THIS FILM MAY NOT BE USED TO REPRODUCE ADDITIONAL FILM COPIES

Use of this film in reproduction is limited to individual page reprints when occasional demands require paper copies for use and study.

Micro Photo Inc.

OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 228 - 229

JULY - AUGUST

1916

MICRO PHOTO INC.-M
CLEVELAND, OHIO P

OFFICIAL GAZETTE

10/2.16

BANGOR PUBLIC
OCT 2 1916
LIBRARY

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CCXXVIII.

JULY,

1916.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1916.

ERRATA.

1,189,314, page 38, in heading, assignment, name of assignee, for the word "Insulator" read *Translator*.

1,189,367, page 58, third claim, line 3, for the word "grinding" read *guiding*.

1,189,605, page 142, first claim, line 4, before the word "said" insert the words *the open end of;* same claim, line 5, strike out the words "the open end of."

1,190,126, page 316, in heading, assignment, after the word "assignor" insert the words *of one-half*.

1,190,362, page 449, in heading, assignment, name of assignee, for "F. H. Moble & Company" read *F. H. Noble & Company*.

1,190,502, page 497, first claim, line 6, for the word "herein" read *therein*.

1,190,614, page 538, third claim, line 4, after the word "stop" insert the word *said*.

1,190,784, page 600, fourth claim, line 9, for the word "on" read *in*.

1,191,085, page 705, first claim, line 4, for the word "combined" read *confined*.

1,191,118, page 716, second claim, line 4, for the word "cover" read *cap*.

1,191,492, page 891, fourth claim, line 17, for the word "latch" read *lath*.

1,191,619, page 934, fourth claim, line 8, after the word "side" insert the words *of said*.

1,191,651, page 945, in heading, assignment, name of assignee, for "Charles H. Wacher" read *Charles H. Wacker*.

1,191,949, page 1104, second claim, line 1, for the word "photogravure" read *intaglio*.

1,192,012, page 1127, in heading, assignment, name of assignee, for the word "Tie" read *Tire*.

1,192,026, page 1133, in heading, after residence of patentee, insert *assignor to American Graphophone Company, of Bridgeport, Conn., a corporation of West Virginia*.

1,192,681, page 1360, in heading, assignment, after the word "assignors" insert the words *of one-third*.

1,192,721, page 1376, third claim, line 7, strike out the words "included in the accumulating mechanisms and"; fourth claim, lines 6–7, strike out the words "the accumulating mechanism, comprising."

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, July 4, 11, 18, 25	3, 413, 767, 1099
TRADE-MARKS PUBLISHED AND REGISTERED, July 4, 11, 18, 25	381, 735, 1069, 1431
LABELS AND PRINTS REGISTERED, July 4, 11, 18, 25	405, 759, 1091, 1456
DECISIONS OF THE COMMISSIONER OF PATENTS, July 4, 11, 18, 25	407, 761, 1093, 1457
INDEX TO THE DECISIONS OF THE COMMISSIONER OF PATENTS	1461
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	i

ANNOUNCEMENTS.

	Page.
ADVERSE DECISIONS IN INTERFERENCE—	
Arter, No. 1,126,679	411
Prescott, No. 1,085,482	409
Truby, No. 1,122,556	411
Winsor and Corliss, No. 1,167,608	411
AMENDMENTS	1459
APPLICATIONS—	
Condition of pending	1097
BRIEFS IN APPEALED CASES	2, 412, 766, 1098
CLASSIFICATION OF INVENTIONS—	
Changes in—*Order 2268*	1, 765
Order 2271	1095
DISCLAIMERS—	1097
Russell, Frank E	411
INTERFERENCE NOTICES—	
Boessneck, Broesel & Co	1095, 410, 763
Weber-Browne Supply Co	763, 1094, 1459
Weiss & Segal	1094, 1459
PATENTS—	
Date of delivery—Rule 169	411
List of adjudicated	409, 763, 1094, 1459
RULES OF PRACTICE OF THE UNITED STATES PATENT OFFICE—	
Amendment of Rule 12—*Order 2259*—Receipt of mail after 4.30	1, 765

Patents Nos. 1,189,221 to 1,190,257.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

Vol. 228—No. 1. TUESDAY, JULY 4, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
Issue of July 4, 1916	1
Amendments to Rules of Practice	1
Briefs in Appealed Cases	1
Applications Under Examination	2
Patents Granted	3
Reissues	367
Designs	374
Trade-Marks—Registration Applied for	381
Trade-Mark Registrations Granted	399
Labels and Prints	405
Decisions of the U. S. Courts—	
Becker v. Bird	407
Gammeter v. Neidich and O'Kane. Neidich v. Gammeter and O'Kane. Neidich v. Liebenthal. Liebenthal v. Neidich	408
Adjudicated Patents	409
Adverse Decisions in Interference	409
Interference Notice	410

ISSUE OF JULY 4, 1916.

Patents	1037—No.	1,189,221 to No.	1,190,257, inclusive.
Designs	30—No.	49,294 to No.	49,323, inclusive.
Trade-Marks	182—No.	111,152 to No.	111,333, inclusive.
Labels	18—No.	19,411 to No.	19,428, inclusive.
Prints	6—No.	4,377 to No.	4,382, inclusive.
Reissues	4—No.	14,160 to No.	14,163, inclusive.
Total	1277		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	2	North Carolina	6	1
Arizona	6	.....	North Dakota	2	.....
Arkansas	2	1	Ohio	57	9
California	41	14	Oklahoma	11	.....
Colorado	8	2	Oregon	9	3
Connecticut	31	2	Pennsylvania	92	10
Delaware	2	2	Rhode Island	5	.....
Florida	4	4	South Carolina	5	.....
Georgia	8	1	South Dakota	6	2
Idaho	2	2	Tennessee	7	.....
Illinois	104	15	Texas	14	2
Indiana	25	4	Utah	8	.....
Iowa	16	2	Vermont	.....	.....
Kansas	7	2	Virginia	10	8
Kentucky	5	.....	Washington	17	2
Louisiana	2	1	West Virginia	9	1
Maine	4	1	Wisconsin	19	7
Maryland	11	2	Wyoming	1	.....
Massachusetts	72	13			
Michigan	35	6	Alaska, District of	1	1
Minnesota	14	3	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	14	1
Missouri	40	5	Hawaii Territory	1	.....
Montana	1	3	Philippine Islands	.....	.....
Nebraska	9	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	2	1	U. S. Navy	.....	.....
New Jersey	50	3			
New Mexico	3	.....	Total to residents of the United States.	963	201
New York	156	63			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	.....	Netherlands	4	.....
Belgium	.....	.....	New South Wales	5	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	1	.....
Canada	22	.....	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	2	.....
Costa Rica	.....	.....	Scotland	1	.....
Cuba	.....	1	South Australia	.....	.....
Denmark	1	.....	Spain	2	.....
England	20	2	Sweden	5	.....
Finland	.....	.....	Switzerland	5	.....
France	7	1	Transvaal, South Africa	.....	.....
Germany	15	.....	Tunis	1	.....
Guatemala	.....	.....	Victoria	2	.....
India	.....	.....	Wales	1	.....
Ireland	1	.....			
Italy	4	.....	Total to residents of foreign countries	101	5
Japan	.....	1			
Mexico	.....	.....			

Amendments to Rules of Practice.

(Order No. 2,259.)

Department of the Interior,
United States Patent Office,
Washington, D. C., June 9, 1916.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 12 of the Rules of Practice in the Patent Office is amended by inserting after "midnight," in the third line of the second paragraph, the words *on week-days, including holidays,* so that the rule as amended will read as follows:

12. Mail reaching the post-office at Washington, D. C., up to 4.30 p. m. on week-days, excepting holidays, and 1 p. m. on half-holidays, is entered as received in the Patent Office on the day it reaches the post-office.

Special-delivery letters and other papers may be deposited in a box provided at the watchman's desk at the F street entrance of the Patent Office up to midnight *on week-days, including holidays,* and all papers deposited therein are entered as received in the Patent Office on the day of deposit.

Letters received at the Office will be answered, and orders for printed copies filled, without unnecessary delay. Telegrams, if not received before 3 o'clock p. m., cannot ordinarily be answered until the following day.

THOMAS EWING,
Commissioner.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 1, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 11	June 1	277
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Feb. 12	Apr. 14	597
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	June 24	June 22	59
232	4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	May 20	June 22	183
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 7	May 2	242
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 4	May 29	348
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Feb. 24	May 2	464
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 24	June 5	1212
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Feb. 2	June 1	498
235	10. Carriages and Wagons	Feb. 19	June 1	726
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 17	June 15	103
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 10	May 31	533
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 10	June 9	377
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 5	June 2	232
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 9	June 10	277
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Jan. 21	May 17	509
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 10	June 1	235
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	June 9	June 2	124
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	May 6	June 3	166
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	June 17	June 13	122

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Mar. 31	June 2	239
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 2	May 10	356
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 1	Mar. 13	479
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 10	May 8	358
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 24	June 5	152
106	26. Electricity, Generation; Motive Power.	Jan. 4	May 6	549
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 18	May 22	216
65	28. Internal-Combustion Engines	Mar. 31	May 31	391
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Mar. 28	May 24	286
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 21	June 8	251
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	May 29	352
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 3	June '16	694
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 10	May 25	382
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 28	Apr. 17	300
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Feb. 19	June 6	471
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Mar. 9	June 2	810
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 4	May 24	642
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	June 1	June 1	227
321	39. Water Distribution	Feb. 9	May 5	329
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 2	June 12	673
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Mar. 18	June 1	348
244	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Nov. 8	Mar. 27	674
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	May 12	May 24	96

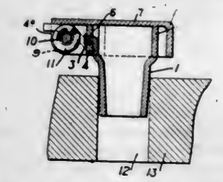
Oldest new case, Nov. 8; oldest amended, Mar. 13.
Total number of applications awaiting action..... 16,559

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 19	June 12	793
	Designs	May 31	June 2	214
	Labels and Prints	June 14	June 17	48

PATENTS

GRANTED JULY 4, 1916.

1,189,221. OIL-CUP. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 27, 1915. Serial No. 58,168. (Cl. 184—91.)



1. An oil cup comprising a tube, a bracket secured to said tube, a cap pivotally mounted on said bracket, and means coacting with said bracket for holding said cap in a closed position.

2. An oil cup comprising a tube, a bracket secured to said tube, a cap pivotally mounted on said bracket, and a resilient member interposed between said bracket and said cap for holding said cap in a closed position.

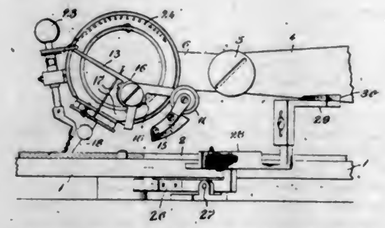
3. An oil cup comprising a tube, a cap for closing said tube and having a pivotal support carried by an extension of said tube, and means carried by said pivotal support for maintaining said cap in a closed position.

4. An oil cup comprising a tube, a cap for closing said tube and having a pivotal support carried by an extension of said tube, and a resilient member surrounding said pivotal support for maintaining said cap in a closed position.

5. An oil cup comprising a tube, a cap for closing said tube and having a pivotal support carried by an extension of said tube, and a coiled spring surrounding said pivotal support and having its ends engaging the said extension and the said cap, respectively, for maintaining said cap in a closed position.

[Claims 6 to 8 not printed in the Gazette.]

1,189,222. PHONOGRAPH-STOP. MONTAGUE ADAIR, New York, N. Y. Filed July 30, 1915. Serial No. 42,733. (Cl. 74—46.)



1. The combination with a phonograph having a rotatable record carrier for supporting a record in disk form having a zone of grooves, and a tone arm having a sound reproducing stylus, of means, normally inoperative, for automatically lifting the sound reproducing stylus off the record and for moving the tone arm transversely of the record out of playing position, means engaging the record grooves for rendering said automatic means operative upon the completion of the playing of the record irrespective of the extent of the zone of grooves in the record, and means for stopping the rotation of the record carrier controlled by the transverse movement of the tone arm out of playing position.

2. The combination with a phonograph having a rotatable record carrier for supporting a record in disk form having a zone of grooves, and a tone arm having a sound reproducing stylus, of means carried by the tone arm, normally inoperative, for automatically lifting the sound reproducing stylus off the record and for moving the tone arm transversely of the record out of playing position, and means controlled by the record grooves for rendering said automatic means operative upon the completion of the playing of the record irrespective of the extent of the zone of grooves in the record.

3. The combination with a phonograph having a rotatable record carrier for supporting a record in disk form having a zone of grooves, and a tone arm having a sound reproducing stylus, of means carried by the tone arm, normally inoperative, for automatically lifting the sound reproducing stylus off the record and for moving the tone arm transversely of the record out of playing position, means controlled by the record grooves for rendering said automatic means operative upon the completion of the playing of the record irrespective of the extent of the zone of grooves in the record, and means for stopping the rotation of the record carrier controlled by the transverse movement of the tone arm out of playing position.

4. The combination with a phonograph having a rotatable record carrier for supporting a record in disk form having a zone of grooves, and a tone arm having a sound reproducing stylus, of means carried by the tone arm, normally inoperative, for automatically lifting the sound reproducing stylus off the record and for moving the tone arm transversely of the record out of playing position, means controlled by the record grooves for rendering said automatic means operative upon the completion of the playing of the record irrespective of the extent of the zone of grooves in the record, and means for stopping the rotation of the record carrier controlled by the transverse movement of the tone arm out of playing position.

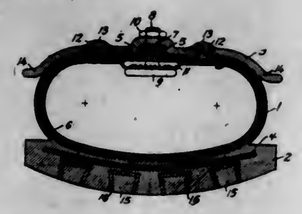
5. The combination with a phonograph having a rotatable record carrier for supporting a record in disk form having a zone of grooves, and a tone arm having a sound reproducing stylus, of means, normally inoperative, for automatically engaging with the record to lift the sound reproducing stylus off the record and for moving the tone arm transversely of the record out of playing position, and means controlled by the record grooves for rendering said automatic means operative upon the completion of the playing of the record irrespective of the extent of the zone of grooves in the record.

[Claims 6 to 19 not printed in the Gazette.]

1,189,223. VEHICLE-WHEEL. LEWIS ALBRECHT, New York, N. Y. Filed Mar. 24, 1911. Serial No. 616,762. (Cl. 152—10.)

1. A vehicle wheel including in combination a laterally extended rim, and a pneumatic tire substantially elliptical in cross-section laid flatwise inside the edges of said rim, said tire comprising a relatively thin air-inflated casing normally receding from said edges on opposite sides, a relatively thick tread around said casing having its edges projected outwardly opposite the edges of the rim, forming therewith four points of support for the sides of the casing in their extended condition, and means operating to limit the movement of the tread in relation to the rim

so as to keep the casing confined between the respective edges thereof at all times.



2. A vehicle wheel including in combination a rigid rim, and a pneumatic tire substantially elliptical in cross-section placed thereon with its major axis in a horizontal plane, said tire comprising a relatively thin casing with thickened portions on the inner face thereof recessed in said rim, a relatively thick resilient tread on the outer face of said casing made to project beyond the opposite sides of the latter in their extended condition, and means serving to limit the movement of said tread laterally in relation to the casing on the supporting rim.

3. A vehicle wheel including in combination a rigid rim, and a pneumatic tire substantially elliptical in cross-section placed thereon with its major axis extending in a horizontal direction, said tire comprising an air-inflated casing normally receding from the edges of said rim, a resilient tread on said casing extending laterally therefrom oppositely to said edges, combined layers of substantially inextensible attenuated material and of diagonally threaded fabric circumferentially wound about the casing inside said tread to a width approximately equal to said axis, and means for staying said layers along the tread and casing at opposite sides.

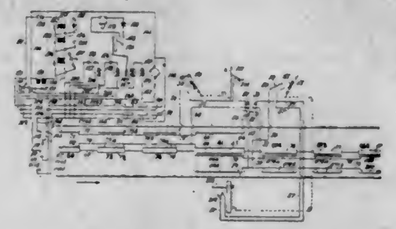
4. A vehicle wheel including in combination a rigid rim, and a pneumatic tire substantially elliptical in cross-section disposed around said rim with its major axis parallel to the axis of rotation, said tire comprising an air-inflated casing of less width normally than that of the rim, a resilient tread on said casing sufficiently extended out laterally therefrom to cover the same in its compressed condition, said tread having embedded therein a layer of circumferentially wound substantially inextensible attenuated material with strands interlaced to resist spreading when under tension, and means securing the opposite sides of said layer to the tread and casing at points within the length of the major axis of the latter.

5. A vehicle wheel including in combination a rigid rim, and a pneumatic tire substantially elliptical in cross section arranged thereround with its major axis in a horizontal plane, said tire comprising an air-inflated casing normally exceeded in width by said rim, and a resilient tread co-extensive transversely with the rim adapted to cover the sides of said casing when in a depressed condition, said tread having embedded therein a plurality of layers of circumferentially wound substantially inextensible attenuated material, each layer having its strands interlaced to resist spreading under tension, the strands of adjacent layers being staggered with relation to each other, and the several layers being fastened along their opposite sides intermediate the tread and casing, within the length of said major axis.

[Claim 6 not printed in the Gazette.]

1,189,224. RAILWAY SAFE-RUNNING DEVICE. ARTHUR REGINALD ANGUS, Spit Road Mosman, New South Wales, Australia. Filed Jan. 18, 1911. Serial No. 603,377. (Cl. 246—31.)

1. Railway safe running apparatus comprising track contacts, means on a train adapted to make contact with said track contacts, appliances for regulating a road corresponding to one of said track contacts, means adapted to be affected by said appliances so as to enable said train on making contact with the last mentioned track contact to complete a circuit only when said appliances are properly set for a train to proceed along said road, another circuit, means adapted to cause the second mentioned circuit to be broken by the completion of the first mentioned circuit, said circuits including in common one of said track contacts, and means adapted to cause the second mentioned circuit when unbroken to give an indication automatically on said train during the contact thereof with said last mentioned track contact.



2. Railway safe running apparatus comprising track contacts, means on a train adapted to make contact with said track contacts, appliances for regulating a road corresponding to one of said track contacts, means adapted to be affected by said appliances so as to enable said train on making contact with the last mentioned track contact to complete a circuit only when said appliances are properly set for a train to proceed along said road, another circuit, means adapted to cause the second mentioned circuit to be broken by the completion of the first mentioned circuit, said circuits including in common one of said contacts, means adapted to cause the second mentioned circuit when unbroken to give an indication automatically on said train during the contact thereof with said last mentioned track contact, and means adapted subsequently to stop the train automatically on its continuing its journey.

3. Railway safe running apparatus comprising track contacts, means on a train adapted to make contact with said track contacts, appliances for regulating a road corresponding to one of said track contacts, means adapted to be affected by said appliances so as to enable said train on making contact with the last mentioned track contact to complete a circuit only when said appliances are properly set for a train to proceed along said road, another circuit, means adapted to cause the second mentioned circuit to be broken by the completion of the first mentioned circuit, said circuits including in common one of said track contacts, means adapted to cause the second mentioned circuit when unbroken to give an indication automatically on said train during the contact thereof with said last mentioned track contact, and means adapted subsequently to stop the train automatically on the contact of said train with another of said track contacts.

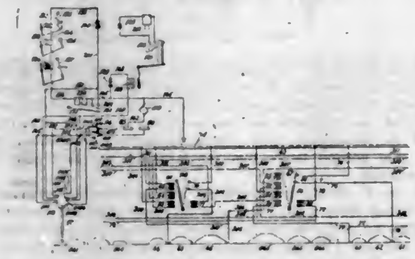
4. Railway safe running apparatus comprising track contacts including two warning track contacts arranged one in advance of the other and other track contacts, means on a train adapted to make contact with said warning contacts successively, appliances for regulating a road corresponding to each of said warning contacts, means adapted to be affected by said appliances so as to enable said train on making contact with each of said warning contacts to complete a circuit only when said appliances are properly set for a train to proceed along said road, another circuit, means adapted to cause the second mentioned circuit to be broken by the completion of the first mentioned circuit, the second mentioned circuit and the first mentioned circuit corresponding to each of said warning contacts, including in common one of said other track contacts, and means adapted to cause the second mentioned circuit when unbroken to give an indication on said train during the contact thereof with a corresponding warning contact.

5. Railway safe running apparatus comprising a testing track contact, a signaling track contact, means on a train adapted to make contact with said track contacts

simultaneously, appliances for regulating a road corresponding to said track contacts, means adapted to be affected by said appliances so as to enable said train on making contact with said testing track contact to complete a circuit including said testing contact only when said appliances are properly set for a train to proceed along said road, another circuit including means adapted to cause the second mentioned circuit to be broken by the adapted to cause the second mentioned circuit when unbroken to give an indication automatically on the said train during the contact thereof with said testing contact.

[Claims 6 to 21 not printed in the Gazette.]

1,189,225. RAILWAY SAFE-RUNNING DEVICE. ARTHUR REGINALD ANGUS, Spit Road Mosman, New South Wales, Australia. Filed Jan. 18, 1911. Serial No. 603,378. (Cl. 246—25.)



1. Railway safe running apparatus comprising a controller track contact, an indicating track contact located remote from said controller track contact, a switch device carried by each of two trains and adapted to come into contact with said contacts, the controller contact and the indicating contact having their operative surfaces so arranged as on making contact with each of said switch devices to give different displacements thereto, means adapted by electrical connection and on contact of said switch device of one of said trains with said controller contact to render operative said indicating contact, and means adapted on contact of said switch device of the other of said trains with said indicating contact so rendered operative to produce an indication on the last mentioned train.

2. Railway safe running apparatus comprising a controller track contact, a warning track contact located remote from said controller contact, a switch device carried by each of two trains and adapted to come into contact with said contacts, the controller contact and the warning contact having their operative surfaces so arranged as on making contact with each of said switch devices to give different displacements thereto, means adapted by electrical connection and on contact of said switch device of one of said trains with said controller contact to render operative said warning contact, and means adapted on contact of said switch device of the other of said trains with said warning contact to produce a warning operation on the last mentioned train.

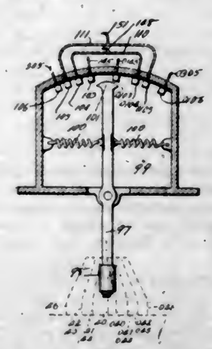
3. Railway safe running apparatus comprising a controller track contact, a stopping track contact located remote from said controller track contact, a switch device carried by each of two trains and adapted to come into contact with said contacts, the controller contact and the stopping contact having their operative surfaces so arranged as on making contact with each of said switch devices to give different displacements thereto, means adapted by electrical connection on contact of said switch device of one of said trains with said controller contact to render operative said stopping contact, and means adapted on contact of said switch device of the other of said trains with said stopping contact so rendered operative to produce a stopping operation on the last mentioned train.

4. Railway safe running apparatus comprising a set of track contacts including a controller contact, a signal contact, and a stop contact, the stop contact being arranged between the controller contact and the signal contact, a switch device carried by each of two trains and adapted to come into contact with said contacts, the signal contact, the stop contact, and the controller contact having their operative surfaces so arranged as on making contact with each of said switch devices to give different displacement thereto, means adapted by electrical connection on contact of said switch device of one of said trains with the controller contact to render operative said signal and stop contacts, means adapted on contact of said switch device of the other of said trains with said signal contacts so rendered operative to produce a warning on the last mentioned train, and means adapted on the contact of the last mentioned switch device with said stop contact so rendered operative to stop the last mentioned train.

5. Railway safe running apparatus comprising sets of track contacts, each of said sets including a controller contact, and an indicating contact, a switch device carried by each of two trains and adapted to come into contact with said contacts, the indicating contact, and the controller contact of each of said sets having their operative surfaces so arranged as on making contact with each of said switch devices to give different displacements thereto, means adapted by electrical connection and on contact of said switch device of one of said trains with the controller contact of one of said sets to render operative the indicating contact of the set in question, means adapted on contact of the last mentioned switch device with the controller contact of a subsequent set to disconnect and so render inoperative said contact so rendered operative, and means adapted on contact of said switch device of the other of said trains with an indicating contact so rendered operative to produce an indication on the last mentioned train.

[Claims 6 to 16 not printed in the Gazette.]

1,189,226. RAILWAY SAFE-RUNNING DEVICE. ARTHUR REGINALD ANGUS, Spit Road Mosman, New South Wales, Australia. Filed Jan. 18, 1911. Serial No. 603,379. (Cl. 246—25.)



1. Railway signaling apparatus comprising electric circuits adapted to be completed through signaling apparatus on a train, track contacts arranged along a railway track and having their operative surfaces located in different positions transversely of said track, and a contacting device on said train adapted to come into contact with said track contacts and to be thereby caused to complete said electric circuits selectively according to the positions transversely of said track of the operative surfaces of said track contacts.

2. Railway signaling apparatus comprising electric circuits adapted to be completed through signaling apparatus on a train, track contacts arranged in line longitudinally of a railway track and having their operative sur-

faces located in different positions transversely of said track, and a contacting device on said train adapted to come into contact with said track contacts and to be thereby caused to complete said electric circuits selectively according to the positions transversely of said track of the operative surfaces of said track contacts.

3. Railway signaling apparatus comprising electric circuits arranged partly on a train and partly on a railway track, a contacting device on said train movable transversely of said track and means on said track adapted to give said contacting device displacements transversely of said track, said contacting device being adapted to cause the completion of said electric circuits therethrough and through said means on said track selectively according to the displacements given thereto by said means.

4. Railway signaling apparatus comprising electric circuits arranged partly on a train and partly on a railway track, track contacts arranged along a railway track and having their operative surfaces located in different positions transversely of said track, and a contacting device on said train adapted to come into contact with said track contacts and to be thereby caused to complete said electric circuits selectively therethrough and through said track contacts according to the positions transversely of said track of the operative surfaces of said track contacts.

5. Railway signaling apparatus comprising electric circuits arranged partly on a train and partly on a railway track, track contacts arranged in line longitudinally of a railway track and having their operative surfaces located in different positions transversely of said track, and a contacting device on said train adapted to come into contact with said track contacts and to be thereby caused to complete said electric circuits selectively therethrough and through said track contacts according to the positions transversely of said track of the operative surfaces of said track contacts.

[Claims 6 and 7 not printed in the Gazette.]

1,189,227. BOAT. LEWIS R. BAKER, Baltimore, Md. Filed Dec. 1, 1915. Serial No. 64,424. (Cl. 114—66.5.)

1. A hydroplane hull with the planing runners joined rigidly by a concaved shaped channel to a point from approximately midship rearward.



2. A hydroplane hull having two concave shaped air confining runners on each side of a concave channel.

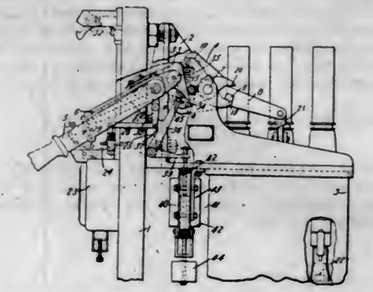
3. A hydroplane hull having a concave shaped channel the center or keel line of which is above the planing runners from stern or transom to a point approximately midship.

4. A hydroplane hull having a concave shaped channel the center or keel line of which is above the planing runners from stern or transom to a point approximately midship and gradually assumes a V shape to the stem.

5. A hydroplane hull having longitudinals starting at the stem above the keel and bounding separate spiral shaped air ducts guiding the air to a channel between a pair of planing runners on the outer side of a channel.

1,189,228. ELECTRICAL PROTECTIVE DEVICE. ANDREW H. BAKKEN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 24, 1914. Serial No. 826,231. (Cl. 175—269.)

1. In a circuit interrupter, the combination with an operating lever arm, of a tripping device comprising a stationary core member, a movable core member, a coil for the same, a cam member operatively connected to the lever arm of the interrupter, a second pivotally mounted lever arm interposed between the said cam member and the said movable core member, and means operatively connected to the said second lever arm for tripping the said circuit interrupter.



2. In a circuit interrupter, the combination with an operating lever arm, of a cam member operatively attached thereto, an electromagnet, a second lever arm interposed between the said cam and the movable core member of the said electromagnet, and means operatively connected to the said second lever arm for tripping the said circuit interrupter.

3. In a circuit interrupter, the combination with an operating lever arm, of a cam member attached thereto, a tripping coil, means interposed between the cam member and the movable member of the tripping coil for resetting the same when the circuit interrupter is closed, and means operatively connected to said tripping coil for tripping the circuit interrupter.

4. In a circuit interrupter, the combination with an operating lever arm and a second lever arm operatively attached thereto, of an under-voltage tripping device comprising a cam member attached to the said second lever arm, an electromagnet, means operatively associated with the said cam member for resetting the movable member of the said electromagnet and for tripping the second lever arm free from the operating lever arm.

5. A retrieving device for an under-voltage trip coil of a circuit interrupter comprising a movable cam member operatively attached to the operating lever arm of the interrupter, a pivotally mounted bell crank lever arm for engaging the said cam member and operatively connected to the movable core member of the said under-voltage trip coil, and a tripping mechanism operatively connected to the said bell crank lever arm.

[Claims 6 to 9 not printed in the Gazette.]

1,189,229. TITANIFEROUS PRODUCTS AND METHOD OF PRODUCING THE SAME. LOUIS E. BARTON, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Sept. 11, 1914. Serial No. 861,184. (Cl. 23—13.)

1. In the treatment of a titaniferous material the steps which consist in digesting it with sulfuric acid; dissolving the resulting product in water; adding to the resulting solution a soluble salt capable of forming by reaction with said solution an insoluble sulfate; withdrawing the resulting sulfate precipitate, and digesting the remaining solution.

2. In the treatment of a titaniferous material the steps which consist in digesting it with sulfuric acid; dissolving the resulting product in water; adding to the resulting solution a soluble salt capable of forming by reaction with said solution an insoluble sulfate; withdrawing the resulting sulfate precipitate; digesting the remaining solution; filtering out the resulting titanic acid precipitate; and drying the same.

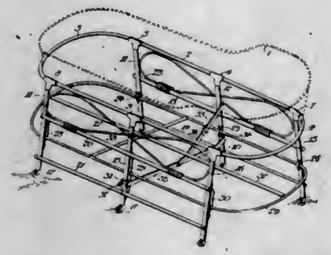
3. In the treatment of a titaniferous material the steps which consists in digesting it with sulfuric acid; dissolving the resulting product in water; adding to the resulting solution a soluble salt capable of forming by reaction with said solution an insoluble sulfate; withdrawing the resulting sulfate precipitate; digesting the remaining solution; filtering out the resulting titanic acid precipitate; washing the same, and drying the same.

4. In the treatment of a titaniferous material the steps which consist in digesting it with sulfuric acid; dissolving the resulting product in water; adding to the resulting solution chlorid of calcium; withdrawing the resulting sulfate precipitate, and digesting the remaining solution.

5. In the treatment of a titaniferous material the steps which consist in digesting it with sulfuric acid; dissolving the resulting product in water; adding to the resulting solution chlorid of calcium; withdrawing the resulting sulfate precipitate; digesting the remaining solutions; filtering out the resulting titanic acid precipitate; and drying the same.

[Claims 6 to 17 not printed in the Gazette.]

1,189,230. COLLAPSIBLE OR FOLDING STAND FOR BASSINETS. HENRY BEHR, New York, N. Y. Filed June 8, 1915. Serial No. 32,811. (Cl. 5—58.)



1. A bassinet support comprising a continuous oblong member the ends of which are rounded, a plurality of approximately vertical members hinged thereto, a bar between certain of said vertical members and a toggle for depressing said bar as herein specified.

2. A bassinet support comprising a plurality of oblong members arranged one above the other, the lowermost member being larger than the upper, a plurality of legs hinged to both said oblong members and a bar and toggle for retaining said legs apart for the purpose set forth.

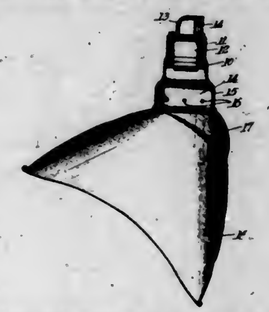
3. A bassinet support comprising a plurality of legs in two series, a plurality of oblong members of different sizes both hinged to one series of legs and one said oblong member slidably engaged with the other series of legs and means for retaining said legs apart for the purpose set forth.

4. A device of the character described having a plurality of legs, a member hingedly engaging all of said legs, a device slidable upon one of said legs, a collar secured to another said leg, a bar pivoted to said collar and said sliding device, and a toggle member adapted to depress said bar and to spread said legs definite distances apart from each other as and for the purpose set forth.

1,189,231. REFLECTOR-SHADE. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 5, 1913. Serial No. 804,901. (Cl. 240—103.)

1. A reflector shade having a casing portion adapted to receive an electric lamp socket and having a conduit-receiving opening disposed at right angles to the axis thereof, said shade having a concave reflector portion wider in one direction than another, whereby the light is distributed over an area which is wider in one direction than another the axis of the reflector being inclined to the axis of the socket.

2. A reflector shade having a portion adapted for connection with an electric lamp socket, and a spherical reflecting portion extending from said first named portion, and having a concave reflector portion extending from said second named portion wider in one direction than another, whereby the light is distributed over an area which is wider in one direction than another the axis of the reflector being inclined to the axis of the socket.

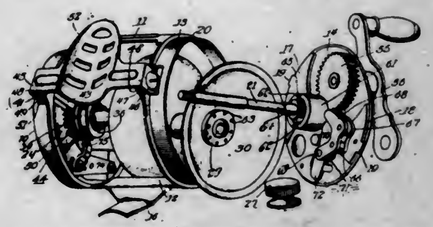


3. A reflector shade having a portion adapted for connection with an electric lamp socket, and a spherical reflecting portion extending from said first named portion, and having a concave reflector portion extending from said second named portion and disposed at an inclination with respect to said first named portion, said reflector portion being wider in one direction than another, whereby the light is distributed at an angle to the axis of the socket and over an area which is wider in one direction than another.

4. A reflector shade having a spherical reflecting portion cut off at its top to form an opening for the reception of a lamp socket and having a reflector portion extending from said spherical portion wider in one direction than another, whereby the light is distributed over an area which is wider in one direction than another the axis of the reflector being inclined to the axis of the socket.

5. A reflector shade having a casing portion adapted to receive the lamp socket and having a conductor receiving opening disposed substantially at right angles to the axis of said socket, said shade having a dished reflector portion with its axis inclined to that of the socket, said dished portion being elliptical in cross section perpendicular to its axis.

1,189,232. FISHING-REEL. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin-Sellar Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1914. Serial No. 809,995. (Cl. 242—84.5.)



1. In a fishing reel the combination with a line spool, of a variable brake adapted to retain said spool against movement when fully applied, said brake being disposed and arranged so as to impart a rotating movement to said spool when released.

2. In a fishing reel the combination with a line spool, of a spring returned spool retaining member, and means for simultaneously moving said member in the direction

of its axis toward said spool and rotating said member, whereby said member when released imparts a rotating movement to said spool when released.

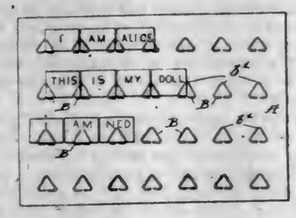
3. In a fishing reel the combination with a line spool of a spring returned brake member, and means for moving said brake member gradually toward said spool to exert a gradually increasing braking pressure thereon, and for simultaneously rotating said brake member, whereby said brake member when released imparts a rotating movement to said spool when released.

4. In a fishing reel the combination with a line spool, of a releasable member for retaining said spool against movement, said member being disposed and arranged so as to impart a rotating movement to said spool when released, and a thumb operated member for releasing said first named member.

5. In a fishing reel the combination with a line spool, of a braking member for said spool, and a thumb operated device for moving said braking member toward said spool, thereby to cause a gradually increasing braking effect upon said spool, said braking member being disposed and arranged so as to cause a rotating movement to said spool when released.

[Claims 6 to 39 not printed in the Gazette.]

1,189,233. EDUCATIONAL APPLIANCE. KATHERINE BRADLEY, Chicago, Ill. Filed Nov. 24, 1914. Serial No. 873,752. (Cl. 35—9.)



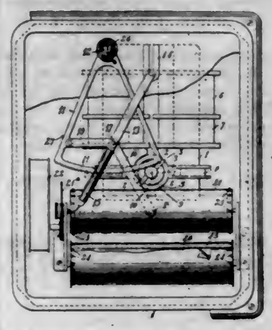


In an educational chart, the combination of a base, triangular-shaped card supports arranged in rows and secured to said base, the apex of each support being bent toward the base, cards arranged between said supports and the base, and held in place by the pressure of the supports against them and the base, and a covering adhesively secured to the back of the base, substantially as described.

1,189,234. ELECTRIC MEASURING INSTRUMENT. HAROLD W. BROWN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 8, 1910. Serial No. 586,088. (Cl. 234—5.5.)

1. In a measuring instrument for an electric circuit, the combination with a meter mechanism comprising a rotatable member and a stationary member connected directly to the electric circuit, of a reducing gearing directly actuated by the rotatable member, a marking device actuated by the reducing gearing, and a resilient means for so directly opposing the torque of the rotatable member that the rotatable member is returned to its initial position when no current traverses the circuit.

2. In a measuring instrument for an electric circuit, the combination with a meter mechanism comprising a rotatable member and a stationary member connected directly to the electric circuit, of a reducing gearing directly actuated by the rotatable member, a marking device actuated by the reducing gearing, and means for opposing the torque of the rotatable member whereby the marking device is adjusted to a greater or less degree in proportion to the electric-circuit variations.



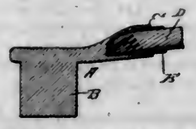
3. In a measuring instrument for an electric circuit, the combination with a meter mechanism comprising a rotatable member actuated directly by the energy traversing the electric circuit, of a marking device, a reducing gearing actuated by the rotatable member and adapted to operate the marking device, and yielding means for so opposing the torque exerted by the rotatable member as to return the rotatable member to its initial position under predetermined conditions.

4. A measuring instrument for an electric circuit comprising a meter armature adapted to be actuated directly by the energy traversing the circuit, a reduction gearing connected directly to the armature, a marking device actuated by the armature through the reduction gearing, and a spring for opposing the operation of the armature and in coöperation therewith to actuate the marking device in accordance with the energy traversing the circuit.

5. A measuring instrument for an electric circuit comprising a meter armature operatively connected to the circuit and adapted to move through a plurality of complete rotations, means for opposing the torque of the armature, a pinion operatively connected to the armature, a straight-line-motion device actuated by the said pinion, and a marking device actuated by the said straight-line-motion device.

[Claim 6 not printed in the Gazette.]

1,189,235. BOND. JOHN ROWLAND BROWN, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Apr. 6, 1914. Serial No. 829,730. (Cl. 173—262.)



1. The combination of a terminal member and a stranded conductor consolidated together in varying degrees of intimacy, and an auxiliary protector sleeve surrounding the stranded member at the point where it emerges from the terminal member.

2. The combination of a solid metallic terminal member and a conductor member composed of a plurality of metallic strands, consolidated together in varying degrees of intimacy, and an auxiliary sleeve surrounding the strands of the conductor at the point where said conductor emerges from the terminal.

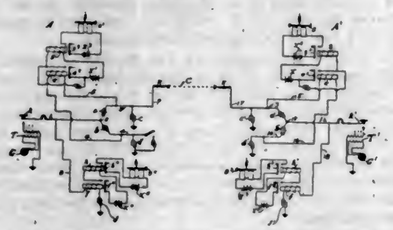
3. A bond of the class described comprising a socketed terminal, a flexible stranded conductor positioned within the socket of said terminal, and a separate protector sleeve surrounding said stranded conductor and interposed between the metal of the terminal and the conductor.

4. A bond of the class described comprising a solid metal terminal, a flexible stranded conductor extending into said terminal and intimately welded therewith, and a separate protector sleeve surrounding the stranded conductor within the terminal and intimately welded with said terminal and conductor.

5. A bond of the class described comprising a solid metal terminal, a flexible stranded conductor extending into said terminal and intimately welded therewith, and a protector sleeve surrounding the stranded conductor within the terminal and intimately welded with said terminal and conductor, a portion of said sleeve projecting along the conductor and beyond the metal of the terminal.

[Claims 6 to 8 not printed in the Gazette.]

1,189,236. DUPLEX TELEGRAPH SYSTEM. WILLIAM M. BAUCE, Jr., Springfield, Ohio, assignor to The United Telegraph & Cable Company, Springfield, Ohio, a Corporation of Ohio. Filed Nov. 7, 1913. Serial No. 799,811. (Cl. 178—60.)

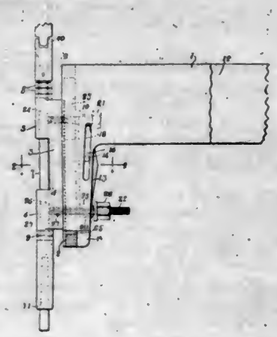


1. In a telegraph system, two stations each having a source of alternating current, a branched circuit for said current at each of said stations, each branch having multiple condensers, and a bridge connected between said multiple condensers and a conductor from one branch only of each of said circuits to the other circuit, and means for interrupting the current supply over said conductor to cause the relay in the bridge at the other station to operate, and a grounded branch from said main circuit including a relay which will operate in response to said impulses in the same station as and for the purpose specified.

2. In a telegraph system, adapted for alternating circuits, a source of current supply, a circuit therefor including a key or circuit breaker, a branch from said circuit including a quick relay, and a condenser to ground, another branch from said circuit including a condenser and conductor to one side of a branched circuit including multiple condensers and a bridge connected to the opposite sides of said branch circuit between said multiple condensers and including a quick relay, each of said relays being adapted to respond to the alternations of said current as well as interruptions therein and means controlled by said relays to cause the interruptions to be recorded without recording the vibrations of said relay as and for the purpose specified.

1,189,237. DRILLER. THOMAS BURKE, Richmond, Ind. Filed Dec. 15, 1915. Serial No. 67,005. (Cl. 77—5.)

1. In a device of the character described, a member comprising a supporting arm, a member comprising a spindle bearing block adjustably mounted on said arm, a guideway between said members, a clamping device connected to one of said members and extending across the path of said guideway to the other of said members, and means which reacts on said clamping device to automatically increase the clamping force thereof as the thrust imparted to said spindle bearing block increases during the operation thereof.



2. In a device of the character described, a supporting arm, a spindle bearing block adjustably mounted on said arm, a clamping lever to clamp said arm and block together, and means in engagement with said lever to prevent the relative displacement of the block and arm when the device is in operation.

3. In a device of the character described, a supporting arm, a spindle bearing block adjustably mounted on said arm, said arm having an inclined surface and a lever having a pivot in adjustable engagement with said inclined surface, said lever being arranged to adjustably clamp said arm and block together.

4. In a device of the character described, a member constituting a supporting arm, a member constituting a spindle bearing block adjustably mounted on said arm, a lever pivotally mounted on one of said members in engagement with the other of said members, means for adjusting said lever to clamp the members together, and means co-acting with said lever to prevent displacement of the members relative to each other.

5. In a device of the character described, a member comprising a supporting arm, a member comprising a spindle bearing block adjustably mounted on said arm, one of said members having an inclined surface, a lever mounted in slidable and pivotal engagement with said inclined surface, and means to adjust said lever to clamp the members together.

[Claims 6 and 7 not printed in the Gazette.]

1,189,238. MANUFACTURE OF PRIMARY EXPLOSIVES. RAFAEL CALVET, Barcelona, Spain. Filed June 6, 1913. Serial No. 772,097. (Cl. 52—1.)

1. A primary explosive consisting of a mixture comprising a compound containing the radical $S_3C_2N_2$, and a salt containing chlorin and not less than three atoms of oxygen.

2. A primary explosive consisting of a mixture including $S_3C_2N_2Cu$, and an oxidizing salt of an acid containing chlorin.

3. A primary explosive containing $S_3C_2N_2Cu$ and potassium chlorate.

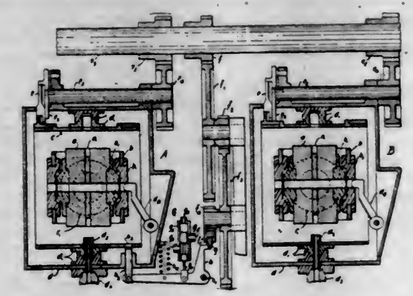
4. A primary explosive containing 1 part of a compound containing the radical $S_3C_2N_2$ and 2½ to 3 parts of an oxidizing salt of an acid containing chlorin.

1,189,239. GYROSCOPIC STEERING DEVICE. OTTO K. CAZIN, Newark, N. J. Filed Aug. 9, 1915. Serial No. 44,513. (Cl. 114—24.)

1. A gyroscopic steering mechanism comprising two or more gyroscopes and a mechanism to start said gyroscopes successively, substantially as hereinbefore described.

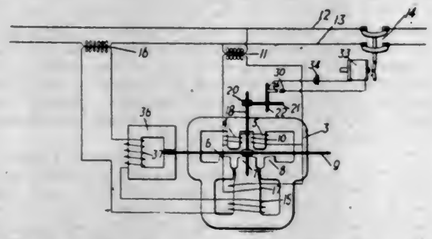
2. In a gyroscopic steering device, the combination of a gyroscope with a second gyroscope and a mechanism

for starting said second gyroscope, said mechanism also alining the second gyroscope with the first gyroscope and transferring the steering function from the first gyroscope to the second gyroscope, all substantially as described and for the purpose set forth.



3. In a gyroscopic steering mechanism, the combination of two or more gyroscopes and a mechanism for starting and alining successive gyroscopes and transferring the steering function to successive gyroscopes, substantially as set forth.

1,189,240. ELECTRICAL RELAY. ALMON W. COPLEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 24, 1912. Serial No. 711,205. (Cl. 175—270.)



1. A relay for an electric circuit comprising a magnetizable member, a rotatable disk armature therefor, potential and current windings for the magnetizable member and an electromagnet for retarding the armature in accordance with the current that traverses the circuit.

2. The combination with an alternating-current circuit, of a relay comprising a magnetizable member, a conducting armature that is inductively actuated in accordance with the energy traversing the circuit, and means for retarding the armature in accordance with the current that traverses the circuit.

3. A relay for an electric circuit comprising a stationary magnetizable member, a disk armature, potential and current windings surrounding the magnetizable member for actuating the armature in accordance with the energy traversing the circuit, and two retarding electromagnets for the armature supplied with current in accordance with the current traversing the circuit.

4. A relay comprising a magnetizable member, current and potential windings therefor, a rotatable armature actuated by the magnetic lines of force from the magnetizable member, and a laminated magnetizable member having a current winding thereon for retarding the armature.

1,189,241. WELL-DRILL JAR. JAMES F. CRAVEN, Crafton, Pa. Filed June 10, 1914. Serial No. 844,293. (Cl. 255—27.)

1. A drill jar link, comprising spaced parallel rein bars of uniform cross section from end to end having their end portions upset and forced inwardly into contact with each other, the contacting faces of said bars being welded together to form the anvil and shank.



2. A drill jar link, comprising three parallel hexagonal rein bars of uniform cross section from end to end and spaced uniformly around an axis, the end portions of said bars being upset and forced inwardly into contact with each other, the contacting faces of said bars being welded together to form the anvil and shank.

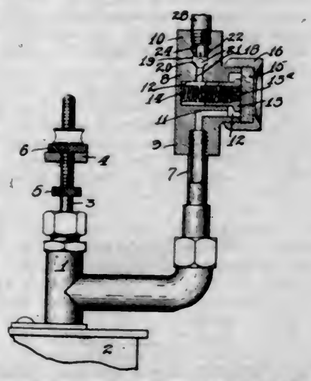
3. A drill jar, comprising two interlocked links, each link being formed of parallel rein bars of uniform cross section from end to end having their end portions upset and forced inwardly into contact with each other, the contacting faces of said bars being welded together to form the anvil and shank.

4. A drill jar, comprising two interlocked links, each link being formed of parallel rein bars of uniform cross section from end to end having their end portions upset and forced inwardly into contact with each other, the contacting faces of said bars being welded together to form the anvil, the metal of each rein bar at the anvil end of each link being expanded laterally in the space between the bars of the other link and thereby interlocking with two of the bars of the other link.

5. A drill jar, comprising two interlocked links, each link being formed of three parallel hexagonal rein bars of uniform cross section from end to end having their end portions upset and forced inwardly into contact with each other, the contacting faces of said bars being welded together to form the anvil, the metal of each hexagonal rein bars at the anvil end of each link being expanded laterally in the hexagonal space between the bars of the other link and thereby interlocking with two rein bars of the other link.

[Claims 6 to 12 not printed in the Gazette.]

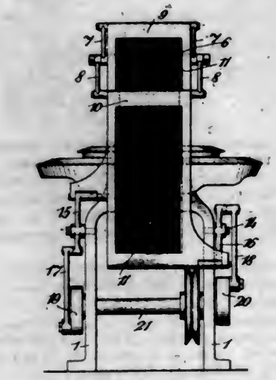
1,189,242. SAFETY-FEED FOR LUBRICATORS. THOMAS A. DELANEY, Chicago, Ill., assignor to Hills, McCanna Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 10, 1915. Serial No. 49,968. (Cl. 184—96.)



1. In a lubricating device of the class described, a sight-feed connection having oil inlet and outlet passages, a ball movably placed in said outlet passage, and a slotted retaining bushing adjustably mounted above said ball, said ball adapted to permit flow of oil through said outlet passage in one direction only.

2. A lubricating device, comprising an oil duct, a transparent wall forming a part thereof; a movable indicator normally impelled against said transparent wall and adapted by the flow of oil to be forced therefrom, a spring to resist such movement of said indicator whereby said indicator indicates the flow or non-flow of the oil, a distributing passage leading from said oil duct, a ball therein, and a bushing having a plurality of openings therein threaded into said passage above said ball to retain the same within said passage, said ball and bushing being adapted to permit a flow of oil in one direction only.

1,189,243. SHEDDING MECHANISM FOR RIBBON-LOOMS. KARL EGGART, Arbon, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Filed Oct. 16, 1915. Serial No. 56,173. (Cl. 139—19.)

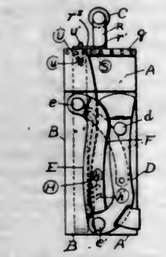


1. In a ribbon loom, straight heddle leaves, means for supporting the heddle leaves to move in parallel relation with the heddle eyes at an unchanging distance from the line of insertion of the weft, and means to actuate the heddle leaves alternately in opposite directions.

2. In a ribbon loom, straight heddle leaves, swinging arms to which the leaves are pivotally connected at their opposite ends, and means to actuate the heddle leaves alternately in opposite directions.

3. In a ribbon loom, straight heddle leaves, arms pivotally connected to the heddle leaves at their opposite ends and mounted to swing on axes in the same plane with the line of insertion of the weft, and means to actuate the heddle leaves alternately in opposite directions.

1,189,244. COLLAPSIBLE BABY-CARRIAGE. OSCAR E. ERICKSON and HJALMAR OLSON, Chicago, Ill. Filed July 19, 1915. Serial No. 40,692. (Cl. 21—83.)



1. In a collapsible baby carriage, a two part receptacle, a link pivotally attached at its ends to said parts, an arm pivotally attached at one end to one of said parts and a riser to said arm pivotally attached to the other of said parts, and said arm and riser pivotally attached together, a notched slot in said arm, a connecting link pivotally attached to said riser, and a pin in said connecting link adapted to fit in said notch when said parts of the receptacle, said arm and riser are all in a pre-determined position, to maintain said parts in said position, all operatively combined.

2. In a collapsible baby carriage, a two part receptacle, links pivotally attached at their ends to said parts, arms pivotally attached at the ends thereof to one of said parts, and notched slots in said arms, risers pivotally attached to the other of said parts, said arms and risers pivotally attached together, connecting links pivotally attached to said risers, and pins in said connecting links, said pins adapted to move in said slots and to fit in said notches, wheel frames pivotally attached to one of said parts of the receptacle to move in a plane at right angles to the plane in which said risers move when turned on the several pivots thereof, said wheel frames and said risers adapted to engage when in a pre-determined position, to maintain said wheel frames in said turned position, all operatively combined.

3. In a collapsible baby carriage, a two part receptacle, links pivotally attached to said parts, arms pivotally attached to one of said parts, said arms provided with notched slots, risers pivotally attached to the other of said parts, and to said arms, links attached to said risers, pins on said links adapted to move in said slots and to fit in said notches, wheel frames hinged to the said part which is provided with said risers, said risers and wheel frames adapted to engage when in a pre-determined position to maintain said wheel frames in said position, an additional wheel frame pivoted to said part which is provided with said risers, and a two part link pivoted to said additional wheel frame and to said last named part of the receptacle, combined as set forth.

4. In a collapsible baby carriage, a two part receptacle, links pivotally attached to said parts, said parts adapted when in pre-determined position to form the back and seat of a baby carriage, arms pivotally attached to said back part, said arms provided with notched slots, risers pivotally attached to said seat part and to said arms, links pivotally attached to said risers, pins on said last named links, said pins adapted to move in said slots and to fit in said notches, wheel frames pivotally attached to said seat part to be movable in a plane at right angles to the plane in which said risers move, and said risers adapted to engage with said wheel frames, when in a pre-determined position, and to maintain said wheel frames in an operative position, in combination with an additional wheel frame pivoted to said seat part, and a handle longitudinally movable in said back part, with means to hold said handle in a predetermined position.

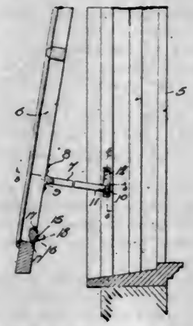
5. In a collapsible baby carriage, a two part receptacle, links pivotally attached to said parts and arranged to permit said parts to be moved into parallel planes and into planes substantially at right angles, with the faces of said parts which form the sides of the receptacle when in parallel planes forming the upper face of a seat and the inner face of a back when said parts are substantially at right angles, in combination with arms pivotally attached to said back part and risers pivotally attached to said seat part and to said arms, said arms provided with notched slots, links pivotally attached to said risers, abutments on said last named links, adapted to move in said slots and to fit in said notches, wheel frames pivoted to said seat part, said risers and wheel frames adapted, when both thereof are in a determined position to engage to maintain said wheel frames in said determined position, and an additional wheel frame collapsibly mounted on said seat part, with means to hold said additional frame in a pre-determined position.

[Claims 6 to 8 not printed in the Gazette.]

1,189,245. FASTENER FOR OUTER SASHES AND THE LIKE. EDWARD J. FELLMAN, Milwaukee, Wis. Filed Jan. 13, 1916. Serial No. 71,837. (Cl. 16—22.)

1. A swinging sash holder comprising a link member provided with a notch in one edge, means for pivotally connecting one end of said member to a sash, a keeper member provided with a slot reduced in its lower portion,

and a head on the other end of the link member movable through the slot and of greater width than the said reduced portion of the slot.



2. A swinging sash holder comprising a link member provided with a notch in one edge, means for pivotally connecting one end of said member to a sash, a keeper member comprising an angular plate having one side adapted for securement to a support and provided in its other side with a longitudinal slot having an extension into said first named side, and a head on the other end of the link member movable through the slot at its extension.

3. In a swinging sash holder the combination of a resilient link strip adapted for pivotal connection with a sash and a catch member having a recess adapted for connection with a sash and adapted to receive the link strip and including a reduced throat portion of lesser width than the width of the link strip necessitating a twisting flexure of the strip to pass therethrough.

4. In a swinging sash holder, the combination of a resilient link strip adapted for pivotal connection with a sash, and a catch member adapted also for connection with a sash and comprising an angular plate, a headed securing member passed through one side of the plate, the free end of the other side being bent inwardly to form a holding portion, an inturned lip on the holding portion and the relation of the lip and securing member being such as to necessitate twisting flexure of the link strip to pass therebetween.

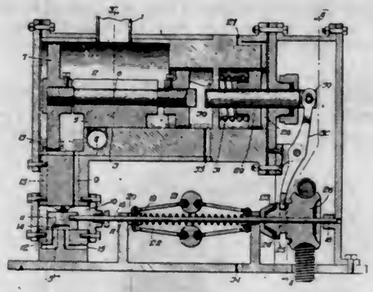
5. A swinging sash holder, comprising a link member provided with a notch in one edge, means for pivotally connecting one end of said member to a sash, a keeper member adapted for connection with a support and provided with a slot, an intermediate portion of the slot being enlarged and a head on the other end of the link member of substantially the same cross-sectional area as the enlarged portion of the slot whereby retraction of the head through the slot except upon an approximately exact intermediate positioning of the head is prevented.

1,189,246. DRIFTING APPARATUS FOR LOCOMOTIVES. FRANK C. FOSDICK, Chicago, Ill. Filed Sept. 3, 1915. Serial No. 48,760. (Cl. 121—14.)

1. The combination of a locomotive cylinder, a pipe for supplying steam to the cylinder, a throttle in said pipe, a passage for supplying steam to the cylinder, a valve controlling said passage, speed-controlled means for operating said valve, and means communicating with the first mentioned pipe at a point between the throttle and the cylinder for controlling the speed-controlled means.

2. The combination of a locomotive cylinder, two passages for supplying steam to the cylinder, a throttle for closing one of said passages, a valve for opening and closing the other passage, pressure-actuated means for operating said valve, speed-controlled means for operating said pressure-actuated means, and means communicating with the throttled passage at a point between the throttle and the cylinder for controlling the speed-controlled means.

3. The combination of a locomotive cylinder, two passages for supplying steam to the cylinder, a throttle for closing one of said passages, a valve for opening and closing the other passage, pressure-actuated means for operating said valve, speed-controlled means for operating said pressure-actuated means, and means for automatically disabling said speed-controlled means.

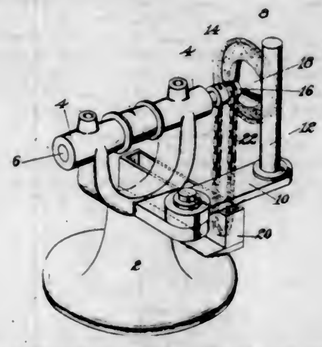


4. The combination of a locomotive cylinder, a valve controlling the flow of steam to the cylinder, differential pistons for moving said valve, a speed-controlled valve governing the action of pressure fluid on said pistons, and fluid-pressure-actuated means governed by pressure admitted to the cylinder for controlling the speed-controlled valve.

5. The combination of a locomotive cylinder, a passage for supplying steam to the cylinder, a valve controlling said passage, fluid-pressure-actuated means for moving the valve, a speed-controlled valve for operating said fluid-pressure-actuated means, and fluid-pressure-actuated means governed by pressure admitted to the cylinder for disabling said speed-controlled valve.

[Claims 6 to 9 not printed in the Gazette.]

1,189,247. GRINDING-MACHINE. FREDERICK M. FURER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 21, 1913. Serial No. 749,905. (Cl. 51—7.)



1. In a machine of the class described, the combination with a grinding wheel, of means for supplying a fluid to the wheel, said means being constructed and arranged to deliver the fluid upon the lateral surface of the wheel simultaneously on all sides of the wheel axis in position to flow centrifugally over said surface to the outer edge of the wheel.

2. In a machine of the class described, the combination with a grinding wheel, of means for supplying a fluid to the wheel, said means comprising a circular distributer constructed and arranged to deliver the fluid from all points on its peripheral edge upon the lateral surface of the wheel.

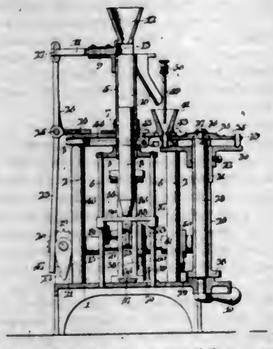
3. A machine of the class described having, in combination, a shaft, a grinding wheel thereon, and a rotary distributer arranged to deliver a fluid by centrifugal action upon the lateral surface of the wheel in position to flow centrifugally over said surface to the outer edge of the wheel.

4. In a machine of the class described, the combination with a shaft and a grinding wheel thereon, of a frusto-conical distributer mounted on the shaft and arranged to deliver a fluid centrifugally from all points on its peripheral edge upon the lateral surface of the grinding wheel, and means to supply fluid to said distributer.

5. A machine of the class described having, in combination, a shaft, a grinding wheel thereon formed with a concave radially curved lateral face, a fluid distributer mounted on the shaft and arranged to deliver a fluid centrifugally upon said face, and means to supply fluid to said distributer.

[Claims 6 to 16 not printed in the Gazette.]

1,189,248. DEVICE FOR MEASURING DRY MATERIALS. ISAAC F. GILES, Trenton, N. J. Filed Mar. 11, 1914. Serial No. 823,895. (Cl. 221—103.)



1. A measuring apparatus comprising a supply magazine, the capacity of which is capable of being adjusted to exactly hold a predetermined or weighed quantity of material, in combination with means for successively subdividing the contents of the magazine into a predetermined number of equal portions.

2. A measuring apparatus comprising a supply magazine, a plunger forming the bottom of the said magazine, means for adjusting the said plunger to vary the capacity of the said magazine, to exactly hold a predetermined or weighed quantity of material, and means for dividing the contents of the said magazine into a predetermined number of equal subdivisions after the adjustment of the said plunger.

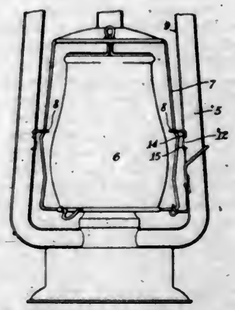
3. A measuring apparatus comprising a supply magazine and mechanism for removing therefrom successively equal amounts of material, including a reciprocating member, a carriage movable substantially at right angles to the path of reciprocation of said member, means for moving said carriage step by step, and devices mounted on said carriage for engaging said reciprocating member for giving thereto equal increments of movement for each step movement of the carriage.

4. A measuring apparatus comprising a supply magazine and mechanism for removing therefrom successively equal amounts of material, including a reciprocating member, a carriage movable substantially at right angles to the path of reciprocation of said member, means for moving said carriage step by step, devices mounted on said carriage for engaging said reciprocating member for giving thereto equal increments of movement for each step movement of the carriage, and means whereby the step by step movement given by the carriage may be varied.

5. A measuring apparatus comprising a supply magazine and mechanism for removing therefrom successively equal amounts of material, including a reciprocating carriage movable subsequently at right angles to said reciprocating member, means for moving the carriage step by step, an actuating bar mounted on said carriage at an inclination to the path of travel of the carriage, and devices for slidingly connecting said reciprocating member to said actuating bar.

[Claims 6 to 16 not printed in the Gazette.]

1,189,249. TUBULAR LANTERN. THEODORE A. GLENDE and WILLIAM B. FRANKENSTEIN, Rochester, N. Y., assignors to Pritchard Stamping Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 8, 1915. Serial No. 54,898. (Cl. 240—32.)

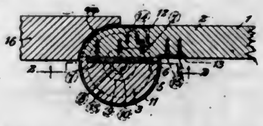


1. In a tubular lantern, the combination of an air-tube having a pair of perforations, and the metal between the perforations unbroken but outwardly offset from the body of the tube; and a wire slide-guide having a straight part lying in said perforations and said offset, an outward bend engaging the end of the offset, an inward bend engaging the body of the air-tube beyond the offset, and a portion, beyond said inward bend, adapted to perform the function of a slide-guide.

2. In a tubular lantern, the combination of an air-tube having, on each side of the middle of its inner surface, a pair of vertically spaced perforations, and the metal between the perforations being unbroken but outwardly offset from the body of the tube; and a wire slide-guide having two parallel end-portions which extend through said perforations and lie in said offsets.

3. In a tubular lantern, the combination of an air-tube having, on each side of the middle of its inner surface, a pair of vertically spaced perforations, and the metal between the perforations being unbroken but outwardly offset from the body of the tube; and a wire slide-guide having two parallel end-portions which extend through said perforations and lie in said offsets, each end being bent both above and below the corresponding offset so as to secure the wire in place without soldering.

1,189,250. DOOR. MAXIMILIAN N. GROOTTEN, Petrograd, Russia. Filed Feb. 17, 1916. Serial No. 78,887. (Cl. 20—16.)



1. In combination, a door casing, a door having a portion provided with a sectoral cylinder edge and a flat side, a shield having a curvature corresponding to that of said edge connected with said flat side and forming a cylindrical door edge having an axis disposed eccentrically of the door width and outside of said casing, the latter having a concaved face closely paralleling the

curvature of said shield, hinge members secured to the door within said shield and so disposed that the door may move from a closed position to an open position substantially parallel with said closed position without creating an open space between door casing and cylindrical door edge.

2. In combination, a door casing having a concaved face, a door, a shield having a cylindrically formed portion inclosing an edge portion of said door and connected to both sides of the door, swiveling hinged members secured to said door edge portion, the concaved face of said casing and the outer face of said cylindrically formed shield portion having closely paralleling curvatures struck from the center of rotation of the door, said center of rotation being disposed eccentrically of the width of the door and outside of said concaved door casing, so that the door may be swung from a closed position to an open position substantially parallel with said closed position without forming an open space between said casing and the hinged edge of the door.

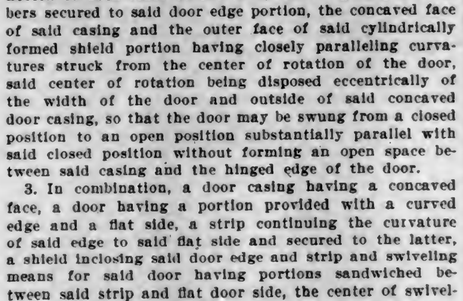
3. In combination, a door casing having a concaved face, a door having a portion provided with a curved edge and a flat side, a strip continuing the curvature of said edge to said flat side and secured to the latter, a shield inclosing said door edge and strip and swiveling means for said door having portions sandwiched between said strip and flat door side, the center of swiveling being eccentric to the width of said door and casing, said concave face and shield having closely paralleling curvatures struck from the center of swiveling, so that the door may be swung from a closed position to an open position, substantially parallel with the closed position without forming an open space between said casing and the hinged edge of the door.

4. In combination, a door having an eccentrically disposed cylindrical edge, door swiveling means concentric with the circumference of said cylindrical edge and a door casing having a concave face, said face and the circumference of said cylindrical edge having closely paralleling curvatures struck from the center of swiveling, the latter being outside said casing, whereby the door may be swung from a closed position to an open position substantially parallel with said closed position without forming an open space between said casing and the door edge adjacent said swiveling means.

5. In combination, a door casing and a door having an edge, a portion of said casing and said edge being in continuously intimate relation to each other and so formed that said door may be swung from a closed position to an open position substantially parallel with said closed position without forming an open space between said casing and said door edge.

[Claims 6 to 14 not printed in the Gazette.]

1,189,251. MECHANISM FOR ACTUATING THE REVERSING MECHANISM OF LOCOMOTIVES. GILBERT A. HARDEN, New York, N. Y. Filed Feb. 11, 1915. Serial No. 7,512. (Cl. 121—98.)



1. In a device for moving and holding the reversing mechanism of a locomotive, the combination of an actuating cylinder, an actuating piston, connections from the piston to the reversing mechanism, means independent of the actuating piston for locking the reversing mechanism, a separate cylinder and piston for unlocking the said locking means, a fluid pressure connection between said unlocking cylinder and the actuating cylinder, means for supplying compressed fluid to said cylinder, a controlling valve therefor, a fluid pressure connection from said controlling valve to the actuating cylinder, an actuating piston, connections from the piston to the reversing mechanism, means independent of the actuating piston for locking the reversing mechanism, a separate cylinder and piston for unlocking the said locking means, a fluid pressure connection between said unlocking cylinder and the actuating cylinder, means for supplying compressed fluid to said cylinder, a controlling valve therefor, a fluid pressure connection from said controlling valve to the actuating cylinder, a normally open exhaust valve for the unlocking cylinder, an operating lever for the controlling valve, and an auxiliary actuating device carried by said operating lever for actuating said exhaust valve and adapted to be operated by the hand of the operator in grasping the lever.

2. In a device for moving and holding the reversing mechanism of a locomotive, the combination of an actuating cylinder, an actuating piston, connections from the piston to the reversing mechanism, means independent of the actuating piston for locking the reversing mechanism, a cylinder and piston for unlocking the said locking means, a fluid pressure connection between said unlocking cylinder and the actuating cylinder, means for supplying compressed fluid to said cylinder, a controlling valve therefor, a fluid pressure connection from said controlling valve to the actuating cylinder, a normally open exhaust valve for the unlocking cylinder, and an operating lever for the controlling valve, and an auxiliary actuating device for closing the exhaust valve, adjacent to said lever.

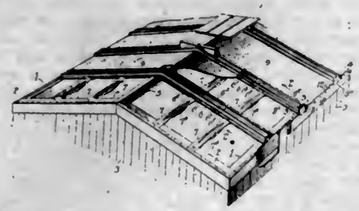
3. In a device for moving and holding the reversing mechanism of a locomotive, the combination of an actuating cylinder, an actuating piston, connections from the piston to the reversing mechanism, means independent of said actuating piston for locking the reversing mechanism, a cylinder and piston for unlocking the said locking means, a fluid pressure connection between said unlocking cylinder and the actuating cylinder, means for supplying compressed fluid to said cylinder, a controlling valve therefor, a fluid pressure connection from said controlling valve to the actuating cylinder, a normally open exhaust valve for the unlocking cylinder, an operating lever for the controlling valve, and an auxiliary actuating device carried by said operating lever for actuating said exhaust valve and adapted to be operated by the hand of the operator in grasping the lever.

4. In a device for moving and holding the reversing mechanism of a locomotive, the combination of an actuating cylinder, an actuating piston, connections from the piston to the reversing mechanism, means independent of said actuating piston for locking the reversing mechanism, a cylinder and piston for unlocking the said locking means, a fluid pressure connection between said unlocking cylinder and the actuating cylinder, means for supplying compressed fluid to said cylinder, a controlling valve therefor, a fluid pressure connection from said controlling valve to the actuating cylinder, a normally open exhaust valve for the unlocking cylinder, an actuating lever for the controlling valve, and a device adapted to be operated by the thumb of the operator operatively connected with the exhaust valve to close said exhaust valve.

5. In a device for moving and holding the reversing mechanism of a locomotive, the combination of a double acting actuating cylinder, a piston reciprocating therein, connections from the piston to the reversing mechanism, means independent of the piston for automatically locking the reversing mechanism in adjusted position, a cylinder and piston for unlocking said locking means, fluid pressure connections between said cylinder and the double acting cylinder extending to both ends of the latter, pressure operated valves controlling said connections to the opposite ends of the cylinder, means for supplying compressed fluid, a controlling valve, a pressure fluid connection from said controlling valve to each end of the actuating cylinder, a normally open exhaust valve for the unlocking cylinder, and manually operable means for closing said exhaust valve.

[Claims 6 and 7 not printed in the Gazette.]

1,189,252. METAL CAR-ROOF. HERBERT H. HART, Evanston, Ill. Filed Feb. 7, 1913. Serial No. 746,716. (Cl. 108—5.4.)



1. In a car roof, the combination of a carline and a purlin connected therewith, the latter consisting of a metallic strip having its body portion corrugated downwardly to form a truss support and having a depressed portion forming a seat for the carline, said depressed portion beginning substantially at one end of said corrugation whereby the strain of the carline on the purlin is communicated directly to the truss and sustained thereby, the top surface of the purlin being otherwise flat, and a roofing sheet supported by said flat surface and by the carline.

2. In a car roof, the combination of a series of carlines and a series of purlins connected therewith, each purlin consisting of a metallic strip having its body portion between the carlines corrugated downwardly to form a truss support and having its portions adjacent the carlines depressed to form seats therefor, said depressed portions beginning substantially at one end of said corrugation whereby the strain of the carline on the purlin is communicated directly to the truss and sustained thereby, the top surface of such body portion of the purlin and the top surface of those portions of the carlines seated in the purlins being flat and flush with each other, and a roofing sheet supported by said flat surfaces of the carlines and purlins.

3. In a car roof, the combination of a carline of channel form provided with a laterally extending flange, a purlin connected therewith and consisting of a metallic strip having a portion offset to the extent of the thickness of said flange and received by the latter and also having an upwardly directed portion interlocked with the channel of the carline, and a roofing sheet fitting upon the purlin and said flange which present a flush surface to the sheet.

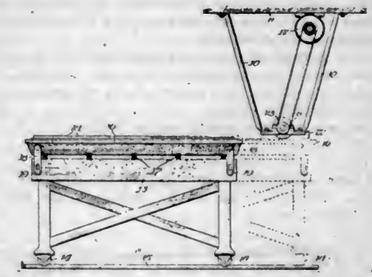
4. In a car roof, the combination of a series of carlines of channel section, metallic purlins having channel portions received by and interlocked with such channel of the carlines, and roofing sheets interlocked with the carlines and supported by the purlins.

5. In a car roof, the combination of a carline of channel form provided with a laterally extending flange, a purlin connected therewith and consisting of a metallic strip having a portion offset to the extent of the thickness of said flange and received by the latter and also having a channel portion received by and interlocked with such channel of the carline, and a roofing sheet interlocked with the carline and fitting upon the purlin and said flange of the carline which present a flush surface to the sheet.

[Claims 6 to 14 not printed in the Gazette.]

1,189,253. MACHINE FOR SHAPING RIBS ON PIANO SOUNDING-BOARDS. JAMES A. HART, Laporte, Ind., assignor to The Hobart M. Cable Company, Laporte, Ind., a Corporation of Illinois. Filed Nov. 20, 1914. Serial No. 873,126. (Cl. 144—134.)

1. In a machine for shaping the ribs on piano sounding boards, the combination of a stationary revolving cutter, a table for carrying the work to the cutter comprising a bodily movable frame having a bed yieldingly mounted thereon to receive the work, and means associated with the cutter and adapted to engage the sounding board on opposite sides of a rib for regulating the cut to insure uniform shaping of the ribs.



2. In a machine for shaping the ribs on piano sounding boards, the combination of a stationary revolving cutter, a table for carrying the work to the cutter comprising a bodily movable frame and a bed yieldingly supported thereon to receive the work, and rollers mounted concentrically with the axis of the cutter to engage the sounding board on opposite sides of a rib to insure uniform shaping of the ribs.

3. In a machine for shaping the ribs on piano sounding boards, the combination of a suspended supporting plate, a shaft journaled in bearings on said plate, a cutter mounted on said shaft, a movable table for carrying the work to the cutter, said table having a yielding bed to receive the work, rollers on the shaft adjacent said cutter to engage the board on opposite sides of the rib being operated upon by the cutter, and means for operating said shaft.

4. In a machine for shaping the ribs on piano sounding boards, the combination of a fixed supporting plate, a revolving cutter mounted on the plate, a movable table for carrying the work to the cutter, said table having a yielding bed to receive the work, means associated with the cutter for regulating the cut to insure uniform shaping of the ribs, and a stop on the supporting plate for limiting the length of cut.

5. In a machine for shaping the ribs on piano sounding boards, the combination of a suspended supporting plate, a shaft journaled in bearings on said plate, a cutter mounted on said shaft, a movable table for carrying the work to the cutter, said table comprising a frame and a relatively movable bed to receive the work, springs supporting the bed to enable it to yield as required, links connecting the bed to the frame, rollers mounted on the shaft concentrically with the axis of the cutter to engage the board on opposite sides of the rib being operated upon by the cutter, a stop on the plate for limiting the length of cut, and means for operating said shaft.

1,189,254. PRODUCTION OF ALUMINATES FROM ALUNITE. PAUL R. HERSHMAN and RAYMOND D. COOKE, Chicago, Ill., assignors to Mineral Products Corporation, New York, N. Y., a Corporation of Maine. Filed Mar. 21, 1916. Serial No. 85,618. (Cl. 23—13.)

1. The method of producing potassium aluminate from alunite, which comprises calcining the alunite in the presence of carbonaceous material; substantially as described.

2. The method of producing potassium aluminate from alunite, which comprises calcining the alunite in the presence of carbonaceous material under non-oxidizing conditions and at a temperature sufficiently low to leave the alumina present in an alkali-soluble condition, and recovering the potassium aluminate and the alkali-soluble alumina from the resulting product; substantially as described.

3. The method of producing potassium aluminate from alunite, which comprises calcining the alunite in the presence of carbonaceous material, and maintaining re-

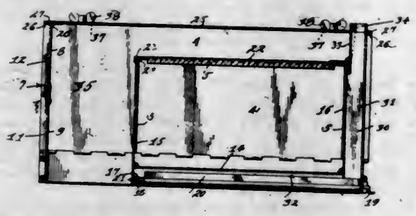
ducing conditions during the calcination; substantially as described.

4. The method of producing potassium aluminate from alunite, which comprises calcining the alunite in the presence of carbonaceous material and of a reducing gas; substantially as described.

5. The method of producing potassium aluminate from alunite, which comprises calcining the alunite, in the presence of carbonaceous material and of steam; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

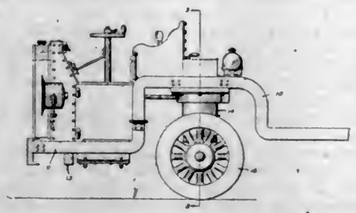
1,189,255. CAMP-STOVE. RALPH W. HIBBARD, Burns, Oreg. Filed July 20, 1915. Serial No. 40,946. (Cl. 126—9.)



1. A camp stove comprising a bottom, sides and ends hingedly connected with the bottom, one of said ends consisting of hingedly connected sections, a top having one edge hingedly connected to the edge of one of the sides and adapted to engage the edges of the ends and the other side, an oven consisting of a bottom and hingedly connected ends, one of said ends having spaced strips hingedly connected thereto, the free edges thereof being adapted to engage the adjacent stove end to provide a vertical flue.

2. A camp stove comprising a bottom, sides and ends hingedly connected with the bottom, plates pivotally associated with the bottom, an oven consisting of a bottom, ends hingedly connected to the oven bottom and having their lower edges engaging the bottom of the stove, the sides of the stove serving to close the sides of the oven, strips hingedly connected to one of the ends of the oven and coacting with the adjacent stove end plate to provide a vertical flue, means for swinging the plates upwardly or downwardly, a top hingedly connected to one of the sides and adapted to engage the ends of the stove and adjacent side, and means for detachably connecting the free edge of the top to the upper edge of the adjacent side.

1,189,256. AUTOMOBILE VEHICLE. OTIS A. HOLLIS, Pittsburgh, Pa., assignor, by mesne assignments, to Hollis Automatic Traction Jack Company, Pittsburgh, Pa., a Corporation of Delaware. Filed June 3, 1912. Serial No. 701,265. (Cl. 21—90.)



1. A motor vehicle having two pairs of front drive wheels normally abreast, the wheels of each pair being loosely mounted on their axles but having automatic clutches engaging the same in one direction, a support for said axle of each pair containing driving mechanism for the axle and mounted for complete revolution on a vertical axis between the tread of the wheels, and means to adjust the position of all said wheels about said vertical axes.

2. A motor vehicle providing two pairs of driving wheels at the front of the frame, each pair of wheels being supported on a power driven horizontal axle and supplied with one way clutches engaging said axle, a rotatable vertical column supporting each axle and having means to drive the axle and to rotate the column.

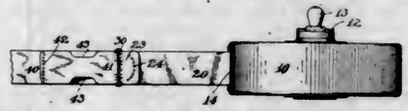
3. In a motor vehicle, driving means comprising several pairs of wheels supported on horizontal axles and said axles mounted for complete revolution on a vertical axes, the drive wheels being provided with means to grip the axle upon relative movement in one direction and to release in the other direction, a motor and gearing to constantly drive said horizontal axle, and gearing to revolve the pair of wheels about said vertical axis.

4. In a motor vehicle, the combination with the frame and the motor, a drive wheel mounted on a horizontal axle, a revoluble vertical column supporting said horizontal axle, and supporting the vehicle frame through a collapsible spring, a relatively movable sleeve splined on said column, and worm gearing to thereby rotate the column without interference with the drive wheels.

5. The combination of a drop frame having a forward extension, a motor on said extension, idle wheels on the rear of the frame and universally movable drive wheels supporting the front of the frame at two points, and gearing to drive said wheels and to revolve them on vertical axes.

[Claims 6 to 8 not printed in the Gazette.]

1,189,257. MEASURING-TAPE. RICHARD KASTMANN, New York, N. Y., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 1, 1915. Serial No. 37,408. (Cl. 33—138.)



1. In a device of the character described, a tape having a terminal loop with a cut out edge on one stretch of the loop, a post, a tongue carried by the post, a connector secured to the tongue and consisting of a ring having an opening whereby its ends on either side of the opening may readily pass within the loop at its cut out portion.

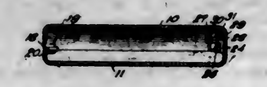
2. The combination with a tape case provided with a central post and a tongue carried thereby of a tape and means for detachably securing it to the tongue including a loop formed on the end of the tape, a loop carried by the tongue and a connector between them consisting of an open ring secured to one loop and adapted to engage the other.

3. The combination with a tape case provided with a central post and a tongue carried thereby of a tape and means for detachably securing it to the tongue including a loop formed on the end of the tape, a loop at the end of the tongue, one loop having notched edges and a connector between the loops consisting of an open ring secured to the unnotched loop and adapted to engage the notched loop.

4. The combination with a tape case provided with a central post and a tongue carried thereby, of a tape and a loop formed on one end thereof, a connector carried by the tongue, said connector located in the end of said loop for connecting the tape to the tongue and capable of being moved from said end location for separating the tape from the tongue.

1,189,258. COIN-BANK. EDWARD FRANCIS KAVANAGH, Cleveland, Ohio. Filed Nov. 12, 1915. Serial No. 61,068. (Cl. 232—6.)

1. A bank having a coin slot and comprising two separable box sections provided with locking means including members on the respective sections and disposed adjacent to each other when the sections are together, and a latch adapted to engage both of the said members.



2. A bank having a coin slot and comprising two separable box sections provided with locking means including tongues on the respective sections parallel with the general planes of the sections, and disposed adjacent to each other when the sections are together, and a spring latch having a recess adapted to accommodate both of the said tongues, and in which one of said tongues is permanently positioned.

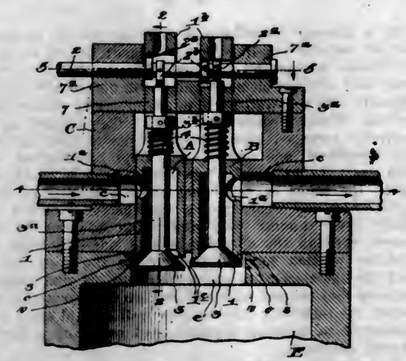
3. A bank having a coin slot and comprising two separable box sections provided with locking means including tongues on the respective sections and disposed adjacent to each other when the sections are together, and a spring latch adapted to engage both of the said tongues, said latch having a hook thereon adapted to be engaged by a mating hook for moving the said latch.

4. A bank having a coin slot and comprising separable box sections, a guard at the interior of the box at said coin slot, the guard presenting convergent members disposed at opposite sides of the slot, and means to lock the sections together, said locking means including lock members on the respective sections adapted to lie in close relation when the said sections are together, and a resilient latch having an opening to receive both of said lock members and having a hook member thereon disposed adjacent to the ends of the guard members and adapted to be engaged by an operating means entered through the coin slots and between the guard members.

5. A bank having a coin slot and comprising separable box sections, and means to lock the sections together, said locking means including a member on one box section at the interior of a side thereof, a latch on said box section engageable with said lock member, and a second lock member on the adjacent side of the other box section adapted to lie in close relation with the first member and engageable also by the said latch, there being a trip member adjacent to the second lock member adapted to trip the latch when the box sections are brought together to permit both of said members to be engaged by said latch.

[Claim 6 not printed in the Gazette.]

1,189,259. VALVE. HENRY B. KRIPER, Lancaster, Pa. Filed May 15, 1914. Serial No. 838,736. (Cl. 123—188.)



1. In a valve, the combination of a seat, and a valve simultaneously movable in opposite directions to open or close the valve; and springs for closing the valve.

2. In a valve, the combination of a sleeve having a seat in one end, a valve adapted to fit said seat, a valve stem extending through the sleeve, means for simultaneously moving the valve and sleeve in opposite directions to open the valve; and a spring for closing the valve.

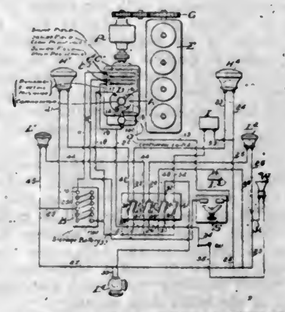
3. In a valve, the combination of a reciprocatory sleeve having a valve seat, a reciprocatory puppet valve adapted to engage said seat, a spring for moving the valve and sleeve in opposite directions to close the valve, and means for moving the sleeve and valve in opposite directions to open the valve.

4. In combination, a valve casing, a sleeve provided with a valve seat, a valve fitted to said seat, means adapted to simultaneously move the sleeve and valve in opposite directions, a spring for normally closing the valve on its seat, and a spring for returning the sleeve to normal position.

5. In a valve, the combination of a sleeve open at one end, a valve adapted to close the open end of the sleeve and having a stem extending through the opposite end of the sleeve, a collar on said stem, and a spring interposed between said collar and the sleeve to normally close the valve on the seat, and means for moving the valve and sleeve in opposite directions to open the valve.

[Claims 6 to 9 not printed in the Gazette.]

1,189,260. ENGINE-STARTER. CARLTON L. KENNEDY, South Braintree, Mass., assignor to The Holtzer-Cabot Electric Company, Brookline, Mass., a Corporation of Massachusetts. Filed Sept. 25, 1912. Serial No. 722,201. (Cl. 171—315.)



1. The combination of an engine, a storage battery, a current consuming device, a direct current dynamo-electric machine connected with the engine to draw current from the storage battery as a motor to start the engine and to be driven by the engine as a dynamo to furnish current to the current consuming device and for charging the storage battery, said dynamo-electric machine having an armature, a shunt field winding connected across the armature and a series field winding, a circuit from the armature through the current consuming device, a circuit from the armature through the series field winding and the battery, said series field winding being so wound that when the battery receives current the machine field is weakened and when the battery furnishes current the field is strengthened by the current in the circuit through the armature, series field winding and battery, a cut-out open when the machine is at rest and closed when the machine is running at full speed, and a connection containing a starting switch shunting the cut-out.

2. The combination of an engine, a storage battery, a current consuming device, a direct current dynamo-electric machine connected with the engine to draw current from the storage battery as a motor to start the engine and to be driven by the engine as a dynamo to furnish current to the current consuming device and for charging the storage battery, said dynamo-electric machine having an armature, a shunt field winding connected across the armature and a series field winding, a circuit from the armature through the current consuming de-

vice, a circuit from the armature through the series field winding and the battery, an automatic cut-out in the circuit through the armature and battery closed when the dynamo-electric machine is running as a dynamo and open when the dynamo-electric machine is running as a motor, and a connection shunting the cut-out and containing a starting switch to lead current around the cut-out to operate the dynamo-electric machine as a motor to start the engine.

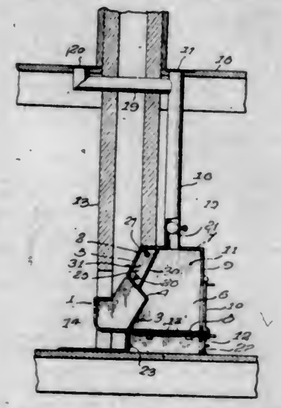
3. The combination of an engine, a storage battery, a current consuming device, a direct current dynamo-electric machine connected with the engine to draw current from the storage battery as a motor to start the engine and to be driven by the engine as a dynamo to furnish current to the current consuming device and for charging the storage battery, said dynamo-electric machine having an armature, a shunt field winding and a series field winding divided into two sections one of which is of higher resistance than the other, an automatic cut-out closed when the machine is running as a dynamo and open when running as a motor, a connection through the armature and cut-out to the current consuming device, a connection through the armature, cut-out and both sections of the series field winding to the battery, said series field winding being wound so that the field is strengthened when current flows from the battery and weakened when current flows to the battery, and a shunt connection containing a starting switch around the cut-out and the higher resistance section of the series field winding.

4. The combination of an engine, a storage battery, a current consuming device, a direct current dynamo-electric machine connected with the engine to draw current from the battery as a motor to start the engine and to be driven by the engine as a dynamo when the engine is running to furnish current to the current consuming device and for charging the storage battery, said dynamo-electric machine having an armature, a shunt field winding and a series field winding divided into two sections, one of which is of higher resistance than the other, a connection from the armature to the current consuming device, a connection from the armature through both sections of the series field winding to the battery, said series field winding being wound so that when the current flows to the battery the field is weakened and when the current flows from the battery the field is strengthened, a cut-out in the connection between the armature and the battery, and a connection containing a starting switch shunting the cut-out and higher resistance section of the series field winding.

5. The combination of an engine, a storage battery, a direct-current dynamo-electric machine connected with the engine to draw current from the storage battery as a motor to start the engine and to be driven by the engine as a dynamo to furnish current for charging the storage battery, said dynamo-electric machine having an armature, a shunt field winding and a series field winding divided into two sections, one section being of higher resistance than the other, connections including a cut-out closed when the machine is running as a dynamo and open when the machine is at rest for leading the current through the higher resistance section of the series field winding to charge the battery, and connections including a starting switch for leading the current around the cut-out and through the lower resistance section of the series field winding for driving the machine as a motor, the series field winding being so wound as to oppose the shunt field winding when the machine is charging the battery and aid the shunt field winding when the machine is run as a motor.

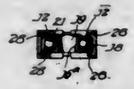
1,189,261. HEATING AND BAKING STOVE. WILLIAM KINCAID and WILLIAM AVIS CLARK, Glen Ferris, W. Va. Filed Aug. 5, 1915. Serial No. 43,865. (Cl. 126—5.)

In a stove of the kind described, the combination with a fire box and a heating chamber in rear thereof; of a zigzag plate between the two and formed of upper and lower flat sections inclining downwardly and forwardly, and an intermediate flat section inclining downwardly and rearwardly and joined integrally at its edges with the adjacent edges of the other sections, the lower half of the intermediate section and the entire lower section constituting the rear wall of the fire box and being uninsulated to allow the free radiation of heat into the heating chamber, a flat plate disposed parallel to the upper section of the aforesaid zigzag plate and confined in the heating chamber, said plate extending from the vertical



center of the intermediate section to the top of said heating chamber to form therewith a water heating reservoir between itself and the upper flat section of the zigzag plate with the upper half of the intermediate section of said plate serving as the bottom of said reservoir, whereby the contents thereof will be subjected to the intense heat within the fire box, means for supplying water to the reservoir, and additional means for withdrawing such water.

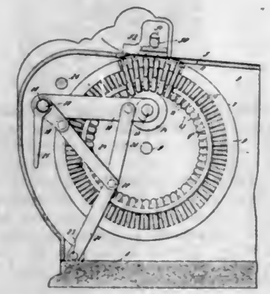
1,189,262. BEARING. EDWARD KRANTZ, Chicago, Ill., assignor to United Vacuum Sweeper Company, Chicago, Ill., a Corporation of Delaware. Original application filed Apr. 22, 1915, Serial No. 23,026. Divided and this application filed Feb. 3, 1916. Serial No. 75,897. (Cl. 64—36.)



1. A bearing comprising in combination an integrally formed metallic cup-like female element having an annular flange upstanding from a centrally apertured side-wall, said cup-like element being open on the side thereof opposite said side-wall portion, an integrally formed male bearing element comprising a disk-like portion and a centrally arranged stem circular in cross view upstanding therefrom, one end of said stem terminating free, said stem being axially apertured to accommodate a shaft, the walls of said stem being substantially thick for strength and wear, the free end thereof having a relatively thin annular wall and being adapted to pass loosely through the aperture of said side-wall with said disk-like portion substantially closing the open side of said cup-like element, a plurality of anti-friction elements between said central stem and the interior surface of said flange, the relatively thin annular wall of said stem being outturned to form an integral bead overlying a portion of said side wall.

2. A bearing comprising in combination an integrally formed metallic cup-like female element having an annular flange upstanding from a centrally apertured side-wall, said cup-like element being open on the side thereof opposite said side-wall portion, an integrally formed male bearing element comprising a disk-like portion and a centrally arranged stem circular in cross view upstanding therefrom, one end of said stem terminating free, said stem being axially apertured to accommodate a shaft, the walls of said stem being substantially thick for strength and wear, the free end thereof having a relatively thin annular wall and being adapted to pass loosely through the aperture of said side-wall with said disk-like portion substantially closing the open side of said cup-like element, a plurality of anti-friction elements between said central stem and the interior surface of said flange, said stem being hardened where said anti-friction elements travel thereon, the relatively thin annular wall of said stem being relatively soft and outturned to form an integral bead overlying a portion of said side wall.

1,189,263. MANIFOLDING DEVICE. ALBERT KRAUTH, Hamilton, Ohio. Filed Mar. 11, 1915. Serial No. 13,789. (Cl. 211—33.)



1. A paper feeding device comprising an apertured table, paper feeding disks rotatably mounted in alinement with said apertures and provided with radially disposed pin plungers, and means for progressively elevating said plungers through the table apertures to engage and puncture the paper.

2. A paper feeding device comprising an apertured table, paper feeding disks projecting into said apertures and provided with radially disposed pin plungers, and means for progressively elevating said plungers through the table apertures to engage and puncture the paper.

3. A paper feeding device comprising an apertured table, intermittently rotated paper feeding disks projecting into said apertures and provided with radially disposed pin plungers, and means for progressively elevating said plungers through the table apertures to engage and puncture the paper.

4. A paper feeding device comprising an apertured table, positively driven tension feed rollers engaging therewith, positively driven paper feeding disks projecting into the table apertures and provided with radially disposed pin plungers, and means for progressively elevating said plungers through the table apertures to engage and puncture the paper.

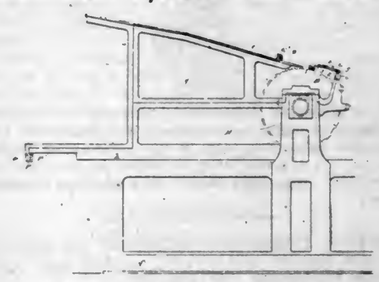
5. A paper feeding device comprising an apertured table, paper feeding disks rotatably mounted in alinement with said apertures and provided with radially disposed plungers, and means for progressively elevating the plungers through the table apertures to engage the paper.

[Claims 6 to 14 not printed in the Gazette.]

1,189,264. PAPER-FEED GAGE. STEPHEN J. KUBEL, Washington, D. C. Filed Nov. 27, 1915. Serial No. 63,892. (Cl. 101—37.)

1. A feed gage comprising a support, a rotary screw-threaded spindle carried thereby, a gage plate adjustably connected with the threaded end of said spindle, electromagnets for actuating the spindle in either direction, operating circuits for said magnets, a detent for locking said spindle, and electromagnetic means for disengaging the detent and spindle when the circuit to either electromagnet is energized to actuate the spindle.

2. A feed gage comprising a support, a rotary spindle, a gage plate operatively connected with said spindle, electromagnets for actuating said spindle in either direction, operating circuits for said magnets, a detent for locking said spindle, and electromagnetic means for disengaging the detent and spindle when the circuit to either electromagnet is energized to actuate the spindle.



3. A feed gage comprising a gage device, electromagnetic means for operating the same step by step in either direction, means for locking the gage at the end of each step, and electromagnetic means energized simultaneously with either operating means for releasing the locking means.

4. A feed gage comprising a rotary spindle, a gage plate operatively connected therewith, actuating and locking ratchets on said spindle, solenoids for operating said actuating ratchets step by step in either direction, a detent engaging the locking ratchet at the end of each step, and an electromagnet energized simultaneously with either operating solenoid for retracting said detent.

5. A feed gage comprising a gage device, electromagnetic means for operating the same step by step in either direction, circuits for said electromagnetic operating means, and circuit closing means carried by the gage and located at some distant point of control respectively for closing the circuit for energizing said electromagnetic operating means.

[Claims 6 and 7 not printed in the Gazette.]

1,189,265. ELECTRODE. ISADOR LADOFF, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 19, 1913. Serial No. 780,031. (Cl. 176—134.)

1. An arc light electrode comprising titanium oxid, fluorin chemically combined with barium and a flux which itself gives a white light in the arc.

2. An arc light electrode comprising titanium oxid, a barium compound which itself gives a substantially white light in the arc, and a flux which also gives a white light in the arc.

3. An arc light electrode comprising titanium oxid, a mineral which itself gives a substantially white light in the arc, and a flux consisting of a cerium compound and a thorium compound.

4. An arc light electrode comprising titanium oxid, a mineral compound which itself gives a substantially white light in the arc, and a flux consisting of a cerium compound and a thorium compound.

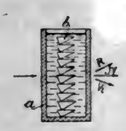
5. An arc light electrode comprising titanic material, sodium fluorid and a mineral compound which itself gives a substantially white light in the arc.

[Claims 6 to 11 not printed in the Gazette.]

1,189,266. STAGGERED DISPERSING DEVICE FOR COLOR PROJECTION. LOUIS LANDRY, Paris, France, assignor to Compagnie Générale des Etablissements Pathé Frères, Phonographe et Cinématographe, Paris, France. Filed Mar. 5, 1914. Serial No. 822,582. (Cl. 88—1.)

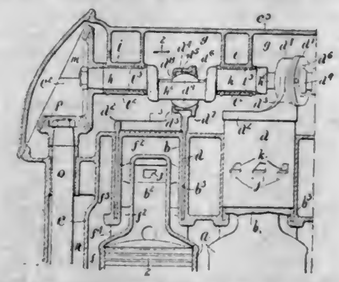
1. A device intended for decomposing light by separating the rays of different colors from one another by

means of prisms which comprises a transparent vat, a staggered refracting body in said vat and a liquid in the vat, the average index of which is near that of the refracting body, but that has a very high dispersing power.



2. A projecting apparatus comprising in combination a source of light, a condenser, a transparent vat, a staggered refracting body in said vat, and a liquid in the vat, the average index of which is near that of the refracting body but having a very high dispersing power.

1,189,267. INTERNAL-COMBUSTION ENGINE. HEBRON B. LAYMAN, New York, N. Y. Filed Mar. 31, 1914. Serial No. 828,431. (Cl. 123—81.)



1. In an internal combustion engine, a cylinder, having an explosion head provided with inlet and exhaust ports, a sleeve valve for controlling said ports, and a valve operating crank shaft mounted over said explosion head and in a vertical plane passing centrally and longitudinally through the engine and the cylinder and the explosion head, said crank shaft and said valve being geared in connection by a universal joint through which a crank of said crank shaft passes.

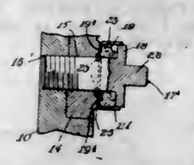
2. In an internal combustion engine, a cylinder having an explosion head provided with inlet and exhaust ports, a sleeve valve for controlling said ports, and a valve operating crank shaft mounted over said explosion head and in a vertical plane passing centrally and longitudinally through the engine and the cylinder and the explosion head, said valve being provided at one side with a raised member which is geared in connection with said crank shaft by a universal joint through which a crank of said crank shaft passes.

3. In an internal combustion engine, a vertically arranged cylinder having a ported explosion head controlled by a ported sleeve valve, and a valve operating crank shaft mounted above the explosion head, said valve being provided at one side with a raised member which is geared in direct connection with said crank shaft by a universal joint whereby said valve is given a compound longitudinally reciprocating, rotary oscillating movement.

4. An internal combustion engine having a cylinder provided with an explosion head having inlet and exhaust ports, a sleeve valve for controlling said ports, a crank shaft mounted centrally over the explosion head in a plane passing centrally and vertically through said cylinder and longitudinally of the engine, said crank shaft being geared directly in connection with said valve by means of a universal joint, and said crank shaft being also inclosed in a chamber independent of the water circulating passages or chambers of the engine and having a removable cap.

5. In an internal combustion engine, a cylinder having an explosion chamber, a piston adapted to reciprocate in said cylinder, a valve controlling the inlet and exhaust ports of the explosion chamber and adapted to reciprocate longitudinally and oscillate circumferentially, a shaft at the upper end of said cylinder and extending transversely thereof, a crank on said shaft, and means for engaging said crank with said valve eccentric of the latter whereby said valve is reciprocated and oscillated.

1,189,268. CLAMPING DEVICE. AXEL LEVEDAHL, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Delaware. Filed May 11, 1914. Serial No. 837,656. (Cl. 151—7.)



1. The combination with a non-rotative member and a rotative member having screw-threaded engagement therewith, of a washer of yielding material interposed between said members, and a ring surrounding said washer and having interlocking connection with said non-rotative member, said rotative member having a part adapted to enter said ring, said part bearing on said washer and adapted to compress the same in said ring and against the opposed surface of said non-rotative member, when said rotative member is turned relatively to said ring and said non-rotative member.

2. The combination with a non-rotative member and a rotative member having screw-threaded engagement therewith, of a washer of yielding material interposed between said members, and a ring surrounding said washer and having interlocking connection with said non-rotative member, said rotative member having a part adapted to enter said ring, said part bearing on said washer and adapted to compress the same in said ring and against the opposed surface of said non-rotative member, when said rotative member is turned relatively to said ring and said non-rotative member, and the bearing surfaces of said part and said non-rotative member in contact with said washer having recesses in which portions of said washer are forced when the latter is placed under compression.

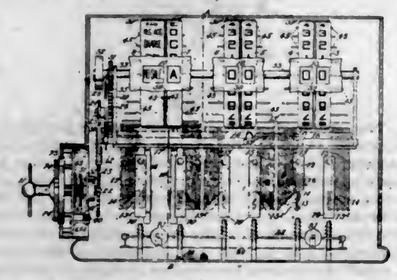
3. The combination with a non-rotative member and a rotative member having screw-threaded engagement therewith, of a cork washer interposed between said members, and a ring surrounding said washer and having interlocking connection with said non-rotative member, said rotative member having a part adapted to enter said ring, said part bearing on said washer and adapted to compress the same in said ring and against the opposed surface of said non-rotative member, when said rotative member is turned relatively to said ring and said non-rotative member.

4. The combination with a non-rotative member and a rotative member having screw-threaded connection therewith, of a washer of yielding material interposed between said members, and a ring surrounding said washer, said ring being provided with at least one radially projecting locking arm, said non-rotative member being provided in the surface against which said washer is forced with at least one locking notch adapted to receive said arm, to hold the ring from rotation when the rotative member is turned, and said rotative member having a part bearing against said washer, adapted to enter said ring and force the washer therein to and against said non-rotative member, when said rotative member is turned relatively to said ring and said non-rotative member.

5. The combination with a non-rotative member and a rotative member having screw-threaded connection therewith, of a washer of yielding material interposed between said members, and a ring surrounding said washer and having interlocking connection with said non-rotative member, said rotative member having a part adapted to enter said ring, said part bearing on said washer and adapted to compress the same in said ring and against the opposed surface of said non-rotative member, when said rotative member is turned relatively to said ring and said non-rotative member, said ring being provided with a plurality of inwardly projecting locking arms adapted to extend beneath said washer, said non-rotative member being provided in its surface against which said washer is forced with a plurality of locking notches adapted to receive said arms, to hold said ring from rotation when said rotative member is turned.

[Claim 6 not printed in the Gazette.]

1,189,269. REGISTERING, RECORDING, AND COMPUTING SYSTEM. GEORGE W. LORIMER, Piqua, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed July 12, 1912. Serial No. 709,042. (Cl. 235—2.)



1. In a system of registers having remote control, the combination of a mechanism located at a remote station for designating the characteristics of a transaction; an impulse generating means at the remote station, a plurality of registering devices located at a home station; electromagnets for causing the operation of said registering apparatus; adjustable means at the home station under the control of said impulse means for selecting the electromagnet to be operated, a plurality of circuits connecting the remote and home stations, and a source of current common to all said circuits for causing the operation of said registering apparatus under the control of said designating apparatus.

2. In a system of registers, the combination of a designating apparatus at a remote station; indicating apparatus at said remote station adapted to indicate the designations of said designating apparatus; means at said remote station, under the control of said designating apparatus, for generating electrical impulses; a home station having a plurality of registering devices selectively operable; means at the home station for recording, under the control of said impulses, the designation and indication of the apparatus at said remote station, and means at the home station also under control of said impulse means for selecting the registering devices for operation.

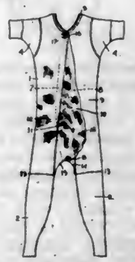
3. In a system of registers, the combination of a designating apparatus at a remote station; indicating apparatus at said remote station adapted to respond to said designating apparatus; means at said remote station, under the control of the designating apparatus, for generating electrical impulses, a home station having a plurality of registering devices selectively operable means at a home station for recording and indicating under the control of said impulses, the designation and indication of the apparatus at said remote station, and means at the home station also under control of said impulse means for selecting the registering devices for operation.

4. In a system of cash registers having remote control, registering apparatus at a remote station; a manually operated keyboard mechanically controlling said registering apparatus to indicate the characteristics of a transaction; electrical apparatus at the remote station, under the control of said keyboard, for generating impulses according to the characteristics shown by said registering apparatus, a plurality of registering devices at a home station, and means under control of said impulses, for selectively operating said registering devices according to the characteristics shown by said remote indicating apparatus.

5. In a system of cash registers having remote control, indicating apparatus at a remote station; a manually operated keyboard at said remote station controlling said indicating apparatus to indicate the characteristics of a transaction; electrical apparatus at the remote station, under the control of said keyboard, for generating impulses according to the characteristics shown by said indicating apparatus; and a plurality of recording devices at a home station adapted, under control of said impulses, selectively to record the characteristics shown by said remote indicating apparatus.

[Claims 6 to 69 not printed in the Gazette.]

1,189,270. UNION UNDERGARMENT. JOHN T. LYONS, Fawtucket, R. I. Filed Oct. 9, 1915. Serial No. 55,098. (Cl. 2—144.)



1. A union garment comprising integral body and leg portions having a front permanently closed from the neck to a substantial distance below the waist line and a back divided from the collar to a point on the thigh, one portion of the back being formed of a fullness of decreasing extent from the crotch toward the collar and the opposite portion having a flap of like decreasing fullness secured to its edge and arranged to overlap the complemental portion of the back and fastening means for said back arranged at the collar and adjacent the waist line, the arrangement of the garment being such as to permit the fitting to or removing from the person without releasing the fastening means at the waist portion.

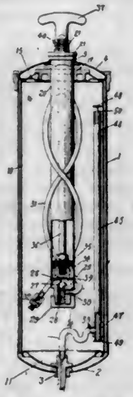
2. A union garment comprising knitted integral body and leg portions, the body portion having a front permanently closed from the neck to a substantial distance below the waist-line, the back having a single opening extending vertically from the crotch to the collar, overlapping flap and gusset portions elastically seamed respectively to the adjacent edges of the back portion, said gusset and flap being of greater fullness than the sections to which they are secured and means located at the collar for securing the flap in overlapped position.

3. A union garment comprising integral body and leg portions, the body portion having a front permanently closed from the neck to a substantial distance below the waist-line and a back divided from the collar to a point on the thigh, overlapping flap and gusset portions secured to the adjacent edges of the back, the fabric of said gusset and flap portions being bias to the fabric of the body portions and provided with greater fullness than that of the body portion and means for securing the back portions together at the top.

1,189,271. FIRE-EXTINGUISHER. HARRY M. MCCASLIN, Elmira, N. Y., assignor to American La France Fire Engine Co., Inc., Elmira, N. Y., a Corporation of New York. Filed Mar. 3, 1916. Serial No. 81,871. (Cl. 169—17.)

1. A fire extinguisher comprising an outer shell, an inner fluid container freely journaled in the outer shell

and carrying a discharge nozzle and a fluid expelling pump.



2. A fire extinguisher comprising an outer shell, an inner elongated fluid container freely journaled upon its longitudinal axis in the outer shell, and the axially arranged discharge nozzle and fluid expelling pump fixed and sealed in the opposite ends of the container and communicating with the interior of the container.

3. A fire extinguisher comprising an outer support, an inner fluid container weighted at one side and freely journaled in the support, and a discharge nozzle and a fluid expelling pump carried by said container.

4. A fire extinguisher comprising an outer supporting shell, an inner fluid container freely journaled in said shell and carrying a discharge nozzle and a fluid expelling pump, and a fluid discharging pipe secured upon one side of said container and in communication with the opposite ends thereof and with said nozzle.

5. An extinguisher comprising an outer supporting shell, an inner fluid container carrying a discharge nozzle at one end and a fluid expelling pump at the other end, the nozzle and pump projecting outwardly from the inner container and forming trunnions which are freely journaled in the ends of the outer shell, a fluid discharging pipe secured upon one wall of said inner container with its opposite ends in open communication with the container, and suitable means of communication between said discharge pipe and said discharge nozzle.

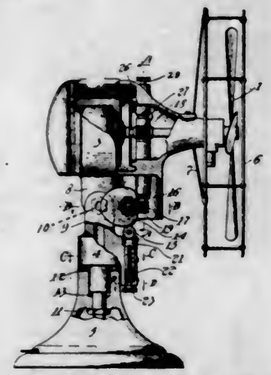
[Claims 6 and 7 not printed in the Gazette.]

1,189,272. LIGHTNING-ARRESTER. WILLIAM MCKEAN MCCLINTOCK, St. Paul, Minn. Filed Aug. 6, 1909. Serial No. 511,617. (Cl. 175—30.)



A lightning arrester comprising an insulating block, a conducting plate seated thereon, a binding screw adapted for a ground connection mounted in said block and passing through said plate and insulated therefrom, a second conducting plate mounted on said binding screw and overhanging said first named plate and insulated therefrom, a block of high resistance material interposed between said conducting plates and in close contact therewith, said block having sufficient resistance to prevent the passage of a normal current therethrough but offering a decreased resistance to the passage of a current of high voltage and forming temporarily a conductor therefor to said binding screw, and terminal binding screws mounted in said block and in circuit with said first named conducting plate.

1,189,273. OSCILLATING FAN. WILLARD M. MCEWEN, Chicago, Ill. Filed July 17, 1915. Serial No. 40,897. (Cl. 230—1.)



1. The combination of a support, a member journaled on a vertically disposed axis on said support, motor-driven mechanism mounted to tilt vertically on said member and comprising parts rotatable on a horizontally disposed axis, coacting means on said motor-driven mechanism and said member for tilting said motor-driven mechanism vertically and thereby through gyratory forces cause the horizontal oscillation of said member and motor-driven mechanism, and means for varying the vertical position of the limits of said vertical tilting.

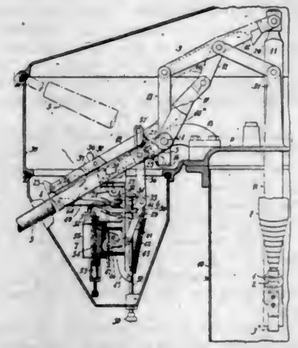
2. In an air circulating device, the combination of a support, a member journaled on a vertical axis thereon, blower mechanism rotatable on a horizontally disposed axis and mounted to tilt vertically on said member, a cam carried by said blower mechanism and engaging said member so as to tilt said blower mechanism in a vertical plane whereby said blower mechanism will oscillate horizontally on said support.

3. In an air circulating device, the combination of a support, a member journaled on a vertical axis thereon, blower mechanism rotatable on a horizontally disposed axis and mounted to tilt vertically on said member, a cam carried by said blower mechanism, a roller carried by said member and positioned for engagement with said cam, and means operated by said blower mechanism for rotating said cam so as to tilt said blower mechanism in a vertical plane and thereby cause said blower mechanism to oscillate relative to said support.

4. In an air circulating device, the combination of a support, a member journaled on a vertical axis thereon, blower mechanism rotatable on a horizontally disposed axis and mounted to tilt vertically on said member, a cam carried by said blower mechanism, a roller carried by said member and positioned for engagement with said cam, means operated by said blower mechanism for rotating said cam so as to tilt said blower mechanism in a vertical plane and thereby cause said blower mechanism to oscillate relative to said support, and means for adjusting said roller vertically on said member.

1,189,274. CIRCUIT-INTERRUPTER. HOWARD G. MACDONALD, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 15, 1912. Serial No. 677,865. (Cl. 175—267.)

1. In a circuit interrupter, the combination with cooperating stationary and movable contact members, an operating mechanism for said movable members, and means for restraining said operating mechanism, of a pivotally mounted bell crank lever having a recess therein, a spring attached to one of the arms of said lever having the recess therein and acting approximately in a line therewith, a latch adapted to engage the recess to restrain said lever, a striking member to release said restraining means, said striking member being operatively connected to the free arm of said lever, and an electromagnet for releasing said latch.



2. In a circuit interrupter, the combination with cooperating stationary and movable contact members, an operating mechanism for said movable members, and means for restraining the said operating mechanism, of a pivotally mounted bell-crank lever having a recess therein, a spring attached to the arm of the lever having the recess therein, means adapted to engage the recess in the lever to restrain the said lever, a striking member for releasing said restraining means, said striking member being operatively connected to the free arm of the said lever, and electro-responsive means for releasing the said means that engages the recess.

3. In a circuit interrupter, the combination with relatively movable coöperating contact members, an operating mechanism for the movable members, a compound operating lever associated with the said mechanism and comprising main and auxiliary levers, means for latching said levers together, means for restraining said compound lever in its closed position, means operatively related to a portion of the compound lever for automatically releasing the restraining means subsequent to the release of the latching means, and an electro-responsive device for automatically tripping said latching means, of means associated with said compound lever for resetting the electro-responsive device during the automatic opening of the interrupter.

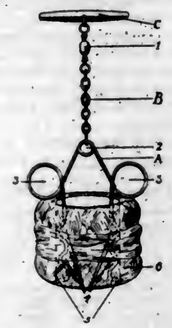
4. In a circuit interrupter, the combination with cooperating stationary and movable contact members, an operating mechanism therefor embodying a compound operating lever comprising two relatively movable pivotally mounted arms, a latch for restraining one of said arms, a second latch on said arm for locking both arms together, and means on said second arm for releasing said first latch, of a power device for releasing said second latch, electro-responsive means for tripping said power device, and means associated with said power device and said first arm for resetting said power device.

5. In a circuit interrupter, the combination with cooperating stationary and movable contact members, an operating mechanism for said movable members, and means for restraining said operating mechanism, of a pivotally mounted bell crank lever, means associated with one of the arms thereof for actuating said lever, a latch for restraining said lever, a striking rod operatively associated with the free arm of said lever by a pin and slot connection for releasing said restraining means and electro-responsive means for releasing said latch.

[Claim 6 not printed in the Gazette.]

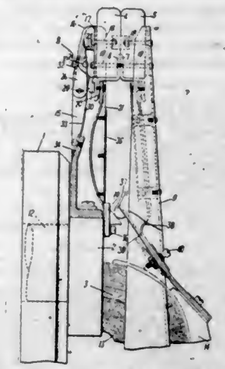
1,189,275. MEANS FOR HOLDING AND SUSPENDING BALLS OF THREAD, &c. JOHN SEIXAS MACGLASHAN, Cincinnati, Ohio, assignor of one-half to George B. Maggini, Cincinnati, Ohio. Filed Jan. 20, 1915. Serial No. 3,356. (Cl. 242—136.)

In means for holding and suspending balls of thread, a holder having a spring-looped eye therein and arms diverging first therefrom and then striking a course parallel with each other, said arms at the point of the beginning of said parallel course having in each a loop or turn and then next thereafter corrugations and next thereafter out-



turned barbs, said loops at the beginning of said parallel course being adapted to receive the ends of the fingers, to give resiliency to said arms and to form a sort of backstop for a ball of thread mounted thereon.

1,189,276. CIRCUIT-INTERRUPTER. JOSEPH N. MAHONEY, Wilkinsburg, and WALTER M. AUSTIN, Swissvale, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 28, 1912. Serial No. 722,933. (Cl. 175—282.)



1. In a circuit interrupter, the combination with relatively movable contact members, of a link for pivotally supporting one of the contact members, and a stop adapted to be engaged on one side by the link to limit its outward movement and adapted to be engaged on its other side by a projection on the contact member to guide and limit its rotational movement.

2. In a circuit interrupter, the combination with relatively movable main and auxiliary contact members, of a doubly-pivoted supporting means for the auxiliary contact member, and a single means for coöperating with the supporting means for limiting its outward movement and for coöperating with the auxiliary contact member for limiting its rotative movement.

3. In a circuit interrupter, the combination with relatively movable main and auxiliary contact members, of a doubly-pivoted supporting means for the auxiliary contact member, and a lug for engaging the supporting means to limit its movement and for engaging the auxiliary contact member to limit its rotative movement.

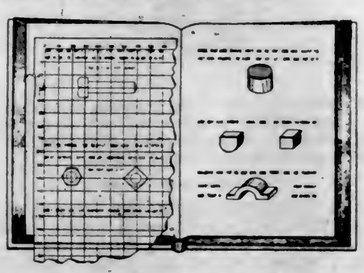
4. In a circuit interrupter, the combination with relatively movable main and auxiliary contact members, of a doubly-pivoted supporting means for the auxiliary contact member, and a lug for engaging the supporting means to

limit its movement and for engaging a projection on the auxiliary contact member to limit its rotative movement.

5. In a circuit interrupter, the combination with relatively movable main and auxiliary contact members, of a pair of links for pivotally supporting the auxiliary contact member on a common axis, resilient means for maintaining the auxiliary contact members in engagement when the interrupter is closed, and two lugs, the auxiliary contact members being adapted to engage the lugs on one side and the links being adapted to engage the lugs on their other sides to limit the relative outward and rotative movements thereof, respectively.

[Claim 6 not printed in the Gazette.]

1,189,277. APPARATUS FOR CODING MESSAGES. RICHARD C. MARTENS, London, England. Filed Apr. 19, 1916. Serial No. 92,185. (Cl. 35—13.)



Apparatus for use in sending messages by code comprising a transparent sheet having vertical and horizontal lines and indicia designating the same adapted to be superposed on the pages of a catalogue or the like to assist in identifying a particular cut on the page.

1,189,278. CASH-REGISTER. HAAKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Aug. 23, 1912. Serial No. 716,578. (Cl. 235—9.)



1. In a machine of the class described, the combination of a driving member having a constant movement in one direction only at each operation of the machine, a driven member, a driven means for differentially controlling the movement of the driven member effected by the driving member, a counter, means for operatively engaging the counter with the driven member before the latter is moved and disengaging it therefrom at the end of the differential movement, and means whereby the driving member thereafter actuates the driven member for moving the latter into position for the next operation.

2. In a machine of the class described, the combination of driving and driven members having movement in one direction only, means for coupling the members together for differential actuation of the driven member and uncoupling them at the end of the differential movement, and means for thereafter coupling the members together to position the driven member in condition for the next operation.

3. In a machine of the class described, the combination of a driving member having a constant movement in but one direction at each operation, a driven member also adapted for movement in but one direction, means for coupling the members together and later uncoupling them for determining differential actuation of the driven member by the driving member, and means whereby the members are again coupled to carry the driven member into position for the next operation and then uncoupled to permit the completion of the constant movement of the driving member.

4. In a machine of the class described, the combination of a driving member having a constant movement in but one direction at each operation, a driven member also having movement in but one direction, means for coupling the members together and later uncoupling them for determining the differential actuation of the driven member by the driving member, accounting mechanism, means operatively connecting it with the driven member before the latter is differentially moved and disconnecting therefrom after said differential movement, and means whereby the driven member is again coupled with the driving member for movement thereby into position for the next operation, and then uncoupled therefrom to permit completion of the constant movement of the driving member.

5. In a machine of the class described, the combination of a driving member having a constant movement in but one direction at each operation, of a driven member having but one direction of movement, a counter engaged with the driven member during a part of the operation only, means for controlling the extent of movement of the driven member given by the driving member while the counter is engaged with the driven member, and means whereby the driving member gives the driven member an additional movement to position it for the next operation after the counter has been disengaged from the driven member.

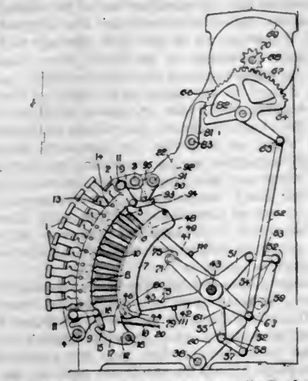
[Claims 6 to 44 not printed in the Gazette.]

1,189,279. DIFFERENTIAL MECHANISM. THOMAS MIDGLEY, Jr., Worthington, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Oct. 13, 1913. Serial No. 794,815. (Cl. 235—28.)

1. In a machine of the class described, the combination with two differentially movable frames; of keys for positively limiting the extent of movements of both frames; operating mechanism for moving the frames differentially and to complementary extents; indicating mechanism; and connections between the frames to the indicating mechanism whereby one of the frames moves the indicator from lower to higher positions and the other frame adjusts it from higher to lower indicating position.

2. In a machine of the class described, the combination with a differentially movable frame; of operating mechanism therefor; an indicator; a second frame adapted to be moved by the operating mechanism to extents complementary to movements of the first frame, movement of one frame being adapted to be limited before the movement of the other frame is limited whereby one frame adjusts the indicator from the lower to higher position to indicate the extent of movement of the frame, or the other mentioned frame adjusts the indicator from higher to lower position to indicate the extent of movement of the first mentioned frame.

3. In a machine of the class described, the combination with an accounting element; of an actuator therefor; differentially adjustable frames movable to complementary extents to adjust said actuator; and a pivoted member having a bodily movement of invariable extent and a rotary movement of different extents, to move said differentially movable frames to complementary extents for the purpose described.

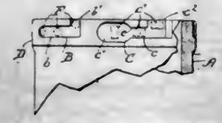


4. In a machine of the class described, the combination with an accounting element; of an actuator therefor; differentially adjustable frames movable to complementary extents to adjust the actuator; keys for limiting movement of said frames; an oscillatory arm; a lever centrally pivoted on said arm and connected to said differentially adjustable frames so that when said oscillatory arm is moved the lever will have no relative movements thereto until movement of one of the frames is limited by the key operated after which the lever will be rotated differentially until movement of the other frame is limited by the key operated.

5. In a machine of the class described, the combination with an accounting mechanism; of pivoted bell crank levers for actuating the same and movable in opposite directions and to complementary extents; keys for limiting the movements of the bell crank levers; an oscillatory driving arm having a constant extent of movement at each operation of the machine; a lever centrally pivoted on said oscillatory arm; and links connecting the ends of said last mentioned lever and the bell crank levers so that said driving arm moves said bell crank levers to complementary extents.

[Claims 6 to 12 not printed in the Gazette.]

1,189,280. CLOSURE FOR CONTAINERS. WILLIAM C. MORRILL, New York, N. Y. Filed Aug. 26, 1914. Serial No. 858,605. (Cl. 215—33.)



1. A container of the class described embodying a receptacle, a cover therefor, coöperating means on the receptacle and the cover for retaining said cover in position upon the receptacle, and other coöperating means on the receptacle and cover for locking the cover from movement relative to the receptacle, said retaining means and the locking means being independent of each other in operation and said retaining means operating during the rotative movement of the cover to position the locking means in such relation to the receptacle that said locking means is free from contact with said receptacle while rotating the cover.

2. A container of the class described embodying a receptacle, a cover therefor, coöperating devices on the cover and the receptacle adapted by a relative rotative movement of one part to the other for retaining the cover in tight engagement with said receptacle, and coöperating locking devices on the cover and the receptacle for positively locking said cover from movement, rotative and otherwise, relative to said receptacle, said retaining means being separate from said locking means and said retaining means operating during the rotative movement of the cover to position the locking means in such relation to the receptacle that said locking means is free from contact with said receptacle while rotating the cover.

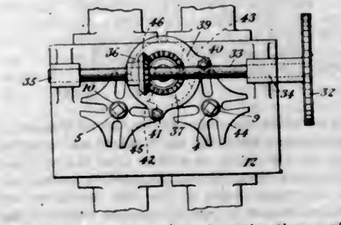
3. A container of the class described embodying a receptacle, a cover therefor, coöperating grooves and studs on the cover and the receptacle respectively for clamping said cover tightly upon the receptacle, and other coöperating devices on the cover and receptacle respectively for locking said cover against rotative movement with respect to said receptacle, said locking devices being separate from the retaining studs and grooves and all said means contributing mutually to the function of holding the cover tightly and immovably upon the receptacle, said retaining studs and grooves operating during the rotative movement of the cover to position the locking devices in such relation to the receptacle that said locking devices are free from contact during such rotative movement of the cover.

4. A container of the class described embodying a receptacle, a cover therefor, coöperating retaining means on the cover and the receptacle for clamping said cover relative to the receptacle, and a keeper on the receptacle coöperating with a locking mechanism on the cover for positively locking the latter against movement relative to the former, said locking mechanism and keeper being independent of the retaining means, said retaining means operating during a rotative movement of the cover to position the locking means free from contact with the keeper during such rotative movement of the cover.

5. In a container of the class described, the combination with a receptacle, and a removable cover therefor, of a keeper in said receptacle, locking means on said cover, and coöperating retaining means on the receptacle and cover adapted by a rotative movement of one part to the other for clamping the cover to or releasing it from the receptacle, said retaining means operating during a rotative movement of the cover to position the locking means free from contact with the keeper slot, and said retaining means coöperating with the locking means and keeper in the performance of the function of holding the cover tightly and immovably upon the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,189,281. INTERNAL-COMBUSTION ENGINE. PAUL H. MUELLER and LUDWIG H. SCHULER, Brooklyn, N. Y., assignors, by direct and mesne assignments, to L-M-S. Motor Co., Esopus, N. Y., a Corporation of New York. Filed Jan. 9, 1912. Serial No. 670,141. (Cl. 123—59.)



1. In a valve gear for internal combustion engines, the combination of a rotary valve, a Geneva gear for intermittently driving the valve, the driver disk of said gear having a series of pins and the follower disk a corresponding series of slots, an operative connection between the engine crank-shaft and driver disk, and an operative connection between the follower disk and the valve spindle, the pins of the driver disk being spaced unequally to occasion, in relation to the lap between the valve ports, an advance opening of the exhaust.

2. In a multi-cylinder internal combustion engine, the combination with a plurality of cylinders each having inlet and outlet ports, of a plurality of valves one for each cylinder and each constituting a combined admission and exhaust valve having a port adapted to register with the inlet and outlet ports of its cylinder at different times, and means for intermittently actuating said valves in similar cycles differing in phase said means including a pair of valve-actuating Geneva-wheels one for each valve and an actuator and stop-wheel common to said Geneva-wheels.

1,189,282. PROCESS OF RECLAIMING RUBBER. HAROLD R. MURDOCK, Naugatuck, Conn., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Aug. 10, 1915. Serial No. 44,732. (Cl. 18—52.)

1. In a process for the disintegration of fibrous cellular material, the treating of such material with a protein in the presence of heat.

2. In a process for the disintegration of fibrous cellular material, the treating of such material with a protein in the form of an albumin in the presence of heat.

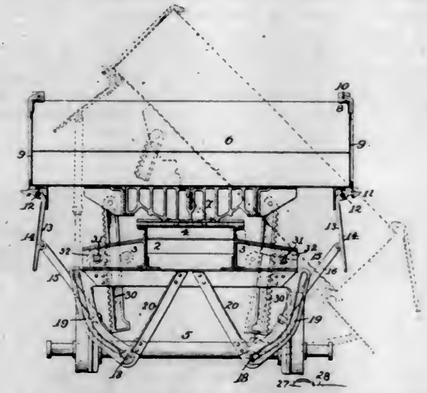
3. In the process for the disintegration of fibrous cellular material, the treating of such material with a natural organic product containing a protein in the presence of heat.

4. In the process of reclaiming rubber waste, the step of treating such waste with a protein.

5. In the process of reclaiming rubber waste, the step of treating such waste with a protein in the form of an albumin.

[Claims 6 to 10 not printed in the Gazette.]

1,189,283. DUMPING-CAR. ALBERT C. MURPHY, New York, N. Y. Filed Oct. 17, 1914. Serial No. 867,058. (Cl. 105—191.)



1. In a dumping car, the combination of the main frame, a body supported upon the main frame and adapted to be oscillated to discharge to either side thereof said body having discharge openings on its sides, doors hinged to the body at the upper edges of its side discharge openings, chute plates hinged to the lower side edges of the body, latches for holding the doors in closed position, means for moving the chute plates in an oblique position when the body is tilted to discharge its contents, and power devices for tilting the body.

2. In a dumping car, the combination of the main frame, a body supported upon the main frame and adapted to be oscillated to discharge to either side thereof said body having discharge openings on its sides, doors hinged to the body at the upper edges of its side discharge openings, chute plates hinged to the lower side edges of the body, latches for holding the doors in closed position, means for moving the chute plates in an oblique position when the body is tilted to discharge its contents, automatic devices for operating the latches to release the doors when the body is tilted and the chute plates moved to an inclined position, and power devices for tilting the body.

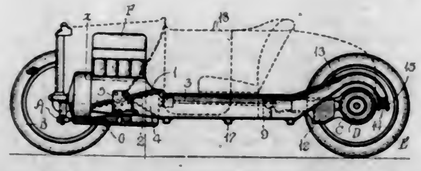
3. In a dumping car, the combination of the main frame, a body supported upon the main frame and adapted to be oscillated to discharge to either side thereof said body having discharge openings on its sides, doors hinged to the body at the upper edges of its side discharge openings, chute plates hinged to the lower side edges of the body, latches for holding the doors in closed position, means for moving the chute plates in an oblique position when the body is tilted to discharge its contents, automatic devices for operating the latches to release the doors when the body is tilted and the chute plates moved to an inclined position, hand controlled means for putting the latches into or out of automatic relation with the chute plate operating means for converting them into automatic or manually operated latches as required, and power devices for tilting the body.

4. In a dumping car, the combination of a longitudinal frame, a body supported upon the longitudinal frame and adapted to tilt for dumping its load, a door hinged to the upper part of the body to close the side opening thereof, a latch at the lower part of the body for engaging the door, a chute plate hinged to the lower part of the body adjacent to its side, means for moving the chute plate into an oblique position when the body is tilted into dumping position, automatic means controlled by the movement of the chute and its operating mechanism for actuating the latch for automatically releasing the door when the body is brought into dumping position, and power devices for tilting the body.

5. In a dumping car, the combination of a longitudinal frame, a body supported upon the longitudinal frame and adapted to tilt for dumping its load, a door hinged to the upper part of the body to close the side opening thereof, a latch at the lower port of the body for engaging the door, a chute plate hinged to the lower part of the body adjacent to its side, means for moving the chute plate into an oblique position when the body is tilted into dumping position, automatic means controlled by the movement of the chute and its operating mechanism for actuating the latch for automatically releasing the door when the body is brought into dumping position, means for throwing the latch out of automatic connection whereby it becomes a manually operated latch when desired, and power devices for tilting the body.

[Claims 6 to 15 not printed in the Gazette.]

1,189,284. MOTOR-VEHICLE. EMIL A. NELSON, Ronville, Mich. Filed Dec. 17, 1914. Serial No. 877,653. (Cl. 21—90.)



1. In a motor vehicle, the combination with a front axle and a rear axle, of a single load carrying member extending longitudinally of the vehicle in the vertical plane of the medial line thereof and having two places of support at its front end upon said front axle to rigidly hold the axle at right angles to said plane, said member being tapered rearwardly and extended over the rear axle, a transverse spring on the rear axle connected intermediate its ends to the rear end of said member and forming a single place of support for the rear end of said member and a single member rigidly secured to the rear axle extending forwardly therefrom to a point of connection with said member and having a universal connection therewith.

2. In a motor vehicle, the combination with a front axle and a rear axle, of a single load carrying member extending longitudinally of the vehicle in the vertical plane of the medial line thereof and having a single place of support at its rear end upon the rear axle, and springs rigidly secured to said member near its front end and extended forwardly to points of connection with the front axle, said springs serving to yieldingly support the load and form brace and connecting members to hold the axle in proper relation to said member.

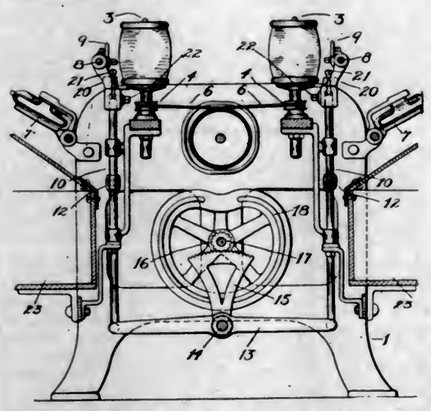
3. In a motor vehicle, the combination with a front axle and a rear axle, of a single load carrying member extending longitudinally of the vehicle in the vertical plane of the medial line thereof and having a single place of support at its rear end upon the rear axle, and leaf springs rigidly secured to said member near its forward end and extending forwardly and outwardly from each side thereof to points of connection with the front axle adjacent the ends of said axle, said springs forming the sole support for the front end of the load carrying member and serving to connect said axle with said member and holding it at right angles to the longitudinal center line of said member.

4. In a motor vehicle, the combination with a front and a rear axle, of a single load carrying member formed from sheet metal and having a longitudinally extending body portion at the medial line of the vehicle which is formed of inverted U-shape in cross section, means for closing the lower side of said member throughout a portion of its length to house motion transmitting means, means for yieldingly supporting the rear end of said member upon the rear axle, and means on the rear axle extending forwardly into said open side of said member and having connection therewith to hold said axle in right angular position relative to said member.

5. In a motor vehicle, the combination with a front axle and a rear axle, of a single hollow load carrying member supported by said axles at the medial line of the vehicle and formed with a forked forward end, an engine seated within the forked forward end of said member, and power transmitting means supported within the member for transmitting motion from the engine to the rear axle.

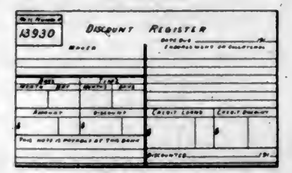
[Claims 6 to 12 not printed in the Gazette.]

1,189,285. SPOOLING-MACHINE. OSCAR L. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Oct. 20, 1915. Serial No. 56,963. (Cl. 242—18.)



In a spooling machine, a series of rotatable spool carriers, thread guides, a traverse rod on which they are mounted, brackets holding the traverse rod and supported by vertically reciprocating members which effect the traversing of the thread guides, said brackets being provided with a vertical adjusting screw whereby the distance of the thread guide from the top of the reciprocating member is varied.

1,189,286. NOTE-RECORD-CARD SET. MATTHEW J. PHILBIN, Olyphant, Pa. Filed Feb. 1, 1915. Serial No. 5,475. (Cl. 11—19.)



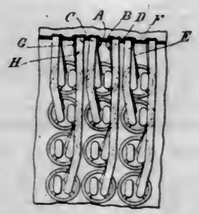
1. A note record card set, having cards respectively designated as a "register" card, a "notice" card, a "tickler" card, and "indorser" card and a "maker" card, all of substantially the same size and adapted to be separably superposed one upon the other for the interposition of transfer medium, each card having spaces appropriately designated respectively as a "maker's" name space, a note "date" space, a "time" space and an "amount" space, said spaces being so arranged that like spaces will be in exact superposition when the cards are superposed one upon the other, whereby the matter impressed on the said spaces of the front card may be produced in the corresponding spaces of the other cards at one writing, the discount register and discount tickler cards provided with additional spaces appropriately designated for entry or credit loans and credit discounts, such spaces being in registration when the cards are superposed, whereby credit loan and credit discount matter may be produced at one writing upon the discount register and discount tickler cards when said cards are separated from the remaining cards.

2. A note record card set having cards respectively designated as a "register" card, a "notice" card, a "tickler" card, an "indorser" card and a "maker" card, all of substantially the same size and adapted to be separably superposed one upon the other for the interposition of transfer medium, each card having spaces appropriately designated respectively as a "maker's" name space, a note "date" space, a "time" space and an "amount" space, said spaces being so arranged that like spaces will be in exact superposition when the cards are superposed one upon the other, whereby the matter impressed on the said spaces of the front card may be produced in the corresponding spaces of the other cards at one writing, the discount register and discount tickler cards provided with additional spaces appropriately designated for entry of credit loans and credit discounts, such spaces being in registration when the cards are superposed, whereby credit loan and credit discount matter may be produced at one writing upon the discount register and discount tickler cards when said cards are separated from the remaining cards, and the indorser and maker cards provided with spaces appropriately designated for receiving indications of payments on the loan, said spaces being in registration when the cards are superposed so that matter relating to payments on the loan may be produced on said indorser and maker cards at one writing when said cards are separated from the remaining cards.

1,189,287. LOCOMOTIVE-SUPERHEATER. JOHN PRIMROSE, New York, N. Y. Original application filed Aug. 5, 1914, Serial No. 855,081. Divided and this application filed Aug. 11, 1915. Serial No. 44,899. (Cl. 122—462.)

1. The combination with a boiler having a plurality of fire tubes, arranged one above another in the same

vertical plane, of a header provided with steam chambers, and superheater units projecting rearwardly into the fire tubes and having upwardly projecting end portions which are expanded into such chambers with the end portions of the upper units lying on one side and the end portions of the lower units lying on the opposite side of a plane passing through the axes of said tubes, and with the said portions on either side lying in front of one another, said end portions of any unit adapted to be shifted laterally so that any unit can be removed from the boiler independently of the others.



2. The combination with a boiler having a plurality of fire tubes arranged one above another in the same vertical plane, of a header provided with steam chambers, and superheating units projecting rearwardly into the fire tubes and having upwardly projecting end portions expanded into said chambers, the end portions of a plurality of upper units lying on one side and the end portions of a plurality of lower units lying on the opposite side of a plane passing through the axes of said fire tubes, said end portions on either side located substantially behind one another and the portions on one side being sufficiently spaced from the portions on the other side to permit any of said portions to be laterally shifted, whereby any one of said units may be removed independently of the others.

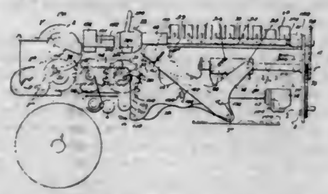
3. The combination with a boiler having a plurality of fire tubes arranged one above another in the same vertical plane, of a header provided with steam chambers, and superheating units projecting rearwardly into the fire tubes and having upwardly projecting end portions expanded into said chamber, a series of said end portions lying on one side and a series of end portions lying on the opposite side of a plane passing through the axes of said fire tubes, the end portions of either side located substantially behind each other, but capable of being laterally shifted whereby any unit is independently removable.

4. The combination of a boiler having a plurality of fire tubes arranged in horizontal and vertical rows, each of the vertical rows comprising at least four fire tubes, of a header provided with steam chambers, and superheater units projecting rearwardly into the fire tubes and having upwardly projecting end portions which are expanded into said chambers with the end portions of succeeding units lying on one side and the end portions of succeeding units lying on the opposite side of a plane passing through the axes of said tubes, and with the said portions on either side lying in front of one another, said end portions of any unit adapted to be shifted laterally so that any unit can be removed from the boiler independently of the others.

5. The combination with a boiler having a plurality of fire tubes arranged in horizontal and vertical rows, each of the vertical rows comprising at least four fire tubes, of a header provided with steam chambers and superheating units projecting rearwardly into the fire tubes and having upwardly projecting end portions expanded into said chambers, the end portion of the upper units lying on one side and the end portions of the lower units lying on the opposite side of a plane passing through the axes of said fire tubes, said end portions on either side located substantially behind one another and the portions on one side being sufficiently spaced from the portions on the other side to permit any of said portions to be laterally shifted, whereby any one of said units may be removed independently of the other.

[Claim 6 not printed in the Gazette.]

1,189,288. SETTING AND ADJUSTING MECHANISM FOR CALCULATING-MACHINES. ALEXANDER RECHNITZER, Vienna, Austria-Hungary. Filed July 31, 1911. Serial No. 641,427. (Cl. 235—75.)



1. In a setting mechanism for multiplying or dividing machines, a main operating shaft, a number of slides or keys, and means for setting up a multiplicand upon said slides or keys and for determining the multiplier by a number of rotations performed by said shaft, in combination with a carriage for determining by its different lateral positions the different digits of the multiplier, a sliding part, and a set of levers adjusted by the means for setting up a multiplicand and connected therewith in such manner that they operate to impart different movements to said sliding part through the medium of said main shaft.

2. In setting mechanism for multiplying or dividing machines, the combination of a main spindle, setting mechanism, a zero setting device for the same, and means for operating the latter after one or several revolutions of said spindle.

3. In a setting mechanism for multiplying or dividing machines, the combination of a main spindle, setting mechanism, a locking device for the same, and means for operating the latter after one or several revolutions of said spindle.

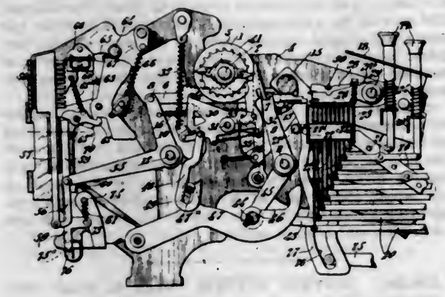
4. In a setting mechanism, the combination of a set of keys or slides, a spindle, a spring to actuate it, stops on the spindle coöperating with stops on the keys to return the latter and stop the spindle, a feed gear for calculating machines, and means to set the feed gear according to the position of said spindle.

5. In a setting mechanism, in combination of keys, a spindle set to different positions by the actuation of said keys, a spirally grooved cylinder on said spindle, a sliding part, a lever pivoted on said sliding part and adjusted by said spirally grooved cylinder, and means to move the sliding part to different amounts depending upon the position of said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,189,289. CALCULATING-MACHINE. JOSEPH F. REIRDON, Kingston, Pa., assignor to The Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed Dec. 15, 1911, Serial No. 666,003. Renewed Oct. 20, 1914. Serial No. 867,667. (Cl. 235—60.)

1. In a calculating machine, the combination with a series of counters, on certain of which, amounts are accumulated, and on the remainder of which, item designating numbers are accumulated; printing mechanism associated with the respective counters; and a keyboard to control the amounts registered on the counters; of means set for operation by the introduction of an amount on the keyboard, to enable the automatic registration of an item designating number on the appropriate counters, as an incident to the registration of an amount on the remaining counters; and non-print mechanism normally preventing listing the item indicating numbers, and variously adjustable to prevent or permit listing the amount, or the total of the item designating numbers with the total of the amounts.



2. In a calculating machine, the combination with a series of counters, on certain of which amounts are accumulated, and on the remainder of which, tally figures are accumulated; drive members for the respective counters; keyboard mechanism, including keys; and shiftable detents controlled by the keys, and normally in the paths of the respective drive members, to prevent a registering operation of the counters; of means whereby a detent coöperating with the drive member of one of the tally figure counters is displaced by the displacement of any of the detents coöperating with the amount counters; and an auxiliary detent to arrest said drive member associated with the figure counter, after said drive member has advanced a predetermined distance, to automatically effect the registration of a tally figure as an incident to the registration of an amount.

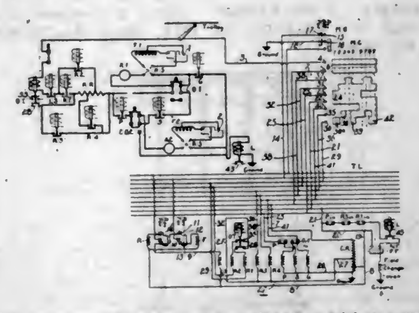
3. In a calculating machine, the combination with a series of counters; a drive member for each counter; and transfer mechanism for the counters, amounts and item-designating figures being separately accumulated on different sets of counters of the same series; a keyboard mechanism including keys; and shiftable detents controlled by the keys and normally lying in the paths of the respective drive members; of a universal bar connected to a detent coöperating with one of the item-designating counters, and arranged to be struck by any of the detents coöperating with the amount counters to displace the first-named detent; and an auxiliary detent uncovered by the displacement of said first-named detent, to arrest its drive member at a predetermined point in its travel, to enable the registration of a designating figure each time an amount is registered.

4. In a calculating machine, the combination with individually rotatable counters; a drive member for each counter; and transfer mechanism for the counters; of a keyboard mechanism including keys, stops operated thereby, a series of shiftable detents controlled by the stops and normally lying in the paths of the respective drive members to prevent a registering operation of the counters; a universal bar connected to a detent intermediate the ends of the series of detents, said bar arranged to be struck by any of the detents to one side of said first-named detent to displace the first-named detent; and an auxiliary detent controlled by the stops and uncovered by the displacement of said first-named detent, to arrest its drive member at a predetermined point in its travel, to enable the registration of a designating figure each time an amount is registered, and itself displaced by a stop when a designating figure of a higher order is to be registered.

5. In a calculating machine, the combination with individually rotatable counters; and drive members for the respective counters; of keyboard mechanism including keys, stops operated thereby and arranged in groups, and detents controlled by the respective groups of stops and normally lying in the paths of the respective drive members to prevent a registering operation of the counters; means whereby one of said detents is displaced when any of the remaining detents to one side thereof is disabled; and an auxiliary detent of less length than the displaceable detent, to arrest its drive member after said drive member has traveled a predetermined distance, to effect the registration of a predetermined amount on the corresponding counter, when the displaceable detent is shifted to idle position.

[Claims 6 to 44 not printed in the Gazette.]

1,189,290. CONTROL SYSTEM. CLARENCE RENSHAW, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 843,939. (Cl. 172—179.)



1. In a control system, the combination with a supply circuit, and a plurality of electric motors severally provided with armatures and field windings, of means for effecting series-parallel acceleration of said motors, and means dependent upon predetermined circuit connections and current conditions for varying the active portions of said field windings.

2. In a control system, the combination with a supply circuit, and a plurality of electric motors severally provided with armatures and field windings, of means for effecting series-parallel acceleration of said motors, and means dependent upon predetermined current conditions for automatically varying the strength of the field winding after the motors are disposed in full parallel relation.

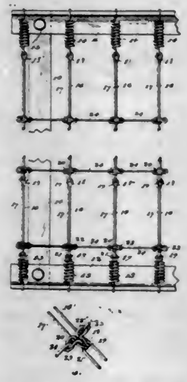
3. In a control system, the combination with a supply circuit, and a plurality of electric motors severally provided with armatures and field windings, of manually-controlled switching means for effecting series-parallel acceleration of said motors, and automatic switching means operative under relatively low motor-current conditions only after the motors are disposed in full parallel relation for excluding portions of said field windings from circuit.

4. In a series-parallel system, the combination with a supply-circuit, and an electric motor provided with an armature and a series-connected subdivided field winding, of a plurality of motor-circuit switches including certain switches that are employed only during parallel relation of the motors, severally provided with closing coils, a switching device for varying the active portions of the field windings and having an actuating coil, a limit switch actuated in accordance with the motor current and having auxiliary contact members included in the energizing circuit of said actuating coil under relatively low motor-current conditions, and interlocking means associated with one of said certain switches for completing the circuit of said actuating coil, whereby the active portions of the field windings are varied only after the motors are disposed in full parallel relation and the motor-current has decreased to a predetermined value.

5. In a control system, the combination with a supply circuit, an electric motor provided with an armature and a series-connected subdivided field winding, and a plurality of accelerating resistors, of a plurality of motor-

circuit switches, including resistor short-circuiting switches, severally provided with closing coils, an auxiliary control system for governing said closing coils to start, and gradually exclude said resistors to accelerate said motors, a switch biased to exclude a portion of said field winding from circuit when certain switches, including said short-circuiting switches, are closed, and an actuating coil for said biased switch that is connected to have its current vary with the motor current and adapted to maintain said switch open when the current exceeds a predetermined value, whereby the effective action of the field winding is automatically changed subsequently to the closing of said certain switches, when the motor current decreases to said predetermined value.

1,189,291. WIRE FABRIC. HENRY RICHARDSON, Chicago, Ill. Filed Apr. 26, 1913. Serial No. 763,914. (Cl. 245—5.)



1. A wire link fabric made up of integral bent wire units arranged in longitudinal and transverse rows, each of said units comprising a two-ply tension member, the two limbs of which are integrally joined at one end forming a closed end for the unit, and a pair of terminal loops at the other end of said tension member interlooped with the closed end of an adjacent unit in the same longitudinal strand, the sides of said terminal loops each crossing itself, and the ends of the wire forming each unit being anchored to the limbs of the tension member, and cross-links flexibly connected at both ends to adjacent longitudinal strands.

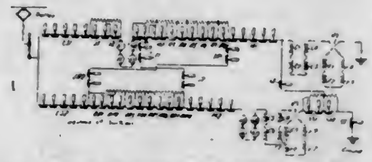
2. A wire link fabric made up of integral bent wire units arranged in longitudinal and transverse rows, each of said units comprising a two-ply tension member, the two limbs of which are integrally joined at one end forming a closed end for the unit, a pair of laterally projecting loops intermediate the ends of the unit, and a pair of terminal loops at the other end of said tension member interlooped with the closed end of an adjacent unit in the same longitudinal strand, the sides of said terminal loops each crossing itself, and the ends of the wire forming each unit being anchored to the limbs of the tension member, and cross-links hooked at their respective ends into the laterally projecting loops of adjacent longitudinal strands.

3. A wire link fabric made up of integral bent wire units arranged in longitudinal and transverse rows, each of said units comprising a two-ply tension member the two limbs of which are integrally joined at one end forming a closed end for the unit, a pair of closed loops at the other end of said tension member interlooped with the closed end of an adjacent unit in the same longitudinal strand, and a pair of laterally projecting loops constituting extensions of said closed end loops, respectively, and anchored to the limbs of the tension member, and cross-links hooked at their respective ends into the laterally projecting loops of adjacent longitudinal strands.

4. As an article of manufacture, an integral bent wire unit, comprising a two-ply tension member the two limbs of which are joined at one end forming a closed end of the unit, a pair of laterally projecting loops intermediate the ends of the unit, and a pair of terminal loops at the other end of said tension member, the sides of said terminal loops each crossing itself, and the ends of the wire forming the unit being anchored to the limbs of the tension member.

5. As an article of manufacture, an integral bent wire unit, comprising a two-ply tension member the two limbs of which are joined at one end forming a closed end of the unit, a pair of closed loops at the other end of said tension member constituting extensions of the limbs of the latter, and a pair of laterally projecting loops constituting extensions of said closed loops and each anchored to said tension member.

1,189,292. CONTROL SYSTEM. LYNN G. RILEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 11, 1914. Serial No. 837,776. (Cl. 172—179.)



1. In a system of control, the combination with a supply circuit, and a plurality of dynamo-electric machines severally provided with a plurality of coöperating windings, of means for effecting a transition of the machines from one circuit relation to another wherein the ultimate machine voltage is substantially twice the machine voltage in the first relation while maintaining substantially identical conditions in all the machines, the corresponding windings of all the machines remaining on a predetermined side of all the other windings throughout the operation.

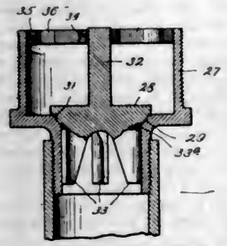
2. In a system of control, the combination with a supply circuit, and a plurality of dynamo-electric machines severally provided with armatures and field windings, said field windings being located on the "ground" side of the armatures, of means for effecting a transition of the machines from series to parallel relation while maintaining substantially identical conditions in all the machines, the field windings remaining on the "ground" side of all the armatures throughout the operation.

3. In a system of control, the combination with a supply circuit and a plurality of electric motors severally provided with armatures and field windings, said field windings being located on the "ground" side of all the armatures, of means for effecting "bridging" transition of the motors from series to parallel relation, the field windings remaining on the "ground" side of all the armatures throughout the operation.

4. In a system of control, the combination with a supply circuit, a plurality of electric motors fed therefrom and severally provided with armatures and with series field windings which are initially directly connected and located on the "ground" side of the armatures, and a plurality of resistors, of means for gradually excluding the resistors from circuit to accelerate the motors to full series relation, means for effecting "bridging" transition of the motors from series to parallel relation, including means for temporarily shunting one set of field windings with a certain resistor prior to opening the direct series connection between the sets of field windings, and means for accelerating said motors to full parallel relation, the field windings remaining on the "ground" side of all the armatures throughout the operation.

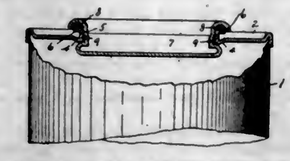
5. In a system of control, the combination with a supply circuit, a plurality of electric motors fed therefrom and severally provided with armatures and with series field windings which are initially directly connected and located on the "ground" side of the armatures, and a plurality of resistors, of means for gradually excluding the resistors from circuit to accelerate the motors to full series relation, means for effecting "bridging" transition of the motors from series to parallel relation, including means for temporarily shunting one set of field windings with a certain resistor prior to opening the direct series connection between the sets of field windings, and means for accelerating said motors to full parallel relation, the field windings remaining on the "ground" side of all the armatures throughout the operation.

1,189,293. PUMP. WILLIAM W. ROBINSON, Kansas City, Mo. Filed Oct. 15, 1914. Serial No. 866,777. (Cl. 103—66.)



In a pump element, a cage having an upper tubular portion and a lower contracted tubular portion, a perforated member having a central guiding opening, positioned adjacent the upper end of the upper tubular portion of the cage, a valve seat formed at the upper end of the contracted tubular portion, a valve body engaging the valve seat, said valve body having a stem operating in the central guiding opening, depending blades integral with the valve body said blades being curved radially and having one of their side faces beveled, the inner side edges of said blades tapering downwardly and outwardly and merging into a concavity in the lower side of the valve body, said blades throughout their lengths engaging the inner wall of the depending tubular member whereby during the rotary movement of the valve the conical periphery thereof is at all times in alinement with the valve seat.

1,189,294. PACKING-CAN. GEORGE W. RUGGLES, Baltimore, Md., assignor, by mesne assignments, to Albert S. Gill, Noah Webster, and Frederick H. Fletcher, committee. Filed Feb. 23, 1915. Serial No. 9,808. (Cl. 220—59.)

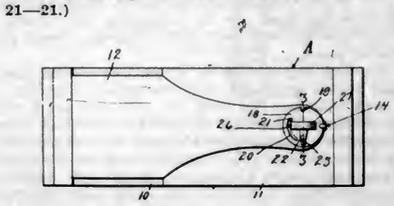


1. The combination of a can having a top provided with an opening therein, the metal around said opening being depressed then turned upwardly and provided with a flange on its upper edge, and a cap adapted to fit within said opening and having its lower end expanded under the depressed edge of the opening of the said top.

2. The combination of a can having a top provided with an opening therein, the metal around said opening being depressed, then bent upwardly and provided with a flange at its upper end, a cap having flanged upper end and a contracted lower end, and having its lower end expanded under the depressed edge of the opening, a disk between the flange of the cap and the flange around the said opening, and a disk on the contracted lower end of the cap.

3. The combination of a can having a top provided with an opening therein, the metal around said opening being depressed then turned upwardly and provided with a flange on its upper edge, a cap adapted to fit within said opening and having its lower end expanded under the depressed edge of the opening of the said top, and a gasket between said cap and said depressed edge of the can opening.

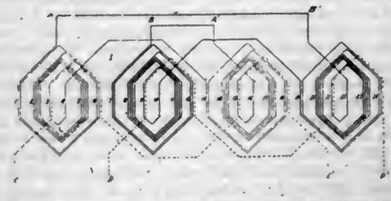
1,189,295. END-GATE LOCK. GEORGE SAMBUC, Plaza, N. D. Filed Sept. 28, 1915. Serial No. 53,057. (Cl. 21—21.)



1. The combination with an end gate comprising hingedly connected sections and a locking board carried by one of the sections and overlying the other section and having a recess in its free end, of a stud carried by one of the sections and seating in the recess of the locking board when the sections are in locked relation, said stud having a recess therein, a locking disk rotatably mounted on the locking board and movable in the recess, said disk having a notch therein adapted to register with one end of the recess whereby the locking board and section may be swung away from each other, and means for automatically locking said disk against rotation when in either locking or released position.

2. The combination with an end gate comprising hingedly connected sections and a locking board carried by one of the sections and overlying the other section and having a recess in its free end of a stud carried by one of the sections and seating in the recess of the locking board when the sections are in locked relation said stud having a recess therein, a locking disk rotatably mounted on the locking board and movable in the recess, said disk having a notch therein adapted to register with one end of the recess whereby the locking board and section may be swung away from each other and a spring controlled stud automatically engageable in openings in the locking disk and the locking board to secure the locking disk against rotation.

1,189,296. VARIABLE-SPEED MOTOR. HAROLD M. SCHEIBE, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 5, 1913. Serial No. 771,878. (Cl. 172—279.)



1. In a motor, the combination with a main winding and an auxiliary winding, of means for automatically short circuiting said auxiliary winding at low speeds, and speed controlling means comprising means for varying the connections of said main windings and said auxiliary windings.

2. In a motor, the combination with a main winding and an auxiliary winding, of means for short circuiting said auxiliary winding in starting the motor and for connecting said auxiliary winding in series with said main winding at a predetermined speed.

3. In a motor, the combination with a main winding and an auxiliary winding displaced from the main winding, of means for short circuiting said auxiliary winding below a predetermined speed, and means for connecting said main and auxiliary windings in series.

4. In an induction motor, the combination of main windings and auxiliary windings, of means for connecting said main windings to produce a plurality of magnetic poles and for otherwise connecting said main windings to increase the number of poles, and a centrifugally actuated device for short-circuiting said auxiliary windings below a predetermined speed and for connecting said auxiliary windings in series with said main windings at said predetermined speed.

5. The combination with an alternating-current motor provided with a main field circuit including a plurality of main field windings and with an additional main field circuit including a plurality of main field windings which are respectively staggered with respect to said first mentioned field windings, of an auxiliary field circuit including a plurality of field windings staggered with respect to said field windings, means for connecting said main field circuits in series to an alternating-current source, and means for short circuiting said auxiliary field circuit at starting.

[Claims 6 to 14 not printed in the Gazette.]

1,189,297. COMBINED SUPPORT AND TIE FOR CONCRETE-REINFORCING BARS. GEORGE R. SCHOENTHALER, Chicago, Ill. Filed Mar. 26, 1915. Serial No. 17,150. (Cl. 72—122.)



1. A device of the class described formed of a single section of resilient wire bent to form supporting legs which are spaced apart a sufficient distance to receive a reinforcing bar, the end portions of which section of wire extend outwardly in the same direction a substantial distance away from the legs to form resilient arms, a bar engaging hook on one of said resilient arms, which hook is adapted to engage a bar, the other one of said arms being bent to form a transversely disposed portion which overlies the upper one of the bars to which the device is applied and serves as a fulcrum for the arm when the same is bent into engagement with said bar, and a hook on the end of said last mentioned arm, which hook is adapted to engage the bar which is engaged by the first mentioned hook.

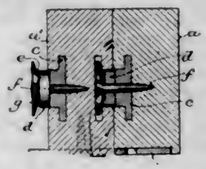
2. The combination with a pair of crossed reinforcing bars, of a combined support and tie formed of a single piece of resilient wire bent to form a support and a seat for the lower one of the bars, one of the end portions of said section of wire being extended to form a resilient arm, a hook on the end of said arm, which hook is adapted to engage beneath the upper one of the reinforcing bars, said arm being bent to form a transversely disposed portion which is adapted to bear upon the upper one of said bars and serves as a fulcrum for said arm when the same is bent to engage the hook beneath the upper bar and the opposite end portion of said section of wire being extended laterally from the support and terminating in a hook which is adapted to engage over the upper one of the bars.

3. The combination with a pair of crossed reinforcing bars, of a combined support and tie comprising a single section of wire bent to form a pair of connected supporting legs, the end portions of which section of wire are extended a substantial distance laterally from said legs to form resilient bar engaging arms, hooks on said arms, one of which hooks engages on top of a reinforcing bar and the other hook on the bottom of said bar and one of said arms being bent to form a transversely disposed portion which overlies the reinforcing bar to which the hooks are applied.

4. The combination with a pair of crossed reinforcing bars, of a combined support and tie comprising a single section of wire bent to form a pair of supporting legs which are spaced a sufficient distance apart to receive one of the reinforcing bars, said section of wire being bent to form a pair of seats for the lower one of said bars, the end portions of said section of wire being extended a substantial distance in the same direction away from said seats to form resilient bar engaging arms, one of which is bent to form a transversely disposed portion which overlies the upper one of the bars to which the device is applied and hooks on the ends of said arms, one of which hooks is adapted to engage on top of the upper reinforcing bar and the other hook being adapted to engage beneath said bar.

5. A device of the class described constructed of a single section of wire bent to form a pair of supporting legs which are spaced a sufficient distance apart to receive a reinforcing bar, the lower ends of which legs are connected, said section of wire being bent to form a pair of bar seats adjacent to said legs, the end portions of said section of wire being extended in the same direction away from said seats to form resilient bar engaging arms, one of which is bent to form a transversely disposed portion which overlies one of the bars to which the device is applied and a hook on the end of said arm, which hook is adapted to engage beneath the bar upon which the transversely disposed portion of the arm engages.

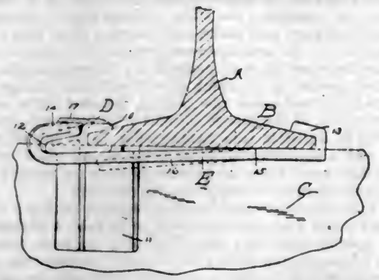
1,189,298. EXTENSION-TABLE. EMIL W. SCHULTZ, Watertown, Wis., assignor of one-fourth to Max H. Gaebler, Watertown, Wis. Filed Nov. 5, 1914. Serial No. 870,327. (Cl. 45—115.)



1. In an extension table the combination with slide bars having undercut grooves in their adjoining faces, of a block secured in the groove in one bar and projecting therefrom loosely into the contracted portion of the groove in the other bar, a roller let into an approximately circular recess in the protruding portion of said block and projecting above and below the same, a washer seated in said recess over said roller and adapted to engage with and run in the groove of the adjoining bar, and a pin forming a pivot for the roller and securing the washer to its seat in said block, the washer serving to firmly and centrally support the outer end of the pin and the roller from the block in which the washer is seated and held by the pin.

2. In an extension table the combination with slide bars having undercut grooves in their adjoining faces, of a block secured in the groove of one bar and projecting therefrom loosely into the contracted portion of the groove in the other bar, a roller loosely fitting in an approximately circular recess in the protruding portion of the block and projecting above and below the same, a washer of greater diameter than the roller and having a convex face fitting into said recess, and a headed pin passing loosely through and forming a pivot for the roller and binding the washer to its seat on said block, the washer centrally and firmly supporting the outer headed end of the pin and the roller from the margin of the recess in which the washer is seated and held by the pin.

1,189,299. RAIL-ANCHOR. JOHN M. SCOTT, Racine, Wis., assignor to Otto R. Barnett, Chicago, Ill. Filed Feb. 4, 1915. Serial No. 6,112. (Cl. 238—4.)



1. A rail anchor comprising a member adapted to engage one edge of the base flange of a rail, and a spring yoke member adapted to extend around the opposite edge of the rail base and said first named member which yoke member is subjected to a bending strain when the device is in operative position on the rail; one of said members being provided with a tie abutting part.

2. A rail anchor comprising a member adapted to engage one edge of the base flange of a rail and formed with a tie abutting flange, and a spring yoke adapted to extend around the opposite edge of the rail base and said member which yoke member is subjected to a bending strain when the device is in operative position on the rail.

3. A rail anchor comprising a member adapted to engage one edge of the base flange of a rail, a spring yoke member adapted to extend around the rail base and said first named member which yoke member is subjected to a bending strain when the device is in operative position on the rail; one of said members being provided with a tie abutting part, and means associated with the first named member providing a stop for the edge of said yoke member for the purpose described.

4. A rail anchor comprising a jaw member adapted to extend around one edge of the base flange of a rail engaging the upper and lower surfaces thereof, and a spring yoke member embracing the opposite edge of the base and the jaw member to bind said jaw member to the rail base which yoke member is subjected to a bending strain when the device is in operative position on the rail; one of said members being provided with a tie abutting part.

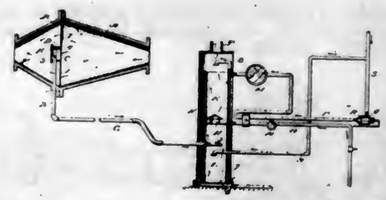
5. A rail anchor comprising a jaw member adapted to extend around one edge of the base flange of a rail engaging the upper and lower surfaces thereof and formed with a tie abutting flange, and a spring yoke member embracing the opposite edge of the base and the jaw member to bind said jaw member to the rail base which yoke member is subjected to a bending strain when the device is in operative position on the rail.

[Claims 6 to 26 not printed in the Gazette.]

1,189,300. METHOD OF DETERMINING THE TOTAL AVAILABLE HEAT OF GASEOUS FUEL. HARRY FORD SMITH, Lexington, Ohio. Filed Sept. 20, 1912. Serial No. 721,416. (Cl. 73—184.)

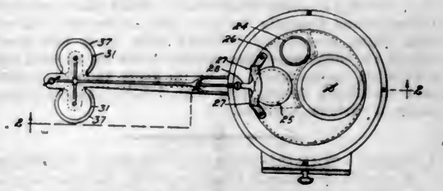
1. A method of determining the total available heat of gaseous fuel flowing through a main, consisting in separating from the flowing stream in the main a stream proportional thereto without determining the actual volume of either portion, of then burning the proportional stream of flowing gas and determining the heat units thus developed, and multiplying the quantity thus determined by the ratio between the streams.

2. A method of determining the total available heat of gaseous fuel delivered through a main, consisting in procuring a sample of the gas from the main, burning the gas sample in and with moistened air and passing the products of combustion through a liquid, and determining the total heat developed by the combustion of the gas sample from the liquid which has been heated by the products of combustion passing through the liquid.



3. A method of determining the total available heat of gaseous fuel delivered through a main, consisting in procuring a sample of the gas from the main, which gas is a definite fraction of the total volume, burning the gas sample and passing the products of combustion through a liquid, and determining from the liquid the total heat developed by the combustion of the gas sample.

1,189,301. STOVE. SAMUEL B. SMITH, Cleveland, Ohio. Filed Dec. 30, 1915. Serial No. 69,323. (Cl. 236—6.)



1. In a stove, the combination of a base portion, an upper magazine portion having its widest part near the center, the side of same converging from the center, a flat top portion formed by the upper sides, draft and fuel openings located on said flat top and both arranged at one side of the center thereof, a thermostatic device projecting from the base portion, a vertical connecting rod extending upwardly therefrom, a check draft in said draft opening, and means connecting said check draft and said arm, for the purpose specified.

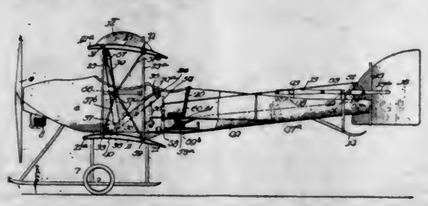
2. In a stove, the combination of a base, a plurality of upper sections formed like frustrums of cones, the two sections being superimposed so that the large portions of the cones are connected together, a reduced flat top portion formed by the converging sides of one section, check draft and fuel openings in said flat top all eccentrically located therein, a rigid thermostatic arm secured to the base, a movable thermostatic element mounted below the arm and protected thereby, a check draft in said draft opening, and means connecting the thermostatic element with said check draft, substantially as specified.

3. In a stove, the combination of a base, an upper section above the base having its widest part near the center of the stove and having its sides converge upwardly, a reduced flat top portion formed by the converging sides, a thermostatic arm projecting horizontally from the base, a vertical connecting rod extending upwardly from said thermostatic arm, check draft and fuel openings located in said flat top portion of the stove and all eccentrically arranged in their relation to said top, a check draft in said draft opening, and means for connecting said check draft to said connecting rod.

4. In a stove, the combination of a base, and a section of stove secured above the base having its sides converge from the center to the top, a reduced flat top portion

formed by the converging sides, fuel openings and check draft openings located in the flat top portion and all eccentrically arranged with the check draft opening located near the outer periphery of the top, a thermostatic arm projecting from the side of the stove, a check draft in said draft opening, and a vertical connecting rod extending between said check draft and said thermostatic arm for the purpose specified.

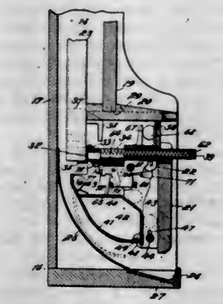
1,189,302. FLYING-MACHINE. WILLIAM E. SOMERVILLE, Coal City, Ill. Filed Mar. 30, 1914. Serial No. 828,257. (Cl. 244—29.)



1. A flying machine comprising a longitudinally extending main frame, a plane supporting frame pivotally mounted on said main frame and comprising members extending transversely with respect to said main frame, and lifting plane supported by said member, the front portions of said plane being pivoted on said transversely extending member to move with respect to the rest of the plane.

2. A flying machine comprising a lifting plane and stabilizing means pivotally mounted back of the rear edge of said lifting planes and provided with upper and lower dished air engaging surfaces, and means for moving said stabilizing means bodily about its pivot and for holding said stabilizing device rigid with respect to said lifting plane in various positions.

1,189,303. COIN-CONTROLLED VENDING-MACHINE. ELIJAH F. SPAULDING, Brooklyn, N. Y., assignor to Artemas Ward, New York, N. Y. Filed Mar. 3, 1913. Serial No. 751,766. (Cl. 194—2.)



1. In a coin-controlled vending machine having a coin-slot plate and a tray for the goods to be sold, a horizontal slide having depending plates forming between them a space to receive and permit the passage therethrough of a coin and open at its front end to admit the coin on edge, a handle for operating the slide, a goods-ejector pivotally mounted between and carried by said plates and having a depending front arm to be engaged by a coin and a flanged portion at its rear end to engage the lower piece of goods in the tray when said end is tilted, means at the front of said plates to engage the front edge of and arrest the coin between said plates when the rear edge of the coin is engaged with said arm, and means tending to maintain said goods-ejector in its initial position, and adapted when the coin is in position to serve as a fulcrum for said arm, to tilt the rear end of said goods-ejector upwardly, said goods-ejector being slotted to receive its pivot and thereby allow limited horizontal movement of the slide in advance of the ejector.

2. In a coin-controlled vending machine having a coin-slot plate and a tray for the goods to be sold, a horizontal slide having depending plates forming between them a space to receive and permit the passage therethrough of a coin and open at its front end to admit the coin on edge, a handle for operating the slide, a goods-ejector pivotally mounted between said plates and having a front arm to be engaged by a coin and a flanged portion at its rear end to engage the lower piece of goods in the tray when said end is tilted, means at the front of said plates to engage the front edge of and arrest the coin between said plates when the rear edge of the coin is engaged with said arm, means tending to maintain said goods-ejector in its initial position, and a stationary stripper between and along which said plates move when the slide is operated for keeping the slide clear to receive coins from the coin-slot.

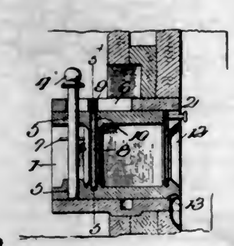
3. In a coin-controlled vending machine having a coin-slot plate and a tray for the goods to be sold, a horizontal slide having depending plates forming between them a space to receive and permit the passage therethrough of a coin and open at its front end to admit the coin on edge, a handle for operating the slide, a goods-ejector pivotally mounted between and carried by said plates and having a front depending arm to be engaged by a coin and a flanged portion at its rear end to engage the lower piece of goods in the tray when said end is tilted, means at the front of said plates to engage the front edge of and arrest the coin between said plates when the rear edge of the coin is engaged with said arm, and a spring carried by said plates and engaging said goods-ejector below its pivot and tending to maintain said ejector in its initial position and adapted when the coin is in position to serve as a fulcrum for said arm, to tilt the rear end of said goods-ejector upwardly, said ejector being slotted to receive its pivot and thereby allow limited inward movement of the slide in advance of the ejector.

4. In a coin-controlled vending machine having a coin-slot plate and a tray for the goods to be sold, a horizontal slide having depending plates forming between them a space to receive and permit the passage therethrough of a coin and open at its front end to admit the coin on edge, a handle for operating the slide, a goods-ejector pivotally mounted between said plates and having a front arm to be engaged by a coin and a flanged portion at its rear end to engage the lower piece of goods in the tray when said end is tilted, means at the front of said plates to engage the front edge of and arrest the coin between said plates when the rear edge of the coin is engaged with said arm, and means tending to maintain said goods-ejector in its initial position, the lower end of said tray having rearwardly extending flanges to support the goods therein at their end portions and front openings between and above said flanges for the passage therethrough of the upper rear flanged end of the said ejector, said flanges on the tray being in such relation to the ejector as to compel a further tilting action of the ejector as its rear end passes rearwardly against and above said flanges.

5. In a coin-controlled vending machine having a coin-slot plate and a tray for the goods to be sold, a horizontal slide having rigid therewith depending plates forming between them a narrow space to receive and permit the passage therethrough of a coin on vertical edge and open at its front end to admit the coin on such edge, a handle for operating and rigid with the slide, an integral goods-ejector pivotally mounted between said plates and having a downwardly extending front arm to be engaged by a coin and a flanged portion at its upper rear end to engage the lower piece of goods in the tray when said end is tilted, means at the front of said plates to engage the front vertical edge of and arrest the coin between said plates when the rear vertical edge of the coin is engaged with said arm, and means tending to maintain said goods-ejector in its initial position, combined with a coin-box below the slide having an opening in its top to receive an arrested coin from said plates when the slide has moved inwardly sufficiently for the coin to be released by the tilting of said ejector, and a guideway to without the machine for the passage of coins or the like not arrested between said plates against the goods-ejector.

[Claim 6 not printed in the Gazette.]

1,189,304. SEAL-LOCK. WALTER L. STANLEY, Norfolk, Va. Filed May 13, 1915. Serial No. 27,907. (Cl. 70—33.)



1. The combination of a bolt, a slotted bolt-casing, and seal insertible into the bolt through the slot of the casing when the latter is out of its locked position, the bolt carrying a locking means which automatically locks the bolt when thrown, and prevents the removal of the seal from the bolt, by precluding the registry of the seal with the slot of the casing.

2. The combination with a bolt-casing, of a bolt slidably fitted within the casing, the bolt having a gravity pin carried by the bolt which automatically locks the latter when the bolt is in its locking position, the bolt and casing having openings therethrough which are in registry when the bolt is in an unlocked position, and a seal insertible through said openings and carried by the bolt and prevented from removal therefrom when the bolt is in its locking position.

3. The combination with a hollow bolt and bolting casing, the bolt having openings in the top and bottom, a gravity pin extending through said openings, the casing having an elongated slot in its top through which the pin moves in the sliding of the bolt, and the bottom of the casing having an opening to receive the pin when the bolt is in the position of locking a door, and a seal carried by the bolt and located in a position in front of the gravity-pin and prevented from removal bodily from the bolt when the latter is in a locking position.

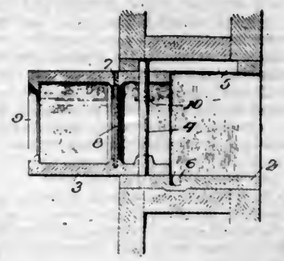
4. The combination with a longitudinally slotted casing, a bolt having a locking means slidably connected therewith and movable with the bolt throughout the length of the slot, the bolt having grooves, a seal adapted to be inserted in the groove of the bolt and carried thereby, and the casing having a slot with which the groove is adapted to register and through which the seal is inserted transversely into the bolt when said groove and slot are in registry.

1,189,305. SEAL-FASTENER FOR CAR-DOORS. WALTER L. STANLEY, Norfolk, Va. Filed July 6, 1915. Serial No. 38,238. (Cl. 70—23.)

1. A seal-fastener for car-doors comprising a sliding hollow bolt, an automatic lock carried by the latter, a seal extending across and carried by the bolt in front of the lock, said seal rendered unremovable from the bolt when the bolt is locked.

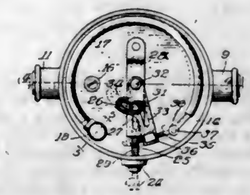
2. The combination with a casing, of a hollow bolt slidably fitted therein and carrying locking means which automatically locks the bolt when in a certain position, the bolt having means accessible from outside the casing to receive a seal thereacross, said seal forming a closure of the bolt in front of the locking-means, which can not be removed after the bolt is locked, and must be broken to gain access to the lock.

3. The combination with a casing having its wall or walls slotted lengthwise thereof, of a bolt adapted to carry a seal and having a gravity-pin connected therewith and operating through said lengthwise slot or slots, and means in the casing to receive the pin by gravity, whereby to lock the bolt automatically in a position where the seal is only removable after being broken.



4. The combination with a casing, a bolt slidably fitted therein and carrying a locking means which automatically fastens the bolt when in a predetermined position, said locking means operating in a slot in the casing which permits the bolt to be temporarily projected beyond its normally locked position, the bolt having a groove or socket to receive a seal which is accessible from outside the casing when the bolt is thus temporarily projected, and means in the casing to receive the pin and lock the bolt when the bolt is in its normal locked position.

1,189,306. AUTOMATIC DRAINING DEVICE FOR RADIATORS AND THE LIKE. JAMES O. STEENSLAND, Blanchardville, Wis., assignor to Carl E. L. Lipman, Beloit, Wis. Filed Aug. 24, 1914. Serial No. 858,253. (Cl. 137—35.)



1. The combination of a chamber, a thermostat disposed in said chamber, a valve closing an outlet opening in said chamber, means tending normally to open said valve, and mechanism connected to said thermostat and movable within predetermined limits relatively to the valve for holding said valve in closed position during normal movements of the thermostat, abnormal movement of said thermostat when the temperature of the fluid in the chamber falls to a predetermined degree, being adapted to release said valve and permit the same to open.

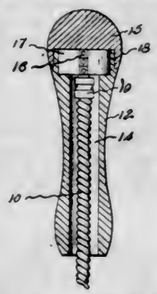
2. The combination of a chamber adapted to be connected with a water receptacle, a thermostat disposed in said chamber, a drain valve, means including a sliding connection between said valve and said thermostat whereby said valve is maintained in closed position during normal movement of the thermostat, and means for automatically opening said valve upon excessive movement of the thermostat to permit said receptacle to drain through said chamber.

3. The combination of a water chamber provided with a drain opening, a valve adapted to close said opening, a thermostat disposed in said water chamber, a member connected with said thermostat and having a sliding connection with said valve whereby the valve is maintained in closed position during normal expansion and contraction of said thermostat, and means for automatically opening said valve to drain the chamber upon undue contraction of the thermostat.

4. The combination of a water chamber, a thermostat disposed therein, a drain valve, the stem of said valve being provided with a lateral extension, a pivoted member provided with a slot engaged with said lateral extension, said slot comprising an arcuate portion adapted to normally hold said valve in closed position, and connections between the free end of said member and said thermostat whereby the member is moved upon excessive contraction of the thermostat to withdraw the arcuate portion of said slot from said extension and thereby permit the valve to open.

5. A draining device comprising a chamber, means for establishing communication between said chamber and a water receptacle through which said chamber is filled with water, a thermostat inclosed in said chamber, a valve adapted to close an outlet port from said chamber, and connection between said valve and said thermostat including a pivotally mounted slotted member constructed to normally hold said valve in closed position and to permit said valve to open when said thermostat contracts a predetermined amount.

1,189,307. RECORDING JUMPING-ROPE. EDWARD H. STOKES and RAYMOND E. GRYMES, New Brunswick, N. J. Filed June 14, 1915. Serial No. 33,954. (Cl. 46—30.)



1. The combination with a jumping rope, of a handle, a counting mechanism rigidly mounted in the handle, and means connecting one end of the rope with a movable part of the counting mechanism.

2. In a jumping rope, a handle, a step-by-step counter mounted in the handle, the handle having a longitudinal bore leading to the counter and said handle having a sight opening in one side through which the numbers of the counter can be seen, and a rope end rotatably disposed in the bore and secured to the counter.

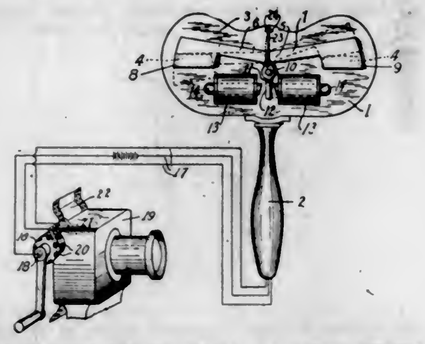
3. The combination with a jumping rope having a handle, rotatably mounted on one end thereof, of a counting mechanism carried by the handle and connected to the rope and handle for counting the number of revolutions of the rope with respect to the handle.

4. The combination with a jumping rope and its handle, of means mounted in the handle and connected to the rope for counting the revolutions of one with respect to the other.

1,189,308. STEREOSCOPIC PROJECTION APPARATUS. MICHAEL FRANCIS SULLIVAN, Chicago, Ill. Filed Aug. 24, 1914. Serial No. 858,224. (Cl. 88—19.3.)

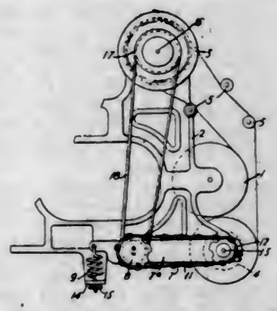
1. A device of the class described, comprising a body having a pair of sight openings spaced apart to register with the eyes of the user, a shutter adapted to control said sight openings comprising a pivoted member having parts located to alternately close said openings through the pivotal movement of said member, said parts being shaped and arranged to fully close one of said sight passages before the other is opened, an armature carried by said member, a pair of electro-magnets coöperating with said armature to oscillate said shutter, and yielding means normally holding said parts in position to close said openings.

2. A device of the class described, comprising a body having a pair of sight openings therein and spaced apart to register with the eyes of the user, a shutter pivotally mounted on said body and adapted to alternately close said openings through pivotal movement thereof, an armature carried by said shutter, a pair of electro-magnets dis-



posed on opposite sides of said armature for oscillating said shutter, a leaf spring having one end attached to said shutter, and a pair of pins on said body for embracing the other end of said spring, said spring being arranged to normally hold said shutter in position to close both said openings.

1,189,309. REROLLING DEVICE FOR GRAPHIC METERS. HAROLD B. TAYLOR, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 25, 1914. Serial No. 863,586. (Cl. 242—55.)



1. In a rolling device, the combination with a feeding roller, and a receiving roller, of a rotatable member, a belt for operatively connecting the feeding roller to the rotatable member, and a gearing means for operatively connecting the rotatable member to the receiving roller, the tension on the belt being adapted to vary to maintain a substantially constant torque on the receiving roller.

2. The combination with a feeding roller, and a receiving roller, of a transmission device therebetween comprising a rotatable member, a positive driving connection between the rotatable member and the receiving roller, and a belt for operatively connecting the rotatable member and the feeding roller, the friction of the belt being adapted to vary under predetermined conditions to maintain a constant torque on the receiving roller.

3. In a rolling device, the combination with a roller for feeding a flexible fabric and a second roller for receiving said fabric, of a power-transmitting device comprising a rotatable member having a fixed distance between its axis and the axis of the second roller, a flexible connecting

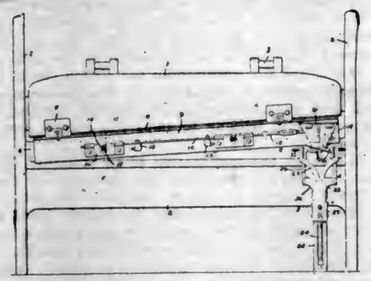
means between said first roller and said rotatable member, and means for decreasing the distance between the axis of said rotatable members and that of said first roller in substantial proportion to the increase in tension of the fabric being rolled on said second roller.

4. In a paper rolling device, the combination with a feeding roller and a receiving roller, of a rotatable member mounted on a pivotally mounted arm, a belt for operatively connecting the feeding roller to the rotatable member, and a positive driving means for connecting the rotatable member to the receiving roller, said belt being permitted to slip in accordance with the tension of the paper on the receiving roller.

5. In a paper rerolling device for a recording instrument, the combination with a roll of paper, a feeding roller, and a receiving roller, of a rotatable member mounted on a pivotally mounted arm, a belt for operatively connecting said feeding roller to said rotatable member, and means for operatively connecting said rotatable member to said receiving roller, the tension on said belt being adapted to vary in accordance with the tension of the paper on said receiving roller.

[Claims 6 to 8 not printed in the Gazette.]

1,189,310. SHEAR-GAGE. WILLIAM TESMER, Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Filed Apr. 25, 1916. Serial No. 93,486. (Cl. 164—59.)



1. In a shear-gage, the combination with a stationary and a movable shear-blade, of a pair of gages disposed at the rear of the blades and movable to and from the shear-line, a support for the gages, and means for simultaneously moving one of the gages closer to and the other one farther from the shear-line prior to each cutting stroke, substantially as set forth.

2. In a shear-gage, the combination with a stationary and a movable shear-blade, of a pair of gages disposed at the rear of the blades and movable to and from the shear-line, a support for the gages, means for simultaneously moving one of the gages closer to and the other one farther from the shear-line prior to each cutting stroke, and means for adjusting the pair of gages together to and from the shear-line, substantially as set forth.

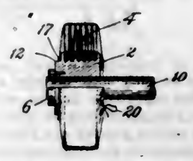
3. In a shear-gage, the combination with a stationary and a movable shear-blade, of a pair of gages disposed at the rear of the blades and movable to and from the shear-line, a support for the gages, springs connected with the gages and urging them in a direction away from the shear-line, adjustable stops to limit the retreating motion of the gages, and means for simultaneously moving one of the gages closer to and the other one farther from the shear-line prior to each cutting stroke, substantially as set forth.

4. In a shear-gage, the combination with a stationary and a movable shear-blade, of a pair of gages disposed at the rear of the blades and movable to and from the shear-line, a support for the gages, springs urging the gages away from the shear-line, adjustable stops to limit the retreat of the gages, an endwise movable cam-bar carried by said support, a cam carried by the cam-bar at each gage and serving to alternatively advance the gages away from their stops, and means for shifting the cam-bar endwise prior to each cutting stroke, substantially as set forth.

5. In a shear-gage, the combination with a stationary and a movable shear-blade, of a pair of gages disposed at the rear of the blades and movable to and from the shear-line, a support for the gages, springs urging the gages away from the shear-line, adjustable stops to limit the retreat of the gages, an endwise movable cam-bar carried by said support, a cam carried by the cam-bar at each gage and serving to alternatively advance the gages away from their stops, means for shifting the cam-bar endwise prior to each cutting stroke, and adjustable stops for limiting the endwise movement of the cam-bar, substantially as set forth.

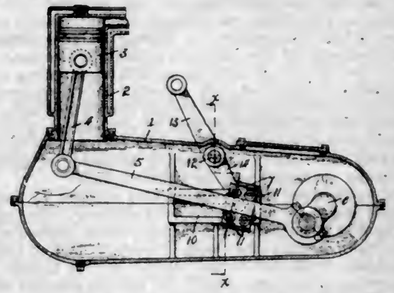
[Claims 6 to 15 not printed in the Gazette.]

1,189,311. FINISHING-ROLL AND COVER THEREFOR. ROBERT W. THOMSON, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 15, 1912. Serial No. 697,431. (Cl. 51—17.)



A work rubbing tool comprising a rotary brush having a hub and an extension projecting concentrically from one end of said hub, providing a peripheral shoulder of smaller diameter than said hub, a cover on said brush comprising an endless band of smaller diameter than the brush having one edge formed as a circular aperture by permanently gathering said edge, said aperture fitting over said extension and resting on said shoulder, a hem formed in the other edge of said cover and a gathering string running through said hem.

1,189,312. ENGINE. WILLIAM G. TIBBELS, Toledo, Ohio. Filed Feb. 23, 1916. Serial No. 79,949. (Cl. 121—45.)

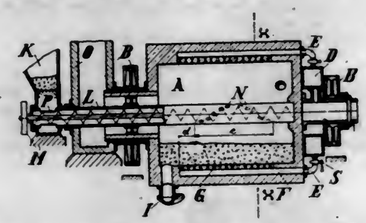


1. In an engine of the class described, a piston and crank-shaft in transversely offset relation, a connecting rod projecting from the piston, a lever member directly connected at one end to said connecting rod and directly connected at its other end to a crank of said shaft, and a fulcrum block for said lever member, said block permitting reciprocatory movements of the lever therethrough.

2. In an engine of the class described, a cylinder, a crank-case extending transversely from said cylinder and in communication therewith, a piston movable in the cylinder, a crank-shaft mounted in the crank-case at one side of the cylinder, a connecting rod projecting from the piston into the crank-case, a lever directly connected at one end to said connecting rod and directly connected at its other end to a crank of said shaft, a fulcrum block

reciprocally receiving said lever and mounted in the crank-case for shifting movements toward and away from the crank-shaft, and a lever connected to said fulcrum block and operable from without the crank-case to shift the block lengthwise of said first lever.

1,189,313. PROCESS OF TREATING METALLIFEROUS MATERIALS FOR ROASTING, REDUCING, SINTERING, AND LIKE PROCESSES. FRIEDRICH CARL WILHELM TIMM, Hamburg, Germany. Filed Oct. 30, 1913. Serial No. 798,176. (Cl. 75—17.)



1. The process of treating material consisting in introducing a charge of such material into a furnace, heating said charge and repeatedly adding solid heating materials to the hot furnace charge so that during the internal combustion only a portion of the total quantity of heating material necessary for treatment of the charge is present in the same.

2. The process of treating material consisting in introducing a charge of such material into a furnace, heating said charge and repeatedly adding a quantity of solid heating materials to the hot furnace charge, said quantity being approximately equal in amount to the quantity of material sufficiently treated and removed from the charge so that during the internal combustion only a portion of the total quantity of heating material necessary for treatment of the charge is present in the same.

3. The process of treating materials consisting in introducing a charge of such material into a furnace, heating said charge and repeatedly adding a quantity of solid heating material to the hot furnace charge, said quantity being approximately equal in amount to the quantity of material sufficiently treated and removed from the charge so that during the internal combustion only a portion of the total quantity of heating material necessary for treatment of the charge is present in the same.

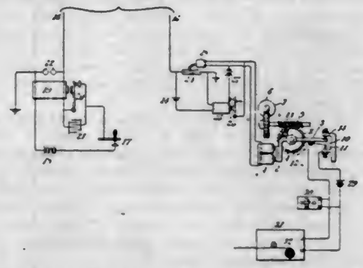
4. The process of treating materials consisting in introducing a charge of such materials into a furnace, repeatedly introducing fuel into said charge, gradually supplying fuel to one portion only of said charge, while the other portion thereof is treated by burning the residual heating materials in said portion by means of gases of oxidizing character conducted therethrough.

5. Process for the treatment of a mixture of metalliferous materials and materials containing solid carbon consisting in introducing a charge of such materials into a furnace, heating said charge, repeatedly adding heating materials to the hot furnace charge so that always only a portion of the total quantity of heating material necessary for the treatment of the furnace charge is present in the same and discharging the gaseous products of combustion to prevent collecting and separating out from the gases the metals volatilized out of the charge.

[Claims 6 to 8 not printed in the Gazette.]

1,189,314. RELAY. CHARLES R. UNDERHILL, New Haven, Conn., assignor to Underhill Telegraph Insulator Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed Aug. 4, 1904, Serial No. 219,541. Divided and application filed Nov. 5, 1912, Serial No. 729,549. Divided and this application filed Nov. 30, 1914. Serial No. 874,573. (Cl. 175—321.)

1. In a relay, the combination of an armature, electromagnetic means for operating said armature, an energizing circuit therefor, a switch controlled by said armature, and means for maintaining the switch closed a predetermined length of time after the energizing circuit is opened, said means including mechanism independent of the armature operating means for imparting a relatively slow return movement to said switch.



2. In a relay, the combination of an armature, electromagnetic means for operating said armature, an energizing circuit therefor, a switch controlled by said armature, and means for maintaining the switch closed a predetermined length of time after the energizing circuit is opened, said means including mechanism constantly tending to impart to said switch a return stroke relatively slow as compared with the working stroke thereof.

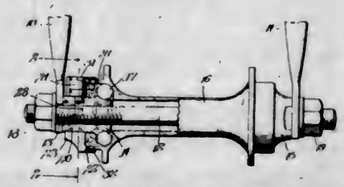
3. In a relay, the combination of an armature, electromagnetic means for operating said armature, an energizing circuit therefor, a switch controlled by said armature, and means for maintaining the switch closed a predetermined length of time after the energizing circuit is opened, said means including continuously moving mechanism constantly tending to impart a return stroke to said switch.

4. In a relay, the combination of an armature, electromagnetic means for operating said armature, an energizing circuit therefor, a switch controlled by said armature, and means for maintaining the switch closed a predetermined length of time after the energizing circuit is opened, said means including continuously moving mechanism constantly tending to impart a return stroke to said switch relatively slow as compared with the working stroke thereof.

5. In a relay, the combination of an armature, electromagnetic means for operating said armature, an energizing circuit therefor, a switch controlled by said armature, and means for maintaining the switch closed a predetermined length of time after the energizing circuit is opened, said means including mechanism continuously operating at a uniform rate of speed for imparting a relatively slow return stroke to said switch.

[Claims 6 to 9 not printed in the Gazette.]

1,189,315. LOCKING-HUB FOR BICYCLES. HENRY E. VAN NESS, Elmira, N. Y. Filed Jan. 13, 1916. Serial No. 71,925. (Cl. 70—90.)



1. In a device of the class described, the combination of a non-rotatable axle, a hub rotatably mounted thereon, a member movable longitudinally of the axle to lock the hub thereto, and a rotatable part carried by said member and coöperating with said axle to move the member into and out of locking position.

2. In a device of the class described, the combination of a non-rotatable axle, a hub rotatably mounted thereon, a member movable longitudinally of the axle to lock the hub thereto, a rotatable part carried by said member and coöperating with said axle to move the member into and out of locking position, and a spring coöperating with said part to hold it in its different positions.

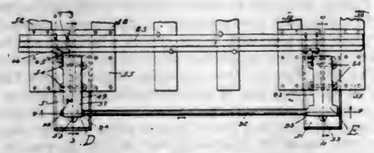
3. In a device of the class described, the combination of a non-rotatable axle, a hub rotatably mounted thereon and provided with teeth adapted to interlock with the teeth on the hub and means carried by said member and coöperating with said axle to cause the member to be moved into and out of engagement with the hub to lock and unlock the hub.

4. In a device of the class described, the combination of a non-rotatable axle, a hub rotatably mounted thereon and provided with teeth at one end thereof, a member slidably arranged on said axle but non-rotatable relatively thereto and provided with teeth adapted to interlock with the teeth on the hub and a rotatable part carried by said member and having an eccentric portion whereby the member is moved into and out of engagement with the hub when the said part is rotated.

5. In a device of the class described, the combination of a non-rotatable axle, a hub rotatably mounted thereon and provided with teeth at one end thereof, a member slidably arranged on said axle but non-rotatable relatively thereto and provided with teeth adapted to interlock with the teeth on the hub, a rotatable part carried by said member and having an eccentric portion whereby the member is moved into and out of engagement with the hub when the said part is rotated, and a spring cooperating with said part to hold said member in the locking and unlocking positions.

[Claims 6 to 12 not printed in the Gazette.]

1,189,316. CIRCUIT-CONTROLLING INSTRUMENT. EUGENE W. VOGEL, Oak Park, Ill., assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill., a Corporation of Illinois. Filed June 25, 1914. Serial No. 847,291. (Cl. 246—35.)



1. In a circuit controlling instrument, the combination with a movable circuit making and breaking element, of actuating means therefor adapted to be operated by deflection of a railroad rail, and an elastic instrumentality forming the only connection for communication of power between said element and said means.

2. In a circuit controlling instrument, the combination with a pivoted circuit making and breaking element, of a pivoted member adapted to be rocked by deflection of a railroad rail, and an elastic instrumentality forming the only connection for communication of power between said member and element.

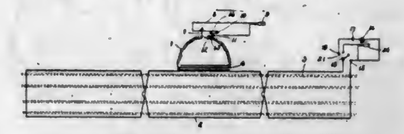
3. In a circuit controlling instrument, the combination with a casing, of a circuit making and breaking element pivoted in said casing, a stop to limit the movement of said element, actuating means for said element adapted to be operated by deflection of a railroad rail, and an elastic instrumentality forming the only connection for communication of power between said element and said means.

4. In a circuit controlling instrument, the combination with a casing, of a circuit making and breaking element pivoted in said casing, a stop to limit the movement of said element, a member pivoted to the casing which is adapted to be rocked by the deflection of a railroad rail, and a spring forming the only connection for communication of power between said member and element.

5. In a circuit controlling instrument, the combination with a casing, of a bell crank mounted in said casing with one arm outside of the same, a device adapted to be carried by a railroad rail so as to bear upon said arm when the rail is deflected, a circuit making and breaking element pivoted on the shaft of said bell crank within the casing, and a spring forming the only connection for communication of power between the other arm of said bell crank and said element.

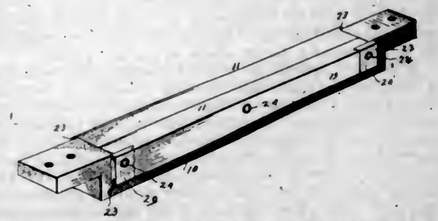
[Claims 6 to 23 not printed in the Gazette.]

1,189,317. INDUCTIVE TELEPHONE INSTALLATION. HANS VON KRAMER, Erdington, Birmingham, England. Original application filed Nov. 4, 1910, Serial No. 790,726. Divided and this application filed May 7, 1912. Serial No. 695,792. (Cl. 179—82.)



In an inductive telephone installation, the combination of a pair of parallel railroad tracks; vehicles therefor, a stationary circuit comprising a pair of conductors in series relationship mutually crossed at intervals and each having alternate parts laid near and parallel to the rails of said tracks; a movable circuit carried by each vehicle and comprising a plurality of long straight parallel wires in series relationship and disposed longitudinally beneath the vehicle in close proximity to said parts; and a telephone transmitter, a telephone receiver and a source of current in each of said circuits.

1,189,318. LOCOMOTIVE-CROSS-HEAD GUIDE. HUGH H. WALCK, Chambersburg, Pa. Filed Feb. 10, 1916. Serial No. 77,515. (Cl. 74—84.)



1. A cross head guide comprising a base member, an adjustable bearing block, a plurality of supporting plates situated between the bearing block and said base and adjusting means acting upon said bearing block to lift the same from said supporting plates.

2. A cross head guide comprising a base member, an adjustable bearing block, a plurality of supporting plates situated between the bearing block and said base, the base having a recess for each of said supporting plates and adjusting means acting upon said bearing block to lift the same from said supporting plates.

3. A cross head guide comprising a base member, an adjustable bearing block, and a plurality of supporting plates situated between the bearing block and said base, the base having a recess for each of said supporting plates, said recess extending from side to side of the base, and the bearing block having a removable cover plate lying over the end of said supporting plate.

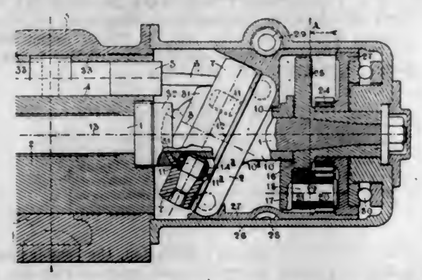
4. A cross head guide comprising a base, a bearing block situated in a recess in the base, a plurality of adjusting bolts engaging threaded openings in the base and engaging said block, and a supporting plate at each end of said block and situated in a recess in the base said adjusting bolts acting to lift the block from said supporting plates.

5. A cross head guide comprising a base, a bearing block situated in a recess in the base, a plurality of adjusting bolts engaging threaded openings in the base and engaging

said block, a supporting plate at each end of said block and situated in a recess in the base, and the bearing block having a removable cover plate lying over the end of said supporting plate.

[Claims 6 and 7 not printed in the Gazette.]

1,189,319. FLUID-PRESSURE APPARATUS. CHARLES LESLIE WALKER, London, England. Filed May 10, 1912. Serial No. 696,394. (Cl. 108—44.)

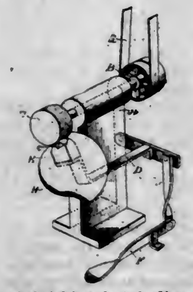


1. A machine of the inclined-disk-Z-crank type in which the inclined member is anchored through the medium of a member which is oscillated about an axis coincident with the axis of the said machine, the angular amplitude of oscillation being substantially equal to the versed sine of the angle which the axis of the said inclined member makes with the said axis of the machine substantially as described.

2. A combination comprising an inclined member carrying a roller an oscillating member in engagement with the said inclined member through the medium of the said roller, an element co-axial with the said oscillating member carrying a cylinder and supporting an eccentric which is in engagement with the said oscillating member a piston in the said cylinder actuated by the said inclined member and means whereby the said eccentric makes two rotations in the period of a double stroke of the said piston.

3. In an apparatus of the known order which comprises a distributing valve, two inclined members of constant inclination, a concentric element and two reciprocating agents coöperating on a single body of fluid and adapted respectively to co-act with the said inclined members, for the purpose of varying the effective-stroke, means of rotational contrariwise adjustment respectively of the two medial planes of the said inclined members relatively to the said valve about the axis of the said concentric element substantially as described.

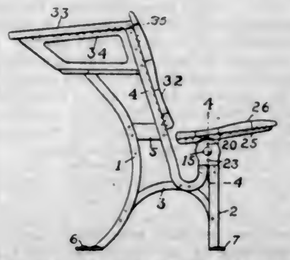
1,189,320. METHOD OF FINISHING HAT-BODIES. JOHN V. WALSH, Haverhill, Mass. Filed Jan. 19, 1915. Serial No. 3,149. (Cl. 223—30.)



1. A method of finishing hat bodies comprising treatment by a coarse abrasive wheel, then by a fine abrasive wheel, then again by a coarse abrasive wheel, then by a felt buffing head, then shaping, and then again subjecting it to treatment by a felt buffing head, substantially as set forth.

2. The method of finishing hat bodies which consists in treating a felt hat body first by a coarse abrasive material, then by a fine abrasive material, then by the coarse abrasive material, and then by a felt buffing head, substantially as set forth.

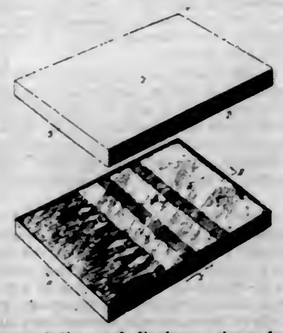
1,189,321. COMBINED SCHOOL DESK AND CHAIR. EDWARD G. WATKINS, Gardner, Mass., assignor to Heywood Brothers and Wakefield Company, Gardner, Mass., a Corporation of New Jersey. Filed June 29, 1914. Serial No. 847,832. (Cl. 155—34.)



1. In an article of furniture, a side frame comprising a front leg angular in cross section, and presenting two of its surfaces respectively at the front and on the outer side of said frame, a rear leg angular in coarse section and presenting two of its surfaces respectively at the rear and on the outerside of said frame, a seat back supporting member between said front and rear legs, and terminating above the lower ends thereof, said seat back supporting member being angular in cross section with one of its surfaces at the front of the frame, whereby a means of attachment for a seat back is afforded, and a connecting member extending between said front and rear legs and attached to the corresponding surfaces thereof which are presented on the outerside of the frame, said connecting member being rigidly attached to said seat back supporting member.

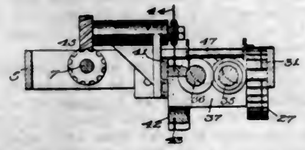
2. In an article of furniture, a side frame comprising front and rear legs which are angular in cross-section, a connecting member extending between said front and rear legs and attached to the corresponding surfaces thereof which lie in the plane of said connecting member, a seat back supporting member disposed between said front and rear legs and attached at its lowest point to said connecting member, and a brace connected to said seat back supporting member and to one of said legs.

1,189,322. TRANSPORTATION AND DISPLAY PACKAGE FOR PACKAGE-STERILIZED ARTICLES. JOHN HOWARD WAY and ALBEN WARREN WAY, St. Davids, Pa.; said John Howard Way assignor to said Alben Warren Way. Filed Apr. 18, 1914. Serial No. 832,963. (Cl. 206—44.)



As a transportation and display package for package-sterilized articles, a substantially rigid receptacle, having raised sides, in combination with a layer of paper completely covering the top of the receptacle having the following qualities, viz.—translucency, permeability by sterilizing reagents in the form of vapor, and imperviousness to the passage of disease germs, said translucent layer being sealed to each side of said receptacle so as to form a complete air tight joint between the two; and a covering element of relatively rigid material adapted to protect said translucent layer under the conditions of transportation and handling.

1,189,323. BEAN-SNIPPER. FRED WEGNER, Fairport, N. Y., assignor to George W. Cobb, Montclair, N. J. Filed Jan. 10, 1914. Serial No. 811,294. (Cl. 146—11.)



1. An apparatus of the character described comprising two parallel horizontally disposed revoluble screws having screw threads extending in the same direction arranged to receive beans and to move them transversely and endwise, a conveyer adapted to receive portions of the beans while the latter are being moved, the conveyer being actuated by one of said screws, and a cutter for snipping the beans.

2. An apparatus of the character described comprising a pair of revoluble screws disposed horizontally in juxtaposition a conveyer arranged to be actuated by one of the screws having open ended pockets moving synchronously with said screws and adapted to receive the ends of beans carried by the screws and a cutter for snipping the ends of the beans coöperating with said pockets.

3. An apparatus of the character described comprising two pairs of revoluble screws disposed in parallel planes, one pair being arranged to receive beans from the other, said pairs of screws being arranged with their screw threads extending in different directions and each serving to move beans transversely in the same direction and alternately in different longitudinal directions and separate cutters for snipping the two ends of the beans.

4. In a bean snipper, the combination with two pairs of screw conveyers arranged to receive beans successively and rotating in directions to move them bodily transversely and longitudinally alternately in opposite directions, of separate pocket conveyers coöperating with said pairs of screws and arranged to receive the ends of the beans and cutting devices arranged to operate on the beans in said pockets.

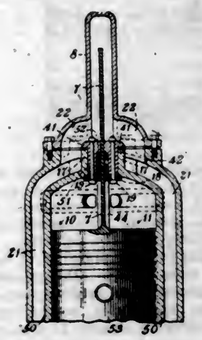
5. In a bean snipper, the combination with a pair of screw conveyers arranged side by side and rotating in a direction to advance beans bodily transversely and longitudinally, of means coöperating with the ends of the beans to sever them and a plurality of pressing rollers arranged transversely of the conveyer screws and acting to hold the beans within the convolutions of the screw threads.

[Claim 6 not printed in the Gazette.]

1,189,324. INTERNAL-COMBUSTION ENGINE. LESTER A. WERNER, Atlantic Highlands, N. J., assignor of one-half to Albert E. Hartcorn, New York, N. Y. Filed Apr. 29, 1915. Serial No. 24,720. (Cl. 123—60.)

1. An internal combustion engine, comprising a casing, a cylinder in the casing, a piston in the cylinder, a partition dividing the combustion chamber, connected with the piston; separate valve chambers for each division of the combustion chamber, intake and exhaust valves set therein, valve operating gears for actuating the valves in each division independently of the other, and means for igniting the explosive charge in each division of the combustion chamber; substantially as herein shown and described.

2. An internal combustion engine, comprising a casing, a cylinder, and valve chambers, communicating therewith, in the casing; a piston in the cylinder, a movable partition dividing the combustion chamber, an intake and an exhaust valve for each division of the combustion chamber, partitions in the casing between the intake and exhaust valves of each division of the combustion chamber, valve operating gears for actuating the valves in each division independently of the other, and means for igniting the explosive charge in each division of the combustion chamber; substantially as herein shown and described.



3. An internal combustion engine, comprising a casing, a cylinder in the casing; a piston in the cylinder, a partition, dividing the combustion chamber of the cylinder, secured to the piston, separate valve chambers for each division of the combustion chamber and communicating therewith; intake and exhaust valves set therein; valve operating gears for actuating the intake and the exhaust valves in each division independently of the other, and means for igniting the explosive charge in each division of the combustion chamber; substantially as herein shown and described.

4. A four cycle internal combustion engine, comprising a casing, a cylinder, a movable partition fitted into the cylinder and dividing the combustion chamber into sections; separate valve chambers and a set of intake and exhaust valves for each section of the combustion chambers; gears for actuating the intake and the exhaust valves in each section independently, and means for igniting the explosive charge in each section of the combustion chamber; substantially as herein shown and described.

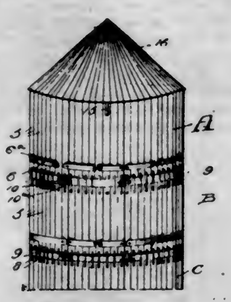
5. A four cycle internal combustion engine, comprising a casing, a cylinder and valve chambers communicating therewith, in the casing; a piston in the cylinder; a partition, secured to the piston, and dividing the combustion chamber into sections; partitions in the valve chambers, dividing each into the same number of sections as that into which the combustion chamber is divided; an intake and an exhaust valve for each section of the combustion chamber; means for igniting the explosive charge in each section of the combustion chamber; and gears for actuating the intake and the exhaust valve in each section of the combustion chamber independently; substantially as herein shown and described.

1,189,325. SILO. JOHN H. WEST, Carthage, Mo. Filed June 25, 1914, Serial No. 847,278. Renewed Nov. 29, 1915. Serial No. 64,203. (Cl. 217—4.)

1. A silo consisting of a plurality of units, one of the units being provided with brackets extending endwise thereof and the adjacent unit being provided with a band uniting the members of the unit and adapted to interlock with the brackets.

2. A silo consisting of a plurality of units interlocked in vertical formation, each unit consisting of a plurality of stave sections interlocked to each other, means for tying the staves of each section to each other, supports

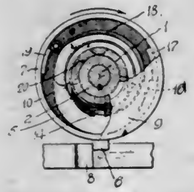
on the ends of each unit and bands clamping the sections of the silo to each other and adapted to interlock with the supports.



3. A silo consisting of a plurality of units, each unit comprising longitudinal tongue and grooved members interlocking with each other, supports on the end of said unit, and a clamping band carried by the adjacent unit and interlocking with the supports.

4. A silo consisting of a plurality of units, means for interlocking the units to each other, a stiffening member consisting of a plurality of sections forming a ring disposed within the upper unit, means for clamping the sections of the stiffening member to each other, and arms carried by said member adapted to seat on the upper unit.

1,189,326. IMPULSE-STARTER. PORTER A. WILEY, Kokomo, Ind., assignor to Kokomo Electric Co., Kokomo, Ind., a Corporation of Indiana. Filed Jan. 19, 1916. Serial No. 72,953. (Cl. 123—149.)



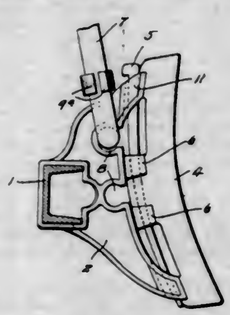
1. An impulse starter for an electric generator comprising a main drum adapted to be non-rotatably secured to the rotatable driving part of a generator, a coupling member rotatable relative thereto, a radially oscillating yoke revolving with the drum and engaging positively with the coupling member when at the limit of the motion of the yoke caused by centrifugal force, a stop engaging the yoke and drum from rotation when at the other limit of motion, a spring yieldingly connecting the drum and permitting relative rotation of them, and coöperating cams on the yoke and coupling adapted to move the yoke into a position intermediate the point of engagement of the drum and with the coupling when the spring is placed under stress by forward movement of the coupling relative to the drum.

2. An impulse starter for an electric generator comprising a main drum adapted to be non-rotatably secured to a rotatable driving part of a generator, a coupling member rotatable relative to the drum, a radially oscillatory yoke mounted in the drum to revolve therewith and adapted to engage positively with the coupling member when at the limit of motion of the yoke caused by centrifugal force, a stop engaging the yoke and drum from rotation when the drum and yoke are at rest, a spring yieldingly connecting the drum and member, a cam point on the yoke, and a coöperating cam part on the coupling adapted to move the yoke into disengagement with the stop and with the coupling when the spring is pressed by the forward movement of the coupling relative to the yoke and drum.

3. An impulse starter for an electric generator comprising a main drum adapted to be non-rotatably secured to a rotatable driving member of a generator, a yoke turning with the drum and oscillatory radially therein under the influence of centrifugal force, a stop engaged by the yoke for arresting the rotation of the latter and the drum when the yoke is at the other limit of motion, a finger on the yoke adapted to interlock positively with the coupling member when the yoke is at the limit of motion caused by centrifugal force, a spring yieldingly connecting the drum and coupling and providing limited forward movement of the coupling relative to the drum, and coöperating cam parts on the yoke and coupling adapted to release the yoke from the stop and from the coupling when the coupling is at the forward limit of motion provided for by the spring.

4. An impulse starter for an electric generator comprising a main drum adapted to be non-rotatably secured to a rotatable driving part of a generator, a coupling member rotatable relative to the drum, a radially oscillating yoke revolving with the drum and engaging with the coupling when at the limit of motion of the yoke caused by centrifugal force, a stop adapted to intercept and lock the yoke and drum from turning when the yoke is at the other limit of motion, cam members on the coupling and yoke adapted to move the yoke into the released position from the stop and drum, and a spring permitting movement of the coupling member relative to the yoke into the cam releasing position and driving the drum forward.

1,189,327. BRAKE HEAD AND HANGER CONNECTION. CHARLES HAINES WILLIAMS, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 9, 1915. Serial No. 44,466. (Cl. 188—70.)



1. In combination with a brake head and its supporting hanger, a retaining member affixed to the hanger and adjustable thereon independently of the head and adapted to engage the head to retain the head on the hanger.

2. In combination with a brake head and its supporting hanger, a retaining member affixed to the hanger and movable therewith independently of movement of the head and adapted to prevent removal of the head from the hanger.

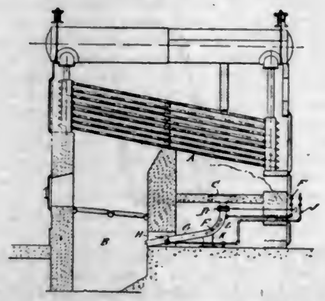
3. In combination with a brake head and its supporting hanger, a retaining member supported on the hanger for movement therewith independently of the head, and adapted for engagement with a rear portion of the head.

4. In combination with a brake head and hanger, a retaining member movable with the hanger independently of the head and adapted to engage the head to prevent displacement thereof from the hanger.

5. In combination with a pivotally connected brake head and hanger, a retaining member affixed to the hanger and movable into and out of engagement with the head by relative pivotal movement of the hanger and head for the purpose described.

[Claims 6 to 26 not printed in the Gazette.]

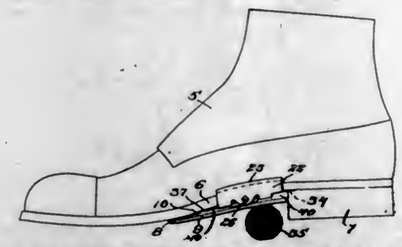
1,189,328. SOOT AND SCALE EJECTOR. ERNEST WILLIAMS, New York, N. Y. Filed May 27, 1913. Serial No. 770,273. (Cl. 110—165.)



1. In a soot and refuse removal unit an ejector or conveyer tube having a single discharge orifice, together with an inlet hopper at the suction end, said inlet hopper being directly connected through a damper to the conveyor tube, a single steam or compressed air jetting device located between the damper and the discharge orifice, said jetting device having a single outlet orifice and being rigidly connected to a removable plate, which plate is fastened to the exterior of the ejector tube, a plurality of water spray nozzles set adjacent to the discharge orifice of the conveyer tube and extending from the interior of the conveyer tube to a chamber of annular form, encircling a portion of the exterior of the conveyer tube; together with the controlling means substantially as shown, for the purposes as specified.

2. In a soot and refuse removal unit a conveyer tube having a single jetting deivce, which jetting device is removable through an opening in the side of the conveyer tube, said jetting device being rigidly connected to a removable plate, said plate being attached to exterior of the conveyer tube, which plate seals opening in the conveyer tube, said plate having lug for pipe connection to same; together with the controlling means substantially as shown, for the purposes as specified.

1,189,329. SHOE-PROTECTOR. DANIEL E. WINAGLE, Gorham, N. Y. Filed Jan. 29, 1916. Serial No. 75,055. (Cl. 36—65.)



1. A shoe protector comprising a lower plate, an upper plate secured thereon, a clamp on one side of the protector between the plates and having its body slidable transversely of the protector, means for fixing the clamp in adjusted position, an opposite clamp, and means for forcing the last named clamp toward or from the first.

2. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates provided with a transverse guideway, a clamp having its body freely slidable in said guideway, means for securing the clamp in adjusted position in the guideway between the two plates, a clamp on the opposite side of the protector, and means for forcing the last named clamp toward or from the first.

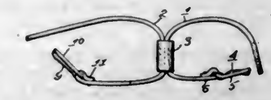
3. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates comprising parallel arms forming a transverse guideway, a clamp having its body freely slidable in said guideway between the two plates and provided with a slot, a bolt passing through said slot and one of the plates to secure the clamp in adjusted position in the guideway, a clamp on the opposite side of the protector, and means for forcing the last named clamp toward the first.

4. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates provided with parallel arms forming a transverse guideway, a clamp having wings of less thickness than the housing inclosing the arms of the housing, a nut seated in the guideway, a bolt swiveled in the clamp and threaded through the nut, an opposite clamp, and means whereby it may be adjusted and fixed in adjusted position.

5. A shoe protector comprising a lower plate, an upper plate secured thereon, a housing between the plates provided with guideways extending from near its midlength to the opposite side edges of the plates, a clamp freely slidable in one guideway, means for fixing it in adjusted position therein, an opposite clamp freely slidable upon the housing, a nut seated in the opposite guideway, and a bolt in the opposite guideway swiveled in the clamp and threaded through the nut.

[Claim 6 not printed in the Gazette.]

1,189,330. COW-TAIL HOLDER AND HOBBLE. LAWRENCE E. WOOLERY, Glendale, Ariz. Filed Oct. 3, 1914. Serial No. 864,914. (Cl. 119—128.)



1. A device of the character described including a pair of straps, an oval-shaped connecting element for slidably receiving said straps, buckles upon one of the ends of each of the straps for facilitating the fastening of the straps, and one of said buckles provided with means therein for clamping the tail of a cow.

2. A device of the character described including a pair of straps, means for slidably connecting the straps, buckles upon one of the ends of each of said straps for facilitating the fastening of the straps, one of said buckles provided with longitudinal grooves, said grooves constituting clamping surfaces for receiving the tail of a cow.

3. A device of the character described including a pair of straps, an oval-shaped connecting element for slidably receiving the straps, rectangular buckles upon one of the ends of each of the straps, the ends of the straps adjacent the buckles being provided with slots, tongues positioned in said slots and pivotally associated with the buckles, said tongues being engageable with the free ends of the straps and coöperating with the buckles for facilitating the securing of the straps, the upper surfaces of the buckles and under surfaces of the tongues being provided with longitudinal grooves throughout their length for facilitating the clamping of the tail of a cow.

1,189,331. LETTERING-PEN. WILLIAM E. WORTH, San Francisco, Cal. Filed Aug. 24, 1915. Serial No. 47,023. (Cl. 120—110.)

1. A pen of the character referred to having two nibs terminating in a flat marking surface which is an equilateral triangle in form.

2. A pen of the character referred to comprising two nibs of triangular form in cross section and terminating

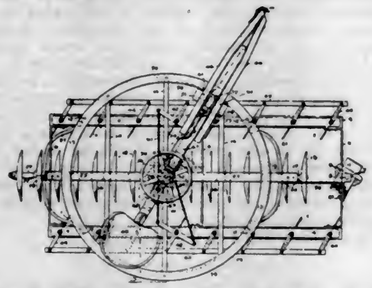
in the same plane in a flat marking surface which is an equilateral triangle in form.



3. A lettering pen of the character referred to, comprising a body, or shank portion, terminating in writing nibs having formed thereon a flat writing surface of equilateral triangular form, substantially as described.

4. A lettering pen having its contacting, or marking, surface flat and of equilateral triangular form, for the purpose referred to.

1,189,332. DISK HARROW. CHESTER YOUNG, Livermore, Cal. Filed Nov. 20, 1915. Serial No. 62,490. (Cl. 55—30.)



1. A disk harrow having a row of disks, two rows of colters respectively in front of and behind the disks, a frame supported upon said disks and colters, a draft bar angularly movable relative to said frame, and means for locking the draft bar in different positions relative to said frame.

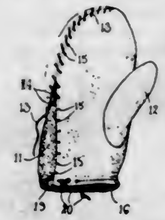
2. The combination of a row of disks, a row of colters in front of the disks, shafts for said colters, forks supported by said shafts, a frame supported upon said forks, a post secured to said frame, a tube rotatable around said post, a grooved wheel secured to said tube, a chain around said grooved wheel, arms secured to the forks of said colters, the chain being operatively connected to one of said forks and operative connections between said arms whereby they rotate in unison.

3. The combination of a row of disks, rows of colters respectively in front of and behind the disks, shafts for said colters, forks supported by said shafts, a frame supported upon said forks, a post secured to said frame, a tube rotatable around said post, a grooved wheel secured to said tube, chains around said grooved wheel, arms secured to the forks of said colters, the chains being operatively connected to one fork in each row of colters, and operative connections between said arms whereby they rotate in unison.

4. The combination of a frame, a row of pivoted colters mounted thereon, a disk axle, disks thereon, a circular controlling ring supported by said colters and disks and secured to the frame, a seat-supporting bar adapted to rotate about the center of the ring, a seat supported thereby, a draft bar connected with the seat-supporting bar and supported by the ring, means for turning the colters about their pivotal axes and a control device at the center of said ring for actuating said means, and means for locking the draft bar to the controlling ring in different positions.

5. The combination of a frame, harrow disks, a shaft about which they revolve mounted on the frame, a bearing for said shaft, a post the lower end of which is supported by said bearing, a seat-supporting bar through which the post extends, a tube around said post also passing through said seat-supporting bar, a hand wheel secured to said tube, a pulley secured to a lower portion of said tube, a frame piece supported by said shaft, and through which said post extends, a flexible member around said pulley, colters rotatably mounted with relation to the frame, and means whereby the movement of said flexible member turns the colters about axes parallel with the planes of the colters.

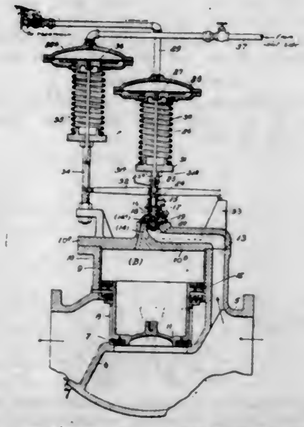
1,189,333. DRAW-STRING FOR BATH-MITTS. SIDNEY E. YOUNGLOVE, Monroe, Mich. Filed Aug. 29, 1914. Serial No. 859,176. (Cl. 24—266.)



1. A mitt having a wrist portion thereof provided with a casing, said casing having a wall thereof at one end provided with a key hole shaped opening, and a lace having one end thereof fixed in said casing and extending throughout said casing and through the wall opening of said casing with the other end thereof knotted and adapted to be held in the restricted portion of said opening.

2. A mitt having the wrist portion thereof provided with a casing, said casing having the wall thereof at one end provided with an opening, a stiff piece of material in said casing at the opening thereof and provided with a key hole shaped opening registering with the opening in the wall of said casing, and a lace having one end fixed in the casing and extending throughout the length thereof and the opposite end knotted and extending through the opening and adapted to be held in the restricted end of the opening of the stiff piece of material.

1,189,334. AUTOMATIC VALVE. EDWARD V. ANDERSON, Monessen, Pa., assignor of one-half to Charles E. Golden, Crafton, Pa. Filed Nov. 6, 1914. Serial No. 870,589. (Cl. 50—5.)



1. The combination with a main valve comprising a movable element provided with a piston, of a pilot valve adapted to open the main valve by releasing pressure behind said piston, and a pressure controlled device to automatically operate said pilot valve and independent means to operate said pilot valve controlled by the pressure from the inlet side of the main valve, substantially as described

2. The combination with a main valve adapted to be opened by release of pressure behind it, a pilot valve and proper ports adapted to normally maintain pressure behind said main valve or to release said pressure, of a pressure operated controlling device governing said pilot valve, and a separate emergency pressure operated device connected to operate the pilot valve independently of said first pressure control.

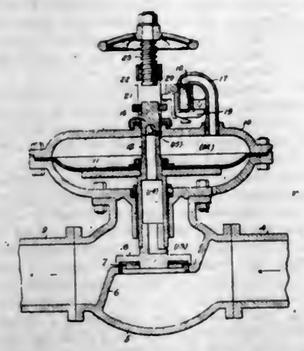
3. The combination with a main valve comprising a cylindrical valve body reciprocating in a cylinder and having an enlarged piston at its upper end, of a casing having a passage from the high pressure side to the top of said piston, a pilot valve normally closing said passage, a device to operate the pilot valve to open said passage comprising a diaphragm subjected on one side to adjustable spring pressure and on the other side to the pressure of the line on the outlet side of the main valve, an actuating element independent of said pressure device, adapted to open the pilot valve, and a pressure and spring operated diaphragm connecting to said actuating device, whereby to operate the pilot valve by changes of pressure on the inlet side of the main valve.

4. The combination of a main valve adapted to be operated by fluid pressure from the supply side of the line in which it is placed, a pilot valve adapted to control such fluid pressure, a pressure diaphragm and connections whereby to operate the pilot valve with change of pressure thereon, and a hand-operated adjusting element in the connections between said diaphragm and pilot valve, adapted to render such control ineffective at will.

5. The combination with a main valve adapted to be operated by varying the pressure on top of it, of a pilot valve comprising a casing having an opening to the top of the main valve and an opening to the atmosphere, a reciprocating cylinder in said casing having at the one end a valve and at the other end a shifting plug controlling an opening from the said hollow cylinder to the atmosphere.

[Claim 6 not printed in the Gazette.]

1,189,335. AUTOMATIC FIRE-SERVICE VALVE. EDWARD V. ANDERSON, Monessen, Pa., assignor of one-half to Charles E. Golden, Crafton, Pa. Filed May 5, 1915. Serial No. 26,070. (Cl. 169—23.)



1. A combined pressure reducing and emergency valve comprising a casing with a partition having a valve seat therein, a valve having a hollow stem communicating with the delivery side of the valve, a supplementary chamber having a movable pressure diaphragm of greater area than the main valve, with the chamber above it in communication with said hollow valve stem, a small valve between the hollow stem and said chamber adapted to prevent a sudden and large flow of fluid therethrough, and means to establish communication between the diaphragm chamber and the outside air when the main valve opens a material distance, substantially as described.

2. An automatic fire service valve comprising a casing, a main valve therein, a pressure chamber communicating with the delivery side of the valve casing, a movable wall in said chamber, a connection between said wall and valve, a normally closed passage from the pressure chamber to the outer atmosphere and means operated by excessive movement of the connection between the wall and the valve to open said passage and relieve the pressure chamber.

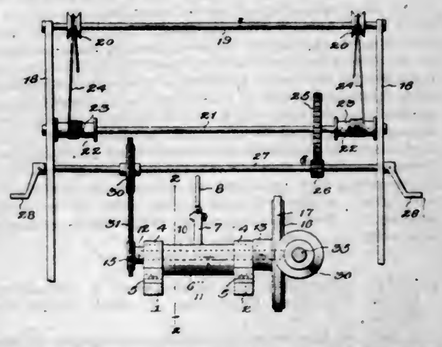
3. A fire service valve comprising a casing, a main valve, a pressure diaphragm connected with the valve stem, and a diaphragm chamber normally maintained at a reduced pressure from the outlet side of the valve, but provided with a valved port adapted to permit only a small flow of fluid toward said chamber, and to exhaust said chamber when the low pressure side of the main valve loses its pressure, a pipe connecting said chamber with the outside air and closed by a valve having a device adapted to coöperate with the main valve stem to establish communication between said chamber and the outside air.

4. The combination with a pipe line having a fluid supply on one side, and a closed pipe on the other, with a fusible plug therein, of a combined emergency and reducing valve comprising a main valve, a supplemental chamber with a pressure diaphragm attached to the main valve stem, a valved port connecting the low pressure side of the main valve with the top side of said pressure diaphragm chamber, and means operated by any sudden and considerable opening of the main valve to completely exhaust the pressure in said diaphragm chamber, substantially as described.

5. A combined reducing valve and emergency valve comprising a casing having a perforated partition and a supplementary chamber, a valve closing the perforation of the partition mounted on a stem carrying a movable wall dividing said supplementary chamber, suitable ports and passages connecting the delivery side of the casing with one of the sub-divisions of said supplementary chamber, and a valve operating to permit small and gradual flow into and out of said chamber but preventing large and sudden flow into the chamber, whereby the reducing valve may be opened entirely by a sudden reduction of pressure on the outlet side, and having been opened interrupts communication between the outlet side and said chamber, substantially as described.

[Claim 6 not printed in the Gazette.]

1,189,336. DRIVING MECHANISM. ROBERT L. ARMSTRONG, Los Angeles, Cal. Filed Jan. 12, 1915. Serial No. 1,857. (Cl. 74—26.)



1. In combination, a supporting structure, said structure including spaced frame members, a driving means, a rotatable shaft journaled on said spaced frame members of the supporting structure and formed with a longitudinal bore, a radial integral arm carried by the shaft, a coiled spring secured to the outer end of the arm for normally holding the shaft in one position, means for

adjusting the tension of the spring, a lever secured to the outer end of the arm for moving it against the action of the spring, a second shaft rotatable in the bore of the first shaft and projecting therefrom, a wheel fixed to a projecting end of the second shaft and adapted to be moved into operative engagement with the driving means on imparting rotary movement to the first shaft, and brake means adapted to coöperate with the wheel when disengaged from the driving means.

2. In combination, a supporting structure including spaced frame members, a single shaft journaled on the frame members and spanning the space therebetween, said shaft being formed with an eccentrically disposed bore extending throughout its length, a second shaft rotatable in the bore of the first shaft and projecting at its opposite ends beyond the frame members, a transmission element on each projecting end of the second shaft, another transmission element with which one of the first transmission elements is adapted to engage on partially rotating the first shaft, and means for partially rotating the first shaft.

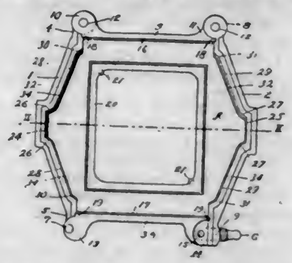
3. In a motor truck, the combination with a supporting structure including spaced frame members and a driving shaft, of a shaft journaled on said spaced frame members and spanning the space therebetween, the axis of said second shaft being at right angles to said driving shaft, said second shaft having a bore, formed longitudinally therethrough and located off center, a third shaft journaled in the bore and projecting from the opposite ends of the bored shaft, a friction wheel on one end of the third shaft, a friction disk on the driving shaft operatively engaging the friction wheel, means to normally hold the wheel and disk in operative contact, a brake, means to rotate the bored shaft so as to move the friction wheel out of operative contact with the disk and into engagement with the brake, and a transmission element on the opposite projecting end of the third shaft.

4. In combination, a supporting structure including spaced frame members, a single shaft journaled on the frame members and spanning the space therebetween, said shaft being formed with an eccentrically disposed bore extending throughout its length, a second shaft rotatable in the bore of the first shaft and projecting at its opposite ends beyond the frame members, a transmission element on each projecting end of the second shaft, another transmission element with which one of the first transmission elements is adapted to engage on partially rotating the first shaft, and an arm extending laterally from the first shaft at a point between the frame members of the supporting structure.

5. In combination, a supporting structure including spaced frame members, a single shaft journaled on the frame members and spanning the space therebetween, said shaft being formed with an eccentrically disposed bore extending throughout its length, a second shaft rotatable in the bore of the first shaft and projecting at its opposite ends beyond the frame members, a transmission element on each projecting end of the second shaft, another transmission element with which one of the first transmission elements is adapted to engage on partially rotating the first shaft, an arm fixed to the first shaft at a point between the frame members of the supporting structure, an operating link connected to the arm for rocking it, and spring means connected to the arm for normally tending to hold the engageable transmission elements separated.

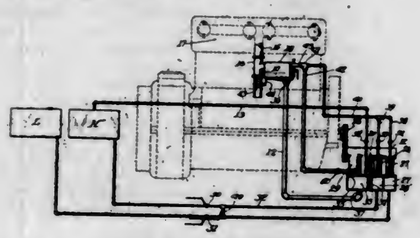
1,189,337. CONVERTIBLE MOLD. ZINA R. ASHBAUGH, Kansas City, Mo. Filed June 12, 1915. Serial No. 33,746. (Cl. 25—121.)

A mold of the character described, consisting of two longitudinal members provided with notches near their ends, a transverse member hinged at its ends to an end of each longitudinal member, a second transverse member hinged at one end to one of the longitudinal members and abutting at its opposite end against the other longitudinal member, shoulders on said transverse members to enter the notches in the longitudinal members, centrally disposed beads extending longitudinally of the inner edges of the transverse members, and a pivoted handle for locking



the abutting end of the second transverse member against the longitudinal member.

1,189,338. INTERNAL-COMBUSTION ENGINE. CHARLES B. ASKEW, Chicago, Ill. Filed Mar. 13, 1916. Serial No. 83,734. (Cl. 123—131.)



1. The combination with an internal combustion engine intake duct having an aperture therein, of means for projecting a spray of liquid fuel into said aperture, and adjustable means for diverting a portion or all of the spray from passage through the aperture.

2. The combination with an internal combustion engine intake duct having an aperture therein, of a fuel supply, of means for projecting a spray of liquid fuel into said aperture, adjustable means for diverting a portion or all of the spray from passage through the aperture and means for returning the fluid in the diverted portion of the spray back to the supply.

3. Means for supplying a combustible charge to an internal combustion engine, comprising an intake duct, means for projecting a spray of fuel into said duct, and means for adjusting the quantity of the spray passing into said duct without affecting the volume of the spray.

4. The combination with an internal combustion engine, of an intake duct, means for projecting a spray of fuel into said duct comprising a pump having a capacity for supplying an amount of fuel at no time less than the maximum amount the engine is capable of utilizing, and means for adjusting the quantity of the spray passing into said duct without affecting the volume of the spray.

5. The combination with an internal combustion engine of an intake duct, means for projecting a spray of fuel into said duct comprising a pump driven by said engine and having a capacity for supplying an amount of fuel at no time less than the maximum amount the engine is capable of utilizing, and means for adjusting the quantity of the spray passing into said duct without affecting the volume of the spray.

[Claims 6 to 8 not printed in the Gazette.]

1,189,339. SAFETY-CRANK FOR AUTOMOBILES. CARL A. BAKKE, Bison, S. D. Filed Oct. 22, 1915. Serial No. 57,331. (Cl. 74—33.)

1. A safety crank for automobiles including an arm provided with means for securing it to the shaft of an engine, a handle extending from the arm and movably connected therewith and adapted to fold with respect to the arm and means for automatically folding the handle when the same is released.



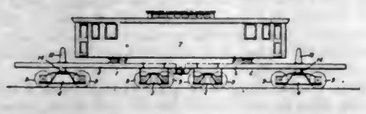
2. A safety crank for automobiles including an arm or bar, a pair of handle sections or members pivoted to the arm or bar and arranged to fit against each other in an extended position and means for automatically folding the handle sections or members with respect to the bar when the former are released.

3. A safety crank for automobiles including an arm or bar, a pair of handle sections or members pivoted to the arm or bar and arranged to fit against each other in an extended position, and a spring connected with the handle sections or members for automatically folding the same with respect to the arm or bar when the said handle sections or members are released.

4. A safety crank for automobiles including an arm or bar, a pair of pivoted handle members provided at their pivoted ends with gear elements meshing with each other to cause the handle sections or members to move in unison and a spring connected with one of the gear elements for automatically folding the handle sections or members.

5. A safety crank for automobiles including an arm or bar having a slot and provided with grooves extending in opposite directions from the slot, handle sections or members having heads provided with teeth, and meshing with each other, said heads being pivoted in the slot and the handle sections or members being adapted to fold in the said grooves, a spring and a flexible connection secured to the head of one of the handle sections or members and connected with the spring, the latter being adapted to fold the handle sections or members automatically in the said grooves when the handle sections or members are released.

1,189,340. LOCOMOTIVE OR CAR. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 9, 1915. Serial No. 33,056. (Cl. 105—259).



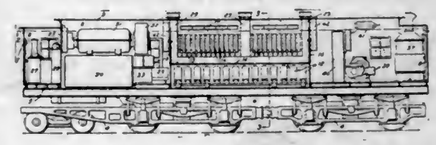
1. In a locomotive or car, a car frame having a supporting member and a single bearing member supported on said supporting member, and a swivel truck comprising axles, journal boxes for said axles, a truck frame supported on said journal boxes, and a single pivotal bearing member supported on said truck frame extending upward above the bottom of said supporting member, said bearing member on said car frame coöperating with said bearing member on said truck frame.

2. In a locomotive or car, a car frame having a supporting member and a single bearing member supported thereon and extending upward above said supporting member, and a swivel truck comprising axles, journal boxes for said axles, a truck frame supported on said journal boxes, and a single pivotal bearing member supported on said truck frame and extending upward above the bottom of said supporting member, said bearing member on said car frame coöperating with said bearing member on said truck frame.

3. In a locomotive or car, a car frame having a supporting member, and a single bearing member supported thereon having a spherical seat, and a swivel truck comprising axles, journal boxes for said axles, a truck frame supported on said journal boxes, and a single pivotal bearing member supported on said truck frame extending upward above the bottom of said supporting member, said bearing member on said truck frame having a spherical seat and coöperating with said bearing member on said car frame.

4. In a locomotive or car, a car frame having a supporting member, a single bearing member supported thereon and extending upward above said supporting member, and a swivel truck comprising axles, journal boxes for said axles, a truck frame supported on said journal boxes, and a single pivotal bearing member supported on said truck frame having a spherical seat and extending upward above the bottom of said supporting member, said bearing member on said car frame having a spherical seat and coöperating with said bearing member on said truck frame.

1,189,341. ELECTRIC LOCOMOTIVE. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 16, 1916. Serial No. 84,724. (Cl. 105—259.)



1. In an electric locomotive, the combination with controlling apparatus therefor comprising resistance sections and contactors, of a cab having a floor, side-walls, and a roof, a central compartment having side-walls parallel with but spaced from the side-walls of the cab and thereby forming passage-ways between said compartment and the side-walls of the cab, said resistance sections being located in the bottom of said compartment, said contactors being located in said compartment above said resistance sections and separated therefrom by a partition.

2. In an electric locomotive, the combination with controlling apparatus therefor comprising resistance sections and contactors, of a cab having a floor, side-walls, and a roof, a central compartment having side-walls parallel with but spaced from the side-walls of the cab and thereby forming passage-ways between said compartment and the side-walls of the cab, said resistance sections being located in the bottom of said compartment, said contactors being located in said compartment above said resistance sections and separated therefrom by a partition, said contactors being placed in rows on both sides of said compartment with a passage-way between them, the arc chutes of those on one side facing the arc chutes of those on the other side.

3. In an electric locomotive, the combination with controlling apparatus therefor comprising resistance sections and contactors, of a cab having a floor, side-walls, and a roof, a central compartment having side-walls parallel with but spaced from the side-walls of the cab and thereby forming passage-ways between said compartment and the side-walls of the cab, said resistance sections being located in the bottom of said compartment, said contactors being located in said compartment above said resistance sections and separated therefrom by a partition, said contactors being placed in rows on both sides of said compartment

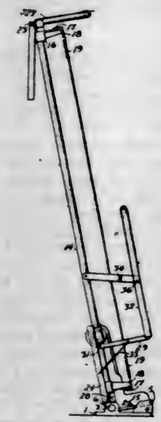
with a passage-way between them, the arc chutes of those on one side facing the arc chutes of those on the other side, and doors in the side walls of said compartment for giving access to said resistance sections and to the connections of said contactors.

4. In an electric locomotive, the combination with controlling apparatus therefor, of a cab having a floor, side-walls, and a roof, a central compartment for containing parts of said controlling apparatus having side-walls parallel with but spaced from the side-walls of the cab, and thereby forming passage-ways between said compartments and the side-walls of the cab and doors in the side-walls of said compartment for giving access to said controlling apparatus from said passage-ways, the portion of said roof of said cab over said passage-ways being lower than the portion of said roof over said central compartment, windows in the side-walls of said compartment and above the portion of the roof over said passage-ways, and windows in the side-walls of said cab adjacent said passage-ways.

5. In an electric locomotive, the combination with controlling apparatus therefor comprising resistance sections and contactors, of a cab having a floor, side-walls, and a roof, a central compartment having side-walls parallel with but spaced from the side-walls of the cab and thereby forming passage-ways between said compartment and the side-walls of the cab, said resistance sections being located in the bottom of said compartment, said contactors being located in said compartment above said resistance sections and separated therefrom by a partition, ventilating flues connected to the portion of said compartment containing the resistance sections and extending upwardly through the roof of said cab, the floor of the cab beneath the resistance sections being provided with openings whereby cooling air circulates over said resistance sections and out through said ventilating flues.

[Claims 6 and 7 not printed in the Gazette.]

1,189,342. WALL OR CLOSET BED. JOSEPH D. BELL, San Francisco, Cal. Filed Sept. 22, 1913, Serial No. 791,049. Renewed Oct. 31, 1914. Serial No. 869,714. (Cl. 5—54.)



1. The combination of means for supporting a swinging bed, located wholly between the side lines of the bed and provided with means for immovably securing it against rotation about a horizontal axis, carrying means likewise located wholly between the side lines of the bed, and pivoted to said supporting means to rock about a horizontal transverse axis, a bar carried by the upper portion of said carrying means and extending transversely beneath the bed and between the head and foot thereof and on which the bed is supported, and a spring coiled around said bar and arranged to be compressed by the lowering of the bed.

2. The combination of an upwardly extending support for a bed, journals arranged to be secured to the floor, said support having trunnions in said journals by which the support can rock about a horizontal axis through the journals, said journals having flanges and the support having flanges arranged to engage the journal flanges and arrest the rocking movement of the support, a bar horizontally pivoted in the upper portion of said support, a bed frame supported by said bar, and a spring coiled around said bar, of which one end is movable with the bed and the other end is sustained by said support.

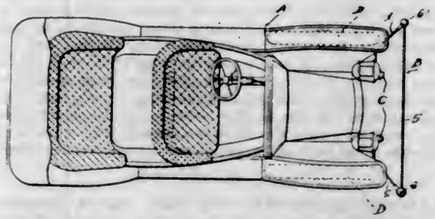
3. The combination of an upwardly extending support for an end of a bed, pivots, said support being movable about a horizontal axis through the pivots, flanges rigidly connected with said pivots and the support having flanges arranged to engage the first named flanges and arrest the swinging movement of the support, a transverse bar horizontally pivoted in the upper portion of said support, a bed frame supported by said bar, and a spring of which one end is movable with the bed and the other end is sustained by said support.

4. The combination of a support for an end of a bed having bearings in its upper portion, a bar rotatable in said bearings, a bed frame of which said bar forms a part, a tube around the bar between said bearings, coiled springs around said tube, means on the central portion of said tube for holding adjacent ends of said springs, their other ends being sustained by said support, and an operative connection between said means and the bed frame, whereby they move in unison.

5. The combination of a support for an end of a bed having bearings in its upper portion, a bar rotatable in said bearings, a bed frame of which said bar forms a part, a tube around the bar between said bearings, plates between the ends of the tube and said bearings, and having ratchet teeth, pawls movably carried by said support and engaging said ratchet teeth, coiled springs around said tube, and means, on the central portion of said tube, for holding the adjacent ends of said springs, the other ends being secured to said plates.

[Claims 6 to 8 not printed in the Gazette.]

1,189,343. VEHICLE-BUMPER. KARL VUCASSOVICH BENNIS, Los Alamitos, Cal. Filed July 8, 1915. Serial No. 38,686. (Cl. 105—33.)



1. The combination with a vehicle, of a spring arm secured to opposite sides thereof and being curved outwardly and forwardly relative to the vehicle in front of the wheels thereof, the free ends of said arms being enlarged and rounded, and a flexible member connected with said enlarged and rounded free ends and extending across the front of the vehicle.

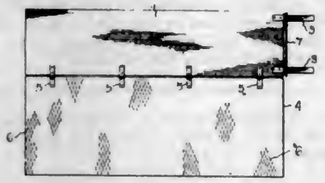
2. In a vehicle bumper the combination with a vehicle, of spring arms secured to the vehicle, and a one-piece flexible member secure at its ends to and held taut between the arms.

3. In a vehicle bumper the combination with a vehicle, of curved spring arms, each secured at one end rigidly to the vehicle, and a one-piece horizontal flexible member secured at its ends to and held taut between the other ends of the arms.

4. In a vehicle bumper the combination with a vehicle, of curved spring arms, each secured at one end rigidly to the vehicle, said arm extending in front of the wheels of the vehicle and outwardly to one side of the wheels,

and a horizontal one-piece flexible member rigidly secured at its ends to the outer ends of the arms and held taut between the arms.

1,189,344. SAFETY-ZONE PROTECTOR. JOHN CALVERT, Mount Clemens, Mich. Filed Mar. 4, 1916. Serial No. 82,054. (Cl. 256—1.)



1. A safety zone protecting device comprising an anchor plate, a traction plate adapted to be folded on said anchor plate, and a barrier at one end of said anchor plate.

2. A safety zone protecting device comprising an anchor plate having a depending flange adapted to engage in a street, a barrier removably secured to one end of said anchor plate, and a traction plate connected to an edge of said anchor plate and adapted to fold thereon.

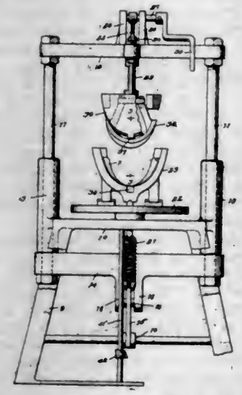
3. A safety zone protecting device comprising an anchor plate, a depending flange carried thereby adapted to engage in a street, a barrier at an end of said anchor plate, brackets carried by said barrier and adapted to extend under said anchor plate, and braces connected to said barrier.

4. A safety zone protecting device comprising an anchor plate, a depending flange on the edge thereof adapted to engage in a street, a barrier connected to an end of said anchor plate, braces connected to said barrier, and a traction plate connected to said anchor plate and adapted to fold thereon.

5. A safety zone protecting device comprising an anchor plate, a traction plate connected to said anchor plate and adapted to fold thereon, a barrier at one end of said anchor plate and means carried by said anchor plate adapted to hold said plate relative to a seat.

[Claim 6 not printed in the Gazette.]

1,189,345. APPARATUS FOR MAKING PUTTEES. CHARLES F. CLARK and ALBERT DE COSTE, Chicago, Ill., assignors to Charles F. Clark, Chicago, Ill. Filed Oct. 16, 1915. Serial No. 56,211. (Cl. 69—8.)



1. In combination, a female die having a cavity of the shape of the finished article to be produced, a male die having the shape of the margin of said cavity, and another male die within said first-named male die having the shape of the portion of said cavity within said margin, said male dies having movement independently of each other.

2. In combination, a female die having a concave form with an additional depression therein, a male die having the shape of the margin of the concavity in said female die, and another male die within said first-named male die, said male dies having movement independently of each other.

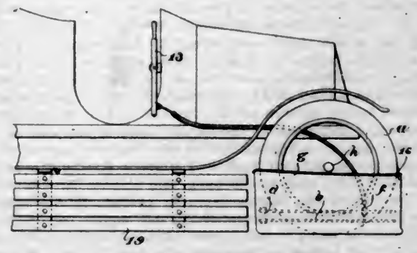
3. In combination, a female die having a concave form with an additional depression therein, a male die having the shape of the margin of the concavity in said female die, and another male die within said first-named male die and formed to correspond to said additional depression, said male dies having movement independently of each other.

4. In combination, a female die having a cavity of the shape of the finished article to be produced, a male die having the shape of the margin of said cavity, and another male die within said first-named male die having the shape of the portion of said cavity within said margin, said male dies having movement independently of each other so that a piece of material may first be clamped between said first-named male die and said female die and then stretched by the depression of said second-named male die.

5. In combination, a female die having a cavity of the shape of the finished article to be produced, a male die having the shape of the margin of said cavity, and another male die within said first-named male die having the shape of the portion of said cavity within said margin, said male dies having movement independently of each other, said last named male die being loosely mounted.

[Claims 6 to 10 not printed in the Gazette.]

1,189,346. SAFETY-GUARD FOR MOTOR-VEHICLES. JOHN SAMUEL CLARK, Canning Town, England. Filed May 24, 1915. Serial No. 30,234. (Cl. 105—33.)



1. In a guard for motor vehicles, a catcher, lateral and transverse members connected to the axle, flexible connections between these members and the catcher to allow the latter to follow the movements of the steering wheels, permanent connections between the rear portion of the supporting structure and the catcher and catches upon the front of the catcher adapted to engage with the front of the said structure to support it until the front of the catcher strikes a person or obstruction in the roadway when the catches will be released and allow the front of the catcher to fall into the operative position, rollers or running wheels adapted to support the front of the catcher upon the road surface when in the operative position and means for raising the catcher and reëngaging the catches operated from the driver's seat.

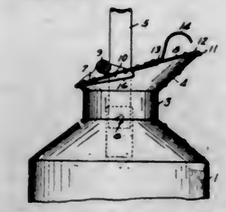
2. In a safety guard for motor vehicles, a catcher comprising longitudinal side members to which are pivoted a series of transverse laths, side supporting frames mounted one on each of the steering heads and adapted to move therewith, depending front and rear ends to the frames and a connecting strip between the front and rear ends thereof, a transverse supporting bar rigidly mounted upon the axle of the vehicle and pivotal connection between each of the depending ends of this transverse supporting bar and one of the strips connecting the front and rear ends of the side frames at a point about midway between its ends, a connection between the rear ends of the side members of the catcher and the rear ends of the side supporting

frames, spring catches on the forward end of the catcher adapted to engage with the forward end of the side supporting frames and rollers on the underside of the catcher to support same upon the road surface when the catches are released and it falls into the operative position.

3. In a safety guard for motor vehicles, a catcher comprising longitudinal side members to which are pivoted a series of transverse laths, side supporting frames mounted one on each of the steering heads and adapted to move therewith, depending front and rear ends to the frames and a connecting strip between the front and rear ends thereof, a transverse supporting bar rigidly mounted upon the axle of the vehicle and pivotal connection between each of the depending ends of this transverse supporting bar and one of the strips connecting the front and rear ends of the side frames at a point about midway between its ends, a connection between the rear ends of the side members of the catcher and the ends of the side supporting frames, spring catches on the forward end of the catcher adapted to engage with the forward end of the side supporting frames, a sliding bar on the front of the catcher adapted to be pressed backward when it strikes a person or obstruction, push-pieces upon this sliding bar adapted to press back the spring operated catches to disengage them from the forward ends of the side supporting frames, allowing the front of the catcher to fall into the operative position and rollers on the underside of the catcher to support same upon the road surface when the catches are released and it falls into the operative position.

4. In a safety guard for motor vehicles, a catcher comprising longitudinal side members to which are pivoted a series of transverse laths, side supporting frames mounted one on each of the steering heads and adapted to move therewith, depending front and rear ends to the frames and a connecting strip between the front and read ends thereof, a transverse supporting bar rigidly mounted upon the axle of the vehicle and pivotal connection between each of the depending ends of this transverse supporting bar and one of the strips connecting the front and rear ends of the side frames at a point about midway between its ends, a connection between the rear ends of the side members of the catcher and the rear ends of the side supporting frames, spring catches on the forward end of the catcher adapted to engage with the forward end of the side supporting frames, a sliding bar on the front of the catcher adapted to be pressed backward when it strikes a person or obstruction, push-pieces upon this sliding bar adapted to press back the spring operated catcher to disengage them from the forward ends of the side supporting frames, allowing the front of the catcher to fall into the operative position and rollers on the underside of the catcher to support same upon the road surface when the catches are released and it falls into the operative position, an operating lever mounted on the vehicle near the driver, a flexible cable connected from this lever to the front of the catcher, an outer tube or covering around this flexible cable and anchored at each end to a fixed portion of the structure so that when the lever is operated it will again raise the catcher and engage the catches.

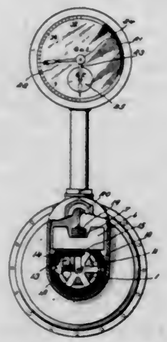
1,189,347. DISPENSING-RECEPTACLE. ROBERT B. COGAN, Swissvale, Pa. Filed May 14, 1915. Serial No. 28,168. (Cl. 221—2.)



1. A receptacle for use in carrying volatile, combustible liquids, comprising a body portion having a neck and pouring spout, a ball pivoted upon said body portion, a cover hinged upon said pouring spout, a lifting member on said cover in position to be grasped by the same hand which supports the receptacle at the bail, and spring means on said pouring spout tending to close said cover.

2. A receptacle for use in carrying volatile, combustible liquids, comprising a body portion, a ball pivoted thereto, a cover hinged thereon, and an apron secured to the under surface of the hinged cover and in open position thereof depending below and lying in front of the hinge joint for covering the same and preventing escape of the liquid through said joint in filling the receptacle.

1,189,348. METER. WALTER J. COSTELLO, Washington, D. C. Filed Oct. 5, 1910. Serial No. 585,528. (Cl. 73—167.)



1. A meter provided with a suitable moving mechanism, registering mechanism, and means for automatically connecting the moving mechanism of the meter with the registering mechanism to register by the registering mechanism the movement of the moving mechanism upon passage of a dense fluid such as a liquid, through the meter, said means being constructed to automatically effect disconnection upon replacement of said liquid by air or gas.

2. A meter comprising a suitable moving mechanism arranged and adapted to be moved by the passage of a fluid through the meter, a registering mechanism, a float within the meter adapted to be raised by the liquid passing therethrough, and means including a member operated by said float to connect the moving mechanism of the meter with the registering mechanism, said member being constructed to effect disconnection automatically upon replacement of such liquid by air or gas.

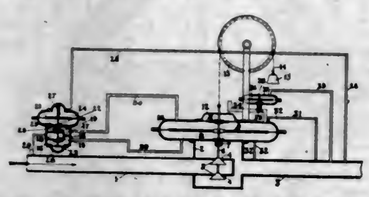
3. A meter comprising suitable moving mechanism arranged and adapted to be moved by the passage of a fluid through the meter, a registering mechanism, a float adapted to be raised by liquid passing through the meter, a clutch, one of the members of which is operated by said float to connect the moving mechanism of the meter with the registering mechanism, said member being constructed to effect disconnection automatically upon replacement of such liquid by a rare fluid.

4. A meter of the type described including a moving mechanism and registering mechanism, said moving mechanism comprising a float, clutch members, one of which members is operated by said float, the other clutch member controlling said registering mechanism, intergeared members, a shaft controlled thereby which connects said moving mechanism with said registering mechanism, said shaft having a slidable connection with the float actuated clutch member, said intergeared members being controlled by an element of the meter.

5. A meter of the type described including a moving mechanism, and a registering mechanism, said moving mechanism comprising a float, clutch members, one of which members is operated by said float, the other clutch member controlling said registering mechanism, intergeared members, a shaft connecting the moving mechanism with the registering mechanism, said shaft being actuated by said intergeared members, a tubular member carried by said float, said shaft having a pin and slot connection with said tubular member, said intergeared member being controlled by an element of the meter.

[Claims 6 to 11 not printed in the Gazette.]

1,189,349. PRESSURE-REGULATOR FOR GAS SYSTEMS. FRANK L. CROSS, Detroit, Mich. Filed Feb. 6, 1909. Serial No. 476,338. (Cl. 50—11.)



1. The combination in a gas system, of a supply main, a service main, a fluid pressure operated valve for regulating the flow between the mains, a fluid pressure operated controlling valve adapted to govern the regulating valve and itself controlled by the pressure in the service main, and a safety valve adapted to independently relieve the pressure of fluid operating the regulating valve to close the latter when a predetermined pressure is reached in the service main.

2. The combination in a gas system, of a supply main, a valve regulating the flow from the supply to the service main, means for operating the valve by pressure of fluid in the supply main, a valve for admitting fluid from the supply main to the regulating valve operating means, means for operating the latter valve by pressure of fluid in the service main, the regulating valve being arranged to automatically maintain a difference in pressure between the supply and service mains, and a safety valve operated by pressure in the service main and adapted to relieve fluid pressure in the operating means of the regulating valve to close the latter when the pressure in the service main reaches a predetermined point.

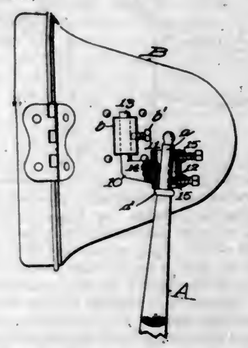
3. The combination in a gas system, of a main, a regulating valve therein, means for operating the valve adapted to be actuated by gas under static pressure in the main to close as the pressure rises, a controlling valve, means for operating the controlling valve adapted to be actuated by gas under static pressure in the main on the outlet side of the regulating valve, the controlling valve and operating means of the regulating valve coacting to operate the regulating valve either in conjunction with or in opposition to the static pressure, and a safety valve adapted when the static pressure in the outlet arm of the main approaches a predetermined point to augment the effective closing pressure.

4. The combination in a gas system, of a main, a regulating valve therein having a drum and a movable main diaphragm therein for operating the valve partially balanced on one side by an opposing diaphragm and arranged to close the valve when the static pressure in the main is above a predetermined point, a controlling valve having one outlet in communication with the drum on one side of the main diaphragm and a second outlet in communication with the drum on the opposite side of the diaphragm, and an inlet in communication with the main, means actuated by gas in the main on the outlet side of the main for moving the controlling valve, and a safety valve operated by gas in the outlet arm of the main adapted to open the drum on the partially balanced side of the diaphragm to atmosphere when the pressure in the outlet of the main reaches a predetermined point.

5. The combination in a gas generating and distributing system, of a conduit, a valve adapted to automatically regulate flow through the conduit, a governor operating under variations in the differences between inlet and outlet pressures in the conduit on either side of the valve to move the valve, and means responding to outlet pressures and controlling the valve through the governor to hold the outlet pressure in the conduit in a constant relation to the inlet pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,189,350. ADJUSTABLE LAMP-SUPPORT. FRED A. CULVER, Detroit, Mich., and JASON C. STEARNS, Worcester, Mass. Filed Dec. 16, 1915. Serial No. 67,110. (Cl. 240—57.)



1. The combination of a lamp support having a vertical pin at its top provided with an enlarged rest below the pin, a bracket for supporting a lamp having a passage therein larger than the pin for receiving the pin adapted to rest on said rest, and means within said passage for engaging the pin at a plurality of points and securing the bracket to the pin in its adjusted angular positions.

2. The combination of a lamp support having a vertical pin at its top provided with a rest, a bracket for supporting a lamp having a passage for receiving the pin and adapted to rest on said rest, said passage having a central projection on its front side, and two set screws on the rear, one above and one below the projection, extending into the passage for receiving the bracket in angularly adjusted positions.

1,189,351. APPARATUS FOR COAGULATING RUBBER LATEX. SAMUEL CLELAND DAVIDSON, Belfast, Ireland. Filed Oct. 14, 1915. Serial No. 55,856. (Cl. 18—2.)

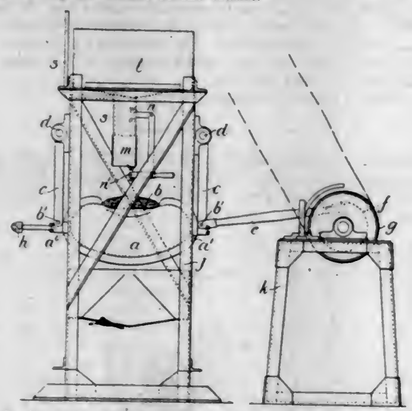
1. An apparatus for coagulating rubber latex consisting of an elongated oscillating cradle in which the latex is caused to flow to and fro, said cradle having an opening in its top through which the coagulant may be gradually added to the latex during the oscillating movement of the cradle.

2. An apparatus for coagulating rubber latex consisting of an elongated oscillating cradle, in which the latex is caused to flow to and fro, said cradle having an opening in its top approximately midway between the ends through which the coagulant may be gradually added to the latex during the oscillating movement of the cradle.

3. An apparatus for coagulating rubber latex consisting of an elongated oscillating cradle, an approximately central opening in the top of said cradle, means for oscillating said cradle and means for supplying the coagulant gradually to the latex through the said opening during the oscillating movement.

4. An apparatus for coagulating rubber latex consisting of an elongated oscillating cradle, an approximately central opening in the top of said cradle, means for oscillating said cradle and a regulatable measuring

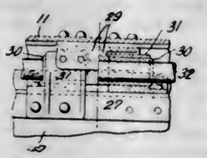
device for adding the coagulant to the latex during the oscillating movement of the cradle.



5. An apparatus for coagulating rubber latex consisting of an elongated cradle, an approximately central opening in top of said cradle, swinging link devices for supporting said cradle and means whereby said cradle may be swung on said links for the purpose of producing an oscillating movement of the cradle and means for supplying coagulant gradually to the latex through said central opening during the oscillating movement.

[Claims 6 to 16 not printed in the Gazette.]

1,189,352. DUMP-CAR. FRANK DITCHFIELD, Montreal, Quebec, Canada. Filed Sept. 20, 1915. Serial No. 51,633. (Cl. 105—14.)



1. In a car, a center sill, body sides pivotally supported, and a floor supported partly by the center sill and partly by the sides.

2. In a car, a framework, a door, an operating shaft, and hinges supporting the door on the framework and forming bearings for the operating shaft.

3. In a car, a center sill, body ends rigidly connected to the center sill, body sides pivotally supported by the ends, and a floor supported partly by the center sill and partly by the sides.

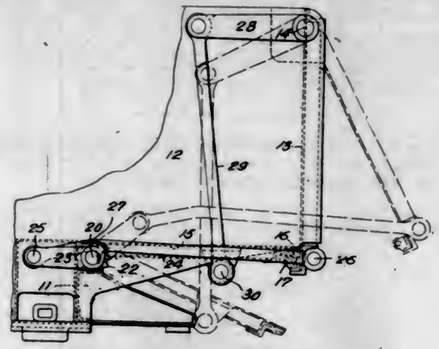
4. In a car, a center sill, body ends rigidly connected thereto, and doors continuous from end to end of the car forming body sides pivotally connected at their upper corners to the ends and floor doors continuous from end to end of the car, each pivotally connected at one edge on the center sill.

5. In a car, a center sill, a pair of plate girders forming body sides, floor doors pivotally connected at their inner edges to the center sill and supported at their outer edges by the sides, and body ends of box girder form rigidly connected to the center sill and pivotally supporting the sides from the upper corners thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,189,353. DUMP-CAR-OPERATING MECHANISM. FRANK DITCHFIELD, Montreal, Quebec, Canada. Filed Sept. 20, 1915. Serial No. 51,634. (Cl. 105—14.)

1. In a car, the combination with a side door and a floor door, of a lever rigidly connected to the side door, and a link connecting the free extremity of said lever with the floor door.



2. In a car, the combination with a side door pivotally supported at its upper edge and a floor door pivotally supported at its inner edge, of a lever fixed to said side door at the pivotal axis thereof, and a link connecting said lever with a point on the floor door intermediate the inner and outer edges thereof.

3. In a car, the combination with a side door pivoted at its upper edge and a floor door pivoted at its inner edge, of a lever rigidly connected to each end of the door at the pivotal axis thereof, a link extending from each lever to the floor door and pivotally connected to the door at a point intermediate the inner and outer edges thereof, the length of said levers being approximately equal to the distance between the pivotal axis of the floor door and the pivotal connection of the links with said floor door.

4. In a car, the combination with a pivotally suspended side door of a floor door pivotally supported at one edge and supported at the opposite edge by said side door, an operating shaft, a crank thereon, and a link connecting said crank and the side door arranged to draw the same into engagement with the floor door.

5. In a car, the combination with a side door pivotally suspended at the upper edge and a floor door pivotally suspended at one edge and supported at the opposite edge by the side door, of an operating shaft, a crank thereon, a link connecting the crank and side door and arranged to draw the side door into engagement with the floor door and lock the same.

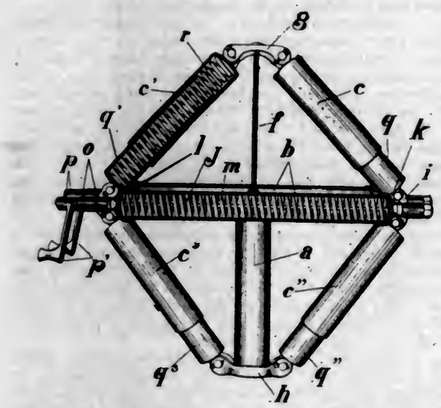
[Claims 6 to 15 not printed in the Gazette.]

1,189,354. SHOCK-ABSORBER. HENRY DIXON, Toronto, Ontario, Canada. Filed Apr. 9, 1915. Serial No. 20,199. (Cl. 267—43.)

1. A shock absorber comprising a set of obliquely-arranged springs converging to exert a normal lifting force upon the load, and means for increasing their tension, comprising a retarding spring with which the diverging ends of the lifting springs are connected, causing their inward and resisting their outward movement, whereby the direct pressure of the lifting springs upon the load decreases in substantially the same ratio as the force resulting from their increase of tension.

2. A shock absorber comprising a set of obliquely-arranged springs converging to exert a normal lifting force upon the load, and a retarding spring, with which the diverging ends of the lifting springs are slidably connected causing their inward and resisting their outward movement, whereby the direct pressure of the lifting springs upon the load decreases in the same ratio as their increase of tension.

3. A shock absorber comprising a set of obliquely-arranged springs converging to exert a normal lifting force upon the load, means for increasing their tension, comprising a retarding spring with which the diverging ends of the lifting springs are connected, causing their inward and resisting their outward movement, whereby the direct pressure of the lifting springs upon the load decreases in substantially the same ratio as the force resulting from their increase of tension, and means for varying the tension of the retarding spring.

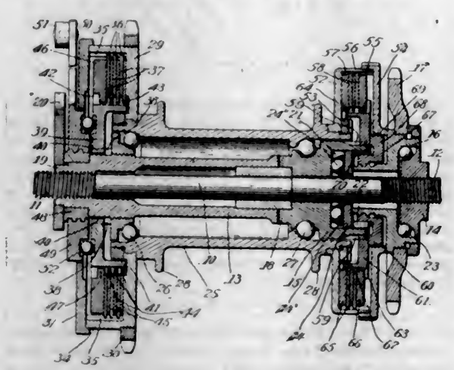


4. A shock absorber comprising a set of obliquely-arranged springs converging to exert a normal lifting force upon the load, a retarding spring, with which the diverging ends of the lifting springs are slidably connected, causing their inward and resisting their outward movement whereby the direct pressure of the lifting springs upon the load decreases in substantially the same ratio as their increase of tension, and means for varying the tension of the retarding spring.

5. A shock absorber comprising an air-cushion having a piston rod extending therefrom, a cylindrical casing having a retarding spring therein, and two obliquely arranged spring-containing cylinders pivotally connected to the piston rod at their converging ends, one of the obliquely arranged cylinders being pivotally connected to one end of the cylindrical casing, and the other obliquely arranged cylinder being slidably connected with the retarding spring within said cylindrical casing.

[Claims 6 and 7 not printed in the Gazette.]

1,189,355. DRIVING-WHEEL HUB FOR MOTOR CYCLES. FREDERICK S. ELLETT, Elmira, N. Y. Filed Jan. 9, 1913. Serial No. 741,089. (Cl. 192—10.)



1. In a motor cycle, the combination of a stationary axle member, a hub barrel, friction members carried by said barrel on the opposite ends thereof, friction members coöperating with said first mentioned friction members and relative to which the first mentioned friction members are adapted to rotate, means extending through said barrel and secured at one end of said axle member and having connection with the second mentioned friction members and adapted to hold the same against rotation, and means at the ends of said axle member for independently effecting the gripping and ungripping of the said coöperating friction members.

2. In a motor cycle, the combination of a stationary axle member, a hub barrel rotatably mounted on opposed bearings at the ends thereof, friction members carried by said barrel on the ends thereof exteriorly of said hub bearings, friction members coöperating with said first mentioned friction members and relative to which the first mentioned friction members are adapted to rotate, means extending through said barrel and secured at one end of said axle member and having connection with the said second mentioned friction members and adapted to hold the same against rotation, means adapted, when actuated one way to effect a gripping of the one non-rotatable friction member with its coöperating friction member to retard said hub barrel, and when actuated in the opposite way to be locked to the hub barrel to drive the latter, and means for effecting a gripping and ungripping of the other coöperating friction members.

3. In a motor cycle, the combination of a stationary axle member, bearings arranged thereon, a hub barrel rotatably mounted on said bearings, friction disks carried by said barrel on the opposite ends thereof exteriorly of said bearings, friction disks carried by said stationary member and coöperating with said first mentioned friction disks, and means for independently effecting the gripping and ungripping of the coöperating friction disks.

4. In a motor cycle, the combination of a stationary axle member, a pair of connected members arranged on said axle member, means at one end of said axle member for holding both of said connected members against rotation, a hub barrel rotatably mounted on said connected members, friction members carried by said barrel on the opposite ends thereof, friction members carried by said connected members and coöperating with said first mentioned friction members, and means for independently effecting the gripping and ungripping of the coöperating friction members to retard or release said barrel.

5. In a motor cycle, the combination of a stationary axle member, a pair of interlocking tubular members arranged on said axle member, means at one end of said axle member for holding both of said tubular members against rotation, a hub barrel rotatably mounted on said tubular members, friction disks carried by said barrel on the opposite ends thereof, friction disks carried by said tubular members and coöperating with said first mentioned disks, a driving member for said barrel arranged at the opposite end of said axle member from said means, means actuated by said driving member for effecting the gripping and ungripping of the friction disks at one end of said barrel, and means for effecting the gripping and ungripping of the friction disks at the opposite end of said barrel.

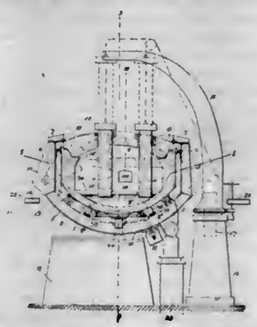
[Claims 6 to 8 not printed in the Gazette.]

1,189,356. ELECTRIC FURNACE. PETER EYERMANN, Witkowitz, Austria-Hungary. Filed Dec. 5, 1912. Serial No. 735,091. (Cl. 204—64.)

1. In an electric furnace, the combination of a crucible, electrodes extending into the crucible, means for producing relative rotary movement between the crucible and said electrodes, and means for tilting the crucible for pouring the charge out of the same.

2. In an electric furnace, the combination of a crucible, electrodes extending into said crucible, means for producing a relative rotary movement between the crucible and the electrodes, a supporting frame in which said crucible is held, and means for tilting the frame for pouring the charge out of the same.

3. In an electric furnace, the combination of a crucible, a frame supporting said crucible, a roof for the crucible supported on said frame, electrodes extending through said roof into said crucible, means for producing relative rotary movement between the crucible and said roof, and means for tilting said supporting frame.

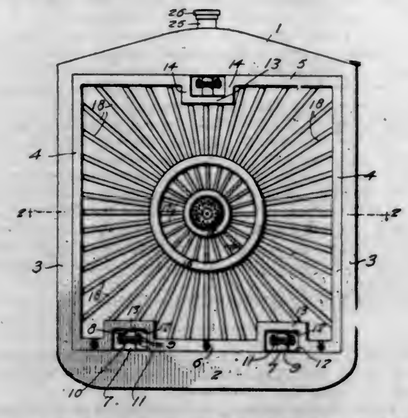


4. In an electric furnace, the combination of a crucible, a roof for the crucible, actuating means for producing relative movement between said crucible and said roof, electrodes extending through said roof and held against movement relatively thereto, and a frame supporting said crucible, said roof and said actuating means.

5. In an electric furnace, the combination of a crucible, a roof for the crucible, electrodes extending through said roof, actuating means for producing relative movement between said crucible and said roof, a movable frame supporting said crucible, said roof and said actuating mechanism, and means for moving said frame for pouring material out of said crucible.

[Claims 6 to 8 not printed in the Gazette.]

1,189,357. RADIATOR. GEORGE WASHINGTON FRAZIER, Oakland, Cal. Filed Dec. 28, 1914. Serial No. 879,316. (Cl. 257—125.)



1. A radiator, comprising a substantially rectangular tubular supporting frame adapted for connection with the engine to be cooled and a radiator body fitting within the frame and having inwardly offset portions at its top and bottom and detachable couplings between the inwardly offset portions and the supporting frame for operatively connecting the cooler to the supporting frame, each of the said couplings comprising nipples connected with the supporting frame and the inwardly offset portions of the cooler frame at one end and abutting at the other end.

2. A radiator, comprising a substantially rectangular tubular supporting frame adapted for connection with the engine to be cooled and a body fitting within the supporting frame and having inwardly offset portions at its top and bottom, and detachable couplings between the inwardly offset portions and the supporting frame for operatively connecting the cooler to the supporting frame.

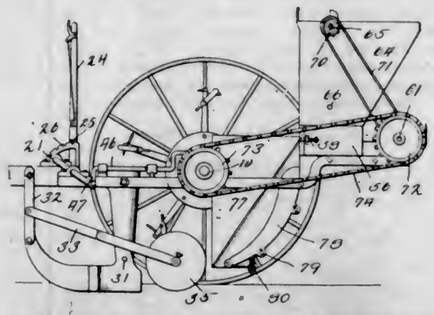
3. A radiator, comprising a tubular supporting frame adapted for connection with the engine to be cooled, a radiator body comprising a continuous tubular frame fitting within the supporting frame and cooling tubes within the frame of the body, said body frame being movable into and out of the supporting frame laterally with respect to the plane of the frame and body, and the said body frame having inwardly offset portions, and the supporting frame and the body frame having detachable water couplings at the inwardly offset portion for operatively connecting the frames and for holding the body in place in the supporting frame.

4. A radiator comprising a tubular inclosing frame, a central receptacle of annular form and cooling tubes radiating from the central receptacle to the frame for connecting the interior of the receptacle to the frame, said tubes being of approximately the same thickness throughout their length and gradually increasing in width from the frame to the central receptacle.

5. A radiator, comprising a tubular supporting frame, and a radiator body shaped to fit and approximately fill the frame and movable into and out of the frame laterally with respect to the plane of the frame and body, the body having inwardly offset portions at its top and bottom, and said supporting frame and body having detachable couplings at the inwardly offset portions for operatively connecting the body with the supporting frame and for preventing lateral movement of the body.

[Claim 6 not printed in the Gazette.]

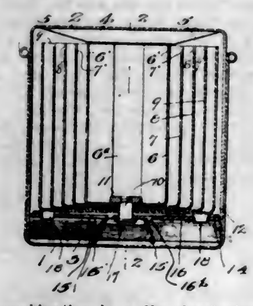
1,189,358. POTATO-PLANTER. FRANK J. GOSMEYER, Clearwater, Minn. Filed Sept. 14, 1914. Serial No. 861,674. (Cl. 111—27.)



In a potato planter the combination of a wheeled frame, a hopper mounted on the frame, a rotary feed wheel including radial arms movable through the hopper, forks on the ends of said arms for engaging the potato parts when moving through the hopper, a stripping frame pivoted to each arm and adapted when moved in one direction to strip the potato part from the related fork, a shoe provided with a slot through which the arms pass during rotation of the feed wheel, and projections extending into said slot and engaging the stripping frames to impart stripping movement to the latter.

1,189,359. FILM-DEVELOPING BOX. CHESTER W. GREENE, East Lynn, Mass., assignor to Commonwealth Engineering Company, Inc., Lynn, Mass. Filed June 9, 1915. Serial No. 33,086. (Cl. 95—90.5.)

1. The combination with a cover having locking means, of a film holder comprising a series of independently revoluble drums, each fashioned to operatively engage with said locking means, and means causing the successive disengagement of said drums.



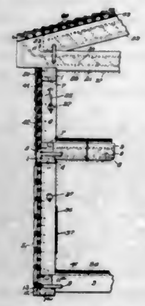
2. The combination in a film developing box of a film holder comprising a series of individually revoluble drums and a relatively non-revoluble drum, a cover for the holder, means on the cover for positively revolving the drums and means co-acting with the non-revoluble drums for successively releasing the individually revoluble drums.

3. The combination in a film developing box with a film holder comprising a base plate and a drum rigid therewith, a series of individually revoluble drums within the outer drum, a cover for the holder having means for engaging the revoluble drums, and means carried by said base plate for causing the successive releasing of said revoluble drums.

4. The combination with a cover having a locking rib of a film holder comprising a series of independently revoluble drums each formed with a recess engaged by said rib, and means for causing the successive withdrawal of said rib from the drums.

5. The combination with a cover having a locking rib, of a film holder comprising a series of independently revoluble drums each formed with a recess engaged by said rib, a base plate and a drum fixed thereon inclosing the revoluble drums, a screw thread on the cover, and slide plates carried by the base plate engaging said screw thread.

1,189,360. FIREPROOF BUILDING. ANNIBALE A. GUERINI, Middleboro, Mass. Filed Feb. 8, 1909. Serial No. 476,609. (Cl. 72—19.)



1. In a fire-proof building, the combination with concrete fire-proof uprights made as independent monoliths, each having a nailing strip set into its outer face, suspension bands strung horizontally across said uprights and from one upright to another and secured by nailing to said strips, tiles having hook-like ledges projecting from their inner sides at their upper edges hung from said bands, said tiles being of greater length than the distance between the bands whereby the tiles above overlap the upper portions of those beneath, and an incombustible covering for said nailing strips.

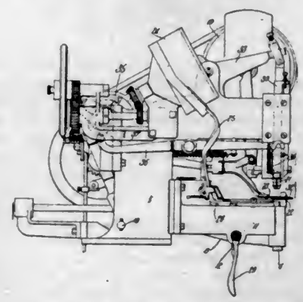
2. In a fire-proof building, the combination with concrete fire-proof uprights made as independent monoliths, each having a nailing strip set into its outer face, suspension bands strung horizontally across said uprights and from one upright to another and secured by nailing to said strips, tiles having hook-like ledges projecting from their inner sides at their upper edges hung from said bands, said tiles being of greater length than the distance between the bands whereby the tiles above overlap the upper portions of those beneath, tying means passing through apertures in the upper portions of the tiles below such ledges and carried about the same and the suspension bands, whereby to lock the tiles in place, and a fire-proof protecting covering for said nailing strips.

3. In a fire-proof building, the combination with concrete fire-proof uprights made as independent monoliths, each having a nailing strip set into its outer face, suspension bands strung horizontally across said uprights and from one upright to another and secured by nailing said strips, and tiles having hook-like ledges projecting from their inner side at their upper edges hung from said bands, said tiles being of greater length than the distance between the bands whereby the tiles above overlap the upper portions of those beneath, and a backing of cement overlying the entire rear faces of the tiles in which the ledges are embedded.

4. In a fire-proof building a shell construction comprising uprights and rafters comprised of monolithic concrete columns and bars each having a strip of wood or equivalent nailing material inserted in its outer face, suspension members extending transversely of said uprights and rafters, being secured by nails, screws, or the like, to said strips, and engaged with said suspension members, and concrete tiles having hook elements adapted to overlie and be engaged with said suspension members, each suspension member thereby sustaining a row of tiles, and an incombustible plastic filling interposed between said nailing strips and the overlying tiles.

5. A fire-proof wall construction comprising monolithic uprights each having a wooden nailing strip embedded in one side, substantially horizontal bands extending across said uprights, fastening means driven into the wooden nailing strips and engaged with said bands to secure the latter in place, tiles having hook-like projections suspended from said bands by engagement of such projections thereover, tie wires passing through the tiles and around said bands, and a back of fire-proof plastic material between the tiles and uprights.

1,189,361. RIVETING-MACHINE. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'f'g Co., a Corporation of Massachusetts. Filed Jan. 2, 1916. Serial No. 73,786. (Cl. 218—2.)



1. A riveting machine having, in combination, a setting plunger, a lever constructed and arranged to impart a reciprocatory motion thereto, a pivot on which said lever is mounted, mechanism including a driving shaft constructed and arranged to rock said pivot and a handle mounted on said pivot, whereby said pivot may be manually rocked independent of said driving shaft and said

lever may be manually operated thereby to impart a reciprocatory motion to said plunger.

2. A riveting-machine having, in combination, a setting plunger, a lever constructed and arranged to impart a reciprocatory motion thereto, a rock-shaft to which said lever is fastened, mechanism constructed and arranged to rock said lever, a handle loosely mounted to rock on said rock-shaft and a stop constructed and arranged to limit the angle through which said handle can be rocked on said rock-shaft, whereby said lever may be manually operated to impart a reciprocatory motion to said plunger.

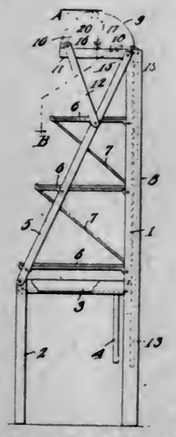
3. A riveting machine having, in combination, a setting plunger, a lever constructed and arranged to impart a reciprocatory motion thereto, a rock-shaft, means for adjustably fastening said lever to said rock-shaft, mechanism constructed and arranged to rock said lever, a handle loosely mounted to rock on said rock-shaft and a stop pin fast to said rock-shaft and projecting therefrom into a slot provided in said handle, whereby said lever may be manually operated to impart a reciprocatory motion to said plunger.

4. A riveting machine having, in combination, a setting plunger with an anvil at its upper end, a driver oppositely disposed to said plunger, mechanism constructed and arranged to impart a reciprocatory motion to said driver and independent mechanism constructed and arranged to impart a reciprocatory motion to said setting plunger including a lever and a rock-shaft on which said lever is mounted and a handle on said rock-shaft, whereby said lever may be manually operated to impart a reciprocatory motion to said setting plunger while said driver remains stationary.

5. A riveting machine having, in combination, a setting plunger with an anvil at its upper end, a driver oppositely disposed to said plunger, a work-support interposed between said driver and setting plunger and having an opening therethrough, mechanism constructed and arranged to impart a reciprocatory motion to said driver, independent mechanism constructed and arranged to impart a reciprocatory motion to said setting plunger including a lever and a rock-shaft on which said lever is mounted and a handle on said rock-shaft, whereby said lever may be manually operated to impart a reciprocatory motion to said setting plunger to move the same upwardly through said opening while said driver remains stationary.

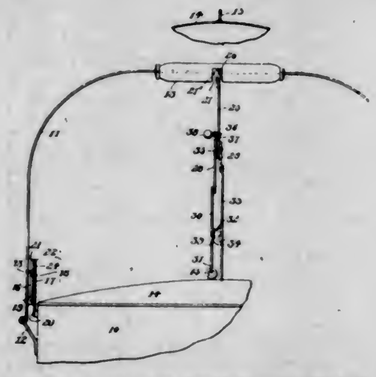
[Claim 6 not printed in the Gazette.]

1,189,362. DISPLAY-STAND. CHRIS T. JOERN, Seward, Nebr. Filed Feb. 28, 1914. Serial No. 821,755. (Cl. 211—24.)



A display stand including a drip pan, a back wall upstanding therefrom, said back wall being imperforate, a substantially cylindrical hood extending forwardly from the upper edge portion of the back wall and having its side edges inturned to constitute deflectors, superposed trays interposed between the pan and the hood, all of the trays being of the same width and extending forwardly from the back wall, said trays being arranged in stepped relation, each tray being imperforate and all of the trays projecting forwardly beyond the hood, and means for directing a jet of water upwardly against the hood, said hood constituting a deflector for directing the water downwardly onto the uppermost tray, each tray constituting means for directing water over the sides and front thereof onto the next tray thereunder, the sides and front of the stand being open.

1,189,363. BAIL AND LID HOLDER. JOHN KAROLLE, Flint, Mich. Filed Jan. 17, 1916. Serial No. 72,544. (Cl. 220—22.)



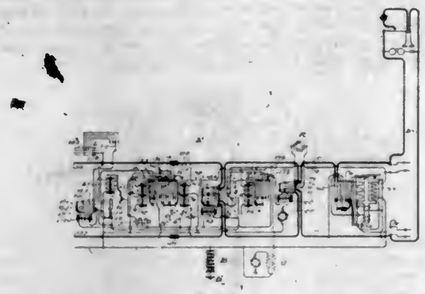
1. A device of the class described comprising in combination with a bucket having a hinged bail adapted for swinging movement and a closure lid, a double link connecting stop between the said bail and bucket for limiting the swinging movement of the bail, and shiftable link retaining means for the said lid detachably carried by the said bail and having a lid engaging foot.

2. A device of the class described comprising a bucket having a swinging bail and a closure lid, a ring carried by the said lid, a handle upon the said bail having a receiving socket therein, pivoted stop links connecting the bucket and bail at one side of the latter, foldable connections detachably positioned between the said lid eye and the bail within the said handle socket, and a foldable retaining foot for the said lid carried by the said bail and ring connections.

3. A lid retaining device for buckets and like vessels having a swinging bail, comprising a series of links pivoted together in longitudinal alinement, the upper link of the series being detachably secured to the bail, a lid engaging foot having its lower end extending below the lower link of the series when said links are in extended position, a connection between said foot and the lower link of the series, and a link pivoted to the upper end of said foot and the upper link of the series.

1,189,364. AUTOMATIC TELEPHONE-SWITCH. ALEXANDER E. KEITH, Hinsdale, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1911, Serial No. 660,367. Renewed Oct. 29, 1914. Serial No. 869,347. (Cl. 179—27.)

1. In a telephone system, a group of telephone lines, an automatic switch, a trunk extending to said switch, to which trunk said switch is individual, means for operating said switch with a continuous motion to connect with any one of said lines, means for closing a circuit to initiate the operation of said switch, and means controlled by said circuit closure for controlling the extent of operation of said switch.



2. In a telephone system, a group of lines extending toward a called line, an automatic switch, means for operating said switch to connect with any one of said lines, a plurality of circuits, means for closing any one of said circuits, and means controlled by the closure of any one of said circuits for initiating and for controlling the extent of the operation of said switch.

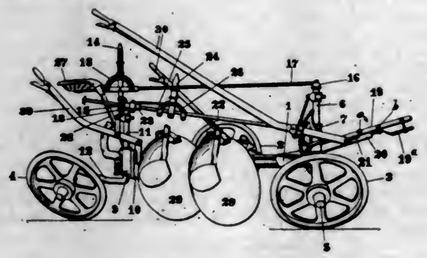
3. In a telephone system, an automatic switch, a plurality of contacts, means for grounding one or more of said contacts, and means controlled by the grounding of said contacts for initiating and for controlling the extent of the operation of said switch.

4. In a telephone system, an automatic switch having vertical and rotary motion, a wiper associated with said switch, means whereby said wiper moves vertically with said switch but is prevented from rotating therewith, and means controlled by said wiper for controlling said vertical motion.

5. In a telephone system, an automatic switch having vertical and rotary motion, a trunk extending to said switch, to which trunk said switch is individual, a wiper associated with said switch, means whereby said wiper is prevented from moving vertically therewith, means for rotating said wiper with said switch, and means controlled by said wiper for controlling the rotary motion of said switch.

[Claims 6 to 30 not printed in the Gazette.]

1,189,365. WHEEL-PLOW. JOHN KIEL, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed July 7, 1914. Serial No. 849,378. (Cl. 97—74.)



1. In a wheel plow, the combination of a frame, supporting wheels therefor including front and rear caster-wheels, a draft device pivotally supported on the frame and turnable in one direction only, means connecting the caster-wheels to control the forward caster-wheel by the rear caster-wheel, and means connecting the draft device and the rear caster-wheel to govern the movement of the latter in one direction only.

2. In a wheel plow, the combination of a frame, supporting wheels therefor including front and rear caster-wheels, a draft device pivotally supported on the frame and turnable in one direction only, means connecting the two caster-wheels to control the forward caster-wheel by the movement of the other, and means connecting the draft device and the rear caster-wheel and on which said caster-wheel is free to swing in one direction and adapted to swing in the other direction when the draft device is turned on its pivot.

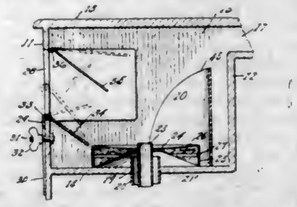
3. In a wheel plow, the combination of a frame, supporting wheels therefor including front and rear caster wheels, a draft device pivotally supported on the frame and turnable in a furrowward direction only, means connecting the caster wheels one with the other, means connecting the draft device and the rear caster wheel to arbitrarily swing both caster wheels in one direction when the draft device is turned in its pivot, said caster wheels being free to swing simultaneously in the opposite direction.

4. In a wheel plow, the combination of a frame, supporting wheels therefor including front and rear caster wheels, a draft device pivotally supported on the frame and turnable in a furrowward direction only, means connecting the caster wheels one with the other, means connecting the draft device and the rear caster wheel to arbitrarily swing both wheels in one direction, a stop on said connecting means to control the swing of said wheels with the turn of the draft device, said caster wheels adapted to swing freely and simultaneously in the opposite direction.

5. In a wheel plow, the combination of a frame, supporting wheels therefor including front and rear caster wheels connected one with the other, a draft link pivotally supported intermediate its ends on the frame and extending substantially parallel with the line of draft, a rod connected to said link rearward of the pivot thereof, said rod extending rearwardly to the rear caster wheel and having a stop thereon to limit the swing of both caster wheels in one direction, both of said caster wheels being free to swing simultaneously in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,189,366. AIR CONTROL FOR HYDROCARBON-BURNERS. WINFIELD M. KIMBERLIN, San Pedro, Cal. Filed Nov. 18, 1914. Serial No. 872,778. (Cl. 126—15.)

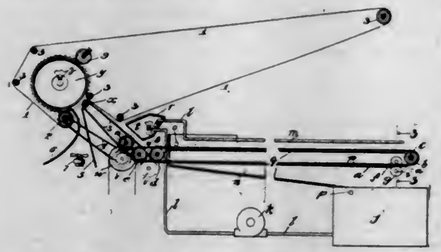


1. In an air inlet controlling device for fire boxes, the combination with a fire box wall having an air inlet opening therein, of a plate slidably mounted on the exterior of the fire box for vertical adjustment, whereby the plane of the lower edge of the opening may be varied, and a pivoted deflecting plate carried by said vertically adjustable plate extending through the air inlet opening and adapted to be adjusted at various inclinations within the fire box.

2. In an air inlet controlling device for fire boxes, the combination with a fire box wall having an air inlet opening therein, of a plate slidably mounted on the exterior of the fire box wall for vertical adjustment, whereby the plane of the lower edge of the opening may be varied, a pivoted deflecting plate carried by said vertically adjustable plate and extending through the air inlet opening to be adjusted at various inclinations within the fire box, and a vertically adjustable deflecting plate arranged at the upper edge of the air inlet opening, coöperating with the first-named deflector plate to direct the flow of air at various inclinations into the fire box.

3. In an air inlet controlling device for fire boxes, the combination with a fire box wall having an air inlet opening therein, of a plate substantially equal in length to said air inlet opening, means adjustably connecting said plate to the exterior of the fire box wall whereby the plate may be moved across the opening to diminish the size thereof, a pivoted deflecting plate carried by said adjustable plate and adapted to be adjusted at various inclinations within the fire box, and an adjustable deflecting plate coöperating with the first-named deflecting plate to direct the inflow of air at various inclinations into the fire box.

1,189,367. WASHING AND DRYING MACHINE. BENJAMIN LEVI, New York, N. Y. Filed Apr. 24, 1913. Serial No. 763,289. (Cl. 34—12.)



1. A machine of the character described, comprising a heated drum, an endless apron partly surrounding the drum, means for guiding and controlling the apron, an inclined paper conveyer with its discharge end adjacent the drum near the entrance between the drum and apron, a guide plate extending downwardly at the rear side of the paper conveyer for directing the paper away from the drum at the point where the apron leaves the drum, and means for producing an air blast upwardly between the paper carrier and the guide plate.

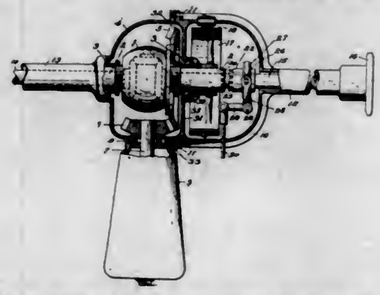
2. A machine of the character described, comprising a heated drum, an endless apron partly surrounding the drum, means for guiding and controlling the apron, an inclined paper conveyer with its discharge end adjacent the drum near the entrance between the drum and apron, said apron being arranged to extend over the front run of the paper conveyer, whereby the paper is directed to the entrance between the apron and drum.

3. A machine of the character described, comprising a heated drum, an endless apron partly surrounding the drum, means for grinding and controlling the apron, an inclined paper conveyer with its discharge end adjacent the drum near the entrance between the drum and apron, said apron being arranged to extend over the upper portion of the front run of the paper conveyer, and a heater located in front of the lower part of the paper conveyer below the apron.

4. A machine of the character described, comprising a heated drum, an endless apron partly surrounding the drum, means for guiding and controlling the apron, a paper conveyer with its discharge end adjacent the drum near the entrance between the drum and apron, a heater located in front of the paper conveyer to preliminarily dry paper carried thereon, and a spraying pipe adapted to spray the paper on the conveyer before it passes in front of the heater and having a portion located in the heater to heat the spraying fluid.

1,189,368. AUTOMOBILE TRANSMISSION MECHANISM. VINCENT LINK, Detroit, Mich. Filed June 21, 1912. Serial No. 704,962. (Cl. 74—34.)

1. In an automobile, an outer casing having a tubular extension, a yoke on the casing, a tubular extension thereon in axial alinement with the casing extension, a differential gear casing having oppositely extending sleeves journaled in the outer casing in axial alinement with the outer casing extensions, a two-part shaft journaled in the extensions whose adjacent ends inside the gear casing are connected to the latter to rotate differentially, a shaft member in the outer casing connected to the gear casing to positively rotate the latter, a brake drum on one of the gear casing sleeves outside the outer casing, and means on the yoke for frictionally engaging the drum.



2. In an automobile, an outer casing having a tubular extension, a yoke on the casing, a tubular extension thereon in axial alinement with the casing extension, a pair of oppositely disposed end thrust bearings in the outer casing in axial alinement with the casing extensions, a differential gear casing having oppositely extending sleeves journaled in the bearings in axial alinement with the outer sleeves, a two-part shaft journaled in the extensions whose adjacent ends inside the gear casing are connected to the latter to rotate differentially, a drive shaft in the outer casing connected to the gear casing to positively rotate the latter, a brake drum on one of the gear casing sleeves outside the outer casing, and means on the yoke for frictionally engaging the drum.

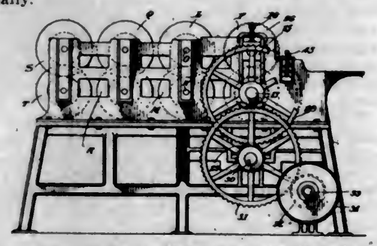
3. In an automobile, an outer casing having a tubular extension, a yoke on the casing, a tubular extension thereon in axial alinement with the casing extension, a differential gear casing having oppositely extending sleeves journaled on the outer casing in axial alinement with the outer casing extensions, a two-part shaft journaled in the extensions whose adjacent ends inside the gear casing are connected to the latter to rotate differentially, a drive shaft in the outer casing connected to the gear casing to positively rotate the latter, a clutch sleeve non-rotatably reciprocable on one of the shaft members adapted to non-rotatably interlock with the gear casing, and means for shifting the sleeve.

4. In an automobile, an outer casing having a tubular extension, a yoke on the casing, a tubular extension thereon in axial alinement with the casing extension, a differential gear casing having oppositely extending sleeves journaled on the outer casing in axial alinement with the outer casing extensions, a two-part shaft journaled in the extensions whose adjacent ends inside the gear casing are connected to the latter to rotate differentially, a drive shaft in the outer casing connected to the gear casing to positively rotate the latter, a clutch sleeve non-rotatably reciprocable on one of the shaft members adapted to non-rotatably interlock with the gear casing, and means for shifting the sleeve, the shaft ends being so connected that they rotate positively at the same speed when one of the shaft members is positively interlocked with the gear casing.

1,189,369. METHOD OF MAKING METAL FABRIC. WILLIAM LOACH, Oshawa, Ontario, Canada, assignor to The Pedlar People Limited, Oshawa, Ontario, Canada. Filed Nov. 2, 1915. Serial No. 59,311. (Cl. 164—6.6.)

1. The herein described method of manufacturing metal fabric which comprises simultaneously expanding one portion of the fabric laterally while shortening another laterally adjacent portion of the fabric longitudinally.

2. The herein described method of manufacturing metal fabric which comprises slitting longitudinal strips of the same, then simultaneously expanding the slitted portions laterally while shortening the unslitted portion longitudinally.



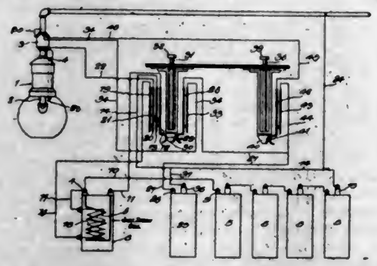
3. The herein described method of manufacturing metal fabrics which comprises simultaneously expanding portions of the fabric laterally while corrugating other laterally adjacent portions of the fabric longitudinally.

4. The herein described method of manufacturing metal fabric which comprises expanding portions of the fabric laterally while corrugating other laterally adjacent portions of the fabric longitudinally and then flattening the corrugations.

5. The herein described method of manufacturing metal fabric which comprises expanding portions of the fabric and then increasing the thickness of the unexpanded portions.

[Claims 6 to 12 not printed in the Gazette.]

1,189,370. GAS-IGNITING SYSTEM. WILLIAM LOWMAN, Silver Creek, Nebr., assignor of one-half to Ernest P. Dussell, Columbus, Nebr. Filed July 19, 1915. Serial No. 40,748. (Cl. 175—115.)

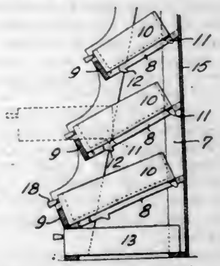


1. The combination with a burner, a pipe line for supplying fuel thereto, an electrically opened valve in said pipe line, and a jump spark device adjacent the burner; of an electric circuit including the jump spark device, a jump spark coil in said circuit, an additional circuit including the electrically opened valve, switch means for completing the two circuits, and a single manually operable member for closing said switch means at a single operation.

2. The combination with a burner, a pipe line for supplying fuel thereto, an electrically opened valve in said pipe line, and a jump spark device adjacent the burner; of a source of current, a circuit including said source and the jump spark device, a jump spark coil likewise included in said circuit, an additional source of current, an additional circuit including said additional source and the electrically opened valve, independent switches for the two circuits, and a single push button for simultaneously closing both switches.

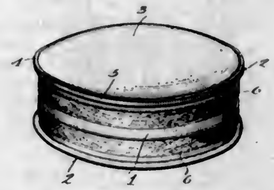
3. An ignition device of the class described comprising an upright elongated one-piece cylindrical body having a rectilinear bore formed throughout its length, said bore having a cylindrical enlargement opening through the upper end of the body, a tubular internally threaded binding post received snugly in said enlargement and projecting above the body, a wire confined snugly in the bore and having its upper end secured in the lower end of the tubular binding post, the lower end of said wire being extended below the body, a current conducting wire received in the tubular internally threaded binding post and rising therefrom, a wedge driven downwardly in the binding post and forcing the wire into tight biting engagement with the threads therein, said wedge having a lateral projection above the post to render it easily removable, and a tubular cap fitting over the upper end of the body and having an opening receiving therein the projecting upper ends of the binding post and wedge whereby to normally conceal them from view, said cap, however, being slidable vertically from the body to render the wedge accessible for the purpose of removing the same.

1,189,371. DISPLAY-FIXTURE. HERBERT H. LYONS, Montreal, Quebec, Canada. Filed May 20, 1914. Serial No. 839,807. (Cl. 45—77.)



In a display fixture, a framework, a plurality of inclined guides extending downwardly from back to front of the case, transverse members at the lower or forward ends of said guides projecting above the plane of the guides, trays slidably mounted on the guides and normally held against forward and downward movement by said transverse members, brackets at the rear corners of said trays pivotally and slidably connecting the trays with the guides whereby only the fronts of said trays may be lifted above the transverse members, and projecting stops on said guides in the path of the brackets positioned to stop movement of the trays when the same have been drawn forwardly into approximately horizontal position.

1,189,372. MENDING-FORM FOR WEARING-APPAREL. GEORGE BERNARD MCWILLIAMS, Olney, Ill. Filed Nov. 4, 1914. Serial No. 870,300. (Cl. 223—14.)



In a device of the class described, a dome-like cap embodying a convexed crown, an outwardly projecting rim and an angularly disposed retaining flange projecting from the rim; a tubular body open at both ends and provided at its ends with outstanding reinforcing beads, the body being reversible to permit either bead to be inserted within the flange, the rim constituting at once a needle deflector and an abutment for the bead; and a pair of resilient, material holding bands, surrounding the body between the beads, one band being shiftable longitudinally of the body, independently of the other band, toward and away from the flange engaged bead, thereby to effect a tightening of the material across the cap, and said other band constituting a holding means for the material during the shifting of the first specified band.

1,189,373. FLUX FOR COATING METAL BATHS. JAMES H. MADDY, New York, N. Y., and BRUNO H. SCHUBERT, Weehawken, N. J., assignors to The Lohmann Company, New York, N. Y., a Corporation of New York. Filed Feb. 2, 1915, Serial No. 5,643. Renewed Dec. 2, 1915. Serial No. 64,776. (Cl. 91—70.3.)

1. The process of forming a flux upon a bath of fusible metal as lead, zinc and tin, which consists in applying a solution of zinc chlorid to the surface of the molten metal insufficient to cover its surface and adding ammonium chlorid thereto until the mixture covers the surface of the bath.

2. The process of forming a flux upon a bath of fusible metal as lead, zinc and tin, which consists in applying a solution of zinc chlorid saturated with ammonium chlorid to the surface of the bath insufficient to cover its surface, and adding ammonium chlorid thereto until the mixture covers the surface of the bath.

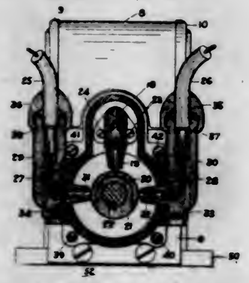
3. The process of applying a metal coating to ferrous articles, which consists in coating the surface of the metal bath with a flux of zinc chlorid and ammonium chlorid, then depositing a salt of mercury upon the surface of the ferrous article, and finally passing such article with such salt of mercury through the flux into the molten bath.

4. The process of applying a coating chiefly of lead, to ferrous articles, which consists in coating the surface of a molten lead bath with a flux of zinc chlorid and ammonium chlorid, then depositing a salt of mercury upon the surface of the ferrous articles, and finally passing the article thus treated through the flux into the bath of melted lead.

5. The process of applying a metal coating to ferrous articles, which consists in coating the surface of the metal bath with a flux of zinc chlorid and a considerable excess of ammonium chlorid, then immersing the ferrous article in a liquor of cleaning acid mixed with a salt of mercury, and finally passing the article through the melted flux into the molten metal.

[Claim 6 not printed in the Gazette.]

1,189,374. IGNITION-DYNAMO. CHARLES THOMAS MASON, Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 15, 1915. Serial No. 14,409. (Cl. 123—149.)



1. In an ignition dynamo, a magnet, a rotor and shaft therefor, a distributer on said rotor shaft, a coil carrying structure having poles spaced apart from said rotor and adapted to receive flux therefrom, a coil on said structure, and circuit connections between said coil and distributer.

2. In an ignition dynamo, a magnet, a rotor and shaft therefor, a distributer on said rotor shaft, a coil carrying structure adjustable about the axis of said rotor for timing purposes, a coil on said structure, and circuit connections between said coil and distributer.

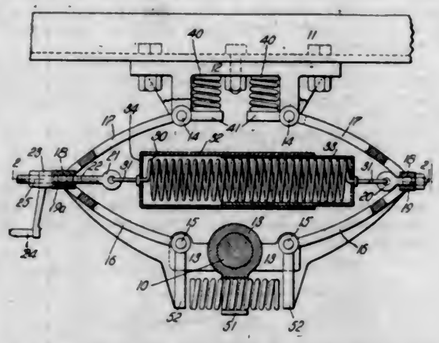
3. In an ignition dynamo, a magnet, a rotor and shaft therefor, a distributer on said rotor shaft, a coil carrying structure, a coil on said structure, a circuit connection between said coil and distributer, and a contact adapted to connect with said distributer and thereby complete a circuit to said coil.

4. In an ignition dynamo, a magnet, a rotor and shaft therefor, a distributer on said rotor shaft, a normally fixed carrying structure having poles spaced apart from said rotor and adapted to receive flux therefrom, a coil on said structure, and circuit connections between said coil and distributer passing through said magnet, but insulated therefrom.

5. In an ignition dynamo, a magnet, a rotor and shaft therefor, a distributer on said rotor shaft, a coil carrying structure, a coil on said structure, circuit connections between said coil and distributer passing through said magnet, and an insulating bushing in said magnet surrounding said circuit connection whereby the same is positioned in operative relation to said coil.

[Claims 6 to 32 not printed in the Gazette.]

1,189,375. VEHICLE-SPRING. CARL A. MILLER, Los Angeles, Cal. Filed Nov. 13, 1915. Serial No. 61,297. (Cl. 267—8.)



1. A vehicle spring, embodying an upper and a lower seat adapted to be mounted upon a vehicle frame and axle, respectively, two pairs of links connected to said seats, the links of each pair being pivotally connected together and being pivotally connected one to the upper seat and one to the lower seat, the four links normally lying in a substantially diamond configuration, a tension spring adjustably connected between the two sets of links at the points where the links of each set are connected together, a downward extension from the lower link of each pair, and a buffer spring mounted on the lower seat and adapted to be compressed between the two extensions when the links have moved about the lower pivots by a predetermined amount.

2. A vehicle spring, embodying an upper and a lower seat adapted to be mounted on a vehicle frame and axle, respectively, two pairs of links connected to said seats, the links of each pair being pivotally connected together and being pivotally connected one to the upper seat and one to the lower seat, the four links normally lying in a substantially diamond configuration, a tension spring adjustably connected between the two sets of links at the points where the links of each set are connected together, a horizontal extension from the upper link of each pair, and compression springs between the upper seat and said extensions adapted to be compressed when the upper links move downwardly around their pivotal connections to the upper seat.

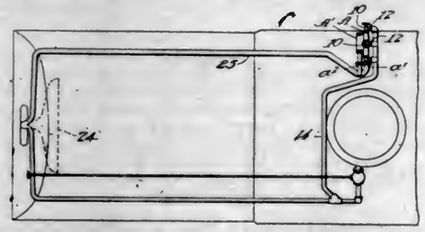
3. A vehicle spring, embodying an upper and a lower seat adapted to be mounted on a vehicle frame and axle, respectively, two pairs of links connected to said seats, the links of each pair being pivotally connected together and being pivotally connected one to the upper seat and one to the lower seat, the four links normally lying in a substantially diamond configuration, a tension spring adjustably connected between the two sets of links at the points where the links of each set are connected together, a downward extension from the lower link of each pair, a buffer spring mounted on the lower seat and adapted to be compressed between the two extensions when the links have moved about their lower pivots by a predetermined amount, a horizontal extension from the upper link of each pair, and compression springs between the upper seat and said extensions adapted to be compressed when the upper links move downwardly around their pivotal connections to the upper seat.

4. A vehicle spring, embodying two pairs of links, the links of each pair being pivotally connected together and being pivotally connected one to the vehicle frame and one to the vehicle axle, the four links normally lying in a substantially diamond configuration, a resilient element connected between the two sets of links at the points where the links of each set are connected together, and auxiliary resilient means normally out of engagement with the links and with which the links connect when they have moved a certain predetermined amount.

5. A vehicle spring, embodying two pairs of links, the links of each pair being pivotally connected together and being pivotally connected one to the vehicle frame and one to the vehicle axle, the four links normally lying in a substantially diamond configuration, a tension spring connected between the two sets of links at the points where the links of each set are connected together, a downward extension from the lower link of each pair, and a compression spring located between the two lower extensions and adapted to be compressed between them.

[Claim 6 not printed in the Gazette.]

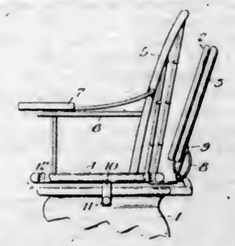
1,189,376. APPARATUS FOR MIXING AND FEEDING STEAM AND AIR TO FIRE-BOXES. CHARLES F. MILLER, Washington, D. C. Filed Oct. 13, 1911. Serial No. 654,477. (Cl. 230—32.)



In an apparatus for mixing and feeding steam and air to locomotive fire boxes the combination of a nozzle located within the fire box, a steam supply pipe to said nozzle communicating with the dome of the steam boiler, a cylindrical casing providing a blower and a motor chamber disposed eccentrically, a shaft journaled in said casing concentric with the motor chamber, a rotor having radially disposed pockets mounted on the shaft within said motor chamber, a pipe connected with the first named pipe for delivering steam under tangential flow to the pockets of the motor rotor, a disk rotor mounted on the shaft in the blower chamber and engaging at one point with the inner wall of the blower chamber, radially acting blades carried by said disk, means for admitting air into the blower chamber, a pipe for delivering air from the blower to the nozzle in the fire box, a pipe for delivering the exhaust steam from the motor into said air delivery pipe, and a valve for controlling the steam supply from the steam pipe, substantially as set forth.

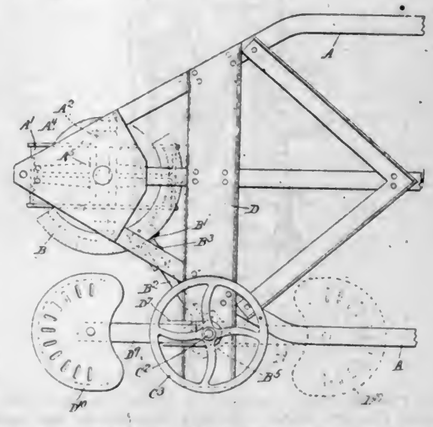
1,189,377. NURSERY-CHAIR. HENRY MILLER, Chicago, Ill., assignor of one-half to Morris L. Masure, Chicago, Ill. Filed Dec. 28, 1914. Serial No. 879,334. (Cl. 155—22.)

The herein described nursery chair, comprising a seat, means for supporting said seat above a water-closet bowl, said means being constructed and arranged to prevent endwise movement of the seat from its position above the bowl, means carried by the seat for confining a child thereon, and an arm fixed with respect to the underside of the seat and extending rearwardly beyond



the rear edge of the seat and then upwardly and forwardly and terminating at its upper end in a portion constructed and arranged to bear against the rear side of an upstanding seat cover, for the purpose set forth.

1,189,378. STEERING-GEAR FOR MOTOR-VEHICLES. ALBERT F. MOHR, Laporte, Ind., assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed June 21, 1915. Serial No. 35,207. (Cl. 21—90.)



1. The combination with a motor vehicle of a single steering column, a hand wheel thereon, a connection from the column to the running gear, and a seat free to move so as to face in opposite direction, means responsive to such movement of the seat for reversing the connection between the steering column and the running gear.

2. The combination with a motor vehicle of a single steering column, a hand wheel thereon, a connection from the column to the running gear, and a seat free to move so as to face in opposite direction, means responsive to such movement of the seat for reversing the connection between the steering column and the running gear, said means comprising connecting gears adapted for operation in two directions, and a cam responsive to the rotation of the movement of the steering column to throw said gears selectively into operation.

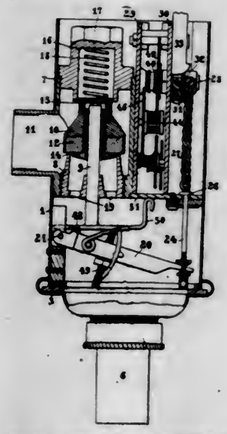
3. The combination with a motor vehicle of a steering wheel, a control member therefor and a connection between them comprising a longitudinally movable steering column, a pair of miter pinions rigid thereon, a miter gear interposed between them, a connection between the miter gear and the steering wheel and means controlled by the operator for longitudinally moving the steering column to bring one of said miter gears selectively into engagement with the miter pinion.

4. The combination with a motor vehicle of a steering wheel, a control member therefor and a connection between them comprising a longitudinally movable steering column, a pair of miter pinions rigid thereon, a miter gear interposed between them, a connection between the miter gear and the steering wheel and means controlled by the operator for longitudinally moving the steering column to bring one of said miter gears selectively into engagement with the miter pinion to reverse the connection between the control member and the steering wheel.

5. The combination with a motor vehicle of a steering wheel, a control member therefor and a connection between them comprising a longitudinally movable steering column, a pair of miter pinions rigid thereon, a miter gear interposed between them, a connection between the miter gear and the steering wheel and means comprising a movable seat and operating mechanism actuated by the movement thereof for longitudinally moving the steering column to bring one of said miter gears selectively into engagement with the miter pinion.

[Claim 6 not printed in the Gazette.]

1,189,379. FLUSHING APPARATUS FOR CLOSETS. JOSEF NEVER, Zurich, Switzerland. Filed Sept. 30, 1912. Serial No. 723,199. Renewed Apr. 6, 1916. Serial No. 89,475. (Cl. 161—7.)

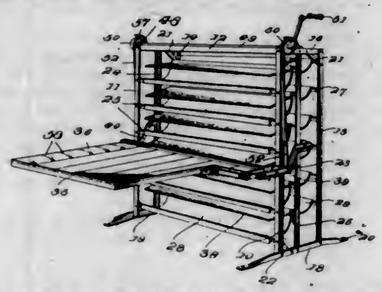


A flushing valve comprising a spring actuated valve, a seat provided therefor, a shaft journaled in said seat normally engaging said valve, a lever hinged to the casing of said valve, an actuating member provided, and means connecting said member to the free end of said lever, the intermediate portion of said lever engaging said shaft, whereby said lever, shaft and valve are raised when said member is actuated, and means coacting with said member to retard the return movement of said valve, said means consisting of a train of gears, and means connecting said member and gears to operate said gears after said valve has been opened, substantially as described.

1,189,380. WIRE-SCREEN RACK. GEORGE B. PARKER and FRED W. GROVER, Wenatchee, Wash. Filed Apr. 17, 1913. Serial No. 761,772. (Cl. 211—18.)

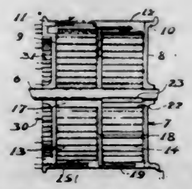
1. A rack including a frame, trays disposed one above the other in the frame, a shaft journaled on the top of the frame, a crank for the shaft, pulleys on the shaft, hangers movable vertically on the frame, cables trained over the pulleys and secured to the hangers, and a table carried by said hangers and movable to points opposite the trays, said table being swingingly mounted between the hangers to fold against the frame and trays.

2. A rack including spaced pairs of spaced front and rear frame members, trays carried by the frame members, hangers carried by the frame members and each having spaced rollers one engaging against the rear face of a rear member and the other against the front face of the adjacent forward member, means for raising and lowering said hangers, and a table swingingly mounted between the hangers whereby it may be moved opposite any tray or swung against the frame to shield the trays.



3. A rack including spaced pairs of front and rear members, trays carried by the frame members, hangers carried by the frame members and a table swingingly supported by the hangers to be swung to shield the trays when not in use, each hanger including a table carrying arm having a roller engaging against the forward face of one frame member, an upwardly and rearwardly offset intermediate portion and a rearwardly directed end portion having a roller engaging the rear face of a rear frame member.

1,189,381. AUTOMATIC FIRE-ESCAPE. WILLIAM E. PAYNE and WALFRID S. EKLUND, Donner, La. Filed June 17, 1914. Serial No. 845,736. (Cl. 254—152.)



A fire escape including a frame, a stationary shaft carried by the frame, a hollow drum composed of spaced heads having openings removably receiving the shaft and a connecting substantially cylindrical body portion presenting a continuous outer surface between the said heads for the reception of a cable, a disk located centrally within the drum and dividing the same into two compartments, a sleeve carried by and projecting from one side of the disk, said sleeve being loosely mounted on the shaft to support the disk for rotation with respect to the shaft and drum, a peripheral flange carried by and extending from the opposite side of the disk, a second sleeve keyed to the shaft and located on the opposite side of the disk from the loose rotary sleeve and provided with a projection, said sleeves extending from the disk to the heads of the drum and spacing the disk from the said heads, a coiled spring mounted in one of the compartments and having its inner end secured to the rotary sleeve and its outer end attached to the drum, and a second coiled spring located in the other compartment and having its inner end secured to the projection of the fixed sleeve and its outer end attached to the said flange.

1,189,382. AERIAL DART. HORACE S. PECK, Rochester, N. Y., assignor, by mesne assignments, to The Sanoma Corporation, a Corporation of New York. Filed Sept. 28, 1915. Serial No. 53,104. (Cl. 102—29.)

1. An aerial dart of the character described, comprising a tubular member containing an explosive charge and having its tail portion provided with longitudinally extending vanes adapted to give rotation and to accurately guide the dart in its descent, a separate striking head slidably fitted within and forming a closure for the front end of the tube, and means coöperating with said head for firing said charge.



2. An aerial dart of the character described containing an exploding charge and having a separable slidably mounted striking head of conical form at its front end, means for temporarily holding the head in fixed relation to said charge, and means for firing said charge by the impact of said head against an object.

3. An aerial dart comprising a tube having a fluted rear portion containing an exploding charge and a separable, slidably-guided striking-head of substantially conical form entering the tube and constituting the closure for the front end thereof, said tube and head having coacting means for temporarily retaining the head in extended position but yieldable on contact of the head with an object to permit the head to slide farther into the tube and explode said charge.

4. An aerial dart comprising a tubular body portion containing an explosive charge, said body having one portion provided with longitudinally extending vanes, a separable solid head having a slidable fit within the opposite portion of the tube and serving as a closure therefor, and a fulminate associated with the head adapted to explode said charge by the impact of the sliding head against an object.

5. An aerial dart comprising a tubular sheet metal body portion having its rear end folded to form a series of longitudinally extending vanes adapted to hold the dart perpendicularly in its descent, said tube containing a charge of explosive, a solid detachable head slidably fitted to and closing the front end of said tube, and having its inner end provided with a firing pin, and a holder within the tube normally positioned above said firing pin and having a fulminate adapted to be exploded by the contact of said pin therewith.

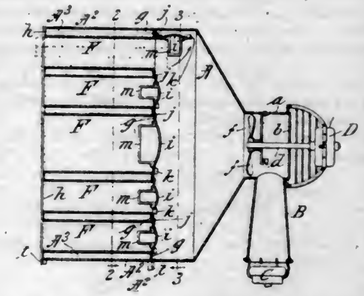
[Claims 6 to 9 not printed in the Gazette.]

1,189,383. PHOTOPRINT-DRIER. FRANK W. POTTER, Springfield, Mass., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation. Filed Dec. 14, 1914. Serial No. 877,022. (Cl. 34—26.)

1. In an apparatus for drying photographic prints, the combination with a tubular holder adapted to receive the print in a rolled condition, of a blower arranged to force air longitudinally through said holder.

2. In an apparatus for drying photographic prints, the combination with a tubular holder adapted to receive the print in a rolled condition, of a blower, a hood leading from the blower to one end of the holder, an air inlet in rear of the blower and means for heating the air traversing the inlet.

3. In an apparatus for drying photographic prints, the combination with a horizontally disposed tubular holder adapted to receive the print in a rolled condition, of a rotary blower rotating on a horizontal axis, a hood leading from the blower to one end of the holder, a casing surrounding the blower, a vertical air shaft connected to the casing to form an inlet in rear of the blower, and means for heating the air in the shaft.



4. In an apparatus for drying photographic prints, the combination with an oven and a plurality of tubular holders extending therethrough and adapted to receive the prints in a rolled condition at their outer ends, of a casing inclosing the oven and holders at their inner ends and a blower within the casing for forcing air through the holders.

5. In an apparatus for drying photographic prints, the combination with an oven and a plurality of tubular holders extending therethrough and adapted to receive the prints in a rolled condition at their outer ends, of a casing inclosing the oven and holders at their inner ends, a blower within the casing for forcing air through the holders and means for delivering heated air to the blower.

[Claims 6 to 10 not printed in the Gazette.]

1,189,384. EMBROIDERY. JULIUS M. REIS, New York, N. Y. Filed Mar. 1, 1913. Serial No. 751,486. (Cl. 2—147.)



1. An article of dry goods, comprising a cloth article to be marketed, having an embroidery foundation of cellulosic material firmly secured thereto by an adhesive, the exposed face of the foundation being colored, whereby the foundation serves as a pattern for the embroidery, as a filling material therefor, and as a chart for selecting the embroidery colors, and whereby a gap in the embroidery threads will not materially disfigure the embroidery.

2. An article of dry goods, comprising a cloth article, having an embroidery foundation of cellulosic material secured firmly thereto by an adhesive, said foundation serving both as a pattern for the embroidery and as a filling material therefor.

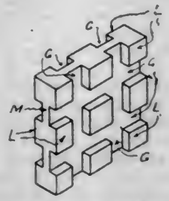
3. The improved embroidery foundation comprising a form of cellulosic material, one side thereof being colored with colors shading from one color or shade to another,

whereby the foundations serve as patterns for the embroidery, as a filling material therefor, and as a chart for selecting the embroidery colors, and whereby a gap in the embroidery threads will not materially disfigure the embroidery.

4. The improved embroidery foundation, comprising a suitable filler form shaped according to the form of the embroidery and colored according to the colors to be used in embroidery thereon, whereby the foundation serves as a pattern for the embroidery, as a filling material therefor and as a chart for selecting the embroidery colors, and whereby a gap in the embroidery threads will not materially disfigure the embroidery.

5. An article of dry goods comprising a cloth article to be marketed, having an embroidery filler form thereon colored according to the colors to be used in the embroidery, whereby the form serves as a pattern for the embroidery, as a filling material therefor and as a chart for selecting the embroidery colors, and whereby a gap in the embroidery threads will not materially disfigure the embroidery.

1,189,385. SLOT AND SLUG. ALONZO E. RHODES, Hillcrest, Del. Filed Sept. 17, 1915. Serial No. 51,122. (Cl. 194—4.)



1. A slug consisting of a thin substantially square central member with raised members or lugs arranged in rows for forming grooves or passageways at right angles to each other and substantially alike on two opposite sides of the said thin square central member, substantially as set forth.

2. A slug having grooves or passageways on two opposite faces and at right angles to other similar grooves or passageways on said faces, substantially as shown, for the purpose specified.

3. The slug M, having lugs L, arranged in rows for forming grooves or passageways G at right angles to each other and substantially alike on two opposite faces of the slug, substantially as shown, for the purpose specified.

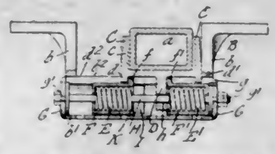
4. A rectangular slot S, having inwardly projecting members T, each directly opposite a similar inwardly projecting member and with a space less than one half the width of the rectangular slot S between the inner surfaces of said members T, substantially as shown, for the purpose specified.

5. The combination, in a slot and slug, of a slot having members extending partially across the slot and opposite similar members extending partially across the said slot, with a slug having grooves or passageways at right angles to each other and substantially alike on two opposite faces of the slug, substantially as shown, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,189,386. CENTERING AND SUPPORTING DEVICE FOR CAR-COUPLINGS. WILLARD F. RICHARDS, Depew, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Dec. 29, 1913. Serial No. 809,182. (Cl. 213—42.)

1. The combination of a drawbar carry-iron having a hollow horizontal portion which forms a spring housing, a drawbar saddle which is arranged to slide on said housing and has a lug projecting into said housing, spring in said housing at opposite sides of said lug and acting thereon, an abutment in said housing for the inner ends of said springs, sliding abutments in said housing for the outer ends of said springs, and means whereby one of said sliding abutments is moved with said saddle when said saddle is moved in either direction.



2. The combination of a drawbar carry-iron having a hollow horizontal portion which forms a spring housing, a drawbar saddle which is arranged to slide on said housing and has a lug projecting into said housing, springs in said housing at opposite sides of said lug and acting thereon, a stationary abutment in said housing between said springs and against which the inner ends of said springs are adapted to react, sliding sleeves against which the outer ends of the springs act, and lugs on said saddle engaging lugs on said sleeves, whereby both of said springs yieldingly resist the movement of said saddle in both directions.

3. The combination of a drawbar carry-iron, a drawbar saddle which is arranged to slide on said carry-iron, springs arranged at opposite sides of a part of said saddle and acting against said part, a stationary abutment between said springs, against which the inner ends of said springs are adapted to react, sliding abutments against which the outer ends of said springs act, and parts on said saddle adapted to engage said sliding abutments, whereby one of said sliding abutments is moved and compresses one of said springs when said saddle is moved in either direction.

4. The combination of a drawbar carry-iron having end attaching portions and a hollow open-ended connecting portion provided with a longitudinal slot extending from end to end thereof, centering means for the drawbar located in said hollow portion and including a part extending through said slot for engagement with the drawbar, and caps for the ends of said hollow portion having slots registering with the ends of said longitudinal slot.

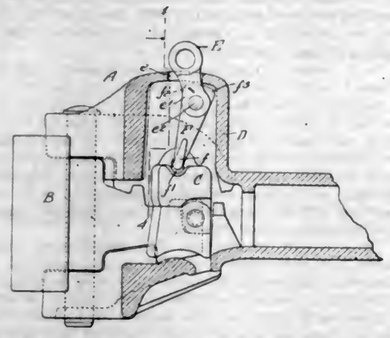
5. The combination of a drawbar carry-iron having a tubular horizontal portion which forms a spring housing and has open ends and a longitudinal slot, a drawbar saddle which is arranged to slide on said housing, abutments arranged to slide in the opposite end portions of said housing, engaging parts on said saddle and said abutments extending through said slot in the housing whereby said abutments are adapted to be moved by said saddle, spring means in said housing for yieldingly resisting the inward movement of said abutments, caps for closing the ends of said housing, and a stationary securing bolt for said caps which extends through said housing, abutments and spring means.

[Claim 6 not printed in the Gazette.]

1,189,387. ANTICREEP DEVICE. WILLARD F. RICHARDS, Depew, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Oct. 1, 1915. Serial No. 53,627. (Cl. 213—14.)

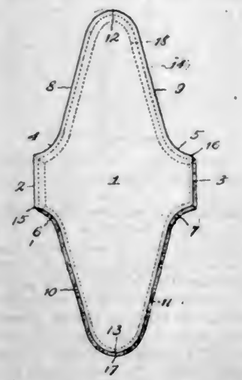
1. The combination with a car coupler having a vertically movable knuckle lock, of two pivotally connected links for lifting said lock, the lower of said links being pivotally connected at its lower portion with said lock and being adapted to swing forwardly and rearwardly from an upright position to different holding positions, said links being drawn into substantially vertical alinement for lifting the lock, and parts on the coupler head adapted to engage said lower link when the same is in either of its holding positions to prevent said lower link and said lock from moving upwardly.

2. The combination with a car coupler having a hole in the top wall of its head, and a knuckle lock which lifts for releasing the knuckle, of two pivotally connected links adapted to move through said hole for lifting the lock, the lower of said links being pivotally connected at its lower portion to said lock and being adapted to swing forwardly and rearwardly from an upright position to two different inclined holding positions, said link when in either of said two holding positions being adapted to engage the edge of said hole and prevent the lock from lifting from its locking position.



3. The combination with a car coupler having a hollow upwardly extending horn and a vertically movable knuckle lock movable to an unlocking position into said horn, of two pivotally connected links in said horn for lifting said lock and adapted to pass through a hole in the top of said horn for lifting said lock, the lower of said links being pivotally connected at its lower portion with said lock and being adapted to swing forwardly and rearwardly from an upright position, parts of said hollow horn being adapted to engage the lower link when in its forward or rearward position to prevent the link and lock from moving upwardly.

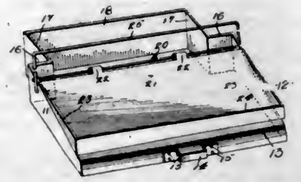
1,189,388. STAVE. HOMER D. ROGERS, Kansas City, Mo., assignor of one-half to Zina R. Ashbaugh, Kansas City, Mo. Filed Apr. 7, 1915. Serial No. 19,781. (Cl. 72—38.)



1. A stave of the character described, consisting of a body portion of segmental configuration in cross section and of less width than length, said body portion being bounded by two short parallel margins at its greatest width, inwardly curved margins communicating with the ends of said parallel margins, margins communicating with said inwardly curved margins and converging toward the ends of the body portion, and curved margins at the ends of said body portion connecting the terminals of the converging margins, substantially as shown and described.

2. A stave of the character described, comprising a body portion one-half of the surrounding edge of which is bevveled inwardly while the other half is beveled outwardly, said body portion being of less width than length and bounded by two short parallel margins at its greatest width, inwardly curved margins communicating with the ends of said parallel margins, margins communicating with said inwardly curved margins and converging toward the ends of the body portion, and curved margins at the ends of said body portion connecting the terminals of said converging margins, substantially as shown and described.

1,189,389. COMBINED GRATE-FENDER AND ASH-PAN. ETHEL M. RYAN, Hawkinsville, Ga. Filed Apr. 21, 1915. Serial No. 22,927. (Cl. 126—203.)



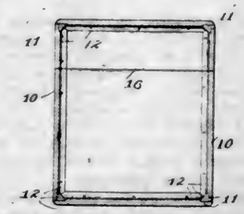
1. In a device of the character described; an ash pan having an extension portion for disposition beneath a grate, a cover movably associated with said ash pan, and upstanding flanges carried by said cover; whereby said cover forms a collector.

2. In a device of the character described, an ash pan having an extension for disposition beneath a grate, a shaft mounted on said ash pan at a point spaced from said extension, and a fender member movably mounted on said shaft, and said fender member provided with upstanding flanges; whereby said fender member forms a collector to deliver to said ash pan upon tilting.

3. In a device of the character described, an ash pan having an extension for disposition beneath a grate, a fender member, means pivotally connecting said fender member and said ash pan at a point spaced from said extension, said ash pan having the upper edges of its side members cut slanting toward its outer end, said fender member adapted to normally lie on said slanting edges, upstanding side and end flanges on said fender member providing a collector, and said fender member adapted to deliver ashes to said ash pan upon tilting.

4. In a device of the character described, a pan structure having an extension for disposition beneath the grate, a shaft mounted on said pan structure at a point spaced from said extension, a fender mounted on said shaft, said fender normally engaging the upper edges of said pan structure and adapted to deliver ashes to said pan structure upon tilting, a handle on said pan structure, and a bail for manipulating said pan structure, substantially as described.

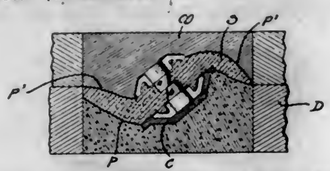
1,189,390. TRUNK. PAUL C. SCHROEDER, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Apr. 9, 1915. Serial No. 20,126. (Cl. 190—24.)



A trunk comprising walls, reinforcing strips fixed in the angles between adjacent walls, the end portions of the three strips at each corner of the trunk being shaped

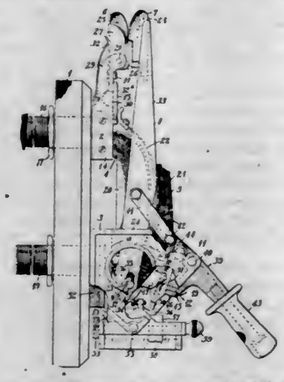
to abut against each other and provide a rigid joint, one of the strips having a perpendicular end abutting against the opposing wall, another of the strips having a single bevel end to abut against the first strip, and the third strip having a double bevel or wedge-shaped end to abut against both of the two first mentioned strips.

1,189,391. ART OF CASTING METAL. THEODORE C. SCHULTZE, Grand Rapids, Mich., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 12, 1913. Serial No. 778,723. (Cl. 22—190.)



An improved method of forming a mold which consists in shaping interior matrix walls of friable material by means of suitable pattern members, suitably supporting said friable portions, withdrawing a pattern member from engagement with the friable material and disposing in proper relationship to the friable material a permanent matrix wall which is in part spaced apart from the friable material to provide a portion of the mold cavity, supporting said friable and permanent matrix walls in proper relationship, withdrawing the remaining pattern portions, and disposing other suitable matrix walls in position to complete the mold cavity.

1,189,392. CIRCUIT-INTERRUPTER. CHRISTIAN AALBORG and THOMAS S. PUKERUD, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 24, 1911. Serial No. 640,192. (Cl. 175—282.)



1. In a circuit interrupter, the combination with main stationary contact terminals, a movable contact member to coöperate therewith, an auxiliary stationary contact terminal and a movable coöperating contact terminal, of an operating mechanism comprising a handle lever and a plurality of links severally associated with said movable member and terminal for positively and successively actuating said member and said terminal in unison, and means for effecting a wiping contact between said cooperating auxiliary contact terminals.

2. In a circuit interrupter, the combination with main and auxiliary movable contact members and supporting arms therefor, of an operating mechanism embodying a handle and a plurality of links severally pivotally connected to said handle and to said supporting arms.

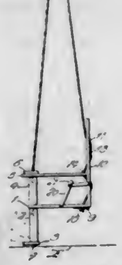
3. In a circuit interrupter, the combination with main stationary contact terminals, a coöperating movable contact member, a stationary arcing contact terminal, a cooperating movable arcing terminal and an arm for supporting said movable arcing terminal, of an operating mechanism separately associated with said movable contact member and said supporting arm to effect concurrent operation thereof, and means associated with said supporting arm and coöperating with said operating mechanism for effecting a wiping contact between said cooperating arcing terminals.

4. In a circuit interrupter, the combination with main stationary contact terminals, a coöperating movable contact member, a stationary arcing contact terminal, a cooperating movable arcing terminal, and an arm for supporting said movable arcing terminal, of an operating lever, positive means for pivotally connecting said lever to said movable contact member and to said supporting arm, and lost-motion connection associated with said supporting arm for permitting a wiping contact between said coöperating arcing terminals.

5. In a circuit interrupter, the combination with a movable contact member, a movable arcing terminal, and an arm for supporting the movable arcing terminal, of positive means embodying linkage mechanisms severally associated with said movable contact member and said supporting arm for actuating said member and said arm in unison with said positive means, and resilient means disposed between said movable contact member and said supporting arm.

[Claims 6 to 14 not printed in the Gazette.]

1,189,393. SWING. JOHN COPELAND MILLER SHAW, Hillsboro, Tex. Filed Nov. 19, 1914. Serial No. 873,042. (Cl. 155—35.)

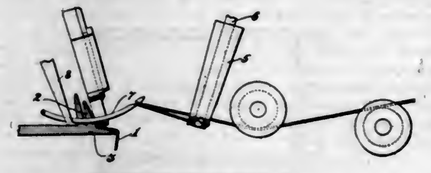


1. In combination, an elevated rigid support, a pair of spaced pulleys carried thereby, a pair of cables trained over said pulleys and having their ends depending therefrom in downwardly diverging relation, a forwardly overbalanced rigid chair-like swing supported by the cables and having a depending foot rest normally engaging the floor and limiting the forward tilting of said swing when unoccupied, and stops on the cables for coaction with the pulleys to limit the rearward tilting of the swing when rearwardly overbalanced by the weight of the occupant, the pulleys and cables being the sole means of supporting the swing.

2. In combination, a horizontal seat, a rigid back-board rising therefrom and hinged at its lower end to the rear end thereof, said back-board having near each of its upright edges two vertically spaced pairs of vertically spaced openings, a pair of arms having their rear ends apertured and disposed in contact with the front side of the back-board between the two pairs of openings, a pair of elevated guides, and a pair of cables passed over said guides and having one end secured to support the front end of the seat, the other ends of said cables being threaded rearwardly and forwardly through the upper

pairs of openings, downwardly through the apertures in the arms, then rearwardly and forwardly through the lower pairs of openings, and being finally extended forwardly across the angle between the seat and back-board and secured to the former.

1,189,394. METHOD OF MAKING A STITCH. PERCY W. SHAW, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 20, 1914. Serial No. 846,273. (Cl. 112—34.)



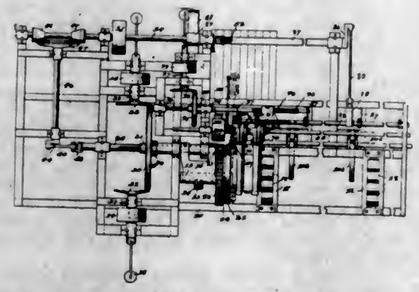
1. The method of making a stitch which consists in passing two loops of thread successively through the work, passing the second loop of thread through the first, releasing the encircled loop, and pulling upon the supply end of the thread to draw the encircling loop into the work and lock the stitch.

2. The method of making a stitch which consists in passing two loops of thread successively through the work, passing the second loop of thread through the first, releasing the encircling loop, pulling upon the supply end of the thread to draw the encircling loop into the work and lock the stitch, and finally severing the supply thread in close proximity to the work.

3. The method of making a stitch which consists in passing a loop of thread through the work, relatively feeding the needle and work, passing a second loop of thread through the work and through the first loop, releasing the encircled loop, and finally drawing upon the supply end of the thread to draw the encircling loop into the work.

4. The method of making a stitch which consists in clamping the short end of the thread, passing a loop of thread through the work, relatively feeding the needle and work, engaging the thread between the first loop and the short end of the thread and passing a second loop of thread through the work and through the first loop, releasing the thread, and finally drawing upon the supply end of the thread to draw the encircling loop into the work.

1,189,395. BARK-PEELING MACHINE. WILLIAM S. SHAW, Boyne City, HERBERT L. DRAKE, Wells, and FREDERICK M. SHAW, Escanaba, Mich. Filed Dec. 1, 1913. Serial No. 803,896. (Cl. 144—208.)



1. In a machine of the character described, the combination of a supporting bed, a rotary chuck adapted to grip one end of a log supported on said bed, a cutter-frame mounted to swing in a direction transverse to the bed, a rotary cutter carried by said cutter-frame adapted to chip the surface of the log, the arrangement being such as to permit automatic relative displacement of the bed and chuck transversely of the log as said log is continuously rotated.

2. In a machine of the character described, the combination of a bed, a rotary chuck adapted to grip one end of a log supported on said bed, means for shifting said chuck toward and from the end of the log, a cutter-frame mounted to swing in a direction transverse to the bed, and a rotary cutter carried by said cutter-frame adapted to chip the surface of the log, said chuck and bed being adapted automatically to permit mutual approachment or separation between them while said log is continuously rotating.

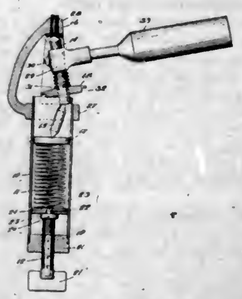
3. In a machine of the character described, the combination of a bed, a rotary chuck adapted to grip one end of a log supported on said bed, a cutter-frame mounted to swing in a direction transverse to the bed, a rotary cutter carried by said cutter-frame, and means for effecting a relative movement between said chuck and said cutter-frame in the direction of the axis of the chuck, the arrangement of said bed, chuck, and cutter-frame such as to permit automatic relative approachment or separation of said cutter-frame and chuck on the one hand and the bed on the other hand while said log continuously rotates.

4. In a machine of the class described, the combination of a rigid foundation, a rotary chuck for gripping the end of a log to be operated upon, said chuck being flexibly mounted with reference to said foundation and adapted to swing in a plane crosswise of the axis of said chuck, means for rotating said chuck, anti-friction bearing means on said foundation intermediate the ends of said log and adapted to rotatably support the log and maintain the same with its axis substantially in the same vertical plane as the axis of said chuck, and a cutter for operating upon the surface of said log and adapted to be traversed along said foundation substantially parallel with the axis of said log.

5. In a machine of the character described, the combination of a bed, a chuck adapted to grip one end of a log supported on said bed, mechanism for rotating said chuck, and mechanism serving to impart to said chuck and its rotating mechanism a bodily movement toward and from the end of the log on said bed, said chuck and bed being arranged to permit automatic relative movement of said chuck transversely toward and from the bed while said log is being continuously rotated by said chuck.

[Claims 6 to 17 not printed in the Gazette.]

1,189,396. EXERCISING DEVICE. GEORGE W. SHERIDAN, Winthrop, Mass. Filed Oct. 14, 1915. Serial No. 55,877. (Cl. 46—69.)



1. An exerciser comprising relatively movable operating-members, a movable element controlled by one of the operating-members and movable relative to the other operating-member, a fixed universal bearing for one end of the movable element and yieldable means associated with the second-mentioned operating-member and exerting

a thrust against the movable element for resisting the movement of the same into alinement with the path of movement of the said means.

2. An exerciser comprising relatively movable operating-members, a fixed bearing, a movable bearing associated with one of the operating-members, yieldable means acting to move the movable bearing toward the fixed bearing, and a movable member interposed between said bearings and terminally engaging them, and governed by the other operating-member, said yieldable means acting to normally maintain the movable member in position with its axis at an angle to the path of movement of the movable bearing.

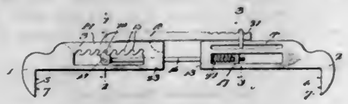
3. An exerciser comprising relatively movable operating-members, a fixed bearing associated with one of the operating-members, a movable bearing associated with the first mentioned operating-member and movable relative to the operating-member, a member interposed between the bearings and terminally engaging them, said member being movable with the second operating member, and yieldable means normally forcing the movable bearing toward the fixed bearing whereby the said member is normally yieldably maintained in position with its axis at an angle to the path of movement of the movable bearing.

4. An exerciser comprising relatively movable operating-members, a movable element controlled by one of the operating-members and movable relative to the other operating-member, a fixed universal bearing for one end of the movable element and yieldable means associated with the second-mentioned operating member and exerting a thrust against the movable element for resisting the movement of the same into alinement with the path of movement of the said means, and locking-means effective when the movable element is brought into alining position.

5. An exerciser comprising relatively movable operating-members, a universally jointed element associated with said members, and a yieldable means opposing an alining movement of said jointed element.

[Claims 6 to 17 not printed in the Gazette.]

1,189,397. LUMBER-CLAMP. JOSEPH A. SIMON, Memphis, Tenn. Filed May 26, 1915. Serial No. 30,616. (Cl. 144—299.)



1. A clamp comprising a pair of jaws, a rod connecting said jaws, and a lever for said rod fulcrumed on one of said jaws and having locking engagement with the other jaw, substantially as set forth.

2. A clamp comprising a pair of jaws, a rod connecting said jaws, a lever carried by said rod adjustably fulcrumed on one of the jaws, and a device for locking the lever to the other jaw, substantially as set forth.

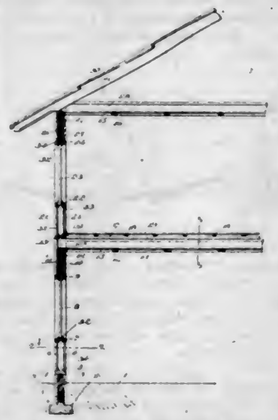
3. A clamp comprising a pair of jaws, a rod connecting said jaws, a lever carried by said rod adjustably fulcrumed on one of the jaws and adapted to engage with the other jaw, and a resilient element associated with said rod and lever operable to permit of limited relative movement between the jaws after setting, substantially as set forth.

4. A clamp comprising a pair of jaws, a rod connecting said jaws, a lever pivotally mounted on said rod and adjustably fulcrumed on one of said jaws, a device for locking the lever to the other jaw, and a resilient element disposed between said other jaw and the rod operable to permit of limited relative movement between the jaws after setting, substantially as set forth.

5. A clamp comprising a pair of jaws and one of said jaws constructed with a rack, a rod connecting the jaws, a lever fulcrumed on the jaw rack and engaging said rod, a device for locking the lever to the other jaw, and a resilient element disposed between said other jaw and the rod operable to permit of limited relative movement between the jaws after setting, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,189,398. CONCRETE STRUCTURE. JOHN THOMAS SIMPSON, Newark, N. J. Filed Nov. 7, 1912. Serial No. 729,923. (Cl. 72—1.)



1. A reinforced concrete building comprising pre-molded vertical wall slabs having reinforcements projecting from their vertical edges, pre-molded bonding members having reinforcements projecting from their ends, premolded beams having reinforcements projecting from their ends, said bonding members engaging the horizontal edges of the slabs, each having its ends substantially coincident with the vertical edges of a slab, an end of each beam resting on a horizontal edge of a slab, and a vertical field-molded weight-carrying element consisting of reinforced concrete embedding the projecting reinforcements of the slabs, bonding members and beams during the formation of the field-molded element, said field-molded element forming part of the exterior of the wall of the building.

2. A reinforced concrete building comprising pre-molded vertical wall slabs having reinforcements projecting from their vertical edges, pre-molded bonding members having reinforcements projecting from their ends, premolded beams having reinforcements projecting from their ends, said bonding members engaging the horizontal edges of the slabs, each having its ends substantially coincident with the vertical edges of a slab, an end of each beam resting on a horizontal edge of a slab, and a vertical field-molded element consisting of reinforced concrete extending the entire height of the structure and embedding the projecting reinforcements of the slabs, bonding members and beams during the formation of the field-molded element, said bonding and field molded elements forming part of the exterior of the wall of the building.

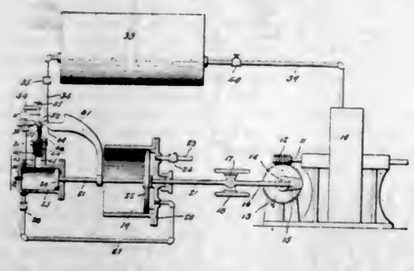
3. A reinforced concrete building comprising pre-molded floor beams having projecting reinforcements, said beams being spaced apart and with their ends in alinement, and a horizontal field-molded element of reinforced concrete extending entirely around the building and embedding the ends of and supporting the beams and their projecting reinforcements during the molding of the element, and vertical field-molded, load-carrying members of reinforced concrete molded integrally with and supporting the element.

4. A reinforced concrete building comprising pre-molded vertical wall slabs having projecting reinforcements, a plurality of vertical field-molded elements of reinforced concrete spaced apart by and molded around the vertical edges of the slabs and embedding the ends of the slabs and the projecting reinforcements during the molding of the element, pre-molded floor beams having projecting reinforcements, said beams being spaced apart with their ends in alinement with the vertical elements, a horizontal field-molded spandrel beam of reinforced concrete extending entirely around the building, uniting with the vertical field-molded elements and embedding the ends of the floor beams and their projecting reinforcements during the molding of the spandrel beam, the reinforcements of the vertical field-molded element extending into the spandrel beam, the reinforcements of the spandrel beam extending into the vertical field-molded element, the spandrel beam and vertical element being molded at the same time to form a monolithic structure.

5. A concrete building comprising wide and narrow wall slabs, a notch in one side of each slab, said slabs being spaced apart and vertically arranged, a beam resting in the notch in the narrow slab, a horizontal spandrel beam between the slabs, a vertical stud embedding the ends of the slabs and of the beam, said stud uniting with the spandrel beam, and a rafter engaging the notch in the wide slab and resting on the spandrel beam.

[Claim 6 not printed in the Gazette.]

1,189,399. MOTOR. GEORGE E. SKAGGS, St. Louis, Mo. Filed June 10, 1915. Serial No. 33,350. (Cl. 60—37.)



1. In a motor, the combination with a turbine, of a chamber in which gases are adapted to be ignited, means operated by the turbine for compressing gases within said chamber, a storage chamber adapted to receive the burnt gases from the combustion chamber, means for conveying the burnt gases from the storage chamber to the turbine, a valve in said conveying means, and means for automatically actuating said valve to permit the discharge of unburnt gases in the event that a charge of gas drawn into the explosion chamber fails to ignite.

2. In a motor, the combination with a turbine, of a chamber in which gases are adapted to be exploded, means operated by the turbine for compressing gases within said explosion chamber, a pressure tank, a connection from the explosion chamber to said pressure tank, a valve in said connection, means adapted to be actuated by the pressure of ignited gases within the explosion chamber for opening said valve to permit the burnt gases from the explosion chamber to pass to the pressure tank, means for automatically actuating said valve to permit the discharge of unburnt gases from the explosion chamber in the event that a charge of combustible gas drawn into said chamber fails to ignite, and a connection from the pressure tank to the turbine.

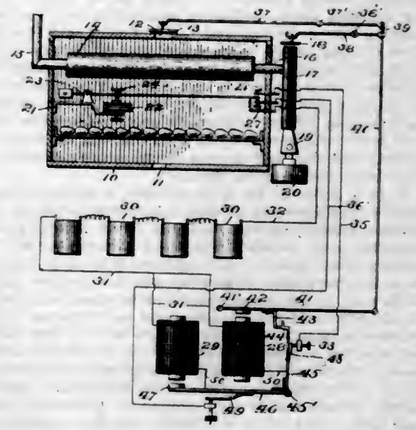
3. In a motor, a pressure storage tank, a chamber in which gases are adapted to be ignited, a tubular connection from said chamber to the storage tank, a valve located in said tubular connection, means for compressing gases in the chamber, means adapted to be actuated by the pressure from the storage tank for actuating the gas compressing means and means for automatically actuating the valve to permit a discharge of unburnt gases from the combustion chamber in the event that a charge of combustible gas is drawn into said combustion chamber and fails to ignite.

4. In a motor, a pressure storage tank, a chamber in which gases are adapted to be ignited, a tubular connection from said ignition chamber to the pressure storage tank, a gas compressor, means for leading gas from said compressor to the ignition chamber, a turbine adapted to be actuated by pressure from the pressure storage tank, driving connections from said turbine to said gas compressor and means for automatically actuating the valve to permit a discharge of unburnt gases from the combustion chamber in the event that a charge of combustible gas is drawn into said combustion chamber and fails to ignite.

5. In a motor, a turbine, a chamber in which gases are adapted to be exploded, means operated by the turbine for compressing gases within said explosion chamber, a pressure tank, a connection from the explosion chamber to said pressure tank, a valve in said connection, means adapted to be actuated by the pressure of ignited gases within the explosion chamber for opening said valve, means for actuating said valve to open the exhaust port thereof when said valve is not actuated by the pressure of ignited gases within the explosion chamber, and a connection from the pressure tank to the turbine.

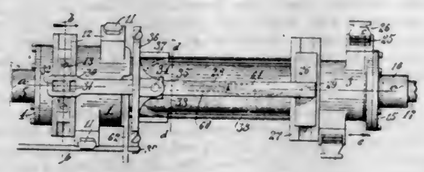
[Claims 6 and 7 not printed in the Gazette.]

1,189,400. ELECTRIC REGULATOR FOR INCUBATORS. WILLIAM W. SMITH, Hawthorne, Cal. Filed Mar. 9, 1915. Serial No. 13,273. (Cl. 236—4.)



In combination, a thermostat, a lever actuated thereby, a battery, a connection between the lever and one pole of the battery, a pair of contact points arranged on opposite sides of the lever and arranged to be selectively engaged thereby, a pair of magnets connected to the remaining pole of the battery, a pair of dampers, a pair of pivoted levers each of which carries one of the dampers, a damper-controlling lever operatively connected to the free ends of the levers to move the same in unison, and provided with an armature controlled by one of the magnets, a bell crank lever provided with an armature controlled by the remaining magnet, contact points adjacent the arms of the bell crank lever and arranged to be selectively engaged by the respective arms upon change of position of said bell crank lever, electrical connections between said first and second contact points, electrical connections between said magnets and bell crank lever, a latch arm carried by the damper-controlling lever, and a latch on the bell crank lever engageable with the latch arm upon energization of one magnet and disengageable therefrom upon energization of the other magnet.

1,189,401. TRANSMISSION OR CHANGE-SPEED DEVICE. JAMES R. STEPHENSON, Dayton, Ohio. Filed Sept. 8, 1913, Serial No. 788,606. Renewed Nov. 19, 1914. Serial No. 873,051. (Cl. 74—53.)



1. In a device of the type specified, a rotating driving member, reciprocating driving members actuated by said rotating driving member, a rotating driven member having a plurality of engaging faces, oscillating members mounted on said driven member, rollers mounted between said oscillating members and said engaging faces, reciprocating driven members in operative relation with said oscillating members, a plurality of levers having shiftable fulcrums connecting the reciprocating driving members and the reciprocating driven members, and means for shifting said rollers on said engaging faces.

2. In a device of the type specified, a rotating driving member, reciprocating driving members actuated by said rotating driving member, a rotating driven member having engaging faces, oscillating members mounted on said rotating driven member and together with said engaging faces forming double wedge-shaped pockets, rollers mounted in said pockets and adapted to clutch said oscillating members and said rotating driven member, springs adapted to move said rollers toward the ends of the pockets, reciprocating driven members in operative relation with said oscillating members, and levers having shiftable fulcrums connecting said driving reciprocating members and said driven reciprocating members.

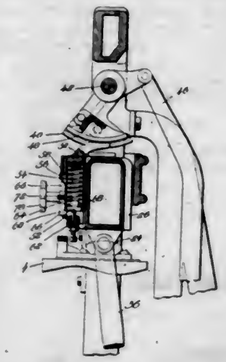
3. In a device of the type specified, a rotating driving member, reciprocating driving members actuated by said rotating driving member, a rotating driven member having engaging faces, oscillating members mounted on said rotating driven member and together with said engaging faces forming double wedge-shaped pockets, rollers mounted in said double wedge-shaped pockets and adapted to clutch said oscillating members and said rotating driven member, springs mounted on opposite sides of said rollers and adapted to press said rollers toward the ends of the pockets when said springs are compressed, a sleeve carrying said springs said sleeve being mounted on said rotating driven member and adapted to positively engage said rollers, means for oscillating said sleeve relative to said rotating driven member, reciprocating driven members connected to said oscillating members, and a plurality of levers having shiftable fulcrums connecting said reciprocating driving members and said reciprocating driven members.

4. In a device of the type specified, a rotating driven member having engaging faces, oscillating members mounted on said rotating driven member and together with said engaging faces forming double wedge-shaped pockets, rollers mounted in said pockets and lying between said oscillating members and said driven member, a sleeve mounted on said driven member and adapted to engage said rollers to move said rollers toward the end of said pockets thereby clutching said driven and oscillating members, said driven member being provided with a longitudinal slot and said sleeve being provided with a spiral slot, a pin extending through said slots, and means for shifting said pin whereby the direction of rotation of said driven member may be reversed.

5. In a device of the type specified, a driving member, a driven member, oscillating members, means constituting a clutch for said driven and oscillating members, means for shifting said clutch, a plurality of transmission members having variable movement connecting said driving member and said oscillating members, means for varying the movement of said transmission members, and means for varying the movement of said transmission members controlling the shifting means for said clutch means.

[Claims 6 to 16 not printed in the Gazette.]

1,189,402. SOLE-PRESSING MACHINE. WILLIAM C. STEWART, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 26, 1914. Serial No. 821,269. (Cl. 12—33.)



1. A sole pressing machine, having in combination, a shoe supporting jack, a sole pressing form, means for relatively moving the jack and form to seat the form, independently acting mechanism for relatively actuating the jack and form to apply pressure to the shoe sole, a spring for supporting the form against pressure, and adjustable means for regulating the distance through which the spring is compressed by the actuating mechanism.

2. A sole pressing machine, having in combination, a shoe supporting jack, a sole pressing form, a head, a spring interposed between the head and form, means for relatively moving the head and jack to seat the form, independently acting mechanism for relatively actuating the jack and head to apply pressure to the shoe sole, and adjustable means for regulating movement between the head and form produced by the actuating mechanism.

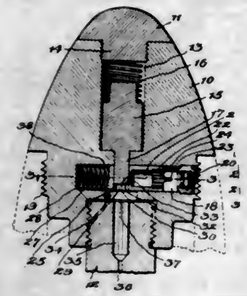
3. A sole pressing machine, having in combination, a shoe supporting jack, a form, a spring supporting the form against pressure, means for moving the form to seat it on the shoe, mechanism for actuating the jack to apply pressure to the shoe sole, and adjustable means for regulating the distance through which the spring is compressed by the actuating mechanism.

4. A sole pressing machine, having in combination, a shoe supporting jack, a head, a form, a spring between the form and head, means for moving the head vertically to seat the form, mechanism for actuating the jack to apply pressure to the shoe sole, a stop for limiting the upward movement of the head, and adjustable means for positioning the stop in accordance with the position of the head when the form is seated.

5. A sole pressing machine, having in combination, a shoe supporting jack, a head, a form, a spring between the form and head, means for moving the head vertically to seat the form, mechanism for actuating the jack to apply pressure to the shoe sole, a stop for limiting the upward movement of the head, and a controller stop connected therewith and arranged to engage a controller stop on the head, one of said stops being adjustable and the controller stops being relatively yielding.

[Claims 6 to 9 not printed in the Gazette.]

1,189,403. PERCUSSION-FUSE FOR PROJECTILES. GEORGE WALLACE STRUBLE and WILLIAM L. LUKENS, Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Mar. 15, 1916. Serial No. 84,435. (Cl. 102—39.)

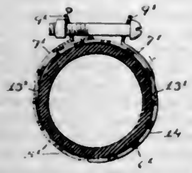


1. A percussion fuse for projectiles comprising a body having an axial opening therein and a radial opening intersecting the axial opening, a hammer in the radial opening having a longitudinal flame passage and having a transverse perforation adapted to aline with the radial opening, a plunger in the axial opening arranged to normally extend into the perforation in the hammer to lock the hammer and close the flame passage, a primer in front of the hammer, and a spring in the rear of the hammer.

2. A percussion fuse for projectiles comprising a body having an axial opening therein and a radial opening intersecting the axial opening, a hammer in the radial opening having a longitudinal flame passage and having a transverse perforation adapted to aline with the radial opening, a plunger in the axial opening arranged to normally extend into the perforation in the hammer to lock the hammer and close the flame passage, an obturator arranged in said flame passage adjacent said plunger, a primer in front of the hammer, and a spring in the rear of the hammer.

3. A percussion fuse for projectiles comprising a body having an axial opening therein and a radial opening intersecting the axial opening, a hammer in the radial opening having a longitudinal flame passage and having a transverse perforation adapted to aline with the radial opening, a plunger in the axial opening arranged to normally extend into the perforation in the hammer to lock the hammer and close the flame passage, an obturator comprising a thin metal disk arranged in said flame passage adjacent said plunger, a primer in front of the hammer, and a spring in the rear of the hammer.

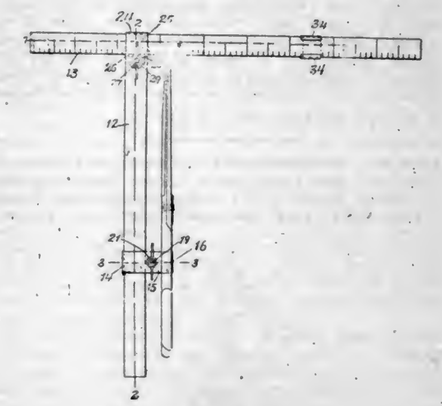
1,189,404. CLAMP FOR HOSE AND THE LIKE. FRED J. STULP, Muskegon, Mich. Filed Apr. 17, 1915. Serial No. 22,111. (Cl. 137—28.)



1. A clamp for hose and the like, comprising a body member having a series of slots and a series of bars between said slots, and a supplementary member having at one end a neck and a laterally spread hook-form head of less breadth than that of said body member, said head having detachable engagement with said body member within any one of said slots.

2. A clamp for hose and the like, comprising a body member having a series of slots and a series of bars between said slots, and a supplementary member having at one end a neck and a laterally spread double-hook-form head, said head and said neck being in substantially the same plane and having uninterrupted lateral surfaces throughout, said supplementary member having a single slight obtuse-angle bend at the joint between the same and said neck, the hook-form head being of less breadth than that of the supplementary member and having detachable engagement with the body member within any one of said slots.

1,189,405. GAGE ATTACHMENT FOR SCISSORS. ETTA MIARS SYLVESTER, Somerville, Mass. Filed Feb. 11, 1916. Serial No. 77,610. (Cl. 33—186.)



1. A gage attachment for scissors, comprising a flat-sided elongated shank having means for engaging a scissors handle and arranged relatively to said means to extend beside and substantially parallel with the scissors blades, said shank having a flat-sided transverse guide at its outer end and means for pressing the sides of said guide toward each other, and a gage bar adjustably confined in said guide and extending at right angles with the shank in advance of the points of the scissors blades, said bar being provided with a hooked finger adapted to slidingly engage an edge of a piece of fabric.

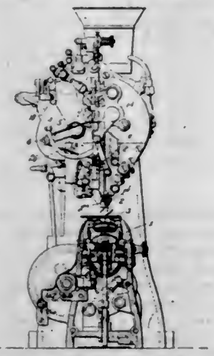
2. A gage attachment for scissors, comprising a flat-sided elongated shank having means for engaging a scissors handle and arranged relatively to said means to extend beside and substantially parallel with the scissors blades, said shank having a flat-sided transverse guide at its outer end and means for pressing the sides of said guide toward each other, and a gage bar adjustably confined in said guide and extending at right angles with the shank in advance of the points of the scissors blades, said bar being provided with a fixed hooked finger facing in one direction to engage one edge of a piece of fabric, and with a slidable hooked finger facing in the opposite direction to engage another edge.

3. A gage attachment for scissors, comprising a handle-engaging bracket composed of a flat-sided metal strip bent to form two arms, a neck connecting said arms, and hooked jaws at the outer ends of the arms, said neck and portions of said arms forming a flat-sided shank guide, a flat-sided shank movable endwise in said guide and extending at right angles with the bracket, means for exerting clamping pressure on the bracket arms to simultaneously bind the jaws on a scissors handle and the sides of the shank guide on said shank, the outer end of the shank being bent to form a neck and an arm overhanging the body of the shank, said body, neck and arm constitut-

ing a flat-sided bar guide at right angles with the shank guide, a gage bar movable endwise in the bar guide, means for exerting clamping pressure on the said body and ear to bind the sides of the bar guide on said gage bar, and a hooked finger carried by the gage bar and adapted to slidingly engage an edge of a piece of fabric, the relative arrangement of the bracket, shank and gage bar being such that when the bracket is secured to a scissors handle the shank extends substantially parallel with the scissors blades and the gage bar at right angles with said blades and in advance of the points thereof.

4. A gage attachment for scissors, comprising a flat-sided shank bent at its outer end to form a neck and an arm overhanging the body of the shank, said body, neck and arm constituting a flat-sided guide at right angles with the shank, means for connecting said shank with a scissors handle in a position substantially parallel with the scissors blades, and a flat-sided transverse gage bar adjustably held by said guide substantially at right angles with said shank and in advance of the points of the scissors, said bar being provided with oppositely facing hooked fingers, one of which is fixed to the bar and adapted to slidingly engage one edge of a piece of fabric, while the other is adjustable on the bar and is adapted to slidingly engage an opposite edge.

1,189,406. SEWING-MACHINE. LAURENCE E. TOPHAM, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 11, 1912. Serial No. 670,627. (Cl. 112—26.)



1. A lockstitch sewing machine, having in combination, stitch forming devices including a hook needle, a looper, a thread finger, a loop taker, and take-up mechanism comprising a draft device for engaging the needle thread, a continuously rotating crank, and connections therefrom for operating the draft device to give said device a rapid movement in one direction to pull the loop from the loop taker and set the stitch and a retarded movement in the opposite direction to pay out the thread to the looper, thread finger and needle as required by the same and to keep the thread taut until the needle hook enters the work.

2. A lockstitch sewing machine, having in combination, stitch forming devices including a hook needle, a looper, a thread finger, a continuously rotating loop taker, and takeup mechanism comprising a draft device for engaging the needle thread, a continuously rotating crank, and connections therefrom for operating the draft device to give said device a rapid movement in one direction to pull the loop from the loop taker and set the stitch and a retarded movement in the opposite direction to pay out the thread to the looper, thread finger and needle as required by the same and to keep the thread taut until the needle hook enters the work.

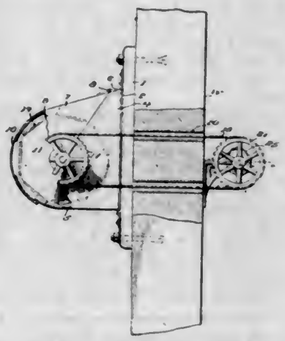
3. A lockstitch sewing machine, having in combination, stitch forming devices including a hook needle, a looper, a thread finger, a continuously rotating loop taker making three complete revolutions during each cycle of operations, and take-up mechanism comprising a draft device for engaging the needle thread, a continuously rotating crank, and connections therefrom for operating the draft device to give said device a rapid movement in one direction to pull the loop from the loop taker and set the stitch and a retarded movement in the opposite direction to pay out the thread to the looper, thread finger and needle as required by the same to keep the thread taut until the needle hook enters the work.

4. A lockstitch sewing machine, having in combination, stitch forming devices including a hook needle, a looper, a thread finger, a loop taker, take-up mechanism comprising an oscillating draft device movable to an approximately central position with relation to the loop which it draws out, a continuously rotating crank and connections therefrom for operating the draft device to give it a rapid movement in one direction to pull the loop from the loop taker and set the stitch, and a retarded movement in the opposite direction to pay out the thread to the looper, thread finger and needle as required by the same, and to keep the thread taut until the needle hook enters the work.

5. A lock-stitch sewing machine, having, in combination, a hook needle, a loop-taker, an awl, a take-up acting while moving in one direction to pull the loop from the loop-taker and set the stitch and while moving in the opposite direction to deliver the thread and keep the thread taut until the needle hook enters the work, a continuously rotating crank and connecting mechanism for operating the take-up from the crank comprising a lever pivoted on the crank, and means for varying the angular position of the lever as the crank rotates.

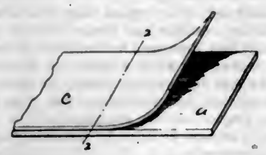
[Claims 6 to 9 not printed in the Gazette.]

1,189,407. INDICATOR. DONAT B. TROTTIER, Lebanon, N. H. Filed Aug. 12, 1913. Serial No. 784,395. (Cl. 40—77.)



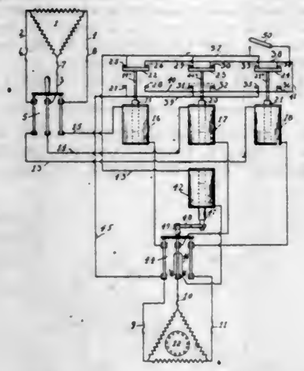
A device of the class described comprising a supporting member, a display casing including a fixed section and a movable section, the fixed section being provided with a laterally extending circumferential attaching flange bearing against the adjacent face of the supporting member, said fixed section having its top wall shorter than its bottom wall and having its forward edges inclined downwardly, the movable section being pivotally connected to the free edge of the short top wall of the fixed section and having its rear edges inclined downwardly and overlapping the inclined forward edges of said fixed section, there being a sight opening formed in the movable section at a point opposite the supporting member, a sign-carrying drum mounted for rotation within the display casing, a sprocket wheel arranged on the outside of the casing at one end thereof and operatively connected with the sign-carrying drum, an illuminating device arranged within the sign-carrying drum, an indicating drum, and a connection between the sprocket wheel of the sign-carrying drum and the indicating drum.

1,189,408. CLOTH FOR BILLIARD-TABLES. JOHN TURNER, Dorchester, Mass. Filed June 28, 1915. Serial No. 36,661. (Cl. 154—46.)



A billiard-table cloth whose constituency is a cotton-back and a woolen-face, the same being interwoven, said cotton-duck having applied thereto a rubberized solution to render it impervious against the passage therethrough of deleterious material.

1,189,409. AUTOMATIC MOTOR-PROTECTING SWITCH. JOHN ASTOR VAN ALSTYNE, Sacramento, Cal., assignor of one-half to Casper Vincent Schneider, Sacramento, Cal. Filed June 1, 1915. Serial No. 31,622. (Cl. 175—294.)



1. In a protective device for a three phase circuit, a solenoid for each phase; a freely movable armature in each solenoid; a metallic member mounted on each armature; a pair of contact points above and below each metallic member, one contact point in each pair being connected together by conductors forming four sets of three contact points each; a connection between a lower set and an upper set of contact points, whereby when any one metallic member is down, one or both of the other two metallic members being up, an electrical connection exists between the other two sets of contact points.

2. In a protective device for a three phase circuit, a tripping-solenoid having tripping means; a solenoid for each phase of the circuit; a freely movable armature in each solenoid; a metallic member mounted on each armature; a pair of contact points above and below each metallic member, one contact point in each pair being connected together by conductors forming four sets of three contact points each; a connection between a lower set and an upper set of contact points; a connection between the other lower set of contact points and one phase of the circuit; a connection between the other upper set of contact points and one terminal of the tripping-solenoid; and a connection between the other terminal of the tripping-solenoid and another phase of the circuit, whereby when any one metallic member is down, one or both of the other metallic members being up, the tripping-solenoid is electrically connected with two of the phases of the circuit.

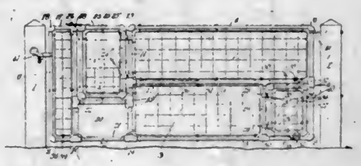
3. An automatic circuit-breaker comprising the combination with a three phase motor having a source of supply therefor and main conductors connecting said source to said motor, a tripping-solenoid, a resilient switch for all phases controlled by a latch and the tripping-solenoid, a solenoid in series in each phase operating independently of each other, a freely movable armature in each solenoid, a metallic member mounted on each armature, said armature and metallic member being adapted to drop on the disruption of its corresponding phase; of a pair of contact points above and below each metallic member, one contact point in each pair being connected together by conductors forming four sets of three contact points each, a connection between a conductor connected to a lower set and a conductor connected to an upper set of contact points, a connection between a conductor connected to the other lower set of contact points and a main conductor, a connection between a conductor connected to the other upper set of contact points and one terminal of the tripping-solenoid and a connection between the other terminal of the tripping-solenoid and another main conductor, whereby the resilient switch is thrown open or not, and placed in latchable or non-latchable relation according to predetermined conditions.

4. In a protective switch for a three phase circuit, a solenoid for each phase; a freely movable armature in each solenoid; a metallic member mounted on each armature; a pair of contact points above and below each metallic member, one contact point in each pair being connected together forming four sets of three contact points each; a connection between a lower set and an upper set of contact points; and a single switch connecting the two upper sets of contact points, whereby when all the metallic members are down an electrical connection exists between the two lower sets and the two upper sets of contact points.

5. In a protective switch for a three phase circuit, a tripping-solenoid having tripping means; a solenoid in series in each phase; a freely movable armature in each solenoid; a metallic member mounted on each armature; a pair of contact points above and below each metallic member, one contact point in each pair being connected together forming four sets of three contact points each; a connection between a lower set and an upper set of contact points; a single switch connecting the two upper sets of contact points; a connection between the other lower set of contact points and one phase of the circuit; a connection between the other upper set of contact points and one terminal of the tripping-solenoid; and a connection between the other terminal of the tripping-solenoid and another phase of the circuit, whereby when all of the metallic members are down the tripping-solenoid is electrically connected to two phases of the main circuit.

[Claim 6 not printed in the Gazette.]

1,189,410. GATE. LEWIS E. VAN EVERY, Hampton, Iowa. Filed Jan. 18, 1916. Serial No. 72,702. (Cl. 39—75.)

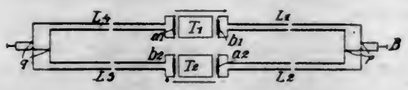


1. In a gate, a frame formed of a plurality of pipe sections terminated to provide an inverted opening intermediate the ends of the frame, a hinged closure mounted in said opening, and a sheet metal permanent closure arranged therebeneath, said sheet metal closure having the marginal edges thereof rolled about the adjacent pipe sections, said sheet metal closure forming

means for preventing traffic through the gates when the hinged closure is in closed position.

2. In a gate, a frame composed of a plurality of pipe sections arranged in parallel horizontal relation, said horizontal pipe sections being terminated to form a U-shaped opening extending from the top of the gate to a point above the bottom thereof, an intermediate pipe section forming said opening in combination with the other pipe section, a stationary closure arranged beneath said opening and formed of a sheet of metal having the marginal edges permanently connected with the intermediate pipe section and the other adjacent pipe section, and a hinged closure mounted in said U-shaped opening, said permanent closure preventing traffic through the gate when the hinged closure is in closed position.

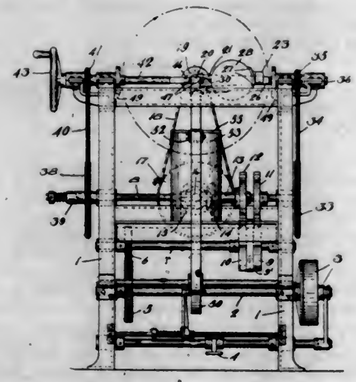
1,189,411. TELEPHONE TRANSMISSION SYSTEM WHEREIN REINFORCING-REPEATERS ARE EMPLOYED. ALBERT SIMON JOHAN VAN KESTEREN, Vlissingen, Netherlands. Filed Dec. 19, 1913. Serial No. 807,749. (Cl. 179—170.)



1. In a telephone system comprising at least one repeater for strengthening the current waves between two subscriber stations, a line for conversation in each direction between said stations, the said separate lines being electrically connected at the ends to each other and also to each subscriber's station, the said lines being of such extent that the damping therein between the two points of connection is equal to, or greater than, the total strengthening produced by the repeater.

2. A telephone transmission system comprising in combination, a pair of parallel lines connected at the ends to each other and also to lines going to each subscriber's station, and repeaters placed in said lines and so arranged that one line is used only for transmisston in one direction and so that the total damping in a closed circuit composed of said parallel lines is greater than the total reinforcing of the repeaters.

1,189,412. LOOM PICKER-WINDING MACHINE. FRANK A. WARDWELL, Methuen, Mass. Filed May 28, 1915. Serial No. 31,058. (Cl. 242—1.)



1. A machine for the purpose described comprising a picker-core-holder, winding means to wind a strip of tape in one direction about a core held on the holder, a second winding means to wind another strip of tape about the core in a direction which is transverse to the windings of the first-named strip, and means to operate said winding means alternately.

2. A machine for the purpose described comprising a picker-core-holder, formed to correspond to the picker-arm of a loom and arranged to support the core at one side therof, means to wind a strip of flexible material about the core and the holder, means to wind an anchoring strip of similar material about the core at approximately right angles to the windings of the other strip and automatic means to operate the winding means of each strip successively.

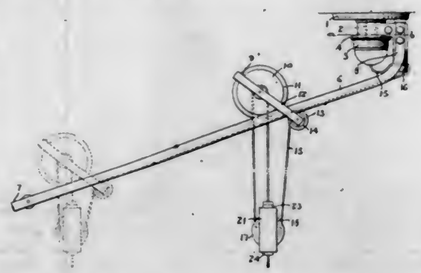
3. A machine for the purpose described, comprising a picker-core-holder, means to rotate said holder to wind a tape about the core in one direction and means to wind another tape about the core in a transverse direction while the holder is held stationary.

4. A machine for the purpose described, comprising an arbor having means to support a picker-core at one side thereof, means to rotate said arbor to wind a strip of tape about the core and the arbor, transversely of the axis thereof and means to wind a second strip about the core in a longitudinal direction with relation to said axis.

5. A machine for the purpose described, comprising an arbor having means to support a picker-core at one side thereof, means to rotate said arbor and to hold it at rest, intermittently, a tape-carrier and means to revolve the same about said core longitudinally of the axis of the arbor while the latter is held stationary.

[Claims 6 to 25 not printed in the Gazette.]

1,189,413. ADJUSTABLE ELECTRIC-LAMP SUPPORT. ARTHUR E. WELLS, Toronto, Ontario, Canada. Filed Nov. 28, 1914. Serial No. 873,450. (Cl. 248—10.)



1. An adjustable electric lamp support, comprising, a supporting arm arranged in an inclined position, a trolley adapted to travel on said inclined arm, and a lamp supporting cord fixed at its upper end and extending over said trolley to effect an automatic compensation of the length of the cord to maintain the lamp in a substantially horizontal plane.

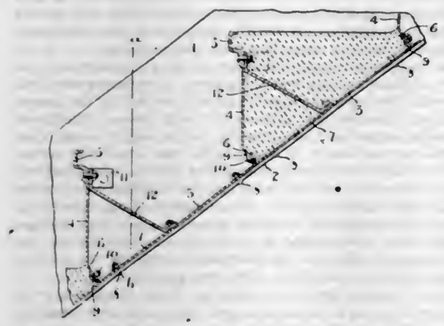
2. An adjustable electric lamp support, comprising, a supporting arm arranged in an inclined position, a trolley adapted to travel on said inclined arm, and having a pair of rollers, a lamp supporting cord fixed at the upper end and extending over one of said rollers and forming a depending loop and passing over the other roller and extending downwardly and supporting the lamp, a sheave arranged in said depending loop, and a member carrying said sheave and engaging the depending terminal end of said cord.

3. An adjustable electric lamp support, comprising, a supporting arm arranged in an inclined position, a grooved roller adapted to travel on said arm, a frame carried by said roller, a secondary grooved roller carried by said frame, a cord fixed at its upper end and passing over said secondary roller and forming a depending loop and extending around the main roller and depending centrally of said loop, a frame adjustably secured on the depending end of said cord, and a sheave journaled in said frame and engaging the depending loop of the cord.

4. An adjustable electric lamp support, comprising, a supporting arm arranged in an inclined position, a trolley adapted to travel on said inclined arm, a cord fixed at its upper end and extending over said trolley and formed with a depending loop, a frame carrying a sheave engaging said loop and formed with spring sides having ferrules at the top through which branches of the depending cord extend, and a plate secured to said frame having holes through which said branches extend, said plate being arranged immediately above the movable ends of the spring frame.

5. An adjustable electric lamp support, comprising, a fixture adapted to be secured to the ceiling, an arm forming a double trackway carried by said fixture and extending in a downward incline therefrom, a grooved roller having flange surfaces riding on said trackway, a frame carried by said roller and extending below said arm, a roller journaled in the lower end of said frame below said trackway and having flanges engaging said trackway, a cord fixed at its upper end and extending over the lower roller of said trolley and depending in a loop and extending over the upper trolley roller from the outer side and depending centrally of said loop, a frame adjustably secured to the depending end of said cord, and a sheave rotatably arranged in said frame.

1,189,414. STAIR CONSTRUCTION. ARTHUR E. WELLS, Toronto, Ontario, Canada. Filed Nov. 23, 1914. Serial No. 873,451. (Cl. 72—96.)

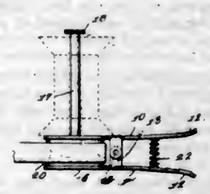


1. A stair construction, comprising, side strings having inwardly turned longitudinal flanges, and a plurality of individual plate members supported upon said flanges and adapted to be secured together to form a continuous soffit, each of said plate members having an upwardly turned portion forming the stair risers and pockets to receive a filling of suitable material to form the treads.

2. A stair construction, comprising, side strings, having inwardly extending longitudinal flanges, and a plurality of trough shaped plate members bent into angle formations and having sloping bottoms forming the stair soffit, the upper edge of said trough shaped members being bent upwardly at about a right angle to the soffit and adapted to engage a correspondingly bent portion of the riser of the adjacent member, said trough members being supported at the ends upon the flanges.

3. A stair construction, comprising, side strings, having inwardly extending longitudinal flanges, trough shaped plate members, having perpendicularly arranged risers and bottoms sloping upwardly in acute angular relation to the risers adapted to rest upon the string flanges and to form the soffit, the upper edge thereof being turned inwardly to abut the adjacent member.

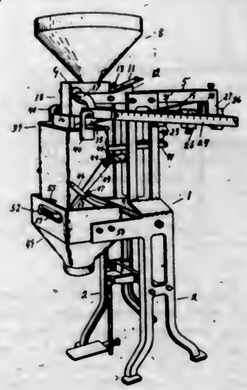
1,189,415. SPOOL-HOLDER. SARAH M. WILCOX, Fairmount, Ill. Filed Aug. 11, 1914. Serial No. 856,292. (Cl. 242—134.)



1. A spool and needle holder including the combination with a clip forming a flange of the spool holder, of a hollow needle receiving spindle interiorly threaded at one end and a threaded closure member for said spindle and carrying a flange coacting with said clip to restrict movement of a spool on said spindle.

2. A spool and needle holder including the combination with a clip forming a flange of the spool holder, of a hollow needle receiving spindle accommodating the spool and open at one end, and a closure for said open end adapted to retain the spool in place on the spindle and to hold the needles in the said spindle.

1,189,416. AUTOMATIC SCALE. RICHARD J. ZANONE, New Albany, Ind., assignor to The Automatic Package Scale Company, Louisville, Ky., a Corporation of Kentucky. Filed May 17, 1915. Serial No. 28,507. (Cl. 73—177.)



1. In a scale, a scale beam, a weighing hopper suspended from the forward end thereof, a chute for delivering material to said hopper, a closure for said chute, and means operable by the rear end of said beam on the downward movement thereof to open said closure.

2. In a scale, a frame, a scale beam pivoted thereon, a hopper suspended from said beam, a drop bottom on said hopper inclined upward at an acute angle to the front wall and hinged to the rear wall thereof, curved latch rods, pivotally attached to the sides of the hopper and adapted to engage and retain the bottom in a closed position, a funnel in fixed relationship to the frame positioned below said hopper, and a rod within said funnel with which the latch rods contact, as the hopper descends, to release the bottom.

3. In a scale, a frame, a scale beam pivoted thereon, a hopper suspended from said beam, a drop bottom on said hopper inclined upward at an acute angle to the front wall and hinged to the rear wall thereof, curved latch rods, pivotally attached to the side of the hopper and adapted to engage and retain the bottom in a closed position, a funnel in fixed relationship to the frame posi-

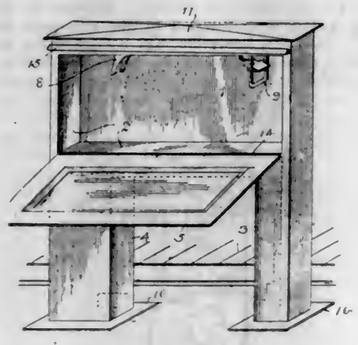
tioned below said hopper, a rod within said funnel with which the latch rods contact, as the hopper descends, to release the bottom, a detent extended from the forward side of the hopper, a stop on the funnel adapted to be interposed in the path of said detent to arrest the descent or ascent of the weighing hopper according, as it is interposed before or after the descent thereof.

4. In a scale, a frame, a receiving hopper having a bottom outlet supported thereby, a gate adapted to close said outlet, a lever, a rod connecting said gate and lever, a scale beam pivotally mounted on said frame, the rear end of said beam adapted to actuate said lever to open said gate and hold it in that position.

5. In a scale, a frame, a receiving hopper, having a bottom outlet supported thereby, a gate adapted to close said outlet, a lever, a rod connecting said gate and lever, a scale beam pivotally mounted on said frame, a weighing hopper suspended from the forward end of said scale beam, the rear end of said beam adapted to come in contact with and depress said lever to open said gate and hold it open while the hopper is empty.

[Claims 6 to 14 not printed in the Gazette.]

1,189,417. SCALE-BEAM BOX. CHARLES P. ZIMMERMAN, Dayton, Ohio. Filed Mar. 8, 1915. Serial No. 12,949. (Cl. 73—121.)



1. In a beam box for scales, a metallic housing, a horizontally disposed wall upon which the weighing beam is suspended dividing the housing into a beam compartment located below said horizontal wall and a compartment above said wall into which the beam supports extend, and independent closures for said compartments.

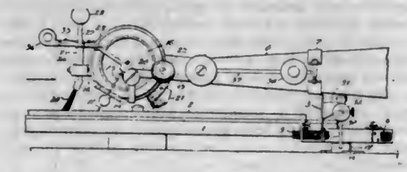
2. In a beam box for scales, a metallic housing to contain the weighing beam of a scale having a lateral opening therein, a closure for the opening of greater marginal extent than that of the opening overlapping the margins of the opening and abutting on the face of the housing, and an outwardly extending flange overhanging the upper edge of the closure.

3. In a beam box for scales, a main body portion formed of sheet metal, and two spaced legs or pedestals also formed of sheet metal carrying at their upper ends the said main or body portion, one of said pedestals or legs having an opening thereinto and a passage therethrough communicating with the interior of the main body.

4. In a beam box for scales, a supporting frame within which the weighing beam is suspended, a metallic housing inclosing the rectangular frame and having an opening therein permitting access to said beam, and a closure for said opening.

5. In a beam box for scales, a metallic housing divided into two compartments, metallic pedestals on which the housing is supported, a hinged closure for one of the compartments, and a sliding closure for the other compartment.

1,189,418. PHONOGRAPH-STOP. MONTAGUE ADAIR, New York, N. Y. Filed Jan. 27, 1916. Serial No. 74,682. (Cl. 74—46.)



1. A sound reproducer stopping device comprising: a record disk having a zone of grooves, a swinging member, a sound box carried thereby, means carried by the sound box and movable into engagement with the record disk to carry the sound box to a position adjacent the center of the record disk when the stylus has reached the termination of the groove zone, controlling means for said carrying means engaging the groove zone and operable by the final convolutions thereof to allow the carrying means to move into engagement with said record disk, and stopping mechanism operated by said swinging member when the sound box is in such position.

2. A sound reproducer stopping device comprising: a record disk having a zone of grooves, a swinging member, a sound box carried thereby, means carried by the sound box and movable into engagement with the record disk to lift the stylus from the record disk at the termination of the groove zone and to carry the sound box to a position adjacent the center of the disk, controlling means for said carrying means engaging the groove zone and operable by the final convolutions thereof to allow the lifting and carrying means to move into engagement with said record disk, and stopping mechanism operated by said swinging member when the sound box is in such position.

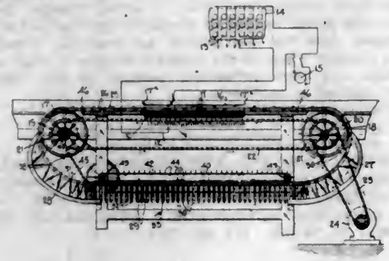
3. A sound reproducer stopping device comprising: a record disk having a zone of grooves, a swinging member, a sound box carried thereby, means carried by the sound box and movable into engagement with the record disk to lift the stylus and to carry the sound box to a position adjacent the center of the record disk when the stylus has reached the termination of the groove zone, controlling means for said carrying means engaging the groove zone and operable by the final convolutions thereof to allow the lifting and carrying means to move into engagement with said record disk, and means carried by the swinging member for automatically stopping the mechanism when the sound box is in such position.

4. A sound reproducer stopping device comprising: a record disk having a zone of grooves, a swinging member, a sound box carried thereby, means carried by the sound box and movable into engagement with the record disk to carry the stylus to a position adjacent the center of the record disk when the stylus has reached the termination of the groove zone, controlling means for said carrying means engaging the groove zone and operable by the final convolutions thereof to allow the lifting and carrying means to move into engagement with said record disk, and means carried by the swinging member for automatically engaging the record disk support to stop the rotation thereof when the sound box is in such position.

5. A sound reproducer stopping device comprising: a record disk having a zone of grooves, a swinging member, a sound box carried thereby, means carried by the sound box and movable into engagement with the record disk to lift the stylus and to carry the sound box to a position adjacent the center of the record disk when the stylus has reached the termination of the groove zone, controlling means for said carrying means engaging the groove zone and operable by the final convolutions thereof to allow the lifting and carrying means to move into engagement with said record disk, a switch, and means carried by the swinging member for opening said switch to stop the mechanism when the sound box is in such position.

[Claims 6 to 28 not printed in the Gazette.]

1,189,419. CONTROLLING MEANS FOR ELECTRIC SIGNS. WILLIAM BACH, Atlantic City, N. J., assignor to The R. C. Maxwell Co., Trenton, N. J., a Corporation of New Jersey. Filed Dec. 30, 1915. Serial No. 69,509. (Cl. 177—350.)



1. A controller for electric lamps comprising an endless element of interlinked metallic frames, plates of insulating material removably carried in the frames, and metallic characters having relatively wide flat surfaces attached to said plates.

2. A controller for electric lamps including an endless element of interlinked metallic frames hingedly connected to each other, plates of insulating material removably disposed in said frames, metallic characters attached to said plates, each of said characters having studs extending through the plate to the opposite side thereof.

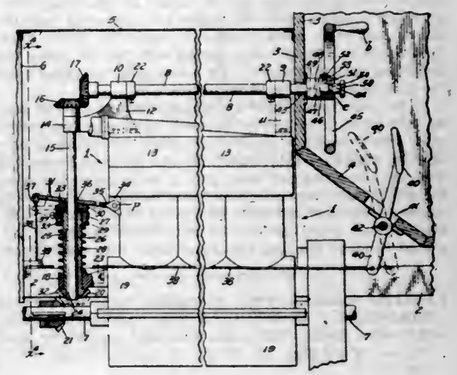
3. Means for controlling electric lamps including a bank of contacts and a current return member disposed above the contacts, an endless element composed of hingedly connected frames moving between the current return member and said bank of contacts, plates of insulating material removably disposed in said frames and carrying metallic characters adapted to electrically engage with the contacts and having metallic studs extending through the plate and electrically engaging with the circuit return member, and means for shifting said endless element across the face of the bank of contacts.

4. Means for controlling electric lamps including a base having thereon a bank of contacts, a current return member disposed over said base, an endless element moving between the base and the current return member and composed of hingedly connected frames, the frames being connected by pintles projecting laterally of the frames, plates of insulating material disposed in said frames and carrying metallic characters adapted to electrically engage with the contacts and having metallic studs extending through the plates and contacting with the return member, means for shifting said endless element across the face of the bank of contacts on the base, and tracks extending longitudinally on each side of said bank of contacts and beneath said base with which tracks the pintles of the several frames engage and by which they are guided.

5. Means for controlling electric lamps including a horizontally disposed base having a bank of contacts and a return member disposed over the contacts, each contact being connected in circuit with a lamp, a source of power and said return member, an endless element composed of hingedly connected frames, the alternating joints of the frames being provided with relatively long pintles and the alternate joints with relatively short pintles, plates of insulating material insertible into said frames and carrying metallic characters adapted to electrically engage with said contacts and having metallic studs extending through the plates and contacting with the circuit return member, means for shifting said endless element across the face of the bank of contacts, endless tracks extending longitudinally on each side of said bank of contacts and beneath the banks and with the upper stretch of which both sets of pintles are adapted to engage and be guided, auxiliary tracks extending outward and downward from the first-named tracks and beneath the first-named tracks with which the relatively short pintles are adapted to engage and whereby said pintles are displaced relative to the first-named tracks to thus cause the plates to be disposed in parallel depending relation and supported upon the first-named pintles, and means for shifting said endless element along the lower stretch of the first-named tracks.

[Claims 6 to 14 not printed in the Gazette.]

1,189,420. ENGINE AND CAR STARTER. CHESTER LEON BARDWELL, Los Angeles, Cal., assignor of one-half to Charles Herman Frazel, Los Angeles, Cal. Filed Apr. 12, 1915. Serial No. 20,958. (Cl. 123—185.)



1. The combination with a motor-car having a dash and an engine shaft, of a driving connection extending from the dash to the engine shaft, said driving connection having a dash extension, means to move said driving connection into commission to drive said engine shaft, a clutch collar on the dash extension adjacent the dash, a crank mounted on said dash extension and adapted to move into engagement with the clutch collar to turn the driving connection, said dash extension being provided with an annular groove rearwardly of the clutch collar, and a spring pressed ball mounted in the crank and adapted to ride into said annular groove to thereby yieldingly lock the crank out of engagement with the clutch collar.

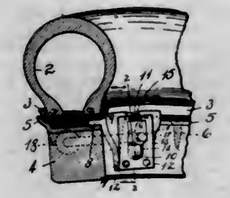
2. In a motor-car, the combination with a foot-board, an engine and an engine shaft, of a gear on the engine shaft, a longitudinal shaft positioned above the engine, an upright shaft positioned in front of the engine and connected with said longitudinal shaft, a sliding gear upon the lower end of said upright shaft and adapted to mesh with said engine shaft gear, spring means to normally hold said sliding gear up out of mesh, an operating lever pivotally mounted upon the engine and provided with an aperture through which said upright shaft extends, said levers swinging downwardly on said shaft to move the sliding gear down into mesh to drive the engine shaft in opposition to said spring means, and a foot pedal mounted upon the foot-board to actuate said lever.

3. In a motor-car the combination with a foot-board, an engine and an engine shaft; of a gear on the engine shaft; a longitudinal shaft supported above the engine; an upright shaft supported in front of the engine and connected with said longitudinal shaft; a sleeve provided with an actuating gear, said sleeve being slidable upon the lower end of said upright shaft to move the actuating gear into mesh with said engine shaft gear; a collar on the sleeve; a spring supported from the engine and coiled around the sleeve, said spring bearing against the collar to normally uphold the sleeve and maintain the actuating gear out of mesh; an operating lever pivotally mounted upon the engine and adapted to move the sleeve down in opposition to said coiled spring and thereby move the actuating gear into mesh; and a foot-pedal mounted upon the foot-board to actuate said lever.

4. In a motor car the combination with a foot-board, an engine and an engine shaft; of a gear on the engine shaft; a longitudinal shaft supported above the engine; an upright shaft supported in front of the engine and connected with said longitudinal shaft; a bearing mounted upon the front of the engine to maintain the lower end of said upright shaft in vertical alinement; a sleeve slidable on the shaft and in the bearing; an actuating gear on the sleeve below the bearing, said gear being adapted to mesh with said engine shaft gear; a collar on the sleeve above the bearing; a spring supported upon the bearing and coiled around the sleeve, said spring exerting an upward pressure against the collar to normally uphold the sleeve and maintain the actuating gear out of mesh; an operating lever pivotally mounted upon the engine and extending over the sleeve, said lever being adapted to move the sleeve down in opposition to said coiled spring and thereby move the actuating gear into mesh; and a foot-pedal mounted upon the foot-board to actuate said lever.

5. In combination with an engine shaft, of a bevel gear on said shaft, a bevel gear to mesh with said first-named gear, crank means, a longitudinal shaft extending in parallelism with the engine shaft, an upright shaft connected with the second-named bevel gear, a bevel gear connection for said longitudinal shaft and said upright shaft, means to normally hold the first two bevel gears out of commission, and pedal means adjacent the crank means connected to move the first two bevel gears into commission.

1,189,421. MEANS FOR LOCKING DEMOUNTABLE TIRE-RIMS. GEORGE G. BAYNE and ALFRED WM. KNUTSON, Quincy, Ill.; said Knutson assignor to said Bayne. Filed Sept. 25, 1915. Serial No. 52,725. (Cl. 152—21.)



1. The combination with a wheel felly and a detachable rim, of a bolt engaging the felly, a nut engaging the bolt, and a substantially V-shaped spring clip each limb of which has an elongated opening, said clip striding the bolt and the head of said nut adapted in rotating to depress one of the limbs of said clip and said clip to bear against said nut to lock said rim, and the nut to be turned to another position to permit said opening to pass over the bolt whereby to unlock said rim.

2. In combination, a wheel including a felly, a rim fixed thereon, and a rim removable from said rim, a bolt passed through said felly, a nut engaging it, and a substantially V-shaped spring clip having registering apertures in its limbs, the head of said bolt adapted to compress one limb of said clip and the clip to then expand and bear against said nut.

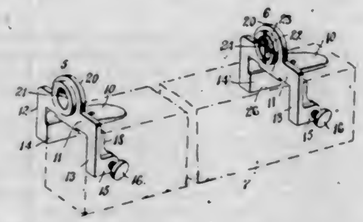
3. The combination with a wheel-felly and a detachable rim, of a bolt engaging the felly, a nut engaging the bolt, and a spring-clip having an elongated opening, said clip striding the bolt and the head of said nut adapted in rotating to depress a portion of the clip to bear against the nut to lock the rim, and the nut to be turned to another position to permit said opening to be passed over the head thereof whereby to unlock the rim.

4. In combination, a wheel including a felly, a rim fixed thereon, a rim removable from said rim, a bolt passed through the felly, a nut engaging it, and a spring-clip comprising oppositely disposed members provided with registering openings through which the head of the nut is adapted to pass when it is in one of its positions, said head adapted to compress one portion of the clip relatively to the other and the compressed portion to then expand and bear against the nut.

5. The combination with a felly, a permanent rim, and a demountable rim, of a bolt engaging the felly, an element lying between said rims, a spring engaged therewith, said spring having an elongated opening, and a nut engaging said bolt and having an angularly arranged head adapted when in one position to pass through said opening and when in another position to rest and be borne against by said spring.

[Claims 6 to 11 not printed in the Gazette.]

1,189,422. SIGHTING ATTACHMENT FOR LEVELS. CHRISTIAN BODMER, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 25, 1916. Serial No. 74,262. (Cl. 33—73.)



1. In a sighting attachment for levels, a sight having a sighting aperture and an annular flange surrounding said aperture provided with slots in the face of said flange at diametrically opposite points, a sighting wire seated in said slots and integral holding lugs struck from said flange at the sides of the slots therein over the top of said sighting wire and thereby confining said wire in the slots without the aid of separate fastenings.

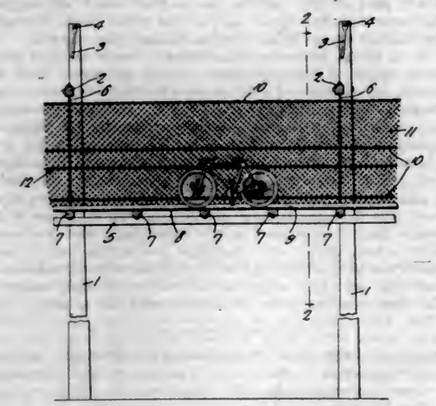
2. In a sighting attachment for levels, a sight having a sighting aperture and an annular flange surrounding said aperture provided with slots in the face of said flange at diametrically opposite points, a second set of diametrically opposite slots in the face of said flange at right angles to the first slots, and of greater depth than said first slots, crossed sighting wires in said sets of slots and integral holding lugs on the flange at the sides of said slots engaged over the tops of the sighting wires seated therein.

3. In a sighting attachment for levels, a sight arched to fit down over the upper edge of a level, a base lug extending rearwardly from the central portion of said arch and clamping lugs extending rearwardly from the sides of said arch, the forward face of said arch being plane and free of projections whereby said sight may be brought as close as need be to the eye of the user.

4. A sighting attachment comprising a base arranged to rest on top of a level, a transversely extending bar at the forward end of said base, sighting means carried by said transversely extending bar, dependent sides at the ends of said transverse bar arranged to embrace the sides of a level, said transversely extending bar and dependent sides being free of any forwardly extending projection whereby said sight may be brought into close proximity with the eye of the user and rearwardly extending clamping lugs carried by said dependent sides.

5. A sighting attachment comprising a flat supporting base arranged to rest on top of a level stock, a transversely extending bar at the forward end of said supporting base, sides dependent from the ends of said transverse bar, an upstanding sighting lug carried by said transverse bar, said sighting lug, transverse bar and dependent sides having a plane forward face and said transverse bar and sides having a rearwardly extending bracing flange and clamping means carried by said sides.

1,189,423. AERIAL BICYCLE-TRACK. RICHARD D. BURCHILL, Tampa, Fla., assignor of fifty one-hundredths to William A. Varnedoe, Tampa, Fla. Filed Mar. 28, 1916. Serial No. 87,247. (Cl. 104—131.)



1. An aerial bicycle track embodying poles, beams attached thereto, hangers suspended from said beams, rails suspended by said hangers, cross ties attached to the rails, and a track member secured upon the ties between the hangers.

2. An aerial bicycle track embodying poles, beams attached thereto, pairs of hangers hung from said beams, and a track plate suspended from said hangers and disposed therebetween, said plate having means for guiding the wheels of a bicycle.

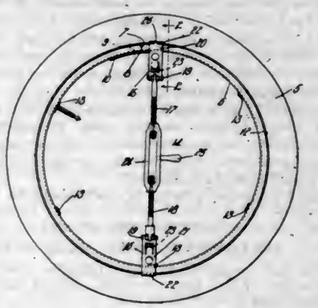
3. An aerial bicycle track embodying poles, beams attached thereto, hangers suspended from said beams, longitudinal rails suspended from said hangers, cross ties secured upon said rails, track plates secured upon the ties between the hangers, longitudinal wires attached to the hangers, and side screens attached to the hangers and wires.

4. An aerial bicycle track embodying poles, beams attached thereto, hangers having their upper ends engaged with the beams, longitudinal rails engaged with the lower ends of the hangers, cross ties secured upon the rails, certain of the ties being attached to the poles, and a longitudinal track plate secured upon the ties and provided with a wheel guiding groove.

5. An aerial bicycle track embodying poles, beams secured between their ends to the poles, braces connecting the ends of the beams and poles, pairs of hangers at the opposite sides of the poles and having their upper ends engaged with the beams, pairs of longitudinal rails at the opposite sides of the poles engaged with the lower ends of the hangers, the hangers diverging upwardly, cross ties secured upon the rails, certain of the ties being secured to the poles between their ends, longitudinal track plates secured upon the ties and having wheel guiding grooves, and side screens attached to the hangers.

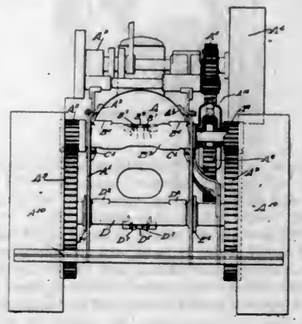
1,189,424. TIRE-TOOL. FRANK H. BURRILL, Concord Junction, Mass., assignor to The Burrill Tire Tool Co., a Corporation of Massachusetts. Filed Dec. 29, 1915. Serial No. 69,256. (Cl. 157—1.)

A tire tool comprising a pair of coaxially disposed screw threaded members, a nut having screw threaded engagement with both of said members constructed and arranged to move said members toward or away from each other, a pair of tongs pivotally attached to each of said screw threaded members, each pair of tongs adapted to grip a portion of a rim when said screw threaded members are moved toward each other to contract said rim, a spur on one arm of one of said pairs adapted to engage a projection on said rim, and a shoulder formed upon the screw threaded member bearing the other pair of tongs, said shoulder being constructed and arranged to engage



another projection on said rim, whereby when said screw threaded members are moved away from each other said rim will be expanded.

1,189,425. TRACTION-ENGINE. WILLIAM H. CAHALL, Racine, Wis., assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Jan. 18, 1915. Serial No. 2,801. (Cl. 21—114.)



1. The combination of a steam traction engine, of a number of parallel plates apertured, projecting rearwardly from the boiler, a bearing sleeve smaller than said aperture, an arm projecting outwardly from said sleeve, said aperture being large enough to permit passage of the sleeve with the arm, means for holding said sleeve removable in fixed position in said aperture.

2. The combination of a steam traction engine with a number of parallel plates apertured, projecting rearwardly from the boiler, a bearing sleeve smaller than said aperture, an arm projecting outwardly from said sleeve, said aperture being large enough to permit passage of the sleeve with the arm, means for holding said sleeve removable in fixed position in said aperture, said means comprising a removable collar interposed between the sleeve and the wall of the aperture.

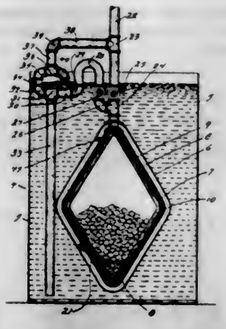
3. The combination of a steam traction engine with a number of parallel plates apertured, projecting rearwardly from the boiler, a bearing sleeve smaller than said aperture, an arm projecting outwardly from said sleeve, said aperture being large enough to permit passage of the sleeve with the arm, means for holding said sleeve removable in fixed position in said aperture, a bracket on the boiler and a pin therein in slidable engagement with the arm to hold the sleeve and arm against rotation.

4. The combination of a steam traction engine with a number of parallel plates apertured, projecting rearwardly from the boiler, a bearing sleeve smaller than said aperture, an arm projecting outwardly from said sleeve, said aperture being large enough to permit passage of the sleeve with the arm, means for holding said sleeve removable in fixed position in said aperture, said means comprising a removable collar interposed between the sleeve and the wall of the aperture, a bracket on the boiler and a pin therein in slidable engagement with the arm to hold the sleeve and arm against rotation.

5. A support for a shaft, comprising a flat apertured plate, a sleeve therein smaller than the aperture and means interposed between the wall of the aperture and the sleeve and removably held therein, for holding the sleeve in fixed position in the aperture.

[Claims 6 to 18 not printed in the Gazette.]

1,189,426. STEAM-GENERATOR. HENRY C. CALDWELL, Buffalo, N. Y., assignor to J. W. Daniels, trustee, Philadelphia, Pa. Filed Oct. 16, 1911. Serial No. 655,033. (Cl. 122—140.)



1. A steam generator comprising a furnace casing, a steam coil within said furnace casing; a water tank surrounding said furnace casing, means for carrying the water in said watertank to said steam coil, a vent rising from said furnace casing, and a by-pass in said vent, partly submerged in the water in said tank; the heat units radiating from said furnace casing and the heat units in the gases passing up the vent being utilized to heat the water before it is passed to the steam coil to be generated into steam.

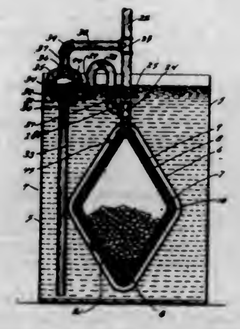
2. A steam generator comprising a furnace casing, a steam coil within said furnace casing, an air casing providing an inclosed air space surrounding said furnace casing, a twyer disposed in said furnace casing within said steam coil, means for conducting compressed air to said air space, means for carrying air from the air space to the said twyer, a water tank surrounding said furnace casing and said air casing and means for carrying the water in said water tank to said steam coil.

3. A steam generator comprising a furnace casing, a steam coil within said furnace casing, an air casing providing an inclosed air space surrounding said furnace casing, a twyer disposed in said furnace casing within said steam coil, means for conducting compressed air to said air space, means for carrying air from the air space to the said twyer, a water tank surrounding said furnace casing, a vent rising from said furnace casing, a by-pass in said vent, partly submerged in the water in said water tank, and means for carrying the water in said water tank to said steam coil.

4. A steam generator comprising a water tank, a furnace casing within the water tank, a steam coil within the furnace casing conforming to the interior dimensions of the furnace casing, an air casing surrounding the furnace casing and spaced therefrom so as to provide an air chamber, a twyer within the furnace casing and the steam coil, a pipe conducting compressed air to the air chamber, a pipe conducting air from the air chamber to the twyer, a vent pipe from the furnace chamber having a by-pass, partly submerged in the water tank, and provided with a downwardly extending pipe conducting water from the lower part of the tank to the by-pass which discharges the same into the upper part of the water tank, through the suction of the gases passing through the by-pass.

5. A steam generator comprising a water tank, a furnace casing of diamond shape within the water tank, a steam coil of diamond shape within the furnace casing conforming to the interior dimensions of the furnace casing, an air casing of diamond shape surrounding the furnace casing and spaced therefrom so as to provide an air chamber, a twyer within the furnace casing and the steam coil, a pipe conducting compressed air to the air chamber, a pipe conducting air from the air chamber to the twyer, a vent pipe from the furnace chamber having a by-pass of S shape, partly submerged in the water tank, and provided with a downwardly extending pipe conducting water from the lower part of the tank to the by-pass which discharges the same into the upper part of the water tank through the suction of the gases passing through the by-pass.

1,189,427. PROCESS OF GENERATING STEAM. HENRY C. CALDWELL, Buffalo, N. Y., assignor to J. W. Daniels, trustee, Philadelphia, Pa. Filed Oct. 16, 1911. Serial No. 655,034. (Cl. 122—140.)



The process of generating steam, which consists in heating water, contained in a suitable receptacle, by radiation from a suitable source of heat, circulating said water by suction caused by venting the products of combustion from such source of heat through said water, and then forcing the heated water through a steam coil which surrounds such source of heat.

1,189,428. MEANS FOR PROTECTING DRILLING-ROPES AGAINST WEAR. WILLIAM H. CATER, Chicago, Ill. Filed Mar. 15, 1916. Serial No. 84,368. (Cl. 255—33.)

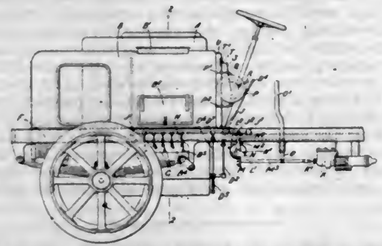


1. A device for protecting a cable comprising a strip of metal bent to embrace the cable and tightened firmly thereon whereby it is held against movement longitudinally of the cable.

2. A device for protecting a cable comprising a band of metal removably secured about the cable in fixed position thereon.

3. A device for protecting a cable comprising a strip of metal bent to embrace the cable and tightened firmly thereon, the inner face of the strip being ribbed to conform to the shape of the cable whereby the band is held against movement longitudinally of the cable.

1,189,429. APPARATUS FOR THE CONTROL OF STEAM-GENERATORS. THOMAS CLARKSON, Galleywood, England, assignor to National Steam Car Company, Limited, Chelmsford, England. Filed July 17, 1914. Serial No. 851,539. (Cl. 122—449.)



1. In apparatus for the control of steam generators the combination of a generator having a grate for burning solid fuel, a bunker, a plurality of push-rods each of which passes through a hole in the bunker wall in such position as to operate on the fuel lying in the lower part of the bunker for transferring the solid fuel from the bottom of the bunker on to the grate, a steam-operated feed pump for the generator, an operative connection between this pump and the push-rods, and means for automatically controlling the supply of steam to the pump in accordance with the variations of the level of the water in the generator.

2. In apparatus for the control of steam generators the combination with a generator having a grate for burning solid fuel, a bunker adjacent to the generator with a chute at its lower end leading on to the grate, a plurality of push-rods each of which passes freely through a hole in the bunker wall in such a position as to operate on the fuel lying in the lower part of the bunker and means for reciprocating the push-rods and imparting a rocking movement thereto.

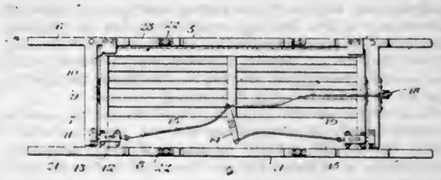
3. In apparatus for the control of steam generators the combination with a generator having a grate for burning solid fuel, a bunker adjacent to the generator with a chute at its lower end leading on to the grate, a plurality of push-rods each of which passes freely through a hole in the bunker wall in such a position as to operate on the fuel lying in the lower part of the bunker, means for reciprocating the push-rods and means for automatically controlling the mechanism by which the push-rods are reciprocated in accordance with the variations in the level of the water in the generator as set forth.

4. In apparatus for the control of steam generators the combination with a generator having a grate for burning solid fuel, a bunker adjacent to the generator with a chute at its lower end leading on to the grate, a plurality of push-rods each of which passes freely through a hole in the bunker wall in such a position as to operate on the fuel lying in the lower part of the bunker, a steam-operated feed pump for the generator, means actuated by the feed pump for reciprocating the push-rods and means for controlling the supply of steam to the pump in accordance with the variations in the level of the water in the generator.

5. In apparatus for the control of steam generators the combination with a generator having a grate for burning solid fuel, a bunker adjacent to the generator with a chute at its lower end leading on to the grate, rockable grate bars, a plurality of push-rods each of which passes freely through a hole in the bunker wall in such a position as to operate on the fuel lying in the lower part of the bunker, a steam-operated feed pump for the generator, means actuated by the feed pump for simultaneously reciprocating the push-rods and rocking the grate bars and means for automatically controlling the supply of steam to the pump in accordance with the variations in the level of the water in the generator as set forth.

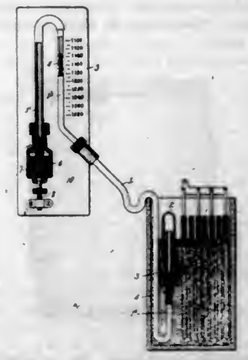
[Claims 6 to 16 not printed in the Gazette.]

1,189,430. TRUCK. JULIAN DIOU, Newark, N. J. Filed June 29, 1915. Serial No. 37,019. (Cl. 214—1.)



A truck body comprising a side rail and end rails fixed thereto, a panel pivoted at its ends to the end rails at points between the ends thereof, said panel having a side rail which corresponds with the side rail of the body and means for locking the panel in the body.

1,189,431. SPECIFIC-GRAVITY-MEASURING MEANS. HENRY P. DODGE, Toledo, Ohio. Filed June 30, 1913. Serial No. 776,610. (Cl. 73—42.)



1. A device for measuring the density of liquids comprising means forming a passage leading to a point remote from the fluid being measured, a fluid in said passage, and a member for floating in the fluid being measured and having a hollow part receiving a portion of said means with its hollow in communication with said passage, whereby a movement of said float member relative to said means effects a movement of the indicator fluid in said passage.

2. In a device of the class described, a float member for rising and sinking in a liquid as the specific gravity thereof changes, said member having a chamber closed by the liquid and varying in size as the member rises and falls therein whereby the liquid pressure in the hollow part varies accordingly, and means forming a passage having a liquid therein with one end of the passage opening within the hollow of said member whereby the liquid within the passage moves lengthwise therein as the pressure in the float member varies upon a rising or sinking of such member in the liquid being measured.

3. A device of the class described having relatively movable floating and tube members, with the floating member forming a closed pressure chamber over a portion of the tube member whereby an indicating fluid in the tube member has its movements therein controlled by a movement of the floating member relative to the tube member.

4. A device of the class described having a floating member provided with a pressure chamber, the size of which is varied by a rising and sinking of the member in a liquid, the specific gravity of which is being determined, a member forming a passage for an indicat-

ing fluid and having a stationary part projecting into the float chamber with its passage in communication with the interior of such chamber, and an indicator fluid in such passage having its movement therein controlled by movements of the floating member relative to the part projecting therein, due to the varying of the pressure within the floating member chamber occasioned by rising and sinking movements thereof in the liquid the specific gravity of which is being determined.

5. A device of the class described having a member forming a passage open at one end and extending into a liquid the specific gravity of which is being measured, and thence to a point remote from the liquid, an indicator fluid in said passage, means for rising and sinking in the liquid to be measured as the specific gravity of such liquid changes, said means having a closed chamber in communication with the passage of said member, the size of such chamber varying as the means rises and sinks in the liquid whereby pressure within the chamber varies and controls the movement of the indicator fluid in said passage.

[Claims 6 to 11 not printed in the Gazette.]

1,189,432. METALLIC RECEPTACLE. CHARLES HERBERT DRAPER, Cleveland, Ohio, assignor to The Draper Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 29, 1908. Serial No. 436,144. (Cl. 220—1.)



1. In a metallic receptacle, the combination with a body portion, of a head or closure part fitting therein, provided with upturned edges lying adjacent to the edges of the body portion, and bent over the same to form substantially a double locked joint, and an interiorly positioned channeled member substantially C-shaped in cross-section over the lower edge of which said double locked joint is bent to tighten and strengthen the same, substantially as set forth.

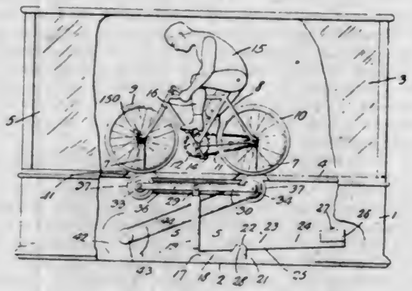
2. In a metallic receptacle, the combination with a cylindrical body portion formed of sheet metal, a disk-like metallic closure part inserted within the end of said body portion having upturned edges united with the edges of the body portion to form a substantially double locked joint, and a channeled ring substantially C-shaped in cross-section interiorly positioned within the head thus formed, wherein the double locked joint is compressed to form a supporting edge or chime, substantially as set forth.

3. In a metallic receptacle, the combination with a cylindrical body portion, of disk-like heads or closure parts provided with upturned edges inserted within the ends of said body portion and united with the edges thereof to form double locked joints, a channeled ring substantially C-shaped in cross-section positioned interiorly of each of said joints and extending beyond the same, wherein said joints are compressed to form substantially integral chimes for the receptacle, substantially as set forth.

4. In a permanent closure for metallic receptacles, the combination with a substantially cylindrical body-portion formed of sheet metal, of a disk-like metallic closure part, inserted within the end of said body-portion, having upturned edges united with the edges of the body-portion to form an overlapped double-locked joint therewith, and a laterally channeled metallic ring substantially C-shaped in cross-section interiorly positioned within the annular joint thus formed, wherein said joint is recessed to form the chime, substantially as set forth.

5. In a metallic receptacle, the combination with the cylindrical body portion, of a cupped closure part fitting closely within the end thereof, and having an upturned lip extending beyond and turned over the edge of the body portion; the respective edges being again doubled over to form a tight joint, and an interior channeled ring substantially C-shaped in cross-section, but of less diameter than the body portion, annularly fitting within said cupped closure part, and extending beyond the joint, wherein the doubled edges are compressed for closing and strengthening the receptacle, substantially as set forth.

1,189,433. MECHANICAL TOY. DAVID W. DUNN, Ashland, Ky. Filed July 21, 1915. Serial No. 41,194. (Cl. 46—45.)



1. In a device of the class described, a support; a bicycle frame held thereby against progressive movement; wheels journaled on the bicycle frame; a pedal carried by the bicycle frame; an operative connection between one bicycle wheel and the pedal; a figure seated on the bicycle and including a movable leg engaging the pedal; and a driving mechanism including a rotatable element engaging that bicycle wheel which is operatively connected with the pedal.

2. In a device of the class described, a support; a bicycle frame upheld thereby; a wheel journaled on the bicycle frame; a pedal carried by the bicycle frame; an operative connection between the wheel and the pedal; a figure seated on the bicycle frame and including a movable leg coöperating with the pedal; a frame; a rotatable element on the frame and engaging the bicycle wheel; means for upholding the frame yieldingly, to cause the rotatable element to engage with the bicycle wheel; and means for driving the rotatable element.

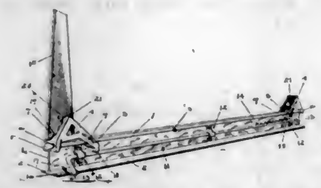
3. In a device of the class described, a support comprising a base and a casing movable with respect to the base thereby to open the base; a bicycle frame mounted on the casing and including a rotatable wheel; a pedal on the bicycle frame, an operative connection between the pedal and the wheel; a figure seated on the bicycle frame and including a movable leg coacting with the pedal; a frame mounted in the base; a rotatable element carried by the last specified frame and coacting with the bicycle wheel; means for rotating the rotatable element; and means for supporting the last specified frame yieldingly whereby the rotatable element will coact with the bicycle wheel when the casing is disposed above the base.

4. In a device of the class described, a supporting structure; a guide carried thereby; a support mounted to reciprocate in the guide; a lever fulcrumed intermediate its ends on the supporting structure and provided at one end with a weight, the other end of the lever being pivotally connected with the support; a frame pivoted to the support; a rotatable element journaled on the frame; means for driving the rotatable element; a bicycle frame upheld by the supporting structure; a wheel journaled on the bicycle frame and engaged by the rotatable element; a figure seated on the bicycle frame and including a movable leg; a pedal carried by the bicycle frame and coacting with the movable leg; and an operative connection between the pedal and the wheel of the bicycle.

5. In a device of the class described, a support comprising a base and a casing movable with respect to the base, thereby to open the base; a vehicle frame mounted on the casing and including a rotatable wheel; a frame mounted in the base; a rotatable element carried by the last specified frame and coacting with the wheel; means for rotating the rotatable element; and means for supporting the last specified frame yieldingly whereby the rotatable element will coact with the wheel when the casing is disposed above the base.

[Claims 6 to 10 not printed in the Gazette.]

1,189,434. SAFETY BUNK AND STAKE FOR LOGGING-CARS. CLAYTON T. EAID, Portland, Oreg. Filed Oct. 19, 1914. Serial No. 867,375. (Cl. 105—173.)



1. A bunk comprising a beam, and a chock block slidably secured thereto, in combination with a rotatable rod provided with a member adapted in its movement to directly engage and to disengage said block substantially for the purpose set forth.

2. The combination with a beam and a crutch block slidably secured thereto, of means detached from the block and operatively mounted on the beam for fixing the adjustment of said block on the beam at different points thereon.

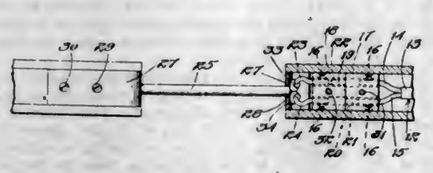
3. The combination with a beam and a crutch block slidably secured thereto, of a movable block lock on the beam detached from the block, and means for actuating the block lock.

4. The combination with a beam and a crutch block slidably secured thereto, of a toothed block lock movably secured to the beam, and means for actuating the block lock.

5. The combination with a beam and a crutch block slidably secured thereto, of a rotatable rod upon the beam provided with a block engaging and disengaging member, and means for operating the rod.

[Claims 6 to 25 not printed in the Gazette.]

1,189,435. ELECTRICAL CONNECTION. WALTER S. EDMANDS, Boston, Mass. Filed June 11, 1915. Serial No. 33,619. (Cl. 173—324.)



1. The electric connection comprising in combination, two connecting members at least one of which has a plug and the other a socket for connecting said two members, each of said two members having a cable connected therewith, and a covering tie member which is rigidly secured to both of said connecting members and ties them together and has an aperture through which the cable of one of said connecting members passes, said last cable being provided with a strain take-up on the inner side of said aperture which prevents the strain on the cable from being transmitted to the two connecting members, and means for detachably and rigidly securing said connecting members to an article which is to be electrically connected with another article.

2. The electric connection comprising in combiantion, two connecting members at least one of which has a plug and the other a socket for connecting said two members, each of said two members having a cable connected therewith, a covering tie member which is rigidly secured to both of said connecting members and ties them together and has an aperture through which the cable of one of said connecting members passes, said last cable being provided with a strain take-up on the inner side of said aperture which prevents the strain on the cable from being transmitted to the two connecting members and means whereby said covering member may be fastened to a desk or other support.

3. The electric connection comprising in combination, a pair of male and female connecting members, a U-shaped covering member having an aperture therein and having one leg longer than the other, and a cable passing through the said aperture in the covering member and knotted on the inside of the covering member, the long leg of said covering member being rigidly secured to both of said connecting members along one face, and the short leg lying in the plane of the other face of said connecting member.

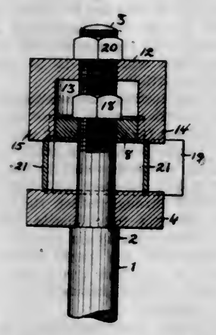
4. The electric connection comprising in combination, a pair of male and female connecting members, a U-shaped member having one leg rigidly connected to both of said connecting members and having an aperture through its head, and a cable connected with one of said connecting members and passing through said aperture, said cable being provided with a stop on the inner side of said aperture which prevents strain on the cable from being transmitted to said connecting member.

5. In combination with two articles which are to be electrically connected together, a pair of members detachably secured to each of said articles, at least one of each pair of members having a plug and the other member of each pair having a socket for connecting said two members together, a tie member for each pair which is rigidly secured to both members of the pair and ties them together, each of said tie members having an aperture, a cable, one end of which passes through the aperture in the tie member on one of said articles, the other end of which passes through the aperture in the tie member on the other of said articles, and a strain take-up on the inner side of each of said apertures which prevents the strain on the cable from being transmitted to either pair of said connecting members, said cable being electrically connected with one member of each pair of connecting members, and separate cables electrically connected with the other member of both pairs of connecting members.

1,189,436. SHAPER-HEAD. THOMAS WILLIAM ELDER, Fort Wayne, Ind., assignor to Van Arnam Mfg. Co., a Corporation of Indiana. Filed Apr. 19, 1916. Serial No. 92,230. (Cl. 144—231.)

1. In a device of the class described, a revoluble spindle having a shoulder thereon and threaded extension; a base-plate on the extension resting against the shoulder, the upper face of the plate having two pairs of parallel grooves extending at right angles to each other; an intermediate block upon the extension having a pair of grooves made in its lower face; a pair of bits arranged between the base-plate and block, their edges extending into the corresponding grooves therein, said block having also a recess in each side; a nut on the extension for clamping the intermediate block against said bits; a cap having a recess to accommodate the nut, and also pendant

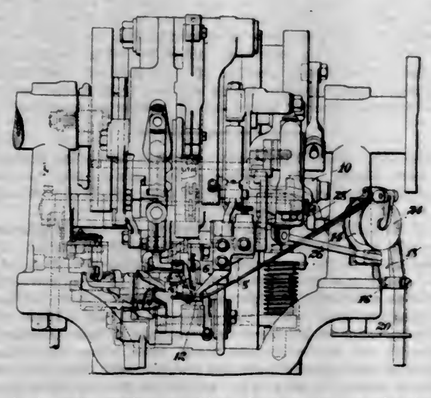
lugs adapted to fit loosely in the recesses in the intermediate block, each lug having a groove made in its lower face; a second pair of bits arranged between the lugs on the cap and the base-plate with their edges extending in the corresponding grooves; and a nut on the spindle for clamping the cap upon the latter bits.



2. In a device of the class described, a rotatable spindle; a base-plate thereon having two pairs of parallel grooves in its upper face arranged at right angles to each other; two pairs of bits arranged with their lower edges in the corresponding pairs of grooves and with their cutting edges positioned respectively at points equi-distant from the axial center of the spindle; and means in connection with the spindle for independently clamping each pair of bits in position upon the base-plate.

3. In combination with a rotating spindle, a base-plate mounted thereon; an intermediate block mounted upon the spindle having a recess in each side thereof; a pair of bits arranged between the base-plate and block in parallel relation with each other, one upon each side of the spindle; means on the spindle for clamping the block upon the bits; a cap having pendant lugs extending through the recesses in the block respectively; a second pair of bits arranged in parallel relation with each other and at right angles to the former bits; and means for clamping the cap to hold the latter bits between said lugs and base-plate.

1,189,437. WELT-SEWING MACHINE. ANDREW EPPLER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 20, 1913. Serial No. 807,856. (Cl. 112—20.)



1. A welt sewing machine, having, in combination, stitch forming and shoe feeding mechanism, a welt guide, and means for automatically slackening the welt between the welt guide and welt supply during the sewing.

2. A welt sewing machine, having, in combination, stitch forming and shoe feeding mechanism, a welt guide, and an intermittently acting welt pull-off for supplying comparatively slack welt between the welt supply and sewing point during the feed of the shoe.

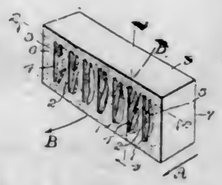
3. A welt sewing machine, having, in combination, stitch forming mechanism, a welt guide, a welt pull-off, and means for actuating the pull-off to intermittently pull on and slacken the welt during the sewing.

4. A welt sewing machine, having, in combination, stitch forming and shoe feeding mechanism including a feed slide lever, a welt guide, and a welt pull-off between the welt guide and welt supply and connected with the feed slide lever.

5. A welt sewing machine, having, in combination, stitch forming mechanism, a welt guide, welt guiding devices between the welt guide and welt supply, and a welt pull-off engaging the welt between the guiding devices, and means for intermittently reciprocating the pull-off to pull and to slacken the welt.

[Claims 6 and 7 not printed in the Gazette.]

1,189,438. SLOTTED BRICK. JONATHAN P. B. FISKE, Newton, Mass. Filed July 1, 1915. Serial No. 37,465. (Cl. 72—41.)



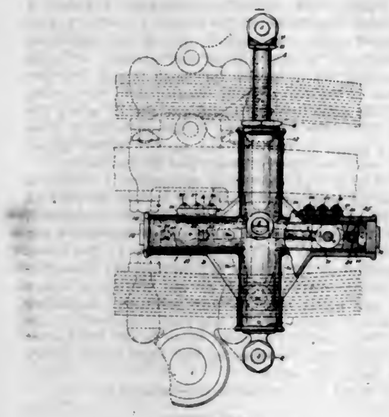
1. As an article of manufacture, a brick having a series of slots and webs extending from bed to bed, the entrances of each slot being substantially closed by brick material from one side of one web adjacent said slot, the opposite side of said web being unbroken and intact.

2. As an article of manufacture, a brick having a series of slots and webs extending from bed to bed, the entrances of each slot being substantially closed by brick material from one web adjacent said slot, the opposite side of said web being unbroken and intact, and with the webs of full thickness and original formation, except at said substantially closed entrance.

1,189,439. SHOCK-ABSORBER. HENRY O. FLETCHER, Boston, Mass. Filed Dec. 27, 1913. Serial No. 809,115. (Cl. 21—105.)

1. In an apparatus of the kind described, vehicle running gear and body elements, a piston connected to and adapted to take the motion of one of said elements, a tightly sealed frame or case, in which the piston is adapted to reciprocate, said case containing a suitable liquid, and connected to and adapted to take the motion of the other element, resisting plungers having passages through which the liquid passes from one chamber of the case to another during the motion of the plungers in both directions and connecting links pivotally connected both to the piston and plungers.

2. In an apparatus of the kind described, vehicle running gear and body elements, a piston connected to and adapted to take the motion of one of said elements, a tightly sealed frame or case, in which the piston is adapted to reciprocate, said case containing a suitable liquid, and connected to and adapted to take the motion of the other element, resisting plungers having adjustable passages through which the liquid passes from one chamber of the case to another during the motion of the plungers in both directions, and connecting links pivotally connected both to the piston and plungers.



3. In an apparatus of the kind described, vehicle running gear and body elements, a piston connected to and adapted to take the motion of one of said elements, a frame or case in which the piston is adapted to reciprocate and which is adapted to take the motion of the other element, sliding resisting members carried by said frame, connecting links pivotally connected to both the piston and resisting members and means to apply frictional resistance to the motion of the resisting members in both directions of their travel.

4. In an apparatus of the kind described, vehicle running gear and body elements, a piston connected to and adapted to take the motion of one of said elements, a frame or case in which the piston is adapted to reciprocate, said case adapted to take the motion of the other element, sliding resisting members carried by said frame, connecting links pivotally connected to both the piston and resisting members and adjustable means to apply frictional resistance to the motion of the resisting members in both directions of their travel.

5. In a shock absorber, a piston element and a body element, having relative movement to each other, resisting members carried by the body element, connecting links pivotally connected to both the piston element and the resisting members and means to frictionally resist the movement of the resisting members in both directions of their travel.

[Claims 6 to 14 not printed in the Gazette.]

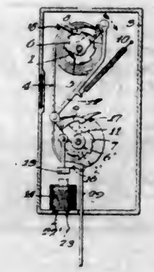
1,189,440. GASOLENE-GAGE. JOHN H. FOX, New York, N. Y., assignor, by mesne assignments, to Fox Accessories Co. Inc., Brooklyn, N. Y., a Corporation of New York. Filed May 19, 1915. Serial No. 29,024. (Cl. 73—82.)

A gasolene gage having means for attachment to the dash of an automobile and embodying a vertically disposed float chamber closed at its lower end, a removable cap at the upper end having a central opening and a depending socket and an upwardly extended socket, a vertical tubular shell in said upwardly extended socket and longitudinally slotted, a glass tube inclosed in said shell, a cap closing the upper end of said shell and having depending screw-threaded socket engaging threads on said shell and a strip of material between said shell and glass tube bearing graduations visible through said glass tube, the cap to said float chamber having a central opening, a stem freely movable through said opening, an index on the upper end of said stem movable in the glass tube,



and a float on the lower end of said stem movable in the float chamber.

1,189,441. STATION-INDICATOR. ALBERT GERGELY, Milwaukee, Wis., assignor of one-half to Arthur J. Wilsman, Two Rivers, Wis. Filed Nov. 18, 1912. Serial No. 732,108. (Cl. 40—87.)

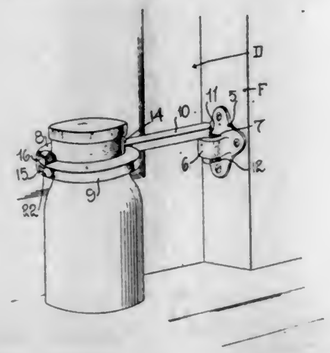


An indicating mechanism comprising a casing, a pair of spool shafts journaled in the casing, a tape found on said shafts, arms extended from the shafts, means adapted for rocking one of the arms in one direction only, a link connecting the arms, oppositely toothed ratchet wheels carried on the shafts, coacting pawls carried by the arms and shiftable stop members engageable with the pawls to hold either or both from engagement with their respective ratchet wheels whereby successive actuations of the rocking means may operate to move the tape in either direction.

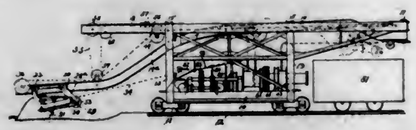
1,189,442. BOTTLE-HOLDER. JOHN W. GREEN, Philadelphia, Pa. Filed Mar. 25, 1916. Serial No. 86,718. (Cl. 232—42.)

1. A bottle holder including a supporting bracket, in combination with a bottle holding device including pivotally connected holding jaws, one of said jaws being provided with means for locking connection with the bracket, and means for locking the jaws together in their closed position upon a bottle when the device is mounted in the bracket, said locking means including a gravity movable part movable to its released position when the device is removed from the bracket and inverted, whereby the jaws may be opened.

2. A bottle holding device including a fixed bracket, in combination with the holding device proper including pivotally connected bottle holding jaws, one of said jaws being provided with means for locking the same in connection with the bracket, said means being of such construction as to prevent removal of the device from the bracket except when the device is disposed in a predetermined position, and means for locking the jaws together upon the bottle when the device is mounted upon the bracket, said locking means including a gravity movable bolt moving to its released position upon the removal of the device from the bracket and the inversion thereof.



1,189,443. DIGGING AND CONVEYING APPARATUS. ROBERT P. GREENLEAF, Hudson, Ohio, assignor to Frank Billings, Cleveland, Ohio. Filed June 9, 1911. Serial No. 632,106. (Cl. 37—16.)



1. In a digging and conveying apparatus, a frame, a track extending lengthwise of the frame, a trolley adapted to be guided along the track, a digging and conveying bucket carried by the trolley, a head rope connected to the trolley for moving the same forwardly along the track, a tail rope for moving the trolley rearwardly along the track, and mechanism intermediate of the tail rope and the bucket for tilting the bucket when tension is placed on the tail rope to move the trolley and bucket rearwardly.

2. In a digging and conveying apparatus, a frame, a track extending lengthwise of the frame, a trolley adapted to be guided along said track, a digging and conveying bucket carried by the trolley, means for moving the trolley and bucket forwardly along the track, a tail rope for moving the trolley and bucket rearwardly along the track, and mechanism intermediate the tail rope and bucket for holding the bucket in digging position when it is moved forwardly by the head rope, and for tilting the bucket when tension is placed on the tail rope to move the trolley and bucket rearwardly.

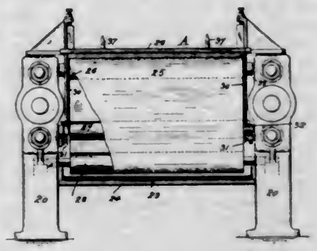
3. In a digging and conveying apparatus, a frame, a track extending lengthwise of the frame, a trolley adapted to be guided along said track, a digging and conveying bucket carried by said trolley, ropes connected to the trolley for moving the same forwardly and rearwardly along the track, and means for holding the bucket in digging position so as to scoop up material when moved forwardly, comprising locking members including a rotary crank carried by the trolley, and a link connecting the crank to the bucket and adapted to be swung into locking relationship with the crank.

4. In a digging and conveying apparatus, a frame, a track extending lengthwise of the frame, a trolley adapted to be guided along said track, a digging and conveying bucket trunnioned in said trolley and serving to scoop up the material when moved forwardly along the forward portion of the track, ropes connected to the trolley for moving the same forwardly and rearwardly along the track, and means for tilting the bucket after it is filled comprising a crank shaft and crank carried by the trolley and a link connected to the crank and to the bucket.

5. In a digging and conveying apparatus, a frame, a track extending lengthwise thereof, a trolley adapted to be guided along said track, a digging bucket trunnioned in said trolley and adapted to scoop up the material when moved forwardly along the forward portion of the track, a rope connected to the trolley for moving the same forwardly, a crank shaft carried by the trolley, a crank secured to said crank shaft, a link pivotally connecting the crank to the bucket, and a tail rope connected to the crank shaft for turning the latter so as to tilt the bucket after being filled and for drawing the bucket and trolley rearwardly along the track.

[Claims 6 to 14 not printed in the Gazette.]

1,189,444. RUBBER-MIXING MILL. BERNARD O. HALE, Ansonia, Conn., assignor to Farrel Foundry & Machine Company, Ansonia, Conn., a Corporation of Connecticut. Filed Aug. 17, 1915. Serial No. 45,984. (Cl. 18—2.)



1. In a mixing mill, the combination of mixing rolls, an endless feed apron adapted to be moved into and out of coöperation with the rolls, and means for holding the apron taut when in the inoperative position; substantially as described.

2. In a mixing mill, the combination of mixing rolls, an endless feed apron adapted to be moved into and out of coöperation therewith, and means for holding the apron taut when in the inoperative position as well as when in the operative position; substantially as described.

3. In a mixing mill, the combination of mixing rolls, an endless feed apron coöperating therewith, and means for swinging a portion of the apron toward and away from one of the rolls, while maintaining the apron substantially taut; substantially as described.

4. In a mixing mill, the combination of mixing rolls, an endless feed apron coöperating therewith and driven by contact with one of said rolls, and means for swinging the apron out of contact with said roll, while maintaining it in a taut condition; substantially as described.

5. In a mixing mill, the combination of mixing rolls, an endless feed apron coöperating therewith and adapted to be driven by contact with one of said rolls, and means including a frame for swinging said apron away from said last named roll, while maintaining it in a substantially taut condition; substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

1,189,445. POLISH AND PROCESS OF MAKING SAME. WILLIAM G. HALL, California, Pa., assignor of one-half to William K. Coatsworth, California, Pa. Filed Feb. 27, 1915. Serial No. 11,048. (Cl. 134—9.)

1. A liquid polish for leather, consisting of a mixture of a watery extract of wood, vinegar, turpentine, and oil of beeswax with the extract predominating in quantity and the vinegar predominates in quantity over the combined amount of turpentine and oil of beeswax.

2. A liquid polish for leather, comprising a watery extract of the wood and bark of cedar, apple, walnut, hickory, elm and pine mixed with vinegar, turpentine and oil of beeswax.

3. A liquid polish for leather comprising a concentrated extract of equal parts of wood and bark of cedar, apple, walnut, hickory, elm and pine, in a mixture of water, vinegar, turpentine and beeswax, with the ingredients of the mixture before concentration in substantially the proportion of water fifty per cent., vinegar thirty-five per cent., turpentine ten percent. and beeswax five per cent.

4. The method of producing a liquid polish for leather, consisting in boiling substantially equal parts of the wood and bark of cedar, apple, walnut, hickory, elm and pine in a liquid mixture sufficient to cover the wood and bark when placed in a tank, said mixture consisting of water, vinegar, turpentine and beeswax, with the water predominating in quantity over the other ingredients of the mixture and the vinegar predominating in qauntity over the combined quantity of turpentine and beeswax, continuing the boiling until the liquid contents have been reduced to about half the original volume, and finally cooling and straining the liquid thus obtained.

1,189,446. DEMOUNTABLE RIM. CHESTER C. HARBRIDGE, Detroit, Mich., assignor to Detroit Demountable Rim Co., Detroit, Mich., a Corporation of Michigan. Filed Dec. 18, 1912. Serial No. 737,394. (Cl. 152—21.)



1. A clamp for securing a demountable rim on a wheel composed of a side portion and an integral wedge tongue projecting from said side portion and having a bolt hole through said side portion and a spherical bearing surface around said hole.

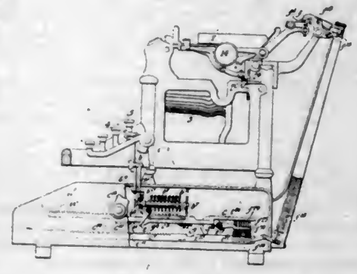
2. A clamp for securing a demountable rim on a wheel composed of a side portion and an integral wedge tongue projecting from said side portion and having a bolt hole through said side portion and a spherical recess around said hole and on the outer side thereof.

3. A clamp for securing a demountable rim on a wheel composed of a side portion and an integral wedge tongue projecting from said side portion and having a bolt hole through said side portion, a spherical bearing surface on said side portion and around said hole, and an inwardly projecting bearing lug at the inner end of said side portion.

4. The combination of a wheel body, a demountable tire rim for the wheel, bolts secured in the wheel and clamps for the rim, each comprising a side portion and an integral projecting wedge tongue to pass between the wheel body and the rim and having a bolt hole in said side portion, nuts on said bolts, the nuts and side portions having spherical engaging surfaces around the bolts.

5. The combination of a wheel body, a demountable tire rim for the wheel, bolts secured in the wheel and clamps for the rim, each comprising a side portion and an integral projecting wedge tongue to pass between the body and the rim and having a bolt hole in said side portion, nuts on said bolts, said side portions having spherical recesses around the bolts, said nuts having spherical surfaces fitting into said recesses.

1,189,447. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 10, 1908, Serial No. 466,836. Divided and this application filed Sept. 16, 1914. Serial No. 861,936. (Cl. 235—60.)



1. In a recording computing machine, the combination with computing devices having decimal orders, of a decimal order selector, transposing devices, for making the selective action of said selector effective on said computing devices in a direction opposite to the travel of the selector, operating means adapted to be operated once for each line written by the typewriter, and means for forcing the transposing devices into normal positions when the operating means is actuated.

2. In a recording computing machine, the combination with computing devices having decimal orders, of a decimal order selector, transposing bars for selecting the decimal orders of the computing devices in a reverse direction to the travel of said selector, a movable arm for forcing said transposing bars into normal positions, and means for actuating said arm, substantially as described.

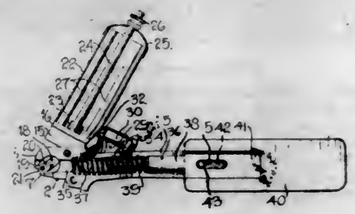
3. In a recording computing machine, the combination with computing devices having decimal orders, of a decimal order selector, transposing bars, for selecting the decimal orders, of the computing devices in a reverse direction to the travel of said selector, actuating means for said computing devices, a rock shaft having an arm for forcing said transposing bars into normal positions, connections between the said actuating means and said rock shaft, and common means for operating said computing devices and said rock shaft, substantially as described.

4. In a combined typewriting and computing machine, the combination with typewriter numeral keys, computing devices, a typewriter carriage, means controlled jointly from said keys and carriage for setting up numbers to be carried into said computing devices, means for carrying numbers into said computing devices when so set, and means for preventing said keys and carriage from performing their setting-up functions while numbers are being carried into the said computing devices.

5. In a combined typewriter and computing machine, the combination with the numeral keys of the typewriter and printing devices operated thereby, of computing devices, actuating means therefor, and means for locking said numeral keys in inoperative positions during the operation of said actuating means.

[Claims 6 to 19 not printed in the Gazette.]

1,189,448. DEVICE FOR APPLYING TRAVELERS ON THE RINGS OF SPINNING-FRAMES. HERMAN HEVEY, Biddeford, Me. Filed July 21, 1915. Serial No. 41,153. (Cl. 29—84.)



1. In a device for applying travelers to spinning rings, a traveler guide, a discharging blade having its edge disposed in a plane just beyond the end of the guide, and a member opposed to the guide but spaced therefrom and adjustable toward and from the end of the guide.

2. In a device for applying travelers, a traveler guide, a reciprocatable blade having a flat face and a beveled face, the blade having its flat face disposed in a plane just beyond the plane of the end of the guide, a member opposed to the guide and movable toward and away therefrom, and a spring urging the member toward the end of the guide.

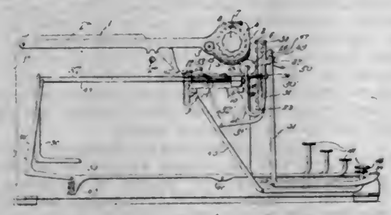
3. A traveler applying implement of the character described comprising a magazine including a head having a tubular barrel formed upon its face with a longitudinally extending ring seat and with a slot intersecting the tubular barrel, a guide extending from the magazine into the tubular head and discharging at the slot, and a plunger movable through the barrel and operating within the slot to force the travelers therefrom.

4. A traveler applying implement of the character described comprising a magazine including a head having a tubular barrel formed upon its face with a longitudinally extending ring seat and with a slot intersecting the tubular barrel, a guide extending from the magazine into the tubular head and discharging at the slot, and a plunger movable through the barrel and operating within the slot to force the travelers therefrom, said plunger including a handle reciprocable with relation to the head.

5. A traveler applying implement comprising a head having a tubular barrel, the face of the barrel being formed with a ring seat, and there being a slot intersecting the said seat and the bore of the barrel, a plunger operating in said slot and extending out from the head, a handle mounted upon the head for reciprocation and engaging said plunger, a magazine mounted upon the head and having a discharge opening, and a track or guide extending from the discharge opening of the magazine through one end of the tubular head and discharging at said slot.

[Claims 6 to 22 not printed in the Gazette.]

1,189,449. TYPE-WRITER. OMAR MILLARD HIGHLEY, Converse, Ind. Filed Dec. 31, 1915. Serial No. 69,685. (Cl. 197—54.)



1. A typewriter, including a platen, a rotatable disk having a plurality of resilient radially extending type carrying arms arranged thereupon movable longitudinally of said platen to produce line writing, a spiral shaft for supporting this disk, a slidable block engageable with the spiral shaft for selecting and bringing the particular arm into writing position, means for actuating said slidable block, means for impressing the selected arm, a plurality of levers for successively operating said block actuating means and said impressing means, and resilient means engageable with the slidable block for returning the same to its initial starting position.

2. A typewriter, including a platen, a rotatable disk having a plurality of resilient radially extending type carrying arms movable longitudinally of said platen to produce line writing, a spiral shaft for supporting said disk, a slidable block engageable with the spiral shaft for selecting and bringing the particular arm into writing position, pivotally supported means arranged adjacent the rotatable disk for impressing the selected arm, means for actuating said slidable block, a plurality of levers for successively operating said block actuating means and said impressing means, and resilient means engageable with said slidable block for returning the same to its initial starting position.

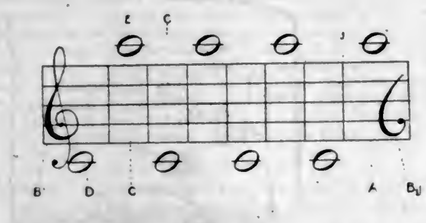
3. A typewriter, including a platen, a rotatable disk having a plurality of radially extending type carrying arms movable longitudinally of said platen to produce line writing, a spiral shaft for supporting said disk, a slidable block engageable with the spiral shaft for selecting and bringing a particular arm into writing position, means for actuating said slidable block, a pivotally supported arm arranged adjacent the disk for impressing the selected arm, resilient means connected with said pivotal arm for returning the same to its normal position, means for actuating said pivotal arm, a plurality of levers for successively operating said block actuating means and said pivotal arm impressing means, and resilient means engageable with said slidable block for returning the same to its initial starting position.

4. A typewriter, including a platen, a rotatable disk having a plurality of resilient radially extending type carrying arms movable longitudinally of said platen to produce line writing, a spiral shaft for supporting said disk, a slidable block engageable with the spiral shaft for selecting and bringing a particular arm into writing position, means for actuating said slidable block, a pivotally supported arm arranged adjacent the disk for impressing the selected arm, means engageable with said pivotal arm for actuating the same, resilient means connected with end of the pivotal arm for returning the same to its normal position, bell crank levers connected with the block actuating means and the pivotal arm impressing means, and a plurality of levers for successively engaging said bell crank arms for moving said block actuating means and pivotal arm impressing means, and resilient means engageable with the slidable block for returning the same to its initial starting position.

5. A typewriter, including a platen, a rotatable disk having a plurality of resilient radially extending type carrying arms movable longitudinally of said platen, to produce line writing, a spiral shaft for supporting said disk, a slidable block engageable with the spiral shaft for selecting and bringing a particular arm into writing position, means for actuating said slidable block, a pivotal arm arranged adjacent the disk for impressing the selected arm, means for actuating said pivotal arm, resilient means for returning said arm to its normal position, spacing means connected with the pivotal arm, bell crank levers connected to the slidable block actuating means and the pivotal impressing arm actuating means, a plurality of levers for successively engaging said bell crank levers whereby to operate said slidable block actuating means and said pivotal impressing arm actuating means, and resilient means engageable with the slidable block for returning the same to its initial starting position.

1,189,450. MUSICAL GAME. WILLIAM LEONARD HOFER, Manhattan, Kans. Filed Mar. 31, 1916. Serial No. 88,045. (Cl. 46—63.)

1. In a musical game, a staff having a clef at the beginning; the staff divided into a number of measures; a note below the staff in alternate measures, beginning with the first, and a similar note above the staff in the intervening measures; pieces to be moved up and down the staff and means to determine the distances to be moved.



2. In a musical game, a staff having a clef at each end, one being reversed; the staff divided into a number of measures; a note below the staff in alternate measures, beginning with the first, and a similar note above the staff in the intervening measures; pieces to be moved up and down the staff and means to determine the distances to be moved.

3. In a musical game, a staff divided into a number of measures; a note on the first added line below the staff in alternate measures, beginning with the first, and a similar note on the first added line above in the intervening measures; a clef at the beginning of the staff, and a spinning pointer attached to the center of a circular arrangement of the seven-note names of the seals, substantially as shown and described.

4. In a musical game, a staff divided into a number of measures, a note on the first added line below the staff in alternate measures, beginning with the first, and a similar note on the first added line above in the intervening measures; a clef at the beginning of the staff; the seven note names of the scale arranged in circular form; a circular arrangement of notes and rests of different values, placed concentrically with the note names, and a spinning pointer turning on the center of the circles, substantially as shown and described.

1,189,451. TOP FOR CONTAINERS. FRANK S. HYATT, Brooklyn, N. Y. Filed Nov. 12, 1914. Serial No. 871,653. (Cl. 221—61.)



A sheet metal container top consisting of a cap portion having a smooth and uncorrugated outer surface and provided with perforations in its upper portion, a screw-threaded thimble having an annular outwardly extending flange and fitting snugly within said cap portion and adapted to be screwed on the neck of a container, said cap portion being provided with an annular bead or flange turned over the flange of said screw-threaded thimble for securing said thimble to said cap portions and for preventing rotation relative thereto, and a removable cover portion telescoping over said cap portion and bearing downwardly against the bead or flange of said cap portion.

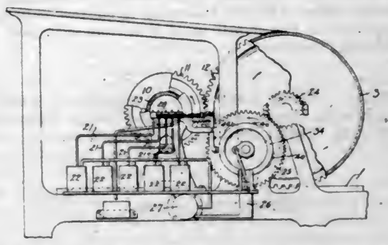
1,189,452. LOCK FOR KNOCKDOWN PAPER BOXES. CHARLES CURTIS IVES, Minneapolis, and EBEN CEPHAS IVES, Jr., St. Paul, Minn., assignors of one-third to Eben Cephas Ives, Sr., St. Paul, Minn. Filed Jan. 24, 1916. Serial No. 73,984. (Cl. 229—31.)



1. A lock for a paper box consisting of a corner section perforated by a diagonal line, a slot at an angle with such line and bisected thereby, and a notched end-piece, substantially as set forth.

2. In a paper box a lock composed of a diagonally perforated corner section, a slot at an angle to such line of perforation and bisected thereby, and an end-piece notched at the sides, substantially as described.

1,189,453. COLOR ATTACHMENT FOR PRINTING-PRESSES. EDWARD D. JOHNSTON, Tacoma, Wash. Filed May 4, 1915. Serial No. 25,735. (Cl. 101—132.)



1. In a machine of the class described, the combination with a stationary guide plate whose outer face is curved to form a portion of the surface of a cylinder; of a pair of concentric rotary cylinders mounted outside of said guide plate, the inner of said cylinders being in contact therewith and guided thereby, each said cylinder formed of open work to permit the substantially unretarded passage of spray therethrough; a stencil sheet held between said rotary cylinders and carried thereby; and means for applying a spray of color through the rotary cylinders and the opening in the stencil sheet as said opening passes a predetermined point adjacent the edge of said guide plate.

2. In a machine of the class described, the combination with means for holding and moving a sheet to be colored; a stencil sheet; rotary means for holding said stencil sheet in substantially rolling contact with said first sheet; driving means connecting said first sheet holding and moving means with said stencil sheet rotary holding means whereby said sheets move in accord the one with the other; a stationary air brush mounted within said rotary stencil sheet holding means and adapted to project a spray of color through the stencil sheet as the opening therein passes said point of rolling contact; and means controlled by said first sheet holding and moving means for controlling said air brush whereby it will apply said spray only at the desired moment.

3. In a machine of the class described, the combination with a sheet to be colored; of means for holding and moving said sheet; a stencil sheet; rotary means for holding said stencil sheet in substantially rolling contact with

said first sheet; driving means connecting said first sheet holding and moving means with said stencil sheet rotary holding means whereby said sheets move in accord the one with the other; an air brush; stationary means for adjustably holding said air brush within said rotary stencil sheet holding means whereby the position and intensity of the spray of color from the air brush may be adjusted; and means controlled by said first sheet holding and moving means for controlling said air brush whereby it will project a spray of color through the stencil sheet as the opening therein passes said point of rolling contact.

4. In a machine of the class described, the combination with a stationary cylinder, having a slot across its face; of a pair of rotary cylinders mounted concentric with and outside of said stationary cylinder and each formed of open work to permit the substantially unretarded passage therethrough of a spray; a stencil sheet held between said rotary cylinders and carried thereby; and means for applying a spray of color through the slot in said fixed cylinder and through the rotary cylinders and the opening in the stencil sheet as said opening passes the slot in said fixed cylinder.

5. In a machine of the class described, the combination with a stationary cylinder, having a slot across its face; of a pair of rotary cylinders mounted concentric with, adjacent to, and outside of said fixed cylinder and each formed of open work to permit the substantially unretarded passage therethrough of a spray; a stencil sheet held between said rotary cylinders and carried thereby; means for applying a spray of color through the slot in the fixed cylinder and through the rotary cylinders and the opening in the stencil sheet as said opening passes the slot in the fixed cylinder; and means for controlling said spraying means whereby the spray is emitted only when an opening in the stencil sheet is in line with said slot in the fixed cylinder.

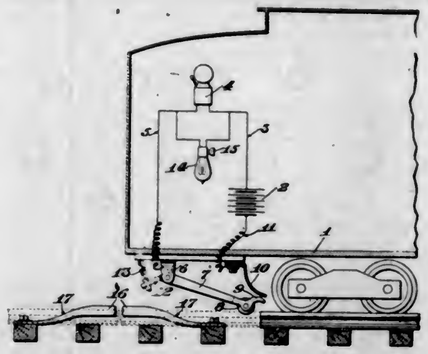
1,189,454. DROP-LEG FOR EXTENSION-TABLES. EUGENE B. JONES, Grand Rapids, Mich. Filed Sept. 18, 1914. Serial No. 862,293. (Cl. 45—9.)



In an extension table, a movable top section, a drop leg hinged to the underside thereof, a brace pivoted to the leg, a U-shaped yoke secured to the underside of the top section inwardly of the point of connection of the leg to said top section, said yoke slidably receiving the brace, and a strip attached to the leg below the point of attachment of the brace and having an end bent parallel to and spaced from the side of the leg to which the brace is attached, whereby the brace may be received between said end and side of the leg when the leg is turned to horizontal position.

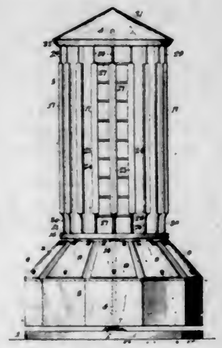
1,189,455. SIGNAL DEVICE. JESSE E. KEPPEL, St. Louis, Mo. Filed Jan. 30, 1915. Serial No. 5,167. (Cl. 246—59.)

The combination in a railway car, of an electrical signal device on said car, said signal device comprising a supporting bracket, a lever-arm pivotally mounted on said supporting bracket and having a bearing roller near its end, the end portion of said lever-arm being extended and formed to constitute a contact shoe, and said lever-arm having a shouldered extension beyond its pivotal axis arranged and adapted to engage said supporting bracket to limit the normal position of said lever-arm, a spring connected at one end to said lever-arm extension so as to hold the latter yieldably in normal position, and a spring contact member mounted in proximity to said contact shoe portion of said lever-arm so as to be engaged thereby, and means adjacent to the railway in the path of said bearing roller whereby, when the car passes in coöperative relation thereto said lever-arm is moved so that its shoe portion is brought into engagement with said spring contact member, said lever-arm and said spring contact being



respectively connected to the opposite terminals of the electrical circuit for said signal device.

1,189,456. ROTARY SPICE-CABINET. FRANKLYN LUTHER KING, Seattle, Wash. Filed Dec. 10, 1914. Serial No. 876,510. (Cl. 211—20.)

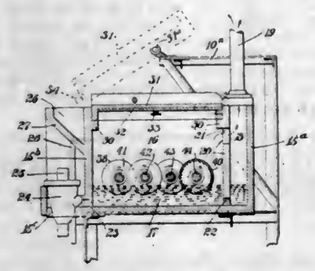


1. A cabinet of the class described including a shell provided with exterior vertically disposed compartments formed by approximately T-shaped bars or members arranged at intervals and having their laterally extending flanges at their outer portions, said flanges being cut away at the top to provide inlets or entrances of a size to receive one package, and a top having a peripheral portion adapted to receive the upper ends of the packages therebehind, without raising the top, when the packages are introduced upwardly through said inlets, and to hold the uppermost packages against outward movement when the compartments are filled.

2. A cabinet of the class described including a shell provided with exterior vertically disposed compartments formed by approximately T-shaped bars or members arranged at intervals and having their laterally extending flanges at their outer portions, said flanges being cut away at the top to provide inlets or entrances of a size to receive one package and a top provided with an inclined peripheral flange having an upturned lower edge extending across to the web portions of the bars or members at the upper ends thereof and arranged to receive and confine the uppermost packages in the compartments when the latter are filled without raising the top.

3. A cabinet of the class described including a shell comprising upper and lower members, the lower member being recessed at its periphery to form a supporting ledge and having an upper peripheral portion corresponding with the periphery of the upper member, vertically disposed approximately T-shaped bars spaced around the periphery of the shell to form intervening compartments and extending from the ledge to the upper member of the shell, said T-shaped bars having their flanges cut away at their upper ends to form upper inlets or openings of a size to receive one package, and a top having a peripheral portion arranged to receive the packages in said inlets without raising the top, and to confine the uppermost packages in the compartment, when the latter are filled.

1,189,457. ETCHING-MACHINE. HOWARD S. LEVY and LIONEL F. LEVY, Philadelphia, Pa. Filed May 19, 1914. Serial No. 839,497. (Cl. 41—9.)



1. An etching machine, embodying therein an etching chamber adapted to contain etching fluid, mechanical sprayers revoluble within said chamber to project said etching fluid, means for oppositely revolving adjacent sprayers, and means whereby certain of said sprayers project a greater quantity of etching fluid than other of said sprayers.

2. An etching machine, embodying therein an etching chamber adapted to contain etching fluid, a plurality of series of mechanical sprayers revoluble within said chamber to project said etching fluid, and means whereby each end series of sprayers projects a greater quantity of etching fluid than the intermediate series of sprayers.

3. An etching machine, embodying therein an etching chamber adapted to contain etching fluid, mechanical sprayers revoluble within said chamber to project said etching fluid, means for revolving said sprayers at varying speeds and whereby adjacent sprayers are revolved in opposite directions, and means whereby certain of said sprayers project a greater quantity of etching fluid than other of said sprayers.

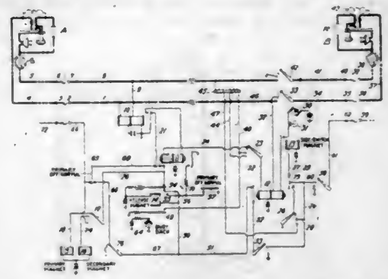
4. An etching machine, embodying therein an etching chamber, adapted to contain etching fluid, mechanical sprayers revoluble within said chamber to project said etching fluid, means whereby adjacent sprayers may be revolved in opposite directions, and means whereby certain of said sprayers project a greater quantity of etching fluid than other of said sprayers.

5. An etching machine, embodying therein an etching chamber adapted to contain etching fluid, mechanical sprayers revoluble within said chamber, and means whereby certain of said sprayers are revolved at greater speed than others thereof and adjacent sprayers are revolved in opposite directions.

[Claims 6 to 9 not printed in the Gazette.]

1,189,458. TELEPHONE-EXCHANGE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 10, 1915. Serial No. 27,037. (Cl. 179—18.)

1. In a telephone exchange system, the combination with telephone lines, means for interconnecting the same including connectors, a steering switch and a release circuit for each connector, a slow relay adapted to control the same, and means actuated upon the response of the called party for including said slow relay in circuit with the called line.



2. In a telephone exchange system wherein a slow-acting relay is employed at the connector to control a steering switch to effect the changeover operation at the end of each series of line circuit interruptions caused by the sender, the combination with the connector, the slow relay and the steering switch, said steering switch being adapted when operated upon the termination of the last series of circuit interruptions to include said slow relay in circuit with the called line, said relay being adapted to respond when the called party answers, and a release circuit for said connector controlled at a back contact of said slow relay.

3. In a telephone exchange system, the combination with a calling and a called line, telephonic apparatus and signal receiving devices therein, means for interconnecting said lines including connector switches, a source of ringing current, of a double wound relay, and means for applying current from said source to the called line over a circuit including one winding of said relay and the signal receiving device in said line and for connecting the other winding in circuit with the calling line and the telephonic apparatus therein to give a ringing signal to the calling party, said relay being adapted to operate upon the response of the called party to open the ringing circuit.

4. In a telephone exchange system, the combination with telephone lines, means for interconnecting the same including connector switches, a ringing generator, a steering switch for each of said connectors, a stepping relay, a circuit therefor, a sender in said circuit for intermittently operating said stepping relay, a double wound slow-acting relay controlling said steering switch, one of the windings of said relay being connected to the back contact of said stepping relay by said steering switch, whereby upon the cessation of the last series of circuit interruptions said slow relay causes said steering switch to advance to the next position, in which said switch transfers said winding into circuit with the calling line and the other winding in circuit with said ringing generator and the called line, means actuated upon the response of the called party for operating said slow relay to advance said steering switch to the next position, a retardation coil, said switch in said position transferring said first mentioned winding into circuit with said coil and the called line, and a release circuit for said connector controlled at a back contact of said slow relay.

1,189,459. ELECTRICAL POLE AND POLE-BASE. EMIL O. LUNDIN, Cambridge, Mass. Filed Apr. 10, 1915. Serial No. 20,530. (Cl. 240—84.)

1. In combination with a pole, a supporting base comprising a hollow metallic receptacle, the walls of the receptacle being provided with inwardly inclined members adapted to engage and center the base of the pole, said walls being beveled at their upper ends to receive wedges for plumbing the pole, and to provide a channel adapted to receive a waterproof sealing medium.

2. In combination with a pole, a support comprising a receptacle adapted to receive and automatically to center the pole, and having inwardly extending flanges at its base, a base formed of concrete having a plurality of longitudinally extending reinforcing bolts embedded therein and projecting above the upper surface thereof and through the base flanges of the receptacle and nuts for said bolts adapted to secure the receptacle firmly to said base.



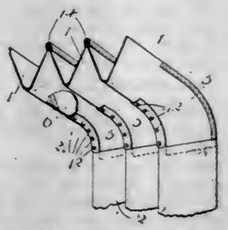
3. In combination with a pole, a support comprising a receptacle adapted to receive and automatically to center the pole, and having inwardly extending flanges at its base, a base formed of concrete having embedded metallic transverse reinforcing members and longitudinal reinforcing members including a plurality of bolts projecting above the upper surface of said base and adapted to be secured to the base flange of said receptacle.

4. In combination with a pole, a support comprising a metallic receptacle adapted to receive the base of the pole, a base composed of reinforced hardened plastic material and having a cable receiving conduit leading from the top downwardly and laterally to the side of said base, and means for detachably securing said base to said receptacle.

5. In combination with a pole inclosing electric conductors, a support comprising a metallic receptacle having means to engage and retain the base of the pole and to provide a chamber therebeneath, a door in the wall of said receptacle permitting access to said chamber, means for introducing the end of an electric cable into said receptacle and means within said chamber connecting the cable with the pole conductors.

[Claims 6 to 11 not printed in the Gazette.]

1,189,460. VESTIBULE-DIAPHRAGM. JOHN B. LYNCH, Cook county, Ill., assignor to Q & C Company, New York, N. Y., a Corporation of Maine. Filed Sept. 24, 1915. Serial No. 52,349. (Cl. 105—61.)



1. Two trough-like members lying at an angle to each other, one of each of said members being extended and shaped to meet the corresponding side of the other member to form a trough-like corner connecting said members.

2. Two trough-like members lying at an angle to each other with their corresponding longitudinal elements in the same planes, one side of each of said members being extended in the form of an arc of a ring of an angular length equal to the angle between said members and meeting the corresponding side of the other member to form a trough-like corner connecting said members.

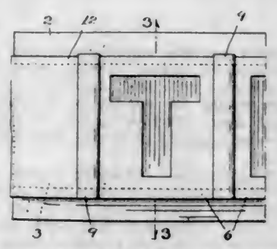
3. In a diaphragm, trough-like leg, top and corner sections; one side of the corner section being a continuation of the corresponding side of the leg section; and the other side of the corner section being a continuation of the corresponding side of the top section.

4. In a diaphragm, trough-like leg, top and corner sections; one side of the corner section being a continuation of the corresponding side of the leg section and lying at an angle to and in the same plane as the latter side; and the other side of the corner section being a continuation of the corresponding side of the top section and lying at an angle to and in the same plane as the latter side.

5. In a diaphragm, a trough-like leg section, top section and corner section made out of two pieces of material; one of the pieces constituting the leg section and one side of the corner section; and the other piece forming the top section and the other side of the corner section.

[Claim 6 not printed in the Gazette.]

1,189,461. INTERCHANGEABLE-LETTER SIGN. CHARLES A. MCNEAL, Newark, Ohio. Filed Nov. 30, 1915. Serial No. 64,309. (Cl. 40—140.)



1. In an interchangeable letter sign, a frame having a longitudinal guideway, and a chain composed of alined letter panels and of removable transverse slidable tie means separate from and locking said panels together, said chain sliding as a whole in said guideway.

2. In an interchangeable letter sign, a frame having a longitudinal opening provided with an open-end guideway bounding said opening, and a chain composed of alined letter panels and of removable transverse slidable tie means located at the joints of and separate from and locking said panels together, said chain slidable as a whole in said guideway.

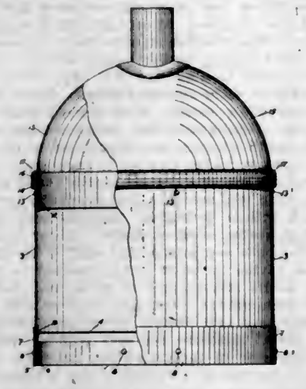
3. In an interchangeable letter sign, a frame having a longitudinal guideway, and a chain composed of alined letter panels having flanges and of removable transverse slidable tie means having flanges engaging the flanges and located at the joints of the panels, said chain slidable as a whole in said guideway.

4. In an interchangeable letter sign, a frame having a longitudinal guideway, and a chain composed of alined letter panels having undercut flanges and of removable transverse slidable tie means having upon the reverse side undercut flanges engaging the flanges and located at the joints of the panels, said chain slidable as a whole in said guideway.

5. In an interchangeable letter sign, a series of alined letter panels having outward projecting flanges, and sliding tie members having inward projecting flanges embracing and locking the flanges of said panels together into a composite whole.

[Claims 6 and 7 not printed in the Gazette.]

1,189,462. GARAGE-CAN. WILLIAM H. MCNUTT, New York, N. Y., assignor to Carrie Emma Owen, Franklin, N. Y. Filed Apr. 24, 1914. Serial No. 834,063. (Cl. 220—92.)



1. In a receptacle, a cylindrical side member, a top member secured to the side member by the margin of the two members being interfolded, and a band or hoop of comparatively rigid material secured to the inner wall of the side member at its connection with the top member, said band projecting down beyond the joint and rigidly secured to the side member.

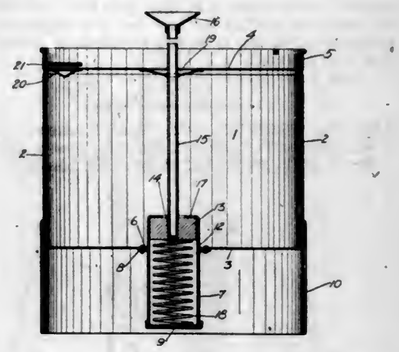
2. In a receptacle, a cylindrical side member having the upper marginal portion bent downward on the outside, a top member having its marginal portion bent around the outer and inner faces of said bent portion to engage the same and also engage the outer wall of the side member, and a band or hoop of comparatively heavy material secured on the inner face of the side member at its connection with and below the same.

3. In a receptacle, a cylindrical side member having the upper marginal portion bent downward on the outside, a top member having its marginal portion bent around the outer and inner faces of said bent portion to engage the same and also the outer wall of the side member, and a band or hoop of comparatively heavy material secured on the inner face of the side member at its connection with the top member and below the same and supporting the top member beyond the joint.

4. In a receptacle of the character described, a cylindrical side member of sheet metal, and a top of sheet metal of arch formation, said top being bent outwardly near its lower edge to constitute a horizontal portion, the metal of said top being extended downwardly beyond said horizontal portion, an annular reinforcing band secured within said cylindrical side member below the upper edge thereof, said side member having portions which extend upwardly beyond said band, said upwardly extending portions of the top having interlocking engagement with each other, and lying outside of the cylindrical side member with the horizontal portion of the top resting upon the upper edge of said band, said interlocking portions of the top and side member being put under pressure toward said band to cause them to tightly engage.

1,189,463. DISPENSING-CAN. WILLIAM H. MCNUTT, New York, N. Y., assignor to Carrie Emma Owen, Franklin, N. Y. Filed Dec. 1, 1914. Serial No. 874,971. (Cl. 21—67.1.)

1. The combination of a closed container having an aperture at the top, a pump barrel at the bottom of the container with openings communicating therewith to receive fluid from the bottom of the container, an apertured piston working in the container, a tube secured in the piston aperture extending upwardly through the container and projecting through the top, whereby the depression of the tube and piston will first close said openings in the barrel, and thereupon force the fluid from the barrel up through the tube, a spring in the barrel below the piston to normally retain it above said openings, and side walls projecting upwardly at the top to form a receptacle to receive overflow from the tube.



2. The combination of a closed container having an opening at the top closed by a screen of flame-proof material, a pump barrel at the bottom of the container and communicating therewith by openings to receive fluid from the bottom of the container, a piston working in the container and having an aperture extending therethrough, a tube secured in the piston aperture and extending upwardly through the container and through the opening in the screen, whereby the depression of the tube and piston will first close communication between the barrel and container and thereupon force the fluid from the barrel up through the tube, a spring in the barrel below the piston to normally retain it above the openings in the barrel, a cone at the top of said tube, and side walls projecting upwardly at the top to form a receptacle to receive overflow from the cone.

3. The combination of a closed container having an opening at the top closed by a screen of flame-proof material, a pump barrel at the bottom of the container and communicating therewith by openings to receive fluid from the bottom of the container, a piston working in the container and having an aperture extending therethrough, a tube secured in the piston aperture and extending upwardly through the container and through the opening in the screen, whereby the depression of the tube and piston will first close communication between the barrel and container and thereupon force the fluid from the barrel up through the tube, a spring in the barrel below the piston to normally retain it above the openings in the barrel, a cone at the top of said tube, side walls projecting upwardly at the top to form a receptacle to receive overflow from the cone, and a supporting member extending down from the side member to form a base below the lower end of the barrel.

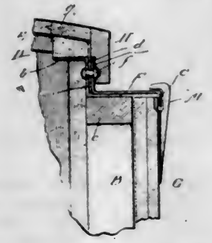
4. The combination with a container having a base extending below the bottom wall, of a pump barrel secured at a central opening in the bottom to extend above and below the bottom, with apertures just above the bottom to receive fluid from the container, and an opening in the top of the barrel, an apertured piston working in the barrel, a spring in the barrel below the piston to normally retain it above said openings, and a tube secured in the piston aperture extending upwardly through the container and projecting through an opening in the top, whereby the depression of the tube and piston will first close said openings in the barrel, and thereupon force the fluid from the barrel up through the tube.

5. The combination with a container having a base extending below the bottom wall, of a pump barrel secured at a central opening in the bottom to extend above and

below the bottom, with apertures just above the bottom to receive fluid from the container and an opening in the top of the barrel, an apertured piston working in the barrel, a spring in the barrel below the piston to normally retain it above said openings, a tube secured in the piston aperture extending upwardly through the container and projecting through an opening in the top, whereby the depression of the tube and piston will first close said openings in the barrel, and thereupon force the fluid from the barrel up through the tube, and side walls projecting upwardly at the top to form a receptacle to receive overflow from the tube.

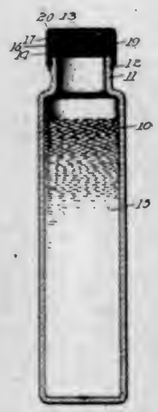
[Claim 6 not printed in the Gazette.]

1,189,464. FREIGHT-CAR. FRED MATHEWS, Chicago, Ill., assignor to Clinton C. Murphy, Chicago, Ill. Filed Apr. 7, 1915. Serial No. 19,661. (Cl. 20—22.)



A freight car having a projecting doorway, a sliding door for closing the same, a side-wall having a metal plate the vertical web of which extends above the lintel of the door, a roof, carlines supporting said roof and having the ends thereof bent downward in front of the web of said plates, a shed comprising a horizontally disposed metal plate which rests on top of said lintel and has the outer edge thereof projecting out over the upper edge of the door and the inner edge thereof flanged upward in front of the end of said carlines and web, rivets uniting said web and flange, and a fascia secured to the edge of the roof and depending in front of and below said rivets.

1,189,465. CONTAINER FOR HYPODERMIC SOLUTIONS. NELSON S. MAYO, Chicago, Ill., assignor to The Abbott Laboratories, Chicago, Ill., a Corporation of Illinois. Filed Jan. 24, 1916. Serial No. 73,853. (Cl. 215—8.)

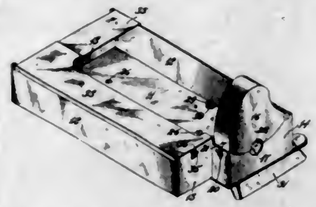


1. In a container for hypodermic solutions having an outwardly facing sealing mouth, the combination of a readily perforable member of porous rubber charged with a germicidal material, a seal of flexible rubber interposed between said mouth and said readily perforable porous rubber member, a member secured to said container and constituting a cap for said porous rubber member and said flexible rubber seal, said cap having a perforation therein for the insertion of a hypodermic needle for withdrawing a charge of the solution from the container, and a secondary seal of flexible rubber adapted to cover said porous rubber member, the said cap serving as an inclosure for said seals and said porous ruober member and as a means for forcing them toward said sealing mouth and for pressing said first mentioned seal against said sealing mouth whereby the evaporation of the germicide in said porous rubber member is prevented.

2. A container having a sealing mouth and a threaded neck surrounding said mouth, a porous readily perforable disk charged with a germicidal material and covering said mouth, a sealing disk of flexible rubber interposed between said mouth and said porous disk, a cap threaded on said neck having its outer end perforated to admit a hypodermic needle and adapted to press said disks, and a disk of flexible rubber interposed between said porous disk and said cap, said flexible disks constituting with the cap a sealed inclosure for said porous element to prevent evaporation of the germicidal material.

3. The combination of a container for hypodermic solutions provided with a neck and a sealing orifice, a rubber sealing disk fitting over said orifice, a porous member charged with germicidal material overlying said disk, a subsidiary sealing disk overlying said porous element, and a perforated screw cap inclosing said disks threaded onto said neck for making said seals effective.

1,189,466. TABLE-BED FOR SEWING-MACHINES. CHARLES H. MEKEEL, Jr., St. Louis, Mo. Filed Apr. 12, 1915. Serial No. 20,628. (Cl. 112—29.)



1. A bed for sewing machines comprising a bottom adapted to rest upon and be secured to a table, openings in said bottom, and means for preventing oil from passing through said openings on to the top of said table.

2. A bed for sewing machines comprising a bottom adapted to rest upon and be secured to a table, openings in said bottom in alinement with openings in said table and tubular downward extensions of said bottom surrounding the openings therein for preventing oil from passing through said openings on to the top of said table.

3. A bed for sewing machines comprising a bottom adapted to rest upon and be secured to a table, an opening in said bottom registering with an opening in said table and having its margins bounded by a downwardly projecting flange extending below said table, one part of said flange being lower than the rest to serve as a drip edge.

4. A bed for sewing machines comprising a bottom adapted to be secured to a table, an opening in said bottom registering with an opening in said table and having its margins bounded by a downwardly projecting flange having an oil groove around its inside near its lower edge, said oil groove sloping toward one part of the flange to lead oil thereto, whereby said oil may be discharged clear of said table.

5. A bed for sewing machines comprising a bottom adapted to be secured to a table, and side and end walls, openings in said bottom, and means for preventing oil from passing through said openings on to the top of said table, in combination with a driving wheel guard hinged to the side wall of said bed at one end to swing in the plane of said driving wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,189,467. LOSS-PREVENTING DEVICE FOR JEWELRY. JAMES M. MILLER, Washington, D. C. Filed Mar. 3, 1916. Serial No. 81,962. (Cl. 24—90.5.)



1. A clasp a flexible element connected therewith, of a clasp associated with said flexible element and formed from a blank of material bent to provide spaced parallel limbs, one of said limbs having an opening therein, spaced lugs projecting inwardly from one wall of said opening, the other of said limbs having a slot, a lever journaled within said slot and including angularly disposed branches, one of said branches being arranged between said limbs and operating within said opening, and adapted to engage one wall thereof between said lugs in operative position, the other of said branches being normally disposed within said slot and having a finger grip projecting therefrom, and means for holding said lever normally in operative position.

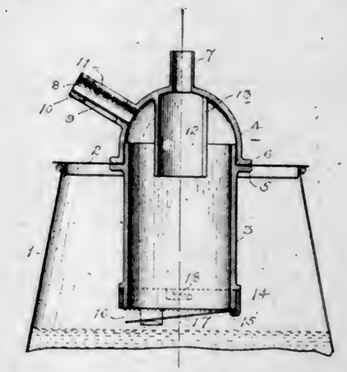
2. The combination with a fastener, and a flexible element connected therewith, of a clasp formed from a blank of material bent to provide spaced parallel limbs, a loop stamped from the closed end of said clasp for association with said flexible element, one of said limbs having an opening, spaced lugs projecting inwardly from one wall of said opening, a lever pivotally associated with the other of said limbs and including angularly disposed branches, one of said branches operating within said opening and adapted to engage the end wall thereof between said lugs in operative position, and means for normally holding said lever in operative position.

3. The combination with a fastener, and a flexible element connected therewith, of a clasp associated with said element and formed from a blank of material bent to provide spaced parallel limbs, one of said limbs having an opening, spaced lugs projecting inwardly from one wall of said opening, the other of said limbs having a substantially L-shaped slot, a lever pivotally mounted therein and including angularly disposed branches, one of said branches operating between said limbs and adapted to engage the end wall of said opening between said lugs in operative position, the other branch being normally disposed within the longitudinally disposed portion of the slot, and a spring encircling the pivot of said lever and arranged within the lateral portion of said slot, said spring having one terminal engaging the limb, and its opposite terminal engaging the lever to hold the latter normally in operative position.

1,189,468. MILKING-MACHINE. REUBEN MANLEY MILLER, Dayton, Ohio, assignor, by mesne assignments, to N. D. Rutherford. Filed Sept. 8, 1914. Serial No. 860,527. (Cl. 31—98.)

1. In an apparatus of the character described, a vacuum chamber having an orifice therein, and an independent closure member loosely supported in a normally inclined position for movement to open and close said orifice, said closure member being operative for opening movement by gravity so as to be drawn into position to close the orifice by the initial exhaustion of the chamber.

2. In an apparatus of the character described, a vacuum chamber having a normally open orifice therein, and a normally inclined closure member loosely supported and mounted for pivotal movement toward and from said orifice, said closing member being adapted for gravital opening movement and for closing movement under the initial exhaustion of said chamber.



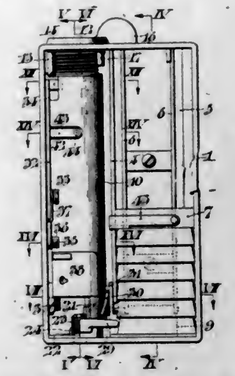
3. In an apparatus of the character described, a vacuum chamber having an orifice therein, and a closure member therefor comprising a normally inclined plate loosely supported for pivotal movement toward and from said opening, said plate being adapted for movement by gravity to an open position and to be closed by the initial exhaustion of the chamber.

4. In an apparatus of the character described, a vacuum chamber having an orifice therein, a normally inclined independent floating closure member therefor, and means for movably supporting said member adjacent to the orifice.

5. In an apparatus of the character described, a vacuum chamber having an orifice therein, a normally inclined independent floating closure plate therefor, and means for loosely supporting said plate for pivotal movement toward and from said orifice.

[Claims 6 to 13 not printed in the Gazette.]

1,189,469. VENDING-MACHINE. JOSEPH F. MUMFORD, Philadelphia, Pa., assignor to Robert H. Carnahan, Philadelphia, Pa. Filed May 27, 1913. Serial No. 770,150. (Cl. 194—85.)



1. A vending device including in combination, an inclosed casing having a delivering opening therein, a coin

receiver having a slot therethrough, a coin magazine within the casing, means carried by the magazine for vending the articles through said opening, and devices whereby the coin locks the coin receiver to the magazine for rotating the same.

2. A vending device including in combination, an inclosed casing having a delivering opening therein, a coin receiver having a slot therethrough, a coin magazine within the casing, means carried by the magazine for vending the articles through said opening, devices whereby the coin locks the coin receiver to the magazine for rotating the same, means for temporarily locking the magazine when the package is delivered, and means operated by the releasing of the coin receiver for releasing said magazine.

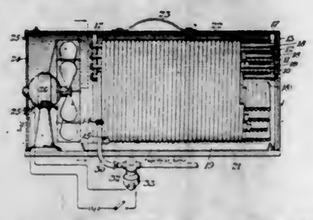
3. A vending device including in combination, an inclosed casing having a delivering opening therethrough, a pivoted door for closing said opening, a coin magazine within said casing, a coin receiver having a slot therein through which a coin may be inserted, devices whereby the coin receiver is locked to the magazine by the coin, whereby the turning of the receiver turns the magazine, a vending arm carried by said magazine, and means carried by the magazine for locking the door in closed position when the vending arm is retracted.

4. A vending device including in combination, an inclosed casing having a delivering opening therethrough, a pivoted door for closing said opening, a coin magazine within said casing, a coin receiver having a slot therein through which a coin may be inserted, devices whereby the coin receiver is locked to the magazine by the coin, whereby the turning of the receiver turns the magazine, a vending arm carried by said magazine, means carried by the magazine for locking the door in closed position when the vending arm is retracted, a weight located on the packages to be delivered, and means carried by the weight for preventing the retraction of the vending arm after the last package is vended.

5. A vending machine including in combination, an inclosed casing having an opening therein, a vertical partition dividing said casing into a package compartment and a compartment for a coin magazine, a cylindrical coin magazine located in said casing and adapted to turn about a vertical axis, a coin receiver having a slot for the coin, a depending slotted stem carried by said coin receiver and extending into said magazine, said magazine at its upper end having a drum with a slot adapted to register with a slot in the coin receiver, lugs carried by the magazine for supporting the coin, and whereby said magazine may be locked to the coin receiver, an arm carried at the lower end of the magazine for engaging and vending the package from the compartment.

[Claims 6 to 10 not printed in the Gazette.]

1,189,470. AIR COOLER AND DEHUMIDIFIER. GLEN O'BRIEN, Manhattan, Kans., assignor of one-half to Elenor Rae Carr, Chicago, Ill. Filed Apr. 28, 1913. Serial No. 764,206. (Cl. 257—202.)

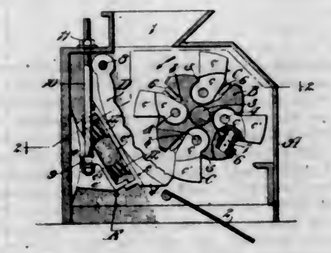


1. An air cooling device comprising a base, spaced standards thereon, a plurality of horizontally disposed concentric spaced helical pipe coils supported by said standards the turns of pipe in each coil being comparatively close together to form longitudinal passages between successive coils and means for forcing air through said passages.

2. A portable device for modifying the temperature of rooms comprising a plurality of spaced concentric helical coils extending substantially horizontal, a fan for effecting the circulation of air between said coils, spaced brackets at opposite ends of said coils and substantially following the outlining of said coils and rods connecting said brackets for supporting said coils.

3. A portable device for modifying the temperature of rooms, comprising a plurality of spaced, concentric, helical pipe coils extending substantially horizontal, a fan for effecting the circulation of air between said coils, rods extending lengthwise of said coils for supporting the latter, and supporting means for the ends of said rods.

1,189,471. CRUSHING-MACHINE. JOHN D. OCHTENBECK, Clayton, Mo. Filed Jan. 12, 1914. Serial No. 811,602. (Cl. 83—11.)



1. In a crushing machine, a rotary hammer support, a plurality of hammers pivotally mounted in said support, said support having integral abutments thereon that limit the pivotal movement of said hammers in one direction, and resilient means that limit the movement in the opposite direction, each of said resilient means comprising a pair of expansible members, one of said members having a higher degree of expansion than the other.

2. In a crushing machine, provided with end walls and side walls, a rotary crushing element, a coöperating breaker-plate pivotally mounted at one end between said side walls and provided with an inclined rear face, and a wedge composed of a pair of telescoping sections normally held spaced apart by yielding devices, said wedge having one face bearing against the inclined rear face of said breaker-plate and its opposite face bearing against the end wall of the machine.

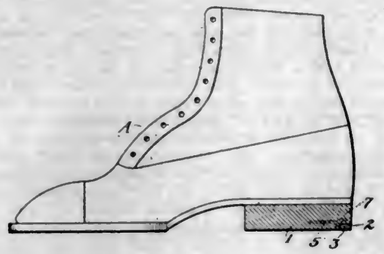
3. In a crushing machine, a rotary crushing element comprising a solid one-piece hammer support, a plurality of pockets arranged in said head, crushing hammers provided with reduced shanks that are pivotally mounted in said pockets, rigid means in said pockets that limits the pivotal movement of said hammers in one direction, and resilient means in said pockets that limits the movement in the opposite direction.

4. In a crushing machine, a rotary one-piece hammer support provided with a plurality of substantially semicircular pockets, a crushing hammer mounted in each of said pockets, the advancing edge of said hammer being normally in engagement with one end wall of said pocket, and a yielding device interposed between the rear edge of said hammer and the opposite end wall of said pocket.

5. In a crushing machine, a rotary crushing element, a breaker plate arranged adjacent the path of movement of said crushing element, said plate having a plurality of inclined ribs arranged thereon, a yielding wedge having its front face inclined and bearing against said inclined ribs and having its opposite face curved and bearing against a stationary curved part of the machine, and means for adjusting said wedge vertically so as to cause it to rock about said curved stationary part and thus change the angle of inclination of the front face thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,189,472. RUBBER HEEL. JOSEPH OPPERUD, Madison, S. D. Filed Jan. 5, 1916. Serial No. 70,456. (Cl. 36—75.)

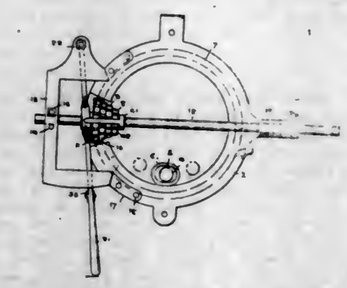


1. In a heel having a rubber body portion, a metal wear plate embedded in said body portion, said plate comprising a wear portion, a portion extending laterally from the inner edge of said wear portion into said heel, and another portion bent upwardly from the inner edge of said wear portion and laterally so that it is spaced from and parallel with said wear portion.

2. A wear plate for heels comprising a wear portion and retaining portions, said retaining portions comprising a plurality of retaining prongs extending laterally in one direction from one of the edges of said wear portion, and a second plurality of retaining prongs extending laterally from the same edge in the opposite direction.

3. A wear plate for heels comprising a wear portion and retaining portions, said retaining portions comprising a plurality of retaining prongs extending upwardly and laterally in one direction from one of the edges of said wear portion, and a second plurality of retaining prongs extending upwardly and laterally from the same edge in the opposite direction.

1,189,473. GEARING. IRA LEWIS PACKARD, Frankfort, Kans. Filed Nov. 16, 1915. Serial No. 61,800. (Cl. 74—58.)

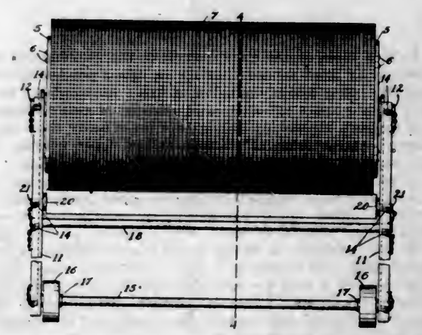


1. A gearing structure comprising a rack, a shaft, a plurality of different size gears rotatable with and slidably mounted on said shaft, said gears being fixed one with the other, a bracket coöperating with one end of the shaft, a clevis-shaped bearing engaging said shaft and having its ends projecting through said bracket, a nut engaging one of said ends for adjusting the bearing on the bracket, a lever pivotally attached at one end to said bracket, collars on said shaft at the opposite ends of said gears, a link connecting said collars and extending through said lever whereby when the lever is swung laterally the gears will be moved longitudinally on the shaft.

2. The combination with a shaft, a plurality of different size gears fixed together and mounted upon said shaft, and a rack adapted to coöperate with any one of said gears, of a lever, means to connect said lever to said gears for moving any one of said gears into engagement with the rack, a plate having a slot therein, one edge of the slot having a plurality of stepped notches and the opposite edge corresponding stepped faces, a latch pivoted to said lever having a finger adapted to engage any one of said stepped faces, and a spring adapted to hold the lever in engagement with the notches and the finger in engagement with said stepped faces.

3. The combination with a plurality of shifting gears, of a lever coöperating with said gears, a plate having a slot through which said lever extends, a latch pivoted to said lever, a finger at one end of the latch, said slot having a plurality of stepped faces at one edge for the reception of said finger and a plurality of notches at the opposite edge for the reception of said lever, a shoulder on the latch adapted to limit the swinging movement of the latch in one direction, and a spring between the lever and latch for holding the latch in operative position.

1,189,474. MOBILE ARMORED SHIELD. JOHN WALLACE PAGE, Adrian, Mich. Filed Jan. 14, 1915. Serial No. 2,202. (Cl. 89—36.)



1. An armored shield comprising a wall composed of a plurality of layers of reticulated metallic fabric superimposed and relatively disposed to cause a variable reduction in the mesh throughout the thickness of the wall, and thereby form a reticulated resilient wall yieldable to the force of impact of a projectile and offering increasing degrees of resistance at intervals to retard and deflect it against direct penetration, and means for supporting said wall upon one side thereof.

2. An armored shield comprising a wall composed of a plurality of layers of woven metal strands superimposed and relatively disposed to intercalate the strands and interstices of the successive layers so as to effect a corresponding reduction in the mesh of the fabric with the increasing thickness of the wall, whereby a projectile impinging alternately upon the strands forming and intersecting the interstices of the layers is intermittently retarded and deflected in such rapid succession of counter impacts as to arrest and neutralize the force of its energy, and means for rigidly supporting said wall at intervals.

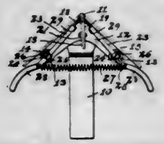
3. An armored shield comprising a cylindrical wall composed of a plurality of layers of woven metal strands superimposed and relatively shifted to position the strands of the successive layers in overlapping relation and differentiate the mesh throughout the fabricated wall formed thereby, and a cylindrical support for said wall.

4. An armored shield comprising an annular wall composed of a plurality of helically wound layers of woven metal strands superimposed and relatively combined to intercalate the strands of the successive layers and graduate the mesh throughout the body of the wall formed thereby, a cylindrical support for said wall, and bearing members and interposed at intervals between said support and wall upon one side thereof.

5. An armored shield comprising a cylinder having radially extending ribs at intervals of its periphery, an outer wall supported on said ribs concentric with said cylinder and composed of a plurality of superimposed layers of reticulated metallic fabric relatively staggered to vary and restrict the mesh of the wall as compared to that of the successive layers, and form a reticulated armor wall of a drum adapted to roll upon the ground and serve as a shield to arrest fired projectiles.

[Claims 6 to 8 not printed in the Gazette.]

1,189,475. WIRE-STITCHING-MACHINE TABLE. JOSEPH PAGLIARUL, Chicago, Ill., assignor to Joseph E. Smyth, Chicago, Ill. Filed Jan. 14, 1915. Serial No. 2,135. (Cl. 1—7.)



1. In a table of the class described, the combination of a relatively fixed support having an upper portion and a laterally offset lower extension, a brace horizontally pivoted to said lower extension and adapted to swing toward said support, means for urging said brace away from said support, and a table-leaf hinged to the upper portion of said support, and supported in position by said brace.

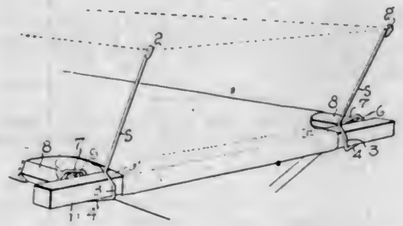
2. In a table of the class described, the combination of a relatively fixed support having an upper portion and a laterally offset lower extension, an upstanding brace horizontally pivoted to said lower extension of said support and adapted to swing toward said support, automatic means for urging said brace outwardly away from said support, a stop for arresting the outward movement of said brace, and a table leaf horizontally hinged to the upper portion of said support and supported in horizontal position by said brace.

3. In a table of the class described, the combination of a longitudinally extending, relatively fixed support provided with a hinge connection at the top of each end thereof and provided with four lower corner extensions, a pair of braces each horizontally pivoted upon an axially alined pair of two of said corner extensions and disposed on one side of and parallel to the axis of said hinge connections, said brace being provided with a horizontally extending portion adapted to swing toward said hinges on said pivots and normally disposed vertically above said pivots, automatic means tending to urge said horizontal brace portions away from said hinges, a stop adapted to arrest movement of said brace and maintain said brace with its horizontal portion substantially vertically above the pivotal axis of said brace, and a pair of abutting leaf members hinged together and supported by said fixed hinge connections at their hinge axis and resting upon the horizontal portions of said braces.

4. In a table of the class described, the combination of a longitudinally extending, relatively fixed support provided with a hinge connection at the top of each end thereof and provided with four lower corner extensions, a pair of braces each horizontally pivoted upon an axially alined pair of two of said corner extensions and disposed on one side of and parallel to the axis of said hinge connections, said brace being provided with a horizontally extending portion adapted to swing toward said hinges on said pivots and normally disposed vertically above said pivots, automatic means tending to urge said horizontal brace portions away from said hinges, a stop adapted to arrest movement of said brace and maintain said brace with its horizontal portion substantially vertically above the pivotal axis of said brace, and a pair of abutting leaf members hinged together and supported by said fixed hinge connections at their hinge axis and resting upon the horizontal portions of said braces, said braces being capable of being swung toward each other on their pivots so as to bring said horizontal supporting portions relatively close together and permitting said leaves to fall and form a saddle top table.

5. In a table of the class described, the combination of a longitudinally extending, relatively fixed support provided with a hinge connection at the top of each end thereof and provided with four lower corner extensions, a pair of braces each horizontally pivoted upon an axially alined pair of two of said corner extensions and disposed on one side of and parallel to the axis of said hinge connections, said brace being provided with a horizontally extending portion adapted to swing toward said hinges on said pivots and normally disposed vertically above said pivots, a spring tending to urge said horizontal brace portions away from said hinges, a stop adapted to arrest movement of said brace and maintain said brace with its horizontal portion substantially vertically above the pivoted axis of said brace, and a pair of abutting leaf members hinged together and supported by said fixed hinge connections at their hinge axis and resting upon the horizontal portions of said braces, said braces being capable of being swung toward each other on their pivots so as to bring said horizontal supporting portions relatively close together and permitting said leaves to fall and form a saddle top table, the weight of said leaves being such as to over-balance said spring.

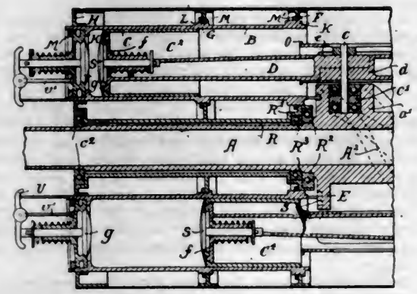
1,189,476. SUPPORT. JUDSON C. PEWTHER, El Paso, Tex. Filed June 9, 1915. Serial No. 33,164. (Cl. 5—14.)



1. In combination with a cot including an end rail and a side rail, a support for a mosquito bar consisting of an elongated resilient body having one extremity provided with a split loop, said loop comprising an offset portion adapted to overlie a side face of the end rail, said offset portion being connected with the support proper by an inclined section adapted to engage the upper and outer marginal portion of the end rail, the lower end of the offset portion being continued in a perpendicularly related obliquely disposed portion underlying the end rail and in contact therewith, said perpendicularly related portion being continued in an upstanding perpendicularly related portion overlying the inner face of the end rail and being continued in an extension overlying the side rail.

2. In combination with a cot including an end rail and a side rail, a support for a mosquito bar consisting of an elongated resilient body having one extremity provided with a split loop, said loop comprising an offset portion adapted to overlie a side face of the end rail, said offset portion being connected with the support proper by an inclined section adapted to engage the upper and outer marginal portion of the end rail, the lower end of the offset portion being continued in a perpendicularly related obliquely disposed portion underlying the end rail, and in contact therewith, said perpendicularly related portion being continued in an upstanding perpendicularly related portion overlying the inner face of the end rail and being continued in an extension overlying the side rail, the free extremity of the portion overlying the side rail being returned, said returned portion being in contact with the side rail.

1,189,477. INTERNAL-COMBUSTION ENGINE. ABEL PEYTOUREAU, Tunis, Tunis. Filed Jan. 27, 1913. Serial No. 744,366. (Cl. 123—58.)



1. An internal combustion engine comprising in combination a shaft having a semi-helicoidal cam groove extending about half a turn in each direction, a plurality of pairs of cylinders mounted around said shaft opposite each other and having their respective piston rods coupled together, members carried by said piston rods and working in the cam groove, cam disks mounted on each side of the cam groove, exhaust valves mounted at the outer ends of the respective cylinders, and rods and rocking levers for operating said exhaust valves, said rods being actuated by said cam disks, substantially as described.

2. An internal combustion engine comprising in combination a shaft having a semi-helicoidal cam groove extending about half a turn in each direction, a plurality of pairs of cylinders mounted around said shaft opposite each other and having their respective piston rods coupled together, members carried by said piston rods and working in the cam groove, cam disks mounted on each side of the cam groove, exhaust valves mounted at the outer ends of the respective cylinders, and rods and rocking levers for operating said exhaust valves, said rods being actuated by said cam disks, and spring suction valves (s) mounted in the pistons, substantially as described.

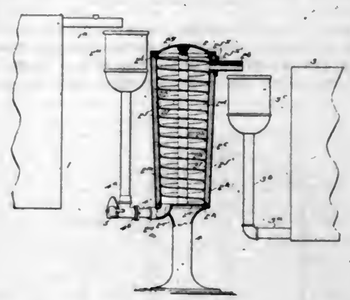
3. An internal combustion engine comprising in combination a shaft having a semi-helicoidal cam groove extending about half a turn in each direction, a plurality of pairs of cylinders mounted around said shaft opposite each other in two groups and having piston rods of alined cylinders coupled together, members carried by said piston rods and working in the cam groove, two partitioned frames in which the two cylinder groups are respectively mounted, a substantially cylindrical member to which the two frames carrying the groups of cylinders are secured, and guides for the piston rods in said substantially cylindrical member.

4. An internal combustion engine comprising in combination a shaft having a semi-helicoidal cam groove extending about half a turn in each direction, a plurality of pairs of cylinders mounted around said shaft opposite each other in two groups and having the piston rods of alined cylinders coupled together, members carried by said piston rods and working in the cam groove, two partitioned frames in which the two cylinder groups are respectively mounted, a substantially cylindrical member to which the two frames carrying the groups of cylinders are secured, and guides for the piston rods in said substantially cylindrical member, and antifriction devices fitted in said last mentioned guides, substantially as described.

5. An internal combustion engine comprising in combination a shaft having a semi-helicoidal cam groove extending about half a turn in each direction, a plurality of pairs of cylinders mounted around said shaft opposite each other in two groups and having the piston rods of alined cylinders coupled together, members carried by said piston rods and working in the cam groove, two partitioned frames in which the two cylinder groups are respectively mounted, each of said frames having three partitions formed with flanges, a motor casing attached to said flanges, a substantially cylindrical member to which the two frames carrying the groups of cylinders are secured, and guides for the piston rods in said substantially cylindrical member.

[Claims 6 to 8 not printed in the Gazette.]

1,189,478. PASTEURIZER. LEROY S. PFOUTS, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of New Jersey. Filed Nov. 20, 1911. Serial No. 661,338. (Cl. 137—21.)



1. In apparatus of the character described, the combination of a chamber closed at opposite ends and having side walls that taper toward one end, a helical member mounted in said chamber and tapering from end to end, its peripheral edge fitting the tapering side walls of the chamber and forming a circuitous passageway for liquid from end to end of the chamber, means for supplying liquid to one end of said chamber, and a discharge conduit at the opposite end of said chamber leading therefrom at right angles to the longitudinal axis of said chamber.

2. In apparatus of the character described, the combination of a chamber closed at opposite ends and having side walls that taper toward one end, a helical member mounted in said chamber and tapering from end to end, its peripheral edge fitting the tapering side walls of the chamber and forming a circuitous passageway for liquid from end to end of the chamber, means for supplying liquid to one end of said chamber, and a discharge conduit at the opposite end of said chamber leading therefrom at right angles to the longitudinal axis of said chamber substantially in the plane of one coil of said member.

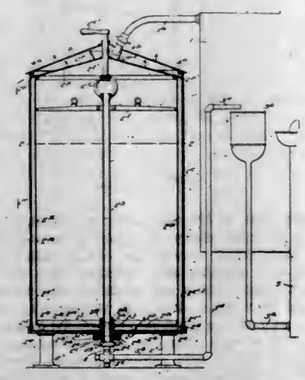
3. In an apparatus for treating liquids, an annular casing arranged vertically and having sides that taper from its upper end to its lower end, a bottom for closing the lower end of said casing, a helical member removably mounted in said casing and tapering from end to end, its peripheral edge fitting the tapering sides of said casing, a removable top for said casing having engagement with but being detachable from said helical member, and means for supplying liquid at the bottom of said casing and discharging it from the top of the tortuous passageway.

4. The combination of a casing comprising two vertical tubular members having sides which taper from their upper ends to their lower ends, the said tubular members being arranged concentrically one within the other, a bottom for closing the lower ends of said tubular members, an annulus carried by said bottom and arranged to space the lower end of the inner tubular member from the outer tubular member, a ring interposed between and spacing the upper ends of said tubular members from each other, a top, and a helical web extending from end to end of said casing, the peripheral edge of said web engaging the wall

of the inner tubular member and coöperating therewith to form a circuitous passageway, the said casing being formed with inlet and outlet openings leading from its opposite ends.

5. The combination of a casing comprising two vertical tubular members having sides which taper from their upper ends to their lower ends, said tubular members being arranged concentrically one within the other, a bottom for closing the lower end of said tubular members, means for spacing the opposite ends of said tubular members from each other, a top, and a helical web extending from end to end of said casing, the peripheral edge of said web engaging the wall of the inner tubular member and coöperating therewith to form a circuitous passageway, the said casing being formed with inlet and outlet openings leading from its opposite ends and the outlet opening extending through the walls of said tubular members and having its inner end arranged between two coils of said web.

1,189,479. PASTEURIZER. LEROY S. PROUTS, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of New Jersey. Filed Nov. 20, 1911. Serial No. 661,339. (Cl. 137—21.)



1. In apparatus of the class described, an outer cylinder, a bottom therefor having a passageway therethrough, a valve mechanism in said passageway, an inner cylinder having a top, the lower end of said cylinder being open and spaced from the bottom wall of the outer cylinder, a conduit serving as a valve stem and leading from the valves of said valve mechanism upwardly through said inner cylinder, means connected to said conduit for operating said valve, and means for introducing liquid to be treated between the inner and outer cylinders and at a point above the top of said conduit.

2. In apparatus of the class described, an outer cylinder, a bottom therefor having a passageway therethrough, a valve mechanism in said passageway, an inner cylinder having a perforated bottom wall spaced from the bottom wall of the outer cylinder and removably mounted within the latter, a conduit serving as a valve stem and leading from the valve of said mechanism upwardly through said inner cylinder, means connected to said conduit for operating said valve, a removable cover for the inner cylinder, and means for introducing liquid to be treated between the inner and outer cylinders and at a point above the top of said conduit.

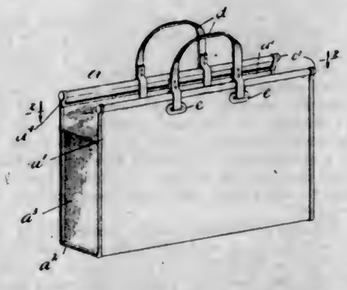
3. In apparatus of the class described, the combination of an inner casing and an outer casing each provided with a top; the sides of the inner casing being spaced from the sides of the outer casing and the lower end of the inner casing being open to permit liquid to rise therein, and the bottom of the outer casing being formed with a passageway, a rotary valve mounted in said passageway, said valve being formed with a duct, a conduit connected with the duct of said valve and extending upwardly through said inner casing, the wall of the conduit being fixed to the wall of the valve, whereby the rotation of said conduit will operate said valve, an operating member connected to said conduit and extending through openings in the tops of said inner and outer casings, the walls of the passageway in the outer casing and of the openings in the tops of the casings serving to rotatively support said conduit and operating member, and means for discharging liquid between the said casings at a point above the upper end of said conduit.

4. An apparatus of the class described, comprising an outer cylinder formed with an opening in its bottom, an inner cylinder open at its lower end to permit liquid to rise therein and separated from the outer cylinder to form a space between said cylinders, means for controlling the flow of the liquid upwardly in said inner cylinder or through the opening in the bottom of the outer cylinder, the said means comprising a conduit having an open upper end arranged within said inner cylinder and connected at its lower end with the opening in said outer cylinder and a valve mechanism at the lower end of said conduit arranged when open to permit the liquid to flow freely through the opening in the bottom of the outer cylinder, and means for discharging liquid between said cylinders.

5. In apparatus of the class described, comprising a casing having a removable top and a bottom, said bottom being formed with a discharge opening, a cylinder having a removable top and a bottom, spacing devices interposed between the sides and bottom of said cylinder and said casing and arranged to form a fluid space between them, means for discharging material on the top of said cylinder whereby it flows over said top and down between the walls of the casing and cylinder, the said cylinder being formed with an opening in its bottom and permitting the material to rise therein, a conduit arranged within said cylinder, the lower end of said conduit being removably mounted in and communicating with said discharge opening in the bottom of the casing and its upper end being open and permitting the material to overflow into said conduit and be discharged, and a device fixed to said conduit and removably mounted in openings formed in the tops of said casing and cylinder and operating to support the upper end of said conduit.

[Claims 6 to 10 not printed in the Gazette.]

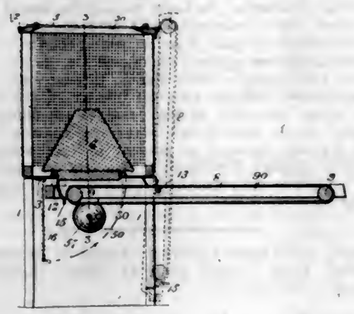
1,189,480. SHOPPING-BAG. ISAK POMPER, New York, N. Y. Filed Feb. 11, 1916. Serial No. 77,561. (Cl. 224—47.)



A flexible shopping bag the side walls of which are folded on their upper edges to form tubular pockets, stiffening rods removably mounted in said pockets and headed pins driven into said stiffening rods and adapted to securedly hold the latter in position in said pockets.

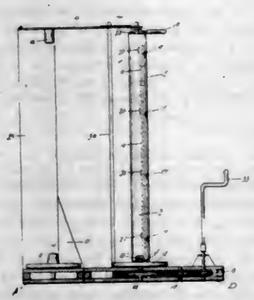
1,189,481. FLY-TRAP. JUDSON PRICE, Poplar Bluff, Mo. Filed July 1, 1915. Serial No. 37,523. (Cl. 43—32.)

In a fly trap, a cage and its frame, a conveyer frame secured to the cage structure and lying beneath the entrance to the cage, an endless belt conveyer mounted in the conveyer frame and comprising a trough-like receptacle, means for detachably securing the said receptacle at its ends to the conveyer frame, U bearings in the receptacle, a shaft set in the said bearings and adapted to be removed when the receptacle is detached, and a baiting disk on the



shaft to engage the said belt conveyer, all being arranged whereby when the said trough-like receptacle is in place on the said conveyer frame, the engagement of the baiting disk with the belt conveyer will hold the said shaft in its bearings.

1,189,482. APPARATUS FOR MEASURING AND WINDING LINOLEUM AND THE LIKE. PHILIP QUIRK, Cobalt, Ontario, Canada. Filed Oct. 28, 1915. Serial No. 58,366. (Cl. 33—130.)



1. In an apparatus for measuring and winding linoleum and the like, the combination with a frame, of a plurality of circular tables arranged in a straight line in a common plane, journaled to the base of the frame and free to revolve horizontally thereon, coned centers on said tables, lifting centers on the top of said frame immediately above said coned centers, gear wheels journaled in the base of the frame, a circular winding table rigidly secured to the larger gear wheel, a crank on the smaller gear wheel, a removable vertical winding pole secured to the center of the winding table, a radial arm pivotally attached to the winding pole shaft and extending toward the series of tables, and an automatic measuring apparatus rigidly secured to the end of said radial arm operated by the passing of the linoleum and adapted to indicate the length of the linoleum which has been wound onto the said winding pole from one of the rolls thereof on said tables.

2. In an apparatus for measuring and winding linoleum and the like, the combination of a frame, gearing in the base of the frame, a handle connected to said gearing, a circular winding table also connected to said gearing, a perpendicular winding pole, the upper end of which is freely pivoted to the top of the frame, and the lower end attached to said table and adapted to revolve therewith, means on said pole to attach to the end of said linoleum, and to loosen the same when it is wound onto said pole, a radial arm pivotally attached to the winding pole shaft and extending toward the series of tables, and an automatic measuring apparatus rigidly secured to the end of said radial arm operated by the passing of the linoleum and adapted to indicate the length of the linoleum which has been wound onto the said winding pole from one of the rolls thereof on said tables.

3. In an apparatus for measuring and winding linoleum and the like, a frame, a series of circular tables loosely journaled in a common plane on the base of the frame and adapted to support rolls of linoleum perpendicularly in the frame, lifting centers secured to the top of the frame, and adapted to engage with the upper ends of said rolls, a perpendicular winding pole in two segments, means between the two segments and operatively carried by one of the segments for clasping the end of the linoleum, gear wheels in the base of the frame for operating the winding pole, a radial arm pivotally attached to the winding pole shaft and extending toward the series of tables, and an automatic measuring apparatus rigidly secured to the end of said radial arm operated by the passing of the linoleum and adapted to indicate the length of the linoleum which has been wound onto the said winding pole from one of the rolls thereof on said tables.

4. In an apparatus for measuring and winding linoleum and the like, a frame, means for retaining rolls of linoleum in a perpendicular position therein and allowing the same to revolve, a winding table journaled to the base of the frame, a perpendicular winding pole in two segments, a larger and a smaller hinged together, means for increasing and decreasing the girth of the pole by opening and closing the two segments, clenching cams for attaching the end of the linoleum to said pole, a radial arm pivotally connected to the winding pole shaft, a traveler wheel pivoted to said arm and in operative contact with said linoleum, a graduated dial secured to said arm, gearing communicating with said traveler wheel and dial, and a roller tensioned against the linoleum where the same passes over the traveler wheel.

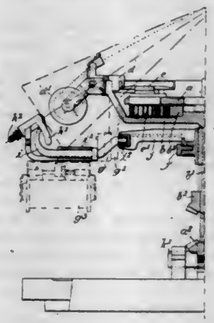
5. In an apparatus for measuring and winding linoleum and the like, a frame provided with a base, gear wheels in said base, a crank handle attached to one of said wheels, a circular table on the same axis as one of said wheels, a perpendicular pole adapted to rotate with said table and wind linoleum, a perpendicular cutting straight-edge rigidly secured to the frame between the winding pole and rolls of linoleum, a radial arm pivotally attached to the winding pole shaft and extending toward the series of tables, and an automatic measuring apparatus rigidly secured to the end of said radial arm operated by the passing of the linoleum and adapted to indicate the length of the linoleum which has been wound onto the said winding pole from one of the rolls thereof on said tables.

1,189,483. BRAIDING-MACHINE. ERNEST LOUIS RANKIN, East Sheen, England. Filed Aug. 25, 1913. Serial No. 786,492. (Cl. 28—4.)

1. The combination with a bobbin support; of an obliquely mounted spindle carried thereby, a double armed throwing lever mounted on said spindle, one arm of which is provided with thread receiving means and the other forked and curved, a ball crank engaged with said forked arm and having its spindle rotatably mounted in said support, a crank on said spindle, and a vertically movable member having an annular groove to receive said last mentioned crank.

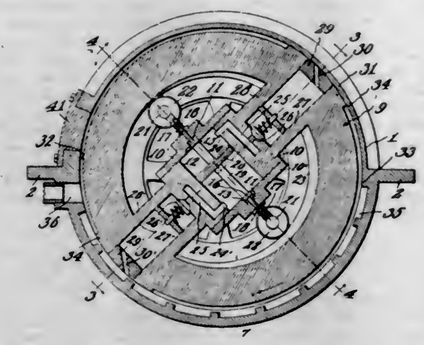
2. The combination with a bobbin support: of an obliquely mounted spindle carried thereby, a double armed throwing lever mounted on said spindle, one arm of which is provided with thread receiving means and the other forked and curved, a ball crank engaged with said forked arm and having its spindle rotatably mounted in said support, a crank on said spindle, a vertically movable member having an annular groove to receive said last mentioned crank, and means for imparting a positive dwell to the throwing lever while the thread is passing the bobbin.

3. The combination with a bobbin support; of an obliquely mounted spindle carried thereby, a double armed throwing lever mounted on said spindle, one arm of which is provided with thread receiving means and the other forked and curved, a ball crank engaged with said forked arm and having its spindle rotatably mounted in said support, a crank on said spindle, a vertically movable member



having an annular groove to receive said last mentioned cranks, and means for partially rotating said ball crank spindle in the fork of said throwing arm to cause the ball to slide without imparting motion to the throwing lever, thereby imparting a positive dwell to the throwing lever while the thread is passing the bobbin.

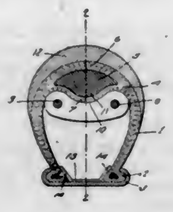
1,189,484. ROTARY EXPLOSION-ENGINE. EDWARD B. RAYMOND, Newkirk, Okla., assignor, by direct and mesne assignments, of one-third to Loyal M. Martin and one-third to Edward A. Hodges, Newkirk, Okla. Filed Feb. 17, 1914. Serial No. 819,227. (Cl. 123—10.)



1. An engine embodying a stator, a rotor rotatable therein and having diametrically opposite radial chambers provided at their outer ends with oblique exhaust ports, the stator having a portion for closing said ports, the rotor having a transverse chamber between the aforesaid chambers and channels extending from the ends of the transverse chamber to the inner ends of the radial chambers, check valves coöperable with said channels to prevent the flow of the gases from the radial chambers to the transverse chamber, a piston slidable within the transverse chamber and having a stem slidable through one end of said transverse chamber, and a cam carried by the stator and coöperable with said stem for reciprocating said piston when the rotor is rotated, the ends of the said transverse chamber having check valved carbureted air inlets.

2. An engine embodying a stator, a rotor rotatable therein and having diametrically opposite radial chambers provided at their outer ends with oblique exhaust ports, the stator having a portion for closing said ports, the rotor having a transverse chamber between the aforesaid chambers and channels extending from the ends of the transverse chamber to the inner ends of the radial chambers, check valves coöperable with said channels to prevent the flow of the gases from the radial chambers to the transverse chamber, a piston slidable within the transverse chamber and having a stem slidable through one end of said transverse chamber, an axial tubular shaft attached to the rotor, the rotor having passages extending from said shaft to the ends of said transverse chamber, check valves for said passages to prevent the gas within the transverse chamber flowing back into said passages, and a cam carried by the stator and coöperable with said stem to reciprocate the piston.

1,189,485. AUTOMOBILE-TIRE. JAMES C. REIFSNIDER, Seattle, Wash. Filed June 24, 1915. Serial No. 36,003. (Cl. 152—5.)



1. In a tire of the class described, in combination with a tire distending ring composed of a plurality of abutted rigid members of inverted arch construction affording a continuous outwardly disposed channel, of a tire casing therefor having a body of cushion material secured therein, said body affording an inwardly directed protrusion corresponding to and adapted to be retained within said channel.

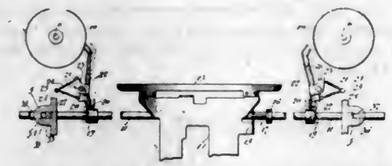
2. In a tire of the class described, in combination with a tire-distending ring composed of a plurality of articulated members of inverted arch construction affording a central longitudinally disposed depression, of a tire casing therefor having a body of cushion material secured therein, said body affording an inward annular protrusion corresponding to and adapted to be retained within said depression, the side walls of said casing being formed of a plurality of plies of fabric the outer portions of which are positioned upon the inner and outer surfaces, respectively, of said cushion.

3. In a tire of the class described, in combination, a flexible casing and a distending ring therefor, composed of a plurality of abutted rigid members severally formed with outwardly inclined side portions to afford a continuous external channel, said casing being formed with a continuous body of cushion material extending inwardly and disposed to interfit with said channel.

1,189,486. TYPE-WRITER RIBBON-FEED. ALVAH C. ROEBUCK, Woodstock, Ill. Filed Dec. 15, 1913. Serial No. 806,700. (Cl. 197—151.)

1. In a typewriter, a reciprocable universal bar frame having a perforated ear, a rotatable and longitudinally movable shaft, an arm connected thereto having a projection of sufficient length to extend through the perforated ear to permit the longitudinal movement of the shaft, and ribbon feeding devices operated by the shaft.

2. In a typewriter ribbon feeding mechanism, the combination of a rotary and longitudinally movable shaft, having a portion of reduced diameter forming shoulders thereon, of ratcheting devices in connection therewith thrown into and out of engagement by the longitudinal movement of the shaft, and fixed means consisting of a lock nut and a threaded stud therefor to engage the shoulders formed by the portion of reduced diameter to limit the movement of the shaft in both directions.



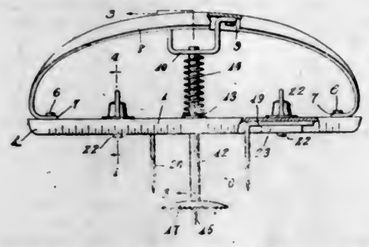
3. In a device of the class described, the combination with a longitudinally movable rock shaft having annular grooves and a portion of reduced diameter forming shoulders therein, of ribbon feeding devices operated by the rock shaft and thrown into and out of engagement by the longitudinal movement thereof, a spring-pressed catch to engage the notches, and a pin adjustable to engage the said shoulders to limit the longitudinal movement of the shaft in either direction.

4. In ribbon feeding mechanism, the combination with a toothed wheel, of a pivoted pawl adapted to engage the wheel at one end, a second pawl adapted to engage the toothed wheel, a rock shaft to which the second pawl is pivoted and by which it is reciprocated, and an arm connected to the rock shaft adapted to engage the free end of the first mentioned pawl when the shaft is moved longitudinally.

5. In a typewriter ribbon feeding mechanism, toothed ratchet wheels, pivotally mounted pawls adapted to engage the ratchet wheels, feeding pawls to rotate the ratchet wheels, a longitudinally movable rock shaft, and arms connected to the rock shaft to which the feeding pawls are pivoted, the arms being adapted to engage the pivotally mounted pawls at their free end to move one of the pivotally mounted pawls and a corresponding feeding pawl into engagement with the ratchet wheel and another pivotally mounted pawl and feeding pawl out of engagement when the rock shaft is moved longitudinally.

[Claims 6 to 10 not printed in the Gazette.]

1,189,487. GASKET AND WASHER CUTTER. CHARLES ROTH, New Philadelphia, Ohio. Filed May 8, 1916. Serial No. 96,198. (Cl. 164—71.)

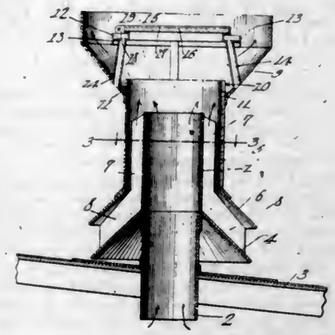


1. A device of the class described comprising a horizontal beam, a spring-protracted center pin carried thereby having its lower end pointed and reduced in diameter to form a shoulder against which a suitable sized clamping disk is adapted to bear, and cutters mounted on said beam.

2. A device of the class described comprising a horizontal beam, an arched handle member connected at its ends to said beam, a guide carried by said handle member, a spring-protracted center pin having one end mounted in said guide and its other end extended through said beam, and cutters adjustably mounted on the latter.

3. A device of the class described comprising a horizontal channeled bar having an opening therein midway of the ends thereof and longitudinal slots on each side of said opening, an arched handle member connected at its ends to the ends of said bar, a plate fixed to the inner side of the intermediate portion of said member and spaced therefrom, said plate having an opening therein in alinement with the opening in said bar, a center pin slidably mounted in said alined opening, a stop on said pin, a coiled spring surrounding said pin and disposed between said stop and said plate for normally holding said pin protracted, blocks slidable in the channel in said bar and having one of their ends bent laterally and provided with cutting edges, and clamping elements extended through said slots and engaged with said blocks for locking the same in their adjusted positions.

1,189,488. VENTILATOR. GEORGE H. RUSSELL, Florence, Ala. Filed June 14, 1915. Serial No. 33,984. (Cl. 98—4.)



1. A ventilator comprising a stack, a shell surrounding the same, a bowl carried by the upper end portion of the shell, the upper end of the shell projecting upwardly within the bowl to provide an annular flange, the bowl having drain apertures adjacent the said flange, a basin and baffle arranged within the bowl above the shell, and drain tubes extending from the said basin through the bowl.

2. A ventilator comprising a shell, a bowl carried by the upper end portion thereof, an annular trough within the bowl above the shell, tubes connecting the bottom of the trough and bowl to allow the water to drain off from the trough, and a panel carried by the inner flange of the trough.

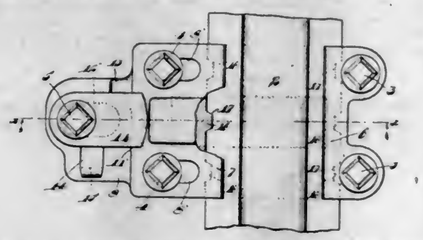
3. A ventilator comprising a shell, a bowl carried by the upper end thereof, an annular trough within the bowl above the shell, tubes connecting the bottom of the trough and bowl to allow the water to drain off from the trough, the inner flange of the trough having an outturned lip, a panel resting upon said lip, a split ring of U-shaped cross section embracing said lip and panel to hold the panel upon said lip, and means connecting the ends of said ring for causing the ring to embrace said panel and lip.

1,189,489. RAIL-FASTENING DEVICE. JOSEPH F. RUSSELL, Chicago, Ill. Filed Sept. 25, 1915. Serial No. 52,679. (Cl. 238—2.)

1. A rail fastening comprising a base plate upon which the rail is adapted to be mounted; a permanent jaw on said plate for engagement with one edge of the base of the rail; a movable jaw coöperating with said plate for engagement with the opposite edge of the rail base; an integral projection on said plate; and a keeper pivotally mounted on said projection adapted to be turned into engagement with one edge of said movable jaw to lock the same in operative position, substantially as described.

2. A rail fastening comprising a base plate upon which the rail is adapted to be mounted; a permanent jaw on said plate for engagement with one edge of the base of the rail; a movable jaw coöperating with said plate for en-

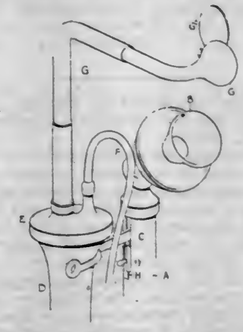
gagement with the opposite edge of the rail base; an integral projection on said plate; a keeper pivotally mounted on said projection adapted to be turned into engagement with one edge of said movable jaw to lock the same in operative position, there being an opening formed through said projection; and a headed member engaging with said opening and adapted for engagement with the outer side of said keeper to hold the latter in position upon said projection, substantially as described.



3. A rail fastening comprising a base plate upon which the rail is adapted to be mounted; a permanent jaw on said plate for engagement with one edge of the base of the rail; a movable jaw mounted upon the upper side of said plate and transversely adjustable thereon into and out of engagement with the opposite edge of said rail base; an integral upwardly projecting tubular post on said plate, there being an elongated slot in said movable jaw affording clearance for said post; a keeper pivotally mounted on said post adapted to be turned into engagement with one edge of said movable jaw to lock the same in operative position; and a headed pin engaging with the opening in said post and having its head overhanging the upper side of said keeper to hold the latter in position upon said post, substantially as described.

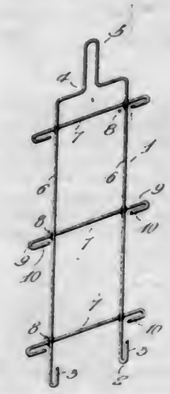
4. A rail fastening comprising a base plate upon which the rail is adapted to be mounted; a permanent jaw on said plate for engagement with one edge of the base of the rail; a movable jaw coöperating with said plate for engagement with the opposite edge of the rail base; a post on said plate; a keeper pivotally mounted on said post adapted to be turned into engagement with said movable jaw to lock the same into operative position; and means overhanging the outer end of said post for holding said keeper in position thereon, said post being slightly higher than the corresponding dimension of said keeper whereby said overhanging means is prevented from clampingly engaging with the adjacent side of the keeper, substantially as described.

1,189,490. TELEPHONE ATTACHMENT. ESTELLA SANDERS, New York, N. Y., assignor of one-third to Isidore Scherer, New York, N. Y. Filed Dec. 19, 1914. Serial No. 878,067. (Cl. 179—182.)



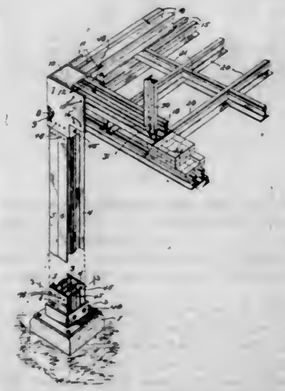
A telephone attachment, comprising a closed diaphragm cap, a plurality of ear connections leading from the said diaphragm cap, one of the said ear connections being flexible and the other formed of rigid telescoping members, and switching means for establishing sound transmission while retaining the receiver in position on its usual support.

1,189,491. FLY-PAPER HOLDER. ALBERT H. SAWYER. Campton, N. H. Filed Jan. 17, 1916. Serial No. 72,567. (Cl. 43—22.)



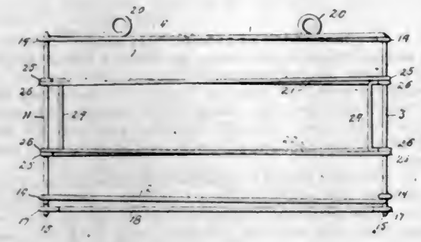
A fly paper holder comprising a substantially U-shaped frame formed of a single piece of wire, the extremities of the arms of said frame at the open end of the same being bent back upon said arms in spaced relation thereto, an elongated loop-shaped handle projecting from the closed end of said frame and disposed in a single plane therewith, a plurality of spaced parallel wires extending transversely across the arms of said frame and secured to the lower surface of the same, the ends of said wires projecting from the arms and having their extremities bent back upon themselves in spaced relation and all disposed in a single plane, a fly paper supporting plate adapted to be positioned on the frame with its sides and one end between said ends and their bent extremities, and said end of the plate positioned between the ends of the frame and the extremities being upturned to prevent the viscid material from dropping therefrom.

1,189,492. RAIL BUILDING. JOSEPH SCHANMAN, Pittsburgh, Pa. Filed Nov. 18, 1913. Serial No. 801,646. (Cl. 189—1.)



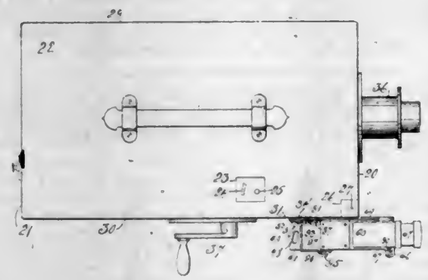
A building structure, comprising a supporting member, upper and lower rails supported thereby, floor frame rails arranged therebetween, the space between the upper and lower rails being greater than the vertical dimension of the floor rails whereby the latter may be shifted in their positions during assembling.

1,189,493. COLLECTION-RECEPTACLE. JOSEPH SCHANMAN, Pittsburgh, Pa. Filed Dec. 24, 1914. Serial No. 878,866. (Cl. 220—136.)



In a receptacle, substantially U-shaped side and end wall-elements, the free ends of each of said elements being hingedly connected with the intermediate portion of its neighboring element, substantially U-shaped minor frame members having their free ends hingedly connected with said intermediate portions of the side and end wall-elements, the intermediate portions of the minor frame members being bent over and hingedly receiving said intermediate portions of the side and end wall-elements, the lower legs of the two end elements having off-set portions providing vertical pivotal connections, and bars hingedly connected with said pivotal connections and forming a bottom wall-element for the receptacle.

1,189,494. ADJUSTABLE DUPLEX VIEW-FINDER. EBERHARD SCHNEIDER, New York, N. Y. Filed July 17, 1913. Serial No. 779,497. (Cl. 88—1.5.)



1. In a view finder the combination of a frame, means to adjustably connect said frame to the casing of a camera in either of two planes, a pair of lens barrels one over the other adjustably connected to the frame to enable the longitudinal axes of the barrels to be located at different inclinations, a reducing glass for the upper barrel and an enlarging glass for the lower barrel.

2. In a view finder for a camera the combination of a frame, means to adjustably connect said frame to the top of a camera casing for adjustment in a horizontal plane, means to adjustably connect the frame to a side wall of said casing for adjustment in a vertical plane, a pair of lens barrels one over the other adjustably connected to said frame, a reducing glass for the upper barrel and an enlarging glass for the lower barrel.

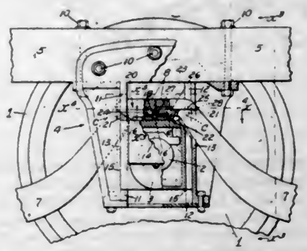
3. In a view finder for a camera the combination of a frame, a pair of lens barrels one over the other and adjustable in a vertical plane connected to the frame, a reducing glass having cross lines for the upper barrel, a sliding tube in the lower barrel, an enlarging glass for the sliding tube, a support adjustably connected to the frame at the rear of the lower barrel and having a sight notch to coact with the said cross lines, a mirror carried by said support to sight through the lower barrel from above and a frosted glass located at the rear end of the lower barrel coacting with said mirror and the glass of the sliding tube.

4. In a view finder for a camera the combination of a frame comprising a vertical leg and a horizontal, each leg having an elongated opening and a pointer adjacent thereto, each leg having pivot openings to pivot the frame to either the top or side of the casing of the camera, a spring washer and a screw for each elongated opening to fasten the frame in different positions to the top or side of the camera casing, the pointers of the frame coacting with scales on said casing.

5. In a view finder for a camera the combination of a frame having a scale formed thereon, a pair of lens barrels pivoted to the frame, a sleeve having an elongated opening and a pointer extending from one of said barrels, a screw extending through the elongated opening and in threaded engagement with said sleeve to secure the barrels in different angular positions to said frame.

[Claims 6 and 7 not printed in the Gazette.]

1,189,495. JOURNAL-BOX EVENER. MICHAEL F. SCHOENBERGER, Los Angeles, Cal. Filed Dec. 15, 1915. Serial No. 67,056. (Cl. 105—244.)



1. The combination with a journal box guide, a journal box in said guide and truck equalizer bars carried by the journal box, of a plate upon the top of said box and provided with an extensional supporting surface to co-act with said equalizer bars to support the same and thus gain stability against tipping of the box.

2. The combination with a journal box guide, a journal box in said guide and truck equalizer bars carried by the journal box, of an evener plate upon the top of said box and supporting the equalizer bars, said plate extending beyond the side boundaries of the box and in the plane of said equalizer bars to afford sufficient leverage to thus maintain the box in alinement in its guide.

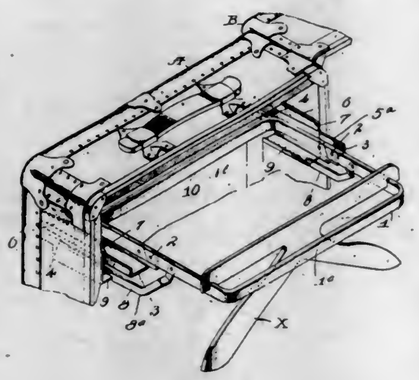
3. The combination with a journal box guide, a journal box in said guide and truck equalizer bars carried by the journal box, of an evener plate upon the top of said box, supporting means on said plate extending beyond the side boundaries of the box and in the plane of said equalizer bars, said equalizer bars being adapted to seat upon said supporting means to afford sufficient leverage to thereby gain stability.

4. The combination with a journal-box guide, a journal box in said guide and truck equalizer bars carried by the journal box, of an evener plate upon the top of said box, a supporting lug at each side of said plate, the equalizer bars being positioned between said lugs and bearing on the plate, shoulders on the equalizer bars and adapted to seat upon said lugs, said shoulders and lugs extending beyond the side boundaries of the box to afford sufficient leverage to thus maintain the box in alinement with its guide.

5. The combination with a journal-box guide, a journal box in said guide and abutting truck equalizer bars carried by the journal box, of an evener plate upon the top of said box, side supporting lugs on said plate and extending beyond the box in the plane of said equalizer bars, the top face of each lug being aslant downwardly and outwardly, and side shoulders on the equalizer bars, the bottom faces of said shoulders being beveled to correspond with and seat upon the top faces of said lugs.

[Claims 6 and 7 not printed in the Gazette.]

1,189,496. WARDROBE-TRUNK. PAUL C. SCHROEDER, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Dec. 17, 1914. Serial No. 877,727. (Cl. 190—13.)



1. A wardrobe trunk having a garment-supporting structure comprising a pair of rail-sections slidably mounted in the trunk so as to move in the direction of their length and a pair of rail-sections hinged to the extremities of said slidable sections at points which are fixed with respect to said slidable sections, the upper surfaces of said hinged sections being in the same plane with the upper surfaces of said slidable sections when said hinged sections are placed in alinement with said slidable sections so as to provide a pair of continuous bearing surfaces spaced apart for slidably supporting the opposite ends of garment hangers.

2. A wardrobe trunk having a garment-supporting structure comprising guides on the sides of the trunk, slides mounted to move therein, rail-sections fixed to said slides so as to be movable longitudinally in and out of the trunk, and extension rail-sections hinged to the ends of the first named rail sections respectively, so as to stand in alinement therewith when extended.

3. In a wardrobe trunk, the combination of a casing having an immovable end wall, a pad on the inner side of said wall, a clothes-supporting frame in said casing comprising two pivoted sections, and means actuated in the folding of the clothes-supporting frame for moving one of the sections of said clothes-supporting frame into clamping relation with said pad.

4. In a wardrobe trunk, the combination of a casing, a hanger-supporting frame slidably supported in said casing, said frame comprising a pivoted front section arranged to be folded into angular relation with the remainder of the frame, and braces for said front section.

5. In a wardrobe trunk, the combination of a clothes-supporting frame comprising two pivoted sections, a clamping portion, and means carried by one of said frame sections for moving the other frame section in operative relation to the clamping portion.

[Claims 6 to 12 not printed in the Gazette.]

1,189,497. JEWELRY. ABRAHAM SCHWARTZMAN, St. Louis, Mo. Filed Sept. 13, 1915. Serial No. 50,474. (Cl. 59—80.)



1. As a new article of manufacture, jewelry comprising a pair of members, and means including a pair of lengthwise rigid pivotally-connected shanks having loose engagement with said members for flexibly connecting said members together, said shanks while engaging said members being freely pivotally movable relatively to each other and movable longitudinally relatively to said members.

2. As a new article of manufacture, jewelry comprising a pair of members, and means including a pair of lengthwise rigid pivotally connected shanks having loose engagement with said members for flexibly connecting said members together, said shanks while engaging said members being freely pivotally movable relatively to each other and laterally movable relatively.

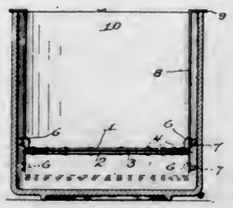
3. As a new article of manufacture, jewelry comprising a pair of members, and means including a pair of lengthwise rigid pivotally connected shanks having loose engagement with said members for flexibly connecting said members together, said shanks while engaging said members being freely pivotally movable relatively to each other and laterally and longitudinally movable relatively to said members.

4. As a new article of manufacture, jewelry comprising a pair of slotted members, and means including a pair of pivotally connected shanks loosely projecting through slots in said members for flexibly connecting said members together, said shanks while projecting through said slots being movable longitudinally and laterally relatively to said members.

5. As a new article of manufacture, jewelry comprising a pair of slotted members, and means for flexibly connecting said members together, said means including a pair of pivotally connected shanks having loose engagement with, and loosely projecting through slots in, said members.

[Claims 6 to 12 not printed in the Gazette.]

1,189,498. FOOD-HOLDING APPLIANCE FOR COOKING UTENSILS. JULIA ANN SESLER, Christiansburg, Va. Filed June 18, 1915. Serial No. 34,850. (Cl. 53—8.)

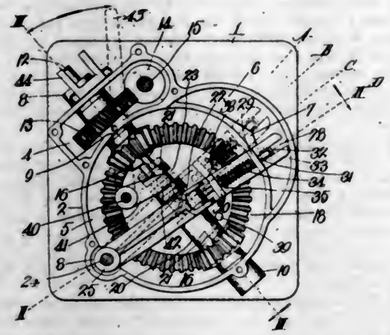


A food supporting appliance for cooking utensils, comprising a pair of rings each having an annular plate surface forming a food rest, a wire netting covering the ring openings and extending between the plates to the outer periphery of the rings, a plurality of clamping rivets extending through the plates and through the wire, a pair of lugs formed on the outer periphery of one of the plates and projecting upwardly and outwardly therefrom, a pair of slotted hangers engaging the top of the utensil and depending below the plate rings, and set screws extending through the slots and screwing into said lugs for adjustably suspending the plate rings, substantially as set forth.

1,189,499. IRONING-WAX PAD. OTIS W. SEVERNS, Chicago, Ill. Filed Sept. 2, 1914. Serial No. 859,794. (Cl. 68—27.)

A sad-iron pad, comprising a body portion composed of felt which is first soaked in a salt solution, dried, then saturated with molten wax, and allowed to cool.

1,189,500. REVERSING-GEARING. RUSSELL M. SMITH, Kansas City, Mo. Filed June 14, 1915. Serial No. 34,117. (Cl. 74—50.)



1. In reversing gearing, the combination of a driven shaft, a pair of clutch gears journaled thereon, a gear wheel meshing at opposite sides of its axis with said cluch gears and provided with a stud, a clutch member slidable on and rotatable with the said shaft and engaging one of said clutch gears, a lever yoked to the slidable clutch member and provided with a lug, movable means carried by the lever, a double cam in the path of movement of said means, a star-wheel journaled on the lever and provided with a lug and adapted to be periodically turned a partial revolution by the successive engagement of said stud with its arms to cause its lug in one of its intermittent movements to apply pressure on the lever and operate the same until the said means passes beyond the crest of the cam and the clutch member is disengaged from the said clutch gear, and means to continue the movement of the lever from the point mentioned to effect engagement of the slidable clutch member with the other clutch gear and thereby effect reverse movement of the stud-carrying wheel.

2. In reversing gearing, the combination of a driven shaft, a pair of clutch gears journaled thereon, a gear wheel meshing at opposite sides of its axis with said clutch gears and provided with a stud, a clutch member slidable on and rotatable with the said shaft and engaging one of said clutch gears, a lever yoked to the slidable clutch member and provided with a lug, movable means carried by the lever, a double cam in the path of movement of said means, a star-wheel journaled on the lever and provided with a lug and adapted to be periodically turned a partial revolution by the successive engagement of said stud with its arms to cause its lug in one of its intermittent movements to apply pressure on the lever and operate the same until the said means passes beyond the crest of the cam and the clutch member is disengaged from the said clutch gear, and a spring to be tensioned by upward movement of the said movable means toward the crest of the cam to exert force to continue the movement of the lever after the crest of the cam has been passed and thereby effect engagement of the clutch member with the other clutch gear.

3. In reversing gearing, the combination of a driven shaft, a pair of clutch gears journaled thereon, a gear wheel meshing at opposite sides of its axis with said clutch gears and provided with a stud, a clutch member slidable on and rotatable with the driven shaft and engaging one of the clutch gears, a lever yoked to the slidable clutch member, movable means carried by the lever, a double cam in the path of movement of said means, means adapted periodically to be caused by the said stud to apply pressure on the lever to operate the same upward on the cam along one side thereof and beyond the crest of the same to effect disengagement between the clutch member and said clutch gear, means to continue the movement of the lever on the cam to effect engagement of the slidable clutch member with the other clutch gear to effect reverse movement of the said stud-carrying wheel, and means connected to the slidable clutch member for yieldingly resisting downward movement thereof and assisting in the upward movement thereof.

4. In reversing gearing, the combination of a driven shaft, a pair of clutch gears journaled thereon, a gear wheel meshing at opposite sides of its axis with said clutch gears and provided with a stud, a clutch member slidable on and rotatable with the driven shaft and engaging one of the clutch gears, a lever yoked to the slidable clutch member, movable means carried by the lever, a double cam in the path of movement of said means, means adapted periodically to be caused by the said stud to apply pressure on the lever to operate the same upward on the cam along one side thereof and beyond the crest of the same to effect disengagement between the clutch member and said clutch gear, means to continue the movement of the lever on the cam to effect engagement of the slidable clutch member with the other clutch gear to effect reverse movement of the said stud-carrying wheel, a second lever loosely connected to the slidable clutch member and adapted for resisting downward movement thereof and assisting in the upward movement thereof and for being manually operated to adjust the clutch member to neutral or inoperative position, and means for holding said second lever against movement while the clutch member occupies its neutral position.

5. The combination of a driven shaft, clutch gears journaled thereon, a clutch member slidable on and rotatable with the driven shaft, a lever to slide the clutch member, provided with a lug, a star wheel journaled on the lever and having a lug, one of the arms on the star wheel being longer than the others, a gear wheel meshing with the clutch gears and provided with a stud adapted in successive rotations of the said wheel, to impart step-by-step rotation to the star wheel by successively engaging with short arms thereof, said stud being adapted to pass by the short arms after engagement therewith and by engagement with the long arm, cause the lug of the star wheel to apply pressure on the lug of the lever to cause the same to swing and withdraw the clutch member from engagement with one of the clutch gears and move it toward the other clutch gear, and coöperating means for yieldingly resisting said movement of the lever until after the unclutching operation is nearly completed and then continuing and accelerating such movement to complete such unclutching movement and cause the clutch member to engage the other clutch gear to cause the same to reverse the operation of the stud-carrying gear wheel.

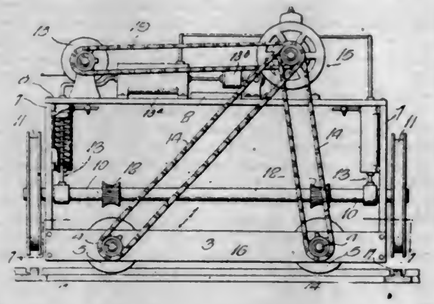
[Claim 6 not printed in the Gazette.]

1,189,501. AGRICULTURAL MACHINE. WILLIAM ROLLIN SMITH, Centralia, Ill. Filed Oct. 16, 1915. Serial No. 56,237. (Cl. 105—245.)

1. A machine of the class described comprising a truck, a wheel for moving said truck forwardly, a power plant for driving said wheel, a driving member likewise driven by said power plant, an additional and normally raised wheel for moving the truck laterally, means for lowering said additional wheel whereby the weight of the truck may rest thereon, and an additional driving member for said additional wheel, said member being movable downwardly with said wheel for engagement with the other driving member.

2. A machine of the class described comprising a truck, a wheel for moving the same forwardly, said wheel having at its axis a rotary member movable therewith and equipped with a gear, means for driving said rotary member, an additional and normally raised wheel for moving the truck laterally, means for lowering said additional

wheel whereby the weight of the truck may be supported thereon, and a gear for driving said additional wheel spaced normally above the other gear but movable downwardly with said wheel, whereby it may engage said other gear.

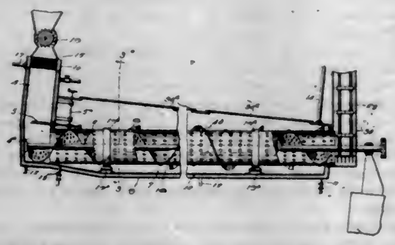


3. A machine of the class described comprising a truck, a wheel for moving the same forwardly, said wheel having at its axis a rotary member movable therewith and equipped with a gear, means for driving said rotary member, an additional and normally raised wheel for moving the truck laterally, and means for lowering said additional wheel whereby the weight of the truck may be supported thereon, said additional wheel having at its axis a rotary member movable therewith and equipped with a gear for engagement with the aforesaid gear when the additional wheel is lowered.

4. A machine of the class described comprising a truck, a wheel for moving the same forwardly and a power plant for driving said wheel, a gear also driven by said plant, a normally raised wheel for moving the truck laterally, said wheel having at its axis a rotary member movable therewith and equipped with a gear spaced normally above the other gear, and means for lowering the additional wheel at will whereby to simultaneously support the weight of the machine upon said wheel, and to interengage the two gears.

5. A machine of the class described comprising a truck frame, a pair of longitudinally spaced transversely disposed horizontal axles carried rotatably thereby and having gears, wheels secured to said axles, means for driving said axles, a horizontal longitudinally disposed axle carried by the frame for vertical movement and positioned above the other axles, wheels secured to said longitudinal axle, means for lowering said axle at will, and gears on the latter for engagement with the gears on the transverse axles.

1,189,502. DIFFUSION APPARATUS. JOHN STEWART, Logan, Utah. Filed Jan. 20, 1916. Serial No. 73,129. (Cl. 127—8.)



1. In a diffusion apparatus, the combination of an elongated vessel having a water inlet at one end and an outlet for juice at the other end, a rotary perforated cylinder in the vessel, means for feeding material to the cylinder, and means for conveying said material through the cylinder in a direction contrary to the direction of flow of water in the vessel.

2. In a diffusion apparatus, the combination of a trough having a water inlet at one end and an outlet for juice at the other end, a rotary perforated cylinder in the trough, said cylinder having an inlet at one end and an outlet at the other, a screw conveyer in said cylinder, and a vertical leg communicating with the inlet end of the cylinder for feeding material thereto, said leg being located at the outlet end of the cylinder being at the inlet end of the trough.

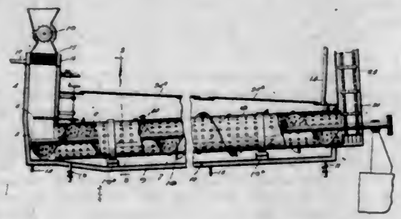
3. In a diffusion apparatus, the combination of a trough having a water inlet at one end and a juice outlet at the other, a rotary perforated cylinder extending lengthwise in the trough and provided with a perforated screw conveyer therein, the cylinder having an outlet at one end for spent material at the inlet end of the trough, and means to feed material into the opposite end of the cylinder.

4. In a diffusion apparatus, the combination of a trough for water and juice, having inlet and outlet at opposite ends, a perforated cylinder rotating in said trough, said cylinder having means therein to cause a flow of material through the same in a direction contrary to the flow of water through the trough, said cylinder having means on the outside thereof to obstruct the flow of water along the same, and means to feed material to the inlet end of said cylinder.

5. In a diffusion apparatus, the combination of a trough having a water inlet at one end and a juice outlet at the opposite end, a perforated cylinder rotating in said trough and having therein a perforated screw conveyer for conveying material through the cylinder, said cylinder having a waste material outlet at the inlet end of the trough, a spiral blade on the outside of the cylinder, and means to feed material into the inlet end of the cylinder.

[Claims 6 and 8 not printed in the Gazette.]

1,189,503. DIFFUSION PROCESS. JOHN STEWART, Salt Lake City, Utah. Filed Feb. 2, 1916. Serial No. 75,745. (Cl. 127—8.)



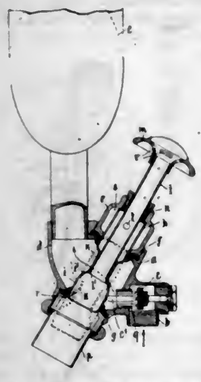
1. A continuous diffusion process comprising passing disintegrated material in one direction through an elongated container, rotating said container to tumble the material therein, and flowing water through said material in the container in another direction.

2. A diffusion process comprising passing disintegrated material in one direction through an elongated perforated container in a stream insufficient to fill said container, agitating the material in the container as it is passed through the same, and flowing water through said material in the container in the opposite direction.

3. A continuous diffusion process comprising passing a stream of pulp in one direction through a perforated container submerged in a body of extracting liquid flowing in another direction and agitating the material as it passes through the container.

4. A continuous diffusion process comprising passing a stream of pulp in one direction through a perforated container submerged in a body of heated water flowing in the opposite direction, and rotating the container to tumble the pulp therein as it passes therethrough.

1,189,504. FLUSHING DEVICE FOR WATER-CLOSETS. ROBERT STICKDORN, Gartenstadt Meererbusch, near Osterath, Germany, assignor to Fritz Ernst, Zurich, Switzerland. Filed May 16, 1914. Serial No. 839,078. (Cl. 4—5.)



1. In a flushing device for water-closets the combination of an air vessel, a casing for the operating mechanism, a stepped piston in said casing, said stepped piston being movable into two positions in said casing, an inlet valve in said casing, an inlet water pipe, a flushing pipe, and means to move said piston by hand into one position only whereby the stepped piston is adapted to give free passage from the inlet pipe to the air vessel, said means being slidably mounted in said stepped piston and being provided with a catch in such a manner as to permit its carrying on the stepped piston into the vessel filling position, while it can return to its idle position independently of the stepped piston.

2. In a flushing device for water closets, the combination of an air vessel, a casing for the operating mechanism, a stepped piston in said casing having two heads and a restriction between the two heads, an inlet valve in said casing, an inlet water pipe, a flushing pipe, said stepped piston giving free passage from the inlet pipe to the air vessel in one position through its restriction, means to move the piston by hand in said position, the inlet valve engaging with the curved surface between the restriction and one head of the stepped piston for actuating the valve by the movement of the stepped piston.

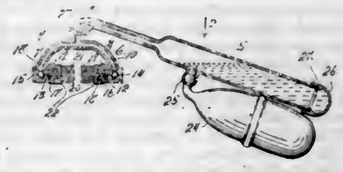
3. In a flushing device for water-closets, the combination of a casing for the operating mechanism, a stepped piston in said casing, said stepped piston being movable into an elevated and a depressed position, an inlet valve in said casing, an inlet water pipe, a flushing pipe, and means for causing a movement of the stepped piston by hand, said stepped piston being hollow and having two piston ends of unequal diameters and having a restricted or inset portion between said piston ends.

4. In a flushing device for water closets, the combination of an air-vessel, a casing for the operating mechanism, a stepped piston in said casing, an inlet valve in said casing, an inlet water pipe, a flushing pipe, and means to move said stepped piston by hand, the axis of said stepped piston being inclined to that of the pipe leading from the casing to the air vessel and being inclined also to the axis of the inlet valve but being in line with the axis of the flushing pipe.

5. In a flushing device for water closets, the combination of an air vessel, a casing for the operating mechanism, a stepped piston in said casing having two piston ends of unequal diameter, an inlet valve in said casing, an inlet water pipe, a flushing pipe, and means to move said stepped piston by hand, the larger piston end being adjacent to the flushing pipe and serving to cut off said flushing pipe from the casing and to open the inlet valve when the stepped piston is moved by hand.

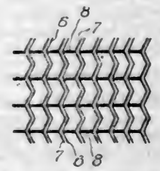
[Claims 6 to 12 not printed in the Gazette.]

1,189,505. TOOTH-BRUSH. LINCOLN C. STOCKTON, Denver, Colo. Filed Aug. 12, 1912, Serial No. 714,537. Renewed Nov. 12, 1915. Serial No. 61,157. (Cl. 15—52.)



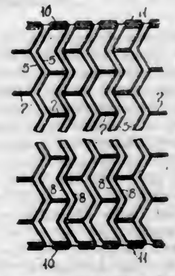
A tooth brush having a hollow handle, a head with tubular arms in communication with said handle, cleansing devices arranged in opposing relation at the ends of the tubular arms, the cleansing devices having outlet ducts in communication with the passages in the said arms, normally closed spring-actuated valves controlling the passage of liquid from the arms to the outlet ducts, and a bulb mounted on the handle and in communication with the latter, said bulb having sufficient fluid-ejecting force, when under pressure, to unseat the said valves.

1,189,506. RADIATOR. EMIL K. F. STREICHERT, Detroit, Mich. Filed Jan. 14, 1914. Serial No. 812,058. (Cl. 257—130.)



In a radiator, a honeycomb cooling section comprising pairs of spaced plates having off-set margins permanently secured together, one of said plates being corrugated, a rib formed at the crest of each corrugation, the other of said plates being continuously corrugated and free of ribs with the projecting ribs received in the depressions thereof and the crests of the corrugations being directed toward and spaced from the depressions in the first-named plate, the ribs of each pair of plates being arranged in alinement and all pointing in the same direction and presenting cells having parallel end walls and angular side walls.

1,189,507. RADIATOR. EMIL K. F. STREICHERT, Detroit, Mich. Filed Nov. 23, 1914. Serial No. 873,432. (Cl. 257—130.)



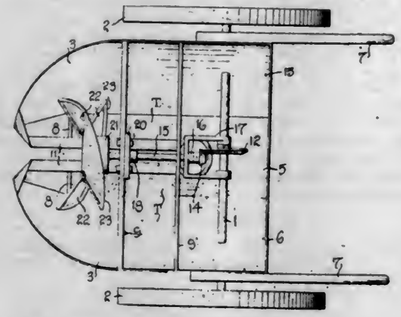
1. A cooling honeycomb section for radiators, the section being formed of pairs of plates that are transversely corrugated and are offset along the lateral margins thereof and secured together, the plates of one pair being folded on themselves at the crest of each corrugation to

form spacing ribs and the other plates being correspondingly corrugated and bearing against the tips of the spacing ribs in the depressions of the corrugations of said plates, each pair of connected plates including a ribbed and ribless plate with the ribbed plates juxtaposed and the ribless plates similarly positioned.

2. A cooling honeycombed structure for radiators consisting of two adjacently positioned ribbed and transversely corrugated plates held in spaced relation by the inset marginal portions thereof with ribs projecting from alternate crests of the corrugations on opposite sides of the assembled pair, pairs of adjacently positioned ribless plates secured in spaced relation by the inset marginal portions thereof, the pairs of rib plates and spacing plates being disposed alternately with the ribs of the one resting in the depressions of the other, the end portions of adjacent plates of the several pairs being folded together to form flanges at the points of connection with the upper and lower headers between which the pairs are disposed in substantially upright position.

3. A cellular cooling body structure consisting of tortuous upright ducts formed of transversely corrugated plates having ribs folded thereon to project laterally from the crests of said corrugations on opposite sides of the duct, the rear faces of the ribbed plates being adjacently positioned, and disposed alternately with conduits formed of transversely corrugated spaced ribless plates adjacently positioned, the ribs of the companion conduits bearing in the depressions of the conduits formed by the spaced plates, the plates of each pair constituting a conduit being held in spaced relation by inset marginal portions that are secured in abutting relation the conduits themselves being secured by companion flanges folded around each other from the adjacent plates of the conduits.

1,189,508. INSECT-DESTROYER. GROVER C. TUCKER, Heiberger, Ala., assignor to Tucker Implement Company, Inc., Greensboro, Ala., a Corporation of Alabama. Filed Dec. 16, 1915. Serial No. 67,235. (Cl. 43—1.)



1. An insect destroyer comprising a portable body adapted to straddle a row of plants and provided with troughs between which the plants are adapted to pass, and a beater rotating about an axis disposed longitudinally of the troughs and occupying a vertical plane intermediate the troughs, said beater including substantially spirally arranged and diametrically opposed blades between which the foliage of the plant is adapted to travel, said blades serving to create air blasts in a direction rearwardly of the insect destroyer, said blades being substantially semi-circular with the adjacent ends thereof at their peripheral portions in overlying relation.

2. A device of the character described comprising a body mounted for rocking movement, the forward end of said body at its bottom portion being provided with transversely separated troughs, a beater rotatably supported by the body and overlying the troughs and moving about an axis disposed longitudinally of the troughs, shoes carried by the bottom of the body and adapted to engage the surface over which the same traverses, each of said shoes being provided with means affording a hitch.

1,189,509. FIRE-KINDLER. MARTIN URBAN, Fall River, Mass. Filed Mar. 25, 1916. Serial No. 86,682. (Cl. 158—10.)



1. A fire kindler comprising a handle portion, a fork-shaped burner carried by the said handle and having spaced rows of forwardly inclined outlet perforations upon corresponding sides of the arms thereof, distributing plates carried by the said arms between the perforations thereof and arranged in parallelism, and fuel supply members for the said burner.

2. A fire kindler comprising a handle portion, a fork-shaped burner carried by the said handle and having spaced rows of forwardly inclined outlet perforations upon corresponding sides of the arms thereof, distributing plates carried by the said arms between the perforations thereof and arranged in parallelism, fuel supply members for the said burner, a laterally-extending mounting foot carried by the said handle, controlling means for the said fuel supply members, and igniting means arranged adjacent the said plates.

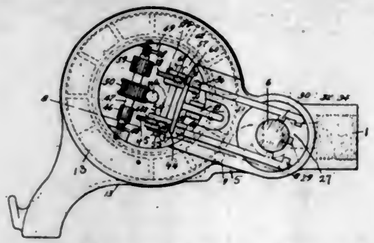
3. A fire kindler comprising a handle, a supply pipe positioned therethrough, controlling valves in the said pipe, a gasolene pressure tank attached to the said pipe, a fork-shaped burner communicating with the said pipe and having three parallel arms each provided with longitudinally-positioned spaced rows of forwardly inclined outlet perforations, and a distributing plate carried by each arm attached thereto between the rows of the perforations therein.

4. A fire kindler comprising a handle, a supply pipe positioned therethrough, controlling valves in the said pipe, a gasolene pressure tank attached to the said pipe, a fork-shaped burner communicating with the said pipe and having three parallel arms each provided with longitudinally-positioned spaced rows of forwardly inclined outlet perforations, a distributing plate carried by each arm attached thereto between the rows of the perforations therein, the said plates being arranged in parallelism, and a gas supply inlet connected to the said pipe intermediate the said handle and burner.

1,189,510. MEASURING-FAUCET. JOHN VAN GEEM, Erie, Pa. Filed Aug. 21, 1913. Serial No. 785,904. (Cl. 221—101.)

1. In a measuring faucet, the combination of a valve opening and closing by a turning movement in either direction; devices for automatically closing the valve when opened by turning in either direction; and means actuated by the liquid discharged controlling said devices and varying the periods during which the valve is open when the valve is turned in one direction from the interval of opening when the valve is turned in the opposite direction.

2. In a measuring faucet, the combination of a valve opening and closing by a turning movement in either direction; devices for automatically closing the valve when opened by turning in either direction; and means actuated by the liquid discharged controlling said devices and varying the periods during which the valve is opened when the valve is opened in one direction to twice the interval of opening when the valve is turned in the opposite direction.



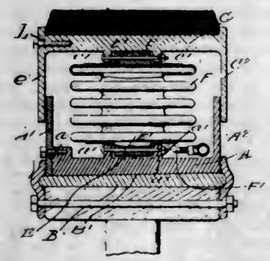
3. In a measuring faucet, the combination of a valve opening by a turning movement in either direction; spring actuated devices for automatically closing the valve; means for locking the valve against the spring devices and in an open position when turned in either direction; a motor actuated by the liquid discharged; and releasing devices actuated by the motor for releasing said means with a given movement of the motor.

4. In a measuring faucet, the combination of a valve opening by a turning movement in either direction; spring actuated devices for automatically closing the valve; means for locking the valve against the spring devices and in an open position when turned in either direction; a motor actuated by the liquid discharged; releasing devices actuated by the motor for releasing said means with a movement of the motor, varying when the valve is turned in one direction from that when the valve is turned in the other direction.

5. In a measuring faucet, the combination of a valve opening by a turning movement in either direction; a motor driven by the liquid discharged; gears of differing diameters driven by the motor; devices for locking the valve in open position; and releasing means actuated by said gears for releasing said devices.

[Claims 6 to 9 not printed in the Gazette.]

1,189,511. PNEUMATIC TIRE. CHARLES E. VAWTER, Blacksburg, Va. Filed Nov. 10, 1914. Serial No. 871,360. (Cl. 152—37.)



1. A pneumatic tire, comprising a tread annulus and a felly annulus, a plurality of longitudinally collapsible air cylinders interposed between said annuli, means for pivotally connecting the terminals of the cylinders to the tread and felly annuli, and flexible means for delivering air to the cylinders.

2. In a pneumatic tire, the combination of a felly and rim plates having lapping slidably engaging side flanges certain of which are removable and forming an annular space therebetween, a plurality of spaced corrugated metal cylinders disposed radially in the said annular space, said cylinders having flexible connections with the felly and rim plates, valve controlled filling tubes connected to each of the cylinders, and means connected to said filling tubes for delivering air to the cylinders under pressure.

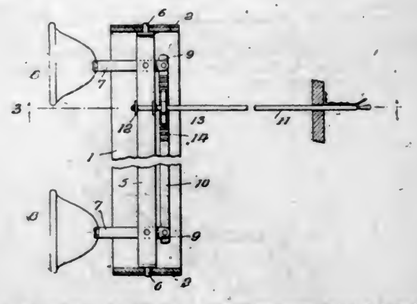
3. In a pneumatic tire of the character described, the combination of felly and rim plates forming an annular space therebetween, and a plurality of spaced corrugated metal cylinders disposed radially in the said annular space and having closed ends and valve controlled filling tubes, means connected to said filling tubes for simultaneously supplying air under pressure to said cylinders, and hinged connections between the inner and outer ends of said cylinders and the said felly and rim plates, all as and for the purpose set forth.

4. In a pneumatic tire, the combination of spaced felly and rim plates, a plurality of closed corrugated metal cylinders disposed radially between the felly and rim plates and hinged thereto, each of said cylinders having a filling tube provided with an inwardly opening check valve, and an inflating ring extending around the series of cylinders and having a filling valve, said inflating ring being connected to the filling tubes of the corrugated cylinders whereby the latter may be simultaneously supplied with air.

5. A pneumatic tire, comprising a tread annulus and a felly annulus, a plurality of longitudinally collapsible air carrying cylinders arranged radially between said annuli, and pivotally connected at their opposite ends to the respective annuli to move angularly with respect to either of said annuli circumferentially thereof, and flexible air carrying means connected to said cylinders for supplying air under pressure thereto and movable circumferentially of said annuli with said cylinders.

[Claim 6 not printed in the Gazette.]

1,189,512. DIRIGIBLE HEADLIGHT. CLAYTON VON CULIN, New York, N. Y., and GEORGE WATSON BEACH, Saybrook, Conn. Filed Mar. 27, 1916. Serial No. 87,070. (Cl. 240—61.)



1. A dirigible headlight mechanism comprising a bracket to be secured to an automobile, said bracket being in the form of a metal bar with vertically extended ends, a second bar extending between said ends of the bracket and pivoted thereto upon an axis extending longitudinally of said second bar, a pair of lamp brackets carried by said second bar, and means for tilting the latter.

2. A dirigible headlight mechanism comprising a bracket to be secured to an automobile, said bracket being in the form of a horizontal bar with its ends extended vertically, a second bar extending between said ends and pivoted thereto upon an axis extending longitudinally of said second bar, a pair of horizontally swinging lamp brackets mounted on said second bar, and means operable from a single member for tilting said second bar and for turning the lamp brackets.

3. A dirigible headlight comprising a bracket having a horizontally extending body with upwardly directed ends, a horizontal rocking member extending between said ends

and pivoted thereto on axes alined longitudinally of said rocking member, a pair of horizontally swinging lamp brackets mounted on the ends of said rocking member, a control lever mounted at one end on said member whereby the latter may be rocked at will, said lever having a slight rotary movement, and connecting means between said lever and said brackets for swinging the latter horizontally when said lever is rotated.

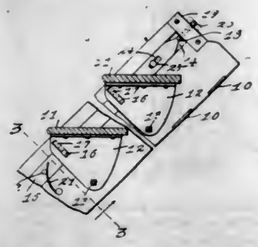
1,189,513. WELL-DRILL. MERIT BENJAMIN WALKER, Blum, Tex. Filed Jan. 26, 1916. Serial No. 74,390. (Cl. 255—76.)



1. A drill having its outer end portion provided with an elongated slot and having an opening in its outer end in communication with the outer end of the slot, and an eye arranged at the inner end of the slot.

2. A drill having its outer end portion provided with an elongated slot and having an opening in its outer end in communication with the outer end of the slot, the inner end of the slot being provided with a restricted extension, and an eye arranged at the inner end of said extension.

1,189,514. LADDER STRUCTURE. LEONARD W. WALLACE, Richmond, Va. Filed June 25, 1915. Serial No. 36,272. (Cl. 228—4.)

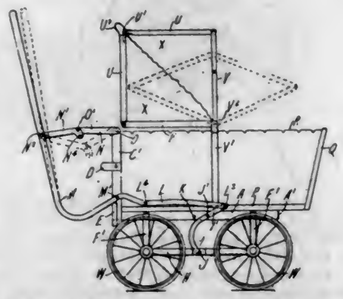


1. In a ladder structure, the combination with parallel side bars, of a plurality of step sections carried therebetween, and means slidably mounted in the bars and having slotted connections with the steps for adjusting and securing the latter in angular relation to the bar.

2. A ladder structure comprising the combination with a pair of side bars held in spaced relation, of step sections, each including a lateral portion at each end pivoted to the side bars and provided with slots, the inner faces of the side bars being provided with longitudinal grooves, bars slidably held in said grooves, pins on the bars extending into the slots and means for moving and holding the bars.

3. A ladder structure comprising side bars, steps disposed between the bars and having lateral portions pivoted to the inner faces thereof and provided with slots, the said inner faces of the bars being provided with longitudinal grooves, strips in said grooves held by the lateral portions of the steps, pins on the strips extending through the slots, means resiliently urging the strips in one direction and means adjustably holding said strips against movement in such direction.

1,189,515. HAMPER FOLDING GO-CART. THEODORE WALLACE and PERCY WALLACE, Petersham, near Sydney, New South Wales, Australia. Filed Mar. 5, 1914. Serial No. 822,619. (Cl. 21—83.)



1. In a hamper folding go-cart, an under-frame comprising two parallel side pieces having bent ends, a bar connecting said ends and means for bracing said side pieces, in combination with a rear frame to which said under-frame is attached, a pair of cranked wheel axles mounted on said side pieces, operating rods connecting said axles on each side of the under-frame, and curved levers pivoted to said under-frame and attached at their operating ends to said axle-connecting rods, the curvature of said levers permitting them to act and fold to the best advantage in turning the cranked parts of said axles up and down, said levers being arranged to fold under said rods.

2. In a hamper folding go-cart, the operating connecting rods pierced at each end to receive the wheel cranks, each kinked at a different part of its length inwardly in the direction of the side pieces of the under frame, and pierced to receive pins by which attachment is made to a pair of bow shaped levers by which the said rods are operated, as described and shown, and for the purposes set forth.

3. In a hamper folding go-cart, the actuating and trundling handle made bow shaped and having the two side parts made with double crank formation, piercings in each of the end curved parts to receive pins by which attachment is made to the lower part of the vertical side pieces of a rear frame, and further pierced at a part of their length upwardly for attachment to jointed connecting rods by which they are attached also to the upper ends of the aforesaid rear frame, and pierced at both ends to receive pins by which attachment is made to long and short connecting rods, and, long and short connecting rods attached at one end to the aforesaid actuating handle, and at their other ends to bow shaped levers, as described and shown, and for the purposes set forth.

4. The body of a hamper folding go-cart, consisting of a floor part, front, back, and side parts attached to the said floor part, overhanging side parts attached to and dependent from the top side of the body part and secured at one end by frame pieces and at the other end to guard brackets also attached to the end framework of the said body part, the space formed between the said overhanging parts and the side parts serving as chambers to hold the wheels, their operating parts, and attachments, as described and shown, and for the purposes set forth.

5. In a hamper folding go-cart, the hamper lids, convertible into a canopy, comprising two parts, hinges securing said parts together to allow of opening and closing movements, a flexible loop attachment secured at the hinged parts, two connecting rods attached on both sides of the lids at the ends and united at their other ends to supporting standards, the said standards being attached to the body part, as described and shown, and for the purposes set forth.

1,189,516. PROCESS OF PLACING CASING IN WELLS. CHARLES W. WHITNEY, Chicago, Ill. Filed Dec. 6, 1915. Serial No. 65,163. (Cl. 166—21.)

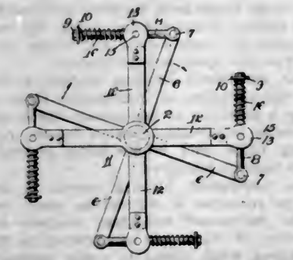


1. The process of introducing a casing into a well consisting in drilling the well filling the well with filling material, placing the casing on the filling material, and removing the filling material through the casing.

2. The process of introducing a casing into a well consisting in drilling the well, filling the well with filling material, placing a section of casing on the column of filling material in the well, removing filling material until the section has settled to a desired extent, placing another section on the first mentioned section, removing filling material until the second section has settled to a desired extent, and thus continuing until the first section has reached its final position.

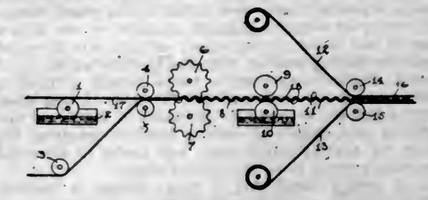
3. The process of constructing a well, consisting in drilling the well, filling the well with filling material, placing on the filling material a casing having a footing which extends into the casing, removing the filling material through the casing to permit the casing to settle to its final position, and then removing that portion of the footing which extends into the casing.

1,189,517. SHOCK-ABSORBING SHAFT-COUPLING. LEE WILLIAMSON, Cache, Okla. Filed July 23, 1913. Serial No. 780,791. (Cl. 64—18.)



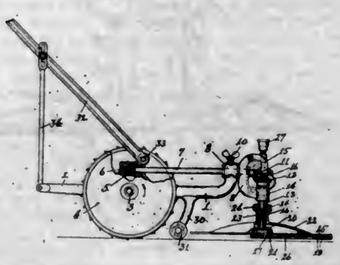
A shock absorbing shaft coupling including in combination, a drive shaft composed of driving and driven sections disposed in alined relation, a collar rigidly mounted on each of the sections adjacent the meeting ends thereof, a set of arms radiating from each collar at diametrically opposite points and also at an angle of 90° with respect to each other, a rod pivoted to each of the arms of one section, bearing extensions arranged on the respective faces of the outer end of each of the arms of the other section, a bearing pivoted between said extensions of each said other section for guiding the free end of one rod therethrough, removable abutments adjustably associated with the free ends of said rods, and coil springs disposed about said rods and having the respective ends thereof bearing against said bearings and said abutments so that resistance to relative rotation of the shaft sections will be equidistantly applied circumferentially of said sections to relieve the said sections of a twisting strain.

1,189,518. METHOD OF MAKING CORRUGATED BOARD. CHARLES D. WOOD, Lakewood, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 19, 1914. Serial No. 857,489. (Cl. 154—33.)



In a method of making corrugated board sheets, the steps which consist in first cementing together a plurality of sheets of paper with a stiffening binder spread evenly over the entire area of the opposite surfaces of such sheets, corrugating such cemental sheets before the binder sets, and then cementing a sheet of paper to the crests of the corrugations on each side of such built up corrugated sheet.

1,189,519. LAWN-MOWER. JOHN B. WORD, Latrobe, Cal., assignor of two-thirds to James M. Vogell, Sacramento, Cal. Filed Oct. 25, 1915. Serial No. 57,739. (Cl. 56—19.)



1. A mower comprising a frame having a traction wheel; a fixed stem depending from the forward end of the frame; a stationary cutting member carried by said stem; a sleeve carried by the frame and revolubly fitted on the stem as an axis; a rotatable cutting member carried by the sleeve in cutting rotation to the stationary cutting member, said rotatable member comprising a cupped disk having its convex side upward, a bottom shield for the disk, and knife-blades projecting from the periphery of the disk; an anti-friction thrust bearing between the lower end of the sleeve and the stationary cutting member, said bearing being housed within the cupped disk; and means to rotate the sleeve from the traction wheel.

2. A mower comprising a frame having a traction wheel; a fixed stem depending from the forward end of

the frame; a stationary cutting member carried by said stem; a sleeve carried by the frame and revolubly fitted on the stem as an axis; a rotatable cutting member carried by the sleeve in cutting relation to the stationary cutting member, said rotatable member comprising a cupped disk having its convex side upward and provided with a hub fitted for vertical adjustment on the sleeve, a bottom shield for the disk, and knife-blades projecting from the periphery of the disk; set-screws in the disk hub bearing on the sleeve to fix the disk in the position adjusted whereby the cutting relation of the cutting members is varied; an anti-friction thrust bearing between the lower end of the sleeve and the stationary cutting member, said bearing being housed within the cupped disk; and means to rotate the sleeve from the traction wheel.

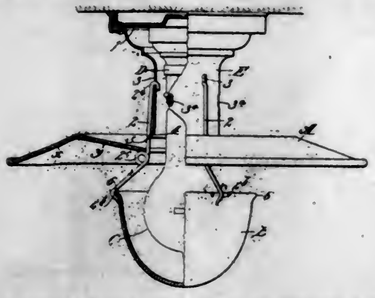
3. In a mower, the combination of a frame having a traction wheel; a fixed hollow stem carried by the frame; co-acting cutting members one rotatable about said stem as an axis and the other stationary and carried by said stem, the teeth of the stationary member having depressed centers and raised cutting edges; means for conveying abrasive material supplied to the hollow stem to said raised cutting edges; and means to drive the rotatable cutting member from the traction wheel.

4. A mower comprising a frame having a traction wheel; associated stationary and rotatable cutting members; a bracket horizontally journaled in the frame and carrying said associated cutting members adapting the latter for angular adjustment; and means to drive the rotatable member from the traction wheel.

5. A mower comprising a frame having a traction wheel; associated stationary and rotatable cutting members; a bracket horizontally journaled in the frame and carrying said associated cutting members adapting the latter for angular adjustment; means for fixing them in the plane to which they are adjusted; and means to drive the rotatable member from the traction wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,189,520. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed Sept. 13, 1915. Serial No. 50,496. (Cl. 240—78.)



1. A lighting fixture comprising a top reflector, a shield arranged under the source of light, and a plurality of sustaining devices for said shield consisting of rods provided with bent portions on which said top reflector rests.

2. A lighting fixture, comprising a top reflector, a shield arranged under the source of light, and a plurality of sustaining devices that support said reflector and shield, each of said devices consisting of a single member or element having a relatively long shank provided intermediate its ends with means that assists in carrying the weight of said top reflector, and provided at its opposite ends with means that coöperates with a supporting structure and with said shield.

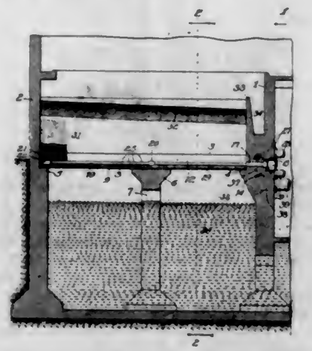
3. A lighting fixture, comprising a top reflector, a shield arranged under the source of light, and a plurality of sustaining devices that carry said top reflector and shield and which are held pressed tightly against the shield by reason of said top reflector bearing upon said devices.

4. An electric lighting fixture comprising a shell that forms a housing for the lamp socket in which the lighting unit is mounted, a top reflector, a shield arranged under the lighting unit, and rods detachably connected to said shell and acting as a support for the shield and the top reflector.

5. A lighting fixture comprising a top reflector, a shield arranged under the source of light, a supporting element arranged above the top reflector, a plurality of sustaining rods for said shield that depend from said supporting element, and integral portions on said rods that carry said top reflector and said shield.

[Claims 6 to 17 not printed in the Gazette.]

1,189,521. UNDERDRAIN FILTRATION SYSTEM. HENRY A. ALLEN, Chicago, Ill. Filed Dec. 2, 1915. Serial No. 64,716. (Cl. 210—8.)



1. In an underdrain filtering system, a filtering-bed floor having formed therein a plurality of substantially parallel valleys for the reception of distributing pipes, perforated distributing pipes located in said valleys, a header in communication with the ends of said pipes said header being provided with openings in its outer wall for the passage of said pipes to permit their insertion or removal, and means for normally closing said openings.

2. An underdrain filtering system comprising a filtering bed floor having therein a plurality of substantially parallel valleys for the reception of distributing pipes, perforated distributing pipes located in said valleys, a filter gallery having therein a header arranged at an angle to the axes of said pipes and in communication with the open ends thereof, said header being provided with normally closed openings in its outer wall accessible from said filter gallery, a filtering bed, means for forcing fluid under pressure into said header and means for draining said bed from the upper surface thereof.

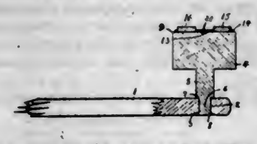
3. In an underdrain filtering system, a filtering-bed floor for the reception of distributing pipes, said floor comprising a plurality of juxtaposed reinforced concrete beams forming longitudinal valleys for the reception of distributing pipes, said beams being grouted together upon their lines of juncture.

4. In an underdrain filtering system, a filtering-bed floor for the reception of distributing pipes composed of a series of juxtaposed reinforced concrete beams, the upper portion of which are constructed to form longitudinal valleys while aiding to resist vertical stress.

5. In an underdrain filtering system, a filtering-bed floor for the reception of distributing pipes composed of a series of juxtaposed reinforced concrete beams, said beams being cut away from a level above the base to the top to form valleys for said pipes.

[Claims 6 to 11 not printed in the Gazette.]

1,189,522. TYPE-BAR. OLIVER PERRY ANDERSON, Nashville, Tenn. Filed Sept. 21, 1915. Serial No. 51,750. (Cl. 197—36.)

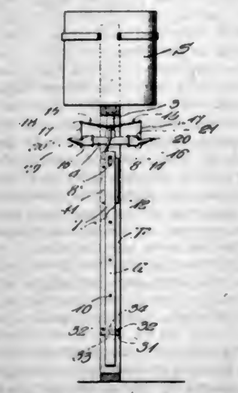


1. In a device of the class described, the combination with a type bar, of means to provide for the interchanging of the type upon the bar, means to render impossible the positioning of the type in inverse order upon the type bar at any stage, and means for locking said type upon said bar, said locking means comprising a recess and a lug for locking engagement with the recess.

2. In a device of the class described, the combination with a type bar, of a type block secured upon said type bar, said type block having a flat face and its side walls disposed at different angular relations to its face, a type plate having depending resilient members of the contour of the side walls of said block for embracing the same, and means for detachably securing said type plate upon said type block.

3. In a device of the class described, the combination with a type bar, of a type block secured upon said bar, said type block having a flat face provided with a centrally disposed recess therein, one of the side walls of said type block being acutely undercut, the other of the side walls of the type block being disposed in right angular relation to the face of said block but having its lower portion acutely undercut, a type plate for said type block having a centrally disposed lug adapted to seat in the recess of said type block for detachably securing said type plate upon said type block, said type plate having depending resilient side members, one of which is formed to snugly engage the acutely undercut side wall of said type block, the other formed to snugly engage the right angularly disposed side wall of said type block and having its lower edge inwardly bent for engaging the lower undercut portion of said side wall, whereby to render impossible the positioning of said type plate upon said type block at any stage with the type in inverse order.

1,189,523. HOG-DISINFECTANT SPRINKLER. BERT ARMSTRONG, Seaton, Ill. Filed July 1, 1915. Serial No. 37,489. (Cl. 119—159.)



1. A device of the character described comprising a gate, and a spraying device having valve outlets on either side of the gate singly operated by the movement of the same.

2. A device of the character described comprising a supply pipe having valved openings at either end, and a gate adapted to be swung in either direction normally positioned in a plane at right-angles to the plane of said pipe, and said gate operating the valved end of the supply pipe positioned in the direction of its movement.

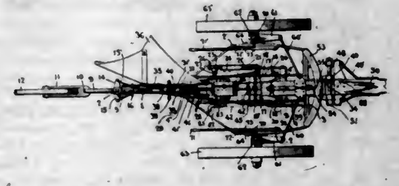
3. A device of the character described comprising a frame, a gate hingedly and slidably mounted in said frame, a spraying device operated by the movement of the gate in either direction, and means for yieldably holding said gate when in central position.

4. A device of the character described comprising a frame, a gate hingedly and slidably mounted in said frame, and a spraying device having valved outlets on either side of the gate singly operated by the movement of the gate in either direction.

5. A device of the character described comprising a frame, a container, a supply pipe from the container projecting from the frame at either side, valves on the ends of said pipe, a gate hingedly and slidably mounted in said frame, and means carried by said gate to operate the valve positioned in the direction in which the gate is swung.

[Claims 6 to 12 not printed in the Gazette.]

1,189,524. SIDEHILL-PLOW. CHARLES ARTHUR BAAL, Sherrills Mount, Iowa. Filed Mar. 23, 1915. Serial No. 16,456. (Cl. 97—27.)



1. In a wheel-plow, a main frame, a supporting bar beneath said frame, parallel links between said bar and said frame, means for raising and lowering said bar, a plow beam pivoted to said bar and parallel therewith, plows on opposite sides of said beam, means for partially rotating said beam to raise one plow and lower the other, a bracket on said bar, and a double catch on said bracket to engage either plow when same is in raised position.

2. In a wheel-plow, a main frame, a non-rotative supporting bar beneath said frame, means for raising and lowering said bar in parallelism with said frame, a bracket on said bar, a double catch on said bracket, a plow beam pivotally connected with said bar, plows on opposite sides of said beam, and means for partially rotating said beam to engage one or the other of said plows with said catch.

3. In a wheel plow, a main frame comprising parallel side members, a bar, a pair of parallel links connecting said bar to said main frame, said links being inclined downwardly and rearwardly, manually operated means for lowering said bar, means independent of said manual means for normally holding said bar elevated, a plow beam provided on opposite sides with plows, one right and the other left handed, said bar having rounded portions, said plow beam being pivotally connected to said rounded portions, a bracket mounted on one of said rounded portions and extending upwardly between said parallel frame members and supported thereby, and a double catch on the upper end of said bracket for engagement with one or the other of said plows when elevated, and means carried by said bar for partially rotating said plow beam.

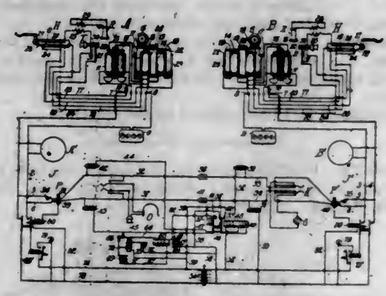
4. In a wheel plow, a main frame, a plow non-rotative supporting frame parallel therewith, means for raising and lowering said supporting frame in parallelism with said main frame, a plow beam parallel with and pivotally connected to said supporting frame, plows on opposite sides of said plow beam, and a drum carried by said supporting frame and having connection with said plow beam to partially rotate the latter.

5. In a wheel-plow, a main frame, a plow supporting frame parallel therewith, means for raising and lowering

said supporting frame in parallelism with said main frame, a plow beam parallel with and pivotally connected to said supporting frame, plows on opposite sides of said plow beam, a bracket extending upwardly from said supporting frame, a drum journaled in said bracket and provided with a hand operating means, and an endless belt passing over said drum and around said plow beam to partially rotate the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,189,525. TELEPHONE SYSTEM. GARRISON BABCOCK, Rochester, N. Y., assignor to Telechronometer Company, Rochester, N. Y., a Corporation of New York. Filed July 5, 1910. Serial No. 570,855. (Cl. 179—11.)



1. In a telephone system employing a rate for service based upon the number of messages and the duration of conversations originating at substations, the combination of telephone lines extending from substations to an exchange, a time meter at one of such substations for registering the length of time the substation is in use for outgoing messages, a message meter at such substation for recording the number of outgoing connections established and means associated with the message meter and transmitter for the use of the subscriber capable of preventing outgoing transmission and disabling the message meter.

2. In a telephone system employing a rate for service based upon the number of messages and the duration of conversations originating at substations, the combination of telephone lines extending from substations to an exchange, a time meter at one of such substations for registering the length of time the substation talking apparatus is in use for outgoing messages only, a message meter for outgoing messages only also at such substation, means for the use of the subscriber capable of preventing outgoing transmission and disabling the outgoing message meter, said means being further capable of permitting incoming transmission and the operation of the time meter.

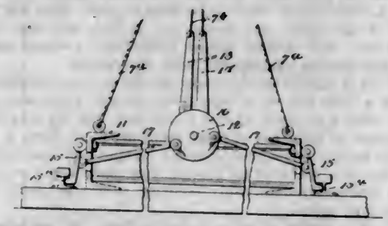
3. In a telephone system employing a rate for service based upon the number of messages and the duration of conversations originating at substations, the combination of telephone lines extending from substations to an exchange, a time meter at one of such substations for registering the length of time the substation talking apparatus is in use, a message meter at such substation for recording the number of connections established and means for connecting such apparatus with the line and simultaneously disabling the message meter and the substation transmitter only.

4. In a telephone system employing a rate for service based upon the number of messages and the duration of conversations originating at substations, the combination of telephone lines extending from substations to an exchange, a time meter at one of such substations for registering the length of time the substation talking apparatus is in use, a message meter at such substation, means for the use of the subscriber capable of preventing outgoing transmission of voice currents from the substation and disabling the message meter.

5. In a telephone system employing a rate for service based upon the number of messages and the duration of conversations originating at substations, the combination at a substation of talking apparatus, a time meter adapted to record the duration of outgoing messages, a message meter adapted to record the number of outgoing messages, means for simultaneously connecting such apparatus and meters in operative condition, and means for operatively connecting the receiver and time meter without operatively connecting the message meter and transmitter.

[Claims 6 to 44 not printed in the Gazette.]

1,189,526. TRACK-LAYING MACHINE. THEODORE A. BAILEY, Live Oak, Fla. Filed Apr. 8, 1912. Serial No. 689,181. (Cl. 57—9.)



1. In an apparatus of the class described, a load engaging and releasing mechanism comprising a frame, engaging plates at the sides thereof and mounted to be projected or retracted, a rock shaft, operative connections between the rock shaft and the plates, a pair of oppositely and simultaneously movable arms, connections for causing each arm in its alternate movement in a particular direction to turn said rock shaft, and a cable connected with said movable arms and operable to become slack at the lowering of the load onto a supporting surface and taut at raised positions for the automatic projection and retraction of the engaging plates.

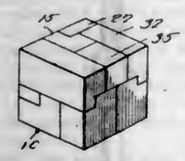
2. In an apparatus of the class described, a load engaging and releasing mechanism comprising a frame, engaging plates at the sides thereof and mounted to be projected or retracted, a rock shaft, operative connections between the rock shaft and the plates, a pair of oscillatory arms mounted on the rock shaft for opposite simultaneous movements, a disk keyed to the rock shaft and having oppositely directed perpheral notches, a second disk loose on the rock shaft and provided with peripheral shoulders having a greater spacing than the notches of the first disk, means for returning the second disk to an initial position, pawls provided on the arms for engagement with the peripheral notches and shoulders of said disks, and a cable connected with said oscillatory arms and operable to become slack at the lowering of the load onto a supporting surface and taut at raised positions for the automatic projection and retraction of the engaging plates.

3. In an apparatus, of the class described, in combination a cable, a load engaging mechanism carried thereby, including engaging plates mounted to be projected or retracted, a pair of arms movable oppositely and simultaneously, connections whereby each arm alternately and positively operates the plates, the movement of one arm causing the projection of the plates and the movement of the other arm causing the retraction thereof, and a connection between the arms and the cable.

4. In an apparatus of the class described, in combination, a cable, load engaging mechanism carried thereby comprising engaging plates mounted to be projected or retracted, a rock shaft, operative connections between the rock shaft and said plates, and mechanism for operating the rock shaft alternately in opposite directions in accordance with the position of the crane and including elements which are connected to said cable and are movable when the cable becomes slack at the lowering of the load and when the cable becomes taut at the inception of raising movement.

5. In an apparatus of the class described, in combination, a cable, a load engaging mechanism carried thereby, comprising engaging plates mounted to be projected or retracted, a pair of arms connected to the cable and movable simultaneously and in opposite directions when the cable becomes slack and again when it becomes taut, for positively moving the plates, and an element adapted to be moved by either arm and serving as an operative connection between the same and the plate moving mechanism, and means for correlating each arm alternately and in accordance with the movements of the arms, with the element.

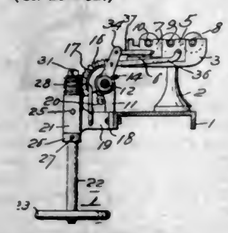
1,189,527. TOY PUZZLE. WILLIAM B. BARNHART, Adelaide, Pa. Filed Nov. 15, 1915. Serial No. 61,652. (Cl. 46—41.)



1. A composite puzzle comprising a foundation block, a vertical block interlocking with one side of the foundation block, side blocks interlocking with the foundation block and with the vertical block, a cap block interlocking with the side blocks and the vertical block, and a key block inserted between the side blocks and through the cap block.

2. A composite puzzle comprising a suitably notched foundation block, a vertical E-shaped block, interlocking therewith, side blocks interlocking with the aforesaid block, an H-shaped block interlocking with the side blocks and the E-shaped block, and an L-shaped key block disposed through the H-shaped block and through the side blocks.

1,189,528. ROLLER-SETTING DEVICE. LEROY M. BENNETT, Moosup, Conn. Filed Mar. 22, 1916. Serial No. 85,906. (Cl. 19—32.)

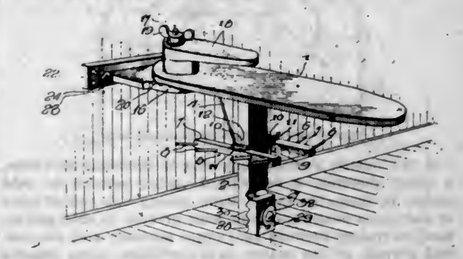


1. In a machine of the class described, a supporting structure; bearings carried by the supporting structure and movable with respect to each other; rolls journaled in the bearings; a bracket mounted on the supporting structure; an actuating shaft mounted for rotation on the bracket; a worm assembled with the actuating shaft; a drive shaft disposed transversely of the actuating shaft and journaled on the supporting structure; a rack carried by the drive shaft and meshing into the worm, the rack being provided with a scale; an indicator mounted on the bracket and coöperating with the scale; a crank arm carried by the drive shaft; and links connecting the crank with the bearings.

2. A machine of the type described comprising relatively movable bearings; rolls journaled in the bearings; links assembled with the bearings; a shaft having a crank arm wherewith the links are connected; means for supporting the shaft for rotation; and means for rotating the shaft.

3. In a machine of the class described, a supporting structure; bearings carried by the supporting structure and movable with respect to each other; rolls journaled in the bearings; an actuating shaft mounted for rotation on the supporting structure; a worm assembled with the actuating shaft; a drive shaft disposed transversely of the actuating shaft and journaled on the supporting structure; a rack carried by the drive shaft and meshing into the worm; crank arms carried by the drive shaft; and links connecting the arms with the bearings.

1,189,529. IRONING-BOARD ATTACHMENT. LARS P. BENSON, Minneapolis, Minn. Filed Feb. 14, 1916. Serial No. 78,219. (Cl. 68—10.)



1. The combination with a support, a pair of work holding racks, blocks of a corresponding size to the width of said support, swiveled to opposite sides of the same, and hinge connections between one edge of said blocks and the racks whereby said racks may be swung from operative horizontal position, in a vertical and horizontal plane to position them parallel with and adjacent to one of the contiguous sides of said support when not in use.

2. The combination with a support, of a pair of bars, a plurality of laterally projecting spaced alining rods on the outer surfaces of said bars, rectangular shaped blocks swiveled to the opposite sides of the support, and hinge members connecting one edge of the blocks and said bars, and the sides of said bars adjacent the blocks having inclined notches therein adapted to hold the bars and rods at an angle to the support.

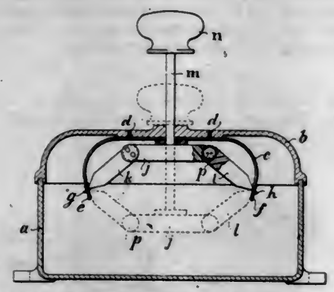
3. The combination with a support, of a pair of bars rectangular shaped in cross section, a plurality of laterally projecting spaced alining rods on the outer surface of said bars, hinge members secured to the upper surfaces of said rods, rectangular shaped blocks swiveled to opposite sides of said support, hinge members secured to the upper edges of said blocks, and connected with the hinge members on the upper surfaces of the same, said bars having inclined notches in their inner surfaces adjacent the blocks extending outwardly from the upper surface to the lower surface of the same, and frictional washers interposed between the rectangular shaped blocks and the opposite sides of the support.

1,189,530. ELECTRIC SWITCH. HERBERT HENRY BERRY, London, and WILLIAM JAMES MARKHAM, Birmingham, England. Filed Nov. 2, 1914. Serial No. 869,977. (Cl. 175—292.)

1. An electric switch comprising in combination a case, a cover therefor, a spring secured to said cover, a three-piece toggle joint having one end of each of the outer portions pivoted on said spring, the central portion of said joint being secured to a handle, concave portions at each end of said central portion, concave portions at one end of each of the outer portions of the joint, and a fuse cartridge between each of the adjacent concave portions on the central portion and the outer portion and adapted to be moved into engagement with contacts by said handle.

2. An electric switch having in combination a case, a cover therefor, a bow-shaped spring secured to said cover, a toggle joint having one end of each of the outer portions of the joint pivoted to said spring the other ends of said outer portions being concave, fuse cartridges between said concave portions and concave portions on the central portion of the toggle joint, and a handle for mov-

ing the joint so as to bring said cartridges into engagement with contacts.



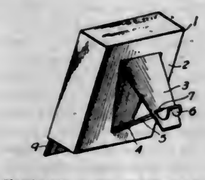
3. An electric switch comprising in combination a case, a cover therefor, a bow-shiped spring secured to said cover, an insulated toggle joint having one end of each of the outer portions of the joint pivoted to said spring, fuse cartridges between said outer portions and the central portion of the switch, said cartridges being capable of being rotated, and a handle for moving the joint so as to bring the cartridges into engagement with contacts.

4. An electric switch comprising a three-piece toggle joint the central piece of which is secured to an operating handle and the end pieces are spring controlled, means being furnished at the adjoining ends of the central piece and the end pieces to receive a fuse cartridge which acts as a pivot between the said pieces.

5. In an electric switch a toggle joint, the parts of which have mounted upon them cartridge fuses which act as pivots between the parts, said joint having a handle by which it is operated.

[Claim 6 not printed in the Gazette.]

1,189,531. EASEL DISPLAY-BOX. GEORGE F. C. BIERWIRTH, Kansas City, Mo. Filed May 3, 1915. Serial No. 25,449. (Cl. 211—24.)



1. An easel display box comprising a bottom part having a leg cut therein to separate from the box at its side and bottom edges, and an insert independent of but lying within the box and having a brace extending through the opening in the bottom of the box and locked to the easel leg.

2. An easel display box comprising a containing member having an easel leg cut from its bottom part and adapted for hinged movement, an insert located within the box and bridging the easel leg opening; the said insert having a narrow strip integral with and extending from its lower edge and initially nested within the box but ultimately folded to extend through the easel leg opening; the said leg having a slot and the brace having wings adapted for projection through the slot and for spreading to provide keeper members, for the purpose set forth.

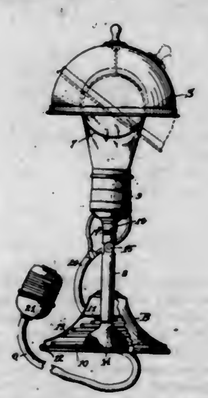
1,189,532. PROD-POLE. WILLIAM P. BISHOP, Edna, Tex., assignor of one-half to Blackaller Brothers, Pearsall, Tex. Filed Oct. 25, 1915. Serial No. 57,886. (Cl. 175—265.)

In a prod pole, a casing, a source of electricity therein, a vibrator, an induction coil, conductors of electricity connecting the source of electricity and the induction coil and the vibrator, a movable electrical contact in the casing near the end thereof, a stationary switch contact with relation to which the movable contact operates, means for actuating the movable contact, a conductor of electricity from the said contact to one pole of the vibrator, a plate held in spaced relation to the end of the casing,



an operating member carried thereby for pressing the switch into engagement with the contact, conductors of electricity connected to the secondary winding of the induction coil and electrodes through which the said conductors are connected.

1,189,533. PORTABLE ELECTRIC-LAMP STAND. AUGUST BOUCHERY, New York, N. Y., assignor, by mesne assignments, to Waterbury-Wallace Company, Inc., New York, N. Y., a Corporation of New York. Original application filed Aug. 22, 1914, Serial No. 858,009. Divided and this application filed Jan. 11, 1915. Serial No. 1,558. (Cl. 240—81.)



1. A portable lamp stand comprising a base, a lamp supporting stem slidably mounted in the base, a suction cup connected to the stem, and a spring carried by the base and connected to the stem to normally maintain the stem in position with the suction cup within the base, said spring being arranged to coöperate with the base to clamp the lamp to a support at the base.

2. In a portable lamp the combination of a hollow base, a stem mounted in the base to have longitudinal movement relative to the base, a lamp connected to the outer end of stem, a suction cup connected to the inner end of stem, and a spring to retract the stem, said spring being arranged so that a portion may be withdrawn from the base to cooperate with the base and clamp the lamp to a support at the base.

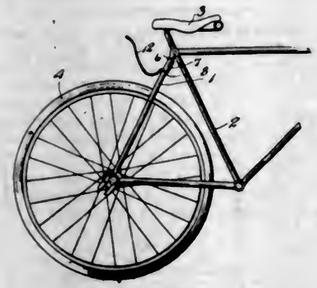
3. A portable electric lamp stand, comprising a base, a lamp supporting stem movable longitudinally with respect to the base, a suction device carried by the stem, and a spring clamping member carried by the base to coöperate with the base to clamp and support the lamp at the base, and said clamping member adapted to retract the stem.

4. In a lamp stand the combination of a base, a clamping member within the base arranged to be withdrawn and coöperate with the base as a clamp, a lamp supporting stem longitudinally slidable in the base and normally maintained in its uppermost position by the clamping member, and a suction device connected to the stem, said stem and suction device movable as a unit with respect to the base against the action of the clamping member.

5. In a lamp stand the combination of a base, a coiled spring secured within and housed by the base, a portion of the spring being arranged to be withdrawn from the base to coöperate therewith as a clamp, a lamp supporting stem slidably mounted in the base and connected to the spring, and a suction device connected to said stem within the base and arranged to be projected out from the base against the tension of the spring by the stem, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,189,534. COAT-PROTECTOR. FRED E. BRESLER, Bay City, Mich. Filed Aug. 13, 1915. Serial No. 45,423. (Cl. 208—140.)



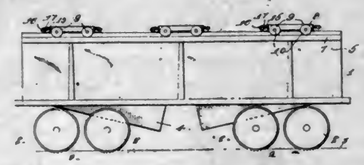
1. A coat protector comprising spaced apart wire elements connected at their ends by horizontal cross members, means formed in said elements adjacent one cross member for detachably securing the protector to the rear fork of a bicycle or motorcycle, and bends in said elements between the ends thereof whereby when attached to a bicycle or motorcycle, the ends of the protector are located above the middle portion thereof.

2. A coat protector formed from a single piece of wire including a horizontal section having loops formed at each end and thence extending downwardly and outwardly for a short distance, other loops formed at the ends of said downwardly and outwardly extended portions thence extending downwardly for a distance and then curved upwardly, and a second horizontal section connecting the ends of said portions, substantially as described.

3. In combination with the rear fork of a bicycle or motorcycle, a coat protector including a horizontal section lying across and between the fork members, loops integral with said cross members engaging with the fork, and means connected with said loops and lying back of the fork adapted to receive a garment and prevent it from entering between the members of the fork, substantially as described.

4. A coat protector including spaced apart wire elements connected at their ends by substantially horizontal cross members, said wire elements being formed to make depressed central portions, and means formed in the wire elements adjacent one of the cross members for detachably engaging and securing the protector to the downwardly and outwardly extending members of the rear fork of a bicycle or motorcycle, substantially as described.

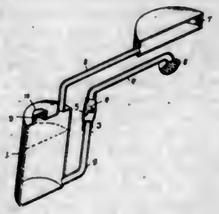
1,189,535. CAR-BODY. ALFRED F. BREST, Williamsport, Pa. Filed Oct. 21, 1915. Serial No. 57,180. (Cl. 105—78.)



1. A device of the character described including a rectangular car body, a cover on the upper edge of the body and provided with a plurality of uniformly spaced and transversely arranged openings, tracks secured longitudinally of the sides of the body and in alinement with the upper edges thereof, a plurality of rectangular doors arranged transversely of the cover for closing the openings, rollers rotatably mounted on the end edges of the doors operating on the tracks and arranged in close relation with the side edges of the cover to permit of and to guide the longitudinal movement of the doors, and means for removably locking the doors above the openings.

2. A closure for car bodies including a cover having a plurality of uniformly spaced openings therein, doors movably mounted on the cover and movable longitudinally to close the openings, staples secured to the side edges of the doors, a plurality of hasps each being formed of two hinge sections, one section of each hasp being secured to the top of the cover and the other sections being engageable with the adjacent hasps on the doors when the doors are arranged over the openings, a plurality of locks engageable with the staples for removably holding the movable sections in engagement with the sides of the doors, and the movable sections being foldable to engage the rigid sections when the locks are released to permit of the removal of the doors from over the openings.

1,189,536. AUTOMATIC FIRE-EXTINGUISHER. WILLIAM H. BURTIS, Decorah, and MONROE S. HOWARD, Waukon, Iowa. Filed Oct. 1, 1915. Serial No. 53,562. (Cl. 169—12.)



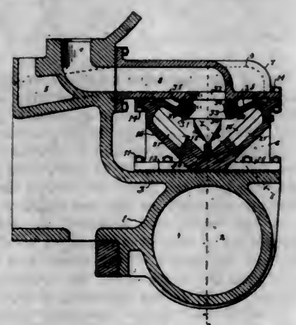
1. An automatic fire extinguisher comprising a tank adapted to contain a fire extinguishing liquid, a discharge pipe connected to the lower end of said tank, a nozzle at the free end of the discharge pipe, an expansion chamber above said nozzle, and a pipe connecting the expansion chamber with the upper end of the tank whereby when heat is applied to the expansion chamber, the liquid within the tank will be forced through the discharge pipe and nozzle.

2. An automatic fire extinguisher, comprising a tank adapted to contain a fire extinguishing liquid, a discharge pipe, a valve in said discharge pipe, a spraying nozzle at the end of the discharge pipe, and an expansion chamber

positioned over said nozzle adapted to automatically apply pressure on the liquid and force the same through said discharge pipe and nozzle.

3. An automatic fire extinguisher, comprising a fluid receiving tank, a discharge pipe connected to said tank, a nozzle at the end of the discharge pipe, an expansion chamber above said nozzle, and a pipe connecting the expansion chamber with the tank whereby when heat is applied to the expansion chamber, the liquid within the tank will be forced through the discharge pipe and nozzle.

1,189,537. SLIDE-VALVE. FRANK D. BUTLER, Burlington, Iowa. Filed July 26, 1915. Serial No. 41,855. (Cl. 136—13.)



1. In combination in a steam engine, a cylinder, a steam chest thereon having a pair of inclined seats, each provided with a plurality of pairs of ports, and passages connecting said pairs of ports with the opposite ends of the cylinder, a slide valve of triangular cross section and having a pair of inclined seats, each seat having a plurality of live steam ports and a plurality of exhaust steam ports adapted to register with the pairs of ports in said seats, a steam chest cover having exhaust and inlet manifolds adapted to supply and receive steam to and from said steam chest.

2. In combination in a steam engine having a cylinder, a steam chest thereon having a pair of inclined seats provided with ports leading to the ends of the cylinder, a hollow slide valve triangular in cross-section and having a pair of inclined seating surfaces provided with inlet and exhaust ports adapted to register with the ports in said seats, a steam chest cover having exhaust and inlet manifolds, the inlet manifold opening into said hollow valve, a packing construction for said valve including a cylindrical body portion fitting into the hollow portion of said valve and having resilient packing rings, said packing construction also including an annular flange and resilient means bearing against said valve and said annular flange to force the same against the opening from said inlet manifold.

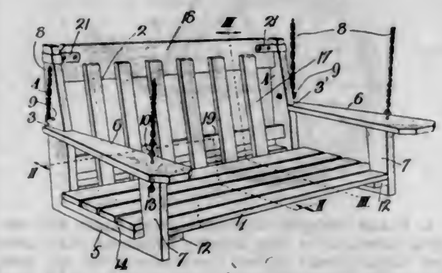
3. In combination in a steam engine having a cylinder with passages leading to each end of the same, a steam chest thereon having a pair of inclined seats, each seat having a plurality of ports leading to said passages to one end of the cylinder, a valve triangular in shape and having a hollow compartment therein, said valve having a pair of inclined seating surfaces and having a plurality of inlet ports on each seating surface communicating with said hollow compartment and a plurality of exhaust ports on each surface communicating within said steam chest, said ports adapted to register with the pairs of ports in said seats in said steam chest, a steam chest cover having inlet and exhaust connections, said inlet connection supplying live steam to the hollow compartment within said valve.

4. In combination in a steam engine, a cylinder having a comparatively flat top and provided with an upper extension with connections for exhaust and supply of steam, said cylinder having passages to each end thereof, a steam chest mounted on said flat top and having a pair of inclined seats provided with a plurality of ports communicating with said passages, a valve having a pair of inclined seating surfaces corresponding to said seats, said valve being hollow and having an inlet opening out of said hollow portion, a steam chest cover having passages adapted to communicate with said inlet and exhaust connections, said inlet passage communicating with said opening from said hollow portion, said valve having a plurality of ports on each of said seating surfaces communicating with said hollow portion to supply live steam to the cylinder and also having a plurality of exhaust ports on each seating surface communicating with the compartment provided outside of said valve for the exhaust of steam from said cylinders.

5. In combination in a steam engine, a cylinder, a steam chest thereon having a plurality of rectangular valve seats, a valve of triangular shape in cross-section fitting said seats and having an inner compartment, said steam chest having an inlet passage, said valve having a flanged packing member surrounding the opening of said inlet passage so that said inlet passage is in communication with said compartment, said valve dividing the steam chest into compartments outside thereof which are the exhaust steam compartments, a plurality of ports leading from each end of the cylinder to said seats, said valve having a plurality of ports leading from said inner compartment to said seats, whereby a plurality of passages are provided to each end of the cylinder.

[Claims 6 to 8 not printed in the Gazette.]

1,189,538. PORCH-SWING. ROY C. CASHNER, Kansas City, Mo. Filed July 24, 1915. Serial No. 41,662. (Cl. 155—3.)



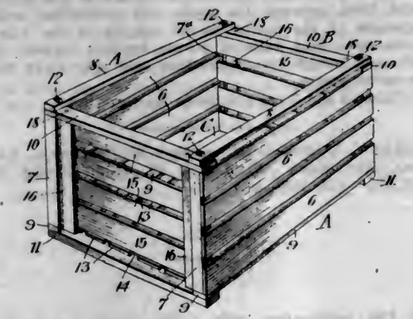
1. A porch swing comprising separate end sections, seat and back members, the back member having tapered upper ends, and clamps on the back member shaped to receive the upper ends of the standards, substantially as set forth.

2. In a porch swing, end sections each comprising a back standard and a front bar, a supporting rail, and an arm member, a seat comprising transverse connecting bars and spaced strips; the intermediate strips being longer than the edge strips to project between the end standards and front bars, bars connecting the projecting ends of the seat strips and a back member in keyed relation to the seat and end section.

3. A porch swing comprising independent end and seat members, the ends having standards provided with tapered upper ends, a back in keyed relation to the seat, and straps on the back fitting over the tapered ends of the end sections, for the purpose set forth.

1,189,539. CRATE. JAMES BICKNELL CASTLE, Honolulu, Hawaii. Filed Aug. 26, 1914. Serial No. 858,581. (Cl. 217—43.)

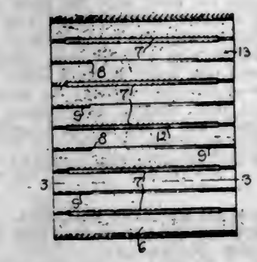
1. A crate comprising side walls, corner posts secured to the ends of the side walls at the inner side thereof, stiffening bars terminally overlapping the ends of the corner posts, rod bolts passing through said overlapping ends of the stiffening bars, each corner post having a groove in one of its two inner faces to receive the bolt, and end walls and a bottom held within the structure so formed.



2. A crate comprising, side walls, corner posts secured to the side walls, each corner post having a groove in each of two faces, stiffening bars terminally overlapping the ends of the corner posts, a bolt in one of the grooves in each corner post adapted to clamp the overlapping ends of said bars to the corner post, a bottom, ends engaging the other grooves in the corner posts, and a cover, substantially as described.

3. In a crate, corner posts each provided with grooves the full length of two adjacent faces, slats having their ends secured to the third faces of said corner posts, stiffening bars with their ends overlapping the ends of the corner posts, bolts passing through one of the grooves in each corner posts and through the overlapping ends of said bars, and end walls composed of slats attached to cleats, the ends of said slats adapted to engage the other grooves in the corner posts, substantially as and for the purpose described.

1,189,540. RADIATOR CONSTRUCTION. JOSEPH S. CHIMERA, Buffalo, N. Y. Filed July 24, 1915. Serial No. 41,761. (Cl. 257—130.)



1. A radiator core embodying sheet metal units each having a series of spaced, laterally projecting open plaits formed therein, said metal sheets being arranged in pairs closely adjacent to each other with the respective series of plaits alternately disposed and projecting in relatively opposite directions, each pair of units thereby providing a water passage having spaced horizontal branches, and additional skeletonic units arranged between said spaced pairs of first named units and also provided with laterally projecting plaits respectively engaging the opposed metal sheets of said first named units and dividing the space between the same into a plurality of intercommunicating passages.

2. A radiator core embodying a multiplicity of units each formed from a sheet of metal having spaced longitudinally extending plaits formed therein, the metal sheets of certain of the units having their body portions cut out, the latter units and the imperforate units being arranged in pairs with their plaits extending in opposite directions and engaging the adjacent metal sheets intermediate of the plaits thereon whereby a multiplicity of air passages are formed with the adjacent passages in communication with each other.

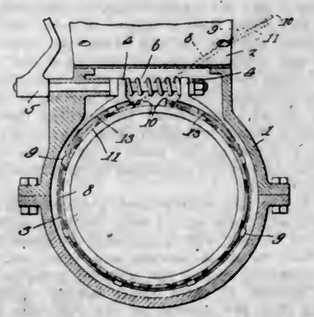
3. A radiator core embodying a plurality of units each formed from a metal sheet bent to provide a plurality of spaced longitudinally extending plaits therein, said units being arranged in pairs with the plaits thereon alternately disposed and extending in opposite directions, the metal sheets of alternate pairs of units and the plaits thereon having their intermediate portions cut out, the plaits of one unit bearing against the metal sheet of an adjacent unit, said plaits forming a multiplicity of air passages arranged in tiers, the adjacent tiers of passages communicating with each other, the imperforate metal sheets of the alternate pairs of units being spaced apart to provide water passages between the walls thereof.

4. A radiator core consisting of a plurality of spaced pairs of sheet metal units, the metal sheets in each pair being spaced apart and each having a plurality of laterally projecting open plaits therein to provide water passages, the plaits on the opposed units in adjacent pairs being disposed in staggered relation with respect to each other, and vertically disposed metal strips arranged between the spaced pairs of units at each end thereof and contacting with the plaits on the opposed metal sheets, said vertical strips having lateral projections in line with the plaits of one metal sheet and in contact with the opposed metal sheet between the plaits thereof.

5. A radiator core consisting of a plurality of spaced pairs of sheet metal units each having spaced, laterally extending open plaits therein to provide water passages, and an additional pair of sheet metal units arranged between the adjacent pairs of first named units and provided with oppositely extending plaits having their opposed walls in intimate contact throughout their length, said plaits bearing against the opposed first named units.

[Claim 6 not printed in the Gazette.]

1,189,541. REMOVABLE LINING FOR FRICTION-BANDS. CLAYTON D. COLLEY, Narrows, Va. Filed Dec. 9, 1915. Serial No. 65,980. (Cl. 74—37.)



1. The combination with a friction band, and lugs outstanding therefrom and having side grooves, of a lining slidable longitudinally into and out of engagement with the band, said lining including side ears slidable within the grooves and along the edges of the band, said ears constituting means for holding the lining to the band.

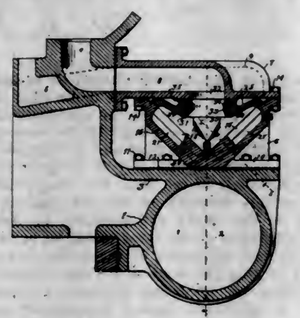
2. The combination with a friction band, and lugs outstanding therefrom and having side grooves, of a lining slidable longitudinally into and out of engagement with the band, said lining including side ears slidable within the grooves and along the edges of the band, said ears constituting means for holding the lining to the band, and means upon the ends of the lining and cooperating with the ends of the band to hold the lining against longitudinal displacement.

3. The combination with a friction band having spaced depressions of varying depth, of a lining including a

positioned over said nozzle adapted to automatically apply pressure on the liquid and force the same through said discharge pipe and nozzle.

3. An automatic fire extinguisher, comprising a fluid receiving tank, a discharge pipe connected to said tank, a nozzle at the end of the discharge pipe, an expansion chamber above said nozzle, and a pipe connecting the expansion chamber with the tank whereby when heat is applied to the expansion chamber, the liquid within the tank will be forced through the discharge pipe and nozzle.

1,189,537. SLIDE-VALVE. FRANK D. BUTLER, Burlington, Iowa. Filed July 26, 1915. Serial No. 41,855. (Cl. 136—13.)



1. In combination in a steam engine, a cylinder, a steam chest thereon having a pair of inclined seats, each provided with a plurality of pairs of ports, and passages connecting said pairs of ports with the opposite ends of the cylinder, a slide valve of triangular cross section and having a pair of inclined seats, each seat having a plurality of live steam ports and a plurality of exhaust steam ports adapted to register with the pairs of ports in said seats, a steam chest cover having exhaust and inlet manifolds adapted to supply and receive steam to and from said steam chest.

2. In combination in a steam engine having a cylinder, a steam chest thereon having a pair of inclined seats provided with ports leading to the ends of the cylinder, a hollow slide valve triangular in cross-section and having a pair of inclined seating surfaces provided with inlet and exhaust ports adapted to register with the ports in said seats, a steam chest cover having exhaust and inlet manifolds, the inlet manifold opening into said hollow valve, a packing construction for said valve including a cylindrical body portion fitting into the hollow portion of said valve and having resilient packing rings, said packing construction also including an annular flange and resilient means bearing against said valve and said annular flange to force the same against the opening from said inlet manifold.

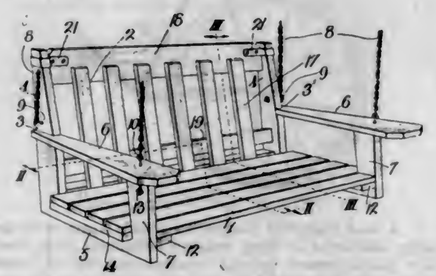
3. In combination in a steam engine having a cylinder with passages leading to each end of the same, a steam chest thereon having a pair of inclined seats, each seat having a plurality of ports leading to said passages to one end of the cylinder, a valve triangular in shape and having a hollow compartment therein, said valve having a pair of inclined seating surfaces and having a plurality of inlet ports on each seating surface communicating with said hollow compartment and a plurality of exhaust ports on each surface communicating within said steam chest, said ports adapted to register with the pairs of ports in said seats in said steam chest, a steam chest cover having inlet and exhaust connections, said inlet connection supplying live steam to the hollow compartment within said valve.

4. In combination in a steam engine, a cylinder having a comparatively flat top and provided with an upper extension with connections for exhaust and supply of steam, said cylinder having passages to each end thereof, a steam chest mounted on said flat top and having a pair of inclined seats provided with a plurality of ports communicating with said passages, a valve having a pair of inclined seating surfaces corresponding to said seats, said valve being hollow and having an inlet opening out of said hollow portion, a steam chest cover having passages adapted to communicate with said inlet and exhaust connections, said inlet passage communicating with said opening from said hollow portion, said valve having a plurality of ports on each of said seating surfaces communicating with said hollow portion to supply live steam to the cylinder and also having a plurality of exhaust ports on each seating surface communicating with the compartment provided outside of said valve for the exhaust of steam from said cylinders.

5. In combination in a steam engine, a cylinder, a steam chest thereon having a plurality of rectangular valve seats, a valve of triangular shape in cross-section fitting said seats and having an inner compartment, said steam chest having an inlet passage, said valve having a flanged packing member surrounding the opening of said inlet passage so that said inlet passage is in communication with said compartment, said valve dividing the steam chest into compartments outside thereof which are the exhaust steam compartments, a plurality of ports leading from each end of the cylinder to said seats, said valve having a plurality of ports leading from said inner compartment to said seats, whereby a plurality of passages are provided to each end of the cylinder.

[Claims 6 to 8 not printed in the Gazette.]

1,189,538. PORCH-SWING. ROY C. CASHNER, Kansas City, Mo. Filed July 24, 1915. Serial No. 41,662. (Cl. 155—3.)



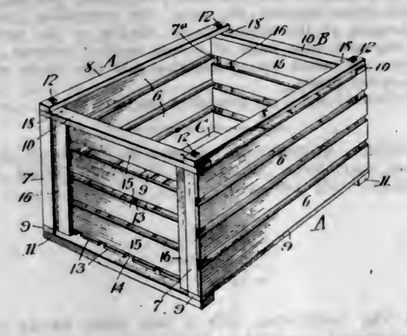
1. A porch swing comprising separate end sections, seat and back members, the back member having tapered upper ends, and clamps on the back member shaped to receive the upper ends of the standards, substantially as set forth.

2. In a porch swing, end sections each comprising a back standard and a front bar, a supporting rail, and an arm member, a seat comprising transverse connecting bars and spaced strips; the intermediate strips being longer than the edge strips to project between the end standards and front bars, bars connecting the projecting ends of the seat strips and a back member in keyed relation to the seat and end section.

3. A porch swing comprising independent end and seat members, the ends having standards provided with tapered upper ends, a back in keyed relation to the seat, and straps on the back fitting over the tapered ends of the end sections, for the purpose set forth.

1,189,539. CRATE. JAMES BICKNELL CASTLE, Honolulu, Hawaii. Filed Aug. 26, 1914. Serial No. 858,581. (Cl. 217—43.)

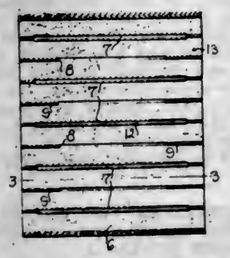
1. A crate comprising side walls, corner posts secured to the ends of the side walls at the inner side thereof, stiffening bars terminally overlapping the ends of the corner posts, rod bolts passing through said overlapping ends of the stiffening bars, each corner post having a groove in one of its two inner faces to receive the bolt, and end walls and a bottom held within the structure so formed.



2. A crate comprising, side walls, corner posts secured to the side walls, each corner post having a groove in each of two faces, stiffening bars terminally overlapping the ends of the corner posts, a bolt in one of the grooves in each corner post adapted to clamp the overlapping ends of said bars to the corner post, a bottom, ends engaging the other grooves in the corner posts, and a cover, substantially as described.

3. In a crate, corner posts each provided with grooves the full length of two adjacent faces, slats having their ends secured to the third faces of said corner posts, stiffening bars with their ends overlapping the ends of the corner posts, bolts passing through one of the grooves in each corner posts and through the overlapping ends of said bars, and end walls composed of slats attached to cleats, the ends of said slats adapted to engage the other grooves in the corner posts, substantially as and for the purpose described.

1,189,540. RADIATOR CONSTRUCTION. JOSEPH S. CHIMERA, Buffalo, N. Y. Filed July 24, 1915. Serial No. 41,761. (Cl. 257—130.)



1. A radiator core embodying sheet metal units each having a series of spaced, laterally projecting open plaits formed therein, said metal sheets being arranged in pairs closely adjacent to each other with the respective series of plaits alternately disposed and projecting in relatively opposite directions, each pair of units thereby providing a water passage having spaced horizontal branches, and additional skeletonic units arranged between said spaced pairs of first named units and also provided with laterally projecting plaits respectively engaging the opposed metal sheets of said first named units and dividing the space between the same into a plurality of intercommunicating passages.

2. A radiator core embodying a multiplicity of units each formed from a sheet of metal having spaced longitudinally extending plaits formed therein, the metal sheets of certain of the units having their body portions cut out, the latter units and the imperforate units being arranged in pairs with their plaits extending in opposite directions and engaging the adjacent metal sheets intermediate of the plaits thereon whereby a multiplicity of air passages are formed with the adjacent passages in communication with each other.

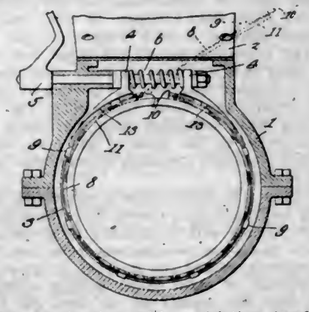
3. A radiator core embodying a plurality of units each formed from a metal sheet bent to provide a plurality of spaced longitudinally extending plaits therein, said units being arranged in pairs with the plaits thereon alternately disposed and extending in opposite directions, the metal sheets of alternate pairs of units and the plaits thereon having their intermediate portions cut out, the plaits of one unit bearing against the metal sheet of an adjacent unit, said plaits forming a multiplicity of air passages arranged in tiers, the adjacent tiers of passages communicating with each other, the imperforate metal sheets of the alternate pairs of units being spaced apart to provide water passages between the walls thereof.

4. A radiator core consisting of a plurality of spaced pairs of sheet metal units, the metal sheets in each pair being spaced apart and each having a plurality of laterally projecting open plaits therein to provide water passages, the plaits on the opposed units in adjacent pairs being disposed in staggered relation with respect to each other, and vertically disposed metal strips arranged between the spaced pairs of units at each end thereof and contacting with the plaits on the opposed metal sheets, said vertical strips having lateral projections in line with the plaits of one metal sheet and in contact with the opposed metal sheet between the plaits thereof.

5. A radiator core consisting of a plurality of spaced pairs of sheet metal units each having spaced, laterally extending open plaits therein to provide water passages, and an additional pair of sheet metal units arranged between the adjacent pairs of first named units and provided with oppositely extending plaits having their opposed walls in intimate contact throughout their length, said plaits bearing against the opposed first named units.

[Claim 6 not printed in the Gazette.]

1,189,541. REMOVABLE LINING FOR FRICTION-BANDS. CLAYTON D. COLLEY, Narrows, Va. Filed Dec. 9, 1915. Serial No. 65,980. (Cl. 74—37.)



1. The combination with a friction band, and lugs outstanding therefrom and having side grooves, of a lining slidable longitudinally into and out of engagement with the band, said lining including side ears slidable within the grooves and along the edges of the band, said ears constituting means for holding the lining to the band.

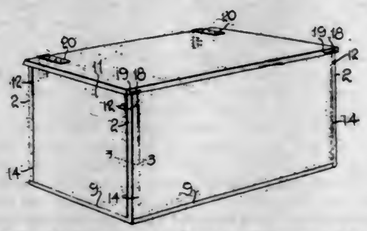
2. The combination with a friction band, and lugs outstanding therefrom and having side grooves, of a lining slidable longitudinally into and out of engagement with the band, said lining including side ears slidable within the grooves and along the edges of the band, said ears constituting means for holding the lining to the band, and means upon the ends of the lining and cooperating with the ends of the band to hold the lining against longitudinal displacement.

3. The combination with a friction band having spaced depressions of varying depth, of a lining including a

flexible backing strip, means on said strip for slidably engaging the edges of the band to hold the strip to the band, a fabric strip upon the inner face of the backing strip, fastening means extending through said strip and shiftable outwardly into the depressions, and means upon the ends of the backing strip and coöperating with the band for holding the lining against longitudinal displacement relative to the band.

4. The combination with a housing having an opening and a friction band within the housing, of a lining insertible through the opening and longitudinally along the inner surface of the band, said lining including means at the sides thereof for slidably engaging the edges of the band to hold the lining to the band, and means upon the ends thereof for engaging the ends of the band to hold the lining against longitudinal displacement relative to the band.

1,189,542. BOX, CRATE, AND LIKE CONSTRUCTION. HORACE B. COLLINS, Oklahoma, Okla. Filed Sept. 13, 1915. Serial No. 50,459. (Cl. 217—12.)



1. As an article of manufacture, a corner post for crates, boxes, or like articles having transversely L-shaped outer and inner webs held in spaced relation to each other, the outer web at the lower end extending beyond the inner web, both of said webs being inwardly bent at their lower ends, the edge of the lowermost inwardly bent portion of the outer web being peripherally notched.

2. A corner stay for crates, boxes, or like articles having outer and inner webs L-shaped in cross section and held in spaced relation to each other, the outer web at the lower end extending beyond the inner web, both of said webs being inwardly bent at their lower ends, the edge of the lowermost inwardly bent portion of the outer web being arcuate, the center from which the arcuate edge is struck being coincident with the corner formed by the intersection of the sides of the outer web and said edge having notches extending inward from the edge at an angle thereto.

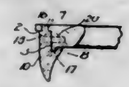
3. In a box or like construction a connecting member having outer and inner spaced webs the confronting faces of which are formed with a plurality of grooves, walls insertible into the space between said webs, and binding members extending around the inserted margins of said walls and formed of sheet metal having corrugations interlocking with the grooves on the webs, the margins of the binding members being rebent upon themselves to extend over the side edges of the webs.

4. In a box or like construction a corner post angular in cross section and having outer and inner webs spaced from each other, the confronting faces of the webs being grooved, box walls insertible between the webs, and members covering the margins of the walls and having corrugations interlocking with the grooves on the webs, said members having re-turned marginal portions which engage over the side edges of the webs.

5. In a box or like construction, a plurality of corner posts each angular in cross section and having outer and inner webs spaced from each other, the confronting faces of said webs being grooved, the outer web of each post at the lower end thereof extending beyond the inner web and both of said webs being inwardly bent at their lower ends to receive a board between them, means for interlocking a bottom board with the inwardly bent portion of one of said webs, said means permitting the bottom board and the corner post to be rotated with relation to each other in one direction to disengage the bottom board from between the webs, but preventing radial movement of the bottom board relative to the corner of the post, said walls or boards inserted between the webs, and means for interlocking said side walls with the corner pieces.

[Claims 6 and 7 not printed in the Gazette.]

1,189,543. HORSESHOE. GEORGE W. COVINGTON, Kansas City, Kans. Filed Oct. 29, 1915. Serial No. 58,581. (Cl. 168—34.)



1. The combination with a shoe plate, having one face recessed to provide a shelf, and said shelf having an opening therein, of a calk having its inner end seated against the shelf and having a lip on its body portion bearing against the recessed face of the plate, the inner end of the calk having a shank projected into the shelf opening.

2. The combination with a shoe plate, having one face recessed to provide a shelf, and said shelf having an opening therein, of a calk having its inner end seated against the shelf and having a lip on its body portion bearing against the recessed face of the plate, and means for attaching the calk to said plate, substantially as set forth.

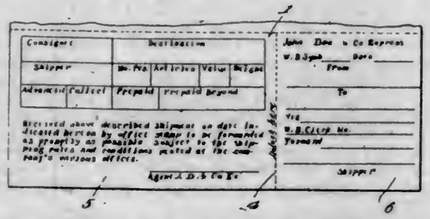
3. The combination with a shoe plate, having one face recessed, forming an overhanging shelf, and having threaded sockets in the base of the recess, of a calk having one end seated against the shelf and having a lip lying against the recessed face of the plate, a shank on the calk projected into the shelf opening, and screws projected through the body of the calk into the socket in said plate.

4. The combination with a shoe plate comprising a shelf and a back wall, of a calk comprising a shelf adapted for seating against the plate and a wall adapted for bearing against the plate wall, the plate and calk walls having one a socket and the other a boss whereby the parts are keyed together, for the purpose set forth.

5. The combination with a shoe plate, comprising a shelf and back wall, the latter having a socket opening through the face of the plate opposite the shelf, and a calk comprising a shelf, adapted for abutment against the face of the plate, and a wall having a boss adapted for seating in the plate socket.

[Claims 6 to 9 not printed in the Gazette.]

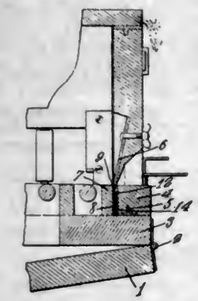
1,189,544. MANIFOLD EXPRESS WAY-BILL. ALBERT DELMER COWDEN, Waterford, Cal. Filed May 21, 1912. Serial No. 698,862. (Cl. 11—19.)



A shipping way bill blank, and a blank to rest thereon and including a receipt and label detachably connected, the way bill blank being adapted to receive imprints of the matter written upon the receipt and label, the receipt and way bill blank having superposed spaces and

accompanying legends for the entry of the names of the consignee and shipper, the place of destination, data identifying the shipment, financial data relative to the shipment, and for the signature of the carrier's receiving agent, the label and way bill blank having superposed spaces and accompanying legends for the entry of the way bill symbol and the date of shipment, the label and way bill blank having superposed spaces designated "From," "To," "Via," "Forward," and "Shipper."

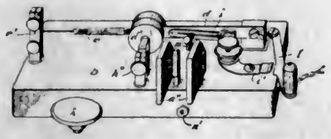
1,189,545. SLICING-MACHINE. THOMAS M. DANSBY, Pine Bluff, Ark. Filed Nov. 26, 1915. Serial No. 63,547. (Cl. 146—7.)



1. A blade guiding device for slicing machines, embodying a pair of strips to guide a blade therebetween, means for supporting and limiting the separation of said strips, and a sinuous leaf spring between the strips for separating them.

2. A blade guiding device for slicing machines embodying a bar, a strip resting thereagainst and having an upper toothed edge projecting above said bar, said strip having apertures, screws extending through said apertures and threadedly engaging said bar, a second strip having countersunk apertures, said screws having countersunk heads seatable in said countersunk apertures, the upper edge of the second strip being spaced below the upper edge of the first mentioned strip, and a sinuous leaf spring between the strips for separating them and engaged upon said screws, the upper edge of the spring being spaced below the upper edges of said strips.

1,189,546. TELEGRAPHIC SENDING-MACHINE. PAUL DINGER, Cleveland, Ohio, assignor of one-half to Albert Lynn Lawrence, Cleveland, Ohio. Filed Apr. 15, 1909. Serial No. 490,041. (Cl. 178—82.)



1. In a telegraphic sending-machine, the combination with automatic interrupter-apparatus and secondary circuit-closing mechanism, of common key mechanism for controlling the same respectively, comprising a horizontally pivoted member having an upwardly-extending finger-piece adapted to be rocked in opposite directions, substantially as set forth.

2. A telegraphic key mechanism, comprising suitable contacts and a member pivotally mounted for substantially horizontal actuation controlling the same, having upwardly-extending oscillating finger-mechanism, whereby said member is adapted to be actuated in either direction from the normal position, substantially as set forth.

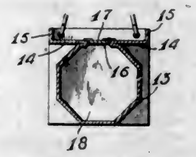
3. The combination in a telegraph key, of suitable contacts and actuating-mechanism therefor, comprising connected finger-pieces respectively movable substantially in horizontal and vertical planes, whereby undue strain may be avoided in operating the key, substantially as set forth.

4. The combination in a telegraphic sending-machine, with an interrupter device and auxiliary circuit-closing mechanism, of actuating means therefor, comprising a horizontally pivoted lever, upwardly-extending finger-pieces therefor, and a laterally positioned finger-piece, whereby the sending-machine may be actuated either by a horizontal rocking or vertical movement of the operator's hand, substantially as set forth.

5. In a telegraphic sending-machine, the combination with automatic interrupter mechanism adapted to send the dot impulses, a resilient spring-closed dash contact mechanism, and means for alternatively releasing the interrupter or closing the resilient dash-contact, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

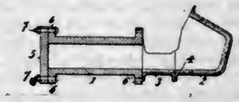
1,189,547. POULTRY-FEEDER. WILLIAM JENKS DUDLEY, Wilmington, Ohio. Filed Apr. 10, 1916. Serial No. 90,150. (Cl. 119—61.)



1. A poultry feeder comprising a feed trough, a platform closing the upper side thereof and having a central longitudinal slot through which the fowls may insert their heads, said platform being adapted to serve as a perch for the fowls when feeding, and means for suspending the feeder from an overhead support at a level to prevent rats and mice from reaching the same, said means serving to swingingly support said feeder to permit jarring thereof by the fowls lighting on the platform, thus agitating the feed to prevent the latter from piling up along the sides of the trough.

2. A poultry feeder comprising a sheet of metal having its opposite side edge portions bent upwardly and inwardly to form a feed trough with a contracted inlet, said portions being bent horizontally outward in opposite directions from the outer edges of the trough to form a horizontal platform which serves as a perch upon which the fowls stand when feeding, the edges of said platform being bent upwardly to provide side flanges, end plates secured over the ends of said trough and extending above the platform to form end flanges coöperating with said side flanges to prevent the fowls from scattering feed from the platform, and means for suspending the feeder at a sufficient height to prevent rats and mice from reaching the same.

1,189,548. APPARATUS FOR AND PROCESS OF CASTING INGOTS OF METALS AND ALLOYS. PIERRE HENRI GASTON DURVILLE, Paris, France. Filed Nov. 10, 1913. Serial No. 800,190. (Cl. 22—79.)



1. The hereindescribed improvement in the method of casting ingots comprising transferring molten metal from a suitable receptacle to a mold by means which cause the surface of the liquid to remain horizontal throughout the operation.

2. The hereindescribed improvement in the method of casting ingots comprising supporting the molten metal throughout the operation of introducing it into a mold so that the surface of the liquid body is maintained continuously horizontal.

3. The hereindescribed improvement in the method of casting ingots comprising introducing molten metal to a mold connected with a reservoir by means permitting liquid to flow from the reservoir to the mold with its upper surface horizontal throughout the operation, and then tilting the connected reservoir and mold to transfer metal from the reservoir to the mold.

4. An ingot casting apparatus comprising a reservoir and a mold connected by means forming a continuous straight line surface from one end of the interior of the reservoir to the opposite end of the mold, whereby when the apparatus is tilted the liquid body flowing from the reservoir to the mold will be supported so that the surface thereof is horizontal throughout the transfer operation.

5. An ingot casting apparatus comprising a reservoir, a mold, and a neck portion connecting the mold and reservoir, the openings at the ends of the neck being respectively of the same diameter as the outlet from the reservoir and inlet to the mold, and the body of the neck forming with the reservoir and mold an unbroken surface extending continuously from the closed end of the reservoir to the closed end of the mold, for the purpose described.

[Claim 6 not printed in the Gazette.]

1,189,549. BINDING AND COATING COMPOSITION. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Mar. 29, 1910. Serial No. 552,178. (Cl. 134—51.)

1. A fluent material, comprising a stiffening material, including a solid rubber resin and a softening agent including guayule resin as a stiffening agent all in the proportions substantially as described.

2. A fluent material, comprising a stiffening material, including Pontianak rubber resin and a softening agent, including guayule rubber resin as a stiffening agent all in the proportions substantially as described.

3. A fluent material comprising a solution of a saponifiable resinous body and an unsaponifiable rubber resin all in the proportions substantially as described.

4. A composition of matter for the protection of structural steel embedded in concrete comprising a solution of an unsaponifiable resinous body and a saponifiable body and Portland cement all in the proportions substantially as described.

5. A composition of matter for the protection of structural steel embedded in concrete, comprising a solution of a saponifiable rubber resin and an unsaponifiable rubber resin all in the proportions substantially as described.

[Claim 6 not printed in the Gazette.]

1,189,550. COATING COMPOSITION. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed July 25, 1911. Serial No. 640,401. (Cl. 134—51.)

1. A coating composition comprising essentially a substantial and influential proportion of unsaponifiable resinous finish-forming material, a thinner and a colloidal bodying agent comprising a vulcanized oil; said composition being stable, fluent and flowable and capable of drying on exposure in thin films to form a coherent firm adhesive waterproofing coating free from granulation.

2. A coating composition adapted for use as a concrete priming or finish composition comprising essentially a substantial and influential proportion of unsaponifiable resinous finish-forming material, a compatible thinner therefor and a colloidal thickener comprising vulcanized oil miscible with said thinner, and tung acids; said composition being stable, fluent and flowable, light colored, transparent to translucent in films of varnish-coating thickness, and capable of drying on exposure in thin films to form a substantially gloss-free, coherent, firm, adhesive waterproofing coating free from granulation and resistant to cement-alkali.

3. A coating composition comprising an unsaponifiable resinous finish-forming material, a thinner and vulcanized Chinese wood oil substantially in the proportions described.

1,189,551. TREATING CONCRETE. CARLETON ELLIS, Montclair, N. J. Filed Oct. 17, 1911. Serial No. 655,214. (Cl. 134—51.)

1. The process of waterproofing concrete which consists in coating and superficially impregnating same with a composition essentially a substantially unsaponifiable resinous body and Chinese wood oil.

2. The process of waterproofing concrete which comprises coating and superficially impregnating same with a fluent composition comprising Jelutong rubber resin and Chinese wood oil.

3. The process of impregnating concrete, which comprises applying thereto a composition comprising cold-cut Pontianak resin and Chinese wood oil.

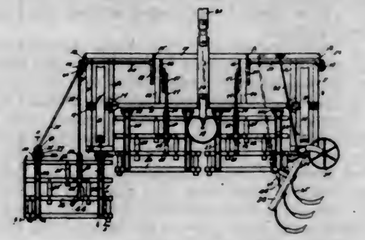
4. The process of impregnating concrete which comprises applying thereto a cold-cut solution of unfused Pontianak resin in a hydrocarbon solvent in conjunction with Chinese wood oil.

5. The process of treating surfaces to protect same which comprises applying thereto a composition comprising essentially resinous material of a substantially unsaponifiable character and Chinese wood oil in solution in a suitable thinner in substantially the proportions described.

1,189,552. [WITHDRAWN.]

1,189,553. [WITHDRAWN.]

1,189,554. ALFALFA-TILLAGE MACHINE. CHARLES E. FORKNER, Marshalltown, Iowa. Filed Mar. 17, 1915. Serial No. 15,080. (Cl. 55—93.)



1. In a device of the class described, a frame, supporting wheels at the ends thereof, a harrow section pivoted to the rear portion of the frame, and a harrow section mounted on the frame at the rear portion thereof, extending laterally beyond the frame and capable of being swung to position where it does not project laterally beyond the end of the frame.

2. In a device of the class described, a frame, supporting wheels at the ends thereof, a harrow section pivoted to the rear portion of the frame, a harrow section at the rear of the frame extending laterally therefrom, means for detachably securing the outer end of the front portion of said last harrow section to the forward portion of the frame at one end thereof, and means for securing the inner end of the front portion of the last named harrow section to the rear portion of the frame near one end thereof to permit universal movement of the section.

3. In a device of the class described, a frame, supporting wheels at the ends thereof, a harrow section pivoted to the rear portion of the frame, a harrow section mounted on the frame at the rear portion thereof, extending laterally beyond the frame and capable of being swung to position where it does not project laterally beyond the end of the frame, means for lifting the rear portions of said sections, and means for imposing yielding downward pressure thereon.

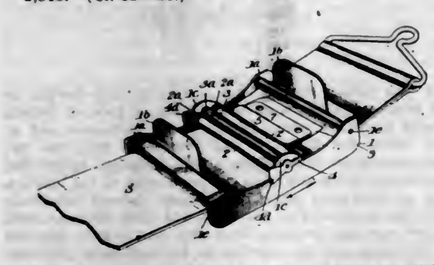
4. In a device of the class described, a frame, supporting wheels at the ends thereof, a harrow section pivoted to the rear portion of the frame, a harrow section

mounted on the frame at the rear portion thereof, extending laterally beyond the frame and capable of being swung to position where it does not project laterally beyond the end of the frame, a caster-wheel under the outer end of said last section, means for lifting the rear portions of said sections, and means for imposing yielding downward pressure thereon.

5. In a device of the class described, a frame, supporting wheels at the ends thereof, a harrow section pivoted to the rear portion of the frame, a harrow section at the rear of the frame extending laterally therefrom, means for detachably securing the outer end of the front portion of said last harrow section to the forward portion of the frame at one end thereof, and means for securing the inner end of the front portion of the last named harrow section to the rear portion of the frame near one end thereof to permit universal movement of the section, a caster-wheel under the outer end of said last section, means for lifting the rear portions of said sections and means for imposing yielding downward pressure thereon.

[Claim 6 not printed in the Gazette.]

1,189,555. STROPPER. WILLIAM JAMES FRANCIS, Pittsburgh, Pa. Filed Jan. 18, 1915. Serial No. 2,843. (Cl. 51—16.)



1. In a razor stropping device the combination with a frame adapted to be placed upon and reciprocated along a strap; of a transversely disposed roller and shaft journaled in the sides of said frame, and gearing between said shaft and roller, a yoke connected with said shaft and spanning the roller and adapted to be swung back and forth according to the rotation of the roller, a blade holder attached to said yoke, and an auxiliary blade holder adapted to be detachably engaged with the aforesaid blade holder, substantially as described.

2. A stropping device comprising a frame adapted to be placed upon and reciprocated along a strap, a roller and shaft journaled in said frame, gearing between said shaft and roller; a yoke rigidly attached to the ends of said shaft and spanning the roller, and a blade holder attached to said yoke and lying in a plane radial of the shaft, said yoke having a counterbalance attached thereto to counterbalance the weight of said holder, substantially as described.

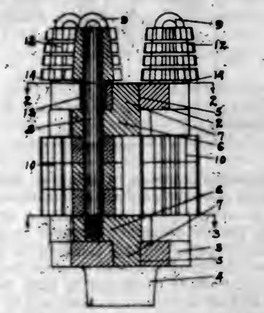
3. In a razor stropping device the combination with a frame adapted to be placed upon and reciprocated over a strap; of transversely disposed rollers, journaled in said frame, a shaft intermediate the rollers gearing between said shaft and rollers, a yoke bar connected with said shaft and spanning the rollers and adapted to be swung back and forth over said rollers according to the rotation of the latter, and a blade holder comprising a metal plate bent over said yoke the opposite ends of the plate forming lips adapted to hold a blade, substantially as described.

4. A stropping device comprising a frame stamped out of metal having depending sides connected by cross bars the latter being provided with upstanding ears, a pair of rollers journaled in said side members intermediate the said ears, a shaft journaled in the side pieces intermediate the said ears, intermeshing pinions on said shaft and rollers; a yoke rigidly attached to the ends of said shaft and extending across the frame, and a blade holder attached to said yoke and lying in a plane radial of the shaft and counterbalanced on the ends of said bearing.

5. In a razor stropping device the combination with a bar having a recessed central portion; of a blade holder composed of a piece of metal bent upon and over said recessed portion of the bar so as to engage said recessed portion of the bar to prevent its longitudinal movement on such bar, said plate having its forward ends extending beyond the recessed portion of the bar so as to prevent disengagement of the holder from the bar.

[Claim 6 not printed in the Gazette.]

1,189,556. TUBE-CLEANER. WILLIAM D. FULLER, Springfield, Ohio, assignor, by mesne assignments, to Elliott Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 30, 1915. Serial No. 58,737. (Cl. 83—64.)



1. In a tube cleaner, a rotary body having front and rear heads integral therewith, a plurality of pairs of oppositely disposed arms, the arms of each pair being spaced apart and having pivot pins seated in openings in the respective heads and removable from the inner sides of said heads and cutters mounted between each opposing pair of arms, substantially as described.

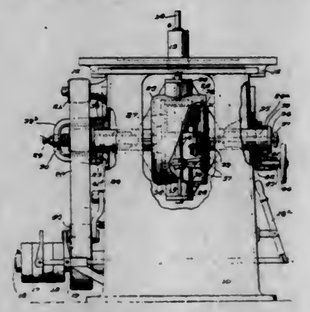
2. In a tube cleaner, a rotary body having front and rear heads, a plurality of oppositely disposed arms having outwardly extending pivot pins formed integrally therewith pivoted in and removable from bores in the respective heads, each pair of arms being spaced apart with a bolt extending through an opening in the free end of one of said arms and secured to the other arm and cutters mounted on said bolt between said arms, substantially as described.

1,189,557. GRINDING-MACHINE. FREDERICK N. GARDNER and FREDERIC E. GARDNER, Beloit, Wis., assignors of one-third to Louis Waldo Thompson, Beloit, Wis.; Alice M. Gardner executrix of said Frederick N. Gardner, deceased. Filed Nov. 23, 1912. Serial No. 733,026. (Cl. 51—5.)

1. In a grinding machine, a normally vertical grinding cylinder, manual means for inclining the axis of said cylinder, and means for rotating said cylinder, said inclining means comprising a casing, the spindle of said cylinder being journaled in said casing, a shaft connected to said casing, an arcuate rack fixed to the frame of said machine, a gear wheel fixed to said shaft and meshing with said rack, and means for operating said shaft.

2. In a grinding machine, a normally vertical grinding cylinder, means for inclining the axis of said cylinder, and manual means for rotating said cylinder, said inclining means comprising a casing, the spindle of said cylinder being journaled in said casing, a shaft connected to said casing, an arcuate rack fixed to the frame of said machine, a gear wheel fixed to said shaft and meshing with said rack, means for operating said shaft, and means for clamping said casing in its adjusted position.

3. In a grinding machine, a rotary grinding element, means for inclining said cylinder, and means for rotating said element, said rotating means comprising a driving shaft journaled in the frame of said machine, a drive pulley fixed to said shaft, two idle pulleys rotatably mounted in said frame and symmetrically placed with reference to said element, a fourth pulley operatively connected with the spindle of said element and positioned within the triangular space formed by said other pulleys, a belt-tightening pulley yieldingly fixed to the frame of said machine, and a belt running on all of said pulleys.

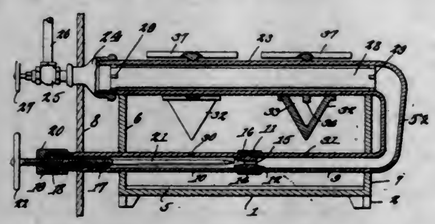


4. In a grinding machine, a grinding element, means for tilting said element, and means for rotating said element, said rotating means comprising a driving pulley and two idle pulleys rotatably mounted in the frame of said machine, a casing tiltably mounted in the frame of said machine, the spindle of said element being journaled in said casing, a shaft journaled in said casing, a disk fixed to one end of said shaft, a disk fixed to said spindle and frictionally in contact with said other disk, a pulley on the other end of said shaft, and a belt adapted to run on all of said pulleys.

5. In a grinding machine, a rotary spindle, and means for reciprocating the spindle, said means comprising a collar on said spindle, an annular flange on said collar, the axis of said flange being inclined to the axis of said spindle, and a finger projecting on each side of said flange and connected to the frame of said machine.

[Claims 6 to 8 not printed in the Gazette.]

1,189,558. BURNER. WILLIAM C. GEORGE, Iola, Kans., assignor of one-half to Daniel B. D. Smeltzer, Iola, Kans. Filed Mar. 20, 1916. Serial No. 85,430. (Cl. 158—63.)

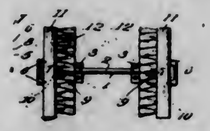


1. In a device of the class described, a supporting structure; and a U-shaped member mounted on the supporting structure, the U-shaped member comprising a retort and a burner tube disposed below the retort, the burner tube being provided with spaced openings; a valve seat in the burner tube and located between the openings; and a needle valve operating in the end of the burner tube, one end of the valve coöperating with the seat, the other end of the needle valve being accessible from a point beyond the burner tube, whereby the flow of fluid to one of said openings may be cut off from a point exterior to the supporting structure.

2. In a device of the class described, a supporting structure; a U-shaped member mounted on the supporting structure and including a retort and a burner tube located below the retort, the burner tube comprising separate sections having openings; a coupling uniting the ends of the sections; a nipple in the inner ends of the sections and provided with a circumscribing rib engaged between the end faces of the sections; and a needle valve in one of said sections and coöperating with the nipple.

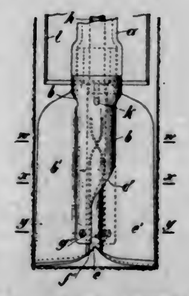
3. In a device of the class described, a supporting structure; a U-shaped member carried by the supporting structure and including a burner tube and a retort located above the burner tube; a hollow conical deflector disposed below the retort and including a transverse bridge extended across the wider end of the deflector, there being a ring assembled with the bridge, the ring surrounding the retort; and a spreader carried by the ring and disposed above the retort; the burner tube having an opening disposed below the deflector.

1,189,559. SHOE-CLEANER. EMANUEL GERBER, Kansas City, Mo. Filed May 20, 1915. Serial No. 29,370. (Cl. 15—2.)



A shoe cleaner comprising a horizontal blade having its flat sides disposed in upright planes, a pair of fingers formed integrally with and rising one from each end of said blade, said fingers having free upper ends and upright sharpened outer edges, a pair of spaced supporting feet formed integrally with the lower edge of the blade, a pair of forwardly projecting flanges formed integrally with the front side of the blade and with the feet, said flanges curving upwardly from said feet toward the end of the blade and terminating in flat horizontal portions extending beyond said ends, identically constructed flanges formed integrally with the rear side of the blade and having their flat horizontal portions joined integrally with such portions of the first-named flanges to form a pair of horizontal brush supports, two pairs of upright fingers formed integrally with and rising from the outer ends of said brush supports, said fingers being spaced laterally from the first-named fingers and having free upper ends and sharpened upright inner edges, a pair of brush backs disposed transversely of the blade and resting on the brush supports, said backs being engaged snugly by the sharpened edges of all of the fingers, and brush bristles extending from the inner sides of the two backs.

1,189,560. ROTARY DRILL. GEORG GONDOS, Zurich, Switzerland. Filed Oct. 21, 1914. Serial No. 867,917. (Cl. 255—75.)



A rotary drill comprising a cutting blade adapted to be attached to a drill rod, a cylindrical guideway on said blade coaxial with said drill rod, a second cutting blade having slidable and pivotal engagement in said cylindrical guideway, and slot and pin connections provided on said guideway and arranged to hold said blades diametrically opposed while the same are in adjacent and operative position, and to constrain said second blade to move through an angle with respect to said first mentioned blade while said second blade slides downward along said guideway.

1,189,561. PLIERS. GEORGE W. GRIMINGER, Cuyahoga Falls, Ohio, assignor of one-half to Charles Roy Lose, Cuyahoga Falls, Ohio. Filed Apr. 25, 1916. Serial No. 93,449. (Cl. 81—45.)



1. Pliers comprising complementary members pivotally united, each of said members having a jaw at one end and a handle at the opposite end, the handle of one member provided with an elongated recess and a slot communicating therewith, a toothed arm pivotally connected with the handle of the other member and extending through the said slot and recess, a shiftable carrier positioned in said recess, means for normally shifting said carrier in one direction for causing engagement of the teeth on said arm with the handle provided with said carrier, and a catch on said carrier adapted to hold said carrier in its inoperative position.

2. Pliers comprising complementary, coacting, pivotally connected members, one of which is provided with a slot, a toothed arm extending through said slot and pivotally connected with the other member and arranged to interengage with said first member for locking said members in a determinate position, and longitudinally shiftable means in said slot for shifting said arm into and out of operative relation with said first member.

3. Pliers comprising complementary, coacting, pivotally connected members, one of which is provided with a longitudinally extending recess and an intersecting slot, a carrier shiftably mounted in said recess and provided with a slot capable of registration with the first slot, an arm having a toothed edge extending through said slots and pivotally connected with the other member and arranged to be moved into and out of operative engagement with said first member by said carrier.

4. Pliers comprising complementary, coacting, pivotally connected members, one of which is provided with a longitudinally extending recess and an intersecting slot, a carrier shiftably mounted in said recess and provided with a slot capable of registration with the slot in said first member, an arm having a toothed edge extending through said slots and pivotally connected with the other member and arranged to be moved into and out of operative engagement with said first member by said carrier, and a catch on said carrier interengaging with the said first member for holding said carrier and arm in their inoperative positions.

5. Pliers comprising complementary, coacting, pivotally connected members, one of which is provided with a longitudinally extending recess and an intersecting slot, the carrier shiftably mounted in said recess and provided with a slot capable of registration with the slot in said first member, and a spring for forcing said carrier and arm toward their operative position, an arm having a toothed edge extending through said slots and pivotally connected with the other member and arranged to be moved into and out of operative engagement with said first member by said carrier, and a catch on said carrier interengaging with the said first member for holding said carrier and arm in their inoperative positions.

1,189,562. RADIATOR-BRACKET. OTTO J. GROSHN and FREDERICK L. ALLDIS, Detroit, Mich., assignors to Briscoe Manufacturing Co., Detroit, Mich., a Corporation of Michigan. Filed May 17, 1915. Serial No. 28,587. (Cl. 21—90.)



1. A radiator bracket, comprising a member provided with a substantially semi-cylindrical socket having a lateral opening, said socket being formed of resilient material, and a second member having a head insertible through said opening into engagement with the socket, said head being of a size to be sprung into engagement with the socket.

2. A radiator bracket, comprising two members each formed from a flat sheet metal blank, one of said members being shaped to provide a base and a socket, the other of said members having a base, a laterally-extending neck, and a head, said base and neck being formed of two plies of material and the plies being separated to form a hollow head, said head and socket having a universal joint connection.

3. A radiator bracket, comprising two members, one of said members being provided with a base and a socket portion having a lateral opening, said second member being formed of two plies of material and shaped to provide a base portion and a neck, the plies of material being separated to form a hollow head insertible through said lateral opening into engagement with the socket portion, and beads upon the head and socket portion providing a universal joint connection between said portions.

4. A radiator bracket, comprising two members each formed from a comparatively wide, flat sheet metal blank, one of said members being provided with a base and having a semi-cylindrical portion above said base, the opening of said semi-cylindrical portion being on the inner side, and said semi-cylindrical portion having a rounding bead struck out therefrom, the second member being bent upon itself to provide a base and a neck portion of two plies of material, the plies of material being separated to form a hollow head, and a bead upon said hollow head complementary to the bead of the socket.

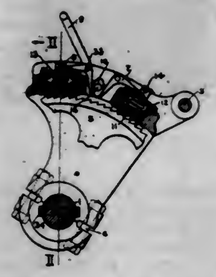
5. A radiator bracket, comprising a member having a cylindrical head formed with a central bead, and a member having a substantially semi-cylindrical socket portion, said portion having its interior face beaded outward to receive the bead of the head when the latter is engaged in said socket, the two said members being engaged or disengaged by a relative movement of said members.

[Claims 6 to 8 not printed in the Gazette.]

1,189,563. SET-WORKS GRIPPING DEVICE. LEMUEL D. HANFORD, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Nov. 25, 1912. Serial No. 733,564. (Cl. 74—54.)

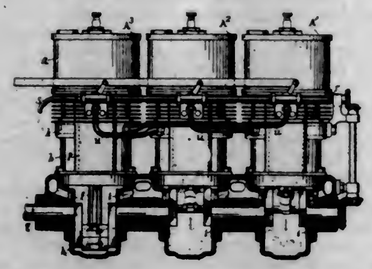
1. In combination, a set-shaft, a ratchet wheel secured thereto, a carrier arm having an opening therethrough, a cap secured to said carrier arm adjacent the opening therein, a grip-block movable within said opening and having a projection formed with an abutment, and an arm engageable with said abutment for moving said grip-block away from said ratchet wheel and for retaining said grip-block within said opening, said grip-block being removable from said arm through said opening upon removal of said cap.

2. In combination, a set-shaft, a ratchet wheel secured thereto, a carrier arm having an opening therethrough, a cap secured to said carrier arm adjacent the opening therein, an arm, and a grip-block supported from said cap through said arm, said grip-block being removable from said carrier arm through said opening upon removal of said cap.



3. In combination, a carrier arm having a recess therein, a grip-block slidable within said recess and formed with abutments, a cap, and an arm, said cap being engageable with an abutment of said grip-block to limit outward motion of said block and said arm being engageable with another of said abutments of said grip-block to limit inward motion of said block, whereby said grip-block is retained within the recess of said carrier arm at all times.

1,189,564. INTERNAL-COMBUSTION ENGINE. WILLIAM HARPER, JR., New Bloomfield, Pa., assignor, by mesne assignments, of three-tenths to Harper Engineering Company, a Corporation of New York, and seven-tenths to Thomas A. Nevins, East Orange, N. J. Filed June 10, 1907, Serial No. 378,147. Renewed Oct. 30, 1912. Serial No. 728,726. (Cl. 123—33.)

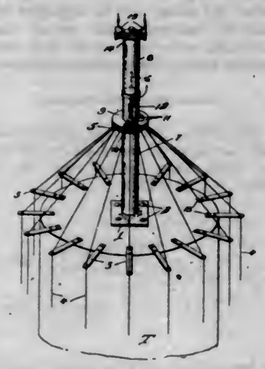


1. The combination of a plurality of internal combustion engines operating in spaced phase, each engine being provided with an atomizer for supplying a charge thereto and an air compression means, and connections between the atomizer of each engine and the air compression means of a different engine, substantially as described.

2. The combination of three internal combustion engines operating in spaced phase, each engine being provided with an atomizer for supplying a charge thereto and an air compression means, and connections between the atomizer of each engine and the air compression means of a different engine, substantially as described.

3. The combination of three internal combustion engines operating in spaced phase, each engine comprising tandem communicating cylinders of different diameters, a piston fitting both cylinders and forming a power chamber in the smaller cylinder and an annular air compression chamber between the walls of the piston and the walls of the larger cylinder, and connections between the atomizer of each engine and the compression chamber of a different engine, substantially as described.

1,189,565. LIGHTNING-CONDUCTOR. DAVID W. HARTSAW, Bristow, Okla. Filed Aug. 19, 1915. Serial No. 46,365. (Cl. 173—31.)



1. A lightning conductor comprising a supporting base having a tube rising therefrom and provided at its upper end with a laterally extending flange, a plurality of contact plugs carried by said flange, ground wires connected with said plugs, another tube rotatably mounted on said first mentioned tube and having an annular flange at its lower end resting on the plug carrying flange of said first mentioned tube and provided with contact plugs, conductors electrically connected with said last mentioned plugs and extending through said tube opening and upwardly through said tube, and lightning attracting points on said conductors.

2. A lightning conductor comprising a supporting base having a standard rising therefrom and provided at its upper end with a laterally extending flange, a plurality of contact plugs carried by said flange, ground wires connected with said plugs, another standard rotatably mounted on said first mentioned standard and having an annular flange at its lower end resting on the plug carrying flange of said first mentioned standard and provided with contact plugs, conductors electrically connected with said last mentioned plugs, and lightning attracting points carried by said conductors and extending laterally therefrom.

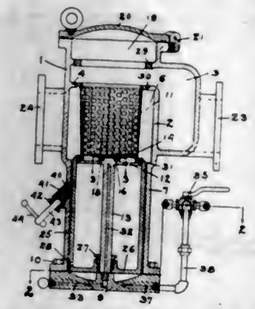
3. A lightning conductor comprising a supporting base having a standard rising therefrom and provided at its upper end with a laterally extending flange, a plurality of contact plugs carried by said flange, ground wires connected with said plugs, another standard rotatably mounted on said first mentioned standard and having an annular flange at its lower end resting on the plug carrying flange of said first mentioned standard and provided with contact plugs, conductors electrically connected with said last mentioned plugs, lightning attracting points carried by said conductors and a wind vane carried by said upper standard for rotating it.

4. In a lightning conductor, the combination of two sections, one of which is revoluble in relation to the other, contacts carried by said sections and positioned for continuous engagement, conductors leading from said contacts, the conductors on the fixed section being grounded and those on the revoluble section being provided with lightning attracting points, and means on said movable section for positioning the conductors carried thereby at the side opposite the direction in which the wind is blowing.

5. In a lightning conductor, the combination of two sections, one of which is revoluble in relation to the other, contacts carried by said sections and positioned for continuous engagement, conductors leading from said contacts, the conductors on the fixed section being grounded and those on the revoluble section being provided with lightning attracting points, and a wind vane mounted on said revoluble section at the side opposite that on which the conductors carried by said section are disposed so that said conductors will be retained at all times at the side opposite the direction in which the wind is blowing.

[Claim 6 not printed in the Gazette.]

1,189,566. STRAINER. ELMER E. HAUER, Springfield, Ohio, assignor to Elliott Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 15, 1916. Serial No. 97,725. (Cl. 210—16.)



1. The combination of a casing having an inlet and outlet, a strainer element and a piston valve adapted to inclose and cut off said strainer element from the flow of the fluid to be strained and means to admit and discharge a motive agent to operate said piston valve, substantially as described.

2. The combination of a casing having an inlet and outlet, a straining chamber and a piston chamber, a strainer element in said straining chamber and a piston valve in said piston chamber movable into said straining chamber and adapted to cut off said strainer element from the flow of the fluid to be strained and means to admit and discharge a motive agent to operate said piston valve, substantially as described.

3. The combination of a casing having an inlet and outlet, a straining chamber and a piston chamber, a strainer element in said straining chamber and a piston valve in said piston chamber movable into said straining chamber and adapted to cut off said strainer element from the flow of the fluid to be strained, means to admit and discharge a motive agent for the operation of said piston valve and a control for said means outside of said casing, substantially as described.

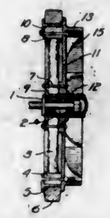
4. The combination of a casing having an inlet and outlet, a straining chamber and a piston chamber, a strainer element in said straining chamber and a piston valve in said piston chamber movable into said straining chamber and adapted to cut off said strainer element from the flow of the fluid to be strained, said casing having an opening for the removal of said strainer element when said piston valve is in its closed position, a closure for said opening, means to admit and discharge a motive agent for the operation of said piston valve and a control for said means outside of said casing, substantially as described.

5. The combination of a casing having an inlet and outlet, a straining chamber and a piston chamber, a strainer element in said straining chamber and a piston valve in said piston chamber movable into said straining chamber and adapted to cut off said strainer element from the flow of the fluid to be strained, means to admit and discharge a motive agent for the operation of said piston valve and devices independent of said motive agent means to tighten and hold said piston valve in closed position, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,189,567. VEHICLE-WHEEL. JOSEPH J. HEIM, Kansas City, Mo. Filed July 19, 1915. Serial No. 40,619. (Cl. 105—143.)

1. A vehicle wheel comprising separate tread members of different diameter, the tread member of less diameter having an outstanding flange adjacent its edge, for the purpose set forth.



2. A vehicle wheel comprising a body part, having a resilient tread member, and a metallic rim fixed to the body part and forming a tread member of less diameter than the resilient tread, and an outstanding flange on the inner edge of the metallic rim adjacent the resilient tread, for the purpose set forth.

3. A vehicle wheel comprising a body member, having a resilient tread, and a metallic rim on said body member, of less diameter than the resilient tread and having an integral outwardly extended flange at its inner edge, for the purpose set forth.

4. A vehicle wheel comprising a body member, having a resilient tread, and a metallic plate secured to the body member and having a circular rim of less diameter than the resilient tread and inset from the edge of the plate to form a supplemental tread and expose a flange portion on said plate.

5. A vehicle wheel comprising a body member, a web attached to the body member and terminating short of the circumference thereof, means for attaching the web to the body member and a rim integral with and projecting laterally from the web, and spaced inwardly from the edge of the web to provide a web flange, for the purpose set forth.

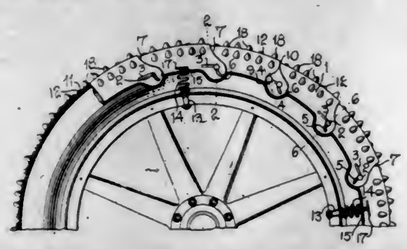
[Claim 6 not printed in the Gazette.]

1,189,568. STUMP-BURNER. JOHN HENRY HEMPY, New Hampshire, Ohio. Filed May 4, 1916. Serial No. 95,474. (Cl. 110—21.)



A stump burning device consisting of a casing made up of telescoping shells, a damper pivotally mounted near the upper end of one section, a series of rods held transversely in diametrically opposite apertures in the other shell and conical-shaped screens supported by said rods and their marginal edges engaging the inner surface of the shell in which they are supported, said screens being arranged concentrically with slight spaces intervening between the same.

1,189,569. AUTOMOBILE-TIRE TREAD. WILLIAM H. HENDERSON, Omaha, Nebr. Filed Sept. 25, 1915. Serial No. 52,588. (Cl. 152—16.)



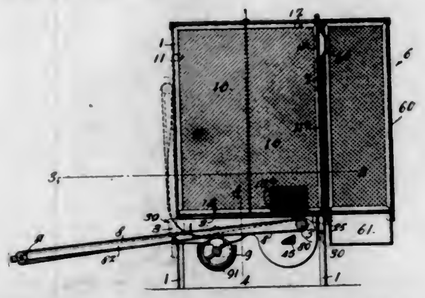
1. A tire tread of the character described comprising a plurality of shields arranged in overlapping relation to each other and having a closed angular slot formed in each of the overlapping portions, each one of said slots including a straight portion extending circumferentially and another portion connected thereto of arcuate form curving inwardly toward the rim of the wheel and toward the adjacent end of the overlapping section, and pivot members secured to the respective underlying shields at one end of the same, each one being freely movable in each one of said slots, said pivot members being normally positioned at the juncture of the straight and the arcuate portions of the slot.

2. A tire tread of the character described comprising a plurality of circumferentially extending transversely curved sections arranged in overlapping relation to each other at their ends, each section being provided at both sides in its overlapping portion with a closed angular slot, the overlapping portion comprising a substantially semi-circular projection in which the slot is located, said slot including a circumferentially extending straight portion and another portion of arcuate form curving inwardly toward the rim of the wheel and toward the adjacent end of the overlapping section, and pivotal members secured to the underlying portions of the sections and each freely movable in the slot of the overlapping portions, the normal position of each of said pivotal members being at the juncture of the two portions of the slot to permit the sections to move relative to each other.

3. A tire tread of the character described comprising a plurality of circumferentially extending curved sections, said sections being substantially semi-circular in form and arranged in overlapping relation to each other at their ends, the overlapping portions of each section being formed with a closed angular slot, one portion of said slot extending circumferentially and another portion connected thereto of arcuate form and curving inwardly toward the rim of the wheel and toward the adjacent end of the overlapping section, and a pivotal member to connect each of said sections together and freely movable in one of said slots, each one of said pivotal members being normally positioned at the juncture of the two portions composing the slot.

4. A tire tread of the character described comprising a plurality of circumferentially extending, transversely bowed sections arranged in overlapping relation to each other, at their ends, each section being provided at one end with a slot including portions angularly positioned with reference to each other, one portion of said slot having straight sides extending circumferentially, the other portion of said slot being arcuate in form and curving inwardly toward the rim of the wheel and toward the adjacent end of the overlapping section, certain of the sections being provided with an enlargement at the end of the first named portion of the slot to permit the assembly of the sections as a continuous tread, a retaining plug coöperating with the enlargement and provided with fastening means to prevent its accidental withdrawal, the several portions of the slot being continuous with each other and with the enlargement, and a pivot member carried by each one of the sections to coöperate with each one of the slots, said pivot member being normally positioned at the juncture of the two portions of the slot.

1,189,570. MECHANICAL FLY-CATCHER. GEORGE WASHINGTON HOLT, Poplar Bluff, Mo., assignor to Judson Price, Poplar Bluff, Mo. Filed Sept. 17, 1915. Serial No. 51,249. (Cl. 43—32.)



1. A trap of the class described, including a cage having a bottom provided with a transversely extended relatively narrow opening, an endless conveyer under the said bottom parallel therewith, the said conveyer having its delivery end located directly under the opening in the bottom and means coöperating with the said end of the conveyer and the opening for concentrating the conveyed flies at the said opening to thereby cause them to pass up through the opening as they leave the conveyer.

2. A trap of the class described, including a cage having a bottom provided with a transversely extended relatively narrow opening, an endless conveyer under the said bottom parallel therewith, the said conveyer having its delivery end located directly under the opening in the bottom, means coöperating with the said end of the conveyer and the opening for concentrating the conveyed flies at the said opening to thereby cause them to pass up through the opening as they leave the conveyer, and a rectangular receiver centrally mounted on the said cage bottom and extended over the fly inlet in the said bottom.

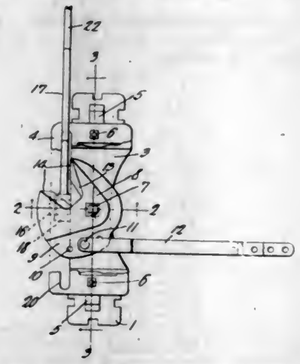
3. In a trap of the character described, the combination with a main frame, a cage mounted on the said frame which includes a bottom having a fly entrance; of a fly catching means that conveys the caught flies to the said entrance in the bottom of the cage, the said means including an endless conveyer that extends entirely under the cage bottom and includes a frame portion fixedly held under the said bottom, a roller journaled in the fixedly held frame portion directly under the entrance to the cage, a frame portion hingedly connected to the main frame to fold vertically thereagainst, a roller journaled in the outer end of the hinged frame portion, an endless belt that passes over the rollers in the two portions of the conveyer frame and a motor geared up with the fixedly held roller.

4. The combination in a fly catcher of the character described, with the main frame, a cage mounted on the said frame and including a bottom having a restricted transverse opening adjacent the rear wall of the cage, an endless conveyer that passes under the said bottom, a fixedly held roller bearing for the conveyer belt located directly under the said opening, and a frame portion hingedly connected to the main frame, and a roller in the outer end of the hingedly mounted frame portion over which the belt passes, and a fixedly held means at the delivery end of the conveyer belt for directing the flies into the opening in the bottom of the cage.

5. In a fly trap, a cage or holder including a screen wire bottom having an elongated transverse fly passage in one end, a screen wire fence or wall that surrounds the sides and ends of the said opening and which extends up into the cage, an endless baited conveyer mounted under the bottom of the cage and having its outer end projected beyond the cage, means at the discharging end of the conveyer for directing the flies off the conveyer into the fly passage in the bottom of the cage and means mounted on the cage frame for imparting motion to the conveyer.

[Claims 6 and 7 not printed in the Gazette.]

1,189,571. SWITCH-THROW. HOWARD HUGHES, ARTHUR FERGUSON, and HARRY L. LOWE, Clinton, Ind. Filed Dec. 23, 1915. Serial No. 68,402. (Cl. 104—25.)



1. In a switch throw, an oscillatory member having a slot, a bar connected to said member, a lever projecting through said slot and arranged in a different plane than said member, said member having a face, and the lever moving partially out of said slot to overlap said face when the lever is moved to one position, to prevent said member from moving backwardly.

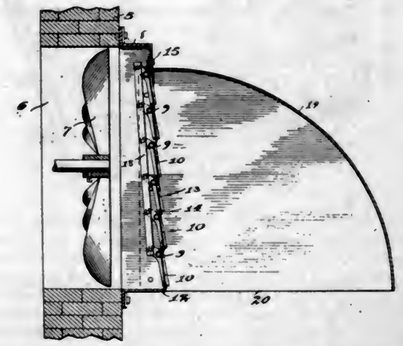
2. In a switch throw, an oscillatory member having a slot, a bar connected to said member, a lever projecting through said slot and arranged in a different plane than said member, said member having diverging faces at the end of said slot, and the lever being movable partially out of said slot at either extreme position of the lever to overlap the respective face, for preventing the backward movement of said member.

3. A switch throw embodying a plate adapted to be secured upon cross ties and having a dropped portion, a second plate secured upon the first mentioned plate across said dropped portion, a rocking member mounted for rotation between said dropped portion and second mentioned plate and having a radial slot, a switch operating bar connected to said member, the second mentioned plate having a longitudinal slot, and an upwardly projecting lever fulcrumed to the dropped portion and projecting through said slots.

4. A switch throw embodying a plate adapted to be secured upon cross ties and having a dropped portion, a second plate secured upon the first mentioned plate across said dropped portion, a rocking member mounted for rotation between said dropped portion and second mentioned plate and having a radial slot, a switch operating bar connected to said member, the second mentioned plate having a longitudinal slot, an upwardly projecting lever fulcrumed to the dropped portion and projecting through said slots, said member having diverging faces at the end of said slot and the lever being movable partially out of said slot of said member when the lever is in either extreme position, so that the lever overlaps the respective face to prevent the backward movement of said member.

1,189,572. SHUTTER MECHANISM. ROBERT A. ILG, Chicago, Ill. Filed Mar. 9, 1914. Serial No. 823,557. (Cl. 98—27.)

1. In a shutter mechanism, the combination of a rectangular frame, a series of horizontal shutter spindles journaled in and between the vertical sides of said frame, the axes of said spindles being located in a plane that is downwardly and outwardly inclined relatively to a vertical plane passing through the axis of the topmost spindle, and a plurality of gravity-closed and outwardly opening sheet metal shutter-vanes curled at their upper edge portions around said spindles and having inwardly bent lower edge portions overlapping when in closed position, the upper edges of the next shutter-vanes therebeneath.



2. In a shutter mechanism, the combination with a series of depending hinged shutter-vanes mounted in suspended and overlapping relation in an external wall of a building and adapted to open outwardly, of a hood or shield covering the outer sides of said shutter-vanes and open on its lower side only substantially in the horizontal plane of the lower edge of the lowermost shutter-vane.

3. In a shutter mechanism, the combination with a series of depending hinged shutter-vanes mounted in superposed and overlapping relation in an external wall of a building and adapted to open outwardly, of a hood or shield of generally quadrant form, covering the outer sides of said shutter-vanes and open on its lower side only substantially in the horizontal plane of the lower edge of the lowermose shutter-vane, the area of said open side of the hood being not less than the area of the opening covered by said shutter-vanes.

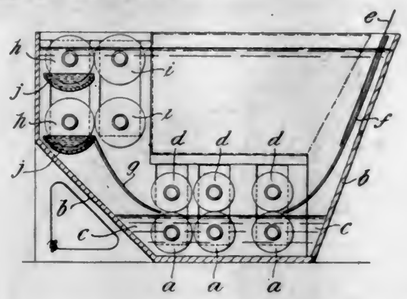
4. In a shutter mechanism, the combination of a rectangular frame, spindles pivotally mounted in opposite side walls of said frame, shutter-vanes secured at one longitudinal edge to said spindles, vane-actuating strips mounted on said spindle opposite an end of said vanes, each of said strips comprising an arm extending parallel with and at its other end engaging the end edge of a vane and a rearwardly extending arm, and a link pivotally connecting said rearwardly extending arms.

5. In a shutter mechanism, the combination of a rectangular frame, spindles pivotally mounted in opposite side walls of said frame, shutter-vanes having their upper longitudinal edges curled around said spindles, vane-actuating strips mounted on said spindles opposite an end of said vanes, each of said strips comprising an arm extending parallel with the end edge of a vane and having an inturned forked end embracing the latter and a rearwardly extending arm, and a link pivotally connecting the outer ends of said rearwardly extending arms.

1,189,573. APPARATUS FOR THE MANUFACTURE OF TIN, TERNE, AND THE LIKE PLATES. DANIEL ROBERT JAMES, Morriston, Wales. Filed Feb. 15, 1915. Serial No. 8,316. (Cl. 91—12.7.)

1. A machine for coating metal plates on one side only comprising, a pot adapted to contain an oily flux and molten bath therein, a series of pairs of rolls horizontally disposed in the lower part of the pot, the lower roll of each pair having its coating periphery located above the molten bath level, the upper and lower rolls of each of

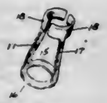
said pairs being of a length corresponding to the width of the plates to be coated, and normally contacting throughout their length, a feed guide leading from the top of the pot to the first pair of said rolls, another guide for delivering the plates from the last pair of said rolls, and a series of paired rolls arranged at the end of said last mentioned guide for delivering the plate and having means for applying a finishing coat thereto.



2. A machine for coating metal plates on one side only, comprising a pot adapted to contain an oily flux and molten bath, a series of pairs of rolls horizontally disposed in the lower part of the pot, an inclined and curved feed guide leading from the top of the pot to the first pair of the series of pairs of rolls, and a second and upwardly curved guide to receive the plate or plates from the last pair of the series of rolls, the upper roll of each pair of rolls being of a material which does not pick up the coating material, while the lower roll of each pair of rolls is of a material adapted to pick up the coating material and transfer the same to the plate.

3. A machine for coating metal plates on one side only, comprising a pot adapted to contain an oily flux and molten bath, a series of pairs of rolls horizontally disposed in the lower part of the pot, an inclined and curved feed guide leading from the top of the pot to the first pair of the series of pairs of rolls, and a second and upwardly curved guide to receive the plate or plates from the last pair of the series of pairs of rolls, the upper roll of each pair of rolls being of a material which does not pick up the coating material, while the lower roll of each pair of rolls is of a material adapted to pick up the coating material and transfer the same to the plate, a pair of horizontally disposed finishing rolls located above the second guide, troughs adapted to contain metal located below the outer roll of the pair of finishing rolls and into which troughs said outer rolls which are of a material adapted to pick up the metal, dip and transfer the metal to the plate, said finishing rolls carrying the plate vertically out of the pot.

1,189,574. DETONATING-FUSE SPRING. CHARLES H. JOCKMUS, Ansonia, Conn. Filed Mar. 20, 1916. Serial No. 85,315. (Cl. 102—39.)

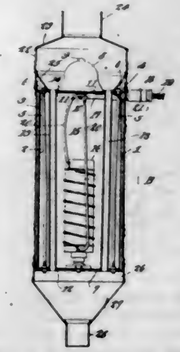


1. A fuse spring of the character described, formed from sheet metal of uniform thickness and comprising a ring, arms extending from opposite sides thereof and bent at an angle thereto, and half collars at the ends of the arms formed by folding the metal upon itself and curving to shape.

2. A fuse spring of the character described, blanked out from sheet metal of uniform thickness and comprising a ring, arms extending from opposite sides thereof and bent at an angle thereto, and plates at the outer ends of the arms which are folded inward upon themselves and curved to form half collars, substantially as described, for the purpose specified.

3. A fuse spring of the character described, blanked out from sheet metal of uniform thickness and comprising a ring, arms extending from opposite sides thereof and bent at an angle thereto, and half collars at the outer ends of the arms, said half collars being formed from plates, having a longitudinal dimension double the width required for the half collars and a transverse dimension corresponding with the length of the half collars, folded inward upon themselves.

1,189,575. ELECTRIC GRAIN-HEATER. JAMES M. JORDAN, Churchville, Va. Filed Aug. 5, 1915. Serial No. 43,830. (Cl. 34—34.)



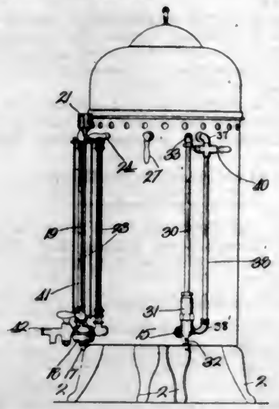
1. A grain heater including a drum, an insulated lining therein forming a supporting ledge at its upper end, a top disk supported upon the ledge, a bottom disk within the lower portion of the drum, connections between the disks, a circular series of tubes extending through the disks and forming a heating chamber therebetween, a spreader upon the top disk and between the upper ends of the tubes, means for directing grain onto the spreader and into the tubes, and a heater within the heating chamber.

2. A grain heater including a drum, an insulated lining therein forming a ledge at its upper end, a top disk supported at its periphery upon said ledge, a bottom disk, tubes extending through the disks and forming a heating chamber therebetween, a heater within said chamber, an inlet section removably mounted upon the upper end of the drum and having a feed tube opening thereinto, a spreader upon the upper disk and below the feed tube and between the upper ends of the tubes in the disks, a bottom section detachably engaging the drum, and an outlet tube extending from the bottom section, said outlet tube being of less diameter than the feed tube.

3. A grain heater including a drum, a lining therein forming a ledge at its upper end, a top disk supported on the ledge, a bottom disk within the drum, detachable connections between the disks and within the drum, a circular series of tubes extending through the disks and converging downwardly, a spreader upon the top disk and between the upper ends of the tubes, a heating medium surrounded by the tubes, an inlet section detachably engaging the upper end of the drum, a downwardly and inwardly inclined deflector carried by said section and terminating close to the tubes, a feed tube opening into the inlet section and above the deflector, a bottom section detachably engaging the drum, and an outlet tube extending therefrom and of less diameter than the feed tube.

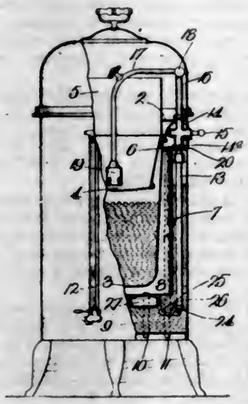
4. A grain heater, including a drum, an insulated lining therein, a top disk supported in the drum, a bottom disk within the lower portion of the drum, connections between the disks, a circular series of tubes extending through the disks and forming a heating chamber therebetween, a spreader upon the top disk and between the upper ends of the tubes, means for directing grain onto the spreader and into the tubes, and a heater within the heating chamber.

1,189,576. HOT-MILK-SERVING URN. HENRY D. KELLY, Kansas City, Mo. Filed July 15, 1912. Serial No. 709,602. (Cl. 53—3.)



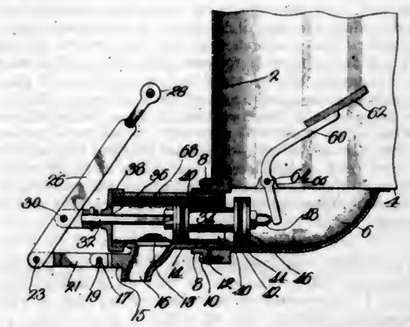
The combination of a boiler, a jar therein, a tube connected to the bottom of the jar and projecting through the wall of the boiler, a measuring cup faucet at the outer end of the tube, a tube extending upward from the measuring cup and provided above the water level of the boiler with one or more perforations, and an inverted bottle-shaped cap inclosing the upper end of the perforated tube and the perforations thereof, and provided with an air-escape opening.

1,189,577. COFFEE-URN. HENRY D. KELLY, Kansas City, Mo. Filed Aug. 7, 1912. Serial No. 713,779. (Cl. 53—3.)



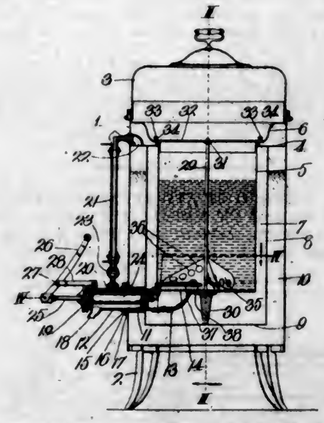
A coffee urn having a boiler, a coffee vessel suspended within said boiler, a pipe having one end submerged in the water of the boiler and its other end positioned to discharge water into said vessel, said pipe having a valve for closing the passage therethrough when the water in the boiler lowers to a given level, a float pivotally carried by the lower end of said pipe and normally held by the water against the bottom of said vessel, and connections between said valve and float whereby the latter will operate automatically to close the former as the float lowers with the water to said level.

1,189,578. MEASURING-FAUCET FOR URNS. HENRY D. KELLY, Kansas City, Mo. Filed May 15, 1913. Serial No. 767,809. (Cl. 221—104.)



The combination with an urn having an opening in its bottom, and a radical channel below and communicating with the opening in the bottom, a cylindrical faucet casing secured to the urn and communicating at its rear end with said channel, and provided with a vent opening and a faucet, a reciprocatory spool-shaped measuring valve fitting slidingly in the casing and adapted to enter the said channel, manually operable means for reciprocating said valve so that when in its rearward position it can be charged between its ends with the liquid from the urn and which when in its forward position will deliver said liquid to the spout, and a pivoted agitator mounted in the urn and provided with a portion depending into the channel and exerting a yielding forward pressure on the valve so as to yieldingly resist rearward movement of the same and gravitate back to normal position when said valve is moved forward.

1,189,579. CHOCOLATE-URN. HENRY D. KELLY, Kansas City, Mo. Filed Apr. 17, 1914. Serial No. 832,654. (Cl. 225—21.)

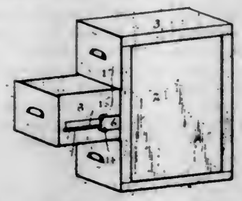


1. A beverage urn, provided with a receptacle having a bottom opening, an elbow secured to and underlying the receptacle and communicating with said opening, a faucet casing extending into the urn and communicating at its inner end with said elbow, a measuring valve in said faucet casing, an agitator in the receptacle and a link extending through said bottom opening and pivotally connected at its opposite ends to the valve and the agitator whereby movement imparted to the former will effect operation of the latter.

2. A beverage urn, provided with a receptacle having a bottom opening, an elbow secured to and underlying the receptacle and communicating with said opening, a faucet casing extending into the urn and communicating at its inner end with said elbow, a measuring valve in said faucet casing, a rotary agitator in the receptacle and a bent link pivotally attached at its inner end to the agitator and at its outer or forward end to the piston valve.

3. A beverage urn provided with a chamber for steam and water, a receptacle to contain a beverage, provided with an opening at its lower end, a faucet casing communicating at its inner end with said opening and projecting from the urn, a valve-controlled pipeway leading from the lower end of said steam and water chamber to the upper end of said receptacle, and means for spraying the water that passes up through said pipeway into said receptacle.

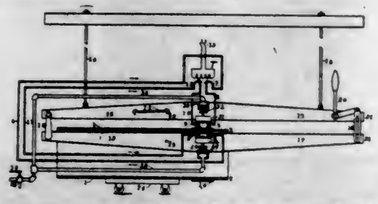
1,189,580. DRAWER-SLIDE. JAMES W. KENYON, Muskegon, Mich., assignor to The Shaw-Walker Company, a Corporation of Michigan. Filed May 4, 1914. Serial No. 836,052. (Cl. 45—77.)



1. In a device of the character described, a primary slide-member having upper and lower guides one of which has a gap through its lateral wall, an intermediate slide-member traveling in said guides and having a guided member, and an ultimate slide-member movably supported on the intermediate slide-member, said guided member of the intermediate slide being adapted in one position of such intermediate slide to be moved outwardly through said gap from the guide in which it moves.

2. In a device of the character described, a primary slide-member, an intermediate slide-member slidable on the primary slide-member, and an ultimate slide-member slidable on the intermediate slide-member; one of said slide-members having a guide with a lateral wall and a gap through said wall, and another of said slide-members having a guided member slidable in said guide and adapted in one position to be moved outwardly through said gap from the guide in which it slides.

1,189,581. METHOD OF AND APPARATUS FOR ELECTRIC WELDING OF METALLIC PLATES. CHARLES H. KICKLIGHTER, Atlanta, Ga. Filed Oct. 15, 1913. Serial No. 795,311. (Cl. 219—4.)



1. A method of electric welding which consists of conducting around metallic material and applying simultaneously two welding currents opposite in direction of flow.

2. A method of electric welding which consists of conducting around metallic material and applying a welding current, and of conducting around said metallic material another current, opposite in direction and derived from the same supply as said welding current.

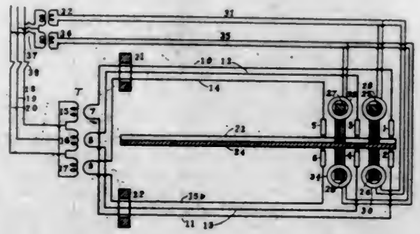
3. A method of electric welding which consists of conducting from a transformer secondary a welding current around metallic material, of applying the same, and of conducting from another secondary of a transformer a current in an opposite direction around said metallic material.

4. A method of electric welding which consists of conducting from a transformer secondary a welding current of applying the same and of conducting from another secondary of a transformer a reversed current in close proximity to said welding current.

5. A method of electric beating a metallic object which consists of conducting around metallic material and applying simultaneously two heating currents opposite in direction of flow.

[Claims 6 to 12 not printed in the Gazette.]

1,189,582. METHOD OF ELECTRIC WELDING. CHARLES H. KICKLIGHTER, Atlanta, Ga. Filed Nov. 10, 1913. Serial No. 800,166. (Cl. 219—10.)



1. A method of electric welding consisting of conveying by conductors and applying by mechanical pressure at conductor terminals to said metals simultaneously a plurality of currents in different phase relations so that any one or more of these tend to prevent inductance in the metal by the remainder.

2. A method of fastening metals together, consisting of conveying by conductors and applying by mechanical pressure at the conductor terminals to the parts of union a plurality of currents in different phase relations so that any one or more of these tend to prevent inductance in the metal by the remainder.

3. A method of electric welding which consists of conducting around metallic material and applying simultaneously a plurality of alternating currents in different phase relations, and of shielding said metallic material from alternating flux by linking with said currents a common path of magnetic flux.

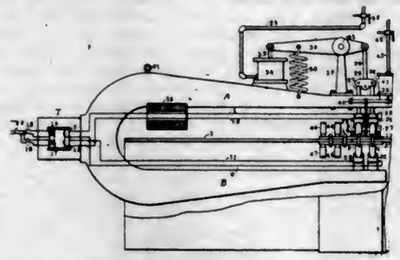
4. A method of electric welding which consists of conducting around metallic material and applying simultaneously a plurality of alternating welding currents in different phase relations, and of maintaining an equality of said currents by linking with them a path of magnetic flux.

5. A method of electric welding which consists of conducting around metallic material and applying simultaneously three alternating welding currents in three-phase relation, and of shielding said metallic material from alternating flux by linking with said currents a common path of magnetic flux.

[Claims 6 to 13 not printed in the Gazette.]

1,189,583. METHOD OF ELECTRIC RIVETING. CHARLES H. KICKLIGHTER, Atlanta, Ga. Filed Nov. 28, 1913. Serial No. 803,478. (Cl. 219—2.)

1. The method of riveting pieces of metal together which consists of placing rivets or uniting members through holes in the said pieces of metal, in applying mechanical pressure upon opposite ends of said rivets or members, and conducting through said rivets or members two equal heating currents opposite in direction of flow.



2. The method of riveting pieces of metal together which consists of placing rivets or uniting members through holes in the said pieces of metal, in applying mechanical pressure upon opposite ends of said rivets or members, conducting through said rivets or members a plurality of heating currents, and equalizing said heating currents by linking with them a path of magnetic flux.

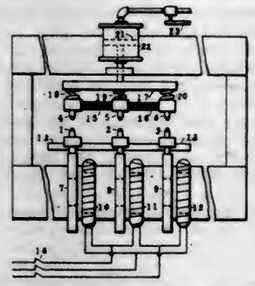
3. The method of riveting pieces of metal together which consists of placing rivets or uniting members through holes in the said pieces of metal applying mechanical pressure upon opposite ends of said rivets or members, and conducting through said rivets or members a plurality of heating currents in different directions, the sum of whose instantaneous values at any time is *nil*.

4. The method of riveting pieces of metal together which consists of placing rivets or uniting members through holes in the said pieces of metal, applying mechanical pressure upon the opposite ends of said rivet or members, conducting through said rivets or members a plurality of heating currents, and maintaining these currents approximately equal by a mutual inductive transfer of energy through a common linking magnetic flux.

5. The method of fastening pieces of metal together which consists of placing uniting members through holes in one or both of the said pieces of metal, in applying mechanical pressure upon the ends of said uniting members, and conducting through said uniting members heating electric currents opposite in direction of flow.

[Claim 6 not printed in the Gazette.]

1,189,584. APPARATUS FOR AND METHOD OF ELECTRIC FASTENING OF METALS. CHARLES H. KICKLIGHTER, Atlanta, Ga. Filed Apr. 5, 1915. Serial No. 19,215. (Cl. 219—4.)



1. The method of fastening two pieces of metal together, consisting of applying a plurality of currents in different phase relation, and of conveying said currents, respectively, from their points of application through the parts to be heated directly to a point of neutral potential.

2. The method of welding two pieces of metal together consisting of applying on the same side thereof a plurality of currents in different phase relation, and of conveying directly said currents respectively, from their points of application through the parts to be welded to a point of common union.

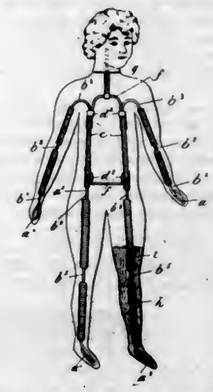
3. The method of fastening two pieces of metal together, consisting of applying thereto three heating currents in three phase relation, and of directly uniting said heating currents after their passage through the parts to be heated.

4. The method of welding two pieces of metal together consisting of applying on the same side thereof three welding currents in three phase relation, and of directly uniting said welding currents after their passage through the parts to be welded.

5. The method of uniting one piece of metal to another, which consists in simultaneously passing polyphase currents from the one side to the other side of said pieces of metal, and of directly uniting said polyphase currents on the latter side of said pieces of metal.

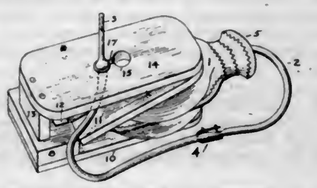
[Claims 6 to 11 not printed in the Gazette.]

1,189,585. DUMMY MODEL FOR REPRODUCING ALL MOVEMENTS OF THE HUMAN OR ANIMAL BODY. KÄTHE KRUSE, Charlottenburg, Germany. Filed Apr. 3. 1915. Serial No. 19,085. (Cl. 46—40.)



A jointed dummy figure comprising a skeleton composed of a pair of bendable longitudinal wires, extending through the trunk and legs and deflected laterally at their upper ends, to pass likewise through the arms, braces connecting the longitudinal wires, reinforcing wire coils mounted on the longitudinal wires between the joints, and a flexible envelop that tightly encompasses the skeleton.

1,189,586. FOUNTAIN-SYRINGE. JEAN B. A. LA JEUNESSE, Alameda, Cal. Filed Nov. 7, 1914. Serial No. 870,816. (Cl. 128—47.)



1. A fountain syringe combined with a pressure frame comprising a bottom board, a block secured at one end thereof, a connection at the inner side of said block, adapted to engage the syringe and a top board hinged to the block and operating as a pressure device upon the syringe.

2. In combination with a fountain syringe, a rigid support therefor, a pressure board hinged to said support and operating as a lever upon the syringe, the front end of said board being raised when the syringe is full and lowered as the syringe empties, and a fixed frame member for a nozzle support, comprising a standard secured to said rigid support at the hinged end of the pressure board and a board secured to said standard, extending over the pressure board and in contact with the free end of the same; said supporting board being suitably apertured to pass and hold the nozzle of the syringe in proper position.

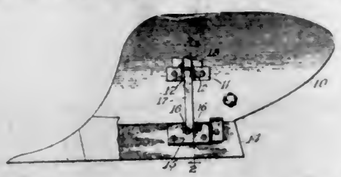
3. In combination with a fountain syringe, pressure boards adapted to be placed respectively, one under, and the other upon the syringe, supporting means for keeping said boards a suitable distance apart at one end, means for flexibly joining the top board to said means, means for attaching the syringe by one end to said supporting means between the boards and a nozzle support adapted to bear down at one end upon the free end of the top board and a standard secured to said nozzle support at its opposite end and holding it above the flexible joint of said top board, said nozzle support having an aperture through which the nozzle of the syringe may be projected from its tubing which may pass between said pressure board and nozzle support.

4. In combination with a fountain syringe provided with a nozzle, a support therefor, a pressure board secured to said support and engaging said syringe, a board mounted upon said support, engaging said pressure board, and adapted to form a seat, and perforations through said seat for holding said nozzle approximately at right angles thereto.

5. A combination fountain syringe and hot water bag, comprising a bag, a flexible tube provided with a nozzle, a bag supporting frame, said frame comprising a part for exerting a pressure upon the bag and a seat upon said frame provided with means for holding the nozzle approximately at right angles thereto.

[Claim 6 not printed in the Gazette.]

1,189,587. PLOW. JAMES L. LAMB, Woodburn, Iowa. Filed Nov. 16, 1914. Serial No. 872,331. (Cl. 97—18.)

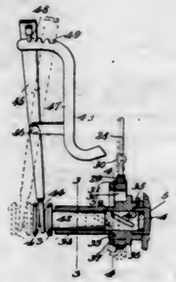


1. In a device of the class described, a pair of flanges adapted to be secured to a share, an arm pivotally mounted in said flanges and adapted to swing about said pivot, a bracket adapted to be secured to a mold board and means for drawing said arm toward said bracket and detachably securing it in place.

2. In a device of the class described, a pair of flanges adapted to be secured to a share, an arm adapted to be pivotally mounted in said flanges, a bracket adapted to be secured to a mold board and a beveled wedge for drawing said arm toward said bracket and securing it in place.

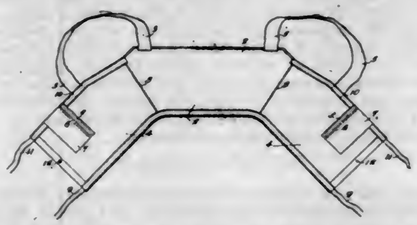
1,189,588. ADJUSTABLE ECCENTRIC. THOMAS E. LANDER, Kansas City, Mo., assignor of one-half to J. Roy Smith, Kansas City, Mo. Filed May 9, 1914, Serial No. 837,402. Renewed Dec. 13, 1915. Serial No. 66,657. (Cl. 74—1.)

1. In a mechanism of the character described, a shaft counterbored at one end, a rectangular portion formed on the shaft, an eccentric slidably mounted upon the rectangular portion of the shaft, a slotted bar extending through the counterbored portion of the shaft and secured to the eccentric, a rod slidably arranged in the counterbore of the shaft and provided at its inner end with an oblique slot, and a transverse pin extending through said slot and secured in the slotted bar to reverse the eccentric when said rod is actuated.



2. In a mechanism of the character described, a rotary shaft, a tubular member fixed to one end of the shaft and rotatable therewith and having a rectangular block formed integral therewith, an eccentric having a rectangular opening therein for slidably engaging the block, a rod slidably mounted in the tubular member and having a web, said web having an oblique slot formed therein, a slotted bar disposed across the opening and having its ends fixed to the eccentric, a pin bridging the slot of the bar and slidably engaged in said oblique slot of the web, said tubular member having registering slots formed therein and slidably engaged with said bar, and means for sliding the rod longitudinally in the tubular member, to reverse the eccentric.

1,189,589. NURSING-BRASSIÈRE. LILY LAWRENCE, Vancouver, British Columbia, Canada. Filed July 9, 1915. Serial No. 38,861. (Cl. 2—98.)

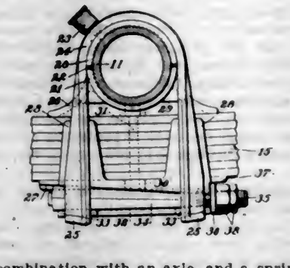


1. A nursing brassière, comprising a back portion of light ordinary fabric, and a front portion composed wholly of light waterproof material connected to each end of the back portion along the sides proper of the brassière at an angle to conform the device to the figure of the wearer, each front portion being slit from the upper edge downward over the middle of the breast, and a flap connected to one edge of the slit and underlapping the other edge, shoulder straps attached to the upper edge of the front and back portions, and means for securing the lower edge around the waist, and means for securing the upper edge around the bust of the wearer.

2. A nursing brassière, comprising a back portion of light ordinary fabric, and a front portion composed wholly of light waterproof material connected to each end of the back portion along the sides proper of the brassière at an angle to conform the device to the figure of the wearer, each front portion being slit from the upper edge downward over the middle of the breast, and a flap connected to one edge of the slit and underlapping the other edge, shoulder straps attached to the upper edge of the front and back portions, means for securing the front edges together, means for tightening the lower edge around the waist and means for tightening the upper edge around the bust of the wearer.

3. A nursing brassière, comprising a back portion of light ordinary fabric, and a front portion composed wholly of light waterproof material connected to each end of the back portion along the sides proper of the brassière at an angle to conform the device to the figure of the wearer, each front portion being slit from the upper edge downward over the middle of the breast, and a flap connected to one edge of the slit and underlapping the other edge, shoulder straps attached to the upper edge of the front and back portions, a draw tape secured in each upper edge adjacent the connection of the shoulder straps thereto and endwise slidable in the upper edge, a draw tape endwise slidable in the lower edge of the connected front and back portions, and means for securing the front edges together between the draw tapes.

1,189,590. MOTOR-VEHICLE. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 26, 1912. Serial No. 727,930. (Cl. 267—34.)



1. The combination with an axle, and a spring support mounted thereon, said spring support comprising a continuous band having its middle portion bent over the axle and its looped ends extending in parallel on either side of the axle providing stirrups for the spring, of a spring having its end adapted to be inserted in and removed from said stirrup when said support is in place on the axle, and means for securing the spring to the support.

2. A spring securing means comprising a support forming a pair of loops surrounding the spring, a plate extending between the ends of said loops, and a wedge for securing the spring to said support.

3. A spring securing means comprising a support surrounding the spring, an adapter plate surrounding the spring on three sides, and a wedge arranged between a part of the adapter plate and a part of the support for securing the spring to the support.

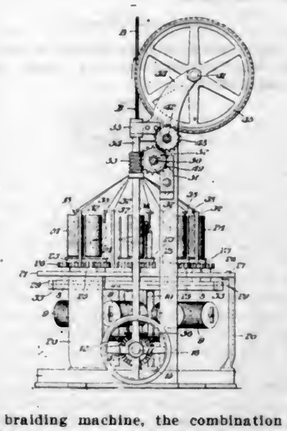
4. In a vehicle, the combination with the axle and the spring adapted to be supported therefrom transversely of the axle, of a continuous band bent at its middle over the axle and forming loops passing around the spring at either side of the axle, and means for clamping the spring between said loops and the axle.

5. In a vehicle, the combination with the axle and the spring adapted to be supported therefrom transversely of the axle, of a continuous band bent at its middle over the axle and forming loops passing around the spring at either side of the axle, and a wedge device for clamping the spring between said loops and the axle.

[Claims 6 to 16 not printed in the Gazette.]

1,189,591. BRAIDING-MACHINE. JACOB LUNDGREN, Philadelphia, Pa., assignor of one-half to The Carlson-Wenstrom Manufacturing Company, Incorporated, Philadelphia, Pa., a Corporation of Delaware. Filed June 20, 1914. Serial No. 846,264. (Cl. 28—4.)

1. In a braiding machine, the combination of a supporting frame, two horizontal plates supported on said frame and disposed in the same horizontal plane, one plate surrounding the other and the plates forming an endless sinuous course between them, a set of spaced carriers adapted to carry a set of thread-supplying devices, a sectional, annular track for supporting and guiding said carriers, said track being supported by said plates and intersected by said course, a rotatable carrier common to and adapted to carry a second set of thread-supplying devices, means for rotating said set of carriers and said rotatable carrier in opposite directions to each other, and a set of vertically-arranged thread-guiding tubes for said second set of devices, said tubes being movable on and carried by said rotatable carrier and extending through and guided by said sinuous course when the carrier is rotated.



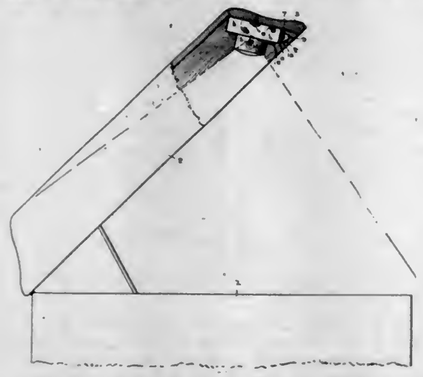
2. In a braiding machine, the combination of a supporting frame, two members on said frame and forming an endless sinuous course between them, a set of spaced carriers adapted to carry a set of thread-supplying devices, a sectional, annular track for supporting and guiding said carriers, said track being intersected by said course, a rotatable carrier common to and adapted to carry a second set of thread-supplying devices, means for rotating said set of carriers and said rotatable carrier in opposite directions to each other, said means including an annular set of shafts and gear wheels thereon, certain shafts of the set being supported by one of said members, certain shafts of the set being supported by the other of said members, and a set of thread guides for said second set of devices, said guides being movable on and carried by said rotatable carrier and extending into and guided by said sinuous course when the carrier is rotated.

3. In a braiding machine, the combination of a supporting frame, a central standard supported on said frame, an inner member supported by said standard, an outer member supported on said frame and surrounding the inner member and forming an endless sinuous course between them, a set of spaced carriers provided with gear teeth and adapted to carry a set of thread-supplying devices, said members being provided with means to support and guide said carriers in an annular path intersected by said sinuous course, and means for actuating said carriers and for guiding threads from a second set of thread-supplying devices through said course, said means including shafts rotatably mounted in said inner member, shafts rotatably mounted in said outer member, a gear wheel rotatable around said standard, pinions on said shafts co-acting with said gear wheel, and pinions on said shafts co-acting with the gear teeth of said carriers.

4. In a braiding machine, the combination of a supporting frame, a central standard supported on said frame an inner member supported by said standard, an outer member supported on said frame and surrounding the inner member and forming an endless sinuous course between them, a set of spaced carriers provided with gear teeth and adapted to carry a set of thread-supplying de-

vices, said members being provided with means to support and guide said carriers in an annular path intersected by said sinuous course, and means for actuating said carriers and for guiding threads from a second set of thread-supplying devices through said course, said means including shafts rotatably mounted in said inner member, shafts rotatably mounted in said outer member, a gear wheel rotatable around said standard, pinions on said shafts co-acting with said gear wheel, and pinions on said shafts co-acting with the gear teeth of said carriers, said gear wheel having thread-receiving spaces at intervals between adjacent teeth, and the threads from said second set of devices being guided by said means to pass through said spaces.

1,189,592. ILLUMINATING DEVICE. HARRY J. LUTZ, Wheeling, W. Va. Filed Nov. 4, 1915. Serial No. 59,576. (Cl. 240—2.)



1. An illuminating device, consisting of an electric battery, an electric lamp, and, interposed within the circuit connecting them, a contact device, movably mounted, and comprising a pivot bearing provided with a pendant arm having a contact finger adapted to swing into contact with a contact plate to close the circuit, by gravity, when the contact device is moved.

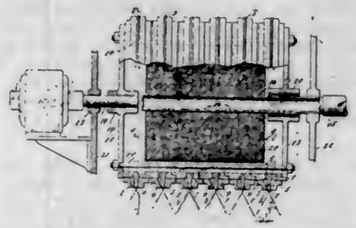
2. An illuminating device, consisting of an electric battery, an electric lamp and, interposed within the circuit connecting them, a contact device attached to the pivoted cover of a receptacle and provided with a movable gravity-actuated member, rendered operative solely by the movement of the pivoted cover, to close the circuit, by gravity, when the pivoted cover is swung to a position opening the receptacle, and open the circuit, by gravity, when the pivoted cover is swung to a position closing the receptacle.

3. The combination of a receptacle provided with a pivoted cover, a source of electrical energy, a device operated by electrical energy and a contact device, mounted upon the pivoted cover, and provided with means operated by gravity and operating solely by the movement of the pivoted cover, for electrically connecting the source of electrical energy and the device operated by electrical energy.

4. The combination of a receptacle provided with a pivoted cover, a source of electrical energy, a device operated by electrical energy, and a contact device, carried by the pivoted cover, and provided with a movable gravity-actuated member, operating solely by the movement of the pivoted cover.

5. The combiantion of a receptacle provided with a pivoted cover, a source of electrical energy, a device operated by electrical energy, and a contact device, carried by the pivoted cover, and comprising a pivot bearing provided with a pendant arm having a contact finger adapted to engage with a contact plate, by gravity, when the pivoted cover is swung to a position opening the receptacle, and adapted to swing out of engagement, by gravity, when the pivoted cover is returned to a position closing the receptacle.

1,189,593. SPRAYING OR ATOMIZING DEVICE. JOHN LYNN, New York, N. Y. Filed Oct. 3, 1913. Serial No. 793,158. (Cl. 137—80.)



1. A liquid spraying device comprising a cylindrical hollow body formed with a central rib and a flange at each side of the said rib, each flange being formed with one or more openings adjacent the rib, two cylindrical caps one fitted upon each flange for movement toward and from the rib to open and close a circumferential discharge orifice, removable end closure plates for the body, a hollow bearing upon which the body is rotatable, and means for conveying water through said bearing to the interior of the body.

2. A spraying device comprising a hollow cylindrical body formed with a circumferential rib and a threaded flange at each side of the said rib, each flange being formed with an outlet port adjacent the rib, an annular cap threaded on each flange for movement toward and from the rib to open and close an annular discharge orifice, a hollow bearing upon which the cylindrical body is rotatable, and means for conveying water through said bearing to the interior of the cylindrical body.

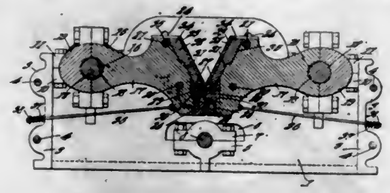
3. A rotatable liquid spraying device comprising multiple separable units, each unit having an annular body formed with a circumferential rib, a threaded flange at each side of the rib and passages through each flange adjacent the rib, a collar threaded upon each flange for movement toward and from the rib, means for rigidly connecting the units, and means for admitting water to the interior wall of each unit.

4. A liquid spraying device comprising a plurality of nozzles, each nozzle consisting of a body having a circumferential projecting rib and passages through the body on both sides of the rib, caps supported on said body on both sides of said rib and forming with the rib annular channels, into which the passages open, and providing also circumferential discharge orifices, end plates between which said nozzles are clamped, means for supplying liquid to the interior of the device, and means for rotating the device for the purpose described.

5. A liquid spraying device comprising a plurality of nozzles, each nozzle consisting of a body having a circumferential rib and passages through the body on both sides of the rib, caps supported on said body and forming with the ribs annular channels on both sides of the rib into which said passages open, and forming also circumferential discharge orifices, end plates between which said nozzles are clamped, a stationary liquid supply pipe terminating within the device, and a motor and a shaft therefor, said device being fast on the motor shaft.

1,189,594. ROCK-CRUSHER. FRANK B. MCCABE, Lewiston, Pa. Filed Sept. 11, 1915. Serial No. 50,238. (Cl. 83—53.)

1. In a crusher, a relatively long horizontal jaw, a second jaw coöperable with one end thereof, means for actuating the other end of the first mentioned jaw for moving said jaw to and from the second mentioned jaw, and means for moving the first mentioned end of the first mentioned jaw bodily downward when said jaw is moved toward the second mentioned jaw.

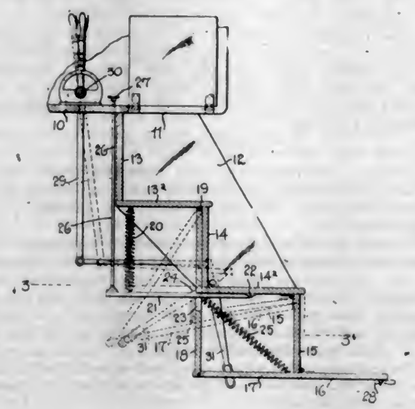


2. In a crusher, a pair of relatively long horizontal jaws projecting toward one another in approximate alinement, means for actuating the remote ends of the jaws for moving them toward and away from one another, and means for moving the adjacent ends of the jaws bodily downward when they are moved toward one another.

3. In a crusher, a frame, a relatively long horizontal jaw therein, a second jaw carried by the frame coöperable with one end of the aforesaid jaw, and means for actuating the other end of the first mentioned jaw to move it to and from the second mentioned jaw, the first mentioned end of the jaw and frame having coöperable portions including an inclined slot and pin working in said slot, whereby when the first mentioned jaw is moved toward the second mentioned jaw the first mentioned end thereof is moved bodily downward.

4. In a crusher, a frame, a pair of relatively long horizontal jaws in the frame arranged in approximate alinement, the frame including inclined slots, and the adjacent ends of the jaws having pins working in said slots, and eccentrics carried by the frame for rotation, the remote ends of said jaws having portions embracing said eccentrics, the pins working in said slots to move the adjacent ends of the jaws downwardly when the jaws are moved toward one another.

1,189,595. FOLDING CAR-STEP. JOHN J. MCCARTHY and CARL MERTZ, Lawler, Iowa. Filed Feb. 11, 1916. Serial No. 77,723. (Cl. 105—86.)



1. The combination with a permanent car step having a lower tread, of an auxiliary step comprising a member pivotally connected to the tread and an auxiliary tread pivotally connected to the lower end of the member and extending rearward therefrom, a hanger pivotally connected to the permanent steps and pivotally engaged with the rear end of the auxiliary tread, means normally urging the parts into a position with the auxiliary tread in approximately parallel relation to the lower step and beneath said step, means for latching said parts in position with the auxiliary tread parallel to but projected beyond the lower tread of the permanent car step, and means for releasing said latching means.

2. The combination with a permanent car step having a lower tread, of an auxiliary step comprising a member pivotally connected to the tread and an auxiliary tread pivotally connected to the lower end of said member and extending rearward therefrom, a hanger pivotally connected to the permanent steps and pivotally engaged with the rear end of the auxiliary tread, means normally urging the parts into a position with the auxiliary tread in approximately parallel relation to the lower step and entirely beneath the step, a spring actuated latch adapted to engage the hanger when in a vertical position to hold it from movement and thereby hold the auxiliary tread projected beyond the lowest tread of the permanent steps, and means for releasing said latch.

3. The combination with a permanent car step having a lower tread, of an auxiliary step comprising a riser pivotally connected to the tread and a tread pivotally connected to the lower end of the riser and extending rearward therefrom, a hanger pivotally connected to the permanent steps and pivotally engaged with the rear end of the auxiliary tread, springs normally urging the parts into a position with the auxiliary riser and tread in approximately parallel relation to the lower step and beneath said step, and a spring actuated latch bar adapted to engage the hanger when in a vertical position to hold it from movement, and means for releasing said latch bar.

4. The combination with a permanent car step having a lower tread, of an auxiliary step comprising a riser pivotally connected to the tread and a tread pivotally connected to the lower end of the riser and extending rearward therefrom, a hanger pivotally connected to the permanent steps and pivotally engaged with the rear end of the auxiliary tread, springs normally urging the parts into a position with the auxiliary riser and tread in approximately parallel relation to the lower step and beneath said step, and a spring actuated latch bar adapted to engage the hanger when in a vertical position to hold it from movement, and means for releasing said latch bar, said means comprising a trip rod passing upward from the inner end of the latch bar to and through the platform of the car.

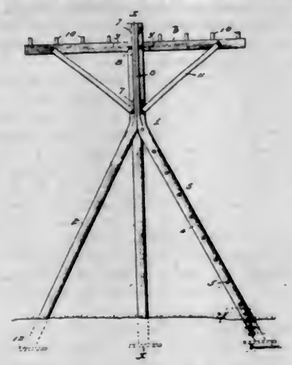
5. The combination with the platform of a car, and a permanent car step extending down therefrom, the step including side members and a lower tread, of a riser pivotally connected to the forward edge of the lower tread, an auxiliary step hingedly connected intermediate its ends to the lower edge of the auxiliary riser, a hanger pivotally mounted at its upper end between the side members of the permanent car step and depending therefrom and pivotally connected to the rear end of the auxiliary tread, said hanger being slotted, springs connected to the permanent step and to the auxiliary tread at its point of connection with the corresponding riser, a latch bar pivotally connected to a tread of the permanent car steps, extending rearward therefrom and passing through and formed with a notch to form one wall of the slot, said latch bar holding the hanger in a depending position when so engaged, a spring connected to the outer end of the latch bar and urging it upward, and a trip rod connected to the outer end of the latch bar and passing upward through the platform.

[Claim 6 not printed in the Gazette.]

1,189,596. TELEPHONE AND TELEGRAPH POLE. WILLIAM MCFADDEN, Davis, W. Va. Filed Oct. 22, 1913. Serial No. 796,638. (Cl. 189—25.)

A device of the type described including a tripod-like arrangement of uprights, with upper end right-lined flat-portions bolted or secured together for the attachment thereto of the cross-arms, said uprights each being hollow or tubular, the upper portions thereof being mashed or pressed together so as to produce said flat-portions,

said flat-portions being, when bolted together, T-shaped in horizontal section, leaving one side thereof flat for



the purpose of providing a smooth surface contacting said cross-arms.

1,189,597. PORTABLE SAND AND GRAVEL DRIER. CHARLES H. MCKENNA, Providence, R. I. Filed Aug. 16, 1915. Serial No. 45,781. (Cl. 34—34.)



1. A knock-down portable drier comprising a plurality of heaters, means at one end of the heaters to retain the materials to be dried thereon, a hook member at the opposite end of each of said heaters, and a removable transversely extending vertical plate adapted to be held in position by said hooks.

2. In a knock-down portable drier, a plurality of heaters, an upright plate secured to one end of each of the heaters, a hook at the opposite end of each of said heaters, and a removable transversely extending vertical plate adapted to be held in position by said hooks.

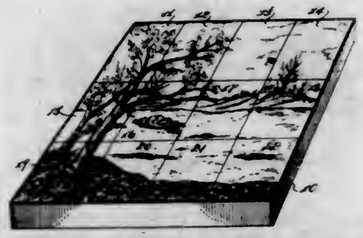
3. In a knock-down portable drier, a plurality of heaters each comprising a horizontally extending cylindrical fire chamber having an outlet pipe formed integrally with one end thereof and extending vertically therefrom, an upright plate secured to one end of each of the heaters, a hook secured to each of said outlet pipes, and a removable transversely extending vertical plate adapted to be held in operative position by said hooks.

4. In a knock-down portable drier, a plurality of heaters each comprising a horizontally extending cylindrical fire chamber having an outlet pipe formed integrally with one end thereof and extending vertically therefrom, a damper in the outer end of each of said outlet pipes, and an upright plate secured to the inlet end of each of said heaters, a door for closing said end, a hook secured to each of said outlet pipes, a foot secured under the outlet end of each of said fire chambers, and a removable transversely extending vertical plate adapted to be held in operative position by said hooks.

5. In a knock-down portable drier, a plurality of heaters each comprising a horizontally extending cylindrical fire chamber, an upright plate secured to one end of each of the heaters, said plates being adapted for overlapping engagement, a hook at the opposite end of each of said heaters, and a removable transversely extending plate adapted to be held in operative position by said hooks.

[Claims 6 to 8 not printed in the Gazette.]

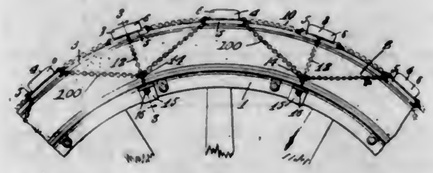
1,189,598. PICTURE-PUZZLE. MELVILLE J. MCLEAN, Toronto, Ontario, Canada, asignor to J. M. Dent & Sons, Limited, London, England, a Corporation. Filed Mar. 30, 1916. Serial No. 87,840. (Cl. 46—41.)



1. A picture puzzle, comprising a series of units, each consisting of separately covered signatures of a book, and the covers of said signature units being provided with separate portions of a picture depicting a scene from the book composed of said signatures.

2. A picture puzzle, comprising a series of units, each consisting of separately covered signatures of a book, the corresponding covers of said signature units being provided with separate portions of a picture depicting a scene from the book composed of said signatures, and the backs of said signature units being located to the left thereof, when the puzzle is set up.

1,189,599. GUIDE-CHAIN. WILLIAM MCMEEKIN, Galva, Ill. Filed Feb. 9, 1916. Serial No. 77,304. (Cl. 152—16.)



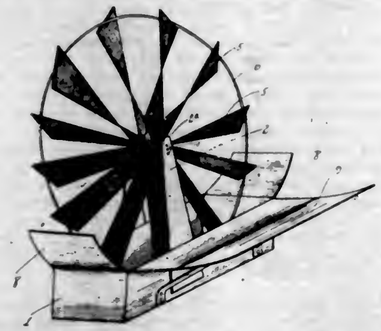
In a device of the class described, a flexible tread strip; anti-skidding members superposed on the tread strip; flexible elements connecting the anti-skidding members; means for securing alternate anti-skidding members to the flexible tread strip, the other, alternate anti-skidding members being free to move with respect to the tread strip; and means for securing the free anti-skidding elements to a rim.

1,189,600. HUMIDIFIER AND DISINFECTOR. RAYMOND A. MALLETT and CHARLES MCCLUNG, Sacramento, Cal. Filed Oct. 15, 1914. Serial No. 866,860. (Cl. 98—44.)

1. A device of the character described comprising the combination with a revoluble fan, of a humidifier operable by the air currents from the fan, such humidifier comprising a receptacle adapted to contain a liquid, an absorbent wheel journaled above the receptacle in front of the fan and movable through the receptacle, the hub of said wheel being adjustable at different angles whereby the wheel may be arranged to operate directly in the air currents from the fan when the fan is inclined at different angles, as described.

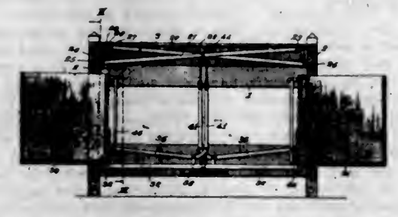
2. A device of the character described comprising a receptacle, a pair of upwardly projecting supports on such receptacle, said supports being slightly resilient whereby they may be moved apart, each support being provided with a plurality of bearings disposed at different angles with respect to each other, and a porous wheel having a hub adapted to be pressed between said supports and projected into said bearings, as described.

3. A device of the character described comprising a receptacle, a pair of upwardly projecting supports on said receptacle, each support being provided with a plurality



of bearings disposed at different angles with respect to each other, a wheel comprising a hub adapted to be projected into said bearings, and a plurality of radial vanes on said hub, as described.

1,189,601. ADJUSTABLE BENCH. CHRISTIAN H. MARTIN, Akron, Ohio. Filed Sept. 30, 1912. Serial No 723,093. (Cl. 45—64.)



1. In a bench, an adjustable seat adapted to be locked in a plurality of positions, a movable compartment adapted to be received within said bench, and lever mechanism connecting said compartment with said seat, whereby the compartment is ejected from the interior of the bench when the seat is shifted from a lower to a higher position.

2. In a bench, an adjustable seat adapted to be locked in a plurality of positions, a movable compartment adapted to be received within said bench, a lever pivoted to a fixed part of the bench, a link connecting the lever with the seat, and means for communicating motion from the lever to the compartment.

3. In a bench, an adjustable seat adapted to be locked in a plurality of positions, a movable compartment adapted to be received within said bench, a lever pivoted to a fixed part of the bench, a link connecting one arm of the lever with the seat, and means connecting the other arm of the lever with the compartment.

4. In a bench, an adjustable seat adapted to be locked in a plurality of positions, a movable compartment adapted to be received within said bench, a lever pivoted to a fixed part of the bench, a link connecting one arm of the lever with the seat, and means for causing the movement of the lever to eject the compartment from the interior of the bench or retract it therein, according to the direction of the movement of said lever.

5. In a bench, an adjustable seat adapted to be locked in a plurality of positions, a movable compartment adapted to be received within the bench, a lever pivoted to a fixed part of the bench, linkage connecting one arm of said lever with the seat, a bar affixed to the compartment, and means mounted on the other extremity of asid lever engaging said bar acting when the lever is oscillated about its pivot to eject the compartment from the bench or retract it therein, according to the direction of such oscillation.

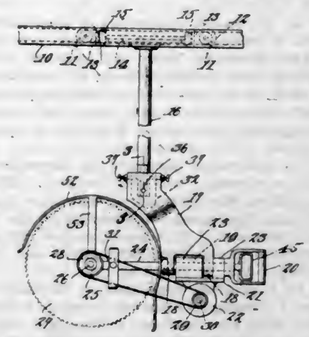
[Claims 6 to 9 not printed in the Gazette.]

1,189,602. PURIFYING ETHYL ETHER. GUSTAVUS MICHAELIS, Albany, N. Y. Filed Apr. 23, 1915. Serial No. 23,517. (Cl. 23—24.)

1. The process for purifying ethyl ether, comprising placing commercially pure ether with a caustic alkali, stirring and raising the ether to its boiling point, recondensing the ether again and again, bringing it in contact with the alkali until upon examination of the ether it answers negatively to all known tests for impurities.

2. A process for treating ethyl ether, comprising placing commercially pure ether with a caustic alkali in a rectifying still fitted with a stirring apparatus and a reflux cooler and condenser, raising the ether to its boiling point while the stirring apparatus is set in motion, and with the aid of the reflux cooler the recondensed ether is again and again brought in contact with the alkali, repeating the process until upon examination the ether answers negatively to all tests for impurities heretofore found in commercially pure sulfuric ether.

1,189,603. SAW. CHARLES E. MICHENER, Charleroi, Pa. Filed Apr. 21, 1915. Serial No. 22,819. (Cl. 143—47.)



1. In a hand-controlled, power-operated saw, the combination of a support, a stem depending from the support, a sleeve swiveled on the lower end of the stem and carryingt runnions, a hanger having a top recess to receive the lower end of the stem and the sleeve thereon, the side walls of the recess having bearings in which the trunnions are journaled, a motor support carried by the hanger, and a saw support on the motor support.

2. In a hand-controlled, power-operated saw, the combination of a hollow shaft, a motor supporting bracket carried by the shaft, a hand grip on the shaft, a saw-supporting arm fast on the shaft, a slidable rod housed in the shaft, a hand grip on said rod located in proximity to the aforesaid hand grip, motor-controlling means carried by the rod, and a saw-brake operatively connected to the rod.

3. In a hand-controlled, power-operated saw, the combination of a hanger, a shaft rockably supported by the hanger, a motor supporting bracket fast on the shaft, a hand-grip fast on one end of the shaft, and a saw-supporting arm fast on the other end of the shaft.

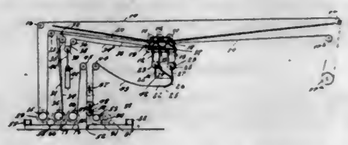
4. In a hand-controlled, power-operated saw, the combination of a support having bearings, a shaft journaled in said bearings and projecting therefrom at its ends, a motor support carried by the shaft intermediate its ends and fast thereon, a saw-supporting arm fast on one end of the shaft, the axis of the saw extending transversely of the axis of the shaft, and a controlling hand grip on the other end of the shaft.

1,189,604. SPIRAL THUMB-TACK. ANNA MILEY, Los Angeles, Cal. Filed Dec. 13, 1915. Serial No. 66,618. (Cl. 40—11.)



A tack consisting of a head of metal plate, a length of spring wire attached to the under face thereof, said spring wire forming a plurality of helical coils having a diameter not to exceed the diameter of the head, said coils being close together and adapted to frictionally hold cards and the like between them, the lower coil of said wire being bent toward the center of the last coil and projecting downwardly therefrom to form a sharpened point.

1,189,605. EXCAVATING CABLEWAY APPARATUS. THOMAS SPENCER MILLER, South Orange, N. J. Filed June 4, 1914. Serial No. 842,914. (Cl. 214—13.)



1. In an excavating apparatus, a suspended cable or trackway, a carriage to travel thereon, an open ended drag bucket supported from said carriage, a drag line connected to said bucket, a drum for exerting a transporting pull on the open end of said drag line, and independent means between said drum and bucket for exerting a digging pull on said drag line in excess of the pulling power of the said drum.

2. In an excavating apparatus, a suspended cable or trackway, a carriage to travel thereon, a drag bucket suspended from the carriage, a drag line connected to the bucket, a high-speed low-power drum for taking up said drag line, and a high-power means independent of the said drum and between the latter and the bucket for exerting a pull on said drag line.

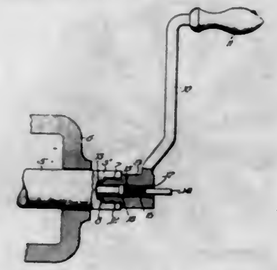
3. In an excavating apparatus, a suspended cable or trackway, a carriage to travel thereon, a drag bucket suspended from the carriage, a drag line connected to the bucket, a high-speed drum for taking up said drag line, and a high-power means for pulling a loop in said drag line, said means having power in excess of the said high-speed drum.

4. In an excavating apparatus, a suspended cable or trackway, a carriage to travel thereon, a drag bucket suspended from the carriage, a drag-line connected to the bucket, a drum for taking up said drag line, a loop in the drag line, a member in the loop and carrying a rope guide, a second drum and a rope extended through said rope guide and having one end wound on said drum and the other end anchored.

5. In an excavating apparatus, a suspended cable or traceway, a carriage to travel thereon, a drag bucket suspended from the carriage, a drag-line connected to the bucket, low power take-up means for taking up said drag-line at relatively high speed, means for holding said means stationary and preventing outward movement of said line therefrom, and high power means independent of the said take-up means for exerting a pull on said drag-line.

1,189,606. SAFETY-CRANK FOR SHAFTS. WILLIAM L. MILLER, Madison, Wis., assignor to Gisholt Machine Company, Madison, Wis., a Corporation of Wisconsin. Filed June 9, 1915. Serial No. 33,025. (Cl. 74—33.)

1. The combination with a shaft having a centrally socketed end, of a crank for turning the same having a hub provided with a rigid portion non-rotatably fitting within the socketed end of said shaft, and means operative to force said crank hub out of engagement with said shaft when the crank is released.

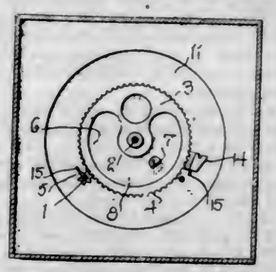


2. The combination with a shaft having in an end thereof a socket the inner portion of which is round and the outer portion polygonal in cross-section, of a crank for turning said shaft having a hub provided with a socket-engaging member the outer portion of which is round and the inner portion polygonal in cross-section to fit the inner and outer portions respectively of said socket.

3. The combination with a shaft having a centrally socketed end, of a crank for turning the same having a hub provided with a rigid portion non-rotatably fitting within the socketed end of said shaft, and spring-actuated means within said hub operative to disengage the latter from said shaft when the crank is released.

4. The combination with a shaft having in an end thereof a socket the inner portion of which is round and the outer portion polygonal in cross-section, of a crank for turning said shaft having a hub provided with a socket-engaging member the outer portion of which is round and the inner portion polygonal in cross-section to fit the inner and outer portions respectively of said socket, and a spring-actuated rod slidably mounted in said hub and adapted through engagement with the bottom of said socket to tend to force the socket-engaging portions of said hub out of engagement with said socket.

1,189,607. WINDING-INDICATOR FOR CLOCKS AND THE LIKE. DANIEL J. MITCHELL, Aubuquerque, N. Mex. Filed Apr. 10, 1915, Serial No. 20,538. Renewed Dec. 27, 1915. Serial No. 68,918. (Cl. 58—85.)



1. In combination with the winding shaft of a clock mechanism, two relatively movable members rotatable about a common axis, one of said members being operatively engaged with the winding shaft, the second of said members being provided with an indication, and coacting means carried by said members whereby the same may be caused to rotate in unison and in the same general direction.

2. In combination with the winding shaft of a clock mechanism, two relatively movable members rotatable about a common axis, one of said members being operatively engaged with the winding shaft, the second of said members being provided with an indication, coacting means carried by said members whereby the same may be caused to rotate in unison and in the same general direction, and means for limiting the movement of the second named member in either direction.

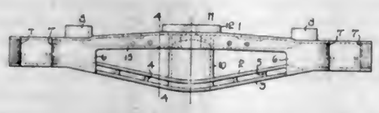
3. In combination with the winding shaft of a clock mechanism, two relatively movable members rotatable about a common axis, one of said members being operatively engaged with the winding shaft, the second of said members being provided with an indication, and coacting means carried by said members whereby the same may be caused to rotate in unison and in the same general direction, said second named member being provided with a weighted mass whereby the same may automatically rotate independently of the first named member.

4. In combination with the winding shaft and the hour sleeve of a clock mechanism, two relatively movable members rotatably supported by the hour sleeve, one of said members being operatively engaged with the winding shaft, the second of said members being provided with an indication, and coacting means carried by said members whereby the same may be caused to rotate in unison and in the same general direction.

5. In combination with the winding shaft of a clock mechanism, two relatively movable members rotatable about a common axis, one of said members being operatively engaged with the winding shaft, the second of said members being provided with an indication, coacting means carried by said members whereby the same may be caused to rotate in unison and in the same general direction, said second named member being provided with a weighted extension, and means adapted to coact with said extension for limiting the movement of the second named member in either direction.

[Claims 6 and 7 not printed in the Gazette.]

1,189,608. TRUCK-BOLSTER. YUSKE MIYASAKI, McKees Rocks, Pa. Filed Nov. 11, 1915. Serial No. 60,929. (Cl. 105—104.)



1. A truck bolster including spaced parallel longitudinally extending chord members in vertically spaced relation, the upper of said chord members having flanges formed on its longitudinal edges.

2. A truck bolster including spaced parallel longitudinally extending bottom chord members, the upper of said members having flanges formed on its longitudinal edges and directed away from the bottom chord member.

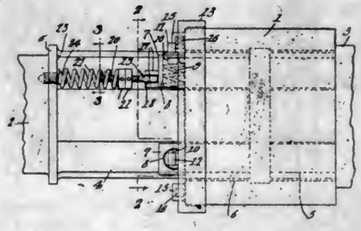
3. A truck bolster including a chord member provided with spaced longitudinally disposed flanges at opposite sides thereof, the inner flange of each set being offset adjacent its outer end to increase the vertical strength of the bolster at a side bearing.

4. A truck bolster including a chord member provided with spaced longitudinally disposed flanges at opposite sides thereof, the inner flange of each set being offset to increase the vertical strength of the bolster at a side bearing.

5. A truck bolster consisting of upper and lower longitudinally extended chord members integrally connected at opposite ends, and a vertical truss integrally connecting the chord members at the center of the bolster, the upper chord member being provided with spaced longitudinally disposed flanges at opposite sides thereof, each of said flanges being integrally connected with the central truss, the outer flange of each set extending the entire length of the bolster and the inner flanges terminating at a point inwardly of and in close proximity to the ends of the bolster, said inner flanges being offset adjacent their outer ends to increase the vertical strength of the bolster at a side bearing.

[Claim 6 not printed in the Gazette.]

1,189,609. ROLLING-MILL COUPLING. JULIAN EARL MONTGOMERY, Wheeling, W. Va. Filed Dec. 27, 1915. Serial No. 68,759. (Cl. 64—13.)



1. In a device of the character described, a coupling box, a spindle engaged therewith and having a portion of angular cross section fitting in said box and providing a recess, a coiled spring having one end bearing against one wall of said recess, and means carried by said box against which the other end of the spring bears, said spring serving to hold the driving surfaces of the box and spindle in contact.

2. In a device of the character described, a coupling box, a spindle having a portion of angular cross section fitting in said box and providing a recess, the box having a lug projecting therefrom within said recess and having an opening, a coiled spring within said opening and bearing against one wall of said recess, and means carried by the box for compressing said spring.

3. In a device of the character described, a coupling box, a spindle engaged therewith, a plurality of springs carried by one of said parts and bearing against the other, and means for simultaneously adjusting all of the springs, said springs when brought under pressure serving to hold the driving surfaces of the box and spindle in contact.

4. In a device of the character described, a coupling box, a spindle engaged therewith, a plurality of springs carried by one of said parts and bearing against the other for holding the driving surfaces of said parts in contact, and a cam ring rotatable upon one of said parts for adjusting the pressure of all of the springs simultaneously.

5. In a device of the character described, a spindle, a coupling box fitted thereon, one of said parts having a plurality of lugs provided with openings, expansion springs disposed within said openings and bearing against the other of said two first mentioned parts, and a rotatable cam ring upon one of said parts and adjustable for compressing said springs simultaneously.

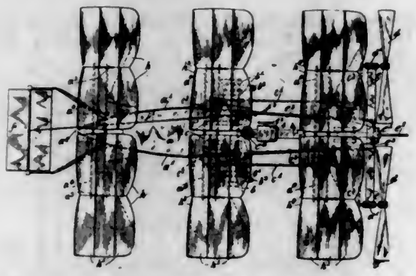
[Claims 6 to 11 not printed in the Gazette.]

1,189,610. AEROPLANE. ALBERT H. MORRIS, New York, N. Y. Filed Aug. 13, 1912, Serial No. 714,788. Renewed Dec. 10, 1913. Serial No. 805,864. (Cl. 244—14.)

1. In an aeroplane, series of sustaining planes disposed symmetrically on opposite sides of the longitudinal axis to maintain the lateral stability thereof, said planes comprising wings mounted angularly each to each, the angularity of each successive pair of wings differing from front to rear of the aeroplane.

2. In an aeroplane, series of sustaining planes disposed symmetrically on opposite sides of the longitudinal axis to maintain the lateral stability thereof, said planes comprising wings mounted angularly each to each, the angularity of each successive pair of wings decreasing from front to rear of the aeroplane.

3. In an aeroplane, sustaining wings composed of a series of layers of vulcanized fiber, the number of layers decreasing from front to rear of said wings, whereby the forward portions are relatively rigid and the rearward portions relatively flexible.

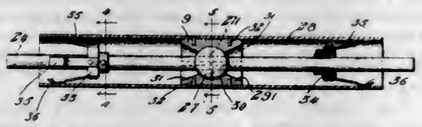


4. In an aeroplane, sustaining wings composed of a series of layers of vulcanized fiber, the number of layers decreasing from front to rear of said wings, whereby the forward portions are relatively rigid and the rearward portions relatively flexible, the forward portions being concave with respect to their longitudinal axes.

5. In an aeroplane, sustaining wings composed of a series of layers of vulcanized fiber, the number of layers decreasing from front to rear of said wings, whereby the forward portions are relatively rigid and the rearward portions relatively flexible, and flexible connections secured to said rearward portions to permit the wings to be warped.

[Claims 6 to 8 not printed in the Gazette.]

1,189,611. GUIDE-ROLL FOR WEBS. WILLIS S. MORSE, Philadelphia, Pa. Filed Dec. 18, 1913. Serial No. 807,475. (Cl. 26—18.)



1. In a device of the class described, the combination of a substantially cylindrical guiding member and means supporting said member for universal movement, said member having a part yieldable relatively to said supporting means.

2. A guide roll for a web in a printing press, comprising a relatively long cylindrical member of substantially uniform diameter over which the web is adapted to run, a support for said member, and a universal connection between said member and support.

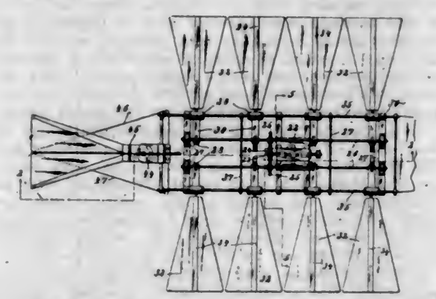
3. A guide roll comprising a cylindrical member of substantially uniform diameter, a support for said member, a universal connection between said support and member, whereby said support and member may assume any one of a number of relations different from their initial relation, and means capable of restoring said support and member to their initial relation.

4. In a printing press, a guide roll for webs comprising a supporting shaft, a relatively long cylindrical member having an exterior surface over which the web may run, and a connection between said member and shaft whereby the member may rotate about and independently of the shaft and whereby said member and shaft may assume different angular relations with respect to each other.

5. In a guide roll for webs, the combination of a shaft and a guiding device carried by the shaft and normally disposed parallel thereto, said guiding device having the exterior surface over which a web is adapted to run and being so supported on the shaft that it may assume an angular position with respect to the shaft when the pressure exterted thereon is unequal and arranged so that it will automatically restore to its normal parallel position when the pressure on all parts thereof is uniform.

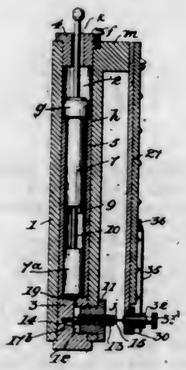
[Claims 6 to 16 not printed in the Gazette.]

1,189,612. FLYING-MACHINE. FRANK NAROBE, New York, N. Y. Filed Aug. 12, 1915. Serial No. 45,140. (Cl. 244—20.)



In a flying machine, the combination with a frame, having truck wheels at its lower side, a boat body pendent in the frame above said truck, a motor, a pair of parallel horizontal shafts driven by said motor, a plurality of triangular, oppositely disposed wings extending from said frame, means for driving said wings from said shafts, means permitting said wings to partially fold on their upward movement and open as they move down, a steering rudder and means in said boat body for operating said motor and said rudder.

1,189,613. HEAT-REGULATING APPARATUS. NATHAN E. NASH, Toronto, Ontario, Canada. Filed Nov. 19, 1914. Serial No. 873,065. (Cl. 236—8.)



1. In a heat-regulating apparatus, a shell bored to produce a cylinder which at its upper end is open to the atmosphere and at its lower end in communication with a valve chamber which at times is open to the atmosphere, and comprising a bored sleeve with an inner annular valve seat, the wall of the said shell having a passage leading to a source of air under pressure and provided with branches one of which leads to the said valve chamber, and the other to the interior of the sleeve at a point between the said annular valve seat and the valve chamber, combined with a ring which is tight within the sleeve, and a piston situated within the cylinder, adapted at its upper end to rest on the annular valve seat and thereby close the sleeve, and at its lower end to rest on the ring, the double seating of the piston being effected simultaneously.

2. In a heat-regulating apparatus, a shell bored to produce a cylinder which at the upper end is open to the atmosphere, and at its lower end in communication with a valve chamber which at times is open to the atmosphere and comprising a bored sleeve with an inner annular valve seat, the wall of the said shell being provided with a passage leading to a source of air under pressure and provided with branches one of which leads to a valve chamber which at times is open to the atmosphere, and the other to the interior of the sleeve, combined with a ring which is tight within the sleeve, a piston within the cylinder adapted at its upper end to seat on the sleeve and close the same, and at its lower end to seat on the ring, the double seating of the piston being effected simultaneously, a second piston, which is also within the sleeve below and spaced from the first, and a rod which connects the two pistons.

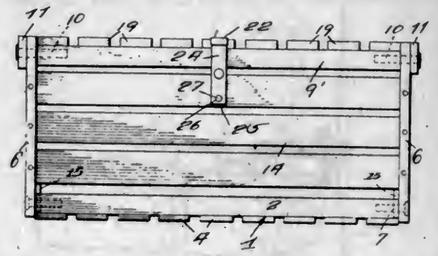
3. In a heat-regulating apparatus, a shell bored to produce a cylinder which at its upper end is open to the atmosphere, and at its lower end in communication with a valve chamber which at times is open to the atmosphere, and comprising a bored sleeve with an inner annular valve seat, the wall of the shell being provided with a passage leading to a diaphragm which together with a spring controls the opening and closing of a radiator valve, the said passage having branches one of which leads to the said cylinder, the other to the interior of the sleeve, combined with a ring which is tight within the sleeve and a piston within the cylinder adapted at its upper end to rest on the sleeve and close the same, and at its lower end to rest on the ring, the double seating of the piston being effected simultaneously.

4. In a heat-regulating apparatus, a shell bored to produce a cylinder which at its upper end is open to the atmosphere, and at its lower end is in communication with a valve chamber which at times is open to the atmosphere, and comprising a bored sleeve, the wall of the shell being provided with a passage leading to a diaphragm which together with a spring controls the opening and closing of a radiator valve, the said passage having branches one of which leads to the said cylinder and the other to the interior of the sleeve, combined with a ring which is tight within the sleeve, a piston within the cylinder adapted at its upper end to rest on the sleeve and close the same, and at its lower end to rest on the ring, the double seating of the piston being effected simultaneously, a second piston which is within the sleeve and below and spaced from the first, and a rod which connects the two pistons.

5. In a heat-regulating apparatus, a shell bored to produce a cylinder which at its upper end is open to the atmosphere, and at its lower end in communication with a valve chamber which at times is open to the atmosphere, and comprising a bored sleeve with an inner annular valve seat, the wall of the said shell having a passage leading to a source of air under pressure and provided with branches one of which leads to the said valve chamber, and the other to the interior of the sleeve at a point between the said annular valve seat and the valve chamber combined with a ring which is tight within the sleeve, a piston situated within the cylinder, adapted at its upper end to rest on the valve seat and thereby close the sleeve, and at its lower end to rest on the ring, the double seating of the piston being effected simultaneously, and a thermostatic blade to control the opening and closing of a valve in the said valve chamber, substantially as, and for the purpose specified.

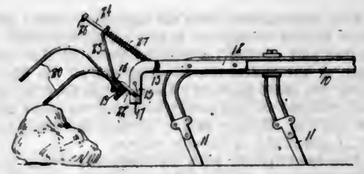
1,189,614. COLLAPSIBLE CRATE. ARNOLD NELIUS, New Hyde Park, N. Y. Filed Dec. 2, 1914. Serial No. 875,145. (Cl. 217—47.)

A collapsible crate comprising a bottom consisting of a plurality of slats and bars secured to the ends thereof, vertically extending bars hingedly connected to the first mentioned bars, slats connecting the last mentioned bars into pairs, connecting bars hingedly securing said pairs together, a cover hinged between the members of one of said pairs, and ends hingedly secured to the bars of the bottom and constructed and arranged to lie between the



aforementioned connecting bars and the ends of the cover.

1,189,615. WEEDER ATTACHMENT FOR CULTIVATORS. ALBERT H. NELSON and GEORGE C. PETERSON, White Lake, S. D. Filed Aug. 24, 1915. Serial No. 47,089. (Cl. 97—44.)



1. A weeder attachment comprising a bar adapted to be secured to a cultivator beam and having its rear end terminating in spaced depending arms, a rake pivotally secured to said arms, and means for yieldingly holding said rake against pivotal movement.

2. A weeder attachment comprising a bar adapted to be secured to a cultivator beam and having its rear end terminating in spaced depending arms, a rake, and means for interchangeably and pivotally connecting the rake to said arms at different elevations with respect to the latter.

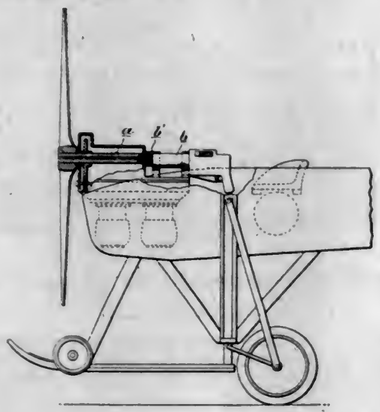
3. A weeder attachment comprising a bar adapted to be secured to a cultivator beam and having its rear end terminating in spaced depending arms, a rake, pivotally connected to said arms, an arm on the rake, a rod pivoted to said bar and slidably engaged through the arm on the rake, and a spring encircling said rod and normally holding the arm on the rake at the limit of its rearward movement.

1,189,616. ARMORED AEROPLANE. JOSEPH THOMPSON PARKER, Washington, D. C. Filed Feb. 11, 1916. Serial No. 77,687. (Cl. 89—40.)

1. The combination with an aeroplane whose propeller shaft is axially hollow, of a gun mounted rigidly on the aeroplane and having its barrel coupled to the rear end of the shaft and axially in line with the passage through the shaft, the pasasge through the shaft being large enough in diameter to permit free passage of bullets but not large enough to permit shifting of the gun barrel independently of the shaft in aiming, so that the gun is aimed by maneuvering the aeroplane and not by adjusting the gun independently of the aeroplane.

2. The combination with an aeroplane whose propeller shaft is axially hollow, of a gun rigidly mounted on the aeroplane and having its barrel axially in line with the passage of the shatf, the forward end of the gun barrel entering the shaft and having a relatively rotatable bearing thereon, so that the gun is aimed by maneuvering the aeroplane and not by adjusting the gun independently of the aeroplane, axial alinement being insured by the

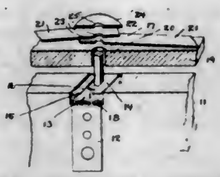
engagement of the forward end of the gun barrel with the propeller shaft.



3. The combination with an aeroplane whose propeller shaft is axially hollow, of a gun rigidly mounted on the aeroplane and having its barrel axially in line with the passage of the shaft, the forward end of the gun barrel entering the shaft part way thereof, the bore in the shaft beyond the end of the barrel being of the same diameter as the bore in the gun barrel, so that the shaft forms in effect an extension of the gun barrel.

4. The combination with an aeroplane whose propeller shaft is axially hollow, of a gun rigidly mounted on the aeroplane and having its barrel axially in line with the passage through the shaft, the bore in the shaft beyond the end of the barrel being of the same diameter as the bore in the gun barrel, so that the shaft forms in effect a rotatable extension of the gun barrel.

1,189,617. SEAL FOR PACKING-CASES. ANTON J. PAROUBEK, Beacon, N. Y. Filed Oct. 18, 1915. Serial No. 56,349. (Cl. 70—80.)



1. A structure of the kind described comprising in combination, a packing case, a keeper secured to the inner side of the case and lying adjacent to one edge thereof, a strap extending around the case and having perforated ends outside the top but adjacent to the keeper, a rivet held in the keeper and extending through the box top and strap ends, and a sealing tag having one portion secured to the box end and the other portion fastened by the aforementioned rivet.

2. The combination with a packing case, of a keeper on the edge of the case, a rivet held in the keeper and extending through the case top, fastening straps extending around the case and opposite the rivet, said straps being perforated to receive the rivet, and a tag or seal member perforated to receive the rivet and fastened to one wall of the case.

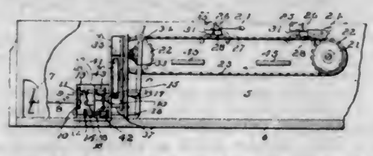
3. The combination with a packing case, of a keeper secured on the edge thereof, a rivet adjustable horizontally in the keeper and adapted to project upward through the case top, a binding strap extending around the case and having overlapping perforated ends to fit on over the aforesaid rivet, and a tag or seal member having one end fastened to a perpendicular wall of the box and the other end fitting over the aforesaid rivet.

4. The combination with a packing case, of a strap secured to the inner wall thereof, said strap being formed into a keeper which overlaps the case edge, a rivet secured in the keeper and extending upward through the case top, a binding strap having perforated overlapping ends which fit over the rivet, a tag or seal member having one portion fitting over the rivet and the other portion extending down the perpendicular wall of the case opposite the inside strap, and a clenched fastening securing the inner strap and the outer seal member to the box wall.

5. The combination with the case having a recessed top edge, of a keeper lying in the said recess, a rivet held in the keeper and adjustable in and out with relation to the case, said rivet extending upward through the case top, a binding strap on the exterior of the case having overlapping perforated ends to fit over the keeper, and a tag or seal member fitting over the rivet and attached to the outer wall of the case.

[Claim 6 not printed in the Gazette.]

1,189,618. MANUALLY-OPERATED SCREW-PROPELLER. JOHN PETERSEN, Orange, N. J. Filed Nov. 6, 1914. Serial No. 870,686. (Cl. 115—24.)



1. A device of the character described comprising a boat, a screw propeller rotatably mounted in said boat, a plurality of hand levers pivotally mounted in said boat, chains adapted to travel under said hand levers, pivoted pawls slidably mounted above said chains, means connecting said pawls with said hand levers, and driving connections between said chains and said screw propeller.

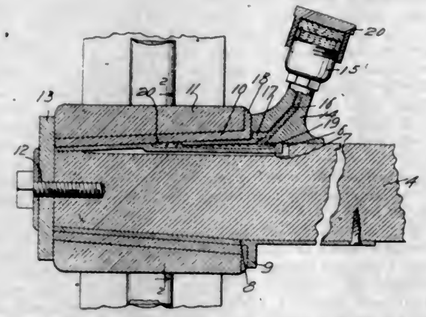
2. A device of the character described comprising a boat, a screw propeller rotatably mounted in said boat, a plurality of hand levers pivotally mounted in said boat, chains adapted to travel under said hand levers, sleeves slidably mounted on said hand levers, pawls associated with said slidable sleeves operatively engaged with said chains, and variable feed driving connections between said chains and said propeller.

3. A device of the character described comprising a boat, a propeller rotatably mounted in said boat, a plurality of hand levers pivotally mounted in said boat, supports mounted below said hand levers, chains adapted to travel below said supports, blocks slidably mounted on said supports, pawls pivotally secured in said blocks and adapted to coöperate with said chains to drive the latter in one direction, connections between said levers and said blocks, and driving connections between said chains and said screw propeller.

4. A device of the character described comprising a boat, a screw propeller rotatably mounted in said boat, a plurality of hand levers pivotally mounted in said boat, sleeves slidably mounted on said hand levers, supports secured to said boats under said hand lever, blocks slidably mounted on said supports, chains adapted to travel below said supports, pawls pivotally secured in said blocks and adapted to coöperate with said chains to drive the latter in one direction, means pivotally connecting said sleeves with said blocks, and driving connections between said chains and said screw propeller.

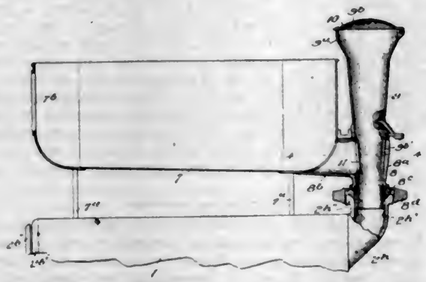
1,189,619. GREASE-CUP. FRANK PETERSON, Spokane, Wash. Filed Mar. 25, 1916. Serial No. 86,706. (Cl. 64—27.)

In a vehicle axle, a skein having an internally extending enlargement, said axle being cut away to produce a clearance for the reception of the enlarged portion, said skein having a stem terminating in a grease cup, said stem having a channel therein, said enlargement of the skein having a channel with which the channel of the stem communi-



cates, a flange on the skein through which a channel extends, said channel being in communication with the channel of the stem and the said skein having an opening forming a terminus of the channel in its enlarged portion.

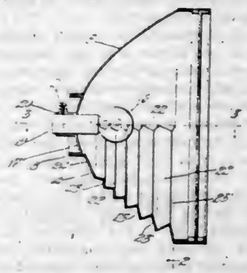
1,189,620. FILLING MECHANISM. LEROY S. PFOUTS, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of New Jersey. Filed Oct. 1, 1914. Serial No. 864,459. (Cl. 137—21.)



1. In apparatus of the class described, the combination with a freezing cylinder having an inlet duct, and a batch tank, of a conduit, formed in sections arranged at an angle to each other, leading from said batch tank to said duct, and a tubular member rotatably mounted in one of said conduit sections and formed in its side wall with a port adapted to be positioned in and out of registry with the other conduit section to control the flow of material therethrough from the batch tank, the tubular member being open from end to end and communicating at all times with said duct, whereby material can be introduced at any time directly into said duct irrespective of the position of said tubular member.

2. In apparatus of the class described, the combination with a head having a duct, and a batch tank, of a conduit, formed in sections arranged at an angle to each other, leading from said batch tank to said duct, and a funnel-shaped tubular member rotatably mounted in one of said conduit sections and formed in its side wall with a port adapted to be positioned in and out of registry with the other conduit section to control the flow of material therethrough from the batch tank, the tubular member being open from end to end and communicating at all times with said duct, whereby material can be introduced at any time directly into said duct irrespective of the position of said tubular member.

1,189,621. NON-GLARING HEADLIGHT. CHARLES E. POST and PAUL G. WAGNER, Los Angeles, Cal. Filed Mar. 27, 1916. Serial No. 87,047. (Cl. 240—41.)



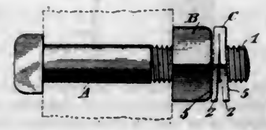
1. In a non-glare headlight, the combination of a parabolic reflector having its upper half smooth and its lower half containing a plurality of concave deflector plates, said plates being portions of concentric spheres whose center is a point on the axis of the parabola slightly in advance of the focus thereof, and a light located at said point.

2. In a non-glare headlight, the combination of a parabolic reflector having its upper half smooth, and its lower half comprising a plurality of concave deflector plates extending transversely to the axis of the parabola, said plates being portions of concentric spheres whose center is a point on the axis of the parabola slightly in advance of the focus thereof and a light located at said point.

3. In a non-glare headlight, the combination of a parabolic reflector, the upper half thereof being smooth, the lower half comprising a plurality of concave deflector plates extending transversely to the axis of the parabola, said plates being segments of concentric spheres whose center is a point on the axis of the parabola slightly in advance of the focus thereof, a removable lamp carrying member in the apex of the reflector, a lamp adjustably carried by said member and adapted to be located at said point, and means for locking said lamp in adjusted position.

4. In a non-glare headlight, the combination of a parabolic reflector, the upper half thereof being smooth, the lower half comprising a plurality of concave deflector plates extending transversely to the axis of the parabola, said plates being segments of concentric spheres, whose center is a point on the axis of the parabola slightly in advance of the focus thereof, each pair of adjacent deflector plates being joined by a wall lying substantially in a plane passing through said center, a removable lamp carrying plate at the apex of said reflector, said removable plate having its outer face frosted, a lamp adjustably carried by said removable plate and adapted to be located at said point and means for locking said lamp in adjusted position.

1,189,622. NUT-LOCK. CHARLES E. RATCLIFFE, Paducah, Ky. Filed July 3, 1915. Serial No. 37,903. (Cl. 151—30.)



1. In combination with a threaded bolt and nut, a lock nut formed of a single piece of metal in polygonal form slitted from one side nearly to the opposite side, so as to form two parts or members of equal dimensions, said parts being bent outwardly defining a V-shaped space separating the diverging parts, said parts having alined threaded openings permitting the lock nut to be

screwed upon the bolt with either part facing the nut to be locked, whereby the contacting of one of the parts against the nut causes it to be forced outwardly toward the other part thereby effecting a locking engagement with the threads of the bolt.

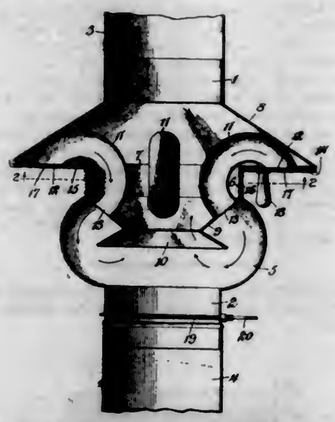
2. A nut lock comprising a two-part member, the parts of which are united at one side and diverge toward the opposite side, said member having a screw threaded bore extending coaxially through the member, and being adapted to be turned up on the threaded end of a bolt, whereby to engage one of the parts against a nut, the opposite part, upon the further rotation of the member, being canted on the bolt to bind against the threads thereof and secure the member from retrograde movement.

3. A nut lock comprising a two part member united at one side and having the parts thereof diverging toward the opposite side of the member, the parts each having a screw threaded bore concentric with the axis of the member, said member being adapted to be secured upon a bolt against a nut thereon, the part adjacent the nut being wedged between the threads of the bolt and the nut and the opposite part being canted on the bolt to bind against the threads and the first part and secure the member from retrograde movement.

4. A nut lock comprising a V-shaped member having a transverse threaded bore extending co-axially through the member in both parts thereof, said member being adapted to be threaded upon a bolt, and turned up against a nut on the bolt whereby to wedge one part of said member against the nut and cant the opposite member on the bolt to bind against the threads thereof and lock the member against retrograde movement.

5. A nut lock comprising a V-shaped member having a transverse threaded bore extending co-axially through the member in both parts thereof, said member being adapted to be threaded upon a bolt and turned up against a nut on the bolt whereby upon the further turning of the member the parts thereof are canted upon the bolt to bind against the threads thereof.

1,189,623. SMOKE-PIPE AIR-CHECK. HULDRICK B. REID, Washington, D. C., assignor of one-half to Grace L. Peine, District of Columbia. Filed Oct. 28, 1915. Serial No. 58,438. (Cl. 110—58.)

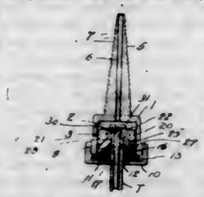


1. A smoke pipe air check comprising a casing provided with terminal collars, an air chamber provided in the casing adjacent to one of the collars, a frustoconical hood arranged above and in overlying relation to the chamber and connected at its upper end to the other collar, a downwardly and inwardly inclined annular partition located within the upper portion of the chamber terminating at its lower edge in an outwardly directed annular deflector plate, ducts connecting the interior of the chamber near the walls thereof with the atmosphere and means for throttling the passage of air through the ducts.

2. A smoke pipe air check comprising a circular casing having terminal collars adapted to fit a furnace smoke pipe, an enlarged air chamber adjacent to one collar, an outstanding frustoconical shaped hood adjacent to the other collar of larger diameter than the chamber and having an inclined upper wall and a horizontal lower wall, an intermediate collar connecting the same with the upper edge of the chamber, an inwardly and downwardly inclined annular partition extending from the upper edge of the chamber and provided at its inner, lower edge with an outwardly and downwardly directed annular deflector plate, accurate air ducts communicating with the space between the partition and the walls of the chamber and with the outside atmosphere and means for simultaneously controlling the inflow of air through the ducts.

3. A smoke pipe air check comprising a circular casing having a collar at each end for connection with a smoke pipe, a damper located in one of the collars, an enlarged circular air chamber arranged adjacent to the latter collar and having a continuous concavo-convex wall of greater diameter than the collars, a downwardly and inwardly inclined annular partition secured to the upper edge of the chamber and located in the upper portion thereof, an outwardly directed annular deflecting plate carried by the lower edge of the partition and in spaced relation to the walls of the chamber and the upper end of the last mentioned collar, a hollow hood arranged above the chamber having its outer periphery of greater diameter than the chamber and communicating at its top with the other collar and provided at its bottom with a horizontally disposed annular wall, an intermediate collar connecting the inner edge of the horizontal wall with the top edge of the air chamber, a plurality of openings formed in the aforesaid inclined partition, a like number of radially alined openings formed in the horizontally disposed wall, curved tubular ducts connecting the several pairs of openings to establish communication between the interior of the chamber and the outside atmosphere, a depending annular flange arranged around the periphery of the hood, an annular damper-plate fitting in the flange and having a depending sleeve surrounding the intermediate collar and openings formed in the plate to register with or uncover the open outer ends of the ducts.

1,189,624. AUTOMATIC HOSE-COUPLING. EDWARD J. ROHRBACHER, Seattle, Wash., assignor, by direct and mesne assignments, to Romort Manufacturing Company, Seattle, Wash., a Corporation of Washington. Filed Sept. 10, 1914. Serial No. 860,998. (Cl. 137—28.)



1. In a hose coupling, a casing formed with a chambered recess, having cylindrical side walls and a cap secured over said casing inclosing said recess and provided with an opening axially of said casing, a gasket secured between said casing and said cap and formed with a conical head extending into said recess, said gasket having a passage through said head in alinement with said cap-opening, and a valve member arranged for limited longitudinal movement within said recess, said valve member being of smaller diameter than said recess to afford a passageway for air, and being chambered on its underside affording a circular edge engageable with said gasket, and having a tubular pin arranged centrally of said chamber adapted to enter the passage of said gasket, the tubular bore of said pin communicating with the chamber of said valve member.

2. In a hose coupling, a casing formed with a chambered recess, having cylindrical side walls and an integrally connected nipple having an axially alined bore communicating with said recess and a cap secured over said casing inclosing said recess and provided with an opening axially of said casing, a gasket secured between said casing and said cap and formed with a passage through said head in alinement with said cap-opening, and a valve member arranged for limited longitudinal movement within said recess, provided with means upon its upper side to prevent closing of said bore, said valve member being of smaller diameter than said recess to afford a passageway for air, and being chambered on its underside affording a circular edge engageable with said gasket, and having a tubular pin arranged centrally of said chamber adapted to enter the passage of said gasket, of tubular bore of said pin communicating with the chamber of said valve member.

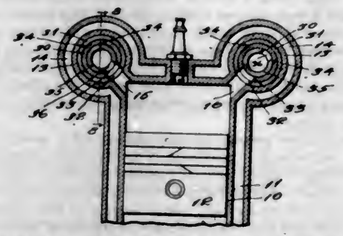
3. In a hose coupling, a casing formed with a chambered recess having cylindrical side walls and a tubular nipple communicating therewith, a cap secured over said casing inclosing said recess and provided with an opening axially of said recess, a gasket secured between said casing and said cap having an opening in the axis of said recess, and a valve member arranged for limited longitudinal movement within said recess, said valve member being of smaller diameter than said recess to afford a passageway for air, and being chambered on its underside to provide a circular edge engageable with said gasket.

4. In a hose coupling, a casing formed with a chambered recess having cylindrical side walls and a tubular nipple communicating therewith, a cap secured over said casing inclosing said recess provided with an opening axially of said recess, a gasket secured between said casing and said cap having an opening in the axis of said recess, and a valve member arranged for limited longitudinal movement within said recess provided with means upon its upper side to prevent the closing of the passage into said nipple, said valve member being of smaller diameter than said recess to afford a passageway for air and being chambered on its underside to provide a circular edge engageable with said gasket.

5. In a hose coupling, a casing formed with a chambered recess, having cylindrical side walls and a tubular nipple communicating therewith, a cap secured over said casing inclosing said recess provided with an opening axially of said recess, a gasket secured between said casing and said cap having an opening in the axis of said recess, and a valve member arranged for limited longitudinal movement within said recess, said valve member being of smaller diameter than said recess to afford a passageway for air and being chambered on its underside to provide a circular edge engageable with said gasket, said valve member having a pin arranged centrally of the chamber provided with an axially arranged bore communicating at its inner end with said chamber.

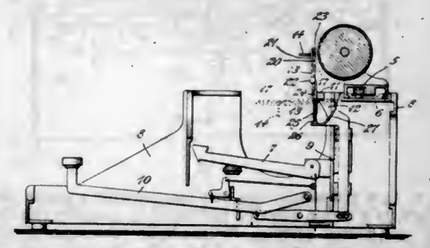
[Claim 6 not printed in the Gazette.]

1,189,625. INTERNAL-COMBUSTION ENGINE. FLOYD TROUTMAN ROMBERGER, Elizabethville, Pa. Filed Jan. 28, 1916. Serial No. 74,784. (Cl. 123—190.)



An engine of the character described, comprising a cylinder having a substantially cylindrical double walled valve casing provided with a port communicating with the interior of the cylinder, said valve casing being provided at one end with a tubular head carrying a stuffing box and at its opposite end with a screw-threaded flange; a cap carried by the flange; a pair of cylindrical longitudinally split resilient sleeves mounted one within the other with their longitudinally split portions arranged to break joint and disposed within the valve casing and confined between the tubular head and cap; a tubular valve mounted within the inner sleeve and projecting outwardly through the tubular head and stuffing-box; and means to rotate the valve.

1,189,626. TYPE-WRITER. GEORGE F. ROSE, New York, N. Y. Filed Oct. 23, 1911. Serial No. 656,170. (Cl. 197—48.)



1. In a typewriter, the combination with a platen carriage, of a type-bar guide positioned normally in front of the platen-carriage and in coöperative relation thereto, said type-bar guide being movable at will into an out-of-service position with respect to said platen carriage.

2. In a typewriter, the combination with a platen carriage, of a pivoted type-bar guide positioned normally in coöperative relation to said platen carriage, said type-bar guide being rotatable at will into an out-of-service position with respect to the platen carriage, and a ribbon vibrator movable relatively to said type-bar guide, said ribbon vibrator being movable with the type-bar guide into and from the out-of-service position.

3. In a typewriter, the combination with a platen carriage, of a rockable bar positioned substantially parallel to the line of travel of said platen carriage, a type-bar guide carried by said rockable bar, said type-bar guide being normally in coöperative relation to the platen carriage and being movable on an axis afforded by the rocker bar into an out-of-service position with respect to said carriage.

4. In a typewriter, the combination with a platen carriage, of a type-bar guide pivoted for movement into an out-of-service position with respect to said platen carriage, and a ribbon vibrator slidable relatively to said type-bar guide.

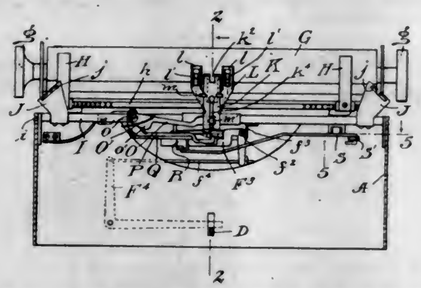
5. In a typewriter, the combination with a platen carriage, of type-bar guides, and a ribbon vibrator carried by said type-bar guide, said type-bar guide being mounted for movement relatively to the platen carriage so as to shift the ribbon vibrator into an out-of-service position.

[Claims 6 to 8 not printed in the Gazette.]

1,189,627. RIBBON MECHANISM FOR TYPE-WRITERS. GEORGE F. ROSE, New York, N. Y. Filed Nov. 7, 1912. Serial No. 729,931. (Cl. 197—157.)

1. In a typewriter, the combination with a platen carriage, of a ribbon vibrator supported normally in an operative position relative to said platen-carriage for the type bars to coöperate therewith, said ribbon vibrator being shiftable bodily into an out of service position with respect to said platen carriage, in which out of service position the type bars are precluded from coöperating with said vibrator, and actuating means for said ribbon vibrator comprising a plurality of devices which remain in coöperative relation to each other when the ribbon vibrator is in said normal operative position or is shifted into the out of service position relatively to the carriage.

2. In a typewriter, the combination with a platen carriage, of a ribbon vibrator positioned normally in operative relation to said platen carriage for the type bars to coöperate therewith, said ribbon vibrator being rotatable into an out of service relation to the carriage so that the type bars are precluded from coöperating therewith, and actuating means for said ribbon vibrator, said actuating means being in operative relation to said ribbon vibrator in both the normal position and in the out of service position thereof.



3. In a typewriter, the combination with a platen carriage, of a ribbon vibrator positioned in operative relation to said platen carriage for the type bars to coöperate therewith, said ribbon vibrator being shiftable into an out of service position with respect to the platen carriage to thereby preclude the type bars from coöperating therewith, actuating means for said ribbon vibrator, said actuating means being in operative relation to the ribbon vibrator in the operative and the out of service positions thereof, and means effective through said actuating means for varying the effective throw of said ribbon vibrator.

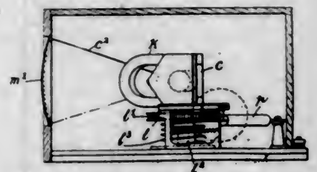
4. In a typewriter, the combination with a platen carriage and an escapement mechanism, of a ribbon vibrator occupying an operative position relative to said platen carriage for the type bars to coöperate therewith, said ribbon vibrator being shiftable into an out of service position with respect to said carriage for precluding the cooperation of the type bars therewith, and means actuated by the escapement mechanism for imparting movement to said ribbon vibrator, said vibrator-actuating means being in operative relation to the vibrator and the escapement mechanism in both the operative and out of service positions of the vibrator.

5. In a typewriter, the combination with a platen carriage and an escapement mechanism, of a ribbon vibrator occupying an operative position relative to said platen carriage for the type bars to coöperate therewith, said ribbon vibrator being shiftable into an out of service position with respect to said carriage for precluding the coöperation of the type bars therewith, means actuated by the escapement mechanism for imparting movement to said ribbon vibrator, said vibrator-actuating means being in operative relation to the vibrator and the escapement mechanisms in both the operative and out of service positions of the vibrator, and means effective through the vibrator-actuating means for imparting variable movement to said vibrator.

[Claims 6 to 25 not printed in the Gazette.]

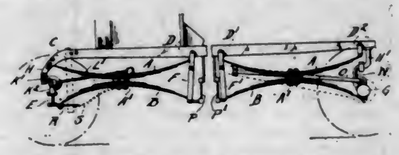
1,189,628. RECORDING-TARGET. SYDNEY ASTON MERSEY ROSE, London, England. Original application filed Feb. 6, 1911, Serial No. 606,922. Divided and this application filed Aug. 5, 1914. Serial No. 855,283. (Cl. 116—49.)

1. In indicators for recording targets, the combination, with a pointer, of a rotatable table whereon said pointer is mounted, teeth on the periphery of said table, a shaft furnished with a worm for engagement with said teeth, a spring-controlled bearing at one end of said shaft and a pivoted bearing at the opposite end thereof, means on said table for disengaging said worm at the end of the travel of the table, a spring for returning the table and means operated by said table for reëngaging the worm with its teeth.



2. In recording target indicators, the combination with a pointer and a rotatable table carrying the same, of a worm-shaft for rotating said table, a spring-controlled bearing at one end of said shaft, a spring arm on said table which serves at the end of the travel of the table in one direction to disengage said worm-shaft from the table, means for returning the table, a catch which holds said shaft in its disengaged position and an arm which on the return of the table releases said shaft and permits it to reëngage with said table.

1,189,629. MEANS OF SUSPENSION FOR MOTOR-CARS AND OTHER MOTOR-DRIVEN VEHICLES. JOHN JOSEPH RUEL, Melbourne, Victoria, Australia. Filed May 28, 1915. Serial No. 30,908. (Cl. 267—31.)



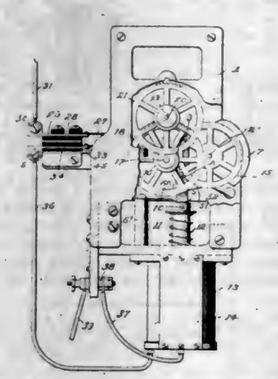
1. Suspension means, for the chassis of a motor-driven vehicle, comprising approximately semi-elliptical upper and lower springs rigidly secured together at about the middle and with their convex faces abutting, means for pivotally connecting each end of the upper spring to the chassis, at least one of said ends being connected through the medium of a shackle, means for pivotally connecting one end of the lower spring to an axle of the vehicle, and a second shackle pivotally connecting the other end of said lower spring to the chassis.

2. Suspension means, for the chassis of a motor-driven vehicle, comprising two sets of approximately semi-elliptical upper and lower springs rigidly secured together at about the middle and with their convex faces abutting, said sets being arranged longitudinally of the vehicle and one set on each side thereof, means for connecting each of said sets of springs partly to the chassis and partly to an axle of the vehicle, an extension pivoted to one side of the chassis on an axis transverse to the chassis, a rod jointed at one end to said extension and extending transversely of the chassis, and means for pivotally connecting the other end of said rod to said axle.

3. Suspension means, for the chassis of a motor-driven vehicle, comprising a pair of approximately semi-elliptical upper and lower springs rigidly secured together at about the middle and with their convex faces abutting, means for connecting said springs partly to the chassis and partly to an axle of the vehicle, and a pair of rods pivotally connected at one end to the said axle and at the other end to projections mounted on substantially the middle of the abutting springs.

4. Suspension means, for the chassis of a motor-driven vehicle, comprising approximately semi-elliptical upper and lower springs rigidly secured together at about the middle and with their convex faces abutting, means for pivotally connecting each end of the upper spring to the chassis, at least one of said ends being connected through the medium of a shackle, means for pivotally connecting one end of the lower spring to an axle of the vehicle, a second shackle pivotally connecting the other end of said lower spring to the chassis, and a rod extending laterally across the chassis and pivotally connected at one end to said second shackle and at the other end to a part of the chassis.

1,189,630. SELF-WINDING CLOCK. FREDERICK M. SCHMIDT, Brooklyn, N. Y., assignor to Self Winding Clock Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 27, 1915. Serial No. 10,967. (Cl. 58—41.)



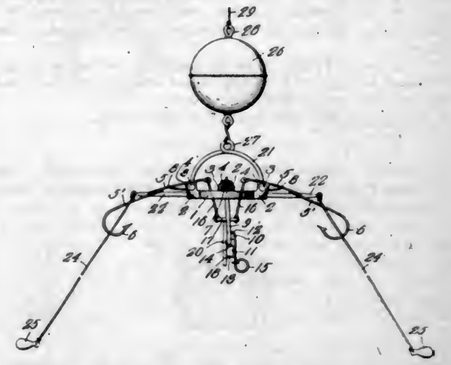
1. In a self-winding clock, a main spring, electromagnetic means for winding said spring, an energizing circuit for said electromagnetic means, and means for making and breaking said circuit, said means including a clock shaft driven by said main spring, a cam loosely mounted on said clock shaft and having oppositely projecting pins, a radially projecting pin carried by said clock shaft for engaging one of the pins on said cam, a lost motion disk loosely mounted on said shaft and adapted to engage the other pin on said cam, and means operated by said electromagnetic means for rotating said disk.

2. In a self-winding clock, a main spring shaft, a main spring having one end attached thereto, a clock shaft geared to said main spring shaft, an electroresponsive device suitably connected to the other end of said spring to wind it upon the spring shaft, an electric circuit for energizing said electroresponsive device, a cam loosely mounted on said clock shaft for controlling said circuit, means driven by said clock shaft for engaging said cam, and means driven by said electroresponsive device independently of said shaft for engaging said cam, the last said means including a laterally projecting pin carried by said cam, and a member loosely mounted on the clock shaft and having lost motion connection with said electroresponsive device.

3. In a self-winding clock, a main spring shaft, a main spring having one end attached thereto, a clock shaft geared to said main spring shaft, an electroresponsive device suitably connected to the other end of said spring to wind it upon the spring shaft, an electric circuit for energizing said electroresponsive device, a cam loosely mounted on said clock shaft for controlling said circuit, means driven by said clock shaft for engaging said cam, and means driven by said electroresponsive device independently of said shaft for engaging said cam, the last said means including a plate movably mounted on said clock shaft and having lost motion connection with said plate, said member being driven by said electroresponsive means.

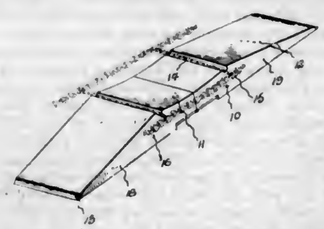
1,189,631. FISH-HOOK. WILLIAM SCHUELLER, Maspeth, N. Y. Filed Feb. 28, 1916. Serial No. 80,984. (Cl. 43—31.)

1. A device of the class described, comprising a ring, rods pivotally connected to the ring, hooks supported by the rods, a hanger supported by the ring, a trigger pivotally connected to the hanger and having a bait receiving hook carried thereby, a disk, links pivotally connecting the upper ends of the rods and disk, a bar carried by the disk, means carried by the trigger for engaging the bar to hold the hooks in their set positions, a bail connected to the ring, and a float connected to the bail, as and for the purpose set forth.



2. A device of the class described, comprising a ring, a bail having its ends terminating in arms for pivotal engagement with the ring, a float connected with the bail, spring pressed rods pivotally associated with the ring, hooks carried by the rods, a trigger pivotally connected to the bail which is supported by said ring, said trigger having upper and lower flanges, a bait receiving hook carried by the trigger, a lug carried by the hanger, a disk, links pivotally connecting the links and upper end of said rods, a bar carried by the disk, and having an opening formed therein for engaging said lug and at which time the flanges of the trigger engage said bar, said flanges serving to swing the bar to disengage the opening therein from said lug when said trigger is actuated, thereby releasing said bar to permit the hooks to swing inwardly, and means connected to said arms for anchoring the device.

1,189,632. ANTISKID-TIRE-CHAIN ADJUSTER. JOHN C. SEITZ, Butte, Mont. Filed Mar. 14, 1916. Serial No. 84,130. (Cl. 254—88.)



1. A device of the character described including a body formed in hinged sections to fold one upon the other and having downwardly and outwardly inclined terminal portions providing runways for a vehicle wheel, and an intermediate wheel supporting portion, the intermediate wheel supporting portion being transversely concaved.

2. A device of the character described including a body having downwardly and outwardly inclined terminal portions providing runways for a vehicle wheel, and an intermediate wheel supporting portion, the intermediate wheel supporting portion being transversely concaved and the body being formed with transverse grooves at the junctures of the intermediate and inclined portions adapted to receive the cross members of a tire chain.

3. A device of the character described including a body having downwardly and outwardly inclined terminal por-

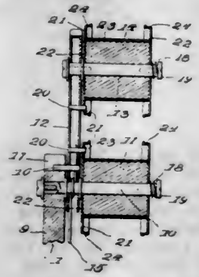
tions providing runways for a vehicle wheel, and an intermediate wheel supporting portion, and the body being provided at the junctures of its intermediate and inclined portions with transverse grooves adapted to receive the cross members of a tire chain.

4. A device of the character described including a body having downwardly and outwardly inclined end portions and an intermediate portion transversely concaved, the body being formed in symmetrical parts hingedly connected.

5. A device of the character described including a body adapted to support a vehicle wheel above the ground and having tire chain receiving grooves.

[Claims 6 to 8 not printed in the Gazette.]

1,189,633. MOTION-PICTURE-FILM CLEANER. EDWARD F. SHUE, New York, N. Y. Filed Sept. 16, 1915. Serial No. 51,050. (Cl. 15—8.)



1. A film cleaner comprising an axially shiftable roller having on its periphery a cleaning material, spring means for shifting said roller axially in one direction, and stop means applied to use when said roller is so shifted, whereby to hold the same against rotation.

2. A film cleaner comprising an axially shiftable roller having outstanding end flanges, one being provided with a series of circumferentially spaced openings, a fixed stop for successive reception in said openings to hold the roller against rotation, a cleaning material on the periphery of the roller, and spring means for shifting the roller axially to engage the stop with the aforesaid openings.

3. A film cleaner comprising a roller having outstanding end flanges whose edges are extended inwardly to form guard rings concentric to the roller, and a cleaning band surrounding the roller and having its edges spaced greater distances than the distance between the two rings.

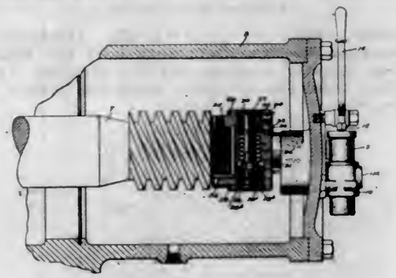
4. A film cleaner comprising a bracket, a shaft extending therefrom and carrying a film cleaning member, an oscillatory arm extending from such shaft and carrying an additional film cleaning member, and spring means for normally holding said arm in one limit of its oscillation.

5. A film cleaner comprising a bracket, a shaft extending therefrom, a roller mounted on said shaft, an oscillatory arm extending from the latter, an additional shaft carried by said arm, an additional roller mounted on said additional shaft, cleaning means on the two rollers, and spring means normally holding the arm in one limit of its oscillation.

[Claims 6 and 7 not printed in the Gazette.]

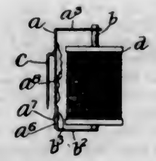
1,189,634. AUTOMATIC STOP-GOVERNOR. JOHN E. SNYDER, Swissvale, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1909. Serial No. 533,838. (Cl. 264—17.)

1. The combination of a rotating shaft, a casing secured to the end of the shaft and rotatable with the shaft, and having a bore which extends diametrically with relation to the shaft, a weight or pin located within the bore of the casing and extending diametrically across the end of the shaft, a coiled spring located within the casing and surrounding the pin, a screw plug screwed into the end of the casing and through which the pin projects and forming an adjustable abutment for the spring, and means for locking said plug against rotation relatively to said casing.



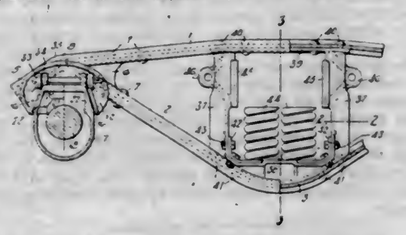
2. A revolving member having a recess extending at right angles to its axis of rotation, in combination with a pin, located within and movable along said recess, an opposing spring located within said recess and engaging said pin, and a holder for said spring screwed into the end of said recess and forming a guide for said pin.

1,189,635. SPOOL-HOLDER. JAMES J. SULLIVAN, Brooklyn, N. Y. Filed Nov. 20, 1915. Serial No. 62,517. (Cl. 242—136.)



A spool holder composed of two sheet metal parts one of which forms a back for the holder and is provided with a top part which projects at right angles thereto and the other of which constitutes the spool support and comprises a bottom part which projects at right angles to the back of the holder and is provided with an upwardly directed finger member adapted to be connected with the top part which projects from the back of the holder, said bottom part being also provided with a vertical member pivotally connected with the back of the holder whereby said finger member is rotatable in a plane parallel with the back of the holder.

1,189,636. TRUCK SIDE FRAME AND JOURNAL-BOX. EDGAR WEBSTER SUMMERS, Pittsburgh, Pa. Filed Nov. 3, 1915. Serial No. 59,403. (Cl. 101—243.)



1. A truck side frame of the arch bar type comprising a compression member and a tension member having their end portions secured together and with their centers of gravity intersecting, pedestal jaw members secured to said end portions, the jaws of said members converging upwardly, and journal boxes having portions of their side walls near the top beveled and inclined upwardly and inwardly and fitting between said pedestal jaws, whereby the intersection of the centers of gravity of the side frame members are brought vertically over the center of rotation of the axle and close down to the tops of the journal boxes.

2. A truck side frame of the arch bar type comprising a compression member and a tension member formed of flanged sections placed with their webs horizontal and the flanges vertical and having their end portions formed to bring the webs into contact and being secured together with their centers of gravity intersecting, pedestal jaw members secured to said end portions, the jaws of said members converging upwardly, and journal boxes having portions of their side walls at the top beveled upwardly and inwardly and fitting between said pedestal jaws, whereby the intersection of the centers of gravity of the side frame members are brought vertically over the center of rotation of the axle and close down to the tops of the journal boxes.

3. A truck side frame of the arch bar type comprising compression and tension members united at their ends and having their end portions outside of the point of intersection of their centers of gravity inclined downwardly at an angle corresponding to the inclination of the tension member, a pedestal jaw member fitting in said angle and secured to the side frame and having downwardly flaring diverging jaws, and a journal box having its central zone beveled upwardly and inwardly and fitting between said flaring jaws, whereby the intersection of the centers of gravity of the side frame members is brought vertically over the center of rotation of the axle and close down to the top of the journal box.

4. A truck side frame of the arch bar type comprising a compression member and a tension member having their end portions parallel and secured together and having their end portions outside of the point of intersection of the neutral axes of the tension and compression members bent downwardly on an angle corresponding to the inclination of the tension member, a pedestal jaw member secured in said angle and provided with downwardly flaring or diverging jaws, and a journal box having its central zone inclined upwardly and inwardly and fitting between said jaws, whereby the intersection of the neutral axes of the tension and compression members is brought vertically over the center of rotation of the axle and close down to the top of the journal box.

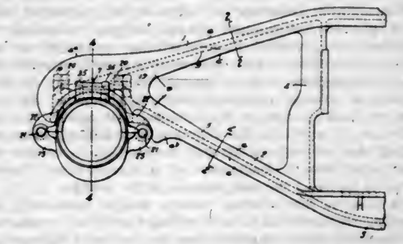
5. A truck side frame of the arch bar type comprising a tension member and a compression member formed of flanged sections placed with their webs horizontal and the flanges vertical and having their end portions formed to bring the webs into contact and being secured together through said webs, and having their end portions outside of the point of intersection of their neutral axes bent downwardly on an angle corresponding to the inclination of the tension member, a pedestal jaw member secured in said angle and provided with downwardly flaring or diverging jaws, and a journal box having its central zone beveled or inclined upwardly and inwardly and fitting between said diverging jaws, whereby the intersection of the neutral axes of the side frame members is brought vertically over the center of rotation of the axle and close down to the top of the journal box.

[Claims 6 to 10 not printed in the Gazette.]

1,189,637. RAILWAY-CAR TRUCK. EDGAR W. SUMMERS, Pittsburgh, Pa. Filed Apr. 15, 1916. Serial No. 91,342. (Cl. 105—243.)

1. A railway car truck side frame of the arch bar type formed as an integral casting comprising a compression member and a tension member each of I-beam cross section having the web horizontal and the flanges vertical.

2. A railway car truck side frame of the arch bar type formed as an integral casting comprising a compression member and a tension member and provided in their united end portion with a journal box seat, the parts being so arranged that the centers of gravity or neutral axes of the tension and compression members intersect directly above the center of rotation of the axle.



3. A railway car truck side frame of the arch bar type formed as an integral casting comprising a compression member and a tension member each of flanged cross section having the web horizontal and the flanges vertical and provided with a journal box seat in their united end portion, said parts being so arranged that the centers of gravity or neutral axes of the tension and compression members intersect directly above the center of rotation of the axle.

4. A railway car truck side frame of the arch bar type formed as an integral casting comprising a compression member and a tension member each of I-beam cross section having the web horizontal and flanges vertical and provided in their united end portion with a journal box seat, the parts being so arranged that the centers of gravity or neutral axes of the tension and compression members intersect directly above the center of rotation of the axle.

5. A railway car truck side frame of the arch bar type formed as an integral casting and comprising a tension member and a compression member each of I-beam cross section having the web horizontal and the flanges vertical and provided in their united end portion with a journal box seat, the downwardly projecting flanges of the tension member being formed to provide a jacking seat adjacent to the journal box seat.

[Claims 6 to 16 not printed in the Gazette.]

1,189,638. GASIFICATION OF SEWAGE-SLUDGE. NILS TESTRUP, London, England, and THOMAS RIGBY and GEORGE WILLIAM ANDREW, Dumfries, Scotland, assignors to Wetcarbonizing Limited, London, England. Filed July 11, 1914. Serial No. 850,513. (Cl. 48—209.)



1. A process for treating sewage sludge, consisting in subjecting it to decarbonization by partial combustion with a limited amount of air in the presence of steam, reducing the proportion of air to steam to such an

extent that the heat of combustion is insufficient to maintain the decarbonization, and supplying such additional heat from an external source as will maintain the reaction without resulting in fusion of the contained ash.

2. A process for treating sewage sludge, consisting in subjecting the material to a distilling operation to remove fatty matters, then decarbonizing the material by partial combustion with a limited supply of air in the presence of steam, reducing the proportion of air to steam to such an extent that the heat of combustion is insufficient to maintain the reaction, and adding from an external source such additional heat as is necessary to render combustion continuous at a temperature below the fusion point of the ash present in the sludge.

3. A process for treating sewage sludge, consisting in subjecting the material to a distilling operation to remove fatty matters, then decarbonizing the material by partial combustion with a limited supply of air in the presence of steam, reducing the proportion of air to steam to such an extent that the heat of combustion is insufficient to maintain the reaction, and in supplying such additional heat as is required to render low temperature combustion continuous by superheating the mixture of air and steam.

4. A process for treating sewage sludge, consisting in drying the sludge, subjecting it to a distilling operation to remove fatty matters, decarbonizing it by a partial combustion with a limited amount of air in the presence of steam, reducing the proportion of such air to steam to such an extent that the heat of combustion is insufficient to maintain the reaction, utilizing the water vapor generated during drying to assist the distilling operation, and utilizing gases produced during the decarbonization to pre-heat the air and steam used in connection therewith.

5. A process for the treatment of sewage sludge, consisting in drying the sludge, removing fatty matters therefrom by steam superheated to a temperature of from 250° C. to 300° C., decarbonizing the residue at a temperature of from 600° C. to 800° C., by partial combustion with a limited supply of air in the presence of steam, reducing the proportion of air to steam that the heat of combustion is insufficient to maintain decarbonization, and supplying from an external source the additional heat thus rendered necessary.

[Claim 6 not printed in the Gazette.]

1,189,639. PEN OR PENCIL CLIP OR HOLDER. HARRY L. TOOKER, Taft, and HUGH R. TOOKER, Santa Monica, Cal. Filed June 8, 1915. Serial No. 32,914. (Cl. 24—11.)



1. A holding clip for pens and the like comprising two members one adapted to be applied to the pen and the other member being movable lengthwise of the pen in coactive relation to the first member, one of said members having a spur of relatively rigid material and the other member having a shield for the spur adapted to sheathe or expose the spur in accordance with the direction of movement of the movable member.

2. A holding clip for pens and the like comprising two members one movable lengthwise of the other with one member provided with a relatively rigid spur and the other with a shield associated with the spur to sheathe or expose the latter in accordance with the direction of movement of the shield.

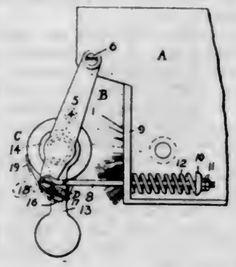
3. A holding clip for pens and the like, comprising relatively rigid cloth engaging means and sheathing means for the cloth engaging means with one movable relative to the other lengthwise of the pen or the like to sheathe or expose the cloth engaging means and on the sheathing movement strip the cloth from said cloth engaging means.

4. A holding clip for pens and the like comprising two members having a relative movement one on the other lengthwise of the pen, one member being provided with relatively rigid cloth engaging means and the other member with means for stripping the cloth engaged by the cloth engaging means from said means and at the same time sheathe the cloth engaging means.

5. A holding clip for pens and the like, comprising a member adapted to be secured to the pen and provided with relatively rigid cloth engaging means, and another member on and movable along the first-named member lengthwise of the pen and provided with a shield sheathing the cloth engaging means on movement in one direction and exposing the cloth engaging means on movement in the other direction.

[Claims 6 to 14 not printed in the Gazette.]

1,189,640. ROLL-STRIPPING MECHANISM. WILLIBALD TRINKS, Pittsburgh, Pa., assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Dec. 9, 1915. Serial No. 65,926. (Cl. 68—22.)



1. In a machine having a roll journaled therein, a stripper mechanism for said roll comprising a blade having its ends pivotally supported from said machine, and resilient members secured to said blade and bearing against the perimeter of said roll whereby the edge of said blade is spring pressed against said roll, for the purpose described.

2. In a machine having a roll journaled therein, a stripper mechanism for said roll comprising a blade, a swinging support for said blade, and resilient members secured to said blade and bearing against the perimeter of said roll whereby the edge of said blade is spring pressed against said roll, for the purpose described.

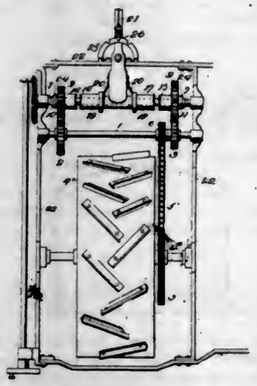
3. In a machine having a roll journaled therein, a blade, a weighted swinging support for said blade, and resilient members secured to said blade and bearing against the perimeter of said roll whereby the edge of said blade is spring pressed against said roll, for the purpose described.

4. In a machine having a roll journaled therein, a stripper mechanism for said roll comprising a blade, a swinging support for said blade in which the latter is pivotally mounted, and resilient members secured to said blade and bearing against the perimeter of said roll whereby the edge of said blade is spring pressed against said roll, for the purpose described.

5. In a machine having a roll journaled therein, a stripper mechanism for said roll comprising a pair of links having their upper ends pivoted to the machine adjacent to the ends of said roll, a blade having its ends pivotally supported by said links, and resilient members secured to said blade bearing against the perimeter of said roll whereby the edge of said blade is spring pressed against the roll, for the purpose described.

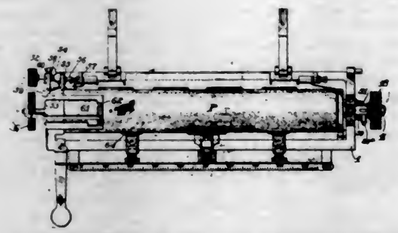
[Claims 6 to 8 not printed in the Gazette.]

1,189,641. CHANGEABLE-SPEED GEARING FOR HARVESTER-BINDERS. RUFUS B. VAUGHN, La Grange, Mo. Filed Nov. 23, 1915. Serial No. 63,077. (Cl. 74—58.)



In an apparatus of the class described, a main shaft, motion transmitting devices spaced apart and rotative upon said shaft and provided with clutch members, a sleeve slidable upon said shaft and partaking of its motion and having opposing clutch members, shoulders upon said sleeve and spaced apart, an operating lever extending between said stop collars, and yieldable members carried by said operating lever and in constant engagement with said stop collars.

1,189,642. LINE-SPACING ATTACHMENT FOR TYPEWRITERS. JACOB LEE WALZ, Baltimore, Md. Filed Nov. 29, 1915. Serial No. 64,104. (Cl. 197—114.)



1. The combination with a paper carriage and a rotatable platen, of means for moving said platen circumferentially comprising clutch mechanism inclosed within said platen, connections between said clutch mechanism and the platen adapted to be automatically locked and released, a member movable axially of the platen for adjusting said clutch mechanism and a member capable of rotational movement for actuating said clutch mechanism and rotating the platen.

2. The combination with a paper carriage and a fixed cylindrical bearing carried therein, of a rotatable platen surrounding said bearing, means for moving said platen circumferentially comprising clutch mechanism inclosed within said cylindrical bearing, means for actuating said platen, means for alternately locking and releasing the platen to and from said actuating means, and a member movable axially of the platen for varying the adjustments of said clutch mechanism.

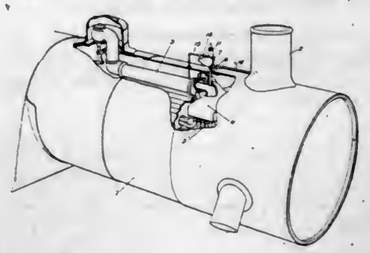
3. The combination with a paper carriage and a rotatable platen, of means for moving said platen circumferentially in one direction for line spacing purposes comprising clutch mechanism inclosed within said platen, a rotatable actuating member for said platen, means associated with said clutch mechanism for automatically successively locking and releasing the platen to and from said actuating means, means for retaining said actuating member in a neutral inoperative position, and means independent of said first mentioned means for moving said platen circumferentially forward or backward when said actuating member is in neutral position.

4. The combination with a paper carriage and a rotatable platen, of line spacing mechanism therefor comprising an indicator fixed to said carriage and adapted to extend partially around the platen in proximity to the paper, clutch mechanism inclosed within said platen, adjusting means for said clutch mechanism including a shaft movable axially and rotatably in relation to said platen, said shaft extending from one end of the platen and carrying on its free end a pointer adapted to coöperate with said fixed indicator, means for actuating said platen, and means associated with said clutch mechanism for alternately locking and releasing said platen to and from said actuating means.

5. In a typewriting machine, the combination of a platen and line spacing devices for controlling the extent of rotation of the platen, said line spacing devices comprising an indicator in proximity to said platen, clutch mechanism inclosed within said platen, a hand wheel at one end of said platen for adjusting said clutch mechanism in relation to the indicator and a second hand wheel at the other end of the platen for actuating the platen after the clutch mechanism has been set to the desired adjustment.

[Claims 6 to 9 not printed in the Gazette.]

1,189,643. MEANS FOR ARRESTING LEAKS IN STEAM-SUPERHEATERS. LEWIS S. WATRES, Scranton, Pa., assignor to The National Graphite Lubricator Company, Scranton, Pa., a Corporation of Pennsylvania. Filed Apr. 19, 1913. Serial No. 762,380. (Cl. 137—99.)



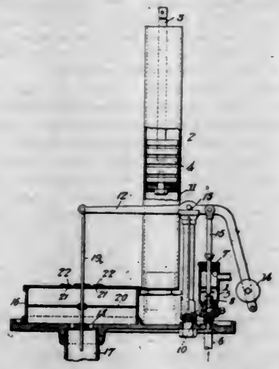
1. In a steam superheater, the combination with superheating tubes and a header in which they are connected, of means for supplying saturated steam to the header and means for delivering finely divided graphite in an attenuated stream to the saturated steam.

2. The combination with a steam superheater comprising a saturated steam pipe, a manifold connected with said pipe, and a plurality of superheating units joined to the manifold; of means for introducing finely divided graphite into that part of the superheater through which the superheated steam passes whereby the insoluble particles of graphite are caused to close steam-tight incipient leaks in the joints of the superheating units.

3. In a steam superheater, the combination with a saturated steam pipe, a plurality of superheating units and a manifold connecting the saturated steam pipe and such units, of a connection extending from the saturated

steam pipe, means for introducing finely divided graphite into said connection and a steam actuated motor for driving said graphite supplying means and means for supplying steam to the motor.

1,189,644. REGULATOR FOR DAMPERS AND THE LIKE. EDWARD A. WILDT, Scranton, Pa. Filed June 12, 1913. Serial No. 773,250. (Cl. 236—8.)



1. In a regulating device for dampers and the like, actuating means comprising a chamber communicating with the furnace, a piston mounted for reciprocation in said chamber and of less diameter than the latter, said chamber provided with openings communicating with the atmosphere, and regulable closures for said openings, substantially as and for the purpose described.

2. In a regulating device for dampers and the like, actuating means comprising a chamber, a piston mounted for reciprocation therein and of less diameter than the chamber, said chamber being in communication with the furnace at one side of the piston and having a cover at the other side thereof provided with an opening, the size of which is so chosen as to produce movement of the piston at predetermined speed and uniformity by the flowage of air or furnace gases through the chamber.

1,189,645. FOLDING TABLE. HERMAN YSSKIN, Newark, N. J. Filed June 1, 1914. Serial No. 842,041. (Cl. 45—116.)



1. In a table, a foldable support, a flat top portion formed of channeled sections which are adapted to be nested, means for holding the sections side by side with their tops in the same plane, the sections when nested receiving the folded support, and means for holding the sections together when they are nested.

2. In a table, a pair of foldable stands, a top portion formed of long narrow channeled sections which are adapted to be laid side by side or nested, and a latch secured to one of the sections and adapted to hold the sections side by side, one of said sections acting as a holder for the stands when folded.

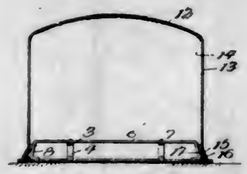
3. In a table, a top portion formed of sections with longitudinal channels to provide for their being nested, and latches to engage the ends of the sections to hold them when they are side by side.

4. In a table, a top portion formed of sections with longitudinal channels to provide for their being nested, and latches to engage the ends of the sections to hold them when they are side by side, the latches being pivotally attached to selected sections.

5. In a table, a top portion formed of longitudinally arranged sections, the sections having flat tops and having side flanges depending from the longitudinal edges to form channels in the bottom of the sections whereby the sections are adapted to be nested, and latches swinging on one end section and engaging the ends of the remaining sections to hold them in position.

[Claim 6 not printed in the Gazette.]

1,189,646. BURIAL-VAULT. CARL A. ALBRECHT, Galion, Ohio. Filed June 14, 1915. Serial No. 33,982. (Cl. 27—7.)



1. A burial vault including a base, a casket supporting structure mounted upon the base and comprising longitudinal members having angularly extending ends secured to the base and transverse members having similar angularly extending ends secured to the base, a cover fitting over the base and having its lower longitudinal edge bent inwardly to form a continuous inwardly extending flange bearing against the angularly extending ends of the longitudinal members, and locking devices secured to the upper portions of the angularly extending ends of the transverse members and coacting with the flange of the cover for holding the cover in position.

2. A burial vault including a base, intersecting transverse and longitudinal casket supporting members having their intermediate portions spaced from the upper surface of the base and their opposite ends inclined downwardly and secured to the base in spaced relation to the margin thereof, flat springs having their upper ends secured to the upper portions of the inclined ends of the transverse bars and their lower ends normally spaced from the lower ends of said bars, and a cover resting on the base between the inclined ends of the transverse and longitudinal bars and the outer edge of the base and having the lower portion of its side and end walls bent laterally and its lower longitudinal edges bent inwardly to form a continuous inwardly extending flange adapted to bear against the inclined ends of the longitudinal and transverse bars, the lower ends of the spring latches being movable to operative position within the laterally bent portion of the cover when the latter is placed in position on the base.

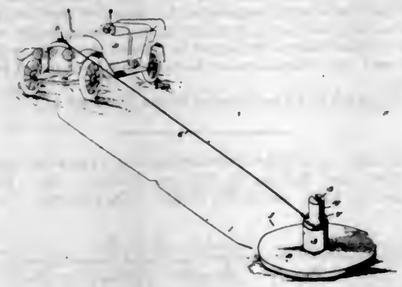
1,189,647. ANCHORING-PIVOT FOR MECHANICAL TOYS. JAMES ANDERSON, Jr., Omaha, Nebr. Filed Sept. 9, 1915. Serial No. 49,774. (Cl. 46—27.)

1. In a device of the class described, an anchoring member having a pivot stud, a flexible connection, an element carried by the connection and rotatably engageable with the said pivot element, an attaching element carried by the said connection, and means for restraining the first-mentioned element against rotation with relation to the pivot member.

2. In a device of the class described, an anchoring member having a pivot stud provided with a kerf, a flexible connection rotatably engageable with the said pivot stud and adapted for engagement in the said kerf, and a connecting element carried by the said connection.

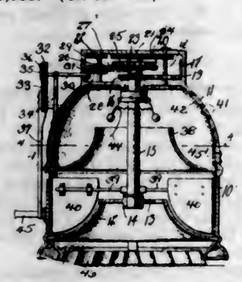
3. In a device of the class described, an anchoring member having a pivot element, a flexible element connected

with the pivot element for free rotation thereabout, and means upon the pivot element arranged for engagement by the said flexible element for connecting the flexible



element with the pivot element for winding thereon and unwinding therefrom when moved about the said pivot element in one and a reverse direction respectively.

1,189,648. VACUUM CLEANING DEVICE. WALTER ANDERSON, Fairmont, Okla. Filed Oct. 25, 1915. Serial No. 57,838. (Cl. 83—47.)

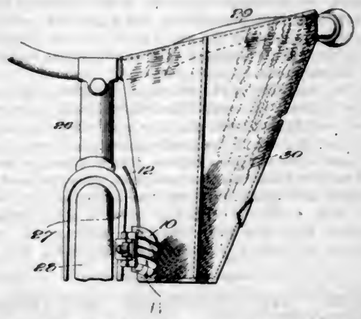


A vacuum cleaning device comprising an outer shell having its upper portion closed and perforated, an upwardly and inwardly extending wall in the lower portion of the shell provided with an inlet opening and forming a circular pocket between the wall and the shell, air current producing means movable in said pocket, a fabric lining disposed inwardly of the perforated portion of the shell, and an upwardly and inwardly extending wall forming a circular pocket between it and said shell for the reception of the dust drawn up by the air current producing means.

1,189,649. PARCEL-CARRIER GUARD FOR BICYCLES. WILLIAM M. APPLE, San Antonio, Tex. Filed May 14, 1915. Serial No. 28,117. (Cl. 224—36.)

1. A device of the character described including a longitudinally curved body portion, a longitudinally curved retaining arm supported thereby and arranged in spaced relation to the body portion with the concave face of the arm presented toward the body portion, and means for supporting the body portion upon one side of the forks of a bicycle with the body portion curving away from the said forks and adapted to receive a parcel carrier engaged with said arm.

2. A device of the character described including a body portion, a retaining arm carried thereby, an attaching clip provided with flanges adapted to seat against the body portion and formed with a bearing portion, a second clip formed with a bearing portion adapted to mate with the bearing portion of said first mentioned clip and provided with flanges adapted to coact with the flanges thereof, the said bearing portions being adapted to embrace an object, and means for connecting the body portion and the said clips together for supporting the body portion in position, the said means being arranged to extend through said flanges.

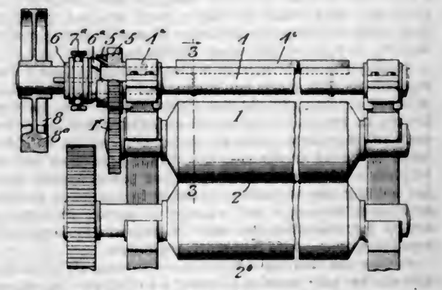


3. The combination with a bicycle having a fork, of a parcel carrier guard carried by one arm of the fork to extend transversely upon each side thereof and adapted to engage a parcel carrier supported by one arm of the handle-bars of the bicycle, and a retaining arm confronting the guard and adapted for engagement with the carrier to prevent lateral shifting thereof relative to the guard.

4. A device of the character described including a body portion, a retaining arm connected to the lower margin thereof with the arm projecting across the body portion, and mating attaching clips for connecting the body portion with one arm of the forks of a bicycle with the body portion extending transversely of the said forks upon each side thereof to receive a parcel carrier engaged with said arm.

5. A device of the character described including a body portion, a retaining arm carried thereby and extending transversely across the body portion, and means for connecting the body portion at a point intermediate its ends with one arm of the front forks of a bicycle with the body portion extending from front to rear of the front wheel of the bicycle and adapted to partially embrace one side of a parcel carrier connected with said arm.

1,189,650. MACHINE FOR MANUFACTURE OF COMPOSITION BOARDS. HOWARD ARMSTRONG, Lestershire, N. Y. Filed Mar. 27, 1912. Serial No. 686,648. (Cl. 92—67.)



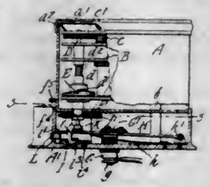
1. In a machine of the character described, the combination of a press roll, a normally idle shaft journaled beside the press roll, a knife carried by said shaft, a loose gear on said shaft, a gear on the press roll shaft meshing therewith, and a clutch on the knife shaft whereby said shaft may be locked to the gear thereon when it is desired to cause the knife to sever the material on the press roll.

2. In a machine of the character described, the combination of a press roll, a normally idle shaft journaled be-

side the press roll, a knife carried by said shaft, a loose gear on said shaft and a gear on the press roll meshing therewith, and a clutch whereby the knife shaft may be locked to or disengaged from the gear thereon to cause the knife to sever the material on the press roll; with means for normally holding the knife shaft in such position that the knife will not contact with the material on the press roll, substantially as described.

3. In a machine of the character described, the combination of a press roll, a shaft journaled beside the press roll, a knife carried by said shaft, a gear loose on said knife shaft, gearing for driving said loose gear from the press roll, and a manually operable clutch whereby the knife shaft may be locked to or disengaged from the gear thereon to cause the knife to sever the material on the press roll; with a weight attached to said shaft adapted to normally hold the knife shaft in position to keep the knife out of contact with the material on the felt roll.

1,189,651. TIME-CONTROLLED MECHANISM FOR OPERATING LIGHTS. WILLIAM H. ADSIT, Batavia, N. Y., assignor to John Francis Thomas, Batavia, N. Y. Filed Feb. 19, 1915. Serial No. 9,290. (Cl. 161—27.)



1. The combination with a clock movement, of a shaft rotated by said clock movement, means for causing endwise movement of the shaft at predetermined parts of the rotation thereof, a light controlling member adapted to be placed into operative and inoperative positions, and means for holding said light controlling member in one of said positions, said shaft placing the member into position to be engaged by said holding means by movement in one direction and releasing the holding means by its movement in the other direction to permit said light controlling member to move to its other position.

2. The combination with a clock movement, of a shaft rotated by said clock movement, means for causing endwise movement of the shaft at predetermined parts of the rotation thereof, a light controlling member adapted to be placed into operative and inoperative positions, and a latch for holding the controlling member in one of said positions, said shaft having a part adapted to engage said latch for releasing the same to permit the controlling member to move to the other of said positions.

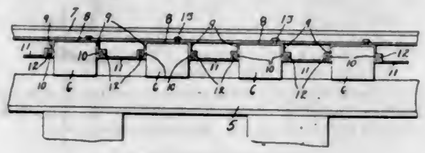
3. The combination with a clock movement, of a shaft rotated by said clock movement and slidable endwise, a cam for causing the endwise movement of said shaft and having an inclined portion and an abrupt portion, a light controlling member adapted to be engaged by said shaft when the same moves over the abrupt portion of the cam to place said member into operative position, and means for holding the controlling member in operative position, said shaft having a part adapted to engage said holding means for releasing the same to permit the controlling member to move into inoperative position.

4. The combination with a clock movement, of a shaft rotated by said clock movement and slidable endwise, a cam for causing the endwise movement of said shaft, a light controlling member adapted to be engaged by said shaft to place said member into operative position, a latch for holding the controlling member in operative position, said shaft having a part adapted to engage said latch for releasing the same to permit the controlling member to move into inoperative position.

5. The combination with a clock movement, of a shaft rotated by said clock movement and slidable endwise, a cam for causing the endwise movement of said shaft and having an inclined portion and an abrupt portion, a light controlling member adapted to be engaged by said shaft when the same moves over the abrupt portion of the cam to place said member into operative position, a latch for holding the controlling member in operative position, and means actuated by said shaft while in engagement with the inclined part of said cam to release the latch to permit said controlling member to move into inoperative position.

[Claims 6 to 15 not printed in the Gazette.]

1,189,652. RAILWAY-TIE COVERING. JOHN W. ALEXANDER and TAYLOR W. EPLING, Roanoke, Va. Filed Apr. 20, 1915. Serial No. 22,617. (Cl. 238—5.)



A covering device for ties or the like, comprising plates having their side portions bent downwardly and then directed upwardly to form a channel member, and intermediate plates having their edge portions bent to engage in said channel members.

1,189,653. SALT FOR USE IN BATHS. THOMAS THORNE BAKER, Westminster, London, England. Filed Aug. 5, 1914. Serial No. 855,244. (Cl. 167—7.)

1. The process for preparing a radio-active soluble salt consisting in introducing solid radio-active matter into sodium chlorid while the latter is in a molten condition.

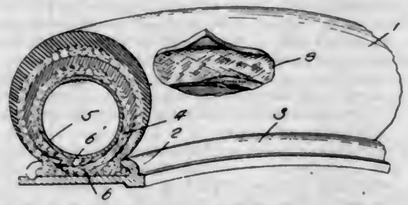
2. The process for preparing a radio-active soluble salt consisting in fusing sodium chlorid and adding to the molten salt a quantity of radio-active substance which dissolves in the fused material.

3. The process for preparing a radio-active soluble bath salt which consists in fusing sodium chlorid containing a small proportion of a sulfate and in adding to the molten salt a quantly of radio-active substance which dissolves in the fused material.

4. The process for preparing a radio-active soluble salt which consists in heating sodium chlorid to a temperature of about 1300° F. and dissolving in the molten salt a quantity of radio-active substance.

5. The process for preparing a radio-active soluble salt which consists in fusing sodium chlorid and adding to the molten salt such a quantity of radio-active substance as will give about 3 milligrams of radium per ton of salt.

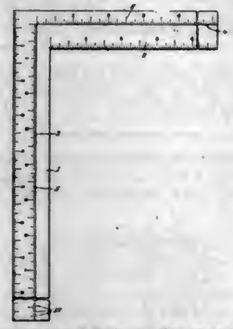
1,189,654. PNEUMATIC TIRE. BERNARD BARROW, Barrows Store, Va. Filed Nov. 9, 1914. Serial No. 871,151. (Cl. 152—18.)



1. In a pneumatic tire, the combination with a shoe adapted to have its edges attached to a rim, of a liner having beads on the edges thereof, one of said beads being disposed between the edges of the shoe and the other of the beads being disposed above the first mentioned bead.

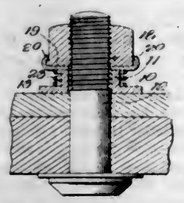
2. The combination with a rim, of a tire shoe having its edges held therein and in spaced relation to each other, a liner having beads on the edges thereof, one of which beads is disposed between the edges of the shoe and the other of which beads is disposed above the first mentioned bead and in contact with the inner face of the liner, and an inner tube disposed within the liner.

1,189,655. SQUARE. JOHN E. BITTNER, Wheeling, W. Va. Filed Nov. 25, 1913. Serial No. 802,884. (Cl. 33—113.)



A square comprising a pair of blades angularly related, and having linear measuring graduations along the outer longitudinal edge only of one blade, and similar graduations along the inner longitudinal edge only of the other blade, and a graduated line disposed inwardly from the longitudinal edges of each blade and intersecting with the corresponding line of the other blade to form the only uninterrupted line of angular formation on the square, the graduations of the inwardly disposed graduated lines thus terminating short of the longitudinal edges of the blades to distinguish the same from the linear measuring graduations along the longitudinal edges of the blades.

1,189,656. NUT-LOCK. WILLIAM BOHLE, Correctionville, Iowa. Filed Nov. 10, 1915. Serial No. 60,741. (Cl. 151—2.)



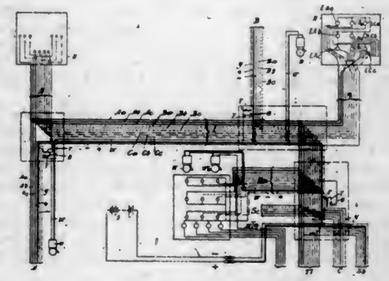
1. In a nut lock, a bolt having a longitudinal channel, a washer member including a cylindrical portion engaging around the bolt and having outwardly directed lugs and an inwardly directed stud slidably engaging said channel, a locking member having outturned portions adapted to engage a nut upon the bolt and apertured to engage around the washer, said apertures having radial recesses to engage over said lugs, and a spring yieldably supporting said locking member.

2. In a nut lock a bolt having a longitudinal channel, a washer engaging around the bolt and having an inwardly directed stud slidably engaging said channel, a locking member having outturned portions adapted to engage a nut upon the bolt and apertured to engage around the washer, means for preventing said plate from rotating on said washer, and yieldable means for holding said locking plate in engagement with said nut and washer.

3. The combination with a bolt and a nut, of a washer device surrounding said bolt, means for preventing the rotation of said washer device upon the bolt, a locking member having means for engaging said nut and slidable longitudinally of said washer device to withdraw the locking member from engagement with the nut, and means for holding said locking member in withdrawn position.

4. The combination with a bolt and a nut, of a washer device surrounding said bolt, means for preventing the rotation of said washer device upon said bolt, a locking member having means for engaging said nut and slidable longitudinally of said washer device to withdraw the locking member from engagement with the nut, yieldable means for holding said locking member in engagement with the nut, and means for holding the locking member in withdrawn position against the resistance of said yieldable means.

1,189,657. ATTENDANT'S SIGNALING SYSTEM. FREDERICK BRINKMANN, Hanover, Germany, and FRANCIS GEORGE BELL, London, England. Filed July 31, 1914. Serial No. 854,420. (Cl. 177—339.)



1. An attendant's signaling system comprising a plurality of groups of stations with a calling device at each station, signaling devices appropriated to respective groups, signaling devices in respective groups indicative of each of the other groups, connections between said first-named signaling devices and the calling devices of their respective groups, and means for connecting the calling devices of one group to the signaling devices of another.

2. An attendant's signaling system comprising a plurality of groups of stations each with a calling device, signaling devices appropriated to respective groups, connections between said signaling devices and the calling devices of their respective groups, and means for connecting the calling devices of one group to the signaling devices of another group without interfering with the operation of the signaling devices of the first-named group.

3. An attendant's signaling system comprising a plurality of groups of stations with a plurality of calling devices at each station distinctive of different classes of attendants, signaling devices distinctive of the classes of attendants located in respective groups, and means for connecting the calling device of a particular class and group to the signaling devices of that class in any other group.

4. An attendant's signaling system comprising a plurality of groups of stations each with a calling device, signaling apparatus located in the respective groups, further signaling apparatus located in the respective groups and indicative of each of the other groups, and means for connecting the calling devices of one group to said further signaling apparatus located in another.

5. In an attendant's signaling system the combination with a plurality of self-contained signaling groups, each having a plurality of distinctive calling devices at each of a plurality of stations and signaling apparatus comprising distinctive signaling devices operable from respective calling devices, of a transfer board, connections between said board and the distinctive calling devices of each group, and between said board and distinctive signaling devices at each group, and means for joining at the

board a particular class of calling devices of any group to the corresponding class of signaling devices at another group.

[Claims 6 to 13 not printed in the Gazette.]

1,189,658. MANURE-SPREADER. THEOPHILUS BROWN, Moline, Ill., assignor to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Filed Jan. 23, 1913. Serial No. 743,879. (Cl. 111—40.)



1. In a manure spreader, the combination of the front wheels, the rear wheels, the body, the rear axle extending directly through the body, the movable bottom support for the material arranged to carry it directly toward, and on the horizontal lines of, the axle, a rapidly rotating beater in the rear part of the body on an axis behind the axle, and relatively slowly traveling material-moving devices arranged to lift the material from the region in front of the axle and in horizontal planes below it and carry it over the axle and deliver it to the rapidly rotating beater.

2. In a manure spreader, the combination of the front wheels, the rear wheels, the body, the rear axle extending directly through the body, the movable bottom support for the material arranged to carry it directly toward, and on horizontal lines of, the axle, a rapidly rotating beater on an axis behind the axle, and an endless apron supplemental to the aforesaid movable bottom support, and arranged to receive the material delivered therefrom at points in front of the axle and carry it past the latter and deliver it to the rapidly rotating beater.

3. In a manure spreader, the combination of the rear wheels, the body, the rear axle extending directly through the body, the movable apron support at the bottom of the body mounted at its rear on an axis below that of the axle and arranged to form a chamber in the front part of the body below the horizontal planes of the axle and to carry material directly toward the latter, a rapidly rotating beater in the rear part of the body on an axis behind the axle, a second supplemental endless apron having its front part mounted directly on the axle and driven thereby and arranged to take material from the first aforesaid apron and lift it over the axle and deliver it to the beater.

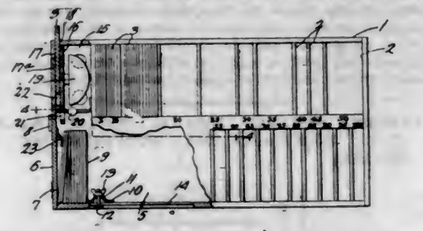
4. In a manure spreader, the combination of a vehicle body, a movable bottom therein for supporting and feeding the material rearward, the rear ground wheels, the through axle extending from one ground wheel to the other and situated above the carrying apron, the rotary distributer on an axis above the through axle, and movable means for supporting and guiding the material of the load on lines extending over the axle as said material is moved backward.

5. In a manure spreader, the combination of a vehicle body, means for supporting and feeding the material backward in the vehicle, the rear ground wheels, a through axle passing across the body from one ground wheel to the other and having its axis situated above the said means for feeding the material backward, a distributing beater behind the axle, and moving means supplemental to the distributer for passing the material of the load upward and over the axle to the beater.

[Claim 6 not printed in the Gazette.]

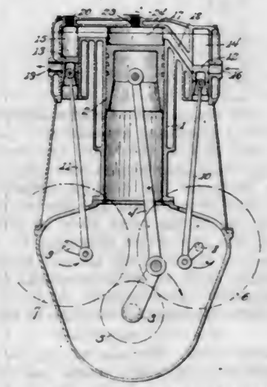
1,189,659. CHECK HOLDER AND REGISTER. ROBERT J. BRUMWELL, Eugene, Oreg. Filed May 17, 1915. Serial No. 28,789. (Cl. 211—37.)

In a device of the character described, a register having a chute, a window in front of said chute, and a partition in rear of said chute, said partition having a slot, a bell, and a clapper coöperable with the bell and having a portion projecting through said slot into said chute whereby a slotted ticket forced into said chute behind said window



moves said clapper away from the bell so that said portion moves into the slot of the ticket to allow the clapper to impinge against the bell.

1,189,660. INTERNAL-COMBUSTION ENGINE. ERNEST S. BULLARD and VICTOR H. LEINER, Wheeling, W. Va. Filed Sept. 27, 1915. Serial No. 52,809. (Cl. 123—86.)



1. In an internal combustion engine, a power cylinder, a piston reciprocating therein, inlet and exhaust valve chambers located laterally of said cylinder, inlet and exhaust ports respectively provided in the walls of said chambers, reciprocating piston valves in said chambers, the exhaust chamber being in permanent open communication with the cylinder above the limit of upward movement of its valve, and the inlet chamber being in communication with said cylinder through a side-opening passage which is closed by its valve during the power stroke of the piston so that the side wall of said valve receives the impact of the explosion, said passage being so located with respect to the inlet port that unobstructed communication is had therebetween over the extreme upper end of said valve throughout the suction stroke of the piston.

2. In an internal combustion engine, a power cylinder, a piston for reciprocating therein, inlet and exhaust valve chambers located laterally of said cylinder, the exhaust chamber being in permanent open communication with said cylinder above the limit of upward movement of said piston, reciprocating piston valves in said valve chambers, said chambers having ports in the outer walls thereof, the inlet valve chamber being in communication with said cylinder through a passage leading from a point therein horizontally alined with the port thereof, and means for synchronously moving said valves to cover and uncover said ports, said passage being opened and closed respectively by the piston valve of the inlet chamber simultaneously with the opening and closing of the inlet ports.

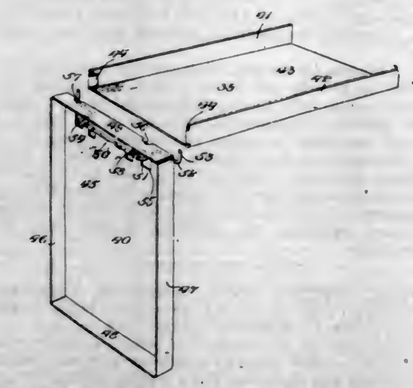
3. In an internal combustion engine, a power cylinder, a piston for reciprocating therein, inlet and exhaust valve chambers located laterally of said cylinder, the exhaust chamber having its upper end in permanent open communication with said cylinder above the limit of upward movement of said piston, unapertured reciprocating piston valves in said valve chambers, said chambers having ports in the outer walls thereof, the inlet valve chamber being in communication with the upper end of said cylinder through an inclined passage leading from a point therein horizontally alined with the port thereof, so that it is opened and closed by the piston simultaneously with the opening and the closing of the inlet port, a pocket being formed in said inlet valve chamber above said alined passages wherein gas is compressed by upward movement of said piston valve for forcibly returning said valve to assist the power piston crank to pass over dead center.

4. In an internal combustion engine, the combination with a power cylinder having an explosion chamber at the upper end thereof, of a piston for reciprocating in said cylinder, inlet and exhaust valve chambers located laterally with respect to said cylinder and having ports in the outer walls thereof below the level of said explosion chamber, a piston valve reciprocating in each of said chambers, means for synchronously moving said valves for covering and uncovering said ports, the exhaust chamber having its upper end in open communication with said cylinder above the limit of upward movement of the piston to permit the valve to receive a downward impulse under the force of the explosion, and an inclined passage for live gas leading into the upper end of said cylinder from a point in the inlet chamber horizontally alined with the inlet port, said passage and said inlet port being simultaneously opened and closed by the piston valve of the inlet chamber.

5. In an internal combustion engine, a power cylinder, a piston for reciprocating therein, inlet and exhaust valve chambers located laterally of said cylinder, the exhaust chamber being in permanent open communication with said cylinder above the limit of upward movement of said piston and the inlet chamber being closed at its upper end against such communication, reciprocating piston valves in said valve chambers, said chambers having ports therein controlled by said valves, and the inlet chamber being in communication with the upper end of said cylinder through an inclined passage leading from a point therein located close above the top of the inlet valve when the latter occupies the limit of its downward movement, so that live gas entering the inlet chamber passes unobstructedly over the top of said valve in reaching said passage.

[Claim 6 not printed in the Gazette.]

1,189,661. ACCOUNTING FILE OR REGISTER. WILLIAM E. BURKS, Pittsburgh, Pa. Filed June 23, 1914. Serial No. 846,854. (Cl. 45—96.)



1. A drawer of the character described including a retaining plate having parallel side walls provided terminally with catch members, a drawer body slidable over

the retaining plate, a catch member pivotally attached to the drawer body, said catch member consisting of a single length of wire bent intermediate its length to produce a substantially U-shaped conformation and having right angularly extending terminal portions adapted to engage between the fixed catch members and the side walls of the retaining plate when the drawer is withdrawn therefrom.

2. A drawer of the character described including a retaining plate having parallel side walls provided terminally with catch members, a drawer body slidable over the retaining plate, a catch member pivotally attached to the drawer body, said catch member consisting of a single length of wire bent intermediate its length to produce a substantially U-shaped conformation and having right angularly extending terminal portions adapted to engage between the fixed catch members and the side walls of the retaining plate when the drawer is withdrawn therefrom, the engagement of the said terminal portions of the second mentioned catch with the fixed catches serving to hold the U-shaped portions of the second mentioned catch in relatively fixed position on the bottom wall of the retaining plate, whereby the drawer body may be swung about the bight portion of the U-shaped member into dependent position.

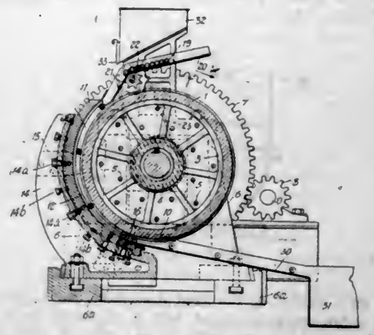
3. A drawer of the character described including a retaining element having side walls reduced at their outer extremities and bent to form catch members extending between said walls, a drawer body, and a hinge member carried by the drawer body and provided with portions extending adjacent to the side walls and shiftable to engage said catch members.

4. A drawer of the character described including a retaining element provided with catch members, a drawer body and a substantially U-shaped hinge member having its bight portion connected to the drawer and provided with fingers extending laterally therefrom relative to the plane of the bight portion, the drawer being shiftable to engage the fingers with the said catch members with the drawer depending from the said bight portion.

5. A drawer of the character described including a retaining element provided with catch members, a drawer body notched to receive a hinge member, and a substantially U-shaped hinge member having its bight portion freely connected to the drawer body with the arms thereof extending through said notches and provided with fingers extending laterally therefrom relative to the plane of the bight portion and said arms, the drawer being shiftable to engage the fingers with said catch members.

[Claims 6 and 7 not printed in the Gazette.]

1,189,662. BALL-ROLLING MACHINE. FERDINAND E. CANDA, New York, N. Y. Filed June 10, 1915. Serial No. 33,223. (Cl. 80—18.)



1. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly

grooved breast located in proximity to the roll, but with a space between the roll and breast which gradually decreases in width in the direction of rotation of the roll, the depth of each such groove being greater than half the distance between the ribs of the roll and breast at the point at which the material to be acted upon enters the space between the roll and breast, whereby objects of rotation are formed of a diameter greater than the initial diameter of the stock from which such objects are formed.

2. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly grooved breast located in proximity to the roll, but with a space between the roll and breast which gradually decreases in width in the direction of rotation of the roll, said breast provided with means engaging the roll and serving to cause the breast to follow lateral motions of the roll.

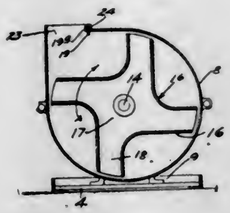
3. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly grooved breast located in proximity to the roll, but with a space between the roll and breast which gradually decreases in width in the direction of rotation of the roll, and a finishing die grooved in correspondence with the grooving of the breast and forming a continuation of the breast, and set to cause less reduction of the material rolled, during passage between the roll and such finishing die, then occurs during the passage of such material between the roll and the breast.

4. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly grooved breast located in proximity to the roll, but with a space between the roll and breast which gradually decreases in width in the direction of rotation of the roll, and a finishing die grooved in correspondence with the grooving of the breast and forming a continuation of the breast and adjustable separately from said breast, with respect to said roll, whereby said finishing die may be set to cause less reduction of the material passing between it and the roll than occurs during the passage of such material between the roll and breast.

5. A machine for forming balls and other objects of rotation, comprising a grooved roll and a correspondingly grooved breast located in proximity to the roll, but with a space between the roll and breast which gradually decreases in width in the direction of rotation of the roll, said breast provided with means engaging the roll and serving to cause the breast to follow lateral motions of the roll, and a finishing die provided with ribs adapted to reduce the necks between adjacent balls to an extent greater than such balls are reduced during their passage past such finishing die.

[Claims 6 to 22 not printed in the Gazette.]

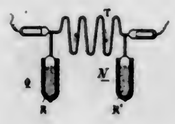
1,189,663. PORTABLE ELEVATOR. HUGH J. CARSON, Fairfax, Minn. Filed Apr. 23, 1914. Serial No. 833,881. (Cl. 193—10.)



1. In a device of the kind described, the combination with a fan casing provided with a discharge spout, of a fan journaled, at one side, to one side of said casing, means for driving said fan, the said fan having a common central chamber and radial tubular blades leading from said chamber, the said tubular blades having flat driving faces, a cut-off blade mounted on said casing for coöperation with said fan blades after they have passed said discharge spout, said casing and fan having coincident eyes, and a feed spout arranged to deliver through said eyes.

2. In a device of the kind described, the combination with a fan casing provided with a discharge spout, of a fan journaled, at one side, to one side of said casing, means for driving said fan, the said fan having a common central chamber and radial tubular blades leading from said chamber, the said tubular blades having flat driving faces, an adjustable cut-off blade mounted on said casing for coöperation with said fan blades after they have passed said discharge spout, said casing and fan having coincident eyes, and a feed spout arranged to deliver through said eyes.

1,189,664. NEON-TUBE. GEORGES CLAUDE, Boulogne-sur-Seine, France. Filed Feb. 12, 1915. Serial No. 7,913. (Cl. 176—122.)



1. A process for forming luminous neon tubes partially purified by vacuum and by an electric current and previously charged with the required amount of neon, essentially consisting in displacing the entire polluted atmosphere of the tube by using means other than the electric current, the displacement taking place toward a purifying chamber connected to the tube, displacing the purified atmosphere from the purifying chamber toward the tube to be formed, liberating the fresh impurities under the action of the electric current, repeating the above-described displacements until the tube is entirely formed, and then separating the purifying chamber from the formed tube.

2. A process for forming luminous neon tubes partially purified by vacuum and by an electric current and previously charged with the required amount of neon, essentially consisting in securing a charcoal purifying receptacle to the tube, absorbing the entire atmosphere of the tube by immersing the purifying receptacle in a bath of liquid hydrogen, displacing the purified atmosphere again by immersing the said receptacle in a bath having not so low a temperature, setting further impurities free by means of an electric current, repeating the above-described immersions alternately until the tube is entirely formed, and then separating the purifying chamber from the formed tube.

3. A process for forming luminous neon tubes partially purified by vacuum and by an electric current and previously charged with the required amount of neon, essentially consisting in connecting each end of the tube to a charcoal purifying receptacle, alternately dipping one of the receptacles in liquid oxygen and the other in liquid nitrogen, displacing the impurities set free by the current toward the coldest receptacle, repeating the above-described immersions alternately until the tube is entirely formed, and then separating the purifying chamber from the formed tube.

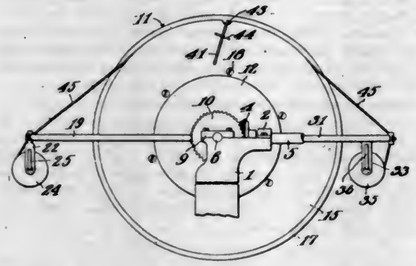
1,189,665. CHILD'S BOOT. JUSTICE H. CLEAR and FRANCES CLEAR RICHVILLE, Clarkston, Wash. Filed Apr. 12, 1915. Serial No. 20,818. (Cl. 36—1.)

A creeping boot for children comprising a foot portion of leather or other material possessing a similar degree of flexibility and toughness, and a legging portion of flexible material secured at its lower end to the foot portion, the legging portion at the top and rear being located a considerable distance below the top and front of said portion, suspension straps secured at their lower ends at opposite sides of the middle front of the legging portion



at the top thereof, and an attaching member connected to the upper ends of the said suspension straps.

1,189,666. MACHINE FOR WRAPPING PNEUMATIC TIRES. JAMES H. CORSIR, Joplin, Mo. Filed Jan. 17, 1914. Serial No. 812,767. (Cl. 242—7.)



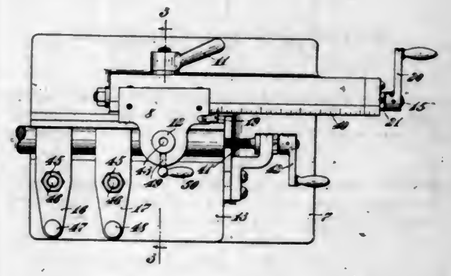
1. In a tire wrapping machine, a core having side flanges; and means for applying a wrapping uninterruptedly to the core in oppositely wound convolutions from the side flanges of the core toward the median plane of the core.

2. In a tire wrapping machine, a core having side flanges; wrapping holders on the core adjacent the flanges; and a pair of applying members movable circumferentially of the core; the core having a convexed tread constituting means for crowding the successive convolutions of the wrapping laterally and toward the flanges.

3. In a tire wrapping machine, a core having side flanges; wrapping holders on the core adjacent the flanges; a pair of applying members movable circumferentially of the core and in opposite directions; means for simultaneously reversing the circumferential movement of the applying members; the core having a convexed tread constituting means for crowding the successive convolutions of the wrapping laterally and toward the flanges.

4. In a device of the class described, a support; a tubular shaft journaled in the support; a second shaft journaled in the tubular shaft; means for driving both shafts; a disk-like core disposed transversely of the second shaft and loose on the second shaft and of greater diameter than the second shaft; arms secured to the shafts and adapted to move in opposite directions circumferentially of the core; and wrapping holders on the arms, the wrapping on the arms coacting with the core to prevent a rotation of the core when the shafts are rotated.

1,189,667. DRILL-PRESS ATTACHMENT. GEORGE J. COSTELLO, Philadelphia, Pa. Filed Apr. 28, 1910. Serial No. 558,181. (Cl. 77—62.)



1. In an apparatus for forming recesses in shafting or the like, the combination of a frame, a work support having a slidable engagement therewith parallel with the longitudinal axis of the work, an apertured bracket and a support therefor rigidly connected with the frame, the bracket having a slidable engagement with its support parallel with the longitudinal axis of the work, a bushing within the aperture in the bracket, and means for changing the relative position of the bracket and the work support to bring the bushing and the work into any position of relative adjustment.

2. In a device for forming recesses in shafting or the like, the combination of a work support, a movable body for carrying the tool along the work, the work support and movable body having a normally constant relative relationship with respect to the longitudinal axis of the work, and locking means for said body.

3. In a drill press attachment, the combination of a clamp for securing the work to the attachment, a movable tool guiding body, a feed therefor and locking means connected with the tool guiding body and a stationary part of the attachment.

4. In a drill jig, the combination of a frame, a work engaging element movably mounted thereon, a tool-guiding body, a support therefor projecting from the frame to one side of the work engaging element, and a tool, the tool-guiding body and the work engaging element each being capable of relative movement at right angles to the axis of rotation of the tool and having a fixed relationship during said movement, at right angles thereto and to the said tool axis.

5. A drill jig comprising a clamp for the work, a support for the clamp, the clamp and support having slidable relationship, a bracket provided with a space for a removable bushing, a bushing within said space and adapted to extend close to the work, a bracket support, the bracket and support having a slidable relationship to permit of relative movement therebetween parallel with the work, means for causing relative movement between bracket and support and means for clamping the bracket and the support in immovable relative relationship.

[Claims 6 to 9 not printed in the Gazette.]

1,189,668. RAIL-HOLDING MEANS. ELMER E. DAVENPORT, Chicago, Ill., assignor of one-half to Merwin R. Davenport, Baraboo, Wis. Filed Apr. 22, 1916. Serial No. 92,856. (Cl. 238—4.)

The combination of a tie, a pair of rails mounted on said tie, an angle bar on one of said rails, said bar having a notch therein, a rail holding member comprising a

bar having upstanding hooked ends adapted to embrace said rails, one of said ends being adapted to fit in the notch in said angle bar for preventing the rail to which



said plate is attached from creeping in a longitudinal direction, and means for securing said member to said tie, said means being disposed transversely to a vertical plane.

1,189,669. MOVABLE RAILWAY-PLATFORM. LOUIS DAVIDSON, New York, N. Y. Filed Sept. 23, 1915. Serial No. 52,248. (Cl. 104—17.)



1. A railway station platform for use on a curve, comprising a stationary platform, a moving platform constructed in sections, elastic connections between adjacent sections, and elastic means for moving said connected sections to operative position.

2. A railway station platform for use on a curve, comprising a stationary platform, a moving platform constructed of sections, elastic connections between adjacent sections, and elastic means operating in approximately radial lines for extending the moving platform to operative position.

3. A railway station platform for use on a curve, comprising a stationary platform, a moving platform constructed of sections, elastic connections between adjacent sections, elastic means operating in radial lines for moving the sections to operative position, and rollers at the outer end of the moving platform adapted to bear against a car.

4. A railway platform comprising a stationary platform, a series of spaced ribs projecting outwardly therefrom, and a moving platform constructed in sections, each section comprising a plurality of spaced ribs adapted to pass between the stationary ribs and flexible and elastic connections between the ribs in the moving platform.

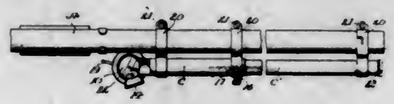
5. A movable railway platform constructed in sections, each section of relatively narrow width as compared with its length, and each section connected to an adjacent section by an elastic connection whereby each section is adapted to have a slight movement independent of adjacent sections, whereby the outer edge of the moving platform will conform to the car irrespective of its position.

[Claims 6 to 11 not printed in the Gazette.]

1,189,670. LIGHT ATTACHMENT FOR GUNS. GARRISON W. DERRYBERRY, Spiro, Okla. Filed May 26, 1914. Serial No. 841,075. (Cl. 240—2.)

1. A lamp attachment for guns comprising a lamp casing having relatively angular openings, a sighting tube detachably connected with one of said openings, a lamp mounted in said casing, and means associated with said lamp for directing the light rays therefrom through either of said openings and preventing their passage through the other opening, substantially as set forth.

2. A light attachment for guns comprising a sighting tube adapted to be secured to the gun barrel, a casing having a perforation into which the end of said sighting tube may be inserted, said casing being provided with another opening at an angle from the opening which receives the sighting tube, a lamp within said casing positioned to bring the light in line with said openings, and means for turning said lamp to throw the light opposite either opening desired, substantially as set forth.



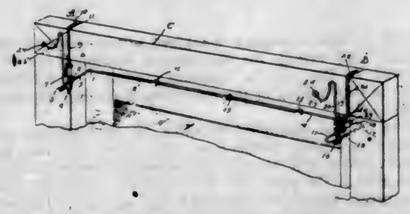
3. A light attachment for guns comprising a lamp casing formed with openings at an angle with each other, a sighting tube detachably secured in one of said openings, a lens covering the other of said openings, a lamp within said casing mounted to be turned, and means for turning said lamp to bring the light opposite either of said openings, substantially as set forth.

4. An attachment for guns comprising a detachable sighting tube adapted to be secured to the side of the gun barrel, a lamp casing detachably secured to the inner end of said sighting tube, and formed with an opening to one side of the attachment of said sighting tube, and a shiftable light within said lamp casing adapted to be shifted to throw the light through the sighting tube or through the other opening, substantially as set forth.

5. An attachment for guns comprising a sighting tube adapted to be attached to the gun barrel, a lamp casing detachably secured to said sighting tube and having a side opening, a light in said lamp casing, a reflector positioned behind said light, and means for turning said light and reflector to throw the light through said sighting tube or said side opening, substantially as set forth.

[Claim 6 not printed in the Gazette.]

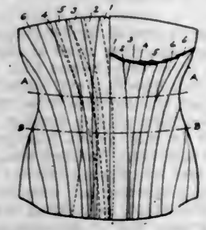
1,189,671. ADJUSTABLE SHADE AND CURTAIN BRACKET. WILLIAM H. DRAKE, Asheville, N. C., assignor, by mesne assignments, to J. S. Mardis, Buncombe county, N. C. Filed July 17, 1915. Serial No. 40,479. (Cl. 156—23.)



1. A device of the class described comprising supporting members, each formed of a single piece of wire having one end extended to provide a connecting arm, the connecting arm of one supporting member being adjustably connected to the supporting arm of the other supporting member, the said wire having its other end bent outwardly to provide a shade supporting arm, and then bent inwardly and extended above the shade supporting arm and coiled to provide a vertically disposed socket, the said end of the wire being then extended from the coiled portion and terminally bent to provide an attaching portion.

2. In combination, a pair of adjustably connected supporting members, each being formed of a single length of wire having one end bent upwardly to provide an arm, the said end of the wire being again bent and extended inwardly to provide a horizontal portion disposed above the arm and coiled to provide a vertically disposed socket and an offset portion, the said socket and offset portion being disposed to one side of the horizontal portion, a bracket having a vertical portion having its lower end positioned at one side of the horizontal arm and adjacent the offset portion and the vertical socket, and having its lower end bent upwardly and interposed between the horizontal arm and the offset portion and then bent downwardly and removably received by the socket.

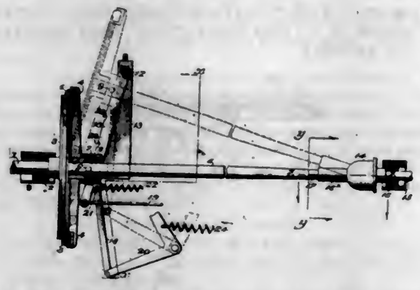
1,189,672. CONSTRUCTION FOR BODY-SUPPORTS. EPHRAIM DRENSHTEIN, New York, N. Y. Filed Dec. 3, 1913. Serial No. 804,335. (Cl. 2—73.)



1. In a body support, a series of substantially upright strips of uniform width curved laterally and longitudinally to form a solid warped flexible and elastic surface, elastic fibers inserted transversely in some of said strips, a multiplicity of thicknesses of material concentrated at any point of said support by the proper curving and overlapping of said strips, and stitching for securing said strips together for permanently retaining said support substantially in the shape of the body when disengaged therefrom.

2. In a body support, a solid permanently warped flexible surface comprising a series of substantially upright continuous strips of uniform width curved laterally and longitudinally, a multiplicity of thicknesses of material concentrated at any desired point of said support by the proper curving and overlapping of the portions of said strips, the supporting properties of any part of said surface and the permanent retention of the shape thereof being primarily dependent on the number of strips concentrated at said part of said surface, and means for longitudinally securing said strips together for permanently retaining substantially the shape of the body when disengaged therefrom.

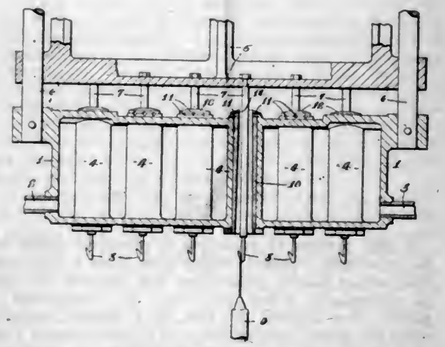
1,189,673. FRICTION-DRIVE FOR MOTOR-VEHICLES. WILLIAM B. ENGLER, Detroit, Mich. Filed Nov. 23, 1914. Serial No. 873,486. (Cl. 74—26.)



1. In a friction drive for a motor vehicle, a driving shaft, an auxiliary shaft, a friction disk on said driving shaft, a member on said auxiliary shaft adapted to be carried by the same, and a friction ring on said member, the periphery of said ring being adapted to contact with the periphery of said friction disk and to overlap the same.

2. In a friction drive for a motor vehicle, a driving shaft, an auxiliary shaft, a friction disk on said driving shaft, a member on said auxiliary shaft adapted to be carried by the same, and a friction ring on said member, said ring and disk being adapted to be in contact, the edge of said disk being beveled, and the edge of said ring being adapted to overlap that of said disk.

1,189,674. MACHINE FOR FINISHING CANDLES. EVALD J. ENOMAN, Syracuse, N. Y., assignor to The Will & Baumer Co., Syracuse, N. Y., a Corporation of New York. Filed July 16, 1915. Serial No. 40,236. (Cl. 18—12.)



1. A candle finishing machine comprising a tubular finishing die through which the candle is passed, the die having a lateral outlet duct near the exit end thereof, substantially as and for the purpose described.

2. A candle finishing machine comprising a tubular die, through which the candle is passed, means for moving the candle through the die, the die having a circumferential series of outwardly extending outlets near its exit end leading from its interior through the periphery thereof, substantially as and for the purpose specified.

3. A machine for finishing candles comprising a tubular finishing die through which the candles are passed, the die having a lateral outlet duct near the exit end thereof, and a finishing surface between said duct and the exit end of the passage of the die, substantially as and for the purpose set forth.

4. A candle finishing machine comprising a tubular die through which the candle is passed, the die having a circumferential series of radially extending outlet ducts near its exit end, and a finishing surface between said ducts and the exit end of the passage of the die, substantially as and for the purpose described.

5. A machine for finishing candles comprising a tubular die through which the candles are passed, the die having an outlet for superfluous material between the ends of its tubular passage, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,189,675. MANUFACTURE OF FILLED AND BENT TUBING. ROLLIE B. FAGEOL, Philadelphia, Pa. Filed Sept. 5, 1911. Serial No. 647,542. (Cl. 29—148.)

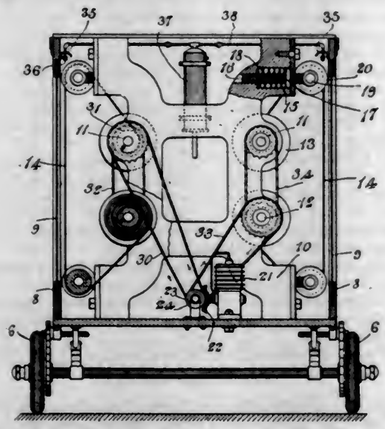
1. The process of producing a reinforced buffer bar for automobile bumpers having curved end portions provided with protective caps, consisting in filling a thin metal tube with a non-adhesive insoluble substance extending from one extremity of the tube to a point a slight distance inwardly thereof, then filling the remainder of the tube with a plastic composition and exposing the same to atmospheric action to permit the composition to harden, the plastic composition shrinking from the unclosed end of the tube during the hardening stage, then removing

the insoluble substance from the tube, then bending the tube in proximity to each of its ends while the plastic composition is in a semi-hardened state, then permitting the plastic composition to harden to render the tube non-flexible, then filling the open ends of the tube with cement and then applying to the ends of the tube the protective caps by embedding a portion of each cap in the cement within the contiguous end of the tube and then permitting the cement to harden.



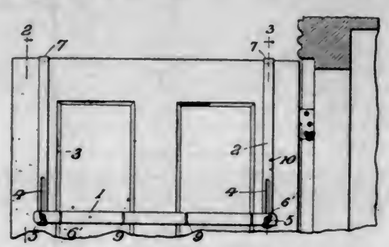
2. The process of producing a reinforced buffer bar for automobile bumpers consisting in filling a thin metal tube with a plastic composition and exposing the same to atmospheric action to permit the composition to harden, then shaping the tube by a bending operation while the plastic composition is in a semi-hardened state, then permitting the plastic composition to harden to render the tube non-flexible and then applying closures to the ends of the tube.

1,189,676. ADVERTISING APPARATUS. ALFRED J. FAIRBANKS, San Francisco, Cal. Filed Aug. 12, 1914. Serial No. 856,461. (Cl. 40—31.)



In combination, a housing, a transparent section positioned in the side of said housing, a pair of supports secured in said housing having apertures therein, shafts rotatably mounted in said supports, a strip secured at its opposite ends to said shafts, eye bolts slidably mounted in said apertures, flanges on the shanks of said eye bolts for limiting the outward movement thereof, spring means normally retaining said eye bolts in outwardly extended position, and a pair of guide rollers supported one above the other in the eye bolts supporting said strip in position adjacent said transparent section.

1,189,677. RACK ATTACHMENT FOR DOORS. JOHN FARLESS, New York, N. Y. Filed Apr. 1, 1915. Serial No. 18,493. (Cl. 45—13.)



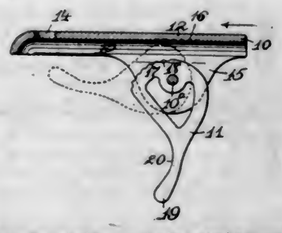
A rack comprising a pair of upright hanger bars having laterally extending supporting hooks at their upper ends and having their lower ends formed with vertical slots, a horizontal article supporting bar contacting with the sides of said hanger bars opposite those from which the hooks extend, pivot bolts passing through the slots and through the ends of said article supporting bar, and clamping nuts on said bolts, the two hanger bars being adapted to fold into overlapping relation adjacent one side of the article supporting bar when not in use and to be then moved inwardly to position the bolts at the outer ends of the slots, one of said hanger bars having in one edge a notch to receive the hook of the other when the device is folded in order to prevent sliding of the hanger bars beyond the article supporting bar while the clamping nuts are being tightened.

1,189,678. SLEIGH ATTACHMENT. ALBERT H. FIHN, Faribault, Minn. Filed Jan. 31, 1913. Serial No. 745,476. (Cl. 21—47.)



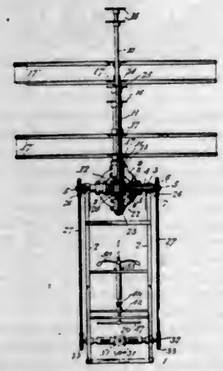
The combination with a wheel including a hub and an axle extending through said hub and having a threaded end extending beyond the same, of an axle extension mounted on the threaded end of said axle and butting against the end of the hub and a runner mounted on said extension.

1,189,679. CLOTHES-LINE HOLDER. PETER P. FURBY, Newark, N. J. Filed June 13, 1914. Serial No. 844,853. (Cl. 24—134.)



In a clothes line holder, a body member comprising a grooved back portion and separated side parts, the back portion being integral with the side parts and extending endwise therebeyond, and being provided at one end with an opening, whereby a bight of rope may be secured to said body member, and said back portion being continuous except for said opening, an eccentric clamping member pivoted between the side portions of the body member and provided with serrations, the body member having internal serrations to coact with the serrations on the clamping member to securely hold a bight of rope therebetween, and a handle for the clamping member, said handle being curved to present a concavity toward the body member and adapted to permit a line clamped in the holder to fall freely away laterally without interference with the handle and at the same time to permit the free end of the handle to approach close to the body member, the continuous back portion of the body member serving to keep the line end and the clamping members protected and free of snow, ice and the like, substantially as set forth.

1,189,680. AIRSHIP. JEFFERSON M. GARDNER, New London, Conn. Filed Apr. 28, 1913. Serial No. 763,997. (Cl. 244—19.)



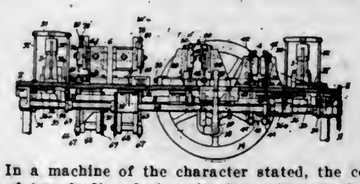
1. An airship comprising a car or body, an upright or stanchion extending upward from each side of the car or body, a horizontal sleeve mounted on each of the uprights or stanchions and capable of rotating, a bracket rigidly secured to the inner ends of the sleeves, horizontal shafts each having a gear on its inner end mounted in the sleeves, upright wing shafts mounted in the bracket and having gears engaging those on the horizontal shafts, and means for rotating the sleeves and thereby tilting the wing shafts.

2. An airship comprising a car or body, an upright or stanchion extending upward from each side of the car or body, a horizontal rotatable sleeve mounted on each of the uprights or stanchions, a sectional bracket rigidly secured to the inner ends of the sleeves, horizontal shafts each having a gear on its inner end mounted in the sleeves, upright wing shafts mounted in the bracket and having gears engaging those on the horizontal shafts, and means for rotating the sleeves and thereby tilting the wing shafts.

3. An airship comprising a car or body, uprights extending from the body, transverse shafts mounted on the uprights, wing shafts supported on the transverse shafts and capable of being inclined relatively thereto, a rudder, a rotatable steering shaft capable of tilting, a lever pivotally mounted between the steering shaft and the wing shafts, and links connecting the lever with such shafts and with the steering shaft.

1,189,681. MACHINE FOR MAKING PENS. JOHN F. GEORGE, Camden, N. J. Filed Oct. 11, 1915. Serial No. 55,182. (Cl. 113—32.)

1. In a machine of the character stated, the combination of two feeding devices for intermittently feeding a strip of metal separated at a distance apart, with means intermediate of the feeding devices and in alinement therewith for operating upon the sheet during the intermissions of the feeding, a longitudinal shaft, means actuated from the power shaft for operating the last mentioned means in an intermittent manner, and separate means actuated by the power shaft for operating the feeding devices simultaneously at times alternate with the operation of the devices intermediate of the feeding devices.



2. In a machine of the character stated, the combination of two feeding devices for intermittently feeding a strip of metal separated at a distance apart, with means intermediate of the feeding devices and in alinement therewith for operating upon the sheet during the intermission of the feeding, means for operating the last mentioned means in an intermittent manner, means for operating the feeding devices simultaneously at times alternate with the operation of the devices intermediate of the feeding devices, and means to adjust the relative degree of feeding of the two feeding devices.

3. In a machine of the character stated, the combination of two feeding devices for intermittently feeding a strip of metal separated at a distance apart, with means intermediate of the feeding devices and in alinement therewith for operating upon the sheet during the intermissions of the feeding, means for operating the last mentioned means in an intermittent manner, means for operating the feeding devices simultaneously at times alternate with the operation of the devices intermediate of the feeding devices, and devices for independently adjusting the extent of feeding of each of the feeding devices and for imparting a greater feeding action at the delivery end of the machine than at the feeding end.

4. In a machine of the character stated, the combination of piercing and slitting dies and means for operating them, with punching and raising dies and means for operating them, feeding devices for feeding a sheet of metal successively between the piercing and slitting dies and the punching and raising dies, said dies and feeding devices arranged in substantial alinement, and power means for operating the feeding devices to feed intermittently and alternately with the dies.

5. In a machine of the character stated, the combination of feeding devices for intermittently feeding a metal strip with a step by step motion, with a plurality of sets of dies arranged in substantial alinement with themselves and with the feeding devices, said dies comprising means to mark the sheet with the name, means to pierce and slit the sheet, and means to punch blanks from the sheet containing the marking and piercing and slitting and to raise the same, and power devices for simultaneously operating the various dies alternately with the intermittent feeding action of the feeding devices.

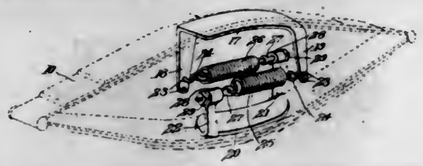
[Claims 6 to 11 not printed in the Gazette.]

1,189,682. SHOCK-ABSORBER. OCTAVE GINGRAS, Laureville, Quebec, Canada. Filed June 16, 1915. Serial No. 34,539. (Cl. 267—19.)

1. The combination with two members and a spring arranged in a vertical plane forming a yieldable connection therebetween and preventing substantial relative lateral movement thereof, of brackets connected with each of said members, and a coil spring having its ends connected with said brackets and movable therewith, said coil spring being normally arranged with its axis parallel to the plane of said first mentioned spring and at right angles to the direction of relative movement of said brackets.

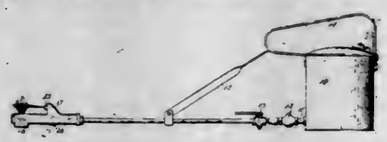
2. The combination with two members and a spring arranged in a vertical plane forming a yieldable connection therebetween and preventing substantial relative lateral

movement thereof, of brackets connected with each of said members and arranged at one side of said spring, and a coil spring having its ends connected with said brackets and movable therewith, said coil spring being normally arranged with its axis parallel to the plane of said first mentioned spring and at right angles to the direction of relative movement of said brackets.



3. The combination with two members and a spring forming a yieldable connection therebetween, of a pair of brackets connected with each of said members and arranged on opposite sides of said spring, and a pair of coil springs each of which has its ends connected with the brackets on the same side of said spring and normally arranged substantially at right angles to the direction of relative movement of the brackets.

1,189,683. IGNITER FOR INFLAMMABLE LIQUIDS. JAMES GREER, Kearney, N. J. Filed Sept. 19, 1914. Serial No. 862,452. (Cl. 158—10.)



1. The combination with a can for containing an inflammable liquid and a pouring pipe which extends from the can and through which the liquid is adapted to be poured, of an igniter secured to the front end of said pipe and comprising a chamber having a pilot lamp at its front end, and a raised discharge nozzle arranged on said chamber at a sufficient distance in rear of said lamp to prevent the flame of the lamp from carbonizing the liquid on said nozzle and adapted to project said liquid from said chamber forwardly in a stream through the flame of said lamp.

2. An igniter for an inflammable liquid comprising a main chamber having a pilot lamp at its front end, a nozzle chamber extending upwardly from said main chamber, and a discharge nozzle arranged in the front wall of said nozzle chamber and adapted to project said liquid forwardly from said nozzle chamber through the flame of said lamp.

3. An igniter for an inflammable liquid comprising a chamber having a pilot lamp at its front end, baffles arranged at intervals in said chamber, and a raised discharge nozzle arranged on said chamber in rear of said lamp.

4. An igniter for an inflammable liquid comprising a main chamber having a pilot lamp at its front end, baffles arranged at intervals in said main chamber, a nozzle chamber extending upwardly from said main chamber, and a discharge nozzle arranged in the front wall of said nozzle chamber and adapted to project said liquid forwardly from said nozzle chamber through the flame of said lamp.

5. An igniter for an inflammable liquid comprising a main chamber having at its front end a well and a wick tube above said well, a raised nozzle chamber extending upwardly from said main chamber in rear of said well, a nozzle in the front wall of said nozzle chamber, and means at its rear end for connection with a pouring pipe.

[Claims 6 and 7 not printed in the Gazette.]

1,189,684. AUTOMATIC STOP MECHANISM FOR KNITTING-MACHINES. IVERN W. GROTHEY, York, Pa., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Mar. 2, 1912. Serial No. 681,064. (Cl. 66—7.)



1. In a yarn actuated stop mechanism the combination of supporting guides through which the yarn is adapted to be passed, a support for said guides, a tension detector pivoted on said support and depending from said pivot, said detector having a downwardly projecting bent extremity over which the yarn is adapted to be passed, whereby movement of the detector through a short arc wholly beneath said pivot will cast off the yarn at or near the completion of a movement ending substantially at the vertical, in combination with power-release devices and actuating connections between said detector and power-releasing devices.

2. In a stop mechanism for a knitting machine, a tension detector over which the yarn is adapted to be passed to the knitting machine, a support to which said detector is pivotally connected, said detector having freedom of movement toward the axis of the machine, means for actuating the stop mechanism, and a substantially vertical and upwardly open fixed guide for the yarn substantially on the vertical axis of and above said machine, the detector being adapted to move through the opening in said guide.

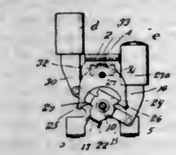
3. In a stop mechanism of the character described, tripping mechanism, a catch adapted to actuate said tripping mechanism, a shaft designed for interlocking engagement with the catch, means for moving the catch in a direction to operate the tripping mechanism upon the disengagement of the catch and shaft, a casing in which the catch is mounted, independently movable detectors in contact with the yarn or yarns and direct connections between said shaft and said detectors to rotate the shaft on its axis to disengage the catch upon the occurrence of a fault in the yarn.

4. In a stop mechanism of the character described, trip actuating mechanism, including a spring actuated catch, a casing in which said catch is mounted, a shaft extending across said casing and journaled therein having means thereon to engage the catch and provided at its ends with fingers, and detector fingers mounted on the respective ends of said shaft and independently movable into engagement with the first named fingers, whereby to disengage the shaft from the catch.

5. In stop mechanism of the character described, the combination with tripping mechanism, including a spring actuated catch formed with a shoulder, a casing in which said catch is mounted, a shaft journaled in said casing and provided with a lug adapted to engage said shoulder, a crank arm connected to said shaft, a link rod connected to said crank arm, a disk to which one end of the link rod is eccentrically connected, a support for said disk, a tension detector over which the yarn is adapted to be passed, a knot catcher for the yarn, the disk being formed with an apertured lip and a tensioned rod passing through said apertured lip and pivotally connected to the tensioning finger.

[Claims 6 to 14 not printed in the Gazette.]

1,189,685. SWITCH. MONROE GUETT, Hartford, Conn., assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 21, 1913. Serial No. 802,217. (Cl. 175—293.)



1. In an electric snap switch, an operating handle, an actuator operatively connected therewith, a blade carrier, a pivoted lock plate, interengaging parts on the blade carrier and lock plate, coöperating parts on said actuator and lock plate to move the latter to release the blade carrier, and means for producing relative motion between said blade carrier and lock plate in a direction at an angle to the plane of rotation of the said blade carrier, said means comprising coöperating parts on said blade carrier and lock plate, and means to return said blade carrier and lock plate to normal position.

2. An electric switch mechanism including, in combination with the blades and oscillating blade carrier, a pivoted lock plate, manual means for moving said lock plate on its pivot in a plane substantially parallel to the plane of rotation of the blade carrier, and automatically operating means to produce relative motion between the lock plate and blade carrier in a direction at an angle to the plane of rotation of the latter.

3. In an electric switch, the combination with the blades and an oscillating blade carrier, of a lock plate supported for movement in different vertical planes, manual means for moving said plate in one plane, and automatically operating means for moving said plate in another plane.

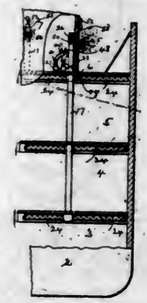
4. In an electric switch, the combination with an oscillating blade carrier, of a lock plate, a support therefor to permit movement in a plurality of directions, means for holding said lock plate in normal position in operative relation with said blade carrier, interengaging parts on said blade carrier and lock plate, manually operated means for moving said lock plate to release said blade carrier, and automatically operating means to move said lock plate out of normal position.

5. In an electric snap switch, the combination with an operating handle, an oscillating blade carrier, of a lock plate, a support therefor to permit movement in a plurality of directions, means for holding said lock plate in normal position in operative relation with said blade carrier, engaging parts on said lock plate and said blade carrier, means connected with said handle to move said lock plate to release said blade carrier, and means on the blade carrier to move said lock plate out of normal position.

[Claims 6 to 8 not printed in the Gazette.]

1,189,686. FIRE INDICATING AND EXTINGUISHING SYSTEM. FRANK C. HAASSLER, Brooklyn, N. Y. Filed Apr. 13, 1914. Serial No. 831,592. (Cl. 169—20.)

1. The herein described combined fire indicating and fire extinguishing system for ships, comprising jointly stand pipes adapted to extend from the upper deck of said ship down and into the hold and intermediate decks thereof, each of said stand pipes provided with an opening and closing valve at its upper portion, each of said stand pipes provided at or near its upper end with an announcing or smoke escaping outlet, each of the said stand pipes provided at its lower end with perforated branch pipes adapted to convey smoke from the compartment of the ship to the said stand pipes or to distribute fire extinguishing mediums from the said stand pipes into the compartments of said ship, fire extinguishing supply pipes in pairs adapted to lie in close proximity to said stand pipes, means for connecting said supply pipes to the said stand pipes, each consisting of a permanent Y coupling, whereby the said stand pipes can be supplied with one or both mediums for extinguishing fires at the same time, said Y couplings provided with openings and closing valves and cocks, and means for supplying the said supply pipes with the extinguishing mediums.



2. The herein described fire extinguishing and indicating system, for ships comprising a plurality of stand pipes located in the compartments of the ship, sprinkling pipes attached to said stand pipes, said stand pipes each provided with an opening and closing valve, said stand pipes provided with smoke announcing outlets controlled by said valves, supply pipes in pairs placed close to said stand pipes, means for connecting said stand pipes to said supply pipes, consisting of permanent Y couplings, said Y couplings provided with valves and cocks, said Y couplings permitting the supply pipes of one medium for extinguishing fires, to pass into the stand pipes of one or more compartments, and another medium to pass into the stand pipes of other compartments at and during the same time, and means for supplying the said supply pipes with the required extinguishing mediums.

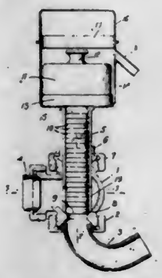
3. The herein described fire extinguishing and indicating system, comprising a plurality of stand pipes each provided with an opening and closing valve and with smoke escaping outlets controlled by said valves; perforated branch pipes attached to said stand pipes; a plurality of supply pipes located in proximity to said stand pipes and connected to said stand pipes, said supply pipes having opening and closing valves, and means for supplying an extinguishing medium to each of said supply pipes.

4. The herein described fire extinguishing and indicating system for ships, comprising a plurality of stand pipes located in the compartments of the ship; sprinkling pipes attached to said stand pipes, said stand pipes each provided with an opening and closing valve and with smoke announcing outlets controlled by said valves, means for closing said smoke announcing outlets, supply pipes in pairs placed close to said stand pipes, means for connecting said stand pipes to said supply pipes; said supply pipes having opening and closing valves, and means for supplying an extinguishing medium to each of said supply pipes.

1,189,687. BACK-PRESSURE REGULATOR FOR CENTRIFUGALIZING-MACHINES. SELDEN H. HALL, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 30, 1914. Serial No. 835,452. (Cl. 137—53.)

1. A fluid pressure regulator, comprising a plunger adapted to serve as a valve, a guide-tube inclosing said plunger with a loose fit to permit leakage, a weight for said plunger and an overflow chamber receiving fluid leaking upward between the plunger and its guide-tube, said weight making a loose fit in said chamber.

2. In a fluid pressure regulator, a valve casing, a guide-tube secured in said casing and having ports, a plunger loosely fitting in said guide-tube and serving to close said ports and a leakage chamber above said guide-tube to receive fluid passing upward between the plunger and its guide-tube.



3. In a fluid pressure regulator, a valve casing, a guide-tube secured in said casing and having ports, a plunger loosely fitting in said guide-tube and serving to close said ports, a leakage chamber above said guide-tube to receive fluid passing upward between the plunger and its guide-tube, and a piston loosely fitting in said chamber and secured to said plunger to damp its sudden movements.

4. In a fluid pressure regulator, the combination of a valve casing, a guide-tube projecting into said casing and having discharge ports, a plunger positioned to open or close said ports and having throughout its length a loose fit in said guide-tube so that fluid may leak upward within the tube, a leakage chamber above said guide-tube for receiving said fluid and a weight connected to said plunger and movable as a piston in said leakage chamber to damp sudden movements of the plunger while freely permitting slow movements thereof.

5. In a fluid pressure regulator, the combination of a valve casing having an inlet, a guide-tube projecting into said casing and having discharge ports above said inlet, a weighted plunger loosely fitting in said guide-tube and shaped at its lower end to form a valve, said plunger being adapted to move upward under fluid pressure to uncover the ports in said guide-tube, said ports being tapered to increase the rate of change in fluid discharge as the valve moves upward.

[Claim 6 not printed in the Gazette.]

1,189,688. FUEL-SUPPLY APPARATUS FOR EXPLOSION-MOTORS. JACOB CHRISTIAN HANSEN-ELLEHAMMER, Copenhagen, Denmark. Filed Feb. 15, 1915. Serial No. 8,334. (Cl. 48—107.)

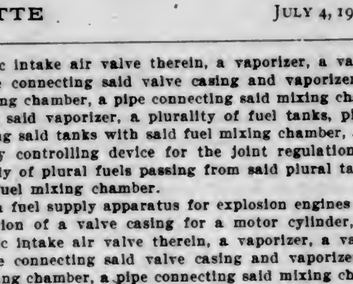
1. In a fuel supply apparatus for explosion engines the combination of a valve casing for a motor cylinder, an automatic intake air valve therein, a vaporizer, a vapor feed pipe connecting said valve casing and vaporizer, a fuel mixing chamber, a pipe connecting said mixing chamber with said vaporizer, a plurality of fuel tanks, pipes connecting said tanks with said fuel mixing chamber, and a unitary controlling device for the joint regulation of the supply of plural fuels passing from said plural tanks to said fuel mixing chamber.

2. In a fuel supply apparatus for explosion engines the combination of a valve casing for a motor cylinder, an automatic intake air valve therein, a vaporizer, a vapor feed pipe connecting said valve casing and vaporizer, a fuel mixing chamber, a pipe connecting said mixing chamber with said vaporizer, a plurality of fuel tanks, pipes connecting said tanks with said fuel mixing chamber, and a unitary controlling device for the joint regulation of the supply of plural fuels passing from said plural tanks to said fuel mixing chamber, said pipe connecting the valve casing and vaporizer being of larger diameter than said pipe connecting said mixing chamber with the vaporizer.

3. In a fuel supply apparatus for explosion engines the combination of a valve casing for a motor cylinder, an automatic intake air valve therein, a vaporizer having an enlarged area at its point of discharge and a small area at its point of intake, a vapor feed pipe of larger diameter connecting the large end of said vaporizer with said casing, a supply chamber, and a pipe of small area connecting said chamber with the small end of said vaporizer.

4. In a fuel supply apparatus for explosion engines the combination of a valve casing for a motor cylinder, an automatic intake air valve therein, a vaporizer having an enlarged area at its point of discharge and a small area at its point of intake, a vapor feed pipe of larger diameter connecting the large end of said vaporizer with said casing, a supply chamber, and a pipe of small area connecting said chamber with the small end of said vaporizer, said last named pipe projecting into the intake end of said vaporizer and having a series of peripheral perforations within said end.

1,189,689. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 10, 1908, Serial No. 466,836. Divided and this application filed Apr. 14, 1916. Serial No. 91,057. (Cl. 235—60.)



1. In a combined typewriting and computing machine, the combination with computing mechanism and an operating member having a uniform stroke, of a typewriter carriage returnable from any point in its transverse concomitantly with the stroke of said operating member, and means adjustable to correspond to any carriage position to determine the extent to which the carriage is returned during the time the operating member is making its uniform stroke to operate the computing mechanism.

2. In a combined typewriting and computing machine, the combination with computing mechanism, of a typewriter carriage, an operating member having a uniform stroke to operate said computing mechanism, means for returning the carriage variable distances during the time the operating member is making its stroke, and an adjustable means for appropriating only as much of the uniform stroke of said operating member as is necessary to return the carriage from any position to which it has been advanced.

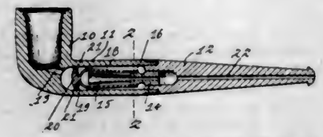
3. The combination with a typewriter having a traveling carriage, of means for imparting variable return movement to said carriage, comprising a gear connected to said carriage, an operating lever and an arm pivoted on the axis of said gear, and pinions journaled on said lever and arm, in constant mesh with said gear and engageable with each other, to determine the effective carriage operating movement of said lever.

4. The combination with a typewriter having a traveling carriage, of a computing mechanism, means for imparting variable return movement to said carriage, comprising a gear connected to said carriage, an operating lever, for said computing mechanism, and an arm pivoted on the axis of said gear, and pinions journaled on said lever and arm, in constant mesh with said gear and engageable with each other, to determine the effective carriage operating movement of said lever.

5. The combination with a typewriter having a traveling carriage, and an associated computing machine, having an operating member, of means for imparting variable return movement to said typewriter carriage and a constant movement to said operating member, comprising a gear connected to said typewriter carriage, an operating lever pivoted on the axis of said gear and connected to said operating member, an arm also pivoted on the axis of said gear, and pinions journaled on said lever and on said arm, in constant mesh with said gear and engageable with each other to determine the effective movement of said lever on said typewriter carriage, under lever movements required to impart predetermined full stroke movements to said operating member.

[Claims 6 to 10 not printed in the Gazette.]

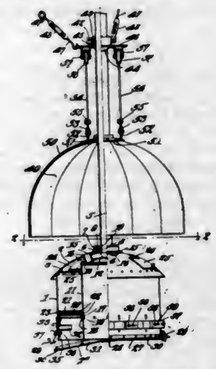
1,189,690. TOBACCO-PIPE. MOSES HELLER, New York, N. Y. Filed May 5, 1915. Serial No. 26,118. (Cl. 131—12.)



1. A tobacco pipe comprising a bowl having a stem portion communicating therewith, a mouth-piece or bit engaged in the outer end of the stem portion, said mouth-piece provided with an enlarged inwardly extending opening, a tube having an enlarged end threadedly engaged in the said opening, the other end of the tube being flared, the said tube having a second threaded enlargement, formed with longitudinal grooves therethrough, an elongated casing engaged on the second enlargement and having its opposite end closed, said closed end of the casing having a reduced neck and a discal head thereon formed with openings for the passage of smoke therethrough and around the casing.

2. A tobacco pipe comprising a bowl having a stem portion communicating therewith, a mouth piece engaged in the outer end of the stem portion, said mouth piece provided with an enlarged inwardly extending condensation chamber, a tube having an enlarged end threadedly engaged in the said chamber, the other end of the tube being flared, the said tube having a second threaded enlargement formed with longitudinal grooves therethrough, a tubular casing detachably connected on the second enlargement and having its opposite end closed, said closed end of the casing having a reduced neck and a discal head thereon arranged to close the inner end of the said stem portion to form a condensation chamber, said discal head formed with openings for the passage of smoke therethrough and around the casing.

1,189,691. STOVE. JOHN HENDERSON, Cadillac, Mich. Filed Sept. 30, 1915. Serial No. 53,292. (Cl. 237—14.)



1. A suspended swingable flue, and a rotatable stove suspended therefrom.

2. In a device of the character described, a supporting member having an opening, a flue, a member secured to said flue and having a concaved portion seated in said opening, and a stove suspended from said flue.

3. In a device of the character described, a supporting member, a flue suspended therefrom, a stove suspended from the flue, a hood slidable upon the flue above the stove, pulleys carried by said supporting member, and flexible elements attached to said hood and passing over said pulleys.

4. In a device of the character described, a suspended flue, and a rotatable stove suspended from the flue and having an annular fire box and covers therefor.

5. In a device of the character described, a suspended flue, and a stove casing suspended from and having its top rotatably connected to the lower end of said flue.

[Claims 6 to 10 not printed in the Gazette.]

1,189,692. KITCHEN-FORK. JOHN HOFFMAN, Medina, N. Y. Filed Feb. 8, 1916. Serial No. 77,046. (Cl. 30—5.)



A fork attachment comprising a rod, said rod being slidably connected to the tines of the fork, a bar pivotally connected to the handle of the fork, a link pivotally connecting the rod and one end of the bar, a spring connecting the rod and handle, an angle arm having one end pivotally connected to the bar and having its other end terminating in a rod, a guide carried by the handle grip of the fork and slidably engaged by the last named rod, and a finger-piece carried by the said last named rod, as and for the purpose set forth.

1,189,693. SOFT FOLD-COLLAR. HUBBARD F. HURD, Troy, N. Y., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y., a Corporation of New York. Filed July 25, 1914. Serial No. 853,148. (Cl. 2—67.)

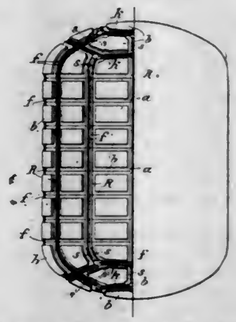
1. A soft fold-collar having a band, and a folded-over top stitched to the band with the ends of the band projecting beyond the respective ends of the top, and having

a loop attached at opposite ends to the top near its end, the length of said loop between its points of attachment being substantially greater than the height of the band whereby it is adapted to receive and embrace the neighboring projecting end of the band. .



2. A soft fold-collar having a band, and a folded-over top stitched to the band with the ends of the band projecting beyond the respective ends of the top, and having a loop inserted at one end in the seam whereby the top and band are stitched together, and attached at its other end to the neighboring end-edge portion of the top, said loop being of a length greater than the height of the band whereby it is adapted to receive and embrace the neighboring projecting end of the band.

1,189,694. RECEPTACLE. HENDRIK JAN JAKOB JANSSEN, Rotterdam, Netherlands, and HEINRICH BORSARI, Zollikon-Zurich, Switzerland, assignors to the Firm of Borsari & Co., Zollikon-Zurich, Switzerland. Filed Apr. 16, 1914. Serial No. 832,215. (Cl. 72—13.)



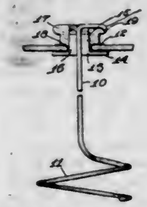
1. A receptacle, particularly adapted to be subjected to an inner pressure, comprising preformed plates forming the ends and side walls, a frame consisting of metallic reinforcing pieces enveloping said plates, a second frame consisting of reinforcing bars provided with adjustable tension members and resting on said first mentioned frame, the plates being bound together by the two frames to form a unitary structure, and a layer of cement laid on said plates and embedding said frames.

2. A receptacle, particularly adapted to be subjected to an inner pressure, comprising preformed plates forming the ends and side walls, a plurality of smaller performed plates placed on said first mentioned plates, crossed reinforcing wires embedded in the smaller plates and projecting beyond the edges of the latter, the spaces between the smaller plates forming recesses in which the projecting ends of the wires are connected, reinforcing bars under tension in said recesses, and means for adjusting the tensional strain of said bars whereby the plates forming the ends and side walls are bound together to form a unitary structure and a filler of cement in the recesses.

3. A receptacle, particularly adapted to be subjected to an inner pressure, comprising preformed plates forming the ends and side walls, a plurality of smaller performed plates placed on said first mentioned plates, crossed reinforcing wires embedded in the smaller plates and projecting beyond the edges of the latter, the spaces between said smaller plates forming recesses in which the projecting ends of the wires are connected, flat-irons arranged in recesses parallel to the longitudinal axis of the receptacle acting as reinforcing and tensional straining members and resting on the reinforcing wires, chain-links connecting the flat-irons, screws provided with left hand and right hand threads, each connecting a flat-iron to a chain-link to permit adjustment of the tensional strain, the plates forming the ends and side walls being bound together by said frame to form a unitary structure, and a filler of cement in said recesses.

4. A receptacle, particularly adapted to be subjected to an inner pressure comprising adjacent rings consisting of preformed plates of a non-compressible material and forming the side walls, preformed plates also of a non-compressible material forming the ends of the receptacle, wire wound around said rings and subjected to a tensional strain corresponding to the inner pressure of the receptacle, reinforcing bars under tension resting on said wire and crossing it at right angles, said bars being provided with means for adjusting the tensional strain, the plates forming the rings and the ends of the receptacle being bound together by said wire and reinforcing bars to form a unitary structure, and a layer of cement on said plates and embedding the wire and reinforcing bars.

1,189,695. HAT-PIN FOR LADIES' HATS. MICHEL JOLAK, New York, N. Y. Filed Sept. 18, 1915. Serial No. 51,313. (Cl. 132—25.)



1. A hat pin for ladies' hats comprising a shank formed with a spiral to engage with the hair, a two-part thumb piece having exterior and interior portions to loosely engage the exterior and interior of the hat, and means for permanently securing the thumb piece to the shank in adjusted position thereon.

2. A hat pin for ladies' hats comprising a member to engage the hair, a thumb piece adjustably secured thereon in accordance with the size of the hat, said thumb piece comprising a portion adapted to engage the interior of the hat, and a threaded portion extending to the exterior of the hat and a nut threaded on said exterior portion to clamp the same against the hair engaging member, the thumb piece and said member being rotatable together to cause the engagement of the member with the hair.

3. A hat pin for ladies' hats comprising a shank having a spiral for engaging the hair, a split taper-threaded screw member mounted on the shank at the interior of the hat and a nut at the exterior of the hat threaded upon the projecting portion of the screw member to clamp the latter to the shank, said nut serving as a thumb piece to rotate the shank to engage and disengage the spiral with the hair.

4. A hat pin for ladies' hats comprising a shank having a spiral for engaging the hair, a split taper-threaded screw member mounted on the shank at the interior of the hat and a nut at the exterior of the hat threaded upon the projecting portion of the screw member to clamp the latter to the shank, said nut serving as a thumb piece to rotate the shank to engage and disengage the spiral with the hair, said nut being formed with a slot in which the end of the shank may be bent to secure the same in place.

1,189,696. PROCESS OF PRODUCING COLLOIDAL SOLUTIONS IN ORGANIC SUBSTANCES NOT MISCIBLE WITH WATER. HANS KARPLUS, Berlin, Germany. Filed June 26, 1915. Serial No. 36,569. (Cl. 252.)

1. A process of producing a colloidal solution in an organic medium insoluble in water from hydrosol consisting in removing the colloid from the hydrosol by means of an organic compound insoluble in water and dispersible in the organic medium, removing the water, and admixing therewith the organic medium.

2. A process of producing a colloidal solution in an organic medium insoluble in water from a hydrosol consisting in forming in the hydrosol a precipitate of an organic compound insoluble in water and dispersible in the organic medium, thereby entraining the colloid, removing the water from the mixture of the organic compound and the colloid, and admixing said mixture with the organic medium.

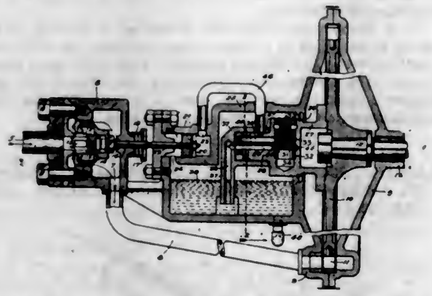
3. A process of producing a collodial solution in an organic medium insoluble in water from a hydrosol consisting in forming in the hydrosol an amorphous precipitate of an organic compound insoluble in water and soluble in the organic medium, thereby entraining the colloid evaporating the water from the mixture of the organic compound and the colloid, and admixing said mixture with the organic medium.

4. A process of producing a colloidal solution in an organic medium insoluble in water from a hydrosol consisting in adding to the hydrosol a solution of an organic compound, converting said organic compound into an amorphous precipitate soluble in the organic medium entraining therewith the colloid, removing and drying the precipitate with the entrained colloid, and admixing the resulting mixture with the organic medium.

5. A process of producing colloidal solution of silver in vaseline from a silver hydrosol consisting in dissolving sodium naphthenate in said hydrosol, converting said naphthenate into a metal-naphthenate insoluble in water and soluble in vaseline, said precipitate entraining the colloidal silver, filtering and drying the precipitate, and mixing the dried precipitate with vaseline.

[Claims 6 and 7 not printed in the Gazette.]

1,189,697. MOTOR CONTROL. ALEXANDER T. KASLEY, Swissvale, and CHARLES N. F. KNAPE, Pittsburgh, Pa., assignors, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 30, 1910. Serial No. 574,695. (Cl. 264—14.)



1. In a device of the class described, means for admitting fluid to a motor and a fluid actuated operating mechanism for said means and means comprising a rotatable member for causing fluid pressure to accumulate and a centrifugal valve rotatable therewith for determining the accumulated pressure.

2. In a device of the class described, means for admitting fluid to a motor, a fluid actuated device for moving said means and a pressure accumulating device comprising a rotatable member, a casing therefor connected to the fluid actuated device, a plurality of ports in the rotatable device and means carried by the pressure accumulating device for automatically cutting off and permitting communication between two of said ports whereby the amount of pressure in the pressure actuating device may be determined.

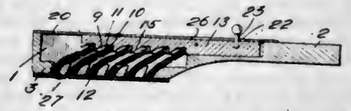
3. In a device of the class described, a combination with a fluid actuated valve seating mechanism, of means for actuating said mechanism comprising a fluid pump having a centrifugal pressure control means rotatable with one of the pump elements for governing the amount of pressure upon the valve seating mechanism.

4. In a device of the class described, a motor and a source of supply, a valve interposed between the source of supply and the motor, means for actuating said valve and means for actuating the actuating means comprising a pump having a runner driven by the motor and means carried by the runner for by-passing fluid past the inlet port toward the actuating means and for introducing fluid into the actuating means.

5. In a device of the class described, a pump having an inlet and an outlet port, and means acted upon directly by centrifugal force for by-passing fluid within the pump so as to prevent its passage through the outlet port.

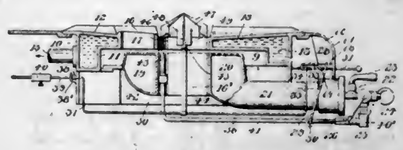
[Claims 6 to 16 not printed in the Gazette.]

1,189,698. BRUSH. CLARENCE P. KEATING, Marshfield, Oreg. Filed Feb. 2, 1915. Serial No. 5,747. (Cl. 15—30.)



A brush comprising a hollow body including top, bottom, side and end walls, said bottom wall having a series of slots separated from each other by spacing webs, a frame slidably housed within the body, a series of tufts of bristles connected with the frame and extending within the slots of the bottom wall, an operating handle carried by the frame and extending through a slot in the top wall of the body, said handle being movable to shift the frame in one direction and project the bristle through the slots and in the opposite direction for withdrawing the bristles entirely within the body, and a cover removably engaged with the body to close said slots.

1,189,699. GAS-HEATED STOVE. JAMES E. KENNEDY, Washington, D. C. Filed July 30, 1915. Serial No. 42,824. (Cl. 126—52.)



1. A stove comprising a grid, a burner having a mixing tube and positioned beneath the said grid, a valve for the said burner, a rocking operating lever consisting of a single length of rod having a transversely arranged upstanding loop at the forward end thereof encircling the said mixing tube, operative connections between the said loop and valve, and contacting means carried by the said lever and normally extending above the said grid, the said lever being arranged entirely beneath the level of the burner top.

2. In a gas stove, the combination with a burner; of a cock for governing the supply of gas to the burner, and means controlled by the imposition of a cooking vessel thereon for opening and closing said cock, said means including a lever provided intermediate its ends with an upstanding member terminating in a pin having a lug on one side thereof and a support rotatably mounted on the lug and provided with a spaced series of slots of different depths, said slots engaging the lug to regulate the height of said member.

3. In a gas stove, the combination with a burner; of a cock for governing the supply of gas to the burner, and means controlled by the imposition of a cooking vessel thereon for opening and closing said cock, said means including a lever provided intermediate its ends with an

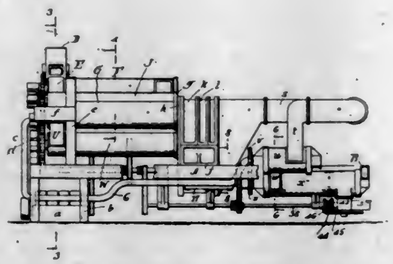
upstanding member terminating in a pin having a lug on one side thereof and a support rotatably mounted on the lug and provided with a spaced series of slots of different depths, said slots engaging the lug to regulate the height of said member, said member further consisting of a central body wherein said slots are formed and downwardly inclined radial arms.

4. In a device of the class described, the combination with a grid, of a burner mounted beneath said grid and provided with an annular body and a mixing tube, a gas supply pipe extending into the tube, a cock in said gas supply pipe, a rock shaft mounted adjacent the front of the device and provided with a downwardly extending arm, a lever attached to said cock to control the same, a link connecting said arm and lever, a forwardly extending arm on said rock shaft provided with a hook at its forward end, and an operating lever journaled at the rear of the device and operatively connected to said hook.

5. In a device of the class described, the combination with a grid, of a burner mounted beneath said grid and provided with an annular body and a mixing tube, a gas supply pipe extending into the tube, a cock in said gas supply pipe, a rock shaft mounted adjacent the front of the device and provided with a downwardly extending arm, a lever attached to said cock to control the same, a link connecting said arm and lever, an inwardly extending arm on said rock shaft provided with a hook at its inner end, a second rock shaft journaled at the rear of the device, a lever consisting of a single length of rod having an upstanding loop at one extremity engaged with the hook on the first mentioned rock shaft and embracing the mixing tube, said lever further comprising rearwardly extending portions lying beneath the tube and burner and terminating in upwardly and rearwardly extending portions passing through the second rock shaft, and a counter-weight carried by the last mentioned portions of the lever.

[Claims 6 to 8 not printed in the Gazette.]

1,189,700. MACHINE AND PROCESS FOR MIXING ROAD MATERIAL. WILLIAM L. KERLIN, New York, N. Y., assignor, by mesne assignments, to Willite Road Construction Company of America, a Corporation of Maine. Filed Dec. 8, 1914. Serial No. 876,035. (Cl. 94—6.)



1. A machine for mixing road materials and the like comprising a casing for conveying solid material, means for maintaining a full supply of material at the admission end so as to practically or nearly cut off the admission of air and means for sucking air out of the casing so as to maintain a partial vacuum in said material.

2. A machine for mixing road materials and the like comprising a casing for conveying solid material, means for maintaining a full supply of material at the admission end so as to practically or nearly cut off the admission of air, a fan for sucking air out of the casing so as to maintain a partial vacuum in said material and means for agitating said material.

3. A machine for mixing road materials and the like comprising a casing for conveying solid material, means for maintaining a full supply of material at the admission end so as to practically or nearly cut off the admission of air, means at the discharge end for sucking air out of the casing and means for heating the material to facilitate the removal of moisture therefrom.

4. A machine for mixing road materials and the like comprising a casing, means for maintaining a full supply of material at the admission end of the casing so as to practically or nearly cut off the admission of air, means at the discharge end for sucking air out of the casing, means for passing solid material through the casing, comprising a screw having a hollow shaft and means for passing steam through the shaft, to heat the material and facilitate the removal of moisture therefrom.

5. A machine for mixing road materials comprising a tubular casing, a screw for passing solid material through said casing, said screw having a hollow shaft open at the discharge end of the casing, means for passing steam through said shaft to heat said material, means for maintaining a full supply of material at the admission end so as to practically or nearly cut off the admission of air, and a fan at the discharge end for sucking air out of said casing, so as to heat the material and extract moisture therefrom and to discharge the same at a high temperature.

[Claims 6 to 21 not printed in the Gazette.]

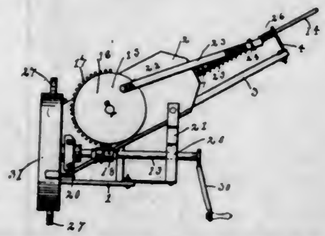
1,189,701. METHOD OF MAKING HANDLED IMPLEMENTS. NELSON B. KEYES, Unionville, Conn., assignor to The H. C. Hart Manufacturing Company, Unionville, Conn., a Corporation of Connecticut. Filed Nov. 24, 1915. Serial No. 63,345. (Cl. 76—104.)



1. A method comprising notching the ends of a length of wire, then doubling the wire on itself to bring the notches opposite with their open sides facing each other, then introducing the tang of an implement into the notches, and then compressing the ends of the length of the wire onto the tang.

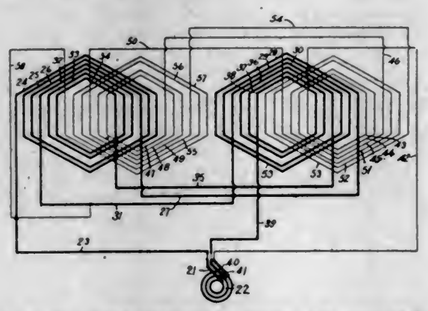
2. A method comprising the formation of notches of V-shape in the ends of a blank, then doubling the blank on itself to bring the notches opposite with their open sides facing each other, then introducing the tang of an implement into the notches and then compressing the notched portion of the blank onto the tang.

1,189,702. KRAUT-CUTTER. LOUIS KIRSCH, Nicktown, Pa. Filed July 23, 1915. Serial No. 41,556. (Cl. 146—11.)



A machine of the class described comprising a hopper, a cutter head traversing the discharge end of the hopper, a shaft for supporting the cutter head, a gear fixed to the shaft, a disk rotatably supported by the hopper, and having half of its periphery provided with teeth and the other half plain, a rod slidably supported by the hopper, a follower yieldably connected to the rod, a shaft fixed to the rod, a pitman pivotally connecting the shaft and disk, a cross bar mounted in the hopper, a coil spring encircling the rod and located between the cross bar and last named shaft, means for rotating the first named shaft to cause gradual rotation of the disk when the teeth thereof are in mesh with the worm gear, whereby the rod and follower are moved forwardly in the hopper and the spring is compressed, continued rotation of the last named shaft causing disengagement of the teeth and worm gear to permit the disk to rotate rapidly during the expansion of said spring and movement of the plain half of the disk over the worm gear, thereby permitting the follower to return to the rear end of the hopper.

1,189,703. ALTERNATING-CURRENT MOTOR. BENJAMIN G. LAMME, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 26, 1910. Serial No. 540,189. (Cl. 172—277.)



1. In an alternating-current motor, the combination with an armature and a commutator having short-circuited brushes, of a field or magnetizing winding, a primary or energy winding the axis of which coincides with the axis of commutation of said brushes, one terminal of the field or magnetizing winding being connected to an intermediate point in the primary or energy winding, in order to produce a two-phase excitation in said winding when connected to a three-phase source of energy and a variable reactance in circuit with said field or magnetizing winding.

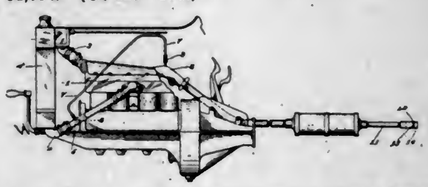
2. In an alternating-current motor, the combination with an armature and a commutator having short-circuited brushes, of a field or magnetizing winding, a primary or energy winding, the axis of which coincides with the axis of commutation of said brushes, one terminal of the field or magnetizing winding being connected to an intermediate point in the primary or energy winding, in order to produce a two-phase excitation in said windings when connected to a three-phase source of energy, and means for adjusting the excitation of said field winding without altering the phase relation between the currents in the said windings.

3. In an alternating-current motor the combination with an armature having short-circuited brushes, of a primary or energy winding and a field or magnetizing winding, one terminal of the field or magnetizing winding being connected to an intermediate point in the primary or energy winding in order to produce a two-phase excitation in said windings when connected to a three-phase source of energy, and each of the parts of the said primary or energy winding being so distributed as to be within the influence of each of the magnetic poles produced by the said field or magnetizing winding.

4. In an alternating-current motor, the combination with an armature having short-circuited brushes, of a primary or energy winding and a field or magnetizing winding, one terminal of the field or magnetizing winding being connected to an intermediate point on the primary or energy winding in order to produce a two-phase excitation in said windings when connected to a three-phase source of energy, and each of the parts of the primary or energy winding being so distributed that the magnetizing component of the current shall flow in opposite directions in adjacent parts of said winding.

5. In an alternating-current motor, the combination with an armature having short-circuited brushes, of a primary or energy winding and a field or magnetizing winding, one terminal of the field or magnetizing winding being connected to an intermediate point on the primary or energy winding in order to produce a two-phase excitation in said windings when connected to a three-phase source of energy and each of the parts of the primary or energy winding being so distributed as to produce a neutral magnetizing effect.

1,189,704. EXHAUST-REGULATOR. NORBERT M. LA PORTE, Baltimore, Md. Filed Oct. 4, 1915. Serial No. 54,034. (Cl. 123—194.)



1. In an internal combustion engine, a cooling system including a radiator, a water jacket and suitable connections, a circulating device operated by the exhaust having a tube leading a portion of the exhaust gases from the exhaust pipe or manifold to supply the circulator, and means for regulating the exhaust pressure consisting of a valve in the exhaust pipe beyond the tube, the valve being mounted to open freely in response to exhaust pressure.

2. In an internal combustion engine, a cooling system including a water jacket, a radiator and a circulating device operated by the exhaust, means for regulating the exhaust pressure at low throttle positions in the form of a valve in the exhaust pipe opening in the direction of and in response to the exhaust pressure, and means tending to close the valve against slight pressures.

3. In a cooling system for internal combustion engines consisting of a water jacket, a radiator and a circulating device operated by the exhaust, means for regulating the exhaust at low throttle positions in the form of a valve in the exhaust pipe, and an eccentrically placed pivot on which the valve is mounted to swing open in the direction of the exhaust current, the valve having a slight tendency to rotate about its pivot to closed position.

4. An internal combustion engine having a cooling system consisting of a water jacket, a radiator, a circulating device in the form of a nozzle in the circulating system, means connecting the nozzle to the exhaust pipe, means for regulating the exhaust pressure consisting of a valve in the exhaust pipe beyond the pipe leading to the nozzle, and means giving the said valve a slight tendency to close so that it resists and thus increases the slight exhaust pressures but opens freely in response to increased exhaust pressures.

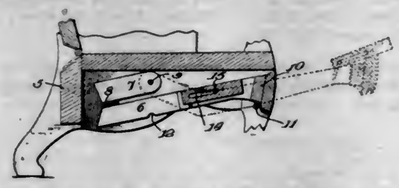
5. An internal combustion engine having a cooling system consisting of a water jacket, a radiator, a circulating device in the form of a nozzle in the circulating system, means connecting the nozzle to the exhaust pipe, means for regulating the exhaust pressure consisting of a valve in the exhaust pipe beyond the pipe leading to the nozzle, the valve being pivotally mounted so that in open position the passage is substantially unobstructed, and means giving the said valve a slight tendency to close so that it resists and thus increases slight exhaust pressures but opens freely in response to increased exhaust pressures.

[Claim 6 not printed in the Gazette.]

1,189,705. FOOT-REST FOR CHAIRS. FERDINAND LENARD, Chicago, Ill. Original application filed Mar. 13, 1915, Serial No. 14,167. Divided and this application filed Oct. 21, 1915. Serial No. 57,147. (Cl. 155—9.)

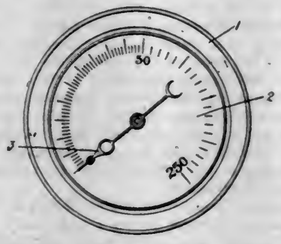
1. In a chair of the class described, a seat frame, and a foot rest including side members each comprising a sec-

tion pivotally mounted beneath the seat frame and a section hingedly connected at its rear end with the free end of the first mentioned section, and a foot supporting member extending between the forward ends of the last mentioned sections, the hingedly connected ends of the sections of each side member being arranged so as to abut against each other in the extended position of the rest.



2. In a chair of the class described, a seat frame, and a foot rest including side members each comprising a section pivotally mounted beneath the seat frame, and a section hingedly connected at its rear end with the free end of the respective one of the first-mentioned sections, a cross piece connecting the forward ends of the last-mentioned sections, the sections of the side members being extensible so as to position the said cross piece in advance of the seat frame, a supporting member including a connecting portion and crank ends pivotally mounted in the second-mentioned sections of the side members of the foot rest, a transverse supporting member extending between the said second-mentioned sections rearwardly of the cross piece, and a foot rest member comprising a plate provided with a slot pivotally and slidably receiving the connecting portion of the said supporting member, the plate being movable to position resting upon the said cross piece in the extended position of the foot rest as a whole and being adapted to be moved pivotally and slidably in a rearward direction upon the said supporting member and to rest at its rear portion upon the said transverse supporting member when the foot rest as a whole is retracted.

1,189,706. PRESSURE-GAGE. ALBERT J. LOEPSINGER, Providence, R. I., assignor to General Fire Extinguisher Company, New York, N. Y., a Corporation of New York. Filed May 21, 1910. Serial No. 562,746. (Cl. 73—109.)



1. In a pressure gage, the combination, with the pointer and a Bourdon tube for actuating the same, of a spring arranged substantially concentric with said tube and adapted to come into action after the pressure has reached a predetermined point and to thereafter act to retard the movement of the pointer under the operation of said tube.

2. In a pressure gage, the combination, with the pointer and a Bourdon tube for actuating the same, of a spring held fast at one end and with its other end free, said spring being arranged substantially concentric with said tube and adapted to come into action after the pressure has reached a predetermined point and to thereafter act to retard the movement of the pointer under the operation of said tube.

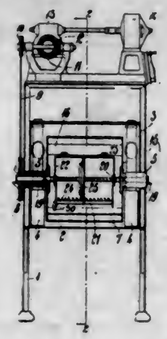
3. In a pressure gage, the combination, with the pointer and a Bourdon tube for actuating the same, of a spring held fast at one end and with its other end free, said spring being arranged substantially parallel with said tube and adapted to come into action after the pressure has reached a predetermined point and to thereafter act to retard the movement of the pointer under the operation of the pointer.

4. In a pressure gage, the combination, with the pointer and a Bourdon tube for actuating the same, of a spring held fast at one end and with its other end free, the free end of said spring being arranged in proximity to the free end of said tube and so as to be engaged thereby when the pressure reaches a predetermined point.

5. In a pressure gage, the combination, with the pointer and a Bourdon tube for actuating the same, said tube being provided with a projection near its free end, of a spring held fast at one end and with its other end free, the free end of said spring being provided with a projection adapted to be engaged by the projection on said tube after the pressure has reached a predetermined point.

[Claim 6 not printed in the Gazette.]

1,189,707. MACHINE FOR WASHING PLATES, KNIVES, FORKS, AND THE LIKE. HJALMAR LOFQUIST, Stockholm, Sweden. Filed July 28, 1914. Serial No. 853,733. (Cl. 141—9.)



1. In a washing machine, a drum having in the interior a series of flat surfaces so arranged as to provide projecting angles and also recesses, said recesses being bounded by the wall of the drum and by a side which is substantially radial to the center of the drum, means for supporting plates, knives, forks and the like within said drum, said means being adapted to be rotated with the drum, and means for rotating said drum.

2. In a washing machine, a frame, a receptacle supported thereby, a semi-cylindrical cover for said receptacle and having a hinged portion adapted to be opened for obtaining access to the receptacle, said receptacles being adapted to contain washing water, heating means mounted in the receptacle, bearings at opposite sides of the receptacle, a drum positioned in the receptacle and having rigid hollow journals projecting through said bearings, a motor having operative connections with one of said journals for rotating said drum, means for obtaining access to the interior of the drum, deflectors on the inner surface of the drum, said drum having openings therethrough to permit the free circulation of the washing water therethrough, stationary bearings mounted in said hollow journals, a basket contained within the drum and supported at opposite sides in said stationary bearings, said basket being adapted to be opened and closed, and for supporting articles to be cleansed therein, and means between the drum and basket for causing the latter to be rotated therewith.

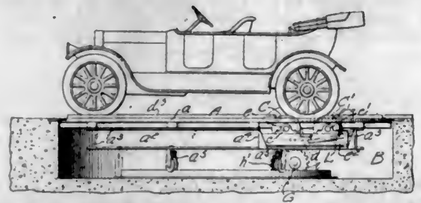
3. In a washing machine, a drum having in the interior a series of flat surfaces, hollow journals for said drum, stationary bearings projecting inward through said journals, a basket for supporting plates, knives, forks and the like resting in said bearings, and means for rotating the drum.

4. In a washing machine, a drum having in the interior a series of flat surfaces, hollow journals for said drum, stationary open bearings projecting inward through said journals, a basket for supporting plates, knives, folks and the like adapted to be journaled in said open bearings, and means for rotating the drum.

5. In a washing machine, a drum having in the interior a series of flat surfaces, hollow journals for said drum, stationary bearings projecting inward through said journals, a basket for supporting plates, knives, forks and the like resting in said bearings and engaging said drum so as to be carried around thereby in rotating, and means for rotating said drum.

[Claim 6 not printed in the Gazette.]

1,189,708. TURN-TABLE AND POWER-TRANSMISSION MECHANISM FOR MOTOR-VEHICLES. EDWARD M. LOGAN and CLARENCE E. MCNAUGHTON, Sonyea, N. Y. Filed Sept. 23, 1913. Serial No. 791,271. (Cl. 104—212.)



1. A turntable for automobiles, means for rotatably supporting the same, pulleys mounted on said turntable and adapted to support the drive wheels of an automobile resting on the turntable, a shaft driven by said pulleys and provided with means for transmitting power therefrom to a device to be driven other than the turntable, drive means for rotating said turntable, comprising gearing interposed between said shaft and the turntable, and means for connecting said gearing to and disconnecting it from said shaft at will while the drive wheels of the automobile rest on said pulleys, substantially as set forth

2. A turntable for automobiles, means for rotatably supporting the same, pulleys mounted on said turntable and adapted to support the drive wheels of an automobile resting on the turntable, a power transmission means driven by said pulleys for transmitting power to a driven device other than the turntable, drive means for rotating said turntable comprising gearing interposed between said power transmission means and the turntable, and means for coupling and uncoupling said gears to and from said transmission means at will while the drive wheels of the automobile rest on said pulleys, substantially as set forth.

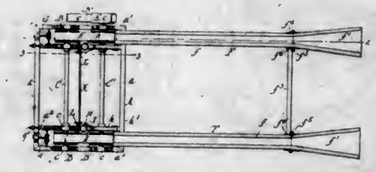
3. A turntable for automobiles, supporting wheels for said turntable arranged to travel on a circular track, a pulley mounted on said turntable and adapted to be driven by the drive wheel of an automobile resting on the turntable, drive means interposed between one of said supporting wheels and said pulley, and means for operatively connecting said drive means to said pulley and to said wheel for driving the latter to turn said turntable, substantially as set forth.

4. The combination of a horizontal platform supported substantially in the plane of a floor, pulleys mounted substantially below the surface of said platform and adapted to support the driving wheels of a motor vehicle resting on said platform, a shaft driven by said pulleys, a pulley on said shaft below said platform, and a power transmitting belt extending from said pulley through an opening in said platform, substantially as set forth.

5. The combination of a horizontal platform supported substantially in the plane of a floor, pulleys mounted substantially below the surface of said platform and adapted to support the driving wheels of a motor vehicle resting on said platform, a shaft driven by said pulleys, a pulley on said shaft below said platform, a power transmitting belt extending from said pulley through an opening in said platform, and a brake arranged below said platform and adapted to engage one of said pulleys and having an operating part accessible from above said platform, substantially as set forth.

[Claims 6 not printed in the Gazette.]

1,189,709. POWER-TRANSMISSION MECHANISM FOR MOTOR-VEHICLES. EDWARD M. LOGAN and CLARENCE E. MCNAUGHTON, Sonyea, N. Y. Filed Mar. 7, 1914. Serial No. 823,061. (Cl. 21—90.)



1. In a power transmitting mechanism, the combination of a stationary supporting frame, pulleys mounted thereon and adapted to support and to be driven by the driving wheels of a motor vehicle, a track for guiding the vehicle onto said pulleys comprising horizontal guide rails which rest at their rear ends on and are detachably secured to said frame, a connecting bar which supports the main ends of the said rails, and inclines running from the front ends of said rails to the floor, and means for transmitting power from one of said pulleys.

2. The combination of a supporting frame, pulleys mounted thereon and adapted to support and to be driven by the driving wheels of a motor vehicle, and a track for guiding the vehicle onto said pulleys comprising separate horizontal guide rails detachably secured at their rear ends on said frame, a connecting bar on which said rails are detachably secured, and removable inclines at the front ends of said rails, substantially as set forth.

3. The combination of a supporting frame, pulleys mounted thereon and adapted to support and to be driven by the driving wheels of a motor vehicle, bumpers hinged to said frame in rear of said pulleys and in alinement therewith, and means for releasably securing said bumpers in inoperative position, substantially as set forth.

4. The combination of a supporting frame, pulleys mounted thereon and adapted to support and to be driven by the driving wheels of a motor vehicle, bumpers hinged to said frame in rear of said pulleys and in alinement therewith, braces pivoted to said frame and adapted to engage said bumpers for releasably holding the same upright, and means for transmitting power from one of said pulleys, substantially as set forth.

5. The combination of a supporting frame, pulleys mounted thereon and adapted to support and to be driven by the driving wheels of a motor vehicle, jacks movably connected to said frame to move from inoperative positions to upright operative positions, said jacks having vertically adjustable lifting members adapted to engage and lift a part of the vehicle and hold it in place so that the driving wheels of the vehicle are in position on the pulleys, and means for operating said lifting members.

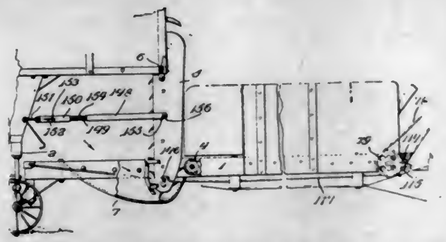
[Claims 6 to 10 not printed in the Gazette.]

1,189,710. FEEDING MECHANISM FOR THRESHING-MACHINES. GUY C. LONG, Timber Lake, S. D. Original application filed July 25, 1913, Serial No. 781,285. Divided and this application filed Feb. 25, 1915. Serial No. 10,593. (Cl. 193—2.)

1. In an apparatus for the purpose set forth, the combination of a conveyer, an elevator having a frame pivotally mounted above the delivery end of the conveyer, an arm engaging the elevator frame, a support for the said arm, means acting on the arm to yieldingly hold the elevator toward the conveyer, and means for preventing rotary movement between the arm and the support therefor.

2. In an apparatus for the purpose set forth, the combination of a conveyer, an elevator pivotally hung at a

point above the discharge end of the conveyer, an arm attached to the elevator, a support for the said fork in which the arm is slidably mounted, a spring arranged between the said arm and said support, and a pin carried by the arm and engaging the support to prevent rotation of the arm.



3. In an apparatus for the purpose set forth, the combination of a conveyer, an elevator moving upwardly in proximity to the delivery end of the conveyer, a shaft operatively connected with the conveyer to actuate the same, a pinion arranged to drive said shaft, means for rotating said pinion, means connected with the elevator for moving said pinion into and out of operative relation to said shaft, and yieldable means for holding said elevator to the conveyer.

4. In an apparatus for the purpose set forth, the combination of a conveyer, an elevator moving upwardly in proximity to the delivery end of the conveyer, a shaft operatively connected with the conveyer to actuate the same, a clutch member fixed on said shaft, a pinion slidably mounted on said shaft and adapted to engage said clutch member, means for rotating said pinion, means connected with the elevator for moving the pinion into and out of engagement with the clutch member, and a spring mounted member normally holding the elevator to the conveyer.

5. The combination of a conveyer, an elevator pivotally hung from its upper end and moving upwardly in proximity to the delivery end of the conveyer, a shaft operatively connected with the conveyer to actuate the same, a clutch member fixed on said shaft, a pinion slidably mounted on said shaft, yieldable means for normally holding said pinion in engagement with the clutch member, means for rotating the pinion, a rock shaft, a shipper arm extending from said rock shaft and engaging the pinion, a second shipper arm extending from the rock shaft at an angle to the first-mentioned shipper arm, and a connection between said second arm and the elevator.

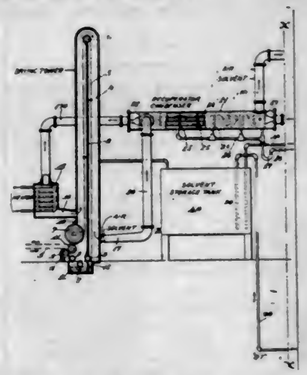
1,189,711. APPARATUS FOR SEPARATING VAPORIZED VOLATILE LIQUIDS FROM GASEOUS MIXTURES. WALTER E. LUMMUS, Lynn, Mass. Filed Mar. 18, 1912. Serial No. 684,507. (Cl. 62—122.)

1. An apparatus for separating vaporized volatile liquids from gaseous mixtures having, in combination, means for compressing the gas-vapor mixture, means for cooling the compressed gas-vapor mixture to condense the vapors, and means for washing the cooled compressed gas-vapor mixture, substantially as described.

2. An apparatus for separating vaporized volatile liquids from gaseous mixtures having, in combination, means for compressing the gas-vapor mixture, means for cooling the gas-vapor mixture to a low temperature to condense the vapors, and means for washing the cooled compressed gas-vapor mixture, substantially as described.

3. An apparatus for separating vaporized volatile liquids from gaseous mixtures having, in combination, means for compressing the gas-vapor mixture, means for cooling the compressed gas-vapor mixture, means for washing the cooled compressed gas-vapor mixture, and means for expanding the washed and purified gas, the expanded gas being utilized to absorb the heat taken from the compressed gas-vapor mixture by the said cooling means, substantially as described.

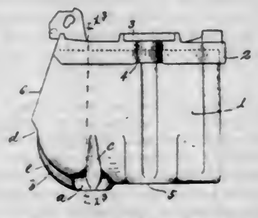
4. An apparatus for separating vaporized volatile liquids from gaseous mixtures having, in combination, means for compressing the gas vapor mixture, means for cooling the gas-vapor mixture to a low temperature to condense the vapors, and means for adiabatically expanding the purified gas against a piston in a plurality of stages, the expanded purified gas being utilized to absorb the heat taken from the gas-vapor mixture by the said cooling means, substantially as described.



5. An apparatus for separating vaporized volatile liquids from gaseous mixtures having, in combination, means for compressing the gas-vapor mixture, means for cooling the gas-vapor mixture, means for supercooling the cooled gas-vapor mixture to a low temperature to condense the vapors, and means for expanding the purified gas in a plurality of stages, the expanded purified gas being utilized to absorb the heat taken from the gas-vapor mixture by the said supercooling means, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,189,712. JOURNAL-BOX CELLAR. ALVIN C. MCCORD and IVAR A. RANDEL, Chicago, Ill., assignors to McCord and Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 14, 1916. Serial No. 91,285. (Cl 64—10.)



1. A journal box cellar having a lower mouth-lip, adapted to serve as a lifting beam, a jacking boss on its bottom, and strengthening means extending from said boss forward and upward to a point directly under said beam, substantially as described.

2. A journal box cellar having a lower mouth-lip, adapted to serve as a lifting beam, a jacking boss on its bottom, a strengthening rib extending from said boss forward and upward to a point directly under said beam, and additional strengthening means, in the bottom, coöperating with said boss and rib, substantially as described.

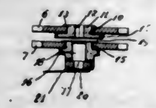
3. A journal box cellar having a lower mouth-lip, adapted to serve as a lifting beam, a jacking boss on its bottom, outward of its longitudinal center, a strengthening rib extending from said boss forward and upward to a point directly under said beam, and additional strengthening ribs extending radially from said boss in the bottom of the box, substantially as described.

4. A journal box cellar having a lower mouth-lip, adapted to serve as a lifting beam, a jacking boss on its bottom, outward of its longitudinal center, a strengthening rib extending from said boss forward and upward to a point directly under said beam, and two opposite radial strengthening ribs extending from said boss laterally outward across the bottom of the box, substantially as described.

5. A journal box cellar of arch-shape in cross section and also at its forward end below the lid opening, and having a mouth-lip, adapted to serve as a lifting beam, a jacking boss at the crown of the bottom and three radial ribs extending therefrom, one forward and upward to a point under said beam and the other two laterally outward in the bottom of the box, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,189,713. STEM WINDING AND SETTING DEVICE FOR WATCHES. SOLOMON MALLIN, Pittsburgh, Pa. Filed Mar. 8, 1916. Serial No. 82,801. (Cl. 58—68.)



1. A stem winding and setting device comprising a pair of spaced members adapted to be arranged between the pillar plates of a watch mechanism, a setting gear rotatably supported by one of said members and adapted to be permanently in engagement with the chain of gears for setting the hands, a normally stationary winding pinion rotatably suspended from the other of said members and engaging with the winding elements of a watch mechanism, and a shiftable stem having means normally engaging with said winding pinion for rotating the latter when the stem is rotated, said means when said stem is shifted outward capable of engaging with said setting pinion for actuating it to operate the setting mechanism for the hands.

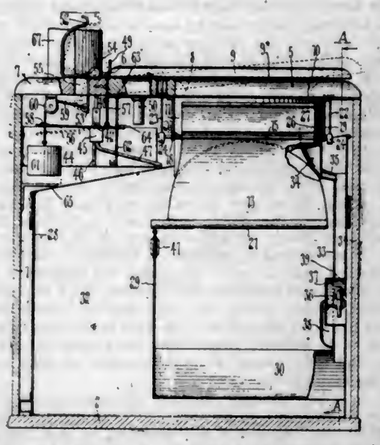
2. A stem winding and setting device comprising a pair of spaced members adapted to be positioned between a pair of pillar plates of a watch mechanism, a barrel rotatably supported by one of said members, having a squared bore and further having a setting pinion at its inner end engaging with the hand setting device of a watch mechanism, a barrel carried by the other of said members and provided with a winding pinion and further provided with a square pocket, and a shiftable stem capable of engaging in said pocket for actuating said winding pinion to operate the watch winding device and further capable of engaging in said squared bore to actuate the hand setting means of a watch mechanism.

3. In a stem winding and setting device for watches the combination with a pair of pillar plates having the marginal portions cut away to provide a pair of opposed openings, a member secured between said plates and extending across said openings, a rotatable barrel supported by said member and having a squared bore and further having its inner end provided with a setting gear, said openings providing clearance for said setting gear, a member secured between said plates inward with respect to said gear, a barrel supported by said second member and carrying a winding pinion and further having a square pocket and a shiftable stem having a reduced inner end terminating in a square head capable when the stem is shifted inwardly to engage in said pocket to rotate said pinion and when shifted outward to engage in said bore to rotate said setting gear.

4. A stem winding and setting device comprising a barrel adapted to be rotatably supported between the pillar plates of a watch mechanism and provided with a squared bore and further having a setting gear, a barrel adapted to be rotatably supported between said plates inwardly with respect to said gear and provided with a winding pinion and further provided with a square pocket, and a shiftable stem having its inner end provided with a head capable when the stem is shifted inwardly to engage in said pocket and rotate said pinion and when shifted outwardly to engage in said square bore to rotate said gear.

5. A stem winding and setting device comprising a barrel adapted to be rotatably supported between the pillar plates of a watch mechanism and provided with a squared bore and further having a setting gear, a barrel adapted to be rotatably supported between said plates inwardly with respect to said gear and provided with a winding pinion and further provided with a square pocket, and a shiftable stem having its inner end provided with a head capable when the stem is shifted inwardly to engage in said pocket and rotate said pinion and when shifted outwardly to engage in said square bore to rotate said gear, said stem having a reduced portion to prevent engagement with the inner faces of said barrels.

1,189,714. COMMODE. MOSES M. MARCUSE, New York, N. Y., assignor to West Disinfecting Company, New York, N. Y., a Corporation of New York. Filed Dec. 30, 1913. Serial No. 809,551. (Cl. 4—32.)



1. A commode comprising a casing, a removable receptacle therein, said receptacle having a dividing wall forming separate feces and urine chambers therein, the said feces chamber being formed with a hipped bottom.

2. A commode comprising a casing, a receptacle therein divided into separate feces and urine chambers, a tubular body, a seat, a cover therefor, a pair of normally closing flaps for closing said tubular body, means carried by the flaps having communication with the urine chamber, and means for opening said flaps.

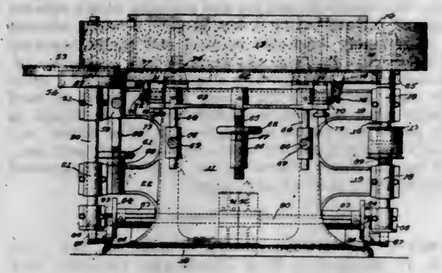
3. A commode comprising a casing, a receptacle divided into separate feces and urine chambers, a tubular body, a seat, a cover therefor, a pair of normally closing flaps for closing said tubular body, means carried by the flaps adapted to coact when closed to form a communication with the urine chamber, and means for opening said flaps.

4. A commode comprising a casing, a receptacle therein divided into separate feces and urine chambers, a tubular body, a seat, a cover therefor, a pair of normally closing flaps for closing said tubular body, inclined coacting means carried by the flaps in communication with the urine chamber when closed, and means for opening said flaps.

5. A commode comprising a casing, a receptacle therein divided into separate feces and urine chambers, a tubular body, a seat, a cover, a pair of normally closing convergent flaps for closing said tubular body, the convergent ends of said flaps being formed with a gutter and an eaves arranged to coact when closed, and means for opening said flaps.

[Claims 6 to 17 not printed in the Gazette.]

1,189,715. BELT SANDING-MACHINE. CARL LAWRENCE MATTISON, Beloit, Wis., assignor to C. Mattison Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed July 18, 1913. Serial No. 779,666. (Cl. 51—5.)



1. In a belt sanding machine, a framework, a driven shaft vertically and slidably mounted in said framework, a belt-driving pulley fixed to one end of said shaft, an idle shaft vertically and slidably mounted in said framework, an idle pulley fixed to said idle shaft, an abrasive belt supported by said pulleys and operated by said belt-driving pulley, a power-receiving pulley fixed to said driven shaft, yielding means tending to elevate said driven shaft, and means for oscillating vertically both of said shafts.

2. In a belt sanding machine, an abrasive belt, a belt-driving pulley and an idle pulley supporting and operating said belt, a work-holding table partly surrounding said idle pulley, means for adjusting said table horizontally, means for rotating horizontally said table to a limited extent, and means for adjusting said table vertically.

3. In a belt-sanding machine, a sand-belt, a support for the belt, a table support near said belt support, a work-table having an open-end slot through which the belt and the belt-support extend, and an adjustable connection between the table support and the work table, permitting the latter to be adjusted toward and away from the belt support, and to be swung so as to position one edge of said slot adjacent to the belt.

4. In a belt sanding machine, a framework, a driving pulley and an idle pulley mounted in said framework, an abrasive belt supported and operated by said pulleys, a belt-tightening pulley coacting with said belt, and means for adjusting the longitudinal form of the surface of said abrasive belt, said means comprising a second idle pulley, arms extending from the ends of the axis of said pulley and pivoted to said framework, and means for locking said arms in adjusted position.

1,189,716. STEAM WALL-PAPER REMOVER. JULIUS MATZKE, Indianapolis, Ind. Filed Mar. 8, 1916. Serial No. 82,818. (Cl. 126—271.1.)

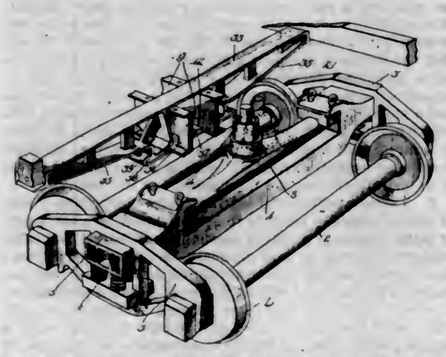
1. A means for applying steam to papered walls to loosen the paper therefrom for removal comprising a hood-shaped head of greater length than width having a longitudinal opening, a steam distributing means extending longitudinally of the head the walls of the head converging from its longitudinal edges toward said distributing means, means for supplying steam to said distributing means, comprising a pipe parallel with the longitudinal opening in the head, a valve in the pipe for regulating the steam flow through it and a handle attached to the pipe between the valve and said steam distributing means.

2. A means for applying steam to papered walls to loosen the paper therefrom for removal comprising a hood-shaped head of greater length than width having a longitudinal opening which is closed by the wall while the head is in use, outside flanges on the longitudinal edges of said opening, means for varying the size of said opening comprising a nozzle having edges bent to form hooks which receive said flanges by an end-wise sliding movement, a steam distributing means extending longitudinally of the head, the walls of the head converging from the longitudinal edges of said opening toward said distributing means,



means for supplying steam to said distributing means, and means for regulating the steam supply.

1,189,717. CAR CONSTRUCTION. EMIL J. P. MEYER, Chicago, Ill. Filed Dec. 24, 1914. Serial No. 878,916. (Cl. 105—243.)



1. In a device of the kind described and in combination, a truck bolster comprising two parts, one part provided with a post projecting from one side and arranged to be seated on the other part, and means for detachably securing said parts together.

2. In a device of the kind described and in combination, a truck bolster comprising two parts, one part provided with a post projecting from one side and arranged to be seated on the other part, said post part partially rotatable about its longitudinal axis, and means for securing said parts together.

3. In a device of the kind described and in combination, a truck bolster comprising two parts, one part provided with a post projecting from one side and arranged to be seated on the other part, said post part longitudinally slidable on its center axis, and means for securing said parts together.

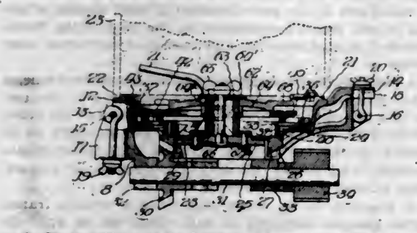
4. In a device of the kind described and in combination, a truck bolster comprising two parts, one part provided with a post projecting from one side and arranged to be seated on the other part, said post part slidable lengthwise and partially rotatable about its center axis, and means for securing said parts together.

5. In a device of the kind described and in combination, a truck bolster comprising a plurality of parts, one part extending across the truck and suitably supported thereby, said part having a groove extending lengthwise across the top side of the same, the other part arranged to seat

in said groove, and provided with a suitably formed post arranged intermediate the ends thereof, and projecting therefrom, and means for securing said parts together.

[Claims 6 to 17 not printed in the Gazette.]

1,189,718. COTTON-SEED PLANTER. CLEMENT W. MICHAEL and CHARLES E. MOHR, Racine, Wis., assignors to J. I. Case Plow Works, Racine, Wis., a Corporation of Wisconsin. Filed Oct. 28, 1913. Serial No. 796,928. (Cl. 111—6.)



1. In a cotton seed planter, a hopper having an outlet in the bottom thereof, a feed plate pivoted in the bottom of the hopper having seed openings therein adapted to be brought into register with the outlet, and a distributer plate having undercut projections extending upwardly and outwardly partially over but out of contact with the feed plate and adapted to distribute cotton seeds thereto.

2. In a cotton seed planter, a hopper having an outlet in the bottom thereof, a feed plate pivoted in the bottom of the hopper having seed openings therein adapted to be brought into registry with the outlet, and a distributer plate having undercut projections thereon spaced from and above the feed plate adapted to feed the cotton seed outward and downward to the openings in the feed plate and to separate a layer of seed from the mass above it.

3. In a cotton seed planter, a hopper having an outlet in the bottom thereof, a feed plate pivoted in the bottom of the hopper having seed openings therein adapted to be brought into registry with the outlet, and a distributer plate having projections extending outwardly above but spaced from the feed plate and whose forward edges are inclined to the direction of movement of the feed plate and adapted to feed cotton seed outward to the openings therein.

4. In a cotton planter, a hopper having an outlet in the bottom thereof, a circular feed plate mounted for rotation in the bottom of said hopper comprising an inner annular portion having a relatively low surface and an outer annular portion having a relatively raised surface, there being seed receiving apertures entirely within the outer periphery of the feed plate and extending through the outer portion thereof from top to bottom.

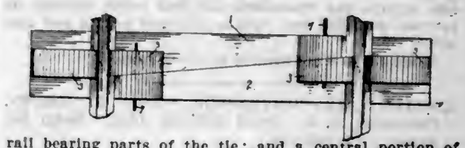
5. In a cotton planter, a hopper having an outlet in the bottom thereof, a circular feed plate mounted for rotation in the bottom of said hopper and formed with an inner annular thinner portion having a relatively lower surface and an outer annular thicker portion having a relatively raised surface, seed receiving apertures extending through the outer raised portion from top to bottom thereof, a distributer plate having outwardly extending projections extending above the feed plate and spaced therefrom a sufficient distance to permit the passage of a single layer of cotton seed thereunder.

[Claims 6 to 24 not printed in the Gazette.]

1,189,719. RAILWAY-TIE. FRANK L. MORRIS, Salt Lake City, Utah, assignor of one-half to Wilford D. Peterson, Salt Lake City, Utah. Filed Apr. 26, 1916. Serial No. 93,806. (Cl. 238—5.)

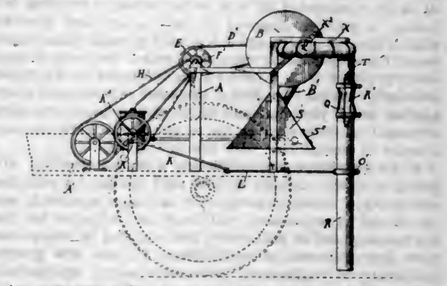
1. A railway tie consisting of two interlocking metal plates; upstanding integral flange engaging lugs on the upper face of each; a key guiding integral lug on the same face; and a key to be driven through said guiding lug and one of said flange engaging lugs contiguous.

2. A railway tie consisting of two duplicate interlocking metal plates each having a vertical edge or face which coincides with a similar face when the two metal plates are contiguous a portion of said face being parallel with the other edge and two other portions parallel with each other and at an angle of 60 degrees from the first described parallel portions and positioned across the



rail bearing parts of the tie; and a central portion of said face cut at an angle extending from the inner edge of one rail tread to the inner edge of the other rail tread and crossing the central line of the assembled tie at its medial point; upstanding integral flange engaging lugs on each plate coacting with the same lugs on the interlocking plate; and a key holding lug on each plate.

1,189,720. APPARATUS FOR DESTROYING INSECTS. JAMES MORTON MORROW, Stephenville, Tex., assignor of one-half to J. J. Bennett, Stephenville, Tex. Filed May 12, 1916. Serial No. 97,115. (Cl. 43—23.)



An apparatus for destroying insects consisting of a frame for attachment to a wagon, suction fans and drums with pipes leading therefrom, flexible pipes communicating with the pipes which lead from said drums, a driving shaft upon the frame, connections between the same and the fan, a pitman connected to said driving shaft, straps fastened to the flexible pipes, and connections between the straps and pitman for causing the flexible pipes to oscillate.

1,189,721. RECLAIMING RUBBER-WASTE. HAROLD R. MURDOCK, Naugatuck, Conn., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Apr. 6, 1916. Serial No. 89,329. (Cl. 106—23.)

1. The process of reclaiming rubber waste containing lead and sulfur, which comprises adding to the waste material a reactive material adapted to produce a light-colored water-insoluble compound with lead and converting the lead into said compound through the action of said reactive material.

2. The process of reclaiming rubber waste containing lead and sulfur, which comprises adding a reactive substance to the waste adapted to produce light-colored water-insoluble compounds with the lead and sulfur and converting the lead and sulfur into said compounds through the action of said reactive substance.

3. The process of reclaiming rubber waste containing lead and sulfur, which comprises adding to the waste material a substance having an acid radical adapted to form a light-colored water-insoluble salt with lead and converting the lead into said salt through the action of said acid radical.

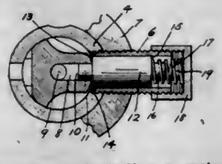
4. The process of reclaiming rubber waste containing lead and sulfur, which comprises adding to the waste

material a reactive substance comprising a metal and an acid radical adapted to form with the sulfur and lead respectively a light-colored water-insoluble sulfid and a light-colored water-insoluble lead salt, and converting the lead sulfid into said light-colored sulfid and lead salt through the action of said reactive substance.

5. The process of reclaiming rubber waste containing lead sulfid, which comprises adding to the waste material zinc sulfate and converting the lead sulfid through its reaction with the zinc sulfate into lead sulfate and zinc sulfid.

[Claims 6 to 8 not printed in the Gazette.]

1,189,722. AIR-COMPRESSOR. JOHN P. MURPHY, Charleston, S. C. Filed July 13, 1915. Serial No. 39,546. (Cl. 136—10.)

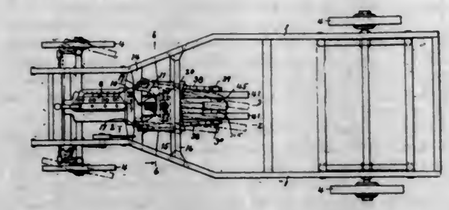


1. An air compressor, including a casing, a valve slidable therein, said casing being provided with ports adapted to be commanded by said valve, a sleeve entering said casing, a plunger disposed in said sleeve and provided with a boss to enter said valve, said plunger being shouldered for engagement with said valve, the said plunger being provided with a boss on its outer end, a coil spring arranged on said boss and a threaded cap for said sleeve against which the outer end of the spring bears, the whole arranged in such manner as to resiliently hold the said plunger in engagement with the said valve.

2. An air compressor, including a casing provided with ports, a valve slidable within said casing to command said ports, a sleeve entering said casing, a plunger in said sleeve and in engagement with said valve, means for closing the outer end of said sleeve and a spring in engagement with the outer end of said plunger to hold said plunger resiliently in engagement with said valve, substantially as described.

3. An air compressor including a casing provided with ports, a valve slidable within said casing to command said ports, a plunger entering said casing and in engagement with said valve, means inclosing the outer end of said plunger, and a spring interposed between said plunger and the outer end of said inclosing means to hold said plunger resiliently in engagement with said valve.

1,189,723. TRACTION DEVICE FOR MOTOR-VEHICLES. HARRY C. NAIL and HARRY T. BARWELL, Brooklyn, N. Y. Filed Apr. 30, 1915. Serial No. 25,048. (Cl. 21—90.)



1. A traction device comprising, with a vehicle frame, a member carried by said frame and arranged to operate on an approximately horizontal plane, a traction member, and longitudinally-extending yielding means interposed between said first-mentioned member and said traction member, with the latter at the rear terminal of said means, which means is held under compression by the load acting thereon forward of said traction member.

2. A traction device comprising, with a vehicle frame, a member carried by said frame and arranged to operate on an approximately horizontal plane, a traction member having an axle, and a yielding member connected at one terminal and intermediately with said first-mentioned member and mounted at the other terminal directly on said axle, and adapted to be expanded by the load acting through such intermediate connection.

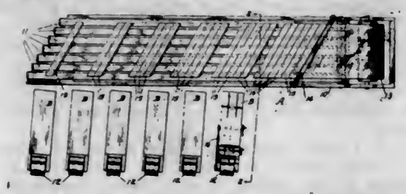
3. A traction device comprising, with a vehicle frame, a traction member, longitudinally-extending yielding means interposed between said frame and said member, with the latter at the rear terminal of said means, which means is held under compression by the load acting thereon forward of said member, and means to vary such compression.

4. A traction device comprising, with a vehicle frame, a traction member, a yielding member connected at one terminal and intermediately with said frame and at the other terminal with said traction member, and adapted to be expanded by the load acting through such intermediate connection, and means to vary the amount of the expansion of said yielding member.

5. A traction device comprising, with a vehicle frame, a swivel member mounted on said frame on an approximately vertical axis, a traction member, and a yielding member connected at one terminal and intermediately with said swivel member and at the other terminal with said traction member, the arrangement being such that said yielding member is expanded by the load acting through such intermediate connection, and said traction member and yielding member move with said swivel member laterally upon said axis.

[Claims 6 to 23 not printed in the Gazette.]

1,189,724. APPARATUS FOR AND PROCESS OF CUTTING AND REELING TIRE FABRIC. DE COURCY NEAL, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed June 28, 1915. Serial No. 36,778. (Cl. 154—2.)



1. The process of preparing rubber treated fabric, consisting of cutting a web of the fabric into bias strips, advancing said strips in a continuation of the path of said web, successively removing said strips from the advancing supply at successive stations, and splicing and reeling the strips at each of said stations.

2. The process of preparing rubber treated fabric consisting of cutting bias strips from a web of the fabric, continuously advancing said strips side by side, successively removing the strips endwise during the advance thereof at successive stations, splicing the freshly cut bias strips end to end and reeling the resultant continuous strips at each of said stations.

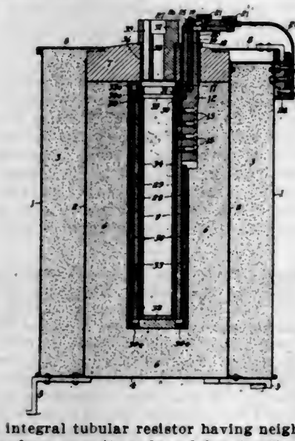
3. The process of preparing rubber treated fabric for use in building tires, consisting of cutting a traveling web of the fabric into bias strips, advancing said strips side by side in a continuation of the path of said web, removing certain of said strips from the advancing supply substantially simultaneously at predetermined stations, and at said stations splicing and reeling the corresponding strips.

4. Apparatus for preparing rubber treated fabric for use in building tires, comprising means for cutting a traveling web of the fabric into bias strips, means for advancing said strips side by side in a continuation of the path of said web, splicing tables disposed at intervals laterally of the path of said bias cut strips and adapted to permit

of certain of said strips being substantially simultaneously transferred from said supply to said tables, and means on said tables for reeling the transferred strips subsequent to their being spliced end to end upon said tables.

5. Apparatus for preparing rubber treated fabric for use in building tires, consisting of a shear for cutting a traveling web of fabric into bias strips, a conveyer for advancing said strips side by side away from said shear, a plurality of splicing tables disposed at intervals along the side of said conveyer, the supply of bias cut strips on the conveyer moving progressively past the inner ends of the said tables and permitting certain of the strips being transferred substantially simultaneously from the supply to said tables and there spliced end to end, and means on said tables for reeling the corresponding strips.

1,189,725. METHOD OF AND APPARATUS FOR PRODUCING HIGH TEMPERATURES. EDWIN F. NORTHRUP, Princeton borough, N. J. Filed Oct. 8, 1915. Serial No. 54,789. (Cl. 219—36.)



1. An integral tubular resistor having neighboring slots extending from opposite ends and forming the resistor material into a current path extending backwardly and forwardly longitudinally.

2. An integral tubular resistor having a slot extending throughout its length, a plurality of neighboring slots extending from opposite ends and forming the resistor material into a current path extending backwardly and forwardly longitudinally, and current connections on opposite sides of and adjacent said first named slot.

3. An integral tubular resistor having neighboring slots extending from opposite ends and forming the resistor material into a current path extending backwardly and forwardly longitudinally, and terminals disposed side by side and at the same end of the resistor.

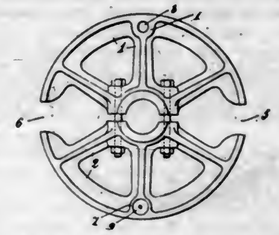
4. An integral tubular graphite resistor having neighboring slots extending from opposite ends and forming the resistor material into a current path extending backwardly and forwardly longitudinally.

5. An integral tubular graphite resistor having a slot extending throughout its length, a plurality of neighboring slots extending from opposite ends and forming the resistor material into a current path extending backwardly and forwardly longitudinally, and current connections on opposite sides of and adjacent said first named slots.

[Claims 6 to 47 not printed in the Gazette.]

1,189,726. BALANCED PULLEY. CARL SIGFRID NYBERG, Hasselbacken, Mellösa, Sweden. Filed Apr. 17, 1916. Serial No. 91,571. (Cl. 64—18.)

In a device of the character specified, the combination of a pulley comprising balanced pulley sections, there being peripheral spaces between the sections of said pulley, a band for said pulley sections, means projecting



into one of said spaces for securing said band about said sections, and means projecting into a diametrically opposite space for counter-balancing said band securing means.

1,189,727. DEEP-HOLE DRILL. JOHN OAKLEY, Springfield, Mass. Filed Nov. 27, 1915. Serial No. 63,875. (Cl. 77—68.)

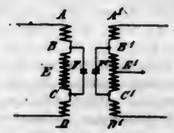


1. A deep-hole drill comprising an exterior longitudinally grooved tubular member having an interior oil passage, and an exterior longitudinally grooved tip secured to said member and supplied with an exterior open-sided oil-way to communicate with said passage, said oil-way being straight and approximately diametrically opposite to the groove in said tip.

2. A deep-hole drill comprising an exterior longitudinally grooved tubular member having an interior oil passage opening at one end through one side of said member, and an exterior longitudinally grooved cutting tip secured to said member and having an exterior open-sided oil-way with one end of which said passage communicates through the side opening thereto or therefrom, said oil-way being straight and approximately diametrically opposite to the groove in said tip.

3. The combination, in a deep-hole drill, with a tubular member having an exterior waste groove and an interior oil passage, of a tip comprising a member secured to said first-mentioned member and having an exterior waste groove and an interior oil passage which respectively communicate with said first-mentioned groove and passage, and a member secured to said first-mentioned tip member and having a waste groove in line with the other waste grooves and an exterior open-sided oil-way which opens at one end into the adjacent end of the oil passage in said first-mentioned tip member, said oil-way being straight and approximately diametrically opposite to said waste groove in the same member therewith.

1,189,728. TELEPHONE-REPEATER. AXEL HERMAN OLSSON and HENNING BERNHARD MATHIAS PLEIJEL, Stockholm, Sweden. Filed Nov. 28, 1914. Serial No. 874,533. (Cl. 179—170.)



1. A telephone repeater for speech- as well as for calling-currents, embracing two induction-coils whereof one is adapted for working with the speech-current and the other for working with calling-currents.

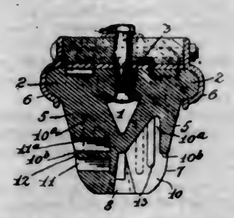
2. A telephone repeater comprising two induction-coils wherein the primary windings and the secondary windings are respectively connected up in series, and wherein the calling-current source is bridged by a capacity.

1,189,729. CRIB AND BIN STRUCTURE. JOHN D. OVERHOLT, Wooster, Ohio, assignor to Iron Crib and Bin Company, Wooster, Ohio, a Corporation. Filed Mar. 13, 1915. Serial No. 14,235. (Cl. 189—3.)



In a structure of the character described, the combination of a plurality of sheet metal sections, each section having a longitudinal ridge or corrugation, and a marginal extension between said ridge and the adjacent edge of the section, the ridge of one section fitted over the ridge of the next adjacent section, and a plurality of metal straps disposed laterally underneath and across the base of the two ridges combined, and bolts passed through said straps and marginal extensions, respectively, on both sides of said combined ridges, substantially as set forth, and for the purpose specified.

1,189,730. TIRE. MAX CYRUS OVERMAN, New York, N. Y. Filed June 21, 1913. Serial No. 774,955. (Cl. 152—1.)



1. A tire comprising a deep nose portion with a deep longitudinally extending central tread-weakening and deep transverse tread-weakenings leading from the sides of the nose to said central weakening, thereby forming the nose into deep laterally and longitudinally flexible load-supporting sections, said sections each having a substantially triangular cross-sectioned hole in its side.

2. A tire comprising a deep nose portion with a deep longitudinally extending central tread-weakening and deep transverse tread-weakenings leading from the sides of the nose to said central weakening, thereby forming the nose into deep laterally and longitudinally flexible load-supporting sections, said sections each having two substantially triangular cross-sectioned holes in its side, opposed base to base, where they are separated by a longitudinally extending web.

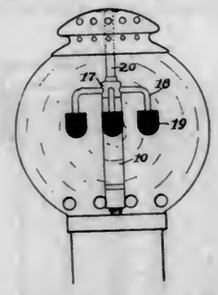
3. A tire comprising a deep nose portion with a deep longitudinally extending central tread-weakening and deep transverse tread-weakenings leading from the sides of the nose to said central weakening, thereby forming the nose into deep laterally and longitudinally flexible load-supporting sections, said sections each having two substantially triangular cross-sectioned holes in its side, opposed base to base, where they are separated by a longitudinally extending web, said longitudinal webs being located in or about the zone of the tops of the transverse weakenings where they open through the sides of the nose.

4. A tire comprising a deep nose portion with a deep longitudinally extending central tread-weakening and deep transverse tread-weakenings leading from the sides of the nose to said central weakening, thereby forming the nose into deep laterally and longitudinally flexible load-supporting sections, said sections each having two substantially triangular cross-sectioned holes in its side, opposed base to base, where they are separated by a longitudinally extending web, the transverse tread-weakenings extending up into the tire and thence downwardly and out at the sides of the nose, the aforesaid longitudinal webs being located in or about the weakening zone of the tops of said transverse weakenings where they open through the sides of the nose.

5. A tire comprising a deep nose portion with a deep longitudinally extending central tread-weakening and deep transverse tread-weakenings leading from the sides of the nose to said central weakening, thereby forming the nose into deep laterally and longitudinally flexible load-supporting sections, said sections each having a substantially triangular cross-sectioned hole in its side of substantially uniform cross section throughout its length.

[Claims 6 to 12 not printed in the Gazette.]

1,189,731. GAS-BURNER. SIMEON F. PIERCE, St. Paul, Minn. Filed Aug. 23, 1915. Serial No. 46,830. (Cl. 67—88.)



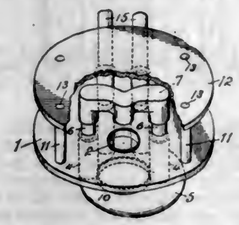
1. A gas burner of the class described comprising inner and outer cylindrical walls spaced apart, said walls being unconnected at the top and connected at the bottom, mantle supporting conduits connected with the upper end of the outer wall above the top of the inner wall, a head carried by the lower connected ends of said tubes and formed with a plurality of openings connecting the outer air with the interior of said tubes, a gas inlet tube fitted in the lower end of said head, the gas inlet tube being formed with side openings, and a gas supply tube leading into said gas inlet tube and formed with a plurality of openings connecting the exterior air with the interior of said gas inlet tube.

2. A gas burner of the class described comprising inner and outer cylindrical walls spaced apart, said walls being unconnected at the top and connected at the bottom, mantle supporting conduits connected with the upper end of the outer wall above the top of the inner wall, a head carried by the lower connected ends of said tubes and formed with a plurality of openings connecting the outer air with the interior of said tubes, a gas inlet tube fitted centrally in said head, the gas inlet tube being formed with side openings, a gas supply tube leading into said gas inlet tube and formed with a plurality of openings connecting the exterior air with the interior of said gas inlet tube, and a solid tapered spreader extending centrally downward in said inner tube and being spaced therefrom.

1,189,782. HYDROCARBON-BURNER. ALBERT A. POTTER, Kansas City, Mo. Filed May 15, 1916. Serial No. 97,555. (Cl. 158—9.)

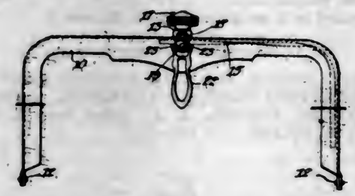
1. A hydro-carbon burner comprising a horizontal plate having a vertical opening therethrough, two tubes extending vertically through said plate at opposite sides respectively of said opening, and a connecting member mounted on the upper ends of said tubes and provided with two passages respectively communicating with said tubes, said two passages terminating closely adjacent to each other and discharging downwardly through said opening.

2. A hydro-carbon burner comprising a horizontal plate having a vertical opening therethrough, two tubes extending vertically through said plate at opposite sides respectively of said opening, and a connecting member mounted on the upper ends of said tubes and provided respectively with two passages connecting with said tubes, said two passages terminating closely adjacent to each other and discharging downwardly and toward each other through said opeinng.



3. A hydro-carbon burner comprising two horizontal plates one above the other and spaced apart and having at their edges at all sides a lateral entrance between them for air, the upper plate being imperforate, and the lower plate having a vertical opening therethrough, spacing tubes between the plates, tie bolts extending through the tubes and said plates for securing the plates together, two tubes extending upwardly through the lower plate, and a connecting member between the plates and mounted on the upper ends of said two tubes and having two passages respectively connecting with said two tubes, said passages terminating closely adjacent to each other and discharging downwardly through said opening.

1,189,783. BAG-JAW FASTENER. ROBERT L. PRAHAR, Massapequa, N. Y. Filed Mar. 3, 1916. Serial No. 81,806. (Cl. 70—116.)



1. In combination, a pair of frame members, a fastener pivoted to one member and adapted to engage with the other member to hold said members together, and an auxiliary fastener pivoted to the side of the other frame member and normally preventing the disengagement of the first mentioned fastener, said second mentioned fastener having depending gravity operating means for normally retaining it in operative position.

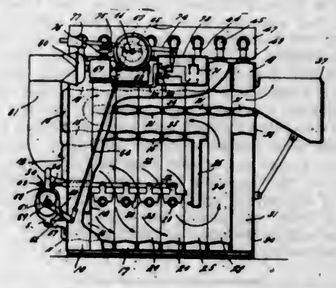
2. The combination with a pair of frames, of a member carried by one frame extending across the upper surface and projecting beyond the other frame, and a fastener pivoted to the side of the second mentioned frame and rotatable about an outwardly extending, substantially horizontal pivot, said fastener having means for engaging with said member to prevent movement of the latter in respect to the second mentioned frame, and also having depending gravity operated means for normally preventing rotation of said fastener.

3. The combination with a pair of frames, of a member carried by one frame extending across the upper surface and projecting beyond the other frame, and a fastener pivoted to the side of the second mentioned frame and rotatable about an outwardly extending, substantially horizontal pivot, said fastener having means for engaging with said member to prevent movement of the latter in respect to the second mentioned frame and having a handle pivoted thereto and depending therefrom to normally prevent accidental rotation of said fastener.

4. The combination with a pair of frames, of a fastener pivoted to one frame to move about an axis extending in the general direction of the frame and adapted to engage with the other frame to hold the frames together, and a second fastener carried by the other frame and pivoted to move about an axis substantially at right angles to the plane of the frame and adapted to engage with the first mentioned fastener to normally prevent movement of the latter.

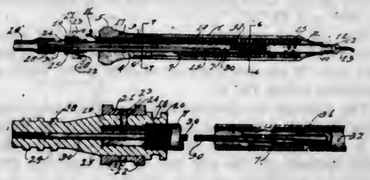
5. The combination with a pair of frames, of a fastener carried by one frame and adapted to engage with the other to hold the frames together, an outwardly extending pivot carried by the other frame on the outer side thereof, a member mounted on said pivot and having a projecting portion adapted to engage with said fastener, and a handle pivoted to said member and normally depending therefrom to act by gravity and prevent accidental rotation of said member and serving as means for the positive rotation of said member and the disengagement of said projecting portion from said fastener.

1,189,784. BOILER. HERMAN C. PROX, Terre Haute, Ind., assignor to Frank Prox Company, Terre Haute, Ind., a Corporation of Indiana. Filed Dec. 19, 1914. Serial No. 878,032. (Cl. 122—225.)



A sectional down-shaft boiler comprising a plurality of sections having water legs and cross water tubes connecting the water legs, some of such sections having one of such cross water tubes below the ash pit and another between the ash pit and the fuel chamber of the boiler, and grate bars mounted on said last-named cross water bars to rock thereon.

1,189,735. DENTAL INJECTOR AND EXTRACTOR. JOHN C. QUINTIN, La Manda Park, Cal., assignor of one-half to Kate T. Quintin, Pasadena, Cal. Filed Aug. 26, 1915. Serial No. 48,366. (Cl. 219—21.)



1. A dental injector and extractor comprising a cylindrical body and a separable head therefor, a metallic tube within the body and removably secured to said head, a heating element carried by said tube, a removable tip for the tube provided with an opening in communication with the interior of the tube, and air supply means exterior of the body, and means for regulating the passage of the air through and discharge from either end of the tube, at will for the purposes set forth.

2. A dental instrument comprising a body provided with a heat compartment and a separable head therefor, an elongated air and vacuum tube removably secured to said head and held firmly in the body, a heating element exterior of the air tube and within said heat compartment of the body, a removable tip carried by said tube and extending forward of the body having an opening in communication with said tube, air supply means for the tube, and means for supply compressed air to and discharging the same from the end of said tube for producing a partial vacuum therewithin for use as an extractor and in a single direction therethrough for use as an injector.

3. A dental instrument capable of use as an extractor and injector of substances and comprising an inclosing cylinder, a combined air and vacuum tube within the body, a heating element carried by the tube, a removable tip on the forward end of the tube and communicating therewith, and self contained vacuum producing means for the extraction of substances and drawing them into said tube, and compressed air means fo rejecting the substances so extracted from the tube, and means exterior of the body for converting said instrument from one to the other of said purposes.

4. A dental instrument comprising an elongated body having a heat compartment therein and a separable head, a metallic tube extending through and from opposite ends of the body, a removable tip secured to the forward end of said tube and having an opening communicating with the tube, a heating element carried by the tube, means for supplying compressed air to the tube, and means for regulating the discharge of the air therefrom at opposite ends, respectively for injecting and extracting operations.

5. A dental instrument including an outer shell provided with a separable head and having a heat chamber formed therein, a metallic tube removably secured to said head and extending through said shell, a heating element within said shell and surrounding said tube, a removable tip secured to one end of said tube and air supply means attached to the opposite end thereof, compressed air means for selectively injecting and extracting into and from said tube, and means for converting said instrument from one to the other of said uses, at will.

[Claims 6 to 10 not printed in the Gazette.]

1,189,736. MAKING PURE CHLORBENZOL. LOUIS RABINOVITZ, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Jan. 19, 1916. Serial No. 72,947. (Cl. 23—24.)

1. A catalyzer adapted for organic bodies which comprises iron chlorid and finely-divided iron in intimate contact and in the form of a very fine powder.

2. The process of chlorinating aromatic hydrocarbons which comprises agitating these with a fine powder containing iron and a sub-chlorid, in the presence of dry chlorin.

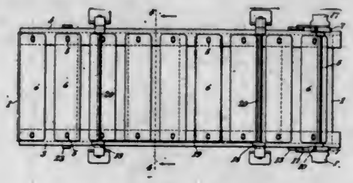
3. The process of chlorinating benzol which comprises agitating it with a fine powder containing iron, in the presence of dry air-free chlorin and at a temperature between 10° and 15° C.

4. The process of chlorinating benzol which comprises agitating it with a fine powder containing a catalyzer comprising iron in the presence of chlorin while cooling to a temperature below 15° C.

5. The process of chlorinating benzol which comprises passing through a body of benzol containing an iron catalyzer a current of chlorin gas, in agitating said body during the passage of the gas and in maintaining the temperature by artificial cooling below the point at which substantial quantities of higher chlorinated products are formed.

1,189,737. CORRUGATED-PAPER-BOARD MACHINE. TOBIAS E. RAFFEL, New York, N. Y. Filed Mar. 14, 1916. Serial No. 84,012. (Cl. 154—1.)

1. In a machine of the character specified, the combination of a heater, a supporting member mounted for longitudinal reciprocating motion adjacent to each side of the heater, presser plates laid across said members and held thereon for movement therewith, and means for reciprocating said supporting members in opposite directions, whereby to produce oscillation of the plates.



2. In a machine of the character specified, the combination of a heater, a supporting member mounted for longitudinal reciprocating motion adjacent to each side of the heater, presser plates laid across said members and held thereon for movement therewith, said plates being free to move vertically, and means for reciprocating said supporting members in opposite directions, whereby to produce oscillation of the plates.

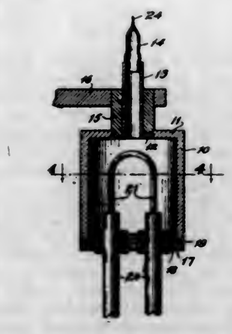
3. In a machine of the character specified, the combination of a heater, means for drawing the sheets over the heater, a pressing device bearing on the upper surface of the sheets and movable with an oscillating motion thereon, and means for actuating the pressing device.

4. In a machine of the character specified, the combination of a heater, drawing rolls for progressing a composite sheet over the heater, a pressing device having a series of plates which bear loosely on the upper surface of the sheet and are movable thereon with an oscillatory motion and means for actuating the pressing device.

5. In a machine of the character specified, the combination of a heater having a smooth face, presser plates extending transversely across the face of the heater, endwise movable supports engaging the plates near their ends, and means for reciprocating both supports in opposite directions to each other.

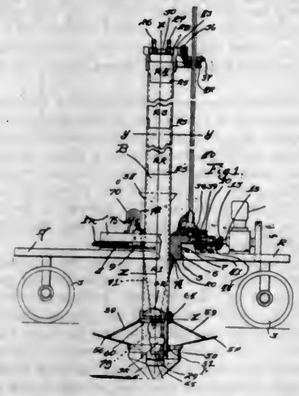
[Claims 6 to 8 not printed in the Gazette.]

1,189,738. DEVICE FOR THE RECTIFICATION OF ALTERNATING ELECTRIC CURRENTS. OWEN W. RICHARDSON, Princeton, N. J. Filed June 5, 1913. Serial No. 771,949. (Cl. 250—27.)



In a current rectifier, a cylindrical metallic casing having a reduced neck extending therefrom to permit connection to an exhaust pump, a bottom for said casing having spaced openings therein, insulating sleeves held in said openings, current leads extending through said sleeves, said casing, sleeves, bottom and leads being arranged to form an air tight structure, a rod, wire or strip of substantially non-volatile material having sufficient electrical resistance connected at its ends to the inner ends of said leads.

1,189,739. EXCAVATING-MACHINE. JOHN ROLLI, Enid, Okla. Filed Jan. 15, 1915. Serial No. 2,317. (Cl. 255—21.)



1. In combination with a support, a revoluble element mounted upon said support, means for turning said revoluble element, a conveyer tube composed of detachable sections adapted to be revolved with said element, an endless carrier disposed for movement within said tube, and a cutter operably connected with the lower of said sections arranged to deliver to said endless carrier.

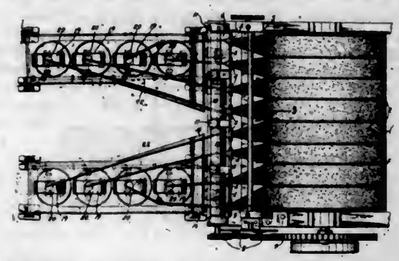
2. In combination with a support, a revoluble element mounted upon said support, means for turning said revoluble element, a conveyer tube composed of a succession of separable longitudinal sections joined together and vertically slidable and mounted in said revoluble element to revolve therewith, an endless carrier mounted in said tube for lifting loose earth from the lower to the upper end thereof, and a plurality of superimposed cutters carried by the lower of said tube sections, said cutters being of different lengths and extending successively a greater distance laterally from said tube to increase the cutting swath thereof.

3. In combination with a truck platform, an upwardly extending conveyer tube freely movable up and down in said revoluble element and mounted to turn therewith, an endless carrier extending from the lower to the upper end in said tube and a plurality of cutters mounted upon the lower end of said tube in superimposed relation, said cutters being of different lengths and extending successively a greater distance laterally from said tube to increase the cutting swath thereof, the lowermost of said cutters extending downwardly and inwardly to conduct the loose earth into engaging position by the lower end of said carrier.

1,189,740. COILER-FRONT FOR CARDS. EDWIN A. ROONEY, Fairhaven, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Oct. 31, 1913. Serial No. 798,392. (Cl. 19—5.)

1. Carding apparatus of the kind described comprising in combination a divided card, delivering fleece sections suitable for direct supply to the slubber, a plurality of cans adapted to receive the separate fleece sections therefrom, such cans being disposed in groups of two or more adjacent the front of the card, means for supporting the fleece sections in transit from the card to the cans, such means being divided into two or more divisions separated to provide access to the card between them, and means for coiling the sections in the cans.

2. Carding apparatus as described, comprising in combination a divided card provided with means for individually condensing the divided fleece sections issuing therefrom, a plurality of sliver cans disposed in groups in front of the card, each can receiving one of the sections, means for conducting the sections upwardly from such condensing means to the cans of both groups, said means being divided into divisions horizontally spaced from each other and permitting access to said delivery means between the cans, and means for coiling the fleece sections in the cans.



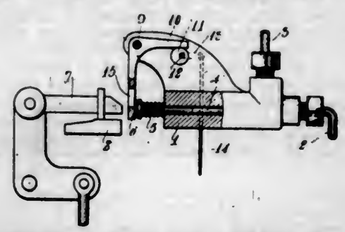
3. Carding apparatus of the kind described comprising a divided card having means for separately condensing the divided fleece sections issuing therefrom, a plurality of sliver cans arranged in groups adjacent such condensing means, separated means for conveying the sections upwardly from the condensing means and depositing them at a higher level into the cans of said groups, and means for rotating the cans of said groups whereby such sections are coiled in their respective cans.

4. Carding apparatus of the kind described, comprising a divided card, delivering fleece sections adapted for direct supply to the slubber, a plurality of sliver cans disposed at a common level, two means for distributing the divided fleece sections into their respective cans, the said distributing means being horizontally separated to provide access to the card between them, and means for rotating the cans to coil the fleece sections therein.

5. Carding apparatus of the kind described comprising a card having means for subdividing its fleece into a plurality of sections, two table structures disposed in front of such card each adapted to accommodate a group of sliver cans, means included in each table structure for distributing the sections thereon into their respective cans and separate driving connections between said structures and the card.

[Claims 6 to 11 not printed in the Gazette.]

1,189,741. CONTROLLING DEVICE FOR FLUID-PUMPS IN INTERNAL-COMBUSTION ENGINES. ERIK ANTON RUNDLÖF, Stocksund, Sweden. Filed Oct. 20, 1913. Serial No. 796,246. (Cl. 123—140.)

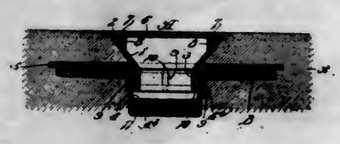


In a fluid pump for internal combustion engines, the combination of a reciprocating pump piston, a hit or miss device actuating said piston, a bell crank lever one arm of which is located between the piston and the hit or miss device, and an eccentric actuating the other arm of said lever, substantially as and for the purpose set forth.

1,189,742. FLOOR-DRAIN. BARNEY H. SANDERS, St. Louis, Mo., assignor to American Foundry & Mfg. Co., St. Louis, Mo., a Corporation of Missouri. Filed Oct. 11, 1915. Serial No. 55,285. (Cl. 61—9.)

1. A floor drain consisting of a shield that is adapted to be embedded in a floor some distance below the top sur-

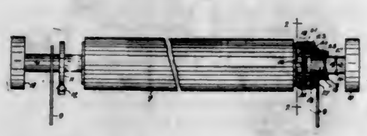
face thereof, said shield being provided at its center with a screw-threaded opening, a depending tubular-shaped portion on said shield arranged concentric with relation to said opening and adapted to have a drain pipe connected to same, a vertically-adjustable head carried by said shield and provided with an externally-threaded sleeve that fits in the opening at the center of the shield, and means for permitting the seepage that collects in the shield to escape therefrom into the depending tubular-shaped portion on the shield to which the drain pipe is connected.



2. A floor drain consisting of a shield provided with an integral portion to which a drain pipe is adapted to be connected, said portion being provided at its upper end with internal screw threads, a head provided with an externally screw-threaded sleeve that is screwed into the internally-screw-threaded portion of said shield, coöperating vertically-disposed grooves on the outer surface of said sleeve and on the interior of the portion to which the sleeve is mounted, and an annular recess formed in the inner surface of the portion of the shield to which the waste pipe is connected at a point below the internal screw threads on said portion.

3. A floor drain consisting of a shield having a rim that is provided at its upper edge with an approximately horizontally-disposed flange, an integral depending portion on said shield to which a waste pipe is adapted to be connected, said portion having two sets of internal screw threads that are arranged on opposite sides of a horizontally-disposed recess formed in the inner surface of said portion, a substantially funnel-shaped head provided at its lower end with an externally screw-threaded sleeve that is screwed into the upper set of screw-threads on the depending portion of the shield, a grill or grating arranged in a flange at the upper end of said head, and coöperating grooves formed in the outer surface of the sleeve on said head and in the inner surface of the depending portion of the shield that surrounds said sleeve.

1,189,743. FRACTIONAL-SPACING DEVICE FOR TYPEWRITING MACHINES. ALBERT A. SCHWARTZ, New York, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed May 3, 1915. Serial No. 25,430. (Cl. 197—121.)



1. A fractional line spacing device for typewriting machines, comprising a cylindrical manipulating part having a screw formed on its interior periphery, a toothed wheel having a bearing on a sleeve secured to the platen shaft and meshing in the internal thread of the manipulating part and a gear connection between said toothed wheel and the platen.

2. A fractional line spacing device for typewriting machines, comprising a cylindrical manipulating part having a multi-thread screw formed on its interior periphery, a toothed wheel having a bearing on a sleeve secured to the platen shaft and meshing in the internal thread of the manipulating part and a gear connection between said toothed wheel and the platen.

3. A fractional line spacing device for typewriting machines, comprising a cylindrical manipulating part having a screw formed on its interior periphery, a toothed wheel having a bearing on a sleeve secured to the platen shaft and meshing in the internal thread of the manipulating part, a worm wheel having a hub seated in a recess in the sleeve, a worm connected to the toothed wheel and a clutch connection between the worm wheel and the end of the platen.

4. A fractional line spacing device for typewriting machines, comprising a cylindrical manipulating part having a multi-thread screw formed on its interior periphery, a toothed wheel having a bearing on a sleeve secured to the platen shaft and meshing in the internal thread of the manipulating part, a worm wheel having a hub seated in a recess in the sleeve, a worm connected to the toothed wheel and a clutch connection between the worm wheel and the end of the platen.

5. A fractional line spacing device for typewriting machines, comprising a cylindrical manipulating part having a screw formed on its interior periphery and a flange at one side, a sleeve secured to the platen shaft and having a bearing in an end frame of the carriage and a flange at its inner end provided with bearing projections, a worm located between and carried by said projections, a toothed wheel secured to one end of the worm and meshing into the internal screw thread of the manipulating part, a worm wheel into which the worm meshes and having a hub seated in a recess of the sleeve, a clutch connection between the worm wheel and the end of the platen, the flange of the manipulating part having a bearing on the sleeve adjacent its flange.

[Claim 6 not printed in the Gazette.]

1,189,744. KNIT FABRIC AND METHOD OF KNITTING THE SAME. ROBERT W. SCOTT, Boston, Mass. Filed Sept. 7, 1915. Serial No. 49,161. (Cl. 66—4.)



1. A knit article having an integral inturned welt comprising a selvage and having one of the structural knit courses of the welt fabric, constituting a knit uniting course, in engagement with both the selvage and the body of the article at a point separated from the selvage by an extent of the fabric.

2. A knit fabric characterized by a selvage structure, and having one of the structural knit courses of the fabric, constituting a uniting course in engagement with said selvage structure in recurrent needle-wales and with the body fabric in other needle wales, an extent of fabric between the points of engagement being turned face side out.

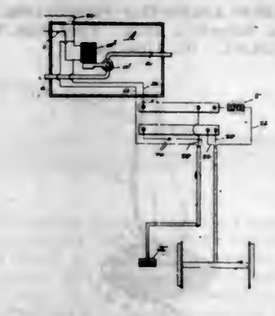
3. A stocking or the like having an integral in-turned welt attached near its beginning edge to the back or inner face of the fabric of the body of the article by one of the structural knit courses of the fabric thereof engaging a selvage structure at the beginning edge, said knit course having bights penetrated by loops of the body fabric.

4. A stocking or the like having an integral in-turned welt attached near its beginning edge to the back or inner face of the fabric of the body of the article by one of the structural knit courses of the fabric engaging loops in alternate needle-wales of a selvage structure at the beginning edge and having bights penetrated by loops of recurrent wales of the body fabric.

5. The method of knitting articles having in-turned welts comprising first forming a selvage structure on a set of needles, then interknitting a uniting course therewith at recurrent loops only, and forming bights of said uniting course, thereafter replacing said bights on the needles, and then knitting the remainder of the article.

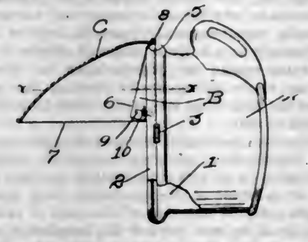
[Claims 6 to 9 not printed in the Gazette.]

1,189,745. TRAIN-CONTROL APPARATUS. HIRAM G. SMOWICK, Mill Valley, Cal., assignor to The National Safety Appliance Company, a Corporation of California. Original application filed Oct. 24, 1908, Serial No. 459,358. Divided and this application filed Apr. 29, 1913. Serial No. 764,407. (Cl. 246—58.)



In a train control apparatus, the combination of a normally closed circuit including a battery and a magnet, a train control device adapted to operate when said magnet is deënergized, a normally dead shunt circuit connected to said normally closed circuit and adapted to be closed by road bed devices, the conductors of the normally closed circuit being looped and arranged close to and on opposite sides of the normally dead conductors so as to mechanically protect the same.

1,189,746. LAMP-SHADE. LAURA E. SILLS, St. Paul, Minn. Filed Nov. 23, 1914. Serial No. 873,503. (Cl. 240—48.4.)



1. The combination with a head light having a body provided with a light projection opening, a shade hingedly supported at its upper end by said body and projecting forwardly therefrom, the lower portion of said shade telescoping upon said body, and means extending through the telescoping portions of said body and shield for adjustably securing such portions together.

2. In combination with a head light having a door thereon formed with a light projection opening, a shield mounted upon said door and extending around the upper portion of said opening, said shield projecting forwardly from said door, a shade hingedly supported from the upper portion of said door having its lower side portions telescopically connected with the lower ends of said shield and means for adjustably securing said shade upon said shield when said shade is swung up or down.

3. The combination with a head light having a body, of a shade hingedly supported at its upper end by said body to project forwardly therefrom and having its lower portion telescoping upon said body, the telescoping portions of said body and said shade being provided with registering slots, and means working within said slots for adjustably securing the telescoping portions of said body and shade together.

4. The combination with a head light having a body, of a shade hingedly supported at its upper end by said body to project forwardly therefrom and having its lower portion telescoping upon said body, the telescoping portions of said body and said shade being provided with registering elongated arcuate slots, and means working within said slots for adjustably securing the telescoping portions of said body and shade together.

1,189,747. BOOK-EDGE-PRINTING MACHINE. LOUIS R. SMITH, Colorado Springs, Colo., assignor to The Universal Indexing Company, Denver, Colo., a Corporation of Colorado. Filed July 6, 1912. Serial No. 708,074. (Cl. 101—83.)



1. In apparatus of the class described, the combination with a suitable frame, means for supporting a book in the edgewise position for printing purposes, said means being adjustable to fit books of varying width between the edge engaging the support and the edge upon which the printing is done, an inking device, a type carrier, stationary members located between the book and the inking device, two pairs of links connecting the type carrier with said members, a rock spindle journaled in each of the stationary members and with which one link of each pair is connected, and means for rotating the spindles to throw the type carrier alternately into position for printing and inking purposes.

2. In a book edge printing machine, the combination of a type carrier, means for inking the type carrier, automatically operated means for holding a book in position for printing on the edge thereof, said means comprising a flatwise clamping device, and a device for supporting the book in the edgewise position for printing purposes, the said devices being independently adjustable to cause them to fit books of varying dimensions, a support interposed between the book holding means and the inking means, two pairs of links connecting the type carrier with said support, a rock spindle journaled in each support and with which one end of one link of each pair of links is made fast, and means for automatically imparting rotary movement to the spindles in reverse directions, whereby the type carrier is alternately brought into contact with the inking means and the book edge for printing purposes.

3. In a book edge printing machine, the combination of a type carrier, a support for the book, said support being adjustable, a clamp for holding the book in position for printing on said support, the clamp being adjustable, means for automatically feeding the books to the support and into position to be acted on by the clamp, means for automatically actuating the supporting means to cause it to alternately support and release the book, means for automatically actuating the clamping means to cause the latter to alternately clamp and release the book, the adjustment of the clamping and book-supporting means being timed to work in synchronism.

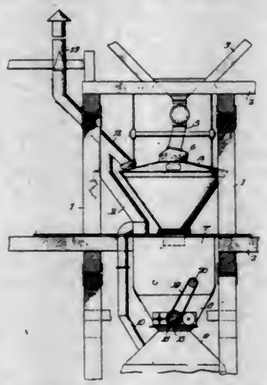
4. In a book edge printing machine, the combination of means for automatically feeding the book into position for printing, means automatically operated for alternately supporting the book in position for printing, and releasing same, means automatically operated for alternately clamping the book on said support and releasing the same, means automatically operated for printing the book edge, means for perforating the book, and means for removing the books from the machine, the various operations being synchronously timed, substantially as described.

5. In apparatus of the class described, the combination with a suitable frame, automatic means for alternately supporting a book in edgewise position for printing purposes and discharging the same, an inking device, a type carrier, stationary members located between the

book in its supported position and the inking device, two pairs of links connecting the platen with said members, rock spindles journaled in the stationary members and with which one link of each pair is connected, gears fast on said spindles, and means for automatically rotating the gears to throw the type carrier alternately into positions for printing and inking purposes, the latter means being so timed with relation to the book-supporting and discharging means as to cause the type carrier to engage the edge of the book while supported and to move to and from the inking position while that book is being discharged and another book is being supported.

[Claims 6 and 7 not printed in the Gazette.]

1,189,748. CENTRIFUGAL DIVIDING MECHANISM. GEORGE LEE SOUTHARD, Chicago, Ill., assignor to The United States Gypsum Company, Chicago, Ill., a Corporation of New Jersey. Filed May 3, 1915. Serial No. 25,438. (Cl. 226—9.)



1. In a centrifugal dividing mechanism, the combination of a rotatable table, means for rotating said table, means for delivering material to said table, means for adjusting the outlet of said delivery means to a plane parallel to the plane of said table, and means for separating the material into equal portions as it flows from the periphery of said table.

2. In a centrifugal dividing mechanism, the combination of a rotatable table, means for rotating said table, means for delivering material to said table, means for adjusting the outlet of said delivery means laterally to center said outlet with respect to said table, and means for separating the material into equal portions as it flows from the periphery of said table.

3. In a centrifugal dividing mechanism, the combination of a rotatable table, means for rotating said table, a hopper adapted to hold a quantity of material, a chute for delivering material to said table, means in said hopper to constantly deliver material to said chute, and means for separating the material into equal portions as it flows from the periphery of said table.

4. In a centrifugal dividing mechanism, the combination of a rotatable table, means for rotating said table, a hopper adapted to hold a quantity of material, a chute for delivering material to said table, means in said hopper to divide it into a plurality of troughs, means in said troughs to move the material toward and deliver it to said chute, and means for separating the material into equal portions as it flows from the periphery of said table.

5. In a centrifugal dividing mechanism, the combination of a rotatable table, means for rotating said table, an elongated hopper adapted to hold a quantity of material and having openings in the bottom thereof, a chute communicating with said openings for delivering material to said table, means in said hopper to divide it into a plurality of troughs, conveyers in said troughs to move the material toward said openings, and means for separating the material into equal portions as it flows from the periphery of said table.

[Claims 6 to 22 not printed in the Gazette.]

1,189,749. SELF-ADJUSTING PROPELLER. FRANK W. STODDER, Somerville, Mass. Filed Sept. 13, 1912. Serial No. 720,211. (Cl. 170—162.)



1. A propeller, having each blade freely rotatable independently of the other blades on an axis substantially at right angles to the axis of rotation of the propeller, each blade having a longitudinally curved form and a portion of the propelling face formed eccentric to the axis of rotation of the blade whereby said curved and eccentric form automatically turns the blade upon its axis to maintain it approximately at a uniform angle of efficiency irrespective of varying speeds, the pressure upon the offset curved edge of the blade automatically varying the center of pressure of the propelling face of the blade from its normal center when at rest.

2. A propeller, having its blades pivotally mounted for free and independent swinging movement, said pivotal mounting being on an axis substantially at right angles to the axis of rotation of the propeller, each blade being curved outwardly at one side of the axis of said pivotal movement from its base toward the lengthwise middle of the blade and thence inwardly toward said axis for the remaining length of the blade, whereby the center of pressure of each blade and the forwardly curved edge of each blade are each eccentric to said pivotal axis.

3. A propeller, having its blade pivotally mounted for free and independent swinging movement, each blade being curved outwardly at one side of the axis of said swinging movement from its base toward the lengthwise middle of the blade and thence inwardly toward said axis for the remaining length of the blade and having a greater width adjacent the base than at the outer end.

4. A propeller, having its blades pivotally mounted for free and independent swinging movement, each blade being curved outwardly at one side of the axis of said swinging movement from its base toward the lengthwise middle of the blade and thence inwardly toward said axis for the remaining length of the blade each blade having a wide portion adjacent its base and thence tapering to a narrow outer end.

5. A propeller, having its blades pivotally mounted for free independent swinging movement, said pivotal mounting being on an axis substantially at right angles to the axis of rotation of the propeller, each blade, when viewed edgewise having a lengthwise curve or bow approaching the line of the pivotal axis adjacent its opposite ends and curving away from said axis between said ends, the inner surface of the blade being substantially straight from front to rear edge, and presenting a blade with its center of pressure eccentric to its pivotal axis.

[Claims 6 and 7 not printed in the Gazette.]

1,189,750. CAR-STOPPING DEVICE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,571. (Cl. 104—229.)



1. A car stopping device comprising a movable bumper adapted to be moved to an inoperative position or in position to be struck by the car to be stopped, a retarding device connected with said bumper for retarding its movement, and means for increasing the retarding effect of said retarding device as it is moved in response to the impact of the car.

2. A car stopping device comprising a movable bumper in position to be struck by the car, a retarding device connected with said bumper, said retarding device comprising friction parts, movable with relation to each other and connected with said bumper, a slideway along which said friction parts move and means for gradually increasing the friction between said friction parts and the portions of the slideway they engage as they are moved there along.

3. A car stopping device comprising a movable bumper adapted to be struck by the car, a retarding device to which said bumper is connected, said retarding device comprising two friction parts movable with relation to each other, converging side pieces between which said friction parts move, and a spring connected with the friction parts and arranged to increase the pressure thereon as the friction parts are moved away from their initial position.

4. A car stopping device comprising a bumper adapted to normally lie between the rails along which the car travels so as to be out of the way, a retarding device with which said bumper is movably connected and adapted when moved to retard the movement of the bumper and a controlling device for moving said bumper to an operative position where it will be struck by the car.

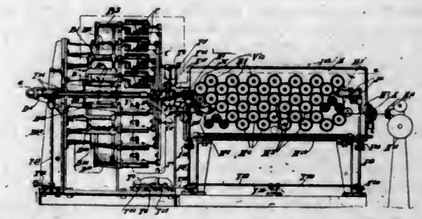
5. A car stopping device comprising a bumper adapted to normally lie between the rails along which the car travels so as to be out of the way, a retarding device with which said bumper is movably connected and adapted when moved to retard the movement of the bumper and a controlling device for moving said bumper to an operative position where it will be struck by the car, said controlling device comprising a shaft and lifting device connected with said shaft and adapted to engage the bumper when the shaft is locked so as to lift it, said bumper and lifting device being free to move relatively so that the bumper can be moved away from the lifting device when struck by the car.

[Claims 6 to 17 not printed in the Gazette.]

1,189,751. MACHINE FOR CONSTRUCTING A LAMINATED COHESIVE INTERWOUND BAND. LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Dec. 30, 1911. Serial No. 668,625. (Cl. 28—21.)

1. In a band forming and coating machine for constructing a flattened band from a series of flattened elements, a stationary former unsupported at one end, series of reels rotatable about said former, the reels in one series revoluble in the opposite direction to the reels in the other series, and alternating therewith in position, and a series of coating devices rotatable about said former, one for each reel.

2. An automatically acting machine for constructing a tubular laminated band from flexible elements, comprising, a fixed former having a free outer end, rotatable devices for winding the flexible elements about the former, said rotatable devices including rotatable coating means for said flexible elements and means for supplying said coating means with fluid coating material.



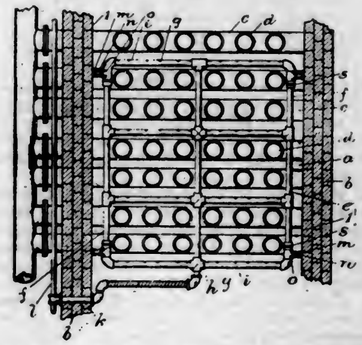
3. In an automatically acting device for constructing a laminated tubular fabric from flexible elements, a former having a free outer end, band guiding devices rotatable in opposite directions about said former for applying said flexible elements in predetermined order upon said mandrel, said bandguiding devices serving also to apply fluid rubber to said flexible elements, means for pulling said tubular fabric from the free end of said former, said pulling means serving also as a flattening means.

4. In an automatically acting device for constructing a laminated fabric of interwound cohering flexible members, a hollow former, devices rotatable about the former in opposite directions for applying the flexible members to said former, a head in which said element applying devices rotate about the former, means for supplying a fluid coating material to said hollow former and head, and thence to said element applying devices, and means for pulling and for simultaneously pushing said fabric from said former.

5. In a machine for winding flexible elements upon a former to construct a laminated fabric in which the flexible elements cohere together, the combination with the former, of hollow concentric guide members containing the coating material and rotatable about the former in opposite directions, said rotatable guide members provided with guide slots for the said flexible elements, and means for supplying said hollow guide members with fluid coating material.

[Claims 6 to 37 not printed in the Gazette.]

1,189,752. ECONOMIZER SOOT-CLEANER. EDWARD H. THOMPSON, Toronto, Ontario, Canada. Filed July 11, 1914. Serial No. 850,524. (Cl. 122—392.)



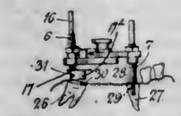
1. An economizer soot cleaner, comprising a perforated tubular frame, said frame coupled together in complete circuit, said frame adapted to be interposed among the radiating tubes of the economizer, a sprocket chain extending from the said frame and engaging with sprocket wheels or other means, extending through the said economizer chamber and adapted to be operated from the exterior of

the said economizer chamber, a flexible tubular connection connecting the said tubular frame with a supply conduit extending along the exterior walls of the said chamber, air, drip and cut-off valves suitably arranged in said supply conduit, substantially as described.

2. An economizer soot cleaner, comprising a series of tubular sections coupled together in complete circuit, discharging orifices or nozzles extending through a series of the said tubular sections, said tubular frame adapted to be interposed among the radiating tubes of the economizer, anti-friction rollers extending laterally from the side of said frame, said rollers adapted to engage in guide-ways vertically arranged on the interior side walls of the said economizer chamber, a sprocket chain connecting the said frame with a gear and means adapted to be actuated from the exterior of the chamber for raising and lowering the said frame among the tubes, substantially as described.

3. An economizer soot cleaner, comprising a perforated tubular frame adapted to be interposed among the radiating tubes of the economizer, a tubular flexible connection coupling the said frame with a supply conduit extending along the exterior walls of the economizer chamber, a sprocket chain for actuating the said tubular frame in vertical relation with the said radiating tubes for the purpose of projecting steam from the said perforations among the radiating tubes in the vertical travels of the said frame, means for opening and closing the supply of steam from the said tubular frame, substantially as described.

1,189,753. INSTRUMENT FOR MAKING PARALLEL CHANNELS FOR TOOTH-ROOT PINS. FRITHJOF THUE, Christiania, Norway. Filed July 18, 1914. Serial No. 851,760. (Cl. 32—10.)



1. A dental parallel device comprising a pair of relatively movable guide tubes having bores; means for holding the tubes exactly parallel; an angle plate post snugly received in one of said bores; and an angle plate on said post.

2. In a dental parallel device, the combination of a pair of relatively movable internally threaded sleeves; means for holding said sleeves with their axes exactly parallel; and externally threaded tubes adapted to carry tools of various sorts and engaging in said sleeves.

3. In a dental parallel device, the combination of a pair of relatively movable internally threaded sleeves; means for holding said sleeves with their axes exactly parallel; externally threaded tubes engaging in said sleeves and having smooth bores; an angle plate post in one of said bores; and an angle plate on said post.

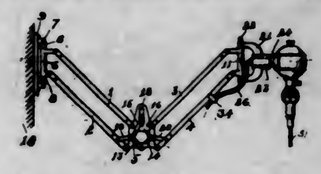
4. In a dental parallel device, the combination of a pair of pivotally connected arms; and guide tubes adjustably mounted in the free ends of said arms and having smooth bores adapted to receive the shanks of tools with axes exactly perpendicular to the plane of relative movement of the arms.

5. In an instrument for making parallel channels for tooth-root pins, the combination of a pair of pivotally connected arms one of which is provided with an arc of teeth at its inner end; a worm engaging the teeth and mounted on the other arm an integrally threaded sleeve secured to the free end of each arm and having its axis exactly perpendicular to the plane of relative movement of the arms; and externally threaded tubes received in said sleeve and having smooth bores.

[Claims 6 and 7 not printed in the Gazette.]

1,189,754. EXTENSIBLE BRACKET. JOHN V. TRENAMAN, New York, N. Y. Filed Aug. 19, 1915. Serial No. 46,244. (Cl. 248—1.)

1. In an extensible bracket, the combination with a pivotally supported inner section, an outer section and a central plate to which adjacent ends of said sections are pivotally connected, of means for causing equal angular movement of said sections toward and from each other comprising,—two pairs of pivotally connected links pivoted at one end to said plate at a point in a line midway between the connections therewith of said sections, their opposite ends pivotally connected and slidable along said median line in guiding means on said plate, and two links each pivotally connected to one of said pairs of links and one of said sections, two corresponding ones of said links having substantially parallel movement with said sections.



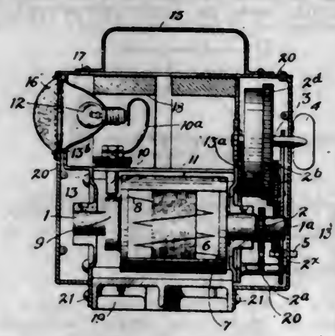
2. In an extensible bracket, the combination of an inner and an outer section movable angularly toward and from each other in a vertical plane each formed by two arms spaced apart and having parallel movement, a central member comprising two plates to and between which adjacent ends of said section arms are pivotally connected, end members to which the opposite ends of said section arms are pivoted, said outer end member adapted to support an object, a wall plate on which the end member of said inner section is supported to swing on a vertical axis, and means for causing an equal angular movement of said sections comprising,—two pairs of pivotally connected links pivoted at one end to and between said central plates at a point in a line midway between the connections therewith of said section arms, their opposite ends pivotally connected and slidable along said median line in guiding means on said plates, and two links each pivotally connected to one of said pairs of links and to the lower arm of one of said sections, two corresponding ones of said links having substantially parallel movement with said sections.

3. In an extensible bracket, the combination with a pivotally supported inner section, an outer section and a central plate to which adjacent ends of said sections are pivotally connected, of means for causing equal angular movement of said sections toward and from each other comprising,—two pairs of pivotally connected links pivoted at one end to said plate at a point in a line midway between the connections therewith of said sections, their opposite ends pivotally connected and slidable along said median line in guiding means on said plate, a sliding member to which the opposite ends of said pairs of links are pivotally connected, centrally disposed means on said plate for guiding such sliding member, and two links each pivotally connected to one of said pairs of links and one of said sections, two corresponding ones of said links having substantially parallel movement with said sections.

1,189,755. PORTABLE ELECTRIC LIGHT. HARRY RANDOLPH VAN DEVENTER, Sumter, S. C. Filed May 17, 1915. Serial No. 28,760. (Cl. 240—8.5.)

1. A self-contained lighting unit comprising the following instrumentalities: a base, a magneto generator mounted on said base having field magnets, a rotor, and generating windings, a train of spring driven gears connected to the rotor shaft on one side of the magneto, a lamp mounted on the other side of the magneto, circuit connections from said lamp to the generating windings, and a continuous metal casing surrounding the entire unit and secured to the base, said casing having an opening opposite the lamp, and a bull's-eye secured to the casing over said opening.

2. A self-contained lighting unit comprising the following instrumentalities: a base, a magneto generator mounted on said base having field magnets, a rotor, and generating windings, a train of spring driven gears connected to the rotor shaft on one side of the magneto, a lamp mounted on the other side of the magneto, circuit connections from said lamp to the generating windings, and a continuous metal casing surrounding the entire unit and secured to the base, said casing having an opening opposite one of the gears in the motor train, and means fitted in said opening for stopping and starting the motor train, and thereby stopping and starting the operation of the generator and the illumination of the lamp.

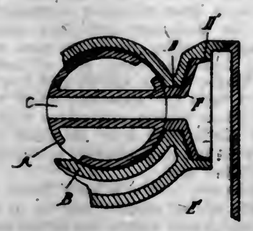


3. A self-contained lighting unit comprising the following instrumentalities: a base, a magneto generator mounted on said base having field magnets, a rotor, and generating windings, a train of spring driven gears connected to the rotor shaft on one side of the magneto, a lamp mounted on the other side of the magneto, circuit connections from said lamp to the generating windings, and a continuous metal casing surrounding the entire unit and secured to the base, said casing having an opening opposite one of the gears of the motor train, and means fitted in said opening to engage said gear for the purpose of stopping the train, said means projecting outside the casing for manual manipulation, together with means also projecting through the casing for winding the spring motor.

1,189,756. PRODUCTION OF TEXTILE MATERIAL. JOHANNES CLAZINUS MARIE VAN DIGGELEN, Amsterdam, Netherlands. Filed Nov. 16, 1915. Serial No. 61,845. (Cl. 92—10.)

The process of preparing from grass, straw and other vegetable matter, material capable of being spun and woven, in which the vegetable matter is boiled in a solution of caustic soda and copper sulfate to which ammonium chlorid has been added, and is subsequently washed, preferably in boiling water.

1,189,757. SEALING MEANS FOR ENGINE-VALVES. NATHANIEL B. WALES, Boston, Mass., assignor, by mesne assignments, to Selaw Products Company, Saginaw, Mich., a Corporation of Michigan. Filed Apr. 5, 1912. Serial No. 688,688. (Cl. 123—190.)



1. The combination with a ported valve and an apertured case, of a sealing member therebetween having an area in contact with the valve face which is in excess of the area directly exposed to the pressure in the case and is proportioned thereto to form a substantial balance, with a preponderance of pressure for holding said member against the valve face.

2. The combiantion with a ported valve and an apertured case, of a member having an adjustable sealing engagement with the aperture in said case and provided with a face bearing against the face of the valve, the area thereof being in excess of the area directly exposed to the pressure in the case and being so proportioned as to substantially balance the pressures with a slight preponderance for holding said member against the valve face.

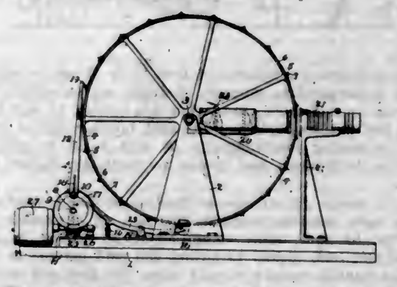
3. The combination with a ported valve and an apertured case, of an annular member having a slidable sealing contact with the walls of the aperture in said case and provided with a face of greater dimensions than said aperture bearing against said ported valve face, the area of said bearing face being so proportioned to the area directly exposed to the pressure within said case as to obtain a substantial balance, with a preponderance of pressure for holding said member against the valve face.

4. The combination with a ported valve and an apertured case, of a member adjustably engaging the aperture in said case, having a portion surrounding the port in said valve and bearing against the face of the latter, the areas on said member respectively bearing against the valve face and exposed to the direct pressure within the case, being proportioned to produce opposed pressures having a predetermined preponderance for holding said member to the valve face.

5. The combination with a ported valve and a ported case, of a member adjustably engaging the aperture in said case having a port corresponding to said valve port, and a bearing portion for engaging the valve face completely surrounding said port, the area of said bearing portion being proportioned to the area of said member exposed to opposed pressure to obtain a slight differential pressure for holding said member against the valve.

[Claims 6 and 7 not printed in the Gazette.]

1,189,758. PICTURE-PROJECTING APPARATUS. ROBERT HENRY WALLER, Nashville, Tenn. Filed Mar. 17, 1915. Serial No. 14,890. (Cl. 88—27.)



1. The combination with a rotary slide carrier, means for projecting images from slides sustained by the carrier, means for rotating the carrier with a step-by-step movement of a length proportional to the dimensions of the carried slides, an electric light for the projecting means, a circuit for the light for supplying current thereto, and a commutator geared to move in timed relation to the movement of the carrier and controlling the light circuit for cutting off current to the light during movement of the carrier, substantially as set forth.

2. The combination, with rotary slide carriers, means for rotating said carriers alternately with step-by-step movements, a projector for each carrier, and electric light for each projector, a circuit for each electric light, and a commutator controlling each circuit and connected with the carrier rotating means for distributing current alternately to the lights of the projectors incident to a stationary condition of the respective carriers and for breaking the circuit of the respective lights during movement of the respective carriers, substantially as set forth.

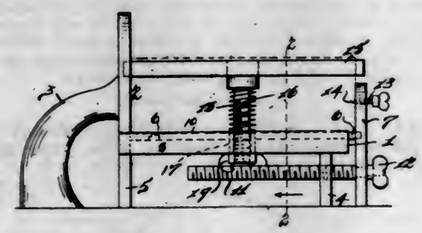
3. The combination with a rotatable carrier wheel, brackets disposed parallel yith the axis thereof carried by said wheel adapted to hold slides and having projecting portions, a projector disposed to project images from the slides sustained by the brackets, and means operable to engage the projecting portions of the brackets and impart a step-by-step movement to the wheel, substantially as set forth.

4. The combination, with a rotary carrier wheel, of axially extending brackets fixed thereto and each comprising a plate grooved longitudinally and terminating at the wheel engaging end with a radially extending tab, the grooves of each two adjacent brackets being adapted to receive a slide therebetween, an actuator adapted to successively engage said tabs for rotating the carrier, and a projector disposed to project images from the slides sustained by the brackets, substantially as set forth.

5. The combination, with a rotatably mounted carrier, of a pawl for actuating the carrier, a disk for actuating the pawl, pivotally engaged by the pawl, means for rotating the disk, a locking pawl adapted to engage the carrier and lock the same against rotation, and a projection carried by the disk and disposed to engage and actuate the locking pawl for moving said locking pawl out of locking engagement with the carrier as the actuating pawl is arriving at a position for beginning movement of the carrier, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,189,759. DEVICE FOR HOLDING CHEESE AND OTHER FOODS. THORVALD WANG, Brooklyn, N. Y. Filed Mar. 25, 1916. Serial No. 86,550. (Cl. 17—24.)



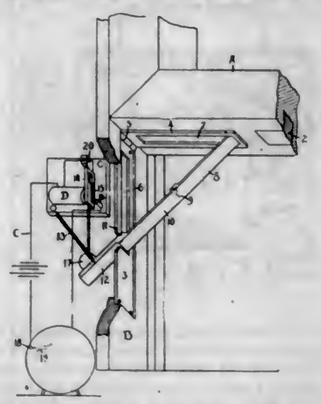
1. A holder for articles of food to be sliced, consisting of a table portion, supports therefor, an extensible leaf carried by said table, clamp elements carried by said table and leaf, means to adjust the said tensible leaf, a guide rail extending longitudinally of said table to guide a cutting implement, and means to vertically adjust said rail.

2. A holder for articles of food to be sliced, consisting of a table portion, supports therefor, an extensible leaf carried by said table, clamp elements carried by said table and leaf, means to adjust the said extensible leaf, and a handle secured to said table, the free end of said handle being located in line with the bottom edges of the supports for said table, whereby said handle acts as an auxiliary support for said table.

3. A holder for articles of food to be sliced, consisting of a table, an end member carried thereby extending above and below said table, the lower portion of said end member acting as a support for said table, the upper portion of said end member acting as a clamp member, a leaf slidably secured to said table, an end member secured thereto and extending above and below said leaf, the lower portion of said end member acting as a support for said leaf, the upper portion acting as a clamp member, a second support for said table adjacent the free end thereof, and a rotatable threaded spindle carried by the end member of said leaf, said last named table support being provided with a threaded opening engaging said threaded spindle.

4. In combination with a holder for articles to be sliced, a guide for a cutting implement consisting of a rail extending longitudinally of the holder, a threaded spindle carried thereby, a support to slidably retain said spindle, a spring to force said rail in one direction, and a wing-nut in engagement with the threads of said spindle to move the rail in the opposite direction.

1,189,760. ELECTRICALLY-OPERATED SASH-HOLDER. WILLIAM WEISKOPF, St. Paul, Minn. Filed Jan. 25, 1915. Serial No. 4,171. (Cl. 16—19.)



1. The combination with a window frame and sash, of a hinged element supported upon the window frame and engaging the sash to hold it in up-lifted position, and electrically actuated means for breaking the hinge whereby to remove the support and allow the window sash to move down by gravity.

2. The combination with a window frame and a sash having vertically sliding support therein, of a collapsible support for the sash comprising two alining members hinged together at their meeting ends, one of said members bearing against the under side of the sash at a point spaced apart from the side member of the window frame and the other member having pivotal support upon said side member of the frame, said hinge being constructed to bend inwardly toward said frame member.

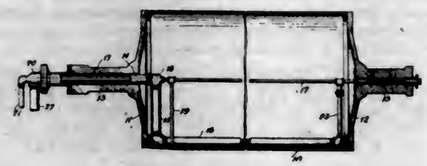
3. The combination with a window frame and a sash having vertically sliding support therein, of a stationary side plate secured within one of the side members of the frame, a swinging plate pivotally connected with the upper end of the stationary plate in position, when raised, to abut against the under side of the window sash, a link pivotally suspended from the outer end of said swinging plate, a bar hinged to the lower end of said link and pivotally connected with the stationary plate, and means for bending the hinge in order to collapse the support for the window.

4. The combination with a window frame and a sash having vertically sliding support therein, of a stationary plate secured within one of the side members of the frame, a swinging plate pivotally connected with the upper end of the stationary plate and adapted, when raised, to engage the under side of the sash, a link pivotally suspended from the outer end of said swinging plate, a lever hinged to the end of said link, said lever being fulcrumed upon the stationary plate and passing freely through a hole therein, and means engageable with the free lower end of said lever for bending the hinge between said lever and link, whereby to collapse the support for the window sash.

5. The combination with a window frame and a sash having vertically sliding support therein, of a vertically slotted plate countersunk within one of the side members of the frame, a longitudinally slotted movable plate pivotally connected with the upper end of said stationary plate and adapted when swung up to engage the window sash, and when swung down to lodge within the countersunk portion of the frame member, a link pivotally suspended from the outer end of said movable plate and capable of folding within the slot therein, a lever hinged to the end of said link and passing through the slot in the stationary plate, said lever having fulcrum support on the stationary plate and being foldable within the slot therein, and means acting on the free lower end of said lever for turning the same whereby to bend the hinge between said link and lever and collapse the support for the window.

[Claims 6 and 7 not printed in the Gazette.]

1,189,761. DRYING-CYLINDER. AMBROSE H. WHITE, Brooklyn, N. Y. Filed Oct. 22, 1914. Serial No. 867,938. (Cl. 34—4.)



1. A steam-heated drying cylinder in which water of condensation collects, said cylinder having means for introducing heating steam with uniform lengthwise distribution directly into the water of condensation, whereby the water is maintained at a uniform high temperature and serves as the agency for distributing the heat of the steam to the cylinder wall.

2. A steam-heated drying cylinder in which water of condensation collects, said cylinder having means for introducing heating steam with uniform lengthwise distribution directly into the water of condensation, whereby the water is maintained at a uniform high temperature and serves as the agency for distributing the heat of the steam to the cylinder wall, and means for withdrawing from the cylinder the excess water of condensation.

3. A steam-heated drying cylinder having a steam conduit located within the cylinder and extending longitudinally thereof adjacent to the peripheral wall thereof and provided with outlets for directing steam issuing therefrom toward the peripheral wall of the cylinder and means for conveying steam from the exterior of the cylinder to said conduit.

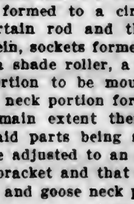
4. A steam-heated drying cylinder having trunnions at its ends, supports passing through the trunnions, and a steam conveying and distributing pipe within the cylinder mounted on said supports and extending lengthwise of the cylinder close to the peripheral wall thereof, said pipe having outlet openings on the side thereof toward the adjacent wall of the cylinder.

5. A steam-heated drying cylinder having a conduit for carrying steam to the interior thereof, a pipe connected to said conduit and located within the hollow cylinder extending lengthwise thereof close to the interior surface of the peripheral wall of the cylinder and provided with outlets for delivering steam toward said surface with substantially uniform lengthwise distribution, and means for withdrawing water of condensation from the interior of the cylinder.

[Claims 6 to 8 not printed in the Gazette.]

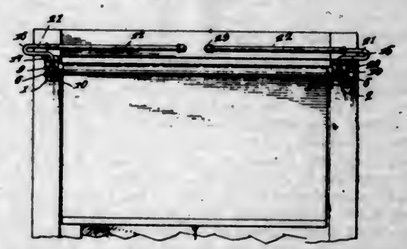
1,189,762. RADIATOR. ISIDOR WHITE, Chicago, Ill. Filed July 25, 1914. Serial No. 852,972. (Cl. 257—130.)

A radiator of the class described, comprising a series of elements each composed of strips of thin metal struck up to form sections 9 and 11 substantially parallel to the direction of extension of the strip, but offset laterally with respect to each other and connected by inclined walls 10, the strips of each element being arranged with the sections 9 opposite each other in pairs to form air channels 7, and the sections 11 also opposite each other, the elements so formed being vertically arranged side by side with the corresponding air channels of alternate elements in the same horizontal plane, and the corresponding air channels of intermediate elements in the same horizontal plane with each other, walls or sections 9 of each air channel being offset outwardly at their ends to space said walls or sections from the walls 11 of adjacent elements, and the walls 11 of each element being



offset inwardly at their ends to space them apart and form passages connecting the air channels.

1,189,763. SHADE AND CURTAIN FIXTURE. JOHN LYLE WHITE, New York, N. Y., assignor of one-half to William F. Schmidt, New York, N. Y. Filed Apr. 1, 1915. Serial No. 18,547. (Cl. 156—24.)



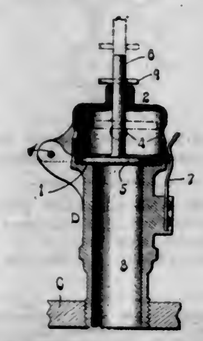
1. A shade and curtain fixture comprising a bracket consisting of a single piece of sheet metal folded on itself and having the ends bent to provide bases for attachment of the bracket at either side of a window opening, the end of the fold being formed to a circular socket for the reception of a curtain rod and the side arms having bosses formed therein, sockets formed in the bosses to receive the ends of a shade roller, and a curtain rod provided with a bearing portion to be mounted in the circular socket to support the rod and allow adjustment of the same to an operative position on either side of the bracket.

2. A shade and curtain fixture comprising a bracket consisting of a single piece of sheet metal folded on itself and having the ends bent to provide bases for attachment of the bracket at either side of a window opening, the end of the fold being formed to a circular socket for the reception of a curtain rod and the side arms having bosses formed therein, sockets formed in the bosses to receive the ends of a shade roller, a curtain rod provided with a bearing portion to be mounted in the circular socket and a goose neck portion formed in the rod to lie in line with the main extent thereof and beyond the bearing portion, said parts being so arranged that the curtain rod may be adjusted to an operative position on either side of the bracket and that a curtain may be arranged on said rod and goose neck portion to overlie and cover said bracket.

1,189,764. RELIEF-VALVE FOR INTERNAL-COMBUSTION ENGINES. HENRY L. WHITMAN, St. Louis, Mo. Filed Dec. 15, 1913. Serial No. 806,792. (Cl. 220—121.)

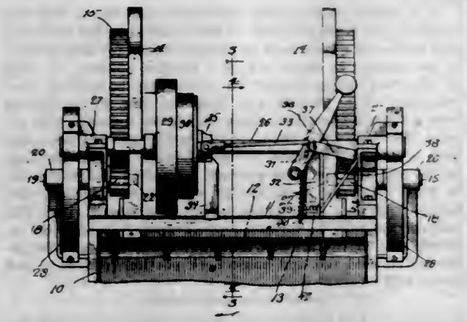
1. An internal combustion engine having a crank case, and means for preventing the admission of air to said crank case, said means including a tube communicating with said crank case, an automatic relief valve device closing said tube to prevent the admission of air through the tube and into the crank case, said automatic relief valve device being loose and free to open and close auto-

matically during the operation of the engine to permit the escape of air through said tube in response to pressure in the crank case, said automatic relief valve device being a single valve arranged to permit a circulation of air through said tube in only one direction, and said tube being firmly closed at all points between said single valve and the crank case so that the circulation of air through the tube will be under the control of said single valve.



2. An internal combustion engine having a crank case, and means for preventing the admission of air to said crank case during the operation of the engine, said means including a tube communicating with said crank case, a closure hinged to said tube and a single relief valve carried by said closure, said single relief valve being fitted to an end of the tube so as to permit a circulation of air through said tube in only one direction, said tube being firmly closed at all points between said single valve and the crank case so that the circulation of air through the tube will be under the control of said single valve and the said relief valve being loose and free to open and close automatically during the operation of the engine, so as to permit the escape of air through said tube in response to pressure in the crank case and to positively prevent the admission of air through said tube.

1,189,765. BALING-PRESS. ANDREW WICKEY, East Chicago, Ind. Filed June 7, 1915. Serial No. 32,513. (Cl. 100—5.)

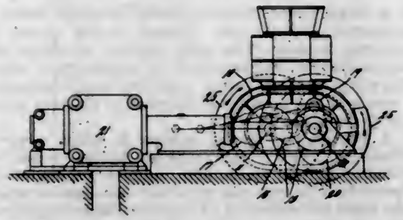


1. In a baling press, an upright baling chamber, a vertically reciprocatory plunger therein having a plunger head and arms carrying the same, continuous racks on said arms having lengthwise extending parallel portions, pinions meshing with said racks and acting to support the plunger, means for holding said pinions in mesh with said racks, and drive mechanism for said pinions.

2. In a baling press, a baling chamber, a plunger therein having a plunger head and arms carrying the head, said arms having continuous racks, each containing two lengthwise extending portions and each arm having a continuous groove running parallel with the rack thereof, pinions, one meshing with each rack, shafts for said pinions, there being portions projecting from said pinions and extending into said grooves, and motor driven gearing for driving said shafts.

3. In a baling press, a compression chamber, a plunger therein comprising a plunger head and arms carrying the head, continous racks, one on each arm and having two parallel, lengthwise extending portions, said arms having continuous grooves running parallel with said racks, pinions, one meshing with each rack, shafts for said pinions, each having a stub end entering the adjacent groove in the arms, power driven gearing for said shafts, hand operated clutch mechanism, and means operated by the plunger for unclutching said clutch mechanism at the ends of the upper strokes of the plunger.

1,189,766. IMPELLER PUMP OR BLOWER AND DRIVER THEREFOR. JOHN T. WILKIN, Connersville, Ind., assignor to The Connersville Blower Company, Indianapolis, Ind., a Corporation of Indiana. Filed Aug. 9, 1915. Serial No. 44,380. (Cl. 230—30.)



1. The combination, with a pump or blower of the lobed impeller type having two impeller shafts, of two reciprocating motor units each having its crank connected to one of said impeller shafts in such manner that each motor will exert its maximum driving effect upon its impeller shaft approximately at the time when the impeller thereof is offering its maximum resistance.

2. The combination with a pump or blower of the lobed impeller type comprising a pair of parallel shafts each carrying a two-lobed impeller and meshing synchronizing gears, of two power units each comprising a crank, each of said power units having its crank attached to one of the impeller-shafts substantially in the lobe plane.

3. The combination, with a pump or blower of the lobed impeller type having two impeller shafts with a two-lobed impeller on each shaft, the impellers on the two shafts intermeshing to produce on each impeller a gradually varying effective radius arm exposed to the fluid action, of two reciprocating motor units each having its crank connected to one of such impeller shafts in such manner that its driving effect on the impeller shafts rises and falls substantially synchronously with the resistance offered by the impeller.

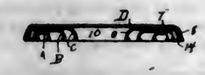
4. The combination, with a pump or blower of the lobed impeller type comprising a pair of parallel impeller shafts each carrying a two-lobed impeller, and intermeshing synchronizing gears connecting said two shafts, the impellers on the two shafts intermeshing to produce on each impeller a gradually varying effective radius arm exposed to the fluid action, of two power units, each of said power units having its crank attached to one of the impeller shafts so that the crank arm is substantially on dead center when the lobe plane of the impeller on such impeller shaft coincides with the plane of the two impeller shafts.

5. The combination, with a pump or blower of the lobed impeller type having two impeller shafts with a two-lobed impeller on each shaft, the impellers on the two shafts intermeshing to produce on each impeller a gradually varying effective radius arm exposed to the fluid action, of two reciprocating steam engines each having its crank mounted on one of said impeller shafts in such

a manner that when the steam engine is exerting its maximum force on such crank the associated impeller will be offering its maximum resistance.

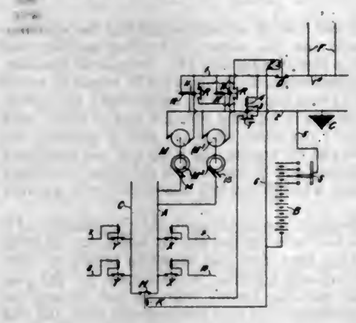
[Claim 6 not printed in the Gazette.]

1,189,767. TOILET-SEAT. GUY A. WILSON, Salt Lake City, Utah. Filed Dec. 3, 1914. Serial No. 875,316. (Cl. 4—18.)



The combination with a closet bowl having a plane upper face at the rear thereof, a plurality of sheet metal seats having concave under sides and of varying sizes both as to their outer and inner peripheral dimensions said seats being housed completely one within another with the lower edges of all of them in the same horizontal plane and means for hinging all of said seats in the same horizontal plane and upon said closet bowl.

1,189,768. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH LESTER WOODBRIDGE, Philadelphia, Pa. Filed Nov. 26, 1913. Serial No. 803,126. (Cl. 171—97.)



1. A system of electrical distribution comprising the combination of an alternating current consumption circuit, a direct current supply circuit having a storage battery, converting apparatus for connecting these circuits, an alternating current supply circuit normally connected to the alternating current consumption circuit, a direct current work circuit normally connected to the direct current supply circuit and means responsive to the direction and rate of energy transfer between the alternating current consumption and the direct current supply circuits, and adapted to automatically disconnect the alternating current supply and the direct current work circuits without interruping the connection between the battery and the alternating current consumption circuit, whereby the alternating current consumption circuit is uninterruptedly supplied with energy, substantially as described.

2. A system of electrical distribution comprising the combination of an alternating current consumption circuit, a direct current supply circuit having a storage battery, converting apparatus for connecting these circuits, an alternating current supply circuit normally connected to the alternating current consumption circuit, a direct current work circuit normally connected to the direct current supply circuit, means responsive to reversal of energy transfer between the alternating current consumption and the direct current supply circuits for automatically disconnecting the alternating current supply circuit, and means responsive to the rate of transfer of energy for automatically disconnecting the direct current work circuit, without interrupting the supply of energy from the battery to the alternating current consumption circuit.

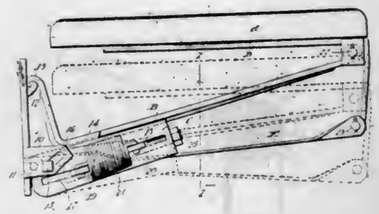
3. A system of electrical distribution comprising the combination of an alternating current supply circuit, an alternating current consumption circuit normally connected thereto and supplied therefrom, a direct current circuit having a normally floating storage battery, converting apparatus connected between the alternating current consumption circuit and the direct current circuit for normally supplying the latter from the former, and means responsive to reversal of energy transfer between the alternating current consumption and the direct current circuits, and adapted to automatically disconnect the alternating current supply circuit and permit the storage battery to discharge through said converting apparatus to the alternating current consumption circuit to maintain the latter without interruption.

4. In combination a direct current supply system including alternating-direct-current converting apparatus and a storage battery connected in multiple, an alternating current distribution system adapted to transfer a part of its energy to the direct current supply system through the converting apparatus, an alternating current supply system adapted to deliver energy to the alternating current distribution system, a switch between the alternating current supply system and the alternating current distribution system, and means dependent on the rate and direction of energy transfer between the alternating current distribution system and the direct current supply system for opening the switch.

5. In combination a direct current supply system including alternating-direct-current converting apparatus and a storage battery connected in multiple, a direct current load circuit connected to the direct current supply system, an alternating current distribution system adapted to transfer a part of its energy to the direct current supply system through the converting apparatus, an alternating current supply system adapted to deliver energy to the alternating current distribution system, a switch between the alternating current supply system and the alternating current distribution system, means dependent upon the rate and direction of energy transfer between the alternating current distribution system and the direct current supply system for opening said switch, a second switch between the direct current load circuit and the direct current supply system, and means dependent on the rate and direction of energy transfer in the alternating-direct-current converting apparatus for opening the last mentioned switch.

[Claims 6 and 7 not printed in the Gazette.]

1,189,769. SPRING-SEAT. OSCAR A. YOUNGREN, Sheridan, Wyo. Filed July 5, 1913. Serial No. 777,561. (Cl. 155—25.)



1. A spring seat comprising a supporting plate, a housing pivoted to said supporting plate, a seat supporting bar slidingly connected with said housing and provided with a connection by which it may be coupled to and turn on said supporting plate at a point removed from the pivot of the housing, springs connected at one end to said seat supporting bar and at the other end to said housing for

supporting said bar yieldingly, and a seat supported on said bar, substantially as set forth.

2. A spring seat comprising a base having a support, a housing pivoted to said base at a point rearward from said support, a bar slidably mounted on said housing and provided with a part extending in one direction and formed to engage and turn on the support on said base and with arms extending in the opposite direction, springs connected at one end to said arms and at the other end to said housing, and a seat mounted on the outer end of said bar, substantially as set forth.

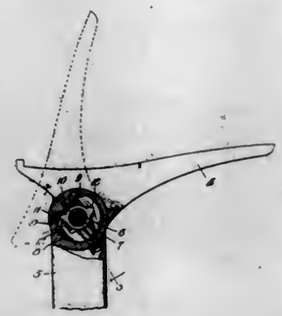
3. A spring seat comprising a base having a support, a housing pivotally mounted on said base at a point removed from said support to have a limited sliding movement, a seat supporting bar mounted on said housing to have a sliding movement, one end of said seat supporting bar being adapted for connection with the support on said base, a seat mounted on the outer end of said seat supporting bar, springs connected with said seat supporting bar at one end and with said housing at the other end, and means connected with the base and the seat supporting bar for maintaining said seat in a horizontal position when in use, substantially as set forth.

4. A spring seat comprising a supporting base, a housing supported to pivot and slide in relation to said base, a seat supporting bar mounted on said housing and formed with a part adapted to be detachably secured to said base to turn thereon and with arms extending within said housing, a cross-bar extending through slots in the sides of said housing and also connected with said arms, another cross-bar mounted in slots in the opposite end of said housing, springs connecting said cross-bars, bolts adjustably connecting the other cross-bar with the housing, and a seat appropriately mounted on the seat supporting bar, substantially as set forth.

5. A spring seat comprising a base support, a housing pivotally carried thereby, a bar slidingly mounted on said housing and adapted to be detachably secured to said base to turn thereon, springs connected at one end to said bar and at the other end to said housing, a seat pivoted on the outer end of said bar, an arm depending from said seat to below its pivot, and a distance rod connecting the lower end of said depending arm to the base, whereby said seat may be maintained in normal relation with the other parts regardless of their position, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

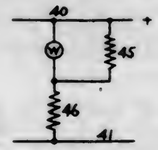
1,189,770. SEAT-HINGE. GEORGE H. ABBOTT, Elgin, Ill., assignor to Alfred D. Edwards, Elgin, Ill. Filed Oct. 4, 1915. Serial No. 54,046. (Cl. 155—13.)



1. A seat hinge embodying, in combination, two pivotally connected members, a flat spring secured to one of said members, a convex fulcrum over which said spring is arranged to bend, and a cam secured to the other of said members arranged to engage with the spring to bend the same over the convex fulcrum when said latter member is moved to a certain position, whereby the end of the spring projecting beyond the fulcrum is decreased in length with an increase in weight applied, substantially as described.

2. A seat hinge embodying, in combination, two pivotally connected members, a flat spring secured to one of said members, a convex fulcrum over which said spring is arranged to bend, and oppositely arranged cams secured to the other of said members arranged each to engage with one end of the spring to bend the same over the convex fulcrum when said latter member is moved to certain positions, whereby the end of the spring projecting beyond the fulcrum is decreased in length with an increase in weight applied, substantially as described.

1,189,771. ELECTRICAL CONTROL APPARATUS. CORNELIUS AMBRUSTER, Roslyn, Pa. Filed Sept. 26, 1913. Serial No. 791,953. (Cl. 172—179.)



1. An electrical control system comprising the combination of a motor and two motor controlling magnets and their circuits, a signal lamp and two resistances therefor, direction switches respectively operated in response to the magnets and having contacts and connections for including said resistances in parallel relation and in series with the lamp to light the latter when the switch positions are in one relation and for putting the lamp and one resistance in parallel relation and in series with the other resistance to dim the lamp when the switch positions are in another relation.

2. In an electrical control system the combination of a master switch having a marked dial of which one marking is indicated at a time, rest and direction lamps for illuminating the exposed marking, a resistance for the rest lamp, direction switches having contacts and circuits for varying the combination of said resistance to light the rest lamp when the switches are in one relation and for dimming it when the switches are in another relation, magnets for the switches, circuit connections common to the magnets and direction lamps, and circuit connections from the master switch for energizing either of the last mentioned circuits.

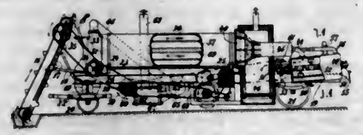
3. In an electrical control system the combination of a spindle capable of more than half a revolution in either direction and having a circular dial provided with markings and of which only one is indicated at a time, conducting segments none of which exceeds one hundred and eighty degrees, a row of contacts coöperating with said segments, gearing interposed between the spindle and segments whereby a rotation of the spindle in either direction produces a less rotation of the segments, and circuit connections controlled by said segments and row of contacts.

4. The combination in an electrical control system of a controlled part, signal lamps for indicating rest or direction of motion of the controlled part, magnet controlled switches for controlling the controlled part and circuits interconnected to these lamps and switches and controlled part and responsive to the actual motion of the controlled part for intermittently lighting the direction signal lamps.

5. The combination of a moving part and an indicator for same provided with a screen capable of transmitting light, lamps for illuminating the said screen, color screens interposed between said lamps and said screen, circuits provided with contacts interconnected with the moving part and the lamps and so arranged as to indicate direction of motion of moving part by the color of the illumination and actual motion of the moving part by intermittent flashing of said lamps.

[Claims 6 to 9 not printed in the Gazette.]

1,189,772. APPARATUS FOR DRYING AND MIXING MATERIAL. ULRICH AMMANN, Langenthal, Switzerland. Filed Jan. 28, 1913. Serial No. 744,681. (Cl. 34—6.)



1. A machine for drying and mixing material comprising a rotary drying cylinder, a device for supplying the material to be treated to said cylinder, means for causing the material to be lifted and spread about the cylinder, means for passing heated gases into said cylinder in the opposite direction to the feed of the material to be dried, a mixing chamber, means for discharging the material from said drying cylinder and transporting same to said mixing chamber and rotary stirring means in said mixing chamber for mixing the dried material with other material and for discharging the mixture, substantially as set forth.

2. A machine for drying and mixing material comprising a rotary drying cylinder, a device for supplying the material to be treated to said cylinder, lifting blades in said cylinder, a ribbed basket cylinder arranged within said drying cylinder, a mixing chamber, means for discharging the material from said drying cylinder and transporting same to said mixing chamber, means for heating said mixing chamber and for passing a current of heated gases through said drying cylinder in a direction opposite to that of the feed of the material, and means for discharging said material from said mixing chamber, substantially as set forth.

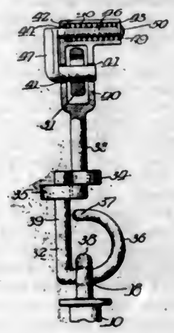
3. A machine for drying and mixing material comprising a rotary drying cylinder, a device for supplying the material to be treated to said cylinder, means for causing the material to be lifted and spread about in said cylinder, means for passing heated gases into said cylinder, a dust separator, means for drawing off the gases and the vapors obtained by the drying operation together with the dust separated from the material into said dust separator, a mixing chamber, and means for discharging the dried material into said mixing chamber, substantially as set forth.

4. A machine for drying and mixing material comprising a rotary drying cylinder, a device for supplying the material to be treated to said cylinder, a mixing chamber, a device for discharging the material from said cylinder to said mixing chamber, a heating chamber, means for passing the gases heated in said heating chamber into said discharging device and thereafter into said cylinder, and means for passing a current of heated gases through said mixing chamber, substantially as set forth.

5. A machine for drying and mixing material comprising a rotary drying cylinder, a device for supplying material to said cylinder, means for regulating said device, means for lifting and spreading said material in the cylinder, a mixing chamber, a device for discharging the material from said drying cylinder to said mixing chamber, a heating chamber, means for heating said mixing chamber and for passing heated gases from said heating chamber into said discharge device and thereafter into said cylinder, means for drawing off said gases and separating the dust therefrom, means for supplying other material to said mixing chamber, and means for mixing both materials and discharging same, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,189,773. UNCOUPLING DEVICE FOR COUPLINGS. HARRY T. ANDERSON, Butler, Pa., assignor to Harry Vissering & Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1913. Serial No. 752,200. (Cl. 213—59.)

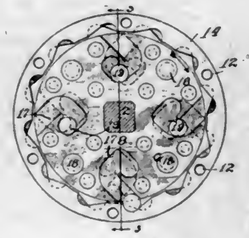


1. The combination with a coupler having a locking device and a lever for operating said locking device, of a longitudinally freely movable reciprocable connection between said lever and locking device, comprising a pair of members each provided adjacent one end with an eye engaging the other of said members.

2. An uncoupling device for coupler locks comprising, in combination, an operating lever, a coupler pin, a link therebetween including two members connected together non-rotatively and within fixed limits freely movable longitudinally relatively to each other, a pin mounted on and slidable relatively to one of said members adapted to connect said member to said operating lever and a spring adapted to yieldingly retain said pin engagement with said operating lever.

3. An uncoupling device for coupler locks comprising, in combination, an operating lever, a link including two members connected together non-rotatively but freely movable longitudinally relatively to each other, means permanently connected to one of said members for releasably connecting said link with the coupler lock, a pin mounted on and slidable relatively to one of said members adapted to connect said member to said operating lever and a spring adapted to yieldingly retain said pin in engagement with said operating lever.

1,189,774. BUILT-UP RELEASABLE CLUTCH MECHANISM. GEORGE D. BAILEY and FRANK E. RICE, Detroit, Mich., assignors to Gearless Differential Co., a Corporation of Michigan. Filed May 4, 1914. Serial No. 836,072. (Cl. 192—22.)



1. In a releasing clutch mechanism roller carrying cam members comprising sets of oppositely directed stamped recessed plates bolted together, a separating plate between the respective sets of oppositely directed recessed plates, and ratchet members formed of a plurality of plates bolted together and to a wheel of a vehicle.

2. In a device of the class described recessed roller carrying members built up of stamped plates, rollers in the recesses thereof of a length equal to the respective depths of the recesses determined by the number of plates assembled, and ratchet rings disposed around said roller carrying members comprising a plurality of stamped plates affording teeth to coact with said rollers to receive a drive from said roller carrying members through said rollers.

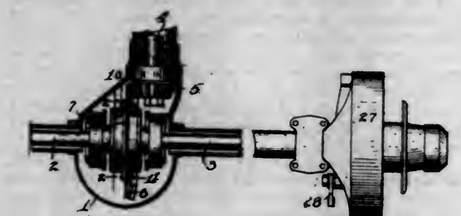
3. In a device of the class described the combination with sectional ratchet rings, of sectional built up roller carrying members and rollers disposed therein.

4. The combination with forward and reverse drive roller carrying members having rollers therein, of sectional built up forward and reverse drive ratchet rings to coact with the rollers to receive a drive from said roller carrying members.

5. In a device of the class described a cam element consisting of stamped recessed plates bolted to one another, a separating plate assembled therewith with the recesses in said stamped plates on each side thereof directed oppositely, and annular ratchet members having two rows of teeth, one row directed oppositely to the other to coact with the respective separated portions of the cam element to receive or transmit a drive therebetween.

[Claims 6 and 7 not printed in the Gazette.]

1,189,775. CLUTCH-DIFFERENTIAL. GEORGE D. BAILEY and FRANK E. RICE, Detroit, Mich., assignors to Gearless Differential Co., a Corporation of Michigan. Filed May 4, 1914. Serial No. 836,074. (Cl. 74—7.)



1. In a device of the class described, a sectional axle, ratchet wheels rigidly secured on the axle sections, spacing rings journaled about each of said wheels and rigidly connected together, pawls having recesses therein mounted in each of said rings, one pawl of each ring adapted to drive a ratchet wheel in one direction and the other to drive the wheel in the other direction, and a tilting lever with its ends engaged in the recesses of adjacent pawls on said respective rings for maintaining the respective reverse driving pawls of each ring out of driving engagement when the forward driving pawls are in driving position.

2. The combination with a sectional driving axle, of rotatable hub members, ratchet wheels, one ratchet wheel secured on each of said axle sections and rotatable therewith independently of one another, a bevel gear carrying ring journaled between said ratchet wheels, rings on each side thereof rigidly connected thereto and to one another and one journaled concentrically about each of said ratchet wheels, pawls journaled in said hub members and said gear carrying ring and adapted to move through recesses in said rings, certain ones thereof adapted to transmit a drive from said associated rings to said ratchet wheels for rotation in one direction, and others for transmitting a drive for rotation in the opposite direction, a bevel gear rigidly secured to said gear carrying ring, and means driving said bevel gear.

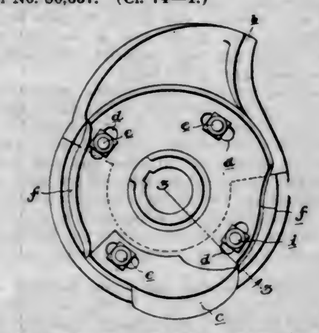
3. In a differential releasing clutch mechanism a sectional driving axle, ratchet wheels, one rigidly secured on each of the respective axle sections, rotatable hub members on the outer side of each of said ratchet wheels, a driving ring between said ratchet wheels, spacing rings between said hub members and said driving ring, one disposed concentrically about each of said respective ratchet wheels, pivoted pawls journaled in said hub members and spacing rings and movable for engagement with the ratchet wheels to drive the same in either direction, and means retracting certain of said pawls when certain others thereof are in driving position.

4. In a device of the class described the combination with a sectional driving axle, of rigidly connected rotatable hub members and a driving ring, ratchet wheels secured on the respective axle sections intermediate said hub members and driving ring, spacing rings disposed between said hub members and said driving ring and concentric about said ratchet wheels, pawls carried by said hub members and driving ring adapted to effect driving engagement between said ring and said ratchet wheels, pivoted tilting levers mounted in said driving ring and engaging the adjacent pawls for the respective ratchet wheels to cause elevation of one pawl with a lowering of the other insuring the pawls for one direction of rotation being moved into inoperative position when the pawls for the other direction of rotation are in driving position.

5. In a device of the class described a sectional driving axle, a driving ring, a bevel gear thereon, spacing rings rigidly connected on each side of said driving ring, hub sections connected to said rings and journaled on the axle sections of the sectional driving axle, ratchet wheels on the driving axle sections concentric with said respective spacing rings, pawls pivoted on said driving ring and hub members adapted to engage said ratchet wheels to drive the same in either direction, and to permit a relative movement to take place therebetween, and tilting levers connecting adjacent pawls whereby one of said pawls is elevated out of driving position when the other is in driving position.

[Claims 6 to 11 not printed in the Gazette.]

1,189,776. LOOM-CAM. JOHN E. BAKER, Raleigh, N. C., assignor to Clinton Cam Company, Clinton, S. C., a Corporation of South Carolina. Filed Feb. 26, 1916. Serial No. 80,637. (Cl. 74—1.)



1. A loom cam consisting of a body part provided with a series of slots, a picker point and a check point and bolts for securing these points to the body of the cam, and a patch plate approximately semi-circular in shape and provided with slots, this plate being fastened to the cam body by the same bolt that fastens the check point and having one end abutting against the adjacent end of the picker point.

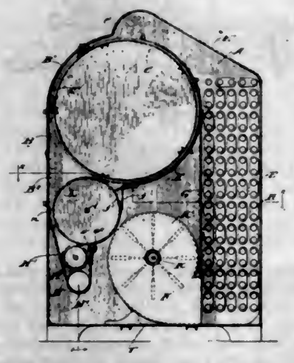
2. A loom cam consisting of a body part provided with a series of slots, a picker point and a check point and bolts for securing these points to the body of the cam, and a patch plate approximately semi-circular in shape and provided with slots, this plate being fastened to the cam body by the same bolt that fastens the check point and having one end abutting against the adjacent end of the picker point, the cam body being provided with an annular rib and the patch plate being provided with a similar groove in its inner face to receive said rib.

3. A loom cam body provided with a picker point secured to one face thereof, and a semi-circular patch plate having a circumference corresponding to the circumference of the cam body and provided with a slot, a bolt for fastening this patch plate to the cam body, said bolt passing through said slot, said bolt and slot connection permitting the cam patch to be rotatively adjusted to cause it to abut against one end of the picker point.

4. The combination with a loom cam, of a patch plate attached to one side thereof, and means whereby this plate is rendered circumferentially adjustable.

5. The combination with a loom cam having a picker point projecting laterally from the face of the cam, of a patch plate, and means for fastening it against the side of the cam in abutting relation to the projecting part of the point.

1,189,777. DRYING APPARATUS. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Ltd., Chicago, Ill., a Corporation of New York. Filed Aug. 28, 1914. Serial No. 859,036. (Cl. 34—5.)



1. In a drying tumbler, the combination with a casing, of a rotary cylinder in said casing for containing articles to be dried, a heating chamber, a blower for circulating air through the heating chamber and thence through the cylinder, a screen through which the air passes before being drawn through the blower, and means for automatically removing the particles of material deposited upon said screen.

2. In a drying tumbler, the combination with a casing, of a rotary cylinder in said casing for containing articles to be dried, a heating chamber, a blower for circulating air through the heating chamber and thence through the cylinder, a screen through which the air passes before being drawn through the blower, and a movable brush engaging said screen for removing therefrom particles of material deposited thereon.

3. In a drying tumbler, the combination with a casing, of a rotary cylinder in said casing for containing articles to be dried, a heating chamber, a blower for circulating air through the heating chamber and thence through the cylinder, a screen through which the air passes before being drawn through the blower, and a rotary brush engaging said screen for removing therefrom particles of material deposited thereon.

4. In a drying tumbler, the combination with a casing, of a rotary cylinder in said casing, a heating chamber, a blower for circulating air through the heating chamber and thence through the cylinder, a screen through which the air passes before being drawn through the blower, and a rotary brush comprising pliable strips spirally arranged thereon engaging said screen to remove particles of material deposited thereon and to discharge the particles of material to the exterior of the casing.

5. In a drying tumbler, the combination with a casing, of a rotary cylinder in said casing, a heating chamber, a blower for circulating air through the heating chamber and cylinder, a rotary cylindrical screen for eliminating particles of material from the air after it passes through the cylinder and before it enters the blower, and means engaging the exterior of said cylindrical screen for removing therefrom particles of material deposited thereon.

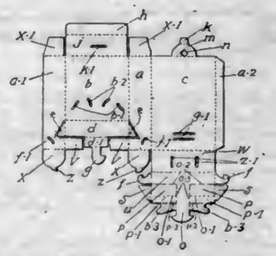
[Claims 6 to 12 not printed in the Gazette.]

1,189,778. LIFTING-JACK. EDMUND C. BATES, Alliance, Ohio. Filed Jan. 16, 1914. Serial No. 812,583. (Cl. 254—111.)



A lifting jack including a base having a vertical guide way therein with a vertical slot having edge flanges extending to the bottom of the base in one side wall thereof, a rack located and operable in the guide way and bearing on the edge flange of the slot, a rest on the upper end of the rack, a bracket extending downward from the rest external to the base and having a lateral bar on its lower end extending through the slot and connected with the lower end of the rack, and an adjustable supplemental rest on the bracket.

1,189,779. COMBINATION FEED-HOPPER AND POULTRY-FOOD CARTON. WALTER A. BECKER, North Chattanooga, Tenn., assignor of one-half to S. Russell Dow, Chattanooga, Tenn. Filed Apr. 19, 1915. Serial No. 22,345. (Cl. 229—17.)



1. A combination feed hopper and poultry-food carton formed from a single blank having front, side and back portions, cover flaps, base flaps and a lower flap portion normally forming a portion of the front of the carton and adapted to be disengaged from its normal position and bent inwardly toward the back of the carton and having means for retaining it in engagement with the back of the carton with its main bottom edge spaced apart therefrom to provide a passage for the downward flow of feed narrower than the main body of the carton, whereby the device may be converted into a poultry food carton.

2. A combination feed hopper and poultry-food carton formed from a single blank comprising integral front, side and back portions, cover and suspending flap portions, base flap, hooked tongue extension portions adapted to lock the blank in carton form, readily detachable side portions adapted to be torn off to convert the device into a feed hopper, and a tongue inclined flap portion adapted

to lock into the back of the carton to retard the downward flow of feed into the feed hopper, substantially as set forth.

3. A feed hopper formed from a single blank and comprising front, side and back portions, a cover portion integral with the front, a suspending flap integral with the back, a tongued feed hopper flap integral with the front and adapted to be bent inwardly toward the back of the carton to afford a narrow passage between the bottom edge thereof and the back of the carton and having a tongue to engage in slotted portions of the back, side extension flaps having inwardly bendable tongues, a base having a hooked tongue engageable in slotted portions of the front of the blank, and having hooked tongues engageable in slotted portions of the sides of the blank, and portions adjacent the central tongue adapted to be detached from engagement with the tongue and to be folded inward to lock against the tongues of the inwardly folded side extension flaps, substantially as shown and described.

1,189,780. HEAT-INSULATING COMPOUNDS AND PROCESS OF PRODUCING SAME. CORNELIS JOHANNES BEINDORFF, The Hague, Netherlands, assignor to Beindorff and Company, The Hague, Netherlands, Filed Dec. 22, 1914. Serial No. 878,588. (Cl. 106—18.)

1. A heat-insulating compound for use as described consisting essentially of infusorial earth, alum, wood pulp paper, chalk, saw-dust and resin.

2. The hereindescribed process of producing a heat-insulating compound which consists in forming two mixtures, one composed of wood pulp paper and resin, and the other composed of infusorial earth, alum, chalk and saw-dust, and then mixing the first mentioned mixture with the other while water is simultaneously sprinkled on the mass.

1,189,781. SIGNALING DEVICE. SIDNEY A. BEYLAND, Elyria, Ohio, assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Oct. 16, 1911. Serial No. 655,062. (Cl. 116—19.)



1. In a device of the class described, the combination of a duct casing having a portion of the bore thereof conical shaped, a frusto-conical shaped supporting member driven into and engaging the conical part of the bore, a reed mounted on said support, a shoulder on said support and an annular member provided on said casing engaging the shoulder on the support to hold the support and reed in place.

2. In a device of the class described, the combination of a hollow casing having a frusto conical shaped socket formed in a portion of the bore thereof, a frusto-conical shaped supporting member driven into said socket, a reed carried by said supporting member, a shoulder on said supporting member, and an annular member provided on the casing engaging such shoulder to hold said supporting member in position.

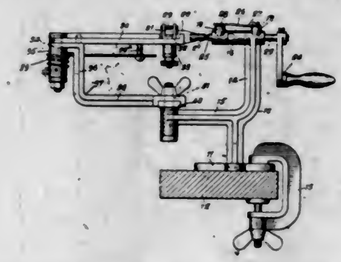
3. In a device of the class described, the combination of a sound conduit, a vibratory sound producing reed mounted therein, a support for said reed having a curved or inclined shoulder, means acting positively to prevent the movement of the reed support in one direction in said conduit and an inclined or curved member on said conduit engaging the inclined or curved shoulder upon the reed support when the parts are assembled.

4. In a device of the class described, the combination of a sound conducting duct, having a socket therein with inclining walls, a vibratory sound producing device in said duct, a frusto-conical shaped support for said sound producing device, said support being mounted in said socket, and said duct being provided with a ring engaging the outer end of the support, and retaining said sound producing device in position in said duct.

5. In a device of the class described, the combination of a duct casing, a chamber casing, means to attach said casings together, a vibratory sound producing device mounted in said casings, inclined walls in said casings forming a socket therein, a frusto-conical shaped support for said sound producing device, and said chamber casing being provided with a ring adapted to engage said support when said casings are fastened together to retain said sound producing device in position in said casing.

[Claims 6 to 9 not printed in the Gazette.]

1,189,782. PARING APPARATUS. FLORENCE HEINBISCHOFF, New York, N. Y. Filed Sept. 8, 1914. Serial No. 860,637. (Cl. 146—8.)



1. In a paring apparatus, the combination with a frame including manually adjustable means for guiding in the radius of a circle a blade yieldingly mounted on the adjustable means, of a rod with means to hold an article to be pared, said rod being manually rotatable in the frame as well as being adjustable in directions to and from the path of movement of the blade, and a catch on the frame for engaging the rod to releasably hold the rod when in adjusted positions.

2. In a paring apparatus, the combination with a frame including manually adjustable means for guiding in the radius of a circle a blade yieldingly mounted on the adjustable means, of a rod with means to hold an article to be be pared, and having spaced annular grooves in its periphery, the said rod being manually rotatable in the frame as well as being adjustable in directions to and from the path of movement of the blade, and a spring actuated catch on the frame for engaging the grooves of the rod to releasably hold the rod when in adjusted positions.

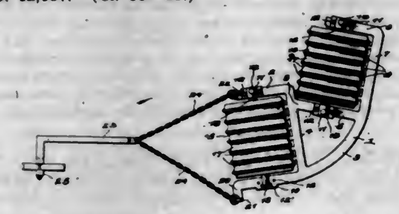
3. In a paring apparatus, in combination, a frame with a bracket manually movable in the radius of a circle, a spring actuated arm pivoted to the bracket, and carrying a cutting-blade, a rod with means to hold an article to be pared, said rod being manually rotatable in the frame as well as being adjustable in directions to and from the path of movement of the blade, and a catch on the frame for engaging the rod to releasably hold the rod when in adjusted positions.

4. In a paring apparatus, in combination, a frame with a bracket manually movable in the radius of a circle, a spring actuated arm pivoted to the bracket, and carrying a cutting blade, a rod with means to hold an article to be pared, and having spaced annular grooves in its periphery, the said rod being manually rotatable in the frame as well as being adjustable in directions to and from the path of movement of the blade, and spring acted means on the frame for engaging the rod to releasably hold the rod when in adjusted positions.

5. In a paring apparatus, the combination with a frame including a blade manually movable in the radius of a circle, of a sleeve on the frame, a rod with means to hold an article to be pared, said rod being manually rotatable in the sleeve as well as being adjustable in directions to and from the path of movement of the blade, and a catch on the frame for engaging the rod to releasably hold the rod when in adjusted positions.

[Claim 6 not printed in the Gazette.]

1,189,783. AGRICULTURAL IMPLEMENT. JOHN RANDALL BLACK, Toulon, Ill. Filed July 29, 1915. Serial No. 42,637. (Cl. 55—21.)



1. A combined leveling and mulching attachment for plows including a supporting frame, a plurality of peripherally grooved rollers revolubly mounted therein with the axes of said rollers diverging toward the front and the inner ends of said rollers disposed in advance of their outer ends whereby the horizontal forward dragging of the attachment will cause the rollers to exert an endwise scraping action thereby leveling the ground over which they are drawn and simultaneously packing the moist earth in the grooves thereof, and cleaning fingers extending into said grooves for removing the packed earth therefrom and permitting it to drop on the ground over which the attachment is drawn to form a moisture conserving mulch.

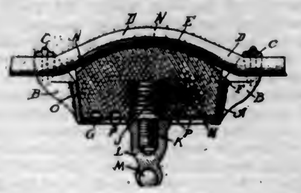
2. A device of the character described including a frame comprising a substantially U-shaped section, an additional substantially U-shaped section disposed in the rear of said first mentioned section and projecting at an angle therefrom, the extremity of one arm of the last mentioned section connected to the base of the first mentioned section adjacent one end, an arcuate strip connecting the opposite ends of said base and arm, and a pair of peripherally grooved rollers disposed in said sections.

3. A device of the character described including a frame, comprising a pair of substantially U-shaped sections disposed one in the rear of the other and diverging from each other, one end of the forward section disposed adjacent the opposite end of the rear section, bearings on the opposite arms of said sections, and a pair of peripherally grooved rollers disposed in said bearings.

4. A combined leveling and mulching attachment for plows including a rigid frame comprising two open sections disposed one in the rear of the other and diverging from each other, one end of the forward section being disposed adjacent the opposite end of the rear section, longitudinally alined bearings carried by the opposite ends of the sections, the axes of the bearings of the two sections diverging toward the front, the inner bearings of the two sections being arranged in advance of the outer bearings thereof, and peripherally grooved rollers having axles at their ends revolubly mounted in the bearings of the sections.

5. A device of the character described including a frame, comprising a pair of substantially U-shaped sections disposed one in the rear of the other and diverging from each other, one end of the forward section disposed adjacent the forward end of the rear section, upper and lower bearing surfaces on the arms of said sections adjacent the ends thereof, a semi-circular lubricating groove on the inner end of said surfaces, a pair of peripherally grooved rollers in said sections having projecting axes positioned between said bearing plates, means carried by said sections to remove soil from the grooves in said rollers when revolving, a lateral projection on the end of one of the arms of the said forward section, the extremities of the arms of said sections being bent vertically upright, and chains connecting the said uprights to a rod secured to the motive power.

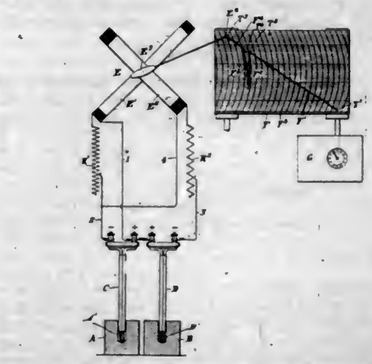
1,189,784. TROLLEY-WIRE HANGER. GLENN HENRY BOLUS, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Oct. 22, 1914. Serial No. 867,982. (Cl. 191—40.)



1. In a trolley wire hanger, the combination with a metal ring having an inwardly inclined seat and diametric extending hooks, of an insulator fitting within the ring having a convexly rounded top with a plurality of diametric grooves extending at different angles across the top, a stud rigidly fixed in the bottom of the insulator with an extending threaded stem, a trolley wire ear threaded on the stem and moved tightly against the stud, and a suspension wire for the hanger which passes under the ear and is seated in a diametric groove for holding the insulator in the ring and adjustable for different grooves to change the angular position of the insulator so that the said trolley ear will be in proper alinement.

2. A trolley wire hanger comprising a metal ring inclined inwardly at the bottom and extending hooks at the opposite sides, an insulator having a bottom aperture and a convexly rounded top with a plurality of diametrically extending grooves at angles to each other and inclined sides so that the insulator may be fitted loosely and adjusted in the ring, a stud rigidly fixed in the said bottom opening of the insulator having an extending threaded stem, a trolley wire ear threaded on the said stem and threaded tightly against the stud, and a suspension wire extending under the said hooks and over the convex top of the insulator in one of the said diametric grooves for holding the insulator firmly in the said ring, the insulator being rotatable before the wire is applied to place the said trolley ear in any desired alinement, and the said wire being then seated in the corresponding groove in the top of the insulator for holding the insulator in place.

1,189,785. METHOD OF AND APPARATUS FOR DETERMINING TRANSFORMATION-POINTS. RICHARD P. BROWN, Philadelphia, Pa., assignor to The Brown Instrument Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 7, 1916. Serial No. 70,737. (Cl. 73—51.)



1. The method of determining the transformation temperature of a test body which consists in simultaneously subjecting said test body and a neutral body to the same thermal conditions to vary their temperatures through a range including the transformation point, utilizing the

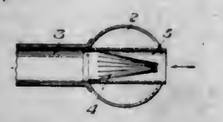
varying temperatures of the two bodies to maintain an electropotential difference which is a function of the temperature of the test body and a second electropotential difference which is a function of the differences between the temperatures of the two bodies and subjecting the movable element of an electric measuring instrument to a deflecting force due to the first of said potential differences and simultaneously therewith to a second force due to the second of said potential differences.

2. The method of determining the transformation temperature of a test body which consists in simultaneously subjecting said body and a neutral body to the same thermal conditions to vary their temperatures through a range including the transformation point, subjecting a thermo-couple to the varying temperature of the test body, subjecting the movable element of a temperature measuring device to a deflecting force which is a function of the potential difference generated in said thermo-couple, subjecting a second thermo-couple to the varying temperature of the neutral body, and simultaneously therewith subjecting said movable element to a deflecting force which is a function of the difference between the potential differences created in the two thermo-couples on a variation between the temperatures of the test and neutral bodies.

3. Apparatus for determining the transformation point of a test body from the temperatures of the test body and a neutral body subjected to the same thermal conditions to vary their temperatures through a range including the transformation point, which comprises in combination with said bodies, an electrical measuring instrument of the differential type having two windings and a movable element subjected to a deflecting force by a current flow of either winding, and means responsive to the temperatures of said bodies for impressing an electro-motive force on the terminals of one of said windings which is a function of the temperature of the test body, and for impressing on the terminals of the other of said windings an electro-motive force which is a function of the difference between the temperatures of the test and neutral bodies.

4. Apparatus for determining the transformation point of a test body from the temperatures of the test body and a neutral body subjected to the same thermal conditions to vary their temperatures through a range including the transformation point, which comprises in combination, a thermo-couple subjected to the temperature of the test body, a second thermo-couple subjected to the temperature of the neutral body, an electrical measuring instrument of the differential type having two windings and a movable element subjected to a deflecting force by a current flow in either winding, and circuit connections for connecting the terminals of one of said thermo-couples to the terminals of one of said windings, and for connecting the two thermo-couples in series with the other winding and in such relation that each thermo-couple bucks the other.

1,189,786. THERMOSTATIC CONTROL DEVICE FOR EXPLOSIVE-ENGINES. CLARENCE P. BYRNES, Sewickley, Pa. Filed Apr. 2, 1915. Serial No. 18,743. (Cl. 123—124.)



1. An explosive engine having a fuel inlet pipe provided with a charge former and an air inlet through which air is continuously sucked by the engine while running, and a thermostatic device adjacent to the engine exhaust and in conductive heat relation thereto additionally to any heating thereof from the air drawn in and arranged to control at all times the volume of air sucked in through said air inlet to the fuel pipe, substantially as described.

2. An explosive engine having a fuel inlet pipe provided with a charge former and an air inlet through which air is continuously sucked by the engine while running, and a thermostatic choke device having a part thereof located in said air inlet and adjacent to the engine exhaust and in conductive heat relation thereto additionally to any heating thereof from the air drawn in, said device controlling at all times the volume of air sucked in through said air inlet, substantially as described.

3. An explosive engine having a flow-channel connected therewith and through which fluid is continuously moved by the engine while running, and a thermostat formed as a choke device located within said flow-channel and continuously controlling the flow of fluid therethrough while the engine is running by the different positionings of said thermostatic device under the different temperatures to which it is subjected, substantially as described.

1,189,787. TENT AND PICKETING PEG AND THE LIKE. SYDNEY CHARLES CADDY, Willesden, England. Filed Jan. 11, 1916. Serial No. 71,476. (Cl. 189—92.)



1. A tent or picketing peg comprising a body of substantially oval shape in cross section of hollow formation being substantially straight for the greater portion of its length and terminating in a pointed end, a central rod or stem slidably mounted within the hollow body, a pair of flukes or arms pivotally mounted to the lower end of the said rod to project through opposite and angularly formed holes in the said hollow body, an enlarged head rotatably mounted on the rod and having its lower portion shaped to project into the hollow body of the peg and when turned at right angles to engage with and rest upon the upper end of the peg, attachment means secured on the hollow body and means to limit the movement of the rod in the said hollow body.

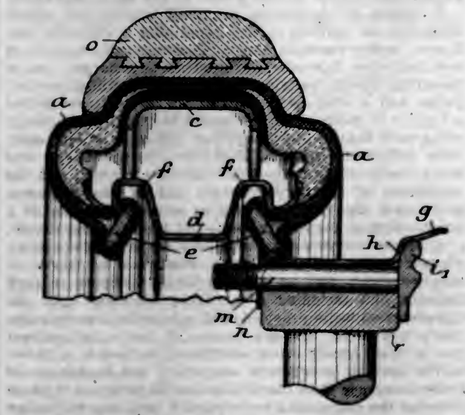
2. A tent or picketing peg comprising a body of substantially oval shape in cross section of hollow formation being substantially straight for the greater portion of its length and terminating in a pointed end, a central rod or stem slidably mounted within the hollow body, a pair of flukes or arms pivotally mounted to the lower end of the said rod to project through opposite and angularly formed holes in the said hollow body, an enlarged head rotatably mounted on the rod and having its lower portion shaped to project into the hollow body of the peg, and when turned at right angles to engage with and rest upon the upper end of the peg, a pin secured to the said rod, projections in the said hollow body, and attachment means secured on the hollow body.

3. A tent or picketing peg comprising a body of substantially oval shape in cross section of hollow formation being substantially straight for the greater portion of its length and terminating in a pointed end, a central rod or stem slidably mounted within the hollow body, a pair of flukes or arms pivotally mounted to the lower end of the said rod to project through opposite and angularly formed holes in the said hollow body, an enlarged head rotatably mounted on the rod and having its lower portion shaped to project into the hollow body of the peg and when turned at right angles to engage with and rest upon the upper end of the peg, a pin of U-shape having its outer ends projecting in an upward and downward direction secured to the said rod, and an attachment ring having its ends projecting into holes in the said hollow body.

4. A tent and picketing peg comprising a body of substantially oval shape in cross section of hollow formation being substantially straight for the greater portion of its length and terminating in a pointed end, a central rod or stem slidably mounted within the hollow body, a pair of flukes or arms pivotally mounted to the lower end of the said rod to project through opposite and angularly formed holes in the said hollow body, an enlarged head rotatably mounted on the rod and having its lower portion shaped to project into the hollow body of the peg when turned at right angles to engage with and rest upon the upper end of the peg, a pin of U-shape having its outer ends projecting in an inward and downward direction secured to the said rod, and an attachment ring having its ends projecting into holes in said hollow body, the said ring being bent and shaped at its intermediate portion to engage with the underside of the rotatable head.

5. A tent and picketing peg comprising a body of substantially oval shape in cross section of hollow formation being substantially straight for the greater portion of its length and terminating in a pointed end, a central rod or stem slidably mounted within the hollow body, a pair of flukes or arms pivotally mounted to the lower end of the said rod, to project through opposite and angularly formed holes in the said hollow body, an enlarged head rotatably mounted on the rod and having its lower portion shaped to project into the hollow body of the peg and when turned at right angles to engage with the rest upon the upper end of the peg, a pin of U shape having its outer ends projecting in an inward and downward direction secured to the said rod, and an attachment ring having its ends projecting into holes in said hollow body, the said ring being bent and shaped at its intermediate portion to form a hook into which the enlarged head of the inner rod can be sprung and retained.

1,189,788. RESILIENT TIRE. TITO LIVIO CARBONE, Charlottenburg, Germany. Original application filed Feb. 12, 1910, Serial No. 543,525. Divided and this application filed Jan. 11, 1911. Serial No. 601,982. (Cl. 152—21.)



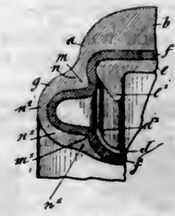
1. The combination of a ring-shaped flange, a detachable ring-shaped flange, said flanges having broad bearing surfaces, bolts extending from the first-mentioned ring-shaped flange to the said detachable ring-shaped flange, a detachable ring-shaped plate extending from and over the fixed flange, and to and under the detachable flange, and a cover having beads with bearing surfaces coöperating with said bearing surfaces of said rings, held by said ring-shaped plate and said flanges.

2. In a resilient tire, the combination of a cover having enlarged beads disposed substantially perpendicularly thereto, an inner stretching ring having substantially vertically disposed depressed seats formed therein for holding the beads of said cover, and means for holding the beads within said seats.

3. In a resilient tire, the combination of an inner stretching ring having a depressed portion and substantially vertically disposed depressed seats formed therein at either side of said depressed portion, a cover having beads held in said seats, said beads being separated by said depressed portion, and means for holding said beads within said seats.

4. In a resilient tire, the combination of an inner stretching ring having depressions with substantially parallel sides forming seats and lateral parts extended outwardly from said seats, a cover provided with enlarged beads held in the said seats and having the narrower portions of said cover adjacent to said enlarged beads pressed against said lateral parts extending outwardly from said seats, pressing means for pressing against the beads of the cover for holding the same within the said seats of the inner stretching ring, said pressing means being adjacent said narrower portions of said cover and on those sides thereof opposite to said seats of said inner stretching ring, and operating to press said beads into said depressed seats of said stretching ring.

1,189,789. RESILIENT TIRE. TITO LIVIO CARBONE, Charlottenburg, Germany. Original application filed Feb. 12, 1910, Serial No. 543,525. Divided and this application filed Oct. 4, 1913. Serial No. 793,313. (Cl. 152—36.)



1. A resilient tire having normally spaced rigid rings, bendable connections connecting the rings and separate from them and arranged around the circumferences of both sides of the said rings, said connections coming down on the sides of said outer rigid ring and flaring sharply outwardly with respect to the central plane of said rings, said connections being vulcanized to permanent mean normal shape, and remaining outwardly bent when the load is applied and at all times, so that the strains in that part of said connections between said rings are always of a bending nature.

2. A resilient tire having normally spaced rigid rings, a cover separate from said rings and connecting them, said cover coming down on the sides of said outer rigid ring and having folds around the circumference of both sides of the rings flaring sharply outwardly with respect to the central plane of said rings, and vulcanized to permanent mean normal shape, and remaining outwardly bent when the load is applied and at all times so that the strain in that part of the tire between said rings is always of a bending nature.

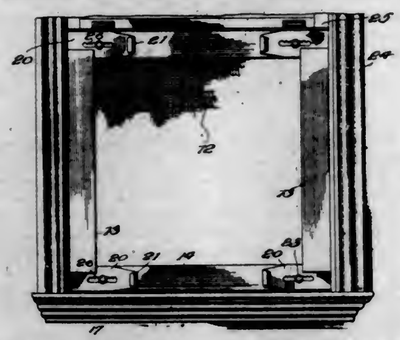
3. In resilient tires having normally spaced rigid rings, a cover connecting the rings and separate from them, said cover coming down the sides of said outer rigid ring, and having continuous folds around the circumference of both sides of the rings and at the sides of the same, said folds being sharply bent outwardly from the sides of the rings, and vulcanized to permanent mean normal shape, and remaining outwardly bent when the load is applied and at all times so that the strain in that part of the tire between said rings is always of a bending nature.

4. A resilient tire having normally spaced rigid rings, bendable connections connecting the rings and separate from them and arranged around the circumferences of both sides of the said rings, said connections coming down on the sides of said outer rigid ring and flaring sharply outwardly with respect to the central plane of said rings, said connections being vulcanized to permanent mean normal shape and remaining outwardly bent when the load is applied and at all times, so that the strain in that part of said connection between said rings is always of a bending nature, said outer ring being provided with strengthening ribs extending inwardly and substantially radially therefrom, that portion of said connections adjacent said strengthening ribs being freely movable with respect thereto and having an internal layer of fabric adjacent said strengthening ribs.

5. A resilient tire having normally spaced rigid rings, one of said rings acting as a stretching ring and the other acting as a floating ring, the stretching ring having curved edge portions and extending laterally outwardly, and the floating ring being provided with strengthening ribs extending inwardly and radially therefrom, the outer faces of said ribs being inclined with respect to the central plane of said rings, a cover connecting the rings and having a tread, said cover having folds around the circumferences of both sides of the rings, vulcanized to permanent mean normal shape, and laterally bent sharply outwardly with respect to the central plane of the rings, said folds maintaining their outward flare when the load is applied and at all times, whereby the strains therein are of a bending nature, the portions of said folds adjacent said ribs having an internal layer of fabric and being normally spaced from the adjacent faces of said ribs and freely movable with respect thereto.

[Claims 6 to 10 not printed in the Gazette.]

1,189,790. ADJUSTABLE WINDOW-SCREEN. GEORGE CARROLL, New Salem, Ill. Filed May 13, 1915. Serial No. 27,864. (Cl. 156—38.)



1. A window screen including a frame, coacting extensions shiftable upon the frame, and a corner plate carried by one of said extensions and adjustable to a position in engagement with the other of said extensions.

2. A window screen including a frame, coacting extensions slidably mounted thereon and having adjacent extremities thereof terminating in spaced relation, and a corner plate carried by one of said extensions and adjustable thereon to fill the space between the extremities of the extensions.

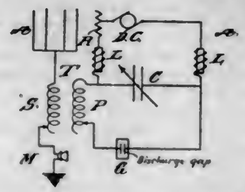
3. A window screen including a frame, coacting extensions slidably embracing adjacent rails of the frame and freely connected thereto, and a closure member carried by one of said extensions and movable thereon to engage the other extension adjacent one extremity thereof.

4. A window screen including a frame, coacting extensions slidably mounted upon adjacent rails of the frame, guides freely connecting the extensions with the said rails, and a closure member carried by one of said extensions and adjustable thereon to engage the other extension adjacent one extremity thereof.

5. A window screen including a frame, coacting extensions each having overlapping flanges freely embracing one of said rails, guides slidably connecting the extensions with the rails, and a closure member carried by one of said extensions and movable thereon to engage the other extension adjacent one extremity thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,189,791. APPARATUS FOR AND METHOD OF EXCITING ELECTRIC OSCILLATIONS. EMORY LEON CHAFFEE, Somerville, Mass., assignor, by direct and mesne assignments, to Fulton Cutting, Tuxedo Park, N. Y. Filed Nov. 4, 1911. Serial No. 658,539. (Cl. 250—37.)



1. Means for producing electrical oscillations, which comprises an exciting circuit containing a charging condenser, and containing also a discharge-gap constructed and operated to rectify the condenser-discharges; and a radiating circuit receiving the resulting rectified current-pulses and having oscillations of its own natural period set up in it thereby; the constants of the exciting circuit being such that its natural time-period, exclusive of the resistance differential of the discharges, is about one and seven tenths times that of the radiating circuit.

2. Means for producing electrical oscillations, which comprises a source of current-supply, an exciting circuit containing a charging condenser and containing also a discharge-gap which is constructed and operates to rectify the condenser-discharges, and a radiating circuit receiving the resulting rectified current-pulses and having oscillations of its own natural period set up in it thereby; the conditions of the supply-current and of the condenser being such that the frequency of primary impulses is a sub-multiple of the natural period of the radiating circuit.

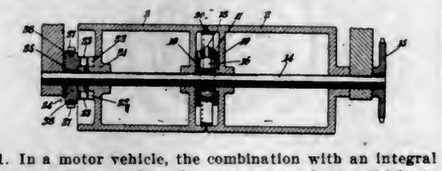
3. Means for producing electrical oscillations, which comprises an exciting circuit containing a charging condenser, and containing also a discharge-gap constructed and operating to rectify the condenser-discharges; and a radiating circuit receiving the resulting rectified current-pulses and having oscillations of its own natural period set up in it thereby; the constants of the exciting circuit being such that its natural period, exclusive of the resistance differential of the discharges, is about one and seven tenths times that of the radiating circuit; and the conditions of the supply-current and of the condenser being such that the frequency of primary impulses is a sub-multiple of the natural period of the radiating circuit.

4. Means for producing single-period oscillations in an electric wave radiator, which comprises a source of supply-current, and an exciting circuit coupled to such radiator and including a rectifying discharge gap, the gap-structure being provided with means for removing discharge-heat from the gap-terminals; the supply-current and exciting circuit being conditioned to permit radiator-oscillations to precipitate successive gap-discharges of lower frequency than the radiator-oscillations but in phase to boost the latter, and to extinguish said gap discharges before occurrence of a phase-relation retarding radiator-oscillations.

5. An apparatus for producing sustained electrical oscillations having, in combination, an oscillation circuit in which the sustained oscillations are maintained, an exciting circuit coupled with the oscillation circuit, a condenser in the exciting circuit, a supply circuit for charging the condenser, and a discharge gap in the exciting circuit for permitting single uni-directional current discharges through the exciting circuit, said oscillation circuit reacting on the exciting circuit to cause ripples of induced electromotive force therein which serve to trigger off the discharge in proper timed relation to the oscillations in the oscillation circuit so as to maintain and amplify the declining oscillations.

[Claims 6 to 12 not printed in the Gazette.]

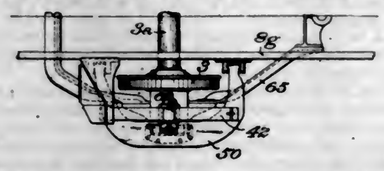
1,189,792. DRIVING MECHANISM FOR MOTOR-VEHICLES. WILLIAM H. COLDWELL, Newburgh, N. Y. Filed June 18, 1914. Serial No. 845,784. (Cl. 74—34.)



1. In a motor vehicle, the combination with an integral driving shaft extending from one side of the vehicle to the other, of a pair of rotary traction devices each loosely mounted on said shaft, differential gearing comprising a driven gear member secured to each of said rotary traction devices, and a driving member secured to rotate with said shaft and provided with pinions mounted thereon and each engaging each of said driven gear members, and clutch mechanism for positively connecting one of said loosely mounted traction devices to the said shaft.

2. In a motor vehicle the combination with an integral driving shaft extending from one side of the vehicle to the other, of a pair of rotary traction devices each loosely mounted on said shaft, a driven gear member fixed to each of said rotary devices, a spider fixed to the driving shaft between said driven gear members and provided with pinions each of which engages both of said driven gear members, a clutch member secured to rotate with one of said rotary traction members, a movable clutch member secured to rotate with the shaft but movable longitudinally thereof, and means for throwing said movable clutch into and out of engagement with the other clutch member.

1,189,793. LOCOMOTIVE TRAILING TRUCK. FRANCIS J. COLE and FRANK F. SCOVILLE, Schenectady, N. Y. Filed May 5, 1916. Serial No. 95,522. (Cl. 105—226.)



1. In a locomotive engine, the combination of a main frame; a radial truck pivoted thereto; springs through which weight borne by the main frame is transmitted to the journal boxes of the truck; floating yokes pivoted at the ends to the main frame and extending intermediately on the outer sides of the springs; and spring seats hinged to the floating yokes and interposed between the springs and the truck journal boxes.

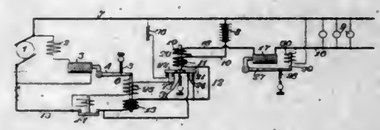
2. In a locomotive engine, the combination of a main frame; a radial truck pivoted thereto; springs through which weight borne by the main frame is transmitted to the journal boxes of the truck; floating yokes pivoted at their ends to the main frame and extending intermediately on the outer sides of the springs; spring seats hinged to the floating yokes; and segmental bearings on said seats through which they are supported on the truck journal boxes.

3. In a locomotive engine, the combination of a main frame; a radial truck pivoted thereto; springs through which weight borne by the main frame is transmitted to the journal boxes of the truck; floating yokes pivoted at their ends to the main frame and extending intermediately on the outer sides of the springs; friction plates resting on the truck journal boxes; spring seats hinged to the floating yokes; and segmental bearings on said seats fitting corresponding recesses in the friction plates.

4. In a locomotive engine, the combination of a main frame; a radial truck pivoted thereto; springs through which weight borne by the main frame is transmitted to the journal boxes of the truck; floating yokes pivoted at their ends to the main frame and extending intermediately on the outer sides of the springs; spring seats on which the bands of the springs are supported and having eyes on their outer sides; hinge bolts passing through said eyes and coupling the spring seats to the yokes; and segmental bearings on the spring seats, which are curved in planes parallel with the hinge bolts and through which said seats are supported on the truck journal boxes.

5. A spring seat for radial trucks of locomotive engines having a recess in its top adapted to receive a spring band and a longitudinally extending hinge bolt eye, and having a segmental bearing on its bottom which is curved in a plane parallel with the axis of the hinge bolt eye.

1,189,794. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Feb. 26, 1912. Serial No. 679,854. (Cl. 171—313.)



1. The combination with a dynamo and a regulating element for controlling the same, of means for controlling said regulating element responsive to voltage fluctuations, means for controlling said element responsive to current fluctuations, automatic means for determining which of said operating means shall govern said regulating element and means for modifying said automatic means in response to current fluctuations.

2. The combination with a dynamo and a regulating element for controlling the same, of means for controlling said regulating element responsive to voltage fluctuations, means for controlling said elements responsive to current fluctuations, automatic means for determining which of said operating means shall govern said regulating element and means for modifying said automatic means in response to current fluctuations in a circuit supplied by said generator.

3. The combination with a generator, a supply circuit, a storage battery and a work circuit, of means the operation of which controls said generator, operating means for affecting the same responsive to voltage fluctuations, operating means for affecting the same responsive to current fluctuations and automatic means for determining which of said operating means shall dominate in controlling the generator dependent upon current fluctuations and means for adjusting the operation of said automatic means in response to current fluctuations in the work circuit.

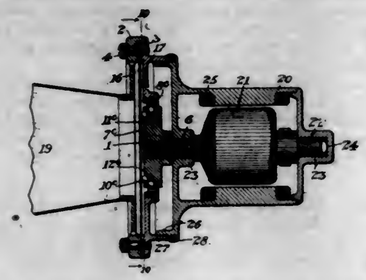
4. The combination with a generator, a supply circuit, a storage battery and a translation circuit, means for regulating the generator, operating means for said regulating means affected by voltage fluctuations, operating means for said regulating means affected by current fluctuations and automatic means for controlling the operativeness of said operating means in response to current fluctuations and means for affecting said automatic means in response to variations in the translation circuit.

5. The combination with a generator, a supply circuit, and a work circuit, of means for regulating the generator in response to voltage fluctuations and in response to cur-

rent fluctuations comprehending a voltage coil and a current coil and automatic means for determining which of said coils shall operate the regulating means responsive to current fluctuations in the supply circuit and means for modifying the point of action of said automatic means in accordance with conditions in the work circuit.

[Claims 6 to 11 not printed in the Gazette.]

1,189,795. MECHANICAL HORN. GEORGE C. DEAN, Bronxville, N. Y., assignor to Lovell-McConnell Manufacturing Company, Newark, N. J., a Corporation of Delaware. Original application filed July 10, 1911, Serial No. 637,678. Divided and this application filed July 22, 1915. Serial No. 41,234. (Cl. 116—1.)



1. In a mechanically actuated diaphragm signal, the combination of a diaphragm, cam means, an interposed series of balls arranged to force the diaphragm at points intermediate the center and virtual periphery thereof, a member having guides in which said balls reciprocate, and drive means for rotating said member.

2. In a device of the class described, a diaphragm, a stationary cam provided with a series of actuating portions, a series of loose interposed members, and a rotatable guide member for said loose members constructed and arranged to cause the latter to travel over the cam.

3. In a device of the class described, a diaphragm, a stationary cam, a series of members constructed and arranged to force the diaphragm at distributed regions between its center and virtual periphery, and a rotatable carrier for causing said members to travel in contact with the cam.

4. In a device of the class described, a diaphragm, a stationary camming means having a series of actuating portions, an interposed series of members constructed and arranged to force the diaphragm at distributed regions, and rotary means having its axis normal to the diaphragm for carrying said members around in contact with the camming means and guiding them in their consequent reciprocatory movement toward and from the diaphragm.

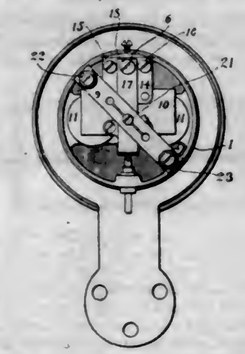
5. In a device of the class described, a diaphragm, stationary camming means, a series of balls interposed between the diaphragm and the camming means, and a rotary guiding member for causing said balls to travel around in contact with the camming means.

[Claims 6 to 20 not printed in the Gazette.]

1,189,796. SIGNALING DEVICE. WILLIAM W. DEAN, Chicago, Ill., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Mar. 30, 1912. Serial No. 687,479. (Cl. 177—7.)

1. In an electric signaling device for use upon conveyances, the combination of a frame, a sonorous member, electric means for controlling said member, a contact carrying bridge supported in said frame, an armature for said electric means adapted to operate said sonorous member, said armature being mounted under said bridge in acute angular relation to said bridge and means to detachably connect said armature to the frame whereby the armature can be removed from under the bridge without disturbing the latter.

2. In an electric horn for use upon conveyances, the combination of a frame, a vibratory sonorous member, electric means for controlling said member, a contact carrying bridge supported in said frame, a movable member controlled by said electric means, and mounted in said frame under said bridge and in acute angular relation with respect to said bridge and means to detachably connect said movable member to the frame whereby the movable member can be removed from under the bridge without disturbing the latter.



3. In an electric signaling device for use upon conveyances, the combination of a frame, a vibratile diaphragm associated therewith, an electro-magnet for actuating said diaphragm, a pair of contacts constituting an electric switch controlled by said magnet, and a bridge upon which one of said contacts is mounted, supported by said frame, an armature for said magnet carrying the other of said contacts supported in said frame under said bridge and in acute angular relation with respect thereto and means to detachably connect the armature to the frame whereby the armature can be removed from under the bridge without disturbing the latter.

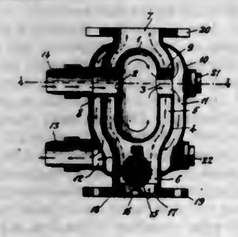
4. In an electric horn for use upon conveyances, the combination of a frame, a vibratile diaphram supported therefrom, a pair of electro-magnets in said frame adapted to actuate said diaphragm, a pair of contacts constituting an electric switch controlled by said magnets, a bridge supported by said frame across one end of said magnets and carrying one of said contacts, an armature extending across one end of said magnets under said bridge and in acute angular relation with respect thereto, said armature carrying the other of said contacts and means to detachably connect said armature to the frame whereby the armature can be removed from under the bridge without disturbing the latter.

5. In an electric signaling device for use upon conveyances, the combination of a vibratory sonorous member, electric means for actuating said member, a frame, supporting posts in said frame, a contact carrying bridge supported from said posts, a movable member controlled by said electric means, a support therefor supporting said movable member in acute angular relation with respect to said bridge and means to detachably connect said movable member to said support whereby the movable member can be removed from under the bridge without disturbing the latter.

[Claims 6 to 14 not printed in the Gazette.]

1,189,797. HEATER AND MIXER FOR INTERNAL-COMBUSTION ENGINES. WILLIAM P. DEPPE, Bay Shore, N. Y. Filed Oct. 14, 1914. Serial No. 866,603. (Cl. 48—148.)

1. A heater for low grade fuel mixtures as produced by and after delivery from a carbureter, adapted for insertion between the carbureter and intake valve of an internal combustion engine, comprising an unobstructed, substantially straight conduit of uniform cross sectional area throughout, the inlet end portion of said conduit being cylindrical, the portion of the conduit immediately following said cylindrical portion being adapted to sheet the mixture, a rotary mechanical mixer within said cylindrical portion of the conduit adapted to atomize the mixture and direct it into said sheeting portion, and means for simultaneously heating the outside of said cylindrical portion of said conduit and the sheeting portion inside and out, whereby a substantially dry gaseous mixture is delivered to the engine.



2. A heater for low grade fuel mixtures as produced by and after delivery from a carbureter, adapted for insertion between the carbureter and intake valve of an internal combustion engine, comprising an unobstructed, substantially straight conduit of uniform cross sectional area throughout, the inlet end portion of said conduit being cylindrical and the adjacent portion of the conduit being annular, means in said inlet portion thereof for breaking up the mixture and swirling it into said annular portion, and means for heating the annular portion of said conduit inside and out and simultaneously heating the outside of the inlet portion thereof whereby a substantially dry gaseous mixture is delivered to the engine.

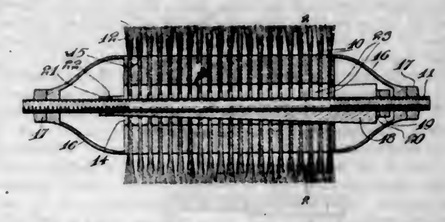
3. A heater for low grade fuel mixtures as produced by and after delivery from a carbureter, adapted for insertion in the manifold of an internal combustion engine between the carbureter and the intake valve of the engine comprising a substantially straight continuous conduit of uniform cross sectional area throughout, a portion of the conduit being adapted to sheet the mixture, the inlet portion being cylindrical and elongated, a longitudinally extending rotary mechanical mixer axially mounted within said cylindrical portion and means for heating the outside of said cylindrical portion of the conduit and for heating the sheeting portion thereof inside and out whereby a dry gaseous mixture is delivered to the engine.

4. A heater for low grade fuel mixtures as produced by the carbureter of an internal combustion engine, adapted for insertion between the carbureter and the intake valve of the engine comprising a continuous, unobstructed substantially straight conduit of uniform area throughout the inlet end of which is adapted to contain a rotary mechanical mixer and to be connected to the outlet of the carbureter, the portion of the conduit immediately following the inlet end portion being annular, a rotary mechanical mixer concentrically mounted in said inlet end, and means provided for heating the annular portion of said conduit inside and out and for simultaneously heating the outside of the inlet end portion whereby the fuel mixture received from the carbureter is transformed into a substantially dry gaseous mixture for delivery to the engine.

5. A heater for low grade fuel mixtures as produced by the carbureter of an internal combustion engine, adapted for insertion between the carbureter and the intake valve of the engine, comprising a continuous, unobstructed, substantially straight conduit of uniform area throughout, the inlet end being provided with a rotary mechanical mixer and adapted to be connected to the outlet of the carbureter, a portion of the conduit being double walled and means for heating the outside of said conduit and simultaneously the inner wall of said double walled portion whereby the fuel mixture received from the carbureter is transformed into a substantially dry gaseous mixture for delivery to the engine.

[Claims 6 to 10 not printed in the Gazette.]

1,189,798. FLUE CLEANER OR BRUSH. JOSEPH J. DILLON, Wilmette, Ill. Filed Oct. 15, 1915. Serial No. 56,024. (Cl. 83—64.)

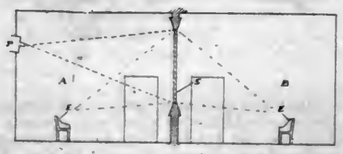


1. A brush comprising a head composed of sections mounted side by side and having a central opening, bristles held between the sections, a spindle passing through the central openings of the head sections, a tapered sleeve slidably mounted on the spindle in the central openings, against which sleeve the inner ends of the bristles are adapted to abut, means for moving the sleeve in the direction of its length, means for locking the sleeve on the spindle, and means carried by the spindle for clamping the sections of the head together.

2. A brush comprising a head composed of sections mounted side by side and having a central opening, bristles held between the sections, a spindle passing through the central opening, bristles held between the sections, a spindle passing through the central openings of the head sections, a tapered sleeve slidably mounted on the spindle in the central openings, against which sleeve the inner ends of the bristles are adapted to abut, means for moving the sleeve in the direction of its length, means for locking the sleeve on the spindle, caps mounted on the spindle ends and engageable with the end head sections of the series, and means for operating the caps to clamp the head sections together, said caps inclosing the aforesaid sleeve actuating and locking means.

3. A brush comprising a head composed of sections mounted side by side and having a central opening, bristles held between the sections, a spindle passing through the central openings of the head sections, a tapered sleeve slidably mounted on the spindle in the central openings, against which sleeve the inner ends of the bristles are adapted to abut, said sleeve being divided longitudinally into sections, and the head sections having lugs extending inward from the central openings to engage the spindle, and seating between the sleeve sections, means for moving the sleeve in the direction of its length, means for locking the sleeve on the spindle, and means carried by the spindle for clamping the sections of the head together.

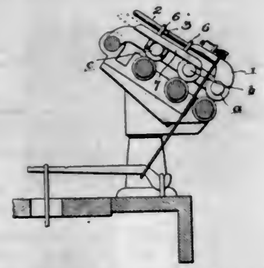
1,189,799. MOTION-PICTURE THEATER. PHILIP MORRIS ERICKSON, Brooklyn, N. Y. Filed Oct. 5, 1915. Serial No. 54,202. (Cl. 20—1.12.)



1. The arrangement, in a motion-picture theater, of two seating sections facing each other having the translucent picture-screen, viewable from both sections, interposed between them.

2. In a motion-picture theater, a translucent picture-screen interposed between two seating sections and viewable from both.

1,189,800. TOP-ROLL SADDLE. EZRA DIXON, Bristol, R. I. Filed Mar. 5, 1915. Serial No. 12,308. (Cl. 19—33.)

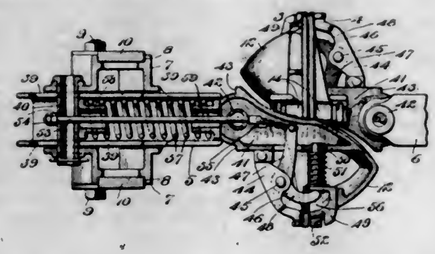


1. In a top roll saddle, a back saddle having a pair of spaced upwardly extending apertured lugs with slots leading into the apertures, a pair of spaced depending fingers on the back saddle adapted to engage on opposite sides of a roll, and a front saddle having a stem slidable in said apertures of the lugs and having a stop movable through the slots engageable with the lugs to prevent disengagement of the saddles except when the stop registers with the slots.

2. In a top roll saddle, a front saddle, a rear saddle, roll engaging means borne by the rear saddle whereby when in one position the rear saddle will engage one roll and upon endwise reversal of the rear saddle the latter will engage two rolls, and means to connect the saddles and to limit the longitudinal movement therebetween so as to require endwise reversal of the rear saddle when said saddle is to be changed from a one to a two roll engagement and vice versa.

3. In a top roll saddle, a front and a rear saddle, the rear saddle in one position being engageable with one roll and in an endwise reversed position being engageable with two rolls, and means to connect the saddles and to limit movement therebetween whereby to require endwise reversal of the rear saddle in changing same from a one to a two roll engagement and vice versa.

1,189,801. AUTOMATIC TRAIN-PIPE COUPLING. VOTAW S. DURRIN, St. Louis, Mo. Filed Mar. 1, 1915. Serial No. 11,149. (Cl. 188—13.)



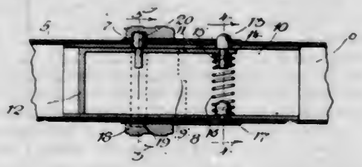
1. In a train-pipe coupling, a bracket, a hollow plunger mounted therein provided with slots in its opposite walls, a pin mounted in said bracket and passing through said slots, a coupling-head pivotally mounted on said plunger, a coil spring located in said plunger and interposed between said coupling-head and said pin, a spring-controlled locking-member slidably mounted in said coupling-head and movable outwardly beyond the surface thereof, and means operatively connecting said locking-member and said pin and adapted normally to hold the locking-member in a retracted position under the action of said interposed spring.

2. In a train-pipe coupling, a bracket, a plunger slidably mounted therein carrying a coupling-head, a spring interposed between the bracket and the coupling-head and tending normally to force the plunger and coupling-head outward, a locking-member slidably mounted in said coupling-head, a bell-crank lever pivotally mounted on the coupling-head for actuating said locking-member, a rod mounted on said bracket and extending through said plunger, and a chain connecting the free end of said rod and one end of said bell-crank lever.

3. In a train-pipe coupling, a bracket, a plunger slidably mounted therein, a coupling-head, a pin pivotally connecting said coupling-head and plunger, a spring located within the plunger and interposed between the coupling-head and said bracket, a rod mounted on the bracket and extending longitudinally through said plunger and adapted to work through an opening in said pin, a spring-controlled locking member slidably mounted in said coupling-head, a bell-crank lever pivotally mounted on said coupling-head for actuating said locking-member, and a chain connecting said rod and one arm of said bell-crank lever.

4. In a train-pipe coupling, a bracket, a plunger mounted therein, a coupling-head pivotally mounted on said plunger, a spring interposed between said bracket and said coupling-head, a spring-controlled locking member slidably mounted in said coupling-head to move in right lines at right angles to the line of draft, and means operatively connecting said locking-member with said bracket for normally holding said locking-member retracted under the action of said interposed spring and against the resistance of the spring of the locking-member.

1,189,802. COUPLING. WILLIAM F. ECKERT, Chicago, Ill., assignor to Frigid Fluid Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 8, 1915. Serial No. 6,813. (Cl. 64—13.)



1. In combination with a pair of tubular members having their adjacent end portions of complementary formation and equal inner diameter, one of said members being a driver and the other a follower, a tubular extension on the driver of diameter to seat nicely into the follower and support the same, a resilient arm having its inner end rigidly connected with respect to the driver and its outer end free to be deflected inwardly, a button on the outer end of said arm, there being an opening in the follower adapted to receive said button, a ring rotatably mounted on the outer surface of the driver, there being a cam slot on the inner face of said ring, and a part on the resilient arm entered into said cam slot and engaging the same, whereby when said ring is rotated, the arm is deflected for the purpose of carrying the button inwardly out of engagement from the follower, substantially as described.

2. In combination with a pair of tubular members having complementary end portions, one of said members being a driver and the other a follower, an extension on the driver adapted to seat into the follower and support the same, a resilient member having one portion rigid with respect to the driver and another portion adapted to lie beneath the follower and flexible with respect to the same, a button on said second mentioned portion, there being complementary openings in the extension and in the follower, said button being adapted to enter both of said openings for locking purposes, a ring rotatably mounted on the driver, there being a cam surface on the inner face of said ring, and a part on the resilient member adapted to engage said cam surface for the purpose specified.

1,189,803. PAINT OR VARNISH REMOVER. CARLETON ELLIS, White Plains, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Feb. 25, 1907. Serial No. 359,264. (Cl. 87—5.)

1. The paint or varnish remover comprising approximately aniiin 20 parts, benzol 10 parts, acetone 10 parts, ceresin wax 1 part, wood flour 3 parts and starch 2 parts.

2. The paint or varnish remover comprising approximately aniiin 20 parts, benzol 10 parts, acetone 10 parts and stiffening material, including wax.

3. The paint or varnish remover comprising approximately aniiin 20 parts, benzol 10 parts, loosening finish solvent material 10 parts, and stiffening material, including a waxy body.

4. The paint or varnish remover comprising approximately amino finish solvent material of the aniiin order 20 parts, aromatic solvent material 10 parts, loosening finish solvent material 10 parts and stiffening material.

5. The paint or varnish remover comprising amino solvent material of the aniiin order, miscible penetrating and loosening finish solvent material, and stiffening material.

[Claims 6 to 21 not printed in the Gazette.]

1,189,804. PAINT OR VARNISH REMOVER. CARLETON ELLIS, White Plains, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Mar. 4, 1907. Serial No. 360,387. (Cl. 87—5.)

1. The paint or varnish remover comprising approximately carbon-tetrachlorid 40 gallons, denatured alcohol 55 gallons, ceresin wax 20 pounds, aniiin 10 pounds and light magnesia 10 pounds.

2. The paint or varnish remover comprising approximately carbon-tetrachlorid 40 gallons, alcohol 55 gallons, ceresin wax 20 pounds, aniiin 10 pounds and magnesia 10 pounds.

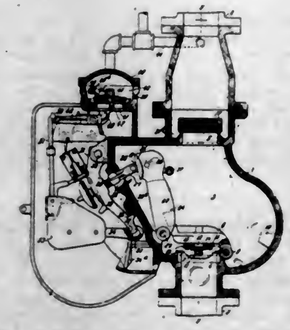
3. The paint or varnish remover comprising approximately non-inflammable chlorinated solvent material 40 gallons, loosening finish solvent material 55 gallons, evaporation-retarding stiffening material and antacid material, including aniiin.

4. The paint or varnish remover comprising non-inflammable chlorinated organic solvent material, loosening finish solvent material miscible therewith, stiffening material and antacid material comprising aniiin.

5. The paint or varnish remover comprising chlorinated organic solvents, loosening solvents miscible therewith, stiffening material and antacid material comprising aniiin.

[Claims 6 to 20 not printed in the Gazette.]

1,189,805. DRY-PIPE VALVE. CHARLES B. GARRETT, Cincinnati, Ohio, assignor to The Globe Automatic Sprinkler Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 26, 1914. Serial No. 814,306. (Cl. 169—23.)



1. A device of the nature disclosed, combining a casing forming a part of the conduit of a fire extinguishing system divided by valve-seat-equipped openings and valves therefor to provide an intermediate chamber, said chamber having a valve-seat-equipped opening to the atmosphere, a lever within said chamber fulcrumed upon said casing swinging by gravity toward said opening to the atmosphere, and adapted to forcibly seat one of said valves, and means united with said lever through said opening to the atmosphere for controlling said lever, including a valve to seal said opening during the valve releasing position of said lever.

2. A device of the nature disclosed combining a casing forming a part of the conduit of a fire extinguishing system, having a valve-seat-equipped opening as a service entrance and a valve therefor, a valve-seat-equipped opening to the atmosphere, a lever within said casing for forcibly seating said entrance valve, and a valve moving with said lever for sealing said opening to the atmosphere, said lever, when free, moving by gravity toward said opening to the atmosphere to automatically seal its valve.

3. A device of the nature disclosed combining a casing forming a part of the conduit of a fire extinguishing system having a valve-seat-equipped opening for service entrance, a valve therefor, a pair of oppositely disposed levers, one within the casing adapted at its fulcrum end to abuttingly engage with said valve for seating the same under pressure, and the second normally confined against movement, strut elements intermediate said levers, and hand operated means therefor for varying the distance between said levers to regulate the pressure upon said valve.

4. A device of the nature disclosed combining a casing forming a part of a conduit of a fire extinguishing system having valve-seat-equipped openings, one to the atmosphere and a second for service entrance, a valve for said opening, a pair of opposing levers, one within the casing swinging upon a fixed fulcrum adapted at its fulcrum end to engage said entrance valve, and the second exterior of the casing normally confined against movement, strut elements intervening said levers, projected through said opening to the atmosphere adjustable to vary the distance between said levers to apply a regulated pressure upon said entrance valve, and a valve for sealing said opening to the atmosphere upon release of lever pressure upon said entrance valve.

5. A device of the nature disclosed combining a casing forming a part of a fire extinguishing system, having valve-seat-equiped openings, one to the atmosphere and a second for service entrance, a valve for said service opening, a lever for supporting and bridging said valve, a pair of levers, one within the casing adapted to engage said bridge lever and swinging by gravity toward said opening to the atmosphere, and the second lever exterior of the casing normally confined against movement, strut elements intervening said levers projected through said opening to the atmosphere adjustable to vary the distance between said levers to apply a regulated pressure upon said service entrance valve, and a valve for said first-named lever for sealing said opening to the atmosphere upon release of service entrance valve.

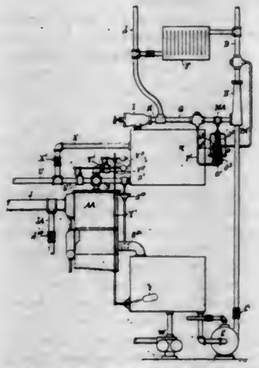
[Claims 6 to 15 not printed in the Gazette.]

1,189,806. HEATING SYSTEM. GEORGE H. GIBSON, Montclair, N. J. Filed Jan. 15, 1915. Serial No. 2,308. (Cl. 237—58.)

1. In combination, an open water heater, a continuous water circulating, heat radiating system external to said heater, a mechanical pump connecting the heater to said circulating system at such a point in the latter that a jet of water forced into said system from the heater by the pump will flow directly through the main heat radiating portion thereof and said jet will create a volume of flow in said main portion of said circulating system greater than the volume of flow into the circulating system from said heater, and means for returning excess water to said heater from said circulating system.

2. In combination, an open water heater, a continuous water circulating, heat radiating system external to said heater, a mechanical pump and an inspirator for forcing

water from said heater into said circulating system at such a point therein that the water thus forced into the circulating system will flow directly through the main heat radiating portion thereof, and a volume of flow will be created in said main heat radiating portion of said circulating system greater than the volume of flow into the circulating system through said pump, and means for returning excess water to said heater from said circulating system.



3. In combination, an open water heater, a continuous water circulating, heat radiating system external to said heater, a mechanical pump for forcing a jet of water from said heater into said circulating system at such a point therein that the water thus forced into said system will flow directly through the main heat radiating portion thereof and said jet will create a volume of flow in said main portion of said circulating system greater than the volume of flow into the circulating system from said heater, means for returning excess water to said heater from said circulating system, and means for varying the ratio between the volume of injection water and total volume of flow.

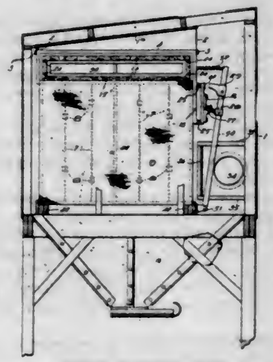
4. In combination, an open water heater, a continuous water circulating, heat radiating system external to said heater, means for forcing a jet of water from said heater into said circulating system at such a point therein that the water thus forced into said system will flow directly through the main heat radiating portion thereof and said jet will create a volume of flow in said main portion of said circulating system greater than the volume of flow into the circulating system from said heater, means for returning excess water to said heater from said circulating system, and means automatically responsive to the difference in temperature between the temperature of the water in said system immediately before and after being mixed with the water of said jet for varying the ratio between the volume of injection water, and said total volume of flow as said temperature difference varies.

5. In a hot water heating system, the combination with a continuous water circulating, heat radiating system external to said heater and storage space, means including an open water heater and a hot water storage space for heating water and storing the heated water, means for withdrawing water from said storage space and injecting the same into said circulating system, and means for discharging excess water from said circulating system and returning it to the heater, said last mentioned means including a storage space through which the water passes on its way to the heater, and means for regulating the pasage of the water from the last mentioned storage space to the heater.

[Claims 6 to 8 not printed in the Gazette.]

1,189,807. DUST-ARRESTER. GEORGE W. GLASSFORD, Sr., Cleveland, Ohio. Filed Apr. 21, 1916. Serial No. 92,789. (Cl. 83—47.)

1. In a dust arrester, a gang of screened frames each of which is tapered from the top downwardly, and provided with head frames extending across the top thereof, the head frames of adjacent screens fitting against each other and having registering openings forming an outlet passage.



2. In a dust arrester, the combination with an outer casing having an outlet opening in one side wall thereof, of a gang of screened frames the sides of which converge from the top downwardly, and provided with head frames secured to the side wall of the casing, said head frames extending across the screen frames from the front to the back thereof and fitting side by side against each other and having registering lateral openings communicating with the said outlet opening.

3. A screen for dust arresters, comprising a screened frame provided with sides converging from one end to the opposite end, and head frames on opposite sides of the said frame at the wide end thereof, said head frames extending entirely across said wide end and having lateral openings.

4. A screen for dust arresters, comprising a frame consisting of top and bottom pieces, and end pieces tapered downwardly, screen fabric on opposite sides of said frame, and head frames extending across the top of said frame, at opposite sides thereof, from one end piece to the other, said head frames having lateral openings.

1,189,808. CROWN-PIN FOR DENTAL WORK. HART J. GOSLEE, Chicago, Ill., assignor to Consolidated Dental Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 21, 1913. Serial No. 743,343. (Cl. 32—9.)



1. A tooth crown pin having an enlarged portion and an annular backing interlocking recess in the pin and at the outer side of the base of the enlarged portion.

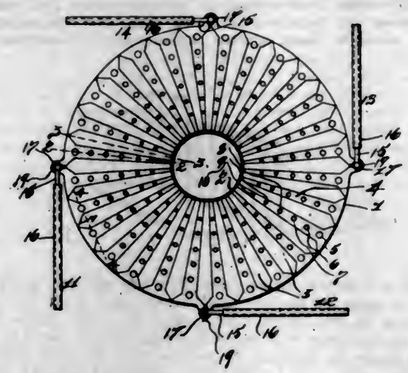
2. A tooth crown pin having an enlarged portion and an annular backing interlocking recess in the pin and at the inner side of the base of the enlarged portion.

3. A tooth crown pin having an enlarged portion and annular backing interlocking recesses in the pin and at the outer and inner sides of the base of the enlarged portion.

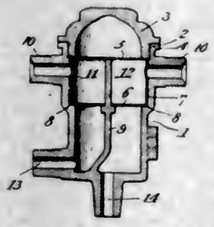
1,189,809. ATTACHMENT FOR WASHBOILERS AND THE LIKE. LEO G. GRABE, St. George, N. Y. Filed Mar. 25, 1916. Serial No. 86,570. (Cl. 68—30.)

1. A conoidal hollow circulating device for washboilers provided at intervals with corrugations extending down its inclined sides, also with perforations in the spaces between such corrugations, these perforations being arranged in straight series parallel to such corrugations substantially as shown.

2. A conoidal hollow circulating device for washboilers having a cylindrical part at its top and provided with corrugations extending at intervals down its inclined sides, also with perforations in the spaces between such corrugations, these perforations being arranged in straight series parallel to such corrugations substantially as shown.



1,189,810. FILTER. THOMAS GRADY, Rochester, N. Y. Filed Mar. 30, 1916. Serial No. 87,817. (Cl. 210—16.)



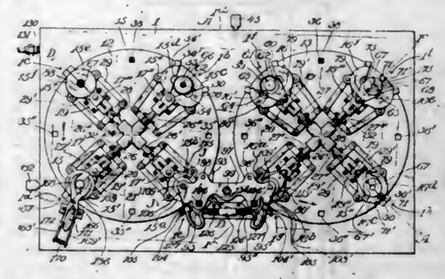
1. In a filter of the character described, a filter chamber divided by a vertical partition into two independent chambers, two horizontal screens disposed within the the upper portion of the chambers, inlets upon opposite sides of the filter communicating with the space intervening between the screens, and outlets for the filter chambers, substantially as shown and described.

2. In a filter of the character described, a filter chamber divided into two vertical chambers, screens disposed horizontally within the chambers, inlets at the upper end of the filter chamber and communicating upon opposite sides thereof with the chambers upon opposite sides of the partition separating the chambers, and outlets to the filter chamber upon opposite sides of the partition separating the chambers, substantially as shown and described.

1,189,811. MEANS FOR PRODUCING BOTTLES. JOSEPH B. GRAHAM and FRANK R. MILLER, Loogootee, Ind., assignors, by direct and mesne assignments, to Graham Bottle Machine Company, a Corporation of Indiana. Filed June 2, 1910. Serial No. 564,552. (Cl. 49—5.)

1. In a glass working machine the combination of a rotary mold-carrying table, a body mold mounted thereon and comprising mating members movable relative to each other, a neck forming plunger movably mounted in the table and provided with an air duct and port, an air passage formed in the body of the table and having one end arranged for registry with the port of the plunger air passage, and means for supplying air to the air passage in the table.

2. Bottle-producing apparatus including a mold-table having a vertical guideway therein and also an air-port extending to the guideway, a mold-bottom on the mold-table and having a vertical guideway therein registering with the other guideway, a pillar rigid on the mold-table adjacent the mold-bottom, a neck-mold removably supported on the mold-bottom, two parison-mold-parts hinged to the pillar and movable to or from the mold-bottom and the neck-mold, and a mouth-and-throat-mold movable vertically in the guideways and into or out of the neck-mold, the mouth-and-throat-mold having a passageway therein for conducting air from the air-port into the neck-mold when the mouth-and-throat-mold descends.



3. Bottle-producing apparatus including a mold-table having a vertical guideway therein and an air-port extending to the guideway, the guideway having a vertical groove in its side, a mold-bottom on the mold-table and having a guideway therein registering with the guideway in the mold-table, a neck-mold removably supported on the mold-bottom, two parison-mold-parts removably supported in contact with the mold-bottom and the neck-mold, a mouth-and-throat-mold movable vertically in the guideways and into the neck-mold, the upper portion of the mouth-and-throat-mold having an upwardly facing filleted shoulder and the lower portion having a rib thereon extending into the groove, the mouth-and-throat-mold having also an air-duct therein to conduct fluid-pressure from the air-port into the neck-mold.

4. Bottle-producing apparatus including a mold-table, a pillar secured fixedly upon the mold-table, a mold-bottom on the mold-table, two mold-parts hinged to the pillar and movable to or from the mold-bottom, a plate secured upon the pillar and having two horizontal fingers thereon extending above the plane of the tops of the mold-parts, and a neck-mold having two horizontal grooves in opposite sides thereof to receive the fingers and be supported thereby when the mold-parts are moved from the mold-bottom.

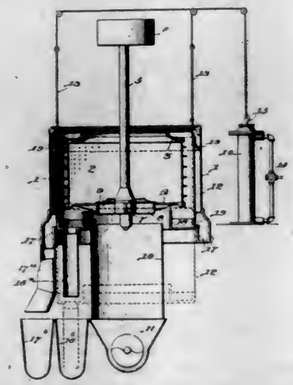
5. Bottle-producing apparatus including a bench, a valve member supported on the bench and having an air-port therein, a mold-table rotative on the bench in sliding contact with the valve member and having a guideway therein and also an air-port extending from the guideway to the portion that has sliding contact with the valve member, the rotating mold-table bringing the air-port therein opposite the port in the valve-member, a neck-mold mounted on the mold-table, and a month-and-throat-mold movable in the guideway to coöperate with the neck-mold and having an air-duct therein and carried thereby opposite the air-port in the mold-table.

[Claims 6 to 25 not printed in the Gazette.]

1,189,812. CENTRIFUGAL MACHINE. PERAY M. GROVER, Ernfold, Saskatchewan, Canada. Filed Apr. 5, 1915. Serial No. 19,251. (Cl. 210—36.)

1. A centrifugal machine comprising the combination of a main outer casing, a centrifugal drum therein, an auxiliary casing adjustably mounted between said drum and said outer casing, means for moving said auxiliary casing bodily into and out of operative relation with respect to said drum, and means on said auxiliary casing constituting a combined limit stop for said casing and cleaning means for the inner wall of said outer casing.

2. A centrifugal machine comprising the combination of a main outer casing, a centrifugal drum therein, an auxiliary casing adjustably mounted between said drum and said outer casing, a gutter on said outer casing, means for moving said auxiliary casing bodily into and out of operative relation with respect to said drum, and means on said auxiliary casing constituting combined spacing means for said auxiliary casing relative to said outer casing and limit stop for said auxiliary casing, said limit stop catching on said gutter to limit the movement of the auxiliary casing when the latter is in one extreme position.



3. A centrifugal machine comprising the combination of a main outer casing, a centrifugal drum therein, an auxiliary casing adjustably mounted between said drum and said outer casing, means for moving said auxiliary casing bodily into and out of operative relation with respect to said drum, and means on said auxiliary casing extending from the latter to said outer casing and constituting combined spacing means for said auxiliary casing relative to said outer casing and cleaning means for the inner wall of said outer casing.

4. A centrifugal machine comprising the combination of a main outer casing, a centrifugal drum therein, an auxiliary casing adjustably mounted between said drum and said outer casing, means for moving said auxiliary casing bodily into and out of operative relation with respect to said drum, and an annular flange on said auxiliary casing extending from the latter to said outer casing and constituting combined spacing means for said auxiliary casing relative to said outer casing and cleaning means for the inner wall of said outer casing.

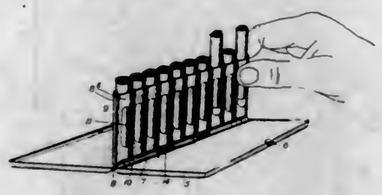
5. A centrifugal machine comprising the combination of a main outer casing, a centrifugal drum therein, a gutter mounted on said outer casing, a rigid auxiliary casing adjustably mounted between said drum and said outer casing and adjacent said gutter, an oblique downwardly projecting flange on said auxiliary casing overhanging one edge of said gutter, and means to lower and raise said auxiliary casing bodily out of and into the operative position relative to said drum.

[Claims 6 to 8 not printed in the Gazette.]

1,189,813. CIGARETTE-CASE. THOMAS F. HATHAWAY, Elgin, Ill.; assignor to Elgin American Manufacturing Company, Elgin, Ill., a Corporation of Illinois. Filed Nov. 24, 1915. Serial No. 63,215. (Cl. 206—41.)

1. A cigarette casing comprising two sections, a pintle for hinging the sections together, an inner container consisting of two leaves hinged upon the same pintle, and cooperating stops between each casing section and one of the leaves for limiting the movement of one with respect to the other, substantially as described.

2. A cigarette casing comprising two sections, a pintle for hinging the sections together, an inner container consisting of two leaves hinged upon the same pintle, cooperating stops between each casing section and one of the leaves for limiting the movement of one with respect to the other, and springs for bearing against the casing sections for forcing said casing open, and maintaining the leaves in closed relation, substantially as described.



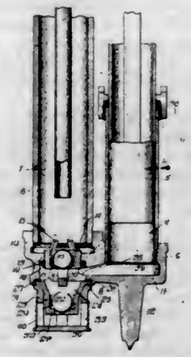
3. A cigarette casing comprising two sections, a pintle for hinging the sections together, an inner container consisting of two leaves hinged upon the same pintle, cooperating stops between each casing section and one of the leaves for limiting the movement of one with respect to the other, and a coil spring interposed between each casing section and its coöperating container leaf for forcing back the sections into open position, and maintaining the leaves in closed relation with respect to one another, substantially as described.

4. A cigarette casing comprising two sections having alined sleeves, a pintle entered through said sleeves to hinge the parts together, an inner container consisting of two leaves having alined sleeves mounted upon the pintle, a coöperating pair of stops upon the adjoined sleeves of each casing section and the adjacent leaf for limiting the relative opening movement of the parts, and a pair of springs each bearing against one of the casing sections and the adjoining container leaf for forcing open the casing sections, and maintaining the container leaves in closed relation, substantially as described.

5. A cigarette casing comprising two sections, a pintle on which the sections are hinged, an inner container comprising two leaves each independently hinged on the same pintle, and springs for bearing against the casing sections and leaves for forcing the casing open and maintaining the leaves in closed position, substantially as described.

[Claim 6 not printed in the Gazette.]

1,189,814. DOUBLE-ACTING VALVE FOR FORCE-PUMPS. RALPH W. E. HAYES, Galva, Ill., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill., a Corporation of Illinois. Filed Sept. 24, 1915. Serial No. 52,381. (Cl. 103—76.)



1. A valve mechanism of the class described, comprising a casing, an upper valve member, a lower valve member, a seat for the upper valve member threaded into the casing, a cup-shaped seat for the lower valve member, a housing inclosing a portion of the last mentioned seat, and bolts connecting the housing with the valve casing and serving to clamp the lower valve seat in position, substantially as described.

2. A valve mechanism of the class described, comprising a casing, an upper valve member, a lower valve member, a seat for the upper valve member threaded into the casing, a cup-shaped seat for the lower valve member, a housing inclosing a portion of the last mentioned seat, bolts connecting the housing with the valve casing and serving to clamp the lower valve seat in position, and a rib-like projection depending from the upper valve seat and in form to serve as a stop to limit the movement of the lower valve member and to afford a point of engagement for a wrench or the like, substantially as described.

3. A valve mechanism of the class described, the combination of a casing, an upper valve member, a seat therefor threaded into the casing and provided with a depending rib-like projection in form to receive a wrench or the like, a lower valve member, a cup-shaped seat for the same, provided around its upper margin with an outwardly extending flange, a packing washer interposed between said flange and the surface of the casing, a housing-ring bearing against the under surface of said flange, and draw bolts connecting the housing-ring with the casing and serving to clamp the flange against the packing, substantially as described.

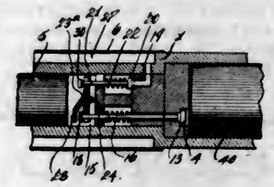
4. In a valve mechanism of the class described, the combination of a casing, an upper valve member, a seat therefor threaded into the casing and provided with a depending rib-like projection in form to receive a wrench or the like, a lower valve member, a cup-shaped seat for the same, provided around its upper margin with an outwardly extending flange, a packing washer interposed between said flange and the surface of the casing, a housing-ring bearing against the under surface of the flange, coöperating projections on the housing-ring and casing respectively, and draw bolts entered through said projections for uniting the parts together and clamping the cup flange against the packing-ring, substantially as described.

5. In a valve mechanism of the class described, the combination of a casing having a cross wall, an upper valve member, a seat therefor in the form of a bushing threaded through the cross wall, and provided with a flange underlying the cross wall adjacent to the bushing, a washer interposed between the cross wall and the flange to seal the bushing, a projection depending from the bushing in form to receive a wrench or the like, tongue-like projections inturned from the upper rim of the bushing to prevent excessive movement of the valve member, a lower valve member, a cup-shaped seat for the same provided around its upper margin with an outwardly extending flange, a packing interposed between said flange and the surface of the casing, a guard member bearing against the flange, and means for uniting the guard member with the casing and clamping the flange between the casing and the guard member, substantially as described.

[Claim 6 not printed in the Gazette.]

1,189,815. VALVE DEVICE FOR HYDRAULIC JACKS. DANIEL E. HENNESSY, Holyoke, Mass, assignor, by mesne assignments, to Herbert W. Cowan, J. Lewis Wyckoff, and Edward N. White, trustees. Filed July 19, 1913. Serial No. 779,903. (Cl. 138—9.)

1. In a hydraulic jack in combination, a closed reservoir chamber containing a fluid, a closed pumping chamber, a closed ram chamber, a communicating port between said reservoir and said pumping chamber, a communicating port between said pumping chamber and said ram chamber whereby the flow of contained fluid is confined within said pumping, ram and reservoir chambers, a separate valve for each port movable in opposite directions for being opened, manually-operated means for opening both of said valves together for giving communication between said ram chamber and said reservoir, comprising a rocking member for transmitting movement to one of said valves in a reverse direction to that of the other valve.



2. In a hydraulic jack in combination, a pumping chamber having a piston therein, inlet and outlet ports at one end of said pumping chamber opposite the end of said piston, a separate valve for each port located directly in front of said piston, and means for opening both of said valves by a positive engagement with said pump piston when the same is moved in one direction.

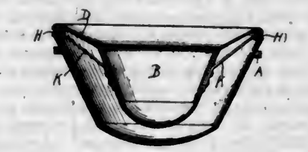
3. In a hydraulic jack in combination, a pumping chamber having a piston therein, inlet and outlet ports at one end of said pumping chamber opposite the end of said piston, a separate valve for each port, and means for opening both of said valves together by a positive engagement with the inner end of said pump piston.

4. In a hydraulic jack in combination, a pumping chamber having a piston therein, inlet and outlet ports at one end of said pumping chamber opposite the end of said piston, a separate valve for each port, and means for opening both of said valves by a positive engagement with said pump piston when the same is moved in one direction, comprising a rocking member acting to transmit movement to one of said valves in a reverse direction to that of the other valve.

5. In a hydraulic jack in combination, a pumping chamber and a ram chamber arranged in tandem, said pumping chamber having a piston adapted to work therein, inlet and outlet ports at one end of said pumping chamber opposite the end of said piston, a separate valve for each port located directly in front of said piston, and means for opening both of said valves by a positive engagement with said pumping piston when the same is moved in one direction.

[Claims 6 to 15 not printed in the Gazette.]

1,189,816. GLUE-KETTLE. OWEN MADISON HIRES, Waycross, Ga. Filed May 5, 1916. Serial No. 95,700. (Cl. 126—284.)

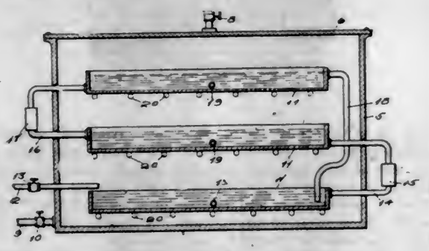


1. A non-scorchable glue kettle comprising an outer water containing receptacle and an inner glue pot, arms fastened to the glue pot and having their ends bent to form hooks adapted to engage over the outer ends of the receptacle, spacing the two receptacles apart by which the vapors may escape, the glue receptacle having an inclined flange about its upper end and projecting over the top of the outer receptacle.

2. A non-scorchable glue kettle comprising an outer water containing receptacle and an inner glue pot, resilient arms fastened to the circumference of the inner receptacle and their free ends terminating in hooks adapted to engage over the inner edge of the outer receptacle, the upper edge of the inner receptacle having an inclined flange, the marginal edge of which is curved and

extending over the upper edge of the outer receptacle and spaced apart therefrom by which the vapors may escape.

1,189,817. PROCESS OF HYDROGENATING UNSATURATED FATTY MATERIAL. JOHN CURTIS CHEVALIER HOEHN, Chicago, Ill. Filed Mar. 13, 1914. Serial No. 824,439. (Cl. 87—12.)



1. The process of hydrogenating oils, fats, fatty acids, etc., containing unsaturated constituents, which consists in exposing a large surface area of the material carrying in suspension a finely divided catalytic agent and having a substantial depth, to the action of hydrogen, while moving the material without violent agitation.

2. The process of hydrogenating oils, fats, fatty acids, etc., containing unsaturated fatty constituents, which consists in exposing a large surface area of the material carrying in suspension a finely divided catalytic agent and having a substantial depth, to the action of hydrogen, and withdrawing a portion of the material to cause the material to move without violent agitation.

3. The process of hydrogenating oils, fats, fatty acids, etc., containing unsaturating fatty constituents, which consists in exposing a large surface area of the material carrying in suspension a finely divided catalytic agent and having a substantial depth, to the action of hydrogen, and withdrawing the saturated constituents from the exposed surface of the material.

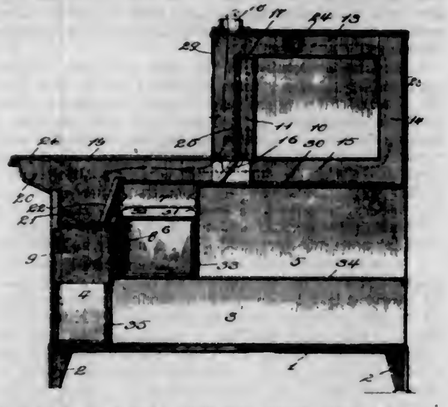
4. The process of hydrogenating oils, fats, fatty acids, etc., containing unsaturated fatty constituents, which consists in exposing a large surface area of the material carrying in suspension a finely divided catalytic agent and having a substantial depth, to the action of hydrogen, in the presence of suitable heat and pressure, and circulating a portion of the material by withdrawing the same from the exposed surface thereof and introducing it into the material near the bottom thereof.

5. The process of hydrogenating oils, fats, fatty acids, etc., containing unsaturated fatty constituents, which consists in placing the material carrying in suspension a finely divided catalytic agent into open pans whereby a large surface area of the material is exposed and the material has a substantial depth, subjecting the large exposed surface area of material to the action of hydrogen in the presence of suitable heat and pressure, and withdrawing the material from one pan and supplying the same to another pan.

[Claims 6 and 7 not printed in the Gazette.]

1,189,818. STOVE AND RANGE. LOUIS RICHARD HOLLOWAY, Victoria, Tex., assignor to Cabirange Manufacturing Company, Belleville, Ill., a Corporation of Illinois. Filed Mar. 22, 1915. Serial No. 16,274. (Cl. 126—1.)

In a range of the character described, an oven whose walls are spaced from the walls of the range to form thereabout heat ducts, the first of which forms a direct passageway from the source of heat to the heat outlet the second of which envelops said oven, and the third of which is shunted across the second, a damper so positioned at the juncture of the three ducts, as to permit selectively the passage of the heat medium through either duct, a reticulated baffle plate positioned in the second or



shunted duct, so as to produce thermal equilibrium in the ducts enveloping said oven.

1,189,819. STOVE-DAMPER. LOUIS RICHARD HOLLOWAY, Victoria, Tex., assignor to Cabirange Manufacturing Company, Belleville, Ill., a Corporation of Illinois. Original application filed Mar. 22, 1915, Serial No. 16,274. Divided and this application filed June 21, 1915. Serial No. 35,431. (Cl. 126—290.)

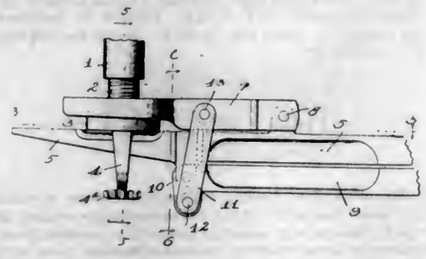


In a locking damper, a plate, protruding shafts at the linear extremities and notches parallel to ends near the ends, end plates, both of which have journal notches into which said protruding shafts extend and in which they rotate and means for securing said plates to stove elements, one of said plates having a rectangular inward projection, the upper face of which is flush with the lower edge of one of said journal notches, the other of said projections being triangular in shape with a nose formed integral therewith at its upper end, and extending above the upper surface of said plate, said end plates being so distanced apart as to permit of lateral motion equal to the width of said rectangular projection, said rectangular projection and said triangular projection being disposed at definite angles with respect to each other.

1,189,820. SPRINKLER-HEAD CLOSER. NORMAN V. HOLMES and SHERMAN H. ARP, Chicago, Ill., assignors to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Dec. 20, 1915. Serial No. 67,744. (Cl. 169—5.)

1. A sprinkler head closer comprising a bar adapted to be passed through the yoke of the sprinkler head and carrying a stopper, an arm pivoted at one end to said bar and forked at its other end to embrace the shank of the sprinkler head and engage the enlargement thereon, a lever pivoted to said bar at the opposite side thereof from said arm and at a point between the ends of said arm, and a pair of links each pivoted at one end to said lever adjacent to its pivotal axis, each link being pivoted at its other end to said arm between the ends of the latter and the links lying at opposite sides of said bar, the respective centers of the links and said lever being arranged so that the links will throw over center and lock the bar and arm in their drawn together position when the lever and bar are swung together.

2. A sprinkler head closer comprising a stopper-carrying member, an opposed member pivoted thereto and adapted to engage a part on the sprinkler head, a lever pivoted to the stopper-carrying member, and a link connecting said lever to said opposed member.

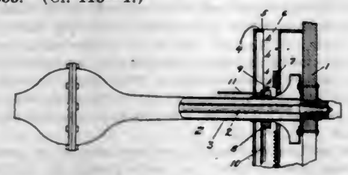


3. A sprinkler-head closer having, in combination, a bar carrying a stopper and constituting a handle, a bell-crank lever pivoted to one side of the bar relatively close to the stopper, one arm of said bell-crank lever constituting a handle, said handles being adapted to extend in approximately parallel relation, a bifurcated arm pivoted to the opposite side of the bar, and a link connecting the other arm of said bell-crank lever to said bifurcated arm, said link being arranged to swing over center to lock the stopper and the bifurcated arm against separating movement.

4. A sprinkler head closer comprising a bar constituting a handle, a forked arm pivoted thereto, a stopper carried by said bar, a lever pivoted to said bar relatively close to the stopper and constituting a handle, and a link connecting said lever to said arm for operating the arm and the bar with relation to each other.

5. A sprinkler head closer comprising a bar constituting a handle and carrying a stopper, an opposed member pivoted to one side of said bar, a bell-crank lever pivoted to the opposite side of said bar relatively close to the stopper, one arm of said bell-crank lever constituting a handle, and links located at opposite sides of said bar and connecting the other arm of said bell-crank lever to said member.

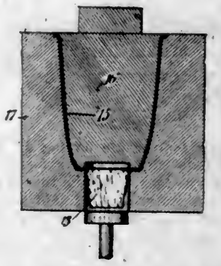
1,189,821. PADDLE ATTACHMENT FOR VEHICLE-WHEELS. JOHN H. HORAN and ANDREW B. HART, Grayling, Mich. Filed Mar. 24, 1916. Serial No. 86,355. (Cl. 115—1.)



1. The combination of a power driven vehicle wheel adapted to travel on land, a drum fixed to said wheel and stationary hollow axle, radially disposed and longitudinally movable paddles in said drum, springs adapted to normally retain said paddles in retracted position, a non-rotatable cam slidably mounted on said axle and actuating means whereby said cam may be moved lengthwise the axle and thrown into and out of engagement with said paddles.

2. The combination of a power driven vehicle wheel adapted to travel on land, a drum fixed to said wheel and stationary hollow axle radially disposed and longitudinally movable paddles in said drum, springs adapted to normally retain said paddles in retracted position, a non-rotatable cam slidably mounted on said axle and actuating means whereby said cam may be moved lengthwise the axle and thrown into and out of engagement with said paddles, a laterally projecting hub on said cam adapted to be normally engaged by said paddles, and a lateral rib extending from the hub part way around the periphery of said cam, for the purposes set forth.

1,189,822. PROCESS FOR THE MANUFACTURE OF PAPER RECEPTACLES OR DRINKING VESSELS OR CUPS. HENRY A. HOUSE, Bridgeport, Conn. Filed June 20, 1913. Serial No. 774,768. (Cl. 93—51.)



1. In the art of making paper receptacles, the method which consists in folding a flat piece of paper to cylindrical form of greater length than the paper receptacle, molding said member to partial shape by application of moisture, heat and pressure to form the sides and the outer part of the bottom, with a part of the member extending in unformed condition beyond the so molded outer part of the bottom, and then upsetting this unformed part back on itself to complete the bottom.

2. In the art of making paper receptacles, the method which consists in folding a flat piece of crimped paper to cylindrical form of greater length than the paper receptacle, molding said crimped member to partial shape to form the sides with one end thereof to an open flared lip, and the other end thereof to the outer part of the bottom, with a part of the member extending in unformed condition beyond the so-molded outer part of the bottom, then upsetting this unformed part back on itself to complete the bottom, and coating the whole with a preserving material.

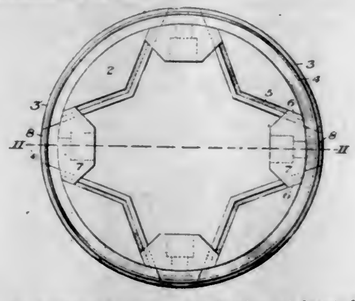
3. In the art of making paper receptacles, the method which consists in folding a flat piece of crimped paper to cylindrical form of greater length than the paper receptacle, molding said crimped member to partial shape with the bottom thereof open, and a part of the member extending beyond the bottom in unformed condition, a length greater than the radius of the opening remaining in the bottom, and then upsetting the unmolded and unformed part back on itself to close the opening and form a reinforced bottom.

4. In the art of making paper receptacles, the method which consists in folding a flat piece of crimped paper to cylindrical form of greater length than the paper receptacle, molding said crimped member to partial shape to form an annular portion forming part of the bottom, with the portion within the annular portion open, and a part of the member extending beyond the annular portion in unformed condition, a length greater than the radius of the opening remaining in the bottom, and pressing said upset portion inwardly to form a circular dished portion inwardly of the annular portion of the bottom first formed.

1,189,823. EXPANDING DIE OR TOOL. EDWIN F. HULBERT, South Norwalk, Conn., assignor to National Paper Can Company, South Norwalk, Conn., a Corporation of Delaware. Filed May 21, 1914. Serial No. 839,995. (Cl. 113—18.)

1. An expanding tool or die comprising a plurality of segments having external die portions and a plurality of intermediate wedges arranged to expand and contract

said segments, said parts having tongue and groove engagement to positively expand and contract the segments; substantially as described.



2. An expanding tool or die having at least four segments, said segments each having external die portions, and at least four wedges coacting therewith to expand or contract the segments, each of said wedges also having external die portions, the external die portions on the segments and wedges when expanded forming a complete circle of similar contour; substantially as described.

3. An expanding tool or die having a series of segments with beading portions arranged to bead the wall of the receptacle or closure, and wedges arranged to expand the segments and having edge portions similar to the segments and forming a continuation thereof when the parts are expanded; substantially as described.

4. An expanding tool or die, comprising a series of expanding segments each having an arc-shaped outer surface with angular inner portions, and a series of wedges co-acting therewith, said wedges having tongue and groove engagement with the inner inclined portions of the segments and provided with outer portions shaped similar to the outer portions of the segments, the parts when expanded forming a complete circle of similar contour throughout; substantially as described.

5. An expanding tool or die, comprising at least four segments, each having an outer shaping surface, combined with at least four expanding wedges movable along angular portions of the segments and engaged therewith to positively move the same, the wedges having outer shaping surfaces corresponding to the outer shaping surfaces of the segments; substantially as described.

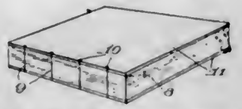
1,189,824. RULING-PEN. ELMER C. INGRAHAM, Fort Morgan, Colo. Filed Dec. 16, 1913. Serial No. 807,084. (Cl. 120—109.5.)



1. A drawing pen comprising two blades under tension tending to move relatively, a screw element secured to one and slidably engaged through the other, adjustable members carried by the screw to limit said movement of said other blade in respective directions, a lever member having a fulcrum and bearing portion formed with an opening having said screw loosely engaged therethrough and disposed between one of said adjustable members and said other blade in the direction which it tends to move, and a finger piece on the lever alined with the pen for operation by pressure of a finger.

2. In a drawing pen, two blades, flexible for relative lateral adjustment, a screw member secured to one blade and engaged slidably through the second, adjustable devices carried by the screw on opposite sides of the second blade for limiting its relative movement with respect to the first blade, a lever member having a central enlarged aperture, at least one of the blades being engaged loosely through the aperture, said lever having an inner fulcrum and bearing portion engaged between one of said adjustable devices and loosely engaged around said screw, and an outer finger piece on the lever.

1,189,825. BINDING FOR BOOKS AND METHOD OF EFFECTUATING THE SAME. GEORGE H. JENKINS, Oak Park, Ill. Filed Aug. 8, 1914. Serial No. 855,881. (Cl. 11—16.)



1. The method of binding between slotted or punched covers loose leaves which are correspondingly slotted or punched adjacent one edge thereof, which consists in arranging the leaves between the covers in book form with the slots or punchings in register, inserting sections of binding material through the slots or punchings of the leaves, moistening a strip of material previously coated with glue to render the glue adhesive, applying said strip over the slotted or punched edges of the leaves, adhering a relatively stiff strip of reinforcing material to the flexible material to stiffen the book binding, and completing the book binding by moistening a finishing strip previously coated with glue to render the glue adhesive, and applying the said finishing strip in position to overlie the reinforcing strip and the adjoining edges of the covers.

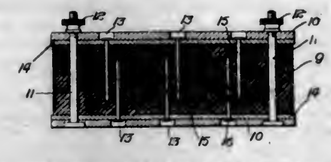
2. The method of binding between slotted or punched covers loose leaves which are correspondingly slotted or punched adjacent one edge thereof, which consists in arranging the leaves between the covers in book form with the slots or punchings in register, moistening strips of string previously coated with glue to render the glue adhesive, inserting said strips of string through the slots or punchings of the leaves, moistening a strip of flexible material previously coated with glue to render the glue adhesive, applying said strip over said slotted or punched edges of the leaves, adhering a relatively stiff reinforcing strip of material to the flexible material to stiffen the book binding, and completing the book binding by moistening a finishing strip previously coated with glue to render the glue adhesive, and applying the said finishing strip in position to overlie the reinforcing strip and the adjacent edges of the covers.

3. The method of binding between slotted or punched covers loose leaves which are correspondingly slotted or punched adjacent one edge thereof, which consists in arranging the leaves between the covers in book form with the slots or punchings in register, inserting sections of binding material through the slots or punchings of the leaves, and completing the book binding by moistening a finishing strip previously coated with glue to render the glue adhesive, and applying the said strip over the slotted or punched edges of the leaves and the adjacent edges of the covers.

4. The method of binding between slotted or punched covers loose leaves which are correspondingly slotted or punched adjacent one edge thereof, which consists in arranging the leaves between the covers in book form with the slots or punchings in register, moistening strips of string previously coated with glue to render the glue adhesive, inserting said strips of string through the slots or punchings of the leaves, and completing the book binding by moistening a finishing strip previously coated with glue to render the glue adhesive, and applying the said strip over the slotted or punched edges of the leaves and the adjacent edges of the covers.

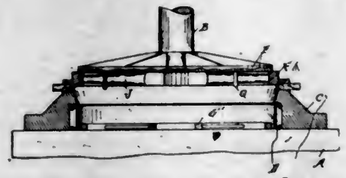
1,189,826. BOOK AND BINDING DEVICE THEREFOR. GEORGE H. JENKINS, Oak Park, Ill. Filed Oct. 19, 1914. Serial No. 867,381. (Cl. 129—1.)

1. In combination with a quantity of leaves arranged in book form, a pair of clamping elements between which the leaves are held together, means for maintaining said elements in clamping relation located outside of the book body, said clamping elements being provided with a plurality of openings through each of which a pointed element may be driven to effect a binding of the leaves, said clamping elements being removable from the book without interference with said binding elements.



2. In combination with a quantity of leaves arranged in book form, a pair of clamping elements between which the leaves are held together, means located outside of the book body for maintaining said elements in clamping relation at a point intermediate the ends of the bound edge of the book, said clamping elements being provided with a plurality of openings through each of which a pointed element may be driven to effect a binding of the leaves, said clamping elements being removable from the book without interference with said binding elements.

1,189,827. METHOD OF ASSEMBLING SPOKED WHEELS. WILLIAM J. KALTZ, Windsor, Ontario, Canada, assignor to Kelsey Wheel Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 26, 1914. Serial No. 868,685. (Cl. 157—1.)



1. The method of assembling spoked wheels, comprising the engagement of the spokes with felly sections, placing complementary felly sections together, circumferentially contracting said felly sections, and simultaneously pressing the same laterally into the metallic rim.

2. The method of assembling spoked wheels, comprising the placing together of complementary spoked felly sections, and forcing said sections through a tapering guide into the wheel rim.

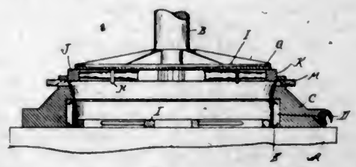
3. The method of assembling spoked wheels, comprising the placing together of complementary spoked felly sections, forcing said sections laterally through a tapering annulus into engagement with the wheel rim.

4. The method of assembling spoked wheels, comprising the placing together of complementary spoked felly sections, forcing said sections laterally through a tapering annulus into engagement with the wheel rim, and guiding one of the spokes during said movement to hold the same in exact radial relation.

1,189,828. MACHINE FOR ASSEMBLING SPOKED WHEELS. WILLIAM J. KALTZ, Windsor, Ontario, Canada, assignor to Kelsey Wheel Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 26, 1914. Serial No. 868,686. (Cl. 157—1.)

1. A machine for assembling spoked wheels comprising a bed, an annular member mounted on said bed having a tapering conical portion and cut away beneath said conical portion for the lateral insertion of a wheel rim, a depressible plunger, and means on said plunger bearing upon complementary spoked felly sections while in engagement with said guide to force the same into said rim.

2. A machine for assembling spoked wheels comprising a bed, an annular member mounted on said bed, cut away in its lower portion for the lateral insertion of a wheel rim and having a tapering conical portion for registration with said rim, a depressible plunger, a follower on said plunger for engaging complementary spoked felly sections and forcing the same through said tapering guide into said rim, and means for guiding one of the spokes during said movement to hold the same in radial relation.



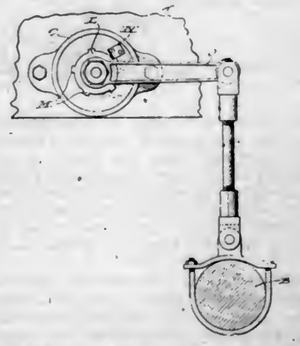
3. A machine for assembling spoked wheels, comprising a bed, an annular member mounted on said bed, cut away on diametrically opposite sides respectively for the insertion and withdrawal of a wheel rim, said member being provided with a tapering conical portion for registering with said rim, a depressible plunger, a follower on said plunger for engaging complementary spoked felly sections and forcing the same through said tapering conical portion into engagement with the rim, and depending pins upon said follower for engaging one of the spokes to hold the same radial.

4. A machine for assembling spoked wheels, comprising a bed, an annular member mounted on said bed, cut away on diametrically opposite sides respectively for the insertion and withdrawal of a wheel rim, said member being provided with a tapering conical portion for registering with said rim, a depressible plunger, and a follower on said plunger for engaging complementary spoked felly sections and forcing the same through said tapering conical portion into said rim.

5. A machine for assembling spoked wheels, comprising a bed, a depressible plunger, a tapering guide above said bed for receiving complementary spoked felly sections, a follower on said plunger for engaging said felly sections and forcing the same through said guide, and means for temporarily holding the felly sections in initial position adjacent the inlet end of the tapering member.

[Claims 6 to 8 not printed in the Gazette.]

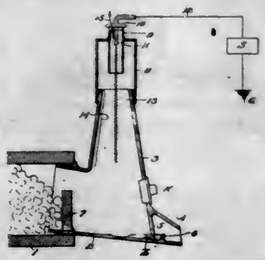
1,189,829. SHOCK OR VIBRATION ABSORBING APPARATUS FOR VIBRATING BODIES OR VEHICLES. ALEXANDER E. KEITH, Hinsdale, and MICHAEL SETTER, Chicago, Ill. Filed Jan. 28, 1913. Serial No. 744,658. (Cl. 21—105.)



In a shock absorber, a chamber, a head therefor, a ledge around the chamber for supporting the head, the latter secured in position against the edge by folded metal from the chamber, the shaft passing through said head,

a gland for said shaft on said head, a set of teeth on the gland, and a latch on the head for locking the gland against rotation.

1,189,830. METALLURGY. HENRY SWIFT KIMBALL, St. Louis, Mo., assignor to American Zinc Lead & Smelting Company, Boston, Mass., a Corporation of Maine. Filed Feb. 4, 1914. Serial No. 816,399. (Cl. 75—30.)

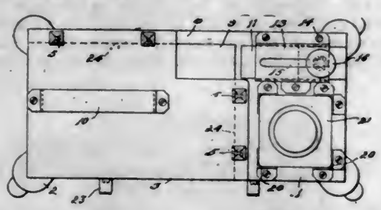


1. The method of promoting and insuring liquefaction by condensation of a metal from a gas thereof, which consists in subjecting the metallic gas when at or near the temperature of condensation, to a field of electric stress, thereby accelerating the agglomeration of liquefying particles and preventing individual oxidation thereof.

2. The method of promoting and insuring liquefaction by condensation of zinc from the gas thereof, which consists in subjecting the zinc gas when at or near the temperature of condensation to a field of electric stress, thereby accelerating the agglomeration of liquefying particles and preventing the formation of blue powder.

3. The method of promoting and insuring the liquefaction by condensation of zinc from the gas thereof, which consists in subjecting the zinc gas when at or near the temperature of condensation to a field of electric stress, characterized by convective discharge, thereby accelerating the agglomeration of liquefying particles and preventing the formation of blue powder.

1,189,831. DEVICE FOR STAMPING ENVELOPS. WILLIAM KIMELMAN, McKeesport, Pa., assignor of one-half to Frank R. S. Kaplan, McKeesport, Pa. Filed Feb. 4, 1916. Serial No. 76,137. (Cl. 120—1.)



1. In combination in a device for stamping envelops, a base member for supporting an envelop, a moistening pad mounted for movement over the corner of an envelop when supported on the base member, and a presser plate member mounted for movement toward and from the base member and cut away at the portion opposite the moistening pad whereby the pad may be moved over the corner of the envelop when it is held between the base and plate members.

2. In combination in a device for stamping envelops, a base member for supporting an envelop, a moistening pad mounted for movement over the corner of an envelop when supported on the base member, and a presser plate member mounted for movement toward and from the base member and cut away at the portion opposite the moistening pad whereby the pad may be moved over the corner of the envelop when it is held between the base and plate members, the presser plate member having a blotter on its lower face.

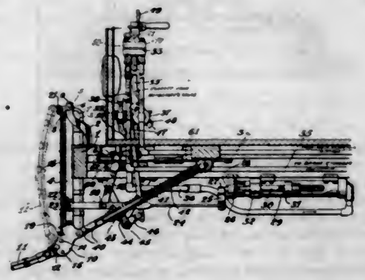
3. In combination in a device for stamping envelops, a base member for supporting an envelop, a moistening pad mounted for movement over the corner of an envelop when supported on the base member, a presser plate member upon the base member, and posts for guiding the plate member vertically and arranged to position the envelop upon the base member, the said plate member being cut away at the portion opposite the moistening pad whereby the moistening pad may be moved over the corner of the envelop when it is held between the base and plate members.

4. In combination in a device for stamping envelops, a base member for supporting an envelop, a moistening pad mounted for sliding movement laterally over the corner of an envelop when supported on the base plate, and a presser plate above the base plate guided for vertical movement and having its corner cut away at the portion of the plate member which would otherwise come over the corner of the envelop to be stamped.

5. In combination in a device for stamping envelops, a base member for supporting an envelop, a moistening pad guided for lateral movement over the corner of an envelop when supported on the base member and also having a limited vertical movement, and a presser plate member mounted for movement toward and from the base portion and cut away at the portion opposite the moistening pad whereby the pad may be moved over the corner of the envelop when it is held between the base and plate members.

[Claim 6 not printed in the Gazette.]

1,189,832. CAR-FENDER. EMIL M. KNOTHE, Seattle, Wash., assignor to Emeline Knothe, Seattle, Wash. Filed Apr. 9, 1914. Serial No. 830,704. (Cl. 105—250.)



1. In a fender of the character described, a fender apron supported upon a car, and mounted to permit downward movement of its forward edge from its normal position in a receding manner only, and means controllable by the fender apron for effecting movement of the latter.

2. In a fender of the character described, a depending support adapted to be pivotally connected to a car, a fender apron carried by the support for swinging with the latter in a downward, receding movement, and means operable by the fender apron for effecting movement of the support to lower said apron.

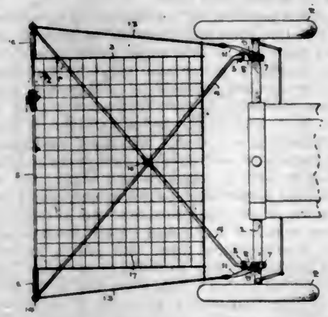
3. In a fender of the character described, a fender apron adapted to be mounted on a car for downward, receding movement, means for operating the fender apron, and a second means for operating the fender apron without affecting the first means.

4. In a fender of the character described, a fender apron adapted to be mounted on a car for downward, receding movement, means for operating the fender apron, and a second means for operating the fender apron, both means being controllable by the fender apron.

5. In a fender of the character described, a fender apron adapted to be mounted on a car for downward movement to an operative position, means under control of the fender apron for moving the latter to an operative position, and auxiliary means independent of the first means for operating the fender apron.

[Claims 6 to 19 not printed in the Gazette.]

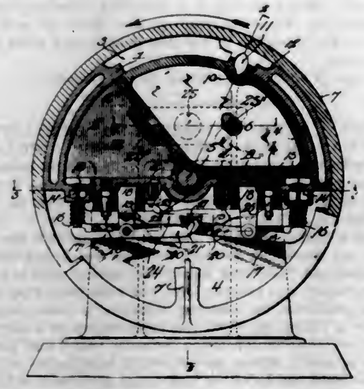
1,189,833. FENDER FOR POWER-PROPELLED VEHICLES. FRANK KOPEL, Centerville, Iowa. Filed Feb. 11, 1916. Serial No. 77,616. (Cl. 105—33.)



1. The combination with parts of a vehicle, of standards having base members, plates having ears thereon, means engaging the base members and plates to clamp said plates to parts of the vehicle, crossed bars pivoted to said plates, supporting cables extending from the upper ends of said standards to the outer ends of said bars, springs attached to the forward ends of the bars, a flexible front member connecting said springs, and a flexible net suspended from said cables and front member.

2. The combination with parts of a vehicle, of standards having base members engaging said parts of the vehicle, the upper ends of said standards being curved forwardly, plates positioned on the opposite side of said parts of the vehicle from said base members, bolts adapted to clamp the base members and plates to the parts of the vehicle, bars in crossed relation with each other having their inner ends pivoted to said plates, cables connecting the outer ends of said bars with the curved ends of said standards, springs attached to the outer ends of said bars, a flexible front member connecting said springs, and a net suspended from said cables and front member.

1,189,834. GAS-ENGINE. HENRY G. KRESS, Manitowoc, Wis. Filed Aug. 6, 1915. Serial No. 44,084. (Cl. 123—18.)



1. A gas engine comprising a chambered stator having a circular outer wall provided with a slot therein, a rotor mounted about the stator, an oscillatory piston within the chamber, a clutch shoe engageable with the rotor, means extending through the chamber slot connecting the shoe and piston, and means for alternately introducing and exhausting charges of gas into the chamber upon opposite sides of the piston.

2. A gas engine comprising a chambered stator having a circular outer wall provided with a slot therein, a rotor mounted about the stator, an oscillatory piston within the chamber, a clutch shoe engageable with the rotor, means extending through the chamber slot connecting the shoe and piston, means under control of movement of the piston for admitting gas on opposite sides of the same, and means for exploding the gas controlled by movement of said piston.

3. A gas engine comprising a chambered stator having a circular outer wall provided with a slot extending therethrough and an exhaust port in communication with said chamber intermediate of its ends, a rotor mounted about the stator, a shaft journaled in the stator, a segmental piston within the chamber, a friction shoe mounted in the stator slot engageable with the rotor, a knuckle block connecting the friction shoe and piston, and means for alternately introducing and exhausting charges of gas into the chamber upon opposite sides of the piston.

4. A gas engine comprising a chambered stator having a circular outer wall provided with a slot extending therethrough and an exhaust port in communication with said chamber intermediate of its ends, a rotor mounted about the stator, a shaft journaled in the stator, a segmental piston within the chamber, a friction shoe mounted in the stator slot engageable with the rotor, a knuckle block connecting the friction shoe and piston, valve-controlled ports in communication with the stator chamber upon opposite sides of the piston, actuating levers for the valves, and an arm movable with the piston for operating the valve levers.

5. A gas engine comprising a chambered stator having a circular outer wall provided with a slot therein, a rotor mounted about the stator, an oscillatory piston within the chamber, means extending through the chamber slot connecting the rotor and piston, means under control of movement of the piston for admitting gas on opposite sides of the same, and means for exploding the gas controlled by movement of said piston and by movement of the rotor.

[Claim 6 not printed in the Gazette.]

1,189,835. LUNCHEON-TABLE FOR AUTOMOBILES. HARRY H. LABADIE, BURTON B. BEERS, and WILLIAM O. STARK, Chicago, Ill., assignors, by direct and mesne assignments, of one-half to said Labadie and one-half to the estate of William Schweitzer, deceased. Filed Aug. 31, 1914. Serial No. 859,413. (Cl. 45—51.)



1. A supporting structure for automobile tables and the like including, in combination, an uprightly sustained post having a table supporting bar pivoted thereto, there being a chamber through said post possessed of spiral cam faces, internally apertured members coacting with said cam faces in said chamber adapted for diametrical and longitudinal movement therein upon rotation thereof, and a tension member in connection with said bar, engaged by said apertured members.

2. A supporting structure for automobile tables and the like including, in combination, an uprightly sustained post having a table supporting bar pivoted thereto, there being a chamber through said post, helical cam faces on said post surrounding said chamber, internally

apertured members in said chamber engaging said cam faces and adapted for diametrical and longitudinal movement therein upon rotation thereof, and a tension member in connection with said bar, engaged by said apertured members.

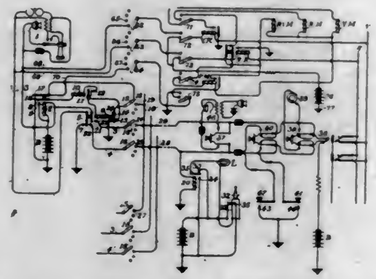
3. In combination, a base structure, an uprightly sustained post therein, having an opening therethrough possessed of spiral cam faces, and helical cam faces on said post surrounding said opening, internally apertured members in said opening coacting with said spiral and said helical cam faces, means for rotating said members, a supporting bar in pivotal relationship with said post, and a tension member connected to said supporting bar and engaged by said internally apertured members.

4. In a device of the class described, including a seat and a floor of an automobile and the like, a support mounted on said floor in adjacency to the back of the said seat, posts arising from said support and having their upper portions bent obliquely back, and a table member having its substantially rear edge in pivotal connection with the upper ends of said posts, said table member being adapted to be swung from a substantially horizontal position up and beyond the perpendicular plane of said pivotal connection, whereby said table member will be maintained in an upright position against the back of said seat by gravity.

5. In a device of the class described, including a seat and a floor of an automobile and the like, a base structure located on said floor in adjacency to the rear of said seat, said base having an upstanding socket at either end thereof, posts having vertical portions fitted in each of said sockets, each of said posts being possessed of an oblique and upwardly bent portion extending rearwardly beyond said base, and a table member pivotally connected to the upper ends of said oblique portions along its substantially rear edge thereof, whereby the front face of said table member will contact the rear face of said seat by the force of gravity.

[Claim 6 not printed in the Gazette.]

1,189,836. TELEPHONE SYSTEM. EDMUND LAND, Grand Rapids, Mich., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Jan. 30, 1905. Serial No. 243,329. (Cl. 179—27.)



1. In combination with a plurality of subscribers' telephones and line circuits extending to each, a line relay connected with one of said subscribers' lines, a source of electrical energy, a relay-controlled motor, a switch mechanism operable by the motor, a series of trunk lines selectable by said switch mechanism, each terminating in a connection device, an operator's cord circuit including means for connecting it with said connection device, a manually-controlled permutation-switch mechanism accessible to the exchange operator, and an automatic switch connecting said last mentioned switch mechanism with a plurality of subscribers' lines.

2. In combination with a plurality of subscribers' telephones and line circuits extending to each, a line relay connected with one of said subscribers' lines, a source of electrical energy, a motor controlled by said line relay, a switch mechanism operable by said motor, a series of trunk lines selectable by said switch mechanism each terminating in a connection device and the several trunk lines terminating at various operators' positions, a plurality of operators' cord circuits, each including means for connecting it with a corresponding trunk line, a manually-controlled permutation-switch mechanism accessible to one or more of the operators, and an automatic switch connecting said last mentioned switch mechanism with a plurality of subscribers' lines.

3. In combination with a plurality of subscribers' telephones and line circuits extending to each, a line relay connected with one of said subscribers' lines, a source of electrical energy, a motor controlled by said line relay, a switch mechanism operable by said motor, a series of trunk lines selectable by said switch mechanism each terminating in a connection device and the several trunk lines terminating at various operators' positions, a plurality of operators' cord circuits, each including means for connecting it with a corresponding trunk line, a manually-controlled permutation-switch mechanism accessible to one or more of the operators, and an automatic switch connecting said last mentioned switch mechanism with a plurality of subscribers' lines, said switch including test lines and means operable to indicate a "busy" condition of the called subscriber's line, when the latter is busy.

4. In combination with a plurality of subscribers' telephones and line circuits extending to each, a line relay connected with each of said subscribers' lines at the exchange station, a source of electrical energy, a relay-controlled motor accessible to each subscriber's line, a switch mechanism operable by each such motor, a series of trunk lines selectable by each switch mechanism and each terminating in a connection device, an operator's cord circuit including means for connecting it with a corresponding trunk line, a manually-controlled permutation-switch mechanism including means for connection therewith of the operator's cord circuit, and circuit connections including an automatic switch connecting said permutation-switch mechanism with a group of subscribers' lines.

5. In combination with a plurality of subscribers' telephones and line circuits extending to each, a line relay connected with each of said subscribers' lines at the exchange station, a source of electrical energy, a relay-controlled motor accessible to each subscriber's line, a switch mechanism operable by each such motor, a series of trunk lines selectable by each switch mechanism and each terminating in a connection device, an operator's cord circuit including means for connecting it with a corresponding trunk line, a manually-controlled permutation-switch mechanism including means for connection therewith of the operator's cord circuit, and circuit connections including an automatic switch connecting said permutation-switch mechanism with a group of subscribers' lines, said automatic switch including a test line extending to and controlled by the corresponding line relay of each line, whereby the condition of the line is indicated when it has been taken.

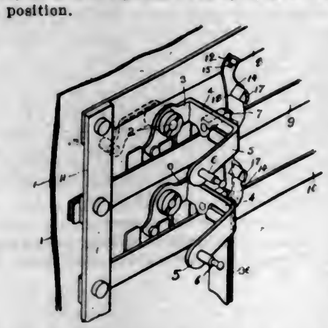
[Claims 6 to 81 not printed in the Gazette.]

1,189,837. KEY-JUSTIFYING AND ZERO-SETTING MECHANISM FOR VOTING-MACHINES. WILLIAM J. LAUSTERER, Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation, a Corporation of New York. Filed Oct. 14, 1913. Serial No. 795,053. (Cl. 235—54.)

1. In a voting machine, the combination of a key movable to an abnormal position between voted and unvoted positions, and justifying means for moving said key from an intermediate to extreme position, said justifying means having provision for yielding laterally in its movement.

2. In a voting machine, the combination of a key movable to an abnormal position between voted and unvoted positions, and a device movable with relation to said key to move said key to either end of its movement when the key is left in an intermediate position, said device comprising relatively movable parts, one of which is controlled in its movement by said key.

3. In a voting machine, the combination of a key movable to an abnormal position between voted and unvoted positions, justifying means, and connections between said justifying means and said key for at all times moving said key to extreme position from any abnormal intermediate position.

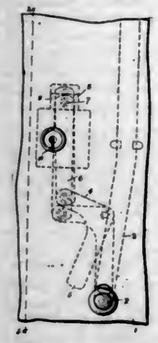


4. In a voting machine, the combination of a key movable to an abnormal position between voted and unvoted positions, and justifying means for moving said key from an intermediate to extreme position, said justifying means comprising a member controlled in its movement by said key.

5. In a voting machine the combination of a key movable to an abnormal position between voted and unvoted positions, and a device movable transversely of said key to move it to either end of its movement when the key is left in an intermediate position, said device comprising a pawl for engaging said key, said pawl being movable at an acute angle to the line of movement of said device.

[Claims 6 to 17 not printed in the Gazette.]

1,189,838. LOCKING MECHANISM FOR VOTING-MACHINES. WILLIAM J. LAUSTERER, Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation, a Corporation of New York. Filed Oct. 14, 1913. Serial No. 795,055. (Cl. 70—14.)



1. In a machine having an inclosing casing, the combination of means for holding an internal mechanism against actuation and means operated from outside of said casing for locking said holding means in operative position, said locking means being releasable only from the inside of said casing.

2. In a machine, releasable means for holding an internal mechanism against operation, means for locking said holding means against releasing movement, means for operating said locking means from outside of the machine, and latching means actuated by movement of said locking means to hold said locking means in operative position, said latching means being releasable only from the inside of the machine.

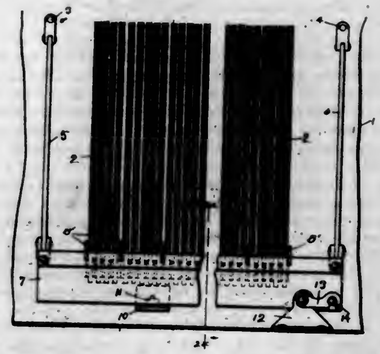
3. In a lock the combination of a bolt, a stud thereon, a latch mounted to swing on one side of said stud and a trigger mounted to swing on the other side, a lug on said latch engaged by said trigger to hold the latch out of engaging position, said trigger being engaged by said stud on the forward movement of the bolt to swing the trigger out of engagement with said latch, said latch being adapted to swing into engagement with the stud on the forward movement of the bolt and hold the bolt against a second movement.

4. In a lock the combination of a bolt, a stud thereon, a latch mounted to swing on one side of said stud and a trigger mounted to swing on the other side, a lug on said latch engaged by said trigger to hold the latch out of engaging position, said trigger being engaged by said stud on the forward movement of the bolt to swing the trigger out of engagement with said latch, said latch being adapted to swing into engagement with the stud on the forward movement of the bolt and hold the bolt against a second movement, a spring pressing said latch forward against the stud.

5. In a lock the combination of a bolt, a stud thereon, a latch mounted to swing on one side of said stud and a trigger mounted to swing on the other side, a lug on said latch engaged by said trigger to hold the latch out of engaging position, said trigger being engaged by said stud on the forward movement of the bolt to swing the trigger out of engagement with said latch, said latch being adapted to swing into engagement with the stud on the forward movement of the bolt and hold the bolt against a second movement, a spring pressing said latch forward against the stud, said latch being first moved back by the movement of the trigger to release the latch.

[Claim 6 not printed in the Gazette.]

1,189,839. SUPPORT FOR INTERLOCKING CHANNELS FOR VOTING-MACHINES. WILLIAM J. LAUSTERER, Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation, a Corporation of New York. Filed Oct. 14, 1913. Serial No. 795,056. (Cl. 235—54.)



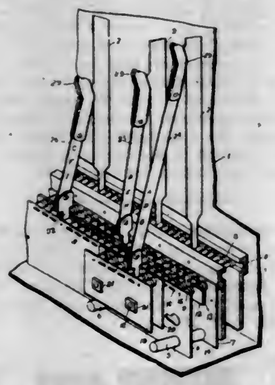
1. In a voting machine, the combination of a frame, separated links extending from said frame, an interlock guide pivotally supported from the ends of said links, and interlocking members supported on said guide, whereby to accommodate the movements of the interlocking actuators and the guide to each other.

2. In a voting machine, the combination of a frame, separated parallel links depending therefrom, an interlock guide pivotally supported between the lower ends of said links, a series of interlocking actuators suspended parallel to said links and positioned on said guide, interlocking members supported by said guide for parallel pivotal movement as required by the pivotal movement of the suspended interlocking actuators, and means carried by said guide for grouping said interlocking members.

3. In an interlocking device, the combination of a guide, means for supporting said guide to give it a swinging movement, a bracket mounted adjacent to said guide, and a roller mounted on said bracket engaging said guide and holding it against lateral movement but permitting endwise movement thereof.

4. In an interlocking device, the combination of a guide, fixed and movable interlocking members supported by said guide, the interlocking members at the ends of the guide being fixed, wedges embraced by the guide and interlocking with said members, straps for supporting said wedges, and a pivoted link at each end of the guide for supporting said guide, said links being mounted substantially parallel to said straps and being adapted to swing with the guide permitting the guide to swing endwise.

1,189,840. INDORSED-CANDIDATE LOCKOUT FOR VOTING-MACHINES. WILLIAM J. LAUSTERER, Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation, a Corporation of New York. Filed Oct. 14, 1913. Serial No. 795,057. (Cl. 235—51.)



1. The combination with an interlocking mechanism comprising a plurality of groups of displaceable members, and means for displacing said members to set the interlock for each group, of means for connecting the members of a plurality of said groups to simultaneously interlock said groups when the members of one group are interlocked.

2. In a voting machine, interlocking mechanism comprising in combination, members movable with the voting keys, interlocking means arranged in separate groups and moved by said members, and means for locking the interlocking means of one of said groups against actuation by the movement of the interlocking means of another group.

3. In a voting machine, interlocking mechanism comprising in combination, members movable with the voting keys of indorsed candidates, interlocking devices arranged in separate groups and moved by said members, and means for locking the blocks of one of said groups against actuation by the movement of the blocks of another group.

4. In a voting machine the combination of a main interlocking strap having a perforated lug thereon intermediate the ends thereof, an auxiliary interlocking strap having a pin thereon capable of engaging with the perforation in said lug, and a yoke pivotally mounted on the auxiliary strap capable of engaging the outer faces of both the auxiliary strap and the lug on the main strap and holding the pin in engagement with said perforation.

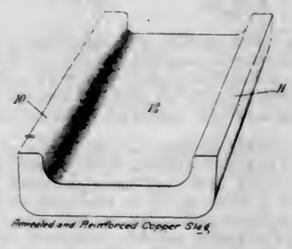
5. In an interlocking device the combination of supporting plates, rollers supported between said plates, predetermined ones of said rollers being held fixed therein, intermediate rollers between said fixed rollers loosely mounted for a limited movement along the plates, said rollers being arranged in successive groups, and a clip adapted to engage a loose roller of one group and adapted to communicate the motion thereof around the fixed roller to a loose roller in the next group.

[Claims 6 to 10 not printed in the Gazette.]

1,189,841. PROCESS FOR THE PREPARATION OF PLASTIC CASEIN. FRANÇOIS LEBREIL, Villeurbanne, Rhône, and RAOUL DESGEORGE, Lyon, France. Filed Dec. 8, 1911. Serial No. 664,672. (Cl. 106—38.)

The herein described process for the production of a casein adapted to the working of plastic substances, which consists in heating skimmed milk to a temperature of 35° C., adding rennet thereto, raising the temperature of the mass upon the commencement of coagulation to a temperature of 75° C. and then exposing the casein to a temperature of 15° C. for about 12 hours.

1,189,842. SLAG LAUNDER-LINING. WILLIAM A. LEDDELL, Morenci, Ariz. Filed Feb. 15, 1915. Serial No. 8,219. (Cl. 61—5.)

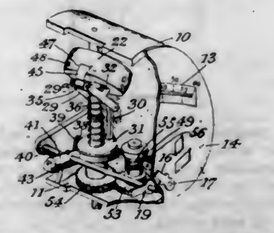


1. An acid-resisting liner for launders and the like composed of annealed copper slag and reinforcing material embedded therein, said liner possessing the property of remaining substantially intact under reasonable shock and of withstanding wear.

2. An acid-resisting liner for launders and the like composed of annealed copper blast furnace slag containing substantially 40% of SiO_2 and 40% of FeO and reinforcing material embedded therein, said liner possessing the property of remaining substantially intact under reasonable shock and of withstanding wear.

3. An acid-resisting, channel-shaped liner composed of annealed copper slag and reinforcing wire-screen embedded throughout the sides and bottom thereof, said liner possessing the property of remaining substantially intact under reasonable shock and of withstanding wear.

1,189,843. SPEEDOMETER. NIXON LEE, Brooklyn, N. Y., assignor to Sears-Cross Company, Brooklyn, N. Y., a Corporation of New York. Filed Sept. 11, 1914. Serial No. 861,240. (Cl. 264—20.)



1. In a speedometer, in combination, a shaft adapted to be driven by a moving part the speed of which is to be indicated, a centrifugal weight carried by said shaft and adapted to move under the action of centrifugal force, an indicating lever, a dial having a scale coöperating with said needle, mechanism for imparting movement from said centrifugal weight to said needle including a lever pivotally carried on said shaft, and a cam on said weight

for actuating said lever to give said needle an equal angular movement for a given speed change at any point on said scale.

2. In a speedometer, in combination, a shaft adapted to be driven by a moving part the speed of which is to be indicated, a centrifugal weight in the form of a wheel pivotally mounted on said shaft and normally disposed with its central plane inclined to the axis of said shaft, a lever pivotally mounted on said shaft, a dial with equidistant numbered divisions, a needle coöperating therewith, means for moving said needle by said lever to indicate the speed, said wheel operating to move under the action of centrifugal force to assume a position in which its central plane is more nearly at right angles to the axis of said shaft, a spring tending to resist the movement of said wheel under the action of the centrifugal force and a cam on said wheel for engaging said lever having a face inclined to the central plane of said wheel, and operating to give said needle an equal angular movement for a given speed change at any point on the said scale.

3. In a speedometer, in combination, a shaft adapted to be driven by a moving part the speed of which is to be indicated, a centrifugal weight having a pivotal connection on said shaft and normally disposed with its central plane inclined to the axis of said shaft, a lever pivotally mounted on said shaft, a dial with equidistant numbered divisions, a needle coöperating therewith, means for moving said needle by said lever to indicate the speed, said weight operating to move under the action of centrifugal force to assume a position in which its central plane is more nearly at right angles to the axis of said shaft, a spring tending to resist the movement of said weight under the action of the centrifugal force, and a cam adjustable radially on said weight for engaging said lever, having a face inclined to a radial line extending from said pivot point, and operating to give said needle an equal angular movement for a given speed change at any point on the said scale.

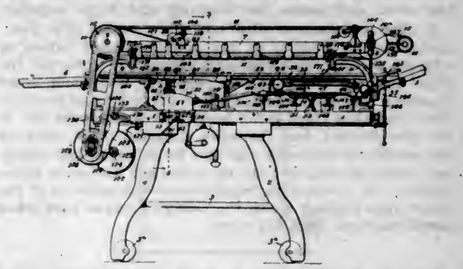
4. In a speedometer the combination of a shaft adapted to be driven by a moving part the speed of which is to be indicated, a centrifugal weight carried by said shaft adjacent the upper end thereof, constructed to swing under the action of the centrifugal force, an indicating needle, a dial having a scale coöperating with said needle, said scale having uniformly equidistant numbered divisions, a collar attached to said shaft adjacent said weight, and a lever pivotally attached to said collar, a sliding collar on said shaft near the other end thereof, and connected with said lever, a spring between said collars and tending to move said sliding collar away from said first named collar, and means actuated by said sliding collar for actuating said needle.

5. In a speedometer the combination of a shaft adapted to be driven by a moving part the speed of which is to be indicated, a centrifugal weight carried by said shaft adjacent the upper end thereof, constructed to swing under the action of the centrifugal force, an indicating needle, a dial having a scale coöperating with said needle, said scale having uniformly equidistant numbered divisions, a collar attached to said shaft adjacent said weight, and a lever having upwardly extending ears pivotally attached to said collar, a sliding collar on said shaft near the other end thereof, and connected with said lever, a spring between said collars and tending to move said sliding collar away from said first named collar, and means actuated by said sliding collar for actuating said needle.

[Claim 6 not printed in the Gazette.]

1,189,844. LABELING-MACHINE. WILLIAM H. LEISTER, Westminster, Md., assignor, by mesne assignments, to Burt Machine Company, Baltimore, Md., a Corporation of Delaware. Filed Aug. 25, 1910. Serial No. 578,911. (Cl. 216—48.)

1. In a labeling machine, the combination of labeling instrumentalities, of means for applying a narrow strip of paste entirely around the can, a can runway or support, means for feeding the cans along the runway into operative relation with respect to the instrumentalities, said means including a plurality of conveyer belts arranged upon opposite sides of the center of the runway, said belts being round in cross section, and an adjustable frame for supporting said belts whereby they may be adjusted vertically with respect to said runway.



2. In a labeling machine, the combination of a runway, labeling and pasting means adjacent the runway, a main support for the runway and said means, conveyer means above the runway, an auxiliary support for the conveyer means positioned upon and adjustable relative to said main support, and a motor supported upon the main support having an adjustable drive connection with the conveyer means, whereby the latter may be adjusted at will to accommodate different sized receptacles and remain in operative drive connection with the motor.

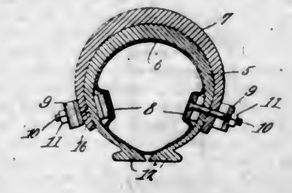
3. In a labeling machine, the combination of pasting and labeling instrumentalities, a runway for cans or the like, a conveyer belt for feeding the cans along the runway, and a relatively wide presser belt also above the runway and to one side of the conveyer belt, for ironing the labeled cans, a common vertically adjustable carrier frame for said belts, and means whereby the tension of said belts may be independently regulated.

4. In a labeling machine, the combination of labeling instrumentalities, a runway for cans or the like, a presser pad adjacent the rear end of the runway oppositely disposed conveyer belts arranged upon opposite sides of the center of the runway and substantially co-extensive therewith for engaging the cans, a relatively wide movable presser or ironing member arranged above the pad and between said belts, and a common support for the conveyer belts and movable presser member.

5. In a labeling machine, the combination of labeling instrumentalities, a runway for cans or the like, oppositely disposed conveyer belts arranged upon opposite sides of the center of the runway and substantially co-extensive therewith for engaging the cans adjacent opposite ends thereof, a relatively wide movable presser or ironing member arranged above the runway and between said belts adjacent the rear end thereof, a supporting frame for said belts and presser member, and means for adjusting the frame vertically relative to the runway.

[Claims 6 to 91 not printed in the Gazette.]

1,189,845. TIRE. STEPHANOS LIOLIOS, Charleston, Mo. Filed Sept. 23, 1915. Serial No. 52,206. (Cl. 152—17.)

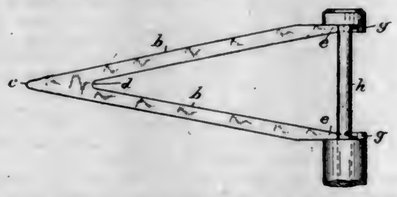


1. The combination with the outer casing of a pneumatic tire; of a cover on the outside thereof extending entirely around the same and completely covering the

sides and the tread thereof, opposite inner and outer clamping rings for securing the cover to the casing, the inner clamping rings being inside the casing adjacent to the base thereof, and the outer clamping rings being on the outside of the cover adjacent to its edges, prongs on the inner faces of the outer rings adapted to embed in the cover and means for drawing said rings together.

2. The combination with the outer casing of a pneumatic tire; of a cover on the outside thereof extending entirely around the same and completely covering the sides and the tread thereof, opposite inner and outer clamping rings for securing the cover to the casing, the inner clamping rings being inside the casing adjacent to the base thereof, and the outer clamping rings being on the outside of the cover adjacent to its edges, and clamping means passing through the rings and the parts therebetween, the rings being resilient and the portions of the outer rings through which the clamping means pass being bowed outward from the cover.

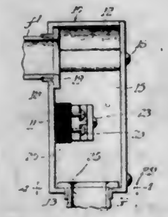
1,189,846. PROCESS OF MAKING AN ANTIFRICTION-ROLL. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Feb. 6, 1914. Serial No. 816,877. (Cl. 153—64.)



1. The process of making an anti-friction roll, which consists first in forming a V-shaped blank of one piece of sheet-metal with two parallel sided arms joined at an angle and their free ends formed with parallel outer sides, second, bending the tips of the arms into the curvature of the intended roll in readiness to grasp the same for winding, and third, holding the tips at a distance apart equal to the length of the intended roll, and rolling both the said arms simultaneously into a cylinder of the diameter desired.

2. The process of making an anti-friction roll, which consists first in forming a V-shaped blank of one piece of sheet-metal with two parallel sided arms joined together at an angle and their free ends formed with parallel outer sides, second, bending the tips of the arms into the curvature of the intended roll in readiness to grasp the same for winding, and third, holding the tips at a distance apart equal to the length of the intended roll, and rolling the said arms into coils of such diameter as to form relatively broad interspaces between the coils, as and for the purpose set forth.

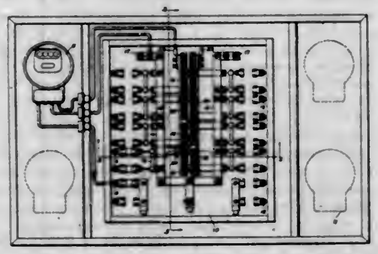
1,189,847. LOCOMOTIVE-WIRING FITTING. JOHN LOFGREN, Chicago, Ill. Filed Dec. 3, 1914. Serial No. 875,284. (Cl. 347—5.)



1. A locomotive wiring fitting comprising in combination a metallic box adapted for attachment to the cab and having in its rear wall a receptive opening for the cab conduit bushing and in its bottom wall an edge opening recess providing a portion of a receptive opening for the engine conduit bushing, said opening extending from the edge inwardly a distance greater than the diameter of the engine carried conduit, wire terminals carried by said box, and a cover member for said box providing a bottom portion coöperating with the said recess of the bottom wall of the box and providing a complemental portion of the receptive opening for the engine carried conduit bushing.

2. A locomotive wiring fitting comprising in combination a metallic box having a vertical base wall for attachment to the cab, outwardly projecting bottom, top and side walls, said base wall having a receptive opening for the cab carried conduit bushing, and in the bottom wall an edge opening recess providing a portion of a receptive opening for the engine carried conduit bushing, said opening extending from the edge inwardly a distance greater than the diameter of the engine carried conduit bushing, wiring terminals carried by said box, and a flat cover member coöperating with the projecting edges of the outwardly extending walls and having an inwardly extending forked part coöperating with the said recess in the bottom wall of the box and providing a complemental portion of the receptive opening for the engine carried conduit bushing.

1,189,848. METER PANEL-BOARD. JAMES P. MCGRADY, Worcester, Mass., assignor to Worcester Electric & Mfg. Co., Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 21, 1914. Serial No. 878,268. (Cl. 247—13.)



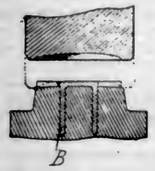
1. In a panel board, the combination with a plurality of switches, of a common terminal for one side of each of said switches, the other side of each switch being provided with an individual terminal, said individual terminals all being located in the same plane, a pair of insulating plates secured to the opposite sides of said individual terminals, and bars mounted on the outer surfaces of said insulating plates and constituting terminal bars, each of said bars and each of the said individual terminals having means for the reception of a connecting member at the points where they cross each other.

2. In a meter panel board, the combination of an insulating panel plate, a metallic bar thereon constituting a common terminal for the meters, a plurality of switches, one side of each switch being connected with said bar, the other sides of all the switches being provided with terminals, an insulating plate secured along the side of said terminals and supported thereby, a plurality of parallel terminal bars secured to the outer face of said insulating plate and each one being adapted to be connected with a pole of a meter and to constitute the terminal therefor, each of said bars being provided with a perforation therethrough where it crosses one of said switch terminals, the insulating plate being provided with perforations registering therewith, and each of the switch terminals having a screw threaded perforation in alinement with the first named perforation.

3. In a meter panel board, the combination of an insulating panel plate, a metallic bar thereon constituting a common terminal for the meters, a plurality of switches, one side of each switch being connected with said bar, the other sides of all the switches being provided with terminals and arranged in a plane on the face of the panel plate transverse to the plane thereof, two parallel insulating plates secured along the opposite sides of said transverse terminals and supported thereby, a plurality of parallel terminal bars secured to the other faces of said insulating plates and each one being adapted to be connected with a pole of a meter and to constitute the terminal therefor, each of said bars being provided with a perforation therethrough where it crosses one of said transverse terminals, the insulating plates being provided with perforations registering therewith and constituting continuations thereof and each of the transverse terminals having a screw threaded perforation in alinement with the first named perforation, whereby connecting plugs can be inserted to connect any one of the transverse terminals with the parallel terminal bars.

4. In a meter panel board, the combination of an insulating panel plate, a metallic bar thereon constituting a common terminal, a plurality of switches arranged along two sides of the panel plate, one side of each switch being connected with said bar, the other sides of all the switches being provided with transverse L-shaped terminals, two parallel insulating plates secured along the opposite sides of said transverse terminals, terminal bars secured to the outer faces of said insulating plates and adapted to be connected with the meters, each of said bars being provided with a perforation therethrough where it crosses one of said transverse terminals, the insulating plates being provided with perforations registering therewith and constituting continuations thereof and each of the transverse terminals having a screw-threaded perforation in alinement with the first named perforation, said terminal bars being located opposite each other on the insulating plates, whereby connecting plugs can be inserted from either side to connect the transverse terminals individually with the respective meter terminals.

1,189,849. PROCESS FOR FORMING METALLIC FASTENERS. FRANKLIN S. MCKENNEY, Detroit, Mich. Filed Oct. 21, 1909. Serial No. 523,865. (Cl. 10—28.)



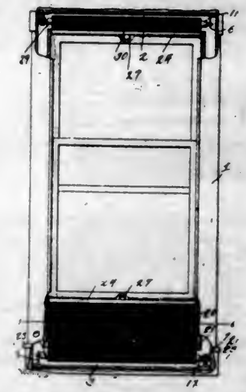
1. The herein-described process of forming the head of a metallic fastening from a blank having a head and a prong, the prong projecting from the inner end of a slot in the head portion and at an interior point thereof, consisting in compressing the head portion to cause the metal in the head to move into and fill the slot to render the head solid.

2. The process of making a metallic fastening from sheet metal, consisting in cutting and forming a blank from sheet metal, comprising a prong and a slotted head, the prong projecting at right angles from the inner end of the slot, and then in compressing the head to cause the metal thereof to fill the slot and render the head solid.

3. The process of making a metallic fastening consisting in cutting and forming a blank from sheet metal comprising a prong and a slotted head, the prong projecting at right angles from the inner end of the slot, and then in compressing the head to thin the same to cause the metal thereof to fill the slot and render the head solid.

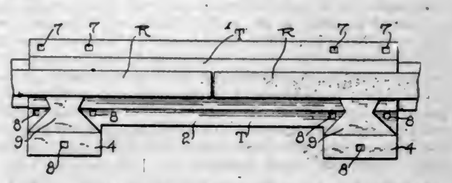
4. The process of making a metallic fastening consisting in cutting and forming a blank from sheet metal comprising a prong and a slotted head, the prong projecting at right angles from the inner end of the slot, and compressing the prong to shape the same and then in compressing the head to cause the metal thereof to fill the slot and render the head solid.

1,189,850. DETACHABLE ROLLER-SCREEN. GEORGE MAIN and JESSE M. STANSELL, Centralia, Ill. Filed Oct. 21, 1914. Serial No. 867,850. (Cl. 156—39.)



In combination with a window frame, a plurality of bearings mounted in the lowermost casing thereof, one of said bearings comprising upwardly extending brackets, a ball-bearing cup secured thereto, ball-bearings in said cup, a sleeve extending through said cup and rotatably mounted on said bearings which have outwardly extending projections thereon, one of said projections being rigidly secured to one of said bearings, and the other of said projections extending through said sleeve and rotatable therewith.

1,189,851. RAIL-JOINT. JAMES T. MARSHALL, Haughton, La. Filed Mar. 4, 1916. Serial No. 82,163. (Cl. 239—6.)

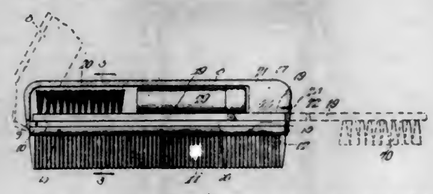


1. In combination with the meeting ends of rails, said meeting ends being straight, splice plates coacting therewith and interposed between the flanges of the rails and the balls thereof, the upper edges of the plates being arcuate with their arches arranged at the meeting ends of the rails and contacting with the under surfaces of the balls, said plates also overlying the flanges of the rails and having said overlying flanges arcuate and substantially concentric to the upper edges of the plates, the extremities of the overlying portions of the plates contacting with the flanges of the rails and the intermediate portion being free therefrom.

2. In combination with the meeting ends of rails, said meeting ends being straight, splice plates coacting therewith and interposed between the flanges of the rails and the balls thereof, the upper edges of the plates being arcuate with their arches arranged at the meeting ends of the rails and contacting with the under surfaces of the balls, said plates also overlying the flanges of the rails and having said overlying flanges arcuate and substantially concentric to the upper edges of the plates, the extremities of the overlying portions of the plates contacting with the flanges of the rails and the intermediate por-

tion being free therefrom, the outer marginal portions of the plates being of increased thicknesses, the inner margins of said thickened portions being provided with depending webs.

1,189,852. COMBINED COMB AND TOOTH-BRUSH. ANDY JOHN MELIN, Wallace, Idaho. Filed Oct. 28, 1915. Serial No. 58,368. (Cl. 132—11.)

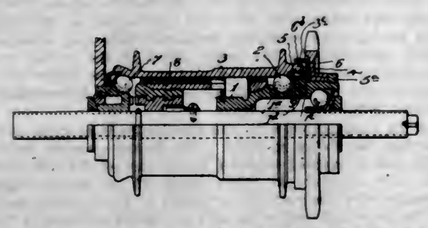


1. In a combined comb and toothbrush, the combination with a hollow casing or holder, of a comb-carrying strip pivotally connected at one of its ends to one end of said holder and adapted to lie along and close one edge of the latter, a tooth-brush having one end of its handle pivotally connected to the said strip, at a distance from its free end, and means carried by the casing or holder to rest on said handle when the brush is extended from the cavity of the holder and the said strip is returned to its normal position.

2. In a combined comb and tooth-brush, the combination with a hollow casing or holder, of a comb-carrying strip pivotally connected at one of its ends to one end of said holder and adapted to lie along and close one edge of the latter, a tooth-brush having one end of its handle pivotally connected to the said strip, at a distance from its free end, means carried by the casing or holder to rest on said handle when the brush is extended from the cavity of the holder and the said strip is returned to its normal position, and means to secure the free ends of the holder and strip together.

3. In a combined comb and tooth-brush, the combination with a hollow casing having its side walls spaced apart in parallelism at one of the edges of the casing and provided at one of its ends with an inwardly extended enlargement, of a comb-carrying strip pivotally connected at one of its ends to the end of the holder opposite that end thereof having said enlargement, the said strip having on its surface adjacent to the holder a longitudinally extended tenon to fit between the sides of the holder at one of its edges, a tooth-brush having one end of its handle pivotally connected to the said tenon at a distance from its free end, and means carried by the said strip at its free end to engage the free end of the holder for the purpose of securing them together.

1,189,853. OIL-RETAINER FOR BEARINGS. JOHANN H. MODLER, Schweinfurt-on-the-Main, Germany. Filed Feb. 25, 1913. Serial No. 750,465. (Cl. 64—22.)



1. The combination of a hub barrel having an inner recess, with a spring-acting retainer adapted to fit said recess, and a protector connected with said retainer and located adjacent to the end of the barrel at the outer part of the retainer.

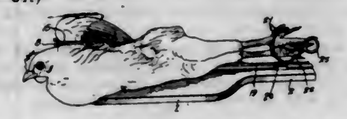
2. The combination of a hub barrel having an inner recess, with a spring-acting oil retainer adapted to fit said recess to rotate with the hub barrel, and a dust-protector adjacent to the end of the hub barrel, said protector having an inward flange and an annular recess to be connected with said retainer said protector being located without said retainer.

3. The combination of a hub barrel having a recess, with an oil-retainer adapted to snugly fit said recess to rotate with the barrel, and a dust protector adjacent to the end of the hub barrel, said protector being connected with the retainer, said protector having an outer flange overhanging the end of said barrel.

4. The combination of a hub barrel having an inner recess, with a spring-acting retainer adapted to fit snugly in said recess, a protector connected with said retainer, and shoulders carried by the axle on opposite sides of said retainer and protector, said retainer and protector being adapted to rotate freely between said shoulders.

5. The combination of a hub-barrel having an inner recess, with a spring acting oil retainer, adapted to fit snugly in said recess, and a dust protector connected with said retainer and overlying the end of the barrel, and a member receiving said retainer and protector and having shoulders on opposite sides thereof adapted to cause the retainer and protector to be pushed against and pulled from the barrel by and with said member.

1,189,854. STRETCHER. SANDIS E. MOHLER, Fremont, Ohio. Filed Jan. 27, 1916. Serial No. 74,602. (Cl. 119—97.)



1. In a device of the character described, the combination with a base, of a track mounted upon said base, a plate slidably mounted upon the track for longitudinal adjustment, said plate carrying a fork comprising a pair of laterally spaced curved arms joined together at their lower ends, a pivot pin carried by the lower end of said arms, and a cam mounted on the pivot pin and arranged in a space provided in the plate and adapted to be moved into and out of engagement with said track for locking said arms in adjusted position.

2. A device of the character described comprising a base, a plate mounted upon said base, said plate provided with upstanding ears at each end, levers pivotally mounted on said ears and shaped to have their ends contact with each other, means for locking two of the ends on said levers together, and resilient means for holding said levers in locked position.

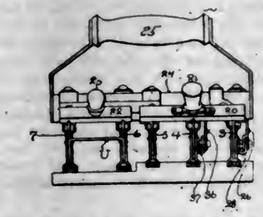
3. A device of the character described comprising a base, a bell crank lever, an L-shaped lever, said bell crank lever and said L-shaped lever being pivotally mounted upon said base at one end thereof and disposed in position whereby their ends will contact with each other, and resilient means carried by said base and attached to said L-shaped lever for holding the end of said L-shaped lever and said bell crank lever in engagement.

4. A device of the character described comprising a base, a bell crank lever, an L-shaped lever, said bell crank lever and said L-shaped lever being pivotally mounted upon said base at one end thereof and disposed in position whereby their ends will contact with each other, a spring element connected to said base and to said L-shaped lever for holding said levers in engagement, and a fork comprising a pair of spaced arms, said fork being longitudinally adjustable on said base, and manually operated means for locking said fork in adjusted position.

5. A device of the character described comprising a base, a bell crank lever, an L-shaped lever, said bell crank lever and said L-shaped lever being pivotally mounted upon said base at one end thereof and disposed in position whereby their ends will contact with each other, a spring element connected to said base and to said L-shaped lever for holding said levers in engagement, and a fork comprising a pair of spaced arms, said fork being longitudinally adjustable on said base, manually operated, a cam pivotally mounted at the base of said fork and engaging said base, and a handle integrally formed with said cam for operating said cam.

[Claim 6 not printed in the Gazette.]

1,189,855. METER-TESTING DEVICE. THOMAS E. MURRAY, Jr., Brooklyn, N. Y., assignor to Thomas E. Murray, New York, N. Y. Filed Dec. 2, 1915. Serial No. 64,693. (Cl. 175—183.)



1. A meter testing cut-out, comprising a base, line and meter terminals of a three-wire system thereon, service switch levers interposed between said line terminals and said meter terminals, a gang plug coöperating with said levers, fixed connections on said plug for shunting the line around said meter, two pivoted arms on said plug constructed to maintain closed circuit to the meter through a potential conductor and the neutral conductor of said system when said levers are moved into position to open circuit to the meter, a separate bridge constructed to be interposed between two of said meter terminals to electrically connect the current coils of said meter, and testing apparatus connected to said gang plug.

2. A meter testing cut-out, comprising a base, line and meter terminals of a three-wire system thereon, service switch levers interposed between said line terminals and said meter terminals, a gang plug, a plurality of contacts depending therefrom and engaging said levers, fixed connections on said plug between certain of said contacts for shunting the line around said meter, two depending brackets on said plug, arms pivoted to said brackets and constructed to maintain closed circuit to the meter through a potential conductor and the neutral conductor of said system when said levers are moved into position to open circuit to the meter, a separate bridge constructed to be interposed between two of said meter terminals to electrically connect the current coils of said meter, and testing apparatus connected to said gang plug.

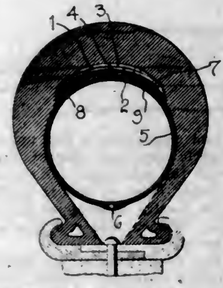
1,189,856. METHOD OF LOCALIZING THE BUR AT ELECTRICAL BUTT OR EDGE WELDED JOINTS. THOMAS E. MURRAY, New York, N. Y. Filed Feb. 18, 1916. Serial No. 79,052. (Cl. 219—10.)



1. The method of localizing the bur of metal extruded at the joint between two butt or edge-welded bodies, which consists in, first, bending over the edges of said bodies toward the side on which the bur is to be formed, second, placing said bent over edges in contact, and third, maintaining welding current and pressing said bodies together until the metal of said bent over edges is fused and the straight portions of said bodies come together and are united.

2. The method of localizing the bur of metal extruded at the joint between butt-welded tubes, which consists in, first, bending over the circumferential edge of the tubes; second, placing said bent over edges in contact, and third, maintaining welding current and pressing said tubes together until the metal of said bent over edges is fused and the straight portions of said tubes come together and are united.

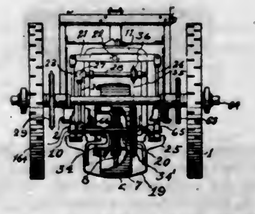
1,189,857. PUNCTURE-PROOF AUTOMOBILE-TIRE SUPPORTER. CHARLES O. MYERS and HOWARD T. MARING, Gettysburg, Pa. Filed Nov. 9, 1914. Serial No. 871,141. (Cl. 152—18.)



1. An internal armor for pneumatic tires comprising an annular member embodying inner and outer concentric superposed plies, said plies being secured one to the other at substantially their transverse centers and in a circumferential direction, the portion of the plies at opposite sides of the connection being capable of relative separting movement.

2. An internal armor for pneumatic tires comprising an annular member embodying inner and outer concentric superposed plies, and plies being secured one to the other at substantially their transverse centers and in a circumferential direction, the portions of the plies at opposite sides of the connection being capable of relative separating movement, and means carried by the inner ply for maintaining the armor in applied position.

1,189,858. BEET-TOPPER. JAMES D. NAIRNE, Alhambra, Cal., assignor to Universal Beet Harvester Co., Los Angeles, Cal., a Corporation of California. Filed Oct. 5, 1914. Serial No. 865,199. (Cl. 55—107.)



1. A beet topper comprising a beet climbing element and a transversely curved cutter under said element.

2. A beet topper comprising a transversely curved beet climbing element and a transversely curved cutter under said element.

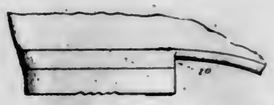
3. The combination with a gage wheel to ride on the tops of beets; of a cutter connected to and running beneath the gage wheel to sever the beet bodies below the tops thereof; and means to swing said cutter in an arc transversely of the gage wheel.

4. The combination with a carrying frame, of a gage wheel journaled to the frame to ride on the tops of beets; a cutter pivoted to the frame and running beneath the gage wheel to sever the beet bodies below the tops thereof; and means to swing said cutter in an arc transversely of the gage wheel.

5. The combination with a carrying frame, of a gage wheel journaled to the frame to ride on the tops of the beets; a cutter pivoted to the frame and running beneath the gage wheel to sever the beet bodies below the tops thereof; a walking beam connected to the ends of the cutter; and means to operate the walking beam to swing said cutter in an arc transversely of the gage wheel.

[Claims 6 to 12 not printed in the Gazette.]

1,189,859. RUBBER HEEL. FREDERICK NERGER, Chicago, Ill. Filed Mar. 17, 1916. Serial No. 84,809. (Cl. 36—35.)



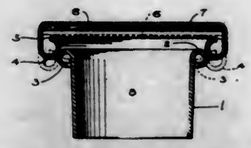
1. A rubber heel comprising a thin upper layer of rubber having a fabric embedded therein, headed fasteners extending through the said layer for securing said layer to the shoe, a lower layer of rubber having a recess in its upper face to receive said upper layer, and a layer of rubber cement between said two layers of rubber for securing them together.

2. A rubber heel comprising a thin upper layer of rubber having a fabric embedded therein, headed fasteners extending through the said layer for securing said layer to the shoe, a lower layer of rubber, and a layer of rubber cement between said two layers for securing them together.

3. A rubber heel comprising a thin upper layer of rubber having a fabric embedded therein for bearing against the heel portion of the shoe, a lower layer of rubber, and a layer of rubber cement between said two layers for securing them together.

4. A rubber heel comprising a thin upper layer of rubber having a fabric embedded therein for bearing against the heel portion of the shoe, and a lower layer of rubber, said layers having opposing faces for receiving the rubber cement for securing the layers together.

1,189,860. CLOSURE FOR CONTAINING VESSELS. JULIUS NEVELSON, Somerville, Mass., assignor to National Can Company, a Copartnership comprising Hyman Stern and David Stern, Boston, Mass. Filed Nov. 27, 1914. Serial No. 874,144. (Cl. 220—80.)



1. In combination, a containing vessel having a downwardly and inwardly turned resilient bead, extending adjacent to but not contacting with the exterior vessel wall and a cap having a flange terminating in an upwardly and outwardly turned resilient bead extending adjacent to but not contacting with the inner face of the cap wall, said cap rim being of greater maximum internal diameter than the maximum external diameter of the vessel rim to leave a free space between the cap and the vessel body, and said space permitting rolling tendency of said beads in opposite directions and away from their plane of mutual contact in the seating movement of the cap and permitting rolling tendency of said beads toward each other and into their plane of mutual contact to interlock upon any tendency of the cap to move away from its seat.

2. In combination, a containing vessel having an outwardly sloped and downwardly rolled rim extending adjacent to but not contacting with the exterior face of the vessel wall, and a cap having an inwardly and upwardly rolled rim extending adjacent to but not contacting with the inner face of the wall cap, said cap rim being of greater maximum internal diameter than the maximum external diameter of the vessel rim, and of greater internal diameter than the external diameter of the opposite wall of the vessel to leave a free space below said vessel rim and exposing said rim for direct underneath support in seating the cap.

3. In combination, a containing vessel having an outwardly directed rim extending adjacent to but not contacting with the exterior face of the vessel wall, and a cap having an inwardly directed rim extending adjacent to but not contacting with the inner face of the cap wall, said cap rim being of greater maximum internal diameter than the maximum external diameter of the vessel rim, and of greater internal diameter than the external diameter of the opposite wall of the vessel to leave a continuous free space below said vessel rim and exposing said rim for direct underneath support in seating the cap.

1,189,861. THRUST-BEARING. CHARLES H. NORTON, Worcester, Mass., assignor to Norton Grinding Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 28, 1915. Serial No. 24,563. (Cl. 64—25.)

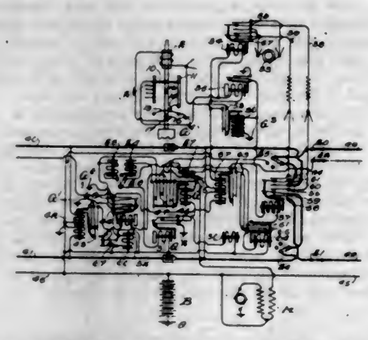
1. A thrust bearing having, in combination, a fixed cylindrical bearing, a shaft having an end flange and rotatable in said bearing, a cap fixed with relation to said bearing and inclosing the flanged end of said shaft, a flange-engaging member slidable in said cap, and means to move said member longitudinally of said cap into operative relation with said flange on said shaft.

2. A thrust bearing having, in combination, a casing, a cylindrical shaft bearing within said casing, a shaft cotatable in said bearing and having adjacent one end a radial flange engaging an end surface of said bearing, a cap fixed to said casing and inclosing the flanged end of said shaft, a flange-engaging member slidable in said cap but non-rotatable therein and means for adjusting said member longitudinally in said cap.

3. A thrust bearing having, in combination, a fixed cylindrical bearing having a flange engaging end surface, a shaft rotatable in said bearing and having a disk removably secured to one end thereof and forming a flange projecting beyond the periphery of said shaft, a cap secured to said bearing, and a cup-shaped member slidable but non-rotatable in said cap and having an end surface effective to engage the outer surface of said disk, whereby the end play of said shaft in both directions is controlled.

1,189,862. RINGING-CURRENT INTERRUPTER. HERBERT F. OBERDORFELL, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 22, 1912. Serial No. 698,900. (Cl. 179—20.)

1. In a telephone system, a plurality of groups of subscribers' lines, means for automatically supplying ringing current to said lines, a distributing interrupter common to said groups, said interrupter being normally at rest, and means for bringing said interrupter into use when it is desired to apply ringing current to a line to successively interrupt the ringing current in the different groups of subscribers' lines.



2. In a telephone system, a plurality of subscribers' lines divided into groups, means for establishing a connection with one of said lines, means for applying ringing current to said line when connection has been established therewith, an interrupter common to said groups of lines normally at rest, means for bringing said interrupter into operation when connection is made with the line, and means controlled by said interrupter for successively interrupting the ringing current supplied to the different groups of subscribers' lines.

3. In a telephone system, a plurality of groups of subscribers' lines, means for automatically supplying ringing current to said lines, a distributing interrupter common to a plurality of said groups, said interrupter comprising a magnet, a wiper carried by the plunger of said magnet, and a bank of contacts successively engaged by said wiper, said contacts belonging to different groups of said subscribers' lines, whereby the ringing current supplied to said groups is successively interrupted.

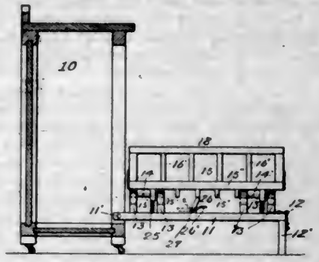
4. In a telephone system, a plurality of subscribers' lines divided into groups, means for automatically supplying ringing current to said lines, an interrupter common to a plurality of said groups for interrupting said ringing current, said interrupter comprising a magnet, a plunger controlled thereby for controlling a series of contacts, whereby the ringing current supplied to the different groups of subscribers' lines is successively interrupted, and a dash-pot for controlling the operation of said plunger.

5. In a telephone system, a plurality of subscribers' lines divided into groups, means for automatically supplying ringing current to said lines, an interrupting device common to a plurality of said groups for interrupting said ringing current, said interrupter comprising a magnet, means for energizing said magnet when connection is made with a subscribers' line, means for automatically breaking said energizing circuit, and means controlled by the return of the plunger of said magnet to normal position to successively interrupt the supply of ringing current to the different groups of said subscribers' lines.

[Claims 6 to 45 not printed in the Gazette.]

1,189,863. FOLDING CRADLE. WALTER G. OLDENDORF, Etna, Pa. Filed Nov. 13, 1915. Serial No. 61,246. (Cl. 5—18.)

1. In a folding cradle, a bottom oppositely disposed side sections arranged lengthwise on said bottom, arms secured to said side sections and pivotally connected to said bottom, end sections, arms secured to said end sections and pivotally secured to said bottom, said end sections being shorter in length than the space intervening between said sides so as to permit the side sections to be folded on said end sections when the latter are folded on said bottom, blocks fixedly attached at each end of one of said side sections and at right angles thereto, blocks suitably hinged to each end of the opposite side section, said blocks being for the purpose of serving jointly with the said end sections to form the ends of the cradle when said end sections are not folded, said hinged blocks being for the purpose of permitting the same to be swung out of a ringht-angled position, relative to the side section, to which they are attached, so that the latter may be folded in closer relation upon the other side section.

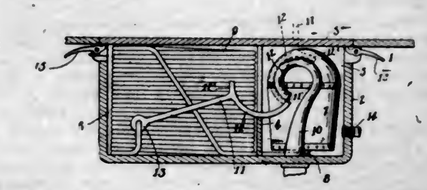


2. In combination with an inclosure, a door hinged to said inclosure so as to be horizontally disposed when open, bearings spaced apart and secured on the interior side of the door of said inclosure and adjacent to the ends thereof, pins carried on said bearings, a folding cradle mounted upon said pins so as to be horizontally movable thereon between said bearings, springs secured to said door and to the bottom of said cradle to resist any horizontal movement of the cradle in the direction of the inclosure while said cradle is being operated.

3. In a folding cradle, a bottom, oppositely disposed side sections arranged lengthwise on said bottom, arms secured to said side sections and pivotally connected to said bottom, end sections, arms secured to said end sections and pivotally secured to said bottom, said end sections being shorter in length than the space intervening between said sides, blocks operatively secured to one of said side sections, one at each end thereof, for the purpose of arranging said blocks at right angles to said side section when the parts of the cradle are unfolded, and of turning said blocks out of said right angle position for the purpose of allowing said side section to be folded on the oppositely disposed side section.

4. In combination with an inclosure, a door hinged to said inclosure so as to be horizontally disposed when open, a folding cradle carried on the door of said inclosure, bearings spaced apart and secured to said door, pins carried horizontally upon said bearings, said cradle being mounted upon said pins so as to be horizontally movable thereon between said bearings for the purpose of permitting said cradle to enter the inclosure with the movement of the door of said inclosure.

1,189,864. DEVICE FOR LOCATING AND RAISING SUNKEN VESSELS. JOHN C. PAULSON, Winthrop, Mass., assignor of one-half to Robert M. MacKay, Dorchester, Mass. Filed Nov. 6, 1915. Serial No. 59,911. (Cl. 114—16.5.)



1. In a device of the class described, a compartment having a grappling member therein, a float and a cable connecting said float and grappling member and having a relatively rigid portion operatively connected with said grappling member.

2. In a device of the class described, a compartment having a grappling member and a float therein, and a cable connecting said float and grappling member, and having a relatively rigid portion hingedly connected with said grappling member and arranged for vertical presentation to a grappling device guided on said cable in the operation of the device.

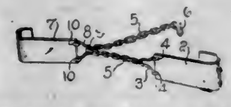
3. In a device of the class described, a rigid grappling member, a float displaceably mounted relative thereo, a cable connected at one end to said float, and a rod connected to the other end of the cable and hinged to the free end of the grappling member and arranged for vertical presentation to a grappling device guided on said cable in the operation of the device.

4. In a device of the class described, in combination with a vessel having a covered compartment therein, means for displacing cover, a grappling member rigidly mounted in said compartment, and a float displaceably mounted therein, a cable connected at one end to said float, and a rod swiveled to the other end of said cable and hinged to the free end of the grappling member and arranged for vertical presentation to a grappling device guided on said cable upon displacement of said float.

5. In a device of the class described, a rigid grappling member and a cable having a rigid portion pivotally connected to said member, said rigid portion having one end substantially conforming to and overlying the free end of said grappling member in the operation of the device.

[Claims 6 and 7 not printed in the Gazette.]

1,189,865. MILKING-HOBBLE. SWEN PAULSON, Heber, Utah. Filed Oct. 9, 1915. Serial No. 55,000. (Cl. 119—105.)



1. A milking hobble comprising a hook-shaped member adapted to be engaged with a cow's leg, a chain attached thereto, and a hook-shaped member adapted to be engaged with another leg of the cow and having a grab link thereon adapted to be engaged with any one of the links of the chain, the extremity of the chain being provided with a hook whereby the extremity may be wound around the cow's tail and the hook engaged with one of the links of the chain.

2. A hobble of the character described comprising a hook-shaped plate, a chain permanently connected to said plate, a hook attached to the end link of the chain, and a hook-shaped plate formed at one end with a grab link, this link being contracted at its free end to less than the width of any one of the links of the chain through which plate the chain passes.

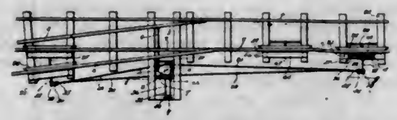
1,189,866. PROCESS OF MAKING RUBBER FOOTWEAR. FRED ERNEST PAYNE, Middletown, Conn., assignor to Goodyear Rubber Company, Middletown, Conn., a Corporation. Filed Jan. 19, 1916. Serial No. 72,928. (Cl. 12—142.)



1. The process of forming a boot or shoe structure having a bead at the lower edge of the boot or shoe body with its exposed surface roughened and having an extra tread portion below the said bead, comprising providing a boot or shoe body having a closed bottom, providing a sole base of sufficient area to cover the said bottom and also to provide a margin to extend above the said bottom to form said bead, and providing an extra tread portion of sufficient area to cover a portion of the said bottom only, securing the said extra tread portion to the said sole base within the said margin to form a unitary structure therewith, and then securing the said unitary structure to the said boot or shoe body, the surface of the said sole base opposed to the said tread portion being roughened.

2. The process of forming a sole structure for a rubber boot or shoe comprising providing a sole base member having a knurled lower surface, and an extra tread member, both of the said members being of unvulcanized rubber, laying the said extra tread member on the said knurled lower surface of the said sole base member, placing the said members with the one so positioned above the other on a plane surface, and passing a roll over the superimposed members, whereby air will be forced from between the opposed surfaces of the said members and the said surfaces will be merged one with the other.

1,189,867. SWITCH-OPERATING MECHANISM. WILLIAM J. PRICE and JOSEPH M. CRAIG, Poteau, Okla.; said Craig assignor to said Price. Filed July 1, 1913. Serial No. 776,832. Renewed Jan. 23, 1915. Serial No. 4,080. (Cl. 104—23.)



1. In a car switch operating mechanism, the combination with the tripping member carried by the car and the switch point, of a tripping box extending parallel with the track, tripping mechanism connected at one end to the switch point and projecting into the tripping box at the opposite end, a slidably removable cover for the tripping box, and automatic means operated by the approaching wheel of the car for removing the cover to open the tripping box, as and for the purpose specified.

2. In a switch operating mechanism, the combination of a switch point, a switch bar, a substantially diamond shaped crank plate mounted to turn on a vertical axis in a direction transversely of the rails, said plate being pivotally coupled to said switch point, depressible switch throwing devices at opposite sides of the switch point, each comprising a rocking member having spaced contact portions, cranks connected with the crank plate, cranks connected with the switch throwing devices, cables connecting the cranks of the switch throwing devices with the cranks of the crank plate, and wheel controlled means for covering and uncovering said switch throwing devices.

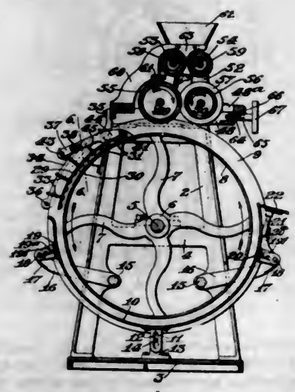
3. In a switch operating mechanism, the combination of a switch point, a crank for operating the same, depressible switch throwing devices at opposite sides of the switch point, each comprising a rocking member having spaced contact portions, cranks connected with the switch throwing devices, cables connecting said cranks with the switch operating crank, and wheel controlled means for covering and uncovering said switch throwing devices.

4. In a switch operating mechanism, the combination of a switch point, a crank for operating the same, depressible switch throwing devices at opposite sides of the switch point, each comprising a rocking member having spaced contact portions, cranks connected with the switch throwing devices, cables connecting said cranks with the switch operating crank, devices for normally covering the switch throwing devices, and wheel controlled means for moving said covering devices to uncovering position, said covering devices being provided with means for automatically retracting the same.

5. In a switch operating mechanism, a casing, a switch operating device mounted therein, a cover for said casing, a laterally movable guard rail adapted to be operated by the wheels of the rolling stock to move said cover to open position, and means for automatically retracting the guard rail and cover.

[Claims 6 and 7 not printed in the Gazette.]

1,189,868. DOUGH-MOLDING MACHINE. EDWIN A. REED, St. Louis, Mo., assignor to Diagraph Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 9, 1915. Serial No. 49,659. (Cl. 107—9.)



1. In a dough molding machine, in combination with a movable member, a flexible inelastic curling element cooperating therewith, having one fixed end and being unattached throughout the remainder of its length.

2. In a dough molding machine, in combination with a rotatable drum, a flexible inelastic curling element cooperating therewith, having one end fixed and being unattached throughout the remainder of its length.

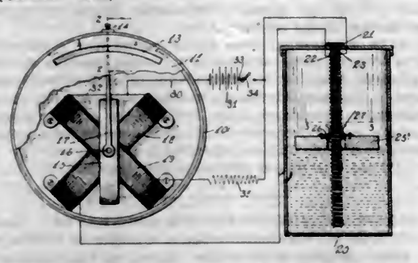
3. In a dough molding machine, in combination with a rotatable drum, a flexible inelastic curling element yieldably supported in coöperative relation thereto, and having a fixed and a free end portion.

4. In a dough molding machine, in combination with a rotatable drum, a flexible curling element pivotally supported in coöperative relation thereto.

5. In a dough molding machine, in combination with a rotatable drum, a flexible curling apron supported out of contact with said drum, and a pivotal holder for said apron.

[Claims 6 to 21 not printed in the Gazette.]

1,189,869. LIQUID-GAGE. FRANK I. REMY, BENJAMIN P. REMY, and ARTHUR BERGER, Anderson, Ind., assignors to Remy Brothers Company, Anderson, Ind., a Copartnership. Filed Nov. 13, 1914. Serial No. 871,951. (Cl. 177—351.)



1. A device of the kind described including an electrically operated gage, a liquid tank, an electrical circuit for operating said gage, and a float within the tank adapted to directly bridge and close said circuit and vary the resistance according to the quantity of fluid in the tank.

2. A device of the kind described including an electrically operated gage, a liquid tank, an electrical circuit for operating said gage, said circuit having a vertical resistance in the tank adapted to extend into the fluid therein and including a pair of parallel wires electrically disconnected and means actuated by the level of said fluid for varying the resistance.

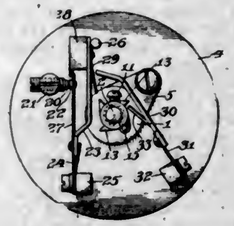
3. A device of the kind described including an electrically operated gage, said circuit having a vertically disposed resistance coil in the tank consisting of a pair of parallel wires electrically disconnected, and a float in said tank carrying brushes adapted to engage said resistance coil as the float rises and lowers and close the circuit between said wires at variable distances from the end of the coil.

4. A device of the kind described including an electrically operated gage, a liquid tank, a non-conducting rod extending from the top substantially to the bottom of the tank, and an electrical circuit extending from said gage into said tank with the two wires thereof in said tank parallel with each other and wound about said rod from top to bottom and at all points disconnected from each other.

5. A device of the kind described including an electrically operated gage, a liquid tank, a non-conducting rod extending from the top substantially to the bottom of the tank, an electrical circuit extending from said gage into said tank with the two wires thereof in said tank parallel with each other and wound about said rod from top to bottom and at all points disconnected from each other, a float in said tank, and electrically connected spring brushes carried by said float in position to engage said wires.

[Claims 6 to 8 not printed in the Gazette.]

1,189,870. CIRCUIT MAKING AND BREAKING DEVICE. LEWIS T. RHOADES, Mont Clare, Pa., assignor to New York Coil Company, Inc., New York, N. Y. Filed Oct. 23, 1915. Serial No. 57,413. (Cl. 123—166.)



1. In a contact device, the combination of a support, a flexible member rigidly secured at one end to said support, the opposite end of which is adapted to swing in two directions, the normal position assumed by said member being under no tension, and a second movable member carrying a contact adapted to be moved into contact with a stationary contact by the first-mentioned member, substantially as described.

2. In a contact device, the combination of a flexible member, one end of said member being rigidly secured to a stationary support and having its free end adapted to swing in two opposite directions, a second flexible member mounted in the path of the first-mentioned member and adapted to be struck and moved by the first-mentioned member to cause contacts to touch, substantially as described.

3. In a contact device, the combination with a support, of a flexible member on the support freely movable in two directions beyond its normal position, and an independently mounted contact closing member on said support movable by the blows of the first-mentioned member, substantially as described.

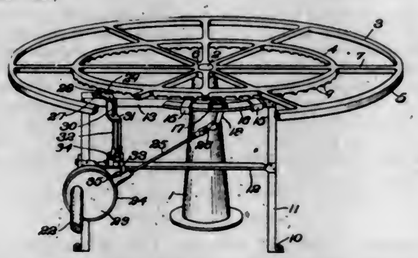
4. In a contact device, the combination with a support, of a flexible member on the support freely movable in two directions beyond its normal position, an independ-

ently mounted contact closing member on said support movable by the blows of the first-mentioned member, and means for moving the first-mentioned member in one direction to store up energy in said member which energy is used in a blow against the contact member, substantially as described.

5. The combination with a support, a swinging contact member on the support, an operating member, a spring forming a support for and connecting the operating member with said first support and holding the member in normal position, means for moving the operating member in one direction to store up energy in the spring, and said operating member adapted when released from said means to move past its normal position and impart a blow to the contact member to cause the latter to move the contacts together, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,189,871. TABLE-FORWARDING MECHANISM. WEBSTER M. ROBERTS and PARK D. ROBERTS, St. Joseph, Mo. Filed Oct. 3, 1914. Serial No. 864,965. (Cl. 74—54.)



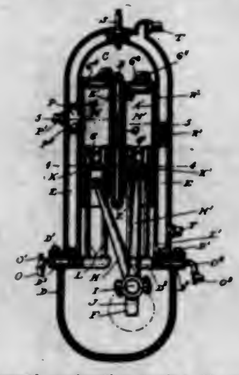
1. The combination with a revoluble member, of a sliding bar located adjacent the revoluble member and provided with a slot, a pawl pivotally mounted on the bar and projecting through the slot, one arm of said pawl being adapted for engagement with the revoluble member, and an eccentric having link connection with the other arm of the pawl.

2. The combination with a revoluble member having teeth on its under face, of an arcuatile bar located beneath the toothed portion of the revoluble member and adapted for movement in a path parallel therewith, a pawl pivotally mounted in the bar and having an arm adapted for engagement with said teeth, an eccentric connected with the opposite arm of the pawl and adapted for positively moving the pawl to engagement with the teeth and advancing the revoluble member upon forward movement of the bar, and for positively disengaging the pawl and returning said bar, for the purpose set forth.

3. The combination with a revoluble member, of a bar movable adjacent the revoluble member, a pawl on said bar, an eccentric operatively connected with the pawl, to positively induce engagement of the pawl with the revoluble member and positively disengage the same, a lock for holding the revoluble member during the period of disengagement of the pawl, and means operable by the eccentric for controlling the lock.

4. The combination with an annular revoluble member having teeth formed thereon; of a pawl carrier mounted adjacent to said teeth and adapted to be moved in a path parallel therewith, said pawl carrier having a slot formed vertically through the central portion thereof; an angular pawl oscillatably mounted in said slot, the upper portion of said pawl projecting thereabove while its lower portion extends below said pawl carrier, said upper portion being adapted to be moved from and into contact with said teeth and to contact the upper surface of said pawl carrier for limiting the oscillation of said pawl in one direction; a stop formed on the rear surface of said pawl, said stop being in like manner adapted to limit oscillation of said pawl in the opposite direction; and reciprocative driving means connected with the lower portion of said pawl whereby said pawl is oscillated and whereby the latter and the therewith connected pawl carrier are reciprocatively moved.

1,189,872. INTERNAL-COMBUSTION ENGINE. JOHN R. ROGERS, Brooklyn, N. Y. Filed July 9, 1910. Serial No. 571,142. (Cl. 123—53.)



1. In an internal combustion engine, the combination of a cylinder, an exhaust in the wall of said cylinder, a hollow working piston, a stationary piston within the working piston, a compression chamber between said working piston and said stationary piston and conduits on which said stationary piston is mounted, said conduits being adapted to convey air or gas to said compression chamber.

2. In an internal combustion engine, the combination of a cylinder, a hollow working piston, a stationary piston within the working piston, a compression chamber between said working piston and said stationary piston and conduits on which said stationary piston is adjustably mounted whereby the size of the compression chamber may be varied, said conduits being adapted to convey air or gas to said compression chamber.

3. In an internal combustion engine, the combination of a cylinder, an exhaust chamber in the wall of said cylinder, a circumferential slot connecting said cylinder with said exhaust chamber, a hollow working piston adapted to uncover and cover said slot, a stationary piston within said working piston, a compression chamber between said working piston and said stationary piston and conduits on which said stationary piston is mounted, said conduits being adapted to convey air or gas to said compression chamber.

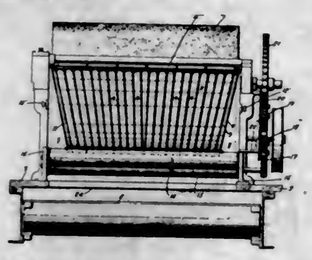
4. In an internal combustion engine, the combination of a twin cylinder, a common explosion chamber for said cylinders, a working piston in each of said cylinders, a common driving shaft offset with relation to said pistons and rods connecting said shaft and said pistons, whereby said pistons are given a differential motion during the revolution of the driving shaft.

5. In an internal combustion engine, the combination of a twin cylinder, a common explosion chamber for said cylinders, a hollow working piston in each of said cylinders, a common driving shaft offset with relation to said pistons, a stationary piston within each of said working pistons and a compression chamber between each of said working pistons and said stationary pistons.

[Claims 6 to 38 not printed in the Gazette.]

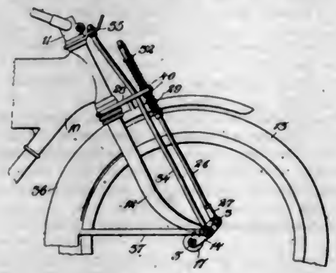
1,189,873. COTTON-WADDING APPARATUS. ELWIN H. ROONEY, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Sept. 11, 1912. Serial No. 719,710. (Cl. 19—10.)

1. Means for changing the width of a card fleece, comprising a fleece conductor having a convex bottom wall and a plurality of closely spaced converging ribs also convex as to their edges secured on such wall and forming a fleece conducting surface, and means for detachably securing said conductor to the card frame to receive the fleece from the doffer.



2. In apparatus of the kind described, the combination of a traveling conveyer, a series of elevated cards successively arranged above the same and comprising each a fleece conductor mounted to receive the fleece direct from the doffer knife of the card, such conductor being formed of converging ribs sharply inclined downward at the delivery end, whereon the fleece moves downwardly by the aid of gravity, and a pair of driven rolls at the end of such ribs adapted to lay the fleece upon the conveyer.

1,189,874. MOUNTING FOR VEHICLE-WHEELS. NORBERT H. SCHICKEL, Stamford, Conn. Filed Dec. 18, 1912. Serial No. 737,566. (Cl. 208—97.)



1. A vehicle having a wheel, a frame part and connections between said wheel and said frame part, said connections including a rod, a rigid guide for said rod, and through which the rod may move longitudinally and angularly, springs encircling said rod upon opposite sides of said guide and both normally under compression and friction washers in engagement with said guide, said washers acting as seats for said springs and slidable upon said guide during the angular movement of said rod in said guide and acting to resist said movement.

2. A vehicle having a fork, a vehicle wheel having its axle movable bodily in respect to the lower end of said fork, tension rods connected to said axle, a guide rigid with said fork adjacent its upper end and supporting said tension rods, and two springs under compression on each of said tension rods and in engagement with opposite sides of said guide.

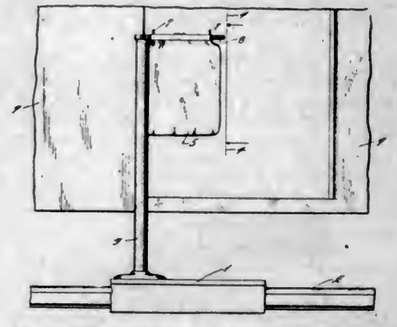
3. A vehicle having a wheel provided with a projecting axle, a link having one end pivoted to said axle, a frame including a part pivoted to said link intermediate of the ends of the latter and extending across above said projecting axle and connections between the opposite end of said link and said frame, said axle extension serving to support said frame part by the latter resting on the former upon the breaking or loosening of said connections.

4. A vehicle having a wheel provided with a projecting axle, a link including two spaced members pivoted thereon, a pivot pin supported by said members, means for preventing the longitudinal movement of said pivot pin through either of said members, a second pivot pin carried by said members, a frame having a part secured to one of said pivot pins between said members, and resilient connections between the other of said pins and said frame.

5. A vehicle having a wheel provided with a projecting axle, a link including two spaced lever members pivoted thereon, two pivot pins carried by said members and each of such diameter intermediate of its ends as to prevent its longitudinal passage through either member, a frame having a part journaled on one of said pins between said members, and resilient connecting means between the other of said pins and said frame.

[Claims 6 to 12 not printed in the Gazette.]

1,189,875. MAIL-BAG-DELIVERING DEVICE. EMIL F. SCHRAGE, Palatine, Ill. Filed Feb. 19, 1915. Serial No. 9,308. (Cl. 258—18.)



1. In a mail bag delivering device, in combination with a railway car, a rotative bearing, a notched arm pivotally mounted in said bearing and normally projected through the floor of said car, means operatively associated with said bearing for yieldingly locking the same against rotation, a latch carried by the car for frictional engagement with the notched portion of said arm, means connecting the inner end of said arm and the side of the car for swinging said arm upon its pivot when disengaged from said latch, and mail bag supporting means stationary beside the railway for engagement with the free end of said first named arm as the car passes.

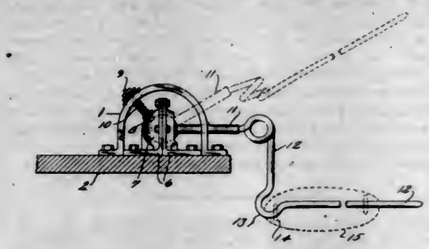
2. In a mail bag delivery device, in combination with a railway car, a rotative bearing, a stepped arm pivotally mounted in said bearing and normally projected through the door of said car, means operatively associated with said bearing for yieldingly locking the same against rotation, a latch frictionally engaging said stepped arm for normally retaining the same in operative position, a spring connecting said arm and car for swinging the former upon its pivot to a position within the car when disengaged from said latch, and mail bag supporting means stationary beside the railway for engagement with the free end of said first named arm as the car passes.

1,189,876. MAIL-BAG CATCHER. EMIL F. SCHRAGE, Palatine, Ill. Filed May 5, 1916. Serial No. 95,660. (Cl. 258—14.)

1. In a mail bag catcher, a U-shaped bracket formed with an arcuate slot, a ball and socket member arranged within said bracket, a tubular extension carried by the ball-portion of said ball and socket member and projected through the said arcuate slot, flexible mail-bag-gripping means carried by said tubular extension and means carried by said bracket engaging the ball portion of said ball and socket member whereby relative movement of said ball member is yieldingly obviated.

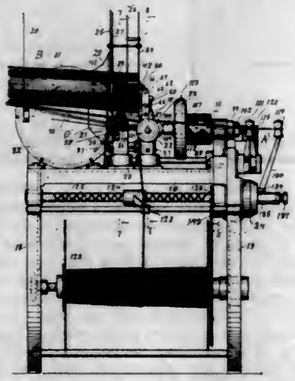
2. In a mail bag catcher, a U-shaped bracket formed with an arcuate slot, a ball and socket member arranged within said bracket, a tubular extension carried by the ball-portion of said ball and socket member and projected through the said arcuate slot, resilient mail-bag-gripping

means carried by said tubular extension and a spring-pressed pin carried by said bracket and yieldingly engaging



the ball-portion of said ball and socket member for yieldingly retaining the same in adjusted position.

1,189,877. GRASS-TWINE MACHINE. JULIUS A. SCHWANTES, Green Bay, Wis., assignor to Willow Grass Rug Company, Green Bay, Wis., a Corporation of Wisconsin. Filed Feb. 13, 1915. Serial No. 7,922. (Cl. 28—21.)



1. A grass twine machine, comprising a grass holder, a rotary selector means having side notches for removing grasses downwardly from the bottom portions of the holder, means for advancing the removed grasses in overlapping order, and means for wrapping cord spirally around the overlapped grasses.

2. A grass twine machine, comprising a grass holder, a rotary selector means having side notches for removing grasses downwardly from the bottom portions of the holder, means for advancing the removed grasses in overlapping order, and means including in part a non-rotatable tubular member and a rotatable member for wrapping the cord spirally around the overlapped grasses.

3. A grass twine machine, comprising a grass holder having a plurality of discharge openings, a rotary selector means having side notches on its opposite side peripheral edge portions for moving grasses laterally through the discharge openings of the holder, means for advancing the removed grasses in overlapping order, and means for wrapping cord spirally around the overlapped grasses.

4. A grass twine machine, comprising a grass holder having a plurality of discharge openings, a rotary selector means having side notches on its opposite side peripheral edge portions for moving grasses laterally through the discharge openings of the holder, means for advancing the removed grasses in overlapping order, and means including in part a non-rotatable tubular member and a rotatable member for wrapping cord spirally around the overlapped grasses.

5. A grass twine machine, comprising a grass holder having a plurality of discharge openings, a rotary selector wheel having a peripheral flange provided with notches in its opposite side portions for removing grasses from the holder and through the discharge openings thereof, revoluble means for advancing the removed grasses in overlapping order, and means for wrapping a cord spirally around the overlapped grasses.

[Claims 6 to 26 not printed in the Gazette.]

1,189,878. CIGAR AND CIGARETTE ASH CATCHER AND HOLDER. ALBERT L. SCHWARTZ, Philadelphia, Pa. Filed Apr. 23, 1915. Serial No. 23,320. (Cl. 131—51.)



1. In a catcher and holder for the ashes of a cigar, a pin adapted to be stationarily connected with a cigar, and an ash receiver freely mounted on said pin and adapted to slide thereon toward the butt end of the cigar, and be advanced to the burning end of the cigar as the latter shortens in being smoked without disturbing said pin.

2. In a catcher and holder for the ashes of a cigar, a hollow body, a disintegrator in the latter, a cap on said body adapted to close the outer end thereof, a diaphragm in said body with which said disintegrator is connected, said diaphragm having therein a port forming a communication between the same and said body and means for attaching said body to a cigar.

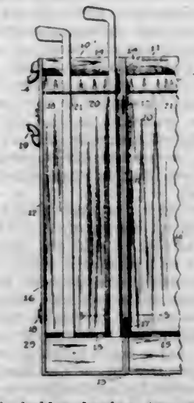
3. In a catcher and holder for the ashes of a cigar, a casing, a closing and collecting member on the outer end thereof, a device in said casing adapted to separate the ashes from the cigar and disintegrate said ashes and allow them in disintegrated condition to pass therethrough into said collecting member and means for attaching said casing to a cigar.

4. In a catcher and holder for the ashes of a cigar, a casing, a diaphragm therein, the latter being provided with a port, a closing cap on said casing interiorly in communication with the latter through said port, a head in said cap adjacent to said port, and means for attaching said casing to a cigar.

5. In a catcher and holder for the ashes of a cigar, a casing, a thimble therein, and a stem freely entering said thimble and being thereby adapted to support said casing on the cigar and allow it to be moved to the cigar as the latter shortens in being smoked.

[Claim 6 not printed in the Gazette.]

1,189,879. GOLF-BAG. GUSTAVE H. SHAMBERG, New York, N. Y. Filed Jan. 22, 1916. Serial No. 73,506. (Cl. 224—45.)

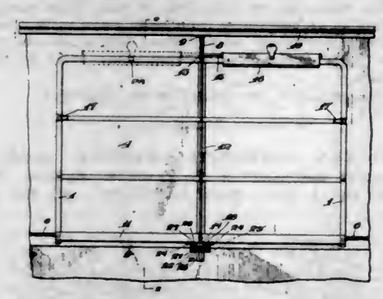


1. A golf-club holder having two shallow elongated compartments hinged at two long sides and having their upper ends open and each compartment provided with means for guiding and separating the golf-clubs.

2. In a golf-club holder, the combination of a plurality of shallow elongated compartments hinged at two long sides and having their upper ends open; means in each compartment for holding the clubs separate; and means for securing the compartments in the open or extended position.

3. In a golf-club holder, the combination of a plurality of shallow elongated compartments hinged at two long sides and having their upper ends open; means in each compartment to guide and separate the clubs; means for locking the compartments in the open position; means for locking the compartments in the closed position; and means near the upper end of the holder for carrying the same.

1,189,880. MUSIC-LEAF TURNER. ERNEST H. SHEPHERD, Philadelphia, Pa. Filed Dec. 16, 1915. Serial No. 67,106. (Cl. 84—17.)

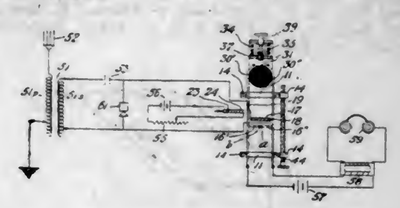


1. A music leaf turner, comprising a frame, a shaft mounted to turn in the frame and having crank arms at both ends, means on one crank arm to engage a music leaf, a lever having a bifurcated end pivotally connected to the frame below the shaft and having an upwardly projecting finger on each of the members of said bifurcated end adapted to engage the crank arm in one of its extreme positions, whereby the movement of the lever operates to turn the shaft in both directions, substantially as described.

2. A music leaf turner, comprising a frame, a shaft mounted to turn in the frame and having crank arms at both ends, means on one crank arm to engage a music leaf, a lever pivotally connected to the frame and having two members thereon located at opposite sides of the shaft each of which is adapted to engage the crank arm in one of its extreme positions, whereby the movement of the lever operates to turn the shaft in both directions, a slotted plate limiting the movement of the lever, and a spring holding the lever in normal position, substantially as described.

1,189,881. WIRELESS TELEGRAPHY. FREDERICK G. SIMPSON, Seattle, Wash. Original application filed Nov. 1, 1912, Serial No. 729,064. Divided and this application filed Apr. 23, 1913. Serial No. 763,142. (Cl. 250—21.)

1. In a wireless telegraph system, the combination with an antenna and a receiving circuit, two suitably supported reeds made of magnetizable material, a helix surrounding a portion of one of said reeds, an electro-magnet in the receiving circuit disposed to extend between said two reeds so that each of the poles of its core may be adjacent to one of said reeds whereby said electro-magnet may be operated to attract said reeds to bring them nearer to each other, said helix and electromagnet being in series in the receiving circuit, microphonic contacts operated by said reeds, a condenser connected with said circuit in series with said helix and said electro-magnet, a detector connected with said circuit in parallel with said helix and said electro-magnet, and a signal controlled by the microphonic contacts.



2. In a wireless telegraph system, the combination with an aerial and a receiving circuit deriving current therefrom, of a crystal detector in parallel with the receiving circuit, a vibrator, an actuating electro-magnet therefor consisting of a coil of fine wire in series in said circuit and having a core of fine individually insulated iron wires, a condenser in said circuit in series with said coil, and a helix in series with said coil for magnetizing said vibrator, the helix and coil in series with said receiving circuit.

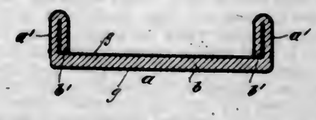
3. In a wireless telegraph system, the combination with an aerial and a receiving circuit deriving current impulses therefrom, a receiving instrument having a vibratory magnetizable reed, a helix in said circuit surrounding said reed, an electro-magnet whose coil is in series with said helix and whose core is a bundle of fine individually insulated iron wires located to attract said reed, and a condenser in said circuit in series with said coil, of a crystal detector in parallel with said coil and said helix.

4. In a wireless telegraph system, the combination with an aerial and a receiving circuit deriving current therefrom, a vibrator forming part of a micro-magnetic receiving instrument, a movable helix in said circuit and surrounding a portion of said vibrator for magnetizing it, an electro-magnet whose coil is in series with said helix and whose core is a bundle of fine individually insulated iron wires located to attract said vibrator, and a condenser in said circuit in series with said coil, of a crystal detector in parallel with said coil, and a separate circuit containing an electro-magnet whose field embraces said vibrator and said fine wire core.

5. In a wireless telegraph system, the combination with an aerial and a receiving circuit, of a rectifier of the crystal type for alternating currents, and a condenser in series with the receiving circuit associated with a vibrator element, a helix in the receiving circuit and surrounding a portion of said element, an electro-magnet in the receiving circuit and having one of its poles adjacent to said element, whereby when rectified electro-magnetic waves exist in the receiving circuit the helix and electro-magnet are caused to directly vibrate said element, means in a separate circuit to produce a magnetic field of predetermined polarity in and adjacent to said element, microphonic contacts operable by said element, and a signal operated by said contacts.

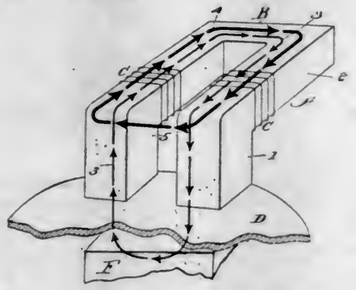
[Claims 6 to 11 not printed in the Gazette.]

1,189,882. MANUFACTURE OF BRACELETS AND OTHER ARTICLES OF JEWELRY. JOHN J. SOMMER, North Attleboro, Mass. Filed Oct. 4, 1915. Serial No. 53,903. (Cl. 29—181.)



As an improved article of manufacture, a one-piece structure composed of a strip of metal with a coating of gold on each face thereof, the longitudinal edges thereof being inturned and sealed directly against the gold surface.

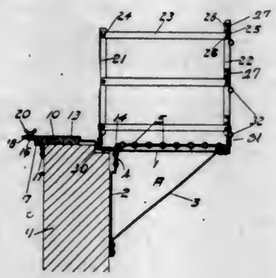
1,189,883. APPARATUS FOR LIMITING THE TRACTION OF AN ELECTROMAGNET. IRVING M. STEIN, Long Branch, N. J., assignor to Thomas E. Murray, New York, N. Y. Filed Nov. 17, 1915. Serial No. 61,906. (Cl. 175—321.)



1. An electro-magnet, comprising a bifurcated core having end portions 1 of its arms parallel and at substantially right angles to the remaining portions 2 thereof, and series coils on said body portion, and an armature; the said body portion 2 of said core being disposed substantially parallel to the plane of said armature.

2. An apparatus of the watt-meter type set forth, comprising a rotary armature, a bifurcated core having its end portions 1 in inductive proximity to a face of said armature and its body portion 2 disposed parallel to said face, and series coils on said body portion.

1,189,884. PORTABLE SCAFFOLD. JOSEPH STRATINSKY, Chicago, Ill. Filed Oct. 16, 1915. Serial No. 56,187. (Cl. 20—87.)



1. In a knockdown structure of the class described, the combination of a pair of side frames, a floor member comprising a plurality of telescoping members removably mounted at their ends on said frames to permit the frames to be moved toward and from each other, and a lock on each side frame common to said telescoping members for maintaining said members in position.

2. In a knockdown structure of the class described, the combination of a pair of side frames, a floor member comprising a plurality of telescoping members removably attached at their ends to said frames to permit the frames to be moved toward and from each other, a clamping member for each side frame for mounting the structure in position, a front railing for said platform comprising foldable uprights on each of said frames, and telescoping railing members detachably connected to said uprights.

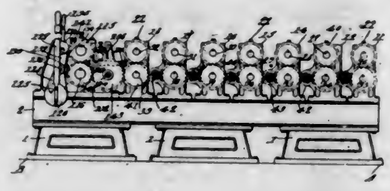
3. The combination of a pair of side frames, a floor member comprising a plurality of telescoping members attached at their ends to said frames to permit the frames to be moved toward and from each other, a clamping member for each side frame for mounting the structure in position upon a support, a front railing for said platform comprising foldable uprights on said frames, telescoping railing members detachably connected to said uprights, inner foldable uprights on said side frames, and side railing members hinged on said latter uprights and detachably connected to the front railing uprights.

4. In a structure of the class described, the combination of a pair of triangular side frames, a plurality of floor members detachably mounted on said triangular frames and each comprising telescoping sections to permit the width of the structure to be varied in accordance with the place where it is to be used, a common locking member on each side frame for locking said telescoping members to said frame, and foldable railings on said side frames.

5. In a structure of the class described, the combination of a pair of triangular side frames, a plurality of parallel floor members detachably connected to said triangular frames and comprising telescoping sections to permit the width of the structure to be varied in accordance with the place where it is to be used, front and rear uprights hinged on said frames, telescoping railing members detachably connected at their ends to said front uprights and forming an adjustable front railing and railing members hinged to the inner uprights and detachably connected to the outer uprights on corresponding sides to form side rails.

[Claims 6 and 7 not printed in the Gazette.]

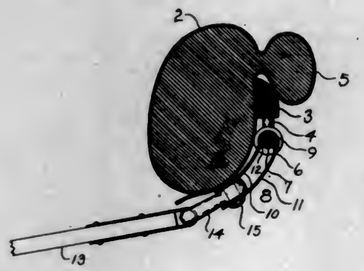
1,189,885. CORRUGATING-MACHINE. GEORGE A. TRACHTE and ARTHUR F. TRACHTE, Madison, Wis. Filed Dec. 7, 1914. Serial No. 875,887. (Cl. 153—7.)



1. In a machine for shaping and bending sheets, a supporting structure having a guide; a first eccentric journaled on the supporting structure adjacent one end of the guide; a first bearing slidable in the guide at said end of the guide; a second bearing slidable in the guide at the other end of the guide; oppositely extended arms provided at their outer ends with straps, the strap of one arm coacting with the first eccentric; a second eccentric coacting with the strap of the other arm; a second shaft carried by the second eccentric and journaled in the second bearing; a first shaft forming a pivotal connection between the inner ends of the arms and journaled in the first bearing; means for operating the eccentrics individually; and coöperating sheet guiding elements carried by the shafts.

2. In a machine for beading sheets, a supporting structure including a substantially horizontal platform; a bead roller mounted for rotation in a plane parallel to the platform; a pair of superposed corrugating rollers journaled on the supporting structure to the rear of the bead roller; a pair of bending rollers disposed to the rear of the corrugating rollers; means for moving the bending rollers together transversely of the line of advance of the stock, and for moving one bending roller toward and away from the other bending roller transversely of the line of advance of the stock; a retaining roller disposed between the corrugating rollers and the bead roller and constituting means for holding the stock on the platform while the stock is passing to the corrugating rollers, the platform having a bead-receiving groove located near the periphery of the beading roller, the retaining roller, the corrugating rollers and the bending rollers being provided with bead-receiving grooves located in alinement with the groove of the platform; and means for partially completing a bead in a sheet and for advancing the sheet to cause the partially finished sheet to coact with the bead roller.

1,189,886. HAME-TUG CLIP. GEORGE W. TROOP, New Britain, Conn., assignor to The North & Judd Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 29, 1916. Serial No. 74,963. (Cl. 54—30.)



1. In a device of the class described, a clip having a bolt-receiving portion, and inner and outer jaws extending from the bolt-receiving portion, the clip also being inwardly indented at approximately the junction of one of the jaws and the bolt-receiving portion to produce an interior projection, the indentation extending partially across the clip between the upper and lower edges thereof.

2. In a device of the class described, a clip having a bolt-receiving portion, and inner and outer jaws extending from the bolt-receiving portion, the clip being indented inwardly approximately at the junction of one of the jaws and the bolt-receiving portion, said jaws being longitudinally curved, and a D pivoted between the free portions of the jaws, the inner jaw acting positively to prevent the D chafing a collar.

3. In a device of the class described, a clip having a bolt-receiving portion and coöperating jaws extending from the bolt-receiving portion, the jaws being longitudinally curved, and a D member pivoted between the free portions of the jaws, the inner jaw acting positively to prevent the D member from chafing a collar.

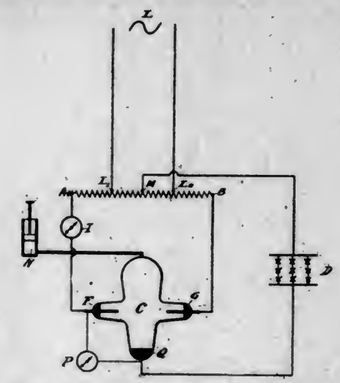
4. In a device of the class described, a clip having a bolt-receiving portion and inner and outer longitudinally curved coöperating jaws extending from the bolt-receiving portion, the clip approximately at the junction of the bolt-receiving portion and the inner jaw being indented inwardly between the upper and lower edges of the clip to thereby provide an interior projection, and a D member pivoted between the free portions of the jaws, the inner jaw acting positively to prevent the D member from chafing a collar.

1,189,887. METHOD FOR CONTROLLING THE EFFICIENCY OF MERCURY RECTIFIERS. WILLIAM TSCHUDY, Lynn, Mass. Filed Apr. 15, 1913. Serial No. 761,315. (Cl. 175—363.)

1. The method of controlling the wave form transmitted by a mercury vapor apparatus which consists in changing the physical condition of the vapor in said apparatus.

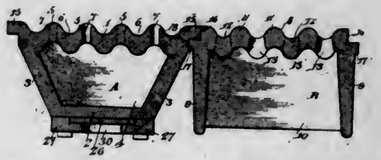
2. The method of controlling the wave form transmitted by a mercury vapor apparatus which consists in varying the pressure or density of the vapor of said apparatus.

3. The method of controlling the efficiency of vapor rectifiers which consists in supplying a varying current



flow to the rectifier and varying its form factor by varying the pressure or density of the vapor of the rectifier.

1,189,888. HOLLOW BLAST-GRATE. PAULUS J. A. VAN DEINSE, Greenville, Mich. Filed Dec. 27, 1910. Serial No. 599,615. (Cl. 110—74.)



1. A grate composed of blast bars and draft bars in alternation, each having the fuel supporting surface formed with alternate ridges and valleys, the blast bars having air passages therethrough opening at the highest points of the ridges, and the draft bars having passages therethrough opening at the bottoms of the valleys.

2. A grate composed of blast bars and draft bars in alternation each having the fuel supporting surface formed with alternate ridges and valleys, the blast bars having air passages therethrough opening at the highest points of the ridges, and the draft bars having passages therethrough opening at the bottoms of the valleys, the meeting edges of the blast and draft bars being in overlapping relation.

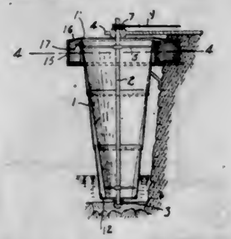
3. A grate composed of blast bars and draft bars in alternation, each having the fuel supporting surface formed with alternate ridges and valleys, the blast bars having air passages therethrough opening at the highest points of the ridges, and the draft bars having passages therethrough opening at the bottoms of the valleys, the meeting edges of the blast and draft bars being formed with matching longitudinal flanges and grooves, the flange of one bar seating in the matching groove of the other bar.

4. In a blast grate, a blast bar having its fuel sustaining surface provided with alternating ridges and valleys and having blast passages with their exit openings at the highest points of the ridges and each there expanding to direct an expanded stream of air into the fuel.

5. A grate composed of blast bars and draft bars in alternation and having the fuel sustaining surface formed into alternate ridges and valleys, the blast bars having air passages therethrough opening at the summits only of the ridges and the draft bars having openings therethrough at the bottoms only of the valleys.

[Claims 6 and 7 not printed in the Gazette.]

1,189,889. CENTRIFUGAL PUMP. NELSON B. WALDRON, Lewiston, Me. Filed Mar. 23, 1915. Serial No. 16,445. (Cl. 103—43.)



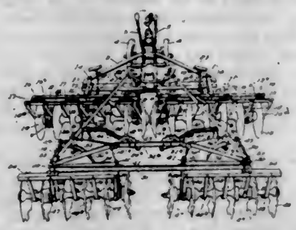
1. In a pump of the class described an elevating element comprising a vertically disposed upwardly flaring member, an inwardly projecting flange on the lower portion, and means for rotating said element.

2. In a pump of the class described, an elevating element comprising a vertically disposed upwardly flaring rotatable member, an inwardly projecting horizontal flange on its lower portion, and means for rotating said element.

3. In a pump of the class described, an elevating element comprising a vertically disposed upwardly flaring rotatable member, an inwardly projecting flange on its lower portion, means for rotating said element, an annular delivery chamber about the upper end having an inner wall terminating adjacent to the upper edge of said flaring member and an outwardly projecting flange on said inner wall of said chamber.

4. In a pump of the class described, an elevating element comprising a vertically disposed upwardly flaring rotatable member, an inwardly projecting horizontal flange on its lower portion, a vertically disposed rim on said flange and extending above the upper surface thereof, and means for rotating said elements.

1,189,890. DISK HARROW. FREDERICK C. WARNE, Mansfield, Ohio, assignor to Roderick Lean Mfg. Company, Mansfield, Ohio, a Corporation of New Jersey. Filed June 20, 1914. Serial No. 846,225. Renewed May 11, 1916. Serial No. 96,939. (Cl. 55—83.)



1. In a double disk harrow, front and rear harrow frames, gang frames carried thereby and reach bars flexibly connected to said rear harrow frame and extending in a forwardly converging angle and flexibly connected at their front end to said front harrow frame at points equally distant from the line of draft.

2. In a double disk harrow, the combination with front and rear harrow frames provided with adjustably mounted disk gangs; of forwardly converging draft bars flexibly connected at their opposite ends to said front and rear harrow frames at points equally distant from the common longitudinal centers of said frames.

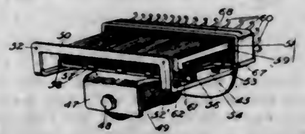
3. In a double disk harrow, the combination with a front harrow frame and adjustable disk gangs carried thereby; of a rear harrow frame provided with separate disk frames vertically pivotally connected therewith, separate forwardly converging reach bars horizontally pivoted at their ends to said front and rear harrow frames, and horizontally movable engaging and supporting members between said rear disk frames and said reach bars.

4. In a double disk harrow, the combination with a front harrow frame and adjustable disk gangs carried thereby; of a rear harrow frame provided with forwardly converging reach bars flexibly connected to said front frame at points equally distant from the longitudinal center thereof, adjustable disk gangs carried by said rear harrow frame, and anti-friction supporting devices connected to said reach bars and rear disk gangs for vertically supporting the latter in their adjusted positions.

5. In a double disk harrow, the combination of front and rear harrow frames provided with adjustable disk gangs, and independently mounted forwardly converging reach bars flexibly connected to said front and rear frames and normally extending at equal angles to the longitudinal center of said harrow, and means for vertically supporting said rear disk gangs in their various adjusted positions relative to said rear harrow frame and said reach bars.

[Claims 6 to 20 not printed in the Gazette.]

1,189,891. ELECTRICAL RELAY. HARRY G. WEBSTER, Chicago, Ill., assignor, by mesne assignments, to James R. Garfield, trustee, Cleveland, Ohio. Filed Apr. 3, 1914. Serial No. 829,237. (Cl. 175—325.)



1. In a multiple-contact relay, the combination with an actuating electro-magnet, of its armature, a plurality of contact springs controlled by said armature, and an integral frame mounting the foregoing members in operative position and forming a magnetic return bar for said magnet; said frame having an integral protective guard bent up adjacent to the free ends of the contact springs, substantially as set forth.

2. In a multiple-contact relay, the combination with an actuating electro-magnet, of its armature, a plurality of contact springs controlled by said armature, and an integral frame mounting the foregoing members in operative position and forming a magnetic return bar for said magnet; said frame being cut away beneath the contact springs and having a protective guard positioned adjacent to their free ends, substantially as set forth.

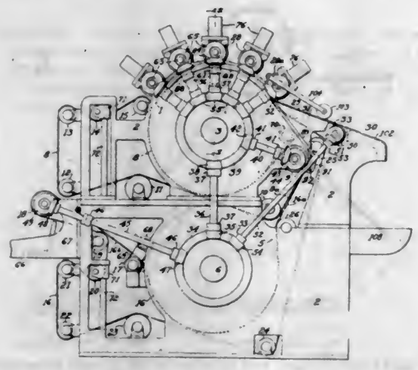
3. A relay structure comprising a magnet core and winding, an apertured bell crank armature, a return frame having two knife edge bearings on which said armature is fulcrumed, a projection of said frame extending through the aperture of said armature from between said bearings and bent at an angle to provide mounting means for said frame, and contact members mounted on said projection and actuated by said armature.

4. A relay structure comprising a magnet core and winding, an apertured bell crank armature, a return frame having a knife edge bearing on which said armature is fulcrumed and a projection entering the aperture in said armature, a retaining plate entering said aperture and supported on said projection, and contact members actuated by said armature.

5. A relay structure comprising a magnet core and winding, an apertured bell crank armature, a return frame having a knife edge bearing on which said armature is fulcrumed and a projection entering the aperture in said armature, a retaining plate entering said aperture and supported on said frame said plate having shoulders to engage said armature at points opposite said bearing, and contact members actuated by said armature.

[Claims 6 to 14 not printed in the Gazette.]

1,189,892. IRONING-MACHINE. FRED C. WENDELL, deceased, by Theresa S. Wendell, administratrix, New York, N. Y. Filed Feb. 17, 1913. Serial No. 748,941. (Cl. 68—9.)



1. In an ironing machine, the combination, with a drum, and a plurality of pressure rollers, of mechanism connecting said rollers for moving all of the rollers simultaneously away from and toward said drum, a cylinder, a piston therein connected to said mechanism, means to admit fluid under pressure to said piston to actuate said mechanism to shift all of said rollers simultaneously away from the drum and to simultaneously restore the rollers to said drum, and means to retard the return movement of said rollers when restored to said drum.

2. In an ironing machine, the combination with a frame, a drum, and pressure rollers, of links for each of said rollers joining it to said frame, links joining said former links, and means to actuate said links for moving said rollers away from the drum and restore said rollers to said drum.

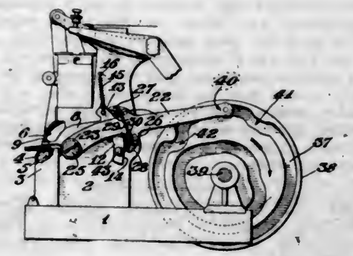
3. In an ironing machine, the combination with a revoluble drum, and pressure rollers yieldable to be pressed away therefrom and adaptable to be maintained away therefrom, of a bevel gear on said drum, gears meshing therewith, hollow shafts rotated by said latter gears, bevel gears carried on said rollers, bevel gears meshing with said roller gears, and shafts on said last gears slidable longitudinally within said hollow shafts being driven by the hollow shafts to drive said roller gears and rollers.

4. In an ironing machine, the combination with a frame, a drum, and pressure rollers, of a pair of links for each of said rollers at each end of the machine pivoted to each other, one of each pair of said links pivoted to its roller and the other pivoted to the frame, links joining said pairs, a rock-shaft on said frame, cranks on said rock-shaft, said cranks connected to said links, a fixed cylinder, a piston therein, a piston rod connected to said cranks to actuate said rock-shaft, means to admit fluid under pressure to said piston to actuate said links to shift said rollers and maintain them shifted away from said drum, means to reverse the pressure on said piston to actuate said links oppositely to restore said rollers to said drum, and said links having their joints yielding to allow said rollers to be pressed away partially from said drum while under pressure.

5. In an ironing machine, the combination with a frame, a drum, and pressure rollers, of a pair of links for each of said rollers pivoted to each other, one of each pair of said links pivoted to its roller and the other pivoted to said frame, links joining said pairs, a cylinder, a piston therein connected to said links, and means to admit fluid under pressure to said piston to set said links to maintain said rollers away from said drum and to actuate said links to restore said rollers to the drum.

[Claims 6 to 13 not printed in the Gazette.]

1,189,893. PRESSER-FOOT MECHANISM. JOHN L. WHEELER, St. Louis, Mo., assignor to Simplex Shoe Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed July 23, 1915. Serial No. 41,428. (Cl. 112—20.)



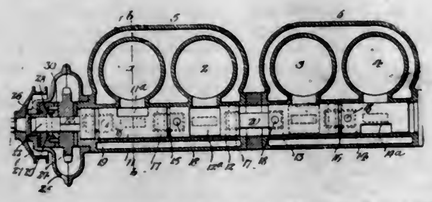
1. In a sewing machine, a work support, and means for holding the work on said support, said means comprising a lever having a forwardly-extending work-clamping portion and a rearwardly-extending sector portion, said sector having two oppositely-arranged sets of teeth, an actuating lever pivoted about the same axis as said first-mentioned lever, a pair of oppositely-disposed pawls on said actuating lever arranged and adapted to respectively engage a set of said teeth on the sector portion of said first-mentioned lever, means for operating said actuating lever to a neutral position and to positions on opposite sides of the neutral position, means coöperating with said pawls whereby they are both out of engagement with said sector portion of said first-mentioned lever in the neutral position of said actuating lever, and whereby said pawls alternately engage said sector portion to move said first-mentioned lever in the corresponding direction when said actuating lever is moved from neutral position, and a spring acting upon said first-mentioned lever to hold its work-clamping portion yieldably on the work.

2. In a sewing machine, a work support, and means for holding the work on said support, said means comprising a lever having a forwardly-extending work-clamping portion and a rearwardly-extending sector portion, said sector having two oppositely-arranged sets of teeth, an actuating lever pivoted about the same axis as said first-mentioned lever, a pair of oppositely-disposed pawls on said actuating lever arranged and adapted to respectively engage a set of said teeth on the sector portion of said first-mentioned lever, means for operating said actuating lever to a neutral position and to positions on opposite sides of the neutral position, means cooperating with said pawls whereby they are both out of engagement with said sector portion of said first-mentioned lever in the neutral position of said actuating lever, and whereby said pawls alternately engage said sector portion to move said first-mentioned lever in the corresponding direction when said actuating lever is moved from neutral position, and a spring acting upon said first-mentioned lever to hold its work-clamping portion yieldably on the work, the operating means for said actuating lever being relatively arranged and adapted so that the motion transmitted to said first-mentioned lever is less in the direction to effect the clamping of the work than in the reverse direction.

3. In a presser-foot mechanism for sewing machines, a head-frame, a work support adjacent thereto, a lever member pivoted on said head-frame, said lever member having a forwardly extending work-clamping portion in coöperative relation to said work support and a rearward sector extension provided with two oppositely disposed sets of teeth, a second lever member pivoted on said head-frame with its axis coincident with that of said first-mentioned lever member, means for actuating said second-mentioned lever member to a neutral position and to positions on opposite sides of the neutral position, a pair of oppositely-disposed pawls on said second-mentioned lever

member respectively arranged and adapted to engage one of the sets of teeth on the sector extension of said first-mentioned lever member when said second-mentioned lever member is moved from the neutral position, an arcuate guide-way on said head-frame, the radius of which is struck from the axis of said lever members, a pair of oppositely-disposed cam members mounted adjustably in said guide-way, and means on said pawls coöperating with the respective cam members whereby both of the pawls are held out of engagement with the sector extension of said first-mentioned lever member when the latter is in the neutral position, and whereby, also, said pawls alternately engage said sector extension to move said first-mentioned lever member in the corresponding direction when said second-mentioned lever member is moved from neutral position.

1,189,894. VALVE MECHANISM. ERNEST M. WHITE, Globe, Ariz., assignor to Packard Motor Car Company, Detroit, Mich. Filed Feb. 20, 1912. Serial No. 678,852. (Cl. 121—24.)



1. The combination in an engine of a cylinder; a piston within the cylinder; a valve chamber; a valve therein; means for rotating the valve in time with the movement of the piston; and independent means for longitudinally moving the valve out of time with its rotary movement to prevent any point on said valve contacting with a given point on the wall of the valve chamber except at relatively long intervals.

2. The combination in an engine having a plurality of cylinders, of a piston for each cylinder; a series of valves for said cylinders; means for rotating the valves in time with the pistons of their respective cylinders; and other means for longitudinally reciprocating the valves at a rate out of time with their rotary movements.

3. The combination in an engine of a series of cylinders; pistons therefor; a series of valves for the cylinders; relatively loose connections formed to permit universal movement between the various valves; means for rotating the valves; and means for reciprocating the valves.

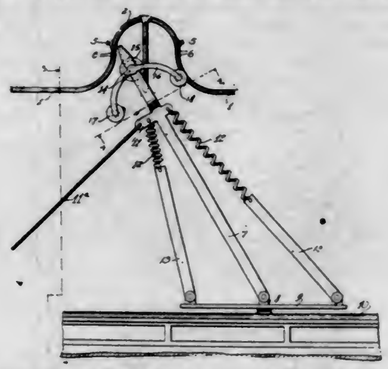
4. The combination in an engine of a series of cylinders; pistons therefor; valves for said cylinders; a driving member for rotating the valves; a cam for longitudinally moving the valves out of time with said driving member; and independent means for respectively operating the cam and the driving member.

5. The combination in an engine of a series of cylinders having ports and provided with an elongated cylindrical cavity communicating therewith; valves in said cavity respectively adjacent the ports of the cylinders; universal joints between the valves; a driving shaft; universal joints between one valve and said shaft; a driving member slidably mounted on the shaft rotatably connected thereto; a cam operative on the shaft for longitudinally moving the same; and means for actuating the cam, the parts being proportioned to cause the longitudinal movement of the valves to be out of time with their rotary movement.

[Claims 6 and 7 not printed in the Gazette.]

1,189,895. OVERHEAD-TROLLEY SYSTEM. SAMUEL WILSON, Chicago, Ill. Filed May 6, 1915. Serial No. 26,200. (Cl. 191—37.)

The combination with an electrically propelled vehicle, of an elevated supply wire formed with extensible arched portions at its intersection with other supply wires, a base pivotally carried by the vehicle, a trolley pole carried by said base, tension poles carried by said base and operatively connected to said trolley pole, a trolley wheel carried by said trolley pole, a frame fast upon the axle



of said trolley wheel, and spools carried by said frame and positioned in advance and in the rear of said trolley wheel for engagement with said supply wire, through the action of said tension poles, while said trolley wheel is passing the arched portions of said supply wire.

1,189,896. PROCESS FOR REGENERATING DECOLORIZING-CARBON. ABRAHAM WIJNBERG, Amsterdam, Netherlands. Filed Mar. 24, 1914. Serial No. 826,981. (Cl. 127—2.)

1. The process of regenerating decolorizing-carbon containing more than 50 per cent. of carbon and having a decolorizing power higher than bone black, which comprises treating said carbon with solutions having an alkaline reaction, and then heating to a glowing heat.

2. The process of regenerating decolorizing carbon containing more than 50 per cent. of carbon and having a decolorizing power higher than bone black, which comprises treating said carbon with solutions having an alkaline reaction and containing an oxidizing agent, and then heating to a glowing heat.

3. In the process of regenerating decolorizing-carbon containing more than 50 per cent. of carbon and having a decolorizing power higher than bone black, the step which consists in treating said carbon with solutions having an alkaline reaction and containing an oxidizing agent.

4. As a new article of manufacture, regenerated decolorizing carbon containing more than 50 per cent. of carbon and having a decolorizing power higher than bone black, said regenerated decolorizing carbon being the product of the treatment of a used decolorizing carbon with alkaline solutions and then heating to a glowing heat.

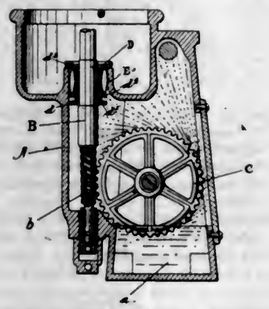
1,189,897. CHILD'S SPOON, FORK, OR SIMILAR ARTICLE. SAMUEL G. WILKES, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Apr. 26, 1916. Serial No. 93,594. (Cl. 46—46.)



1. A spoon, fork or similar article formed with a handle having a chamber, and a striker located in said chamber free to move therein.

2. A spoon, fork or similar article having a handle, the front plate of which is formed integral with the spoon or fork, a back plate attached to the front plate and forming a chamber between them, and a striker located in said chamber.

1,189,898. OILING DEVICE FOR VERTICAL SHAFTS. CARL OSCAR ANDERSON, Lancaster, Pa., assignor to The Champion Blower & Forge Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed Mar. 25, 1916. Serial No. 86,573. (Cl. 64—56.)



1. A vertical shaft bearing comprising a sleeve having an exterior annular flange thereon and oil holes therein extending tangentially to and in the direction of rotation of the shaft and terminating in upwardly inclined ducts, whereby oil thrown onto said flange will be drawn into the sleeve and carried upwardly along the shaft.

2. A vertical shaft bearing including a sleeve having an exterior annular flange thereon and oil holes through the body of the sleeve extending in the direction of rotation of the shaft, whereby oil thrown or splashed onto said flange will enter said holes and be drawn into the sleeve and carried along the shaft.

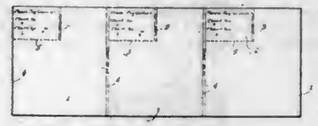
3. In combination, a housing having an oil chamber, a gear-wheel having its periphery partly immersed in oil in said chamber, a vertically disposed shaft having a gear thereon in mesh with said gear-wheel, and a bearing sleeve on said shaft having an annular flange thereon and adjacent tangential oil holes through which the oil thrown or splashed upon said flange by the rotation of the gear-wheel is drawn into the sleeve and forced upwardly along the shaft.

4. In combination, a housing having an oil chamber, a gear-wheel having its periphery partly immersed in oil in said chamber, a vertically disposed shaft having a gear thereon in mesh with said gear-wheel, and a bearing sleeve on said shaft having a circumferential flange and tangential oil holes adjacent said flange and upwardly inclined grooves leading from said holes, whereby oil splashed on said flange is drawn into said sleeve by the rotation of the gear-wheel and carried upwardly along the shaft.

5. In combination, a gear casing having an oil chamber in its bottom, a gear-wheel having its periphery partly immersed in oil in said chamber, a vertical shaft having a gear thereon in mesh with said gear-wheel; said shaft being journaled in upper and lower bearings; said upper bearing comprising a sleeve surrounding the shaft and having an annular flange thereon adapted to catch oil splashed by said gear-wheel, and said sleeve having oil holes therethrough adjacent said flange and grooves on the inner surface thereof slanting upwardly from the inner ends of said oil holes so as to conduct the oil entering said holes upwardly along the shaft.

1,189,899. BARBER'S PAPER AND CHECK. ALEXANDER JAMES ANDREWS, Portland, Oreg. Filed Sept. 9, 1915. Serial No. 49,775. (Cl. 40—2.)

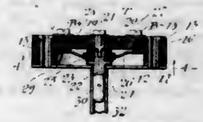
1. The combination with a strip of paper for the head rests of barbers' chairs comprising a plurality of sections, a check formed integrally in one corner of each section and adapted to be severed therefrom, for the purpose set forth.



2. A barber's paper and check comprising a roll of a continuous strip of paper, said strip being divided into a plurality of sections adapted to be severed, an integrally formed check within one corner of each section, the inner ends of said checks adapted to be severed from the sections, and one edge of the check being perforated for the purpose of facilitating its detachment from the section.

3. A barber's paper and check consisting of a roll of paper comprising a plurality of sections adapted to be severed from each other, a check formed integrally within one corner of each section having one end thereof adapted to be severed from the section in which it is formed, and one edge of the check being perforated.

1,189,900. SWITCH. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed Aug. 17, 1914. Serial No. 857,079. (Cl. 175—282.)



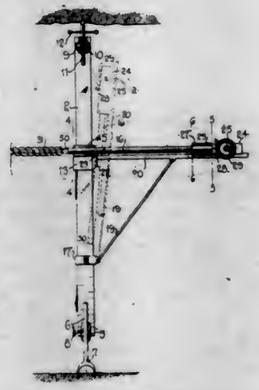
1. The combination in a switch of a blade movable in the plane parallel to one wall of the casing and having convex projections thereon, a contact for said blade adapted to be engaged by said convex projections and comprising a metallic member having a through aperture, the inner end of which is impositively engaged by the convex projection on the switch blade, said aperture being threaded at its outer end and a terminal screw taking into said threaded aperture.

2. A switch comprising a body part of insulating material, a switch blade movable in a plane parallel to one wall of the casing and having button shaped projections on the ends thereof, contacts for said blade comprising internally threaded tubes positioned in the wall of said casing substantially parallel to the switch blade with their inner ends flush with the inner surface of the wall, and terminal screws taking into said threaded tubes from their outer ends.

3. A switch comprising a cup shaped body part of insulating material, a concentrically positioned rotatable metallic post extending within the cup and having an opening in its inner end, a metallic pin carried at the center of the body part and projecting into said opening to provide a journal for said post, a terminal screw engaging the outer end of the pin, a switch blade mounted on the post within the confines of the body part, and contacts carried in the body part for engagement by said blade.

4. A switch comprising a cup shaped body part of insulating material, a concentrically positioned rotatable metallic post extending within the cup and having an opening in its inner end, a metallic pin carried at the center of the body part and projecting into said opening to provide a journal for said post, a terminal screw engaging the outer end of the pin, a switch blade mounted on the post within the confines of the body part, contacts carried in the body part for engagement by said blade, a collar formed on the post, a cross bar having a perforation through which the post extends overlying said collar and means for securing the ends of the cross bar to the rim of said cup shaped body part.

1,189,901. COAL-DRILLING MACHINE. DAN ARMENTI, Cleveland, Ohio. Filed Sept. 4, 1915. Serial No. 49,048. (Cl. 255—46.)



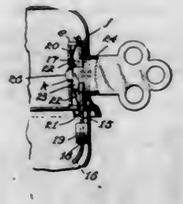
1. A drilling machine including oppositely disposed vertical supporting bars, a member slidably mounted upon the bars for vertical adjustment, spaced drill supporting bars detachably engaging with said member and extending rearward therefrom, a member disposed below the first-named slidably adjustable member and slidably engaged with said vertical bars for vertical adjustment, braces pivotally engaging the drill supporting bars and the second-named sliding member, a drill, and means mounted upon the drill supporting bars for rotating and feeding the drill.

2. A drilling machine of the character described including vertical supporting members, collars slidable upon said members, normally spaced supporting bars having detachable engagement at their inner ends with one of said collars, braces pivotally connected to said bars and pivotally connected to the other collar, means for holding said slidable collar in any adjusted position, a drill shaft operatively mounted upon said bars, and means mounted upon the bars for rotating and feeding the shaft.

3. A drilling apparatus of the character described including spaced vertical bars, members connecting the upper and lower ends of the bars, roof and floor engaging members vertically adjustable through said connecting members, a slide mounted upon the supporting members for vertical movement, means for holding the slide in adjusted positions, a yoke mounted upon the slide having a drill shaft bearing, bars detachably connected at their inner ends to said slide, a member slidably mounted upon the bars, a drill shaft supported in said bearing and rotatably supported in said member, means mounted on the bars for rotating the shaft, said means being mounted upon said slidable member, braces pivotally connected to said bars and depending downward therefrom, a slide adjustably mounted upon the said supporting bars and to which the lower ends of said braces are pivotally connected.

4. In a drilling apparatus of the character described, a supporting member having means at its upper and lower ends for engaging respectively the roof and floor of a tunnel, a vertically adjustable collar mounted upon the supporting member and supporting a screw threaded eye, a drill shaft supporting frame including spaced parallel bars having hook-shaped ends, pins projecting from said collar which the hook-shaped ends of the bars are adapted to detachably engage, braces pivotally engaged at their upper ends with said bars and adapted to be operatively engaged with the supporting member for vertical adjustment, a slide mounted upon the bars of the supporting frame, a drill carried at the rear end of said slide and engaging at its forward end with a screw threaded eye, and means mounted upon the slide for rotating the drill.

1,189,902. LOCK OR FASTENING DEVICE FOR HINGED BOX MEMBERS. CHARLES C. ARMSTRONG, Marysville, Ohio. Filed May 8, 1915. Serial No. 26,841. (Cl. 70—27.)



1. A lock or fastening device for hinged box members having an intermediate hinged leaf, comprising a catch for holding said members and leaf in closed position, said catch being operable to release said members by pressing it inwardly, and said catch being disengageable from the leaf by springing the latter in a direction at right angles to the direction in which the catch is released to free the two tray like members, substantially as described.

2. A lock or fastening device for hinged box members having an intermediate flap comprising a catch for holding said members in closed position, said catch being releasable by pressing it inwardly, said catch having a notch or shoulder on its side edge to engage said flap and having said edge inclined away from said shoulder, said catch also having an opening to receive a locking pin on one of the members, the flap or leaf being slightly movable in the direction of its plane to release itself from the shoulder of the catch, substantially as described.

3. A lock or fastening for two members hinged together, a lock for said members comprising a catch on one member and a stud on the other member to be engaged by said catch, a leaf spring pressing upon the catch, a casing containing said catch and leaf spring, said leaf spring having a locking portion to be located between the catch and the casing to prevent the catch from being pushed aside, the said spring having sliding movement in the casing to be removed from control upon the catch and having a portion to be engaged by the key to be moved thereby, substantially as described.

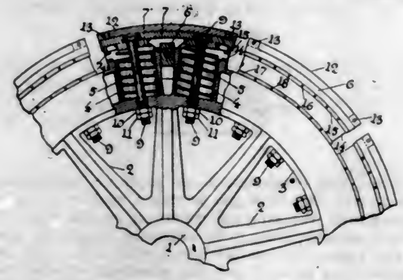
4. A lock or fastening device for two hinged members, comprising a catch on one member, a stud on the other member to be engaged by said catch, a leaf spring for holding the catch yieldingly to its work, said leaf spring being shiftable and when shifted serving to lock the catch against movement and having means to be operated by a key, substantially as described.

5. A lock or fastening device for two hinged members comprising a catch on one member and a stud on the other member to be engaged thereby, a casing for holding said catch, a leaf spring for holding the catch yieldingly to its work, said leaf spring having an enlarged portion for holding the catch unyieldingly to its work, a key ferrule bearing upon the catch to move the same aside when pressure is applied and a key for operating the leaf spring into position to yieldingly hold the catch or to unyieldingly hold the same, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

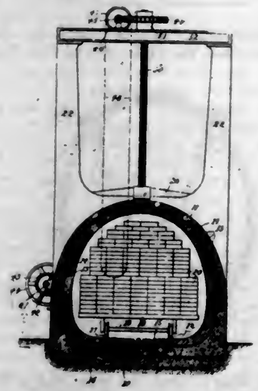
1,189,903. RESILIENT TIRE. FREDERICK E. ARROUQUIER, Worcester, Mass. Filed Jan. 8, 1915. Serial No. 1,120. (Cl. 152—8.)

The combination with the rim of a wheel, provided with a series of cylindrical tubular receptacles extending around the periphery thereof, and arranged in pairs, of a block, loosely supported between each pair of said receptacles, and having an inward and an outward motion, and a side motion, and a tread member, pivotally attached to said block, and a bolt at each end of said tread member, extending through a tubular receptacle, to attach said tread member to the rim of the wheel and limit the outward movement thereof, and a spring extending within each



tubular receptacle and encircling said bolt, to yieldingly hold said tread member in its outward position.

1,189,904. KILN. MOIS H. AVRAM, New York, N. Y., assignor to Standard Silica Brick Machinery Company, Wilmington, Del. Filed Sept. 16, 1913. Serial No. 790,010. (Cl. 73—19.)



1. A kiln for steam indurating sand lime bricks, comprising a tubular shell made of reinforced concrete, said shell having a flat bottom and an integral curved top, a flanged yoke partly embedded within said concrete at each end of the shell, a gate slidably engaging each yoke, rails embedded within the shell-bottom and adapted to support a brick-carrying truck, and means for admitting steam into the interior of the shell.

2. A kiln for steam indurating sand lime bricks, comprising a tubular shell made of reinforced concrete, said shell having a curved top and an integral flat bottom provided with a longitudinal gutter, a flanged yoke partly embedded within said concrete at each end of the shell, a gate slidably engaging each yoke, rails embedded within the shell-bottom and adapted to support a brick-carrying truck, and a perforated steam inlet pipe extending along the gutter.

1,189,905. JOURNAL-BOX. LEIGH S. BACHE, Boundbrook, N. J., assignor to The Graphite Lubricating Company, Boundbrook, N. J., a Corporation of New Jersey. Filed July 25, 1913. Serial No. 781,140. (Cl. 64—24.)

1. A journal box consisting of an unbroken cylindrical shell having an interior series of lubricating grooves arranged in parallel spirals, said grooves being continuous for substantially 180° of the circumference of the journal box though reversing their direction at 90°, and a lubricant filling said grooves.

2. A journal box consisting of an unbroken cylindrical shell having interiorly arranged lubricating grooves arranged in a series of parallel spirals, said spirals reversing their direction at each 90°, throughout the shell said spirals being separated at substantially diametrically opposite sides of the bearing by unbroken metallic portions of the bearing and a lubricant filling said grooves.



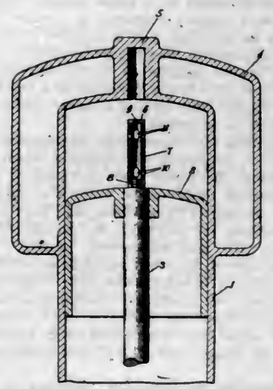
3. A journal box consisting of an unbroken cylindrical shell having interiorly arranged lubricating grooves arranged in series in a spiral herring-bone formation, the spiral direction of the grooves reversing at each 90° about the entire inner periphery of the bearing surface and a lubricant filling said grooves.

4. A journal box consisting of an unbroken cylindrical shell having interiorly arranged lubricating grooves arranged in spiral herring-bone formation, the series in a spiral direction of the several parallel grooves reversing at each 90° about the entire inner periphery of the bearing surface, the continuity of said grooves being broken by interposed metallic parts at each 180° and a lubricant filling said grooves.

5. A journal box consisting of an unbroken cylindrical shell having interior lubricating grooves arranged in sets of parallel spirals extending substantially 90° about the bearing surface in one direction and reversing their direction for each succeeding 90°, said grooves being closed at each 90° point of reversal to provide continuous metallic supports from end to end of the bearing and a lubricating filling said grooves.

[Claim 6 not printed in the Gazette.]

1,189,906. IGNITING DEVICE FOR EXPLOSIVE-ENGINES. CHARLES ROBERT BANGS, New York, N. Y. Filed Feb. 6, 1913. Serial No. 746,545. (Cl. 123—143.)



1. An ignition device for explosive engines comprising an engine cylinder and piston, an ignition cylinder opening directly into said engine cylinder, a piston therefor, and means affording constant communication between the closed end of said ignition cylinder and said engine cylinder.

2. An ignition device for explosion engines comprising an engine cylinder and piston, an ignition cylinder and piston, and means for operating the same, said ignition cylinder and piston being provided with a passage communicating with the main cylinder to permit ignition to travel thereto.

3. An ignition device for explosion engines comprising an engine cylinder and piston, an ignition cylinder and

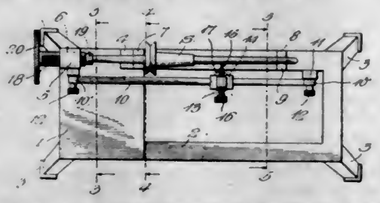
piston, and means for operating the same, said ignition piston being provided with a passage therethrough.

4. In an ignition device for explosion engines, the combination of an engine cylinder and piston, an ignition cylinder and piston, the latter having an opening therethrough, and a support for the ignition piston mounted on the engine piston or piston rod.

5. In an ignition device for explosion engines, the combination of an engine cylinder and piston, an ignition cylinder and piston, the latter having an opening therethrough, and a support for the ignition piston mounted on the engine piston or piston rod, said support being of smaller cross-section than said ignition piston.

[Claims 6 to 19 not printed in the Gazette.]

1,189,907. MACHINE FOR STRAIGHTENING SPINDLES. PAUL K. BARKER, Greer, S. C. Filed June 10, 1915. Serial No. 33,343. (Cl. 33—174.)



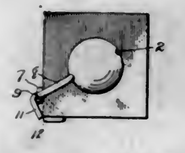
1. In an apparatus for detecting portions of a spindle which are out of alinement, the combination of a supporting structure, spindle supports rising therefrom, a bar disposed in a plane parallel with and at one side of said spindle supports, said bar and supporting structure having coöperating means for permitting the vertical adjustment of the bar, a bracket adjustable longitudinally on said bar, and a detector carried by said bracket and adjustable longitudinally therein.

2. An apparatus for detecting portions of a spindle which are out of alinement comprising a supporting structure, spindle supports rising therefrom, a vertically adjustable bar disposed in a plane parallel with and at one side of said spindle supports, a bracket adjustable longitudinally on said bar, and a detector carried by said bracket and adjustable longitudinally therein and laterally relative to the spindle to be tested, said detector being in the form of a screw mounted in a threaded opening in said bracket and having a point for engagement with the spindle to be tested.

3. An apparatus for determining portions of a spindle which are out of alinement comprising a supporting base, standards rising therefrom and provided in their free ends with notches designed to receive a spindle to be tested, other standards rising from said base and having laterally extending set screws, a bar having slots adjustably engaged with said set screws, said bar being arranged at one side of the plane occupied by said first mentioned standards, a bracket adjustably mounted on said bar and having an upwardly extending arm provided with a threaded aperture, and a screw mounted in said aperture and adjustable toward and away from the plane occupied by the upper ends of said first mentioned standards.

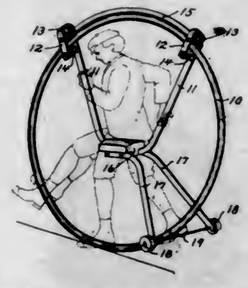
4. An apparatus for detecting portions of a spindle which are out of alinement comprising a supporting structure, spindle supports rising therefrom, a bar mounted for vertical adjustment and disposed in a plane parallel with and at one side of said spindle supports, a bracket adjustable longitudinally on said bar, and a detector carried by said bracket and adjustable longitudinally therein and laterally relative to the spindle to be tested, said detector being in the form of a screw mounted in a threaded opening in said bracket and having a point for engagement with the spindle to be tested, a standard rising from said supporting structure and having a threaded aperture extending therethrough, and a screw mounted in said aperture and having a socket at its inner end positioned for receiving one end of the spindle.

1,189,908. NUT-LOCK. CHARLES O. BAUGHN, Lyons, Ind. Filed Feb. 4, 1915. Serial No. 6,093. (Cl. 151—8.)



In a nut lock comprising a bolt having a longitudinal recess formed therein, a nut having a similar recess to be alined with the aforesaid recess at certain times to provide a key-way, a key to be positioned in said key-way, said key having its intermediate portion bent to lie on the upper face of said nut, the other end of said key lying in intimate relation to one of the outer faces of said nut and having an eye lying against the respective face of the nut, said nut provided with a transverse bore communicating with two faces thereof and in registry with the aforesaid eye, and a second key positioned through said bore and having its one end passed through said eye for retaining said first mentioned key in position, as and for the purpose specified.

1,189,909. UNICYCLE. THOMAS BEMIS, Sr., Indianapolis, Ind. Filed Jan. 28, 1915. Serial No. 4,914. (Cl. 208—1.)



1. A toy including a hoop-like ring, and a frame suspended from the upper portion of said ring at points in front of and to the rear of the vertical diameter of the ring so said frame can swing laterally in said ring, said frame arranged so that a child can straddle the same and propel the device with his feet on the ground.

2. A toy including a hoop-like ring, and a frame within said ring and suspended thereon by rollers adapted to rest on said ring at points in front of and to the rear of the vertical diameter of the ring so said frame can swing laterally in said ring, and said frame arranged so that a child can straddle the lower part of the same and propel the device with his feet on the ground.

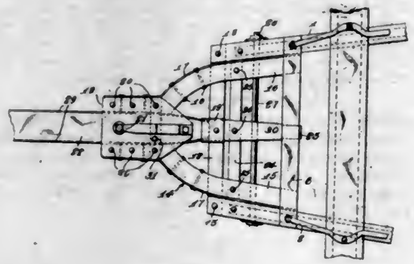
3. A toy including a hoop-like ring, a frame within said ring and suspended thereon by rollers adapted to rest on said ring at points in front of and to the rear of the vertical diameter of the ring so said frame can swing laterally in said ring, and a seat on the lower part of said frame arranged so that a child can straddle the frame and seat and propel the device with his feet on the ground.

4. A toy including a hoop-like ring, a frame which is substantially V-shape, and bearing rollers on the upper ends of said frame adapted to suspend the frame in said ring at points to the front and rear of the vertical diameter of the ring so said frame can swing laterally in said ring.

5. A toy including a hoop-like ring, a frame which is substantially V-shape, and bearing rollers on the upper ends of said frame adapted to suspend the frame in said ring at points to the front and rear of the vertical diameter of the ring, the lower part of said frame extending to a point below the center of the ring so said frame can swing laterally in said ring.

[Claims 6 to 10 not printed in the Gazette.]

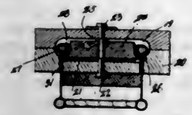
1,189,910. WAGON-TONGUE SUPPORT AND SLIP-TONGUE. FRANCIS G. BREWSTER and HOWARD L. IRONS, Bridgeton, N. J. Filed Sept. 27, 1915. Serial No. 52,926. (Cl. 21—36.)



1. The combination with wagon hounds, of a yoke, a stem projecting forwardly from the intermediate portion of the closed end of said yoke and being provided at its extremity with a socket, a tie bar connecting the arms of said yoke and supporting said stem adjacent its forward extremity, a pivot pin extending through said hounds, yoke arms and stem in the rear of said tie bar whereby the said yoke is supported for vertical oscillation, stops on the upper and under sides of said hounds to prevent the forward end of the yoke swinging below the plane of the hounds, a tongue for insertion in said yoke and to seat in said socket, and means for holding said tongue against forward movement, substantially as described.

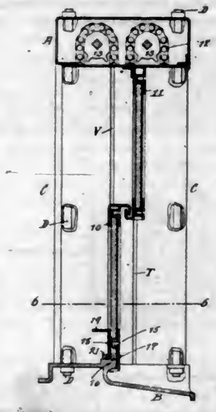
2. The combination with wagon hounds, of a yoke arranged between said hounds with its arms projecting forwardly therefrom, a tie bar connecting said arms inwardly from their ends, a stem secured at one end to the base portion of said yoke intermediate the ends thereof and extending forwardly and being supported adjacent its opposite end by said tie bar, a socket at the forward end of said stem, a pivot pin extending through said hounds, yoke arms and stem whereby said yoke is supported for vertical oscillation, plates connecting the free end of the yoke arms to provide a tongue channel between the same, a tongue adapted for insertion in said channel and to seat in said socket, and a pin for connecting said tongue to said plates, substantially as described.

1,189,911. CLOTHES-LINE SUPPORTING AND OPERATING MECHANISM. ALBERT G. BURRIS, Sloatsburg, N. Y. Filed May 17, 1913. Serial No. 768,372. (Cl. 254—190.)



A support of the character described including a recessed block, a pulley carried by said block, said pulley being partially arranged within said recess, a second recessed block mounted on the first block, said pulley being arranged within the recesses of the blocks, a plate arranged adjacent said second block, said plate coöperating with the first and second blocks to entirely inclose said pulley, and an endless carrier arranged on said pulley and extending from said blocks.

1,189,912. METAL WINDOW FRAME AND SASHES. HARRY E. CAMPBELL, New York, N. Y. Filed Feb. 10, 1916. Serial No. 77,364. (Cl. 189—73.)



1. A metal window-frame, comprising a hollow member having an elongated guide slot in its inner wall, a sash slidable in said frame and of less length than said member, a plate on said sash entering said slot, and resiliently supported means within said hollow member for closing the portion of said slot not occupied by said plate when said sash is in normal closed position.

2. A metal window-frame, comprising a hollow member having an elongated guide slot in its inner wall, a sash slidable in said frame and of less length than said member, a plate on said sash entering said slot, resiliently supported means within said hollow member for closing the portion of said slot not occupied by said plate when said sash is in normal closed position, and means controlled by said sash for moving said closing means to open said slot when said sash is moved from said normal closed position.

3. A metal window-frame, comprising a hollow jamb having a vertical slot in its inner wall, a sash slidable in said frame and of less vertical dimension than said frame, a plate laterally projecting from said sash and extending through said slot into said hollow jamb, and a vertical strip within said jamb, and means for resiliently supporting said strip to bear upon a vertical edge of said slot: the length of said strip being such as to close the portion of said slot which is not occupied by said projecting sash plate when said sash is in normal closed position.

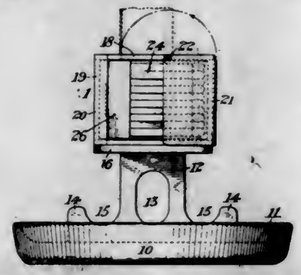
4. A metal window-frame, comprising a hollow jamb having a vertical slot in its inner wall, a sash slidable in said frame and of less vertical dimension than said frame, a plate laterally projecting from said sash and extending through said slot into said hollow jamb, a vertical strip within said jamb and outwardly beveled at one extremity, and means for resiliently supporting said strip to bear upon a vertical edge of said slot: the length of said strip being such as to close the portion of said slot which is not occupied by said projecting sash plate when said sash is in normal closed position, whereby when said sash is slid in a vertical direction to meet the beveled end of said strip said sash shall move said strip outwardly against the resilience of said strip support and enter between the vertical edge of said strip and the adjacent edge of said slot.

5. A metal window-frame, comprising a hollow jamb having a vertical opening in its inner wall, a fixed vertical partition secured to the inner side of the outer wall of said jamb, a vertical plate on the outer edge of said partition and at right angles thereto and disposed in said opening with a clearance between an edge of said plate and said inner jamb wall, a sash slidable in said frame, a plate laterally projecting from said sash and extending through said clearance into said hollow jamb, a vertical

strip within said jamb, means for resiliently supporting said strip on one side of said partition to bear upon a vertical edge of said wall opening: the length of said strip being such as to close the portion of said clearance which is not occupied by said projecting sash plate when said sash plate is in normal closed position.

[Claims 6 to 10 not printed in the Gazette.]

1,189,913. MATCH-STAND. CESARE CAMPUS, New York, N. Y. Filed Feb. 28, 1916. Serial No. 80,845. (Cl. 206—20.)

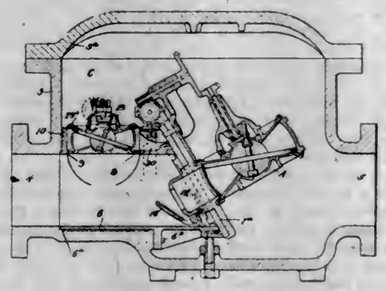


1. A match stand comprising a base, an upright fixed in position thereon, and a receptacle carried by said upright and adapted to receive a match book with the match splints parallel to the base and the striking surface in alinement with the said upright.

2. A match stand comprising a base, an upright fixed in position thereon, a receptacle carried by said upright and adapted to receive a match book with the match splints parallel to the base and the striking surface in alinement with the said upright, and a guard member mounted on said receptacle, so as to normally cover the heads of the match splints when the same are in position therein and which may be swung to obtain ready access to the matches.

3. A match stand comprising a base, an upright connected thereto and provided with an opening and the lateral recessed extensions, the said opening and the recesses in the lateral extensions serving as rests, a receptacle fixed to the upper end of the said upright and adapted to receive and contain match books with the match splints in horizontal positions, and a guard extending over one side of said receptacle and adapted normally to cover the heads of the match splints therein.

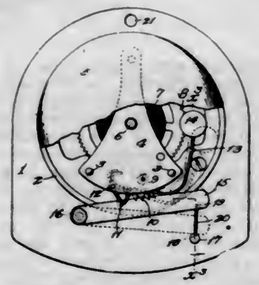
1,189,914. DEVICE FOR SUPPORTING FLUID-CONTROL APPARATUS. HORACE CHRISMAN, Edgewood Park, Pa., assignor to Pittsburgh Meter Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Original application filed Jan. 21, 1913, Serial No. 743,347. Divided and this application filed July 7, 1914. Serial No. 849,439. (Cl. 137—82.)



1. In a device of the character described the combination of a casing provided with a seat, a sleeve resting in said seat, said sleeve having an attaching flange and being provided with a fluid control device adapted to control the flow therethrough, and fastening screws passing through said flange and into the casing, whereby the sleeve and the fluid control device may be bodily removed from said casing.

2. In a device of the character described the combination of an open-ended casing having a seat adjacent to one opening, a sleeve resting on said seat and provided with a fluid control device, and means for detachably securing the sleeve in position, said casing being provided with a detachable cover for the withdrawal of the sleeve together with its fluid control device, there being substantially no obstruction in the chamber of the casing between the sleeve and the cover whereby the sleeve may be lifted substantially directly out of the casing.

1,189,915. INDEPENDENT FIRE-ALARM. ALBERT A. CLIVE, Los Angeles, Cal., assignor to American Fire Alarm Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 28, 1911, Serial No. 662,940. Renewed May 17, 1916. Serial No. 98,213. (Cl. 116—11.)



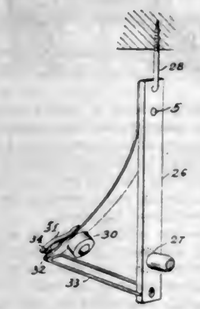
1. The combination with a frame; of clock work carried by the frame; a signal device operated by the clock work; a horizontal pivot pin; a bar pivoted at one end on the pin and adapted at its free portion to form a stop for the clock work and also to normally fall by gravity out of stopping position; a fuse support; and a fuse to hold the bar in clock-work stopping position.

2. The combination with a frame; of clock work carried by the frame; a signal device operated by the clock work; a horizontal pivot pin; a bar pivoted at one end on the pin and provided with a socket at its free portion and adapted at its free portion to form a stop for the clock work and also to normally fall by gravity out of stopping position; a fuse support provided with a socket; and a fuse wire in the socket to hold the bar in clock-work stopping position.

1,189,916. CARTRIDGE FIRE-ALARM. ALBERT A. CLIVE, Los Angeles, Cal., assignor to American Fire Alarm Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 14, 1914. Serial No. 831,830. (Cl. 116—11.)

1. The combination with a rigid element pierced to hold a cartridge of a resilient element coextending with the rigid element and fixed to one end thereof, a hammer on the free end of the resilient element for exploding the cartridge, a retaining element interposed between the rigid and resilient elements to hold the resilient element retracted, the retaining element being pivotally connected to the rigid element, a lug on the end of the resilient member and spaced from the end thereof, a resilient catch extending between the lug and end of the resilient element and projecting in the set position to engage the retaining element, and a fusible element interposed between the lug and catch to hold the catch in the set position.

2. A fire alarm comprising a rigid and a resilient element fastened together at one end, the rigid member being pierced to hold a cartridge, a hammer on the resilient member for exploding the cartridge, a retaining element interposed between the free ends of the rigid and resilient elements to hold the resilient element retracted, a lug on the resilient element and spaced from the end thereof, a resilient catch extending between the lug and the end of the resilient element and projecting to engage the retaining element, and a fusible element interposed between the lug and resilient catch to hold the resilient catch in position to engage the retaining element and hold the resilient element retracted.

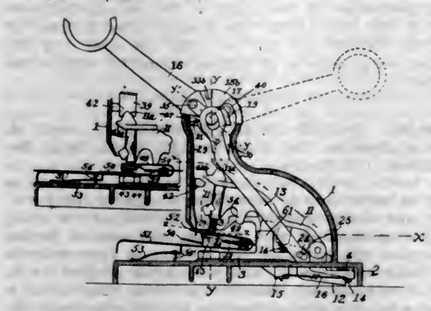


3. In a fire alarm, the combination with a rigid bar and a coextending spring fixed to the bar at one end, the bar having an orifice for holding a cartridge, a hammer on said spring for exploding the cartridge, of a retaining link interposed between the spring and bar to hold the spring retracted, the link being pivoted to the bar, a lug on the spring and spaced from the end thereof, a resilient catch extending between the lug and spring and projecting to engage the link, and a fusible wedge interposed between the lug and catch to hold the catch in position to engage the link to hold the spring retracted.

4. In a fire alarm, the combination with a rigid bar pierced to hold a cartridge, a spring fixed at one end to the bar and provided with a hammer for exploding the cartridge, a link to retain the hammer in retracted position, a resilient catch to engage with said link, and a fusible element to hold the catch in engagement with the link, of a swivel suspension screw in the end of the rigid bar.

5. The combination with a bar having means to hold a cartridge, of a spring fixed to the bar and having means to explode the cartridge, means between the bar and spring to hold the spring retracted; yielding means to retain the retracting means in spring retracting position; a fusible element to hold the retaining means in retaining position; and means to hold the fusible means in holding position.

1,189,917. RIVETING-MACHINE. ELMER M. COBB, South Portland, Me. Filed Oct. 9, 1913. Serial No. 794,253. (Cl. 218—2.)



1. In a riveting machine, the combination of a pivoted bed piece having thereon a die and an anvil, a pair of arms pivoted to said bed piece, one carrying a punch for said die and the other an upsetting head for said anvil, an actuating device for depressing said punch and head separately, means for reciprocating said bed piece and means for feeding a rivet to said anvil.

2. In a riveting machine, the combination of a pivoted bed piece having thereon one of the members of a punch and die mechanism and one of the members of a rivet upsetting mechanism, a pair of arms pivoted to said bed piece and having thereon the other members of the punch and die mechanism and rivet upsetting mechanism, means making a yielding connection with said bed piece for reciprocating the same, an actuating device for alternately operating the punch and die and the rivet upsetting mechanism and means for feeding a rivet to said upsetting mechanism.

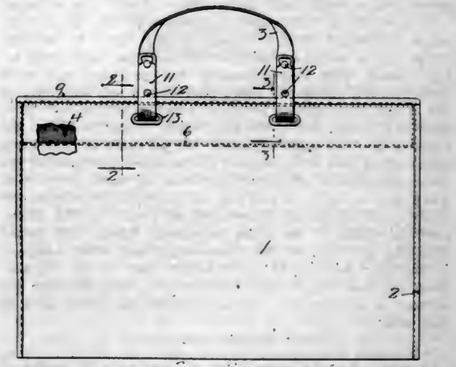
3. In a riveting machine, the combination of a pivoted bed piece carrying a punch and die mechanism and a rivet upsetting mechanism, actuating means for operating each mechanism separately, a pivoted operating handle and a pair of push-bars connecting said operating handle with said bed piece for swinging the same in opposite directions.

4. In a riveting machine, the combination of a pivoted bed piece carrying a punch and die mechanism and a rivet upsetting mechanism, actuating means for operating each mechanism separately, a pivoted operating handle, a pair of push-bars operated by said handle and springs connecting said push bars with the bed piece for oscillating the same.

5. In a riveting machine, the combination of a pivoted bed piece carrying a punch and die mechanism and a rivet upsetting mechanism, actuating means for operating each mechanism separately, a pivoted operating handle, a pair of push bars alternately actuated by the movement of said handle, a yoke centrally pivoted adjacent to the pivoting point of said bed piece to which yoke the ends of said push-bars are connected and springs connecting said yoke with said bed piece.

[Claims 6 to 43 not printed in the Gazette.]

1,189,918. HAND-BAG. TOBIAS COHN, New York, N. Y. Filed June 9, 1915. Serial No. 33,018. (Cl. 224—47.)



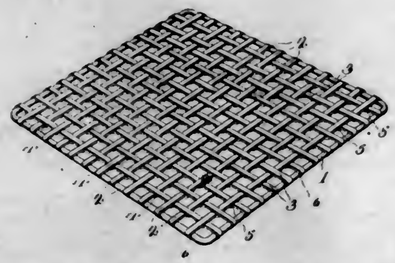
1. A hand bag having an open top extending the length of the bag and having flexible sides, stiffening members of semi-rigid cardboard and of elongated cross section connected with the top of the sides and lying in planes parallel with the sides, and a handle for said bag.

2. A hand bag having an open top extending the length of the bag and having flexible sides, hem members secured to the sides near the open top to form pockets, stiffening members of semi-rigid cardboard and of elongated cross section, disposed in said pockets in planes parallel with the sides, and a handle for the bag.

3. A hand bag having an open top, and flexible sides, hem members secured to the sides below the top edges thereof and turned over to cover the edge of the hem

member by forming a loop, said hem members forming pockets with the sides, stiffening members of semi-rigid cardboard and of elongated cross section, disposed in said pockets in planes parallel with the sides, and a handle for said bag.

1,189,919. SHELF FOR REFRIGERATORS AND THE LIKE. GEORGE COLLIS, Dubuque, Iowa, assignor to The Collis Company, Dubuque, Iowa, a Corporation of Iowa. Filed Sept. 5, 1912. Serial No. 718,705. (Cl. 189—82.)



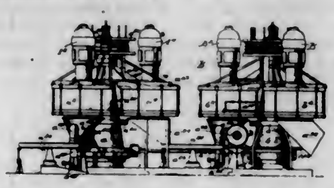
1. A shelf for refrigerators, stoves and the like, including a fabricated structure comprising a plurality of interwoven and crossed metallic strips, each formed with approximately flat portions, and with spaced-apart offset portions in one side only of the strips, such offsets being of a depth and width corresponding to the thickness and width, respectively, of the strips which are seated therein; the approximately flat portions of each strip occupying a position in the offset portions in the other strips and with alternate portions of each strip overlying and underlying portions of other of the strips, whereby the surfaces of all of the strips on opposite sides of the offset portions line in the same horizontal plane with corresponding portions of the cross-strips, the offset portions occupying a horizontal plane, on one side of the structure, below the plane of the flat portions, so that said structure presents a substantially flat surface on one side at least.

2. A shelf for refrigerators, stoves and the like, including a fabricated structure comprising a series of metallic strips and a series of metallic cross-strips, each strip being formed with approximately flat portions, and with spaced-apart, elongated offset portions in one side only of the strips, such offsets being of a depth and width corresponding to the thickness and width, respectively, of the cross-strips; the approximately flat portions of each strip intersecting and being seated in the offset portions of the other strips and alternate portions of each strip overlying and underlying portions of other of the strips, the surfaces of all the strips, on opposite sides of the offset-portions, lying in the same horizontal plane with corresponding portions of the cross-strips, the offset portions occupying a horizontal plane below that of the flat-portions, so that the structure presents a substantially flat surface on at least one side throughout the entire area of that side.

1,189,920. APPARATUS FOR HANDLING MATERIAL IN CENTRIFUGAL MACHINES. DANIEL M. COOPER, Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 13, 1912. Serial No. 703,435. (Cl. 91—42.)

1. The combination, with a rotary support, of a plurality of baskets mounted on the support and rotatable thereon independently of the movement of the support, and mechanism controlled by the rotation of the support for arresting and starting the rotation of the baskets at predetermined intervals.

2. The combination with a rotary support, of a plurality of baskets mounted on the support and rotatable thereon independently of the movement of the support, and mechanism controlled by the rotation of the support for arresting and starting the rotation of the baskets at predetermined intervals.



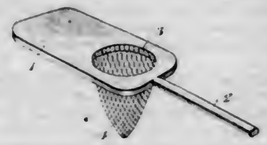
3. The combination with a rotary support, of a plurality of baskets mounted on the support and rotatable thereon independently of the movement of the support, and mechanism controlled by the movement of the support for arresting and starting the support at predetermined intervals, and for starting and arresting the rotation of the baskets at predetermined intervals.

4. The combination with a movable support, of a plurality of baskets mounted on the support and rotatable thereon independently of the movement of the support, each of said baskets having an unobstructed, open bottom, and mechanism controlled by the movement of the support for arresting and starting the support at predetermined intervals.

5. The combination with a movable support, of a plurality of baskets mounted on the support and rotatable thereon independently of the movement of the support, each of said baskets having an unobstructed open bottom, and mechanism controlled by the movement of the support for starting and arresting the rotation of the baskets at predetermined intervals.

[Claims 6 to 25 not printed in the Gazette.]

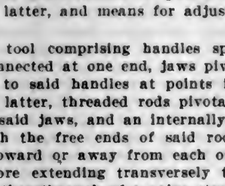
1,189,921. BAT. LORETTO CORY, Shelbyville, Ind. Filed Nov. 24, 1914. Serial No. 873,783. (Cl. 46—60.)



A bat comprising a broad flat elongated body portion of greater length than breadth, with a handle projecting from one end lengthwise of the body portion, said body portion being pierced by a passage adjacent the handle end, said passage being constantly open and of a size to be readily traversed by a ball, and a basket of soft flexible material having its mouth end attached to the body portion about the margin of the passage, that portion of the body beyond the passage being designed to support the ball and also to strike the same, and the basket being capable of folding compactly within the passage.

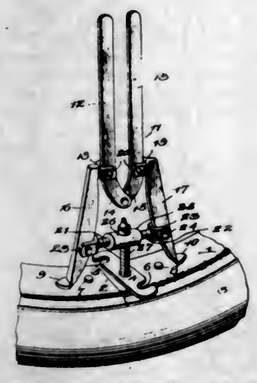
1,189,922. WATER-GAGE FOR BOILERS. JOHN J. DALY, Reading, Pa. Filed Jan. 17, 1916. Serial No. 72,388. (Cl. 73—54.)

A hollow casing having varied internal diameters, a reduced screw-threaded inner end, a squared outer surface, and being internally screw-threaded at its outer end, in combination with a glass body member having a reduced end and a tapered portion at approximately its longitudinal center, said body being adapted to fit one of said internal diameters; a rubber ring having a tapered inner surface adapted to fit over and engage the tapered portion of said body and its outer surface adapted to engage another of said internal diameters; and a retaining ring, externally screw-threaded for engagement with the threaded portion of the casing and adapted



to bear against said rubber ring and to retain said glass body in position in the casing.

1,189,923. TIRE-TOOL. ROY W. DAMARON, Jackson, Mich. Filed July 15, 1915. Serial No. 40,014. (Cl. 157—1.)



1. A tire tool comprising handles spaced apart and pivotally connected at one end, jaws pivotally connected at one end to said handles at points intermediate the ends of the latter and adjusting means arranged between and connecting said jaws adapted to control the position of the jaws relatively to each other.

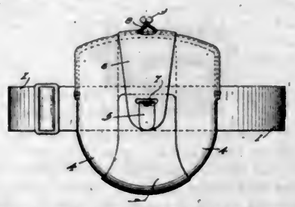
2. A tire tool comprising handles spaced apart and pivotally connected at one end, jaws pivotally connected at one end to said handles at points intermediate the ends of the latter, and means for adjustably connecting said jaws.

3. A tire tool comprising handles spaced apart and pivotally connected at one end, jaws pivotally connected at one end to said handles at points intermediate the ends of the latter, threaded rods pivotally connected at one end to said jaws, and an internally threaded sleeve engaged with the free ends of said rods for adjusting said jaws toward or away from each other, said sleeve having a bore extending transversely therethrough for the passage therethrough of a valve stem.

4. A tire tool comprising a pair of parallel handle bars having their inner ends bent inwardly and pivotally connected at their terminals, jaws having laterally extending bifurcated arms straddling and pivotally connected with said handle members at points intermediate the ends of the latter, and means for adjustably connecting said jaws intermediately of their ends.

5. A tire tool comprising handles spaced apart and pivotally connected at one end, a pair of jaws tapering toward one of their ends and having their outer edges flattened, said jaws being provided at their other ends with laterally extending bifurcated arms to straddle said handles, rivets extending through said arms and said handles to pivotally connect said jaws to the latter, and means for adjustably connecting said jaws, substantially as and for the purpose set forth.

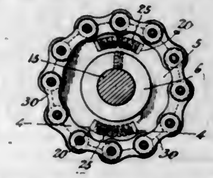
1,189,924. SAFETY-PURSE. FRANK WASHINGTON DE BLIEUX, Chicago, Ill. Filed Jan. 22, 1916. Serial No. 73,551. (Cl. 224—26.)



1. A safety purse comprising an elastic supporting element, a strap permanently secured at one end to the purse and passing about the greater portion of the same and terminating in a free end having perforations therein, one of said perforations being adapted to receive the purse clasps, and a clasp carried by the secured end of said strap for engagement with a perforated portion of the free end thereof.

2. The combination with a purse provided with fastening clasps, of a strap fastened thereto so as to form a loop portion and having one of its ends perforated and free from said purse, one perforated portion of the free end of said strap being adapted to coöperate with the purse clasps when in closed relation, a clasp carried by the opposite end of said strap for engagement with another perforated portion of the free end of said strap, and an adjustable supporting element slidingly engaging the looped portion of said strap.

1,189,925. FLEXIBLE COUPLING. TALBOT C. DEXTER, Pearl River, N. Y., assignor to I. H. Dexter Company, Inc., New York, N. Y., a Corporation of New York. Filed May 25, 1915. Serial No. 30,318. (Cl. 64—13.)



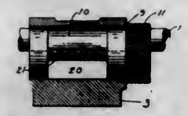
1. A flexible coupling comprising relatively movable power transmitting members, adapted to be mounted respectively upon driving and driven shafts, a non-yielding coupling element between said members, and a spring device interposed between said members and yieldingly holding the driven one of said members in engagement with said coupling element.

2. A flexible coupling comprising approximately alined driving and driven shafts, relatively movable power transmitting members mounted respectively upon said shafts, a positive driving coupling element between said members and a circumferentially acting spring device interposed between said members.

3. In a device of the character set forth, the combination with the power transmitting driving and driven sprocket members, adapted to be mounted respectively upon driving and driven shafts, and coupling links engaging the sprockets of said members, of a spring device interposed between said sprocket members and tending to separate said coupled sprockets to hold them in engagement with opposite portions of the coupling links.

4. In a device of the character set forth, the combination with the power transmitting driving and driven sprocket members adapted to be mounted respectively upon driving and driven shafts, and an endless sprocket chain encircling and flexibly coupling said members, the links of said chain embracing adjacent sprockets of said members, of a spring device interposed between said sprocket members and tending to separate said coupling sprockets to hold them in opposite ends of said links.

1,189,926. BORING-BAR HOLDER. EMORY E. ELLIS, Orange, Mass. Filed May 13, 1914. Serial No. 838,384. (Cl. 82—36.)



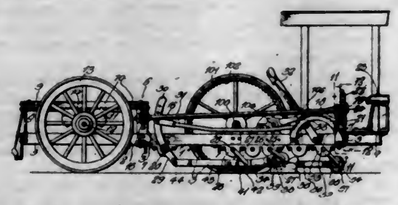
1. A boring bar holder comprising a bearing, a head adjustable therein and having a split tool socket extending from end to end thereof, said head having the stock between its ends and below said split socket removed, leaving connected end portions spaced by said cut-out and fitting said bearing, and means for holding the adjustment of said head in the bearing.

2. A boring bar holder comprising a tool post attachment having a bearing, a head adjustable therein and having an eccentrically disposed tool socket, said head having slits extending from said tool socket in divergent planes and extending from end to end of the head, and having the stock between its ends removed to increase its flexibility, means for clamping said head in said bearing, and means for rigidly locking said attachment to a tool post.

3. In combination with the cross slide of a lathe, a tool post thereon, a boring bar holder having a bearing, a head adjustable therein, said head having non-diametric slits extending from end to end thereof and having a tool socket therein intersected by said slots, the stock of said head between its ends and below the ends of said slots being removed to increase the flexibility of the head without destroying the effective grip of the tool socket, means for holding the adjustment of said head in said bearing, and means for rigidly locking said holder to said tool post.

4. A boring bar holder comprising a bearing, a head longitudinally and rotatably adjustable therein, and terminating beyond one end of said bearing in an enlarged portion, disposed to abut said bearing and stop the movement of said head in one direction, said head having a diagonally split tool socket and having the stock between said enlarged portion and its opposite end and below said tool socket removed leaving connected portions spaced by said cut-out and fitting said bearing, and means for contracting said split tool socket.

1,189,927. PLOW-MOUNTING MECHANISM. JOHN A. ERICKSON, Fairview, Utah. Filed Nov. 9, 1914. Serial No. 871,072. (Cl. 97—36.)

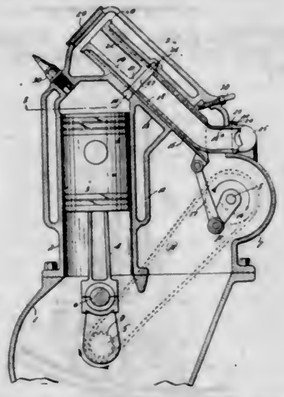


1. The combination with a wheel supported frame of a trio of longitudinally spaced transverse shafts thereon, a comparatively long crank depending from the central shaft, shorter cranks depending from the front and rear shafts, a plow beam pivotally connected to the central and rear cranks, a link pivotally connected to the central and front cranks, and means whereby the latter may be rocked.

2. The combination with a wheel supported frame, of a front and rear crank depending therefrom, a plow team connected to the rear crank and having a notch in one edge of its front end, said notch receiving one side of the front crank, an operating link in advance of said front crank, a hook shaped plate carried by said link and embracing the other side of said front crank, a stop on the beam for preventing the plate from moving vertically in respect thereto, and means connecting the rear end of the beam to the rear crank.

3. The combination with a wheel supported frame, a shaft having a crank, and an implement to be raised and lowered by rotation of said shaft, of an operating link having one end located adjacent the crank on said shaft, and a pair of plates secured to said link and having oppositely facing hooks embracing the crank.

1,189,928. INTERNAL-COMBUSTION ENGINE. THOMAS J. FAY, Brooklyn, N. Y., assignor to The Goby Engine Company, a Corporation of Ohio. Filed Aug. 2, 1913. Serial No. 782,582. (Cl. 123—75.)



1. In an internal combustion engine, the combination, with a cylinder, of a valve casing adjacent to the cylinder and provided with a port intermediate of its ends communicating with the cylinder, a sliding sleeve valve mounted within the casing, a liner section within one end of the valve casing and extending from such end to a point adjacent to the port and there provided with an abutment, there being an annular space provided between such section and the casing for the reception of the sleeve of the valve, a separate second liner section inserted within the opposite end of the valve casing and having its end spaced from the abutment to provide a port adapted to register with the first mentioned port, and a fluid connection communicating with the second liner section.

2. In an internal combustion engine, the combination, with a cylinder, of a valve casing having a port intermediate of its ends communicating with said cylinder, a liner section mounted in one end of the casing and extending from such end substantially as far as said port and provided adjacent to the port with an abutment, there being an annular space provided between said section and said casing, a second liner section projecting into the valve casing from the opposite end and spaced from the abutment to form a port adapted to communicate with the valve casing port, a fluid connection communicating with the interior of said second section, and a sliding sleeve valve surrounding the second liner section and interposed between the same and the valve casing, there being a water jacket surrounding the valve casing and communicating with the interior of the first mentioned liner section.

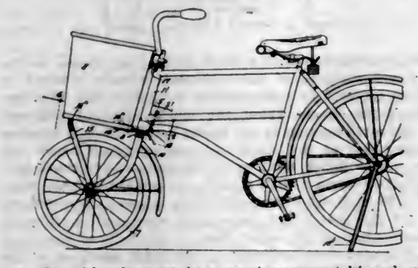
3. In an internal combustion engine, the combination, with a cylinder, of a valve casing having a port intermediate of its ends communicating with said cylinder, a liner section mounted in one end of the casing and extending from such end substantially as far as said port and provided adjacent to the port with an abutment, there being an annular space provided between said section and said casing, a second separate liner section projecting into the valve casing from the opposite end and spaced from the abutment to form a port adapted to communicate with the valve casing port, a fluid connection communicating with the interior of said second section, and a sliding sleeve valve surrounding the second liner section and interposed between the same and the valve casing.

4. In an internal combustion engine, the combination, with a cylinder, of a valve casing adjacent to the cylinder and provided with a port intermediate of its ends communicating with said cylinder, a liner sleeve section projecting into the interior of said casing from one end thereof and having an abutment adjacent to said port and forming with the casing an annular space, a second liner section within and secured to the opposite end of the valve casing and spaced from the abutment to provide therewith a port adapted to communicate with the former port, a sliding sleeve valve surrounding the second section, and connections for moving said sleeve into and out of said annular space.

5. In an internal combustion engine, the combination, with a cylinder, of a valve casing having a port intermediate of its ends communicating with said cylinder, a liner sleeve within said casing having a port adapted to communicate with the first mentioned port, a sliding valve sleeve interposed between the liner sleeve and the valve casing, means for reciprocating said sleeve, and connections for supplying lubricating fluid to the exterior of the sleeve at a point outside of the valve casing.

[Claims 6 and 7 not printed in the Gazette.]

1,189,929. BICYCLE. WILLIAM M. C. FOSTER, Chicago, Ill., assignor to Mead Cycle Co., Chicago, Ill., a Corporation of Illinois. Filed Nov. 17, 1914. Serial No. 872,538. (Cl. 208—45.)



1. In a bicycle, a package-carrier support hinged on the crown of the front steering-fork to turn with the latter, a package-carrier fastened at its bottom on said support and having its upper portion connected with the handle-bars, and props extending from the front-wheel axle and hinged to the bottom of said carrier.

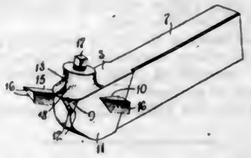
2. In a bicycle, hinge-knuckles on the forward side of the steering-fork crown, a package-carrier support having hinge-knuckles on its rear edge, a pintle-rod passing through the crown and support knuckles for connecting said support with the crown to turn with the latter, and props extending from the front-wheel axle to engage said carrier.

3. In a bicycle, hinge-knuckles on the forward side of the steering-fork crown, a package-carrier platform having hinge-knuckles on its rear edge, a pintle-rod passing through the crown and platform knuckles for connecting the platform with the crown to turn with the latter, a package-carrier fastened at its bottom on said support and having its upper portion connected with the handle-bars, and props extending from the front-wheel axle and pivotally connected with the bottom of said carrier toward the front thereof.

4. In a bicycle, a steering-fork crown having forward hinge-knuckles, a platform formed with a back and rear hinge-knuckles, a pintle-rod passing through the crown and platform knuckles for connecting the platform with the crown to turn with the latter, a package-carrier fastened on the platform against said back and having its upper portion connected with the handle-bars, ears depending from the bottom of said carrier, and props extending from the front-wheel axle and pivotally connected with said ears.

5. A bicycle having its steering-fork crown provided with hinge-knuckles on its forward and rear sides for hingedly connecting with the forward knuckles, a package carrier support to turn with the steering-fork, and with the rear knuckles a fork to adapt it to be raised on its hinge to straddle the bicycle-frame and prevent the steering-fork from turning.

1,189,930. TOOL-HOLDER. DANIEL S. FOX, Chester, Conn. Filed Aug. 19, 1915. Serial No. 46,327. (Cl. 29—99.)



1. In a tool holder, the combination of a shank provided with two forwardly extending upwardly inclined intersecting cutter-receiving passages extending obliquely from opposite sides of the shank out through opposite corners of the end portion of the shank, said passages intersecting each other substantially at the center of the shank and having side walls converging downwardly and forming substantially V-shaped bottoms to the passages, a cutter bar of a triangular cross section substantially conforming to the angularity of the convergent side walls of the passages received in said passages and seating in the V-shaped bottoms thereof, said cutter bar being reversible end for end in either of the passages and having cutter faces at its opposite ends to provide a variety of cutting faces at different angles and a clamp screw engaged in the top of the shank above the point of intersection of the cutter receiving passages and bearing on the flat upper side of the cutter seated in either passage, to thereby force the cutter bar downward in rigid engagement with the convergent side walls of the passage in which it is seated and hold the same against lateral movement.

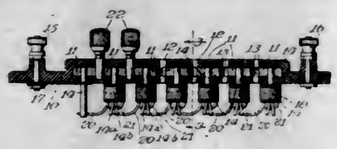
2. In a tool holder, the combination of a shank having a tool-holding head at one end provided with intersecting cutter-receiving passages extending obliquely from opposite sides of the head out through the end portion of the head, said passages having side walls converging downwardly and forming substantially V-shaped bottoms to the passages, a cutter bar of a triangular cross section substantially conforming to the angularity of the convergent side walls of the passages received in said passages and seating in the V-shaped bottoms thereof, and a clamp screw engaged in the top of the head above the point of intersection of the cutter receiving passages and bearing on the flat upper side of the cutter seated in the passage, said tool-holding head having its forward end sloped upwardly and rearwardly from the points of emergence of the tool-holding passages therein on a curve approximating the curvature of a cutting made by the tool to guide the cutting and provide clearance upward from the cutting edge of the cutter for the cuttings.

1,189,931. RESISTANCE-BOX AND THE LIKE. ALBERT FROHNE, Chicago, Ill. Filed Aug. 31, 1914. Serial No. 859,395. (Cl. 175—282.)

1. An improvement in the art of producing goods of the general class described, consisting in molding a bar into a plate of insulating material, and then separating said bar to provide a series of contacts.

2. An improvement in the art of producing goods of the general class described, consisting in surrounding a bar of suitable conducting metal with a covering of insulating material and then forming a series of contacts in said bar.

3. An improvement in the art of producing goods of the general class described, consisting in initially forming a metal bar, surrounding said bar with insulating material and finally dividing said bar into sectional contacts.

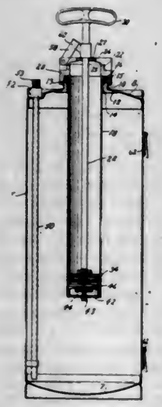


4. An improvement in the art of producing goods of the general class described, consisting in vulcanizing a metal bar within a hard rubber covering and then separating said bar into a series of contacts.

5. An improvement in the art of producing goods of the general class described, consisting in vulcanizing a metal bar within a covering of insulating material, and then forming a series of contacts in said bar.

[Claims 6 to 13 not printed in the Gazette.]

1,189,932. PUMP. JESSE B. GARBER, Salem, Ohio, assignor to The Deming Company, Salem, Ohio, a Corporation of Ohio. Filed Mar. 20, 1915. Serial No. 15,711. (Cl. 221—77.)



1. In a device of the character described, the combination of a container, a removable barrel therein, a piston operating in the barrel, and a cap operating to hold the barrel to the container and having a recess of slightly smaller diameter than the interior of the barrel adapted to receive the piston.

2. The combination of a container, a removable barrel therein, a piston occupying the barrel and having a rod, a cap operating to clamp the barrel to the container and forming a guide for the rod and having a cavity which is adapted to receive the piston when withdrawn by the barrel.

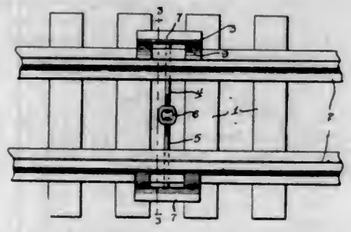
3. The combination, with a container having a collar with an external thread, of a pump barrel extending into the container and having an external flange over-hanging said collar, an internally threaded head screwed onto said collar and clamping the pump barrel in position, a piston in the barrel and an actuating rod therefor guided by said head.

4. In a device of the character described, the combination with a pump barrel having an external flange, of a support therefor adapted to embrace the barrel adjacent one end, said flange overhanging and resting on the support, a clamping head adapted to be removably secured to said support and secure the pump barrel in position, a piston in the barrel and an actuating rod therefor extending through said head, and a bore in said head registering with the bore of the cylinder and slightly smaller in diameter, whereby the piston may be drawn into said bore allowing the removal of the head together with the piston and enabling the piston to be guided into its barrel when the parts are assembled.

5. The combination, with a container having an externally threaded open collar, of a removable barrel occupying said collar and having an outward flange overhanging the upper edge of the collar, a cap having an internal thread engaging the collar and having a shoulder adapted to bear down on the flange, whereby the cap may clamp the barrel in place, said cap having an internal recess of slightly smaller diameter than the barrel, a rod extending through the cap, and a piston on the rod adapted to be drawn into said smaller recess in the cap.

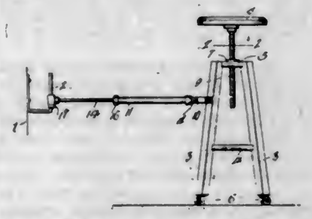
[Claim 6 not printed in the Gazette.]

1,189,933. COMBINED RAIL AND TIE BRACE. WILLIAM H. GARRETT, Centralia, Mo. Filed Sept. 15, 1915. Serial No. 50,883. (Cl. 238—5.)



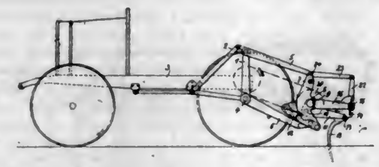
The combination with a track bed, of tie braces having the lower surfaces of their respective ends reduced to provide recesses to consequently permit of the arrangement of the braces about the upper edges of adjacent ties, the main portion of the braces being disposed between adjacent ties of the track bed and arranged below the plane of the under surfaces of the rails of the track bed, integrally formed arms extending in spaced parallel relation with each other from the inner edges of the reduced ends of the braces and engageable with and conforming to the contour of the outer sides of the rails of the track bed, threaded rods anchored in the inner surfaces of the main portions of the braces and extending beneath the rails of the track bed, and a turnbuckle engageable upon the free ends of the rods for removably holding the arms and braces in position.

1,189,934. CHAIR ATTACHMENT. ANGELO GERACI, Annapolis, Md. Filed July 18, 1912. Serial No. 710,239. (Cl. 155—22.)



In a device of the character described a major chair, an auxiliary chair movable with respect to said major chair, a pivot bracket carried by one of said chairs, hinge ears connected with the outer of said chairs, a rod pivotally connected with said pivot bracket for horizontal swinging movement, and a sleeve pivotally connected with said hinge ears for vertical pivotal movement, said sleeve being slidably and rotatably mounted upon said rod.

1,189,935. DIGGING-MACHINE. JULES GOBIET, Valentigney, France. Filed Aug. 16, 1913. Serial No. 785,150. (Cl. 97—53.)



I. A digging machine comprising a vehicle, a plurality of digging tools, a mechanism for driving each digging tool, each mechanism comprising in combination a first jointed parallelogram for determining the depth to which the tool digs, a power driven crank-shaft carried by the said first parallelogram and common to all mechanisms, a handle on the digging tool, a box within which said handle is rotatably mounted, a connecting rod whose foot is carried by the axial part of the said crank-shaft, a first axle mounted in said box and connected to the head of the connecting rod, a lever having one end mounted on the first axle, a link connected at the other end and forming a second parallelogram with said lever, connecting rod and the rear member of the first parallelogram which carries the crank-shaft, a forked member rotatable by the crank-pin, a link connecting between one end of the forked member and a point on the said rear member of the first parallelogram, and a second axle mounted in said box coöperatively engaged by the rear end of the forked member, whereby the box carrying the digging tool has imparted to it a combined movement along a path determined by the paths described by the said first and second axles.

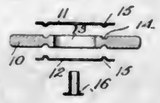
2. A digging machine comprising a vehicle, a plurality of digging tools, a mechanism for driving each digging tool, each mechanism comprising in combination a first jointed parallelogram for determining the depth to which the tool digs, a power driven crank-shaft carried by the said first parallelogram and common to all mechanisms, a handle on the digging tool, a box within which said handle is rotatably mounted, a connecting rod whose foot is carried by the axial part of the said crank-shaft, a first axle mounted in said box and connected to the head of the connecting rod, a lever having one end mounted on the first axle, a link connected at the other end and forming a second parallelogram with said lever, connecting rod and the rear member of the first parallelogram which carries the crank-shaft, a forked member rotatable by the crank-pin, a link connecting between one end of the forked member and a point on the said rear member of the first parallelogram, a second axle mounted in said box and coöperatively engaged by the rear end of the forked member, a sector having helical teeth and a smooth peripheral portion arranged in said box and driven by the first axle, a pinion on the handle of the digging tool having a groove on its periphery and teeth on one side of the groove, the said peripheral portion of sector engaging in said groove, whereby the box has imparted to it a movement along a path determined by the paths described by the said first and second axles while the digging tool is given a rotary motion only at the moment when the smooth portion of the sector has reached the end of its course, and the teeth on the sector and on the pinion engage and thereby rotate the pinion.

1,189,936. METHOD OF MAKING RUBBER BANDS. BYRON B. GOLDSMITH, New York, N. Y. Filed Aug. 1, 1911. Serial No. 641,857. (Cl. 18—50.)

1. The process of manufacturing rubber bands which consists in forming a tube from a sheet of rubber by joining the edges thereof, collapsing and inclining said tube with said joined edges lowermost, pouring down the channel so formed a solution of rubber, permitting the same to dry freely, and then vulcanizing and slicing said tube transversely, substantially as described.

2. The process of manufacturing rubber bands which consists in forming a tube from a sheet of rubber by joining the edges thereof, collapsing and inclining said tube with said joined edges lowermost, pouring down the channel so formed a solution of rubber, permitting the same to dry freely, again collapsing said tube, this time with the joined edges on a flat side, depositing a free layer of rubber in solution across the joined edges on the outer side of the tube so collapsed, allowing said layer to dry freely, and then vulcanizing and slicing said tube transversely, substantially as described.

1,189,937. ERASER. BYRON B. GOLDSMITH, New York, N. Y. Filed Mar. 8, 1912. Serial No. 682,464. (Cl. 120—40.)



1. An eraser of appropriate yielding composition made in substantially annular form and having a central opening covered by metal disks applied to opposite sides of the eraser, one or both of said disks being supplied with means near its edges engaging the material of the eraser close to the edge of the central aperture of the annulus, substantially as described.

2. An eraser of appropriate yielding composition made in substantially annular form and having a central opening surrounded by depressions molded in the composition, and metal disks applied to opposite sides of the eraser, one or both of said disks having a bent in portion adapted to coöperate with the corresponding depression or depressions for engaging the material of the eraser and securing said disks, substantially as described.

1,189,938. METHOD OF MAKING RUBBER BANDS. BYRON B. GOLDSMITH, New York, N. Y. Filed Apr. 29, 1914. Serial No. 835,116. (Cl. 18—50.)

1. The process of making bands of rubber and the like which consists in forming a section of tubing from a suitable plastic composition, subjecting said tubing to a smoothing process, vulcanizing it, and cutting the treated tube into sections of the desired width for the bands desired.

2. The process of making bands of rubber and the like which consists in forming a section of tubing from a suitable plastic composition, heating and smoothing the tubing so formed, vulcanizing it, and cutting the treated tube into sections of the desired width for the bands desired.

3. The process of making bands of rubber and the like which consists in forming a section of tubing from a suitable plastic composition, simultaneously stretching and compressing said tubing, vulcanizing it, and cutting the treated tube into sections of the desired width for the bands desired.

4. The process of making bands of rubber and the like which consists in forming a section of tubing from a suitable plastic composition, expanding said tubing and pressing its outer section by fluid pressure against a suitably formed resistant surface, vulcanizing it, and cutting the treated tube into sections of the desired width for the bands desired.

5. The process of making bands of rubber and the like which consists in forming a section of tubing from a suitable plastic composition, simultaneously stretching, heating and compressing said tubing, vulcanizing it and cutting the treated tube into sections of the desired width for the bands desired.

[Claims 6 to 8 not printed in the Gazette.]

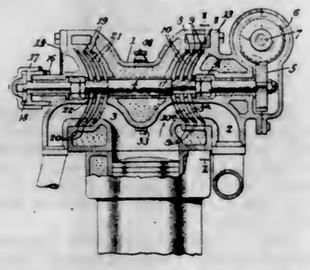
1,189,939. CARBON-PAPER AND PROCESS FOR MAKING SAME. BYRON B. GOLDSMITH, New York, N. Y. Filed Aug. 9, 1915. Serial No. 44,452. (Cl. 91—68.)

1. The process of manufacturing duplicating paper which consists in applying a suitable pigment-bearing layer to a foundation sheet of wax laden paper, substantially as described.

2. The process of manufacturing duplicating paper which consists in first applying to a sheet of paper a foundation of wax and then laying over this a film of a suitable pigment-bearing compound, substantially as described.

3. As an article of manufacture, a sheet of paper having a foundation layer of wax interpenetrating its texture and an external pigment-bearing layer united with said foundation layer, substantially as described.

1,189,940. LABYRINTH-VALVE. JOHN GOOD, New York, N. Y. Filed Jan. 17, 1914. Serial No. 812,633. (Cl. 136—7.)



1. A labyrinth valve comprising interlapping lamellæ having port openings adapted to form a free passage through the valve when in alinement and provided with inclined portions beyond the boundaries of the port openings forming a labyrinth crevice.

2. A labyrinth valve comprising interlapping lamellæ provided with port openings adapted to open a free passage through the valve when said openings are in alinement and provided with angular juxtaposed surfaces beyond the boundaries of said port openings forming a tortuous crevice between lamellæ.

3. A labyrinth valve comprising a series of dished members and a series of similarly dished members, the members of one series interlapping without contact with those of the other series and each provided with port openings adapted to be brought into alinement with port openings in the other members.

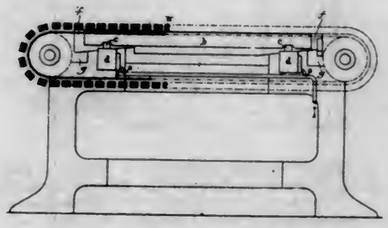
4. A labyrinth valve comprising a series of dished lamellæ and a series of similarly dished lamellæ interlapping therewith, both series provided with port openings which form a free passage through the valve when in alinement and being related and assembled to form a labyrinthic crevice between them.

5. Valve mechanism for engines and like purposes comprising a valve shaft, a pair of labyrinth valves thereon each formed of series of interlapping, dished, lamellæ, their dished sides facing in opposite directions.

[Claims 6 to 10 not printed in the Gazette.]

1,189,941. BEATING APPARATUS, ESPECIALLY FOR THE MANUFACTURE OF CHOCOLATE. PAUL HÄNEL, Dresden, Germany, assignor to Louis Bernhard Lehmann, Dresden, Germany. Filed Nov. 27, 1912. Serial No. 733,750. (Cl. 107—8.)

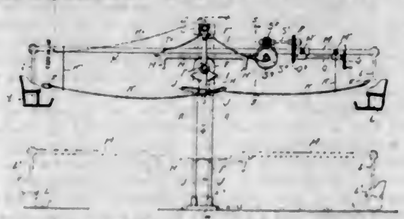
1. In an apparatus of the class described, a frame, endless chains, cross bars extending between and connected to the links of said endless chains, carriers upon which the said cross bars rest and slide, means for adjusting the position of the said carriers to determine the extent to which the cross bars may be raised and permitted to fall, agitator bars, and percussive air hammers for actuating the said agitator bars to raise the said cross bars when compressed air is supplied thereto and permitting the said cross bars to drop suddenly and freely when the supply of air is cut off therefrom.



2. In an apparatus of the class described, a frame, endless chains, cross bars extending between and connected to the links of said chains, carrier bars upon which the said cross bars, at their ends, rest and slide, adjustable support brackets for the said carrier bars to determine the elevation of the same, agitator bars connected to the said cross bars, and percussive air hammers for actuating the said agitator bars to raise the said cross bars when compressed air is supplied thereto and permitting the said cross bars to drop suddenly and freely when the supply of air is cut off therefrom.

3. In an apparatus for molding chocolate tablets, the combination of a table for supporting molds, consisting of spaced apart parallel endless chains and closely spaced cross bars extending entirely across the apparatus and connected to the links of said chains, carriers for supporting said table, and percussive air hammers for raising said carriers, chains and cross bars and permitting the same to fall downward freely.

1,189,942. SEESAW. EDWARD HARDY, Canton, Mo. Filed Sept. 23, 1915. Serial No. 52,171. (Cl. 46—22.)



1. A see saw device, consisting of a horizontally disposed oscillatory frame, central supporting means for the same, means carried by the frame for elevating the same, on the supporting means, and means carried by the frame for causing oscillation of the frame when elevated.

2. A see saw device consisting of a horizontally disposed oscillatory frame, parallel uprights at opposite sides of the frame, blocks slidably mounted on said uprights, a shaft connecting said blocks and rotatably mounted therein, cog wheels mounted on said shaft, rack bars on the under side of the frame and meshing with the aforesaid cog wheels, and means for causing reciprocal oscillation of the cog wheels whereby such oscillation will cause longitudinal movement of the frame to opposite sides of its normal center of gravity.

3. A see saw device consisting of parallel side uprights, a cross bar at the top thereof, bearing blocks slidably mounted on said supports, a shaft rotatably mounted in said bearing blocks, cog wheels rigidly secured to said shaft, an oscillating teeter frame having rack bars on its under side meshing with and supported on the cog wheels, swinging hooks mounted on the aforesaid shaft and adapted to engage the top cross bar of the uprights and hold the teeter frame in elevated position, and means for causing oscillation of the cog wheels to impart reciprocal horizontal movement of the teeter frame to opposite sides of its center of gravity.

4. In a see saw device, the combination with uprights carrying vertically slidable cog wheels, and means for reciprocally rotating the same, of an oscillatory teeter frame having rack bars engaging said cog wheels.

5. In a see saw device, the combination with vertical side uprights, a cross bar connecting the same at the top, bearing blocks slidably mounted with respect to said uprights, a shaft revolubly mounted in said blocks and connecting the same, cog wheels rigidly mounted on said shafts, an arm extending from said shaft, pulling means secured to said arm, a teeter frame having rack bars at its sides resting on the cog wheels, swinging hooks carried by the aforesaid shaft and adapted to engage the top cross bar, and windless mechanism carried by the frame and engaging with the cross bar to raise and lower the frame and the slidable blocks.

[Claims 6 to 8 not printed in the Gazette.]

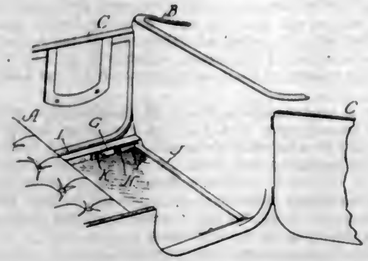
1,189,943. ANTIVIBRATION DEVICE FOR VEHICLES. EDWARD V. HARTFORD, New York, N. Y. Filed Feb. 7, 1906. Serial No. 299,867. (Cl. 21—105.)



1. An anti-vibration device for vehicles, comprising oppositely-disposed friction disks, friction material between said disks, a recessed annulus rigidly secured to one of said disks, friction rollers in said recesses, springs in said recesses bearing upon said rollers formed of a single piece of tempered wire having a straight portion connecting double, oppositely-wound, helical springs terminating in straight, parallel portions substantially at right angles to said straight portions, a locking ring surrounding said recessed annulus, and connections between said locking ring and one of said friction disks to the suspended portion and running gear respectively of a vehicle, whereby said locking ring will move freely in one direction and will cause said friction disks to operate if moved in the other direction, substantially as described.

2. A spring for anti-vibration devices for vehicles formed of a single piece of wire having a straight portion connecting double, oppositely-wound, helical portions terminating in straight parts at substantially right angles to said straight connection portion, substantially as described.

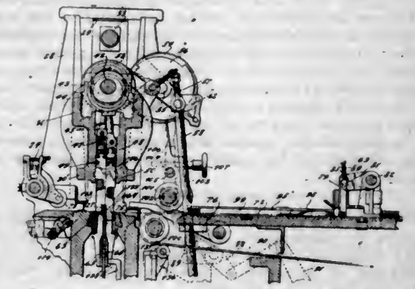
1,189,944. FOOT-REST FOR VEHICLES. DONALD T. HASTINGS, Detroit, Mich., assignor, by mesne assignments, to Hupp Motor Car Corporation, Richmond, Va., a Corporation of Virginia. Filed Oct. 22, 1914. Serial No. 868,035. (Cl. 21—15.)



1. The combination with vehicle frame having corresponding side portions projecting slightly above its bottom, of arms pivotally mounted upon the inner faces of said portions, a foot rail extended between the free ends of said arms, and stops projecting oppositely inward from the inner faces of said portions to support the foot rest at an elevation above the frame bottom.

2. The combination with a vehicle frame having corresponding side portions projecting slightly above its bottom, of brackets secured to the inner faces of said side portions below the upper edges thereof, arms pivotally connected to the brackets, a foot rail extended between the free ends of said arms, and stops projecting inwardly from the respective brackets, engaged by said arms in their rearmost positions, to support the foot-rest at an elevation above the frame bottom.

1,189,945. CARTON-BLANK-FORMING MACHINE. EDGAR MARION HAWKINS, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 3, 1915. Serial No. 18,940. (Cl. 93—58.)



1. The combination with means for providing a box blank with slots and creases disposed in one direction, of means operative on the blank subsequent to the operation of said first-named means to trim the slots and provide the blank with creases disposed at an angle to said first-named creases.

2. The combination with means for providing a box blank with flap creases and slots, of means operative on the blank subsequent to the operation of said first-named means for tapering the flaps and providing the blank with panel creases.

3. The combination with a machine for providing a box blank with slots, and creases disposed in one direction, of an auxiliary machine having means for trimming said slots, and means for providing the blank with creases disposed at an angle to said first-named creases.

4. The combination with a machine for providing a box blank with flap creases and slots, of an auxiliary machine having means for tapering the flaps, and means for providing the blank with panel creases.

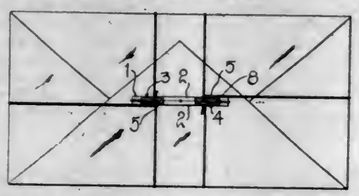
5. In a machine for operating on box blanks upon which the flaps have been provided, the combination of means for feeding the blank through the machine, and means for interrupting the feeding movement of the blank comprising means for engaging the successive flaps of the blank during its movement through the machine.

[Claims 6 to 42 not printed in the Gazette.]

1,189,946. PACKAGE-TIE. JOHN HEFFLEY, Sr., Duncannon, Pa., assignor to William H. Hefley, Duncannon, Pa. Filed May 15, 1915. Serial No. 28,458. (Cl. 24—18.)

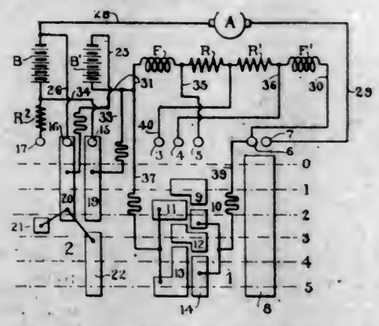
1. A device of the character described, comprising a base plate formed with inturned side fangs, a body portion embodying hooks arranged in spaced relation to each other, and including a connecting bar and terminals arranged substantially parallel to the connecting bar and terminating in spaced relation to each other at their extremities, a clamping device consisting of a bar extending longitudinally between said connecting bar and said terminals, and formed with arched portions designed to co-act with the bills of the hooks and also formed at its middle with a lateral crimp disposed in the space between the extremities of said terminals, and a base

plate formed with inturned side flanges, extending over the connecting bar, the terminals, and the interposed crimp, as and for the purpose set forth.



2. A device of the character described, comprising a base plate formed intermediate of its ends with inturned side flanges, a body portion formed of a single length of wire bent to form hooks arranged in spaced relation to each other with their bills facing, a connecting bar and terminals arranged substantially parallel to the connecting bar and terminating in spaced relation to each other at their extremities, and a clamping device consisting of a bar extending longitudinally between said connecting bar and said terminals and formed near its ends with arched portions adapted to spring up into the bills of the hooks, and also formed at its middle with a lateral crimp disposed in the space between the extremities of said terminals.

1,189,947. CONTROLLER FOR ELECTRIC MOTORS. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 28, 1913. Serial No. 797,900. (Cl. 172—291.)



1. In combination, a motor having a plurality of field windings normally in series, a resistance and controlling means to commutate said field windings from series to parallel and to shunt the same through said resistance at a single step and thereafter vary said resistance.

2. In combination, a motor having a plurality of series field windings normally connected in series, a resistance normally in series with said windings, and means for progressively removing said resistance from circuit for starting, and paralleling said windings with one another and with different amounts of said resistance for speed regulation.

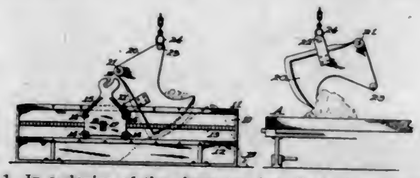
3. The combination with a motor having a plurality of field windings, of a plurality of supply batteries, means for commutating said batteries, a variable resistance and means to commutate said field windings and to control said resistance, said second mentioned means being operable during parallel connection of said batteries to commutate said field windings from series to parallel with a shunt through a part only of said resistance and during series connection of said batteries to commutate said field windings from series to parallel with a shunt through all of said resistance and thereafter to exclude a part of said shunting resistance.

4. In a motor controller, in combination, a resistance normally included in the motor circuit and means for excluding said resistance from circuit for starting and thereafter commutating the motor field windings and shunting the field windings when paralleled through different amounts of said resistance.

5. The combination with a motor having a plurality of series field windings, of a plurality of supply batteries, a variable resistance and circuit controlling means operable to complete the motor circuit with said batteries in parallel and said field windings in series for one speed, then parallel said field windings with one another and a part only of said resistance for the next speed, then commutate said batteries to series relation at the same time restoring the fields to series relation for the next speed, then parallel said field windings with one another and with all of said resistance for the next speed and then vary said resistance for further speed variation.

[Claim 6 not printed in the Gazette.]

1,189,948. SAND-HANDLING APPLIANCE. WALTER H. HOFMANN, Richmond Hill, N. Y., assignor to Richey, Browne & Donald, Inc., Maspeth, N. Y., a Corporation of New York. Filed July 26, 1915. Serial No. 41,819. (Cl. 214—10.)



1. In a device of the character described, the combination of a frame comprising two members located in stationary position, a pair of yokes adapted to be adjusted along said members each having a notch in the top, a sand scoop provided with trunnions adapted to rest in said notches, and means whereby said scoop can be caused to swing on its trunnions.

2. In a device of the character described, the combination of a stationary frame, a pair of yokes mounted thereon and provided with notches therein, a scoop having trunnions adapted to rest in said notches and also provided with two pairs of studs, one pair located at the rear of the trunnions and the other at the front and adapted to receive a chain hook for hoisting the scoop.

3. In a sand handling appliance, the combination of a frame provided with means longitudinally adjustable thereon for supporting trunnions, a sand scoop having trunnions adapted to rest removably on said means and provided with studs located on opposite sides of the trunnions, and a hoist adapted to be connected with either of said studs for turning the scoop about the trunnions and lifting it therefrom.

4. In a device of the character described, the combination with a scoop having supporting trunnions, of a hoisting device adapted to lift the scoop from the trunnions, and means whereby said hoisting device can be connected with the scoop at either side of the trunnions to the exclusion of the other, whereby it will be tilted about the trunnions as it is being raised by the hoisting device.

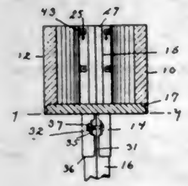
5. In a sand handling device, the combination with a pair of frames, each having a rack extending therealong, a pair of yokes movable along said frames each having a pawl for engaging the teeth of the rack to hold the yokes in adjusted positions therealong, a sand scoop having trunnions adapted to be supported by said yokes, and means for depositing the trunnions on the yokes and turning the scoop on the trunnions.

[Claim 6 not printed in the Gazette.]

1,189,949. ADJUSTABLE DESK OR TABLE COMBINATION. STANLEY H. HOLMES, New Britain, Conn. Filed Aug. 10, 1915. Serial No. 44,803. (Cl. 45—48.)

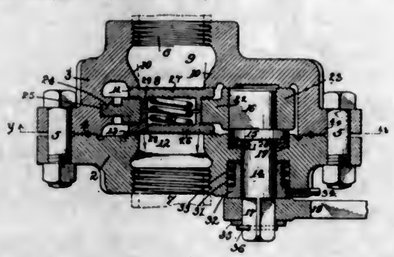
In combination in a desk, a box-like body for housing books and other articles having side walls and a bottom,

the said side walls being composed of body pieces each of which is slightly shorter than the side wall of which it forms a part, and corner members at the junctions of the adjacent body pieces, the said corner members comprising each an outer piece that extends around the outer side of the corner and an auxiliary piece on the inner side, the ends of the said body pieces being interposed between and secured to opposed portions of an outer piece and an auxiliary piece, the said outer piece and auxiliary



piece at each corner being separated by a space suitable to serve as a leg receiving socket, the said outer pieces having clamping means for clamping a leg received in the said socket, and the said auxiliary piece in each case extending the full depth of the body piece to which it is connected, suitably to reinforce the said body piece for the full depth thereof, and to serve as a closure for the socket for the full depth thereof, and to serve as a barrier between the said socket and the interior of the said box-like structure.

1,189,950. VALVE. RUDOLPH M. HUNTER, Philadelphia, Pa., assignor to Forged Steel Valve Company, Inc., a Corporation of New York. Filed Oct. 16, 1914. Serial No. 866,921. (Cl. 137—7.)



1. In a valve, the combination of the casing formed of a plurality of parts bolted together and providing an internal chamber having inlet and outlet ports opening respectively through the opposite faces and terminating in opposed valve seats, a spindle journaled in one of the parts of the casing to one side of the port there through, a swinging arm carried on the inner end of the spindle so as to be moved thereby and having an aperture through the free end in alinement with the ports, two valve pieces of the same cross section respectively working in contact with the valve seats and having recessed hubs of the same diameter fitting the aperture in the swinging arm and each of a depth approximately equal to one-half the thickness of the swinging arm so as to be wholly independent of each other, and a spring inclosed between the valve pieces and inclosed thereby for pressing the valve pieces upon their respective seats.

2. In a valve, the combination of the casing formed of a plurality of parts bolted together and providing an internal chamber having inlet and outlet ports opening respectively through the opposite faces and terminating in opposed valve seats and also having a guide in its side wall and extending in a plane parallel to the plane of the valve seats, a spindle journaled in one of the parts of the casing to one side of the port there through, a swinging arm carried on the inner end of the spindle so as to be moved thereby and having an aperture through the free end in alinement with the ports the said swinging arm having its free end provided with a projection guided by the guide on the side of the internal chamber for supporting said arm against movement toward either valve seat, two valve pieces respectively working in contact with the valve seats and having hubs fitting the aperture in the swinging arm, and a spring inclosed between the valve pieces and inclosed thereby for pressing the valve pieces upon their respective seats.

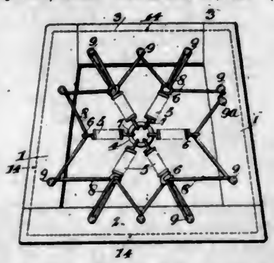
3. In a valve, the combination of the casing formed of a plurality of parts bolted together and providing an internal chamber having inlet and outlet ports opening respectively through the opposite faces and terminating in opposed valve seats, a spindle journaled in one of the parts of the casing to one side of the port there through having an annular collar adapted to seat upon the inner part of the casing to form a tight joint, a bushing surrounding the spindle and guided in an aperture in the open face of the casing, an arm secured to the end of the spindle for operating it and against which the bushing exerts a pressure, a spring surrounding the bushing for forcing it outward against the operating arm for causing the collar of the spindle to make a tight joint in the casing, a swinging arm carried on the inner end of the spindle so as to be moved thereby and having an aperture through the free end in alinement with the ports, two valve pieces respectively working in contact with the valve seats and having hubs fitting the aperture in the swinging arm, and a spring inclosed between the valve pieces and inclosed thereby for pressing the valve pieces upon their respective seats.

4. In a valve, the combination of a body having an internal chamber formed with inlet and outlet ports, means to control the ports, a spindle for actuating said means said spindle having an annular collar for making a tight joint on the inside of the casing, an arm secured to the outer end of the spindle for rotating it, a bushing surrounding the spindle and guided in an aperture in the outer surface of the casing, and a spring arranged in the said aperture and extending around the spindle for forcing the bushing outwardly to impart an outward spring action to the spindle for holding its collar tightly upon its seat.

5. In a valve, the combiantion of a body having an internal chamber formed with inlet and outlet ports, means to control the ports, a spindle for actuating said means said spindle having an annular collar for making a tight joint on the inside of the casing, an arm secured to the outer end of the spindle for rotating it, a bushing surrounding the spindle and guided in an aperture in the outer surface of the casing, means to hold the bushing against rotation while permitting it to move longitudinally in the casing, and a spring arranged in the said aperture and extending around the spindle for forcing the bushing outwardly to impart an outward spring action to the spindle for holding its collar tightly upon its seat.

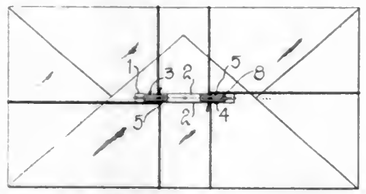
[Claims 6 and 7 not printed in the Gazette.]

1,189,951. CHAIR-SEAT. FRANK H. HURD, Wabasha, Minn., and EVERETT JOHN HEULE, Superior, Wis.; said Heule assignor to Arthur W. Highfield, Superior, Wis. Filed Sept. 10, 1915. Serial No. 49,894. (Cl. 155—25.)



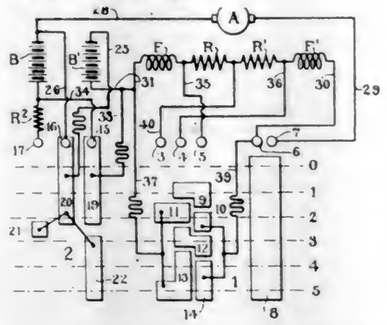
1. In combination an open frame, radially disposed coil springs connected at their inner ends centrally of the

plate formed with inturned side flanges, extending over the connecting bar, the terminals, and the interposed crimp, as and for the purpose set forth.



2. A device of the character described, comprising a base plate formed intermediate of its ends with inturned side flanges, a body portion formed of a single length of wire bent to form hooks arranged in spaced relation to each other with their bills facing, a connecting bar and terminals arranged substantially parallel to the connecting bar and terminating in spaced relation to each other at their extremities, and a clamping device consisting of a bar extending longitudinally between said connecting bar and said terminals and formed near its ends with arched portions adapted to spring up into the bills of the hooks, and also formed at its middle with a lateral crimp disposed in the space between the extremities of said terminals.

1,189,947. CONTROLLER FOR ELECTRIC MOTORS. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 28, 1913. Serial No. 797,900. (Cl. 172—291.)



1. In combination, a motor having a plurality of field windings normally in series, a resistance and controlling means to commutate said field windings from series to parallel and to shunt the same through said resistance at a single step and thereafter vary said resistance.

2. In combination, a motor having a plurality of series field windings normally connected in series, a resistance normally in series with said windings, and means for progressively removing said resistance from circuit for starting, and paralleling said windings with one another and with different amounts of said resistance for speed regulation.

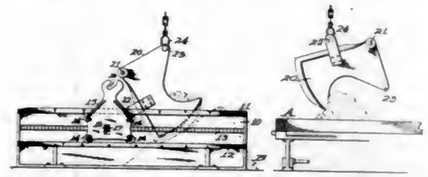
3. The combination with a motor having a plurality of field windings, of a plurality of supply batteries, means for commutating said batteries, a variable resistance and means to commutate said field windings and to control said resistance, said second mentioned means being operable during parallel connection of said batteries to commutate said field windings from series to parallel with a shunt through a part only of said resistance and during series connection of said batteries to commutate said field windings from series to parallel with a shunt through all of said resistance and thereafter to exclude a part of said shunting resistance.

4. In a motor controller, in combination, a resistance normally included in the motor circuit and means for excluding said resistance from circuit for starting and thereafter commutating the motor field windings and shunting the field windings when paralleled through different amounts of said resistance.

5. The combination with a motor having a plurality of series field windings, of a plurality of supply batteries, a variable resistance and circuit controlling means operable to complete the motor circuit with said batteries in parallel and said field windings in series for one speed, then parallel said field windings with one another and a part only of said resistance for the next speed, then commutate said batteries to series relation at the same time restoring the fields to series relation for the next speed, then parallel said field windings with one another and with all of said resistance for the next speed and then vary said resistance for further speed variation.

[Claim 6 not printed in the Gazette.]

1,189,948. SAND-HANDLING APPLIANCE. WALTER H. HOFMANN, Richmond Hill, N. Y., assignor to Richey, Browne & Donald, Inc., Maspeth, N. Y., a Corporation of New York. Filed July 26, 1915. Serial No. 41,819. (Cl. 214—10.)



1. In a device of the character described, the combination of a frame comprising two members located in stationary position, a pair of yokes adapted to be adjusted along said members each having a notch in the top, a sand scoop provided with trunnions adapted to rest in said notches, and means whereby said scoop can be caused to swing on its trunnions.

2. In a device of the character described, the combination of a stationary frame, a pair of yokes mounted thereon and provided with notches therein, a scoop having trunnions adapted to rest in said notches and also provided with two pairs of studs, one pair located at the rear of the trunnions and the other at the front and adapted to receive a chain hook for hoisting the scoop.

3. In a sand handling appliance, the combination of a frame provided with means longitudinally adjustable thereon for supporting trunnions, a sand scoop having trunnions adapted to rest removably on said means and provided with studs located on opposite sides of the trunnions, and a hoist adapted to be connected with either of said studs for turning the scoop about the trunnions and lifting it therefrom.

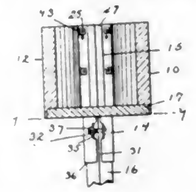
4. In a device of the character described, the combination with a scoop having supporting trunnions, of a hoisting device adapted to lift the scoop from the trunnions, and means whereby said hoisting device can be connected with the scoop at either side of the trunnions to the exclusion of the other, whereby it will be tilted about the trunnions as it is being raised by the hoisting device.

5. In a sand handling device, the combination with a pair of frames, each having a rack extending therealong, a pair of yokes movable along said frames each having a pawl for engaging the teeth of the rack to hold the yokes in adjusted positions therealong, a sand scoop having trunnions adapted to be supported by said yokes, and means for depositing the trunnions on the yokes and turning the scoop on the trunnions.

[Claim 6 not printed in the Gazette.]

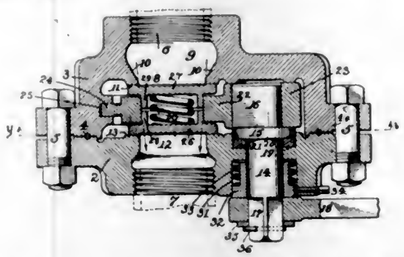
1,189,949. ADJUSTABLE DESK OR TABLE COMBINATION. STANLEY H. HOLMES, New Britain, Conn. Filed Aug. 10, 1915. Serial No. 44,803. (Cl. 45—48.)

In combination in a desk, a box-like body for housing books and other articles having side walls and a bottom, the said side walls being composed of body pieces each of which is slightly shorter than the side wall of which it forms a part, and corner members at the junctions of the adjacent body pieces, the said corner members comprising each an outer piece that extends around the outer side of the corner and an auxiliary piece on the inner side, the ends of the said body pieces being interposed between and secured to opposed portions of an outer piece and an auxiliary piece, the said outer piece and auxiliary



piece at each corner being separated by a space suitable to serve as a leg receiving socket, the said outer pieces having clamping means for clamping a leg received in the said socket, and the said auxiliary piece in each case extending the full depth of the body piece to which it is connected, suitably to reinforce the said body piece for the full depth thereof, and to serve as a closure for the socket for the full depth thereof, and to serve as a barrier between the said socket and the interior of the said box-like structure.

1,189,950. VALVE. RUDOLPH M. HUNTER, Philadelphia, Pa., assignor to Forged Steel Valve Company, Inc., a Corporation of New York. Filed Oct. 16, 1914. Serial No. 866,921. (Cl. 137—7.)



1. In a valve, the combination of the casing formed of a plurality of parts bolted together and providing an internal chamber having inlet and outlet ports opening respectively through the opposite faces and terminating in opposed valve seats, a spindle journaled in one of the parts of the casing to one side of the port there through, a swinging arm carried on the inner end of the spindle so as to be moved thereby and having an aperture through the free end in alinement with the ports, two valve pieces of the same cross section respectively working in contact with the valve seats and having recessed hubs of the same diameter fitting the aperture in the swinging arm and each of a depth approximately equal to one-half the thickness of the swinging arm so as to be wholly independent of each other, and a spring inclosed between the valve pieces and inclosed thereby for pressing the valve pieces upon their respective seats.

2. In a valve, the combination of the casing formed of a plurality of parts bolted together and providing an internal chamber having inlet and outlet ports opening respectively through the opposite faces and terminating in opposed valve seats and also having a guide in its side wall and extending in a plane parallel to the plane of the valve seats, a spindle journaled in one of the parts of the casing to one side of the port there through, a swinging arm carried on the inner end of the spindle so as to be moved thereby and having an aperture through the free end in alinement with the ports the said swinging arm having its free end provided with a projection guided by the guide on the side of the internal chamber for supporting said arm against movement toward either valve seat, two valve pieces respectively working in contact with the valve seats and having hubs fitting the aperture in the swinging arm, and a spring inclosed between the valve pieces and inclosed thereby for pressing the valve pieces upon their respective seats.

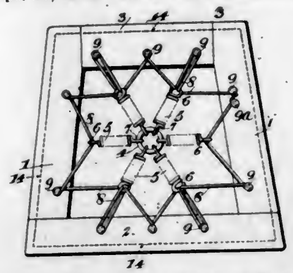
3. In a valve, the combination of the casing formed of a plurality of parts bolted together and providing an internal chamber having inlet and outlet ports opening respectively through the opposite faces and terminating in opposed valve seats, a spindle journaled in one of the parts of the casing to one side of the port there through having an annular collar adapted to seat upon the inner part of the casing to form a tight joint, a bushing surrounding the spindle and guided in an aperture in the open face of the casing, an arm secured to the end of the spindle for operating it and against which the bushing exerts a pressure, a spring surrounding the bushing for forcing it outward against the operating arm for causing the collar of the spindle to make a tight joint in the casing, a swinging arm carried on the inner end of the spindle so as to be moved thereby and having an aperture through the free end in alinement with the ports, two valve pieces respectively working in contact with the valve seats and having hubs fitting the aperture in the swinging arm, and a spring inclosed between the valve pieces and inclosed thereby for pressing the valve pieces upon their respective seats.

4. In a valve, the combination of a body having an internal chamber formed with inlet and outlet ports, means to control the ports, a spindle for actuating said means said spindle having an annular collar for making a tight joint on the inside of the casing, an arm secured to the outer end of the spindle for rotating it, a bushing surrounding the spindle and guided in an aperture in the outer surface of the casing, and a spring arranged in the said aperture and extending around the spindle for forcing the bushing outwardly to impart an outward spring action to the spindle for holding its collar tightly upon its seat.

5. In a valve, the combiantion of a body having an internal chamber formed with inlet and outlet ports, means to control the ports, a spindle for actuating said means said spindle having an annular collar for making a tight joint on the inside of the casing, an arm secured to the outer end of the spindle for rotating it, a bushing surrounding the spindle and guided in an aperture in the outer surface of the casing, means to hold the bushing against rotation while permitting it to move longitudinally in the casing, and a spring arranged in the said aperture and extending around the spindle for forcing the bushing outwardly to impart an outward spring action to the spindle for holding its collar tightly upon its seat.

[Claims 6 and 7 not printed in the Gazette.]

1,189,951. CHAIR-SEAT. FRANK H. HURD, Wabasha, Minn., and EVERETT JOHN HEULE, Superior, Wis.; said Heule assignor to Arthur W. Highfield, Superior, Wis. Filed Sept. 10, 1915. Serial No. 49,894. (Cl. 155—25.)

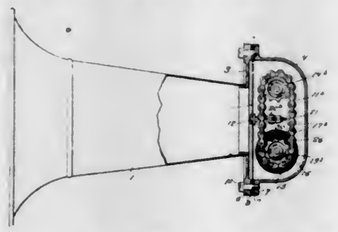


1. In combination an open frame, radially disposed coil springs connected at their inner ends centrally of the

frame, and a running connection between the outer ends of the springs and the frame bars for centralizing the springs and equalizing the tension thereon.

2. In combination an open frame, a ring disposed centrally of the frame, radially arranged coil springs having their inner ends loosely connected with the ring and having eyes at their outer ends and a single running connection between the outer ends of the springs and the frame bars, said connection loosely engaging the eyes at the outer ends of the springs.

1,189,952. DIAPHRAGM-HORN. MILLER REESE HUTCHISON, West Orange, N. J., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed May 11, 1911. Serial No. 626,491. (Cl. 116—1.)

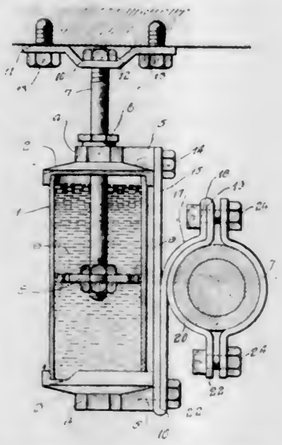


1. In an alarm or signaling device, a diaphragm, and mechanical means for actuating the same including an endless flexible actuator and rolling actuating devices carried thereby.

2. In an alarm or signaling device, the combination of a diaphragm, an endless flexible actuator provided with rolling actuating projections, and a thrust-receiving member adapted to be contacted by said projections to produce the vibration of the diaphragm.

3. In an alarm or signaling device, a diaphragm, an endless flexible actuator provided with rolling projections for causing the diaphragm to vibrate, and a rolling backing member for holding the actuator to its work.

1,189,953. SHOCK-ABSORBER. RAY HYNE, Evansville, Wis. Filed Mar. 13, 1916. Serial No. 83,894. (Cl. 21—105.)

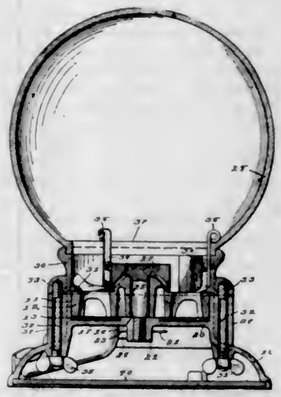


1. A shock absorber including an upright cylinder to contain shock absorbing means, said cylinder having upper and lower detachable caps closing its ends, an upright bar rigidly secured at its ends to said caps to prevent removal thereof, and a clamp secured to said bar for attaching the cylinder to the running gear of a vehicle.

2. A shock absorber including an upright cylinder to contain shock absorbing means, and an upright bar rigidly secured to the ends of said cylinder, said bar having one of its ends bent backwardly and formed into a clamp member to assist in securing the cylinder to the running gear of a vehicle.

3. A shock absorber including an upright cylinder to contain shock absorbing means, an upright bar rigidly secured to the ends of said cylinder, one end of said bar being bent upon itself and directed outwardly, said end being then again bent upon itself and further bent into substantially the form of a C to constitute a clamp member, and an additional clamp member coöperating with the aforesaid member to secure the cylinder to the running gear of a vehicle.

1,189,954. VENDING-MACHINE. ALONZO JACOBS, Oklahoma, Okla. Filed Nov. 2, 1914. Serial No. 869,945. (Cl. 211—8.)



1. In a vending machine, a supporting base having a delivery port, a chambered delivery tray mounted to revolve on the base and have its chambers register successively with said delivery port, an actuating-plate mounted on the base under the delivery tray and adapted to be given limited movement to advance the tray, said plate having an opening registering with said delivery port when in initial position.

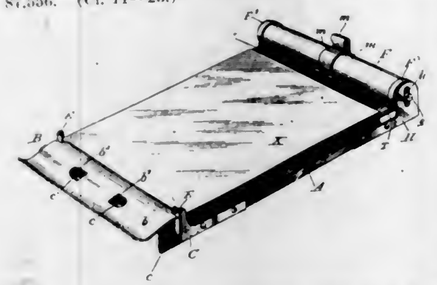
2. In a vending machine, a supporting base having a circular compartment and a port leading from the bottom of said compartment, a tray in the compartment having a series of chambers adapted to register successively with said port, and an annular member mounted over the base compartment and adapted to hold the delivery tray down in said compartment, said annular member having depending rod extensions extending removably down through the base, and nuts engaging the lower ends of said rod extensions.

3. In a vending machine, a supporting base having a circular compartment and a port leading from said compartment, a tray mounted to revolve in the compartment and having a series of chambers adapted to register successively with said port, an annular member mounted on the base over the compartment to hold the delivery tray down, a container mounted on the annular member and having locking means accessible only by reaching up through said member, said annular member having depending rod extensions passing down removably through the base, and nuts engaging the lower ends of said extensions.

4. In a vending machine, a supporting base having a compartment and a port leading from said compartment, a tray mounted revolubly in said compartment and having chambers adapted to register successively with said port, an annular member resting on the base over said compartment to retain the delivery tray in place, a container resting on the annular member and locked thereto by means accessible only by reaching upward through said annular member, said annular member having depending rod extensions passing down through the base, nuts on the lower ends of said rod extensions, and means for preventing access to said nuts.

5. In a vending machine, a base having a compartment and a delivery tray mounted to revolve in said compartment, a stud on which the tray pivots, said stud having a head, the side surfaces of said head being vertically disposed, whereby the tray will more certainly fill when being revolved.

1,189,955. MANIFOLDING DEVICE. CHARLES H. JAMES, Spokane, Wash. Filed Mar. 29, 1916. Serial No. 87,556. (Cl. 11—23.)



1. A manifolding device, comprising a base piece, a pad clip mounted at one end thereof and a roll holder at the opposite end of the base piece having trunnions mounted in slotted bearings and movable in a plane at right angles to that of the pad.

2. A manifolding device, comprising a base piece, a pad-clip mounted at one end thereof and provided with corner gages for the pad, and a roll-holder for manifolding material mounted at the opposite end of the base piece.

3. A device of the character described embodying a base, means at one end of the base for holding one edge of a paper pad and a writing surface pivotally mounted to move about an axis at the other end of the base to normally lie in the plane of the paper pad and to be swung about said axis away from the pad.

4. A device of the character described embodying a base, means at one end of the base for holding one edge of a paper pad and a table pivotally mounted to move about an axis at the other end of the base to normally lie in the plane of the paper pad and to be swung about said axis away from the pad.

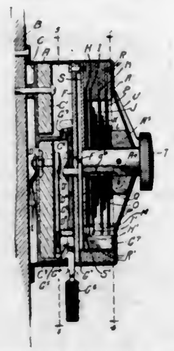
5. A manifolding device, comprising a base piece, a paper clip connected therewith, a roll casing for manifolding material, brackets having arms attached to edges of the base piece and having also resilient portions extending beyond the end of the base piece formed with upwardly projecting roll-supporting members and which are detachably connected with said roll-casing.

[Claims 6 to 14 not printed in the Gazette.]

1,189,956. COMBINATION SWITCH-LOCK. JOHN H. JEFFRIES, Inglewood, Cal. Filed Sept. 20, 1915. Serial No. 51,543. (Cl. 175—282.)

1. A combination switch lock comprising a casing, a double throw switch arm mounted therein, and contact plates over which said arm may be turned, a spindle journaled in the casing, tumblers within the casing and mounted on said spindle, and controlled thereby, an auxiliary switch lever slidably and pivotally mounted in the casing, means for coupling the said auxiliary lever with the throw switch arm, and means pivotally carried by the auxiliary lever for engaging the aforesaid tumblers and operatively coupling the auxiliary lever with the spindle, whereby the throw switch arm may swing into contact with either a battery or magneto circuit.

2. A combination switch lock comprising a casing, a double-throw switch arm mounted therein, contact plates over which the switch arm may be turned, said switch arm having a forwardly projecting pin, an auxiliary switch lever mounted in the casing, said lever having a slot adapted to be engaged by the pin on the throw lever, a spindle rotatably mounted in the casing, tumblers within the casing controlled by said spindle and means for operatively coupling the spindle with the auxiliary arm, whereby the throw lever may be swung into contact with either a battery or magneto circuit.



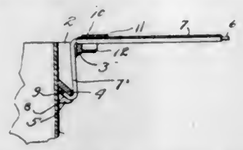
3. A combination switch lock comprising a casing, a double-throw switch arm mounted therein, contact plates over which the switch arm may be turned, said switch arm having a forwardly projecting pin, an auxiliary switch lever slidably mounted in the casing, and having an elongated slot adapted to receive the forwardly projecting pin on the double-throw switch arm, an arm pivotally suspended from the auxiliary lever, a bolt projecting transversely from said arm, a spindle rotatably mounted in said casing, and slotted tumblers rotatably mounted in the casing and controlled by said spindle, whereby the bolt may be brought into the slots when in register and permit the auxiliary lever to be swung to move the double-throw lever into contact with a battery or magneto circuit.

4. A combination switch lock comprising a casing, a back plate, three posts mounted in said back plate, contact plates connected with two of said posts, a contact lever arm mounted in the casing and adapted to be swung from one contact plate to the other, said arm having a forwardly projecting pin, a back plate having forwardly projecting upper and lower lugs, the upper lug having a hooked end and the lower lug having a slot therethrough, an auxiliary switch lever slidably mounted in the casing having rearwardly projecting hooks adapted to engage the aforesaid upper and lower lugs and provided with an elongated slot to receive the pin on the arm of the throw lever, when in on position, an arm pivotally engaging the auxiliary lever, a bolt projecting forwardly from the lower end of said arm, a spindle rotatably mounted in the casing at the front thereof, rotatable tumblers within the casing controlled by said spindle, said tumblers having slots adapted to be brought into alinement, whereby the bolt may be moved into said slots and permit the auxiliary switch lever to be slid vertically, and swung to the right or left to cause the double-throw lever to contact with the battery or magneto circuit.

1,189,957. DETACHABLE POT-HANDLE. JOHN M. JEWELL, New York, N. Y. Filed June 25, 1914. Serial No. 847,281. (Cl. 53—8.)

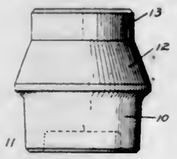
1. The combination with a utensil having outwardly extending spaced ears on the side thereof, a cross bar secured to the outer edges of the said ears adjacent the upper ends thereof, and a second cross bar secured between the ears at the lower ends thereof and extended downwardly and outwardly from the utensil, of a handle detachably secured to the said utensil, said handle com-

prising a web, arms extending downwardly therefrom and hook shaped portions on the lower ends of said arms, the arms being arranged to bear against the inner face of the upper cross bar and the hook shaped portion to engage beneath the lower cross bar, the portions connecting the web of the handle and the arms being curved whereby when the outer end of the handle is lifted it will move about the hook shaped portion as a pivot until the curved portion engages the face of the utensil at which time further movement of the handle will cause the disengagement of the hook shaped portion from the lower cross bar.



2. The combination with a utensil having outwardly extending spaced ears on the side thereof, a cross bar extending between the outer edges at the upper ends thereof, a second cross bar extending between the ears at lower ends thereof, of a handle detachably secured to the said utensil, the said handle including a web, wires for supporting the same arranged to bear against the uppermost cross bar, hook shaped portions engaging beneath the lowermost cross bar, and means for maintaining the handle in its operative position, the web supporting wires being so bent as to bear against the utensil and cause the disengagement of the hook shaped portion from the adjacent cross bar upon the release of the aforementioned means and the raising of the end of the web.

1,189,958. FORGED BLANK FOR FUSE-BODIES. CHARLES H. JOCKMUS, Ansonia, Conn. Filed Feb. 3, 1916. Serial No. 76,016. (Cl. 29—48.)



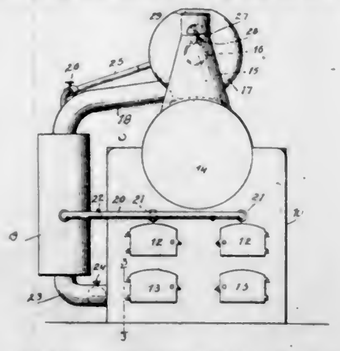
1. A blank for a fuse body forged with a shank at one end, and a head having a portion in the form of a truncated cone, the base of which is of greater diameter than that of the shank, said head also having a chuck-engaging portion, the base of which coincides with the top of said truncated cone portion.

2. A blank for a fuse body forged with a shank at one end, and a head having a portion in the form of a truncated cone, the base of which is of greater diameter than that of the shank, said head also having an approximately cylindrical chuck engaging portion, the base of which coincides with the top of said truncated cone portion.

3. The method of producing fuse bodies which comprises forging a blank with a shank at one end and a cone-shaped head provided with a chuck-engaging portion, providing the blank with the necessary bores, apertures, and threads, and finally shaping the chuck-engaging portion to conform to the taper of said head.

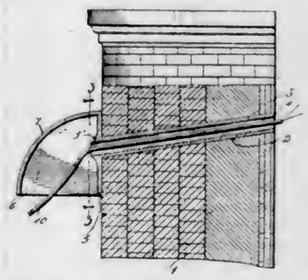
1,189,959. SMOKE-CONSUMER. CHARLES W. JOHNS, Jerseyville, Ill. Filed Feb. 17, 1913. Serial No. 748,964. (Cl. 110—49.)

In a device of the character described comprising a furnace having a boiler, fire-box and ashpit, a smoke stack mounted on said boiler, a blower mounted on said boiler and connected to said smoke stack, an outwardly and downwardly extending pipe connected to said blower, a tank secured to said pipe, means for conducting smoke from the tank to the ash pit, means for cutting off smoke from said ash pit, said furnace provided with openings into the fire-box, a second pipe connected to said tank and provided with branch pipes adapted to extend into said openings, semi-circular spreader plates hinged to the interior of the fire-box and adapted to overhang said openings, said furnace provided with a second lot of openings



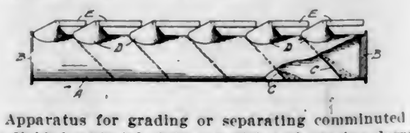
adjacent said first mentioned openings, rods pivotally secured to said plates and extending through said last mentioned openings, teeth formed on said rods to engage shoulders formed in last mentioned openings, providing means to adjustably support and regulate the angle of the plates in relation to said first mentioned openings for spreading the smoke over a fire in the fire-box and means for conducting steam to the tank.

1,189,960. INSULATING-BUSHING. JOHN B. JOHNSON, Laurel, S. D. Filed Apr. 30, 1914. Serial No. 835,517. (Cl. 173—311.)



An insulating bushing comprising a tube, a hood formed integral upon the outer end of said tube and open at the bottom, said hood provided with a rear wall extending vertically upward from said open bottom having a thickened curve portion adjacent the outer end of said tube, said thickened curved portion terminating evenly with the outer end of said tube.

1,189,961. APPARATUS FOR GRADING AND QUANTITATIVELY DETERMINING COMMINUTED MATERIALS. NATHAN C. JOHNSON, Englewood, N. J., assignor to Concrete Appliances Company Inc., New York, N. Y., a Corporation of New York. Filed May 5, 1915. Serial No. 26,147. (Cl. 83—56.)



1. Apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees

of fineness, comprising a receptacle for the material to be treated having extending obliquely across it a plurality of approximately parallel screens of progressively decreasing fineness of aperture.

2. Apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a receptacle adapted for containing a mixture of comminuted material and liquid, said receptacle having extending obliquely across it a plurality of screens of progressively decreasing fineness of aperture.

3. An apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a tubular container closed at one end and provided at its other end with a removable closure, whereby material may be introduced into the container, and a plurality of screens of progressively decreasing size of aperture extending obliquely across said container.

4. An apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a receptacle for the material to be treated having extending completely across it a plurality of partitions, each comprising a screen, these screens being of progressively decreasing fineness of aperture, and a plurality of branch containers leading from said receptacle at points intermediate the partitions thereon, such branch containers adapted for containing the material of the several grades into which the initial mixture is divided by the partitions.

5. An apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a receptacle for the material to be treated having extending across it a plurality of partitions, each comprising a screen, these screens being of progressively decreasing fineness of aperture, and a plurality of branch containers leading from said receptacle at points intermediate the partitions therein, such branch containers adapted for containing the several quantities into which the initial mixture is divided by the screens and having transparent portions through which the quantities of the materials in such branch containers may be observed.

[Claims 6 to 8 not printed in the Gazette.]

1,189,962. CIGAR-HOLDER. XAVIER J. JOLLER, Chicago, Ill. Filed Nov. 3, 1913. Serial No. 798,897. (Cl. 131—51.)



1. A device of the kind described comprising a tubular casing open at one end; a cap on the open end of said casing; an ash tray in said casing at the lower end thereof; and a handle on said ash tray and engaging said cap preventing movement of said ash tray, substantially as described.

2. A device of the kind described comprising a tubular casing open at one end; a cap on the open end of said casing; an ash tray in said casing at the lower end thereof; a handle on said ash tray and engaging said cap preventing movement of said ash tray; and a guide struck up from said casing and engaging said handle preventing lateral movement of the latter, substantially as described.

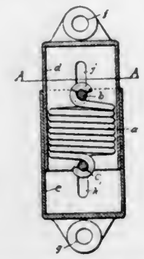
3. A device of the kind described comprising a tubular casing open at one end and a notch therein adjacent said open end; a handle extending longitudinally in said casing with a bent end engaging said notch; an ash tray at the lower end of said handle; and a cap on said open end engaging said handle maintaining the latter in said notch and said ash tray at the bottom of said casing, substantially as described.

4. A device of the kind described comprising a tubular casing open at one end and a notch therein adjacent said open end; a handle extending longitudinally in said casing with its upper end bent and extending laterally through said notch out of said casing; an ash tray at the lower end of said casing and secured to the lower end of said handle; a guide struck up from the wall of said casing and engaging said handle; and a cap on said casing locking the bent end of said handle in said notch, substantially as described.

5. A device of the kind described comprising a hollow casing open at one end; a tray slidably mounted in said casing; and a handle for moving said tray in said casing, substantially as described.

[Claim 6 not printed in the Gazette.]

1,189,963. YIELDING UNIT. CHARLES W. JONES, Arlington, Mass. Filed Feb. 4, 1915. Serial No. 6,189. (Cl. 267—15.)



1. An elastic connecting device between two bodies, comprising members slidable longitudinally with relation to each other and having means of connection to said bodies, a yielding medium, and connections at the opposite ends of the yielding medium between said yielding medium and each of the sliding members, whereby the yielding medium will be lengthened by a movement of the sliding members in either direction.

2. An elastic connecting device between two bodies, comprising members slidable longitudinally with relation to each other and having means of connection to said bodies, an extention spring, and connections at the opposite ends of the spring between said spring and each of the sliding members, whereby tension will be applied to the spring by a movement of the sliding members in either direction.

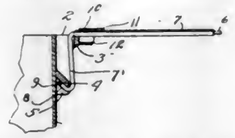
3. An elastic connecting device between two bodies, comprising slotted members slidable longitudinally with relation to each other and having means of connection to said bodies, a yielding medium, and a bar at each end of the yielding medium, each bar passing through the slotted perforation in one of the sliding members and engaged by the end of the other sliding member, whereby the yielding medium will be lengthened by a movement of the sliding members in either direction.

4. An elastic connecting device between two bodies, comprising two slotted tubular members slidable one within the other and forming a tubular casing, each member having means of connection to said bodies, a yielding medium within the tubular casing and a bar at each end of the yielding medium, each bar passing through the slotted perforations in one of the sliding members and engaged by the end of the other sliding member, whereby the yielding medium will be lengthened by a movement of the sliding members in either direction.

1,189,964. STREET-CAR BRAKE AND FENDER. OLIVER A. KALBFUS, Baltimore, Md. Filed Dec. 22, 1915. Serial No. 68,110. (Cl. 105—250.)

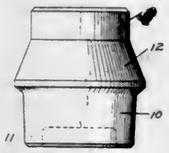
1. The combination with a car of a loop bar at each side of the car and extending longitudinally thereof; a brake head slidable on each of said loop-bars; a spring attached to each brake-head to draw it backward; a brake-shoe suspended by a swinging link from each slidable

prising a web, arms extending downwardly therefrom and hook shaped portions on the lower ends of said arms, the arms being arranged to bear against the inner face of the upper cross bar and the hook shaped portion to engage beneath the lower cross bar, the portions connecting the web of the handle and the arms being curved whereby when the outer end of the handle is lifted it will move about the hook shaped portion as a pivot until the curved portion engages the face of the utensil at which time further movement of the handle will cause the disengagement of the hook shaped portion from the lower cross bar.



2. The combination with a utensil having outwardly extending spaced ears on the side thereof, a cross bar extending between the outer edges at the upper ends thereof, a second cross bar extending between the ears at lower ends thereof, of a handle detachably secured to the said utensil, the said handle including a web, wires for supporting the same arranged to bear against the uppermost cross bar, hook shaped portions engaging beneath the lowermost cross bar, and means for maintaining the handle in its operative position, the web supporting wires being so bent as to bear against the utensil and cause the disengagement of the hook shaped portion from the adjacent cross bar upon the release of the aforementioned means and the raising of the end of the web.

1,189,958. FORGED BLANK FOR FUSE-BODIES. CHARLES H. JOCKMUS, Ansonia, Conn. Filed Feb. 3, 1916. Serial No. 76,016. (Cl. 29—48.)



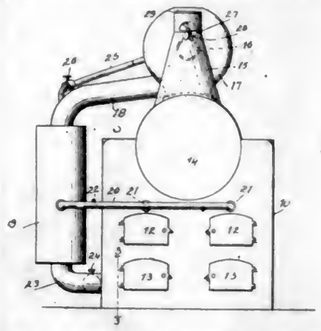
1. A blank for a fuse body forged with a shank at one end, and a head having a portion in the form of a truncated cone, the base of which is of greater diameter than that of the shank, said head also having a chuck-engaging portion, the base of which coincides with the top of said truncated cone portion.

2. A blank for a fuse body forged with a shank at one end, and a head having a portion in the form of a truncated cone, the base of which is of greater diameter than that of the shank, said head also having an approximately cylindrical chuck engaging portion, the base of which coincides with the top of said truncated cone portion.

3. The method of producing fuse bodies which comprises forging a blank with a shank at one end and a cone-shaped head provided with a chuck-engaging portion, providing the blank with the necessary bores, apertures, and threads, and finally shaping the chuck-engaging portion to conform to the taper of said head.

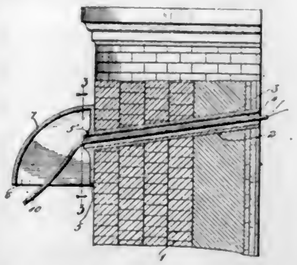
1,189,959. SMOKE-CONSUMER. CHARLES W. JOHNS, Jerseyville, Ill. Filed Feb. 17, 1913. Serial No. 748,964. (Cl. 110—49.)

In a device of the character described comprising a furnace having a boiler, fire-box and ashpit, a smoke stack mounted on said boiler, a blower mounted on said boiler and connected to said smoke stack, an outwardly and downwardly extending pipe connected to said blower, a tank secured to said pipe, means for conducting smoke from the tank to the ash pit, means for cutting off smoke from said ash pit, said furnace provided with openings into the fire-box, a second pipe connected to said tank and provided with branch pipes adapted to extend into said openings, semi-circular spreader plates hinged to the interior of the fire-box and adapted to overhang said openings, said furnace provided with a second lot of openings



adjacent said first mentioned openings, rods pivotally secured to said plates and extending through said last mentioned openings, teeth formed on said rods to engage shoulders formed in last mentioned openings, providing means to adjustably support and regulate the angle of the plates in relation to said first mentioned openings for spreading the smoke over a fire in the fire-box and means for conducting steam to the tank.

1,189,960. INSULATING-BUSHING. JOHN B. JOHNSON, Laurel, S. D. Filed Apr. 30, 1914. Serial No. 835,517. (Cl. 173—311.)



An insulating bushing comprising a tube, a hood formed integral upon the outer end of said tube and open at the bottom, said hood provided with a rear wall extending vertically upward from said open bottom having a thickened curve portion adjacent the outer end of said tube, said thickened curved portion terminating evenly with the outer end of said tube.

1,189,961. APPARATUS FOR GRADING AND QUANTITATIVELY DETERMINING COMMINUTED MATERIALS. NATHAN C. JOHNSON, Englewood, N. J., assignor to Concrete Appliances Company Inc., New York, N. Y., a Corporation of New York. Filed May 5, 1915. Serial No. 26,147. (Cl. 83—56.)



1. Apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a receptacle for the material to be treated having extending obliquely across it a plurality of approximately parallel screens of progressively decreasing fineness of aperture.

2. Apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a receptacle adapted for containing a mixture of comminuted material and liquid, said receptacle having extending obliquely across it a plurality of screens of progressively decreasing fineness of aperture.

3. An apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a tubular container closed at one end and provided at its other end with a removable closure, whereby material may be introduced into the container, and a plurality of screens of progressively decreasing size of aperture extending obliquely across said container.

4. An apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a receptacle for the material to be treated having extending completely across it a plurality of partitions, each comprising a screen, these screens being of progressively decreasing fineness of aperture, and a plurality of branch containers leading from said receptacle at points intermediate the partitions thereon, such branch containers adapted for containing the material of the several grades into which the initial mixture is divided by the partitions.

5. An apparatus for grading or separating comminuted or finely-divided materials into quantities of varying degrees of fineness, comprising a receptacle for the material to be treated having extending across it a plurality of partitions, each comprising a screen, these screens being of progressively decreasing fineness of aperture, and a plurality of branch containers leading from said receptacle at points intermediate the partitions therein, such branch containers adapted for containing the several quantities into which the initial mixture is divided by the screens and having transparent portions through which the quantities of the materials in such branch containers may be observed.

[Claims 6 to 8 not printed in the Gazette.]

1,189,962. CIGAR-HOLDER. XAVIER J. JOLLER, Chicago, Ill. Filed Nov. 3, 1913. Serial No. 798,897. (Cl. 131—51.)



1. A device of the kind described comprising a tubular casing open at one end; a cap on the open end of said casing; an ash tray in said casing at the lower end thereof; and a handle on said ash tray and engaging said cap preventing movement of said ash tray, substantially as described.

2. A device of the kind described comprising a tubular casing open at one end; a cap on the open end of said casing; an ash tray in said casing at the lower end thereof; a handle on said ash tray and engaging said cap preventing movement of said ash tray; and a guide struck up from said casing and engaging said handle preventing lateral movement of the latter, substantially as described.

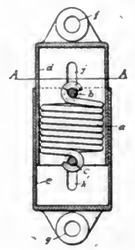
3. A device of the kind described comprising a tubular casing open at one end and a notch therein adjacent said open end; a handle extending longitudinally in said casing with a bent end engaging said notch; an ash tray at the lower end of said handle; and a cap on said open end engaging said handle maintaining the latter in said notch and said ash tray at the bottom of said casing, substantially as described.

4. A device of the kind described comprising a tubular casing open at one end and a notch therein adjacent said open end; a handle extending longitudinally in said casing with its upper end bent and extending laterally through said notch out of said casing; an ash tray at the lower end of said casing and secured to the lower end of said handle; a guide struck up from the wall of said casing and engaging said handle; and a cap on said casing locking the bent end of said handle in said notch, substantially as described.

5. A device of the kind described comprising a hollow casing open at one end; a tray slidably mounted in said casing; and a handle for moving said tray in said casing, substantially as described.

[Claim 6 not printed in the Gazette.]

1,189,963. YIELDING UNIT. CHARLES W. JONES, Arlington, Mass. Filed Feb. 4, 1915. Serial No. 6,189. (Cl. 267—15.)



1. An elastic connecting device between two bodies, comprising members slidable longitudinally with relation to each other and having means of connection to said bodies, a yielding medium, and connections at the opposite ends of the yielding medium between said yielding medium and each of the sliding members, whereby the yielding medium will be lengthened by a movement of the sliding members in either direction.

2. An elastic connecting device between two bodies, comprising members slidable longitudinally with relation to each other and having means of connection to said bodies, an extention spring, and connections at the opposite ends of the spring between said spring and each of the sliding members, whereby tension will be applied to the spring by a movement of the sliding members in either direction.

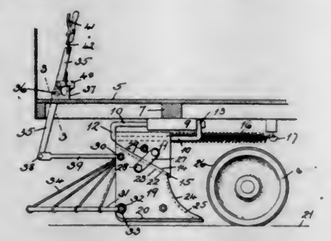
3. An elastic connecting device between two bodies, comprising slotted members slidable longitudinally with relation to each other and having means of connection to said bodies, a yielding medium, and a bar at each end of the yielding medium, each bar passing through the slotted perforation in one of the sliding members and engaged by the end of the other sliding member, whereby the yielding medium will be lengthened by a movement of the sliding members in either direction.

4. An elastic connecting device between two bodies, comprising two slotted tubular members slidable one within the other and forming a tubular casing, each member having means of connection to said bodies, a yielding medium within the tubular casing and a bar at each end of the yielding medium, each bar passing through the slotted perforations in one of the sliding members and engaged by the end of the other sliding member, whereby the yielding medium will be lengthened by a movement of the sliding members in either direction.

1,189,964. STREET-CAR BRAKE AND FENDER. OLIVER A. KALBFUS, Baltimore, Md. Filed Dec. 22, 1915. Serial No. 68,110. (Cl. 105—250.)

1. The combination with a car of a loop bar at each side of the car and extending longitudinally thereof; a brake head slidable on each of said loop-bars; a spring attached to each brake-head to draw it backward; a brake-shoe suspended by a swinging link from each slidable

brake-head, said brake-shoe adapted to lower and contact with the track-rail, and means for releasing the said contact of the brake-shoe.

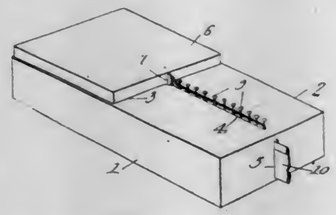


2. The combination with a car of a hanger-beam secured below the car-frame; a loop bar at each side of the car and secured to the end of said hanger-beam; a brake-head slidable on each of said loop-bars; a spring attached to each brake-head to draw it backward; a brake-shoe suspended by a swinging link from each slidable brake-head, said brake-shoe adapted to lower and contact with the track-rail and also swing back and contact with a car-wheel; and means for releasing the said contact of the brake-shoe.

3. The combination with a car of a loop bar at each side of the car; a brake-head slidable on each of said loop-bars said brake-head having an inclined bottom; a spring that normally presses the brake-head to the backward position but yields to allow it to slide forward; a brake-shoe having a top that is inclined to correspond with the inclined bottom of said brake-head and the two inclines contacting, said incline of the brake-shoe being slidable on the incline of the brake-head; a swinging link loosely connecting the brake-shoe with the said brake-head; and means for effecting the operation of the brake to apply or release.

4. The combination with a car of a loop-bar at each side of the car; a brake-head slidable on each of said loop-bars said brake-head having an inclined bottom; a spring that normally presses the brake-head to the backward position; a brake-shoe having a top that is inclined to correspond with the inclined bottom of the brake-head and the two inclines contacting; a swinging link loosely connecting the brake-shoe with the said brake-head; a fender at the front end of the car and attached to the said two brake-shoes and movable therewith; and means operated manually that will effect a movement of both the fender and brake-shoes.

1,189,965. PIN-HOLDER. JAMES KELLEY, Jr., Winsted, Conn. Filed Oct. 19, 1915. Serial No. 56,743. (Cl. 132—27.)



1. A pin holder comprising a box having an upper opening and slot extending from said opening, said box being adapted to hold a strip of pins below said opening so that the strip can be drawn longitudinally below said slot with the projecting ends of the pins projecting through said slot, and a cap fitted within said opening and having a slot complementing the aforesaid slot for the passage of the strip therethrough.

2. A pin holder comprising a box having a compartment for a strip of pins at one end, an upper slot extending from said compartment toward the other end, and a slot in the last mentioned end, said compartment being adapted to hold a strip of pins with the strip extending under the first mentioned slot and through the second mentioned slot, so that the projecting ends of the pins project through the first mentioned slot.

3. A pin holder comprising a box having an upper opening at one end, an upper slot extending from said opening toward the other end, and a slot in the last mentioned end, the box being adapted to hold a strip of pins below said opening with the strip extending under the first mentioned slot and through the second mentioned slot, so that the projecting ends of the pins project through the first mentioned slot, and a cap fitted within said opening and having its top projecting above the top of the box, said cap having a slot complementing the first mentioned slot and projecting above the top of the box.

1,189,966. HOG-SLAUGHTERING APPLIANCE. HENRY M. KELLOGG, Devon, Conn., assignor of one-half to Frederick Le Pan, Devon, Conn. Filed May 12, 1916. Serial No. 97,059. (Cl. 17—30.)

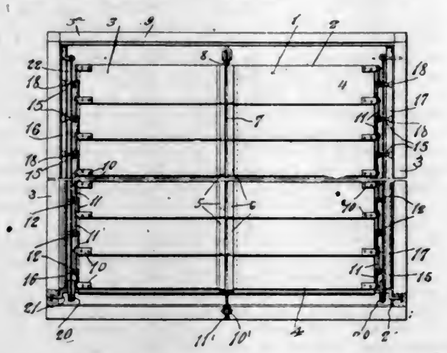


1. An appliance of the character described, comprising a main suspension chain having at its upper end the usual track hook and suspension spur connected to the chain by a swivel, and at its lower end a leg shackle provided at its extremity with the usual tie hook, the upper and lower portions of said chain being connected by an elongated rod whose extremities are linked to said portions, said rod having a rigid stop shoulder, rotatable cross-bars around said rod and above said stop, and a second shackle chain having at its lower end a tie hook and at its upper end a ring encircling said rod.

2. An appliance of the character described, comprising a hoisting chain having intermediate its length an elongated bar provided with a shoulder portion, that part of said chain below said bar constituting one leg shackle having at its lower end a tie hook, rotatable cross bars swiveled around said bar above said shouldered portion and slidable along said rod, and a second leg shackle provided at its lower end with a tie hook and having at its upper end a ring which encircles said bar above said cross bars, the diameter of said ring being such that it cannot pass below said cross bars.

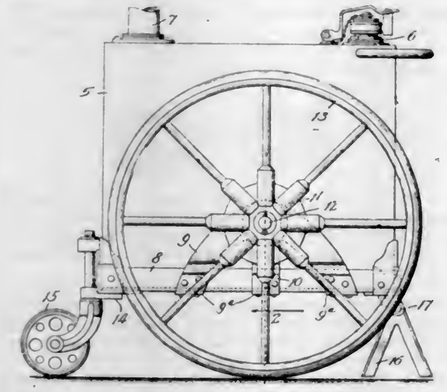
3. An appliance of the character described, comprising a main suspension chain having a tie hook at its lower end, an elongated bar intermediate the length of said chain and forming a part thereof, a rotary cross bar element loose around said rod, the lower portion of said chain below said bar constituting one leg shackle, and a second leg schackle having at its lower end a tie hook and having its upper end loosely connected with said bar above said cross bar element, whereby this last named shackle is capable of free sliding and rotary movements along and about said bar.

1,189,967. CURTAIN. WALTER J. KENNEDY and GEORGE YELLE, Indian Orchard, Mass. Filed June 22, 1914. Serial No. 846,654. (Cl. 156—16.)



In a curtain, a plurality of slats composed of a pair of strips having their meeting ends in over-lapping adjustable engagement with each other, means for varying the angle or disposition of said slats, a plurality of links pivotally connecting the free terminal ends of said slats, means for moving said slats into a folded position for moving said slats into facial proximity with each other, guide pins formed upon said links to prevent the accidental dislodgment of said slats.

1,189,968. GASOLENE-STORAGE TANK. LOUIS KESSLER, Chicago, Ill. Filed Sept. 24, 1914. Serial No. 863,284. (Cl. 21—119.)

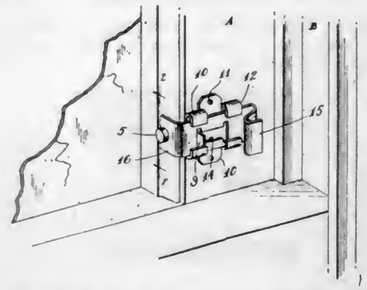


In combination, a gasolene-tank, and a wheeled underframe formed of a frame composed of angle-bars, within which the tank seats, journal-carrying members and central trusses having feet projecting beneath and riveted to the frame-sides to rise on opposite sides of the frame at the tank-sides, bosses on and integral with said members and trusses at their junction, and journals for the wheels extending from the bosses.

1,189,969. WINDOW-FASTENER. GORDON KIMBALL, Ouray, Colo. Filed Apr. 3, 1916. Serial No. 88,601. (Cl. 16—119.)

1. The combination with the side rail of a window sash having an aperture extending transversely therethrough; of a bolt slidable in said aperture, a member slidably mounted on the inner face of said rail and having a tongue extending laterally therefrom, said tongue being connected to the rear end of said bolt.

2. The combination with the side rail of a window sash having an aperture extending transversely therethrough; of a bolt slidable in said aperture and having notches in its rear end, a member slidably mounted on the inner face of said rail and having a tongue extending laterally therefrom, the free end of said tongue being bifurcated and engaging the notches in the rear end of said bolt.



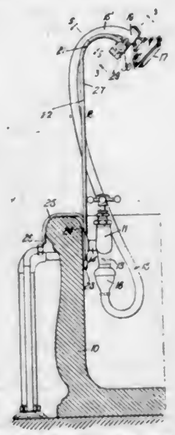
3. The combination with the side rail of a window sash having an aperture extending transversely therethrough; of a bolt slidable in said aperture, a guide member fixed to the inner face of said rail, a plate slidable in said member and having a tongue extending laterally from the inner end thereof, said tongue being engaged with said bolt.

4. The combination with the side rail of a window sash having an aperture extending therethrough; of a bolt slidable in said aperture, a plate fixed to the inner face of said rail, the edges of said plate being bent upon themselves to form guides, a second plate slidable in said guides and having a tongue extending laterally from the inner end thereof, and in engagement with said bolt.

5. The combination with the side rail of a window sash having an aperture extending transversely therethrough; of a spring pressed bolt slidable in said aperture, a guide member fixed to the inner face of said rail, a plate slidable longitudinally and transversely in said member and having a tongue extending laterally from the inner end thereof, said tongue being engaged with said bolt, said plate being provided with an I-shaped slot, and a lug extending through said slot for locking said plate against longitudinal movement.

[Claims 6 to 9 not printed in the Gazette.]

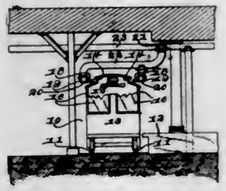
1,189,970. BATH-SPRAY SUPPORT. MAX KLINE, New York, N. Y. Filed Feb. 17, 1916. Serial No. 78,893. (Cl. 248—29.)



In a bath spray support, the combination of a bracket constituting one main portion, said bracket comprising means for securing the same upon a bathtub and bent at its upper end into a goose neck constituting a hose sup-

port, said goose neck comprising two curved portions of the support spaced slightly less than the diameter of the hose along which the curved portion of the hose lies as in a cradle, a hose supporting clip, and means connecting the clip directly to the end of the goose neck.

1,189,971. VENTILATING SYSTEM. ROBERT KLOTZ, New York, N. Y. Filed July 24, 1915. Serial No. 41,701. (Cl. 98—23.)



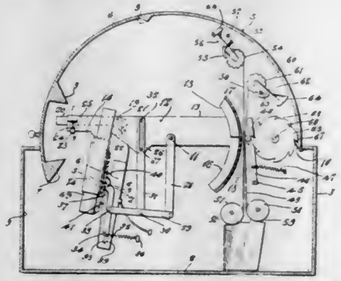
1. As an improved system of ventilation, the combination with a tunnel or subway, and a car movable therethrough, of distributing ducts located on opposite sides of the course traveled by said car, and means for forcing air from said ducts into the car while the car is located between the ducts.

2. As an improved system of ventilation, the combination with a tunnel or subway, and a car movable therethrough and provided with ventilating openings, of distributing ducts located on opposite sides of the course traveled by said car and provided with nozzles arranged to discharge into said ventilating openings, and means for forcing air through said ducts.

3. As an improved system of ventilation, the combination with a tunnel or subway, and a car movable therethrough provided with ventilating openings near the roof thereof, of distributing ducts located on opposite sides of the course traveled by said car and provided with means for discharging air into said ventilating openings, means for forcing air through said ducts, and fans located in said car near the roof thereof.

4. As an improved system of ventilation, the combination with a tunnel or subway, and a car movable therethrough and provided with ventilating funnels, of distributing ducts located on opposite sides of the course traveled by said car and provided with means for discharging air into said funnels, and means for forcing air through said ducts.

1,189,972. COIN-RECORDER. SAMUEL G. KNIGHT, Randall, Minn. Filed Aug. 24, 1915. Serial No. 47,177. (Cl. 133—1.)



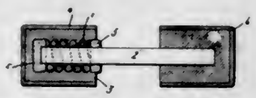
1. A device of the character described including a pivoted cover, an arm movable on the pivot of the cover, a lug on the cover to engage the arm to swing the same to a vertical position, a coin carriage beneath the cover, a weight on the arm to cause the same to swing downwardly against the coin carriage and normally remain in a horizontal position, the arm being inclined when a coin is placed on the coin carriage and means to record the number of coins placed on the coin carriage and removed therefrom.

2. A recorder of the character described including a casing, a cover pivoted to the casing, an arm pivoted within the casing, means carried by the cover to swing the arm upon movement of the cover, a coin carriage, an extension on the arm engaging the upper end of the coin carriage, the said arm being normally in a horizontal position and being inclined upwardly or downwardly upon the placing or removal of a coin with relation to the coin carriage, means to lower the coin carriage upon the positioning of a coin thereon, means for raising the coin carriage upon the removal of a coin therefrom and means for recording the number of coins on or removed from the coin carriage.

3. A device of the character described including a vertically movable coin carriage, an arm normally raised on said coin carriage, means to swing the arm into a vertical position, the arm being inclined upon the positioning of a coin or upon the removal of a coin from the coin carriage, and means to record the number of coins placed upon or removed from the coin carriage, means to raise the coin carriage upon the removal of a coin therefrom and to lower the same upon the placing of a coin thereon.

4. A recorder of the character described including a coin carriage, a horizontal pivoted arm, type bars carried by the arm, a coin carriage, coins on the coin carriage, the arm being inclined upon the positioning of additional coins on the coin carriage or upon the removal of coins from the carriage to incline the arm and remove the type bars into operative position, means to take an impression from the type bars to make a record of the number of coins placed on or removed from the coin carriage.

1,189,973. ELECTRICAL CUT-OUT. ERNEST KRAUS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 28, 1914. Serial No. 874,422. (Cl. 175—276.)



1. An electrical cut-out comprising, a helix consisting largely of boron, a rod of conductive material making electrical contact with the inner surface of said helix and means for electrically contacting with the outer surface of said helix.

2. An electrical cut-out, comprising a body of conductive material, a filamentary body consisting largely of boron coiled about said body, and a mass of conductive material surrounding and rigidly binding said boron body but out of electrical contact with said core.

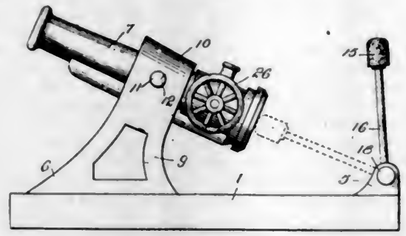
3. As an article of manufacture, a helical conductor having a coating of boron, a rod of conductive material contacting with the inner surface of said helix, and a mass of metal surrounding the outer surface of said helix.

4. An electrical cut-out comprising a filament having a relatively fine core of conductive material and a deposit of boron thereon, electrical terminals extending lengthwise said filament on opposite sides of the outer surface of said boron deposit, and means for maintaining said terminals spaced and out of contact with each other.

1,189,974. TOY GUN. THOMAS C. LACKLAND, Norfolk, Va. Filed Aug. 31, 1915. Serial No. 48,288. (Cl. 124—8.)

1. In a toy comprising a gun, movable on its mount, and an ejector secured to said mount and extending into the breech end of said gun whereby upon movement of the gun the projectile will be ejected.

2. In a toy comprising a gun slidably arranged upon its mount, and an ejector secured to said mount and extending into the breech end of said gun whereby upon movement of the gun the projectile will be ejected.



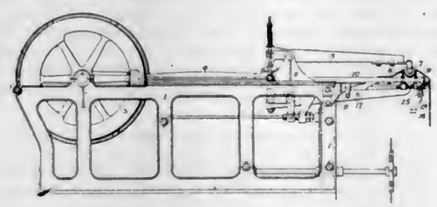
3. In a toy comprising a gun slidably arranged upon its mount, and an ejector secured to said mount rearwardly of said gun and extending into the breech end thereof whereby upon rearward movement of the gun the projectile will be ejected.

4. In a toy comprising a gun slidably arranged upon its mount, and an ejector pivotally secured to said mount rearwardly of said gun and extending into the breech end of said gun whereby upon movement of the gun the projectile will be ejected.

5. In a toy comprising a gun slidably arranged upon its mount, and an ejector mounted for movement toward or away from said mount and adapted to extend into the breech end of said gun when in active position.

[Claims 6 to 12 not printed in the Gazette.]

1,189,975. LEATHER-STAKING MACHINE. ALFRED C. LAYMAN, Wilmington, Del. Original application filed Mar. 11, 1911, Serial No. 613,692. Divided and this application filed Oct. 2, 1912. Serial No. 723,537. (Cl. 149—20.)



1. In a leather staking machine, the combination of staking devices, a frame, a supplemental table detachably connected to said frame and longitudinally adjustable with respect to the same, and clamping means carried by said frame for securing said table in its adjusted positions.

2. In a leather staking machine, the combination of staking devices, a frame, brackets fixed to said frame, a two-part supplemental table supported by said brackets and longitudinally adjustable with respect to the frame, and clamping means carried by said brackets for securing the table in its adjusted positions.

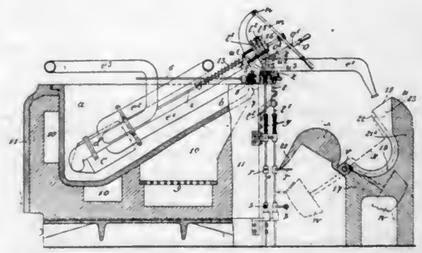
3. In a leather staking machine, a frame, a supplemental table, a bracket fixed to the frame to removably support said supplemental table, the latter having a groove, and clamping means adapted to the groove of said supplemental table carried by said bracket.

4. In a leather staking machine, a frame, a supplemental table having a groove with a flaring end, a bracket carried by the frame to removably support said supplemental table, and clamping means for said supplemental table carried by said bracket comprising a dovetailed member fitting the groove, a clamping screw, and a spring for releasing said member when the screw is backed off.

5. In a leather staking machine, a frame, supplemental tables carried at the forward end of said frame, means for adjustably holding said tables longitudinally with respect to said frame, and a connecting member for the forward end of said supplemental tables.

[Claims 6 and 7 not printed in the Gazette.]

1,189,976. CASTING-MACHINE. ADOLF LEINWEBER, Munich, Germany. Filed Nov. 19, 1912. Serial No. 732,289. (Cl. 22—2.)



1. In a casting machine provided with a hand pump in combination, a melting pot within which said pump is arranged, a plurality of molds adapted to be charged with the molten metal from said melting pot, distributing pipes connected to said pump, means for distributing the molten metal into said pipes for discharging it into said molds, means between said pipes and the distributing means for operating the distributing pipes in harmony with the opening and closing of the corresponding molds, and means for actuating said operating means upon the introduction of a core into a mold, substantially as described.

2. In a casting machine provided with a hand pump, in combination, a melting pot within which said pump is arranged, a plurality of molds adapted to be charged with the molten metal from said melting pot, a distributer for said metal connected to the sides of said pump, distributing pipes connected to said pump into which said metal is distributed, a rotary slide between said distributer and said pipes, means for operating said slide to distribute the metal from said distributer into said pipes in harmony with the opening of said molds, substantially as described.

3. In a casting machine provided with a hand pump, in combination, a melting pot adapted to receive said pump, a plurality of molds in juxtaposition to said pot, adapted to be charged with the molten metal from the same, distributers laterally arranged upon said pump, distributing pipes connected with said pump into which said metal is distributed, a rotary slide provided with an opening and arranged between said distributers and said pipes, means for operating said slide to close said distributing pipes, means for operating said slide for distributing the metal from said distributers into said pipes, a counter-balanced core within each of said molds for operating said slide operating means upon the introduction of said core for distributing the molten metal into one of said pipes and into said mold, substantially as described.

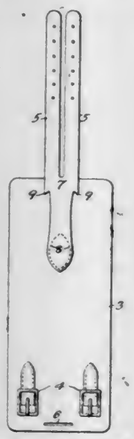
4. In a casting machine provided with a hand pump within the melting pot thereof, a plurality of molds in juxtaposition to said pot adapted to be charged successively with the metal from said pot, distributing means for distributing the charge contained in said pot, comprising distributers and distributing pipes, a rotary slide provided with an opening arranged between said distributers and said pipes, a rotary rod connected to said slide, rack gears and a system of levers for rotating said rod, means for operating said levers upon the operation of a core for adjusting the opening of said rotary slides to communicate with one of the distributing pipes, means for locking said rod in this position, and means for releasing said rod for dropping said slide into its position for locking said distributing pipes, substantially as described.

5. In a casting machine of the character described a melting pot, a hand operated pump within said pot, dis-

tributers radially disposed to said pump, distributing pipes connected to said pump, a rotary slide provided with an opening and arranged between said distributers and said pipes, molds in juxtaposition to said pot, means for rotating said slide upon the operation of the core of one of said molds for forming a communication between the distributer, one of the distributing pipes and said mold, means for locking said slide in this position, and means for returning said slide into its position interrupting the communication between said distributing pipes and said distributers at the end of the charging period for said molds, substantially as described.

[Claim 6 not printed in the Gazette.]

1,189,977. WRIST-STRAP. ELMER GEORGE LEWIS, Coffeyville, Kans. Filed Jan. 20, 1916. Serial No. 73,266. (128—3.)



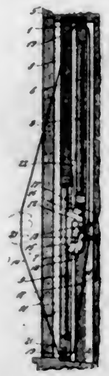
1. A wrist support, comprising a band, provided with a slot adjacent one end, a strap adjacent the other end of a width exceeding the length of said slot and provided with a portion of a width less than the length of said slot to form shoulders adapted to engage said band to lock the same to a wrist, and a buckle for said strap for adjusting the tension of said band.

2. A wrist support, comprising a band provided with a slot adjacent one end, a strap adjacent the other end of less width at its inner end than at its outer end to form shoulders engaging said band in the position of said slot to lock said band around a wrist, said strap being divided into two members, and a buckle for each member of said strap at the slotted end of said band, said slot being of a length less than the width of the divided portion of said strap.

1,189,978. WINDOW-WASHER. CHARLES D. LYON, University City, Mo. Filed Sept. 30, 1915. Serial No. 53,257. (Cl. 15—59.)

1. In a device of the character described, the combination with the upper and lower sash of a window of a flexible member adapted to be looped around said sash, a rubbing member carried by said flexible member, a substantially U-shaped member adapted to lie against the end of the sash, teeth carried by the said last-named member, the last-named member being held in position by the tension of the flexible member.

2. In a device of the character described, the combination with the upper and lower sash of a window of a flexible member adapted to be looped around said sash, a rubbing member carried by said flexible member, a substantially U-shaped member adapted to lie against the end rail of said sash, and teeth carried by the ends of said U-shaped member, said teeth being adapted to bite into the end rail of said sash under the tension of said flexible member.

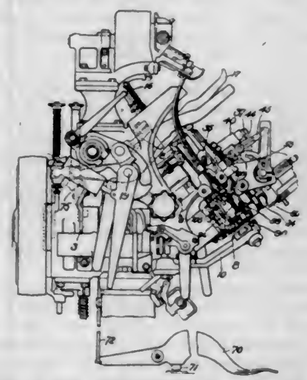


3. In a device of the character described, the combination with the upper and lower sash of a window of a flexible member adapted to be looped around said sash, a rubbing member carried by said flexible member, a substantially U-shaped member adapted to lie against the end rail of the sash, said U-shaped member being adjustable longitudinally in order to fit sash of different widths.

4. In a device of the character described, the combination with the upper and lower sash of a window of a flexible member adapted to be looped around said sash, a rubbing member carried by said flexible member, and a substantially U-shaped member adapted to lie against the end rail of the sash and being formed of two pieces, one of which is adapted to slide reciprocally within the other.

5. In a device of the character described, the combination with the upper and lower sash of a window of a flexible member adapted to be looped around said sash, a rubbing member carried by said flexible member, a substantially U-shaped member adapted to lie against the end rail of the sash and being formed of two tubular sections and adapted to slide one within the other, said sections being solid at their outer ends, and teeth carried by the said ends of said sections.

1,189,979. MACHINE FOR WORKING UPPERS OVER LASTS. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 20, 1912. Serial No. 710,669. (Cl. 12—4.)



1. A machine of the class described having, in combination, two pairs of gripper jaws arranged to engage the upper at each corner of the toe and actuating mechanism

therefor arranged to impart to the corner grippers a combined outdrawing and updrawing movement.

2. A machine for working the toe portion of an upper into lasted position having, in combination, a last bottom rest, grippers separate from each other and spaced apart a substantial distance to engage the upper at each of the corners of the toe, mechanism to close the grippers and to move the grippers and the last rest relatively to pull up the upper at the corners of the toe, wipers constructed and arranged to embrace the toe and to overwipe the upper while it is held under tension by the corner grippers, mechanism for operating the wipers, and additional mechanism for relatively moving the grippers and the last to outdraw the corners of the toe portion of the upper for avoiding formation of wrinkles during the operation of the wipers.

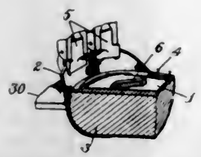
3. A machine for working an upper over a last having, in combination, means for engaging the shoe bottom, two pairs of gripper jaws arranged to engage the upper at the two corners of the toe, and operating mechanism organized to effect relative movements of the shoe last and said gripper jaws to updraw the upper at the corners of the toe and to outdraw it in diverging directions inclined forwardly.

4. A machine for working the toe portion of an upper into lasted position having, in combination, a last bottom rest, grippers arranged to engage the upper at each of the corners of the toe, means for closing the grippers, toe embracing wipers, means for operating the wipers, and means for imparting to the corner grippers a pulling movement obliquely outwardly in diverging directions for outdrawing the corners of the toe portion of the upper, said grippers being mounted to permit them to have, while they are outdrawing, a turning movement about axes which are substantially perpendicular to the plane of the last bottom.

5. A machine for working the toe portion of an upper into lasted position having, in combination, a last bottom rest, toe embracing wipers, grippers which are arranged for pulling the upper at each corner of the toe of the last and are turned during the upper pulling operation about separate axes which are substantially perpendicular to the plane of the last bottom to spread the toe of the upper for the operation of the wipers, and operating mechanism to effect the pulling and the spreading of the upper.

[Claims 6 to 98 not printed in the Gazette.]

1,189,980. METHOD OF WORKING UPPERS OVER LASTS. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed July 30, 1912, Serial No. 710,669. Divided and this application filed Dec. 11, 1915. Serial No. 66,319. (Cl. 12—145.)



1. That improvement in methods of making shoes which consists in assembling an upper on a last, independently gripping the toe portion of the upper at more than two points, including points at the two corners of the toe, relatively moving the gripped portions and the last to draw the gripped portions of the upper from the corners of the toe of the last forwardly and outwardly in diverging directions to spread the toe of the upper and produce a forwardly tensioned and unwrinkled condition of the upper from one side of the toe around the end and corners of the toe to its other side and then maintaining the upper under outdrawing tension in the specified directions while wiping the upper inwardly over the margin of the last bottom around the toe.

2. That improvement in methods of making shoes which consists in assembling an upper on a last, gripping the toe portion of the upper at a plurality of points including the corners of the toe, relatively moving the gripped portions and the last to updraw the upper from the corners of the toe simultaneously in forwardly and outwardly diverging directions to spread the toe of the upper and prepare it in unwrinkled condition for lasting around the toe of the last, and then wiping the upper inwardly between the corner gripping means and the margin of the last bottom while moving the gripping means inwardly at a rate to maintain the upper under tension across the wipers at the corners of the toe while being wiped into lasted position.

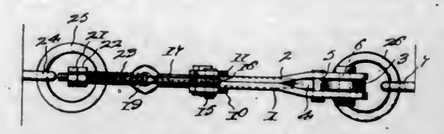
3. That improvement in methods of making shoes which consists in seizing an upper at the corners of the toe and pulling it in directions to updraw it and outdraw it to spread the toe of the upper, embracing the shoe around the toe on a substantially continuous line and holding the upper spread and outdrawn upwardly across the edge of the embracing means while wiping the upper inwardly over the bottom of the toe and simultaneously giving up the stock as the upper is wiped in.

4. That improvement in methods of making shoes which consists in seizing an upper at the corners of the toe and pulling it in directions to spread the toe of the upper, embracing the shoe around the toe on a substantially continuous line, wiping the upper upwardly to the edge of the toe and then inwardly over the bottom of the toe while holding the upper tensioned outwardly and upwardly and moving the holding means inwardly to give up the stock for the wiping-in operation as required to permit the completion of that operation.

5. That improvement in methods of making shoes which consists in seizing an upper at the corners of the toe and tensioning it upwardly and drawing it outwardly in diverging directions to spread the toe portion of the upper, embracing the toe of the shoe below the plane of the last bottom and wiping the toe portion of the upper upwardly to said plane and then inwardly under the spreading means, and moving the seized portions of the upper stock inwardly as required to permit the wiping-in operation to proceed with the upper spread under tension.

[Claims 6 to 10 not printed in the Gazette.]

1,189,981. DRAFT APPLIANCE. AUGUSTA P. MCKAY, Rome, Ga., assignor to McKay Disc Plow Co., Rome, Ga., a Corporation of Georgia. Filed Nov. 5, 1915. Serial No. 59,834. (Cl. 21—75.)

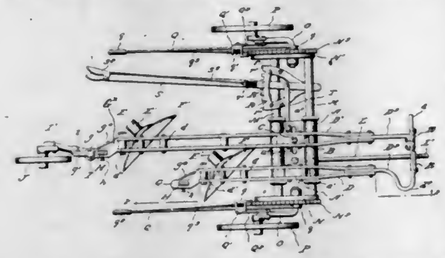


1. An improved draft appliance comprising a frame connected to one vehicle and providing a socket therein, a coupling element having a bill removably fitted in said socket and adapted to swing to release the same, a lever mounted on said frame and provided with a recess therein having a lower inclined face, a pin on said coupling element normally engaging the recess in said lever to hold the former in coupled position, yieldable means for maintaining said lever with the recess engaging said pin, and a connection between said coupling element and the other vehicle for tending to revolve said coupling element and engage the pin with the inclined face of said recess whereby to move the lever in opposition to said yieldable means and release the coupling element, substantially as described.

2. In an improved draft appliance of the character described, the combination of a frame connected to one vehicle and comprising a pair of members disposed parallel and in contact, said members being bent apart at one end to provide a socket, a pair of spaced bolts connecting said bent-apart ends, a coupling element, a bill on said coupling

element engaging the socket in said frame and fitted to swing between said bolts to release the same, a lever comprising a pair of connected members pivoted on said frame and provided with cam recesses therein, a pin on said coupling element engaging said recesses, yieldable means for holding said lever to maintain the pin in said recesses, and a connection between the other vehicle and said coupling element for tending to revolve the latter to disengage said pin and release the appliance, substantially as described.

1,189,982. DISK PLOW. AUGUSTA P. MCKAY, Rome, Ga., assignor to McKay Disc Plow Co., Rome, Ga., a Corporation of Georgia. Original application filed July 7, 1915. Serial No. 38,495. Divided and this application filed Feb. 5, 1916. Serial No. 76,385. (Cl. 97—36.)



1. In an agricultural implement, of the character described, the combination with a main frame provided with cross bars, of a main casting adapted to slide laterally upon said bars, and provided with sleeves engaging said bars, draft beams supported on said main casting, with means carried by said casting for varying the distance between said draft beams, and a tillage implement carried by each draw beam near the rear end thereof, substantially as described.

2. In an agricultural implement of the character described, the combination with a main frame provided with cross bars, of a main casting adapted to slide laterally upon said bars, and provided with sleeves engaging said bars, draft beams supported on said main casting, with means carried by said casting for varying the distance between said draft beams, means for shifting said casting laterally, and a tillage implement carried by each draft beam near the rear end thereof, substantially as described.

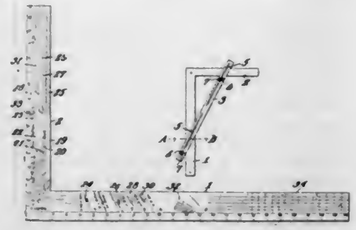
3. In an agricultural implement of the character described, the combination with a main frame provided with cross bars, of a main casting adapted to slide laterally upon said bars, and provided with sleeves engaging said bars, draft beams supported on said main casting, with means carried by said casting for varying the distance between said draft beams, means for shifting said casting laterally comprising a sector secured to said main frame, a shifting lever pivoted to said sector, and provided with a pawl engaging said sector, a link connecting said shifting lever and said casting, and a tillage implement carried by each draft beam near the rear end thereof, substantially as described.

4. In an agricultural implement of the character described, the combination with a main frame provided with cross bars, of a main casting adapted to slide laterally upon said bars, and provided with sleeves engaging said bars, a web connecting said sleeves with a slot therein parallel to said sleeves, and a lug projecting upward from one end of said web, a block slidably mounted on said web between said sleeves, a lamp bolt passing through said block and adapted to clamp same to said web, a draft beam supported by said main casting and secured to said lug, and a second draft beam secured to said slidable block and also supported by said main casting, with means for shifting said main casting transversely of said frame, substantially as described.

5. In an agricultural implement of the character described, the combination with a main frame provided with cross bars, of a main casting adapted to slide laterally upon said bars, and provided with sleeves engaging said bars, a web connecting said sleeves with a slot therein parallel to said sleeves, and a lug projecting upward from one end of said web, a block slidably mounted on said web between said sleeves, a clamp bolt passing through said block and adapted to clamp same to said web, a draft beam supported by said main casting and secured to said lug, and a second draft beam secured to said slidable block and also supported by said main casting, with means for shifting said main casting transversely of said frame, said means comprising a sector secured to said main frame, a shifting lever pivoted to said sector, and provided with a pawl engaging said sector, a link connecting said shifting lever and said casting, and a tillage implement carried by each draft beam near the rear end thereof, substantially as described.

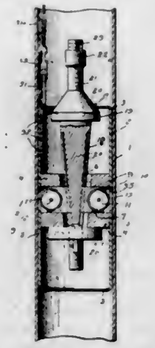
[Claims 6 and 7 not printed in the Gazette.]

1,189,983. FRAMING-TOOL. DANIEL C. MCLEOD, Cedar Rapids, Iowa. Filed Feb. 12, 1914. Serial No. 818,429. (Cl. 33—92.)



A framing tool including a square having groups of lines upon the blade, the lines of each group radiating from a common point, there being parallel columns upon the tongue of the square and having suitable designations, each column being intersected by lines alining with lines of one of the groups on the blade, parallel longitudinally slotted rules arranged upon opposite faces respectively of the square and engaging the blade and tongue thereof, means extending through the slots for binding the rules upon said faces of the blade and tongue to hold the rules against movement relative to the square, there being graduations upon the exposed faces of the rules indicating miter cuts.

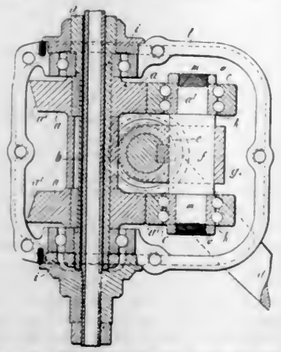
1,189,984. TOOL FOR SLOTTING A WELL-CASING. FRANKLIN O. MACKEY, Tucson, Ariz. Filed Mar. 26, 1915. Serial No. 17,216. (Cl. 81—195.)



1. A device of the class described comprising a tubular member, a cylindrical member secured within the tubular member and provided with a central vertical tapering aperture, and transversely extending slots communicating with each other, cutter-wheel carrying blocks slidable in said slots, a wedge member slidable through the central aperture in said cylindrical member, and means carried by said tubular member to hold the device in operative position within the well casing, said means also adapted to be used to remove the device from the well casing.

2. A device of the class described comprising a tubular member, a cylindrical member secured within the tubular member and provided with a central vertical tapering aperture and transversely extending slots communicating with said aperture, cutter-wheels carrying blocks slidable in said slots, a wedge member slidable through the central aperture, a cylindrical extension formed at the lower end of the wedge member, and a disk secured to said extension forming a lower abutment for the device when it is being put in place or removed from the well casing.

1,189,985. STEERING-GEAR FOR MECHANICALLY-PROPELLED VEHICLES. HENRY MARLES, Manor Park, England. Filed Nov. 7, 1914. Serial No. 870,895. (Cl. 74—79.)



1. A steering gear, comprising a vertical steering column, spaced apart cams on the steering column, having opposed cam surfaces, a horizontal pivot nested between the cams in close proximity to the steering column, a bracket keyed at one end upon said pivot and projecting outwardly between the cams from the steering column, a pin secured vertically through the outer end of the bracket, and having its ends projecting laterally beyond the bracket in spaced relation to and in the planes of the cams, rollers on the opposite ends of the pin for contact with the respective cams, and a steering arm carried upon the horizontal pivot.

2. A steering gear for mechanically propelled vehicles, comprising a steering column, spaced apart cams on the steering column having opposed cam surfaces, a bracket located against the steering column between said cams, and extending outwardly from the steering column, the bracket being provided with a vertical opening in its outer end, and a horizontal opening in its inner end, a pin mounted in the vertical opening in the outer end and projecting beyond the sides of the bracket, rollers mounted on the ends of said pin, and engaging the cams, a horizontal pivot keyed in the horizontal opening of the bracket, between the cams, and in close proximity to the steering column, and a steering arm operatively connected to said pivot.

3. A steering gear comprising a steering column, cams mounted on the steering column having opposed cam surfaces, a bracket lying close to the steering column between the cams, and extending outwardly therefrom, said bracket having a vertical opening and a horizontal opening in its outer and inner ends respectively, a horizontal pivot lying close to the steering column between the cams and extending through the horizontal opening, and keyed to the bracket, a steering arm operatively connected to the pivot, a pin extending through the vertical opening at right angles to the bracket, and outwardly of said horizontal pivot, and having the ends thereof reduced and screw threaded, rings mounted upon the reduced ends of the pin, rollers bearing against the cam surfaces and encircling the rings, balls interposed between the rings and the rollers, and nuts secured upon the reduced ends of the pin for fastening the rings and rollers thereon.

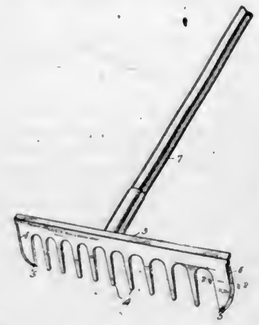
1,189,986. SPECTACLE OR EYEGLASS MOUNTING. FREDERICK C. MERRY, Kansas City, Mo. Filed Sept. 3, 1915. Serial No. 48,922. (Cl. 88—47.)



1. The combination with a lens having a groove opening through its head, of a mounting comprising pair of ears, one seated in said groove and the other lying along the opposite face of the lens, the base of the groove being inclined to spread the ears substantially as set forth.

2. The combination with a lens comprising a rim of greater thickness than the body of the lens, and having a groove opening through its edge, of a mounting comprising paired ears, one seated in said groove and the other lying along the opposite face of the lens, the base of the groove being inclined to spread the ears, substantially as set forth.

1,189,987. COMBINED RAKE AND HOE. HERNAN D. MONEY, Ocean Springs, Miss. Filed June 24, 1915. Serial No. 36,083. (Cl. 55—10.)



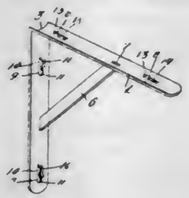
In a combined rake and hoe, a substantially wide head, said head having cut out portions forming end teeth and intermediate teeth, the end teeth being substantially wide and the outer edges thereof being straight substantially half their length, the remaining portions thereof being curved and merging with the points, each of said end teeth having their edges beveled throughout their lengths to form cutting blades, and the side faces of said end teeth being parallel with the side faces of the intermediate teeth.

1,189,988. SHELF-BRACKET. IRA V. MOODY, Elwood, Ind. Filed Jan. 25, 1916. Serial No. 74,172. (Cl. 248—18.)

1. An angular bracket for shelves comprising a vertical portion and a lateral horizontal portion extending at right angles to the upper end of the vertical portion, a brace connecting the two portions, said vertical portion having keyhole-shaped slots therein, the contracted parts of which slots extend upwardly, and are designed to receive the shanks of headed screws on the wall, said horizontal portion having keyhole-shaped slots, the contracted parts of which extend outwardly and are designed to receive the shanks of headed securing members of the shelf to hold the shelf in place.

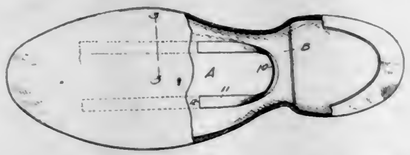
2. An angular bracket for shelves comprising a vertical portion and a lateral horizontal portion extending at right

angles to the upper end of the vertical portion, a brace connecting the two portions, said vertical portion having keyhole-shaped slots therein, the contracted parts of which slots extend upwardly, and are designed to receive the shanks of headed screws on the wall, said horizontal



portion having keyhole-shaped slots, the contracted parts of which extend outwardly and are designed to receive the shanks of headed securing members of the shelf to hold the shelf in place, one end of each of the contracted portions of each slot having a yieldable tongue to overlie the head of the securing member.

1,189,989. ATTACHMENT FOR OVERSHOES. LAWRENCE ROY MOORE, San Rafael, Cal. Filed Apr. 28, 1915. Serial No. 24,487. (Cl. 36—1.)

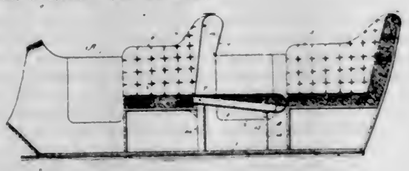


1. The combination with an overshoe, of a pull-on device therefor, comprising a non-elastic member having one portion secured to the overshoe bottom forward of its shank and another portion extending backwardly therefrom inside the overshoe a distance sufficient to enable it to be grasped for pulling-on the overshoe and constructed and arranged to lie wholly within the overshoe while the latter is in use.

2. The combination with an overshoe, of an inelastic, non-extensible member secured longitudinally along the overshoe bottom, and having a rearwardly extending portion free from the sole and forming a handhold and pulling grip, and a transverse reinforce for said member contiguous to the junction of the fixed and loose portion thereof.

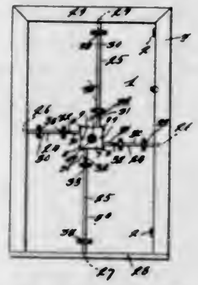
3. An overshoe having on the bottom thereof at the interior, a pulling-on attachment presenting a loop having side members forwardly disposed and united to the material forming the outer sole of the overshoe, the said forwardly extending ends of the loop lying beneath the inner sole of the overshoe and a transverse reinforce strip beneath the inner sole through which strip said ends of the loop extend.

1,189,990. CONVERTIBLE TOURING-CAR. LESLIE B. MOULTON, Dairy, Oreg. Filed Nov. 10, 1914. Serial No. 871,345. (Cl. 21—43.)



A convertible touring and sleeping car comprising a front seat, a rear seat, a hinged back for the front seat adapted to be swung from its normal position to a substantially horizontal position between the front and rear seat cushions, supporting means for said seat back when in a substantially horizontal position consisting of a pair of supporting legs having a jointed connection with the back and adapted to be brought into alinement with each other to form a coat rail, and a slotted keeper fastened to the hinged back and adapted to receive and support the free ends of the legs when in coat-supporting position.

1,189,991. MULTIPLE-BOLT DOOR-LOCK. PETER MUGLER, Sisson, Cal. Filed Apr. 14, 1916. Serial No. 91,088. (Cl. 70—74.)



1. In a lock of the kind set forth, the combination of a casing having a stud pin and a plurality of lateral and vertical slidable bolts arranged in pairs, one pair sliding across the other pair, of a pair of tumblers rockably mounted upon the stud pin having loose slot and pin connections with the bolts for extending and retracting the bolts so as to engage and disengage their keepers.

2. In a lock of the kind set forth, the combination of a casing having a stud pin and a plurality of lateral and vertical slidable bolts arranged in pairs, one pair sliding across the other pair, of a pair of tumblers rockably mounted upon the stud pin having loose slot and pin connections with the bolts for extending and retracting the bolts so as to engage and disengage their keepers, means for limiting the bolts in their protractive movements, and means for limiting the bolts in their retracted positions.

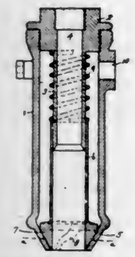
3. In a multiple bolt lock of the kind set forth, the combination of a casing having a centrally disposed stud pin and a plurality of laterally and vertically slidable bolts arranged in pairs, the inner ends of one pair being slidable across the inner ends of the other pair and operating at right angles to each other, of a pair of tumblers extending at right angles to each other and having interlocked connections and being mounted upon the stud pin, said tumblers having loop arms, the loop arms of one tumbler underlying the inner ends of the laterally sliding bolts, the loop arms of the other tumbler overlying the inner ends of the vertically sliding bolts, the inner end portions of both pairs of bolts having pins engaging said loop arm, whereby as the tumblers are rocked in one direction or the other simultaneously, the bolts are extended or retracted so that their outer ends may engage or disengage their keepers, means for limiting the bolts in their protractive movements, and means for limiting the bolts to their retracted positions.

4. In a multiple bolt lock of the kind set forth, the combination of a casing having a centrally disposed stud pin and a plurality of laterally and vertically slidable bolts arranged in pairs, the inner ends of one pair being slidable across the inner ends of the other pair and operating at right angles to each other, of a pair of tumblers extending at right angles to each other and having interlocked connections and being mounted upon the stud pin, said tumblers having loop-arms, the loop arms of one tumbler underlying the inner ends of the laterally sliding bolts, the loop arms of the other tumbler overlying the inner ends of the vertically sliding bolts, the inner end portions of both pairs of bolts having pins engaging said loop arm,

whereby as the tumblers are rocked in one direction or the other simultaneously, the bolts are extended or retracted so that their outer ends may engage or disengage their keepers, means for limiting the bolts to their extended positions, and means for limiting the bolts to their retracted positions, one edge of each bolt near its inner end being provided with a notch, and means rockably carried upon the inner face of the top of the casing for engaging the notches to lock the bolts in their retracted positions.

5. In a multiple bolt lock of the kind set forth, the combination of a casing having a centrally disposed stud pin and a plurality of laterally and vertically slidable bolts arranged in pairs, the inner ends of one pair being slidable across the inner ends of the other pair and operating at right angles to each other, of a pair of tumblers extending at right angles to each other and having interlocked connections and being mounted upon the stud pin, said tumblers having loop arms, the loop arms of one tumbler underlying the inner ends of the laterally sliding bolts, the loop arms of the other tumbler overlying the inner ends of the vertically sliding bolts, the inner end portions of both pairs of bolts having pins engaging said loop arm, whereby as the tumblers are rocked in one direction or the other simultaneously, the bolts are extended or retracted so that their outer ends may engage or disengage their keepers, means for limiting the bolts in their protractive movements, and means for limiting the bolts to their retracted position, one edge of each bolt near its inner end being provided with a notch, and means rockably carried upon the inner face of the top of the casing for engaging the notches to lock the bolts in their retracted positions, said last named rockable means comprising a plate having a plurality of arms provided with angled ends having lugs to engage said notches, said lugs constituting means to assume positions in the paths of the inner ends of the bolts to hold the same in their extended positions, the top of the casing having diametrically oppositely disposed segment slots, a member on the exterior of the top of the casing having pins passing through said segment slots and connected to the plurality arm plate for rocking the same, and means for limiting the plurality arm plate in its rocking movement in either direction.

1,189,992. HYDROCARBON-BURNER. JOHN NICHOLSON, Houston, Tex. Filed Jan. 3, 1916. Serial No. 69,821. (Cl. 158—75.)



1. A burner including a nozzle having a tapering free end, a fuel pipe formed of telescoping sections, extending therethrough, one of said sections being fixed and the other connected to the fixed section by means of a slip joint, a resilient cushion upon which the movable section rests, an enlarged annular conical shaped nose carried by the free end of the movable section and fitting closely against the tapering end of the nozzle and being provided with peripheral spiraled grooves.

2. A burner including a nozzle having a tapering free end, a fuel pipe formed of telescoping sections, extending therethrough, one of said sections being fixed and the other being movable and connected to the fixed section by means of a slip joint, a resilient cushion upon which the movable section rests and an enlarged nose carried by the free end of the movable section and fitting within the tapering end of the nozzle and provided with peripheral spiraled grooves for imparting a spiraled motion to the fluid discharged from said nozzle.

1,189,993. SHOE-FASTENER. SARAH G. NOLAN, Washington, D. C. Filed Feb. 24, 1915. Serial No. 10,295. (Cl. 24—97.)



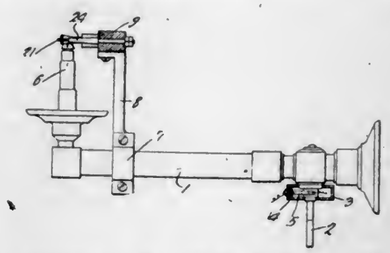
1. A button fastener comprising an arm bent at one end into a foot and the latter bent at right angles to the first bend into a toe, a hinge at the inner end of the arm permitting it to swing in a given plane, a head, a pintle at the outer end of said toe pivotally engaging the head and permitting the latter to swing in a plane at right angles to that mentioned, and a spring in the head engaging said pintle.

2. A shoe fastener comprising an arm adapted to be hinged at one end to the shoe so as to swing in a given plane and having its other end bent at an angle into a foot standing in said plane, the foot being bent at right angles into a toe and the latter at its outer extremity having a square pintle, a button head hingedly mounted on said pintle to swing in a plane at right angles to that mentioned, and a spring in said head for holding it in either plane.

3. A shoe fastener comprising an arm provided with a hinge at one end adapting it to swing in a given plane and having its other end bent at right angles into a foot standing in said plane, the foot being bent at its outer end into a toe, and a head hingedly mounted on the toe so as to swing from a position at right angles to the toe to a position alongside the toe and arm.

4. A shoe fastener comprising an arm provided with means at one end adapting it to swing in a given plane and having its other end bent at right angles into a foot standing in said plane, the foot being bent at its outer end into a toe, an angular pintle across the extremity of said toe, a button-head hingedly mounted on the pintle of the toe so as to swing around the arm in a plane at right angles to that mentioned, and yielding means in the head engaging said pintle for holding the head in either of two positions.

1,189,994. GAS DEVICE. EDWARD C. OBERMEYER, Nessen City, Mich. Filed Mar. 11, 1916. Serial No. 83,599. (Cl. 175—115.)

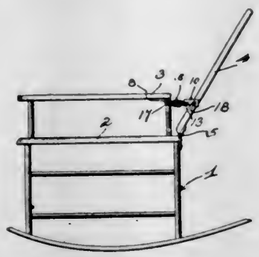


1. In a device of the class described, a support; a first terminal carried by the support; a second terminal carried by the support; a third terminal carried by the support and located between the first and second terminals; a thermo-expansible arm connected with the first terminal and adapted to coact with the second terminal, the third terminal being disposed in close relation to the arm.

2. In a device of the class described, a support; a first terminal carried by the support; a second terminal carried by the support; a third terminal carried by the support and located between the first and second terminals; a thermo-expansible arm connected with the first terminal, the third terminal being disposed adjacent the arm; and a slide mounted to reciprocate on the second terminal, the end of the arm being interengaged with the slide.

3. In a device of the class described, a support; a first terminal carried by the support; a second terminal carried by the support; a third terminal carried by the support and disposed between the first and second terminals; a thermo-expansible arm connected with the first terminal; a slide mounted to reciprocate on the second terminal and provided with spaced shoulders between which the arm is located; an insulating element carried by the arm and adapted to coact with one shoulder; and spring means for controlling the movement of the slide.

1,189,995. ATTACHMENT FOR CHAIRS. FRANK OLSON, Wausa, Nebr. Filed Nov. 23, 1914. Serial No. 873,565. (Cl. 155—27.)

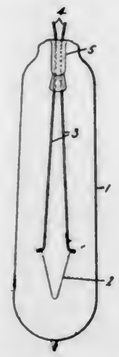


The combination with a chair having an arm rest and a reclining back, a coil spring of the contractile type located in rear of the arm rest and having one end secured to the arm rest and having its opposite end extending in the direction of the back and terminally formed to provide a hook, a plate located in rear of the spring and having an opening for the reception of the hook on the adjacent end of the spring, and extensions formed on the forward end of the plate and extending into the interior of the spring, a pin carried by the chair back, the said plate having one of its side edges provided with notches for interchangeably engaging the pin on the chair back, and a depending tongue carried by the rear end of the plate.

1,189,996. INCANDESCENT ELECTRIC LAMP. JOHN ARTHUR ORANGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 19, 1913. Serial No. 762,269. (Cl. 176—16.)

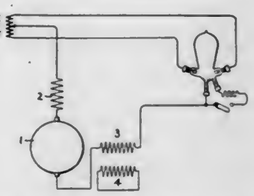
1. An incandescent lamp comprising a lamp bulb, a filling of gas therein of at least about 20 inches of mercury pressure, a filament of refractory metal therein operable in said gas at a temperature substantially higher than the temperature corresponding in a vacuum to one watt per candle power lighting efficiency, and long bare metallic lead wires for said filament, the said lead wires being located in said bulb in the path of gas convection currents and supporting said filament far enough away from the glass parts of the lamp to permit convection currents of heated gas to cool substantially before coming into contact with said glass parts.

2. An incandescent lamp comprising an elongated bulb, a filament of tungsten located near one end of said bulb, a gas inert with respect to tungsten at incandescence and of at least about 20 inches of mercury pressure, and long bare lead wires of refractory metal for said filament extending upwardly away from said filament in the operating position of the lamp, and sealed into the bulb remote from the filament, the portion of the bulb surrounding the



lead wires constituting a depositing chamber for vaporized filament material.

1,189,997. MOTOR. MENDEL OSNOS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 24, 1913. Serial No. 808,605. (Cl. 171—228.)



1. In combination, a source of pulsating current and a compensated series motor, said motor having means for preventing pulsations of flux in its exciting axis corresponding to the pulsations of current, comprising a saturated field core in said axis.

2. In combination, a source of pulsating current and a compensated series motor, said motor having an exciting winding, a compensating winding, and means for preventing pulsations of flux in its exciting axis corresponding to the pulsations of current, comprising a short-circuit for said compensating winding arranged in the exciting axis.

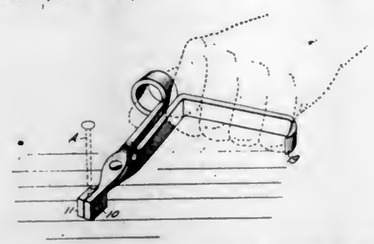
3. In combination, a source of pulsating current and a compensated series motor, said motor having an armature winding, a compensating winding, means for increasing the self-induction of the compensating and armature windings, and means for preventing pulsations of flux in the exciting axis corresponding to the pulsations of current, comprising a saturated field core in said axis.

4. In combination, a source of pulsating current and a compensated series motor, said motor having an armature winding, an exciting winding, a compensating winding, means for increasing the self-induction of the compensating and the armature windings, and means for preventing pulsations of flux in the exciting axis corresponding to the pulsations of current, comprising means providing a closed electrical circuit in inductive relation to the exciting winding.

5. In combination, a source of pulsating current and a compensated series motor, said motor having an armature winding, an exciting winding, a compensating winding, means for increasing the self-induction of the compensating and armature windings, and means for preventing pulsations of flux in the exciting axis corresponding to the pulsations of current, comprising a short circuit for said compensating winding arranged in the exciting axis.

[Claim 6 not printed in the Gazette.]

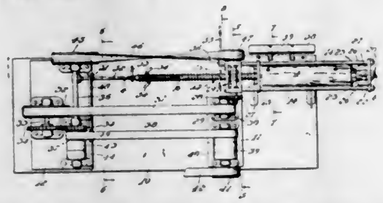
1,189,998. NAIL-HOLDING TOOL. HERMAN PERKINS, Montague, Mass. Filed Oct. 12, 1915. Serial No. 55,437. (Cl. 1—47.)



1. A nail-holding tool, comprising elongated shanks pivotally united and presenting vertically disposed jaws at the front ends, said jaws presenting opposite depressions to receive the opposite sides of the nail, the rear end of one shank terminating in an arched thumb loop, disposed laterally at the outside of said shank, the opposite shank having at the rear end at the outside thereof an arm elongated in a lateral direction to an extent to afford a hand hold to be gripped while the tool is in use, said lateral arm terminating at its outer end in a forwardly extending member forming a guard to prevent the hand slipping laterally from the said arm.

2. A nail-holding tool, comprising pivotally connected shanks presenting nail gripping jaws, the one shank terminating at its rear end in a thumb loop and the other shank having at the rear end at the outside thereof an arm extending laterally to an extent to afford a hand-hold to be gripped while the tool is in use, while the thumb is received in said thumb loop.

1,189,999. SPLITTING-MACHINE. FRANK PETER, Chicago, Ill. Filed Mar. 16, 1914. Serial No. 825,047. (Cl. 144—193.)

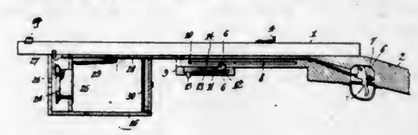


A splitting machine comprising a cutting element consisting of two sets of blades, each set consisting of a plurality of blades having radially disposed cutting edges, said sets of blades being relatively rotatably adjustable; and means for pressing a piece of material to be split into engagement with said blades, substantially as described.

1,190,000. REPEATING PUMP-GUN CAMERA. CHARLES R. PFANDER, Hill City, S. D. Filed Aug. 2, 1915. Serial No. 43,257. (Cl. 95—31.)

1. A photographing apparatus comprising a camera, a structure attached thereto, a trigger pivoted to the structure, shutters mounted in the camera, means operatively connecting the shutters with the trigger and cross threads located in the camera in front of the field of exposure.

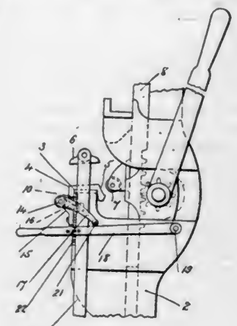
2. A photographing apparatus comprising a camera, a structure attached thereto, a trigger mounted upon the structure, shutters mounted in the camera, means operatively connecting the shutters with the trigger, a grip slidably mounted upon the structure, means for locking the grip against sliding movement, and means operatively connecting the grip with the film roll of the camera.



3. A photographing apparatus comprising a camera, a structure attached thereto, a trigger pivotally mounted upon the structure, shutters mounted in the camera, means operatively connecting the shutters with the trigger, and a safety slide mounted upon the structure and having a portion engageable with the trigger to hold the same against swinging movement.

4. A photographing apparatus comprising a camera, a structure attached thereto, a trigger mounted upon the structure, shutters located in the camera, means operatively connecting the shutters with the trigger, cross threads located in the camera in advance of the field of exposure, a grip slidably mounted upon the gun, and means operatively connecting the grip with the film roll of the camera.

1,190,001. CALK-MACHINE. ADAM PFEIFFER, Gnadenhutten, Ohio. Filed Feb. 12, 1916. Serial No. 77,975. (Cl. 59—65.)



1. In a calk machine, a supporting frame, a slidable calk-former, a die mounted in the frame in front of the calk-former, and means for tilting the said die so that calks of different sizes may be formed against it by the calk-former.

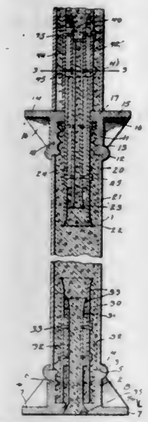
2. In a calk machine, a supporting frame, a slidable calk-former, a clamping plate mounted in the frame and having a die at its rear end, means for clamping the shoe against the said plate, and means for raising the front end of the plate so as to tilt it and move the said die downwardly and thereby permit the calk-former to form a thinner calk against it.

3. In a calk machine, a supporting frame, a slidable calk-former, a die mounted in the frame in front of the calk-former, a rock-shaft pivoted to the frame and provided with means for oscillating it, arms projecting rearwardly from the rock-shaft, and slidable pins arranged between the said arms and the front end portion of the die plate.

4. In a calk machine, a supporting frame, a slidable calk-former, a die mounted in the frame in front of the calk-former, a rock-shaft pivoted to the frame, lifting devices arranged between the rock-shaft and the front end portion of the die plate, a lever secured to the rock-shaft, a hand lever pivoted to the frame and operatively

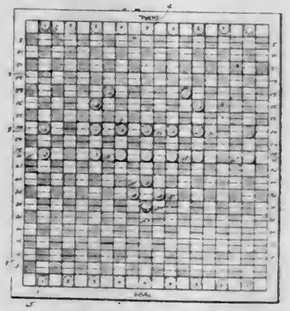
connected with the aforesaid lever, and locking mechanism for sustaining the die plate when tilted by the said hand lever.

1,190,002. BUILDING-COLUMN. JOSEPH PICURI, Jersey City, N. J. Filed May 19, 1915. Serial No. 29,114. (Cl. 72—75.)



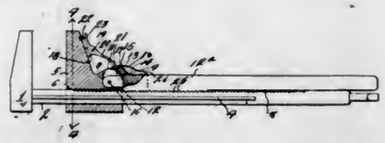
A building column comprising a cap, a shell carried by said cap, reinforcing means secured to the cap and extending upwardly within said shell, a cap carried by the upper end of the shell and provided with a central opening, wings formed on the second mentioned cap, a shell positioned on the second mentioned cap, a cylindrical sleeve extending through the second mentioned cap into both of the shells and provided with its lower end flared, an inner sleeve positioned within said sleeve and extending above the upper end thereof, bars positioned between said sleeves and the upper ends thereof terminating in a horizontal plane with the upper end of the first mentioned sleeve, bolts extending through the first mentioned sleeve and bars threaded to the inner sleeve, a sleeve surrounding the upper end of the first mentioned sleeve and resting upon the second mentioned cap, an inner sleeve surrounding the upper end of the first mentioned inner sleeve, bars positioned between the sleeve resting upon the second mentioned cap and the second mentioned inner sleeve, bolts extending through the sleeve resting upon the second mentioned cap and the second mentioned bars and threaded to the second mentioned inner sleeve, and concrete within the shells and sleeves to form a continuous column.

1,190,003. GAME APPARATUS. THOMAS F. QUINN, Brockton, Mass. Filed Dec. 30, 1914. Serial No. 879,766. (Cl. 46—64.)



A game apparatus consisting of a rectangular board representing a field, the upper face of which is provided with a plurality of alternatingly arranged white and colored squares, said squares being intersected by horizontal lines to indicate the yard lines, the opposite ends of said board being numbered to represent the score, two sets of colored pieces representing two foot ball teams and one piece of each set provided in its upper face with a recess and a ball seated in said recess to be carried by said piece, each of said pieces adapted to be moved forwardly and certain of said pieces allowed to be moved forwardly or rearwardly to provide openings for the back piece carrying the ball, substantially as set forth.

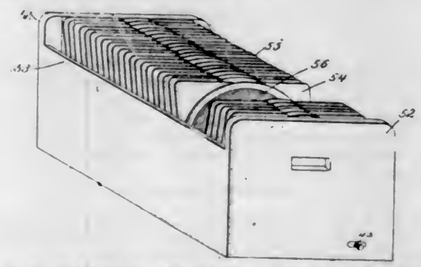
1,190,004. WRENCH. MERRILL CLAUD RAIKES, Philippi, W. Va. Filed Dec. 15, 1915. Serial No. 66,941. (Cl. 81—131.)



1. In combination, a stationary jaw having a handle or shank, a movable jaw slidable upon the shank, said shank having a series of teeth upon its inner face, the rear portion of the movable jaw having a socket and provided with a semi-circular curved part where the socket is formed, a second handle having a curved end surface and a lip coöperating with the circular curved portion of the movable jaw, and provided with a lug pivoted in said socket, said second handle having teeth to coöperate with the teeth of the shank or first handle.

2. In combination, a stationary jaw having a handle or shank, a movable jaw slidable upon the shank, said shank having a series of teeth upon its inner face, the rear portion of the movable jaw having a socket and provided with a semi-circular curved part where the socket is formed, a second handle having a curved end surface and a lip coöperating with the circular curved portion of the movable jaw, and provided with a lug pivoted in said socket, said second handle having teeth to coöperate with the teeth of the shank or first handle, said lip upon its outer face having a notch, and a spring tensioned dog having its nose engaging said notch, to hold the pivoted handle against the shank of the stationary jaw, said pivoted handle adjacent the lip being provided with side flanges, between which the nose end of the dog engages, when disengaged from the notch.

1,190,005. FILING DEVICE FOR DISK RECORDS. JOSEPH E. RALPH, Newark, N. J. Filed May 11, 1914. Serial No. 837,858. (Cl. 129—16.)



1. A container for filed matter comprising a box structure having sides and ends, and a corrugated strip of cushioning material held centrally with respect to the bottom of the container, the sides of the container adapted to hold the filed matter so that the lowest portion thereof will engage the cushioning member.

2. A container for filed matter comprising a box structure having ends and sides, plates parallel to the sides but spaced therefrom and a cushioning member located centrally with respect to said plates, the upper surface of the cushioning member being roughened, the plates adapted to hold the filed matter in such position that the lowest portion thereof will engage the cushioning member.

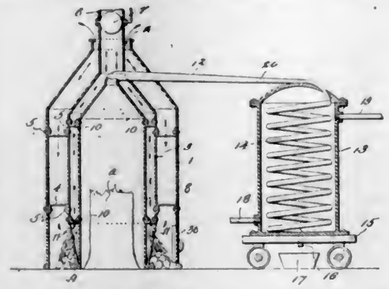
3. A device for holding disk records comprising a partition strip, padding strips secured to one side thereof adjacent the bottom thereof, the upper surfaces of the padding strips being arcuate to conform to the shape of a disk record, a space being defined between adjacent portions of the padding strips through which the bottom of the disk record may extend to engage the bottom of a suitable container.

4. A device for holding disk records comprising a partition strip, padding strips located adjacent the bottom thereof and having the upper edges arcuate, adjacent portions of the padding strips being spaced to define an opening, a container for carrying a record having the bottom thereof arcuate and adapted to conform to the arcuate edges of the padding strips, the bottom of the container adapted to extend into the opening to engage the bottom of a suitable container, said first mentioned container adapted to receive a disk record.

5. A device for holding disk records comprising a partition strip, padding strips located adjacent to the bottom of the partition strip and spaced apart to form an opening therebetween, the upper edges of the padding strips being of concave formation for receiving the rounded portion of a disk record, and means for securing the padding strips to the partition strip.

[Claims 6 to 8 not printed in the Gazette.]

1,190,006. PROCESS OF AND APPARATUS FOR REDUCING STUMPS. ALBERT T. RATLIFF, Hattiesburg, Miss., assignor to Free Stump Remover Manufacturing Company, Laurel, Miss., a Corporation of Mississippi. Filed June 11, 1915. Serial No. 33,595. (Cl. 203—6.)



1. An apparatus for reducing stumps and obtaining the by-products therefrom consisting of a retort, having a pipe leading to a condenser coil, a casing surrounding the retort, and a hood supported upon the retort, means for admitting air to support combustion between the retort and the outer casing.

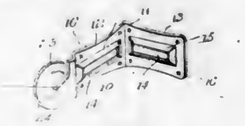
2. An apparatus of the character described comprising a casing, a retort within the casing, a hood connected to the retort, and draft appliances to support combustion between the outer casing and the retort, and an outlet pipe leading from the retort to a condenser coil.

3. An apparatus of the character described comprising a casing, a retort within the casing, an outlet pipe leading from the top of the retort to a condenser coil, an outer casing, a hood between the retort and outer casing, and a forced draft device for supporting combustion between the outer casing and the retort.

4. An apparatus for reducing pine stumps comprising an outer casing, a retort within the outer casing, a hood disposed between the retort and outer casing, a smoke stack, an inlet opening for air, an outlet pipe for the retort, a condenser coil to which the outlet pipe is connected, and means to force air into apparatus.

5. The herein described process of destroying a stump in the ground and gathering its by-products, consisting in placing a retort over the stump, applying heat to the exterior of the retort to reduce the stump, and conveying the vapors generated in the retort to a condenser.

1,190,007. CURTAIN OR SHADE FIXTURE. JOSEPH A. RAYDER, Philadelphia, Pa. Filed Sept. 24, 1915. Serial No. 52,459. (Cl. 156—24.)

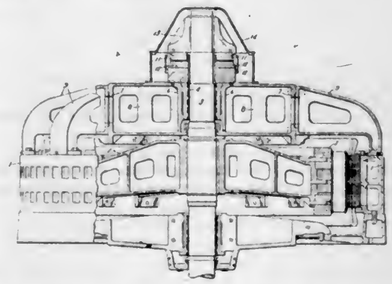


1. An interchangeable curtain or shade fixture for door or window casings, comprising a body, plates formed therewith and each having a slot, one of said plates being adapted to bear against a face of the casing when the fixture is applied to the outside thereof and the other plate being adapted to bear against the side of the casing when the fixture is arranged within the latter, and a screw-eye common to each plate and passing through the slot of the plate in use to secure said fixture to the outside of or within said casing.

2. As an new article of manufacture a shade or curtain fixture comprising an L-shaped body having slots therein, beveled facings struck from the body and forming the walls of the slots, and teats struck from the body to extend in a direction opposed to the direction of protrusion of the facings.

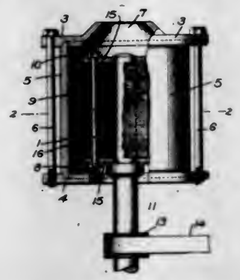
3. As a new article of manufacture a shade or curtain fixture comprising an L-shaped body having slots therein, beveled facings struck from the body and forming the walls of the slots, teats struck from the body to extend in a direction opposed to the direction of protrusion of the facings, and an offset socket on said body and formed therewith.

1,190,008. BEARING. HENRY G. REIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 15, 1914. Serial No. 866,851. (Cl. 64—25.)



In a machine of large diameter having revolving and stationary members and a vertical shaft on which said revolving member is mounted, a thrust bearing for said shaft and a bearing bracket for supporting said thrust bearing comprising a hub of large diameter formed of a single casting having inner and outer concentric walls connected together by ribs, and bearing bracket arms fastened at one end to the outer wall of said hub and at the other end to said stationary member, said arms extending radially from said hub, whereby said hub and said arms act together as a jointed beam jointed near the ends by which it is supported and carrying at its center the revolving member of said machine.

1,190,009. INDUCTION-MOTOR. HENRY G. REIST and HOWARD MAXWELL, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Mar. 31, 1915. Serial No. 18,256. (Cl. 22—203.)



1. The process of forming an induction motor squirrel cage on a magnetic core having substantially longitudinally extending, conductor receiving openings therethrough which consists in pouring molten metal into a mold surrounding the core and simultaneously rotating said mold and core at sufficient speed to drive the molten metal into the conductor receiving openings by centrifugal force, and continuing such rotation until the poured metal has congealed.

2. The process of forming an induction motor squirrel cage on a magnetic core having substantially longitudinally extending, conductor receiving openings therethrough which consists in pouring molten metal into a mold surrounding the core and simultaneously rotating said mold and core at sufficient speed to drive the molten metal into the conductor receiving openings and into the end ring recesses in said mold by centrifugal force, and continuing such rotation until the poured metal has congealed.

3. In combination with a cylindrical magnetic core member of an induction motor provided with substantially longitudinally extending, conductor receiving openings therethrough, of a mold comprising end flange portions and cylindrical portions extending beyond the ends of the core, and means for rotating said core and mold.

4. In combination with a cylindrical magnetic core member of an induction motor provided with substantially longitudinally extending, conductor receiving openings therethrough, of a mold comprising end flange portions and cylindrical portions extending beyond the ends of the core, one of said end flange portions being provided with an opening through which molten metal is received for forming conductors in said conductor receiving openings in said core and rings for short-circuiting the conductors at the ends of the core, and means for rotating said core and mold.

5. In combination with a cylindrical magnetic core member of an induction motor provided with substantially longitudinally extending, conductor receiving openings therethrough, of a mold comprising end flange portions, cylindrical portions extending beyond the ends of the core, and means for clamping said end flange portions and said cylindrical portions in place, one of said end flange portions being provided with an opening through which molten metal is received for forming conductors in the conductor receiving openings in said core and rings for short-circuiting the conductors at the ends of the core, and means for rotating said core and mold.

[Claims 6 to 11 not printed in the Gazette.]

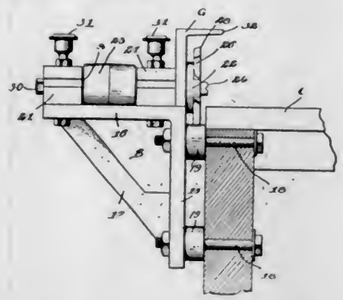
1,190,010. PROCESS FOR COOKING HAMS. ADAM REUBOLD, New York, N. Y. Filed May 10, 1916. Serial No. 96,565. (Cl. 99—8.)

1. The herein described process of cooking hams, the same including the use of a fabric jacket thoroughly smoked, the wrapping tightly of the jacket around the meat and thoroughly inclosing the meat, introducing the meat thus wrapped into an air-tight cooking receptacle, and afterward cooking the same in the receptacle, the jacket serving to maintain a comparatively low temperature for the meat.



2. The herein described process of cooking hams comprising the following steps: first, the wrapping of the ham snugly and completely in a smoked fabric jacket; secondly, introducing the wrapped ham into an air-tight cooking receptacle under pressure; thirdly, allowing the ham to rest in the receptacle for a number of hours; and finally, cooking the ham thus wrapped and sealed at low temperature.

1,190,011. OIL-CAKE TRIMMER. JAMES WARNER RHODES, Memphis, Tenn. Filed Mar. 12, 1915. Serial No. 14,038. (Cl. 100—53.)



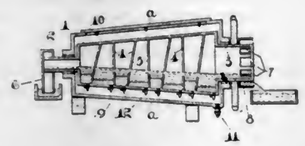
1. In a cutting device of the class described, a spindle supported for rotation and having an integral pulley and an integral cutter head, the latter provided with intersecting diametrical grooves, cutting members seated in the grooves of the cutter head, said members having interengaging recesses in their opposed faces, and means for securely mounting the cutters in the recesses of the cutter head.

2. In a cutting device of the class described, a table, a supporting member mounted on the table and spaced therefrom, a spindle mounted for rotation on the supporting member and having a cutter head at the end facing the table, and cutting tools mounted on the cutter head and operating in the interspace between the table and the supporting member.

3. In a cutting device of the class described, a table, a supporting element mounted on the table and spaced laterally therefrom, bearing boxes on said supporting member, a spindle mounted for rotation in the boxes and having an integral pulley and an integral cutter head, the latter facing the table, cutting tools carried by the cutter head and operating in the interspace between the table and the supporting element, and a guard member secured on one of the bearing boxes and having a flange projecting in the direction of the table and overhanging the cutting members.

4. In a machine of the class described, the combination with suitable supporting means, of a spindle having an integral pulley, an integral cutter head provided with intersecting diametrical grooves, and a longitudinal axial bore, cutting members seated in the grooves of the cutter head, said members having interengaging recesses in their opposed faces, and an assembling bolt extending longitudinally through the spindle and through the cutting members.

1,190,012. AMALGAMATOR. PERCY A. ROBBINS, Timmins, Ontario, Canada. Filed Oct. 10, 1914. Serial No. 866,060. (Cl. 83—67.)



1. Amalgamating apparatus comprising a chamber journaled for rotation and provided with an axial opening and a circular axial outlet opening, the chordal planes of segments of the chamber tangentially intersecting the periphery of the outlet opening at different points of the circumference thereof varying in area to cause the surface of contained mercury to alternately approach and recede from the axis of rotation as the chamber is rotated.

2. Amalgamating apparatus comprising a chamber journaled for rotation and provided with an axial inlet and outlet openings, said chamber being varied in both depth and width at different points relative to the circumference of the outlet opening to cause the surface of contained mercury to alternately approach and recede from the axis of rotation as the chamber is rotated and to cause the space occupied by the mercury to be alternately expanded and contracted in a direction parallel to the axis of rotation.

3. Amalgamating apparatus comprising a chamber of a closed curved figure in cross section journaled lengthwise and provided with an axial opening and a circular axial outlet opening, the chordal planes of segments of the chamber tangentially intersecting the periphery of the outlet opening at different points of the circumference thereof varying in area to cause the surface of contained mercury to alternately approach and recede from the axis of rotation as the chamber is rotated.

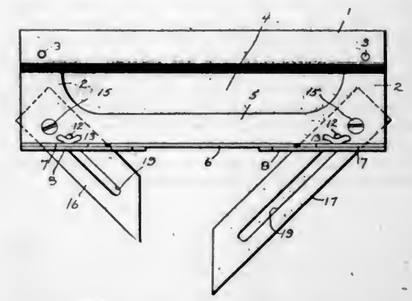
4. Amalgamating apparatus comprising a chamber of a closed curved figure in cross section journaled lengthwise and provided with an axial inlet opening and a circular axial outlet opening, said chamber being varied in both depth and width at different points relative to the circumference of the outlet opening to cause the surface of contained mercury to alternately approach and recede from the axis of rotation as the chamber is rotated and to cause the space occupied by the mercury to be alternately expanded and contracted in a direction parallel to the axis of rotation.

5. Amalgamating apparatus comprising a plurality of connected chambers journaled for rotation and provided with axial circular inlet and outlet openings, each of the chordal planes of segments of the chamber tangentially intersecting the periphery of the outlet opening at different points of the circumference thereof varying in area to cause the surface of contained mercury to alternately approach and recede from the axis of rotation as the chamber is rotated, the chambers being so arranged that in adjacent chambers the mercury levels will be in different planes.

[Claims 6 to 10 not printed in the Gazette.]

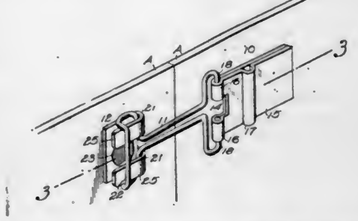
1,190,013. ROOF-SQUARE. WALTER S. RODGERS, Deming, N. Mex. Filed Jan. 15, 1915. Serial No. 2,392. (Cl. 33—90.)

1. A roof square comprising a handle, supporting members spaced apart and connected to the handle, said supporting members having angular portions, blades pivotally and adjustably mounted on said angular portions, and blades mounted between said supporting members and provided with longitudinal slots and screws for holding the last mentioned blades in adjusted position.



2. A roof square comprising a handle, supporting members connected to the handle and spaced apart, said supporting members having outwardly directed portions, blades provided with longitudinal slots pivotally and adjustably mounted on said outwardly directed portions at opposite ends of the tool, and a second set of blades each pivotally and adjustably connected between the spaced supporting members, whereby the right and left rafters for a roof may be marked for cutting without adjustment after the tool has been set.

1,190,014. SHOE-FASTENING DEVICE. ROBERT VINTON SAMPSON, Denver, Colo. Filed Aug. 6, 1915. Serial No. 43,962. (Cl. 24—225.)



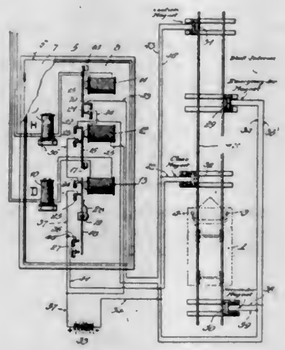
1. A fastener of the character described, including a coupling link formed at one end with a loop having lateral members presenting rearwardly disposed shoulders and a cross-bar offset from the plane of said lateral members and joining at its ends with the latter; means to secure the opposite end of the link to an article to be fastened; and a fastener member co-acting with the loop of the link, said co-acting member having means whereby to secure it to the article to be fastened and having forwardly projecting hook members in a plane to receive the lateral members of the loop therebeneath and said hook members being adapted to be disposed beneath the cross-bar of the loop.

2. A fastener of the character described, including a link formed of wire returned on itself presenting at one end a transverse loop having lateral members forming rearwardly disposed shoulders, the loop having a cross-bar offset from the plane of said lateral members and joining with the same, the opposite end of the said link having hinge pintles oppositely disposed; a securing plate returned on itself and having a plurality of hinge knuckles to detachably receive said hinge pintle; and a fastener element co-acting with the loop of the link, said co-acting fastener element having a base provided with means to secure it in position and having hook members spaced

from each other to receive the longitudinal members of the link therebetween, the hook members lying in a plane to receive the lateral members of the loop on the link beneath the said hook members and said hook members being adapted to be disposed beneath the cross-bar of the loop.

3. A fastener comprising co-acting fastener elements having means to separately secure the same to an article to be fastened, one of said elements having a shank formed with a transverse loop presenting lateral members at the sides of the shank and a cross-bar offset from the plane of the lateral members and connected therewith, the other fastener element having hook members spaced to receive the shank and rearwardly disposed in a plane to extend through the loop to lie over the lateral members thereof and to project beneath the cross-bar thereof.

1,190,015. TRAIN-STOPPING MECHANISM. ARTHUR P. SANBORN and ROY C. WILSON, Ossining, N. Y. Original application filed Sept. 14, 1914, Serial No. 861,614. Divided and this application filed Apr. 26, 1915. Serial No. 24,066. (Cl. 246—58.)



1. In an automatic block signaling system, a series of electro-magnets disposed contiguous to the track, the members of said series being equally apportioned on opposite sides of the track and in predetermined relationship, electrical energizing circuits for each of said magnets, and means for completing the circuits of the latter, whereby certain of the same will be energized pursuant to the condition of the track.

2. In an automatic block signaling system, a series of electro-magnets disposed contiguous to the track, the members of said series being equally apportioned on opposite sides of the track and in predetermined relationship, electrical energizing circuits for each of said magnets, and electro-mechanical means for controlling the circuits of the latter, whereby certain of the same will be energized pursuant to the condition of the track.

3. In an automatic block signaling system, a plurality of magnets disposed contiguous to the track in predetermined relationship, electrically energized circuits for each of said magnets, means for controlling the circuits of said magnets, said means including a plurality of switches, one of the latter being included in the circuit of each of said magnets, a series of solenoids, one of the latter coöperating with each of said switches, means to energize certain of said solenoids, whereby to actuate the coöperating switch to close the circuit of one of said magnets and open that of certain others pursuant to the condition of the track.

4. In an automatic block signaling system, a series of electro-magnets disposed in pairs and in predetermined relationship on each side of the track, electrically energized circuits for each of said magnets, and means controlling the respective circuits of said magnets and including a plurality of solenoids, means to energize the latter, a series of switches disposed in the circuit of each of said magnets, one of said switches being arranged contiguous to each of said solenoids, whereby when one of the latter has been energized, the circuit of one of said magnets will be closed and those of the others opened according to the condition of the track.

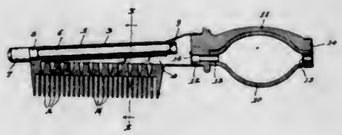
5. In an automatic block signaling system, a trio of electro-magnets disposed in predetermined relation contiguous to the track, means for simultaneously energizing two of said magnets, and additional means for energizing the remaining magnet and concomitantly deënergizing the energized magnets substantially as and for the purpose set forth.

1,190,016. LOOP-FASTENER FOR GARTERS. ANTHONY P. M. SCARPA, Derby, Conn. Filed Feb. 13, 1914. Serial No. 818,562. (Cl. 24—245.)



The combination with a loop member and a stud member, said loop member having a slot formed in the upper end thereof, a base formed on said stud member and having slots formed therein, said slots being arranged at opposite points on said stud member, and a tape comprising a single piece of material trained over the upper end of the loop member and through the slot therein, and having the ends thereof passing in reverse directions through the slots in the base, one of the ends passing over the stud and then trained through one of the slots in the base and terminating beneath the base.

1,190,017. HAIR-DRYING DEVICE. GEORGE L. SCHEEL, Chicago, Ill. Filed Nov. 3, 1915. Serial No. 59,419. (Cl. 34—26.)

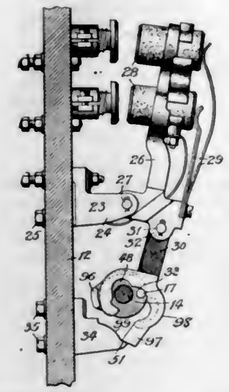


1. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; a heating element removably mounted in said back; and means for forcing air through said passages, substantially as described.

2. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; a longitudinally extending chamber also formed in said back opening in the outer end of the comb; a heating element removably mounted in said chamber; a non-heat conducting lining for said chamber; and means for forcing air through said passages, substantially as described.

3. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; a longitudinally extending chamber also formed in said back opening in the outer end of the comb; a heating element removably mounted in said chamber; and means for forcing air through said passage or through said chamber when said heating element is removed, substantially as described.

1,190,018. ELECTRICAL STARTING DEVICE. JACOB L. SCHUREMAN and CARL J. ANDERSON, Chicago, Ill., assignors, by mesne assignments, to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 21, 1910. Serial No. 539,350. (Cl. 172—289.)



1. In mechanism of the character described, the combination of a switch having relatively-movable members, a rotary-shaft, means on said shaft for engaging one of the members of said switch to move the other member thereof into and out of position for closing and opening it, said means being free for continued movement without actuating said switch after the switch is closed, and means independent of said first-named means, for holding said switch in closed position.

2. In mechanism of the character described, the combination of a plurality of switches each having relatively movable members, a rotary shaft, a plurality of eccentrically-disposed means on said shaft operating respectively to successively engage with said switches to move them to closed position during the turning of the shaft in one direction and operating to successively open said switches when rotated in the opposite direction, the means on said shaft engaging with said switches during a portion only of their movement with the shaft and means engaged by said switches for holding them in closed position while the shaft continues to rotate, for the purpose set forth.

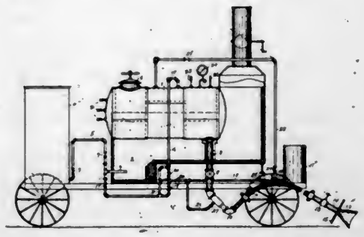
3. In mechanism of the character described, the combination of a plurality of switches each formed of relatively movable rigid members, a stop for one of the movable members of each switch, a rotary shaft, and means carried by said shaft coöperating with those members of the switches which engage with the stops and operating to successively actuate the switches for closing them and moving them into engagement with said stops, the latter operating to hold the switches in closed position.

4. In mechanism of the character set forth, the combination of a switch formed of relatively movable rigid members, a rotary shaft, a stop coöperating with one of the members of said switch for holding the same in closed position, and means operated by said shaft for engaging with said switch during a portion only of its revolution for closing the switch and operating upon reversal to open the switch.

5. A switch adapted to control an electrical circuit, said switch comprising two arms, one of general bell-crank form pivotally supported to permit it to be rocked and the other arm pivoted to the bell-crank, a rotatable shaft, means operated by the shaft for raising said last-referred-to arm, and a stop-bearing for said last-referred-to arm, for the purpose set forth.

[Claims 6 to 65 not printed in the Gazette.]

1,190,019. DEVICE FOR HEATING AND APPLYING COATING MATERIAL. ELBERT E. SEALE, Houston, Tex. Filed May 24, 1915. Serial No. 30,251. (Cl. 137—63.)



A device of the character described including a container for asphalt and the like, a furnace arranged adjacent thereto, a flexible tube leading from the container, means for applying the heated asphalt carried by the free end of the tube, a fluid compressor communicating through a suitable conduit with the container, and a conduit leading from said container and discharging into said furnace.

1,190,020. [WITHDRAWN.]

1,190,021. EMBROIDERING-MACHINE. GOTTWALT SIEBER, Plauen, Germany, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Filed May 6, 1915. Serial No. 26,441. (Cl. 112—7.)



1. In an embroidering machine, the combination with the tambour frame, of a device for preventing the line of connection of two successive portions of a continuous design from becoming distorted or deranged during the feeding of the fabric, and comprising longitudinal end members to which the edges of the fabric above and below said line are removably fastened, means for temporarily securing said members against longitudinal displacement and means for stiffening the portion of the fabric located between said members, said device including said members and said last named means being adapted to move along with the fabric when fed and to be removed therefrom after a new portion of the fabric has been brought into embroidering position and stretched.

2. In an embroidering machine, the combination with the tambour frame, of a device for preventing the line of connection of two successive portions of a continuous

design from becoming distorted or deranged during the feeding of the fabric, said device being adapted to be fastened to the tambour frame both prior to and after the completion of the feeding of the fabric and to move along with the fabric while the latter is being fed and comprising longitudinal stiffening members to which the edges above and below the line of connection of two successive portions of the design are fastened, means for temporarily securing said members in position, means for stiffening the part of the fabric between said members, and means for temporarily fixing said last named means in position.

3. In an embroidering machine, the combination with the tambour frame, of longitudinal members carried by the tambour frame and by which the fabric is fastened and stretched during the embroidering operation, a device for preventing the line of connection of two successive portions of the design from becoming distorted or deranged during the feeding of the fabric, said device being adapted to be fastened to the tambour frame both prior to and after the completion of the feeding of the fabric and to move along with the fabric while the latter is being fed and comprising longitudinal transportable end members to which the parts of the edges above and below the line of connection of two successive portions of the design are fastened, means for stiffening the part of the fabric located between said members, and means for temporarily fixing said last named means to the frame.

4. In an embroidering machine, the combination with the tambour frame, of longitudinal adjustable members carried by said tambour frame and by which the fabric is fastened and stretched during the embroidering operation, transportable end members capable of being temporarily fastened to said longitudinal members and including means for fastening the fabric thereto, and a stiffening adjustable frame capable of being removably fastened to said end members and adapted to be moved together with the latter and the fabric while said fabric is fed from one end of the tambour frame to the other, said stiffening frame and end members serving to prevent the line of connection of two successive portions of a continuous design from becoming distorted or deranged during the feeding of the fabric.

1,190,022. EMBROIDERING-MACHINE. GOTTWALT SIEBER, Plauen, Germany, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Filed May 6, 1915. Serial No. 26,442. (Cl. 112—7.)



1. A tambour frame for embroidering machines, comprising flexible endless conveyers extending along the longitudinal sides of said frame and fastening means on said conveyers for removably fastening the fabric thereto.

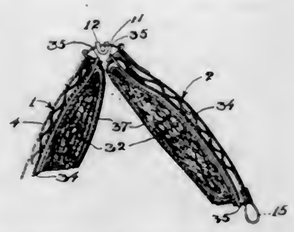
2. A tambour frame for embroidering machines, comprising guides extending along the longitudinal sides of said frame, flexible endless conveyers guided in said guides and fastening means on said conveyers for removably fastening the fabric thereto.

3. A tambour frame for embroidering machines, comprising guides extending along the longitudinal sides of said frame, flexible endless conveyers for the fabric guided in said guides and means for adjusting the guides relative to one another so as to stretch the fabric.

4. A tambour frame for embroidering machines, comprising guides extending along the longitudinal sides of said frame and adjustable relative to one another, flexible endless conveyers for the fabric guided in said guides and fastening means on said conveyers for fastening the fabric thereto.

5. A tambour frame for embroidering machines, comprising guides extending along the longitudinal sides of said frame, flexible endless conveyers for the fabric guided in said guides, the ends of the latter being slanting so that the distance between the opposite conveyers away from their ends is gradually increased and the fabric is automatically stretched during the feeding movement thereof.

1,190,023. PACK-SADDLE. WALTER B. SIMONS, Buffalo, N. Y. Filed Mar. 26, 1915. Serial No. 17,206. (Cl. 54—37.)



1. A pack saddle of the character described comprising a pair of curved sections hinged together, flanges extending inwardly from each of the sections, said flanges being apertured, pads arranged to be secured between the flanges, springs carried by the pads engaging in the apertures to hold the pads in place, and means to support a plurality of articles on the saddle.

2. A pack saddle of the character described comprising a pair of frames, links hingedly securing the frames together, corrugated plates carried by the frames, flanges extending inwardly from the frames, pads, springs carried by the pads, extensions on the ends of the springs, removable casings inclosing the pads, the flanges on the frames engaging the springs for holding the pads in place, and flexible means carried by the frames to support the articles on the corrugated plates.

3. A pack saddle of the character described comprising a pair of frames hinged together, cinch straps carried by the frames to support the same on the draft animal, pads carried by the frame, a casing surrounding the pads to protect the back of the animal, loops at the lower edge of the frame, to support implements, flanges on the side edges of the frames having slots therein, chains engaging the slots, bars supported by the chains, flexible members arranged to support articles on the saddle, and flexible means holding the pads and casing to the frame.

4. A pack saddle of the character described including a pair of frames hingedly connected at their upper ends, pads secured to the under side of the frame, means on the outer sides of the frame to secure packs thereto, bars removably secured to the frame to support the packs and prevent the same from rocking during the motion of the animal, and springs removably holding the pads to the frame.

5. A pack saddle of the character described including a pair of frames hinged together, said frame being arcuate to conform to the backs of pack animals, pads removably carried by the under sides of the frames, and springs holding the pads to the flanges of the frame, flexible members secured to the frame to support packs on the exterior thereof, bars arranged to prevent the packs from rocking, and flexible members carried by the bars to adjustably secure the same to the frame.

1,190,024. APPARATUS FOR PLUGGING WELLS. CHARLES EDWARD SITZMAN, Taft, Cal. Filed Dec. 30, 1915. Serial No. 69,368. (Cl. 57—13.)

1. An apparatus for plugging wells comprising relatively movable complementary sections portions of which are semi-circular and interlock to form a cylindrical material container, and means for moving one of the sections relative to the other to empty the contents thereof.



2. An apparatus for plugging wells comprising relatively movable complementary sections portions of which are semi-circular and interlock to form a cylindrical material container, means for moving one of the sections relative to the other to empty the contents thereof, and a latch device carried by the last-named means for releasably retaining said sections closed.

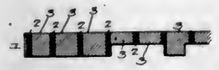
3. An apparatus for plugging wells comprising relatively movable complementary sections portions of which are semi-circular and interlock to form a cylindrical material container, means for moving one of the sections relative to the other to empty the contents thereof, and a connection between said sections for limiting said relative movement.

4. An apparatus for plugging wells comprising a container including sections having relative movement, means for moving one of the sections relative to the other to empty the contents thereof, a connection secured to each section for limiting said relative movement, and releasable means for actuating said connection to retain said sections closed.

5. An apparatus for plugging wells comprising a container including relatively movable sections, means for maintaining said sections in closed position and released, by contact of one of the sections with the bottom of a well, to permit relative movement of said sections, and means for raising the other section after the last-named means is released whereby the contents of the container is discharged.

[Claims 6 to 22 not printed in the Gazette.]

1,190,025. BATTERY-SEPARATOR. JAMES M. SKINNER, Philadelphia, Pa., assignor to Philadelphia Storage Battery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 31, 1914. Serial No. 879,841. (Cl. 204—29.)

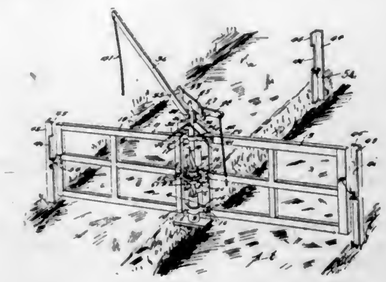


1. A battery separator consisting of a wooden plate in which the natural laminations lie in planes substantially at right angles to its plane.

2. A battery separator consisting of alternated layers of relatively high and low resistance materials extending in planes substantially at right angles to the plane of the separator.

3. A battery separator consisting of alternated layers of relatively high and low resistance materials extending in planes substantially at right angles to the plane of the separator, the low resistance layers being thicker than those of the high resistance material.

1,190,026. FARM-GATE. CHARLES SLYFIELD, Chaseville, Fla. Filed Dec. 10, 1915. Serial No. 66,107. (Cl. 39—31.)



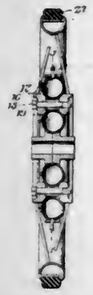
1. In combination, a vertical standard adapted to be positioned between two parallel roadways and having a central twisted or auger section, a pair of gate sections arranged end to end and extending in opposite directions to close both roadways, means connecting the adjacent ends of the gate sections and having cylindrical collars fitting the standard above and below the twisted or auger section, means connecting the central parts of the adjacent ends of the gate sections and having collars, a ratchet sleeve operable on the twisted section of the standard and being swiveled in the collars of the central connecting means, means to raise the gate sections as one body causing the ratchet sleeve to rotate and move upwardly on the twisted section of the standard, and means to hold the ratchet sleeve fast with the central connecting means, when the raising means are released, causing the gate sections to gravitate and rotate to an open or closed position.

2. In combination, a vertical standard adapted to be positioned between two parallel roadways and having a central twisted or auger section, a pair of gate sections arranged end to end and extending in opposite directions to close both roadways, means connecting the adjacent ends of the gate sections and having cylindrical collars fitting the standard above and below the twisted or auger section, means connecting the central parts of the adjacent ends of the gate sections and having collars, a ratchet sleeve operable on the twisted section of the standard and being swiveled in the collars of the central connecting means, means to raise the gate sections as one body causing the ratchet sleeve to slide and rotate on the twisted section of the standard upwardly, and means to hold the ratchet sleeve fast with the central connecting means, when the raising means are released, causing the gate sections to gravitate and rotate to an open or closed position, and abutment posts for the free ends of the gate sections to limit the gate sections in open and closed positions.

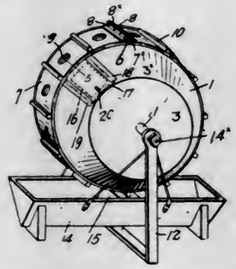
1,190,027. AUTOMOBILE-WHEEL. DAVID SMAIL, Moscow, Iowa. Filed Sept. 24, 1915. Serial No. 52,471. (Cl. 152—46.)

A wheel structure of the class described comprising a felly, a resilient tire mounted on the outer side of the felly, a two-part hub having cheeks provided with openings concentrically of the hub, ring-like inflatable elements arranged within the openings, annular members disposed on opposite sides of the cheeks, bolt members passed centrally through the inflatable ring-like members and also

passed through the annular members, sleeves surrounding the bolt members and located centrally of the ring-like inflatable members, and spokes connecting the annular members to the felly.



1,190,028. HOG-FEEDER. HENRY SMITH, Listowel, Ontario, Canada. Filed Apr. 14, 1916. Serial No. 91,108. (Cl. 119—53.)



1. A hog feeder comprising a drum freely mounted in suitable bearings and provided with peripheral orifices and a band passing around the exterior periphery of the drum and provided with orifices designed to be brought more or less into alinement with the orifices of the drum, and cross cleats secured at suitable intervals apart to the band.

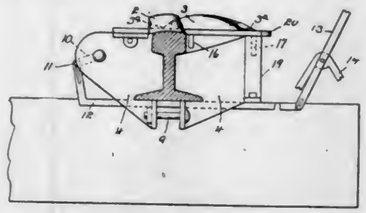
2. A hog feeder comprising a drum freely mounted in suitable bearings and having peripheral orifices, a split band secured around the periphery of the drum and provided with orifices designed to be brought more or less into alinement with the orifices of the drum, detachable means for securing the ends of the split band together, and means carried by the band with which the head of the animal engages to impart free rotary movement to the drum.

3. In a hog feeder, the combination with the trough having a central block, of a drum freely mounted with its face extending longitudinally of the trough and directly above the central block and having peripheral orifices, and means carried exteriorly of the drum with which the head of the animal engages to impart free rotary movement thereto.

4. In a hog feeder, the combination with the trough having a central block, of a drum freely mounted with its face extending longitudinally of the trough and directly above the central block and having peripheral orifices, and cross cleats carried by the drum with which the head of the animal engages to impart rotary movement thereto and designed to pass in close contact with the upper face of the block of the trough.

5. In a hog feeder, the combination with the trough having a central block having outwardly and downwardly inclined sides and a concaved upper face, of a drum freely mounted with its face extending longitudinally of the trough and directly above the central block and concentric with the concaved upper face of the block and having peripheral orifices, and means carried exteriorly of the drum with which the head of the animal engages to impart free rotary movement thereto.

1,190,029. DERAILER. EZRA SMYTH, Portland, Oreg. Filed July 8, 1915. Serial No. 38,751. (Cl. 104—127.)



1. A car-wheel derailing device, including a skid-like member or shoe adapted to be applied to a track-rail, said shoe having upon its upper surface cam-like elevations, one cam-like elevation being at a rear corner-edge thereof and itself having a rounded or convex upper surface alining with the rail, with its inner lateral edge beveled and tapered toward the opposite or off edge at its forward end, the other cam-like elevation also having a rounded or convex upper surface and extending diagonally of said shoe, with its inner lateral edge substantially parallel with the corresponding edge of the aforesaid cam-like elevation, its forward end extending considerably beyond and to a point nearly in alinement with the forward end of the aforesaid cam-like elevation, said cam-like elevation having their upper convex surfaces produced upon curved lines whose terminals at one end of the shoe are at opposite points, the convex surface of one of said cam-like elevations having its opposite terminal about midway the convexity of the other cam-like elevation.

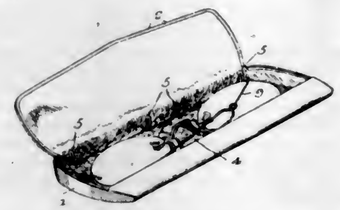
2. A derailer, including a pivotally supported shoe, means for its attachment to a track-rail, said attaching means having a pocket, said shoe having pendent lugs upon its underside and at its lateral free edge, said lugs extending downwardly alongside of the track-rail and received by said pocket, respectively.

3. A car-wheel derailing device, including a pivotally supported skid-like member or shoe, means for its attachment to a track-rail said means being provided with a pocket, said shoe having upon its upper surface cam-elevations, one cam-like elevation being at a rear corner edge thereof and itself having a rounded convex upper surface alining with the rail, with its inner lateral edge beveled and tapered toward the opposite or off edge at its forward end, the other cam-like elevation also having a rounded or convex upper surface and extending diagonally of said shoe with its inner lateral edge substantially parallel with the corresponding edge of the aforesaid cam-elevation, its forward end extending considerably beyond and to a point nearly in alinement with the forward end of the aforesaid cam-like elevation, said shoe having pendent lugs upon its underside and at its lateral free edge, said lugs extending downwardly alongside of the track-rail and received by said pocket, respectively.

1,190,030. EYEGLASS-CASE. ROYLE B. SNOW, Juddhaven, Ontario, Canada. Filed May 22, 1915. Serial No. 29,859. (Cl. 206—6.)

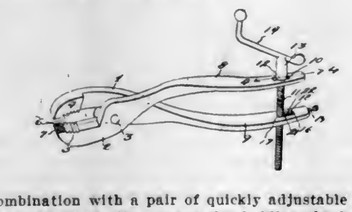
1. In combination with a body, lining and hinged back of an eyeglass case, projections in the body spaced from the back thereof and of such length as to cause their points to be engaged by the cover when the cover is closed.

2. In combination with a body, hinged back and lining of an eyeglass case, a guard wire arranged in the bottom of the body between the bottom and the lining and provided with projections extending through openings in the bottom lining and arranged in spaced relation to the back of the case, said projections being of such length as to have their points engaged by the cover when the cover is closed.



3. In combination with a body, a hinged back and lining of an eyeglass case, a guard formed from a strand of wire and disposed between the lining and bottom of the case, said guard having curved arms located adjacent the ends of the case, and loops in the portion of the wire connecting the arms forming projections extending upwardly through the lining and adapted to contact with the cover adjacent its connection with the body.

1,190,031. ATTACHMENT FOR A PAIR OF PLIERS. DAVID SPALDING, Lonerock, Oreg. Filed Jan. 25, 1916. Serial No. 74,147. (Cl. 81—45.)

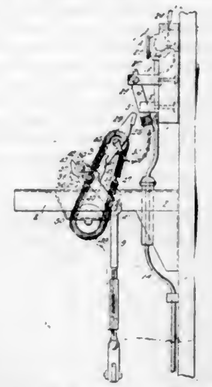


In combination with a pair of quickly adjustable pliers having a pair of handles, means for holding the handles in different adjusted positions for holding the jaws of the pliers in different adjusted positions, said means, comprising elongated openings in said handles, a screw loosely extending through the opening of one handle and being threaded in engagement with one end of the opening of the other handle, and means for disengageably holding said screw in engagement with the threaded end of said opening, whereby the screw may be quickly adjusted, said last mentioned means comprising a block guided in the opening having the threads at one end, said block having a semi-circular face provided with threads to engage the threads of the screw opposite the threads of said opening, a pin extending axially through the end of the handle having the block and being connected to the block, and a spring interposed between the block and one end of the opening, in which said block is mounted.

1,190,032. AUTOMATIC ELECTRIC SWITCH. SIDNEY S. STAHL, Connellsville, Pa. Filed Nov. 27, 1915. Serial No. 63,865. (Cl. 175—287.)

1. The combination of a switch including a contact element movable to and from closed circuit position, an arm movable in one direction to impart a blow to the movable element to throw the same to closed circuit position, a flexible member connecting the arm with the said movable element for jerking the latter to open circuit position, a device for initially moving the arm to a predetermined position, and means for quickly moving the arm in the same direction from the said predetermined position.

2. The combination of an electric switch including a movable contact element, an arm, a flexible member connecting the arm and element for moving the latter in one direction, said arm being so positioned with respect to the element as to impart a blow thereto and move the same in the opposite direction, and quickly acting means associated with and operating the arm.



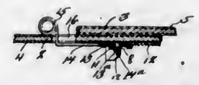
3. The combination of an electric switch including a movable element, a swinging arm having its outer end movable in the path of the said movable element for imparting a hammer blow thereto, a flexible connection between the arm and said element for moving the same in a direction opposite from that due to the hammer blow, an actuator, a lost motion connection between the actuator and arm, whereby the actuator moves the arm initially in both directions, and means energized during the initial movement of the arm and active after the arm reaches a predetermined position for suddenly completing the movement of the arm.

4. The combination of an electric switch including a movable element, a swinging arm having its outer end movable in the path of the said movable element for imparting a hammer blow thereto, a flexible connection between the arm and said element for moving the same in a direction opposite from that due to the hammer blow, an actuator, a lost motion connection between the actuator and arm, whereby the actuator moves the arm initially in both directions, and a spring means connected with the arm and extensible during the movement of the arm to a predetermined position and adapted to contract to quickly continue the movement of the arm from such position.

5. The combination of a switch including a swinging blade element, a horizontally extending metallic post on which the element is pivoted, a contact disposed under the post and so arranged that the movable contact will not engage therewith when hanging loosely, a movable arm arranged to strike the said element to throw the same to closed circuit position, a flexible member connecting the arm and element for moving the latter to open circuit position, means for moving the arm to a predetermined position, and means for automatically and quickly continuing the movement of the arm from such position.

[Claims 6 to 8 not printed in the Gazette.]

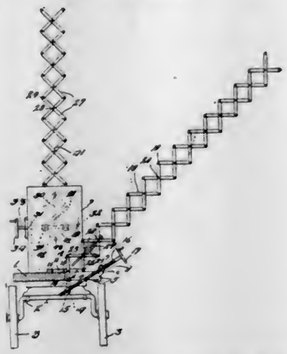
1,190,033. FASTENER FOR SHOES AND THE LIKE. STEVE STARCOVIC, Sedro Woolley, Wash. Filed Jan. 11, 1916. Serial No. 71,521. (Cl. 24—205.)



In combination, a pair of overlapping plates embedded in opposite portions of an upper of a shoe, one of said plates having a pair of spaced apertures, the other plate having a pair of spaced lugs adapted to enter the apertures, and provided with notches, a pair of pivoted levers

having curved portions to simultaneously engage said notches to hold the lugs in said apertures, and means to yieldably hold the curved portions of the lever in engagement with said notches, a slide bar connected to said yieldable means and having pivotal connections with the inner ends of said levers, one end of the slide bar having an enlargement, the plate having the levers having an opening through which the enlarged end of the slide bar engages, said enlargement adapted to be pushed outwardly through the opening and partially engage one end of the opening, thereby partially bending the slide bar to securely hold the curved portions of the levers in engagement with the notches.

1,190,034. EXTENSIBLE FIRE-LADDER. STEVE STARCOVIC, Sedro Woolley, Wash. Filed Jan. 11, 1916. Serial No. 71,522. (Cl. 227—17.)



In combination, a truck body, a frame on said body and having upwardly and laterally protruding extensions, one being directly opposite the other, said frame having slots extending correspondingly with the extensions and into the extensions, an extensible and collapsible ladder extending laterally and upwardly, said ladder comprising two sets of lazy tong bars, one set being in spaced parallel relation to the other, the corresponding bars of both sets having tread step connections, the lowermost bars of both sets having their pivotal connection engaging said slots, one of the lowermost bars of each set being pivoted to the frame, a lever pivoted in the frame and having a fork at its upper end and the single arm at its lower end, one end of each of the other lowermost lazy tong bars being connected to each arm of the fork, a collar swiveled to the lower end of the single arm of the forked lever, a bracket on the body, a collar swiveled in said bracket, and a screw threaded through said collars, for extending and collapsing the ladder.

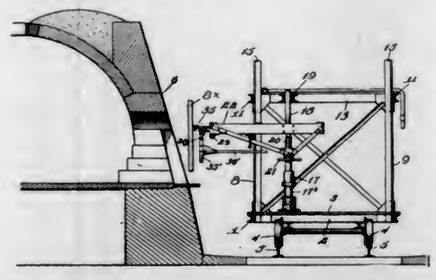
1,190,035. CAGE FOR BALL-BEARINGS. FRANK STARIN, Springfield, Mass. Filed Dec. 3, 1915. Serial No. 64,828. (Cl. 64—59.)



1. A cage for ball bearings consisting of a ring and spaced retaining lugs extending integrally from the inner edge of one face of the said ring in an outward oblique direction relative to the plane of the ring, and terminating at its outer end in an inwardly extending flange approximately parallel with the plane of the said ring, the opposite edges of adjacent lugs being concave for receiving and retaining a ball between them and allowing free rotation thereof.

2. A cage for ball bearings consisting of a ring having one face concave, and spaced retaining lugs each having a shank and a flange, the shank being integrally connected with the inner edge of the said concave ring face and extending outwardly at an obtuse angle from the said concave ring face, the said flange extending from the outer edge of the shank in an inward direction and standing approximately parallel to the plane of the ring, the opposite edges, the shank and flanges of adjacent lugs being concaved for receiving and retaining a ball and allowing the free rotation thereof.

1,190,036. DOOR-HANDLING DEVICE. DANIEL B. STAUFT, Uniontown, Pa. Filed Aug. 2, 1915. Serial No. 43,295. (Cl. 212—4.)



1. In a device for handling coke oven doors, the combination of a wheeled supporting frame, a post upon the frame, a crane arm mounted upon the post for vertical adjustment and horizontal swinging motion, said arm being provided with a guideway, an extension arm movable in said guideway, means for vertically adjusting the crane arm, means for moving the extension arm in and out of the guideway, door engaging means on the outer end of the extension arm, and a swinging door controlling device on said extension arm.

2. A device of the character described comprising a wheeled truck, a vertically disposed screw shaft, a jack carrying said mast and operative to raise and lower the same, a crane carried by the mast, means engaging the threaded portion of the shaft for supporting the crane and raising and lowering the same in combination with or independently of the jack, and door engaging means supported by and adjustably mounted on the crane.

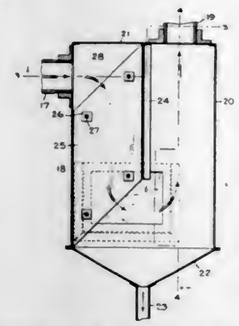
3. A device of the character described including a wheeled support, a vertical post upon the support, means for vertically adjusting said post, a crane arm adjustably mounted on the post, means for adjusting said crane arm, an extension arm upon the crane arm provided with a door engaging hook, a presser head pivoted to and hanging pendent from the hook, and a lever for operating said presser head.

4. A device of the character described comprising a wheeled support, a post upon the support, a crane arm pivotally and adjustably mounted upon the post, said arm comprising spaced channeled beams forming a guideway and a slot communicating therewith, an extension arm provided with wheels or rollers and movable in said guideway, said arm being also provided with rack teeth upon the underside thereof, a gear arranged within said guide slot and operative for engagement with said rack teeth, a door engaging hook upon the outer end of the extension arm, and a door engaging device pivotally supported from said hook.

5. A device of the character described comprising a transportable frame, a mast upon the frame, a crane arm adjustably and pivotally supported by said mast, an extension arm upon said crane arm, means for controlling

said extension arm, door engaging means upon the extension arm, and means upon the extension arm for forcing the door to a closed position.

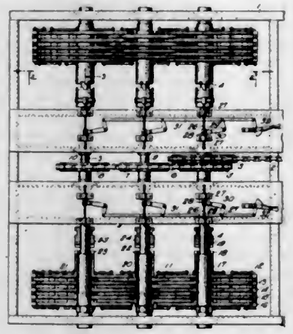
1,190,037. SEPARATOR. HENRY W. STOCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed June 19, 1915. Serial No. 35,170. (Cl. 83—90.)



1. In a separator, the combination of a casing having an inlet and an outlet, a partition member in the casing for causing the substance flowing through the casing to change its direction of flow, and a plurality of plates arranged in parallel relation to each other in the casing in advance of said partition member as regards the direction of flow and extending across the space between the partition and the casing wall, said plates being arranged close together and having their lower edges beveled so as to direct the fluid condensed on them toward the casing wall and out of the path of the flowing substance.

2. In a separator, the combination of a casing having an inlet opening and an outlet opening arranged adjacent one end thereof and a drain opening at the other end, a partition member in the casing arranged between said two openings and attached to the end of the casing adjacent them, said partition members extending to a point short of the other end of the casing, and a plurality of parallel plates arranged between the partition members and the casing on the side of the partition member next to the inlet opening and extending entirely across the space between them, said plates being arranged close together and having their lower edges beveled so as to direct the fluid condensed on them toward the casing wall and out of the path of the flowing substance.

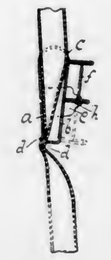
1,190,038. TRACTION DEVICE FOR MOTOR-VEHICLES. SAMUEL SYLVESTER, Lisbon Falls, Me. Filed Oct. 23, 1915. Serial No. 57,533. (Cl. 21—150.)



1. In a tractor of the character described, a frame, a plurality of shafts arranged on said frame, a traction wheel arranged adjacent each end of each of said shafts, driving means connected with said shafts for rotating the same, means for connecting said shafts with said traction wheels, and a chain mounted on the sets of traction wheels positioned adjacent each end of said shafts, said chains comprising a plurality of links and pintle members for connecting said links, said pintle members being formed with a bowed-down section overlapping said wheels, whereby the chains are prevented from accidentally moving off of the wheels.

2. In a tractor of the character described, a frame, a plurality of traction wheels, driving means connected with said wheels for rotating the same, and a chain for said wheels, said chain being formed from a plurality of links and pintles for connecting the links, said pintles comprising a pair of parallel bars merging into bracing arms and a depending loop acting as a guard for preventing the removal of the chain.

1,190,039. CLAMP FOR FLEXIBLE TUBES. CHARLES A. TATUM, Middletown, N. J., assignor to Whitall Tatum Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 22, 1916. Serial No. 73,528. (Cl. 137—6.)



1. A clamping device for flexible tubes, comprising two arms formed of a single sheet of metal, and having an aperture for a tube to pass through, the forward portions of the arms including jaw members one beyond the other for gripping the adjacent portions of the tube, and a double acting cam lever with a handle said lever being swingingly mounted on one of the arms for coöperation with the other arm.

2. A clamping device for flexible tubes, comprising two arms yieldingly connected together for gripping a tube at their forward ends, and having an aperture for the tube to pass through, a lever swingingly mounted on one of the arms with upper and lower projections to form respectively a handle and a double acting cam for coaction with the other arm.

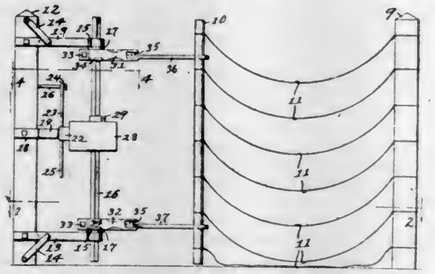
3. A clamping device for flexible tubes, comprising two arms yieldingly connected together for gripping a tube at their forward ends, and having an aperture for the tube to pass through, and a substantially I shaped lever swingingly mounted on one of the arms the upper portion of which forms a handle while the lower projecting ends include a double acting cam for coaction with the other arm.

1,190,040. GATE. JEFFERSON D. TEETERS, Newton, Nebr. Filed Sept. 22, 1915. Serial No. 51,975. (Cl. 39—74.)

1. The combination with two fence posts, of a gate, comprising a plurality of wires secured to one of said posts, a rod carried by said wires, a vertical shaft rotatably mounted on the other post, a gear on said shaft, upper and lower hooks carried by said shaft, a pinion enmeshed with said gear, means for supporting said pinion, a lever provided with arms of unequal lengths for rotating said pinion to rotate said shaft to draw said rod, when engaged by said hooks, toward said shaft, and a pin fixed in the path of the longer of said lever arms to limit lever movement.

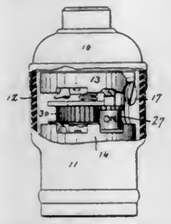
2. In combination with two spaced posts causing an

interruption in a fence, a gate, comprising a plurality of wires secured to one of said posts, a vertical rod secured to the free ends of said wires, a vertical shaft rotatably carried by the other post, upper and lower arms adjustably secured to said shaft, a hook pivotally connected



with each arm, a spring for holding each hook in desired relationship with the respective arm, a gear on said shaft, a pinion enmeshed with said gear, means for supporting said pinion, and means for actuating said pinion to rotate said shaft to draw said rod, when engaged with said hooks, toward said shaft to apply tension to said wires.

1,190,041. ELECTRIC-SWITCH INDICATOR. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 4, 1913. Serial No. 771,712. (Cl. 173—354.)



1. A switch comprising an inclosing casing, a rotary switch piece within the same, an insulating member inclosing the moving with said switch piece and means in connection with said insulating member for indicating the open or closed position of the switch.

2. A switch comprising an inclosing casing, a rotary switch piece with the same, an insulating member inclosing and moving with said switch piece and means in connection with said insulating member for indicating within the casing the open or closed position of the switch, said casing being apertured to permit the inspection of the indicator.

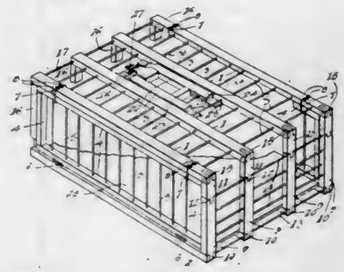
3. An electric lamp socket comprising line and lamp terminals, a rotary switch piece interposed between the same, an independent rotary indicator for indicating the "on" or "off" position of the switch and gearing operatively connecting said indicator to the switch piece.

4. An electric lamp socket comprising line and lamp terminals, a rotary switch piece interposed between the same, an independent rotary indicator for indicating the "on" or "off" position of the switch and gearing operatively connecting said indicator to the switch piece, a socket casing comprising cap and shell, the latter being apertured in register with said rotary indicator to permit the inspection thereof, substantially as described.

5. A switch comprising a rotary switch piece, an insulating ring surrounding the periphery of the switch piece, a rotary indicator disclosing the open or closed position of the switch and an operative connection between said ring and indicator.

[Claims 6 to 14 not printed in the Gazette.]

1,190,042. FOLDING CRATE. ALONZO C. THOMPSON, Mount Union, Pa. Filed Mar. 12, 1915. Serial No. 13,930. (Cl. 217—46.)



1. A folding crate having sides hinged to fold inwardly, a bottom member, a top member, and end members hinged to the top and bottom members, one of said hinges being formed of a continuous strip of metal bent upon itself and extending into slots in the adjacent vertical end member and provided with a continuous rod extending through said slots and hinge, the continuous strip being connected to the bottom of the crate.

2. A folding crate made up of longitudinal bars and vertical bars connected by wire rods, the bottom being provided at one end with a continuous sheet metal hinge, bent upon itself to form a plurality of hinge members, said hinge members and the vertical members of the adjacent end being connected by means of a pintle rod, and the plate continued across the bottom of the crate and secured thereto.

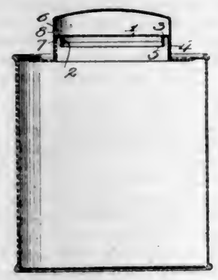
3. A folding crate comprising hinged sides adapted to be folded inwardly, top and bottom members, hinged end members, said end members provided at one end with sectional vertical bars connected together by mortise and tenon hinges, and the opposite end member being provided with a continuous metal strip hinge, said strip being bent upon itself to form a plurality of hinge members mounted in slots in the ends of the vertical bars and connected by means of a continuous pintle rod, said metal strip being secured in slots formed in one of the end members of the crate.

4. A folding crate comprising hinged sides adapted to be folded inwardly, top and bottom members, hinged end members, said end members provided at one end with sectional vertical bars connected together by mortise and tenon hinges, the opposite end member being provided with a continuous metal strip hinge, said strip being bent upon itself to form a plurality of hinge members to be mounted in the slots formed in the ends of the vertical bars and the end members, a pintle rod extending through the ends of the end members for holding the continuous strip therein, said metal strip being secured to the bottom of the crate.

5. A crate including end members, each provided at one end with slots, other members, means hinging the other ends of said end members to one of said other members, hinges connecting the slotted ends of said end members to the second of said other members, each of said hinges being formed of a continuous strip of metal secured to said second member and bent to provide a plurality of leaves fitting in said slots, and rods passing through said end members and said leaves.

1,190,043. MEANS FOR LOCKING CANS. JAMES HENRY THOMPSON, South Melbourne, and EMIL STEPHEN GOETZ, West Melbourne, Victoria, Australia, assignors to Randal James Alcock, Melbourne, Australia. Filed May 21, 1915. Serial No. 29,574. (Cl. 220—59.)

1. Improved means for locking cans consisting of a locking lid formed with a downwardly projecting flange, a lateral projection extending from the flange, said lid being adapted to be pressed into position into the mouth of the can from the underside of the top before the can is completed and a lip on the mouth formed with a downwardly projecting flange against which said lateral projection abuts.



2. Improved means for sealing cans formed with a discharge mouth, comprising a sealing lid formed with a downwardly projecting flange, a lateral projection extending from said flange, said lid being adapted to be pressed into the mouth of the can from the underside of the top before the can is completed, and a lip on the mouth formed with a downwardly projecting flange against which said lateral projection on the lid abuts, said lid being depressible within the can to unseal the latter.

3. Improved means for locking cans consisting of a locking lid formed with a downwardly projecting flange with a lateral projection and adapted to be pressed into the mouth of the can from the underside of the top of the can before the latter is completed, and a lip on the mouth formed with a downwardly projecting flange against which said lateral projection on the lid abuts, said locking lid being depressible within the can to unseal the latter and when removed from the can, adapted to be reversed and used as a closure lid applicable from the outside of the can.

4. Improved means for sealing cans having elliptical mouths comprising a downwardly projecting flange on the mouth, an elliptical lid formed with a lateral projection and adapted to be pressed in sealed position into the mouth from the underside of the top to seal the can, said lid being adapted to be depressed to unseal the can and turned vertically so that its smallest diameter is opposite the greatest diameter of the mouth of the can when the lid is to be removed.

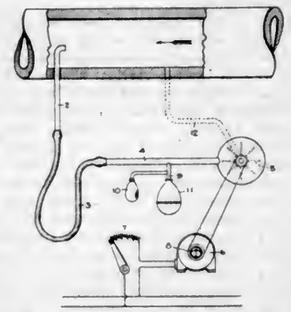
5. A fraud-preventive closure for vessels comprising a sealing closure applicable in sealing position only before the vessel is completed, and means formed on the closure for preventing the latter from being withdrawn from the vessel out of sealing position, while permitting the closure to be depressed into the vessel to unseal the latter, said closure being removable from the vessel when unsealed to provide a cover for the latter applicable from the outside thereof.

1,190,044. MEASUREMENT OF SMALL PRESSURES. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 31, 1912. Serial No. 712,439. (Cl. 73—31.)

1. The method of measuring small fluid pressures, which consists in admitting said pressure to a transparent chamber, introducing a visible gas, setting up in said chamber a counter-pressure sufficient to check the movement of said visible gas and measuring the energy required to produce said counter-pressure.

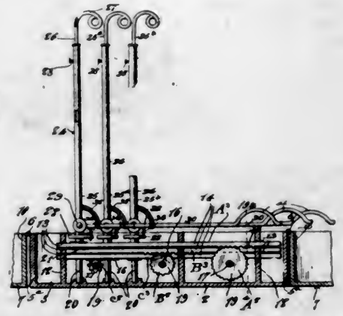
2. Means for measuring small fluid pressures, comprising a pressure collecting device, a chamber connected therewith, a counter-pressure producing device connected with said chamber, means for operating the same, devices for indicating the value of such counter-pressure, and means for introducing a puff of visible gas into said chamber.

3. Means for measuring small fluid pressures, comprising a Pitot tube, a glass tube having one end connected therewith, a rotary fan blower connected with the other end of said tube, a motor for driving said fan, means for indicating the pressure set up by said fan blower, and means for injecting into said tube a puff of smoke.



4. Means for measuring small fluid pressures, comprising a Pitot tube, a glass tube having one end connected therewith, a rotary fan blower connected with the other end of said tube, an electric motor for driving said fan, means for regulating the speed of said motor, means for indicating its speed, a branch pipe leading from said tube, and receptacles connected therewith for holding chemicals adapted to produce a puff of smoke in said branch pipe and tube.

1,190,045. MUSIC-LEAF TURNER. ARMAND A. TIBBITS, South Omaha, Nebr. Filed Mar. 27, 1915. Serial No. 17,447. (Cl. 84—17.)



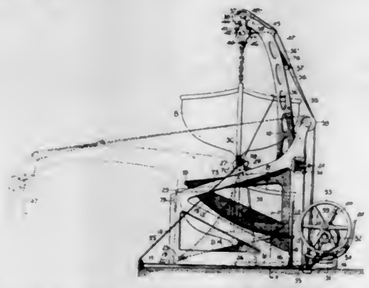
1. A device of the character described including a casing, bars slidably mounted in said casing, racks formed on the sides and under faces of the bars, vertical shafts journaled within said casing, gears carried by said vertical shafts and adapted to mesh with the racks upon the sides of said bars, disks secured to the free ends of said vertical shafts and spaced from the gears, tubular standards mounted in the vertical shafts, music leaf holders secured to the ends of said tubular standards, horizontal shafts journaled in said casing, gears mounted on said horizontal shafts and adapted to mesh with the racks upon the under faces of the bars, thumb pieces carried by the free ends of said horizontal shafts to rotate said horizontal shafts to move the bars laterally of the casing to rotate the music leaf holders about a vertical axis.

2. In a device of the character described including a casing, bars slidably mounted in said casing, vertical shafts journaled in said casing, racks formed on said bars, gears carried by said vertical shafts to mesh with said racks, means to move the bars laterally of the casing to rotate said vertical shafts, disks secured to the upper ends of said vertical shafts and provided with a side aperture therein, said vertical shafts provided with a recess in the ends thereof, tubular standards having extensions formed

thereon to be received within the recesses, arms pivoted to said tubular standards, lugs carried by said arms and engaging the apertures of the disks, and means carried by the ends of the arms and tubular standards to receive the corners of leaf music.

3. In a device of the character described including a casing, bars slidable within said casing, racks formed on said bars, means for manually operating said bars to slide them laterally of said casing, vertical shafts journaled in said casing, gears carried by said shafts and adapted to mesh with the racks of said bars, disks provided with side apertures carried by said vertical shafts, said vertical shafts provided with recesses in the ends thereof, tubular standards having extensions formed on the lower ends to be received by said recesses, arms pivoted to said standards adjacent the lower ends of the latter, pins carried by said arms and engaging the apertures of the disks, uprights adjustably secured to said tubular standards, said uprights provided with the ends curved and bifurcated to form clips, said arms provided with their free ends curved and slotted to form clips, said last mentioned clips adapted to receive one corner of leaf music and the first mentioned clips to receive the opposite corner of the leaf music.

1,190,046. AUTOMATIC DAVIT. RICHARD TJADER, New York, N. Y. Filed Dec. 12, 1914. Serial No. 876,802. (Cl. 9—22.)



1. In an automatic davit, the combination of a pair of vertically arranged rigid supporting brackets each having near its base a track member and having sockets formed at the upper and lower ends thereof, a pair of davit arms supported upon said brackets and each including a rocker member coöperating with the track member of the supporting bracket of such arm, said coöperating rocker and track members having relatively curved and straight coacting surfaces, each rocker member furthermore having at its ends a pair of downwardly projecting toes adapted to coöperate at the ends of the rocking movements with the aforesaid sockets, and a flexible flat metallic strap extending between said engaging surfaces and connected at its opposite ends to the rocker and track members respectively, said flat strap receiving directly the impact and rolling friction between the rocker and the tread member.

2. In an automatic davit, the combination of a vertical rigid supporting bracket including a track member adjacent its base, a rear connecting web, a pair of spaced parallel side bars extending forwardly from said rear web and connecting bar at the outer or front portion, a davit arm supported upon said bracket, said arm including a rocker adapted to roll along said track member and adapted to be limited in its outward movement by said connecting bar, and a resilient member connected to said rear web acting normally upon the davit arm to initiate its outward rolling movement.

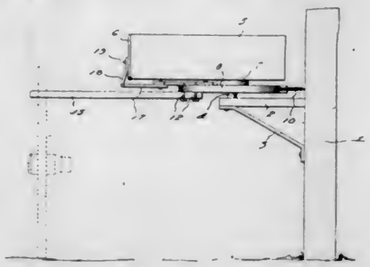
3. In an automatic davit, the combination of a pair of spaced parallel vertical supporting brackets, each bracket including a track member at its base, a vertical transverse rear portion and a pair of spaced parallel forwardly projecting bars, a pair of davit arms supported upon said brackets between the bars thereof, each davit arm including a rocker member adapted to roll upon the track member of the supporting bracket, resilient members acting between the upper portions of the brackets and the davit arms serving to initiate the outwardly rolling action of the davit arms, and means carried by the outer portions of the brackets and extending between the pairs of parallel bars thereof to limit the outward movement of the arms.

4. In an automatic davit, the combination of a pair of rigid supports, a pair of davit arms adapted to roll upon said supports, means to confine the arms as desired to proper rolling position upon the supports, each of the davit arms having a bifurcated head, a sheave pivoted in the bifurcation upon a pivot pin extending through the sides of the head, a pair of hooks suspended from said pivot pin, a shackle including a sheave and a shaft for the sheave adapted to coöperate with said hooks, and a main controlling cable for each davit arm secured at one end to the head, extending thence under and around the shackle sheave and thence over and around the head sheave, substantially as set forth.

5. In automatic davit construction, a movable davit arm having a bifurcated head at its upper end, a sheave in said bifurcation, a pivot pin extending through the head for supporting said sheave, stop means extending laterally from the head, a pair of hooks suspended from said sheave pin, means tending to hold the hooks outwardly toward said stop means, a boat supporting shackle coöperating with said hooks and including a sheave having antifriction rollers for direct engagement with the hooks, and a flexible controlling member coöperating with said sheaves, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,190,047. MAIL-BOX. ALBERT TRAVELSTEAD, Marion, Ill. Filed Aug. 24, 1915. Serial No. 42,200. (Cl. 232—45.)

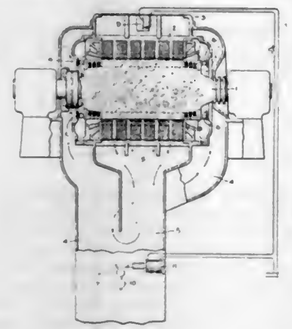


The combination with a mail box having a hinged door, of a wheel pivoted beneath the box, a link pivotally connected to the wheel, an operating rod connected to the link, an operating arm pivotally connected to the free end of the rod, the opposite end of the arm being connected to the door of the mail box, an arm on the wheel to cause the same to rotate upon the approach of the vehicle and spring means to return the wheel to its normal position thereby closing the door of the box.

1,190,048. DYNAMO-ELECTRIC MACHINE. HEINRICH TREITEL, Charlottenburg, and KARL SULZBERGER, Berlin, Germany, assignors to General Electric Company, a Corporation of New York. Filed Sept. 23, 1914. Serial No. 863,069. (Cl. 171—252.)

1. In combination with a dynamo-electric machine, an inclosing casing provided with inlet and outlet passages, means for circulating cooling fluid through said machine, means for closing said passages and for connecting said inlet passage to said outlet passage to provide for local circulation within said machine, and automatic means for operating said first mentioned means.

2. In combination with a dynamo-electric machine, an inclosing casing provided with inlet and outlet passages, means for circulating cooling fluid through said machine, means for closing said passages and connecting said inlet passage to said outlet passage to provide for local circulation within said machine, and means dependent upon the temperature of said machine for operating said first mentioned means.



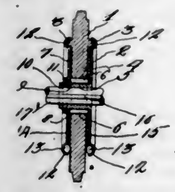
3. In combination with a dynamo-electric machine, an inclosing casing provided with inlet and outlet passages, means for circulating cooling fluid through said machine, and a valve member for closing said passages and for connecting said inlet passage to said outlet passage to provide for local circulation within said machine.

4. In combination with a dynamo-electric machine, an inclosing casing provided with inlet and outlet passages, means for circulating cooling fluid through said machine, a valve member for closing said passages and for connecting said inlet passage to said outlet passage to provide for local circulation within said machine, and automatic means for operating said valve member.

5. In combination with a dynamo-electric machine, an inclosing casing provided with inlet and outlet passages, means for circulating cooling fluid through said machine, a valve member for closing said passages and for connecting said inlet passages to said outlet passages to provide for local circulation within said machine, and means depenedent upon the temperature of said machine for operating said valve member.

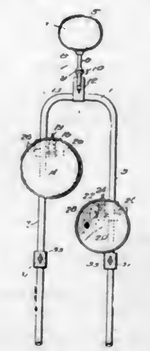
[Claims 6 to 8 not printed in the Gazette.]

1,190,049. STRAIN-ABSORBER FOR SPROCKET-WHEELS. HELMER ULLENSAKER, Hatton, N. D. Filed Oct. 7, 1915. Serial No. 54,520. (Cl. 74—29.)



In combination, a sprocket having a central opening and provided upon its opposite faces with directly opposite lugs, a pair of annular plates, one arranged adjacent each side or face of the sprocket, one of said plates having a centrally arranged sleeve integral therewith extending through said opening and being keyed to the opposite plate, roller bearings in said opening of the sprocket and surrounding said sleeve, said roller bearing being longer than the width of the sprocket and almost engaging the inner faces of said plates, a member threaded upon said sleeve to hold the keyed plate keyed to the sleeve, a shaft extending axially through the sleeve and having splined connections therewith, said plates upon their inner faces adjacent their edge portions having annular channels semicircular in cross section corresponding to and receiving the lugs of the sprocket, said channels having directly opposite lugs, which are diametrically opposite the lugs of the sprocket, and springs in said channels coöperating between the lugs of the channels and the lugs of the sprocket.

1,190,050. LARYNGOSCOPE. FRANK J. VERBA, Colorado Springs, Colo. Filed Dec. 15, 1915. Serial No. 67,014. (Cl. 128—43.)



1. A laryngoscope, comprising a substantially U-shaped frame, consisting of a body and arms depending from the body in spaced relation, a clamping bar slidably connected with the lower end of each arm and adjustable vertically with respect to the arm, a concave mirror supported by one arm and adjustable thereon, a plain mirror connected with the other arm and adjustable thereon, a lens having a handle or staff extending from one side thereof approximately perpendicular to the plane of the lens, and an adjustable connection between the staff and the body of the frame, said connection comprising a pair of clamping plates, the body of the frame being between the plates at one end thereof, a sleeve mounted to slide on the staff or handle of the lens and having a radially extending ball adapted to fit between the plates at the other end from the body, a set screw engaging the plates for clamping them on the body and the balls and a set screw threaded through the sleeve into engagement with the staff, a staff for each mirror, a universal joint connection between each mirror and the staff and having means for making the connection rigid with respect to both shaft and mirror, a sleeve slidable on the arm of the frame and having means for clamping the sleeve to the frame, a clamping block at each sleeve and having a transverse groove for receiving the adjacent staff on the face adjacent to the sleeve, and a set screw for connecting the block to the sleeve.

2. A laryngoscope, comprising a substantially U-shaped frame, consisting of a body and arms depending from the body in spaced relation, a clamping bar slidably connected with the lower end of each arm and adjustable vertically with respect to the arm, a concave mirror supported by one arm and adjustable thereon, a plain mirror connected with the other arm and adjustable thereon, a lens having a handle or staff extending from one side thereof approximately perpendicular to the plane of the lens, and an adjustable connection between the staff and the body of the frame, said connection comprising a pair of clamping plates, the body of the frame being between the plates at one end thereof, a sleeve mounted to slide on the staff or handle of the lens, and having a radially extending ball adapted to fit between the plates at the other end from the body, a set screw engaging the plates for clamping them on the body and the balls, and a set screw threaded through the sleeve into engagement with the staff.

3. A laryngoscope, comprising a substantially U-shaped frame, consisting of a body and arms depending from the

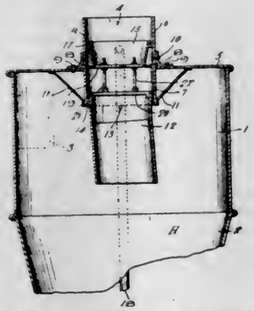
body in spaced relation, a clamping bar slidably connected with the lower end of each arm and adjustable vertically with respect to the arm, a concave mirror supported by one arm and adjustable thereon, a plain mirror connected with the other arm and adjustable thereon, a lens having a handle or staff extending from one side thereof approximately perpendicular to the plane of the lens, and an adjustable connection between the staff and the body of the frame.

4. A laryngoscope, comprising a substantially U-shaped frame, consisting of a body and arms depending from the body in spaced relation, said arms having clamping means for engaging a fixed support, a support for the lens adjustably connected with the body of the frame, interchangeable lenses each having a staff for slidably engaging the support and the support having means for holding the staff in adjusted position, a mirror for each arm of the frame, a staff for each mirror and having a universal joint connection with the mirror, means in connection with each joint for making the joint rigid, and an adjustable connection between each staff and arm of the frame for permitting the staff to be adjusted with respect to the arm.

5. In a laryngoscope, a substantially U-shaped frame, consisting of a body and arms extending from the body and having means for engaging a fixed support, a supporting sleeve for receiving a lens supporting staff having a universal joint connection with the body of the frame, means in connection with the joint for making the said joint rigid, the lens supporting staff being adapted to slide in the sleeve, means for fixing the staff in the sleeve, and mirrors adjustably connected with the frame.

[Claims 6 to 8 not printed in the Gazette.]

1,190,051. DUST-COLLECTOR. FREDERICK A. WEGNER, Silver Creek, N. Y. Filed Apr. 22, 1916. Serial No. 92,893. (Cl. 83—48.)



1. A dust collector of the cyclone type comprising a separating chamber and a deck therefor, a tubular guard mounted in said deck and an extension on said tubular guard pivotally connected to the guard within said chamber.

2. A dust collector of the cyclone type comprising a separating chamber and a deck therefor, a tubular guard mounted in said deck and an extension on said tubular guard axially adjustable with reference to the guard.

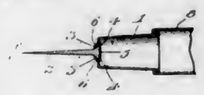
3. A dust collector of the cyclone type comprising a separating chamber and a deck therefor, a tubular guard mounted in said deck and an extension on said tubular guard axially adjustable with reference to the guard and pivotally adjustable thereon.

4. A dust collector of the cyclone type comprising a separating chamber, a deck therefor of light weight sheet metal provided with an air escape opening, a tubular guard mounted in said opening and projecting above the deck, and parallel vertical transverse truss rods secured to the deck and bearing against opposite sides of the tubular guard.

5. A dust collector of the cyclone type comprising a separating chamber, a deck therefor of light weight sheet metal having an air escape opening, a tubular guard mounted in said opening and projecting above the deck, and transverse truss rods comprising vertical portions secured to the opposite sides of the tubular guard and horizontal flanges secured to the top of the deck.

[Claims 6 to 10 not printed in the Gazette.]

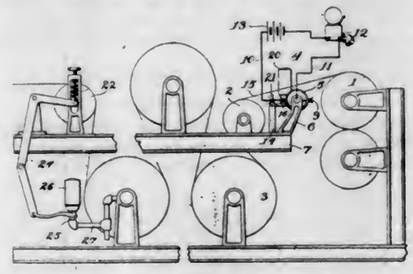
1,190,052. CUTTING DEVICE. WILHELM R. WELANDER, Minneapolis, Minn. Filed Apr. 23, 1915. Serial No. 23,379. (Cl. 30—24.)



1. A device of the class described comprising a thimble adapted for arrangement upon the finger, there being a slot in the outer end of said thimble; a cutting blade arranged in the outer end of said thimble and having its rearward end resting in the slot provided in said thimble; laterally projecting portions at the rearward end of said blade; and resilient engaging flanges on said thimble overhanging said slot and adapted for engagement with said laterally projecting portions of said blade to crowd the rearward end of said blade down into said slot, substantially as described.

2. A device of the class described comprising a thimble adapted for arrangement upon the finger, there being a substantially V-shaped slot in the outer end of said thimble having resilient sides; a cutting blade arranged in the outer end of said thimble and having its rearward end resting in the slot provided in said thimble; laterally projecting portions at the reaward end of said blade adapted for engagement under said sides of said slot whereby said end of said blade is crowded down into said slot, substantially as described.

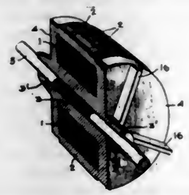
1,190,053. ALARM FOR PAPER-MAKING MACHINES. WILLIAM WESCOTT, Watertown, N. Y. Filed Sept. 23, 1914. Serial No. 863,169. (Cl. 177—311.)



An alarm for paper making machines arranged intermediate the final press roller and the initial drier roller, said alarm including a roller arranged below the path of travel of the unbroken paper web, an alarm circuit including an alarm, and normally spaced contacts included in said circuit and carried by the roller, one of said contacts being movable to be influenced by the paper web in the event of breakage of the same between the press roll and drier roll.

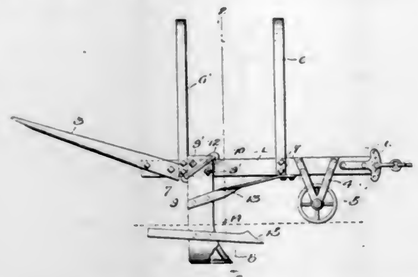
1,190,054. INDUCTION-MOTOR. JOHN B. WIARD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 20, 1915. Serial No. 3,224. (Cl. 172—120.)

1. A secondary member for an induction motor comprising laminations in the form of annuli provided with conductor receiving openings near their outer periphery, a central hub in which said laminations are mounted, a shaft, thrust collars about said shaft, conducting members extending through said openings, and end rings at the ends of said laminations connecting said conducting members and said hub, said conducting members, hub, thrust collars and end rings being molecularly united.



2. A secondary member for an induction motor comprising laminations in the form of annuli provided with conductor receiving openings near their outer periphery, a central hub on which said laminations are mounted, a shaft, thrust collars about said shaft, fan blades, conducting members extending through said openings, and end rings at the ends of said laminations connecting said conducting members and said hub, said conducting members, hub, thrust collars, fan blades and end rings being molecularly united.

1,190,055. NURSERY TREE-DIGGER. OSCAR WICK, East Grand Forks, Minn. Filed Oct. 7, 1915. Serial No. 54,627. (Cl. 55—18.)



1. A tree digger comprising a frame, a blade disposed in a plane below said frame, and an inverted U-shaped yoke carried by said frame and disposed in advance of said blade.

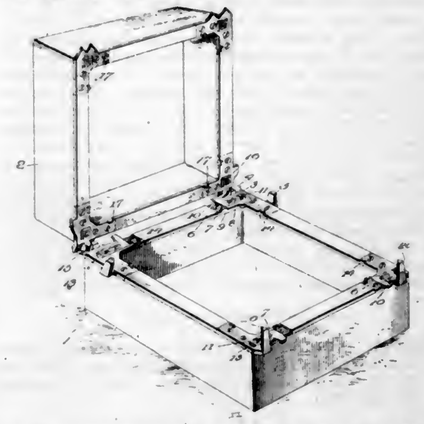
2. A tree digger comprising a pair of parallel spaced beams, inverted U-shaped yokes connecting said beams, and a U-shaped blade structure depending below said beams, said yokes and said U-shaped blade structure forming the sole means of holding said beams in their spaced parallel relation.

3. A tree digger comprising a pair of parallel spaced beams, inverted U-shaped yokes disposed between said beams, the ends of the former being secured to the latter, a knife disposed in a plane below said beams and upright legs integrally connected with said knife, said legs being secured at their upper free ends to said beams.

4. A tree digger comprising a pair of parallel spaced beams, inverted U-shaped yokes disposed between said beams, the ends of the former being secured to the latter, a knife disposed in a plane below said beams, upright legs integrally connected with said knife, said legs being secured at the upper free ends to said beams, and land sides carried by said legs at points adjacent said knife.

5. A tree digger comprising a pair of parallel spaced beams, supporting wheels mounted beneath said beams, inverted U-shaped yokes disposed between said beams and secured thereto, a pointed knife disposed in a plane below said beams, upright legs integrally connected with said knife and secured to said beams, land sides carried by said legs, and handles secured to the rear ends of said beams.

1,190,056. SLIDE FOR MOLDING-FLASKS. HENRY J. WIEGMANN, Quincy, Ill. Filed June 24, 1914. Serial No. 847,079. (Cl. 22—105.)



1. The combination with a section of a molding flask, and a match plate, of means for supporting the match plate above said section during the filling of the flask with sand, and means for causing a coöperation between said means and match plate to allow the match-plate to rest upon the sand, and come into engagement with the section as the sand is packed in the flask.

2. The combination with a section of a molding flask, and match plate, of a slide on the section for supporting the match-plate above the section, and means for operating the slide whereby the match plate may rest upon the section.

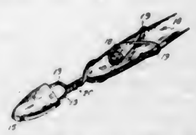
3. In a molding flask, the combination with a drag and match-plate, said match-plate provided with slots, of slides having lugs on which the match-plate is adapted to rest for supporting the match-plate above the drag, said slides adapted to be moved to bring the lugs in a position to enter the slots in the match-plate whereby the match-plate may rest upon the drag.

4. In a molding flask, the combination with a section of a molding flask and match plate, of slides having lugs on which the match plate is adapted to rest, and means for operating the slides whereby the match plate may rest upon the section.

5. The combination with a section of a molding flask, having a hinge plate and drag plate, said plates provided with grooves, of slides movably mounted in the grooves, and a match plate adapted to be supported by said slides above the section.

[Claims 6 to 8 not printed in the Gazette.]

1,190,057. ATTACHMENT FOR TOOTH-BRUSHES AND THE LIKE. ROBERT MORSE WITHYCOMBE, Sydney, New South Wales, Australia. Filed July 18, 1913. Serial No. 779,779. (Cl. 24—73.)

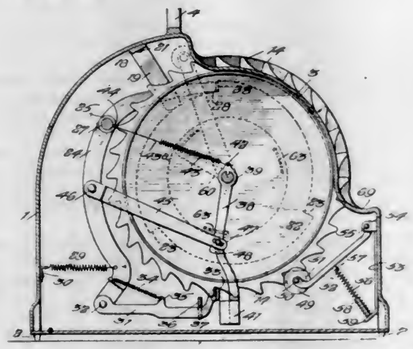


1. A device of the class specified comprising a member provided at one end with a spring socket adapted to fit

over the end of a tooth brush or equivalent holder and at its other end with a pair of spaced longitudinal prongs adapted to carry a block of dental massaging material, the said member having a springy portion adjacent the said block of massaging material whereby said block may be caused to bear with resilient pressure upon the gums.

2. A device of the class specified comprising a member consisting of a single strip of spring wire bent to form a spring loop at one end of said member for the reception of an end of a tooth brush handle or equivalent holder, and a pair of spaced longitudinal prongs at the other end thereof adapted to carry a block of dental massaging material, the arms of said loop having a coil connecting the same and arranged to exert an inward pressure upon the adjacent face of the handle and having their terminals arranged to exert an inward pressure upon the opposite edges of the handle, said arms including portions which, adjacent said terminals, bear upon the face of the handle opposite to that engaged by said coil and are thereafter bent forwardly into the plane of the coil and continued to provide said prongs which are also disposed in the plane of the coil, the portion of the member adjacent said prongs being springy whereby the massaging block may be caused to bear with resilient pressure against the gums.

1,190,058. ADDING-MACHINE. JOHN WARING WITSELL, Charleston, S. C. Filed May 13, 1914, Serial No. 838,276. Renewed Apr. 21, 1916. Serial No. 92,759. (Cl. 235—80.)



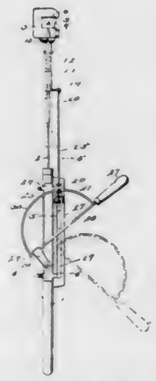
1. In an adding machine, the combination with the shaft, and the number wheels journaled on the shaft, each wheel having an annular series of teeth, and a series of cams, a lever pivoted adjacent to each wheel and engaging the cams to move the lever in one direction, a spring normally acting to move the lever in the other direction, a pawl arm on the shaft and engaging the teeth of the succeeding wheel to move the said wheel when the lever is released from the cam, and a momentum arrester in connection with each pawl arm for positively locking the wheel from movement and operated by the lever, each of the said arresters comprising an arm journaled on the shaft and having means for engaging the adjacent pawl arm to lock the wheel from movement, a spring engaging the arm and acting normally to move the arm in a direction to disengage the pawl arm, and a lost motion connection between each arm and the lever of the preceding wheel for causing the said arm to engage the pawl arm to prevent movement of the wheel in either direction.

2. In an adding machine, the combination with the shaft, and the number wheels journaled on the shaft, each wheel having an annular series of teeth, and a series of cams, a lever pivoted adjacent to each wheel and engaging the cams to move the lever in one direction, a spring normally acting to move the lever in the other direction, a pawl arm on the shaft and engaging the teeth of the succeeding wheel to move the said wheel when the lever is released from the cam, and a momentum arrester in connection with each pawl arm for positively locking the wheel from movement and operated by the lever.

3. In an adding machine, a series of coaxial number wheels, each wheel having means for engagement by the operator to move the same in one direction, a lever pivoted intermediate its ends adjacent to each wheel, each lever having means at its lower end for engaging the succeeding wheel to move the wheel a distance of one tooth when the lever is swung on its pivotal connection in one direction, a spring for swinging the lever in such direction, means in connection with the first-named wheel for moving the lever in the other direction, and means adjacent to each wheel for engaging the engaging means of the lever to lock the wheel from movement, and a connection between each of the said means and the lever of the preceding wheel for operating the said means.

4. In an adding machine, a series of coaxial number wheels, each wheel having means for engagement by the operator to move the same in one direction, a lever pivoted intermediate its ends adjacent to each wheel, each lever having means at its lower end for engaging the succeeding wheel to move the wheel a distance of one tooth when the lever is swung on its pivotal connection in one direction, a spring for swinging the lever in such direction, means in connection with the first-named wheel for moving the lever in the other direction, and means adjacent to each wheel and operated by the lever for locking the wheel from movement in either direction.

1,190,059. TREE-TRIMMER. HENRY C. WOLF, Catawissa, Pa. Filed Oct. 17, 1914. Serial No. 867,177. (Cl. 30—11.)



1. In a tree trimmer comprising relatively movable knives, knife-actuating means embodying a spring operative when tensioned to retract one of said knives, and a member actuated by said spring and operative to produce an impact blow upon one of said knives.

2. In a tree trimmer comprising relatively movable knives, knife-actuating means embodying a spring connected to one of the knives to retract it and a hammer member connected to and actuated by said spring to produce an impact upon one of said knives.

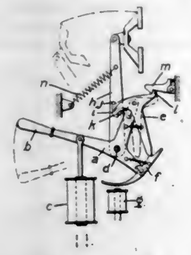
3. In a tree trimmer comprising relatively movable knives, knife-actuating means embodying, in combination, a spring connected to one of said knives to retract it, a member connected to and actuated by said spring and operative to produce an impact blow upon one of said knives, and means for retracting said member and releasing the same.

4. In a tree trimmer comprising relatively movable knives, knife-actuating means embodying, in combination, a spring operative to retract one of the knives, a member actuated by said spring and operative to produce an impact blow upon one of said knives, and means for retracting said member and releasing the same, comprising a slide connected to said member, and a pivoted handle having an eccentric track coöperative with said slide to retract and release the same.

5. In a tree trimmer comprising a fixed and a movable knife, the combination of a rod supporting the fixed knife, a spring surrounding said rod and connected to the movable knife, a sleeve surrounding the spring and connected thereto, and means for retracting said sleeve to disengage it from the movable knife and to tension the spring and retract the knife to which it is connected and for releasing the sleeve to cause the latter to produce an impact upon the movable knife.

[Claims 6 and 7 not printed in the Gazette.]

1,190,060. ELECTRIC SWITCH. GEORG WOLFF, Hermsdorf, near Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 4, 1913. Serial No. 771,629. (Cl. 175—267.)



1. An electric switch comprising an actuating member and a switch member, said members being relatively movable and both biased to move out of closed switch position, a normally positive collapsible connection between said members set in non-collapsed position by movement of said actuating member away from closed switch position, restraining means coöperating with said connection to hold it and both said members in closed switch position while said connection is positive and to release both said members in response to collapse of said connection, and means for collapsing said connection.

2. An electric switch comprising an actuating member and a switch member, said members being relatively movable and both biased to move out of closed switch position, a normally positive collapsible connection bodily movable with said members for normally establishing a rigid connection between them when said connection is positive, a resilient detent which yields when said connection while positive moves with said members under said detent and into switch closing position and which latches said connection and both said members in switch closing position only while said connection is positive, and means for collapsing said connection and thereby moving it out of engagement with said detent to release said connection and both said members.

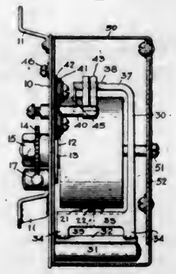
3. An electric switch comprising relatively movable actuating and switch members both biased to move out of closed switch position, a detent to hold the switch closed, a normally positive collapsible connection between said members having a projection thereon in position to be engaged and held by said detent when the switch is closed with said connection in non-collapsed position and to be released from said detent as said connection collapses to release said connection and both said members when said connection is collapsed, and electro-responsive means for collaping said connection.

4. An electric switch comprising relatively movable actuating and switch members both biased to move out of closed switch position, a normally positive collapsible connection set in non-collapsed position to rigidly connect said members to each other in response to movement of said actuating member away from switch closing position, a detent engaged by said connection while rigid to hold both said members in switch closing position and disengaged upon collapse of said connection, and electroresponsive means for collapsing said connection.

5. An electric switch comprising an actuating member and a switch member movable relatively to each other and biased to move away from switch closing position, a normally positive collapsible connection between said members comprising two relatively movable parts set in positive and rigid relation to each other by movement of said actuating members away from switch closing position, a hook on one of the parts of said connection, a detent engaged by said hook to hold said members in closed switch position when said connection is rigid, and electroresponsive means for moving the parts of said connection relatively to each other to release said hook from said detent and simultaneously collapse the connection between said members.

[Claim 6 not printed in the Gazette.]

1,190,061. THERMOSTAT. JAMES J. WOOD, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed June 25, 1914. Serial No. 847,340. (Cl. 200—31.)



1. A thermostatic switch comprising a movable contact bar having a leg extending at right angles thereto, a stationary support pivotally engaging with one side of said leg, a coiled thermostatic element pivotally engaging with the opposed side of said leg, one of said coacting bearings engaging with said leg at two points and the other engaging at an intermediate point, and a frictional contact on each side of said contact bar to engage with and temporarily hold said contact bar.

2. A thermostat comprising a horizontal knife-edge support, a movable contact arm provided with a V-shaped groove resting upon said support and extending upwardly therefrom, said arm being provided with another V-shaped groove above the first-named groove, means responsive to changes in temperature having a moving part resting in said upper groove, and a fixed contact coöperating with the upper end of said arm.

3. A thermostat comprising a flat supporting plate adapted to be arranged in a vertical plane, a knife-edge support perpendicularly attached to said plate, the knife-edge pointing upwardly, a stud attached to said plate above said support, a spirally coiled thermostatic element attached to said stud and having its free end normally adjacent to and above said support, a fixed contact, a movable contact arm coöperating therewith, said arm having an offset leg at its lower end, said leg having a V-shaped groove in its upper side receiving the free end of said thermostatic element intermediate the ends of the leg, feet adjacent the ends of said leg having a V-shaped groove on their lower edges and bearing on said knife-edge support.

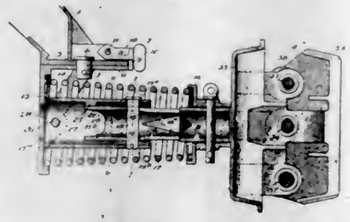
4. A thermostat comprising a flat supporting plate adapted to be arranged in a vertical plane, a contact arm pivoted to said plate at its lower end and arranged so that its upper end oscillates across a perpendicular axis through the pivot point, thermostatic means connected to said arm for moving the same, binding posts insulated from each other and said arm attached to said plate on opposite sides of said axis adjacent the upper end of said arm, and contact springs carried by said posts curved to

frictionally engage and temporarily retain said arm in contact therewith.

5. A thermostat comprising a flat supporting plate adapted to be arranged in a vertical plane, a contact arm pivoted to said plate at its lower end and arranged so that its upper end oscillates across a perpendicular axis through the pivot point, thermostatic means connected to said arm for moving the same, binding posts insulated from each other and said arm attached to said plate on opposite sides of said axis adjacent the upper end of said arm, contact springs carried by said posts curved to frictionally engage and temporarily retain said arm in contact therewith, and stop members for said arm also carried by said binding posts.

[Claims 6 to 8 not printed in the Gazette.]

1,190,062. FLUID-PRESSURE COUPLING. LEONIDAS D. WOODRUFF, Newport, Ky. Filed Dec. 10, 1915. Serial No. 66,178. (Cl. 188—13.)



1. The combination of shank sections mounted on a car and one shank section slidable relatively to the other shank section, a coupler head on the outer end of the slidable shank section, means for extending said slidable shank section outwardly in the direction of the end of the car, and a connection between the slidable shank section and the other shank section effective to maintain the slidable shank section substantially rigid laterally when the same is extended and also to permit a limited yielding lateral movement thereof when the same is retracted.

2. The combination of a laterally rigid shank section, another shank section slidable relatively to said laterally rigid shank section, a coupler head on the outer end of the slidable shank section, means for extending said slidable shank section outwardly in the direction of the end of the car, and a connection between the slidable shank section and the laterally rigid shank section effective to maintain the slidable shank section substantially rigid laterally when the same is extended and also to permit a limited yielding lateral movement thereof when the same is retracted.

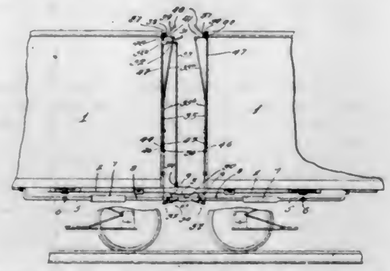
3. The combination of a laterally rigid, vertically yieldable shank section, another shank section slidable relatively to said first named shank section, a coupler head on the outer end of the slidable shank section, means for extending said slidable shank section outwardly in the direction of the end of the car, and a connection between the slidable shank section and said first named shank section effective to maintain the slidable shank section substantially rigid laterally when the same is extended and also to permit a limited yielding lateral movement thereof when the same is retracted.

4. In a fluid pressure coupling of the character described, the combination of shank sections mounted on a car and one shank section slidable relatively to the other shank section, a coupler head on the outer end of the slidable shank section adapted to effect a fluid pressure coupling with a coöperating coupler head mounted on another car, a spring bearing against said coupler head and pressing the head and slidable shank section outwardly in the direction of the end of the car, said slidable shank section being moved inwardly against the tension of the spring by pressure of the coöperating coupler heads against each other in coupling, and a connection between the slidable shank section and the other shank section effective to maintain the slidable shank section substantially rigid laterally when the same is extended by the spring and to permit a limited yielding lateral movement thereof when the same is moved inwardly by the pressure of the coupled coupler heads.

5. In a fluid pressure coupling of the character described, the combination of shank sections mounted on a car and one shank section slidable relatively to the other shank section, a coupler head at the outer end of the slidable shank section adapted to effect a fluid pressure coupling with a coöperating coupler head mounted on another car, a spring bearing against said coupler head and pressing the head and slidable shank section outwardly in the direction of the end of the car, said slidable shank section being moved inwardly against the tension of the spring by pressure of the coöperating coupler heads against each other in coupling, a connection between the slidable shank section and the other shank section effective to maintain the slidable shank section substantially rigid laterally when the same is extended by the spring and to permit a limited yielding lateral movement thereof when the same is moved inwardly by the pressure of the coupled coupler heads, and means for preventing vertical movement of the slidable shank section relatively to the other shank section.

[Claims 6 to 24 not printed in the Gazette.]

1,190,063. AIR-COUPLING. FREADS WOODS, Stewart, Ala. Filed Dec. 12, 1914. Serial No. 876,823. (Cl. 188—13.)



1. In combination, a coupler, a section of air train pipe carried by the coupler and having a male portion fitting a female portion of a corresponding train pipe connection of an additional car, a U-shaped member upon said train pipe section having hollow forks provided on their interiors with projections, a male U-shaped member carried by a train pipe section of an adjacent car having forks for mating with the hollow forks of the first U-shaped member and having spring devices provided with bulges to engage said projections.

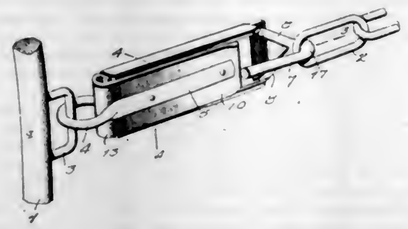
2. In combination, a coupler, a section of air train pipe carried by the coupler and having a male portion fitting a female portion of a corresponding train pipe connection of an additional car, a U-shaped member upon said train pipe section having hollow forks provided on their interiors with projections, a male U-shaped member carried by a train pipe section of an adjacent car having forks for mating with the hollow forks of the first U-shaped member and having spring devices provided with bulges to engage said projections, and additional U-shaped members having their forks provided with male and female socket connections.

3. In combination, a pair of swinging air train pipe sections of two adjacent cars provided with male and female connections, a pair of male and female U-shaped members having sleeves fitting said train pipe sections and provided with interlocking connections upon the interior of the female U-shaped member, additional U-shaped members having sleeves fitting said pipe sections and secured thereto and provided with male and female socket connections to reinforce the first U-shaped members.

4. In combination, an air train pipe having male and female parts adapted to coöperate and fit female and male parts of a train pipe of an adjacent car, a U-shaped member carried upon said train pipe adjacent each of said male and female parts and having coöperative interlocking telescopical connections with an opposing U-shaped member of an adjacent car, said train pipe having two sets of valves for controlling the air through each set of male and female parts, and means operated from the top of the car for opening and closing said valves for cutting the air on and off through the male and female parts.

5. In combination, an air train pipe having male and female parts adapted to coöperate and fit female and male parts of a train pipe of an adjacent car, a U-shaped member carried upon said train pipe adjacent each of said male and female parts and having coöperative interlocking telescopical connections with an opposing U-shaped member of an adjacent car, said train pipe having two sets of valves for controlling the air through each set of male and female parts, and means operated from the top of the car for opening and closing said valves for cutting the air on and off through the male and female parts, and means in said train pipe for cutting off the air through one set of male and female parts.

1,190,064. ATTACHMENT FOR TRACES. CORTEZ LEANDER WOODY, Judyville, Ind. Filed Mar. 24, 1916. Serial No. 86,390. (Cl. 54—32.)



1. An attachment for connecting a trace chain with a hame, comprising the combination with a hame engaging clip, of a hook member consisting of a rigid body, I-shaped in cross section, and provided at one end with a hook overlying the body and with a transverse slot at the end of the hook, and a strap of a width to fit between the flanges of the body for connecting the clip to the body, the arms of the clip embracing opposite sides of the body, and the strap lying upon opposite sides of the body of the hook between the arms and passing through the said slot, one end of the strap overlying the inner arm of the clip and the inner face of the body and extending beyond the end of the body at the hook.

2. An attachment for connecting a trace chain with a hame, comprising a hook for engaging the chain, a U-shaped clip for engaging the hame, the hook having a body lying between the arms of the clip, and a leather strip connecting the hook and the clip, and lying between the arms of the clip on the opposite sides of the body and having its end overlying the arm of the clip adjacent to the draft animal and extending beyond the body of the hook to underlie the same.

1,190,065. PNEUMATIC-TIRE SLEEVE OR PATCH. RAY YOST, Tyrone, N. Y. Filed Mar. 18, 1916. Serial No. 85,082. (Cl. 152—24.)

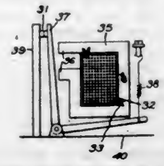
1. The combination of a tire sleeve having longitudinal beads at its edges, a plurality of fasteners having members engaging the beaded portion of the sleeve on its inner and outer surfaces and shaped to slide on the bead from either end thereof, and a lacing for engaging the fasteners, said fasteners being frictionally held on the bead against longitudinal movement thereof, each fastener comprising a single-piece metal plate having opposite ends bent into bills extending from opposite sides for engagement respectively with the sleeve and lacing, one bill having a serrated edge, and a tongue struck out from the plate and having its free end disposed adjacent the serrated bill.

2. A fastener for a tire sleeve comprising a single-piece metal plate having opposite ends bent into bills extending from opposite sides, one bill having a serrated edge, and a tongue struck out from the plate and having its free end disposed adjacent the serrated bill.



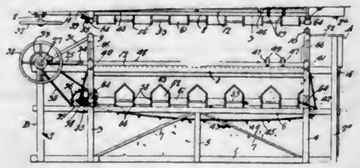
3. A fastener for tire sleeves comprising a single-piece metal plate having an intermediate portion struck out into a longitudinal tongue and one extremity bent over to the side and adjacent the free end of the tongue for forming a bill and the opposite extremity bent back at the other side of the plate to form a bill, the bends of the bills being transverse to the length of the tongue.

1,190,066. ELECTROMAGNETIC RELAY. ARTHUR P. YOUNG, Kenilworth, and ALEXANDER H. ST. C. WATSON, Coventry, England, assignors to General Electric Company, a Corporation of New York. Filed May 21, 1915. Serial No. 29,691. (Cl. 175—326.)



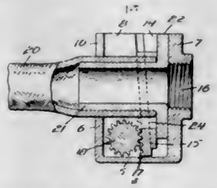
An electromagnetic relay comprising a differentially wound coil of substantial internal diameter, a plurality of magnetic cores substantiallly surrounding one side of said coil to form an incomplete magnetic circuit having two projecting closely adjacent ends, a movable armature for each core pivotally mounted at a point remote from said ends and adapted to close said magnetic circuit when attracted by said core, said armature carrying a contact, and a fixed contact coöperating therewith.

1,190,067. PICKLE-GRADING MACHINE. HARRY H. ZENGE and WILLIAM J. C. ZENGE, Canton, Mo. Filed Apr. 24, 1915. Serial No. 23,747. (Cl. 130—32.)



In a device of the class described, a supporting structure; chutes extended transversely of the supporting structure; conveyers in the chutes and operating transversely of the supporting structure; means for operating the conveyers; removable deflectors disposed between the chutes and discharging laterally in opposite directions on the conveyers, each deflector comprising end walls engaged with the supporting structure to prevent the deflectors from moving longitudinally of the conveyers and engaged with the chutes to prevent the deflectors from moving transversely of the conveyers, the deflectors comprising gables projecting beyond the end wall and resting on the chutes to prevent a downward movement of the deflectors.

1,190,068. HOSE-COUPLING. ROBERT J. ABBOTT, Washington, D. C. Filed Nov. 30, 1915. Serial No. 64,340. (Cl. 137—13.)



1. A hose coupling for fire plugs comprising in combination with a hose having a flange at one end a fixed support associated with said plug, a wedge shaped member capable of vertical adjustment with respect to said fixed support and coöperating with the latter to clamp the flanged end of the hose in engagement with the outlet nipple of the plug, and means for controlling the movements of said member.

2. A hose coupling for fire plugs comprising a fixed support associated with said plug, a relatively movable hose support mounted upon said fixed support and having a rack surface, and a pinion operatively engaging said surface for adjusting the movable support to clamp the adjacent end of the hose in engagement with the outlet nipple of said plug.

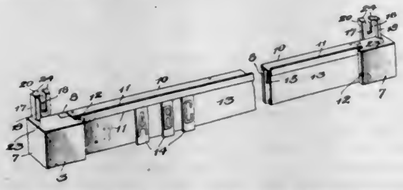
3. A hose coupling for fire plugs comprising a fixed support associated with said plug, a relatively movable hose support mounted upon said fixed support and having a rack surface, a pinion operatively engaging said surface for adjusting the movable support to clamp the adjacent end of the hose in engagement with the outlet nipple of the plug, means for rotating said pinion, and means for limiting the adjustment of said movable support.

4. The combination with a hose having a flange on one end, of means for coupling said end to the outlet of a fire plug, said means comprising a support fixed upon the plug, a relatively movable wedge-shaped member mounted upon said fixed support and adapted to clamp said flange therebetween said fixed support with the hose in communication with said outlet, and means for operating said wedge.

5. The combination with a hose having a flange on one end, of a coupling for connecting said end to a fire plug, consisting of a receptacle having an opening in one wall thereof for the reception of the outlet nipple of the plug, the opposed wall thereof having an entrance passage for the hose into the receptacle, a movable member arranged within the receptacle to receive the adjacent end of the hose, means for adjusting said member to clamp said end of the hose in alinement with the outlet nipple of the plug, and a cover for said receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,190,069. BULLETIN-BOARD. JOHN SAMUEL ABERNETHY, Newton, N. C. Filed Dec. 3, 1915. Serial No. 64,858. (Cl. 40—140.)



1. A bulletin board embodying interchangeable supposed sections and means for detachably attaching the sections together in vertical alinement, a letter-carrying strip or plate for each section, detachable letter plates carried by said strip or plate, and means for detachably attaching said strip and letters to the section, said means embodying springs pressing forwardly against said letter-carrying strip or plate.

2. A bulletin board consisting of superposed interchangeable sections and means for deachably connecting them together, each section consisting of end blocks, a connecting board, a metal strip attached to one edge of this board and projecting forwardly and provided with upwardly and downwardly extending flanges, bowed springs attached to the front faces of these boards, a letter-carrying plate for each section having a width approximating that of said board and being adapted to be held against said upwardly and downwardly extending flanges by said springs, and letter plates held in position on said plate by the pressure of said springs.

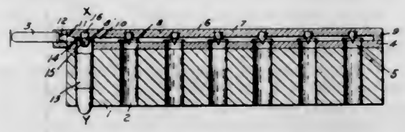
3. A bulletin board comprising interchangeable superposed sections and means for detachably locking said sections together, said means consisting of plates fastened to each section and projecting beyond one longitudinal edge thereof, the projecting ends being provided with open-ended slots; screws on each section adapted to enter the slots in the plates on the adjacent section; and clamping thumb nuts on these screws, for the purpose set forth.

4. A bulletin board comprising interchangeable superposed sections and means for detachably locking said sections together, said means consisting of plates fastened to each section and projecting beyond one longitudinal edge thereof, the projecting ends being provided with open-ended slots; screws on each section adapted to enter the slots in the plates on the adjacent section; and clamping thumb nuts on these screws; each of said plates being provided at one vertical edge with a rearwardly-extending lug adjacent the open end of the slot, to form a stop for the thumb nut.

5. A bulletin board comprising interchangeable superposed sections transversely grooved and means for detachably locking said sections together, said means consisting of plates fastened to each section and projecting beyond one longitudinal edge thereof, the projecting ends being provided with open-ended slots; screws on each section adapted to enter the slots in the plates on the adjacent section; and clamping thumb nuts on these screws; the projecting slotted part of each of said plates being provided with a vertical flange fitting into one of said transverse grooves in the adjacent section.

[Claims 6 and 7 not printed in the Gazette.]

1,190,070. FIREARM. GEORGE WASHINGTON ABRAHAM, Weston, Ontario, Canada. Filed Oct. 18, 1915. Serial No. 56,547. (Cl. 42—1.)



1. In a weapon of the class described, the combination with the barrel block, of a breech block having recesses to receive the bases of cartridges provided with free ignition chambers and the usual firing perforation, means for creating an initial ignition flash to fire one cartridge through its ignition chamber, and means for directing the back flash of each preceding fired cartridge into the ignition chamber of the next succeeding cartridge and through the firing perforation thereof.

2. In a weapon of the class described, the combination with the barrel block, of a breech block having recesses to receive the bases of cartridges provided with free ignition chambers and the usual firing perforation, and a groove communicating with each cartridge ignition chamber, means for creating an initial flash at one end of the groove for firing the first cartridge, and means for directing the back flash of each preceding cartridge into the ignition chamber of the next succeeding cartridge and through the firing perforation thereof.

3. In a weapon of the class described, the combination with the barrel block, of a breech block having recesses to receive the bases of cartridges provided with free ignition chambers and the usual firing perforation, and a groove intercommunicating between the ignition chambers of all the cartridges, and deflectors extending across the groove into and diametrically across the ignition chamber of each cartridge and firing perforation thereof.

4. In a weapon of the class described, the combination with the barrel block, of a breech block having recesses to receive the bases of cartridges provided with free ignition chambers and the usual firing perforation, and a groove intercommunicating between the ignition chambers of all the cartridges, and flat substantially V-shaped deflectors extending across the groove into and diametrically across the ignition chamber of each cartridge and firing perforation thereof.

5. In a weapon of the class described, a breech block in which the bases of a plurality of cartridges are adapted to be located, said block having a firing groove, and a deflector interposed in the length of the firing groove opposite the base of each cartridge adapted to divide the back flash from each cartridge.

[Claims 6 and 7 not printed in the Gazette.]

1,190,071. APPARATUS FOR PROJECTING RADIANT ENERGY. WALDO P. ADAMS, Syracuse, N. Y. Filed Nov. 16, 1914. Serial No. 872,403. (Cl. 240—41.)



1. In an apparatus of the character described, the combination of a fixate nucleate light, and an inclosing medium therefor including a material that will permit the passage of "invisible" radiations therethrough.

2. In an apparatus of the character described, the combination of an electrically incandescing filament and an inclosing medium therefor including a material that will permit the passage of "invisible" radiations therethrough.

3. In light-projecting apparatus, the combination of a metallic reflector, and an incandescent electric lamp producing a fixate nucleate of light of high intensity in and uniformly around the focal axis of the reflector adjacent the focus thereof, said light having an enveloping medium capable of transmitting therethrough certain "invisible" radiations of such light.

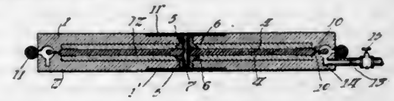
4. In an apparatus of the character described, the combination of a reflector, a fixate nucleate light at or immediately adjacent the focal point of the reflector, and an inclosing medium for said light including a material that will permit the passage of "invisible" radiations therethrough.

5. In light-projecting apparatus, the combination of a converging metallic reflector, and an incandescent electric lamp producing a fixate nucleate of light of high intensity in and uniformly around the focal axis of the reflector adjacent the focus thereof, said lamp having a light-enveloping medium capable of transmitting therethrough the visible and certain invisible radiations.

[Claims 6 to 10 not printed in the Gazette.]

1,190,072. PROCESS AND APPARATUS FOR MOLDING. EDWARD L. AIKEN, Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 18, 1912. Serial No. 726,425. (Cl. 18—5.3.)

1. The process of molding tablets which comprises placing moldable material between two mold plates, sealing the space between said plates to render the same air tight, withdrawing air from between said plates peripherally of said material and producing a vacuum in said space, rendering said material plastic, and pressing the same to shape between said plates while maintaining said vacuum, substantially as set forth.



2. The process of molding disk records which comprises placing moldable material between two mold plates, one of which contains a mold surface having a negative or reverse copy of record undulations therein, sealing the space between said plates to render the same air tight, withdrawing air from between said mold surface and said material peripherally of said material and producing a vacuum in said space, rendering said material plastic, and pressing the same to shape between said plates while maintaining said vacuum, substantially as set forth.

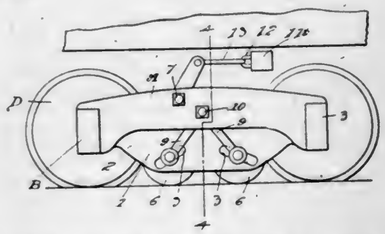
3. The process of molding disk records which comprises placing moldable material between two mold plates, each having a mold surface containing a negative or reverse copy of record undulations, sealing the space between said plates to render the saime air tight, withdrawing air from between said mold surfaces and said material peripherally of said material and producing a vacuum in said space, rendering said material plastic, and pressing the same to shape between said plates while maintaining said vacuum, substantially as set forth.

4. The process of molding tablets which comprises placing moldable material between two mold plates, sealing the space between said plates with a ring of yielding material to render the same air tight, withdrawing air from between said plates peripherally of said material and producing a vacuum in said space, rendering said material plastic and pressing the same to shape between said plates while maintaining said vacuum, substantially as set forth.

5. The process of molding disk records which comprises placing moldable material between two plates, one of which contains a mold surface having a negative or reverse copy of record undulations therein, sealing the space between said plates with a ring of yielding material to render the same air tight, withdrawing air from between said mold surface and said material peripherally of said material and producing a vacuum in said space, rendering said material plastic, and pressing the same to shape between said plates while maintaining said vacuum, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,190,073. CAR-BRAKE. OSWALD W. ALLISON, Seattle, Wash. Filed Sept. 10, 1915. Serial No. 50,080. (Cl. 188—65.)

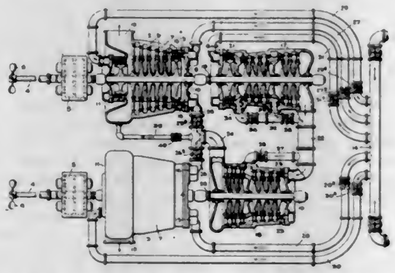


1. In a car brake, the combination with a car truck and wheels therefor, of relatively spaced plates carried by the car truck and disposed below the same, each of the plates having upwardly converging slots therein, shafts extending transversely of the car truck frame and having the opposite ends slidably mounted in the converging slots, means for sliding the shafts in the slots, and brake wheels carried by the shafts and adapted when the shafts are slid in one direction to engage the wheels of the truck, for the purpose specified.

2. In a car brake, the combination with a car truck and wheels therefor, of a shaft extending transversely of the car truck and having its opposite end fixed within the sides of the trucks, bell crank levers mounted on the shafts, brake wheels swingingly mounted within the car truck, means for connecting the brake wheels to one arm of each of the bell crank levers, a brake beam disposed above the car truck, and means for connecting the brake beam to the other arms on the bell crank lever, whereby to effect movement of the brake wheels in the direction of the car truck wheels, when the brake beam is moved in one direction.

3. In a car brake, the combination with a car truck and wheel therefor and the track rails, of bell crank levers pivoted within the car truck, a brake beam, means connecting the brake beam to one arm of each of the bell crank levers, brake wheels located within the car truck and normally held from engagement with the car truck wheels and the track rails, upwardly converging link members located within the car truck and having their lower ends providing journals for the brake wheels, and the upper ends connected to the other arms of the bell crank levers, the said link members being adapted, when the bell crank levers are operated, to move the brake wheels into engagement with the car truck wheels and the track rails.

1,190,074. MARINE TURBINE. KARL ALQUIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 27, 1916. Serial No. 94,031. (Cl. 121—58.)



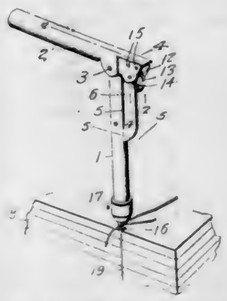
1. In a system of ship propulsion, the combination of main turbines arranged to propel the ship at maximum speed, cruising turbines arranged to coöperate with the main turbines to propel the ship at speeds below the maximum, means for connecting the cruising turbines in series with each other as regards the flow of steam and to supply the exhaust therefrom in parallel to the main turbines for lower speeds of the ship, and means for by-passing one or more stages of a cruising turbine for speeds between the maximum and the lower speeds.

2. In a system of ship propulsion, the combination of main turbines arranged to propel the ship at maximum speed, main and auxiliary nozzles for the turbines, the former being adapted in size and shape to receive live steam and the latter exhaust steam, cruising turbines arranged to coöperate with the main turbines to propel the ship at speeds below the maximum, means arranged to connect the cruising turbines serially as regards the flow of steam and to supply the exhaust therefrom to the auxiliary nozzles of the main turbines in parallel for lower speeds of the ship, and means for by-passing one or more stages of a cruising turbine for speeds between the maximum and the lower speeds.

3. In a system of ship propulsion, the combination of main turbines arranged to propel the ship at maximum speed, cruising turbines arranged to coöperate with the main turbines to propel the ship at speeds below the maximum, means for connecting the cruising turbines in series with each other as regards the flow of steam and to supply the exhaust therefrom in parallel to the main turbines for lower speeds of the ship, means for by-passing one or more stages of a cruising turbine for speeds between the maximum and the lower speeds, and means for connecting the casings of the cruising turbines to a region of lower pressure when the ship is running with the cruising turbines idle.

4. In a system of ship propulsion, the combination of main turbines arranged to propel the ship at maximum speed, cruising turbines arranged to coöperate with the main turbines to propel the ship at speeds below the maximum, means for connecting the cruising turbines in series with each other as regards the flow of steam and to supply the exhaust therefrom in parallel to the main turbines for lower speeds of the ship, and by-passing conduits in connection with each of the cruising turbines for shunting elastic fluid around one or more stages of such turbines for intermediate speeds of the ship.

1,190,075. WIRE-APPLYING TOOL. ALFRED JAMES AMBROSE, North Yakima, Wash. Filed Aug. 24, 1915. Serial No. 47,101. (Cl. 140—93.)



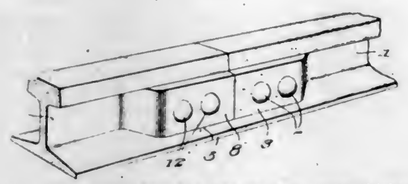
1. A tool of the character specified, comprising a body portion and a handle portion, the body portion being tubular and being pivoted to the handle portion near one end thereof, a plunger mounted to slide in the body portion, a block secured to the handle portion at the end adjacent to the body and on the outer side of the pivotal connection with the body portion, a link connecting the block to the plunger, the body portion having a longitudinal slot and the link having an angular lug extending through the slot and pivoted to the body portion, a spring normally pressing the plunger away from the handle portion, a ferrule detachably connected with that end of the body portion remote from the handle portion, said plunger having the end adjacent to the ferrule cut away to form a pin extending diametrically of the body portion for engaging the wires to be twisted, said link and block having laterally extending blades adjacent to the pivotal connection, the blade of the block being below the blade of the link when the body portion of the tool is upright, and adapted to move past each other when the handle portion is moved toward the body portion.

2. A tool of the character specified, comprising a body portion and a handle portion, the body portion being tubular and being pivoted to the handle portion near one end thereof, a plunger mounted to slide in the body portion, a block secured to the handle portion at the end adjacent to the body and on the outer side of the pivotal connection with the body portion, a link connecting the block to the plunger, the body portion having a longitudinal slot and the link having an angular lug extending through the slot and pivoted to the body portion, a spring normally pressing the plunger away from the handle portion, and a ferrule detachably connected with that end of the body portion remote from the handle portion, said plunger having the end adjacent to the ferrule cut away to form a pin extending diametrically of the body portion for engaging the wires to be twisted.

3. A tool of the character specified, comprising a tubular body and a handle pivoted to one end of the body near one end of the handle, a plunger in the body and provided at the end remote from the handle with a lateral pin extending diametrically of the body, a spring normally pressing the plunger away from the handle portion, and a connection between the plunger and the handle for constraining the plunger to move toward the handle when the outer end of the handle is moved toward the body, and cooperating cutting blades in connection with the handle and the plunger and moved past each other by the movement of the outer end of the handle toward the body.

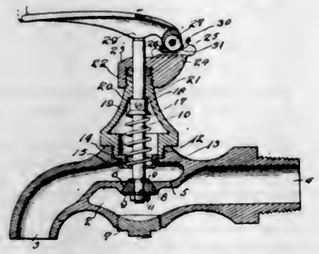
4. A tool of the character specified, comprising a tubular body and a handle pivoted to one end of the body near one end of the handle, a plunger in the body and provided at the end remote from the handle with a lateral pin extending diametrically of the body, a spring normally pressing the plunger away from the handle portion, and a connection between the plunger and the handle for constraining the plunger to move toward the handle when the outer end of the handle is moved toward the body, and a ferrule detachably connected with that end of the body remote from the handle.

1,190,076. RAIL-JOINT. FINIS L. ANDERSON and JOSEPH W. HORNE, Fullerton, Nebr. Filed Jan. 4, 1916. Serial No. 70,177. (Cl. 239—8.)



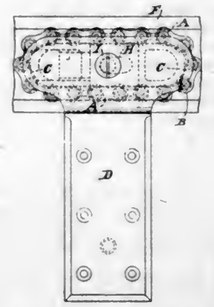
In a rail joint, two rails having their ends thickened and their flanges extending beyond their ends, the said flanges being cut centrally, longitudinally, horizontally and transversely to provide pockets beneath the thickened webs at one side of the webs, and the projecting flange of one of the rails adapted to be received in the pocket of the co-acting rail, one of the rails at the end thereof having a transverse groove entering from one of its sides, the other rail end having a projecting tongue, one of its sides being arranged flush with one of the sides of the thickened web and its opposite side terminating away from the other side of the said web, said tongue adapted to be arranged in the groove of the first mentioned rail, a plate covering the tongue and groove, and means for securing the plate to the rail ends.

1,190,077. FAUCET. CHARLES DELL ANGELO and LAWRENCE A. PEARSON, Diorite, Mich. Filed Sept. 15, 1915. Serial No. 50,863. (Cl. 137—4.)



A faucet having a spring actuated valve provided with an extending stem, guide members for the stem, means for regulating the tension of the spring, one of said guide members including a cap, said cap having an extension provided with spaced ears, a valve actuating lever pivoted between the ears, said lever having its pivoted end provided with teeth, a slidable lock between the ears, and said lock having teeth adapted to co-act with the teeth of the lever to retain the lever in locked position, as and for the purpose set forth.

1,190,078. DOOR-HANGER. JOHN EDWARD ANGER, Preston, England. Filed Sept. 11, 1914. Serial No. 861,293. (Cl. 16—91.)



1. A hanger device for sliding doors comprising in combination upper and lower track rails, hanger brackets each having a guide or sheave in connection therewith interposed between the opposing rails, a series of spaced rollers whose peripheries are mounted on each guide or sheave and connected by a flexible chain, the links of which are coupled together by engaging axial pins on the rollers.

2. A hanger device for sliding doors, comprising in combination upper and lower track rails, hanger brackets each having a guide or sheave in connection therewith, an antifriction hanger device consisting of spaced rollers coupled together by links so as to form an endless traveling chain of rollers mounted on each guide sheave, and grooves on opposite sides of the track rails in which the links of the chain run to prevent lateral displacement of the chain of rollers.

3. A hanger device for sliding doors, comprising in combination upper and lower track rails, hanger brackets each having a guide or sheave in connection therewith, an antifriction hanger device consisting of spaced rollers the same width as the track rails, and coupling links for the rollers adapted to overlap the rails at opposite sides so as to prevent lateral displacement of the chain of rollers.

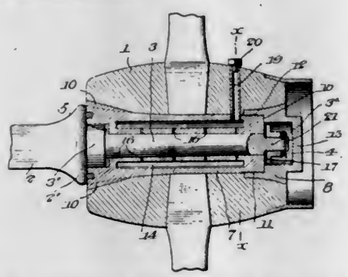
4. A hanger device for sliding doors, comprising in combination upper and lower track rails, hanger brackets each having a guide or sheave in connection therewith, said guides or sheaves being pivoted to the brackets so as to provide for a little rocking movement, and an endless traveling chain of rollers mounted on each guide or sheave and interposed between the opposing rails.

5. A hanger device for sliding doors comprising in combination upper and lower track rails, hanger brackets each having in connection therewith a guide or sheave, an endless traveling chain of rollers mounted on each guide or sheave which is interposed between the track rails, a pair of vertical ribs on the face of each bracket with a depression between, and a downwardly extending leaf spring secured to the top rail of the doorway, the lower end of which is adapted to enter the depression in one bracket when the door is open, and the depression in the other bracket when the door is closed.

1,190,079. VEHICLE-WHEEL BOXING. THEODORE ARTHUR and LEE M. MORRIS, Montgomery, W. Va. Filed Nov. 30, 1915. Serial No. 64,300. (Cl. 64—26.)

1. The combination with a vehicle hub, of a boxing arranged within the bore thereof, said boxing having a flared end provided with sharpened members which enter the hub, the boxing having its rear flared end provided

with an annular pocket which communicates with its bore, said flared end being further provided with a circumferential depression, a gasket within the depression, a gasket within the pocket, an axle having a spindle, said spindle received within the bore of the said boxing, said spindle having an enlarged annular portion received within the pocket of the boxing and the axle having its end portion adjacent the spindle also enlarged and contacting with the annular compressible member in the annular depression in the boxing, the boxing being centrally formed with a longitudinally extending lubricant receptacle and having ports communicating with its bore, a flanged nut, a compressible element between the nut and the end of the boxing, and a hollow threaded cap secured to the reduced end of the boxing and surrounding the nut for the spindle.



2. The combination with a vehicle hub, of a boxing for the hub, said boxing comprising a portion having its outer end thickened and flared toward its inner end, and the said outer end threaded, longitudinally extending ribs on the flared portion of the axle adapted to be forced in the hub, said boxing having a longitudinally extending interior lubricant receptacle and having ports leading therefrom to the bore of the boxing, a tube extending from the boxing and communicating with the receptacle, a cap for the tube, and a hollow cone-shaped cap secured to the threaded outer end of the boxing.

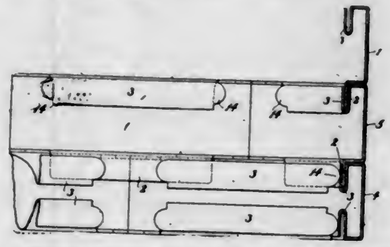
1,190,080. FENCE-POST. PERCY TAIPP BAILEY, Middletown, R. I. Filed Feb. 10, 1915. Serial No. 7,380. (Cl. 189—23.)



1. A fence post comprising a body formed from a single sheet bent so as to appear in cross section substantially U-shaped, the legs of said U-shaped structure tapering from the top of the post to the bottom so as to provide a wide supporting base, said legs on their edges also tapering from the ground line to the top of the post in one direction and tapering from the ground line to the bottom of the post in the opposite direction.

2. A fence post, comprising a single body formed from sheet metal bent so as to present a pair of edges, said edges being corrugated, the ridges of the corrugations of one edge being opposite the grooves of the corrugations of the other edge.

1,190,081. BUILDING ELEMENT. WILLIAM BAILEY, Birmingham, England. Filed Apr. 13, 1915. Serial No. 21,111. (Cl. 189—34.)



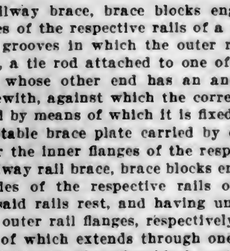
1. A building element for constructing walls comprising a sheet metal plate having one horizontal edge bent rearward at right angles to the front face and then first bent inwardly at right angles and then outwardly to form a narrow parallel-sided socket parallel to said front face and also to form flat horizontal bearing surface to the element, the opposite horizontal edge of the element being bent inwardly to form a flat bearing surface at right angles to the front face and a plain flat tongue of single thickness parallel to the front face to engage respectively with the contiguous bearing face and with the socket of an adjacent element to form a rigid connection between the elements and render the same mutually supporting and interlocking.

2. A building element for constructing walls comprising a sheet metal plate having one horizontal edge bent rearward at right angles to the front face, and having for a portion of its length an extension which is bent first inward at right angles and then outward to form a narrow parallel-sided socket parallel to but shorter than said front face and also to form a flat horizontal bearing surface to the element, the outwardly bent side of the socket being provided at opposite ends with laterally extending ears between which and the ends of the rearwardly bent horizontal edge, a space is formed adapted to receive an adjacent part of the structure, the opposite horizontal edge of the element being bent inward to form a flat bearing surface at right angles to the front face and a plain flat tongue of single thickness parallel to the front face to engage respectively with the contiguous bearing face and with the socket of an adjacent element so as to form a rigid connection between the elements and render the same mutually supporting and interlocking.

1,190,082. OVEN-THERMOMETER. EUGENE L. BAKER, Taunton, Mass. Filed Jan. 29, 1916. Serial No. 75,098. (Cl. 73—119.)

1. In an oven thermometer, a supporting structure having spaced shoulders; a resilient yoke embodying fingers yieldingly engaged with the shoulders to hold the yoke assembled with the supporting structure; a shaft journaled for rotation in the yoke; an indicating arm carried by the shaft; and a thermometric spring forming a connection between the yoke and the shaft.

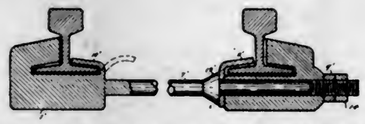
2. In an oven thermometer, a dial having an opening; a resilient yoke embodying a back, fingers yieldingly engaged with the dial along the edges of the opening, and a transverse head carried by one finger and located upon the opposite side of the dial from the back; a shaft journaled for rotation in the back and in the head; an indicating arm carried by the shaft and coacting with the dial; and a thermometric spring forming a connection between the shaft and the yoke.



3. In an oven thermometer, a supporting structure having spaced shoulders; a resilient yoke embodying fingers yieldingly engaged with the shoulders to hold the yoke assembled with the supporting structure; a shaft journaled in the yoke; an indicating arm carried by the shaft; and a thermometric spring operatively connected with the shaft; a portion of the yoke being provided with an opening, the material freed in the formation of the opening being formed into a securing element integral with the yoke and connected to the spring.

4. In an oven thermometer, a dial; a yoke supported by the dial; a shaft journaled in the yoke; an indicating arm carried by the shaft and coacting with the dial; a thermometric spring, one end of which is operatively connected with the shaft, the yoke being provided with an opening into which said end of the spring is adapted to retire when the indicating arm is near zero, the material freed in the formation of the opening being fashioned into a securing element integral with the yoke and connected with the other end of the spring.

1,190,083. RAILWAY-RAIL BRACE. NED EASTMAN BARNES, Willis, Tex. Filed Apr. 9, 1915. Serial No. 20,143. (Cl. 238—5.)

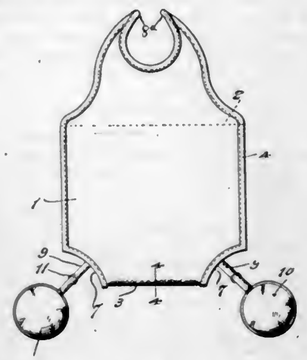


1. In a railway brace, brace blocks engaging against the outer sides of the respective rails of a track and having undercut grooves in which the outer rail flanges, respectively, fit, a tie rod attached to one of said blocks at one end and whose other end has an annular shoulder integral therewith, against which the corresponding block is located and by means of which it is fixed upon said rod and an adjustable brace plate carried by each block and engaging over the inner flanges of the respective rails.

2. In a railway rail brace, brace blocks engaging against the outer sides of the respective rails of a track and upon which said rails rest, and having undercut grooves in which the outer rail flanges, respectively, fit, and a tie rod, one end of which extends through one block and the other being rigid with the other block, nuts secured upon the outer end of said rod and securing said rod against detachment therefrom, a brace plate through which one end of said rod extends and another brace plate with which the other end is rigid engaging over the inner flanges of the respective rails and a shoulder on said rod against which the inner side of one of said plates rests when in normal position.

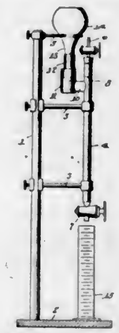
1,190,084. BABY ROMPERS OR CREEPERS. THEODOCIA BATES, Sasakwa, Okla. Filed June 4, 1915. Serial No. 32,136. (Cl. 2—131.)

1. A garment for creeping children comprising a front and back portion connected together by a tape, said back portion having a draw-string in the upper edge thereof, and said garment having elastic straps connected at the leg openings thereof, and pads provided with straps and buckles for adjustment to the first named straps, said pads comprising a cover, padding, and tapes for securing the pads to the legs of the child.



2. A garment for creeping children comprising a front and back portion connected together by a tape, a neck portion, said garment having elastic straps connected to the front portion at the leg openings thereof, and knee pads comprising a leather cover, padding inside the cover, a strap having a buckle connected thereto and adapted to engage the elastic straps to permit adjustability of the knee pads.

1,190,085. VISCOSITY-TESTING APPARATUS. HANS F. BAUER, Cedar Rapids, Iowa. Filed Sept. 25, 1915. Serial No. 52,647. (Cl. 73—51.)



1. An apparatus for testing the fluidity or viscosity of liquids comprising a test tube having a vent cock at its upper end, a valve outlet at its lower end, a filling cup disposed parallel with and adjacent to the upper end of the tube, a lateral inlet connecting the tube with the lower end of said filling cup, and an indicating mark disposed above and in proximity to said inlet connection.

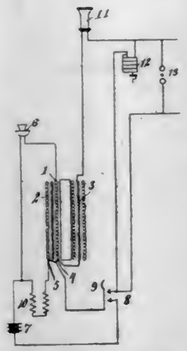
2. An apparatus for determining the fluidity or viscosity of liquids, comprising a support, a test tube carried by the support, and having a vent cock at its upper end, a valved outlet at its lower end, a lateral inlet adjacent to but below its upper end, a liquid level indicating mark disposed above and adjacent to said inlet, and a holder carried by the support to contain a vessel from which the cup is to be filled.

3. An apparatus for determining the fluidity or viscosity of liquids comprising a test tube having a vent cock at its upper end, a valved outlet at its lower end, an inlet disposed adjacent to but below its upper end, a liquid level indicating mark disposed above and adjacent

to said inlet, and a filling cup communicating with the inlet.

4. An apparatus for determining the fluidity or viscosity of liquids, comprising a support, a test tube carried by the support and having a vent cock at its upper end, a valved outlet at its lower end, a lateral inlet adjacent to but below its upper end, a liquid level indicating mark disposed above and adjacent to said inlet, and a filling cup communicating with the inlet, and a flask carried by the support and having a neck portion depending into said filling cup.

1,190,086. TELEPHONE-CIRCUIT. ALBERTA EGBERT BEACHUM, Polkton, N. C., assignor of one-half to Robert L. Steele, Rockingham, N. C. Filed May 20, 1914. Serial No. 839,725. (Cl. 179—81.)



A telephone circuit, an induction coil comprising a core relatively long in proportion to its cross section, a primary winding next the core, a secondary winding over said primary winding and having a large number of turns, a second primary winding over said secondary winding and having the same number of turns as said first mentioned winding, a circuit including a transmitter, a source of energy and one of said primary windings, a circuit including a receiving device and said secondary winding, and a circuit including said second primary winding and balancing resistance being bridged across said first mentioned primary winding.

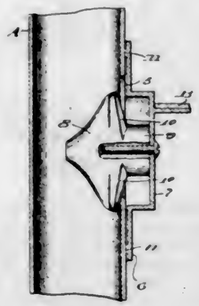
1,190,087. ENGINE OR MACHINE PACKING AND METHOD OF MAKING THE SAME. GEORGE WILLIAM BELDAM, Ealing, England. Filed Feb. 14, 1916. Serial No. 78,234. (Cl. 154—2.)

1. A "soft" or "flexible" packing consisting of a plurality of adhered rubber impregnated canvas layers or strips being the separated layers or strips of casings or covers of old or used up self propelled vehicle pneumatic or equivalent tires; and the layers or strips of the packing being adhered together by an adhesive substantially as set forth.

2. The manufacture of the packing consisting in pulling apart the layers or strips of old or disused pneumatic tire casings or covers; coating or proofing these separated layers or strips with an adhesive; and then rolling or laying up the coated layers or strips upon one another into the form or shape of packing required: substantially as set forth.

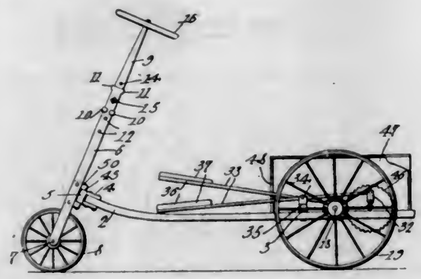
3. A soft or flexible packing consisting of a plurality of adhered rubber impregnated canvas layers or strips being the separated layers or strips of casings or covers of old or used up self propelled vehicle pneumatic or equivalent tires, the layers or strips of the packing being adhered together by rubber compound or mixture or like adhesive, said packing being semi-vulcanized, substantially as described.

1,190,088. CORNER-FASTENING FOR DISPLAY-RACKS. SIMEON BELDEN, Jr., Birmingham, Ala. Filed May 20, 1914. Serial No. 839,870. (Cl. 5—55.)



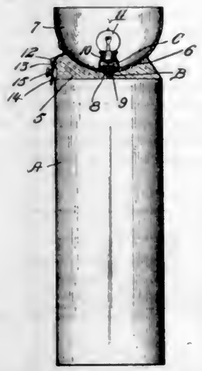
In a device of the class described, in combination, a hollow corner post, formed with an elongated slot, a substantially semi-circular plate having a back wall, side walls, top and bottom walls, having semi-circular edges, opposing semi-circular flanges formed in a plane with the top and bottom walls of said plate flush with their semi-circular edges, the back wall of said plate being spaced from the line of said flanges, a substantially T-shaped head having a shank and tapering forwardly toward said shank, said shank adapted to bear against the back wall of said plate to properly dispose said head against one edge of said slot, said shank having an elongated internally threaded bore, and a single set screw projecting through the back wall of said plate into said threaded bore and adapted to hold said shank against said back wall.

1,190,089. VELOCIPEDE. JOHN WILLIAM BELLAIRS, Mishawaka, Ind. Filed Nov. 18, 1915. Serial No. 62,180. (Cl. 208—34.)



In a velocipede, a frame; a ground wheel; a shaft journaled on the frame and provided with a crank; means for connecting the shaft with the ground wheel; a bracket upstanding from the frame; a lever fulcrumed intermediate its ends on the bracket; means for connecting the rear end of the lever with the crank; a steering wheel; and a steering shaft journaled on the frame and connected with the steering wheel, the lever being forwardly extended to a point adjacent the steering shaft, whereby an operator may stand upon the forward end of the lever while the steering shaft is being manipulated, the frame lying beneath the forward end of the lever to limit the downward movement thereof should the connecting means between the rear end of the lever and the crank break, the fulcruming of the lever intermediate its ends on the bracket serving to decrease the vertical throw of the lever at its forward end.

1,190,090. ELECTRIC FLASH-LAMP. CHARLES A. BENNETT, Galt, Cal. Filed Oct. 16, 1915. Serial No. 56,213. (Cl. 240—8.5.)



1. The combination with a dry cell battery, of a lamp comprising a base of nonconducting material having an opening for receiving the center binding post of the battery, a reflector body, a nut on the post for fastening the base and reflector body on the battery, a socket member carried by the reflector body for receiving an electric bulb for its engagement with the binding post, and means on the reflector for engagement with the body of the battery to close the circuit to the bulb.

2. The combination with a dry cell, of a lamp including a body of insulation adapted to substantially cover the terminal end of the cell and provided with an opening through which the center terminal of the cell projects, a metal reflector carried by the body, a spring clip carried by the reflector and normally out of contact with the casing of the cell, a lamp socket having a central connection insulated from the reflector and connected to the terminal of the cell, the shell of the socket being electrically connected to the reflector, and a lamp bulb mounted in the socket, whereby the engagement of the spring clip with the casing of the cell, closes the circuit with the cell and bulb.

1,190,091. TRIMMING. HARRY BERLIN, New York, N. Y. Filed Oct. 21, 1915. Serial No. 57,166. (Cl. 2—187.)

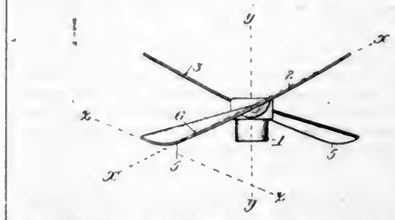


1. As an article of manufacture, an embroidery trimming consisting of a strand formed of two corrugated ribbons twisted one upon the other with the edges of the flats between bends of one ribbon in register with the flats between bends of the other ribbon, to cause the respective bends to register to permanently lock said ribbons in twisted condition.

2. As an article of manufacture, an embroidery trimming consisting of a strand formed of two corrugated ribbons twisted one upon the other with the edges of the flats between bends of one ribbon registering with and bearing upon the respective flats between bends of the other ribbon.

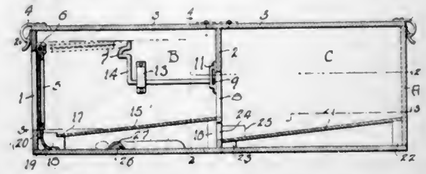
1,190,092. PROPELLER FOR FLYING-MACHINES. EMILE BERLINER, Washington, D. C. Filed Mar. 12, 1909. Serial No. 483,034. (Cl. 170—159.)

1. A propeller for flying machines including a hub, a blade projecting from said hub, said blade being substantially triangular in outline with its front or cutting edge from the hub to the tip thereof offset from the plane of the body of the blade and part of the blade adjacent the offset cutting edge being formed on a shallow curve merging into the plane of the blade.



2. A propeller for flying machines, including a hub, a blade projecting from said hub, said blade being substantially of uniform thickness and substantially triangular in outline with its front or cutting edge from the hub to the tip thereof curved and offset from the plane of the body of the blade whereby a plane tangential to said curve at the edge thereof cuts the axis of the hub at an acute angle which is substantially the supplement of the angle formed by the plane containing the body of the blade and cutting the axis of the hub.

1,190,093. TRAP-NEST. ALBERT K. BODENHORN, Punxsutawney, Pa. Filed Sept. 24, 1915. Serial No. 52,452. (Cl. 119—47.)



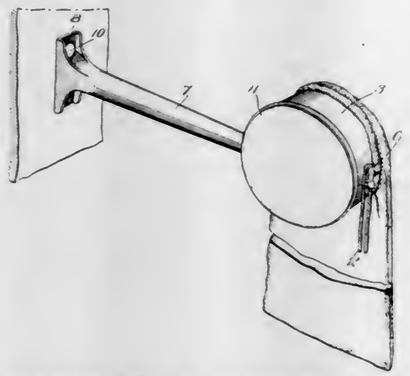
1. A device of the character described, including a nest box subdivided by an intermediate partition into two compartments and provided with an entrance opening leading into the outer compartment, said outer compartment being provided with an egg receiving chamber and the partition being formed with an opening communicating with the egg receiving chamber, an inclined bottom board arranged within the inner compartment, and guide means for directing an egg from the lower end of the inclined bottom board through the opening of the partition into the egg receiving chamber, in combination with means for entrapping the hen in the nest operated by her passage from the outer compartment into the inner compartment.

2. A device of the character described, including a nest box subdivided by a partition into two compartments, and provided with an entrance leading into the outer compartment, an inclined bottom board mounted within the outer compartment and arranged above the bottom thereof to provide an egg receiving chamber under the bottom board, an inclined apron arranged opposite the lower edge of the said bottom board for deflecting an egg into the egg receiving chamber, the before mentioned partition being provided with an opening leading from the egg receiving chamber to the inner compartment, an inclined bottom board arranged within the inner compartment, and means at the lower end of the second mentioned inclined bottom board for deflecting an egg through the opening of the partition into the egg receiving chamber, in combination with means for entrapping the hen in the nest operated by her passage from the outer compartment into the inner compartment.

3. A device of the character described, including a nest box subdivided by a partition into communicating inner and outer compartments and provided with an entrance opening leading to the outer compartment, an inclined

bottom board arranged within the outer compartment above the bottom thereof to provide an egg receiving chamber under the bottom board, means for directing an egg from the lower end of the inclined bottom board into the egg receiving chamber, an inclined bottom board arranged within the inner compartment, means for directing an egg from the inclined bottom board of the inner compartment into the egg receiving chamber, and ribs projecting from the bottom of the egg receiving chamber to separate the eggs received from the two compartments, in combination with means for entrapping the hen in the nest operated by her passage from the outer compartment into the inner compartment.

1,190,094. STRAINER. JOSEPH E. BORN, Weyauwega, Wis. Filed May 13, 1916. Serial No. 97,348. Cl. 210—16.)



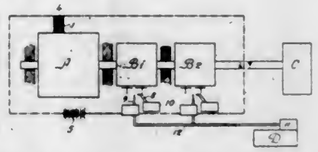
1. A strainer including a bag having its mouth provided with a drawing string, a band having one of its edges flanged outwardly and upwardly to receive the mouth of the bag, a spring clip upon the band to engage with the drawing string when the mouth of the bag is closed around the band, and a handle for the band.

2. A strainer including a textile bag having its mouth provided with a drawing string, a metal band having its lower edge flanged outwardly and upwardly and provided with teeth which are adapted to engage with the bag when the bag is arranged upon the band, a spring clip upon the band to engage with the ends of the drawing string when the said string is tightened to close the mouth of the bag upon the band, and a supporting handle for the band.

3. A strainer including a textile bag having its mouth provided with a drawing string, a metal band having its lower edge flanged outwardly and upwardly and the edge of the said flange provided with teeth which are adapted to engage with the bag when the bag is arranged upon the band, means upon the band for engaging the ends of the drawing string of the bag when the string is drawn taut to close the mouth of the bag upon the band, a handle for the band, said handle having its end provided with a flat laterally extending member, said member having its extensions formed with key-hole slots to receive a headed supporting element, and a flanged closure for the band.

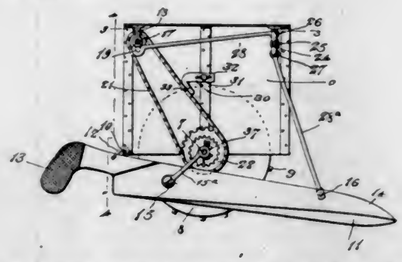
1,190,095. PRODUCTION OF PICTURES IN NATURAL COLORS BY PHOTOMECHANICAL MEANS. BORIS BOUBNOFF, Petrograd, Russia. Filed Jan. 13, 1914. Serial No. 811,854. (Cl. 41—25.)

1. An apparatus for the production of pictures in natural colors comprising a cylinder having a copy in relief attached thereto, a lever adjacent said cylinder, a needle attached to one arm of said lever, an electric circuit including a battery and a rheostat, said arm carrying a roller engaging said rheostat for regulating the resistance in the circuit of the battery; a compressed air receptacle having a valved nozzle for spraying the pictures, an electro-magnet inserted in the circuit of the battery, the armature of said electro-magnet being adapted to control the outlet opening of the nozzle according to the irregularities of the copy in relief, means for causing the valve of the spraying devices to be moved in a relatively coördinated movement along the said cylinder, and means arranged between the sprayed portion of the spraying apparatus for the purpose of adjusting the width of the spraying portion, said last mentioned means taking part in the movement of the spraying apparatus.



2. An apparatus for the production of pictures in natural colors comprising a cylinder having a copy in relief attached thereto, a lever adjacent said cylinder, a needle attached to one arm of said lever, an electric circuit including a battery and a rheostat, said arm carrying a roller engaging said rheostat for regulating the resistance in the circuit of the battery; a spraying apparatus comprising a compressed air receptacle having a valved nozzle for spraying the pictures, a series of spaced rotating disks arranged between said cylinder and said spraying apparatus, certain of said disks being capable of movement in a horizontal direction for the purpose of enabling the width of space between said disks being adjusted, an electro-magnet inserted in the circuit of the battery, the armature of said electro-magnet being adapted to control the outlet opening of the nozzle according to the irregularities of the copy in relief, and means for causing the valve of the spraying devices to be moved in a relatively coördinated movement along the said cylinder.

1,190,096. CUTTING-MACHINE. ANDREW BRAY, Jackson, Mich. Filed Oct. 29, 1914. Serial No. 869,278. (Cl. 164—73.)

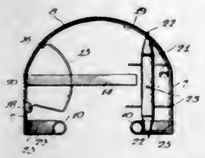


1. A cutting machine comprising a frame, a shaft rotatably mounted in said frame, supporting wheels secured on said shaft, a hook secured in the rear portion of said frame, a pair of supporting members secured to said shaft, a blade secured to the rear extremities of said hook and said supporting members, a second blade pivoted to said first blade, and driving connections between said shaft and the second mentioned pivoted blade.

2. A cutting machine comprising a frame, a shaft rotatably mounted in the lower portion of said frame, supporting wheels keyed on said shaft, a pair of shafts rotatably mounted in the upper portion of said frame, driving connections between the first mentioned shaft and one of the shafts of said pair, driving connections between the shafts of said pair, a blade supported in said frame, a second blade pivotally secured to said first blade, and driving connections between the other shaft of said pair and the second mentioned pivoted blade.

3. A cutting machine comprising a frame, a shaft rotatably mounted in the lower portion of said frame, supporting wheels keyed on said shaft, a pair of shafts rotatably mounted adjacent the upper end of said frame and having cranks, a driving connection between the first mentioned shaft and one of the shafts of the pair, driving connections between the shafts of the pair, a hook member pivotally supported in the lower portion of said frame, a blade secured to the lower extremity of said hook, a second blade pivotally secured to the first blade, and driving connections between the other shaft of the pair and the said second mentioned pivoted blade.

1,190,097. INSECT-DESTROYER. JOHN THOMAS BROOKS, Corpus Christi, Tex., assignor on one-half to J. B. F. Newton, Corpus Christi, Tex. Filed Oct. 10, 1914. Serial No. 866,079. (Cl. 43—1.)



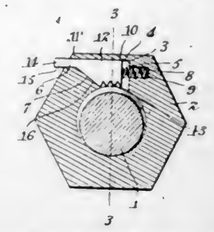
1. In an insect destroyer of the class described, the combination of a one piece hood, said hood being formed from a blank and comprising a body semi-circular in cross section having inwardly extending shelves formed integral upon its lower portions and extending at right angles thereto, said shelves having longitudinally extending rolled sleeves upon their inner portions, means carried by said shelves for shaking bushes passing therebetween, whereby insects which are shaken from the bushes will fall upon said shelves, said shelves preventing the insects from escaping and also preventing said shelves from injuring the bushes, and means for supporting said hood.

2. In an insect destroyer of the class described the combination of a one-piece hood, said hood being formed from a blank so as to have a closed upper portion, and terminating at its lower portions in inwardly extending shelves having rolled sleeves, flat spring beaters positioned within said hood, each spring having one end thereof fixedly secured upon said hood, whereby the springs may swing so as to beat or shake the bushes passing through said hood for removing insects from the bushes, said shelves being adapted to catch the insects, means for limiting the swing of said flat springs in one direction, whereby the springs are prevented from breaking off, and means for supporting said hood.

3. In an insect destroyer of the class described, the combination of a one-piece hood, said hood being formed from a blank and comprising a body semi-circular in cross-section having inwardly extending shelves formed integral upon the lower portions thereof and extending at right angles thereto, said shelves having longitudinally extending rolled sleeves upon their inner portions, flat spring beaters fixedly secured at their ends within said hood, reinforcing frames fixedly secured within said hood and having their central portions carried at a spaced distance from the inner surfaces of said hood, said frames carried adjacent said spring beaters whereby said springs may shake a bush passing through said hood for shaking insects therefrom, said shelves being adapted to catch the insects, said frames limiting the swinging of said spring beaters in one direction thereby preventing the springs from breaking from engagement with said hood, and means for supporting said hood.

4. In an insect destroyer of the class described, the combination of a supporting hood, insect catching means carried by said hood, means for supporting said hood, reinforcing bands fixedly mounted within said hood and conforming in shape to the contour thereof for strengthening said hood, outwardly-bowed reinforcing frames positioned within said hood, said frames provided with feet, said feet being fixedly secured upon said bands, whereby the major portions of said frames will be carried at a distance from the inner portions of said hood, and resilient elongated beaters fixedly mounted within said hood, said beaters being adapted to normally bear against the central portions of said frames, said beaters being adapted to shake bushes passing through said hood, whereby insects may be shaken onto said insect catching means, said frames being adapted to limit the swinging movement of said beaters in one direction, whereby the beaters will be prevented from breaking from engagement with said hood.

1,190,098. LOCK-NUT. WILLIAM L. BROOKS, Sharon, Pa. Filed Jan. 22, 1916. Serial No. 73,689. (Cl. 151—25.)



In combination, a bolt and a nut threaded on the bolt, said nut having a pocket including an outer straight wall and an inner end wall arranged at a right angle to the said straight wall and communicating with the bore of the nut, the outer straight wall communicating with the exterior of the nut, an inner straight wall parallel with the outer straight wall at the entrance to the pocket, a wall at an acute angle to the outer straight wall formed at the terminal of the inner straight wall spaced from the inner end wall of the pocket and communicating with the bore of the nut, a dog including a body portion and a tail shaped to correspond with the shape of the pocket, the body of the dog being of a lesser length than the length of the deeper portion of the pocket and the tail extending through the opening for the pocket, a spring forcing the tail of the dog through the pocket to bring the teeth of the dog within the area of the nut opening and into engagement with the threads of the bolt, the said tongue and angular portion thereof contacting with the walls of the pocket adapted to retain the outer edge of the lock at all times in engagement with the outer wall of the pocket, substantially as described.

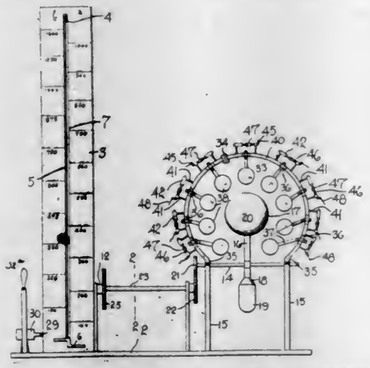
1,190,099. BASE-BALL GAME. FRANK M. BROWN, Bayonne, N. J. Filed Aug. 5, 1915. Serial No. 43,818. (Cl. 73—15.)

1. In an amusement device of the character described, a scale, an indicating device movable vertically over the scale, a winding drum, a flexible connection leading from the winding drum to the indicating device, a rotatably mounted target, means for operatively connecting the winding drum with the target whereby to cause the rotation of the winding drum upon a rotation of the target under the impact of an object, and means for manually disconnecting the winding drum from the target to thereby permit the return of the indicating device.

2. In an amusement device of the character described, a rotatably mounted target, an arcuate support disposed concentric to the target, and a plurality of subsidiary targets each rotatably mounted upon said support and spaced in uniform relation from the central target and from each other.

3. In an amusement device of the character described, a rotatably mounted central target, an arcuate support

disposed concentric to the target, and a plurality of rotatable subsidiary targets mounted upon said support and normally supported in uniform spaced relation from the central target.



4. In a device of the character described, a shaft, a target mounted upon said shaft for rotation in a vertical plane, means for normally supporting the target in a vertical position, an arcuate support disposed concentric to the target, a plurality of subsidiary targets rotatably mounted upon said support and normally disposed in the same plane as the plane of the target, and means for indicating the number of revolutions made by the first named target under the impact of an object.

5. In an amusement device of the character described, a shaft, a target mounted thereon for rotation with the shaft and normally supported in a vertical position, means operatively connected to the shaft for indicating the number of rotations made by said shaft under the impact of an object upon the target, an arcuate support disposed concentric to the shaft, a plurality of subsidiary targets disposed concentric to the main target and at a uniform distance therefrom and from each other, said subsidiary targets being mounted for rotation in planes radial to the center of the main target, and means for engaging the subsidiary targets when they are rotated from their normal position into an upwardly projecting position under the impact of an object.

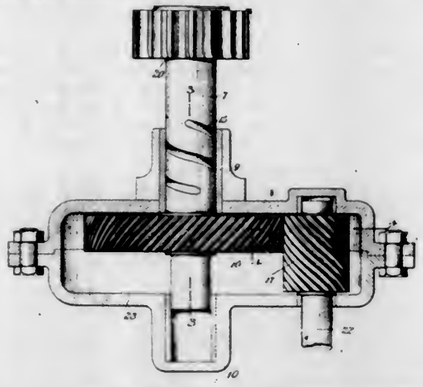
[Claims 6 to 8 not printed in the Gazette.]

1,190,100. AUTOMATIC GEAR-SHIFTING DEVICE. FRED A. BROWN and ALBERT F. WAGNER, New York, N. Y. Filed May 8, 1914. Serial No. 837,181. (Cl. 74—7.)

1. In a device of the character described, the combination with a driven member, of a driving member, a shaft rigidly connected with said driving member, means engaging said shaft for causing a longitudinal movement of said shaft during the first part of the rotation thereof, a gear wheel secured to said shaft, and a driving pinion meshing with said gear wheel, said pinion being of a width to remain continually in mesh with said gear wheel regardless of the position of the gear wheel and said shaft.

2. In a device of the character described, the combination with a driven member, of a driving member, a shaft connected rigidly with said driving member, means engaging said shaft for resisting the rotation thereof; a spiral gear rigidly secured to said shaft, a spiral pinion meshing with said spiral gear, and means for rotating said spiral pinion, whereby said spiral pinion will act in connection with said spiral gear as a cam for moving the spiral gear and the shaft carried thereby longitudinally for causing said driving member to engage said driven member.

3. In a device of the character described, the combination with a driven member, of a driving member, a shaft rigidly secured to said driving member, said shaft having a spiral groove arranged therein, a spring pressed pin extending into said groove, and means for rotating said shaft, said pin acting in said spiral groove causing said shaft to be moved longitudinally as the same is rotated, whereby said driving member is brought into engagement with said driven member.



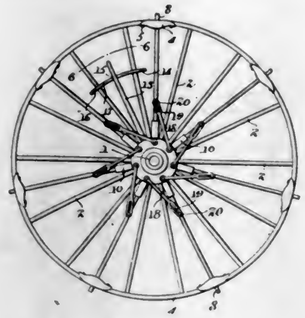
4. In a device of the character described, the combination with a driven member, of a driving member, a shaft rigidly secured to said driving member, said shaft being provided with a spiral groove, a spring pressed pin fitting into said spiral groove for partially resisting the rotation of the shaft, and for causing a longitudinal movement of the shaft when the shaft is rotated, a spiral gear secured to said shaft, a spiral pinion meshing with said gear, means for rotating said spiral pinion, whereby said shaft is rotated and moved also longitudinally, and means co-acting with said spiral gear for limiting the longitudinal movement of said shaft.

5. In a device of the character described, the combination with a driven member, of a driving member, a shaft connected with said driving member, means for partially resisting the rotation of said shaft, a spiral gear rigidly secured to said shaft, a spiral pinion meshing with said spiral gear, means for rotating said spiral pinion, said spiral pinion acting for part of its movement as a cam, whereby said spiral gear and the shaft carried thereby are moved longitudinally of the shaft, and means co-acting with said spiral gear for limiting the longitudinal movement of said shaft, whereby said driving member may be brought into engagement with said driven member and moved out of engagement therewith.

1,190,101. WHEEL. JAMES WESLEY BRUCE, Summerfield, Ohio. Filed Oct. 13, 1915. Serial No. 55,701. (Cl. 21—209.)

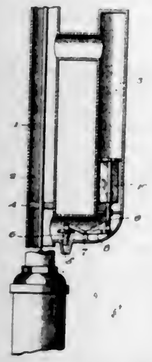
1. A traction wheel comprising a hub, rigid spokes and a rim, said rim being provided with guide passages, radially movable gripping spokes slidable at their outer ends through said guide passages and at their inner ends within the hub, springs for holding said gripping spokes projected, projections upon the gripping spokes, links having elongated slots at their outer ends receiving the projections upon the gripping spokes, and forming slip-joint connections between the links and spokes, means pivotally connecting the inner ends of the spokes eccentric to the wheel hub, and means for transmitting adjusting motions to said connecting means.

2. A traction wheel comprising a hub, rigid spokes and a rim, said rim being provided with guide passages, radially movable gripping spokes slidable at their outer ends through said guide passages and at their inner ends within the hub, springs for holding said gripping spokes projected, projections upon the gripping spokes, a rotary collar upon the hub, eccentric links pivotally connected at their inner ends with said collar and having elongated slots at their opposite ends receiving the projections upon the gripping spokes, and forming slip-joint connections between the links and spokes, means for rotating said collar upon the wheel hub for adjusting the links inwardly and outwardly, and means for locking said adjusting means in adjusted positions.



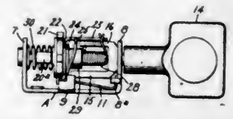
3. A traction wheel comprising a hub, rigid spokes and a rim, said rim being provided with guide passages, radially movable gripping spokes slidable at their outer ends through said guide passages and at their inner ends within the hub, springs for holding said gripping spokes projected, projections upon the gripping spokes, a rotary collar upon the hub, and eccentric links pivotally connected at their inner ends with said collar and having elongated slots at their opposite ends receiving the projections upon the gripping spokes, and forming slip-joint connections between the links and spokes, substantially as and for the purpose described.

1,190,102. VENT FOR WELL-PUMPS. WILFRED H. BUTCHER, Burwell, Nebr. Filed Mar. 20, 1915. Serial No. 15,931. (Cl. 113—60.)



A pump casing, a by-pass in said casing adjacent to the lower end thereof having the lower portion formed with a vent opening, a valve for closing said opening, a bracket in said by-pass adjacent to said vent opening, a lever fulcrumed between its ends to said bracket and having one end connected to said valve, a stem secured to the other end of said lever and projecting upwardly therefrom, an actuating element slidably mounted within the vertical portion of said by-pass and bearing upon the upper end of said stem to hold said valve in open position and movable by the water flowing through the by-pass to disengage said stem whereby said valve may gravitate to closed position.

1,190,103. SWITCH. JOHN R. BYRNE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 12, 1913. Serial No. 800,449. (Cl. 173—351.)



1. A snap switch mechanism comprising an axially movable rotary member including a switch element and detent means; stop means normally engaging said detent means so as to prevent rotation of said member; a rotary actuator for said rotary member; and means responsive to rotation of said actuator in either direction for exerting tension on said rotary member and shifting said detent means axially to release it from said stop means.

2. A snap switch mechanism comprising a rotary member including a contact plate and axially movable detent and cam means; stop means normally engaging said detent means so as to prevent rotation of said member; a rotary actuator for said rotary member and means forming between said actuator and said member a yielding operating connection adapted to exert tension on the latter in response to rotation of the former in either direction; and means carried by said actuator for coöperating with said cam means to shift said detent means axially to disengage it from said stop means.

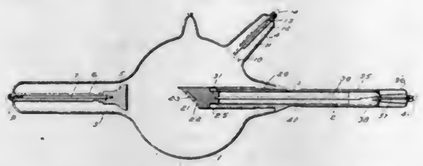
3. A snap switch mechanism including an axially movable rotary member comprising a contact plate, a detent wheel, and a double faced cam; means yieldingly resisting axial movement of said rotary member; means normally engaging said detent wheel to prevent rotation thereof in either direction; a rotary actuator for said rotary member; means forming between said actuator and said rotary member a yielding operating connection adapted to exert tension on the latter in response to rotation of the former in either direction; and means carried by the actuator for engaging one or the other of the cam faces in accordance with the direction of rotation of the actuator to move the rotary member axially and release the same from said engaging means.

4. A snap switch mechanism including an axially movable rotary member comprising a contact plate, a star wheel, and a double cam; a spring opposing axial movement of said rotary member; stop means for preventing rotation of said rotary member comprising a pair of yielding members between which one of the detents of the star wheel is normally held; a rotary actuator for said rotary member facing said cam; means forming between said actuator and said rotary member a yielding operating connection adapted to exert tension on the latter in response to rotation of the former in either direction; and an arm carried by said actuator adapted on such rotation to coöperate with said cam in moving said rotary member axially so as to release the star wheel from said stop means.

5. A snap switch mechanism comprising a rotary member including an axially movable detent wheel; means yieldingly resisting axial movement of said wheel; stop means for preventing rotation of said rotary member comprising a pair of flat springs between which the detents of said wheel are successively received, the upper surfaces of said springs lying in the path of movement of said detents; a rotary actuator for said rotary member comprising means for moving said detent wheel axially to release it from said stop means; and means forming a yielding connection between said actuator and said rotary member adapted to exert tension on the latter in response to rotation of the former.

[Claims 6 to 9 not printed in the Gazette.]

1,190,104. X-RAY TUBE. CHARLES E. CAMPBELL, Lynn, Mass. Filed Apr. 5, 1913. Serial No. 759,012. (Cl. 250—35.)



1. An X-ray tube having, in combination, a glass bulb, an outwardly extending tubular target extension blown in one side of the bulb, a glass flange around the mouth of the extension integral with the bulb and projecting inwardly therefrom, a target, a supporting sleeve for the target fitting over the flange, and a heat conducting sleeve connected with the target, entirely inclosed within the X-ray tube and fitting closely against the inside of the target extension so as to dissipate the heat through the glass walls of the target extension, substantially as described.

2. An X-ray tube having, in combination, a glass bulb, an outwardly extending tubular target extension blown in one side of the bulb, a glass flange around the mouth of the extension integral with the bulb and projecting inwardly therefrom, a target, a steel supporting sleeve for the target fitting over the flange and resiliently clasping it, and a heat conducting sleeve connected with the target and fitting inside the extension, substantially as described.

3. An X-ray tube having, in combination, a glass bulb, an outwardly extending tubular target extension blown in one side of the bulb, a glass flange around the mouth of the extension integral with the bulb and projecting inwardly therefrom, a target, a steel supporting sleeve for the target fitting over the flange and resiliently clasping it, a heat conducting sleeve connected with the target and fitting inside the extension, and a heat dissipating sleeve surrounding the extension, substantially as described.

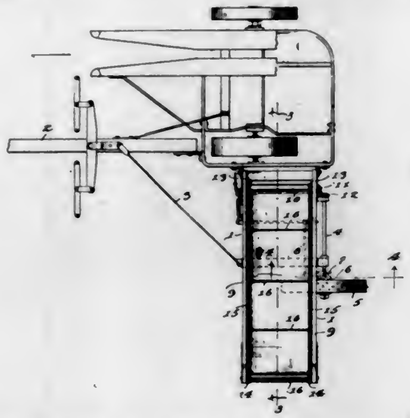
4. An X-ray tube having, in combination, a glass bulb, an outwardly extending tubular target extension blown in one side of the bulb, a target, a heat conductor extending from the target into the target extension for conducting heat from the target to the target extension, said heat conductor being inclosed within the X-ray tube and dissipating the heat through the glass walls of the target extension, and a heat dissipating sleeve surrounding the extension outside of the heat conductor, substantially as described.

5. An X-ray tube having, in combination, a glass bulb, an outwardly extending tubular target extension blown in one side of the bulb, a glass flange around the mouth of the extension integral with the bulb and projecting inwardly therefrom, a target, a heat conducting sleeve extending from the target into the target extension for conducting heat from the target to the target extension, a vacuum regulating tube sealed through the glass at the end of the target extension, and a heat dissipating sleeve surrounding the target extension and projecting beyond it to form a protecting cage for the regulating tube, substantially as described.

[Claim 6 not printed in the Gazette.]

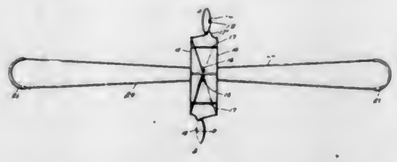
1,190,105. CORN-LOADER. AUGUST CARLSON, Richardson, Ill. Filed Nov. 22, 1915. Serial No. 62,862. (Cl. 193—14.)

A device of the class described, a combination, a rectangular frame, wheels upon which said frame is mounted, a pair of angle iron supports secured to one side of said frame, a pair of L-shaped standards secured at their inner ends upon said angle iron supports, a conveyer casing secured at an upward inclination and secured respectively to the opposite part of said L-shaped standard, a wheel disposed in a plane at right angles to said conveyer casing, a clutch member, a shaft secured concentrically of said wheel, side supports carried by said L-shaped standard and serving as a mounting for said shaft and as a means for supporting said casing



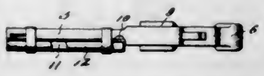
upon said wheel, an endless carrier moving between the sides of said casing, being controlled by said last named wheel for operating said endless carrier and an actuator for said last named means disposed in proximity to the rectangular frame.

1,190,106. TOY. EDWARD CHARLES CARROLL, Vancouver, British Columbia, Canada. Filed Aug. 10, 1915. Serial No. 44,784. (Cl. 46—14.)



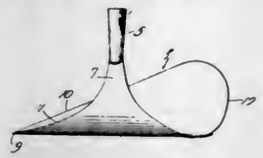
A toy of the class described comprising two dished disks assembled together with their apices in abutting relation by connecting means including open-ended spaced tubes, and circumferentially disposed braces, some of said braces being bent to form outwardly projecting humps intermediate the ends thereof, a spinning cord threaded through the tubes, and sounding devices mounted on the humps, said sounding devices being disposed about midway between the disks and obliquely with respect thereto.

1,190,107. FIREARM. JOHN W. CARROLL, Cincinnati, Ohio. Filed Dec. 29, 1914. Serial No. 879,536. (Cl. 42—1.)



A fire arm comprising a barrel having an aperture adjacent its inner end, operating mechanism, and a closed chamber provided with a longitudinal opening the edges of said chamber adapted to conform to and engage with the side of the barrel connecting the interior of the chamber with the opening in the barrel, and means surrounding the chamber and barrel for holding the same in air-tight engagement therewith.

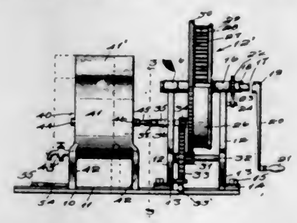
1,190,108. HOE. AMBROSE B. CHABOT, Seattle, Wash. Filed Oct. 14, 1915. Serial No. 55,831. (Cl. 55—5.)



1. An agricultural tool, including a semi-cone shaped blade, all the edges of which are cutting edges, and an integral handle receiving socket carried thereby.

2. An agricultural tool, including a handle receiving member, and a blade having a point, the edges of which converge, one terminating intermediate of its ends in the handle receiving member and the other in an oval shaped edge, the body of the blade being curved into a semi-cone shape.

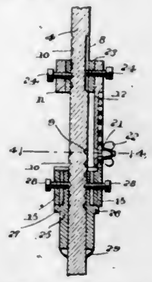
1,190,109. CONNECTING MEANS FOR DRIVING AND DRIVEN SHAFTS OF A SPRING-MOTOR AND CHURN. ASA S. CHEEK, Charlotte, N. C. Filed Feb. 24, 1914. Serial No. 820,555. (Cl. 64—13.)



In apparatus of the character described, a substantially flat, horizontal base provided upon its upper side with longitudinal, upstanding guide ribs; a substantially vertical standard rigidly connected with one end portion of the base; a substantially horizontal drive shaft journaled through the standard and rotatable therein and held against perceptible longitudinal and lateral movements; a supporting structure arranged above the base and provided with pairs of depending, spaced feet having transverse notches open at their bottoms for detachably receiving the upstanding guide ribs; a substantially horizontal driven shaft journaled through the supporting structure with one end adapted to be brought into alinement with the corresponding end of the drive shaft; detachable clutch mechanism rendered active by the movement of the driven shaft, into proximity to the drive shaft to lock the same together for rotation and to prevent perceptible vertical swinging movement of the driven shaft prior to the longitudinal movement thereof away from the drive shaft; and a vertically swinging forked latch pivoted to the upper side of the base near the opposite end thereof and having its free ends adapted to slidably engage the adjacent pair of legs of the supporting structure upon the downward movement of the latch to effect the longitudinal movement of the supporting structure toward the active position and to lock the same in such position.

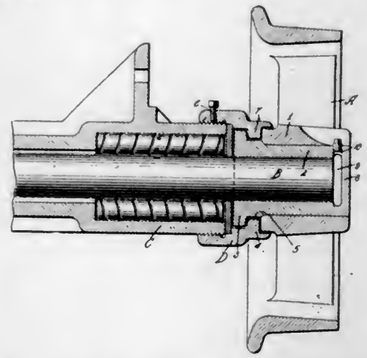
1,190,110. GAGE FOR CUTTING-BITS. THOMAS HUNT CLARKE, Camden, N. J. Filed Sept. 4, 1914. Serial No. 860,239. (Cl. 145—125.)

1. A gage for cutting bits comprising a collar adapted to surround the bit adjacent the brace end thereof, a plate depending from the inner surface of one side of the collar, the outer surface of said side having spaced vertical grooves, a second collar adapted to surround the bit below the first collar and at a remote point therefrom, a plate rising from the outer surface of one side of the second collar, the inner surface of said side having spaced vertical grooves, said plates being arranged in face to face contact and slidably adjustable relatively, means for holding said plates fixed relatively, spaced parallel legs projecting from the free end of each of said plates contiguous to the longitudinal edges thereof, the legs of one plate being arranged in the said grooves in the collar carried by the other plate, and means for holding the collars fixed upon said bit.



2. A gage for cutting bits comprising a collar adapted to surround the bit adjacent the brace end thereof, a plate depending from one side of the collar, a sleeve surrounding the bit adjacent the cutting end thereof, a laterally disposed flange formed on the upper end of said sleeve, cutting teeth formed on the lower end thereof, a bushing rising from said flange in alinement with said sleeve and embracing said bit, a second collar surrounding said bushing and resting upon said flange, a plate extending upwardly from the second mentioned collar in face to face contact with the first mentioned plate, means for holding said collars fixed relatively, said plates being slidably adjustable, and means for holding said plates in fixed relation.

1,190,111. MINE-CAR WHEEL. CARL CLAUSEN, Bisbee, Ariz. Filed Apr. 19, 1916. Serial No. 92,172. (Cl. 105—67.)

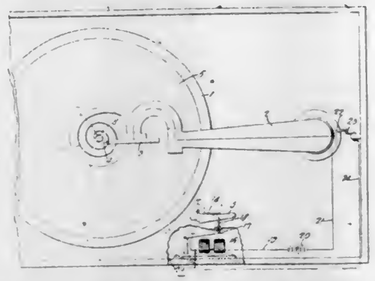


1. The combination of an axle, a bearing therefor, a retaining ring removably fastened to the bearing and having an internal flange, a wheel, and a bushing fastened in the hub of the wheel and having an annular groove on its inner end with which the flange of the retaining ring engages to rotatably hold the wheel and bushing on the axle.

2. The combination of a wheel, a bushing fastened in the hub thereof and having an end extending from one end thereof, said extending end being formed with a circumferential groove, an axle extending into the bushing, a bearing for the axle, and a ring screwed on the outside of the bearing and embracing the projecting end of the

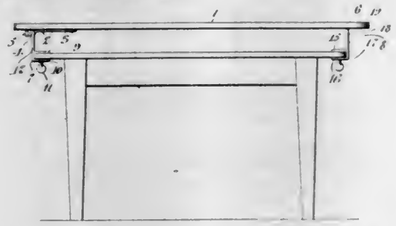
bushing and formed with an internal annular flange engaging in the groove of the bushing to rotatably retain the latter and wheel on the axle.

1,190,112. ARRESTER FOR SOUND-PRODUCING APPARATUS. CHESTER Y. CLAWSON, Salt Lake City, Utah. Filed Apr. 27, 1915. Serial No. 24,275. (Cl. 74—46.)



The combination with a turn table, a spindle carrying the same, a brake applying device for stopping the turn table, a member of insulating material seated upon said turn table, and a swinging arm having an element to ride upon said member and move toward said spindle, of a disk embedded in said member and having an aperture to receive said spindle whereby the disk engages the spindle, and an electrical circuit terminally connected to said element and spindle and including a source of electrical energy and electrically operated means coöperating with said brake applying device to move it to brake applying position, said member having a spiral groove for receiving said element and extending to said disk and aperture whereby the disk forms the bottom of said groove upon which said element rides.

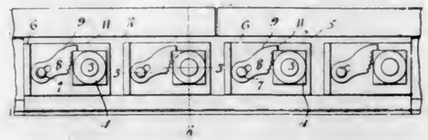
1,190,113. IRONING-BOARD ATTACHMENT. HENRY COHEN, New York, N. Y. Filed Mar. 31, 1916. Serial No. 88,131. (Cl. 68—1.)



In combination with an ironing board, attaching members on the under side of the same near one end and each having a substantially semi-circular spring arm, supporting members for the board, one of said members having an opening, and a bar across said opening, said bar adapted to bear under the board, and said spring arms of the attaching members being adapted to be engaged under said bar, to detachably and pivotally connect said end of the board to said supporting member.

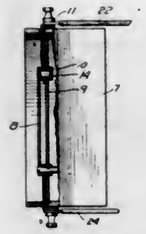
1,190,114. NUT-LOCK. JOHN B. COLVIN, Dundee, Miss. Filed Sept. 4, 1915. Serial No. 49,054. (Cl. 151—65.)

The combination with a structure including a flanged member and a bolt passing through the same, and a nut for the bolt, of a plate arranged upon one of the faces of the structure and engaging with the flange thereof, said plate having an angular end and provided with a headed pivot member adjacent to said angular end, a dog having an elongated slotted portion receiving the pivot and having a toothed face to engage with one of the sides of the nut and a lip to engage with another side of the nut and said dog adapted to have one of its ends forced by the



nut into contact with the angular end of the plate and to relieve the headed member from the strain of the pressure upon the dog between its end engaging with the nut and its end contacting with the angular portion of the plate, all as and for the purpose set forth.

1,190,115. SPEED-LIMITING DEVICE FOR MOTOR-DRIVEN VEHICLES. ORVILLE W. COMPTON, Independence, Kans. Filed May 6, 1915. Serial No. 26,443. (Cl. 175—355.)

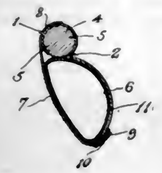


1. The combination with a vehicle, of a motor for driving the vehicle, a source of electrical supply, a grounded circuit leading through the source of supply for controlling an operative part of the motor, a speed indicator comprising a dial and track, a binding post conductively connected with the track, a slide on the track in conductive relation thereto, a pointer normally insulated from the track but adapted for conductive contact with the slide, and direct and grounded circuit wires for electrically connecting the indicator members with the source of electrical supply.

2. The combination with a vehicle, of a motor for driving the vehicle, a source of electrical supply, circuit connection between the source of supply and a part of the motor, a speed indicator comprising a dial, a track on said dial, electrical connection between the track and the source of supply, a block slidably mounted in the track, a bolt in said block adapted for locking engagement with the track, a pointer insulated from the dial and adapted for conductive contact with the block, and means for electrically connecting the pointer with the source of supply.

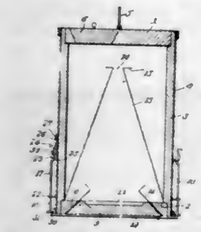
3. The combination with a vehicle, of a motor for driving the vehicle, a source of electrical supply, means for electrically energizing a member in operative relation with the motor from the source of electrical supply, a speed indicator comprising a dial having speed graduations thereon, a depressed track arranged adjacent the speed graduations, and having openings therein, a block slidably mounted in the track, a bolt in said block adapted for projection into said openings, means for electrically connecting the track with the source of electrical supply, a pointer adapted for contact with said block, and means for electrically connecting the pointer with the source of supply, for the purpose set forth.

1,190,116. HORSE-COLLAR. GUY MARION COOK, Rochester, Nev. Filed Sept. 3, 1914. Serial No. 860,061. (Cl. 54—19.)



A horse collar comprising a metal shell having its ends overlapping and connected together and bent to form a substantially large after-wale approximately elliptical in cross section, also further bent to form a fore-wale approximately annular in cross section, a wood filler secured in said fore-wale and reinforcing the same, a flexible lining secured to the inner walls of said after-wale, and an air tube positioned in and secured to said flexible lining, one face of said shell being creased substantially at the point of juncture of the fore-wale and after-wale and forming a groove adapted to receive the hame therein when in use.

1,190,117. FLY-TRAP. JOHN MORGAN COOLEY, Fayetteville, Ark. Filed Sept. 2, 1915. Serial No. 48,692. (Cl. 43—22.)



1. A fly trap of the class described having an apertured bottom, an auxiliary bottom, the auxiliary bottom being provided with a transverse groove, a substantially U-shaped member disposed in said groove, the arms of the said member supporting the trap, a hook formed on the terminal of each arm, a shoulder formed on each arm near its extremity, means on the trap to coöperate with the hooks and shoulders to hold the trap in an open or closed position, and means to automatically open the trap.

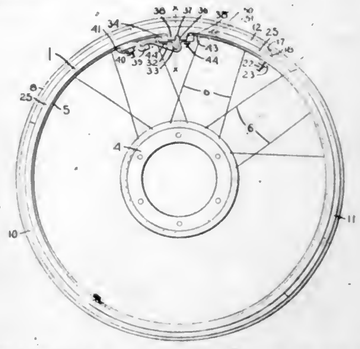
2. A fly trap of the class described having an apertured bottom, an auxiliary bottom, legs carried by the auxiliary bottom to support the trap, shoulders formed upon the legs, and eyes carried by the trap to hold the trap in a closed position, and a locking member adapted to coöperate with one of the shoulders and eyes to prevent the opening of the trap.

3. A fly trap having an apertured bottom, an auxiliary bottom, means for supporting the auxiliary bottom in opened and closed position, and means for automatically opening the trap.

4. A fly trap having an apertured bottom, an auxiliary bottom, means for supporting the auxiliary bottom, and a coil spring having one terminal secured to the trap and the other terminal to the auxiliary bottom to hold the same in spaced relation.

1,190,118. WHEEL-RIM. WALTER E. COPITHORN, Natick, Mass. Filed Jan. 14, 1915. Serial No. 2,253. (Cl. 152—21.)

1. The combination with a wheel body having a rim member provided on one of its edges with inclined shoulders, of a demountable rim encircling said rim member, a split locking ring for holding the demountable rim in place, said locking ring encircling the shouldered edge of the rim member and being provided with projections which are brought into engagement with and are disengaged from said shoulders by circumferential movement of the locking ring, and a lever pivoted to the rim member and engaging one end of the locking ring for moving it into locking position and contracting it tightly about the rim member.



2. The combination with a wheel body having a rim member provided with inclined shoulders, of a demountable rim encircling said body, a locking ring for holding the demountable rim in place and provided with projections which are brought into engagement with and disengaged from said shoulders by circumferential movement of the locking ring, a fulcrum block adjustably secured to said rim portion, and a lever pivoted to the fulcrum block and by which the locking ring is given its movement.

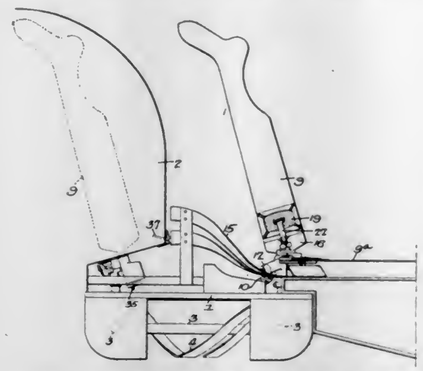
3. The combination with a wheel body having a rim member provided with inclined shoulders, of a demountable rim encircling said body, a split locking ring for holding the demountable rim in place, said locking ring encircling the rim member and provided with projections which are brought into engagement with and are disengaged from said shoulders by a circumferential movement of the locking ring, a fulcrum block adjustably secured to said rim member, and a lever pivoted to the fulcrum block and engaging one end of the locking ring, said lever operating to move the locking ring into locking position and to draw it tightly about the rim member.

4. The combination with a wheel body having a rim member provided with inclined shoulders, of a demountable rim encircling said body, a locking ring to hold the demountable rim in place and provided with projections which are brought into engagement with and disengaged from said shoulders by circumferential movement of the locking ring, said locking ring having a notch therein, a fulcrum block adjustably secured to the rim member, and an actuating lever pivoted to said fulcrum block and having a portion received in said notch whereby turning movement of said actuating lever will give movement to the locking ring.

5. The combination with a wheel body having a rim member provided on one of its edges with inclined shoulders, of a demountable rim encircling said rim member, a split locking ring for holding the demountable rim in place, said locking ring encircling the shouldered edge of the rim member and being provided with projections which are brought into engagement with and disengaged from said shoulders by circumferential movement of the locking ring, said locking ring also having a notch adjacent one end thereof, an L-shaped lever pivoted to the rim member and having its shorter arm engaging said notch whereby swinging movement of the lever draws the locking ring tightly about the rim member and brings the projections thereon into locking engagement with said shoulders, and a locking member secured to the rim mem-

ber and adapted to engage the other arm of said lever thereby to lock it in a position to hold the locking ring in its operative position.

1,190,119. DEVICE FOR HOLDING STOCKINGS TO FORMS. HARRY COULSTON, Philadelphia, Pa., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 25, 1915. Serial No. 57,878. (Cl. 26—16.)



1. The combination of a stocking form; a clamp for holding the open end of the stocking to the form; and means for actuating the clamp to release the stocking so that it can be withdrawn from the form.

2. The combination of a stocking form; a clamp for holding the open end of a stocking to the form; means for opening and closing the clamp; a carrier for carrying said means; and automatic mechanism for actuating the operating means as the carriers move in a predetermined path.

3. The combination of a carrier; means for actuating the carrier in a predetermined path; a stocking form mounted on the carrier; clamps for holding the lower portion of the stocking to the form; a slide arranged to actuate the clamps; a rod projecting from the slide; and means for moving the rod so as to close the clamps on the stocking.

4. The combination of a carrier arranged to travel in a predetermined path; a stocking form mounted on the carrier; clamps for holding the open end of the stocking to the form; a slide; means for actuating the slide to close the clamps on the stocking; and means for automatically releasing the slide prior to the removal of the stocking from the form.

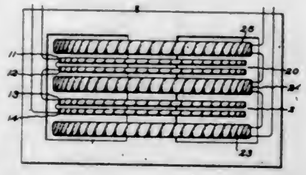
5. The combination of a carrier; means for moving the carrier in a predetermined path; a stocking form mounted on the carrier; two pivoted clamping arms, one located on one side of the form and the other located on the opposite side; a vertically movable slide arranged to force the clamping arms into the closed position; a rod attached to the slide; means for raising the rod to cause the slide to move the arms into the closed position; a projection on the slide and means connected to the projection to withdraw the slide and to release the arms.

[Claims 6 to 10 not printed in the Gazette.]

1,190,120. ELECTRICAL WINDING. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 25, 1914. Serial No. 874,068. (Cl. 175—30.)

1. In a transformer, a winding comprising a plurality of electrically connected coils assembled in groups and a second winding separating said groups, adjacent groups having unequal natural frequencies of electrical oscillation to restrain the building up of dangerous voltages through resonance.

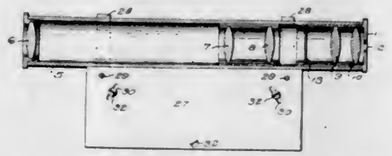
2. In a transformer, a winding comprising a plurality of electrically connected disk coils assembled in groups and a second winding separating said groups, adjacent groups having unequal natural frequencies of electrical oscillation to restrain the building up of dangerous voltages through resonance.



3. In a transformer, a winding comprising a plurality of electrically connected coils connected in groups and a secondary winding separating said groups, adjacent groups having unequal natural fundamental frequencies of electrical oscillation and harmonics thereof to restrain the building up of dangerous voltages through resonance.

4. In an electrical apparatus, a winding comprising a plurality of electrically connected coils assembled in groups, one of said groups and an adjacent coil having unequal natural fundamental frequencies of electrical oscillation and harmonics to restrain the building up of dangerous voltages through resonance.

1,190,121. SIGHT FOR FIREARMS. JAMES CLYDE CRITCHETT, El Paso, Tex. Filed July 20, 1915. Serial No. 40,865. (Cl. 33—50.)



1. A sight for firearms having a plurality of sighting marks, and a scale adjacent thereto and having a base line and marks spaced apart referring to sighting marks to indicate which sighting mark is to be used when the outline of an object of known size is substantially inclosed within said base line and one of the marks on the scale.

2. A sight for firearms having a plurality of sighting marks spaced apart from one end, and a scale adjacent thereto with marks spaced apart from one end, the distance between the sighting marks increasing from the said end relatively to the distances between the scale marks from the said end of the scale.

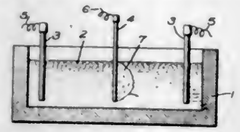
3. In a sight for firearms, a tube having lenses and a transparent member fixed therein, there being indicated on the transparent member a plurality of sighting marks and corresponding scale marks, it being possible to compare the scale with the outline of an object to determine the sighting mark to be used when firing at the object.

4. A sight for firearms having a plurality of sighting marks spaced apart over each other, and a scale having marks corresponding to the sighting marks and spaced apart over each other, the distances between the sighting marks increasing downwardly relatively to the distances between the scale marks.

5. A sight for firearms having a plurality of sighting marks spaced apart over each other, and a scale having marks corresponding with the sighting marks, the distance between the sighting marks increasing downwardly relatively to the distances between the corresponding scale marks.

[Claims 6 and 7 not printed in the Gazette.]

1,190,122. ELECTROLYTIC CELL AND THE PROCESS OF ELECTROLYZING METAL. CHRISTIAN DANTSIZEN, Scotia, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 20, 1915. Serial No. 15,740. (Cl. 204—19.)



1. An electrolytic cell for isolating metallic magnesium comprising a container, an anode inert with respect to a molten electrolyte containing magnesium compounds and a cathode remaining unfused during the electrolysis of the magnesium and having a surface layer wetted by molten magnesium.

2. The process of collecting by electrolysis metal tending to separate out in small globules, which consists in separating the metal in a fused state in contact with a cathode remaining unfused during the electrolysis and having a surface layer of a metal slowly alloying with the metal to be collected.

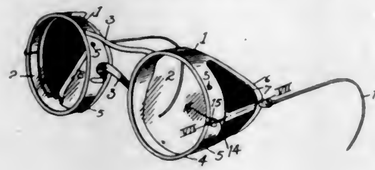
3. The process of isolating magnesium which consists in conducting current through a magnesium compound between a cathode consisting of iron, the surface of which is coated with zinc, and an anode.

4. An electrolytic cell comprising a container, a magnesium-containing electrolyte which is molten during operation of the cell, an anode, and a cathode consisting of material not readily alloyable with magnesium and remaining unfused during the electrolysis of magnesium, the surface of which is alloyed with zinc.

5. An electrolytic cell comprising a container, an electrolyte of fused salts containing an earth metal, an anode, and a cathode of iron in contact with said electrolyte, the surface of said cathode consisting largely of a metal other than iron wetted by a metal electrolyzable from said electrolyte.

[Claims 6 to 10 not printed in the Gazette.]

1,190,123. EYE-PROTECTOR. GEORGE H. DAY, Southbridge, Mass., ass'gnor to American Optical Company, Southbridge, Mass., a Voluntary Association. Filed Dec. 28, 1914. Serial No. 879,303. (Cl. 2—149.)



1. A frame member for an eye protector, comprising a ring having an inturned flange at one side thereof, for engagement with a lens and having an integral shield member projecting from the opposite side thereof, said shield member being provided with an inturned flange, and a mesh for the shield member fitting beneath the flange and secured in position by pinching of the flange thereagainst, substantially as described.

2. A frame for an eye protector, comprising a ring having a portion at one edge thereof for engaging a lens, means projecting inwardly of the frame for engaging the opposite face of the lens to secure the same in position, said frame having a portion of the opposite edge thereof rolled to provide a face engaging bead and having the remainder of said edge curving rearwardly to provide a shield portion, the central part of the shield portion being cut away, and the portion of the frame at each side of the cut away part being doubled to provide a trough, and a screen or mesh having its edges fitting within the said trough, the material of the trough being pinched down upon the edges of the mesh to securely retain the same in position.

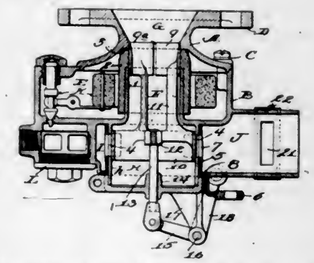
3. In an eye protector, a shield comprising an open frame in which a mesh is received, and overlapping brace members connecting portions of said frame to prevent crushing thereof.

4. In a device of the character described, a shield including a plurality of frames, and members connecting portions of each frame, said members being adapted to engage with each other when the frames are assembled to provide a rigid shield.

5. In an eye protector, the combination with split lens frames, of shields carried by said frames comprising frame portions in which a shield element is mounted, and braces connecting portions of said shield frames to resist crushing of the shield when the lens frames are mounted upon the lenses.

[Claim 6 not printed in the Gazette.]

1,190,124. CARBURETER. CHARLES DE LUKACSEVICS and CLAIR J. TERRILL, West Nutley, N. J.; said Terrill assignor to said de Lukacsevics. Filed July 7, 1915. Serial No. 38,619. (Cl. 48—156.)



1. A carbureter having a fuel chamber or reservoir and an air passage separated therefrom and having an air inlet and an outlet for connection to the motor suction tube, said chamber and said air passage being separated by an annular wall comprising a rigid body part and a relatively stiff absorbent element, the said body part having an opening communicating with the upper portion of said air passage and also communicating with the said fuel chamber, the said absorbent element occupying said opening and having an upper thickened portion which is freely exposed in said fuel chamber and which provides a shoulder for engagement upon the rigid body part of said wall, the said absorbent element having its lower portion freely exposed in said fuel chamber, and a cylindrical slide valve movable in said air passage across the freely exposed surface therein of said absorbent element.

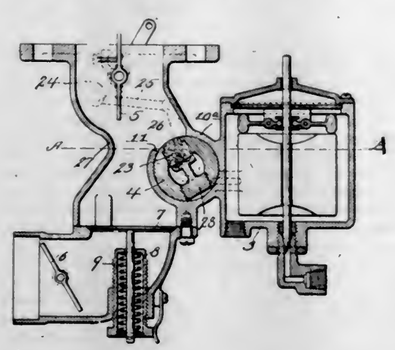
2. A carbureter having a fuel chamber or reservoir and an air passage separated therefrom and having an air inlet and an outlet for connection to the motor suction tube, said chamber and said air passage being separated by an annular wall comprising a rigid body part and a relatively stiff absorbent element, the said body part having an opening communicating with the upper portion of said air passage and also communicating with the said fuel chamber, the said absorbent element occupying said opening and having its lower portion freely exposed in said fuel chamber and its upper portion freely exposed in said air passage, a cylindrical slide valve movable in said air passage across the freely exposed surface therein of said absorbent element, and a valve controlling the supply of air to said air inlet, the said valves being connected to move as one and the said slide valve having a split or opening therein which always uncovers a portion of the absorbent element surface exposed in said fuel chamber.

3. A carbureter having a fuel chamber or reservoir and an air passage separated therefrom and having an outlet

for connection to the motor suction tube, an air chamber arranged below said air passage and in open communication therewith, said chamber having air inlet openings in its annular wall, said fuel chamber and said air passage being separated by an annular wall comprising a rigid body part and a relatively stiff absorbent element, the said body part having an opening communicating with the upper portion of said air passage and also communicating with the said fuel chamber, the said absorbent element occupying said opening and having its lower portion freely exposed in said fuel chamber and its upper portion freely exposed in said air passage, a cylindrical slide valve movable in said air passage across the freely exposed surface therein of said absorbent element, and a second cylindrical slide valve movable in said air chamber across the air inlet openings thereof, said valves being connected to move as one.

4. A carbureter having a fuel chamber and an air passage separated therefrom and having an air inlet and an outlet for connection to the motor suction tube, the wall between the fuel chamber and the air passage comprising an annular metal part having a continuous interruption at its upper end and an annular relatively stiff absorbent element having its lower portion concentric to the said metal part and freely exposed in the fuel chamber, and having its upper portion thickened and closely fitted in the interruption of the metal part for support thereon and for free exposure in the air passage, that face of the absorbent element which is exposed in the air passage being flush with the inner face of the annular metal part, and a cylindrical slide valve movable in said air passage across the freely exposed surface therein of said absorbent element.

1,190,125. CARBURETER. CHARLES DE LUKACSEVICS, Newark, N. J., assignor to Dane Manufacturing Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 4, 1915. Serial No. 65,087. (Cl. 48—156.)



1. In a carbureter for internal combustion engines, in combination, a mixing chamber, a fuel supply chamber, absorbent fuel distributing means submerged in the liquid fuel and arranged intermediate said chambers, and means for progressively and simultaneously increasing the exposure of said absorbent means in said mixing chamber and the submergence of said means in the liquid fuel, or, in like manner decreasing such exposure and submergence.

2. In a carbureter for internal combustion engines, in combination, a mixing chamber, a fuel supply chamber, and a regulating element provided with absorbent fuel distributing means exposed in said mixing chamber and submerged in the liquid fuel of said supply chamber, said element being operable to progressively and simultaneously increase the exposure of said absorbent means in said mixing chamber and the submergence of said means in the liquid fuel, or, in like manner, to decrease such exposure and submergence.

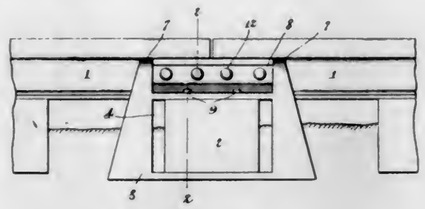
3. In a carbureter for internal combustion engines, in combination, a mixing chamber, a fuel supply chamber, and absorbent fuel distributing means submerged in the liquid fuel and arranged intermediate said chambers, said absorbent means being operable whereby its exposure in said mixing chamber and its submergence in the liquid fuel are progressively and simultaneously increased or decreased as the case may be, or, in like manner, whereby such exposure and submergence are decreased.

4. In a carbureter for internal combustion engines, in combination, a mixing chamber, a fuel supply chamber, a casing having an opening communicating with the mixing chamber, a regulating cylinder rotatably fitted in said casing and having a connection with said fuel supply chamber, and absorbent means carried by said cylinder for exposure to said mixing chamber through said opening, said absorbent means being submerged in the liquid of said supply chamber and being arranged whereby, upon a rotation of said cylinder, its exposure through said opening and its submergence in the liquid fuel is progressively and simultaneously increased or decreased as the case may be.

5. In a carbureter for internal combustion engines, in combination, a mixing chamber, a fuel supply chamber, a casing having an opening communicating with the mixing chamber, a hollow regulating cylinder rotatably fitted in said casing and having a connection with said fuel supply chamber, and a plurality of absorbent blocks carried by said cylinder for exposure to said mixing chamber through said opening, said blocks being submerged in the liquid of said supply chamber and being arranged whereby, upon a rotation of said cylinder, their exposure through said opening and their submergence in the liquid fuel is progressively and simultaneously increased or decreased as the case may be.

[Claim 6 not printed in the Gazette.]

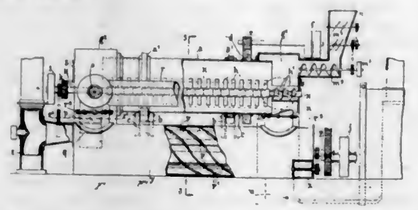
1,190,126. RAIL-JOINT. CHARLES K. DEMMITT, Owings Mills, Md., assignor to James L. Sunderland, Baltimore, Md. Filed Apr. 25, 1916. Serial No. 93,453. (Cl. 239—6.)



1. The combination with the meeting ends of two rails and a tie upon which the ends of the said rails rest, of a joint member having an opening to receive the tie and being provided with horizontally straight shoulders opposite the said opening upon which the rails rest, a rail engaging lip formed integral with the block and received in the fishing spaces of the rails, a fish plate for the rails opposite the said lip, means for connecting the lip, rails and fish plate, and means for securing the block to the tie.

2. The combination with the meeting ends of two rails and a tie upon which the ends of the said rails rest, of a joint member for the rails comprising a substantially rectangular element having oppositely beveled ends, provided with a central recess which communicates with an opening and within which opening and recess the end of the tie is received, whereby the ends of the rails will rest directly upon the tie and the portions of the rails adjacent the said ends will rest upon the top of the joint member, said joint member including a rail engaging lip, a fish plate in the fishing spaces of the rails opposite the lip, means for securing the rails to the lip and fish plate, and means for securing the tie to the joint member.

1,190,127. DRYING APPARATUS. ENRIQUE DISDIER, Malaga, Spain. Filed Jan. 4, 1912. Serial No. 669,303. (Cl. 34—5.)



1. In a drying apparatus, a rotary drum, means for admitting hot gases into the drum, and a pair of rotating shafts in said drum, each of said shafts having vanes radially mounted upon it, said vanes being arranged for throwing into and through the atmosphere of the hot gases the material admitted into the drum.

2. In a drying apparatus, a rotating drum, means for admitting the hot gases into the drum, and a pair of revoluble shafts mounted in the drum on opposite sides of and below the axis of said drum and each provided with vanes, the vanes being a considerable distance from the top and bottom of the drum and almost contacting with the walls of the drum only at the sides thereof.

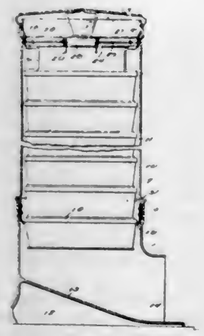
3. In a drying apparatus, a rotating drum, a pair of hollow shafts revolubly mounted in said drum, and means carried by said shafts for advancing material through said drum, the said hollow shafts being provided with transverse holes to permit air to pass through said shafts into said drum.

4. In a drying apparatus, a revoluble drum, means for creating a current of hot gases in said drum, a pair of shafts rotating in said drum in opposite directions, and vanes mounted on said shafts, said vanes being arranged to project the substance in a contrary direction to the current of the hot gases.

5. In a drying apparatus, a revoluble drum, means for creating a current of hot gases in said drum, a pair of rotating shafts in said drum, an auxiliary drum for receiving the substances from the first drum, a collecting conduit of the gases communicating by its ends with the two ends of the first drum, and a vane shaft rotating in the interior of the fixed auxiliary drum, the vanes of said shaft being provided with ribs or projections preventing the dragging of the substance by the hot gas current.

[Claim 6 not printed in the Gazette.]

1,190,128. MUG-HOLDER. LUKE W. DOYLE, Port Chester, N. Y. Filed Aug. 27, 1915. Serial No. 47,664. (Cl. 211—8.)



1. In a holder for mugs and the like, the combination with an upright tubular hopper, a base having an outlet at its lower end, and yielding mug supports within the hopper just above said outlet; of a follower movably mounted within the hopper and engaging the stack of mugs therein, and means for checking the descent of the follower when the mug immediately beneath it engages said supports.

2. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a body movably mounted within the hopper, bolts within the body, and yielding means for forcing them outward, for the purpose set forth.

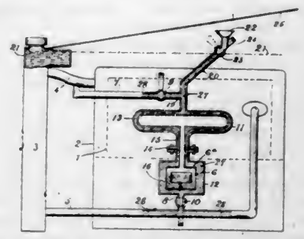
3. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a body, radially movable bolts mounted thereon, means for pressing them outward with yielding force, and legs depending from said body.

4. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a hollow body having slots at opposite points in its shell, a pair of bolts within said body and having heads mounted in said slots, and an oval spring within the body and forcing the bolts normally outward, for the purpose set forth.

5. In a delivery cabinet, an upright hopper having an outlet at its lower end and an internal groove above said outlet, and means within the hopper beneath the groove for supporting the lowermost of a stack of articles; combined with a follower for initial use on the top of the stack, the same comprising a hollow body consisting of a top plate, a shell having slots in opposite sides, and a bottom plate having slots opposite those in the shell, a pair of T-shaped bolts mounted within said body and with their heads standing within the slots in the shell and their inner ends deflected and projecting through the other slots, guides for the bolts, and yielding means pressing them normally outward, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,190,129. CARBURETER-HEATER. REGINALD S. DU BOIS, East Orange, N. J. Filed Mar. 20, 1916. Serial No. 85,288. (Cl. 123—122.)



1. In a carbureter heater and in combination with the water cooling system of a gas motor, a water jacketed carbureter, a filling pipe having its receiving end located above the water level of the water in said system, and means for preventing the diversion of the ingoing water to the main system before reaching the carbureter.

2. A water jacketed carbureter connected with the usual water system of a gas motor, in combination with a supplemental filling pipe having its receiving end located above the water level in said system, and an intercepting valve for shutting off the cold water from the main system to the carbureter during the filling operation.

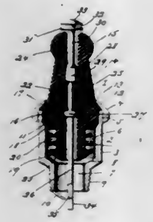
3. A water-jacketed carbureter having a supplemental water filling pipe and means for cutting off communica-

tion between the cold water from the main system and filling pipe, said filling pipe rising to a point above the water level of the main system whereby hot water, when poured into the filling pipe, will drive the cold water ahead of it and take its place around the carbureter to vaporize the gasolene therein.

4. A water-jacketed carbureter having the usual intake and outlet water pipes, in combination with a supplemental water filling pipe in water communication with the water jacket, said filling pipe having a receiving end rising to a point at or above the water level of the main water system and an intercepting valve for cutting off the flow to the main system during the filling operation through the supplemental pipe.

5. In a water-jacketed carbureter for gas motors and in combination with the main water cooling system, a supplemental pipe adapted to receive hot water for vaporizing the liquid in the carbureter, said pipe having its upper end arranged and adapted to rise above the water level of the main water system, whereby when extra water is poured into said pipe, it will be absorbed by that of the main system after having passed through the water jacket of the carbureter.

1,190,130. SPARK-PLUG. CHARLES HUGH DUFFY, North Laurel, Md. Filed Jan. 6, 1913. Serial No. 740,502. (Cl. 123—169.)



1. A spark plug comprising an insulating core, a metal shell and a plurality of electrodes including a central one, said electrodes being separated to provide a spark gap, the said metal shell being provided with an enlarged upper chamber and a smaller lower chamber, the said insulating core being of greater diameter than the said lower chamber and extending into said metal shell providing an annular space between the outer surface of the insulating core and the inner wall of said enlarged upper chamber, the said insulating core being provided within said upper enlarged chamber with a plurality of deep and relatively narrow annular chambers, the lower central portion of said insulating core being provided with a relatively large longitudinal bore surrounding but out of contact with the central electrode of the plug, the outer portion of the insulating core being provided with a relatively large central longitudinal bore surrounding but out of contact with the central electrode in such manner that the central electrode is out of contact with the top and outer surface of the insulating core, one of said electrodes being provided at the spark gap with a capillary slot or cut open at the side of the electrode to exert a capillary attraction for liquid bridging the spark gap.

2. A spark plug comprising an insulating core, a metal shell and a plurality of electrodes, said electrodes being separated to provide a spark gap, the said metal shell being provided with an enlarged upper chamber and a smaller lower chamber, the said insulating core being of greater diameter than the said lower chamber and extending into said metal shell providing an annular space between the outer surface of the insulating core and the inner wall of said enlarged upper chamber, the said insulating core being provided within said upper enlarged chamber with a plurality of deep and relatively narrow annular chambers, the chambered portion of the insulating core being wholly contained within the said enlarged upper chamber of the metal shell.

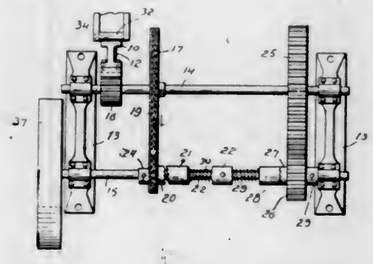
3. A spark plug comprising an insulating core, a metal shell and a plurality of electrodes including a central one and terminal connections, said electrodes being separated to form a spark gap, the lower external portion of said insulating core being annularly chambered and internally provided with a deep and relatively large bore surrounding but out of contact with the lower portion of the central electrode, the upper portion of said insulating core being provided with a deep and relatively large bore in such manner that the central electrode and terminal connections are out of contact with the top and outer surface of the insulation.

4. A spark plug comprising an insulating core, a metal shell and a plurality of electrodes including a central one, said electrodes being separated to form a spark gap, the said insulating core being provided with a relatively small central bore, the upper and lower portions of said insulating core being provided with relatively large bores communicating with said relatively small bore, the central electrode comprising an upper and a lower section, the upper section being surrounded by but out of contact with the relatively large upper bore, the lower member of the central electrode being surrounded by but out of contact with the lower portion of the relatively large lower bore in such manner that the upper and lower portions of the insulating core and the upper and lower portions of the central electrode surrounded by said core are free to expand or contract, the lower portion of the insulating core being externally chambered around the enlarged bored portion thereof.

5. A spark plug comprising a plurality of electrodes separated to form a spark gap, one of said electrodes being provided at the spark gap with a capillary slot entering the electrode from the side thereof to attract by capillarity a bridge of liquid across the spark gap.

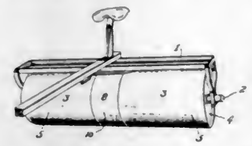
[Claims 6 to 8 not printed in the Gazette.]

1,190,131. GEARING. MILES H. DUNHAM, Sheffield, Mass. Filed May 6, 1913. Serial No. 765,941. (Cl. 74—54.)



The herein described system of gearing for tide-motors including a horizontal drive shaft, means for positively reversely rotating the drive shaft in opposite directions alternately, said means including a pinion fixed to the drive shaft and a vertically disposed reciprocatory rack bar meshing with the said pinion and rotating the drive shaft in one direction when it moves upwardly and in the opposite direction when it moves downwardly, a horizontal driven shaft disposed in parallelism with the drive shaft, and means for continuously rotating the driven shaft in one direction from the said reversely rotatable drive shaft, the last mentioned means comprising sprocket wheels mounted on the drive and driven shafts, a sprocket chain arranged on the sprocket wheels, spur gear wheels mounted on the said shaft and meshing with each other and spaced from the sprocket wheels and a pair of automatic clutches both mounted on the driven shaft and connecting the sprocket wheel and the spur wheel of the said driven shaft to the latter when the said sprocket wheel and spur gear wheels are rotated in a forward direction.

1,190,132. LAND-ROLLER. RAY E. DUNHAM, Berea, Ohio, assignor to The Dunham Company, Berea, Ohio, a Corporation of Ohio. Filed June 17, 1915. Serial No. 34,713. (Cl. 55—6.)



1. In a land roller, the combination with a suitable frame; an axle mounted upon the latter; and a plurality of drum sections mounted upon said axle and separated from each other in planes perpendicular to their axis; one of said sections being arranged so as to be removable from the axle in a direction perpendicular to such axis and while the remaining section or sections are in place.

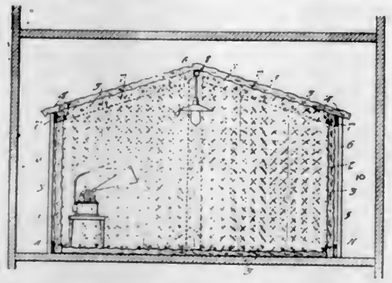
2. In a land roller, the combination of a suitable frame; an axle suitably mounted upon said frame; two end and freely rotating drum sections permanently mounted upon said axle; and an intermediate section removably mounted thereon.

3. In a land roller, the combination of a sheet bent into a cylindrical form and having overlapping ends formed with suitable registering apertures for receiving bolts; a casting secured to the interior of the innermost of said overlapping end portions and provided with apertures registering with said bolt apertures and with recesses for receiving nuts, said recesses intersecting that face of said casting which is contiguous to said shell; nuts in said recesses; and bolts passing through said apertures and engaging said nuts.

4. In a land roller, the combination of a suitable frame; an axle mounted upon said frame; and a plurality of freely rotating drum sections mounted upon said axle succeeding each other in the direction of the axis thereof; one of said sections being arranged so as to be removable from said axle while the latter is in place.

5. In a land roller, the combination of a suitable frame; an axle mounted on said frame; and a plurality of freely rotatable drum sections of uniform exterior contour and mounted upon said axle, one of which sections is an intermediate section arranged so as to be removable from said axle while the latter is in place on said frame.

1,190,133. MEANS FOR RECORDING SOUNDS. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 16, 1912. Serial No. 678,065. (Cl. 181—30.)



1. A sound recording chamber having yielding walls containing a mixture of fibrous and powdered materials, substantially as described.

2. A sound recording chamber having yielding walls containing a mixture of fibrous and powdered materials of low specific gravity, substantially as described.

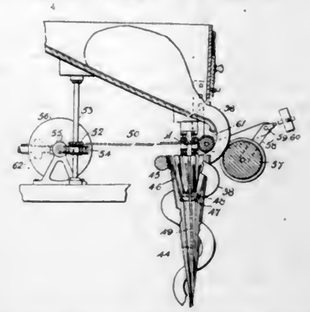
3. A sound recording chamber having yielding walls containing a mixture of a fibrous material and powdered magnesite, substantially as described.

4. A sound recording chamber having yielding walls containing powdered magnesite, substantially as described.

5. A sound recording chamber having walls containing powdered material, all the inner surfaces of said walls being sufficiently yielding as to be substantially non-sound reflecting, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,190,134. APPARATUS FOR WORKING DOUGH. LAURENCE EMBREY, Fenton, Stoke-upon-Trent, England. Original application filed Feb. 19, 1914, Serial No. 819,809. Divided and this application filed June 1, 1915. Serial No. 31,635. (Cl. 107—8.)



1. In an apparatus for working dough capable of being stretched, the combination of means for furthering the operation of proving, comprising means for forming a rope of said dough, and means located to act at an intermediate point of said rope of dough to coil the same, the coiling means operating faster than the rope forming means whereby the gluten of the dough is stretched.

2. In an apparatus for working dough capable of being stretched, the combination of means for furthering the operation of proving, comprising means for forming a rope of dough, and depending rotary means with which the dough engages to form a coil and to draw the rope of dough faster than the rope is formed, whereby to impart tension to the rope after same is formed to stretch the gluten in the dough.

3. An apparatus for treating dough capable of being stretched, comprising means for forming a rope of dough, a substantially vertical rotary member engaging said rope of dough while same is in a depending condition for coiling same to impart tension thereto, the coiling means operating faster than the rope forming means, whereby the gluten of the dough is stretched.

4. An apparatus for treating dough capable of being stretched, comprising means for forming a rope of dough, a substantially vertical conical member engaging said rope of dough while the latter is in a depending condition for coiling the rope of dough to impart tension to the gluten, and operating at such relative speed with respect to the rope forming means as to draw the rope of dough faster than said rope is formed by the rope forming means, whereby the gluten of the dough is stretched.

5. In an apparatus for working dough, the combination of a hopper having an inclined bottom and formed with an outlet opening through which dough passes to form a rope of said dough, means for controlling the opening, means located below the hopper to coil the rope of dough, said coiling means operating faster than the rope forming means, whereby the gluten of the dough is stretched.

[Claim 6 not printed in the Gazette.]

1,190,135. MEANS FOR PREVENTING CORONA LOSSES. GIUSEPPE FACCIOLI, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Original application filed Apr. 27, 1911, Serial No. 623,630. Divided and this application filed May 11, 1912. Serial No. 696,552. (Cl. 173—13.)



1. A conductor for high tension currents comprising a plurality of insulated current carrying elements connected in multiple and a plurality of transverse conductive mechanical supports spaced away from one another and along said elements at intervals in firm engagement therewith to electrically connect said elements and mechanically support and space them.

2. An insulated high potential conductor having smooth edged longitudinal conducting elements and transverse mechanical supports of metal in firm engagement with said longitudinal portions and forming an angle therewith, said supports being spaced away from one another along said conductor at intervals which cause said supports to mechanically hold said longitudinal portions in proper relation and renders the critical voltage of the conductor higher than that of a cylindrical conductor having a cross section equal to the combined cross sections of said longitudinal portions.

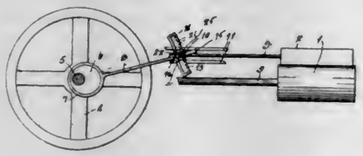
3. A high voltage conductor comprising a plurality of insulated longitudinal conducting elements arranged side by side and connected in multiple and a plurality of transverse conductive mechanical supports in electrical engagement with said longitudinal elements and spaced away from one another and along said longitudinal elements at intervals to mechanically hold said elements in definite relation and to render the critical voltage of said conductor higher than the critical voltage of the wire having a cross section equivalent to the combined cross sections of said longitudinal elements.

4. A conductor for high tension currents comprising a plurality of insulated longitudinal current carrying elements mounted side by side and connected in multiple, and a plurality of transverse conductive mechanical supports, each looped around the said longitudinal elements to mechanically maintain said elements properly spaced and to make metallic connection therewith.

5. A high voltage conductor comprising a plurality of insulated longitudinal current carrying elements connected in multiple and mounted about a common axis to form a longitudinal conductor, and transverse conductive mechanical supports spaced away from one another and encircling said longitudinal elements and in metallic contact therewith, said members being spaced along said elements to render the critical voltage of said conductor higher than the critical voltage of the wire having a cross section equal to the size of the cross sections of said longitudinal elements.

[Claim 6 not printed in the Gazette.]

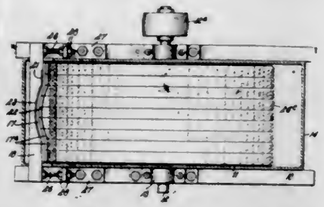
1,190,136. VALVE-COUPLING. DANIEL F. FAULK, Holt, Fla., assignor of one-half to William C. Griffith, Holt, Fla. Filed Aug. 27, 1914. Serial No. 858,886. (Cl. 121—98.)



1. A valve link comprising a substantially S-shaped body having a longitudinal slot extending approximately the whole length thereof, a pair of parallel arms formed centrally on and extending laterally from the side of said body intermediate the ends thereof, a handle formed on the opposite side and extending laterally from the center thereof in direct alinement with the arm, said arms provided with vertical apertures, blocks slidably mounted in the slot in the body of the link, flanges formed on opposite faces of the slots of the blocks and engaging the sides of the body, one of said flanges provided with a set screw, said body provided on its outer face with a plurality of spaced screw threaded apertures adapted to receive the set screw therein for holding said blocks in any desired position within said body, said blocks provided centrally with transversely extending openings, a sleeve arranged in said opening, a bolt extending through said sleeve, said bolt connecting said blocks to the cross head, substantially as set forth.

2. A valve link comprising a substantially S-shaped body having a longitudinal slot extending approximately the full length therethrough, a pair of parallel arms on one side of the body centrally thereof, a handle on the opposite side of said body and in direct alinement with the arms, valve blocks slidably mounted in said slots, flanges on opposite faces of said blocks engaging the outer faces of the body, one face of said body provided with a plurality of spaced screw-threaded openings, a set screw extending through one of the flanges of the block, and engaging any of the openings on the body for holding the blocks at any desired adjustable position with the slot of the body, means extending through said block for securing the same to the cross head, said blocks also provided with a central opening, a sleeve in said opening, a bolt arranged in said sleeve, and means extending through the arms for forming adjustable connection for the eccentric rod whereby wear may be taken up substantially as set forth.

1,190,137. CLOVER-HULLER. JAMES WILLIAM FEELER, Buhl, Idaho. Filed Apr. 5, 1916. Serial No. 89,039. (Cl. 130—2.)



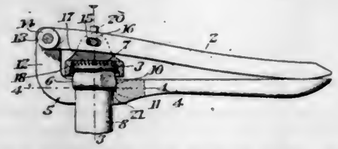
1. A clover huller including a housing having a discharge outlet at the bottom, a cylinder mounted to turn in the housing, a concave, said concave being formed of sheet metal and having its lower end turned downwardly at the said discharge outlet, a transverse rod supporting the said lower end of the concave, an adjustable transverse bar on which the concave rests at its upper end, means for adjusting said transverse rod to and from the cylinder, means for adjusting said transverse bar to and from the cylinder, the transverse bar having a depression presenting a transversely concaved surface and the concave being correspondingly curved presenting an inlet throat, and means to deliver material to said throat.

2. A clover huller including a cylinder, a concave formed of sheet metal and having its lower end bent downwardly, a transverse rod supporting the said downturned end, a transverse bar, means for adjusting said bar to and from the cylinder, the said bar having a depression transversely curved, and the concave being correspondingly curved and presenting an inlet throat between said curved portion and the cylinder, and means to deliver material to said throat.

3. A clover huller including a cylinder, a concave formed of sheet metal and having its lower end bent downwardly, a transverse rod supporting the said downturned end, a transverse bar, means for adjusting said bar to and from the cylinder, the said bar having a depression transversely curved, a plate secured to the said bar and having a depression curved to correspond with the depression in the bar, the concave being correspondingly curved and presenting an inlet throat between said curved portion and the cylinder, and means to deliver material to said throat.

4. A clover huller including a cylinder, a concave, means to support the lower end of the concave, a transverse bar supporting the upper end of the concave, and formed with a depression concaved transversely, the said concave having a depression curved to correspond with the depression of the said supporting bar, and rasp sections on the face of the concave, said rasp sections at the depressed portion of the concave being formed to correspond with said depression.

1,190,138. BOTTLE-CAPPING TOOL. ARTHUR NOAH FLEAGLE, Baltimore, Md. Filed Oct. 8, 1915. Serial No. 54,813. (Cl. 113—2.)



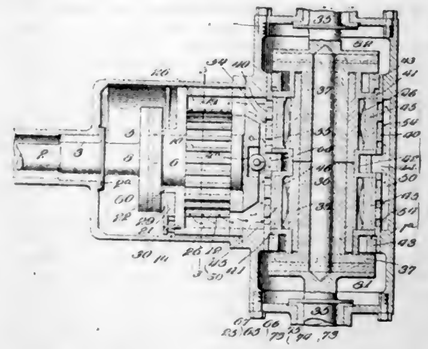
In a hand operated tool for applying crown corks to the beaded necks of bottles, a holder including a handle having a widened end which is centrally slotted to provide spaced side members, the connecting wall between the same being rounded and being grooved at one of the edges thereof, the opposite walls provided by the groove being tapered inwardly of the said side members and the lower wall thereof being round, the ends of the side members being inclined outwardly from the groove and provided with extensions at an angle thereto, a lever having one of its ends pivotally secured between the extensions of the side members, said lever having an elongated slot disposed above the mentioned groove, a capping member having a cylindrical body provided with ears arranged to the opposite sides of the lever and having a pivot member passing through the said ears and through the mentioned elongated slot in the lever, lugs formed upon the diametrically opposite sides of the capping member, and guide pins on the side members of the handle passing through openings in the said lugs.

1,190,139. POWER-TRANSMITTER. EUGENE A. FORD, Uxbridge, Mass. Filed Mar. 25, 1914. Serial No. 827,189. (Cl. 138—22.)

1. A power transmitter comprising a rotary pump or motor, two diametrally opposite induction passages, two diametrally opposite eduction passages, and means for varying the quantity and the direction of the flow of liquid passing through the apparatus in each revolution of the pump or motor without changing the direction of rotation of the pump or motor.

2. A power transmitter comprising a rotary pump or motor, having radially movable blades, two diametrally opposite induction passages, two diametrally opposite eduction passages, and means controlling said blades for varying the quantity and the direction of the flow of liquid passing through the apparatus in each revolution of the pump or motor without changing the direction of rotation of the pump or motor.

3. A power transmitter comprising a rotary pump or motor having radially-movable blades, a casing therefor having diametrally opposite induction passages and diametrally opposite eduction passages, and a controller sleeve between said casing and said blades and with which the latter are designed to engage, said sleeve having openings for the passage of liquid and constructed and arranged for varying the quantity and the direction of the flow of liquid passing through the apparatus in the revolution of the pump or motor without changing the direction of rotation of the pump or motor.

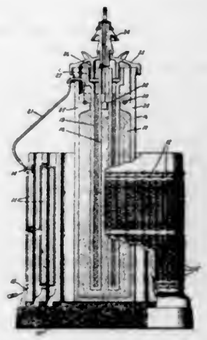


4. A power transmitter comprising a rotary pump or motor having radially-movable blades, a casing therefor having diametrally opposite induction passages and diametrally opposite eduction passages, and a controller sleeve between said casing and said blades and with which the latter are designed to engage, said sleeve having openings for the passage of liquid and constructed and arranged for varying the quantity and the direction of the flow of liquid passing through the apparatus in the revolution of the pump or motor.

5. A power transmitter comprising a rotary pump or motor having radially-movable blades, a casing therefor having diametrally opposite induction passages and diametrally opposite eduction passages, a controller sleeve between said casing and said blades and with which the latter are designed to engage, said sleeve having openings for the passage of liquid, and also having an elliptical bore, and means for varying the position of the sleeve relatively to the blades to vary the quantity and the direction of the flow of liquid passing through the apparatus.

[Claims 6 to 25 not printed in the Gazette.]

1,190,140. PROTECTIVE DEVICE. JOHN J. FRANK, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Original application filed June 16, 1913, Serial No. 772,161. Divided and this application filed Oct. 19, 1915. Serial No. 56,791. (Cl. 219—63.)



1. A liquid resistance comprising in combination a liquid containing vessel, an electrolyte within said vessel,

means within said vessel for providing a plurality of electrically connected paths for the flow of current through said electrolyte, and liquid insulating means for confining the flow of current from one path to another to the point of electrical connection between the paths.

2. A liquid resistance comprising in combination a liquid containing vessel, an electrolyte within said vessel, a layer of liquid insulating material suitably supported within said vessel and dividing the electrolyte therein into two electrically connected portions, and an electrode extending into each portion of said electrolyte.

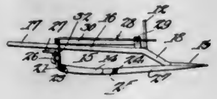
3. A liquid resistance comprising in combination a liquid containing vessel, an electrolyte within said vessel, an insulating layer of oil suitably supported within said vessel and dividing the electrolyte therein into two electrically connected portions and an electrode extending into each portion of said electrolyte.

4. A liquid resistance comprising in combination a liquid containing vessel, an electrolyte within said vessel, a member mounted within said vessel and dividing the electrolyte therein into two electrically connected portions, an electrode extending into each portion of said electrolyte, and liquid insulating material coöperating with said member for insulating said portions of electrolyte.

5. A liquid resistance comprising in combination a liquid containing vessel, an electrolyte within said vessel, electrodes extending into said electrolyte near the surface thereof and constituting terminals for said rheostat, means within said vessel for directing flow of current from one electrode toward the bottom of said vessel and thence toward the top of said vessel to said other electrode, and liquid insulating means for insulating the path of downward flow of the current from the path of upward flow of the current.

[Claims 6 and 7 not printed in the Gazette.]

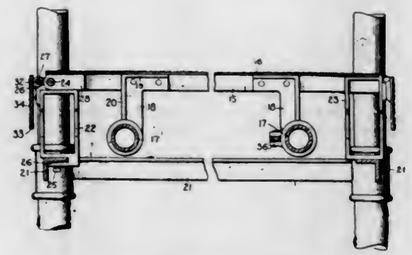
1,190,141. LOADING APPARATUS. JESSE L. FRIESNER, Lima, Ohio. Filed Apr. 30, 1915. Serial No. 25,020. (Cl. 37—54.)



1. In a loading apparatus, a scoop including upper and lower forwardly converging side bars, side plates secured to said bars and closing the openings therebetween, the forward ends of the bars forming prongs, cross rods connecting the lower bars, spaced tines mounted on the rods and having pointed front ends, a yoke straddling and pivotally connected to the upper side bars of the scoop, a frame secured to and extending rearwardly from the yoke, slats secured to the intermediate portion of the yoke and to the rear portion of the frame, the rear portions of the slats being extended downwardly, said slats forming a grating for closing the top and back of the scoop, a latch connected to the downwardly extended portion of certain of the slats, means upon the rear end portion of one of the tines for engagement by the latch, and a bail pivotally connected to the upper side bars of the scoop and adjacent the yoke.

2. In a loading apparatus, a scoop including upper and lower forwardly converging side bars, side plates secured to said bars and closing the openings therebetween, the forward ends of the bars forming prongs, cross rods connecting the lower bars, spaced tines mounted on the rods and having pointed front ends, a yoke straddling and pivotally connected to the upper side bars of the scoop, a frame secured to and extending rearwardly from the yoke, slats secured to the intermediate portion of the yoke and to the rear portion of the frame, the rear portions of the slats being extended downwardly, said slats forming a grating for closing the top and back of the scoop, a latch connected to the downwardly extended portion of certain of the slats, means upon the rear end portion of one of the tines for engagement by the latch, a bail pivotally connected to the upper side bars of the scoop and adjacent the yoke, a pulley connected to the bail, a pulley connected to the rear portion of the slats carrying frame, and a flexible actuating element mounted on the pulleys and secured to the bail.

1,190,142. BED-SPRING. HIMAN GARFINKEL, New York, N. Y., assignor to Ettey Garfinkel, Brooklyn, N. Y. Filed Apr. 26, 1915. Serial No. 23,828. (Cl. 5—9.)



1. A bed spring comprising a frame embodying end rails and a resilient covering for supporting a mattress; supports for said frame pivotally connected therewith, said supports being adapted to be rigidly mounted on a bedstead; a supporting edge mounted on said supports; and means operatively connecting said edge and frame for moving said edge in accordance with and approximately perpendicular to said frame in both the prone and uplifted positions of said frame.

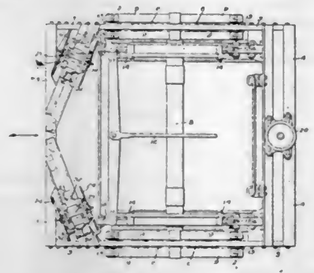
2. A bed spring comprising a frame embodying end rails and a resilient covering for supporting a mattress; supports for said frame pivotally connected therewith, said supports being adapted to be rigidly mounted on a bedstead; a supporting edge mounted on said supports; and transmission gearing operatively connecting said frame and said edge for moving said edge to relatively perpendicular relation with said frame when said frame is in both the prone and uplifted positions.

3. The combination of a bed spring frame adapted to be uptilted on one edge and having rigid end rails and extension bars rigidly connecting the same; a plurality of supporting blocks pivotally connected with said rails; means for rigidly clamping said blocks to a bedstead structure; a supporting edge pivotally mounted on said blocks; and means operatively connecting said edge and said frame for moving said edge to a position approximately perpendicular to said frame when said frame is lifted on said blocks to a position substantially vertical.

4. The combination of a bed spring frame adapted to be uptilted on one edge and having rigid end rails and extension bars rigidly connecting the same; a plurality of supporting blocks for said frame pivotally connected with said rails; means for rigidly clamping said blocks to a bedstead structure; a supporting edge pivotally mounted on said blocks; and means for operatively connecting the same for moving said edge to a service position approximately perpendicular to said frame when uptilted, the movement of said edge being simultaneous with the movement of said frame on said blocks and advanced in timed relation thereto for moving the edge to its service position prior to the completion of the movement of the frame to its uptilted position.

5. A bed spring comprising a frame embodying end rails and a resilient covering for supporting a mattress; a supporting edge mounted on said frame; supporting blocks pivotally connecting said frame and said edge; and transmission gearing operatively connecting said frame and said edge, for moving said edge to a position perpendicular to said frame in both the vertical and horizontal positions of said frame.

1,190,143. SWING-TRUCK. CHARLES H. GASKILL, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 6, 1915. Serial No. 65,406. (Cl. 105—239.)



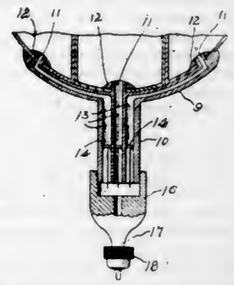
1. The combination in a car of the four wheel type, of a body; two trucks, each truck having a single axle; wheels mounted on the axles; a pivot for the truck off center in respect to the axle; two bearings depending from the under side of the car body; links pivoted to the bearings; and two coiled springs mounted one on each side of the center of the links and resting upon the frame of the truck so that, as the truck swings on its pivot, one spring will be compressed while the other will be released, allowing the truck to swing laterally, the springs returning the truck and holding it yieldingly in its normal position.

2. The combination in a car, of a truck having a single axle; a car body; a pivot for the truck located at one end thereof; two swing link mechanisms at the opposite end of the truck and located one on each side thereof, each mechanism consisting of a bearing secured to the under side of the car body; two links connected to the bearing and having a cross pin; a guide carried by the truck for the cross pin; two pins, one at each side of the center of the link; a spring seat on each pin; and a coiled spring mounted between the spring seats and the frame of the truck so that, as the truck swings under the car in passing around curves, the swing link mechanism will allow the truck to swing laterally and will return the truck, holding it yieldingly in its normal position so that the car will ride without undue lateral motion when on a straight track.

3. The combination in a car of the four wheel type, of a body; two single axle trucks mounted under the body; wheels on the axles; a pivot connecting each truck with the car body at one end of the truck; a spring mounted at the pivot so that the pivot end of the truck will be yieldingly supported; two swing link mechanisms connecting the opposite end of each truck with the car body, each swing link mechanism consisting of a bracket secured to the under side of the car body; links pivoted to the lower end of the brackets; and spring seats pivotally connected to the upper ends of the links at each side of the center thereof; springs located between the spring seats and the truck; boxes for the axles; and springs yieldingly connecting the boxes with the truck frame.

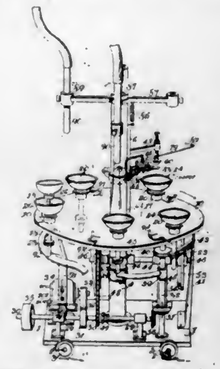
1,190,144. PNEUMATIC TIRE. MARY A. GINNONS, Des Moines, Iowa. Filed Mar. 1, 1915. Serial No. 11,290. (Cl. 152—22.)

A pneumatic tire comprising an outer casing, an inner and a pair of outer annular tubes positioned within the casing, a curved plate engaging each of the tubes, an extension formed on said plate intermediate its ends and centrally of the inner tubes, said plate provided with oppositely extending passages extending from points adjacent the ends of the plate and terminating throughout the extension, projections formed on the plate adjacent each end thereof and extending into the outer tubes, nuts positioned on the projections for clamping the outer tubes to the plate, said projections provided with passages therein and in communication with the passages of the plate, a projection formed intermediate the ends of the plate and extending through the inner tube, a nut on last mentioned extension for clamping the inner tube to the plate, said last mentioned projection provided



with a passage and extending through the extension and intermediate the first mentionel passages of the extension, check valves mounted in the passages of the extension, and a sleeve provided with a recess and threaded to the extension and provided with a reduced portion having a passage in communication with the recess for filling the tubes with air simultaneously.

1,190,145. AUTOMATIC CENTRIFUGAL GLASSWARE-MAKING MACHINERY. BENJAMIN FRANKLIN GIFT, Dunkirk, Ind. Filed Sept. 9, 1915. Serial No. 49,729. (Cl. 49—29.)



1. In a centrifugal glass molding machine, a base, a standard mounted on said base, a rotatable table mounted on said standard, a centrifugal mold carried by said table to receive a batch of glass, means for chilling the center of the batch to form a heft, and means for revolving said mold during certain stages of the rotation of the table whereby to cause the glass to flow upwardly on the sides of the mold from the said heft.

2. In a centrifugal glass molding machine, a base, a standard mounted on said base, a rotatable table mounted on said standard, a centrifugal mold carried by said table to receive a batch of glass, means for chilling the center of the batch to form a heft, and means for revolving said mold at different speeds successively during certain stages of the rotation of the table to cause flow of the glass upwardly in the mold away from the said heft.

3. In a centrifugal glass molding machine, a base, a standard mounted on said base, a stationary gear segment supported from said base, a constantly revolving gear adjacent to the stationary segment, a rotating table mounted on the aforesaid standard, a centrifugal mold carried by said table to receive a batch of glass, said mold

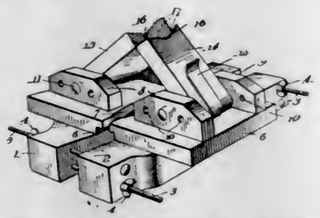
having a dependent shaft and a pinion mounted on said shaft, a chilling plunger movable into the mold centrally of the batch of glass to form a heft, and means for bringing the mold carried pinion into engagement with the stationary segment and the revolving gear successively, for the purpose described.

4. In a centrifugal glass molding machine, a portable base, a standard mounted on said base, a rotatable table mounted on said standard, a stationary gear segment supported from the base and positioned beneath said table, a constantly revolving gear adjacent to the stationary segment and in an equal plane therewith, a centrifugal mold carried by the rotatable table to receive a batch of glass, said mold having a shaft downwardly dependent through said table, a pinion mounted on said shaft and disposed in an equal plane with the aforesaid stationary segment and revolving gear, a chilling plunger movable into the mold centrally of the batch of glass to form a heft, and means for rotating the table so as to bring the mold carried pinion into successive intermeshing engagement with the stationary segment and revolving gear.

5. In a glass molding machine, a base, a standard mounted on said base, an intermittently rotatable table mounted on said standard, a stationary gear segment supported from the base and positioned beneath said table, a constantly revolving gear adjacent to the stationary segment the pitch lines of the segment and gear being in radial coincidence, a mold carried by the rotatable table, said mold having a shaft extending downwardly through the table, a pinion mounted on said shaft said pinion being adapted to engage the stationary segment and the revolving gear successively as the table rotates, and means for intermittently rotating the table.

[Claims 6 to 22 not printed in the Gazette.]

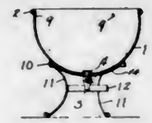
1,190,146. SAFETY PIPE-GRIP. FELTA B. GIST, Brownfield, Tex. Filed Feb. 10, 1914. Serial No. 817,883. (Cl. 24—249.)



In a device of the class described, in combination, a pair of blocks, a pair of ears integrally disposed upon each of said blocks substantially throughout their width, said pair of blocks being formed with a longitudinal spaced apart series of openings in registration, a pair of gripping jaws, pivots connecting each pair of said ears and adapted for insertion in any of said openings, said jaws being fulcrumed upon said pivots, one of said gripping jaws being formed adjacent said blocks with an inwardly beveled edge disposed contiguous to said block, each of said jaws being formed at its outer gripping end with an outwardly beveled transverse V-shaped edge, said V-shaped edges being formed with oppositely sloping teeth, another of said gripping jaws being formed adjacent said block with an arcuate edge, a flat spring bearing flat upon one of said blocks and secured thereto, said spring being curved under and around the arcuate edge of said gripping jaw and having a terminal arranged to press against said jaw to hold it biased, said other gropping jaw arranged at a bias to contact said remaining gripping jaw.

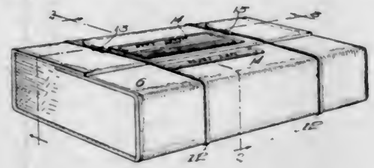
1,190,147. JARDINIÈRE. RICHARD F. GLOEDE, Evanston, Ill. Filed Feb. 17, 1915. Serial No. 8,735. (Cl. 47—25.)

1. A device of the character described, including a substantially semispherical receptacle formed with a curved bottom having a drain opening therein, a pet cock applied to the drain opening and projecting downwardly from the curved bottom of the receptacle, a skeleton pedestal frame engaging the curved bottom of the receptacle to support the same in an elevated and upright position, and means upon the pedestal for engaging the pet cock to lock the receptacle in proper position upon the pedestal.



2. A device of the character described including a receptacle adapted to receive a growing plant or the like, said receptacle being semispherical in shape and formed with a curved bottom having a drain opening therein, a pet cock formed with a stem fitted within the drain opening, a pedestal frame including a ring adapted to fit against the curved bottom of the receptacle to support the receptacle in an upright position, and a transverse bar applied to the ring and provided with an opening adapted to receive the stem of the pet cock for attaching the pedestal frame to the receptacle.

1,190,148. PARCEL-POST CASE. CHARLES THORP GOLWEY, South Bend, Ind. Filed Oct. 1, 1915. Serial No. 53,512. (Cl. 150—52.)



1. A parcels carrying device, substantially as herein described, comprising an inner section composed of a box having end flaps and side flaps, the latter being of combined width greater than the width of the box whereby they will overlap when closed, and a flexible cover comprising a box-like portion adapted to receive the inner section and having end flaps corresponding to the end flaps thereof and also having side flaps corresponding to the side flaps of the inner section, these side flaps of the cover being of a combined width greater than the width of the carrier, whereby they will overlap when closed, addresses on the outer side of both side flaps of the cover, near the free edges thereof, each address being substantially covered by the overlapping portion of the flap bearing the other address when the flaps are closed, and fastening devices, all substantially as and for the purpose set forth.

2. In a parcels carrying device, the combination of a rigid body portion bearing a plurality of oppositely disposed cover flaps, two of which flaps overlap, a textile cover shaped to conform therewith, and provided with oppositely disposed flaps, two of which overlap and are provided with pockets, said cover being detachably secured to said body portion by means of said pockets, which are adapted to retain said two overlapping flaps and adapted to bear address labels adjacent their edges, said other two flaps of said cover being adapted to be secured at their meeting ends disposed at right angles to said overlapping flaps, and binding means disposed around said covering and attached thereto.

3. In a parcels carrying device, the combination of a rigid body portion provided with closing flaps, a flexible covering shaped to conform with said body portion and detachably secured to certain of said flaps, and binding means attached to said covering.

4. In a parcels carrying device, the combination of a body portion, provided with closing flaps, a covering

shaped to conform with said body portion and secured to certain of said flaps, and binding means attached to said covering.

5. A shipping container comprising an inner case provided with overlapping flaps, a textile outer cover having corresponding overlapping flaps adapted to bear address labels and provided with pockets at their extremities, said pockets adapted to fit over the overlapping flaps of said case.

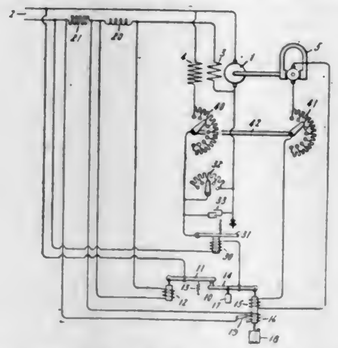
[Claims 6 and 7 not printed in the Gazette.]

1,190,149. AERIAL PROPELLER. FRED R. GOLDER, Chicago, Ill. Filed Sept. 11, 1915. Serial No. 50,245. (Cl. 244—25.)



An aerial propeller comprising a blower casing, a cylinder of less diameter than said casing and communicating at one end therewith, a shaft within the blower casing, angularly disposed blades secured to said shaft and forming a rotary blower of the same diameter as the casing and operating therein, a longitudinal shaft extending through the cylinder and connected with the first-named shaft, and spiral blades within the cylinder and connected with said longitudinal shaft, said blades forming a spiral propeller of a diameter conforming to the interior of the cylinder.

1,190,150. SPEED CONTROL OF D. C. MOTORS. HAROLD V. GREEN, Chicago, Ill., assignor to General Electric Company, a Corporation of New York. Filed May 27, 1914. Serial No. 841,199. (Cl. 171—229.)



1. In combination, a direct current motor provided with a shunt field winding, a resistance in series with said field winding, a relay for short-circuiting said resistance, an inductive resistance in series with said motor, a solenoid operated contacter controlling said relay and connected in shunt with said inductive resistance to hold said motor at constant speed.

2. In combination, a direct current motor provided with a shunt field winding, a generator driven by said motor, a resistance in series with said motor field winding, a relay for short-circuiting said resistance, floating contacts controlling said relay, a solenoid, controlling one of said contacts, supplied with a current proportional to the motor armature current, and another solenoid, controlling the other contact, supplied with current by said generator.

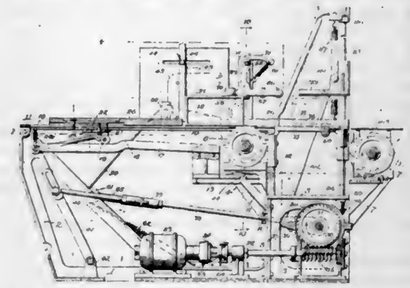
3. In combination, a direct current motor provided with a shunt field winding, a generator driven by said motor, a resistance in series with said motor field winding, a relay for short-circuiting said resistance, floating contacts controlling said relay, a solenoid, controlling one of said contacts, supplied with a current proportional to the motor armature current, another solenoid, controlling the other contact, supplied with current by said generator, and a third solenoid opposing the latter and also supplied with a current proportional to the motor armature current.

4. In combination, a direct current motor provided with a shunt field winding, a generator driven by said motor, a resistance in series with said motor field winding, a relay for short-circuiting said resistance, floating contacts controlling said relay, an inductive resistance in series with said motor, a solenoid controlling one of said contacts connected in shunt with said inductive resistance, another solenoid controlling the other contact electrically connected to said generator, a non-inductive resistance in series with said motor, and a third solenoid opposing the second mentioned solenoid and connected in shunt with said non-inductive resistance.

5. In combination, a direct current motor provided with a shunt field winding, a generator driven by said motor, a resistance in series with said motor field winding, a relay for short-circuiting said resistance, floating contacts controlling said relay, an inductive resistance in series with said motor, a solenoid controlling one of said contacts connected in shunt with said inductive resistance, another solenoid controlling the other contact electrically connected to said generator, and a third solenoid opposing the second mentioned solenoid and responsive to the motor armature current.

[Claim 6 not printed in the Gazette.]

1,190,151. MACHINE FOR GROOVING BOXES. WARREN T. GREEN, Louisville, Ky., assignor to Mengel Box Company, Louisville, Ky., a Corporation of New Jersey. Filed Apr. 1, 1915. Serial No. 18,530. (Cl. 144—136.)



1. In a machine for the purpose described, the combination of a pair of cutters adapted to form seats in the adjacent side walls of a box; means for advancing the box past one cutter; means for securing a relative separation of the box and cutter when said advancing means has moved a predetermined distance; and means for thereafter advancing the box into working relation with the second cutter in a path at right angles to its movement past the first cutter.

2. In a machine for the purpose described, the combination of a pair of cutters, means for advancing a box over one of said cutters to form a groove in one face thereof; and means acting to clamp the box and carry it downwardly and upwardly into and out of contact with the second cutter.

3. In a machine for the purpose described, the combination of a table; means for advancing a box from one end thereof and discharging it at the other; a cutter; and means for effecting a relative separation of the table and cutter when the advancing means has moved the box a predetermined portion of its travel along the table and maintaining such separation until the box is passed from the table.

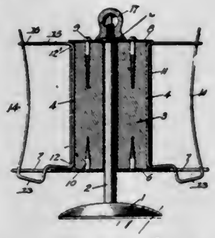
4. In a machine for the purpose described, the combination of a table; means for advancing a box from one end thereof and discharging it at the other; a cutter; and means for moving the table away from the cutter when

the advancing means has moved the box a predetermined portion of its travel along the table and maintaining such separation until the box is passed from the table.

5. In a machine for the purpose described, the combination of a table, pivoted at one end; a cutter located below the table at the opposite end; means for advancing a box along the table in one direction and discharging the same therefrom; and means for tilting the free end of the table upwardly when said advancing means has moved a predetermined distance and maintaining such relation until the box is discharged.

[Claims 6 to 11 not printed in the Gazette.]

1,190,152. DENTAL-DISK HOLDER. LOUIS F. GROSS, Scranton, Pa. Filed Mar. 9, 1915. Serial No. 13,295. (Cl. 211—20.)



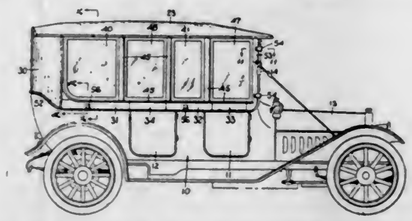
1. In a device of the class described, the combination with a core supported on an upright axis, and a plate secured across its lower end and projecting beyond its face and provided with radial slots in its periphery; of a series of loops whereof each has an upright shank secured to said core, an outwardly projecting arm at the upper end of the shank provided with a hook at its extremity, the lower end of the shank being bent outward over said plate and then depressed through one of said slots, and a tongue rising from the depressed portion and removably engaged with said hook.

2. In a device of the class described, the combination with an upright support, a core rotatably mounted thereon and having upright grooves in its surface, and a plate secured to the lower end of the core and projecting beyond said surface, the plate having radial openings in its projecting portion; of a series of loops whereof each has a straight upright shank mounted in one of said grooves, an outturned and hooked arm at its upper end, and its lower end bent outward over the plate, depressed into one of said openings therein, and then brought upward again in said opening into a spring tongue removably engaging said hook.

3. In a device of the character described, the combination with a cylindrical core mounted on an upright axis and having upright grooves in its surface, plates secured to its upper and lower ends and overlying the extremities of said grooves, one of the plates having openings alined with the grooves, and a cylinder surrounding said core and its grooves and shorter than the core so that the ends of the grooves adjacent the plates are left open; of a series of loops whereof each has a shank lying in one groove, ends bent over the edges of the surrounding cylinder and one of them engaging one of said openings, and a hook on one end and a spring tongue on the other, for the purpose set forth.

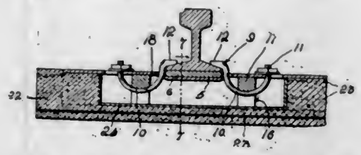
1,190,153. REMOVABLE TOP FOR VEHICLES. FRANK GRUNDY, Jersey City, N. J. Filed Jan. 18, 1915. Serial No. 2,824. (Cl. 21—62.)

1. The combination with an automobile body having swinging doors and a wind shield; of a removable top including opposite longitudinal upper and lower bars, said lower bars being designed to fit the body and being divided into sections certain of which are connected to the doors to move therewith, means to detachably secure the other sections to the body, bows at spaced points along said top and having side portions with their lower extremities resting upon the lower bars beyond the movable sections thereof, said upper bars being notched to receive said bows, a covering over the bows, a lining therefor, a front bow between the upper bars over which said lining passes to connect with the wind shield, sections contiguous with the lower bars and connected to the sides of the wind shield, guideways on the bottom faces of the upper bars and the top faces of the lower bars, stationary sashes secured between the sides of the bows and the upper and lower bars beyond the doors in watertight connection therewith and sashes movable in the guideways for operation over the doors to close the spaces between the first named sashes and between the forwardmost of said sashes and the sections at the wind shield.



2. The combination with an automobile body having swinging doors and a wind shield; of a removable top including opposite longitudinal upper and lower bars, said lower bars being designed to fit the body and being divided into sections certain of which are connected to the doors to move therewith, means to detachably secure the other sections to the body, bows at spaced points along said top and having side portions with their lower extremities resting upon the lower bars beyond the movable sections thereof, said upper bars being notched to receive said bows, a covering over the bows, a lining therefor, a front bow between the upper bars over which said lining passes to contact with the wind shield, sections contiguous with the lower bars and connected to the sides of the wind shield, guideways on the bottom faces of the upper bars and the top faces of the lower bars, stationary sashes secured between the sides of the bows and the upper and lower bars flush with the outer faces thereof, other sashes slidably in the guideways for movement beyond the first named sashes and doors when closed to span the sections and guideways adjacent thereto and adapted to be opened rearwardly inside of said first named sashes clear of said doors and means to hold said sashes in closed position.

1,190,154. RAIL TIE AND FASTENER. JOHN W. C. HAAS, Newburgh, N. Y. Filed Mar. 10, 1915. Serial No. 13,390. (Cl. 238—4.)



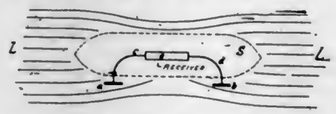
A rail tie including a hollow body having rail seats formed in the upper side thereof and having a pair of spaced openings located adjacent each side of each rail seat, and spaced pairs of blocks interposed between and engaging the upper and lower sides of the body and each having a vertical recess therein, the upper end wall of each recess being arcuate and the blocks forming each pair being arranged on opposite sides of one of the rail seats, and rail clamps received by each pair of openings in the upper side of the body and extending into the body and received by the recesses in the blocks and engaging around the arcuate walls of the recesses.

1,190,155. CALENDAR-WATCH. JOSEPH E. HAGEL, Zabriskie, Cal. Filed Sept. 3, 1915. Serial No. 48,809. (Cl. 40—113.)



In combination, a watch provided with a bezel and having an annular bead, and a calendar attachment, the same consisting of a ring to overlie and fit close against the bezel and provided at its outer edge with a flange to engage the bead and retain the attachment in place, said ring being arched and provided on its face with radial lines forming thirty-one regular spaces which receive numbers in successive order from one to thirty-one inclusive corresponding to the days of the month, said ring being rotatable to bring the numbers in position opposite a given fixed point of the watch.

1,190,156. SUBMARINE TELEGRAPHY OR TELEPHONY. WALTER HAHNEMANN, Kiel, Germany. Filed Feb. 17, 1913. Serial No. 749,007. (Cl. 250—4.)



1. A system of submarine telegraphy or telephony in which current lines originating at a distant transmitting station are utilized to operate a receiving instrument on a ship, said system having spaced submerged receiving electrodes carried by the ship, the resistance of the receiving circuit between said electrodes being so small as to be comparable with that of the short-circuiting path afforded by the ship's body, for the purpose specified.

2. A system of submarine telegraphy or telephony in which current lines originating at a distant transmitting station are utilized to operate a receiving instrument on a ship, said system having spaced submerged receiving electrodes carried by the ship and a receiving circuit in parallel with the short-circuiting path afforded by the ship's body, and the resistance of the receiving circuit between said electrodes being so small as to be comparable with that of the short-circuiting path afforded by the ship's body, for the purpose specified.

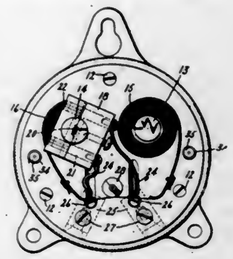
3. A system of submarine telegraphy or telephony in which current lines originating at a distant transmitting station are utilized to operate a receiving instrument on a ship, said system having a receiving circuit comprising a transformer system having a secondary circuit connected to the receiving instrument and a primary circuit comprising spaced submerged receiving electrodes carried by the ship, the resistance of the circuit between said electrodes being so small as to be comparable with that of the short-circuiting path afforded by the ship's body, for the purpose specified.

4. A system of submarine telegraphy or telephony in which current lines originating at a distant transmitting station are utilized to operate a receiving instrument on a ship, said system having a receiving circuit comprising a transformer system the secondary of which is connected to the receiving instrument while the primary circuit is arranged in parallel with the short-circuiting path afforded by the ship's body and has a resistance so small as to be comparable with that of the short-circuiting path afforded by the ship's body, for the purpose specified.

5. A system of submarine telegraphy or telephony in which current lines originating at a distant transmitting station are utilized to operate a receiving instrument on a ship, said system having a receiving circuit comprising a transformer system having a plurality of secondary circuits connected together through the receiving instrument, and a plurality of primary circuits therefor comprising spaced submerged receiving electrodes carried by the ship, the resistance between the said electrodes being so small as to be comparable with that of the short-circuiting path afforded by the ship's body, for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,190,157. ELECTRICAL INSTRUMENT. CHESTER I. HALL, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed Sept. 14, 1914. Serial No. 861,640. (Cl. 171—308.)



1. An electrical instrument comprising a heat-storage mass, an electric current heating element arranged within said mass, a thermostatic spiral member arranged around said mass and having one end in thermal connection with the mass, and an indicating element operatively related to said thermostatic member.

2. An electrical instrument comprising a heat-storage mass, a thermostatic spiral spring member arranged around said mass and having one end in thermal connection with the mass, means for subjecting said heat-storage mass to the heating effect of an electric current, and an indicating element operatively related to said thermostatic member.

3. An electrical instrument comprising a movable element, two bi-metallic thermostatic spiral spring members adapted to exert opposing actions upon said element, a heat-storage mass, and means for subjecting said mass to the heating effect of an electric current, one of said thermostatic members being thermally related to said heat-storage mass so that heat from the mass flows into one end thereof and thence through the convolutions thereof.

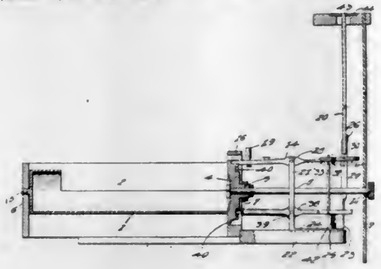
4. An electrical instrument comprising a movable element, two thermostatic members adapted to exert opposing actions upon said element, a heat-storage mass, means for subjecting said mass to the heating effect of an electric current, one of said thermostatic members being thermally related to said heat-storage mass so that heat from the mass flows into one end thereof and reaches other parts by conduction so that a significant time interval elapses before the member completely responds to a change in the heat stored in said mass.

5. An electrical instrument comprising a heat-storage mass, a thermostatic member having one end in thermal connection with said mass so that heat from the mass enters the member at this end and passes to other parts thereof by conduction, means for subjecting said heat-

storage mass to the heating effect of an electric current, and an indicating element operatively related to said thermostatic member.

[Claims 6 to 15 not printed in the Gazette.]

1,190,158. VENDING-MACHINE. WILLIAM P. HALL, Cedar Falls, N. C. Filed Aug. 25, 1915. Serial No. 47,293. (Cl. 194—19.)



1. A vending machine including a rotary disk or head provided with a cam groove having an inwardly extending portion, a locking lever engaging the disk or head for holding the same normally against movement, said locking lever being provided with a coin receiving portion, a slidable member mounted on the locking lever for holding a coin thereon, a lever extending into the groove and arranged to be actuated by the same and means for connecting the cam actuated lever with the slidable member for dislodging a coin.

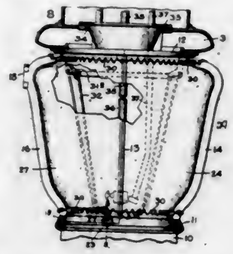
2. A vending machine including a rotary disk or member, a locking lever engaging the disk or member to hold the same against rotary movement, said locking lever being provided wtih a slot, a slide mounted on the locking lever and having a coin supporting portion and a slot adjacent to the same and movable to carry the slot to the coin to permit the said coin to drop through the locking lever and means actuated by the disk or member for operating the slide.

3. A vending machine including a rotary disk or member, a locking lever engaging the disk or member to hold the same against rotary movement, said locking lever being provided with a slot, a slide mounted on the locking lever and having a coin supporting portion and a slot adjacent to the same and movable to carry the slot to the coin to permit the said coin to drop through the locking lever, and a lever actuated by the disk or member and connected with the slide for operating the same.

4. A vending machine including a rotary disk or member having a cam, a locking lever pivoted intermediate of its ends and having one arm engaging the disk or head for holding the same against rotary movement, a coin chute located above the other arm of the lever, a slide mounted on such arm of the lever and located beneath the coin chute for supporting a coin, and slidable to dislodge the coin, a second lever pivoted intermediate of its ends and having one arm arranged to be engaged by the cam of the disk or member and a rod connecting the other arm of the cam actuated lever with the said slide.

5. A vending machine including a disk or head, a locking lever fulcrumed intermediate of its ends and engaging the disk or head to hold the same against movement, said lever being provided with a transverse coin slot and having longitudinal slots, a slide arranged on the said lever and provided with a transverse slot having a constricted coin supporting portion and movable to permit a coin to drop through the slot of the lever, said slide being provided with means operating in the said longitudinal slot for guiding it, a second lever fulcrumed intermediate of its ends and engaged by the disk or member and a rod extending from the last mentioned lever and operating in the slot of the locking lever and connected with the said slide.

1,190,159. ARC-LAMP. CROMWELL A. B. HALVORSON, Jr., Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 16, 1914. Serial No. 861,961. (Cl. 176—52.)



1. In an arc lamp, a supporting frame, a globe secured to said frame and provided with a removable panel, an arc lamp frame mounted upon said supporting frame, an inner globe secured to said frame and depending within the outer globe, the arc lamp frame being tiltably mounted on the supporting frame so as to bring the inner globe opposite the removable panel when the arc lamp frame is tilted.

2. In an arc lamp, a supporting frame comprising a number of substantially vertical ribs, an outer globe divided into a number of panels secured between said ribs, one of the panels being pivotally mounted whereby the same may be opened, an arc lamp frame mounted upon said supporting frame, and an inner globe secured to said arc lamp frame and depending within the outer globe, the arc lamp frame being pivoted opposite the pivoted panel whereby the inner globe is brought into the opening formed by said panel when the arc lamp is tilted.

3. In an arc lamp, a supporting frame, an outer globe secured to said frame and provided with a removable panel, an arc lamp frame provided with a depositing chamber for fumes evolved from the arc mounted upon said supporting frame, an inner globe open at the top secured beneath the depositing chamber and communicating therewith, said depositing chamber being pivoted to said supporting frame opposite the removable panel, whereby the inner globe is brought into the opening formed by the removable panel when the arc lamp frame is tilted.

4. In an arc lamp, a supporting frame comprising upper and lower rings joined by a number of ribs, an outer globe divided into a number of panels mounted between said ribs, one of the panels being mounted on a hinged frame, an arc lamp frame mounted upon the top ring of said frame and hinged thereto opposite the removable panel, an inner globe secured to the arc lamp frame and depending within the outer globe, whereby when the arc lamp is tilted the inner globe is brought into the opening formed by the removable panel.

5. In an arc lamp, a base, a supporting frame mounted thereon, an outer globe secured thereto, an arc lamp frame comprising a flat depositing chamber seated upon said supporting frame, an inner globe secured against said depositing chamber, and a tube extending through the upper and lower walls of the depositing chamber and communicating with the space between the inner and outer globes for accommodating the conductors extending from the base to the arc lamp.

1,190,160. FIRE-EXTINGUISHING COMPOUND. FRANK P. HARRIS, Cranford, N. J. Filed June 2, 1914. Serial No. 842,374. (Cl. 23—5.)

1. A fluid adapted for use in extinguishing fires, comprising a haloid derivative of acetylene in a non-combustible liquid vehicle, in combination with a suitable compound adapted to reduce the freezing point of the mixture.

2. A fluid adapted for use in extinguishing fires comprising a haloid derivative of acetylene in a non-combustible liquid vehicle, a compound, having a bromin radical in its structure, and a suitable ingredient adapted to reduce the freezing point of the mixture.

3. A fluid adapted for use in extinguishing fires comprising acetylene tetrabromid and carbon tetrachlorid.

4. A fluid adapted for use in extinguishing fires comprising acetylene tetrabromid, carbon tetrachlorid and trichlorethylene.

5. A fluid adapted for use in extinguishing fires comprising acetylene tetrabromid, carbon tetrachlorid and a noncombustible liquid adapted to reduce the freezing point of the mass.

[Claims 6 and 7 not printed in the Gazette.]

1,190,161. FIRE-EXTINGUISHING COMPOUND. FRANK P. HARRIS, Cranford, N. J. Filed June 2, 1914. Serial No. 842,375. (Cl. 23—5.)

1. A fluid adapted for use in extinguishing fires comprising bromoform and a noncombustible liquid vehicle, the bromoform content being substantially 10% of the total mass.

2. A fluid adapted for use in extinguishing fires comprising bromoform and a noncombustible liquid vehicle therefor in combination with a noninflammable material adapted to reduce the freezing point of the resultant fluid.

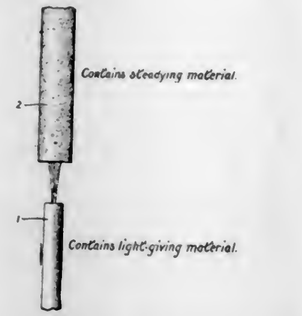
3. A fluid adapted for use in extinguishing fires comprising bromoform and a liquid vehicle and a compound added thereto to reduce the freezing point of the resultant fluid, the liquid vehicle and said compound, both consisting of non-inflammable fluids.

4. A fluid adapted for use in extinguishing fires comprising bromoform and carbon tetrachlorid and a noninflammable liquid adapted to reduce the freezing point of the mass.

5. A fluid adapted for use in extinguishing fires comprising bromoform, carbon tetrachlorid and trichlorethylene.

[Claim 6 not printed in the Gazette.]

1,190,162. METHOD OF PRODUCING A FLAMING OR LUMINOUS ARC. JOSEPH L. R. HAYDEN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 25, 1911. Serial No. 623,236. (Cl. 176—135.)

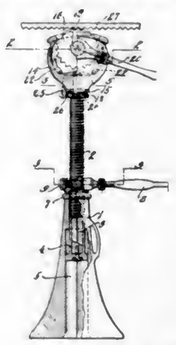


1. The method of producing a flaming or luminous arc which consists in introducing a light-giving material into the arc from one electrode only and a steadying material from the companion electrode only.

2. The combination of a pair of electrodes for producing a luminous or flaming arc, one of which is the sole source of light giving vapors for the arc and the other is the sole source of steadying vapors for the same.

3. The combination of a pair of electrodes for producing a luminous or flaming arc, one of which contains material which is the sole source of the light giving vapors in the arc, and the other contains material which is the sole source of steadying vapors in the arc.

1,190,163. JACK. NILS OLAF HEDMAN, Leadville, Colo. Filed Aug. 2, 1915. Serial No. 43,321. (Cl. 254—85.)



1. In a jack of the class described, the combination of a base, a lifting member mounted thereon, a head swivel on said lifting member, actuating means projecting from said head, operating means for said actuating means, and a member adapted for engagement with the object to be moved and geared to the actuating means for imparting traversing movement to the object mentioned.

2. In a jack of the class described, the combination of a base, a lifting member mounted therein, a head swiveled on said lifting member, actuating means carried by said head for imparting traversing movement to the object lifted, and means for locking the head from swivel action at any of a number of different positions.

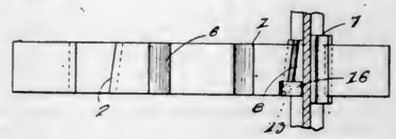
3. In a jack of the class described, the combination of a base, a lifting member mounted therein, a head swiveled on said lifting member, actuating means comprising a gear projecting from the head and an operating member therefor, a toothed rack for carrying the object lifted and with which said gear member meshes, and locking means for holding the head from swiveling during actuation of the gear.

4. In a jack of the class described, the combination of a base, a lifting member mounted therein, a head swiveled on said lifting member, actuating means carried by said head for imparting traversing movement to the object lifted, and means for locking the head from swivel action, comprising a hook pivotally connected to the head and adapted for engagement with the lifting member, said member having a recess in which said hook interlocks.

5. In a jack of the class described, the combination of a base, a lifting member mounted therein, a hollow head carried by said lifting member, a gear member therein, locking members for holding said gear from movement in either direction, a pinion disposed exteriorly of the head and having fixed relation with the gear aforesaid, and an operating lever coöperating with the pinion for operating said gear.

[Claims 6 to 8 not printed in the Gazette.]

1,190,164. RAILWAY-TIE. NOAH F. HEINSELMAN, Pike, W. Va. Filed Nov. 13, 1914. Serial No. 871,997. (Cl. 238—5.)



A rail tie consisting of a body portion having rail-receiving recesses in the ends thereof, said recesses being dovetailed in cross section and each having one wall thereof tapering from one end of the recess to the other end, the said body portion of the tie having vertical open-

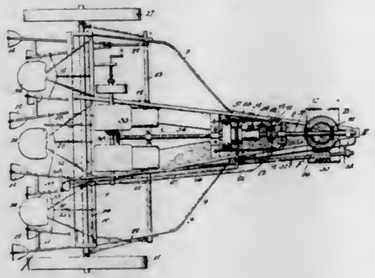
ings therein having their upper ends opening through the bottom walls of the recesses and at points adjacent the beveled walls of the recesses, companion pairs of rail fastening blocks removably arranged within the recesses and one block of each pair being wedge shaped and of a length less than the length of the recess, and having one side thereof engaging the tapering wall of the recess, the other block of each pair engaging the other side of the recess, means carried by the last-mentioned block for engaging the body portion of the tie for holding the said block against movement when in operative position, locking elements having shanks extending through the vertical openings in the tie body and having heads thereon for engaging the adjacent ends of the wedge shaped blocks, the said heads having rail-engaging off-set portions formed thereon.

1,190,165. FLY-CATCHER. WILLIAM A. HEMENWAY and ORA E. HEMENWAY, Cottage Grove, Oreg. Filed Mar. 7, 1916. Serial No. 82,603. (Cl. 43—1.)



In a fly catcher, a holder for sticky fly paper comprising a plate having its longitudinal side portions bent upon themselves to form overlying flanges, thereby providing longitudinal oppositely disposed grooves between the flanges and the plate for the reception of a sheet of sticky fly paper, said flanges being rebent to form laterally extending additional flanges, constituting guards to prevent the flies from escaping or falling beyond the plate, said additional flanges having their extreme end portions bent upon themselves to reinforce the flanges, the ends of the plate having struck-up lugs or tongues to be bent over the ends of the fly paper, the ends of the plate being bent upon themselves forming ribs or thickened parts, to reinforce the plate, and a pivotal-adjustable handle socket secured centrally to the under face of the plate.

1,190,166. AGRICULTURAL MACHINERY. WILLIAM W. HERRING, Shawnee, Okla. Filed Jan. 10, 1913. Serial No. 741,352. (Cl. 21—114.)



1. A chassis for agricultural machines comprising in combination, a frame including a longitudinally extending beam, an elongated bearing sleeve rigid with said beam and disposed with the axis of its bore upright, wheels for supporting said frame adjacent one end of said beam, a fork including an elongated hollow standard extending through the bore of said bearing sleeve to permit oscillation of said fork about an upright axis, a wheel revolubly carried by said fork supporting said frame adjacent its end opposite from said first mentioned wheels, a shaft coaxial with and extending through the said standard of said fork, a motor carried by said frame, means for rotating said shaft from said motor, means for imparting movement of said shaft to said wheel of said fork, and means operatively connected with said hollow elongated standard of said fork for oscillating the same, substantially as and for the purpose set forth.

2. A chassis for agricultural machines comprising in combination, a frame including a longitudinally extending beam, an elongated bearing sleeve rigid with said beam and disposed with the axis of its bore upright, ground wheels for supporting said frame adjacent one end of said beam, a fork including an elongated hollow standard extending through said bore of said bearing sleeve to permit oscillation of said fork about an upright axis, a wheel revolubly carried by said fork supporting said frame adjacent its end opposite from said first mentioned wheels, a shaft coaxial with and extending through the said standard of said fork, a motor carried by said frame, a second wheel rigid with said shaft and disposed above said bearing sleeve, means for rotating said second wheel by action of said motor, a third wheel, intermediate said second wheel and bearing sleeve, and rigid with the said hollow standard of said fork, and means for imparting movement to said third wheel in either direction.

3. A chassis for agricultural machines comprising in combination, a frame including a longitudinally extending beam, an elongated bearing sleeve rigid with said beam and disposed with the axis of its bore upright, ground wheels for supporting said frame adjacent one end of said beam, a fork including an elongated hollow standard extending through said bore of said bearing sleeve to permit oscillation of said fork about an upright axis, a wheel revolubly carried by said fork supporting said frame adjacent its end opposite from said first mentioned wheels, a shaft coaxial with and extending through the said standard of said fork, a motor carried by said frame, a second wheel rigid with said shaft and disposed above said bearing sleeve, means for rotating said second wheel by action of said motor, a worm wheel relatively greater in diameter than said second mentioned wheel disposed intermediate the same and said bearing sleeve, and rigid with said hollow standard of said fork, a worm co-meshing with said worm wheel, and means for imparting movement to said worm wheel in either direction.

4. A chassis for agricultural machines including a frame having a narrowed forward portion and a widened rearward portion, the rearward portion of said frame being provided with a dead axle having a plurality of supporting wheels, driving mechanism including a prime mover located adjacent said rearward portion of the frame and thereby providing a preponderance of weight over said dead axle, said driving mechanism including a forward driving and steering wheel located at the narrowed portion of said frame.

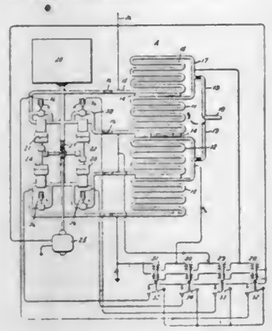
5. An agricultural machine including a frame provided with a dead rear axle having supporting wheels, a prime mover and soil treating means located adjacent and on either side of said axle to provide a preponderance of weight over said axle, forward driving and steering means, and power transmission mechanism connecting said prime mover with said driving and steering means.

[Claim 6 not printed in the Gazette.]

1,190,167. AUTOMATIC CONTROL FOR FLASH-BOILERS. GEORGE H. HILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 25, 1915. Serial No. 30,444. (Cl. 219—39.)

1. An electric heating system comprising a plurality of pipe sections in which the water is electrically heated, a source of water supply feeding said sections in parallel, and means for equalizing the temperatures of all of the sections.

2. An electric heating system comprising a plurality of pipe sections in which water is electrically heated, a source of water supply for feeding said sections in parallel, and electrically controlled means for varying the relative flow of water to these sections to equalize the temperature of said sections.



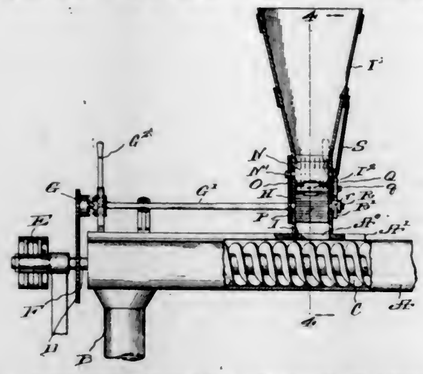
3. An electric heating system comprising a plurality of pipe sections in which the water is electrically heated, a source of water supply feeding said sections in parallel, and means controlled by the temperature of a section for controlling the relative flow of water to the various sections.

4. An electric heating system comprising a plurality of pipe sections, a source of water supply feeding said sections in parallel, means for passing an electric current through said sections in series, and means controlled by the temperature of any one section for controlling the relative flow of water to the various sections.

5. An electric heating system comprising a plurality of pipe sections, electric heating means associated therewith, a source of water supply feeding said sections in parallel, and electromagnetic means controlled by the temperature of a section for controlling the flow of water to the various sections.

[Claims 6 to 12 not printed in the Gazette.]

1,190,168. PULVERIZER AND DISTRIBUTER FOR PROPORTIONING AND FEEDING GRANULATED MATERIAL. FORREST C. HOLLY, Memphis, Tenn. Filed Sept. 7, 1915. Serial No. 49,361. (Cl. 83—14.)



1. Means for pulverizing and distributing fine granular material, comprising a hopper, a box mounted below said hopper, and provided with a cant-board and an adjustable feed gate, a feed roller mounted beneath said cant-board and said feed gate, a pulverizing roller mounted above said feed roller, means for simultaneously rotating said feed roller and said pulverizing roller, and means operated by said feed roller shaft for intermittently vibrating said box, substantially as described.

2. Means for pulverizing and distributing fine granular material, comprising a hopper, a box mounted below said hopper, and provided with an adjustable cant-board and an adjustable feed gate, a feed roller mounted beneath said cant-board and said feed gate, a pulverizing roller mounted above said feed roller, means for simultaneously rotating said feed roller and said pulverizing roller, and means operated by said feed roller shaft for intermittently vibrating said box, substantially as described.

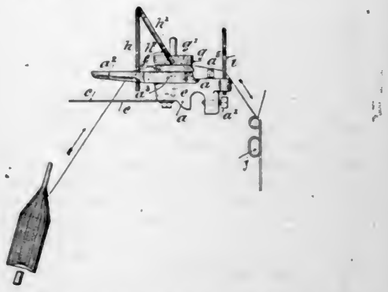
3. Means for pulverizing and distributing fine granular material, comprising a hopper, a box mounted below said hopper, and provided with an adjustable cant-board and an adjustable feed gate, a grooved and fluted feed roller mounted beneath said cant-board and said feed gate, a grooved and fluted pulverizing roller mounted above said feed roller, means for simultaneously rotating said feed roller and said pulverizing roller, and means operated by said feed roller shaft for intermittently vibrating said box, substantially as described.

4. Means for pulverizing and distributing fine granular material, comprising a hopper, a box mounted below said hopper, and provided with an adjustable cant-board and a hinged feed gate, a hand wheel and screw for adjusting the position of said feed gate, a feed roller mounted beneath said cant-board and said feed gate, a pulverizing roller mounted above said feed roller, means for simultaneously rotating said feed roller and said pulverizing roller, and means operated by said feed roller shaft for intermittently vibrating said box, substantially as described.

5. An apparatus of the character described, comprising a conveyer and means for driving same, a hopper and a box below same both mounted above said conveyer and connected therewith, a pulverizing roller and a feed roller both journaled in said box, gearing connecting said feed roller and said pulverizing roller with said conveyer whereby both are driven at a speed proportional to the speed of said conveyer, with means for varying the supply of powdered material delivered by said feed roller to said conveyer, and means operated by the conveyer shaft for intermittently vibrating said hopper and box, substantially as described.

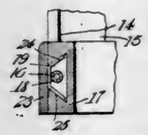
[Claim 6 not printed in the Gazette.]

1,190,169. YARN-CLEANING DEVICE. THOMAS WILLIAM HOLT, Staleybridge, England. Filed May 5, 1916. Serial No. 95,614. (Cl. 28—20.)



A yarn tension device having a bracket, a slotted steel guide attached thereto, a forward bifurcated extension on said bracket having a laterally extending lug, rotatable adjacent tension disks, a deflecting guide adjustably secured in said lug in advance of the tension disks and to one side thereof, said guide comprising a wire having a limb that extends upwardly then downward and forward and then slightly curvedly inwardly to produce an inclined directing plane terminating in line with the contacting faces of the disks, and a double curved deflecting guide in rear of said disks, said guides adapted to throw the yarn tangentially to the disks and thereafter permitting sufficient release to effect threading.

1,190,170. SECTIONAL CABINET. WILLIAM T. HORMES, Govans, Md., assignor to Solomon Himmel, Baltimore, Md. Filed Apr. 9, 1915. Serial No. 20,269. (Cl. 45—78.)



1. An improvement in sectional display cabinets comprising a plurality of spaced apart stacks arranged in alinement, a filling member interposed between the contiguous ends of every pair of adjacent stacks and filling the space between said ends, said filling member being provided with a pilaster portion, exposed fastening devices engaging the stacks and the filling member, to bind them together, and a removable facing strip covering said fastening devices.

2. An improvement in sectional display cabinets comprising a plurality of spaced apart stacks arranged in alinement, a filling member interposed between the contiguous ends of every pair of adjacent stacks and filling the space between said ends, said filling member being provided with a pilaster portion, exposed fastening devices engaging the stacks and the filling member to bind them together, a facing strip covering said fastening devices, and means for providing a slidable detachable connection between the facing strip and said stacks.

3. An improvement in sectional display cabinets comprising a plurality of spaced apart stacks arranged in alinement and provided with recesses in their exterior faces, a filling member interposed between contiguous ends of every pair of adjacent stacks and filling the space between said ends, fastening devices located within said recesses and binding each pair of stacks and its interposed filling member together, said recesses permitting inserting or withdrawing of the fastening devices without disturbing the stacks or filling member, and a detachable facing strip covering said recesses.

4. An improvement in sectional display cabinets comprising a plurality of spaced apart stacks arranged in alinement and provided with recesses in their exterior faces, a filling member interposed between contiguous ends of every pair of adjacent stacks and filling the space between said ends, fastening devices located within said recesses and binding each pair of stacks and its interposed filling member together, said recesses having undercut portions, and permitting inserting or withdrawing of the fastening devices without disturbing the stacks or filling member, and a facing strip having clips on its inner face to engage the undercut portions of said recesses.

5. An improvement in sectional display cabinets comprising a plurality of spaced apart stacks arranged in alinement and provided with recesses in their exterior faces, a filling member interposed between contiguous ends of every pair of adjacent stacks and filling the space between said ends, said filling member being provided with a pilaster portion, bolts located in said recesses and passed through the end walls of the stacks and the filling member of the interposed filling member, and an adjustable facing strip covering said recesses.

1,190,171. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 10, 1908, Serial No. 466,836. Divided and this application filed May 10, 1916. Serial No. 96,527. (Cl. 235—60.)

1. In a computing machine, the combination with a plurality of registers, of register-actuating mechanism including a decimal order selecting dog and a coöperating group of denominational-determining members for each register, the said selecting dogs being arranged to engage their coöperating denominational-determining members on different lines, so that each selecting dog will act only upon its own coöperating group of denominational-determining members.



2. In a computing machine having a key-controlled traveling carriage, a plurality of independent registers, corresponding independent preliminary representation devices for action on said registers, a common set of keys with connections for setting the several preliminary representation devices, and corresponding decimal-order-selecting mechanism, each comprising a selecting dog on said carriage, and a group of denominational-determining members acted upon in succession by said selecting dog, and having connections operating to present the decimal orders of the corresponding preliminary representation devices successively to the action of said key-controlled setting connections, the said several selecting dogs and their coöperating groups of denominational-determining members having engagement on lines offset transversely of the direction of the movement of said carriage, so that each selecting dog will act only upon its own coöperating group of denominational-determining members.

3. In a computer, the combination with a stationary register having decimal orders, of a traveling paper supporting carriage, keys controlling the step-by-step movements of said carriage, a decimal-order selector carried by said carriage, and case-shifting mechanism for rendering said selector inoperative.

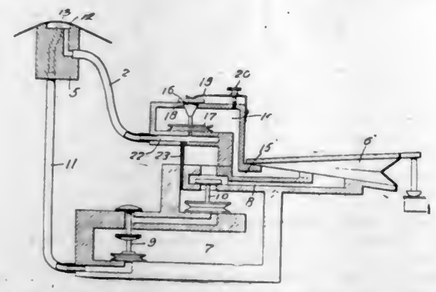
4. In a combined typewriter and computing machine, the combination with printing devices, of adding mechanism comprising a register and register-actuating devices, a shift key, a tabulating key, and connections between the tabulating key and the shift key, whereby the operation of either key breaks the operative connection between the printing devices and the register-actuating devices.

5. In a combined typewriter and computing machine, the combination with typewriting mechanism, of adding mechanism comprising a register and register-actuating devices, case-shifting means for the typewriting mechanism, a carriage release and stop mechanism, and connections between said release and stop mechanism and said case-shifting means, whereby the operation of either the shifting means or the carriage release and stop mechanism, automatically breaks the connection between the typewriting mechanism and the register-actuating devices.

[Claims 6 to 84 not printed in the Gazette.]

1,190,172. AUTOMATIC EXPRESSION CONTROL FOR PLAYER-PIANOS. MONROE S. HOWARD, Waukon, Iowa. Filed June 22, 1915. Serial No. 35,572. (Cl. 84—168.)

1. In an automatic player piano including a tracker bar and a striking pneumatic, and means between the tracker bar and striking pneumatic for actuating the latter, said means including an exhaust chamber, the combination of a chamber communicating directly with the striking pneumatic, and being provided with a valve for admitting air at atmospheric pressure to the chamber when opened, a control pneumatic for the valve, a passage connecting said valve control pneumatic with an opening in the tracker bar, whereby air at atmospheric pressure may be admitted to said valve control pneumatic when the auxiliary opening is uncovered, a bleed tube connecting said passage with said exhaust chamber whereby the pressure of air within the passage may be reduced to the pressure of air within the exhaust chamber when said opening is closed, and a music sheet provided with perforations adapted to be brought into registration with said opening for uncovering it to various degrees whereby the amount of atmospheric air admitted to the said passage may be controlled.



2. In a player piano including a tracker bar and a striking pneumatic and means connecting them whereby the striking pneumatic may be actuated for striking a note, said means including an exhaust chamber, the combination of a chamber communicating directly with the striking pneumatic and being provided with a valve adapted when opened to allow atmospheric air to enter said chamber whereby to pass into the striking pneumatic, a control pneumatic for controlling the action of said valve, a passage connecting said control pneumatic with an opening in the tracker bar, a bleed tube connecting said passage and the said exhaust chamber, and means whereby the auxiliary opening may be uncovered and covered to various degrees.

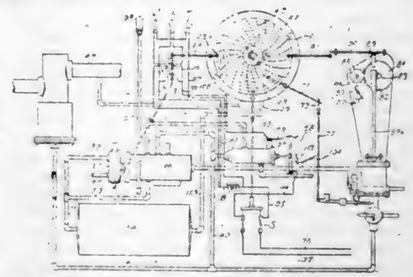
3. In a player piano, the combination of a tracker bar, a striking pneumatic, means connecting the tracker bar and striking pneumatic whereby the latter may be actuated for striking a note, a valve control means operably connected with said striking pneumatic whereby atmospheric air may be admitted to the striking pneumatic when the valve is opened, a pneumatic for controlling the valve, a passage connecting the pneumatic with an opening in the tracker bar, and means whereby the pressure within the passage may be reduced when the opening is covered whereby to maintain the valve in closed position, and a music sheet arranged across the opening and being provided with a plurality of perforations adapted to uncover said opening to various degrees as the music sheet passes thereover.

4. A player piano including a tracker bar, a striking pneumatic, means connecting the tracker bar and striking pneumatic whereby the latter may be actuated for sounding a note, means communicating with the striking pneumatic and with an opening provided in the tracker bar, whereby air at atmospheric pressure may be admitted to the striker pneumatic when the opening is uncovered, and a music sheet adapted to be drawn across said tracker bar for normally covering the opening, said music sheet being provided with a plurality of apertures adapted to be brought into registration with said opening for uncovering the latter to various degrees whereby various amounts of atmospheric air may be admitted to the striking pneumatic.

5. A player piano including a tracker bar and a striking pneumatic, and means communicating with the tracker bar and striking pneumatic whereby atmospheric air may be admitted to the latter for reducing the force of the blow struck by the striking pneumatic.

[Claims 6 to 9 not printed in the Gazette.]

1,190,173. AUTOMATIC TRAIN-STOPPING AND RECORDING DEVICE. FREDERICK F. HUDSON, Memphis, Tenn.; Annie Hudson, administratrix of said Frederick F. Hudson, deceased, assignor to Recording Safety Device Company, Memphis, Tenn., a Corporation of Arizona. Filed June 10, 1914. Serial No. 844,249. (Cl. 246—58.)



1. An automatic train stopping mechanism comprising a main air reservoir, a train pipe, a valve casing communicating with said train pipe, a piston in said valve casing, an exhaust valve connected with said piston, connections between said main reservoir and said valve casing for normally supplying pressure to said piston, thereby holding said exhaust valve in closed position, a normally energized magnet carried by the engine, means for controlling the pressure transmitted from said main reservoir to said valve casing, said last named means comprising a cylinder, a piston valve in said cylinder, said piston valve being normally under pressure from said main reservoir, and a pair of valves operated by the magnet, one of said valves serving to control the flow of air from the main reservoir into said cylinder and the other establishing communication between the cylinder and the outer atmosphere.

2. An automatic train stopping mechanism comprising a main air reservoir, a train pipe, a valve casing communicating with said train pipe, a piston in said valve casing, an exhaust valve connected with said piston, connections between said main reservoir and said valve casing for normally supplying pressure to said piston, thereby holding said exhaust valve in closed position, a normally energized magnet carried by the engine, means for controlling the pressure transmitted from said main reservoir to said valve casing, said last named means comprising a cylinder, a piston valve in said cylinder, said piston valve being normally under pressure from said main reservoir, means actuated by the movement of the armature of said magnet for cutting off the flow of air from said main reservoir into said cylinder and for opening said cylinder to the atmosphere, a second cylinder provided with a piston, and an exhaust port arranged to be uncovered by said piston, said second cylinder being in communication with said first named cylinder on one side of the piston and said main reservoir being in communication with said second named cylinder on the other side of the piston.

3. An automatic train stopping mechanism comprising a main air reservoir, a train pipe, a valve casing communicating with said train pipe, a piston in said valve casing, an exhaust valve connected with said piston, connections between said main reservoir and said valve casing for normally supplying pressure to said piston thereby holding said exhaust valve in closed position, a normally energized magnet carried by the engine, means for controlling the pressure transmitted from said main reservoir to said valve casing, said last named means comprising a cylinder, a piston valve in said cylinder, said piston valve being normally under pressure from said main reservoir, means actuated by the movement of the armature of said magnet for cutting off the pressure transmitted from said main reservoir into said cylinder and for opening said cylinder to the atmosphere, a second

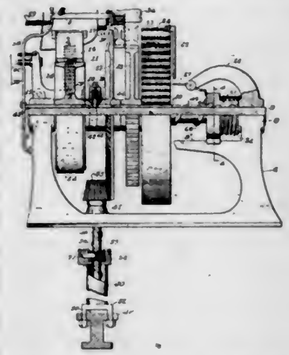
cylinder provided with a piston, an exhaust port arranged to be uncovered by said piston, said second cylinder being in communication with said first named cylinder on one side of the piston and said main reservoir being in communication with said second named cylinder on the other side of the piston, and a manually operated three-way valve having an exhaust port disposed in the connecting pipe between said main reservoir and said second named cylinder.

4. An automatic train stopping mechanism comprising a main air reservoir, a train pipe, a valve casing communicating with said train pipe, a piston in said valve casing, an exhaust valve connected with said piston, connections between said main reservoir and said valve casing for normally supplying pressure to said piston, thereby holding said exhaust valve in closed position, a normally energized magnet carried by the engine, means for controlling the pressure transmitted from said main reservoir to said valve casing, said last named means comprising a cylinder, a piston valve in said cylinder, said piston valve being normally under pressure from said main reservoir, means actuated by the movement of the armature of said magnet for cutting off the pressure transmitted from said main reservoir into said cylinder and for opening said cylinder to the atmosphere, a second cylinder provided with a piston, an exhaust port arranged to be uncovered by said piston, said second cylinder being in communication with said first named cylinder on one side of the piston and said main reservoir being in communication with said second named cylinder on the other side of the piston, a manually operated three-way valve having an exhaust port disposed in the connecting pipe between said main reservoir and said second named cylinder, and means for locking said three-way valve in its shifted position.

5. An automatic train stopping mechanism comprising a main air reservoir, a train pipe, a valve casing communicating with said train pipe, a piston in said valve casing, an exhaust valve connected with said piston, connections between said main reservoir and said valve casing for normally supplying pressure to said piston, thereby holding said exhaust valve in closed position, a normally energized magnet carried by the engine, means for controlling the pressure transmitted from said main reservoir to said valve casing, said last named means comprising a cylinder, a piston valve in said cylinder, said piston valve being normally under pressure from said main reservoir, means actuated by the movement of the armature of the magnet for cutting off the pressure transmitted from said main reservoir into said cylinder and for opening said cylinder to the atmosphere, a second cylinder provided with a piston, an exhaust port arranged to be uncovered by said piston, said second cylinder being in communication with said first named cylinder on one side of the piston and said main reservoir being in communication with said second named cylinder on the other side of the piston, a manually operated three-way valve having an exhaust port disposed in the connecting pipe between said main reservoir and said second named cylinder, means for locking said three-way valve in its shifted position, and means for automatically returning said three-way valve to its original position.

1,190,174. ENGINE-STARTER. HARRY J. JOERDEN, Los Angeles, Cal., assignor of one-fifth to Lamont S. Wren, Hawthorne, Cal. Filed Aug. 2, 1915. Serial No. 43,273. (Cl. 185—41.)

1. A starter, comprising in combination a shaft; mechanism for operatively engaging the said shaft with the crank shaft of an internal combustion engine, but normally out of engagement therewith; a brake mechanism normally holding said shaft against rotation in one direction, but permitting rotation in the opposite direction; mechanism connecting a source of power to said crank shaft; a clutch normally engaging said last named mechanism with said shaft; a power accumulator operatively secured to said shaft; means operated by said power accumulator to release said clutch when said power accumulator is charged; and mechanism for simultaneously releasing said clutch, said brake mechanism and operatively engaging the first named mechanism with said shaft.



2. A starter comprising a shaft; a gear secured thereto; means for operatively engaging the gear with the crank shaft of an internal combustion engine; a brake secured to said shaft normally holding the shaft against rotation in one direction, but permitting rotation of the shaft in the opposite direction; a gear mounted on said shaft; a source of power geared to the last named gear; a clutch for engaging said last named gear with the shaft; a power accumulator secured to said shaft; means connected to said power accumulator to throw said clutch out of engagement, when said power accumulator has been fully charged; mechanism for throwing said clutch out of engagement, releasing said brake, and operatively engaging the first named gear.

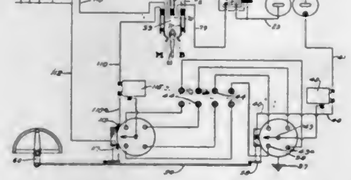
3. A starter comprising a shaft provided with a longitudinal groove; mechanism for operatively engaging said shaft with the crank shaft of an internal combustion engine, but normally out of engagement therewith; a brake mechanism normally holding said shaft against rotation in one direction, but permitting rotation of the shaft in the opposite direction; a gear mounted on said shaft; a source of power in mesh with said gear; a dog on said gear normally disposed in the groove on said shaft; a power accumulator secured to said shaft; a sliding rod disposed in the groove of said shaft for engagement with said dog; mechanism secured to said rod for sliding the latter to move said dog out of engagement with said shaft; means operated by said power accumulator for controlling the last named mechanism; a second sliding rod disposed in the groove on said shaft for moving said dog out of engagement with said shaft; and means for moving the last named rod to release said dog, release said brake, and engage said shaft with said crank shaft.

4. A starter comprising a shaft provided with a longitudinal groove and a thread thereon disposed adjacent one end thereof; mechanism for operatively engaging said shaft with the crank shaft of an internal combustion engine, but normally out of engagement therewith; a brake mechanism normally holding said shaft against rotation in one direction, but permitting rotation of the shaft in the opposite direction; a gear mounted on said shaft; a source of power in mesh with said gear; a dog on said gear normally disposed in the groove on said shaft; a power accumulator operatively secured to said shaft; a sliding rod disposed in the groove of said shaft for engagement with said dog, an internally threaded member mounted on said shaft for engagement with the thread on said shaft, normally contiguous to said thread and provided with means preventing rotation thereof; resilient means tending to force said internally threaded member into engagement with the thread on said shaft; a catch disposed to hold said internally threaded member out of engagement with said thread; means operated by said power accumulator when charged to release said catch; a second sliding rod disposed in the groove on said shaft for moving said dog out of engagement with said shaft; and means for moving the last named rod to release said dog, release said brake, and engage said shaft with said crank shaft.

5. A starter comprising a shaft, provided with a longitudinal groove and a thread adjacent one end thereof, mechanism for operatively engaging said shaft with the crank shaft of an internal combustion engine, but normally out of engagement therewith; brake mechanism normally holding said shaft against rotation in one direction, but permitting rotation of the shaft in the opposite direction; a gear mounted on said shaft; a source of power in mesh with said gear, a dog on said gear normally disposed in the groove of said shaft; a motor spring secured to said shaft; a sliding rod disposed in the groove of said shaft for engagement with said dog; an internally threaded member for engagement with the thread on said shaft mounted on said shaft normally contiguous to said thread and provided with means preventing rotation; resilient means tending to force said internally threaded member into engagement with said thread; a trigger disposed to hold said internally threaded member out of engagement with said thread; a striker secured to said spring for engaging said trigger; a second sliding rod disposed in the groove on said shaft for moving said dog out of engagement with said shaft; and means for moving the last named rod to release said dog, release said brake, and engage said shaft with said crank shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,190,175. IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Mar. 4, 1912. Serial No. 681,401. (Cl. 123—148.)



1. In an ignition system for combustion and explosion engines, the combination with a plurality of sparking circuits, one of said circuits having a greater electrical lag therein than the other; means for advancing and retarding the time at which the sparking impulses take place; and means coöperating with said last named means for compensating for the electrical lag in either of said circuits, whereby sparking impulses will take place at a given time, in the circuit that is in use, upon a given movement of said last named means.

2. In an ignition system for combustion and explosion engines, the combination with a direct and indirect sparking circuit, one of said circuits having a greater electrical lag than the other, a common operating member, of means operable by said common operating member for compensating for the increased lag in one of said circuits; whereby the adjustment of said operating member, a given distance, will equalize the advance of the means for controlling the sparking impulse in the circuit that is in use.

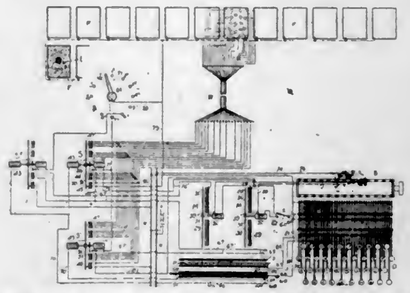
3. In an ignition system for combustion and explosion engines, the combination with a direct ignition circuit, having connection with an engine operated generator; a timer for opening and closing said circuit, to generate a sparking impulse for ignition purposes; of a second ignition circuit having connection with a constant supply of electrical energy; a timer for closing said circuit; and means having a time constant for breaking said circuit during the interval it is closed by the timer, to generate a sparking impulse.

4. In an ignition system, the combination with a direct and an indirect sparking circuit, having varying degrees of electrical lag; of means operable by a common operating member for compensating for the differential electrical lag, whereby the adjustment of said operating member a given distance, will operate to equalize the advance or retard of the time occurrence of the spark in either of said circuits.

5. In ignition systems for combustion engines, the combination with a sparking circuit; engine actuated means for intermittently opening and closing said circuit, comprising a rotatable sleeve having a slot therein, of varying angularity; and means associated with said slot and adjustable to advance said sleeve variable degrees for equal increments of adjustment of said means.

[Claims 6 to 17 not printed in the Gazette.]

1,190,176. ILLUMINATED SIGN OR ELECTROGRAPH. ELMER JEROME KINGSBURY, Juneau, Alaska. Filed Dec. 29, 1914. Serial No. 879,471. (Cl. 177—349.)



1. In an electric sign, the combination of a plurality of monogram units having devices adapted to be energized in predetermined groups to exhibit letters, a source of current, a set of keys, letter-control switches for each monogram unit equal in number to the number of keys, electrical means for closing each switch and connected with the corresponding key to be energized when the latter is pressed, a series of master switches, one for each monogram unit, and each including contacts for connecting all the letter-control switches for a monogram unit with the source of current, electrical operating means for each master switch for closing the latter when the corresponding key is pressed, and means for connecting the electrical closing means and contacts of the master switches successively with the source of current as the keys are pressed.

2. In an electric sign, the combination of a plurality of monogram units having devices adapted to be energized in predetermined groups to exhibit letters, a source of current, a set of keys, letter-control switches for each monogram unit equal in number to the number of keys, electrical means for closing each switch and connected with the corresponding key to be energized when the latter is pressed, a series of master switches, one for each monogram unit, and each including contacts for connecting all the letter-control switches for a monogram unit with the source of current, electrical means for each master switch for closing the latter when the corresponding key is pressed, a carriage movable step by step as the keys are pressed, and means on the carriage for connecting the electrical closing means and contacts of the master switches successively with the source of current.

3. In an electric sign, the combination of a plurality of monogram units having devices adapted to be energized

in predetermined groups to exhibit letters, a source of current, a set of keys, letter-control switches for each monogram unit equal in number to the number of keys, electrical means for closing each switch and connected with the corresponding key to be energized when the latter is pressed, a series of master switches, one for each monogram unit, and each including contacts for connecting all the letter-control switches for a monogram unit with the source of current, electrical means for each master switch for closing the latter when the corresponding key is pressed, a carriage movable step by step as the keys are pressed, a cylinder on the carriage and provided with a plurality of sets of contacts connected respectively with the electrical closing means and contacts of the master switches, a fixed contact connected with the source of current and with which contacts on the cylinder successively engage, and means for turning the cylinder to present the sets of contacts thereof successively to the fixed contact.

4. In an electric sign, the combination of a plurality of monogram units having devices adapted to be energized in predetermined groups to exhibit letters, a source of current, a set of keys, letter-control switches for each monogram unit equal in number to the number of keys, electrical means for closing each switch and connected with the corresponding key to be energized when the latter is pressed, a series of master switches, one for each monogram unit, and each including contacts for connecting all the letter-control switches for a monogram unit with the source of current, electrical means for each master switch for closing the latter when the corresponding key is pressed, means for connecting the electrical closing means and contacts of the master switches successively with the source of current and automatically as the keys are pressed, and an electrical means at each letter control switch to open the same and blank the monogram.

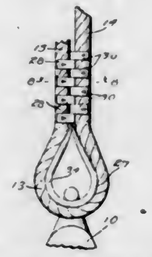
5. In an electric sign, the combination of a plurality of monogram units having devices adapted to be energized in predetermined groups to exhibit letters, a source of current, a set of keys, letter-control switches for each monogram unit equal in number to the number of keys, electrical means for closing each switch and connected with the corresponding key to be energized when the latter is pressed, a series of master switches, one for each monogram unit, and each including contacts for connecting all the letter-control switches for a monogram unit with the source of current, electrical means for each master switch for closing the latter when the corresponding key is pressed, means for connecting the electrical closing means and contacts of the master switches successively with the source of current and automatically as the keys are pressed, an electrical means at each letter control switch to open the same and blank the monogram, and normal separated contacts in the circuit of said last electrical means and adapted to engage when the associated letter-control switch closes by the first mentioned electrical means thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,190,177. FASTENER FOR SASH-CORDS. JOHN D. C. KNAPP, Minneapolis, Minn., assignor to John C. Brown, Duluth, Minn. Filed Oct. 11, 1915. Serial No. 55,159. (Cl. 16—16.)

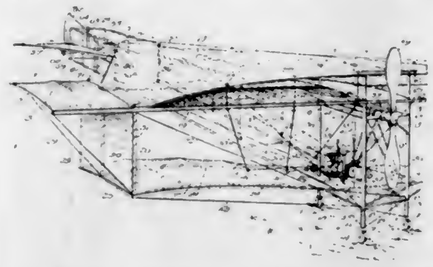
1. A sash cord fastener comprising a metallic member having a looped portion extending through the sash weight and receiving a corresponding loop of the cord, the two ends of said member having oppositely extended barbed wings, the wings of one end alternating with those of the other and being adapted to engage with their barbs the strands of cord at each side of the member and fasten the loop.

2. A sash cord fastener comprising a metallic member having a looped portion extending through the sash weight and receiving a corresponding loop of the cord, the two ends of said member having oppositely extended barbed wings, the wings of one end alternating and interlocking with the wings of the other to engage with their barbs the strands of the cord at each side of the member and fasten the loops.



3. A sash cord fastener comprising a metallic member having a looped portion extending through the sash weight and receiving a corresponding loop of the cord, the two ends of said member forming stems having oppositely extended barbed wings, the wings of one stem embracing the other stem and one of the ends of the cord, and the wings of the other stem embracing the first stem and the other end of the cord.

1,190,178. BIPLANE. GUSTAVE G. LELEVIER, Douglas, Ariz. Filed Jan. 28, 1914. Serial No. 814,923. (Cl. 244—14.)



1. A bi-plane comprising upper and lower planes, the upper plane being of greater length than the lower plane and extending beyond the same at each end, connections between the planes, said connections being at the outer ends of the lower plane, a covering between the planes at each connection, a central frame extending rearwardly beyond the planes at the center thereof, a flexible cover having its ends connected with the upper plane and extending over the central frame, guide studs connected with the central frame and extending upwardly, the parachute cover having openings through which the guide studs extend and the said studs having heads for limiting the movement of the cover away from the planes, means for holding the front edge of the cover in contact with the upper surface of the upper plane, and means controlled by the operator for releasing the holding means at either side of the central frame.

2. A bi-plane comprising upper and lower planes, the upper plane being of greater length than the lower plane and extending beyond the same at each end, connections between the planes, said connections being at the outer ends of the lower plane and a cover between the planes at each connection, a central frame extending rearwardly beyond the planes at the center thereof, a flexible cover having its ends connected with the upper plane and extending over the central frame, means for limiting the upward movement of the central portion of the front edge of the parachute cover with respect to the upper plane, means for holding the front edge of the cover in contact with the upper surface of the upper plane, and means controlled by the operator for releasing the holding means at either side of the central frame.

3. A bi-plane comprising upper and lower planes, the upper plane being of greater length than the lower plane and extending beyond the same at each end, connections between the planes, said connections being at the outer ends of the lower plane, a covering between the planes at each connection, a central frame extending rearwardly beyond the planes at the center thereof, a flexible covering having its ends connected with the upper plane and extending over the central frame, means for holding the front edge of the cover in contact with the upper surface of the upper plane, and means controlled by the operator for releasing the holding means at either side of the central frame.

4. A bi-plane comprising upper and lower planes, the upper plane being of greater length than the lower plane and extending beyond the same at each end, connections between the planes, said connections being at the outer ends of the lower plane, a covering between the planes at each connection, a central frame extending rearwardly beyond the planes at the center thereof, a flexible covering having its ends connected with the upper plane and extending over the central frame, means for drawing down the front edge of the parachute cover at each side of the central frame and for holding it in contact with the upper plane, each of the said means being under the control of the operator.

5. A bi-plane comprising upper and lower planes, the upper plane being of greater length than the lower plane and extending beyond the same at each end, connections between the planes, said connections being at the outer ends of the lower plane, a covering between the planes at each connection, a central frame connected with the plane, a parachute cover arranged above the upper plane, means at each side of the central frame for holding the front edge of the cover in contact with the upper plane, each of the said means being under the control of the operator.

[Claims 6 to 28 not printed in the Gazette.]

1,190,179. BATH-MAT. EDWARD L. LIVINGSTON, West Orange, N. J. Filed Oct. 15, 1915. Serial No. 56,043. (Cl. 4—27.)



1. A bath mat having an integral attaching cup a part of which extends above the plane of the body of the mat and forms a part of the surface thereof, and a part of which extends below the plane of the body of the mat in the form of a continuous rib thereby forming an inclosure and a support for the mat.

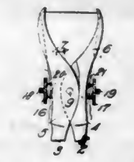
2. A bath mat having an integral attaching cup a part of which extends above the plane of the mat and forms a part of the surface thereof, and a part of which cup extends below the plane of the mat in the form of an annular rib, for the purpose set forth.

3. A bath mat having a plurality of integral attaching cups each of which comprises a dome-shaped portion which rises above the plane of the mat and forms a part of the upper surface thereof, and an annular portion which projects below the plane of the mat whereby a chamber is formed through said mat, for the purpose set forth.

4. As an article of manufacture, a bath mat having an integral attaching cup at various points, each cup having a part which extends above the plane of the body of the mat and forms a part of the surface thereof, and a part which extends below the plane of the mat body in the form of a continuous rib thereby forming an inclosure and a support for the mat, said mat having ribs on the upper surface thereof intervening between said cups, for the purpose set forth.

5. As an article of manufacture, a bath mat having a plurality of attaching cups each of which has a dome-shaped portion rising above the plane of the mat and forming a part of the surface thereof, and an annular rib on which the mat rests, said mat having ribs intervening between said cups, for the purpose set forth.

1,190,180. DENTAL PLIERS. JAMES BELLINGER MCALLISTER, St. Johnsville, N. Y. Filed Sept. 20, 1915. Serial No. 51,570. (Cl. 32—10.)

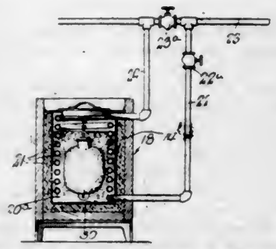


1. In a pair of dental pliers of the character described, a plier construction provided with a pair of jaws pivotally connected together and gripping portions for actuating the jaws, and means arranged on the pliers for receiving and holding against independent movement the ends of a ligature, said jaws being provided with openings through which said ligature passes.

2. In a pair of dental pliers of the character described, a plier construction provided with a body, gripping portions and a pair of jaws, said jaws being bent so as to extend to one side of the body, the outer end of the jaws being provided with openings for receiving a ligature, and ligature receiving gripping members arranged on said body portion for receiving and holding the ends of said ligature after the same have been passed through said openings.

3. In a pair of dental pliers of the character described, a plier construction including a pair of jaws having openings therein for receiving a ligature, a pair of pawls pivotally mounted on the plier structure, one of said pawls being pivotally mounted near the end thereof and the other near the center thereof whereby the sides of the pawls will engage when one pawl is pulled over against the other, said pawls being provided with notches for assisting in holding the end portions of the ligature on the pawls so that one section thereof will be between the sides thereof.

1,190,181. PROCESS OF MANUFACTURING CREAMS, CUSTARDS, AND THE LIKE. ARTHUR L. S. MCCURDY, Chicago, Ill., assignor to Larsen Ice Machine Company (Inc.), Wilmington, Del., a Corporation of Delaware. Filed May 18, 1914. Serial No. 839,273. (Cl. 62—174.)



1. The process of manufacturing creams, custards and the like, which consists in freezing the same in a flexible waterproof bag, and in then kneading said bag until the ice crystals therein have been disintegrated and broken.

2. The process of manufacturing creams, custards and the like, which consists in placing the same in a flat, flexible waterproof bag, subjecting the bag and its contents to a freezing temperature, and then kneading the bag with its contents, then subjecting the bag and its contents again to a freezing temperature and thereafter repeating the kneading step, the freezing and kneading steps being continued until the mixture is brought to the desired consistency.

1,190,182. HAIR-CUTTING DEVICE. JOSEPH J. MCDONOUGH, Rochester, Pa., assignor to American Fire Alarm Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Mar. 17, 1915. Serial No. 15,062. (Cl. 30—12.)



1. In a hair-cutting device, the combination of a comb, a casing provided with a blade held at a side of the comb, a single connector attached to the casing and engaging the comb at a single point thereof and permitting the casing to rock about such point, and a resilient member between the casing and comb for resisting such rocking movement of the casing.

2. In a hair-cutting device the combination of a comb, a casing provided with a pair of spring clips engaging the back of the comb and permitting a rocking movement of the casing on the comb, a blade carried by said casing at one side of said clips, and a spring secured to the casing and bearing on the back of the comb at the other side of said clips.

3. In a hair-cutting device, the combination of a comb, an elongate U-shaped inner casing member provided with a blade, a correspondingly shaped outer casing member movable longitudinally upon and coöperating with said inner member to hold said blade at a side of the comb, spring clips secured to the casing members and engaging the back of the comb, said clips permitting of a rocking movement of the casing, and resilient means for resisting such rocking movement.

4. In a hair-cutting device, the combination of a comb, a casing provided with a pair of blades held one on each side of said comb, the cutting edge of one blade being in advance of that of the other, means for pivotally attaching the casing to the comb, and resilient means for holding the blades yieldingly toward the toothed edge of the comb.

5. In a hair-cutting device, the combination of a comb, a pair of blades disposed one at each side of the comb, a casing comprising inner and outer elongate members movable longitudinally of each other and coöperating with each other to hold said blades in said positions, a spring clip within the inner casing member and engaging the back of the comb, a clamping screw engaging said casing member and clip, and a spring for holding the blade-provided portion of the casing yieldingly toward the toothed edge of the comb.

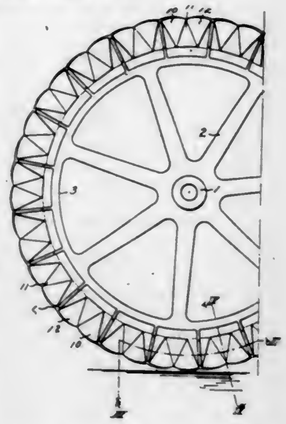
1,190,183. TRACTION-WHEEL. DENNIS W. MCLAUGHLIN, Berkeley, Cal. Filed May 26, 1913. Serial No. 769,832. (Cl. 21—207.)

1. A traction wheel having a narrow rim, a tread including oppositely open triangles formed by the base lines of inclined triangular planes, having their apices in said rim; and inverted triangular planes whose base line extends between said apices, and whose apex joins the contiguous apex of said open triangles.

2. A traction wheel having a narrow rim, a tread including oppositely open triangles formed by the base lines of inclined triangular planes having their apices in said rim, and joined by a triangular plane whose base line extends between said apices, and whose apex joins the contiguous apex of said open triangles; and radial planes extending laterally from said apices.

3. A traction wheel having a narrow rim, inclined planes extending from said rim to form substantially triangular, pyramidal, open spaces on opposite sides of said wheel, and radial planes extending laterally from the apices of said triangular spaces, whereby the peripheral tread of the wheel presents a series of conjoined Y shaped lines facing in alternately opposite directions.

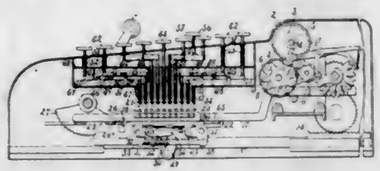
4. A traction wheel having a narrow rim and a zig-zag tread, inclined planes extending from said rim to said tread to form polygonal spaces on alternately opposite sides of said wheel, and radial planes extending laterally from alternate sides of said tread.



5. A traction wheel having a narrow rim and a zig-zag tread wider than said rim; radial planes extending from said tread to said rim; radial planes extending laterally beyond said tread, whereby the tread presents a series of conjoined Y shaped lines open in alternately opposite directions.

[Claims 6 and 7 not printed in the Gazette.]

1,190,184. COMPUTING-MACHINE. HOLMES MARSHALL, Plainfield, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Oct. 28, 1911. Serial No. 657,279. (Cl. 235—60.)



1. The combination with a closely collected set of computing pins, of a set of keys arranged diffusedly with respect to said pins for operating said pins, and centripetal connections extending from said keys to said pins; certain of said connections acting to transmit a direct movement of said keys to said pins, and certain of said connections being in the nature of compound levers acting indirectly to transmit the movement of certain of said keys to certain of said pins.

2. The combination with a closely collected set of computing pins, of a set of keys arranged diffusedly with respect to said pins for operating said pins, and centripetal connections extending from said keys to said pins; certain of said connections being in the nature of compound levers acting indirectly to transmit the movement of said keys to certain of said pins.

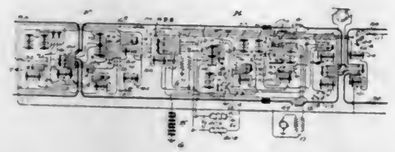
3. The combination with a plurality of pins, of plungers for setting said pins, keys for operating said plungers, connections between said keys and said plungers, said connection being arranged at different levels to avoid interference with one another, and said plungers being all of variable lengths, to allow for the difference in level of said connections, and said keys also having stems of different magnitude, to allow for the difference in level of said connections; some of said connections being rigidly secured to both said plungers and said stems, and others of said connections acting indirectly to transmit the movement of certain of said keys to certain of said plungers.

4. The combination with a plurality of pins, of plungers for setting said pins, keys for operating said plungers, connections between said keys and said plungers, said connections being arranged at different levels to avoid interference with one another, and said plungers being all of variable lengths, to allow for the difference in level of said connections, and said keys also having stems of different magnitude, to allow for the difference in level of said connections; some of said connections being rigidly secured to both said plungers and said stems, and others of said connections acting indirectly to transmit the movement of certain of said keys to certain of said plungers, and springs for returning said keys to their normal unactuated positions.

5. The combination with a plurality of pins, of a plurality of plungers for setting said pins, a plurality of keys for operating said plungers, springs for returning said plungers to their normal positions, rigid connections between certain of said keys and certain of said plungers, and loose connections between certain of said keys and certain of said plungers.

[Claims 6 to 12 not printed in the Gazette.]

1,190,185. AUTOMATIC TELEPHONE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1913. Serial No. 784,096. (Cl. 179—18.)



1. In a telephone system, a plurality of subscribers' lines, means including an automatic connector switch for establishing a talking circuit between two of said lines, a common battery for supplying talking current, a line relay normally included in series with said battery in a bridge across said talking circuit, and means for including an impedance in series with said line relay when said talking circuit is established.

2. In a telephone system, a plurality of subscribers' lines, means including an automatic connector switch for establishing connection between two of said lines, a common battery for supplying talking current, a line relay connected with said battery and included in a bridge across said talking circuit, and means for connecting an impedance in series with said line relay when said talking circuit is established.

3. In a telephone system, a plurality of subscribers' lines, means including an automatic connector for establishing a talking circuit between two of said lines, a common battery for supplying talking current, a line relay bridged across said talking circuit and connected with said battery, a non-inductive resistance normally included in said bridge, an inductive resistance, and means for cutting out said non-inductive resistance and including said inductive resistance in said bridge when said talking circuit is established.

4. In a telephone system, a plurality of subscribers' lines, means for establishing a talking circuit between two of said lines, a common battery for supplying talking current, said battery normally connected through a low impedance path with the conductors of said talking circuit, and means for increasing the impedance in said path when said talking circuit is established.

5. In a telephone system, a plurality of subscribers' lines, means for establishing a talking circuit between two of said lines, a common battery for supplying talking current, said battery normally connected through a low impedance path with the conductors of said talking circuit, and means for automatically increasing the impedance in said bridge.

[Claims 6 to 19 not printed in the Gazette.]

1,190,186. POOL-TABLE POCKET. FRANK MASHEK, Chicago, Ill. Filed June 9, 1915. Serial No. 33,041. (Cl. 46—12.)

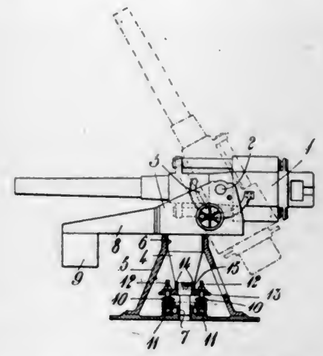


1. A pool table pocket formed of flexible material, the lower edges of said material being turned inwardly; a securing plate secured to the bottom of said inwardly turned lower edges; and a distending plate of stiff material arranged inside the bottom of said pocket and secured to said securing plate, substantially as described.

2. A pool table pocket formed of flexible material, the lower edges of said material being turned inwardly; a securing plate riveted to the bottom of said inwardly turned lower edges; and a distending plate of stiff material arranged inside the bottom of said pocket and riveted centrally to said securing plate, substantially as described.

3. A pool table pocket formed of a sheet of leather split and spread at the splits to form a flexible foraminated material, the lower edges of said sheet being turned inwardly; a securing plate riveted to the bottom of said inwardly turned lower edges; a distending plate of stiff material secured inside the bottom of said pocket by means of a single rivet passed centrally therethrough and through said securing plate; and a lining of softer material covering said distending plate, substantially as described.

1,190,187. ORDNANCE-MOUNT TURNING ON A CENTRAL PIVOT. EMIL OLSSON, Bofors, Sweden, assignor to Aktiebolaget Bofors-Gullspang, Bofors, Sweden, a Company Limited. Filed Feb. 23, 1916. Serial No. 79,855. (Cl. 89—37.)

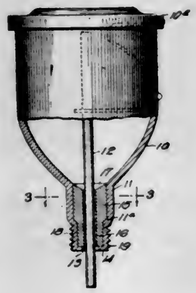


1. A pivoting ordnance mount for high angles of elevation comprising a pedestal, a top-carriage pivotally mounted thereon adapted to rotate in a horizontal plane, a gun provided with trunnions near its center of gravity, bearings for the trunnions in said top carriage located rearwardly of the axis of the top-carriage pivot, and a counterweight on the forward part of the top carriage whereby the center of gravity of the gun and top-carriage is brought to coincide with the axis of the top carriage pivot.

2. A pivoting ordnance mount comprising a pedestal, a top-carriage, a pivot vertically dependent therefrom, a ball thrust bearing, a ring concentric with said pivot, Belleville springs between said ring and the upper race of said ball bearing, screws operating in said ring upon the Belleville springs to adjust the compression thereof, and a sectional collar between said ring and a shoulder of the pivot to transmit the load to the bearing, said sectional collar being removable whereby access may readily be had to the ball bearing.

3. A pivoting ordnance mount for high angles of elevation comprising a pedestal, a top-carriage, a pivot vertically dependent from said top-carriage and having a shoulder formed thereon, a ball thrust bearing, a ring concentric with said pivot, a plurality of Belleville springs between said bearing and ring, screws coöperating with said ring to regulate the compression of said springs, a sectional collar between said ring and said shoulder on the pivot, a gun having trunnions near its center of gravity, bearings for said trunnions in the top-carriage located rearwardly of the axis of said pivot, and a counterweight on the forward part of said top-carriage whereby the center of gravity of gun and top-carriage is brought to coincide with the axis of the pivot.

1,190,188. GREASE-CUP. THOMAS OPIE ORGAN, Philadelphia, Pa. Filed Nov. 4, 1915. Serial No. 59,540. (Cl. 184—65.)



1. A grease cup having a shank thereon, said shank having means whereby to secure the cup in position, and a tubular retarder fitted in the said shank and independent of said securing means, said retarder having a bore smaller than the outlet of the said shank.

2. A grease cup having a shank thereon, said shank having means whereby to secure the cup in position, and a tubular retarder removably fitting the shank of the cup and formed with a bore smaller than the outlet of the said shank, said retarder being independent of the said securing means.

3. A grease cup having a tubular retarder fitted in the shank thereof, the retarder having a bore smaller than the outlet of the said shank, the upper end of the retarder having a depression flaring from the bore of said retarder to correspond with the taper of the body of the cup.

4. A grease cup having an inturned annular flange at the lower end defining the outlet of the shank and a tubular retarder in said shank, said retarder having a bore smaller than the outlet of the shank.

5. A grease cup having an inturned annular flange at the lower end defining the outlet of the shank, the shank being formed with a lower portion of reduced diameter presenting an interior shoulder above said flange, and a tubular retarder in said shank, the retarder having a bore smaller than the outlet of the shank and having a reduced lower portion presenting a shoulder conforming to the shoulder on the shank.

[Claims 6 and 7 not printed in the Gazette.]

1,190,189. ELECTRIC SWITCH. GEORGE B. PILKINGTON, Waterbury, Conn., assignor to Waterbury Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 9, 1915. Serial No. 49,688. (Cl. 173—346.)



1. In an electric switch, an insulating base spaced relatively stationary contacts on said base, a relatively movable contact pivoted on said base and adapted to bridge the stationary contacts, a switch-operating lever pivoted on the base and having a driving engagement with the movable switch member in the oscillating movement of said lever in a forward direction, a spring normally returning the lever in the opposite direction, a shell inclosing said switch parts and provided with a slot receiving the projecting end of the switch-operating lever, a finger-hold on the exposed end of said lever outside the shell and a complementary relatively stationary finger-hold on the outside of the shell at a point adjacent the end of the forward stroke of the lever whereby said switch is operable both to open and to close the circuit by a pinching engagement of the thumb and forefinger with said relatively spaced finger-holds.

2. In an electric switch, an insulating base, spaced relatively stationary contacts on said base, a relatively movable contact pivoted on the base and adapted to bridge the stationary contacts, a switch operating lever pivoted on the base and having driving engagement with the movable switch member in the oscillating movement of said lever in a forward direction, a shell inclosing said switch parts provided with a laterally extending slot receiving the projecting end of the lever and limiting the oscillating movement of said lever, this slot having an entrance portion cut thereinto from the edge of the shell to admit the lever into the lateral portion of the slot, a spring acting to return the lever toward the rearward end of this guide slot, a finger hold on the projecting end of the lever outside the shell and a complementary finger hold secured to the shell adjacent the forward end of the guide slot.

3. In an electric switch, an insulating base, relatively stationary contacts supported on said base, a relatively movable contact pivoted on the base and adapted to connect the relatively stationary contacts, a ratchet plate connected to said relatively movable contact and provided with notches therein, a switch operating lever having a driving engagement with said ratchet plate in the movement of said lever in one direction, a spring for returning said switch operating lever and a holding spring engaging the notches in the ratchet plate to hold the relatively movable switch member in the position to which it is advanced by the switch operating lever.

4. In an electric switch, an insulating base, a contact member secured on said base and provided with a plurality of spaced upwardly projected contact portions, a second contact member secured on the base and provided with a plurality of spaced upwardly projected contact portions disposed opposite the contact portions of the first contact member, a movable contact mounted on the base and adapted to bridge the oppositely disposed contact portions of the two contact members and means for intermittently rotating said movable contact member to carry the same into engagement with the oppositely disposed contact portions or with the spaces between said contact portions.

5. In an electric switch, an insulating base, a contact ring secured on said base and provided with upstanding contact portions at different points in the length thereof, a second contact ring secured on the base inside the first contact ring and provided with upstanding contact portions disposed diametrically opposite the contact portions of the first contact ring, a movable contact member journaled on the base, concentric to said contact ring, a lever pivoted on the base concentric to the movable contact member and pawl and ratchet connection between said lever and the movable contact member.

[Claims 6 to 9 not printed in the Gazette.]

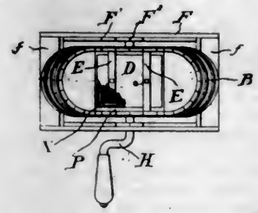
1,190,190. CARBON-CONTACT HOLDER. CHARLES M. PROCTOR, Detroit, Mich., assignor to Security Trust Company, Detroit, Mich., receiver of P. R. Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 16, 1914. Serial No. 824,908. (Cl. 175—282.)



1. In combination with an armature spring, a clip member fulcrumed in spaced relation to one face thereof, a carbon button interposed between said armature spring and said clip member, and engaging partially through an aperture in said clip member, and a screw member operatively correlating said armature spring and the other end of the clip member from that engaged by said carbon button, whereby the button is held in position on said armature spring with the desired degree of pressure.

2. In combination with an armature spring, an apertured clip member fulcrumed thereon, a carbon button resting upon said armature spring and engaging through the apertured portion of the clip member, and an adjusting screw engaging the free end of the clip member and the armature spring, whereby that portion of the clip member engaging the carbon button may be forced toward or away from the armature spring, thereby anchoring in position or releasing the button accordingly.

1,190,191. CHURN. LEWIS L. RANDALL, Ottumwa, Iowa. Filed Aug. 18, 1911. Serial No. 644,895. (Cl. 259—89.)



1. In a churn, a frame, a receptacle comprising two semi-cylindrical end members and a substantially straight central member, a removable cover positioned at one end of said receptacle and means for completely revolving said receptacle end for end with reference to said frame.

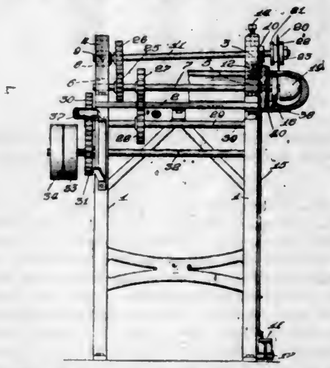
2. In a churn, a frame, a substantially elliptical receptacle mounted for rotative movement thereon, a plurality of dashers retained in fixed relation to said receptacle, a plurality of other dashers, capable of movement with reference to said receptacle, and means for revolving said receptacle on said frame.

3. In a churn, a frame, a receptacle comprising two semi-cylindrical end members having tapering staves, a central member having substantially straight rectangular staves, means for retaining said staves in an operative position, a removable dasher mounted in the central member, a removable cover mounted between the semi-cylindrical end members, and means for revolving said receptacle end for end upon the frame.

4. In a churn, a frame, a receptacle comprising two cylindrical end members having tapering staves, a central member having substantially straight rectangular staves, metallic strips positioned between said staves, means for retaining the staves in an operative position, a removable dasher mounted within the central member, a removable cover for said central member, said cover having resilient retaining means adapted to engage the central member, and means for revolving the receptacle end for end upon said frame.

5. In a churn, a frame, a substantially elliptical receptacle having a straight central member, a removable cover for said central member, a removable dasher mounted within said central member, said dasher comprising a series of fixed members and a series of movable members, said fixed and movable members being connected by a central rod, a stay for connecting said fixed dashers and for limiting the movement of the movable dashers, and means for revolving said receptacle end for end upon the frame.

1,190,192. CUTTING OR SLITTING MACHINE. HUGO REICHEL, Chicago, Ill. Filed June 23, 1913. Serial No. 775,326. (Cl. 164—61.)



1. In a device of the kind described, a pair of cutting members adapted to coöperate as a shear and means for normally maintaining one of said members out of operative position, in combination with means at each of said members adapted to coöperate to feed the material to the cutters, and means for manually maintaining said first mentioned member and its feeding means in operative position.

2. In a device of the kind described, a pair of cutting members adapted to coöperate as a shear, means for normally maintaining one of said cutters out of operative position and mechanism for manually controlling the distance between said cutters, in combination with means upon said members adapted to coöperate to feed the material to the cutters, and means for directing said material during the cutting operation.

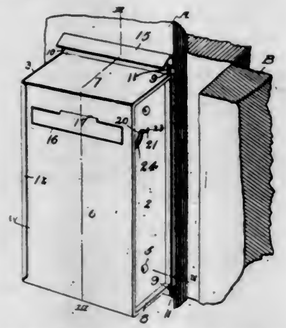
3. In a device of the kind described, a pair of cutting members adapted to coöperate as a shear, one of which is laterally movable, means for yieldingly holding said laterally movable cutter out of cutting position in combination with means at each cutter adapted to coöperate to feed the material to the cutters and mechanism for manually maintaining said laterally movable cutter and its feeding means in operative position.

4. In a device of the kind described, a pair of circular rotary cutting members adapted to coöperate as a shear, one of which is laterally movable, resilient means for normally maintaining said laterally movable member out of cutting position, in combination with means for manually controlling the distance between said cutters and means upon said members adapted to coöperate to feed the material to the cutters.

5. In a device of the kind described, a pair of circular rotary cutting members adapted to coöperate as a shear, one of which is laterally movable, means for normally maintaining said laterally movable member out of cutting position and means for manually controlling the distance between said cutters, in combination with means mounted

concentrically with and rigidly attached to said members adapted to coöperate only when said cutters are in operative position to feed the material to the cutters.

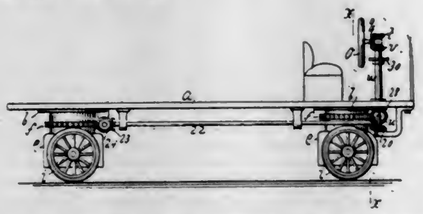
1,190,193. MAIL-RECEPTACLE. JOHN H. REESE, Washington, D. C. Filed July 25, 1910. Serial No. 573,614. (Cl. 232—22.)



1. A receptacle for mail matter adapted to be applied to a door casing and to be closed by the door, comprising an attached section and a removable section united by interrupted sliding joints, the removable section being provided with a continuous flange folded upon itself but having portions of the folded part removed, and the other section having a broken or interrupted edge, the separate portions of the said edge engaging with the folded over portions of the flange of the first mentioned section while that portion of the said flange from which the folded over part has been removed closes the space between the interrupted portions of the edge of the said second section.

2. A receptacle for mail matter and the like adapted to be applied to a door casing, having one side left open to be closed by the door, the receptacle comprising an attached section having a back and one end, the upper and lower edges of the back being interrupted and a removable section having a front wall, a top and a bottom, the edges of the top and bottom respectively being provided each with a continuous flange folded upon itself but having portions of the folded part removed, the removable section being united with the attached section by the interengagement of the said interrupted edges and folded flanges, and the said flanges operating to close and conceal the spaces between the interrupted portions of the edges of the said attached section.

1,190,194. MOTOR-VEHICLE. EDWARD G. SCHLEICHER, Stamford, Conn. Filed Apr. 12, 1915. Serial No. 20,693. (Cl. 21—90.)



1. In a motor vehicle the combination with a steering wheel means, of gears for actuating the means, a steering wheel connected to the gears, means for shifting the steering wheel to convert the rotary movement of one of the gears into planetary movement and change the rotation of the gears.

2. In a motor vehicle the combination with a steering wheel means, of gears including a planetary gear for actuating the means, a steering wheel mounted on the planetary gear, means for shifting the steering wheel to convert the rotary movement of the latter gear into planetary movement and change the rotation of the other gears.

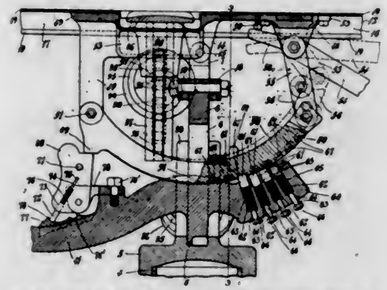
3. In a motor vehicle the combination with a forward and rear wheel steering means, of gears including a planetary gear for actuating the means, a steering wheel connected to the gears, means for shifting the steering wheel to convert the rotary movement of one of the gears into planetary movement and change the rotation of the gears.

4. In a motor vehicle the combination with a steering post having a sleeve mounted thereon, of gears carried by the sleeve and the post, a planetary gear to engage the gears, and a steering wheel mounted on the planetary gear to operate the post and sleeve, and means for moving the steering wheel to convert rotary into planetary movement of the planetary gear and change the rotation of the gears.

5. In a motor vehicle the combination with a steering post having a sleeve mounted thereon, of gears carried by the sleeve and the post, a planetary gear to engage the gears, and a steering wheel mounted on the planetary gear to operate the post and sleeve, and means for swinging the steering wheel to convert rotary into planetary movement of the planetary gear and change the rotation of the gears.

[Claims 6 to 15 not printed in the Gazette.]

1,190,195. OPERATING-TABLE. MAX SCHMIDT, Cincinnati, Ohio. Filed Sept. 14, 1915. Serial No. 50,565. (Cl. 45—50.)



1. In an operating table, a top, a segment with a hinged connection to the top for tilting the top in one direction, a radially inwardly extending arm on said segment, and a pedestal to which said arm on the segment is pivoted for supporting the segment and top for tilting in another direction.

2. In an operating table, a top, lateral trunnions on said top, a transverse segment with ends hingedly connected to said trunnions, supporting the top for longitudinal tilting, a radially inwardly extending arm on said segment, secondary supporting means to which said arm on the segment is pivoted for supporting the segment and top for lateral tilting, a leg-extension hinged to one end of said top, a brace-arm on said segment, and a brace pivoted on said leg-extension, and adjustably engaging with said brace-arm, causing automatic adjustment of said leg-extension relative to the top upon longitudinal tilting of the top.

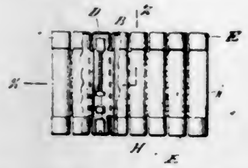
3. In an operating table, a top, supporting means with a hinged connection to the top for tilting the top, a clamp member having one end pivoted on said top at one side of said hinged connection, said supporting means having a contact surface substantially concentric with said hinged connection, a toggle connection from said top to the other end of said clamp member at the other side of said hinged connection, and means for operating said toggle connection to clamp said clamp member against said contact surface to hold said top on said direct supporting means in different tilted positions.

4. In an operating table, a top, a segment with a hinged connection to said top, supporting the top for tilting, a sector having one end pivoted on said top at one side of said hinged connection, said segment having a contact surface substantially concentric with said hinged connection, a toggle connection from said top to the other end of said sector at the other side of said hinged connection, and means for operating said toggle connection to clamp said sector against said contact surface to hold said top on said segment in different tilted positions.

5. In an operating table, lateral trunnions on said top, a transverse segment with ends hingedly connected to said trunnions, supporting the top for longitudinal tilting, a sector having one end pivoted on said top longitudinally away from said trunnions in one direction, said segment having a contact surface substantially concentric with said trunnions, a toggle connection from said top to the other end of said sector longitudinally away from said trunnions in opposite direction, and means for operating said toggle connection to clamp said sector against said contact surface and hold said top on said segment in different longitudinally tilted positions.

[Claims 6 to 13 not printed in the Gazette.]

1,190,196. RECEPTACLE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J., and HENRY P. KRAFT, New York, N. Y. Filed June 28, 1912. Serial No. 706,403. (Cl. 220—14.)



1. A multiple receptacle for small articles formed of stiff sheet material bent to form a plurality of independent compartments with a web of the sheet material joining one compartment to another, each of said compartments having an open end, and said receptacle having a separate closure for the open end of each compartment, said closures constituting a means for holding each of said compartments together at their ends.

2. A sheet metal receptacle having its sides corrugated providing a plurality of article-holding recesses and having slits formed in one end of said sides between said recesses, and caps for closing each of said recesses adapted to enter said slits and to receive opposite corrugations.

3. A receptacle formed of a pair of plates corrugated longitudinally, forming a plurality of article-holding recesses between opposite corrugations, each of said plates having slits at the ends between said corrugations, caps for closing each end of each recess adapted to enter the said slits and to receive the ends of the opposite corrugations and hold the plates together and to close the recesses.

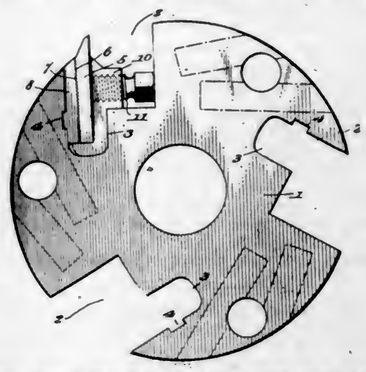
4. A receptacle having a plurality of integrally connected article holding compartments, and a cap for each compartment fitting over the outside wall thereof.

5. A receptacle having a plurality of integrally connected article holding compartments, said receptacle being weakened between each compartment, and a cap for each compartment fitting over the outside wall thereof.

[Claims 6 to 8 not printed in the Gazette.]

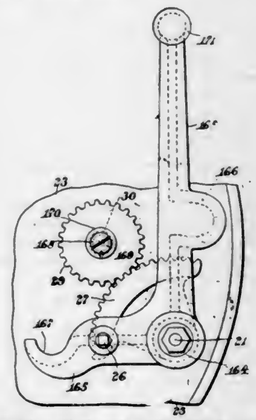
1,190,197. ROTARY CUTTER-HEAD. ELMER S. SHIMER, Milton, Pa., assignor to Samuel J. Shimer & Sons, Milton, Pa., a Corporation of Pennsylvania. Filed July 27, 1915. Serial No. 42,184. (Cl. 144—230.)

The combination of a cutter head having a recessed periphery, the recess having a transverse groove on one side wall thereof, a bit, a bit holder, comprising two sections which embrace the bit between them, one section having a longitudinal rib on one side adapted to fit the groove in the wall of the recess and one end of the other section of the bit holder substantially filling the space between the inner end of the recess and the inner end of



the other section and a screw which turns in a threaded hole in one section and is adapted to be backed up against a wall of the recess, whereby the cutter is rigidly held by the parts of the bit holder and the walls of the recess.

1,190,198. MANUAL DRIVING MECHANISM FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Original application filed Feb. 17, 1915, Serial No. 9,465. Divided and this application filed Mar. 27, 1915. Serial No. 17,942. (Cl. 74—27.)



1. In a machine of the class described, the combination of an operating shaft; a pinion thereon; a gear segment meshing therewith; a stop member in axial alinement with said shaft; and a handle secured to said segment and adapted to impart oscillating movement thereto provided with shoulders adapted to engage said stop member to limit the movement of said handle in either direction.

2. In a machine of the class described, the combination of an operating shaft; a pinion thereon; a gear segment meshing therewith; a stop member in axial alinement with said shaft; and a handle secured to said segment and adapted to impart oscillating movement thereto provided with recessed shoulders adapted to engage said stop member to limit the movement of said handle in either direction.

3. In a machine of the class described, the combination of an operating shaft; a pinion thereon provided with a

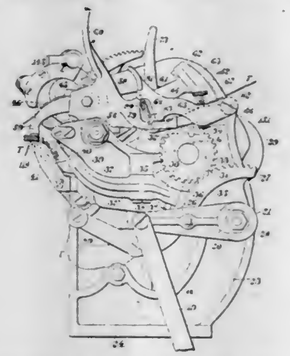
stop member; a gear segment meshing with said pinion; and a lever secured to said segment and having means coacting with said stop member for limiting the movement of said lever in opposite directions.

4. In a machine of the class described, the combination of an operating shaft; a pinion thereon provided with a stop member having a cushioned surface; a gear segment meshing with said pinion; and a lever secured to said segment and having means coacting with said stop member for limiting the movement of said lever in opposite directions.

5. In a machine of the class described, the combination of an operating shaft; a pinion thereon; a gear segment meshing therewith; a stop member in axial alinement with said shaft; and a handle secured to said segment and adapted to impart oscillating movement thereto provided with shoulders adapted to engage said stop member to limit the movement of said handle in either direction.

[Claims 6 to 8 not printed in the Gazette.]

1,190,199. PRESSER-FOOT MECHANISM FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Original application filed Feb. 17, 1915, Serial No. 9,465. Divided and this application filed Mar. 27, 1915. Serial No. 17,943. (Cl. 112—20.)



1. In a machine of the class described, the combination of a stitch forming mechanism; a member for actuating said mechanism adapted to be oscillated during the formation of each stitch; means for oscillating said member; a work support; a presser foot mechanism; and a cam on said oscillating member for actuating said presser foot mechanism.

2. In a machine of the class described, the combination of an oscillating member; means for oscillating said member; a cam on said member; a work support; a presser foot provided with a rearward extension having ratchet teeth; a pivoted pawl engaging said teeth and controlled by said cam; and means pivoted to said presser foot extension for moving said pawl about its pivot.

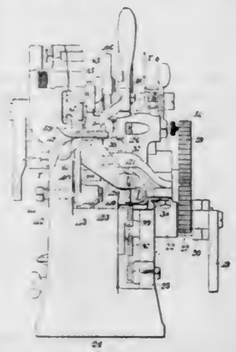
3. In a machine of the class described, the combination of an oscillating member; means for oscillating said member; a cam on said member; a work support; a presser foot provided with a rearward extension having ratchet teeth; a lever pivoted thereto and controlled by said cam; a pawl pivoted to the free end thereof; resilient means for retaining said pawl in engagement with said teeth; and means for disengaging said pawl.

4. In a machine of the class described, the combination of an oscillating member; means for oscillating said member; a cam on said member; a work support; a presser foot provided with a rearward extension having ratchet teeth; a lever pivoted thereto and controlled by said cam; a pawl pivoted to the free end of said lever; resilient means for retaining said pawl in engagement with said teeth; and automatic means for disengaging said pawl at a predetermined time.

5. In a machine of the class described, the combination of a work support; a presser foot provided with a rearward extension having ratchet teeth; a cam controlled lever pivoted thereto; a pawl pivoted to the free end of said lever and having an arm provided with a cam engaging projection; resilient means for retaining said pawl in engagement with said teeth; and means for disengaging said pawl.

[Claims 6 to 21 not printed in the Gazette.]

1,190,200. THREAD-BENDER FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Original application filed Feb. 17, 1915, Serial No. 9,465. Divided and this application filed May 13, 1915. Serial No. 28,496. (Cl. 112—20.)



1. In a machine of the class described, the combination of an oscillating needle carrier; a barbed needle therein; a work support provided with a slot through which the thread extends from the work to the source of supply; an oscillating member having two separated fingers adapted to engage the thread on opposite sides thereof and then oscillate about its axis and bend the portion of thread between said fingers into a horizontal position; and means for advancing said oscillating member to cause the horizontal portion of thread to contact with the needle while the latter is near its lowest position whereby the thread will be seized by the needle barb during its upward movement.

2. In a device of the class described, the combination of an oscillating needle carrier; a barbed needle therein; a work support provided with a slot through which the thread extends from the work to the source of supply; and an oscillating member provided with two fingers parallel with the axis about which said member oscillates, said fingers being adapted to straddle the thread and during the oscillation of said member bend a portion of said thread horizontally in position to be seized by the barb of the needle during its upward movement.

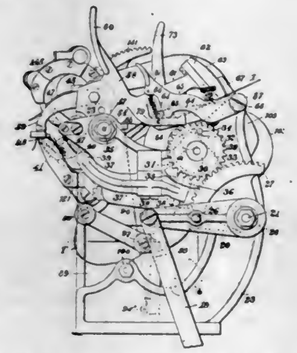
3. In a device of the class described, the combination of an oscillating needle carrier; a barbed needle therein; a work support provided with a slot through which the thread extends to the source of supply; an oscillating forked member beneath the work support provided with two fingers parallel with the axis about which said member oscillates, said fingers being adapted to straddle the thread and during the oscillation of said member bend a portion of said thread into position to be seized by the barb of the needle during its upward movement; and means for subsequently advancing said member toward the needle.

4. In a device of the class described, the combination of an oscillating needle carrier; a barbed needle therein; a work support provided with a slot through which the thread extends to the source of supply; an oscillating forked member beneath the work support adapted to straddle the thread and bend a portion thereof into position to be seized by the barb of the needle during its upward movement; and means carried by the needle carrier for effecting the oscillation of said forked member at a predetermined time.

5. In a device of the class described, the combination of an oscillating needle carrier; a barbed needle therein; a work support provided with a slot through which the thread extends to the source of supply; a forked member adapted to straddle the thread and having a cylindrical shank in a bearing; an arm secured to the opposite end of the shank; and means on said needle carrier for engaging said arm and causing said forked member to bend said thread horizontally in the path of the barb of the needle in its upward movement.

[Claims 6 to 18 not printed in the Gazette.]

1,190,201. WORK-FEEDING MECHANISM FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Original application filed Feb. 17, 1915, Serial No. 9,465. Divided and this application filed May 13, 1915. Serial No. 28,497. (Cl. 112—20.)



1. In a machine of the class described, the combination of a stitch forming mechanism; an oscillating member for actuating said mechanism; means for oscillating said member; a cam on and oscillating with said member; and a work feeding device independent of but operable by said cam.

2. In a machine of the class described, the combination of a stitch forming mechanism; a member adapted to move alternately in opposite directions and actuate said mechanism; means for imparting motion thereto; a cam on and oscillating with said member; and a work feeding device independent of but operable by said cam.

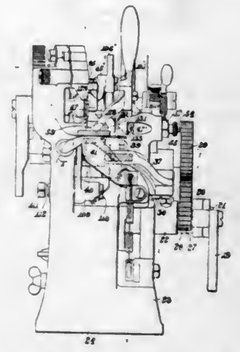
3. In a machine of the class described, the combination of a stitch forming mechanism; a member adapted to move alternately in opposite directions and actuate said mechanism; means for imparting motion thereto; a face cam on and oscillating with said member; a work feeding device independent of but operable by said cam; and yielding means for retaining said work feeding device in contact with said cam.

4. In a machine of the class described, the combination of a stitch forming mechanism; an oscillating member for actuating said mechanism; a work feeding device; a member loosely mounted on said oscillating member and adapted to oscillate therewith during a portion of its movement; and means for actuating said work feeding device by said loosely mounted member.

5. In a machine of the class described, the combination of a stitch forming mechanism; an oscillating member for actuating said mechanism; a work feeding device; a member for actuating said device; and means actuated by said oscillating member for oscillating said work-feeding-device-actuating member having provision for effecting a standstill thereof at the end of the oscillatory movement in either direction of said oscillating member.

[Claims 6 to 10 not printed in the Gazette.]

1,190,202. NEEDLE-GUIDE FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Co., Lynn, Mass., a Corporation of Massachusetts. Original application filed Feb. 17, 1915, Serial No. 9,465. Divided and this application filed Aug. 4, 1915. Serial No. 43,898. (Cl. 112—29.)



1. In a device of the class described, the combination of a fixed stud; a needle carrier thereon provided with a lateral hub; a needle carried thereby; an awl carrier pivoted to said needle carrier; an awl carried thereby; a spring for normally separating said carriers; a needle guide on said hub; a stop to limit the movement of said guide; a projecting blade secured to the needle carrier; a spring normally retaining said guide in contact with said blade; a stop to limit the movement of said guide during the downward movement of the needle; and means for moving said awl carrier toward said needle carrier.

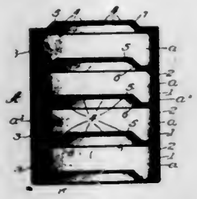
2. In a device of the class described, the combination of a needle carrier; a blade thereon projecting forwardly beyond the front face thereof; a needle guide movable about the axis of said needle carrier; a torsional spring surrounding the needle guide hub for retaining said guide normally in contact with the upper edge of said projecting member and moving it therewith a limited distance; and a stop for limiting the downward movement of said guide prior to the completion of the forward movement of said needle carrier.

3. In a machine of the class described, the combination of a needle carrier; an oscillating member; means for oscillating said member; means for actuating said needle carrier by the oscillatory movement of said oscillating member; a blade secured to said needle carrier and projecting forwardly beyond the front face thereof; a needle guide loosely mounted on the hub of said needle carrier; a torsional spring surrounding the needle guide hub for normally retaining said guide in contact with the upper edge of said blade and moving it therewith a limited distance; and means stopping the movement of said guide prior to the completion of the forward movement of said carrier.

1,190,203. BOX. ADOLPH SORGE, Jr., St. Joseph, Mich. Filed Feb. 19, 1912. Serial No. 678,739. (Cl. 206—65.)

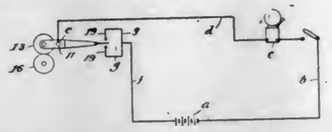
A box comprising a plurality of separate units detachably connected to form a unitary structure, said units being arranged in series with corresponding sides of succeeding units overlaid and covered by preceding adjacent units, whereby the covered sides of succeeding units will be uncovered and exposed by detaching the preceding adjacent

unit, each of said units forming a complete box in itself capable of being utilized independently when detached, and said unit boxes being provided on one of their sides with struck up or raised portions and with corresponding depressions in their opposite sides adapted to receive the



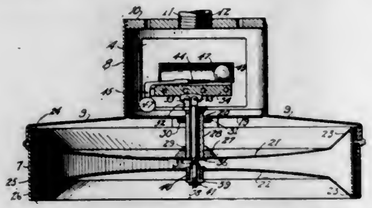
raised portion of another box unit, the sides of said raised portions and of said depressions being correspondingly tapered and one thereof being perforated inside of its tapered sides, substantially as described.

1,190,204. MEANS FOR DETECTING IMPERFECTIONS IN MOTION-PICTURE FILMS. ROBERT T. ST. JAMES, Great Barrington, Mass. Filed Nov. 6, 1914. Serial No. 870,677. (Cl. 242—57.)



In a device of the class described, a pair of oscillatory arms each having resilient fingers forming a contact, a pivot common to said arms for supporting the same, film engaging rollers journaled upon said arms, contact points arranged opposite each other and having the resilient fingers playing between the same, a normally open electric circuit connected with the contact points and with the arms and closed upon the engagement of the resilient fingers with either of said contact points arranged opposite each other, and means acting upon the arms to hold the same in positive engagement with the film, and effective on a break in the film or an imperfection therein, the said arms being formed with duplex bearings for the pivot.

1,190,205. THERMOSTAT. IMLE E. STOREY, Los Angeles, Cal. Filed Mar. 3, 1914. Serial No. 822,123. (Cl. 200—31.)



1. In a thermostat, a tilting member having a plurality of electrical contact members affixed thereon, a gravity operated contact member carried by said tilting member, an expansible and a contractible element connected to the tilting member for actuating the same, and means to prevent the operation of the tilting member except on a sudden increase of temperature.

2. A thermostat, comprising a concavo-convex thermostatic disk formed of a sensitive heat conducting material, a support for said disk formed of a less sensitive heat-conducting material thermically insulated from said disk to prevent the rapid absorption of heat by the supporting member, said support engaging said disk to prevent a sudden lateral expansion thereof.

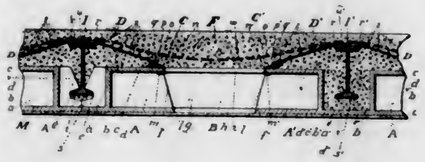
3. A thermostat, comprising a concavo-convex thermostatic disk formed of sensitive seat-conducting material, a support for said disk formed of a less sensitive heat-conducting material thermically insulated from said disk to prevent the rapid absorption of heat by the supporting member, and means operable by the sudden expansion of said disk for actuating a signal.

4. A thermostat, comprising a concavo-convex expansible and contractible disk formed of sensitive heat-conducting material, a ring of less sensitive heat-conducting material supporting and engaging said disk and thermically insulated therefrom to prevent the rapid absorption of heat by the said ring, a tilting member connected to said disk adapted to be actuated thereby, and a gravity operated device on said tilting member adapted to be shifted by the movement of said member on expansion of said disk.

5. A thermostat, comprising a concavo-convex expansible and contractible disk formed of a sensitive heat-conducting material, a ring formed of a less sensitive heat-conducting material and supporting and engaging said disk and thermically insulated therefrom to prevent the rapid conduction of heat from the disk to the ring, a tilting member connected to said disk and adapted to be actuated thereby, a gravity operated device on said tilting member adapted to be shifted by the movement of said member on expansion of the disk, and means for preventing excessive movement of the gravity operated member when the thermostat is subjected to sudden jar.

[Claims 6 to 8 not printed in the Gazette.]

1,190,206. FIREPROOF FLOOR. EDWIN R. STORM, New York, N. Y. Filed Feb. 23, 1911. Serial No. 610,360. (Cl. 72—66.)



1. In a concrete floor system, a bearing beam; arch-blocks having vertical sustaining walls perpendicular to, and adapted to engage with the bearing beam; and retaining walls between the sustaining walls adapted to form a mold for the concrete that is to surround the tension portion of the beam.

2. In a concrete floor system, a bearing beam; arch-blocks having vertical sustaining walls perpendicular to, and adapted to engage with, the bearing beam; retaining walls between the sustaining walls adapted to form a mold for the concrete at the bottom of the beam; retaining walls between the sustaining walls adapted to form a mold for the floor; a concrete filling on the retaining walls for the beam and the floor; and a reinforcing rod connected to the beam and to the forward end of the arch-block, and adapted to unite with and strengthen the concrete.

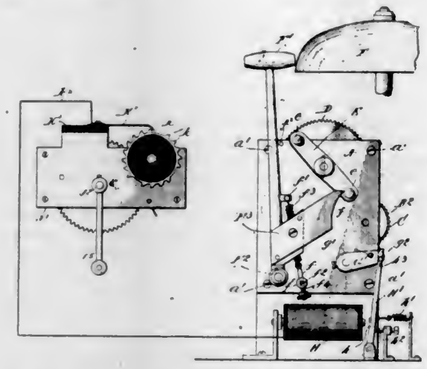
3. In a floor system having a concrete filling, a series of bearing beams; arch-blocks having vertical sustaining walls perpendicular to, and adapted to engage one end with a bearing beam; retaining walls between the sustaining walls adapted to form a mold for the concrete surrounding the tension portion of the beam; retaining walls between the sustaining walls adapted to become part of a mold for the concrete forming the floor; reinforcing rods connected to the beams and to the forward ends of each block, and adapted to unite with and strengthen the concrete; filling-pieces having sustaining walls adapted to bear against the sustaining walls of the said arch-block; and retaining walls between the sustaining walls of the said filling-pieces adapted to complete the mold for the concrete filling forming the floor.

4. In a fireproof floor construction having a concrete filling, a bearing beam; arch-blocks having vertical sustaining walls perpendicular to and adapted to engage with the bearing beam; retaining walls between the sustaining walls adapted to form a mold for the concrete surrounding the tension portion of the beam; a member adapted to fit against and engage with the forward end of an arch-block; and a reinforcing rod connected to the member and to the beam.

5. Arch-blocks, for a fireproof construction having concrete filling and beams, consisting of vertical sustaining walls having notched ends; bottom walls between and formed integrally with the sustaining walls, portions of which are adapted to form part of a mold for the concrete surrounding the tension portion of the beam; vertical retaining walls between and formed integrally with the sustaining walls adapted to act in conjunction with the said bottom walls to form part of a mold for the concrete surrounding the tension portion of the beam; and top walls between and formed integrally with the sustaining walls, adapted to form part of a mold for the concrete at the top of and between the beams.

[Claims 6 to 9 not printed in the Gazette.]

1,190,207. BELL-SOUNDING MECHANISM. FREDERICK WILLIAMS, Somerville, Mass., assignor to Acme Register Company, Somerville, Mass., a Corporation of Massachusetts. Filed May 10, 1913. Serial No. 766,712. (Cl. 177—288.)



1. In a device of the kind described, the combination with a constantly running motor shaft, of a clutch one member of which is permanently connected to said shaft to be constantly operated thereby and the other or second member of which is loose on said shaft, a bell, a striker, comprising a hammer and pivoted arm by which said hammer is carried, connections between said clutch and said pivoted arm whereby the said hammer may be moved away from said bell, a returning spring to cause the said hammer to strike said bell when said arm is released, and means, operable from a distance, whereby said clutch members may be engaged with said connections for causing said hammer to sound said bell when desired.

2. In a device of the kind described, the combination with a constantly running motor shaft, of a clutch one member of which is permanently connected to said shaft to be constantly operated thereby and the other or second member of which is loose on said shaft, a bell, a striker, comprising a hammer and a pivoted arm by which said hammer is carried, connections between said clutch and said pivoted arm whereby the said hammer may be moved away from said bell, a returning spring to cause the said hammer to strike said bell when said arm is released, means to restrain said second clutch member from rotation, and means, operable from a distance, whereby said restraining means will be rendered inactive so as to release said second clutch member and thus permit said striker to sound said bell.

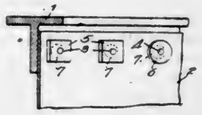
3. In a device of the kind described, the combination with a constantly running motor shaft, of a clutch one member of which is permanently connected to said shaft to be constantly operated thereby and the other or second member of which is loose on said shaft, a bell, a striker comprising a hammer and a pivoted arm by which said hammer is carried, connections between said clutch and said pivoted arm whereby the said hammer may be moved away from said bell, said connections comprising rotating pins and a cam piece or part on said pivoted arm to be engaged by and released from said pins, a returning spring to cause the said hammer to strike said bell when said arm is released, means to restrain said second clutch member from rotation, and means, operable from a distance, whereby said restraining means will be rendered inactive so as to release said second clutch member and thus permit said striker to sound said bell.

4. In a device of the kind described, a constantly-moving shaft a clutch member mounted thereon to rotate therewith, a gear loosely mounted on said shaft in frictional contact with said clutch member, a second clutch member loosely mounted on said shaft and also in contact with said gear, means for holding said gear stationary, and means for releasing said gear, in combination with a striker operated by said gear whereby upon the rotation of said gear said striker will be operated.

5. In a device of the kind described, in combination, a striker, a cam piece carried thereby, a rotatable member adapted to engage said cam piece and operate said striker, and means for operating said rotatable member comprising a constantly-rotating shaft, and a clutch, one member of which is operated constantly by said shaft and the other clutch member of which is connected to said rotatable member, and means for intermittently allowing the engagement of said clutch members.

[Claims 6 to 8 not printed in the Gazette.]

1,190,208. METHOD OF MAKING WELDS WITH PIECES OF COATED METAL AND PRODUCT THEREOF. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed Sept. 8, 1913. Serial No. 788,642. (Cl. 219—10.)



1. The method of uniting a thin galvanized iron sheet to another metal member which consists in overlapping said sheet upon said member, placing a metal block upon the overlapping portion of the sheet, driving off the sheet's coating under a relatively small central portion only of said block and integrally uniting said portion with the denuded portion of the sheet and the corresponding portion of said member, by means of welding heat.

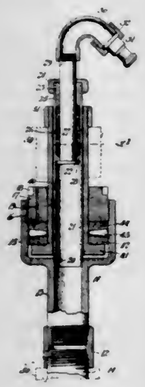
2. The method of securing a thin sheet of galvanized iron to another metal member, which consists in placing a portion of said sheet between said member and a metal block, driving off the sheet's coating under a small central portion only of the block and integrally uniting said portion with the corresponding portions of the sheet and member, by welding heat; whereby the block serves like a rivet head to hold a portion of the sheet unaffected by heat.

3. The method of securing a galvanized iron sheet to another iron member, which consists in placing the sheet between said member and a metal block, spot welding the sheet, member and block at a point materially distant from all margins of the block, to hold the marginal portions of the block closely upon portions of the sheet surrounding

the welding point leaving the exposed portion of the coating uninjured by the welding.

4. The combination with an iron member, of a galvanized iron sheet placed thereon, and a metal block superposed upon the sheet and integrally united, by a relatively small central spot weld, with said sheet and member and pressing around its margin upon a portion of the sheet having its coating uninjured by the welding; whereby the destruction of that portion of the sheet immediately surrounding the welding point would leave the sheet still securely held.

1,190,209. SWIVEL. VICTOR YORK, Los Angeles, Cal. Filed Dec. 27, 1915. Serial No. 68,928. (Cl. 255—25.)

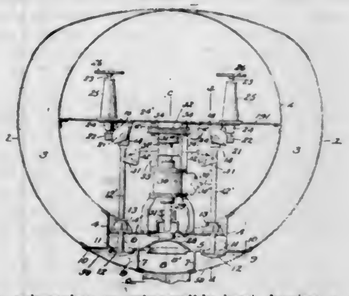


1. In a swivel for use with a string of drill pipe, a stationary sleeve of approximately the same diameter as the drill pipe, a stationary sleeve collar secured to the upper end of said stationary sleeve, a roller casing, means for securing said roller casing to the drill pipe, friction reducing means for supporting said roller casing on the lower end of said stationary sleeve, a mud sleeve secured in said roller casing and projecting upwardly through said stationary sleeve, a mud pipe projecting downwardly inside said mud sleeve, and means for packing said mud pipe so as to make a rotatable tight joint with said mud sleeve.

2. In a swivel for use with a string of drill pipe, a stationary sleeve of approximately the same diameter as the drill pipe, a stationary sleeve collar secured to the upper end of said stationary sleeve, a roller casing, means for securing said roller casing to the drill pipe, a roller bearing flange formed on the lower end of said stationary sleeve, a friction reducing means supported on said flange, means for supporting said roller casing on said friction reducing means, a mud sleeve secured in said roller casing and projecting upwardly through said stationary sleeve, a mud pipe projecting downwardly inside said mud sleeve, and means for packing said mud pipe so as to make a rotatable tight joint with said mud sleeve.

3. In a swivel for use with a string of drill pipe, a stationary sleeve of approximately the same diameter as the drill pipe, a stationary sleeve collar secured to the upper end of said stationary sleeve, a roller casing, means for securing said roller casing to the drill pipe, a roller bearing flange formed on the lower end of said stationary sleeve, a friction reducing means supported on said flange, a casing nut secured in said casing resting upon and supported by said friction reducing means, a mud sleeve secured in said roller casing and projecting upwardly through said stationary sleeve, a mud pipe projecting downwardly inside said mud sleeve, and means for packing said mud pipe so as to make a rotatable tight joint with said mud sleeve.

1,190,210. SUBMARINE BOAT. JOSEPH BARRAJA-FRAUENFELDER, Bridgeport, Conn., assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn., a Corporation of Maine. Filed Dec. 15, 1914. Serial No. 877,409. (Cl. 114—16.)



1. A submarine or submersible boat, having a tank to contain water-ballast, a manifold arranged in and communicating with said tank and with the water of flotation, outwardly opening valves controlling the admission of sea-water to said manifold, and an inwardly opening valve controlling the communication between said manifold and said tank.

2. A submarine or submersible boat, having a tank to contain water-ballast, a manifold arranged in said tank and communicating therewith through a single opening and with the water of flotation through two openings, the combined area of said latter openings being substantially equal to that of the opening leading to the said tank, an inwardly opening valve controlling the admission of water to said ballast-tank, and outwardly opening sea-valves controlling the admission of water to the manifold.

3. A submarine boat, having a tank to contain water-ballast, a manifold arranged in and communicating with said tank through a single opening and with the water of flotation through two openings, a power operated inwardly opening valve controlling the opening leading to the tank, and outwardly opening, hand operated valves controlling the admission of sea-water to the manifold.

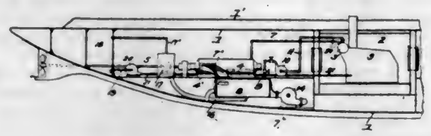
4. A submarine or submersible boat, having a tank to contain water-ballast, a manifold arranged in said tank and having a horizontal partition providing a chamber, a duct below said partition opening into the tank, valve controlled openings formed in said horizontal partition and opening to the water of flotation, a valve controlled opening formed in said partition and opening into the duct, and means for operating said valves.

5. A submarine or submersible boat, having a tank to contain water-ballast, a manifold arranged in said tank and having two compartments which are in open communication with the water of flotation, and a channel or duct in open communication with said tank, outwardly opening sea-valves controlling the admission of sea-water to said manifold, and a single inwardly opening valve controlling the admission of water to said tank through said manifold, and independent means for operating said valves.

[Claims 6 to 12 not printed in the Gazette.]

1,190,211. MOTIVE POWER FOR SUBMARINE BOATS. JOSEPH BARRAJA-FRAUENFELDER, Bridgeport, Conn., assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn., a Corporation of Maine. Filed Apr. 29, 1915. Serial No. 24,792. (Cl. 121—122.)

1. In a submarine boat, a steam generating plant, a motor connected with said plant, and a condenser independently connected with said steam generating plant and with the exhaust of said motor, a valve for closing communication between said generating plant and said condenser, and means interposed between said generating plant and condenser for drawing the steam and hot water from said generating plant into said condenser when said valve is opened, to rapidly reduce the temperature of the generating plant, said condenser thereby serving as a cooler for the steam and hot water drawn from the generating plant and as a condenser for condensing the exhaust steam from the motor, substantially as and for the purpose specified.



2. In a submarine boat, a steam generating plant, a turbine motor piped to said steam generating plant, a propeller geared to said motor, a condenser independently piped to said steam generating plant, means for drawing the water from the generating plant into said condenser, a pump for forcing external water through said condenser, and means for supplying said steam generating plant with fresh water.

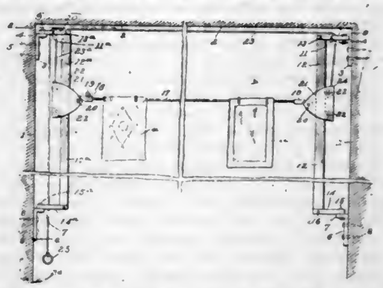
3. In a submarine boat, a steam generating plant located therein, turbine motors piped to said steam generating plant and operatively geared with the propellers of the boat, a condenser independently connected to said steam generating plant and to said turbine motors, means for drawing the water from the generating plant into said condenser, means for causing a circulation of external water through said condenser for the purpose specified, a source of fresh water supply piped to said steam generating plant, and a pump for forcing water into said steam generating plant.

4. In a submarine boat, a steam generating plant located therein, turbine motors piped to said steam generating plant and operatively connected with the propellers of the boat, a condenser independently piped to said steam generating plant, means for withdrawing hot water from said steam generating plant and for spraying it into said condenser, means for forcing external cooling water through said condenser, said condenser serving as a cooler for the hot water from the generating plant, means for withdrawing the cooled water from said condenser, and means for passing the cool water drawn from the condenser back to the said steam generating plant.

5. In combination with a submarine boat having a steam generating plant arranged therein, a turbine motor piped to said steam generating plant, and a propeller geared to said turbine motor, of a combined condenser and cooler independently piped to said steam generating plant and to said motor, means for circulating external water through said condenser, means for withdrawing the hot water from said steam generating plant and forcing it into said condenser and cooler, a combined feed and filtering tank arranged within the boat, means for conducting the cooled water from said condenser and cooler and forcing it into said tank, and means for conducting the cooled water from said tank back to said steam generating plant.

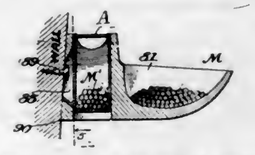
1,190,212. ADJUSTABLE LINE-SUPPORT. ROBERT B. BARRÈRE, Penn Grove, Cal. Filed Feb. 27, 1915. Serial No. 11,045. (Cl. 254—144.)

In a device of the character described comprising two pairs of upper and lower brackets secured to a base, a pair of pulley supports pivotally connected to the upper bracket of each pair, a pulley journaled in one of said pulley supports, a pair of oppositely disposed pulleys journaled in the other pulley support, a pair of vertical bars secured to the pulley supports, a pair of plates secured to the lower ends of the vertical bars and pivotally connected to said lower brackets, one of said plates provided with an aperture therein and in vertical alinement with the pair of oppositely disposed pulleys, a pair of carriers slidably mounted on said vertical bars, a clothes line connecting said carriers, a rope connected to one of said carriers and passing over one of said oppositely disposed pulleys and down through the aperture of the plate, a second rope secured to the other carrier and passing over the pulley in one of said pulley supports and over



one of the oppositely disposed pulleys and connected to said first mentioned rope to raise and lower the carriers simultaneously.

1,190,213. MATCH-SAFE. JOSEPH BECKER, Washington, D. C. Continuation of application Serial No. 532,640, filed Dec. 11, 1909. This application filed Dec. 24, 1910. Serial No. 599,070. (Cl. 206—30.)



1. As an article of manufacture, a match safe for safety matches having a substantially rectangular chamber with its side and end walls vertical, and open at the top to receive and hold the scratch sheath of a safety match box so that one of the scratch faces of such sheath shall be held exposed in horizontal position parallel to the open end of such chamber, the length and width of such chamber being each just sufficiently large to admit the scratch sheath in such horizontal position and the depth of such chamber being substantially equal to the distance between the opposite scratch faces of the said scratch sheath in order that the scratch face that is exposed to be rubbed on shall be directly held against longitudinal displacement by forces reacting substantially in its own plane.

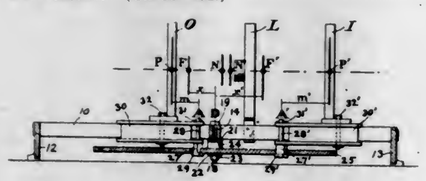
2. As an article of manufacture, a match safe for safety matches having a chamber adapted to receive and hold the scratch sheath of a safety match box with one of its scratch faces exposed in horizontal position as a stopper to such chamber; the length and width of the rectangular chamber inlet thus obturated corresponding respectively to the length and width of such scratch face; and the depth of such chamber being approximately equal to the distance between the opposite scratch faces of the sheath; one end wall of such chamber being provided with a passage leading into the inside of the scratch sheath.

3. As an article of manufacture, a match safe for safety matches having a chamber adapted to receive and hold the scratch sheath of a safety match box with one of its scratch faces exposed in horizontal position as a stopper to such chamber; the length and width of the rectangular chamber inlet thus obturated corresponding respectively to the length and width of such scratch face; and the depth of such chamber being approximately equal to the distance between the opposite scratch faces of the sheath; one end wall of such chamber being provided with a passage leading into the inside of the scratch sheath; and the opposite end wall being provided with a similar passage situated at the same level as the first to avoid chimney effect or draft.

4. As an article of manufacture, a combined wall and table match safe for safety matches comprising a chamber adapted to receive and hold the scratch sheath of a safety match box with one of its scratch faces exposed in horizontal position as a stopper to such chamber, the length and width of the chamber opening so obturated corresponding respectively to the length and width of such scratch face and the depth of such chamber being approximately equal to the distance between the opposite scratch faces of the sheath; one end wall of such chamber being provided with a passage leading into the inside of the scratch sheath held in such chamber; and the opposite end wall being provided with a similar passage situated at the same level as the first; such safe being further provided with a chamber specially adapted to receive and hold live matches; the said scratch sheath and live match receiving chambers being of equal length and arranged adjacent to each other to constitute a table safe; the rear substantially vertical face of the safe being provided with an inwardly and downwardly flared opening adapted to engage the enlarged head of a fastener driven into a wall to firmly draw the safe against such wall by wedging action and hold the scratch face of an inserted sheath as closely as possible to the point of support so that the "table safe" may be used equally well as a "wall safe."

5. As an article of manufacture, a safe for holding matches and the like, having one side face adapted to bear against a wall, said side face being provided with an inwardly and downwardly flared opening adapted to engage the enlarged end of a nail or other fastener driven into the said wall to wedge itself in between the head of such fastener and the wall without engaging the reduced or shank part of such fastener whereby one single and almost wholly driven fastener of any desired size is adapted to prevent any sluing of the safe on the wall.

1,190,214. AUTOMATIC-FOCUSING CAMERA. JOSEPH BECKER, Washington, D. C. Filed Nov. 7, 1911. Serial No. 659,021. (Cl. 88—24.)



1. A copying or enlarging camera comprising a support for an object plane, a support for a lens, and a support for an image receiving plane, and automatic focusing mechanism of the radial cam type with connections to the said three supports for relatively moving two of such supports with relation to the third and having two of such connections made freely adjustable in the direction parallel to the slideway in the camera bed, to secure desired changes in the longitudinal dimensions of such connections; also a transverse adjustment to adapt the device for use with different lenses.

2. The combination with an automatic copying or enlarging camera having a rectangular cam focusing gear; of means for adjusting its end frame pintles with relation to their respective conjugate planes in planes parallel to the slideway of the camera; and means for adjusting the lens pivot in a plane perpendicular to the slideway of the camera.

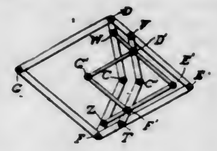
3. A copying or enlarging camera comprising: a support for the object; a support for the lens and a support for the image receiving surface, such three supports being virtually: a support for the object plane P; a support for the focal planes F, F' and a support for the image plane P'; such camera having the supports of its left focal planes F and P connected by a radial cam pivoted to F at a distance x from F and acting on a point A mounted in fixed relation to plane P at a distance m, equal to x, from P; said same camera also having the supports of its right hand focal planes F' and P' similarly connected by a radial cam pivoted to F' at a distance x' therefrom and acting on a point A' mounted in fixed relation to P' at a distance m', equal x', from P': the distance of the cam pivots from the paths of their respectively controlled points A and A' being such as to form a constant product equal to the square of the focal length of the lens; and means to oblige the two radial cams to turn equally in perpendicular relation.

4. A copying or enlarging camera comprising: a support for the object, a support for the lens and a support for the image receiving surface, such three supports being virtually: a support for the object plane P; a support for the focal planes F, F' and a support for the image plane P'; such camera having the supports of its left focal planes F and P connected by a radial cam pivoted to F at a distance x from F and acting on a point A mounted in fixed relation to plane P at the distance m, equal to x, from P; said same camera also having the supports of its right hand focal planes F' and P' similarly connected by a radial cam pivoted to F' at a distance x' therefrom and acting on a point A' mounted in fixed relation to P' at the distance m', equal x' from P'; the distance of the cam pivots from the paths of their respectively controlled points A and A' being such as to form a constant product equal to the square of the focal length of the lens; and means to oblige the two radial cams to turn equally in perpendicular relation, said means consisting in an articulated parallelogram.

5. The combination with a copying or enlarging camera having rectangular cam focusing gear of the type having the end frame connecting axes A, A' offset in different planes parallel to the slideway of the camera; of a second rectangular cam having its pivot symmetrically disposed with relation to the pivot of the first mentioned cam and adapted to act directly on the same said axes A, A'.

[Claim 6 not printed in the Gazette.]

1,190,215. LINKAGE. JOSEPH BECKER, Washington, D. C. Original application filed June 17, 1913, Serial No. 774,220. Divided and this application filed Mar. 13, 1915. Serial No. 14,178. (Cl. 74—14.)

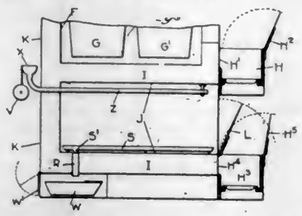


1. A constant product linkage comprising a large Peaucellier cell and a similar smaller Peaucellier cell, and connections to keep their corresponding angles equal.

2. A linkage adapted to determine constant product space elements between three terminals guided to move in the same straight path, such linkage comprising a link with one end pivoted to the first terminal, a longer link with one end pivoted to the third terminal and a straight lever having one end fulcrumed on the second terminal, said lever having its longer lever arm connected with the longer of the said two links and its shorter lever arm connected with the shorter of the said two links.

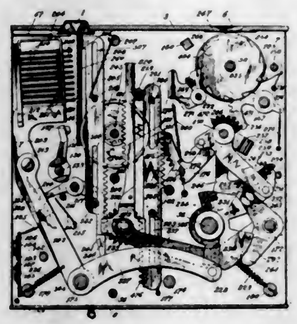
3. A linkage adapted to determine constant product space elements between three terminals guided to move in the same straight path, such linkage comprising a link with one end pivoted to the first terminal, a longer link with one end pivoted to the third terminal and a straight lever having one end fulcrumed to the second terminal, said lever having its longer lever arm connected with the longer of the said two links and its shorter lever arm connected with the shorter of the said two links; said two links and said two lever arms being of such lengths as to form a link ratio that is equal to the corresponding lever arm ratio.

1,190,216. MILITARY OR CAMP KITCHEN. EDWIN BURCH BLOXHAM and WILLIAM OWEN, London, England, assignors to themselves and William Green & Company (Ecclesfield) Limited. Filed Feb. 11, 1916. Serial No. 77,739. (Cl. 126—276.)



A portable cooking stove comprising a casing containing an oven chamber, a superposed cooking chamber thereabove, and a heating flue therebetween, superposed fire boxes outside the casing for heating both chambers, the upper fire box communicating with said flue, and a hinged cooking top for each fire box.

1,190,217. TIME-RECORDER. JAMES W. BRYCE, Brooklyn, N. Y., assignor to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed June 3, 1908. Serial No. 436,444. (Cl. 234—33.5.)



1. In a time recorder the combination of time recording mechanism adapted to be set and to give an imprint or time record and an impulse mechanism for transmitting power to set the time recording mechanism in accordance with time and to operate the recording mechanism to cause it to record such time, the impulse mechanism being adapted to be flexible or yielding at that part of its operation which sets the time recording mechanism and to be rigid in that part of its operation in which it operates the recording mechanism to cause it to make a record.

2. In a time recorder the combination of time recording mechanism, operating means for setting it in accordance with time and for causing it to make a record, and connections between the two for transmitting power from the operating means to set the recording mechanism in accordance with time and to operate it to cause it to make a record, adapted at one part of the operation to furnish a yielding or flexible connection to set the recording mechanism and at another part of the operation to furnish a rigid connection during the recording operation.

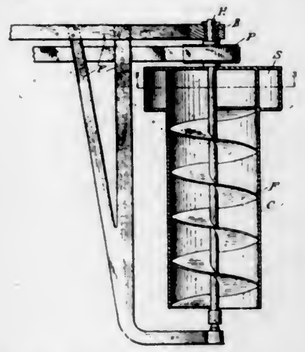
3. In a time recorder the combination of operating means, recording mechanism and connections between the two for transmitting power from the operating means to the recording mechanism adapted in the earlier part of the operation to furnish a yielding or flexible connection to set the recording mechanism in position to record and at a later part to furnish a rigid connection to actuate the recording mechanism to make a record.

4. In a time recorder the combination of time recording mechanism, operating means for setting it in accordance with time and for operating it to cause it to make a record, connections between the two for transmitting power from the operating means to the recording mechanism containing a flexible or yielding portion and a rigid portion, and means for making operative the flexible or yielding portion of the connections in that part of the operation in which the time recording mechanism is set in accordance with time and for making operative the rigid portion in that part of the operation in which the recording is done.

5. In a time recorder the combination of operating means, recording mechanism, connections between the two for transmitting power from the operating means to the recording mechanism containing a flexible or yielding portion and a rigid portion, and means for making operative the flexible or yielding portion of the connections at one part of the operation to set the recording mechanism in position to record and for making operative the rigid portion at a later part of the operation to actuate the recording mechanism to make a record.

[Claims 6 to 99 not printed in the Gazette.]

1,190,218. PUMPING-MACHINE. BYRON ELIJAH CAGLE and MATTHEW LINCOLN CAGLE, Mountainair, N. Mex. Filed Aug. 17, 1915. Serial No. 46,008. (Cl. 103—43.)



A rotary pump comprising a cylinder closed at one end and open at the other end to provide a fluid inlet and having adjacent its closed end a peripheral port, a casing having a discharge port and rigidly connected to said cylinder adjacent its closed end and forming therewith an annular conduit which surrounds and is of less axial extent than said cylinder, and communicates at one end with said peripheral port and at its other end with said discharge port, a helical blade rigidly connected to said cylinder, and means for rotating said parts, whereby fluid is impelled through said cylinder and discharged centrifugally through said discharge port.

1,190,219. LAMP. LEE S. CHADWICK, East Cleveland, Ohio, assignor to The Cleveland Foundry Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 19, 1915. Serial No. 22,243. (Cl. 67—21.)

1. A lamp of the character set forth comprising a reservoir, means for supporting a wick with a portion of the wick within and a portion without the reservoir, the latter portion being adapted to be lighted, and a wax carrying element that reposes with one end within the reservoir and adapted to be inverted and supported by a part of the lamp with its wax laden end in juxtaposition to the portion of the wick that is to be lighted.

2. A lamp of the character set forth comprising a reservoir, means for supporting a wick with a portion of the

wick within and a portion without the reservoir, the latter portion being adapted to be lighted, and a reversible element having a wax carrying section at each end and adapted to be supported with one end in the reservoir and the other in juxtaposition to the portion of the wick that is to be lighted.



3. A lamp of the character set forth comprising a reservoir, a holder for supporting a wick with a portion of the wick within and a portion without the reservoir, the latter portion being adapted to be lighted, said wick holder having a longitudinal guideway, and a wax carrying element that is slidable within the guideway of the holder and movable from a position within the reservoir to a position adjacent the portion of the wick that is to be lighted.

4. A lamp of the character set forth comprising a reservoir, a holder for supporting a wick with a portion of the wick within and a portion without the reservoir, the latter portion being arranged to be lighted, said holder having a longitudinal guideway, a wax carrying element that is slidable within the guideway of the holder and movable from a position within the reservoir to a position adjacent the portion of the wick that is to be lighted, and means for delivering a quantity of wax from the wax carrying element into operative relation to the last mentioned portion of the wick upon the withdrawal of the element from the guideway of the wick holder.

5. A lamp of the character set forth comprising a reservoir, means for supporting a wick with a portion of the wick within and a portion without the reservoir, the latter portion being adapted to be lighted, a wax carrying element having a portion normally reposing within the reservoir and removable therefrom, and means for delivering a quantity of wax from the wax carrying element into operative relation to the last mentioned portion of the wick by the withdrawal of the element from the reservoir.

[Claims 6 to 17 not printed in the Gazette.]

1,190,220. HOG-GREASER. OLIVER H. CLOYD, Peoria, Ill. Filed July 6, 1914. Serial No. 849,354. (Cl. 119—157.)

1. In a device of the character described, the combination with a nozzle having a discharge opening in one of its walls, of a member below the nozzle and uprising to the latter and provided with a recess to receive it, said recess being open at the front and at the top, its rear wall adapted to overlie the opening of the nozzle, the upper surface of its bottom or lower wall being inclined downwardly in opposite directions toward the middle, the member having a rubbing surface below the recess to receive fluid from the same.

2. In a device of the character described, the combination with a nozzle having a discharge opening in one of its walls, of a member below the nozzle and uprising to the latter and provided with a recess to receive it, said recess being open at the front and at the top, its rear wall adapted to overlie the opening of the nozzle, the upper surface of its bottom or lower wall being inclined downwardly in opposite directions toward the middle, the member having a rubbing surface below the recess to receive the fluid from the same, and a part beneath and connecting the lower wall of the recess with the said surface for conducting the fluid from the said recess thereto.



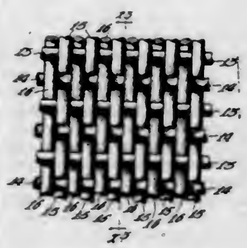
3. In a device of the character described, the combination with a nozzle having a discharge opening on one of its walls, of a member below the nozzle and uprising to the latter and provided with a recess to receive it, said recess being open at the front and at the top, its rear wall adapted to overlie the opening of the nozzle, the upper surface of its bottom or lower wall being inclined downwardly in opposite directions toward the middle, the member having a rubbing surface below the recess to receive the fluid from the same, and a part beneath and connecting the lower wall of the recess with the said surface for conducting the fluid from the said recess thereto, there being a groove in the said upper surface of the lower wall of the recess at the lowermost portion thereof through which the fluid passes to said part.

4. In a device of the character described, a nozzle having an opening for the discharge of a fluid, and a rubbing member including a part to overlie and close the opening and having a flange below said part underhanging the nozzle, said flange having an upper surface inclined downwardly toward the middle of its length beneath said nozzle to conduct the fluid upon the middle portion of said bar.

5. In a device of the character described, a nozzle having an opening for the discharge of a fluid, and a rubbing member including a part to overlie and close the opening and having a flange below said part underhanging the nozzle, said flange having an upper surface inclined downwardly toward the middle of its length beneath said nozzle to conduct the fluid upon the middle portion of said bar, and a portion beneath the flange at the juncture of the inclined surfaces to lead the fluid from the flange upon the bar.

[Claims 6 to 9 not printed in the Gazette.]

1,190,221. SACK. ALVIN A. DAUGHERTY, Los Angeles, Cal. Filed Nov. 30, 1914. Serial No. 874,921. (Cl. 150—1.)



1. An imperforate sack formed of fabric and metallic members woven into a cloth.

2. An imperforate sack formed of fabric and copper wire members woven into a cloth.

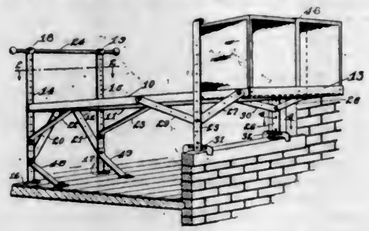
3. An imperforate sack formed of fabric and metallic members woven into a cloth, and having a coating of enamel or varnish applied thereto.

4. An imperforate sack formed of fabric and copper wire members woven into a cloth and having a coating of enamel or varnish applied thereto.

5. An imperforate sack formed of fabric and metallic members woven into a cloth, and having an internal and external coating of enamel applied thereto.

[Claim 6 not printed in the Gazette.]

1,190,222. ADJUSTABLE STEEL OUTSIDE WINDOW-BED. SALLIE L. DAVIS, Los Angeles, Cal. Filed Aug. 11, 1915. Serial No. 45,022. (Cl. 5—9.)

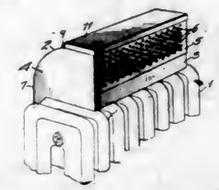


1. In an adjustable outside window bed, a frame comprised of side, foot and head rails detachably secured together; slats disposed on said frame; supporting legs detachably secured to said frame at the foot thereof; braces, one detachably secured to each of said feet and to the foot rail; angle braces, one detachably secured to each of said feet and its corresponding side rail; angle braces, one detachably secured to each leg and adapted to be secured to the floor; legs detachably secured to said side rails at points spaced from the head end of said frame; angle braces, one detachably secured to each of the last mentioned legs and to the corresponding side rails; angle braces, one secured to each of the last mentioned legs and to the corresponding side rail on the side of the leg opposite to the last mentioned angle braces; and sill foot pieces detachably secured to the legs at the head end of the bed, said foot pieces comprising bars slotted longitudinally and provided with laterally extending portions at one end adapted to engage the sides of the window sill for locking the bed to the window sill.

2. In an adjustable outside window bed, a frame comprised of side, foot and head rails detachably secured together; slats disposed on said frame; supporting legs detachably secured to said frame at the foot thereof; braces, one detachably secured to each of said feet and to the foot rail; angle braces, one detachably secured to each of said feet and its corresponding side rail; angle braces, one detachably secured to each leg and adapted to be secured to the floor; legs detachably secured to said side rails at points spaced from the head end of said frame; angle braces, one detachably secured to each of the last mentioned legs and to the corresponding side rails; angle braces, one secured to each of the last mentioned legs and to the corresponding side rail on the side of the leg opposite to the last mentioned angle braces; foot pieces detachably secured to the legs at the head end of the bed having fingers adapted to engage the sides of the window sill.

1,190,223. HUMIDIFIER. URIAH DAVIS, Park Ridge, Ill. Filed Aug. 5, 1915. Serial No. 43,788. (Cl. 98—44.)

1. In a device of the character described the combination with a tank adapted to contain liquid, of absorbent means projecting into and extending upwardly from said liquid, a ventilating casing for said means, said casing and tank forming a self-contained structure adapted to rest upon a radiator, and a pair of deflecting plates secured to said structure adapted to direct the hot air through said casing past different portions of said absorbent means.



2. In a device of the character described the combination with a tank adapted to contain liquid, of a plurality of parallel rows of absorbent means projecting into and extending upwardly from said liquid, a ventilated casing for said means, said casing and tank forming a self-contained structure adapted to rest upon a radiator, and a pair of deflecting plates secured to said structure adapted to direct the hot air through said casing past different portions of said absorbent means.

3. In a device of the character described the combination with a tank adapted to contain liquid, of a plurality of parallel rows of absorbent means projecting into and extending upwardly from said liquid, a ventilated casing for said means, said casing and tank forming a self-contained structure adapted to rest upon a radiator, and a deflector plate secured to said structure adapted to direct the hot air through said casing past said absorbent means, said deflecting plate extending unbroken up to said means and having a plurality of extending fingers extending between the said parallel rows.

4. In a device of the character described the combination with a tank adapted to contain liquid, of a plurality of parallel rows of absorbent means projecting into and extending upwardly from said liquid, a ventilated casing for said means, said casing and tank forming a self-contained structure adapted to rest upon a radiator, a deflector plate secured to said structure adapted to direct the hot air through said casing past said absorbent means, said deflecting plate extending unbroken up to said means and having a plurality of extending fingers extending between the said parallel rows, and a second deflector plate exteriorly of said first aforesaid deflector plate and terminating substantially at the top of said casing.

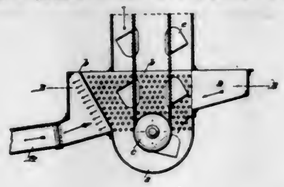
5. In a device of the character described the combination with a tank adapted to contain liquid, of a plurality of parallel rows of absorbent means projecting into and extending upwardly from said liquid, a ventilated casing for said means, said casing and tank forming a self-contained structure adapted to rest upon a radiator, a deflector plate secured to said structure adapted to direct the hot air through said casing past said absorbent means, said deflector plate extending unbroken up to said means and having a plurality of extending fingers extending between the said parallel rows, a second deflector plate exteriorly of said first aforesaid deflector plate and terminating substantially at the top of said casing, and a channel provided in said casing leading to said tank.

[Claims 6 and 7 not printed in the Gazette.]

1,190,224. APPARATUS FOR THE SEPARATION OF THE SAND AND WATER RAISED IN DREDGING GRAVEL. LEON DÉSIRÉ DROUARD and PAUL ARMAND DROUARD, Rouen, France. Filed Apr. 1, 1912, Serial No. 687,922. Renewed Feb. 11, 1916. Serial No. 77,807. (Cl. 83—56.)

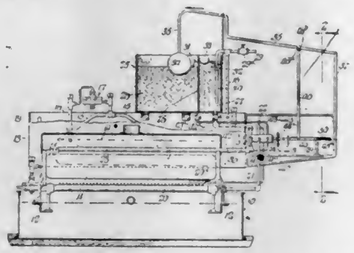
A separator of the character described, comprising a bowl which forms the bottom of the separator; a conveyer which passes down to the bottom of the bowl; screen-like vertically-disposed walls which rise from said bowl on three sides and form the walls of an inner foraminated compartment one side of which is open to permit the free ingress thereinto of the stream of dredged

sand from that side; an inlet conduit through which the dredged sand passes into the bowl; and an outlet conduit



through which is led off the stream of muddy water flowing through said walls from said inner compartment.

1,190,225. REFRIGERATING APPARATUS. MALCOLM F. EWEN, Chicago, Ill., assignor to Larsen Ice Machine Company (Inc.), Wilmington, Del., a Corporation of Delaware. Filed May 18, 1914. Serial No. 839,207. (Cl. 62—5.)

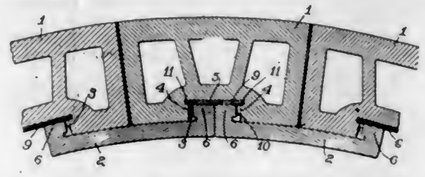


1. In a refrigerating apparatus, including a still and means for supplying cooling water to said still and means for heating said still in alternate cycles, means controlling the alternate application of heat and cooling water to said still, comprising a main controlling device, a tank, means for supplying a liquid to said tank, a float in said tank, and mechanism intermediate said float and said main controlling device adapted to shift said controlling device when the liquid in said tank reaches predetermined maximum and minimum levels in said tank.

2. In a refrigerating apparatus, including a still, a discharge pipe for supplying cooling water to said still and means for supplying a burner for heating said still in alternate cycles, a main controlling device adapted in one position to turn on said heating supply means and including a valve plug for controlling the flow of cooling water to cool said still, a tank containing two compartments, a smaller compartment and a larger compartment, means providing an overflow from the smaller compartment to the larger compartment at a predetermined level in the smaller compartment, an inlet pipe adapted to discharge cooling water into said smaller compartment, a float controlled valve in said inlet pipe adapted to close when the liquid in said smaller compartment rises to a predetermined level, a float in said larger compartment, a large conduit connecting said smaller compartment through said valve plug with said cooling water discharge pipe, a smaller conduit connecting said larger compartment through said main controlling valve to said cooling water discharge pipe, and means actuated by the float in the larger tank adapted for shifting said main controlling device at predetermined maximum and minimum levels of the water in said larger compartment.

1,190,226. BUILDING-BLOCK. WILLIAM C. FERGUSON, Champaign, Ill. Filed Mar. 18, 1915. Serial No. 15,232. (Cl. 72—51.)

1. A sewer pipe section comprising an outer block having a longitudinal groove, lining plates having longitudinal ribs along their edges, the ribs of two adjacent plates adapted to freely enter said groove, and pliable means for locking said ribs in said groove applied to said groove by said ribs.



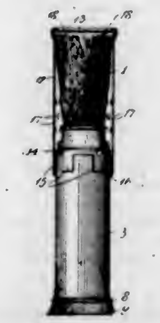
2. A method of locking the adjacent ribs of two lining plates into a sewer section block having a groove therein consisting in placing a pliable medium in the groove and deforming the same by pressure of the ribs into the groove until its deformation locks the ribs in the groove.

3. A sewer section comprising a block having a groove in one of its faces, lining plates having longitudinal edge ribs, the adjacent ribs of two plates adapted to freely enter said groove, and pliable means for locking said ribs to each other and into said groove said means being carried by said ribs and rendered effective by the seating of said ribs in said groove.

4. A sewer section comprising a block having a groove in one of its faces, lining plates having longitudinal edge ribs, the adjacent ribs of two plates adapted to freely enter said groove, and means for locking said ribs into said groove comprising finger carrying metallic members, said fingers adapted to be bent into locking position by the insertion of the ribs into said groove.

5. A sewer section comprising a block having a groove in one of its faces, lining plates having longitudinal edge ribs, the adjacent ribs of two plates adapted to freely enter said groove, and means for locking said ribs to each other and into said groove comprising finger carrying metallic members, certain of said fingers adapted to be bent over said ribs and certain others to be bent into locking position by the insertion of the ribs into said groove.

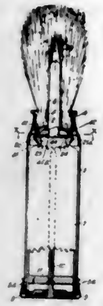
1,190,227. BRUSH. JOEL B. FESLER, New York, N. Y. Filed May 26, 1911, Serial No. 629,647. Renewed Jan. 2, 1915. Serial No. 252. (Cl. 15—38.)



1. A brush comprising in combination a handle, a bristle tuft secured thereto, and a cover arranged to slide over said handle, said handle provided with a guide and stop for said cover comprising a collar surrounding said handle and provided with projecting spring leaves arranged to act against the inner surface of said cover and thereby to guide same, said cover provided at its lower end with an inwardly projecting rib adapted to engage the end of one of said leaves, whereby upward motion of said cover is arrested.

2. A brush comprising a handle, a bristle-tuft secured thereto, and a cover arranged to slide over said handle, said cover provided in its sides with ventilation openings, said handle provided with cover-guiding means comprising spring leaves arranged to press outwardly against the inner surface of said cover, the said leaves being at their ends of greater breadth than the breadth of the ventilation openings in said cover, whereby engagement of said leaves with the said openings is obviated.

1,190,228. FOUNTAIN-BRUSH. JOEL BARLOW FESLER, New York, N. Y., assignor to Fesler Sales Company, New York, N. Y., a Corporation of Delaware. Filed July 9, 1915. Serial No. 38,909. (Cl. 15—50.)



1. A fountain shaving brush comprising in combination a handle, a bristle tuft insertible into and removable from one end of said handle, a reservoir located within said handle and having a top cap structurally separate from the main portion of the reservoir but secured thereto, and provided with means adapted to be engaged to prevent rotation of said reservoir with respect to said handle, said reservoir also having a feed tube extending into said bristle tuft, a piston within said reservoir and screw means for advancing said piston, and means secured to said handle and projecting inward and engaging said reservoir cap and arranged to prevent rotation thereof during the actuation of said screw means.

2. A fountain shaving brush comprising in combination a handle, a bristle tuft insertible into and removable from one end of said handle, and having a base portion, and a ferrule within and forming a part of the handle and provided with a spring leaf formed from the body of such ferrule and projecting inward and arranged to engage such base portion and by such engagement to hold the bristle tuft removably within the handle.

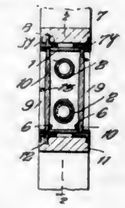
3. A fountain shaving brush comprising in combination a handle, a reservoir located within said handle and having a piston, and screw means for advancing said piston within said reservoir, said reservoir having a cap provided with projections, and said handle having means adapted to engage such projections and thereby to prevent rotation of the reservoir within the handle.

4. A fountain shaving brush comprising in combination a handle, a reservoir located within said handle and having a piston, and screw means for advancing said piston within said reservoir, said reservoir having a cap provided with circumferentially-incomplete grooves, said handle provided with means adapted to enter such grooves and by engagement with the ends thereof to prevent rotation of the reservoir within the handle.

5. A reservoir for fountain brushes and the like, comprising a container having at one end a discharge mouth, a feed tube having a base fitting over and engaging the outside of the mouth portion of the receptacle, and an end cap covering such base portion of the feed tube and centrally apertured for the passage of the tubular portion of the feed tube and embracing the mouth portion of said receptacle, said end cap provided with means adapted to be engaged by retaining means for preventing rotation of the receptacle.

[Claim 6 not printed in the Gazette.]

1,190,229. PLUMB OR LEVEL. DANIEL W. L. FRANK, Chicago, Ill., assignor, by mesne assignments, to George M. Engels, Chicago, Ill. Filed Mar. 25, 1915. Serial No. 16,942. (Cl. 33—211.)

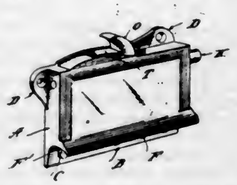


1. In a plumb or level, a support provided with a circular opening, a unit disposed within said circular opening, said unit comprising a central tube threaded at its ends, a threaded collar attached to said central tube at each end of the exterior of the tube, a lens at each end of said central tube, and means arranged to engage the collars for retaining said lenses in fixed position, said last-named means comprising rings threaded exteriorly to engage said threaded collars, said rings being rotatable so as to clamp said lenses against the ends of said central tube.

2. In a plumb or level, a support provided with a circular opening, a unit disposed within said circular opening, said unit comprising a central tube threaded at its ends, a threaded collar attached to said central tube at each end of the exterior of the tube, a lens at each end of said central tube, means arranged to engage the collars for retaining said lenses in fixed position, said last-named means comprising rings threaded exteriorly to engage said threaded collars, said rings being rotatable so as to clamp said lenses against the ends of said central tube, and means for securing said central tube to said collars for preventing rotation of the tube with respect to the collars.

3. In a plumb or level, a support provided with a circular opening, a unit disposed within said circular opening, said unit comprising a central tube threaded at its ends, a threaded collar attached to said central tube at each end of the exterior of the tube, a lens at each end of said central tube, means arranged to engage the collars for retaining said lenses in fixed position, said last-named means comprising rings threaded exteriorly to engage said threaded collars, said rings being rotatable so as to clamp said lenses against the ends of said central tube, means for securing said central tube to said collars for preventing rotation of the tube with respect to the collars, and means for securing one of said collars to said support.

1,190,230. SASH-FASTENER. ISRAEL M. GRIMM, Peoria, Ill. Filed June 24, 1914. Serial No. 847,105. (Cl. 16—119.)

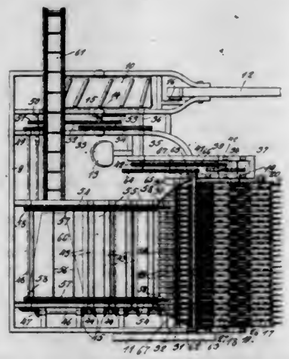


1. As an article of manufacture, a recessed body grooved exteriorly beneath its lower edge, a locking bolt slidably mounted in said body, a finger-piece operatively engaging the bolt and extending substantially perpendicular to the line of movement of said bolt and extending outward through the top wall of the body and pivoted at its inner end to said body inward from the said wall, the locking bolt lying between the described

top wall and the pivot of said finger-piece, that part of the wall through which the finger-piece extends being outwardly curved concentrically to the pivot of the latter, an extension carried by the finger-piece also curved concentrically to the pivot and adapted to overlie the opening in the wall through which the finger-piece extends and to close said opening in any position of said finger-piece, and a spring arranged to hold the bolt normally and elastically in its locking position and to hold the finger-piece elastically at one of its extreme positions.

2. As an article of manufacture, a hollow body closed at its outer or front side and having integral lugs extending from its opposite side, a member slidably mounted in said body, a spring holding the member in one of its extreme positions, a member pivoted at one end within the body and lying substantially perpendicular to the line of movement of the first member and operatively engaging it, the second described member extending through and outside of one of the walls of the body, there being a slot in said wall through which the said second member extends, the outer surface of said wall at said slot being curved concentrically to the pivot of the second member, and an extension on the latter overlying and conforming to the curve of the wall and covering the slot.

1,190,231. CORN-HARVESTER. LEE O. HALCOMB, Indianapolis, Ind. Filed Aug. 11, 1915. Serial No. 44,949. (Cl. 56—111.)



1. A corn harvester comprising a wheeled supporting frame, a transverse horizontal cylinder rotatably mounted at the front end of the supporting frame, ear-stripping fingers mounted on the cylinder, stationary husk-tearing hooks extending around the front and top portions of the cylinder and alternating with the stripping fingers, and means for rotating the cylinder.

2. A corn harvester comprising a wheeled supporting frame, a transverse horizontal cylinder rotatably mounted at the front end of the supporting frame, ear-stripping fingers mounted on the cylinder, stationary husk-tearing hooks extending around the front and top portions of the cylinder and alternating with the stripping fingers, and means for rotating the cylinder, the stripping fingers being curved in the direction of their travel, and the tearing hook being curved in the opposite direction.

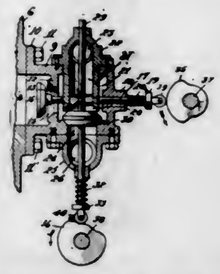
3. A corn harvester comprising a wheeled supporting frame, a transverse horizontal cylinder rotatably mounted at the front end of the supporting frame, ear-stripping fingers mounted on the cylinder, husk-tearing hooks, stationary supports for said hooks extending around the front, top and bottom of the cylinder, and extending rearward therefrom and fastened to the supporting frame, said supports being located between the stripping fingers to locate the tearing hooks alternately with respect to the stripping fingers, and means for rotating the cylinder.

4. A corn harvester comprising a wheeled supporting frame, a transverse horizontal cylinder rotatably mounted at the front end of the supporting frame, ear-stripping fingers mounted on the cylinder, stationary husk-tearing hooks mounted adjacent to the stripping fingers, and means for rotating the cylinder.

5. A corn harvester comprising a wheeled supporting frame, a transverse horizontal cylinder rotatably mounted at the front end of the supporting frame, ear-stripping fingers mounted on the cylinder, stationary husk-tearing hooks mounted adjacent to the stripping fingers, and means for rotating the cylinder, the stripping fingers being curved in the direction of their travel, and the tearing hooks being curved in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,190,232. VALVE MECHANISM FOR GAS-ENGINES. CARL H. HALLAUER, Los Angeles, Cal. Filed Sept. 23, 1914. Serial No. 863,165. (Cl. 123—79.)



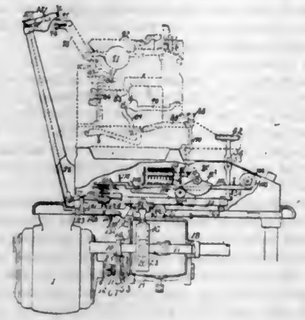
1. A valve mechanism for internal combustion engines, comprising a valve casing formed with a chamber and having an opening in the side thereof adapted to communicate with the interior of an engine cylinder, a valve controlling said opening, a double seating inlet and an outlet valve controlling oppositely disposed ports arranged at right angles to the before mentioned opening, means for positively operating the inlet and outlet valve whereby it will maintain one port closed and the other open, and means for operating the first named valve to open it simultaneously with the unseating of the inlet and outlet valve.

2. In a valve mechanism for internal combustion engines, a valve casing, an intake manifold connected to one side of said casing, an exhaust manifold connected to the opposite side thereof, a valve stem extending through the openings connecting the intake and exhaust manifolds to the valve casing, a double seating valve mounted on said valve stem adapted to alternately open and close the communication between the valve casing and the intake and exhaust manifolds, means for normally maintaining said valve closed to the exhaust manifold, a normally closed valve controlling an opening in said casing arranged at right angles to the openings communicating with the intake and exhaust manifolds, and means for positively actuating said valves.

1,190,233. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 11, 1911. Serial No. 607,925. (Cl. 235—62.)

1. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of means connected to a source of power for actuating said operator, said source of power wholly independent of said carriage, and means operated by the typewriter carriage in its motion for causing said actuating means to operate.

2. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of means connected to a source of power for actuating said operator, said source of power wholly independent of said carriage, and means operated by the typewriter carriage only when advancing from the units place, for causing said actuating means to operate.



3. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of a constantly rotating motor, and means dependent upon the letter-feeding movement of the typewriter carriage for connecting said motor to said operator to actuate the latter.

4. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of a constantly rotating motor, a normally broken train of mechanism extending from said motor to said operator to actuate the latter, and means dependent upon a movement of the typewriter carriage for restoring said train to effective condition.

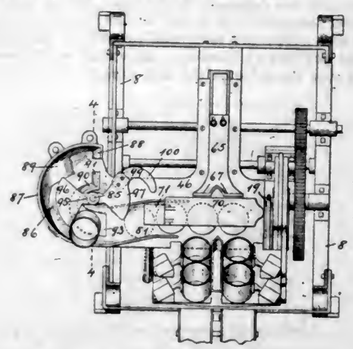
5. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of a motor, and means connected to the typewriting mechanism for enabling said motor to actuate said operator after the writing of a number in the units place.

[Claims 6 to 75 not printed in the Gazette.]

1,190,234. FEEDING MECHANISM FOR CAN-FILLING MACHINES. CHARLES H. AYARS, Salem, N. J., assignor to Ayars Machine Company, Salem, N. J., a Corporation of New Jersey. Filed Jan. 30, 1914. Serial No. 815,394. (Cl. 193—1.)

1. In a can-feeding and righting mechanism, the combination with a chute to feed empty cans on their sides, of a stationary table to receive and sustain the cans while on their sides; means sweeping through a circular path over the stationary table for rolling the cans over said table, and means for turning the cans on end as they are rolled over the table.

2. In a can-feeding and righting mechanism, the combination with a stationary support to receive empty cans on their sides, of rotary means movable over the support for rolling the cans over said support and means extending in a circular direction over the support for engaging an end of the rolling cans as they are rolled by the rotary means and turning the cans onto their ends.



3. In a can-feeding and righting mechanism the combination with a stationary support to receive empty cans on their sides, of rotary means movable over the stationary support for rolling the cans over the latter, and stationary inclined circular means extending in the direction of travel of the rolling cans to engage an end of the rolling cans and turn them onto their ends.

4. In a can-feeding and righting mechanism the combination with means to present empty cans on their sides, of a stationary can-support to receive the cans on their sides; rotary means traveling over the support to push and roll the cans over the support and stationary spaced apart inclined means extending in a curved direction on the stationary can support to engage the end and the circular wall of the rolling cans and turn them on one end.

5. In a can-feeding mechanism the combination with means to present empty cans on their sides, of a stationary horizontal can-support beneath the presenting means to receive the cans on their sides; stationary inclined curved means around the outer side of the stationary support; stationary inclined means on the support and spaced from the outer curved means,—both said inclined means to engage the cans on the support, and rotary means movable over the stationary support to roll the cans along the two inclined means.

[Claims 6 to 9 not printed in the Gazette.]

1,190,235. CAN-FEEDING MECHANISM. CHARLES H. AYARS, Salem, N. J., assignor to Ayars Machine Company, Salem, N. J., a Corporation of New Jersey. Filed Jan. 30, 1914. Serial No. 815,396. (Cl. 193—1.)

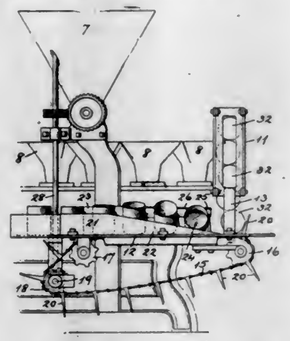
1. In a can-feeding and righting mechanism the combination with a chute, of a conveyer moving in a straight line from beneath the chute, said conveyer to receive empty cans on their sides; means for actuating the conveyer and means at one side and independent of the conveyer for righting the cans as they are advanced with the conveyer.

2. In a can-feeding and righting mechanism the combination with a flexible conveyer moving in a straight line to receive empty cans on their sides, of stationary means at one side and independent of the conveyer for raising one end of each can in succession and stationary means at the other side and independent of the conveyer for engaging the other end of each can while the first-named end is being raised.

3. In a can-feeding and righting mechanism the combination with a flexible straight conveyer to receive empty cans on their sides, of stationary means independent of and at one side of the flexible conveyer for engaging and

gradually raising one end of each can as it advances and stationary means also independent of and at the opposite side of the flexible conveyer for engaging the other end of each can while its first-named end is being raised.

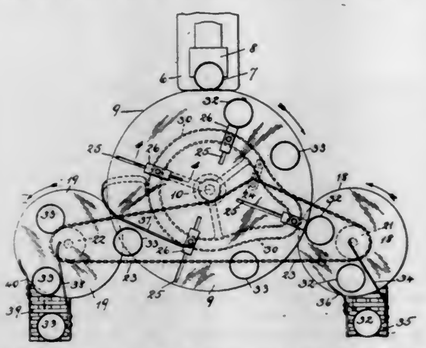
4. In a can-feeding and righting mechanism the combination with a horizontal table to receive empty cans on their sides, of a flexible conveyer extending longitudinally of the table and depressed with respect to the latter; can-engaging arms attached to and carried by the conveyer and projecting above the table and means for engaging and turning one end of each can uppermost as the cans are moved over the table by the said arms.



5. In a can-feeding and righting mechanism the combination with a horizontal table to receive empty cans on their sides, of a flexible conveyer extending longitudinally of the table and depressed with respect to the latter; can-engaging arms attached to and carried by the flexible conveyer and projecting above the table; an inclined guide wall extending longitudinally at one side of the conveyer for engaging and turning one end of the cans uppermost as they are moved longitudinally over the table, and means at the opposite side of the flexible conveyer for engaging the other ends of the cans.

[Claim 6 not printed in the Gazette.]

1,190,236. CAN-DELIVERING MACHINE. CHARLES H. AYARS, Salem, N. J., assignor to Ayars Machine Company, Salem, N. J., a Corporation of New Jersey. Filed Dec. 8, 1915. Serial No. 65,729. (Cl. 113—115.)



1. The combination with a rotating table on which cans may be placed and bodily carried, of a conveyer branching from the periphery of the said rotary table, and means for moving some of the cans from the periphery of the rotating table onto the said branch conveyer and allowing other cans to remain on the table and pass said branch conveyer.

2. The combination with a rotary table on which cans may be placed and bodily carried, of a plurality of conveyers extending radially from the periphery of the rotary table; means for moving some of the cans from the periphery of the rotary table onto one of the said radially-extending conveyers, and means for moving other of said cans from the periphery of the rotary table onto another of said radially-extending conveyers.

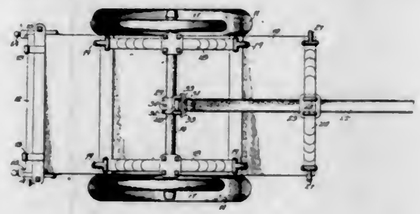
3. The combination with a rotary table to support and bodily carry cans, of means for feeding cans onto said rotary table; a plurality of conveyers extending radially from the periphery of the rotary table; means for moving some of the cans from the periphery of the rotary table onto one of said radially-extending conveyers and allowing other of said cans on the said rotary table to pass onto another radially-extending conveyer.

4. The combination with a rotary table to support and bodily carry cans, of means for feeding cans onto said rotary table; a plurality of conveyers extending away from the periphery of the rotary table; reciprocating means to move some of the cans across the periphery of the rotary table onto one of the said conveyers and means for moving other of said cans across the periphery of said rotary table onto another of said conveyers.

5. The combination with a circular disk to support and bodily carry cans, of means for revolving said disk; means for feeding cans onto the disk; two conveyers traveling away from the periphery of said disk; means for moving some of the cans across the periphery of the disk onto one of said traveling conveyers and means for moving others of said cans also across the periphery of the disk onto the other of said two conveyers.

[Claims 6 to 11 not printed in the Gazette.]

1,190,237. AUTOMOBILE-TRAILER. ADDI BENJAMIN CADMAN, Beloit, Wis., assignor to Warner Manufacturing Company, Beloit, Wis., a Corporation of Illinois. Filed Jan. 7, 1916. Serial No. 70,725. (Cl. 21—137.)



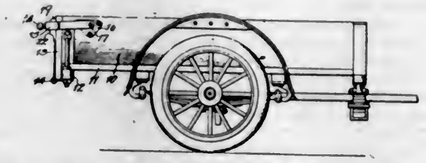
1. An automobile trailer having, in combination, a body, an axle provided with two supporting wheels, two springs extending longitudinally of the body and rigidly secured between their ends to said axle, the ends of said springs being connected to the body for supporting the latter, a third spring extending transversely beneath the forward end of the body and having its ends connected to the body, a tongue extending beneath the body, means connecting said tongue to the midportion of said third spring and allowing the tongue to rock on a horizontal axis, a bracket fixed to the rear end of said tongue, another bracket fixed to the central part of said axle, said brackets having abutting faces struck on an arc with said horizontal axis as a center, and bolt-and-nut means for rigidly clamping said brackets together in different adjusted positions, whereby the angular relation between the tongue and the body may be varied.

2. An automobile trailer having, in combination, an axle provided with two supporting wheels, a body supported between its ends on said axle, a tongue extending beneath the body, a pivotal connection between the tongue and the forward portion of the body permitting the tongue to rock on a horizontal axis, a bracket fixed to the rear end of the tongue, another bracket fixed to the axle, said brackets having abutting arcuate faces struck with said horizontal axis as a center, and means for rigidly securing the abutting faces of said brackets together in adjusted relations to vary the angle between the tongue and the body.

3. An automobile trailer having, in combination, an axle provided with two supporting wheels, a tongue extending centrally beneath the body, a pivotal connection between the tongue and the forward portion of the body permitting the tongue to rock on a horizontal axis, a bracket fixed to the rear end of the tongue and having its rearmost face of arcuate form, another bracket fixed to the axle and having its foremost face of arcuate form, said arcuate faces abutting and being concentric with said horizontal axis, and means for rigidly clamping the abutting arcuate faces of said brackets together in adjusted relation to vary the angle between the tongue and the body.

4. An automobile trailer having, in combination, a body, an axle provided with two supporting wheels, two springs extending longitudinally of the body and rigidly secured between their ends to said axle, the ends of said springs being connected to the body for supporting the latter, a third spring extending transversely beneath the forward portion of the body and having its ends connected to the body, and a tongue extending centrally beneath the body and secured at its rear end to said axle, the tongue being also secured to the mid-portion of said transverse spring, whereby the forward end of the body is supported by the tongue.

1,190,238. END-GATE LOCK. ADDI BENJAMIN CADMAN, Beloit, Wis., assignor to Warner Manufacturing Company, Beloit, Wis., a Corporation of Illinois. Filed Feb. 26, 1916. Serial No. 80,582. (Cl. 21—21.)

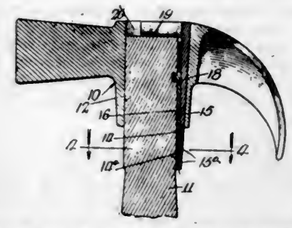


1. A vehicle having, in combination, a body having side walls, an end-gate hinged at its lower edge to the body, two members having outstanding ribs secured to the rear face of the end-gate near the upper outer corners thereof, two arms secured to the outer faces of the body side walls by means of attaching plates having pivot studs on which the arms are mounted, said arms having inwardly offset shoulders adjacent to their free ends, and having heads beyond said shoulders adapted to be grasped by the fingers, said shoulders having curved faces arranged to abut against the rear edges of said ribs on the end-gate, and the shoulders having guard flanges at their inner sides to prevent disengagement from said ribs, whereby when said arms are swung downwardly the shoulders frictionally grip said ribs and bind the end-gate rigidly to the body of the vehicle.

2. A vehicle having, in combination, a body, an end-gate closing one end of the body and hinged at its lower edge thereto, a pair of arms each pivoted at one end to the outer face of one of the sides of the body and having near its opposite end an inwardly offset shoulder, and two ribbed members secured to the rear face of the end-gate near the ends thereof, said arms being adapted to be swung on their pivots to carry said shoulders into frictional binding engagement with the ribs of said members for rigidly clamping the end-gate to the vehicle body.

3. A vehicle having, in combination, a body, an end-gate, two members secured to the rear face of the end-gate near the ends of the latter, and two arms each pivoted at one end to the outer face of one of the sides of the body forwardly of the end-gate, each arm having at its free end an inwardly offset shoulder arranged to overlie one of the said members on the end-gate, the arms being arranged to be swung in a vertical plane to carry said shoulders into and out of engagement with said members, said arms when swung downwardly lying alongside the ends of the end-gate and projecting rearwardly from the latter and said shoulders then exerting a camming action upon said members to force the end-gate forwardly and frictionally bind the same in closed position.

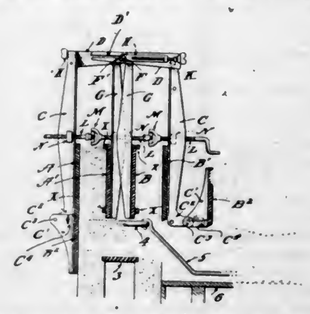
1,190,239. HANDLE-FASTENING WEDGE. JAMES G. DUNCAN, Los Angeles, Cal. Filed Nov. 25, 1914. Serial No. 873,871. (Cl. 145—81.)



1. A wedge device of the kind described comprising two members, one of said members having an integral prong adapted to be entered into the handle adjacent its end to affix said member to said handle, and the other of said members being adapted to be driven in the manner of a wedge into the eye of the head of the tool adjacent the other member and in engagement therewith, said member having a supplemental wedge at its top end adapted to enter the handle and each of said members being provided with interacting interlocking teeth at their bottom ends.

2. A wedge device of the kind described comprising two members, one of said members having an integral prong adapted to be entered into the handle adjacent its end to affix said member to said handle and the other of said members being adapted to be driven in the manner of a wedge into the eye of the head of the tool adjacent the other member and in engagement therewith, said member having a supplemental wedge at its top end adapted to enter into the handle, each of said members being provided with interacting interlocking teeth at their bottom ends, the last mentioned member including a hinged part upon which is formed the teeth of said member.

1,190,240. MECHANISM FOR USE IN BUILDING CONCRETE STRUCTURES. ISAAC N. GATES, Jacksonville, Ill., assignor of one-half to Daniel R. Sheen, Peoria, Ill. Filed July 11, 1913. Serial No. 778,573. (Cl. 25—131.)



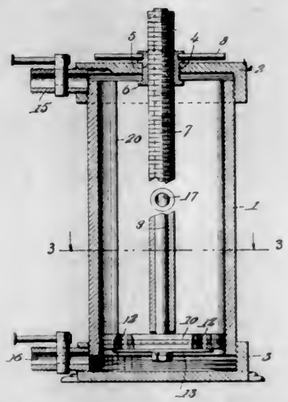
1. In a structure of the nature described, the combination of a pair of clamping arms each including a mold board adapted to be frictionally secured upon a wall in process of construction, a portion pivoted to one of the parts of the structure and also including a mold board having its working surface in the same plane with that of one of the arms, means to fix the portion rigid relative to

the structure, and means to clamp the structure upon a wall, the described portion adapted to be removed from contact with the wall and swung relatively to the structure whereby the construction material may be placed beneath it for continuing said material in a direction at right angles to the plane of said wall.

2. In a structure of the nature described, the combination of a pair of clamping arms each including a mold board adapted to be frictionally secured upon a wall in process of construction, a portion pivoted to one of the parts of the structure and also including a mold board having its working surface in the same plane with that of one of the arms, means to fix the portion rigid relative to the structure, means to adjust the arms in parallelism, and means to clamp them upon the wall, the described portion adapted to be removed from contact with the wall and swung relatively to the structure whereby the material of which the wall is being constructed may be placed beneath it for continuing said material in a direction at right angles to the plane of said wall.

3. In mechanism of the character described for building an inclosing wall, the combination of a continuous mold extending around the site to receive the inclosure comprising a mold board lying outside and adjacent the wall site, a mold board lying inside adjacent the wall site, a pair of mold boards spaced from one another and from the first described boards, inner and outer bridging members lying upon the adjacent ends of all of the mold boards for closing the spaces between said ends, means to clamp the mold boards to the wall being constructed including an arm for each board, movable extensions on the innermost arm of the clamps, and mold boards carried by the extensions and movable therewith with respect to the mold boards of the arms, said extensions and their mold boards adapted to be removed from the wall structure to permit placing beneath them the material of which the wall is being constructed for extending the structure at right angles to the plane of the wall.

1,190,241. GREASE-GUN. JOSEPH B. HENDRIX and CLYDE DUROSSETTE, Walsenburg, Colo. Filed Apr. 4, 1914. Serial No. 829,623. (Cl. 221—78.)

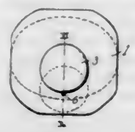


1. In a grease gun, a cylinder, a sleevelike operating element mounted for rotation within an opening of said cylinder, said element being immovable longitudinally independent of said cylinder, a hollow sleevelike operating screw, said screw being movable longitudinally of said cylinder, a piston, a piston rod fastened to said piston, said rod being rigid with said screw whereby to impart movement to said piston through rotation of said operating element.

2. In a grease gun, a cylinder, a rotatable sleevelike operating element immovable longitudinally with respect to said cylinder, the bore of said element being interiorly threaded, an operating screw extending through the bore of said element, said screw being movable longitudinally through rotation of said element, a piston, and a piston rod fastened to said piston and adapted to be detachably connected to said operating screw whereby to move said piston by a rotation of said element.

3. In a grease gun, a cylinder, a piston, a piston rod, a hollow screw rod embracing said piston rod and having detachable connection therewith for the purpose specified, and means engaging the said hollow rod to rotate it.

1,190,242. PROCESS OF FORMING BIFOCAL LENSES. HARRY W. HILL, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed June 3, 1914. Serial No. 842,576. (Cl. 49—82.1.)

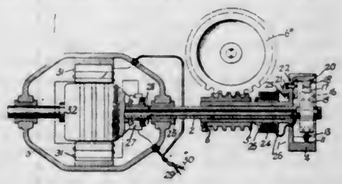


1. The process of uniting blanks for bifocal lenses, which consists in forming a major portion with a depression therein, mounting a spacing member having an adhesive coating at one side of the depression, mounting a second blank above the depression with one side held away from the first blank by the said spacing member, subjecting the said parts to a welding heat, whereby one of the blanks is caused to soften and settle down upon and unite with the spacing member and with the other blank, and grinding the resultant unitary blank into a finished ophthalmic lens.

2. The process of making bifocal lenses which consists in supporting the parts to be united in spaced relation through the medium of a spacing member of the same material as the parts to be united, applying an adhesive to retain the spacing member in correct position between the parts, and subjecting the parts and spacing member to a welding heat to fuse the three parts into a single unitary structure, substantially as described.

3. The process of forming an ophthalmic bifocal lens blank, consisting in forming a major portion with a depression therein, coating a spacing member with a suitable adhesive, placing the spacing member at one side of the depression, mounting a second blank on the first with one edge in engagement with the first and the other spaced therefrom by the spacing member, and subjecting the parts to a welding heat, whereby the spacing member and one of the blanks are rendered plastic and settle down into close engagement with the other blank and unite therewith in a single unitary structure.

1,190,243. SPEED-GOVERNOR FOR ELECTRIC MOTORS. HUGH J. MCMAHAN, Monessen, Pa. Filed Dec. 5, 1911. Serial No. 664,055. (Cl. 171—222.)



1. A speed governor for an electric motor comprising a speed-adjusted circuit-making and breaking switch and an electrical load that is imposed upon the motor armature when said switch is closed and is withdrawn when said switch is opened, and means for rendering the frequency of application of said breaking load substantially independent of the motor load.

2. A speed governor for an electric motor comprising an electrical load for the motor armature and a circuit-making and breaking switch for inserting and withdrawing said load, one of the members of which turns with the motor shaft and the other has a yielding, lost-motion connection thereto.

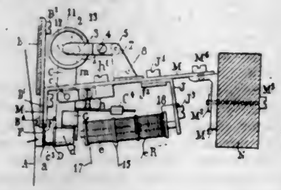
3. A speed governor for an electric motor comprising an electrical load for the motor armature and a circuit-making and breaking switch for inserting and withdrawing said load, one of the members of which turns with the motor shaft and the other of which has a resilient lost-motion connection thereto.

4. A speed governor for an electric motor of the commutator type comprising a resistor, a centrifugally operated switch for making and breaking a circuit connection between said resistor and commutator bars of opposite polarity, and means for rendering the frequency of connection of said resistor substantially independent of the motor load.

5. The combination with a commutator type series motor, of a resistor having one terminal connected to one of the commutator bars, a centrifugally operated switch for making and breaking circuit connection between the other resistor terminal and another commutator bar, and means for varying the travel of said switch from the open to the closed position in accordance with the motor load.

[Claims 6 to 14 not printed in the Gazette.]

1,190,244. CONTACT-BREAKER DEVICE FOR ELECTROMAGNETIC VIBRATING MEMBERS. ALCIDE HECTOR MAITRE and VICTOR HENRI GASTON MARTIN, Rouen, France. Filed Mar. 7, 1914. Serial No. 823,091. (Cl. 175—349.)



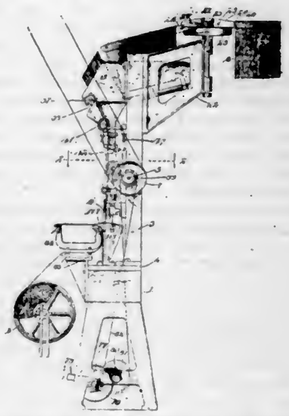
1. In an electric circuit, an electromagnet energized by said circuit, a vibratory body subjected to the influence of said electromagnet, a contact moving with said vibratory body, a second contact coöperating therewith, a rocking lever carrying said second contact, an arm on said lever terminating at one end in an arc struck from the pivotal axis of the lever, a braking disk having a spindle resting on said arc, a pivoted clamp supporting said braking disk and an exciter arranged in the circuit and acting on the rocking lever to produce pulsations therein, for the purpose described.

2. In an electric circuit, an electromagnet energized by said circuit, a vibratory body subjected to the influence of said electromagnet, a contact moving with said vibratory body, a second contact coöperating therewith, a rocking lever carrying said second contact, an arm on said lever terminating at one end in an arc struck from the pivotal axis of the lever, a braking disk having a spindle resting on said arc, in series in the said circuit, said exciter comprising two or more windings having a common soft iron core, the resistance of one winding being sufficient to produce a pianissimo effect upon said vibratory body when said winding is introduced into the circuit, and the number of its windings being so predetermined that its effect on the rocking lever is the same irrespective of the effect on the vibratory body, a circuit interrupter for each electromagnet, and manually controlled means for operating said switch.

3. In an electric circuit, an electromagnet energized by said circuit, a vibratory body subjected to the influence of said electromagnet, a contact moving with said vibratory body, a second contact coöperating therewith, a rocking lever carrying said second contact, an arm on said lever terminating at one end in an arc struck from the pivotal axis of the lever, a braking disk having a spindle resting on said arc, a rheostat in the circuit to vary the intensity of the current in the electromagnet, a branch circuit for the exciter energized upon the separation of the coöperating contacts and a fixed resistance.

4. In an electric circuit, an electromagnet energized by said circuit, a vibratory body subjected to the influence of said electromagnet, a contact moving with said vibratory body, a second contact coöperating therewith, a rocking lever carrying said second contact, an arm on said lever terminating at one end in an arc struck from the pivotal axis of the lever, a braking disk having a spindle resting on said arc, a pivoted clamp supporting said braking disk and an exciter arranged in the circuit and acting on the rocking lever to produce pulsations therein, said exciter having a winding of greater resistance than that of the main electromagnet and tending to move said contacts into engagement, together with a spring tending to separate said contacts.

1,190,245. WARP-DRAWING MACHINE. BURT A. PETERSON, Rockford, Ill., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed Oct. 28, 1907. Serial No. 399,445. (Cl. 139—94.)



1. A warp-drawing machine having, in combination, mechanism for handling thread-engaging elements, a thread selector, and means controlled by selected threads for intermitting the operation of the first mentioned mechanism during the continued operation of the thread selector.

2. In a warp-drawing machine, in combination, a heddle magazine; a chute; an escapement between said magazine and said chute; means for moving the heddles through said chute; a drawing mechanism; a gate at the outlet end of said chute; and a positioning means between said chute and said drawing mechanism.

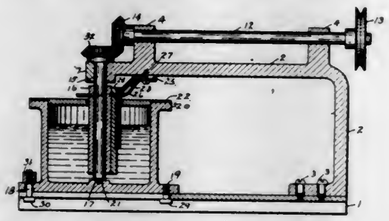
3. In a warp-drawing machine, in combination, a drawing mechanism; a stringer bar; means structurally independent of said stringer bar for holding heddles; a member arranged to engage a heddle; and means for turning said member to transfer the heddle from operative relation to the drawing mechanism to said stringer bar.

4. In a twister, the combination, with a frame, of a stationary member having an opening therein; a member rotatably mounted in said frame and having an opening therein arranged to register with the stationary opening; a conical projection on the stationary member and extending centrally of the rotatable member and through the opening therein; a plush lining on the stationary member; and means for rotating said rotatable member.

5. In a warp-drawing machine, in combination, two shafts; heddle-handling mechanisms driven from one of said shafts; warp-thread-handling mechanisms driven from the other shaft; and means controlled by the warp threads for disconnecting the heddle-handling-mechanism shaft from its source of power.

[Claims 6 to 61 not printed in the Gazette.]

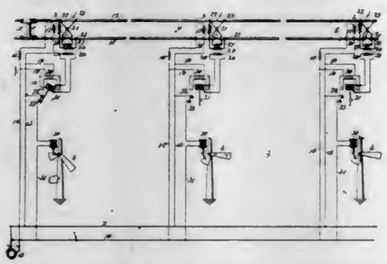
1,190,246. MACHINE FOR INKING OR COLORING THE EDGES OF LEATHER OR OTHER MATERIAL. WILLIAM STUEBING, Jr., and LOUIS J. VAN GUELPEN, Cincinnati, Ohio. Filed Apr. 22, 1915. Serial No. 23,239. (Cl. 91—38.)



1. The combination of a base and an upwardly and forwardly extending arm fastened to said base, a vessel fastened to said base, and adapted to be filled with coloring liquid, a vertical revolving spindle centered in said vessel and covered with a porous shell, and submerged in said coloring liquid in said vessel and extending above said vessel and journaled in said arm attached to said base; means for driving said spindle revolving in said coloring liquid, and means for automatically distributing said coloring liquid to the unsubmerged part of the shell surrounding said spindle.

2. The combination of a base and an upwardly and forwardly extending arm fastened to said base; a vessel fastened to said base and adapted to be filled with coloring liquid; a vertical revolving spindle centered in said vessel and covered with a porous shell and submerged in said coloring liquid in said vessel, and extending above said vessel and journaled in said arm attached to said base; means for driving said spindle revolving in said coloring liquid; a wick of felt or other fibrous substance so placed in said coloring liquid as to draw the said coloring liquid up to and distribute the said coloring liquid upon the unsubmerged portion of the shell surrounding said spindle; means for holding said wick or other fibrous substance; and means for adjusting said wick to, and away from the surface of said spindle.

1,190,247. RAILWAY SIGNALING SYSTEM. HERBERT A. WAGNER, Short Hills, N. J. Filed June 11, 1908. Serial No. 437,826. (Cl. 246—36.)



1. In a railway signaling system, the combination of track rails forming part of an electric power circuit, opposing sources of signaling current supplying the rails at intervals, said signaling sources having characteristics contrasting with the current of the power circuit, signals controlling traffic over the track sections between successive sources, a rail of the track having points of interrupted conductivity between successive sources and adjacent one of the sources, and means for controlling said signals including coils connected across the points of interrupted conductivity, whereby a train in its progressive movement along the rails subjects each coil successively to currents from the sources between which said coil is located.

2. In a railway, the combination of means for electric power distribution including track rails as part of the power circuit, means for automatic signaling including opposing sources of signaling current having different characteristics to that of the propelling current and connected to the rails at intervals to divide the rails into signaling sections, an insulating section in one rail adjacent one extremity of and within each signal section, and a signal controlling coil for each signal section having its terminals connected to the rail upon opposite sides of the insulating section and normally deënergized as to signal controlling currents.

3. In a railway, the combination of means for electric power distribution including track rails as part of the power circuit, and means for automatic signaling comprising a signal, opposing sources of signal controlling current having a different characteristic to that of the propelling current and supplying the rails at intervals and dividing the track into signaling sections, insulating sections in one of the rails at corresponding points in each signal section, a coil in each signal section connected across said insulating section and forming a section of the main return conductor for propulsion currents but normally deënergized as to signal currents, and an electro-responsive signal controlling device operatively connected to said coil and controlling the signal to indicate traffic along the block.

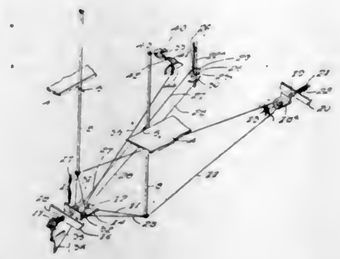
4. In a railway, the combination with the track rails, of means for electric power distribution thereon including a power generator connected to said track rails and means for automatic signaling thereon including a generator of current of contrasting characteristics, means connecting the rails at intervals to form signaling sections and operatively connected with the said last generator to supply opposing signaling currents to the rails at the points of connection, one of said rails having a point of interrupted conductivity adjacent the end of and within each signal section, and a signal controlling coil for each section connected at opposite sides of a point of interrupted conductivity and forming the connection for power currents around said point, but normally deënergized as to signal currents.

5. In a railway, the combination of track rails, of means for electric power distribution thereon including a direct current power generator connected to said track rails, means for automatic signaling on said railway, including a generator of alternating impulses of current, means connecting said rails at intervals to form signal sections and operatively connected with the said last generator to supply opposing signaling currents of like polarity to the rails at the points of connection, one of said rails having points of interrupted conductivity at corresponding points in each signal section, and signal controlling coils, one for each section, connected at opposite sides of the points of interrupted conductivity so as to form the conductor for propulsion currents around said points, but normally deenergized as to signaling currents.

[Claims 6 to 18 not printed in the Gazette.]

1,190,248. ATTACHMENT FOR AEROPLANES. DENIS F. CASHMAN and CHRIST A. BROWNFIELD, Zanesville, Ohio. Filed Apr. 14, 1914. Serial No. 831,858. (Cl. 244—29.)

1. An aeroplane including a frame, shafts journaled on the frame, wings carried by the shafts, struts carried by the shafts and extending below the wings, a spring supported pulley located at the front of the frame, a spring supported pulley located at the rear of the frame, and cable passing about said pulleys, said cable being secured at points intermediate the pulleys to the lower ends of said struts.



2. An aeroplane including a frame, shafts journaled on the frame, wings carried by the shaft, struts carried by the shafts and projecting below the wings, a pulley journaled at the front of the frame, another pulley journaled at the rear of the frame, a cable passing about said pulleys, said cable being secured at points intermediate the pulleys to the lower ends of said struts, other pulleys journaled at the front of the frame, a lever pivoted to the frame at a point in the rear of said front pulleys, other cables secured to the lower ends of said struts and passing about said other front pulleys, one of said other cables secured to the lever at a point above its pivot and the other to the lever at a point below its pivot.

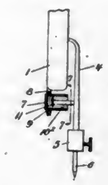
3. An aeroplane including a frame, shafts journaled on the frame, wings carried by the shafts, struts carried by the shafts and extending below the wings, a spring supported pulley block located at the front of the machine, a spring supported pulley block located at the rear of the frame, a pulley journaled on each of said blocks, a cable passing about the pulleys, said cable being secured at a point intermediate the pulleys to the lower ends of the struts, other pulleys journaled on said front pulley block, other cables secured to the lower ends of said struts and passing around said other pulleys, a lever pivoted to the frame, said other cables having their ends connected to the lever at a point above and below the pivot respectively, and means by which said front pulley block can be manually moved.

4. An aeroplane including a frame, shafts journaled on the frame, wings carried by the shafts, struts carried by the shafts and extending below the wings, a spring supported pulley block located at the front of the frame, a spring supported pulley block located at the rear of the frame, a pulley journaled on each of said blocks, a cable passing about the pulleys, said cable being secured at a point intermediate the pulleys to the lower ends of the struts, other pulleys journaled on said front pulley block, other cables secured to the lower ends of said struts and passing around said other pulleys, a lever pivoted to the frame, said other cables having their ends connected to the lever at a point above and below the pivot respectively, a pivoted lever connected to said front pulley block, a foot operated lever pivoted to the frame, and a cable connected to the front pulley block and the foot pedal.

5. An aeroplane including a frame, shafts journaled on said frame, wings carried by said shafts, struts carried by the shafts and projecting below the wings, means connected to the lower ends of said struts by which the angle of incidence of both wings may be simultaneously increased or decreased, and a second means connecting the lower ends of said struts, said second means being adapted to be operated independently of the first means by wind pressure and on the increase of the angle of incidence of one wing to automatically and proportionately reduce the angle of incidence of the other wing.

[Claims 6 and 7 not printed in the Gazette.]

1,190,249. SOUND-REPRODUCING MACHINE. PATRICK B. DELANY, South Orange, N. J. Filed May 29, 1912. Serial No. 700,394. (Cl. 274—35.)



1. In a talking machine, the combination of a diaphragm, a vibrating arm coöperating therewith and having a lateral projection, a support for said lateral projection, and a meltable mass interposed between said support and said projection.

2. In a talking machine, the combination of a diaphragm, a holder in which it is mounted, a vibrating arm coöperating with the diaphragm and provided with a lateral projection, a support for said projection carried by the diaphragm holder, and a meltable mass interposed between said support and said projection.

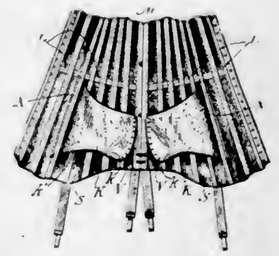
3. The combination of a diaphragm, its holder, an arm coöperating with the diaphragm, a plastic mass attached to the holder and positioned to one side of the arm, and a support attached to said arm and embedded in the plastic mass.

4. The combination of a diaphragm, an arm coöperating therewith, a fixed container, a plastic adhesive compound within the container, the container and compound being positioned at one side of the arm, and a support projecting from said arm and embedded in the plastic compound.

5. The combination of a diaphragm, its head or holder, a coöperating vibrating arm, a support for said arm rigidly attached thereto and projecting laterally therefrom, and a fixed plastic mass inert to vibrations embracing the sides of said support and connecting it with the diaphragm head or holder.

[Claims 6 to 12 not printed in the Gazette.]

1,190,250. ABDOMEN-SUPPORTING CORSET. HUGH M. MCCORMICK, Chicago, Ill., assignor to Uplift Corset Company, Phoenix, Ariz. Filed Aug. 6, 1912. Serial No. 713,643. (Cl. 2—73.)



1. A corset comprising an outer corset member and an inner abdominal belt member, consisting solely of two opposed sections, which are secured inside of said corset member from near the lower region thereof, substantially to the waist line, said belt members embracing the hips and extending down under the lower front extremity of the abdomen, being smaller in circumference than the corset member at the top of the belt line and becoming smaller comparatively, relatively to said corset member to the bottom of the belt, thereby giving uplift support to the abdomen by pressure inserted diagonally upwardly and rearwardly.

2. A corset comprising an outer corset member and an inner abdominal belt member, consisting solely of two opposed sections, which are secured inside of said corset member from near the lower region thereof, substantially to the waist line, said belt members being made up of a plurality of sections stitched together and shaped so as to embrace the hips and extend down under the lower front extremity of the abdomen, being smaller in circumference than the corset member at the top of the belt line and becoming smaller comparatively, relatively to said corset member to the bottom of the belt, thereby giving uplift support to the abdomen by pressure inserted diagonally upwardly and rearwardly and being provided with stiffening plates effecting a limited front area only.

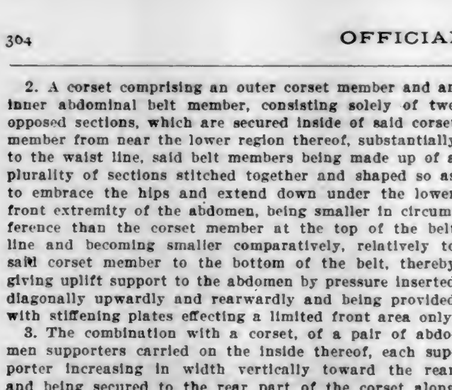
3. The combination with a corset, of a pair of abdomen supporters carried on the inside thereof, each supporter increasing in width vertically toward the rear and being secured to the rear part of the corset along an extended line vertically and having their front edges adjacent to each other, but out of contact, whereby the drawing together of said supporters by their front edges exerts a diagonal, downward and frontward pull from the region of the waist line at the rear of the corset, at the same time drawing the lower edges of said supporters smooth and taut.

4. The combination, with a corset, of a pair of abdomen supporters secured at one end thereof to said corset, positioned thereon in a downward-inclined direction, and being of greatest width at the point of attachment thereof to said corset, the adjacent, unattached ends of said stays diverging from the top thereof to the bottom.

5. The combination, with a corset, of a pair of abdomen-supporters each secured at one end thereof to said corset between the median side lines and the back edges thereof and each being of greatest width at its point of attachment to the corset; said stays being positioned in a downward-inclined direction, with their upper ends above and their lower ends substantially even with the lower line of the abdomen when the corset is disposed on the figure of the wearer, the unattached front ends of said stays passing over the downward-receding abdominal curve when the corset and stays are adjusted to the wearer's figure; and means for connecting the front ends of said stays.

[Claim 6 not printed in the Gazette.]

1,190,251. CURRENT-METER. DANIEL A. MUNROE, Wilkinsburg, Pa., assignor to Pittsburg Meter Company, a Corporation of Pennsylvania. Filed Mar. 14, 1908. Serial No. 421,091. (Cl. 253—113.)



1. In a water meter, a wing wheel provided with two sets of oppositely disposed blades, a wheel casing surrounding the wing wheel and provided with peripherally disposed outlet ports, located between the two sets of blades of said wheel and two sets of inlet ports for delivering water in opposite directions to the separate sets of blades of the wheel, a meter casing surrounding the wheel casing, provided with an inlet port and an outlet port, and having an interior chamber surrounding the wheel casing and communicating with the outlet port through passages located diametrically on opposite sides of the wheel casing.

2. In a water meter, a meter casing having an inlet and a discharge port, a wing wheel rotatively mounted within the casing and having two sets of oppositely disposed blades, a wheel casing surrounding the wing wheel and having inlet ports located above and below the wheel and communicating with the inlet port of the meter casing, and peripherally located outlet ports communicating with an annular chamber surrounding the wheel casing and communicating with said outlet port of the meter casing through two oppositely disposed ports located in a line extending at right angles to the direction of flow through the outlet port and the general direction of flow through the meter.

3. In a water meter, a wing wheel, a wheel casing surrounding the wing wheel and provided with inlet ports located at both ends thereof, and peripherally disposed outlet ports, a meter casing inclosing the wheel casing and provided with an inlet and an outlet port, and having a chamber encircling the wheel casing communicating with the peripherally disposed outlet ports, and communicating with the outlet port of the meter casing in such a way as to counterbalance the reactive force of the water leaving the wing wheel for all flows.

4. In a water meter, a wing wheel, a wheel casing surrounding the wing wheel and provided with inlet ports located above and below the wing wheel, and peripherally disposed outlet ports located between the two sets of inlet ports, a meter casing inclosing the wheel casing and provided with an inlet port, an outlet port, and passages for delivering separate streams of water entering the inlet port to the separate sets of inlet ports of the wheel casing, a chamber formed within the meter casing around the wheel casing and communicating with the outlet ports thereof, and two outlet passages formed within the meter casing on opposite sides of the wheel casing and communicating with said chamber and with said outlet port of the meter casing.

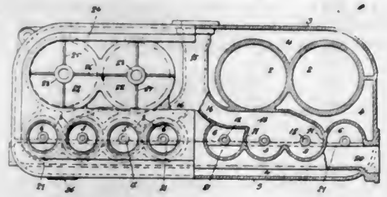
5. In a meter, a wing wheel having two sets of oppositely disposed blades, a wheel casing surrounding the wing wheel and provided with two sets of inlet ports, one located above and one below the wing wheel, and peripherally disposed outlet ports located between the two sets of blades of the wing wheel, a meter casing having an inlet port and an outlet port and inclosing the wheel casing and forming therewith a delivery chamber which encircles the wheel casing and communicates with the outlet ports thereof, two oppositely disposed delivery passages formed within the meter casing and communicating with said delivery chamber and with the outlet port of the meter casing, the inlets of said passages being so located on opposite sides of the wheel casing that the liquid leaving the wheel casing is divided into two oppositely directed streams, each of which flows substantially at right angles to the direction of flow of the water through the outlet port of the meter casing.

[Claims 6 and 7 not printed in the Gazette.]

1,190,252. COMBUSTION-ENGINE. GUIDO FORNACA, Turin, Italy, assignor to F. I. A. T., a Corporation of New York. Filed Dec. 17, 1909. Serial No. 533,554. (Cl. 123—59.)

1. A multiple cylinder casting for an explosion engine comprising at least four cylinders having heads integral therewith, a manifold inlet pipe integral therewith and inclosed within the casting having branches of equal length connected to pairs of said cylinders, an exhaust pipe having a connection with each of said cylinders and extending lengthwise of the casting, and a water jacket integral with said casting and surrounding said cylinders and said manifold inlet pipe.

2. A casting for a multiple cylinder explosion engine comprising at least four cylinders, a manifold inlet pipe integral therewith and inclosed within the casting having branches of equal length connected to pairs of said cylinders, an exhaust pipe connected to each cylinder, and a water jacket casing outside said cylinders and integral therewith.



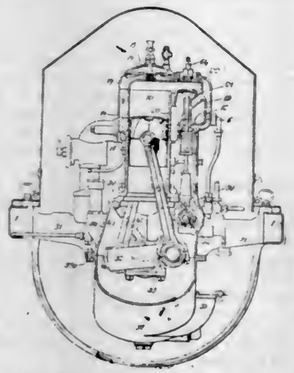
3. A multiple cylinder casting for an explosion engine comprising at least four engine cylinders, a manifold inlet pipe integral therewith extending transversely between pairs of said cylinders and having branches of equal length leading through inlet valve chambers to the cylinders of each pair, an exhaust valve chamber for each cylinder adjacent its inlet valve chamber, an exhaust pipe having a connection with each of said exhaust valve chambers, and a water jacket integral with said casting and surrounding said cylinders and said manifold inlet pipe.

4. A casting for a multiple cylinder explosion engine comprising a plurality of pairs of cylinders having integral heads, an inlet and an exhaust chamber for each cylinder, an exhaust pipe connected to the exhaust chambers, an inlet pipe passing between pairs of said cylinders and branching to said inlet chambers, and a water jacket inclosing said cylinders and said inlet pipe.

5. A casting for a multiple cylinder explosion engine comprising at least four cylinders, an inlet for each cylinder, a manifold inlet pipe integral with the cylinders opening from one side of the casting and connected to the several inlets by passages of approximately equal length, and a cooling jacket outside said cylinders and manifold.

[Claims 6 to 20 not printed in the Gazette.]

1,190,253. COMBUSTION-ENGINE. GUIDO FORNACA, Turin, Italy, assignor to F. I. A. T., a Corporation of New York. Filed Jan. 5, 1911. Serial No. 600,854. (Cl. 123—173.)



1. The combination with a multiple cylinder engine casting comprising at least four cylinders and a water jacket cast integrally and having a water inlet adjacent one end, of a removable longitudinal cover for closing the water jacket having a water discharge outlet, said cover being adapted to fit the casting in such manner as to bring said discharge outlet at the same end of the casting as said water jacket inlet, and means within the water jacket for causing a portion of the cooling water to flow longitudinally of the casting over the cylinders before reaching said cover discharge.

2. In a multiple cylinder engine, a plurality of cylinders, a water jacket for said cylinders open at the top, an inlet opening adjacent one end of said jacket, and a cover for said jacket having a water passage therein opening outwardly at the end adjacent said inlet opening, and inwardly at the opposite end.

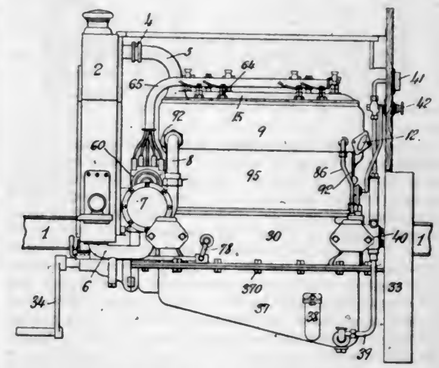
3. The combination in a multiple cylinder engine casting comprising cylinders and a water jacket cast integrally, of a water inlet at one end and a water outlet at the opposite end, and baffle plates within said jacket and between said inlet and outlet for distributing and directing the flow to the various cylinders.

4. The combination in a multiple cylinder engine casting comprising closed cylinders and a water jacket open at the top cast integrally, of a water inlet at one end into the water jacket, a cover separable from the casting for closing the water jacket and having a passage therethrough opening to the end of the water jacket opposite the inlet end.

5. The combination in a multiple cylinder engine casting comprising closed cylinders and a water jacket open at the top cast integrally, of a hollow cover for said water jacket having a longitudinal water passage therethrough, one end of said water passage opening into the water jacket at one end and outwardly at the other end.

[Claims 6 to 16 not printed in the Gazette.]

1,190,254. INCLOSED COMBUSTION-ENGINE. GUIDO FORNACA, Turin, Italy, assignor to F. I. A. T., a Corporation of New York. Original application filed Jan. 5, 1911, Serial No. 600,854. Divided and this application filed Apr. 8, 1913. Serial No. 759,628. (Cl. 123—59.)



1. In a combustion engine, a plurality of cylinders cast in a block and having an overhang in which valve seats are located, a base portion supporting the guides for the lifts of the valves in said seats, end walls forming with said overhang and said base a chamber for the valve lifts, shoulders on said casting on the edge of said chamber, and a plate removably attached to the casting and adapted to fit against said shoulders to completely close the said chamber.

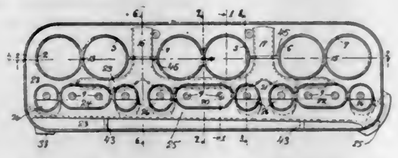
2. A combustion engine comprising a plurality of cylinders cast in a block having all valves on one side, an overhang containing seats for said valves and a water jacket, a base portion carrying guides for the valve lifts, shoulders formed on said overhang and said base portion outside said valve lifts and valve seats, and a cover plate engaging said shoulders to completely close the said chamber.

3. An inclosed combustion engine comprising at least four integrally cast cylinders and a water jacket, one

side of said casting having an overhang provided within said water jacket with valve seats, a water inlet opening into the lower portion of said water jacket adjacent one end, a water outlet at the top of said jacket adjacent the same end, a single charge inlet and a single exhaust outlet opening through said water jacket into said cylinders through said valve seats, a base supporting said cylinders and projecting laterally below said overhang to carry valve actuating devices, an end wall carried by each end cylinder extending between said overhang and said base, and removable inclosing means fitting between said overhang and said base and between said end walls, whereby the gas and water passages and valve mechanisms are completely inclosed.

4. An inclosed combustion engine comprising at least four integrally cast cylinders and a water jacket, one side of said casting having an overhang provided within said water jacket with valve seats, a water inlet opening into the lower portion of said water jacket, a water outlet carried by a removable cover at the top of said jacket, a single charge inlet on the opposite side from said overhang opening through said water jacket into said cylinders through said valve seats, means for exhausting the gases from the cylinders, a base supporting said cylinders and projecting laterally below said overhang to carry valve actuating devices, an end wall carried by each end cylinder extending between said overhang and said base, and removable inclosing means fitting between said overhang and said end walls, whereby the charge and water passages and valve mechanisms are completely inclosed.

1,190,255. COMBUSTION-ENGINE. GUIDO FORNACA, Turin, Italy, assignor to F. I. A. T., a Corporation of New York. Filed Nov. 18, 1913. Serial No. 801,585. (Cl. 123—193.)



1. An integral six cylinder combustion engine casting comprising three pairs of engine cylinders, a transverse admission passage between each pair of cylinders, a longitudinal passage intermediately connected to said transverse admission passages, and a passage from said longitudinal passage to each of said cylinders.

2. An integral six cylinder combustion engine casting comprising three spaced pairs of engine cylinders, a transverse admission passage in said space between each pair of cylinders, a longitudinal passage intermediately connected to said transverse admission passages, and a passage from said longitudinal passage to each of said cylinders.

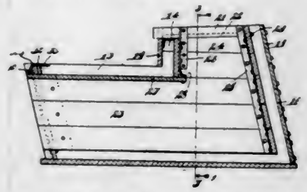
3. An integral six cylinder combustion engine casting comprising three pairs of engine cylinders, the cylinders of each pair being in contact vertically, a transverse admission passage between each pair of cylinders, a longitudinal passage intermediately connected to said transverse admission passages, and a passage from said longitudinal passage to each of said cylinders.

4. An integral six cylinder combustion engine casting comprising three pairs of engine cylinders, a transverse admission passage between each pair of cylinders, a longitudinal passage having closed ends intermediately connected to said transverse admission passages and communicating with each cylinder at substantially equal distances from said transverse passages, an integral water jacket surrounding said cylinders and passages, and an exhaust passage formed integrally with said casting and having connection with each of said cylinders.

5. An integral engine casting comprising an external water jacket, six alined cylinders each having an inlet, a single supply passage within the casting extending longitudinally of said cylinders and connecting said inlets, and means connected within the casting intermediately to said longitudinal passage for equally supplying said cylinders with charge.

[Claims 6 to 14 not printed in the Gazette.]

1,190,256. MOLD FOR GARBAGE-RECEPTACLES. FREDERICK HARPER, Chicago, Ill. Filed Mar. 25, 1916. Serial No. 86,787. (Cl. 25—130.)



1. A construction of the class described comprising outer side form members having vertically extended portions at their rear ends; front and rear end form members coöperating with said side members; a cross form member extending across said side members adjacent the forward ends of said vertically extended portions; and a core member within said form members supported on said front and cross members, substantially as described.

2. A construction of the class described comprising outer side form members having vertically extended portions at their rear ends; front and rear end form members coöperating with said side members; a cross form member extending across said side members adjacent the forward ends of said vertically extended portions; and a hollow core member open at the bottom within said form members supported on said front and cross members, there being an opening in said front member giving access to said core member, substantially as described.

3. A construction of the class described comprising outer side form members having vertically extended portions at their rear ends; front and rear end form members coöperating with said side members, said front and rear members being upwardly and forwardly inclined; a cross form member extending across said side members adjacent the forward ends of said vertically extended portions; and a core member within said form members supported on said front and cross members, substantially as described.

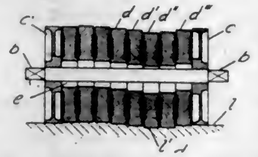
4. A construction of the class described comprising outer side form members having vertically extended portions at their rear ends; front and rear end form members coöperating with said side members, said front and rear members being upwardly and forwardly inclined; a cross form member extending across said side members adjacent the forward ends of said vertically extended portions; and a hollow core member open at the bottom within said form members supported on said front and cross members, there being an opening in said front member giving access to said core member, substantially as described.

5. A construction of the class described comprising outer side form members having vertically extended portions at their rear ends; front and rear end form members coöperating with said side members; a cross form member extending across said side members adjacent the forward ends of said vertically extended portions, said cross member being notched to correspond with a door and being interchangeable with the uppermost part of said rear member; and a core member within said form member supported on said front and cross members, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,190,257. ROAD-ROLLER. JOHN H. HENDERSON, Oakland, Cal. Filed June 29, 1915. Serial No. 37,027. (Cl. 94—4.)

1. In a road roller, a plurality of pressure members independently operating during the process of rolling, said members having a freedom of movement in a vertical direction but constrained to move substantially together in a horizontal direction, means for varying the degree of pressure exerted by the pressure members.



2. In a road roller, a plurality of pressure members independently operating during the process of rolling, said members having a freedom of movement in a vertical direction but constrained to move substantially together in a horizontal direction, means for varying the pressure exerted by each of the members.

3. In a road roller, a plurality of pressure members independently operating during the process of rolling, said members having a freedom of movement in a vertical direction but constrained to move substantially together, in a horizontal direction, and means for locking said members against relative movement between them.

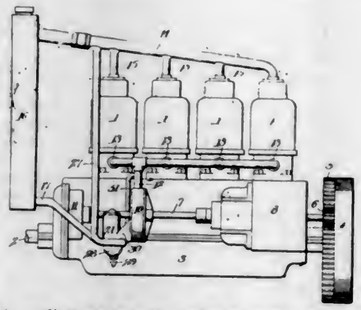
4. In a road roller, a plurality of pressure members independently operating during the process of rolling, said members having a freedom of movement in a vertical direction but constrained to move substantially together in a horizontal direction, and means for elastically locking said members against relative movement between them.

5. In a road roller, a shaft, a roller member on each end of said shaft and constrained to rotate concentric therewith, a plurality of pressure members between said roller members having freedom of vertical movement so as to establish substantially an equal pressure over the entire line of contact with the surface being rolled.

[Claims 6 and 7 not printed in the Gazette.]

REISSUES.

14,160. CIRCULATING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. CHESTER F. JOHNSON, Detroit, Mich. Filed Jan. 24, 1916. Serial No. 74,041. Original No. 1,145,995, dated July 13, 1915, Serial No. 847,587. (Cl. 123—174.)



1. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a device for feeding fuel to the cylinder, means for supplying liquid to the water jacket, a plurality of means for returning the cooling liquid from the water jacket to the supplying means, one of said returning means including a radiator, and another of said returning means passing in close proximity to the fuel feeding device to heat the latter, and means for controlling the amount of liquid that passes through the radiator.

2. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a device for feeding fuel to the cylinder, means for supplying liquid to the water jacket, a plurality of means for returning the cooling liquid from the water jacket to the supplying means, one of said means including a conduit comprising two branches, one of which includes a radiator, means for determining the relative amount of liquid that passes through the branches, and another of said means for returning the cooling liquid comprising a conduit that passes in close proximity to the fuel feeding device for heating the latter.

3. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a device for feeding fuel to the cylinder, means for supplying liquid to the water jacket, a plurality of means for returning the cooling liquid from the water jacket to the supplying means, one of said means including a conduit comprising two branches, one of which includes a radiator, thermal-controlled means for determining the relative amount of liquid that passes through the branches, and another of said means for returning the cooling liquid comprising a conduit that passes in close proximity to the fuel feeding device for heating the latter.

4. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a carbureter, means for forcing cooling liquid into the water jacket of the cylinder, three conduits for returning the cooling liquid from the cylinder jacket, one of the conduits including a radiator and leading to a valve casing, another of the conduits also leading to the valve casing, and the third conduit including a water jacket for the carbureter, a valve casing, means within the valve casing for determining the relative amounts of liquid that pass through the two first mentioned conduits, and means for connecting all of the conduits with the means for forcing the liquid to the cylinder jacket.

5. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a carbureter, means for forcing cooling liquid into the water jacket of the cylinder, three conduits for returning the cooling liquid from the cylinder jacket, one of the conduits including a radiator and leading to a valve casing, another of the conduits also leading to the valve casing, and the third conduit including a water jacket for the carbureter, a valve casing, means within the valve casing for determining the relative amounts of liquid that pass through the two first mentioned conduits, and means for connecting all of the conduits with the means for forcing the liquid to the cylinder jacket.

6. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a carbureter, means for forcing cooling liquid into the water jacket of the cylinder, three conduits for returning the cooling liquid from the cylinder jacket, one of the conduits including a radiator and leading to a valve casing, another of the conduits also leading to the valve casing, and the third conduit including a water jacket for the carbureter, a valve casing, thermal-controlled means within the valve casing for determining the relative amounts of liquid that pass through the two first mentioned conduits, and means for connecting all of the conduits with the means for forcing the liquid to the cylinder jacket.

7. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a device for vaporizing fuel and feeding it to the cylinder, means for forcing liquid into the water jacket of the cylinder, a plurality of means for returning the cooling liquid from the water jacket to the supplying means, one of said returning means comprising more radiating surface than another, and the latter extending from a highly heated portion of the cylinder jacket to a point in close proximity to the fuel feeding device to heat the same.

8. A cooling system for internal combustion engines comprising an engine cylinder and a water jacket therefor, a device for vaporizing fuel and feeding it to the cylinder, means for forcing liquid into the water jacket of the cylinder, a plurality of means for returning the cooling liquid from the water jacket to the supplying means, one of said means extending from a highly heated portion of the water jacket to a point in close proximity to the fuel feeding device to heat the same, another including a radiator,

and the third constituting a by-pass to return part of the liquid without allowing it to pass through the radiator.

9. A cooling system for internal combustion engines comprising a plurality of engine cylinders each provided with a water jacket, a device for vaporizing fuel and feeding it to the cylinders, means for forcing cooling liquid into the water jackets, said means comprising a pump and a discharge pipe therefor communicating with all of the water jackets, a plurality of means for returning the cooling liquid to the means for forcing the liquid to the water jackets, one of the returning means comprising a conduit that connects to a highly heated portion of one of the water jackets and passes in close proximity to the fuel feeding device to heat the latter, and another of the returning means comprising a divided conduit one branch of which includes a radiator.

10. The combination of a cylinder of an internal combustion engine provided with a jacket, a carbureter for said engine also provided with a jacket, a circulating pump for forcing liquid to the jacket of the cylinder, and pipes for conducting the circulating liquid from the jacket of the engine to the jacket of the carbureter, from the jacket of the carbureter to the pump, and from the pump to the engine jacket, and means for controlling the temperature of the liquid passing from the pump to the engine jacket.

11. The combination with the cylinder of an internal combustion engine and the cooling jacket therefor, of a pump for supplying cooling fluid to the jacket, a plurality of conduits for returning the cooling fluid from the jacket to the pump, a valve device located between the return conduits and the pump and constructed to positively control the flow of fluid through each of said return conduits, and a thermostat connected to operate said valve device, said thermostat being arranged to be subjected to the fluid coming through any or all said return conduits.

12. The combination with the cylinder of an internal combustion engine and the cooling jacket therefor, of a pump for supplying cooling fluid to the jacket, two conduits for returning the cooling fluid from the jacket to the pump, one of said conduits including a radiator, a valve device located between the return conduits and the pump and constructed to positively control the flow of fluid through each of said return conduits, and a thermostat connected to operate said valve device, said thermostat being arranged to be subjected to the fluid coming through either or both said return conduits.

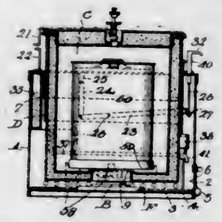
13. The combination with the cylinder of an internal combustion engine and the cooling jacket therefor, of a pump for supplying cooling fluid to the jacket, a plurality of conduits for returning the cooling fluid from the jacket to the pump, a valve device located between the return conduits and the pump and constructed to positively control the flow of fluid through each of said return conduits, and a thermostat connected to operate said valve device, said thermostat being controlled by the fluid coming through all said return conduits.

14. The combination with the cylinder of an internal combustion engine and the cooling jacket therefor, of a pump for supplying cooling fluid to the jacket, two conduits for returning the cooling fluid from the jacket to the pump, one of said conduits including a radiator, a valve device located between the return conduits and the pump and constructed to positively control the flow of fluid through each of said return conduits, and a thermostat connected to operate said valve device, said thermostat being controlled by the fluid coming through both said return conduits.

15. The combination with the cylinder of an internal combustion engine and the cooling jacket therefor, of a pump for supplying cooling fluid to the jacket, a plurality of conduits for returning the cooling fluid from the jacket to the pump, one of said conduits including a radiator, a valve device and thermostatic means for operating the same to control the flow of fluid through the several conduits, and manually operated means for controlling said valve device independently of the thermostat.

16. The combination with the cylinder of an internal combustion engine and the cooling jacket therefor, of a pump for supplying cooling fluid to the jacket, a plurality of conduits for returning the cooling fluid from the jacket to the pump, one of said conduits including a radiator, a valve device, thermostatic means for operating the same to control the flow of fluid through the several conduits, and manually operated means for controlling said valve device independently of the thermostat to maintain the return conduit through the radiator open.

14,161. COOKING APPARATUS. Ross M. G. PHILLIPS, West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn., a Corporation. Filed Mar. 6, 1916. Serial No. 82,488. Original No. 1,102,796, dated July 7, 1914, Serial No. 710,630. (Cl. 126—39.)



1. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater, one of the said parts being movable with respect to the other for the creation and closure of a draft-space between them, a spacing mechanism for holding the said movable part in spaced relation to the other part, and means for automatically controlling the releasing function of the said spacing mechanism.

2. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages and adapted to receive a radiator, of a preheater, one of the said parts being movable with respect to the other for the creation and closure of a draft-space between them, spacing-mechanism for holding the said movable part in spaced relation to the other part, and means for automatically controlling the releasing function of the spacing-mechanism.

3. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress passage, the said parts being movable with respect to each other for the creation and closure of a draft-space between them, spacing mechanism for holding the said movable part in spaced relation to the other part, and means for automatically controlling the releasing function of the said spacing-mechanism.

4. In a cooking apparatus, the combination with a vertically movable food-container formed at its lower end with an ingress draft-passage, of a preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for holding the food-container above the preheater in spaced relation thereto, and means for automatically controlling the function of the spacing-mechanism in releasing the container which descends upon the preheater for the closing of its said draft ingress passage.

5. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress draft-passage, one of the said parts being movable with respect to the other, spacing-mechanism for holding the said movable part in spaced relation to the other part, means for automatically controlling the releasing function of the spacing mechanism, and means for automatically closing the said egress draft-passage when the container and preheater are moved together.

6. In a cooking apparatus, the combination with a food container having an ingress draft-passage, of a preheater adapted to act as a closure for the said ingress draft-passage, one of the said parts being movable with respect to the other, spacing-mechanism for holding the container and preheater in spaced relation, means for automatically controlling the releasing function of the spacing-mechanism, and means for insulating the container and preheater when moved together for the closure of the said ingress draft-passage.

7. In a cooking apparatus, the combination with a food-container having an ingress draft-passage and a preheater adapted to constitute a closure for the said passage, one of said parts being movable with respect to the other for the creation and closure of a draft-space between them, and the preheater being also movable into a lighting position; of a spacing-mechanism for holding the said movable part in spaced relation to the other part, and means for automatically controlling the releasing function of the spacing-mechanism.

8. In a cooking apparatus, the combination with a food-container having an ingress draft-passage, of a laterally movable preheater adapted to act as a closure for the said passage one of the said parts being movable with respect to the other for the creation and closure of a draft-space between them, spacing-mechanism for holding the said container and preheater in spaced relation, means for automatically controlling the releasing function of the spacing-mechanism, and means for moving the preheater laterally with respect to the container into its lighting position.

9. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater adapted to close the said ingress draft-passage one of the said parts being movable with respect to the other, spacing-mechanism for holding the said container and preheater in spaced relation, means for automatically controlling the releasing function of the said spacing-mechanism, and an insulating member carried by the said preheater and insulating the same from the container when the two parts are closed together for the closure of the said ingress draft-passage.

10. In a cooking apparatus, the combination with a vertically movable food-container having an ingress and an egress draft-passage, of a preheater adapted to close the said ingress draft-passage, spacing-mechanism for holding the container in spaced relation above the preheater, means for automatically controlling the releasing function of the spacing-mechanism, and means controlled by the descent of the container for automatically closing the egress draft passage thereof concurrently with the closing of the ingress passage thereof by the preheater.

11. In a cooking apparatus, the combination with a casing, of a vertically movable food-container having ingress and egress draft-passages, a laterally movable tray, a preheater thereupon adapted to close the ingress draft-passage of the container and moved into its lighting position outside of the said casing when the tray is retracted therefrom, spacing-mechanism for holding the container in spaced relation above the preheater, and means for automatically controlling the releasing function of the spacing-mechanism for the descent of the container upon the preheater.

12. In a cooking apparatus, the combination with a vertically movable food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress passage, spacing-mechanism for holding the said container in spaced relation above the preheater, the said mechanism including a vertically movable handle, and automatic means coöperating with the said handle for releasing the container to permit its descent for the closure of its draft-passage by the preheater.

13. In a cooking apparatus, the combination with a vertically movable food-container having an ingress draft-passage in its lower end, of a preheater adapted to act as a closure for the said draft-passage, spacing-mechanism for holding the container in spaced relation above the preheater, the said spacing-mechanism including a lever and a vertically movable handle, and automatic means coacting with the said handle for releasing the container to permit its descent for the closure of its ingress draft-passage by the preheater.

14. In a cooking apparatus, the combination with a casing, of a vertically movable food-container having an ingress draft-passage in its lower end, a tray laterally movable in the said casing and provided at its outer end with a door, a preheater carried by the said tray and adapted to act as a closure for the said ingress draft-passage of the container, spacing-mechanism for holding the container in spaced relation above the preheater, and means for automatically controlling the releasing function of the spacing-mechanism.

15. In a cooking apparatus, the combination with a vertically movable food-container having an ingress draft-passage at its lower end and an egress draft-passage in the cover provided for its upper end, of a preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for holding the container in spaced relation above the preheater, means for automatically controlling the releasing function of the spacing-mechanism, a valve for closing the said egress draft-passage, and means for automatically closing the said valve upon the descent of the food-container.

16. In a cooking apparatus, the combination with a casing, of a vertically movable food-container having an ingress draft-passage in its lower end and provided with a removable cover having an egress draft-passage, of a preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for holding the container in spaced relation above the preheater, means for automatically controlling the releasing function of the said spacing-mechanism, a valve for the said egress draft-passage, means mounted upon the cover of the container for carrying the said valve, and means for automatically closing the said valve concurrently with the descent of the container for the closure of its ingress draft-passage by the said preheater.

17. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a sleeve in which the said container is suspended, a preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for lifting the said valve and container and holding the same in spaced relation above the preheater, means for automatically controlling the releasing function of the spacing-mechanism, and means for closing the egress openings of the container when the same is released for the closure of its ingress draft-passage.

18. In a cooking apparatus, the combination with a casing, of a vertically movable food-container having an ingress draft-passage in its lower end and provided with a removable cover having an egress draft-passage, a preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for holding the container in spaced relation above the preheater, means for automatically controlling the releasing function of the said spacing-mechanism, a vented valve for the said egress draft-passage, and a lever mounted upon the said cover, carrying the said vented valve and engaged by a part of the casing for automatically closing the said valve upon the descent of the container for the closure of its ingress draft-passage by the preheater.

19. In a cooking apparatus, the combination with a casing, of a vertically movable food-container having an ingress draft-passage in its lower end and provided with a removable cover having an egress draft-passage, a preheater acting as a closure for the said ingress draft-passage and laterally movable into a lighting position outside of the casing, spacing-mechanism for holding the container in spaced relation above the preheater, means for automatically controlling the releasing function of the spacing-mechanism, and means for automatically closing the egress passage in the cover of the container when the same descends for the closure of its ingress draft-passage by the preheater.

20. In a cooking apparatus, the combination with a casing, of a food-container and a preheater one of which parts is movable with respect to the other for the creation and closure of a draft space between them, spacing-mechanism for holding the said movable part in spaced relation to the other part, means for automatically con-

trolling the releasing function of the spacing-mechanism, and means for manually forestalling the action of the said automatic means in releasing the said spacing-mechanism.

21. In a cooking apparatus, the combination with a casing, of a vertically movable food-container, a preheater, spacing-mechanism for holding the said container in spaced relation above the said preheater for the creation and closure of a draft-space between them, means for automatically controlling the releasing function of the said spacing-mechanism, and means for manually forestalling the action of the said automatic mechanism in releasing the container.

22. In a cooking apparatus, the combination with a casing, of a vertically movable food-container having ingress and egress draft-passages, a laterally movable preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for holding the said container in spaced relation above the preheater, means for automatically controlling the releasing function of the spacing-mechanism, a fuel reservoir located within the casing, and means for supplying fuel to the preheater from the said reservoir when the preheater is moved laterally with respect to the container.

23. In a cooking apparatus, the combination with a food-container having ingress and egress draft-passages, of a preheater adapted to act as a closure for the said ingress draft-passage, spacing-mechanism for holding the said container in spaced relation above the preheater, means for automatically controlling the releasing function of the said spacing-mechanism and including a setting-lever, a slotted disk, a spring for actuating the same, a tripping-lever carrying a member coacting with the edge of the said disk and entering the slot thereof, and means for actuating the said tripping-lever when so released.

24. In a cooking apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment, of a burner arranged in heating relation thereto, a fuel-supply, means for storing energy for terminating the period of fire-cooking, cocking means for restraining the energy so stored, and automatic operating means for releasing the cocking means upon the occurrence of a predetermined condition of the cooking operation, and so permitting the stored energy to conclude the period of fire-cooking and begin the period of fireless-cooking.

25. In a cooking apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment, of a burner arranged in heating relation thereto, a fuel-supply, means for storing energy for terminating the period of fire-cooking at a predetermined point therein, cocking means for releasing the energy so stored, automatic operating means for releasing the cocking means and upon the occurrence of a predetermined condition of the cooking operation and so permitting the stored energy to conclude the said period of fire-cooking, the said automatic means being adapted to be manually set for the variable control of the period of fire-cooking, whereby the relation of the period of fire-cooking to the period of fireless-cooking may be prearranged by the operator prior to the use of the apparatus.

26. In a cooking apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment having an egress draft-passage and a burner-opening, of a burner arranged in heating relation to the said burner-opening, a fuel-supply, means for automatically terminating the period of fire-cooking and beginning the period of fireless-cooking upon the occurrence of a predetermined condition of the cooking operation, and means independent of the said fuel-supply for setting the apparatus preparatory to fire-cooking.

27. In a cooking apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment having an egress draft-passage and a burner-opening, of a burner arranged in heating relation to the said burner-opening, a fuel-supply, cocking means for maintaining the apparatus in adjustment for fire-cooking, means for automatically releasing the said cocking means upon the occurrence of a predetermined condition of the cooking operation for terminating the period of fire-cooking and beginning the period of fireless-cooking, and means independent of the said fuel-supply for manually cocking the cocking means preparatory to fire-cooking.

28. In a cooking apparatus for conjoint fire- and fireless cooking, the combination with a cooking compartment having an egress draft-passage and a burner-opening, of a closure for the said passage, a burner arranged in heating relation to the said burner-opening, a fuel-supply for the said burner, cocking means for maintaining the apparatus in adjustment for fire-cooking, means for automatically releasing the said cocking means for terminating the period of fire-cooking upon the occurrence of a predetermined condition of the cooking operation and beginning the period of fireless-cooking, and means independent of the said fuel-supply for manually cocking the cocking means.

29. In a cooking apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment having an egress draft-passage and a burner-opening, of a closure for the said passage, a burner arranged in heating relation to the said burner-opening, a fuel-supply, means for storing energy for terminating the period of fire-cooking, cocking means for restraining the energy so stored and maintaining the said closure in its open position, and automatic operating means for releasing the cocking means upon the occurrence of a predetermined condition of the cooking operation and so permitting the stored energy to conclude the period of fire-cooking and begin the period of fireless-cooking, also permitting the closing of the egress draft-passage by the said closure.

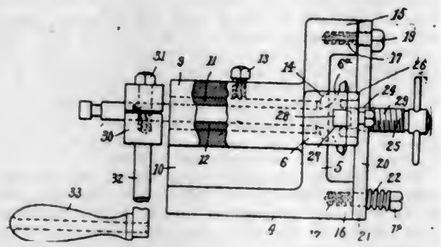
30. In a cooking apparatus for conjoint fire- and fireless cooking, the combination with a cooking compartment having an egress draft-passage and a burner-opening, of a closure for the said passage, a burner arranged in heating relation to the said burner-opening, a fuel-supply, means for storing energy for terminating the period of fire-cooking, cocking means for restraining the energy so stored, and automatic operating means for releasing the said cocking means upon the occurrence of a predetermined condition of the cooking operation and so permitting the stored energy to conclude the period of fire-cooking, and the closure of the said passage by the said closure.

31. In a cooking apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment having a controlled egress draft-passage and a controlled burner-opening, of a burner arranged in heating relation to the said burner-opening, a fuel-supply, means for storing energy for terminating the period of fire-cooking, cocking means for restraining the energy so stored, and automatic operating means for releasing the said cocking means upon the occurrence of a predetermined condition of the cooking operation and so permitting the stored energy to conclude the period of fire-cooking.

32. In an apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment having a burner-opening, of a burner exteriorly applied to said opening and co-acting therewith to close and seal the same concurrently with the termination of the period of fire-cooking and to bear a spaced relation to it during the said period.

33. In an apparatus for conjoint fire- and fireless-cooking, the combination with a cooking compartment having a burner-opening and an egress draft-passage, of a closure for the said passage adapted to be opened manually prior to beginning the period of fire-cooking, and to be closed automatically upon the termination of said period, a burner arranged in heating relation to the said burner-opening, and means adapted to be manually set as required by the demands of ordinary cooking and to automatically control the transition of the cooking cycle from fire-cooking to fireless-cooking upon the occurrence of a predetermined condition of the cooking operation.

14,162. VALVE CUTTING AND RESEATING MECHANISM. JOHN SHANNON, Stonington, Conn., assignor to Charles H. Quackenbush, Stamford, Conn. Filed July 29, 1914. Serial No. 853,984. Original No. 1,099,316, dated June 9, 1914, Serial No. 789,158. (Cl. 82—1.)



1. In a valve truing mechanism, the combination of a front plate provided with a bore extending therethrough and adapted to rotatably receive a valve stem therein, a cutting knife adjustably and rigidly secured to said front plate juxtaposed to said bore, a holding plate resiliently secured to the said front plate, means extending through said holding plate engaging the valve head and adapted to force the same into contact with said cutting knife, and means for holding said valve stem true during the rotations thereof.

2. In a mechanism of the class described, the combination of a body portion including a front plate provided with an aperture extending therethrough, a sleeve projecting rearwardly from the said plate and communicating with said plate aperture, knife holding lugs carried by said plate, a cutting knife adjustably secured thereto, said plate and sleeve adapted to rotatably secure a valve of the puppet type therein, a holding plate rotatably and resiliently secured to the body portion in front of said first mentioned plate and removable above the said valve, and means adapted to contact with said valve to force the same into yielding contact with said cutting knife.

3. In a valve cutting and seating mechanism, the combination of a body portion including a front plate provided with an aperture therethrough, a sleeve extending rearwardly from said front plate in alinement with said aperture and adapted to rotatably receive a valve stem therein with the valve head thereof projecting in front of said plate, said front plate provided with upstanding lugs at the side thereof, cutting knives adjustably secured to the upstanding lugs and arranged to contact with the said valve head, said front plate provided with outstanding lugs at the top and bottom thereof, a plate rotatably and resiliently secured to one of said lugs, locking means secured to the other of said lugs adapted to hold said holding plate in locked position extending above the valve head, means extending through said holding plate adapted to contact with the said valve head to force the said valve head into yielding contact with the said cutting knives, and means for regulating the pressure and force of contact between said valve head and said cutting knives.

4. In a valve truing and seating cutter, the combination of a body portion including a front plate provided with an aperture extending therethrough and with a sleeve projecting outwardly in alinement with the said aperture, said sleeve and aperture adapted to rotatably receive a valve of the puppet type therein, said front plate provided with outstanding lugs at the sides thereof, said lugs provided with means for adjustably engaging cutting tools and holding the same rigidly secured thereto, cutting knives secured to said lugs and held a distance above the said plate, said plate provided with outstanding lugs at the upper and lower portion thereof, a holding plate rotatably and resiliently secured to one of said lugs, means upon the other of said lugs adapted to hold said plate in a locked position above said plate aperture, means extending through said holding plate above said front plate aperture adapted to contact with the valve head and resiliently force the same into contact with said cutting knives, means for varying the force of contact between said valve head and cutting knives, and means securable to the projecting end of said valve stem for the manual rotation thereof.

5. In a valve seating and cutting mechanism, the combination of a frame including a base and an upstanding front plate carried thereby, a rearwardly extending sleeve carried by said front plate and a web extending between said sleeve and said base for the bracing thereof, said front plate provided with an aperture extending therethrough communicating with the bore of said sleeve, means insertible within said sleeve for rotatably securing a valve stem therein with the valve head thereof projecting in front of said front plate, said front plate provided with outstanding lugs, cutting knives secured to said outstanding lugs and spaced a distance from said plate, said plate provided with a second pair of outstanding lugs, a holding plate resiliently and rotatably secured to said lugs and extending above the said valve head, and a wing bolt extending through said holding plate and contacting with the said valve head adapted to resiliently force the same into contact with the said cutting knives.

6. A valve cutting and seating mechanism comprising a front plate provided with a bore extending therethrough and adapted to rotatably receive a valve stem therein, a cutting knife adjustably and rigidly secured to said plate, a holding plate resiliently secured to said front plate, means extending through said holding plate adapted to engage a valve head and to force the same into contact with said cutting knife.

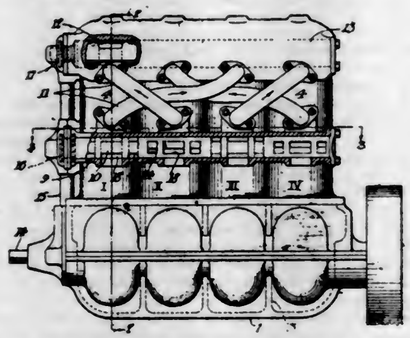
7. A valve cutting and seating mechanism, comprising a base, a sleeve upon the base and including a flat face front plate and a bore extending therethrough and adapted to rotatably receive a valve stem therein, an adjustable and rigidly supported cutting knife arranged forward of the first plate, a holding plate pivotally supported upon one member of the base and detachably connected with another member, and means carried by the holding plate adapted to engage a valve head to force its face into contact with said cutting knife and in a way to not engage the front plate.

8. A valve cutting and seating mechanism, comprising a base having a flat front plate and a series of projected lugs, a removable sleeve with a bore extending therethrough, an adjustable cutting knife mounted in one of the said lugs and forward of the plate, a holding plate pivotally supported upon another of the lugs and adapted to be detachably secured to one of said lugs, and means carried by the holding plate to engage a valve to force the same into contact with said cutting knife.

9. A valve cutting tool comprising a base, supporting means upon said base for rotatably supporting the stem of a valve, blocks carried by the base and symmetrically arranged with respect to the axis of rotation of the valve, a tool carried by one of said blocks, a bar movably connected with one of said blocks, means for connecting said bar with another of said blocks and means adjustably carried by said bar for engaging the head of the valve to hold it in engagement with the tool.

10. A valve cutting tool comprising a base, valve stem supporting means positioned upon said base, bearing means contained in said supporting means for rotatably supporting the stem of a valve, blocks carried by said base and symmetrically arranged with respect to the axis of rotation of the valve, one of said blocks being provided with a cutting tool positioned forward of the supporting means and with a holding means for said tool, a cross bar movably connected with one of said blocks, means for releasably connecting said bar, with another of said blocks, and means adjustably carried by said bar for engaging the head of a valve to hold it in engagement with the cutting edge of the tool.

14,163. INTERNAL-COMBUSTION MOTOR. RUSSELL T. KINGSFORD, Plainfield, N. J. Filed Mar. 29, 1916. Serial No. 87,629. Original No. 1,092,578, dated Apr. 7, 1914, Serial No. 733,607. (Cl. 123—59.)



1. A two-cycle internal combustion engine having three or more units each including a combustion chamber, a fuel pumping chamber, an air compressing and pumping chamber and a reciprocatory piston member having operating parts coöperating with each chamber, said combustion chamber having an exhaust port and said pumping chambers having inlet ports, means to connect the air pumping and compression chamber of each unit with the combustion chamber of the same unit when the piston member of that unit is at the end of its power stroke and after the opening of the exhaust port from the combustion chamber, means to connect the fuel pumping chamber of each unit with the combustion chamber of a different unit, and crank shaft connections between the several piston members for imparting to each fuel pump piston part, a delivery stroke beginning not more than one-third of a crank-shaft revolution ahead of the compression stroke of the power piston part in the combustion chamber to which the charge is delivered.

2. A two-cycle internal combustion engine having three or more units, each including a combustion chamber, a fuel pumping chamber, an air compressing and pumping chamber, and a reciprocatory piston member having operating parts coöperating with the other, said combustion chamber having an exhaust port and said pumping chambers having inlet ports, means to connect the combustion chamber of each unit when the piston is at the end of its power stroke with the air compression chamber whose piston is at the end of its compression stroke, means to connect each combustion chamber with the fuel pumping chamber of a different unit, whose piston member is intermediate of the ends of its delivery stroke, and means for closing said last mentioned connection after the piston part in the combustion chamber has completed not less than one-third of its compression stroke as measured by the rotation of the crank shaft.

3. A two-cycle internal combustion engine having three or more units, each including a combustion chamber, a fuel pumping chamber, an air compressing and pumping chamber and a reciprocatory piston member having operating parts coöperating with each chamber, said combustion chamber having an exhaust port and said pumping chambers having inlet ports, passages to connect the air pumping and compression chamber of each unit with the combustion chamber of the same unit when the piston member of that unit is at the end of its power stroke and after the opening of the exhaust port from the combustion chamber, and passages to connect each fuel pumping chamber with the combustion chamber of the unit not more than one-third of a revolution later in order of crank-shaft rotation.

4. A two-cycle internal combustion engine having three or more units each including a combustion chamber, a fuel pumping chamber, an air compressing and pumping chamber and a reciprocatory piston member having operating parts coöperating with each chamber, said combustion chamber having an exhaust port and said pumping chambers having inlet ports, passages to connect the air pumping and compression chamber of each unit with the combustion chamber of the same unit when the piston member of that unit is at the end of its power stroke and after the opening of the exhaust port from the combustion chamber, passages to connect each fuel pumping chamber with the combustion chamber of the unit not more than one-third of a revolution later in order of crank-shaft rotation, and means for opening each of said last mentioned passages after the opening of the corresponding one of said first mentioned passages and closing them after the corresponding pistons have advanced on their compression strokes in the compression chambers by not less than sixty degrees of crank-shaft rotation.

5. An internal combustion engine having three or more cylinders of the two-diameter type and corresponding two-diameter pistons reciprocable therein, each of said pistons forming in connection with its cylinder and closed compartment beneath it a combustion chamber, a charge pump chamber, and a scavenging air compression chamber; an exhaust port and an air port in each combustion chamber arranged to be opened as the piston approaches the end of its power stroke, an individual conduit connecting each air compression chamber with the air port of a combustion chamber which makes its power stroke in time with the compression stroke in said air compression chamber, a charge inlet port in each combustion chamber, and an individual conduit connecting each fuel pump chamber with the inlet port of a combustion chamber which has its compression stroke timed not more than one-third of a revolution later than the compression stroke in said pump chamber, the arrangement being such that the exhaust, air, and inlet ports are opened in the order named and the air, exhaust and inlet ports are closed in the order last named.

6. An internal combustion engine having three or more units, each including a cylinder of the two-diameter type, a corresponding two-diameter piston reciprocable therein; and a crank case section, said parts together forming for each unit a combustion chamber, an annular charge pump chamber, and a scavenging air compression chamber, said combustion chamber having an exhaust port and an air port arranged to be opened as the piston approaches the end of its power stroke, an individual conduit connecting each air compression chamber with the air port of a combustion chamber of the same unit, a charge inlet port in each combustion chamber, and an individual conduit connecting each fuel pump chamber with the charge inlet port of a combustion chamber which has its compression stroke timed not more than one-third of a revolution later than the compression stroke in said pump chamber, the arrangement being such that the exhaust, air and inlet ports are opened in the order named, and the air, exhaust and inlet ports are closed in the order last named.

7. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston a fuel pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air-inlet port controlled by the movement of the piston; a crank-case forming separate air-compression chambers corresponding with said cylinders, a conduit connecting each compression chamber with the air-inlet port in the corresponding combustion chamber, a conduit connecting each pumping chamber with the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank-shaft rotation; valve mechanism adapted to control the last mentioned conduit and permit the transfer of fuel from the pumping chambers to the connected combustion chambers during at least one-third of the compression stroke in said combustion chambers.

8. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston an annular fuel pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air-inlet port arranged to be successively opened by the piston in the order named in the course of said piston's downward movement; a crank-case forming separate air-compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber and each pumping chamber being connected with the combustion chamber of the cylinder following not more than one-third of a revolution later in order of crank-shaft rotation; valve mechanism controlling the admission of air to the compression chambers, the admission of fuel to the pumping chambers and the transfer of fuel from the pumping chambers to the connected combustion chambers.

9. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston an annular fuel pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air inlet port arranged to be successively opened by the piston in the order named as said piston approaches the lower limit of its movement; a divided crank-case forming air-compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber and each pumping chamber being connected with the upper end of the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank-shaft rotation; valve mechanism controlling the admission of air to the compression chambers, the admission of fuel to the pumping chambers and the transfer of fuel from the pumping chambers to the connected combustion chambers.

10. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston an annular fuel pumping chamber and a combustion chamber, the latter being provided in its opposite side walls with an exhaust port and an air-inlet port arranged to be successively opened by the piston in the order named as said piston approaches the lower limit of its movement; a divided crank-case forming air-compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber and each pumping chamber being connected with the upper end of the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank-shaft rotation; means controlling the admission of air to the compression chambers and of fuel to the pumping chambers; and separate means, operable independently of said first-named controlling means, adapted to control the transfer of fuel from the pumping chambers to the connected combustion chambers.

11. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston a fuel pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air-inlet port controlled by the movement of the piston; a divided crank-case forming air-compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber and each pumping chamber being connected with the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank-shaft rotation; a rotary valve controlling the admission of air to the compression chambers and of fuel to the pumping cylinders; and a separate rotary valve controlling the transfer of fuel from the pumping chambers to the connected combustion chambers.

12. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston a fuel pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air-inlet port controlled by the movement of the piston; a divided crank-case forming air compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber and each pumping chamber being connected with the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank-shaft rotation; a rotary valve controlling the admission of air to the compression chambers and of fuel to the pumping chambers, said valve being adapted to close communication between the pumping chambers and their connection with the combustion chambers; and independent means controlling the transfer of fuel through such connections from the pumping to the combustion chambers.

13. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston a fuel-pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air-inlet port controlled by the movement of the piston; a divided crank-case forming air-compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber; a fuel-supply manifold extending alongside said cylinders, each pumping chamber being connected therewith; a rotary valve disposed parallel with said manifold and controlling the connections between the same and the pumping chambers; a series of ducts connecting said pumping chambers respectively with the upper end of the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank-shaft rotation; and a second rotary valve extending along the upper ends of the cylinders and controlling communication between said ducts and the combustion chambers.

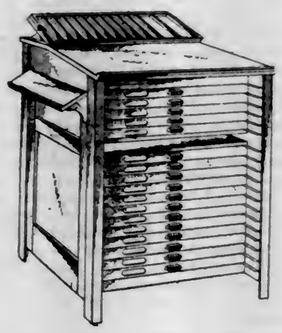
14. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston a fuel-pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air-inlet port controlled by the movement of the piston, a divided crank-case forming air-compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber; a fuel-supply manifold extending alongside said cylinders, each pumping chamber being connected therewith; a rotary valve disposed parallel with said manifold and controlling the connections between the same and the pumping chambers; a series of ducts connecting said pumping chambers respectively with the upper end of the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank shaft rotation; and a second rotary valve extending along the upper ends of the cylinders and controlling communication between said ducts and the combustion chambers, said first rotary valve being arranged to close communication between said ducts and pumping chambers when said chambers are opened to the admission of fuel from said manifold.

15. In an internal combustion engine, the combination of three or more cylinders and pistons reciprocable therein, each of said cylinders forming in connection with its piston, a fuel-pumping chamber and a combustion chamber, the latter being provided with an exhaust port and an air-inlet port controlled by the movement of the piston; a divided crank-case forming air-compression chambers corresponding with said cylinders, each compression chamber being connected with the air-inlet port in the corresponding combustion chamber and each pumping chamber being connected therewith; a fuel-supply manifold extending alongside said cylinders, each pumping chamber being connected therewith; a rotary valve disposed parallel with said manifold and controlling the connections between the same and the pumping chambers, the same valve also controlling the admission of air to the compression chambers; a series of ducts connecting said pumping chambers respectively with the upper end of the combustion chamber of the cylinder fired not more than one-third of a revolution later in order of crank-shaft rotation; and

a second rotary valve extending along the upper ends of the cylinders and controlling communication between said ducts and the combustion chambers.

DESIGNS.

49,294. PRINTER'S CABINET. FRANK M. BASHELIER, Jenkintown, Pa. Filed Sept. 8, 1910. Serial No. 581,100. Term of patent 14 years.



The ornamental design for a printer's cabinet as herein shown.

49,295. BREAD AND CAKE KNIFE. SAMUEL BOWMAN, Lancaster, Pa. Filed Apr. 17, 1916. Serial No. 91,804. Term of patent 14 years.



The ornamental design for a bread and cake knife, as shown.

49,296. TIRE-TREAD. OTTO BRAUNWARTH, New York, N. Y. Filed Apr. 22, 1916. Serial No. 93,033. Term of patent 7 years.



The ornamental design for a tire tread as shown.

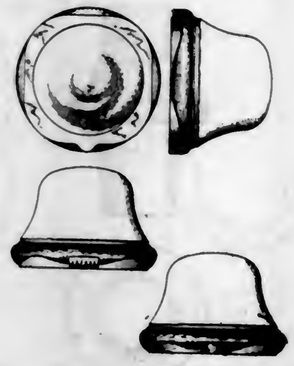
49,297. LAMP. ROBERT FRANKLIN SNOW, Elba, Ala. Filed Jan. 21, 1916. Serial No. 73,472. Term of patent 7 years.





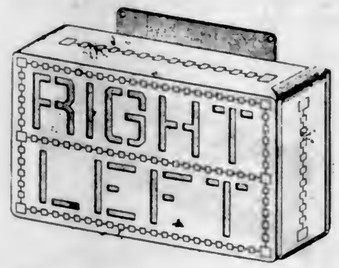
The ornamental design for a lamp, as shown.

49,298. AUTOMOBILE-LAMP. DAVID HENRY ELKINS, Amesbury, Mass. Filed May 9, 1916. Serial No. 96,450. Term of patent 7 years.



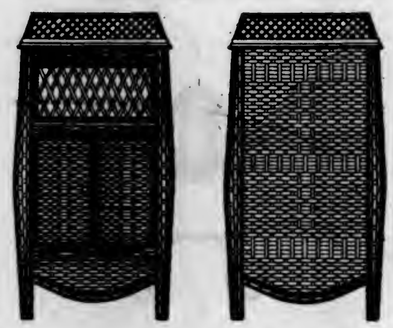
The ornamental design for an automobile lamp, as shown.

49,299. SIGNAL-LAMP FOR VEHICLES. THEODORE C. ESENBERG, Kansas City, Mo. Filed Mar. 20, 1916. Serial No. 85,525. Term of patent 3½ years.



The ornamental design for a signal lamp for vehicles, as shown.

49,300. TALKING-MACHINE CABINET. EDWARD J. FISCHER, Cincinnati, Ohio. Filed Apr. 14, 1916. Serial No. 91,257. Term of patent 3½ years.



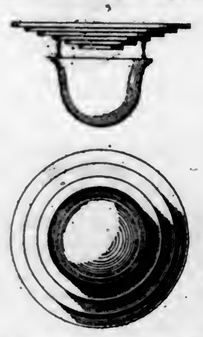
The ornamental design for a talking machine cabinet, as shown.

49,301. TOY. HENRY FRIED, Brooklyn, N. Y. Filed Jan. 4, 1915. Serial No. 4801. Term of patent 7 years.



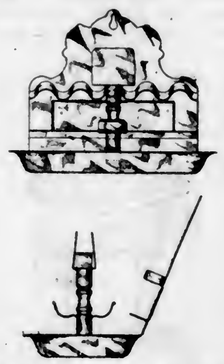
The ornamental design for a toy as shown.

49,302. LIGHTING-FIXTURE. EDWIN F. GUTH, St. Louis, Mo., assignor to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 26, 1915. Serial No. 17,271. Term of patent 14 years.



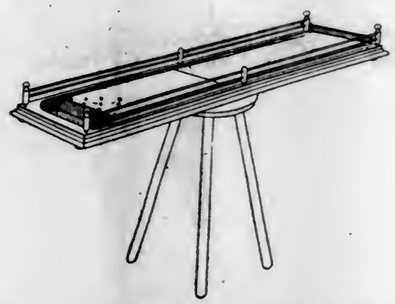
The ornamental design for a lighting fixture as shown.

49,303. CIGAR AND ASH TRAY. JULIUS GYURINA, West Chester, Pa. Filed May 12, 1916. Serial No. 97,199. Term of patent 7 years.



The ornamental design for a cigar and ash tray, as shown.

49,304. GAME-BOARD. ALFRED HALL, Boston, Mass. Filed Apr. 6, 1916. Serial No. 89,500. Term of patent 14 years.



The ornamental design for a game board, as shown.

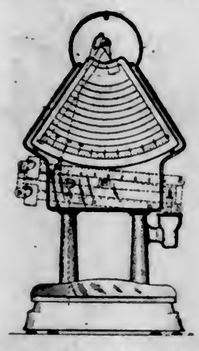
49,305. PRECIOUS, SEMIPRECIOUS OR SYNTHETIC STONE, OR AN IMITATION THEREOF. SAMUEL HELLER, New York, N. Y. Filed Mar. 2, 1916. Serial No. 81,758. Term of patent 7 years.





An ornamental design for a precious, or a semi-precious or a synthetic stone or an imitation thereof, consisting of a crown having a substantially circular girdle and embodying therein a square flat table, four triangular facets, the base of each of which is at said table and the apex of each of which is at said girdle, each of said triangular facets having at each side thereof a substantially trapezoidal facet having one side thereof at the girdle and a substantially triangular facet at one side of each of said trapezoidal facets with one side thereof at the girdle, and a pavilion having facets thereon.

49,306. SCALE-CASING. HALVOR O. HEM, Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 7, 1916. Serial No. 70,882. Term of patent 14 years.



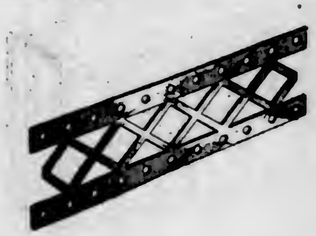
The ornamental design for a scale casing as shown.

49,307. BED-MOUNT. EDWIN J. HICKSON, Butler, Pa. Filed Mar. 9, 1916. Serial No. 83,207. Term of patent 7 years.



The ornamental design for a bed mount, substantially as shown and described.

49,308. GIRDER-STRIP. FRANK HORNBY, Liverpool, England. Filed June 3, 1915. Serial No. 31,997. Term of patent 14 years.



The ornamental design for a girder strip, as shown and described.

49,309. ARTIFICIAL-LIGHT FIXTURE. HAMILTON T. HOWELL, Woodside, N. Y. Filed May 22, 1916. Serial No. 99,245. Term of patent 3½ years.



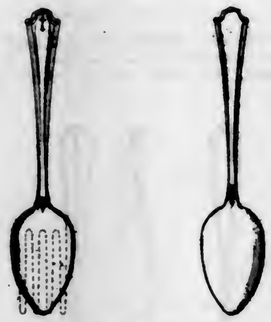
The ornamental design for an artificial light fixture, as shown.

49,310. ARM FOR ELECTRIC BRACKETS AND CHANDELIERS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed May 26, 1916. Serial No. 100,165. Term of patent 3½ years.



The ornamental design for an arm for electric brackets and chandeliers, as shown.

49,311. SPOON, FORK, OR SIMILAR ARTICLE. FREDERICK KAUPMANN, New York, N. Y. Filed Apr. 29, 1916. Serial No. 94,503. Term of patent 14 years.



The ornamental design for a spoon, fork or similar article as shown.

49,312. ROPE-CLAMP. WILLIAM M. LEE, Ogden, Utah, assignor of one-half to Louis H. Peery, Ogden, Utah. Filed Oct. 30, 1915. Serial No. 58,923. Term of patent 14 years.



The ornamental design for a rope clamp, as shown.

49,313. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 28, 1916. Serial No. 87,368. Term of patent 3½ years.



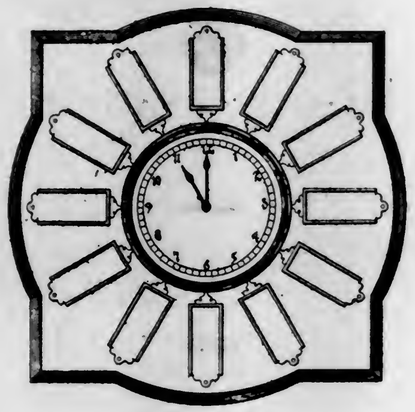
The ornamental design for a button substantially as shown and described.

49,314. STAND OR PEDESTAL. LOUIS NITSCHE, Johnsonburg, Pa. Filed May 11, 1916. Serial No. 96,930. Term of patent 14 years.



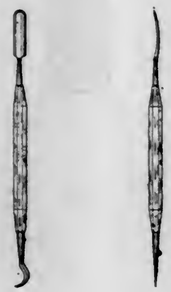
The ornamental design for a stand or pedestal, as shown.

49,315. INDICATOR. GEORGE W. RAWLINGS and GEORGE M. LANAM, Dayton, Wash. Filed Jan. 21, 1916. Serial No. 73,473. Term of patent 3½ years.



The ornamental design for an indicator, as shown.

49,316. SURGICAL INSTRUMENT. MAIMON SAMUELS, Seattle, Wash. Filed Oct. 18, 1915. Serial No. 56,622. Term of patent 3½ years.



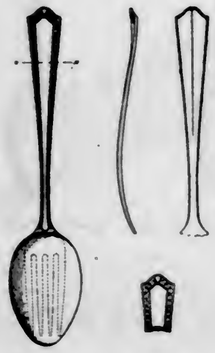
The ornamental design for a surgical instrument as shown.

49,317. APPAREL-HOOK. OTTO HUGO SHULTZ, Windsor, Ontario, Canada, assignor of one-fourth to Leonard R. Benson, Windsor, Ontario, Canada. Filed Apr. 7, 1916. Serial No. 89,719. Term of patent 3½ years.



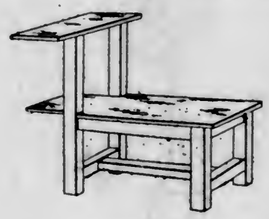
The ornamental design for an apparel hook, as shown.

49,318. SPOON, FORK, OR SIMILAR ARTICLE. CHARLES FRANKLIN SIMMS, Attleboro, Mass. Filed Mar. 7, 1916. Serial No. 82,748. Term of patent 3½ years.



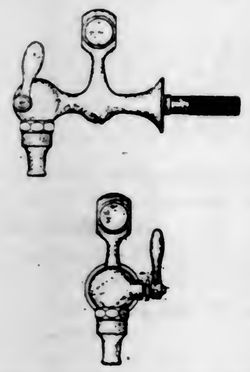
The ornamental design for a spoon, fork or similar article, as shown.

49,319. COMBINED SEAT AND TELEPHONE-STAND. CHARLES E. SPEAKER, Louisville, Ky. Filed Nov. 30, 1914. Serial No. 874,954. Term of patent 7 years.



The ornamental design for a combined seat and telephone stand, as shown.

49,320. FAUCET AND POST FOR THE SAME. ALONZO G. VAN NOSTRAND, Boston, Mass. Filed June 21, 1915. Serial No. 35,463. Term of patent 14 years.



The ornamental design for a faucet and post for the same, as shown.

49,321. SPOON, FORK, OR SIMILAR ARTICLE. SAMUEL G. WILKES, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Mar. 10, 1916. Serial No. 83,425. Term of patent 3½ years.



The ornamental design for a spoon, fork or similar article, as shown.

49,322. SPOON, FORK, OR SIMILAR ARTICLE. SAMUEL G. WILKES, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Mar. 10, 1916. Serial No. 83,426. Term of patent 3½ years.



The ornamental design for a spoon, fork or similar article as shown.

49,323. SPOON, FORK, OR SIMILAR ARTICLE. SAMUEL G. WILKES, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Mar. 10, 1916. Serial No. 83,427. Term of patent 3½ years.



The ornamental design for a spoon, fork or similar article as shown.

TRADE-MARKS

PUBLISHED JULY 4, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 73,576. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) EDDIE BALDWIN HAMMITT, Boston, Mass. Filed Oct. 28, 1913.

DOUTMACO

The word "Doutmaco."

Particular description of goods.—Clothes-Washers, Including Vacuum Clothes-Washers.

Claims use since Oct. 17, 1913.

Ser. No. 78,371. (CLASS 39. CLOTHING.) JOSEPH A. SCHREIER, Rochester, N. Y. Filed May 18, 1914.



The word "Shoes" shown in the drawing being disclaimed.

Particular description of goods.—Boys' Boots and Shoes Made of Leather.

Claims use since about January, 1914.

Ser. No. 79,132. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) PONDELICK BROTHERS, Chicago, Ill. Filed June 15, 1914.



Applicant disclaims (*a*) the words "The World's Greatest Self-Adjusting Anti-Leak Endless Piston Rings Manufactured Only by Pondelick Bros. Chicago, Illinois, Trade Mark, Patent Applied For;" (*b*) the representation of the piston-rings apart from the mark shown in the drawing.

Particular description of goods.—Piston-Rings.

Claims use since Apr. 22, 1914.

Ser. No. 82,158. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WHITTELSEY COMPANY, New York, N. Y. Filed Oct. 24, 1914.

MAGIC

Particular description of goods.—Thermostatically-Controlled Auxiliary Devices for Preheating the Fuel of Combustion-Engines.

Claims use since the 21st day of October, 1914.

Ser. No. 83,934. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MACK CO., Brandon, Manitoba, Canada. Filed Jan. 18, 1915.

RUSO

Particular description of goods.—Dyspepsia and Anemia Medicines.

Claims use since July 30, 1913.

Ser. No. 86,155. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) WM. A. ROGERS, LIMITED, New York, N. Y. Filed Apr. 23, 1915.

Heirloom

Particular description of goods.—Silver-Plated Flat and Hollow Ware and Cutlery.

Claims use since Mar. 19, 1915.

Ser. No. 86,236. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ROCK ISLAND REGISTER CO., Rock Island, Ill. Filed Apr. 27, 1915.

NO STREAK

No claim being made to the words "No Streak" apart from the mark as shown.

Particular description of goods.—Side-Wall Warm-Air Registers.

Claims use since Jan. 2, 1915.

Ser. No. 86,563. (CLASS 39. CLOTHING.) CARSON, PIRIE, SCOTT & CO., Chicago, Ill. Filed May 12, 1915.

Beaver Brand

No claim is made for the word "Brand" apart from the mark shown in the drawing.

Particular description of goods.—Knitted Underwear for Men, Women, and Children.

Claims use since about March, 1913.

Ser. No. 86,759. (CLASS 39. CLOTHING.) GEO. A. BOND & CO., New Brunswick, N. J. Filed May 20, 1915.

AMERICAN LADY

Comprising the words "American Lady."

Particular description of goods.—Hosiery.

Claims use since May 16, 1914.

Ser. No. 86,801. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH EMLICH, Cincinnati, Ohio. Filed May 21, 1915.

HCILME

Particular description of goods.—Massage-Cream, Cold-Cream, and a Shampoo Preparation.

Claims use since May 1, 1915.

Ser. No. 86,804. (CLASS 39. CLOTHING.) HENDERSON & ERVIN, New York, N. Y. Filed May 21, 1915.



Particular description of goods.—Textile Underwear—viz., Union Suits.

Claims use since Aug. 1, 1911.

Ser. No. 86,812. (CLASS 37. PAPER AND STATIONERY.) THE PRATT PAPER COMPANY, Des Moines, Iowa. Filed May 21, 1915.



No claim being made to the words "Iowa" and "Writing Tablet" apart from the mark shown.

Particular description of goods.—Paper Tablets and Note-Books.

Claims use since February, 1912.

Ser. No. 88,323. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed July 31, 1915.

NEUTRO

Particular description of goods.—Oleomargarin.

Claims use since Dec. 1, 1904.

Ser. No. 88,490. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WASHINGTON ALDRIDGE, Denver, Colo. Filed Aug. 9, 1915.



No claim being made to the exclusive use of the words "Kernels of Wheat" apart from the trade-mark shown in the drawing.

Particular description of goods.—Granulated Cereals.

Claims use since Nov. 1, 1913.

Ser. No. 88,615. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Aug. 14, 1915.

FABROIL

Consisting of the word "Fabroil."

Particular description of goods.—Toothed Gearing, Toothed Gears, and Toothed Pinions.

Claims use since about Apr. 22, 1914.

Ser. No. 88,976. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) ROBERT L. WARNER, Boston, Mass. Filed Sept. 1, 1915.

OBJECTIVE

Particular description of goods.—Open and Peep Sights for Firearms.

Claims use since July 28, 1915.

Ser. No. 89,665. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. G. MCDONALD CHOCOLATE COMPANY, Salt Lake City, Utah. Filed Oct. 5, 1915.

Roof Garden

Particular description of goods.—Candies and Chocolates.

Claims use since about July 28, 1915.

Ser. No. 90,209. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PEX PRODUCTS CO., Buffalo, N. Y. Filed Oct. 29, 1915.



Particular description of goods.—A Furniture-Polish.

Claims use since May 1, 1915.

Ser. No. 90,211. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MAYME JEFFERSON PEPPARD, Minneapolis, Minn. Filed Oct. 29, 1915.

KUTE KURLER KO.

Particular description of goods.—Hair-Curlers.

Claims use since about January, 1914.

Ser. No. 90,236. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OXWELD ACETYLENE COMPANY, Chicago, Ill. Filed Oct. 30, 1915.

OXWELD

Particular description of goods.—Welding-Flux.

Claims use since June 1, 1913.

Ser. No. 90,586. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LOUIS ROESSEL & CO., New York, N. Y. Filed Nov. 11, 1915.



No claim being made to the exclusive use of the word "Poplin" apart from the mark shown in the drawing.

Particular description of goods.—Poplin.

Claims use since June 10, 1915.

Ser. No. 91,075. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID MCMEEKAN MANUFACTURING CO., Brooklyn, N. Y. Filed Dec. 1, 1915.

THISTLE

Particular description of goods.—Dextrin, Starches, and Glue Used in Sizing, Tallow Compound and Vegetable Tallow Employed as Softening Agents in Manufacturing Sizing.
Claims use since 1876.

Ser. No. 91,401. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE MYSTIC MIT COMPANY, INC., New York, N. Y. Filed Dec. 11, 1915.

THE MYSTIC MIT

No claim being made to the word "Mit" apart from the mark shown in the drawing, the trade-mark comprising the words "The Mystic Mit."
Particular description of goods.—Metallic Cloths for Cleaning Purposes.
Claims use since Dec. 10, 1915.

Ser. No. 91,701. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SUTCLIFFE & BINGHAM, LIMITED, Manchester, England. Filed Dec. 22, 1915.

KKOVAH

Particular description of goods.—A Preparation for Making a Non-Alcoholic Beverage as a Medicine for the Relief of Headache, Biliousness, Flatulency, Indigestion, Heartburn, Constipation, and Hemorrhoids.
Claims use since Jan. 20, 1891.

Ser. No. 91,753. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUTHERLAND FRUIT COMPANY, Riverside, Cal. Filed Dec. 24, 1915.

BANNER

Particular description of goods.—Citrus Fruits.
Claims use since 1908.

Ser. No. 91,843. (CLASS 38. PRINTS AND PUBLICATIONS.) NATIONAL CLOAK & SUIT CO., Central Valley and New York, N. Y. Filed Dec. 30, 1915.

The NATIONAL Money Saving Style Book

Particular description of goods.—Pamphlets, Catalogues, and Magazines.
Claims use since September, 1912.

Ser. No. 91,922. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VITOLOX COMPANY, Bisbee, Ariz. Filed Jan. 4, 1916.

VITOLOX

Particular description of goods.—A Cough-Syrup, Eye-Water, Antiseptic Oil, Veterinary Absorbent, Throat-Gargle, Toothache-Drops, Preparation for Piles and Rheumatism.
Claims use since November, 1912.

Ser. No. 91,953. (CLASS 39. CLOTHING.) CROWN MERCANTILE COMPANY, Chicago, Ill. Filed Jan. 6, 1916.

DREADNAUGHT BRAND

The words "Dreadnaught Brand" being printed in red. No claim is made to the exclusive right for the use of the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Men's Overalls and Trousers.
Claims use since Jan. 1, 1915.

Ser. No. 92,037. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIGESTIVE FERMENTS CO., Detroit, Mich. Filed Jan. 10, 1916.

BACTO

Particular description of goods.—Bacteriological Products—Namely, Oxgall, Veal Powder, Beef Powder, Liver Powder, Culture Media, Peptone, Agar, Gelatin, Lactose, and Dextrose.
Claims use since May 1, 1915.

Ser. No. 92,156. (CLASS 12. CONSTRUCTION MATERIALS.) WM. CAMERON & CO., INC., Waco, Tex. Filed Jan. 15, 1916.

ARMOR

Particular description of goods.—Building-Papers, Insulating-Papers, Waterproof Papers; Roofing-Cement, a Coal-Tar Product in Plastic Form for Covering and Repairing Prepared Roofing-Felt; Roofing-Pitch; Plastic Cement, an Asphalt Product for Cementing Felt Roofing Used in Building Construction; Asphalt Shingles; Felt Shingles; Wall-Plaster; Stucco; Plaster-Boards; and Wall-Boards.
Claims use since 1909.

Ser. No. 92,262. (CLASS 39. CLOTHING.) BERKSON BROTHERS, Chicago, Ill. Filed Jan. 20, 1916.



No claim being made to the exclusive use of the word "Stockings" apart from the mark shown in the drawing.
Particular description of goods.—Hosiery.
Claims use since Jan. 8, 1916.

Ser. No. 92,328. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AARON OSTON FRIDAY, Maben, Miss. Filed Jan. 22, 1916.



Particular description of goods.—A Pile Remedy.
Claims use since Sept. 15, 1915.

Ser. No. 92,768. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) W. H. BROWN SON & CO., New York, N. Y. Filed Feb. 11, 1916.

LINENIZED CRETONNES

Comprising the letters "L C" and the design formed thereby, the exclusive use of the other features of the mark not being claimed.
Particular description of goods.—Cotton Piece Goods.
Claims use since Feb. 9, 1916.

Ser. No. 92,865. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed Feb. 15, 1916.



Particular description of goods.—Toilet-Paper.
Claims use since February, 1898.

Ser. No. 92,963. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WACKER & BIRK BRG. & MLTG. CO., Chicago, Ill. Filed Feb. 18, 1916.

Proxie

Particular description of goods.—A Non-Alcoholic Carbonated Beverage Sold as a Soft Drink.
Claims use since Nov. 24, 1915.

Ser. No. 93,238. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KRANO-ZEMA-COMPANY, Girard, Kans. Filed Mar. 2, 1916.

KRANO-ZEMA

Particular description of goods.—A Remedy for Skin Diseases, and Particularly for Eczema.
Claims use since Jan. 15, 1916.

Ser. No. 93,384. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BURHAM SAFETY RAZOR COMPANY, New York, N. Y. Filed Mar. 8, 1916.

BURHAM

Particular description of goods.—Razors and Razor-Blades.
Claims use since Mar. 1, 1907.

Ser. No. 93,563. (CLASS 17. TOBACCO PRODUCTS.) ARNOLD TIETIG & SON, Cincinnati, Ohio. Filed Mar. 15, 1916.

LA SIESTA

Particular description of goods.—Cigars.
Claims use since Mar. 19, 1894.

Ser. No. 93,590. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. A. SPENCER & SON, Boston, Mass. Filed Mar. 16, 1916.

CASCO-TAN

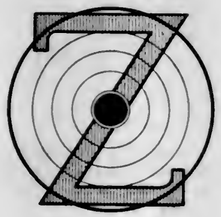
No claim is made for the use of the word "Tan" apart from the mark shown in the drawing.

Particular description of goods.—Tanning and Finishing Extracts.

Claims use since July 25, 1912.

Ser. No. 93,592. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WM. ZINSSER & CO. INC., New York, N. Y. Filed Mar. 16, 1916.

Bulls-Eye



The letter "Z" being shown in red.

Particular description of goods.—Dry, Paste, and Ready-Mixed Paints, Paint-Colors and Colors in Oil, Driers, Varnishes, Enamels, Fillers, Stains, Prepared Shellac, Linseed-Oil, Varnish-Powders, Paint-Pigments, and Turpentine.

Claims use since the year 1912.

Ser. No. 93,759. (CLASS 4. ABRASIVE, DETERGENT. AND POLISHING MATERIALS.) THE N. K. FAIRBANK COMPANY, Union township, near Guttenberg, N. J., and Chicago, Ill. Filed Mar. 22, 1916.

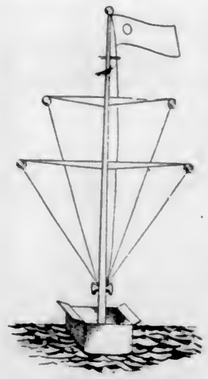
THE BUSY CLEANER

No claim being made to the words "The" and "Cleaner" apart from the mark shown in the drawing.

Particular description of goods.—Washing-Powders.

Claims use since Feb. 1, 1916.

Ser. No. 93,940. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SIDNEY H. NICHOLSON, Decatur, Ill. Filed Mar. 28, 1916.



Particular description of goods.—Sea-Breeze Hand and Face Lotion for Beautifying the Complexion and for Chapped Hands and Face.

Claims use since Sept. 1, 1915.

Ser. No. 94,009. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ELECTRIC STORAGE BATTERY CO., Philadelphia, Pa. Filed Mar. 31, 1916.



The representation of a battery is disclaimed.

Particular description of goods.—Electric Storage Batteries or Accumulators, Their Parts and Supplies.

Claims use since the 28th day of February, 1916.

Ser. No. 94,097. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Apr. 4, 1916.

METROPOLIS

Particular description of goods.—Clothes-Wringers and Parts Thereof.

Claims use since some time prior to 1890.

Ser. No. 94,098. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Apr. 4, 1916.

EUREKA

Particular description of goods.—Clothes-Wringers and Parts Thereof.

Claims use since some time prior to 1892.

Ser. No. 94,100. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Apr. 4, 1916. Under ten-year proviso.

SHERMAN

Particular description of goods.—Clothes-Wringers and Parts Thereof.

Claims use since some time prior to 1894.

Ser. No. 94,108. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Apr. 4, 1916.

WELCOME

Particular description of goods.—Clothes-Wringers and Parts Thereof.

Claims use since some time prior to 1893.

Ser. No. 94,113. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Apr. 4, 1916.

CHEMICAL

Particular description of goods.—Clothes-Wringers and Parts Thereof.

Claims use since some time prior to 1909.

Ser. No. 94,162. (CLASS 5. ADHESIVES.) ALONZO COOK, Greencastle, Ind. Filed Apr. 5, 1916.



The portrait on Cook's Film Cement labels and on the drawing is the portrait of the applicant, Alonzo Cook.

Particular description of goods.—Bottled Film-Cement Used to Mend Moving-Picture Films.

Claims use since Mar. 16, 1916.

Ser. No. 94,249. (CLASS 39. CLOTHING.) SAMUEL COOKSEY, Blackfriars, London, England. Filed Apr. 8, 1916.



No claim being made to the words "Extra Quality," "Manufactured by," "Cooksey & Co.," and "London" apart from the mark as shown.

Particular description of goods.—Hats and Caps.

Claims use since October, 1883.

Ser. No. 94,251. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE ENTERPRISE MANUFACTURING COMPANY, Akron, Ohio. Filed Apr. 8, 1916. Under ten-year proviso.

"PFLUEGER-TANDEM"

SPINNERS

Particular description of goods.—Trolling Spoons or Spinners and Artificial Bait.

Claims use since on or about Jan. 1, 1895.

Ser. No. 94,252. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE ENTERPRISE MANUFACTURING COMPANY, Akron, Ohio. Filed Apr. 8, 1916.

"PFLUEGER"

"RECORD"

Particular description of goods.—Trolling Spoons or Spinners and Artificial Bait.

Claims use since on or about Jan. 1, 1906.

Ser. No. 94,296. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OPLER BROS. INC., New York, N. Y. Filed Apr. 10, 1916.



No claim is made to the words "New York" apart from the mark shown in the drawing.

Particular description of goods.—Cocoa and Chocolate.

Claims use since July, 1915.

Ser. No. 94,307. (CLASS 32. FURNITURE AND UPHOLSTERY.) BUFFALO NOVELTY COMPANY, Buffalo, N. Y. Filed Apr. 11, 1916.



Particular description of goods.—Window-Backgrounds, Office-Partitions, Folding Screens, Sewing-Screens, Decorated Panels, and Folding Tables.
Claims use since Mar. 15, 1916.

Ser. No. 94,488. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE ROSATTO-BARRY-STREET CO., Philadelphia, Pa. Filed Apr. 17, 1916.

ACME

Particular description of goods.—Cushions on Billiard and Pocket-Billiard Tables.
Claims use since Feb. 1, 1916.

Ser. No. 94,564. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CHICLE COMPANY, New York, N. Y. Filed Apr. 20, 1916.

CHICLE

No claim is made to the term "Chicle" except as used in conjunction with the other features of the mark as shown.
Particular description of goods.—Chewing-Gum and Confections.
Claims use since Apr. 10, 1916.

Ser. No. 94,613. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN F. HINDERER, Hilliard, Ohio. Filed Apr. 21, 1916.

HINDERER'S Golden-Nugget Gall Cure

No claim is made to the words "Gall Cure" apart from the mark shown in the drawing.
Particular description of goods.—A Veterinary Medicine for Treatment of Gall.
Claims use since Apr. 5, 1916.

Ser. No. 94,636. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. SPENCER TURNER CO., New York, N. Y. Filed Apr. 22, 1916. Under ten-year proviso.

TURNER MILLS

Comprising the words "Turner Mills."
Particular description of goods.—Cotton Duck.
Claims use since about twenty-five years.

Ser. No. 94,697. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) AMERICAN PAINT & SUPPLY CO., Dallas, Tex. Filed Apr. 25, 1916.

SAFEMCO

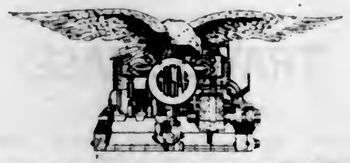
Particular description of goods.—Oxid-Red Paint, Gray Paint, Outside White Paint, Bronze-Green Paint, Maroon-Red Paint, Black Paint, Roof-Paint, and Graphite Paint; also Floor-Varnish, Inside Varnish, Outside Varnish, Furniture-Varnish, Flat Varnish, Hard-Oil-Finish Varnish, Light-Hard-Oil Varnish, and Columbia Hard-Oil Varnish.
Claims use since June 23, 1915.

Ser. No. 94,700. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE BELL TALKING MACHINE CORPORATION, New York, N. Y. Filed Apr. 25, 1916.

SCHUBERT TWO-TONE MAGNETIC MF'D. BY THE BELL TALKING MACHINE CORPORATION NEW YORK

No claim being made to all the words except "Schubert" apart from the mark shown. The trade-mark includes the picture of Franz Schubert, the famous musical composer, long since dead.
Particular description of goods.—Phonographs and Parts Thereof, Including Combined Phonographs and Their Cabinets.
Claims use since Apr. 3, 1916.

Ser. No. 94,721. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANDREW H. CLAUSS, Charleston, S. C. Filed Apr. 26, 1916.



Particular description of goods.—A Chemical Compound Used in Connection with Gasolene or Kerosene for Removing and Preventing Carbon in the Cylinders of Internal-Combustion Engines.
Claims use since Aug. 3, 1915.

Ser. No. 94,737. (CLASS 39. CLOTHING.) FELLSWAY RUBBER CO., Medford, Mass. Filed Apr. 27, 1916.

WALKMORE

The word "Walkmore," as represented in the drawing, is sought to be registered.
Particular description of goods.—Heels and Soles of Boots and Shoes.
Claims use since Apr. 1, 1916.

Ser. No. 94,774. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MAJESTIC PHONOGRAPH COMPANY, Chicago, Ill. Filed Apr. 28, 1916.

Majestic

Particular description of goods.—Talking-Machines and Talking-Machine Parts.
Claims use since on or about the 1st day of February, 1916.

Ser. No. 94,782. (CLASS 37. PAPER AND STATIONERY.) THE WHITAKER PAPER COMPANY, Cincinnati, Ohio. Filed Apr. 28, 1916.

Gold Reserve

Particular description of goods.—Bond, Writing, and Ledger Paper.
Claims use since Mar. 20, 1916.

Ser. No. 94,813. (CLASS 37. PAPER AND STATIONERY.) BOSTON INDEX CARD COMPANY, Boston, Mass. Filed May 1, 1916.

Yankee

Particular description of goods.—Writing, Printing, and Wrapping Papers.
Claims use since Apr. 1, 1914.

Ser. No. 94,814. (CLASS 38. PRINTS AND PUBLICATIONS.) BAKER-VAWTER COMPANY, Benton Harbor, Mich. Filed May 1, 1916.

Successful Banking

Said trade-mark consisting of the name "Successful Banking."
Particular description of goods.—A Periodically-Printed Magazine.
Claims use since Mar. 21, 1916.

Ser. No. 94,823. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDRIKSSTAD ELEKTROKEMISKE FABRIKER a/s F. E. F., Fredriksstad, Norway. Filed May 1, 1916.

E F F

Particular description of goods.—Metallic Sodium, Sodium Peroxid, Chlorate of Sodium, Sodium Cyanid, Metallic Potassium, Potassium Peroxid, Chlorate of Potassium, Potassium Cyanid, Chlorate of Barium.
Claims use since November, 1914.

Ser. No. 94,853. (CLASS 12. CONSTRUCTION MATERIALS.) BASIC PRODUCTS COMPANY, Kenova, W. Va. Filed May 2, 1916.

SYNDOLAG

Particular description of goods.—Refractory Material for Furnace-Linings and Similar Purposes.
Claims use since about January, 1916.

Ser. No. 94,873. (CLASS 15. OILS AND GREASES.) WILBERT B. JACOBS, Emlenton, Pa. Filed May 3, 1916.

CRYSTAL

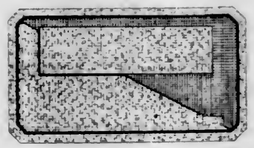
Particular description of goods.—Lubricating-Oils.
Claims use since Apr. 27, 1916.

Ser. No. 94,898. (CLASS 33. GLASSWARE.) HOLOPHANE GLASS CO. INC., New York, N. Y. Filed May 4, 1916.

DECOLITE

Particular description of goods.—Glass Bowls, Shades, and Reflectors.
Claims use since Apr. 1, 1916.

Ser. No. 94,900. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) OPPENHEIM, OBERNDORF & CO. INC., Baltimore, Md. Filed May 4, 1916.



The trade-mark consists of a substantially rectangular figure colored in black and yellow, the main bodies of the two colors being separated on a line extending diagonally across the figure. No claim is made to the exclusive use of a rectangular figure.
Particular description of goods.—Khaki Twills.
Claims use since about February, 1914.

Ser. No. 94,945. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WARE BROTHERS, Chicago, Ill. Filed May 5, 1916.

AER-IN

Particular description of goods.—Attachments for Carbureters for Gas-Engines.
Claims use since Apr. 15, 1916.

Ser. No. 94,952. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) INSULATING MATERIALS CO., Detroit, Mich. Filed May 6, 1916.

IMCo

Particular description of goods.—Electrical Insulating Materials.
Claims use since Jan. 31, 1916.

Ser. No. 94,969. (CLASS 39. CLOTHING.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed May 6, 1916.

POYNTEX

Particular description of goods.—Women's, Children's, and Infants' Coats, Cloaks, Wraps, and Capes.
Claims use since about Feb. 21, 1916.

Ser. No. 94,970. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE THOMAS MANUFACTURING COMPANY, Dayton, Ohio. Filed May 6, 1916.

ORCHESTROLA

Particular description of goods.—Phonographs or Talking-Machines.
Claims use since the 2d day of May, 1916.

Ser. No. 94,976. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) WALLACH BROS., New York, N. Y. Filed May 6, 1916.

TRAVEL-EASE

Particular description of goods.—Satchels, Suitcases, Traveling-Bags, Portfolios, and Trunks.
Claims use since Feb. 1, 1916.

Ser. No. 94,994. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROYAL EMBROIDERY WORKS; NADAY & FLEISCHER, New York, N. Y. Filed May 8, 1916.

GIVRETTE

Comprising the word "Givrette."
Particular description of goods.—Silk Piece Goods.
Claims use since Apr. 18, 1916.

Ser. No. 94,997. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CLARENCE C. SHIPP, Indianapolis, Ind. Filed May 8, 1916.

D-I

Particular description of goods.—Wall Ventilating-Boxes; Ventilating Wall-Ducts; Ventilating-Box Bases and Connections; Ventilating Air-Diffusers; Ventilating Air-Moisteners, and Ventilating-Air-Moistener Valves.
Claims use since Oct. 1, 1915.

Ser. No. 95,022. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUSTIN & RAUP CO., Detroit, Mich. Filed May 10, 1916.



Particular description of goods.—Pancake-Flour Compound, Cornmeal, Canned Hominy, Canned Sauer-Kraut, Canned Beans with Pork, Coffee, Canned Vegetables, Prepared Mustard, Pancake-Syrup, Mince-Meat, and Rice.
Claims use since January, 1916.

Ser. No. 95,024. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, New York, N. Y. Filed May 10, 1916.

TAACCO

Particular description of goods.—Poultry Feed.
Claims use since Mar. 20, 1916.

Ser. No. 95,033. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRY REMEDY CO., Greeneville, Tenn. Filed May 10, 1916.

VELVETTO

Particular description of goods.—A Liquid Remedy for Diseases of Poultry — Namely, Gapes, Roup, Cholera, Canker, White Diarrhea, Limber-Neck, Worms, White Comb, Sore Head and Eyes, and Black-Head or Bowel Trouble.
Claims use since Apr. 1, 1916.

Ser. No. 95,044. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM S. LEE, Seattle, Wash. Filed May 10, 1916.

CIGAM SALVE

The word "Salve" does not form a part of the trade-mark, and no claim is made therefor.
Particular description of goods.—A Salve.
Claims use since Apr. 7, 1916.

Ser. No. 95,074. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELDERWITCH COMPANY, Atlanta, Ga. Filed May 11, 1916.

Elderwitch

Particular description of goods.—A Liniment and Lotion.
Claims use since July 1, 1915.

Ser. No. 95,078. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY E. KENDALL, Shelby, N. C. Filed May 11, 1916.

HI-KO

Particular description of goods.—A Remedy for Corns, Calluses, and Bunions.
Claims use since Jan. 1, 1916.

Ser. No. 95,079. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY E. KENDALL, Shelby, N. C. Filed May 11, 1916.

KENTONE

Particular description of goods.—A Remedy for Dyspepsia, Indigestion, Impurities of the Blood, Nervous Disorders, and Ailments of the Stomach and Liver.
Claims use since Jan. 1, 1916.

Ser. No. 95,100. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARNATION MILK PRODUCTS COMPANY, Portland, Me., and Seattle, Wash. Filed May 12, 1916.

CARNATION

Particular description of goods.—Malted Milk.
Claims use since Jan. 12, 1916.

Ser. No. 95,101. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DE FOREST RADIO TELEPHONE AND TELEGRAPH COMPANY, New York, N. Y. Filed May 12, 1916.

AUDION

Particular description of goods.—Radio Telegraph and Telephone Apparatus.
Claims use since December, 1913.

Ser. No. 95,103. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRAIN PRODUCTS COMPANY, St. Louis, Mo. Filed May 12, 1916.

Bran-eata

Particular description of goods.—Biscuits or Cakes.
Claims use since Apr. 15, 1916.

Ser. No. 95,121. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CLENOL CO., INC., New York, N. Y., Filed May 13, 1916.

Clenol

Particular description of goods.—Tooth-Powder.
Claims use since about Apr. 21, 1916.

Ser. No. 95,122. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DUREX CHEMICAL WORKS, New York, N. Y. Filed May 13, 1916.

DUREX

Particular description of goods.—Barium Carbonate, Barium Chlorid, Barium Nitrate, Barium Sulfate, Barium Sulfid; Sodium Sulfid; Alumina Hydrate; Manganese Borate, Manganese Resinate, Manganese Sulfate; Lead, Zinc, and Barium Resinates; Barium Ore; Depilatories, and Insecticides.
Claims use since Mar. 15, 1916.

Ser. No. 95,126. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HALCRESS CO., Philadelphia, Pa. Filed May 13, 1916.

HUSH

Particular description of goods.—A Preparation for the Relief of the Odor of Perspiration.
Claims use since the 28th day of April, 1916.

Ser. No. 95,129. (CLASS 12. CONSTRUCTION MATERIALS.) THE LIGMASTIC PAVEMENT CORPORATION, New York, N. Y. Filed May 13, 1916.

LIGMASTIC

"Ligmastic."
Particular description of goods.—A Cementitious Pavement for Roadways and other Areas.
Claims use since the 17th day of April, 1916.

Ser. No. 95,132. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) STEWART PHONOGRAPH CORPORATION, Chicago, Ill. Filed May 13, 1916.

Stewart

The trade-mark is a facsimile of the signature of the president and founder of this corporation.
Particular description of goods.—Phonographs.
Claims use since Feb. 15, 1916.

Ser. No. 95,134. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVID G. VAN DUSEN, New York, N. Y. Filed May 13, 1916.

DE-LIGHTED

Particular description of goods.—Wheat-Flour.
Claims use since the month of January, 1916.

Ser. No. 95,138. (CLASS 17. TOBACCO PRODUCTS.) CALVERT DRUG COMPANY, Baltimore, Md. Filed May 15, 1916.

CALDRUCO

Particular description of goods.—Cigars.
Claims use since June 1, 1914.

Ser. No. 95,142. (CLASS 33. GLASSWARE.) J. P. EUSTIS MANUFACTURING COMPANY, Boston, Mass. Filed May 15, 1916.

The Brasscrafters

Particular description of goods.—Glass Shelves.
Claims use since July, 1901.

Ser. No. 95,143. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALPHONSE P. FOOSE, Dayton, Ohio. Filed May 15, 1916.

Medco

Particular description of goods.—Corn-Plasters.
Claims use since about June 1, 1915.

Ser. No. 95,152. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PILLSBURY FLOUR MILLS COMPANY, Minneapolis, Minn. Filed May 15, 1916.

NORTHERN KING

Particular description of goods.—Wheat-Flour.
Claims use since on or about Nov. 20, 1915.

Ser. No. 95,164. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed May 16, 1916.

LUCK

Particular description of goods.—Clothes-Wringers and Parts Thereof.
Claims use since May 5, 1916.

Ser. No. 95,165. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed May 16, 1916.

BONDED

Particular description of goods.—Clothes-Wringers and Parts Thereof.
Claims use since May 5, 1916.

Ser. No. 95,166. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed May 16, 1916.

GOOD LUCK

Particular description of goods.—Clothes-Wringers and Parts Thereof.
Claims use since May 5, 1916.

Ser. No. 95,167. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GASTON J. BLOCK, New York, N. Y. Filed May 16, 1916.

BLASCO

Particular description of goods.—Perfume, Toilet Cream, Toilet Powder, and Toilet Water.
Claims use since September, 1915.

Ser. No. 95,176. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PARKER BROTHERS, Portland, Me., and Salem, Mass. Filed May 16, 1916.

TOUCH

Particular description of goods.—Card Games.
Claims use since May 11, 1916.

Ser. No. 95,177. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PARKER BROTHERS, Portland, Me., and Salem, Mass. Filed May 16, 1916.

DIXIE

Particular description of goods.—Games.
Claims use since the 1st of April, 1912.

Ser. No. 95,189. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HARRY S. WILLIAMSON, Chicago, Ill. Filed May 16, 1916.

EDGERTEEN

Particular description of goods.—A Paste to be Applied to the Edges of Razor-Blades to Prevent Them from Becoming Dull.
Claims use since Feb. 1, 1916.

Ser. No. 95,198. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EVAN A. BARTLETT, Fairmont, W. Va. Filed May 17, 1916.



Particular description of goods.—Medicinal Powder for Poultry.
Claims use since Nov. 1, 1915.

Ser. No. 95,205. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE H. MURRY, Madison, N. C. Filed May 17, 1916.

BOTS & WORMS

The words "Bots & Worms" being hereby disclaimed.
Particular description of goods.— Stock Condition-Powder.
Claims use since the 1st day of March, 1916.

Ser. No. 95,214. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY W. ALPERS, Huntingburg, Ind. Filed May 18, 1916.



Particular description of goods.—Wheat-Flour.
Claims use since Apr. 5, 1916.

Ser. No. 95,241. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TOBEY M. SHAMBAUGH, Superior, Nebr. Filed May 18, 1916.



Particular description of goods.—Insecticide.
Claims use since May 5, 1916.

Ser. No. 95,243. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHERMAN WHITE & COMPANY, Fort Wayne, Ind. Filed May 18, 1916.



Particular description of goods.—Butter.
Claims use since 1914.

Ser. No. 95,244. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WILLIAM B. THURMAN, Madera, Cal. Filed May 18, 1916.

Builderettes

Particular description of goods.—Toy Building-Blocks.
Claims use since Jan. 1, 1916.

Ser. No. 95,247. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEORGE S. THURMAN, Madera, Cal. Filed May 18, 1916.

Squaredoodle Circus

Particular description of goods.—Toy Blocks.
Claims use since Jan. 1, 1916.

Ser. No. 95,250. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE W. R. L. COMPANY, Athens, Ga. Filed May 18, 1916.



Particular description of goods.—A Remedy for Healing Wounds, Cuts, and Bruises.
Claims use since Apr. 24, 1916.

Ser. No. 95,251. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE W. R. L. COMPANY, Athens, Ga. Filed May 18, 1916.



Particular description of goods.—A Remedy for Gonorrhea.
Claims use since Apr. 24, 1916.

Ser. No. 95,275. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PERFECT NOTION CO., INC., New York, N. Y. Filed May 19, 1916.



No claim being made to the exclusive use of the word "Perfect" apart from the mark shown in the drawing.
Particular description of goods.—Compressed Sanitary Napkins, Sanitary Napkins, Sanitary Aprons, Sanitary Bloomers, and Compressed Absorbent Cotton.
Claims use since Aug. 26, 1912.

Ser. No. 95,313. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SOUTH BEND BAIT CO., South Bend, Ind. Filed May 20, 1916.

NITE-LUMING

Particular description of goods.—Artificial Minnows, Artificial Fish-Baits, and Artificial Lures.
Claims use since Apr. 1, 1916.

Ser. No. 95,405. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) REAMS, HOPKINS, CHADBOURNE & SPARKS, Suisun, Cal. Filed May 24, 1916.



Particular description of goods.—Wrenches.
Claims use since May 16, 1916.

Ser. No. 95,412. (CLASS 39. CLOTHING.) A. J. BATES & CO. INC., New York, N. Y. Filed May 25, 1916.

Baco

Particular description of goods.—Footwear—Namely, Rubber and Leather Boots and Shoes, Rubber Boots and Shoes, and Slippers.
Claims use since May 1, 1916.

Ser. No. 95,414. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE CAROLA COMPANY, Cleveland, Ohio. Filed May 25, 1916.

CAROLA

Particular description of goods.—Phonographs.
Claims use since March, 1916.

Ser. No. 95,434. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ACME SHEAR COMPANY, Bridgeport, Conn. Filed May 26, 1916.



Particular description of goods,—Scissors and Shears.
Claims use since May 12, 1916.

Ser. No. 95,435. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ACME SHEAR COMPANY, Bridgeport, Conn. Filed May 26, 1916.

RED SUN

Particular description of goods.—Scissors and Shears.
Claims use since May 12, 1916.

Ser. No. 95,451. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) CHARLES T. SCHOEN, Media, Pa. Filed May 26, 1916.

MONOGRAM

Particular description of goods.—Music-Rolls for Player-Pianos and Like Musical Instruments.
Claims use since on or about May 1, 1916.

Ser. No. 95,458. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE THOMAS MANUFACTURING COMPANY, Dayton, Ohio. Filed May 26, 1916.

Armoniola

Particular description of goods.—Phonographs or Talking-Machines.
Claims use since the 11th day of May, 1916.

Ser. No. 95,461. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE WILLYS-OVERLAND COMPANY, Toledo, Ohio. Filed May 26, 1916.



No claim being made to the words "Toledo, Ohio" apart from the mark shown in the drawing.
Particular description of goods.—Automobiles or Motor-Cars, Motor Trucks and Trailers, and Motor-Cycles.
Claims use since Nov. 8, 1915.

Ser. No. 95,509. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMES SHOVEL & TOOL COMPANY, Jersey City, N. J., and Boston, Mass. Filed May 29, 1916.



Particular description of goods.—Shovels, Spades, and Scoops.
Claims use since the early part of 1897.

Ser. No. 95,510. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMES SHOVEL & TOOL COMPANY, Jersey City, N. J., and Boston, Mass. Filed May 29, 1916.

WRIGHTO

Particular description of goods.—Shovels, Spades, and Scoops.
Claims use since Feb. 25, 1916.

Ser. No. 95,555. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MONARCH DRUG COMPANY, Chicago, Ill. Filed May 31, 1916.

MONARCH

Particular description of goods.—Soaps, Soap Powder, and Soap Jelly.
Claims use since November, 1906.

Ser. No. 95,564. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN T. STANLEY Co., INC., New York, N. Y. Filed May 31, 1916.

CAMPUS

Comprising the word "Campus."
Particular description of goods.—Soap.
Claims use since February, 1916.

Ser. No. 95,571. (CLASS 39. CLOTHING.) GEO. A. BOND & Co., New Brunswick, N. J. Filed June 1, 1916.

LADY BETTY

Particular description of goods.—Hosiery.
Claims use since June 23, 1915.

Ser. No. 95,572. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOSEPH D. CRONAN, Portland, Oreg. Filed June 1, 1916.

MÄZEL-TOV.

Particular description of goods.—A Novelty Doll.
Claims use since about Apr. 15, 1916.

Ser. No. 95,573. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) COLGATE & Co., Jersey City, N. J., and New York, N. Y. Filed June 1, 1916.

CONVENOMIC

Particular description of goods.—Shaving and Toilet Soaps.
Claims use since May 29, 1916.

Ser. No. 95,612. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) NATIONAL PIANO MANUFACTURING COMPANY, Grand Rapids, Mich. Filed June 3, 1916.

THE CENTUNE

Particular description of goods.—Player-Pianos.
Claims use since the 26th day of May, 1916.

Ser. No. 95,618. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ARROW MFG. Co., Rochester, N. Y. Filed June 5, 1916.



Particular description of goods.—A Carpet-Cleanser.
Claims use since the middle of May, 1916.

Ser. No. 95,619. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BERNHEIM DISTILLING Co., Louisville, Ky. Filed June 5, 1916. Under ten-year proviso.

Old Moorehead

Particular description of goods.—Whisky.
Claims use since Jan. 30, 1872.

Ser. No. 95,637. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) C. H. WHEELER MANUFACTURING COMPANY, Philadelphia, Pa. Filed June 5, 1916.

HYDROVAC

Particular description of goods.—Rotary Pumps, Air-Pumps, and Entrainment-Pumps.
Claims use since May 26, 1916.

Ser. No. 95,649. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE NATIONAL JUVENILE AUTO Co., Toledo, Ohio. Filed June 6, 1916.

CYCLOMOBILE

Particular description of goods.—Juvenile Autos.
Claims use since May 1, 1916.

Ser. No. 95,653. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

FRANKLIN FS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,654. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

LINCOLN LS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,655. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

TIMES TS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,656. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

MADISON MS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,658. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

GREELEY GS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,659. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

STUYVESANT SS SQUARE

Particular description of goods.—Gloves.
Claims use since May 23, 1916.

Ser. No. 95,660. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

HERALD HS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,661. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

WASHINGTON WS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,662. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

ABINGDON AS SQUARE

Particular description of goods.—Gloves.
Claims use since about four years last past.

Ser. No. 95,669. (CLASS 39. CLOTHING.) W. B. DAVIS & SON, INC., Fort Payne, Ala. Filed June 7, 1916.

PRETTIGIRL

Particular description of goods.—Hosiery.
Claims use since May 1, 1916.

Ser. No. 95,672. (CLASS 39. CLOTHING.) HART-ALBIN Co., Billings, Mont. Filed June 7, 1916.

Madam Lucile

Particular description of goods.—Corsets.
Claims use since May 6, 1916.

TRADE-MARK REGISTRATIONS GRANTED

JULY 4, 1916.

111,152. CANNED SALMON. ALASKA-PACIFIC FISHERIES, Portland, Oreg.
Filed March 3, 1916. Serial No. 93,249. PUBLISHED APRIL 18, 1916.

111,153. POULTRY FEED. ALFOCORN MILLING COMPANY, East St. Louis, Ill.
Filed March 24, 1916. Serial No. 93,812. PUBLISHED APRIL 25, 1916.

111,154. MEDICATED TONIC NERVE FOOD. ALLEN & HANBURYS, LIMITED, London, England.
Filed February 16, 1915. Serial No. 92,887. PUBLISHED APRIL 25, 1916.

111,155. CERTAIN NAMED HEATING, LIGHTING, AND VENTILATING APPARATUS. AMERICAN DISTRICT STEAM COMPANY, North Tonawanda, N. Y.
Filed December 10, 1913. Serial No. 74,486. PUBLISHED APRIL 11, 1916.

111,156. CERTAIN NAMED STATIONERY. AMERICAN PAD & PAPER COMPANY, Holyoke, Mass.
Filed February 7, 1916. Serial No. 92,679. PUBLISHED APRIL 18, 1916.

111,157. PEANUTS. AMERICAN PEANUT CORPORATION, Norfolk, Va.
Filed March 18, 1916. Serial No. 93,620. PUBLISHED APRIL 25, 1916.

111,158. PEANUTS. AMERICAN PEANUT CORPORATION, Norfolk, Va.
Filed March 18, 1916. Serial No. 93,622. PUBLISHED APRIL 25, 1916.

111,159. VULCANIZED FIBER. AMERICAN VULCANIZED FIBRE CO., Wilmington, Del.
Filed February 19, 1916. Serial No. 92,966. PUBLISHED APRIL 25, 1916.

111,160. WASTE-BASKETS. AMERICAN VULCANIZED FIBRE CO., Wilmington, Del.
Filed February 19, 1916. Serial No. 92,967. PUBLISHED APRIL 25, 1916.

111,161. TALKING-MACHINES. LOUIS ANNIN AMES, New York, N. Y.
Filed November 4, 1915. Serial No. 90,400. PUBLISHED APRIL 25, 1916.

111,162. CANNED FRUITS. THE J. K. ARMSBY CO., San Francisco, Cal.
Filed March 16, 1916. Serial No. 93,568. PUBLISHED APRIL 25, 1916.

111,163. LUBRICATING, ILLUMINATING, AND FUEL OILS AND GREASES. AUSTIN, BRYANT & CARTER, Los Angeles, Cal.
Filed November 26, 1915. Serial No. 90,920. PUBLISHED APRIL 11, 1916.

111,164. BATHING-SUITS. OTTO AXT, New York, N. Y.
Filed March 24, 1916. Serial No. 93,813. PUBLISHED APRIL 25, 1916.

111,165. PEANUTS. THE BAIN PEANUT CO., INC., Wakefield, Va.
Filed March 18, 1916. Serial No. 93,625. PUBLISHED APRIL 25, 1916.

111,166. WATERPROOF DUCK OR KHAKI. WILLIAM L. BARRELL CO., New York, N. Y.
Filed February 18, 1916. Serial No. 92,934. PUBLISHED APRIL 25, 1916.

111,167. HAIR-TONIC AND SHAMPOO PREPARATION. H. H. BATEMAN, Missoula, Mont.
Filed February 10, 1916. Serial No. 92,743. PUBLISHED APRIL 18, 1916.

111,168. HAIR-TONIC AND SHAMPOO PREPARATION. H. H. BATEMAN, Missoula, Mont.
Filed February 10, 1916. Serial No. 92,744. PUBLISHED APRIL 18, 1916.

111,169. GRANITE IN THE ROUGH. BATTLEFIELD GRANITE CORPORATION, Fredericksburg, Va.
Filed January 28, 1915. Serial No. 84,160. PUBLISHED MARCH 30, 1915.

111,170. STAMPS OR STICKERS. BEACON ADJUSTMENT COMPANY, Springfield, Mass.
Filed January 13, 1916. Serial No. 92,099. PUBLISHED APRIL 4, 1916.

111,171. RAZORS. FRED R. BELT, Chicago, Ill.
Filed January 24, 1916. Serial No. 92,352. PUBLISHED APRIL 18, 1916.

111,172. CERTAIN NAMED FURNITURE. BEST & CO., New York, N. Y.
Filed February 21, 1916. Serial No. 92,994. PUBLISHED APRIL 25, 1916.

111,173. CERTAIN NAMED FURNITURE. BEST & CO., New York, N. Y.
Filed February 21, 1916. Serial No. 92,995. PUBLISHED APRIL 25, 1916.

111,174. CERTAIN NAMED SHEET-METAL WORK FOR BUILDINGS. BOSTON METAL CEILING AND MANUFACTURING COMPANY, Boston, Mass.
Filed February 10, 1916. Serial No. 92,745. PUBLISHED APRIL 25, 1916.

111,175. BOOTS AND SHOES MADE OF CERTAIN MATERIALS AND COMBINATIONS OF MATERIALS. BOSTON RUBBER SHOE COMPANY, Malden and Boston, Mass.
Filed March 6, 1916. Serial No. 93,329. PUBLISHED APRIL 25, 1916.

111,176. TOILET POWDER, SACHET-POWDER, TOILET WATER, BRILLIANTINE AND PERFUME, ROUGE, AND FACE-CREAM. A. BOURJOIS & CO., INC., New York, N. Y.
Filed September 18, 1915. Serial No. 89,286. PUBLISHED APRIL 11, 1916.

111,177. FACE-POWDER. A. BOURJOIS & CO., INC., New York, N. Y.
Filed January 22, 1916. Serial No. 92,321. PUBLISHED APRIL 25, 1916.

111,178. CERTAIN NAMED WATERPROOFED TEXTILES. JOHN BOYLE & COMPANY, INCORPORATED, New York, N. Y.
Filed March 9, 1916. Serial No. 93,408. PUBLISHED APRIL 25, 1916.

111,179. COFFEE. M. J. BRANDENSTEIN & CO., San Francisco, Cal.
Filed March 3, 1916. Serial No. 93,253. PUBLISHED APRIL 18, 1916.

111,180. REMEDY FOR RHEUMATISM, SPRAINS, BRUISES, BURNS, NEURALGIA, CHILBLAINS, AND INSECT-BITES. BRITISH-AMERICAN LINIMENT CO., Glens Falls, N. Y.
Filed January 26, 1916. Serial No. 92,406. PUBLISHED APRIL 25, 1916.

111,181. AUTOMOBILE INNER TUBES, BLOW-OUT PATCHES, TIRE-COVERS, RUBBER HOSE, AND CEMENTLESS PATCHES. BROWNELL AUTO CO. INC., Birmingham, Ala.
Filed January 24, 1916. Serial No. 92,354. PUBLISHED APRIL 11, 1916.

111,182. BUTTER. CALDWELL CO-OPERATIVE CREAMERY Co., Caldwell, Idaho.
Filed March 24, 1916. Serial No. 93,830. PUBLISHED APRIL 25, 1916.

111,183. DRIED PEACHES, FIGS, PRUNES, APRICOTS, APPLES, PEARS, PLUMS, SILVER PRUNES, NECTARINES, AND PAISINS. CALIFORNIA ASSOCIATED RAISIN CO., Fresno, Cal.
Filed February 21, 1916. Serial No. 93,003. PUBLISHED APRIL 4, 1916.

111,184. FRESH-PACKED ASPARAGUS IN BOXES AND BUNCHES. CALIFORNIA VEGETABLE UNION, Los Angeles, Cal.
Filed March 3, 1916. Serial No. 93,262. PUBLISHED APRIL 18, 1916.

111,185. FLAVORING EXTRACTS FOR FOODS, COCOANUT, CHOCOLATE, DESICCATED EGGS, DRIED EGGS, SPICES, ESSENTIAL OILS FOR FOODS. E. C. CAMPBELL, Boston, Mass.
Filed November 12, 1915. Serial No. 90,595. PUBLISHED APRIL 18, 1916.

111,186. LADIES', MEN'S, AND CHILDREN'S CAPS AND HATS. THE CAPANHAT CO. INC., New York, N. Y.
Filed December 28, 1915. Serial No. 91,796. PUBLISHED FEBRUARY 1, 1916.

111,187. DENTAL PREPARATION. W. A. CHAMBERLAIN, St. Louis, Mo.
Filed February 28, 1916. Serial No. 93,139. PUBLISHED APRIL 11, 1916.

111,188. BEER. CITIZENS BREWING CORPORATION, Albany, N. Y.
Filed March 30, 1916. Serial No. 93,984. PUBLISHED APRIL 25, 1916.

111,189. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. THE CLEVELAND TOOL & SUPPLY COMPANY, Cleveland, Ohio.
Filed February 21, 1916. Serial No. 93,002. PUBLISHED APRIL 25, 1916.

111,190. SODA FOR WASHING AND SCOURING USES. COLGATE & Co., Jersey City, N. J., and New York, N. Y.
Filed January 25, 1916. Serial No. 92,390. PUBLISHED MARCH 28, 1916.

111,191. WINDOW-GLASS, PLATE-GLASS, AND GLASSWARE. FREDERICK H. CONE, New York, N. Y.
Filed February 18, 1916. Serial No. 92,942. PUBLISHED APRIL 4, 1916.

111,192. GLASS. CORNING GLASS WORKS, Corning, N. Y.
Filed June 29, 1914. Serial No. 79,446. PUBLISHED AUGUST 3, 1915.

111,193. CORRUGATED-PAPER BOXES AND MAILING-WRAPPERS. CORRUGATED PAPER PRODUCTS Co., New York, N. Y.
Filed February 24, 1916. Serial No. 93,063. PUBLISHED APRIL 25, 1916.

111,194. DISK RECORDS FOR INSTRUCTION IN LANGUAGES. R. D. CORTINA COMPANY, New York, N. Y.
Filed December 11, 1915. Serial No. 91,394. PUBLISHED MARCH 28, 1916.

111,195. LIQUID STOVE-POLISH AND PASTE STOVE-POLISH. WILLIAM H. CRANDALL, San Francisco, Cal.
Filed March 3, 1916. Serial No. 93,261. PUBLISHED APRIL 11, 1916.

111,196. CARBONATED BEVERAGES, NON-ALCOHOLIC. JAY LEE CROSS, Cleveland, Ohio, assignor to The Sparkade Company, Cleveland, Ohio, a Corporation of Ohio.
Filed April 1, 1915. Serial No. 85,601. PUBLISHED APRIL 25, 1916.

111,197. SHORTENING COMPOSED OF COTTON-SEED OIL AND COTTON-SEED-OIL STEARIN. DE JARNETTE REFINING COMPANY, Montgomery, Ala.
Filed March 3, 1916. Serial No. 93,267. PUBLISHED APRIL 18, 1916.

111,198. PEANUTS. DIXIE PEANUT CO., INC., Petersburg, Va.
Filed March 18, 1916. Serial No. 93,637. PUBLISHED APRIL 25, 1916.

111,199. PEANUTS. DIXIE PEANUT CO., INC., Petersburg, Va.
Filed March 18, 1916. Serial No. 93,639. PUBLISHED APRIL 25, 1916.

111,200. LITERARY WORKS OF MRS. GENE STRATTON-PORTER. DOUBLEDAY PAGE & COMPANY, Garden City, N. Y.
Filed March 9, 1916. Serial No. 93,409. PUBLISHED APRIL 25, 1916.

111,201. MOTION-PICTURE FILMS. DOUBLEDAY PAGE & COMPANY, Garden City, N. Y.
Filed March 17, 1916. Serial No. 93,598. PUBLISHED APRIL 25, 1916.

111,202. WRITING-PAPER AND ENVELOPS. EASTERN MANUFACTURING COMPANY, Bangor, Me.
Filed December 1, 1915. Serial No. 91,059. PUBLISHED APRIL 25, 1916.

111,203. CAMERAS AND TRIPODS. EASTMAN KODAK Co., Rochester, N. Y.
Filed February 23, 1916. Serial No. 93,044. PUBLISHED APRIL 18, 1916.

111,204. CHILDREN'S DRESSES. ELITE GARMENT COMPANY OF SYRACUSE, N. Y., INC., Syracuse, N. Y.
Filed March 17, 1916. Serial No. 93,601. PUBLISHED APRIL 25, 1916.

111,205. CIGARS. MANUEL LOPEZ FERNANDEZ, Habana, Cuba.
Filed January 13, 1915. Serial No. 83,815. PUBLISHED APRIL 11, 1916.

111,206. OIL-MOPS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed February 4, 1916. Serial No. 92,624. PUBLISHED APRIL 25, 1916.

111,207. FERTILIZERS. FLORIDA SOFT PHOSPHATE & LIME Co., Ocala, Fla.
Filed February 12, 1916. Serial No. 92,807. PUBLISHED APRIL 25, 1916.

111,208. CUFF-LINKS. FLEXO CUFF LINK MANUFACTURING Co., Sheboygan, Wis.
Filed March 7, 1916. Serial No. 93,361. PUBLISHED APRIL 11, 1916.

111,209. HUMIDORS FOR CIGARS OR TOBACCO. FRANCISCO E. FONSECA, New York, N. Y.
Filed December 2, 1915. Serial No. 91,099. PUBLISHED APRIL 25, 1916.

111,210. PERFUMES, TOILET WATERS, TALCUM POWDER, SACHET-POWDER, NAIL-POLISH, FACE-POWDER, AND COLD-CREAM. FOOTE & JENKS, Jackson, Mich.
Filed January 12, 1916. Serial No. 92,077. PUBLISHED APRIL 18, 1916.

111,211. SHOCK-ABSORBERS FOR VEHICLES. FOX PNEUMATIC SHOCK-ABSORBER Co., Philadelphia, Pa.
Filed February 29, 1916. Serial No. 93,171. PUBLISHED APRIL 25, 1916.

111,212. CANNED PREPARED MEATS. L. FRANK & SON Co., Milwaukee, Wis.
Filed February 19, 1916. Serial No. 92,973. PUBLISHED APRIL 25, 1916.

111,213. SALVES AND OINTMENTS. IDA FREDRICKSON, Milton, Mass.
Filed January 19, 1916. Serial No. 92,238. PUBLISHED APRIL 11, 1916.

111,214. CERAMIC TABLEWARE. THE FRENCH CHINA COMPANY, Sebring, Ohio.
Filed March 4, 1916. Serial No. 93,301. PUBLISHED APRIL 25, 1916.

111,215. HEATING AND COOKING STOVES AND RANGES AND HOT-AIR FURNACES. GALUSHA STOVE COMPANY, Rochester, N. Y.
Filed March 4, 1916. Serial No. 93,302. PUBLISHED APRIL 18, 1916.

111,216. COAL. GARFIELD & PROCTOR COAL COMPANY, Boston, Mass.
Filed February 7, 1916. Serial No. 92,683. PUBLISHED APRIL 18, 1916.

111,217. TIRE-TAPE, RUBBER AND ADHESIVE PATCHES. GAUL, DERR & SHEARER COMPANY, Philadelphia, Pa.
Filed February 9, 1916. Serial No. 92,728. PUBLISHED APRIL 18, 1916.

111,218. ELECTRIC INCANDESCENT LAMPS. GENERAL ELECTRIC COMPANY, Schenectady, N. Y.
Filed November 16, 1914. Serial No. 82,616. PUBLISHED SEPTEMBER 7, 1915.

111,219. PERIODICALLY-PUBLISHED NEWSPAPER-SECTION. GERMAN JOURNAL CORPORATION, New York, N. Y.
Filed February 1, 1915. Serial No. 84,230. PUBLISHED APRIL 4, 1916.

111,220. CANDIES. THE GOLDEN PHEASANT, San Francisco, Cal.
Filed February 19, 1916. Serial No. 92,974. PUBLISHED APRIL 4, 1916.

111,221. COFFEE. E. E. GRAY Co., Boston, Mass.
Filed January 6, 1916. Serial No. 91,962. PUBLISHED APRIL 18, 1916.

111,222. NON-ALCOHOLIC, NON-INTOXICATING BEVERAGE USED ONLY AS A SOFT DRINK. GREEN & GREEN, Houston, Tex.
Filed March 9, 1916. Serial No. 93,411. PUBLISHED APRIL 18, 1916.

111,223. PEANUTS. GWALTNEY-BUNKLEY PEANUT Co., Smithfield, Va.
Filed March 20, 1916. Serial No. 93,701. PUBLISHED APRIL 25, 1916.

111,224. LAUNDERER'S SOURING AND CLEANING AGENT. HACHMEISTER-LIND CHEMICAL Co., Pittsburgh, Pa.
Filed December 7, 1915. Serial No. 91,271. PUBLISHED APRIL 25, 1916.

111,225. WATCH-SPRINGS. HAMMEL, RIGLANDER & Co., New York, N. Y.
Filed April 3, 1916. Serial No. 94,070. PUBLISHED APRIL 25, 1916.

111,226. COATS, VESTS, TROUSERS, OVERCOATS, AND RAIN-COATS. HART SCHAFFNER & MARX, Chicago, Ill.
Filed March 1, 1916. Serial No. 93,209. PUBLISHED APRIL 25, 1916.

111,227. COATS, VESTS, TROUSERS, OVERCOATS, AND RAIN-COATS. HART SCHAFFNER & MARX, Chicago, Ill.
Filed March 1, 1916. Serial No. 93,210. PUBLISHED APRIL 25, 1916.

111,228. GLASS DISHES AND GLASS TABLEWARE. HAZEL-ATLAS GLASS COMPANY, Wheeling, W. Va.
Filed February 5, 1916. Serial No. 92,657. PUBLISHED APRIL 4, 1916.

111,229. ICE-CREAM POWDER. B. HELLER & Co., Chicago, Ill.
Filed March 17, 1916. Serial No. 93,603. PUBLISHED APRIL 25, 1916.

111,230. TOILET-PAPER. THE JOHN HOBERG Co., Green Bay, Wis.
Filed February 15, 1916. Serial No. 92,867. PUBLISHED APRIL 25, 1916.

111,231. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET USE. HOLMAN SOAP Co., Chicago, Ill.
Filed September 3, 1915. Serial No. 89,004. PUBLISHED NOVEMBER 23, 1915.

111,232. VELVET SPONGES. FERD. T. HOPKINS & SON, New York, N. Y.
Filed December 20, 1915. Serial No. 91,613. PUBLISHED APRIL 4, 1916.

111,233. CERTAIN NAMED FOODS. HORN & HARDART BAKING COMPANY, Philadelphia, Pa.
Filed January 4, 1915. Serial No. 83,677. PUBLISHED APRIL 25, 1916.

111,234. SHEETS AND PILLOW-CASES. THE HOWLAND DRY GOODS COMPANY, Bridgeport, Conn.
Filed March 2, 1916. Serial No. 93,231. PUBLISHED APRIL 18, 1916.

111,235. TEA, COFFEE, CHOCOLATE, COCOA, SPICES, FOOD-FLAVORING EXTRACTS, AND OLIVE-OIL. THE HOWLAND DRY GOODS COMPANY, Bridgeport, Conn.
Filed March 2, 1916. Serial No. 93,232. PUBLISHED APRIL 25, 1916.

111,236. FLUID-OPERATED HAMMER-DRILLS. INGERSOLL-RAND COMPANY, Jersey City, N. J., and New York, N. Y.
Filed March 21, 1916. Serial No. 93,740. PUBLISHED APRIL 25, 1916.

111,237. SUCTION-CLEANERS AND ATTACHMENTS THEREFOR. INNOVATION ELECTRIC COMPANY, INC., New York, N. Y.
Filed October 31, 1914. Serial No. 82,299. PUBLISHED DECEMBER 14, 1915.

111,238. PREPARATION TO BE USED AS AN ANTISEPTIC AND GERMICIDE LOCALLY, HYPODERMICALLY, AND INTRAMUSCULARLY. THE INTRAVENOUS PRODUCTS COMPANY, Denver, Colo.
Filed February 5, 1916. Serial No. 92,668. PUBLISHED APRIL 25, 1916.

111,239. CERTAIN NAMED LINEN GOODS IN THE PIECE. IRELAND BROS., INC., New York, N. Y.
Filed January 27, 1916. Serial No. 92,444. PUBLISHED APRIL 11, 1916.

111,240. CIGARS AND CIGARETTES. HYMAN JACOBSTEIN, Rochester, N. Y.
Filed March 1, 1916. Serial No. 93,213. PUBLISHED APRIL 18, 1916.

111,241. WHITE-PINE BEVEL SIDING, MOLDINGS, CASING, BASE, AND FLOORING. THE R. T. JONES LUMBER COMPANY, North Tonawanda, N. Y.
Filed January 31, 1916. Serial No. 92,527. PUBLISHED FEBRUARY 29, 1916.

111,242. STOMACH-BITTERS. FRED KALINA, Pittsburgh, Pa.
Filed February 7, 1916. Serial No. 92,687. PUBLISHED APRIL 11, 1916.

111,243. REMEDY FOR BOWEL AND STOMACH DISEASES. HARRY T. KESSINGER, Joplin, Mo.
Filed February 16, 1916. Serial No. 92,896. PUBLISHED APRIL 25, 1916.

111,244. CITRUS FRUIT—VIZ., ORANGES AND GRAPE-FRUIT. KISSIMMEE CITRUS GROWERS' ASSOCIATION, Kissimmee, Fla.
Filed March 14, 1916. Serial No. 93,529. PUBLISHED APRIL 25, 1916.

111,245. CITRUS FRUIT—VIZ., ORANGES AND GRAPE-FRUIT. KISSIMMEE CITRUS GROWERS' ASSOCIATION, Kissimmee, Fla.
Filed March 14, 1916. Serial No. 93,530. PUBLISHED APRIL 25, 1916.

111,246. MEDICATED SALT FOR LIVE STOCK. SIMON N. KOHN, Cleveland, Ohio.
Filed January 24, 1916. Serial No. 92,363. PUBLISHED APRIL 25, 1916.

111,247. PNEUMATIC TIRES COMPOSED OF RUBBER. KOKOMO RUBBER CO., Kokomo, Ind.
Filed January 31, 1916. Serial No. 92,528. PUBLISHED APRIL 4, 1916.

111,248. POLISH FOR ALL METALS. KLEMENS J. KOMACKI, Chicago, Ill.
Filed March 10, 1916. Serial No. 93,433. PUBLISHED APRIL 11, 1916.

111,249. PIANOS. CHARLES J. KOPS, Great Falls, Mont.
Filed January 27, 1916. Serial No. 92,445. PUBLISHED APRIL 18, 1916.

111,250. POULTRY FEED AND STOCK FEED. THE LARROWE MILLING CO., Cohocton, N. Y., and Detroit, Mich.
Filed January 31, 1916. Serial No. 92,531. PUBLISHED APRIL 11, 1916.

111,251. FACE-CREAM. AMANDA LEBLANC, Juneau, Alaska Ter.
Filed March 6, 1916. Serial No. 93,338. PUBLISHED APRIL 25, 1916.

111,252. COUGH-SYRUP. MARIE LESSARD, Manchester, N. H.
Filed February 21, 1916. Serial No. 93,016. PUBLISHED APRIL 11, 1916.

111,253. PANAMA AND STRAW HAT BLEACH. LEWIS H. LICHTERMAN, Chicago, Ill.
Filed February 3, 1916. Serial No. 92,609. PUBLISHED MARCH 28, 1916.

111,254. LIQUID MALT PREPARATIONS HAVING DIASTASIC PROPERTIES. MALT-DIASTASE CO., New York, N. Y.
Filed March 27, 1916. Serial No. 93,913. PUBLISHED APRIL 25, 1916.

111,255. WHEAT-FLOUR. THE MANSFIELD MILLING CO., Mansfield, Ohio.
Filed August 4, 1915. Serial No. 88,414. PUBLISHED APRIL 25, 1916.

111,256. REMEDY FOR RHEUMATISM. CHARLES E. MARTIN, Jonesboro, Ark.
Filed December 14, 1915. Serial No. 91,478. PUBLISHED APRIL 25, 1916.

111,257. PASTE PAINT GROUND IN JAPAN, ESPECIALLY ADAPTED FOR COACH AND AUTOMOBILE PAINTING. JOHN W. MASURY & SON, New York, N. Y.
Filed March 20, 1916. Serial No. 93,718. PUBLISHED APRIL 25, 1916.

111,258. PASTE PAINT GROUND IN JAPAN, ESPECIALLY ADAPTED FOR COACH AND AUTOMOBILE PAINTING. JOHN W. MASURY & SON, New York, N. Y.
Filed March 20, 1916. Serial No. 93,720. PUBLISHED APRIL 25, 1916.

111,259. SALT. MICHIGAN SALT WORKS, Marine City, Mich.
Filed February 25, 1916. Serial No. 93,106. PUBLISHED APRIL 11, 1916.

111,260. COMPOSITION FOR TREATING HOG-CHOLERA. SAMUEL B. MILLER, Miller, S. D.
Filed February 7, 1916. Serial No. 92,692. PUBLISHED APRIL 18, 1916.

111,261. MALT CONTAINED IN SACKS OR CASES. MILWAUKEE MALTING COMPANY, Milwaukee, Wis.
Filed January 21, 1916. Serial No. 92,294. PUBLISHED APRIL 18, 1916.

111,262. WRITING-TABLETS, PAPETERIES, WRAPPING-PAPER, BOND-PAPERS, TOILET-PAPERS, WRITING-PAPERS, BLANK BOOKS. JAMES E. MITCHELL, Utica, N. Y.
Filed March 17, 1916. Serial No. 93,609. PUBLISHED APRIL 11, 1916.

111,263. HYDRATED LIME. THE NATIONAL LIME AND STONE COMPANY, Carey, Ohio.
Filed February 14, 1916. Serial No. 92,842. PUBLISHED APRIL 25, 1916.

111,264. PEANUTS. NORFOLK STORAGE CO., Norfolk, Va.
Filed March 18, 1916. Serial No. 93,660. PUBLISHED APRIL 25, 1916.

111,265. POLISH FOR AUTOMOBILES, FURNITURE, PIANOS, DESKS, AND HARDWOOD FLOORS. NUBRITE MANUFACTURING CO., St. Louis, Mo.
Filed March 29, 1916. Serial No. 93,973. PUBLISHED APRIL 25, 1916.

111,266. CANNED CORN AND CANNED SAUERKRAUT. OLIVIA CANNING PRESERVING & MANUFACTURING CO., Olivia, Minn.
Filed March 13, 1916. Serial No. 93,506. PUBLISHED APRIL 18, 1916.

111,267. CARPETS, MATTINGS, RUGS, BURLAP, AND BAGGINGS MADE FROM PALMETTO-PALM-LEAF FIBERS. PALMETTO PRODUCTS COMPANY, INC., New York, N. Y., assignor to Palmetto Products Company, Inc., Jacksonville, Fla., a Corporation of Florida.
Filed December 7, 1915. Serial No. 91,261. PUBLISHED APRIL 25, 1916.

111,268. CARPETS, MATTINGS, BURLAP, AND BAGGINGS MADE FROM PALMETTO-PALM-LEAF FIBERS. PALMETTO PRODUCTS COMPANY, INC., New York, N. Y. assignor to Palmetto Products Company, Inc., Jacksonville, Fla., a Corporation of Florida.
Filed December 7, 1915. Serial No. 91,262. PUBLISHED APRIL 25, 1916.

111,269. CERTAIN NAMED CONTAINERS AND PARTS THEREOF. THE PAPER VESSELS COMPANY, Baltimore, Md.
Filed February 18, 1916. Serial No. 92,951. PUBLISHED APRIL 11, 1916.

111,270. PIANO-SALESMAN'S GUIDES, CONSISTING OF A NUMBER OF CARDS EACH BEARING A PRINTED SCHEDULE. EDWARD W. PARSONS, Binghamton, N. Y.
Filed January 27, 1915. Serial No. 84,143. PUBLISHED APRIL 25, 1916.

111,271. LUBRICATING OILS AND GREASES. PETROLEUM PRODUCTS CO. OF CALIFORNIA, San Francisco Cal.
Filed March 11, 1916. Serial No. 93,470. PUBLISHED APRIL 11, 1916.

111,272. LOGANBERRY FRUIT JUICE AND SYRUP. PHEASANT FRUIT JUICE COMPANY, Salem, Oreg.
Filed March 4, 1916. Serial No. 93,314. PUBLISHED APRIL 4, 1916.

111,273. LAMP-SHADES CONSISTING OF FRAME, AND COVERING OF TEXTILE MATERIAL, PAPER, OR ANALOGOUS MATERIAL. PHILLIPSON DECORATING CO., New York, N. Y.
Filed February 17, 1914. Serial No. 75,970. PUBLISHED APRIL 25, 1916.

111,274. CIGARS. PRINCE CIGAR MFG. CO., Trenton, N. J.
Filed October 21, 1915. Serial No. 89,997. PUBLISHED APRIL 25, 1916.

111,275. CERTAIN NAMED FOODS. THE PUYALLUP & SUMNER FRUIT GROWERS ASSN., Puyallup, Wash.
Filed November 22, 1915. Serial No. 90,842. PUBLISHED APRIL 18, 1916.

111,276. ORANGES, LEMONS, AND FRESH APPLES AND FRESH VEGETABLES. WILLIAM OLIVER RANDOLPH, Los Angeles, Cal.
Filed March 13, 1916. Serial No. 93,511. PUBLISHED APRIL 18, 1916.

111,277. CERTAIN NAMED FRESH FRUITS AND VEGETABLES. REAMS & WATERMAN, Winter Garden, Fla.
Filed December 21, 1915. Serial No. 91,662. PUBLISHED APRIL 18, 1916.

111,278. SELF-RISING WHEAT-FLOUR. THE REA-PATTERSON MILLING COMPANY, Coffeyville, Kans.
Filed March 18, 1916. Serial No. 93,665. PUBLISHED APRIL 18, 1916.

111,279. SELF-RISING WHEAT-FLOUR. THE REA-PATTERSON MILLING COMPANY, Coffeyville, Kans.
Filed March 18, 1916. Serial No. 93,666. PUBLISHED APRIL 18, 1916.

111,280. BUNS OR BISCUITS. AMZI G. RECK, Columbus, Ohio.
Filed March 8, 1916. Serial No. 93,397. PUBLISHED APRIL 18, 1916.

111,281. BLUE. RECKITTS (U. S. A.) LTD., New York, N. Y., and New Brunswick, N. J.
Filed March 3, 1916. Serial No. 93,282. PUBLISHED APRIL 25, 1916.

111,282. ELECTRIC STOVES AND TOASTERS. RED-TOP ELECTRIC COMPANY, INC., New York, N. Y.
Filed March 24, 1916. Serial No. 93,858. PUBLISHED APRIL 25, 1916.

111,283. SURGICAL AND MEDICAL BANDAGES AND CUSHIONS. THE REINSCHILD CHEMICAL CO., New York, N. Y.
Filed January 5, 1916. Serial No. 91,945. PUBLISHED APRIL 25, 1916.

111,284. TEXTILE THREADS. RICHARDSON SILK CO., New York, N. Y., and Chicago, Ill.
Filed December 6, 1915. Serial No. 91,236. PUBLISHED APRIL 18, 1916.

111,285. INCANDESCENT GAS-MANTLES, INCANDESCENT GAS-MANTLES WITH ATTACHED HOLDERS, AND BURNERS THEREFOR. JACOB IGNOT ROBIN, New York, N. Y.
Filed February 2, 1916. Serial No. 92,586. PUBLISHED APRIL 18, 1916.

111,286. GARTERS. CARLOS A. RODRIGUEZ, New York, N. Y.
Filed October 6, 1915. Serial No. 89,692. PUBLISHED APRIL 18, 1916.

111,287. SILK PIECE GOODS. ROGERS & THOMPSON, INC., New York, N. Y.
Filed March 11, 1916. Serial No. 93,472. PUBLISHED APRIL 4, 1916.

111,288. RECEPTACLES WHICH ARE INTENDED TO HOLD PHONOGRAPH-DISKS, SHEET-MUSIC, LETTERS, AND OTHER ARTICLES. HENRY ROSENBERG, New York, N. Y.
Filed July 21, 1915. Serial No. 88,086. PUBLISHED APRIL 25, 1916.

111,289. BRUSHES, BROOMS, AND DUSTERS MANUFACTURED FROM BRISTLE. RUBIN, SCHUMANN COMPANY, New York, N. Y.
Filed March 14, 1916. Serial No. 93,540. PUBLISHED APRIL 18, 1916.

111,290. CERTAIN NAMED TOILET PREPARATIONS. ANNA J. RYAN, New York, N. Y.
Filed July 20, 1915. Serial No. 88,053. PUBLISHED APRIL 25, 1916.

111,291. WHEAT-FLOUR. THE ST. ANTHONY MILLING & ELEVATOR COMPANY, St. Anthony, Idaho, and Denver, Colo.
Filed November 18, 1915. Serial No. 90,739. PUBLISHED APRIL 11, 1916.

111,292. RAW SILK. GOSHIKWAISHA SANRIUSHA, Okazaki-machi, Japan.
Filed November 23, 1915. Serial No. 90,886. PUBLISHED APRIL 4, 1916.

111,293. TOILET-PAPER. SAUQUOIT PAPER CO., INC., New Hartford, N. Y.
Filed March 20, 1916. Serial No. 93,726. PUBLISHED APRIL 25, 1916.

111,294. STEAM-HEAT GENERATORS. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed August 3, 1915. Serial No. 88,401. PUBLISHED NOVEMBER 16, 1915.

111,295. WRENCHES. REGINALD F. SEDGLEY, Philadelphia, Pa.
Filed March 17, 1916. Serial No. 93,613. PUBLISHED APRIL 25, 1916.

111,296. BREAD, BISCUITS, ROLLS, CRACKERS, AND CAKE. THE GEORGE SELL BAKING & CONFECTIONERY COMPANY; Denver, Colo.
Filed October 7, 1915. Serial No. 89,721. PUBLISHED DECEMBER 7, 1915.

111,297. FUR MUFFS AND SCARFS. SHARFSTEIN & COHN, New York, N. Y.
Filed March 8, 1916. Serial No. 93,400. PUBLISHED APRIL 25, 1916.

111,298. OXYACETYLENE-TORCHES. CLARENCE C. SHIPP, Indianapolis, Ind.
Filed January 21, 1916. Serial No. 92,299. PUBLISHED APRIL 4, 1916.

111,299. REMEDY FOR RINGWORM, ITCH, AND PARASITIC SKIN DISEASES. SHUPTRINE CO., Savannah, Ga.
Filed February 17, 1916. Serial No. 92,927. PUBLISHED APRIL 25, 1916.

111,300. CERTAIN NAMED DRESS GOODS IN THE PIECE. WM. SIMPSON, SONS & CO., Philadelphia, Pa.
Filed June 4, 1915. Serial No. 87,109. PUBLISHED APRIL 25, 1916.

111,301. LEATHERS AND SKINS. SOCIETE DES ANCIENS ETABLISSEMENTS A. COMBE ET FILS ET CIE., Paris, France.
Filed January 28, 1916. Serial No. 92,482. PUBLISHED APRIL 25, 1916.

111,302. FRUIT-TREES. STARK BRO'S NURSERIES & ORCHARDS CO., Louisiana, Mo.
Filed February 5, 1916. Serial No. 92,673. PUBLISHED APRIL 25, 1916.

111,303. FRUIT SYRUPS FOR MAKING CERTAIN NAMED SOFT DRINKS. STEELE-WEDELES COMPANY, Chicago, Ill.
Filed May 17, 1915. Serial No. 86,678. PUBLISHED APRIL 25, 1916.

111,304. SHEATHING-FELTS, BUILDING-PAPERS, ROOFING-FELTS, AND ROOFING-PITCH. STEL-WAGON MANUFACTURING COMPANY, Philadelphia, Pa.
Filed November 1, 1915. Serial No. 90,290. PUBLISHED APRIL 25, 1916.

111,305. INSULATING MATERIAL. KURT R. STERNBERG, Springfield, Mass.
Filed February 21, 1916. Serial No. 93,032. PUBLISHED APRIL 4, 1916.

111,306. COTTON YARNS. FRED STERNBERG, New York, N. Y.
Filed March 11, 1916. Serial No. 93,474. PUBLISHED APRIL 18, 1916.

111,307. CAKES. THE F. O. STONE BAKING COMPANY, Cincinnati, Ohio, and Atlanta, Ga.
Filed March 9, 1916. Serial No. 93,419. PUBLISHED APRIL 18, 1916.

111,308. CRACKERS. TAGGART BAKING COMPANY, Indianapolis, Ind.
Filed January 31, 1916. Serial No. 92,542. PUBLISHED APRIL 11, 1916.

111,309. BREAD. TAGGART BAKING COMPANY, Indianapolis, Ind.
Filed January 31, 1916. Serial No. 92,543. PUBLISHED APRIL 11, 1916.

111,310. MILK, CREAM, AND BUTTERMILK. CORBIN THOMPSON, Washington, D. C.
Filed November 4, 1915. Serial No. 90,420. PUBLISHED APRIL 25, 1916.

111,311. MINIATURE GOLF-COURSES, A GAME. ALBERT WARREN TILLINGHAST, Philadelphia, Pa.
Filed December 3, 1915. Serial No. 91,117. PUBLISHED FEBRUARY 29, 1916.

111,312. COFFEE. TINDALL, KOLBE & MCDOWELL CO., Milwaukee, Wis.
Filed March 3, 1916. Serial No. 93,286. PUBLISHED APRIL 18, 1916.

111,313. COFFEE. TINDALL, KOLBE & MCDOWELL CO., Milwaukee, Wis.
Filed March 3, 1916. Serial No. 93,287. PUBLISHED APRIL 18, 1916.

111,314. WHEAT-FLOUR. THE UNITED MILLS FLOUR COMPANY, New York, N. Y.
Filed January 3, 1916. Serial No. 91,899. PUBLISHED MARCH 28, 1916.

111,315. LIQUID POLISH FOR VEHICLE-BODIES. UNITED STATES WHIP CO., Westfield, Mass.
Filed March 28, 1916. Serial No. 93,947. PUBLISHED APRIL 25, 1916.

111,316. MOVING-PICTURE FILMS. UNIVERSAL FILM MANUFACTURING COMPANY, New York, N. Y.
Filed March 13, 1916. Serial No. 93,517. PUBLISHED APRIL 4, 1916.

111,317. WHEAT-FLOUR. VAIL MILLING COMPANY, Vail, Iowa.
Filed March 18, 1916. Serial No. 93,684. PUBLISHED APRIL 18, 1916.

111,318. MUSTARD. S. J. VALK & BRO., New York, N. Y.
Filed January 29, 1916. Serial No. 92,511. PUBLISHED APRIL 4, 1916.

111,319. TRANSLUCENT MATERIAL FOR DECORATING WINDOW-GLASS. THE WALL PAPER MANUFACTURERS, LIMITED, London and Darwen, England.
Filed January 5, 1916. Serial No. 91,948. PUBLISHED APRIL 18, 1916.

111,320. SKIRT FOUNDATIONS TO PRODUCE A FLARING OR DISTENDED EFFECT. THE WARREN FEATHERBONE COMPANY, Three Oaks, Mich.
Filed August 23, 1915. Serial No. 88,773. PUBLISHED APRIL 4, 1916.

111,321. FLOWERS AND PLANTS. WEST GROVE ROSE & FLORAL CO., Westgrove, Pa.
Filed February 18, 1916. Serial No. 92,959. PUBLISHED APRIL 4, 1916.

111,322. HARDWOOD FLOORING. WEST MICHIGAN FLOORING COMPANY, Manistee, Mich.
Filed March 9, 1916. Serial No. 93,421. PUBLISHED APRIL 11, 1916.

111,323. NITROGEN-FIXING BACTERIA OR SOIL-BACTERIA. WESTERN SOIL BACTERIA CO., San Francisco, Cal.
Filed January 26, 1916. Serial No. 92,429. PUBLISHED APRIL 11, 1916.

111,324. BICYCLES AND MOTOR-CYCLES. WESTFIELD MANUFACTURING COMPANY, Westfield, Mass.
Filed December 13, 1915. Serial No. 91,463. PUBLISHED MARCH 14, 1916.

111,325. MEDICINAL TONIC. HENRY C. WHITE, Portland, Oreg.
Filed January 22, 1916. Serial No. 92,346. PUBLISHED APRIL 25, 1916.

111,326. KITCHEN AND SERVING TABLES. WHITE ENAMEL REFRIGERATOR COMPANY, St. Paul, Minn.
Filed June 8, 1915. Serial No. 87,197. PUBLISHED MARCH 28, 1916.

111,327. COTTON-WARP FABRICS WITH WOOL OR MOHAIR OR ALPACA FILLINGS. LESHER WHITMAN & CO., INC., New York, N. Y.
Filed October 20, 1915. Serial No. 89,959. PUBLISHED NOVEMBER 30, 1915.

111,328. SUGARS. WILBERT'S MYRTLE GROVE PLANTING & MANUFACTURING CO., Plaquemine, La.
Filed March 13, 1916. Serial No. 93,518. PUBLISHED APRIL 18, 1916.

111,329. DETERGENT FLUID FOR CLEANING CARPETS, CLOTHS, AND THE LIKE. JOHN E. WILLIAMS, Chicago, Ill.
Filed December 16, 1915. Serial No. 91,536. PUBLISHED MARCH 28, 1916.

111,330. CLEANING PASTES AND SOAPS. JOHN E. WILLIAMS, Chicago, Ill.
Filed January 20, 1916. Serial No. 92,278. PUBLISHED APRIL 4, 1916.

111,331. DIGESTIVE TABLETS. ORIN B. WILSON, Los Angeles, Cal.
Filed March 1, 1916. Serial No. 93,220. PUBLISHED APRIL 11, 1916.

111,332. TEXTILE RUGS. JOSEPH WITTMANN, New York, N. Y.
Filed February 18, 1916. Serial No. 92,962. PUBLISHED APRIL 25, 1916.

111,333. CERTAIN NAMED FOODS. YOUNGLOVE GROCERY CO., Tacoma, Wash.
Filed January 13, 1916. Serial No. 92,114. PUBLISHED APRIL 18, 1916.

LABELS

REGISTERED JULY 4, 1916.

19,411.—*Title:* "'EUCLID' TARRED ROOFING FELT." (For Felt Material.) BINGHAMTON SLAG ROOFING CO., INC., Binghamton, N. Y. Filed May 5, 1916.

19,412.—*Title:* "BOWL-ENE." (For a Disinfectant and Deodorizer.) BOWL-ENE MANUFACTURING COMPANY, Canton, Ohio. Filed February 18, 1916.

19,413.—*Title:* "GOLDEN STATE." (For Butter.) CALIFORNIA CENTRAL CREAMERIES, San Francisco, Cal. Filed May 9, 1916.

19,414.—*Title:* "GOLDEN STATE—GOLDEN GLOW." (For Butter.) CALIFORNIA CENTRAL CREAMERIES, San Francisco, Cal. Filed May 9, 1916.

19,415.—*Title:* "BRAN-EATA BISCUITS." (For a Food in Biscuit Form.) GRAIN PRODUCTS COMPANY, St. Louis, Mo. Filed May 12, 1916.

19,416.—*Title:* "'HARMLESS' INFLATABLE TOYS." (For Inflatable Toys.) HOWE BAUMANN BALLOON CO., Newark, N. J. Filed May 31, 1916.

19,417.—*Title:* "INFLATABLE TOYS." (For Inflatable Toys.) HOWE BAUMANN BALLOON CO., Newark, N. J. Filed May 31, 1916.

19,418.—*Title:* "OLD DUTCH." (For Varnish.) NUBIAN PAINT & VARNISH COMPANY, Chicago, Ill. Filed June 1, 1916.

19,419.—*Title:* "JAYELPI FRÈRES & CIE." (For Cigarettes.) JACOB L. & FREDERICK PINKUS, New York, N. Y. Filed June 1, 1916.

19,420.—*Title:* "SHEPARD'S HOUSE FLY AND INSECT KILLER." (For a Fly and Insect Killer.) SHEPARD'S CHEMICAL COMPANY, East Wilmington township, New Hanover county, N. C. Filed March 16, 1916.

19,421.—*Title:* "SMITH'S ORANGE SPARKLE THAT SPARKLES." (For a Beverage.) JAMES D. SMITH, Poteet, Tex. Filed May 16, 1916.

19,422.—*Title:* "CHICAGOAN SHOES." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed May 17, 1916.

19,423.—*Title:* "SPANGLER'S FAMOUS NUT BREAD." (For Bread.) JOSEPH E. SPANGLER, Minneapolis, Minn. Filed April 28, 1916.

19,424.—*Title:* "BUTTONS 1915 DESIGN." (For Buttons.) RALPH P. STEVENS, Stanford, Cal. Filed March 18, 1913.

19,425.—*Title:* "PATRIARCH." (For Cigars.) TACKABERRY CIGAR CO., De Smet, S. D. Filed May 25, 1916.

19,426.—*Title:* "DAIRY MAID." (For Canned Hominy.) WESTERN GROCER COMPANY, Marshalltown, Iowa. Filed June 5, 1916.

19,427.—*Title:* "WRIGHT'S CAKE SPECIALTIES." (For Cake.) WRIGHT CAKE COMPANY, Brooklyn, N. Y. Filed May 20, 1916.

19,428.—*Title:* "WELKUM BREAD." (For Bread.) GENERAL BAKING COMPANY, New York, N. Y. Filed June 7, 1916.

PRINTS

REGISTERED JULY 4, 1916.

4,377.—*Title:* "DO YOU KNOW A LITTLE HOUSE-MOTHER." (For Kellogg's Toasted Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,378.—*Title:* "ONE IN 17." (For a Puzzle.) HUBERT G. KINDY, Milwaukee, Wis. Filed May 22, 1916.

4,379.—*Title:* "DRINK MOXIE." (For Moxie.) THE MOXIE CO., Boston, Mass. Filed May 18, 1916.

4,380.—*Title:* "DRINK MOXIE." (For Moxie.) THE MOXIE CO., Boston, Mass. Filed May 18, 1916.

4,381.—*Title:* "EVERY LOAF IS SHAPED AND PANNED WITHOUT THE TOUCH OF HUMAN HAND." (For Ward's Tip-Top Bread.) WARD BAKING CO., New York, N. Y. Filed May 18, 1916.

4,382.—*Title:* "LET US TAILOR YOUR CLOTHES." (For Clothing.) U. S. WOOLEN MILLS COMPANY, Baltimore, Md. Filed June 8, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

BECKER *v.* BIRD.

Decided February 7, 1916.

INTERFERENCE—CONCURRENT DECISIONS BY OFFICE TRIBUNALS.

When the three tribunals of the Patent Office have reached the same conclusion on the question presented, the appellant, in order to prevail, must show clear error.

Mr. L. S. Bacon and *Mr. J. H. Milans* for the appellant.

Mr. Harrison F. Lyman and *Mr. Horace A. Dodge* for the appellee.

SHEPARD, *C. J.:*

This is an interference case, and Becker appeals from an award of priority to Bird.

Bird was the first to file his application, August 21, 1911; Becker filed February 1, 1912, and secured a patent on April 30, 1912.

The invention is defined in the declaration of interference in the following issue:

Prepared roofing comprising a sheet of fibrous material impregnated and coated with a waterproof material, said coating being varied in thickness in various fields, a coating of granular grit partially embedded in said coating in the fields of least thickness, and a similar coating completely embedded in the fields of greater thickness.

Becker filed a motion to dissolve the interference on the ground that Bird had no right to make the claim.

This question was decided against him by the Primary Examiner and the successive tribunals of the Board, concluding with the decision of the Commissioner.

The reasoning in their decisions is satisfactory to us, and we content ourselves with merely referring to them.

Such a unanimous decision by the experts of the Patent Office will be accepted as conclusive when there is no palpable error. We find none such. (*Kilbourn* v. *Hirner*, 29 App. D. C., 54–57; *Lindmark* v. *Hodgkinson*, 31 App. D. C., 612.)

Becker being the junior party had to establish a date of conception prior to Bird's, and either reduction to practice, or diligence thereabout, prior to Bird's filing date. He claimed conception in July, 1907, but that claim is uncorroborated. He testified that in May, 1911, he completed a piece of roofing by hand and nailed it upon the fence near his office, where it could be seen by the public, and where he claimed that it remained for more than a year.

All of the tribunals of the Patent Office discussed the evidence of this reduction to practice and were unanimous in holding that it was insufficient, and held that Becker must be restricted to his filing date for both conception and reduction to practice.

Customarily the unanimous decisions of the Patent Office tribunals on a question of fact will be accepted by this court, and the party attacking the same must make a plain case of error.

Becker has attacked the decision on this point and claims that it is contrary to the evidence. We need not, however, consider that question, but will turn to Bird's evidence.

This evidence establishes Bird's conception of the invention of the issue June 15, 1909. He then disclosed his conception to several of his skilled employees, and set them to work in carrying it out. Two or three different kinds of paints were used by these, but one of them, using an asphalt base paint which amalgamated with the paint on the felt paper that was used, arranged the same in a design to imitate shingles. This was about July 3, 1909.

This was put upon a roof which was used for experiments and remained there nearly a year, demonstrating its lasting qualities.

As his proof of conception was earlier than Becker's, and this was a substantial reduction to practice, coupled with the fact that he had filed his application prior to Becker's, we think the Commissioner was right in declaring priority in his favor.

This decision is affirmed, and the clerk will certify this decision to the Commissioner of Patents.

Affirmed.

Court of Appeals of the District of Columbia.

GAMMETER *v.* NEIDICH AND O'KANE. NEIDICH *v.* GAMMETER AND O'KANE. NEIDICH *v.* LIEBENTHAL. LIEBENTHAL *v.* NEIDICH.

Decided April 24, 1916.

INTERFERENCE—PRIORITY.

Evidence *Held* to justify the award of priority made by the Office in each of the interferences.

Mr. Albert H. Bates for Gammeter.

Mr. Albert H. Bates for Neidich.

Mr. Arthur E. Paige for Neidich and O'Kane.

Mr. Arthur E. Paige for Gammeter and O'Kane.

Mr. H. F. Riley and *Mr. Arthur E. Paige* for Liebenthal.

SHEPARD, *C. J.*:

The decisions appealed from in this case are in four interferences, numbered, respectively, No. 36,042, No. 36,322, No. 36,321 and No. 36,522, all relating to the same subject-matter, which is a device adapted to be attached to the rotary drum of a duplicating-machine for the purpose of printing vertical lines on the sheets passed through the machine. The drums of such machines are made up of parallel rails with overhanging edges, thus providing longitudinal undercut channels in which type is mounted. The device in controversy comprises in general an arcual rule-strip which extends across the parallel rails of the drum and is held in place between the type. The issues of the interferences involve certain details in the means for fastening and supporting the rule-strip.

The parties to the several interferences are Herman G. Liebenthal, who has a patent issued December 31, 1912, upon an application filed October 11, 1912; Samuel A. Neidich, application filed April 10, 1913; Katherine R. O'Kane, application filed June 12, 1913; and Harry C. Gammeter, application filed July 21, 1913. The American Multigraph Company is the assignee of Neidich and Gammeter and O'Kane owns the Liebenthal patent. All four parties were included in interference No. 36,042. The issue involved in each is the following:

In a duplicating machine, the combination, with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels; and a rule strip having a printing surface curved in concentric relation with said drum, held between said flange type, and having lugs fitted in said channels.

Interference 36,322 includes Neidich and Liebenthal, and the issue declared therein is the following:

1. In a duplicating machine, the combination with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels; and, a rule strip having a printing surface curved in concentric relation with said drum, held between said flanged type, having lugs fitted in said channels and having flanges engaged by the overhanging ledges in channels.

2. In a duplicating machine, the combination with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels; and, a rule strip having a printing surface curved in concentric relation with said drum, held between said flanged type, having supporting flanges extending laterally upon opposite sides of said printing surface and bearing upon said drum, and, lugs on said rule strip fitted in said channels and having flanges engaged by the overhanging ledges in said channels.

Interference 36,521 includes Gammeter, Neidich and O'Kane, and has the following issue:

1. In a duplicating machine, the combination, with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels; and a rule strip having a printing surface curved in concentric relation with said drum, having means connecting it with said drum independently of said type.

2. In a duplicating machine, the combination, with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels and a member having a printing surface curved in concentric relation with said drum, having means connecting it with said drum independently of said type.

Interference 36,522 includes Gammeter, Neidich and O'Kane, and the issue therein is the following:

1. In a duplicating machine, the combination, with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels, and a rule strip having a printing surface curved in concentric relation with said drum held between said flanged type having supporting flanges extending laterally upon opposite sides of said printing surface and bearing upon said drum, and lugs on said rule strip fitted in said channels.

2. In a duplicating machine, the combination, with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels, and a rule strip having a printing surface curved in concentric relation with said drum held between said flanged type and having a supporting flange extending laterally and bearing upon said drum.

By stipulation of the parties the evidence taken in 36,042 was to be used in all the cases, and it was reviewed in 36,042 which was regarded as the one of greatest importance.

The Examiner of Interferences in this case awarded priority to O'Kane of all the counts.

Gammeter alleged conception and reduction to practice in the year 1906. The Examiner of Interferences held that Gammeter was entitled to conception in 1906, but denied his reduction to practice, holding that from the evidence and all the surrounding circumstances that his alleged reduction to practice was but an abandoned experiment. He then considered the proofs on behalf of O'Kane and Liebenthal. O'Kane who was the proprietor of a printing establishment in Philadelphia, using a number of multigraphs, claimed conception of the idea of the vertical rule for use in said machines and reduction to practice on July 8, 1910. In the execution of this idea she used a string which was mounted on spacing-type and held at each end by rubber plugs inserted in the channels of the drum. This construction did not conform to the issue, and was held not to be reduction to practice. The second construction by O'Kane for printing vertical lines was a strip of thin metal on which was mounted a round wire. Both strip and wire had the ends cut off to engage in the channels of the drum for holding the rule in place. It was held that this was used in the latter part of the year 1910, but not a reduction to practice of the issue in 36,522, which includes a flange or flanges on the rule-strip, but was held to be a reduction to practice in 36,042 in which the issue merely requires that the rule-strip be provided with lugs fitted in the channels or means for connecting it with the drum, the bent ends of the wire and strip being believed to respond to that issue. Although it responded to the issue it was held to be an abandoned experiment.

After this Miss O'Kane employed Liebenthal early in 1911, who, at her suggestion, made a flat rule-strip, which did not respond to the issues of the interferences. This strip did not hold securely, and Liebenthal produced for O'Kane a brass rule with

a base-flange, another with straight projections, and another with base-flanges. These were made in August, 1911, at which time Liebenthal had entered into the employ of O'Kane. In February, 1912, steps were taken to procure the manufacture of these last rules, but nothing was accomplished until the latter part of 1912. Liebenthal applied for a patent on this construction October 11, 1912. For the services of the patent solicitor in this case O'Kane paid the fees. It was held that because of the relation of employer and employee O'Kane was entitled to anything done by Liebenthal which was merely ancillary to the invention he was employed to develop. This entitled her to all the devices of Liebenthal except the rule with two base-flanges, which is involved in interference 36,322. Liebenthal has conceded to O'Kane the subject-matter covered by the claims of his patent 2, 3, 4, and 7. This concession was held to cover also 6, which is broader than claim 7, and claim 2 is more limited than 6. O'Kane was held to be the inventor of the issue in 36,042. Early in 1913 O'Kane's commercial rule was put upon the market.

Neidich was connected with a company called the Flexotype Company, which was afterward sold to the American Multigraph Company, and Neidich has been since in the employ of that company. The Flexotype Company used a flexible blanket for its work, which was to be withdrawn and laid flat for file. Neidich's Bridgeport brass rule was used, but was not entirely satisfactory. Next Neidich produced the Lino-Tabler rule in August, 1911. This rule was considered by the Examiner of Interferences not to embody the issue. His stamped rule was held to involve the issue, and a number were sold to the Southern Railway Company in October, 1911. The evidence of use by the Southern Railway Company was held to be insufficient by the Examiner of Interferences. He further found that neither Gammeter nor Neidich was entitled to reduction to practice until their filing date. He finally held that O'Kane had been diligent in the perfection of her invention when Neidich entered the field, and awarded priority to her of the subject-matter of 36,042.

The Examiners-in-Chief, to whom appeal was taken by Gammeter and Neidich, affirmed the decision of the Examiner of Interferences. They held that Neidich was entitled to conception as early as March 13, 1911. They also held that the Neidich rule had been reduced to practice in October, 1911, by the Southern Railway Company, and held that as to interference 36,521, and count 1 of interference 36,322 he was entitled to March 13, 1911, and August 24, 1911, for his conception of the issue in 36,042, but as to interference 36,322 he did not allege conception until August 10, 1911. They awarded priority to O'Kane as having been the first to conceive, and diligent in the perfection of her invention and reduction to practice when her adversaries entered the field.

The Commissioner, agreeing with the Examiners-in-Chief, affirmed their decision, awarding priority to O'Kane.

In interference 36,522 the Examiner of Interferences awarded priority to Liebenthal of both counts of the issue. The Examiners-in-Chief reversed this decision as to count 1, and affirmed it as to count 2. Appeals by each party were taken to the Commissioner, who affirmed the decisions of the Examiners-in-Chief.

All parties have appealed from the final decisions.

The testimony has been reviewed at length, and with fairness, in the decision made in No. 36,042. Having carefully examined the testimony, which it is unnecessary to again review, we are not convinced that any error has been shown in the decisions of the Commissioner, and they are affirmed.

The clerk will certify this decision to the Commissioner of Patents.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Fisher patent, No. 793,779, for a savings-bank, *Held* valid, and also infringed as to claims 1, 5, 6, 7, and 8, and not infringed as to claims 2, 3, and 4. *Automatic Recording Safe Co. v. Burns Co.*, 231 Fed. Rep., 985.

(U. S. C. C. A.) The Rice patent, No. 822,302, for an amusement-vehicle, *Held* void for lack of invention. *Rice v. Palisades Realty & Amusement Co.*, 231 Fed. Rep., 997.

(U. S. C. C. A.) The Phillips patent, No. 950,402, for gearing for washing-machines, *Held* void as an aggregation of old elements. *E. E. Johnson Co. v. Grinnell Washing Mach. Co.*, 231 Fed. Rep., 988.

(U. S. C. C. A.) The Parkin patent, No. 968,587, for a carbureter, *Held* void for lack of invention in view of the prior art. *Locomobile Co. of America v. Parkin*, 231 Fed. Rep., 980.

(U. S. C. C. A.) The Hutten and McDougall patent, No. 1,016,153, for folding eyeglasses, *Held* void for lack of invention. *Hutten v. Frank Krementz Co.*, 231 Fed. Rep., 973.

(U. S. C. C. A.) The Parkin patent, No. 1,082,762, for an improvement on a carbureter, *Held* void for lack of invention in view of the prior art. *Locomobile Co. of America v. Parkin*, 231 Fed. Rep., 980.

Adverse Decisions in Interference.

PATENT NO. 1,085,482.

On May 9, 1916, a decision was rendered that Sydney I. Prescott was not the first inventor of the subject-matter covered by claims 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, and 91 of his Patent No. 1,085,482, subject, "Engine-starting devices," and no appeal having been taken within the time allowed such decision has become final.

Interference Notice

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 21, 1916.

Boessneck, Broesel & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of M. Heminway & Sons Silk Company, of Watertown, Conn., for registration of a trade-mark and trade-mark registered May 14, 1901, No. 36,400, to Boessneck, Broesel & Co., 464 Broome street, New York, N. Y., and a notice of such declaration sent by registered mail to said Boessneck, Broesel & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Boessneck, Broesel & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

[Vol. 228. No. 1.]

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 228—No. 2. TUESDAY, JULY 11, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JULY 11, 1916	411
ADVERSE DECISIONS IN INTERFERENCE	411
DISCLAIMER	411
DELIVERY OF PATENT	411
APPLICATIONS UNDER EXAMINATION	412
PATENTS GRANTED	413
REISSUES	723
DESIGNS	723
TRADE-MARKS—REGISTRATION APPLIED FOR	735
TRADE-MARK REGISTRATIONS GRANTED	755
LABELS AND PRINTS	759
DECISIONS OF THE U. S. COURTS—	
The Barrett Company and Schutte v. Ewing, Commissioner of Patents	761
ADJUDICATED PATENTS	763
INTERFERENCE NOTICES	763

ISSUE OF JULY 11, 1916.

Patents	881	No. 1,190,258 to No. 1,191,138,	inclusive.
Designs	55	No. 49,324 to No. 49,378,	inclusive.
Trade-Marks	102	No. 111,334 to No. 111,435,	inclusive.
Labels	12	No. 19,429 to No. 19,440,	inclusive.
Prints	16	No. 4,383 to No. 4,398,	inclusive.
Reissues	1	No. 14,164.	
Total	1067		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	10	.....	North Carolina	4	14
Arizona	2	.....	North Dakota	3	.....
Arkansas	3	1	Ohio	64	6
California	45	7	Oklahoma	9	1
Colorado	9	.....	Oregon	13	.....
Connecticut	10	2	Pennsylvania	81	3
Delaware	2	.....	Rhode Island	4	.....
Florida	4	1	South Carolina	9	1
Georgia	5	1	South Dakota	2	1
Idaho	4	.....	Tennessee	6	.....
Illinois	86	10	Texas	9	3
Indiana	25	2	Utah	2	.....
Iowa	20	1	Vermont	2	.....
Kansas	14	1	Virginia	3	2
Kentucky	8	2	Washington	13	1
Louisiana	2	1	West Virginia	8	1
Maine	2	1	Wisconsin	22	2
Maryland	5	.....	Wyoming	1	.....
Massachusetts	51	4			
Michigan	41	5	Alaska, District of	.....	.....
Minnesota	12	5	Canal Zone	.....	.....
Mississippi	1	.....	District of Columbia	3	.....
Missouri	22	4	Hawaii Territory	1	.....
Montana	9	1	Philippine Islands	.....	.....
Nebraska	4	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	1	.....
New Jersey	44	5			
New Mexico	.....	.....	Total to residents of the United States.	873	129
New York	172	40			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	.....	.....
Belgium	1	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	20	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
China	1	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	.....	.....
Denmark	.....	.....	South Australia	.....	.....
England	14	.....	Spain	.....	1
Finland	.....	.....	Sweden	1	.....
France	9	.....	Switzerland	3	.....
Germany	9	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	3	.....	Total to residents of foreign countries	63	1
Japan	.....	.....			
Mexico	.....	.....			

Adverse Decisions in Interference.

PATENT NO. 1,122,556.

On June 10, 1916, a decision was rendered that Franklin J. Truby was not the first inventor of the subject-matter covered by claim 3 of his Patent No. 1,122,556, subject, "Automatic trunking systems," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,126,679.

On June 10, 1916, a decision was rendered that William Arter was not the first inventor of the subject-matter covered by claims 15 and 17 of his Patent No. 1,126,679, subject, "Valve mechanism," and no appeal having been taken within the time allowed such decision has become final.

Disclaimer.

1,166,787.—*Frank E. Russell*, Alameda, Cal. THROTTLE-LEVER MECHANISM. Patent dated January 4, 1916.

Disclaimer filed July 6, 1916, by the patentee.

Enters this disclaimer to, and disclaims, the entire subject-matter claimed in said Letters Patent.

Delivery of Patent.

RULE 169. The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 8, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 11	June 2	330
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Feb. 12	May 1	596
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	June 24	June 22	73
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	May 23	June 23	207
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 17	May 17	257
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 4	June 9	321
312	7. Educational Appliances; Clutches, Games and Toys; Motors; Optics; Velocipedes.	Feb. 24	May 2	505
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 24	June 8	1297
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Feb. 7	June 1	511
235	10. Carriages and Wagons	Feb. 21	June 3	776
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 17	June 27	120
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 10	June 16	546
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 10	June 9	429
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 5	June 2	262
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated-Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 13	June 17	287
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Jan. 24	May 17	...
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 13	June 1	246
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	June 12	June 2	121
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	May 6	June 3	177
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	June 20	June 15	120

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Apr. 4	June 5	266
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 9	May 16	385
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 1	Mar. 13	506
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 10	May 8	365
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 31	June 12	150
106	26. Electricity, Generation; Motive Power.	Jan. 4	May 5	553
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 18	June 9	215
65	28. Internal-Combustion Engines	Mar. 14	June 9	441
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Mar. 29	June 3	320
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 21	June 8	297
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	June 1	368
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 3	June 21	692
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 11	May 31	414
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 28	Apr. 22	323
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Feb. 19	June 13	502
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Mar. 9	May 29	849
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 26	May 26	656
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	June 3	June 1	242
321	39. Water Distribution	Feb. 19	May 5	371
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 2	June 12	742
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Mar. 18	June 1	352
244	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Nov. 8	Mar. 27	699
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 3	June 10	111

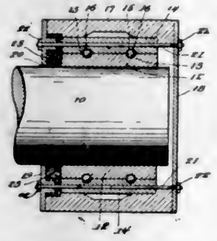
Oldest new case, Nov. 8; oldest amended, Mar. 13.
Total number of applications awaiting action..... 17,551

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 22	June 12	838
	Designs	June 2	June 2	230
	Labels and Prints	June 14	June 17	82

PATENTS

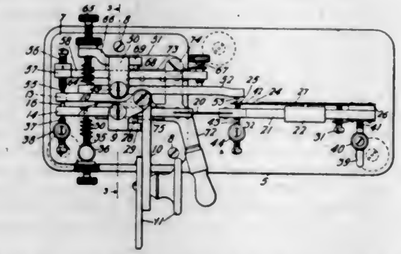
GRANTED JULY 11, 1916.

1,190,258. ANTIFRICTION-HUB. HARRY L. ALDER and HENRY E. GILFERT, Stockton, Cal. Filed Jan. 25, 1913. Serial No. 744,076. (Cl. 64—36.)



In a device of the character described a bushing ring, a collar rotatably mounted upon said bushing ring, antifriction means positioned between said collar and ring, a hub fitting upon said collar and being provided at one end with an inwardly extending abutment flange engaging said collar and having its opposite end portion extending beyond the ends of said ring and collar, a plate fitting against the extending end of said hub and extending in spaced relation to said collar and bushing to provide a packing pocket, said plate being provided with a central opening positioned in alinement with the central opening of said bushing and having enlargements formed upon the inner face of said plate and extending into the space between said plate and the ends of said collar and bushing ring to provide securing means for packing plates therein, a closure plate fitting against the opposite end of said hub, and securing means extending through said collar and connected with said plates to hold the same in tight engagement with said hub.

1,190,259. TELEGRAPH-KEY. ROY M. ALLEN, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 29, 1914. Serial No. 841,872. (Cl. 178—82.)



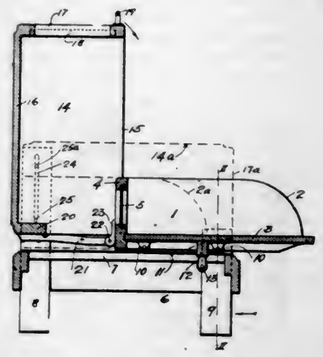
1. A telegraph key comprising a contact-carrying lever, a vibrator, a spring member mounted upon the free end of said vibrator and parallel thereto, a contact carried on the free end of said spring member and in the plane of vibration of said vibrator, and a device for actuating said contact-carrying lever to produce dashes and said vibrator to produce dots.

2. A telegraph key comprising a contact-carrying lever, a vibrator having an opening therein, a spring member mounted upon the free end of said vibrator and parallel thereto, a contact carried on the free end of said spring member and in the plane of vibration of said vibrator, an adjustable stop pin for said contact passing through said opening, and means for actuating said contact-carrying lever to produce dashes and said vibrator to produce dots.

3. A telegraph key comprising a pivoted lever, a contact carried thereby, a vibrator, a leaf spring mounted on the free end of said vibrator and parallel thereto, a contact carried on the free end of said leaf spring and in the plane of vibration of said vibrator, a floating key lever adapted to be moved in one direction to actuate said vibrator to cause engagement of said contacts to produce dots, and in the other direction to actuate said lever to move the contact carried thereby into engagement with said other contact to produce dashes.

4. A telegraph key comprising a pivoted lever, a contact carried thereby, a vibrator having an opening therein, a leaf spring mounted upon the free end of said vibrator and parallel thereto, a contact carried on the free end of said leaf spring and in the plane of vibration of said vibrator, a floating key lever adapted to be moved in one direction to actuate said vibrator to cause engagement of said contacts to produce dots and in the other direction to actuate said lever to move the contact carried thereby into engagement with said other contact to produce dashes, and an adjustable stop pin passing through the opening in said vibrator and into engagement with the vibrator contact to maintain said contact stationary when producing dashes.

1,190,260. SANITARY MEAT-CASE. JOSEPH BERRETTA, Buntyn, Tenn. Filed Oct. 13, 1915. Serial No. 55,662. (Cl. 45—71.)



1. In a sanitary meat case, the combination with a base, slotted guides integral therewith at one end thereof extending upward therefrom, and a drawer resting on said base and longitudinally movable thereon, of a cover hinged to one end of said drawer near the bottom thereof and pins extending outward from the sides of said cover near the top thereof and engaging the slots of said guides to give a direct thrust to move said drawer forward when

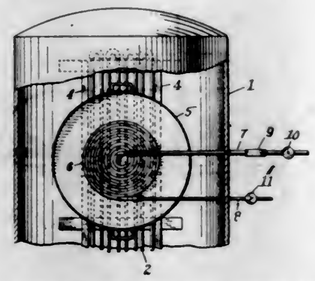
said cover is opened and to pull said drawer back when said cover is closed.

2. In a sanitary meat case, the combination with a base having an opening therein, slotted guides integral therewith at one end thereof extending upward therefrom, a drawer, rollers fastened to the bottom of said drawer and resting on said base, and a yoke attached to and extending through the said opening in and engaging the under portion of, said base; of a cover hinged to one end of said drawer near the bottom thereof and pins extending outward from said cover near the top thereof and engaging the slots of said guides to give a direct thrust to move said drawer when said cover is opened and to pull said drawer back when said cover is closed.

3. In a sanitary meat case, the combination with a base, slotted guides integral therewith and extending upward therefrom, a drawer, having one end closed and one end open, resting on said base and longitudinally movable thereon, and a window in the closed end of said drawer, of a cover having sides and one end, adapted when closed, to inclose the sides and open end of said drawer and to rest on said base, and one end adapted to rest on the closed end of said drawer, said cover being hinged to the closed end of said drawer near the bottom thereof, and pins extending outward from the sides of said cover near the top thereof and engaging the slots of said guides, to give a direct thrust to move the drawer forward and backward when the cover is opened and closed.

4. In a sanitary meat case, the combination with a base having a longitudinal opening therethrough, slotted guides integral with base at one end thereof extending upward therefrom, a drawer, having one end closed and one end open, resting on said base and longitudinally movable thereon, said drawer having a window in the closed end thereof, and a yoke projecting downward from said drawer through the opening in said base and engaging the lower side thereof, of a cover having sides and one end, adapted when closed, to inclose the sides and open end of said drawer, and to rest on said base, and one end adapted to rest on the closed end of said drawer, said cover being hinged to the closed end of said drawer near the bottom thereof, and pins extending outward from the sides of said cover near the top thereof and engaging the slots of said guides, to give a direct thrust to move said drawer forward and backward when said cover is opened and closed.

1,190,261. METHOD OF MAKING VULCANIZED-RUBBER ARTICLES. HARRY G. BLANCHARD, New York, N. Y., and FRANK DUESLER, Cleveland, Ohio, assignors to The Mechanical Rubber Company, a Corporation of New Jersey. Filed Oct. 14, 1914. Serial No. 866,708. (Cl. 154—8.)



1. The method of making rubber articles which comprises forming the article of unvulcanized rubber stock, treating one portion or surface thereof with a vaporable fluid medium and treating another portion or surface thereof with another fluid heat conveying medium of different character.

2. The method of making rubber articles which comprises forming the article of unvulcanized rubber stock, treating one portion or surface thereof with a vaporous heat carrying medium and another portion or surface thereof with a gaseous heat carrying medium.

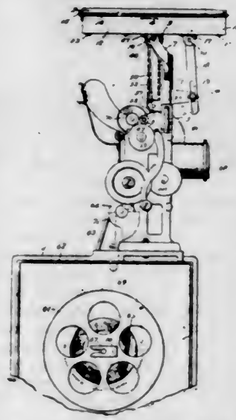
3. The method of making rubber articles which comprises forming the article of unvulcanized rubber stock, treating one portion or surface thereof with steam and another portion or surface thereof with dry heated air.

4. The method of making hollow rubber articles which comprises forming the article of unvulcanized rubber stock, treating the interior thereof with a vaporable fluid heat conveying medium, and treating the exterior thereof with another fluid heat conveying medium of different character.

5. The method of making hollow rubber articles which comprises forming the article of unvulcanized rubber stock, treating the interior thereof with a vaporable heat conveying medium, and the exterior thereof with a dry fluid heat conveying medium.

[Claims 6 to 18 not printed in the Gazette.]

1,190,262. FILM-UNWINDING APPARATUS. JOHN B. CARROLL, Chicago, Ill. Filed Sept. 15, 1915. Serial No. 50,817. (Cl. 88—18.7.)



1. A film unwinding device, comprising, in combination, independent, annular, revoluble film supports arranged one within the other to rotate around a common vertical axis, film guiding means located within the aperture of the inner support for guiding the inner convolution of a film to unwind it, and means for positively rotating said inner film support.

2. A film unwinding device comprising, in combination, independent annular revoluble, horizontally arranged coaxial film supports, central film guiding means located within the aperture of the inner support for guiding the inner convolution of a film downwardly to feeding means, and means for positively rotating said inner film support.

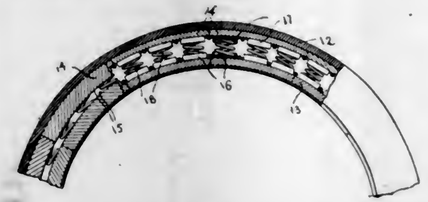
3. A film unwinding device, comprising, in combination, independent, annular film supports arranged to rotate around a common vertical axis, said supports being located substantially in a common plane, film guiding means situated within the aperture of the inner support for guiding the inner convolution of a film to feeding means, means for positively rotating said inner film support, a projector, positively actuated film feeding means therefor, and means for winding a film.

4. A film unwinding device, comprising in combination, main and auxiliary annular film supports, the latter being located within the central opening of the former, while both are independently rotatable around a common vertical axis, stationary supporting means therefor, a portion of which is located within the central opening of said auxiliary support, said portion having a film slot therein, guiding means for said portion for guiding a film from said film supports into said slot, means for rotating said auxiliary support and film feeding means.

5. A film unwinding device, comprising in combination, two annular revoluble film holders, one of which is located within the central opening of the other to rotate independently around a common vertical axis, a stationary support having a film slot therein within the circular opening of said inner film holder, film guiding means upon said stationary support arranged to guide the film from the inner convolution of the film coil into said film slot, film feeding means and means for winding said film.

[Claims 6 to 11 not printed in the Gazette.]

1,190,263. SPRING-TIRE. TÉLESPHORE COMEAU, Lawrence, Mass. Filed Nov. 13, 1915. Serial No. 61,234. (Cl. 152—8.)



1. A tire comprising an outer shoe, inner and outer pads within the shoe and spaced from each other to provide an air chamber, and springs for normally preserving the pads in spaced relationship, the outer shoe completely inclosing the pads and in cross section presenting a substantially cylindrical inner wall, the pads being of elastic material and externally formed to closely fit the inner wall of said shoe to prevent the passage of air between the contacting surfaces of the pads and shoe, the inner faces of the pads having metallic pockets inclosing the ends of the springs and preventing them from shifting, the said pockets being directly connected together to prevent one from yielding without transmitting movement to adjacent spring-holding pockets.

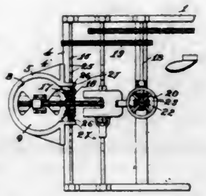
2. A tire comprising an outer shoe, inner and outer pads within the shoe and spaced from each other to provide an air chamber, radially arranged coiled springs between the pads, and an endless series of seats for the outer ends of the springs, said seats being directly pivoted together, the pads closely fitting the interior of the shoe and having opposing abutting faces relatively spaced to permit them to contact with each other and prevent excessive collapsing of the springs.

3. A tire comprising an outer shoe, inner and outer pads within the shoe and spaced from each other to provide an air chamber, radially arranged coiled springs between the pads, and an endless series of seats for the outer ends of the springs, said seats being directly pivoted together, each of said seats comprising a plate having two of its marginal portions bent to form walls to confine the end of a spring and having its other two marginal portions bent to form eyes for a pintle.

4. A tire comprising an outer shoe, inner and outer pads within the shoe and spaced from each other, the opposing faces of the pads having longitudinal grooves, inner and outer links directly hinged together and lying in said grooves, and a pair of coiled springs secured to each inner link and adapted to oppose movement of an outer link toward an inner link, one of the springs of each pair being shorter than the other.

1,190,264. STEERING MECHANISM FOR TRACTORS. EDWARD W. COOK, Galion, Ohio. Original application filed Apr. 19, 1915, Serial No. 22,341. Divided and this application filed Sept. 2, 1915. Serial No. 48,599. (Cl. 21—202.)

1. A frame mounted upon wheels, a bracket mounted upon said frame and adapted to be laterally adjusted thereon, a fifth wheel rotatably mounted in said bracket, a tractor carried by said fifth wheel, a shaft mounted transversely of said frame adjacent said fifth wheel, means secured to said shaft and longitudinally adjustable thereon for rotating said fifth wheel when said shaft is rotated, and means for rotating said shaft, substantially as described.



2. A frame mounted upon wheels, a bracket mounted upon said frame and adapted to be laterally adjusted thereon, a fifth wheel rotatably mounted in said bracket, a tractor carried by said fifth wheel, a rotatable shaft mounted transversely of said frame, a second shaft rotatably mounted in said frame substantially parallel with said first mentioned shaft, means adjacent the driver's seat for rotating said second shaft, an operative connection between said shafts, means secured on said first mentioned shaft and longitudinally adjustable thereon for rotating said fifth wheel when said first mentioned shaft is rotated, substantially as described.

3. A frame including a transverse beam, a bracket adjustably mounted upon said beam, a fifth wheel rotatably mounted in said bracket, a tractor wheel carried by said fifth wheel, a transverse shaft on said frame, said fifth wheel being provided in its periphery with worm teeth, a worm mounted on said shaft and meshing with said worm teeth, said worm being adjustably secured to said shaft and means for manually rotating said shaft, substantially as described.

4. A frame mounted upon wheels and including a transverse beam provided with a series of bolt holes, a transverse shaft on said frame provided with correspondingly spaced apertures, a bracket provided with flanges abutting said beam and perforated to receive securing bolts, bolts extending through said flanges and said beam for adjustably securing the bracket to the frame, a fifth wheel rotatably mounted in said bracket, a tractor wheel carried by said fifth wheel, said fifth wheel being provided in its periphery with worm teeth, a worm mounted upon said shaft and meshing with said worm teeth and a pin extending through said worm and adapted to engage in the perforations in said shaft, substantially as described.

5. A frame, a bracket laterally adjustable on said frame, a transverse shaft on said frame, a fifth wheel rotatably mounted in said bracket and provided with worm teeth in its periphery, a worm slidably mounted on said shaft and meshing with said teeth, ears on said bracket engaging opposite ends of said worm, means for preventing relative rotation of said worm and said shaft and means for rotating said shaft, substantially as described.

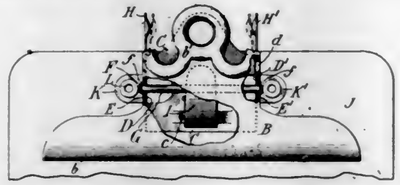
[Claims 6 and 7 not printed in the Gazette.]

1,190,265. PAPER-CLIP. CHARLES S. COOKE, New York, N. Y. Filed Apr. 2, 1915. Serial No. 18,702. (Cl. 24—66.)

1. In a paper clip, a supporting member, a clamping member and means for pivotally connecting said members, a spring tending normally to press said clamping member to closed position, recessed ears on one of said members and projections on the other member, said projections and ears being relatively spring-pressed laterally toward each other whereby said projections are adapted to enter said recesses when the clamp is open and hold the clamp in such position until withdrawn.

2. In a paper clip, a supporting member having ears, a clamping member having ears and pivotal supports for

said clamping member in said ears, the ears on one member having recesses and projections on the other ears, said respective sets of ears relatively spring pressed toward each other whereby said projections are caused to spring into said ears when the clamp is opened, and hold the clamp in such position until withdrawn.



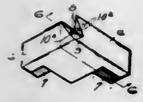
3. In a paper clip, a supporting member having ears, a clamping member having ears, and pivotal supports in said respective ears for said clamping member, the ears on the clamping member having recesses and projections on the ears in the supporting member, said projections normally spring pressed toward the other ears and adapted to enter the said recesses when the clamp is opened and hold the clamp in such position until withdrawn.

4. In a paper clip, a supporting member having ears, a clamping member having ears, the ears in one of said members having apertures and bosses in the other ears adapted to enter said apertures and provide pivotal bearings for said clamping member and a rod having its ends in said bosses, the ears on the clamping member having recesses and projections on the ears in the supporting member, said projections normally spring pressed toward the other ears and adapted to enter the said recesses when the clamp is opened and hold the clamp in such position until withdrawn.

5. In a paper clip, a supporting member having ears, a clamping member having ears, and pivotal supports in said respective ears for said clamping member, the ears on the supporting member located between the ears on the clamping member and having projections spring pressed outwardly and adapted to enter recesses in the ears on said clamping member when the clamp is opened and hold the clamp open until withdrawn.

[Claims 6 to 12 not printed in the Gazette.]

1,190,266. BATH-MAT. EDWIN R. CROOKER, Los Angeles, Cal. Filed Nov. 23, 1915. Serial No. 63,100. (Cl. 4—27.)



1. A bath mat, comprising a flexible sheet having its side and end portions folded in upon the body, the infolded periphery being folded to form a rim or wall.

2. A bath mat, comprising a flexible sheet having its side and end portions folded in upon the body, the infolded periphery being folded to form a rim or wall, said infolded portions lying on the outside of the mat.

3. A bath mat, comprising a flexible sheet having its side and end portions folded in upon the body, the infolded periphery being folded to form a rim or wall, said infolded portions lying on the outside of the mat and extending beneath the same.

4. A bath mat, comprising a flexible sheet having its side and end portions folded in upon the body, the infolded periphery being folded to form a rim or wall, and means for securing the infolded portions of the sheet to each other.

5. A bath mat, comprising a flexible sheet having its side and end portions folded in upon the body, the infolded periphery being folded to form a rim or wall, said infolded portions lying on the outside of the mat, and means for securing the infolded portions of the sheet to each other.

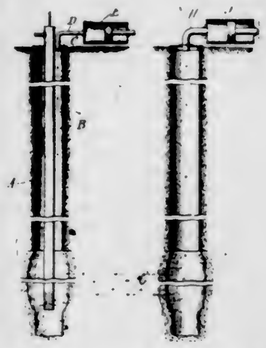
[Claims 6 to 12 not printed in the Gazette.]

1,190,267. METHOD OF PRODUCING HYDROCARBON FROM HYDROCARBON-BEARING EARTH-STRATA. IRWIN L. DUNN, Long Beach, Cal., assignor to Petroleum Patents Company, Chicago, Ill., a Corporation of Maine. Filed Sept. 21, 1911. Serial No. 650,640½. (Cl. 166—21.)



A method of obtaining the lighter liquid hydrocarbons from the earth which consists in forcing atmospheric air into hydrocarbon bearing strata thereby carbureting the same, drawing off the carbureted air so produced, and condensing the hydrocarbons from said air to a liquid form.

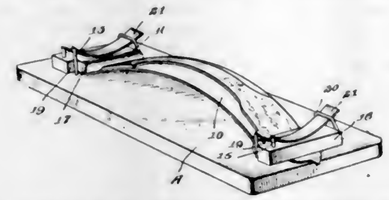
1,190,268. METHOD FOR INCREASING THE PRODUCTION OF OIL-WELLS. IRWIN L. DUNN, Marietta, Ohio, assignor to Petroleum Patents Company, Chicago, Ill., a Corporation of Maine. Filed Jan. 20, 1914. Serial No. 813,159. (Cl. 166—21.)



1. A process for increasing the production of oil wells consisting in forcing a gas into one of the wells of a group under pressure, exhausting gas from other wells and pumping oil from the latter.

2. A process for increasing the production of oil wells consisting in forcing gas into one of the wells of a group under pressure and exhausting gas from other wells of the group thereby causing the oil to flow from the direction of the first said well toward the wells from which the gas is being exhausted and then mechanically pumping oil from the latter said wells.

1,190,269. TIE PRESSER AND STRETCHER. ARTHUR W. DODDS, Chester, England. Filed Nov. 30, 1915. Serial No. 64,370. (Cl. 223—19.)



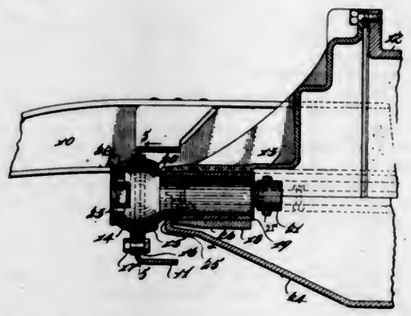
1. A device of the class described comprising a base, a distorted leaf spring supported upon the base and capable of freely flexing, and clamps carried by the base and arranged beyond the distorted portion of said spring.

2. A device of the class described comprising a base, a distorted leaf spring supported upon the base and capable of freely flexing, clamps carried by the base and arranged beyond the distorted portion of said spring, and tension means for the said clamps and serving as releasing devices therefor.

3. A device of the class described comprising a base, a distorted leaf spring supported upon the base and capable of freely flexing, clamps carried by the base and arranged beyond the distorted portion of said spring, tension means for the said clamps and also serving as releasing devices therefor, a straight portion on the distorted spring, and means for securing the straight portion to the base.

4. A device of the class described comprising a base, a distorted leaf spring supported upon the base and capable of freely flexing, clamps carried by the base and arranged beyond the distorted portion of said spring, tension means for the said clamps and serving as releasing devices therefor, a straight portion on the distorted spring, means for securing the straight portion to the base, and means for limiting the swinging of the clamps in one direction and also permitting vertical adjustment thereof.

1,190,270. MOTOR-SUPPORT. JOHN F. DODGE, Detroit, and HORACE E. DODGE, Grosse Pointe, Mich., assignors to Dodge Brothers, Detroit, Mich., a Corporation of Michigan. Filed Jan. 16, 1915. Serial No. 2,562. (Cl. 21—90.)



1. In a motor support, the combination of two supporting members, a socket member carried by one of said members, a ball member comprising a cylindrical tubular portion and a hollow ball-head, said tubular portion being mounted on the other of said two supporting members, and said head having a bearing in said socket and provided with an outward opening, and a closure for said opening carried by said head and having a wrench-receiving socket lying within said opening.

2. In a motor support, the combination with a frame, a motor supporting casing, a motor driven crank shaft supported in said casing, and connections between said frame and said casing comprising a socket carried by the frame, a ball having an integral tubular radial extension, said ball being received in said socket, said casing having a slideway in axial alinement with said crank shaft in which said tube is received and guided, and said ball having an opening therethrough in line with said tube and said shaft.

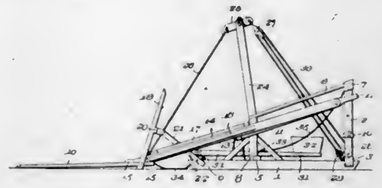
3. In combination, a vehicle frame, a motor carrying frame, a motor crank shaft in said frame and a single connection between said frames at one end of said motor carrying frame, said connection comprising a universal joint in line with said crank shaft and provided with a crank-receiving opening and a closure for said opening having a wrench-receiving socket extending into said opening.

4. In combination, a vehicle frame, a motor carrying frame, a motor crank shaft in said frame apd a single connection between said frames at one end of said motor carrying frame, said connection comprising a universal joint having a longitudinal sliding connection with one of said frames to provide for endwise relative movement of said frames, and said joint and sliding connection being in line with the motor crank shaft and being provided with a crank receiving opening.

5. In a motor-support, in combination, a vehicle frame comprising side bars and a cross-bar connecting said sidebars, a motor-carrying frame, a slideway in said motor-carrying frame, a ball socket on said cross-bar and opening upon opposite sides thereof, and a ball confined in said socket and having a rigid extension received in said slideway.

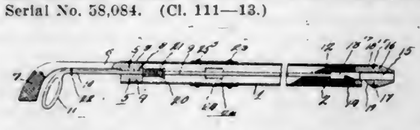
[Claims 6 to 27 not printed in the Gazette.]

1,190,271. HAY-STACKER. FREDERICK C. DOODY, St. Onge, S. D. Filed Sept. 4, 1915. Serial No. 49,096. (Cl. 57—53.)



A stacker comprising a frame, stops adjustably mounted thereon, arms pivoted upon the frame and having sleeves adapted to encounter the stops whereby the swinging movement of the arms is limited, a cradle having side bars pivotally connected with the arms, a derrick pivotally mounted upon the frame and connected with the side bars of the cradle, and means for swinging the derrick.

1,190,272. POISON-DISTRIBUTER. DANIEL P. DAUGHERTY, Worden, Oreg., assignor of one-third to H. L. Veit and one-third to Ralph O. Vincent. Filed Oct. 26, 1915. Serial No. 58,084. (Cl. 111—13.)

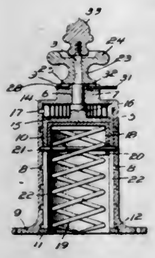


1. A poison distributer, comprising a poisonous grain tubular container, plugs secured in both ends of the container, one plug terminating in a shank having a handle, the other plug being partially tapered and provided with a longitudinal passage, a plunger rod guided in the plug having the handle and provided with a piston to reciprocate in the longitudinal passage of the other plug, said piston having the pocket, to carry grain from the container toward and beyond the tapered end of one of the plugs, and spring tensioned means, against the action of which the plunger rod is retracted, and when the plunger

is released the spring tensioned means actuates the plunger rod to move the piston, so that its pocket will protrude beyond the tapered end of one of the plugs.

2. A poison distributer, comprising a poisonous grain tubular container, plugs secured in both ends of the container, one plug terminating in a shank having a handle, the other plug being partially tapered and provided with a longitudinal passage, a plunger rod guided in the plug having the handle and provided with a piston to reciprocate in the longitudinal passage of the other plug, said piston having the pocket, to carry grain from the container toward and beyond the tapered end of one of the plugs, and spring tensioned means, against the action of which the plunger rod is retracted, and when the plunger is released the spring tensioned means actuates the plunger rod to move the piston, so that its pocket will protrude beyond the tapered end of one of the plugs, said plunger having a shoulder to contact with the plug having the handle to limit the plunger so that the pocket assumes the position just beyond the tapered end of the tapered plug, the container having an opening through which the poisonous grain may be deposited into the container, and an opening through the wall of the container and the tapered plug to be registered with by the pocket in the piston.

1,190,273. SPIRAL HAT-FASTENER. JOHN W. EATON, Portland, Oreg. Filed Oct. 8, 1915. Serial No. 54,814. (Cl. 132—25.)



1. A hat fastener comprising an outer casing, an inner casing rotatably mounted therein, means whereby said inner casing may be rotated, a hair engaging element normally disposed within said inner casing, a connection between the casing and said element whereby the latter is projected from within the casing to active position upon rotation of the said inner casing, and means for automatically returning said element to normal position.

2. A hat fastener comprising an outer casing, an inner casing rotatably mounted therein, means whereby said inner casing may be rotated, a spiral hair engaging element normally positioned within said inner casing, means for projecting said element from within the casing with a rotary motion to active position upon rotation of said inner casing, means for holding said element in projected position, and means for automatically reversing the rotation of said element to return the same to normal position when released.

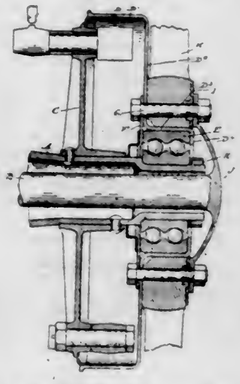
3. A hat fastener comprising an outer casing, an inner casing, a stem projecting from said inner casing through the top of said outer casing whereby said inner casing may be rotated, a spiral hair engaging element normally disposed within said inner casing, means for projecting said element with a rotary motion to active position upon rotation of said inner casing, means for holding said element in projected position, a spring encircling said stem and terminally connected therewith and with said outer casing, and operating to automatically reverse the movements of said element to return the same to normal position when released.

4. A hat fastener comprising an outer casing having an interior spiral groove, an inner casing rotatably mounted within said outer casing, a spiral hair engaging element normally disposed within said inner casing, a pin associated with said element and extended through elongated slots in said inner casing, into said grooves, whereby said element is projected from within said casing to active position upon rotation of said inner casing, means for holding said element in projected position, and means for automatically returning said element to normal position when released.

5. A hat fastener comprising an outer casing, having an interior spiral groove, an inner casing rotatably mounted within the outer casing, means whereby said inner casing may be rotated, a cup-shaped member adjustably mounted within said inner casing, a spiral hair engaging element associated with said cup-shaped member, a connection between said cup-shaped member and the said inner and outer casings whereby the latter is adjusted upon rotation of said inner casing to project said hair engagement element to active position, means for holding said element projected, and means for automatically returning the parts to normal position when released.

[Claim 6 and 7 not printed in the Gazette.]

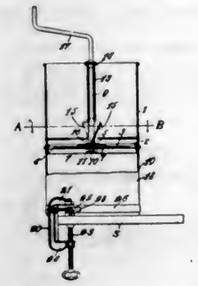
1,190,274. VEHICLE-WHEEL. DONALD M. FERGUSON, Detroit, Mich., assignor to General Motors Company, Detroit, Mich., a Corporation of New Jersey. Filed June 15, 1914. Serial No. 845,288. (Cl. 21—90.)



In a device of the character described, the combination with an axle, a drive shaft therein and a head at the outer end of said drive shaft for communicating the torque to the wheel, of a pressed metal member having a brake-drum, an inwardly-extending web and a cylindrical portion projecting oppositely from said web, constituting a hub; an anti-friction bearing seated in said hub upon said axle, a flange for clamping said bearing in said hub, spokes extending radially from said hub, a flange on the outer face of said spokes, and a clamping bolt for securing said bearing-clamping flange, spoke-clamping flange and torque head to each other.

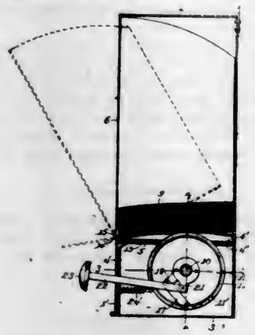
1,190,275. VEGETABLE-CUTTER. HENRY W. FERRIS, Lyndon, Kans. Filed Apr. 22, 1915. Serial No. 23,174. (Cl. 146—11.)

A vegetable cutter including a receptacle, a casing detachably seated thereon and having an interior annular shoulder, said casing being open at its ends, a concentric tubular core within the casing, oppositely extending and oppositely disposed deflecting wings constituting connections between the core and the wall of the casing for holding the core centered within the casing, each of said wings being straight for the greater portion of its length and having its inner portion curved laterally toward the core, there being sharpening ledges extending throughout the length of each wing, a shaft mounted for rotation in the core and supported thereby, a disk secured to the lower end portion of the shaft and revoluble therewith, the marginal portion of the disk bearing upwardly against the interior shoulder within the casing, opposed cutting blades upstruck from the disk and movable successively



into engagement with the sharpening ledges, said ledges being extended in the direction of rotation of the blades, the cutting edges of the blades being disposed along straight lines with the core therebetween.

1,190,276. CUP-DISPENSING APPARATUS. WILBUR D. FLOOD, Martins Ferry, Ohio. Filed Oct. 12, 1914. Serial No. 866,197. (Cl. 211—29.)



1. A cup dispensing apparatus comprising a rectangular casing having an open side, a cup container disposed within said casing and having an open side, said casing and said container being reversely disposed to constitute an inclosure, said casing having curved slots in its opposite sides adjacent to the front edges of the latter, laterally directed trunnions carried by said container removably mounted in said slots and whereby said container is supported in pivotal relation to said casing, said container having a bottom provided with an opening therein and also having a dispensing slot in its exposed face, a wheel rotatable within the lower end of the casing and having a portion of its periphery extending through the opening in the bottom of said container, and means for rotating said wheel.

2. A cup dispensing apparatus comprising an open-faced rectangular casing having a closed top, a cup container normally occupying an upright position within said casing and pivotally movable to and from said position through the open face of said casing, said container having an open upper end and being adapted to be rocked forward to withdraw said open end from beneath said top, said container having an apertured bottom and being provided with a dispensing slot in its front face adjacent to said top, and means protruding through the bottom aperture whereby cups disposed within said container may be thrust outward through said dispensing slot.

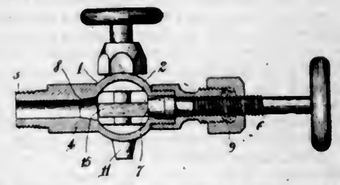
3. A cup dispensing apparatus comprising a casing of substantially U-shape in horizontal section, a cup container of substantially U-shape in horizontal section mounted within said casing and adapted for pivotal rocking movement with respect to the latter, said casing and said container being reversely disposed, said casing having a closed upper end and said container having an open upper end adapted to be exposed when the container is rocked forward, said container also having an apertured bottom and being provided with a dispensing slot in its face adjacent to said bottom, an arched forwardly and downwardly inclined lip defining the upper edge of said slot, and means operating through said apertured bottom adapted to advance the lowermost cup in said container outward through said slot.

4. A cup dispensing apparatus comprising an open-faced rectangular casing having a cup container removably mounted therein, said container being adapted for pivotal forward swinging movement with respect to said casing, said casing also having an apertured bottom and being provided with a dispensing slot in its face, an arched forwardly and downwardly inclined lip defining the upper boundary of said slot, a wheel having a portion of its periphery protruding upward through said bottom into elevating relation to the rear ends of the cups in said container, said wheel being disposed to engage the lowermost cup substantially midway between its lateral edges whereby said cup is caused to assume an arched form, and means for rotating said wheel forward for projecting the front end of said cup outward through said slot.

5. A cup dispensing apparatus comprising a casing having an open face, a cup container of substantially U-shape in horizontal section mounted within said casing and exposing the wall thereof opposite its open side through the open face of said casing, said casing having slots in its opposite side walls adjacent to the front edges of the latter, trunnions carried by said container mounted in said slots and pivotally supporting said container, an apertured bottom in said container, said container having a dispensing slot in its exposed wall adjacent to said bottom, and means operating through said apertured bottom whereby the lowermost cup in said container is thrust outward through said dispensing slot.

[Claims 6 to 8 not printed in the Gazette.]

1,190,277. GAGE-COCK. IRA B. FLYNN, Pittsburg, Kans. Filed Mar. 7, 1913. Serial No. 752,736. (Cl. 137—138.)

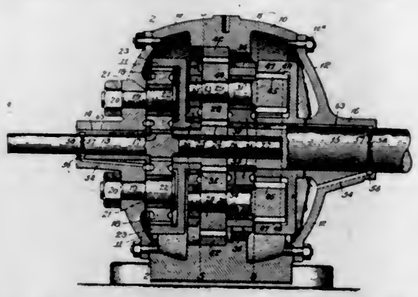


A gage cock for boilers comprising a body formed with a spherical chamber and a passage communicating with said chamber, an approximately semi-spherical chamber of less capacity than said spherical chamber and communicating therewith at a point above the bottom of said spherical chamber, the centers of said chambers being in horizontal alinement, a main valve passing centrally through said first chamber for obstructing said passage, a discharge nipple communicating with said second chamber and an auxiliary valve for closing the passage in said nipple and threaded into the casing at a point remote from said nipple, the axis of the nipple passage being arranged in a right angular direction with relation to the axis of the passage in said body.

1,190,278. SPEED-REDUCING MECHANISM. JOHN B. FOOTE, Chicago, Ill. Filed Sept. 23, 1914. Serial No. 863,057. (Cl. 74—84.)

1. The combination of a non-rotatable case having sides, a drive shaft mounted in one side of the case, a

driven shaft mounted in the other side of the case, said shafts being coaxial, idler pinions at one side of the case mounted to rotate about fixed axes, a pinion on the drive shaft engaging said idler pinions, an internally toothed gear wheel meshing with said idler pinions, a pinion secured to said internally toothed wheel, planetary gearing comprising arbors, and a plurality of pinions on each of the arbors, a stationary rack engaging one pinion on each of the arbors, and a gear meshing with the other pinions on the arbors and connected to said driven shaft.



2. The combination of a non-rotatable case having sides, a drive shaft mounted in one side of the case, a driven shaft mounted in the other side of the case, said shafts being coaxial, idler pinions at one side of the case mounted to rotate about fixed axes, a pinion on the drive shaft engaging idler pinions, an internally toothed gear wheel meshing with said idler pinions, a pinion secured to said internally toothed wheel, planetary gearing comprising arbors, and a plurality of pinions on each of the arbors, a stationary rack engaging one pinion on each of the arbors, and an internally toothed wheel meshing with the other pinions on said arbors and connected to said driven shaft.

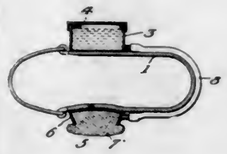
3. The combination of a non-rotatable case having sides, a drive shaft mounted in one side of the case, a driven shaft mounted in the other side of the case, said shafts being coaxial, studs fixed on one side of the case, idler pinions mounted to rotate on said studs, a pinion on the drive shaft engaging the idler pinions, an internally toothed gear wheel meshing with said pinions at the side of the case, a pinion secured to rotate with said internally toothed wheel, planetary gearing comprising arbors and a plurality of pinions on each of the arbors, a stationary rack engaging one pinion on each of the arbors, and a gear meshing with the other pinions on the arbors and connected to said driven shaft.

4. The combination of a non-rotatable case having removable sides, a drive shaft mounted in one side of the case, a driven shaft mounted in the other side of the case, said shafts being coaxial, idler pinions mounted on one side of the case, a pinion on the drive shaft engaging the idler pinions, an internally toothed gear wheel meshing with said idler pinions, a pinion secured to rotate with said internally toothed wheel, planetary gearing comprising arbors and a plurality of pinions on each of the arbors, a stationary rack engaging one pinion on each of the arbors, and a gear driven by the other pinions on the arbors, and connected to said driven shaft, said internally toothed gear and planetary gearing being removable from the case when one case-side is removed.

5. The combination of a non-rotatable case having removable sides, a drive shaft mounted in one side of the case, a driven shaft mounted in the other side of the case, said shafts being coaxial, idler pinions mounted on one side of the case, a pinion on the drive shaft engaging the idler pinions, an internally toothed gear wheel meshing with said idler pinions, a pinion secured to rotate with said internally toothed wheel, planetary gearing comprising arbors and a plurality of pinions on each of the arbors, a stationary rack engaging one pinion on each of the arbors, and an internally toothed gear meshing with the other pinions on the arbors and secured to the driven shaft, the planetary gearing being removable through one side of the case and the internally toothed gear on the driven shaft being removable through the other side.

[Claims 6 to 24 not printed in the Gazette.]

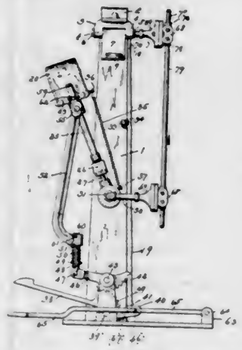
1,190,279. MOISTENER. WILLIE F. FRANCIS, Dott, W. Va. Filed Apr. 4, 1916. Serial No. 88,904. (Cl. 91—54.4.)



1. A device of the character described comprising a U-shaped body of elastic material, an elastic member forming with said body a resilient elliptical band to extend across and embrace the hand of the operator, a water reservoir carried by the upper limb of the body portion, a moistener carried by the lower limb of the body portion, said moistener comprising a cup having a body of absorbent material therein, both the reservoir and cup being free from connection with said elastic member, and a conducting tube extending along the body from the reservoir to the cup.

2. A device of the character described comprising an elliptical elastic band adapted to extend transversely across the body of the hand and resiliently grip the same, a water reservoir upon the top portion of said band, a moistener upon the bottom of the band comprising a cup having a body of absorbent material therein, and a conducting tube leading along the band from the reservoir to the cup.

1,190,280. CUFF AND NECKBAND PRESS. LADBROOK H. FREEMAN, Cleveland, Ohio. Filed Aug. 10, 1910. Serial No. 576,533. Renewed Dec. 10, 1915. Serial No. 66,223. (Cl. 68—9.)



1. In an ironing press, pivoted dies having ironing faces, a former coöperating with said dies, an ironing plate carried by the dies and forming a continuous ironing surface and bridging the break between the dies, a reinforcing plate for said ironing plate and arranged adjacent the break between the dies, and means for moving the former.

2. In an ironing press, pivoted dies having ironing faces, a former coöperating with said dies an ironing plate carried by the dies forming a continuous ironing surface and bridging the break between the dies, a reinforcing plate between the ironing plate and the dies adjacent the break between them, means for supporting said reinforcing plate, and means for moving the former.

3. In an ironing press, pivoted dies having ironing faces, a former coöperating with said dies and adapted to close the same about the former, an ironing plate carried by the dies, forming a continuous ironing surface and bridging the break between the dies, a reinforcing plate for said ironing plate and secured to one of the dies and arranged adjacent the break between the dies, and means for shifting the former.

4. In an ironing press, a pair of pivoted dies adapted to normally assume an open position, a movable former adapted to coöperate with said dies to close the same, and means carried by the former and adapted to engage upon the outside of the lower portions of the dies to force them in against the former.

5. In an ironing press, a pair of opposed pivoted dies having free lower ends adapted to normally assume an open position a former coöperating with said dies and adapted to swing the dies inward toward its sides, and means carried by said former for engaging the free ends of the dies to cause them to be forced toward the sides of the former.

[Claims 6 to 13 not printed in the Gazette.]

1,190,281. OIL-WELL PUMP. OTTO GARVER and MARION GRIDER, St. Marys, Ohio, assignors of one-third to C. W. Schmehl, St. Marys, Ohio. Filed Sept. 13, 1915. Serial No. 50,290. (Cl. 103—80.)



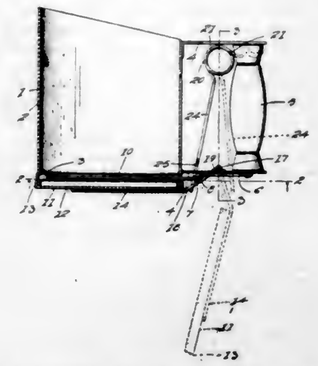
1. In an oil well pump, in combination, a piston and a standing valve, a threaded stem mounted on said valve, a nut splined to said piston, and resilient means connecting said piston and valve adapted to normally close the opening in said nut, substantially as described.

2. In an oil well pump, in combination, a piston and a standing valve, a threaded stem secured to said valve, a nut splined to said piston, and a plunger mounted in said nut, substantially as described.

3. In an oil well pump, a piston and a standing valve, a threaded stem on one of said parts, a nut yieldingly mounted on the other of said parts and adapted to engage said threaded stem, and a yieldingly mounted plunger received by said nut, substantially as described.

4. In an oil well pump, a standing valve the cage of which is provided with a threaded stem, resilient arms secured to said cage at the base of said stem, a piston having an extension provided with oil ports, said extension having an annular bead adapted to be engaged by said resilient arms to unite the valve and piston, a nut slidably mounted in said extension and adapted to receive said threaded stem to unite said valve and piston, and a plunger arranged in said extension and controlled by springs which maintain a contact between said plunger and said threaded stem, substantially as described.

1,190,282. ATTACHMENT FOR FLOUR-SIFTERS. MAE H. GEARTTS, Marinette, Wis. Filed Apr. 3, 1915. Serial No. 18,982. (Cl. 83—60.)



1. In combination, a flour sifter including a body having a foraminous bottom, a bracket carried by the body, and an agitator within the sifter, a handle pivoted between the bracket, a spring carried by the upper end of the handle, an arm on the spring and extending downwardly therefrom, a loop at the end of the arm, a cover arranged to engage the lower edge of the body, a support for the cover, and an angular extension on the support extending through the loop on the spring and being hinged to the lowermost bracket so that when the spring is in the normal position, the loop will engage the extension and hold it against the lower edge of the body.

2. A flour sifter comprising a body, means for securing a grip to said body, a foraminous bottom for said body, an agitator pivotally mounted within the body above said bottom, a cover pivoted to the securing means for the grip above said bottom, means connected to the agitator for oscillating the agitator and means for releasably holding the cover in closed position.

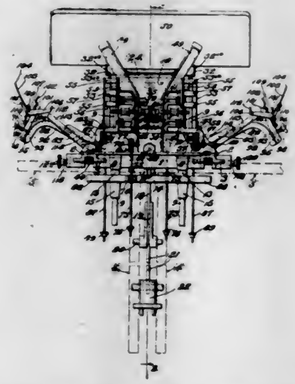
3. A flour sifter comprising a body, a foraminous bottom for said body, an agitator pivotally mounted within the body above the bottom, arms on the body, a grip pivoted between the arms, a gravity opening cover pivoted to one of said arms, means on the grip for operating the agitator, and means on the grip for releasably holding the cover in its closed position.

1,190,283. WRAPPING-MACHINE. MARSHALL D. GIBSON, Webster Groves, and MILTON LANDIS OGLESBY, St. Louis, Mo., assignors to said Gibson and William H. McCormick, St. Louis, Mo. Filed Feb. 15, 1915. Serial No. 8,177. (Cl. 93—2.)

1. In a wrapping machine, a support for the article to be wrapped, and means for supporting the wrapper blank in relation to said article support, whereby when the article is placed on said support over the wrapper blank the latter is drawn close to the underside of the article and the wrapper is given an initial shape with its side portions deflected upwardly throughout its length on opposite sides of the article and with its middle end portions puckered upwardly, thereby producing partial folds of said side and end portions of the wrapper.

2. In a wrapping machine, a support for the article to be wrapped, a support for the wrapper blank on opposite sides of the article support, and supports for the middle end portions of the wrapper blank mounted adjacent to the ends of said article support, whereby, when the article is placed on the support over a wrapper blank the wrapper is given an initial shape with its side portions deflected upwardly throughout its length on opposite sides of the article and with its middle end portions puckered upwardly, thereby producing partial folds of said side and end portions of the wrapper.

3. In a wrapping machine, a support for the article to be wrapped, means for supporting the wrapper blank in relation to said article support, whereby, when the article is placed on said support over the wrapper blank the latter is drawn close to the under side of the article and the wrapper is given an initial shape with its side portions deflected upwardly throughout its length on opposite sides of the article and with its middle end portions puckered upwardly, and means for successively engaging the wrapper so formed for folding first the middle end portions thereof up to the adjacent ends of the article, then folding the side end portions inwardly the one over the other to said folded up middle portions, and finally folding the upper portions of the infolded side end portions inwardly upon the top of the article and producing upstanding flaps on opposite sides of the article.

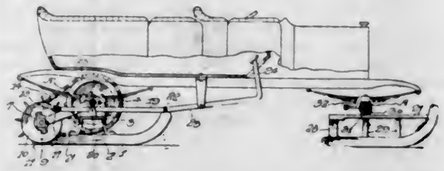


4. In a wrapping machine, a vertically-movable support for the article to be wrapped, a support for the wrapper blank in coöperative relation to the article support, said second mentioned support being arranged and adapted so as to deflect the wrapper upwardly on opposite sides of the article and to pucker the middle end portions of the wrapper upwardly when the article is placed on its support over the wrapper, means coöperating with said wrapper support and said article support during the downward movement of the latter for engaging the puckered end portions of the wrapper to fold the same up close to the article and form side end flaps, means for folding said flaps inwardly the one over the other close to the folded up middle end portions of the wrapper, and means for folding the upper portions of the infolded side end flaps inwardly and down upon the top of the article, and forming upstanding flaps on opposite sides of the article.

5. In a wrapping machine, a vertically-movable support for the article to be wrapped, oppositely inclined plates on opposite sides of said article support and constituting with the latter a support for the wrapper blank, means cooperating with said inclined plates adjacent to the ends of said article support for supporting the middle portion of the wrapper blank at an elevation above said article support, whereby, when the article is placed on the support over the wrapper blank the latter is drawn close to the under side of the article and the middle end portions of the wrapper blank are puckered upwardly, end folder members located adjacent to the ends of the article support and adapted to engage said puckered portions of the wrapper during the downward movement of the article support so as to fold the middle end portions of the wrapper up close to the adjacent ends of the article, and also forming side end flaps, side end folders mounted adjacent to the ends of said article support, means for actuating said folders in timed relation to each other and to said article support whereby the side end flanges are folded inwardly the one over the other close to said upfolded middle end portions of the wrapper after the table has come to rest, and end folders arranged and adapted to fold the upper portions of the infolded side end flaps inwardly and downwardly upon the top of the article, and resilient means acting upon said folders to hold them yieldably in operated relation to the wrapped article.

[Claims 6 to 10 not printed in the Gazette.]

1,190,284. RUNNER ATTACHMENT FOR AUTOMOBILES. JOSEPH GIRARD, JOHN CLAIRMONT, and THOMAS CHENIER, Tupper Lake, N. Y. Filed Aug. 12, 1915. Serial No. 45,213. (Cl. 21—47.)



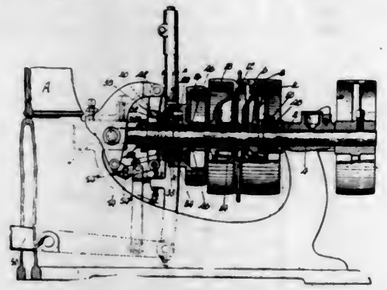
1. An attachment for general application to automobiles of numerous types, consisting of a pair of runners and a bolster connecting the same, sectional bearings carried by the bolster and adapted to receive therein portions of the rear axle of the automobile, downwardly and rearwardly inclining hangers having sectional bearings at their front ends also designed to receive portions of the axle, rotary propellers carried by the rear ends of the hangers and having sprockets, a pair of driving sprockets adapted to be secured on the driven spindles at the ends of the axle, sprocket chains passing around the driving sprockets and the first named sprockets, a longitudinally disposed lever fulcrumed between its ends to the center of the bolster, a transverse lever overlying the hangers and fulcrumed between its ends to the rear end of the longitudinally disposed lever, a spring connected at one end to the bolster and at its other end to the rear end of the longitudinal lever whereby to exert a constant yielding downward pull thereon to normally depress the transverse lever and thus prevent excessive raising of the hangers to retain the propellers in engagement with the road bed, and manually operated means for raising the front end of the longitudinal lever, whereby to positively depress the transverse lever at will.

2. The combination with a runner attachment for motor vehicles, including a pair of depressible members and driven propellers carried by said members; of a horizontal transverse lever fulcrumed between its ends and having said ends movable vertically with the aforesaid members, spring means for normally depressing the transverse lever to engage the propellers with the roadway, a longitudinally disposed lever carrying the fulcrum of the transverse lever and having a non-yieldable fulcrum, and manually operated means for actuating said longitudinally disposed lever to positively depress the transverse lever and the propellers.

1,190,285. VARIABLE-SPEED MECHANISM. JOSEPH GOULDBOURN, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 15, 1912. Serial No. 671,148. (Cl. 74—21.)

1. A speed changing mechanism comprising a driving member, driven members constructed for operative engagement with the driving member, a manually controlled actuating member, and connections from said actuating member to the driven members constructed and arranged to move said driven members successively toward and into operative relation to the driving member upon movement of said actuating member in one direction.

2. A speed changing mechanism comprising a driving member, driven members having means for effecting operative engagement respectively with different portions of the driving member, a manually controlled actuating member, and connections between said actuating member and the driven members whereby said driven members are moved successively in the same direction into operative relation with the driving member upon movement of said actuating member in one direction.



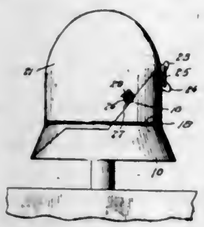
3. A speed changing mechanism comprising a driving member, a plurality of members for imparting different operative speeds to the machine, and a manually controlled actuating member for successively moving said speed members into clutching engagement with the driving member upon continuous movement of said actuating member in one direction.

4. A speed changing mechanism having a plurality of driven speed members each having connection with a clutch device, a driving member having a clutch surface for engagement with said clutch devices, and a manually operated member and connections constructed and arranged to cause successive clutching engagements between said devices and the driving member upon movement of the manually operated member in one direction.

5. A speed changing mechanism having driven members and a driving member, a male friction surface member connected to each of the driven members, the driving member having a coöperating female friction surface of sufficient extent to permit both of the male friction surfaces to be engaged therewith at the same time, and means for initially moving one of said male friction surfaces into clutching engagement with the female surface and for thereafter moving the other male friction surface into clutching engagement with the female friction surface while the clutching engagement between the first named male friction surface and the female friction surface is maintained.

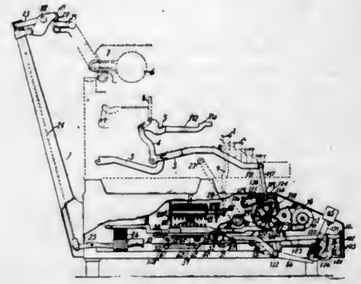
[Claims 6 to 31 not printed in the Gazette.]

1,190,286. INSULATOR. EARLE HARLAN, Fresno, Cal. Filed Jan. 12, 1914. Serial No. 811,685. (Cl. 173—314.)



In a device of the class described, the combination with a base, of a post rising therefrom, a hood detachably mounted on the base, the base and hood having notches therein, bushings mounted in the notches through which a line wire is adapted to extend, the post having a notch therein for the reception of said line wire and a U-shaped wire embracing the post and secured to the line wire adjacent to the bushing, the post having notches therein in which the last mentioned wire is seated.

1,190,287. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Jersey City, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Aug. 9, 1911, Serial No. 643,108. Renewed May 27, 1916. Serial No. 100,188. (Cl. 235—59.)



1. In a combined typewriting and computing machine, the combination with a special type mounted to print on the work sheet, of a spring tending to operate said type, means restraining said type, a computing mechanism including a set of dial devices, means for returning the dial devices to zero, said returning means including a key, and means associated with said key for releasing said restraining means, thereby to permit said spring to operate said special type.

2. In a combined typewriting and computing machine, the combination with a special type mounted to print on the work sheet, of a spring tending to operate said type, means restraining said type, a computing mechanism including a set of dial devices, means for returning the dial devices to zero, said returning means including a key, means associated with said key for releasing said restraining means, thereby to permit said spring to operate said special type, and means associated with said computing mechanism for automatically restoring said type, spring and restraining means to normal positions.

3. In a combined typewriting and computing machine, the combination with a special type mounted to print on the work sheet, of a spring tending to operate said type, means restraining said type, a computing mechanism including a set of dial devices, means for returning the dial devices to zero, said returning means including a key, means associated with said key for releasing said restraining means, thereby to permit said spring to operate said special type, means associated with said computing mechanism for automatically restoring said type, spring and restraining means to normal positions, said zero-returning devices including a set of tens-carrying members and a shaft whereon they are mounted, and said restoring means including a cam upon said shaft, and means controlled by said cam to restore said type and its associated parts to normal positions.

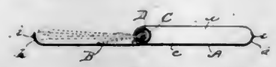
4. In a combined typewriting and computing machine, the combination with a special type mounted to print on the work sheet, of a spring tending to operate said type, means restraining said type, a computing mechanism including a set of dial devices, means for returning the dial devices to zero, said returning means including a key, means associated with said key for releasing said restraining means, thereby to permit said spring to operate said special type, means associated with said computing mechanism for automatically restoring said type, spring and restraining means to normal positions, said zero-returning devices including a set of tens-carrying members and a shaft whereon they are mounted, and said restoring means including a cam upon said shaft, and means controlled by said cam to restore said type and its associated parts to normal positions, said restraining means including a trip provided with a spring to reposition it during the operation of said cam, and the latter

being timed to continue in motion sufficiently to disconnect itself from the type-bar operating devices.

5. In a combined typewriting and computing machine, having a platen and types to strike thereon, the combination with a special type, of a lever connected to said type to operate the same, a spring tending normally to operate said lever, a trip connected to said lever to restrain the same, a clearance-key connected to the computing mechanism, and means connected to said clearance-key to release said trip.

[Claims 6 to 35 not printed in the Gazette.]

1,190,288. CONTAINER FOR MATCH-PACKAGES. ROBERT HEAD, New York, N. Y., assignor to Samuel Lautenbach, New York, N. Y. Filed June 29, 1914. Serial No. 847,904. (Cl. 206—36.)



1. A container embodying a body member comprising a back, sides and an end, said body member being open at one end and at the top, a cover member provided at one end with means for closing the open end of the body member, means unitary with the body member and means unitary with the cover member for hingedly connecting the two said members independently of a pivotal pin, and gripping means unitary with said cover member for retaining a match package fixedly in position against the inner face of said cover member, whereby an attached match package is adapted to be withdrawn from the body member upon opening the container.

2. A container comprising a body member, a cover member hinged to said body member, said cover member being provided with a curled flange which produces a space internally of said flange into which is adapted to be inserted the edge portion of a match package, the edge of said curled member being positioned for contact with one face of said match package, and gripping means positioned in opposing relation to said edge of the curled flange and coöperating therewith in retaining a match package in fixed relation to said cover member.

3. A two-part container of the class described one part having trunnions and the other provided with a curled member which receives said trunnions for pivotally connecting the two said parts independently of a separate pivotal pin, said curled member being provided with means for retaining a match package in fixed position against one face of the container part of which said curled member forms a part thereof.

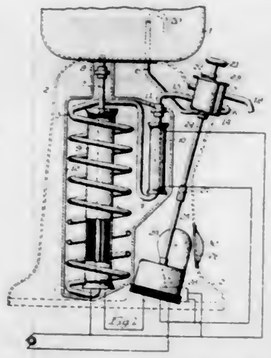
4. A two-part container of the class described each part of which is composed of a single piece of material, one of said parts being provided with side walls and trunnions projecting inwardly from said side walls, the other part being provided with a curled member positioned to receive said trunnions and to pivotally connect the two said parts, said curled member being provided with means for retaining a match package in a fixed position on one of said parts and at the pivotal connection between the two said parts.

5. A two-part container of the class described embodying a body member and a cover member each composed of a single piece of material, said body member having side walls and trunnions extending inwardly from the side walls, and said cover member having one end portion thereof curled upon itself for receiving said trunnions, thereby pivotally connecting the cover member to said body member.

[Claims 6 to 12 not printed in the Gazette.]

1,190,289. ELECTRIC WATER-HEATER. ALFRED HERZ, Chicago, Ill. Filed May 24, 1915. Serial No. 29,945. (Cl. 219—38.)

1. In combination, a tank, a base for supporting said tank, a tube connected at both ends to said tank, an electric heater surrounding said tube, said tube and said heater being contained in said base, a valve, said tube forming a circulatory system for said tank through said valve, a spigot, an electric switch, and means for operating said valve and said switch simultaneously, said valve having a plurality of circulatory positions and an off position.



2. In combination, a tank, a conduit forming part of a circulatory system for said tank, a spigot, a return conduit for said circulatory system, a valve controlling said spigot and said conduit, a pair of electric heaters for said first conduit, switch means for controlling the connections of said heaters separately, and means for jointly operating said valve and said switching means.

3. In combination, a tank, a base for supporting said tank, a conduit forming part of a circulatory system for said tank supported by and depending from said tank, a valve, a spigot, a return conduit, a pair of electric heaters for said conduit, said conduit and said heaters being contained in said base, a pilot lamp connected to one of said heaters, an indicating lens in said base adjacent said pilot lamp, switch means for controlling the connections of said heaters, and means for jointly operating said valve and said switch means.

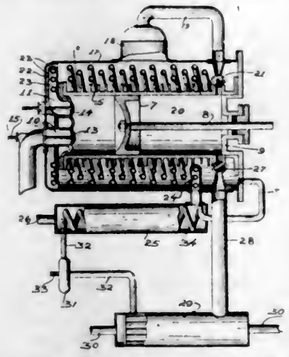
4. In combination, a tank, a base for supporting said tank, a down-take tube from said tank projecting into said base, a heater surrounding said down-take tube, a coil connected to said down-take tube and surrounding said heater, a valve, a return circulating tube, and a spigot connected to said valve, a low wattage heater connected between said coil and said valve, an electric switch for controlling said heater, said switch being located in the base, a mechanical connection between said valve and said switch, and means for operating said valve.

5. In combination, a tank, a hollow base supporting said tank, a down-take tube connected to said tank, a high wattage heater surrounding said down-take tube, a coil connected to said down-take tube and surrounding said heater, a valve connected to said coil, a return circulating tube connected to said valve, a spigot for said valve, an electric switch for controlling said heater, and common means for controlling said valve and switch.

[Claims 6 to 15 not printed in the Gazette.]

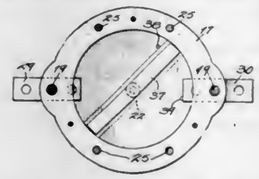
1,190,290. ENGINE. FRANK A. HILL, Rock Island, Ill. Filed Oct. 31, 1914. Serial No. 869,637. (Cl. 123—6.)

In a device of the character described, an internal combustion engine including a cylinder having one end closed and an exhaust port at the opposite end, a boiler inclosing said cylinder, a plurality of pipes connected with said exhaust port coiled about said cylinder and extending through the wall of said boiler, a hollow drum connected with the outer extremities of said pipes, a dome carried by said boiler, a pipe connecting said dome with the closed end of said cylinder, a valve in said pipe, a condenser, a pipe connecting the closed end of said cylinder with said condenser, a pipe connecting said condenser with said boiler and extending through said hollow drum, and a



pump connected with the last mentioned pipe for returning the condensed steam to said boiler.

1,190,291. METHOD OF AND APPARATUS FOR VARYING THE SPEED OF ELECTRIC METERS ON REVERSAL OF CURRENT-FLOW. JACOB H. HODDE, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Nov. 1, 1912. Serial No. 729,010. (Cl. 171—265.)



1. The method of varying the speed of an electricity meter when actuated by current flowing in one direction as compared with its speed when actuated by an oppositely flowing current, which consists in interposing resistance in the path of the current, and subjecting such resistance to the influence of a magnetic field and thereby changing the current flowing through the meter by varying such resistance according to the direction of flow of the current therethrough.

2. The method of varying the speed of an electricity meter when actuated by current flowing in one direction as compared with its speed when actuated by an oppositely flowing current, which consists in interposing resistance in the path of the current, and subjecting such resistance to the influence of a magnetic field and thereby changing the proportion of total current flowing through the meter and a current path parallel therewith, by varying such resistance according to the direction of flow of the current therethrough.

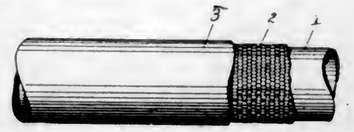
3. The combination with an electricity meter, of a resistor comprising a body of mercury and a conducting element therein of different conductivity, said conducting element being movable in one direction or the other, depending upon the direction of flow of current therethrough, to vary the current flowing through the meter.

4. The combination with an electricity meter, of a resistor comprising a body of mercury and a rotary conducting element therein of different conductivity, said conducting element being movable in one direction or the other, depending upon the direction of flow of current therethrough, to vary the proportion of total current flowing through the meter and a path parallel therewith, according to the direction of flow of current through the meter.

5. The combination with a mercury motor meter having a magnet of constant polarity, of a resistor lying in the magnetic field of said magnet, comprising a body of mercury and a rotary conducting element therein of different conductivity, said conducting element being movable in one direction or the other, depending upon the direction of flow of current therethrough, to vary the current flowing through the meter.

[Claims 6 to 15 not printed in the Gazette.]

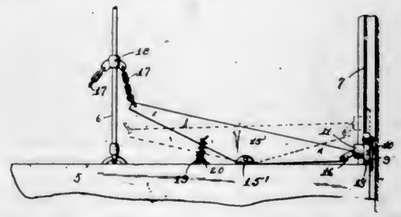
1,190,292. PROCESS OF MAKING HOSE. ARTHUR T. HOPKINS, Cleveland, Ohio, assignor to The Mechanical Rubber Company, a Corporation of New Jersey. Filed Aug. 27, 1915. Serial No. 47,580. (Cl. 154—8.)



1. The process of manufacturing hose which comprises forming a continuous inner tube of rubber stock in a tubing machine, semi-curing said tube, forming an intermediate layer of helically interwoven fibrous strands about said inner tube, forming an outer covering of rubber stock by passing said inner tube and fibrous layer through a tubing machine while inflated, and then finally curing the whole in any suitable way.

2. The process of manufacturing hose which comprises forming a continuous inner tube of rubber stock in a tubing machine, semi-curing said tube, forming an intermediate layer of helically interwoven fibrous strands about said inner tube while in collapsed condition, inflating said inner tube and fibrous layer, forming an outer covering of rubber stock by passing said inner tube and fibrous layer through a tubing machine while in inflated condition, and then curing the whole by subjecting the interior thereof to a heated vulcanizing medium under pressure.

1,190,293. ELEVATOR SAFETY DEVICE. GEORGE HULME, McDonald, Pa. Filed July 9, 1915. Serial No. 38,986. (Cl. 187—87.)

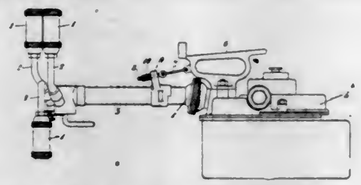


The combination with an elevator cage and its hoisting cable, levers pivoted to the top of the cage at opposite sides of the hoisting cable, springs urging the outer ends of the levers upward from the cage, chains connecting the inner ends of the levers and the cable and normally preventing the action of the springs, guides carried by the outer ends of the levers, links pivoted to the cage and extending upwardly therefrom on opposite sides of the guides, bell crank levers pivoted to the guides adjacent their angles and having the links pivotally connected each to one arm of a lever, and gripping faces formed on the remaining arms of the bell crank levers.

1,190,294. MILKING-MACHINE. GUSTAF EMIL JONSSON, Halmstad, Sweden, assignor to Aktiebolaget Mjölkningsmaskinen Manus, Norrköping, Sweden. Filed Oct. 21, 1915. Serial No. 57,187. (Cl. 31—97.)

1. In a milking machine operated by suction and adapted to be carried by the cow by means of straps, the com-

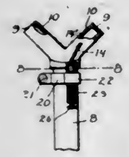
bination of a lid forming a common support for all parts of the machine, a tube movably connected with the lid, suction teat-cups secured to the outer end of said tube by means of flexible hoses, and a link between the lid and the tube supporting the latter, substantially as and for the purpose set forth.



2. In a milking machine operated by suction and adapted to be carried by the cow by means of straps, the combination of a lid forming a common support for all parts of the machine, a tube movably connected with the lid, a projecting arm on said tube, suction teat-cups secured to the outer end of said tube by means of flexible hoses, a link secured to the lid, and an adjustable connection between said link and said arm, substantially as and for the purpose set forth.

3. In a milking machine operated by suction and adapted to be carried by the cow by means of straps, the combination of a lid forming a common support for all parts of the machine, a tube movably connected with the lid, a projecting arm on said tube, suction teat-cups secured to the outer end of said tube by means of flexible hoses, a link secured to the lid, a screw secured to the link and projecting through the arm, and a nut on said screw, substantially as and for the purpose set forth.

1,190,295. AUTOMATIC GAS-LIGHTER. BEN F. KEITH, Belton, Tex., assignor of one-third to Thomas S. Lovette, Belton, Tex. Filed Feb. 4, 1915. Serial No. 6,154. (Cl. 175—115.)

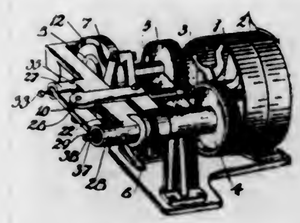


1. In a gas igniter, the combination with a burner having upwardly diverging jet tubes provided with jet openings, one of the tubes having an exterior groove in its upper inclined side or face, said groove being located adjacent to the jet opening of such tube, an insulator mounted on the burner below the said tube, an incandescent resistance wire extending over the grooved tube of the burner and arranged in the groove thereof, the terminals of the resistance wire being secured to the insulator and conductors also mounted on the insulator and connected with the terminals of the resistance wire.

2. In a gas igniter, the combination with a burner, of a sectional clamp of insulating material engaging the burner, binding posts located at opposite sides of the burner and connecting the sections of the insulator or clamp, a resistance wire extending over the burner and connected at its ends to the terminals of the binding posts at one side of the clamp and conductors connected to the other terminals of the binding posts and located at the opposite side of the clamp.

1,190,296. RAND-TURNING MACHINE. CHARLES E. KENNEDY, Lakeville, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 1, 1915. Serial No. 59,036. (Cl. 12—67.1.)

1. A machine of the class described, having, in combination, rand molding means, and means constructed and arranged to limit the action of said rand molding means to a portion of a rand strip intermediate between its ends.



2. A machine of the class described, having, in combination, rand molding means, and means constructed and arranged to limit the action of said rand molding means to the longitudinally central portion of the rand strip.

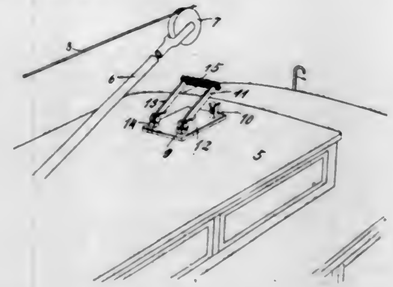
3. A machine of the class described, having, in combination, rotary rand molding means, and means constructed and arranged to limit the action of said rand molding means to a portion of a rand strip intermediate between its ends.

4. A machine of the class described, having, in combination, rand molding means and means constructed and arranged to prevent the action of said rand molding means upon the end portions of a rand strip.

5. A machine of the class described, having, in combination, rotary rand molding means and means constructed and arranged to prevent the action of said rand molding means upon the end portions of a rand strip.

[Claims 6 to 15 not printed in the Gazette.]

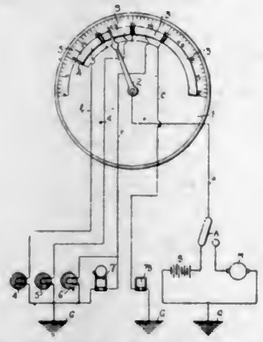
1,190,297. LIGHTING SYSTEM FOR ELECTRICALLY-PROPELLED VEHICLES. DAVID KINNIBURGH, Chicago, Ill. Filed Dec. 14, 1914. Serial No. 877,161. (Cl. 171—313.)



1. The combination with the lighting circuit of a trolley car and the trolley pole, of a pivoted switch blade in the path of the trolley pole and engageable by said pole when the same is lowered, switch poles for said blade, a branch conductor from one side of the lighting circuit to one of said poles, a conductor leading from the other one of said poles, a switch contact to which the last mentioned conductor is connected, and a switch interposed in the lighting circuit, and engageable with the aforesaid switch contact.

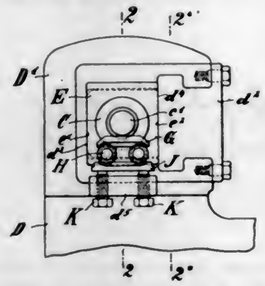
2. The combination with the lighting circuit of a trolley car and the trolley pole, of a switch carried by the car and actuated by the trolley pole when the latter is lowered, switch poles for said switch, a branch conductor from one side of the lighting circuit to one of said poles, a conductor leading from the other one of said poles, a switch contact to which the last mentioned conductor is connected, and a switch interposed in the lighting circuit, and engageable with the aforesaid switch contact.

1,190,298. SPEED-INDICATOR. FRANK S. KIRK, Enid, Okla. Filed July 24, 1915. Serial No. 41,736. (Cl. 175—355.)



In combination with a dial and index of a speedometer, a source of electrical energy in communication with the index, a plurality of contact plates carried by the dial and with which the index is adapted to contact, said contact plates being arranged circular or concentric to the rotative axis of the index, alternate contact plates being of a length materially less than the intermediate contact plates, and a signal in electrical communication with each of the contacts, the signal in communication with the alternate contact plates being audible and the signals in contact with the intermediate plates being visual.

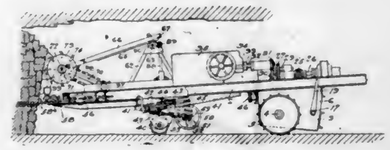
1,190,299. PRESSURE-RELIEVING TRUNNION-BEARING FOR GUNS. OSCAR KNOCH, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Sept. 11, 1913. Serial No. 789,320. (Cl. 89—37.)



1. Pressure relieving trunnion bearings for guns provided with trunnions comprising a sleeve without play on each trunnion, a bearing body for said sleeve, said sleeve being guided without play in the bearing body between guiding surfaces which run in the direction of the bearing-relieving movement and an auxiliary trunnion on each of the main trunnions and in alinement therewith, said auxiliary trunnion having a vertically adjustable seat on the bearing body.

2. Pressure relieving trunnion bearings for guns provided with trunnions, comprising a sleeve without play on each trunnion, said sleeve having straight outside surfaces, a bearing body open on one side and a cap for closing said opening, said bearing body and cap fitting closely in all directions around the sleeve only permitting vertical displacement of the sleeve; an auxiliary trunnion on each of the main trunnions and in alinement therewith, a sled mounted on a pair of rollers supporting each auxiliary trunnion, a rail for carrying the rollers, set screws under the rail, said screws being vertically adjustable in a ledge on the bearing body; whereby said sleeves will be relieved from the weight of the gun on raising said sleds, rollers and rails by means of said screws, and transverse turning of the gun out of its given firing direction will be prevented, said rollers being provided with guide flanges engaging both with said rail and said sled, whereby the sled is guided by the rollers and the rollers by the rail.

1,190,300. MINING-MACHINE. HARRY A. KUHN, Pittsburgh, Pa. Filed May 18, 1914. Serial No. 839,328. (Cl. 125—14.)



1. In a mining machine, the combination with a suitable frame, of an endless chain, cutting mechanism carried thereby, means for advancing the same laterally into the wall of coal, conveying mechanism, means for moving said frame at an angle to the line of travel of the cutting mechanism and simultaneously therewith, and cutting mechanism carried by said frame working at an angle to the first named cutting mechanism.

2. In a mining machine, the combination with a suitable frame, of an endless chain, cutting mechanism carried thereby, means for advancing the same laterally into the wall of coal, conveying mechanism, means for raising said frame at an angle to the line of movement of the cutting mechanism, and simultaneously therewith, and a cutting disk carried by said frame operating at an angle to the line of cut of said first cutting mechanism.

3. In a mining machine, the combination with a suitable frame, of an endless chain, cutting mechanism carried thereby, means for advancing the same laterally into a mass of coal, conveying mechanism, a swinging frame carried by said first named frame, and cutting mechanism carried by said swinging frame operating at an angle to the line of movement of said first named cutting mechanism.

4. In a mining machine, the combination with a suitable frame, of an endless chain, cutting mechanism carried thereby, means for advancing the same laterally into the mass of coal, conveying mechanism, a swinging frame on said first named frame, cutting mechanism on said frame moving at an angle to the line of movement of the first named cutting mechanism, and means for raising and lowering said swinging frame.

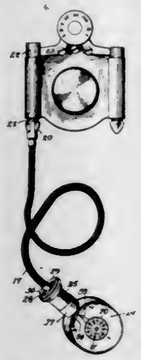
5. In a mining machine, the combination with a suitable frame, of cutting mechanism carried thereby, means for advancing same into the mass of coal, conveying mechanism, a swinging frame on said first named frame, cutting mechanism carried by said swinging frame, operating at an angle to the line of movement of said first named cutting mechanism, a rack connected to said swinging frame, and a pinion supported by said first named frame engaging said rack.

[Claims 6 to 10 not printed in the Gazette.]

1,190,301. TIME-CONTROLLED CAMERA-SHUTTER OPERATOR. ALFRED G. F. KUROWSKI and OTTO A. MARTINI, New York, N. Y., assignors to Felix Goodfriend, New York, N. Y. Filed Oct. 27, 1915. Serial No. 58,120. (Cl. 161—26.)

1. In a device of the class specified the combination with a clock-work, of a reciprocable plunger; a pivotally supported lever connected to the plunger; means to connect said lever to the clock-work at a predetermined time to rotate the lever and impart movement to the plunger in one direction and to disconnect said lever from the clock-work at a predetermined time, substantially as and for the purpose specified.

2. In a device of the class specified, the combination of a reciprocable plunger; a clock-work; means to wind the latter in one direction and indicate the extent of such movement; means operable at a predetermined time to automatically connect the plunger to the clock-work when moving in a reverse direction to impart movement to the plunger and to disconnect the plunger from the clock-work, substantially as and for the purpose specified.



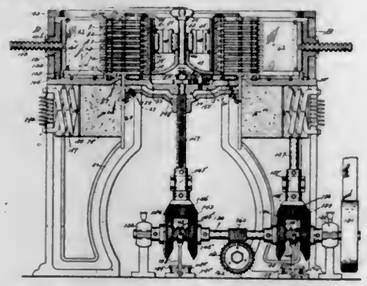
3. In a device of the class specified, the combination with a clock-work, of a reciprocable plunger; a rotatably supported lever connected to the plunger; means to connect the lever to the clock-work at a predetermined time to impart movement to the plunger in one direction; and means to disconnect the lever from the clock-work at a predetermined time to permit the return of the lever and plunger, substantially as and for the purpose specified.

4. In a device of the class specified, the combination with a clock-work, of a reciprocable plunger; a rotatably supported lever connected to the plunger; a latch to connect the lever to the clock-work at a predetermined time to impart movement to the plunger in one direction; and means to trip said latch at a predetermined time to disconnect the lever from the clock-work and permit the return of the lever and plunger, substantially as and for the purpose specified.

5. In a device of the class specified, the combination with a clock-work, of a reciprocable plunger; a rotatably supported lever; a link to connect the lever to the plunger; means to connect the lever to the clock-work at a predetermined time to impart movement to the plunger; and adjustable means to disconnect the lever from the clock-work at a predetermined time, substantially as and for the purpose specified.

[Claims 6 to 18 not printed in the Gazette.]

1,190,302. BRUSH-MACHINE. CHARLES S. LABOFISH, Washington, D. C. Filed Jan. 18, 1911. Serial No. 603,872. (Cl. 15—7.)



1. A brush machine comprising a member containing a conduit formed so that two of its walls are parallel and the other two convergent and having knot-fastener-guiding grooves in the parallel walls.

2. A brush machine comprising a member composed of two conjoined parts having a row of conduits formed along the line of juncture of the said two parts each conduit of which is tapered widthwise of the row and has oppositely disposed grooves along the line of juncture of the said two parts.

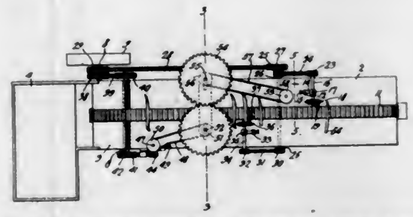
3. A brush machine comprising a member containing a row of conduits each of which has two parallel and two convergent walls and is provided with oppositely disposed grooves in its parallel walls; means for holding a brush blank so that a row of cells therein coincides with the row of circular openings of the said conduits, and plungers the free end of each of which slides freely in the said oppositely disposed grooves in the conduit.

4. The combination, in a brush machine, of means for carrying a plurality of brush blanks the cells in which are arranged staggeringly having openings therein through which the said cells are exposed, and tuft inserters corresponding in number to that of the brushes arranged in relation to the rows of cells so that some of the inserters are in position for operation on the first rows of cells in the blanks opposite thereto, some on the second rows of cells, and so on, and upon moving the said carrying means successive rows of cells are brought into position for operation by the said inserters.

5. The combination, in a brush machine, of a member containing a plurality of conduits, a corresponding number of plungers adapted to the said conduits, and blank carrying means for carrying a corresponding number of brush blanks; the blanks being arranged in relation to the said conduits so that some of the latter are in line for tufting the first rows of cells in the blanks opposite thereto, some the second rows, and so on, so that upon moving the said carrying means successive rows of cells will be brought in line for tufting.

[Claims 6 to 44 not printed in the Gazette.]

1,190,303. BEAN-CLIPPER. MORGAN J. LANGTON, Oswego, N. Y. Filed Oct. 8, 1915. Serial No. 54,867. (Cl. 146—11.)



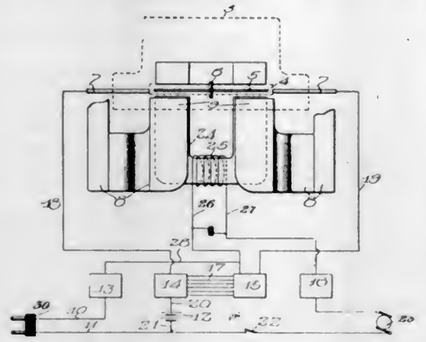
1. In a device for cutting off the ends of beans, a supporting structure; a conveyer mounted to move thereon; inclined belts located on opposite sides of the conveyer; knives in advance of the belts; and means for driving the belts at a higher speed than the conveyer, thereby to advance the stems of the beans and to facilitate the cutting of the beans by the knives.

2. In a device of the class described, a supporting structure; a carriage mounted to move for adjustment transversely of the supporting structure; means for holding the carriage in adjusted positions; pulleys mounted on the carriage; belts extended in opposite directions from the respective pulleys and disposed in converging relation; means for operating the belts; knives disposed to the rear of the belts; and a conveyer operating between the respective knives and the respective belts.

3. In a device of the class described, a supporting structure; a carriage mounted to move transversely of the supporting structure; means for holding the carriage in adjusted positions transversely of the supporting structure; pulleys mounted on the carriage; means for operatively connecting the pulleys, whereby one pulley will rotate the other pulley; means for driving one pulley; converging belts driven by the pulleys; knives operating in the rear of the belts; and a conveyer operating between the respective belts and the respective knives.

4. In a device of the class described, a supporting structure; a carriage mounted to move transversely of the supporting structure for adjustment; means for holding the carriage in adjusted positions; pulleys mounted on the carriage; belts carried by the pulleys; intermeshing gear wheels operatively connected with the pulleys; a conveyer operating between the belts, the belts being disposed in converging relation; and knives operating to the rear of the belts.

1,190,304. AMPERE-HOUR METER. ROBERT C. LANPHIER, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Nov. 16, 1911. Serial No. 660,629. (Cl. 171—265.)



1. The method of indicating the effective capacity of a storage battery having an ampere hour meter connected therewith so as to operate on charge and on discharge of the battery, which consists in operating the meter on charge at a rate which is substantially directly proportional to the value of the current supplied to the battery, and operating the meter on discharge at an accelerated rate by electro-magnetically supplementing the normal armature-operating effect of the motor element of the meter by an auxiliary motor element energized by the battery current, the effect of which varies substantially as the square of the value of the current withdrawn from the battery.

2. The combination with an electric meter, comprising a rotary armature, and a permanent magnet adapted by the passage of a current through said armature to cause said armature to rotate in one direction or the other, depending on the direction of flow of the current, of electro-magnetic means acting on the armature and adapted to be energized by flow of the current in one direction only, for varying the rate of rotation of the armature in one direction under a given flow of current, as compared with its rate of rotation in the opposing direction under a corresponding current flow.

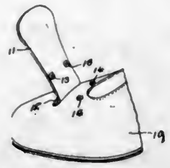
3. The combination with an electric meter, comprising a rotary armature, and a permanent magnet adapted by the passage of a current through said armature in one direction or another to cause said armature to rotate in either direction at the same rate, depending on the direction of flow of the current, of means acting upon said armature only when the current flows in one direction to abnormally vary the rate of rotation of the armature.

4. The combination with an electric meter, comprising o rotary armature, and a permanent magnet adapted by the passage of a current through said armature in one direction or another to cause said armature to rotate in either direction at the same rate, depending on the direction of flow of the current, of an electro-magnet adapted to act upon the armature only when the current flows in one direction to vary from the normal its rate of rotation.

5. The combination with an electric meter, comprising a rotary armature, and a permanent magnet adapted to operate upon said armature by the flow of current therethrough in one direction or another to cause the armature to rotate in either direction, depending on the direction of flow of the current, of a storage battery, and auxiliary motor mechanism controlled by the flow of current from the battery only for increasing the rate of rotation of the armature by an amount that varies substantially as the square of the load.

[Claims 6 to 15 not printed in the Gazette.]

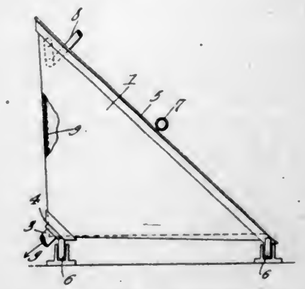
1,190,305. BUCKLE-SUPPORT. MILTON M. LEICHTER, Brooklyn, N. Y. Filed June 9, 1913, Serial No. 772,666. Renewed Dec. 3, 1915. Serial No. 64,934. (Cl. 36—1.)



1. In combination, a slipper, a tab having one end thereof permanently secured to said slipper, and cooperating securing means carried by said tab and slipper for detachably securing said tab to said slipper at a distance from said permanently secured end, in order to permit a buckle having a securing bar attached thereto to be slipped over said tab to position its bar beneath the portion of the tab between said permanently secured end and the detachable securing means and the subsequent securing of said tab to said slipper by means of said detachable securing means.

2. In combination, a slipper, a tab having an extension from one end thereof, means for permanently securing said extension to said slipper, and coöperating securing means carried by said tab and extensions for detachably securing said tab to said slipper at a distance from the end of said tab adjacent said extension, in order to permit a buckle having a securing bar attached thereto to be slipped over said tab to position its bar beneath the portion of the tab between the end thereof adjacent said extension and the detachable securing means and the subsequent securing of said tab to said slipper by means of said detachable securing means.

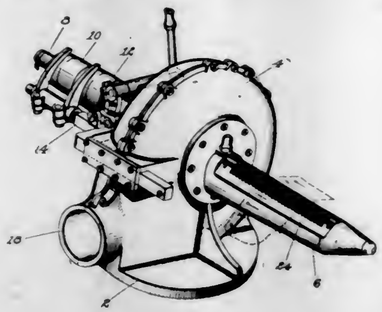
1,190,306. ORE-CONCENTRATOR. RUDOLPH LEONHART, San Anselmo, Cal. Filed Oct. 6, 1914. Serial No. 865,394. (Cl. 83—86.)



An ore concentrator including a conical body mounted for rotation and having a substantially perpendicular portion leading downwardly to the apex of the body and a slightly inclined portion leading upwardly to the apex

of the body, there being an outlet at said apex, means for rotating the body in one direction about an axis extending along said slightly inclined bottom portion, means for directing values onto the bottom portion of the table between the outlet and the front of the table, and means extending along the periphery of the table at the uppermost portion thereof, for directing water downwardly toward the outlet to direct into the outlet values adhering to the table.

1,190,307. THREAD-CUTTING MACHINE. BERNARD T. LEVEQUE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 2, 1914. Serial No. 829,157. (Cl. 26—9.)



1. In a thread cutting machine, the combination of means for producing a current of air to lift the threads away from the face of the work, mechanical means for aiding the action of the air on the threads, and means for severing the threads from the work while they are held in such lifted position.

2. In a thread cutting machine, the combination of a cutter, means for producing a current of air to carry the threads attached to the work away from the face of the work and into the path of said cutter, a guard for protecting the work from contact with said cutter, and mechanical means for acting on the threads to aid the current of air in carrying them into the path of the cutter.

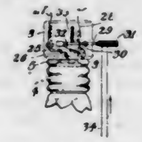
3. In a thread cutting machine, the combination of a cutter, a guard therefor over which the work is guided, said guard being constructed to protect the work from contact with the cutter but having a plurality of transverse apertures therein to permit the passage therethrough of threads only, and means for producing a partial vacuum around the cutter to cause the air currents produced thereby to carry the threads attached to the work through the apertures in the guard into the path of the cutter.

4. In a thread cutting machine, the combination of a cutter, a guard therefor constructed to protect the work from contact with the cutter but apertured to permit the passage therethrough of threads, means for producing a current of air through the guard to carry the threads attached to the work through the apertures in the guard into the path of the cutter, and means for acting on the threads as the work is passed over the guard to facilitate their passage through the guard.

5. In a thread cutting machine, the combination of a cutter, a guard therefor constructed to protect the work but apertured to permit the passage through the guard of threads attached to the work, means for producing a current of air through the apertures of the guard to carry the threads therethrough into the path of the cutter, and means for combing the threads as the work is passed over the guard to facilitate their entrance into the apertures of the guard.

[Claims 6 to 21 not printed in the Gazette.]

1,190,308. INCANDESCENT-LAMP SOCKET. REGINALD M. LEVY, New York, N. Y. Filed Nov. 24, 1914. Serial No. 873,672. (Cl. 175—183.)

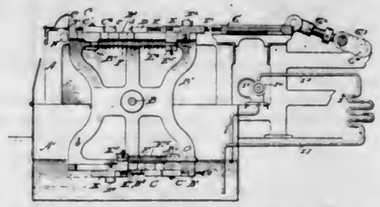


1. In an incandescent lamp socket a pair of electrical terminals adapted to be connected with terminals of the lamp and controllable means for short-circuiting the terminals of the socket comprising a contact member in electrical contact with one terminal and a lever in electrical contact with the other terminal, said lever being adapted to make electrical contact with the first contact member to short-circuit the terminals when manually controlled and to automatically break contact when the manual control is released.

2. In an incandescent lamp socket a pair of electrical terminals adapted to be connected with terminals of the lamp, an electrical conductor permanently secured to one of said terminals, and manually controllable means for bringing said conductor into electrical contact with the other terminal for short-circuiting said terminals said means being adapted to break contact simultaneously with the releasing of the manual control.

3. A system of incandescent lamp sockets connected in series and means at each socket for short-circuiting it comprising a contact member in electrical contact with one terminal and a lever in electrical contact with the other terminal, said lever being adapted to make electrical contact with the first contact member to short-circuit the terminals when manually controlled and to automatically break contact when the manual control is released.

1,190,309. MACHINE FOR FORMING AND TEMPERING VEHICLE-SPRINGS OR OTHER ELEMENTS. FREDERICK H. LEWIS and WILLIAM H. BAKER, Jackson, Mich., assignors to Lewis Spring and Axle Company, Jackson, Mich., a Corporation of Michigan. Filed Mar. 8, 1915. Serial No. 13,012. (Cl. 148—36.)



1. In a machine of the character described, a rotatable frame, a tank for a tempering fluid located beneath the rotatable frame, a plurality of adjustable fingers carried by the rotatable frame, a table slidable upon the rotatable frame, a plurality of adjustable fingers carried by the table, a ram normally spaced from the table, means for actuating the ram to slide the table whereby the fingers carried by the table may coöperate with the first named fingers to shape and grip a bar placed between their opposing ends, and means to rotate the rotatable frame in one direction to carry the bar in the one and same direction into and through the tempering fluid.

2. In a machine of the character described, a rotatable frame, a tank for a tempering fluid located beneath the rotatable frame, a plurality of adjustable fingers carried by the rotatable frame, a table slidable upon the rotatable frame, a plurality of adjustable fingers carried by the table, a ram, means for actuating the ram to slide the table whereby the fingers carried by the table may coöperate with the first named fingers to shape and grip a bar placed between their opposing ends, means to rotate the rotatable frame in one direction to carry the bar in the one and same direction into and through the tempering fluid, and means for arresting rotative movement of the rotatable frame at one point in its rotation to hold the bar in the tempering fluid.

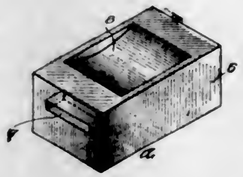
3. In a machine of the character described, a rotatable frame, a plurality of grated platforms carried by the rotatable frame, a plurality of adjustable fingers grouped upon each grated platform, a slidable table carried by each grated platform, a plurality of adjustable fingers carried by each slidable table in opposing relation to the first named fingers to coöperate with the latter to shape and grip a bar placed between the ends of the fingers, a horizontally slidable ram to force the tables with their banks of fingers against the respective opposing banks of fingers carried by the respective grated platform to shape said bar when adjusted, and means for operating the ram.

4. In a machine of the character described, a rotatable frame, a plurality of grated platforms carried by the rotatable frame, a plurality of adjustable fingers grouped upon each grated platform, a slidable table carried by each grated platform, a plurality of adjustable fingers carried by each slidable table in opposing relation to the first named fingers to coöperate with the latter to shape and grip a bar placed between the ends of the fingers, a horizontally slidable ram to force the tables with their banks of fingers against the respective opposing bank of fingers carried by the respective grated platform to shape said bar when adjusted, means for operating the ram, and means to rotate the rotatable frame in one direction to carry the bar into and through the bath.

5. In a machine of the character described, a rotatable frame, a plurality of grated platforms carried by the rotatable frame, a plurality of adjustable fingers grouped upon each grated platform, a slidable table carried by each grated platform, a plurality of adjustable fingers carried by each slidable table in opposing relation to the first named fingers to coöperate with the latter to shape and grip a bar placed between the ends of the fingers, a horizontally slidable ram to force the tables with their banks of fingers against the respective opposing bank of fingers carried by the respective grated platform to shape said bar when adjusted, means for operating the ram, and cushioning means carried by each table for engagement by the ram to cushion the impact incident to engagement of the ram with the tables when the latter are forced by the ram against the fingers of the respective grated platform and to cushion the table when the latter engages the ram when the latter is moved to normal position.

[Claims 6 to 19 not printed in the Gazette.]

1,190,310. BUFFER. ADAM A. LONG, Rochester, N. Y. Filed Mar. 4, 1915. Serial No. 12,138. (Cl. 4—18.)



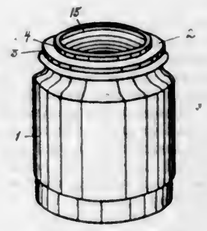
1. An elongated cushion body for buffers having a pocket in one wall thereof formed with a bottom curved transversely only, to render the body more flexible in a transverse direction than longitudinally.

2. A buffer having, in combination, a cushion body transversely flexible, and provided with recesses in opposite ends of less width than the body and spaced from opposite sides thereof, and an attaching member comprising a base plate against which the body rests, integral laterally extending end portions spaced apart on said plate between which the body lies, and inwardly turned lugs at opposite ends of less width than the body projecting into said recesses to lock said cushion body against lateral shifting on said base plate.

3. A buffer having, in combination, an elongated cushion body provided with a pocket having a bottom wall curved transversely only to render the body more flexible in the transverse direction than in the longitudinal direction and recesses in opposite ends, and an attaching member having a surface against which the pocketed face of the body rests and also having spaced means at opposite ends entering the recessed ends of said body to hold the latter to the attaching member.

4. A buffer having, in combination, an elongated cushion body provided with a pocket in one face having a bottom wall curved transversely only to render the cushion body more flexible transversely than longitudinally and with recesses in opposite ends, the recesses being shorter in length than the body is wide and spaced from opposite sides of the body, and a attaching member embodying a plate against which the pocketed face of the body rests, said plate having fastener openings under the pocket, integral laterally-turned portions spaced apart on the plate and receiving the body between them, and inwardly-turned lugs on the laterally-turned portions fitting in said recesses and locking the cushion body against lateral shifting on said base plate.

1,190,311. COVER FOR HUMIDORS. ARTHUR E. MCBRIDE, Utica, N. Y. Filed July 28, 1915. Serial No. 42,305. (Cl. 131—51.)



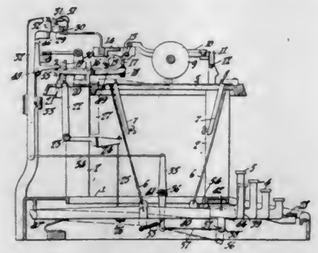
1. In a cover for a humidor, an annular flange, forming shoulders, whereby said cover may be reversibly held upon a humidor, a bowl upon one side of said cover, and means upon the other side for containing moisture, said means forming a standard for said cover.

2. In a cover for a humidor, an annular flange forming shoulders, whereby said cover may be reversibly held upon a humidor, a bowl for holding pipes and ashes upon one side of said cover, an annular member having a chamber for holding moisture, whereby to humidify the air within said humidor upon the other side of said cover and an aperture for the admission of a sponge into said chamber.

3. In a cover for a humidor, an annular flange, whereby said cover may be reversibly held upon said humidor, notches for holding cigarettes, cigars and pipes upon one side of said cover, and a standard for supporting said cover independent of said humidor.

4. In a cover for a humidor, an annular flange forming shoulders on either side thereof, whereby said cover may be reversibly held upon said humidor, a bowl upon one side of said cover, notches in the periphery of said bowl, an enlarged annular member upon the other side of said cover, said annular member having a flat base, whereby to form a standard, a chamber within said annular member for the disposition of a sponge, and an aperture giving access to said chamber.

1,190,312. TYPE-WRITING MACHINE. GEORGE F. MCKAY, Derry, N. H., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 22, 1915. Serial No. 16,016. (Cl. 197—178.)



1. In a typewriting machine and tabulating mechanism therefor, the combination with a carriage, a platen thereon, and types to strike against the platen, of character keys, operating connections between the keys and types for actuating the latter by downward movements of the keys, denomination stops, individual connections between the keys and said stops, the keys each operable through its said connection by a movement different from its key-operating movement, to operate the connected stop to carriage-arresting position, and means operated by said keys to release the carriage and permit it to run forward and be arrested at a denominational position determined by the selected stop.

2. In a typewriting machine and tabulating mechanism therefor, the combination with a carriage and a platen thereon, of means to drive the carriage, escapement mechanism controlling the movement of the carriage, character keys, types operated thereby to strike against the platen or a work-sheet thereon, column stops on the carriage, denomination stops, and individual connections from said keys to the denomination stops whereby the stops are individually controlled by said character keys and operated by the keys when the latter are moved in one direction, to release the carriage from the escapement mechanism and to arrest the carriage at a position determined by the operated stop, said keys operable when moved in a different direction to actuate the type-bars without operating the tabulating mechanism.

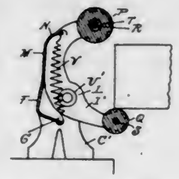
3. In a typewriting machine and tabulating mechanism therefor, the combination with a carriage, of a platen, means to drive the carriage, escapement mechanism controlling the travel of the carriage, character keys comprising alphabet keys, and a row of numeral keys, types operated by a downward movement of said keys, said numeral keys movable in a direction transverse to said downward movement without operating the types, a series of denomination stops, individual connections between said stops and numeral keys for actuating the stops when the keys are moved transversely, and means operated by said transverse movement of the numeral keys to release the carriage from its escapement mechanism, and permit it to be advanced to a position corresponding to the actuated denomination stop.

4. In a typewriting machine and tabulating mechanism therefor, the combination of a keyboard comprising a row of keys extending transversely across the machine, a carriage, a platen thereon, types operated by said keys when the latter are depressed, to print at the platen, escapement mechanism controlling the travel of the carriage, a series of denomination stops located at the rear of the machine and arranged at letter-space intervals, said keys movable rearwardly, individual connections from said keys to the denomination stops arranged to actuate each stop by the rearward movement of the connected key, and means operable when said keys are moved rearwardly to release the carriage from its escapement mechanism, and permit it to run forward to a denominational position determined by the operated stop.

5. In a typewriting machine and tabulating mechanism therefor, the combination with a carriage and a platen thereon, of means to drive the carriage, escapement mechanism controlling the movement of the carriage, a keyboard comprising a row of keys extending across the machine, types operable by depressing the keys, a series of denomination stop levers and stops at the rear of the machine and arranged at letter-space intervals, sub-levers located forward of the said stop levers and spaced to correspond with the spacing of the said keys, said keys being capable of forward and rearward movement, links connecting said keys to the sub-levers, links connecting the sub-levers to the stop levers for actuating the latter when said keys are moved rearwardly, and means controlled by said keys for releasing the carriage from its escapement mechanism when a key is moved rearwardly and permitting the carriage to run forward until arrested by the operated denomination stop.

[Claims 6 to 16 not printed in the Gazette.]

1,190,313. DOOR-CHECK. GEORGE W. MALLORY, Blenheim, Ontario, Canada. Filed Jan. 24, 1916. Serial No. 73,816. (Cl. 16—46.)



1. A door-check, comprising stationary and movable members each formed from an integral sheet-metal blank and having parallelly-arranged similar side portions and a connecting rear portion, said side portions of the two blanks being pivotally connected to each other, and cross members between the sides of the movable member at the outer and inner ends thereof for respectively engaging the inner and outer faces of the door.

2. In a door-check, the combination with a stationary bifurcated bracket member, of a movable lever member formed from a single sheet-metal blank having parallelly-arranged similar crescent-shaped side portions and a connecting rear portion, said side portions being pivotally connected with the sides of the bifurcated bracket member, and cross members between the opposite ends of said crescent-shaped sides forming bearings for the outer and inner faces of the door.

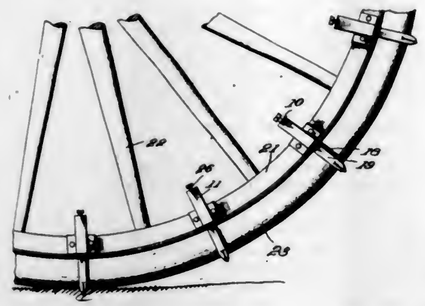
3. In a door-check, the combination with a bifurcated bracket member, of a lever member formed from a single sheet-metal blank having parallelly-arranged similar crescent-shaped side portions and a connecting rear portion, said side portions being pivotally connected with the sides of the bifurcated bracket and the lower portion of said sides inclining obliquely inward for the purpose described.

4. A door-check, comprising stationary and movable members each formed from a single sheet-metal blank struck-out to form parallelly-arranged similar side portions and a connecting rear portion, the side portions of the movable member being crescent-shaped, a pivotal connection between said members formed of eye-rivets integral with the one and engaging apertures in the other, and cross stop members between the ends of the crescent-shaped sides.

5. In a door-check, stationary and movable members each formed from a single sheet-metal blank struck up to form parallelly-arranged similar side portions and a connecting rear portion having a tongue extending forwardly between the side portions, the side portions of the movable member being crescent-shaped and being pivotally connected to the sides of the stationary member, and a spring connecting the forwardly-projecting tongues of said members located to be beyond the center of the pivot when said rear portions are in contact.

[Claims 6 to 10 not printed in the Gazette.]

1,190,314. ANTISKIDDING DEVICE. SILAS E. MARTZ, Plymouth, Pa. Filed Feb. 27, 1915. Serial No. 11,100. (Cl. 21—212.)



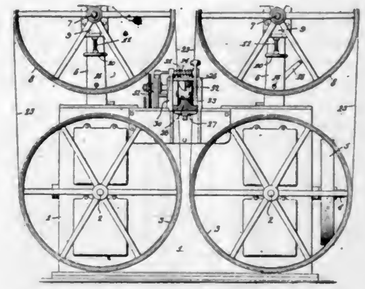
1. A device of the character described including a supporting bracket provided with spaced arms, laterally extending flanges formed on said arms, stop lugs carried by said flanges, a road engaging member slidably mounted upon said arms, the said member and the bracket embracing a wheel felly with the member projecting radially upon opposite sides of the felly and with said flanges seating against opposite edges of the felly with the stop lugs engaging the inner face of the felly, means connecting said flanges to the felly, a spring carried by the member, and means adjustable upon the bracket and engaging said spring for regulating the tension thereof.

2. The combination with a wheel felly, of a supporting bracket provided with spaced arms embracing the felly, a laterally extending flange formed on each of said arms and seating against the adjacent side edge of the felly, a stop lug carried by each of said flanges and engaging the inner face of the felly, means connecting the said flanges with the felly, a road engaging member adapted to embrace the felly and slidably mounted upon said arms, the said member being arranged to project radially of the felly, and yieldable means engaging said member for normally urging it to position projected beyond the periphery of a tire carried by the felly.

3. The combination with a wheel felly, of a substantially U-shaped supporting bracket having spaced arms joined by a connecting portion, the arms embracing the felly and having channels formed therein, laterally directed and oppositely disposed flanges formed on the side walls of said arms at the free extremities thereof and seating against opposite side edges of the felly, laterally directed stop lugs formed on the inner extremities of said flanges and extending inwardly between the arms, the said lugs seating against the inner face of the felly, bolts extending through said flanges and the felly and detachably connecting the bracket with the felly, a substantially U-shaped road engaging member having spaced arms joined by a connecting portion, the said arms being slidably mounted in said channels with the connecting portion normally resting against the inner face of the felly, a bowed spring mounted upon the connecting portion of said member, and a set screw adjustable upon the connecting portion of said bracket and engaging said spring.

4. The combination with a wheel felly, of a supporting bracket having arms joined by a connecting portion and secured at their free extremities to opposite side faces of the felly to project laterally therefrom, a road engaging member slidably mounted upon the said arms and provided with arms interposed between the arms of the supporting bracket and the side faces of the felly, and yieldable means interposed between the connecting portion of the said bracket and the road engaging member for urging the member radially of the felly.

1,190,315. FLAP-TRIMMING MACHINE. THOMAS MIDGLEY, Worthington, Ohio, assignor to Morgan & Wright, Detroit, Mich., a Corporation of Michigan. Filed Aug. 13, 1913. Serial No. 784,530. (Cl. 164—36.)



1. In a machine of the character described, a support for receiving and guiding endwise the material to be trimmed to the trimming point, means at the trimming point coöperating with said support for maintaining the material in position on said support, means for trimming the material at the point of contact of the first named means therewith, and means for drawing the material past the trimming point.

2. In a machine of the character described, a support for receiving and guiding endwise the material to be trimmed to the trimming point, a roller at the trimming point cooperating with said support for maintaining the material in position on said support, band cutters for trimming the material and passing through the tangential points of contact of the roller therewith, and means for drawing the material past the trimming point.

3. In a machine of the character described, a support for receiving and guiding endwise the material to be trimmed to the trimming point, said support being shaped on its upper surface to conform to the shape of the material to be trimmed, a similarly shaped guide roller at the trimming point for pressing upon the material on said support to maintain the same in position thereon, means for trimming the material and passing through the tangential points of contact of the roller therewith, and means for drawing the material past the trimming point.

4. In a machine of the character described, a support for receiving and guiding endwise the material to be trimmed to the trimming point, said support being shaped on its upper surface to conform to the shape of the material to be trimmed, a similarly shaped guide roller at the trimming point for pressing upon the material on said support to maintain the same in position thereon, band cutters for trimming the material and passing through the tangential points of contact of the roller therewith, and means for drawing the material past the trimming point.

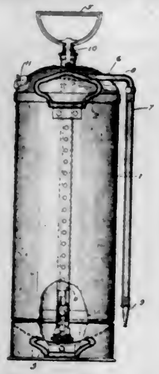
5. In a machine of the character described, a support for receiving and guiding endwise the material to be trimmed to the trimming point, said support being shaped on its upper surface to conform to the shape of the material to be trimmed, similarly shaped spring pressed guide rollers for pressing upon the material on said support to maintain the same in position thereon, means for simultaneously lifting said guide rollers from operative position, means for trimming the material, and means for drawing the material past the trimming point.

[Claims 6 to 10 not printed in the Gazette.]

1,190,316. FIRE-EXTINGUISHER. JOSEPH M. MILLER, Chicago, Ill. Filed Feb. 8, 1915. Serial No. 6,796. (Cl. 169—17.)

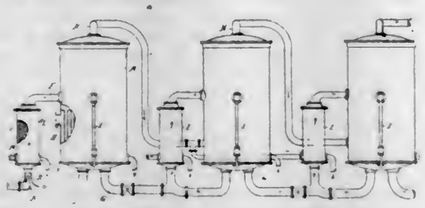
The combination of a container, a pump extending longitudinally into said container, a transversely disposed

branch leading from said pump to the exterior of said container near the top thereof, and a hose connected to said branch, the communication between said pipe and branch



and hose being normally open, said branch having a vent located therein within said container, said container having a filling opening located below the level of said vent.

1,190,317. PROCESS AND APPARATUS FOR THE EVAPORATION OF SUGAR-JUICE. LEON NAUDET, Chelles, France. Filed June 28, 1915. Serial No. 36,825. (Cl. 127—18.)



1. In an evaporator having a heating surface, the combination with means for supplying liquid thereto, of means actuated by the liquid supply for accelerating the flow of liquid over the heating surface.

2. In an evaporator having a heating surface, the combination with means for supplying liquid thereto, of means actuated by the inflow of said liquid for re-circulating the liquid in said evaporator and accelerating the flow over the heating surface.

3. In an evaporator having a heating surface, the combination with means for supplying liquid thereto, of an injector operated by the inflowing liquid for re-circulating the liquid within said evaporator to increase the flow over the heating surface.

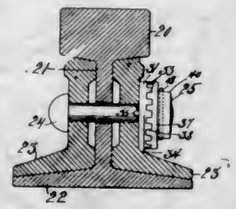
4. The combination with a multiple unit evaporator, each unit having a heating surface and a conduit for flowing the liquid from one unit to another, of means actuated by the flow of liquid through said conduit for moving a larger volume of fluid over the heating surface.

5. In an evaporator, the combination with a conduit for supplying liquid thereto, of a supplemental evaporator connected to said supply conduit, a return conduit from said evaporator to said supplemental evaporator, and an injector operated by the fluid supply for circulating the fluid through said return circuit and supplemental evaporator.

[Claims 6 to 18 not printed in the Gazette.]

1,190,318. NUT-LOCK. AXEL NELSON, Newark, N. J. Filed July 29, 1914. Serial No. 853,794. (Cl. 151—55.)

1. In a nut lock of the character described the combination of a member with teeth formed therewith, and having means incorparated therewith to prevent its turning when in operative position, a second member having teeth to lock with the first member, the second member adapted to engage a nut of a bolt and means to lock the said second member with said nut.

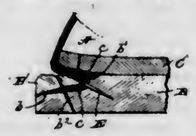


2. In a nut lock of the character described the combination of a member with an abutting flange and teeth, a second member having teeth to lock with the first member, the said second member adapted to engage a nut of a bolt and a pin locking the said second member with said nut.

3. In a nut lock of the character described the combination of a member with an abutting flange and teeth, a second member with teeth to lock with the first member and having a box flange formed therewith, the said second member adapted to engage a nut of a bolt and a pin locking the said second member with said nut.

4. In a nut lock of the character described, the combination of a member comprising a barrel having a central opening and with teeth extending therefrom and also having an abutting flange to bear against an object to prevent said member turning, a second member comprising a barrel having a central opening and with teeth extending therefrom to lock with the first member, said second member having a box flange formed therewith to engage the nut of a bolt and a pin locking said box flange with said nut.

1,190,319. SHOE. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 16, 1912. Serial No. 731,892. (Cl. 36—16.)



1. In a shoe, an outer sole, an inner sole, means for securing the edge portion of the inner sole to the edge portion of the outer sole with the edge portion of said inner sole in spaced relation to said outer sole, an upper provided with an outwardly turned portion overlying the edge portion of the outer sole, a welt strip overlying the outwardly turned portion of the upper, the inner edge of said welt strip extending between the inner and outer soles, and fastening means connecting the welt strip, outer sole, and interposed portion of the upper.

2. In a shoe, an outer sole, an inner sole, means for securing the edge portion of the inner sole to the edge portion of the outer sole with the edge portion of said inner sole in spaced relation to said outer sole, an upper, a portion of the lower edge of said upper being tucked inwardly between the inner and outer soles and the free edge of said portion being extended outwardly to overlie the edge portion of the outer sole, said inwardly tucked portion of the upper being also secured to the outer sole, a welt strip overlying the edge portion of the outer sole and the portion of the upper resting thereon, and fastening means connecting the welt strip, outer sole, and interposed portion of the upper.

3. In a shoe, an outer sole, an inner sole, means for securing the edge portion of the inner sole to the edge portion of the outer sole with the edge portion of said inner sole in spaced relation to said outer sole, an upper, a portion of the lower edge of said upper being tucked inwardly between the inner and outer soles, and the free edge of said portion being extended outwardly to overlie the edge portion of the outer sole, said inwardly tucked portion of the upper being also secured to the outer sole, a welt strip overlying the edge portion of the outer sole and the portion of the upper resting thereon, the inner edge of said welt strip extending between the inner and outer soles, and fastening means connecting the welt strip, outer sole, and interposed portion of the upper.

4. In a shoe, an outer sole, an inner sole positioned thereover, an upper, the lower edge of said upper being provided with an outwardly extending portion overlying the edge portion of the outer sole, a welt strip overlying the edge portion of the outer sole and the outwardly extending portion of the upper, said inner sole being provided with outwardly extending securing portions underlying the welt strip, and securing means for connecting the welt strip, outer sole, the interposed portion of the upper, and the securing portions of the inner sole.

5. In a shoe, an outer sole, an inner sole thereon, the outer edge of said inner sole being positioned inwardly of the outer edge of said outer sole, and said inner sole being provided with attaching portions overlying the edge portion of the outer sole, an upper provided at its lower edge with an outwardly turned portion overlying the edge portion of the outer sole, a welt strip overlying the edge portion of the outer sole and the outwardly turned portion of the upper, the inner edge of said welt strip extending between the inner and outer soles, and fastening means for connecting the welt strip, the outer sole, the interposed portion of the upper, and the attaching portions of the inner sole.

[Claims 6 to 16 not printed in the Gazette.]

1,190,320. SHOE-SOLE. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 16, 1912. Serial No. 731,893. (Cl. 36—22.)



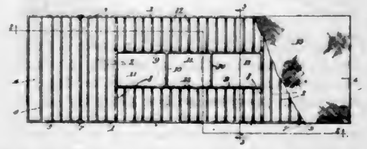
1. As a new article of manufacture, a shoe sole for stitch-down shoes provided with a welt strip having one of its ends integrally connected thereto, said welt strip being otherwise unconnected to said sole.

2. As a new article of manufacture, a shoe sole provided with a channel extending along the edge thereof and provided with a welt strip having one of its ends integrally connected thereto at one end of the channel formed therein, said welt strip being otherwise unconnected to said sole.

3. As a new article of manufacture, a shoe sole for stitch-down shoes provided with a channel extending along the edge thereof and provided with a welt strip of less width than the channel in the sole and having one of its ends integrally connected to the sole at one end of the channel formed therein, said welt strip being otherwise unconnected to said sole.

4. As a new article of manufacture, a shoe sole provided with a channel, which extends along the edge thereof and which has an abrupt inner shoulder and a bottom surface inclined downwardly to the outer edge thereof, and provided with a welt strip which has one of its ends integrally connected to the sole at one end of the channel formed therein and is otherwise unconnected to said sole, said welt strip being provided with a bottom surface inclining downwardly from the inner to the outer edge thereof, being of less width than the channel in the sole, and, when located with its outer edge flush with the outer edge of the sole, being of less thickness than the depth of the portion of said channel which it overlies.

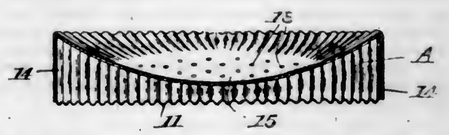
1,190,321. AEROPLANE. WILLIAM BENJAMIN PUSEY, Boise, Idaho. Filed July 8, 1915. Serial No. 38,722. (Cl. 244—31.)



1. A plane for aerial devices comprising a body portion having apertures therein, the surface of said plane being curved upwardly at each side of said apertures and being flat from the ends of said apertures to the ends of the body portion of said plane, and adjustable wings mounted on the ends of said body portion.

2. A plane for aerial devices comprising a body portion having apertures therein, said body portion extending upwardly at an angle from its center, the surface of said plane being curved upwardly at each side of said apertures and being flat from the ends of said apertures to the ends of the body portion of said plane, and adjustable wings mounted on the ends of said body portion.

1,190,322. SINK-STRAINER. ROBERT EDWIN REARDON, Ottawa, Ontario, Canada. Filed Mar. 18, 1915. Serial No. 15,239. (Cl. 4—35.)



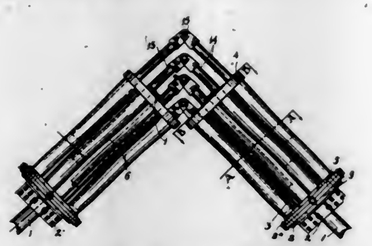
1. A self-contained paper garbage container and sink strainer, comprising a concave perforated dish portion and an integral supporting flange depending from the periphery thereof at an acute angle thereto, said supporting flange having an intersticed lower edge to drain the sink water.

2. A self-contained paper garbage container and sink strainer, comprising a radially fluted concave perforated dish portion and an integral fluted supporting flange depending from the periphery thereof at an acute angle thereto, the flutings on said parts registering at the point of juncture to strengthen the structure at the point of the angle, said supporting flange having a plurality of interstices at its lower edge to drain the sink water.

1,190,323. MEANS FOR TRANSMITTING POWER. SIMON ROBERT, Montreal, Quebec, Canada, assignor to Elphège Maher, Montreal, Quebec, Canada. Filed Nov. 26, 1915. Serial No. 63,518. (Cl. 64—13.)

1. The combination with a driving shaft, a driven shaft supported in angular relation to said driving shaft, a hub secured on each of said shafts having at one end a circular flange provided with a plurality of apertures arranged circumferentially, and at the other end a well, a plurality of cylinders secured between said circular flanges and wells and communicating with said wells at one end and

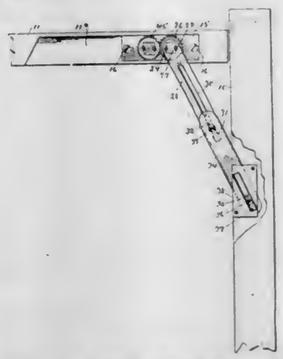
rods sliding in said cylinders and pivotally connected at their outer ends, substantially as described.



2. The combination with a driving shaft, a driven shaft supported in angular relation to said driving shaft, a hub rigidly mounted on each of said shafts, having at one end a circular flange provided with a plurality of circumferential apertures, and at the other end with a circular flange also provided with a plurality of apertures arranged circumferentially and being centrally depressed, a circular disk secured to said circular flange having a corresponding central depression, thus forming an oil well, a plurality of cylinders secured between said circular flanges and communicating with said apertures in said flange at one end and communicating with said well at the other end, and rods sliding in said cylinders pivotally connected at their outer ends, substantially as described.

3. The combination with a driving shaft, a driven shaft supported in angular relation to said driving shaft, a hub secured on each of said shafts having at one end a circular flange provided with a plurality of apertures arranged circumferentially and at the other end with a circular flange also provided with a plurality of apertures and centrally depressed, a circular disk provided with a corresponding central depression, the outer edge forming a flange registering with said centrally depressed circular flange and forming a well therebetween, means to secure said circular flange and disk together, said disk having an aperture to introduce lubricants and means to close said aperture, a plurality of cylinders secured between said circular flanges and communicating with the apertures therein and at the other end communicating with said well formed between the circular flange and disk, and rods sliding in said cylinders and pivotally connected at their outer ends substantially as described.

1,190,324. DOOR CHECK AND SPRING. CLARENCE T. ROGERS, New York, N. Y. Filed Oct. 14, 1913, Serial No. 795,159. Renewed Dec. 6, 1915. Serial No. 65,421. (Cl. 16—88.)



1. The combination with a swinging door and its frame, of a spiral spring sunk in the door top, an extensible and swinging arm connected at one end with the spring and at the opposite end to the door frame, a door check sunk in the top of the door, and a gear connection between the spring closing mechanism and the door check, whereby the door check retards the action of the spring.

2. The combination with the swinging door and its frame, of a door closing spring sunk in the top edge of the door, an extensible connection between the spring and the door frame, a door check sunk in the top edge of the door, an operative connection between the door check and the aforesaid closing spring, whereby the action of the check retards the action of the spring, and means in the door check for additionally checking the door when the latter is in closed position.

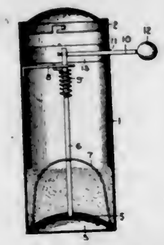
3. The combination with a swinging door and its frame, of door closing and checking mechanism located in the top edge of the door and operatively connected together, and an extensible and swinging connection between the door closing and checking mechanism and the door frame, said connection comprising telescoping members, one connected with the closing and checking mechanism and the other with the door frame.

4. The combination with a swinging door and its frame, of door closing and checking mechanism located in the top edge of the door and operatively connected together, an extensible telescoping arm connecting the closing and checking mechanism with the door frame, a slotted plate on the door frame, and a slide block working in the slot of said plate and connecting with the aforesaid telescoping arm.

5. The combination with a swinging door and its frame, of means for closing the door, an extensible arm comprising telescoping members connecting the top edge of the door with its frame, and a friction block sliding in one member of the telescoping arm and connecting with the second member of said arm.

[Claims 6 to 11 not printed in the Gazette.]

1,190,325. DISPENSING-CAN. HARRY ROSENTHAL and ISADOR ROSENTHAL, New York, N. Y. Filed Mar. 6, 1915. Serial No. 12,543. (Cl. 221—64.)

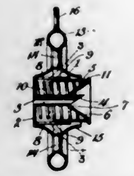


1. In a dispensing can of the class described, a body portion formed with an apertured bottom and a slot adjacent the top, a rotatable disk arranged interiorly of the body portion and adapted to normally close the apertures in the bottom of said body portion, said disk being cut away except where the same covers said apertures, whereby when the disk is rotated for part of a revolution the apertures will be uncovered, a shaft rigidly connected with said disk, a spring connected with said shaft and arranged so as to normally hold the shaft and disk connected therewith in such position as to cause the disk to normally cover the apertures in said bottom, a crank arm secured to said shaft, said crank arm extending through said slot, and a covering plate arranged interiorly of the body portion secured to said crank arm, said plate being formed of such a size as to maintain closed the slot in said body portion.

2. In a dispensing can of the class described, a body portion, a bottom arc-shaped in cross section provided with a plurality of apertures arranged on opposite sides of the bottom, a disk fitting said bottom, said disk being cut away except at the part covering said apertures, a shaft connected with said disk for rotating the same, a pair of bracing and stirring arms connected with said shaft and with the outer edge of said disk for stirring the contents of the can when the disk is being moved, an operating crank arm connected with said shaft and extending through said body portion, said body portion having a slot for accommodating said crank arm, a slide mounted on said arm for maintaining said slot closed, and a spring acting on said shaft for resiliently maintaining said shaft in a predetermined position and for returning said shaft to said position when moved therefrom.

3. In a dispensing can of the class described, a body portion, a bottom for said body portion formed partiglobular, said bottom having a plurality of sets of openings, a disk fitting against said bottom and conforming to the contour of the bottom, said disk being cut away on opposite sides whereby the disk normally covers that part of the bottom provided with apertures so that when the disk is moved to a different position the apertures will be uncovered, a shaft connected with said disk and extending to near the top of the body, a pair of bracing arms connected with said shaft and with the outer part of said disk for bracing the disk and for acting as stirring members, an operating handle for partially rotating said disk, and a spring member acting on said shaft in the double capacity of causing the shaft and the disk connected therewith to return to its original position and for causing the disk to press against the bottom.

1,190,326. SOUVENIR CIGAR-PIERCER. ERNEST F. RUECKERT, Providence, R. I. Filed Feb. 11, 1915. Serial No. 7,636. (Cl. 131—20.)

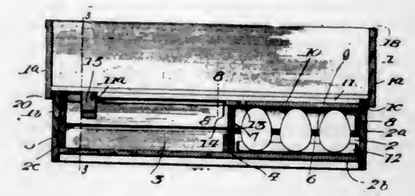


The attachment herein described comprising a cylindrical body member having one end closed and the other end open, and a rigid tube extending axially from the closed end and provided with a beveled extremity which projects beyond the free end of said member, a sleeve telescoping into the body member and having its outer end joined to a conical head which projects inwardly within the sleeve, the body member having diametrically opposite slots and the sleeve having tongues cut from diametrically opposite sides thereof at the inner end, said tongues and slots constituting means for guiding the movements of the sleeve and for retaining the sleeve and body member in interlocked relation, said head having an axial passage at its inner end which snugly receives the tube and through which the beveled end of the latter projects thereby closing ingress to the interior of the sleeve and body member, and a coiled spring bearing at one end against the closed end of the body member and at the other end encircling the conical head and bearing thereagainst, said attachment being insertible as a unit within a miniature representation of a useful or fanciful article to be used as a pendant.

1,190,327. RECEPTACLE FOR DELIVERING GOODS. JAMES H. RUSSELL, Manistee, Mich. Filed June 25, 1913. Serial No. 775,817. (Cl. 217—18.)

1. A portable device for the storage and delivery of goods, comprising a casing having at one end a compartment open at its top and permanently closed at its bottom, and having at its opposite end a second compartment normally closed at its top, a slidable partition separating said compartments, and a slidable component normally occupying a position in the second compartment and shiftable out of the same to release the contents of the said compartment.

2. A portable device for the storage and delivery of goods, comprising a casing having at one end a compartment open at its top and permanently closed at its bottom, and having at its opposite end a second compartment, a slidable separating top therefor, a slidable vertical separating partition, and a slidable article-releasing component normally underlying said slidable top and shiftable independent thereof.



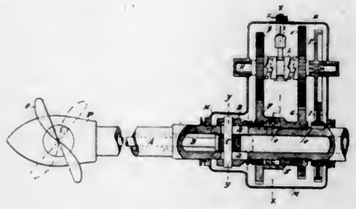
3. A portable device for the storage and delivery of goods, comprising a casing having at one end a compartment open at its top and permanently closed at its bottom, and having at its opposite end a second compartment, a slidable separating top therefor normally covering said second compartment and slidable into a position in the first-mentioned compartment, a vertical separating partition normally underlying the slidable top and movable therewith in one direction, and a slidable egg-releasing component normally occupying a position in the second compartment and shiftable in part out of the same and beyond the walls of the casing.

4. A portable device for the storage and delivery of goods, comprising a casing having at one end a compartment open at its top and permanently closed at its bottom, and having at its opposite end a delivery-compartment, a movable top for said delivery-compartment, a shiftable article-supporting component, and an article-holder normally housed in said delivery-compartment and removable therefrom when said component is shifted.

5. A device for the storage and delivery of goods, comprising a casing having at one end a compartment open at its top and permanently closed at its bottom and extending the full height of the casing; and having at its other end a delivery compartment provided with an article-discharging opening, a shiftable top for the delivery compartment, a shiftable vertical separating partition at one side of the delivery compartment, a shiftable article-spacing component associated with the shiftable top and positionable into the delivery compartment, and a covering-component associated with the article-spacing component and adapted to close said opening and shiftable to permit removal of the contained articles through said discharge opening in the delivery compartment.

[Claims 6 to 18 not printed in the Gazette.]

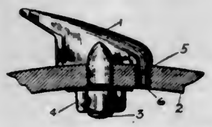
1,190,328. ADJUSTING DEVICE FOR REVERSIBLE SCREW-PROPELLERS. CESARE SACERDOTI, Genoa, Italy, assignor to Societa Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Filed May 22, 1915. Serial No. 29,940. (Cl. 115—34.)



An adjusting device for reversible screw propellers comprising, in combination, a casing containing oil, a hol-

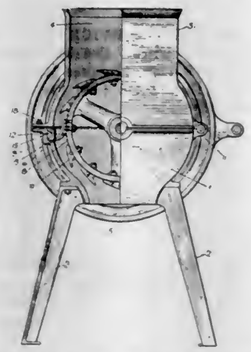
low driving shaft and an operating lever extending from said casing, the said lever being adapted to operate, at a distance, a reversible screw propeller with rotary blades by deriving the necessary power from the hollow driving shaft, two diametrically opposed slots in said hollow shaft, a cross rod passing through them so as to protrude, a blade operating rod sliding in the bore of the driving shaft, said cross-rod being fixed to the end of the blade operating rod, and fast with a slidable screw threaded sleeve engaging with a nut loosely mounted on the driving shaft but prevented by stops from being shifted axially, the said nut being adapted to rotate faster or slower with regard to the driving shaft by two pairs of gears, two of which latter are fast with the nut, and the other two of which are loosely mounted on a countershaft receiving its movement from the driving shaft by a couple of gears respectively keyed on the driving shaft and countershaft, the loose gears being adapted to be made fast with the said counter-shaft by a double tooth clutch.

1,190,329. ICE-CRUSHER. BERNHARD L. SCHMIDT, Davenport, Iowa, assignor to B. L. Schmidt Company, Davenport, Iowa, a Corporation of South Dakota. Filed Mar. 25, 1915. Serial No. 16,827. (Cl. 83—63.)



In combination, a cylinder provided with pairs of openings in its surface, one of each pair being larger than the other and arranged in rows around the cylinder; and picks secured around the cylinder and each being formed with two depending portions, one of larger diameter than the other, to engage the pairs of openings in the cylinder, the larger depending portion being of a diameter larger than the thickness of the pick, formed intermediate the length of the pick, adapted to pass through one of the openings in the cylinder wall to form a bolt and a sole fastening means for securing the pick to the cylinder and also extending upon the sides of the pick to a point near its upper edge to reinforce said pick, and the other depending portion being formed on the rear end of the pick and adapted to seat in the companion opening to prevent turning of the pick on its bolt.

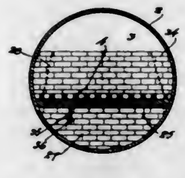
1,190,330. ICE-CHIPPING MACHINE. BERNHARD L. SCHMIDT, Davenport, Iowa, assignor to B. L. Schmidt Company, Davenport, Iowa, a Corporation of South Dakota. Filed Mar. 25, 1915. Serial No. 16,828. (Cl. 83—63.)



1. In a combined ice shaving and chipping machine, a two-part casing having a hopper-like inlet in its upper part and a discharge opening at the bottom of its lower part, a pocket formed in said lower part at the dividing line between the parts, a grate formed with a solid portion having spaced teeth projecting from one side thereof, and coöperating interlocking means formed integrally within said pocket and said grate for preventing the tilting of the grate in said pocket under a downward pressure upon the teeth, and also for positively securing said grate against inward movement and allowing it to be bodily removed when the upper part of the casing is displaced and a cylinder rotatively mounted in said casing and provided with teeth to coöperate with the teeth on said grate.

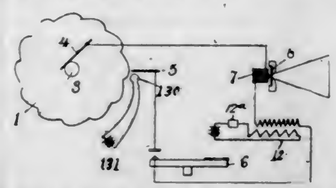
2. In a combined ice shaving and chipping machine, a casing of substantially cylindrical form having a hopper like inlet at the top and a discharge opening at the bottom, an off-set or pocket extending transversely of the casing at about its longitudinal diameter, having a floor or ledge and vertically disposed lugs extending inwardly from the sides thereof, a grate provided with teeth projecting from one side thereof and vertically extending slots in each end, said grate adapted to slip into said pocket with its end slots engaged by said lugs, a cylinder rotatably mounted in said casing provided with outwardly extending picks arranged to pass between the teeth of said grate when the said cylinder is rotated.

1,190,331. ATTACHMENT TO BOILER AND OTHER FURNACES. CHRISTIAN SCHNEIDER, Sheffield, England. Filed Mar. 9, 1914. Serial No. 823,631. (Cl. 110—59.)



In a boiler the combination with a furnace provided with the usual front plate, entry door and grate bars, of a cross plate secured to the front end of the furnace beneath the front plate and door, said cross plate being supplied with a plurality of air inlet openings, tubes carried by the cross plate and continuous with the openings, said tubes entering the furnace beneath the grate, a steam pipe leading from the top of the boiler and passing lengthwise of the cross plate, steam nozzles secured at intervals to the pipe and passing into the tubes aforesaid, a controlling valve in the feed pipe, an adjustable damper carried by the cross plate, a second steam feed pipe communicating with the boiler and passing to the front end of the furnace, a steam nozzle entering the furnace at a point above the door, said nozzle communicating with the latter steam pipe and a valve in the said latter steam pipe, as and for the purpose specified.

1,190,332. ELECTRIC SOUND-PRODUCER. MELVIN L. SEVERY, Arlington Heights, Mass. Filed Feb. 18, 1907. Serial No. 357,977. (Cl. 84—81.)



1. An electric musical instrument comprising a vibrating body, electrical means for its vibration, a source of current, a circuit including said means and source and having a fluid slightly conductive section, a rotatable member located in said fluid section, and means connected with said member for producing by the latter's motion pulsations in the current flowing through said fluid section.

2. An electric musical instrument comprising a vibrating body, electrical means for its vibration, a source of current, a circuit including said means and source and having a fluid slightly conductive section, a current varying means including a rotatable member extending into said fluid, and means for producing by the motion of said member pulsations in the current passing through said fluid section between said member and a fixed point of said circuit.

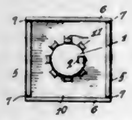
3. An electric musical instrument comprising a vibrating body, electrical means for its vibration, a source of current, a circuit including said source and means and having a fluid slightly conductive section, and a rotatable circular member extending into said fluid and formed with an undulatory periphery; said member forming a part of said circuit and acting by its rotation to produce pulsations in the current passing through said fluid between said member and a fixed point in the circuit.

4. An electric sound producing instrument comprising a vibrating body, electrical means for its vibration, a source of current, a circuit including said source and means and having a fluid slightly conductive section, and a plurality of rotatable circular members extending into said fluid and forming a part of the circuit; said members being formed with peripheral projections spaced for the production of different overtones of the same musical note.

5. An electric sound producing instrument comprising a vibrating body, electrical means for its vibration, a source of current, a circuit including said source and means and having a fluid slightly conductive section, a plurality of rotatable circular members extending into said fluid and forming a part of the circuit, and means for introducing different resistances into the circuits of said members; said members being formed with peripheral projections spaced for the production of different overtones of the same musical note.

[Claims 6 to 11 not printed in the Gazette.]

1,190,333. NUT-LOCK, JOHN H. SLATTERY, Green Bay, Wis. Filed Jan. 16, 1914. Serial No. 812,496. (Cl. 151—28.)

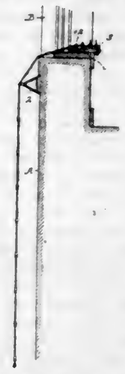


1. A nut lock, including, in combination with a bolt having a longitudinal groove therein, a nut on said bolt having one face thereof provided with a plurality of marginal flanges, a plate having a central opening complementally formed with the bore of the nut and provided with locking tongues for engagement in said groove, said plate being mounted upon said nut and securable thereto by bending certain of said flanges into engagement therewith.

2. The combination with a bolt having a longitudinal groove therein and a nut on said bolt, of a plate on said nut provided with a central opening and having a plurality of tongues anyone of which is to be bent for engagement in the groove, said nut having flanges bent for engagement with the plate to detachably retain the latter in position.

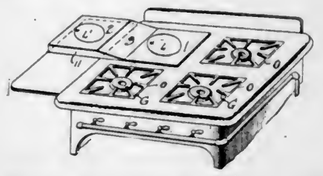
1,190,334. FIRE-ESCAPE LADDER. JAMES F. SPALDING, Kansas City, Mo. Filed Apr. 8, 1915. Serial No. 19,910. (Cl. 228—6.)

1. In a fire escape, a flexible ladder, a bar suitably connected to said ladder, hooks adjustably-engaging said bar and adapted to engage a window sill, means to secure said hooks at any point of their adjustment on the bar, a rung connected to said hooks, and means to space said rung a short distance above the window sill.



2. In a fire escape, a flexible ladder, and a holder consisting of a pair of L-shaped hooks secured to the ladder and adapted to engage a window sill, means to secure books to the window sill, a bar uniting said claw members, a second pair of hooks adjustably-engaging said bar and adapted to engage the window sill and coact with the claw members in supporting the ladder, means to secure said second pair of hooks at any point of their adjustment on the bar, a rung connecting said second pair of hooks, and means on the claw members and the second hooks for spacing the rung a short distance above the window sill.

1,190,335. HEATING ATTACHMENT FOR STOVES. WILLIAM SPENCER, Philadelphia, Pa. Filed Apr. 26, 1916. Serial No. 93,746. (Cl. 126—216.)



1. A heating attachment for stoves comprising a directly heated plate, an indirectly heated plate arranged at a higher level than said directly heated plate, a flange depending from said directly heated plate and forming a chamber having an outlet, and flanges depending from said indirectly heated plate and forming a chamber in communication with the outlet of said first mentioned chamber, said flanges terminating in a plane coincident with the plane of the directly heated plate.

2. A heating attachment for stoves comprising a directly heated plate and an indirectly heated plate arranged at different levels, an inclined heat deflecting wall connecting said plates, a flame enveloping flange carried by and depending from the central portion of said directly heated plate and having a constricted outlet arranged beneath said inclined connecting wall, and a valve for said outlet.

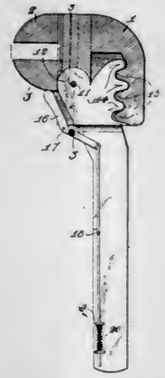
3. A heating attachment for gas stoves comprising a directly heated plate and an indirectly heated plate arranged at different levels, an inclined heat deflecting wall connecting said plates, and a depending flame enveloping flange carried by the underside of said directly heated plate and having a constricted heat conducting outlet passage, a plurality of air nozzles carried by said flange opposite said outlet passage and projecting radially there-

from into the flame chamber formed by said depending flange.

4. A heating attachment for gas stoves comprising a directly heated plate, and an indirectly heated plate arranged at different levels, an inclined wall connecting said plate members, side wall members depending from said indirectly heated plate, an end wall having draft openings also depending from said indirectly heated plate and connecting the ends of said side wall members, and coöperating therewith to provide a heat retarding chamber, and a depending flame enveloping flange carried by said directly heated plate member.

5. A heating attachment for gas stoves comprising a directly heated flat plate member, an indirectly heated plate member arranged at a higher level than said directly heated plate member, an inclined wall connecting said plate members, side wall members depending from said indirectly heated plate, an end wall having draft openings connecting the ends of said side wall members and coöperating therewith to provide a heat retarding chamber, a flame enveloping member carried by said directly heated plate member and having a constricted heat conducting passage disposed beneath said inclined wall, and also having a plurality of air nozzles projecting radially into the flame chamber formed by said member.

1,190,336. WRENCH. GEORGE W. STANLEY and CHARLES W. STANLEY, Bluecreek, Wash. Filed Oct. 6, 1915. Serial No. 54,418. (Cl. 84—127.)



1. A wrench including an outer jaw having a recessed body portion, an oscillating handle engaged in said recessed body portion, a sliding jaw block mounted on said handle and movable through said jaw, and a movable jaw mounted upon said movable jaw block.

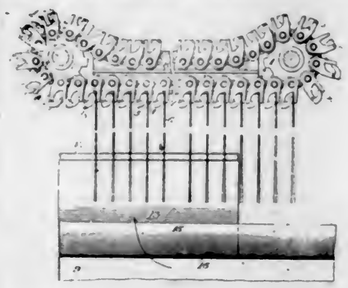
2. A wrench comprising a recessed jaw, a handle having one end engaged in said recess, a stationary jaw carried by said head, a slide block within said head and pivoted to said handle, said handle and jaw having interlocking teeth to cause sliding movement of the slide block upon oscillation of the handle, a movable jaw carried by said slide block, and means for limiting movement of said movable jaw in one direction.

3. A wrench comprising a head, a handle having an enlarged end engaged in said head, a stationary jaw carried on said head, a slide block pivoted to said handle and having sliding movement in said head, a movable jaw mounted in said slide block for coöperation with said stationary jaw, said slide block and movable jaw being adapted to be moved toward and away from the stationary jaw upon oscillation of the handle, a stop finger engaged with said movable jaw to retain the latter in normal position, a release rod pivoted to said stop finger, and means for resiliently retaining said release rod in unoperated position.

4. A wrench including a head having an outer jaw formed thereon, an oscillating handle engaged in said head, a movable jaw block carried by said handle, and a movable jaw carried by said movable jaw block for coöperation with the first-mentioned jaw.

5. A wrench including a head having an outer jaw formed thereon, an oscillating handle engaged in said head, a movable jaw block carried by said handle, a movable jaw carried by said movable jaw block for coöperation with the first-mentioned jaw, and means for limiting movement of said movable jaw in one direction.

1,190,337. CURING-MACHINE. FRANK A. STECHER, Rochester, N. Y., assignor to Stecher Lithographic Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 15, 1915. Serial No. 21,568. (Cl. 34—12.)



1. A curing machine comprising sheet holding means for maintaining a sheet in a vertical position, and an air duct arranged beneath the sheet holding means and provided with upwardly and inwardly directed ports at its sides acting to cause air to be projected upwardly, and inwardly from the sides, into contact with the sheet.

2. A curing machine comprising sheet holding means for maintaining a sheet in a vertical position, and an air duct arranged beneath the sheet holding means and provided with upwardly and inwardly directed ports at its sides and upwardly directed ports between its sides acting to cause air to be projected upwardly from the center, and upwardly and inwardly from the sides into contact with the sheet.

3. A curing machine comprising sheet holding means for maintaining a sheet in vertical position, and an air duct arranged beneath the sheet holding means and provided with upwardly and inwardly directed ports arranged in alternate relation at opposite sides and upwardly directed ports between the sides acting to cause air to be projected upwardly from the center and upwardly and inwardly from alternately arranged portions of the sides.

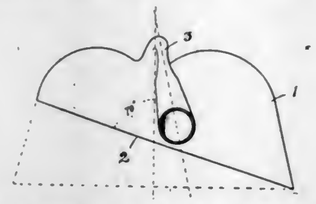
4. A curing machine comprising sheet holding means for maintaining a sheet in a vertical position, and an air duct arranged beneath the sheet holding means and provided with upwardly and inwardly directed elongated ports arranged in alternate relation at opposite sides and an upwardly directed continuous port arranged between the sides.

5. A curing machine comprising a traveling conveyer for holding sheets in a vertical position, and an air duct arranged beneath the conveyer and provided with upwardly and inwardly directed ports at its sides acting to cause air to be projected upwardly and inwardly from the sides into contact with sheets on the conveyer.

[Claim 6 not printed in the Gazette.]

1,190,338. SOIL-CULTIVATING TOOL. SYLVESTER GEORGE STEVENS, Duluth, Minn. Filed Apr. 19, 1915, Serial No. 22,300. Renewed May 25, 1916. Serial No. 99,920. (Cl. 55—5.)

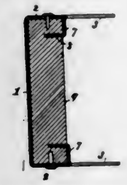
1. A soil cultivating hoe having one side of the blade thereof substantially twice the area of the opposite side, the cutting corner of the larger side normally poised nearer a vertical plane through the center of the handle of the hoe than the cutting corner of the smaller side.



2. A soil cultivating hoe having one side of the blade thereof substantially twice the area of the opposite side and the cutting edge formed on an incline transverse the face of the hoe.

3. A hoe having a leading cutting corner and the cutting edge of the hoe formed on an incline transverse the face thereof, in such a manner as to cause the leading corner to normally poise nearer a vertical plane through the center of the handle of the hoe than the opposite corner.

1,190,339. SWINGING-TABLE-LEG HINGE. CHARLES STOLZER, Philadelphia, Pa. Filed Feb. 9, 1914. Serial No. 817,439. (Cl. 45—48.)



A hinge formed from a single piece of metal comprising a face plate adapted to lie against one face of an object, a pair of parallel integral side members projecting from said face plate at right angles thereto and adapted to lie against two other faces of the object, a perforated hinge member formed integral with each of said side members and projecting therefrom in line therewith and parallel to each other, an extension formed integral with each of the side members projecting therefrom at right angles thereto toward each other and parallel with the face plate, said extensions being of less length than the length of said members and prongs formed integral with said extensions and projecting therefrom at right angles thereto toward the face plate and parallel with the side members as shown and for the purpose described.

1,190,340. PACKAGE-ROLL OF METALLIC LEAF. ERNEST H. SWIFT, Hartford, Conn. Filed Feb. 25, 1914. Serial No. 821,024. (Cl. 206—71.)



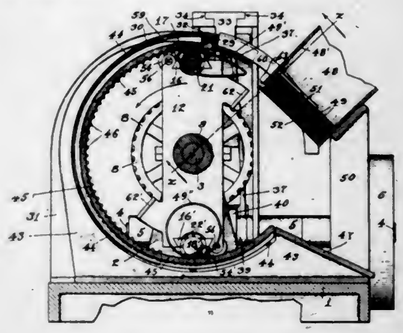
1. A package roll of metallic leaf including a core separately formed from paper tightly wound into a number of superposed layers to the required thickness, said layers being slidable one upon another.

2. A package roll of metallic leaf including a core separately formed from paper of a width equal to the length of the core, said paper being tightly wound into a number of superposed layers to produce a core of the required thickness, said layers being slidable one upon another.

3. A package roll of metallic leaf including a separately formed core composed of a single piece of paper wound into a number of superposed layers to produce the required thickness for the core, said layers being slidable one upon another.

4. A package roll of metallic leaf including a core formed from a single piece of paper spirally wound into a plural number of superposed layers sufficient to produce the required thickness for the core, and metallic leaf with its backing wound upon said core, said layers being slidable one upon another.

1,190,341. MACHINE FOR RE-FORMING CAN-BODIES. IVAN D. THORNBURGH, Oakland, Cal., assignor to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed Oct. 2, 1915. Serial No. 53,741. (Cl. 153—32.)



1. In a machine for the described purpose, the combination with a rotary element, of devices associated therewith for successively removing the lowermost body from the stack of deformed can bodies held within the path of the rotary element, a reciprocating mandrel carried by the rotary element, devices for moving the same into and out of a deformed can body, devices associated with the rotary element for engaging with the surface of a deformed can body and ironing the same into substantially cylindrical form, and devices for ejecting the reformed can body on the withdrawal of the mandrel therefrom.

2. In a machine for the described purpose, the combination with a reciprocating mandrel for receiving and holding a deformed can body, of means associated therewith for engaging the surface of a can body for ironing the same into substantially cylindrical form.

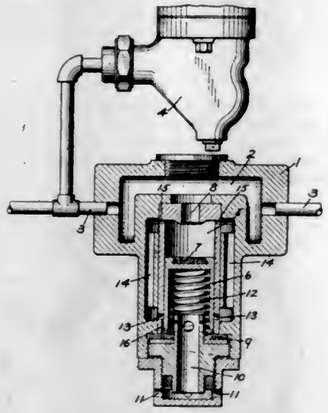
3. In a machine for the described purpose, the combination with a rotary mandrel for receiving and holding a deformed can body, of means for moving the mandrel into and out of the can body, and means associated with the mandrel for engaging with the surface of a can body thereon for the ironing of the same into substantially cylindrical form.

4. In a machine for the described purpose, the combination with a rotary mandrel for receiving and holding a deformed can body, of means for moving the mandrel into and out of the can body, means associated with the mandrel for engaging with the surface of a can body thereon for the ironing of the same into substantially cylindrical form, and devices for automatically ejecting the reformed can body on the withdrawal of the mandrel therefrom.

5. In a machine for the described purpose, the combination with a reciprocating rotary mandrel, of means for positioning a deformed can body in axial alinement with the said mandrel, of devices for moving the mandrel into and out of the deformed can body, devices associated with the mandrel for engaging with the surface of a deformed can body thereon for the ironing of the same into substantially cylindrical form, and devices for ejecting the reformed can body on the withdrawal of the mandrel therefrom.

[Claims 6 to 27 not printed in the Gazette.]

1,190,342. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1915. Serial No. 57,057. (Cl. 188—14.)



1. In a fluid pressure brake, the combination with a brake pipe, of a vent valve device operated upon a predetermined reduction in brake pipe pressure for first gradually venting fluid from the brake pipe and then suddenly.

2. In a fluid pressure brake, the combination with a brake pipe, of a vent valve device operated upon a predetermined reduction in brake pipe pressure for initially venting fluid from the brake pipe at a service rate and then at an emergency rate.

3. In a fluid pressure brake, the combination with a brake pipe, of a vent valve device comprising a valve piston movable under a predetermined reduction in brake pipe pressure for opening a restricted communication for venting fluid from the brake pipe and adapted upon a further movement to open a larger connection for venting fluid from the brake pipe at a more rapid rate.

4. In a fluid pressure brake, the combination with a brake pipe, of a vent valve device comprising a valve piston movable under a predetermined reduction in brake pipe pressure for opening a restricted communication for venting fluid from the brake pipe and adapted upon a further movement to open a larger communication for venting fluid from the brake pipe at a more rapid rate, and upon a still further movement to close communication through which fluid is vented from the brake pipe.

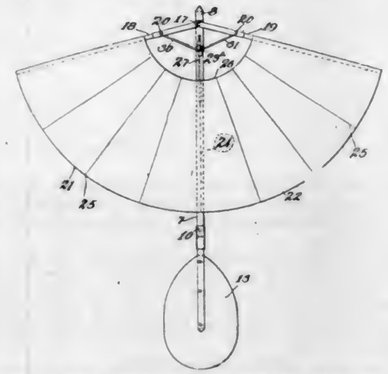
1,190,343. MONOPLANE FLYING TOY. CLAUDE U. TYRRELL, Chicago, Ill. Filed July 20, 1914. Serial No. 851,840. (Cl. 244—12.)

1. A monoplane flying toy comprising in combination a backbone, foldable wings pivoted thereto, a coiled spring, arms pivoted respectively to said wings, and means slidably connecting said spring and arms with the backbone, whereby said wings yieldingly unfold from the opposite sides of a fixed line therethrough extending longitudinally of the backbone.

2. A monoplane flying toy comprising in combination a backbone, foldable wings pivoted at one end thereof, a spring, the ends of which are respectively pivoted to said wings, a clip for and slidably connecting said spring with the backbone.

3. A monoplane flying toy comprising in combination a backbone, foldable wings pivoted to and toward one end thereof, a spring slidably connected with the backbone having its opposite ends pivoted respectively to said wings, and a rudder adjustable on the opposite end of said backbone, and whereby the direction of the glide of the monoplane is predetermined and fixed throughout its flight.

4. A monoplane flying toy comprising in combination a backbone, foldable wings pivoted thereto, a spring slidably connected with the backbone at one end thereof, an adjustable rudder at the opposite end thereof, a catch projecting from the underside of the backbone about the middle of the length thereof, adapted for releasably holding an elastic sling for projecting the monoplane in mid-air when held by a grip well toward the rear end thereof.



1,190,344. FASTENING DEVICE. WALTER H. UNDERWOOD, New York, N. Y. Filed June 16, 1909. Serial No. 502,512. (Cl. 24—207.)



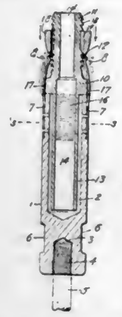
1. A fastening device consisting of flexible slideways composed of coiled wire provided with loops of the same wire formed tangent to the coils, said loops constituting means whereby said slideways may be secured to a support, prehensile members fitted to said slideways and adapted to move to and fro thereon, and a means adapted to connect the prehensile members on one slideway with the prehensile members on the other slideway, substantially as and for the purpose set forth.

2. A fastening device comprising flexible slideways composed of wires in the form of continuous coils and provided with integral loops formed tangent to the coils, a cord or the like adapted to pass through said loops and secure the same to a support adjacent the aperture therein, said loops being adapted to pass through the support adjacent the aperture therein to receive said cord or the like, prehensile members fitted to said slideways and adapted to move longitudinally thereon, devices, each having the members associated with one slideway secured thereto, and means for connecting said devices together.

3. A device for closing an aperture in a flexible body comprising flexible slideways consisting of continuous coils of wire provided at intervals with integral loops, said loops being adapted to extend through said body adjacent the aperture therein, a flexible member adapted to pass through said loops on the opposite side of said body from the slideways thereon and adapted to secure said slideways to said body adjacent the aperture therein, and means fitted to said slideways whereby the edges of the apertures may be drawn together to close the aperture.

4. A device for fastening together the edges of a flexible body, said device comprising slideways extending longitudinally of the edges to be fastened together, each slideway comprising a single length of wire spirally wound and provided at intervals with integral parts extending through said body to the opposite side thereof, members separate from said parts and coöperating therewith to secure said slideways in place, one of said members being associated with each slideway and extending parallel thereto on the opposite side of said body therefrom, and means fitted to said slideways whereby said edges may be drawn together.

1,190,345. RELEASABLE WIRE-ROPE SOCKET FOR OIL-WELLS. JOHN J. VARNER, Spencer, W. Va., assignor of one-half to John D. Russ, Spencer, W. Va. Filed June 25, 1915. Serial No. 36,211. (Cl. 103—61.)

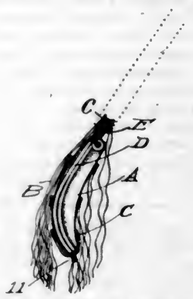


1. A releasing device for the cable-line of oil-well machinery, comprising, in combination, a base-member having, at one end thereof, a longitudinally-extending, threaded socket for engagement with the threaded end of a sinker-pin and, extending from the other end thereof, a second, longitudinally-extending socket; a top-member projecting into said socket and provided with a longitudinally-extending socket in which a wire-cable may be secured; said top and base members having coöperating, interrupted threaded portions engageable by a partial revolution of one member with respect to the other; bowed leaf-springs carried by said base member; said top-member having grooves normally engaged by said springs to lock the top and base members against independent revolution; and a conoidal weight adapted by gravitational descent on the wire-cable to bear against said leaf-springs and remove them from engagement with said grooves.

2. A releasing device for the cable-line of oil-well machinery, comprising, in combination, a base-member having, at one end thereof, a longitudinally-extending, threaded socket for engagement with the threaded end of a sinker-pin and, extending from the other end thereof, a second, longitudinally-extending socket; a top-member projecting into said socket and provided with a longitudinally-extending socket in which a wire-cable may be secured; said top and base members having coöperating, interrupted threaded portions engageable by a partial revolution of one member with respect to the other; bowed leaf-springs carried by said base-member; said top-member having grooves normally engaged by said springs to lock the top and base members against independent revolution; and a conoidal weight adapted by gravitational descent on the wire-cable to bear against said leaf-springs and remove them from engagement with said grooves; said top portion being provided, on the portion thereof projecting exteriorly of said base-member, with circumferential, stepped serrations for engagement by a fishing-tool.

1,190,346. MOP OR DUSTER. SARAH F. VAUGHAN and ESTELLE V. HASKELL, Worcester, Mass.; said Sarah F. Vaughan assignor to Henry E. Vaughan, Worcester, Mass. Filed Nov. 5, 1914. Serial No. 870,508. (Cl. 15—13.)

As an article of manufacture, a mop or duster comprising a bag formed of a rectangular piece of textile material, the ends being secured together by a seam transverse to the length thereof, a plurality of series of threads or strings arranged parallel with said seam on the outside of said bag, a piece of tape on the outside of each series of threads or strings between the ends thereof, stitching securing said tapes to the bag through the threads or strings, the lowest tier of said threads or strings being secured to the bag on both sides at a point below said tape by a longitudinal row of stitches which also closes the bottom of the bag.



1,190,347. SLING-PULLEY. JOHN M. BOYD, Fond du Lac, Wis. Filed Apr. 4, 1910. Serial No. 553,392. (Cl. 57—11.)



1. A set of pulley blocks consisting of a single block or frame and a double block or frame adapted to work together, said single block being provided with coupling means at its upper or forward end, extending up above and beyond the upper side of its frame, above the pulley and well above the ropes as it travels flatwise over its load, and adapted to enter the opposite frame and couple with a suitable support provided in the upper part of said double block or frame, substantially as and for the purposes set forth.

2. In a set of pulley blocks, the combination of a central block or frame provided with coupling means extending out sidewise above and beyond said frame at its upper forward end, above and at one side of the line of travel of the pulley and ropes, and a wider block or frame with its upper ends spread apart and provided with a suitable support between the same adapted to be engaged by said upwardly and outwardly extending coupling means, of said central block or frame, and to support the same, substantially as set forth.

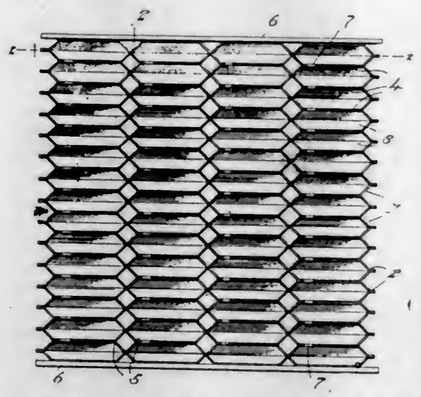
3. A set of pulley blocks consisting of a central block or frame, and a wider block or frame carrying sheaves or guide pulleys at its sides, and provided with a rigid support fixed crosswise in its frame between said pulleys, and a backwardly-hooked sidewise extension at the upper end of said central frame, extending out and carrying its hook above and beyond the outside of the frame at the upper side of the pulley as it travels flatwise over its load, and adapted to enter said wider frame underneath and hook backward over said support, substantially as and for the purposes set forth.

4. A set of pulley blocks formed with two separate frames carrying sheaves or pulleys, means provided at the upper and outer end of one side of one frame, above and at the side of the pulley and ropes, whereby it may be coupled with the other, and a guide rib or flange, as d^2, extending downward and backward from said means above the ropes, and at an angle across the upper end of said frame, whereby said frame may be guided or floated above its load, and into proper position to couple with the other frame or block as said frames are drawn together, substantially as and for the purposes set forth.

5. In a set of pulley blocks adapted to couple together, the combination of a double frame as b., provided with a rigid cross-piece, guide, or brace, as b^2., and a suitable coupling means provided at the upper outer side of the upper end of the opposite frame, above the ropes and the line of travel of said frame, having a rear extension forming a hook, and formed with a forwardly extending rib or flange, as d^2., projecting out from its forward underside, and at an angle downward and backward between the ropes and across the upper or forward end of said frame, and adapted to glide over the load and to engage with said cross-piece or brace as said frames are drawn together, substantially as and for the purposes set forth.

[Claims 6 to 25 not printed in the Gazette.]

1,190,348. FILING-CASE. WILLIAM E. WESTBERG, Willmar, Minn. Filed Aug. 7, 1914. Serial No. 855,672. (Cl. 129—15.)



1. A filing case including a plurality of flexible pockets, a plurality of compartments being formed in each pocket by stitching the opposite sides of each pocket together transversely at uniformly spaced intervals, and said pockets being secured together in a transverse series to permit a movement of the pockets toward and away from each other.

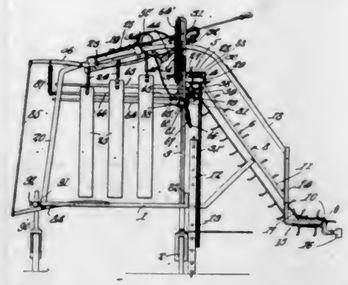
2. In a filing case, the combination with rigid supporting ends flaps, of a plurality of parallel arranged flexible pockets, a plurality of compartments being formed in each of said pockets by stitching the opposite sides transversely at uniformly spaced intervals, the compartments in each pocket being secured in alinement with the compartments of the adjacent pocket, and the end pockets being secured to the supporting plates.

3. A filing case including a plurality of flexible pockets each comprising a plurality of compartments in a longitudinal series, said pockets being secured together in a transverse series, and a recording element secured to the upper edges of the sides of two adjacent compartments for facilitating the securing of the compartments.

4. In a filing case, the combination with rigid supporting plates, of a plurality of flexible pockets, each formed of a piece of material bent upon itself and having the longitudinal edges arranged in alinement, a plurality of compartments being formed in each of said pockets by stitching the opposite sides thereof together transversely at uniformly spaced intervals, the compartments in each pocket being secured in alinement with the compartments of the adjacent pocket, said compartments being folded adjacent the transverse stitches to provide bellows folds for facilitating the opening of the compartments, and the outer sides of the end pockets being secured to said supporting plates.

5. In a filing case, the combination with rigid supporting plates, of a plurality of flexible pockets, each formed of a piece of material bent upon itself and having the longitudinal edges arranged in alinement, a plurality of compartments being formed in each of said pockets by stitching the opposite sides thereof together transversely at uniformly spaced intervals, the compartments in each pocket being secured in alinement with the compartments of the adjacent pocket, said compartments being folded adjacent the transverse stitches to provide bellows folds for facilitating the opening of the compartments, recording elements secured to the upper edges of the sides of the compartments adjacent the bellows folds for facilitating the securement of the pockets, and the outer sides of the end pockets being secured to said supporting plates.

1,190,349. SHOCKING-MACHINE. LLOYD A. WILLIAMS, Burlington, Kans. Filed Apr. 8, 1915. Serial No. 20,074. (Cl. 56—122.)



1. In a machine of the class described, a yieldingly supported structure, a member fixed thereto for engagement with the top of a formed shock, a pivoted member for engagement with the butt end of the shock, means for directing bundles onto said members to lower the structure, means for locking said pivoted member against movement relative to the yieldingly supported structure, means for automatically unlocking the pivoted member to drop the butt end of the formed shock when said yieldable structure is lowered under the weight of its load to a predetermined point, and means operated by the released butt end of the shock for pushing downwardly on the upper side of the butts.

2. In a machine of the class described, the combination with a shock former and means for directing bundles thereinto to form a shock, of a yieldingly supported structure, a finger fixed relative thereto and adapted to extend under the top of the formed shock, a finger pivotally connected to said structure and adapted to extend under the butt end of the formed shock, means for locking the pivoted finger against movement with respect to said yieldingly supported structure, means for automatically unlocking the pivoted finger when the yieldingly supported structure is lowered to a predetermined position under the weight of its load, an actuating lever in the path of the released butt end of the shock, an ejecting lever above the shock, and means for transmitting motion from the actuating lever to the ejecting lever to press the butt end of the shock downwardly during the release of said pivoted finger.

3. In a shock forming machine, the combination with a yieldingly supported structure, a finger fixedly connected thereto, and a finger pivotally connected to said structure, of resilient means for holding the pivoted finger normally in raised or active position, a member projecting laterally from the pivoted finger, a locking lever extending into the path of said member, means for holding the locking lever in such position, means operated by the descent of the yieldingly supported structure for releasing said holding means from the locking lever to free said laterally projecting member on the finger, and means operated by the locking lever when shifted out of holding position, for engaging said locking lever to hold it out of the path of the laterally projecting member on the finger.

4. In a shocking machine, the combination with a yieldingly supported structure, a finger fixedly connected thereto, and a finger pivotally connected thereto, of yielding means for holding the pivoted finger normally in active position, a projection upon one side of said finger, a locking lever normally extending into the path of the projection, a holding lever normally engaging the locking lever to maintain the same in the path of the projection, a pivoted dog extending under the projection, and a yieldable connection between the locking lever and the dog, said connection constituting means for lifting the dog into engagement with the locking lever when said lever is shifted out of engagement with the projection, thereby to hold said lever out of the path of the projection, and for disengaging the holding lever from the locking lever when the yieldable structure is lowered to a predetermined position, thereby to release the load supported by the fingers.

5. In a shock forming machine, the combination with yieldable shock supporting means, and means for automatically releasing the butt end of the supported shock when lowered to a predetermined position, of means operated by the released butt end of the shock for pressing downwardly upon said butt end to eject it downwardly into engagement with the ground.

[Claims 6 to 9 not printed in the Gazette.]

1,190,350. JOINT FOR FLUMES. MAURICE W. WILLIAMS, Wheeling, W. Va., assignor to Wheeling Corrugating Company, a Corporation of West Virginia. Filed Jan. 13, 1916. Serial No. 71,868. (Cl. 61—5.)



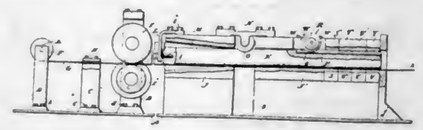
1. A joint for flumes comprising a channel bar devoid of abrupt angles and adapted to receive in the channel thereof the adjacent edge portions of flume sections, and a nest bar adapted to overlie the portions of said sections which seat within said channel, the said bars having their adjacent side surfaces relatively disposed to form upwardly and outwardly inclined open spaces therebetween which gradually increase in width from their lower ends upward, said channel bar having its sides terminated by laterally directed wings which directly underlie and constitute seats for plane surfaces of said sections.

2. In a flume, the combination with adjacent sheet-metal flume sections having their adjacent edges bent into compound curve form and devoid of abrupt angles, of a channel bar disposed in supporting relation to said edges, and a nest bar seated in overlying relation to said edges and maintaining the latter in interlocked relation to said channel bar, said channel bar having side walls of compound curve form wherein the curves have greater sweep than those of said edges for forming intervening clearance spaces, said side walls having lateral terminal flanges constituting rests for uncurved portions of said sections, and said nest bar having its side surfaces so disposed relative to said edges as to form intervening clearance spaces.

3. In a flume, the combination with adjacent sheet-metal flume sections having their adjacent edges regularly curved, of a channel bar adapted to receive said edges in closely seated relation in the channel thereof, said channel bar being devoid of abrupt angles and having inclined side walls terminated by laterally directed wings, said wings constituting seats upon which rest the plain surfaces of said sections at points adjacent to said edges and upon which said sections are slidable under the forces exerted by expansion and contraction, and a nest bar for seating upon said edges for maintaining the latter in position, the adjacent side surfaces of said bars being spaced away from said edges to form intervening clearance spaces for permitting free expansion and contraction of said sections.

4. In a flume, the combination with adjacent sheet-metal flume sections having their adjacent edges regularly curved, of a channel bar disposed in underlying supporting relation to said edges, said channel bar having inclined side walls terminating by laterally directed wings which constitute rests for uncurved portions of said sections, and a nest bar seated upon said edges for maintaining the seated relation between the latter and said channel bar, said bars being relatively disposed to afford clearance spaces therebetween at opposite sides of said nest bar.

1,190,351. MACHINE FOR LOCK-JOINING TUBES. HARRY WILSIE, Brooklyn, N. Y., assignor of one-half to M. J. Ford, New York, N. Y. Filed Aug. 20, 1915. Serial No. 46,413. (Cl. 113—33.)



1. In a machine for lock joining tubes, the combination with means for bending a sheet into tubular formation with overlapping edges, of means for bending said overlapped edges into U-formation to constitute a joint, outside die members, a grooved die carrier adapted to occupy a position within the tube, and axially alined successively acting die members occupying relatively fixed positions in said groove, some of which have a straight side wall and inclined base wall to close the joint and to upset the same from a vertical to an approximately horizontal position, substantially as described.

2. In a machine for lock joining tubes, the combination with means for bending a sheet into tubular formation with overlapping edges, of means for bending said overlapped edges into U-formation to constitute a joint, outside die members, a grooved die carrier adapted to occupy a position within the tube, and axially alined successively acting die members occupying relatively fixed positions in said groove, some of which have a straight side wall and inclined base wall to close the joint and to upset the same from a vertical to an approximately horizontal position, said dies with the inclined base walls decreasing in depth and the final die being straight and adapted to effectually close the joint and cause the same to lie approximately in the plane of the wall of the tube, substantially as described.

3. In a machine of the character described, a die support, a depressing member at one end of the same for closing the tube with overlapped edges, a guide roller adapted to engage said overlapped edges to maintain them in proper position for presentation to dies members, and a preliminary die for initially depressing said overlapped edges in combination with a succession of dies mounted in the die support adapted to operate interiorly of the tube on the overlapped edges thereof, and complemental die members arranged to operate exteriorly of the tube, substantially as described.

4. In a machine of the character described, means for forming a sheet into trough formation, means for closing the trough formation into a tube with overlapped edges, means for depressing the overlapped edges into a curved interlocked relation, means for closing the depressed portion into a more definite rib with straight sides, means for deflecting the rib laterally, means for further laying the rib toward the wall of the tube, and means for finally compressing the walls of the rib together in flat condition, substantially in the plane of the wall of the tube, substantially as described.

5. In a machine of the character described, means for forming a sheet into trough formation, means for closing the trough formation into a tube with overlapped edges, means for depressing the overlapped edges into a curved interlocked relation, means for closing the depressed portion into a more definite rib with straight sides, means

for deflecting the rib laterally, means for further laying the rib toward the wall of the tube, and means for finally compressing the walls of the rib together in flat condition substantially in the plane of the wall of the tube, in combination with a guide roller for engaging the overlapped edges of the tube as it leaves the tube closing mechanism and before presentation to the die members.

[Claims 6 and 7 not printed in the Gazette.]

1,190,352. AUTOMATIC FIREARM. JOHN O. WINKS, San Francisco, Cal. Filed Apr. 7, 1914. Serial No. 830,141. (Cl. 42—3.)



1. In an automatic firearm, a receiver, a barrel attached to said receiver, a slide engaging in said barrel and extending into said receiver, a reciprocating breech-bolt in said receiver below said slide, and means for locking said slide and breech-bolt together.

2. In an automatic firearm, a receiver, a barrel fixed to said receiver, a slide engaging in said barrel and extending into said receiver and having a movement independent of the barrel, a reciprocating breech-bolt in said receiver below said slide, and means for locking said slide and breech-bolt together in their forward positions.

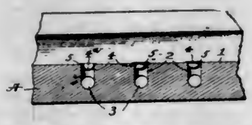
3. In an automatic firearm, a receiver, a barrel attached to said receiver, a slide engaging said barrel and extending into the receiver provided on opposite sides with grooves, a reciprocating breech-bolt arranged below said slide provided on opposite sides with grooves and latches arranged in said grooves adapted to be moved into the grooves in the slide to lock the two parts together.

4. In an automatic firearm, a receiver, a barrel attached to said receiver, a slide engaging said barrel provided on opposite sides with grooves, a reciprocating breech bolt arranged below said slide provided on opposite sides with grooves, latches arranged in said grooves adapted to be moved into the grooves in the slide to lock the parts together, and pins on said latches engaging in grooves formed in the side walls of the receiver.

5. In an automatic firearm, a receiver, a barrel attached to said receiver, a slide engaging said barrel provided on opposite sides with grooves, a reciprocating breech-bolt arranged below said slide provided on opposite sides with substantially vertical grooves, latches arranged in said grooves adapted to be moved into the grooves in the slide to lock the parts together, and pins on said latches engaging in grooves in the side walls of the receiver, said last named grooves being horizontal and being inclined upwardly at their forward ends, whereby a movement of the breech-bolt to its forward position causes said latches to be elevated and moved into engagement with the slide.

[Claims 6 to 21 not printed in the Gazette.]

1,190,353. VENT-CAP. MORRIS S. WRIGHT, Worcester, Mass., assignor to M. S. Wright Co., Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 15, 1910, Serial No. 544,121. Renewed Mar. 6, 1916. Serial No. 82,467. (Cl. 84—178.)

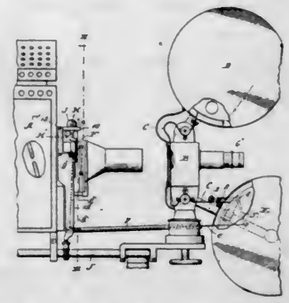


1. A cap for the usual vent opening of a wind chest or the like in pneumatic musical instruments, comprising a relatively thin dish-shaped body portion with a relatively small bleed aperture and a peripheral flange, the dish-shaped portion of the cap being adapted to snugly and frictionally fit in the vent opening and the flange to rest against the surface of the wind chest wall.

2. In a pneumatic musical instrument, a wind chest or the like having in one of its walls a vent opening and a cap comprising a relatively thin dish-shaped body portion with a relatively small bleed aperture and a peripheral flange, the dish-shaped portion of the cap adapted to snugly and frictionally fit in the vent opening, and the flange to rest against the surface of the wind chest wall.

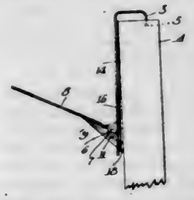
3. A relatively thin dish shaped cap for the usual vent opening for the wind chest or the like in musical instruments, said cap being struck up from sheet metal and having a central relatively small bleed aperture and a peripheral flange and said dish shaped portion of the cap being adapted to snugly and frictionally fit in the vent opening and the flange to rest against the surface of the wind chest wall.

1,190,354. SAFETY ATTACHMENT FOR MOVING-PICTURE MACHINES. LLOYD E. WYBLE, Kansas City, Mo. Filed Dec. 3, 1914. Serial No. 875,302. (Cl. 88—17.)



The combination with a film, a lens holder, a projecting machine mounted for adjustment relatively to said lens holder, and a shutter interposed between said projecting machine and the film to cut off the rays of light to the latter, a gravity roller normally controlled by the film, a cable controlled by said gravity roller, a bell-crank lever controlled by said cable and adapted to close the shutter in case of breakage or interrupted feeding of the film, and a bracket mounted independently of the projecting machine and carrying said bell-crank lever, substantially as described.

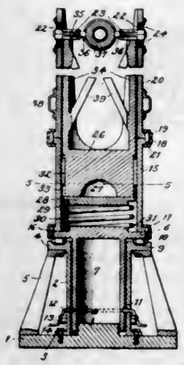
1,190,355. GARMENT-HOOK. HORACE M. YORKE, Lewiston, Me. Filed Nov. 13, 1915. Serial No. 61,315. (Cl. 248—24.)



The herein described garment hook comprising a sheet metal body having a bill at one end to engage over the upper edge of a door or other projection, said bill being split and being provided with teeth and said body being provided with bearings at a point spaced from the end opposite the bill, a sheet metal hook arm having an eye arranged between the bearings, a pivot connecting the bearings and extending through the eye and pivotally

mounting said hook arm so that it may be extended from the body of the hook or arranged against the same, and a substantially triangular brace on the outer side of the hook arm at the lower end thereof to bear against the body when the hook arm is extended outwardly from the body.

1,190,356. GUN-CARRIAGE. CLAUDE H. YOST, Greenwich, Conn. Filed Nov. 23, 1915. Serial No. 63,022. (Cl. 89—37.)



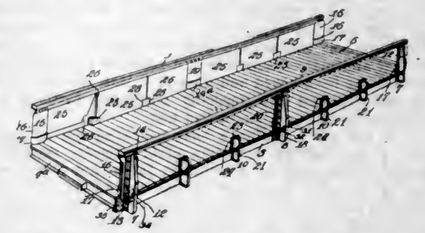
1. In a gun carriage, a stationary base, a turntable mounted to rotate thereon on a vertical axis, a rotatable recoil chamber fastened upon said turntable, oppositely arranged parallel guides secured fixedly to said recoil chamber and rising therefrom and spaced in relation to each other, a gun carrying plunger slidable longitudinally of and between said guides, a plunger recoil spring in said recoil chamber, a gun having trunnions, and trunnion bearings having a fixed relation to said plunger and a sliding relation to said guides.

2. In a gun carriage, a stationary base, a turntable mounted to rotate thereon on a vertical axis, a rotatable recoil chamber fastened upon said turntable, oppositely arranged parallel guides secured fixedly to said recoil chamber and rising therefrom and spaced in relation to each other, a gun carrying plunger slidable longitudinally of and between said guides, a plunger recoil spring in said recoil chamber, a gun having trunnions, trunnion bearings having a fixed relation to said plunger and a sliding relation to said guides, and resilient bumpers at opposite sides of said trunnion bearings.

3. In a gun carriage, a stationary base, a turntable mounted to rotate thereon on a vertical axis, a rotatable recoil chamber fastened upon said turntable, oppositely arranged parallel guides secured fixedly to said recoil chamber and rising therefrom and spaced in relation to each other, a gun carrying plunger slidable longitudinally of and between said guides, a plunger recoil spring in said recoil chamber, a gun having trunnions, trunnion bearings having a fixed relation to said plunger and a sliding relation to said guides, a tubular pedestal in said base, and a tubular shaft extending from the turntable downwardly within said pedestal.

4. In a gun carriage, a stationary base, a turntable mounted to rotate thereon on a vertical axis, a rotatable recoil chamber fastened upon said turntable, oppositely arranged parallel guides secured fixedly to said recoil chamber and rising therefrom and spaced in relation to each other, a gun carrying plunger slidable longitudinally of and between said guides, a plunger recoil spring in said recoil chamber, a gun having trunnions, trunnion bearings having a fixed relation to said plunger and a sliding relation to said guides, a tubular pedestal in said base, a tubular shaft extending from the turntable downwardly within said pedestal and formed with an annular groove, and a catch on said pedestal movable into and out of said annular groove.

1,190,357. CAR SIDE CONSTRUCTION. WINFIELD HANCOCK YOST, Montreal, Quebec, Canada. Filed Dec. 10, 1913. Serial No. 805,801. (Cl. 105—15.)



1. In a car, the combination with non-swinging side stakes of different heights, of side doors supported betwen certain of said stakes.

2. In a car adapted for the passage of a plow therethrough, the combination with non-swinging side stakes of different heights, of side doors supported between certain of said stakes.

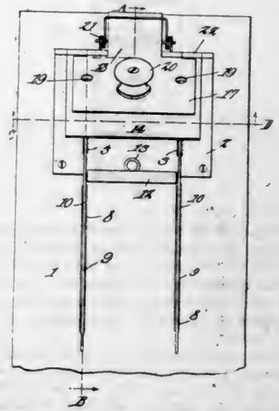
3. In a car adapted for the passage of a plow therethrough a plurality of side stakes of normal height and non-swinging stakes of lesser height located between same.

4. A car of the class specified, having beveled side stakes and a stake located between and of lesser height than the beveled side stakes.

5. A car of the class specified, having beveled side stakes and a beveled stake located between and of lesser height than the side stakes.

[Claims 6 to 13 not printed in the Gazette.]

1,190,358. BILL-FILE. SAMUEL L. YOUNG, New Castle, Pa., assignor of one-half to William H. Hill, New Castle, Pa. Filed July 20, 1915. Serial No. 40,876. (Cl. 129—7.)



1. A bill file including an apertured back board, lapping leaves hingedly connected to the board, a punching element carried by one of the leaves, there being an aperture in the other leaf for the reception of said element, and a resilient arm connected to the back board and having an outturned end normally seated between the apertured leaf and the back board.

2. A bill file including a back board having an opening, a leaf hingedly connected thereto and provided with an opening, an actuating plate hingedly connected to the back board, a punch extending therefrom and normally spaced from the leaf, said punch being movable into the apertures in the leaf and back board, and a resilient arm

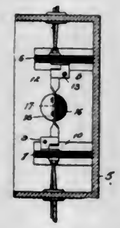
connected to the back board and interposed between the apertures in said board and leaf.

3. A bill file including a back board having an aperture, an apertured leaf hingedly connected thereto, an actuating plate hingedly connected to the back board, said leaf and actuating plate each including a tongue, yielding means coöperating with the tongues for holding the leaf and plate spaced apart, a resilient arm extending between the back board and apertured leaf, said arm having an outturned end normally positioned between the apertures in the back board and leaf.

4. A bill file including a back board having an aperture, a leaf and an actuating plate hingedly connected thereto, there being an aperture in the leaf, a punch carried by the plate and movable into the apertures in the leaf and back board, a resilient arm detachably connected to the back board and extending between said board and the leaf, said arm having an outturned end normally positioned between the apertures in the back board and leaf.

5. A bill file including a back board having spaced apertures and grooves leading to the apertures, a leaf hingedly connected to said board and having spaced openings, an actuating plate hingedly connected to the back board and having spaced punchers movable into the openings in the leaf and back board, tongues extending from the leaf and actuating plate respectively, said tongues lapping, yielding means coöperating with the tongues for holding the leaf and actuating plate normally spaced relative to each other and from the back board, a bail-like wire detachably connected to the back board and having resilient arms extending between the back board and leaf, said arms having outturned terminals normally positioned between the apertures in the leaf and back board.

1,190,359. ELECTRIC SWITCH. CHARLES JACOB ZIGLER and WILLIAM POOL HOLDEN, Chicago, Ill. Original application filed Aug. 27, 1913, Serial No. 786,860. Divided and this application filed Feb. 14, 1914. Serial No. 818,636. (Cl. 175—282.)



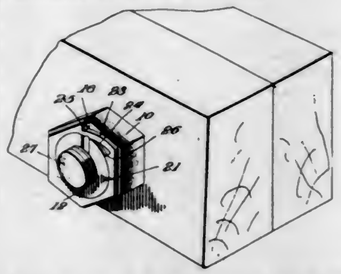
1. A switch member for an electric switch comprising a roller having transverse grooves therein, and contact blades secured in the bottoms of said grooves, lying in a plane passing substantially through the axis of the roller, the ends of said blades being given a quarter turn so that they will stand in planes at right angles to the axis of the roller.

2. A switch member comprising a rotatable support having a slot in the side thereof, a contact blade secured in the bottom of said slot with its ends extending some distance beyond the support, each end of said blade being given a quarter turn so that it will stand in a plane at right angles to the axis of the support to form contacts.

3. A rotatable cylinder formed of insulating material and having a transverse slot therein, a blade having a flat central portion fitting closely in said slot, the ends of said blade being turned 90° to form engaging portions, and means for securing the blade in the slot.

1,190,360. NUT-LOCK. HENRY E. ZIPLINSKY, Lancaster, Pa. Filed Mar. 6, 1915. Serial No. 12,637. (Cl. 151—19.)

1. A device of the character described including a nut bored to receive a bolt, a dog movable upon the nut to project into the bore thereof, a locking member rotatably mounted upon the nut and operatively engaging the dog for moving the dog to operative and inoperative positions, and means disposed radially upon opposite sides of the locking member and adapted to limit said member in its rotative movement in opposite directions.



2. A device of the character described including a nut bored to receive a bolt, a dog movable upon the nut to project into the bore thereof, a rotatably mounted locking member operatively engaging the dog for actuating the said dog, and radially disposed means carried by the said member and adapted to engage the dog for limiting the movement of the locking member in opposite directions.

3. A device of the character described including a nut bored to receive a bolt, a dog movable upon the nut to project into the bore thereof, and a rotatable locking member mounted upon the nut concentric to the axis thereof, the said locking member being cut away upon one side to provide faces eccentric to the axis of rotation of the member and adapted to operatively engage the dog for moving the dog to operative and inoperative positions and to provide radially disposed shoulders adapted to engage the dog for limiting the locking member in its rotative movement in opposite directions.

4. A device of the character described including a nut bored to receive a bolt, an extension formed on the nut and surrounding the said bore, a dog movable upon the nut to project into the bore thereof, and a locking ring swiveled upon said extension concentric to the axis of the said bore, the said ring being provided with portions eccentric to the axis of rotation of the ring and operatively engaging the dog for moving the dog to operative and inoperative positions.

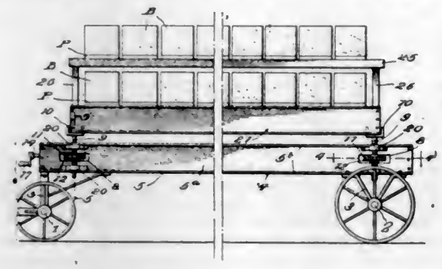
5. A device of the character described including a nut bored to receive a bolt, a dog carried by the nut, said dog including a head and having a lug formed thereon, the dog being movable to operative position with the head projected into the bore of the nut and to inoperative position with the head disposed upon one side of the said bore, a locking member rotatably mounted upon the nut concentric to the axis thereof, said locking member being provided with portions arranged eccentric to the axis of rotation of the member and operatively engaging the dog for actuating the said dog, and shoulders formed on the said member, one of said shoulders being adapted to engage said lug for limiting the member in its rotative movement with the dog disposed in operative position and the other of said shoulders being adapted to engage the head for limiting the member in its rotative movement with the dog disposed in inoperative position.

[Claims 6 to 11 not printed in the Gazette.]

1,190,361. TRUCK FOR HANDLING CEMENT BLOCKS. AMEL L. ZWIEBEL, Valley, Nebr. Filed Dec. 16, 1915. Serial No. 67,234. (Cl. 254—7.)

1. A truck of the class described comprising a portable horizontal rectangular frame having horizontally elongated slots formed in its side bars and disposed near the corners of said frame, upright jack screws adjacent the slots, horizontally disposed wheels extending partially through the slots and having their hubs threaded on the screws, and means for rotating said wheels.

2. A truck of the class described comprising a portable horizontal rectangular frame having two of its side bars formed of channel iron with the flanges thereof projecting horizontally, said flanges being formed with vertically alined apertures adjacent their ends, while the upright webs of said bars are formed with horizontally elongated



slots disposed between the apertured portions of the flanges, upright jack screws passed slidably through the vertically alined apertures in the aforesaid flanges, horizontally disposed wheels partially received in the aforesaid slots and having their hubs threaded on the screws, and means for rotating said wheels.

1,190,362. CLUTCH FOR GRIPPING PINS OR RODS. LOUIS AANERUD, Chicago, Ill., assignor to F. H. Moble & Company, Chicago, Ill., a Corporation of Illinois. Filed May 8, 1913. Serial No. 766,276. (Cl. 24—155.)



1. A clutch for gripping pins and rods comprising a slotted casing having a protuberant portion, a perforated inclined clutching member within the casing extending through the slot of the latter and arranged to fulcrum upon said abutment, a spring tending to press said clutching member against said abutment, and a protuberant slide upon said casing contacting the projecting portion of the clutching member and arranged adjacent the protuberant portion of the casing, whereby the slide may be shifted against the stress of its spring to release the clutch by a pinching pressure between the slide and said protuberant portion of the casing.

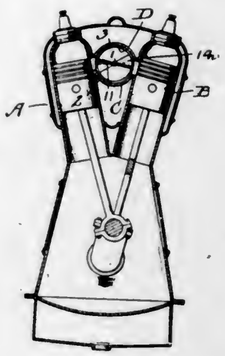
2. A clutch for gripping pins or rods comprising a casing formed with a cylindrical bore having an internal abutment at the end opposite its base and formed with a longitudinal slot diametrically opposite said abutment, a perforated disk free within said casing arranged to fulcrum upon said abutment and having a tongue arranged to project through said slot, a spring in said cylinder confined between the base thereof and said disk and tending to press the latter against said abutment, and a slide arranged to engage the projecting end of the tongue upon the disk and move it toward the base of the cylinder to turn the disk to disengaging position.

3. A clutch for gripping pins or rods comprising a casing having a protuberant portion and a tubular end, a perforated bushing in said protuberant portion having an oblique face adjacent said tubular end, a perforated disk in said tubular end adjacent the oblique face of the bushing, a spring in said tubular end tending to press the disk toward such oblique face, and a disengaging slide on the tubular end arranged to engage said disk and shift it against the stress of the spring.

4. A clutch for gripping pins or rods comprising a casing having a portuberant portion and a slotted tubular end, said tubular end forming a cylindrical bore which terminates adjacent the protuberant end of the casing in a perforated oblique face, a perforated disk within said bore adjacent said face and having a tongue arranged to project through the slot in the casing, a spring in said bore tending to press the disk against said oblique face, and a slide arranged to engage the projecting end of the tongue upon the disk and shift it against the stress of the spring.

5. A clutch for gripping pins or rods comprising a casing having a protuberant portion and a slotted tubular end portion, a perforated bushing in said protuberant portion having an oblique face extending into said tubular end, a perforated disk in said tubular end adjacent the oblique face of the bushing and having a tongue arranged to project through the slot in the casing, a spring in said bore tending to press the disk toward said oblique face, and a hollow protuberant slide adjacent the protuberant portion of the casing arranged to cover the projecting end of the tongue upon the disk and engage the same to shift it against the stress of the spring.

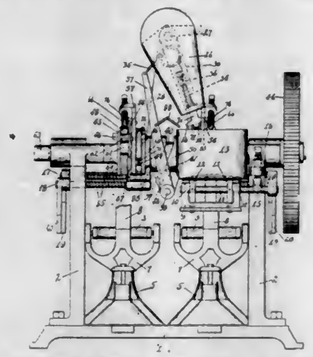
1,190,363. ROTARY ENGINE-VALVE. VICTOR H. ANDERSON, Mount Vernon, Me. Filed Sept. 4, 1915. Serial No. 48,998. (Cl. 123—52.)



1. In a multiple cylinder V-type internal combustion engine, the combination of angularly related cylinders, a valve chamber located between the angularly related cylinders and formed with a cylindrical bore and a single port for each cylinder acting both as an intake and exhaust port, a rotary cylindrical valve mounted to revolve in said chamber and embodying a tubular shell having an imperforate medial portion and ported portions at opposite sides of said medial portion, each formed with an inlet port and an exhaust port which successively register with the ports of the said cylinders, an intake chamber at one end of said valve, an exhaust chamber at the other end of said valve, and an internal partition extending longitudinally and diametrically of said shell and shaft and forming valve-contained intake and exhaust manifolds.

2. In a multiple cylinder V-type internal combustion engine, the combination of angularly related cylinders, a valve chamber located between said angularly related cylinders and formed with a cylindrical bore and a single port for each cylinder acting both as an intake and exhaust port, a rotary cylindrical valve mounted to revolve in said chamber and embodying a tubular shell having an imperforate medial portion and ported portions at opposite sides of said medial portion, each formed with an inlet port and an exhaust port which successively register with the ports of the respective cylinder, and an internal partition extending longitudinally and diametrically of said shell and forming valve-contained intake and exhaust manifolds.

1,190,364. WEIGHING-MACHINE. WILLIAM C. ANDERSON and ALBERT R. THOMPSON, San Jose, Cal., assignors to Anderson-Barngrover Mfg. Co., San Jose, Cal., a Corporation of California. Filed Dec. 16, 1915. Serial No. 67,170. (Cl. 73—169.)



1. A weighing-machine comprising movable delivery means; plural weighing-scales; a receiver on each scale; a power device for moving said delivery means into relation with said receivers successively; and means actuated by a predetermined weight of the material delivered to the receivers for throwing said power device into and out of action.

2. A weighing-machine comprising movable delivery means; plural weighing-scales; a receiver on each scale; a rotatable power shaft; and means actuated by the movement of the scales under a predetermined weight of material delivered to the receivers for throwing the power shaft into action to move the delivery means into relation with said receivers successively.

3. A weighing-machine comprising movable delivery means; plural weighing-scales; a receiver on each scale; a power device for moving said delivery means into relation with said receivers successively and holding it in each of said relations until a predetermined weight of delivered material is attained; and means actuated by such predetermined weight for throwing said power device into and out of action.

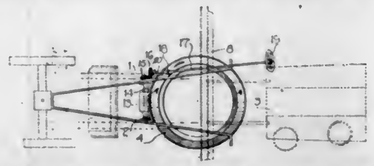
4. A weighing-machine comprising movable delivery means; plural weighing-scales; a receiver on each scale; a rotatable power shaft; and means actuated by the movement of the scales under a predetermined weight of material delivered to one receiver for throwing the power shaft into action to move said delivery means into relation with another receiver, holding it there until said predetermined weight is attained, releasing it thereupon, and moving it again into relation with the first receiver.

5. A weighing-machine comprising movable delivery means; plural weighing-scales; a weighing bucket on each scale; a power device for moving the delivery means into relation with said buckets successively and dumping them when a predetermined weight of delivered material has been attained; and means actuated by said predetermined weight for throwing the power device into and out of action.

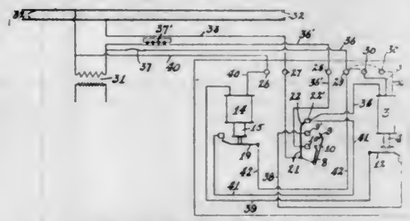
[Claims 6 to 11 not printed in the Gazette.]

1,190,365. ROAD-MACHINE. FRANKLIN E. ARNDT, Galion, Ohio, assignor to The Galion Iron Works & Manufacturing Company, Galion, Ohio, a Corporation of Ohio. Filed Feb. 28, 1914. Serial No. 821,764. (Cl. 37—49.)

In a road machine, the combination with the draw bars thereof and a revoluble circle supported thereby, said circle being provided with a toothed rack, of a brace secured to said draw bars and extending transversely from one draw bar to the other, a transverse shaft journaled in said brace and provided intermediate of its ends with a worm meshing with said rack between said draw bars, the shaft being provided at one end outside of the adjacent draw bar with a bevel pinion, a sectional flexible operating shaft extending longitudinally of the machine toward the rear thereof outside of the draw bars, a pinion on the forward end of said flexible operating shaft meshing with the first-named pinion, and a bracket secured to the outer side of one of said draw bars, the transverse shaft and the foremost section of the operating shaft extending through and having bearings in said bracket.



1,190,366. AUTOMATIC CIRCUIT-CONTROLLER. ROBIN D. ASHLEY, Oakland, Cal. Filed Aug. 9, 1915. Serial No. 44,426. (Cl. 175—268.)



1. In a circuit-controlling system having a normal circuit, an emergency circuit and an auxiliary restoring circuit, an automatic controller comprising an electrically operated switch for opening and closing the normal circuit; an electrically operated switch for opening and closing the auxiliary circuit; interlocking means whereby either switch must be closed before the other can be opened; devices for preventing the simultaneous closing of both switches; and suitable connections for operating said switches.

2. In a circuit-controlling system having a normal circuit, an emergency circuit and an auxiliary restoring circuit, an automatic controller comprising an electrically operated switch for opening and closing the normal circuit; an electrically operated switch for opening and closing the emergency circuit and the auxiliary circuit; interlocking means whereby either switch must be closed before the other can be opened; devices for preventing the simultaneous closing of both switches; and suitable connections for operating said switches.

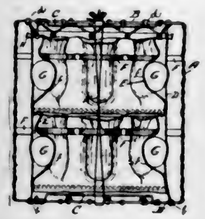
3. In a circuit-controlling system having a normal circuit, an emergency circuit and an auxiliary restoring circuit, an automatic controller comprising a switch for opening and closing the normal circuit and an electro-magnet for closing said switch; a second switch for opening and closing the auxiliary circuit and a second electro-magnet for closing said second switch; interlocking means whereby either switch must be closed before the other can be opened; inter-connections for preventing the simultaneous energizing of both of said magnets; and suitable connections between said magnets and said switches.

4. In a circuit-controlling system having a normal circuit, an emergency circuit and an auxiliary restoring circuit in parallel with said emergency circuit, an automatic controller comprising a solenoid magnet in series with the normal circuit; a switch operated by said series magnet to close the auxiliary restoring circuit; a solenoid magnet in said auxiliary restoring circuit; a switch operated by said restoring magnet to close the normal circuit; interlocking means carried by said switches whereby the closing of either switch must precede the opening of the other; devices for preventing the simultaneous energizing of both magnets consisting of a switch operated by the series magnet for breaking the circuit of the restoring magnet, and a switch operated by the restoring magnet for short-circuiting the series magnet; and suitable connections between said magnets and said switches.

5. In a circuit-controlling system having a normal circuit, an emergency circuit and an auxiliary restoring circuit in parallel with said emergency circuit, an automatic controller comprising a solenoid magnet in series with the normal circuit; a switch operated by said series magnet to close the auxiliary restoring circuit; a solenoid magnet in said auxiliary restoring circuit; a switch operated by said restoring magnet to close the normal circuit; interlocking means whereby either switch must be closed before the other can be opened, said interlocking means comprising a notched arm extending from the movable member of one of said switches and a lug, adapted for engagement with said notched arm, attached to the movable member of the other switch; devices for preventing the simultaneous energizing of both magnets; and suitable connections between said magnets and said switches.

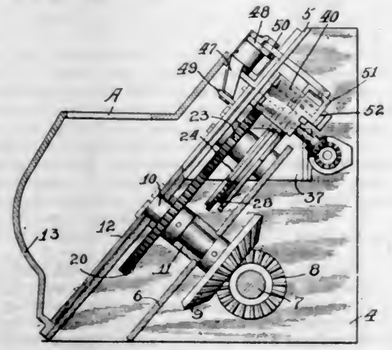
[Claims 6 and 7 not printed in the Gazette.]

1,190,367. SHIPPING-CRATE. SAMUEL F. BAGG, Troy, N. Y. Filed Oct. 15, 1914. Serial No. 866,771. (Cl. 217—28.)



A cylindrical receptacle provided with an interiorly extending flange at the top thereof; a fabric supported by said flange and secured to the bottom of the receptacle; a flexible material secured to said fabric near its lower edge; and means for drawing said flexible material toward said fabric along its upper edge, substantially as described.

1,190,368. TOTAL-REGISTERING MEANS FOR COIN-RECEIVING PREPAYMENT DEVICES. HUGO J. BAUR, Chicago, Ill., assignor to Jay M. Johnson, Chicago, Ill. Filed Aug. 19, 1912. Serial No. 715,749. (Cl. 235—32.)



1. In a device of the class described a coin carrying element, means removed from the coin carrying element for driving a register, said means comprising in part gears mounted with their axes parallel to the axis of the coin carrying element, a register normally out of train with said driving means, shifting mechanism operated by contact with the surface of a passing coin to bring the register into train with its driving means, and means holding the register in train independent of the coin until the coin value has been registered on the register.

2. In a device of the class described a coin carrying element, a register for the coin values, driving means normally out of train therewith and comprising in part gears mounted parallel to the axis of said coin carrying element and disposed above the same, mechanism adapted to contact the surface of a coin and operated by each coin carried to deposit on said carrying element to bring the register into train with its driving means, and a detent acting to hold said register in train independent of the coin until the registration of the money value of said coin.

3. In a device of the class described an inclined rotative coin carrying element, different coin engaging means thereon, one for each denomination of coin to carry that coin only, a hopper for indiscriminately mixed coins supported to discharge to said carrying element, means for driving the carrying element, a register for the coins, driving means for said register normally out of train with the register and comprising in part gears mounted parallel to the axis of the carrying element and disposed above said axis of said coin carrying element, means operated by each passing coin for bringing the register in train with its driving means, a detent acting to support said mechanisms in train until complete registration of the coin, and means immediately thereafter shifting said mechanism out of train.

4. In a device of the class described a continuously rotatable coin carrying element, driving mechanisms independent therefrom, and rotating simultaneously therewith, and disposed at the rear of and at a point above the axis of said coin carrying element, a register normally out of train with the driving mechanism, pivotally supported means for entraining the register with said driving mechanism, comprising a shifting lever extending over the carrying element in position to be held elevated by each passing coin, and means acting to maintain the register in train until complete registration of the coin and to release the register from said driving mechanism thereafter.

5. In a machine of the class described an inclined rotative coin carrying wheel, coin carrying projections thereon, said coin carrying wheel having a groove in the face thereof concentric therewith and lying between the coin carrying projections, a tripping lever extending over the faces of said wheel, a roller thereon extending into the groove and adapted to ride over each coin carried therepast on said carrying element, a shifting arm connected with said lever, a register, driving means therefor normally out of train therewith mounted at the rear of said carrying wheel at a point above the axis thereof, means connected with the shifting arm to bring the same into train when the tripping lever is elevated by each coin, and means holding the register in train until registration of the coin is effected.

[Claims 6 to 16 not printed in the Gazette.]

1,190,369. PROCESS OF MAKING ARTIFICIAL CREAM. HERMAN C. BECKMAN and GEORGE E. DYCK, Chicago, Ill., assignors to National Synthetic Products Co., Chicago, Ill., a Corporation of New Jersey. Filed Sept. 19, 1912. Serial No. 721,142. (Cl. 99—11.)

1. The process of making artificial cream which consists in preparing a mixture of an oleaginous substance, a milk base, adding casein, pasteurizing and emulsifying the whole, and subjecting the resulting product to the action of a binding agent.

2. The process of making artificial cream which consists in preparing a mixture of an oleaginous base, a milk base, adding casein, pasteurizing and emulsifying the whole, and adding starch.

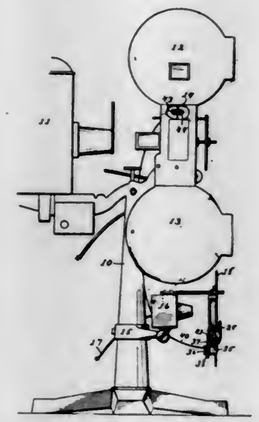
3. The process of making artificial cream which consists in preparing a mixture of an oleaginous base, a milk base,

adding casein in solution, pasteurizing and emulsifying the whole, and adding starch.

4. The process of making artificial cream which consists in preparing a mixture of an oleaginous substance and a milk base, pasteurizing and emulsifying the same, and subjecting the resulting product to the action of oxygen.

5. The process of making artificial cream which consists in preparing a mixture of an oleaginous substance and a milk base, pasteurizing and emulsifying the same, and subjecting the resulting product to the action of ozone.

1,190,370. DESCRIPTIVE-FILM ATTACHMENT AND SYNCHRONIZING MECHANISM. JOHN W. BILLINGS, Union, Iowa. Filed Aug. 9, 1915. Serial No. 44,421. (Cl. 88—17.)



1. A device of the class described, comprising, in combination with a moving picture machine having a picture film and means for operating the same, a supplementary film bearing vertically arranged items of descriptive matter relating to said picture film, and means actuated by the travel of the picture film for intermittently moving said descriptive film to successively disclose the items thereon.

2. A device of the class described, comprising, in combination with a moving picture machine having a picture film mounted for travel, a supplementary film bearing spaced items of descriptive matter relating to the picture film, and electrically operated mechanism controlled by the travel of the picture film for intermittently moving the descriptive film.

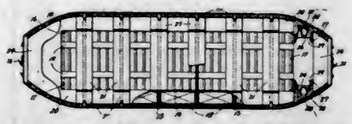
3. A device of the class described, comprising, in combination with a moving picture machine having a picture film mounted for travel, a supplementary film bearing items of descriptive matter relating to the picture film, and electrically operated means controlled by the travel of the picture film for moving the descriptive film.

4. A device of the class described, comprising, in combination with a moving picture machine having a picture film mounted for travel, a supplementary film bearing spaced items of descriptive matter relating to the picture film, a contact member in contact with said picture film, spaced contact points at selected intervals on said picture film, electrically operated means for intermittently moving said supplementary film, and electrical connections between said contact member and said electrically operated actuating means.

5. The combination of a moving picture machine having a picture film mounted for travel, a supplementary device relating to the subject matter of said picture film, a contact member in contact with said picture film, contact points on said film adapted to successively engage said contact member, electrically operated mechanism for actuating said supplementary device, and electrical connections between said contact member and said actuating mechanism.

[Claims 6 to 9 not printed in the Gazette.]

1,190,371. LIFE-BOAT. FREDERICK WILLIAM BOULTON, Bootle, near Liverpool, England. Filed Aug. 26, 1915. Serial No. 47,505. (Cl. 9—3.)



1. A flat bottom life-boat embracing spaced inner and outer frames to provide a central passenger receiving compartment and surrounding buoyancy chambers, the outer frame being extended in fixed position for an appreciable distance above the top of the inner frame, decks covering the spaces between adjacent frames and partitions, each embracing a horizontal and two vertical members disposed athwart the life-boat and each extended in a continuous manner from gunwale to gunwale to intersect both the central compartment and the starboard and port buoyancy chambers.

2. A flat bottom life-boat embracing spaced inner and outer frames to provide a central passenger receiving compartment and surrounding buoyancy chambers, the outer frame being extended in fixed position for an appreciable distance above the top of the inner frame, decks covering the spaces between adjacent frames, partitions, each embracing a horizontal and two vertical members disposed athwart the life-boat and each extended in a continuous manner from gunwale to gunwale to intersect both the central and the starboard and port buoyancy chambers to provide individual compartments, and seats within the passenger compartment and upon deck arranged athwart the boat, said seats being supported in fixed position by said partition member.

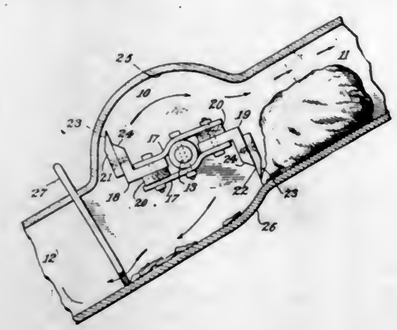
3. A flat bottom life-boat embracing spaced inner and outer frames to provide a central passenger receiving compartment and surrounding buoyancy chambers, the outer frame being extended in fixed position for an appreciable distance above the top of the inner frame, decks covering the spaces between adjacent frames, partitions, each embracing a horizontal and two vertical members disposed athwart the life-boat and each extended in a continuous manner from gunwale to gunwale to intersect both the central and the starboard and port buoyancy chambers, passenger seats arranged athwart the boat within the central compartment and supported by the horizontal members, seats for the crew located upon the decks and supported by the vertical members, said seats being also disposed athwart the body, and retiring compartments for at least one end of the life-boat located upon said deck.

4. A flat bottom life-boat embracing spaced inner and outer frames to provide a central passenger receiving compartment and surrounding buoyancy chambers, the outer frame being extended in fixed position for an appreciable distance above the top of the inner frame, decks covering the spaces between adjacent frames, partitions each embracing a horizontal and two vertical members disposed athwart the life-boat and extended from gunwale to gunwale in a continuous manner to intersect the central compartment and the buoyancy chambers, retiring compartments for at least one end of the life-boat located upon said decks, and collapsible screens operative for rendering private said retiring compartments.

5. A life-boat construction embracing spaced inner and outer frames to provide a central passenger compartment and surrounding buoyancy chambers, decks covering the spaces between adjacent frames, substantially U-shaped members disposed athwart the life-boat from gunwale to gunwale and intersecting the starboard and port buoyancy chambers to provide a series of individual compartments, seats within the passenger compartment and upon the deck and supported by said U-shaped members, retiring compartments for at least one end of the boat located upon deck and collapsible screens operative for rendering private said retiring compartments.

[Claims 6 and 7 not printed in the Gazette.]

1,190,372. MACHINE FOR CHOPPING CHICLE-GUM. BENJAMIN W. BROWN, Roselle Park, N. J. Filed Dec. 3, 1915. Serial No. 64,939. (Cl. 146—11.)



1. In a device of the class described, in combination, a housing comprising a central ventilating chamber and chutes extending obliquely into and from the same, a central power driven shaft, tangential chopping blades rotatably mounted thereon and adapted to chip fragments from a mass of gum fed to the same, and means for maintaining an air blast over the knives and the gum in order to cool the same.

2. In a device of the class described, in combination, a housing comprising a central chamber and a chute extending upwardly therefrom, a central power driven shaft, a plurality of wide radial supporting arms rotatably mounted thereon, and chopping blades tangentially secured to the ends of said arms, these parts being constructed and arranged to chop off bits from a mass of gum descending the chute and to force an air blast over the knives and the descending gum in order to cool the same.

3. In a device of the class described, in combination, a housing comprising a central chamber and a plurality of chutes extending therefrom, a central shaft, a plurality of wide radial supporting arms rotatably mounted thereon, and chopping blades tangentially secured to the ends of the arms, said blades being adapted to chop off bits from a mass of gum fed into the device through an inclined chute, and the said arms and blades constituting a fan to force a blast of air over the blades to cool them and through the chutes to cool the gum therein.

4. In a device of the kind described, in combination, a housing comprising an arcuate central chamber and an inclined chute leading into the same, a central shaft, a pair of wide radial supporting arms or blades rotatably mounted thereon, chopping blades tangentially secured to the ends of said arms and adapted to chop off bits from a mass of gum placed in and sliding down the inclined chute, the said arms and blades constituting a fan or blower to force an air blast over the gum to keep it cool.

5. In a device of the class described, in combination, a housing having an arcuate central portion, a shaft journaled therein, a plurality of straps secured to said shaft, a plurality of angle members secured to the straps, cushion blocks interposed between the angle members and the straps to take up shocks, knives secured to the angle members, means for directing billets of gum to the knives to be chopped into chips upon the rotation of the shaft, angles and knives, and means for removing the chips from the arcuate portion of the housing.

1,190,373. CHILD'S COLLAPSIBLE VEHICLE. RHINEHARDT H. BROWN, Chicago, Ill. Filed Dec. 14, 1914. Serial No. 877,019. (Cl. 21—83.)



1. In a collapsible sulky, the combination with a main frame, of a back-supporting frame foldable down on the main frame when the vehicle is collapsed, locking means for holding the back-supporting frame in its erected position, springs for throwing the back-supporting frame from its erected position to its collapsed position when said back-supporting frame is unlocked, a handle pivotally connected to the main frame and adapted to be folded down over the collapsed back-supporting frame, and a catch to hold the handle and thereby all the parts in their collapsed position.

2. In a collapsible vehicle, the combination with a main frame, of a pair of wheel frames pivoted to the under side thereof and adapted to be moved from collapsed to erected position, and vice versa, a back-supporting frame pivoted to the upper side and rear of the main frame, locking means for holding said frames locked in their erected position, springs for throwing them from their erected to their collapsed position when said frames are unlocked, a handle pivotally connected to the main frame and adapted to be folded down over the collapsed back-supporting frame, and a catch to hold the handle and thereby all the parts securely in their collapsed position.

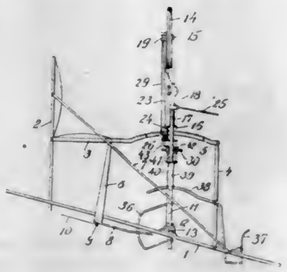
3. In a collapsible vehicle, the combination with a main frame, of a pair of wheel frames pivoted thereto, cams secured to the wheel frames, an erecting frame pivoted to the main frame and adapted to coöperate with the cams to move the wheel frames to their erected position or to be moved out of engagement therewith, springs interposed between the main frame and the wheel frames, and serving to throw the latter to their collapsed position when the bail is moved out of engagement with the cams, another spring interposed between the main frame and the erecting frame, tending to move the latter out of engagement with the cams, and locking means to hold the erecting frame in engagement with the cams.

4. In a collapsible vehicle, the combination with a main frame, of a pair of wheel frames pivoted thereto and adapted to be moved from collapsed to erected position and vice versa, a standard pivoted relative to the main frame and adapted to be swung at right angles thereto in its erected position, or substantially parallel thereto in its collapsed position, locking means for holding the wheel frames and standard locked in their erected position, and springs for throwing the wheel frames and standard from their erected to their collapsed position when they are unlocked.

5. In a collapsible vehicle, the combination with a main frame, of a pair of wheel frames pivoted to the under side thereof and adapted to be moved from collapsed to erected position, and vice versa, a standard pivoted relative to the forward end of the main frame and adapted to be swung at right angles or substantially parallel to said main frame, a back-supporting frame pivoted to the top of the rear of the main frame and foldable down on the same when the vehicle is collapsed, locking means for holding the frame and standard locked in their erected position, and springs for throwing the frames and standard from their erected to their collapsed position when they are unlocked.

[Claims 6 to 23 not printed in the Gazette.]

1,190,374. CONTROLLING DEVICE FOR AIRCRAFT AND THE LIKE. FRANK CAPPEVILA, New York, N. Y. Filed Apr. 1, 1912. Serial No. 687,811. (Cl. 244—29.)



1. In a controlling device of the character described the combination with a tiller post mounted for angular movement about its longitudinal axis and for inclination about an axis transverse to its longitudinal axis, of a spring actuated latch swinging with said post about its transverse axis and adapted to automatically lock said post against angular movement about its longitudinal axis the while admitting of its inclination about said transverse axis; and hand operated means near the top of said tiller post for controlling said latch; substantially as and for the purposes set forth.

2. In a controlling device of the character described the combination with a tiller post mounted for angular movement about its longitudinal axis and for inclination about an axis transverse to its longitudinal axis, of a hand actuated latch adapted to automatically lock said post against angular movement about its longitudinal axis the while admitting of its inclination and a second latch, adapted to automatically lock said post against inclination about said transverse axis the while admitting of its angular movement about its longitudinal axis, said latches being independent of one another and severally or simultaneously actuatable by hand from near the top of said tiller post and swinging with said post when it is inclined about said transverse axis; substantially as and for the purposes set forth.

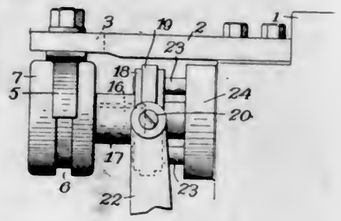
3. In a controlling device of the character described, the combination with a tiller post mounted for angular movement about its longitudinal axis and inclination about a transverse axis, of a wheel mounted for rotation on said post in a plane substantially parallel to said longitudinal axis of said post, a locking device swinging with said post and capable of preventing the angular movement of said post about its longitudinal axis, a second locking device swinging with said post and capable of preventing the inclination of said post about said transverse axis and a third locking device rotating with said wheel and capable of preventing the rotation of said wheel on said post; all of said locking devices being hand operated from near the top of the tiller post; substantially as and for the purposes set forth.

4. In a controlling device of the character described, the combination with an operating member adapted to be grasped by the operator, of an automatic locking device for said operating member, of a handle mounted on said operating member in a position admitting of its being grasped therewith, said handle being operatively connected with said locking device and designed to assume a normal locking position, a second position wherein it releases said locking device and from which it will automatically reassume said normal position and a third position wherein it releases said locking device and resists return to said normal position; substantially as and for the purposes set forth.

5. In a controlling device of the character described, the combination with an operating member capable of movement by hand in two or more directions, of a plurality of automatic locking devices all swinging with said member and each normally adapted to lock said member against movement in one of said directions, while permitting movement in another direction, and all of said locking devices having control mechanism within reach of the operator's hands while said movements of the operating member are being made.

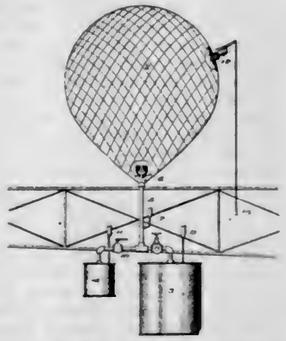
[Claims 6 to 10 not printed in the Gazette.]

1,190,375. SCREW-THREADING DIE. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 9, 1912. Serial No. 735,600. (Cl. 10—95.)



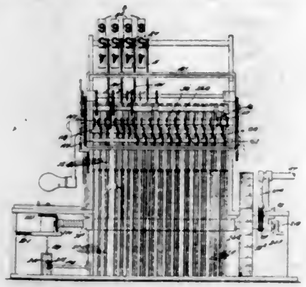
In a device of the character described, the combination with a tool carrying head, means for rotating said head, means for moving said head longitudinally, during its rotative movement, with respect to the work operated upon, thread cutting tools carried radially in said head and capable of radial movement therein, a casing inclosing said head and provided with interior longitudinal tapering ways to receive the ends of said tools, and means for fixing said casing in various positions of longitudinal adjustment relative to said head, whereby the longitudinal movement of said head causes radial movement of said tools therein.

1,190,376. SAFETY APPLIANCE FOR AEROPLANES. FRED J. CHIONE, La Salle, Ill. Filed Oct. 2, 1915. Serial No. 53,827. (Cl. 244—21.)



The combination with an aeroplane, of a normally-deflated balloon connected to the top of the aeroplane at the center thereof, a tank for compressed gas connected with and pendent from the aeroplane, a conduit intermediate said tank and the interior of the balloon and extending within the balloon, a controlling valve in said conduit, a downwardly-seating non-return valve arranged in the portion of the conduit within the balloon, an escape valve carried by the balloon, means for opening said valve connected with and pendent from the same, and an auxiliary tank for compressed gas connected through a valved conduit with and pendent from the first-named conduit.

1,190,377. COMPUTING AND REGISTERING SCALE. EDMUND S. CHURCH, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio. (Incorporated in 1906.) Filed May 28, 1906. Serial No. 319,162. (Cl. 73—104.)



1. In a machine of the class described, the combination with weighing mechanism, of means for computing value therefrom and indicating same, a totalizing means and connections for operating same under control of the value computing means and after the latter has been positioned at the computed value.

2. In a machine of the character described, the combination with weighing mechanism, of devices for indicating rate per unit, computing mechanism controlled by said devices and said mechanism, accounting devices and means for transferring the indication of the computing mechanism when computed to said accounting devices.

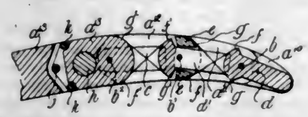
3. In a machine of the character described, the combination with a weighing mechanism, of mechanism for indicating rate per unit, price computing mechanism controlled in its movement by said rate mechanism and said weighing mechanism, and automatically computing and indicating the product, accounting devices, and means for transferring the indication of the computing device when computed to said accounting devices when desired.

4. In a machine of the character described, the combination with a weighing scale, of controlling devices set thereby, rate mechanism, computing mechanism regulated in its movement by said controlling devices and said rate mechanism, and having differential movement, accounting devices and means for transferring to said accounting devices the indication of said computing devices.

5. In a machine of the character described, the combination with weighing mechanism, of rate mechanism, a computing mechanism controlled by both the weighing and rate mechanism, an accounting device and operating mechanism therefor, and means for restoring the computing device to normal position thereby setting the accounting device operating mechanism.

[Claims 6 to 59 not printed in the Gazette.]

1,190,378. AIRCRAFT PLANE OR WING. JOHN PERCIVAL CLARK, Hendon, England. Filed Mar. 31, 1915. Serial No. 18,279. (Cl. 244—31.)



1. An aircraft plane or wing having a front portion composed of a plurality of longitudinal sections which are disposed one behind another and are articulated together for movement up or down relative to one another, so as to vary the curvature of the wing section; and connections between the successive articulated sections for transmitting the movement of one section successively to the remaining sections, so as to cause said sections to act together symmetrically, when moved up or down.

2. An aircraft plane or wing having a front portion composed of a plurality of longitudinal sections which are disposed one behind another and are articulated together for movement up or down relative to one another, so as to vary the curvature of the wing section; and flexible elements connecting the successive articulated sections together for transmitting the movement of one section successively to the remaining sections, so as to cause said sections to act together symmetrically, when moved up or down.

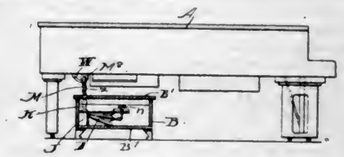
3. In an aircraft, the combination of a plane or wing having a front portion composed of a plurality of longitudinal sections which are disposed one behind another and are articulated together for movement up or down relative to one another, so as to vary the curvature of the wing section; connections between the successive articulated sections for transmitting the movement of one section successively to the remaining sections, so as to cause said sections to act together symmetrically, when moved up or down; and means for operating and controlling said sections from a point in the air-craft remote from said wing.

4. An aircraft plane or wing having a plurality of supporting ribs each having a front portion composed of a plurality of structurally-separate, articulated sections, and connections between the sections of each rib whereby the movement of one section thereof in a vertical direction will produce movement of the remaining sections thereof in the same direction, to change the curvature of the wing seciton.

5. An aircraft plane or wing having a front portion composed of a plurality of longitudinal sections disposed one behind another and articulated directly together for movement up or down relative to one another, so as to vary the transverse curvature of the wing; and means for operating and controlling the movement of said sections.

[Claim 6 not printed in the Gazette.]

1,190,379. MOTOR AND EXHAUST APPLIANCE FOR PIANO-PLAYERS. MELVILLE CLARK, Chicago, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 29, 1914. Serial No. 835,111. (Cl. 84—233.)



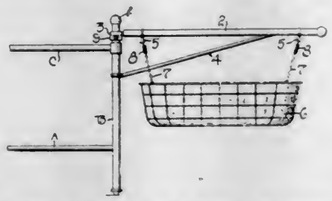
1. In combination with a grand piano casing, a tracker and roll carrier mounted thereon and an automatic player action mounted therein, comprising an exhaust chamber and an air trunk leading therefrom; a casing independent of the piano casing wholly exterior thereto; exhaust pumpers and an electric motor for the same mounted in said exterior casing, an air trunk connected with the pumpers leading from said exterior casing and adapted for connection with the air trunk on the piano casing; electric circuit wires in the piano casing and a controlling key in said circuit accessible at the piano front; circuit wires connected with the motor in the exterior casing, and disengageable terminals for the circuit wires which are located in the piano casing and in the exterior casing respectively.

2. In combination with a grand piano casing, a track-and-roll carrier mounted thereon and an automatic player action mounted therein, comprising an exhaust chamber and an air trunk leading therefrom; a casing independent of the piano casing wholly exterior thereto; exhaust pumpers and an electric motor for the same mounted in said exterior casing, an air trunk connected with the pumpers leading from said exterior casing and adapted for connection with the air trunk on the piano casing; electric circuit wires in the piano casing and a controlling

key in said circuit accessible at the vicinity of the tracker-and-roll carrier; circuit wires connected with the motor in the exterior casing, and disengageable terminals for the circuit wires in the piano casing and in the exterior casing respectively, the circuit wires in the exterior casing being coiled around the air trunk leading from the pumpers therein, and the air trunk terminal and circuit wire terminals in the piano casing being proximately situated on the latter.

3. In combination with a grand piano casing, a tracker-and-roll carrier mounted thereon, an automatic player action therein comprising an exhaust chamber and an air trunk leading therefrom; a player's bench comprising a chamber under the seat, the front wall of the chamber having a longitudinally-extending opening and a movable panel for closing said opening; pumpers and operative mechanism therefor mounted in the bench chamber; an air trunk leading from the pumpers and a swivel joint by which said trunk is connected with the pumpers for swinging about a vertical axis, said joint being located near one end of the chamber in position for swinging the trunk about said axis to carry it in horizontal path through said opening, the contents of said chamber being arranged to afford unoccupied space at the forward side in the horizontal plane of said opening to accommodate the trunk therein.

1,190,380. CRADLE-SUPPORTING ATTACHMENT FOR BEDS. GEORGE HOLMES COCKS, Ashland, Ky. Filed May 29, 1915. Serial No. 31,277. (Cl. 5—59.)

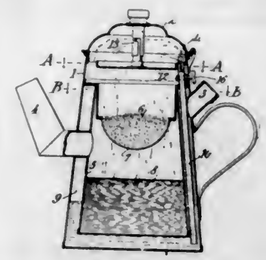


1. In a cradle supporting attachment, the combination with a vertically disposed supporting member having a stop, of an arm rotatably and detachably engaged with the supporting member and a brace extending downward and inward from the arm, said brace at its lower end being formed to partially and loosely embrace the supporting member and being thereby detachably and rotatably engaged therewith, and said brace further acting to prevent the detachment of the arm from the supporting member until the brace is disengaged from the supporting member, said stop limiting the upward movement of the supporting arm and brace and a cradle swingingly supported by the arm.

2. A cradle supporting attachment for beds comprising a vertically disposed supporting element, a cradle supporting arm tubular at one end, a member embracing the element and carried by the screw threaded end of the arm, a brace extending downward and inward from the outer end of the arm and partially embracing the supporting element and thereby having rotative engagement with the vertical supporting element, a cradle disposed longitudinally below the supporting arm, hooks on the supporting arm, and flexible connections at the ends of said cradle and extending upward to said hooks.

3. The combination with a bed post, of a swinging cradle support therefor comprising a supporting arm tubular at one end, a brace extending downward and inward from the outer end of the arm and being formed at its inner end to partially embrace the bed post, a bed post clamp formed in two sections adapted to embrace and have rotation upon the bed post, the two sections being formed with screw threaded shanks engaging with the threaded end of the arm, and a cradle swingingly supported from said arm, said brace acting to prevent a rotation of the supporting arm relative to the clamp until the brace is detached from the bed post.

1,190,381. PERCOLATOR. BURTON H. COOK, Brooklyn, N. Y. Filed Dec. 2, 1914. Serial No. 875,057. (Cl. 53—3.)



1. A percolator having an outer casing and an inner chamber, the outer casing constituting a water compartment and the inner compartment constituting a liquid coffee receptacle, a tube leading from near the bottom of the water compartment to a point above the top of the coffee receptacle, said tube being located in the water compartment, a container for the ground coffee at the top of the coffee compartment, said container being open on its top side, a distriubter receiving the water from said tube and located above the coffee container, said distributer having a number of holes for distributing the boiling water and a single cover closing the top of the percolator whereby when the cover is removed the coffee container is rendered accessible without the removal of additional parts.

2. A percolator having an outer casing and an inner chamber, the outer casing constituting a water compartment and the inner compartment constituting a liquid coffee receptacle, a tube leading from near the bottom of the water compartment to a point above the top of the coffee receptacle, said tube being located in the water compartment, a container for the ground coffee at the top of the coffee compartment, said container being open at its top side, a hollow distributer having a detachable connection with the top of said tube, said distributer extending over the open side of the coffee container and having a number of holes for distributing the boiling water directly into the coffee container.

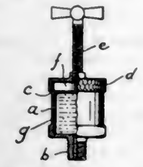
3. A percolator having an outer casing and an inner chamber, the outer casing constituting a water compartment and the inner compartment constituting a liquid coffee receptacle, a tube leading from near the bottom of the water compartment to a point above the top of the coffee receptacle, said tube being located in the water compartment, a container for the ground coffee at the top of the coffee compartment, said container being open at its top side, a hollow distributer having a pipe arranged centrally at its top and curved downwardly to detachably engage the top of said tube, said distributer extending over the open top of the coffee container.

4. A percolator having an outer casing and an inner chamber, the outer casing constituting a water compartment and the inner compartment constituting a liquid coffee receptacle, a tube leading from near the bottom of the water compartment to a point above the top of the coffee receptacle, said container being open at its top side, a hollow distributer having a pipe arranged centrally at its top and curved downwardly to detachably engage the top of said tube, said distributer extending over the open top of the coffee container, and a valve for adjusting the quantity of hot water passing through said distributer.

5. A percolator having an outer casing and an inner chamber, the outer casing constituting a water compartment and having a cover at its top, the inner chamber being located below said cover, a ground coffee container at the top of said inner chamber, a tube in the water compartment leading to the top of the inner chamber, a substantially circular distributer, a tube leading centrally from the top of said distributer and thence downwardly, and detachably connected to the water tube, said tube being partially housed in said cover, and said distributer being located directly above the ground coffee container, a valve located above said tube for graduating the amount of boiling water fed to said distributer, whereby upon opening said cover the distributer valve and coffee container are rendered accessible.

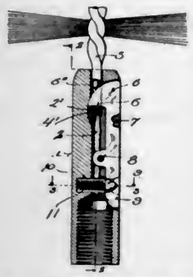
[Claim 6 not printed in the Gazette.]

1,190,382. COLLAPSIBLE GREASE-CAPSULE. LLOYD G. COPEMAN, Flint, Mich., assignor of one-half to John F. Burleson, Grand Rapids, Mich. Filed Sept. 10, 1915. Serial No. 49,933. (Cl. 184—38.)



The combination with a grease-cup, having a bottom portion provided with a relatively small discharge opening, of a collapsible capsule located within the grease-cup, a part of the bottom portion of the grease-cup being formed and arranged to furnish a perpendicular abutment for the end of the collapsible capsule, the said capsule having a relatively large open inner end of substantially greater area than the discharge opening of the grease-cup so as to span said opening and bear against the perpendicular abutment at a point remotely related to the discharge opening of the grease-cup, and means for collapsing the capsule upon the abutment, substantially as described.

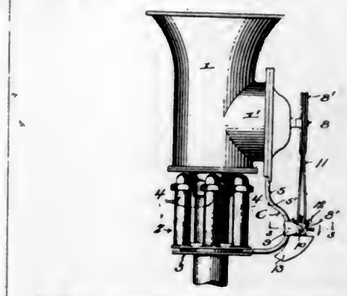
1,190,383. SPINDLE-HEAD BRUSH-HOLDER. EDWARD COURT, Milwaukee, Wis., assignor of one-half to George J. Meyer, Milwaukee, Wis. Filed Jan. 7, 1915. Serial No. 892. (Cl. 141—7.)



The combination with a brush having a shank provided with an opening of a spindle head provided in one side with a longitudinal slot extending inwardly of the axis of the head and forming at its inner portion a water duct, the head being provided in one end with a socket communicating with and extending transversely of the slot for receiving the shank, the head being formed with a channel communicating with the socket and slot and a dog pivoted longitudinally in the outer portion of the slot and engageable in the opening of the shank to hold said shank in the head, said dog also serving to substantially close the outer portion of the slot.

1,190,384. CAP-SCRUBBING ELEMENT FOR CROWN-CORKING MACHINES. EDWARD COURT, Milwaukee, Wis., assignor of one-half to George J. Meyer, Milwaukee, Wis. Filed Dec. 27, 1915. Serial No. 68,641. (Cl. 113—1.)

1. The combination of a crown-corking machine comprising a hopper, a crimping head, and a throat leading from the hopper in communication with the head through which crown corks are adapted to travel with their inner surfaces uniformly exposed, and a scrubbing element juxtaposing the feed throat adapted to successively engage the inner surfaces of said caps.

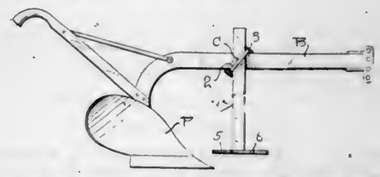


2. The combination of a crown-corking machine comprising a hopper, a crimping head, and a throat leading from the hopper in communication with the head through which crown corks are adapted to travel with their inner surfaces uniformly exposed, and a rotatory scrubbing brush juxtaposing the feed throat adapted to successively engage the inner surfaces of said caps.

3. The combination of a crown corking machine comprising a hopper, a crimping head and a skeleton feed throat in communication with the head and hopper, the throat being bowed outwardly in the direction of its skeleton surface, the said throat being adapted to receive crown corks with their inner surfaces projecting toward the skeleton face of the throat, and a rotatory scrubbing brush juxtaposing the aforesaid skeleton face of the throat for successive engagement with the inner surfaces of the crown caps as they travel past said brush.

4. The combination of a crown corking machine having a hopper, a revoluble shaft projecting therethrough, a crimping head positioned under the hopper, a throat in communication with the hopper head having a portion thereof apertured, a revoluble brush adapted to enter the throat at the apertured portion thereof, a pulley carried by the brush, a pulley carried by the crown corking machine shaft, and a belt connection between the pulleys.

1,190,385. TURNER ATTACHMENT. JOHN HOBSON CRESWELL, Jr., Perote, Ala. Filed Nov. 27, 1915. Serial No. 63,852. (Cl. 97—33.)

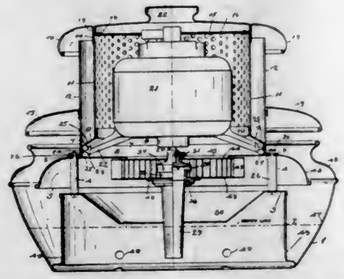


A turner attachment for a plow consisting of a standard and a substantially horizontally disposed member secured to the lower end of the standard, said member comprising oppositely directed reëntrant arms, the under face of the member being flat, said under face being disposed in the same horizontal plane throughout its length and being free and unobstructed.

1,190,386. AIR-CONDITIONER. MALCOLM DICKERSON, Newark, N. J., assignor, by direct and mesne assignments, to E. Marshall Kinsey, New York, N. Y. Filed June 21, 1911. Serial No. 634,427. (Cl. 98—41.)

1. In a device of the character described, the combination of a horizontally disposed centrifugal fan, means for rotating said fan upon a substantially vertical axis, means for supplying air to the central intake of said fan,

a reservoir beneath said fan, an inverted conical tube extending downward from the center of said fan into said reservoir, said tube being attached to and rotating with the fan, and means around said fan for separating the discharged air and water from each other.



2. In a device of the character described, the combination of a horizontally-disposed centrifugal fan having a circumferential series of marginal blades, means for rotating said fan upon a substantially vertical axis, means for supplying air to the central intake of said fan, a reservoir beneath said fan, an inverted conical tube extending downward from the center of said fan into said reservoir, said tube being attached to and rotating with the fan and the hub of said fan having passages leading from said tube radially outward through its hub toward said blades, and means around said fan for separating the discharged air and water from each other.

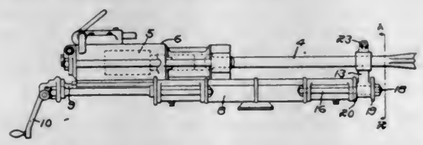
3. The combination of a centrifugal fan having a circumferential series of marginal blades and a hollow hub with radial lateral apertures therein directed toward said blades, means for rotating said fan, means for supplying water to the interior of said hub, and means for supplying air to the fan around said hub.

4. The combination of a horizontally disposed fan, means for rotating said fan upon a substantially vertical axis, an air inlet extending upward from the central intake of the fan, a reservoir adapted to inclose said fan and contain water, and a pump tube placing the central intake at the underside of the fan in communication with said reservoir, said pump tube being attached to and rotating with the fan.

5. The combination of a horizontally disposed fan, an air inlet extending upward from the central intake of said fan, a motor in said inlet for driving the fan, means for supporting said motor and fan with their axes substantially vertical, a container adapted to hold water beneath the fan and a pump tube placing the central intake at the underside of the fan in communication with said reservoir, said tube being attached to and rotating with the fan.

[Claims 6 to 25 not printed in the Gazette.]

1,190,387. ROCK-DRILL. ANDREW L. ENGELS and JOSEPH WALKER, Bisbee, Ariz. Filed July 21, 1914. Serial No. 852,300. (Cl. 255—51.)



1. A rock drill comprising, in combination, a drill bit, means for reciprocating said drill bit, a mounting upon which said means is mounted to slide lengthwise of the drill bit, and separable drill bit guiding means comprising a plurality of members pivoted to the mounting in a plane transverse to said drill bit in such manner that they may severally be swung clear of said drill bit and into proximity in reversed position and means to clamp said members together in similar manner either in drill bit guiding relation or in said reversed position.

2. A rock drill, comprising, in combination, a drill bit, means for reciprocating said drill bit, a mounting upon which said means is mounted to slide lengthwise of the drill bit, and separable drill bit guiding means comprising a plurality of members pivoted to the mounting in a plane transverse to said drill bit in such manner that they may severally be swung clear of said drill bit into proximity in reversed position and means to clamp said members together in similar manner either in drill bit guiding relation or in said reversed position, the members in such first mentioned relation together forming an opening to receive and guide the drill bit.

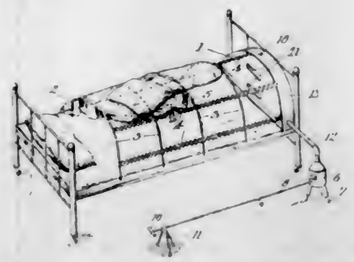
3. A rock drill comprising, in combination, a drill bit, means for reciprocating said drill bit, a mounting provided with longitudinal grooves in which said means may slide, and separable drill bit guiding members pivoted to the mounting coöperatively forming an opening to receive and guide said drill bit and means to secure said members together in drill bit guiding relation, said members being arranged to be swung clear of said grooves when not in guiding relation.

4. A rock drill comprising, in combination, a drill bit, means for reciprocating said drill bit, a mounting on which said means may slide lengthwise of the drill bit, and separable drill bit guiding members pivoted on the end face of said mounting to swing in a plane transverse to the bit, said members coöperatively forming an opening to receive and guide the drill bit and means for clamping said members together in drill bit guiding relation.

5. A rock drill comprising, in combination, a drill bit, means for reciprocating said drill bit, a mounting provided with longitudinal grooves in which said means may slide, pivots projecting from the end face of said mounting, drill bit guiding members on said pivots to swing in a plane transverse to the drill bit and coöperatively forming an opening to receive and guide the same, a plate having a surface conforming to and alining with the guiding surface of said mounting, maintained outwardly of said members and means to secure said members in drill bit guiding relation said members adapted to be swung clear of said guiding surface when not so secured.

[Claim 6 not printed in the Gazette.]

1,190,388. HOT-AIR BATH. WILLIAM F. ERATH, Rosebank, N. Y. Filed Apr. 4, 1916. Serial No. 88,955. (Cl. 4—13.)

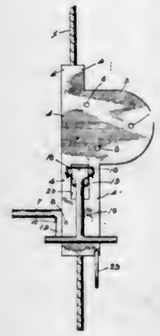


1. In a bath structure, the combination with a plurality of arched supports, a plurality of lazy-tong elements connecting between said supports whereby the distance between each element may be adjusted, an arcuate chamber to which one end of said lazy-tong elements is attached, a hot air supply source, and means for admitting air from said supply source to said chamber.

2. In a bath structure, the combination with an arcuate chamber, a casing spacedly contained therein, forming an inner chamber, a source of heated air, means for connecting said air source with said inner chamber, means for holding said chambers in spaced relation, a plurality of arcuate hoop supports registerable with said outer chamber, and flexible connections engaging said outer chamber with said arcuate hoop elements, said chamber and elements being adapted to sustain a textile covering thereover.

3. In a bath structure, the combination with a chamber having an arcuate profile, a casing spaced concentrically therewithin, a plurality of arcuate hoop elements registerable with said outer chamber, connections between said chamber and said elements whereby the latter may be uniformly spaced therefrom, a covering adapted to be disposed over said chamber and arcuate elements, means for admitting air to the interior of said casing, and means for ventilating said chamber.

1,190,389. FIRE-ESCAPE. HORACE M. ERWIN, Fort Payne, Ala. Filed Mar. 30, 1915. Serial No. 18,053. (Cl. 227—29.)

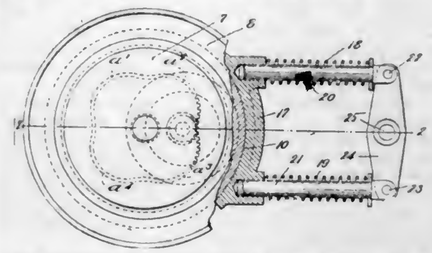


A fire escape comprising a casing, friction blocks mounted in said casing, and adapted to receive a rope, said casing provided with a slot in the lower end thereof, a lever pivotally mounted on said casing and the inner end thereof extending into said casing, a spring secured to the casing and extending part way across the slot and into an engagement with the under side of said lever to normally hold the lever in a horizontal and inoperative position, a friction plate secured to the casing opposite said slot, said casing provided with a second slot at right angles to the first mentioned slot, and at right angles to one of the friction blocks, a second friction plate secured to the casing and at right angles to first mentioned friction plate, a hand lever pivotally secured to the casing and adapted to engage the rope through the second mentioned slot and press it into engagement with the second mentioned friction plate and at right angles to first mentioned plate, and means for suspending a person to the casing.

1,190,390. APPARATUS FOR GENERATING AND CUTTING IRREGULAR GEARS. EDWIN R. FELLOWS, Springfield, Vt., assignor to The Fellows Gear Shaper Company, Springfield, Vt., a Corporation of Vermont. Filed Aug. 22, 1914. Serial No. 858,192. (Cl. 90—9.)

1. A machine for cutting irregular gears, comprising a cutter having tooth-like peripheral projections, a work holder, one of the elements constituting the cutter and the work holder being movable relatively to the other for cutting, means for giving a generating rotary movement to the cutter, and means for giving a combination of simultaneous generating movements of rotation and translation to the work holder, whereby to cause the cutter to produce an irregular line of teeth in a gear blank carried by said work holder.

2. A machine for cutting irregular gears, comprising a cutter having tooth-like peripheral projections arranged on a curved pitch line, a work holder, one of the elements constituting the cutter and the work holder being movable relatively to the other for cutting, means for giving a generating rotatory movement to the cutter, and means for moving the work holder rotatably and at the same time toward and away from the cutter, whereby to cause the pitch line of the cutter to roll tangent to an irregular pitch line in a gear blank carried by said holder.



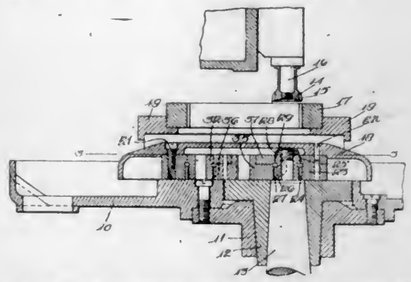
3. A machine for cutting irregular gears, comprising a cutter having tooth-like peripheral projections, a work holder, one of the elements constituting the cutter and the work holder being movable relatively to the other for cutting, means for giving a generating rotatory movement to the cutter, and means for rotating the work holder and at the same time shifting the axis about which it rotates toward and away from the cutter whereby to present successive points in an irregular line in a gear blank carried by the holder successively to the action of the cutter.

4. A machine for cutting irregular gears, comprising a cutter having tooth-like peripheral projections, a work holder, one of the elements constituting the cutter and the work holder being movable relatively to the other for cutting, means for giving a generating rotatory movement to the cutter, and means for rotating the work holder and at the same time shifting the holder back and forth transversely of the direction of cutting movement during the cutting of a single gear, whereby teeth are cut in the blank extending on an irregular line.

5. In a machine of the character described having a rotatable gear shaped planing cutter, a floating work holder movable transversely of the axis of said cutter, a master gear having teeth arranged as the teeth to be cut in a blank, secured to said work holder, a master pinion in mesh with said master gear, and means for maintaining said gear in mesh with said pinion.

[Claims 6 to 21 not printed in the Gazette.]

1,190,391. MEANS FOR GENERATING AND CUTTING IRREGULAR GEARS. EDWIN R. FELLOWS, Springfield, Vt., assignor to The Fellows Gear Shaper Company, Springfield, Vt., a Corporation of Vermont. Filed Apr. 22, 1915. Serial No. 23,248. (Cl. 90—9.)



1. A machine for generating and cutting irregular gears comprising a blank holder, a cutter having tooth-like projections, means for producing relative cutting movements between the cutter and the blank holder, a means

for shifting said blank holder, comprising a driving pinion having a former similar to its pitch line, an integral gear and an external gear both meshing with said pinion and each having a former surface similar to the pitch line of its teeth in tangent contact with the former of the driving pinion, the point of pitch line tangency between the driving pinion and one of said gears being in alinement in the direction of cutting with the pitch line tangent point of the cutter and gear blank, one of said gears being rigidly connected to the blank holder, and floating pinions interposed between the internal and external gears in mesh therewith and each having a former surface tangent to the formers of both said gears.

2. In an apparatus for cutting irregular gears and in combination with a rotating and axially movable gear-shaped cutter, a work driving spindle in approximate axial alinement with said cutter, a master pinion on said spindle arranged with a point in its pitch line in a line parallel with its axis passing through a point in the pitch line of the cutter, and irregular master gears in mesh with said pinion, the work piece being rigidly connected with one of said master gears.

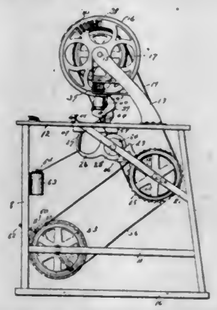
3. In a machine for generating and cutting teeth in irregular gears, a means for holding and moving a work piece, comprising a master gear to which the work piece is rigidly connected, a driving pinion in mesh with said gear, and a second master gear also in mesh with the driving pinion, one of said master gears being an internal gear surrounding the other master gear and the driving pinion.

4. In a machine for generating and cutting teeth in irregular gears, a means for holding and moving a work piece, comprising a master gear to which the work piece is rigidly connected, a driving pinion in mesh with said gear, a second master gear also in mesh with the driving pinion, one of said master gears being an internal gear surrounding the other master gear and the driving pinion, and a table on which said gears are supported with freedom to move both rotatively and translatively.

5. In a gear cutting apparatus, the combination with a rotatory and axially reciprocatory gear-shaped planing cutter, of a supporting table, a master gear having an irregular pitch line, with which the work piece is connected, a spindle in approximate alinement with the cutter, a driving pinion on said spindle in mesh with said gear, the gear being free to move upon the table, and a collection of gears and pinons in floating mesh with said driving pinion, with said master gear, and with one another, arranged to constrain movements of the master gear to traverse past the driving pinion in pitch line tangent rolling contact therewith, whereby the work piece is given a similar movement with respect to the cutter.

[Claims 6 to 21 not printed in the Gazette.)

1,190,392. VEGETABLE-BINDER. CHARLES E. FERRELL, Oklahoma, Okla. Filed Apr. 8, 1913. Serial No. 759,666. (Cl. 100—31.)



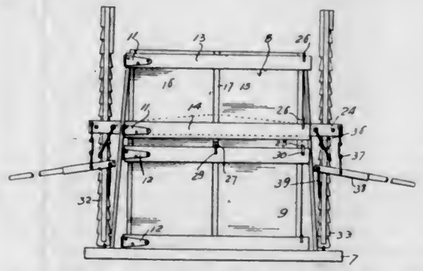
1. A vegetable binding machine comprising a table, a knotter mounted upon said table, means for operating the knotter, a needle shaft, a gravity controlled needle, an arm operating said needle, a segment on said needle shaft, a driving shaft, an arm revolving with said shaft, a segment carried by said arm and engaging intermittently with the first named segment, and means for operating the shaft.

2. A vegetable binding machine comprising a table, a knotter mounted upon said table, means for operating said knotter, a needle shaft, a needle normally inoperative by gravity, an arm for operating said needle, a segment connected with said needle shaft, a driving shaft, an arm carried thereby, a segment carried by said arm and adapted to coöperate with the segment on the needle shaft to intermittently operate the needle to cause it to coöperate with the knotter, and means to operate the shaft.

3. A vegetable binding machine comprising a table, a knotter mounted upon said table, means for operating the knotter, a needle shaft, a needle, a curved arm carrying said needle, a segment mounted on the needle shaft, a driving shaft, a wheel on said shaft, a treadle-wheel, a chain for transmitting motion from the last named wheel to the first named wheel, an arm on said shaft, a segment on said arm and adapted to coöperate with the segment on the needle shaft, topping cutters adapted to operate to cut the tops from the bundles, means for operating the topping cutters, and means for holding the cord tight while the needle and the knotter operate.

4. A vegetable binding machine comprising a table, a knotter carried thereby, means for operating the knotter, a needle shaft, a gravity returning needle adapted to cooperate with the knotter, a curved arm for the needle, and aadpted to press the bundle together, a segment carried by said needle shaft, a driving shaft, means to operate said shaft, an arm revolving with the shaft, a segment carried by said arms, and coöperating with the needle shaft-segment to force the needle to an operative position, cutters operating to cut the tops from the bundles while the same are being tied, means for operating the cutters, and means to hold the cord tight while the needle and knotter operate.

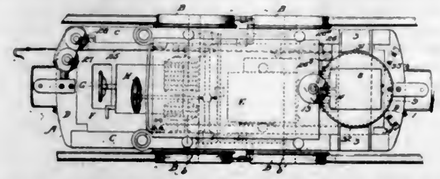
1,190,393. HAY-PRESS. MOSES M. FIELDS, Palestine, Tex. Filed Oct. 8, 1915. Serial No. 54,780. (Cl. 100—6.)



In a press, a casing including hinged doors, said doors having panels spaced apart, a partition extending transversely of the said casing, said partition having a member projecting into the space between the panels of the doors, means for holding the doors closed, means for compressing material in the casing, said partition having an opening therein, a rod rotatable in said opening, said rod having an angularly disposed end for engaging the door for holding it in closed position, and means for compressing material in the casing.

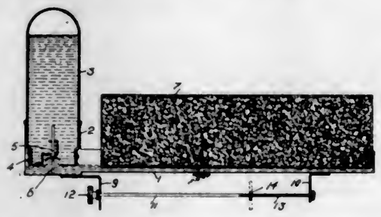
1,190,394. LOCOMOTIVE WITH HAULAGE-CABLE MECHANISM. DUDLEY T. FISHER, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Sept. 20, 1907, Serial No. 393,829. Renewed Oct. 21, 1914. Serial No. 867,905. (Cl. 254—166.)

The combination of the locomotive body, having a depressed platform at each end, the track wheels, a motor for driving the track wheels, the reel mounted on one of the depressed platforms, the second electric motor connected to the reel for driving it, the haulage cable secured to the reel, the motorman's support and chamber on the depressed platform at the other end of the frame, the sheave guides for the steel haulage cable at the motorman's end of the platform with their axes in transverse vertical



planes in the rear of the motorman's chamber arranged to have the cable deflected from the said sheave guides laterally in either direction at angles to the car equal to, less than, or greater than right angles, said parts being arranged to provide a passage for the haulage cable from one end platform to the other in a horizontal plane below the top of the car driving motor.

1,190,395. AIR-MOISTENING DEVICE. EDGAR L. FLORY and BENJAMIN M. OSBUN, Chicago, Ill. Filed Aug. 2, 1915. Serial No. 43,083. (Cl. 98—44.)

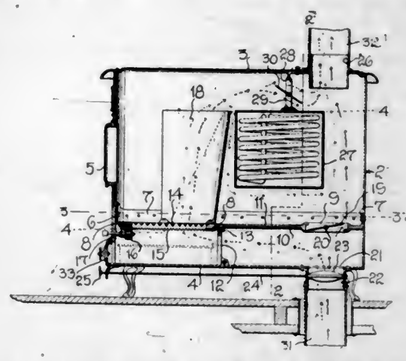


1. In a device of the character described, a long, shallow, narrow pan of a width such as to permit the pan to be inserted between the coils of a radiator, a thick porous pad seated within the pan and projecting a considerable distance above the same, the pad being rigid enough to remain upright between the radiator coils between which the device is inserted, and means for securing the pan between the coils of a radiator.

2. In a device of the character described, a long, narrow pan, brackets projecting downwardly from the under side of the pan, a screw threaded rod lying between and revolubly supported by said brackets, one of said brackets being considerably wider than the pan, and an elongated nut arranged on the screw threaded portion of the rod between the brackets, the length of the nut being considerably greater than the width of the pan.

1,190,396. HEATING-STOVE. WILLIAM D. FRAZER, Dain, W. Va., assignor of one-fourth to J. B. Dodge, Richwood, W. Va. Filed Nov. 1, 1915. Serial No. 59,132. (Cl. 126—58.)

1. A stove of the character described having a fuel supporting grate, an outlet flue section in its bottom and an inlet flue section in the top rearward of the grate and in approximate alinement whereby products of combustion from another heating appliance may be passed upward through the rear of the stove, means for controllably admitting fresh air beneath the grate, a heating chamber disposed rearward of the grate, and means for directing all products of combustion entering through the inlet flue either directly upward through the stove rearward of the heating chamber, forward, beneath and through the grate and over the heating chamber and to the outlet flue, or upward through the grate, then downward and rearward beneath the heating chamber and then upward through the outlet flue.



2. A stove of the character described including a body having a septum extending horizontally across it adjacent its lower end, the septum having a grate supporting opening in its front and an opening in its rear, a grate supported in the first-named opening, a damper controlling the passage through the second-named opening, an inlet flue in the bottom of the body beneath the last-named opening in the septum, a damper controlling the passage through the inlet flue, an outlet flue disposed in the top of the body and in approximate alinement with the inlet flue, a draft opening disposed in the body below the grate whereby fresh air may be admitted to the space beneath the grate, a deflecting obstruction disposed within the body, and a damper in the upper portion of the body above the deflecting obstruction which when closed causes the products of combustion from the space above the grate to pass downward around said deflecting obstruction.

3. A stove of the character described including a body, a septum extending horizontally across the body and adjacent its lower end and having a grate supporting opening in its forward end and an opening in its rear end, a grate supported upon the septum over the grate opening, a damper controlling the passage through the second-named opening, an inlet flue section in the bottom of the body below the second-named opening in the septum, a damper controlling passage through said inlet section, an outlet flue section disposed in the top of the body and in approximate alinement with the inlet flue section, and a back wall extending upward from the rear portion of the grate, and means for controllably admitting fresh air beneath the grate.

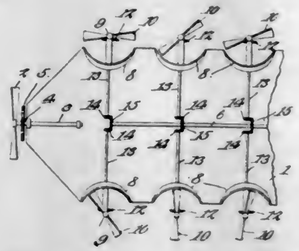
4. A stove of the character described including a body, a septum extending across the body and formed with a grate opening in its forward end and with an opening in its rear end, a grate rotatably mounted in the grate opening, a damper controlling the passage through the second-named opening, an inlet flue section in the bottom of the body beneath the second-named opening, a damper controlling the passage therethrough, an outlet flue section disposed in the top of the body approximately in alinement with the inlet flue section, a back wall mounted upon and extending upward from the grate, and means for rotating said grate to shift the back wall from a position intermediate of the ends of the stove to a position in the front of the stove.

5. A stove of the character described including a body, a septum extending horizontally across the lower portion of the body and formed with a grate opening and an opening in its rear end, a grate rotatably mounted in the grate opening, a damper controlling the passage in the second-named opening, an inlet flue section at the bottom of the body beneath the second named opening in the septum, a damper controlling the passage through said inlet flue section, an outlet flue section in the top of the stove approximately in alinement with the inlet flue section, a

draft door in the body below the grate whereby fresh air may be admitted therethrough, means for rotating the grate, a rear wall semicylindrical in form and mounted upon the grate, a heating chamber disposed within the body above the septum and rearward of the grate, a partition extending from the top of the body down to said heating chamber and formed with an opening, and a damper controlling said opening.

[Claims 6 to 8 not printed in the Gazette.]

1,190,397. AIRSHIP. JOHN W. FREEMAN, Oklahoma, Okla. Filed Aug. 6, 1915. Serial No. 44,065. (Cl. 244—15.)



1. An airship of the helicopter type, including a body, a combined stabilizer and guard upstanding from each side of the body, and lifting wheels mounted adjacent the outer sides of the combined guards and stabilizers.

2. An airship of the helicopter type, including a body, a combined stabilizer and guard upstanding from each side of the body, and lifting wheels mounted adjacent the outer sides of the combined guards and stabilizers at the upper ends thereof.

3. In an airship, the combination with a body, of guards extending upwardly from the sides of the body and constituting stabilizing means, said guards at the two sides of the body converging downwardly to said body from points thereabove, and lifting wheels mounted adjacent the outer sides of the guards.

1,190,398. BABY-CART. BENJIMAN LOWELL GATES, Chicago, Ill., assignor to Rhinehardt H. Brown, Chicago, Ill. Filed Sept. 21, 1912, Serial No. 721,552. Renewed June 28, 1915. Serial No. 36,905. (Cl. 21—83.)



1. In a two-wheeled baby-cart, the combination with a seat, of a pair of wheel brackets pivoted to the under side of the seat at opposite points and provided with cam surfaces inclined to their axes of rotation, a cam-yoke pivoted to the seat between the brackets and adapted to turn up against the seat and down between the brackets, and a pole having sliding and tilting connection with the seat and swiveling connection with the cam-yoke for unfolding the brackets.

2. In a two-wheeled baby-cart, the combination with a seat, of a pair of spring-pressed wheel brackets pivoted to the seat and provided with oppositely inclined cam surfaces, a cam-yoke pivoted to the seat between the brackets and adapted to turn up against the seat and down between the brackets, and a pole having sliding and tilting connection with the seat and swiveling connection with the cam-yoke.

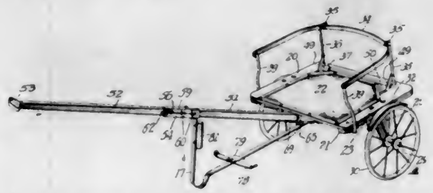
3. In a two-wheeled baby-cart, the combination with a seat, of a pair of wheel brackets pivoted to the seat to fold toward one another and provided with oppositely inclined cam surfaces, a cam-yoke pivoted to the seat between the brackets, a pole having sliding and tilting connection with the seat and swiveling connection with the cam-yoke for unfolding the brackets, and means for locking the parts in their unfolded condition.

4. In a two-wheeled baby-cart, the combination with a seat, of a pair of wheel brackets pivoted to the seat to fold toward one another and provided with oppositely inclined cam-surfaces, the degree of inclination varying in one of said surfaces from that of the other to effect a more rapid folding of one of said brackets over the other, a cam-yoke pivoted to the seat between said brackets and a pole having sliding and tilting connection with the seat and connection with the cam-yoke for folding and unfolding said brackets the one more rapidly than the other.

5. In a two-wheeled baby-cart, the combination with a seat, of a clip 6^a constructed with oblique flanges for bolting to the seat and provided with a recess 6^b at one end, a pole adapted to slide, tilt and rotate in said clip, a projection 6^c on said pole, and a pivoted latch provided with a recess 6^e adapted to engage projection 6^c in recess 6^b.

[Claims 6 to 19 not printed in the Gazette.]

1,190,399. CHILD'S COLLAPSIBLE VEHICLE. BENJIMAN L. GATES, Chicago, Ill., assignor to Rhinehardt H. Brown, Chicago, Ill. Filed June 28, 1915. Serial No. 36,612. (Cl. 21—83.)



1. In a device of the class described, the combination with a main frame, of wheel frames pivoted thereto, a back-rest frame pivoted to the main frame, a tongue connected to the main frame, means for collapsing the wheel frames and the back-rest frame, an angular standard connected to the lower portion of the tongue, and a handle secured to the normally vertical portion of said standard.

2. In a device of the class described, the combination with a tongue member, of an angular metallic standard secured thereto, a foot-rest bar pivoted thereto, and a spring-metal plate secured to the foot-rest bar and having lugs coöperating with the standard to hold the foot-rest bar in operative position.

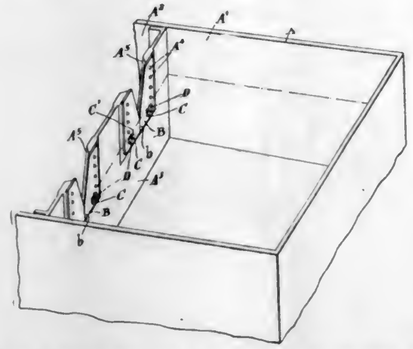
3. In a device of the class described, the combination with a lower tongue member, of an outer tongue member hinged thereto, a channel secured to the lower tongue member having an aperture in its bottom, a hook carried by the outer tongue member passed through the aperture when the tongue is extended, and a spring latch member secured on the bottom of the channel and adapted to engage the hook and to be sprung out of engagement therewith.

4. In a device of the class described, the combination with a main frame, of a member angular in cross section sliding thereon, a guide therefor having the same angular cross section, a recess in the guide, a projection on the member adapted to enter the recess, and a spring tongue carried by the member and adapted to engage the far side of the guide when the projection enters the recess.

5. In a device of the class described, the combination with a main frame, of a flat metal strip curved in a general U-shape having two sharp salient loops formed therein extending outwardly therefrom, a pair of supporting rods pivoted to the main frame and the ends of the metal strip, and a pair of parallel supporting rods pivoted to the main frame and the salient loops.

[Claims 6 to 16 not printed in the Gazette.]

1,190,400. WEIR-PLATE. WALTER S. GIBLE, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., doing business under the firm-name of Harrison Safety Boiler Works, Philadelphia, Pa. Filed Sept. 14, 1914. Serial No. 861,561. (Cl. 73—167.)



1. A V-notch weir plate comprising two sections secured together and each formed with an elongated straight edge fitting against the corresponding edge of the other to form a tight joint intersecting the apex of the weir notch.

2. A V-notch weir plate provided with laterally projecting positioning lugs terminating in upwardly extending points which are located in the same horizontal plane in the normal operating position of the weir plate.

3. A V-notch weir plate provided with positioning lugs terminating in upwardly extending points located in a horizontal plane transverse to the weir plate and passing through the apex of the weir notch in the normal operating position of the weir plate.

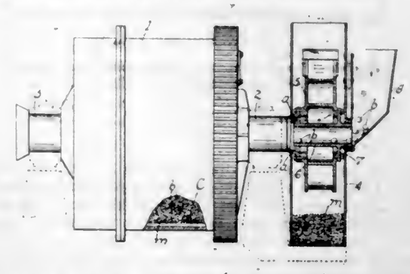
4. A V-notch weir plate having lugs secured to one side thereof and terminating in upwardly extending points displaced from the said side of the weir plate and located in the same horizontal plane in the normal operating position of the weir plate.

5. A V-notch weir plate provided with a pair of spaced apart positioning lugs terminating in upwardly projecting points, and a second pair of lugs one adjacent each of the first mentioned lugs and each having a flat upper end lying in the same plane transverse to the weir plate with said points.

1,190,401. BALL-MILL. ERNEST S. GREGORY, Anaconda, Mont. Filed Nov. 18, 1915. Serial No. 62,157. (Cl. 83—9.)

1. The combination with a tumbling-barrel or container rotatable about a fixed axis and having a crushing compartment provided respectively with intake and discharge openings for the material disposed about said axis, a pulp-feed adapted to be charged from the exterior and provided with an axial tubular member discharging the material to be crushed into the compartment aforesaid, a stationary holder for the crushing bodies provided with a discharge opening, and a ball-feed tube leading from said opening and discharging into the tubular member aforesaid.

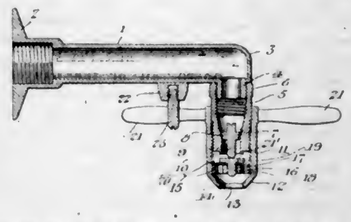
2. In combination with a tumbling-barrel or container rotatable about a fixed axis and having a crushing compartment provided with a hollow axial intake trunnion, a plup-feeder discharging into said trunnion, a ball-feed tube axially traversing the pulp-feeder and forming an annular passage-way with the outer end of the trunnion for the flow of the pulp therethrough into the trunnion, a stationary hopper discharging into the ball-feed tube, the outer terminal of said tube being flush with the inner wall of the hopper to permit of ready gravitation of the balls into the tube without obstruction.



3. In an apparatus of the character described, a rotatable pulp-feeder provided with an axial discharge, a detachable ball-feed tube axially traversing said pulp-feeder, said tube being provided with a securing flange coupled to the pulp-feeder wall and removed a suitable distance from the outer end of the tube, a stationary feed-box provided with a wall for the support of said outer end of the tube, and a ball-hopper secured to the feed-box for delivering the balls to said tube.

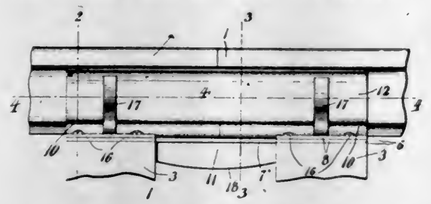
4. In combination with a tumbling-barrel or container rotatable about a fixed axis and having a crushing compartment provided respectively with intake and discharge openings for the material disposed about said axis, a pulp-feed adapted to be charged from the exterior and provided with an axial tubular member discharging the material to be crushed into the compartment aforesaid, a stationary holder for the crushing bodies provided with a discharge opening, and a ball-feed tube leading from said opening and discharging into the tubular member aforesaid, the discharge end of the tube being spaced a suitable distance from the inner walls of the tubular member.

1,190,402. SPIGOT. WILLIAM L. HAMILTON, Cleveland, Ohio. Filed Nov. 23, 1915. Serial No. 62,996. (Cl. 137—4.)



A spigot or the like comprising a bib, a casing mounted on the discharge end of said bib, a valve, a tapering valve seat formed within the casing and receiving the valve, a stem formed on said valve and projecting from said casing, a nozzle threadedly embracing the free end of said casing, the discharge end of said nozzle being inwardly inclined to provide a tapering outlet, a disk threadedly mounted within said nozzle and disposed in close proximity to said tapering outlet, said disk being formed with a circular series of perforations, said series extending radially beyond the circle defined by the discharge end of the nozzle, and a baffle disk mounted on said disk concentrically thereof and having a projection extending through the same, said baffle disk being of such a diameter as to partially overlie the series of perforations, whereby the liquid passing through said perforations will strike the tapering outlet at an angle.

1,190,403. RAIL-JOINT. ISAAC RADFORD HANSON, Oconee, and JACOB ANDREW HANSON, Vernon, Ill. Filed Jan. 21, 1916. Serial No. 73,389. (Cl. 239—6.)



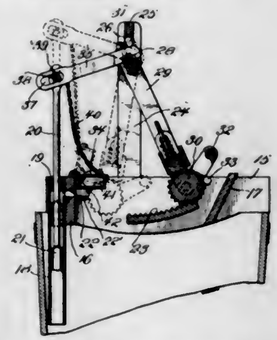
1. A rail joint including two chair sections having their ends formed with lateral extensions, the said lateral extensions upon one side of one of the chair members being formed with pockets to receive the lateral extensions upon one of the sides of the other chair member, each of the chair members having one of its longitudinal edges between the lateral extensions on one side thereof provided with an inwardly extending angular flange to engage with the base flanges of the rails and the lateral extensions being likewise formed with similar flanges, said flanges terminating in vertically extending portions which are adapted to be received in the fishing spaces and to contact with the heads of the rails, the vertical portion of each of the chair members having inwardly extending lugs adjacent one of its ends, said lugs being adapted to be received in the bolt openings in the flanges of the rails, reinforcing ribs between the rail engaging members and lateral extensions of each of the chair sections, means passing through the said extensions for securing the joint chair to the rail ties, and said means permitting the lateral and longitudinal adjustment of the said sections with relation to the rails.

2. In a joint for railway rails, a chair comprising two members each including a central web upon which the rails rest, and having their ends provided with members extending laterally from the webs, the extensions upon one side of one of the chair sections being formed with pockets to receive the extensions upon one side of the other chair sections, the said extensions having registering elongated openings which are arranged at an angle to the other openings with which they aline, the webs having their underfaces formed with longitudinal reinforcements and the ends of said reinforcements adapted to abut with the opposite faces of two of the ties upon which the chair is supported, the outer longitudinal edge of the web of each of the members being provided with an overlying rail engaging flange and the lateral extensions being likewise flanged, all of the flanges being formed with vertical extensions which are adapted to contact with the webs to underlie the heads of the rails, means provided upon the said vertical extensions for engaging in the bolt openings in the rails, and reinforcing ribs between the vertical extension and flanges of the lateral ends, and securing means passing through the angular alining openings and entering the ties.

1,190,404. WASHING-MACHINE. SIMON J. HARDING Harrisburg, Pa. Filed Jan. 22, 1916. Serial No. 73,681. (Cl. 68—20.)

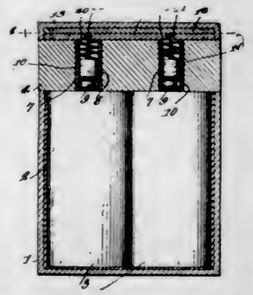
1. In a device of the class described, a frame having side members and front and rear members, a rubbing board extending between the side members, a pump depending from the front member and having a spout whereby water is directed toward the rubbing board, a pump plunger, a rocking frame connected with the pump plunger to actuate the same and having a roller to engage the rubbing board, a shield hinged to the front member of the frame, and a flexible connection between the shield and the rocking frame, said flexible connection having sufficient slack to enable the rocking frame to be operated within predetermined limits without affecting the position of the shield.

2. In a device of the class described, a frame having side members and front and rear members, a rubbing board extending between the side members, a pump depending from the front member and having a spout whereby water is directed toward the rubbing board, a pump plunger, a rocking frame connected with the pump plunger to actuate the same and having a roller to engage the rubbing board, a shield hinged to the front member of the frame, and a flexible connection between the shield and the rocking frame, said flexible connection having sufficient slack to enable the rocking frame to be operated within predetermined limits without affecting the position of the shield, said shield having a sifting reservoir supported on the underside thereof.



3. In a device of the class described, a main frame having side, front and rear members, a rubbing board supported between the side members, a rocking frame supporting a corrugated roller that coöperates with the rubbing board, a pump including a plunger and a spout for projecting water within the frame, a hinged shield to prevent water from splashing over the frame, and means connecting the pump plunger and the shield with the rocking roller carrying frame to be actuated thereby, in combination with a sifting box supported on the underside of the shield and having an apertured wall arranged to face downwardly when the shield is elevated.

1,190,405. BATTERY-BOX. CHARLES M. HATTENBERGER, Kettle River, Minn. Filed July 27, 1915. Serial No. 42,199. (Cl. 204—52.)

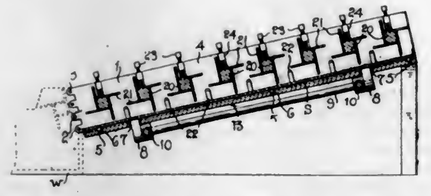


1. A battery container, including a receptacle, a cover therefor having a plurality of recesses, circuit terminals in said recesses, battery terminals receivable in said recesses, conductors associated therewith, a supplemental cover, said circuit terminals being complemental to the battery terminals of the cells to automatically connect the same when the cover is closed.

2. A connector for a battery of cells, including a container, a cover therefor, said cover having a plurality of apertures, circuit terminals in said apertures, conductors associated therewith, battery terminals receivable in said apertures, a supplemental cover, and protecting means associated therewith, said circuit terminals being complemental to the binding posts of the cells to automatically connect the same when the cover is closed.

3. A battery container, including a receptacle, a receptacle for reception of a battery of cells, a cover therefor, said cover having a plurality of apertures, yieldable circuit terminals in said apertures, battery terminals receivable in said apertures, conductors associated therewith, a supplemental cover, and insulating and protecting means associated with said first mentioned cover, as and for the purpose set forth.

1,190,406. MERCURY-SEPARATOR. JEROME HAVERLY, Los Angeles, Cal. Filed Nov. 15, 1915. Serial No. 61,602. (Cl. 83—81.)



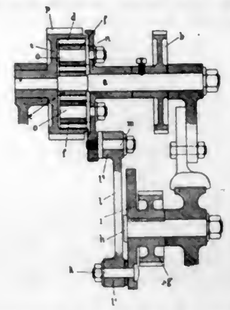
1. A mercury separator including a longitudinally inclined receptacle provided with feed supply means at its lower end, means for transversely reciprocating said receptacle, a plurality of rotary members transversely arranged in series along said receptacle, each provided with lifting blades, the lifting blades of one member being adapted to deliver material into the field of operation of the next higher rotary member, and said blades being spaced from the bottom of said receptacle at their points of nearest approach.

2. A mercury separator including a longitudinally inclined receptacle provided with feed supply means at its lower end, means for transversely reciprocating said receptacle, a plurality of rotary members transversely arranged in series along said receptacle, each provided with lifting blades, the lifting blades of one member being adapted to deliver material into the field of operation of the next higher rotary member, said blades being spaced from the bottom of said receptacle at their points of nearest approach, and a series of upstanding pins on the bottom of the receptacle intermediate adjacent rotary members.

3. A mercury separator including a longitudinally inclined receptacle provided with feed supply means at its lower end, means for transversely reciprocating said receptacle, a plurality of rotary members transversely arranged in series along said receptacle, each provided with lifting blades, the lifting blades of one member being adapted to deliver material into the field of operation of the next higher rotary member, said blades being spaced from the bottom of said receptacle at their points of nearest approach, and said rotary members being supported independently of the receptacle whereby said rotary members are mounted for rotary but not reciprocatory movement.

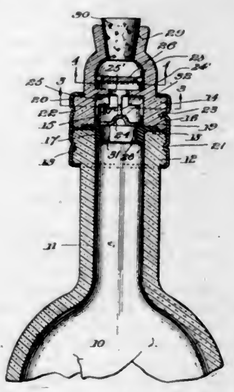
1,190,407. DIFFERENTIAL FEED MECHANISM FOR SPINNING OR COMBING MACHINES. PAUL HELMBOLD, Colmar, and JULIUS WEINBRENNER, Thann, Germany. Filed Jan. 20, 1913. Serial No. 743,023. (Cl. 74—34.)

In a combing machine, the combination with a frame, of a driven wheel having a hub journaled in the frame and provided with internal and external gear teeth, a driving shaft having one end journaled in the frame and the other end journaled in the hub of said driven wheel; a gear on said shaft by which it is rotated, a sun-wheel fixed on the shaft, a disk loosely mounted on said shaft, planet wheels which are mounted on pins carried by said disk and are in gear with the sun-wheel on the one hand and with the internal teeth of the driven wheel on the other hand, a



crank device connected to said disk for imparting oscillatory motion thereto, and means independent from said shaft for rotating said disk.

1,190,408. NON-REFILLABLE BOTTLE. CHARLES S. HERSH and CHRISTOPHER J. O'CONNOR, Philadelphia, Pa. Filed June 25, 1915. Serial No. 36,286. (Cl. 215—103.)

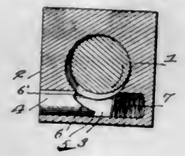


A non-refillable bottle embodying a body, a head thereon, means for securing the head to said body, a valve seat interposed between the said body and head and depending in the bottle body, a disk valve loosely mounted in the valve chamber to normally repose upon the valve seat and having a bead, a protector formed in the upper part of said head and having a centrally located discharge opening, L-shaped ribs formed on the bottom of said protector and projecting into the valve chamber at opposite diametrically opposed points, and provided with a broadened horizontal portion, said valve adapted to repose upon the broadened portions of the ribs confining the bead thereof between the confronting ends of said portions and in spaced relation with the discharge opening of the protector when the body is tilted, and a baffle in the head above and in adjacent relation with the protector and provided with a series of spaced concentrically arranged passages.

1,190,409. LOCK-NUT. ERNEST F. HOCKENBERRY, Slippery Rock, Pa. Filed Mar. 12, 1915. Serial No. 13,896. (Cl. 151—25.)

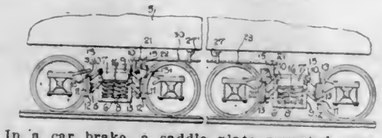
In a lock nut, the combination of a bolt and a nut therefor, said nut having a longitudinal passage which communicates with its bore, a plug closing the open end of the passage, said plug having its face disposed opposite

the opening between the bore of the nut and the passage therein formed with an angular surface that terminates in a shoulder, a helical spring in the passage normally engaging between the inner wall of the passage and the inner end of the plug, said spring adapted when the nut or



bolt is rotated in an unscrewing direction to have certain of its convolutions spread and forced upon the angular surface of the plug and toward the shoulder of the plug to frictionally engage between the said angular wall and the threads of the bolt to lock the nut upon the bolt.

1,190,410. CAR-BRAKE. THEODOR E. HOLSTEN and WILLIAM LUNDIN, Watertown, S. D. Filed Oct. 23, 1915. Serial No. 57,558. (Cl. 188—24.)



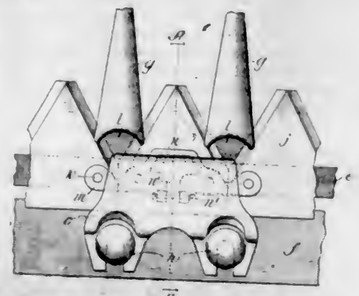
1. In a car brake, a saddle plate mounted upon the truck bolster, brake shoes arranged upon opposite sides of the saddle plate, links pivotally mounted in the saddle plate and connected to the brake shoes, a vertically disposed, operating lever pivotally connected at a point intermediate of its ends to the brake shoe on one side of the saddle plate, a bar operatively connected to said lever below its point of connection to said brake shoe, means to adjustably connect the bar to the brake shoe on the opposite side of the saddle plate, and operating means connected to said lever.

2. In a car brake, a saddle plate mounted upon the truck bolster, spaced links pivotally mounted in the saddle plate on each side of the bolster, a brake shoe supported by each pair of links, a vertically disposed lever fulcrumed intermediate of its ends upon one of the brake shoes between the point of connection of the links thereto, a guide for said lever fixed to the saddle plate, a bar pivotally connected to said lever below its point of connection to the brake shoe, said saddle plate having a guide opening through which said bar is disposed, means for adjustably connecting the other end of said bar to the other of the brake shoes, and means for operating said lever.

3. The combination with the spaced car trucks each equipped with brake shoes, an actuating lever for the brake shoes of each pair of car wheels, operating rods connected to said levers, a transversely disposed sectional equalizing lever including central and end sections, said central section being connected to the air brake piston, means for adjustably connecting the rods extending from the brake shoes of one truck to the end sections of said lever, additional pivotally mounted levers, means for adjustably connecting the rods extending from the brake shoes of the other truck to the latter levers, and link rods connecting said latter levers to the end sections of the equalizing lever.

1,190,411. CUTTING APPARATUS. HARVEY L. HOPKINS, Chicago, Ill., assignor of one-half to John Howard McElroy, individually, and one-half to John Howard McElroy, trustee, Chicago, Ill. Filed Nov. 1, 1913. Serial No. 798,637. (Cl. 56—43.)

1. In a device of the class described, the combination with a finger-bar, and guard-fingers carried thereby, of a cutter-bar and knife-sections secured thereto adapted to reciprocate on the finger-bar, a plurality of lugs having bearing surfaces inclined relatively to the plane of the knife-sections and hinged thereon, and retaining clips carried by the finger-bar and having correspondingly inclined bearing surfaces coöperating with the first-mentioned bearing surfaces.



2. In a device of the class described, the combination with a finger-bar, and guard-fingers carried thereby, of a cutter-bar and knife-sections secured thereto adapted to reciprocate on the finger-bar, a plurality of lugs having bearing surfaces inclined relatively to the plane of the knife-sections and hinged thereon, retaining clips carried by the finger-bar and having correspondingly inclined bearing surfaces coöperating with the first-mentioned bearing surfaces, and means independent of the hinges for holding the lugs in operating position.

3. In a device of the class described, the combination with a finger-bar, and guard-fingers carried thereby, of a cutter-bar and knife-sections secured thereto adapted to reciprocate on the finger-bar, a plurality of lugs having bearing surfaces inclined relatively to the plane of the knife-sections and hinged thereon, retaining clips carried by the finger-bar and having correspondingly inclined bearing surfaces coöperating with the first-mentioned bearing surfaces, and means independent of the hinges for holding the lugs in operating position, said means consisting of a recess carried by the knife-sections and a correspondingly shaped portion of the bottom of the lug which enters said recess, for the purpose described.

4. In a device of the class described, the combination with a finger-bar, and guard-fingers carried thereby, of a cutter-bar and knife-sections secured thereto adapted to reciprocate on the finger-bar, a plurality of lugs having bearing surfaces inclined relatively to the plane of the knife-sections, and retaining clips carried by the finger-bar and having correspondingly inclined bearing surfaces coöperating with the first-mentioned bearing surfaces, said knife-sections having a plurality of recesses associated therewith, in which recesses the lugs are held by the overhanging retaining clips while the machine is in operation and from which they can be removed while the knife-sections are being ground.

1,190,412. ELECTRODE FOR DEVICES FOR VARYING ELECTRICAL RESISTANCE. WALTER G. HUDSON, New York, N. Y., assignor to Radio Telephone & Telegraph Company, a Corporation of Delaware. Filed Feb. 19, 1914. Serial No. 819,648. (Cl. 250—27.)

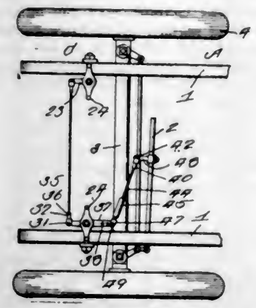


1. An electrode of the class described, comprising a tungsten filament and a covering of tantalum.

2. An electrode of the class described, comprising a filament adapted to be heated electrically, and a covering of tantalum.

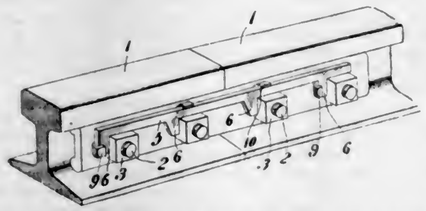
3. An electrode of the class described, comprising a tungsten filament and a sheath of tantalum inclosing said filament.

1,190,413. DIRIGIBLE HEADLIGHT. BERT MACE HUFF, La Fayette, Ind. Filed Jan. 21, 1914. Serial No. 813,538. (Cl. 240—62.)



The combination with a clamp adapted to be secured to one side of the frame of a vehicle, a vertical sleeve carried by said clamp, said sleeve having the ends of its bore enlarged, a post revolubly seated in said sleeve and having collars thereon for slidably engaging in the bores, springs coiled about the ends of the post and seated in the enlarged sections of the bore of the sleeve and engaged with the collars and bases of the bores, a lamp bracket mounted to turn with the post, and means adjustably and yieldably connecting the post with the steering mechanism of the vehicle whereby the lamp may be turned in the direction of travel of the vehicle.

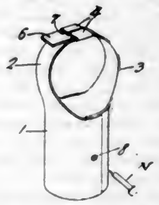
1,190,414. NUT-LOCK. EDWARD HUGHES, Forestville, and IRVING SCHOFIELD, Avon, Conn. Filed Dec. 15, 1915. Serial No. 67,003. (Cl. 151—60.)



In a device for the purpose set forth, bolts and nuts for the bolts, washer members arranged upon the bolts and contacted with the nuts, said washer members having their ends hooked, the hooks of the intermediate series of washer members comprising angle flanges and being disposed at an angle with relation to the hooks of the end washer members, a lock bar having angular fingers upon one of its edges, and its end fingers adapted to be passed in engaging position with the hooks of the end washers and swung to cause its outer longitudinal edge to be engaged by the hoods of the intermediate washer members, as and for the purpose set forth.

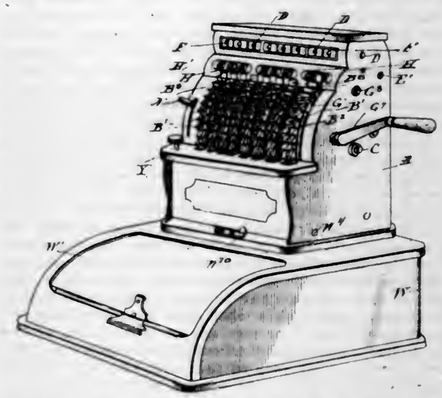
1,190,415. MOP-FERRULE. CARL M. HUGULEY, Dallas, Tex. Filed Nov. 4, 1915. Serial No. 59,638. (Cl. 15—56.)

A mop ferrule having a pair of bendable tongues projecting therefrom to receive strands therebetween, the tongues being adapted to be bent around the strands for embracing the same whereby the free ends of the tongues overlap the free end portion of one tongue having laterally projecting tabs adapted to be bent back so as to overlap the free



portion of the other tongue, and the free end of the last mentioned tongue having a tab projecting longitudinally therefrom and adapted to be bent back so as to overlap the aforesaid tabs.

1,190,416. CASH-REGISTER. ARTHUR E. JACOBS, Cleveland, Ohio. Filed June 30, 1914. Serial No. 848,116. (Cl. 235—21.)



1. In a register, in combination, a series of pivoted finger operated levers, a casing in which they are mounted, a series of separately rotatable sales dials mounted in said casing, and a series of adding dials separately rotatable in said casing, said levers and sales dials provided each with a series of digits and said adding dials provided with a multiple number of the same series of digits, each of said sales dials operatively connected with one of said levers, to rotate the said dials when said levers are depressed, said adding dials operatively connected with said levers to rotate the said adding dials when said levers are raised to their former positions, and a separate device for restoring said levers and sales dials to their original positions.

2. In a register, in combination, a casing, a series of finger operated levers pivoted therein, a common pivot shaft therefor, each lever provided with a projecting segmental extremity having a series of digits thereon arranged in columnar order, a corresponding series of sales dials pivoted in said casing, each dial provided with a corresponding series of digits, a series of adding dials pivoted in said casing, each dial having corresponding series of digits thereon, said sales dials and adding dials operated by the movements of said levers to alternately advance said dials one digit at a time, and separate means for advancing said adding dials in turn the space of one digit when the preceding dial has passed the last digit of one of said series of digits.

3. In a register, a casing having reading openings, a series of number dials, and a series of adding dials rotatable within said casing, a series of finger operated levers

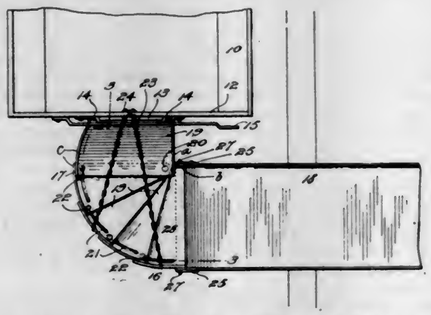
pivoted in said casing and having projecting extremities upon which a series of digits are shown in columnar form, said number dials having a corresponding series of digits thereon, and said adding dials having corresponding series of digits thereon, means for rotating said number dials when said finger levers are depressed to show digits in said openings, corresponding to those on said levers, means for rotating said adding dials to show corresponding digits in said openings when the finger levers are raised, an arm pivoted exterior to said casing, a gear secured upon the pivot shaft of said arm, a second gear operated by said first mentioned gear, arms pivoted in said casing, a bar connecting said arms, and adapted to raise said finger operated levers to their starting positions, and a connecting rod pivotally connected at its ends with said second mentioned gear and with one of said pivoted arms.

4. In a register, the combination with a casing having reading openings, of a series of finger operated levers, projecting through said casing and provided each with a series of digits at its outer end, a common main shaft upon which said levers are pivoted, series of counting dials loosely pivoted within said casing, and supplied with corresponding series of digits, a gear attached to each counting dial, a rack mounted upon each finger operated lever and adapted to operate its respective gear and dial, when its respective lever is depressed, a series of adding dials loosely mounted upon a common shaft in said casing, a gear attached to each adding dial, a driving gear engaging with each gear on said adding dials, each driving gear mounted loosely upon said main shaft, and a spring pawl pivoted upon each finger operated lever engaging one of said driving gears, whereby said adding wheels are rotated upon the reverse movement of said finger operated levers.

5. In a register, in combination, a casing having reading openings, a series of adding dials provided each with series of digits readable in turn in said openings, a gear attached to each dial, a common shaft upon which said dials are loosely mounted, a main shaft, a series of driving gears loosely mounted thereon, and respectively engaging the gears upon said dials, a series of finger operated levers projecting through said casing and rotatable therein, and loosely mounted upon said main shaft, a spring pawl upon each of said levers adapted to engage and operate respectively said driving gears when said finger levers are elevated, an exterior lever pivotally mounted in the wall of the casing, a gear rotatable therewith, a driven gear operated thereby, a bar adapted to engage and raise all said finger operated levers, and a connecting rod operatively connected with said driven gear, and with said bar, whereby when said exterior lever is moved to one position all said finger operated levers will be raised and the respective adding dials will be rotated, and when the movement of the exterior lever is reversed, all the finger operated levers will be released for subsequent movement thereof.

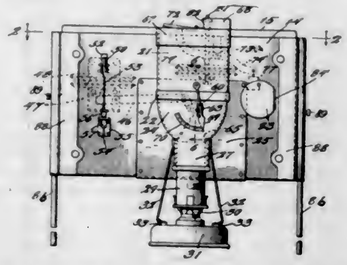
[Claims 6 to 11 not printed in the Gazette.]

1,190,417. CHUTE. SALLIE G. JACOBS, Bala, Pa. Filed Oct. 2, 1915. Serial No. 53,801. (Cl. 193—40.)



A chute for the tailboard of wagons including a main portion and a supplemental portion removably connected with the main portion, said main portion comprising a plurality of segments having a common pivot, and the inner segment being secured to the inner tailboard of the wagon, all of said sections having a rounded edge which is flanged and the flanges of one of the elements lapping the flange of the other element throughout the series of elements, the opposite edge of the innermost and outermost segments being straight formed each with a flange, and whereby the flange of the outer segment will aline with the flange of the inner segment when the segments are telescoped and also whereby the flange of the said outer segment will contact with the outer face of the flange of the inner segment when the segments are spread and by virtue of such contact limit the swinging of the outer segments with relation to the inner segment, and means connected with the swinging segments for supporting the same upon the wagon.

1,190,418. INCUBATOR. PETER KAISER, Crown Point, Ind., assignor of sixty-five one-hundredths to Clayton D. Root, Crown Point, Ind. Filed July 19, 1915. Serial No. 40,546. (Cl. 237—4.)



1. In an incubator, the combination with a casing, of a boiler outside of the casing for heating water, a pair of connection pipes, one above the other, extending from the boiler into the casing, a heating pipe extending from the upper connection pipe in one direction around the outer portion of the interior of the casing above the egg chamber and terminating in the lower connection pipe, a second heating pipe extending from the upper connection pipe in the opposite direction around the interior of the casing above the egg chamber adjacent the first heating pipe and terminating in the lower connection pipe, and means for applying heat to the boiler to cause a circulation of water through the heating pipes in opposite directions to equalize the temperature throughout the egg chamber.

2. In an incubator, the combination with a casing, of a boiler outside of the casing for heating water, a pair of connection pipes, one above the other, extending from the boiler into the casing, a heating pipe extending from the upper connection pipe in one direction around the outer portion of the interior of the casing above the egg chamber and terminating in the lower connection pipe, a second heating pipe extending from the upper connection pipe in the opposite direction around the interior of the casing above the egg chamber adjacent the first heating pipe and terminating in the lower connection pipe, said boiler and pipes being rigidly connected but loosely supported in the upper part of the casing so that when the top is removed the boiler and pipes may be lifted out attached to each other, and means for applying heat to the boiler to cause a circulation of water through the heating pipes in opposite directions to equalize the temperature throughout the egg chamber.

3. In an incubator, the combination with a casing, of a boiler outside of the casing for heating water, a pair of connection pipes, one above the other, extending from the boiler into the casing, a heating pipe extending from the upper connection pipe in one direction around the outer portion of the interior of the casing above the egg chamber and terminating in the lower connection pipe, a second heating pipe extending from the upper connection pipe in the opposite direction around the interior

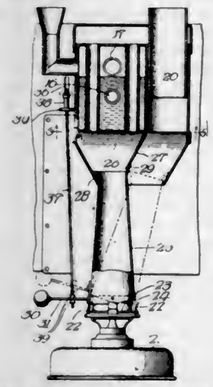
of the casing above the egg chamber adjacent the first heating pipe and terminating in the lower connection pipe, means for applying heat to the boiler to cause a circulation of water through the heating pipes in opposite directions to equalize the temperature throughout the egg chamber, a thermostat element in the casing, and connections from said element to the heating means to keep the temperature constant.

4. In an incubator, the combination with a casing, of a boiler outside of the casing for heating water, a pair of connection pipes, one above the other, extending from the boiler into the casing, a heating pipe extending from the upper connection pipe in one direction around the outer portion of the interior of the casing above the egg chamber and terminating in the lower connection pipe, a second heating pipe extending from the upper connection pipe in the opposite direction around the interior of the casing above the egg chamber adjacent the first heating pipe and terminating in the lower connection pipe, a lamp supported beneath the boiler, and a flue connecting the chimney of the lamp with the bottom of the boiler.

5. In an incubator, the combination with a casing, of a boiler outside of the casing for heating water, a pair of connection pipes one above the other, extending from the boiler into the casing, a heating pipe extending from the upper connection pipe in one direction around the outer portion of the interior of the casing above the egg chamber and terminating in the lower connection pipe, a second heating pipe extending from the upper connection pipe in the opposite direction around the interior of the casing above the egg chamber adjacent the first heating pipe and terminating in the lower connection pipe, a lamp supported beneath the boiler, a flue connecting the chimney of the lamp with the bottom of the boiler, a valve hung in the flue, a thermostat element in the casing, and connections from the thermostat element to the valve to swing the latter to divert the heat from the boiler.

[Claims 6 to 17 not printed in the Gazette.]

1,190,419. INCUBATOR. PETER KAISER, Crown Point, Ind., assignor of sixty-five one-hundredths to Clayton D. Root, Crown Point, Ind. Filed Oct. 14, 1915. Serial No. 55,818. (Cl. 237—4.)



1. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a chimney on said lamp consisting of a fixed collar portion closely surrounding the lamp burner, and a main portion pivoted near the top of the collar portion and overlapping and making a comparatively tight joint therewith in all positions, a heat-applying member above the chimney having heat-utilizing passages extending therethrough, and link and lever connections from the thermostat element to the swinging portion of the chimney so that the expansion of the thermostat under undue heat will swing the chimney so as to deflect some of the heat from the heat-utilizing passages.

2. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a chimney on said lamp consisting of a fixed collar portion closely surrounding the lamp burner, and a main portion pivoted near the top of the collar portion and overlapping and making a comparatively tight joint therewith in all positions, a heat-applying member above the chimney having heat-utilizing passages extending therethrough, a bracket support for the thermostat element within the casing, a single lever fulcrumed on the bracket and connected to the free side of the thermostat element and having its load arm extending outside of the casing, and a link extending from the load arm and connected to the swinging portion of the chimney at a distance from its fulcrum.

3. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a chimney on said lamp consisting of a fixed collar portion closely surrounding the lamp burner, and a main portion pivoted near the top of the collar portion and overlapping and making a comparatively tight joint therewith in all positions, a heat-applying member above the chimney having heat-utilizing passages extending therethrough, a bracket support for the thermostat element within the casing, a single lever fulcrumed on the bracket and connected to the free side of the thermostat element and having its load arm extending outside of the casing, a link extending from the load arm and connected to the swinging portion of the chimney at a distance from its fulcrum, and a counterbalance weight on the swinging portion of the chimney tending to hold it in its heating position.

4. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a chimney on said lamp consisting of a fixed collar portion closely surrounding the lamp burner, and a main portion pivoted near the top of the collar portion and overlapping and making a comparatively tight joint therewith in all positions, a heat-applying member above the chimney having heat-utilizing passages extending therethrough, a single lever fulcrumed within the casing and connected to the free side of the thermostat element and having its load arm extending outside of the casing, an arm fixed to the swinging portion of the chimney, a counterbalance weight on the outer end of the arm, and a link connecting the lever and arm.

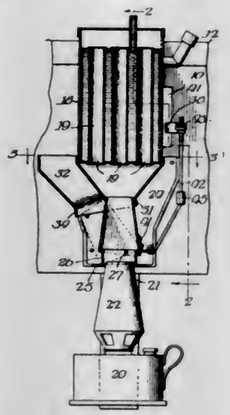
5. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a chimney on said lamp consisting of a fixed collar portion closely surrounding the lamp burner, and a main portion pivoted near the top of the collar portion and overlapping and making a comparatively tight joint therewith in all positions, a heat-applying member above the chimney having heat-utilizing passages extending therethrough, a single lever fulcrumed within the casing and connected to the free side of the thermostat element and having its load arm extending outside of the casing, an arm fixed to the swinging portion of the chimney, a counterbalance weight on the outer end of the arm, a link connecting the lever and arm, and means for adjusting the effective length of the link, consisting of a nut threaded on the upper end thereof and engaging the lever through which it passes.

[Claim 6 not printed in the Gazette.]

1,190,420. HEAT-CONTROLLING MECHANISM FOR INCUBATORS, &c. PETER KAISER, Crown Point, Ind., assignor of sixty-five one-hundredths to Clayton D. Root, Crown Point, Ind. Filed Mar. 15, 1916. Serial No. 84,286. (Cl. 237—4.)

1. In a device of the class described, the combination with a casing having heat-distributing appliances therein

and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a stationary chimney on the lamp, surrounding the burner, a stationary collar supported from the casing having a chimney opening into its bottom, a swinging flue pivoted near the top of the collar and overlapping the same to make a joint in all positions, a heat-applying member above the swinging flue having heat-utilizing passages extending therethrough, and link and lever connections from the thermostat element to the swinging flue so that the expansion of the thermostat under undue heat will swing the flue so as to deflect some of the heat from the heat-utilizing passages.

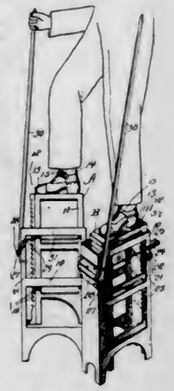


2. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a stationary chimney on the lamp surrounding its burner, a stationary collar supported from the casing having the chimney opening into its bottom, a swinging flue pivoted near the top of the collar and overlapping the same to make a joint in all positions, a heat-applying member above the flue having heat-utilizing passages extending therethrough, a bracket support for the thermostat element within the casing, a single lever fulcrumed on the bracket and cooperating with the free side of the thermostat element and having its load arm extending outside of the casing, and a link extending from the load arm and connected to the flue to one side of its fulcrum.

3. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a stationary chimney on the lamp surrounding its burner, a stationary collar supported from the casing having the chimney opening into its bottom, a swinging flue pivoted near the top of the collar and overlapping the same to make a joint in all positions, a heat-applying member above the flue having heat-utilizing passages extending therethrough, a bracket support for the thermostat element within the casing, a single lever fulcrumed on the bracket and coöperating with the free side of the thermostat element and having its load arm extending outside of the casing, a link extending from the load arm and connected to the flue to one side of its fulcrum, and a counterbalance weight for the flue tending to hold it in its heating position.

4. In a device of the class described, the combination with a casing having heat-distributing appliances therein and a thermostat element fixedly supported therein, of a lamp supported outside of the casing, a stationary chimney on the lamp surrounding its burner, a stationary collar supported from the casing having the chimney opening into its bottom, a swinging flue provided near the top of the collar and overlapping the same to make a joint in all positions, a heat-applying member above the flue having heat-utilizing passages extending therethrough, a bracket support for the thermostat element within the casing, a single lever fulcrumed on the bracket and resting on the free side of the thermostat element and having its load arm extending outside of the casing, a link connecting the lever and flue, a counter-balance weight on the link, and means for adjusting the effective length of the link, consisting of a nut threaded on the upper end thereof and held to turn in the outer end of the lever through which it passes.

1,190,421. SELF-ELEVATING DEVICE. ERNEST C. KALEY, Pittsburgh, Pa. Filed Mar. 14, 1916. Serial No. 84,174. (Cl. 135—53.1.)



1. A self elevating device comprising a pair of stilts, each including a fixed frame-like section and a similar relatively movable telescopic section, and means for holding said movable section fixed in different adjusted positions.

2. A self elevating device comprising a pair of stilts, each including telescopic frame-like sections, one of which is capable of adjustment with respect to the other, means carried by one of said sections for connecting the stilt with the foot of the user, and means for holding said sections fixed relatively.

3. A self elevating device comprising a pair of stilts, each including telescopic frame-like sections, one of which is capable of adjustment with respect to the other, means for locking the movable section in adjusted position, and means carried by said section for connecting the same to the foot of the user whereby the section is adapted to be adjusted by the raising or lowering of the foot, subsequent to the release of said means.

4. A self elevating device comprising a pair of stilts, each including a fixed frame-like section and a similar relatively movable telescopic section, means carried by the movable section for connecting the latter to the foot of the user for adjustment therewith, pawl and ratchet mechanism for holding said movable section fixed in adjusted position, and means for controlling said mechanism to permit of the adjustment of said section.

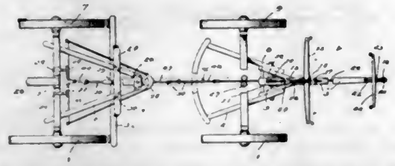
5. A self elevating device comprising a pair of stilts, each including a fixed frame-like section, and a similar section slidably fitted within the fixed section, means for connecting the movable section to the foot of the user for adjustment therewith, and means for holding said movable section fixed in adjusted position.

[Claims 6 to 8 not printed in the Gazette.]

1,190,422. AUTOMATIC WAGON-BRAKE. JOHN V. KAMMERS and JAMES H. BROPHY, Lamont, Wash. Filed Mar. 13, 1914, Serial No. 824,584. Renewed Mar. 10, 1916. Serial No. 83,411. (Cl. 21—9.)

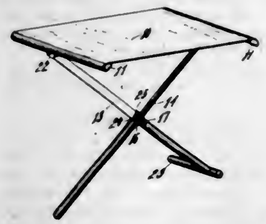
In a device of the kind described, in combination a draft beam, said beam being cut away to provide a pulley-

receiving opening, a pin in said beam spanning said opening, a pulley journaled on said pin, a strap secured at one end upon said beam in advance of said pulley, said strap having an elongated part spaced parallel from said beam and having an elongated slot formed therein, a cable trained over said pulley, and passing through the back of said strap, a whiffletree slidably mounted upon said beam



and having a substantially central pin operating in said slot, a horse shoe loop secured upon opposite longitudinal edges of said whiffletree, said cable being secured to one of said loops and a pivoted hook on said beam adapted to engage the other of said loops whereby to prevent movement of the pin in said slot.

1,190,423. COLLAPSIBLE CAMP-STOOL. EMIL L. KAMRATH, Milwaukee, Wis. Filed May 7, 1914. Serial No. 836,874. (Cl. 155—42.)



1. A collapsible camp stool, comprising a pair of supporting members half sectioned for approximately half the length thereof, a clamping member having a pair of clamping sleeves at an angle to each other to receive the half sectioned portions of the supporting members, and a seat member comprising a flexible seat portion secured to end pieces and means for securing the end pieces to the upper ends of the supporting members, said supporting members when disconnected from the seat member and the clamping members being adapted to have their half sectioned portions fitted together.

2. A collapsible camp stool, comprising a pair of supporting rods, half sectioned for approximately half the length thereof, a cross piece on the end of one supporting rod, a clamping member having a pair of clamping sleeves at an angle to each other and adapted to receive the half sections of the supporting rods, a seat member comprising a flexible central portion, end pieces connected to the ends thereof, and means for connecting the end pieces to the upper ends of the supporting rods, said supporting rods when disconnected from the seat member and the clamping members being adapted to have their half portions fitted together to constitute a cane.

3. A collapsible camp stool, comprising a pair of supporting rods, half sectioned for approximately half the length thereof, a clamping member comprising a central sheet metal plate with projecting curved flaps at opposite edges thereof to form clamping sleeves at an angle to each other, clamping screws passing through the ends of the flaps of each clamping sleeve to tighten the clamping sleeves upon the half sectioned portions of the supporting rods, a seat member comprising a flexible central portion, end pieces secured to the ends thereof, a means for connecting the end pieces to the upper ends of the supporting rods, said supporting rods being adapted, when disconnected from the seat member and the clamping member, to have their half sectioned portions fit together to form a cane.

4. A collapsible camp stool, comprising a pair of supporting rods, half sectioned for approximately half the length thereof, a clamping member comprising a central sheet metal plate with flaps at opposite edges thereof, bent to form a pair of clamping sleeves at an angle to each other, clamping screws connecting the ends of the flaps of each clamping sleeve to tighten the clamping sleeve around the half sectioned portions of the supporting rods, tongues bent up from adjacent edges of the central plate portion of the clamping member to fit within notches in the flat surfaces of the half sectioned portions of the supporting rods, a seat member comprising a flexible central portion, end pieces secured thereto and means for connecting the end pieces with the upper ends of the supporting rods, said supporting rods being adapted when disconnected from the seat member and the clamping member, to have their half sectioned portions fit together to form a cane.

5. A collapsible camp stool, comprising a pair of supporting rods half sectioned for approximately half the length thereof, a clamping member having clamping sleeves at an angle to each other to receive the half sectioned portions of the supporting rods, dowel pins projecting from the upper ends of the supporting rods, a seat member comprising a flexible central portion, end pieces secured thereto and provided with dowel pin openings to fit upon the dowel pins, and socket plates on the end pieces fitting on the ends of the supporting rods, there being dowel pin openings in the shoulders formed by the beginning of the half sectioned portions of the supporting rods to receive the dowel pins when the supporting rods have their half sectioned portions fitted together after removing the clamping member and the seat member, so that the supporting rods constitute a cane.

1,190,424. RADIATOR. THOMAS J. KEHOE, Toledo, Ohio. Filed Feb. 15, 1915. Serial No. 8,225. (Cl. 257—130.)



1. A radiator having a plurality of vertically disposed cells, each cell having on each side thereof and at the upper and lower ends thereof frustumal bulged portions, the outer ends of the frustumal bulged portions forming flat abutting surfaces which abut the outer ends of the frustumal bulged portions of the adjoining cells, forming thereby intermediate spaces for the movement of air currents between the cells in directions transverse to the cells, the said cells mounted in a frame having water chambers communicating one at the upper ends of the cells and the other at the lower ends of the cells.

2. A radiator having a plurality of cells, the cells having frustumal bulging portions for spacing the cells, the said bulging portions of each cell abutting the bulging portions of the adjoining cells, and means for spacing the edges of the cells and securing the edges in their spaced relation.

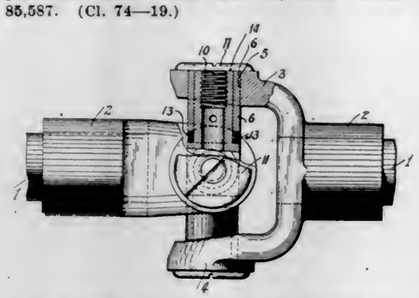
3. A radiator having a plurality of cells, the cells having a pair of circular bulge portions formed in the opposite sides of each cell and near the upper and lower ends of the cell, and located centrally with respect to the front and rear edges of the cell and means for spacing the edges of the cell.

4. A radiator having a plurality of cells, the cells having a pair of frustumal bulged portions formed in the opposite sides of each cell near the upper and lower ends of the cell, and located centrally with respect to the front and rear edges of the cell, and means for spacing the edges of the cells and securing the edges in their spaced relation.

5. A radiator having a plurality of vertical cells formed by folding strips along central vertical lines, the strips having tongues at their edges forming thereby spacing tongues extending laterally from the edges of the cells for spacing the edges of the cells, the cell walls having bulged portions for spacing the cells in the radiator.

[Claims 6 to 8 not printed in the Gazette.]

1,190,425. UNIVERSAL JOINT. HARRY A. KNOX, Chicopee Falls, Mass. Filed Mar. 21, 1916. Serial No. 85,587. (Cl. 74—19.)



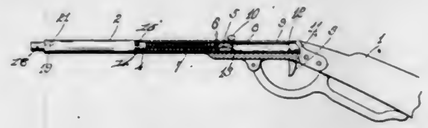
1. A universal joint comprising in combination, two fork-shaped members having arms, the said arms being provided with holes having smooth finished surfaces, and finished surfaces on the outer faces of the arms, a cross-shaped member having arms which project respectively into said holes, and means, as described, for securing the said cross-shaped member in said holes, said means comprising a bushing located in said holes and engaging the arms of the cross-shaped member, and screw plugs threaded into the openings in the ends of the cross-shaped member and having flanged heads for engaging the finished surfaces on the outer faces of the arms of the said forks, said flanged heads being firmly screwed against the ends of the cross-shaped member.

2. A universal joint, comprising, two fork members having arms, and formed with smooth holes in the arms, a cross-shaped member having threaded openings in its ends, screw plugs in the threaded openings, the plugs having flanged heads firmly engaging the ends of the arms of the cross-shaped member, and slidably engaging the outer faces of the arms of the forks, and bushings located in the holes in the arms of the forks and on the arms of the cross-shaped member.

3. A coupling device comprising in combination, two fork members having holes in their arms, a cross-shaped member having its four arms integral with its hub, open ended bushings located on the arms of the cross-shaped member and in said holes, and flanged plugs firmly secured to the arms of the cross-shaped member for retaining said member in place in said fork members.

1,190,426. INSECTICIDE-GUN. EMANUEL KROMER, Spokane, Wash. Filed Aug. 31, 1915. Serial No. 48,194. (Cl. 43—1.)

1. In an air gun for shooting insecticide, a barrel provided with an abutment having an air passage therein and disposed rearwardly of the muzzle end of the barrel, a spring operated trigger controlled air piston movable against said abutment, an insecticide holding sleeve movable into said barrel through the muzzle end of the latter and having its outer end closed, and an air tube open to the outer air through said closed end of the sleeve and communicating with said passage, said tube having a charge hole opening to the interior of said sleeve for admission of a charge of insecticide to said tube at a point in advance of the air shot through said tube with respect to the direction of passage of the air, substantially as described.



2. In an air gun for shooting insecticide, a barrel provided with an abutment having an air passage therein and disposed rearwardly of the muzzle end of the gun, a spring controlled air piston movable against said abutment to force air therethrough, an insecticide charging sleeve insertible into said barrel through the muzzle end of the latter for holding the insecticide, and an air tube open to the outer air at the muzzle end of said barrel and communicating with said abutment air passage, said tube having a charge opening and constantly open for ingress of the insecticide therethrough into said tube from said sleeve, substantially as described.

3. In an air gun for shooting insecticide, a gun barrel, an insecticide holding sleeve insertible into said barrel through the muzzle end of the latter, an air tube open to the outer air at the muzzle end of said barrel and having a charge opening in constant communication with the interior of said sleeve for ingress of the insecticide into said tube, and means for forcing air through said tube to shoot the powder therefrom, substantially as described.

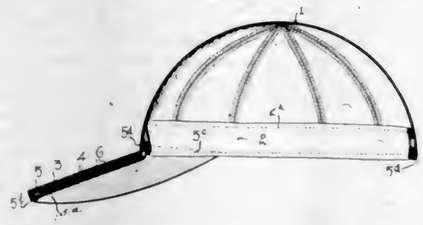
4. In an air gun for shooting insecticide, a barrel, closure means for the muzzle end of the barrel to permit of insertion into the barrel of a load of insecticide for a plurality shot, an air tube in said barrel communicating at its forward end with the outer air through said closure and having an opening between its ends in constant communication with the insecticide in said barrel for ingress of the insecticide into said tube, and means for supplying air under pressure to the remaining end of said tube to shoot the insecticide through the muzzle end of said tube, substantially as described.

5. In an air gun for shooting a powdered material, a barrel, closure means for the muzzle end of the barrel to permit of insertion of a load of the powdered material into said barrel sufficient for a plurality of shots, a tube communicating with the outer air near the muzzle end of the gun and having an opening between its ends for ingress of the powdered material into said tube from the interior of the barrel, means for supplying compressed air to the rear end of said tube to shoot the powdered material out of the muzzle end of said tube, and means for causing the compressed air to enter the rear end and pass through said tube, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

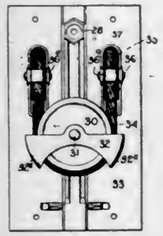
1,190,427. CAP. GEORGE J. KROMER, Jr., South Kaukauna, Wis. Filed Apr. 8, 1916. Serial No. 89,925. (Cl. 2—106.)

The herein described foldable, washable cap comprising a substantially semispherical body having an inturned edge extending around the same and upwardly therein, a sweat band arranged within the body and having an upturned lower edge disposed on its outer side, and a vizor comprising a stiffening inner fabric, and covering fabrics on the upper and lower sides thereof, the inner edges of the covering fabrics of the vizor extending inwardly from the stiffening fabric thereof, and being upturned, and disposed between the inturned edge of the cap body, and the upturned edge of the sweat band, said edges of the covering fabrics of the vizor being secured to the said upturned edges of the cap body and of the sweat band, the upturned edge of the sweat band at points other than where the same is attached to the lower covering fabric of the vizor being attached to the upturned inner edge of the cap body, the upturned inner edges of the inwardly



extended upper and lower covers of the vizor forming a flexible connection between the vizor, the cap body, and the sweat band.

1,190,428. COUNTERBALANCE FOR WINDOW-SASHES. GEORGE JOHN LEON LANGFORD, Ingersoll, Ontario, Canada. Filed Sept. 20, 1915. Serial No. 51,541. (Cl. 16—116.)



1. In a counter-balance for window sashes, a plate having two openings and a guide, two sheaves, one pivoted adjacent each opening, a slide for moving on the guide, a third sheave pivoted to the slide, and resilient means for holding the slide yieldingly extended.

2. In a counter-balance for window sashes, a plate having a bent in portion forming a groove on its face and a guide on its rear, said plate having two openings, one at each side of the bent in portion, two sheaves, one pivoted adjacent each opening, a slide for moving on the guide, a third sheave pivoted to the slide, and resilient means for holding the slide yieldingly extended.

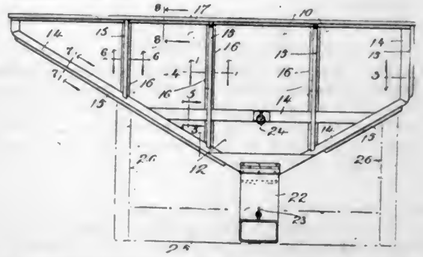
3. In a counter-balance for window sashes, a plate with orifices, two sheave openings and a guide, two sheaves, one pivoted adjacent each opening, a slide for moving on the guide, a third sheave pivoted to the slide, a clamp disposed across the slide and provided with threaded orifices, and screws disposed through the orifices in the plate and meshing with the threaded orifices in the clamp for pressing the clamp against the slide.

4. In a counter-balance for window sashes, a plate with orifices, two sheave openings, and a guide, two sheaves, one pivoted adjacent each opening, a slide for moving on the guide, a third sheave pivoted to the slide, a clamp disposed across the slide and provided with threaded orifices, screws disposed through the orifices in the plate and meshing with the threaded orifices in the clamp for pressing the clamp against the slide, and springs for holding the clamp yieldingly away from the slide.

5. In a counter-balance for window sashes, a plate with two openings, brackets extending rearwardly from the plate at the sides af the openings, each pair of brackets being extended to form a U-shaped guide beyond the ends of the openings, two sheaves, one pivoted to each of the brackets, a guide on the plate, a slide for moving on the guide, a third sheave pivoted to the slide, there being orifices in the plate within the U-shaped guides, a clamp disposed across the slide and provided with threaded orifices, screws disposed through the orifices in the plate and meshing with the threaded orifices in the clamp for pressing against the slide, and springs disposed around the screws and within the U-shaped guides for holding the clamp yieldingly extended.

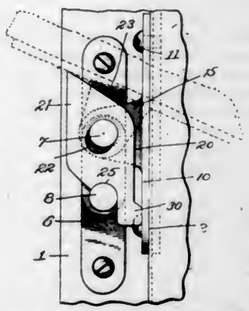
[Claims 6 and 7 not printed in the Gazette.]

1,190,429. COAL-WAGON BODY. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Edward C. Budd Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 22, 1912. Serial No. 732,834. (Cl. 21—86.)



A wagon body composed of sheet metal plates having vertical side and end portions and downwardly inclined or converging bottom portions and strengthening ribs channel shape in cross section secured to the exterior surfaces of said plates, said ribs being bent intermediate their ends to conform to the angle between the vertical and inclined portions of the body, one portion of each rib extending vertically against a side plate and the other portion thereof being secured to the inclined surface of the wagon bottom, all of said parts secured into an integral structure.

1,190,430. WINDOW-STOP. PETER C. LENZ, Brooklyn, N. Y. Filed Oct. 27, 1914. Serial No. 868,852. (Cl. 16—142.)



1. In combination with a window sash and frame, a pivot member, a socket member engaging the pivot member to pivotally suspend said sash, a stop rotatably supported on the pivot and a retaining arm located under the pivot for holding said stop normally in position to limit the movement of the sash.

2. In combination with a window sash and frame, a supporting pivot carried by the frame, a socket member engaged by said pivot and carried by the sash, a stop rotatably supported on the pivot and a retaining arm located under the pivot for engaging the stop to normally hold it in position to limit the movement of the sash.

3. In combination with a window sash and frame, a supporting pivot carried by the frame, a socket member engaged by said pivot and carried by the sash, a stop supported on the pivot and held against displacement thereon by the socket member and a retaining arm for

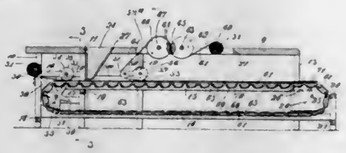
engaging said stop to hold said stop normally in position to limit the movement of the sash.

4. In combination with a window sash and frame, a pivot member, a socket member engaging the pivot to pivotally support the sash, a stop rotatably mounted on the pivot, and a retaining arm located under said pivot for normally holding the stop in position to limit the movement of the sash.

5. In combination with a window sash and frame, a pivot member, a socket member engaging the pivot member to pivotally support the sash, a stop slotted to receive the pivot and a retaining arm under said pivot for normally holding the stop in position to limit the movement of the sash.

[Claims 6 to 8 not printed in the Gazette.]

1,190,431. MACHINE FOR MAKING STUCCO-BOARDS. ROBERT LINKLETTER and GEORGE W. MUTTART, Jersey City, N. J., assignors of one-third to said Linkletter, one-third to said Muttart, and one-third to Alder C. Muttart, New York, N. Y. Filed July 10, 1915. Serial No. 39,070. (Cl. 25—1.)



1. In an apparatus of the character described the combination, with a number of traveling members connected together in the form of an endless chain and means for propelling said chain, of mechanism for placing upon said traveling members charges of plastic material capable of setting, means for supplying paper into engagement with said charges of plastic material in order to cause said paper to adhere thereto, perforating mechanism for punching holes through said paper and forming protuberances thereupon, and means for forcing said protuberances into said charges of plastic material in order to firmly anchor said paper to said charges.

2. In an apparatus of the character described the combination, with a number of traveling members connected together in the form of an endless chain and means for propelling said chain, of projecting pins carried by each traveling member, means for depositing a charge of plastic material upon each traveling member so as to partially cover the pins thereof with plastic material capable of setting, and means for bringing into engagement with said charge of plastic material, under pressure, a sheet of paper adapted to adhere thereto and provided with portions for engaging said pins and of being swaged thereby to form anchorages within said charge of plastic material.

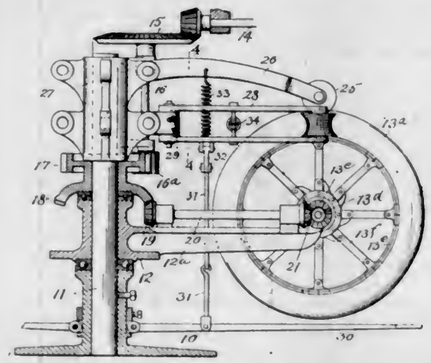
3. In an apparatus of the character described the combination, with a supporting member for receiving a charge of plastic material capable of setting, of a forming member mounted upon said supporting member for the purpose of extending through said charge in order to provide the same with a perforation, means for supplying a sheet of paper capable of adhering to said charge and provided with a protuberance for engaging said forming member, and means for applying pressure to said paper in order to force said protuberance against said forming member and thus form said protuberance into an anchorage for holding said sheet of paper upon said charge of plastic material.

4. In a machine of the character described the combination, with a number of traveling members connected together in the form of an endless chain, of pins carried by each traveling member; a plate carried by each traveling member and provided with holes through which said pins may extend, a roller provided with holes into which said pins may project so as to enable the movement of the traveling members to turn said roller, means for feeding a strip of paper between said traveling members and said roller so that said pins punch holes through the strip of paper, means for cutting off said strip of paper, and mechanism for loading a charge of plastic material upon each piece of paper thus cut off.

5. In a machine of the character described the combination, with a number of traveling members connected together in the form of a continuous chain, of pins carried by said traveling members, a roller provided with holes into which said pins may extend, means for delivering a strip of paper into engagement with said pins and said roller in order to enable said pins to punch holes through said paper and form protuberances thereupon bounding said holes and adapted to serve as anchorages, and means for discharging plastic material upon said strip of paper so as to envelop the protuberances and thus anchor the paper to the plastic material.

[Claims 6 and 7 not printed in the Gazette.]

1,190,432. TIRE-FORMING APPARATUS. JOHN T. LISTER, Cleveland, Ohio. Filed Apr. 14, 1913. Serial No. 760,896. (Cl. 154—10.)



1. In a tire forming machine, a plurality of cores, a plurality of sets of compressors adapted to compress tire forming material wound on the cores and each adapted to compress on each core material forming a definite part of a tire, and means whereby the cores and compressors may be relatively shifted so that each core is successively positioned into working relationship with each of the different sets of compressors.

2. In a tire forming machine, a plurality of cores, a support therefor permitting each core to be rotated about its own axis, a plurality of sets of compressors adapted to compress tire forming material wound upon the cores and each being adapted to compress on each core material corresponding to a definite part of a tire, and means whereby the cores and compressors may be relatively shifted so that each set of compressors may be caused to compress tire forming material on each core.

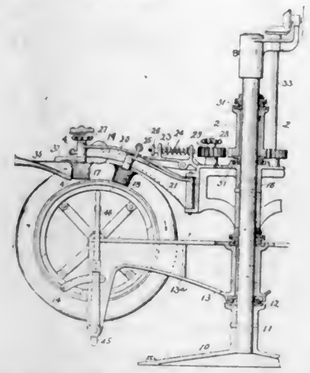
3. In a tire forming machine, a plurality of cores, a plurality of sets of compressors adapted to compress tire forming material wound on the cores and each adapted to compress material forming a definite part of a tire, and means whereby the cores and compressors may be relatively rotated so that each core is successively positioned into working relationship with each of the different sets of compressors.

4. In a tire forming machine, a plurality of cores, a plurality of sets of compressors adapted to compress tire forming material wound on the cores and each coöperating with each core and adapted to compress thereon material forming a definite part of the tire, and means whereby the cores may be shifted relatively to the compressors so that each core is brought successively into working relationship with each of the different sets of compressors.

5. In a tire forming machine, a plurality of cores, a plurality of sets of compressors adapted to compress tire forming material wound on the cores and each coöperating with each core and adapted to compress thereon material forming a definite part of the tire, and means whereby the cores may be rotated relatively to the compressors so as to bring each core successively into working relationship with each of the different sets of compressors.

[Claims 6 to 12 not printed in the Gazette.]

1,190,433. TIRE-FORMING APPARATUS. JOHN T. LISTER, Cleveland, Ohio. Filed July 12, 1913. Serial No. 778,636. (Cl. 154—10.)



1. In a tire forming machine, a frame, a core supported thereby and adapted to have wound thereon tire forming material, rotary compressors coöperating with the sides and top of the core to compress the material wound thereon, and means for positively rotating certain of the side compressors so that the latter will rotate the core by their engagement therewith, said core being supported independently of the compressors.

2. In a tire forming machine, a frame, a rotary core supported thereby, a plurality of pairs of rotary compressors coöperating with the core and arranged on opposite sides of the same so as to compress material wound on the core, and means for positively driving a part of the compressors so that the latter may rotate the core, as well as compress material wound on the latter, said core being supported independently of the compressors.

3. In a tire forming machine, a frame, a rotary core supported thereby and adapted to have tire forming strips wound thereon, a guide and shaper for the material arranged adjacent the point at which the strip passes onto the core, said guide having its outer end substantially flat, and its inner end curved substantially in conformity with the curvature of the core and being composed of upper and lower parts between which the material passes.

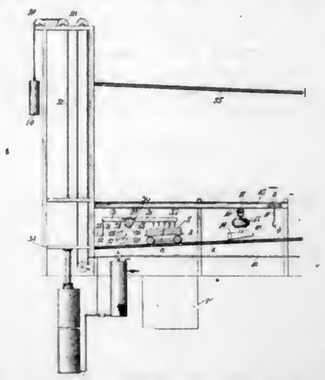
4. In a tire forming machine, rotary core compressors adapted to shape material on the core, a rotary support for the core permitting the core to be swung laterally with respect to the compressors, and means for raising and lowering the core relative to the compressors.

5. In a tire forming machine, a support, a frame supported thereby for rotary movement about a substantially vertical axis, a core supported by the frame for rotary movement about a substantially horizontal axis, compressors supported in proximity to the core and independently thereof, and on opposite sides of the latter, and means for raising the core upwardly between the compressors and for lowering the same beneath the compressors.

[Claims 6 and 7 not printed in the Gazette.]

1,190,434. APPARATUS FOR MOLDING. ALEXIUS M. LOUGHRAN, New York, N. Y. Filed Sept. 8, 1915. Serial No. 49,534. (Cl. 22—64.)

1. In combination, a cupola, a truck, a feeding track carrying the same, passing by the cupola, a return track located above the first-mentioned track and elevating devices between the said tracks.



2. In combination, a cupola, a truck, a feeding track carrying the same passing by the cupola, a return track located above the first-mentioned track and elevating devices connecting the adjacent ends of said two tracks.

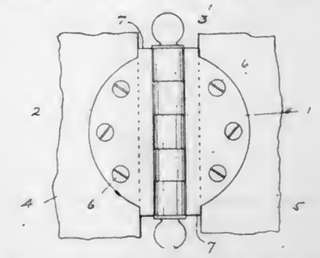
3. In combination, a cupola, a truck, a feeding inclined track carrying the same, passing by the cupola, a return inclined track located above the first-mentioned inclined track, and elevating devices between the same, said tracks being inclined in opposite directions.

4. In combination, a cupola, a truck, a feeding inclined track carrying the same passing by the cupola, a return inclined track located above the first-mentioned track and elevating devices connecting the adjacent ends of said two inclined tracks, said tracks being inclined in opposite directions.

5. In combination, a cupola, a truck, a feeding track carrying the same, passing by the cupola, a return track located above the first-mentioned track, elevating devices between the same, and means for storing up power by a downward movement of one elevating device and supplying said power to said other elevating device.

[Claims 6 to 45 not printed in the Gazette.]

1,190,435. HINGE. ANDREW S. LOWDEN, Concord, Mass. Filed Feb. 5, 1912. Serial No. 675,640. (Cl. 16—107.)

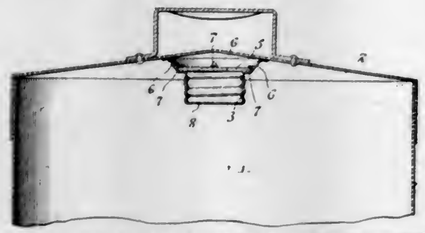


1. A hinge composed of leaves hinged together by a hinge pin, the free edge of one of said leaves having shoulders located adjacent each end of said leaf, each of said shoulders embodying a longitudinal edge lying substantially parallel to the said hinge pin, said longitudinal edge of each shoulder being located at an equal distance from said hinge pin, said free edge further having a portion substantially conforming in curvature to the arc of a circle and lying intermediate said shoulders.

2. A hinge composed of two leaves hinged together by a hinge pin, the free edge of each of said leaves having a shoulder at each end, each of said shoulders embodying an end edge substantially perpendicular to the hinge pin and a longitudinal edge substantially parallel to said hinge

pin, said longitudinal edge of each shoulder on the same leaf being located substantially at an equal distance from the hinge pin, said free leaf edge further having a curved portion substantially conforming in curvature to the arc of a circle, and lying intermediate said longitudinal edges.

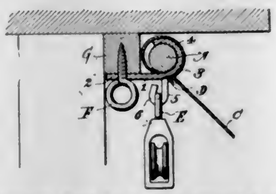
1,190,436. GARBAGE-PAIL. JOSEPH MCGRATH and HENRY WM. BANSCHBACH, Brooklyn, N. Y. Filed Aug. 31, 1915. Serial No. 48,287. (Cl. 220—56.)



1. Deodorizing means for garbage receptacles comprising a cup-shaped casing secured to the under surface of the cover of the receptacle and having the upper edge of the side wall thereof diverging outwardly and stamped to form openings, the material stamped from such openings being bent back in the form of tongues, and a disinfectant pad seated at the juncture of the lower portion of the side wall with the outwardly diverging portion thereof and held upon such seat by said tongues.

2. Deodorizing means for garbage receptacles comprising a cup-shaped casing secured to the under surface of the cover of the receptacle and having the upper edge of the side wall thereof diverging outwardly and stamped to form openings, the material stamped from such openings being bent back in the form of tongues, a disinfectant pad seated at the juncture of the lower portion of the side wall with the outwardly diverging portion thereof and held upon such seat by said tongues, and a cap detachably connected to the lower end of said casing and removable therefrom.

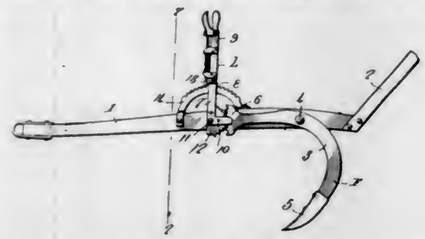
1,190,437. AWNING-SUPPORT. JEROME MANASSA, New York, N. Y. Filed Feb. 25, 1916. Serial No. 80,469. (Cl. 156—15.)



The combination with an awning having a hem receiving the head bar and an opening formed in one of the folds of the hem, of a plate having a bendable portion insertible through the opening and into the hem and adapted to be upstruck against the head bar, the said plate having a horizontal extension, and means for detachably connecting the plate to the window frame.

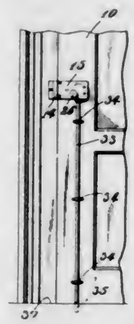
1,190,438. PLOW. IMLAH A. MANLEY, Canon, Ga., assignor to Worley Adams, Royston, Ga. Filed Aug. 27, 1912. Serial No. 717,337. (Cl. 97—26.)

In a device of the class described, the combination with a plow beam and a plow standard pivoted thereon, said standard having side members positioned adjacent to opposite sides of the beam, and said side members being provided with segment racks at their front ends, of a bifurcated lever straddling the beam and extending upwardly therefrom, said lever having limbs provided with rearwardly extending arms, a pivot member extending through the beam and through the lever at an angle between the limbs and the rearwardly extending arms, said arms being extended rearwardly to overlap the rack segments at the forward ends of the limbs of the standard, rack segments mounted on the pivot member in engagement with the



first mentioned rack segments, fastening means whereby the last mentioned rack segments are secured upon the limbs and arms of the lever, and means for retaining the lever and related parts at various adjustments, said means consisting of a notched segment bar secured on the plow beam between the limbs of the lever which is thereby guided, and a spring actuated stop member carried by the lever and engaging the notched bar.

1,190,439. LOCK. SANDOR A. MARCHFELD, New York, N. Y. Filed Oct. 25, 1915. Serial No. 57,750. (Cl. 70—74.)

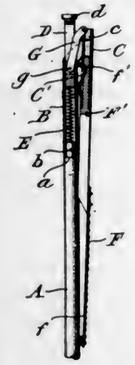


1. In a lock of the class described, the combination with a casing, a bolt movable horizontally therein, said bolt having two spaced extending elements, a vertically movable bolt, means for actuating said bolts simultaneously, said means being operated by a knob upon one side and by a key on the other, means for disengaging said key operated means from said actuating means and means for preventing reëngagement of said actuating means.

2. In a lock of the class described, the combination with a casing, bolts movable therein, and a rack combined therewith, of a pinion engaging said racks revolubly in said casing, said pinion being inclinably mounted, a knob for actuating said pinion, a key barrel having hardened pins operative therein, a cylinder rotatable within said barrel, an adjustable connection between said cylinder and said pinion, said connection having a part normally maintaining said pinion in a horizontal position and means preventing the re-insertion of said part after withdrawal.

3. In a lock of the class described, a casing, one or more bolts slidable in transverse planes in said casing, racks combined with said bolts, a pinion common to all of said racks, direct means for rotating said pinion on one side of the lock, a key operated rotating means on the other, a pivot mounting for one end of said pinion, an extension from said key operating means entering said pinion at the other, and means, operative upon the withdrawal of said extension, for raising said pinion out of alinement therewith and preventing its reëntrance.

1,190,440. INSECT-BEATER. MARIUS A. MARCUCCI, New York, N. Y. Original application filed Jan. 18, 1916, Serial No. 72,660. Divided and this application filed Apr. 15, 1916. Serial No. 91,277. (Cl. 43—1.)



1. In an insect destroyer, a staff, a pivoted beater, an actuating member separate from the staff and the beater and movable relatively to said staff, and a spring placed under tension by the relative movement of said actuating member.

2. In an insect destroyer, a staff, a pivoted beater, an actuating member separate from the staff and the beater and slidable relatively to said staff, and a spring placed under tension by the slidable movement of said actuating member.

3. In an insect destroyer, a staff, a pivoted mount, a beater carried by said mount and removable at will therefrom, an actuating member separate from the staff and the pivoted mount and movable relatively to said staff, and a spring adapted to be placed under tension by said relative movement of the actuating member.

4. In an insect destroyer, a staff, a pivoted mount, a beater carried by said mount and removable at will therefrom, an actuating member separate from the staff and the pivoted mount and slidable relatively to said staff, and a spring adapted to be placed under tension by said slidable movement of the actuating member.

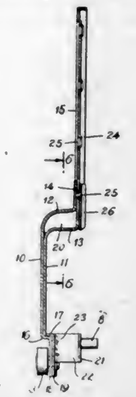
5. In an insect destroyer, a staff, a slide movable relatively thereto, a pivoted beater separate from the slide, means connecting the slide and the beater, and a spring adapted to be placed under tension by the movement of the slide.

[Claims 6 to 14 not printed in the Gazette.]

1,190,441. BACK-SUPPORTING STANDARD FOR CAR-SEATS. RICHARD B. MARSH, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Aug. 10, 1915. Serial No. 44,673. (Cl. 155—2.)

1. In a back-supporting standard, the combination of a sheet of metal pressed to shape with an upper portion having screw-holes therethrough for attachment to a seat-back, a horizontally offset portion, and a lower vertical portion below the offset portion, and a second sheet of metal having a lower vertical portion welded to the lower vertical portion of said first sheet, an offset portion spaced from the said first offset portion and a short vertical portion above said offset portion welded to the upper portion of said first sheet, said second offset portion having side projections formed over and welded to said first offset portion, substantially as set forth.

2. In a back-supporting standard, the combination of a pair of sheets of pressed metal having parallel portions welded in contact and offset portions between said parallel portions, substantially parallel but spaced apart, one of said offset portions having side portions formed over and welded to said other offset portion to form a closed box-section, said offset portions being adapted to permit said standard to extend around the end of a projecting seat-cushion, substantially as set forth.



3. In a back-supporting standard, the combination of a sheet of metal pressed to shape with an upper portion having screw-holes therethrough for attachment to a seat-back, a horizontally offset portion, and a lower vertical portion below the offset portion, and a second sheet of metal having a lower vertical portion welded to the lower vertical portion of said first sheet, an offset portion spaced from the said first offset portion and a short vertical portion above said offset portion welded to the upper portion of said first sheet, said second offset portion having side projections formed over and welded to said first offset portion, the lower vertical portions of said sheets being bent inwardly, adjacent their lower ends, to form a shoulder, and thence downwardly in contact to their lower ends and rollers mounted beneath said shoulder, substantially as set forth.

1,190,442. LEGEND DEVICE FOR CAMERAS. WALTER H. MARTIN, Beloit, Wis. Filed June 30, 1915. Serial No. 37,129. (Cl. 95—1.1.)



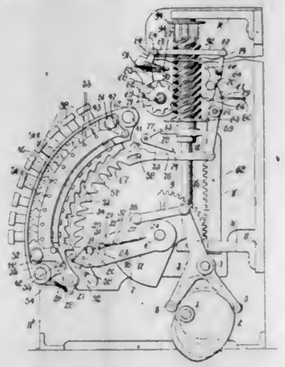
1. In a device of the character described, the combination of a camera having a groove adjacent to the opening through which the sensitized medium is exposed to the light, and a member adapted to be detachably accommodated partially in any part of said groove and project therefrom slightly to shield a portion of the sensitized medium near the margin only thereof to prevent exposure of such portion during the subjecting of such medium to

the action of light in taking the picture, whereby to leave a blank space on the negative in addition to the usual unexposed marginal portion for the reception of a legend, said member being removable from said groove by a bodily movement thereof out of the groove and inwardly of the camera, substantially as described.

2. In a device of the character described, the combination of a camera having a groove adjacent to the opening through which the sensitized medium is exposed to the light, and a member adapted to be detachably accommodated partially in any part of said groove and project therefrom slightly to shield a portion of the sensitized medium near the margin only thereof to prevent exposure of such portion during the subjecting of such medium to the action of light in taking the picture, whereby to leave a blank space on the negative in addition to the usual unexposed marginal portion for the reception of a legend, said member being adjustable in said groove to vary the area of said blank space and removable from the groove by a bodily movement thereof out of the groove and inwardly of the camera, substantially as described.

3. In a device of the character described, the combination of a photographic camera grooved adjacent to the opening through which the sensitized medium is exposed to the light, and a reversible member having two offset portions of different areas either of which is adapted to be received in the groove while the other overlies a marginal portion of the sensitized medium to prevent exposure thereof during the subjecting of such medium to the action of light in taking the picture, whereby to leave a blank space on the negative for the reception of a legend in addition to the usual unexposed marginal portion, substantially as described.

1,190,443. DIFFERENTIAL MECHANISM FOR ACCOUNTING-MACHINES. THOMAS MIDGLEY, Jr., Worthington, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Oct. 11, 1913. Serial No. 794,723. (Cl. 235—9.)



1. In a machine of the class described, the combination of a member to be driven in one direction only, a driving member constantly in engagement with the driven member and having an invariable extent of movement, and manipulative means for predetermining the distance the driving member is to drive the driven member.

2. In a machine of the class described, the combination of a member to be driven in one direction only, a driving member constantly in engagement with said driven member and having an invariable extent of movement, means normally preventing said driving member from moving the driven member, and manipulative devices for disabling said preventing means and predetermining the distance the driving member is to drive the driven member.

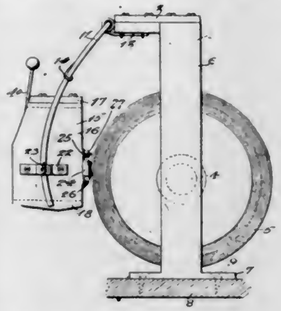
3. In a machine of the class described, the combination of a member to be driven in one direction only, a driving member constantly in engagement with the driven member and having an invariable extent of movement, manipulative devices, and means controlled by said manipulative devices whereby the invariably moved driving member will differentially move said driven member.

4. In a machine of the class described, the combination with an operating mechanism, of a driving element given invariable excursions by operations of the operating mechanism, a driven element constantly in engagement with and driven in one direction only by said driving element, and manipulative means whereby the driving element may be rendered effective to drive the driven element predetermined distances during one direction of the invariable excursion and ineffective during the remainder of the excursion.

5. In a machine of the class described, the combination of a driving member and a driven member, said driven member being at all times in engagement with the driving member and designed to be driven in one direction only, means whereby the driving member is reciprocated an invariable distance, and manipulatively controlled devices for predetermining the distance the driving member is to drive the driven member and rendering the driving member effective to hold the driven member stationary during the remainder of the reciprocation of the driving member.

[Claims 6 to 40 not printed in the Gazette.]

1,190,444. PAPER HOLDING AND CUTTING ATTACHMENT. MICHAEL N. MISHLER, Walter, Okla. Filed Oct. 1, 1915. Serial No. 53,575. (Cl. 211—32.)



1. A paper holding and cutting attachment for roll paper racks comprising, means for securing the attachment to the rack, means for guiding the paper during unwinding travel, a cutting member movable to a severing position and to a position to expose and hold a short unwound length of paper to be grasped in withdrawing an additional length of paper, and a tension device to press said cutting member against the paper whereby an even severed edge is obtained, substantially as described.

2. A paper holding and cutting attachment for roll paper racks comprising, means for securing the attachment to the rack, means for guiding the paper during unwinding travel, a cutting member movable to and from a cutting position, and means for guiding the cutting member during such movement and to compensate for paper of different thicknesses, substantially as described.

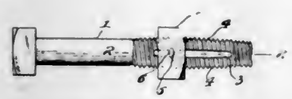
3. A paper holding and cutting attachment for roll paper racks comprising, means for securing the attachment to the rack, a cutting member movable to and from a cutting position, a tension device to press said cutting member against the paper, and manual means for returning said cutting member to the normal starting position to expose a short unwound length of paper to be grasped in withdrawing an additional length of paper from the rack, substantially as described.

4. A paper holding and cutting attachment for roll paper racks comprising, means for securing the attachment to the rack, spring means for maintaining the attachment in contact with the paper on the roll, and a cutting member movable into a severing position and into a position to expose a short unwound length of paper to be grasped in subsequently withdrawing an additional length of paper from the rack, substantially as described.

5. A paper holding and cutting attachment for roll paper racks comprising, a supporting structure attachable to the rack, a frame structure adjustable in a horizontal plane and including a cutting member movable by engagement with the paper into a severing position, and means for guiding said cutting member during movement and to compensate for different thicknesses of paper, substantially as described.

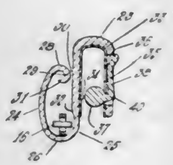
[Claim 6 not printed in the Gazette.]

1,190,445. LOCK NUT AND BOLT. JACOB MITCHELL, Sixteen, Mont. Filed Jan. 13, 1915. Serial No. 2,035. (Cl. 151—5.)



In a nut having its shank formed with a central longitudinal opening to divide the said shank into two oppositely disposed outwardly bulging spring portions that are adapted to be compressed or forced together by a nut and to exert an outward spring pressure on the said nut, and a member passing transversely through the nut and through the opening in the bolt to sustain the spring portions of the bolt against inward movement, one toward the other at the portion of the shank engaged by the nut.

1,190,446. CHAIN. EDWARD A. MOORE, Chicago, Ill., assignor to R. F. Simmons Company, a Corporation of Rhode Island. Filed Apr. 7, 1916. Serial No. 89,589. (Cl. 24—3.)



1. In a device of the character described, a frame comprising a yoke, a front plate, and a back plate, and an arm upon the lower portion of the front plate extending outwardly and upwardly adapted to embrace a chain and terminating adjacent the front plate.

2. In a device of the character described, a frame comprising a yoke, a front plate, and a back plate, an upright resilient arm upon the end of the front plate provided with an arcuate bend adjacent its connection with the front plate and adapted to engage a chain, and a curved guiding member upon the free end of the arm adjacent an intermediate portion of the front plate.

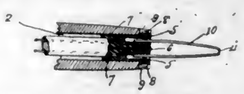
3. In a device of the character described, a frame comprising a yoke, a front plate, and a back plate, a resilient arm upon the free end of the front plate extending downwardly, outwardly and upwardly adapted to embrace a chain, and a circular hook upon the free end of the arm spaced from an intermediate portion of the plate a less distance than the thickness of the chain.

4. As an improved article of manufacture a safety attachment for chains, comprising a front plate, a back plate, a yoke connecting the plates at one end, a clamping member in one of the plates, a resilient arm integral with the free end of the front plate provided with a loop extending below the plane of the front plate, and a hook upon the free end of the arm adjacent an intermediate portion of the front plate.

5. A safety attachment for chains, comprising a back plate and a front plate with oppositely disposed bends and a free arm extending from the bend of the front plate with its free end curved inwardly toward the front plate and formed into a curved hook.

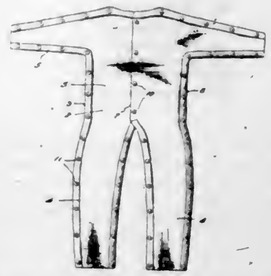
[Claim 6 not printed in the Gazette.]

1,190,447. HOT-POINT PEN. ROBERT W. MUNGER and ARTHUR E. MCGINLEY, Tacoma, Wash. Filed Oct. 26, 1914. Serial No. 868,635. (Cl. 219—31.)



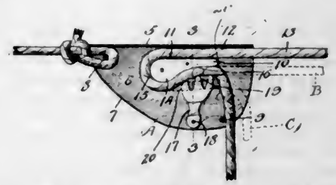
A hot point pen, comprising two side members and a cross member, said side members having a larger cross section at the points of juncture with the cross member than said cross member thereby forming shoulders at the junction points adapted to remain cooler than the cross member and to receive the wear.

1,190,448. UNDERGARMENT. ISABELLA MURRAY, Lonerock, Iowa. Filed Jan. 16, 1915. Serial No. 2,627. (Cl. 2—144.)



A bifurcated undergarment comprising a two piece front section, fastening elements to secure the separate parts of the front sections to one another, a front arm portion formed integrally with each part of the front section, a one-piece back section having button holes about the edges thereof, rear arm portions formed integrally with the back sections and having button holes about the edges thereof and buttons carried about the edges of the separate parts and arm portions of the front sections and arranged for cooperation with the button holes.

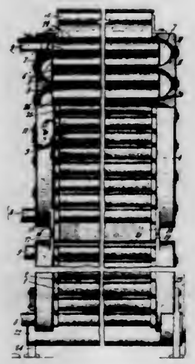
1,190,449. LINE-CLAMP. NELS A. OLSON, Waterbury, Conn. Filed May 6, 1914. Serial No. 836,655. (Cl. 24—134.)



A rope clamp comprising a substantially U-shaped housing in cross section, a guide block permanently fixed within the casing and having a flat upper edge spaced from one wall of the casing defining a passage for the free end of the rope, said block having an enlarged rounded end portion and its lower edge curved reversely to said end portion, the rope being adapted to be trained over

said flat upper edge and enlarged end portion of the block, and engage the curved lower edge thereof, a cam pivoted between the walls of the housing below said block at a right angle thereto when in operative position, said cam being free to fall away from said block to an inoperative position, and means for limiting the falling movement of said cam, said cam having a serrated jaw edge correspondingly curved with respect to said curved surface of the block for effectively clamping the rope therebetween.

1,190,450. APPARATUS FOR STERILIZING OR COOLING LIQUIDS. EDWARD OTTEN, Brooklyn, N. Y. Filed Feb. 24, 1915. Serial No. 10,209. (Cl. 257—185.)

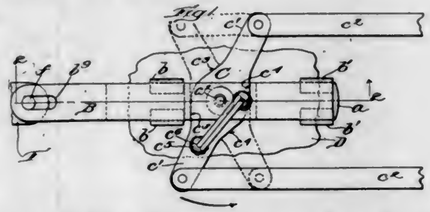


1. In a beer cooler, a series of cooling pipes arranged in a serpentine line one below the other, filling strips between the said pipes separating the same from each other and forming a continuous surface therewith, a casing at the ends of said pipes provided with a series of apertures into which the ends of the pipes are secured, shoulders abutting the ends of said pipes, chambers connecting alternately the ends of the cooling pipes, a trough above the uppermost cooling pipe provided with perforations adjacent the said pipe, and a central drip flange at the lower end of the lowermost pipe, adapted to conduct the liquid off of the cooler.

2. In a beer cooler, a series of cooling pipes arranged in a serpentine line one below the other, relatively thin filling strips between the said pipes separating the same from each other and forming a continuous surface therewith, a casing at the end of said pipes provided with a series of apertures into which the ends of the pipes are secured, shoulders abutting the ends of said pipes, inwardly directed portions on said casings surrounding the ends of the said pipes, and inclined toward the surface of the pipes, chambers connecting alternately the ends of the cooling pipes, a trough above the uppermost cooling pipe provided with perforations adjacent the said pipe, and a central drip flange at the lower end of the lowermost pipe, adapted to conduct the liquid off of the cooler.

3. In a beer cooler, a series of cooling pipes arranged in a serpentine line one below the other, relatively thin filling strips substantially square in cross-section between the said pipes separating the same from each other, the exposed surfaces thereof being curved inwardly and forming a continuous surface with the said pipes, a casing at the end of said pipes provided with a series of apertures into which the ends of the pipes are secured, shoulders abutting the ends of said pipes, arcuate chambers connecting alternately the ends of the cooling pipes, a trough above the uppermost cooling pipe provided with perforations adjacent the said pipe, downwardly projecting flanges on said casings provided with recessed portions for securing the same to a lower section of pipes, and a central drip flange at the lower end of the lowermost pipe, for conducting the liquid off of the cooler.

1,190,451. MECHANICAL MOVEMENT. HERMAN G. PAPE, New York, N. Y., assignor to Ralph A. Schoenberg, New York, N. Y. Filed Mar. 27, 1916. Serial No. 87,101. (Cl. 74—14.)



1. A mechanical movement comprising a driving member, a driven member and a spring connecting said members which spring oscillates on an axis perpendicular to the direction of movement of one of said members.

2. A mechanical movement comprising a driving member, a driven member and a spring connecting said members which spring oscillates on an axis perpendicular to the direction of movement of said driving member.

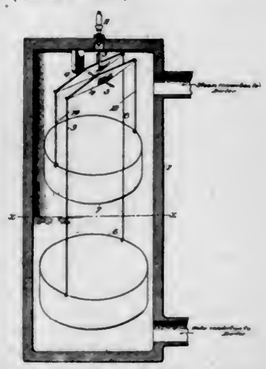
3. A mechanical movement comprising a driving member, a driven member, and a spring connecting said members which spring oscillates on an axis perpendicular to the direction of movement of both of said members.

4. A mechanical movement comprising a driving member, a driven member, and a bow spring connecting said members which spring oscillates on an axis perpendicular to the direction of movement of one of said members.

5. A mechanical movement comprising a driving member, a driven member, and a spring connecting said members and put under stress in a plane at a right angle to one of said members and when released oscillating on an axis perpendicular to the direction of movement of one of said members.

[Claims 6 to 12 not printed in the Gazette.]

1,190,452. BOILER-ALARM. DUNCAN W. PATTERSON, Philadelphia, Pa. Filed Aug. 19, 1914. Serial No. 857,539. (Cl. 137—102.)



A boiler alarm comprising a water column designed to be connected with the steam and water spaces of a boiler, a weighted body designed to be normally beneath the water level in the boiler, a second weighted body normally located above such water level, a pair of levers having a common pivot, connections between the alternate ends of each lever and each body, the actual weight of the first mentioned body being greater than that of the second mentioned body, a whistle, and a single valve therefor connected to the arm of one of said levers having connection with the first mentioned weighted body, such whistle being designed to be controlled by the movement of said weighted bodies.

1,190,453. TOWEL-RACK. LEWIS E. PEASE, Somerville, Mass. Filed June 3, 1914. Serial No. 842,761. (Cl. 45—32.)

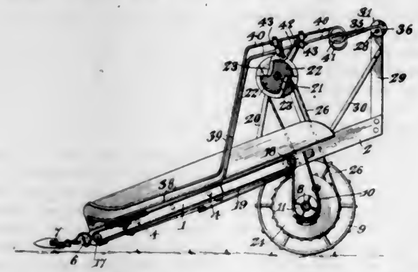


1. A towel rack comprising two separate towel-holding sections, each having at one end means by which it may be attached to a wall or other support, and an indicating member detachably secured to each section and constituting the sole connection between said sections.

2. A towel rack comprising an indicating member having bosses and two towel-holding sections adapted to detachably engage said bosses whereby the indicating member serves to connect the towel-holding sections.

3. In a towel rack, the combination with an indicating member having two screw-threaded openings and bearing a mark indicative of the use to which the towel is to be put, of two towel-holding sections screw-threaded into said openings and each provided with attaching means by which the towel rack is secured to a support whereby the indicating member serves to connect the two towel-holding sections.

1,190,454. SEED-HARVESTING ATTACHMENT FOR MOWING-MACHINES. RALPH PECK, Vicksburg, Miss. Filed July 10, 1915. Serial No. 39,151. (Cl. 130—28.)



1. In a seed harvester, a frame, a plurality of vibratory beaters for removing seed from the grain, and having angularly turned projections upon their inner ends, a plurality of independent supporting members having abutting faces provided with angular slots for the reception of the inner ends and angular projections of said vibratory beaters, and means for securing said members in abutting relation to secure said beaters rigidly in the angular slots of said members.

2. A seed harvester comprising a conveyer frame, an endless conveyer mounted on the frame upon which the severed material is received, a plurality of vibratory beaters for removing the grain from the severed material as it is fed across the endless conveyer, means for actuating the beaters, a transverse shaft, eccentric means mounted on the shaft for connecting the inner terminals of the beaters thereto, and means for adjusting the shaft for regulating the stroke of the beaters.

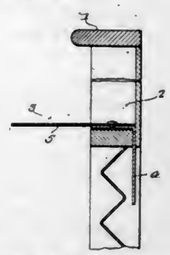
3. A seed harvester comprising a conveyer frame having an endless conveyer mounted thereon, a plurality of vibratory beaters for removing the grain from the severed material, means for actuating the beaters, a transverse shaft, a plurality of eccentrically mounted collars on the shaft, said collars confining the inner terminals of the beaters therebetween for fastening them to the shaft, and means for adjusting the shaft for regulating the stroke of the beaters.

4. A seed harvester comprising a frame, a plurality of vibratory beaters for removing the seed from the grain, a transverse shaft, a plurality of eccentrically mounted collars on the shaft, each collar having intersecting grooves on one face thereof, each beater provided with an angular projection at the inner terminal thereof, each of said beaters having the angular projection and the inner terminal thereof received in the grooves of a collar for fastening the beaters to the shaft.

5. A seed harvester comprising a frame, a plurality of vibratory beaters mounted thereon for removing the grain from the severed material, means for actuating the beaters, a transverse shaft, collars mounted on the shaft, each collar provided with intersecting grooves on one face thereof, the inner terminals of said beaters received in the intersecting grooves of the collars for fastening the beaters to the shaft, and means for adjusting the shaft for regulating the stroke of the beaters.

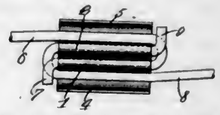
[Claims 6 to 14 not printed in the Gazette.]

1,190,455. ATTACHMENT FOR WASHBOARDS. MAE E. POWERS, Chicago, Ill. Filed Apr. 21, 1916. Serial No. 92,699. (Cl. 68—29.)



The combination with a wash board having a soap pocket, of a metal sheet having one edge disposed in the space between the bottom wall of the pocket and the front wall of the board and the other edge bent at right angles in line against the bottom wall of the pocket, and an apron secured to the last-mentioned edge of said sheet and projecting outwardly from the board at right angles thereto to prevent the water from being thrown into the pocket and over the soap therein.

1,190,456. BALE-TIE. WILEY H. PRIDGEN, Creek, N. C. Filed Oct. 9, 1914. Serial No. 865,870. (Cl. 24—28.)



1. A bale tie buckle consisting of a single piece of sheet metal bent to form separate contacting parallel tie receiving barrels and a separate outstanding wing bendable along lines parallel with the barrels and toward said tie receiving portions, said wing constituting tie gripping means.

2. A bale tie buckle including a single piece of sheet metal forming parallel tie receiving barrels and clenching wings parallel with the barrels and bendable relative thereto.

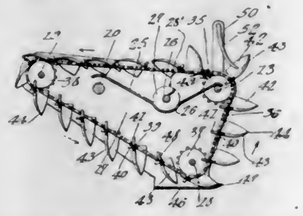
3. A bale tie buckle including a piece of sheet metal bent to form parallel barrels, for the reception of the end portions of a tie, and outstanding wings extending longitudinally of the barrels and constituting tie engaging portions.

4. The combination with a bale tie having parallel lapping terminal portions, each having an offset end, of a buckle having separate barrels engaging said parallel terminal portions, said tie having portions bent back along the outer sides of the barrels, and clenching wings outstanding from the barrels and bendable against said portions outside of the barrels.

5. The combination with a bale tie buckle including a single piece of sheet metal forming parallel tie receiving

barrels and outstanding clenching wings parallel with the barrels and bendable relative thereto, of a tie having its end portions extended in opposite directions through the barrels and its terminals bent back along the outer faces of the respective barrels, said wings being bendable about said terminals.

1,190,457. MACHINE FOR HARVESTING CLOVER-SEEDS. WILEY H. PRIDGEN, Creek, N. C. Filed Oct. 4, 1915. Serial No. 53,998. (Cl. 56—2.)



1. A machine for harvesting clover seeds, including a wheel supported structure movable forwardly over a field, a hopper movable with said structure, endless chains carried by said structure and movable in a path extending forwardly under the hopper, upwardly and rearwardly over the hopper, means operated by the forward movement of the structure for driving the chains, parallel rows of stripping and collecting fingers carried by the chains, means for holding each series of fingers extended forwardly during its movement in the upward and rearward paths of the chains, and means for tilting each series of fingers when brought to position above the hopper, to direct the contents of the fingers into the hopper.

2. In a clover seed harvester, endless chains movable in paths portions of which extend upwardly, pivoted bars connecting the chains, a series of fingers extending from each bar, the fingers of each series being arranged side by side and spaced apart, the front end of each finger being pointed, all of the fingers having upturned retaining side portions, and means upon the bars coöperating with the chains for holding the fingers in retaining positions during the upward movement of the bars and fingers with the chains, and means for moving the chains.

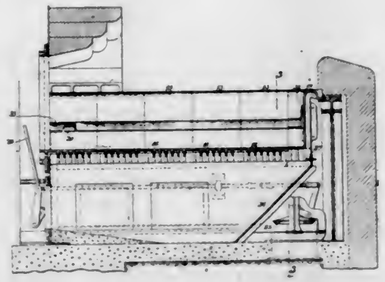
3. In a clover seed harvester, a cross blade having an upturned forward portion, an endless series of parallel bars movable over and upwardly from the blade, means for moving the series of bars, a hopper, said bars being movable over the hopper, spaced fingers extending from the bars, said bars being pivotally mounted, means for successively swinging the fingers forwardly above the blade, means for supporting the fingers in forwardly extended positions during their upward movement, and means for swinging the fingers when above the hopper to discharge the contents thereof into the hopper.

4. In a clover seed harvester, a cross blade having an upturned forward portion, an endless series of parallel bars movable over and upwardly from the blade, means for moving the series of bars, a hopper, said bars being movable over the hopper, spaced fingers extending from the bars, said bars being pivotally mounted, means for successively swinging the fingers forwardly above the blade, means for supporting the fingers in forwardly extended positions during their upward movement, means for swinging the fingers to discharge the contents thereof into the hopper, and clearing blades extending between the paths of the fingers.

5. In a clover seed harvester, a cross blade having an upturned forward portion, an endless series of parallel bars movable over and upwardly from the blade, means for moving said series of bars, a hopper, said bars being movable over the hopper, spaced fingers extending from the bars, said bars being pivotally mounted, means for successively swinging the fingers forwardly above the blade, means for supporting the fingers in forwardly extended positions during their upward movement, means for swinging the fingers to discharge the contents thereof into the hopper, an elevator and means for directing seeds from the hopper to the elevator.

[Claims 6 to 10 not printed in the Gazette.]

1,190,458. DESTRUCTOR-FURNACE. JOHN PRIMROSE, New York, N. Y., assignor to The Destructor Company, a Corporation of New York. Filed Sept. 4, 1914. Serial No. 860,153. (Cl. 110—8.)



1. In a destructor furnace, a trough grate comprising side plates composed of a plurality of transverse sections secured to each other and freely suspended from their tops and a bottom composed of a plurality of transverse sections and supported upon the side plates, said furnace provided with means at the front thereof to which the front sections of the grate are secured, and with means at the rear to which the rear end of said grate is slidably suspended to permit of a free longitudinal movement of the latter.

2. A destructor furnace in combination with a grate freely suspended from the walls therein to adjust itself in any direction according to temperature conditions, said grate comprising side plates suspended at their upper ends from the side walls of the furnace, means at the bottom of said plates for holding them in position and a substantially flat bottom supported upon said side plates, said grate being secured at its front to the front walls of the furnace and the rear end being slidably supported by the rear wall of the furnace.

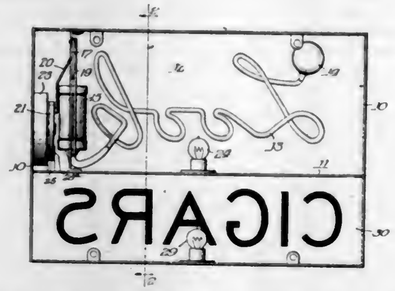
3. A destructor or other furnaces having a grate the front end of which is secured to the front wall of the furnace, the sides of which are freely suspended from the side walls of the furnace, and the rear end of which is slidably connected with the rear wall of the furnace, whereby said grate is free to adjust itself in any direction according to temperature conditions.

4. A destructor furnace, comprising a framework in the side and rear walls thereof, in combination with a perforated trough grate freely suspended from said framework and provided with an upwardly projecting continuous perforated ridge, extending along the bottom thereof, and an angle iron slidably mounted upon said ridge provided with means thereon for removing the clinker from the furnace, said ridge provided with projections thereon to space the angle iron from the ridge whereby air is supplied above the grate through perforations in the top of the ridge.

5. In a refuse destructor or other furnace a perforated trough grate freely suspended from the side and rear walls of the furnace to permit free expansion in all directions, said grate provided with a central ridge projecting upwardly therefrom, and means associated with said ridge for removing upon being reciprocated the clinker from said furnace, said means comprising an angle iron slidably mounted upon said ridge and a clinker engaging means secured to the rear end of said angle iron.

[Claims 6 to 17 not printed in the Gazette.]

1,190,459. ILLUMINATED SIGN. LE MOINE F. RANDOLPH, Chicago, Ill. Filed Apr. 19, 1915. Serial No. 22,264. (Cl. 40—132.)



1. In an illuminated sign, the combination of a casing having an opaque wall through which a light-transmitting path in the form of the letters or characters of the sign is formed, a continuous translucent tube shaped in conformity with said letters or characters, a closed pressure-receiving chamber connected with one end of said tube, a pump connected with the other end of said tube, and an opaque fluid filling the tube for one condition of the pump and removed from the tube for another condition of said pump, whereby operation of the pump alternately fills the tube with said fluid and removes said fluid from the tube.

2. In an illuminated sign, the combination of a casing having an opaque wall through which a light-transmitting path in the form of the letters or characters of the sign is formed, a continuous translucent tube shaped in conformity with said letters or characters, a pressure-receiving chamber connected with one end of said tube, a pump connected with the other end of said tube, an opaque fluid filling the tube for one condition of the pump and removed from the tube for another condition of said pump, whereby operation of the pump alternately fills the tube with said fluid and removes said fluid from the tube, the removal of the fluid from the tube being in the direction of the tracing or writing of the sign, a lamp in the casing for illuminating the sign, and mechanism for extinguishing the lamp during the filling of the tube with said opaque fluid.

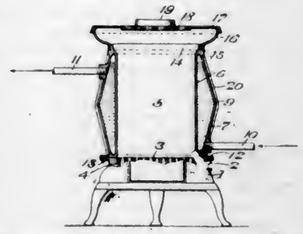
3. In an illuminated sign, the combination of a casing having an opaque wall through which a light transmitting path is formed in the shape of the letters or characters of the sign, a continuous translucent tube shaped in conformity with said path, a pressure receiving chamber connected with one end of said tube, a pump connected with the other end of said tube, an opaque fluid filling the tube for one condition of the pump and removed from the tube for another condition of said pump, whereby operation of the pump alternately fills the tube with said fluid and removes said fluid from the tube, means for actuating said pump, an electric lamp for illuminating the sign from a suitable source of current, switching mechanism for controlling the illumination of the lamp, and a cam operated by said pump actuating means for operating said switching mechanism to light the lamp during the emptying of the tube and darken the lamp during the filling of the tube, emptying of the tube being in the direction of the tracing or writing of the sign.

4. In an illuminated sign, the combination of a casing having an opaque wall through which a light transmitting path is formed in the shape of the letters or characters of the sign, a continuous translucent tube shaped in conformity with said path, a pressure receiving chamber connected with one end of said tube, a pump connected with the other end of said tube, an opaque fluid filling the tube for one condition of the pump and removed from the tube for another condition of said pump, whereby operation of the pump alternately fills the tube with said fluid and removes said fluid from the tube, a motor-driven shaft, mechanism for operating the pump from said shaft, an electric lamp for illuminating the sign from a suitable source of current, switching mechanism for controlling the illumination of the lamp, a cam operated by said shaft for actuating said switching mechanism to light the lamp during the emptying of the tube and darken the lamp during the filling of the tube, the emptying of the tube being in the direction of the tracing or writing of the sign, a second compartment in the casing, an illuminated sign forming the front wall of said second compartment, an electric lamp in said second compartment, and circuit connections from said switching mechanism for illuminating the lamp in the second compartment when the other lamp is extinguished and for extinguishing the lamp in the second compartment when the other lamp is lighted.

5. In an illuminated sign, the combination of a casing having an opaque front wall through which a continuous slot is made in the form of the letters or characters constituting the sign, a translucent tube formed to fit said slot and located therein, a pressure receiving chamber connected with one end of said tube, an opaque fluid for filling the tube, and pumping mechanism connected with the other end of the tube for alternately filling and emptying said tube, the emptying of the tube being in the direction of the writing or tracing of the sign.

[Claims 6 and 7 not printed in the Gazette.]

1,190,460. HOT-WATER STOVE. SAMUEL V. REEVES Haddonfield, N. J. Filed July 2, 1913. Serial No 776,894. (Cl. 122—155.)



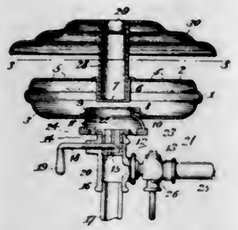
1. In a device of the character stated, a water jacket for a fire-pot, having its interior of uniform diameter and unobstructed, the outer wall of said jacket having its greatest diameter at a medial point equidistant from its top and bottom, and the upper, outer, annular wall of said jacket converging from said medial point upwardly toward said top, and the lower, outer, annular wall thereof converging downwardly from said medial point toward said bottom, the inclination of said upper and lower walls with respect to the longitudinal axis of said jacket being the same.

2. In a device of the character stated, a water jacket for a fire-pot, having its interior of uniform diameter and unobstructed, the outer wall of said jacket having its greatest diameter at a medial point equidistant from its top and bottom, and the upper, outer, annular wall of said jacket converging from said medial point upwardly toward said top, and the lower, outer, annular wall thereof converging downwardly from said medial point toward said bottom, the inclination of said upper and lower walls with respect to the longitudinal axis of said jacket being the same, a support for said water jacket, a grate carried by said support in close proximity to the lower water line of the jacket, and a top casing extending outwardly therefrom and supported above said water jacket.

1,190,461. COMBINED BURNER AND HEATER. FRANCIS J. RICHARDS, Brooklyn, N. Y. Filed Apr. 20, 1916. Serial No. 92,449. (Cl. 126—248.)

1. A combined heating and lighting device comprising a heating burner provided with a perforated portion, a mixing chamber of an increasing depth in an outward

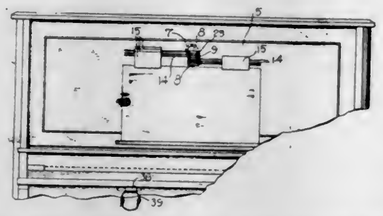
direction, an air regulator at the base of the member, a valved fuel supply pipe leading to the chamber, the perforated portion of the burner having a depending socket at its center provided with a baffle forming wall disposed in the same longitudinal line with the fuel supply pipe, and a valved pipe section extending from said fuel supply pipe.



2. A combined heating and lighting device comprising, a heating burner having a wall provided with perforations, a depending socket member at the center of the perforated wall of the burner, a pipe section detachably fitting in the socket member, a dome detachably fitted in the opposite end of the pipe and overlying the perforated wall, the burner member having a mixing chamber, an air regulating valve opening to the mixing chamber, the socket member having a baffle disposed in axial alinement with the air regulating valve, and valved means for feeding fuel to the air regulating valve.

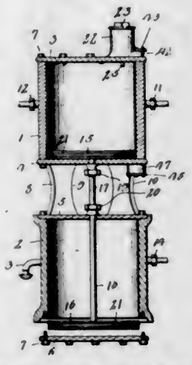
3. A combined heating and lighting device comprising, a heating burner having a wall provided with perforations, a depending socket member at the center of the perforated wall of the burner, a pipe section detachably fitting in the socket member, a dome detachably fitted in the opposite end of the pipe and overlying the perforated wall, the burner member having a mixing chamber, an air regulating valve opening to the mixing chamber, the socket member having a baffle disposed in axial alinement with the air regulating valve, and valved means for feeding fuel to the air regulating valve, and comprising, a plug carried by the regulator and provided with an aperture and a valve seat, a coupinig attached to the air regulating valve and surrounding the plug, and a valve stem adjustable across the aperture in the plug and against said seat.

1,190,462. MUSIC-SHEET TURNER. GEORGE L. RICKARD, West Fairview, Pa. Filed Dec. 12, 1914, Serial No. 876,890. Renewed Dec. 15, 1915. Serial No. 67,083. (Cl. 84—135.)



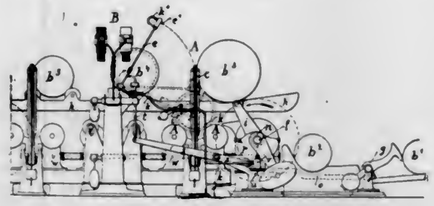
In a sheet turning mechanism, sheet carrying arms, a series of pinions to which the respective arms are secured, racks coöperating with the respective pinions, a series of levers each having arms extending at right angles to each other, said racks being connected to one of the lever arms, a pivotally mounted arm, a plate pivoted upon said arm at one of its ends and provided with a shoulder on its other end to engage the other arms of said levers, a bar pivotally connected to said plate and provided with a vertically disposed extension on its free end, a leaf spring coöperating with said bar to yieldably hold the same against movement, and spring held manually operable means connected to said pivoted arm to move the same and successively engage the shoulder on said plate with the latter arms of said first named levers to turn the sheets, said vertical extension on said bar being adapted for engagement with the lever arms when the movement of said pivoted arm is reversed to simultaneously return the sheets to the normal positions.

1,190,463. AIR-COMPRESSOR PUMP. BERNARD M. ROGGENBUCK, Norfolk, Va., assignor of one-half to Jennie Powers, Norfolk, Va. Filed Nov. 27, 1915. Serial No. 63,779. (Cl. 230—34.)



An air compressor pump comprising a steam cylinder, an air cylinder, said cylinders being arranged in axial alinement and provided at their relatively outer ends with detachable heads, pistons operating in said cylinders, a rod connecting said pistons for movement in unison, said rod being of a length to space and so dispose the pistons within the respective cylinders that when the steam piston is at the limit of downward stroke it terminates above the lower head of the steam cylinder while the air piston moves downwardly into contact with the lower head of the air cylinder, and upon the reverse strokes of the pistons the air piston terminates below the upper head of the air cylinder while the steam piston moves upward against the top head of the steam cylinder, for the purpose set forth, and valve mechanism controlling the supply and exhaust of steam to and from the ends of the steam cylinder.

1,190,464. BARREL-CLEANSING MACHINE. PAUL ROMBERG, Leipzig, Germany. Filed Sept. 27, 1912, Serial No. 722,729. Renewed Sept. 9, 1914. Serial No. 860,954. (Cl. 141—6.)



1. A barrel-cleansing machine consisting of a plurality of operating stations and means for effecting the step by step progress of a barrel therethrough, one of said stations comprising a barrel-seat consisting of rollers, a bung-hole finder, means for moving said finder to and from said seat periodically with the step by step movements of

the machine, adjusting means adjacent said seat whereby a barrel deposited and rotated on said seat is adjusted so that its bung-hole travels through the path of said finder and engages the latter, and means operated in conjunction with said finder whereby liquid is delivered into said barrel when the bung-hole is engaged with said finder.

2. In a barrel-cleansing machine the combination of a barrel-seat consisting of rollers, conveyer mechanism for depositing barrels on said seat, a bung-hole finder operatively connected to said conveyer mechanism so that said finder is moved toward said seat when a barrel is deposited on the latter, guides adjacent said seat whereby a barrel deposited on said seat is adjusted so that its bung-hole travels through the path of said finder and engages the latter, and means operatively connected to said conveyer mechanism whereby liquid is delivered into said barrel when the bung-hole is engaged with said finder.

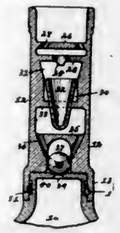
3. In a barrel-cleansing machine the combination of a barrel seat consisting of rollers, conveyer mechanism for depositing a barrel on said seat, a bung-hole finder, operatively connected to said conveyer mechanism so that said finder is moved toward said seat when a barrel is deposited on the latter, guides adjacent said seat whereby a barrel deposited and rotated on said seat is adjusted so that its bung-hole travels through the path of said finder and engages the latter, a nozzle attached to said finder, means for supplying liquid to said nozzle, a valve which controls said liquid supply means and is opened by said conveyer mechanism when the conveyer has moved past the position for depositing a barrel on said seat, and a second valve controlling said liquid supply means, arranged so that it is closed by said finder when the latter has moved past the position for engaging a bung-hole.

4. A barrel cleansing machine, consisting of a plurality of operating stations and means for effecting the step by step progress of the barrel therethrough, the first one of said stations being a filling-station and comprising a barrel-seat, a bung-hole finder-nozzle and means for supplying water thereto, means for moving said finder-nozzle to and from said seat periodically with the aforesaid step by step movement of the machine, said means being constructed to cause said finder-nozzle to bear yieldingly upon the exterior of the barrel deposited on said barrel-seat at a point above the under side of the barrel, and means for centering the barrel on said seat so that its bung-hole shall travel through the path of the entering end of said finder-nozzle and be engaged thereby.

5. A barrel cleansing machine, consisting of a plurality of operating stations and means for effecting the step by step progress of the barrel therethrough, the first one of said stations being a filling-station and comprising a barrel-seat, a combined bung-hole finder and nozzle having a water passage through it, and means for causing said finder-nozzle to bear yieldingly against the exterior of the barrel at an elevated point periodically with the step by step movement of the machine, means for centering the barrel on said seat so that its bung-hole shall travel through the path of the entering end of said finder-nozzle, whereby when the bung-hole arrives at a point coincident with the finder-nozzle the latter will enter the bung-hole and arrest the rotation of the barrel, and means for automatically delivering water to said finder-nozzle after the same enters the bung-hole and for cutting off the supply at a predetermined time thereafter.

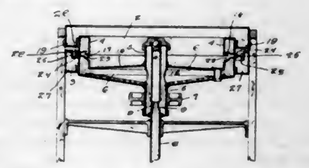
1,190,465. NON-REFILLABLE BOTTLE. PAOLO RUSSO, Pittsburgh, Pa., assignor of one-half to Ermenegildo Lisotto, Pittsburgh, Pa. Filed May 4, 1915. Serial No. 25,725. (Cl. 215—103.)

1. A non-refillable bottle comprising a body portion having a seat at the mouth thereof, a neck secured to said body portion so as to form an extension thereof, a plurality of perforated partitions in said neck and unitary therewith, the perforations of the respective partitions being disposed in staggered relation, a hollow conical plunger vertically movable in said neck, beneath said partition, a wall in said neck and unitary therewith, said wall being formed with a seat for said plunger, and a ball plunger vertically movable in said neck and seating on said first-named seat.



2. A non-refillable bottle comprising a body portion having a seat at the mouth thereof, a neck secured to said body portion so as to form an extension thereof, a plurality of perforated partitions in said neck and unitary therewith, the perforations of the respective partitions being disposed in staggered relation, a hollow conical plunger vertically movable in said neck, beneath said partition, a wall in said neck and unitary therewith, said wall being formed with a seat for said plunger, a ball plunger vertically movable in said neck and seating on said first-named seat, and a perforated partition between said conical plunger and said ball plunger.

1,190,466. APPARATUS FOR SEPARATING MATERIALS OF DIFFERENT SPECIFIC GRAVITIES. CHARLES SCHIFFERLE, San Francisco, Cal., assignor to The Yuba Construction Company, San Francisco, Cal., a Corporation of California. Filed May 18, 1915. Serial No. 28,851. (Cl. 233—20.)



1. An apparatus of the character described, comprising a rotatable annular casing, means for introducing fluid into said casing to fill the same, an annular pocket formed in the inner wall of said casing and a lip on the casing extending into said pocket, the lip being spaced from the wall of the pocket to permit fluid to flow from the casing into the pocket.

2. An apparatus of the character described comprising a rotatable annular casing, means for introducing fluid into said casing to fill the same, an annular pocket formed in the inner wall of said casing, said inner wall being provided with an annular slot for conveying fluid from the casing to the bottom of the pocket, a discharge outlet for said pocket, a valve controlling said outlet and means for operating said valve.

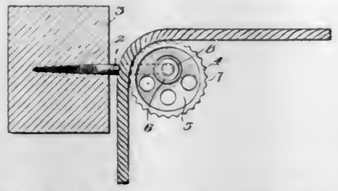
3. An apparatus of the character described comprising a rotatable annular casing, means for introducing fluid into said casing to fill the same, an annular pocket formed in the inner wall of said casing, said inner wall being provided with an annular slot for conveying fluid from the casing to the bottom of the pocket, a discharge outlet for said pocket, a valve controlling said outlet and means operative by the rotation of the casing for operating said valve.

4. An apparatus of the character described comprising a rotatable annular casing, means for introducing fluid into said casing to fill the same, an annular pocket formed in the inner wall of said casing, said inner wall being provided with an annular slot for conveying fluid from the casing to the bottom of the pocket, a discharge outlet for said pocket, a valve controlling said outlet, means for op-

erating said valve to discharge material in the pocket and a receptacle adapted to receive said discharged material.

5. An apparatus of the character described comprising a rotatable annular casing, means for introducing fluid into said casing to fill the same, an annular pocket formed in the inner wall of said casing, means for conveying fluid from the casing to the bottom of the pocket, a discharge outlet for said pocket, a valve controlling said outlet projecting beyond the casing and a stationary cam surrounding the casing and engaging said valve.

1,190,467. CLAMP. ERNEST E. SCHNELLE, Rochester, N. Y. Filed July 9, 1914. Serial No. 849,993. (Cl. 24—134.)



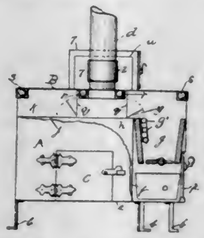
1. A clamp of the class described comprising a clamping member and a support therefor formed from a single piece of wire stock and having the clamping member journaled on one end thereof and the opposite end formed with screw threads and extending outwardly and laterally with reference to the axis of rotation of the clamping member.

2. A clamp of the class described comprising a clamping member and a support therefor formed from a single piece of wire stock, said stock being bent into U-shape and having the clamping member journaled on one arm thereof and attaching means arranged solely on the other arm of the U-shaped portion, the arms having their free ends unconnected and spaced apart to permit a rope or the like to be moved sidewise between them.

3. A clamp of the class described comprising a clamping member, and a support therefor formed from a single piece of wire stock, said stock being bent into U-shape with a screw threaded portion extending laterally from one arm thereof and the clamping member journaled on the other arm.

4. A clamp of the class described comprising a clamping member having a periphery provided with parallel longitudinal flutes and a supporting member on which the clamping member is mounted to turn on a fixed pivot, said supporting member having a rigid clamping jaw in the form of a single rib curved transversely and of a size to be received within the flutes of the movable clamping member.

1,190,468. COOKING STOVE AND RANGE. GEORGE F. SCHORLING, Fresno, Cal. Filed Oct. 23, 1913. Serial No. 796,850. (Cl. 126—211.)



1. In a cooking stove the combination of an upright tubular shell, a bottom to such shell, a rotatable top on such shell adapted to carry cooking vessels, upright partitions dividing a vertical portion of the interior of such shell into segments, a fire box in one of such segments, a covering over the top of the segment not containing such fire box, forming an air chamber between such covering and the rotatable top, a flue from such covering through the center of such rotatable top, having openings communicating with such fire box segment and such air chamber, a damper in the opening between such fire box segment and such flue adapted to permit the heated air and smoke to pass directly from such fire box to the flue when such damper is open and to retard such passage when such damper is closed, partitions separating such air chamber from such fire box segment having dampers therein adapted to regulate the passage of hot air from such fire box segment to such air chamber, a damper between such flue and such air chamber adapted to regulate the passage of hot air from such air chamber to such flue and an oven having double walls spaced to form a heating chamber, such oven being disposed on said rotatable top, and having openings through such rotatable top, which communicate with the heating chamber between the walls and a lead communicating between such heating chamber and the flue, all substantially as described.

2. In a cooking stove the combination of an upright tubular shell, a bottom to such shell, a rotatable top on such shell, upright partitions dividing a vertical portion of the interior of such shell into segments, a fire box in one of such segments, a covering over the top of the segment not containing such fire box, forming an air chamber between such covering and the rotatable top, a flue from such covering through the center of such rotatable top communicating with such fire box segment and such air chamber, a damper in each of such openings, partitions between such fire box segments and such air chamber extending from such flue a portion of the distance toward the wall of such shell and thence extending rearwardly in such air chamber, forming a passageway between the wall of such shell and such partition from the segment holding the fire box to such air chamber, dampers within such passage way and an oven having double walls spaced to form a heating chamber between them, disposed on the upper side of the rotatable top with openings through such rotatable top into the heating chamber, a circular main flue from such stove and in the center thereof, an opening in the wall of such main flue, a collar rotatably disposed around such flue, an auxiliary flue connecting such collar and heating chamber constructed to have the hole in the main flue communicate with a hole in the heating chamber when the oven is over the fire box, and to cut off such communication when the oven is not over the fire box.

3. In a cooking stove the combination of an upright shell having a bottom and a rotatable top thereon, partitions therein forming separate compartments, a fire box in one of such compartments, a circular flue attached to a nonrotatable portion of such stove and extending through the center of such rotatable top, a warming oven on such rotatable top constructed with double walls, and having an inclosed air chamber between such double walls, a hole in the wall of such flue, a collar adapted to encircle such flue and to turn thereon, a passage way between such inclosed air chamber and such collar arranged to register with such hole in the wall of the flue at some point within range of the movement of such rotatable top, all substantially as described.

1,190,469. AUTOMOBILE-LOCK. EDWARD R. SCHREITER, Jr., Detroit, Mich. Filed Apr. 10, 1914. Serial No. 831,061. (Cl. 123—198.)

1. A safety device for automobiles comprising a pair of switches adapted to be connected respectively with the conductors of electric self starting and ignition systems, a valve for controlling the fuel supply of an automobile, a reciprocable member adapted when moved from initial position to open the switches and close the valve, means for engaging the reciprocable member, a manually operable member adapted to contact with and move the reciprocable member into position for engagement with such means, a casing adapted to be locked in position to house the mechanism by the reciprocable member when the latter is engaged by such means and permutation mechanism adapted when operated to trip the engaging means.



2. A safety device for automobiles comprising a base, switches mounted on the base and adapted to be connected with the conductors of electric self starting and ignition systems, a valve mounted on the base for controlling the fuel supply of an automobile, a member reciprocable on the base adapted when moved from initial position to open the switches and close the valve, a latch plate for engaging the reciprocable member, a manually operable oscillatory member on the base adapted to contact with and move the reciprocable member into position for engaging with the latch plate, a casing detachably mounted on the base over the mechanism and locked thereon by the controlling member when the latter is engaged by the latch plate, and permutation mechanism adapted when operated to trip the latch plate.

3. A safety device for automobiles comprising a base, a valve casing, a closure in the casing, a sleeve securing the casing and base, a plunger reciprocable through the sleeve for seating the closure, electric switches on the base, a controlling member reciprocable on the base for operating the switches and simultaneously therewith depressing the plunger to seat the closure, a spring on the base for retracting the controlling member to initial position, a latch plate swiveled on the base for locking the controlling member when the latter is fully projected, a manually operable oscillatory member on the base adapted to project the controlling member into engaged relation with the latch plate, permutation mechanism for tripping the latch, and a casing detachably secured on the base and locked in position thereon by the controlling member when the latter is fully projected.

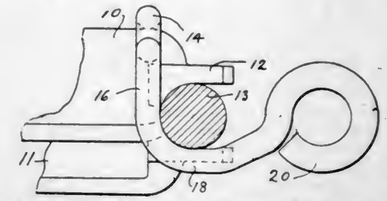
1,190,470. THIRD-POINT SUSPENSION-HANGER. FREDERICK J. SCHROEDER, Cleveland, Ohio, assignor, by mesne assignments, to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio. (Incorporated Feb. 25, 1916.) Filed Nov. 15, 1915. Serial No. 61,660. (Cl. 188—70.)

1. A third point suspension hanger for brake beams comprising a bar of uniform section bent to form a saddle, two elbows and two eyelets in such a manner that the saddle rides on top of the brake beam, while the tension member of the brake beam rests in the elbows and the eyelets extend beyond said tension member in the longitudinal direction of the brake beam fulcrum.

2. A third point suspension hanger for brake beams, said hanger comprising a saddle, elbows and eyelets, said saddle and elbows being shaped to firmly engage the fulcrum and the tension member of the brake beam, the eyelets being adapted for attachment to a suspension member.

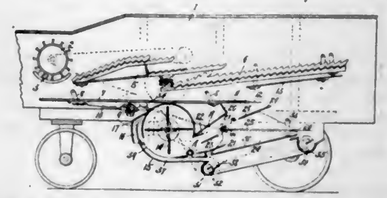
3. A third point suspension hanger for brake beams, said hanger comprising a saddle, elbows and eyelets, said saddle and elbows being shaped to firmly engage the fulcrum and the tension member of the brake beam, the eyelets being adapted for attachment to a suspension member, said eyelets being positioned beyond the tension member in the longitudinal direction of said fulcrum.

4. A third point suspension hanger for brake beams, said hanger comprising a saddle, elbows and eyelets, said saddle and elbows being shaped to firmly engage the fulcrum and the tension member of the brake beam, the eyelets being adapted for attachment to a suspension member, said eyelets being positioned beyond the tension member in the longitudinal direction of said fulcrum, and in such a manner that the center of gravity of the brake beam falls in the central vertical plane between the two eyelets with the parts in working position.



5. A third point suspension hanger for brake beams, said hanger comprising a saddle, elbows and eyelets, said saddle and elbows being shaped to firmly engage the fulcrum and the tension member of the brake beam, the eyelets being adapted for attachment to a suspension member, said eyelets being positioned beyond the tension member in the longitudinal direction of said fulcrum, and in such a manner that the center of gravity of the brake beam falls in the intersection of the vertical and horizontal planes which run through the longitudinal axis of the hanger and the center line of the eyelets respectively with the parts in working position.

1,190,471. THRESHING-MACHINE. HENRY H. SCHUETTE, Napoleon, Ohio. Original application filed July 19, 1915, Serial No. 40,659. Divided and this application filed Nov. 1, 1915. Serial No. 59,014. (Cl. 130—24.)



1. In a machine of the class described, blast means, a housing for said means having air inlet and outlet passages, a shaker frame mounted in the path of discharge of air from said outlet passage, said shaker-frame having an inclined bottom and a blast divider part at its top, and a riddle carried by said frame intermediate its bottom and divider part.

2. In a machine of the class described, blast creating means, a housing for said means having air inlet and outlet openings, a shaker frame mounted in advance of the outlet opening and having an inclined bottom and an inclined divider part at its top, an adjustable divided part, a riddle carried by said frame in vertically spaced relation to said bottom and divider part, blast gates disposed in said outlet opening, and a grain auger and tailing auger mounted respectively at the rear and forward ends of said bottom.

3. In a machine of the class described, a grain bottom, a blast creating member disposed below said grain bottom, a housing inclosing said member and having an inlet

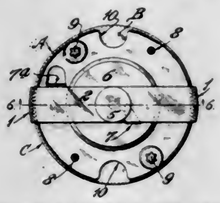
opening at one side and main and auxiliary outlet openings at the opposite side, said auxiliary opening being in the form of a shallow passage which extends under the main outlet opening, a shaker frame disposed in advance of said main opening and below the delivery end of the grain bottom, said shaker frame having a rearwardly declining bottom extending below the said main opening and adjacent to said auxiliary opening, a riddle carried by said shaker frame over its bottom, and grain delivery means disposed below the rear end of said shaker frame bottom and the outlet end of said auxiliary passage whereby the blast from said auxiliary passage is directed through grain as it flows from the shaker frame bottom into the said delivery means.

4. In a machine of the class described, a grain bottom, blast means below said grain bottom, a housing for said means having air inlet and outlet passages and having its outlet passage under an end portion of said grain bottom, a riddle disposed under the discharge end of said grain bottom in the path of discharge of air from said outlet passage, and an inclined blast divided part disposed between said riddle and the adjacent end portion of the grain bottom.

5. In a machine of the class described, a grain bottom, blast means below said grain bottom, a housing for said means having air inlet and outlet passages and having its outlet passage under an end portion of said grain bottom, a riddle disposed under the discharge end of said grain bottom in the path of discharge of air from said outlet passage, and a blast divider member between said riddle and the adjacent end of said grain bottom and having a vertically adjustable part.

[Claims 6 to 10 not printed in the Gazette.]

1,190,472. CLOSURE FOR EVAPORATED-MILK CANS. CHARLES H. SCHULZE, St. Louis, Mo. Filed Apr. 3, 1915. Serial No. 19,017. (Cl. 220—67.)



1. A closure for evaporated milk cans and the like comprising a yoke having depending legs with inwardly turned ends, and a member rotatably mounted on said yoke and means for pressing said member against the end of the can, said member being provided with a plurality of diametrically opposite openings.

2. A closure for evaporated milk cans and the like comprising a yoke having depending concaved legs with inwardly turned and toothed ends, and a member rotatably mounted on said yoke in position to bear against the end of the can, said member being provided with a plurality of diametrically opposite openings, and means whereby said member is pressed against the end of the can.

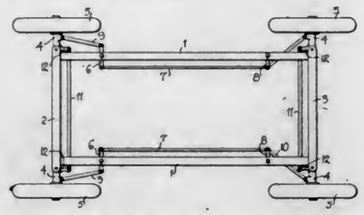
3. A closure for evaporated milk cans and the like comprising a yoke having depending legs with inwardly turned ends, and a disk rotatably mounted on said yoke in position to bear against the end of the can, said disk being provided with a plurality of diametrically opposite holes, and said disk also being provided with diametrically opposite stoppers in circular alinement with said holes.

4. A closure for evaporated milk cans and the like comprising a yoke having depending legs with inwardly turned ends, a screw threaded through the middle portion of said yoke, and a disk swiveled on said screw in position to bear against the end of the can, said disk being provided with a plurality of diametrically opposite holes and with diametrically opposite stoppers in circular alinement with said holes.

5. A closure for evaporated milk cans and the like comprising a yoke adapted for attachment to such can, and a disk rotatably mounted on said yoke, said disk being provided with means for limiting the rotary movement of said disk in each direction, said disk being also provided with a pair of diametrically opposite openings adapted to register with certain holes in the can top when the disk is at one limit of its movement, and said disk being also provided with diametrically opposite stoppers adapted to register with and close said holes when the disk is at the opposite limit of its movement, said disk having diametrically opposite openings located between each of said first mentioned openings and the adjacent stopper.

[Claims 6 to 8 not printed in the Gazette.]

1,190,473. RUNNING-GEAR FOR VEHICLES. CALVIN J. SCOTT, Hartsville, S. C. Filed Aug. 2, 1915. Serial No. 43,225. (Cl. 21—140.)



In combination with the chassis of a vehicle, spindles operatively supported thereby adjacent the opposite ends thereof and adapted for swinging movement in a horizontal plane, transversely disposed levers pivotally supported at their longitudinal centers at opposite sides of the chassis and adjacent the forward spindles, inwardly disposed rock arms operatively supported by the chassis adjacent the rear spindles, said arms being of a length equal to the length of the inwardly disposed portions of the levers and arranged in parallelism therewith, an operative connection between the inner extremities of the levers and the rock arms, an operative connection between the inner ends of the rock arms and the rear spindles at points outwardly of the pivotal connection between said spindles and the chassis, an operative connection between the outer extremities of the levers and the forward spindles at points outwardly of the pivotal connection between said spindles and the chassis, endwise movable rods disposed transversely of the chassis adjacent the opposite ends thereof, and an operative connection between the extremities of said last named rods and the adjacent spindles whereby the spindles at the same end of the chassis will be caused to move in unison and in the same general direction.

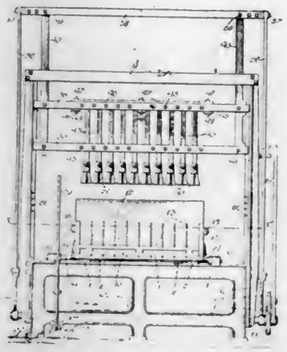
1,190,474. PNEUMATIC TIRE AND PROCESS OF MAKING THE SAME. JAMES H. SEIBERLING, Jonesboro, Ind. Filed May 8, 1915. Serial No. 26,779. (Cl. 152—13.)



1. The herein described improved pneumatic tire, comprising in combination, a carcass composed of layers of carcass fabric, the edges of which layers are augmented by other material and formed into separate, and separated, thickened base beads having circumferential inner toes, the edges of one of said layers being extended inwardly beyond respective toes and being lapped one upon the other and forming a flexible, but substantially inextensible, coupling between said separated base beads, an inflatable air tight lining within the annular chamber formed by said carcass and coupling, and a covering or tread on said carcass, the whole constituting a unitary vulcanized structure.

2. The herein described improved pneumatic tire, comprising in combination, a carcass composed of layers of carcass fabric, the edges of which layers are augmented by other material and formed into separate, and widely separated, thickened base beads having circumferential inner toes, the edges of one of said layers being extended inwardly beyond respective toes and being lapped one upon the other and forming a flexible, but substantially inextensible, coupling between said separated base beads, an outwardly extending circumferential bead being formed in said coupling and being of less width, leaving straight juncture portions C'' at the edges of said toes, an inflatable air tight lining within the annular chamber formed by said carcass and coupling, and a covering or tread on said carcass, the whole constituting a unitary vulcanized structure.

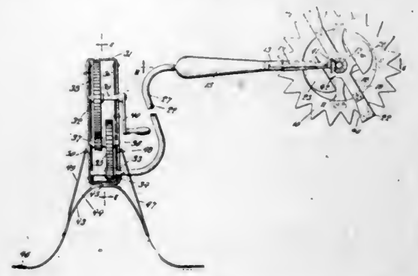
1,190,475. BRICK-MACHINE. WILLIAM A. SHOCK, Detroit, Mich. Filed Aug. 3, 1914. Serial No. 854,888. (Cl. 25—41.)



1. In a brick machine, a machine frame, uprights carried by the ends of said frame, a mold between said uprights, a cross head reciprocable between said uprights, a plurality of tampers carried by said cross head and adapted to enter said mold, a rock shaft journaled in said machine frame, cranks on the ends of said shaft, pitmen connecting said cranks and the cross head, a ratchet wheel fixed on an end of said shaft, a lever loose on said shaft at a side of said ratchet wheel; a pawl carried by said lever normally in engagement with said ratchet wheel whereby said tampers may be elevated through the medium of said lever, ratchet wheel, crank shaft, pitmen, and cross head; and a trip on the front of said machine frame adjacent said ratchet wheel adapted to be engaged by said pawl to move said pawl out of engagement with said ratchet wheel during an elevation of said tampers whereby said tampers may descend by gravity.

2. In a brick machine, a machine frame, uprights carried by the ends of said frame, a mold between said uprights, a cross head reciprocable between said uprights, a plurality of tampers carried by said cross head and adapted to enter said mold, a rock shaft journaled in said machine frame, cranks on the ends of said shaft, pitmen connecting said cranks and the cross head, a ratchet wheel fixed on an end of said shaft, a lever loose on said shaft at a side of said ratchet wheel; a pawl carried by said lever normally in engagement with said ratchet wheel whereby said tampers may be elevated through the medium of said lever, ratchet wheel, crank shaft, pitmen and cross head, a trip on the front of said machine frame adjacent said ratchet wheel and adapted to be engaged by said pawl to move said pawl out of engagement with said ratchet wheel during the elevation of said tampers, whereby said tampers may descend by gravity, means carried by said uprights adapted to hold said cross head in an elevated position whereby said mold may be held, and adjustable means carried by said uprights adapted to limit the inward movement of said tampers into said mold.

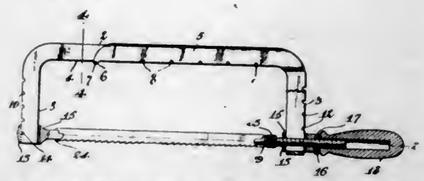
1,190,476. HEDGE AND GRASS CUTTER. PERCY O. SMITH, Freeport, N. Y. Filed Mar. 13, 1915. Serial No. 14,140. (Cl. 56—16.)



1. A hedge and grass cutter, comprising a peripherally toothed disk held stationary on a frame, a handle projecting from the frame for permitting the toothed disk to be directed by a person, a rotatable bar having two cutting blades mounted on the frame so as to be revolved for the blades to coöperate with the teeth of the disk for trimming grass, an anti-friction bearing between the disk and the bar, two weights on the bar to increase its momentum when revolved, a flexible drive shaft, operative mechanism for driving the shaft, and adapted to be removably applied to the body of a person whereby the cutter may be carried, and means connected to the flexible shaft and to the bar of the cutting blades to impart rotation to this bar when the drive shaft is driven.

2. A hedge and grass cutter, comprising a peripherally toothed disk held stationary on a frame, a handle projecting from the frame for permitting the toothed disk to be directed by a person, a rotatable bar having two cutting blades mounted on the frame so as to be revolved for the blades to coöperate with the teeth of the disk for trimming grass, two weights on the bar to increase its momentum when revolved, a flexible drive shaft, operative mechanism for driving the shaft, means connected to the mechanism, and adapted to be removably applied to the body of a person whereby the cutter may be carried, and means connected to the flexible shaft and to the bar of the cutting blades to impart rotation to this bar when the drive shaft is driven.

1,190,477. HACKSAW-FRAME. CLIFFORD SPRAGUE, St. Louis, Mo. Filed Mar. 17, 1916. Serial No. 84,921 (Cl. 145—34.)

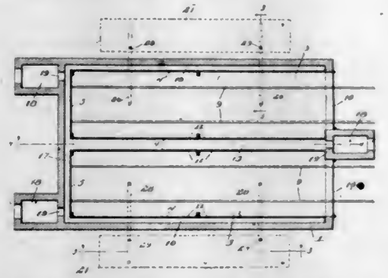


1. A hack saw frame of substantially U-form having one of the legs thereof bifurcated, collars carried by said legs and adjustable longitudinally thereon, a securing shank passed through one of said collars and between the limbs of said bifurcated leg, and blade holding means carried by said shank and the remote collar respectively.

2. A hack saw frame of substantially U-form having one of the legs thereof bifurcated, collars carried by said

legs and adjustable longitudinally thereon, a securing shank passed through one of said collars and between the limbs of said bifurcated leg, a nut threaded on said shank and bearing against said collar whereby the shank may be moved longitudinally to tension the blade, and blade holding means carried by said shank and the remote collar respectively.

1,190,478. WOOD-DISTILLING APPARATUS. JOHN W. SPURLOCK, Folkston, Ga. Filed Feb. 25, 1916. Serial No. 80,496. (Cl. 203—6.)



1. A wood distilling apparatus comprising an outer inclosing casing of oblong rectangular form, a plurality of distilling chambers of corresponding form arranged within said casing, said chambers being arranged on opposite sides of the longitudinal center of the casing and spaced from each other and from the side walls of the casing to provide intervening longitudinal flues, and also spaced at one end from the adjacent end wall of the casing to provide transverse flues connecting said longitudinal flues, the casing and distilling chambers being provided with doorways at the opposite end thereof, doors for closing said doorways, furnaces arranged at one end of the casing on opposite sides of the longitudinal center thereof and communicating with the outer side and transverse flues, a furnace arranged at the opposite end of the casing between the doors and communicating with the central flue, and stacks at the ends of the flues opposite the furnaces.

2. A wood distilling apparatus including an outer casing of oblong rectangular form, distilling chambers of corresponding form arranged within the outer casing on opposite sides of the longitudinal center thereof, said outer casing and distilling chambers having doorways at one end thereof, and said chambers being spaced at their opposite ends from the opposite end of the casing to provide transverse flues and also being spaced from each other and from the sides of the casing to provide longitudinal central and side flues, doors for closing said doorways, heaters communicating with the flues, stacks communicating with the flues, and horizontal longitudinal partitions separating the lower portions of the flues from the upper portions thereof.

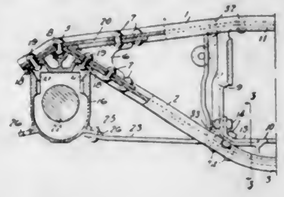
1,190,479. WAIST AND SKIRT SUPPORTER AND FASTENER. IDALIA J. STEWART, Portland, Oreg. Filed Apr. 27, 1915. Serial No. 24,261. (Cl. 2—136.)



1. In a device of the class described, coöperating members comprising a skirt and a waist; a flexible element circumscribing one of said coöperating members and having detachably connected ends; a second flexible element partially circumscribing the other of said coöperating members; means for detachably connecting the second specified flexible element adjacent its ends with the first specified flexible element; and detachably interengaged suspension members on the flexible elements.

2. In a device of the class described, a waist; a flexible element extended around the waist and having detachably connected ends; a skirt; a flexible element assembled with the skirt; snap fasteners connecting the ends of the last specified flexible element with the first specified flexible element; and detachably interengaged suspension members on the flexible elements.

1,190,480. CAR-TRUCK SIDE FRAME AND JOURNAL-BOX. EDGAR WEBSTER SUMMERS, Pittsburgh, Pa. Filed Jan. 12, 1916. Serial No. 71,779. (Cl. 105—243.)



1. A truck side frame of the arch bar type comprising a compression member and a tension member having their end portions united, a journal box having its top fitting against and riveted directly to the end portions of said arch bar, and a tie bar member secured to the lower portion of said journal box and to the depressed central portion of the tension member.

2. A truck side frame of the arch bar type comprising a compression member and a tension member having their end portions united, a journal box having its top fitting against the end portions of said arch bars and provided with perforated lugs for riveting the same directly to the arch bars, and a tie bar member secured to a perforated ear on the lower portion of the journal box and to the central depressed portion of the tension member.

3. A truck side frame of the arch bar type comprising a compression member and a tension member having their end portions united and with the end portions of both members bent and having a tangent inclined downwardly on an angle corresponding to the inclination of the tension member, and a journal box having its top formed to fit in said angle and being directly secured to the side frame.

4. A truck side frame of the arch bar type comprising a compression member and a tension member having their end portions united and with the end portions of both members bent and inclined downwardly on an angle corresponding to the inclination of the tension member, a journal box having its top formed to fit in said angle and being directly secured to the side frame, and a tie bar member secured to the lower portion of said journal box and to the depressed central portion of the tension member.

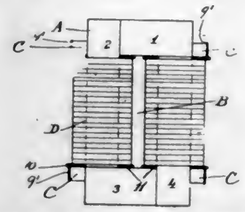
5. A truck side frame of the arch bar type comprising a compression member and a tension member having their end portions united and with the end portions of both members bent and having a tangent inclined downwardly on an angle corresponding to the inclination of the tension member, and a journal box having its top formed to fit in said angle and being provided with perforated bosses for directly securing the same to said arch bars.

[Claims 6 to 25 not printed in the Gazette.]

1,190,481. ELECTRICAL TRANSFORMER. GEORGE W. TERHORST, Pittsburgh, Pa., assignor to Pittsburgh Transformer Company, a Corporation of Pennsylvania. Filed Aug. 29, 1912. Serial No. 717,657. (Cl. 175—356.)

1. A laminated transformer core having laminated projections, the laminæ of the projections being sandwiched with those of the main body of the core and fillers secured between the aforesaid laminæ of the projections.

2. A laminated transformer core, windings for said core, said core having an interior opening for the passage of said windings and having projections for positioning said windings, said projections being formed by extensions from certain of the laminæ of which said core is composed, the laminæ having said extensions being built into the core, and all of the laminæ of said core being rectangular.



3. A laminated transformer core, windings for said core, said core having an interior opening for the passage of said windings and having oppositely disposed projections for positioning said windings, said projections being formed by extensions from certain of the laminæ of the core at one side thereof and at the opposite side thereof by reversing the layers of the laminæ.

4. A laminated transformer core, windings for said core, said core having an interior opening for the passage of said windings and having oppositely disposed projections for positioning said windings, said projections being formed by extensions from certain of the laminæ of the core at one side thereof and at the opposite side thereof by reversing the layers of the laminæ, and all of the laminæ of said core being rectangular.

5. A layer of laminæ for a transformer core having a central opening, said layer having on two opposite sides of said opening laminæ of the same size and at each of the other sides of the opening having two laminæ, one longer than the other.

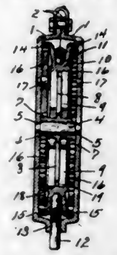
1,190,482. FIRE-ESCAPE. WALTER H. TIBBALS, Syracuse, N. Y. Filed Oct. 1, 1913. Serial No. 792,901. (Cl. 254—157.)



A fire escape comprising a sheave or pulley having an annular groove and opposite outwardly projecting flanges provided with gear teeth in their peripheries, a cable frictionally engaged in the groove of the sheave or pulley, a pinion meshing with the toothed flanges of the sheave, a brake drum concentric with the pinion and having a portion thereof projecting between said flanges of the sheave, and movable braking means actuated by the pinion when rotated to engage the brake-drum.

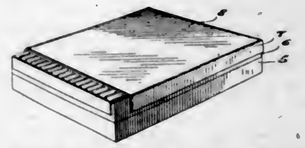
1,190,483. FIRE-ESCAPE. WALTER H. TIBBALS, Syracuse, N. Y. Filed Nov. 14, 1913. Serial No. 800,952. (Cl. 254—155.)

In a fire escape, a case, a sheave therein having a singe external annular groove and an internal annular brake-surface in the same plane of rotation as the groove, a single cable engaged in the groove and having its opposite ends passed out through one and the same side of the case in the same plane as the groove, centrifugally operated brake-shoes for engaging the brake-surface, a rotary



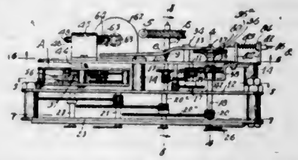
actuator for the brake-shoes centrally within the sheave, and separate devices for transmitting motion from the opposite ends of the sheave to corresponding ends of the actuator.

1,190,484. COMBINED MATCH AND CIGARETTE BOX. DANIEL TUDOR, Philadelphia, Pa. Filed Oct. 7, 1914. Serial No. 865,531. (Cl. 206—48.)



A boxlid comprising a body having a marginal rim adapting it for detachable and telescopic engagement with the box, a sheet of material of a size for covering a greater portion of the lid body and having three of its edges fixed throughout their length to the outer face of the marginal rim of said body to provide a pocket exteriorly of the lid between the body thereof and said sheet of material, a strip having a plurality of stems arranged in spaced parallel relation to each other and provided with inflammable heads at their free ends, said strip being fixed exteriorly to the marginal rim of the lid body, with the stems bent at right angles thereto and inserted in the pocket for the concealing of the inflammable heads by the sheet of material, and a roughened section fixed to the inner face of the sheet of material at the free edge thereof to lie in the path of movement of the inflammable heads on the extracting of a stem from the pocket when separated from the strip.

1,190,485. ELECTRIC METER. MATHIAS E. TURNER, Cleveland, Ohio. Filed June 16, 1910. Serial No. 567,204. (Cl. 171—34.)



1. In a maximum demand indicator for existing electric meters, of the type having a dial and a gear train in the rear of said dial plate, the combination of a plate having bearings and securing devices arranged similar to the bearings and securing devices of a plate of the existing meter and adapted to be substituted therefor, said plate also having an extension, a maximum demand shaft extending through said plate and dial, a maximum demand pointer secured to the forward end of said shaft, a gear mounted beyond the inner end of said shaft, driving connections between said gear and shaft whereby

said shaft will be rotated when said gear revolves in a forward direction and will be left stationary when said gear rotates rearwardly, a gear operated by the meter train and adapted to rotate said first gear in a forward direction, chronometric devices carried by said extension, a lever pivoted to said plate and carrying one of said gears, cam means carried by said chronometric devices and arranged to rock said lever at predetermined intervals, so as to separate said gears, and means operative during such separation to set said shaft and pointer to zero position.

2. In an electric meter, the combination of a frame comprising a pair of spaced plates, a third plate spaced from one of said plates and detachably secured thereto, an indicator at the front of the first plate of the series, a shaft for said indicator extending through all of said plates and provided at its rear end with an arm, a current driven shaft projecting rearwardly from the last plate of the series, reduction gearing interposed between the second and third plates, a lever pivoted to the third plate, a gear supported near one end of said lever and having a projection adapted to engage the projecting arm of the indicator shaft, a connection between the last mentioned gear and the train of reduction gearing, and clock-mechanism carried entirely by the last plate and arranged to engage intermittently the end of the lever arm opposite the gear and rock the lever to separate said gear from the train of reduction gearing.

3. In an electric meter, the combination of a frame comprising a pair of spaced plates and a third plate detachably connected to the rear plate of the pair, an indicator shaft extending through all of said plates and having an indicator on its front end and an operating projection near its rear end, a current driven shaft, and a train of reduction gearing extending between the second and third plates, the shaft for the last gear in said train projecting rearwardly through the rear plate and having a gear thereon, a stud projecting rearwardly from the last plate, a lever pivoted to said stud and having a gear near one end thereof provided with a projection for operating the indicator shaft, and time mechanism carried entirely by the third or rear plate and comprising a shaft having one or more projections at the rear of the plate and adapted to engage the arm of the lever opposite the gear.

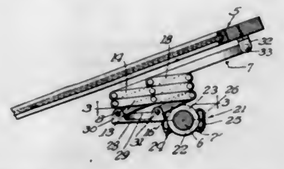
4. In an electric meter, the combination of a frame comprising a pair of plates and a third and rear plate detachably secured to one of said plates, an indicator shaft projecting through said plates and having at the rear of the third plate an operating projection, a current driven shaft, a lever pivoted to the rear of the third plate and having a gear arranged to drive said shaft through said projection, clock-work mechanism carried by the third plate for automatically operating the lever to set the gear to zero position at predetermined short time intervals, and means for winding said mechanism, the demand period being an exact multiple of the rewinding period.

5. A maximum demand attachment for meters comprising a plate adapted to be attached to the rear of the registering device and having bearings for the usual reduction train forming part of said device, said plate being provided with a current driven gear adapted to be constantly in operative connection with the registering device, a gear adapted to intermittently engage and disengage said current driven gear, and to advance an indicator during its engaged condition and to be set back to zero position during its disengaged condition, and a constant speed shaft carried by said plate and provided with means for engaging and disengaging said gears at predetermined times.

[Claims 6 to 10 not printed in the Gazette.]

1,190,486. EXPANSIBLE LIFTING-ARM. ROY D. TYLER, Chicago, Ill., assignor to John C. Moninger Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 10, 1916. Serial No. 77,476. (Cl. 16—28.)

1. A sash arm adapted to be extended and contracted by oscillation of a shaft, comprising two series of pivoted together link members, one series on each side of the longitudinal median plane, the central portion of crossing links of the respective series pivoted together; a bracket, for extension from one side of a shaft and positioned to lie at all times above a horizontal plane passing through the axis of the shaft, said bracket having terminal links of each series pivoted thereto so as to lie in parallel planes and means to secure the bracket to a shaft.



2. A sash arm adapted to be extended and contracted by oscillation of a shaft, comprising two series of pivoted together link members, one series on each side of the longitudinal median plane, the central portions of crossing links pivoted together; a bracket arm, for lateral extension from one side of the shaft and positioned to lie at all times above a horizontal plane passing through the axis of the shaft, said bracket having terminal links of each series pivoted thereto so as to permit the attached links to lie in parallel planes, and an integral hub offset from the bracket arm and which extends therefrom to secure said bracket arm to a shaft.

3. A device of the character described, comprising two parallel link members; a washer between said members and a rivet having a shank of two diameters, the part of largest diameter being long enough to pass through one link member and beyond the washer, the smaller part passing through and headed beyond the other link member.

1,190,487. ART OF PHOTO-ENGRAVING. HARRY J. VAN VALKENBURG, Rochester, N. Y. Filed June 9, 1915. Serial No. 33,167. (Cl. 95—5.)

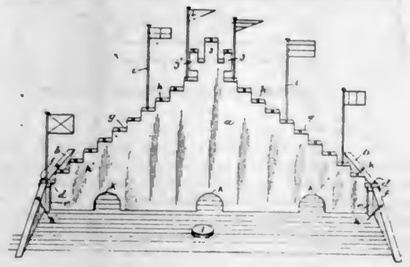


1. The improvement in the art of photo-engraving which consists in eliminating half-tone dots from predetermined portions of a half-tone negative by covering the copy to be photographed with a transparent material including a layer of a color having non-actinic value, tracing on said material over portions of said copy from which all half-tone dots are to be eliminated from the negative with a pigment having high actinic value, photographing said tracing on a sensitized plate, removing said non-actinic covering, and photographing said copy by a second exposure of the same plate through a half-tone screen.

2. The improvement in the art of photo-engraving which consists in eliminating half-tone dots from predetermined portions of a half-tone negative by covering the surface of the copy to be photographed with a transparent material, tracing on said cover over portions of said copy from which all half-tone dots are to be eliminated from the negative with a pigment having high actinic value, inserting a backing of a color having non-actinic value between said copy and said cover, photographing said tracing on a sensitized plate, removing said backing, and photographing said copy by a second exposure of the same plate through a half-toned screen.

3. The improvement in the art of photo-engraving which consists in eliminating half-tone dots from predetermined portions of a half-tone negative by covering the surface of the copy to be photographed with a transparent material, tracing on said cover with a pigment over certain portions of said copy, inserting an opaque backing sheet between said copy and said cover, photographing said tracing on a sensitized plate, removing both backing and cover, and photographing said copy by a second exposure of the same plate through a half-tone screen, said backing preventing the photographing of the copy during said first exposure.

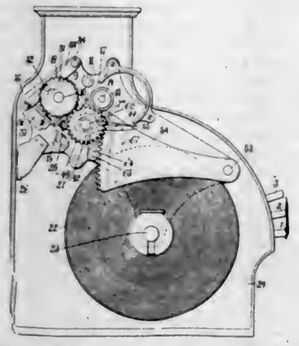
1,190,488. GAME APPARATUS. ARTHUR EDWARD VERRAL, Toronto, Ontario, Canada. Filed Apr. 10, 1916. Serial No. 90,165. (Cl. 46—61.)



1. A game apparatus comprising a perpendicular barrier of substantially pyramidal shape, means for supporting the barrier in upright position, markers for insertion in the inclined sides of the barrier, and appropriate projectiles, the base of the barrier being apertured for the flight of the projectiles therethrough.

2. A game apparatus comprising a perpendicular barrier of substantially pyramidal shape having apertures in its base for the flight of projectiles therethrough and having its inclined sides stepped with vertical sockets therein, markers for insertion in said sockets, and appropriate projectiles to be directed through the apertures in the base of said barrier.

1,190,489. CASH-REGISTER. EDWARD J. VON PEIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Oct. 1, 1913. Serial No. 792,909. (Cl. 235—3.)



1. In a machine of the class described, the combination of a movable type carrier, its type being capable of movement independent of movement of the carrier, means for moving the carrier, means for imparting independent movement to all of the type in an invariable sequence during the movement of the carrier, a platen, and means for determining which type is to be moved while in cooperative relation with said platen to take an impression.

2. In a machine of the class described, the combination with a driving means, of a type carrier driven by said driving means, the type being capable of movement independent of the movement of their carrier, means for giving the independent movement to all of the type in an invariable sequence, a platen, and means for determining which type is to be moved while in coöperative relation with said platen.

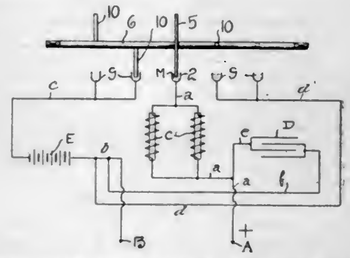
3. In a machine of the class described, the combination of a movable type carrier, its type being capable of movement independent of the movement of the carrier, means for moving the carrier, means for imparting independent movement to all of the type during the movement of their carrier, a platen, an ink supplying device, and manipulative means for determining which type will be moved while in coöperative relation with the inking device and the platen.

4. In a machine of the class described, the combination with an operating mechanism, of a platen, a movable type carrier, its type being arranged to come simultaneously in coöperative relation to the platen, means for projecting all of the type from the carrier during an operation of the operating mechanism, and means for determining the type to be projected while in coöperative relation with the platen.

5. In a machine of the class described, the combination with driving mechanism, of a rotary type carrier, the type being arranged longitudinally of the type carrier, cams for projecting all of the type from the carrier during an operation of the driving mechanism, a platen, and a plurality of keys whereby said cams may be differentially positioned to project any desired type while in coöperative relation with the platen.

[Claims 6 to 43 not printed in the Gazette.]

1,190,490. ELECTROTHERAPEUTIC APPARATUS. WILLIAM L. WALTER, Pueblo, Colo. Filed Nov. 7, 1914. Serial No. 870,901. (Cl. 250—36.)

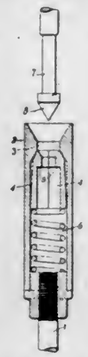


An electrotherapeutic apparatus comprising a main circuit having interposed therein a source of direct current, a coil, application members and an interrupter, a second interrupter bridged across the source of current, the two interrupters being mechanically coupled so that when one is in its open circuit position the other is in its closed circuit position, a condenser bridged across the application members, and means for continuously operating the interrupters.

1,190,491. COUPLING. ELMER A. WATTS, Springfield, and IRWIN L. DUNN, Marietta, Ohio. Original application filed Mar. 8, 1915, Serial No. 12,795. Divided and this application filed Nov. 19, 1915. Serial No. 62,273. (Cl. 103—61.)

1. A coupling of the character described comprising a tubular casing open at one end and provided adjacent the open end with an inwardly extending annular shoulder beveled on its inner side, a plurality of jaws mounted within said casing, provided with inwardly extending shoulders and having their ends beveled inside and outside, a spring tending to hold said jaws in engagement with said beveled shoulder, a coöperating coupling member comprising a shank with an enlarged head forming

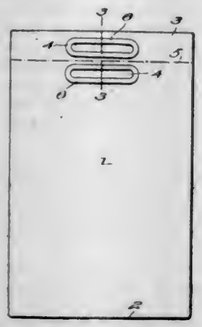
a shoulder, said head being tapered away from said shank and being of such size that it will pass through the opening in the end of the casing, whereby the shoulders on the jaws will engage the shoulder of the coupling member.



2. A coupling of the character described comprising a tubular casing having an opening at one end, an inwardly extending annular shoulder beveled on its inner side, a plurality of jaws mounted within said casing provided with squared inwardly extending shoulders and having their ends beveled to coöperate with the beveled shoulder of said casing, a spring tending to hold said jaws in engagement with said beveled shoulder, and a coöperating coupling member comprising a shank with an enlarged head forming a squared shoulder adapted to coöperate with the shoulders on the jaws.

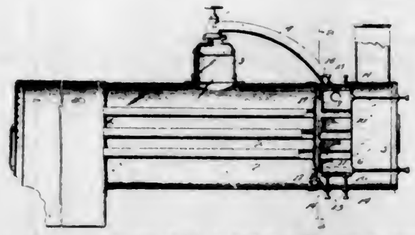
3. In a coupling member, a tubular casing having a beveled shoulder at its upper end, a series of jaws mounted in said casing having their upper ends beveled to engage said beveled shoulder, a spring tending to hold said jaws in engagement with said beveled shoulder, and a second member adapted to be connected with a wire and having a tapered head and a reduced portion above said head, said head being adapted to engage said jaws, force the same away from said beveled shoulder and separate them to permit said head to move into operative engagement therewith, and a sleeve adapted to move along said wire and to engage said jaws to move them away from said shoulder and to separate them to permit said head to be withdrawn.

1,190,492. RECEPTACLE AND BAG. JOSEPH WAY, Jr., Philadelphia, Pa. Filed Feb. 2, 1916. Serial No. 75,803. (Cl. 229—54.)



A bag of the class described embodying a commodity receiving body having a normally open end and formed adjacent said end with a pair of vertically spaced hand receiving openings, the marginal portion of said body being bent downwardly at a point between said openings and brought to bear against the body portion for registering said openings with one another, and a reinforcing member surrounding each of said openings and serving as a hand grip.

1,190,493. STEAM-SUPERHEATER. JOHN E. WEEKS, Three Rivers, Mich. Filed Sept. 24, 1915. Serial No. 52,441. (Cl. 122—467.)



1. The combination with a steam boiler for a smoke box, of bosses formed on said box provided with threaded bores, positioning screws working in said bores and a drum provided with sockets arranged within said smoke box adapted to receive the ends of said positioning screws.

2. The combination with a steam boiler having a smoke box, of a drum arranged within the smoke box provided with a plurality of sockets, a plurality of positioning screws carried by the boiler having their ends arranged within said sockets for positioning said drum within said smoke box.

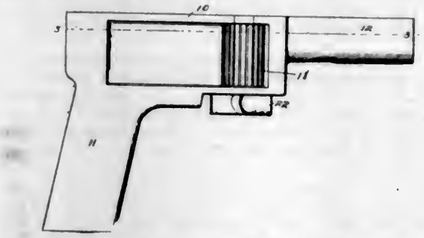
3. The combination with a steam boiler having fire tubes and a smoke box, of a drum provided with fire tubes arranged within said smoke box, said drum being provided with sockets, means for spacing said drum from the tube sheet of the boiler, and positioning screws carried by the casing of the smoke box working within said sockets.

4. The combination with a steam boiler having fire tubes and a smoke box, of a superheating drum disposed within said smoke box having horizontally disposed fire tubes, said drum being provided with sockets, means for spacing said drum from the tube sheet of the boiler, and a plurality of positioning screws extending through the wall of the smoke box having their ends mounted within said sockets for positioning said superheater within said smoke box.

5. The combination with a steam boiler having horizontally disposed fire tubes and a smoke box at one end thereof, of a drum disposed in said smoke box provided with horizontally disposed fire tubes, a series of independently adjustable supports for supporting said drum in said smoke box with the fire tubes thereof in alinement with the fire tubes of the boiler, said drum having a vertically disposed partition arranged centrally therein between the fire tubes thereof, the ends of said partition being bent outwardly in opposite direction to provide flanges for securing said partition within said drum to the top and bottom thereof, said partition being provided with a series of openings adjacent the bottom affording communication between the two compartments, formed by said partition, one of said compartments being provided with an outlet extending from the upper end thereof and the other compartment being provided with an inlet of a larger diameter than the outlet.

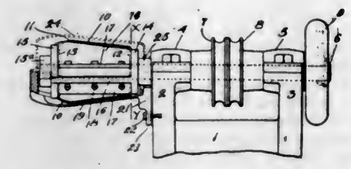
1,190,494. TOY PISTOL. FRANK C. WEGENER, Des Moines, Iowa. Filed Nov. 8, 1915. Serial No. 60,953. (Cl. 46—46.)

1. A toy pistol comprising a body portion formed complete of a single piece of material such as wood, and comprising a stock, a handle, a barrel portion, said stock portion being provided with a relatively large recess closed at the top, bottom and one side, and open at the other side, the closed side being formed of a thin layer of the material of which the body is made, and capable of serving as a sounding board, a detonator strip fixed at one end within said recess and formed of a wide vertically arranged piece of resilient material, a toothed cylinder rotatably mounted in the forward end of said recess and yieldingly engaged by the front end of said strip, said strip and the adjacent sounding board being arranged substantially parallel and close to each other, and a trigger device for rotating said toothed cylinder.



2. A toy pistol comprising a body portion formed complete of a single piece of material such as wood, and comprising a stock, a handle, a barrel portion, said stock portion being provided with a relatively large recess closed at the top, bottom and one side, and open at the other side, the closed side being formed of a thin layer of the material of which the body is made, and capable of serving as a sounding board, a detonator strip fixed at one end within said recess and formed of a wide vertically arranged piece of resilient material, a toothed cylinder rotatably mounted in the forward end of said recess and yieldingly engaged by the front end of said strip, said strip and the adjacent sounding board being arranged substantially parallel and close to each other, said cylinder being provided with an angular opening extending vertically through it, a trigger device comprising a shaft extended through the stock from the cylinder and fixed to it, whereby up and down movements of the shaft are prevented by the cylinder within the recess, and a series of trigger members at the lower end of said shaft extending horizontally outwardly from it, said parts being so arranged that a single movement of one of the trigger members by the operator's finger may result in moving a number of the cylinder teeth past the detonator strip, for the purpose stated.

1,190,495. SOLE-PLANING MACHINE. WINSLOW I. WENTWORTH, Brockton, Mass. Filed July 8, 1912. Serial No. 708,169. (Cl. 69—1.)



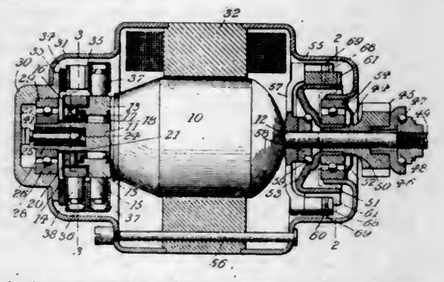
1. In a machine for planing the grain side of soles, means to plane the surface of a sole, comprising a conical cutter having a plurality of cutting blades, each blade having a straight cutting portion adapted to plane out protuberances on said sole surface, and a curved cutting portion adapted to plane out depressions in the sole surface, means to rotate the cutter, and a work rest closely adjacent the line of rotation of said cutters and conforming substantially with the straight and curved cutting portions thereof.

2. In a machine for planing the grain side of soles, means to plane the surface of a sole, comprising a conical cutter having a plurality of cutting blades, each blade having a straight cutting portion adapted to plane out protuberances on said sole surface, and a curved cutting portion adapted to plane out depressions in the sole surface, a guard for each cutter closely adjacent the cutting edge of each blade and of substantially the same contour therewith, means to secure the cutting blades and guards in adjusted position relatively with each other, means to rotate the cutter and guards, and a workrest closely adjacent the line of rotation of said cutters and conforming substantially with the straight and curved cutting portions thereof.

3. A sole planing machine having a rotatable shaft, a plurality of planing blades, means on said shaft to carry the planing blades, each blade having a straight cutting edge and a curved cutting edge, a guard adjacent to each blade and of corresponding contour, means to adjust each blade and guard relatively to each other, and a workrest comprising two members arranged tangentially to the path of operation of the blades, said work-rest being adjustable toward and from the path of movement of the blades, and each being substantially of corresponding contour to the cutting edge of the blades.

4. In a machine for planing the grain side of soles, means to plane the surface of a sole, comprising a conical cutter having a plurality of cutting blades, each blade having a straight cutting portion adapted to plane out protuberances on said sole surface, and a curved cutting portion adapted to plane out depressions in the sole surface, means to rotate the cutter, means to prevent the cutters gouging into the leather during the planing action, and a work rest closely adjacent the line of rotation of said cutters and conforming substantially with the straight and curved cutting portions thereof.

1,190,496. CENTRIFUGAL SPEED-REGULATOR FOR DYNAMOS. PERRIN B. WHITNEY, New York, N. Y., assignor to Mesinger-Whitney Electric Company, Inc., New York, N. Y. Filed Jan. 21, 1915. Serial No. 3,520. (Cl. 74—45.)



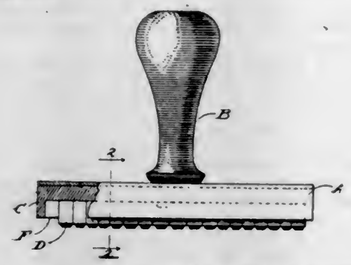
1. A speed regulator for dynamos comprising an armature having a shaft, a hub embracing the shaft, a driving pinion on the hub, a ball bearing between hub and shaft, a clutch drum mounted on the hub, a housing encompassing the drum, a second ball bearing between drum and housing, a spider mounted on the shaft, a third ball bearing between the spider and drum and a plurality of spring-influenced jaws pivoted to the spider and adapted to engage the drum.

2. A speed regulator for dynamos comprising an armature having a shaft, a driving member loosely mounted thereon, a clutch drum fast on the driving member, a spider mounted on the shaft, jaws pivoted to said spider and adapted to engage the clutch drum, said jaws having apertured and nicked webs at their free ends, screw bolts passing loosely through said webs, wedge-shaped nuts mounted on the screw bolts and adapted to engage the web nicks, and springs that connect the screw bolt of any one jaw with the pivot of the adjoining jaw.

1,190,497. TYPE-HOLDER FOR STAMPS. MAURICE L. WILLARD, Chicago, Ill., assignor to Superior Type Company, a Corporation of Illinois. Filed Jan. 2, 1915. Serial No. 134. (Cl. 101—58.)

1. In a stamp for printing and marking purposes, the combination with a chase having a channel therein the

opposing walls of which are made of rubber to receive type between them, the width of said channel being slightly greater adjacent its top, of a plurality of type removably fitting between the rubber walls of said channel with their upper ends lying within the widened portion of said channel.



2. In a stamp for printing and marking purposes the combination with a chase having a channel therein open at its bottom and formed between parallel rubber walls, the walls of said channel diverging at their upper edges, of a plurality of rubber type of a shape to closely fit between the parallel walls of the channel and to project below the chase in alinement with the channel, and a holder within which said chase is supported.

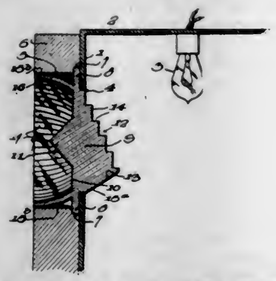
3. In a stamp for printing and marking purposes, the combination with a chase formed of rubber and having a channel therein to receive type, of ribs projecting into said channel from the side walls thereof, and a plurality of type of a shape to closely fit between the supporting walls of said channel and to be retained therein by said ribs.

4. In a stamp for printing and marking purposes, the combination with a chase formed of non-metallic resilient material having a channel therein open at its bottom and formed between parallel walls, the walls of said channel diverging at their upper edges, of ribs projecting into said channel from the side walls thereof, and a plurality of type of a shape to closely fit between the supporting walls of said channel and to be retained therein by said ribs.

5. In a stamp for printing and marking purposes, the combination with a chase formed of rubber material, having a channel therein open at its bottom and formed between parallel walls, the walls of said channel diverging at their upper edges, of ribs projecting into said channel from the side walls thereof, a plurality of type of a shape to closely fit between the supporting walls of said channel and to be retained therein by said ribs, and a holder within which said chase is supported.

[Claims 6 to 8 not printed in the Gazette.]

1,190,498. DIFFUSION-LENS FOR ELECTRIC SIGNS AND THE LIKE. HARRY STANFORD WILLIAMS, Ithaca, N. Y., assignor to Duane G. Hunt, Salt Lake City, Utah. Filed Nov. 15, 1915. Serial No. 61,658. (Cl. 240—93.)



1. A lens comprising a substantially cylindrical transparent body whose rear end is positioned obliquely of its axis and stepped, and a reflecting medium surrounding the curved side of the body and having its active surface facing the center of said body.

2. A lens comprising a substantially cylindrical transparent body whose rear end is formed by a pair of joined surfaces converging rearwardly from diametrically opposite points on the curved side of the body, one of said surfaces being stepped, and a reflecting medium covering the other surface and the curved side of the body, said medium having its active surface facing the center of said body.

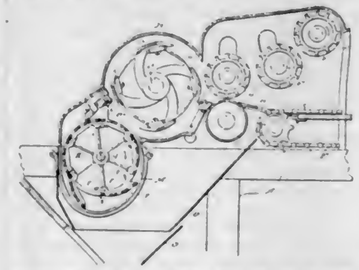
3. A lens formed of strictly transparent material and having a flat circular front end through which light rays may pass freely, said front end being provided at its axis with an outstanding frosted cone formed integrally therewith.

4. A lens formed of strictly transparent material having a flat front end through which light rays may pass freely, said end being provided at its edge with a circular reflector extending forwardly therefrom and increasing in diameter from its rear to its front end, and an outstanding frosted cone formed integrally with said front end of the lens at the axis thereof.

5. A lens comprising a substantially cylindrical transparent body whose rear end is positioned obliquely of its axis and stepped, a reflecting medium applied to the curved side of the body and having its active surface facing the center of said body, and a circular reflector extending forwardly from the front edge of the lens and increasing in diameter from its rear to its front end.

[Claims 6 to 9 not printed in the Gazette.]

1,190,499. COMMINUTING DEVICE. FRED M. WOODS, Freeport, Ill., assignor to Stover Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed Oct. 14, 1915. Serial No. 55,828. (Cl. 146—29.)



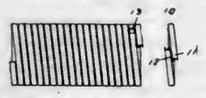
1. In devices of the class described, the combination with comminuting devices, of a lower roll having a fixed axis and a yielding roll co-acting with the first to deliver material to said devices, a conveyer for bringing material near said rolls, an inclined plate leading upwardly from said conveyer to the upper side of the lower roll, and a yielding roll co-acting with the plate to raise the lower portion of the material and depress the upper portion, delivering the whole between said co-acting rolls.

2. In apparatus of the class described, the combination with a casing having a peripheral inlet passage and a peripheral discharge opening, of comminuting devices within the cylinder or casing, and a perforated cylinder rotating in said opening and permitting comminuted material to pass therefrom while barring the escape of coarser material.

3. In apparatus of the class described, the combination with a casing having a lateral discharge opening, of comminuting devices within the casing, a perforated cylinder fitting and rotating in said opening and provided with peripheral sections arranged to remain closed when at said opening and to open when at the opposite part of their common path.

4. In apparatus of the class described, the combination with a casing having a lateral discharge opening, of comminuting devices within the casing, a perforated cylinder fitting and rotating in said opening and provided with stave-like sections each pivoted to swing upon an axis parallel to the axis of the cylinder and arranged to be closed when at said opening and to open when at a lower point in their common path.

1,190,500. METHOD OF MAKING PISTON PACKING-RINGS. CHARLES C. ALLEN, Kansas City, Mo. Filed Sept. 7, 1915. Serial No. 49,298. (Cl. 153—64.)



1. The herein described method of making piston packing rings, consisting in forming the body of the ring spirally, and with terminal parts extending past each other forming parts of a complete joint in the reverse outer portions of said terminal parts, and springing the said parts of said joint in opposite directions past each other and into constant spring and joint forming engagement.

2. The herein described method of making piston packing rings, consisting in making the body of the ring from a spiral coil, forming the parts of a joint in the reverse outer portions of the terminal portions of the coil opposed to each other and moving forcibly said parts in opposite directions against the tension of the body of the coil into joint-forming positions and spring engagement with each other.

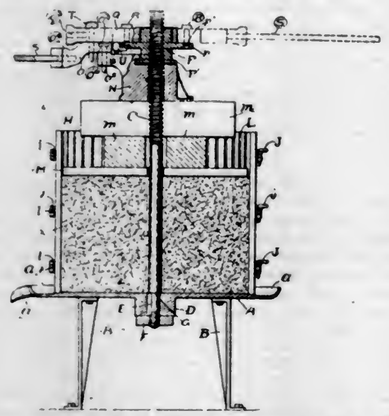
3. The herein described method of making piston packing rings, consisting in forming a ring from a normally spiral coil, making reverse bearing surfaces in the outer portions of the terminal parts of the coil opposed to each other and moving forcibly said parts against the tension of the said coil in opposite directions past each other into joint forming positions and into constant spring engagement.

4. The herein described method of making piston packing, consisting in forming a ring spirally from a metal body, with terminal parts extending past each other, forming rabbets in the outer portions of the said terminal parts, then applying torsion to the said parts of the coil and moving said parts in opposite directions past each other into constant spring engagement and against the tension of said spiral body.

5. The herein described method of making piston packing, consisting in forming a ring from a spiral sectional part of a coil, whose terminal parts extend past each other, forming rabbets in the said terminal parts, and shoulders in a parallel plane with the lateral surfaces of the ring and moving said parts in opposite directions past each other against the torsion of the coil and into constant spring engagement.

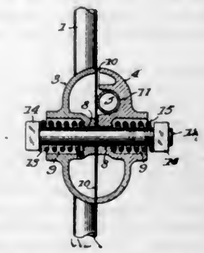
[Claim 6 not printed in the Gazette.]

1,190,501. PRESS. BENJAMIN AMIRANT, Chicago, Ill. Filed Nov. 22, 1915. Serial No. 62,774. (Cl. 100—44.)



In a press, provided with a stationary, vertical, screw threaded shaft, and a pressure board, operative means to move said board comprising a head, longitudinally movable and a screw threaded nut rotatably movable on said shaft, said nut provided with an annular flange having spaced apertures therein and with a cylindrical portion, in combination with a movable member provided with spaced apertures adapted to register with the apertures in said flange, pivotally mounted concentric to said nut and bolts loosely mounted in said apertures, said bolts beveled on the lower ends thereof and adapted when oppositely placed, to join said movable member and said nut and when similarly placed to join said member and said nut when said member is moved in one direction.

1,190,502. SUPPORT. ROBERT ANDERSON, Racine, Wis. Filed Jan. 21, 1916. Serial No. 73,295. (Cl. 248—8.)



1. In a support the combination with two arms, of a clamp composed of two similar and pivotally connected jaws having opposing friction faces each formed at a distance from and transversely to the pivot axis of the jaws with a recessed seat for one of the arms which is held herein in slidable engagement with the opposing friction face of the other jaw, each jaw with the arm carried thereby being angularly adjustable relative to the other jaw and arm.

2. In a support the combination with two arms, of a clamp composed of two similar pivotally connected jaws having opposing friction faces yieldable away from each other and each formed at a distance from and transversely to the pivot axis of the jaws with a recessed seat for one of the arms, which is held therein in slidable engagement with the opposing friction face of the other jaw, each jaw and the arm carried thereby being angularly adjustable relative to the other jaw and arm.

3. In a support the combination with two arms, of a clamp composed of two similar pivotally connected jaws having opposing friction rims concentric with the pivot axis of the jaws, yieldable away from each other, and each formed at a distance from and transversely to the pivot axis of the jaws with a recessed seat for one arm, which is held therein in slidable engagement with the opposing friction rim of the other jaw, each jaw with the arm carried thereby being angularly adjustable relative to the other jaw and arm.

4. In a support the combination of a main supporting arm, an adjustable arm and a clamp composed of two similar members pivotally connected together by a bolt and having opposing bearing faces and recessed seats at a distance from and transverse to the pivot bolt, said seats being adapted to receive said arms each of which projects from its seat in one clamp member beyond the bearing face of that member, and a spring interposed between a bearing on the pivot bolt and the adjacent clamp member and adapted to hold each arm in frictional engagement with its seat in one member and with the bearing face of the other member.

5. In a support the combination of a main supporting arm, an adjustable arm and a clamp composed of two similar members having axially alined bolt holes and spring sockets, a bolt passing through said holes and sockets and pivotally connecting said members, and springs interposed between bearings on the bolt and the inner ends of said sockets and adapted to hold the clamp

members in yielding engagement with said arms, the clamp members being provided with opposing curved bearing faces and at a distance from and transverse to the pivot bolt with recessed seats to receive said arms each of which projects from its seat in one clamp member slightly beyond the bearing face of that member.

1,190,503. CHECK-BOOK. PAUL H. BENNETT, Paris, Tex. Filed Jan. 20, 1916. Serial No. 73,158. (Cl. 11—11.)



1. The combination with cover lids one of which has a pocket formed in its inner face, of a binder receiving stubs of checks, and a tongue of comparatively stiff material secured to the back of said binder and entering said pocket.

2. The combination with rigid cover lids, one of which has on its inner face a pocket, of a binder secured to the stubs of checks and adapted to fold over the same when the checks are detached and a stiff tongue secured to the back of said binder and entering the pocket, and fastening means securing the binder to the stubs and the tongue to the binder.

3. In a check book cover, lids united by a flexible back, pivoted sockets carried by one of said lids, a pocket being formed in the same lid, a binder for check stubs, and a tongue secured to said binder and entering the pocket, the corners of the stubs resting in said sockets when said tongue has been inserted in the pocket, as and for the purpose set forth.

1,190,504. SHIRT. ALEX BERNSTEIN, Chicago, Ill. Filed Nov. 16, 1914. Serial No. 872,335. (Cl. 2—41.)



In a device of the class described, a shirt body, upstanding widely separated tabs at the front and rear of the neck portion thereof, and elastic V-shaped gussets inserted in the shirt neck between said front and rear tabs.

1,190,505. PREPARED ROOFING. HAROLD E. BOARDMAN, Medford, Mass. Filed Nov. 2, 1915. Serial No. 59,209. (Cl. 91—68.)



1. A grit surface prepared roofing having its said grit surface composed of artificially prepared hard spheroidal particles of uniform size.

2. A grit surface prepared roofing having its said grit surface composed of hardened particles molded from a plastic mass consisting of a mixture of silicate of soda and a powdered substance containing silica.

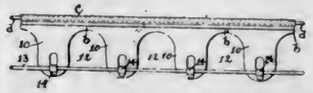
3. A grit surface prepared roofing having its said grit surface composed of hardened particles molded from a plastic mass consisting of a mixture of silicate of soda a powdered substance containing silica and a pigment.

4. A grit surface prepared roofing having its said grit surface composed of hardened particles molded from a plastic mass consisting of a mixture of silicate of soda and powdered talc.

5. A grit surface prepared roofing having its said grit surface composed of hardened particles molded from a plastic mass consisting of a mixture of silicate of soda, powdered talc and a pigment.

[Claim 6 not printed in the Gazette.]

1,190,506. METAL HOOP. EDWARD I. BRADDOCK, Winchester, Mass., assignor, by direct and mesne assignments, to Lamb & Nash Company, Kittery, Me., a Corporation of Maine. Filed Nov. 14, 1914. Serial No. 872,245. (Cl. 217—91.)



1. A metal hoop comprising a sheet metal member provided at one edge with a fold to form a hollow bead and having extended from its unfolded edge or portion a plurality of arms spaced apart, a reinforcing wire within the hollow bead, said hollow bead and reinforcing wire having their ends welded together, and a wire member secured to said arms and having its ends welded together, substantially as described.

2. A metal hoop comprising a sheet metal member provided at one edge with a fold to form a hollow bead and having extended from its unfolded edge or portion a plurality of arms spaced apart and provided with bent fingers integral with said arms, a reinforcing wire within the hollow bead, said hollow bead and reinforcing wire having their ends welded together, and a wire member attached to said arms by said bent fingers and having its ends welded together, substantially as described.

3. A metal hoop comprising a sheet metal member provided at one edge with a fold to form a hollow bead and having extended from its unfolded edge or portion a plurality of arms spaced apart, a reinforcing wire within the hollow bead, said hollow bead and reinforcing wire having their ends welded together, and a wire member secured to said arms and having its ends secured together.

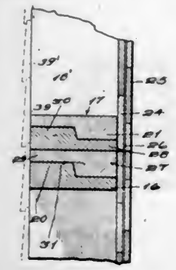
4. A metal hoop comprising a sheet metal member provided at one edge with a fold to form a hollow bead and having extended from its unfolded edge or portion a plurality of arms spaced apart, a reinforcing wire within said hollow bead having its ends welded together, and a wire member secured to said arms and having its ends secured together, substantially as described.

5. A metal hoop comprising a sheet metal member provided at one edge with a fold to form a hollow bead and having extended from its unfolded edge or portion a plurality of arms separated by spaces of substantially the same width and shape as the said arms, a reinforcing wire within the hollow bead, said hollow bead and reinforcing wire having their ends welded together, and a wire member of greater length than the reinforcing wire and secured to said arms and having its ends welded together to form a wire hoop of greater diameter than the wire hoop formed by the reinforcing wire.

[Claims 6 and 7 not printed in the Gazette.]

1,190,507. SILO. AUGUST T. BRAMER, Monett, Mo. Filed Apr. 28, 1915. Serial No. 24,469. (Cl. 217—4.)

1. A wooden knock-down silo; comprising a lower unit consisting of detachable casing-sections, provided at their tops with upstanding flanges starting at the outer sides thereof and extending toward their inner sides and terminating near and spaced a substantial distance from such inner sides to provide an interior recess; an upper unit consisting of detachable casing-sections, provided at their bottoms with depending flanges starting at their inner sides and extending outwardly and terminating near and spaced a substantial distance from such outer sides to provide an exterior recess; and a continuous locking ring arranged between the lower and upper units, and provided upon its bottom with a depending flange starting at the inner side thereof and extending toward its outer side and terminating near and spaced a substantial distance from such outer side, and upon its top with an upstanding flange starting at the outer side thereof and extending toward the inner side and terminating near and spaced a substantial distance from the inner side, the flanges of the locking ring interfitting with the flanges of the upper and lower casing-sections.

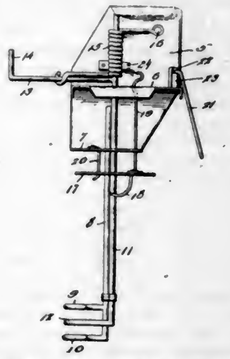


2. A wooden knock-down silo; comprising a lower unit consisting of detachable casing-sections, provided at their tops with upstanding flanges starting at the outer sides thereof and extending toward their inner sides and terminating near and spaced at substantial distance from such inner sides to provide an interior recess; an upper unit consisting of detachable casing-sections, provided at their bottoms with depending flanges starting at their inner sides and extending toward their outer sides and terminating near and spaced a substantial distance from such outer sides to provide an exterior recess; and a continuous locking ring arranged between the lower and upper units, comprising lower and upper strips which are secured together, the lower strip being provided upon its bottom with a depending flange starting at the inner side thereof and extending toward its outer side and terminating near and spaced a substantial distance from such outer side, and the upper strip being provided with an upstanding flange starting at the outer side thereof and extending toward its inner side and terminating near and spaced a substantial distance from such inner side, the flanges of the locking ring interfitting with the flanges of the upper and lower casing-sections.

3. A wooden knock-down silo; comprising a lower unit consisting of detachable casing-sections, each casing-section being provided at its top with an upstanding flange arranged near its outer side and spaced a substantial distance from its inner side, and sheathing boards secured to the inner side of each casing-section and extending upwardly beyond the upper end thereof to coöperate with the flange for providing a recess having its sides closed: an upper unit consisting of detachable casing-sections, each casing-section being provided at its bottom with a depending flange arranged near its inner side and spaced a substantial distance from its outer side, and sheathing boards secured to the inner side of each casing-section and extending downwardly below the same for a substantial distance; and a continuous locking ring provided at its bottom with a depending flange arranged near its inner side and spaced a substantial distance from its outer side, and at its top with an upstanding flange arranged near its outer side and spaced a substantial distance from its inner side, the flanges of the locking ring interfitting with the flanges of the casing-sections and the ends of the sheathing boards overlapping the locking ring.

4. A wooden knock-down silo, comprising a lower unit of detachable casing-sections provided at their tops with upstanding flanges forming in effect a continuous flange, an upper unit of detachable casing-sections having depending flanges forming in effect a continuous flange and disposed in a different plane from the flanges of the lower casing-sections, and a locking ring having depending and upstanding flanges disposed in different planes and adapted to interfit with the flanges of said casing-sections.

1,190,508. ANIMAL-TRAP. HARRY E. BROWN, Salem, Oreg. Filed Apr. 24, 1916. Serial No. 93,228. (Cl. 43—23.)

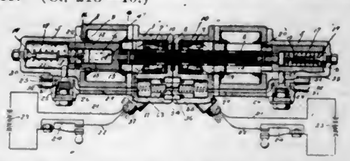


1. An animal trap comprising an oscillatory spring-actuated impaling member, a crank arm carried thereby, a pivoted trigger wire, a fixed abutment behind which the end of said trigger wire engages, a slidably mounted releasing rod for dislodging the trigger wire when moved in either direction and means carried by said rod whereby the animal actuates the same.

2. A device of the character described, comprising a support, fixed impaling members supported therefrom, an oscillatory impaling member mounted upon said support and co-acting with the fixed impaling members, a crank arm carried by the oscillatory impaling member, a spring for actuating the oscillatory impaling member, a trigger wire and means for dislodging said trigger wire to permit the spring to act, said means comprising a flange carried by the support, a releasing rod slidable through said flange and operable to release the trigger when moved in either direction, a contact plate carried by the releasing rod and a guide rod carried by the flange with which said contact plate slidably engages.

3. A device of the character described, comprising a support, fixed impaling members supported therefrom, an oscillatory impaling member mounted upon said support and co-acting with the fixed impaling members, a crank arm carried by the oscillatory impaling member, a spring for actuating the oscillatory impaling member, a trigger wire and means for dislodging said trigger wire to permit the spring to act, said means comprising a flange carried by the support, a releasing rod slidable through said flange and operable release trigger when moved in either direction, a contact plate carried by the releasing rod and a guide rod carried by the flange with which said contact plate slidably engages and a bait retaining element carried by the contact plate.

1,190,509. ELECTRIC TRAIN-WIRE COUPLING. THOMAS R. BROWN, Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Mar. 11, 1914. Serial No. 823,969. (Cl. 213—40.)



1. In an electric train line coupling, the combination with a coupling head containing a plurality of fixed contacts adapted to be connected to train line circuits and a movable carrier provided with contacts, of electrically controlled means for projecting said carrier to electrically

connect the corresponding fixed contacts of counterpart coupling heads through the contacts of the movable carrier.

2. In an electric train line coupling, the combination with a coupling head containing a plurality of fixed contacts adapted to be connected to train line circuits and a movable carrier provided with corresponding contact bars, of an electric solenoid for projecting said carrier to electrically connect the corresponding fixed contacts of counterpart coupling heads through the contact bars of the movable carrier.

3. In an electric train line coupling, the combination with a coupling head containing a plurality of fixed contacts adapted to be connected to train line circuits and a movable carrier provided with corresponding contact bars, of an electric solenoid for projecting said carrier to electrically connect the corresponding fixed contacts of counterpart coupling heads through the contact bars of the movable carrier and means for returning the carrier to normal position.

4. In an electric train line coupling, the combination with a coupling head containing a plurality of fixed contacts adapted to be connected to train line circuits and a movable carrier provided with corresponding contact bars, of an electric solenoid for projecting said carrier to electrically connect the corresponding fixed contacts of counterpart coupling heads through the contact bars of the movable carrier and a spring for returning the carrier to normal position.

5. In an electric train line coupling, the combination with a coupling head containing a plurality of fixed contacts adapted to be connected to train line circuits and a movable carrier provided with corresponding contact bars, of an electric solenoid for projecting said carrier to electrically connect the corresponding fixed contacts of counterpart coupling heads and to push back the carrier in the adjacent coupling head.

[Claims 6 to 11 not printed in the Gazette.]

1,190,510. PROCESS OF FORMING ARTICLES FROM PLASTIC MATERIAL. WILLIAM J. BURNS, Bridgeport, Conn., assignor to The Peerless Vulcanite Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 18, 1916. Serial No. 92,035. (Cl. 18—48.4.)

1. The process of forming articles from plastic material which consists in crushing the material into particles, depositing a layer of the particles upon a mold, subjecting the material to heat sufficient to expel the gases and vapor, depositing one or more additional layers of the crushed material upon the material in the mold, subjecting each additional deposit of the crushed material to heat to expel the gases and vapor, and then subjecting the material to pressure to give it the required form.

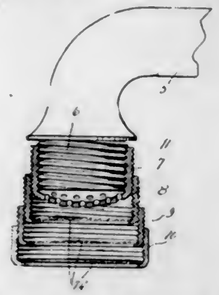
2. The process of forming articles from plastic material which consists in crushing the material into particles, depositing the material in layers upon a mold, expelling the gases and vapors from each layer of the material by the application of heat, and then subjecting the material to pressure.

1,190,511. FILTER. EDNA E. BUSCHER, New Harmony, Ind. Filed Mar. 14, 1916. Serial No. 84,188. (Cl. 210—6.)

1. In a device of the class described, a plurality of strainer members, an exteriorly and interiorly threaded flange on each of said members, the flange of each member being adapted to be engaged and inclosed by the flange of the next adjacent member, and a strainer in each of said members, substantially as described.

2. In a device of the class described, the combination with a threaded faucet, of a cap, an annular interiorly and exteriorly threaded flange extending from said cap and adapted to engage over the threads of said faucet, said cap being provided with openings, an interiorly and exteriorly threaded ring adapted to engage over and inclose said cap, and a wire gauze closing one end of said ring, substantially as described.

3. In a device of the class described, a cap, a head on said cap, an annular interiorly and exteriorly threaded flange on said cap, the head of said cap being provided



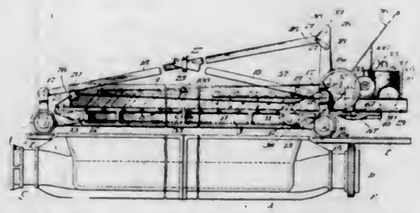
with apertures, a plurality of interiorly and exteriorly threaded rings adapted to be nested each with the other and with said cap, and each ring being provided with a diaphragm of wire mesh, substantially as described.

1,190,512. ACID-RESISTING STRAINER FOR SMELTERS. DONALD M. CAMERON, Lowell, Mass. Filed June 25, 1915. Serial No. 36,372. (Cl. 75—30.)



As an article of manufacture, an acid resisting strainer for smelters comprising a cylindrically-formed body closed at its upper end and composed of yarn, constructed of fiber, the striations of which are longitudinal and free of scale-like formation.

1,190,513. COVER FOR SINTERING-PANS. FRANK D. CARNEY and RICHARD V. MCKAY, Steelton, Pa. Filed Apr. 21, 1914. Serial No. 833,514. (Cl. 266—21.)



1. The combination with a cover for sintering pans, and wheeled axles, of levers pivotally connected on the cover and connected to the axles for raising and lowering the cover, said levers being connected together for simultaneous operation, whereby the cover can be raised and lowered from a single operating position.

2. The combination with a cover for sintering pans, of wheeled axles, links connecting the axles to the cover and levers pivoted on the cover, and links connecting one end of the levers to the axles.

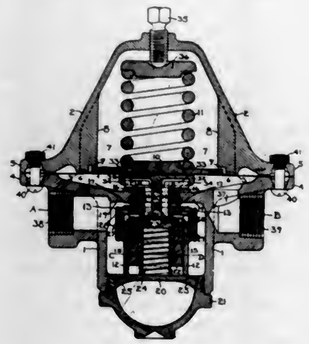
3. The combination with a cover for sintering pans, and wheeled axles, of a pair of levers pivotally mounted on each end of said cover, the two levers on each side of the cover arranged to cross each other, a sliding connection between the levers at their crossing points, and a link for connecting one end of each lever to an axle.

4. The combination with wheeled axles, of a sintering pan cover between the axles, links connecting the cover and axles, levers pivoted on the cover and links connecting the levers and axles.

5. The combination with a sintering pan cover, wheeled axles, lever mechanism for raising and lowering the cover, of a pivoted standard carried by the cover, power mechanism also carried by the cover, and a flexible connection between the lever mechanism and power mechanism and guided over said standard.

[Claims 6 to 9 not printed in the Gazette.]

1,190,514. PRESSURE REDUCING AND REGULATING VALVE. ARTHUR W. CASH, Decatur, Ill. Filed Dec. 17, 1915. Serial No. 67,421. (Cl. 50—13.)



1. In a pressure reducing and regulating valve, the combination of upper and lower casing portions, a diaphragm adapted to be held by and form an impervious division between said casing portions, inlet and outlet chambers within said lower casing portion, a dividing wall having a port therethrough between said inlet and outlet chambers, a valve piston cylinder having an integral seat therein, a slidably mounted valve within said piston cylinder adapted to imperviously close against said integral seat, a spring tending to press said valve to a closed position against said seat, a plurality of restricted ports through the wall of said piston cylinder communicating with said inlet chamber, in combination with compressible and resilient packing means adapted to form an impervious joint between the outside of the seat end of said valve piston cylinder and said dividing wall surrounding the port therethrough, means abutting and closing the end of said piston cylinder away from its seat end said means also serving to confine said slidably mounted valve and the spring in said valve piston cylinder, said abutting means further serving to hold said valve piston cylinder within said inlet chamber with the outside of the seat end of said piston cylinder in impervious contact with said dividing wall surrounding the port therethrough.

2. In a pressure reducing and regulating valve, the combination of upper and lower casing portions, a diaphragm adapted to be held by and form an impervious division between said casing portions, inlet and outlet chambers within said lower casing portion, a dividing wall having a port therethrough between said inlet and outlet chambers, a valve piston cylinder having an integral seat therein contained within said inlet chamber, the outside of the seat end of said valve piston cylinder adapted to be held in impervious contact with said dividing wall surrounding the communicating port between the said inlet and outlet chambers, a slidably mounted valve within said valve piston cylinder, a spring normally closing said valve against said integral seat in the direction of fluid flow, means for closing the end of said valve piston cylinder away from its seat end, restricted ports through the wall of said valve piston cylinder whereby the full initial fluid pressure will be within the cylinder when only a small volume of fluid is flowing, and a partially reduced initial pressure will be within the cylinder when a large volume of fluid is flowing.

3. In a pressure reducing and regulating valve, the combination of upper and lower casing portions imperviously separated by a diaphragm, inlet and outlet chambers in said lower casing portion, a dividing wall having a port therethrough separating said inlet and outlet chambers, a valve piston cylinder having an integral seat therein contained within said inlet chamber, the outside of the seat end of said valve piston cylinder adapted to be held in impervious contact with the dividing wall surrounding the communicating port between the said inlet and outlet chambers, a slidably mounted valve within said valve piston cylinder, a spring normally closing said valve against said integral seat in the direction of fluid flow, means for closing the end of said valve piston cylinder away from its seat end, restricted ports through the wall of said valve piston cylinder whereby the full initial fluid pressure will be within the cylinder when only a small volume of fluid is flowing, and a partially reduced initial pressure will be within the cylinder when a large volume of fluid is flowing.

4. In a pressure reducing and regulating valve, the combination of upper and lower casing portions imperviously separated by a diaphragm inlet and outlet chambers in said lower casing portion, a dividing wall having a port therethrough separating said inlet and outlet chambers, a valve piston cylinder having an integral seat therein contained within said inlet chamber, the outside seat end of said valve piston cylinder adapted to be held in impervious contact through intermediate compressible and resilient packing means, with the dividing wall surrounding the port therethrough, a slidably mounted valve within said valve piston cylinder, a spring normally closing said valve against said integral seat in the direction of the fluid flow, means for closing the end of said valve piston cylinder away from its seat end, restricted ports through the wall of said valve piston cylinder whereby the full initial fluid pressure will be within the cylinder when only a small volume of fluid is flowing, and a partially reduced initial pressure will be within the cylinder when a large volume of fluid is flowing, a screen surrounding the outer wall of said valve piston cylinder and supported thereby through the intermediary means of ribs so disposed as to hold the screen from immediate contact with said cylinder wall, whereby the screen may intercept and deflect any foreign matter within the fluid, to prevent obstruction of the restricted ports, and obstruction to the closing of the said slidably mounted valve within said valve piston cylinder.

5. In a pressure reducing and regulating valve, the combination of upper and lower casing portions, a diaphragm

imperviously separating said casing portions, inlet and outlet chambers in said lower casing portion, a dividing wall with a port therethrough between said inlet and outlet chambers, a valve cylinder providing therein a valve seat and a valve adapted to close with the fluid flow against said seat, means adapted to close the end of said valve cylinder and confining the said valve therein, together with restricted ports through the wall of said valve cylinder, a screen surrounding said valve cylinder wall and supported thereby adapted to prevent the passage of foreign matter to and through said restricted ports, and said valve cylinder adapted to be contained within said inlet chamber with the outside of the valve seat end of said valve cylinder in removable impervious contact with said dividing wall surrounding the port therein, together with an extended portion of said inlet chamber adapted to receive and hold foreign matter intercepted and deflected by said screen.

1,190,515. NECKTIE. HARRY A. CLARK, Des Moines, Iowa. Filed Aug. 31, 1914. Serial No. 859,543. (Cl. 2—84.)



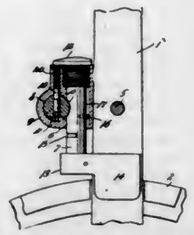
In a neck tie, a substantially upright neck tie portion, a transverse portion at the upper end thereof, projecting beyond the sides of said upright portion, an upright reinforcing member received within said upright portion of the neck tie, having a plurality of screw-threaded openings, said upright portion having openings arranged to register with said screw-threaded openings on one side thereof, and provided with eyelets, a fastening device comprising a screw-threaded shank adapted to extend through said eyelets and received in said openings, said shank having at its upper end a catch device and adapted to receive and hold the head of a collar button.

1,190,516. ERASER-CLEANER. LOGAN CLARK, Fort Collins, Colo. Filed Aug. 13, 1913. Serial No. 784,624. (Cl. 15—25.)



In an eraser cleaner, a cylindrical foraminated casing, supporting legs for the casing, a rotor mounted within the casing, a plurality of uniformly spaced arms extending radially from the rotor some of which are longer than others, strips connecting the free ends of the longest arms and arranged in closely spaced relation with the interior of the casing for engaging and agitating erasers within the casing, the shortest arms being arranged alternately with the other arms to constitute beaters for acting upon the erasers when agitated whereby to efficiently clean the erasers, a dust retaining receptacle removably associated with the bottom of the casing, said casing being provided with an opening in its upper surfaces to permit of the insertion of erasers, a removable closure for said opening, and a piece of nonforaminated material mounted upon one side of said casing for preventing chalk dust cleaned from the erasers from blowing therethrough.

1,190,517. LEVER-LOCKING DEVICE. CHESTER E. CLEMENS, Cleveland, Ohio. Filed June 5, 1913. Serial No. 771,809. (Cl. 79—90.)



1. The combination, with a sector and a lever movable relatively thereto, of a member slidably supported by said lever and adapted to engage the sector to prevent movement of the lever with respect thereto, means tending to move said member away from the sector, said member having a notch or recess, a lock comprising a rotary barrel which is intersected by said member and is notched to permit the movement of the same, the unrecessed portion of the barrel being adapted to enter the notch and retain the member in sector-engaging position, and means for rotating the barrel.

2. The combination, with a sector and a lever movable relatively thereto, of a member slidably mounted on said lever and adapted to engage the sector to prevent movement of the lever with respect thereto, a spring tending to move said member away from the sector, said member having a bolt provided with a recess, a lock comprising a rotary barrel which is intersected by said bolt and is recessed to prevent the movement of said bolt, the unrecessed portion of the barrel being adapted to enter the bolt notch and retain the bolt in sector-engaging position, and a spring tending to rotate the barrel.

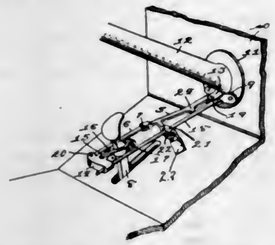
3. The combination, with a sector and a lever movable relatively thereto, of a member slidably mounted with respect to the lever and adapted to engage the sector to prevent movement of the lever, means normally holding said member out of engagement with the sector, a rotary cylindrical barrel, a bolt carried by the member, the cylindrical barrel being arranged at substantially right angles to and intersecting the path of movement of the bolt and having a notch or recess in a portion thereof to permit the movement of the bolt when said recess is in register with said bolt and the bolt having a cylindrical recess adapted to receive the cylindrical body of the barrel when the member is in sector-engaging position, a spring tending to rotate the barrel into bolt-engaging position, and key operated means for rotating the barrel to bring its notch into register with the bolt.

4. The combination, with a sector and a lever movable relatively thereto, of a casing mounted on said lever, said casing having a guideway and a cylindrical bore, at right angles to and intersecting each other, a bolt reciprocably mounted in the said guideway, and having an extension adapted to engage the sector, a spring surrounding the bolt and tending to hold the said extension out of engagement with the sector, a lock barrel rotatably mounted in said bore and having a portion thereof provided with a notch or recess for the adjacent surface of the bolt and said bolt having a cylindrical recess in the portion thereof which is presented toward the barrel and which is adapted to receive the said barrel to thereby lock the said bolt and extension in sector-engaging position, a spring adapted to rotate the barrel when the notch or recess in the bolt is in register with the cylindrical bore, means for locking the barrel in bolt-engaging position, and stops for limiting the rotary movement of the barrel.

5. The combination, with a sector and a lever movable relatively thereto, of a casing mounted on said lever, said casing having a guideway and a cylindrical bore, at right angles to and intersecting each other, a sector-engaging member mounted in the said guideway, means tending to hold the member out of engagement with the sector, a lock barrel rotatably mounted in said bore and having a portion thereof provided with a notch or recess for the adjacent surface of the said member and said member having a cylindrical recess in the portion thereof which is presented toward the barrel and which is adapted to receive the said barrel to thereby lock the said member in sector-engaging position, a spring adapted to rotate the barrel when the notch or recess in the member is in register with the cylindrical bore, means for locking the barrel in member engaging position, and stops for limiting the rotary movement of the barrel.

[Claims 6 to 15 not printed in the Gazette.]

1,190,518. LOCK FOR AUTOMOBILES. CHARLES E. COOP, Oklahoma, Okla. Filed Mar. 24, 1916. Serial No. 86,509. (Cl. 70—90.)



1. In a device of the class described, a support, a straight rod pivoted to the support, a block mounted slidably on the rod and adapted to be attached to a lever, a brace having one of its ends pivoted to the support and its other end to the block, said brace having a pivot joint intermediate its ends whereby it may be swung from bracing position and allow movement of the block on the rod, and means for limiting the movement of said pivot joint toward the rod.

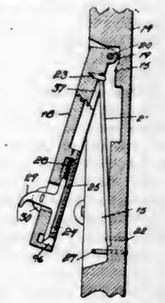
2. In a device of the class described, a support, a straight rod pivoted to the support, a block mounted slidably on the rod and adapted to be attached to a lever, a brace having one of its ends pivoted to the support and its other end to the block, said brace comprising two link members engaging each other by a pivot joint, one of the link members having a projection adapted to abut the rod and thereby limit the movement of the pivot joint of said link members toward said rod.

3. In a device of the class described, a support, a straight rod pivoted to the support, a block mounted slidably on the rod and adapted to be attached to a lever, a brace having one of its ends pivoted to the support and its other end to the block, said brace comprising two link members engaging each other by a pivot joint, one of the link members having a bifurcated lug adapted to straddle the rod, and having a projection adapted to abut the rod to limit the movement of the pivot joint of said link members toward said rod.

1,190,519. SLIDING-DOOR FASTENER. FINIS W. CREAGER and ORA L. WILSON, Cecilia, Ky. Filed Mar. 31, 1916. Serial No. 87,976. (Cl. 70—102.)

1. In a lock of the character described, the combination with a support, of a door-bolt adapted for movement with relation to the support, a bolt-spring connected with the support and adapted to engage with the door-bolt and to move laterally with relation thereto to release it, a control member pivotally connected with the support and having connection with the bolt-spring to move it laterally, and means to hold the control member in the closed position.

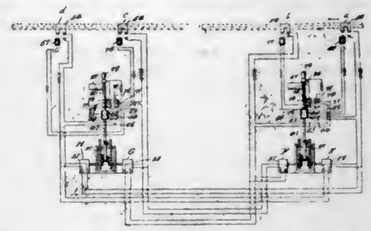
2. In a lock of the character described, the combination with a support, of a door-bolt adapted for movement with relation thereto, a bolt-spring connected with the support to engage with the door-bolt and to be moved laterally to disengage the door-bolt, a control member pivotally connected with the support and having connection with the bolt-spring, a stationary member secured to the support, and a latch bolt carried by the control member to engage with the stationary member.



3. In a lock of the character described, the combination with a vertical support, of a horizontal reciprocatory door-bolt movable with relation thereto, an upstanding bolt-spring having its lower end secured to the support and its upper end adapted to move laterally, a vertically swinging control member having its upper end pivotally connected with the support and connected with the bolt-spring near its pivot, a stationary apertured member secured to the support near the lower end of the control member, a spring pressed latch bolt carried by the control member to engage the apertured stationary member, and means to lock the latch bolt against movement.

4. In a lock of the character described, a combination with a support, of a door-bolt adapted for movement with relation to the support, a co-acting bar connected with the support and adapted to engage with the door bolt and to be moved laterally with relation thereto to release it, and a gravity operated control member pivotally connected with the support and having connection with the co-acting bar to move it laterally.

1,190,520. TRAIN SIGNALING AND CONTROLLING SYSTEM. CURTIS S. CURRIER, Pontiac, Mich. Filed July 15, 1914. Serial No. 851,214. (Cl. 246—59.)



1. In combination with train carried control means, actuating means therefor including a trip arm movable into and out of operative position, a shaft upon which the said arm is mounted, a spirally grooved block rigid with the said shaft, actuating means engageable with the said block and controlled through movement of a passing train to elevate the block, stationary means engageable with the groove in the block to impart to the said arm a quarter turn simultaneously with the elevation of the block, and means controlled through movement of a passing train, said last mentioned means being actuatable to lower the said block and return the said arm to its normal inoperative position, as and for the purpose set forth.

2. In combination with train carried control means, actuating means therefor including a trip arm movable into and out of operative position, a shaft upon which

the said arm is mounted, a spirally grooved block rigid with the shaft, a pin stationary relatively to the block and fitting the groove therein, means operable to elevate the block, means actuatable by a passing train to control said operating means, independent means operable to lower the said block, and means actuatable by a passing train to control movement of said last mentioned operating means, as and for the purpose set forth.

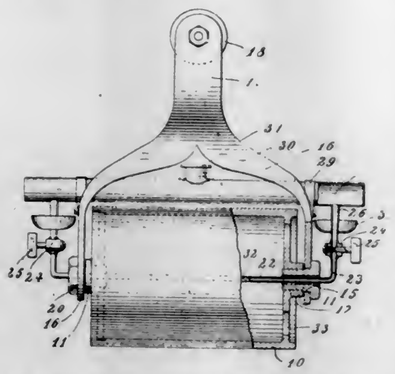
3. In combination with train carried control means, actuating means therefor including a trip arm movable into and out of operative position, a shaft upon which the said arm is mounted, a spirally grooved block rigid with the shaft, means stationary relatively to the block and fitting the said groove, to impart to the said arm a turning movement when elevated through movement of said block, motor controlled means engageable with the said block to elevate the same, means actuatable by a passing train, said means being in electrical communication with the motor to control operation thereof, motor controlled means operable to lower the said block, and means actuatable by a passing train in electrical communication with the said last mentioned motor, as and for the purpose set forth.

4. In combination with train carried control means, actuating means therefor including a trip arm, a shaft upon which the said arm is mounted, means carried by the said shaft for imparting thereto a quarter turn when actuated, motor control means including an eccentric operable to control movement of said shaft, means actuatable by a passing train, said means being in electrical communication with said motor control means, motor control means operable to lower the said shaft, means actuatable by a passing train, said last mentioned means being in electrical communication with said last mentioned motor control means, as and for the purpose set forth.

5. In combination with train carried control means, actuating means therefor including a trip arm movable into and out of operative position, a shaft upon which the said arm is mounted, a spirally grooved block mounted upon the said shaft, a pin stationary relatively to the block and fitting the groove to impart to the said arm a turning movement when actuated, an eccentric actuatable to raise and lower the said block, motor control means operable to actuate the eccentric for elevating the said block, motor control means operable to actuate the eccentric to lower the said block, and means actuatable by a passing train to control operation of said motor control means, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,190,521. ROLLER SMOOTHING-IRON. GUSTAV DÄHNE, New York, N. Y. Filed Dec. 16, 1915. Serial No. 67,180. (Cl. 158—22.)

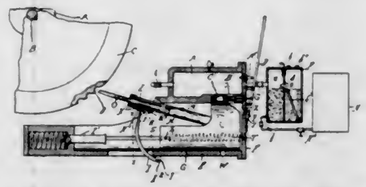


1. In a smoothing iron, the combination with a hollow metallic roller, a supporting frame revolubly engaging the ends of said roller, and a handle mounted in said frame transversely of said roller, of a reservoir adapted to contain liquid fuel attached to said frame, means for filling said reservoir, a tube communicating with the ends of said reservoir, and extending through said roller, said tube having perforated walls within the roller, and means for controlling the passage through said tube.

2. In a smoothing iron, the combination with a hollow metallic roller, having openings through its end walls, a supporting frame revolubly engaging the ends of said roller, and an operating handle in said frame transversely of said roller, of a reservoir adapted to contain liquid fuel, a tube communicating with the ends of said reservoir and extending through said roller, said tube having a perforated wall within the roller, means for initially gasifying the contents of said reservoir and valves controlling passage through said tube.

3. In a smoothing iron, the combination with a heavy walled metallic roller, a supporting frame in which said roller is revolubly mounted and a handle therefor, of a reservoir arranged closely contiguous to said roller, means for initially gasifying the contents of said reservoir, a perforate tube within said roller, connections between said tube and said reservoir and means for controlling the flow therethrough.

1,190,522. ENGINE-STARTER. ALEXANDER S. DIACK, Detroit, Mich. Filed Apr. 28, 1910. Serial No. 558,278. (Cl. 123—179.)



1. In starting mechanism for explosive engines, the combination with the engine shaft of a toothed member thereon, a cylinder auxiliary to the engine cylinder provided with a piston having a member positioned to impinge against the toothed member, means for charging the cylinder with an explosive mixture under pressure to initially operate the piston, and mechanism for automatically exploding the charge after the initial operation of the piston has been effected.

2. In starting mechanism for explosive engines, the combination with the engine shaft, of a fly wheel thereon provided with a toothed surface, an auxiliary cylinder and its piston, a rod pivoted to the piston and adapted to impinge against the fly wheel, a pivoted supporting member for and having a limited sliding engagement with the rod, means for charging the auxiliary cylinder with an explosive mixture under pressure, and means for subsequently and automatically exploding the charge.

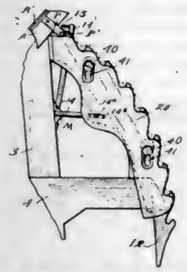
3. In starting mechanism for explosive engines, the combination with the engine shaft carrying a fixed member, of a cylinder auxiliary to the engine cylinder, a piston therein, a piston rod positioned to impinge against the shaft member, and automatic means for causing the rod to traverse different paths during and outward and return movements thereof, for the purpose of impinging against the fixed member in one direction of movement and clearing the same in the opposite direction.

4. In starting mechanism for explosive engines, the combination with the engine shaft, of a fly wheel thereon, an auxiliary cylinder and its piston, and a piston rod positioned to impinge against the wheel on outward movement and automatic means for causing said piston rod to clear said wheel upon its return travel.

5. In a starting mechanism for explosive engines, the combination with an engine shaft carrying a fixed member, of a cylinder auxiliary to the engine cylinder, a piston therein adapted to travel to the cylinder head, a piston rod positioned to impinge against the shaft member, and automatic means for causing the rod to traverse different paths during each outward and return movement thereof, to clear said shaft member in one direction of movement.

[Claims 6 to 10 not printed in the Gazette.]

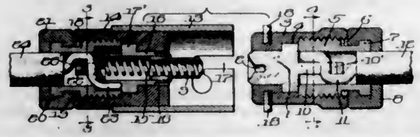
1,190,523. RECLINING OR INVALID'S CHAIR. MALCOLM BLAKELY DODD, Arnprior, Ontario, Canada. Filed Nov. 3, 1913. Serial No. 798,974. (Cl. 155—27.)



1. In a chair of the class described and in combination, a stand, a back pivotally mounted on the said stand, a curvilinear rack mounted on the back of the stand, a second curvilinear rack designed to coact with the first said curvilinear rack, links pivotally mounted on the back, a transversely extending rod carried by the links designed to engage with the first said curvilinear rack, and means for operating the second curvilinear rack, as and for the purpose specified.

2. In a chair of the class described and in combination, a stand, a back pivotally mounted in the said stand, a curvilinear rack rigidly mounted on the back of the stand, pins engaging with the curvilinear rack, a second curvilinear rack provided with slots adapted to engage the pins on the first said curvilinear rack, a bell crank pivotally mounted to the stand having one of its arms coacting with the second curvilinear rack, a manually operated link connected to the second arm of the bell crank, links pivotally mounted on the back, and a transversely extending rod carried by the links designed to engage with the first said curvilinear rack, substantially as described.

1,190,524. TERMINAL CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich., a Corporation of Michigan. Filed Aug. 5, 1913, Serial No. 783,158. Renewed May 19, 1916. Serial No. 98,679. (Cl. 173—324.)



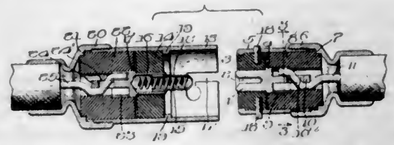
1. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve having a bore in which said portion may slide and shaped to engage the flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; and a second sleeve in threaded engagement with the first and in butt engagement with the flange to maintain the flanged portion and the first sleeve in firm connection, the bore of the second sleeve receiving the wire and stem and being of such diameter as to enable the second sleeve to maintain the wire in firm electrical connection with the stem.

2. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve having a bore in which said portion may slide and shaped to engage the flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; and a second sleeve in threaded engagement with the first sleeve and in butt engagement with the flanged portion to maintain the flanged portion and the first sleeve in firm engagement.

3. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve having a bore in which said portion may slide and shaped to engage the flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; and a second sleeve in threaded engagement with the first sleeve and in butt engagement with the flanged portion to maintain the flanged portion and the first sleeve in firm engagement, the bore of one of said sleeves receiving the wire and stem and being of such diameter as to engage the wire and maintain it in firm electrical connection with the stem.

[Claim 6 not printed in the Gazette.]

1,190,525. TERMINAL CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich., a Corporation of Michigan. Filed Aug. 5, 1913, Serial No. 783,159. Renewed May 19, 1916. Serial No. 98,680. (Cl. 173—324.)



1. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve, which is of insulating material, having a bore in which said portion may slide and shaped to engage the

flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; a metal sheath for said sleeve of insulating material; a second sleeve for engaging the flange; and a clamping device in threaded engagement with said sheath and operating upon the second sleeve to force it into engagement with said flange.

2. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve having a bore in which said portion may slide and shaped to engage the flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; a second sleeve, which is of metal, for engaging the flange; a clamping device co-acting with the first sleeve to force the second sleeve into engagement with said flange, the bore of the second sleeve receiving the wire and stem and being of such diameter as to enable the second sleeve to maintain the wire in firm electrical connection with the stem; and a sleeve of insulating material interposed between said metal sleeve and the clamping means through which interposed sleeve the clamping means operates to press the metal sleeve against the flange.

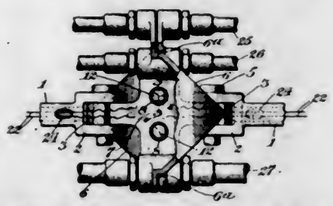
3. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve, which is of insulating material, having a bore in which said portion may slide and shaped to engage the flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; a metal sheath for said sleeve of insulating material, a second sleeve, which is of metal, for engaging the flange; a clamping device in threaded engagement with said sheath and operating upon the second sleeve to force it into engagement with said flange; and a sleeve of insulating material interposed between said metal sleeve and the clamping means through which interposed sleeve the clamping means operates to press the metal sleeve against the flange.

4. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve having a bore in which said portion may slide and shaped to engage the flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; a second sleeve for engaging the flange; and a clamping device co-acting with the first sleeve to force the second sleeve into engagement with said flange.

5. A terminal connector including a flanged portion through which circuit is to be extended, which portion includes an apertured stem; a conducting wire having an end projected through the aperture of said stem so as to have parts thereof lie upon opposite sides of the stem; a sleeve having a bore in which said portion may slide and shaped to engage the flange of said flanged portion to limit the extent of relative movement of the sleeve and flanged portion; a second sleeve for engaging the flange; and a clamping device co-acting with the first sleeve to force the second sleeve into engagement with said flange, the bore of one of said sleeves receiving the wire and stem and being of such diameter as to engage the wire and maintain it in firm electrical connection with the stem.

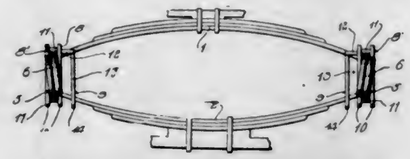
1,190,526. ELECTRICAL CONTACT DEVICE FOR TRAIN-COUPLINGS. VOTAW S. DURBIN, St. Louis, Mo., assignor to Durbin Automatic Train Pipe Connector Company, St. Louis, Mo., a Corporation of Arizona. Filed July 5, 1912. Serial No. 707,761. (Cl. 173—332.)

In a coupling of the character described, a pair of mating coupler heads having juxtaposed longitudinal body portions whose meeting faces are adjacent to a median line when in the coupled relation, each of said coupler heads having a lateral extension on one side of the body portion, a forward projection on said lateral extension, said projection being tapered toward its end and square at its base with respect to the face of said lateral extension, and an oppositely-disposed lateral extension on the other side of the body portion, said-last-mentioned lateral extension having an opening therein which is a counterpart of the base portion of said forward projection, whereby the forward projection on the lateral extension of the one coupler head enters the opening in the meeting lateral extension of the other coupler



head, so that, in the coupled relation, said lateral extensions are brought together and the base portions of said projections coöperate with the walls of said openings to prevent lateral separation of the coupler heads, and co-operatively-opposed spring-pressed electrical contact members mounted in said body portions so as to work transversely thereof in the region of said lateral extensions, the axes of said contact members substantially coinciding on a median line between the meeting faces of said lateral extensions when the coupler heads are in the coupled relation, and the ends of said contact members projecting normally beyond the respective meeting longitudinal faces of said body portions and having their edges shaped so as to slide edgewise into engagement.

1,190,527. SUPPLEMENTAL SPRING. BURTON A. ELLIOTT, Kingston, Mich. Filed Feb. 28, 1916. Serial No. 80,977. (Cl. 267—17.)



1. The combination with the adjacent ends of the upper and lower sections of a vehicle spring, each of said sections having an eye thereon; of a spring, the ends thereof being extended outwardly to form a pair of parallel spaced apart arms, straight through the greater portion of their length, the free ends thereof being offset, said offset portions of said arms being disposed in said eyes, and means on the ends of said arms to hold the same in said eyes.

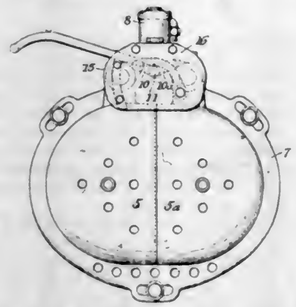
2. The combination with the upper and lower sections of a vehicle spring, each of said sections having an eye thereon; of a spring, the ends thereof being extended outwardly to form a pair of spaced apart arms, one of said arms being disposed in each of said eyes, a keeper on said arms to prevent lateral and longitudinal shifting of said sections, and means for retaining said keeper in operative position.

3. The combination with the upper and lower sections of a vehicle spring, each of said sections having an eye thereon; of a spring, the ends thereof being extended outwardly to form a pair of spaced apart arms, one of said arms being disposed in each of said eyes, a yoke straddling said arms to prevent excessive spreading thereof, and lateral and longitudinal shifting of said sections, and means for retaining said yoke in operative position.

4. The combination with the upper and lower sections of a vehicle spring, each of said sections having an eye thereon; of a spring, the ends thereof being extended outwardly to form a pair of spaced apart arms, one of said arms being disposed in each of said eyes, a yoke straddling said arms to prevent excessive spreading thereof, and lateral and longitudinal shifting of said sections, and a retaining arm extending from said yoke into engagement with one of said sections.

5. A device of the class described comprising a helical spring, the ends thereof being extended outwardly from opposite sides of the coil to form a pair of parallel spaced apart arms, said arms being straight throughout the greater portion of their length, the free ends thereof being offset, said offset portions being adapted to be disposed one in each eye on the ends of the upper and lower sections of a vehicle spring, and means on the ends of said arms to retain the same in said eyes.

1,190,528. FIRE-DOOR APPARATUS. ALBERT G. ELVIN, Somerville, N. J. Filed Sept. 25, 1914. Serial No. 863,451. (Cl. 110—177.)



1. In a fire door apparatus, the combination of a door adapted to swing laterally and vertically, a vertical cylinder and piston having a positive connection with said door for opening the same by fluid pressure, a pin projecting from said piston, and a hand lever having a curved portion engaging said pin for manually operating the piston.

2. In a fire door apparatus, the combination of a pair of fire doors pivoted to swing laterally and vertically, a vertical cylinder and piston, links connecting the piston with said doors, a pin projecting from the piston, and a hand lever having a curved portion engaging said pin for manually operating the piston.

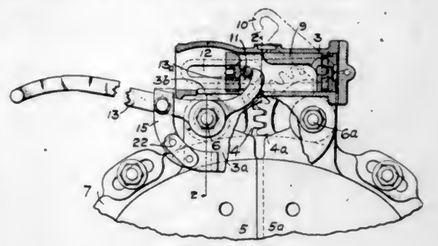
3. In a fire door apparatus, the combination of a pair of fire doors pivoted to swing laterally and vertically, a vertical cylinder and piston, links connecting the piston with said doors, a pin projecting from the piston, and a hand lever pivoted at one end upon the casing and having a curved neck portion passing over said pin for manually depressing the piston.

4. In a fire door apparatus, the combination of a door, a cylinder, a piston having a positive connection with said door, for operating the same by fluid pressure, a pin projecting from said piston, and a pivoted hand lever having a curved portion engaging said pin for manually operating the piston, the lever arm from the pivot to said pin diminishing as the lever is turned from its normal position whereby the leverage is increased.

5. In a fire door apparatus, the combination of a pair of fire doors pivoted to swing laterally and vertically, a vertical cylinder and piston, links connecting the piston with said doors, a lubricant chamber carried by the cylinder and feed passages leading therefrom to the doors, said doors having feed ducts and grooves communicating with said passages for supplying lubricant to the pivots of said doors and links.

[Claim 6 not printed in the Gazette.]

1,190,529. FURNACE-DOOR DEVICE. ALBERT G. ELVIN, Somerville, N. J. Filed Oct. 5, 1914. Serial No. 865,010. (Cl. 110—177.)

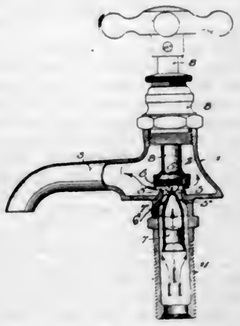


1. In a furnace door device, the combination of a pair of doors mounted on pivots to swing laterally and vertically, a cylinder, a piston therein, a pin and link connecting the same to one of said doors, means operatively connecting said doors, and a hand lever mounted at an intermediate point on one of the door pivots and having a curved arm at its end engaging said pin for manually operating the piston.

2. In a furnace door device, the combination of a pair of doors mounted on pivots to swing laterally and vertically, a horizontal cylinder, a piston therein, a pin and link connecting the same to one of said doors, means operatively connecting said doors, said piston having a slotted recess formed therein, and a hand lever having a curved arm extending into said recess and engaging said pin for manually operating the piston.

3. In a furnace door device, the combination of a door pivoted to swing laterally and vertically, a hand lever and connections for manually operating the door, a latch frame having a notch for holding the lever in the full open position, and a movable safety latch for locking the lever in said notch.

1,190,530. VALVE. AUGUST ENGEL, Milwaukee, Wis., assignor to Milwaukee Brass Manufacturing Company, Milwaukee, Wis. Filed Oct. 6, 1913. Serial No. 793,655. (Cl. 137—4.)



The combination with a valve including a casing, an integral inlet neck extending from the casing and having its bore reduced at its ends, a valve seat in the casing surrounding a port forming a continuation of the inner reduced bore end of the neck, and a valve engageable on said seat, a hollow cylindrical stopper member closed and engageable with the valve at its inner end and of a diameter not greater than the diameter of the outer reduced end of the said neck, and the outer end of the stopper being spread to prevent its movement past the outer end of the inlet neck.

1,190,531. GRAVITY GATE-LATCH. ANDREW J. EVERETT, Lakeport, Cal. Filed Dec. 7, 1912. Serial No. 735,473. (Cl. 70—28.)



1. In combination, a fixed and a swinging part, and a locking member comprising a strap of metal bent upon itself and having its ends connected, means pivotally hanging said member on said fixed part at its connected ends, an intermediate portion of the strap being extended laterally to engage the swinging part to hold the same against opening movement, substantially as described.

2. In combination, a fixed and a swinging part, and a locking member comprising a strap of metal bent upon itself and having its ends connected, means pivotally suspending said member upon said fixed parts at its connected ends, an intermediate portion of said strap being extended laterally to engage the swinging part and hold the same against opening movement, and another intermediate portion of said strap being extended outwardly and inclined for engagement with the swinging part to shift said member laterally when the swinging part is being moved into a closed position, substantially as described.

3. In a device of the character described, the combination with a gate, and a gate post, of an arm pivoted upon said gate post, said arm having a substantially wedge-shaped extension provided thereon, said extension provided with an opening, a pin disposed upon said gate post and projecting through said opening, and a handle portion formed integral with the said extension, as and for the purpose set forth and described.

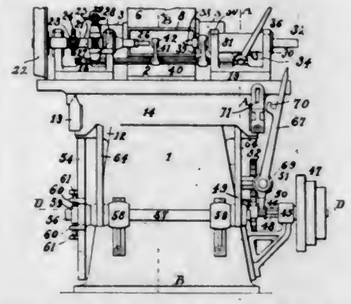
4. In a device of the character described, the combination with a pivoted and stationary support, of an arm pivoted upon said pivoted support, a pin disposed upon said stationary support, said arm provided with a substantially wedge-shaped extension, said extension having an opening therein, said pin projecting into said opening, the forward end of said extension bent upwardly, said upstanding portion being raised to form a handle portion, the forward end of said handle portion being secured to said arm as and for the purpose set forth and described.

5. In a device of the character described, the combination with a gate and gate post, of an arm secured to said gate, said arm having a substantially wedge-shaped extension formed at one end thereof a pin carried by said gate post, said extension provided with an opening for the reception of said pin, said opening being extended at different points for the reception of said pin the outer extremity of said extension being bent upwardly, the upper extremity of said upstanding portion being constricted and curved to form a handle portion, a portion of said handle portion lying parallel with said arm and secured thereto as and for the purpose set forth and described.

[Claims 6 and 7 not printed in the Gazette.]

1,190,532. SEMI-AUTOMATIC WOOD-LATHE. MICHEL FANGET, Lyon, France. Filed Oct. 24, 1914. Serial No. 868,519. (Cl. 142—40.)

1. A semi-automatic wood lathe comprising in combination a tool carrying shaft journaled in stationary brackets, means for rotating said shaft, a work carriage, and means for reciprocating said work carriage at right angles to said tool shaft in such manner that it is first given a quick forward movement to bring the work into contact with the tools, the remainder of its forward movement being at a relatively slow rate, then held stationary while the wood working is completed and finally returned to its initial position, substantially as described.



2. A semi-automatic wood lathe comprising in combination, a tool carrying shaft journaled in stationary brackets, means for rotating said shaft, a work carriage, means for reciprocating said work carriage at right angles to said shaft, automatic means for varying the rate of travel of said carriage at a predetermined point in its movement and for stopping said carriage while the tools operate upon the work, and means for automatically disconnecting the carriage from its driving mechanism upon its return to its initial position.

3. A semi-automatic wood lathe comprising in combination a tool carrying shaft journaled in stationary brackets, means for rotating said shaft, a work carriage, means for reciprocating said work carriage at right angles to said shaft, means for varying the length of travel of said carriage, automatic means for decreasing the rate of travel of said carriage when the work is in contact with the tools and for holding the carriage stationary for a predetermined period while said tools operate on the work, and means for automatically disconnecting the carriage from its driving mechanism upon its return to its initial position.

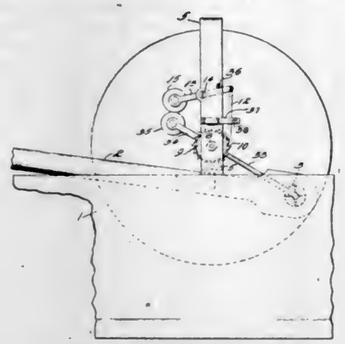
4. A semi-automatic wood lathe comprising in combination, a rotatable tool shaft, a movable work holding carriage, means for reciprocating said work carriage at right angles to said shaft, means for varying the length of travel of said carriage, automatic means for decreasing the rate of travel of said carriage at a predetermined point in the movement of said carriage and for holding the carriage stationary for a predetermined period while the tools operate on the work, a lever adapted manually to be actuated to connect the carriage with its driving mechanism, and means for automatically disconnecting said carriage from its driving mechanism upon the completion of its backward stroke.

5. A semi-automatic wood lathe comprising a rotatable tool shaft, means for rotating said shaft, a work holding carriage, a grooved cam, means whereby said cam causes said carriage to move forward a predetermined distance quickly, then a predetermined distance slowly, to remain stationary for a predetermined period, and finally to return to its initial position, a lever adapted manually to be actuated to connect said cam with its driving mechanism, and means for automatically disconnecting said cam when the carriage has reached the limit of its backward travel.

[Claim 6 not printed in the Gazette.]

1,190,533. LUBRICATING DEVICE. DIEDRICH I. FEHR, Haskett, Manitoba, Canada. Filed June 7, 1915. Serial No. 32,774. (Cl. 184—8.)

1. In a lubricating device, the combination of a pitman having a wrist pin bearing, a rotary oil cup, a stationary shaft, supporting said oil cup, an apertured casting within said oil cup and threaded into engagement therewith, a bolt carried by said stationary shaft and projected into said casting, a plunger carried upon said bolt within said casting and adapted to alternately cover and uncover the apertures in said casting, means associated with said oil cup and plunger whereby rotary motion of the former is transmitted to the latter in the form of reciprocating motion, power transmission mechanism connecting said pitman and oil cup, a head for said oil cup communicating with said plunger and a tube connecting said head and the said wrist pin bearing in said pitman.



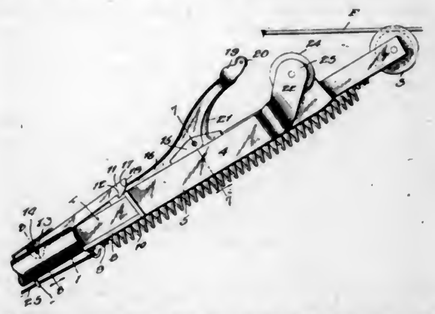
2. In a lubricating device, the combination of a pitman having a wrist pin bearing, a rotary oil cup, a stationary shaft supporting said oil cup, an apertured casting within said oil cup and threaded into engagement therewith, a bolt carried by said stationary shaft and projected into said casting, a plunger carried upon said bolt within said casting and adapted to alternately cover and uncover the apertures in said casting, a ratchet formed in said casting, teeth formed in said plunger and adapted for engagement with said ratchet whereby rotary movement of said casting is transmitted to said plunger in the form of straight translation, a return spring for said plunger, power transmission mechanism connecting said oil cup and pitman, a head for said oil cup communicating with said plunger and a tube connecting said head and the said wrist pin bearing in said pitman.

3. In a lubricating device, the combination of a pitman having a wrist pin bearing, a rotary oil cup, a stationary shaft supporting said oil cup, an apertured casting within said oil cup and threaded into engagement therewith, a bolt carried by said stationary shaft and projected into said casting, a plunger carried upon said bolt within said casting and adapted to alternately cover and uncover the apertures in said casting, a ratchet formed in said casting, teeth formed in said plunger and adapted for engagement with said said ratchet whereby rotary movement of said casting is transmitted to said plunger in the form of straight translation, a return spring for said plunger, a ratchet encircling said oil cup, a pawl in engagement with said ratchet, a head for said oil cup communicating with said plunger, a tube connecting said head and the said wrist pin bearing of said pitman and connection between said tube and the said pawl whereby rotary movement of the former will operate to depress the latter and cause it to move its ratchet a distance equal to the depth of one tooth.

1,190,534. TROLLEY-REPLACER. HENRY H. FISHER and WILLIAM C. BARNES, Evansville, Ind. Filed Sept. 13, 1915. Serial No. 50,445. (Cl. 191—83.)

1. The combination with a pole having a trolley, of a replacing device slidable thereon, means for retaining said device in retracted position, means for projecting said device into operative position, and means mounted on said device to release the same when struck by the feed wire.

2. The combination with a pole having a trolley, of a replacing device comprising a carriage slidable on said pole, means for retaining said carriage in retracted position, means for projecting said carriage into operative position, and means on said carriage operable by the feed wire for releasing the same.



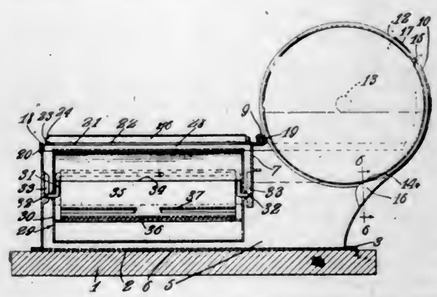
3. The combination with a pole having a trolley, of a replacing device comprising a carriage slidable on said pole, means for retaining said carriage in retracted position, means for projecting said carriage into operative position, and a trip mounted on said carriage and operable by the feed wire for releasing the same.

4. The combination with a pole having a trolley, of a replacing device comprising a carriage slidable on said pole, means for retaining said carriage in retracted position, means for projecting said carriage into operative position, and a swinging trip pivoted on said carriage adapted to release the same when struck by the feed wire.

5. The combination with a pole having a trolley, of a replacing device comprising a carriage slidable on said pole toward and away from said trolley, a catch for conction with said carriage to retain the same in retracted position, a spring for projecting said carriage toward said trolley, and means pivoted on said carriage and operable by the feed wire for releasing the same.

[Claims 6 to 11 not printed in the Gazette.]

1,190,535. LABEL-MOISTENER. WARREN E. FLEMING, Manhattan, Kans. Filed Nov. 6, 1915. Serial No. 60,099. (Cl. 91—544.)



1. A moistening device embodying a tank having a cross member between its ends and a cover between said cross member and one end, said cover having an opening, a moistening element projectable upwardly through said opening from within the tank, and a rotatable cylindrical water reservoir seated between said reservoir and other end of the tank and having an aperture in its periphery.

2. A moistening device embodying a tank having a cross member between its ends provided with a hinge butt, a cover having a bead slidable into said hinge butt and having portions engageable with the sides and one end of the

tank to hold the cover in place, said cover having an opening, a moistening element projectable upwardly through said opening from within the tank, and a rotatable cylindrical water reservoir seated between said hinge butt and opposite end of the tank and having an aperture in its periphery.

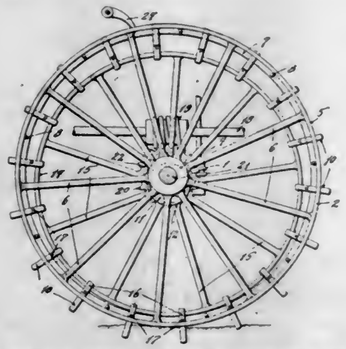
3. A moistening device embodying a tank having a cross member between its ends, a rotatable cylindrical water reservoir seated between said cross member and one end of the tank and having an aperture in its periphery, said end of the tank being extended upwardly and curved to conform to the curvature of the reservoir and to slightly overhang the same.

4. A moistening device embodying a tank having a cross member between its ends, a rotatable cylindrical water reservoir seated between said cross member and one end of the tank and having an aperture in its periphery, said end of the tank being extended upwardly and curved to conform to the curvature of the reservoir and to slightly overhang the same, said extension having flanges overlapping the ends of the cylinder, and the periphery of the cylinder having an outstanding lug movable between said cross member and extension, said lug and aperture being so arranged that when the lug is moved against said extension the aperture is brought lowermost, and when the lug is moved against said cross member the aperture is brought uppermost.

5. A moistening device embodying a tank, a cover therefor having an opening, a plate hinged to the cover over said opening, there being a slot between the free edge of said plate and one edge of the cover formed by said opening, a rotatable member within the tank below said slot and having a moistening element projecting therefrom to swing past said plate into said slot, the plate being adapted to drop behind said moistening element, and means for rotating said member.

[Claims 6 to 12 not printed in the Gazette.]

1,190,536. TRACTION-WHEEL. ALEXANDER S. FRASER, Cairo, Ill. Filed Dec. 24, 1915. Serial No. 68,473. (Cl. 21—210.)



1. A traction wheel including a rotatable drive wheel, a guiding member disposed eccentrically of the axis of said wheel and normally held against rotation therewith, radially movable earth engaging elements disposed peripherally of the wheel, and a freely movable thrust member operably associated with the eccentric guiding member and earth engaging elements for projecting and retracting the latter.

2. A traction wheel including a rotatable drive wheel, an axle on which the wheel rotates, a guiding member disposed eccentrically on the axle, means for adjusting said guiding member to different positions, earth engaging elements mounted on the wheel and movable beyond the tread thereof, and a thrust member operably connecting the guiding member and the earth engaging elements, which thrust member is rotatable relative to the wheel.

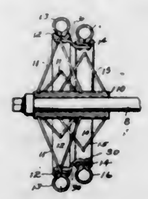
3. A traction wheel including a rotatable drive wheel, an extensible and retractile earth engaging member disposed peripherally thereof, guiding means normally held against rotation with the wheel, and a thrust member coöperating with said guiding means and earth engaging member to project and retract the latter, said thrust member being arranged for revoluble movement relative to both the guiding means and the earth engaging member.

4. A traction wheel including a rotatable drive wheel, an eccentric associated therewith and normally held against rotation, a thrust wheel mounted on said eccentric for rotation relative to the drive wheel, and extensible earth engaging members disposed peripherally of the drive wheel and movably engaging the thrust wheel at intervals about its circumference.

5. A traction wheel including a drive wheel, extensible earth engaging members disposed peripherally thereof, a thrust wheel rotatable relative to the drive wheel and having peripheral engagement with the earth engaging members for projecting and retracting them, and means for guiding said thrust wheel for rotation eccentrically of the drive wheel.

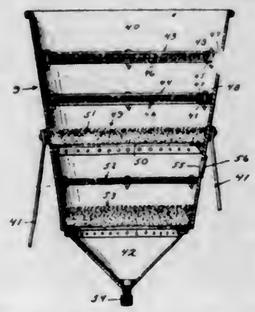
[Claims 6 to 8 not printed in the Gazette.]

1,190,537. SAFETY-WHEEL. LESLIE FRY, Des Moines, Iowa. Filed Nov. 26, 1915. Serial No. 63,533. (Cl. 21—69.)



A safety wheel comprising an elongated hub, a pair of rims arranged adjacent to each other one of said rims of slightly smaller diameter than the other rim, wire spokes connecting the respective rims with the hub, the adjacent spokes of the different rims being arranged to overlap each other, whereby the rims may be mounted close together, and cross braces secured to and connecting the said rims.

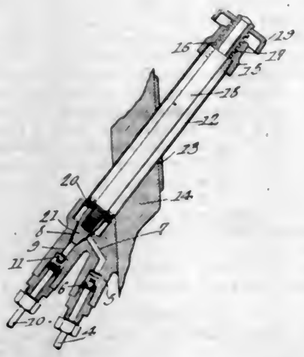
1,190,538. PROCESS FOR PURIFYING OIL. WILLIAM F. GARRITY and ARTHUR JARVIS, Bayonne, N. J. Filed June 1, 1914. Serial No. 842,142. (Cl. 210—10.)



1. The process of purifying lubricating oil consisting in boiling the oil, and then passing it through filtering screens composed of sheets of cotton held between sheets of Turkish toweling.

2. The process of purifying lubricating oil consisting in boiling the oil, and then passing it through alternate filters of sheets of cotton disposed between sheets of Turkish toweling, and layers of fullers' earth.

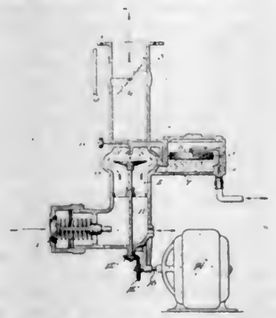
1,190,539. PRIMER FOR EXPLOSION-ENGINES. PETER J. GEORGENSON and CLARENCE H. GEORGENSON, Tustin, Wis. Filed Dec. 3, 1914. Serial No. 875,309. (Cl. 103—75.)



1. A priming attachment for explosion engines embodying a pump cylinder, a cap upon one end thereof, a fitting upon the other end thereof having a conical valve seat and a pair of channels extending to said valve seat for the attachment of pipes leading to an intake manifold and a source of fuel, check valves in said channels, and a plunger rod movable through said cap and having a plunger working within the cylinder and a frusto-conical valve to enter said valve seat, the plunger rod having a threaded portion adapted to screw into said cap for seating said frusto-conical valve and holding it seated.

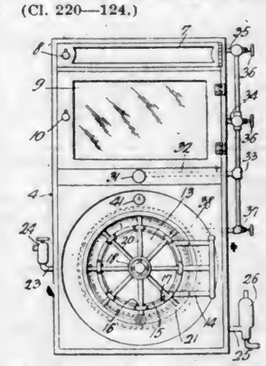
2. In a priming device, a cylinder, a piston having a valve member, a port constituting a valve seat and communicating with an engine cylinder, a supply conduit communicating with said port, whereby said valve member when in engagement with said seat closes both the port and the conduit.

1,190,540. CARBURETER. FREDERICK GETTELMAN, Milwaukee, Wis. Filed Feb. 25, 1913. Serial No. 750,551. (Cl. 48—154.)



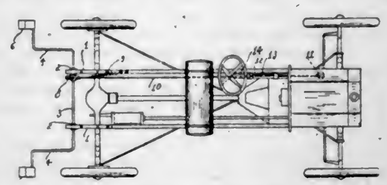
In a carbureter, a mixing chamber comprising a vertically disposed cylindrical casing provided with an air intake and discharge at its respective ends and having an intermediate annular enlargement, a driven disk arranged transversely in the casing at the point of its annular enlargement and axially thereof, the disk having an uninterrupted upper flat surface upon a horizontal plane, and a fluid discharge nozzle positioned axially of the cylindrical casing above the flat surface of the disk adapted to discharge fuel upon the center of the flat surface of the disk whereby a uniform radial spread of the fluid is insured.

1,190,541. STERILIZING-CABINET. MARION E. GIBSON, Portland, Oreg. Filed Oct. 28, 1914. Serial No. 869,049. (Cl. 220—124.)



In a device of the character described, a casing having a circular opening and an annular overhanging rim surrounding said opening upon the outer side of the casing, a circular door adapted to rest against the outer side of the casing within said rim to close said opening, a resilient dished spider upon the outer side of the door, the door having guides for the arms of the spider adjacent the margin of the door, the terminals of the spider arms being projectable beyond the margin of the door to engage behind said rim, and a screw engaged with the door and hub of the spider whereby said screw can be rotated for forcing said hub toward the door, thereby tending to move the spider arms into a common plane, to project said arms behind said rim, the spider when released bending away from the door.

1,190,542. BRAKE FOR MOTOR-VEHICLES. FRANCOIS D. GRANDBOIS, Stockton, Cal. Filed Jan. 17, 1916. Serial No. 72,466. (Cl. 21—8.)

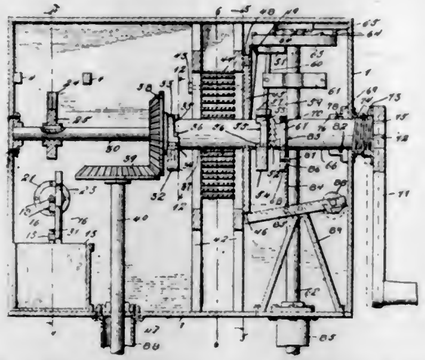


A brake mechanism comprising a shaft turnably mounted on the rear end of the vehicle, projecting arms on the brake, brake blocks on the arms, a pulley on the shaft, a spring connected with the pulley and with the vehicle, and a cable connected with the pulley and extending to a point adjacent the driving seat of the vehicle, as described.

1,190,543. FLUID-VENDING MACHINE. HORATIO SEYMOUR HALL, Home Valley, Wash. Filed Feb. 9, 1914. Serial No. 817,631. (Cl. 194—29.)

1. A vending machine comprising a casing, a main shaft, a coin controlled ratchet carried by said main shaft, a frame positioned within said casing, a coin delivering chute suspended within said casing and capable of having swinging movement therein, a locking bar pivotally mounted upon said frame and engaging said coin controlled ratchet for preventing the rotation thereof in one direction, a stop latch pivotally mounted upon said frame and engaging said coin controlled ratchet for preventing the rotation thereof in the opposite direction, means engaging said stop latch for normally urging the same to an inoperative position, a weighted bar suspended upon said frame and projecting under said chute, means carried by said weighted bar for holding said stop latch in an operative position, and said weighted bar adapted to be swung

as the coin is delivered from said chute whereby said stop latch may be allowed to swing.



2. A vending machine comprising a main casing, a coin delivering chute suspended within said main casing, a frame positioned within said main casing, a locking bar pivotally supported upon said frame, a coin controlled ratchet, an operating shaft supported said ratchet, said locking bar adapted to engage said coin controlled ratchet, a stop latch pivotally mounted upon said frame and engaging said coin controlled ratchet for preventing the rotation thereof in one direction, a spring pressed plunger supported adjacent said frame, said spring pressed plunger provided with a lug, a dog pivotally secured to said frame and engaging said lug for holding said plunger in an inoperative position, a weighted lever pivotally secured to said frame, means connecting said dog to said lever whereby said dog may be thrown out of engagement with said spring pressed plunger as said weighted lever is swung, said weighted lever projecting under said coin chute whereby said weighted lever will be swung as a coin drops thereon, means for operating said operating shaft when said coin controlled ratchet is released, and valve opening means coöperating with said coin operating shaft.

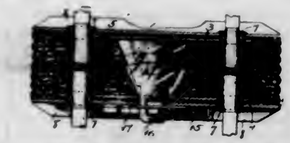
3. A vending machine comprising a main casing, a coin delivering chute suspended within said main casing, a frame positioned within said main casing, a locking bar pivotally supported upon said frame, a coin controlled ratchet, an operating shaft supporting said coin controlled ratchet, a stop latch pivotally mounted upon said frame and engaging said coin controlled ratchet for preventing the rotation thereof in one direction, a spring pressed plunger supported adjacent said frame, said spring pressed plunger provided with a lug, a dog pivotally secured to said frame and engaging said lug for normally holding said plunger in an inoperative position, a weighted lever pivotally secured to said frame, means connecting said dog to said lever whereby said stop latch may be thrown out of engagement with said spring pressed plunger as said weighted lever is swung, said weighted lever projecting under said coin chute whereby said weighted lever will be swung as a coin drops thereon, means for operating said operating shaft when said coin controlled ratchet is released, a sleeve carried by said main operating shaft, means for permitting a limited rotation of said sleeve, a gear carried by said sleeve, and valve operating means coöperating with said gear for facilitating the operation of a valve as said main shaft is rotated.

4. A vending machine comprising a main casing, a coin delivering chute suspended within said main casing, a frame positioned within said main casing, a locking bar pivotally supported upon said frame, a coin controlled ratchet, an operating shaft supporting said coin controlled ratchet, a stop latch pivotally mounted upon said frame and engaging said coin controlled ratchet for preventing the rotation thereof in one direction, a spring pressed plunger supported adjacent said frame, said spring pressed plunger provided with a lug, a dog pivotally secured to said frame and engaging said lug for holding said plunger in an inoperative position, a weighted lever pivotally secured to said frame adapted to be swung as a coin engages the same, means connecting said dog to said lever whereby said dog may be thrown out of engagement with said spring pressed plunger as said weighted lever is swung, said weighted lever projecting under said coin chute, a sleeve mounted upon said main shaft, means for permitting a limited rotation of said sleeve, a coil spring mounted within said casing and engaging said sleeve for normally exerting a re-winding action upon said sleeve, and valve operating means coöperating with said sleeve for operating a valve as said main shaft is rotated.

5. A vending machine comprising a main shaft, coin operated mechanism for releasing said main shaft, a crank shaft supported by said casing, means for locking said crank shaft against longitudinal movement within said casing, and means carried by said first mentioned shaft for releasing said locking means when said first mentioned shaft is in normal position and permitting said crank shaft to move longitudinally within said casing.

[Claims 6 to 14 not printed in the Gazette.]

1,190,544. BAG-CLOSURE. OWEN L. HARRISON, Coleta, Ill. Filed Aug. 17, 1915. Serial No. 45,934. (Cl. 150—20.)



1. The combination with a bag having a collapsible mouth portion, of cords passing freely through said collapsible mouth portion, and limiting means carried by said cords intermediate their ends and adapted to engage said collapsible mouth portion.

2. The combination with a bag having a collapsible mouth portion comprising two series of folds, of cords passing freely through the respective series of folds, and limiting means carried by said cords between the central folds of the respective series of folds.

3. The combination with a bag having a collapsible mouth portion comprising two series of folds, of cords passing through the respective series of folds, and stiffening means at the intermediate portions of said cords and adapted to extend through the several folds of the respective series when the mouth is closed.

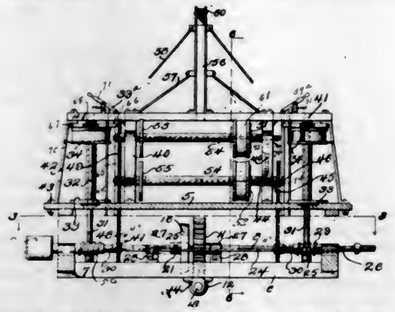
4. The combination with a bag having a collapsible mouth portion comprising two series of folds, of metal plates at respective ends of said mouth portion, cords passing freely through the respective series of folds and through the metal end plates, ferrules secured to intermediate portions of the respective cords, and limiting devices fixed to said ferrules between the central folds of the respective series.

5. The combination with a bag having a collapsible mouth portion comprising two series of folds, and rigid end structures secured at respective ends of the mouth portion, of cords passing freely through the respective series of folds and the rigid end structures, means secured to said cords and adapted to engage the adjacent folds for limiting endwise movement of said cords, a lock carried by one rigid end structure, and a tongue carried by the other rigid end structure and engageable with said lock.

[Claim 6 not printed in the Gazette.]

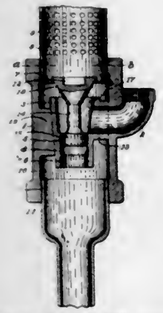
1,190,545. SELF-LOADING ATTACHMENT FOR AUTO-TRUCKS. HARLOW H. HATHAWAY, Phoenix, Ariz. Filed Jan. 20, 1915. Serial No. 3,288. (Cl. 254—166.)

The combination with a self-propelled vehicle comprising a body portion, of a frame mounted transversely of said body at the forward end thereof, a derrick supported above said frame, a horizontally disposed winding drum for said derrick mounted in said frame, a vertically disposed winding drum mounted in said frame, means for driving said horizontally disposed winding drum from the power plant of the vehicle through the medium of



reducing gearing, and means for driving the said vertically disposed drum from said power plant of the vehicle at a much greater reduction in speed than the horizontal drum is driven.

1,190,546. PNEUMATIC PUMP. JOSEPH S. HATTERY, Waterloo, Iowa. Filed Apr. 29, 1915. Serial No. 24,691. (Cl. 103—84.)



1. A sprayer-device, for air-lift pumps, comprising an orificed conduit, a chamber in communication therewith and with a supply of air under pressure, and an inverted cone supported within said chamber, spaced from its inner walls and extending toward said conduit coaxially within the path of upward movement of air into the conduit, to deflect the air toward the inner wall of the conduit.

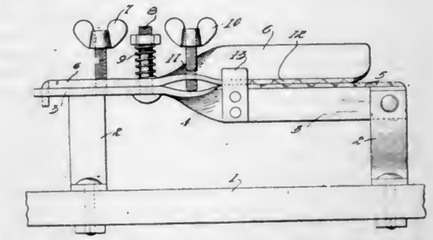
2. A sprayer-device for air-lift pumps, comprising a conduit in communication with a supply of liquid, and also at a lower level in communication with a supply of fluid under pressure, and a deflector supported in the conduit between its said communications, and adapted to deflect the fluid upwardly toward the walls of the conduit obliquely and against the liquid in the conduit thereabove.

3. A sprayer-device for air-lift pumps, comprising an upwardly directed conduit, a tubular orificed chamber below and in communication with the lower end of said conduit, a tubular socket supported centrally in said chamber spaced concentrically therefrom and having a communication through the wall of the chamber with a source of air under pressure, and a spreader device moupted in said socket below said air-communication, having a contracted stem travering the socket centrally and an upwardly coned spreader-head extending above the socket and into the lower end of said orificed conduit, and adapted to deflect air entering from said source of supply upwardly and divergingly toward the inner wall of the conduit below its orifices.

4. A sprayer-device for air-lift pumps, comprising a tubular chamber, a tubular body supported therein in spaced relation concentrically, a laterally-directed conduit communicating between the said tubular body and the outside of said chamber, and an upwardly coned sprayer-head with enlarged base seated in detachably and closing the hollow of said tubular body below said lateral conduit, the latter delivering to the space in said tubular body under said sprayer-head, and the top of said sprayer-head being spaced concentrically from the inner wall of said chamber and extending radially beyond the outer limit of the tubular body.

5. A sprayer-device for air-lift pumps, comprising an upwardly-directed conduit, a tubular chamber in communication with the lower end of the conduit, the lower end of the conduit being perforated immediately above the chamber, the lower end of the chamber being provided with engaging means adapted to disconnectibly engage the upper end of another alined conduit, said chamber having a cup containing a conical deflecting-body mounted concentrically therein, and a conduit extending from without into said chamber and said cup below the deflecting-body, the said cup being supported within and spaced from the inner wall of said chamber.

1,190,547. INTESTINE-CLEANER. JOHN HECKE, Red Bud, Ill. Filed May 6, 1915. Serial No. 26,259. (Cl. 17—12.)



1. In an intestine cleaner, a lower blade formed with a beveled cutting edge, an upper blade formed with a cutting edge and hinged to said lower blade and means connecting said blades whereby they may be adjusted with relation to each other, said upper and lower blades being twisted to stand at an angle to each other with respect to their transverse sections to effect engagement or cutting action therebetween along their longitudinal corner-edges.

2. In an intestine cleaner, a pair of blades having beveled cutting edges and hinged, and resiliently held together at one end, and means for the retention of said pair of blades in operative position, said blades being twisted to stand at an angle to each other with respect to their transverse sections, to effect engagement or cutting action therebetween along their longitudinal corner-edges.

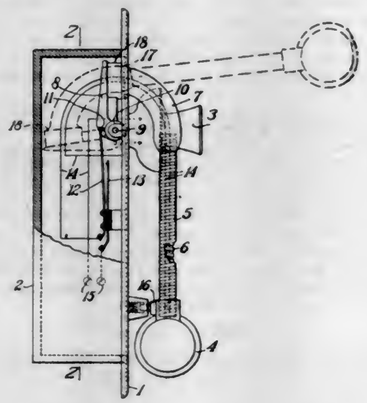
1,190,548. TELEPHONE-RECEIVER. WILLIAM WEIR HENRY, Wollaston, Mass., assignor to S. H. Couch Company, Inc., Atlantic, Mass., a Corporation of Massachusetts. Filed May 3, 1915. Serial No. 25,352. (Cl. 179—149.)

1. A telephone wall-plate with an opening therethrough for the projection of the receiver-support; a receiver-support comprising a curved conduit pivotally mounted behind said wall-plate and adapted to project through said opening; a receiver pendantly mounted in connection with the projecting end of said conduit; and automatic means whereby said conduit may control an electric switch.

2. A telephone wall-plate; a receiver; a rigid conduit pivotally mounted on the back of said wall-plate and adapted to project therethrough and be connected with said receiver; and means whereby the raising or lowering of said receiver may respectively cause said rigid conduit to withdraw or extend through said wall-plate.

3. A wall-plate with an opening; a rigid conduit adapted to project therethrough; receiving means connected

with said conduit; and a pivot for said conduit and so positioned as to cause said conduit to withdraw or extend through said opening when said receiving means is manipulated.



4. A wall-plate with an opening; a curved conduit adapted to extend or withdraw through said opening; and a pivotal mounting for said conduit, positioned at substantially the center of curvature of same, and adapted to guide said extension or withdrawal when said conduit is manipulated.

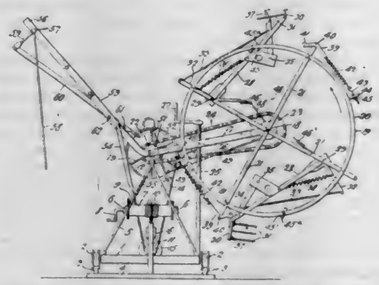
5. A wall-plate with an opening; a curved conduit adapted to extend or withdraw therethrough around its axis of curvature as a center; guiding means for holding said conduit within its path of motion; and a sound conveyer connected with the projecting end of said conduit and adapted, when properly manipulated, to cause said extension or withdrawal.

[Claims 6 to 8 not printed in the Gazette.]

1,190,549. PROCESS OF RECOVERING VALUES FROM ORES. HENRY HIRSCHING, Oakland, Cal. Filed Nov. 28, 1913. Serial No. 803,480. (Cl. 75—18.)

A process for recovering copper, silver and gold from roasted or unroasted ores, consisting in acting on the ore with aqueous ammonia, thereby dissolving the copper and the silver, expelling the ammonia from the solution, thereby causing a precipitate from the solution of the black copper oxid and silver oxid, settling and decanting, dissolving the precipitate with sulfuric acid, electrolyzing to deposit copper, recovering the silver, and recovering the gold from the ore residue substantially as and for the purpose set forth.

1,190,550. MANURE-LOADER. ALBERT HOSSFELD, Lewiston, Minn. Filed Oct. 18, 1915. Serial No. 56,502. (Cl. 37—17.)



1. In a loader, a rotary wheel, a movable bucket carried thereby and movable in the direction of rotation of the wheel, means for holding the bucket when it is moved in the direction of rotation of the wheel, the bucket being moved in said direction by centrifugal action, and means movable with the bucket and operable for discharging the contents thereof at one point of its path of rotation.

2. In a loader, a rotary member, a bucket pivotally connected therewith to swing by centrifugal action in the direction of rotation of the member, means for holding the said bucket when swung in said direction, and means movable with the bucket and operable for discharging the contents thereof at one point of its path of rotation.

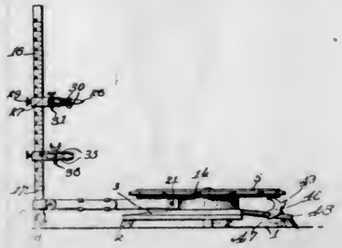
3. In a loader, a rotary member, an arm pivoted to said member and having a bucket at its free end, means for holding said arm when it is swung away from the center of said member, and means movable with the bucket and operable for discharging the contents thereof at one point of its path of rotation.

4. In a loader, a rotary member, an arm pivoted to said member and having a bucket at its free end, means for holding said arm when it is swung away from the center of said member, an ejector coöperable with the bucket, and trip means for operating said ejector when the bucket is brought to an upper position.

5. In a loader, a rotary wheel having spokes and a rim, an arm pivoted to one spoke and projecting past the rim, said arm having a bucket at its free end, a buffer carried by the rim, said rim having a friction grip for engaging said rim, said arm being swingable between said grip and buffer, an ejector carried by said arm and coöperable with the bucket to eject the contents thereof, a lever carried by the wheel and operatively connected with said ejector, and a trip member disposed in the path of said lever for swinging it to operate the ejector.

[Claims 6 to 8 not printed in the Gazette.]

1,190,551. SKIRT-MARKER. GEORGE J. HUGHES, Bedford, Iowa. Filed Feb. 25, 1914. Serial No. 821,038. (Cl. 33—10.)



1. In a dressmaker's skirt fitting and cutting device of the character described, a raised platform for supporting the subject, and pendent means for connection with the body of the subject to sustain the same against movement on the platform, substantially as described.

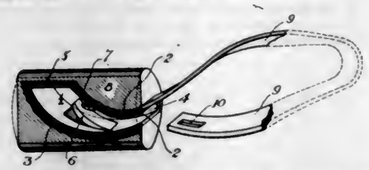
2. In a dressmaker's skirt fitting and cutting device of the character described, a rotatable platform, and pendent swiveled means for grasp by the hands of the subject for supporting the latter against movement on the platform, substantially as described.

3. In a dressmaker's device of the character described, pendent means for grasp by the hands of the subject to restrain shifting movement of the body from one foot to the other, substantially as described.

4. In a skirt marker, a base, and a platform rotatably mounted on said base and provided with a railing peripherally disposed thereon and bent to form a plurality of hand grips for rotating said platform, substantially as described.

5. A skirt marker including a revoluble platform to receive the subject, means to hold the platform in a predetermined position, a marking means associated with the platform and revoluble independently of the latter to mark a skirt while the subject is in a stationary pose, said marker being radially adjustable to conform to skirts of various widths.

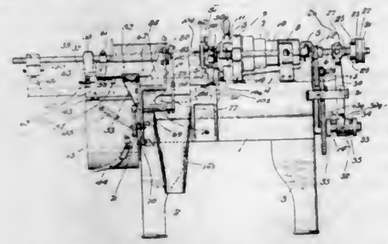
1,190,552. LOCKING-SEAL. JOSEPH JALBERT, Sr., Naughton, Ontario, Canada. Filed Nov. 27, 1915. Serial No. 63,885. (Cl. 70—99.)



1. A seal comprising a longitudinally curved pocket having two of its opposite walls longitudinally curved and diverging from the entrance opening toward the opposite end, each of said walls having a tongue stamped therefrom and turned inwardly to present a very narrow passage between the tongues, a band having one end wrapped lengthwise about said pocket to close the openings formed by stamping out the aforesaid tongues and having its opposite end provided with an opening to receive one of the aforesaid tongues, and a lead block incasing said pocket and surrounding band.

2. A seal comprising a pocket having a lower concave wall and an upper convex wall, a tongue projecting inwardly from each of said walls and extending in the same longitudinal direction having their free ends terminating adjacent each other, a band having one end thereof extending around said pocket and having an opening provided in its opposite end for receiving one of the said tongues, a cylindrical block for inclosing said pocket and for holding one end of the band thereto, and the inlet end of said pocket being less in height than the remaining portions of the pocket for the purpose set forth.

1,190,553. AUTOMATIC RING-HANDLING MACHINE. CHARLES E. JOHNSON, Muskegon, Mich. Filed Oct. 11, 1915. Serial No. 55,302. (Cl. 82—2.)



1. In a mechanism of the character described, a ring receiving hopper, a ram having a head, means to carry a ring from the hopper to the head, means on the head to receive the ring, an expanding clutch, means to operate the ram to carry the ring on the head thereof to the clutch, means to expand the clutch after the ring is placed thereover, a tool holder, tools mounted thereon, means to move the tool holder toward the ring, means for rotating the clutch and ring thereon, means for retracting the tool holder, an ejecting mechanism mounted adjacent the clutch, means for operating the ejecting mechanism for striking the ring after the tool holder has been retracted and means to release the clutch previous to the action of the ejecting mechanism.

2. In combination, a ring receiving hopper adapted to contain a plurality of rings, a support therefor, a ram slidably mounted on the support, a shaft rotatively mounted on the support, means to rotate the shaft, a drum on the shaft, cam bars on the drum engaging with the ram for moving it back and forth on the support, a head on the ram, means operated by the drum for taking a ring from the hopper and transferring it to the head, means on the ram for forcing the rings forward step by step with each reciprocation of the ram, an expanding clutch rotatively mounted on the support adapted to receive the ring from the head, means to expand and release the clutch with an interval of time between, means automatically operated by the shaft for machining the ring during said interval of time, and means to eject the ring from the clutch after release thereof.

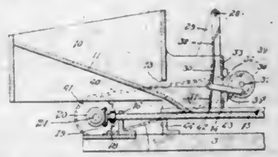
3. In combination, a supporting bed, a shaft extending lengthwise of the bed, a drum on one end of the shaft, a ram slidably mounted above the drum, means interposed between the ram and drum for moving the ram back and forth once with each rotation of the shaft, an expanding clutch located in front of the head of the ram, means to rotate the clutch, means to expand and release the clutch with each revolution of the shaft with an interval of time between expansion and release, a ring holding hopper, means operated by the drum for taking a ring therefrom and transferring it to the head of the ram with each revolution of the drum previous to the movement of the ram toward the clutch, means for machining the sides of the ring during the time between expansion and release of the clutch, a spring operated ejecting mechanism located adjacent the clutch, means to move said mechanism away from the clutch against the spring while the ring is being operated upon, and means to release the ejecting mechanism after the operation on the ring is completed to thereby eject the ring from the clutch.

4. In combination, an expanding clutch, means to support the clutch, means to rotatively drive the clutch, means to expand and release the clutch, means to periodically position a ring over the clutch immediately before expansion thereof, means to machine the ring before release of the clutch, and means to eject the ring from the clutch immediately after release thereof, substantially as described.

5. In combination, an expanding clutch, a hollow shaft on which the clutch is detachably secured, means to support the shaft, means to drive the shaft, a second shaft located below the hollow shaft, reduction gearing between the shafts for driving the second shaft at a comparatively low rate of speed, a rod extending through the hollow shaft and connected with a tapered head forming part of the clutch, a lever pivotally mounted between its ends, a collar loosely mounted on the lower shaft, pins projecting from opposite sides of the collar, a connection between said collar and the lower end of the lever, a collar on the lower shaft at each side of the loose collar, a pin on each collar extending toward the loose collar, a collar on the upper shaft, connections therebetween and the upper end of the lever, and means on the rod adapted to be acted upon by said collar to move the rod lengthwise in the hollow shaft to expand the clutch when the lever is moved in one direction, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,190,554. FEEDING MECHANISM FOR NUT-BLANCHING MACHINES. WILLIAM H. KELLY, Cleveland, Ohio, assignor to The Kelly Company, a Copartnership consisting of William H. Kelly and Louis A. Kelly, Cleveland, Ohio. Original application filed Oct. 6, 1914, Serial No. 865,224. Divided and this application filed Dec. 11, 1914. Serial No. 876,628. (Cl. 146—14.)



1. In a machine for treating peanuts, a receptacle for the peanuts provided with an outlet opening, agitating means within the receptacle for the peanuts and movable toward and from the discharge opening, and peanut supporting means associated with the agitator and below the latter and forming the bottom of the receptacle, the agitator and last-named means being in coactive relation

for alining the peanuts within the receptacle and said last-named means discharging the peanuts from the receptacle while they are in the alined condition.

2. In a machine for treating peanuts, a hopper having a main compartment and an auxiliary compartment into which the main compartment discharges, said auxiliary compartment having an outlet on the opposite side from where it communicates with the main compartment, a reciprocatory agitator for the peanuts located in the auxiliary compartment, and means at the bottom portion of the auxiliary compartment in coactive relation to the agitator for alining the peanuts while in the auxiliary compartment and directing them through the outlet of said auxiliary compartment in the alined condition.

3. In a machine for treating peanuts, a receptacle for the peanuts from which the peanuts are discharged, a reciprocatory agitator for the peanuts located in said receptacle adjacent to the outlet thereof, with the agitator movable toward and from said outlet in close spaced relation to the bottom of the receptacle, and means located at and constituting the bottom of the receptacle and leading therefrom for conveying the peanuts from said receptacle, the last-named means and the agitator where adjacent thereto being coactively formed to aline the peanuts and prevent them from issuing from the receptacle in a stream of alined peanuts of more than one-peanut depth.

4. In a machine for treating peanuts, a hopper provided with a main compartment and an auxiliary compartment into which the main compartment discharges, with the auxiliary compartment having a restricted outlet through the side thereof remote from the main compartment, an agitator in the auxiliary compartment adjacent to the outlet side thereof and mounted to reciprocate toward and from said outlet side closely adjacent to the bottom of said compartment, and means coacting with the agitator whereby peanuts delivered into the auxiliary compartment are alined and caused to move from the auxiliary compartment in a shallow restricted stream while in the alined condition.

5. In a machine for treating peanuts, a hopper having a main compartment and an auxiliary compartment in communication with the main compartment of the hopper and into which the main compartment discharges, conveyer means for the peanuts located at the bottom portion of and within the area there defined by the auxiliary compartment and leading therefrom, and an agitator for the peanuts within the auxiliary compartment and in coactive relation to the conveyer means whereby the peanuts are alined on the conveyer means and discharged from the auxiliary compartment by said conveyer means while in the alined condition.

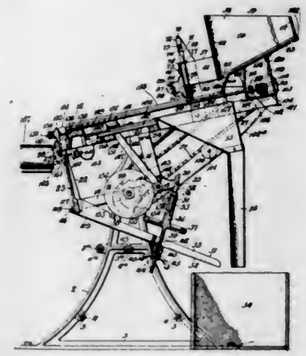
[Claims 6 to 28 not printed in the Gazette.]

1,190,555. NUT-BLANCHING MACHINE. WILLIAM H. KELLY, Cleveland, Ohio, assignor to The Kelly Co., Cleveland, Ohio, a Partnership composed of William H. Kelly and Louis A. Kelly. Continuation in part of application Serial No. 865,224, filed Oct. 6, 1914. This application filed Aug. 4, 1915. Serial No. 43,607. (Cl. 146—14.)

1. In a peanut skinning machine, a skinning device adapted to engage and strip the skin from a peanut moving lengthwise through said device, means for propelling peanuts each lengthwise through the skinning device, and means for feeding the peanuts in the direction of their length and for controlling the same so as to be engaged one at a time by the first-named means.

2. In a peanut skinning machine, a skinning device adapted to engage and strip the skin from a peanut moving lengthwise through said device, means for propelling peanuts each lengthwise through the skinning device, means for containing peanuts and discharging them therefrom in the direction of their length, and means for receiving the peanuts discharged from the containing means and for feeding the peanuts lengthwise and for controlling the same so as to be engaged one at a time by the first-named means.

3. In a peanut skinning machine, the combination of a hopper, peanut skinning means spaced therefrom, and means between the hopper and the skinning means for feeding the peanuts lengthwise from the hopper and then controlling the peanut so as to be engaged one at a time and be fed at intervals to the skinning means.

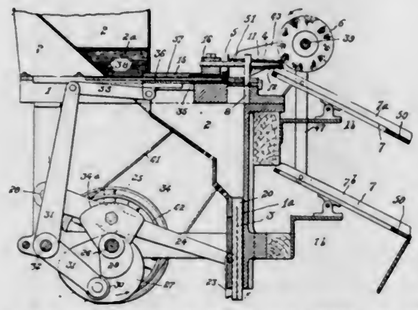


4. In a peanut skinning machine, peanut skinning devices, and feeding means for the peanuts having means for first arranging the peanuts longitudinally in series, and means for then automatically spacing them one from the other in the direction of their length before reaching the skinning devices.

5. In a peanut skinning machine, skinning devices, and feeding devices having means for engaging the peanuts and first arranging them in lengthwise position and causing them to travel in the lengthwise direction and also provided with automatic means for then positively directing the peanuts individually and in a lengthwise direction to the skinning devices.

[Claims 6 to 57 not printed in the Gazette.]

1,190,556. NUT-BLANCHING MACHINE. WILLIAM W. KELLY, Cleveland, Ohio, assignor to The Kelly Company, a Copartnership consisting of William H. Kelly and Louis A. Kelly, Cleveland, Ohio. Filed Sept. 3, 1914. Serial No. 860,079. (Cl. 146—14.)



1. In a peanut decorticating machine, means for causing the peanut kernels to travel progressively without rotative movement each in the direction of its longer axis, expansively yieldable compressing means in the path of the traveling kernels for producing a zone of compressive forces of a degree harmless to the exterior portions and adapted to prevent relative displacement of the peanut cotyledons, and skin holding and rupturing means for engaging the enveloping skin of and stripping it from a traveling peanut while the latter is subjected to the compressive forces.

2. A machine for decorticating cooked peanuts, comprising means for causing the peanut kernels with the skins thereon to travel progressively each in the direction of its longer axis, expansively yieldable means of rigid material for applying yielding pressure to each peanut kernel while progressively traveling with said pressure in surrounding or enveloping relation to the kernel and gaged to hold the cotyledons of the peanut kernel together against separation or displacement movements, and abrasive means located with relation to the expansively yieldable means to hold and break the skin and thereby cause it to be stripped from the traveling peanut while the latter is being subjected to the expansively yieldable pressure applying means.

3. A decorticating machine for cooked peanuts having means for causing the peanut kernels with the skins thereon to travel progressively each in a direction lengthwise of its longer axis, and a plurality of decorticating means in surrounding relation to the path of travel of the peanut kernels, said decorticating means being normally spaced apart by a distance less than the shorter diameter of a peanut kernel and elastically yieldable to the passage of the kernels, the pressure exerted by the decorticating means upon the peanuts being gaged to yield to the passage of the peanut kernels and at the same time exert a compressive action thereon sufficient to prevent breakage of the radicle ends of the peanut kernels and to break and remove the enveloping skin of the peanut kernels.

4. A peanut decorticating machine having decorticating means provided with a plurality of elastically and expansively yieldable pressure applying members together defining an elongated passage of normally less diameter than the shorter diameter of a peanut kernel, and means for causing the peanut kernels to travel progressively through the passage defined by the pressure applying means each in a direction lengthwise of its longer axis, said pressure applying means being gaged to exert a pressure sufficient to hold the peanut cotyledons from displacement one relative to the other and to break and remove the skin from the peanut kernels without harm to the fleshy exterior of such kernels.

5. In a peanut decorticating machine, a decorticating device constructed to exert an expansively yieldable compressing force on a peanut traveling therethrough to a degree harmless to the exterior portion of the peanut cotyledons, and said device having means for holding the skin of the peanut to strip it therefrom while the peanut is being forced through such device, means for presenting the peanuts successively into position to be forced through the decorticating device with the longitudinal axis of the peanuts in the line of travel through such decorticating device, and means for causing the peanuts to travel progressively, without rotative movement, each in the direction of its longer axis through said decorticating device.

[Claims 6 to 33 not printed in the Gazette.]

1,190,557. TRUNK-FASTENER. SAMUEL L. KLEBER, Pittsburgh, Pa. Filed Nov. 16, 1915. Serial No. 61,786. (Cl. 70—103.)

1. The combination with a pivoted fastener member adapted to be secured to one section of a receptacle and provided with a slot, of a coupling member adapted to be secured to the other section of a receptacle and provided with a link capable of extending through said slot for the reception of means to lock said fastener member.

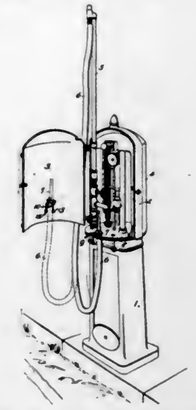
2. The combination with a pivoted fastener member adapted to be secured to one section of a receptacle and provided with a slot, of a coupling member adapted to be secured to the other section of a receptacle and provided with a link capable of extending through said slot for the reception of means to lock said fastener member, said link being pivotally connected to said coupling member and having a pointed end.

3. The combination with a trunk lid fastener having its hasp or fastener member provided with a slot, of a coupling member adapted to have one end secured to a receptacle and its other end project through said slot, said projecting end provided with a link adapted to receive means for locking the said fastener member.



4. The combination with a trunk lid fastener having its hasp or fastener member provided with a slot, of a coupling member adapted to have one end secured to a receptacle and its other end project through said slot, said projecting end provided with a link adapted to receive means for locking the said fastener member, said link having a pointed end to facilitate the passage of the link and a portion of the coupling member through said slot.

1,190,558. DISPENSING APPARATUS. ARTHUR C. KNUDTSON, New England, N. D. Filed Dec. 8, 1915. Serial No. 65,779. (Cl. 221—99.)

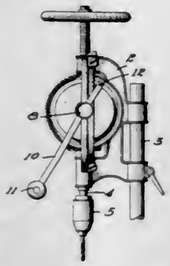


In combination with a dispensing apparatus of the class described which includes a shelterless yoke, an outwardly rounded door hinged thereto, a base having a hose receiving notch, an upwardly projecting discharge pipe and a flexible hose secured at one end to said discharge pipe outside of the inclosure, of a hose holder secured on the inside of the door and having a restricted entrance to receive the hose and support it from the door, said hose holder being so located with respect to the base notch as to lie with its hose receiving portion directly above the base notch when the door is closed, whereby to locate the pendent portion of the hose in the base notch substantially as shown and described.

1,190,559. CRANK FOR BENCH-DRILLS. JOHN KOWALSKY, Minneota, Minn. Filed Aug. 7, 1915. Serial No. 44,312. (Cl. 74—33.)

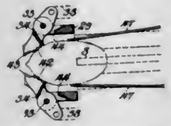
1. The combination, with a shaft having a threaded end, of a nut having a slot extending therethrough from side to side and into one end of which nut said shaft is

tapped to intersect said slot, a crank arm having flat faces and slidable lengthwise in said slot, the outer wall of said slot forming a broad bearing surface for said arm and against which surface said arm is pressed when said nut is revolved in one direction to engage said shaft with the opposite surface of said arm, said arm being released and free to slide lengthwise in said slot when said nut is revolved in the opposite direction.



2. The combination, with a shaft having a threaded end, of a nut into which said threaded end is tapped, said nut having a transverse slot therein, a crank arm slidable in said slot and locked by engagement with said threaded end when said nut is revolved in one direction, and released when it is revolved in the other direction.

1,190,560. PEANUT-SKINNING DEVICE. CHARLES F. LAGANKE, Cleveland, Ohio, assignor to The Kelly Company, a Copartnership composed of William H. Kelly and Louis A. Kelly, Cleveland, Ohio. Filed July 9, 1915. Serial No. 38,959. (Cl. 146—14.)



1. In a device for removing the skins from peanuts, a plurality of members arranged in a circular series and adapted to engage and hold the skin of a peanut kernel traveling therethrough, said members being mounted with reference to the path of the peanut kernels to cause the skin engaging portions thereof to approach each other and engage the forward end of the peanut during the initial portion of the travel of the latter through the series of members, and means for moving the kernel in the direction of its length through the series of members.

2. In a device for removing skins from peanuts, a plurality of rockable dogs arranged in a circular series, with each dog having a series of teeth to engage the skin of the peanut kernel and mounted to move toward the peanut for the initial portion of the travel of the latter through the circular series of dogs and then away from the peanut during the remainder of the travel of the peanut therethrough, and means for moving the peanut kernel in the direction of its length through the series of dogs.

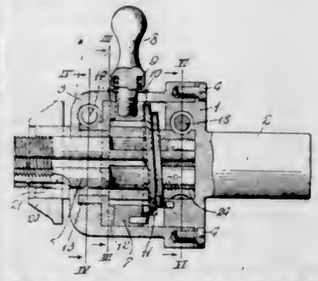
3. In a device for removing skins from peanuts, the combination of means for moving each peanut progressively in the direction of its length, with a series of rockable dogs arranged about the path of the peanut and adapted to engage the skin of the peanut as the latter is forced forwardly, the dogs being mounted to each first engage the peanut to the rear of the forward end of the latter, then move with the peanut toward said forward end thereof, and then move away from the forward end of the peanut.

4. In a device for removing skins from peanuts, the combination of a plurality of engaging members having teeth to engage and hold the skin of a peanut and associated to define a passageway for the peanut smaller than the diameter of the latter, said members being mounted to move toward each other during the initial travel of the peanut through the passageway to thereby contract the passageway so as to engage the front extremity of the peanut, and then move away from each other to permit the ejection of the peanut through the passageway with the skin of the peanut retained by said engaging members.

5. In a device for removing the skins from peanuts, the combination of means for moving a peanut progressively in a line coinciding with the longitudinal axis of the nut, with skin-removing means acting to first progress with the moving peanut until the skin of the forward end of the nut is broken, said means then expanding and holding skin while the peanut kernel is forced therethrough.

[Claims 6 to 46 not printed in the Gazette.]

1,190,561. COLLAPSIBLE TAP. JOSEPH P. LAVIGNE, Detroit, Mich. Filed Nov. 22, 1913. Serial No. 802,354. (Cl. 10—143.)



1. A collapsible tap comprising a main head, an outer casing mounted thereon, cutting dies journaled in the head and casing in symmetrical relation and around the axis of rotation, a member rotatable in the head in engagement with the several dies for projecting them simultaneously from the head, a spindle in the head adapted to operate the die projecting means, a rotatable member in the casing adapted to simultaneously engage and turn the dies, a knock-off member on the casing engaging the die rotating member and adapted to reciprocate the latter longitudinally of the casing and a spring member in the casing adapted to yieldingly project the dies and turning member against the thrust of the knock-off member and normally retain the die rotating members in initial position.

2. A collapsible tap comprising a main head, a casing thereon, cutting dies journaled in the head and casing in symmetrical relation to the axis of rotation, a bushing rotatable in the head in screwthreaded engagement with the several dies for projecting them simultaneously from the head, a worm spindle in the head adapted to turn the bushing, an annular gear journaled in the casing segmental teeth on the dies meshing with the annular gear, a handle for shifting the gear to turn the dies into operative position, a stop collar in the head adapted to interlock with the gear when the dies are in cutting position, a spring member in compression and tension between the head and annular gear adapted to normally hold the latter interlocked with the stop collar and to turn the latter when released from the stop collar to inoperative position, and a knock-off member adapted to shift the gear out of engagement with the stop collar.

3. A collapsible tap comprising a rotatable head, a casing on the head, cutting dies having cylindrical shanks journaled in the head and casing in symmetrical relation with the axes of rotation and with cutting edges on the projecting portions eccentric to the shank axes, segmental gear teeth on the shank axes, a bushing rotatable in the head in screwthreaded engagement with the shank for projecting the latter from the head, worm teeth on the bushing, a manually operable worm spindle in the head meshing with the bushing teeth, an annular gear journaled in the head and casing in mesh with the teeth of the shanks, a stop collar rotatable in the casing and head adapted to interlock with the annular gear when the latter has turned the dies into cutting position, a manually operable worm spindle in the head and casing in mesh with the teeth of the stop collar, a spring member in the casing secured to the head and adapted to hold the gear in engagement with the stop collar and to turn the gear when released from the stop collar to inoperative position, a knock-off member reciprocable on the casing adapted to shift the gear out of engagement with the collar.

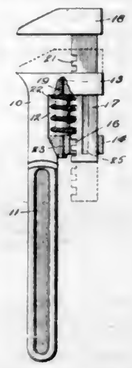
4. A collapsible tap comprising a rotatable head, a casing on the head, cutting dies having cylindrical shanks journaled in the head and casing in symmetrical relation with the axis of rotation and with cutting edges on the projecting portions eccentric to the shank axes, segmental gear teeth on the shank axes, a bushing rotatable in the head in screwthreaded engagement with the shanks for projecting the latter from the head, worm teeth on the bushing, a manually operable worm spindle in the head meshing with the bushing teeth, an annular gear journaled in the head and casing in mesh with the teeth of the shanks, a stop collar rotatable in the casing and head adapted to interlock with the annular gear when the latter has turned the dies into cutting position, a manually operable worm spindle in the head and casing in mesh with the teeth of the stop collar, a spring member in the casing secured to the head and adapted to hold the gear in engagement with the stop collar and to turn the gear when released from the stop collar to inoperative position, a knock-off member reciprocable on the casing adapted to shift the gear out of engagement with the collar, and a manually operable member extending from the gear in frictional engagement with the casing for turning the gear into position to interlock with the stop collar.

5. A collapsible tap comprising a rotatable head, dies having cylindrical shanks journaled in the head in symmetrical relation to the axis of rotation thereof, cutting edges in the dies in eccentric relation to the shank axes, gear teeth on each of the shanks, a bushing rotatable in the head in screwthreaded engagement with each of the shanks, worm teeth on the bushing, a manually operable worm spindle in mesh with the worm teeth, a stop collar rotatable in the casing, a worm spindle engaging the stop collar for turning the latter, an annular gear journaled in the casing in mesh with the shank teeth and adapted to bear outwardly against the stop collar, a spiral spring encircling the die shanks in compression between the head and the gear and projecting the latter against the stop collar, the end portions of the spring being locked respectively with the head and the gear for throwing the latter with the dies to inoperative position when disengaged from the stop collar, a knock-off member reciprocable on the casing secured to the gear and adapted to shift the latter against the action of the spring out of engagement with the collar and a manually operable member extending from the gear through the casing with which it is in frictional engagement for moving the gear into interlocked engagement with the stop collar.

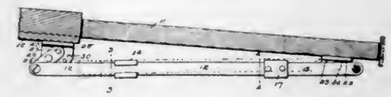
1,190,562. WRENCH. AUGUSTE MARIE LE PIERRE, Korbel, Cal. Filed Mar. 20, 1915. Serial No. 15,827. (Cl. 81—171.)

1. A wrench including a handle provided at one end with a stationary jaw and with elongated arms extending in spaced relation and provided with passageways positioned in alinement, one of the arms being provided with an unthreaded opening, and the second arm with a threaded socket positioned in alinement with the unthreaded opening, a movable jaw having a gripping head positioned beyond the stationary jaw and having a shank extending through the alined passageways of said arms and provided with teeth forming a rack, a turn screw positioned between said arms and having its threads engaging the teeth of said shank, and a pivot pin for said turn screw passing through the unthreaded opening of one arm and having a threaded end screwed into the threaded socket of the second arm to releasably hold said turn screw in place.

2. A wrench including a handle provided at one end with a stationary jaw and with elongated arms extending in spaced relation at one side of said handle and provided with passageways positioned in alinement, a movable jaw having a gripping head positioned beyond the stationary jaw and having a shank extending through the alined passageways of said arms and provided with teeth forming a rack, and a turn screw rotatably mounted between the arms and having its threads engaging the teeth of the shank for moving the shank longitudinally in overlapping relation to said handle.



1,190,563. DOOR-CLOSER. LEROY J. LINDSAY, Seymour, Iowa. Filed Oct. 12, 1914. Serial No. 866,409. (Cl. 16—9.)



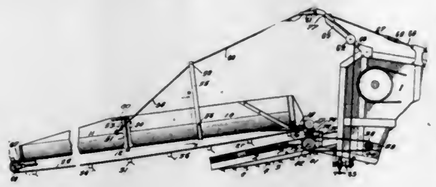
1. In a device of the class described, a pair of members slidably mounted on each other, yielding means tending to force said members apart, means for pivoting one of said members to a support, means for pivoting the other of said members to a member hinged to said support, said last named means being so arranged that it may be swung to different positions, and will be maintained in said positions for varying the tensions on said yielding device.

2. In a device of the class described, the combination of a stationary support, a door hinged thereto, closer members slidable with relation to each other, yielding means tending to force said closer members apart, one of said closer members being pivoted to said support at a point spaced laterally from the plane in which the door rests when closed, a link pivoted to the other closer member and pivotally connected with said door, said parts being so arranged as to permit the variation of tension on the yielding device by moving said link from one position to another, without otherwise affecting the operativeness of the device.

1,190,564. SELF-FEEDING DEVICE FOR THRESHING-MACHINES. WILLIAM D. LINDSAY, Milwaukee, Wis. Filed June 3, 1911. Serial No. 631,116. (Cl. 193—15.)

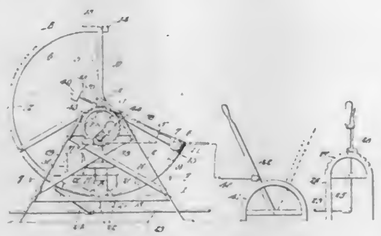
1. The combination with a main feeding conveyer for a threshing machine, of an auxiliary feeding conveyer arranged to deliver material to the main conveyer and adjustably supported in operative relation thereto, said auxiliary feeding conveyer comprising a feed way having a cylindrically curved bottom, a channel iron longitudinally disposed in said bottom and rigidly secured thereto, an endless chain conveyer arranged to travel in said channel iron, and provided with bundle engaging flights, extending above and laterally from said channel iron in the bottom portion of the feed way, and means for actuating said chain conveyer.

2. The combination with a main feeding-conveyer for a threshing machine, of an auxiliary feeding conveyer arranged to deliver material to the main conveyer and adjustably supported in operative relation thereto, said auxiliary feeding conveyer comprising a feed way having a cylindrically curved bottom, a channel iron longitudinally disposed in said bottom and rigidly secured thereto, an endless chain conveyer arranged to travel in said channel



iron, and provided with bundle engaging flights, extending above and laterally from said channel iron in the bottom portion of the feed way, and means for actuating said chain conveyer, said flights being each connected with a link of said conveyer, and the connecting member being arranged to bear upon the side margins of the channel iron to support the flights, with their end portions out of contact with the feed way walls.

1,190,565. MECHANICAL BASE-BALL PITCHER. JOHN D. LONG, Butte, Mont. Filed Oct. 19, 1915. Serial No. 56,744. (Cl. 124—1.).



1. A mechanical base ball pitcher embodying an arcuate guide mounted for oscillatory adjustment, and a resilient rotatable arm working within said guide and having ball holding means at its free end coöperable with said guide.

2. A mechanical base ball pitcher embodying a rotatable shaft, an arcuate guide, spiders carrying said guide and mounted loosely upon said shaft, means for tilting said guide, means for delivering balls one at a time within said guide, and a resilient arm carried by said shaft and having ball holding means at its free end coöperable with said guide.

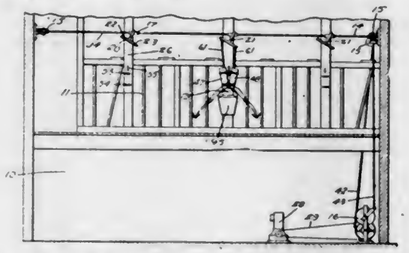
3. A mechanical base ball pitcher, embodying an arcuate guide, and a rotatable resilient arm working within said guide and having ball holding means at its free end coöperable with said guide, the delivery portion of the guide extending in a spiral curve closer to the center of rotation of said arm.

4. A mechanical base ball pitcher, embodying a rotatable shaft, an arcuate guide, a pair of spiders carrying said guide and mounted loosely upon said shaft, means for tilting said guide, and means for delivering balls one at a time into said guide, and a resilient arm carried by said shaft and having ball holding means at its free end, coöperable with said guide, the delivery portion of said guide extending along a spiral curve nearer said shaft than the other portions of said guide.

5. A mechanical base ball pitcher, embodying an arcuate channel mounted in a vertical plane for oscillatory adjustment and extending through an arc of over 180 degrees, the lower portion of the channel having a longitudinal slot and a cut away portion at one side, trip means disposed in said slot for holding a ball, and an inclined chute for delivering balls one at a time through said cut away portion to said trip means, and a rotatable resilient arm movable within said channel and having a pocket at its free end movable in said channel past said trip means.

[Claims 6 and 7 not printed in the Gazette.]

1,190,566. SUCTION MILKING-MACHINE. KENNETH K. MCLEOD, St. Paul, Minn. Filed Aug. 20, 1915. Serial No. 46,414. (Cl. 31—98.)



1. A milking apparatus comprising two parallel spaced members each extending entirely across the barn, means for simultaneously reciprocating both said members, a plurality of rocking arms each having operative connection with one or the other of said members, and a milking machine comprising a pair of upright cylinders with pistons in said cylinders and piston rods adapted to be connected for operation with any of said rocking arms.

2. A milking apparatus comprising a rotary member having a pair of oppositely-extended arms, a unitary cable attached at its ends to said arms, a series of pulley guides for causing said cable to extend in a pair of spaced parallel runs across the barn, means for rotating said member and arms to reciprocate the cable, a plurality of rocking arms each having operative connection with one or the other of said arms, and a milking machine comprising a pair of upright cylinders with pistons in said cylinders and piston rods adapted to be connected for operation with any of said rocking arms.

3. A milking apparatus comprising a reciprocating member having a pair of spaced lugs thereon, a three-armed rocker member pivoted so that one of said arms extends between said lugs, a suction pump comprising a pair of upright pump cylinders each having a discharge opening, pistons in said cylinders, piston rods connecting said pistons with the ends of the two other rocker arms for simultaneously reciprocating said pistons in opposite directions, and valve mechanism beneath said openings for alternately opening and closing the pump cylinders.

4. A milking apparatus comprising a reciprocating member having a pair of spaced lugs thereon, a three-armed rocker member pivoted so that one of said arms extends between said lugs, a suction pump comprising a pair of upright pump cylinders each having a discharge opening, pistons in said cylinders, piston rods connecting said pistons with the ends of the two other rocker arms for simultaneously reciprocating said pistons in opposite directions, and a double valve yieldingly connected so that both parts move in unison for alternately opening and closing each cylinder.

5. A milking apparatus comprising a reciprocating member having a pair of spaced lugs thereon, a three-armed rocker member pivoted so that one of said arms extends between said lugs, a suction pump comprising a pair of upright pump cylinders each having a discharge opening, pistons in said cylinders, piston rods connecting said pistons with the ends of the two other rocker arms for simultaneously reciprocating said pistons in opposite directions, and a double valve yieldingly connected so that both parts move in unison for alternately opening and closing each cylinder.

[Claims 6 to 18 not printed in the Gazette.]

1,190,567. EYE-PROTECTOR. ROBERT MALCOM, Chicago, Ill. Filed Nov. 8, 1915. Serial No. 60,203. (Cl. 2—149.)



1. In an eye protector, the combination of a body portion formed of a single piece of substantially transparent material having the ends thereof bent at an angle to the plane of vision, a shade and shield portion of relatively darker material than the protector, said shade and shield portion being attached to the outside of the protector at the upper edge thereof, the free edge of said shield portion projecting beyond the plane of the body portion, substantially as described.

2. In an eye protector, the combination of a body portion formed of a single piece of substantially transparent material having the ends thereof bent and folded to extend at an angle to the plane of vision, a shade and shield portion of relatively darker material than the protector, said shade and shield portion extending lengthwise of the protector from end to end thereof, the ends of said shield portion being bent to conform to the shape of the ends of the protector, means for securing said protector and said shield portions together along the upper edges and ends thereof, the free edge of said shield projecting beyond the front of the protector to form a rain shield, substantially as described.

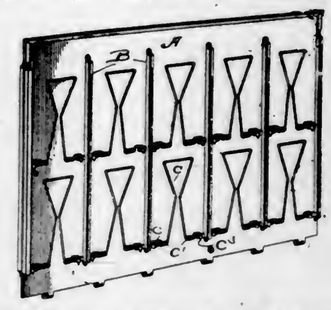
3. In an eye protector, the combination of a body portion formed of a single piece of substantially transparent material having the ends thereof bent and folded to form an end wall extending at an angle to the plane of vision, a shade and shield portion of relatively darker material extending from end to end of said protector and secured thereto at the upper edge and ends thereof, the free edge of the shade portion extending beyond the plane of the body portion, said protector and shield portions having ventilating apertures therethrough at each end of the device, substantially as described.

4. In an eye protector, the combination of a body portion formed of a single piece of substantially transparent material having the ends bent and folded to form an end wall extending at an angle to the plane of vision, a strip of relatively dark-colored material extending from end to end of said eye protector along the upper edge and outside of said protector, and binding material engaging the edges of the protector and the upper edge and ends of the shield portion, the free edge of said shield portion projecting beyond the front of the body of the protector, substantially as described.

5. In an eye protector, the combination of a body portion formed of a single piece of flexible transparent material having the ends thereof bent and folded to extend at an angle to the plane of vision, an elongated strip of material of contrasting color forming a shield and shade portion secured to the outside of said protector along the upper edge thereof, said shield portion extending at an angle of approximately 45° from the vertical and from the edge thereof, projecting over and beyond the front of the eye protector.

[Claims 6 and 7 not printed in the Gazette.]

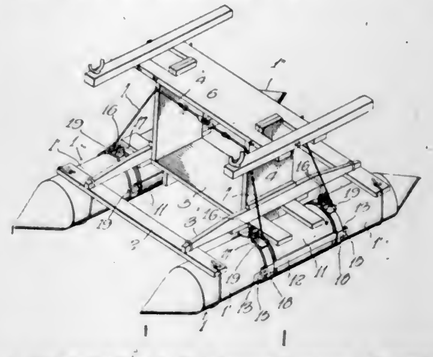
1,190,568. BILL LEAF AND SPRING. FRANK GEORGE MARBACH, Cleveland, Ohio, assignor to Champion Register Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 27, 1915. Serial No. 11,093. (Cl. 129—34.)



1. A bill leaf and the sheet metal rubbing strips each strip having integral end and side ears, said ears being spot-welded to the leaf.

2. The combination with a bill leaf, of the sheet metal rubbing strips having upset or grooved side ears spot-welded to the leaf and bill clips having their end portions projected through the grooved or upset portions of the rubbing strip ears, as set forth.

1,190,569. PONTOON FOR KNOCKDOWN RAFTS. JAMES H. MAXWELL, Seattle, Wash. Filed Nov. 26, 1915. Serial No. 63,528. (Cl. 9—2.)



1. In a knockdown raft, a sectional pontoon, a cylinder disposed in one section thereof and projecting therefrom and said projecting end of the cylinder being adapted to be inserted into the adjacent section of the pontoon, and clamping bands surrounding said sections over said cylinder.

2. In a knockdown raft, a sectional pontoon, a cylinder disposed in one section thereof and projecting therefrom, said projecting end of the cylinder being adapted to be inserted into the adjacent section of the pontoon, a thimble surrounding said pontoon and disposed over the ends of the adjacent sections around the cylinder therein.

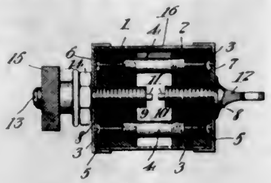
3. In a knockdown raft, a sectional pontoon, a thimble surrounding said pontoon and disposed over the adjacent ends of a pair of sections thereof, arms projecting from the opposite edges of said thimble, and clamping bands surrounding said sections and disposed on said arms.

4. In a knockdown raft, a sectional pontoon, a thimble surrounding said pontoon, and disposed over the adjacent ends of a pair of sections thereof, a strip secured to said thimble and projecting beyond the opposite ends thereof, the ends of said strip being bent laterally, and clamping bands surrounding said sections and disposed in the seats formed in said arms.

5. In a knockdown raft, a sectional pontoon, a cylinder disposed in one section thereof and projecting therefrom, said projecting end of the cylinder being adapted to be inserted into the adjacent section of the pontoon, a thimble surrounding said pontoon and disposed over the adjacent ends of the sections, arms projecting from the opposite edges of said thimble, and clamping bands surrounding said sections and disposed over said arms.

[Claim 6 not printed in the Gazette.]

1,190,570. SPARK-INTENSIFIER FOR SPARK-PLUGS. GEORGE RICHARD MEISSNER, Albia, Iowa, assignor of one-half to L. R. West, Osceola, Iowa. Filed Oct. 16, 1914. Serial No. 866,969. (Cl. 175—183.)



1. A spark intensifier, comprising a pair of insulating disks, plugs for spacing said disks, electrodes adjustably mounted within said disks, a glass tube inclosing said disks, and caps secured on said disks by said electrodes engaging the ends of said glass tube.

2. A spark plug intensifier, comprising a pair of insulating disks provided with centrally arranged threaded bores, said disks being provided with sockets, spacing plugs mounted in said sockets, screws extending through said disks into said plugs, caps arranged on said disks, a glass tube arranged between said caps, and electrodes mounted within said threaded bores of said disks for holding said caps in position upon said insulating disks.

3. A spark intensifier, comprising a pair of insulating disks, electrodes adjustably mounted within said disks, means for holding said disks spaced apart, caps surrounding said disks and held in position thereon by said electrodes, and a glass tube arranged between said caps surrounding said disks.

4. As a new article of manufacture, a spark intensifier comprising a pair of opposed insulating disks, spacing plugs connecting said disks, means for securing said plugs to said disks, mica sheets arranged upon said disks, caps arranged upon said mica sheets, a glass tube arranged between said caps, and electrodes adjustably mounted within said disks for securing said caps in position upon said disks.

5. A spark intensifier, comprising a pair of spaced insulating disks provided with centrally threaded bores, apertured sheets of mica arranged upon the outer faces of said disks, apertured caps mounted upon said sheets of mica, a glass tube arranged between said caps and surrounding said insulating disks, and threaded electrodes mounted within the threaded bores of said insulating disks having means for clamping said caps in engagement with the ends of said tube.

[Claims 6 to 8 not printed in the Gazette.]

1,190,571. AUTOMATIC SASH-STOP. CLINTON O. MIKLE, Portland, Oreg. Filed Dec. 15, 1915. Serial No. 66,944. (Cl. 16—18.)

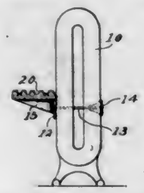
1. An automatic sash stop or catch of the character described, comprising a vertical casing, a stop or catch pivoted in the upper end of the casing, extending over the casing a suitable distance and engaging its upper end when the stop is in a horizontal position, a spindle within the casing vertically movable therein, its upper end pivoted in the lower part of the said stop, the spindle being of sufficient length to extend a suitable distance below the lower end of the casing when the stop is in a horizontal position, substantially as described.

2. An automatic sash stop of the character described in combination as follows, an outer and inner window sash, a vertical casing secured upon the stile of the inner face of the outer sash, a stop or catch pivoted in the upper end of the casing, extending over the casing when the stop is in a horizontal position a sufficient distance to engage the lower edge of the inner sash when it is



above the catch and also to engage the upper end of the casing at the same time, a spindle within the casing vertically movable therein, its upper end pivoted in the lower part of the said stop, the spindle being of sufficient length to extend a suitable distance below the lower end of the casing when the stop is in a horizontal position, substantially as described.

1,190,572. FOOT-REST FOR RADIATORS. ANTHONY MILLER, Ridott, Ill. Filed July 11, 1913. Serial No. 778,579. (Cl. 155—9.)

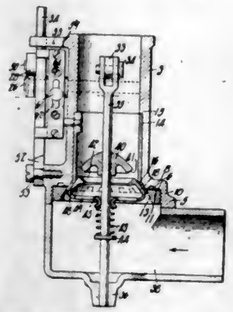


1. An improved bracket for the purposes described, comprising a sheet metal body in the form of a truncated triangle, a broad central tongue formed integrally on the base of the body, the side portions of the body bent downwardly in parallel relation at right angles to the intermediate portion of the body with inner vertical edges disposed in a common plane, said tongue being extended a distance beyond the body, and being bent downwardly parallel to said vertical edges for the purpose described.

2. An improved foot rest and shelf construction for radiators comprising brackets stamped from sheet metal and having triangular side portions, a tongue extended therefrom between said side portions said side portions being bent downwardly in parallel spaced relation and having inner vertical alined edges, said tongue being extended beyond the plane of said edges and being then turned downwardly parallel thereto, an extension formed on the outer end of the brackets, and recurved, a rail carried therein and a removable shelf shaped to rest upon the bracket inwardly of the rail.

1,190,573. CARBURETER. CHARLES L. NEDOMA, Detroit, Mich., assignor of one-half to Frank M. Hawley, Detroit, Mich. Filed June 26, 1915. Serial No. 36,465. (Cl. 48—150.3.)

1. A carbureter comprising in combination a tubular casing forming an air passage, said casing including a fuel passage leading inwardly through the wall thereof, a tubular fuel valve conforming to a portion of the wall of the air passage, a throttle valve for controlling the flow of air through the air passage, and means for simultaneously operating the fuel valve and the air valve, said fuel valve being movable in one direction in respect to the casing and said throttle valve being movable in another direction.



2. A carbureter comprising in combination a tubular casing forming an air passage, said casing including a fuel passage leading inwardly through the wall thereof, a tubular fuel valve conforming to a portion of the wall of the air passage, and a throttle valve for controlling the flow of air through the air passage, means for moving said fuel valve in one direction in respect to the casing, and means for moving said throttle valve in another direction.

3. A carbureter comprising in combination a tubular casing forming an air passage, said casing including two sections, one an intake section and the other a casing for a carbureting chamber, and a ring-like jet plate located between the sections, said jet plate having a series of notches in its inner edge, said notches extending through the jet plate in a direction parallel to the axis thereof, means for supplying fuel to the notches, and a tubular fuel valve conforming to the interior of a portion of the air passage casing for regulating the flow of fuel from the notches.

4. A carbureter comprising in combination a tubular casing forming an air passage, said casing including two sections, one an intake section and the other a casing for a carbureting chamber, and a thin annular jet plate located between the sections, said jet plate having a series of notches in its inner edges, said notches extending through the jet plate in a direction parallel to the axis thereof, means for supplying fuel to the notches, and a tubular fuel valve conforming to the interior of a portion of the air passage casing for regulating the flow of fuel from the notches.

5. A carbureter comprising in combination a tubular casing forming an air passage, said casing including two members, and a thin annular jet plate located between the members, said jet plate having a series of notches in its inner edge, said notches extending through the jet plate in a direction parallel to the axis thereof, means for supplying fuel to the notches, a hollow tubular air valve conforming to the air passage at a point adjacent the jet plate, and means for moving the fuel valve in reference to the notches for regulating the flow of fuel.

[Claims 6 to 32 not printed in the Gazette.]

1,190,574. SIGN FOR ADVERTISING PURPOSES AND THE LIKE. EUGENE OPPENHEIMER, St. Louis, Mo. Filed Jan. 26, 1915. Serial No. 4,419. (Cl. 40—138.)

1. In an advertising sign or the like, a body-portion, a shiftable advertising-member pivoted on said body-portion, and means for pivotally shifting said advertising member, said means including a main lever pivoted intermediate its ends on said body-portion, a second lever also pivotally fulcrumed on said body-portion at a distance from, and normally out of alinement with, said main lever, a member pivotally connecting said second lever with said advertising-member, a link pivotally connected at one end to said main lever and at its other end to said second lever at a point intermediate the point of connection between said connecting-member and said second lever and the fulcrum of said second lever upon said body-portion.



2. In an advertising sign or the like, a body-portion, a shiftable advertising-member pivoted on said body-portion, and means for pivotally shifting said advertising-member, said means including a main lever pivoted intermediate its ends on said body-portion, a second lever also pivotally fulcrumed on said body-portion at a distance from, and normally out of alinement with, said main lever, a member pivotally connecting said second lever with said advertising-member, a link pivotally connected at one end to said main lever and at its other end to said second lever at a point intermediate the point of connection between said connecting-member and said second lever and the fulcrum of said second lever upon said body-portion, and a coiled spring for yieldingly holding said levers and advertising-member in normal position.

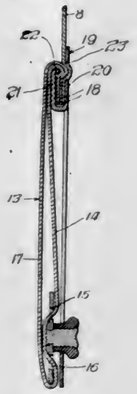
3. In an advertising sign or the like, a body-portion, a plurality of shiftable advertising-members pivoted on said body-portion, and means for pivotally shifting said advertising-members, said means including a main lever pivoted intermediate its ends on said body-portion, a second lever also pivoted on said body-portion at a distance from, and normally out of alinement with, said main lever, members pivotally connecting said second lever with each of said advertising-members, a link pivotally connected at its ends to said main and second levers, and a coiled spring having engagement with one of said levers and with said body-portion for yieldingly holding said levers and advertising-members in normal position.

4. The combination with a hinged door or the like, of an advertising-sign mounted upon said door, said sign including a body-portion, a shiftable advertising member pivoted on said body-portion, a main lever pivoted intermediate its ends on said body-portion, a second lever pivoted on said body-portion at a distance from, and normally out of alinement with, said main lever, a member pivotally connecting said second lever with said advertising-member, a link pivotally connected at its ends to said main and second levers, and a coiled spring for yieldingly holding said levers and advertising-member in normal position, and an operating-cord fastened to said main lever and to said door, whereby said door in its opening movement is adapted to pull said cord to actuate said main lever and its connected parts against the tension of said spring.

1,190,575. TAPE-AFFIXING ATTACHMENT FOR GARMENT-CLASPS. BENJAMIN F. OREWILER, Chicago, Ill. Filed May 3, 1915. Serial No. 25,590. (Cl. 24—245.)

1. A device of the class described, comprising a loop-shaped clamping member of one-piece construction formed with a button-hole slot, a cross-plate above said slot, a horizontal recess in the cross-plate, a tongue formed of a portion of the metal lying within the confines of the button-hole slot, said tongue being bent back to extend to the rear of the cross-plate and forming a U-shaped slot to the rear of the cross-plate, with the closed end of the slot at the bottom of the cross-plate, and said tongue being provided with a flange projecting toward and in register with the recess of the clamping member, substantially as described.

2. An attachment of the class described, comprising a body portion of one-piece construction, said body being formed to provide a button-hole slot and an upper cross-plate above said slot, said cross-plate being formed with a horizontally extending slot therein, a tongue extending in the lower end of the cross-plate and bent back to form a U-shaped slot at the rear of the cross-plate, with the closed end thereof lying at the bottom of the cross-plate, a stud base, webbing woven through the stud base, the free ends of the webbing lying within said U-shaped slot with the body of the webbing passing over the free end of the tongue and downwardly across the back thereof, a flange on the free end of the tongue, said flange alining with the horizontal slot in the cross-plate, whereby when said tongue is swaged inward toward said cross-plate, said webbing is forced into said slot and held in place, substantially as described.

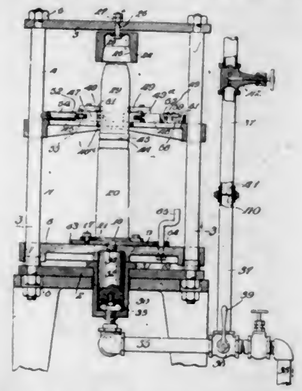


3. An attachment of the class described, comprising a body portion of one-piece construction, said body being formed to provide a button-hole slot and an upper cross-plate above said slot, said cross-plate being formed with a horizontal recess, a tongue extending from the cross-plate and bent back to form a U-shaped slot at the rear of the cross-plate, with the closed end thereof lying at the bottom of the cross-plate, a stud base, webbing woven through the stud base, the free ends of the webbing lying within said U-shaped slot with the body of the webbing passing over the free end of the tongue and downwardly across the back thereof, a flange on the free end of the tongue, said flange alining with the recess in the cross-plate, whereby said tongue is swaged inward toward said cross-plate, and said webbing is forced into said recess and held in place, substantially as described.

1,190,576. MACHINE FOR ASSEMBLING PROPELLENT EXPLOSIVE-CONTAINERS AND THEIR PROJECTILES. WALTER PAGE, Montreal, Quebec, Canada, assignor to Canadian Explosives Limited, Montreal, Canada, a Corporation. Filed May 14, 1915. Serial No. 28,207. (Cl. 29—1.2.)

1. In a machine for assembling propellent explosive containers and their projectiles, a support adapted to hold the container with the projectile set therein, an abutment, means for moving the support to carry the projectile against the abutment and a centering cap floatably mounted upon the abutment and adapted to receive the end of the projectile.

2. In a machine for assembling propellent explosive containers and their tapered projectiles, a support adapted to hold the container with the projectile set therein, an abutment, means for moving the support to carry the projectile against the abutment and a centering cap suspended from the abutment and adapted to receive the tapered end of the projectile, such cap having a flared opening therein conforming to the taper of the projectile and of a depth to provide a space between the interior end of the cap and the top or impact end of the projectile.



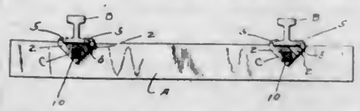
3. In a machine for assembling propellent explosive containers and their tapered projectiles, a support adapted to hold the container with the projectile set therein, an abutment, means for moving the support to carry the projectile against the abutment, a centering cap upon one side of the abutment and adapted to receive the tapered end of the projectile, such cap having a flared opening therein conforming to the taper of the projectile and of a depth to provide a space between the interior end of the cap and the top or impact end of the projectile, a headed bolt passed from the interior of the cap loosely through the end of the latter and through the abutment and a nut screwed upon the bolt and bearing against the opposite side of the abutment, the space between the head of the bolt and the abutment being greater than the thickness of the cap end through which the bolt passes.

4. In a machine for assembling propellent explosive containers and their projectiles, a platform, a cylinder, a fluid supply pipe leading to the cylinder, a ram in the cylinder and extending from one end thereof, an extension upon the ram and extending up through the platform, a circular table upon the platform and rotatably mounted upon said extension and means for rotating the table.

5. In a machine for assembling propellent explosive containers and their projectiles, a platform, a circular table rotatably mounted upon the platform and adapted to hold the container with the projectile set therein, teeth upon the edge of the table, a spur gear rotatbaly mounted upon the platform and meshing with the teeth of the table, a handle for operating the gear and rotating the table, an abutment, means for moving the platform to carry the projectile against the abutment and force such projectile into the container and a device for crimping the container about the projectile as the latter is rotated with the table.

[Claims 6 to 12 not printed in the Gazette.]

1,190,577. RAIL-FASTENING DEVICE OR CLAMP. FEKECS PAL, East St. Louis, Ill., assignor of forty one-hundredths to George Smajda, East St. Louis, Ill. Filed Nov. 22, 1915. Serial No. 62,818. (Cl. 238—4.)



1. A rail-fastening device comprising a pair of coöperating members each including a cross-piece having laterally projecting lugs on its upper face, end-pieces depending from the cross-piece, and extensions on said end-pieces obliquely disposed to the cross-piece, each of said members

being adapted to straddle the tie and to operatively engage the rail at the upper, side, and under faces of the base-flange thereof, and a bolt adapted to engage with the tie and with said extensions for simultaneously fastening said members, and thereby the rail, to the tie.

2. A rail-fastening device comprising a pair of coöperating members each including a cross-piece having laterally projecting lugs on its upper face, end-pieces depending from the cross-piece, and extensions on said end-pieces obliquely disposed to the cross-piece, each of said members being adapted to straddle the tie and to operatively engage the rail at the upper, side, and under faces of the base-flange thereof, and a bolt adapted to engage with the tie and with said extensions for fastening said members, and thereby the rail, to the tie, said extensions being adapted to interlock to prevent pivotal movement of said members relatively to the rail when in engagement therewith.

3. A rail-fastening device comprising a pair of coöperating members each including a cross-piece having laterally projecting lugs on its upper face, end-pieces depending from the cross-piece, and shouldered extensions on said end-pieces obliquely disposed to the cross-piece, each of said members being adapted to straddle the tie and to operatively engage the rail at the upper, side, and under faces of the base-flange thereof, and a bolt adapted to engage with the tie and with said extensions for fastening said members, and thereby the rail, to the tie, the extensions of said members being adapted to overlap and interlock to prevent pivotal movement on said bolt of said members when in engagement with the rail.

4. A rail-fastening device comprising a pair of coöperating members each including a cross-piece and obliquely shouldered depending end-pieces, each of said members being adapted to straddle the tie and to operatively engage the rail at the upper, side, and under faces of the base-flange thereof, extensions on the end-pieces of said members, each of said extensions having a face obliquely oppositely disposed to, but having the same angle to the horizontal as, the shoulders of said end-pieces, and a bolt adapted to engage with the tie and with said extensions for fastening said members, and thereby the rail, to the tie, said extensions being adapted to interlockingly engage at their said faces with the shoulders of said end-pieces to prevent pivotal movement on said bolt of said members when in engagement with the rail.

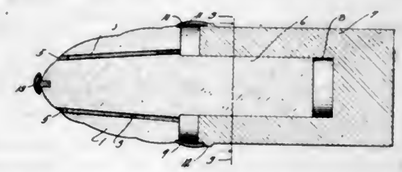
5. A rail-fastening device comprising a pair of coöperating members each including a cross-piece, laterally projecting lugs on the upper face of said cross-piece, and obliquely shouldered end-pieces depending from said cross-piece, each of said members being adapted to straddle the tie and to operatively engage at its said cross-piece, lugs, and end-pieces with the rail at the side, upper, and end faces, respectively, of the base-flange thereof, extensions on the end-pieces of said members, each of said extensions having a face obliquely oppositely disposed to, but having the same angle to the horizontal as, the shoulders of said end-pieces, and a bolt adapted to engage with the tie and with said extensions for fastening said members and thereby the rail to the tie, said extensions being adapted to interlockingly engage at their said faces with the shoulders of said end-pieces to prevent pivotal movement on said bolt of said end members when in engagement with the rail.

[Claims 6 and 7 not printed in the Gazette.]

1,190,578. PROJECTILE. PETER JOHN PEARSON, Staveley, Alberta, Canada. Filed Feb. 8, 1915. Serial No. 6,818. (Cl. 102—26.)

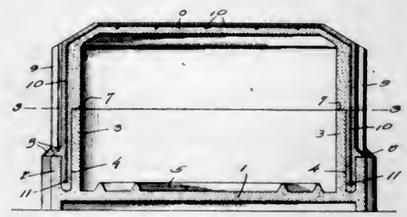
1. A projectile comprising a stock formed with a terminal bore, an interiorly perforated shell arranged in the bored end of said stock, caps for said perforated portions, the head of said shell being spaced away from the end of said stock, a ring connecting the head of said shell and said stock, a percussion cap carried by said shell and an inflammable fluid disposed in the perforated portions of said shell and in the spaced portion between the head of said shell and the adjacent end of said stock.

2. A projectile comprising a stock formed with a terminal bore, an interiorly perforated shell comprising a head and a shank, caps for the perforated portions of said shell, the said shank being projected into the end of said stock a distance less than the depth of the bore therein and said head being spaced away from the adjacent end of said stock; said head being formed with an annular groove, an annular shoulder formed upon the end of said stock, a collar connecting said stock and shell and having its lateral edges abutting said shoulder and disposed in the grooved portion of said head, a percussion cap carried by said shell and an inflammable fluid disposed in the perforated portions of said shell and in the spaced portions between said head and stock and between said shank and stock.



3. A projectile comprising a hollow perforated shell, an interior percussion cap for said shell, a bullet arranged in said shell and spaced away from the nose thereof, an inflammable fluid arranged in the hollowed end of said shell and in the apertured portions thereof and caps for the perforated portions of said shell.

1,190,579. VAULT. JOHN H. PEGG, Wabash, Ind. Filed Dec. 21, 1915. Serial No. 68,036. (Cl. 72—7.)



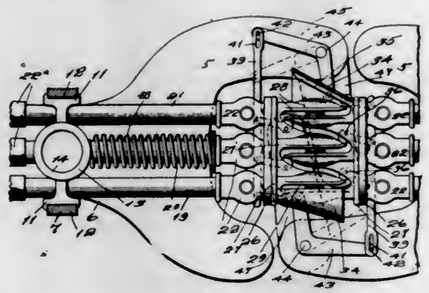
A plastic reinforced vault comprising a base having spaced upstanding walls, the inner wall being of greater height than the outer wall, a body member having the lowermost portion of its side extending into the space between the upstanding walls of the base and having a horizontally extending shouldered portion projecting over and resting on the top of the outermost wall to render the vault insect proof and air tight, spaced reinforcing outwardly projecting ribs on the sides of the body of the vault, spaced reinforcing members embedded in said ribs and disposed in substantially inverted U-form in the sides and across the top of the vault body to provide continuous transverse reinforcement to prevent cracking of the vault substantially as set forth.

1,190,580. RAILWAY-CAR PIPE-COUPLING MECHANISM. WILLIAM ALBERT PETERSEN, Excelsior Springs, Mo., assignor of one-half to Jesse Williams, Excelsior Springs, Mo. Filed Dec. 15, 1915. Serial No. 67,022. (Cl. 188—13.)

1. In apparatus of the character described, the combination with co-acting units, each unit comprising a plurality of coupling-heads provided upon corresponding sides with openings, cams arranged near and connected with the coupling-heads, means to move the cams, and a guide element connected with one end of the coupling-head and embodying an inclined face.

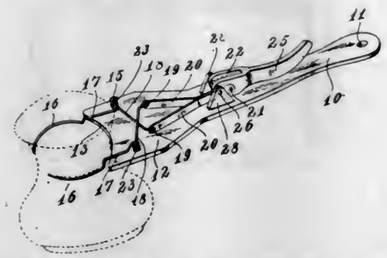
2. In apparatus of the character described, the combination with a coupler embodying a pivoted knuckle, of a pipe arranged near the coupler and having a coupling head, a cam pivotally connected with the coupling head to engage a co-acting coupling head to move it toward the first named coupling head, a lever pivotally mounted

upon the coupler and having one end pivotally connected with the knuckle to be moved thereby, and means to connect the lever and cam.



3. The combination with a coupler embodying a knuckle having pivotal connection therewith, of a bell crank lever pivoted upon the pivot member of the knuckle and having one arm thereof pivoted to the outer portion of the knuckle, a plurality of pipes arranged near the coupler and having coupling heads, a corresponding number of cams pivoted upon the coupling heads and having cranks, and a link pivotally connected with the cranks and having connection with the other arm of the bell crank lever.

1,190,581. TONGS OR CARRIER FOR VESSELS OF THE CUSPIDOR TYPE. ALBERT PFENINGER, Utica, N. Y. Filed Jan. 29, 1916. Serial No. 74,990. (Cl. 57—111.)

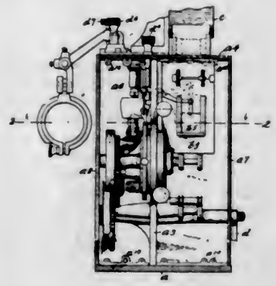


1. In a device of the class described, the combination with a rigid handle, of a pair of resilient arms pivotally engaged therewith, coiled spring elements combined with said arms at the pivotal point thereof, extensions from said springs transversely disposed on said plate, a slotted lever fulcrumed on said plate and links connecting said extensions with said lever at a point beyond its pivotal support.

2. In a device of the class described, the combination with a handle element, having a concave engaging surface, a pair of resilient arms bent to lie in the plane of said handle, spring coils formed with each of said arms, pivots passing through said spring coils fixed in said handle, extensions from said coils crossing transversely, a lever pivoted on said handle, links connecting between said lever and said extensions, and means combined with said lever for locking said arms when in a closed position.

1,190,582. KINETOSCOPE-CASING. EDWIN S. PORTER, New York, N. Y., assignor of one-half to Francis B. Cannock, New York, N. Y. Original application filed Mar. 4, 1911, Serial No. 612,417. Divided and this application filed Aug. 11, 1911. Serial No. 643,477. (Cl. 88—17.)

1. A kinetoscope, comprising a base, a vertical support thereon, operative kinetoscope mechanism carried by said support, a removable inclosing envelop for said mechanism and independent thereof having two openings in line with each other, one in the front wall provided with a shutter and one in the rear wall provided with a closure, and automatic means for actuating said closure in the kinetoscope operation.



2. A kinetoscope, comprising a base, a vertical support thereon, a top, operative kinetoscope mechanism carried by said support and a removable inclosing envelop for said mechanism independent thereof comprising a front wall, a rear wall, and hinged side walls, said front and rear walls being provided, each, with an opening in line with each other, one of which is provided with an automatic closure and the other with a shutter, both operative with said mechanism.

3. A kinetoscope, comprising a base, a vertical support thereon, a top, operative kinetoscope mechanism carried by said support, a crank for operating said mechanism, and a removable inclosing envelop for said mechanism consisting of front and rear walls independent of the said kinetoscope mechanism and provided with openings therethrough in line with each other, and hinged side walls also independent of the said kinetoscope mechanism, a portion of one of said walls being in permanent connection with said base to provide a support for said crank, whereby said inclosing envelop may be removed without removing said crank.

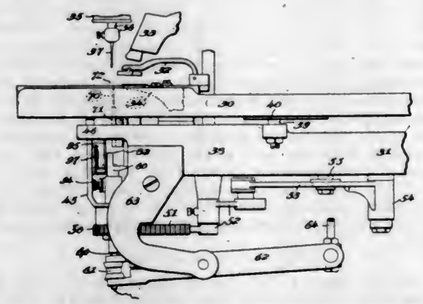
4. A kinetoscope comprising a base, a vertical support thereon, a top, operative kinetoscope mechanism carried by said support, and a removable inclosing envelop for said mechanism consisting of front and rear walls independent of the said kinetoscope mechanism provided with openings in line with each other, and side walls also independent of the said kinetoscope mechanism hinged to said front wall, said base, plate, and top being integral, and said front, rear and side walls being in detachable engagement therewith.

5. A kinetoscope, comprising a base, a single vertical support secured to said base substantially centrally thereof, a top plate supported by said support, operative kinetoscope mechanism also supported by said support, and a removable inclosing envelop for said mechanism comprising two parts, both of which are adapted to be detachably secured to said base, and said top plate, one of said parts comprising a plurality of walls hingedly connected together.

[Claims 6 and 7 not printed in the Gazette.]

1,190,583. BUTTONHOLE-STITCHING MACHINE. FRANKLIN AUGUSTUS REECE, Manchester, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Nov. 8, 1913. Serial No. 799,855. (Cl. 112—4.)

1. A machine for producing buttonhole stitching with interlocking upper and under threads including in combination, an upper needle for the upper thread, an eye-pointed under needle for the under thread, said upper needle being straight and reciprocable lengthwise in a straight vertical path, said under needle being movable in a curved path in a vertical plane closely adjacent to the upper needle path, a shiftable stock upon which said under needle is mounted, and mechanism operable in all positions of said stock for coöperatively actuating said two needles to interlock the threads alternately above and below the work such that the lower needle may directly enter the loop of thread when held only by the upper needle below the work.

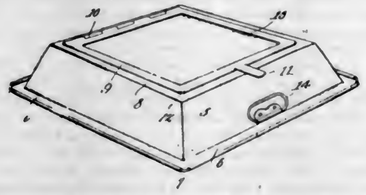


2. A machine for producing buttonhole stitching with interlocking upper and under threads including in combination, an upper needle for the upper thread, an under needle for the under thread, said upper needle being straight and reciprocable lengthwise in a straight vertical path, said under needle being an eye-pointed needle absolutely straight from shank to point and movable in a curved path in a vertical plane closely adjacent to the upper needle path, a shiftable stock upon which said under needle is mounted to move as described, and mechanism operable in all positions of said stock for coöperatively actuating said two needles to cause each needle to directly enter the loop held on the other.

3. A machine for producing buttonhole stitching with interlocking upper and under threads including in combination, an upper needle for the upper thread, an absolutely straight under needle for the under thread, an under needle carrier, said under needle and carrier being movable in a curved path adjacent to the upper needle path, a shiftable stock upon which said under needle is mounted, and means operable in all positions of said stock for causing said carrier to take a lateral and return movement when below the work whereby the under needle may directly enter the upper thread loop held only by the upper needle below the work.

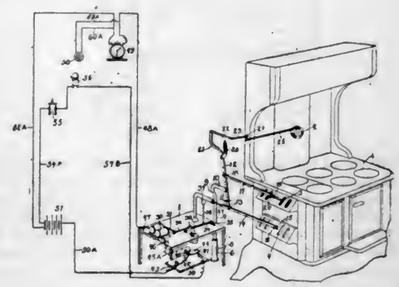
4. A machine for producing buttonhole stitching with interlocking upper and under threads including in combination, an upper needle for the upper thread, an under needle for the under thread, the upper needle being absolutely straight and reciprocable lengthwise in a straight path, the under needle being an eye-pointed needle movable in a curved path in a plane parallel to and closely adjacent to the upper needle path, an under needle carrier, said carrier guided in its movements through the work plane by only a plurality of guide links, said guide links, an additional link for causing an extra lateral movement below the work, and mechanism for actuating said needles to interlock the threads both above and below the work by direct coöperation without the interposition of a further looping or spreading means.

1,190,584. COMBINED HEATER AND COOKING UTENSIL. HENRY O. REESE, Atlantic City, N. J. Filed Dec. 3, 1915. Serial No. 64,834. (Cl. 161—8.)



A combined heating and cooking utensil, comprising a hood formed to inclose a cooking utensil and, having sloping sides and open at the bottom, the top of the sides having inturned flanges, and a lid closing the top of the hood, said lid seating on the top flanges and having a depression to serve as a pan seating inside the top flanges.

1,190,585. DAMPER-OPERATING MECHANISM. RICHARD ROBERTS, Forest City, Pa. Filed June 3, 1915. Serial No. 31,916. (Cl. 53—7.)



1. In an attachment for stoves having dampers above and below the fire-pot, operating means therefor comprising a pivoted lever, a rigid connection therefrom to the upper damper, a rigid connection therefrom at the opposite side of its pivot to the lower damper, an operating weight, a connection therefrom to the lower end of said lever, a tripping device for supporting and releasing said weight, and a time controlled electric circuit for releasing said tripping device.

2. In an attachment for stoves having dampers above and below the fire-pot, operating means therefor comprising a pivoted lever, a rigid connection therefrom to the upper damper, a rigid connection therefrom at the opposite side of its pivot to the lower damper, an operating weight, a connection therefrom to the lower end of said lever, a tripping device for supporting and releasing said weight, a time controlled electric circuit for releasing said tripping device, and an electric alarm circuit having means in the path of movement of said weight to break the tripping circuit and establish the alarm circuit.

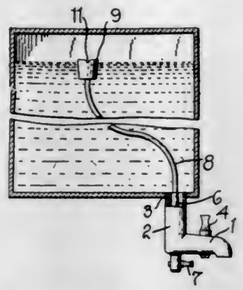
3. In an attachment for stoves having dampers above and below the fire-pot, operating means therefor comprising a pivoted lever, a rigid connection therefrom to the upper damper, a rigid connection therefrom at the opposite side of its pivot to the lower damper, an operating weight, a connection therefrom to the lower end of said lever, a tripping device for supporting and releasing said weight, a connection from the upper end of said lever to operate a draft pipe damper simultaneously with the movement of the fire-pot dampers, and a time controlled electric circuit for releasing said tripping device.

4. In an attachment for stoves having dampers above and below the fire-pot, operating means therefor comprising a pivoted lever, a rigid connection extending therefrom above the pivot to the upper damper, a rigid connection therefrom extending from the opposite side of its pivot to the lower damper, an operating weight, a chain connection from said weight to said lever, a trip lever having flexible connection with said chain, a detent for retaining said trip lever, a time controlled electric circuit for releasing said detent, a vertically adjustable standard upon which said pivoted lever is mounted, and a handle carried by said lever for restoring the parts to a set position.

5. In a damper controlling mechanism, damper operating means, means for automatically shifting the same in one direction, a time controlled electric circuit for releasing said shifting means, an electric alarm circuit, and means disposed in the path of said shifting means to break the releasing circuit and establish the alarm circuit.

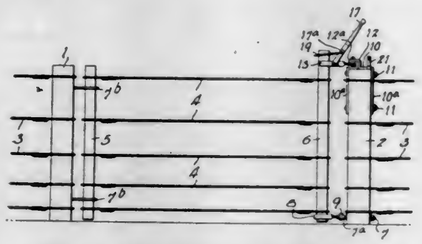
[Claims 6 to 8 not printed in the Gazette.]

1,190,586. SPIGOT. CHARLES E. ROBERTSON, Shale, Cal. Filed Apr. 19, 1915. Serial No. 22,437. (Cl. 225—2.)



A device of the character described, comprising a spigot, an air tube mounted therein and opening exteriorly thereof, a section of rubber hose connected at one end to the inner end of said tube and provided at its other end with a transverse groove, and a cork having an opening extending therethrough whereby it may be readily slipped upon the grooved end of said hose, the cork being further formed in its upper edge with a diametrical groove extending from side to side thereof and intersecting said opening.

1,190,587. GATE-FASTENER. CARL OTTO RODA, Paradise, Kans. Filed Apr. 10, 1916. Serial No. 90,101. (Cl. 16—121.)



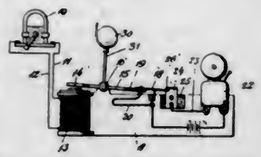
1. A wire gate fastener including a swinging frame carried by the top of the latch post and having a seat in the end thereof, an operating lever pivotally mounted upon the swinging frame, a yoke pivotally connected to the operating lever and adapted to engage the gate bar to force it into the seat of the frame, and means for holding the operating lever in closed position.

2. A wire gate fastener including a swinging frame carried by the upper end of the latch post, said frame having a looped formation and being provided at its free end with an inwardly curved seat, an operating lever having a forked end straddling the looped frame and pivotally connected to the sides thereof, a yoke member pivotally connected to the arms of the forked end of the frame and adapted to be swung over the gate bar to draw it into engagement with the seat of the looped frame, and means for holding the operating lever in a closed position.

3. A wire gate fastener, including a cap member applied to the top of the fence post and provided with an upstanding pivot lug, a looped swinging frame having an inwardly curved seat at the outer end thereof and provided at its inner end with an arm which is pivotally connected to the upstanding lug of the cap member, an operating lever having a bifurcated end which straddles the looped frame and is pivotally connected to the sides thereof, a yoke member pivotally connected to the operating lever and adapted to be swung over the upper end of the gate bar for coöperation with the operating lever to draw the gate bar into engagement with the seat of the looped frame, and coöperating ears projecting upwardly from the cap member for engagement with the operating lever to hold it in a closed position.

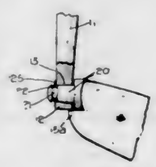
4. A wire gate fastener, a cap member applied to the top of the latch post and formed with an upstanding pivot lug, a looped frame having an inwardly curved seat at the outer end thereof and provided at its inner end with an arm which is pivotally connected to the upstanding lug of the cap piece, an operating lever formed with a forked end which is pivotally mounted upon the sides of the looped frame, a yoke member pivotally connected to the operating lever and adapted to be swung over the upper end of the gate bar for drawing the same into a firm engagement with the seat of the looped frame, and ears upon the cap piece for engaging the operating lever to hold it in a closed position, the looped frame and gate bar receiving ring being both adapted to be swung laterally to give a maximum clearance space through the gate opening.

1,190,588. RELAY. WARREN E. ROGERS, Trenton, Mich. Filed Mar. 8, 1913. Serial No. 752,814. (Cl. 175—281.)



A relay comprising an armature pivoted intermediate its ends, an electromagnet for moving one end of the same in one direction, a stationary contact member, a resilient circuit-closing contact blade carried by the other end of said armature and engaging said contact member and being tensioned thereby during the final portion of the armature movement as caused by said magnet, said blade also tending to move said armature in the opposite direction upon the deënergization of said magnet, and a weight carried by the armature normally on the side of the pivot toward the contact and movable to the other side of said pivot, whereby when the force of said electromagnet is momentarily interrupted, the return and circuit-opening movement of said armature would be retarded.

1,190,589. GOLF-CLUB. CHARLES A. ROLFE, Redlands, Cal. Filed Aug. 6, 1914. Serial No. 855,374. (Cl. 46—4.)

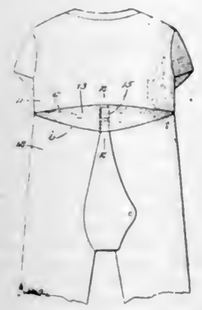


1. In a lawn golf club, a shaft having a blade carrying member at its lower end with a bore therethrough, a blade with a shank fitting said bore and engaging the blade carrying member exclusively frictionally, and resilient means for drawing the shank into its frictional engagement with said member, whereby the blade may be turned against the restraint of said frictional engagement without loosening said means, substantially as described.

2. In a lawn golf club, a shaft having a blade carrying member at its lower end with a taper bore therethrough, a blade with a taper shank adapted to fit said taper bore, and means for holding said shank in said bore, embodying exclusively a resilient means for drawing said shank into said bore, whereby said shank and blade are restrained exclusively frictionally against turning about the axis of the shank with reference to the blade carrying member, substantially as described.

3. In a lawn golf club, a shaft having a blade carrying member at its lower end, a blade having a shank engaging the blade carrying member and having a surface adapted to exclusively frictionally engage said member, and resilient means for drawing said surface into frictional engagement with said member.

1,190,590. UNDERGARMENT. WILLIAM B. ROOD, Ware, Mass., assignor to Otis Company, Ware, Mass., a Corporation of Massachusetts. Filed Sept. 30, 1915. Serial No. 53,358. (Cl. 2—144.)



1. A union undergarment having its shirt and drawers portions made of relatively inelastic material when stretched lengthwise of the back, an elastic insert at the back of the garment at the waist, and a normally slack, non-elastic stay of greater length than the width of said insert, said stay spanning said elastic insert and having its ends secured respectively to the shirt and drawers portions of the garment.

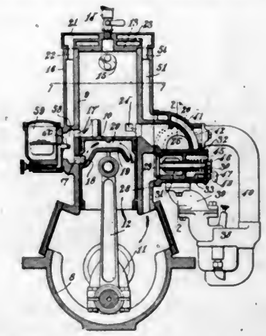
2. A union undergarment having its shirt and drawers portions made of relatively inelastic material when stretched lengthwise of the back, an elastic two-ply insert at the back of the garment at the waist, said insert being widest at its central portion at the back of the garment and tapering thence toward the sides of the garment, and a normally slack, non-elastic stay spanning said elastic insert at its middle portion and having its ends secured respectively to the shirt and drawers portions of the garment.

3. A union undergarment having its shirt and drawers portions made of relatively inelastic material when stretched lengthwise of the back, an elastic insert at the back of the garment at the waist, said elastic insert being of double thickness at the small of the back, and a concealed, normally slack, non-elastic stay between the two thicknesses of said elastic insert and having its ends secured respectively to the shirt and drawers portions of the garment.

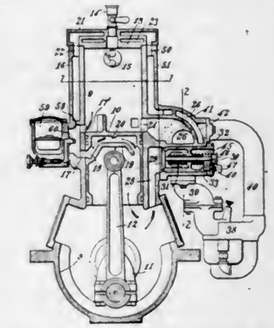
4. A union undergarment having its shirt and drawers portions made of a single piece of relatively inelastic material when stretched lengthwise of the back, an elastic two-ply insert at the back of the garment at the waist, said insert being widest at its central part, tapering thence toward the sides of the garment, and a normally slack non-elastic stay disposed between the two plies of said elastic insert and having its ends secured respectively to the shirt and drawers portions of the garment.

1,190,591. GAS-ENGINE. CLAUDE RORABECK, Dayton, Ohio. Filed Jan. 2, 1915. Serial No. 126. (Cl. 123—173.)

In an explosive engine, a cylinder having a water jacket inclosing the circumference and the head thereof, and an air chamber lying between the head and the water jacket thereof, said head water jacket and air chamber combining to maintain a temperature adapted to prevent condensation of the mixture upon the interior of the cylinder head, substantially as described.



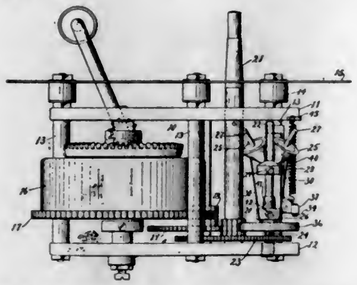
1,190,592. MANIFOLD FOR GAS-ENGINES. CLAUDE RORABECK, Dayton, Ohio. Original application filed Jan. 2, 1915, Serial No. 126. Divided and this application filed Apr. 14, 1915. Serial No. 21,203. (Cl. 123—122.)



1. In an explosive engine, the combination with a crank case and a cylinder mounted thereon, of a manifold having a series of integrally united walls forming an intake passage, an exhaust passage surrounding two sides of said intake passage, air and water passages inclosing a side and the top of the exhaust passage, a carbureter communicating with said intake passage, and an exterior pipe forming a medium of communication between said air passage and the carbureter.

2. In an explosive engine, a crank case, a cylinder mounted on said crank case having exhaust ports, and a carbureter opening in a side thereof, a kerosene carbureter mounted over said opening and delivering explosive fluid thereto, a piston in said cylinder controlling said carbureter opening, said piston having a passage forming a communication between the crank case and said carbureter opening, a manifold mounted on the side of said cylinder opposite said kerosene carbureter, having an intake passage, an exhaust passage communicating with the exhaust ports of the cylinder, an air passage partly inclosing said intake and exhaust passages and communicating with the atmosphere, a gasolene carbureter communicating with said intake passage, and an air tube exterior to the manifold and extending from the air passage to said last named carbureter, the said cylinder being provided with a passage connecting the intake of the manifold with the crank case.

1,190,593. MOTOR-GOVERNOR. CHARLES C. RUSSELL, Chicago, Ill. Filed Jan. 11, 1916. Serial No. 71,464. (Cl. 74—45.)



1. In a motor governor, in combination, a rotating spindle, a collar sliding on the spindle, an arm fixed to the spindle and projecting obliquely outward therefrom in a direction which is inclined away from the collar, a weight sliding on the arm, a flexible wire having its opposite ends connected to the weight and collar and extending directly between said parts, and motor regulating means operated by the sliding movement of the collar.

2. In a motor governor, in combination, a rotating spindle, a disk having an upstanding hub sliding on the spindle, a collar detachably mounted on the hub of the disk, an arm fixed to the spindle above the collar and disk and projecting obliquely outward from the axis of the spindle in a direction which is inclined away from the said collar and disk, a weight sliding on the arm, a wire having one end fixed to the weight and having its other end held between the collar and disk and a friction shoe adjustably supported over the disk.

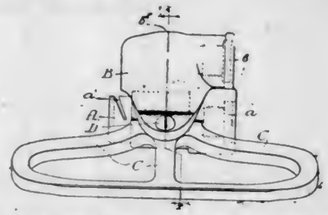
3. In a motor governor, in combination, a rotating spindle, a disk having an upstanding hub sliding on the spindle, a collar detachably mounted on the hub of the disk, a plurality of arms fixed to the spindle over the collar and disk and projecting obliquely outward from the axis of the spindle in directions which are inclined away from the collar and disk, the said arms being symmetrically arranged with reference to the axis of the spindle, a weight sliding on each arm, a plurality of flexible wires each having one end fixed in one of the said weights, and the other end fixed in the collar and extending directly between said parts, and a friction shoe adjustably supported over the disk.

4. In a motor governor, in combination, a rotating spindle, a member sliding on the spindle and rotating with it, an arm fixed to the spindle and projecting obliquely outward therefrom in a direction which is inclined away from the said sliding member, a weight sliding on the arm; a flexible wire having its opposite ends connected to the weight and the first mentioned sliding member and extending directly between said parts, and a friction shoe adjustably supported in the path of sliding movement of the first mentioned sliding member.

5. In a motor governor, in combination, a rotating spindle, a disk having an upstanding hub sliding on the spindle, a collar detachably mounted on the hub of the disk, a plurality of arms fixed to the spindle over the collar and disk and projecting obliquely outward from the axis of the spindle, the said arms being symmetrically arranged with reference to the axis of the spindle, a weight sliding on each arm, a member connecting each weight with the collar and extending directly between the said parts, and a friction shoe adjustably supported in the path of sliding movement of the disk.

1,190,594. LAWN-SPRINKLER. CHARLES F. SCHNASA, Evanston, Ill. Filed Aug. 2, 1915. Serial No. 43,263. (Cl. 137—59.)

1. A lawn sprinkler comprising a common base or support and two sprinkler heads mounted one above the other upon said base or support, the lower one of said sprinkler heads having a tubular bore provided with a coupling at its open end and provided adjacent the top of its closed end with a discharge orifice for throwing a substantially fan-shaped spray, the upper one of said sprinkler heads being provided in its top with a discharge orifice for throwing a circular spray, said upper sprinkler head having at one end a coupling and having its opposite end out of line with the orifice at the closed end of the lower sprinkler head.

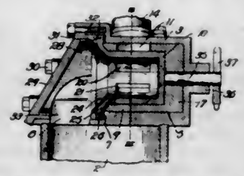


2. A lawn sprinkler comprising two sprinkler heads formed separately and secured together one above the other, one of said sprinkler heads being of tubular shape and having adjacent its closed end a transverse slot in its upper portion and the other of said sprinkler heads being mounted above said first mentioned sprinkler head and being provided with a central discharge orifice in its top, the upper sprinkler head having its closed end terminating outside the plane of said transverse slot in said lower sprinkler head.

3. A lawn sprinkler comprising two sprinkler heads one arranged above the other and each formed of a separate casting, one of said sprinkler heads having a tubular bore and having adjacent its closed end a transverse slot in its upper portion and the other of said sprinkler heads having a yoke-shaped lower part setting over said first mentioned sprinkler head, means for connecting said sprinkler heads together and a common base or support for holding said sprinkler heads in their proper relative positions.

4. A lawn sprinkler comprising two sprinkler heads, one of said sprinkler heads consisting of a tubular casting closed at one end and open at its opposite end and provided adjacent its closed end with a transverse slot in its upper portion, and the other of said sprinkler heads comprising a chambered casting formed at its top with a central orifice and having an induction port, said casting being provided with depending lugs, a common base or support for said sprinkler head and means for connecting said lugs to said base or support.

1,190,595. ROTARY VALVE FOR EXPLOSIVE-ENGINES. GEORGE L. SCHOFIELD, Kansas City, Mo. Filed Nov. 16, 1914. Serial No. 872,389. (Cl. 123—190.)



1. A rotary valve comprising a housing having inner and outer valve chambers and provided with intake and exhaust ports and with a spark plug, a rotary sleeve mounted in one of the chambers, and having a port adapted for communication with either of the housing ports and for exposing said plug to the interior of the chamber, a valve cup located within the sleeve and having intake and exhaust ports adapted for communication with the housing ports, and having an opposite balance port

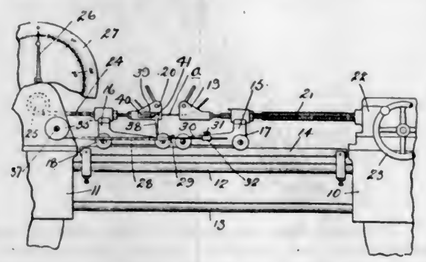
in alinement with the valve port, a sleeve in the other valve chamber having pin and dowel connection with the valve cup, means for holding the sleeve against rotation, means for closing the outer end of the second chamber and holding the collar in place, and means for rotating said sleeve.

2. A rotary valve comprising a housing having a valve chamber and intake and exhaust ports opening to said chamber, a spark plug exposed to the interior of said chamber, a cup in the chamber spaced from the housing, the said cup having intake and exhaust ports adapted for communication with the intake and exhaust ports in the housing and having a port through which a spark from said plug may be projected to the interior of the cup and a valve member rotatably mounted between the cup and housing and having a port adapted for passing the intake and exhaust ports and the spark plug in proper sequence.

3. A rotary valve comprising a shouldered valve chamber and having intake and exhaust ports opening to said chamber, a cup located in said valve chamber and an end flange seated against the shoulder thereof, the said cup having separate intake, exhaust and spark ports, and a valve member rotatably mounted between the cup and housing and having a single port adapted for exposing the housing intake and exhaust ports and the spark plugs to the proper cup ports in determined sequence.

4. A rotary valve comprising a housing having an interior chamber closed at one end and having a shoulder at its opposite end, the said housing having separate intake and exhaust ports and having a spark plug exposed to its interior, a cup mounted in and spaced from the inner face of said housing, said cup being closed at the closed end of the housing and having a baring mouth at its opposite end, a shoulder on the open end of said cup seated in the housing shoulder, the said cup having intake, exhaust and spark ports in radial alinement with the housing intake and exhaust ports and with the spark plug, a valve member rotatably mounted between the cup and housing and having a closed end located between the closed end of the housing and the closed end of the cup, and having a port adapted for exposing the cup ports in proper sequence and a shaft rotatably mounted in the closed end of the housing and fixed to the valve member.

1,190,596. STRETCH-MEASURING DEVICE FOR TESTING-MACHINES. HENRY L. SCOTT, Providence, R. I. Filed July 6, 1915. Serial No. 38,076. (Cl. 73—51.)



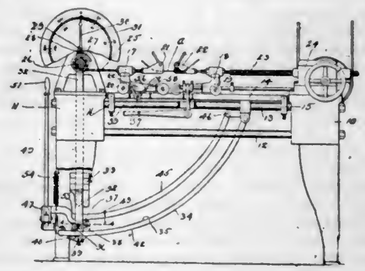
1. In a testing machine, a tension element, a resistance element, a graduated flexible tape adapted to be connected to the tension element and a member on the resistance element cooperating with said tape whereby the relative movement of said elements is indicated by direct reading upon said tape to show the net stretch of the goods under tension.

2. In a testing machine, a tension element, a resistance element, a scale adapted to be releasably connected to the tension element, and a pointer on the resistance element whereby the relative movement of said elements is indicated by direct reading upon the scale to show the net stretch of the goods under tension, and means for housing the scale when not in use.

3. In a testing machine, a tension element, a resistance element, a flexible scale adapted to be releasably connected to and moved by said tension element, a member on the resistance element cooperating with said scale whereby the relative movement of said elements causes said scale to show the net stretch of the tested goods, and a reel carried by the machine on which the scale is wound.

4. In a machine of the character described, a tension element, a resistance element, a graduated flexible tape adapted to be connected to and moved by said tension element, a member on the resistance element cooperating with the graduations on said tape whereby the relative movement of said elements is caused to indicate by direct reading on the tape the stretch of the goods being tested and a spring actuated reel carried by the machine on which the tape is wound.

1,190,597. TESTING-MACHINE. HENRY L. SCOTT, Providence, R. I. Filed July 7, 1915. Serial No. 38,439. (Cl. 73—51.)



1. In a testing machine, means for applying tension to the material to be tested, a weight moved by and in proportion to the tension applied, means for temporarily retaining said weight in adjusted position and a single element operable to effect the release of said weight and control its return to normal.

2. In a testing machine, means for applying tension to the material to be tested, a weighted arm moved by and in proportion to the tension applied, a brake, means for temporarily retaining said arm in adjusted position, and means for releasing said retaining means and automatically applying said brake for controlling the return movement of said arm.

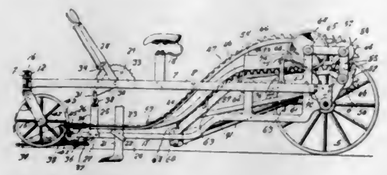
3. In a testing machine, means for applying tension to the material to be tested, a weighted arm moved in proportion to the tension applied, a gage operated by the movement of said arm, a brake, pawls for positively retaining said arm in adjusted position, means for readily releasing said pawls and a lever for setting said brake and controlling the return of said arm to normal.

4. In a testing machine, means for applying tension to the material to be tested, a weighted arm moved in proportion to the tension applied, a gage operated by the movement of said arm, means for positively retaining said arm in adjusted position, means for readily releasing the retaining means, a brake for controlling the return of said arm to normal and manually operated means for releasing said retaining means and applying said brake by the operation of a single element.

5. In a testing machine, means for applying tension to the material to be tested, a weighted arm moved in proportion to the tension applied, means for positively retaining said arm in adjusted position, means for readily releasing the retaining means, a brake and a single element operable to effect the release of said retaining means apply said brake and control the return of said arm to normal.

[Claims 6 to 17 not printed in the Gazette.]

1,190,538. BEET-HARVESTER. THEODOR M. E. SEIERUP, Denver, Colo., assignor of one-half to James T. Craig, Bellefourche, S. D. Filed Feb. 24, 1914. Serial No. 820,422. (Cl. 55—108.)



1. A vegetable harvester comprising a frame, soil loosening means, bunching means, a set of oppositely located horizontally disposed wheels, a second set of oppositely located vertically disposed wheels situated on a plane above the first named set of wheels, means for imparting motion to one set of wheels, a warped double guide leading from a point intermediate the peripheries of the horizontal set of wheels to a point approximately in alinement with the inner peripheries of the vertically disposed wheels, a plurality of toothed cables passing around and connecting the respective wheels of the two sets and engaging the said warped guide which is shaped to conform to the shape of the cables and is provided with relatively narrow slots to allow the teeth of the cables to extend beyond the guide.

2. A vegetable harvester comprising a frame, soil loosening means, bunching means, a set of oppositely located horizontally disposed wheels, a second set of oppositely located vertically disposed wheels situated on a plane above the first named set of wheels, means for imparting motion to one set of wheels, a warped double guide leading from a point intermediate the peripheries of the horizontal set of wheels to a point approximately in alinement with the inner peripheries of the vertically disposed wheels, a plurality of toothed cables passing around and connecting the respective wheels of the two sets and engaging the said warped guide which is shaped to conform to the shape of the cables and is provided with relatively narrow slots to allow the teeth of the cables to extend beyond the guide, a cutter and a twisted supporting belt traveling synchronously with the cables for supporting the vegetables and presenting them to the cutter in a horizontal position.

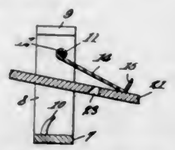
3. A vegetable harvester comprising soil loosening means, bunching means, a pair of toothed cables adapted to grasp the tops of the vegetables when bunched, a pair of horizontally disposed pulleys, around which the cables pass just prior to engaging the tops, a pair of pulleys located rearwardly of and on a higher plane than the first named pair, the cables passing in opposite directions around the last named pair of pulleys to release the tops, means for imparting a twist to the cables as they travel from the first named to the last named pair of pulleys, the cables having guides of countershape part provided with relatively narrow slots through which the teeth of the cables extend in order to act upon the tops of the vegetables.

4. A vegetable harvester comprising soil loosening means, bunching means, a pair of toothed cables adapted to grasp the vegetable tops after bunching, pulleys around which the cables pass, the cables being arranged on an incline and means for twisting the cables intermediate the pulleys, a cutter and a twisted supporting belt traveling synchronously with the cables for supporting the vegetables and presenting them to the cutter in a horizontal position, and guides for the cables, circular in cross section, and having relatively narrow slots spirally arranged to impart the twisting action to the cables through which slots the teeth of the cables extend.

5. A vegetable harvester comprising soil loosening means, bunching means, pulling means comprising a conveyer for grasping the tops of the vegetables to pull them out of the ground and a guide through which the conveyer passes, the guide being equipped with anti-frictional devices which the conveyer engages.

[Claims 6 to 14 not printed in the Gazette.]

1,190,599. CHECKREIN-CONTROLLER. JOHN F. SHAFFER, Morgantown, W. Va. Filed Oct. 18, 1915. Serial No. 56,566. (Cl. 54—70.)

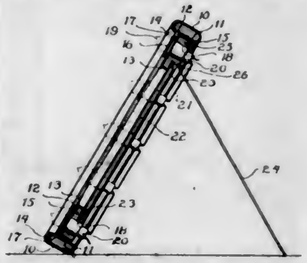


1. In a device of the class described, a harness including a saddle; a bracket on the saddle; a keeper pivoted to the bracket; a finger carried by the bracket; a check rein strap slidable through the bracket and engageable by the keeper, the strap having an opening adapted to receive the finger; and a flexible element assembled at one end with the harness to the rear of the saddle, the flexible element being provided at its other end with an eye through which the strap slides.

2. In a device of the class described, a harness including a saddle; a bracket on the saddle; a finger upstanding from the bracket; a keeper pivoted to the bracket and abutting against the finger; a check rein strap engaged by the keeper and having an opening receiving the finger; a flexible element connected at one end with the harness to the rear of the saddle; and an eye on the flexible element, the strap passing through the eye.

3. As an article of manufacture, a check rein controller embodying a bracket including a base and side arms; a rearwardly inclined finger upstanding from the base; and a keeper pivoted to one of the side arms and adapted to coact with the base, the finger constituting an abutment for the keeper.

1,190,600. DISPLAYING-FRAME. BENJAMIN F. SHREVES and EVERETT G. ANDERSON, Des Moines, Iowa. Filed July 14, 1915. Serial No. 39,732. (Cl. 40—130.)



1. A display frame constructed of sheet material, said material being bent upon itself to form a tubular annular portion, one edge of the material being bent at substantially right angles to the tubular portion to form a facing, the extremity of said facing being deflected to form a flange, the other edge of the material being bent backwardly toward and terminating short of the portion forming the facing and overhanging said facing, and means for securing in the frame the sheet to be displayed, there being light sockets in the portion forming the facing.

2. A display frame constructed of sheet material, said material being bent upon itself to form a tubular annular portion, one edge of the material being bent at substantially right angles to the tubular portion to form a facing, the extremity of said facing being deflected to form a flange, the other edge of the material being bent backwardly toward and terminating short of the portion forming the facing and overhanging said facing, means for securing in the frame the sheet to be displayed, there being light sockets in the portion forming the facing, and means for supporting said frame.

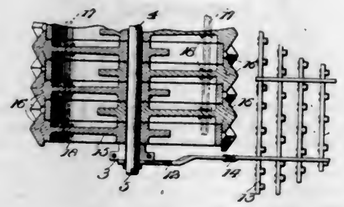
3. A display frame constructed of sheet material, said material being bent upon itself to form a tubular annular portion, one edge of the material being bent at substantially right angles to the tubular portion to form a facing, the extremity of said facing being deflected to form a flange, the other edge of the material being bent backwardly toward and terminating short of the portion forming the facing and overhanging said facing, and a filler resting against the rear of the said facing and the said flange, said filler having a display opening and the edge of the filler adjacent the frame opening being notched to receive the edge of the sheet to be displayed for securing the latter in the frame, there being light sockets in the facing and said filler.

4. A display frame constructed of sheet material, said material being shaped into a tubular surrounding portion, forming a display opening, a portion of the material also shaped to form a facing disposed at an angle to the tubular portion and encompassing the opening, the edge of the facing being shaped into a rearwardly extending protecting flange for the opening, said facing being spaced from the forward edge of the tubular portion, and the extremity of the material forming said forward edge extending toward, terminating short of and overhanging said facing, there being light sockets in the said facing.

5. A display frame constructed of sheet material, said material being shaped into a tubular surrounding portion, forming a display opening, a portion of the material also shaped to form a facing disposed at an angle to the tubular portion and encompassing the opening, the edge of the facing being shaped into a rearwardly extending protecting flange for the opening, said facing being spaced from the forward edge of the tubular portion, and the extremity of the material forming said forward edge extending toward, terminating short of, and overhanging said facing, there being light sockets in the said facing, and a non-metallic filler resting against the rear of said facing and surrounding said opening, and circuit contacts supported by the filler in alinement with the said socket openings.

[Claim 6 not printed in the Gazette.]

1,190,601. CLOD CRUSHER AND PULVERIZER. WALTER RAMSEY SMITH, Forest City, Ark. Filed Feb. 21, 1916. Serial No. 79,654. (Cl. 55—21.)



1. A clod crusher and pulverizer having a crushing roll formed of a series of wheels, each wheel being provided with pyramidal teeth of a greater width than the tread of the wheel adapted to rest on the tread of the adjacent wheels.

2. A clod crusher and pulverizer comprising an axle, a series of wheels mounted on said axle, each wheel being provided with a series of pyramidal teeth having overhanging portions, and means for connecting said wheels together with the overhanging portions of the teeth resting on the tread of the adjacent wheels.

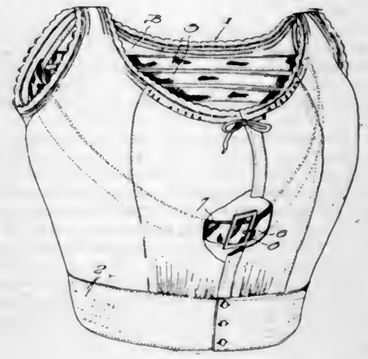
3. A clod crusher and pulverizer comprising an axle, a series of wheels arranged upon said axle, said wheels being provided with overhanging pyramidal teeth, the base of each tooth being substantially diamond-shaped, and means for locking said wheels together with the teeth of the adjacent wheels out of alinement, with the edges of the teeth arranged in spiral manner.

4. In a clod crusher and pulverizer, the combination with an axle, of a series of wheels arranged upon said axle, each wheel being provided with a series of pyramidal teeth having overhanging portions, and means for locking said wheels together with said teeth arranged in spiral manner with the overhanging portions of said teeth resting on the tread of the adjacent wheels.

5. A clod crusher and pulverizer, having a crushing roll formed of a series of wheels, each wheel having pyramidal teeth provided with overhanging portions resting on the tread of the adjacent wheels, and means for locking said wheels together with the teeth of said wheels arranged in staggered relation.

[Claims 6 and 7 not printed in the Gazette.]

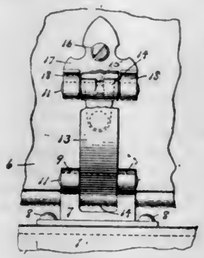
1,190,602. BRASSIÈRE. SARAH SORKIN, New York, N. Y. Filed Nov. 26, 1915. Serial No. 63,517. (Cl. 2—98.)



1. A body garment having an elastic strip extending transversely across the back thereof and secured at its opposite ends adjacent the armholes of the garment, said strip being of a length less than the width of the garment back when it is in normal unstretched position, and corresponding in length to the width of said back when the strip is stretched, and inelastic strips secured at one end to the rear portion of the armholes of the garment adjacent the connection of the ends of said elastic strip, said inelastic strips being adapted to pass around under the arms of the wearer to the front thereof and be secured together at their free ends under the bust of the wearer.

2. A tight fitting body garment having a plurality of elastic strips extending transversely across the back thereof, said strips being spaced laterally from each other and secured at their opposite ends adjacent the opposite armholes of the garment and having rows of stitches extending longitudinally thereof in laterally spaced relation from their ends toward their center, said rows connecting said strips with the back of the garment and terminating at their inner ends at points spaced from each other, the strips when in unstretched position being of less length than the width of the garment back, thereby producing in the garment between the unstitched portions of each strip a fullness to provide for the stretching of the strips when the garment is applied without danger of tearing the garment, inelastic strips each having one end inclined downwardly and inwardly and secured to the rear portion of the armholes of the garment adjacent the connected ends of the elastic strips, said inelastic strips being adapted to pass under the arms of the wearer, and means for securing their free ends together below the bust of the wearer.

1,190,603. HOOD-RETAINER FOR MOTOR-VEHICLES. JOHN SQUIRES, Detroit, Mich. Filed May 8, 1916. Serial No. 96,039. (Cl. 70—3.)

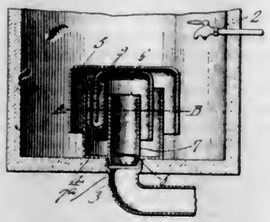


1. In a motor vehicle, the combination of a frame and a hood, a bracket secured to the frame and carrying a pin, a C-shaped resilient member, pivotally mounted on said pin, a hook secured to the hood, and a pin carried by the free end of the resilient member and adapted to engage said hook.

2. In a motor vehicle, the combination of a frame and a hood, a C-shaped resilient member, means at one end of the resilient member connecting it to the frame and at the other end connecting it to the hood, said resilient member being stressed so as to press the hood toward the frame.

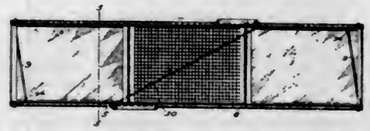
3. In a motor vehicle, the combination of a frame and a hood, a bracket secured to the frame, a pin mounted in the bracket, a pair of hooks secured to the hood, a resilient member formed from a flat bar bent to substantially C-shape having one end wound around said pin carried by the bracket, and a second pin around which the free end of the resilient member is wound and which is adapted to be engaged by the hooks on the hood, one of said pins having a circumferential groove intermediate its ends, said resilient member being formed with a tongue struck up from the portion wound around said pin to enter said groove and prevent longitudinal movement of the pin.

1,190,604. AUTOMATIC FLUSHING-TANK. EMIL P. STARY, Cedar Rapids, Iowa. Filed Aug. 31, 1912. Serial No. 718,140. (Cl. 137—106.)



The combination with a receptacle having means for continuously supplying fluid thereto, of an outlet pipe extending from the bottom of the receptacle, a container resting upon the bottom of the receptacle and concentric with the outlet, a pipe within the container and extending through the bottom thereof and into the outlet, that portion of said pipe within the outlet being frusto-conical to constitute fluid deflecting means, outer and inner bells within the receptacle, said container being extended between the bells and the inner bell extending below the outer bell, and a U-shaped air conductor integral with the inner bell and extending along the inner and outer faces thereof and under said inner bell, both ends of said conductor being extended above the container and the outlet pipe, the outer end of the conductor being above the inner end thereof.

1,190,605. PROTECTING-SHIELD FOR PLANTS. JOHN STOCKFLETH, San Francisco, Cal. Filed Mar. 7, 1916. Serial No. 82,655. (Cl. 47—22.)



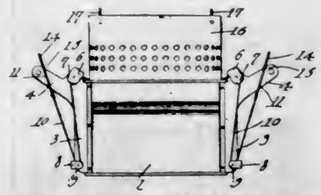
1. A protective shield for plants and the like, said shield comprising parallel sides, hinged rods connecting said sides and capable of folding between the sides when closed, handles disposed diagonally with relation to the sides so as to meet and form a single handle when the sides are closed, said handles being pivoted to the sides and foldable to lie flat against the sides.

2. In a protective shield of the character described, side members having hinge and distance rods formed at each end and capable of turning to be opened or closed, and a flexible connection extending diagonally between the sides and co-acting with the hinged rods to retain the sides in their separated position.

3. In a device of the character described, side plates having securing legs adapted to extend below the bottom edge and pivoted so as to fold against the sides, said sides having the upper edges bent outwardly and then vertically to form a ledge to receive and support a screen, and a locking member consisting of a plate swiveled at the upper edge and having a right angled extension adapted to rest upon said plates or to be turned outwardly to release the plates.

4. A plant screen of the character described, including metal sides having lower edges and legs adapted to enter the ground, inturned flanges at the top, hinge rods connecting the ends and turnable to separate the plates, a flexible connection extending diagonally between the sides and co-acting with the hinge rods to limit the opening movement, and screen plates adjustable in the flanges.

1,190,606. CLOTHES-DRAINER. JOHN P. SUNDIN, Salem, Oreg. Filed Jan. 26, 1916. Serial No. 74,417. (Cl. 68—30.)

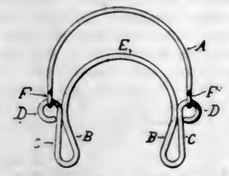


1. The combination with a wash boiler, of a clothes supporting member therein, upper and lower pulleys carried by the boiler upon the outside thereof, flexible elements passed over the upper pulleys and under the lower pulleys and having their inner ends attached to said member, handles attached to the outer ends of said elements, and means for holding said handles when they are raised to raise said member.

2. The combination with a wash boiler, of a clothes supporting member therein, vertical plates attached to the ends of the boiler, upper and lower pulleys carried by said plates, flexible elements passed over the upper pulleys and under the lower pulleys and having their inner ends attached to said member, and handles attached to the outer ends of said elements, the upper ends of said plates having means for the engagement of the handles when they are raised.

3. The combination with a wash boiler, of an apertured clothes supporting member therein, a pair of vertical plates secured to each end of the boiler and having outstanding arms at their upper ends, handles secured between said arms, the upper and lower ends of said plates having bent back ears, upper and lower pulleys mounted for rotation between said ears and plates, pairs of flexible elements passed over the upper pulleys and under the lower pulleys and having their inner ends attached to said member, and bails having their ends attached to the outer ends of said elements, the bails having offsets seatable upon said arms when the bails are raised, and forming handles.

1,190,607. SAFETY BOTTLE-HOLDER. SIGEL HAMMAT TARBET and LEONARD CARRELL, Topeka, Kans. Filed Feb. 15, 1915. Serial No. 8,409. (Cl. 215—1.)



1. The combination of a bail formed with terminal loops, and a clamping member of spring steel wire formed as to its middle portion into a half circle and thence continuing from each end of the half circle equidistantly so as to form in all approximately three-fourths of a circle, the ends being thence bent outwardly and backwardly in a curve and formed at the extreme ends into eyelets that are diametrically opposite to each other, said loops engaging said eyelets, said clamping member and its said parts being all substantially in the same plane, and said loops being substantially in planes at right angles to the plane of said bail.

2. The combination of a bail formed with terminal loops disposed in a plane substantially at right angles to the plane of the bail, and a clamping member of spring wire formed to embrace more than half and less than all of the circumference of a bottle below the head thereof, each end being turned outwardly and backwardly upon the main embracing portion of the clamping member and terminating in eyelets engaged by said respective loops; said clamping member and its said parts being all in substantially the same plane.

3. The combination of a bail formed with terminal loops, and a clamping member formed partially to surround the neck of a bottle below the head, said clamping member being of spring wire, the ends being bent outwardly and backwardly and terminating in means for engagement by the respective loops by diametrically opposite points.

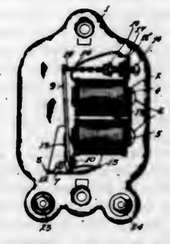
4. The combination of a bail formed with terminal loops, and a clamping member formed partially to surround the neck of a bottle below the head, said clamping member being of spring wire, the ends being bent outwardly and backwardly and terminating in means for engagement by the respective loops.

5. A holder for bottles or analogous articles comprising a gripping member consisting of a single piece of resilient wire bent to form an open loop adapted to be sprung on the neck of the article and forming forwardly and outwardly projecting portions adapted to engage the neck of the article to facilitate the springing of the gripping member on the neck of the article, the ends of said wire being bent back toward the middle of the loop and forming eyes at their ends, and a bail pivotally secured in said eyes for supporting said article.

1,190,608. BUZZER. RICHARD I. UTTER, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 8, 1914. Serial No. 860,556. (Cl. 177—7.)

1. A buzzer comprising an electromagnet and normally retracted armature, circuit connections for the electromagnet, and a normally taut link chain included in said circuit connections and controlled by said armature whereby when the armature is attracted said chain becomes slack to vary the resistance of the circuit to cause a retraction of the armature.

2. A buzzer comprising an electromagnet and normally retracted armature, circuit connections for the electromagnet, a plurality of conductive links normally held in electrical contact and included in said circuit connections and controlled by said armature whereby when the armature is attracted said normal engagement between said links is changed to effect said circuit connections so as to cause a retraction of the armature.



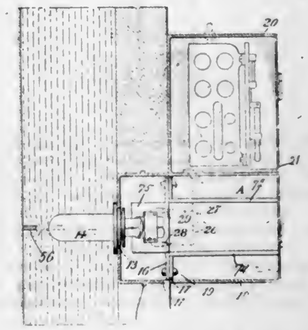
3. A buzzer comprising an electromagnet and normally retracted armature, circuit connections for the electromagnet, and a normally taut link chain included in said circuit connections and controlled by said armature whereby when the armature is attracted the links of said chain vary their relative position to effect said circuit connections so as to cause a retraction of the armature.

4. A buzzer comprising an electromagnet and normally retracted armature, terminals for the buzzer, circuit connections extending from one terminal through the winding of said electromagnet to the other terminal, a conductive link chain included in said circuit connections and controlled by said armature whereby when the armature is attracted the links of said chain vary their relative position to increase the resistance of said circuit connections between the terminals so as to cause a retraction of the armature.

5. A device of the character described comprising an electromagnet, an armature for said electromagnet normally under spring tension, a link chain for holding said armature in its normal position, circuit connections for said electromagnet including said link chain, and means for closing a circuit through said magnet whereby said armature is attracted and said chain becomes slack to vary the resistance of the circuit whereby said armature is retracted.

[Claims 6 and 7 not printed in the Gazette.]

1,190,609. APPARATUS FOR THE STERILIZATION OF LIQUIDS BY ULTRA-VIOLET RAYS. MAX VON RECKLINGHAUSEN, Paris, France, assignor to The R. U. V. Company, New York, N. Y., a Corporation of New York. Filed Jan. 15, 1914. Serial No. 812,173. (Cl. 210—1.)



1. In a device of the kind described, a sterilizing unit of concrete or masonry through which a liquid is adapted to flow, a metallic securing member embedded in said concrete or masonry, in combination with an accessory box

comprising a plurality of chambers, a lamp, switch board and other electrical accessories therein, means for securing said accessory box to said embedded member, an ultra-violet ray lamp projecting into said unit, and means for removably securing said lamp to said embedded metallic member.

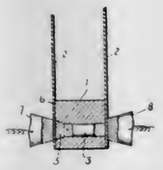
2. A device for sterilizing liquids, comprising a tank through which the liquid is adapted to flow and provided with a perforation in one side thereof, an accessory box located upon the exterior of the said tank and provided with a plurality of chambers, a lamp capable of emitting ultra-violet rays located in a quartz tube, which is secured to said box and projects through said perforation to the interior of said tank, said lamp being slidably mounted in said accessory box whereby the same is adapted to be moved into and out of said quartz tube and means for securing said box to said tank.

3. A device for sterilizing liquids by ultra-violet rays, comprising, in combination, a tank through which the liquid is adapted to flow and provided with a perforation in one side thereof, an accessory box located upon the exterior and provided with a plurality of separate hermetically sealed chambers, a closure common to two of said chambers to afford access thereto, a lamp capable of emitting ultra-violet rays located in a quartz tube, which is secured to said box and projects through said perforation to the interior of said tank, and means for securing said box to said tank.

4. A device for sterilizing liquid, by ultra-violet rays, comprising, in combination, a tank through which the liquid is adapted to flow and provided with a perforation in one side thereof, an accessory box located upon the exterior of said tank and divided by perforated partitions into a plurality of separate chambers, a lamp capable of emitting ultra-violet rays located in a quartz tube which is secured to said box and projects through said perforation to the interior of said box, and means consisting of a removable closure for affording access to said lamp.

5. In a device of the class described, a sterilizing unit through which a liquid is adapted to flow, in combination with an accessory box connected to said unit and having a quartz container projecting into said unit, a lamp movable into and out of the quartz container, regulating devices to control the flow of current to said lamp, said devices being located within the accessory box, and a dividing partition to prevent the liquid reaching said regulating devices upon the breakage of the quartz container.

1,190,610. WELDING. JOHN G. WALLACE, Philadelphia, Pa., assignor to Hale & Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Feb. 16, 1915. Serial No. 8,609. (Cl. 219—10.)



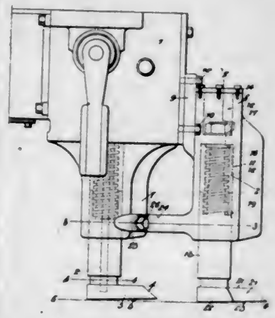
1. The process of welding consisting in passing through a spacing member of non-conducting, vibration-absorbing material, conducting metallic rods of a length at least equal to the thickness of said member, interposing said member between metallic plates with the ends of said rods in contact with the adjacent surfaces of said plates, and passing a welding current through said plates and rods and simultaneously exerting a suitable welding pressure on the same to weld the same together and cause close contact of said plates and member, substantially as set forth.

2. The process of welding consisting in passing through wooden spacing strips conducting metallic rods of a length at least equal to the thickness of said strips, interposing said strips between metallic plates with the ends of said rods in contact with the adjacent surfaces of said plates and passing a welding current through said plates and rods while submitting the same to a suitable welding pressure, to weld the same together and cause close contact of said plates and spacing strips, substantially as set forth.

3. The process of welding consisting in passing through a wooden spacing-strip conducting metallic rods of a length somewhat greater than the thickness of said strip, said rods having end portions of reduced cross-section at one extremity thereof, interposing said strip between metallic plates with the ends of said rods in contact with the adjacent surfaces of said plates, and passing a welding current through said plates and rods while pressing the same together with a suitable welding pressure to weld the same together and to cause close contact of said plates and spacing-strip, substantially as set forth.

4. As a new article of manufacture, a pair of metallic plates having a strip of electrically non-conducting vibration-absorbing material secured to and between said plates by metallic rods extending through said strip, said rods being welded at their ends to the plates and said plates and strip being in close contact, substantially as set forth.

1,190,611. PATH-CLEARING APPARATUS. JEAN F. WEBB, Jr., New York, N. Y., assignor to The International Signal Company, New York, N. Y., a Corporation. Filed Apr. 27, 1914. Serial No. 834,867. (Cl. 246—59.)



1. In an apparatus of the character stated, a rigid support, a plunger vertically movable in said support, a plow shoe carried by said plunger, said support including a penetrating nose.

2. In an apparatus of the character stated, a rigid support, a plunger vertically movable in said support, a plow shoe carried by said plunger, said support including a penetrating nose, a supplemental support secured to the front of said rigid support, a rearwardly projecting arm carried by said supplemental support to engage said rigid support, a plunger yieldably mounted in said supplemental support and a plow shoe carried by said last named plunger.

3. In an apparatus of the character stated, a rigid support having a depending portion provided with a chamber, a plunger mounted in said chamber, a shoe carried by said plunger, a supplemental support secured near its upper end to said rigid support, said supplemental support having a rearwardly projecting arm secured to said depending portion of said rigid support, a plunger yieldably mounted in said supplemental support in advance of said first mentioned plunger, said second mentioned plunger having a plow shoe for clearing the path of movement.

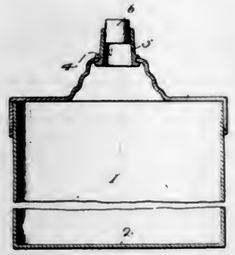
4. In an apparatus of the character stated, a rigid support having a depending portion provided with a chamber, a plunger mounted in said chamber, a shoe carried by said plunger, a supplemental support secured near its upper end to said rigid support, said supplemental support having a rearwardly projecting arm secured to said depending portion of said rigid support, a plunger yieldably mounted in said supplemental support in advance of said first mentioned plunger, said second mentioned plunger having a plow shoe for clearing the path of movement, said supplemental support having a penetrating nose.

5. In an apparatus of the class described, a support, a plunger yieldably mounted in said support, a cutting plow carried by said plunger for clearing the path of movement of the apparatus as a whole.

[Claims 6 to 8 not printed in the Gazette.]

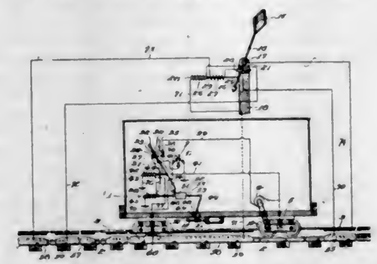
1,190,612. BOX. CHARLES L. WEIL, St. Clair, Mich., assignor to Diamond Crystal Salt Company, St. Clair, Mich., a Corporation of Michigan. Filed Apr. 24, 1912. Serial No. 692,822. (Cl. 221—11.)

A can having a body portion, a top attached to the rim



of the can including a depending annular flange arranged to fit over the said rim upon the outside surface of the body portion, an adjacent integral annular surface disposed at right angles to the said depending flange extending inwardly over a part of the area of the said top, an integral movable corrugated surface spaced from the inner sides of the can and disposed in conical relation therewith, and a centrally arranged spout secured at one end to the terminating edges of the movable corrugated surface, the said spout being disposed beneath the plane of the said adjacent integral annular surface by the conical corrugated surface when in depressed position, and held extended by the said movable conical corrugated surface above the plane of the integral annular surface when in a protracted position.

1,190,613. AUTOMATIC ELECTRIC BLOCK-SIGNALING APPARATUS FOR RAILROADS. FRANK C. WILLIAMS, Philadelphia, Pa., assignor to The Safety Block Signal Company, a Corporation of Delaware. Filed Dec. 9, 1908. Serial No. 466,581. (Cl. 246—58.)



1. In a signal and stopping system, the combination with a signal, of a car, an electric circuit for actuating said car, means whereby said signal is controlled by the movement of said car and means controlled by said signal to stop said car upon failure to actuate said signal.

2. A signal and stopping system for railways, comprising a car, an electric circuit for actuating said car, a movable signal, fixed contact plates, a shoe carried by said car for engaging said contact plates, a solenoid having two windings respectively operative to actuate a common core in opposite directions, means connecting said core and signal, separate circuits including the respective windings of said solenoid and terminating in said fixed contact plates respectively arranged to be closed by contact of said shoe for energizing the respective solenoid windings to move said signal into its opposite positions, and a circuit and means coöperating therewith to stop said car upon failure of said signal to properly shift to the danger position to protect said car.

3. A signal and stopping system for railways comprising a car, an electric circuit for actuating said car, a switch for breaking said circuit, a movable signal, a pair of fixed contact plates arranged in alinement, a shoe carried by said car for engaging said plates consecutively, a circuit adapted to be closed by the contact of said shoe and one of said plates, and including means for breaking said first mentioned circuit and stopping the car when said signal is in one predetermined position, and a circuit adapted to be closed by the contact of said shoe with the other of said plates and including means for breaking said first mentioned circuit, and stopping said car, when said signal is in a second predetermined position, a third fixed contact plate between, but out of alinement with said first mentioned plates, a shoe carried by said car and adapted to engage said third plate, a circuit adapted to be closed by the contact of said shoe and said third plate and including means for moving said signal into said predetermined position, a fourth plate in alinement with said third plate and adapted to be engaged by said second mentioned shoe and a circuit adapted to be closed by the contact of said second mentioned shoe and said fourth plate to move said signal away from said first predetermined position into said second mentioned predetermined position.

4. A signal and stopping system comprising, an electric line conductor, a car comprising stopping mechanism, means to propel said car including a circuit connected with said line conductor, means controlled by the movement of said car to stop a second car, means coöperating with said stopping mechanism to assure the operator of said first mentioned car that said stopping means is actuated to stop said second car, and means controlled by the movement of the first mentioned car arranged to actuate said stopping means to permit the unchecked movement of said second car.

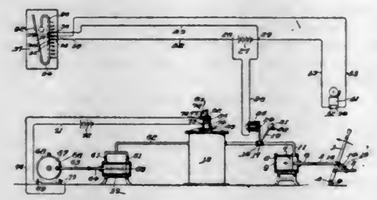
5. A signal and stopping system comprising an electric line conductor, a car, a signal station having a movable signal, a circuit connected with said line conductor, and carried by said car, and including a motor to propel said car, a second circuit formed through said signal arranged to be closed by the movement of said car, means actuated by said second circuit to break said motor circuit when said signal is "danger" set, and to be unaffected when said signal is "safety" set, a solenoid, a third circuit formed through said signal and including said solenoid when "safety" set, means to close said third circuit controlled by the movement of said car, to shift said signal to "danger" position, a fourth circuit formed through said signal, means to close said fourth circuit controlled by the movement of said car, and including means to stop the latter upon failure to actuate said signal to "danger" position, and to remain open when said signal is properly set by the movement of said car, to "danger" position, a second solenoid, and a fifth circuit formed through said signal and including said second solenoid arranged to be closed by the movement of said car, to shift said signal from "danger" to "safety" position.

[Claims 6 and 7 not printed in the Gazette.]

1,190,614. MECHANISM FOR STOPPING MARINE VESSELS. FRANK C. WILLIAMS, Philadelphia, Pa. Filed July 20, 1912. Serial No. 710,546. (Cl. 115—0.5.)

1. Mechanism carried by marine vessels for controlling the propelling mechanism when in proximity to icebergs, comprising means to stop said propelling mechanism, a valve having means normally tending to open its ports

to actuate said stopping means, means operative to hold said valve closed, and a thermostat having means connected to release said valve when the temperature falls to a predetermined degree.



2. Mechanism carried by marine vessels for controlling the propelling mechanism when in proximity to icebergs, comprising means for stopping said propelling mechanism, a valve having means normally tending to shift it to its open position for controlling said stopping means, electrical means operative to hold said valve closed, and a thermostat having means to deënergize said electrical means, to release said valve when the temperature falls to a predetermined degree.

3. In an apparatus for a marine vessel with means to manually start and stop the propelling mechanism of said vessel, of means automatically actuated by the cool atmosphere of the vicinity of an iceberg to stop propelling mechanism, when operating, independent of said means to manually control said propelling mechanism.

4. Mechanism carried by marine vessels for controlling the propelling mechanism when in proximity to icebergs, comprising a cylinder having a piston connected with said propelling mechanism, and operative when shifted to stop said propelling mechanism, a pressure reservoir connected with said cylinder, an automatically-actuated valve tending to open the connection, and having means normally maintaining it in closed position, and a thermostat having means connected to release said valve upon a drop in temperature to a predetermined degree.

5. Mechanism carried by marine vessels for controlling the propelling mechanism when in proximity to icebergs, comprising a cylinder having a piston connected to stop said propelling mechanism when shifted, a pressure reservoir having a pipe connected with said cylinder behind said piston, a valve in said pipe having means normally tending to shift it to its open position, an electromagnet normally energized to maintain said valve in its closed position and included in a normally closed electric circuit, and a thermostat having means connected therewith to deënergize said magnet and permit the automatic release of said valve.

[Claims 6 to 8 not printed in the Gazette.]

1,190,615. PLASTIC COMPOSITION. HARRY P. WILLIS, Waterford, N. Y., assignor to Willite Road Construction Company of America, a Corporation of Maine. Filed Dec. 7, 1914. Serial No. 875,767. (Cl. 106—31.)

1. A plastic composition comprising a finely-divided filler, a mineral asphaltic binder, and sulfate of copper.

2. A plastic composition comprising eighty to ninety per cent. of finely-divided filler, ten to twenty per cent. of mineral asphaltic binder, and a small percentage of sulfate of copper.

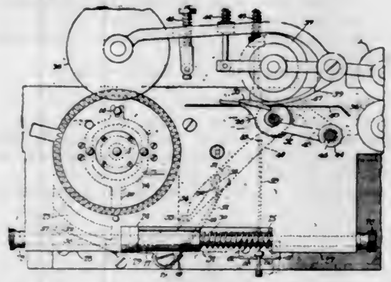
3. A plastic composition comprising a finely-divided soil filler, a mineral asphaltic binder, and sulfate of copper.

4. A plastic composition comprising a finely-divided earthy filler, a mineral asphaltic binder, and sulfate of copper.

5. A plastic composition comprising a finely-divided filler, a mineral asphaltic binder, and sulfate of copper: all of the ingredients being intimately mixed in a highly heated condition.

[Claims 6 and 7 not printed in the Gazette.]

1,190,616. STOP MECHANISM. IRVING C. WOODWARD, Chicago, Ill., assignor to American Postage Meter Co., a Corporation of Arizona. Filed Dec. 1, 1913. Serial No. 804,101. (Cl. 74—46.)



1. In a device of the class described, the combination of a rotating driving member, a driven member, said driven member having movement axially of said driving member for the purpose of being engaged or disengaged therewith, a spring for normally urging said driven member into engagement with the driving member, movable means for normally preventing the operation of said spring, and a cam separate from said means adapted to disengage said driven member from the driving member, said means being adapted to support the driven member against the action of said spring in the position in which said driven member is placed by the action of said cam.

2. In a device oft he class described, the combination of a rotating driving member, a driven member, said driven member having movement axially of said driving member for the purpose of being engaged or disengaged therewith, a spring for normally urging said driven member into engagement with the driving member, movable means for normally preventing the operation of said spring, a cam adapted to disengage said driven member from the driving member, said means being adapted to support the driven member against the action of said spring in the position in which said driven member is placed by the action of said cam, and a stationary buffer for stopping said driven member in normal position.

3. In a device of the class described, the combination of a rotating driving member, a driven member, said driven member having movement axially of said driving member for the purpose of being engaged or disengaged therewith, a spring for normally urging said driven member into engagement with the driving member, movable means for normally preventing the operation of said spring, a cam adapted to disengage said driven member from the driving member, said means being adapted to support the driven member against the action of said spring in the position in which said driven member is placed by the action of said cam, and a spring cushioned buffer for stopping said driven member in normal position.

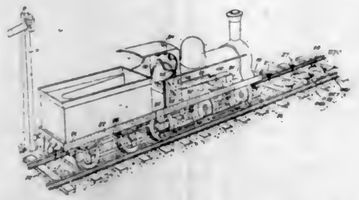
4. In a device of the class described, the combination of a rotating driving member, a driven member, said driven member having movement axially of said driving member for the purpose of being engaged or disengaged therewith, a spring for normally urging said driven member into engagement with the driving member, movable means for normally preventing the operation of said spring, a cam adapted to disengage said driven member from the driving member, said means being adapted to support the driven member against the action of said spring in the position in which said driven member is placed by the action of said cam, a spring cushioned buffer for stopping said driven member in normal position, and a fixed shoulder opposed to said buffer and adapted to prevent recoil of said driven member.

5. In a device of the class described, the combination of a rotating driving member, a driven member, said driven member having movement axially of said driving member for the purpose of being engaged or disengaged therewith, a spring for normally urging said driven member into

engagement with the driving member, movable means for normally preventing the operation of said spring, and a fixed incline in position to cam said driven member to its disengaged position, said means being adapted to support the driven member against the action of said spring in the position in which said driven member is placed by the action of said incline.

[Claims 6 to 10 not printed in the Gazette.]

1,190,617. DEVICE FOR PREVENTING COLLISIONS BETWEEN RAILWAY-TRAINS. ARTHUR REGINALD ANGUS, Sydney, New South Wales, Australia. Filed Apr. 17, 1909. Serial No. 490,552. (Cl. 246—58.)



1. In a railway signaling system and in combination, danger indicating means, signal transmitting means, and controlling means, all carried by a train, and in each block section both signaling devices located on the track and all adapted when operative to come into contact with said signal transmitting means and thereby to operate said danger indicating means, and also controlling means located on the track and adapted to come into contact with the first mentioned controlling means and to be thereby caused to render operative two of said signaling devices in front of said train and one of said signaling devices in the rear of said train and to render inoperative those of said signaling devices adapted to be similarly rendered operative by said train on contact with said controlling means located on the track in the next preceding block section.

2. In a railway signaling system and in combination, danger indicating means, signal transmitting means, and controlling means, all carried by a train, and in each block section signaling devices located on the track and all adapted when operative to come into contact with said signal transmitting means and thereby to operate said danger indicating means, and also a first controlling contacting device located on the track and adapted to come into contact with said controlling means and to be thereby caused to render operative the nearer one of two of said signaling devices in front of said train and one of said signaling devices in the rear of said train and to render inoperative those of said signaling devices adapted to be similarly rendered operative by said train on contact with said first controlling contacting device located on the track in the next preceding block section, and a second controlling contacting device located on the track and adapted to come into contact with said controlling means and to be thereby caused to render operative the further one of said two signaling devices and to render inoperative the one of said signaling devices adapted to be similarly rendered operative by said train on contact with said second controlling contacting device located on the track in the next preceding block section.

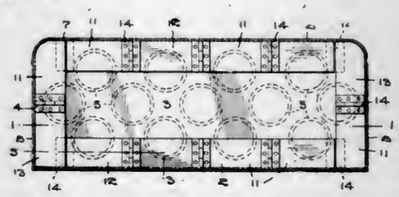
3. In a railway signaling system and in combination, danger indicating means, signal transmitting means, and controlling means, all carried by a train, and in each block section both signaling devices located on the track and all adapted when operative to come into contact with said signal transmitting means and thereby to operate said danger indicating means, electrical means for operating said signaling devices, and also, electrically connected with said electrical means, controlling means located on the track and adapted to come into contact with the first mentioned controlling means and to be thereby caused to complete electrical circuit connections through said electrical means and thereby to render operative two of said signaling devices in front of said train and one of said signaling devices in the rear of said train and to render inoperative those of said signaling devices adapted to be similarly rendered operative by said train on contact with said controlling means located on the track in the next preceding block system.

4. In a railway signaling system and in combination, danger indicating means, signal transmitting means, and controlling means, all carried by a train, and in each block section signaling devices located on the track and all adapted when operative to come into contact with said signal transmitting means and thereby to operate said danger indicating means, electrical means for operating said signaling devices, and also, electrically connected with said electrical means, a first controlling contacting device located on the track and adapted to come into contact with said controlling means and to be thereby caused to complete electrical circuit connections through corresponding ones of said electrical means and thus to render operative the nearer one of two of said signaling devices in front of said train and one of said signaling devices in the rear of said train and to render inoperative those of said signaling devices adapted to be similarly rendered operative by said train on contact with said first controlling contacting device located on the track in the next preceding block section, and a second controlling contacting device located on the track and adapted to come into contact with said controlling means and to be thereby caused to complete electrical circuit connections through other corresponding ones of said electrical means and thus to render operative the further one of said two signaling devices and to render inoperative the one of said signaling devices adapted to be similarly rendered operative by said train on contact with said second controlling contacting device located on the track in the next preceding block section.

5. a railway contacting device comprising two elements adapted to be moved transversely of the track in opposite directions and spring means adapted to tend to restore said elements to normal position during such movement.

[Claims 6 to 11 not printed in the Gazette.]

1,190,618. CUSHION. MORRIS A. APPEL, Philadelphia, Pa. Filed Aug. 11, 1915. Serial No. 45,036. (Cl. 155—25.)



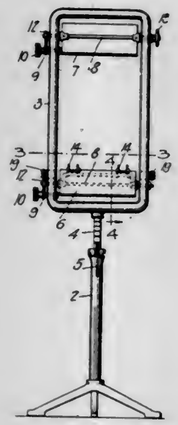
1. A cushion comprising a lower rigid frame, an upper flexible frame having sides and ends composed of rigid sections hinged together, the hinges connecting the sections of the sides and ends located on the upper face of the frame, and the hinges connecting the sides and ends located on the under face of the frame, and springs between the frames, substantially as described.

2. A cushion comprising a lower rigid frame, an upper flexible frame having sides and ends composed of rigid sections hinged together, the hinges connecting the sections of the sides and ends located on the upper face of the frame, and the hinges connecting the sides and ends located on the under face of the frame, flexible material secured to both frames, springs located between the frames and the flexible material, and filling material above the upper frame, and a covering inclosing the filling material, the frames, and the springs, substantially as described.

3. A cushion, comprising a lower rigid frame, an upper flexible frame, and coiled springs between the frames,

said upper frame of general rectangular shape consisting of parallel sides and ends, said sides and ends each composed of sections, hinges on top of the upper frame connecting the sections of the sides and ends, and hinges on the bottom of the upper frame connecting the sides and ends, substantially as described.

1,190,619. REFLECTOSCOPE. CHARLES E. H. ARMBRUSTER, Denver, Colo. Filed Dec. 8, 1915. Serial No. 65,749. (Cl. 88—20.)



1. In an instrument of the character described, a pair of reflective surfaces placed one above the other and relatively positioned to reflect an image from the upper surface to the lower one, there being a space immediately above the said lower surface, through which an observer looks across the upper edge of the same, into the eye of a patient whose line of vision is centered in the reflected image of the lower surface.

2. In an instrument of the character described, a pair of pivotally mounted reflective surfaces placed one above the other and relatively positioned to reflect an image from the upper surface to the lower one, there being a space immediately above the said lower surface, through which an observer looks across the upper edge of the same, into the eye of a patient whose line of vision is centered in the reflected image of the lower surface.

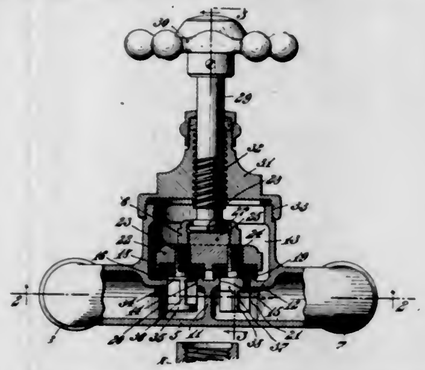
3. In an instrument of the character described, a pair of pivotally mounted reflective surfaces placed one above the other and relatively positioned to reflect an image from the upper surface to the lower one, there being a space immediately above the said lower surface, through which an observer looks across the upper edge of the same into the eye of a patient whose line of vision is centered in the reflected image of the lower surface, and micrometric means for the rotation of said surfaces to vary their angles of inclination.

4. In an instrument of the character described, a pair of reflective surfaces placed one above the other and relatively positioned to reflect an image from the upper surface to the lower one, and a finder adjustably mounted adjacent the upper edge of the lower surface, the said finder having a sight through which an observer looks across the said upper edge of the lower surface, into an eye of a patient whose line of vision is centered in the reflected image of the lower surface.

5. In an instrument of the character described, a pair of reflective surfaces placed one above the other and relatively positioned to reflect an image from the upper surface to the lower one, and a finder adjustably mounted adjacent the upper edge of the lower surface, the said finder including a projection overhanging the respective surface to be reflected therein, and a sight in alinement with said projection, through which an observer looks across the said upper edge of the lower surface, into an eye of a patient whose line of vision is centered in the reflected image of the lower surface.

[Claims 6 to 22 not printed in the Gazette.]

1,190,620. MIXING-VALVE. ALBERT E. BACON, Germantown, Pa., assignor to Haines, Jones & Cadbury Incorporated, a Corporation of Pennsylvania. Filed Sept. 4, 1909. Serial No. 516,279. (Cl. 137—26.)



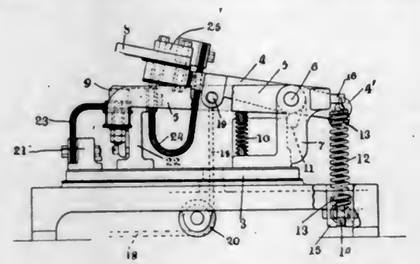
1. In a mixing valve, the combination of a chambered body having separate inlet chambers, a common mixing chamber and ports between the inlet chambers and the mixing chamber, a spindle, a yoke provided on one side with a threaded lug and on the other side with piston members operating in the ports between the inlet chambers and the mixing chamber, said piston members being threaded into the yoke and provided at the ends toward the yoke with pistons adapted to be moved without or within the margins of the ports to control communication therethrough, washers between the pistons and the yoke, and a threaded sleeve on the threaded lug having a loose engagement with the spindle adapted to permit of relative movement between spindle and pistons.

2. In a valve having separate inlet chambers, a common mixing chamber and ports between the inlet chambers and the mixing chamber, the combination of a spindle, a yoke provided on one side with a threaded lug and having threaded recesses in the opposite side and countersunk recesses surrounding the same and concentric therewith, piston members operating in the ports between the inlet chambers and the mixing chamber, said piston members being threaded into the recesses in the yoke and provided at the ends toward the yoke with pistons adapted to be moved without or within the margins of the ports to control communication therethrough, washers seated in said countersunk recesses, between the pistons and the yoke, and a threaded sleeve between the threaded lug and the spindle adapted to permit of relative movement between spindle and pistons.

3. The combination in a valve having separate inlet chambers, a common mixing chamber and ports between the inlet chambers and the mixing chamber, of a bonnet provided with a screw-threaded opening, one side of the bonnet forming a portion of the mixing chamber wall, a spindle threaded in said bonnet, a yoke movably connected with the spindle and extending across said ports, entirely on the mixing chamber side of the same, to points short of or removed from the mixing chamber wall, piston members rigidly connected with the yoke, said piston members provided at corresponding ends with pistons fitting closely within the ports and normally closing the same, one piston member having a piston projecting a shorter distance into its port than the piston of the other member and provided at its opposite end with an additional piston, and washers between the yoke and the adjacent pistons.

4. In a mixing valve, the combination of a chambered body having separate inlet chambers, a common mixing chamber and ports between the inlet chambers and the mixing chamber, a spindle, a yoke provided on one side with a threaded lug and on the other side with piston members operating in the ports between the inlet chambers and the mixing chamber, said piston members being threaded into the yoke and provided at the ends toward the yoke with pistons adapted to be moved without or within the margins of the ports to control communication therethrough, one piston member having a piston projecting a shorter distance into its port than the piston of the other member and provided at its opposite end with an additional piston, washers between the pistons and the yoke, and a threaded sleeve on the threaded lug having a loose engagement with the spindle adapted to permit a relative movement between spindle and pistons.

1,190,621. BREAKSWITCH. GEORGE E. BARSTOW, Lynn, Mass., assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Oct. 16, 1909. Serial No. 523,062. (Cl. 175—282.)



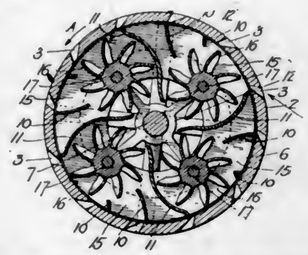
1. In a breakswitch, the combination of two coöperating contact arms, a common pivotal support for said arms, rigid flat-surfaced contacts adapted to engage each other and carried by the ends of said arms but insulated therefrom, flexible conductors secured to said contacts, means normally separating said contacts, means tending to cause one contact arm to follow the movement of the other and press the contacts together and means limiting the movement of the last-named arm.

2. In a breakswitch, the combination of a pair of contact arms, a common pivotal support for said arms, coöperating rigid flat contacts carried by the end of each arm and insulated therefrom, the arcing surfaces of said contacts being at right angles to the direction of their movement, flexible electric connections to said contacts, means normally separating said contacts, means tending to cause one contact arm to follow the movement of the other and press the contacts together and means limiting the movement of the last-named arm.

3. In a breakswitch, the combination of a pair of contact arms, a common pivot on which said arms are mounted, a contact secured to but insulated from the end of one of said arms, a coöperating contact secured to but insulated from the end of the other arm and offset therefrom to bring it in line for engagement with the first-named contact, a flexible electric connection secured to each of said contacts, means normally separating said contacts, means tending to cause one contact arm to follow the movement of the other and press the contacts together and means limiting the movement of the last-named arm.

4. In a breakswitch, the combination of a pair of freely mounted contact arms, a common pivot on which said arms are mounted, a contact carried by but insulated from the end of each arm, said contacts being adapted to engage each other, flexible conductors secured to said contacts, a stop for one of said arms and a spring acting on said arm and adapted to follow up and press the contact of said arm against the coöperating contact.

1,190,622. TURBINE. WILLIAM H. BASHOR, Steamboat Springs, Colo. Filed June 9, 1915. Serial No. 33,130. (Cl. 253—117.)



1. In a turbine, a rotary element comprising a shaft, plates on said shaft, partitions dividing the space between the plates into chambers, rotary impulse wheels in said chambers, and a planet gearing comprising planet wheels connected with the impulse-wheels, and a relatively stationary sun-wheel.

2. In a turbine, a rotary element comprising a shaft, plates on said shaft, partitions dividing the space between the plates into chambers, vanes fixed in said chambers, rotary impulse wheels in said chambers, and a planet gearing comprising planet wheels connected with the impulse-wheels, and a relatively stationary sun-wheel.

3. In a turbine, a stationary casing having an inlet and an outlet for motive fluid, a rotary element in said casing comprising a shaft extending through an opening in the casing, plates on said shaft and partitions dividing the space between said plates into chambers, rotary impulse wheels in said chambers, and a planet-gearing comprising planet wheels connected with the impulse wheels, and a sun-wheel fixed on the casing.

4. In a turbine, a stationary casing having an inlet and an outlet for motive fluid, a rotary element in said casing, comprising a shaft extending through an opening in the casing, plates on said shaft and partitions dividing the space between said plates into chambers, rotary impulse wheels in said chambers, vanes fixed in said chambers, and a planet-gearing comprising planet wheels connected with the impulse wheels, and a sun-wheel fixed on the casing.

5. In a turbine, a stationary, interiorly cylindrical casing having peripheral inlets and an outlet, a rotary hollow cylinder in said casing having peripheral intake-openings registering with said inlets and a discharge-opening registering with said outlet, rotary impulse wheels in said cylinder adjacent the intake openings thereof to receive the impact of fluid currents entering through the inlets of the casing, and mechanism for converting a rotary movement of the impulse-wheels into a rotary movement of the cylinder.

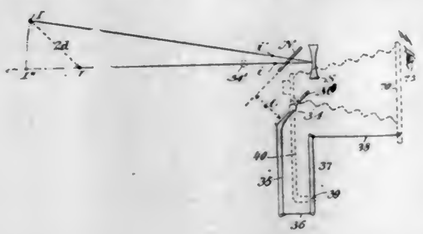
[Claims 6 to 9 not printed in the Gazette.]

1,190,623. FOCUSING-CAMERA. JOSEPH BECKER, Washington, D. C. Filed June 15, 1901. Serial No. 64,722. (Cl. 95—44.)

1. The combination with a focusing camera, of two fixed mirrors, and a divided lens, one-half of which is adapted to view the object directly and the other half adapted to view it by reflection in the mirrors, and connections between the camera and the lens elements to cause the latter to relatively slide so any object whose direct and reflected images apparently register shall be in focus in the camera.

2. The combination with a focusing camera, of two fixed parallel mirrors, and a divided lens, one-half of which is adapted to view one part of the object directly and the other half adapted to view the complementary part of the object by reflection in the mirrors, and connections between the camera and the lens elements to cause the latter to relatively slide so any object whose

direct and reflected images apparently register shall be in focus in the camera.

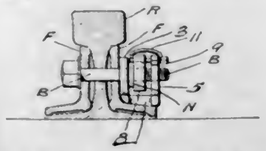


3. The combination with a photographic camera comprising relatively movable parts adapted to be relatively moved to set the camera in focus on an object point of the camera field; of an optical focuser, for said camera, comprising image forming elements adapted to receive, and then collect for final transmission, two distinct and differently directed groups of rays which are really emitted from the said object point toward two separated stations of the said focuser and which are collected for final transmission to the eye as being virtually emitted from two different but simultaneously visible object point images which have a relative position that varies with variations produced in the initial ray inclinations by changing the distance of the said object point; said focuser comprising, moreover, relatively translatable focuser elements whose translatory or rectilinear displacement is adapted to produce changes in the relative position of the said two object point images, to permit of bringing said two object point images, at will, into a characteristic relative position that has been selected as the focus-indicating position for the camera; structural connections between the said relatively translatable focuser elements on the one hand, and the said relatively movable camera parts on the other hand to insure that to each relative position of the camera parts shall correspond only one angular value of ray inclinations at their origin in the said object when the said two relatively movable object point images of such object point have been brought into the said characteristic focus-indicating relative position.

4. The combination with a photographic camera comprising relatively movable parts adapted to be relatively moved to set the camera in focus on an object point of the camera field; of an optical focuser, for said camera, comprising image forming elements adapted to receive, and then collect for final transmission, two distinct and differently directed groups of rays which are really emitted from the said object point toward two separated stations of the said focuser and which are collected for final transmission to the eye as being virtually emitted from two different but simultaneously visible object point images which have a relative position that varies with variations produced in the initial ray inclinations by changing the distance of the said object point; said focuser comprising, moreover, relatively translatable focuser elements whose translatory or rectilinear displacement is adapted to produce changes in the relative position of the said two object point images, to permit of bringing said two object point images, at will, into a characteristic relative position that has been selected as the focus-indicating position for the camera; structural connections between the said relatively translatable focuser elements on the one hand, and the said relatively movable camera parts on the other hand to insure that to each relative position of the camera parts shall correspond only one angular value of ray inclinations at their origin in the said object point when the said two relatively movable object point images of such object point have been brought into the said characteristic focus-indicating relative position; said relatively translatable focuser elements consisting in the relatively movable parts of a divided lens.

5. The combination with a photographic camera comprising relatively movable parts adapted to be relatively moved to set the camera in focus on an object point of the camera field; of an optical focuser, for said camera, consisting in a range finder of the type having its base line on the camera; separated and relatively fixed mirrors for determining the two end stations of said base line; means coöperating with the said fixed mirrors for forming two proximate and simultaneously visible images of the said object point showing it as viewed virtually from the said two end stations; such image forming means comprising relatively movable optical elements whose relative motions are adapted to cause a relative motion of the said two object point images; and structural connections established between the said relatively movable camera parts on the one hand and the said relatively movable focuser parts on the other hand to insure that to each relative position of the said camera parts shall correspond only one relative position of the said relatively movable focuser parts.

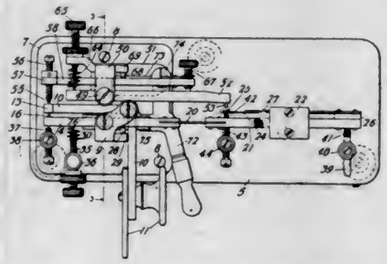
1,190,624. NUT-LOCK. MANUEL G. BITTENCOURTT, New Orleans, La. Filed Nov. 23, 1915. Serial No. 62,989. (Cl. 151—62.)



1. A nut lock for track construction and the like, comprising a chair having uprights to embrace a nut, said uprights being provided with holes to accommodate a track bolt, one of the uprights being provided with notches, a jaw to engage the nut and a pin to engage the jaw and a suitable one of said notches.

2. A nut lock for track construction and the like, comprising a chair having uprights to embrace a nut, said uprights being provided with holes to accommodate a track bolt, one of the uprights being provided with notches, a jaw to engage the nut and a pin to engage the jaw and a suitable one of said notches, and a ring loosely connecting the jaw with one of said uprights .

1,190,625. TELEGRAPH-KEY. WALTER ANDERSON BOYD, Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 29, 1914. Serial No. 841,870. (Cl. 178—82.)



1. A telegraph key comprising a base, two independently movable levers pivotally mounted thereon, a contact carried by each of said levers, means for holding one of said contacts rigid and moving the other into contact therewith to make "dots" and for holding said other contact rigid and moving the said one into contact therewith to make "dashes."

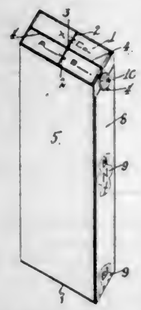
2. A telegraph key comprising a base, two independently movable levers pivotally mounted thereon, a contact carried by each of said levers, and a floating key lever pivotally mounted on said base between said levers, whereby movement of said key lever in one direction causes said contacts to engage and disengage in rapid succession, and in another direction causes a single engagement of said contacts.

3. A telegraph key comprising a base, two independently movable levers pivotally mounted thereon, a contact carried by each of said levers, spring-pressed means for holding one of said contacts stationary, a key lever for moving the other of said contacts into engagement therewith to make "dots", spring-pressed means for holding the other of said contacts stationary, and an intermediate lever through which movement of said key lever is transmitted to move the said one contact into engagement with said other contact to make "dashes".

4. A telegraph key comprising a floating key lever movable in two directions, a lever actuated by movement of said key lever in one direction but remaining stationary during its other movement, a vibrator actuated by movement of said key lever, a contact carried by said lever and a contact carried by said vibrator, movement of said key lever to actuate said vibrator causing said contacts to engage and disengage in rapid succession to produce "dots" and movement of said key lever to actuate said lever causing said contacts to engage to produce a "dash".

5. A telegraph key comprising a floating key lever movable in two directions, a vibrator, a contact carried thereby, a pivotally mounted lever, a contact carried by said lever, an intermediate lever through which said first lever is actuated by movement of said key lever in one direction causing said contacts to engage to produce a "dash", movement of said key lever in another direction causing said vibrator to oscillate whereby said contacts engage and disengage in rapid succession to produce "dots".

1,190,626. PROTECTED TICKET-PACKAGE. LYMAN A. BRIDGES, Burlingame, Cal. Filed Dec. 27, 1915. Serial No. 68,710. (Cl. 206—46.)



1. A ticket-package comprising a ticket-pile; a string tying said pile, with its free ends extending over and beyond opposite edges of the top of said pile; a carton inclosing said ticket-pile and having holes in opposite sides through which the free ends of the tying string pass from the inside outwardly; and means for sealing the projecting ends of the string.

2. A ticket-package comprising a ticket-pile; a string tying said pile, with its free ends extending over and beyond opposite edges of the top of said pile; a carton inclosing said ticket-pile and having holes in opposite sides through which the free ends of the tying string pass from the inside outwardly; and a sealing member applied to the outer surface of the carton sides over the holes therein and upon the projecting ends of the string.

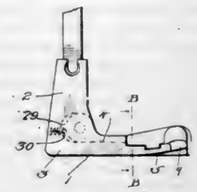
3. A ticket-package comprising a ticket-pile; a string tying said pile, with its free ends extending over and beyond opposite edges of the top of said pile; a carton inclosing said ticket-pile, and having holes in opposite sides through which the free ends of the tying string pass from the inside outwardly, said holes being appreciably larger in diameter than the dinmeter of the string ends; and a sealing member of wax applied to the outside of the carton sides upon the projecting string ends, a portion of said wax passing through said holes to the inside.

4. A ticket-package comprising a ticket-pile; a tying-string around said pile in one plane with its free ends extending over the top of the pile in opposite directions in a plane at right angles to the plane of the body of the string; a carton inclosing said ticket-pile and having holes in those of its sides which lie parallel with the plane of the string body, the free ends of the string passing through said holes from the inside outwardly; and means for sealing the projecting ends of the string.

5. A ticket-package comprising a ticket-pile; a tying-string around said pile in one plane with its free ends extending over the top of the pile in opposite directions in a plane at right angles to the plane of the body of the string; a carton inclosing said ticket-pile and having holes in those of its sides which lie parallel with the plane of the string body, the free ends of the string passing through said holes from the inside outwardly; and a sealing member applied to the outer surface of the carton sides over the holes therein and upon the projecting ends of the string.

[Claims 6 to 9 not printed in the Gazette.]

1,190,627. HEMMER. OPHELIA M. CARTWRIGHT, New York, N. Y. Filed Aug. 21, 1915. Serial No. 46,650. (Cl. 112—10.)



1. A device of the class described comprising a presser foot the toe portion of which is provided with a conical tongue, a scroll pivoted to the heel portion of the presser foot and adapted to inclose said conical tongue in its lowered position.

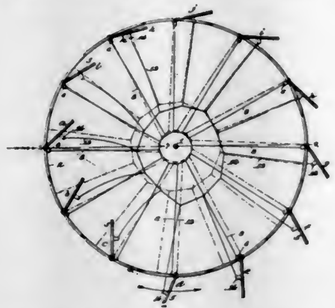
2. A device of the class described, comprising a presser foot the toe portion of which is provided with a conical tongue, a scroll pivoted to the heel portion of the presser foot and adapted to inclose said conical tongue in its lowered position, said conical tongue and scroll serving as means to fold a piece of goods passed therethrough, and said presser foot being provided with a channel by means of which the fold is supported and guided in the operation of stitching the same.

3. A device of the class described, comprising a presser foot the toe portion of which is provided with a conical tongue, a scroll pivoted to the heel portion of the presser foot and adapted to inclose said conical tongue in its lowered position, said conical tongue and scroll serving as means to fold a piece of goods passed therethrough, said presser foot being provided with a channel by means of which the fold is supported and guided in the operation of stitching the same, and means for holding said scroll in a raised and lowered position.

1,190,628. WINDMILL. ROBERT CLADE, Newark, N. J., assignor to Air Turbine Company of America, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 12, 1915. Serial No. 20,635. (Cl. 170—23.)

1. A windmill having a vertical shaft, rims carried by the shaft and spaced apart, a plurality of vanes turning on vertical axes between the rims, a transmission ring surrounding the shaft and connections between the ring and the vanes, said transmission ring having an expansi-

ble member by means of which its diameter may be increased by wind pressure upon the vanes to turn them upon their axes to a greater extent and thus reduce the area of surface subjected to action by the wind.



2. A windmill having a vertical shaft, rims carried by the shaft and spaced apart, a plurality of vanes turning on vertical axes between the rims, a transmission ring surrounding the shaft and having an expansible member whereby its diameter may be increased and connections between the ring and the vanes, and a centrifugal ring also surrounding the shaft, and connectors between the vane and the centrifugal ring to balance the centrifugal forces which tend to turn certain of the vanes outwardly by increased wind pressure on the other vanes.

3. A windmill having a vertical shaft, rims carried by the shaft and spaced apart, a plurality of vanes turning on vertical axes between the rims, a flexible, transmission ring surrounding the shaft and connections between the ring and the vane, said transmission ring having an expansible member by means of which its diameter may be increased by wind pressure upon the vanes to turn them upon their axes to a greater extent and thus reduce the area of surface subjected to action by the wind.

4. A windmill having a vertical shaft, rims carried by the shaft and spaced apart, a plurality of vanes turning on vertical axes between the rims, a flexible, transmission ring surrounding the shaft and having an expansible member whereby its diameter may be increased and connections between the ring and the vanes, and a centrifugal ring also surrounding the shaft, and connectors between the vane and the centrifugal ring to balance the centrifugal forces which tend to turn certain of the vanes outwardly by increased wind pressure on the other vanes.

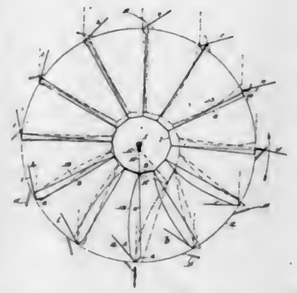
5. A windmill having a vertical shaft, rims carried by the shaft and spaced apart, a plurality of vanes turning on vertical axes between the rims, a transmission ring surrounding the shaft and having an expansible member whereby its diameter may be increased and connections between the ring and the vanes, and a flexible, centrifugal ring also surrounding the shaft and connectors between the vane and the centrifugal ring to balance the centrifugal forces which tend to turn certain of the vanes outwardly by increased wind pressure on the other vanes.

[Claims 6 to 12 not printed in the Gazette.]

1,190,629. WINDMILL. ROBERT CLADE, Newark, N. J., assignor to Air Turbine Company of America, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 12, 1915. Serial No. 20,636. (Cl. 170—23.)

1. A windmill having a vertical shaft, a plurality of rims carried by the shaft, a plurality of vanes each mounted on a vertical axis adjacent to one edge, said vanes swinging outside and inside of the perimeter of the rims, a ring surrounding the shaft, connections between the ring and the vanes between the free edges and the axis thereof to restrain wind stresses, and connections between the ring and the vanes at the opposite sides of the axis to restrain centrifugal stresses.

2. A windwill having a vertical shaft, a plurality of rims carried by the shaft, a plurality of vanes each mounted on a vertical axis adjacent to one edge, said vanes swinging outside and inside of the perimeter of the rims, a ring surrounding the shaft, two arms associated with each vane, one arm between the free edge and the axis thereof, and one arm extending in the opposite direction from the axis thereof, and a stay connecting each arm with the ring.



3. A windmill having a vertical shaft, a plurality of rims carried by the shaft, a plurality of vanes mounted on vertical axes adjacent to their edges, said vanes swinging outside and inside of the perimeter of the rims, a noose surrounding the shaft, and connections between the vanes and noose.

4. A windmill having a vertical shaft, a plurality of rims carried by the shaft, a plurality of vanes mounted on vertical axes adjacent to their edges, said vanes swinging outside and inside of the perimeter of the rims, a noose surrounding the shaft, and connections between the vanes and noose, said connections being equally spaced when the noose is at its smallest diameter.

5. A windmill having a vertical shaft, a plurality of rims carried by the shaft, a plurality of vanes mounted on vertical axes adjacent to their edges, said vanes swinging outside and inside of the perimeter of the rims, a noose surrounding the shaft, connections between the noose and the vanes between the free edges and the axes thereof, and connections between the noose and the vanes at the opposite sides of the axes.

[Claims 6 to 9 not printed in the Gazette.]

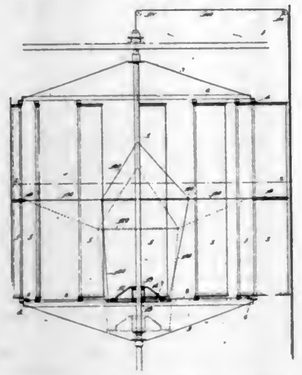
1,190,630. GOVERNING MECHANISM FOR WINDMILLS. ROBERT CLADE, Newark, N. J., assignor to Air Turbine Company of America, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 12, 1915. Serial No. 20,637. (Cl. 170—26.)

1. In a windmill, a vertical shaft, a plurality of rims carried thereby, a plurality of vanes mounted to turn on vertical axes between the rims, a flexible ring surrounding the shaft and free to move eccentrically in relation thereto, connections between the ring and vanes, and means controlled by the rotation of the mill to limit the eccentricity of the ring.

2. In a windmill, a vertical shaft, a plurality of rims carried thereby, a plurality of vanes mounted to turn on vertical axes between the rims, a flexible ring surrounding the shaft and free to move eccentrically in relation thereto, connections between the ring and vanes, and means for holding the ring concentric to the shaft.

3. In a windmill, a vertical shaft, a plurality of rims carried thereby, a plurality of vanes mounted to turn on vertical axes between the rims, a flexible ring surrounding the shaft and free to move eccentrically in relation thereto, connections between the ring and vanes, a governing cone moving longitudinally in relation to the shaft, and means for moving the cone to engage with the ring.

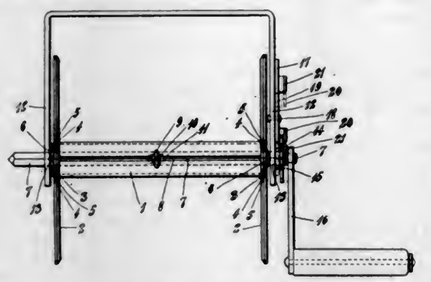
4. In a windmill, a vertical shaft, a plurality of rims carried thereby, a plurality of vanes mounted to turn on vertical axes between the rims, a flexible ring surrounding the shaft and free to move eccentrically in relation thereto, connections between the ring and vanes, a governing cone surrounding the shaft and capable of longitudinal movement in relation thereto, and means controlled by the rotation of the mill to move said cone.



5. In a windmill, a vertical shaft, a plurality of rims carried thereby, a plurality of vanes mounted to turn on vertical axes between the rims, a ring surrounding the shaft and free to move eccentrically in relation thereto, connections between the ring and vanes to one side of the axes of the latter, a second ring surrounding the shaft, connections between the second ring and the vanes at the opposite side of the axes thereof, governing means moving longitudinally in relation to the shaft to confine and reduce the eccentricity of the first ring, and connections between the said means and the second ring, whereby said second ring will be raised, by centrifugal stresses on the vanes, and will raise said governing means.

[Claims 6 to 28 not printed in the Gazette.]

1,190,631. PAWL-AND-RATCHET MECHANISM FOR REELS. ALBERT O. CLAIN, Cincinnati, Ohio, assignor to Fred A. Caskey, Marietta, Ohio. Filed May 6, 1915. Serial No. 26,326. (Cl. 74—53.)



1. In combination with a ratchet wheel, and a stationary mounting on which the ratchet wheel is held for rotation or for dismounting axially, a pawl for said ratchet wheel pivoted on said mounting, a lug on said pawl adjacent to one end thereof, and another lug near the other end of the pawl, said first described lug being adapted to engage with the teeth of the ratchet wheel when said pawl is swung backward and downward and thereby prevent rotation of said ratchet wheel in one direction, and said other lug being adapted to engage with the teeth of said ratchet wheel when the pawl is swung forward and upward but to permit rotation of said ratchet wheel in said direction, each of said lugs being positioned to extend outside of said ratchet wheel to engage the outer side thereof to prevent dismounting of the ratchet wheel, and dismounting of and withdrawal of the ratchet wheel being permitted by swinging said pawl midway between the aforesaid positions.

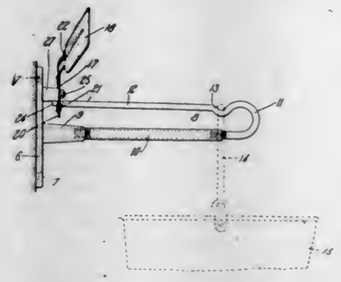
2. In combination with a ratchet wheel, and a stationary mounting on which the ratchet wheel is held for rotation or for dismounting axially, a pawl for said ratchet wheel, a pivot for said pawl located on said mounting some distance away from and below the center of said ratchet wheel and considerably nearer one end of said pawl than it is to the other end of said pawl, a lug on said pawl adjacent to the end to which the pivot is nearer, and comprising a part extending laterally from the side of said pawl away from said ratchet wheel and then extending across said pawl, and another lug similar to the above lug extending from said pawl on the same side as does the above lug, but near the other end of the pawl, said first described lug being adapted to engage with the teeth of the ratchet wheel when said pawl is swung backward and downward and thereby prevent rotation of said ratchet wheel in one direction, and said other lug being adapted to engage a flat side with the teeth of said ratchet wheel when the pawl is swung forward and upward, but to permit rotation of said ratchet wheel in said direction, each of said lugs being positioned to extend outside of said ratchet wheel to engage the outer side thereof to prevent dismounting of the ratchet wheel, and dismounting of the ratchet wheel being permitted by swinging said pawl midway between the aforesaid positions.

3. In combination with rotary means, and a stationary mounting therefor, a shaft turning in said mounting and turning with the rotary means, a bracket comprising parts flanking said rotary means and having openings through which said shaft extends at respective ends of the rotary means, said openings forming bearings for said shaft, a ratchet wheel fixed on said shaft and having an annular boss engaging with the outer side of one of said members of said bracket, spacing said ratchet wheel away from said member, manipulative means fixed on said shaft outside said ratchet wheel, and a pawl comprising a main part pivoted on said member of said bracket below and to the rear of said shaft with the pivot nearer one end of said pawl than it is to the other, said pawl swinging between said ratchet wheel and said member of said bracket, and a lug adjacent to the end of the pawl to which the pivot is nearer having a part the edge of which engages with the teeth of said ratchet wheel to prevent rotary means in one direction, and a part to extend outside the ratchet wheel and engage with the outer side thereof and prevent withdrawal of the shaft from the bracket and rotary means, and another lug on said pawl near its other end similar to the above described lug but adapted to engage its flat side with said ratchet teeth when the pawl is swung upward and forward to permit rotation of said rotary means in said direction, but having its part outside the ratchet wheel to engage with the outer side of the ratchet wheel and prevent withdrawal of the shaft from the bracket and rotary means, said pawl being swung to a position substantially midway of the aforesaid positions for withdrawal of said shaft from said bracket and rotary means to dismount said rotary means.

1,190,632. SUPPORT FOR FIRE-PAILS AND THE LIKE. AUSTIN B. COLLETTE, Everett, Mass. Filed Mar. 19, 1915. Serial No. 15,538. (Cl. 116—49.)

1. A device of the class described having, in combination, a support, a hook mounted on said support, said hook having an outwardly projecting relatively rigid portion and an inwardly projecting relatively resilient portion connected with said outwardly projecting portion at the outer end thereof, said relatively resilient portion having a depression formed therein, adjacent to the outer end thereof, adapted to position a weight, a plate mounted on said support, said plate having a slot therein adapted to receive the free end of said relatively resilient portion to

limit the deflections thereof, said plate also having differentiating characters thereon, and a pivoted indicator hand adapted to register with said differentiating characters, said hand being operatively connected with the free end of said relatively resilient portion and constructed and arranged to be rocked upon its pivot by the deflection thereof.



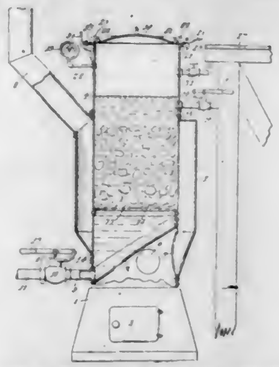
2. A device of the class described having, in combination, a resilient member, having a fixed end and a movable end, said resilient member also having a depression formed therein, adjacent to its fixed end constructed and arranged to position a weight, the movable end of said resilient member being constructed and arranged to be deflected by the application of a predetermined weight thereto, and an indicator hand operatively connected with the movable end of said resilient member and adapted to indicate the deflection thereof.

3. A device of the class described having, in combination, a support, a hook mounted on said support, said hook having an outwardly projecting relatively rigid portion and an inwardly projecting relatively resilient portion connected with said outwardly projecting portion at the outer end thereof by a reversely bent portion, said relatively resilient portion having a depression formed therein adjacent the outer end thereof, a plate mounted on said support, said plate having a slot therein adapted to receive the free end of said relatively resilient portion and adapted to limit the deflections thereof, said plate also having differentiating characters thereon, an indicator hand pivotally mounted on said plate and adapted to register with said differentiating characters, said hand being operatively connected with the free end of said relatively resilient portion and to be rocked upon its pivot by the deflection thereof, and means to adjust said plate relatively to the axis of said hand.

4. A device of the class described having, in combination, a support, a hook arranged substantially at right angles to said support, said hook including a resilient member directed toward said support, the inner end of said resilient member being free, said resilient member also having a depression formed adjacent to its outer end constructed and arranged to position a weight, and a pivoted indicator hand arranged adjacent to said support adapted to engage the inner free end of said resilient member and to be rocked upon its pivot by the deflection of said resilient member upon the application of a predetermined weight to the depressed portion of said resilient member.

5. A device of the class described having, in combination, a support, a hook mounted on said support substantially at right angles thereto, said hook including a relatively rigid portion and a relatively resilient portion arranged substantially parallel with, in close proximity to and connected with said relatively rigid portion adjacent to its outer end said relatively resilient portion extending toward said support, the inner end thereof being free, said relatively resilient portion having a depression formed therein adjacent to its outer end constructed and arranged to position a weight, and an indicator connected with the free end of said resilient portion constructed and arranged to be moved by the deflection thereof.

1,190,633. PROCESS FOR THE SEPARATION OF ASPHALTIC COMPOUNDS FROM GANGUE. CARL L. COOK, San Francisco, and JOHN R. PRICE, Oakland, Cal. Filed Feb. 17, 1914. Serial No. 819,212. (Cl. 196—25.)



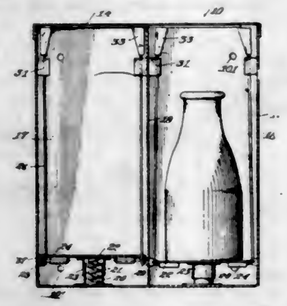
1. The process of separating asphaltic compounds from gangue carrying the same, which consists in heating the gangue in water to a sufficient temperature to cause the compounds to partially free themselves from the gangue and to rise through the water and continuing the heating of the floating compounds to a temperature above 212° Fahrenheit whereby the compounds will coalesce and release gangue carried thereby and then separating the asphaltic compounds from the water.

2. The process of separating asphaltic compounds from gangue carrying the same, which consists in heating the gangue in water to a temperature above 250° Fahrenheit whereby the asphaltic compounds are first caused to partially separate from the gangue and float to the surface of the water and there to liquefy and release carried gangue which precipitates through the water and then removing the liquefied compounds from the surface of the water.

3. The process of separating asphaltic compounds from gangue carrying the same which consists in heating the gangue in water to a temperature sufficiently high to cause the compounds to partially separate from the gangue and float to the surface of the water and then heating the separated compounds in water to a higher temperature whereby the compounds will coalesce and release the gangue carried thereby which precipitates through the water.

1,190,634. AUTOMATIC SAFETY-DEPOSIT BOX. THEODORE CROSSLEY, Riverside, Cal. Filed Jan. 27, 1916. Serial No. 74,674. (Cl. 232—41.)

1. An automatic safety deposit box comprising a box, a side door therefor, means for locking said door, a tubular spring holder centrally secured on the bottom of said box, a vertically movable horizontal shelf, a tubular guide secured to the bottom of said shelf and slidably mounted on said spring holder, a coiled spring in said holder upwardly projecting therefrom, the upper end thereof engaging the bottom of said shelf, a pair of bell crank levers having their short arms secured at opposite sides to the bottom of said shelf and their long arms extending vertically upward adjacent to the side walls of said box, said levers being fulcrumed to the side of said box, a pair of ears limiting the inner swinging movement of said vertical arms, a pair of locking members attached to the upper ends of the vertical arms of said levers, a pair of folding doors provided with spring hinges opening downwardly from the top of said box, the meeting edges of said doors being in a vertical plane passing through said locking members, said locking members being adapted to swing into locking position underneath the meeting edges of said doors when an article is deposited on said shelf.



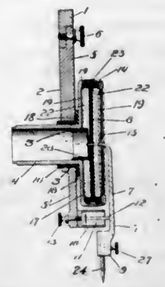
2. An automatic safety deposit box comprising a box adapted to be secured to the wall of a building, a side door for said box, means for locking said door, a vertically movable horizontal shelf within said box, a coiled spring secured substantially at the center of the bottom of said box, and engaging with its upper end the under side of the bottom of said shelf, a pair of bell crank levers having their short arms secured at opposite sides to the bottom of said shelf and their long arms extending vertically upward adjacent to the side walls of said box, said levers being fulcrumed to the sides of said box, a pair of locking members attached to the upper ends of the vertical arms of said levers and a pair of folding doors provided with spring hinges and opening downwardly from the top of said box, the meeting edges of said doors being in a vertical plane passing through said locking members, said locking members being adapted to swing into locking position underneath the meeting edges of said doors, whereby the latter are locked in closed position when an article is deposited on said shelf.

3. An automatic safety deposit box comprising a container, a door therefor, means for locking said door, a vertically movable horizontal shelf in the lower end of said container, a spring engaging the under side of said shelf, and tending to move said shelf upwardly to its normal inoperative position, a pair of bell crank levers having their short arms secured at opposite sides to said shelf and their long arms extending vertically upward, a pair of locking members attached to the upper ends of the long arms of said levers, and a pair of folding doors provided with spring hinges opening downwardly from the top of said container, the meeting edges of said doors being in a vertical plane passing through said locking members, said locking members being adapted to swing into locking position underneath the meeting edges of said doors whereby said doors are locked in closed position when an article is deposited on said shelf.

4. An automatic safety deposit box comprising a container, a door therefor, means for locking said door, a vertically movable shelf in the lower end of said container, resilient means engaging the under side of said shelf and tending to move the same into its normal inoperative position, a pair of bell crank levers having their short arms secured on opposite sides to said shelf and their long arms extending vertically upward, a pair of locking members attached to the upper ends of the long arms of said levers and a pair of folding doors provided with spring hinges opening downwardly from the top of said box, the meeting edges of said doors being in a vertical plane passing through said locking members, said locking members being adapted to swing into locking position underneath the meeting edges of said doors, whereby said doors are locked in closed position when an article is deposited on said shelf.

5. An automatic safety deposit box comprising a container, a door therefor, means for locking said door, a vertically movable shelf in said container, yielding means engaging the under side of said shelf and tending to move said shelf to its normal inoperative position, a pair of locking members operatively connected to said shelf, a pair of folding doors provided with spring hinges opening downwardly from the top of said container, the meeting edges of said doors being in a vertical plane passing through said locking members, said locking members being adapted to swing into locking position underneath the meeting edges of said doors, whereby said doors are locked in closed position when an article is deposited on said shelf.

1,190,635. TALKING-MACHINE. PATRICK B. DELANY, South Orange, N. J. Filed Jan. 3, 1913. Serial No. 739,939. (Cl. 274—35.)

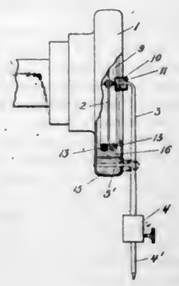


1. In a talking machine a diaphragm mounted between gaskets composed of nonstretchable central cores of wire and closely adhering insulating material molded thereon.

2. In a talking machine, a diaphragm, a supporting frame therefor and a retaining gasket consisting of a nonstretchable core of relatively hard material and closely adhering insulating material molded thereon.

3. In a talking machine the combination with a sound box the inner faces of which are coated with a dampening material, a diaphragm mounted therein and also coated with a dampening material, a vibrating arm attached to the diaphragm and coated with a dampening material, and a support for the vibrating arm mounted in a mass inert to vibrations.

1,190,636. TALKING-MACHINE RECORDER AND REPRODUCER. PATRICK B. DELANY, South Orange, N. J. Filed July 19, 1913. Serial No. 779,947. (Cl. 274—35.)



1. In a talking machine sound box, a vibrating arm severed intermediate the part contacting with the record and the diaphragm, said several parts being joined by a meltable non-vibratory material.

2. In a talking machine sound box, a vibrating arm in two parts, one part attached to the diaphragm the other part mounted on a support and a non-vibratory connection between the two parts composed of a meltable mass.

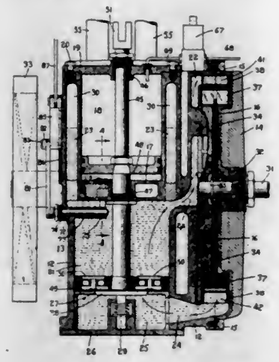
3. In a talking machine sound box a vibrating arm, a support for said arm and a meltable mass surrounding

said support, and the juncture of said support with said arm.

4. In a talking machine sound box provided with a diaphragm, a support, a vibrating arm in two parts, one part attached to the diaphragm and the other part attached to said support, a meltable non-vibratory connection between the two parts, and a meltable non-vibratory mounting for the support.

5. The combination of a diaphragm, its supporting frame, a vibrating needle-supporting arm, means for supporting said vibrating arm, a container attached to the diaphragm and into which one of said vibrating arm extends, and a meltable mass of non-vibratory material in the container surrounding the end of the vibrating arm therein.

1,190,637. TURBINE-ENGINE. FRIDERICH E. DOMSCHEIT, Bridgeport, Conn. Filed Sept. 8, 1914. Serial No. 860,679. (Cl. 123—5.)



1. A motor comprising, in combination, a reciprocating engine, a rotary motor shaft, a rotary fluid driven element connected with said shaft, a pump cylinder communicating with said rotary element and having a discharge chamber, a reciprocating piston in said cylinder operated by said engine, a separate casing constituting a suction chamber within said pump cylinder, said discharge and suction chambers communicating with said rotary element and said suction chamber having a port communicating with said pump cylinder, and a spring-pressed check valve for controlling said port.

2. A motor comprising, in combination, an engine, a rotary fluid driven element, and a pump operated by said engine and comprising a cylinder having discharge and suction chambers and a valved reciprocating piston in said cylinder, said supply and suction chambers both communicating with said fluid driven element.

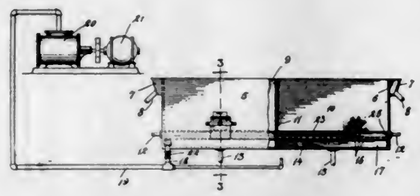
3. A motor comprising, in combination, an engine having a pair of reciprocating oppositely acting fluid impelling elements, rotary fluid driven means, and inlet and exhaust conduits for said fluid driven means each communicating directly with both said fluid impelling elements.

4. A motor comprising, in combination, an engine, a rotary fluid driven element, a pump operated by said engine and comprising a cylinder and a valved reciprocating piston in said cylinder, and inlet and exhaust conduits for said fluid driven element communicating with said cylinder at opposite sides of said piston respectively.

5. A motor comprising, in combination, an engine having a plurality of cylinders and a plurality of reciprocating pistons in said cylinders respectively, a plurality of reciprocating fluid impelling elements operated by said pistons respectively, a single rotary fluid driven element, and inlet and exhaust conduits for said fluid driven element each communicating directly with all of said fluid impelling elements.

[Claim 6 not printed in the Gazette.]

1,190,638. APPARATUS FOR TREATING FOOD STUFFS AND THE LIKE. GEORGE B. FURMAN, East Orange, N. J. Filed July 17, 1914. Serial No. 851,464. (Cl. 146—14.)



1. An apparatus for treating food stuffs comprising a container for a liquid in which said food stuffs are immersed, a removable air compression chamber in said container comprising a continuous and endless side wall and a transverse wall connected with said continuous and endless side wall throughout, said compression chamber being provided with perforations whereby air is distributed to said liquid and means for introducing air into said compression chamber.

2. An apparatus for treating food stuffs comprising a container for a liquid, in which said food stuffs are immersed, a member located in said container at a distance above the bottom thereof, and means for introducing air under pressure into said container and beneath said member, the latter being provided with perforations having their outlet ends arranged at an angle to the vertical whereby said air is distributed to said liquid in jets which extend at angles to each other.

3. An apparatus for treating food stuffs comprising a container for a liquid, in which said food stuffs are immersed, a dished member removably located at the bottom of said container in an inverted condition to form an inclosed chamber, said member having a corrugated surface, and means for introducing air under pressure into said chamber and beneath said member, the latter being provided with perforations whereby said air is evenly distributed to said liquid.

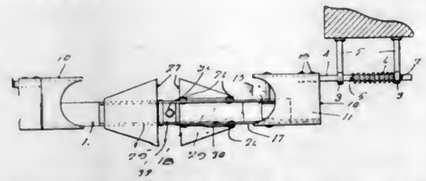
4. An apparatus for treating food stuffs comprising a container for a liquid, in which said food stuffs are immersed, a removable corrugated dished member located at the bottom of said container in an inverted condition to form an inclosed chamber, said member having perforations in the corrugations, the outlet ends of which are arranged at an angle to the vertical, a removable foraminated element in said container at a distance above said member and means for introducing air into said inclosed chamber and through said perforations and foramina.

5. An apparatus for treating food stuffs comprising a container for a liquid, in which said food stuffs are immersed, said container having an exit opening, a door for normally sealing said opening, a removable, perforated, dished member located at the bottom of said container in an inverted condition to form an inclosed chamber, a removable foraminated element located in said container at a distance above said member and inclined downwardly toward said exit opening and means for introducing air into said chamber and through said perforations and foramina.

[Claims 6 to 9 not printed in the Gazette.]

1,190,639. AUTOMATIC AIR-HOSE COUPLING. PHILIAS A. GAGNON, Bathurst, New Brunswick, Canada. Filed Sept. 15, 1915. Serial No. 50,860. (Cl. 188—13.)

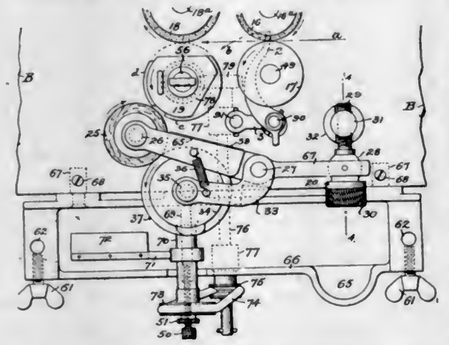
1. In a train pipe coupler, brackets secured to the under side of the draw bar of a car, a rod slidable through the brackets, a spring cushioning the rearward movement of the rod, a supporting member secured to the forward end of the rod, a pivot pin at the forward end of the supporting member, a tapered coupling element provided with an offset at its enlarged end, a tapered extension at the enlarged end of the coupling element, a carriage carried by the tapered extension and slidable on the pivot pin, whereby the device may be moved in a vertical plane and may also swing on the pivot pin, the inclined face of the coupling element being provided with an opening, a train pipe connection alined with the opening and communicating with the train pipe and a funnel shaped guard secured to the enlarged end of the tapered coupling element and extending outwardly from the tapered side thereof, said funnel shaped guard acting as a guide to cause the coöperating element to assume the proper position to couple the train pipe.



2. In a train pipe coupler, brackets secured to the under side of the draw bar of a railway car, a rod slidable in the brackets, a cushioning spring surrounding the rod and adapted to force the same outwardly, a stop to prevent the rod from moving beyond a predetermined distance, a hollow supporting member secured to the forward end of the rod, a pivot pin extending vertically through the supporting member, and a tapered train pipe coupling vertically movable on the pivot pin within the hollow supporting member.

3. In a train pipe coupler, brackets secured to the under side of the draw bar of a railway car, a rod slidable in the brackets, a cushioning spring surrounding the rod and adapted to force the same outwardly, a stop to prevent the rod from moving beyond a predetermined distance, a hollow supporting member secured to the forward end of the rod, a pivot pin extending vertically through the supporting member, a carriage, rollers at opposite ends of the carriage, said rollers engaging the pivot pins and allowing for free vertical movement of the carriage, and a train pipe coupler, supported on the carriage between the upper and lower walls of the supporting member.

1,190,640. INKING MECHANISM. GEORGE H. GRAHAM, Upper Montclair, N. J., assignor to Universal Stamping Machine Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 18, 1913, Serial No. 807,384. Renewed Jan. 12, 1915. Serial No. 1,881. (Cl. 101—71.)



1. In a mail marking machine, a normally inactive printing roller or die, and normally inactive ink supplying mechanism therefor, said ink supply mechanism operating only when the die is operating; with means whereby said die and ink supplying mechanism are caused to operate only when mail matter is passing through the machine and according to the amount of such mail matter.

2. In a mail marking machine, a normally inactive printing roller or die, and means for operating said die only when mail is passing through the machine and according to the amount of such mail matter; with normally inactive inking mechanism for said die including a rotatable ink-applying roller adapted to ink the die and a rotatable ink supplying roller frictionally contacting with the ink applying roller, and means whereby such ink applying and ink supplying rollers are operated only upon and in accordance with the operation of the die.

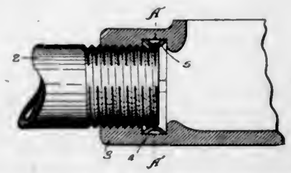
3. In a mail marking machine, a normally inactive printing roller or die; a normally inactive inking mechanism therefor comprising a rotatable ink-applying roller adapted to ink the die, a rotatable ink-supplying roller contacting with the ink applying roller, and an ink feeding mechanism, said inking mechanism operating only when the die is operating; with means whereby said die and inking mechanism are caused to operate only when mail matter is passing through the machine and according to the amount of such mail matter.

4. In combination a normally inactive printing roller or die, a normally inactive ink-roller for applying ink to the die, a normally inactive ink roller supplying ink to the ink-applying roller; an ink supply and normally inactive ink-feeder conveying ink from the supply to the ink-supplying roller, and means whereby such inking rollers are operated only upon and in accordance with the operation of the die.

5. In combination a normally inactive printing roller or die, a normally inactive ink-roller for applying ink to the die, and a normally inactive ink roller supplying ink to the ink-applying roller, said rollers being mounted on parallel axes, an ink supply and a normally inactive rotatable ink-feeder conveying ink from the supply to the ink-supplying roller; with means whereby such inking rollers and feeder are operated only upon and in accordance with the operation of the die.

[Claims 6 to 18 not printed in the Gazette.]

1,190,641. CONNECTION FOR ELECTRIC CONDUITS. EDWIN E. GREAVES, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 25, 1912. Serial No. 711,430. (Cl. 247—1.)



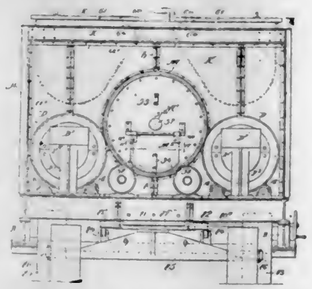
1. The combination of two conduit members, one being formed with a threaded passage, and an enlarged recess at the inner end of the passage, and the other being a pipe threading in the passage, and an expansible and contractile ring in the recess, the ring being formed of yielding nonresilient metal, and having an inclined inner face opposed to the end of the pipe turning in the passage, the inner diameter of the ring being less than the diameter of the passage whereby the end face of said pipe engages the inner face of the ring and causes the ring to expand and grip the walls of the recess and the periphery of the pipe, substantially as and for the purpose described.

2. The combination of two conduit members, one being formed with a threaded passage, and an enlarged recess at the inner end of said passage, and the other member being a pipe turning in such passage, and a metal ring located in the recess and formed with a peripheral circumferential groove, and the inner diameter of the fing being less than that of the passage whereby the end of the pipe turning in the passage engages the inner face of such ring and causes the same to expand and grip the walls of the recess and the periphery of the pipe, substantially as and for the purpose specified.

3. The combination of two conduit members, one being formed with a threaded passage, and an enlarged recess at the inner end of said passage, and the other being a pipe threading in such passage, and a retaining ring in the recess, the ring being concavo-convex in cross section and the diameter of the inner face thereof being less than the diameter of the passage whereby the end face of the pipe turning in said passage engages the inner curved face of the ring and causes the ring to expand and grip the walls of the recess and the periphery of the pipe, substantially as and for the purpose set forth.

4. The combination of two conduit members, one being formed with a threaded passage, and an enlarged recess at the inner end of the passage, and the other being a pipe threading in the passage, and an expansible and contractile transversely split ring in the recess, the ring being formed of yielding, non-resilient metal, and having an inclined inner face opposed to the end of the pipe turning in the passage, the inner diameter of the ring being less than the diameter of the passage whereby the end face of the pipe engages the inner face of the ring and causes the ring to expand and grip the walls of the recess and the periphery of the pipe, substantially as and for the purpose described.

1,190,642. ASPHALT DRYING, HEATING, AND MIXING PLANT. CHARLES E. GUELICH, Kingston, Pa., assignor to Guelich Paving Process Company, Huron, S. D., a Corporation of South Dakota. Filed Oct. 24, 1911, Serial No. 656,490. Renewed Dec. 30, 1915. Serial No. 69,504. (Cl. 94—6.)



1. The combination in apparatus of the kind specified, of a mixer and a plurality of driers, a conveyer in operative communication with each said drier, a plurality of compartments for dried material in operative connection with said mixer, and a closure for said compartments whereby each said compartment may independently receive dried material from said conveyer.

2. The combination in apparatus of the kind specified, of a mixer, a plurality of driers adapted to supply dried aggregates for said mixer, a chute provided with a plurality of compartments, one for each said drier, and all said compartments being operatively connected with said mixer, means to close the inlet of one or the other said compartment, and a conveyer adapted to convey dried aggregates from one or the other drier to one of said compartments, whereby either of said driers may be operated singly.

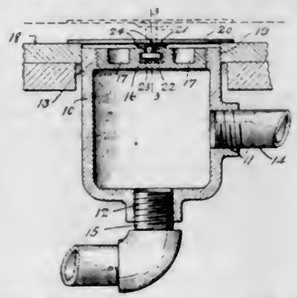
3. In apparatus of the kind specified, the combination with a rotary mixer of a worm-feeding device operatively connected with said mixer and comprising a channel for aggregates and a feeding worm therein, and a separate channel for molten asphalt extending inwardly slightly beyond said channel for aggregates, whereby said aggregates and said molten asphalt begin to mix as they enter said mixer.

4. The combination in apparatus of the kind specified, of a mixer and a plurality of driers, a housing containing said mixer and driers, a single furnace or set of furnaces arranged to heat all said driers and mixer, means to deliver dried aggregates from either drier to said mixer, and means to mix molten asphalt with said aggregates as they enter said mixer, and a circumferential conveyer adapted to convey the dried aggregates from each drier.

5. The combination in apparatus of the kind specified, of a rotary mixer, a plurality of rotary driers in operative connection therewith, whereby one or the other of said driers may be inoperative without stopping the feed of materials to said mixer, and a worm feed device operatively connected with said mixer, and provided with a channel for aggregates and with a separate channel for molten asphalt.

[Claims 6 and 7 not printed in the Gazette.]

1,190,643. TRAP. ARCHIBALD HARRIS, Chicago, Ill. Filed Feb. 29, 1916. Serial No. 81,098. (Cl. 182—12.)



1. A closure for a water seal trap which is adapted to be concealed below a floor, comprising a relatively thin cap, the cap having an external screw thread for mounting the cap tightly upon a trap, said cap provided with means below its upper surface for removably retaining a threaded nut.

2. A closure for a water seal trap which is adapted to be concealed below a floor, comprising a cap, the cap having a screw-threaded periphery for mounting the cap tightly upon a trap, said cap provided with means below its upper surface for removably retaining a threaded nut, a floor plate adapted to rest at its edge upon a floor above the cap, and a screw engaging the nut and holding the plate in place.

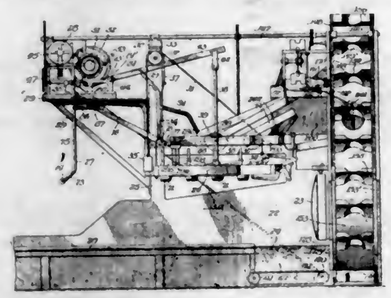
3. A closure for a water seal trap which is adapted to be concealed below a floor, comprising a cap having an external screw thread and provided in its upper side with oppositely disposed wrench receiving sockets and provided with an elongated open slot in its upper side which crosses the center of the cap, said slot provided at the center of the cap with overhanging side ribs adapted to receive a threaded nut below them, the outer end of said slot being free of said ribs and permitting the entrance into and the removal from the slot of a nut.

4. A closure for a concealed water seal trap comprising a thin flat cap provided with an external screw thread, a nut receiving slot in its upper side which crosses the center of the cap, said slot being under cut at the center of the cap adapting it to retain a threaded nut and open at its outer end whereby a nut can be entered into and removed from the slot, in combination with a floor plate of larger diameter than said cap provided with a central opening for receiving a bolt, and a bolt adapted to connect said plate with said nut as and for the purpose specified.

5. Means for concealing a water seal trap beneath a floor, comprising a screw threaded cap for closing the trap, said cap provided with wrench receiving openings in its upper side and with a nut receiving and retaining slot between the wrench receiving openings, said nut receiving slot being formed at one end for permitting the free entrance and removal of a nut, a thin floor plate larger in diameter than the cap provided with a central bolt opening, a threaded nut in said nut receiving slot, and a screw threaded bolt in the central opening of the floor plate and entering said nut to removably secure the floor plate in position.

[Claims 6 to 8 not printed in the Gazette.]

1,190,644. AUTOMATIC PIN-SETTING MACHINE. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Sept. 6, 1913. Serial No. 788,410. (Cl. 46—54:)



1. In a pin setting machine for a bowling alley, the combination of a vertically movable pin setter comprising a frame and a plurality of pairs of complementary elements secured thereto adapted to receive and guide the pins to their proper position upon the alley bed, automatic means for lowering said setter to pin-depositing position, and means for actuating said setter to deposit the pins.

2. In a pin setting machine for a bowling alley, the combination of a pin setter comprising a frame and a plurality of pairs of complementary elements secured thereto adapted to receive and guide the pins to their proper positions upon the alley bed, automatic means for taking the pins from the alley pit and delivering them to said setter, and means for actuating said setter to deposit the pins.

3. In a pin setting machine for a bowling alley, the combination of a pin setter comprising a frame and complementary elements secured thereto adapted to receive and guide the pins to their proper positions upon the alley bed, a distributer adapted to receive and temporarily retain a set of pins, and means for releasing the pins from said distributer to allow the pins to fall onto said setter.

4. In a pin setting machine for a bowling alley, the combination of a pin setter comprising a frame and complementary elements secured thereto adapted to receive and guide the pins to their proper positions upon the alley bed, a distributer adapted to receive and temporarily retain a set of pins, and automatic means for taking the pins from the alley pit and delivering them to said distributer.

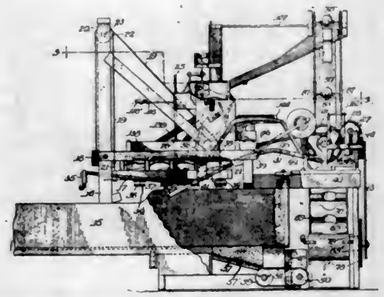
5. In a pin setting machine for a bowling alley, the combination of a pin setter, a distributer above said setter adapted to receive and temporarily retain a set of pins, and means for releasing the pins from said distributer, whereby the pins are allowed to fall onto said setter.

[Claims 6 to 183 not printed in the Gazette.]

1,190,645. AUTOMATIC PIN-SETTING MACHINE. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Sept. 6, 1913, Serial No. 788,412. Renewed Mar. 9, 1916. Serial No. 83,172. (Cl. 46—54.)

1. In a pin setting machine for a bowling alley, the combination of a pin setter adapted to place a set of pins in proper position upon the alley bed, a transfer mechanism, means for delivering the pins from the alley pit to the transfer mechanism, an assembler, an elevating mechanism for taking the pins from the transfer mechanism and carrying them to the assembler, and means for transferring the pins from the assembler to the pin setter.

2. In a pin setting machine for a bowling alley, the combination of a pin setter adapted to place a set of pins in proper position upon the alley bed, means for removing pins from the alley bed into the alley pit, a transfer mechanism, means for delivering the pins from the alley pit to the transfer mechanism, an assembler, an elevating mechanism for taking the pins from the transfer mechanism and carrying them to the assembler, and means for transferring the pins from the assembler to the pin setter.



3. In a pin setting machine for a bowling alley, the combination of a pin setter adapted to place a set of pins in proper position upon the alley bed, a transfer mechanism, means for delivering pins from the alley pit to the transfer mechanism, an assembler, an elevating mechanism for taking the pin from the transfer mechanism and delivering them singly to the assembler, and means for simultaneously transferring a full set of pins from the assembler to the said pin setter.

4. In a pin setting machine for a bowling alley, the combination of conveyer means in the alley pit, a continuously rotating element to receive the pins as they are discharged from the conveyer means, and means coöperating with said continuously rotating element for elevating the pins above the pit.

5. In a pin setting machine for a bowling alley, the combination of a pin setter adapted to place a set of pins in proper position upon the alley bed, a rotatable element, means for delivering the pins from the alley pit to the rotatable element, an assembler, an elevating mechanism for receiving the pins from the rotatable element and carrying them to the assembler, and mechanism for transferring the pins from the assembler to the said pin setter.

[Claims 6 to 52 not printed in the Gazette.]

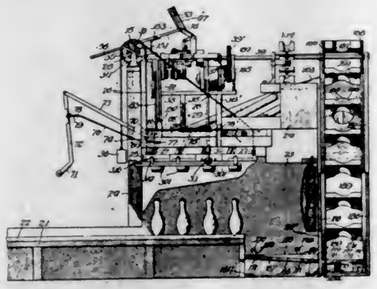
1,190,646. AUTOMATIC PIN-SETTING MACHINE. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Feb. 13, 1914. Serial No. 818,449. (Cl. 46—54.)

1. In a pin setting machine for a bowling alley, the combination of a pin setter, means normally suspended above the plane of the tops of the pins on the alley bed for clearing the alley preparatory to the setting operation, and means for bringing the setter into operation during the movement of the clearing means.

2. In a pin setting machine for a bowling alley, the combination of a sweeper normally suspended above the plane of the tops of the pins on the alley bed and adapted to clear the alley bed, a pin setter adapted to place a set of pins in position upon the alley bed, and means for moving said sweeper downwardly and rearwardly over the alley bed and back to normal position and for moving said setter into position adjacent the alley bed to deposit a set of pins, said means causing the setter to move into posi-

tion adjacent the alley bed while the sweeper is returning to normal position after clearing the alley.

3. In a pin setting machine for a bowling alley, the combination of a sweeper normally suspended above the plane of the tops of the pins on the alley bed and adapted to clear the alley bed, said sweeper having a sweeping movement and a return movement, and a pin setter for placing a set of pins in position on the alley bed and having a movement into position to deposit the pins and a return movement, the movement of the setter into position to deposit the pins occurring during the return movement of the sweeper.

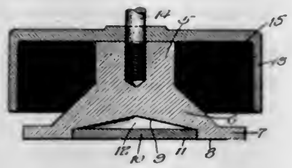


4. In a pin setting machine for a bowling alley, the combination of continuously operating means for temporarily lifting pins standing on the alley bed, and means for clearing the alley of fallen pins while the standing pins are being lifted.

5. In a pin setting machine for a bowling alley, the combination of movable means for lifting the standing pins from the alley bed and replacing them again upon the alley bed, and a sweeper for clearing the alley bed of fallen pins while the standing pins are lifted, said sweeper clearing the alley of fallen pins during the operation of said lifting means.

[Claims 6 to 90 not printed in the Gazette.]

1,190,647. ELECTROMAGNET. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Feb. 28, 1916. Serial No. 80,836. (Cl. 175—21.)

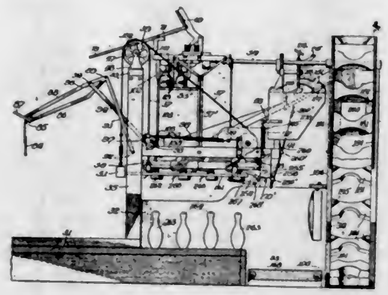


1. In an electro-magnet, a metal core provided with a flaring end presenting a substantially flat face of relatively large superficial area, and a metal housing partially surrounding said core, said flaring end being provided with an inclosed chamber forming an air gap, whereby the magnetic lines of force are equally distributed over the area of the flat face of the flaring end of said core.

2. In an electro-magnet a metal core provided with a circular flaring end presenting a substantially flat face of relatively large superficial area, and a metal housing partially surrounding said core, said flaring end being provided with an inclosed chamber forming an air gap, the depth of said chamber being maximum rearwardly of the center of said face and diminishing toward the periphery thereof, whereby the magnetic lines of force are equally distributed thereover.

3. In an electro-magnet, a metal core provided with a circular flaring end presenting a substantially flat face of relatively large superficial area, a metal housing partially surrounding said core, said core being provided adjacent said face with a conical recess, and a metal plate secured to said core at the base of said recess with its outer face in substantially the plane of the face of said core to form an inclosed chamber which serves as an air gap to maintain an equal distribution of the lines of magnetic force over the faces of said core and plate.

1,190,648. AUTOMATIC PIN-SETTING MACHINE. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed June 6, 1914. Serial No. 843,372. (Cl. 46—54.)



1. In a pin setting machine for a bowling alley, the combination of a pin setter adapted to deposit a set of pins on the alley bed, and means for operating the same, said machine comprising a driving element, a rotatable member mounted on the driving element and normally locked thereto, and stationary means for unlocking said member from said driving element.

2. In a pin setting machine for a bowling alley, the combination of a sweeper adapted to clear the alley bed, and means for operating the same, said means comprising a driving element, a member mounted on said driving element and normally locked thereto and stationary means for unlocking said member from said driving element.

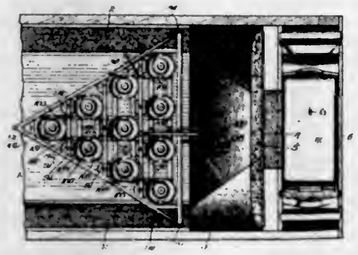
3. In a pin setting machine for a bowling alley, the combination of a pin setted adapted to deposit a set of pins on the alley bed, a sweeper adapted to clear the alley bed, a driving element, means for operating the setter, means for operating the sweeper, both said means being normally locked to said driving element, and stationary means for unlocking said setter-controlling means and said sweeper-controlling means from said driving element.

4. In a pin setting machine for a bowling alley, the combination of a pin setter adapted to deposit a set of pins upon the alley bed, means for operating the same, said means comprising a normally idle driving element, means for imparting rotation to said driving element, a member mounted on said driving element and normally locked thereto, and a stationary magnet disposed adjacent said member and adapted to unlock said member from said driving element.

5. In a pin setting machine for a bowling alley the combination of a sweeper adapted to clear the alley bed, and means for operating said sweeper, said means comprising a driving element normally at rest, means for imparting rotation to the driving element, a member mounted on and normally locked to said driving element, and a stationary magnet for unlocking said member from said driving element.

[Claims 6 to 80 not printed in the Gazette.]

1,190,649. AUTOMATIC PIN-SETTING MACHINE. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Oct. 22, 1914. Serial No. 868,028. (Cl. 46—54.)



1. A pin setting machine for a bowling alley, the combination of means for elevating pins from the alley pit, and means disposed in juxtaposition to said first-mentioned means to break the fall of pins which may become disengaged therefrom.

2. In a pin setting machine for a bowling alley, the combination of a conveyer for elevating balls from the alley pit, and a shelf disposed in juxtaposition to said conveyer to break the fall of balls which may become disengaged therefrom.

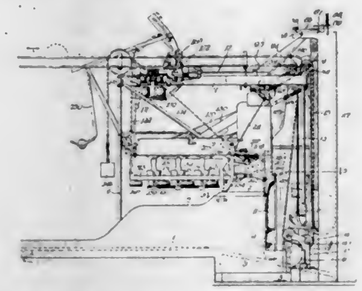
3. In a pin setting machine for a bowling alley, the combination of a conveyer for elevating pins and balls from the alley pit, and means resiliently mounted in juxtaposition to said conveyer to break the fall of pins or balls which may become disengaged therefrom.

4. In a pin setting machine for a bowling alley, the combination of a conveyer for elevating pins and balls from the alley pit, and a padded shelf resiliently suspended in juxtaposition to said conveyer to break the fall of pins or balls which may become disengaged therefrom.

5. In a pin setting machine for a bowling alley, the combination of a frame, an endless conveyer for elevating pins and balls from the alley pit, and a padded shelf resiliently mounted on said frame within said conveyer and adapted to break the fall of pins or balls which may become disengaged therefrom.

[Claims 6 to 50 not printed in the Gazette.]

1,190,650. AUTOMATIC PIN-SETTING MACHINE. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Feb. 28, 1916. Serial No. 80,835. (Cl. 46—54.)



1. In a pin setting machine for a bowling alley, the combination of a stationary sloping floor in the alley pit and an element rotating in a plane normal to the axis of the alley to lift the pins from said floor.

2. In a pin setting machine for a bowling alley, the combination of a stationary sloping floor in the alley pit, means to lift the pins from said floor, and elevating means adapted to receive the pins from said lifting means.

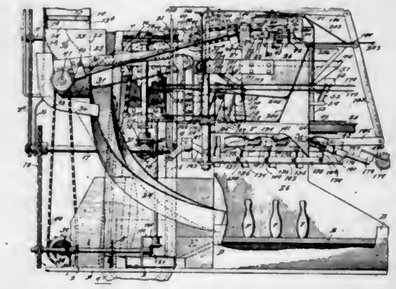
3. In a pin setting machine for a bowling alley, the combination of a stationary sloping floor in the alley pit, a continuously rotating element to lift the pins from said floor, elevating means adapted to receive the pins from said rotating element, and means to insure delivery of the pins from said rotating element to said elevating means with their butt ends foremost.

4. In a pin-setting machine for a bowling alley, the combination of a stationary sloping floor in the alley pit, a continuously rotating element to lift the pins from said floor, elevating means adapted to receive the pins from said rotating element, means to insure delivery of the pins from said rotating element to said elevating means with their butt ends foremost, and a cushion disposed forwardly of said rotating element and provided with an aperture adjacent said floor through which the pins may pass.

5. In a pin setting machine for a bowling alley, the combination of a floor in the alley pit, means to lift the pins from said floor, elevating means adapted to receive the pins from said lifting means, and means to insure delivery of the pins from said lifting to said elevating means with their butt ends foremost.

[Claims 6 to 75 not printed in the Gazette.]

1,190,651. MACHINE FOR SETTING PINS ON BOWLING-ALLEYS. ERNEST HEDENSKOOG, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Oct. 28, 1914. Serial No. 868,939. (Cl. 46—54.)



1. In a pin setting device for bowling alleys, setting mechanism, assembling mechanism adapted to support a set of pins, a spout for feeding the pins to the assembling mechanism having a central partition, and means to feed the pins to the spout in a horizontal position so that the partition aforesaid engages them and delivers them in an upright position.

2. In a pin setting device for bowling alleys, setting mechanism, assembling mechanism adapted to support a set of pins, a spout for feeding the pins to the assembling mechanism having a central partition, and means to feed the pins to the spout in a horizontal position so that said partition engages them in their middle and throws the center of gravity of the pin on one side of the partition.

3. In a bowling alley pin setting apparatus, mechanism for setting the pins, assembling mechanism adapted to support a set of pins, a conveyer to carry the pins to the assembling mechanism, and mechanism utilizing the difference in weight of the ends of the pin to always throw the pin on the conveyer butt end foremost.

4. In a bowling alley, mechanism to clamp the set pins and raise them from the alley, and mechanism to clear the alley of down pins.

5. In a bowling alley pin setting apparatus, a magazine for assembling the pins comprising a rotatable structure, and pin compartments arranged in said magazine in the relative positions of pins when set on the alley.

[Claims 6 to 79 not printed in the Gazette.]

1,190,652. ARTICLES SUBJECTED TO HIGH EXTERNAL TEMPERATURES. JOHN C. HENDERSON, Washington, D. C., assignor to Driver-Harris Wire Company, Harrison, N. J., a Corporation of New Jersey. Filed Jan. 4, 1916. Serial No. 70,123. (Cl. 75—1.)

1. A cast article of manufacture subjected when in use to external heat at high temperatures composed of an alloy containing chromium and iron and another metal of the iron group of substantially the same atomic weight as iron, the chromium being from 5 to 30 per cent. and the metal last referred to from 50 to 90 per cent., and the combined third metal and chromium amounting to at least 60 per cent.

2. A cast article of manufacture subjected when in use to external heat at high temperatures composed of an alloy containing nickel and chromium and iron, the chromium being from 5 to 30 per cent., and the nickel from 50 to 90 per cent., and the combined nickel and chromium amounting to at least 60 per cent.

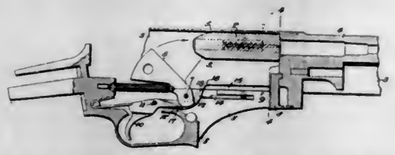
3. A cast article of manufacture subjected when in use to external heat at high temperatures composed of a ferrous alloy containing substantially chromium 12 per cent., iron 26 per cent., and 60 per cent. of another metal of the iron group of substantially the same atomic weight as iron.

4. A cast article of manufacture subjected when in use to external heat at high temperatures composed of an alloy containing chromium and iron and another metal of the iron group of substantially the same atomic weight as iron, the chromium being from 5 to 30 per cent., and the metal last referred to from 50 to 90 per cent., and the combined third metal and chromium amounting to at least 60 per cent., the alloy being substantially carbon-free.

5. A massive article of manufacture subjected when in use to external heat at high temperatures composed of an alloy containing chromium and iron and another metal of the iron group of substantially the same atomic weight as iron, the chromium being from 5 to 30 per cent., and the metal last referred to from 50 to 90 per cent., and the combined third metal and chromium amounting to at least 60 per cent.

[Claim 6 not printed in the Gazette.]

1,190,653. AUTOMATIC FIREARM. CHARLES F. HUGHES, Vancouver, British Columbia, Canada. Filed Apr. 12, 1916. Serial No. 90,699. (Cl. 42—3.)



1. In a firearm, the combination with a breech bolt endwise movable under the recoil of the shot fired and a hammer adapted to be moved to the cocked position by the backward movement of the breech bolt, of means directly operable with the trigger for retaining the hammer in the cocked position, and means independent of the trigger for retaining the hammer in the cocked position, said means releasable by the breech bolt when that bolt is in its firing position.

2. In a firearm, the combination with a breech bolt endwise movable under the recoil of the shot fired and a hammer adapted to be moved to the cocked position by the backward movement of the breech bolt, of means directly operable with the trigger for retaining the hammer in the cocked position, a supplementary sear lever pivotally mounted to move independently of the trigger and adapted to engage the sear notch of the hammer and retain it in the cocked position, said lever adapted to be engaged by a part of the breech bolt when the same is in the firing position and release the supplementary sear from engagement with the sear notch of the hammer.

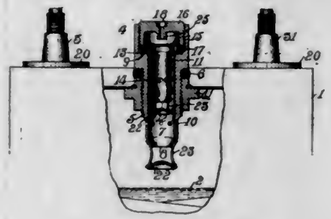
3. In a firearm, the combination with a breech bolt endwise movable under the recoil of the shot fired and a hammer adapted to be moved to the cocked position by the backward movement of the breech bolt, of means directly operable with the trigger for retaining the hammer in the cocked position, a supplementary sear lever pivotally mounted on the trigger pin to move independently of the trigger, said sear lever having provision to engage the sear notch of the hammer to retain it in the cocked position, the free end of said lever being upturned and laterally offset to project in the path of a portion of the breech bolt and to be engaged and depressed by it to release the hammer at the forward limit of the movement of the bolt.

4. In a firearm, the combination with a breech bolt endwise movable under the recoil of the shot fired and a hammer adapted to be moved to the cocked position by the backward movement of the breech bolt, a trigger having an end forwardly projecting from the pin on which it is mounted and adapted to engage the sear notch of the hammer and retain the hammer in the cocked position, and a supplementary sear independently mounted on the trigger pin and adapted to engage the sear notch of the hammer when the same is in the cocked position, said supplementary sear being produced beyond this engaging shoulder and upwardly turned and laterally offset to project into a groove in the side of the breech bolt and adapted to be pressed down by the end of the groove to release the hammer when the bolt is at the forward limit of its movement.

5. In a firearm, the combination with a breech bolt endwise movable under the recoil of the shot fired and a hammer adapted to be moved to the cocked position by the backward movement of the breech bolt, of means for retaining the hammer in the cocked position, said means comprising a trigger having an end forwardly projecting from the trigger pin and adapted to engage the sear notch of the hammer, and a supplementary sear independently mounted on the same pin and adapted to engage the same sear notch of the hammer to retain it in the cocked position and provision for yieldingly projecting the end of the supplementary sear in the path of a portion of the breech bolt to be engaged and depressed from engagement with the sear notch of the hammer when the breech bolt is in the firing position.

[Claim 6 not printed in the Gazette.]

1,190,654. GAS FILTERING OR SEPARATING VALVE. HEINRICH H. MENO KAMMERHOFF, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 9, 1914. Serial No. 817,494. (Cl. 204—53.)



1. A valve comprising a valve tube, one end of the bore of which is constricted and the opposite end of which is enlarged to form a seat therein, an inner tube removably supported from said seat, a puppet valve normally closing the bore of said inner tube, and a cap having a vent therethrough, said cap being positioned in the enlarged portion of said first named bore, inclosing said puppet valve and maintaining said inner tube in position, each of said tubes having one or more gas vents in the sides thereof, substantially as described.

2. A valve comprising a plurality of nested tubes spaced from each other, the lower end of certain of said tubes having a constricted bore and each tube having one or more relatively small vents in the side thereof, the lower end of an inner tube being positioned above the side vent or vents in the next adjacent outer tube, and a puppet valve for controlling the passage of fluids through the innermost tube, substantially as described.

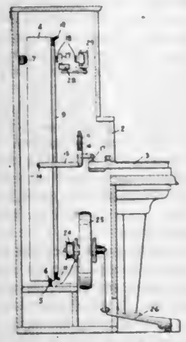
3. A valve comprising a plurality of nested tubes spaced from each other, the lower end of certain of said tubes having a constricted bore and each tube having one or more relatively small vents in the side thereof, the lower end of an inner tube being positioned above the side vent or vents in the next adjacent outer tube, a puppet valve for controlling the innermost tube, and means for limiting the unseating movement of said puppet valve, substantially as described.

4. A valve comprising a plurality of nested tubes spaced from each other, the lower end of certain of said tubes having a constricted bore and each tube having one or more relatively small vents in the side thereof, the lower end of an inner tube being positioned above the side vent or vents in the next adjacent outer tube, substantially as described.

5. A valve comprising a plurality of nested tubes spaced from each other, and each tube having one or more relatively small vents in the side thereof, the side vent or vents of an inner tube being positioned above the side vent or vents in the next adjacent outer tube, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,190,655. PIANO-VIOLIN. ANTON KELLER, West New York, N. J. Filed Jan. 19, 1914. Serial No. 812,897. (Cl. 84—46.)



1. In a musical instrument, the combination of a case, a series of finger keys carried by said case, a series of hollow string-carrying boxes, one for each key, supported within said case and each having a substantially knife edge pivotal support at its lower forward edge whereby the weight of the box will assist the return thereof to its normal position, means for shifting forward each box on the operation of its key, an endless bow in position to engage the strings on the shifting of the box, and means for operating said bow.

2. In a musical instrument, the combination of a case, a series of finger keys carried by said case, a series of hollow string-carrying boxes, one for each key, supported within said case and each having a substantially knife edge pivotal support at its lower forward edge whereby the weight of the box will assist the return thereof to its normal position, means for shifting forward each box on the operation of its key, an endless bow in position to engage the strings on the shifting of the box and having both runs thereof forwardly of the boxes, and means for operating said bow.

3. In a musical instrument, the combination of a case, a lengthwise extending narrow member supported edgewise within said case and forming a substantially knife edge pivotal support, a series of finger keys carried by said case, a series of hollow string-carrying boxes, one for each key, mounted adjacent to their forward edges on said narrow member and extending at right angles to said keys whereby the weight of said boxes will assist in returning the boxes to normal position with their rear edges in contact with said cushioning members, a bell-crank lever pivotally supported between each key and its string-carrying box and having one arm thereof connected to said key, a link pivotally connected to the other arm of said lever and removably connected to said box, an endless bow in position to engage the strings on the operation of said keys and having both runs thereof forwardly of the boxes, and pedal mechanism for operating said bow.

4. In a musical instrument, the combination of a case, a lengthwise extending narrow member supported edgewise within said case and forming a substantially knife edge pivotal support, a series of horizontal finger keys carried by said case, a series of hollow string-carrying boxes, one for each key, mounted adjacent to their forward edges on said narrow member and extending at right angles to said keys, said narrow member and boxes having one a groove for the reception of the other, cushioning members on the back of said case on which said boxes normally rest, means for shifting forward each box on the operation of its key, an endless bow in position to engage the strings on the shifting forward of the boxes and having both runs thereof forwardly of the boxes, and means for operating said bow.

5. In a musical instrument, the combination of a case having a series of cushioning members at its upper portion adjacent to the rear wall thereof, a lengthwise extending narrow member supported edgewise within said case and forming a substantially knife edge pivotal support, a series of horizontal finger keys carried by said case, a series of hollow string-carrying boxes, one for each key, mounted adjacent to their forward edges on said narrow member and extending at right angles to said keys whereby the weight of said boxes will assist in returning the boxes to normal position with their rear edges in contact with said cushioning members, a bell-crank lever pivotally supported between each key and its string-carrying box and having one arm thereof connected to said key, a link pivotally connected to the other arm of said lever and removably connected to said box, an endless bow in position to engage the strings on the operation of said keys and having both runs thereof forwardly of the boxes, and pedal mechanism for operating said bow.

[Claim 6 not printed in the Gazette.]

1,190,656. AUTOMATIC VALVE. WALTER J. KENNEDY, Cleveland, Ohio, assignor to The Fuel Economizer Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 30, 1913. Serial No. 782,112. (Cl. 126—52.)

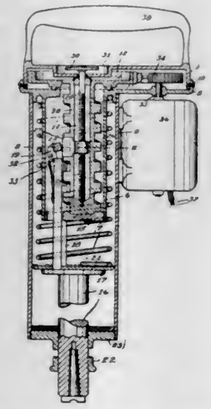


1. In a valve for a gas stove, a valve casing, a shaft in said casing, a lever secured thereto, and having an extensible outer end, laterally and downwardly extending fingers secured to said extension, an extensible brace for said lever having one end pivoted in said casing, and the other adjustably secured to said lever, a main rotary valve in said casing, a radial member extending from said valve, an arm upon said shaft, engaging said radial member, and a return spring for said valve, arm and lever.

2. A lever for operating the valve of a gas burner for a cook stove, comprising, a main portion and an adjustable extremity therefor, said extremity provided with laterally and downwardly extending fingers, and a brace bar therefor, said brace bar adjustably connected with said main portion.

3. A valve operating lever for a gas stove adapted to be depressed to operate the valve when a cooking utensil is placed thereon, said lever comprising a body portion operatively connected with said valve, an outer extremity for said lever, longitudinally adjustable in the body portion, fingers upon said outer extremity having laterally and downwardly turned portions, and a brace rod for said lever secured to the lever, and laterally adjustable relatively thereto.

1,190,657. HAMMER. GEORGE L. KOLLOCK and ROBERT P. MARTIN, Seattle, Wash., assignors to Universal Hammer Company, Seattle, Wash., a Corporation of Washington. Filed Sept. 7, 1915. Serial No. 49,243. (Cl. 78—27.)



1. A device of the class described, comprising a rotatable shaft having a spiral groove, a hammer element provided with a pawl for engaging within said groove, means for rotating said shaft, and means for disengaging said pawl from said groove.

2. A device of the class described, comprising a rotatably mounted screw-threaded member, a hammer element, a compression spring engaging therewith, a pawl associated with said hammer element to engage said screw, and means adjustable lengthwise of said screw for effecting the disengagement of said pawl from said screw.

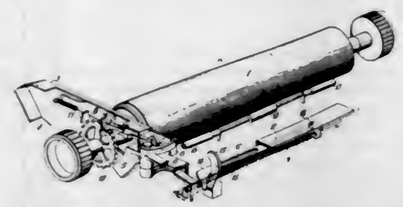
3. A device of the class described, comprising a hollow screw having a longitudinal slot, a trip member disposed within said screw and adjustable longitudinally in said slot, a hammer element having a spring pressed pawl that engages said screw, a compression spring, and means for rotating said screw to move said hammer element and compress said spring.

4. A device of the class described, comprising an outer casing, a hammer element reciprocable longitudinally therein, a compression spring engaging said hammer element, an inner casing, a screw rotatably mounted within said inner casing, a spring-pressed pawl associated with said hammer element to engage said screw, means for rotating said screw to move said hammer element and compress said spring, and a trip member movable longitudinally of said screw to trip said pawl whereby the length of stroke of said hammer element may be varied.

5. A device of the class described, comprising an outer casing, a hammer element reciprocable longitudinally therein, a compression spring engaging said hammer element, a hollow slotted screw shaft, a pawl on said hammer element to engage with said hollow screw shaft, a smaller screw disposed within said hollow screw, a trip member screwed onto said smaller shaft and movable longitudinally of said slot to trip said pawl, and means for rotating said hollow shaft to move said hammer and compress said spring.

[Claims 6 to 8 not printed in the Gazette.]

1,190,658. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 14, 1913. Serial No. 741,911. (Cl. 197—114.)



1. In a typewriter, the combination of a line-spacing mechanism comprising a line-space lever, a pawl operated thereby to rotate the platen, feed rolls bearing upon said platen and receiving motion therefrom, a member operable to return the carriage, and elastic means between said member and said line-space lever to transmit the required power to the latter to actuate the line-spacing mechanism.

2. In a typewriter, the combination of a line-spacing mechanism comprising a line-space lever, a pawl operated thereby to rotate the platen, feed rolls bearing upon said platen and receiving motion therefrom, a member to operate said line-space lever, and means to limit the amount of power transmissible from said member to the line-space lever to prevent the platen being started to rotate too rapidly and cause a slip between the platen and the feed rolls.

3. In a typewriter, the combination with a line-spacing mechanism comprising a lever and a pawl operated thereby to rotate the platen, of an operating member, and a spring connecting said member to said line-space lever, said member capable of distending said spring sufficiently to actuate the line-space mechanism.

4. In a typewriter, the combination of a line-spacing mechanism comprising a line-space lever, a pawl operated thereby to rotate the platen, a stop to limit the amount of travel of said pawl, an operating member, and means forming a driving connection from said member to said line-space lever and operable to limit the amount of power transmitted to the latter to prevent the pawl striking the stop with undue force.

5. In a typewriting machine, the combination with a traveling carriage and a rotatable platen thereon, of a line-spacing mechanism for rotating the platen, a slide on the carriage having a limited movement relative thereto, and elastic means connecting the slide with the line-spacing mechanism and operating to prevent excessive force being applied to said mechanism.

[Claims 6 and 7 not printed in the Gazette.]

1,190,659. PROCESS OF MANUFACTURING METHYL CHLORID AND METHYLENE CHLORID. BURRITT S. LACY, Sewaren, N. J. Filed Sept. 28, 1914. Serial No. 863,985. (Cl. 23—24.)

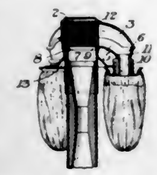
1. The process of manufacturing methyl chlorid and methylene chlorid consisting in mixing chlorin gas with an excess of methane in the proportions of one volume of chlorin to more than such proportion of methane as is required to keep outside the explosive limits of the gaseous mixture at ordinary temperature but less than ten volumes of methane, and bringing said mixture to reaction.

2. The process of manufacturing methyl chlorid and methylene chlorid consisting in mixing chlorin gas with an excess of methane in the proportion of one volume of chlorin to from substantially about three to less than ten volumes of methane, and bringing said mixture to reaction.

3. The process of manufacturing methyl chlorid and methylene chlorid consisting in mixing chlorin gas with an excess of methane in the proportions of one volume of chlorin to less than ten volumes of methane and reacting said mixture at a temperature of from about 400° C. to 600° C.

4. The process of manufacturing methyl chlorin and methylene chlorid consisting in mixing chlorin gas with an excess of methane in the proportions of one volume of chlorin to from substantially about four to eight volumes of methane, bringing said mixture to reaction and conserving the heat of reaction to maintain the temperature at the necessary reaction point in the absence of application of external heat.

1,190,660. CLUSTER-BURNER FOR INCANDESCENT LAMPS. JAMES MCKENNA, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed May 6, 1914. Serial No. 836,667. (Cl. 67—94.)



1. A cluster burner for inverted incandescent lamps having a plurality of burner arms formed with substantially horizontal portions, and comprising upper and lower members secured to each other, there being a seam between said members which extends through the substantially horizontal portions of all of the arms of the burner, substantially as described.

2. A cluster burner for inverted incandescent lamps having a plurality of outwardly and downwardly extending hollow arms, there being a central chamber in said burner communicating with the spaces of all of the arms, said burner being formed of two generally similar horizontal parts seamed together, the lower part having depending tips at the ends of the arms, and said seam extending in a general horizontal direction through the central portion of the outwardly extending portions of all of the arms above the upper ends of said tips; substantially as described.

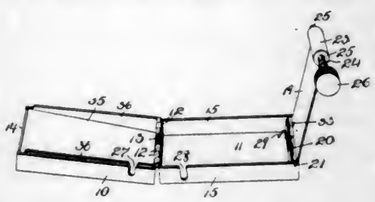
3. A cluster burner for inverted incandescent lamps formed of upper and lower members each having a body portion and radially extending arms, there being a central cavity in the body portion of each member, and a cavity in each of the arms of each of said members communicating with the central cavity, the central cavities of the members forming a manifold and the other cavities forming the conduits for conducting gas to the burners, said members being secured to each other by a seam which extends in substantially a horizontal direction through the body portions and the arms, and a burner tip secured to the lower end of each arm; substantially as described.

4. A cluster burner for inverted incandescent lamps, comprising two generally similar sheet metal stampings seamed together at their meeting edges, each stamping comprising a hollow central portion and a plurality of radial arms, said seam extending through the central portion and all of the arms, the lower stamping having a plurality of openings below the seam and burner tips secured in said openings; substantially as described.

5. A cluster burner for inverted incandescent gas lamps, comprising generally similar upper and lower stampings seamed together and forming a central manifold chamber with radial hollow arms extending therefrom, said seam extending through the central portion and all of the arms, the lower stamping having an opening at the bottom of its body portion and also an opening in the bottom of each of said arms, a mixing tube secured in the first named opening and extending downwardly therefrom, and depending burner tips secured in the openings of the arms; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,190,661. DEVICE FOR HOLDING AND FEEDING PAPER. HANS E. A. MARKER, East Orange, N. J. Filed Dec. 15, 1915. Serial No. 66,884. (Cl. 211—29.)



1. A holding and feeding device for paper comprising a bottom lid, a top lid hinged to one end of the bottom lid, a spring-pressed plate hinged to the other end of the bottom lid, the two lids being formed so as to provide a slit where their ends meet when they are swung together, and a roller on the free end of the plate.

2. A holding and feeding device for paper comprising a bottom lid with marginal walls, a top lid hinged to the top of one end wall, a plate hinged to the other end wall, the lids being formed to provide a slit adjacent to the hinge of the plate, a spring to normally force the plate out of the bottom lid, and a roller on the plate.

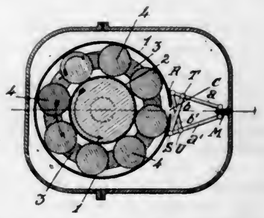
3. A holding and feeding device for paper comprising a bottom lid with marginal walls, a top lid hinged to the top of one end wall, a plate hinged to the other end wall, the lids being formed to provide a slit adjacent to the hinge of the plate, a spring to normally force the plate out of the bottom lid, a roller on the plate, and an inclined plate in the top lid with its forward end substantially flush with the top of the slit.

4. A holding and feeding device for paper comprising a bottom lid with marginal walls, a top lid hinged to the top of one end wall, a plate hinged to the other end wall, the lids being formed to provide a slit adjacent to the hinge of the plate, and a spring to normally force the plate out of the bottom lid, the spring having one end forming a perforating pin, said end being in perforating position when the plate is swung toward the bottom end.

5. A holding and feeding device for paper comprising a casing having a slit therein, a plate hinged adjacent to the slit so as to guide a sheet of paper to the slit, a roller on the plate over which a stack of sheets is adapted to be folded, and a pin connected to the plate so that the pin perforates the stack when the plate is swung to operative position.

[Claims 6 to 14 not printed in the Gazette.]

1,190,662. GEARING. RAFFAELE MATTEUCCI, Turin, Italy. Filed Dec. 5, 1913. Serial No. 804,875. (Cl. 74—26.)



1. A power-transmitting mechanism comprising a rotary driving member, a rotary driven member and a non-rotary member, one of said members consisting of a cage supporting a plurality of cylindrical rollers and the others of an inner and an outer ring having tracks adapted to be frictionally engaged by said rollers and one of said rings being split, and means for automatically actuating

said split ring, for either direction or rotation of the driving member, to press against the rollers with a variable force depending on the power transmitted.

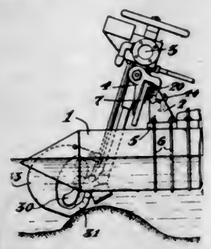
2. A power-transmitting mechanism comprising a rotary driving member, a rotary driven member and a nonrotary member, one of said members consisting of a cage supporting a plurality of cylindrical rollers and the others of an inner and an outer ring having tracks adapted to be frictionally engaged by said rollers and one of said rings being split, a fulcrum at each end of the split ring, and a lever mechanism operating on said fulcra and actuated by the driving member, when rotating in either direction, to force the split ring into engagement with the rollers with a variable pressure depending on the variations in the power transmitted.

3. A power transmitting mechanism comprising a rotary driving member, a rotary driven member and a nonrotary member, one of said members consisting of a cage supporting a plurality of cylindrical rollers and the others of an inner and outer ring having tracks adapted to be frictionally engaged by said rollers, and the inner of said rings being split, and a lever engaging at its outer end between the ends of the split ring and at its inner end with a central shaft.

4. A power transmitting mechanism comprising a rotary driving member, a rotary driven member and a nonrotary member, one of said members consisting of a cage supporting a plurality of cylindrical rollers and the others of an inner and outer ring having tracks adapted to be frictionally engaged by said rollers, and the inner of said rings being split, a second split ring arranged inside the aforesaid split ring, and connected thereto so as to form virtually one member, and a lever engaging at its outer end between the ends of the second split ring and at its inner end with a central shaft.

5. A power transmitting mechanism comprising a rotary driving member, a rotary driven member and a nonrotary member, one of said members consisting of a cage supporting a plurality of cylindrical rollers and the others of an inner and an outer ring having tracks adapted to be frictionally engaged by said rollers, and the inner of said rings being split, a lever engaging at its outer end between the ends of the split ring and at its inner end with a central shaft, and antifriction means arranged between the split ring and the central shaft.

1,190,663. MOUNT FOR OUTBOARD MOTORS. JAMES H. MAXWELL, Seattle, Wash. Filed Nov. 23, 1915. Serial No. 63,129. (Cl. 115—17.)

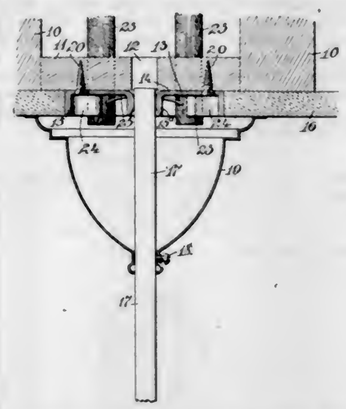


1. The combination with a raft or like construction of a board adapted for use as a support for an outboard motor and pivoted by one edge to swing in a fore-and-aft direction.

2. A support for an outboard motor having a board pivoted by one edge upon a transverse axis and a stop limiting its swing in the direction of the action of the motor.

3. A means for supporting an outboard motor upon a water craft comprising upwardly extending brackets having rearwardly facing surfaces, and a transversely extending board hinged toward its upper edge upon said brackets and adapted to bear against the rearward faces thereof.

1,190,664. OUTLET-BOX. JAMES T. MELEADY, Newark, N. J. Filed Oct. 29, 1914. Serial No. 869,179. (Cl. 247—1.)

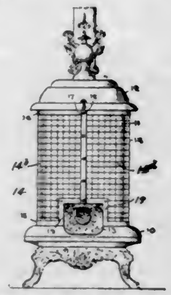


1. An outlet box comprising a body portion having an opening in the bottom, the bottom at one side of the opening being materially thickened to form an abutment, and a curved spring secured to the bottom and with its end curved away from said bottom and extending normally within the edge of the opening, the abutment and the end of the spring being opposite each other.

2. An outlet box comprising a body portion having an opening in the bottom, the bottom at one side of the opening being materially thickened to form an abutment, and a curved spring secured to the bottom and with its end curved away from said bottom and extending normally within the edge of the opening, the spring extending from the side opposite the abutment and toward the abutment, the end of the spring being opposite a point above the bottom and below the top of the abutment.

3. An outlet box comprising a cup-shaped body portion, the body portion having a substantially flat bottom and a marginal rim of material height, the bottom having conduit openings adjacent to the rim, the rim being extended partly around said openings to form abutments of material height, and a slightly curved spring secured at its middle part against the bottom of the body portion between the openings in the bottom, the ends of the spring projecting slightly within the lines of the edges of the openings, said ends of the springs being opposite said abutments between the top and bottom edges thereof.

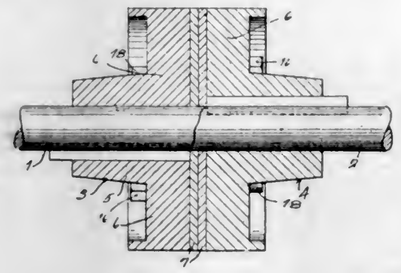
1,190,665. HOT-AIR STOVE. THOMAS WARREN MILLER, Waukon, Iowa. Filed May 10, 1913. Serial No. 766,775. (Cl. 126—202.)



1. The combination with a stove and the base thereof, of a screen having its edges reinforced with a metallic frame, said frame comprising upper and lower horizontal members, and vertical members, the lower horizontal member supporting the shield upon the base of said stove, said vertical members provided with means for surrounding the respective openings of said stove, and fastening means upon said vertical members for securing the same in lapped relation for retaining the shield upon said stove.

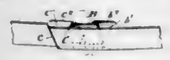
2. The combination with a stove and the base thereof, of a sectional screen having the edges of each of its sections reinforced with a metallic frame, each frame comprising upper and lower horizontal members, and vertical members, said lower horizontal members supporting the shield upon the base of the stove, said vertical members provided with means for surrounding the respective openings of said stove, and fastening means upon said vertical members for securing the same in lapped relation for retaining the shield upon said stove.

1,190,666. SHAFT-COUPLING. WALTER E. MILLER, Goshen, Ind. Filed Oct. 14, 1914. Serial No. 866,631. (Cl. 64—13.)



A coupling comprising a pair of companion coupling members having passages therein for the reception of the opposed ends of abutting shafts and alined transverse openings opening into the forward and rear sides of the coupling members, one of said coupling members having a transverse recess therein opening into the rear side of the coupling member and into the transverse opening in the coupling member, the forward face of the mentioned coupling member having a recess therein extending at right angles to the first-mentioned recess and the transverse opening and having one end thereof communicating with the first-mentioned recess and the transverse opening, a plate mounted on the said forward face of the coupling member and closing the recess in the forward face and having an opening therein registering with the transverse opening in the coupling member, a spring pressed latch operable in the recess in the forward face of the coupling member and extending into the transverse opening, a manipulating member carried by the latch and extending through the transverse recess in the coupling member and a bolt extending through the alined transverse openings in the coupling members and the plate and having a notch therein for the reception of the latch so as to prevent displacement of the bolt.

1,190,667. BALE-TIE. JOHN ELDRIDGE O'RIORDAN, Sugar Land, Tex. Filed Apr. 14, 1915. Serial No. 21,312. (Cl. 24—20.)



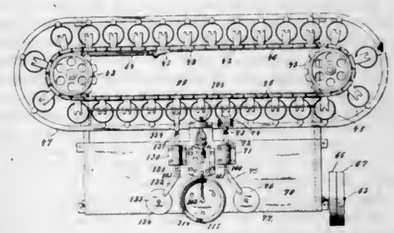
1. A bale tie of the character described having terminal portions, each of which is normally bent at least twice upon itself to present complementary interfitting parts to constitute a double interlock adapted to be effected without further bending by relative longitudinal movements of the terminal portions of the tie.

2. A bale tie of the character described having terminal portions possessing complementary approximately V shaped interfitting parts, and complementary interfitting flanges, said flanges being normally bent downwardly from the V shaped parts to afford telescoping edge portions adapted to effect their interfitting and telescoping engagements by relative longitudinal movements of the terminal portions of the tie.

3. A bale tie of the character described having terminal portions possessing complemental V-shaped interfitting parts, and complementary interfitting flanges, said flanges projecting from the V-shaped parts to afford telescoping edge portions, and the flanges when interlocked crossing each other to diverge in a general direction lengthwise of the tie.

4. A bale tie of the character described having terminal portions, one terminal portion being formed by bending the same upon itself on a diagonal line to present a V-shaped intermediate portion, and being bent on another line to constitute a flange, and the other terminal portion being similarly bent to present a corresponding V-shaped inner portion and again bent to constitute a flange, the V-shaped portions and the flange portions being adapted to overlie one another in interlocking position.

1,190,668. BOTTLE-STOPPER-SEALING MACHINE. DIMITRIOS PANTAZI, New York, N. Y. Filed Sept. 30, 1915. Serial No. 53,323. (Cl. 140—94.)



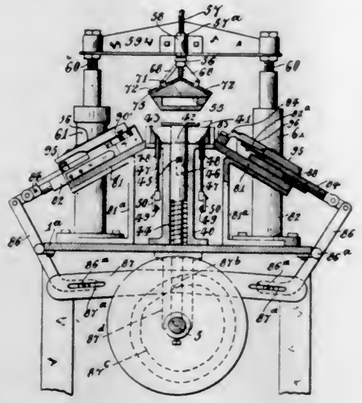
1. In a bottle sealing machine, the combination of an endless carrier for the bottles, supporting means for the wires combined with the carrier, means for advancing said carrier at successive intervals, a plunger having means combined for crossing the ends of the sealing wires, a gripper adapted to automatically engage with the crossed ends, means combined with the gripper for twisting the wires, and means for pressing the twisted wires to one side.

2. In a wire twisting head, a constantly rotating cam, a slide actuated thereby, a wire gripper, means combined with said slide for opening and closing said gripper, means for intermittently rotating said gripper whereby the wire is twisted, and means for placing the jaws of said gripper in a horizontal position prior to their closing.

3. In a wire twisting head, a constantly rotating cam, a mutilated gear combined with said cam, a slide operated by said cam, a sleeve rotatable in said slide movable longitudinally therewith, a gripper having pivoted levers, means adjustably combined with said sleeve for operating the gripper levers whereby the jaws are opened and closed, a shaft passing through said sleeve, means combined with said shaft for rotating said gripper, and a pinion on said shaft intermittently actuated by said mutilated gear.

4. In a bottle stopper fastening machine, a hollow cylindrical holder for bottles, the holder being partially opened at the front, a standard secured to said holder at the rear, a recessed plate formed with said standard extending partially over said holder, and adapted to hold the bottle neck in said recess, means formed in said plate receptive of fastening wires, means for securing the wires about the necks of bottles, and means for progressively feeding the bottles.

1,190,669. MACHINE FOR MAKING PAPER RECEPTACLES. ISRAEL PITKOWSKY, New York, N. Y., assignor, by direct and mesne assignments, to Crescent Paper Butter Dish Co., Inc. Filed Mar. 20, 1914. Serial No. 825,997. (Cl. 93—42.)



1. The combination of blank forming devices, a die and plunger for folding the blanks to the required shape, means for driving staples into the blank, staple clenchers carried by the plunger, a slide guided to slide along the plunger, projecting and reëntrant parts operatively connecting the slide with the clenchers to actuate the same, a support for operating the plunger, spring means interposed between said support and plunger to permit one to move relatively to the other, and means between said support and slide for operating along the plunger to clench a staple in a blank held by the plunger.

2. The combination of blank forming devices, a die and plunger for folding the blanks to the required shape, means for driving staples into the blank, staple clenchers carried by the plunger, a slide guided to slide along the plunger, projecting and reëntrant parts operatively connecting the slide with the clenchers to actuate the same, a bar, means movably supporting the plunger from said bar, spring means between the bar and plunger to permit one to move relatively to the other, and means interposed between said bar and slide for reciprocating the latter along the plunger to clench a staple after the plunger is at rest.

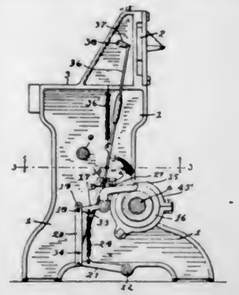
3. The combination of blank forming devices, a die and plunger for folding the blanks to the required shape, means for driving staples into the blank, staple clenchers carried by the plunger, a slide carried by the plunger operatively connected with the clenchers to actuate the same, a bar, and means movably suporting the plunger from said bar, a link movably connecting said bar with said slide to actuate the latter for clenching a staple after the plunger bears on the blank.

4. The combination of blank forming devices, a die and plunger for folding the blanks to the required shape, means for driving staples into the blank, staple clenchers carried by the plunger, a slide carried by the plunger operatively connected with the clenchers to actuate the same, a bar, rods movably supporting the plunger from said bar, and a link movably connecting said bar with said slide adapted to cause the clenchers to clench a staple after the plunger bears against a blank.

5. The combination of a die, a plunger to coact therewith, means to reciprocate the plunger, staple driving devices at opposite ends of the die, staple clenchers at opposite ends of the plunger, means carried by the plunger and connected with said clenchers to operate them, a head to support the plunger, means to permit the plunger to move relatively to said head, and means movably connecting said head with said clencher operating means to cause the latter to operate the clenchers to clench staples after the plunger has pushed a blank into the die.

[Claims 6 to 19 not printed in the Gazette.]

1,190,670. SAFETY DEVICE FOR POWER SQUARING-SHEARS AND SIMILAR MACHINES. GEORGE W. RANK and PHILIP M. HOFFMANN, Indianapolis, Ind. Filed Nov. 14, 1914. Serial No. 872,123. (Cl. 164—107.)



1. In combination with a machine including a member to be driven for operation upon work supplied to the machine, operating mechanism for said member, driving means for said operating mechanism, a clutch between said driving means and operating mechanism, a detent for holding said clutch out of engagement, a locking member for said detent automatically movable into position to lock said detent in clutch detaining position, a single common foot operated member for operating both said detent and said locking member in the same movement of the operating member and means of connection between said operating member and said detent and locking member permitting the operation of the latter befor the operation of the detent and means for automatically and successively restoring the detent and locking member to locking positions.

2. In combination with a machine including a member to be driven for operation upon work supplied to the machine, operating mechanism for said member, driving means for said operating mechanism, a clutch between said driving means and said operating mechanism, said clutch including a spring pressed automatically engaging clutch pin, a pivoted detent for holding said clutch pin normally out of clutching engagement, a sliding latch bar adapted to bear against said detent for locking it in detaining position, an operating foot treadle under the control of the operator of the machine, operative connections between said operating treadle and the locking member and detent respectively, said locking member connection permitting the withdrawal of the latch bar from the detent preliminarily to the withdrawal of the detent from the clutch pin and means for successively and automatically restoring the detent and latch bar to locking positions.

3. In combination with a machine including a member to be driven for operation upon work supplied to the machine, operative mechanism for said member, driving means for said operating mechanism, a spring pressed automatically engaging clutch pin between said driving means and operating mechanism, a pivoted detent for holding said clutch out of engagement, a sliding latch bar for locking said detent in detaining position, a connection between said treadle and said locking latch bar for retracting the latter, and a spring and a lost motion connection between said treadle and said detent whereby said detent will be operated only after the latch bar has been withdrawn and after tension has been imposed upon said spring by the movement of the treadle.

4. In combination with a machine including a part to be driven for operation upon work supplied to the machine, mechanism for operating said part, driving means, a clutch intermediate said driving means and operating mechanism, a detent for holding said clutch out of operative position, a locking latch bar adapted to engage said detent, a treadle for operating said detent and latch bar, an operating link, means of connection between said link and latch bar and a lost motion and flexible connection between said link and said detent whereby the locking member will be released preliminarily to the release of the detent, and means for automatically and successively restoring the detent and locking member to locking positions upon the release of the treadle, substantially as described.

5. In combination with a shear machine including a movable blade, a work bed, a guard member mounted in front of the blade and movable toward and away from the work bed, operating mechanism for the blade, driving means, a clutch between said mechanism and means, a detent for holding said clutch out of operation, a locking member for holding said detent in clutch detaining position, a treadle, and means of operative connection between said treadle and the guard member, detent and locking member respectively, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,190,671. POWER-OPERATING DEVICE FOR WINDOW-SASHES. HENRY N. RENTON, Philadelphia, Pa., assignor of one-third to William Roper and one-third to Theodore F. Oechsle, Philadelphia, Pa. Filed Dec. 15, 1915. Serial No. 66,983. (Cl. 16—28.)



1. The combination with a frame, and a pivoted sash therein, of a link pivotally connected to the frame, a lever pivotally connected to the link and operatively connected to the sash, and means limiting the independent pivotal movement of the lever in both directions relative to the link, substantially as described.

2. An operating device for pivoted sashes comprising a link adapted to be pivotally connected to a sash frame, an angle lever pivotally connected at its angle to the free end of the link, means on the link limiting the pivotal movement of the lever in both directions, means connecting one end of the lever with the sash to be operated, and operating means connected to the other end of the lever, substantially as described.

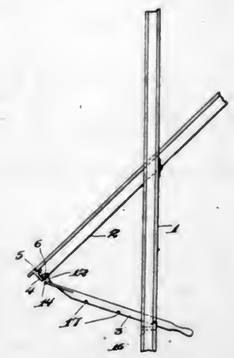
3. An operating device for pivoted sashes comprising a link adapted to be pivotally connected to a sash frame, an angle lever pivotally connected at its angle to the free end of the link, means connecting one end of the lever with the sash to be operated, operating means connected to the other end of the lever, and means on the link limiting the pivotal movement of the lever relative to the link, substantially as described.

4. An operating device for pivoted sashes comprising a link adapted to be pivotally connected to a sash frame, an angle lever pivotally connected at its angle to the free end of the link, means connecting one end of the lever with the sash to be operated, operating means connected to the other end of the lever, said link at its free end having shoulders at opposite sides limiting the pivotal movement of the lever, substantially as described.

5. An operating device for pivoted sashes, comprising a link pivotally connected at one end to a fixed part, an angle lever pivotally connected at its angle to the free end of the link, means on the link limiting the pivotal movement of the lever in both directions, an operating rod pivotally connected to one end of the lever, and a bar pivotally connecting the other end of the lever with the sash, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,190,672. LOCKING DEVICE AND PUSH-OUT STAY FOR STEEL SASHES. HENRY N. RENTON, Philadelphia, Pa., assignor of one-half to William Roper, Philadelphia, Pa. Filed Dec. 15, 1915. Serial No. 66,985. (Cl. 16—22.)



1. A device of the character described, comprising a bracket adapted to be secured to a sash, a coupling member pivotally connected to the upper portion of the bracket, a locking member pivotally connected to the lower portion of the coupling member, and a stay pivotally connected to the locking member, substantially as described.

2. A device of the character described, comprising a bracket adapted to be secured to a sash, and having lugs thereon, a coupling member pivotally connected to the bracket and having lugs thereon engaging the first-mentioned lugs and limiting the pivotal movement of the coupling in one direction, a locking member pivotally connected to the coupling at right angles to the pivotal connection of the coupling with the bracket, said locking member having a tongue thereon adapted to engage a fixed part and hold the sash in closed position, and a stay pivotally connected to the locking member, substantially as described.

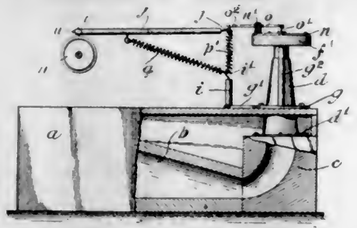
3. A device of the character described, comprising a bracket adapted to be secured to a sash, and having lugs thereon, a coupling member pivotally connected to the bracket and having lugs thereon engaging the first-mentioned lugs and limiting the pivotal movement of the coupling in one direction, a locking member pivotally connected to the coupling at right angles to the pivotal connection of the coupling with the bracket, said locking member having a tongue thereon adapted to engage a fixed part and hold the sash in closed position, a stay pivotally connected to the locking member and having notches in its edge adapted to engage a fixed part and hold the sash in open position, and a fixed locking member adapted to enter one of the notches in the stay and hold the stay with the sash in closed position, substantially as described.

4. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the upper portion of the bracket, a locking member pivotally connected to the lower portion of the coupling and having a tongue thereon engaging over a bar of the frame, and a stay pivotally connected to the locking member, substantially as described.

5. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the bracket, a locking member pivotally connected to the coupling and having a tongue thereon engaging over a bar of the frame, a stay pivotally connected to the longer member, all of said pivotal connections positioned at right angles to each other, and means for locking the stay against movement, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,190,673. PHONOGRAPH. CLINTON B. REPP, New York, N. Y. Filed Aug. 12, 1909. Serial No. 512,552. (Cl. 181—7.)



1. In a phonograph, a fixed sound box having a downwardly presented sound outlet opening, a diaphragm therein, a vibrator member having a fixed relation to said sound box, one end of said member projecting over said diaphragm, and the other end thereof projecting beyond said sound box, a vibrator member adapted to be impelled across a record, connections between said last named vibrator member and the end of said first named vibrator member extending beyond said sound box and between the other end of said first named vibrator member and said diaphragm, whereby sound vibrations are transmitted through said connections from one of said vibrator members to the other, and therethrough to the diaphragm, and means acting to simultaneously tension said diaphragm and said connections between said first named vibrator member, said diaphragm, and said other vibrator member.

2. In a phonograph, a sound box, a diaphragm therein, a vibrator member adapted to be impelled across a record, a vibrator member having a fixed relation to said diaphragm, connecting means between said vibrator members whereby sound vibrations are transmitted from one to the other, connecting means between said last named vibrator member and the diaphragm whereby sound vibrations transmitted thereto are transmitted to the diaphragm, and means acting on said diaphragm through said connecting means and said last named vibrator member to tension said diaphragm, said last named means having constant uniform action to tension said diaphragm in a direction opposite to the direction of movement of the sound vibrations in passing to said diaphragm.

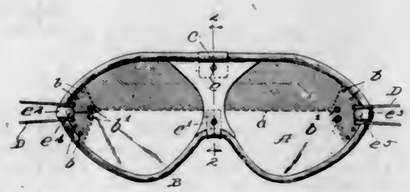
3. In a phonograph, a sound box having a downwardly projected sound outlet, a concealed horn or resonator communicating with said outlet, a diaphragm in said sound box, a vibratory member carrying a reproducer point mounted to rotate about an axis parallel to the axis of said diaphragm and eccentrically thereof, means applying a downward pressure upon said vibrator member, and interposed members between said vibrator member and said diaphragm whereby said pressure is reversed in direction as to said diaphragm, and said diaphragm and said interposed members are placed under tension.

4. In a phonograph, a sound box having a downwardly projected sound outlet, a concealed horn or resonator communicating with said outlet, a diaphragm in said sound box, a vibratory member carrying a reproducer point mounted to rotate about an axis parallel to the axis of said diaphragm and eccentrically thereof, a vibratory arm mounted in horizontal bearings fixed relatively to said diaphragm, flexible connections between the opposite ends of said last mentioned arms and said diaphragm and said first mentioned vibratory member, and an elastic member acting upon said first mentioned vibratory member directly below the flexible connections between the same and said fixed vibratory member whereby said connections and said diaphragm are placed under a constant tension, and said first mentioned vibratory member is permitted to swivel relatively to said second vibratory member to follow the spiral indentations in the record.

5. In a phonograph, a sound box having a downwardly projected sound outlet, a concealed horn or resonator communicating with said outlet, a diaphragm in said sound box, a vibratory member carrying a reproducer point mounted to rotate about an axis parallel to the axis of said diaphragm and eccentrically thereof, a vibratory arm mounted in horizontal bearings fixed relatively to said diaphragm, flexible connections between the opposite ends of said last mentioned vibratory arm and said diaphragm and said first mentioned vibratory member, and a helical spring acting upon said first mentioned vibratory member directly below the flexible connections between the same and said fixed vibratory member whereby said connections and said diaphragm are placed under a constant tension, and said first mentioned vibratory member is permitted to swivel relatively to said second vibratory member to follow the spiral indentations in the record.

[Claims 6 and 7 not printed in the Gazette.]

1,190,674. EYE-PROTECTOR. FRANK H. REXTREW, Hammond, Ind., assignor to Robert Malcom, Chicago, Ill. Filed Jan. 17, 1916. Serial No. 72,458. (Cl. 2—149.)



1. An eye protector formed of flexible transparent material, a binding around the outer edges thereof, an independent reinforcing strip extending transversely of the protector at the center thereof, and means for securing said strip to the protector.

2. An eye protector formed of a flexible transparent material, a flexible binding arranged around the outer edges thereof, an independent reinforcing strip extending transversely of the protector at the center thereof, said strip having a tongue projecting from each end which extends around the outside of the binding, and means for securing the same to the body of the protector.

3. An eye protector formed of a single piece of flexible transparent material, a flexible binding inclosing the edges of the protector, an independent reinforcing strip extending transversely of the protector at the center thereof, said reinforcing strip being curved inwardly upon each side and having laterally extending projections near the top and bottom thereof, and means for securing the same to the body of the protector.

4. An eye protector formed of a single piece of flexible transparent material, a flexible binding incasing the edges of the protector, an independent reinforcing strip extending transversely of the protector at the center thereof, said strip having laterally extending projections near the top and bottom thereof, the outer ends of said projections extending approximately parallel with the edges of the protector body and being secured thereto with the binding, tongues extending from the top and bottom of said reinforcing strip, said tongues being folded around the outside of the binding, and means for securing the same in fixed position.

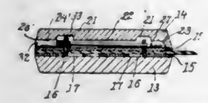
5. An eye protector formed of a single piece of flexible transparent material having the ends thereof folded to extend at an angle to the plane of vision, means for securing the folded portions together, a flexible binding incasing the outer edges of the body of the protector, separate reinforcing strips folding around the outside of the binding, and means for securing said reinforcing strips to the body of the protector.

[Claims 6 to 9 not printed in the Gazette.]

1,190,675. KNIFE. ISAAC ROSE, West Elizabeth, and HARRY A. SPEISER, Newark, N. J. Filed Aug. 24, 1915. Serial No. 47,088. (Cl. 30—9.)

1. In a knife, a blade member comprising a blade and a blade tang, said blade tang being provided with apertures, a handle scale provided with perforated lugs extending through said apertures, a handle scale on the opposite side of said tang, and means in the last named scale and received in the perforations in the lugs for detachably securing the parts together, substantially as set forth.

2. In a knife, a blade tang provided with apertures, a handle scale provided with perforated lugs extending through said apertures, a handle scale on the opposite side of said blade tang and a key extending through said apertures in the lugs and provided with wedge-shaped portions for detachably securing said parts closely together with a wedging action, substantially as set forth.



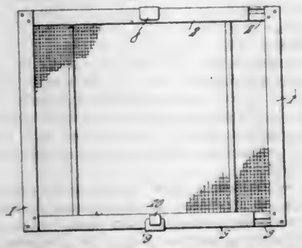
3. In a knife, a blade member comprising a blade and an apertured tang integral therewith, a pair of handle scales each provided with metallic linings, perforated lugs on one of said linings and extending through the apertures in the tang and through the remaining lining, and means back of said remaining lining and within its scale for detachably locking the parts together, substantially as set forth.

4. In a knife, a blade member comprising a blade and a flat tang integral therewith, the tang being provided with perforations, a handle scale on one side of said tang, a metallic lining secured to said handle scale, lugs on said lining and adapted to extend through the apertures in the blade tang, a handle scale on the other side of said tang, a metallic lining for said handle scale, said lining having apertures registering with those in the blade tang, and a locking key passing through the perforations in the lugs where the same project beyond the last named lining, substantially as set forth.

5. In a knife, a blade member comprising a blade and a flat tang integral therewith, said tang being provided with apertures, a pair of handle scales, perforated lugs on one of said handle scales and extending through said apertures in the blade tang, and a key in the remaining handle scale passing through the perforations in the lugs and having a right-angled extension, said extension being received within a recess provided in the last named handle scale, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,190,676. SCREEN. ANTHONY ROTH, Jr., New Brunswick, N. J. Filed Aug. 19, 1915. Serial No. 46,296. (Cl. 156—38.)



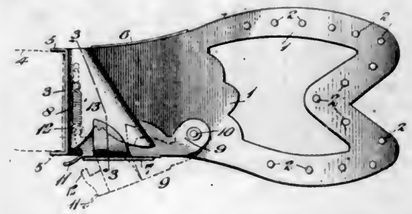
1. In a device of the class described, a frame; tracks carried thereby; a multi-part expansible screen comprising means for engaging the tracks, the parts of the screen including cross rails located side by side; and a removable, resilient, U-shaped clip engaging the cross rails and exerting pressure on the outer faces thereof, to prevent movement between the parts of the screen.

2. In a device of the class described, a frame; tracks carried thereby; an expansible screen comprising parts having means to engage with the tracks; and a resilient, U-shaped clip engaging the lower edges of the said parts of the screen, the clip having a handle constituting, at once, a means for lifting the screen, and a means for seating the clip on the said parts of the screen.

3. In a device of the class described, a frame; tracks assembled with the frame, the tracks being arched in cross section and having resilient tongues struck therefrom; an expansible screen comprising parts coacting with the tracks, the tongues coacting with the said parts of the screen to prevent a dropping movement of the screen; and means engaging the said parts of the screen to prevent relative sliding movement therebetween.

4. In a device of the class described, a frame; tracks carried thereby; an expansible screen provided with means for engaging the tracks slidable, the screen comprising relatively movable parts; and a resilient, U-shaped clip engaging the said parts of the screen, the clip being pivoted to one of said parts and being provided with a movable locking tongue engaging one of the said parts of the screen.

1,190,677. ICE-CREEPER. PASQUALE RUGGIERO, Philadelphia, Pa. Filed Apr. 19, 1916. Serial No. 92,076. (Cl. 36—62.)



1. In a device of the character stated, a plate adapted to be attached to the sole of a shoe having anti-slipping devices secured thereto and located directly beneath the ball of the foot, separate jaw members for gripping opposite sides of the shoe sole in close proximity to the heel of said shoe, means carried by said plate for engaging said heel to prevent lateral movement of said plate spring means for normally holding said jaws under tension to exert a clamping action and a movable cover member for protecting said spring means and its adjuncts.

2. In a device of the character stated, a plate adapted to be attached to the instep of a shoe and having a portion extending along the sole beneath the ball of the foot, said extending portion being provided with a plurality of anti-slipping members, a main jaw fixed to said plate for engagement with one edge of the sole of said shoe, a movable main jaw adapted to engage the opposite sole edge, spring means for normally maintaining said jaws under tension to exert a clamping action and auxiliary jaw members adapted to be removably attached respectively to said main jaw members, said auxiliary jaws being of variable dimensions whereby soles of different widths may be clamped by said jaws.

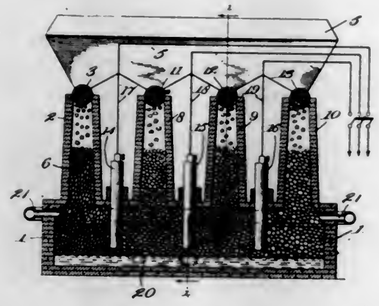
3. In a device of the character stated, a plate adapted to be attached to the instep of a shoe and having a portion extending along the sole beneath the ball of the foot, said extending portion being provided with a plurality of anti-slipping members, a main jaw fixed to said plate for engagement with one edge of the sole of said shoe, a movable main jaw adapted to engage the opposite sole edge spring means for normally maintaining said jaws under tension to exert a clamping action, and auxiliary jaws adapted to be removably secured respectively to said main jaws, each of said auxiliary jaws having a rounded or beaded edge, whereby rubbers or overshoes may be clamped by said jaws without injuring the fabric.

1,190,678. PROCESS OF MAKING SILICO-SPIEGEL. HARRY SCHAGRIN, South Bethlehem, Pa. Filed Aug. 3, 1914. Serial No. 854,818. (Cl. 75—45.)

The process of producing a silico-spiegel containing aluminum and recovering zinc which consists in providing

suitable charge material from waste clinker containing the oxids of zinc, aluminum, iron, manganese and silicon; mixing carbon with said charge material; heating said material in a reducing atmosphere, to a temperature sufficient to allow said manganese with the aluminum, iron, and silicon present, and to volatilize said zinc; and drawing off said zinc vapors and suitably recovering the same, substantially as described.

1,190,679. PROCESS OF PRODUCING FERROMANGANESE ALLOYS. HARRY SCHAGRIN, South Bethlehem, Pa. Continuation of application Serial No. 3,785, filed Jan. 22, 1915. This application filed Oct. 25, 1915. Serial No. 57,853. (Cl. 75—45.)



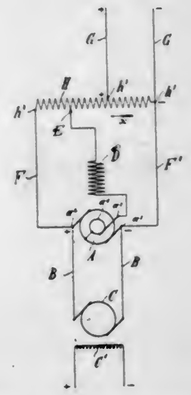
1. The process of making a ferro-manganese alloy which consists in providing a furnace charge containing the oxids of iron, manganese and silicon, as well as limestone and carbon; feeding said charge by gravity to the fusion zone of a furnace; and heating said charge to a temperature sufficient to fuse a portion of the same, and to volatilize a portion of the manganese, but insufficient to reduce the silicon oxid present, or to drive the manganese out of the furnace, while maintaining a reducing atmosphere in said furnace; whereby the ascending manganese vapors are caused to condense on the cooler portions of said charge, to be carried back to said zone and to alloy with the molten iron there present, substantially as described.

2. The process of making a ferro-manganese alloy which consists in providing a furnace charge containing the oxids of iron, manganese, and silicon, as well as lime stone and carbon; feeding said charge to the fusion zone of a furnace; and heating said charge to a temperature between 1300° C. and 1550° C., while maintaining a reducing atmosphere in said furnace, substantially as described.

3. The process of making a ferro-manganese alloy which consists in providing a furnace charge containing the oxids of iron, zinc, manganese and silicon, as well as limestone and carbon; feeding said charge by gravity to the fusion zone of a furnace; heating said charge to a temperature sufficient to fuse a portion of the same, and to volatilize a portion of the same, and to volatilize a portion of the manganese, but insufficient to reduce the silicon oxid present, or to drive the manganese out of the furnace, while maintaining a reducing atmosphere in said furnace, and removing the zinc vapors and evolved gases; whereby the ascending manganese vapors are caused to condense on the coller portions of said charge, to be carried back to said zone and to alloy with the molten iron there present, substantially as described.

4. The process of making a ferro-manganese alloy containing silicon which consists in providing a furnace charge containing the oxids of iron, zinc, manganese, silicon and carbon; feeding said charge to the fusion zone of a furnace; heating said charge to substantially 1500° C. while maintaining a reducing atmosphere in said furnace, substantially as described.

1,190,680. ARRANGEMENT FOR EXCITATION OF CONTINUOUS-CURRENT GENERATORS. LUDWIG SCHÖN, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Jan. 7, 1914. Serial No. 810,852. (Cl. 171—229.)



1. An arrangement for exciting continuous current generators having two main brushes and an auxiliary brush for dividing the voltage of the main brushes, an external source of constant voltage, a regulating resistance connected with two of said brushes, a portion of said resistance serving to connect the armature in opposition to said external voltage source, a sliding contact for said resistance and a main field winding connected on the one hand with the third one of said brushes and on the other hand with said sliding contact.

2. An arrangement for exciting continuous current generators having two main brushes and an auxiliary brush for dividing the voltage of the main brushes, an external source of constant voltage, a regulating resistance connected with the two main brushes, a portion of said resistance serving to connect the armature in opposition to said external voltage source, a sliding contact for said resistance and a main field winding connected on the one hand with said auxiliary brush and on the other hand with said sliding contact.

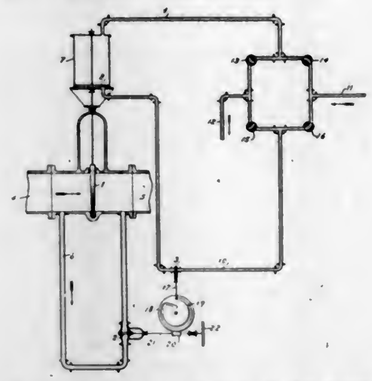
1,190,681. PRESSURE-EQUALIZER FOR VALVES. PURVES E. SPITZER, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Nov. 30, 1914. Serial No. 875,190. (Cl. 137—5.)

1. In combination, a main valve, means for equalizing the pressure on opposite sides of said main valve, pressure operated means for actuating said main valve, and means for positively preventing admission of pressure to said operating means for actuation of said main valve when the pressures on opposite sides of said main valve are not equalized.

2. In combination, a main valve, means for equalizing the pressures on opposite sides of said main valve, pressure operated means for actuating said main valve, and means operable by said equalizing means for positively preventing admission of pressure to said operating means for actuation of said main valve.

3. In combination, a main valve, means for equalizing the pressures on opposite sides of said main valve, pressure operated means for actuating said main valve, and means for positively preventing admission of pressure to said operating means to open said main valve when the pressures on opposite sides of said valve are not equalized.

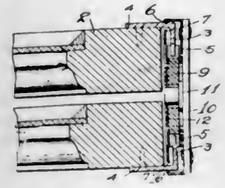
4. In combination, a main valve, a by-pass valve, pressure operated means for actuating said main valve, and means for positively preventing admission of pressure to said operating means for actuation of said main valve when said by-pass valve is closed.



5. In combination, a main valve, a by-pass around said main valve, a hydraulic servo-motor for actuating said main valve, an auxiliary valve for positively preventing admission of pressure to said operating means for actuation of said main valve, and means for locking said auxiliary valve in closed position until after said by-pass has been opened.

[Claims 6 to 8 not printed in the Gazette.]

1,190,682. OPERATING MECHANISM FOR WINDOWS. JOSEPH B. STRAUSS, Chicago, Ill. Filed Nov. 27, 1912. Serial No. 733,783. (Cl. 16—116.)



1. A device for windows, comprising two separated cases made up of metal bent into shape, the edges of the metal at one side of each case being separated to form a slot extending longitudinally along the case, racks inclosed within said cases and having parts projecting therefrom through the space between the edges thereof, means for connecting said cases together so as to hold them in rigid relation with each other, a pinion located between the cases and projecting into said cases through openings therein so as to engage said racks.

2. A device for windows, comprising a case made up of metal bent back upon itself to form an inclosure, the two edges separated so as to form a longitudinal slot, a rack in said case having a portion projecting through said slot.

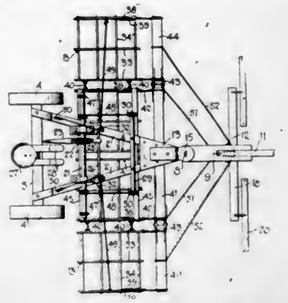
3. A device for windows, comprising a case made up of metal bent back upon itself to form an inclosure, the two edges separated so as to form a longitudinal slot, a rack in said case having a portion projecting through said slot, a stationary friction device attached to said case projecting inwardly so as to engage said rack.

4. A device for windows, comprising a case made up of metal bent back upon itself to form an inclosure and provided with a longitudinal slot at the side thereof, a rack contained within said case, said rack having a portion which projects through said slot and a portion bent at an angle thereto and adapted to be connected to the device to be operated.

5. A device for windows, comprising a single piece inclosing casing, a rack inclosed in said casing, said casing provided with a slot through which the rack projects and an opening in said casing through which engagement may be made between said rack and an actuating part therefor.

[Claims 6 to 8 not printed in the Gazette.]

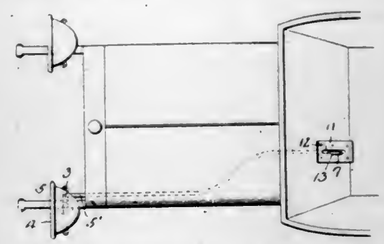
1,190,683. HARROW. CLARENCE E. STROUD, Bladen, Nebr. Filed June 26, 1915. Serial No. 36,508. (Cl. 55—93.)



1. In a harrow, a wheeled supporting frame, a pair of flexibly supported harrow sections, a manually rotatable main shaft mounted upon the frame, a subsidiary shaft having pulleys, flexible connections attached to said harrow sections, certain of the connections being wound directly upon the main shaft and certain other connections passing over the pulleys on the subsidiary shaft and being connected to the main shaft whereby the sections may be raised or lowered, lateral harrow sections flexibly connected to the first named harrow sections and adapted to be raised from a horizontal to a vertical position, rods extending upward from the frame and having eyes at their upper ends, flexible connections passing from the ends of the lateral harrow sections through the eyes, and means on the frame for holding the ends of the flexible connections.

2. In a harrow, a wheeled supporting frame, flexibly supported harrow sections, a main shaft mounted upon the frame, means for rotating said main shaft, a subsidiary shaft having pulleys, flexible connections attached to said harrow sections, certain of the connections being wound directly upon the main shaft and certain other connections passing over the pulleys on the subsidiary shaft and being connected to the main shaft whereby the harrow sections may be raised or lowered.

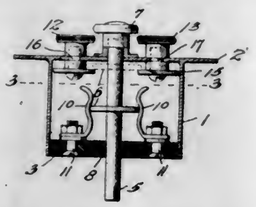
1,190,684. HEADLAMP CONTROL. MAX G. STRUBLE, Girard, Kans. Filed Nov. 17, 1915. Serial No. 62,006. (Cl. 240—61.)



In headlamp control, a headlamp post mounted to turn on a substantially vertical axis, a lamp turning arm extending laterally therefrom, an operating lever arranged within reach of the operator, a rod connecting said lever with the lamp turning arm, a floor plate having a slot in which said lever operates and also formed with a notch to

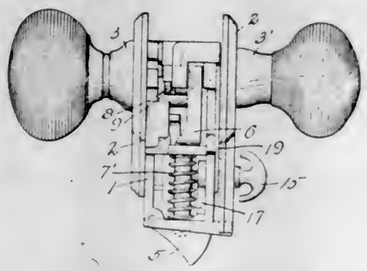
receive and hold said lever in a central position, guide pulleys arranged in spaced relation to each other, and a spring connected at one end with said operating lever and working between said pulleys and acting to restore said lever to a central position after it has been moved away therefrom and also acting to force said lever into the centering notch.

1,190,685. PERMUTATION SWITCH-LOCK. ELMER C. TEACHOUT and ELMER L. HARAISON, Flint, Mich. Filed Oct. 22, 1915. Serial No. 57,263. (Cl. 175—282.)



The combination with an open bottom housing and an insulating member closing the same and resilient switch arms secured to the member within the housing, of a reciprocable plunger having a circular notched head engaging said arms and provided with a handle outside the housing, a locking device fixed in the housing and projecting in the path of movement of the notched head, a pair of rotary members each having a cut away disk in the housing to permit passage of the circular head and an actuating knob outside the housing, a scale for each knob on the housing, and an indicating device on each knob whereby the locking disk scale and indicating device may coöperate for the purpose described.

1,190,686. LOCK. ERNEST L. TEICH, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed May 2, 1916. Serial No. 94,858. (Cl. 70—93.)



1. In a pin tumbler lock, the combination of a casing having two series of tumbler chambers disposed at an angle to one another, a plug having cavities therein corresponding, to the chambers in said series, and two keys adapted to position said tumblers so that said plug when in normal position can be turned, one of said keys being insertible and withdrawable when said cavities are in line with either of said series, the other key being insertible and withdrawable when said cavities are in line with one of said series, and means for preventing said other key from being inserted or withdrawn when the cavities are in line with the other of said series, the position of the key-slot indicating whether said second key can be inserted.

2. In a pin tumbler lock, the combination of a casing having two series of tumbler chambers, one series having more chambers than the other, a plug having tumbler cavities in excess of the chambers in the smaller series and tumbler sections in said chambers and cavities.

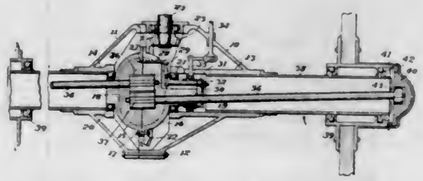
3. In a pin tumbler lock, the combination of a casing having two series of tumbler chambers, one series having more chambers than the other, a plug having tumbler cavities in excess of the chambers in the smaller series, tumbler sections in said chambers and cavities, and two keys, both of which will position the tumblers so as to permit the operation of the inserted key when in line with the larger series, and one of which has a rise engaged by a section in the innermost cavity when the key is in alinement with said smaller series.

4. In a pin tumbler lock, the combination of a casing having two series of tumbler chambers, one series having more chambers than the other, a plug having tumbler cavities in excess of the chambers in the smaller series, tumbler sections in said chambers and cavities, said plug consisting of an inner core member and an outer sleeve member, said tumbler sections being such that they can be positioned to break at the surface of the periphery of either of said members.

5. In a pin tumbler lock, the combination of a casing having two series of tumbler chambers, one series having more chambers than the other, a plug having tumbler cavities in excess of the chambers in the smaller series, tumbler sections in said chambers and cavities, said plug consisting of an inner core member and an outer sleeve member, said tumbler sections being such that they can be positioned to break at the surface of the periphery of either of said members, said outer sleeve being divided transversely to its axis, each part thereof having a portion of the tumbler cavities therein.

[Claims 6 to 8 not printed in the Gazette.]

1,190,687. DIFFERENTIAL GEARING FOR MOTOR-VEHICLES. MILTON TIBBETTS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 14, 1910. Serial No. 566,886. (Cl. 74—34.)



1. In a differential mechanism, the combination with a pair of intermeshing gears, said pair of gears comprising all the gears of the differential mechanism, of fluid retarding means therefor.

2. In differential mechanism, the combination with a housing, of a pair of intermeshing gears therein, said pair of gears comprising all the gears of the differential mechanism, said housing being adapted to contain a fluid, and means within the housing coöperating with said gears to circulate the fluid and retard the movements of said gears.

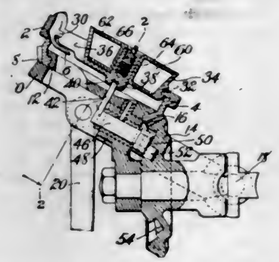
3. In differential mechanism, the combination with a housing divided to form chambers and provided with a passage between the chambers, of a pair of intermeshing gears in said passage, and there being a controlling port between said chambers, said gears comprising all the gears of the differential mechanism.

4. In differential mechanism, the combination with a housing divided to form chambers and provided with a passage between the chambers, of a pair of intermeshing gears in said passage, and there being a port between said chambers, a valve for controlling said port, and means to open and close said valve, said plurality of gears comprising all the gears of the differential mechanism.

5. In differential gearing, the combination with a housing provided with a chamber, of radial partitions for said chamber forming a passage, a pair of intermeshing gears arranged in said passage, and coöperating with said partitions to form a pump, and one of said partitions having a controlled port therein.

[Claims 6 to 22 not printed in the Gazette.]

1,190,688. LOCK-STITCH SEWING-MACHINE. LAURENCE E. TOPHAM, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed May 20, 1912, Serial No. 698,458. Divided and this application filed July 23, 1914. Serial No. 852,775. (Cl. 112—38.)

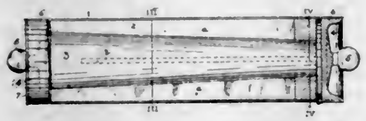


1. A lock-stitch sewing machine, having, in combination, a rotary loop-taker, a stationary bobbin case supported by the loop-taker and having a detent receiving slot in its face, and a movable detent slidingly engaging the slot and having a notch in its edge for engaging the needle-thread and carrying it longitudinally of the slot between the bobbin case and detent.

2. A lock-stitch sewing machine having, in combination, a rotary loop-taker, a stationary bobbin case supported by the loop-taker and having a detent receiving slot in its face, a movable detent slidingly engaging the slot and having provision for engaging the needle-thread, carrying it across the face of the bobbin case longitudinally of the slot and releasing it, and means for actuating the detent in timed relation with the loop-taker.

3. A lock-stitch sewing machine having, in combination, a rotary loop-taker having an annular body portion, a stationary discoidal bobbin case supported within the annular body of the loop-taker and having a detent receiving slot in its face extending at substantially right angles to the axis of rotation of the loop-taker, a detent for holding the bobbin case stationary as the loop-taker rotates comprising a plate having a circular edge slidingly engaging the slot and having a thread engaging notch in said edge, to carry the thread engaged in the notch between the bobbin case and detent across the face of the bobbin case longitudinally of the slot.

1,190,689. ROLL CONSTRUCTION. WILLIBALD TRINKS, Pittsburgh, Pa., assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Original application filed Sept. 28, 1915, Serial No. 53,004. Divided and this application filed Mar. 3, 1916. Serial No. 81,823. (Cl. 68—33.)



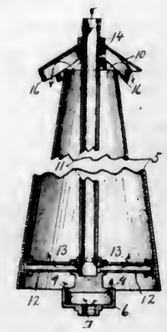
1. A roll structure comprising an outer metal cylinder and an internal reinforcement for the same consisting of an integral expandible cylindrical socket member having longitudinally slotted walls and a tapered plug member driven into said socket member to expand the latter against said cylinder, for the purpose described.

2. A roll structure comprising an outer metal cylinder and an internal reinforcement for the same consisting of an expandible cylindrical socket member having longitudinal slots in its wall extending alternately from either end and a tapered plug member driven into said socket member to expand the latter against said cylinder, for the purpose described.

3. A roll structure comprising an outer metal cylinder, an internal reinforcement for said cylinder consisting of an expandible socket member having its wall slotted longitudinally alternately from either end and a tapered plug member driven into said socket member to expand the latter against said cylinder, and end members tightly closing the ends of said cylinder, for the purpose described.

4. A roll structure comprising an outer metal cylinder, an internal reinforcement for said cylinder consisting of an expandible socket member having longitudinal slots in its wall extending alternately from either end and a tapered bore and a tapered plug member driven into said bore to expand said socket member against said cylinder, and end members inserted into and tightly closing the end of said cylinder, for the purpose described.

1,190,690. APPARATUS FOR TREATING STARCH. CHARLES A. TYLER, Auburn, N. Y., assignor to National Chemical Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 22, 1914. Serial No. 858,064. (Cl. 127—11.)



1. In an apparatus for treating laundrying starch, a starch container, an upright conical shell therein open at both ends, a conical baffle plate directly over the upper end of the shell, and means for projecting steam through the shell and against the baffle plate for breaking up the starch into fine particles and cooking the same, said baffle plate having a series of vanes on its underside curved in the same direction.

2. In an apparatus for treating laundrying starch, a starch container, an upright shell therein open at both ends, means for projecting steam into the lower end of the shell for agitating and cooking the starch, and separate means for projecting relatively cool air into the lower end of the shell for agitating and cooling the starch.

3. In an apparatus for treating laundrying starch, a starch container, an upright conical shell therein open at both ends, a steam receiving head having outlets discharging into the lower end of the shell, an air receiving pipe extending from the top downwardly into the shell below the starch level and provided with openings discharging upwardly into said shell, and a conical baffle plate directly over the upper end of the shell.

4. In an apparatus of the class described, a tank, a tubular shell open at both ends vertically arranged therein and having its lower end positioned adjacent the bottom of the tank, a steam receiving head discharging into the lower end of the shell, and additional means for discharging air into the shell adjacent its lower end.

5. In an apparatus of the class described, a tank, a tubular shell open at both ends vertically arranged there-

in and having its lower end positioned adjacent the bottom of the tank, a steam receiving head discharging into the lower end of the shell, and a series of radially extending pipes within the shell and positioned near its lower end and having openings for discharging air into the shell.

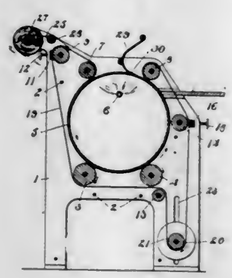
[Claims 6 to 8 not printed in the Gazette.]

1,190,691. METHOD OF PACKAGING AND PRESERVING TEA. WILLIAM G. VOLKMANN, Oakland, Cal., assignor to A. Schilling & Company, San Francisco, Cal., a Corporation of California. Filed Nov. 26, 1915. Serial No. 63,635. (Cl. 99—8.)

1. The method of packaging and preserving tea, the same consisting in first heating the tea to drive the moisture therefrom, thence placing the same in a package for the hermetic sealing thereof, thence exhausting the air from within the package, and finally hermetically sealing the package before the tea is permitted to cool to an appreciable extent.

2. The method of packaging and preserving tea while in a heated condition, which consists in placing the tea within a suitable container, thence placing the container so filled within a suitable receptacle adapted to be closed to the atmosphere, thence creating a vacuum within said receptacle for the withdrawal of the air from within the filled container, and thence hermetically sealing the said container before the tea is permitted to cool to an appreciable extent.

1,190,692. BLUE-PRINT-DRYING MACHINE. CLARE M. WATERMAN, Chicago, Ill. Filed Nov. 6, 1915. Serial No. 60,134. (Cl. 34—4.)



1. In a blue print drying machine, the combination with the frame and a rotatable heated drum, of a plurality of rollers extending transversely of said frame, a single endless belt supported upon said rollers and passing around the major portion of the periphery of said drum and having a pendant looped portion, a gravity roller suspended in said pendent loop of said belt, said gravity roller being free to move laterally with the belt.

2. A blue print drying machine, comprising, a frame, a pair of rollers extending transversely of said frame, a heated drum rotatably supported on said rollers, a plurality of rollers arranged in said frame adjacent to the drum, a single endless belt extending around said rollers and passing in contact with the major portion of the periphery of said drum, said belt having a pendant loop portion, a weighted roller suspended in said loop and free to move laterally with the belt.

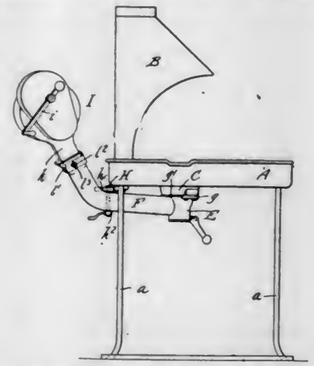
3. A blue print drying machine, comprising, a frame, a pair of rollers extending transversely of said frame, a heated drum rotatably supported on said rollers, a pair of rollers extending longitudinally of the drum and close to the periphery at the upper side, a single endless belt passing around said upper rollers and around the under periphery of the drum, rollers interposed to suitably support the portions of the belt in contacting with the drum, and a weighted gravity roller suspended in a looped portion of the belt and adapted to move laterally with said belt having a spindle extending therefrom engaging guides in the frame.

4. A blue print drying machine, comprising, a frame, a pair of rollers extending transversely of said frame, a heated drum rotatably supported on said rollers, a roller arranged adjacent to the upper front roller adjacent to the drum, a roller arranged below the rearmost lower roller supporting the drum, a roller arranged rearward of the upper rearward roller, said latter roller being adjustably supported in the frame and adapted to engage the periphery of the drum in pressure contact, a single endless belt traveling around said rollers and passing around the under periphery of the drum and between said drum and the pressure roller, and a gravity roller carried in a looped portion of the belt.

5. A blue print drying machine, comprising, a frame, a pair of rollers extending transversely of said frame, a heated drum rotatably supported on said rollers, rollers arranged adjacent to the upper side of the drum, a single endless belt adapted to extend around said rollers and around the under periphery of the drum and having a looped portion, a weighted gravity roller carried in said looped portion, an adjusting roller arranged beneath the belt adjacent to the upper forward roller having adjustable journals at the ends adapted to be moved inward or outward to or from the drum and at either side to adjust the tension of the belt.

[Claims 6 to 8 not printed in the Gazette.]

1,190,693. FORGE. HENRY W. WENDT, Buffalo, N. Y., assignor to Buffalo Forge Company, Buffalo, N. Y. Filed July 24, 1915. Serial No. 41,682. (Cl. 110—3.5.)



1. In a forge, the combination with a hearth, of a blower, and an air pipe which connects the blower to the hearth and is arranged to move laterally to different positions relative to the hearth for placing the blower at one or the other side of the hearth, said blower being reversibly connected to said pipe.

2. In a forge, the combination with a hearth, of a twyer pipe pivotally connected to the hearth to swing laterally relative thereto, and a blower reversibly connected to the outer end of said pipe.

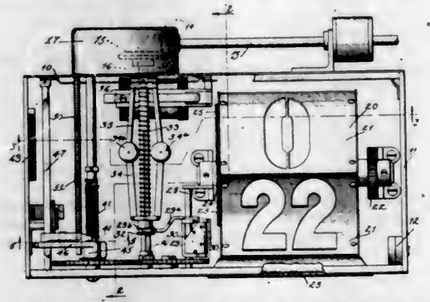
3. In a forge, the combination with a hearth, of a twyer pipe pivotally connected to the hearth to swing laterally relative thereto, means for securing said pipe in different positions, and a blower reversely connected to the outer end of said pipe.

4. In a forge, the combination with a hearth, of a twyer pipe pivotally connected at its inner end to the hearth to adapt the outer end of the pipe to swing to different positions relative to the hearth and a blower reversibly connected to the outer end of said pipe and supported thereby.

5. In a forge, the combination with a hearth, of a twyer, pivotally connected to the hearth, a twyer pipe connected to said twyer means for securing said pipe in different positions, and a blower secured to and supported by the outer end of said pipe.

[Claims 6 to 8 not printed in the Gazette.]

1,190,694. REGISTER AND SIGNAL MECHANISM FOR VEHICLES. FREDERICK A. WIELAND, Chicago, Ill. Filed Apr. 21, 1915. Serial No. 22,893. (Cl. 235—91.)



1. Mechanism of the class described comprising, in combination, a register, actuating devices for said register, means for driving said actuating devices from a movable element of an associated vehicle, said actuating devices adapted when placed in driving relation to the register to effect the operation of the latter after the vehicle has traveled a predetermined distance, and means for placing said actuating devices in driving relation to the register when the associated vehicle exceeds a predetermined speed.

2. Mechanism of the class described comprising, in combination, a register, actuating devices for said register, means for driving said actuating devices from a movable element of an associated vehicle, said actuating devices adapted when placed in driving relation to the register to effect the operation of the latter after the vehicle has traveled a predetermined distance, and electromagnetically controlled devices for placing said actuating devices in driving relation to the register when the associated vehicle exceeds a predetermined speed.

3. Mechanism of the class described comprising, in combination, a register, actuating devices for said register arranged to be driven from a movable element of an associated vehicle and adapted, when placed in driving relation to the register, to effect the operation thereof when the vehicle travels a predetermined distance after said relation is established, and means operable by the associated vehicle adapted to place said actuating devices in driving relation to the register when the vehicle exceeds a predetermined speed.

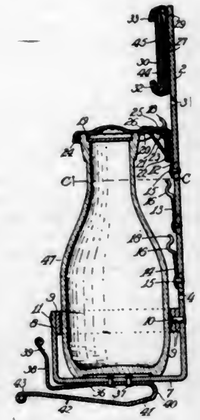
4. Mechanism of the class described comprising, in combination, a register, actuating devices for said register arranged to be driven from a movable element of an associated vehicle and adapted, when placed in driving relation to the register, to effect the operation thereof when the vehicle travels a predetermined distance after said relation is established and electromagnetic mechanism controlled from a movable element of the associated vehicle adapted to place said actuating devices in driving relation to the register when the vehicle exceeds a predetermined speed.

5. The combination with a vehicle, of a register, and means controlled by a movable element of the vehicle for actuating said register when the vehicle exceeds a predetermined speed for a predetermined distance.

[Claims 6 to 8 not printed in the Gazette.]

1,190,695. MILK-BOTTLE HOLDER. JOHN A. WILDE, Indianapolis, Ind. Filed Dec. 30, 1914. Serial No. 879,783. (Cl. 248—20.)

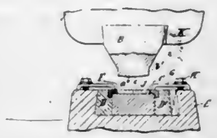
1. A milk bottle holder including an upright back member, a bottle-support fixed on the member, a plurality of pivoting devices mounted on the member above the bottle-support, and a cover for the bottle having a pivot to be removably connected with either one of the plurality of pivoting devices and supported by bottles of different sizes.



2. A bottle holder comprising a back plate, an arm fixed on the back plate for bodily supporting a bottle, a guide connected to the back plate for guiding the bottle on the arm, a plurality of pivot plates secured to the back plate and extending elastically in the direction away from the arm, each pivot plate having two pivot bearings arranged to coöperate with the back plate, and a cover for the bottle having an arm provided with a pivot that is removably connected with the pivot bearings of one of the pivot plates, the arm of the cover extending between the two pivot bearings.

3. In a bottle-holder, the combination of a normally upright back plate, a supporting arm fixed on and projecting horizontally from the back plate, a pivot plate secured to the front of the back plate above said arm and having two pivot bearings on the upper portion thereof, and a cover having an arm thereon that is pivotally connected to said bearings, the cover having also a projection that extends downwardly to the pivot plate below said bearings and having also a flange that extends downward toward said arm, said cover being normally horizontal and movable upwardly on its pivotal connection.

1,190,696. MEANS FOR SHAPING SPOON-BOWLS AND THE LIKE. ARTHUR WILZIN, St.-Ouen, France. Filed Oct. 11, 1913. Serial No. 794,602. (Cl. 76—105.)



1. In a press for spreading spoon blanks and the like, a block or die adapted to support the blank and having edge-confining elements, and a punch movable relatively to said die and having a convex working surface, the central portion of which is nearer to the central portion of the die than the distance between the marginal portions of the punch and die respectively, whereby the central

portion of punch will be the first to engage the blank so as to spread it toward said edge confining elements.

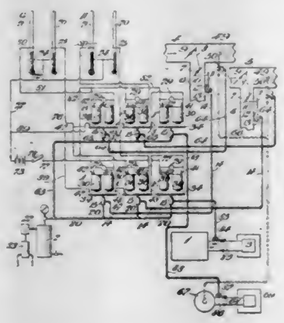
2. In a press for spreading spoon blanks and the like, a block or die adapted to support the blank, separate contour-confining pieces superposed on said block, and a punch adapted to coöperate with said die.

3. In a press for spreading spoon blanks and the like, a block or die having a flat upper surface adapted to support the blank, removable contour-confining pieces engaging said die, and a punch having a convex working surface adapted to coöperate with said die.

4. In a press for spreading spoon blanks and the like, a block or die whose upper surface is adapted to support the blank, a removable edge-confining member engaging said upper surface, and a punch adapted to coöperate with said die.

5. In a press for spreading spoon blanks and the like, a block or die whose upper surface is adapted to support the blank, an edge-confining member engaging the edges of said die and overlapping its upper surface, means for holding said member against said surface, and a punch adapted to coöperate with said die.

1,190,697. APPARATUS FOR THERMO-HUMIDITY CONTROL. FRANK D. WINDELL, Philadelphia, Pa., assignor of one-half to Henry Lewis Williams, Pittsburgh, Pa. Original application filed May 6, 1913, Serial No. 765,838. Divided and this application filed June 10, 1914, Serial No. 844,383. Renewed Dec. 10, 1915. Serial No. 66,218. (Cl. 98—39.)



1. In a device of the character stated, a source of temperature changing medium and a source of humidity changing medium, in communication with a plurality of inclosures, and means for controlling said sources for maintaining a predetermined temperature and a predetermined relative humidity in each of the plurality of inclosures, irrespective of the temperatures and relative humidities maintained in the other inclosures.

2. In a device of the character stated, a source of temperature changing medium and a source of humidity changing medium in communication with a plurality of inclosures, and means for automatically controlling said sources for maintaining a predetermined temperature and a predetermined relative humidity in each of the plurality of inclosures, irrespective of the temperatures and relative humidities maintained in the other inclosures.

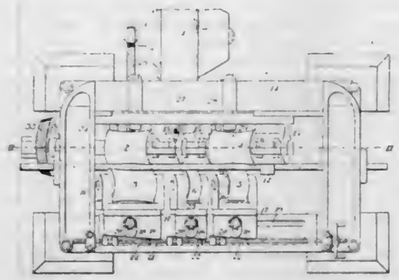
3. In a device of the character stated, independent means controlled by the temperature and relative humidity of each of a number of inclosures to respectively control and maintain the temperature and humidity of each of said inclosures at predetermined fixed points, and means controlled by the temperature of all of said inclosures under predetermined conditions to control the main source of temperature supply to all of said inclosures.

4. In a device of the character stated, independent means controlled by the temperature and relative humidity of each of a number of inclosures to respectively control and maintain the temperature and humidity of each of said inclosures at predetermined fixed points, and means controlled by the humidity of all of said inclosures under predetermined conditions to control the main source of humidity supply to all of said inclosures.

5. In a device of the character stated, independent means controlled by the temperature and relative humidity of each of a number of inclosures, to respectively control and maintain the temperature and humidity of each of said inclosures at predetermined fixed points, and means controlled by the humidity and temperature of all of said inclosures under predetermined conditions to control the main supplies of temperature changing medium and humidity changing medium to all of said inclosures.

[Claims 6 to 19 not printed in the Gazette.]

1,190,698. METHOD OF AND APPARATUS FOR COLD-ROLLING METAL. PETTER B. ABRAMSEN, Knoxville, Pa. Filed Dec. 18, 1913, Serial No. 807,422. Renewed Nov. 13, 1915. Serial No. 61,442. (Cl. 80—22.)



1. The herein described method of cold rolling rods and round bars, which consists in subjecting the rods or bars to the action of successive pairs of cross rolls arranged in tandem, and simultaneously subjecting the bars to a bending action to straighten them; substantially as described.

2. The herein described method of cold rolling rods and round bars, which consists in subjecting the rods or bars to the action of a plurality of pairs of cross rolls, said rolls being arranged in groups or sets, and rotating corresponding rolls in the two groups in opposite directions to cause the rolls of one group to remove surface markings produced by the rolls of a preceding group; substantially as described.

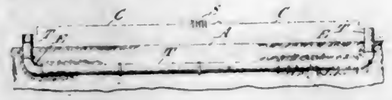
3. The herein described method of cold rolling rods and round bars, which consists in subjecting the bars or rods to the sizing and reducing action of a set of cross rolls, and then subjecting them to the finishing action of another set of cross rolls, and rotating the second set of cross rolls in an opposite direction to the direction of rotation of the first set; substantially as described.

4. Cold rolling apparatus of the character described, comprising at least two pairs of cross rolls arranged in tandem and at least one pair of said rolls forming a reducing pass, and means whereby the bars or rods being rolled are subjected to a bending and straightening action while passing through the rolls; substantially as described.

5. Cold rolling apparatus of the character described, comprising a plurality of sets of cross rolls, the rolls of one set forming reducing and sizing means and the rolls of the other set forming finishing means, corresponding rolls of the two sets being rotated in reverse directions; substantially as described.

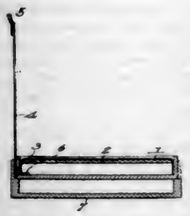
[Claims 6 to 11 not printed in the Gazette.]

1,190,699. MEANS FOR PROMOTING VEGETATION. WARREN J. ANSON, Los Angeles, Cal. Filed Dec. 23, 1911. Serial No. 667,535. (Cl. 47—37.)



An appliance for promoting vegetation embodying a porous conduit adapted to be embedded in the soil and having upstanding branches to project above the surface of the soil, said conduit comprising abutting tile sections, each individual tile section being adapted to be laid in various angular positions about its axis, a plurality of electrical conductors embedded in the walls of each section and extending longitudinally thereof from end to end, and contact plates embedded within the ends of the sections, said conductors being connected with said plates, and said plates being adapted to bear against one another at various angular positions of the sections relative to one another, to correct said conductors for the passage of an electrical current.

1,190,700. BOX. JOSEPH H. APPLETON, Attleboro, Mass. Filed Dec. 27, 1915. Serial No. 68,610. (Cl. 229—6.)



1. In combination with a box having a merchandise receiving filling piece stationarily secured above its bottom, and having a slotted end, a card slidable through said slot and between the bottom and filling piece and when in the box being concealed by said filling piece.

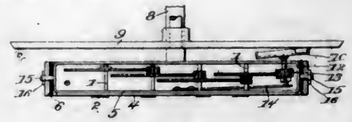
2. In combination with a box, a card slidable within and without the box, means to limit the sliding movement of the card and to allow same to be disposed at right angles to and across an end of the box, and a cover for the box adapted to receive the box and to engage the card and hold same in said angular position.

3. A box having a card provided with a tab slidably connected thereto, and a cover for the box completely removable therefrom, the tab being adapted to extend across an edge of the cover to facilitate separation of the box and cover.

4. In combination with a box and a cover completely separable therefrom, a card slidable independently of the box and cover and within and without the box, and means to limit the extent of outward sliding movement of the card, said card when withdrawn from the box being movable to engage an end of the box and to extend at right angles thereto and said cover being adapted to receive the box bottom and to engage the card to hold the latter against said end of the box and in said right angular disposition.

1,190,701. INTEGRATOR. ERVIN G. BAILEY, Newton Highlands, Mass., assignor to Bailey Meter Company, a Corporation of Massachusetts. Filed Apr. 19, 1915. Serial No. 22,298. (Cl. 235—91.)

1. An integrator comprising a clock-driven revoluble surface; a traction wheel in frictional contact with said surface, the plane of said wheel being nearly parallel to said surface; a spring constituting the sole means for holding said wheel in frictional contact with said surface; a meter adapted to move said wheel radially with relation to said surface; and indicating mechanism operated by said wheel.

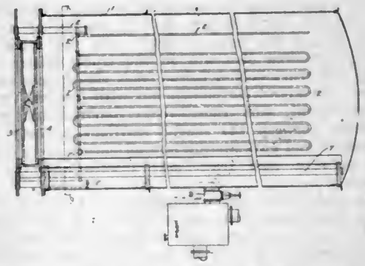


2. An integrator comprising a motor driven revoluble surface having radial components; a traction wheel, the side edge of which is in frictional contact with said surface, the axis of said wheel being nearly perpendicular to the said surface; a spring bearing on the end of said axis and constituting the sole means for holding said wheel in contact with said surface; a meter adapted to move said wheel radially with relation to said surface; and counting mechanism operated by said wheel.

3. An integrator comprising a revoluble surface; a traction wheel adapted to lie in contact with said surface and to be moved radially along said surface, said traction wheel lying nearly parallel to said surface and having anti-friction devices along its bearing periphery, the axes of which are in the plane of the traction wheel and transverse to the path of travel of the wheel across the revoluble surface; and a countertrain actuated by said wheel.

4. An integrator comprising a clock driven revoluble surface; a traction wheel in friction contact with said surface, the plane of said wheel being nearly parallel to said surface; a meter adapted to move said wheel radially with relation to said surface; indicating mechanism operated by said wheel; and means whereby said wheel is capable of movement lengthwise of its axes with relation to said indicating mechanism.

1,190,702. PROCESS OF DRYING. DANIEL B. BANKS, Baltimore, Md. Filed Apr. 21, 1914. Serial No. 833,368. (Cl. 34—24.)



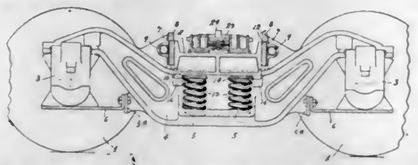
1. The process of drying substances consisting of subjecting the same first to a pressure of a heated medium then evaporating therefrom at a decreasing pressure while supplying heat to the same during evaporation.

2. The process of drying substances consisting of, submitting the same to a steam pressure, then reducing the pressure below atmospheric pressure and simultaneously maintaining a superheated condition of the surrounding medium.

3. The process of drying substances, consisting of, subjecting the same to a pressure of a heated condensable medium at substantially the dew point thereof, then evaporating therefrom at a decreasing pressure.

4. The process of drying substances, consisting of, subjecting the same to a pressure of a heated condensable medium, at substantially the dew point thereof, then evaporating therefrom at a decreasing pressure while supplying heat to the same during said evaporation.

1,190,703. CAR-TRUCK. JOHN C. BARBER, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed May 6, 1915. Serial No. 26,317. (Cl. 105—243.)



1. In a car truck, the combination with truck side frames having central webs and spring-supporting brackets on the inner and outer sides thereof, of springs seated on said brackets, a truck bolster having depending flanges that embrace upper central portions of said side frames and are mounted on said springs, the said truck bolster being free for vertical movements in respect to said side frames but held against endwise movements transversely of said side frames and held against lateral movements longitudinally of said side frames.

2. In a car truck, the combination with cast side frames having central webs, spring-supporting brackets projecting inward and outward from the lower central portions of said webs and having longitudinally spaced vertical bolster guide lugs on its upper portion, of springs mounted on said brackets, and a truck bolster working between said bolster guide lugs and having depending flanges supported on said springs, the said truck bolster being thereby mounted for vertical movements only in respect to said side frames.

3. In a car truck, the combination with cast side frames having central webs, spring-supporting brackets projecting inward and outward from the lower central portions of said webs and having longitudinally spaced vertical bolster guide lugs on its upper portion, of springs mounted on said brackets, and a truck bolster working between said bolster guide lugs and having depending flanges supported on said springs, the said truck bolster being thereby mounted for vertical movements only in respect to said side frames, and constituting the only cross tie between the central portions of said side frames.

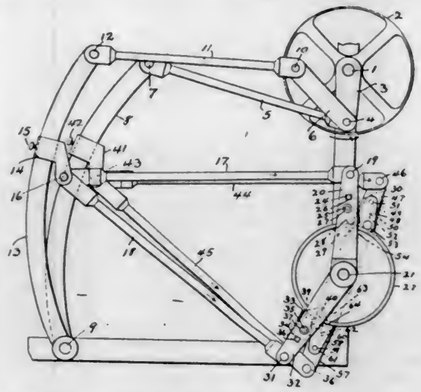
4. In a car truck, the combination with truck wheels, axles, journal boxes and truck side frames, of a truck bolster having its ends extended over the truck side frames, depending elements on the truck bolster interlocking said truck bolster to the truck side frames against endwise and lateral movements but with freedom for vertical movement, said truck bolster constituting the sole connection between the central portions of said truck side frames, and anti-friction lateral motion devices interposed between said truck side frames and the axle journals.

5. In a car truck, the combination with wheels, axles, journal boxes and truck side frames, of a truck bolster having its ends extended over the truck side frames and spring-supported on said truck side frames, depending elements on the truck bolster interlocking said truck bolster to the truck side frames against endwise and lateral movements but with freedom for vertical movement, and anti-friction lateral motion devices interposed between said side frames and the axle journals.

[Claim 6 not printed in the Gazette.]

1,190,704. VARIABLE-SPEED DRIVING MECHANISM. RENSSELAER W. BARTON, Philadelphia, Pa. Filed Jan. 17, 1916. Serial No. 72,462. (Cl. 74—53.)

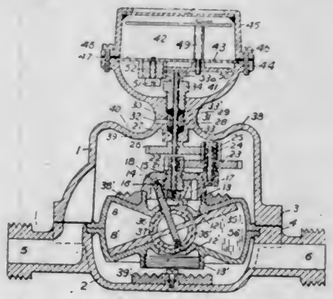
1. The combination of rotary driving means comprising devices pivoted at points revoluble about a center and approximately a quadrant apart, means comprising a pair of levers connected with said pivotal points and differentially operated by said driving means, a pair of links operated by and having a pivotal connection with each of said levers, a pair of levers provided with clutching means simultaneously oscillated in opposite directions by each of said pair of links, and a wheel revolved by the engagement therewith of said clutching means.



2. The combination of a revoluble wheel provided with a crank, a pair of curved levers, a link connecting said crank with one of said levers, a pair of links connecting said crank with the other of said levers, bearings adjustably connected to the respective levers, a pair of diverging links pivotally connected to each of said bearings, a pair of oppositely extending levers, the respective pairs of diverging links being connected with corresponding pairs of oppositely extending levers, friction pawls carried by the respective levers last named, and a friction wheel operated by said pawls.

3. The combination of a revoluble crank, a pair of levers, a link having a journaled connection with said crank and one of said levers, a second link fixed to said crank, a third link having a journaled connection with the other of said levers and said link fixed to said crank, whereby said crank communicates differential movements to said levers, a revoluble device, and means whereby said levers revolve said device.

1,190,705. WATER-METER. GEORGE B. BASSETT, Buffalo, N. Y. Filed July 12, 1915. Serial No. 39,444. (Cl. 73—98.)



1. A water meter comprising a registering indicator, a water operated device, a stuffing box intermediate said indicator and said water operated device, a stuffing box shaft passing through said stuffing box and means whereby said stuffing box shaft may be actuated at its inner end by the power furnished by said water operated device, an indicator percentage change gear, an idler gear meshing with said indicator percentage change gear and a series of denominational meter change gears whose teeth have the ratios of 8 for indicating cubic feet, 6 for indicating U. S. gallons and 5 for indicating imperial gallons, any one of which is adapted to transmit motion from said stuffing box shaft through said idler gear to said indicator percentage change gear; substantially as and for the purpose described.

2. A water meter comprising a registering indicator, a water operated device, a stuffing box shaft adapted to transmit motion from said water operated device to said indicator, and intermediate to said indicator and said water operated device a weeping stuffing box through which said shaft passes comprising a cylindrical recess in the meter case having a weep hole in its cylindrical wall, two packings one on each side of said weep hole, a gland intermediate to said packings and also having a weep hole communicating with the weep hole in the wall of the cylindrical recess; substantially as and for the purpose described.

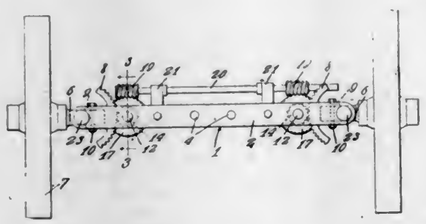
3. A water meter comprising a registering indicator, a hermetically sealed indicator compartment in which said indicator is located, a water operated device, a stuffing box shaft adapted to transmit motion from said water operated device to said indicator, and intermediate to said indicator compartment and said water operated device a weeping stuffing box through which said shaft passes comprising a cylindrical recess in the meter case having a weep hole in its cylindrical wall, two packings one on each side of said weep hole, a gland intermediate to said packings and also having a weep hole communicating with the weep hole in the wall of the cylindrical recess; substantially as and for the purpose described.

4. A water meter comprising an indicator box containing the indicator and a casing containing the submerged parts of the meter and having corrugations formed therein adjacent and exterior to said indicator box whereby abnormal expansion of the casing will not distort the indicator box; substantially as and for the purpose described.

5. A meter stuffing box comprising a cylindrical recess in the meter case having a weep hole in its cylindrical wall, two packings one on each side of said weep hole, a gland intermediate to said packings and also having a weep hole communicating with the weep hole in the wall of the cylindrical recess; substantially as and for the purpose described.

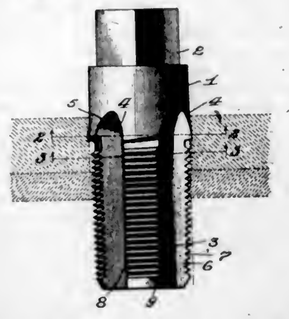
[Claims 6 to 24 not printed in the Gazette.]

1,190,706. AXLE. IRA D. BATE, West Jefferson, Ohio. Filed Feb. 15, 1916. Serial No. 78,480. (Cl. 21—5.)



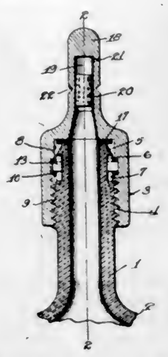
In a device of the class described, a main axle comprising spaced parts; stub axles located between the parts of the main axle; ground wheels journaled on the outer ends of the stub axles; arcuate racks carried by the inner ends of the stub axles and located between the parts of the main axle; pivot elements connecting the parts of the main axle and supporting the stub axles for vertical swinging movement; shafts disposed transversely of the axle and journaled therein; pinions on the shafts and located between the parts of the main axle, the pinions meshing into the arcuate racks; worm wheels on the shafts and located exteriorly of the axle; a second shaft supported for rotation on the main axle and extended longitudinally thereof; and worms on the second shaft, the worms meshing into the worm wheels.

1,190,707. COMBINED TAP AND REAMER. WILLIAM C. BEINDORF, Litchfield, Ill. Filed Apr. 15, 1911. Serial No. 621,183. (Cl. 10—140.)



An improved tapping and reaming tool, all formed integral, and comprising a cylindrical body proper, the inner part of which is provided with longitudinal grooves, and is gradually increased in diameter toward its inner end, the walls of said grooves being sharpened at the point of greatest diameter and at their lower ends, to form thereat a series of laterally and downwardly projecting integral reaming-cutters which extend radially and longitudinally beyond the said body proper; and a tap-screw formed integral with said enlarged inner end of said body, but having a lesser diameter throughout its length than the extreme diameter of the said diametrically-enlarged portion of the said body.

1,190,708. NON-REFILLABLE BOTTLE. EDWIN B. BENNETT, Peermont, N. J. Filed Nov. 18, 1914. Serial No. 872,824. (Cl. 215—12.)



1. A non-refillable bottle including an exteriorly threaded neck portion provided with longitudinal radial ribs, a sealing cap adapted to be threaded on the neck, a hollow breakable extension integral with the cap, and means upon the cap interior engageable with the ribs of the bottle neck to positively lock the cap against removal.

2. A non-refillable bottle including an exteriorly threaded neck portion provided with longitudinal radials ribs, a sealing cap adapted to be arranged over the neck and to engage the threads thereof, a breakable cap extension integral with the cap, the said extension being provided with a closed end longitudinal bore open to the bore of the bottle neck, and means arranged upon the interior of the cap and engageable with the ribs to automatically lock the said cap against removal from the neck, as and for the purpose set forth.

3. A non-refillable bottle including an exteriorly threaded neck portion provided with a plurality of radial abut-

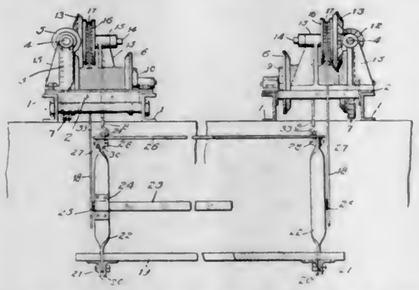
ting surfaces, a breakable sealing cap adapted to be arranged over the said bottle neck and to engage the threads thereof, and a locking band or ring carried by the said cap and arranged upon the interior thereof, said band or ring being engageable with the abutting surfaces of the bottle neck to lock the cap against removal when screwed in place, as and for the purpose set forth.

4. A non-refillable bottle including an exteriorly threaded neck portion provided with exterior radial abutting surfaces, a sealing cap adapted to be threaded on the bottle neck, a locking band fastened to the cap upon the interior thereof, locking tongues extending inwardly from the said band, the said tongues being adapted for engagement with the abutting surfaces of the neck to automatically lock the cap against removal therefrom when screwed thereon, as and for the purpose set forth.

5. A non-refillable bottle including an exteriorly threaded neck portion provided with longitudinal radial abutting surfaces, a sealing cap adapted to be arranged over the said bottle neck and to engage the threads thereof, an extension integral with the sealing cap, the said extension being provided with a longitudinal closed end bore open to the bore of the bottle neck, the said extension being breakable and constricted at a point intermediate its ends, a locking band arranged upon the interior of the sealing cap, means to lock the band against turning movement within the cap, and a plurality of locking tongues struck inwardly from the band to engage the abutting surfaces aforesaid, the said tongues being adapted to lock the sealing cap against removal when screwed on the bottle neck, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,190,709. SCAFFOLD-MACHINE. JOHN BERTODO, New York, N. Y., assignor to American Safety Device Company, a Corporation of New York. Filed Dec. 14, 1914. Serial No. 877,011. (Cl. 20—81.6.)



1. In a scaffold supporting device, in combination, a support, a pair of winding drums thereon, ropes attached to said drums and adapted to be attached to a scaffold at the front and back thereof, worm wheels connected to said drums, a shaft provided with worms engaging said worm wheels, said worms being detachably connected to said shaft, and means for rotating said shaft.

2. In a scaffold supporting device, in combination, a support, a pair of winding drums thereon, ropes attached to said drums and adapted to be attached to a scaffold at the front and back thereof, worm wheels connected to said drums, a shaft provided with worms engaging said worm wheels, said worms being detachably connected to said shaft, a bevel pinion fixed to said shaft between said worms, a bevel gear meshing with said pinion, a pulley operatively connected to said bevel gear, and a rope engaging said pulley for rotating the same, said rope depending from said pulley whereby said pulley may be rotated to actuate said gearing by a person standing on the scaffold between the front and back thereof.

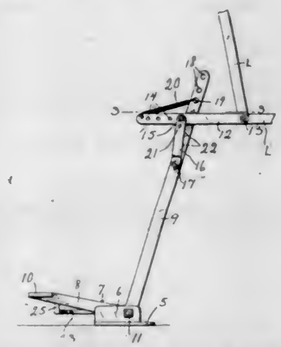
3. In a scaffold supporting device, in combination, a pair of supports, a pair of winding drums on each support, ropes attached to said drums and adapted to be attached to a scaffold at the four corners thereof, worm wheels connected to said drums, two shafts provided with worms engaging said worm wheels, said worms being detachably connected to said shafts, a bevel pinion fixed to each of said shafts between said worms, a bevel gear meshing with each pinion, a pulley operatively connected to each of said gears, and a rope engaging each pulley for rotating the same, said ropes depending from said pulleys whereby said pulleys may be rotated to actuate said gearing by a person standing on the scaffold between the front and back thereof.

4. In a scaffold supporting device, a support, a pair of drums mounted thereon, ropes attached to said drums and adapted to be attached to the scaffold at the front and back thereof, and means for rotating said drums comprising an actuating loop depending between said drums and ropes and lying in a plane substantially at right angles to the longitudinal axis of the scaffold, the plane of the loop being inward of the vertical plane passing through the outer ends of the drums.

5. In a scaffold supporting device, a support, a pair of drums mounted thereon, ropes attached to said drums and adapted to be attached to the scaffold at the front and back thereof, and means for rotating said drums comprising an actuating loop depending between said drums and ropes and lying in a plane substantially at right angles to the longitudinal axis of the scaffold.

[Claim 6 not printed in the Gazette.]

1,190,710. PEDAL-CONTROLLED THROW-OFF LEVER FOR PRINTING-PRESSES. ROBERT R. BETHEL, Concordia, Kans. Filed Oct. 7, 1915. Serial No. 54,619. (Cl. 74—81.)



1. The combination with the throw-off lever of a printing press, of a pivotally mounted pedal lever having an upright, link bars connected to the throw-off lever and straddling said upright for relative movement with respect thereto, means connected to said link bars and urging the same in one direction, and means for positively limiting such movement of the link bars engaged by the upright when the same is operated to actuate the throw-off lever, the movement of the lever continuing after the movement of the upright has ceased and shifting said link bars against the action of the means tending to urge the same to their normal positions.

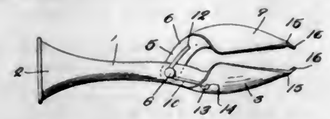
2. The combination with the throw-off lever of a printing press, of a pivotally mounted pedal lever having an upright, link bars connected to the throw-off lever and straddling said upright for relative movement with respect thereto, means connected to the upright and to the other ends of the link bars to yieldingly limit the continued movement of the lever and the link bars with respect to the upright of the pedal lever.

3. The combination with the throw-off lever of a printing press, of a pivotally mounted pedal lever having an upright, link bars connected to the throw-off lever and straddling said upright, links pivotally connected at one of their ends to said upright and at their other ends to the link bars, means for adjusting the pivotal connection of the links to the upright and the link bars, and a spring adjustably connected at one end to the upright and at its other end to said link bars to yieldingly limit the continued movement of the link connections and the throw-off lever with respect to the upright of the pedal lever and return said link connections to their normal positions with respect to said upright when the movement of the throw-off lever ceases.

4. The combination with the throw-off lever of a printing press, of an operating member having limited movement in one direction, means for adjustably connecting the throw-off lever to said operating member, said means being movable independently of the operating member, whereby the movement of the throw-off lever may continue after the movement of the operating member has ceased, and means for cushioning such continued movement of the throw-off lever.

5. The combination with the throw-off lever of a printing press, of a pivotally mounted pedal lever having limited movement in one direction, link bars connected to the throw-off lever and straddling the pedal lever and capable of movement independently of the pedal lever in one direction, means connecting said link bars and engaged by the pedal level, whereby the throw-off lever is positively moved when the pedal lever is operated, and means for yieldingly retarding the independent movement of the link bars, and the continued movement of the throw-off lever after the movement of the pedal lever has ceased.

1,190,711. CORING INSTRUMENT. ELISHA R. BETZER, Medina, Ohio. Filed July 23, 1913. Serial No. 780,788. (Cl. 146—6.)



1. In an eye remover for fruits or vegetables, a pair of semi-ovoid pivoted jaws provided with bulged sides, the free extremities of said jaws being broadened adjacent the points thereof, each of said jaws having an aperture therethrough, and a means trained intermediate its ends around the pivot of the jaws, the ends of which means pass through said apertures and engage with the outer face of the jaws to normally hold the jaws in spaced relation.

2. A fruit or vegetable eye remover comprising a pair of pivotally connected jaws which are constructed to provide a plurality of complemental guideways longitudinal thereof when the jaws are in a closed position.

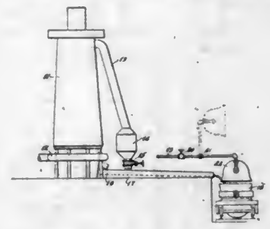
3. A fruit or vegetable eye remover comprising a pair of semi-ovoid pivotally connected jaws, each of which is provided with a central partition dividing the jaws into compartments, thus forming elliptical passageways when the jaws are closed, and means secured through apertures in the jaws and trained about the pivotal connection of the jaws to hold them normally spaced apart.

1,190,712. PROCESS FOR REDUCING FLUE-DUST AND OTHER METAL FINES. SAMUEL L. BOGGS, Pittsburgh, Pa. Filed Apr. 9, 1914. Serial No. 830,755. (Cl. 75—17.)

1. The process of reducing flue-dust, or fines, consisting of emptying the dust into molten metal whereby the two are mingled, and then applying a blast of the gas generated in the furnace to the surface of said mixture.

2. The process of reducing metal fines consisting of mixing the dust with molten metal, pouring the mixture into a receptacle, aplying a layer of coke braize to the top of said mixture, and then turning a blast upon the surface of the latter mixture.

3. The process of reducing flue-dust or other fines of metal consisting of the successive steps of mixing the dust with flowing molten metal, allowing the mixture to pour into a receptacle, and applying a blast of carbon and oxygen gas from a blast furnace to reduce the fines.



4. The process of reducing flue-dust or other metal fines consisting of mixing said dust with molten metal as it is drawn from a blast furnace, allowing the mixture to pour into a receptacle, adding to the mixture a layer of coke braize, and applying thereto a blast of the gas generated in the furnace.

5. The process of collecting flue-dust of a blast furnace, emptying it into molten metal as it comes from the furnace, pouring the mixture into a receptacle, adding a layer of carbonaceous material to the mixture, and applying thereto a blast of the gas generated in the first reduction furnace.

[Claims 6 and 7 not printed in the Gazette.]

1,190,713. RECEPTACLE. HENRY D. BOKOP, Defiance, Ohio. Filed June 11, 1915. Serial No. 33,596. (Cl. 150—48.)

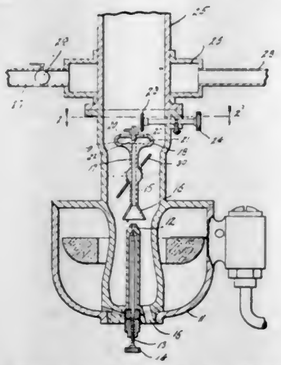


A bucket of the class described comprising a top ring, a bail pivotally attached to said ring and capable of being folded in flat relation to said ring in the plane thereof, a collapsible body part depending from said ring and having a flexible spout extending from the bottom thereof, said spout being of considerable length and having its inner end provided with an enlargement which reduces in size outwardly from said body part, a sleve member removably disposed within said spout enlargement, and a hook carried by the spout for engagement over the upper edge of the bucket to hold the free end of the spout in elevated relation to the bucket.

1,190,714. METHOD OF AND APPARATUS FOR CARBURETING. TURNER D. BOTTOME, Indianapolis, Ind. Filed July 2, 1913. Serial No. 776,920. (Cl. 48—219.)

1. The method of carbureting air; which comprises atomizing fuel into a portion of the air to be carbureted, conducting this mixture of the fuel with said portion of the air to an enlarged chamber, and re-atomizing this mixture of air and fuel from such chamber through a

contracted orifice into the remainder of the air to be carbureted.



2. The method of carbureting air, which consists in producing suction through an air passage, dividing the flow of air through a portion of such passage into two parts, discharging fuel in a state of division into one of such parts of the air, conducting the resultant mixture of fuel and part of the air to an enlarged chamber and then discharging it from such enlarged chamber through a contracted orifice in a finer state of division into the remainder of the air.

3. The method of carbureting air, which comprises discharging fuel into air to be carbureted in a low vacuum part of an air passage, conducting this mixture of air and discharged fuel to an enlarged chamber, and discharging it from said enlarged chamber through a contracted orifice in a fine state of subdivision into the air passage at a materially higher vacuum part thereof and there mixing it with more air to be carburted.

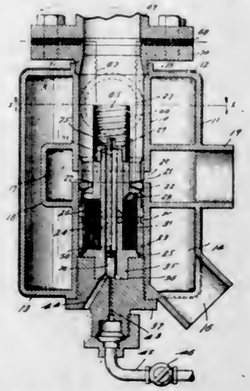
4. A carbureter, comprising an air passageway, a throttle valve in such passageway, a fuel nozzle in such passageway between the in-take end thereof and such valve, a vaporizer in such passageway between the discharge end thereof and such valve, and means for conducting the fuel discharged from said nozzle and part of the air passing through such passageway to the vaporizer by a path separate from the air passageway, said vaporizer having an enlarged chamber into which said path discharges and a contracted orifice forming a discharge outlet from said enlarged chamber to said passageway, and a vaporizer valve controlling the size of the opening between said path and said chamber.

5. A carbureter, comprising an air passageway, a throttle valve in such passageway, a fuel nozzle in such passageway between the in-take end thereof and such valve, a vaporizer in such passageway between the discharge end thereof and such valve, and means for conducting the fuel discharged from said nozzle and part of the air passing through such passageway to the vaporizer by a path separate from the air passageway, said vaporizer having an enlarged chamber into which said path discharges and a contracted orifice forming a discharge outlet from said enlarged chamber to said passageway.

[Claims 6 to 12 not printed in the Gazette.]

1,190,715. CARBURETER. TURNER D. BOTTOME, Indianapolis, Ind. Filed Aug. 27, 1914. Serial No. 858,798. (Cl. 48—155.1.)

1. In a carbureter, the combination of a tube having a lateral air inlet aperture, a member slidable longitudinally within said tube and provided with a perforated part coöperating by relatively oblique edges with the aperture in the tube to control the admission of air thereto, said member also being provided with a longitudinal passage, with a needle mounted in said longitudinal passage, and with a cap carrying said needle and located at the top of said passage and provided with restricted perforations for allowing the flow of fluid from said passage to the space within said tube, and a fuel nozzle with which said needle coöperates to control the supply of fuel to said passage.



2. In a carbureter, the combination of a tube having a lateral air inlet aperture, a member slidable longitudinally within said tube and provided with a perforated part coöperating with the aperture in the tube to control the admission of air thereto, said member also being provided with a longitudinal passage, with a needle mounted in said longitudinal passage, and with a cap located at the top of said passage and provided with restricted perforations for allowing the flow of fluid from said passage to the space within said tube, and a fuel nozzle with which said needle coöperates to control the supply of fuel to said passage.

3. In a carbureter, the combination of a tube having a lateral air inlet aperture, a member manually slidable longitudinally within said tube and provided with a perforated part coöperating with the aperture in the tube to control the admission of air thereto, said member also being provided with a longitudinal passage, and with a needle mounted in said longitudinal passage, and a fuel nozzle with which said needle coöperates to control the supply of fuel to said passage, said nozzle having an opening in its upper surface and said needle projecting into said opening.

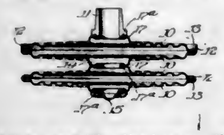
4. In a carbureter, the combination of a tube having a lateral air inlet aperture, a member slidable longitudinally within said tube and provided with a part coöperating by relatively oblique edges with the aperture in the tube to control the admission of air thereto, said member also being provided with a longitudinal passage, and with a needle mounted in said longitudinal passage, and a fuel nozzle located in said passage, and with which said needle coöperates to control the supply of fuel to said passage.

5. In a carbureter, the combination of a tube having a lateral air inlet aperture, a member manually slidable longitudinally within said tube and provided with a perforated part coöperating with the apertures in the tube to control the admission of air thereto, said member also being provided with a longitudinal passage, and with a needle mounted in said longitudinal passage, and a fuel nozzle with which said needle coöperates to control the supply of fuel to said passage, said passage being connected to the atmosphere so that it can receive a small supply of air, said nozzle having an opening in its upper surface and said needle projecting into said opening in said nozzle.

[Claims 6 to 13 not printed in the Gazette.]

1,190,716. FLEXIBLE METALLIC DIAPHRAGM. LOUIS T. BOWMANN, Chicago, Ill. Filed Sept. 11, 1915. Serial No. 50,134. (Cl. 60—2.)

1. A flexible metallic diaphragm, including a plurality of corrugated disks having axial openings therein, an eyelet joining adjacent disks at their axes, and a clamping ring joining said disks at their peripheries, and a gasket interposed between the peripheral edges of said disks, whereby the edges of the disks are sealed and rigidly held against relative movement, substantially as described.



2. In a multiple metallic diaphragm, the combination of a plurality of corrugated metallic disks having axial openings, each disk being laterally deflected at its periphery to provide a groove, an eyelet joining two disks at their axes, a ring joining the peripheries of adjacent disks, and a metal gasket interposed between the disks at their peripheries, the parts being shaped and combined by die action thus producing a compartment or a series of intercommunicating compartments gas tight without introduction of a fused medium, substantially as described.

3. In a multiple metallic diaphragm, the combination of a plurality of corrugated metallic disks having axial openings, each disk being laterally deflected at its periphery to provide a groove, an eyelet joining two disks at their axes, a ring joining the peripheries of adjacent disks, and a metal gasket interposed between the disks at their peripheries, and other joints, the parts being shaped and combined by die action, the compartment thus formed being gas tight without the introduction of a fused medium, substantially as described.

1,190,717. CAMERA. EARL L. BROWNSON, Rochester, N. Y. Filed July 31, 1915. Serial No. 42,909. (Cl. 95—41.)

1. A camera case having guideways, an exposure slide adapted to said guideways, a sensitive surface carrier having a slide, means to secure unison movement of said slides, means to retain said carrier in position during movement of said slides, and means to prevent complete withdrawal of said exposure slide from the camera case.

2. A camera provided with an exposure slide sufficiently spaced from the rear wall of the camera to permit the insertion of a plurality of sensitive surface carriers, a plurality of sensitive surface carriers each provided with a slide, and means for effecting conjoint or unison movement of the exposure slide and the next adjacent sensitive surface carrier slide.

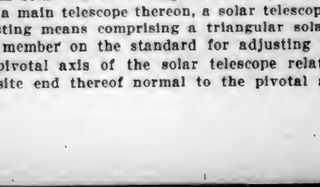
3. A camera provided with an exposure slide sufficiently spaced from the rear wall of the camera to permit the insertion of a plurality of sensitive surface carriers, guideways for said slide, and a plurality of sensitive surface carriers, each having a slide, each of said sensitive surface carrier slides having means for effecting temporary interengagement with the exposure slide.

4. A camera provided with an exposure slide sufficiently spaced from the rear wall of the camera to permit the insertion of a plurality of sensitive surface carriers, guideways for said slides, a plurality of sensitive surface carriers, each having a slide, each of said sensitive surface carrier slides having means for effecting temporary interengagement with the exposure slide, and means to retain the active sensitive surface carrier in position during movement of its slide.

5. A camera provided with an exposure slide sufficiently spaced from the rear wall of the camera to permit the insertion of a plurality of sensitive surface carriers, guideways for said slide, a plurality of sensitive surface carriers each having a slide, each of said sensitive surface carrier slides having means for effecting temporary interengagement with the exposure slide, means to retain the active sensitive surface carrier in position during movement of its slide, and means to prevent complete withdrawal of the exposure slide from the camera case.

[Claims 6 to 14 not printed in the Gazette.]

1,190,718. SCRAPER-SHARPENER. CHARLES J. BRUNSELL and JOHN JOHNSON, Minneapolis, Minn. Filed Aug. 9, 1915. Serial No. 44,432. (Cl. 76—82.)



1. A scraper sharpener device, comprising a body having a raised elongated portion and a guide surface at one side below the upper surface thereof, and a hard sharpening blade set into the raised portion of said blade having oblique end and edge portions projecting respectively beyond the side and top surfaces of said raised portions.

2. A scraper blade sharpening tool comprising a body having a raised rectangular portion and guide surface outward of the side edges and below the top surface of said raised portion, and a hard sharpening blade set into said raised portion in a plane that is oblique to the side and top surfaces thereof, with the end and upper edge surfaces of said blade projecting respectively outward of the side and top surfaces of said raised portion.

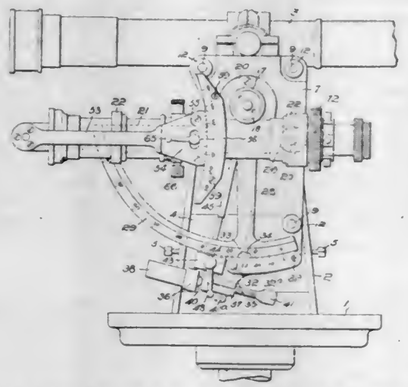
3. A scraper blade sharpening tool comprising a body having a raised rectangular portion with a groove at one side thereof, and with a guide surface outward of said groove slightly above the bottom thereof, but below the top of said rectangular raised portion, and a hard sharpening blade set into the said raised portion of said body in a plane that is oblique to the upper and side surfaces thereof, and with the edges of said blade projecting outward of said surfaces

4. A scraper blade sharpening tool comprising a body having a raised rectangular portion with a groove at one side thereof, and with a guide surface outward of said groove slightly above the bottom thereof, but below the top of said rectangular raised portion, and a hard sharpening blade set into the said raised portion of said body in a plane that is oblique to the upper and side surfaces thereof, and with the edges of said blade projecting outward of said surfaces, the said body, at one projecting edge, having a groove adapted to receive a portion of a file.

1,190,719. SOLAR ATTACHMENT FOR TRANSITS. LOUIS F. BUFF, Jamaica Plain, Mass. Filed Feb. 18, 1915. Serial No. 9,015. (Cl. 33—61.)

1. A solar transit having, in combination, a standard with a main telescope thereon, a solar telescope, and axis adjusting means comprising a triangular solar telescope base member on the standard for adjusting one end of the pivotal axis of the solar telescope relative to the opposite end thereof normal to the pivotal axis of the

main telescope while the solar telescope is in operating position.



2. A transit having a standard with a main telescope thereon, a solar telescope base supported at three points on the standard permitting adjustment of one end of the solar telescope pivotal axis bearing of the base relative to the opposite end thereof normal to the pivotal axis of the main telescope.

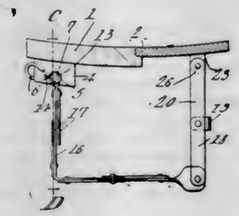
3. A transit having a standard with a telescope thereon, a solar telescope base on the standard; a telescope post on the base, and a solar telescope supporting member on the post each having a coöperating striding level carrying member thereon for leveling the base.

4. A solar transit having, in combination, a standard, a main telescope movable thereon; a solar attachment adjustably mounted on and laterally relatively to the standard and below the main telescope including a solar telescope, and a single adjustable member permitting adjustment of the pivotal axis of the solar telescope to a greater extent at one end thereof than at its opposite end and normal to the pivotal axis of the main telescope.

5. A solar transit comprising, in combination, a standard; and a solar attachment therefor comprising a solar telescope, a triangular base therefor, base adjusting means permitting angular adjustment of the axis of the solar telescope to an unequal extent throughout the length of the axis.

[Claims 6 to 24 not printed in the Gazette.]

1,190,720. SILO-DOOR SUPPORT. EDWARD E. BUSTER, Portland, Oreg. Filed Apr. 29, 1915. Serial No. 24,779. (Cl. 20—1.4.)



1. The combination with a silo having a plurality of superposed doors, of a hinge structure adjustable into position adjacent any one of the doors, and means for detachably connecting said hinge structure to said doors.

2. The combination with a silo having a plurality of superposed doors, of a vertically adjustable hinge structure upon the silo, means upon the silo for engaging the hinge structure to hold it against displacement after adjustment, and means for detachably connecting the hinge structure to the adjacent door.

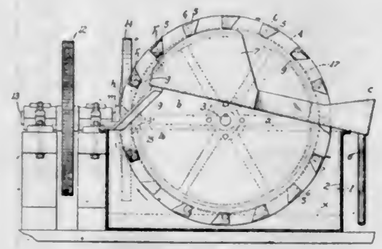
3. The combination with a silo having superposed doors, of a bracket upon the silo and adjacent each door, a hinge structure adjustable into engagement with any one of the brackets, said bracket constituting means for holding the hinge structure against horizontal displacement, and means for detachably securing the hinge structure to the adjacent door.

4. The combination with a silo having superposed doors, and a bracket adjacent each door and upon the silo, of a hinge structure including a sleeve shiftable into position within any one of the brackets, a frame movable with the sleeve and adapted to swing relative thereto, and means carried by the frame for detachable connection with the adjacent door.

5. The combination with a silo having superposed doors, of a guide upon the silo and adjacent the doors, a hinge structure adjustable along the guide, and means for detachably connecting the hinge structure to the adjacent door.

[Claims 6 to 10 not printed in the Gazette.]

1,190,721. OIL AND ACID FEEDER. ALBERT CAMPBELL, Anaconda, Mont. Filed July 21, 1915. Serial No. 41,209. (Cl. 193—6.)

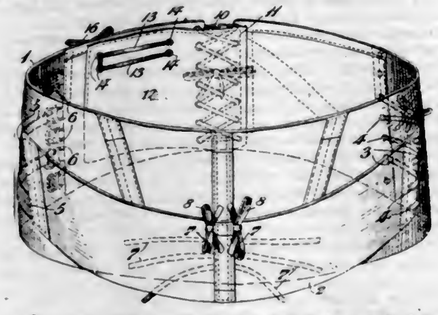


In a liquid feeder of the character described, a suitable tank or container, a rotatable member operating in the tank and partially submerged in the liquid in the tank, a series of buckets of equal contents mounted on the member and dipping into the liquid in the tank, an inclined launder positioned adjacent the rotatable member and the buckets comprising terminal sections connected by an intermediate section inclined to the terminal sections and to the plane of rotation of the buckets and of the rotatable member, the buckets being secured to the rotatable member to permit their revolution around the upper and the medial inclined section of the launder, the lower section being farthest removed from the rotatable member and out of range of the plane of rotation of the buckets, the upper section of the launder being positioned relatively to the buckets to receive the minimum quantity of liquid dipped up by the buckets irrespective of the level of the liquid in the container, and to permit a return into the tank of any excess of liquid over that discharged into the launder.

1,190,722. ABDOMINAL BELT. WRIGHT R. CARTLEDGE, Baltimore, Md., assignor to Chesterman and Streeter, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 4, 1915. Serial No. 65,051. (Cl. 2—188.)

1. In an abdominal belt, a band overlying the front portion of said belt, means for adjustably connecting the ends of said band to said belt whereby a vertical adjustment of said band is provided, and means for holding said band in its adjusted position.

2. An abdominal belt having a placket thereon and means on the latter for securing and adjusting the same, and a flap member adapted to close the opening of said placket, the same being connected at one end with a side of said packet, passing said opening and overlapping freely the other side of said packet, and a securing and adjusting tape-like member reeved through said free end of the flap member and the adjacent portion of the belt adjacent to said placket, said free end of the flap member and said adjacent portion of the placket of the belt having each therein a plurality of registering separated eyelets for the passage therethrough of said tape-like member, whereby said flap is held flat on said adjacent portion of the belt.



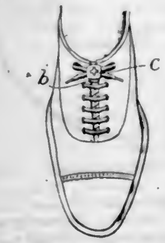
1,190,723. PAPER-BOTTLE CLOSURE. HARRY D. CAYLOR, Indianapolis, Ind. Filed July 12, 1915. Serial No. 39,418. (Cl. 229—12.)



1. The combination with a paper bottle having sides in the form of a truncated cone the upper edge of which is bent in to form a hollow elastic bead, of a one-piece paper cap having an annular channel to receive the bead, the portion of the cap within the channel forming a plug comprising a flat circular area which overhangs the channel and is of greater diameter than the inside diameter of the bottle at its beaded end and is forced through the latter by springing the bead and plug.

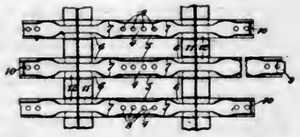
2. The combination with a paper bottle having truncated conical sides and a hollow elastic beaded upper end, and an inside flange near the bead, of a one-piece paper cap having an annular channel to receive the bead, that portion of the cap which is bounded by the channel comprising a flat circular area which overhangs the channel and is greater in diameter than the inside diameter of the bottle at its beaded end, and is forced through the neck by springing the parts into contact with said inside flange, and a sealing layer of paraffin between the contacting portions of the cap and bottle.

1,190,724. SHOESTRING-RETAINER. ABBIE CHADWICK, South Gardner, Mass. Filed Oct. 5, 1914. Serial No. 865,029. (Cl. 24—119.)



As an article of manufacture, a shoe string retainer comprising a member adapted to be pushed under a shoe string bow, a resilient plate secured thereto at one edge and adapted to fly back therefrom by its own resiliency and having a projection for engaging under the edge of said member, and a lever for forcing said projection back and releasing said resilient plate.

1,190,725. METALLIC LATH. MINOR E. CHAMBERLAIN, Lebanon, Mo. Filed Oct. 4, 1915. Serial No. 53,925. (Cl. 72—18.)

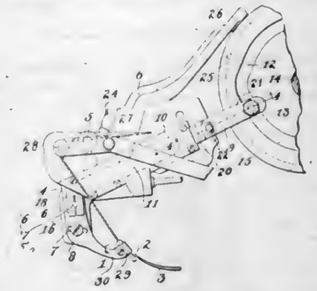


1. A metallic lath comprising a section of sheet metal having a substantially flat back surface and having its edges folded to provide flange portions on the outer side of the section of sheet metal, and said flange portions having parts thereof pressed flat against the outer surface of the sheet metal section.

2. A metallic lath comprising a section of sheet metal having its side edges folded to provide outwardly extending flanges and having portions of said flanges pressed flat against the outer surface of the sheet metal section, and said section having holes therethrough between the flanges on opposite sides thereof.

3. In a structure of the character described, series of metallic laths each being composed of a number of sheet metal sections arranged end to end, an interlocking tongue and slot connection holding the sheet metal sections of each series together end to end, and each of said sections being folded to provide outwardly extending flanges on the upper and lower edges thereof and having portions of said flanges pressed flat against the outer surface of the sheet metal sections.

1,190,726. SEWING-MACHINE. FRANK CHATEAUNEUF, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 17, 1911. Serial No. 660,745. (Cl. 112—20.)



1. A sewing machine having, in combination, stitch forming mechanism including a curved hook needle, looper mechanism comprising a lever mounted to oscillate in a single plane substantially perpendicular to the plane of the needle, a looper lever mounted on the forward end of said lever to oscillate in a plane substantially perpendicular to the plane of oscillation of the first lever, a looper carried by the looper lever, positively acting means for oscillating the first lever and positively acting means for oscillating the looper lever in timed relation to the oscillating movement of the first lever to carry the looper about the needle.

2. A sewing machine, having, in combination, stitch forming mechanism including a curved hook needle, looper mechanism comprising a lever mounted to oscillate

above the needle in a single plane substantially perpendicular to the plane of the needle, a looper lever pivotally mounted on the forward end of the said lever to oscillate in a plane substantially perpendicular to the plane of oscillation of the first lever, a looper carried thereby, a slide, connections between the slide and the looper lever for oscillating the looper lever, means for actuating the slide, and means for oscillating the first lever.

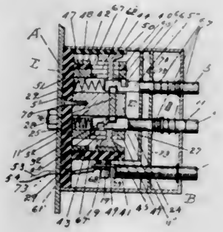
3. A sewing machine having, in combination, stitch forming mechanism including a curved hook needle, looper mechanism comprising a lever mounted to oscillate above the needle in a plane substantially perpendicular to the plane of the needle, a looper lever pivotally mounted on the forward end of the lever to oscillate in a plane substantially perpendicular to the plane of oscillation of the first lever and projecting below the first lever, a looper carried at the lower end of the looper lever, a slide arranged to reciprocate transversely of the line of feed, connections between the slide and the looper lever for oscillating the looper lever from the slide, means for actuating the slide and means for oscillating the first lever.

4. A sewing machine having, in combination, stitch forming mechanism including a curved hook needle, looper mechanism comprising a lever mounted to oscillate in a plane substantially perpendicular to the plane of the needle, a looper lever mounted on the forward end of said lever to oscillate in a plane substantially perpendicular to the plane of oscillation of the first lever, a looper carried by said looper lever, a slide, connections between the slide and the looper lever for oscillating the looper lever from the slide, said slide having provision for adjustment to vary the path of movement of the looper, means for actuating the slide and means for actuating the first lever.

5. A sewing machine having, in combination, stitch forming mechanism including a curved hook needle, looper mechanism comprising a lever arranged to oscillate in a single plane, a looper lever mounted on said first lever to oscillate therewith and also arranged to oscillate independently of the first lever in a plane substantially perpendicular to the plane of oscillation of the said first lever, a looper carried by said looper lever, positively acting means to oscillate said first lever and positively acting means to oscillate the second lever in timed relation to the oscillatory movements of the first lever to carry the looper about the needle.

[Claims 6 to 10 not printed in the Gazette.]

1,190,727. CIRCUIT-CLOSING COMBINATION ALARM-LOCK. JOHN E. CHRISTIE, Salt Lake City, Utah. Filed Apr. 5, 1915. Serial No. 19,390. (Cl. 175—282.)



1. A circuit closing combination alarm lock of the character described, comprising an insulating plate, a cover, a combination case within said cover and secured to said insulating plate, a switch slidably mounted in said combination case, terminals on said insulating plate adapted to be engaged by said switch, push buttons entering said combination case and means provided on said push buttons adapted to lock said switch in place and to permit operation of the switch respectively upon manipulation of said push buttons.

2. A circuit closing combination alarm lock of the character described, comprising a cover, a combination case within said cover, front and back filling plates within said combination case, a switch slidably mounted between said filling plates, guide plates provided above and below said switch, front and back metal plates spaced apart and arranged at a distance from said guide plates, said metal plates forming terminals of an alarm circuit, push buttons entering said combination case, locking tumblers provided on said push buttons and adapted to engage said switch, and keys arranged between said guide plates and said metal plates adapted to make connections between said metal plates upon manipulation of said push buttons.

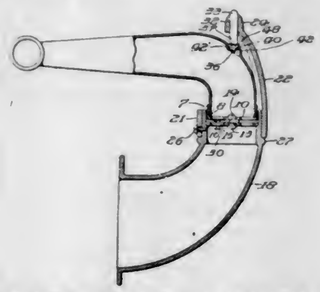
3. A circuit closing combination alarm lock of the character described, comprising a cover, a combination case within said cover, an insulating plate attached to said cover, means for securing said insulating plate to said combination case, a switch within said combination case, a bracket secured to said combination case, a spring within said bracket engaging said main closing switch and terminals provided on said insulating plate and adapted to be engaged by said switch.

4. A circuit closing combination alarm lock of the character described, comprising a cover, a spring case within said cover, a lid for said spring case, push buttons passing through said spring case, springs within said spring case and surrounding said push buttons, a main push button on the end of said cover, means for holding said main push button in place, an insulating plate secured to said cover, a combination case within said cover and secured to said insulating plate, a switch slidably mounted in said combination case comprising a center plate having recesses, means provided on said push buttons adapted to engage the notches of said center plate and means for operating said circuit closing switch.

5. A circuit closing combination alarm lock, comprising an insulating plate, a cover, a spring case within said cover, push buttons extending through said spring case, springs within said spring case surrounding said push buttons, a cover for said spring case, locking lugs on said cover having notches, a combination case within said cover and secured to said insulating plate, a switch slidably mounted in said combination case and adapted to enter with lugs the notches of the locking lugs of said second named cover, terminals of a main circuit on said insulating plate and adapted to be engaged by said switch, and means for operating said switch.

[Claims 6 to 16 not printed in the Gazette.]

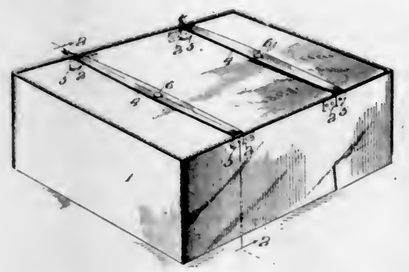
1,190,728. TONE-ARM FOR TALKING-MACHINES AND THE LIKE. OSCAR J. CLAIR, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Mar. 31, 1915. Serial No. 18,276. (Cl. 274—23.)



1. As an article of manufacture, a tapering tone arm of thin ductile metal consisting of two portions extending substantially at right angles to each other and united by an elbow or bend integral therewith, a portion of the material of said elbow being indented into said elbow and a portion of the material of said elbow being pressed outwardly from said elbow to form therein a substantially flat circular portion integral with said elbow, the plane of said flat surface being normal to and in substantial alinement with the axis of that portion of said tone arm of the larger diameter and said flat portion being provided with an opening in alinement with said axis.

2. As an article of manufacture, a tapering tone arm of thin ductile metal consisting of two portions extending substantially at right angles to each other and united by an elbow or bend integral therewith, a portion of the material of said elbow being indented into said elbow and a portion of the material of said elbow being pressed outwardly from said elbow to form therein a substantially flat circular portion integral with said elbow, the plane of said flat surface being normal to and in substantial alinement with the axis of that portion of said tone arm of the larger diameter and said flat portion being provided with an opening in alinement with said axis, and a bushing tightly fitted into said opening and having a flat exterior surface parallel to the surface of said flat portion.

1,190,729. CLOSURE-FASTENER. WILLIAM L. COOK, Portland, Oreg. Filed May 25, 1915. Serial No. 30,325. (Cl. 70—80.)



1. The combination with a receptacle and a closure therefor, of angled latch plates secured to the inner wall of the receptacle, and a pivoted bar mounted upon the top of the closure having substantially U-shaped ends cooperating with the angled plates for fastening said closure within a receptacle.

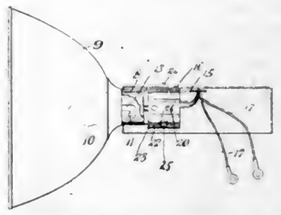
2. The combination with a receptacle, of horizontally disposed angled latch plates secured to the inner wall of the receptacle, a cover arranged within said receptacle and supported by said latch plates, and pivoted bars mounted upon the top of said cover having depending angled ends coöperating with said latch plates for securing said cover within said receptacle.

3. A closure fastener for receptacles, comprising angled latch plates, pivotally mounted bars having substantially U-shaped ends coöperating with said latch plates, said receptacle, latch plates and U-shaped ends of said bars being provided with registering openings, and wires passing through said openings having their ends sealed.

1,190,730. ELECTRIC LAMP. JOHN L. CORCORAN, Cincinnati, Ohio, assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 19, 1915. Serial No. 40,597. (Cl. 240—8.5.)

1. In an electric lamp, having a container portion and a lid portion, a lamp socket, a light bulb mounted in said socket, a battery in the container, a contact plug mounted in said socket electrically connected to said battery, and a clip secured to the lid for mounting the lamp socket, and means on the clip for holding in fixed position the electric plug.

2. In an electric lamp, having a container portion and a lid portion, a lamp socket, a light bulb mounted in said socket, a battery in the container, a contact plug mounted in said socket electrically connected to said battery, and a clip secured to the lid for engaging over the lamp socket, a tongue on the clip for engaging a slot in said socket, and means whereby said tongue engages said plug, to hold it in fixed position.



3. In an electric lamp, having a container portion and a lid portion, a lamp socket, a light bulb mounted in said socket, a battery in the container, a contact plug mounted in said socket electrically connected to said battery, having spring pins to contact with the base of the light bulb, and a clip secured to the lid for engaging over the lamp socket, a tongue on the clip for engaging a slot in said socket, and means whereby said tongue engages said plug, to hold it in fixed position.

4. In an electric lamp, a container portion and a lid portion, a socket, a light bulb having its base in said socket, means for mounting the socket on the lid so as to permit a partial movement thereof, a contact plug, and means for mounting the contact plug in a fixed position on the lid so that it is in contact with the base of the light bulb.

1,190,731. HOLLOW RUBBER ARTICLE AND PROCESS OF PRODUCING SAME. NEIL D. CRAWFORD, Elizabeth, N. J., assignor to The Mechanical Rubber Company, a Corporation of New Jersey. Filed Sept. 29, 1915. Serial No. 53,190. (Cl. 18—56.)

1. The process of making hollow rubber articles consisting of partially vulcanizing rubber sections of the article while maintaining the borders thereof spaced from each other, then assembling the partially vulcanized sections with an intervening strip of vulcanizable rubber therebetween, and then completing vulcanization of the assembled article while maintaining the same externally confined and yieldably pressed outwardly in all directions from the interior.

2. The process of making hollow rubber articles consisting of partially vulcanizing rubber sections of the article while maintaining the borders thereof spaced from each other, then assembling the partially vulcanized sections with an intervening strip of vulcanizable rubber therebetween, and then completing vulcanization of the assembled article with pneumatic pressure upon the inside of the article and with the outside of the article rigidly confined.

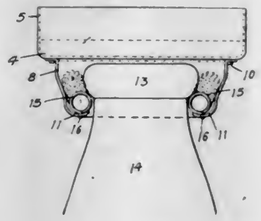
3. The process of making hollow rubber articles consisting of rigidly supporting the exterior and interior of rubber sections of the article with their borders in spaced relation, partially vulcanizing the sections while thus supported, assembling the partially vulcanized sections with a strip of vulcanizable rubber therebetween, and completing vulcanization of the assembled article supported rigidly upon its exterior surface and yieldably pressed outwardly in all directions from its interior.

4. A hollow rubber article comprising body sections and a binder strip integrally united therewith and having a band disposed in contact with the inner surface of meeting sections of the article, and a flange projecting outwardly at an angle from the band and disposed in contact with confronting edges of the sections.

1,190,732. BOTTLE SHELF AND LOCKER. EMIL CHRISTENSEN, Portland, Oreg. Filed July 6, 1915. Serial No. 38,288. (Cl. 232—42.)

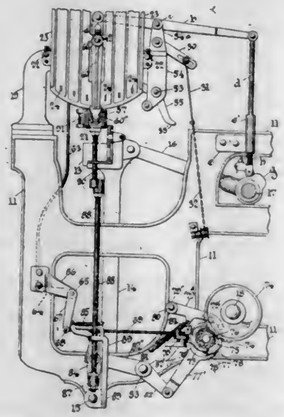
1. A milk bottle lock having means for securing it in the angle of a window or door casing and provided with in-

wardly inclined walls with an opening between them adapted to receive the neck of a bottle, coil springs secured to said walls and partially bridging said opening and adapted to be thrust upwardly when the neck of the bottle is pushed therein, said springs snapping downwardly under the enlarged portion of the neck for locking it in its support, said walls limiting the downward movement of said springs and having an opening on one side through which the bottle may be removed horizontally when the opening is exposed by the opening of the door or window.



2. A bottle lock having means for securing it in the angle of a window or door casing and provided with flaring walls with an opening between them to receive the neck of a bottle, springs secured to said walls and partially bridging said opening and adapted to be pressed upwardly when the neck of a bottle is pushed between them, said springs engaging the enlarged portion of the neck for locking it in its support and held against downward springing movement to release said neck, said walls having an opening on one side through which the bottle may be removed when the passage is exposed by the opening of the door or window.

1,190,733. WEFT-REPLENISHING MECHANISM. RANDOLPH CROMPTON, Chatham, Mass. Filed Apr. 7, 1916. Serial No. 89,612. (Cl. 139—85.)



1. In a loom, a lay, a filling supply mechanism, containing filling carriers of distinctive color or character, a set of shifting shuttle boxes, a single box for the running shuttle adjacent to said filling supply mechanism, means to cause said single shuttle box to be carried above the race of said lay and cause a fresh filling carrier, of proper color or character, to be transferred into said running shuttle and means to discard a filling carrier failing in transfer.

2. In a loom, a lay, a filling supply mechanism, containing filling carriers of distinctive color or character, a set of shifting shuttle boxes, a single box for the running shuttle adjacent to said filling supply mechanism, means to cause said single shuttle box to be carried above the race of said lay and cause a fresh filling carrier, of proper color or character, to be transferred into said running shuttle, and means to dispose of without transfer, a filling carrier failing in transfer when acted upon therefor.

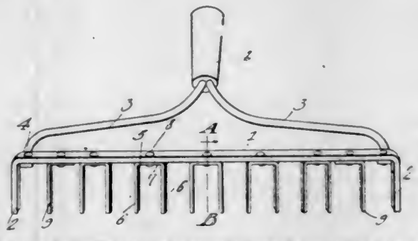
3. In a loom, a lay, a filling supply mechanism, containing filling carriers of distinctive color or character, a set of shifting shuttle boxes, a single box for the running shuttle adjacent to said filling supply mechanism, means to cause said single shuttle box to be carried above the race of said lay and cause a fresh filling carrier, of proper color or character, to be transferred into said running shuttle, and means to eject without transfer, a filling carrier failing in transfer.

4. In a loom, a lay, a filling supply mechanism, containing filling carriers of distinctive color or character, a set of shifting shuttle boxes, a single box for the running shuttle adjacent to said filling supply mechanism, means to cause said single shuttle box to be carried above the race of said lay and cause a fresh filling carrier, of proper color or character, to be transferred into said running shuttle, and means to clear the filling supply mechanism of filling carriers continuing therein because of faulty action in attempted transfer.

5. In a loom, a lay, a filling supply mechanism, containing filling carriers of distinctive color or character, a set of shifting shuttle boxes, a single box for the running shuttle adjacent to said filling supply mechanism, means to cause said single shuttle box to be carried above the race of said lay and cause a fresh filling carrier, of proper color or character, to be transferred into said running shuttle, and means to clear the filling supply mechanism of a filling carrier continuing therein through faulty action in attempted transfer of such filling carrier in a lifting movement of said single shuttle box.

[Claims 6 to 9 not printed in the Gazette.]

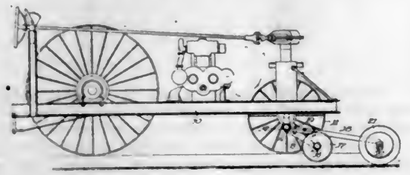
1,190,734. RAKE. WILLIAM CRONK, Montour Falls, N. Y. Filed Feb. 24, 1915. Serial No. 10,337. (Cl. 55—114.)



A rake including a transversely bowed top strip having downturned terminals forming side teeth, transversely bowed metal strips bent to U-shape and having the crown portions seated snugly against the concave face of the top strip, the transversely concaved side portions of the U-shaped metal strips forming teeth, and a single angular fastening device extending through the crown portion of each U-shaped strip and through the top strip, each fastening device being separate from the U-shaped strip and the top strip and having its ends upset to bind the crown portion of the engaged U-shaped strip against the top strip, the contacting faces of the crown portion of the U-shaped strip and of the top strip coöperating to assist the fastening device in holding the U-shaped strip against displacement relative to the top strip.

1,190,735. STEERING DEVICE FOR TRACTORS. DAVID P. DAVIES, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Apr. 19, 1915. Serial No. 22,325. (Cl. 97—S1.)

1. A steering device for tractors, comprising a horizontally movable tractor steering-wheel axle, a vertically movable supporting member connected to said axle, a carrier-wheel mounted upon said support and adapted to travel on unplowed land and carry said device therealong, a forwardly-extending axle connected to said support, and a guide-wheel mounted on said forwardly-extending axle in advance of said carrier-wheel and adapted to travel in a furrow and maintain said carrier-wheel from contact therewith and carry said device therealong.



2. A steering device for tractors, comprising a horizontally movable tractor steering-wheel axle, a vertically movable supporting member connected with said axle, a carrier-wheel mounted upon said support and adapted to travel on unplowed land and carry said device therealong, a forwardly-extending axle connected to said support and having its outer end bent, and a guide-wheel mounted upon said bent axle in advance of said carrier-wheel and adapted to travel in a furrow and maintain said carrier-wheel from contact with said furrow and carry said device therealong.

3. A steering device for tractors, including a horizontally movable tractor steering-wheel axle, a vertically movable carrier-wheel support mounted upon said axle, a carrier-wheel mounted upon said support and adapted to travel on unplowed land and carry said device therealong, a forwardly-extending axle communicating with said support, and a guide-wheel of greater diameter than said carrier-wheel mounted upon said forwardly-extending axle in advance of and in alinement with said carrier-wheel and adapted to travel in a furrow and maintain said carrier-wheel from contact therewith.

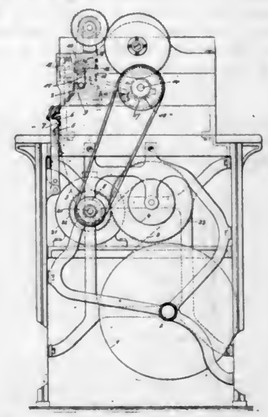
4. A steering device for tractors, including an extended horizontally movable tractor steering-wheel axle, a vertically movable carrier-wheel support mounted upon said axle and laterally adjustable thereon, a stud-shaft on said support, a carrier-wheel mounted upon said stud-shaft and adapted to travel on unplowed land and carry said device therealong, a forwardly-extending axle communicating with said support, and a guide-wheel mounted upon the outer end of said forwardly-extending axle and adapted to travel in a furrow and maintain said carrier-wheel from contact therewith.

5. A steering device for tractors, including a horizontally movable tractor steering-wheel axle extending laterally from said tractor, a vertically movable carrier-wheel support mounted upon and adjustable along said axle, a carrier-wheel mounted upon said support and adapted to travel on unplowed land and carry said device therealong, a forwardly-extending bent axle connected to said support, and a guide-wheel mounted on said forwardly-extending axle in advance of said carrier-wheel and adapted to travel in a furrow and maintain said carrier-wheel from contact therewith.

1,190,736. PERFORATING-MACHINE. HEINRICH DREWELL, Charlottenburg, Germany. Filed Sept. 17, 1913. Serial No. 790,218. (Cl. 164—89.)

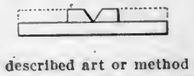
1. In means for making perforated bands for operating automatic type-setting or line-casting machines, the combination, with a step-by-step feeding device for feeding band from a stock roll step by step, of a plurality of continuously driven friction rollers lapped by the band, the action of which friction rollers depends upon the tension of the band caused by the step-by-step feeding device.

2. In means for making perforated bands for the automatic operation of type-setting or line-casting machines, the combination of intermittently driven feed rollers, an escapement device, an eccentric operating said escapement device and driving said feed rollers, a member carrying a stock roll of band, the band passing between said feed rollers and lapping said friction rollers and being adapted



to be transferred by said friction rollers when put under tension by said feed rollers.

1,190,737. ART OR METHOD OF MAKING TRANSFER-ROLLS FOR PRODUCING UNDERSURFACE OR INTAGLIO PRINTING-PLATES. WILLIAM S. EATON, Sag Harbor, N. Y., assignor to American Bank Note Company, a Corporation of New York. Filed Oct. 23, 1913. Serial No. 796,820. (Cl. 204—1.)



1. The herein described art or method of making transfer rolls for producing intaglio or undersurface printing plates, including therein the steps of producing a design in depressed lines upon a master plate, reproducing said design through electro-deposition upon a metallic body capable of being tempered, tempering said body, transferring said design from said body, through pressure, upon a relatively softer body, and tempering said last named body.

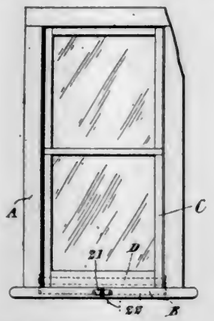
2. The herein described art or method of making transfer rolls for producing intaglio or undersurface printing plates, including therein the steps of producing a design in depressed lines upon a master plate, having a soft, refractory surface, making a metal cast from said master plate, developing an electro-conductive matrix from said cast, using said matrix as a cathode for making a plate through electro-deposition, which will be capable of being tempered, tempering said plate, transferring the design from said plate through pressure upon a relatively softer body, and the tempering of said last named body.

3. The herein described art or method of making transfer rolls for producing intaglio or undersurface printing plates, including therein the steps of producing a design in depressed lines upon a master plate, having a soft, refractory surface, making a metal cast from said master plate, making a wax impression of said cast, electro-depositing copper upon said wax matrix forming, through pressure, a matrix of soft material from said copper matrix, using said last named matrix as a cathode for making a plate through electro-deposition, which will be capable of being tempered, tempering said plate, transferring the design from said plate through pressure upon a relatively softer body, and tempering said last named body.

4. The herein described art or method of making transfer rolls for producing intaglio or undersurface printing plates, including therein the steps of producing a design in depressed lines upon a master plate, having a soft, refractory surface, making a metal cast from said master plate, making a wax impression of said cast, electro-de-

positing copper upon said wax matrix, forming, through pressure, a matrix of lead from said copper matrix, using said lead matrix as a cathode for making a plate through electro-deposition, which will be capable of being tempered, tempering said plate, transferring the design from said plate through pressure upon a relatively softer body, and tempering said last named body.

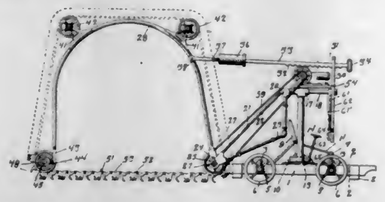
1,190,738. WINDOW FLY-SCREEN. JOHN LUDVIK EDLUND, Claresholm, Alberta, Canada. Filed Feb. 15, 1913. Serial No. 748,753. (Cl. 156—39.)



1. In a window the combination with a window frame having longitudinal grooves in the sides extending upwardly from the bottom and downwardly from the top to near the center thereof, of sashes, spring roller screens carried by the sashes having pintles and the vertical edges of the screens engaging the said grooves, transversely extending entrance grooves communicating with the longitudinal grooves and spring controlled locking means operatively mounted in the frame and designed to coact with the free end of the screens.

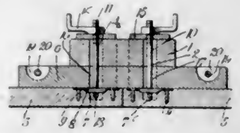
2. In a window the combination with a window frame of a sash, spring controlled screens carried by the sash, a bar forming the end of the screen having a perforation therethrough, a sill having a transverse perforation, a latch bolt located in the transverse perforation having the outer end provided with a thumb piece and the inner end with a notch adapted to engage the perforation in the bar and a spring adapted to normally press the latch bolt inwardly into the said sill.

1,190,739. SAWING-MACHINE. ARTHUR L. EDWARDS, Lewistown, Mont. Filed Oct. 13, 1914. Serial No. 866,514. (Cl. 143—32.)



A sawing machine comprising a rotatably mounted vertically extending post, a pair of downwardly diverging arms connected to the upper ends of said posts and being operable therewith on a horizontal axis, a saw frame pivotally connected to the lower end of one of said arms and arranged to have movement in a vertical plane, a member secured to the other of said arms for adjusting the saw frame in its vertical plane and independent means for adjusting the frame on its horizontal pivot.

1,190,740. CONCRETE-WALL MOLD. CHARLES O. ELBERT, New York, N. Y. Filed July 1, 1911, Serial No. 636,363. Renewed Dec. 17, 1915. Serial No. 67,487. Cl. 25—131.)



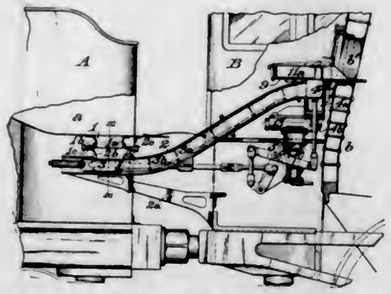
1. A concrete wall mold comprising uprights provided with perforations; mold sections; integral holding means positioned in proximity to the abutting ends of the mold sections; removable fastening means adapted to engage said uprights and said integral holding means; and perforated spacing members positioned intermediate said uprights and said mold sections in a manner to permit the perforations in said spacing members to register with the perforations in said uprights and with said integral holding means to permit the positioning of said fastening means, said fastening means passing through openings in the spacing members.

2. A concrete wall mold comprising uprights provided with alined perforations; mold sections provided with integral holding means in proximity to their abutting ends; spacing members provided with perforations to register with the perforations in said uprights; means engaging said integral holding means and said uprights to secure the elements; and auxiliary means in said spacing members to facilitate the ready withdrawal or re-positioning of said spacing members.

3. In combination, a concrete wall mold comprising spaced uprights provided with openings; mold sections provided with integral holding means in proximity to their abutting ends; spacing members provided with means to register with said openings in said uprights; and means engaging said integral holding means and said uprights to secure the elements, said fastening means passing through the opening in the spacing members.

4. In combination, a concrete wall mold comprising spaced uprights having their body portions intermediate their edges provided with perforations; mold sections having one of their faces provided with integral holding means; spacing members provided with perforations to register with said perforations in said uprights; and removable fastening means passing through said perforations in said uprights and said spacing members and engaging said integral holding means in said mold sections.

1,190,741. MECHANICAL STOKER. ALBERT G. ELVIN, Somerville, N. J. Filed Dec. 30, 1914. Serial No. 879,683. (Cl. 193—11.)



1. The combination, with a locomotive, of a mechanical stoker having a conveyer casing which projects rearwardly from the locomotive sufficiently far for its inlet to be positioned, when in service beneath the fuel storage space of a tender so as to allow independence of motion between the locomotive and tender, and means for supporting the stoker structure, including said conveyer casing, wholly upon the locomotive.

2. The combination, with a locomotive, of a mechanical stoker having a conveyer casing which projects rearwardly from the locomotive sufficiently far for its inlet to be positioned, when in service beneath the fuel storage space of a tender, so as to allow independence of motion between the locomotive and tender, and an upwardly and rearwardly extending bracket, fixed to the framing of the locomotive and supporting the rear end of the conveyer casing.

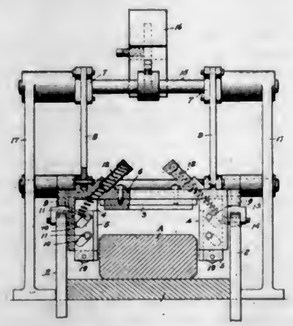
3. The combination, with a locomotive, of a mechanical stoker having a conveyer casing which projects rearwardly from the locomotive sufficiently far for its inlet to be positioned, when in service beneath the fuel storage space of a tender, an upwardly and rearwardly extending bracket fixed to the framing of the locomotive and supporting the rear end of the conveyer casing, and a universal joint supply conduit interposed between the fuel storage space of a tender and the conveyer casing, and free from positive connection with said casing.

4. A mechanical stoker for locomotives, comprising a fuel receptacle, means for feeding fuel therefrom to a locomotive firebox, a conveyer mechanism having a casing leading to a connection with the fuel receptacle and extending rearwardly from the locomotive sufficiently far for its inlet to be positioned, when in service beneath the fuel storage space of a tender so as to allow independence of motion between the locomotive and tender, and means for suporting the stoker structure, including the conveyer casing, wholly upon the locomotive to which it is applied.

5. A mechanical stoker for locomotives, comprising a fuel receptacle, means for feeding fuel therefrom to a locomotive firebox, a conveyer mechanism having a casing leading to a connection with the fuel receptacle and extending rearwardly from the locomotive sufficiently far for its inlet to be positioned, when in service beneath the fuel storage space of a tender so as to allow independence of motion between the locomotive and tender, and an upwardly and rearwardly extending bracket fixed to the framing of the locomotive and supporting the rear end of the conveyer casing.

[Claim 6 not printed in the Gazette.]

1,190,742. BRICKMAKING MACHINERY. ROBERT EMERY, Mount Oliver, Pa. Filed Aug. 27, 1915. Serial No. 47,555. (Cl. 25—101.)



1. In a brick-making machine the combination of a movable clay-carrying table provided with marginal rows of teeth and a die-carrying frame reciprocable to and from engagement with such teeth and movable when such engagement exists in unison with said table.

2. In a brick-making machine the combination with a movable clay-carrying table, a die frame movable transversely of the direction of table advance, opposite dies borne in said frame and movable therein in opposite directions oblique to the direction of frame movement, said dies normally extending beyond said frame and by virtue of such extension engaging said table while said frame is in course of its said transverse movement.

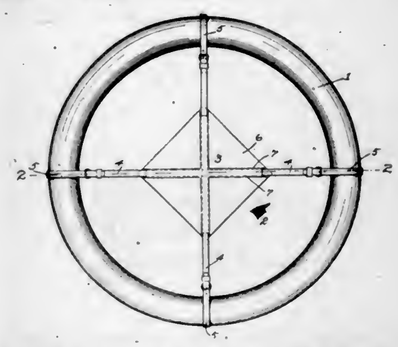
3. In a brick-making machine, the combination of a supporting table, a die-frame movable transversely opposite the surface of said table, opposite slide-ways in said frame extending in the direction of frame movement, dies arranged in said slide-ways, said dies being provided with oblique slots, and pins extending across said slide-ways and through the oblique slots in said dies.

4. In a brick-making machine, the combination with a movable clay-carrying table of a member reciprocable above and in a plane perpendicular to said table, a hanger pivoted to said reciprocable member and a die pivoted to said hanger.

5. In a brick-making machine, the combination of a movable clay-carrying table provided with marginal rows of teeth, a die reciprocable opposite the face of said table into and out of engagement with said teeth, a trigger movable in response to advance of said teeth and means for imparting movement from said trigger to said die.

[Claim 6 not printed in the Gazette.]

1,190,743. AMUSEMENT DEVICE FOR BATHERS. ROLLIE B. FAGEOL, Oakland, Cal. Filed Aug. 17, 1915. Serial No. 45,890. (Cl. 9—17.)



A device of the class described, comprising a rigid annular frame providing a buoyant support, a body supporting frame within the opening in said annular support and comprising flexible intersecting members extending across said openings, with their ends passing around said suporting frame, and detachably secured to the main body portion of their respective members, and a flexible seat carried at the intersection of said members and of a less area than that of the opening in said annular frame, and provided with intersecting channels through which said frame members pass.

1,190,744. INNER TUBE FOR PNEUMATIC TIRES. FRANK FENTON, Akron, Ohio. Filed Jan. 18, 1916. Serial No. 72,753. (Cl. 152—13.)



1. An inner tube for inflatable tires having flattened overlapping ends, one of said flattened ends being pro-

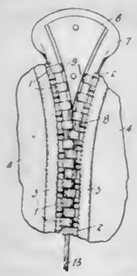
vided with notches in its sides and a band of flexible material engaging said notches and encircling an inflatable portion of the other overlapping end, substantially as described.

2. An inner tube for inflatable tires having flattened overlapping ends with plain exterior surfaces free from projections, one of said ends having a wide flat band of flat rubber vulcanized to the exterior surface thereof and encircling the other end.

3. An inner tube for inflatable tires having end portions with the walls vulcanized together to form flat closed ends, said ends having smooth exterior surfaces and overlapping each other, with the closed part of each end extending beyond and overlying the inflatable part of the adjoining end, and a pair of flat elastic bands encircling said closed ends and the corresponding inflatable parts.

4. An inner tube for pneumatic tires having overlapping closed ends, one of said ends being flattened and adapted to overlie an inflatable portion of the other end and being provided with notched edges, and a flat band of flexible material encircling said overlapping ends and engaging said notches.

1,190,745. FASTENING DEVICE. JOEL BARLOW FESLER, New York, N. Y. Original application filed Aug. 8, 1914, Serial No. 855,743. Divided and this application filed July 9, 1915. Serial No. 38,911. (Cl. 24—207.)



1. A fastening device such as described comprising a plurality of rows of open-sided eyelets adapted to be drawn into approximate registry with the eyelets of one row alternated with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having guide means adapted to engage said eyelets exteriorly and thereby to guide such eyelets convergently over such stem, or divergently away from such stem, according to the direction of motion of such threading device with reference to the two rows of eyelets.

2. A fastening device such as described comprising a plurality of rows of open-sided eyelets adapted to be drawn into approximate registry with the eyelets of one row alternated with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having laterally extending guide flanges adapted to engage such eyelets exteriorly and thereby to guide such eyelets convergently over such stem, or divergently away from such stem, according to the direction of motion of such threading device with reference to the two rows of eyelets.

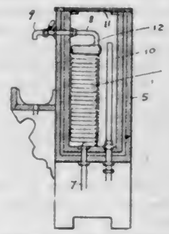
3. A fastening device such as described comprising a plurality of rows of open-sided eyelets adapted to be drawn into approximate registry with the eyelets of one row alternated with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having guide means adapted to engage said eyelets exteriorly and thereby to guide such eyelets convergently over such stem, or divergently away from such stem, according to the direction of motion of such threading device with reference to the two rows of eyelets, said guide means flaring outwardly at the upper or larger end of the threading device to facilitate the passage of the eyelets into the spaces inclosed by such guiding means.

4. A fastening device such as described comprising a plurality of rows of open-sided eyelets adapted to be drawn into approximate registry with the eyelets of one row alternated with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having laterally extending guide flanges adapted to engage such eyelets exteriorly and thereby to guide such eyelets convergently over such stem, or divergently away from such stem, according to the direction of motion of such threading device with reference to the two rows of eyelets, said guide flanges flaring outwardly at the upper or larger end of the threading device, to facilitate the passage of the eyelets into the spaces inclosed by such guide flanges.

5. A threading device for fastening devices such as described, comprising a wedge-shaped member having a stem at its smaller end, and having laterally projecting guiding means inclosing guide passages adapted to receive eyelets and to guide the same toward or from such stem.

[Claims 6 to 9 not printed in the Gazette.]

1,190,746. COOLING-COIL PROTECTOR. TILLMANN P. FLIEGENSCHMIDT and LOUIS V. PRINZLER, Indianapolis, Ind. Filed Sept. 30, 1915. Serial No. 53,335. (Cl. 62—147.)



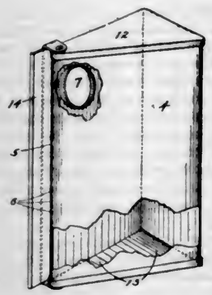
1. In an ice-box having a pipe formed in a spiral coil through which a liquid is passed to be cooled, a guard supported entirely by the coil, said guard being in the form of an annulus having an underside channel which receives the top convolution with a close fit against its top by conforming to the spiral shape of said convolution, and receives part of the next lower convolution and is soldered to the latter.

2. In an ice-box having a pipe formed in a spiral coil through which a liquid is passed to be cooled, a guard supported entirely by the coil, said guard being in the form of an annulus having an underside channel which receives the top convolution with a close fit against its top, and receives part of the one below and is soldered to the latter, the channel being shaped to fit close against the top of the top convolution, the outer walls of the guard tapering upwardly to a central line extending longitudinally of the annulus.

1,190,747. WINDOW-CLEANING AND SPRINKLING DEVICE. CARL H. FLODINE, Chicago, Ill. Filed Jan. 8, 1912. Serial No. 670,120. (Cl. 15—59.)

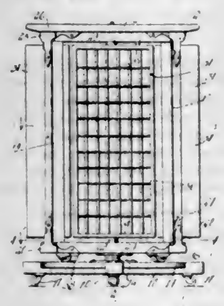
1. A squeegee consisting of a triangular shaped prism having thin, flexible, converging side walls adapted to be compressed by the hand, a series of openings in the meeting edge of said walls, of such small size as normally to prevent water leaking through, but adapted to direct water in a series of fine streams, when said sides are compressed.

2. A device of the character described comprising a triangular shaped prism having a covered opening through which fluid may be introduced, and having a rounded edge provided with minute perforations, the converging side walls which meet at said rounded edge, being made of thin flexible metal adapted to be squeezed inwardly by hand to expel said fluid through said perforations, and a layer of fabric and absorbent material covering said perforations.



3. A device of the character described comprising a triangular shaped prism having a covered opening through which fluid may be introduced, and having a rounded edge provided with minute perforations, the converging side walls which meet at said rounded edge, being made of thin flexible metal adapted to be squeezed inwardly by hand to expel said fluid through said perforations, a layer of absorbent material covering said perforations, and a squeegee pivoted to the end walls of the device and normally lying flat against one of said side walls out of the way of said rounded end, but adapted to swing outwardly and project beyond said end.

1,190,748. PHONOGRAPH-RECORD CABINET. CHARLES D. FREEMAN, Lockport, N. Y. Filed June 5, 1913. Serial No. 771,946. (Cl. 45—2.)



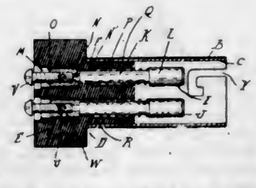
A phonograph record cabinet comprising a base, a rotatable frame mounted thereon and formed of cross bars and connecting strips, a plurality of vertically disposed posts secured at their lower ends to said frame and having a top secured to their upper ends, and a plurality of independently rotatable sections pivotally mounted in the connecting strips and top respectively, and having record receiving compartments opening from the opposite sides thereof, whereby access to all of the compartments can be had from a single point at one side of the cabinet.

1,190,749. FENCE-POST. JOHNATHAN R. FREEZE, Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Filed May 15, 1916. Serial No. 97,539. (Cl. 256—54.)

A metallic fence-post consisting of a tube formed by bending a single piece of sheet-metal to produce a longitudinal joint at the front of the post, the edges of the metal at the joint projecting into the interior of the tube and being angularly bent sidewise of the joint, perforations being provided in the front of the tube at each side of the joint in front of the flanges formed by the angular bending of the edges of the metal, substantially as set forth.



1,190,750. PLUG. CHARLES E. GODLEY, Detroit, Mich., assignor, by mesne assignments, to Edmunds & Jones Corporation, New York, N. Y., a Corporation of New York. Filed June 28, 1913. Serial No. 776,261. (Cl. 173—328.)



1. In a plug, the combination with a lamp-bulb engaging portion, of an insulating core operatively connected thereto and provided with an opening extending longitudinally therethrough, a contact member extending through said opening a spring sleeved upon the contact tending to yieldably retain one end of the contact within the lamp-bulb engaging portion, and a lead-attaching section fixedly connected to the contact to move as a unit therewith and constituting a stop to limit displacement of the contact into the lamp-bulb-engaging portion.

2. In a plug, the combination with a sleeve having a lamp bulb engaging portion, an insulating core having a section arranged within the sleeve and operatively connected thereto, said core being provided with an aperture and with alining bores upon opposite sides of said aperture, a contact comprising a shank slidably engaging said aperture, a head upon one end of the shank projecting within the lamp bulb engaging portion, a spring arranged within one of the bores and sleeved upon the shank, the ends of said springs respectively engaging the base of said bore and said head, and a lead-attaching section arranged within and slidably engaging the other bore, said lead-attaching section including a clamping member accessible through the last-mentioned bore.

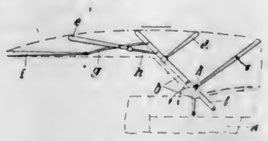
3. In a plug, the combination with a sleeve provided with a lamp bulb engaging portion, of an insulating core having a section arranged within said sleeve and provided with a portion arranged therewithout, a contact carried by said core having its forward end arranged within said lamp bulb engaging portion, a spring exerting a forward pressure on said contact, as a whole, a terminal-engaging section carried by the rear end of said contact and arranged within said core, and a terminal chamber extending laterally through said core in operative relation to said terminal-engaging section.

4. In a plug, the combination with a sleeve provided with a lamp bulb engaging portion, of an insulating core having a section arranged within said sleeve and provided with a portion arranged therewithout, a spring-pressed contact carried by said core having its forward end arranged within said lamp bulb engaging portion, a terminal-engaging section carried by the core and arranged therewithin, a chamber extending laterally through said core in operative relation to said terminal-engaging section, and a clamping member carried by the terminal-engaging section accessible through the end of said core.

5. In a plug, the combination with a sleeve having a lamp bulb-engaging portion, of an insulating core having a portion projecting into said sleeve, contact members extending through said insulating core longitudinally of the sleeve and having portions projecting into the bulb-engaging portion theerof, terminals arranged within the insulating core exterior to the sleeve, respectively connected with said contact members, and clamping members accessible through the outer end of the core engaging the terminals, said end being formed with laterally opening chambers for the engagement of conductors with the terminals.

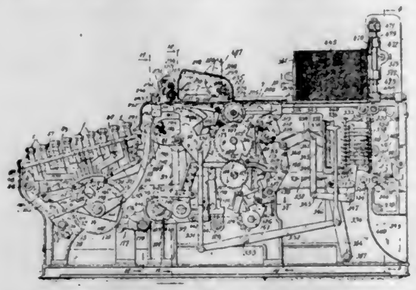
[Claims 6 to 8 not printed in the Gazette.]

1,190,751. TOP FOR CONVEYANCES. TRAUGOTT GOLDE, Gera, Germany. Filed Sept. 30, 1913. Serial No. 792,567. (Cl. 21—62.)



A vehicle top comprising an articulated bow having an upper section adapted to support a covering, a pair of lower sections pivoted at their lower ends to the vehicle body, stop hinges between the upper section and the lower sections, said lower sections being adapted to form obtuse angles at said hinges with said upper section, during the unfolded position of the top, and bracing members pivoted at their upper ends to said upper section a distance below the upper end theerof, and at their lower ends to the vehicle body, said bracing members being adapted to be axially alined with said upper section during said unfolded position.

1,190,752. ADDING-MACHINE. HARRY T. GOSS, Rutherford, and JAMES W. BRYCE, Bloomfield, N. J., assignors to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed Dec. 29, 1911. Serial No. 668,423. (Cl. 235—58.)



1. In a machine of the class described, the combination of the following instrumentalities, mechanism for supporting and feeding a printing surface, mechanism for impressing thereon any desired items, mechanism for also impressing thereon characters identifying the different items, and selective punching mechanism for punching holes in a separate card representing by their location on such card the value of an impressed item and also its identifying character.

2. In a machine of the class described, the combination of the following instrumentalities, mechanism for supporting and feeding a printing surface, mechanism for impressing thereon any desired items, mechanism for also impressing thereon characters identifying the different items, selective printing mechanism for punching holes in a separate card, and connections between the item and character identifying mechanism and the selective punching mechanism adapted to cause the latter to move in accordance with the movements of the impressing mechanism, and to punch holes in the card representing by their location thereon the value of an item and its identifying character.

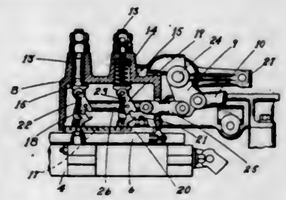
3. The combination of mechanism for supporting and feeding a paper strip, mechanism for recording items thereon, mechanisms for also recording characters thereon identifying different items, and selective punching mechanism for punching holes in a suitable card representing by their location on the surface thereof the value of an item recorded and its identifying character, and controlling devices, manually operated, adapted to control the nature and extent of movement of the recording mechanism and the punching mechanism to cause them to record and punch in accordance with the operation of the controlling devices.

4. The combination with mechanism for supporting and feeding a paper strip, mechanism for recording items thereon, mechanism for also recording characters thereon identifying different items, selective punching mechanism for punching holes in a suitable card, representing by their location on the surface of the card the value of an item recorded and its identifying character, and controlling devices, manually operated, adapted to control the nature and extent of movement of the recording mechanism and the punching mechanism and connections between the controlling devices and the recording mechanism and punching mechanism to cause them to record and punch in accordance with the operation of the controlling devices.

5. The combination of mechanism for supporting and feeding a paper strip, mechanism for recording thereon different items, mechanism for also recording characters thereon identifying different items, and selective punching mechanism for punching holes in separate and removable cards representing by their location on the card the value of an item recorded and its identifying character.

[Claims 6 to 46 not printed in the Gazette.]

1,190,753. UPPER-MOLDING MACHINE. JOSEPH GOULBOURN, ARTHUR BATES, and ARTHUR ERNEST JERRAM, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 18, 1915. Serial No. 62,232. (Cl. 12—97.)



1. In a machine of the class described for shaping the end portions of the uppers of boots and shoes, the combination with molds and wipers for flanging the upper over the top face of a mold, of means for allowing a relative tilting motion between the wipers and the mold by which the relative position of the wipers and the coöperating surface of the mold will be automatically varied in accordance with variations in thickness of different portions of the flange of the upper materials.

2. In a machine for shaping the upper materials of an end portion of a shoe, the combination with inner and outer molds and wipers for forming the margin of the upper materials into a sole attaching flange, of operating means for the molds and the wipers including means to effect compression of the flange in the position to which it is formed and means constructed and arranged to allow relative tilting of the wipers and the mold over which the flange is formed, for the purpose described.

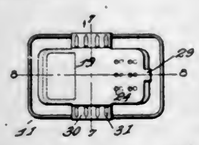
3. In a machine for shaping the upper materials of an end portion of a shoe, the combination with inner and outer molds and wipers for forming the margin of the upper materials into a sole attaching flange, of operating means for the molds and the wipers including means to force the wipers down upon the flange with a compressing action and connections between the wipers and said means permitting the wipers to tilt relatively to said means for adapting their position to variations in the thickness of the flange at different portions of the shoe end.

4. In a machine for shaping the upper materials of an end portion of a shoe, the combination with inner and outer molds and wipers for forming the margin of the upper materials into a sole attaching flange, of operating means for the molds and the wipers including means to force the wipers down upon the flange with a compressing action and connections between the wipers and said means permitting the wipers to tilt transversely of the shoe and also longitudinally of the shoe relatively to said means for adapting their position to variations in the thickness of the flange at different portions of the shoe end.

5. In a machine for operating on the sole attaching flange of a shoe upper, the combination with wipers for turning the flange and means for sustaining the flange, of two wiper supporting members operatively connected together in such manner that the wipers can automatically tilt transversely and longitudinally of the shoe for adaptation of themselves to differences of thickness of different portions of the flange.

[Claims 6 to 14 not printed in the Gazette.]

1,190,754. CONTAINER. FREDERICK HACHMANN, St. Louis, Mo., assignor to Hachmann Specialty Company, a Corporation of Missouri. Filed Aug. 15, 1913. Serial No. 784,915. (Cl. 221—62.)



1. A condiment container, comprising a receptacle having an end closure consisting of a pair of coöperating superposed plates arranged to lie in close surface contact with each other, said closure being provided with an enlarged opening and with a group of sifter perforations normally closed and sealed by the outer closure plate, the inner closure plate being turned over and against the edge of the receptacle for fixedly attaching the closure thereto and forming marginal guiding beads, the said outer plate being provided with edge flanges formed and arranged for engagement with said beads to hold the outer plate in contact with the inner plate and for sliding movement thereover to positions for uncovering either the enlarged opening or the perforations.

2. A container having a top provided with marginal beads and a raised portion having an opening, and a cover slidably mounted on said raised portion for sliding movement thereover to uncover said opening, said cover having laterally projecting wings provided with flanges bearing at the sides of said raised portion and other flanges engaging said beads.

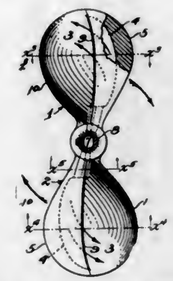
3. A container having a top provided with marginal beads and a raised portion having an opening, and a cover slidably mounted on said raised portion for sliding movement thereover to uncover said opening and having laterally projecting wings provided with flanges engaging said beads for retaining the cover in place.

4. A container having a top provided with marginal beads and a raised portion having an opening, and a cover slidably mounted on said raised portion for sliding movement thereover to uncover said opening and having laterally projecting wings provided with flanges engaging said beads for retaining the cover in place, said flanges being slightly flared relatively at their forward ends.

5. A device of the class described comprising a container having a bead, a longitudinal sliding member constructed with a single sheet of material, the edges thereon being bent downwardly forming flanges, wings formed integral therewith and its edges bent to frictionally contact with said bead, one end of the wings flared partially outwardly.

[Claim 6 not printed in the Gazette.]

1,190,755. METHOD OF PROPULSION FOR VESSELS AND SCREW-PROPELLER FOR EFFECTING THE SAME. JOHN HAHN, Los Angeles, Cal. Filed July 16, 1914. Serial No. 851,417. (Cl. 170—172.)



1. The method of propulsion for vessels, which method comprises discharging fluid under pressure along the median line of the vanes of a propeller so that said fluid will resist the thrust of the rear half of the vanes and will prevent the medium in which the propeller is working from slipping rearward along the fore half of said vanes.

2. The method of propulsion for vessels, which method comprises exhausting the burned gases from an internal combustion engine under their discharge pressure along the median line of the vanes of a propeller at the rear faces of the vanes so that said gases will resist the thrust of the rear half of the vanes and will prevent the medium in which the propeller is working from slipping along the fore half of the said vanes and so as to maximize the power of said engine.

3. In combination a hollow shaft, propeller blades mounted on the shaft and having distributing chambers extending lengthwise from the inner to the outer ends of the blades and extending crosswise from near the receiving fore edges to substantially the longitudinal axes of the blades and having ports opening from the chambers to the bore of the shaft, said chambers being provided at said longitudinal axes with vents opening on the rear faces of the blades so that gases will pass from said chambers to the space at the rear of the rear half of the blades to prevent creation of a partial vacuum adjacent said rear half.

4. The method of propulsion for vessels, which method comprises discharging fluid under pressure along only the median line of the vanes of a propeller at the rear faces of the vanes so that said fluid will resist the thrust of the rear half of the vanes and will prevent the medium in which the propeller is working from slipping rearward along the fore half of said vanes.

5. A screw propeller having vents along only the median line of its blades at the rear faces of said blades.

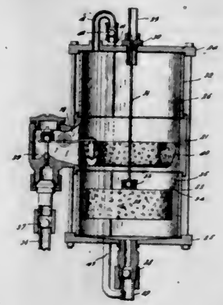
[Claims 6 and 7 not printed in the Gazette.]

1,190,756. METHOD OF MAKING WALL-COATING COMPOUNDS. ROBERT E. HAIKE, Paris, Ontario, Canada. Filed June 7, 1915. Serial No. 32,740. (Cl. 106—34.)

1. The herein described method of making an adhesive compound of animal glue and a base, the latter in the form of a powder, consisting in adding cold glue in stiff, jellied form to the dry powder and agitating and heating said ingredients to mix them together, substantially as described.

2. The herein described method of making an adhesive compound of animal glue and a powder base consisting in mixing the powder and glue together by agitation while heating, said glue, before mixing, being in cold, stiff, jellied form having incorporated therewith substantially one and one-quarter times its weight of water, substantially as described.

1,190,757. FUEL-FEED SYSTEM. HARRY W. HAMILTON, Indianapolis, Ind. Filed Feb. 28, 1916. Serial No. 80,806. (Cl. 158—36.)



1. In combination, a liquid chamber having connections to a source of vacuum, to a supply of liquid, and to a device which is to be supplied with such liquid, check valves in said last two connections for preventing flow of liquid from and to said liquid chamber respectively, and float-controlled valves controlled by the liquid level in said chamber for controlling the first and second of said connections respectively, the float-controlled valve controlling said first connection operating at a lower liquid level than the float-controlled valve controlling the second connection.

2. In combination, a liquid chamber having connections to a source of vacuum, to a supply of liquid, and to a device which is to be supplied with such liquid, and float-controlled valves controlled by the liquid level in said chamber for controlling the first and second of said connections respectively, the float-controlled valve controlling said first connection operating at a lower liquid level than the float-controlled valve controlling the second connection.

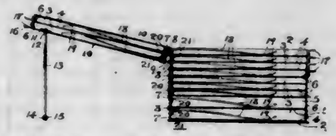
3. In combination, a liquid chamber having connections to a source of vacuum, to a supply of liquid, and to a device which is to be supplied with such liquid, check valves in said last two connections for preventing flow of liquid from and to said liquid chamber respectively, and float-controlled valves controlled by the liquid level in said chamber for controlling the first and second of said connections respectively.

4. In combination, a liquid chamber having connections to a source of vacuum, to a supply of liquid, and to a device which is to be supplied with such liquid, and float-controlled valves controlled by the liquid level in said chamber for controlling the first and second of said connections respectively.

5. In combination, a liquid chamber having connections to a source of vacuum, to a supply of liquid, and to a device which is to be supplied with such liquid, and float-controlled valves controlled by the liquid level in said chamber for controlling the first and second of said connections respectively, both said float-controlled valves closing upon rise and opening upon fall in the liquid level in said liquid chamber.

[Claims 6 to 18 not printed in the Gazette.]

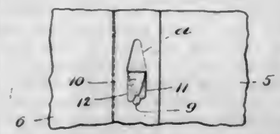
1,190,758. SHEET-RECEIVING CABINET. FRANK S. HAND, Newark, N. J. Filed Feb. 19, 1915. Serial No. 9,282. (Cl. 45—2.)



1. A cabinet of the character set forth, comprising a base-plate, a plurality of sheet-receiving receptacles normally stacked upon said base-plate and one upon the other, so that each next-upper receptacle will act as a closure for the next-lower receptacle, a lid for closing the uppermost receptacle, means of pivotal connection between the lid and the uppermost receptacle, means of pivotal connection between the adjacently disposed receptacles, all arranged so that the said lid and any one or more of said receptacles may be brought into their opened and stacked reversed relation at one side of the cabinet when thus opened, and a bail pivotally connected with said lid, said bail serving as a support for the opened receptacles and being adapted to embrace the said receptacles when stacked in their closed relation.

2. A cabinet of the character set forth, comprising a base-plate, a plurality of sheet-receiving receptacles normally stacked upon said base-plate and one upon the other, so that each next-upper receptacle will act as a closure for the next-lower receptacle, a lid for closing the uppermost receptacle, means of pivotal connection between the lid and the uppermost receptacle, means of pivotal connection between the adjacently disposed receptacles, all arranged so that the said lid and any one or more of said receptacles may be brought into their opened and stacked reversed relation at one side of the cabinet when thus opened, a bail pivotally connected with said lid, said bail serving as a support for the opened receptacles and being adapted to embrace the said receptacles when stacked in their closed relation, and a retaining member connected with said bail, said retaining member being adapted to be brought into separable holding engagement with said base-plate.

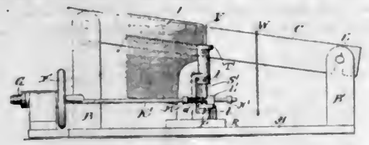
1,190,759. SHEET-METAL JOINT. JAMES B. HARRINGTON, Dorchester, Mass., assignor to The Waverly Heating and Supply Company, a Corporation of Massachusetts. Filed May 17, 1915. Serial No. 28,732. (Cl. 29—187.)



1. The sheet metal joint comprising a series of folded and interengaged sheet metal members having a slot cut therethrough, said slot having at one end a series of superposed tongues integral with said sheet metal members, the tongues of certain of said members extending through said slot and bent away from said slot.

2. The sheet metal joint comprising a series of folded and interengaged sheet metal members having a slot cut therethrough, said slot having at one end a series of superposed tongues integral with said sheet metal members, the tongues of certain of said members extending through said slot and bent away from said slot, the tongues of the intermediate members spread laterally from the tongues of the upper and lower members.

1,190,760. MECHANISM FOR CONTROLLING OR RELEASING AND FEEDING INDEPENDENT, DETACHED HEDDLES. EDGAR F. HATHAWAY, Boston, Mass., assignor to American Warp-Drawing Machine Company, Boston, Mass., a Corporation of Maine. Filed Dec. 12, 1904. Serial No. 236,431. (Cl. 139—94.)



1. The combination with a series of independent heddles characterized by regular, alternate, exterior, linear variation of the members of the series, means for holding said series and releasing or disengaging means coöperating with the alternate, exterior linear variation of the members of the series adapted regularly and alternately to reciprocate with relation to the alternate members of said series, and to release or disengage said members from the series.

2. The combination with a series of independent heddles characterized by regular, alternate, exterior, linear variation of the members of said series, means for causing the feeding of said series to releasing or disengaging means, and releasing or disengaging means coöperating with the alternate, exterior, linear variation of the members of the series adapted regularly and alternately to reciprocate with relation to the alternate members of said series, and to release or disengage said members successively from the series.

3. The combination with a series of independent heddles characterized by regular, alternate, exterior, linear variation of the members of said series, means for holding said series, and a pair of vibratory or oscillating releasing fingers coöperating with the alternate, exterior linear variation of the members of the series adapted to reciprocate alternately with relation to the members of said series, together with means for actuating said releasing fingers and causing the successive release and disengagement of the members of the series.

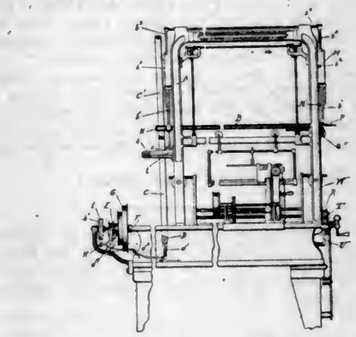
4. The combination with a series of independent heddles characterized by regular, alternate, exterior, linear variation of the members of said series, means for causing the feeding of said series to releasing or disengaging means, and a pair of vibratory, oscillating, releasing fingers coöperating with the alternate, exterior linear variation of the members of the series adapted to reciprocate alternately with relation to the members of said series, together with means for actuating said releasing fingers and causing the successive release or disengagement of the members of said series.

5. The combination with a series of independent heddles characterized by regular, alternate, exterior, linear variation of the members of said series, means for holding said heddles in compact series arrangement, and means coöperating with the linear variation of the members of said series for releasing the heddles singly and successively therefrom.

[Claims 6 to 12 not printed in the Gazette.]

1,190,761. SHIFTING MECHANISM FOR POWER-DRIVEN MACHINES AND MEANS FOR SIMULTANEOUSLY APPLYING A BRAKE. EDGAR F. HATHAWAY, Boston, Mass., assignor to American Warp-Drawing Machine Company, Boston, Mass., a Corporation of Maine. Filed Mar. 30, 1906. Serial No. 308,905. (Cl. 139—94.)

1. In a warp drawing machine the combination with a warp support and drawing-in devices of shifting devices for the driving mechanism, means connecting the shifting devices with a brake for the machine by which the operation of the shifter to release the power will apply the brake and means which automatically release the brake without applying the power.



2. In a warp-drawing machine, a shifter-rod supported on pivoted arms upon which the rod may be raised and lowered, means upon the rod which engage and are adapted to slide upon the shifter lever, by which that lever may be operated in any position of the shifter-rod.

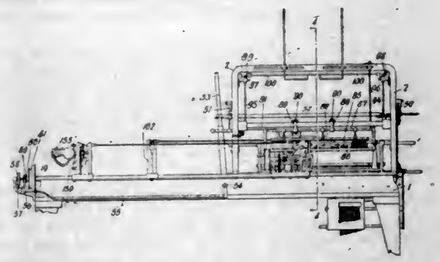
3. In a warp-drawing machine, a shifter-rod normally in engagement with the shifter-lever and adapted to be raised and lowered in its horizontal position, and means to engage and retain the rod in its raised position.

4. In a warp-drawing machine, a shifter-rod adapted to be raised and lowered in its horizontal position, means upon the rod which are adapted to slide upon the shifter-lever and engage it in any position of the rod, and means to retain the rod in its raised position.

5. In a warp-drawing machine, a shifter-rod supported on pivoted arms upon which the rod may be raised and lowered in its horizontal position, other pivoted arms secured to a transverse rod and respectively connected with the shifter-rod supports and adapted to move in unison therewith, and means upon the shifter-rod which are adapted to slide upon the shifter-lever and to engage that lever in any position of the shifter-rod.

[Claims 6 to 18 not printed in the Gazette.]

1,190,762. MECHANISM FOR OPERATING UPON METALLIC HEDDLES OR THE LIKE. EDGAR F. HATHAWAY and CHARLES D. LANNING, Dorchester, Mass. Filed May 9, 1907. Serial No. 372,729. (Cl. 139—94.)



1. Mechanism for operating upon metallic heddles or the like comprising heddle holding means, means to compact said metallic heddles in a series with a portion of each heddle deflected from the normal plane thereof.

2. Mechanism for operating upon metallic heddles or the like comprising means to suspend heddles in a series and means to bend the entire series.

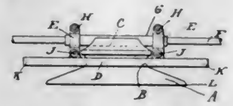
3. Mechanism for operating upon metallic heddles or the like comprising means to support the heddles in a series, and means simultaneously to bow the entire series of heddles while so supported.

4. Mechanism for operating upon metallic heddles or the like comprising means to suspend a series of heddles, means to bow said heddles from the normal plane of suspension, means to separate the leading heddle from the series, and means to move the series of heddles oppositely to the direction of release of the leading heddle.

5. Mechanism for operating upon independent heddles or the like comprising means to support such heddles in a plurality of series, pattern mechanism, and means controlled by said pattern mechanism to operate upon individual heddles of said series and move the same upon the support.

[Claims 6 to 83 not printed in the Gazette.]

1,190,763. INSULATOR-CLAMP. EDWIN G. HATCH, New York, N. Y., assignor to Clark Electric and Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Aug. 9, 1913. Serial No. 783,993. (Cl. 173—313.)



1. An insulator clamp comprising two clamping members having jaws clamping to the conductor and both having body portions encircling the insulator neck adapted to be secured thereon, said body portions of the clamping members both having separate and independent extension members connected directly thereto adjacent the said jaws and extending longitudinally of the conductor out of contact therewith beyond the periphery of the insulator.

2. An insulator clamp comprising two clamping members having jaws clamping to the conductor and both having body portions encircling the insulator neck and adapted to be secured thereon, said body portions of the clamping members both having separate and independent extension members extending outwardly beyond the periphery of the insulator longitudinally below the conductor and out of contact therewith, to protect the conductor from the injurious effects of arcs which may form to ground.

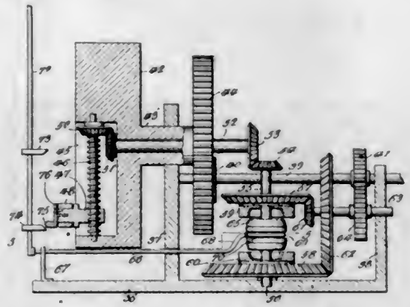
3. An insulator clamp comprising two clamping members having body portions and jaws, said jaws clamping to the conductor, and the body portions encircling the insulator neck and adapted to be secured thereon, said body portions both being provided with separate and independent extension members, extending longitudinally below the conductor out of contact therewith and beyond the insulator to which the clamp is secured, to protect the conductor from the injurious effects of arcs which may form to ground.

4. An insulator clamp comprising two clamping members clamping to the conductor and both encircling the insulator neck and adapted to be secured thereon, said clamping members both having extension members extending longitudinally above and below the conductor, the lower extension members projecting beyond the insulator to protect the conductor from the injurious effects of arcs which may form to ground.

5. An insulator clamp comprising two clamping members both encircling the insulator neck and adapted to be secured thereon and having jaws for clamping to the conductor, connecting members connecting the jaws above the conductor, and extension members connected directly to both of the clamping members and extending longitudinally below the conductor beyond the plane of the periphery of the insulator.

1,190,764. SPEED-CHANGING DEVICE. LYSLE L. HAZEN, Beaver Falls, Pa., assignor of one-half to Earl A. Hazen, Beaver Falls, Pa. Filed Aug. 14, 1914. Serial No. 856,863. (Cl. 74—53.)

1. In a machine of the character described a frame including a bearing standard, a disk provided with a stub shaft rotatably supported by said bearing standard, a rotatable shaft extending through said stub shaft into a pocket formed in the outer face of said disk, a screw rotatably mounted in said pocket, a pin mounted upon said screw, gears connecting said shaft and screw whereby said pin may be moved longitudinally upon said screw when said screw is rotated, means for rotating said disk, means for rotating said shaft including a clutch and coöperating gears, and means operated by said pin for automatically moving said clutch from an operative to an inoperative position.



2. A machine of the character described including a support, a disk rotatably carried by said support and provided with a pocket in its outer face, a screw rotatably mounted in said pocket, a finger carried by said screw and movable longitudinally thereon when said screw is rotated, means for rotating said screw including a clutch and coöperating gears, means actuated by said finger for moving said clutch from an operative to an inoperative position, and means for rotating said disk.

3. In a machine of the character described a support, a disk rotatably carried by said support and having a pocket formed therein, a screw rotatably mounted in said pocket, a rotatably mounted driving shaft rotatably carried by said support, gears connecting said driving shaft with said disk, a shaft rotatably carried by said disk and extending into said pocket, gears connecting said second shaft with said screw, a vertical shaft rotatably carried by said support, gears connecting said vertical shaft with said second mentioned shaft, a shaft rotatably carried by said support, gears connecting said driving shaft with said last mentioned shaft, clutch plates rotatably mounted upon said vertical shaft, gears connecting said third shaft with said clutch plates whereby said clutch plates may be independently rotated in opposite directions, a clutch block slidably mounted upon said vertical shaft, shifting means for moving said clutch block into engagement with a selected one of said plates, a pin mounted upon said screw for longitudinal movement thereon, and means extending from said pin for engaging the shifting means of said clutch block to actuate the same and move said clutch block to an inoperative position upon said pin reaching opposite end portions of said screw.

4. A machine of the character described including a rotatably mounted disk, a screw rotatably connected with said disk, a pin mounted upon said screw for longitudinal movement thereon, means for transmitting rotary motion to said screw, said means including a clutch having upper and lower clutch plates rotating in opposite directions, a clutch block slidably mounted between said clutch plates, a rotatably mounted rod, a fork engaging said clutch block and connected with said rod whereby said clutch block may be moved in opposite directions by rotating said rod, a second rod connected with said first mentioned rod whereby said first mentioned rod may be rotated by moving said second rod longitudinally, abutments carried by said second rod, and means extending from said pin for engaging said abutments when said pin reaches opposite end portions of said screw to move said second rod and rotate said first mentioned rod to move said clutch block to an inoperative position.

5. In a machine of the character described a rotatably mounted disk, a screw rotatably connected with said disk, a pin carried by said screw and adapted for longitudinal movement thereon, a shaft for rotating said screw, means for rotating said disk, means actuated by said last mentioned means for transmitting rotary motion to said shaft, said last mentioned means including a rotatable shaft, clutch plates rotatably mounted thereon, a clutch block slidably mounted upon said shaft between said clutch plates, means for moving said clutch block into engagement with a selected one of said clutch plates and including abutments, and means extending from said pin for engaging said abutments to actuate said last mentioned means and cause said clutch block to be moved to an inoperative position.

1,190,765. WATERPROOF VARNISH COMPOSITION AND PROCESS OF MAKING SAME. CHARLES A. HOLLENBECK, Elmhurst, and AARON C. HORN, New York, N. Y. Filed Dec. 30, 1914. Serial No. 879,699. (Cl. 134—26.)

1. The process of making a waterproof varnish which comprises melting a hard varnish resin and heating to render same soluble in a varnish vehicle, cooling to solidify, remelting the solidified product, incorporating with a sulfured drying oil and a drier, and thinning the composite to the consistency of varnish.

2. The process of making a waterproof varnish which comprises melting a hard varnish resin and heating to render same soluble in a varnish vehicle, cooling to solidify, remelting the solidified product, incorporating with sulfured Chinese wood oil and a drier, and thinning the composite to the consistency of varnish.

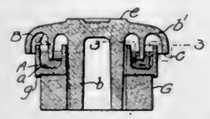
3. The process of making a waterproof varnish which comprises melting a hard varnish and heating to render same soluble in a varnish vehicle, cooling to solidify, remelting the solidified product, incorporating with a sulfured drying oil and a drier, and thinning the composite to the consistency of varnish.

4. In a process of making a waterproof varnish the step which comprises remelting a run resin and incorporating the remelted product with a sulfured drying oil.

5. A varnish product consisting of a light colored siccative composition of the consistency of varnish comprising a remelted, cracked, hard varnish resin, a sulfured drying oil, a drier and a thinning vehicle comprising turpentine.

[Claims 6 to 9 not printed in the Gazette.]

1,190,766. INSULATING-SUPPORT. ALBERT S. HUBBARD, New York, N. Y., assignor to Gould Storage Battery Company, New York, N. Y., a Corporation of New York. Filed Aug. 13, 1913. Serial No. 784,534. (Cl. 173—28.)



1. An insulating support comprising a supporting member of insulating material having a leg of sufficient breadth to rest stably on a supporting base and an integral enlarged head having a broad top face on which an object is adapted to rest, and an annular receptacle for an insulating substance which surrounds said leg under said head and is supported on said base independently of said leg, said enlarged head overhanging said receptacle and having a portion which depends into said receptacle and is adapted to dip into the insulating substance therein.

2. An insulating support comprising a supporting member of insulating material having a leg of sufficient breadth to rest stably on a supporting base and an integral enlarged head having a broad top face on which an object is adapted to rest, and an annular receptacle for an insulating substance which surrounds said leg under said head and is supported on said base independently of said leg, said enlarged head overhanging said receptacle and having depending skirt portions respectively surrounding said receptacle and depending into said receptacle.

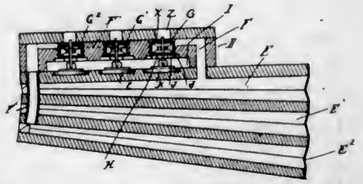
3. On insulator for supporting a substantially downwardly acting load comprising an annular receptacle for an insulating substance, an insulating supporting member of unitary structure having an integral leg extending through the central opening of the receptacle and adapted to rest on a base and an integral enlarged head which overhangs said receptacle and has a portion which depends into said receptacle and dips into said insulating substance, and means independent of said supporting member for supporting said receptacle and constructed to permit the receptacle to be lowered away from said head.

4. An insulator for supporting a substantially downwardly acting load, comprising a receptacle for an insulating substance, an insulating supporting member of unitary structure having an integral leg adapted to rest on a base and an integral part which depends into said receptacle and dips into said insulating substance, and means independent of said supporting member for supporting said receptacle and constructed to permit the receptacle to be lowered away from said depending part.

5. An insulating support comprising an annular receptacle for an insulating substance, a separate supporting member of insulating material which has a supporting leg extending through the central opening of said receptacle and a head which overhangs and forms a cover for said receptacle, and a sectional supporting ring for said receptacle, said receptacle having a depending lip encircling said supporting ring.

[Claims 6 to 8 not printed in the Gazette.]

1,190,767. PNEUMATIC ADJUSTING MECHANISM FOR MUSICAL INSTRUMENTS. VERN L. JONES, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 10, 1913. Serial No. 760,254. (Cl. 84—160.)



1. In a pneumatically-operated musical instrument, the combination with the hammer rest rail, of pneumatic means for differentially adjusting said rail including a plurality of independently collapsible sections, valves controlling the collapsing of said sections, independent ducts leading to said valves, and manually operable means for controlling said ducts comprising a valve block, provided with ports, valves controlling said ports, and a reciprocal plug moving in said block and directly contacting with and controlling said valves.

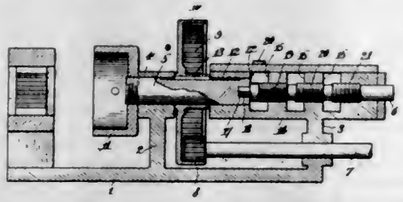
2. In a pneumatically-operated musical instrument, the combination with the hammer rest rail, of pneumatic means for adjusting said rail including a plurality of independently collapsible sections, valves controlling the collapsing of said sections, independent ducts leading to said valves, valves for controlling said ducts, said valves being provided with up-standing lugs in substantial alinement with each other, and means for progressively engaging said lugs.

3. In a pneumatically-operated musical instrument, the combination with the hammer rest rail, of pneumatic means for adjusting said rail including a plurality of independently collapsible sections, valves controlling the collapsing of said sections, independent ducts leading to

said valves, means for controlling said ducts, and means for slightly holding each adjustment of control.

4. In a pneumatically-operated musical instrument, the combination with the hammer rest rail, of pneumatic means for differentially adjusting said rail including a plurality of independently collapsible sections, valves controlling the collapsing of said sections, independent ducts leading to said valves and manually operable means for controlling said ducts comprising a valve block, ports in said block, valves controlling said ports, a reciprocal plug moving in said block and controlling said valves, said plug having spaced notches, and means for progressively engaging said notches.

1,190,768. SELF-STARTING DIE-MACHINE. GEORGE H. JOSLIN, Terre Haute, Ind. Filed June 25, 1915. Serial No. 36,280. (Cl. 10—105.)



1. A threading machine involving a die head spindle, a starting screw for feeding the spindle longitudinally and formed with a threaded section, a split nut for coöperation with said section, and an element coöperating with the outer edges of the split nut for holding said nut in threaded engagement with the threaded section of the screw, said nut sections being formed intermediate their edges to permit engagement by the element to hold the sections spread with relation to the threaded section of the screw.

2. A threading machine involving a die head spindle, a starting screw for feeding the spindle longitudinally, said screw being formed with a plurality of threaded sections, a split nut for coöperation with each section, the sections of the nut being formed with openings, and a stirrup to engage said openings to hold the sections of the nut in spread relation with respect to the screw.

3. A threading machine involving a die head spindle, a starting screw for feeding the spindle longitudinally, said screw being formed with a plurality of threaded sections, a split nut for coöperation with each section, the sections of the nut being formed with openings, and a stirrup to engage said openings to hold the sections of the nut in spread relation with respect to the screw, said stirrup being adapted to be engaged by the outer edges of the nut sections to hold said nut in screw engaging position.

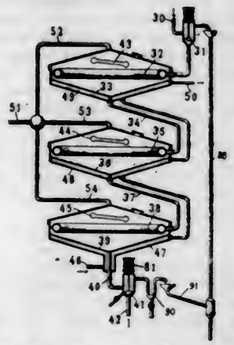
1,190,769. APPARATUS FOR TREATING LIQUIDS. BENJAMIN JURIST, New York, N. Y., assignor to Bryer H. Pendry, trustee. Filed Nov. 27, 1911. Serial No. 662,555. (Cl. 210—1.)

1. Apparatus for treating liquids comprising a treating chamber, a lamp, and electro-magnetically controlled means for regulating the supply and discharge of the liquid in accordance with the operation of the lamp.

2. Apparatus for treating liquids comprising a lamp for emitting ultra violet rays, a chamber for treating the liquid and means for automatically checking the discharge of liquid in case the lamp is extinguished.

3. Apparatus for treating liquids comprising a lamp for emitting ultra violet rays, a chamber for treating the liquid, means for automatically checking the discharge of liquid in case the lamp is extinguished and means for preventing the resumption of discharge in case the lamp is again started.

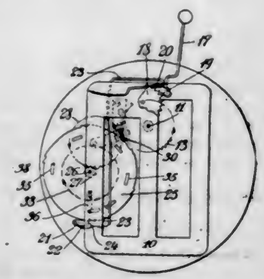
4. Apparatus for treating liquids comprising a lamp, a liquid treating chamber having a discharge outlet and an electro-magnetic device in series with the lamp for controlling the discharge.



5. Apparatus for treating liquids comprising a lamp, a liquid treating chamber having a discharge outlet, an electro-magnetic device in the lamp circuit operating a controlling valve in the discharge and a latch for automatically locking said valve when said valve has been closed and so preventing a resumption of the operation of said valve after the lamp has been once extinguished and before said automatic locking device is released.

[Claims 6 to 8 not printed in the Gazette.]

1,190,770. ALARM-CLOCK. ZOLTÁN KARDOS, New York, N. Y. Filed Nov. 27, 1915. Serial No. 63,750. (Cl. 58—16.)



1. In an alarm clock, the combination with means for sounding an alarm at a predetermined time, of mechanism for effecting a second sounding of the alarm, said mechanism including means settable prior to the first sounding of the alarm for determining the length of time elapsing between the first and second soundings of said alarm.

2. In an alarm clock, the combination with means for sounding an alarm at a predetermined time, of mechanism for effecting a second and third sounding of the alarm, said mechanism including means settable prior to the first sounding of the alarm, for determining the length of time elapsing between two of the soundings of said alarm.

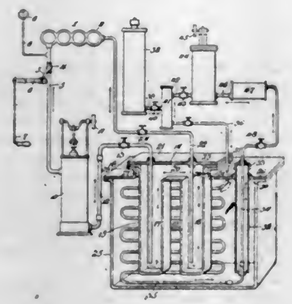
3. In an alarm clock, the combination with means for sounding an alarm at a predetermined time, of means for restraining the operation of the alarm sounding means, controlling means for rendering the said restraining means effective to terminate the sounding of the alarm after a given time period, and for again rendering said restraining means ineffective after another time period to permit the second sounding of the alarm, and means settable prior to the first sounding of the alarm for adjusting said controlling means to thereby vary said last mentioned time period.

4. In an alarm clock, the combination with means for sounding an alarm at a predetermined time, of means for restraining the operation of the alarm sounding means, controlling means for rendering said restraining means effective to terminate the sounding of the alarm after a given time period, for again rendering said restraining means ineffective after another time period to permit the second sounding of the alarm, for again rendering said restraining means effective after another time period to terminate the second sounding of the alarm and for again rendering said restraining means ineffective to permit the third sounding of the alarm, and means settable prior to the first sounding of the alarm for adjusting said controlling means to vary the time period elapsing between two of the soundings of said alarm.

5. In an alarm clock, the combination with means for sounding an alarm at a predetermined time, of means for restraining the operation of the alarm sounding means, controlling means including a cam provided with a plurality of irregularly spaced projections for rendering said restraining means effective to terminate the sounding of the alarm after a given time period, and for again rendering said restraining means ineffective after another time period to permit the second sounding of the alarm, means for setting said controlling means into operation substantially simultaneously with the first sounding of the alarm, and means for adjusting the initial position of said cam to thereby vary said last mentioned time period.

[Claims 6 to 12 not printed in the Gazette.]

1,190,771. COOLING MEANS FOR AUTOMOBILE-ENGINES. ZACHARIAH KEOUGH, Shelby, Ohio. Filed Aug. 28, 1915. Serial No. 47,850. (Cl. 123—170.)



1. A cooling system for explosion engines, comprising a refrigerating tank, refrigerating means connected with the tank, an air tank within the refrigerating tank, and air circulating means connected with the air tank and with the engine to be cooled, whereby air heated by radiation from the engine is directed through the air tank in the refrigerating tank to be cooled before being again directed to the engine.

2. A cooling system for explosion engines, comprising a refrigerating tank with means for maintaining the refrigerating tank in refrigerating condition, an air tank within the refrigerating tank, and a closed circulating system for the air connected with the air tank for directing air from the air tank through the engine to cool the latter and to direct heated air from the engine to the air tank for chilling said heated air.

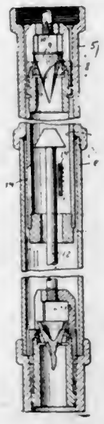
3. A cooling system for explosion engines comprising a brine tank, a refrigerating system connected with the brine tank for maintaining the brine in a chilled condition, an air tank housed in the brine tank, and an air circulating system including cooling jackets for the engine cylinders and opening into and leading from the air tank.

4. A cooling system for explosion engines comprising a brine tank, a refrigerating system connected with the brine tank for maintaining the brine in a chilled condition, an air tank housed in the brine tank, and an air circulating system including cooling jackets for the engine cylinders and opening into and leading from the air tank, said air tank having leg portions in spaced relation with the air entering one leg portion near one end thereof and leaving the other leg portion near that end thereof remote from the part of the first leg entered by the air.

5. A cooling system for explosion engines, comprising a brine tank, refrigerating means for maintaining the brine in a chilled condition, an air tank entering the brine tank and provided with spaced leg portions each having one end closed with the leg portions communicating at the other end, and an air circulating system including cooling jackets for the engine cylinders, said air circulating system opening into the air tank by one leg thereof and leaving it by the other leg at points remote from the junction portions of the legs.

[Claims 6 to 8 not printed in the Gazette.]

1,190,772. PLUNGER-PUMP. DE WITT C. KING, Los Angeles, Cal. Filed July 21, 1913. Serial No. 780,173. (Cl. 103—80.)

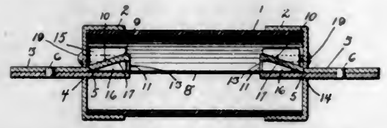


1. In a deep well pump the combination of a pump barrel, composed of a lift section and a filling section, the filling section having a greater diameter than the lift section; a tubular plunger having slots in the side walls thereof near its bottom, said plunger having a working fit in the lift section and a clearance in the filling section; a valve cage secured to and at the top of said plunger; a valve in said valve cage; a pierced tubular plug secured in the bottom of said plunger below the slots therein; a standing valve secured to the bottom of the pump barrel; and a Garbutt attachment secured to said standing valve and having the stem of said attachment passing through the plug in the bottom of the plunger.

2. In a deep well pump the combination of a pump barrel, composed of a lift and a filling section, the filling section having a greater diameter than the lift section; a tubular plunger having slots in the side walls thereof near its bottom, said plunger having a working fit in the lift section and a clearance in the filling section; a valve cage secured to and at the top of said plunger; a valve in said valve cage; a pierced tubular plug secured in the bottom of said plunger below the slots therein; a standing valve secured to the bottom of the pump barrel; and a Garbutt attachment secured to said standing valve and having the stem of said attachment passing through the

plug in the bottom of the plunger, a clearance being provided between the stem and plug for the passage therebetween of liquid.

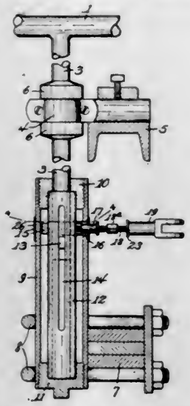
1,190,773. ELECTRIC CARTRIDGE-FUSE. WILLARD R. KOEN, Flat River, Mo. Filed Feb. 24, 1915. Serial No. 10,299. (Cl. 175—273.)



1. In a cartridge fuse, the combination with an insulating barrel having slots in one end thereof, of a cap mounted on said end, a blade extending through said cap and having lugs extending into said slots, a clamping block slidably mounted on said blade, a fusible strip having one end disposed between the sliding block and blade and having its other end secured to the opposite end of the barrel, the said blade having cam faces thereon cooperating with said clamping block to force the same into engagement with the strip and a screw in threaded engagement with the clamping block and extending through the cap to effect the clamping action between the said block and base to maintain the cap upon the end of the barrel.

2. In a cartridge fuse, the combination with a blade having spaced arms extending outwardly from one end of the base thereof, the said arms being provided with inclined portions and portions perpendicular to the base, and a clamping block having a body portion extending between the said arms and wedge-shaped portions arranged to ride beneath the inclined portions of the arms whereby a fusible strip may be clamped between the said clamping block and the base upon the inward movement of the clamping block.

1,190,774. HEADLIGHT-STEERING MECHANISM. ADOLPH KREITZER and ALBERT GOOD, Wheeling, W. Va. Filed Dec. 30, 1915. Serial No. 69,366. (Cl. 240—62.)



1. Headlight steering mechanism comprising, in combination with the frame, spring and steering mechanism of a motor vehicle, a bearing mounted on said frame, a lamp-supporting bracket having a stem pivoted in said bearing and extending downward therefrom, a tubular casing mounted on said spring, a sleeve disposed within said casing and having rotary movement with respect to the latter, said sleeve having a vertical slot therein, said stem being received within and being vertically movable with respect to said sleeve, means carried by said stem and operating in said slot whereby independent rotary movement of said sleeve with respect to said stem is prevented, said casing having a horizontal slot therein, a member rigidly associated with said sleeve and having a portion projected outward through and operable in said horizontal slot, and means interposed between the vehicle steering mechanism and said member whereby turning motion imparted to the former is communicated to the latter.

2. Headlight steering mechanism, comprising, in combination with the frame, spring and steering mechanism of a motor vehicle, a bearing mounted on the frame, a lamp-supporting bracket having a stem pivoted in said bearing and extending downward therefrom, a tubular casing mounted on said spring, a sleeve disposed vertically within said casing and having the lower end of said stem received therein, means interposed between said stem and said sleeve whereby relative rotary movement of said parts is prevented, said casing having a horizontal slot therein extending throughout substantially half of its circumference, means extending through said slot and rigidly connected to said sleeve, a band fastened to said means and encircling said casing, and means connecting the last-mentioned means with said steering mechanism whereby said sleeve is turned with said mechanism.

1,190,775. PROCESS OF COVERING HEELS. IRWIN M. KROHN and MICHAEL J. SULLIVAN, Cincinnati, Ohio. Filed Feb. 7, 1916. Serial No. 76,547. (Cl. 12—147.)



1. In the art of shoe making, the process comprising the steps of lapping the margin of a heel seat cover over a heel seat surface of a lasted shoe and then securing it thereto.

2. In the art of shoe making the process comprising the steps of securing the margin of a heel cover upon a heel seat portion of a lasted shoe upper, the unattached cover portion being folded around the heel portion of the lasted upper, laying and attaching the outsole, attaching the heel upon the outsole heel seat, drawing the unattached portion of the heel cover from the lasted upper over an outer heel surface and securing it thereto.

3. In the art of shoe making the process comprising the steps of nailing the margin of a heel cover to the heel margin of a lasted upper, securing the outsole to the lasted upper parts, securing the heel to the heel seat, and securing the unattached portion of the heel cover to the outer heel surface of the attached heel.

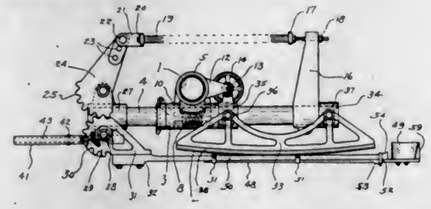
4. In the art of shoe making the process comprising the steps of nailing a heel cover to a non-exposed heel seat portion of a lasted shoe, attaching the heel and securing the unattached cover portion to the outer heel surface.

5. In the art of shoe making, the process comprising the steps of securing a margin of a heel cover to a non-exposed heel seat portion of a lasted shoe, securing an outsole over said cover margin, sectionally assembling and securing a laminated heel upon the heel seat of the outsole and drawing the unattached cover portion around the outer heel surface and securing it thereto to conceal the lift joints and outsole heel seat edge.

[Claims 6 to 9 not printed in the Gazette.]

1,190,776. BASE-BALL-THROWING MACHINE. LEWIS H. LANIER, Newport, Ky., assignor of one-third to Thomas J. Leen and one-third to Charles Koester, Cincinnati, Ohio. Filed Mar. 24, 1915. Serial No. 16,797. (Cl. 124—1.)

1. In a baseball throwing machine, a throwing arm of resilient material, means for actuating said arm, a curved fixed abutment of considerable length to contact with a considerable portion of the outer end of said arm at the end of its actuation, and means for mounting said arm so as to swing sidewise whereby a snapping away of the ball is accomplished.



2. In a baseball throwing machine, a straight throwing arm of resilient material, means for actuating said arm, a curved fixed abutment of considerable length to contact with a considerable portion of the outer end of said arm at the end of its actuation, and means for mounting said arm so as to swing sidewise whereby a snapping away of the ball is accomplished.

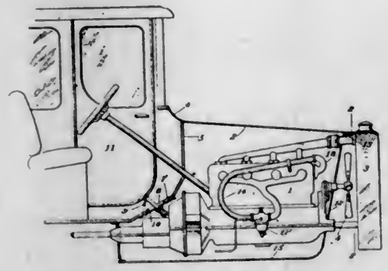
3. In a baseball throwing machine, a straight throwing arm of tough resilient wood, means for actuating said arm, a curved fixed abutment for said arm at the end of its actuation, and means for mounting said arm so as to swing sidewise.

4. In a baseball throwing machine, a throwing arm of resilient material, means for actuating said arm, a curved abutment for said arm, said abutment positioned so as to engage the arm throughout its outer portion at the end of a throw, means for mounting the arm so as to swing sidewise, and a ball holding means on the arm located at the end of the arm.

5. In a baseball throwing machine, a straight throwing arm of tough resilient wood, a curved fixed abutment for said arm, said abutment positioned so as to engage the arm throughout its outer extremity at the end of a throw, means for mounting the arm so as to swing sidewise, and a ball holding means located at the end of the arm.

[Claims 6 to 33 not printed in the Gazette.]

1,190,777. COOLING SYSTEM. NORBERT M. LA PORTE, Baltimore, Md., assignor to The Motor Cooling Systems Company, a Corporation of Maryland. Filed June 15, 1915. Serial No. 34,254. (Cl. 123—171.)



1. In an automobile having an engine, a radiator forward of the engine, a fan directly in the rear of the radiator, on a level with the central portion of the radiator, and between the radiator and the engine for drawing air through the radiator, and a shield between the fan and engine to prevent the passage of the air from the fan into contact with the engine and means serving with the shield to completely inclose the engine and prevent the access of outside air and dirt to the engine.

2. In an automobile having an engine, a radiator forward of the engine, a fan directly in the rear of the radiator, on a level with the central portion of the radiator, and between the radiator and the engine for drawing air through the radiator, a shield between the fan and engine to prevent the passage of the air from the fan into contact with the engine, a hood inclosing the engine, and having a small opening for the admission of air to the hood space, a carbureter, and means for leading air to the carbureter, taking it from a point adjacent the engine casting so that the air supply is drawn over the engine and heated to a substantially constant temperature.

3. In an automobile having an engine, a radiator forward of the engine, a fan for drawing air through the radiator, a shield between the fan and engine to prevent the passage of the air from the fan into contact with the engine, a hood inclosing the engine, a small opening for the admission of air to the hood space, a carbureter, and means for leading air to the carbureter, taking it from a point adjacent the engine casting on the side of that casting opposite the air inlet to the hood.

4. In an automobile, an engine, means for passing cooling water through the engine casting, a radiator for cooling the water, means completely inclosing the engine on all sides and providing a dead air space around the engine, a carbureter taking air from the inclosed space, and openings leading from the hood space to the body whereby the displacement of air to feed the engine ventilates the body.

5. In an automobile, an engine, a hood inclosing the engine on all sides with a small opening only for the admission of air from the car body to supply the engine in running, a carbureter, and an air inlet to the carbureter inside the hood adjacent the engine casting and on the side of the casting opposite the hood inlet opening whereby the air supply for the carbureter is drawn over the engine casting and given a temperature which is substantially constant and unaffected by the variation of the temperature of the outside air and the engine is correspondingly cooled.

[Claim 6 not printed in the Gazette.]

1,190,778. WINDOW-SHADE ADJUSTER. FRANK LEEPER, Los Angeles, Cal. Filed Jan. 12, 1916. Serial No. 71,679. (Cl. 156—27.)



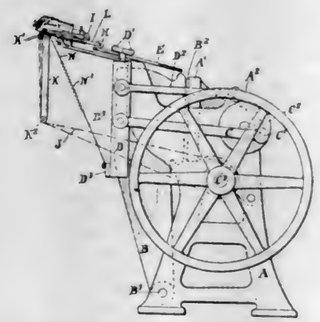
1. In a window shade adjuster, the combination, with pulleys adapted for attachment to a window frame and with a flexible cable provided with means for supporting a window shade, said cable being mounted on said pulleys to adjustably support the shade, of an operating member, and two oppositely extending springs connecting each end of said cable to said operating member to enable the spring tension on the end of the cable in advance of the operating member in either direction of movement to be reduced by the movement of the operating member in elongating the spring at rear of the operating member.

2. Means for operating the flexible cable of a window shade adjuster comprising two oppositely extending springs, each spring being secured to one end of the adjusting cable, and an operating member providing a common base for said oppositely extending springs.

1,190,779. INKING APPARATUS FOR PRINTING-PRESSES. JOHN MCCLURE, Glenside, Pa. Filed Nov. 11, 1912. Serial No. 730,592. (Cl. 101—79.)

1. An inking appliance adapted to be attached to a printing press to supply ink to the ink bed thereof, com-

prising in combination, a frame adapted to be attached to a part of the printing press, a roll journaled in said frame, means for mounting an ink receptacle in said frame, a plunger working in said frame and adapted to engage said ink receptacle and thereby expel ink therefrom against said roll, a movable frame mounted on the said first mentioned frame, a distributing roll mounted in said movable frame and movable with the latter back and forth between one position, in which it contacts with the first mentioned roll and is out of contact with said ink bed, and a second position in which it contacts with said bed and is out of contact with the first mentioned roll, means adapted to connect said movable frame to a movable part of the printing press whereby said frame may be given its to and fro movement, means adapted to connect the first mentioned roll to a movable part of the printing press whereby said roll is given a rotary movement, and mechanism for advancing said plunger, including a pawl and ratchet connection through which the movements of said movable frame are caused to impart a feeding movement to said plunger.



2. An inking appliance adapted to be attached to a printing press of the kind comprising a stationary frame member and a reciprocating presser head member, said inking appliance comprising a frame adapted to be attached to one of said members, a roll journaled in said frame, means for mounting an ink receptacle in said frame, a plunger working in said frame and adapted to engage said ink receptacle, a swinging arm pivotally connected to said frame, guide rolls carried by said swinging arm for a belt adapted to connect said roll to a shaft journaled in the other of said members from that to which said frame is adapted to be attached, and means acting on said swinging arm to hold said belt taut as said two members move relatively to one another.

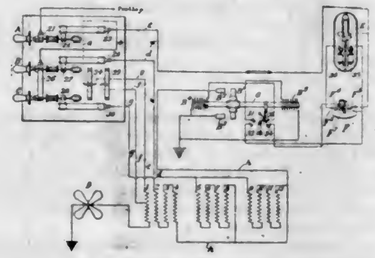
3. An inking appliance adapted to be attached to a printing press comprising in combination, a frame, provisions for secnring it to said press, a roll journaled in said frame, means for mounting an ink receptacle in said frame, a plunger working in said frame and adapted to engage said ink receptacle and expel ink therefrom against said roll, a bracket detachably secured to said frame and guide rolls carried by said bracket for a belt adapted to connect said roll to a shaft of the printing press.

1,190,780. ELECTRIC HEATER. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Mar. 1, 1913. Serial No. 751,536. (Cl. 219—20.)

1. In an indirect heating system, the combination with heating coils in sections of an electric fan motor and a switch for including said fan motor in series with one of said coil sections.

2. In an indirect heating system, the combination with heating coils in sections, a regulating switch for connecting said coil sections in different ways to vary the heating effect, a fan motor in series with one of the coil sections, for driving air over said heating coils and a switch for said fan motor controlling said regulating switch.

3. In an indirect heating system, the combination with heating coils in sections, a regulating switch for connecting said coil sections in different ways to vary the heating effect, a fan motor for driving air over said heating coils and in series with one of said coil sections and a switch for said fan motor controlling said regulating switch.



4. In an indirect heating system, the combination with heating coils in sections of a regulating switch for connecting said coil sections in different ways to vary the heating effect, a fan motor for driving air over said heating coils, and contacts in the circuit of said motor controlled by said regulating switch to vary the air current according to the heating effect.

5. In an indirect heating system, the combination with heating coils in sections, of a regulating switch for connecting said coils in different ways to vary the heating effect, an electric fan motor for driving air over said heating coils, and regulating means for said fan motor controlled by said regulating switch to decrease the air delivery as the heating effect is increased.

[Claims 6 to 11 not printed in the Gazette.]

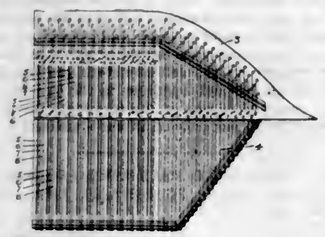
1,190,781. HAND-GRIP PAD FOR STEERING-WHEELS AND THE LIKE. DAVID F. MAHER, Watsonville, Cal. Filed Aug. 18, 1915. Serial No. 46,083. (Cl. 74—33.)



1. In a device of the character described, a pad of spongy rubber and of a length and width to surround as much of the ring portion of the steering wheel of a self-propelled vehicle as is necessary to protect the hand of the driver grasping said steering wheel from direct contact therewith, a flexible covering inclosing said pad, and means for detachably securing the ends of said covering together.

2. In a device of the character described, a pad of spongy rubber and of a length and width to surround as much of the ring portion of the steering wheel of a self-propelled vehicle as is necessary to protect the hand of the driver grasping said steering wheel from direct contact therewith, a flexible covering inclosing said pad having ends reduced in width and spring clasp members secured on the respective ends.

1,190,782. CHORD-STRINGS OF A ZITHER. HENRY C. MARX, Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass., a Corporation of Maine. Filed Aug. 28, 1913. Serial No. 787,154. (Cl. 84—80.)



1. A stringed musical instrument having a plurality of differently tuned groups of chord strings, each group consisting only of strings each having a fixed tone, said strings producing the tonic base, and the tonic, third and fifth tones, to form a complete tonic chord, said groups being tuned and arranged with the groups of strings producing dominant and sub-dominant chords next adjacent the group producing the tonic chord of the same key.

2. A stringed musical instrument comprising a plurality of groups of chord strings, each group comprising a tonic bass string and tonic, third and fifth strings, the bass strings being in the same relative positions in all the groups, said groups being so arranged that the tonic strings of each group form the fifth of one next adjacent group and the fourth of the other next adjacent group of chord strings.

3. A stringed musical instrument comprising twelve groups of chord strings, said groups forming complete independent tonic chords of all the tones of the chromatic scale, and each group comprising a tonic bass and a triad, the bass strings occupying the same relative positions in all the groups, said groups being arranged with the group of strings for the tonic chord of any key immediately next to and located between the groups producing the dominant and sub-dominant chords of the same key.

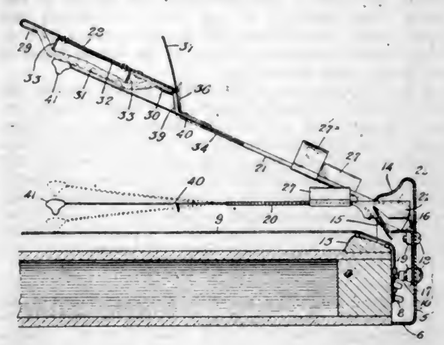
4. A stringed musical instrument having melody strings forming a complete chromatic scale, and twelve groups of strings, each group forming a tonic bass and a complete tonic chord, there being one group for each tone of the chromatic scale, said groups being arranged so that each group forms the tonic chord of one key, the dominant chord for one next adjacent group whose tonic is the fifth of said key, and the sub-dominant chord for the other next adjacent group whose tonic is the fourth of said key.

1,190,783. KEYED ZITHER. HENRY C. MARX, Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass., a Corporation of Maine. Filed Jan. 16, 1915. Serial No. 2,639. (Cl. 84—116.)

1. The combination with a stringed musical instrument, of a bar arranged transversely of the strings, a plurality of movable keys fulcrumed on said bar, each key having spaced stops for engaging said bar to limit the movement of the keys in opposite directions, and a spring hammer carried by each key.

2. The combination with a stringed musical instrument, of a plurality of spring hammers arranged in operative relation to the strings, a plurality of oscillatory keys therefor, and a pivot bar for said keys, said keys being notched and resting upon said pivot bar, the walls of the notches serving to alternately engage said pivot bar and limit the oscillatory movement of the keys in opposite directions.

3. The combination with a stringed musical instrument, of a plurality of spring hammers, a plurality of oscillatory keys for supporting said hammers, each key being notched at its rear end, a pivot bar extending into said notches so that the keys rest thereon, and means for preventing the displacement of said keys from said pivot bar.

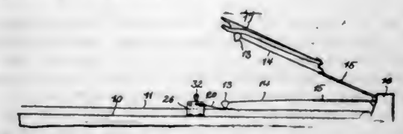


4. The combination with a stringed musical instrument, of a plurality of spring hammers, a plurality of oscillatory keys for supporting and operating said hammers, each key having separated stops, means for supporting said keys, and a stationary member located between said stops to limit the oscillatory movement of said keys.

5. The combination with a stringed musical instrument, of a plurality of spring hammers, a plurality of oscillatory keys for supporting and operating said hammers, each key having separated stops, and a stationary member projecting between said stops to limit the oscillatory movement of said keys, said member constituting a fulcrum for said keys.

[Claims 6 to 34 not printed in the Gazette.]

1,190,784. TONE-SOFTENING ATTACHMENT FOR ZITHERS. HENRY C. MARX, Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass., a Corporation of Maine. Filed Jan. 16, 1915. Serial No. 2,640. (Cl. 84—80.)



1. An attachment for a zither having hammers for striking the strings, said attachment comprising soft flexible sheet material for engaging the strings, a holder for said sheet material, holder-supporting members adapted to be affixed to such instrument, said holder being pivoted in said supporting members to permit said holder to tilt to carry said sheet material from an inactive position to a position to rest loosely upon the strings, and a stop on one of said supporting members arranged to coact with said holder to prevent the latter from touching the strings.

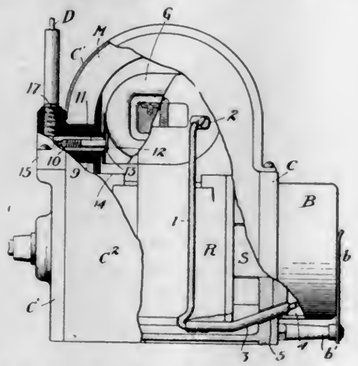
2. An attachment for a zither having hammers for striking the strings, said attachment comprising soft flexible sheet material for engaging the strings, a holder for said sheet material consisting of a strip of sheet metal having a longitudinal bend and coactive clamping wings connected by said bend, one marginal portion of said soft flexible sheet material being arranged between and clamped by said wings, and holder-supporting members adapted to be affixed to such instrument, said holder being pivoted in said supporting members to permit said holder to tilt to carry said soft flexible sheet material into position to rest loosely upon said strings.

3. The combination with a zither having strings and hammers and a sounding-board, of a holder arranged to span a plurality of such strings, and having pinties at the

ends thereof, soft flexible string-engaging material carried by said holder, and fixtures attached to such sounding board and arranged adjacent the ends of said holder and beyond the ends of the hammers, the pintles of said holder being journaled in said fixtures to permit said holder to tilt to carry said soft flexible material from inactive position beyond the paths of the hammers and to rest loosely upon the strings.

4. The combination with a zither having strings and hammers and a sounding-board, of a tone-softening element consisting of soft flexible sheet material, a holder for said tone-softening element, and means fastened to such sounding-board and supporting said holder across said strings and beyond the ends of the hammers, said holder being pivotally mounted to tilt on said supporting means to carry said tone-softening element from a position beyond the paths of such hammers to a position on which the said element rests loosely upon the strings.

1,190,785. IGNITION-DYNAMO. CHARLES THOMAS MASON, Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 25, 1915. Serial No. 4,357. (Cl. 123—149.)



1. In an ignition dynamo, a magnetic field structure, a rotor, a generating coil structure separate from said rotor, means for shifting flux due to a circuit breaker, and a circuit connection between the coil and the circuit breaker inclosed and concealed throughout its entire length.

2. In an ignition dynamo, a magnetic field structure, a rotor, a generating coil separate from said rotor due to a circuit breaker and a conductor extending from a terminal of the coil to a terminal of the circuit breaker, inclosed throughout its entire length, and protected by a rigid envelop against the movement of adjacent mechanical parts.

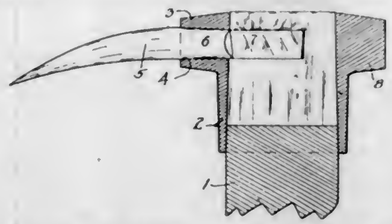
3. In an ignition dynamo, a magnetic field structure, a rotor, a generating coil separate from said rotor due to a circuit breaker, a tube extending from the coil structure into the circuit breaker structure, and a conductor connected at one end to a terminal of the generating coil, passing through said tube, and connected at the other end to a terminal of the circuit breaker.

4. In an ignition dynamo, a magnetic field structure, a generating coil structure, means for shifting flux due to the magnetic field, so as to generate electromotive forces in the coil, a circuit breaker, a mechanical connection between the circuit breaker and the generating coil structure whereby said parts may be angularly displaced around the axis of the flux shifting means for timing purposes, and a conductor extending from one terminal of the generating coil through inclosed portions of the coil structure and the breaker, and connected to a terminal of the latter, said conductor constituting in part a bridge electrically connecting the coil and the breaker and mechanically movable therewith.

5. In an ignition dynamo the combination of the following instrumentalities: field magnets, a rotor composed of permanently polarized elements connected respectively to the poles of said magnets, a generating coil structure having pole pieces adjacent said rotor, a breaker box containing circuit breaking contacts actuated from the rotor shaft, said box lying on the opposite side of one of the field magnet poles from the rotor, a mechanical support for the coil structure with a sleeve connection to the breaker box for simultaneous and angular adjustment, a base supporting the field magnets and associated parts, and a conductor extending from one terminal of the generating coil to a support on the coil structure contiguous to the base, and thence through openings in the base and breaker box, and connected to one of the terminals therein.

[Claims 6 to 22 not printed in the Gazette.]

1,190,786. TOOL-HEAD FASTENER. GEORGE H. MERRITT, Tacoma, Wash. Filed Oct. 26, 1914. Serial No. 868,615. (Cl. 145—79.)



1. In a tool head fastener, the combination with a handle having a slit in its end; of a tool-carrying socket surrounding said end of the handle and having a conical cavity therein, the axis of said cavity being at right-angles to the axis of said socket, and its small end being adjacent said handle; a conical body fitting in said cavity; and a double wedge extending from the small end of said conical body into the slit in the handle and adapted to spread the handle into contact with the socket and to draw the conical body toward the handle and into contact with the cavity walls.

2. In a tool head fastener, the combination with a handle having a slit in its end; of a socket surrounding said end of the handle and having a conical cavity therein extending through the socket walls, the axis of said cavity being at right-angles to the axis of said socket, and its small end being adjacent said handle; a tool; a conical body extending from the tool and fitting in said cavity; and a double wedge extending from the small end of said conical body into the slit in the handle and adapted to spread the handle into contact with the socket and to draw the conical body toward the handle and into contact with the cavity walls.

1,190,787. VOICE AND SOUND RECORDING MACHINE. FRANK EBENEZER MILLER, New York, N. Y. Filed Feb. 9, 1915. Serial No. 7,035. (Cl. 274—35.)



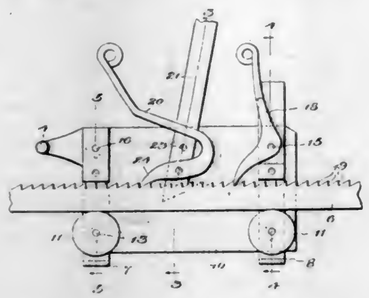
1. In a sound-functioning mechanism, a vibratory medium in the shape of an eccentric cup-shaped diaphragm; and vibration transmitting means coöperating with said diaphragm at the umbo of eccentricity.

2. In sound mechanism, a sound diaphragm having a substantially circular periphery and being cup-shaped with the locality of maximum displacement spaced in substantially the proportion of 3, 4 and 5 from three equi-distant points at the periphery of the diaphragm.

3. In sound mechanism, a diaphragm approximating the shape of the tympanum of the human ear; and a transmitter of vibrations coöperating with said diaphragm at the locality corresponding to the umbo of the human tympanum.

4. In a sound mechanism, an eccentric cup-shaped diaphragm having a volumetric capacity approximating the volumetric capacity of one of the three cavities of the human voice anatomy.

1,190,788. WIRE-STRETCHER. JAMES A. MITCHELL, Magnolia, Ark. Filed Sept. 9, 1915. Serial No. 49,809. (Cl. 254—71.)

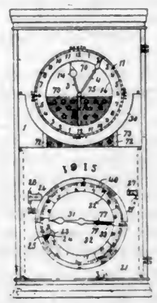


In a wire stretcher, a carriage comprising a pair of spaced apart U-shaped bars, spacing blocks between the free ends of said bars and riveted thereto, a flat plate on the outer face of each pair of bars, a pivot bolt extending through each of said bars adjacent the bottom thereof and through said plates to secure the same in place, an antifriction roller on each of said bolts between the arms of the bars, a clevis, the arms thereof extending across said plates adjacent their upper edges, a ratchet bar slidable on said rollers between the same and said spacing blocks, a pivot bolt extending through the upper end of one of said U-shaped bars and through said plates and the ends of the clevis arms, a retaining gravity catch on said last mentioned pivot bolt between the arms of the U-shaped bar, said catch coöperating with the ratchet teeth, an additional bolt extending through the intermediate portions of the arms of said clevis and through said plates to secure the same together, a forked operating lever, the fork thereof being pivoted intermediate its ends on said last mentioned bolt between said plates, an actuating gravity catch pivoted to said lever between the arms of the fork and below its fulcrum, and a clevis on one end of the ratchet bar.

1,190,789. CALENDAR. ADOLF MORAWSKI, Springfield, Mass. Filed Apr. 17, 1915. Serial No. 22,019. (Cl. 58—5.)

1. In a calendar, a twenty-four hour dial divided into right and left sections of twelve hours each, a clock movement and hands, and means positively operated by said movement in both directions to separate the space outlined by said dial into proportionate day and night parts.

2. In a calendar, a twenty-four hour dial divided into right and left sections of twelve hours each, a clock movement and hands, and a sliding member, positively operated by said movement in both directions to separate the space outlined by said dial into proportionate day and night parts, said member being adapted to indicate on said dial, with the edge thereof that cuts across the same, the times of the rising and setting of the sun.



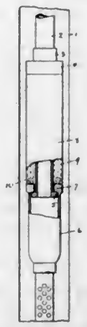
3. In a calendar, an hour dial, a sliding member adapted to separate the space outlined by said hour dial into proportionate day and night parts, a clock movement, and means positively to operate said sliding member in both directions from said clock movement.

4. In a calendar, an hour dial, a sliding member adapted to separate the space outlined by said dial into proportionate day and night parts, a rotary member, connections between said rotary member and said sliding member, a second rotary member provided with means to actuate said first-mentioned rotary member, a clock movement, and means to actuate said second rotary member from said clock movement, whereby said sliding member is positively operated in both directions.

5. The combination, in a calendar, with an apertured dial member, clock-work, and an operating member which travels around with the hour-hand sleeve of said clock work, of a spring-pressed lever arranged with one end in the path of said operating member, and provided at the other end with a pawl, a ratchet-wheel engaged by said pawl, a rotary member, means to actuate said rotary member from said ratchet-wheel, a slide extending into the space behind the aperture in said dial member, and connecting means between said rotary member and said slide, whereby the latter is caused to travel up and down with the slow intermittent motion imparted thereto by said rotary member.

[Claims 6 to 12 not printed in the Gazette.]

1,190,790. WELL-PACKER. FRED JOSEPH MOSER, Kane, Pa. Filed Apr. 16, 1915. Serial No. 21,669. (Cl. 166—10.)



1. A well packer having a rubber body reinforced throughout its circumference by threads extending spirally around the packer, some of the threads being oppositely pitched to others of said threads.

2. A well packer having a rubber body reinforced throughout the circumference by threads having a direction

at an angle to a plane at right angles to the axis of the packer.

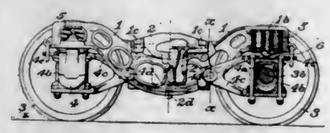
3. A well packer having a rubber body reinforced by threads extending spirally around the packer and permitting circumferential expansion of the rubber as it is contracted endwise.

4. A well packer having a rubber body reinforced throughout its circumference by woven fabric having its threads extending diagonally to the surface of the packer.

5. A well packer having a rubber body reinforced throughout the central portions of the packer by threads having directions permitting circumferential expansion of the rubber as it is contracted endwise and reinforced at the ends by threads extending circumferentially around the packer and preventing circumferential expansion of the packer at its ends.

[Claim 6 not printed in the Gazette.]

1,190,791. CAR-TRUCK. JOHN E. MUHLFELD, Scarsdale, and HERMAN F. BALL, New York, N. Y. Filed Apr. 28, 1915. Serial No. 24,497. (Cl. 105—243.)



1. In a railroad truck, a frame comprising two side members, a transverse connecting member which is supported, without positive connection, on each of the side members upon bearing faces thereon located at substantial distances from the central transverse plane of the truck, and means for detachably, but not rigidly, connecting the transverse member to the side members.

2. In a railroad truck, the combination of two side frame members, each having two bearing faces located at substantial distances from its middle transverse plane; a transom having end faces supported, without positive connection, on said bearing faces and lugs depending from its bottom in its middle longitudinal plane, and means for detachably, but not rigidly, connecting said lugs to the side members.

3. In a railroad truck, the combination of two side frame members, each having two bearing faces located at substantial distances from its middle transverse plane; a transom having end faces supported, without positive connection, on said bearing faces, means for effecting lateral engagement of the transom with the side frame members, with the capacity of flexibility without substantial relative lateral movement, and means for detachably, but not rigidly, connecting the transom to the side frame members.

4. In a railroad truck, the combination of two side frame members, each having two bearing faces located at substantial distances from its middle transverse plane; a transom having end faces supported on said bearing faces; interlocking projections on the transom, laterally engaging the side members, adjacent to said bearing faces; downwardly projecting lips on the transom, adjoining the outer faces of the side members, in the central transverse plane of the truck; lugs depending from the bottom of the transom, in said plane; and pins passing through said lugs and through projections on the inner faces of the side members and detachably connecting the transom and side members.

1,190,792. ANTISPREADING MEANS FOR RAILS. SWAN A. NELSON, Tunnelhill, Pa. Filed Jan. 3, 1916. Serial No. 69,963. (Cl. 238—5.)

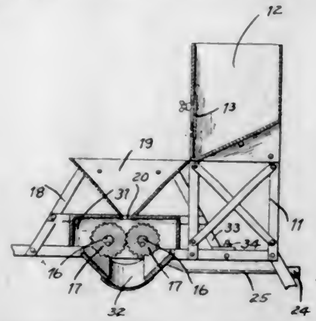
1. In combination with a rail, anti-spreading means therefor comprising an anchor, a bolt pivoted to the anchor, having a screw threaded portion, said rail being provided with an opening, said bolt being movable into and through said opening, and a nut to engage said bolt to complete its fastening to the rail.

2. In combination with a rail, anti-spreading means therefor comprising an anchor, a fastening member pivoted to the anchor, said rail being provided with an opening



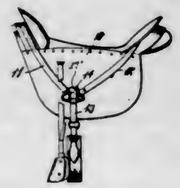
enlarged to permit entrance of the fastening member therein through pivotal movement, and means beyond said opening engageable with the fastening member to prevent return pivotal movement thereof.

1,190,793. FEED-MILL. ORIA W. NOTTINGHAM, Shonkin, Mont. Filed Mar. 24, 1914. Serial No. 826,887. (Cl. 83—12.)



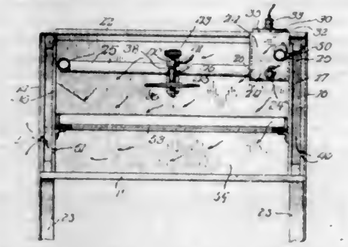
In a grinding mill, a frame, crushing rollers associated with the frame, inverted U-shaped arms having one of their ends pivotally connected to the frame, a hopper supported by the arms and movable therewith, and guard plates fixed to the arms and normally engaged with the ends of the rollers.

1,190,794. CINCH-RING. GEORGE W. PARMETER, Sheridan, Wyo. Filed Oct. 11, 1912. Serial No. 725,277. (Cl. 54—46.)



In combination with a saddle having skirts secured to the sides thereof, a cinch ring having an approximately straight side and an approximately semi-circular side merging into the straight side, a flat plate formed integral with the semi-circular side, the flat plate portion being provided with diagonally disposed arcuate slots and a plurality of cinch accommodating compartments arranged below said slots, supporting straps secured in the said arcuate slots, the said slots being slightly larger than the said straps, and a cinch strap mounted in the center one of said compartments and adapted to be shifted forwardly and rearwardly therein, the said compartments being of the same width as the cinch strap and said ring being provided with an aperture adapted to receive a fastening to secure the ring to the saddle.

1,190,795. INCUBATOR. LOUIS F. PERKETT, Traverse City, Mich. Filed Apr. 1, 1915. Serial No. 18,437. (Cl. 219—35.)



1. In an incubator, the combination of a water circulation tank, water circulation pipes connected with the tank and extending about the incubator, and an electric vacuum heating element supported by the tank for free removal and extending into the tank and immersed in the water therein for heating the latter.

2. In an incubator a water tank, circulation pipes having communication therewith, said tank having an opening through its top, a vacuum heating element adapted to extend into the tank through said opening, and immersed in the water therein and a support for removably holding the said element in position.

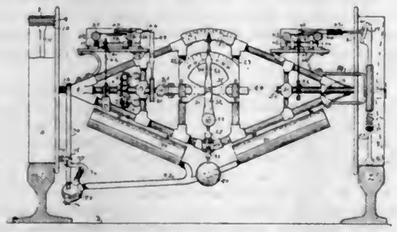
3. In an incubator a water tank, circulation pipes having communication therewith, said tank having an opening through its top, a cover for the tank, said cover embodying spaced elements, and a vacuum heating element supported by the cover to extend into the tank, said cover elements being held assembled by the said heating element.

4. In an incubator a water tank, circulation pipes having communication therewith, said tank having an opening through its top, a hollow cover for the tank, a vacuum heating element supported by the cover to extend into the tank, said element passing through one wall of the cover and engaging the opposite wall thereof, and vent openings leading through the wall of the cover outside on the tank.

5. In an incubator a water tank, circulation pipes having communication therewith, said tank having an opening through its top, a cover for the tank, said cover comprising spaced elements, a socket connected with one of the elements, the other element having an opening therethrough in alinement with the socket, and an electric lamp passing through the opening in one cover element and engaging the socket on the other cover element to draw the cover elements together, said lamp projecting from the cover and extending into the tank.

[Claims 6 to 8 not printed in the Gazette.]

1,190,796. TRACK-GAGE. EFFINGHAM LAWRENCE POLLARD, deceased, Dobbs Ferry, N. Y., by Marion M. Pollard, administratrix, Dobbs Ferry, N. Y. Filed Dec. 27, 1912. Serial No. 738,795. (Cl. 234—8.)



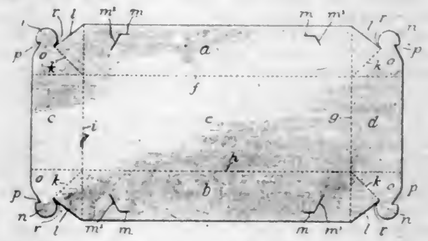
1. A track having a frame and a plurality of traction wheels, a vertically reciprocating means supported by said frame and partly arranged in the line of travel of one of said wheels for indicating and recording the relative height of the rails as herein specified.

2. A track gage having a frame and a plurality of traction wheels, a vertically reciprocating means supported by said frame and partly arranged in the line of travel of one of said wheels and having its uppermost end provided with angularly disposed ways, and a horizontal arm and stylus operated thereby for recording the relative height of the rails as herein specified.

3. A device of the character described comprising a plurality of traction wheels in axial alinement, shafts in said wheel a frame supported by said shafts and means for urging one of said shafts away from the center of said frame in combination with a valve controlled chamber having a valve lever resting upon one of said wheels and adapted to operate said valve upon the movement of said shaft as and for the purpose set forth.

4. A device of the character described comprising a plurality of traction wheels in axial alinement, shafts in said wheels, a frame supported by said shafts and means for retaining said frame in a normally vertical position, a spring operated anti-friction device for urging one of said shafts away from the center of said frame, a plurality of tanks carried by said frame, a valve controlled chamber connected to said tanks and a valve lever resting upon one of said wheels and adapted to operate the said valve upon the movement of the said spring operated shaft as and for the purpose set forth.

1,190,797. KNOCKDOWN PAPER BOX. FRANCIS V. POWELL, Anderson, Ind., assignor to The Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Jan. 5, 1912. Serial No. 669,525. (Cl. 229—35.)



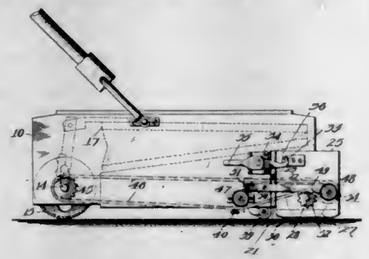
A knockdown box comprising a bottom *c*, side walls *a*, *b*, end walls *c*, *d*, corner folds doubled upon a line *k* diagonal to the angle between the scoring between the bottom and the adjacent side and end walls and folded back against one of said walls, the inner leaf of the corner fold being cut away upon the line *l* extending from the line *k* to the adjacent upper corner of the side wall, the outer leaf of the corner fold being formed with a locking tongue comprising an outwardly directed hook terminating at one edge at the line of fold of the corner fold and projecting over the edge *l* of the inner leaf, the wall against which the corner fold is laid being provided with a slit *m* for receiving the hooked tongue.

1,190,798. PNEUMATIC CARPET-SWEEPER. FRANK J. QUIST, Worcester, Mass. Filed June 26, 1912. Serial No. 705,898. (Cl. 15—60.)

1. In a pneumatic carpet sweeper, the combination with a casing, of a pneumatic suction device carried thereby, wheels for supporting the casing and operatively connected with said suction device for operating it, a nozzle removably mounted on the casing and connected with said suction device, a brush mounted in said nozzle, means supported by the casing for driving the brush, and means for automatically connecting the brush with said brush operating means when the nozzle is applied to the casing.

2. In a pneumatic carpet sweeper, the combination with a casing, of a pneumatic suction device carried thereby, wheels for operating the suction device, a nozzle remov-

ably mounted on the casing and connected with said suction device, a brush carried by said nozzle, a flexible driving member connected with said wheels and supported by the casing, and means carried by said nozzle for operatively connecting said brush with the driving member when the nozzle is in position on the casing.



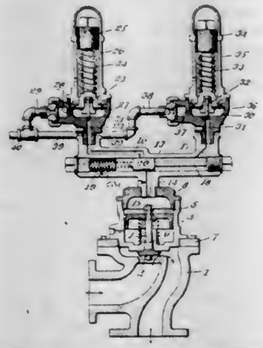
3. In a pneumatic carpet sweeper, the combination with a casing, of a pneumatic suction device carried thereby, wheels for supporting the casing and operatively connected with said suction device for operating it, a nozzle removably mounted on the casing and connected with said suction device, a brush carried by said nozzle, a chain supported by the casing for driving the brush, and a sprocket wheel fixed to the brush for connecting the brush with said chain when the nozzle is applied to the casing.

4. In a pneumatic sweeper, the combination with a casing, of supporting wheels carried thereby, an endless chain supported by the casing and connected with the wheels, a nozzle removably mounted on the casing, a brush carried by said nozzle and having a sprocket wheel normally engaging the outer side of the lower strand of said endless chain, whereby when the nozzle is removed from the casing the sprocket wheel will move out of engagement with the chain and will move into engagement therewith so as to be positively operated thereby when the nozzle is replaced on the casing.

5. In a pneumatic carpet sweeper, the combination of a casing, supporting wheels therefor, a sprocket wheel connected with the supporting wheels, a nozzle removably mounted on the casing, an arm projecting out from the casing over the end of said nozzle and having an idler thereon, an endless chain connecting said idler and sprocket wheel, a brush carried by the nozzle, and a sprocket wheel on the brush meshing with the outerside of the lower strand of said chain.

[Claims 6 to 10 not printed in the Gazette.]

1,190,799. CONTROLLING APPARATUS. DOMINICK H. RENÉ, Birmingham, Ala. Filed May 3, 1915. Serial No. 25,349. (Cl. 103—93.)



1. A pressure fluid operated controlling apparatus comprising a valve cylinder having two inlets spaced apart longitudinally of the cylinder, a valve piston in the cylinder biased to a position closing one of the inlets and controlled by pressure fluid supplied through both inlets, an automatically-closing fluid-operated valve device in control of the piston-controlled inlet of the valve cylinder and openable under a predetermined minimum pressure of fluid supplied to such valve device, a second automatically-closing fluid-operated valve device in control of the other inlet of the valve cylinder and openable under a predetermined maximum pressure of fluid supplied to said second valve device, means for supplying valve-controlling fluid from a common source to both of said valve devices, and means controlled by the valve piston in control of the pressure of the fluid supplied to said valve devices.

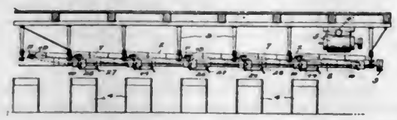
2. A pressure fluid operated controlling apparatus comprising a valve cylinder having an outlet and having two inlets spaced apart longitudinally of the cylinder, a valve piston in the cylinder controlled by the pressure of fluid supplied through both inlets and having a bias toward a position in which it closes one of the inlets, an automatically-closing valve device openable at a predetermined minimum pressure of fluid for supplying such fluid to the piston-controlled inlet of the valve cylinder, a second automatically-closing valve device openable at a predetermined maximum pressure of fluid for supplying such fluid to the other inlet of the valve cylinder, means for supplying fluid at the same pressure from a common source to both of the valve devices, and a controlling device operated by the pressure of fluid supplied from the outlet of the valve cylinder.

3. A pressure fluid operated controlling apparatus comprising a valve cylinder having two inlets spaced apart longitudinally of the cylinder and an outlet adjacent to one of the inlets, a valve piston in the cylinder biased to a position in which it closes the outlet and the adjacent inlet and controlled by the pressure of fluid supplied through both inlets, an automatically-closing valve device openable at a predetermined minimum pressure of fluid for supplying such fluid to the piston-controlled inlet of the valve cylinder, a second automatically-closing valve device openable at a predetermined maximum pressure of fluid for supplying such fluid to the other inlet of the valve cylinder, means for supplying fluid at the same pressure from a common source to both of the valve devices including freely open permanent communication for the passage of such fluid between the valve devices, and means controlled by the pressure of fluid supplied from the piston-controlled outlet of the cylinder in control of the pressure of the fluid supplied to said valve devices.

4. A pump governor comprising a valve cylinder having two inlets spaced apart longitudinally of the cylinder and an outlet adjacent to one of the inlets, a valve piston in the cylinder biased to a position in which it closes the outlet and the adjacent inlet and controlled by the pressure of fluid supplied through both inlets, an automatically-closing valve device openable at a predetermined minimum pressure of fluid for supplying such fluid to the piston-controlled inlet of the valve cylinder, a second automatically-closing valve device openable at a predetermined maximum pressure of fluid for supplying such fluid to the other inlet of the valve cylinder, means for supplying the pumped fluid to both of the valve devices, and means controlled by the pressure of fluid supplied from the piston-controlled outlet of the cylinder in control of the pump-operating motive agent.

5. A pump governor comprising a valve cylinder having an outlet and having two inlets spaced apart longitudinally of the cylinder, a valve piston in the cylinder controlled by the pressure of fluid supplied through both inlets and having a bias toward a position in which it closes one of the inlets, an automatically-closing valve device openable at a predetermined minimum pressure of fluid for supplying such fluid to the piston-controlled inlet of the valve cylinder, a second automatically-closing valve device openable at a predetermined maximum pressure of fluid for supplying such fluid to the other inlet of the valve cylinder, means for supplying the pumped fluid freely to both of the valve devices, and a controlling device operated by the pressure of fluid supplied from the outlet of the valve cylinder in control of the pump-operating motive agent.

1,190,800. COTTON-DISTRIBUTING APPARATUS. GEORGE E. REPASS, Knoxville, Tenn., assignor to H. & B. American Machine Company, Pawtucket, R. I., a Corporation of Maine. Filed June 26, 1914. Serial No. 847,464. (Cl. 193—4.)



1. In a cotton distributing apparatus, the combination of a conveyer comprising a plurality of independently movable sections, driving means therefor, selective means for automatically reversing the direction of movement of said sections, and means for reversing the direction of movement of an individual section independent of the selective means.

2. In cotton distributing apparatus, the combination of a conveyer comprising a plurality of independently movable sections, driving means therefor, and selective means for automatically reversing the direction of movement of said sections.

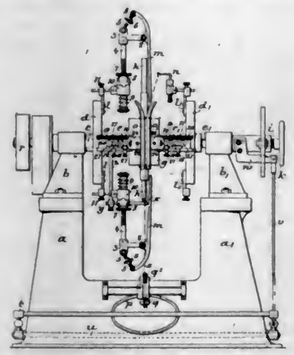
3. In cotton distributing apparatus, the combination of a conveyer comprising a plurality of independently movable sections, driving means therefor, and means for automatically reversing the direction of movement of said sections in any predetermined order.

4. In cotton distributing apparatus, the combination of a conveyer comprising a plurality of independently movable sections, driving means therefor, and selective means for automatically reversing the direction of movement of said sections embodying a plurality of members corresponding in number to the number of sections and differentially movable relative to one another.

5. In cotton-distributing apparatus, the combination of a conveyer comprising a plurality of independently movable sections, driving means therefor, and selective means for automatically reversing the direction of movement of said sections embodying a plurality of differentially-movable members.

[Claims 6 to 17 not printed in the Gazette.]

1,190,801. MACHINE FOR WINDING ARMATURES FOR DYNAMO-ELECTRIC MACHINES. KONRAD RIDOCAR RITTER, Leipzig-Schönefeld, Germany. Filed Aug. 1, 1914. Serial No. 854,528. (Cl. 140—92.2.)



1. In a machine for winding armatures for dynamo-electric machines, of the type in which a holder for the armature and a wire supply spool are rotated relatively to each other about an axis at right angles or substantially at right angles to the armature shaft, a wire guide carried by the armature holder capable of adjustment away from or toward the armature and around or across it, substantially as hereinbefore described.

2. In a machine for winding armatures for dynamo-electric machines, of the type in which a holder for the armature and a wire supply spool are rotated relatively to each other about an axis at right angles or substantially at right angles to the armature shaft, holding cheeks to support the armature and slides mounted thereon carrying wire directing guides capable of adjustment away from or toward the armature and around or across it, substantially as hereinbefore described.

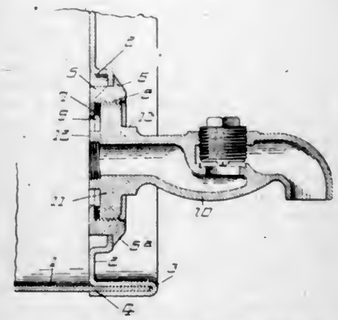
3. In a machine for winding armatures for dynamo-electric machines, of the type in which a holder for the armature and a wire supply spool are rotated relatively to each other about an axis at right angles or substantially at right angles to the armature shaft, holding cheeks to support the armature and slides mounted thereon carrying wire directing guides and stops to determine the movement of said slides, substantially as hereinbefore described.

4. In a machine for winding armatures for dynamo-electric machines, of the type in which a holder for the armature and a wire supply spool are rotated relatively to each other about an axis at right angles or substantially at right angles to the armature shaft, a pivoted and adjustable guiding horn carried by the apparatus to direct the wire out of engagement with the armature shaft, substantially as hereinbefore described.

5. In a machine for winding armatures for dynamo-electric machines, of the type in which a holder for the armature and a wire supply spool are rotated relatively to each other about an axis at right angles or substantially at right angles to the armature shaft, a guide horn to direct the wire out of engagement with the armature shaft, and means for adjusting said guide horn in a direction radial to the axis of the machine, substantially as hereinbefore described.

[Claims 6 and 7 not printed in the Gazette.]

1,190,802. COMBINED BUNG AND FAUCET. SIDNEY ROSENFELD, Cleveland, Ohio. Filed Aug. 15, 1914. Serial No. 856,921. (Cl. 221—24.)

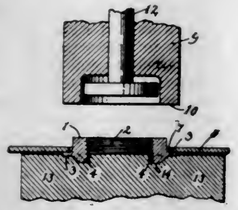


The combination of a bushing threaded internally and having an outwardly projecting attaching flange at one end, and an inwardly projecting flange at its other end, beyond the threaded portion, a reversible faucet having an outwardly projecting base the rim of which is threaded its whole width, whereby said threads may be screwed into the bushing in either direction, and packing between said base and said inwardly projecting flange.

1,190,803. PROCESS OF UNITING BUSHINGS TO METAL BODIES. SIDNEY ROSENFELD, Cleveland, Ohio. Filed Oct. 1, 1914. Serial No. 864,420. (Cl. 29—148.)

1. The method of uniting a metallic body to a surrounding metallic body which consists in inserting the first men-

tioned body into an aperture within the second body and compressing the outer portion only of the first body in the direction of the axis thereof, whereby such outer portion is spread radially and outwardly into engagement with the surrounding body, thereby to form a close connection therewith.



2. The method of uniting a hollow body having a laterally projecting flange with a metal plate which consists in providing the plate with an aperture of greater diameter than the external diameter of the body but of less diameter than the flange, inserting the hollow body into the aperture, with the flange in engagement with one of the faces of said body, and compressing the outer peripheral portion of the hollow body whereby such outer portion is spread radially and outwardly into engagement with the surrounding body thereby to form a close connection therewith.

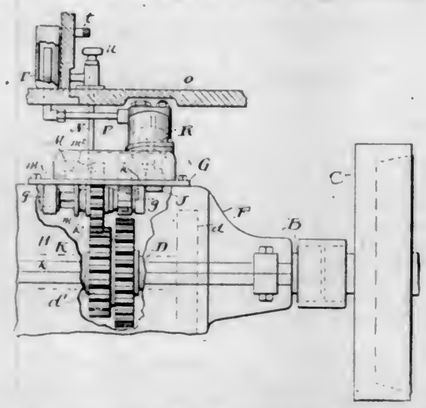
3. The process of uniting a metal body having a flange and a reduced extension with a metal plate which consists in providing the plate with an aperture of less diameter than the flange but of sufficiently greater diameter than the reduced extension to receive the latter therewithin, the reduced extension having one or more laterally extending lugs and the plate having one or more corresponding notches extending from the aperture, inserting the reduced extension into the plate aperture with the lug or lugs in operative relation to the notch or notches and with the flange in substantial engagement with one face of the plate, and thereafter subjecting the ends of the body to compression whereby the reduced portion is spread radially outwardly, bringing the said reduced portion and the projecting lugs into close and locking relation to the surrounding plate.

4. The process of uniting a hollow metal body having a flange and a reduced extension with a metal plate which consists in providing the plate with an aperture of less diameter than the flange but of sufficiently greater diameter than the reduced extension to receive the latter therewithin, the reduced extension having one or more laterally extending lugs and the plate having one or more corresponding notches extending from the aperture, inserting the reduced extension into the plate aperture with the lug or lugs in operative relation to the notch or notches and with the flange in substantial engagement with one face of the plate, and thereafter compressing an outer annular portion of the hollow body, whereby such outer portion is spread radially outwardly, bringing the same and the projecting lugs into close and locking relation to the surrounding plate.

1,190,804. AIR-PUMP ATTACHMENT FOR AUTOMOBILES. ARTHUR J. SCAIFE, Cleveland, Ohio, assignor to The White Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 9, 1913. Serial No. 772,470. (Cl. 230—27.)

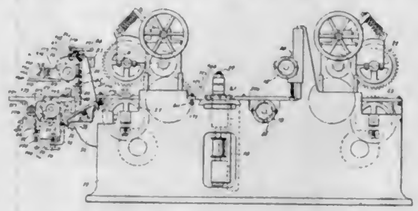
1. In combination with the transmission gear case of a motor car, and transmission gearing therein, of a cover plate removably secured to said gear case, an air pump fixed to said cover plate, a pump-operating shaft mounted on the under side of said cover plate, pump operating mechanism driven by said pump operating shaft, and means for bringing about at will a driving connection between the pump operating shaft and some part of the transmission gearing with said gear case.

2. In combination with the transmission gear case of a motor car, the transmission gear counter shaft mounted in said gear case, and a gear on said countershaft, of a removable cover plate to said gear case, an air pump fixed to said cover plate, a pump operating shaft mounted on the under side of said cover plate in parallel relation to said counter shaft, pump operating mechanism driven by said pump operating shaft, a sliding gear on the pump operating shaft, and means for moving said gear into and out of mesh with the gear on the counter shaft.



3. In combination with the transmission gear case of a motor car, the transmission gear counter-shaft mounted in said gear case, and a gear on said counter-shaft, of a removable cover plate to said gear case, an air pump fixed to said cover plate, a pump operating shaft mounted on the under side of said cover plate in parallel relation to said counter shaft, pump operating mechanism driven by said pump operating shaft, a sliding gear on the pump operating shaft, and means for moving said gear into and out of mesh with the gear on the counter shaft, a rock shaft mounted on said cover plate having an arm which projects into the gear case for operating the sliding gear on the pump shaft, and having another arm which projects above the cover plate, an operating link which extends from the last mentioned arm to a convenient operating point.

1,190,805. PLANING MACHINERY. PETER A. SOLEM, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed May 19, 1913. Serial No. 768,518. (Cl. 144—36.)



1. A planing machine comprising usual cutter-head and feeding devices, a profiler cutter-head support, a profiler cutter-head thereon, and a table under the latter, said profiler cutter-head support movable for moving said profiler cutter-head into and out of the vertical projection of material passing through the machine, and said table movable laterally crosswise of said vertical projection.

2. A planing machine comprising usual cutter-head and feeding devices, a profiler cutter-head support, a profiler cutter-head thereon, and a table under the latter, said profiler cutter-head support movable for moving said profiler cutter-head into and out of the vertical projection of material passing through the machine, and said table movable laterally crosswise of said vertical projection with and independently of said profiler cutter-head support.

3. In a planing machine, the combination with a cutter-head, a feeding device and a main table, of a profiler cutter-head, a profiler table thereunder, means for sidewise shifting of said profiler table, a pair of side-guides, releasable connecting means between each of said side-guides and each of said tables, and constructed and arranged for rigid connection of either of said side-guides to either of said tables upon sidewise shifting of said profiler table.

4. In a planing machine, the combination with a cutter-head and a feeding device, of a profiler cutter-head support, a profiler table under the cutter-head on said support, and parallel guiding means for guiding said support and said profiler table laterally, said support and profiler table movable independently.

5. In a planing machine, the combination with a cutter-head and a feeding device for the material, of a profiler at the feeding-out end of the machine comprising a profiler cutter-head support, a profiler cutter-head shaft supported thereby, a profiler cutter-head on said shaft, a bearing for one end of said profiler cutter-head shaft on said support, a bearing for the other end of said shaft, positioning means for the latter, and means for lateral shifting of said support for withdrawing said shaft from said last-named bearing and locating said profiler cutter-head at the side of the vertical projection of the path of material fed by said feeding device.

[Claims 6 to 20 not printed in the Gazette.]

1,190,806. MATERIAL ADAPTED FOR USE IN THE MANUFACTURE OF AN IMITATION LEATHER. WILLIAM O. STODDARD, Jr., Madison, N. J., assignor, by mesne assignments, to The Duratex Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 29, 1914. Serial No. 879,451. (Cl. 91—70.)

1. A fabric having thereon a coating containing nitrated cotton and an oil, and a superimposed baked coating of a japanning composition.

2. A fabric having thereon a coating containing nitrated cotton and an oil, and a superimposed baked coating of a japanning composition united to the first coat.

3. A fabric having a coating containing nitrated cotton and a vegetable oil, and a superimposed coating of a japanning composition baked thereon.

4. A fabric having a coating containing nitrated cotton and rape seed oil, and a superimposed coating of a baked japanning composition.

5. A fabric having thereon a coating containing nitrated cotton and an oil, and a superimposed baked coating of a japanning composition sealing or binding the oil in the base or nitrated cotton coats.

[Claims 6 to 16 not printed in the Gazette.]

1,190,807. MATERIAL ADAPTED FOR USE IN THE MANUFACTURE OF AN IMITATION LEATHER AND METHOD OF MAKING THE SAME. WILLIAM O. STODDARD, Jr., Madison, N. J., assignor, by mesne assignments, to The Duratex Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 18, 1915. Serial No. 9,150. (Cl. 91—68.)

1. A fabric coated with a composition containing nitrocellulose and leather.

2. A fabric coated with a composition containing nitrocellulose and leather, and a superimposed coating of a japanning composition.

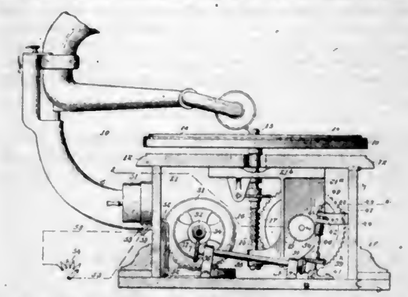
3. A fabric coated with a composition containing nitrocellulose and leather, and a superimposed baked coating of a japanning composition.

4. A fabric coated with a composition containing nitrocellulose and leather, and a superimposed coating of a japanning composition united to the first-named coat.

5. A fabric coated with a composition containing nitrated cotton, an oil and leather.

[Claims 6 to 19 not printed in the Gazette.]

1,190,808. OPERATING MECHANISM FOR PHONOGRAPHS. HERBERT A. STOIBER, New York, N. Y. Filed May 23, 1911. Serial No. 628,927. (Cl. 74—35.)



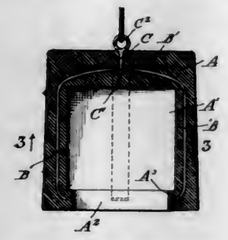
1. A machine of the character described having a disk operating shaft, a primary motor, and a pair of gears on the shaft of said primary motor; one of said gears being normally operatively connected with said disk operating shaft, in combination with a supplemental motor, a shaft on said supplemental motor, a worm fixed on the shaft of said supplemental motor, a driven shaft, gear wheels at the ends thereof, one of said gear wheels meshing with the worm on the shaft of said supplemental motor, an adjustable shaft pivotally supported at one end, a gear thereon adapted to mesh with the gear at one end of said driven shaft, a worm adapted to mesh with the other of the gears on the shaft of said primary motor, means for guiding the upper end of said pivoted shaft, and locking means for securing said pivoted shaft to its operative and inoperative positions, substantially as specified.

2. A machine of the character described having a disk operating shaft, a worm fixed thereon, a spring motor, a gear thereon normally in mesh with the worm on said disk operating shaft; said spring motor having a shaft composed of two parts and one of said parts being connected to the spring of said motor, and the other of said parts secured to the gear normally in mesh with the worm on said disk operating shaft, in combination with a gear on the outer end of said second-named shaft part, a supplemental motor, a worm fixed on the shaft of said supplemental motor, a driven shaft, a gear at one end of said driven shaft in mesh with the worm on said supplemental motor shaft, and a bevel gear at the opposite end of said driven shaft, an adjustable shaft pivotally supported at its lower end, a bevel gear fixed upon said adjustable shaft adjacent to said lower end adapted to mesh with the bevel gear on said driven shaft, a worm fixed adjacent to the upper end of said pivoted shaft adapted to mesh with the gear on said second-named shaft part of the spring motor shaft, a head upon the upper end of said pivoted shaft, a guide within which said head is adapted to work, and locking means arranged upon said guide adapted to engage the head on said pivoted shaft whereby to hold the same locked in its operative and inoperative positions, substantially as specified.

3. A machine of the character described having a disk operating shaft, a worm fixed thereon, a primary motor, a gear thereon in mesh with the worm on said disk operating shaft, a shaft for said primary motor composed of two parts; one of said parts being connected to the driving element of said primary motor, and the other of said parts being secured to the gear mounted upon said primary motor, in combination with a gear fixed upon the other end of said second-named shaft part, a supplemental motor, a worm fixed upon the shaft of said supplemental motor, a driven shaft, a gear at one end thereof in mesh with the worm on said supplemental motor shaft, and a bevel gear at its opposite end, an adjustable shaft pivot-

ally supported at its lower end, a bevel gear fixed thereon adjacent to said lower end adapted to mesh with the bevel gear on said driven shaft, a worm fixed adjacent to the upper end of said pivoted shaft adapted to mesh with the gear on the second-named part of the shaft of said primary motor, a head upon the upper end of said pivoted shaft, a bracket supported adjacent to the upper end of said shaft having its free end bifurcated to receive said head, said head being provided with recesses, and a locking spring secured upon said bracket having a projection upon its under side adapted to engage with either of the recesses in said head whereby to hold said pivoted shaft locked to its operative and inoperative positions, substantially as specified.

1,190,809. CHALK-HOLDER ATTACHMENT FOR BILLIARD-TABLES, &c. WILLIAM J. STONE, Horton, Kans. Filed Mar. 30, 1916. Serial No. 87,799. (Cl. 46—8.)



1. A chalk holder comprising an elastic body having a socket leading in from its side and surrounded by an inwardly disposed flange, resilient arms embedded in the body and extending along the sides of the socket.

2. A chalk holder comprising a resilient body having a socket leading in from the side thereof and surrounded by an inwardly disposed flange, and resilient arms embedded in the body and disposed along the socket and having curved ends disposed toward the flange.

3. A chalk holder, comprising a resilient body having a socket leading in from the side thereof and surrounded by an inwardly disposed flange, resilient arms embedded in the body and extending along the socket, and a supporting member connected with the arms.

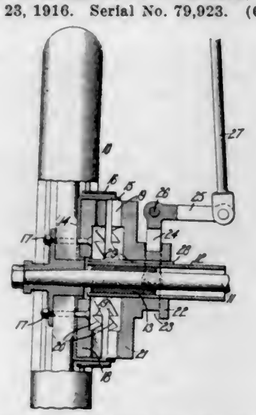
4. A chalk holder comprising an elastic body having a socket leading in from the side thereof and surrounded by an inwardly disposed flange, resilient arms embedded in the body and extending along the socket, a disk embedded in the body, and a supporting member connected with the arms and the disk.

1,190,810. ONE-PIECE PAJAMAS. ROBERT BURKET SWIFT, Jr., Cincinnati, Ohio. Filed May 26, 1915. Serial No. 30,536. (Cl. 2—144.)



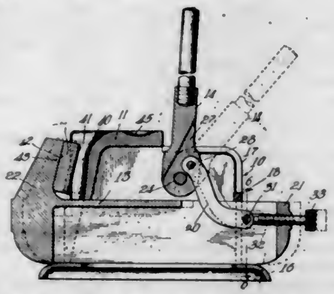
A one-piece pajama comprising a jacket, trousers having a seat opening and a flap normally closing said seat opening, and a continuous band or belt of knitted elastic fabric constituting the sole connection between the trousers and the jacket, said belt or band having its upper edge directly stitched to the interior of the jacket well above the lower edge thereof around the major portion of the interior of said jacket and directly stitched to the upper portion of, and extending entirely around the trousers and being open or disconnected at the front of the trousers.

1,190,811. SAFETY BRAKE CLUTCH AND LOCK. WILLIAM H. SWOYER and JACOB W. HORNER, Linfield, Pa. Filed Feb. 23, 1916. Serial No. 79,923. (Cl. 21—8.)



In a safety brake for traction vehicles, the combination with a driving axle, a wheel secured thereto, a brake drum secured to the wheel and having a flange extending inwardly therefrom, a toothed clutch member secured within the drum flange and having teeth spaced inwardly from the rim of the flange, and a stationary axle casing in which the driving axle is journaled, of a clutch member secured slidably upon the axle casing and movable toward and from the other clutch member, the slidable clutch member having teeth complemental to and adapted to interlock with the teeth of the first mentioned clutch member, means to prevent rotation of the latter mentioned clutch member, and means to control the position of the slidable clutch member holding it either out of engagement or in locking engagement with the first mentioned clutch member, the teeth of the slidable clutch member always lying within the projecting flange of the brake drum.

1,190,812. ARCH-FITTING MACHINE. CHARLES JEFFERSON SYKES, Chicago, Ill., assignor to The Scholl Manufacturing Company, Chicago, Ill., a Corporation of New York. Filed May 1, 1915. Serial No. 25,314. (Cl. 153—48.)



1. In an arch support fitting machine, the combination of a frame carrying an anvil and provided with a guide way, a slide bar in said guide way having an arm confronting the anvil and carrying a pressure head to cooperate with said anvil, a lever above said slide bar positioned at the side of the anvil away from the head and working in the direction of slide movement, a link connection between said lever and said slide bar, and means for varying the throw of said slide bar.

2. In an arch support fitting machine, the combination of a frame carrying an anvil and provided with a guide way, a slide bar in said guide way having an arm confronting the anvil and carrying a pressure head to cooperate with said anvil, a lever above said slide bar, working in the direction of slide movement, a link connection between said lever and said slide bar, and having a slot and pin connection with said slide bar.

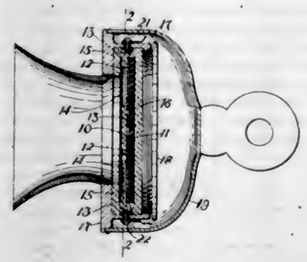
3. In an arch support fitting machine, the combination of a frame carrying an anvil and provided with a guide way, a slide bar in said guide way having an arm confronting the anvil and carrying a pressure head to cooperate with said anvil, a lever above said slide bar, working in the direction of slide movement, a link connection between said lever and said slide bar, having a slot and pin connection with said slide bar and means for adjusting the amount of lost motion permitted between the link and slide bar.

4. In an instep arch fitting machine the combination of a base, an anvil carried thereby, having a concaved surface at its end, a slide bar sliding below said base having a pressure arm extending upward to confront said anvil, said slide bar having a channel in its rear portion open at its top, a lever pivoted above said slide bar at the side of the anvil away from the pressure arm, and a link connection between said lever and said slide bar, said link extending into said channel of said slide bar.

5. In an instep arch fitting machine the combination of a base, an anvil carried thereby, having a concaved surface at its end, a slide bar sliding below said base having a pressure arm extending upward to confront said anvil, said slide bar having a channel in its rear portion open at its top, a lever pivoted above said slide bar, a link connection between said lever and said slide bar, said link extending into said channel of said slide bar, said link at its lower end carrying a transverse pin and the side walls of said slide bar recess having slots therein to receive said pin, and an adjusting screw carried by said slide bar for limiting the play of said pin in said slots.

[Claim 6 not printed in the Gazette.]

1,190,813. TELEPHONE-TRANSMITTER. NAHO TANNAKA, New York, N. Y. Filed Mar. 27, 1915. Serial No. 17,564. (Cl. 179—125.)



1. A telephone transmitter, comprising the combination with a casing; of a diaphragm cushioned by a yielding member against the casing, so as to enable the diaphragm to vibrate bodily in the intended operations, a plurality of carbon contact means disposed along the back of the diaphragm, having their effective cross section extended to the outer or edge portion thereof, an electrode holder or supporter bearing electrodes for said carbon contact means, a washer forming compartments for the contact means, and a cushion yieldingly separating the electrode holder or supporter from the casing.

2. A telephone transmitter, comprising a casing, a diaphragm cushioned around the peripheral edge portion thereof by a yielding member against the casing, an electrode supporter, a mouth piece in front of the diaphragm, its bottom being nearly equal in area to the exposed surface of the diaphragm, variable resistance means partitioned by a yielding washer and disposed between the diaphragm and the electrode supporter, in engagement therewith, and a soft cushion supporting the electrode supporter against the casing.

3. A telephone transmitter, comprising the combination with a casing; of a diaphragm, carbon contacts in cooperative relation therewith for transmitting sounds, an electrode holder or supporter bearing electrodes for said carbon contacts, a washer separating the diaphragm and the electrodes, and sealing the carbon contacts, and blankets yieldingly holding under a pressure the diaphragm and the electrode holder or supporter, without making hard contact with the casing, the arrangement thereby allowing bodily vibrations of the diaphragm in the intended operations.

4. A telephone transmitter, comprising a casing, a diaphragm sufficiently stiff to vibrate substantially bodily under the stresses of the intended operations, a plurality of variable resistance means in coöperative relation with the diaphragm, portions of which serve as intermediate electrodes therefor, an electrode plate bearing the electrodes of said variable resistance means, an elastic washer held between the diaphragm and the plate, and means yieldingly holding them under pressure, without hard contact between the diaphragm and the casing.

5. A telephone transmitter, comprising the combination with a casing; of a diaphragm, carbon contact means partitioned by a yielding washer and arranged in engagement with the back surface of the diaphragm at the central and the outer portions of said surface, an electrode holder bearing electrodes for the carbon contact means, and cushions which hold under a pressure the above described members in an operative position, without hard contact between the casing and the other members, said diaphragm thereby being able to vibrate bodily in the intended operations.

[Claims 6 to 10 not printed in the Gazette.]

1,190,814. INSULATING COMPOSITION AND PROCESS OF PRODUCING IT. HARRY CLAY TAZEWELL, Wilmington, Del. Filed Feb. 1, 1915. Serial No. 5,544. (Cl. 106—15.)

1. The method of producing a composition of matter applicable for insulating purposes, which comprises heating creosote oil, introducing shellac into the oil until it has become homogeneously incorporated therewith and then dissolving alum in the heated mass, the ingredients being used in suitable proportions to form a composition which can be melted off by a torch and which when melted is non-inflammable and sufficiently liquid to flow into place before setting; substantially as described.

2. The method of producing a composition of matter applicable for insulating purposes, which comprises heating creosote oil, introducing shellac and rosin into the oil until they have become homogeneously incorporated therewith and then dissolving alum in the heated mass, the ingredients being used in suitable proportions to form a composition which can be melted off by a torch and which when melted is non-inflammable and sufficiently liquid to flow into place before setting; substantially as described.

3. A new insulating composition of matter which can be molded and cast and which can be melted off by a torch, comprising creosote oil, shellac and alum, said composition being non-inflammable at the temperature of melting in the blow torch flame, and being when molten sufficiently fluid to flow into place before setting, and setting hard without appreciable shrinkage; substantially as described.

4. A new insulating compostion of matter which can be molded and cast and which can be melted off by a torch, comprising creosote oil, shellac, rosin and alum, said composition being non-inflammable at the temperature of melt-

ing in the blow torch flame, and being when molten sufficiently fluid to flow into place before setting, and setting hard without appreciable shrinkage; substantially as described.

1,190,815. PLASTIC COMPOSITION AND PROCESS OF MAKING IT. HARRY CLAY TAZEWELL, Wilmington, Del. Filed Feb. 1, 1915. Serial No. 5,545. (Cl. 106—15.)

1. The method of producing a composition of matter suitable for the production of articles adapted for use as insulators of heat and electricity, which comprises heating a body of creosote oil, introducing therein a sufficient amount of a filling material to make a stiff pasty mass, introducing shellac into the mass and thoroughly incorporating it therein, adding alum to the mass to lessen its liability to ignition and then adding carbonate of magnesium to lighten the mass; substantially as described.

2. The method of producing a composition of matter suitable for the production of articles adapted for use as insulators of heat and electricity, which comprises heating a body of creosote oil, introducing therein a sufficient amount of a filling material to make a stiff pasty mass, introducing shellac into the mass and thoroughly incorporating it therein, adding alum to the mass to lessen its liability to ignition and then adding carbonate of magnesium to lighten the mass and finally adding hydrated lime to make the mass set more effectively when subsequently molded; substantially as described.

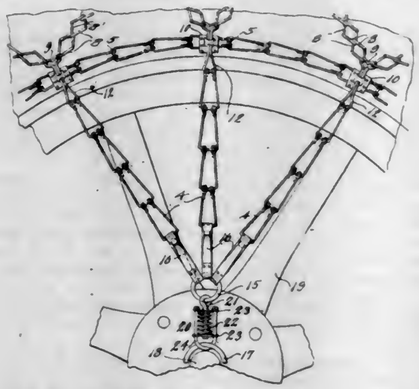
3. A new composition of matter adapted for the production of articles for use as insulators of heat and electricity, which comprises creosote oil, shellac, a filling material, and alum; substantially as described.

4. A new composition of matter adapted for the production of articles for use as insulators of heat and electricity, which comprises creosote oil, shellac, a filling material, alum and carbonate of magnesium; substantially as described.

5. A new composition of matter adapted for the production of articles for use as insulators of heat and electricity, which comprises creosote oil, shellac, a filling material, alum, carbonate of magnesium and hydrated lime; substantially as described.

[Claim 6 not printed in the Gazette.]

1,190,816. ANTISKIDDING DEVICE. THOMAS A. THOMPSON, Butte, Mont. Filed May 29, 1915. Serial No. 31,219. (Cl. 152—14.)



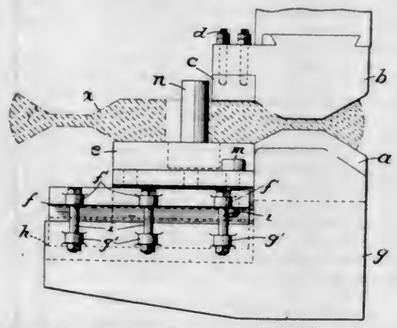
1. An anti-skidding device for vehicle wheels comprising cross chains, circumferential side chains, radially extending retaining chains connected to the side chains at the points of connection of the cross chains therewith, connecting members for groups of said retaining chains, and means connecting the said last mentioned connecting members to the wheel whereby stress on the cross chains due to gripping action is transmitted to the wheel.

2. An anti-skidding device for vehicle wheels comprising intersecting cross chains, circumferential side chains, radially extending retaining chains connected to the side chains at the points of connection of the cross chains therewith, connecting members for groups of said retaining chains, and yieldable means connecting each group of connecting members to the wheel.

3. An anti-skidding device for vehicle wheels comprising cross chains, side chains, clip members connected to links of the side chains at regular intervals throughout their length, connecting hooks for the cross chains connecting said cross chains to the clip members, and retaining chains connected at one end to the clip members of one of said side chains aforesaid, ring members connecting certain of said retaining chains at their other ends in groups, a hub engaging ring, and a yieldable device between each of the rings for the retaining chains and the hub engaging ring.

4. An anti-skidding cross chain for tires comprising diamond-shaped links, each link having its parallel sides offset in opposite directions to form a continuous tread from end to end of the link and a continuous tire engaging surface from end to end of the link.

1,190,817. APPARATUS FOR FORGING BUCKET-WHEELS. WILLIAM H. T. THORNHILL, Philadelphia, Pa. Original application filed Feb. 23, 1915, Serial No. 9,863. Divided and this application filed Mar. 23, 1916. Serial No. 86,185. (Cl. 78—1.)



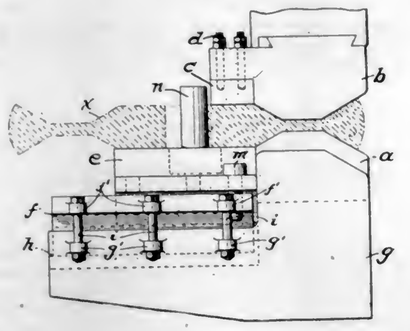
1. Means for forging wheels provided with a central hole, comprising a carriage, a lower die forming, with the carriage, a support for a part of the blank, an abutment on the carriage adapted to extend through the hole in the blank, an upper die, and ways in which the carriage is movable horizontally toward and from the lower die.

2. Means for forging wheels provided with a central hole, comprising an upper die, a lower die, a carriage forming with the lower die a support for a part of the blank and adjustable horizontally toward and from the lower die and also adjustable vertically, and an abutment on the adjustable carriage adapted to extend through the hole in the blank.

3. Means for forging wheels provided with a central hole, comprising a lower die, a horizontally adjustable carriage alongside the lower die, an abutment on the adjustable carriage adapted to extend through the hole in the blank, and an upper die adapted to extend over the lower die and also over a part of the carriage when the latter is in horizontal position nearest the lower die.

4. Means for forging wheels provided with a central hole, comprising a carriage, a lower die forming with the carriage a support for a part of the blank, an abutment on the carriage adapted to extend through the hole in the blank, an upper die, ways in which the carriage is movable horizontally toward and from the lower die, said carriage and ways having rows of holes differentially spaced, and a pin adapted to engage alining holes in the carriage and ways respectively.

1,190,818. PROCESS FOR FORGING BUCKET-WHEELS. WILLIAM H. T. THORNHILL, Philadelphia, Pa. Filed Feb. 23, 1915. Serial No. 9,863. (Cl. 29—159.)



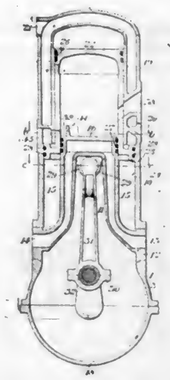
1. The process of forging wheels with a central opening, which consists in forming a blank with a central hole, compressing a relatively small part of the entire blank on one side of the hole while maintaining the adjacent wall of the hole against an abutment, repeating the operation on other relatively small parts of the blank until the blank has been forged throughout its circumference, then compressing a relatively small part of the entire blank on one side of the hole while maintaining the most distant wall of the hole against an abutment and repeating the operation on other relatively small parts of the blank until the same has again been forged throughout its circumference.

2. The process of forging wheels with a central opening, which consists in forming a blank with a central hole, compressing a relatively small part of the entire blank to form a radial section of the hub and a part of the web adjacent thereto while maintaining the adjacent wall of the hole against an abutment, repeating the operation until the hub and the inner part of the web adjacent thereto has been forged, then expanding the web and increasing the diameter of the wheel by compressing a small part of the metal beyond the previously forged part of the web, and repeating the operation throughout the circumference of the wheel.

3. The process of forging wheels with a relatively thick hub, a relatively thin web and a rim thicker than the web, which consists in forming a blank of substantially uniform thickness with a central hole, compressing a small part of the blank between the central portion thereof and the peripheral portion thereof and repeating the operation throughout the circumference of the blank while maintaining the wall of the hole nearest the compressing force against an abutment, thereby forming a relatively thin web, then compressing a small part of the blank between the previously compressed portion thereof and the peripheral portion thereof and repeating the operation throughout the circumference of the blank, thereby increasing the radial dimension of the web while leaving a peripheral portion of greater thickness to form the rim.

4. The process of forging wheels with a relatively thick hub, a relatively thin web and a rim thicker than the web, which consists in forming a blank of substantially uniform thickness with a central hole, compressing a small part of the blank between the central portion thereof and the peripheral portion thereof and repeating the operation throughout the circumference of the blank while maintaining the wall of the hole nearest the compressing force against an abutment, thereby forming a relatively thin web, then compressing a small part of the blank between the previously compressed portion thereof and the peripheral portion thereof and repeating the operation throughout the circumference of the blank and then compressing the rim throughout its circumference to reduce its thickness.

1,190,819. INTERNAL-COMBUSTION MOTOR. JOHN N. TOOKER, New York, N. Y. Filed Apr. 9, 1913. Serial No. 759,885. (Cl. 123—62.)



1. In an internal combustion engine and in combination, a cylinder, a hollow piston therein forming a combustion chamber between its head and one end of the cylinder, there being a mixing chamber between the walls of the piston and a portion of the walls of the cylinder, a crank case, and a jacketed extension of the crank case extending into the said piston and forming a second combustion chamber with the interior thereof.

2. In an internal combustion engine and in combination, a cylinder, a hollow piston therein forming a combustion chamber between its head and one end of the cylinder, there being a mixing chamber between the walls of the piston and a portion of the walls of the cylinder, a crank case, and a jacketed extension of the crank case extending into the said piston and forming a second combustion chamber with the interior thereof, there being provided an inlet port from the mixing chamber to the said second combustion chamber, an inlet port from the crank case to the said first combustion chamber, and an outlet port common to both the said combustion chambers.

3. In an internal combustion engine and in combination, a cylinder having bores of different diameters, a hollow stepped piston forming a combustion chamber between its head and that portion of the cylinder having the smaller bore and also forming a mixing chamber between its walls and the larger bore of the cylinder, a crank case, and a jacketed extension of the crank case extending into the piston and forming the second combustion chamber with the interior thereof.

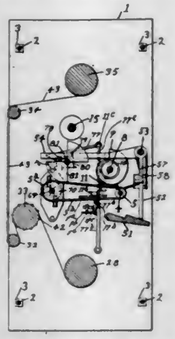
4. In an internal combustion engine and in combination, a cylinder having bores of different diameters, a hollow stepped piston forming a combustion chamber between its head and that portion of the cylinder having the smaller bore and also forming a mixing chamber between its walls and the larger bore of the cylinder, a crank case, a jacketed extension of the crank case extending into the piston and forming the second combustion chamber with the interior thereof, there being provided an inlet port from the mixing chamber to the said second combustion chamber, an inlet port from the crank case to the first combustion chamber, and an outlet port common to both the said combustion chambers.

5. In an internal combustion engine and in combination, a cylinder, a hollow piston within the cylinder, and forming a combustion chamber with one end thereof, there being a mixing chamber associated with the walls of the cylinder and hollow piston, a crank case, and an integral jacketed extension of the crank case extending into the piston and forming a second combustion chamber with the interior thereof, there being provided an inlet port from the mixing chamber to the said second combustion cham-

ber, an inlet port from the crank case to the first combustion chamber, and an outlet port common to both the said combustion chambers.

[Claims 6 to 8 not printed in the Gazette.]

1,190,820. ELECTRICALLY-OPERATIVE CALENDAR DEVICE. GEORGE N. TSUMURA, Mountain View, Cal. Filed May 29, 1915. Serial No. 31,188. (Cl. 40—53.)



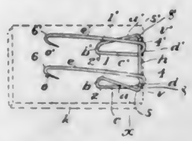
1. In an electrically operative calendar device, a body portion, means for holding said body portion together, a governor shaft, a motor shaft to which a pulley and driving gear are attached, said pulley being adapted to drive said governor shaft; a cam shaft to which a gear is attached connecting with said driving gear; a cam attached to said shaft, a worm gear attached to said cam and said shaft, a revolving arm attached to said shaft, an intermediate gear connected by arms to said second mentioned gear and operatively connecting with a secondary gear, substantially as shown and described.

2. In an electrically operative calendar device, the combination of a paper roller, and means by which said roller is operated; a friction roller, a measuring roller, and means by which said roller is driven, said roller having spur points on the outer surface thereof; a second friction roller, a paper feed roller, means for adjusting said feed roller, a gear fastened to the outer end of said measuring roller meshing with a gear carrying a trip arm; a trip lever connecting with said trip arm, a shaft to which said trip lever is attached, a spring on said shaft, a notched bar attached to said shaft adapted to engage an arm, said arm being attached to a shaft; a clutch engaging arm attached to said shaft, a projecting arm attached to said clutch engaging arm adapted to engage with a cam, and means by which said arm is operated, as shown and described.

3. In an electrically operative calendar device, the combination of a shaft to which a cam and worm gear are fastened, a clutch engaging arm, a spring adapted to engage said arm with said clutch, means by which said arm is operated, a revolving arm on said shaft, a timing shaft, and means for operating said shaft; a four pointed ratchet wheel fastened to said shaft, a square end on said shaft, a tension spring resting on said square end, a timing wheel attached to said shaft, means by which said timing wheel is operated, substantially as shown and described.

4. In an electrically operative calendar device, the combination of a governor shaft, a governor operative thereon, a metal block operated by said governor, a pulley to which said metal block is connected, links connecting said governor with said metal block, a spring attached to said metal block, a block engaging arm having notches on the underside thereof, a four-pointed ratchet wheel, an arm by which said four-pointed ratchet wheel is operated, a guide by which said arm is carried out of engagement, a revolving arm, a spring by which said arm is operated on its return movement, a timing shaft, a timing wheel, a tension spring resting on the square end of said timing shaft, means by which the electrically operative power is obtained through the hour and minute hands of a clock, substantially as shown and described.

1,190,821. CLIP-TAG FOR PRICE-MARKING SILK GOODS. ALBERT T. VAN ALSTYN, New York, N. Y. Filed Aug. 29, 1912. Serial No. 717,673. (Cl. 40—20.)



1. In a clip-tag of the class specified, the combination with a card and with a pair of hook-arms lying in a plane adjacent to the card face, and each having a hook at its free end, of a transversely-disposed combined head-bar and top-face member located on the card under the hook-arms and holding said arms at the ends thereof opposite to the hooks above the card face for thereby providing a selvage-space between the hook-arms and the card face adjacent to said head-bar, and said head-bar forming a stop-face at such position for the edge of the fabric.

2. In a clip-tag of the class specified, the combination with a card and with a pair of hook-arms each having a hook facing the card, of a transversely-disposed combined head-bar and stop-face member located on the card under the hook-arms and holding said arms at the ends thereof opposite to the hooks above the card face for thereby providing a selvage-space and a stop-face for the edge of a fabric; and a pair of integrally-connected three-bend, four-sided loops each having one end thereof located above the card and each inclosing a part of the card below said head-bar, and said loops having the ends thereof above the card connected, respectively, to the opposite ends of said transverse stop-face member by bends each located to the outside of one of the hook-arms, substantially as described.

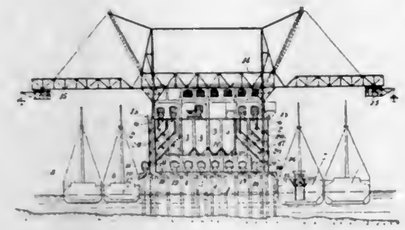
3. In a clip-tag of the class specified, the combination with a card and with a hook-arm having a hook, facing the card, of a transversely disposed stop-face member located on and near the edge of the card and under the hook-arm, and holding said arm at the end thereof opposite to the hooks above the card face for thereby providing a clear selvage-space for a fabric, and a loop arranged to have a draft bearing at two points on the card and having one end connected to said transverse stop-face member, such connection being distant laterally of the hook-arm sufficient to form a free space between such loop member and the hook-arm, and said stop-face member having an upwardly curved portion.

4. In a clip-tag of the class specified, the combination with a card and with a pair of hook-arms each having a hook, facing the card, of a transversely disposed stop-face member located on and near the edge of the card and under the hook-arms, and holding said arms at the ends thereof opposite to the hooks above the card face for thereby providing a clear selvage-space for a fabric, and having the stop-face member provided with upwardly curved portions at the outer sides of the hook arms, respectively.

1,190,822. MEANS FOR LOADING AND UNLOADING MERCHANDISE. ALEXANDRE VANDEVELDE, Brussels, Belgium. Filed July 15, 1913. Serial No. 779,160. (Cl. 214—4.)

1. A hopper comprising a plurality of similarly-formed compartments, each of such compartments comprising an inclined portion and an upright portion, the inclined portions having a superposed disposition and gradually increasing in length from top to bottom, and the upright portions having a lateral arrangement and gradually increasing in depth.

2. A hopper comprising a plurality of similarly-formed compartments, each consisting of an inclined portion and an upright portion, the inclined portions having a superposed arrangement and gradually increasing in length and capacity from the topmost to the lowermost inclined portion, and the upright portions having a lateral disposition and gradually increasing in depth from the shortest to the longest inclined portion of the compartments.



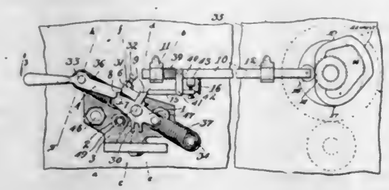
3. A hopper comprising an inclosed structure, the top of the structure having transversely arranged inlet openings, and the front of the structure being provided with a corresponding number of outlet openings at different elevations, and partitions dividing the structure into compartments which communicate at their upper ends with the respective inlet openings and at their lower ends with the respective outlet openings, each of the partitions consisting of a vertical portion and an inclined portion, the vertical portions of the partitions having a lateral arrangement and the inclined portions of the partitions being disposed vertically one above the other.

4. In combination, adjacent rows of storage hoppers, having discharging apertures arranged in vertical rows, partitions between the successive hoppers of each row, comprising each a vertical upper section and an inclined lower section, means for filling the said hoppers from above and means for unloading same through the bottom into conveying means.

5. In combination, adjacent rows of storage hoppers, having discharging apertures arranged in vertical rows, partitions between the successive hoppers of each row, comprising each a vertical upper section and an inclined lower section, means for discharging the contents of one hopper through the discharging aperture of another hopper, opening below the former, means for loading the hoppers from above and means for unloading the same through the bottom directly into conveying means.

[Claims 6 to 15 not printed in the Gazette.]

1,190,823. TRIPPING MECHANISM FOR IGNITERS. HARRY RANDOLPH VAN DEVENTER, Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 15, 1915. Serial No. 2,497. (Cl. 123—153.)



1. In an ignition mechanism for internal combustion engines, the combination of an oscillating magneto, a make and break igniter, a trip lever for actuating said magneto and igniter, tension means tending normally to hold the trip lever in a given position, actuating means operated by the engine for tripping the trip lever at a predetermined point in the cycle of the engine and means for holding the trip lever in a position to be tripped by the said actuating means at a point in the cycle other than said first mentioned predetermined point.

2. In an ignition mechanism for internal combustion engines, the combination of an oscillating magneto, a make and break igniter, a trip lever for actuating said magneto and igniter, tension means tending normally to hold the trip lever in a given position, actuating means operated by the engine for tripping the trip lever at a predetermined point in the cycle of the engine and means coöperating with the trip lever to move and hold the same against the tension of said tension means and adapted to be released at a point in the cycle of the engine other than said first mentioned predetermined point.

3. In an ignition mechanism for internal combustion engines, the combination of an oscillating magneto, a make and break igniter, a trip lever for actuating said magneto and igniter, tension means tending normally to hold the trip lever in a given position, means for locking the trip lever in an off normal position against the force of said tension means and means operated by the engine to trip the trip lever at a given point in the cycle of operation of the engine at all times and to trip the trip lever at a point other than the aforesaid given point only when the trip lever has been locked in the off normal position.

4. In an ignition mechanism for internal combustion engines, the combination of a frame adapted to be mounted on the engine body, an igniter carried by the frame and projecting into the ignition chamber of the engine, a flange carried by the frame, anchor posts carried by the frame, an operating shaft for the igniter, a magneto mounted on the flange with its operating shaft substantially in alinement with said igniter operating shaft, a trip lever, tension means tending normally to hold the trip lever in a given position relative to the frame, an oscillating rod operated by the engine to make long and short oscillations, means carried by the rod adapted normally to operate said trip lever upon a long oscillation of the rod only and means for temporarily rendering said trip lever operable by said rod carried means upon a short oscillation of the said rod.

5. In an ignition mechanism for internal combustion engines, the combination of a frame adapted to be mounted on the engine body, an igniter carried by the frame and projecting into the ignition chamber of the engine, a flange carried by the frame projecting outwardly from the engine body, anchor posts carried by the frame and projecting outwardly from the engine body, an operating shaft for the igniter, a magneto mounted on the said flange with its operating shaft substantially in alinement with said igniter operating shaft, a trip lever mounted to rotate on an axis substantially concentric with said operating shafts, pull springs connecting the trip lever with the anchor posts and tending normally to hold the trip lever in a given position relative to the frame, means coöperating with the trip lever to move the same out of said given position against the force of the pull springs into a second given position and locking it against movement by said pull springs, and a push rod operated by the engine to make alternate long and short strokes, said long and short strokes being so proportioned and the path of the push rod so positioned in relation to the said given position of the trip lever that the push rod will always engage the trip lever in the long stroke and will engage the trip lever in the short stroke only when said trip lever is in the said second given position.

[Claim 6 not printed in the Gazette.]

1,190,824. STRUCTURAL FORM. ADAM A. VEBELUNAS, Munhall, Pa. Filed Feb. 4, 1915. Serial No. 6,057. (Cl. 189—37.)

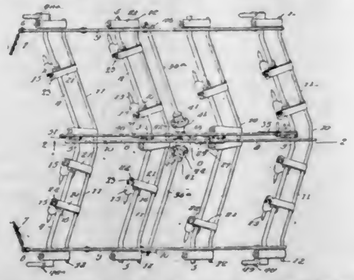
1. A structural shape having a groove rolled therein, and an integral bendable flange adapted to cover said groove.

2. A structural shape having a groove rolled therein, and an integral bendable flange adapted to cover said



groove, the outer edge of said bent flange being riveted to said structural shape.

1,190,825. COMBINATION HARROW AND CULTIVATOR. FRANCIS M. VERMILION, Shattuck, Okla. Filed June 30, 1915. Serial No. 37,263. (Cl. 55—103.)



1. A combined harrow and cultivator, comprising upper and lower frames, each frame consisting of a central and lateral plates, the plates of the frame being arranged one above the other and slidably connected for movement longitudinally with respect to each other, a series of rods arranged transversely of each frame and journaled in the plates, each rod having its ends offset laterally with respect to the central portion and in the same direction, and all of the rods being similarly arranged, a series of teeth connected with each adjacent pair of rods of the frames, a sleeve for each tooth, each sleeve having a bearing journaled on the rod of the lower frame, and the tooth having its upper end reduced to pass through the sleeve, a plate for each tooth, each plate having an opening through which the upper end of the tooth extends, and a nut threaded onto the tooth for holding the parts in place, each plate having a bearing at the end remote from the tooth and journaled on the adjacent rod of the upper frame, a lever pivoted intermediate its ends to the central plate of the upper frame and having a lost motion connection at its lower end with the central plate of the lower frame, a quadrant on the said central plate of the upper frame, the lever having latch mechanism for engaging the quadrant for holding the frames in adjusted position, and means in connection with the frames for simultaneously oscillating all of the rods to raise the lateral plates with respect to the central plates, said means comprising a plate arranged longitudinally of the frame at the center thereof, brace arms pivoted at their upper ends to the plate and rigidly connected at their lower ends with sundry of the rods of the lower frame, a lever pivoted to the plate intermediate its ends and having a rigid connection at its lower end with the rearmost rod of the lower frame, latch mechanism for holding the lever in adjusted position, a stub shaft journaled in the central plate of the lower frame, a rigid connection between the stub shaft and the central plate of the upper frame, lateral shafts having a universal joint connection with the ends of the stub shaft and journaled at their outer ends in the lateral plates of the lower frame, and a rigid connection between the outer end of each of the said lateral shafts and the adjacent lateral plate of the upper frame, said lateral shafts being parallel with the inclined portions of the rods.

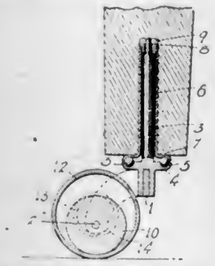
2. A combined harrow and cultivator, comprising upper and lower frames, each frame consisting of a central and lateral plates, the plates of the frame being arranged one above the other and slidably connected for movement longitudinally with respect to each other, a series of rods arranged transversely of each frame and journaled in the plates, each rod having its ends offset laterally with respect to the central portion and in the same direction, and all of the rods being similarly arranged, a series of teeth connected with each adjacent pair of rods of the frames, a sleeve for each tooth, each sleeve having a bearing journaled on the rod of the lower frame, and the tooth having its upper end reduced to pass through the sleeve, a plate for each tooth, each plate having an opening through which the upper end of the tooth extends, and a nut threaded onto the tooth for holding the parts in place, each plate having a bearing at the end remote from the tooth and journaled on the adjacent rod of the upper frame, a lever pivoted intermediate its ends to the central plate of the upper frame and having a lost motion connection at its lower end with the central plate of the lower frame, a quadrant on the said central plate of the upper frame, the lever having latch mechanism for engaging the quadrant for holding the frames in adjusted position, and means in connection with the frames for simultaneously oscillating all of the rods to raise the lateral plates with respect to the central plates, said means comprising a plate arranged longitudinally of the frame at the center thereof, brace arms pivoted at their upper ends to the plate and rigidly connected at their lower ends with sundry of the rods of the lower frame, a lever pivoted to the plate intermediate its ends and having a rigid connection at its lower end with the rearmost rod of the lower frame, and latch mechanism for holding the lever in adjusted position.

3. A combined harrow and cultivator, comprising upper and lower frames, each frame consisting of a central and lateral plates, the plates of the frame being arranged one above the other and slidably connected for movement longitudinally with respect to each other, a series of rods arranged transversely of each frame and journaled in the plates, each rod having its ends offset laterally with respect to the central portion and in the same direction, and all of the rods being similarly arranged, a series of teeth connected with each adjacent pair of rods of the frames, a sleeve for each tooth, each sleeve having a bearing journaled on the rod of the lower frame, and the tooth having its upper end reduced to pass through the sleeve, a plate for each tooth, each plate having an opening through which the upper end of the tooth extends, and a nut threaded onto the tooth for holding the parts in place, each plate having a bearing at the end remote from the tooth and journaled on the adjacent rod of the upper frame, a lever pivoted intermediate its ends to the central plate of the upper frame and having a lost motion connection at its lower end with the central plate of the lower frame, a quadrant on the said central plate of the upper frame, the lever having latch mechanism for engaging the quadrant for holding the frames in adjusted position, and means in connection with the frames for simultaneously oscillating all of the rods to raise the lateral plates with respect to the central plates.

4. A combined harrow and cultivator, comprising upper and lower frames, each frame consisting of a central and lateral plates, the plates of the frame being arranged one above the other and slidably connected for movement longitudinally with respect to each other, a series of rods arranged transversely of each frame and journaled in the plates, each rod having its ends offset laterally with respect to the central portion and in the same direction, and all of the rods being similarly arranged, a series of teeth connected with each adjacent pair of rods of the frames, a sleeve for each tooth, each sleeve having a bearing journaled on the rod of the lower frame, and the tooth having its upper end reduced to pass through the sleeve, a plate for each tooth, each plate having an opening through which the upper end of the tooth extends, and a nut threaded onto the tooth for holding the parts in place, each plate having a bearing at the end remote from the tooth and journaled on the adjacent rod of the upper frame, a lever pivoted intermediate its ends to the central plate of the upper frame and having a lost motion connection at its lower end with the central plate of the lower frame, a quadrant on the said central plate of the upper frame, the lever having latch mechanism for engaging the quadrant for holding the frames in adjusted position, and means for moving the frames longitudinally with respect to each other.

[Claims 6 to 8 not printed in the Gazette.]

1,190,826. FURNITURE-CASTER. JAMES F. VICH, Jackson, Minn. Filed Mar. 18, 1916. Serial No. 85,032. (Cl. 16—73.)



1. A furniture caster including a fork, a shaft connecting the arms of the fork, a small roller journaled upon the shaft, and a large hollow roller inclosing the small roller, the sides of the large hollow roller being formed of openings of such a size that the distance between the edges of the opening and the periphery of the roller is less than the radius of the small roller, the large roller providing a continuous track upon which the small roller moves.

2. A furniture caster including a fork, a shaft connecting the arms of the fork, a small roller journaled upon the shaft, a large hollow roller inclosing the small roller and having shaft receiving openings in the sides thereof of such a size that the distance between the edges of the openings and the periphery of the roller is less than the radius of the small roller, the large roller providing a continuous track upon which the small roller rolls, and dust excluding plates applied to the arms of the fork and fitting against the sides of the large roller to close the openings in the sides thereof.

1,190,827. BREAD-IMPROVER AND PROCESS OF MAKING THE SAME. RICHARD W. WAHL, Chicago, Ill. Filed Jan. 21, 1916. Serial No. 73,308. (Cl. 99—10.)

1. A concentrated yeast food and bread improver consisting of salts of lactic acid and lactic acid bacteria.

2. A concentrated yeast food and bread improver consisting of mineral salts of lactic acid and lactic acid bacteria.

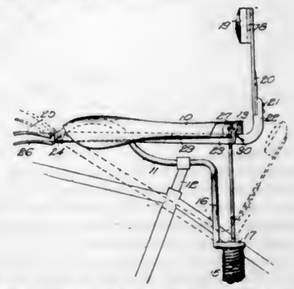
3. A concentrated yeast food and bread improver consisting of lactate of ammonium and lactic acid bacteria.

4. A concentrated bread improver consisting of salts of lactic acid, lactic acid bacteria and the lactic-acid extracted substances of edible seeds.

5. A bread improver prepared by subjecting a mash to the action of lactic-acid bacteria, and continuously neutralizing the lactic acid as it is formed by the addition of compounds which react therewith to form lactates separating the resultant liquor from the spent material and concentrating said liquor.

[Claims 6 and 7 not printed in the Gazette.]

1,190,828. BACK-REST FOR SEATS. HOWARD W. WEED, Stamford, Conn. Filed Sept. 20, 1915. Serial No. 51,530. (Cl. 208—138.)



1. The combination with a seat and its supporting frame, of a back rest comprising a pair of arms pivoted to the front portion of the frame and movable downwardly with respect to the seat, and devices coöperating between the rear portion of the seat and said arms to lock the arms in elevated position, substantially as set forth.

2. The combination with a seat and its supporting frame including downwardly and outwardly projecting stop shoulders, of a back rest comprising a pair of arms pivoted at the front portion of the frame on a horizontal pivot and movable downwardly from the seat toward said shoulders, pivoted locking means carried by the arms coöperating with holding means secured to the rear portion of the seat serving to prevent the downward movement of the back rest toward the shoulders, and means at the front portion of the back rest arm structure to control the position of the back rest.

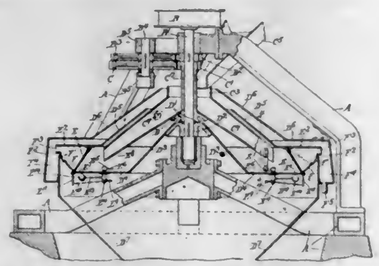
3. In a device of the character set forth, the combination with a seat and a supporting frame therefor comprising downwardly and rearwardly diverging horns terminating in stop shoulders, of a back rest comprising a pair of arms connected by a horizontal pivot adjacent their front ends to the front portion of the frame and movable downwardly along said horns toward the shoulders, said back rest also including a resiliently supported cross bar located normally above the seat, and movable devices carried by said arms coöperating with the back portion of the seat serving to hold the back rest in operative position.

4. The combination with a seat, a supporting frame therefor including a pair of rearwardly and downwardly diverging horns terminating in outwardly projecting stop shoulders, and a pair of hangers connected at their upper ends to the seat and supported at their lower ends from said shoulders, of a back rest comprising a frame pivoted at its front end on a horizontal pivot to the front portion of the supporting frame and supporting at the rear end a cross bar, said frame being movable downwardly along said horns and adapted to be limited in such movement by said shoulders, and means coöperating between the frame and the seat normally preventing such downward movement of the back rest.

1,190,829. DRIER. CARL A. WENDELL, Joliet, Ill. Filed June 12, 1915. Serial No. 33,792. Renewed May 19, 1916. Serial No. 98,670. (Cl. 210—34.)

1. In a centrifugal drier a screen, a feed chute adapted to deliver material to one side of the screen, means for

swinging the screen to permit the material to escape and water deflecting plate attached to and moving with the screen.



2. In a centrifugal drier an inclined screen, a feed chute adapted to deliver material to one side of the screen, means for swinging the screen to permit the material to escape and a water deflecting plate attached to and movable with the screen.

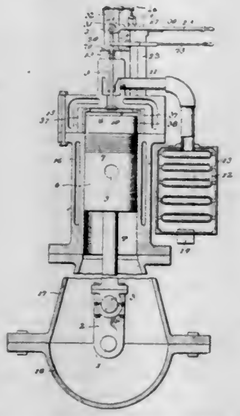
3. In a centrifugal drier a series of screen sections, a feed chute adapted to deliver material to one side of each of such sections, means for swinging the sections to permit the material to escape and a water deflecting plate attached to and moving with the screen.

4. In a centrifugal drier a series of inclined screen sections, a feed chute adapted to deliver material to one side of each of said sections, means for swinging the screen sections to permit the material to escape and a water deflecting plate attached to and moving with each screen section.

5. In a centrifugal drier a screen, a feed chute adapted to deliver material to one side of the screen, means for swinging the screen to permit the material to escape and a water deflecting plate attached to and moving with the screen, a water box open toward the outer side of the screen and a material box open toward the other side of the screen when the latter is tilting.

[Claims 6 to 12 not printed in the Gazette.]

1,190,830. INTERNAL-COMBUSTION ENGINE. JOHN F. WENTWORTH, Quincy, Mass. Filed June 17, 1911. Serial No. 633,834. (Cl. 123—27.)



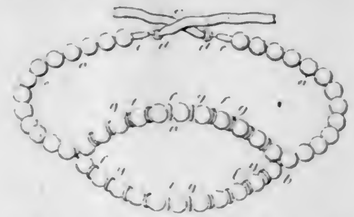
1. In an internal combustion engine, a cylinder, means for admitting air at atmospheric pressure to the cylinder, means for compressing said air to the ignition temperature of the fuel, means for admitting fuel to the cylinder at the beginning of the working stroke and means for varying the amount of air admitted to the cylinder.

2. In an internal combustion engine, a cylinder, means for admitting air at atmospheric pressure to the cylinder, means for compressing said air to the ignition temperature of the fuel, means for admitting fuel to the cylinder at the beginning of the working stroke, means for varying the amount of air admitted to the cylinder and means for heating the air admitted to the cylinder.

3. In an internal combustion engine, a cylinder, means for admitting air at atmospheric pressure to the cylinder, means for compressing said air to the ignition temperature of the fuel, means for admitting fuel to the cylinder at the beginning of the working stroke, means for varying the amount of air admitted to the cylinder, a fuel pump and a fuel valve comprising a fuel passage in communication with the cylinder and a compressed air supply controlled by a valve whereby when said valve is unseated the compressed air will blow through said fuel passage and carry the fuel into the cylinder in the form of a fine spray.

4. In an internal combustion engine, a cylinder, means for admitting air at atmospheric pressure for compression to the cylinder, means for compressing the air to the ignition temperature of the fuel, means for discharging the products of combustion after the working stroke, a fuel valve, a fuel pump, a supply of compressed air for injecting the fuel at substantially the beginning of the working stroke and means for varying the amount of the charge of pure air used per cycle of the engine.

1,190,831. APPLIANCE FOR TREATING GOITER. FREDERICK C. WERNER, Watertown, Wis. Filed Aug. 9, 1915. Serial No. 44,564. (Cl. 174—88.)



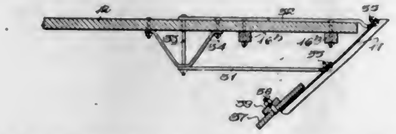
1. A device of the character described consisting of a belt or necklace having a plurality of electrodes arranged in pairs, the two electrodes of each pair occupying different positions in the electro-chemical scale, a metallic cord upon which said electrodes are strung and with which said electrodes have electrical engagement, and beads of insulating material interposed between said electrodes, said electrodes together with their connection forming the external circuit of individual galvanic cells, the protruding portions of said electrodes being adapted in connection with a suitable electrolyte to cause a flow of miniature electric currents of uni-directional current for therapeutic purposes.

2. A device of the character described consisting of a belt or necklace provided with a loop, said loop having a plurality of electrodes arranged in pairs, the two electrodes of each pair occupying different positions in the electro-chemical scale, a metallic cord upon which said electrodes are strung and with which said electrodes have electrical engagement, and beads of insulating material interposed between said electrodes, said electrodes together with their connection forming the external circuit of individual galvanic cells, the protruding portions of said electrodes being adapted in connection with a suitable electrolyte to cause a flow of miniature electric currents of uni-directional current for therapeutic purposes.

3. A device of the character described consisting of a belt or necklace having a plurality of electrodes arranged in pairs, the two electrodes of each pair occupying different positions in the electro-chemical scale, means for metallically electrically connecting adjoining electrodes together, and beads of insulating material interposed between said electrodes, said electrodes together with their connection forming the external circuit of individual galvanic cells, the protruding portions of said electrodes being adapted in connection with a suitable electrolyte to cause a flow of miniature electric currents of uni-directional current for therapeutic purposes.

4. A device of the character described consisting of a belt or necklace provided with a loop, said loop having a plurality of electrodes arranged in pairs, the two electrodes of each pair occupying different positions in the electro-chemical scale, means for metallically electrically connecting adjoining electrodes together, and beads of insulating material interposed between said electrodes, said electrodes together with their connection forming the external circuit of individual galvanic cells, the protruding portions of said electrodes being adapted in connection with a suitable electrolyte to cause a flow of miniature electric currents of uni-directional current for therapeutic purposes.

1,190,832. GUTTER SNOW-PLOW. WARREN F. WHEELER, Stoneham, Mass. Filed Feb. 26, 1915. Serial No. 10,701. (Cl. 37—42.)



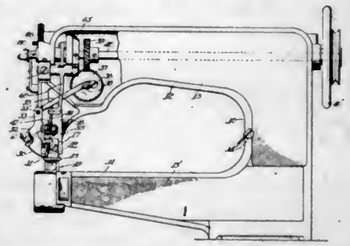
1. A gutter snow plow comprising a rigid frame including inner and outer runners and a bracket attached to the inner runner and projecting partly across the space between the runners, an oblique scraper having its forward end extended across the forward end of the inner runner and its rear end located between the runners, the scraper being adapted to form a relatively narrow path or trench in a gutter, an inner strut having its rear end pivoted to the inner runner and its forward end attached to the forward end of the scraper, an outer strut having its rear end pivoted to the frame bracket and offset thereby from the inner runner, and its forward end attached to the scraper, and means for raising and lowering the scraper.

2. A gutter snow plow comprising a rigid frame including inner and outer runners, a bracket attached to the inner runner and projecting partly across the space between the runners, and a transverse pin engaged with the inner runner and with said bracket, an oblique scraper adapted to form a relatively narrow path or trench in a gutter, said scraper having its forward end extended across the forward end of the inner runner and its rear end located between the runners, an inner strut pivotally engaged with said pin at its rear end and attached at its forward end to the forward end of the scraper, an outer strut pivotally engaged with said pin at its rear end and spaced by the bracket from the inner runner and attached at its forward end to the scraper, and means for raising and lowering the scraper.

3. A gutter snow plow comprising a rigid frame including inner and outer runners, front and rear uprights on the ends of the outer runner forming parts of the frame, an oblique scraper formed and arranged to move snow from the path of the inner runner toward the outer runner, an oblique leveler pivoted to the frame at a point behind the scraper, and extending obliquely across the outer runner, and vertically adjustable leveler-hanging means adapted to hold the leveler at different inclinations, said leveler bearing against said rear upright and being supported thereby against backward displacement.

1,190,833. SEWING-MACHINE STITCH-FORMING MECHANISM. JAMES WHITELAW, St. Louis, Mo. Filed Nov. 24, 1913. Serial No. 802,733. (Cl. 112—24.)

1. In a sewing machine stitch forming mechanism, the combination with a needle, of looper mechanism, comprising a looper bar structure, a middle fulcrum therefor constituting of said bar a lever of the first order, means having flexible connection with said bar for imparting motion to the power-receiving end thereof in a plane to give its point-end an in-and-out movement across the needle path, and means for shifting the middle fulcrum of said lever fore-and-aft, thereby to actuate said bar as a lever of the third order, to move the looper point fore-and-aft with said flexible connection as a fulcrum.



2. In a sewing machine stitch forming mechanism, the combination with a needle, of looper mechanism, comprising a looper bar structure, a middle fulcrum therefor constituting of said bar a lever of the first order, said fulcrum comprising an eccentric oscillating member, means to vibrate the end of said looper bar on said fulcrum, said means providing a sliding flexible connection with the looper bar on which said bar fulcrums transversely to the middle fulcrum as a lever of the third order.

3. A sewing machine stitch forming mechanism comprising in combination a reciprocating needle, a looper-bar structure comprising a lever of the first order, having a point structure at one end, a movable middle fulcrum for said bar, means for moving said fulcrum up and down and fore-and-aft with respect to the line of needle passage and means for moving the power receiving end of said bar in and out with respect to said line of needle passage, transversely to the plane of the first said movement, to vibrate said bar on its middle fulcrum.

4. In a sewing machine stitch forming mechanism, the combination with a pivoted needle bar, a curved needle, and means for operating the needle bar, of a shaft parallel with the needle bar axis, means to rock said shaft, a fulcrum member eccentrically carried by said shaft, a looper bar structure pivoted on and carried by said fulcrum member for vibration in a plane parallel with the shaft axis and for bodily movement fore-and-aft and up-and-down with said fulcrum member, and means for imparting the stated vibration to said looper bar structure.

5. In a sewing machine stitch forming mechanism, the combination with a pivoted needle bar, a curved needle therein, and means for vibrating said needle bar, of a shaft concentric with the needle bar axis, a fulcrum member eccentrically carried by the said shaft, means to rock said shaft, a looper bar lever of the first order pivotally carried by said fulcrum member, said lever vibratable upon its pivotal axis in a plane parallel with the axis of the shaft and bodily movable fore-and-aft with respect to the line of passage of the needle with said fulcrum member, means for imparting to said looper bar lever the stated vibration working in a plane parallel with the axis of said shaft, and a universal sliding joint between the power-receiving end of said looper lever and said moving means.

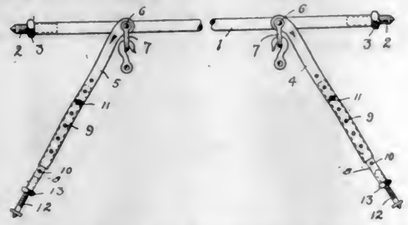
[Claims 6 to 18 not printed in the Gazette.]

1,190,834. PORTABLE TRUSS. EDWARD H. WHITNEY, Superior, Wis. Filed May 6, 1915. Serial No. 26,301. (Cl. 254—139.)

1. A device of the character described, comprising a tie-rod, means adjacent its ends and coöperating therewith for changing the length thereof, longitudinally adjustable struts pivotally attached to the rod, and means for suspending the load from the tie-rod.

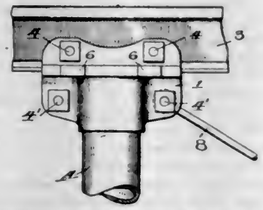
2. A device of the character described, comprising a tie-rod, means adjacent its ends and coöperating therewith

for changing the length thereof, a longitudinally adjustable strut pivotally attached to the tie-rod adjacent each end thereof, means for attaching hoisting tackle at the pivotal points of contact of the struts and tie-rod.



3. A device of the character described, comprising a tie-rod, means carried by the rod and coöperating therewith for changing the length thereof, longitudinally adjustable struts pivotally attached to the rod and means for suspending a load from the tie-rod.

1,190,835. RAIL-CLAMP. CHARLES J. WILLIAMS, Jr., Jacksonville, Fla., assignor to L. Moore Dry Kiln Co., Jacksonville, Fla., a Corporation of Florida. Filed Jan. 5, 1916. Serial No. 70,449. (Cl. 238—2.)

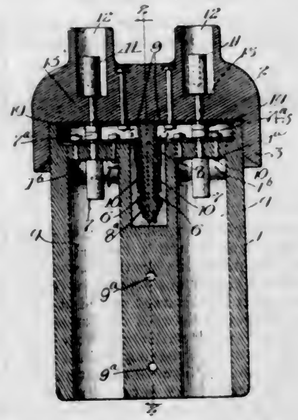


The combination with a column and a rail, of a clamp made of two similar members made to embrace opposite sides of the column and the rail web and base, the portion opposite the rail base reinforced at intervals to give strength and the portions above and in the angle below having holes to receive bolts for fastening the members together and to the rail and column, the clamps having a horizontal seat for the rails between the column and the base of the rail.

1,190,836. COMBINATION POTHEAD AND SERIES CUT-OUT. PAUL F. WILLIAMS, Chicago, Ill., assignor to G. & W. Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 23, 1908. Serial No. 468,920. (Cl. 173—332.)

1. A device of the class specified comprising a base member provided with two vertically arranged bores open at their lower ends and closed at their upper ends, metallic terminals for the connection of electrical conductors at the upper ends of said bores, said member being also provided with a space or recess located between said bores and open at its upper end and closed at its lower end, contact devices connected with said terminals and extended to said recess and into the same, a top fitted upon and covering the upper end of said base member, said top being provided with a pair of vertically arranged bores or channels open at their upper ends and closed at their lower ends, terminals for the connection of electrical conductors at the lower ends of said top bores or channels, and contact devices connected with said top terminals and extended downwardly so as to coöperate with the contact devices in the recess in said base member.

2. A device of the class specified comprising a base member provided with two vertically arranged bores open at their lower ends and closed at their upper ends, metallic terminals for the connection of electrical conductors at the upper ends of said bores, said member being also provided with a space or recess located between said bores and open at its upper end and closed at its lower end, contact devices connected with said terminals and extended to said recess and into the same, a top fitted upon and covering the upper end of said base member, said top being provided with a pair of vertically arranged bores or channels open at their upper ends and closed at their lower ends, terminals for the connection of electrical conductors at the lower ends of said top bores or channels, and contact devices connected with said top terminals and extended downwardly so as to coöperate with the contact devices in the recess in said base member, said contacts on said top being mounted upon a prong or projection 8 extending downwardly from the lower surface of said top and said base member having the upper ends of its vertically arranged bores or channels provided with side enlargements 1^b adapted to permit insulating cement to be poured into said bores or channels from above.



3. The combination of a base member provided with upwardly extending bores for conductors, the upper ends of said bores being closed and the lower ends being open, terminals at the upper ends of said bores, said terminals being constructed for the connection of electrical conductors and having extensions extending through the walls closing the upper ends of said bores, a top covering the upper end of said base member, said top being provided with bores for conductors, said bores having their upper ends open and their lower ends closed, terminals at the lower ends of said top bores, said terminals being constructed for the connection of electrical conductors in said bores and having extensions extending through the walls closing the lower ends of said bores, and coöperating contact members within said base member and top, the contacts on the base member being connected with the extensions of the base member terminals, and the contacts on the top being connected with the extensions of the terminals of said top.

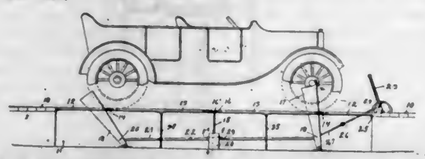
4. The combination of a base member provided with upwardly extending bores for conductors, the upper ends of said bores being closed and the lower ends being open, terminals for connection of conductors at the upper ends of said bores, said terminals having extensions extending through the walls closing the upper ends of said bores, a top fitted upon and covering the upper end of said base member, said top being provided with bores for conductors having their upper ends open and their lower ends closed, terminals for the connection of conductors at the lower end of said top bores, said terminals having extensions extending through the walls closing the lower ends of said bores, and coöperating contact members within said base member and top, the contacts on the base member being connected with the extensions of the base member terminals and the contacts on the top being connected

with the extensions of the terminals of said top, said base contact members comprising metallic strips normally making contact with one another, and the contacts on the top comprising metallic strips separated and insulated from each other and adapted when the top is put in position upon the base member, to pass between and separate the contact strips on said base member, making contact with the same.

5. The combination of a base member provided with upwardly extending bores closed at their upper ends and provided at said upper ends with terminals for the connection of conductors in said bores, a top member covering and protecting said base member, terminals adapted for connection of electrical conductors carried by said top member, said terminals being located on the outer side of portions of the wall of said top which is accessible when the top is in place upon the base, said terminals having extensions extending through said wall portions of the top to the inside thereof, and coöperating contact devices on said top and base member.

[Claims 6 and 7 not printed in the Gazette.]

1,190,837. AUTOMOBILE-STAND. HOWARD WOLFE, Plymouth, Ind. Filed Feb. 4, 1915. Serial No. 6,176. (Cl. 25—89.)



1. An automobile stand comprising movable and tiltable track sections, means for holding said track sections from tilting, means movable by an automobile for supporting the same, means for holding the latter in operative position and connected with the automobile holding means for releasing the holding means whereby the track sections may automatically tilt below the automobile wheel.

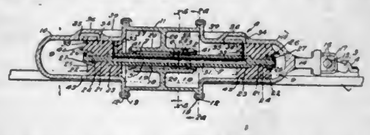
2. An automobile stand comprising a plurality of movably connected tiltable track sections for supporting a moving automobile, jacks movable by the automobile for supporting the same, members connected to certain of said track sections and the jacks for tilting the track sections from below the wheels of the automobile and a manually operable lever for holding the track sections in tilted position.

3. An automobile stand comprising movable and tiltable track sections, means for holding said track sections from tilting, jacks movable by an automobile for supporting the same, a ratchet connected to said jacks for holding the latter in operative position, and means connected to the said holding means and the jacks for releasing the holding means upon the movement of the jacks to an operative position.

4. An automobile stand comprising movable and tiltable track sections, a depressible latch member connected to certain of said track sections, jacks moved by an automobile for supporting the same, a hand operated ratchet lever for holding the latter in operative position, and a rod connecting said jacks together and including a shoulder adapted to engage the latch member when the latter is depressed to hold the said track sections in an operative position.

1,190,838. CYLINDER-DRIVE ENGINE. JASPER WILLIAM WOOD, Needles, Cal., assignor of forty-five one-hundredths to Thomas J. Murphy and ten one-hundredths to Frederick C. Blodgett, Needles, Cal. Filed Jan. 5, 1914. Serial No. 810,521. (Cl. 123—42.)

1. A cylinder having a piston head in each end and together with said heads forming firing chambers and compression chambers on opposite sides of said heads respectively and a tubular connection slidably mounted in and relative to the cylinder and extending from one head to the other head and provided with a port, a pivotally mounted cross head fastened to the tubular connection and having an internal chamber communicating with said port, a carbureter connected to the chamber of the cross head, and means to first pass fuel from said tubular connection to one of the compression chambers and from the other compression chamber to one of the firing chambers and to then pass fuel from said tubular connection to the other compression chamber and from the first compression chamber to the other firing chamber.



2. A cylinder having a piston head in each end and together with said heads forming firing chambers and compression chambers on opposite sides of said heads, a tubular connection from one head to the other head, means slidably mounting said tubular connection in and relative to the cylinder, means to supply fuel to said tubular connection, and means to first pass fuel from said tubular connection to one of the compression chambers and from the other compression chamber to one of the firing chambers and to then pass fuel from said tubular connection to the other compression chamber and from the first compression chamber to the other firing chamber.

3. A frame, a cross-head pivoted on the frame and provided with an internal chamber, a carbureter connected to said chamber, a tubular connection connected to the cross-head and provided with a port communicating with said chamber of the cross-head, and a cylinder having a piston head in each end and together with said heads forming firing chambers and compression chambers on opposite sides of said heads, said heads having passages communicating with the tubular connection and said cylinder being provided with channels each having an inlet and an outlet, said inlets communicating with said passages and said outlets communicating alternately with the compression chambers.

4. In an internal combustion engine the combination with a frame, a cross head mounted to rock on said frame, a pair of axially alined pistons fixed to said cross head to rock therewith, a cylinder mounted outside of said pistons to slide relative to said pistons, means for producing fluid expansion for actuating said cylinder, and a driven member connected to said cylinder to be driven thereby when said cylinder is actuated.

5. In an internal combustion engine the combination with a frame, a cross head mounted to rock on said frame, a pair of piston rods fixed to said cross head to rock therewith, a cylinder mounted outside of said piston rods and adapted to slide relative to said piston rods, piston heads on said piston rods to form compression and firing chambers in said cylinder, means for feeding fuel to said firing chambers, and means for igniting said fuel to actuate said cylinder.

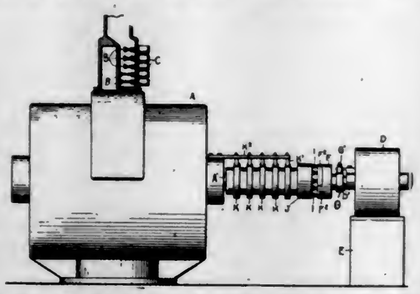
[Claims 6 to 16 not printed in the Gazette.]

1,190,839. SPEED-CONTROLLER. JULIUS GOURGUES ACEVES, New York, N. Y. Filed Mar. 24, 1915. Serial No. 16,788. (Cl. 175—355.)

1. In a speed controller for prime movers, means for controlling the admission of the motive agent to said prime mover, a pilot motor, and an electric controlling device directly connected with the admission means for controlling the same, the said controlling device being governed by the said pilot motor.

2. In a speed controller for prime movers having controlling means, a pilot motor, an electric controlling device controlling directly the controlling means of the said prime mover, the said controlling device being influenced on a relative angular displacement between rotating elements of the prime mover and the pilot motor to vary the controlling means of the prime mover.

3. In a speed controller for prime movers having controlling means, a pilot motor, a controlling device having controlling members of which one is driven by a rotatable part of the prime mover and the other is driven by a rotatable part of the pilot motor, one of the said controlling members having a suitable commutator and the other controlling member having a series of contact brushes, a certain number of said brushes engaging the contact surface of the said commutator when the prime mover and the pilot motor are running at the same normal speed, the number of brushes in contact varying as the speed of the prime mover varies from the normal, and actuating devices for the controlling means of the prime mover and connected with the said series of contact brushes.

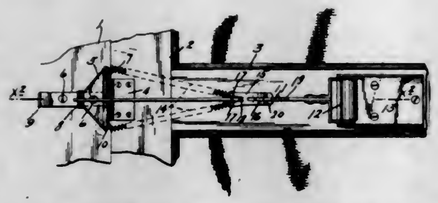


4. In a speed controller for prime movers, a pilot motor, electric actuating means for directly actuating the controlling devices of the said prime mover, and means for controlling the said actuating devices from the said pilot motor on a tendency of variation of relative speed of the prime mover with respect to the pilot motor to bring a greater or less number of the controlling devices of the prime mover into action.

5. In a speed controller for prime movers having controlling valves, electro-magnets for individually and directly controlling said valves, a pilot motor, a controlling device connected with the prime mover, for controlling said electromagnets, the said controlling device being governed by the said pilot motor to bring a greater or less number of electromagnets into action.

[Claims 6 to 8 not printed in the Gazette.]

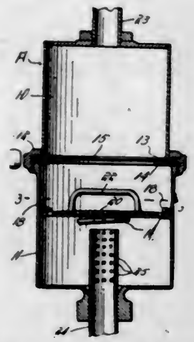
1,190,840. DOOR-SPRING. OLE W. ANDERSON, Boyd, Minn. Filed Apr. 3, 1916. Serial No. 88,520. (Cl. 16—96.)



1. The combination with a door casing and a door hinged thereto, of a base plate anchored to the door casing, a lever pivoted to the base plate at one end and having its other end bearing against the door, a lock dog mounted on the lever for sliding and rocking movements with respect thereto, and a spring anchored at one end to the base plate and at its other end to the lock dog, said spring tending to move the lever in a position to close the door and to hold the lock dog rocked into interlocking engagement with the lever.

2. The combination with a door casing and a door hinged thereto, of a base plate anchored to the door casing, a lever pivoted to the base plate at one end and having its other end bearing against the door, longitudinally spaced ratchet teeth on the lever, a lock dog having a body member with a slot through which the lever projects, said lock dog having sliding and rocking interlocking engagement with the ratchet teeth of the lever, and a spring anchored at one end to the base plate and at the other end to the lock dog, said spring tending to move the lever in a position to close the door and to hold the lock dog rocked into interlocking engagement with the ratchet teeth on the lever.

1,190,841. BEER-STRAINER. ALEXANDER ALMASY and JOSEPH BACHA, Chrome, N. J. Filed June 7, 1915. Serial No. 32,764. (Cl. 210—15.)



1. A strainer for beer dispensing system comprising a casing formed of detachably connected upper and lower sections, an outlet pipe leading from the outer end of the upper section an inlet pipe projecting through the outer end of the lower section and extending a predetermined distance into the latter, the portion of the inlet pipe disposed within the lower section being provided with a plurality of perforations, a fine screen clamped between the adjacent ends of said sections, and a coarse screen removably mounted in the lower section.

2. A strainer for a beer dispensing system comprising a casing formed of detachably connected upper and lower sections, an outlet pipe leading from the outer end of the upper section, an inlet pipe leading from the outer end of the lower section, a relatively fine screen clamped between the adjacent ends of said sections, helical supporting lugs on the inner face of the lower section, locking lugs on the inner face of the lower section and spaced above the supporting lugs, and a perforated straining plate having its lower side engaged with the supporting lugs and its upper side with the locking lugs, said plates having recesses therein adapted to be brought into registration with the locking lugs by rotation of the plate to permit removal of the latter.

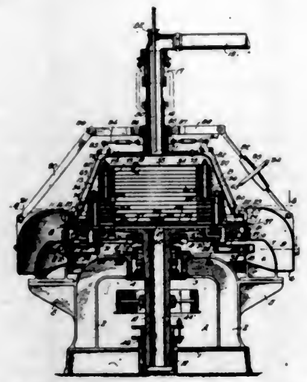
1,190,842. CENTRIFUGAL-PRESSURE FILTER. FRANK K. ATKINS and EARL F. ATKINS, New York, N. Y. Filed Nov. 13, 1915. Serial No. 61,269. (Cl. 210—25.)

1. A centrifugal pressure filter including a bowl rotatable on a vertical axis having ports for the discharge of solids, filtering means in the bowl, and a single vertically movable valve common to and normally closing all the ports.

2. A centrifugal pressure filter including a rotary bowl having a flaring peripheral wall, ports in the portion of the wall of largest diameter for the discharge of solids, a normally closed valve surrounding the bowl to open or close all the ports, and filtering means within the bowl.

3. A centrifugal pressure filter including a rotary bowl having spaced ports in its peripheral wall for the discharge of solids, and an annular valve common to and normally closing all the ports.

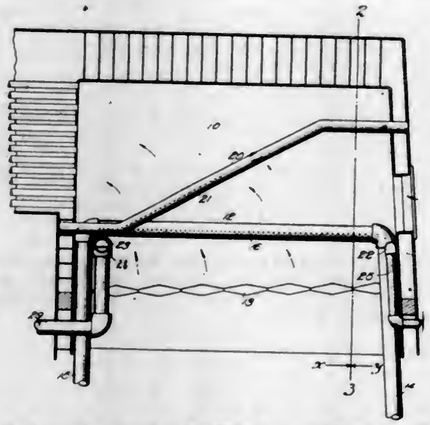
4. A centrifugal pressure filter including a rotary bowl having spaced ports in its peripheral wall for the discharge of solids, and an annular valve common to and normally closing all the ports, said valve being located outside the bowl.



5. A centrifugal pressure filter including a rotary bowl having spaced ports in its peripheral wall for the discharge of solids, an annular valve common to and normally closing all the ports, said valve being located outside the bowl, and means for axially moving the valve to open or close the ports.

[Claims 6 to 59 not printed in the Gazette.]

1,190,843. SMOKE-CONSUMER. HENRY S. AYLING, Danville, Ill., assignor of one-half to Arthur J. Wilmot, Danville, Ill. Filed Sept. 9, 1915. Serial No. 49,761. (Cl. 110—76.)



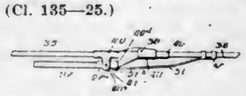
1. A smoke consumer for furnaces, comprising air delivering pipes extending above the burning fuel in the fire box of the furnace, the air delivering pipes being provided at their lower portions with perforations, the said air delivering pipes being connected at the ends with the atmosphere to admit air to the said air delivering pipes, and two diaphragms extending lengthwise within each air supply pipe above the perforations, the diaphragms terminating short of each other near the middle of the pipe and the outer ends of the diaphragms being turned down to cause the air passing into the ends of the pipe to travel over the diaphragms to the middle of the pipe and then pass between the adjacent ends of the diaphragms into the perforated portions of the pipe out through the perforations into the fire box.

2. A smoke consumer for furnaces, comprising side air delivering pipes extending longitudinally within the fire box at the sides thereof, the said side air delivering pipes being connected at their ends with the atmosphere and having their lower portions perforated, and a plurality of top air delivering pipes extending longitudinally within the fire box from the back of the fire box in a downward and forward direction to the front of the same, the ends of each of the said top delivering pipes opening into the atmosphere and the forward bottom portions of the said top delivering pipes being perforate.

3. A smoke consumer for furnaces, comprising side air delivering pipes extending longitudinally within the fire box at the sides thereof, the said air delivering pipes being connected at their ends with the atmosphere and having their lower portions perforated, top air dilevering pipes extending longitudinally within the fire box in a downward and forward direction, the ends of each of the said top delivering pipes opening into the atmosphere and the forward bottom portions of the said top delivering pipe being perforated, each side and top delivering pipe being provided with two diaphragms having their outer ends engaging the pipe and their inner ends spaced apart near the middle of the pipe, and back air delivering pipes extending transversely in the fire box at the back thereof and above the burning fuel in the fire box, the said back air delivering pipes having their bottom portions perforated.

4. A smoke consumer for furnaces, comprising side air delivering pipes extending longitudinally within the fire box at the sides thereof, the said air delivering pipes being each connected at its ends with the atmosphere and having its lower portions perforated, top air delivering pipes extending longitudinally within the fire box in a downward and forward direction, the ends of each of the said top delivering pipes opening into the atmosphere and the forward bottom portions of the said top delivering pipes being perforated, back air delivering pipes extending transversely in the fire box at the back thereof and above the burning fuel in the fire box, the said back air delivering pipes being each connected at one end with the atmosphere and having its bottom portion perforated, and front air delivering pipes extending transversely in the fire box at the front end thereof and above the burning fuel in the fire box, the inner ends of the said front air delivering pipes opening into the atmosphere through a common pipe and the bottom portions of the said front air delivering pipes being perforated.

1,190,844. FOLDING UMBRELLA. CHARLES ALLEN BACON, Chicago, Ill. Filed Jan. 28, 1914. Serial No. 814,865. (Cl. 135—25.)



1. The combination in an umbrella, of a handle rod, a rib pivotally connected therewith, said rib comprising two sections pivotally connected to each other by a hinged joint, and an elastically controlled locking device secured to one of the rib sections and being adapted to coöperate with a rigid locking member on the other section of the rib to lock said sections of the rib in a rigid extended relation, a ferrule to slide on the handle rod, a brace or stretcher of integral and relatively rigid construction being pivotally secured at one extremity to the said sliding ferrule and its other extremity being pivotally connected to one of the sections of the said rib, there being a projection on the said brace or stretcher beyond its pivotal connection with the rib section adapted to engage the said elastically controlled locking device when said brace or stretcher is moved to a position nearer parallel in relation to the said rib than the normal position of the said brace or stretcher when the rib or float is extended in its normal open position, and hand operated locking means interposed between the handle rod and ferrule.

2. The combination of an umbrella, of a handle rod, a rib pivotally connected therewith, said rib comprising two sections hingedly connected together, a locking device comprising a spring formed with a cross member at one end

and being secured to one of the sections of the rib, a rigid locking device comprising a plurality of spaced lugs secured to the coöperating section of the rib on opposite sides of the said spring adjacent the cross member thereof, a brace or stretcher pivotally connected to the last said section of the rib, and means operated by the movement of the brace or stretcher in relation to the rib for disengaging the spring-controlled locking device from its cooperating rigid locking device on the rib.

3. The combination with the handle rod of an umbrella, of a rib pivotally connected therewith, said rib comprising two sections hingedly connected together, there being a spring controlled locking device secured to one of the said sections and a rigid coöperating locking lug on the other of the said sections, a sliding ferrule on the handle rod, a brace or stretcher of integral and relatively rigid construction connected therewith, and having pivotal connection at its opposite extremity with one section of the said rib, a projection on said brace or stretcher beyond its pivotal connection with the said rib, said projection being adapted to engage the said elastically controlled locking device for disengaging the same from the said locking lug on the rib, and hand operated locking means for locking the said ferrule in relation to the handle rod.

4. The combination with the handle rod of an umbrella, of a rib comprising two hingedly connected sections, pivotally connected with said handle rod, a rigid locking member secured to one of the said sections of the rib and an elastically controlled latch adapted to coöperate with said locking member being secured to the other said rib section, a brace or stretcher for operating said rib pivotally connected to one of the said sections thereof, and a projection on the said brace or stretcher beyond the pivotal connection with the said rib, said projection being adapted to engage the said elastically controlled latch to render the same operative or inoperative to lock the sections of the rib in their rigid or extended position at the will of the operator accordingly as the angle between the said brace or stretcher and the rib is varied.

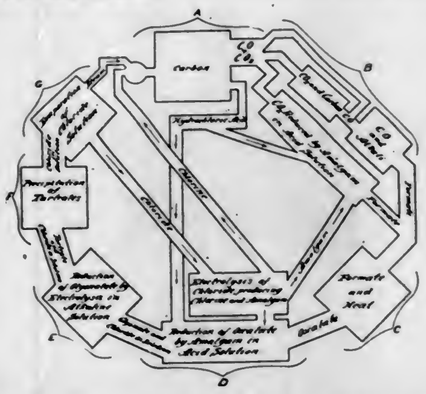
5. The combination of a handle rod of an umbrella, of a rib pivotally secured thereto, and comprising a plurality of hingedly connected sections, an elastically controlled locking device secured to one of the said rib sections, and being adapted to coöperate with means on the other of said sections for locking the said sections in their rigid or extended relation, a brace or stretcher for opening and closing the said rib, a projection on the brace or stretcher for engaging the said elastically controlled locking device to unlock the same when the brace or stretcher is brought to a position approximately parallel with the rigidly extended rib, a ferrule slidably mounted on the handle rod and being pivotally connected with the brace or stretcher, and means for locking the ferrule in engagement with the handle rod.

[Claim 6 not printed in the Gazette.]

1,190,845. PROCESS FOR ORGANIC SYNTHESIS. LEO H. BAEKELAND, Yonkers, and ARNOLD H. PETER, New York, N. Y. Filed July 10, 1912. Serial No. 708,588. (Cl. 204—9.)

1. A process for the manufacture of tartaric acids and their compounds, comprising electrolyzing a chlorid and by means of said electrolysis both developing chlorin and promoting the transformations hereinafter mentioned, mixing said chlorin with water and bringing the mixture in contact with carbon thereby oxidizing the carbon and producing hydrochloric acid, transforming the carbon-oxid into a formic substance, the formic substance into an oxalic substance, the oxalic substance into a glyoxylic substance, and the glyoxylic substance into a tartaric substance, employing therein the same electrolysis aforesaid whereby said chlorin is developed, and causing the hydrochloric acid produced from said chlorin to unite with the residue from the said electrolysis to form chlorid suitable for use as aforesaid.

2. A process for the manufacture of tartaric substances, comprising electrolyzing a chlorid and by means of said electrolysis developing chlorin, bringing said chlorin and water in contact with carbon to produce carbon-oxid and hydrochloric acid, transforming the carbon-oxid into a tartaric substance by successive reductions wherein said electrolysis is employed, and causing said hydrochloric acid to unite with the residue resulting from said electrolysis to reform chlorid.



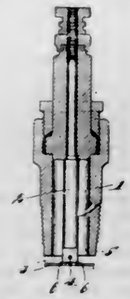
3. A process of manufacturing tartaric substances comprising developing and transforming carbon into a tartaric substance by oxidation and reduction, the oxidation being accomplished by the assistance of chlorin developed from a chlorid by electrolysis and the reduction being accomplished by means of the same electrolysis whereby the chlorin is produced.

4. A process of manufacturing tartaric substances comprising the oxidation and reduction of carbon, the oxidation being effected by a reaction between chlorin, water and carbon with the concomitant production of hydrochloric acid, the reduction being effected by the electrolysis of a chlorid whereby the chlorin is produced and the acid being used to unite with the residue resulting from the electrolysis to form chlorid.

5. In a process for the manufacture of tartaric substances by the oxidation of carbon and the subsequent transformation of the carbon-oxid, developing chlorin from a chlorid by electrolysis, conducting the chlorin with water over carbon to produce carbon-oxid, and reducing the carbon-oxid or a development thereof by means of the said electrolysis whereby the chlorin is produced.

[Claims 6 to 17 not printed in the Gazette.]

1,190,846. SPARK-PLUG. JOHN W. BAIRD, Chicago, Ill. Continuation in part of application Serial No. 57,460, filed Oct. 23, 1915. This application filed Jan. 24, 1916. Serial No. 73,982. (Cl. 123—169.)



1. A spark plug for explosion engines comprising two poles; a member rockingly mounted intermediate its ends upon one of said poles so that in the oscillation of said member the ends thereof will move toward and from the other pole, one end of said member being heavier than the other; and means for limiting oscillatory movement of said member to prevent contact thereof with said last mentioned pole, substantially as described.

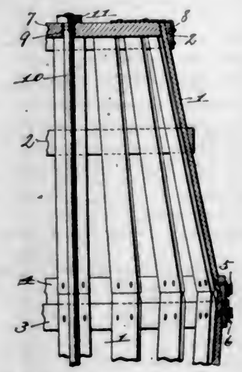
2. A spark plug for explosion engines comprising two poles; a member rockingly mounted intermediate its ends upon one of said poles so that in the oscillation of said member, the ends thereof will move toward and from the other pole, the under side of one end of said member disposed parallel with the axis of said member being of less area than that of the corresponding side of the other end; and means for limiting oscillatory movement of said member to prevent contact thereof with said last mentioned pole, substantially as described.

3. A spark plug for explosion engines comprising an outer tubular body forming one pole of the plug; an inner centrally positioned longitudinally extending member arranged in said body and forming the other pole of the plug; a transversely extending elongated member mounted intermediate its ends upon the inner end of said last mentioned member for free vertical movement about a transverse axis whereby, in the oscillation of said member, the ends thereof will move toward and from opposite sides of said tubular member; and means for limiting oscillatory movement of said elongated member to prevent contact thereof with the tubular member, substantially as described.

4. A spark plug for explosion engines comprising an outer tubular body forming one pole of the plug; an inner centrally positioned longitudinally extending member arranged in said body and forming the other pole of the plug; a transversely extending elongated member mounted intermediate its ends upon the inner end of said last mentioned member for free vertical movement about a transverse axis, the under side of one end of said member disposed parallel with the axis of said member being of less area than that of the corresponding side of the other end; and means for limiting oscillatory movement of said member to prevent contact thereof with the tubular pole member, substantially as described.

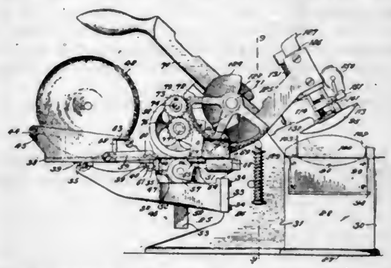
5. A spark plug for explosion engines comprising an outer tubular body forming one pole of the plug; an inner centrally positioned longitudinally extending member arranged in said body and forming the other pole of the plug; a transversely extending bar mounted centrally upon the inner end of said member for free oscillatory movement about a transverse axis; and shoulders at the inner end of said central member adapted for engagement with the upper side of said bar at opposite side of the pivot thereof for limiting oscillatory movement of said bar to prevent contact thereof with said tubular pole member, substantially as described.

1,190,847. HAMPER. OSCAR L. BARTLETT, Mound City, Ill. Filed Mar. 29, 1915. Serial No. 17,761. (Cl. 217—44.)



A packaging device comprising two hampers, each hamper having staves and exterior hoops, the staves of one hamper projecting beyond the hoop and having the outer faces of their projecting portions beveled, the hoop of the coöperating hamper projecting beyond the staves and having its inner projecting face beveled to engage the beveled portions of the staves of the other hamper.

1,190,848. MACHINE FOR BANDING BILLS AND THE LIKE. CHARLES S. BATDORF, Brooklyn, N. Y. Filed Apr. 23, 1915. Serial No. 23,293. (Cl. 93—93.)



1. In a banding machine of the character described, a bed having a concave face transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in overlapping relation and secured together, and means for moving said presser or platen forcibly against said bundle of bills to concave the same preparatory to the ends of the strip being secured together on the outer face of said presser or platen, whereby when the bundle is removed from the presser or platen and flattened out it closely fills the band upon it.

2. In a banding machine of the character described, a bed having a concave face, means for feeding a banding strip transversely across said face and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in overlapping relation and secured together, and means for moving said presser or platen forcibly against said bundle of bills to concave the same preparatory to the ends of the strip being secured together on the outer face of said presser or platen, whereby when the bundle is removed from the presser or platen and flattened out it closely fills the band upon it.

3. In a banding machine of the character described, a bed having a concave face transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in overlapping relation and secured together, means for moving said presser or platen forcibly against said bundle of bills to concave the same, and means for then folding the end portions of said strip upon the outer face of said presser or platen preparatory to said ends being secured together thereon, whereby when the bundle is removed from the presser or platen and flattened out it closely fills the band upon it.

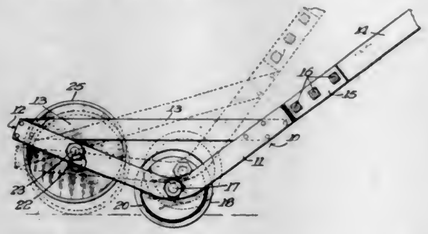
4. In a banding machine of the character described, a bed having a concave face transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having a convex face to engage said bundle and an outer face upon which the end portions of said strip may be folded in overlapping relation and secured together, means for moving said presser or platen forcibly against said bundle of bills to concave the same, means for then folding the end portions of said strip upon the outer face of said presser or platen, and means for securing said end portions of the strip together while on said outer face of said presser or platen, whereby when

the bundle is removed from the presser or platen and flattened out it closely fills the band upon it.

5. In a banding machine of the character described, a yielding bed transversely across which a banding strip may be extended and against which strip and bed a bundle of bills to be banded may be placed, a presser or platen having one face to engage said bundle and an outer face upon which the end portions of said strip may be folded and secured together, means for moving said presser or platen forcibly against said bundle of bills and to depress said bed according to the thickness of the bundle, means on the depression of said bed for turning the end portions of the strip upwardly, and means for folding the end portions of the strip in overlapping relation upon the outer face of said presser or platen preparatory to said ends being secured together thereon.

[Claims 6 to 29 not printed in the Gazette.]

1,190,849. METHOD OF TREATING TURF. EDWARD C. BERRIMAN, Chicago, Ill. Filed Nov. 30, 1915. Serial No. 64,253. (Cl. 47—36.)



1. The method of cultivating and treating a grass plot or green sward which consists in cutting the grass to a substantially uniform short length; slashing the turf at intervals, by making a series of relatively long parallel incisions through the root mat; laterally compressing the sward between adjacent incisions to leave said incisions open; sowing seeds on the sward; applying water in a spray to wash the seeds that may have found lodgment on the turf into said incisions and to soften the turf, then expanding said intervening pieces of wet turf, or sod, by rolling to close said incisions to cover the seed and to smooth the surface.

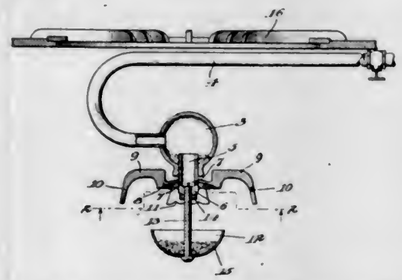
2. The method of cultivating and treating a grass plot or green sward which consists in cutting the grass to a substantially uniform short length; slashing the turf at intervals by making a series of relatively long parallel incisions through the root mat; making another series of incisions across the first series, thereby dividing the turf into small blocks without lifting it; compressing the sward between adjacent incisions, as the incisions are made, to leave said incisions open; sowing seed on the sward; applying water in a spray to wash the seed, that may have found lodgment on the turf, into said incisions and to soften the turf, then expanding the said intervening pieces of wet turf or sod, by rolling to close said incisions to cover the seed and to smooth the surface.

3. The method of cultivating, propagating and treating grass upon a plot or green sward which consists in cutting the grass to a substantially uniform short length; slashing the turf at intervals to make a series of relatively long parallel incisions through the root mat; laterally compressing the sward between adjacent incisions, as the incisions are made to leave said incisions open; sowing seeds on said sward at substantially the same time when said incisions are made; applying water in a spray to wash the seeds that may have found lodgment on the turf into said incisions and to soften the turf, then laterally expanding the said intervening pieces of wet turf, or sod, by rolling to close said incisions, cover the seed and to smooth the surface.

4. The method of cultivating and treating a grass plot or green sward which consists in cutting the grass to a substantially uniform short length; slashing the turf at intervals by making a series of relatively long parallel incisions through the root mat into the soil below; laterally compressing the sward between adjacent incisions to leave said incisions open; uniformly distributing materials to be introduced below the root mat on said sward; washing said materials into said incisions by application of water, then closing said incisions by rolling.

5. The method of treating a grass plot or green sward which consists in slashing the turf at intervals, by making a series of relatively long parallel incisions through the root mat; sowing seeds on the sward; applying water in a spray to wash the seeds into the incisions and to soften the turf, then expanding the intervening pieces of turf or sod, by rolling to close the incisions and smooth the surface.

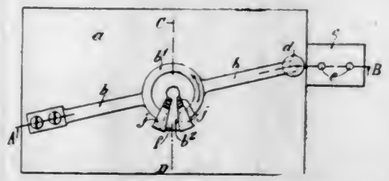
1,190,850. OIL-BURNER. JOSEPH M. BIANCHI, Chicago, Ill. Filed Oct. 9, 1915. Serial No. 54,940. (Cl. 158—63.)



1. An oil burner comprising a hollow oil receptacle; an oil supply pipe leading thereto; a pipe nipple threaded in the bottom of said receptacle and projecting upwardly thereinto and downwardly therefrom, there being escape openings in said nipple below said receptacle; a spider threaded on said nipple below said receptacle, said spider being provided with deflector blades opposite said escape openings; a supporting member threaded centrally in the bottom of said nipple; and a heating vessel suspended on said member, substantially as described.

2. An oil burner comprising a hollow globe; a supply pipe passing over said globe and being rebent and entering the side thereof; a nipple threaded in the bottom of said globe and projecting upwardly thereinto and downwardly therefrom, there being escape openings in said nipple below said globe; a spider threaded on said nipple below said globe, said spider being provided with a plurality of radiating arms having depending deflector blades at their outer ends opposite said escape openings; a supporting bolt threaded centrally in the bottom of said nipple; a lock nut on said bolt contacting with the bottom of said nipple; and a preliminary heating vessel suspended on said bolt, substantially as described.

1,190,851. SAFETY DEVICE FOR LOCKS. JEAN PIERRE JOSEPH BIROT, Bayonne, France. Filed Nov. 24, 1913. Serial No. 802,588. (Cl. 70—14.)



1. In a lock, in combination: a lock mechanism including a bolt, a casing containing said mechanism and a stop piece for the bolt, mounted on said casing, and having opposite the key hole and concentrically therewith an annular part interrupted at one point, said stop piece being adapted to be disengaged from the bolt by a supplementary bit of the key acting on said annular part, substantially as described and for the purpose set forth.

2. In a lock, in combination, a lock mechanism, including a bolt, a casing containing said mechanism, a stop piece mounted on the outside of said casing and adapted to be disengaged from the bolt by a supplementary bit of the key, and guards mounted on the outside of the lock casing and having a cut corresponding to that of the supplementary bit of the key, substantially as described and for the purpose set forth.

1,190,852. FASTENER. GEORGE E. BISHOP, Cleveland, Ohio. Filed Jan. 7, 1915. Serial No. 902. (Cl. 24—221.)



1. In an improved fastener, the combination with a frame and a turning head: of a spring member provided with an approximately continuous outer surface and adapted by the turning of said head rigidly to engage a fastener eyelet.

2. In an improved fastener, the combination of a frame; a spring member supported thereon; a turning member also supported upon said frame and adapted to actuate said spring member rigidly to engage a fasteer eyelet; and means adapted to take up wear between said spring member and said actuating means.

3. In an improved fastener, the combination of a frame and a turning head therefor; means adapted by the turning of said head to hold said fastener rigidly against the wall of an eyelet; and means adapted to take up wear between said turning head and said holding means.

4. In an improved fastener, the combination of a frame; a spring member supported thereon; means adapted to actuate said spring member rigidly to engage a fastener eyelet; and a second spring member adapted to take up wear between said first spring member and said actuating means.

5. In an improved fastener, the combination of a frame; a spring member supported thereon and provided with an approximately continuous outer surface; and a turning head provided with a rectangularly shaped base adapted to engage said spring member with its sides of one dimension to unlock the fastener and its sides of the other dimension to lock the same.

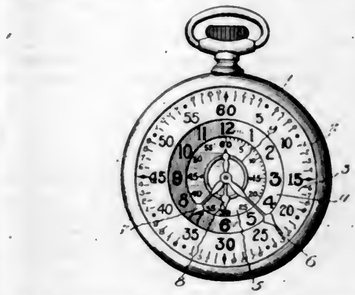
[Claims 6 to 12 not printed in the Gazette.]

1,190,853. HOROLOGICAL INSTRUMENT. HELGE A. BORRESEN, Marquette, Mich. Original application filed Nov. 25, 1910, Serial No. 594,168. Divided and this application filed Dec. 6, 1911. Serial No. 664,251. (Cl. 58—126.)

1. A timepiece having a dial and concentrically arranged hour, minute and second hands, said dial having indicia corresponding to said hands and said second hand being shorter than and operating below at least one of said other hands.

2. A timepiece having a dial and concentrically arranged hour, minute and second hands, said dial having indicia corresponding to said hands and said second hand being shorter than and operating below the hour hand.

3. A timepiece having a dial and concentrically arranged second, hour and minute hands, said dial having indicia corresponding to said hands arranged in the order named from the center of said dial toward the periphery, the second hand being shorter than any of the other two hands, and operating below both of the other hands.

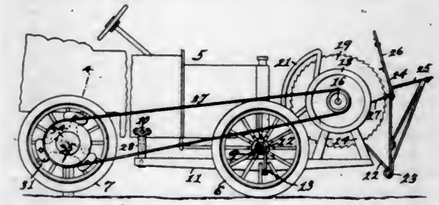


4. A timepiece having a dial and concentrically arranged second, hour and minute hands, said dial having indicia corresponding to said hands arranged in the order named from the center of said dial toward the periphery, the second hand being shorter than any of the other two hands, and operating below both of the other hands, said dial having a depressed central portion to accommodate the said second hand.

5. A timepiece having a dial and concentrically arranged second, hour and minute hands, said dial having indicia corresponding to said hands arranged in the order named from the center of said dial toward the periphery, the second hand being shorter than any of the other two hands, and operating below both of the other hands, said dial having step-like depressions respectively for the hour and second hands, the depression for the second hand being lower than the depression for the hour hand.

[Claims 6 and 7 not printed in the Gazette.]

1,190,854. TOOL-DRIVING ATTACHMENT FOR AUTOMOBILES. HENRY L. BRIGGS, Salem, Oreg. Filed Nov. 12, 1915. Serial No. 61,079. (Cl. 21—90.)



1. The combination with an automobile provided with a driving wheel, a driving axle and with a front axle; of an attachment suspended from said front axle and forming a component part of the automobile, a rotative tool carried by said attachment, and means for operatively connecting said tool with said driving wheel, said driving wheel being jacked up in the operation of said tool.

2. The combination with an automobile provided with a driving wheel, a driving axle and with a front axle; of sill bars suspended from said axle, a rotative tool carried at the forward ends of said sill bars, and means for operatively connecting said tool with said driving wheel.

3. The combination with an automobile provided with a driving wheel, a driving axle and with a front axle; of hooks depending from said axle, sill bars suspended from said hooks, a rotative tool carried at the forward ends of said sill bars, and means for operatively connecting said tool with said driving wheel.

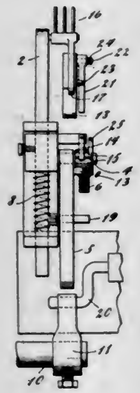
4. The combination with an automobile provided with a driving wheel, a driving axle and with a front axle; of hooks depending from said axle, sill bars suspended from said hooks, a rotative tool carried at the forward ends of

said sill bars, bearings on said automobile for the rear ends of said sill bars, and means for operatively connecting said tool with said driving wheel.

5. The combination with an automobile provided with a driving wheel, a driving axle and with a front axle; of an attachment suspended from said axle, a rotative tool carried by said attachment, a pulley carried by said driving wheel, and means for operatively connecting said tool and said pulley.

[Claims 6 and 7 not printed in the Gazette.]

1,190,855. MECHANISM FOR PREVENTING SUCCESSIVE CHANGES IN AUTOMATIC LOOMS. ALBERT BAIOT, Paris, France. Original application filed July 19, 1911, Serial No. 639,286. Divided and this application filed Dec. 9, 1913. Serial No. 805,482. (Cl. 139—85.)

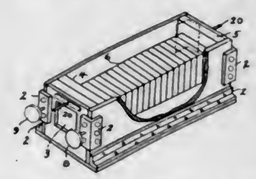


1. In looms, a weft stop motion, an automatic cop changing mechanism, mechanism for stopping the looms when after a change of cops said weft stop motion is actuated before a determined number of weft threads have been correctly passed, said mechanism including a toothed sector, means co-acting with said teeth for displacing said sector with a step by step motion, a lever for controlling the actuation of the loom and a device engageable by said sector and adapted for engagement with said lever when said sector has been displaced a number of steps corresponding to a determined number.

2. In looms, a weft stop motion, an automatic cop changing mechanism, mechanism for stopping the loom without actuating the cop changing mechanism, when after a change of cops said weft stop motion is actuated before a determined number of shots of the shuttle have occurred, said mechanism including an intermediate part adapted to have a step by step motion imparted thereto, means for displacing said part step by step for each of said determined number of shots of the shuttle, a lever for controlling the actuation of the loom; and a device engageable by said intermediate part and adapted for engagement with said cop changing mechanism when in one position and with said lever when in another position, said cop changing mechanism being unactuated when said device is out of engagement with said actuating member, said device engaging said lever when said intermediate part has been displaced a number of steps corresponding to said determined number.

3. In looms, in combination, a member controlling the actuation of an automatic cop changing mechanism, a member controlling the stoppage of the loom, a mechanism engaging with one or the other of the two members for actuating the same upon a failure of the weft thread, and a step-by-step device controlling the engagement of said mechanism with said second named member.

1,190,856. ELECTRIC FURNACE. JOHN W. BROWN, Lakewood, Ohio, assignor to National Carbon Co., Cleveland, Ohio, a Corporation of New Jersey. Filed Aug. 12, 1912. Serial No. 714,516. (Cl. 204—64.)



1. In electric furnaces, a plurality of independent furnace units containing charges to be heated, a support for said units, electrodes for heating the charges and means for causing relative movement between said support and the electrodes to place said electrodes adjacent different units on the support.

2. In electric furnaces, a plurality of furnace units, means whereby charges contained in said units may be heated, and a conveyer for moving the units into position to be acted upon by said first mentioned means.

3. In electric furnaces, a plurality of furnace units adapted to contain charges to be heated, electrodes for heating the charges, a conveyer for moving the units successively between the electrodes and means for supporting said units on the conveyer.

4. In electric furnaces, a plurality of furnace units, means whereby charges contained in said units may be heated, supporting means for the units, means for moving said supporting means and said heating means relative to each other to place the heating means successively adjacent different units on the support.

5. In electric furnaces a plurality of furnace units adapted to contain charges to be heated, a supporting frame for said units, electrodes for heating the charges, and means for moving said frame to place the units successively between the electrodes.

[Claims 6 to 19 not printed in the Gazette.]

1,190,857. HEAT-INSULATING COVER. HERMAN WINANS BURGHER, Port Kennedy, Pa. Filed Mar. 25, 1915. Serial No. 16,903. (Cl. 154—45.)

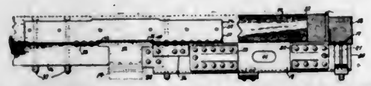


1. A cover as characterized, comprising a layer of inflammable fiber; a leyer of non-inflammable fiber, said layers being formed as a homogeneous sheet, said sheet being pressed to form surface depressions therein, said depressions being formed in opposite surfaces of said sheet; and a protective layer for said sheet, constructed from a woven fabric permanently attached to said sheet and to the outer surface thereof.

2. A cover as characterized, comprising a layer of inflammable fiber; a layer of non-inflammable fiber, said layers being formed as a homogeneous sheet, said sheet being pressed to form surface depressions therein, said depressions being formed in opposite surfaces of said sheet: and a protective layer for said sheet, constructed from a woven fabric permanently attached to said sheet and to the layer of non-inflammable fiber thereof, said protective cover being indented in correspondence with said sheet.

3. A cover as characterized, comprising a plurality of unit sheets, each embodying superposed layers of inflammable fiber and non-inflammable fiber homogeneously united and indented to form pockets in the surfaces thereof, said sheets being adhered in superposed relation, and the pockets thereof being superposed to form internal cells.

1,190,858. DRAFT-ARM FOR RAILWAY-CARS. LEWIS T. CANFIELD, Chicago, Ill., assignor to Union Draft Gear Co., a Corporation of Illinois. Filed Sept. 16, 1915. Serial No. 51,043. (Cl. 105—76.)



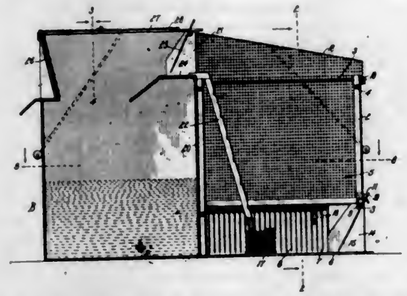
1. In combination, a pair of draft plates, each adapted to extend beneath one of the center sills of a car, a transom plate extending over and rigidly connecting the two draft plates and a flange extending upwardly from the transom plate at each side for engaging the outside face of the corresponding center sill.

2. In combination, a pair of draft plates, each adapted to extend beneath one of the center sills of a car with its rear end abutting against the body bolster, a transom plate rigidly connecting the two draft plates and extending rearwardly therefrom over the body bolster, and an upstanding flange extending continuously along each side of the transom plate for engaging the outside face of the corresponding center sill from a point in front to a point in rear of the body bolster.

3. In combination, a pair of draft plates, each adapted to extend beneath one of the center sills of a car from the end sill of the car to a point adjacent the body bolster, a tie plate connecting the two draft plates at their forward ends, said tie plate having a portion extending upwardly in front of the end sill of the car, a transom plate rigidly connecting the two draft plates adjacent their rear ends and extending rearwardly therefrom over the bolster, and an upstanding flange extending continuously along each side of the transom plate for engaging the outside face of the corresponding center sill.

4. In combination, a pair of draft plates, and a transom plate connecting the draft plates and extending rearwardly therefrom to project over the body bolster of a car, the transom plate being provided with an upstanding flange at each side forming a trough for receiving the two center sills of the car with each of the said flanges engaging the outside face of one of the sills to prevent lateral spreading of the sills over the bolster.

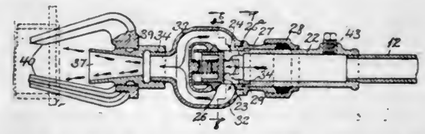
1,190,859. ANIMAL-TRAP. STEPHEN CABLE CAUSEY, Schenectady, N. Y. Filed Feb. 18, 1916. Serial No. 79,021. (Cl. 43—24.)



1. A trap comprising a structure having an entrance opening, a rod extending across the opening, a plurality of impaling gate members pivotally mounted on the rod and adapted to swing open in an upward direction and to drop downwardly to closed position behind an animal entering the trap by raising the members, and a stop element mounted adjacent the rod and with which the members normally engage to hold the same in inclined position and preventing the members from swinging outwardly, said stop element being in the form of an angle bar having a downwardly bent flange having as many recesses as there are members for the upper ends of the members to normally engage therein.

2. A trap comprising a structure having an entrance opening, a smooth, straight rod extending across the opening, a plurality of wire gate members having pivot eyes through which the rod extends and formed with extensions projecting upwardly above the eyes, washers disposed between the members of the rod for holding the members in spaced relation and a stop element fixed above the rod and with which the extensions of the members engage for holding the members inclined downwardly and inwardly and preventing the members from swinging outwardly, whereby the animal can enter the trap by pushing under and raising the members, the lower ends of the members being sharpened.

1,190,860. DEVICE FOR DELIVERING GASEOUS FLUID UNDER PRESSURE. CHARLES A. CLAFLIN, Medford, Mass. Filed Oct. 19, 1912. Serial No. 726,761. (Cl. 230—38.)



1. A device of the character described, comprising a telescopic conduit having a valve mechanism, a chamber provided with arms having passages for fluid passing the valve mechanism, said arms converging and having a delivery nozzle, and a spring mounted between said arms and coöperating with the members of the telescopic conduit to hold the valve closed.

2. A device of the character described, comprising a conduit having a delivery head at one end and a fitting for the connection of a fluid supply tube at the other end, said fitting having two diverging handle sockets, one of said sockets being in alinement with the conduit, the passage for the fluid through said fitting being separated from said sockets by a curved wall.

3. A device of the character described, comprising a valved conduit, a chamber secured to said conduit, said chamber having arms provided with fluid passages, a nozzle for delivering fluid from said passages, and tapering arms for locating the device relatively to a tube, said arms extending beyond the delivery end of the nozzle.

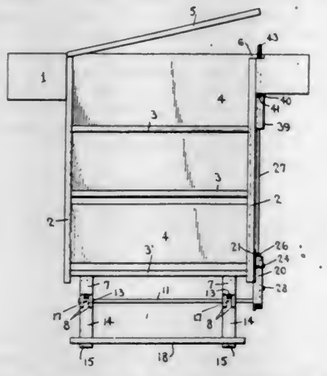
4. A device of the character described, comprising a stream-delivering nozzle, and a plurality of hooked arms having inner portions radiating from said nozzle and outer portions extended to points in advance of the nozzle and converging from their junction with the inner portions to present inclined backs adapted to enter and bear on the mouth of a tube, said arms being separated from each other along their entire length, so that their surfaces coöperate with the periphery of the nozzle and the mouth of said tube in forming relatively large unobstructed ducts permitting correspondingly large streams of air to flow undeflected lengthwise of the nozzle and into the tube, the volume of said streams being limited only by the diameter of the tube and the cross sectional areas of the nozzle and arms.

1,190,861. AUTOMATIC EXTENSION CAR-STEP. JOHN G. CLAUS, Plattsmouth, Nebr. Filed Aug. 31, 1914. Serial No. 859,389. (Cl. 105—86.)

1. The combination with a car step, of depending brackets secured thereto each having a stop shoulder, a shaft carried by said brackets, lower brackets each having stop shoulders for co-action with said first mentioned stop shoulders said lower brackets secured to said shaft, a tread secured to said lower brackets, a pinion secured to said shaft, and a pivotally held gear sector meshing with said pinion having an outstanding operating arm.

2. The combination with a car step, of depending brackets secured thereto, a shaft carried by said brackets, lower brackets secured to said shaft, a tread secured to said lower brackets, a pinion upon said shaft, a pivotally held

gear sector in mesh with said pinion having an outstanding arm, and an operating arm extending from said outstanding arm.



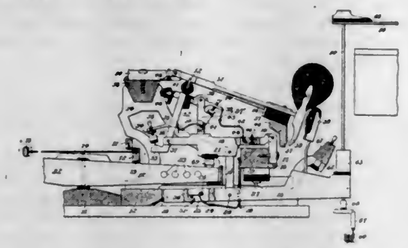
3. The combination with a car step, of depending brackets secured to said step, a shaft carried by said depending brackets, lower brackets fixed to said shaft, a tread carried by said lower brackets, said tread held upon said car step in one position of said lower brackets, a pinion upon said shaft, a pivotally held gear sector in mesh with said pinion having an outstanding arm, a plunger rod secured to said arm, and a spring to normally force said plunger rod in one direction to hold said tread upon said car step.

4. In combination, a car step, brackets depending from said step, a shaft carried by said brackets, lower brackets fixed to said shaft, a pinion secured to said shaft, a pivotally held gear sector in mesh with said pinion having an outstanding arm, a housing and plunger rod secured to said arm and passing through said housing, and a spring within said housing working against said plunger rod to force the same in one direction to hold said tread upon said step.

5. In combination, a car step, of depending brackets secured to said step each having a stop shoulder, a shaft carried by the brackets, lower brackets each having stop shoulders arranged for co-action with said first mentioned shoulders and keyed to said shaft, a tread carried by said lower brackets, a pinion secured to said shaft, a pivotally held gear meshing with said pinion, and a pivotally held gear sector having an outstanding operating arm.

[Claims 6 to 9 not printed in the Gazette.]

1,190,862. GRAND-PIANO ACTION. WILLIAM F. COOPER, Norwalk, Ohio. Filed July 1, 1915. Serial No. 37,572. (Cl. 84—233.)



1. A grand piano having a key and action, the action including an under-lever extending beneath the key, a wippen extending above the key, and a link connecting the under-lever and wippen.

2. A grand piano having a key and action, the action including an under-lever extending beneath the key, an action rail, a wippen having pivotal connection to the action rail and extending over the key, a link connecting the under-lever and wippen, and a counter-balancing spring having connection at one end to the under lever and at the other end to the action rail.

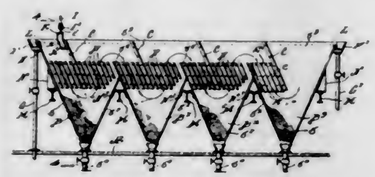
3. A grand piano having a key and action, the action including an under-lever extending beneath the key, an action rail, a wippen having pivotal connection to the action rail and extending over the key, a link connecting the under-lever and wippen, a counter-balancing spring carried by the under-lever, a flexible connection between one end of the spring and the action rail, and an adjusting screw screwed into the under-rail and bearing against the other end of the spring.

4. A grand piano having a key and action, the action including an under-lever extending beneath the key, a wippen extending above the key, and a link connecting the under-lever and wippen, the under-lever being provided with means at its free end extending down to engage player mechanism.

5. A grand piano having a key and action, the action including an under-lever extending beneath the key, an action rail, a wippen having pivotal connection to the action rail and extending over the key, a link connecting the under-lever and wippen, and a counter balancing spring having connection at one end to the under-lever and at the other end to the action rail, the under-lever being provided with means at its free end extending down to engage player mechanism.

[Claim 6 not printed in the Gazette.]

1,190,863. SETTLING-TANK. CHARLES LOUIS CORNE and DENIS P. J. BURGUIERES, Louisa, La. Filed Jan. 26, 1916. Serial No. 74,450. (Cl. 210—5.)



1. An apparatus for separating solid particles from liquids, comprising a series of settling tanks in the shape of inverted pyramids connected together by deep and wide overflow passages, with inclined baffle plates parallel to each other and mounted in said tanks, and spaced above the bottoms thereof, means for supplying the impure liquid at one end of the system, and means for carrying off the clear liquid at the other end of the system, with means for draining the bottom of each tank, substantially as described.

2. Apparatus for separating solid particles from liquids, comprising a series of settling tanks in the shape of inverted pyramids connected together by deep and wide overflow passages, with inclined baffle plates parallel to each other and mounted in said tanks, and spaced above the bottoms thereof, means for supplying the impure liquid in a finely divided stream at one end of the system, and means for carrying off the clear liquid at the other end of the system, with means for draining the bottom of each tank, substantially as described.

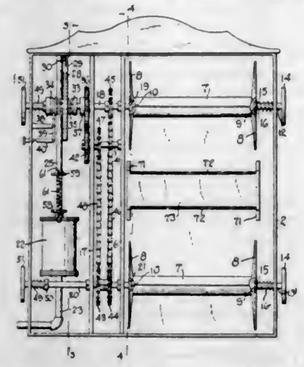
3. An apparatus for separating solid particles from liquids, comprising a series of settling tanks in the shape of inverted pyramids connected together by deep and wide overflow passages, with baffle plates mounted in said tanks and spaced above the bottoms thereof, means for supplying the impure liquid in a finely divided stream at one end of the system, a skimming trough provided at the receiving end of the system, an adjustable plate separating said trough from the first tank of the system, and means for carrying off the clear liquid at the other end of the system, with means for draining the bottom of each tank, substantially as described.

4. An apparatus for separating solid particles from liquids, comprising a series of settling tanks in the shape of inverted pyramids and connected together by deep and wide overflow passages, baffle plates mounted in said tanks and spaced above the bottoms thereof, with removable cloth panels mounted near the delivery end of the system, means for supplying the impure liquid in a finely divided stream at one end of the system, and means for carrying off the clear liquid at the other end of the system, with means for draining the bottom of each tank, substantially as described.

5. An apparatus for separating solid particles from liquids, comprising a series of settling tanks in the shape of inverted pyramids and connected together by deep and wide overflow passages, with baffle plates mounted in said tanks and spaced above the bottoms thereof, with removable cloth panels mounted near the delivery end of the system, means for supplying the impure liquid in a finely divided stream at one end of the system, a skimming trough provided at the receiving end of the system, an adjustable plate separating said trough from the first tank of the system, and means for carrying off the clear liquid at the other end of the system, with means for draining the bottom of each tank, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,190,864. STREET OR STATION INDICATOR FOR VEHICLES. EUGENE R. CRAMPTON, Petaluma, Cal. Filed June 5, 1915. Serial No. 32,387. (Cl. 40—38.)



1. In a station indicator for vehicles, parallel shafts operatively connected to each other for common rotation, display band carrying rolls mounted upon said shafts, a display band carried by the rolls, a rotatable element mounted upon one of said shafts, an intermediate shaft operatively connected to the other of said shafts, a cylinder, a piston therein, a piston rod, means for admitting air to the cylinder to thereby force the piston rod in one direction, means for operatively engaging the piston rod with the said rotatable member upon a movement of the rod in one direction, and means for operatively engaging said member either with the first-named shaft or with the intermediate shaft.

2. In a station indicator of the character described, a driving shaft and a parallel driven shaft, sprocket wheels carried upon said shafts, a chain passing over the sprocket wheels for giving a common rotation to the shafts, a counter-shaft carrying a sprocket wheel, a sprocket wheel on the driven shaft, a sprocket chain passing over the sprocket wheels and connecting the counter-shaft with the driven shaft for common movement, a gear wheel mounted upon the counter-shaft, a gear wheel loosely mounted upon the driving shaft and engaging with the first-named gear wheel, said second named gear wheel being provided with a clutch element, a clutch element mounted upon the driving shaft and opposed to the first-named clutch element, a slidable double clutch freely rotatable upon the driving shaft but shiftable into engagement with either one of the clutch elements, means for intermittently rotating the double clutch element, and manually operable means for shifting the double clutch element into or out of engagement with either clutch.

3. In a station indicator of the character described, a driving shaft, a driven shaft, the shafts being operatively connected to each other for movement in the same direction, a counter-shaft operatively connected to the driven shaft, gear wheels carried by the counter shaft, a gear wheel loosely mounted upon the driving shaft and engaging with the first-named gear wheel and carrying a clutch element, a driving wheel loosely mounted upon the driving shaft but disconnected therefrom and provided with a plurality of perforations arranged concentric to the shaft, oppositely disposed clutch elements mounted on each side of the driving wheel and slidably mounted upon the driving shaft, said clutch elements being connected by pins passing through the perforations of the driving wheel, one of said clutch elements adapted to engage with the clutch element on the said gear wheel, a clutch element mounted upon the driving shaft and with which the other clutch element on the other shiftable clutch element is adapted to engage, means for rotating the driving shaft, and manually operable means for shifting the double clutch element into or out of engagement with either clutch.

4. In a station indicator of the character described, parallel winding shafts operatively connected to each other for movement in the same direction, a counter shaft operatively connected to one of said shafts for movement in the same direction, a gear wheel carried by the counter shaft, a gear wheel loosely mounted upon the adjacent shaft and engaging the first named gear wheel, said second-named gear wheel being provided with a clutch element, a clutch element mounted upon the first-named shaft and opposed to the first-named clutch element, a double clutch freely rotatable upon the shaft but shiftable into engagement with either one of the clutch elements, means for rotating said double clutch element, and manually operable means for shifting the double clutch element into or out of engagement with either clutch.

1,190,865. PUZZLE. SAMUEL CRAVEN, Ossining, N. Y., assignor of one-half to John Jasper, Ossining, N. Y. Filed Dec. 10, 1915. Serial No. 66,102. (Cl. 46—41.)

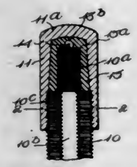


1. A puzzle apparatus comprising a box triangular in contour and having a partition dividing the box into upper and lower compartments, said partition terminating considerably short of one corner of the box and provided upon its upper surface with substantially triangular shaped passages and having a substantially triangular central space, said passages having communictions at different locations, said partition having apertures, which are formed in the passages, a plurality of balls adapted to pass from the lower compartment to the upper compartment, without passing through said apertures and arranged in the central space, and means to permit said balls to pass from the lower compartment to the upper compartment.

2. A puzzle apparatus comprising a box triangular in contour and having a partition dividing the box into upper and lower compartments, said partition terminating considerably short of one corner of the box and provided upon its upper surface with substantially triangular shaped passages and having a substantially triangular central space, said passages having communictions at different locations, said partition having apertures, which are formed in the passages, a plurality of balls adapted to pass from the lower compartment to the upper compartment, without passing through said apertures and arranged in the central space, and means to permit said

balls to pass from the lower compartment to the upper compartment, said means comprising a pivoted trough-shaped strip pivoted to where the partition terminates and inclined downwardly, said partition where it terminates having an upstanding flange provided with a notch or recess adjacent the upper part of the trough-shaped strip to permit each of the balls to enter upon the upper face of the partition.

1,190,866. TIRE-VALVE ATTACHMENT. HARVEY F. CRAWFORD, Brockton, Mass. Filed Mar. 9, 1916. Serial No. 83,064. (Cl. 152—12.)



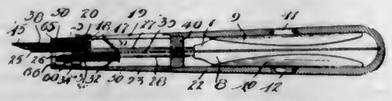
1. The combination with a valve casing having an externally threaded body, a reduced nipple at its outer end, and an annular shoulder between the body and nipple, of a metal cap containing a longitudinal socket having a tapered portion and an internally threaded portion below the tapered portion to engage the external thread of the casing body, the said tapered portion surrounding the nipple and being separated therefrom by an annular tapering space, and a compressible tube embracing the nipple and radially compressed thereon by the tapering wall of the cap socket.

2. The combination with a valve casing having an externally threaded body, a reduced nipple at its outer end, and an annular shoulder between the body and nipple, of a metal cap containing a longitudinal socket having a tapered portion and an internally threaded portion below the tapered portion to engage the external thread of the casing body, the said tapered portion surrounding the nipple and being separated therefrom by an annular tapering space, and a compressible tube embracing the nipple, radially compressed thereon and seated on said shoulder by the tapering wall of the cap socket.

3. The combination with a valve casing having an externally threaded body, a reduced nipple at its outer end, and an annular shoulder between the body and nipple, of a metal cap containing a longitudinal socket which is internally threaded at its lower portion to engage the external thread of the casing body, and a compressible tube embracing the nipple and having a crown at its outer end compressed upon the mouth of the nipple, the tube being of greater length than the nipple, so that its open end is compressed upon said shoulder.

4. The combination with a valve casing having an externally threaded body, a reduced nipple at its outer end, and an annular shoulder between the body and nipple; of a rigid cap containing a longitudinal socket having a tapered portion and an internally threaded portion below the tapered portion to engage the external thread of the casing body, and a compressible member embracing the nipple, said compressible member having tapering walls increasing in thickness as they extend toward said annular shoulder.

1,190,867. FOUNTAIN-PEN. HARRY CLIFTON CROSBY, New York, N. Y. Filed Dec. 22, 1914. Serial No. 878,613. (Cl. 120—42.)



1. In a fountain pen, a barrel provided with reservoirs for different colored inks, a feed spoon connected with each reservoir, a common pen point for the several inks, and means for operatively associating the said pen point with any one of the feed spoons.

2. In a fountain pen, a barrel made up of relatively rotatable sections, reservoirs for different colored inks in one of said sections, a support carried by said section projecting into the other section, retractable feed spoons slidingly mounted on opposite sides of said support and connected with the ink reservoirs, outstanding lugs on the feed spoons and reversely arranged internal cam shoulders on the other relatively rotatable barrel section engaging the said lugs to project one feed spoon while retracting the other feed spoon upon relative rotation of the barrel sections.

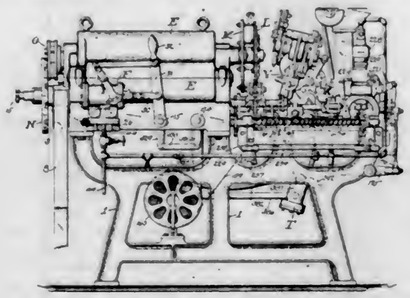
3. In a fountain pen, a barrel provided with reservoirs for different colored inks, a feed spoon connected with each reservoir, a common pen point for the several inks, means for projecting the feed spoon of the ink to be used and simultaneously retracting the feed spoons not in use into the barrel, and means for operatively associating the pen point with the projected feed spoon.

4. In a fountain pen, a barrel made up of relatively rotatable sections and provided with reservoirs for different colored inks, feed spoons carried by one of the barrel sections and connected with the ink reservoirs and a pen point mounted on the other barrel section and carried by relative rotation thereof into register with any one of the feed spoons.

5. In a fountain pen, a barrel made up of relatively rotatable sections and provided with reservoirs for different colored inks, feed spoons carried by one of the barrel sections and connected with the ink reservoirs, a retractable pen point mounted on the other relatively rotatable barrel section and means for retracting and projecting the said pen point, whereby said pen point may be retracted and the barrel sections be relatively rotated to bring the pen point into register with another one of the feed spoons and the pen point be then projected over the said feed spoon.

[Claims 6 to 12 not printed in the Gazette.]

1,190,868. COIL-MAKING MACHINE. WILLIAM DEATS, Yonkers, N. Y. Filed May 1, 1912. Serial No. 694,488. (Cl. 140—71.)



1. In a coil making machine, the combination of mechanism to wind a coil, and means automatically to stretch the coil into substantially a straight loop, and bend the loop.

2. In a coil making machine, the combination of mechanism for winding material into a circular coil, and mechanism to stretch the coil into a straight loop, and bend the end portions into position each to extend at an angle to the central portion of the loop.

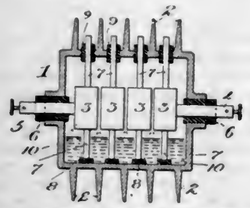
3. In an armature coil making machine, the combination of mechanism to wind material into a coil, and automatic means to apply separate binding material to the coil.

4. In an armature coil making machine, the combination of means to wind a coil or ring from strand material, and mechanism coöperating therewith automatically to secure separate binding material to the coil.

5. The combination of mechanism to form a coil, and means associated with said mechanism to automatically apply binding clips to the coil.

[Claims 6 to 59 not printed in the Gazette.]

1,190,869. QUENCH-SPARK DISCHARGER. LEE DE FOREST, New York, N. Y., assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 24, 1915. Serial No. 23,701. (Cl. 250—38.)



1. A spark gap device including a closed vessel, a dielectric liquid contained therein, separated electrodes arranged therein and provided with flanges immersed in said dielectric liquid, and means to utilize the heat of the electrodes to vaporize said liquid to quench the arc between said electrodes.

2. A high frequency spark discharger, comprising electrodes immersed in vapor of carbon tetrachlorid.

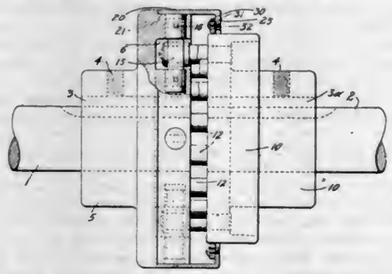
3. A series spark discharger comprising a plurality of electrodes subjected to a vapor of carbon tetrachlorid.

4. The combination with a quench spark gap of a dielectric containing vapor of carbon tetrachlorid for quenching the spark thereacross.

5. The combination with a quench spark gap of a mixture of air and vapor of carbon tetrachlorid for quenching the spark thereacross.

[Claims 6 to 8 not printed in the Gazette.]

1,190,870. FLEXIBLE COUPLING. IRVEN H. DEXTER, Pearl River, N. Y., assignor to I. H. Dexter Co., Inc., New York, N. Y., a Corporation of New York. Filed Jan. 31, 1916. Serial No. 75,474. (Cl. 64—13.)



1. A flexible coupling comprising two shaft coupling members, and coöperating coupling elements, carried by said coupling members, the elements on one of said coupling members being free to turn upon axes radial to the coupling.

2. A flexible coupling comprising two shaft coupling members, spring elements mounted upon one of said members to turn upon axes radial thereto, and suitable means of driving engagement between said spring elements and the other coupling member.

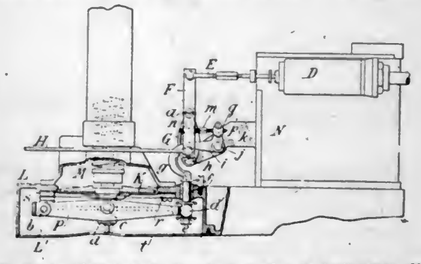
3. A flexible coupling comprising two shaft coupling members and coöperating spring and stud coupling elements carried by said coupling members, the spring elements of which are mounted thereon to turn upon axes radial to said coupling.

4. A flexible coupling comprising two shaft coupling members and coöperating spring and stud coupling elements carried by said coupling members, the spring elements being mounted to turn upon axes radial to said coupling and the stud elements being mounted approximately parallel with the axis of rotation of the coupling.

5. A flexible coupling comprising two shaft coupling members, and spring and stud coupling elements carried upon each of said coupling members, the spring elements being mounted to turn upon axes radial to said coupling and the stud elements being mounted approximately parallel with the axis of rotation of the coupling.

[Claims 6 to 15 not printed in the Gazette.]

1,190,871. DIVING-GEAR FOR TORPEDOES. WILLIAM DIETER, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Mar. 13, 1916. Serial No. 83,738. (Cl. 114—25.)



1. In a diving gear for a torpedo, a hydrostat diaphragm detachable from the exterior, having an outer attaching ring, and a detachable lever for communicating movements from said diaphragm.

2. In a diving gear for a torpedo, a hydrostat diaphragm removable from the exterior, an attaching ring therefor, and a lever, the fulcrum of which is carried by said ring, and which lever receives movement from the diaphragm.

3. In a diving gear for a torpedo, the combination with a hydrostat diaphragm, of a lever fulcrumed at one end, receiving movement from the diaphragm at an intermediate point and transmitting multiplied movement at its opposite end, and a plunger engaging said opposite end and moved thereby.

4. In a diving gear for a torpedo, the combination with hydrostat, pendulum, engine, valve stem and intervening whiffletree of a connection between the hydrostat diaphragm and whiffletree comprising a lever operated by the diaphragm, a plunger operated by the lever, and a connection between said plunger and the whiffletree whereby the movements of the diaphragm are transmitted thereto.

5. In a diving gear for a torpedo, the combination with hydrostat, pendulum, engine, valve stem and intervening whiffletree of a connection between the hydrostat diaphragm and whiffletree comprising a lever operated by the diaphragm, a plunger operated by the lever, and an elbow lever moved by said plunger and a connection between said elbow lever and the whiffletree.

[Claims 6 and 7 not printed in the Gazette.]

1,190,872. FISHING APPARATUS. FOREST E. DILDINE, Columbus, Ohio. Filed Jan. 30, 1915. Serial No. 5,173. (Cl. 43—4.)

1. A fishing apparatus comprising a pole, a battery carried by said pole, a float, an electric light bulb on said float, an electric light bulb on said pole, electric wires connecting both of said bulbs to said battery, a twine connected to the underside of said float, and a switch mechanism for lighting said bulbs, said mechanism being arranged so that one of said bulbs will be extinguished when the other is lighted.

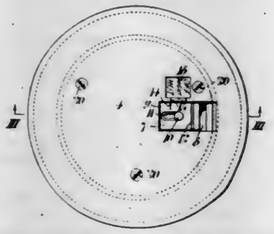
2. A fishing apparatus comprising a pole, a battery carried by said pole, a float, an electric light bulb on said float, a reel, a hollow spindle forming a portion of said reel, wires leading from said bulb through said hollow

spindle, binding posts carried by said reel, wire connections between said posts and said battery, and a contact



structure located between said reel and said spindle and arranged to permit rotation of said spindle.

1,190,873. AIR-HEATING DEVICE FOR STOVES. WILLIAM T. DUNNING, Ridley Park, Pa. Filed Mar. 9, 1915. Serial No. 13,249. (Cl. 126—15.)



1. The combination with a stove lid having a rectangular air inlet leading from the top thereof to the interior of the stove, a plane depression including said inlet and extending therefrom toward the center of the lid, another plane depression adjoining the first named depression, a series of graduations upon the portion of the lid between said depressions, and means forming the words "Off", "Night" and "Hot" in the last named depression respectively corresponding with marks in said series of graduations; of a plane rectangular slide valve plate fitted to reciprocate in the first named depression, to vary the effective area of said inlet, and having a slot therein, extending radially with respect to the lid; a rivet, extending through said lid and said slot in said plate and having a head in the latter preventing the removal of said plate; a single casting primarily separate from said lid, having a conical spiral air passageway formed therein, by an upwardly extending spiral rib in unitary relation with said casting, with the outer end of said passageway registering with said inlet in said lid, and having a radial passageway leading directly from said outer end of the spiral to the center thereof, and radially opening outlets at the outer convolution of said spiral, opening to the interior of the stove; a disk gasket, formed of a sheet of material which is a nonconductor of heat, interposed between the under side of said lid and the top of said casting; means removably connecting said lid, casting and gasket in assembled relation, including three screws symmetrically disposed with respect to said lid, extending through the latter in engagement with said casting; whereby a stream of air may be heated and discharged through said lid into the stove at a rate and temperature affected by said valve.

2. The combination with a stove lid having an air inlet leading from the top thereof to the interior of the stove, a depression including said inlet, another depression adjoining the first named depression, a series of graduations upon the portion of the lid between said depressions, and means forming the words "Off", "Night" and "Hot" in the last named depression respectively corresponding with marks in said series of graduations; of a plane slide valve plate fitted to reciprocate in the first named depression, to vary the effective area of said inlet, and having a slot therein, extending radially with respect to the lid; a rivet, extending through said lid and said slot in said plate and having a head in the latter preventing the removal of said plate; a single casting primarily separate from said lid, having a conical spiral air passageway formed therein, by an upwardly extending spiral rib in unitary relation with said casting, with the outer end of said passageway registering with said inlet in said lid, and having a passageway leading from said outer end of the spiral to the center thereof, and outlets at the outer convolution of said spiral, opening to the interior of the stove; a disk gasket, interposed between the under side of said lid and the top of said casting; means removably connecting said lid, casting and gasket in assembled relation, including screws extending through the lid in engagement with said casting; whereby a stream of air may be heated and discharged through said lid into the stove at a rate and temperature affected by said valve.

3. The combination with a stove lid having an air inlet leading from the top thereof to the interior of the stove, a depression including said inlet, a series of graduations upon the lid, and means forming the words "Off", "Night" and "Hot" respectively corresponding with marks in said series of graduations; of a valve fitted in the first named depression, to vary the effective area of said inlet, and having a slot therein, extending radially with respect to the lid; a rivet, extending through said lid and said slot in said plate and having a head in the latter preventing the removal of said plate; a single casting primarily separate from said lid, having a conical spiral air passageway formed therein, by an upwardly extending spiral rib in unitary relation with said casting, with the outer end of said passageway registering with said inlet in said lid, and having a passageway leading from said outer end of the spiral to the center thereof, and outlets at the outer convolution of said spiral, opening to the interior of the stove; a gasket, interposed between the under side of said lid and the top of said casting; means connecting said lid, casting and gasket in assembled relation, extending through the lid in engagement with said casting; whereby a stream of air may be heated and discharged through said lid into the stove at a rate and temperature affected by said valve.

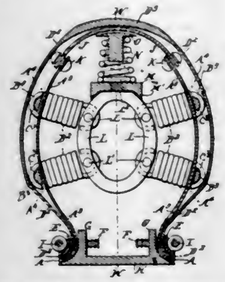
4. The combination with a stove lid having an air inlet leading from the top thereof to the interior of the stove, a depression including said inlet, a series of graduations upon the lid, and means forming the words "Off", "Night" and "Hot" respectively corresponding with marks in said series of graduations; of a valve fitted in the first named depression, to vary the effective area of said inlet, and having a slot therein, extending radially with respect to the lid; a rivet, extending through said lid and said slot in said plate and having a head in the latter preventing the removal of said plate; a single casting primarily separate from said lid, having a spiral air passageway formed therein, by an upwardly extending spiral rib in unitary relation with said casting, with the outer end of said passageway registering with said inlet in said lid, and having a passageway leading from said outer end of the spiral to the center thereof, and outlets opening to the interior of the stove; a gasket, interposed between the under side of said lid and the top of said casting; means connecting said lid, casting and gasket in assembled relation, extending through the lid in engagement with said casting; whereby a stream of air may be heated and discharged through said lid into the stove at a rate and temperature affected by said valve.

5. The combination with a stove lid having an air inlet leading from the top thereof to the interior of the stove, of a valve fitted to vary the effective area of said inlet, and having a slot extending radially with respect to the

lid; a rivet, extending through said lid and said slot in said plate and having a head in the latter preventing the removal of said plate; a single casting primarily separate from said lid, having a spiral air passageway formed therein, by an upwardly extending spiral rib in unitary relation with said casting, with the outer end of said passageway registering with said inlet in said lid, and having a passageway leading from said outer end of the spiral to the center thereof, and outlets opening to the interior of the stove; a gasket, interposed between the under side of said lid and the top of said casting; means connecting said lid, casting and gasket in assembled relation, extending through the lid in engagement with said casting; whereby a stream of air may be heated and discharged through said lid into the stove at a rate and temperature affected by said valve.

[Claims 6 to 12 not printed in the Gazette.]

1,190,874. RESILIENT OR CUSHION TIRE. ELBERT F. DURFEE, Roselle Park, N. J. Filed July 16, 1915. Serial No. 40,197. (Cl. 152—8.)



1. A cushion tire of the character described, comprising a flexible metallic sheath, having a continuous unbroken tread portion, transverse spring means therein, connecting opposite points, and annular means disposed on said sheath connecting the said spring means, and adapted to distribute stresses upon one portion of the tire to adjacent portions thereof.

2. A cushion tire of the character described, comprising a flexible metallic sheath, having a continuous unbroken tread portion, transverse spring means therein, connecting opposite points, and annular means disposed on said sheath connecting the ends of said spring means, having sliding engagement therewith, and adapted to distribute stresses upon one portion of the tire to adjacent portions thereof.

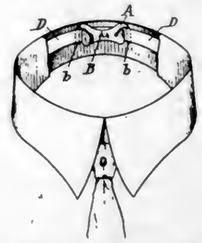
3. A cushion tire of the character described, comprising a flexible metallic sheath having a continuous unbroken tread portion, transverse spring means therein connecting opposite points, and annular means disposed on said sheath connecting the ends of the said transverse spring means, and adapted to distribute stresses upon one portion of the said tire to adjacent portions thereof, and an outer covering extending over the said sheath and said annular means.

4. A cushion tire of the character described, comprising a flexible metallic sheath, having a continuous unbroken tread portion, a plurality of radially disposed rings within the said sheath, transverse spring means secured between the said rings and the sides of the said sheath, annular means exterior of the said sheath connecting the ends of the said transverse spring means, having sliding engagement therewith, and adapted to distribute stresses upon one portion of the said tire to adjacent portions thereof, and an outer covering extending over the said sheath and said annular means.

5. A cushion tire of the character described, comprising a flexible metallic sheath, a plurality of radially disposed rings within the said sheath, an annular ring supported by the said plurality of radially disposed rings, transverse spring means secured between the said plurality of rings and the sides of the sheath, spring means disposed between the said annular ring and the tread of the sheath, annular means exterior of the said sheath connecting the ends of the said transverse spring means, the said annular ring and the said annular connecting means adapted to distribute stresses upon one portion of the said tire to adjacent portions thereof.

[Claim 6 not printed in the Gazette.]

1,190,875. NECKTIE ATTACHMENT. JOSEPH EAKINS, New York, N. Y. Filed Mar. 15, 1915. Serial No. 14,565. (Cl. 2—11.)



1. A one-piece, anti-friction necktie attachment adapted to be mounted on a necktie and be positioned at the back of a collar, said attachment embodying, in its entirety, a single elongated strip of sheet material provided near its opposite ends with slots extending inwardly from one and the same edge of said strip, said strip being adapted to be applied to a necktie in such manner that the necktie will pass through the slots at the opposite ends of the strip.

2. A one-piece, anti-friction necktie attachment adapted to be mounted on a necktie and to be positioned at the back of a collar, said attachment embodying, in its entirety, a single strip of resilient material provided at its opposite ends with substantially parallel slots extending inwardly from the edge of the strip whereby the necktie is adapted to be inserted into said slots for the purpose of detachably positioning the attachment on the tie.

3. A necktie attachment embodying a strip of resilient material provided at its opposite ends with substantially parallel slots whereby a necktie is adapted to be passed through said slots for the purpose of detachably positioning the attachment thereon, and a plurality of teeth positioned along one edge of each of said slots and adapted to engage with a tie to preclude relative movement between the attachment and the tie.

4. A one-piece, anti-friction necktie attachment embodying, in its entirety, a single sheet metal strip, adjacent the opposite ends of which is a pair of substantially parallel slots extending from one and the same longitudinal edge of the strip, the base of each of said slots communicating with another slot positioned in angular relation to the first-mentioned slot whereby, maximum flexibility is secured at the opposite ends of said attachment, thereby allowing the same to readily conform to the shape of a necktie when the attachment is positioned thereon.

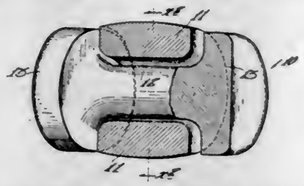
5. A necktie attachment embodying an elongated sheet metal strip provided near its opposite ends with parallel slots extending from one and the same longitudinal edge of the strip, the base of each of which slots coöperates with an additional slot extending in angular relation to the first-mentioned slot whereby the opposite ends of the strip are rendered flexible to conform with a necktie when said attachment is positioned thereon and the necktie is positioned within a fold-over collar.

[Claims 6 and 7 not printed in the Gazette.]

1,190,876. ROCK-PULVERIZER. CHARLES W. ECCLESTON and WILLIAM B. MCPHERSON, Los Angeles, Cal. Filed Nov. 20, 1913. Serial No. 802,171. (Cl. 83—9.)

1. A rock pulverizer comprising a central member, and a closed ring loosely secured about said central member and normally non-removable therefrom.

2. A rock pulverizer comprising a central member formed of a shaft terminating in a flattened portion at either end, and a ring loosely mounted upon said central member surrounding said shaft between said ends.

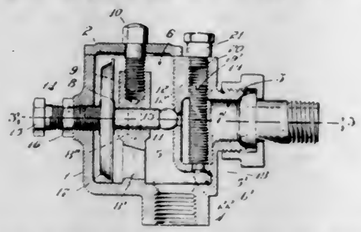


3. A rock pulverizer comprising a central member formed of a shaft having enlarged ends, and a ring loosely mounted on said shaft between said ends.

4. A rock pulverizer comprising an annular ring and a loose center having enlarged ends having a diameter approximately equal to the ring.

5. A rock pulverizer comprising a cylinder having a groove formed in the periphery thereof, and a loose collar mounted in said groove.

1,190,877. AUTOMATIC VENT-VALVE FOR HEATING SYSTEMS. GEORGE B. EDDY, Chicago, Ill. Filed Feb. 3, 1913. Serial No. 745,792. (Cl. 236—10.)



1. In a valve of the character described, the combination with the outer valve-casing, of an internal partition including an upright portion, dividing the interior into two chambers, one constituting a combined inlet and sediment chamber and the other a main chamber in communication with the outlet, said partition being provided with a valve port in its upright portion, a thermostatic element and valve mechanism controlled thereby arranged wholly within said main chamber and operating to control said valve port, and a baffle in said inlet chamber extending opposite the valve port in said partition.

2. In combination, a valve casing having its interior divided by a partition into side by side inlet and main chambers, the lower end of said partition being deflected laterally to meet the side wall of the casing at a point above the bottom of the main chamber, whereby a portion of the inlet chamber is superposed above a portion of the main chamber, said partition being provided in its upright portion with a valve port and in its deflected lower portion with another port, a valve support extending into said main chamber, a valve plug slidably mounted in said support and arranged to coöperate with the port in the upright part of said partition, an adjustable stop screw threaded through the side wall of the casing opposite the end of the valve plug, said stop screw being capable of adjustment to directly engage the valve plug and hold it against its seat, and retractable to provide a substantial space between the end of the stop screw and end of the valve plug, an expansible thermostatic element loosely interposed between the stop screw and valve plug, and a screw plug threaded to extend through the upper portion of the valve casing, its lower end entering and closing said port in the deflected part of said partition, whereby said screw plug may be retracted to open the port controlled thereby without opening the valve casing to the exterior.

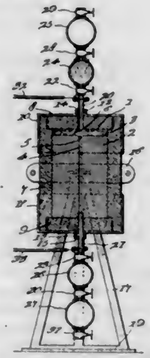
3. In a valve, the combination of an internal partition provided with a port therethrough, of a screw plug threaded through the exterior wall of said valve casing and controlling said port, the part of said valve casing through which the plug extends being relatively thick, the screw plug being of such length that when seated against the port its head end will terminate a substantial distance inside the outer surface of the valve casing, and a separate closure closing the outer end of the bore in which said screw plug is seated.

4. In a valve of the character described, the combination with the outer valve casing, of an internal partition dividing the interior into two chambers side by side, one of said chambers constituting a combined inlet and sediment chamber and the other a main chamber communicating with the outlet, said partition being provided with a valve port in its upright portion and a by-pass port through the lower side of the sediment chamber, an automatic valve mechanism arranged in the main chamber to control the upper valve port, and a plug extending through the inlet and sediment chamber and normally closing the by-pass, said plug being arranged directly opposite but spaced away from the valve port and in the direct line of flow of the fluid on its way through the inlet chamber to said port, whereby said plug acts as a deflector to prevent sediment passing into said valve port.

5. In a valve of the character described, the combination with the outer valve-casing, of an internal partition having an upright portion and dividing the interior of the casing into two chambers side by side, one constituting an inlet chamber and the other a main chamber in communication with the outlet, a valve-support extending into the main chamber and provided with a horizontal valve-supporting aperture therein, a valve wholly within said main chamber mounted in said valve-support and unrestrained from sliding freely therein, a port extending through said partition and located in axial alinement with said valve and controlled by the latter, a thermostatic element interposed between the other end of the valve and the opposed side wall of the chamber, and an adjustable stop mounted in said latter side wall of the chamber and adapted to coöperate with the proximate side of said thermostatic element.

[Claims 6 and 7 not printed in the Gazette.]

1,190,878. METHOD OF OPERATING ELECTRIC BATTERIES. PHILIP A. EMANUEL, Aiken, S. C. Original application filed Nov. 5, 1915, Serial No. 59,838. Divided and this application filed Dec. 6, 1915. Serial No. 65,329. (Cl. 204—53.)



1. The herein described method of operating an electric battery, which consists in supplying an electrolyte to the battery and circulating the same therethrough in one direction, and supplying a depolarizer to the battery and circulating the same therethrough in a direction opposite to the passage of the electrolyte, substantially as described.

2. The herein described method of operating a battery, which consists in supplying an electrolyte to the battery which is decomposed into a salt and hydrogen, circulating the electrolyte through the battery by a depolarizer under pressure, and removing the salt from the battery by the water formed by the freed hydrogen and depolarizer, substantially as described.

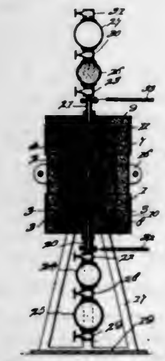
3. The herein described method of operating an electric battery, which consists in supplying an electrolyte to an inclosed battery which is decomposed to form a salt and hydrogen, mixing a depolarizer under pressure in said electrolyte for placing the battery under pressure and causing the electrolyte to be brought into intimate contact with the battery electrodes, and withdrawing from time to time the congested salt formed in the battery by the water formed by the freed hydrogen and depolarizer, substantially as described.

4. The herein described method of operating an electric battery, which consists in supplying an electrolyte to the battery, circulating the electrolyte through the battery by a depolarizer under pressure, and supplying an additional depolarizer from a separate source, substantially as described.

5. The herein described method of operating an electric battery, which consists in supplying an electrolyte to the battery through the positive electrode, circulating the electrolyte through the battery by means of a depolarizer under pressure, and supplying an additional depolarizer from a separate source through the negative electrode, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,190,879. METHOD OF REGENERATING ELECTRIC BATTERIES. PHILIP A. EMANUEL, Aiken, S. C. Original application filed Nov. 5, 1915, Serial No. 59,838. Divided and this application filed Dec. 6, 1915. Serial No. 65,330. (Cl. 204—53.)



1. The herein described method of regenerating an electric battery, which consists in supplying a salt to the battery, circulating the salt through said battery by means of hydrogen under pressure, and including the battery in an electric circuit substantially as described.

2. The herein described method of regenerating a battery, which consists in supplying a salt to the battery, mixing in the salt free hydrogen under pressure whereby the salt is circulated through the battery, and including the battery in an electric circuit, substantially as described.

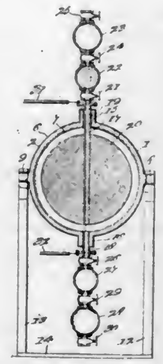
3. The herein described method of regenerating an electric battery, which consists in supplying to the battery a salt, circulating the salt through the battery by means of hydrogen under pressure, including the battery in an electric circuit, and withdrawing the acid produced, substantially as described.

4. The herein described method of regenerating a battery, which consists in supplying a salt to the battery, circulating the salt by means of hydrogen under pressure, including the battery in an electric circuit, and furnishing an additional supply of hydrogen from a separate source, substantially as described.

5. The herein described method of regenerating an electric battery, which consists in supplying a salt to the battery, circulating the salt through the battery in one direction by means of hydrogen under pressure, including the battery in an electric circuit, and supplying additional hydrogen from a separate source and circulating the same through the battery in a direction opposite to the passage of the salt, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,190,880. ELECTRIC CELL. PHILIP A. EMANUEL, Aiken, S. C. Filed Dec. 10, 1915. Serial No. 66,156. (Cl. 204—53.)



1. An improved electric cell including a spherical container constituting one electrode thereof, and a spherical electrode located within said spherical container and spaced circumferentially therefrom, substantially as described.

2. An improved electric cell including an outer hollow substantially spherical container constituting the positive electrode, and a solid spherical negative electrode supported substantially centrally within said container and insulated therefrom substantially as described.

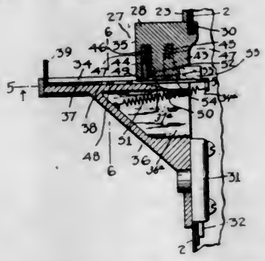
3. An improved electric cell including an outer substantially spherical and hollow container constituting one electrode, and a solid substantially spherical negative electrode supported within said container and provided with a duct therein for introducing the electrolyte, substantially as described.

4. An improved electric cell of the character described including an outer substantially spherical and hollow container constituting one electrode, a solid substantially spherical second electrode of lesser diameter within the interior of said container and provided with a substantially central duct therethrough, a hollow pole-piece connected to support said inner electrode and communicating with the duct therein to deliver the electrolyte to the space within said container and between the electrodes, substantially as described.

5. An improved electric cell of the character described including an outer substantially spherical container composed of hemispherical sections assembled together and constituting the positive electrode, a solid substantially spherical negative electrode supported centrally within said container and having a central duct therein, a hollow pole-piece supported in said container and connected to said negative electrode in alinement with the duct therein, and means for supplying an electrolyte through said hollow pole-piece and duct, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

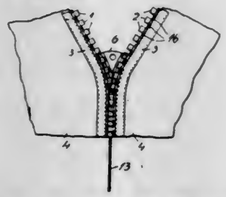
1,190,881. COIN-CONTROLLED APPARATUS. LEIF ERICKSEN, Brooklyn, N. Y., assignor to Sidney M. Harrington, Brooklyn, N. Y. Filed Nov. 19, 1915. Serial No. 62,342. (Cl. 194—93.)



1. In a coin-controlled apparatus, a member having a flat, apertured slideway and a chambered portion, beneath said slideway, closed at its front and open at its rear; a slide-pusher movable on said slideway and having a coin-receiving aperture registrable with the slideway aperture when the slide-pusher is moved inward; a second member disposed over said slide-pusher and having spring-pressed detents coöperable with said slide-pusher to limit movement thereof, when an improper coin is deposited in the said coin-receiving aperture, or when no coin is disposed therein; a coin-chute supported in said chambered portion to receive coins dropping through said two apertures when they register; and spring means disposed in said chambered portion and secured to the front wall thereof and to the rear end of said slide-pusher, for automatically returning the latter to normal position after manual actuation thereof.

2. In a coin-controlled apparatus, a member having a flat apertured slideway and a chambered portion, beneath said slideway, closed at its front and open at its rear; a slide-pusher movable on said slideway and having a coin-receiving aperture registrable with the slideway aperture when the slide-pusher is moved inward; a second member disposed over said slide-pusher and having spring-pressed detents coöperable with said slide-pusher to limit movement thereof, when an improper coin is deposited in said coin-receiving aperture, or when no coin is disposed therein; a coin-chute supported in said chambered portion to receive coins dropping through said two apertures when they register; spring means disposed in said chambered portion and secured to the front wall thereof and to the rear end of said slide-pusher, for automatically returning the latter to normal position after manual actuation thereof; and means carried by said second member for positively ejecting the coin from the coin-receiving aperture when said slide-pusher has been moved to the limit of its rearward movement.

1,190,882. FASTENING DEVICE. JOEL BARLOW FESLER, New York, N. Y. Filed Aug. 8, 1914. Serial No. 855,743. (Cl. 24—207.)



1. A fastening device such as described, comprising a plurality of rows of open-sided eyelets adapted to be drawn into approximate registry with the eyelets of one row alternated with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having two guides diverging from such stem and adapted each to pass through the eyelets of one series.

2. A fastening device such as described, comprising a plurality of rows of open-sided eyelets adapted to be drawn into approximate registry with the eyelets of one row alternated with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having two guides diverging from such stem and adapted each to pass through the eyelets of one series, and a flexible connecting member secured to such stem and adapted to be drawn thereby through the alternated substantially registering eyelets of the two series.

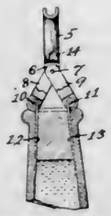
3. A fastening device such as described, comprising a plurality of rows of open-sided eyelets, the eyelets of each row adapted to be drawn into approximate registry with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having two guides diverging from such stem and adapted each to pass through the eyelets of one series, and having also a body portion intermediate such diverging guides, but connected thereto and having grooves adjacent to and parallel with said guides to receive the edges of the eyelets, each such groove crossing the opposite guide in proximity to the point where such guides merge into the stem.

4. A fastening device such as described, comprising a plurality of rows of open-sided eyelets, the eyelets of each row adapted to be drawn into approximate registry with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having two guides diverging from such stem and adapted each to pass through the eyelets of one series, and having also a body portion intermediate such diverging guides, but connected thereto and having grooves adjacent to and parallel with said guides to receive the edges of the eyelets, each such groove crossing the opposite guide in proximity to the point where such guides merge into the stem, and a flexible connecting member secured to such stem and adapted to be drawn thereby through the alternating substantially registering eyelets of the two series.

5. A fastening device such as described, comprising a plurality of rows of open-sided eyelets adapted to be drawn into approximate registry with the eyelets of one row alternated with the eyelets of the opposite row, in combination with a threading device having a stem adapted to pass through such eyelets, and having two guides diverging from such stem and adapted each to pass through the eyelets of one series, such threading device having also outer guides surrounding and substantially parallel to, but spaced away from, the guides first mentioned, and adapted to receive the eyelets within them and to guide such eyelets exteriorly.

[Claims 6 to 12 not printed in the Gazette.]

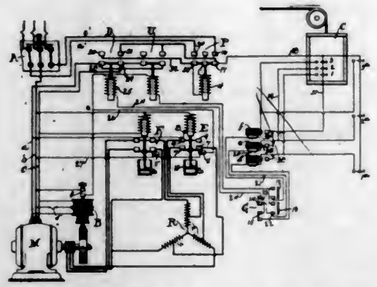
1,190,883. BOTTLE-OPENER. ROLAND FLITSCH, Miner, N. D. Filed Nov. 4, 1915. Serial No. 59,566. (Cl. 65—46.)



A bottle opener, consisting of a looped handle, a pivot joining the ends thereof, two arms carried by said pivot and provided, each, with a bifurcated outer end, a pivot in each bifurcated end in parallel relationship with said first named pivot, and a blade on each of said last named pivots, said bifurcated ends overlying each other whereby

the central longitudinal planes of both blades coincide with each other and with the central plane of the handle, and the upper ends of said blades being forced into said cork upon outward strain on said handle by said pivoted arms.

1,190,884. SAFETY DEVICE. ERNEST L. GALE, Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 20, 1912. Serial No. 732,404. (Cl. 172—152.)



1. The combination of an electric motor, a brake, and automatic means to break the motor circuit if the brake is not released.

2. The combination of an electric motor, a brake, means operated by the release of the brake to maintain a supply of current to the motor, and automatic means to cut off the supply of current to the motor if the brake is not released.

3. The combination of an electric motor, a brake, a switch operated by the brake to maintain the circuit to the motor, said switch operating only when the brake is released, and means to break the circuit to the motor and maintain it broken unless said switch is operated.

4. The combination of an electric motor, a brake therefor, a switch operated by the brake to maintain the circuit to the motor, said switch operating only when the brake is released, and means to break the circuit to the motor and maintain it broken unless said switch is operated.

5. The combination of an electric motor, a brake therefor, a switch operated by the brake to maintain the circuit to the motor, and means to break the circuit to the motor and maintain it broken unless said switch is operated.

[Claims 6 to 28 not printed in the Gazette.]

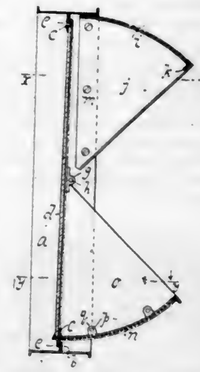
1,190,885. COMBINATION WINDOW AND SCREEN. HERMANN GEHNRICH, Brooklyn, N. Y. Filed July 9, 1915. Serial No. 38,886. (Cl. 156—14.)

1. A combination window and screen comprising a frame, a sash swingingly mounted on the frame, and a pair of segmental screens projecting from opposite portions of the window in an arc with the oscillation of the ends of the sash to cover the gaps when the sash is opened.

2. A combination window and screen comprising a frame, a sash swingingly mounted on the frame, and a pair of screens arranged in an arc with the swing of the sash for covering the gap when the sash is open, one being secured to the sash and the other to the frame.

3. A combination window and screen comprising a frame, a sash swingingly mounted on the frame, an upper and lower screen arranged in an arc with the oscillation of the ends of the sash to cover the gap when the sash is open, one being secured to the sash and the other to the frame.

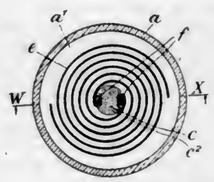
4. A combination window and screen comprising a frame, a sash centrally pivoted to swing on the frame, an upper screen secured to the frame, and a lower screen carried by the sash, said screens being arranged in an arc with the oscillation of the ends of the sash to cover the gap when the sash is open.



5. A combination window and screen comprising a frame, a sash pivoted to swing vertically on the frame, an upper removable screen mounted on the frame and a lower removable screen carried by the sash.

[Claims 6 and 7 not printed in the Gazette.]

1,190,886. ELECTROLYTIC CONDENSER OR ELECTROLYTIC VALVE. GEORGES GILES, Fribourg, Switzerland. Filed Mar. 11, 1916. Serial No. 83,491. (Cl. 175—315.)



1. In an electrolytic condenser or in an electrolytic valve where cylindrical armatures are wound around a central axis the combination with this axis made of insulating matter of rods of aluminium embedded therein unto each of which an armature like a band in shape of a circular evolute is fastened the number of rods corresponding to the number of armatures.

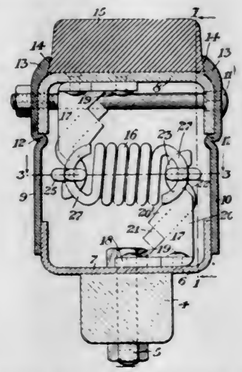
2. Electrolytic condenser or electrolytic valve where cylindrical armatures are wound around a central axis the combination with this axis made of insulating matter of rods of aluminium embedded therein unto each of which an armature like a band in shape of a circular evolute is fastened and the upper ends of which are serving as connecting contacts of the incoming and the outcoming current the number of rods corresponding to the number of armatures.

1,190,887. FLEXIBLE TIRE-RIM. OCTAVE GINGRAS, Laurierville, Quebec, Canada. Filed Aug. 28, 1915. Serial No. 47,758. (Cl. 152—37.)

1. In a device of the class described, the combination of an inner wheel band designed to be attached to the wheel, an outer tread band encircling the inner band, an angle bracket having a broad flat base flange, a plurality of spaced apart fastening means for affixing said base to one of said bands thereby to resist twisting of the same, a post projecting from said base flange toward the other band and cushioning means for holding the bands in operative relationship, said means including a transversely

disposed spring having one end pivotally supported from said post and the other end pivotally supported from the other band.

2. In a device of the class described, the combination of an inner wheel band designed to be attached to the wheel, an outer tread band encircling the inner band, fastening means for affixing said bracket to one of said bands, a post projecting from said base flange toward the other band and cushioning means for holding the bands in operative relationship, said means including transversely disposed springs having one end of each pivotally supported from said post and the other ends pivotally supported from the other band, the ends of said spring being bent back upon themselves to form end eyes disposed in transverse planes passing substantially through the axis of rotation of the tire.



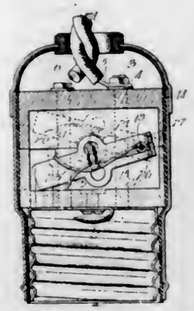
3. In a device of the class described, the combination of an inner wheel band designed to be attached to the wheel, an outer tread band channel shape in cross section, a rigid bracket fixed to said inner band, a second rigid bracket fixed to the web of said channel shape tread band and spaced from the flanges thereof whereby the flanges of said tread member are permitted some resiliency relative to the web thereof, cushioning means for holding the bands in operative relationship, said means including transversely disposed spring connections disposed between said rigid brackets.

4. In a device of the class described, the combination of an inner wheel band, channel shape in cross-section, means for attaching the web of said band centrally to the felly of a wheel, an angle bracket having a base portion extending transversely of the web of the band and on the side thereof opposite the side engaged by the wheel felly whereby strains on said bracket are transferred directly to the portion of the band reinforced by the felly, cushioning means for holding the bands in operative relationship, said means including a transversely extending spring placing a strain on said bracket and side plates having a sliding engagement with the flanges of said channel shape band and capable of acting thereon to distort the same slightly.

5. A tire for vehicle wheels including an inner wheel band adapted to be attached to the wheel, an outer element encircling the inner member and including a channel shaped member with the channel facing the inner band, a side plate engaging the outside of one of the flanges of the channel members and extending to the band, said side plate having an offset portion lapping the edge of said flange and having an inturned outer end portion projecting beyond said flange and coacting with the web of said member to form a clencher rim for a resilient tread section carried by the member, said offset portion of the side plate constituting a stop for limiting the movement of the outer element toward the wheel band and resilient means for maintaining said element and band in position.

[Claims 6 to 15 not printed in the Gazette.]

1,190,888. SWITCHING MECHANISM. DAVID D. GORDON, Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Feb. 2, 1915. Serial No. 5,729. (Cl. 173—351.)



1. An electric switch mechanism having a rotatable control part, a pivoted switch piece shiftable across the axis of rotation of said part from one side to the other thereof, the axis of said control part being substantially at right angles to the axis of said piece, a yielding connection between said part and piece, said connection effecting a snap action movement of said piece when the control part is rotated in either direction, and means controlled both by said part and said piece to at times prevent movement of said piece.

2. An electric switch mechanism having a rotatable control part, a pivoted switch piece shiftable across the axis of rotation of said part from one side to the other thereof, the axis of said control part being substantially at right angles to the axis of said piece, a yielding connection between said part and piece, said connection effecting a snap action shifting movement of said piece when the control part is rotated, and means controlled both by said part and said piece to at times prevent movement of said piece.

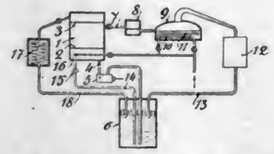
3. A switch movement having a rotatable control part, a movable switch piece, a pair of springs interposed between said part and piece whereby upon rotation of said control part in either direction of rotation motion is transmitted from said part to said piece to move it from either one of its limiting positions to the other by snap action, said springs being mounted intermediate their ends, one end of each spring abutting said piece, and the other end of each spring engaging said part, and means controlled by said part to at times prevent movement of said piece, said means including relatively movable interlocking elements.

4. A switch movement having a rotatable control part, a pivoted switch piece, a pair of springs interposed between said part and piece whereby upon rotation of said control part in either direction of rotation motion is transmitted from said part to said piece, to move it from either one of its limiting positions to the other by snap action, said springs being mounted intermediate their ends, one end of each spring abutting said piece, and the other end of each spring engaging said part, and means controlled by said part to at times prevent movement of said piece.

5. A switch movement having a rotatable control part, a movable switch piece, a pair of springs interposed between said part and piece whereby upon rotation of said control part in either direction of rotation motion is transmitted from said part to said piece to move it from either one of its limiting positions to the other by snap action, said springs being mounted intermediate their ends, one end of each spring oppositely abutting said piece, and the other end of each spring oppositely engaging said part, and means controlled by said part to at times prevent movement of said piece, said means including relatively movable interlocking elements.

[Claim 6 not printed in the Gazette.]

1,190,889. PROCESS FOR THE PRODUCTION OF RESINOUS MATERIALS. CAMILLE GRANEL, Bouscat par Lesperon, Landes, France. Filed Apr. 11, 1913. Serial No. 760,442. (Cl. 203—6.)

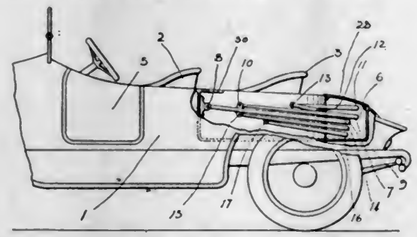


1. A process for the extraction of the resinous materials contained in the waste from the distillation of the tappings, consisting in forcing through the mass of tapping waste a solvent from a closed reservoir, such solvent being so selected as to dissolve the clear resins while not acting on the darker resins, in operating at a temperature below the melting point on the darker resins, in distilling the resinous solution thus obtained, in condensing the vapors given off, and returning the condensed liquor to the said closed reservoir.

2. The herein described process of extracting resinous matter contained in the residues from the distillation of pine tappings, which consists in treating said residues with a volatile solvent in a hermetically sealed vessel, separating the solution thus obtained from the tappings, heating the solution to a temperature below the vaporizing point of the resinous matter and above the vaporizing point of the solvent, condensing the solvent, increasing the temperature of the heated resinous matter progressively to 100° C., and subsequently treating the resinous matter to a jet of steam of substantially 150° C. for expelling the remainder of the solvent.

3. A process of extracting from the resinous substances contained in the waste from distillation of the pine tappings, consisting in forcing under pressure carbon bisulfid through the waste mass starting from a closed tub, said mass being placed in an extractor, then in gathering said carbon bisulfid charged with resin dissolved in a distilling boiler, in distilling said resin carbon bisulfid in said boiler, in conducting the carbon bisulfid through a refrigerant, then in said closed tub alone, in causing the passage of steam at a temperature of about 150° C. through the resin mass in the boiler, in bringing back to said closed tub the greater part of the remainder of carbon bisulfid charged with resin in said extractor; in sending through the latter steam in order to remove the balance of the carbon bisulfid, in condensing said steam and the carbon bisulfid, and in bringing the products of said condensation into the said closed receptacle, substantially as described.

1,190,890. FOLDING TOP FOR VEHICLES. DARWIN HANAUER, Kingston, N. Y., assignor to Entz Motor Patents Corporation, a Corporation of New York. Filed July 11, 1914. Serial No. 850,504. (Cl. 21—62.)



1. The combination with a vehicle body having a receptacle inclosed therein, of a foldable top for said body, including one or more bows, said top when raised being wider at its widest point than said receptacle, connecting means operative both when the top is raised and when it is lowered for connecting the top to the body, and means for varying the width of one or more of said bows, whereby said top may, when lowered, be received within said receptacle.

2. The combination with a vehicle body having a receptacle inclosed therein, of a foldable top for said body, pivoted thereto and including one or more bows, said top when raised being wider at its widest point than said receptacle and means for varying the width of one or more of said bows, whereby said top may, when lowered, be received within said receptacle.

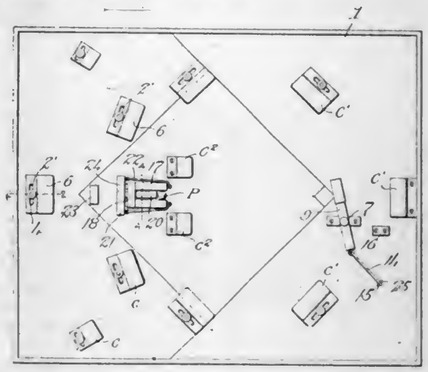
3. The combination with a vehicle body having a seating compartment and a receptacle partially surrounding said compartment; of a foldable top for said body pivoted thereto and including one or more bows, said top when raised being wider, at its widest point, than said receptacle; and means for varying the width of one or more of said bows whereby said top may when lowered be received within said receptacle.

4. The combination with a vehicle body having a receptacle inclosed therein; of a foldable top for said body pivoted within said receptacle and including one or more bows, said top when raised being wider, at its widest point, than said receptacle; and means for varying the width of one or more of said bows whereby said top may, when lowered, be wholly received within said receptacle.

5. The combination with a vehicle body having a seating compartment and a receptacle partially surrounding said compartment; of a foldable top for said body including one or more bows, said top when raised being wider, at its widest point, than said receptacle; connecting means operative both when the top is raised and when it is lowered for connecting the top to the body and means for varying the width of one or more bows whereby said top may when lowered be received within said receptacle; and a cover for said receptacle for protecting said top when contained therein.

[Claims 6 and 7 not printed in the Gazette.]

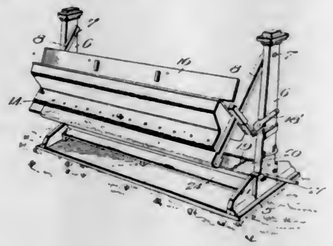
1,190,891. GAME APPARATUS. WILSON W. HARBOURT, Peewee Valley, Ky., assignor of one-half to James L. Caplinger, Peewee Valley, Ky. Filed Mar. 22, 1916. Serial No. 85,911. (Cl. 46—61.)



A game of the character described comprising an impelling mechanism, said impelling mechanism consisting of elongated parallel members, a cross member connecting adjacent ends thereof and maintaining said elongated members in predetermined spaced relation, the space between said members affording a projectile receiving guide, a striking arm slidably disposed through the connecting bar and movable between the elongated members, a cross head carried by the outer end of the striking arm, and extending beyond the opposite ends of the cross member, a retractile member secured to each end of the cross head and to the forward end of the adjacent parallel member, and a buffer carried by the cross member and with which the cross head engages under the influence of the retractile

means, said striking arm when at the limit of its movement under the influence of the retractile members terminating inwardly of the forward ends of the parallel members.

1,190,892. FEEDING DEVICE. WILLIAM M. HARTT, Great Falls, Mont. Filed June 7, 1915. Serial No. 32,603. (Cl. 119—51.)

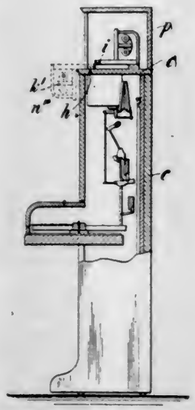


1. A feeding device comprising a base, standards carried thereby, a swinging frame pivoted to said standards, and a substantially Y-shaped feed receptacle carried by said frame and provided in its lower portion with a plurality of openings on each side thereof.

2. A feeding device comprising a base, standards carried thereby, a frame pivoted to said standards and including a horizontal member, and a feed receptacle carried by said frame and resting upon said horizontal member.

3. A feeding device comprising a base, standards carried thereby, a swinging frame mounted in said standards, a feed receptacle carried by said frame, and a latch pivoted to one of said standards for retaining said frame in a tilted position.

1,190,893. PNEUMATICALLY-OPERATED PIANO. GUSTAV KARL HENNIG, Bohlitz-Ehrenberg, near Leipzig, Germany, assignor to the Firm of Ludwig Hupfeld Aktiengesellschaft, Bohlitz-Ehrenberg, near Leipzig, Germany. Filed June 19, 1912. Serial No. 704,579. (Cl. 84—233.)



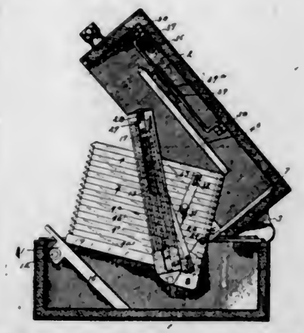
1. The combination with an upright piano, of supplemental mechanism comprising pneumatic valve mechanism, a wind chest extending across the piano above the hammers of the action unit and in front of the wrest plank, actuating pneumatics mounted on said wind chest, levers for actuating said units independently of the key-levers, means to operatively connect said levers and pneumatics, a tracker bar having ducts, said wind chest having ducts within its walls connecting said valve mechanism with ports in the piano case and means whereby a direct detachable connection is made between the tracker bar ducts and the ports in said case.

2. The combination with an upright piano, of supplementary pneumatic mechanism comprising an undivided wind chest extending across the piano above the hammers of the action units and in front of the wrest plank face, actuating pneumatics mounted directly on the wind chest, valve mechanism therefor, levers for actuating the action units independently of the key levers, means to operatively connect said pneumatics and levers, a detachable mechanism comprising a tracker bar having ducts, and note sheet rolls, said wind chest having ducts within a wall connecting the valve mechanism to ports in the piano case, and means for guiding the tracker bar ducts into register with said ports in the case.

3. In combination with an upright piano, supplementary pneumatic player mechanism including a wind chest having the usual valves, ducts and pneumatics, said wind chest disposed adjacent a piano case wall within the case above the action units, a tracker bar having the usual ducts and associated music rolls movable into and out of operative position, said tracker bar and rolls disposed outside of the piano case, and means to guide the ducts of said bar into register with corresponding ducts of the wind chest through the piano case wall.

4. The combination with an upright piano, of supplementary pneumatic mechanism comprising an undivided wind chest extending across the piano above the hammers of the action units and in front of the wrest plank face, actuating pneumatics mounted directly on the wind chest, valve mechanism therefor, levers for actuating the action units independently of the key levers, means to operatively connect said pneumatics and levers, a detachable mechanism comprising a tracker bar having ducts, and note sheet rolls, said wind chest having ducts within a wall connecting the valve mechanism to ports in the piano case and hinged means for guiding the tracker bar ducts into register with said ports in the case.

1,190,894. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 5, 1914. Serial No. 855,232. (Cl. 45—2.)



1. A filing appliance including a case having base and cover sections with hinge connections between the rear ends thereof, a series of hinged holders having their hinged ends connected with the rear end of the cover section to be carried thereby into and out of the base section; and means for supporting and guiding the free ends of the holders upward and over the rim of the base section including tilting tracks pivotally connected intermediate their ends to the base section with their longer ends extending rearward to bear upon the bottom of the base section and their shorter ends extending forward over the forward rim thereof.

2. A filing case including similar base and cover sections with guiding hinge connections for swinging and

shifting the cover section upon the base section, a plurality of hinged holders having their hinged ends depending from a pivotal connection with the rear end of the cover section, means for supporting and guiding the free ends of the holders upward and forward from within the base section over the forward rim thereof; and counterbalance means including a bearing head with slide rods thereon, a main head pivoted to the case cover having sliding engagement with all the rods, a minor head in the path of the main head having sliding engagement with certain rods, compression springs on the rods between the bearing head and the respective sliding heads, a bearing bracket depending from the main-head pivot for sustaining the bearing head, a pendent link having pivotal connection with the base section and the bearing bracket, a jointed link having pivotal connections with the bearing head and the cover section, and a swinging link having pivotal connections with the minor sliding head and the hinged end of the lower holder.

3. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a plurality of hinged holders having their hinged ends depending from a pivotal connection with the rear end of the cover section, means for supporting and guiding the free ends of the holders upward and forward from within the base section over the forward rim thereof; and counterbalance means including a bearing head with slide rods thereon, a main head pivoted to the case cover having sliding engagement with all the rods, a minor head in the path of the main head having sliding engagement with certain rods, compression springs on the rods between the bearing head and the respective sliding heads, a bearing bracket depending from the main-head pivot for sustaining the bearing head, an L-shaped link having its stem end pivoted to the base section and its lower L-end pivoted to the bearing bracket with an abutment on its stem in the path of said bracket, a jointed link having pivotal connections with the bearing head and the cover section, and a swinging link having pivotal connections with the minor sliding head and the hinged end of the lower holder.

4. A filing appliance including a plurality of holders adapted to be swung from reclined to upright position and having their lower-rear ends hinged together, a pivotal support for the hinged end of the foremost holder, an upright swinging bar mounted behind the rearmost holder, and guide plates on the rearmost holder having longitudinal and lateral sliding engagement with the swinging bar.

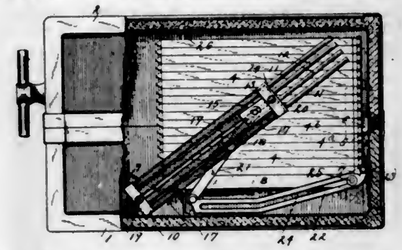
5. A filing appliance including a plurality of holders adapted to be swung from reclined to upright position and having their lower-rear ends hinged together, a pivotal support for the hinged end of the foremost holder, upright guide bars mounted on swinging arms behind the rearmost holder, and pairs of guide plates on the rearmost holder having longitudinal and lateral sliding engagement with the guide bars.

[Claim 6 not printed in the Gazette.]

1,190,895. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 6, 1914. Serial No. 855,441. (Cl. 45—2.)

1. A filing case including similar base and cover sections with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, a lifting lever having its rear end pivoted in the rear end of the base section, spring means for elevating the forward end of the lifting lever, and means connected with the hinged end of the lower holder having sliding and bearing engagement with the lifting lever.

2. A filing case including similar base and cover sections with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section; a spring-sustained swinging link, a lifting lever having its rear end pivoted to the base section and its forward end pivoted to the swinging link, and means connected with the hinged end of the lower holder having bearing and sliding engagement with the lifting lever.



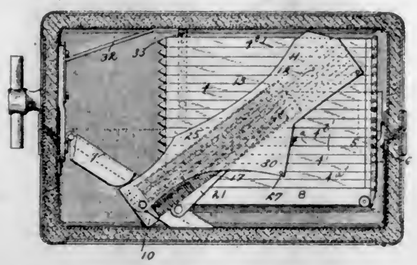
3. A filing case including similar base and cover sections with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section; counterbalance means for the cover section including a bearing head pivoted to the base section having a plurality of guide rods thereon, and a main head pivoted to the cover section having sliding engagement with the rods; and lifting means for the holders including a minor head in the path of the main head having sliding engagement with certain rods, a swinging link depending from the minor head, a lever containing a longitudinal slot having its rear end pivoted to the base section and its forward end pivoted to the swinging link, and lateral pins connected with the hinged end of the lower holder for bearing and sliding in the slot of the lever; there being compression springs on the guide rods between the bearing head and the respective sliding heads.

4. A filing case including similar base and cover sections with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section; means for supporting and guiding the forward ends of the holders upward and forward over the forward rim of the base section; counterbalance means for the cover section including a bearing head pivoted to the base section having a plurality of guide rods thereon, and a main head pivoted to the cover section having sliding engagement with the rods; and lifting means for the hinged ends of the holders including a minor head in the path of the main head having sliding engagement with certain rods, a swinging link depending from the minor head, a lever containing a longitudinal slot having its rear end pivoted to the base section and its forward end pivoted to the swinging link, and lateral pins connected with the hinged end of the lower holder for bearing and sliding in the slot of the lever; there being compression springs on the guide rods between the bearing head and the respective sliding heads.

1,190,896. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 7, 1914. Serial No. 855,653. (Cl. 45—2.)

1. A filing case including base and cover sections with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, a guiding and lifting track for the holders having its forward end pivoted in the forward end of the base section, and pendent means having a spring bearing in the base section for elevating and sustaining the rear end of the track.

2. A filing case including base and cover sections with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section, a guiding and lifting track for the holders having its forward end pivoted in the forward end of the base section, and a swinging link having a spring bearing in the base section for elevating and sustaining the rear end of the track.



3. A filing case including base and cover sections with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends depending from a pivotal connection with the rear end of the cover section; counterbalance means for the cover section including a bearing head pivoted to the base section having a plurality of guide rods with compression springs thereon, and a main head pivoted to the cover section having sliding engagement with the rods; guiding and lifting means for the holders including a minor head in the path of the main head having sliding engagement with certain rods, a swinging link depending from the minor head, and a track having its forward end pivoted in the base section and its rear end connected with the swinging link.

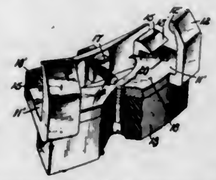
4. A filing case including base and cover sections, with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends pivotally connected with the rear end of the cover section; counterbalance means for the cover section and the rearward thrust of the holders including a bearing head pivoted to the base section having a plurality of guide rods and compression springs thereon, and a main head pivoted to the cover section having sliding engagement with the rods; and a case having side plates and an upper rim wall for shielding the counterbalance means.

5. A filing case including base and cover sections, with hinge connections for swinging the cover section upon the base section, a plurality of hinged holders mounted in the case having their hinged ends pivotally connected with the rear end of the cover section; counterbalance means for the cover section and the rearward thrust of the holders including a bearing head pivoted to the base section having a plurality of guide rods and compression springs thereon, and a main head pivoted to the cover section having sliding engagement with the rods; and a case having side plates and an upper rim wall for shielding the counterbalance means, having its lower end mounted on the bearing head pivot and its upper end slotted for the main head pivot.

[Claim 6 not printed in the Gazette.]

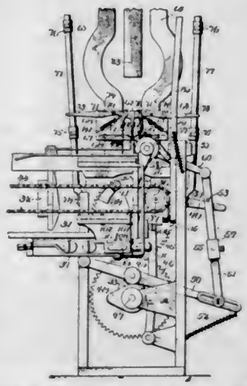
1,190,897. DETACHABLE HORSESHOE-CALK. WILLIAM B. HILL, New York, N. Y., assignor of one-fourth to Asa Sherwood, Bayonne, N. J. Filed May 23, 1916. Serial No. 99,277. (Cl. 168—34.)

1. The combination with a standard horseshoe, of an arc-shaped bracket extending along and spaced inwardly from the inner edge of the shoe, a plurality of claws extending outwardly from the bracket along the bottom of the shoe and thence bent upwardly along the outer edge of the shoe and overlapping the outer surface of the hoof to which the shoe is connected, means acting outwardly through the bracket against the inner edge of the shoe to bind the upwardly projecting portions of the claws against the shoe and hoof, means engaging over the upper surface of the shoe along its inner edge and extending thence downwardly between the bracket and the shoe to hold the bracket and claws from downward movement, and anti-slipping means carried by the bracket and base portions of the claws.



2. The combination with a horseshoe, of a bracket of curved form secured to the shoe lying within and parallel to the shoe, a plurality of claws having base portions formed integral with the ends of the bracket and extending along the bottom of the shoe and thence upwardly against the outer edge of the shoe, the upper ends of the claws being bent inwardly and formed with serrations to engage the hoof above the shoe, a pair of clips having lips extending between the inner edge of the shoe and the bottom of the hoof and having shanks projecting downwardly through the base portions of the claws, binding means projecting radially and horizontally through the bracket into binding engagement with the inner edge of the shoe, and anti-slipping means secured to the base portions of the claws and projecting downwardly thereon, substantially as set forth.

1,190,898. MECHANISM FOR AUTOMATICALLY APPLYING BAGS TO FILLING-MACHINES. ALBERT R. HINTON, Greensboro, N. C. Filed May 19, 1915. Serial No. 29,095. (Cl. 83—26.)



1. In a machine of the class described, the combination with a filling instrumentality, of means for bringing a closed bag to a predetermined position, means for gripping and opening such positioned bag, means for moving said gripping and opening devices and the bag to said filling instrumentality and raising and applying said gripped and opened bag thereto, and means for effecting the withdrawal of said gripping and opening devices from said bag after its application to said filling instrumentality.

2. In a machine of the class described, the combination with a suitable filling instrumentality, of a bag support, means for advancing a stack of closed bags on said support, means for selecting and protruding a bag from said stack, means for gripping and opening said protruded bag, and means for moving said gripping and opening devices to said filling instrumentality and raising and applying the opened bag thereto.

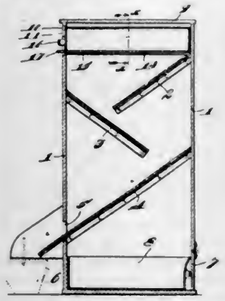
3. In a machine of the class described, the combination with a suitable filling instrumentality, of means for supporting a stack of bags, means for removing bags singly from the stack, means for gripping and opening the bag removed from the stack, said removing and opening means being movable to filling position relative to said filling instrumentality, and means for withdrawing the bag removing and opening means after the bag has been brought to filling position.

4. In a machine of the class described, the combination with a suitable filling instrumentality, of means for supporting a stack of bags, means for removing the bags singly from said stack, and means independent of the removing instrumentalities for gripping and opening said bag and applying it to the filling instrumentality.

5. In a machine of the class described, the combination with a suitable filling instrumentality, of means for supporting a stack of bags, means for removing the bags singly from the stack, gripping devices to engage the removed bag, mechanism for separating said grippers to open such bag after it has been removed from the stack, and means for moving said gripping devices and open bag to filling position beneath said filling instrumentality.

[Claims 6 to 45 not printed in the Gazette.]

1,190,899. ASH-SIFTER. JOHN W. HOFF, Chicago, Ill. Filed Dec. 1, 1913. Serial No. 803,951. (Cl. 83—60.)

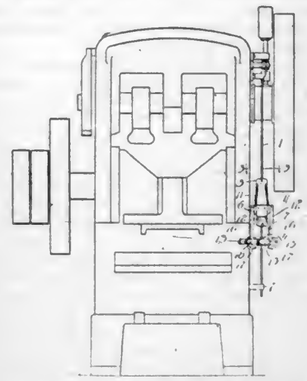


An ash sifter comprising a casing having a closed top and an entry opening in the side thereof; an ash pan slidably mounted in said casing and passing through said opening; a slidably removable bottom for said pan sliding through said opening; and sifting means in said casing below said pan, substantially as described.

1,190,900. SAFETY STARTING DEVICE. RUDOLPH HOFFMAN, Kankakee, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Apr. 10, 1916. Serial No. 90,073. (Cl. 164—107.)

1. A machine having a starting member, two relatively-movable elements carried by said member, each of said elements being arranged to limit movement of the other, a stud on the starting member arranged to be simultaneously engaged by said elements when their movement is thus limited, two hand-levers each connected to one of said elements, and a stationary member located between the hand-levers to prevent simultaneous depression of both hand-levers with one arm.

2. A machine having a starting member, two bell-crank levers each having an elongated opening therein, pins extending through said elongated openings and securing the bell-crank levers to the starting member, a stop-pin on the starting member for each bell crank lever, spring means tending to hold the bell-crank levers in contact with the stop-pins, a stud on the starting member located between the stop-pins, and means for swinging the bell-crank levers against the action of the spring means and into engagement with said stud.



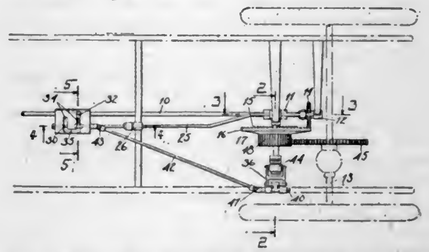
3. A machine having a starting member, a bell-crank lever having an elongated opening therein, a pin extending through said elongated opening and securing the bell-crank lever to the starting member, a stop-pin on the starting member for the bell-crank lever, spring means tending to hold the bell-crank lever in contact with the stop-pin, a stud on the starting member, means for swinging the bell-crank lever against the action of the spring means, and manually-operable means for limiting the swinging movement of the lever when the lever is in alinement with the stud.

4. A machine having a starting member, two bell-crank levers movably supported opposite each other, a stop-pin for each bell-crank lever, springs tending to move the bell-crank levers into contact with their stop-pins, a stud on the starting member located between the stop-pins, and means for swinging the bell-crank levers into contact with each other and against the stud.

5. A machine having a starting member, two bell-crank levers movably supported by said member, a stop-pin for each bell-crank lever, springs tending to hold the bell-crank levers in contact with their stop-pins, a stud on the starting member located between the stop-pins, and means for swinging the bell-crank levers toward each other and into engagement with the stud.

[Claims 6 to 13 not printed in the Gazette.]

1,190,901. CHANGE-SPEED GEARING. PETER HOLLENBECK, Kildare, Okla. Filed Aug. 5, 1914. Serial No. 855,120. (Cl. 74—58.)

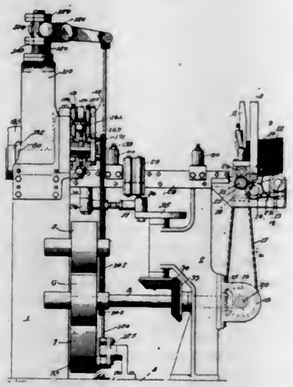


1. In change speed gearing, the combination of a power shaft, a pinion splined thereon, a jack shaft arranged at an angle to the power shaft, a master gear including a plurality of gear members coöperating selectively with the pinion, and means to cause the master gear to move away from the pinion, then shift the pinion, and then return the master gear into mesh with the pinion, said last mentioned means including a rod loosely connected to the pin-

ion and slidable substantially parallel with the power shaft, a hand lever having a ball pivotally connected to said rod and movable around the axis thereof, and a jointed shaft connected at one end to the master gear and having its other end arranged co-axially with said rod and adapted to be rotated by said lever.

2. In change speed gearing, the combination of a power shaft, a pinion slidable and splined thereon, a master gear including a plurality of gear members coöperating selectively with said pinion, and manually controlled means for throwing the master gear out of mesh with said pinion, sliding the pinion and returning the master gear with one of its gears into mesh with the pinion by a continuous operation, said manually controlled means including a jointed shaft, a casing adjacent the motor shaft and in which one end of the jointed shaft is journaled, link connections between the other end of the jointed shaft and the master gear, a lever of the first class splined and slidable upon that portion of the jointed shaft within the casing, a rod connected at one end to the pinion and having its other end arranged coaxially with that part of the jointed shaft journaled in the casing but spaced therefrom, and a ball loosely journaled upon the adjacent end of the rod and constituting a part or extension of said hand lever, substantially as set forth.

1,190,902. CAN-BODY-SEAM-WELDING MACHINE. HARRY H. HOOD, Chicago, Ill., assignor to E. F. Herrmann. Filed Apr. 18, 1914. Serial No. 832,720. (Cl. 219—6.)



1. In an electrical seam-welding machine, the combination of means for supplying current to the parts to be welded, a vibratory hammer disposed over the top and another vibratory hammer under the bottom of the seam, and means for engaging said hammers with the seam when a welding temperature is attained.

2. In an electrical seam-welding machine, the combination of means for supplying current to the parts to be welded, a pair of opposed continuously vibrating hammers disposed at the top and bottom of the seam, and means for simultaneously advancing said hammers together and in contact with the weld when a welding temperature is reached.

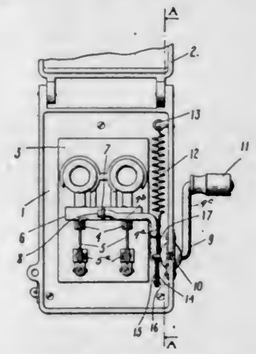
3. In an electrical seam-welding machine, the combination of means for supplying current to the parts to be welded, a vibratory hammer suitably disposed over said seam, a second vibratory hammer located below said seam, means for synchronously vibrating said hammers toward and away from each other, and means for simultaneously engaging said hammers with the top and bottom of the weld when a welding temperature is reached.

4. In an electrical seam-welding machine, the combination of means for supplying current to the parts to be welded, means for closing up the edges of the seam while the weld is being formed, and a pair of opposed vibratory hammers adapted simultaneously to engage the top and bottom of said weld.

5. In an electrical seam-welding machine, the combination of means for supplying current to the parts to be welded, means for advancing said parts together during the welding operation, opposed vibratory hammers synchronized with each other to vibrate in unison and disposed at the top and bottom of said weld, and means for simultaneously engaging the hammers with said weld at a suitable step in the welding operation.

[Claims 6 to 42 not printed in the Gazette.]

1,190,903. ELECTRICAL SWITCH. BRYSON D. HORTON, Detroit, Mich. Filed Nov. 18, 1913. Serial No. 801,755. (Cl. 175—282.)



1. A switch of the character described, including a metallic casing provided with a cover, a switch mechanism therein, said switch mechanism including a pair of spaced-apart stationary jaw contacts, a pair of pivoted movable knife blade contacts, a cross-head of non-conducting material connecting said knife blade contacts at their free ends, an operating crank journaled in said casing laterally of and substantially in line with the axis of the movable pivoted knife blade contacts, said operating crank arm having portion extending adjacent to said cross-head at a point intermediate its connection with the movably mounted pivoted knife blade contacts and operably connected thereto, and means for accelerating the movement of the movable pivoted knife blade contacts when being thrown to their "off" position, said means comprising an expansion spring connected at one end to one side of the casing, and at its opposite end to the operating crank arm, substantially as described.

2. In an iron-clad switch of the character described, in combination with stationary and movable contacts, an operating crank coöperating with said contacts and extending through the casing and providing for exterior manipulation, an expansion spring connected at one end to the side of the casing and at its opposite end to a link, a second link having pivot connection with said first link, the points of connection of said spring and operating links being such with respect to the bearing point of the operating crank that these points will be brought substantially into alinement on a dead center line with the spring fully expanded by the movement of the operating crank when connection is made between the contacts.

3. In a switch of the character described, the combination of a metallic casing, a switch mechanism therein, said switch mechanism including pairs of spaced-apart cooperating contacts, one pair being mounted stationary upon a base of insulating material, and the other pair being movably mounted with respect thereto, of a cross-head made of insulating material connecting the movable contacts at their free ends, and a one-piece operating crank mounted in the side of the casing, its inwardly-extending free end having operable connection with the insulating cross-head at a point intermediate the contacts

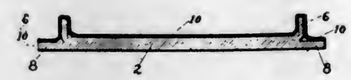
and provided with an exterior end-portion, said crank being pivotally mounted in the side of the casing at a point substantially in line with the pivot points of the movable contacts, whereby substantial movement of the movable contacts through an arc of a circle is obtained when operated.

4. A switch mechanism including a plurality of spaced stationary contacts, a plurality of spaced knife-blade contacts pivotally mounted in coöperative relation thereto, a cross-head connecting said spaced knife-blade contacts near their free ends, an operating member pivotally supported laterally of and in substantial alinement with the pivot points of said knife-blade contacts, and provided with a portion extending into proximity to and operably connected with the cross-head by means exerting a substantially balanced force on said cross-head with relation to the pivot supports of said knife-blade contacts when said operating member is operated to actuate the switch.

5. A switch mechanism including a plurality of spaced stationary contacts, a plurality of spaced knife-blade contacts pivotally mounted in coöperative relation thereto, a cross-head connecting said spaced knife-blade contacts near their free ends, an operating member pivotally mounted laterally of and in substantial alinement with the pivot points of said knife blade contacts and having a portion extending from the pivotal support into proximity to said cross head, and means connecting said portion with said cross-head, intermediate of the knife-blade contacts, whereby said member will exert a substantially balanced force upon said cross-head.

[Claims 6 to 15 not printed in the Gazette.]

1,190,904. INSOLE. JAMES E. JACKSON, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Sept. 18, 1911, Serial No. 650,020. Renewed Mar. 5, 1914, Serial No. 822,767. Divided and this application filed July 19, 1915. Serial No. 40,662. (Cl. 36—22.)



1. An insole comprising a blank provided with an upstanding marginal lip or rib, and reinforcing fabric beaded or crimped about the lip or rib and extending laterally from said lip or rib on each side thereof, the edge of said fabric at the outside of the lip or rib lying, at the shank portion of the blank at least, within the edge of the blank.

2. An insole comprising a blank provided with an upstanding, marginal lip or rib and a feather outside the lip or rib, and a layer of reinforcing fabric extending across the lipped face of the blank but stopping short of the edge of the blank where it lies on the feather.

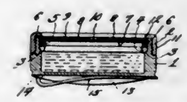
3. An insole comprising a blank having a marginal lip and a feather with reinforcing fabric secured to said lip and feather, the length of the edge of the fabric on the feather being less than the length of that part of the edge of the blank which is opposite the edge of the reinforcing fabric.

4. An insole comprising a blank having a marginal lip or rib and a feather of substantially even thickness throughout its width, and a sheet of reinforcing fabric secured to the lipped face of the blank, to both sides of the lip or rib and to the feather, with its edge lying at the shank portion of the blank at least within the edge of the feather.

5. An insole comprising a blank having a marginal lip and unreduced feather formed by slitting the edge of the blank and upturning one of the two sections thus produced, and reinforcing fabric secured across the lipped face of the insole, about the lip and across a portion of the unreduced feather its edge lying, at the shank portion of the blank at least, within the edge of the blank.

[Claims 6 to 10 not printed in the Gazette.]

1,190,905. MOISTENER. JOHN JASPER and SAMUEL CRAVEN, Ossining, N. Y. Filed Jan. 11, 1916. Serial No. 71,560. (Cl. 91—54.4.)



1. A finger moistener, comprising a circular or annular receptacle, a top for said receptacle comprising a pair of circular flexible pieces, one over and adjacent the other, one of said pieces having a single perforation, the other piece being provided with a plurality of perforations, one of which being adjacent the single perforation and adapted to partially overlie the single perforation, when the pieces are depressed, whereby moistening fluid may be drawn into or expelled from the receptacle, and an annular band having a flange threaded to the receptacle for holding the top in place.

2. A finger moistener, comprising a circular or annular receptacle, a top for said receptacle comprising a pair of circular flexible pieces, one over and adjacent the other, one of said pieces having a single perforation, the other piece being provided with a plurality of perforations, one of which being adjacent the single perforation and adapted to partially overlie the single perforation, when the pieces are depressed, whereby moistening fluid may be drawn into or expelled from the receptacle, and an annular band having a flange threaded to the receptacle for holding the top in place, a pair of annular clamping rings, one smaller in diameter than the other and adapted to telescope to clamp the edge portions of the flexible pieces together, and means for supporting the annular clamping rings inserted on the interior of the receptacle.

3. A finger moistener, comprising a circular or annular receptacle, a top for said receptacle comprising a pair of circular flexible pieces, one over and adjacent the other, one of said pieces having a single perforation, the other piece being provided with a plurality of perforations, one of which being adjacent the single perforation and adapted to partially overlie the single perforation, when the pieces are depressed, whereby moistening fluid may be drawn into or expelled from the receptacle, and an annular band having a flange threaded to the receptacle for holding the top in place, a pair of annular clamping rings, one smaller in diameter than the other and adapted to telescope to clamp the edge portions of the flexible pieces together, and means for supporting the annular clamping rings inserted on the interior of the receptacle, the bottom of the receptacle being arched or concaved to fit and correspond to the shape of a cuff or sleeve, and a clamp carried by the receptacle to coöperate with the concavity to clamp the receptacle in place.

1,190,906. TIE-PLATE. ALEXANDER V. JENSEN, Devils Slide, Utah. Filed Nov. 13, 1915. Serial No. 61,371. (Cl. 238—2.)

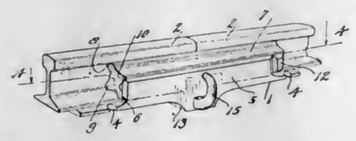


1. In combination, two longitudinally alined plates provided with transversely disposed upstanding ribs upon which rails are adapted to rest, each of said plates being provided with an upstanding shoulder adapted to contact with the free longitudinal edge of the outer flange of the coacting rail, and a web interposed between and integrally connected with the opposite ends of the plates, said web and the adjacent end portions of the plates being provided with an upstanding rib extending longitudinally

of the web, each of said plates having its inner transverse rib provided with bolt openings.

2. In combination, two longitudinally alined plates with transversely disposed upstanding ribs upon which rails are adapted to rest, each of said plates being provided with an upstanding shoulder adapted to contact with the free longitudinal edge of the outer flange of the coacting rail, and a web interposed between and integrally connected with the opposite ends of the plates, said web and the adjacent end portions of the plates being provided with an upstanding rib extending longitudinally of the web, each of said plates having its inner transverse rib provided with bolt openings, each of the plates having also disposed therethrough additional openings intersecting the upstanding shoulder.

1,190,907. RAIL-JOINT. CEZAIRE JOLY, Salem, Mass. Filed Dec. 21, 1915. Serial No. 68,040. (Cl. 239—6.)



1. A rail joint device of the class described comprising a chair having a seat arranged at each side of the rails, rail engaging members disposed in said seats, means for holding said members from displacement comprising a transversely arranged clamp extending beneath the rail and having one end coacting with the rail engaging member at one side of the rails, and adjustable means carried by its other end engaging the opposite rail engaging member.

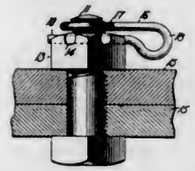
2. A rail joint device of the class described comprising a chair having a seat arranged at each side of the rails, rail engaging members disposed in said seats, means for holding said members from displacement comprising a transversely arranged clamp interlocked with the chair and having a hooked terminal at one end engaging the rail engaging member at one side of the rails, and a clamping arm adjustably carried by the other end for engaging the rail engaging member at the opposite side of the rails.

3. A rail joint device of the class described comprising a chair having a lateral wall forming a key receiving seat, a key disposed in said seat and engaging the rails, the chair aforesaid having a transverse opening, and a clamping member arranged in the transverse opening and having one end upturned to interlock with the lateral wall aforesaid, the end of said member engaging the key at the corresponding side of the rails and adjusting means on the other end of said clamping member for clamping the key against displacement from its seat.

4. A rail joint device of the class described comprising a chair, a key member arranged intermediate the chair and the rail seated therein, a wedge flange on said key interlocking with the chair for preventing displacement of the key therefrom, and a clamping member extending transversely of the chair and coöperating with the key member to hold it in wedging position, the chair aforesaid being formed with an enlarged portion having an opening therethrough to receive the transversed clamping member.

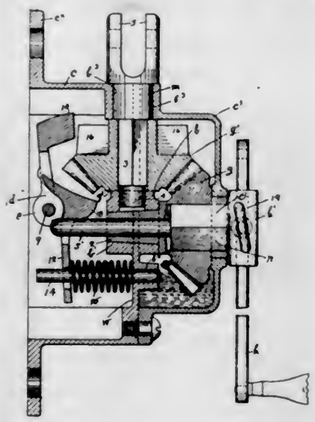
5. A rail joint device of the class described comprising a chair provided with lateral seats, rail engaging members disposed in said seats, interlocking means intermediate the rail engaging members and the chair for preventing vertical displacement of the engaging members, and clamping means common to said rail engaging members and arranged transversely of the chair for engagement with said members to prevent longitudinal displacement of said members from the seats aforesaid.

1,190,908. COTTER-PIN. JAMES OLIVER KAFADER, Fort Bidwell, Cal. Filed Feb. 24, 1916. Serial No. 80,152. (Cl. 74—8.)



A cotter pin formed of a length of material returned on itself to present a locking arm, the said locking arm having an eye formed at its free end adapted to be passed over a bolt, there being a resilient formation joining the said pin and locking arm.

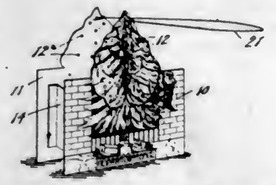
1,190,909. AWNING-OPERATING MECHANISM. CHARLES F. KARBERG, Cleveland, Ohio, assignor to The Cleveland-Akron Bag Company, Cleveland, Ohio, a Corporation. Filed Feb. 8, 1915. Serial No. 6,942. (Cl. 74—7.)



1. A casing as described consisting of front and rear sections, the rear section having a vertically disposed integral wall substantially half its depth at its inside and provided with journal bearings at right angles to each other, a transmitting gear having a journal mounted in one of said bearings and an actuating gear having a tubular spindle mounted in the other bearing, in combination with a pivoted detent having a projection on its inside and provided with a hump adapted to engage said transmitting gear, and a shaft projected through said actuating gear and the spindle thereof and adapted to contact with said projection and release said detent.

2. A device of the class described, comprising an inclosing casing and a transmitting gear and an actuating gear in mesh at right angles with each other in said casing, in combination with a detent of substantially T shape, a rod extending transversely through said casing and having the detent pivoted thereon said detent being provided with a tooth adapted to engage the transmitting gear and with a projection near its middle and front, and a shaft in rotating relation with said actuating gear and having a stem projected through the axis thereof into contact with said projection on said detent and adapted to throw and hold the detent back out of engagement with said transmitting gear.

1,190,910. LANTERN. PHILIP J. KNORPP, Jr., New York, N. Y. Filed Oct. 30, 1915. Serial No. 58,886. (Cl. 240—16.)

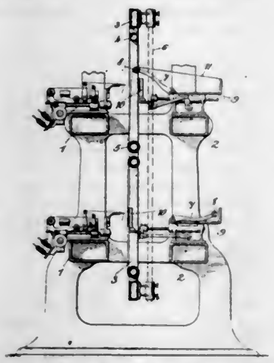


1. A device of the character described comprising two opposite side walls having ornamental exterior designs, a candle supporting member hinged to one of said side walls, a supporting device on the other side member for holding said candle supporting member in lowered position, and folding connections between said side walls which permit them to move directly toward each other in collapsing and directly apart in setting up.

2. In a device of the character described, side walls, connecting end pieces secured between the side walls and adapted to be folded outwardly, a connecting base piece secured between the side walls and adapted to be folded inwardly, and a candle-supporting member hinged to one of said side pieces, and adapted to be folded inwardly with the said base piece.

3. In a device of the character described, side walls, connecting end pieces secured between the side walls and adapted to be folded outwardly, a connecting base piece secured between the side walls and adapted to be folded inwardly, and a candle-supporting member hinged to one of said side pieces, and adapted to be folded inwardly with the said base piece, the said base piece being of shorter width than the said end piece, to prevent complete straightening thereof in open position, thereby forming a space between the said end pieces and the candle-supporting member to permit the fingers to be inserted therein.

1,190,911. EMBROIDERING-MACHINE. VICTOR KOBLER, Rorschach, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Filed Mar. 25, 1914. Serial No. 827,015. (Cl. 112—7.)



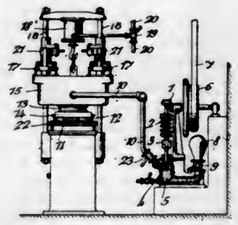
1. In an embroidering machine, the combination of a fabric frame, needles, supports for the needles at one side of the fabric frame, shuttle races, supports for the shuttle races at the other side of the fabric frame, a fabric roller, a roller for guiding the fabric to be reeled, and pivoted arms arranged on the shuttle side of the fabric frame carrying the guide roller, whereby the guide roller may be turned back away from the fabric frame and the needle supports when embroidering.

2. In an embroidering machine, the combination of a fabric frame, needles, supports for the needles at one side of the fabric frame, shuttle races, supports for the shuttle races at the other side of the fabric frame, a fabric roller, a brake roller for guiding the fabric to be reeled, pivoted arms carrying said brake roller and pivoted on the shuttle side of the fabric frame, whereby the brake roller may be turned back away from the needle supports and the fabric frame when embroidering, and an adjustable means for exerting a brake action on the brake roller.

3. In an embroidering machine, the combination of a main frame, a fabric frame, needles, supports for the needles at one side of the fabric frame, shuttle races, supports for the shuttle races at the other side of the fabric frame, a fabric roller mounted on the fabric frame, a roughened roller for guiding the fabric to be reeled, and arms pivoted on the shuttle side of the main frame and supporting the roughened roller.

4. In an embroidering machine, the combination of a main frame, a fabric frame, needles, supports for the needles at one side of the fabric frame, shuttle races, supports for the shuttle races at the other side of the fabric frame, a fabric roller mounted on the fabric frame, a roughened roller for guiding the fabric to be reeled, arms pivoted on the shuttle side of the main frame and supporting the roughened roller, and adjustable means for exerting a brake action on the roughened roller.

1,190,912. APPARATUS FOR COMPRESSING PLASTIC MATERIAL. MAX KOLLER, Winterthur, Switzerland. Filed Oct. 1, 1915. Serial No. 53,605. (Cl. 25—1.)



1. In an apparatus for compressing plastic material, the combination of a mold for the material to be compressed, a piston resting upon the material in said mold, a weighted cylinder for said piston filled with a liquid, and means for producing hydraulic strokes in said liquid.

2. In an apparatus for compressing plastic material, the combination of a mold for the material to be compressed, a weighted cylinder, a piston resting upon the material in said mold and movable in said cylinder, a liquid within the cylinder, a spring influenced plunger for producing hydraulic strokes within the liquid, and means for actuating said spring influenced plunger.

3. In an apparatus for compressing plastic material, the combination of a mold for the material to be compressed, a weighted cylinder, a piston movable in the latter and resting upon the material in said mold, a liquid within the cylinder, buffers for absorbing the reactive effect of the cylinder, a spring influenced plunger for producing hydraulic strokes within the liquid, and means for driving said spring influenced plunger.

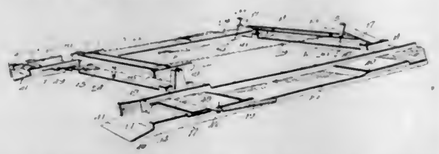
4. In an apparatus for compressing plastic material, the combination of a mold for the material to be compressed, a weighted cylinder, a piston movable in the latter and resting upon the material in said mold, a liquid within the cylinder, a spring influenced plunger for producing hydraulic strokes within the liquid, means for driving said plunger, an air chamber in connection with the cylinder, and a cock for interrupting the connection.

5. In an apparatus for compressing plastic material, the combination of a mold for the material to be compressed, a weighted cylinder, a piston movable in the latter and resting upon the material in said mold, a liquid within the cylinder, a spring influenced plunger for producing hydraulic strokes within the liquid, means for driving said plunger, an air chamber in connection with the cylinder, a cock for interrupting said connection and

buffers for absorbing the reactive effect of the hydraulic strokes exercised on the material not absorbed by the cylinder.

[Claims 6 and 7 not printed in the Gazette.]

1,190,913. AUTOMOBILE-LIFTING APPARATUS. ROMANUS KRAUSE, Belhaven, N. C., assignor of one-half to John G. Tooly, Belhaven, N. C. Filed Dec. 21, 1915. Serial No. 68,070. (Cl. 254—89.)



1. An apparatus of the character described comprising a base frame including longitudinal and transverse members, a front axle supporting frame pivotally mounted upon one of said transverse members and normally in a tilted position, journals carried by the other transverse member, a rear axle supporting frame pivoted in said journals and normally in substantially horizontal position, flexible connections between said front and rear axle supporting frames, and means carried by said base frame for raising said rear axle supporting frame from its journals when said frame is swung to a substantially vertical position.

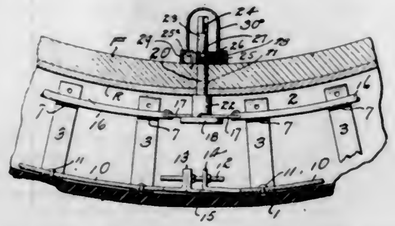
2. An apparatus of the character described comprising a base frame, swinging front and rear axle supporting frames mounted in said base frame, connections between said swinging frames whereby the rear frame is moved to vertical position when the front frame is engaged by the front axle of the vehicle, means for elevating said rear frame as the same is being swung to vertical position, rear wheel elevating members movable longitudinally of said base frame and actuated by frictional contact between the same and said wheels to move rearwardly and from under said wheels whereby the rear axle of the vehicle is lowered onto its supporting frame, and means for returning said wheel elevating members to normal position while the vehicle is being removed from the apparatus.

3. An apparatus of the character described comprising swinging front and rear axle supporting frames adapted to be swung to vertical position by contact of a vehicle with one of said frames, means for elevating one of said frames as the same is being swung to vertical position, and longitudinally movable members for elevating the rear wheels of said vehicle and actuated to move rearwardly from under said wheels whereby the rear axle of the vehicle is lowered on its supporting frame.

4. An apparatus of the character described comprising swinging front and rear axle supporting frames adapted to be swung to vertical position by contact of a vehicle with one of said frames, means for elevating one of said frames as the same is being swung to vertical position, longitudinally movable members for elevating the rear wheels of said vehicle and actuated to move rearwardly from under said wheels whereby the rear axle of the vehicle is lowered on its supporting frame, guide flanges arranged on each side of said longitudinally movable members and having slots therein, a transverse arm secured to each of said longitudinally movable members and having its ends extending into the slots in said guide flanges whereby movement of said movable members is limited in both directions, and means secured to one end of said arm for returning said movable members to normal position while the vehicle is being moved from the apparatus.

1,190,914. RESILIENT TIRE. LOUIS E. KRICHBAUM, Youngstown, Ohio. Filed Oct. 22, 1915. Serial No. 57,292. (Cl. 152—8.)

1. A resilient tire including a tire casing, and an internal spring core unit comprising a circular series of spaced transversely disposed spring members each having an outer arched portion and an inner introverted portion, an adjustable circumferential connector rigidly connected with the outer arched portion of all of the spring members, and an expansible pressure ring connected with the said introverted portions of all of the spring members.



2. A resilient tire including a casing, and an internal spring core unit comprising a plurality of spaced transversely disposed spring members, said members each having an arched portion and introverted end portions opposite the said arched portion, a circumferential holding strip for spacing said springs, said strip being rigidly connected with the inner side of the arched portion of each spring member, and an expansible ring connected with the said introverted ends of each member.

3. A resilient tire including a casing, and an internal spring core unit comprising a plurality of spaced transversely disposed spring members each having an outer arched portion and an inner introverted portion formed with an eye, a circumferential holding strip rigidly connected with the arched portion of the spring members and having adjustment means, and a pressure ring passing through the eyes of the spring members and having expansible tension means.

4. A resilient tire including a tire casing, and an internal spring core unit comprising a plurality of spaced transversely disposed spring members each having an arched outer portion and an introverted inner portion having an eye, a circumferential holding strip for connecting the arched portion of each spring member, a pressure ring passing through the eye of each spring member, and means for placing said ring under tension including a disk having link connections with the ends of said ring, and an externally exposed operating stem.

5. A resilient tire including a tire casing, and an internal spring core unit comprising a plurality of spaced transversely disposed spring members each having an outer arched portion and an introverted inner portion having an eye, a circumferential holding strip for uniting the arched portions of the spring members and having adjustment means, a pressure ring passing through the eye of each spring member, and means for placing said ring under tension including a disk, links pivotally connected with said disk and the free ends of said ring, an operating stem rigidly carried by said disk and extending to an exposed position, and means for locking said stem in adjusted position.

1,190,915. EXTENSION-SHOE. JOHN AUGUST KULL, Jr., Chicago, Ill. Filed May 10, 1915. Serial No. 27,230. (Cl. 3—5.)

1. In an extension shoe, the combination of a platform adapted to accommodate the foot of the wearer, said platform comprising rigid body and toe parts the adjacent surfaces of which are both inclined forwardly; a flexible connecting member inserted between and connecting said surfaces, and an upper connected to said platform and providing toe space directly above the said flexible connecting members, substantially as described.

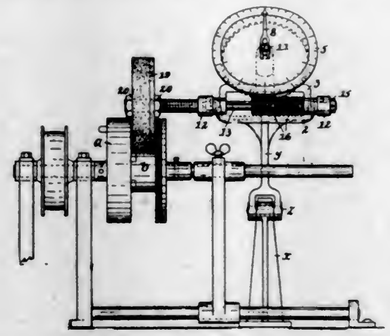
2. In an extension shoe, the combination of a platform adapted to accommodate the foot of the wearer, said platform comprising a body part and a plurality of toe parts, the adjacent surfaces of said parts being spaced apart in substantially parallel relation and inclined forwardly; a flexible connecting member interposed between and connecting each pair of said surfaces, and an upper connected to said platform and providing toe space directly above the said flexible connecting members, substantially as described.



3. In an extension shoe, the combination of a platform formed to accommodate the foot of the wearer; upwardly extending brace bars fixed at their lower ends to said platform at the opposite sides thereof; rearwardly extending portions on said bars adjacent the lower extremities thereof engaging around the back of said platform, the rearward ends of said rearwardly extending portions being overlapped; and a fastening device passing through said overlapping ends and securing the same to said platform, substantially as described.

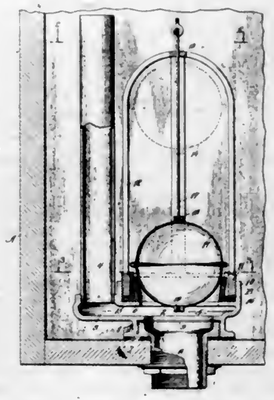
4. In an extension shoe, the combination of a platform fashioned to accommodate the foot of the wearer, said platform comprising a slender longitudinally extending member formed of hard wood having its grain running lengthwise of said member, the front end portion of said member constituting the toe portion of the shoe; an elevated heel portion at the rearward end of said member; upwardly extending brace bars arranged at the opposite sides of said platform; and securing devices rigidly connecting the lower ends of said bars with said platform and said heel portion, the lowermost of said securing devices entering said longitudinally extending member, and rearwardly extending portions on said bar intermediate the ends thereof and embracing said heel portion, substantially as described.

1,190,916. MEANS FOR MEASURING RIBBONS AND THE LIKE. HAIGAZN H. KURKJIAN, Paterson, N. J. Filed Mar. 27, 1915. Serial No. 17,312. (Cl. 33—129.)



The combination of a support, a supporting arm pivoted therein on a horizontal axis, said arm having a fork at its free end, a shaft journaled in the fork parallel with the axis of pivotal movement of the arm, a contact wheel adapted to bear against the roll of material being wound and arranged on the shaft, a worm having portions of different pitch splined on the shaft between and movable from one to the other of the fork-forming parts of the arm and having means to releasably hold it at either limit afforded by said parts, and indicating means carried by said supporting arm and including a worm wheel journaled therein and having its teeth meshing with the worm.

1,190,917. FLUSH-VALVE. GEORGE LAMB, New York, N. Y. Filed May 4, 1916. Serial No. 95,353. (Cl. 4—5.)



1. A float valve comprising a chambered casing through which water is adapted to flow, a valve seat of cylindrical form and expansible in diameter at its upper end, a cage having a screw connection with the casing and clamping the valve seat in place, the body of the cage forming a handle for facilitating the screwing and unscrewing of the cage, a ball valve disposed in the cage and engageable with the seat, and a stem connected with the valve and extending upwardly therefrom, the top of the cage having a guide through which the stem extends.

2. A flush valve comprising a chambered casing through which water is adapted to flow, a cylindrical rubber valve seat yieldable laterally at its top edge and having an annular flange at its bottom, means for clamyping the flange tightly against the valve casing, and a ball valve adapted to enter the seat and engage the top edge thereof.

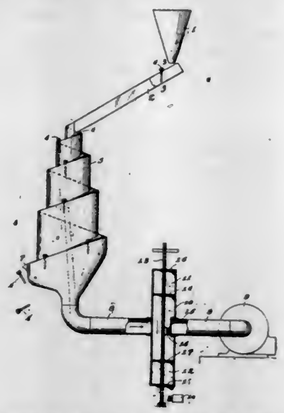
3. A flush valve comprising a chambered casing through which water is adapted to flow and having an internally threaded flange at its top, a ring screwing into the flange, a rubber valve seat of annular form disposed within the ring and of less diameter than the same and having an annular flange clamped between the ring and valve casing, and a rigid ball valve engageable internally of the seat.

4. A flush valve comprising a chambered casing through which water is adapted to flow and having an internally threaded flange at its top, a ring screwing into the flange, a rubber valve seat of annular form disposed within the ring and of less diameter than the same and having an annular flange clamped between the ring and valve casing, and a rigid ball valve engageable internally of the seat, said ring having a cage extending upwardly therefrom for guiding the ball valve and forming a handle for the screwing and unscrewing of the ring.

5. A flush valve comprising a seat, a ball of slightly larger diameter than the seat and engageable therewith, a stem, and separate means at diametrically opposite points on the ball for permitting the latter to be reversed for connection with the stem.

[Claim 6 not printed in the Gazette.]

1,190,918. QUILL-CLEANER ART. JAMES SMITH LANIER, Chambers county, Ala. Filed Apr. 10, 1913. Serial No. 760,259. (Cl. 19—15.)



1. In a quill cleaner, the combination with a housing proportioned to receive a plurality of quills, and means for directing a cleansing blast through the housing in contact with all quills extending therein.

2. In the art of quill cleaning, causing traveling of a quill laterally into a line of blast with the quill disposed substantially longitudinally of the line of blast for subjecting waste yarn on the quill to the action of the blast.

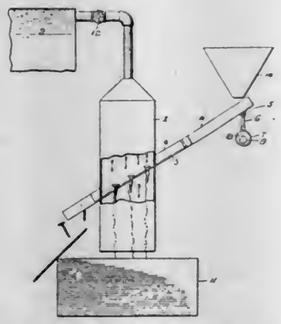
3. In the art of quill cleaning, moving a series of juxtaposed quills laterally into a line of blast and maintaining said quills positioned longitudinally of the line of blast while subjecting waste yarn thereon to the action of the blast.

4. In the art of quill cleaning, subjecting waste yarn on a quill to a cleansing blast adapted to remove yarn from the quill, and causing the quill to travel laterally while yarn on the quill is subjected to the blast.

5. In a quill cleaner, the combination of means for creating a cleansing blast, and means for directing a quill laterally into the blast with the quill disposed longitudinally of the blast.

[Claims 6 to 23 not printed in the Gazette.]

1,190,919. QUILL-CLEANER. JAMES SMITH LANIER, Chambers county, Ala. Filed Aug. 21, 1913. Serial No. 786,024. (Cl. 19—15.)



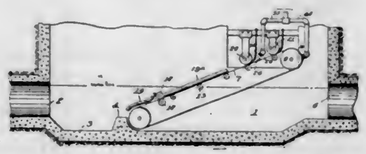
1. In a quill cleaner, the combination of a pneumatic tube, and a track extending through the tube and adapted to sustain a quill while waste yarn is being pneumatically cleaned from the quill.

2. In a quill cleaner, the combination of a pneumatic tube, and a track extending through the tube on an incline sufficient for causing a quill to travel through the tube on the track by gravity for subjecting the quill to the removal of waste yarn pneumatically while in the tube.

3. In a quill cleaner, the combination of pneumatic cleaning means for removing waste yarn from quills, a track for delivering quills to said cleaning means, and means for vibrating the track.

4. In a quill cleaner, the combination of pneumatic cleaning means for removing waste yarn from quills, a track for delivering quills to said cleaning means, means for vibrating the track, and means for delivering quills to the track.

1,190,920. SEWAGE-SCREENING APPARATUS. ALPHONSE M. LEONI, Brooklyn, and ALBERT F. SCHREINER, Long Island City, N. Y., assignors to said Alphonse M. Leoni. Filed Feb. 1, 1913. Serial No. 745,639. (Cl. 210—16.)



1. In a sewage screening apparatus, in combination, a screen, means for guiding and advancing the same in a direction inclined with respect to the water level of the sewage, a transverse row of rollers engaging the under side of the upper run of the screen for supporting the same, and a screw conveyer disposed transversely to said screen above the upper run thereof, and opposite to said supporting rollers for advancing material gathered on said screen in a lateral direction to remove the same from the screen.

2. In a sewage screening apparatus, in combination, a screen, means for guiding and advancing the same in a direction inclined with respect to the water level of the sewage, a transverse row of rollers engaging the under side of the upper run of the screen for supporting the same, a screw conveyer disposed transversely to said screen above the upper run thereof and opposite to said supporting rollers for advancing material gathered on said screen in a lateral direction to remove the same from the screen, and a sprayer extending transversely of the screen for directing a spray onto the screen adjacent said screw conveyer.

3. In a sewage screening apparatus, in combination, a screen, means for guiding and advancing the same in a direction inclined with respect to the water level of the sewage, a transverse row of rollers engaging the under side of the upper run of the screen for supporting the same, a screw conveyer disposed transversely to said screen above the upper run thereof and opposite to said supporting rollers for advancing material gathered on said screen in a lateral direction to remove the same from the screen, a sprayer extending transversely of the screen for directing a spray onto the screen adjacent said screw conveyer, and a shield over and adjacent the said upper run of said screen and between said sprayer and said screw conveyer.

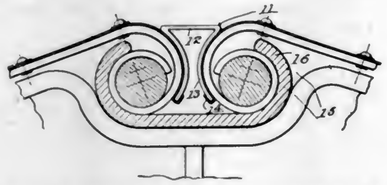
4. In a sewage screening apparatus in combination, a pair of endless chains comprising links, transverse rods connecting links at one of said chains to the corresponding links of the other of said chains, wheels having sockets receiving said rods to drive said chains and screen sections supported between said rods, said screen sections having rolls passing around said rods and channel shoes enveloping said rods and said rolls and received in said sockets.

5. In a sewage screening apparatus in combination, a pair of endless chains comprising links, transverse rods

connecting links in one of said chains to the corresponding links of the other of said chains, wheels having sockets receiving said rods to drive said chains, screen sections supported between said rods, and channels receiving said rods and adapted to seat in said socket when said wheels drive said chains.

[Claims 6 to 8 not printed in the Gazette.]

1,190,921. SCREEN. ALPHONSE M. LEONI, Brooklyn, N. Y. Filed Mar. 28, 1913. Serial No. 757,302. (Cl. 210—16.)



1. A screen adapted to raise and carry material on the upper surface thereof, said screen comprising sections jointed together, in combination with a transversely disposed conveyer for removing the material having a brush engaging said sections, and fillers disposed between said sections and preventing said brush from becoming caught between said sections.

2. A screen composed of connected sections, said sections consisting of frames having openings therethrough and a covering of mesh secured to the frame, the adjacent ends of said sections having curved extensions, and members lying in the space between said extensions and filling the same.

3. A screen consisting of a plurality of sections, said sections having curved extensions, means for connecting said extensions, and a filler disposed in the space between said extensions freely movable on said extensions.

4. A screen consisting of sections connected together, each section consisting of a grid with a mesh cover secured thereto, said grids having curved extensions lying adjacent to each other, said covers lying on and conforming to said curved extensions, and fillers received in the spaces between said extensions conforming to said curved extensions and holding the ends of said cover in position thereupon.

5. A screen composed of sections, said sections having curved extensions, transverse bars receiving said extensions, links connecting said bars and forming a chain, and filler bars disposed between said curved extensions extending transversely of said screen and filling the spaces between said sections.

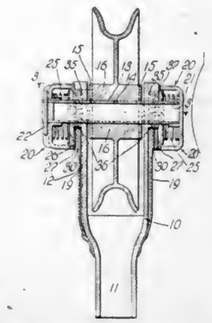
[Claims 6 and 7 not printed in the Gazette.]

1,190,922. TROLLEY. MARK LEV, Jr., near Los Angeles, Cal. Filed June 28, 1915. Serial No. 36,613. (Cl. 191—61.)

1. A trolley, embodying a frame, a shaft carried therein, a trolley wheel on said shaft, a contact member adapted to be pressed against the wheel, a removable head mounted on the shaft, a spring in said head adapted to press the contact member against the wheel, and means for preventing rotation of the head relative to the frame.

2. A trolley, embodying a frame, a shaft carried therein and projecting outside the frame, a trolley wheel on said shaft inside the frame, a contact member between the wheel and frame adapted to be pressed against the wheel, a removable head mounted on the shaft exterior of the frame, a spring in said head pressing the contact member against the wheel, and means for preventing rotation of the head relative to the frame.

3. A trolley, embodying a frame, a shaft carried therein and projecting outside the frame, a trolley wheel on said shaft inside the frame, a contact member between the wheel and frame adapted to be pressed against the wheel, a removable head mounted on the shaft exterior of the frame, interengaging means on the frame and head to prevent rotation of the head relative to the frame, and a spring in said head pressing the contact member against the wheel.

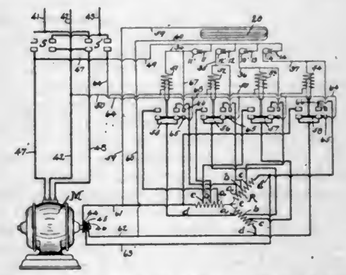


4. A trolley, embodying a bifurcated frame, a shaft carried in the furcations thereof, a trolley wheel mounted on the shaft between the furcations, a pair of contact members between the furcations one on each side of the wheel adapted to be pressed against the wheel, heads mounted one on each side of the shaft outside the furcations, springs in said heads pressing said contact members against the wheel, and means for preventing rotation of the head relative to the frame.

5. A trolley, embodying a bifurcated frame, a shaft carried in the furcations thereof, a trolley wheel mounted on the shaft between the furcations, a pair of contact members between the furcations one on each side of the wheel adapted to be pressed against the wheel, heads mounted one on each end of the shaft outside the furcations, interengaging means between the frame and heads to prevent rotation of the heads relative to the frame, and springs in said heads pressing said contact members against the wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,190,923. CONTROLLING MECHANISM FOR INDUCTION-MOTORS. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 7, 1911. Serial No. 612,872. (Cl. 172—289.)



1. The combination of an electric motor, a source of alternating current of constant frequency for the motor, and vibratory means having a high coefficient of resiliency controlled by the periodicity of current induced in a circuit of the motor for controlling the speed of the latter.

2. The combination of an alternating current electric motor, a source of alternating current of constant frequency for the motor, and vibratory means having a high coefficient of resiliency controlled by the frequency of current alternations in a circuit of the motor to control the speed of the motor.

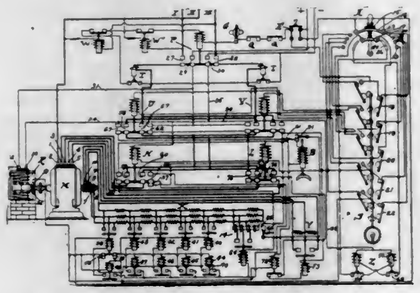
3. An alternating current electric motor of the induction type, in combination with a source of alternating current of constant frequency for the motor, and vibratory means having a high coefficient of resiliency controlled by the frequency of a current induced in a winding of the motor to control the speed of said motor.

4. The combination of an alternating current electric motor of the induction type, a source of current supply therefor of constant frequency, accelerating apparatus for the motor, and vibratory means having a high coefficient of resiliency controlled by the frequency of current alternations in a secondary circuit of the motor for effecting the operation of said accelerating apparatus.

5. The combination of an alternating current electric motor comprising a stator and a rotor, starting resistance, and vibratory means having a high coefficient of resiliency dependent upon the frequency of current alternations in a circuit of the rotor to effect the cutting out of the starting resistance.

[Claims 6 to 22 not printed in the Gazette.]

1,190,924. ALTERNATING-CURRENT-MOTOR CONTROL. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 5, 1913. Serial No. 771,803. (Cl. 172—152.)



1. In a hoist, a load carrying device, an alternating current induction motor connected to operate said device comprising independent windings for effecting different motor speeds, means for closing a circuit to either one of said windings, a resistance in one of said windings, and means controlled by the load for varying said resistance in accordance with the speed of the motor.

2. In a hoist, a load carrying device, an alternating current induction motor operatively connected to the said device comprising independent windings for effecting different motor speeds, means for closing a circuit to either of said windings, a resistance element in circuit with each of said motor windings, and electro-responsive devices controlled by the load for varying said resistances in accordance with the speed of the motor.

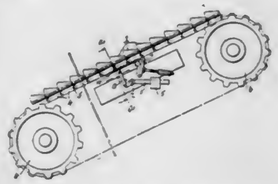
3. In a hoist, a load carrying device, an alternating current induction motor operatively connected to the said device comprising independent windings for effecting different motor speeds, means for closing a circuit to either of said windings, a resistance element in circuit with each of said motor windings, an electric generator driven by said motor, and means operated by current from said generator for controlling said resistances, said means being controlled by the load.

4. In a hoist, a load carrying device, an alternating current induction motor operatively connected to the said device comprising independent windings for effecting different motor speeds, means for closing a circuit to either of said windings, a resistance element in circuit with each of said motor windings, a direct current generator driven by said motor, and means operated by current from said generator for controlling said resistances, said means being controlled by the load.

5. In a hoist, a load carrying device, an electric motor operatively connected therewith, a resistance in the motor circuit, an electro-responsive device for controlling said resistance, a relay for controlling a circuit of constant potential to the said electro-responsive device, and means controlled by the load for effecting the operation of said relay.

[Claims 6 to 10 not printed in the Gazette.]

1,190,925. SAFETY BRAKE APPARATUS. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 1, 1915. Serial No. 5,412. (Cl. 74—13.)



1. The combination with an inclined conveyer, of a brake therefor comprising a pawl adapted directly to engage the conveyer, and a shoe in frictional engagement with the conveyer to bring the pawl into direct engagement with the conveyer.

2. The combination with an inclined conveyer, of a brake therefor comprising a pawl adapted directly to engage the conveyer, and a shoe in frictional engagement with the conveyer and connected to the pawl to bring the pawl into direct engagement with the conveyer.

3. The combination with an inclined conveyer, of a brake therefor comprising a pawl, a shoe connected to the pawl and adapted frictionally to engage the conveyer, to maintain the pawl out of engagement with the conveyer for one direction of travel and into engagement with the conveyer for the opposite direction of travel.

4. The combination with an inclined conveyer, of a brake therefor comprising a pawl, a shoe connected to the pawl and in constant frictional engagement with the conveyer to maintain the pawl out of engagement with the conveyer for one direction of travel of the conveyer and to cause the pawl to engage the conveyer for the opposite direction of travel.

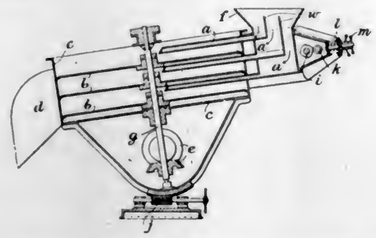
5. In apparatus of the class described, the combination with an inclined conveyer, of a brake therefor comprising a pawl, a shoe connected to the pawl and in constant frictional engagement with the conveyer, and a weighted bell crank lever connected to the shoe for supporting the same in constant frictional engagement with the conveyer.

[Claims 6 and 7 not printed in the Gazette.]

1,190,926. APPARATUS FOR MECHANICALLY SEPARATING MATERIALS. ALEXIS LOTOZKY, Kharkoff, Russia. Filed Mar. 20, 1916. Serial No. 85,317. (Cl. 83—54.)

1. Apparatus for the separation of materials having different coefficients of friction comprising a frictionally retarding separating disk inclined at an angle intermediate of the angles of rest of the materials being separated, means for rotating said disk, a feeding shelf extending over, and substantially parallel to, said disk at one side of its axis, said shelf terminating intermediate the highest and lowest portions of said disk and spaced sufficiently above the same to permit passage thereunder of one of the materials being separated, and means for shaking said shelf in its own plane.

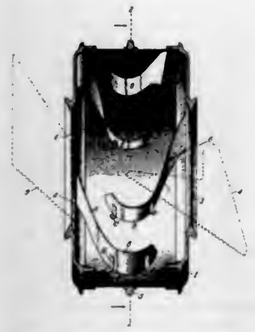
2. Apparatus for the separation of materials having different coefficients of friction comprising a frictionally retarding reparating disk inclined at an angle intermediate of the angles of rest of the materials being separated, means for rotating said disk, a feeding shelf extending over, and substantially parallel to, said disk at one side of its axis, said shelf terminating intermediate the highest and lowest portions of said disk and spaced sufficiently above the same to permit passage thereunder of one of the materials being separated, means for shaking said shelf in its own plane, and means for adjusting the angle of inclination of the disk and shelf simultaneously.



3. Apparatus for the separation of materials having different coefficients of friction comprising a frictionally retarding separating disk inclined at an angle intermediate of the angles of rest of the materials being separated, means for rotating said disk, a feeding shelf extending over, and substantially parallel to, said disk at one side of its axis, said shelf terminating intermediate the highest and lowest portions of said disk and spaced sufficiently above the same to permit passage thereunder of one of the materials being separated, means for shaking said shelf in its own plane, and means for varying the intensity of the shaking motion.

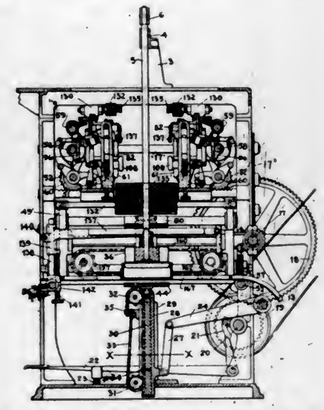
4. Apparatus for the separation of materials having different coefficients of friction comprising a frictionally retarding separating disk inclined at an angle intermediate of the angles of rest of the materials being separated, means for rotating said disk, a feeding shelf extending over said disk at one side of its axis, said shelf terminating intermediate the highest and lowest portions of said disk and spaced sufficiently above the same to permit passage thereunder of one of the materials being separated, means for shaking said shelf longitudinally in its own plane, means for varying the intensity of the shaking motion, and means for adjusting the angle of inclination of the disk and shelf simultaneously.

1,190,927. CONCRETE-MIXING MACHINE. OBERT G. MANDT, Keokuk, Iowa, assignor to American Cement Machine Co., Inc., Keokuk, Iowa. Filed Jan. 18, 1916. Serial No. 72,726. (Cl. 83—73.)



A concrete mixing machine, comprising a drum provided with side walls, one of which is formed with an aperture centrally thereof, and a plurality of blades extending from the side walls, the blades on one side being spaced from the blades on the other and also being arranged alternately, said blades terminating substantially centrally in a curved portion acting as buckets, said buckets being connected to the periphery of the drum, whereby the blades act not only as means for working the material back and forth but act as discharge buckets at the central portion.

1,190,928. BOX-COVERING MACHINE. JOHN P. MARKERT and ROBERT S. BOLGER, New York, N. Y.; said Bolger assignor to said Markert. Filed Jan. 14, 1913. Serial No. 742,080. (Cl. 93—54.)



1. In a box covering machine, the combination of a pair of plungers between which the box is clamped and by which the same is carried through the machine, said plungers together having a synchronous reciprocatory motion, a power-shaft, and means whereby said plungers are independently and positively driven in both directions from said power-shaft, substantially as described.

2. In a box covering machine, the combination of two plungers between which the box to be acted upon is clamped, one of said plungers having a telescoping stem, a chain attached to one of the members of said stem, a pair of wheels carried by another member of said stem and over which said chain runs, the chain being anchored at one fixed point in its length whereby the actuation of one of the plunger-sections in either direction will cause the other to positively move in a corresponding direction but at a different speed, substantially as described.

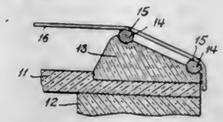
3. In a box covering machine, a box clamping plunger comprising a stem and head, the latter having an opening of larger diameter than the stem, through which the stem passes, a sleeve surrounding said stem and provided with a flange substantially parallel to the head, said flange provided with a plurality of adjusting screws bearing against said head whereby the angle of the head with respect to the stem may be adjusted.

4. In a box covering machine, a box clamping plunger comprising a stem and a head, the head having a central orifice countersunk on its working face, the stem adapted to pass through said orifice, a crosshead engaging with said stem and located in said countersink, and a sleeve carried by the stem and provided with adjusting screws bearing upon said head.

5. In a box covering machine, a plunger-head adapted to enter a box and rest against the bottom thereof, said head having cut-away portions exposing the bottom of the box, in combination with means for cutting thumb holes in the box, said means being located in the planes of said cut-away portions, for the purpose set forth.

[Claims 6 to 31 not printed in the Gazette.]

1,190,929. BRIDGE-WIRE FOR STRINGED INSTRUMENTS. HENRY C. MARX, Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass., a Corporation of Maine. Filed Feb. 8, 1915. Serial No. 6,871. (Cl. 84—80.)

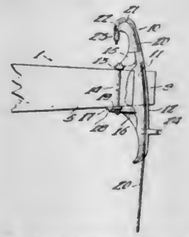


1. A bridge wire for stringed musical instruments, having a series of transverse grooves, each groove having its bottom curved convexly longitudinally of the groove.

2. A cylindrical bridge wire for stringed musical instruments having a series of transverse grooves, the bottoms of which are convexly curved and are eccentric to the peripheral surface of the remainder of said wire.

3. A bridge wire for stringed musical instruments, having a series of transverse grooves formed therein, the bottoms of the grooves being convexly curved longitudinally of such grooves, and the metal forming such walls being compacted and harder than the metal of the wire between such grooves.

1,190,930. WALKING-BEAM ATTACHMENT. PHILO W. MASTEN, Los Angeles, Cal. Filed Apr. 6, 1914. Serial No. 830,081. (Cl. 74—5.)



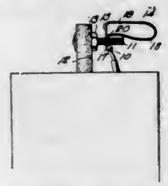
1. A walking beam attachment adapted to be mounted upon the end of a walking beam having an opening therein comprising a casting having a throat adapted to enter said opening, ears formed on said casting extending over the edge of the walking beam at the rear of said opening, a bar slidably mounted in said casting below said walking beam, bolts for clamping said bar against said walking beam, and a flexible member adapted to connect said casting to a polish rod to operate the same.

2. In combination with a walking beam having an opening therein, an attachment comprising a casting having a throat adapted to enter said opening, ears formed on said casting extending over the edge of the walking beam at the rear of said opening, a bar slidably mounted in said casting below said walking beam, bolts for clamping said bar against said walking beam, and a wire rope placed in a groove in said casting and securing means for said wire rope on said casting.

3. In combination with a walking beam adapted to operate a detachable head for said beam comprising a curved outer portion having a groove therein on a radius centering at the pivotal point of said walking beam and in the axis of said polish rod, means for detachably securing said head to said beam to bring said groove within the end of the beam, a flexible rope in said groove having its upper end secured to the upper portion of said head, and means for securing the lower end of said rope to said polish rod.

1,190,931. TERMINAL CONNECTOR. WILLIAM CLIFFORD MAYNARD, Miami, Fla. Filed Dec. 1, 1915. Serial No. 64,505. (Cl. 173—259.)

1. A connector of the class described including a seat member to receive a conductor wire, there being an opening in the connector adjacent to and transversely of the said seat member, for the entrance axially therethrough of a terminal in a direction transversely of the seat, and a spring-pressed clamp element having a movement toward the seat member, across said opening, to engage the terminal and draw the conductor and terminal in direct contact with each other in crossed relation.



2. An electrical terminal connector having two opposed resilient clamp elements movable relatively to each other, one of which presents a member adapted to receive a conductor and a terminal disposed in crossed relation between said clamp elements, the said elements acting to press the conductor and terminal in direct contact for the direct passage of the current without the intermediary of the connector as a conducting medium.

3. In a device of the class described, in combination; a conductor, a connector formed with a resilient arm having a member on which the said conductor seats and formed with an opening adjacent to said member, a terminal extending axially through said opening across the conductor and in direct contact therewith, and a second resilient arm on said connector bearing against the terminal adjacent to said opening at the opposite side of the terminal from the conductor, said arms acting to press the conductor and terminal directly against each other.

4. A terminal connector including an element having an opening extending therethrough adapted to receive a terminal, the said element being formed at a side thereof adjacent to one end of said opening with a laterally turned flange constituting a conductor seat, and a resilient clamp element having a free end adjacent to the said opening and movable to and from the said flange across the said opening.

5. A terminal connector comprising a strip of sheet metal bent to form a bowed spring, one arm of which presents a member formed with an oblong opening therein, the free end of said member being returned in the form of a flange curved in cross section and constituting a seat for a conductor, said opening being adapted to receive a terminal transversely of said seat, the other arm of the spring being disposed in the direction of the member having the opening, the free end of the second arm being adjacent to the said opening and having its terminal bent toward the curved flange.

[Claim 6 not printed in the Gazette.]

1,190,932. SCREWLESS MOUNTING. EMIL B. MEYROWITZ, New York, N. Y., assignor to General Optical Company, Inc., a Corporation of New York. Filed Oct. 20, 1914. Serial No. 867,567. (Cl. 88—47.)



1. In a lens mount, a stud having a flatted head, a lens having a notch in its peripheral edge into which said head fits and from which it is only laterally displaceable, and a separate strap mounted on said stud and having side flanges covering said head and clamped to the faces of said lens.

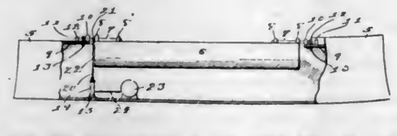
2. In a lens mount, a lens having a slot extending inwardly from its peripheral edge and of increased width at its inner end, a stud having a flatted head filling said slot and fitting snugly therein, and a separate strap mounted on said stud having side flanges covering said head and clamped to the faces of said lens.

3. In a lens mount, a lens having a slot extending inwardly from its peripheral edge and of increased width at its inner end, a stud having a flatted head filling said slot and fitting snugly therein, a separate member mounted on said stud comprising a strap having side flanges covering said head and clamped against the faces of said lens, a box integral with said strap, a bridge or bow spring fitting into said box and fastening means on the end of said stud.

4. In a lens mount, a lens having a slot extending inwardly from its peripheral edge and of increased width at its inner end, a threaded stud having a flatted head filling said slot and fitting snugly therein, a separate member loosely mounted on said stud comprising a strap having side flanges covering said head and clamped against the faces of said lens, a sleeve carrying a box attached to said strap and a bridge having an opening therein through which said stud passes and a nut on the end of said stud securing said bridge in place in said box and for forcing said strap against the lens.

5. In a lens mount, a lens having a slot extending inwardly from its peripheral edge and of increased width at its inner end, an anchoring member filling said slot and fitting snugly therein, a separate strap having side flanges covering said anchoring member and means in the plane of the lens for drawing the strap member and anchoring member together.

1,190,933. SHIP. WILLIAM MILLER, Oklahoma, Okla. Filed Sept. 7, 1915. Serial No. 49,165. (Cl. 114—191.)



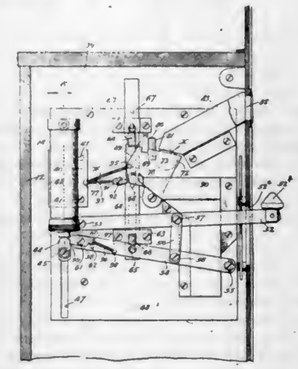
1. In an improvement of the character described, an outer hull, an inner hull mounted within the outer hull, the inner hull having pivot-shafts, open bearings on the outer hull to receive and support the pivot-shafts, and releasable means for retaining said pivot-shafts in said bearings.

2. In an improvement of the character described, an outer hull, an inner hull mounted within the outer hull, the inner hull having pivot-shafts, open bearings on the outer hull to receive and support the pivot-shafts, and a flexible separable binder overlying said pivot-shafts, the ends of the binder being anchored in the outer hull.

1,190,934. COIN-CONTROLLED MECHANISM. HERBERT S. MILLS, Chicago, Ill., assignor to Mills Novelty Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1915. Serial No. 43,170. (Cl. 194—92.)

1. In coin-controlled mechanism, the combination of a shiftable member, a second shiftable member shiftable at an angle to said first-named member and having a coin-engaging surface, a third member having a coin-engaging surface, said shiftable members having portions adapted to engage and prevent movement of said first-named member when said second member is in one position, means on said first-named member for normally holding said second member in position for holding a coin between said surfaces and said portions out of engaging position, means for actuating said first-named member, and means for releasing the coin from said second-named shiftable member after said first-named member has moved a predetermined distance.

2. In coin-controlled mechanism, the combination of a shiftable member, a second shiftable member shiftable at an angle to said first-named member and having a coin-engaging surface, a third member having a coin-engaging surface, said shiftable members having portions adapted to engage and prevent movement of said first-named member when said second member is in one position, means on said first-named member for normally holding said rock-member in position for holding a coin between said surfaces and said portions out of engaging position, means for releasing the coin from said rock-member after said shiftable member has moved a predetermined distance.



3. In coin-controlled mechanism, the combination of an automatically-returnable shiftable member, a second shiftable member shiftable at an angle to said first-named member and having a coin-engaging surface, a third member having a coin-engaging surface, said shiftable members having portions adapted to engage and prevent movement of said first-named member when said second member is in one position, means on said first-named member for normally holding said second member in position for holding a coin between said surfaces and said portions out of engaging position, means for actuating said first-named member, and means for releasing the coin from said second-named shiftable member after said first-named member has moved a predetermined distance.

4. In coin-controlled mechanism, the combination of a shiftable member, a second shiftable member shiftable at an angle to said first-named member and having a coin-engaging surface, a third member having a coin-engaging surface, said shiftable members having portions adapted to engage and prevent movement of said first-named member when said second member is in one position, means on said first-named member for normally holding said second-named member in position for holding a coin between said surfaces and said portions out of engaging position, and means actuated by said first-named member for shifting said second-named member to a position in which the coin will discharge from the latter.

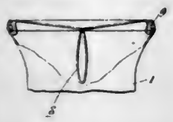
5. In coin-controlled mechanism, the combination of a shiftable member, a second shiftable member shiftable at an angle to said first-named member and having a coin-engaging surface, a third member having a coin-engaging surface, said shiftable members having portions adapted to engage and prevent movement of said first-named member when said second member is in one position, means tending to move said second member into a position in which said portions engage, means on said first-named member operating to normally hold said second member in a position in which said portions are out of engagement and in a postion for holding a coin between said surfaces, in opposition to said first-named means, and means for releasing the coin from said second member after said first-named member has moved a predetermined distance.

[Claims 6 to 12 not printed in the Gazette.]

1,190,935. BAG-CLOSING DEVICE. FRANK W. MINOR, Richmond, Va. Filed Aug. 26, 1915. Serial No. 47,425. (Cl. 150—10.)

1. A bag closing device, comprising a body of springy material having at each of its ends an inwardly directed

bag engaging member and connecting the same a single intermediate member having a portion extending substantially straight across at least a portion of the mouth of the bag.



2. A bag closing device, comprising a body of springy material having at each of its ends an inwardly directed bag engaging member and connecting the same a single intermediate substantially straight member having a portion extending substantially straight across at least a portion of the mouth of the bag.

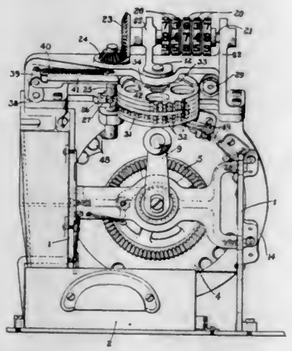
3. A bag closing device, comprising a body of springy material having at each of its ends an inwardly directed bag engaging member and connecting the same a single intermediate member having a portion extending substantially straight across at least a portion of the substantially straight mouth of the bag.

4. A bag closing device, comprising a body of springy material having at each of its ends an inwardly directed bag engaging member and connecting the same a single intermediate substantially straight member having a portion extending substantially straight across at least a portion of the substantially straight mouth of the bag.

5. A bag closing device, comprising end bag engaging portions, intermediate portions extending substantially straight across at least a portion of the mouth of the bag, and a central compressible spring.

[Claims 6 to 10 not printed in the Gazette.]

1,190,936. FARE-BOX. PHILIP J. MITTEN, Oakwood Village, and JOHN E. MCALLISTER and GEORGE E. IRELAND, Dayton, Ohio, assignors to The Recording Register and Fare Box Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 14, 1914. Serial No. 824,681. (Cl. 235—32.)



1. In a coin registering mechanism, a coin receptacle having means to move coins therefrom, a register, a coin controlled device for actuating said register, said device comprising a lever movable into different positions, a detent arranged to engage said lever and hold the same in an adjusted position, and means to release said lever from said detent at the completion of the registering operation and retain said detent in its inoperative position until said lever has returned to its normal position and has again been moved from said normal position.

2. In a coin registering mechanism, a hopper comprising a rotatable disk to move coins of different diameters from the hopper, a register, selective operating mechanism for said register comprising a differentially movable member arranged to be engaged by the coins as they are moved by said disk, means to hold said movable member in adjusted position until the operation of said register has been completed, and means to release said movable member from said holding means at the completion of the registering operation and retain said holding means in its inoperative position until said movable member has returned to its normal position and has again been moved from said normal position.

3. In a coin registering mechanism, the combination, with a coin receptacle having means to move the coins therefrom, a register, actuating mechanism therefor comprising a series of movable racks, a pinion having axial movement into operative relation with any one of said racks, and a coin-controlled arm to impart axial movement to said pinion, said arm having teeth in one edge thereof, and a spring-pressed pawl to engage the teeth of said arm to hold the same in adjusted positions, of a part connected with said racks to actuate said pawl to move it into its inoperative position at the completion of the registering operation and to hold it in such inoperative position until said pinion is again in a position to be engaged by one of said racks.

4. In a coin registering mechanism, the combination, with a coin receptacle having means to move the coins therefrom, a register, a pinion operatively connected with said register and capable of axial movement, a series of racks rotatably mounted adjacent to said pinion, a coin-actuated arm connected with said pinion to move the same into operative relation with a selected rack, said arm having teeth in one end thereof, and a spring-pressed pawl to engage said teeth, of a finger connected with said pawl, and a cam associated with said racks and arranged to engage said finger when the longest rack has passed said pinion and to remain in engagement therewith until said arm has again moved said pinion into operative relation with a selected rack.

5. In a coin registering mechanism, a hopper having a movable member to move the coins therefrom and provided with coin lifting devices, a register, a pinion connected with said register and capable of axial movement, a series of racks arranged to engage said pinion, and means actuated by the coins on said movable member for moving said pinion into operative relation with a selected one of said racks, of means to lock said registering mechanism against operation if axial movement is imparted to said pinion by any means other than by a coin properly seated in one of said coin lifting devices.

[Claims 6 to 21 not printed in the Gazette.]

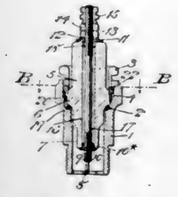
1,190,937. PROCESS OF TEMPERING OR HARDENING STEEL. JOHN B. MOORE, Latrobe, Pa. Filed Feb. 24, 1915. Serial No. 10,263. (Cl. 148—37.)

1. A process of hardening high speed steel which consists in cleaning the metal, wetting the same with water, covering the wet surface with boric acid, whereby the water will cause the acid to stick, heating the coated metal to a degree to convert the boric acid into a glaze covering the surface of the metal, then increasing the temperature until the metal reaches a white heat, and finally quenching.

2. The process of hardening high speed steel which comprises cleaning the metal, causing a coating of boric acid to adhere to the cleaned metal, heating the coated metal to a degree to cause the boric acid to form a glaze covering the surface of the metal, increasing the temperature until the metal reaches a white heat, and finally quenching.

3. The process of hardening high speed steel which comprises cleaning the metal, causing a coating of boric acid to adhere to the cleaned metal, preheating the coated metal to form a glaze over the surface thereof, applying a second coating of boric acid, again heating to convert the second coating into a glaze covering the first glaze, continuing to increase the temperature until the metal reaches a white heat, and finally quenching.

1,190,938. SPARK-PLUG. ARTHUR R. MOSLER, New York, N. Y., assignor to A. R. Mosler & Co., Yonkers, N. Y., a Corporation of New York. Filed Oct. 29, 1913. Serial No. 798,039. (Cl. 123—169.)



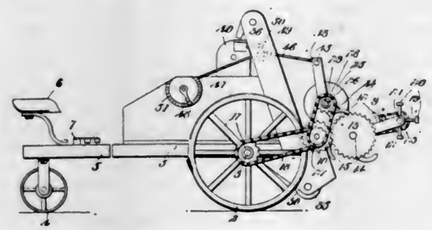
1. A spark plug comprising a base having a seat and longitudinal grooves therein, an insulating block having an annular flange, a gasket interposed between said flange and seat, a collar fitted to girdle and extend above the vertical walls of said flange, tongues on the collar in position to slide in said grooves, and a cap having a screw-threaded engagement with the base to frictionally engage the collar to force the block to its seat.

2. A spark plug comprising a base having a seat and longitudinal grooves therein, an insulating block having a tapered annular flange, a gasket interposed between said flange and seat, a collar having tapered inner walls fitted to girdle and extend above the tapered vertical walls of said flange, tongues on the collar in position to slide in said grooves, and a cap having a screw-threaded engagement with the base to frictionally engage the collar to force the block to its seat.

3. In a spark plug, an insulating block having a centrally arranged tubular bore, an electrode extending through said bore and spaced from the walls thereof, washers on said electrode at the opposite ends of the block, one of said washers having a shank extending within the bore of one end of the block and spaced from the walls thereof, and cement and malleable fillings closing the space and surrounding the electrode between said washers to form a gas-tight seal.

4. In a spark plug, an insulating block having a centrally arranged tubular bore, an electrode extending through said bore and spaced from the walls thereof, a washer on said electrode at the inner end of said block, a cement filling closing the space and surrounding the electrode within the block, a washer on the electrode at the outer end of the said block and a malleable filling between said cement and other washer.

1,190,939. RICE-HARVESTER. JAMES N. MOTTE and ADAM KOTZ, Beaumont, Tex. Filed Nov. 10, 1911. Serial No. 659,613. (Cl. 56—29.)



1. A grain harvester comprising a wheeled truck, a shaft for the wheels of the truck, a frame pivotally mounted on said truck, a rotary stripper having a plurality of stripper arms attached thereto and tapering from their bases outwardly whereby said arms are spaced farther apart at the ends to receive the rice heads and to strip the grain therefrom by means of the converging sides of the arms, a rotary shaft having a series of disks running between the stripper arms, and means for driving said stripper and said disks from the shaft of said truck.

2. A wheeled truck having a frame, a pivoted frame mounted thereon, a rotary stripper consisting of a cylinder and a plurality of curved and tapered stripper arms attached thereto and forming V-shaped angles between the arms, and a rotary cleaning device provided with members running between said stripper arms.

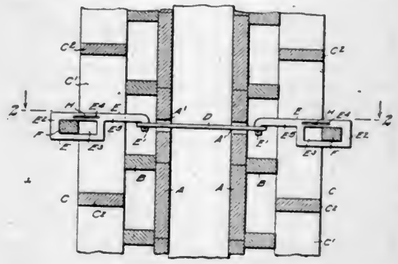
3. A harvesting machine comprising a wheeled truck, a rotary stripper carried by said truck and consisting of a cylinder and a series of curved arms attached thereto, said arms tapering from the cylinder to the ends thereof, and rotary disks running between said arms for cleaning the same.

4. A harvesting machine comprising a wheeled truck, a rotary stripper carried by said truck and having a plurality of stripper arms attached thereto, said stripper arms tapering from the stripper outwardly to the tips thereof and forming spaces converging toward the stripper, and rotary disks running between said arms for cleaning the same.

5. A harvesting machine comprising a wheeled truck, a frame pivotally mounted thereon, a rotary stripper mounted in said pivoted frame, a plurality of rows of stripper arms attached to said stripper, said stripper arms forming spaces which converge from the tips of the arms to said stripper, means for vertically adjusting said pivoted frame, and rotary disks carried by said truck and pivoted frame for cleaning said strippers.

[Claims 6 to 9 not printed in the Gazette.]

1,190,940. FORM-CLAMP. JOHN STEPHEN MURPHY, New York, N. Y. Filed July 29, 1915. Serial No. 42,565. (Cl. 25—131.)



1. In combination, a mold having sides, studs engaging the sides, a connecting member extending transversely through the said mold sides and having eyes at the ends, clamps extending between the studs and each having an apertured body portion and a shank extending from the body portion and terminating in a hook, the hooks of the clamps being adapted to engage the eyes at the ends of the said connecting member, and wedges driven through the apertures in the body portions and abutting against the outer edges of the said studs.

2. In combination with a mold having sides, studs engaging the sides, a connecting member extending transversely through the said mold sides and having eyes at the ends, clamps each having an apertured body portion and a shank extending from the body portion and terminating in a hook, the hooks of the clamps being adapted to engage the eyes at the ends of the said connecting member, the said clamps having lengthwise extending slots, pins adapted to be driven through the said slots into the sides of the studs, and wedges driven through the apertures in the body portions and abutting against the outer edges of the said studs.

3. In combination, a mold having sides, studs engaging the sides and each formed of spaced stud members, a connecting member extending transversely through the said mold sides and having eyes at the ends, clamps slidably mounted between the studs each having a body portion

and a shank provided with an angular hook engaging the corresponding eye of the connecting member, the body portion of each clamp having an opening and the clamps extending between the stud members, and wedges driven into the said body openings and abutting against the outer edges of the said studs.

4. The combination with a mold side having an opening therein and beams engaging the side, of a clamp having a rectangular apertured body and provided with a shank projecting from one end thereof in direction of the length of the body and terminating in a hook for engaging a member, means for slidably mounting the clamp on a beam, and a wedge passing through the opening of the clamp and engaging said beam.

1,190,941. EXTENSION TRY-SQUARE. JOSEPH H. NEEDHAM, Bristow, Iowa. Filed Oct. 13, 1915. Serial No. 55,678. (Cl. 33—95.)



1. A try-square comprising a stock, a blade secured thereto consisting of relatively stationary and movable sections, the movable section comprising spaced side members between which the stationary section is received, the stationary section having spaced longitudinally extending slots, and fastening members connecting the side members aforesaid and passing through the slots of the stationary member whereby to provide for sliding action of the movable blade member.

2. A try-square comprising a stock, a blade secured thereto and consisting of a relatively stationary section and an extensible section, the extensible section consisting of spaced side members between which the stationary section is received, a spacing member intermediate the side members at one end for holding the side members in spaced relation and constituting a stop coöperative with the extremity of the stationary section, said stationary section having spaced longitudinally extending slots, fastening means connecting the side members together and extending through said slots, and a tongue and groove connection for said sections arranged between the slots of the stationary section.

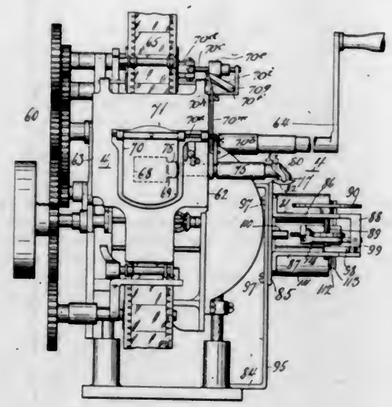
1,190,942. FLOOR-COVERING COMPOSITION. MAX NIENSTAEDT, Palisade, N. J., assignor to American Flooring Company, Inc., New York, N. Y., a Corporation of New York. Filed July 23, 1913. Serial No. 780,651. (Cl. 106—7.)

1. A floor composition adapted for application to the floor in plastic state, and comprising a cement binder component and a body component including tough istle-like vegetable fibers, the latter being split longitudinally and intimately mixed with the cement and other ingredients.

2. A floor composition adapted to be prepared and applied in plastic state, comprising a granular resilient material mixed with split istle fiber, a filler and a cement binder, the whole being mixed with oil and allowed to set.

3. A floor composition adapted for application to the floor in plastic state and comprising a cement binder component consisting of magnesite cement and a body component including granular cork, longitudinally split istle-like vegetable fibers, a mineral filler containing asbestos and clay, and oil, all intimately mixed together and adapted to trowel freely upon the surface to be covered.

1,190,943. SYNCHRONIZING APPARATUS. EUGENE EARL NORTON, Bridgeport, Conn., assignor to James Albert Whitman, New York, N. Y. Filed Apr. 14, 1909. Serial No. 489,931. (Cl. 88—16.2.)



1. The combination of means for enabling the movement of a moving picture record and that of a corresponding phonograph record to be synchronized, consisting of a visible indicator driven by the phonograph and means located adjacent the moving picture record and constructed to reflect the image of an indicating mark thereon and display the same in proximity with said visible indicator.

2. In a synchronizing apparatus the combination of means to move a picture record having index marks thereon and a talking machine, a magnet intermittently excited by the talking machine, a dial plate, connections between the latter and said magnet to intermittently rotate the dial plate and means to reflect the said index marks of said record so as to coact with the dial plate.

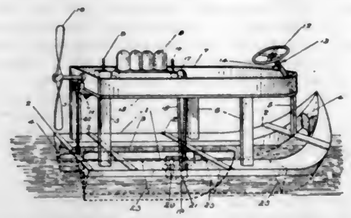
3. The combination in a synchronizing apparatus for a picture machine and talking machine of means in the picture machine to permit light rays to pass through a portion of the picture record thereof having index marks, a tube with one end in the path of said light rays, mirrors in said tube to reflect the light rays and said index marks, an intermittently rotated dial plate actuated by the talking machine and located to coact with the reflected index marks of said records.

4. The combination in synchronizing apparatus for a picture machine and talking machine of means in the picture machine to permit light rays to pass through a portion of the picture record thereof during the movement of said record, a tube connected to the picture machine with one end in the path of said light rays, mirrors in said tube to reflect the light rays and index marks located on the record, a tell tale plate opposite the other end of said tube, a dial plate with its circumferential edge adjacent to the tell tale plate, a magnet intermittently excited by the talking machine and connections between the magnet and the dial plate.

5. In a synchronizing apparatus the combination of a talking machine and a picture machine carrying a picture record having index marks, means in the picture machine to permit light rays to pass through a portion of the record with the index marks during the movement of said record, mirrors connected to the picture machine to reflect said light rays, a lens in the path of said rays, a tell tale plate in the path of said rays to exhibit the reflected index marks of the record, a dial plate with its circumferential edge adjacent to the tell tale plate and means actuated by the talking machine to rotate the dial plate.

[Claims 6 to 8 not printed in the Gazette.]

1,190,944. BOAT. PASCAL ORLANDO, Buffalo, N. Y. Filed Dec. 10, 1914. Serial No. 876,470. (Cl. 115—34.)



1. A motor boat comprising spaced shells, said shells being flat on top and having V shaped sections extending down into the water, the forward ends of which are turned up and toward each other and are fastened together by means of a block, cross bars extending laterally across the tops of said shells for spacing and fastening them together, a center board attached to said cross bars and located from at or near amidships to the stern of said shells, uprights from said shells which carry a platform, an engine mounted on said platform, a water propeller mounted in an opening in said centerboard and a driving mechanism for said water propeller, operated by the forward part of said engine, a reverse gear between said engine and said driving mechanism, an air propeller mounted at the stern of said motor boat and a reverse gear between said air propeller and said engine.

2. In a motor boat, the combination, of spaced shells, a center board between said shells, uprights supporting a platform above said shells, an engine mounted on said platform, a water propeller mounted in an opening in said center board, an air propeller mounted on said platform, said propellers driven from opposite ends of said engine and reverse gears between said engine and said propellers whereby either or both of said propellers may be operated by said engine for the propulsion of said motor boat.

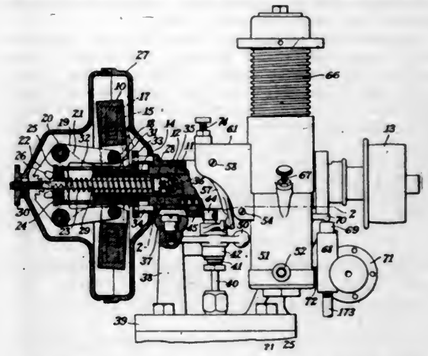
3. In a motor boat, the combination, of spaced shells having V shaped sections extending down into the water, the forward ends of which meet and are connected by means of a diamond shaped block, a center board midway between said shells and located in the stern portion of said boat, uprights from said shells, which carry a platform, an engine mounted on said platform, a water propeller mounted in an opening in said centerboard, an air propeller mounted on said platform, said propellers driven from opposite ends of said engine and reverse gears between said engine and said propellers and a wheel mounted on the forward end of said platform for operating a stern rudder.

1,190,945. PUMP-CONTROLLING DEVICE. JOHN L. OSBORNE, Rochester, N. Y., assignor to Judson Governor Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 26, 1915. Serial No. 58,022. (Cl. 230—24.)

1. A pump-controlling device having, in combination, a valve-actuating member; a pressure-controlled element coöperating with said member and arranged to move it in a direction to close the valve as the pressure rises; and a second pressure-controlled element also coöperating with said member and adapted to move it toward closed position, independently of the first pressure-controlled element, upon the attainment of a predetermined maximum pressure.

2. A pump-controlling device having, in combination, a valve-actuating member; two pressure-controlled elements independently operable upon said member to move it in a direction to close the valve; and means for adjusting, independently of each other, the effective ranges of action of the respective pressure-controlled elements.

3. A pump-controlling device having, in combination, a valve-actuating member; two pressure-controlled elements independently operable upon said member to move it in a direction to close the valve; and means for adjusting, independently of each other, the pressures to which the respective pressure-controlled elements are responsive.

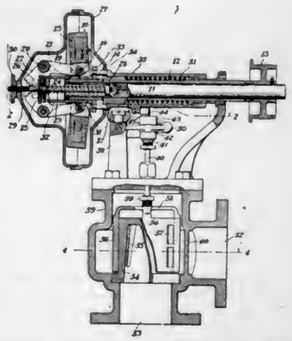


4. A pump-controlling device having, in combination, a valve-actuating mechanism; two pressure-controlled elements operable independently upon said mechanism to move it in a direction to close the valve; adjustable means for limiting said movement of the valve-actuating mechanism; and adjustable means for limiting the movement of one of the pressure-controlled elements.

5. A pump-controlling device having, in combination, a valve-actuating member; a pressure-controlled element operable upon said member to move it in a direction to close the valve; a second pressure-controlled element operable in the same manner on the valve-actuating member; an unloader; and a pivot-valve controlling simultaneously the admission of pressure to the second pressure-controlled element and the unloader.

[Claims 6 to 10 not printed in the Gazette.]

1,190,946. GOVERNOR. JOHN L. OSBORNE, Rochester, N. Y., assignor to Judson Governor Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 26, 1915. Serial No. 58,023. (Cl. 264—3.)



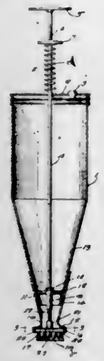
1. A governor having, in combination, a stationary sleeve; a shaft journaled in the sleeve; centrifugal mechanism carried by the shaft; a stationary casing carried at the end of the sleeve and inclosing the centrifugal mechanism; and means, for connecting the centrifugal mechanism with a governor-valve, comprising a sleeve slidable upon the stationary sleeve, and connections, between the sliding sleeve and the centrifugal mechanism, slidable through the wall of the casing.

2. A governor having, in combination, a horizontal shaft; centrifugal mechanism actuated by said shaft; a sleeve concentric with the shaft and movable longitudinally under the influence of the centrifugal mechanism;

a vertical rotary valve-member; an arm fixed to the valve-member; and an abutment, on the sleeve, coöperating with said arm to turn the valve-member in consequence of the movement of the sleeve.

3. A governor having, in combination, a stationary sleeve, a shaft journaled in the sleeve; centrifugal mechanism carried by the shaft; a stationary casing carried at the end of the sleeve and inclosing the centrifugal mechanism; means for connecting the centrifugal mechanism with a governor-valve; a nonrotative rod projecting forwardly through the casing, adapted for engagement by an adjusting nut; a centripetal spring compressed between a collar on said rod and a movable bearing on said rod; and bell-crank levers connected with said centrifugal mechanism and acting on said movable bearing.

1,190,947. SHOE-INKER. GEORGE H. OTTO, Hermann, Mo. Filed Feb. 5, 1916. Serial No. 76,438. (Cl. 15—46.)



1. A shoe inker comprising a substantially funnel shaped tank, a substantially funnel shaped receptacle rotatably mounted upon said tank, a cover detachably secured to said tank, a valve rod mounted in said cover and extending through the tank and terminating at a point adjacent the lower end thereof, a valve secured to the lower end of the valve rod for an engagement with the walls of the tank, said valve rod provided with its upper end screw-threaded, a collar mounted on said valve rod for traveling upon the screw-threads, a spring surrounding the valve rod and provided with one of its ends secured to the collar and its other end secured to the cover for normally holding the valve in a seated position, a brush head received by the lower end of the funnel shaped receptacle, and means for adjustably securing the brush to the lower end of the valve rod to regulate the upward movement of the valve.

2. A shoe inker comprising a substantially funnel shaped tank, a substantially funnel shaped receptacle rotatably mounted upon said tank, a cover detachably secured to said tank, a valve rod carried by said cover and extending through the tank to a point adjacent the lower end, a sleeve secured to the lower end of the valve rod, a shoulder formed on the upper end of said sleeve, a rubber washer mounted on said sleeve for an engagement with the walls of the tank and held thereto by means of said shoulder, a brush head carried by the lower end of said measuring receptacle, and means for adjustably securing the brush to the sleeve for regulating the upward movement of the rubber washer when pressure is exerted upon the brush.

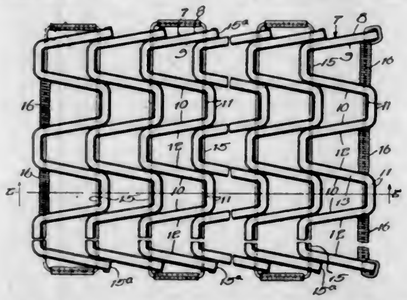
3. A shoe inker comprising a substantially funnel shaped tank, a substantially funnel shaped receptacle rotatably mounted on the tank, a valve rod extending into said tank and terminating at a point adjacent the lower end thereof, means for detachably securing the valve rod to the tank, a sleeve secured to the lower end of said valve rod, a shoulder formed on the upper end of said sleeve, a rubber washer mounted on said sleeve and held thereon by said shoulder for an engagement with the walls of said tank, said sleeve provided with an internally screw-threaded opening, and an elongated member formed on the lower end of said receptacle, flanges formed on said elongated member, a brush received by said elongated member within said flanges, and means for adjustably securing the brush to the internally screw-threaded opening of said sleeve for regulating the upward movement of the rubber washer when pressure is exerted upon the brush.

4. A shoe inker comprising a substantially funnel shaped tank, a substantially funnel shaped receptacle rotatably mounted upon said tank, a valve rod extending into said tank and terminating at a point adjacent the lower end thereof, means for detachably and adjustably securing the valve rod to the tank, a sleeve secured to the lower end of said valve rod, a shoulder formed on the upper end of said sleeve, a rubber washer mounted on said sleeve and adapted to abut the shoulder, said washer provided with its periphery beveled to conform to the contour of the walls of said tank, an elongated member formed on the lower end of said receptacle, flanges formed on said elongated member, a brush received within the flanges of said elongated member, and means for adjustably securing the brush head to the sleeve for regulating the upward movement of the rubber washer when pressure is exerted upon the brush.

5. A shoe inker comprising a tank, a receptacle rotatably mounted on said tank, a valve rod adapted to extend into said tank and terminating at a point adjacent its lower end thereof, means for detachably and adjustably securing the valve rod to said tank, a valve secured to the lower end of said valve rod for an engagement with the walls of said tank, an elongated member formed on said receptacle, a brush received by said elongated member, a plate secured to said brush, a screw-threaded pin secured to said plate and screw-threaded to said valve for regulating the upward movement of the valve within the tank when pressure is inserted upon the brush.

[Claims 6 and 7 not printed in the Gazette.]

1,190,948. MAT. CHRISTEN J. PETERSON, Chicago, Ill. Filed Mar. 7, 1916. Serial No. 82,568. (Cl. 15—65.)



1. A mat comprising a series of sections, each section formed of metallic strips spaced apart from one another and bent to provide a winding opening, friction material in said opening, and a flexible connection between said sections, substantially as described.

2. A mat comprising a series of sections, each section formed of metallic strips spaced apart from one another and bent to provide a winding opening closed at its ends, and friction material in said opening, substantially as described.

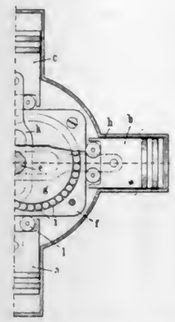
3. A mat comprising a series of sections, each section formed of metallic strips spaced apart from one another and bent to provide a winding opening, friction material in said opening, and the metallic strips of one section telescoping with the metallic strip of the adjacent section, substantially as described.

4. A mat comprising a series of sections, each section composed of metallic strips spaced apart from one another and bent to provide a winding opening, said strips forming a series of outwardly diverging side walls, with a connecting wall therebetween, friction material in said opening, the metallic strips of one section telescoping with the strips of the next adjacent section, said strips and friction material being provided with alined holes, and a member passing through said holes to form a flexible joint between the sections, substantially as described.

5. A mat comprising a series of sections, each section formed of metallic strips spaced apart from one another to provide an opening, said strips extending parallelly and in a winding path from edge to edge of the mat, and friction material in said opening, the ends of the sections being bent to form a metallic closure at the ends of the opening, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,190,949. MECHANICAL MOVEMENT. RAOUL PHILIPPE, Paris, France. Filed Feb. 8, 1913. Serial No. 747,094. (Cl. 74—1.)



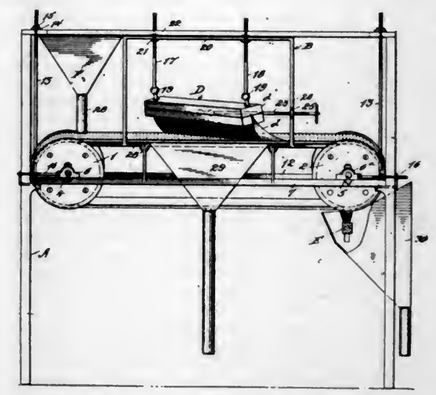
1. In a mechanical movement, a rotatably mounted eccentric, a collar freely rotatable thereon, said collar having a polygonal-shaped periphery, a plurality of cylindrically-shaped reciprocating elements, a plurality of hollow members each of a bore to receive one of said elements, said elements having a sliding fit therein, said elements and members being arranged around the said collar and each of said elements having a part bearing against one of the faces of the polygonal-shaped periphery of the collar and having its longitudinal axis at right angles to said face.

2. In a mechanical movement, a rotatably mounted eccentric, a collar freely rotatable thereon, said collar having a polygonal-shaped periphery having an even number of faces, a plurality of cylindrically-shaped reciprocating elements, a plurality of hollow members each of a bore to receive one of said elements, said elements having a sliding fit therein, said elements and members being arranged around the said collar and each of said elements having a part bearing against one of the faces of the polygonal-shaped periphery of the collar and having its longitudinal axis at right angles to said face, and means for connecting diametrically opposed elements together.

1,190,950. SEED-SEPARATOR. HERMAN J. PIEPGRAS and BENJAMIN M. HOLT, Caldwell, Idaho. Filed June 18, 1914. Serial No. 845,816. (Cl. 130—18.)

1. A seed separating machine comprising a movable seed carrier having a surface formed with a plurality of cells arranged in rows transverse to the line of movement of the carrier and the adjacent cells being connected in the line of the rows, the adjacent rows being separated by a thin serpentine rib of rubber and the carrier being inclined transversely to the direction of its movement, whereby seeds drop off the lower edge of the carrier.

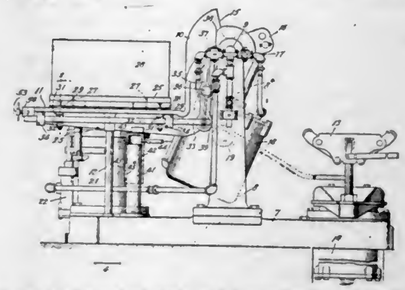
2. A seed separating machine comprising a traveling carrier inclined transversely to the direction of travel whereby one longitudinal edge of the carrier will be lower than the other longitudinal edge, and the upper surface of the carrier being provided with transverse rows of pockets, the rows being separated by yielding ribs and a bristle brush pressed against the carrier for causing seeds of one shape to become lodged in the pockets while arresting seeds of a different shape and causing them to roll down and off the sloping carrier at the lower longitudinal edge thereof.



3. A seed separating machine comprising an endless carrier having a rubber outer surface formed with transverse grooves separated by intermediate ribs or webs, means for supporting the carrier to slope transversely, a bristle brush bearing on the carrier and set with its length at an angle to the direction of travel of the carrier for causing certain seeds to lodge in the grooves and be carried past the brush while other seeds are arrested by the brush and caused to roll down and off the sloping carrier, the grooves being open at the bottom edge of the carrier.

4. A seed separating machine comprising an endless carrier having a rubber surface formed with rows of cells extending approximately transversely to the carrier and yielding ribs separating adjacent rows of cells, a bristle brush pressing on the said surface, means for adjusting the pressure of the brush on the carrier, means for adjusting the angle of the bristles of the brush with respect to the plane of the carrier, and means for adjusting the angle of the brush with respect to the direction of travel of the carrier.

1,190,951. MOLDING-MACHINE. EDWARD A. PRIDMORE, La Grange, Ill. Filed Oct. 29, 1914. Serial No. 869,210. (Cl. 22—33.)



1. In a molding machine, the combination of a pattern-carrier supported to be moved to inverted position, a

pattern-supporting member, means supporting said member above, and in spaced relation to, said pattern-carrier, means for moving said carrier into engagement with said member preliminary to the operation of inverting the carrier, and means for releasably securing said member to the carrier.

2. In a molding machine, the combination of a pattern-carrier supported to be moved to inverted position, a pattern-supporting member, jarring mechanism supporting said member above, and in spaced relation to, said pattern-carrier, means for moving said carrier into engagement with said member preliminary to the operation of inverting the carrier, and means for releasably securing said member to the carrier.

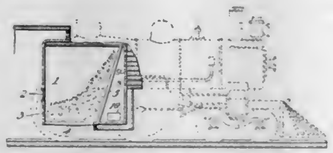
3. In a molding machine, the combination of a pattern-carrier supported to be moved to inverted position, a pattern-supporting member, means supporting said member above, and in spaced relation to, said pattern-carrier, power means for inverting said carrier, means for moving said carrier into engagement with said member preliminary to the operation of said power means, and means for releasably securing said member to the carrier.

4. In a molding machine, the combination of a pivotally-supported pattern-carrier adapted to be turned to inverted position, a pattern-supporting member, means supporting said member above, and in spaced relation to, said pattern-carrier, means for turning said carrier to a predetermined position for engaging with said member, preliminary to the inverting of the pattern-carrier, and means for releasably securing said member to the carrier.

5. In a molding machine, the combination of a pivotally-supported pattern-carrier, a pattern-supporting member, means supporting said member above, and in spaced relation to, said pattern-carrier, power means for inverting said carrier, means for turning said carrier to a predetermined position for engagement with said member, preliminary to the operation of said power means, and means for releasably securing said member to the carrier.

[Claims 6 to 16 not printed in the Gazette.]

1,190,952. FIRE-BOX FOR LOCOMOTIVE OR STATIONARY BOILERS. DOMINICK A. REAGAN, Altoona, Pa. Filed Nov. 11, 1910. Serial No. 591,788. (Cl. 122—64.)



In a fire-box for boilers, the combination with grate bars in the floor of the fire-box and boiler tubes, of a water circulating device extending through the upper floor of the bottom portion of the fire-box and inclined upwardly and forwardly terminating through the roof of said fire-box thereby forming an inclined rest for the fuel and increasing the fire surface of the fire-box, said water circulating device comprising a series of hollow-spaced bars disposed horizontally between which and through the incandescent bed of fuel the products of combustion are caused to pass to the boiler tubes, and side bars to which the horizontal bars are connected.

1,190,953. PROCESS FOR MAKING FODDER. RAEMER REX RENSHAW, Ames, Iowa. Filed Sept. 2, 1914. Serial No. 859,798. (Cl. 99—11.)

1. In a process for making fodder from cellulose substance rich in pentosans, a step consisting in substantially hydrolyzing the pentosans contained in the substance without materially affecting the cellulose of the substance.

2. In a process for making fodder from material rich in pentosans, a step consisting in subjecting said material to heat and the action of an inorganic acid to hydrolyze only the pentosans contained in said material.

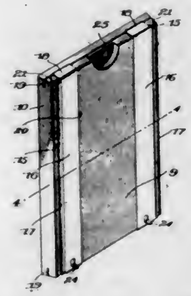
3. A process for making fodder from material rich in pentosans consisting in subjecting the said material to heat, pressure and the action of an inorganic acid to substantially hydrolyze the pentosans of the material, and then removing the pentoses produced by the action of the hydrolyzation of said material.

4. A process for making fodder from material rich in pentosans consisting in subjecting the cellulose material to heat, pressure of about three atmospheres and the action of an inorganic acid to substantially hydrolyze the pentosans present in the material and then drying the resultant mass.

5. A process for making fodder from material rich in pentosans consisting in subjecting the material to heat, pressure of about three atmospheres and the action of inorganic acid for about two minutes to hydrolyze only the pentosans present in the material, then neutralizing any excess of inorganic acid, and then drying the resulting mass.

[Claims 6 and 7 not printed in the Gazette.]

1,190,954. PHOTOGRAPHIC-PLATE HOLDER. JOHN A. ROBERTSON, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed May 16, 1914. Serial No. 838,920. (Cl. 95—69.)

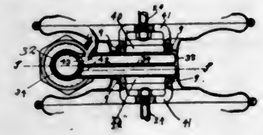


1. In a plate holding back for dark boxes, the combination with a back board or support, of a pair of retaining plates mounted on the face thereof and each provided at its outer edge with a continuous inturned object engaging flange, one of said plates being adjustably movable toward and from the other in a direction transversely of the flanges, and a stop at one end of one of the plates projecting into the plane of the flanges, the opposite ends of the latter being adapted for the sliding insertion of a plate between them.

2. In a plate holding back for dark boxes, the combination with a back board or support having flat depressions in the face thereof at opposite sides, of a pair of retaining plates mounted in the depressions to lie with their upper surfaces flush with the face of the back and each provided at its outer edge with an inturned object engaging flange, and guides on the back board in which the retaining plates are movable toward and from each other in a direction transversely of the flanges.

3. In a plate holding back for dark boxes, the combination with a back board or support having grooves in two of its opposite end faces, of a pair of sheet metal retaining plates mounted to lie against the face of the back board and having rearwardly and thence inwardly turned guiding flanges coöperating with the grooves in the back board, the outer side edges of the plates being provided with object holding means and the said plates being adjustably movable transversely in the grooves to carry the holding means toward and from each other.

1,190,955. RADIATOR. CLARENCE E. SAFFORD, Detroit, Mich., assignor to American Pressweld Radiator Corporation, Detroit, Mich., a Corporation of Delaware. Filed Feb. 10, 1912, Serial No. 676,799. Renewed Sept. 3, 1915. Serial No. 48,914. (Cl. 257—134.)



1. A radiator comprising a series of sections connected into two groups, a supply pipe for the radiator, a valve-body at the upper end of the pipe and having discharge hubs connecting to the upper ends of said sections and a dividing plate between said hubs, a valve-plug mounted within the body and provided with ports to permit the heating element to pass from said pipe into said body on either side or both sides of said plate at will, means to position said valve-plug and an outlet fitting connecting the lower ends of the groups.

2. A radiator comprising a series of sheet-metal sections connected together to form two groups, an inlet valve between the upper portions of said groups and an outlet valve between the lower portions of said groups, and tie-rods extending from both of said valves to the outer walls of both end sections of the radiator.

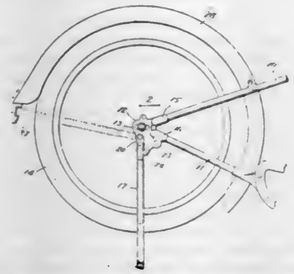
3. A radiator comprising a series of sheet-metal sections connected together into two groups, the outer walls of the end sections of both groups having openings at their tops and bottoms and flanges surrounding said openings, an inlet valve between the upper portions of said groups and having projections fitting into adjacent flanges, an outlet valve between the lower portions of said groups and having projections fitting adjacent flanges, closures for the openings in the outer walls of the end sections of the radiator, and tie-rods extending between the closures and valves.

4. A radiator comprising a series of sections forming two groups, an inlet fitting between the upper ends of the groups and an outlet fitting between the lower ends of the groups, each of said fittings having a dividing wall, and a valve mounted in the inlet fitting to control the flow of fluids to said group of sections.

5. A radiator comprising a series of sections forming two groups, inlet and outlet fittings between said groups, each of said fittings having a dividing wall, a valve mounted in the inlet fitting to control the flow of fluids to said groups of sections, and connecting members extending from said fittings to the outer sections of the groups.

[Claims 6 to 18 not printed in the Gazette.]

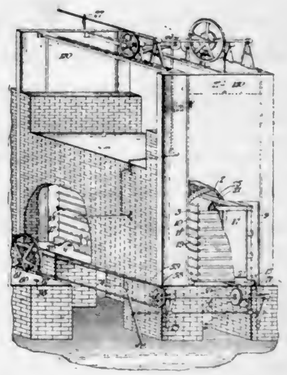
1,190,956. CYCLE-STAND. IGNAZ SCHWINN, Chicago, Ill. Filed Mar. 24, 1915. Serial No. 16,715. (Cl. 208—75.)



1. In cycle construction and in combination, a cycle-frame, tail-pieces carried by the frame for the mounting of a rear wheel therebetween, a stand-member comprising a U-shaped bracket having its leg-sections each forked to embrace one of the said tail-pieces, means for pivotally securing said forked bracket ends to the tail-pieces, and lugs carried by said tail-pieces in the planes of the latter and in the path of movement of the said bracket-legs and adapted to contact with the legs when the stand is swung to operative position.

2. In cycle construction and in combination, a cycle-frame, tail-pieces carried thereby for the mounting of a rear wheel therebetween, said tail-pieces having flattened portions lying in a vertical plane and provided with downwardly-extending lugs having downwardly and forwardly inclined rear faces, a stand-member comprising a U-shaped bracket, and forks carried by the ends of the bracket-legs and embracing the said tail-pieces and pivotally secured thereto whereby the said bracket-legs may contact with the downwardly and forwardly inclined faces of the said lugs to support the stand in operative position.

1,190,957. APPARATUS FOR TREATING COALS AND OTHER HYDROCARBONACEOUS SUBSTANCES. JOHN DUNLAP SCOTT, Detroit, Mich. Original application filed Aug. 26, 1910, Serial No. 579,019. Divided and this application filed Oct. 23, 1914. Serial No. 868,242. (Cl. 34—39.)



1. In an apparatus of the class described, a tray carrier having its side walls made up of I-beams, with the flanges thereof forming tray supports and open at its bottom and top, the latter to permit the passage from end to end thereof of tray supporting means, and provided with doors at its ends.

2. In an apparatus of the class described, a tray carrier having its side walls made up of I-beams, with the flanges thereof forming tray supports and open at its bottom and top, the latter to permit the passage from end to end thereof of tray supporting means, and provided with doors at its ends, and trays supported on the flanges of said I-beams.

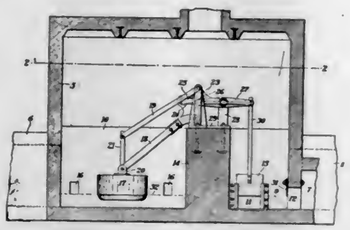
3. In an apparatus of the class described, a tray carrier having its side walls made up of I-beams with the flanges thereof forming tray supports and open at its bottom and top, the latter to permit the passage from end to end thereof of tray supporting means, and provided with doors at its ends, and trays supported on the flanges of said I-beams and each having a reticulated bottom.

4. In an apparatus of the class described, a tray carrier having its side walls made up of I-beams, with the flanges thereof forming tray supports and open at its bottom and top, the latter to permit the passage from end to end thereof of tray supporting means, and provided with doors at its ends, and removable trays supported on the flanges of said I-beams and each having a reticulated bottom.

5. In an apparatus of the class described, the combination of a shiftable tray carrier, superposed trays supported thereby, and means for raising said trays from the carrier and shifting the same bodily endwise therefrom.

[Claims 6 to 21 not printed in the Gazette.]

1,190,958. FLOW-CONTROLLER FOR SEWERS. ARTHUR R. SELDEN, Rochester, N. Y. Filed Feb. 24, 1914. Serial No. 820,705. (Cl. 61—46.)



1. The combination, with a sewer having a normal outlet and a flood-outlet, of means controlling the area of the normal outlet and actuated by the rise of fluid in the sewer, said means being adapted to vary said area as the fluid-level varies, approximately in inverse proportion with the square-root of the effective head, so as to maintain substantially constant the discharge through the normal outlet.

2. The combination, with a sewer having a normal outlet and a flood-outlet, of a gate for varying the area of the normal outlet, a float actuated by the fluid in the sewer, and mechanism, including a cam, connecting said float and gate to actuate the latter, the cam being shaped to move the gate and vary the area of the normal outlet, as the effective head in the sewer varies, in conformity with the variation of the rate of flow due to the variation in said head, so as to maintain a substantially constant discharge through the normal outlet.

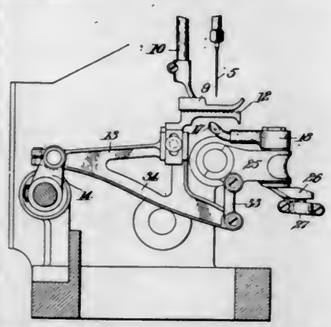
3. The combination, with a sewer having a normal outlet and a flood-outlet, of a gate for varying the area of the normal outlet, a float actuated by the fluid in the sewer, and mechanism, including a cam, connecting said float and gate to actuate the latter, the cam being shaped to move the gate so as to vary the area of the normal outlet approximately in inverse proportion with the square-root of the effective head in the sewer.

4. In combination with a sewer-line, a chamber, into which the sewer-line discharges, provided with a compartment to receive such sewage, a normal outlet from said compartment, a compartment into which said normal outlet discharges, an overflow opening into the latter compartment, and a flood-outlet from the receiving-compartment; a valve for varying the area of said normal outlet, and means controlling the valve, and actuated by the rise of fluid in the receiving-compartment, said means being adapted to move the valve toward closed position as the fluid-level rises in the receiving-compartment.

1,190,959. LOOPER MECHANISM FOR SEWING-MACHINES. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 10, 1910. Serial No. 591,735. (Cl. 112—5.)

1. A sewing machine including in combination, a work support, a needle, a looper coöperating with said needle wholly beneath the work support, means for carrying said looper whereby it swings about a substantially vertical axis when moving into and out of the needle loop, and means for moving said looper carrying means about a horizontal axis for swinging the looper bodily from one side of the needle to the other for its needle avoiding movement.

2. A sewing machine including in combination, a work support, a needle, a looper coöperating with said needle wholly beneath the work support, a looper carrier, means for supporting said carrier, whereby the same moves about a substantially vertical axis, a looper support on which said carrier is mounted, and means for oscillating said support about a horizontal axis for moving the looper from one side of the needle to the other for its needle avoiding movement.



3. A sewing machine including in combination, a needle, a looper coöperating with the needle wholly beneath the work support, a looper carrier mounted to swing about a substantially vertical axis, a link connected to said looper carrier for oscillating the same, a looper support, an arm carried by said looper support and having a bearing for said looper carrier, said looper support being mounted to swing upon a substantially horizontal axis, and means for oscillating said looper support for carrying the looper from one side of the needle to the other for its needle avoiding movement.

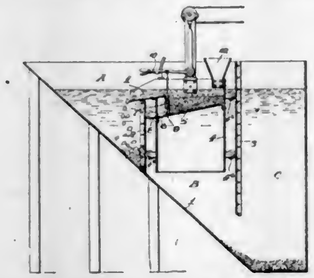
4. A sewing machine including in combination, a needle, a needle lever having an extension, a looper, a looper carrier mounted to swing about a substantially vertical axis, a link connected to said looper carrier, a rock lever connected to said link, a second link for connecting said rock lever to the needle lever extension, said link and needle lever extension being so disposed as to give an extended dwell to the looper at the forward end of its stroke, a looper support, means for oscillating said looper support about a substantially horizontal axis, said looper support having an arm on which said looper carrier is mounted.

5. A sewing machine including in combination, a work support, a needle, a looper coöperating with said needle wholly beneath the work support, a looper carrier, means for supporting said looper carrier whereby the same moves about a substantially vertical axis, and means for moving said supporting means for tilting the axis of the looper carrier relative to the path of the needle for moving the looper to the opposite side of the needle for its needle avoiding movement.

[Claims 6 and 7 not printed in the Gazette.]

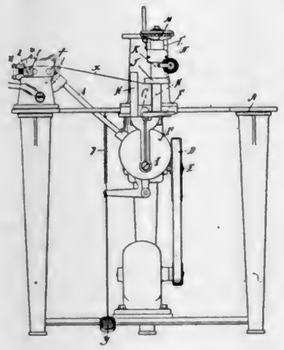
1,190,960. PROCESS OF WASHING COAL AND SEPARATING REFUSE THEREFROM. NICHOLAS SHANNON, Panama, Ill., assignor to Link Belt Company, Chicago, Ill., a Corporation of Illinois. Filed May 22, 1908. Serial No. 434,428. (Cl. 83—58.)

The process of separating mixed materials of different specific gravity which consists in moving the same laterally underneath the surface of a confined body of still water in a continuous stream by means of the pressure of the oncoming current of material, reciprocating said moving stream of material vertically beneath the surface of such body of water and against a portion thereof confined in an inertia chamber to permit the stratification of material, discharging the light material from above at the end of the stream into one compartment containing a portion of such still water, the fine heavy material into the inertia compartment below, and the coarse heavy material from below at the end of the stream into an



upwardly inclosed body of water and thence into the inertia chamber body of water.

1,190,961. MACHINE FOR APPLYING METALLIC LEAF TO BOOK-COVERS OR THE LIKE. CHARLES E. SMITH, Oak Lawn, R. I. Filed Apr. 24, 1913. Serial No. 763,281. (Cl. 41—7.)



1. In a metallic leaf applying machine, the combination of a support for a strip of metallic leaf, a support for an article to which the leaf is to be applied, and means for imparting a rocking movement to one of the said supports substantially as described.

2. In a metallic leaf applying machine, the combination of a support for effecting the deposit of metallic leaf upon an article to which it is to be applied and a support for the said article, with means for imparting a rocking movement to one of the said supports, and means for causing a sliding movement between the said supports, substantially as described.

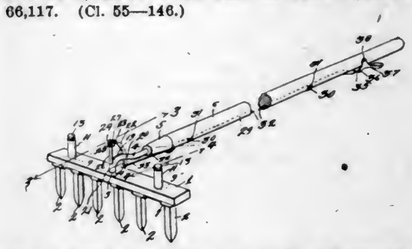
3. In a metallic leaf applying machine, the combination of a support for effecting the deposit of metallic leaf upon an article to which it is to be applied, a support for the said article, means for rocking one of said supports, and means for feeding the metallic leaf between the said supports, substantially as described.

4. In a metallic leaf applying machine, the combination of a support for effecting the deposit of metallic leaf upon an article to which it is to be applied, a support for the said article, a continuous leaf supporting strip movable between the supports and suction means applied to one of the supports, substantially as described.

5. In a metallic leaf applying machine, the combination of an adjustable segment, a feed-roll, and means for causing the engagement of the segment with the said roll, to draw a paper strip forward, substantially as described.

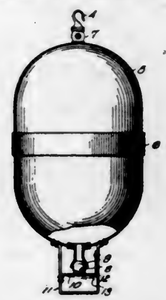
[Claims 6 to 38 not printed in the Gazette.]

1,190,962. RAKE-CLEANER. RALPH LESTER SMITH, Gloucester, Mass. Filed Dec. 10, 1915. Serial No. 66,117. (Cl. 55—146.)



In a cleaning attachment for rakes, the combination with a handle, of a rake head having rake teeth, a cleaning plate adapted to be reciprocated on said teeth in parallelism with the teeth, said handle having an extension handle shank connected to the head, spring means against the action of which said cleaning plate is reciprocated, a plunger mounted vertically in a portion of the extension handle shank and the head and having its lower end connected to the cleaning plate, and adapted to be reciprocated vertically to actuate the plate against the tension of the spring means, and means having a camming device connected to the plunger for actuating the same, said extension handle shank having a slot, said camming device consisting of a lever pivoted in said slot and having its upper portion curved and provided with a cam slot and pin connection with the upper end of the plunger, and casings carried by the rake head for inclosing said spring means.

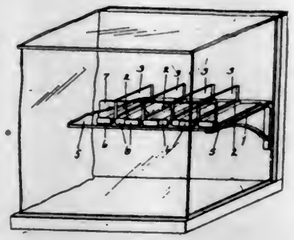
1,190,963. AUTOMATIC PORTABLE FIRE-EXTINGUISHER. JOHN C. SNACKENBERG, New York, N. Y. Filed Dec. 13, 1915. Serial No. 66,498. (Cl. 169—14.)



1. In a fire extinguisher of the character described, a container adapted to contain a quantity of fire extinguishing fluid and a quantity of compressed air, a discharge member provided with a valve seat and a valve member normally engaging said seat, a spring for holding said valve member against its seat, said spring when released being allowed a limited swinging movement so as to hold the valve member adjacent the seat when the valve member is open so as to turn the valve member into a spraying device, and a fusible member acting on the spring for normally preventing a movement thereof.

2. An automatic portable fire extinguisher, comprising a tank, means for supporting the tank, a discharge member connected with the tank, said discharge member comprising a valve seat and a ball fitting said seat, a spring engaging said ball for causing the same to engage said seat, and a fusible member engaging said spring for normally preventing the movement thereof, the free end of said spring being adapted to move a short distance when said fusible member has been fused, whereby said ball is permitted to leave its seat but is held in proximity thereto, whereby the ball and seat act as a spraying nozzle.

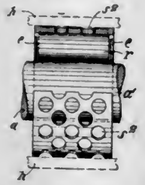
1,190,964. TRAY. BALFOUR SNYDER and KING MCCREERY, Columbus, Ohio. Filed Aug. 30, 1915. Serial No. 47,917. (Cl. 211—28.)



1. In a tray construction, the combination with a plurality of base plates, the side portions of which are adapted to adjustably overlap each other, each of said plates having a pair of central longitudinal ribs and an upright plate adapted to be supported between said ribs.

2. In a tray construction, the combination with a plurality of horizontal base plates, the side members of which are adapted to overlap each other, each of said base plates having a pair of parallel upright ribs and upwardly bent front end extensions on opposite sides of said ribs, of a plate adapted to be supported between said ribs, and a second plate adapted to be supported between said upturned plate ends and the ends of said ribs.

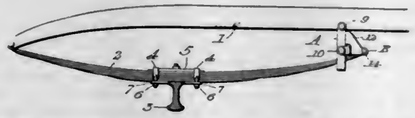
1,190,965. ROLLER-BEARING. BENJAMIN FRANKLYN SPARR, New York, N. Y. Filed Jan. 10, 1916. Serial No. 71,145. (Cl. 64—39.)



1. In a bearing of the character designated, the combination with rollers, of a containing shell formed with a lining constructed of a flat metallic strip having perforations throughout its length, the ends of the strip being overlapped within each other and said perforations being staggered relatively to each other transversely of the surface of said strip.

2. As an improved article of manufacture, a lining for roller bearings, the same composed of a strip of flat perforated metal having at one end a V-shaped projection and at the other end a correspondingly-shaped recess, said perforations being of elongated form and staggered with relation to each other transversely of said strip, said strip being bent into cylindrical form with the ends thereof interlocking.

1,190,966. SHACKLE FOR THE SPRINGS OF AUTOMOBILES AND OTHER VEHICLES. FRANK N. SPRAGUE, Sedgwick, Colo. Filed Nov. 30, 1915. Serial No. 64,284. (Cl. 267—37.)



1. The combination with the axle and side bar of a vehicle, of a leaf spring secured substantially midway of its length to the axle, and at one end to said side bar, a hanger pivotally connected to the side bar adjacent the opposite end of the spring, a member hinged to said hanger and extending at right angles thereto, the free end of which supports the adjacent end of said spring, and abutments on said hinged member which engage the hanger.

2. The combination with the axle and side bar of a vehicle, of a leaf spring secured substantially midway of its length to said axle and at one end to said side bar, a U-shaped hanger hinged to said side bar through which the opposite end portion of the spring passes, a member hinged to said hanger and extending at right angles thereto, having a bolt in its free end to which the adjacent end of the spring is secured, and abutments on said hinged member which normally engage said hanger.

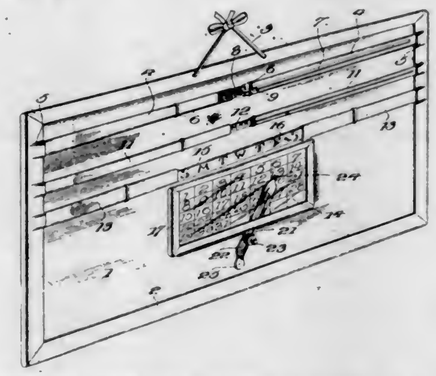
3. A shackle for securing one end of a spring to the side bar of a vehicle, comprising a U-shaped hanger, a bolt extending through the same adjacent its center, a member pivotally mounted on said bolt, comprising parallel, integrally connected arms having projecting lug portions adapted to normally engage the adjacent edges of said hanger, and a spring-end-receiving bolt which is passed through the outer ends of said arms.

4. The combination with the axle and side bar of a vehicle, of a semi-elliptic spring which is secured substantially midway of its length to said axle, and at one end to said side bar, a U-shaped hanger pivotally connected to said side bar, adjacent the opposite end of the spring, a bolt extending through said hanger below its center, a member pivotally mounted on said bolt comprising parallel portions having upwardly extending abutment lugs, which are adapted to engage the adjacent edges of the hanger, and a bolt which is passed through the free ends of said hinged members, the adjacent end portion of said spring being passed through said hanger and supported at its extremity upon the bolt which passes through the outer ends of the hinged member.

5. The combination with the axle and side bar of a vehicle, of a semi-elliptic spring secured substantially midway of its length to said axle, and at one end to said side bar, a hanger pivotally connected to said side bar adjacent the opposite end portion of said spring, a member hinged to said hanger and extended at right angles to the same, means for connecting the adjacent end of said spring to the outer end of said hinged member, and abutments on said hinged member which normally engage said hanger.

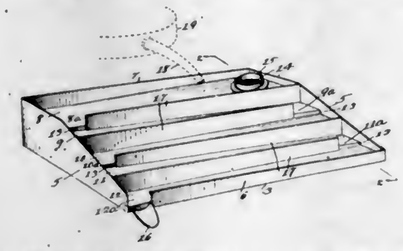
[Claims 6 and 7 not printed in the Gazette.]

1,190,967. CALENDAR. JAMES N. STACY, New York, N. Y. Filed Mar. 12, 1915. Serial No. 13,891. (Cl. 40—110.)



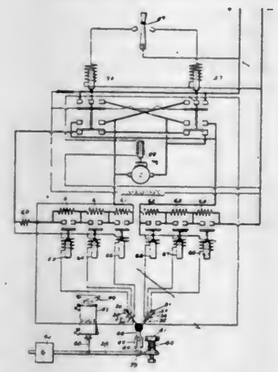
In a calendar, alined guides having their inner ends spaced apart, one of said guides being provided upon its face at its inner end with relatively permanent characters indicating a part of the number of a year, and a slide having upon one face a series of characters each indicating a part of the number of a year, the slide being slidably and adjustably fitted within both of said guides and bridging the space between the inner ends of the said guides, the slide being designed to be slid by successive steps from the first mentioned guide into the other guide whereby to successively expose at the space between the inner ends of the guides the characters comprising the series thereon in position directly opposite and close to the characters upon the first mentioned guide.

1,190,968. COOLER. SAMUEL SANFORD STORY, Pawling, N. Y. Filed Aug. 22, 1914. Serial No. 857,999. (Cl. 257—188.)



A device of the class described, comprising a receptacle for a cooling medium, provided with a closed top formed of stepped platforms successively sloped downward in opposite directions, and a partition wall between each pair of platforms provided with a gateway at the lowest point of the higher and at the highest point of the lower corresponding platforms, the uppermost platform having a filler opening therethrough surrounded by a relatively high combing, the sides and ends of said receptacle being extended upwardly above the several platforms and said ends being downwardly inclined to register in height with the successively lower partition walls.

1,190,969. CONTROLLING APPARATUS FOR ELEVATORS. WALTER C. STRANG, Yonkers, N. Y., assignor to Otis Elevator Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 4, 1912. Serial No. 734,828. (Cl. 172—152.)



1. In an electric elevator, the combination of a hoisting motor, means for varying the current in the said motor in starting and stopping, and additional means dependent for its operation upon the rate of speed variation of the motor for controlling the current in said motor both in starting and stopping.

2. In an elevator, the combination of a car, an electric motor operatively connected thereto, means for controlling the motor, and additional means operative upon excessive speed variation in the said car for reducing the current flow to the motor.

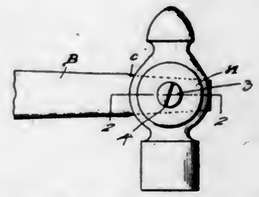
3. In an elevator, the combination of a car, an electric motor operatively connected thereto, a starting and dynamic stopping resistance for the motor, means for controlling the said resistances, and means dependent upon the rate of speed change in the said car for controlling the said resistance controlling means.

4. In an elevator, the combination with a vertically movable load carrying device, an electric motor for operating the device, means for controlling the speed of the motor, an inertia controlled means for controlling the rate of speed variation of the motor both in starting and stopping.

5. In an elevator, the combination with a vertically movable load carrying device, an electric motor for operating the device, means for controlling the speed of the motor, and additional motor controlling means independent of the counter-electro-motive force of the motor for controlling the speed of the motor both in starting and stopping.

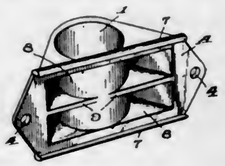
[Claims 6 to 17 not printed in the Gazette.]

1,190,970. HAMMER-LOCK. THOMAS WILD, Lowell, Mass. Filed Sept. 15, 1915. Serial No. 50,845. (Cl. 145—79.)



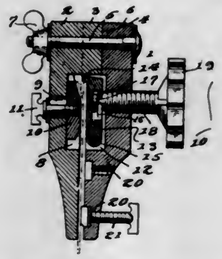
The combination with a hammer head having a handle-receiving opening therein and a transverse opening in one side thereof communicating with the handle receiving opening, the walls of the transverse opening being threaded, of a threaded shank adjustably mounted within the transverse opening and having its inner ends provided with a stud, a plate associated with the inner end of the shank and having an opening therein loosely receiving the stud, and having a plurality of depending spurs thereon adapted, when the shank is adjusted in the transverse opening to be forced into the handle.

1,190,971. HANGER. CHARLES J. WILLIAMS, Jr., Jacksonville, Fla., assignor to L. Moore Dry Kiln Co., Jacksonville, Fla., a Corporation of Florida. Filed Feb. 19, 1916. Serial No. 79,403. (Cl. 248—36.)



A hanger comprising a sleeve or hub, a face plate integral therewith having bolt holes at its ends and flanges at its edges, the sleeve having a threaded hole and a screw which turns therein to hold the sleeve or hub in place, in connection with a brace the edges of which the flanges embrace, said brace having holes adapted to register with the holes in the face plate, and means passing through said holes for holding the face plate and brace together.

1,190,972. HANDSAW-SET. WALTER H. WOOD, Forest, Idaho, assignor of one-half to Joseph D. Paris, Forest, Idaho. Filed Jan. 18, 1916. Serial No. 72,802. (Cl. 76—60.)



1. A saw set including two companion members each comprising a longitudinal jaw having a head portion offset from the jaw and the head of one of the members projecting over the jaw thereof, one of said heads having a dovetailed tongue to be received in a dove-tailed groove in the other head, removable means for connecting the heads, an anvil carried by one of the jaws, a hammer carried by the other jaw, and a longitudinally movable operating member for the hammer.

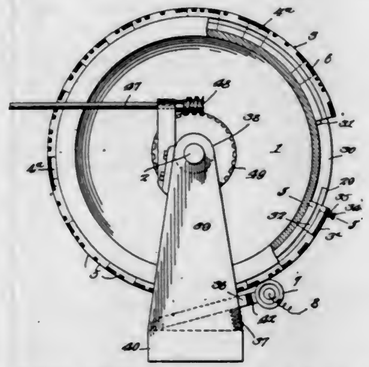
2. A saw set including two companion members each comprising a longitudinal jaw having one of its ends formed with a head, means for connecting the heads to retain the inner faces of the jaws spaced, said jaws having their opposing faces each provided with a substantially rectangular pocket, a reversible and longitudinally adjustable anvil member disposed in one of the pockets, a pivoted hammer in the other pocket, and a longitudinally movable operating member for the handle.

3. A saw set including two companion members each comprising a longitudinal jaw having a head portion offset from the jaw, means for removably connecting the head portions and for sustaining the opposing faces of the jaws spaced, said opposing faces of the jaws having oppositely disposed substantially rectangular pockets, a reversible and longitudinally movable anvil in one of the pockets, a hammer member in the other pocket and having one of its ends pivotally secured therein, the outer face of the anvil having a keyhole slot, and a threaded operating member passing through the jaw carrying the hammer and having a reduced flange and which is adapted to be passed through the larger opening of the keyhole slot and to be received in the smaller opening thereof, as and for the purpose set forth.

1,190,973. TRANSMITTING MEANS FOR WIRELESS TELEGRAPHY. CHESTER MILLER AGNER, Sacramento, Cal. Filed June 8, 1914. Serial No. 843,787. (Cl. 178—84.)

1. A wireless telegraphic transmitter, comprising a rotatable carrier and interchangeable contact members, the carrier having a peripheral channel for the reception of the contact members serially and at one end having permanent stop means for the contact members, and said contact members each having conducting and insulating portions together representing complete words, numbers, or the like, or recognized abbreviations thereof, and another member adapted to the peripheral channel and constituting a stop member for the end of the series of contact members remote from the permanent stop.

2. A wireless telegraph transmitter comprising a rotatable disk or carrier having a peripheral groove or channel, blocks interchangeably adapted to the channel and provided with conducting and insulating portions corresponding to chosen telegraphic symbols, and means for coupling up the rotatable carrier and blocks in the transmitter circuit, said disk or carrier having block retaining means at the peripheral channel portion, and said retaining means having its circumferential continuity broken to provide for the insertion into and removal of the blocks from the channel.

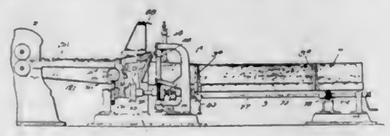


3. A wireless telegraph transmitter comprising a rotatable disk or carrier with a peripheral channel having inturned marginal flanges with the continuity of the flanges broken at a predetermined point to provide an entrance and exit opening for the channel, and blocks adapted to the channel to move lengthwise therein, said disk having a stop in the channel adjacent to the entrance opening, and one of the blocks being provided with retaining means for engaging the disk or carrier to hold the block in position to prevent escape of the other blocks.

4. A wireless telegraph transmitter comprising a rotatable disk having a peripheral channel, blocks adapted to the channel and provided with conducting and insulating surfaces, means on the carrier for preventing movement of the blocks circumferentially of the channel beyond a predetermined point, and one of the blocks having clamping means for holding it and the blocks between it, and the means on the carrier for preventing movement of the blocks.

5. A wireless telegraph transmitter comprising a rotatable disk having a peripheral channel, blocks adapted to the channel and provided with conducting and insulating surfaces, means on the carrier for preventing movement of the blocks circumferentially of the channel beyond a predetermined point, and one of the blocks having clamping means for holding it and the blocks between it and the means on the carrier for preventing movement of the blocks, said clamping means on the last-named block including a set screw threaded through the block in position to engage the carrier, and a lock nut on the set screw.

1,190,974. APPARATUS FOR FEEDING METAL SHEETS OR STRIPS. FRED C. AREY, Oak Park, Ill., assignor to Northwestern Expanded Metal Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 15, 1912. Serial No. 690,895. (Cl. 113—113.)



1. In combination, rolls for receiving metal strips, feeding mechanism for delivering strips to said rolls, said feeding mechanism including means for producing at the rear end only of each strip a vertical shoulder adapted to be engaged by the front edge of a following strip.

2. In combination, a receiver for metal strips, mechanism for delivering strips to said receiver, said mechanism including means for producing a vertical shoulder at the rear edge of each strip and said mechanism being constructed and arranged to feed each strip faster than it passes through said receiver so as to cause the front edge of each strip to be fed into engagement with the shoulder at the rear end of the preceding strip, and means for preventing the front end of the strip from rising above or falling below the shoulder on the strip in advance.

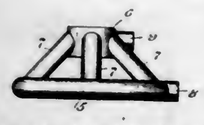
3. In combination, a receiver for strips, feed rolls for feeding strips to said receiver, mechanism between said feed rolls and said receiver for producing a vertical shoulder in said strips, and means controlled by a strip for opening said feed rolls and causing said mechanism to act upon each strip when the rear end thereof reaches said mechanism.

4. In combination, rolls for receiving and feeding strips, a table for supporting a strip and guiding it into said rolls, means for delivering strips to said table and feeding them along the same toward said rolls, and means adjacent to the end of the table nearest the rolls for slightly tilting the front end of each strip so as to bring the front edge at an angle to the plane of the top of the table.

5. In combination, a receiver for metal strips, a table for supporting and guiding strips into said receiver, mechanism for delivering strips upon the table and feeding them toward said receiver, said mechanism including means for producing a vertical shoulder at the rear end of each strip, and means on the table for preventing the front end of a strip from rising above or dropping below the shoulder on the rear end of the strip in advance.

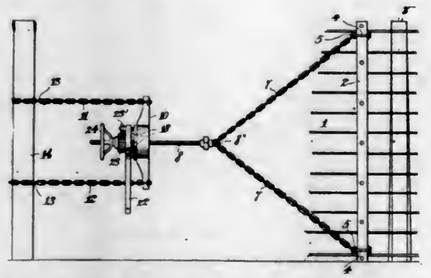
[Claims 6 to 45 not printed in the Gazette.]

1,190,975. WATER-HEATER. ALBERT W. BACHMANN, Laporte, Ind. Filed Aug. 19, 1914. Serial No. 857,591. (Cl. 122—20.)



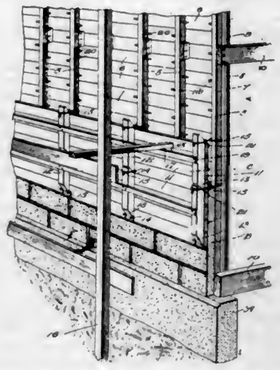
In a device of the class described, in combination, a ringlike bottom member forming a base, a plurality of upwardly converging tubes integrally connected for communication with the bottom ringlike base, an annular head to which said tubes are connected radially for communication with said head having a flat horizontal top and bottom, an integral inlet connection formed radially of said ringlike tube, and an outlet connection opening out radially of said head in a plane at right angles thereto and reinforcing two of said tubes, said outlet connection terminating in advance of the ringlike tube.

1,190,976. WIRE-STRETCHER. CHARLES W. BARTLEY, Erie, Ill. Filed Oct. 31, 1914. Serial No. 869,648. (Cl. 254—67.)



A wire stretcher including a threaded rod, a head having an opening through which the rod passes, said head having its inner face provided with an annular depression which surrounds the opening, a grooved nut having a rounded perimeter received within the recess, removable means mounted within the groove of the nut and contacting with one face of the rounded perimeter and connected with the head and coöperating with the rod for sustaining the nut upon the head rotatable with respect to the latter, said nut receiving the rod and coöperating with the threads thereof, a lever including a head arranged for rotation upon the nut, the nut being provided with teeth, a dog having two engaging faces pivoted to the head and adapted to engage between the teeth of the nut for imparting rotary movement to said nut, and a hand wheel formed contiguous with the free end of the nut for imparting a further rotary movement to the nut independent of the first mentioned means.

1,190,977. PORTABLE CONCRETE-MOLD. ORVILLE D. BARTOW, Philadelphia, Pa. Filed Aug. 26, 1915. Serial No. 47,625. (Cl. 25—131.)



1. In a concrete mold, the combination with spaced vertically disposed studs, of a plurality of false-work forms, each including interfitted tongued and grooved boards and transverse beams secured to said boards, said beams being correspondingly beveled at opposite ends, whereby, on stacking the forms one above the other, adjacent ends of the beams will overlap each other, tie wires embracing certain of the studs and also embracing the overlapped beveled end of the beam to hold the forms in spaced relation to the studs for the molding of concrete, and pins mounted in the forms near the lower edges thereof and adapted to be engaged by certain tie wires to hold the forms against lowering movement.

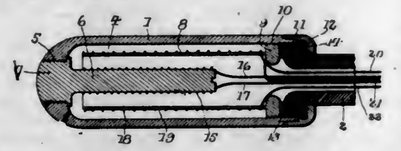
2. In a concrete form, the combination with vertical studs arranged in spaced relation to each other, of a plurality of removable false work forms, each including interlocked sections and transverse beams secured to said sections, said beams being inwardly beveled for the overlapping of the ends adjacent each other of the beams on the respective forms when superposed relative to one another, and tie wires embracing the studs and the said beams to anchor the forms.

1,190,978. TEMPERATURE-MEASURING DEVICE FOR SURGICAL INSTRUMENTS. LOUIS D. BLISS, North Takoma, Md., assignor of one-half to Howard R. Bliss, New York, N. Y. Filed May 27, 1916. Serial No. 100,424. (Cl. 219—19.)

1. A surgical instrument comprising an operating head, means for supporting said head, means for heating said operating head, and an electrical thermometer including a controlling coil constructed and arranged relative to the supporting head so as to be responsive to the surface temperature of said head.

2. A surgical instrument comprising a hollow copper head, a handle for supporting said head, an electrical heating coil located within said head for heating the same,

and an electrical thermometer including a controlling coil disposed within said head and positioned so as to be responsive to the surface temperature of the head.

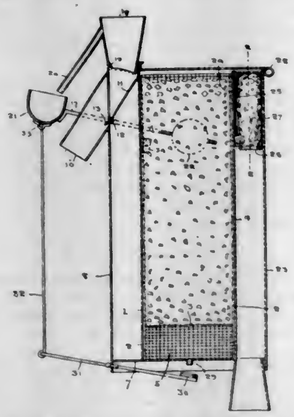


3. A surgical instrument comprising a hollow copper head, a handle supporting said head, a copper stud secured internally in said head and projecting longitudinally thereof, and an electric heating coil surrounding said stud, a copper sleeve secured to said head, and surrounding and spaced from said stud, and an electric thermometer including a controlling coil disposed on the outer face of said sleeve.

4. A surgical instrument including a hollow copper head, an internal copper stud secured to the head and projecting longitudinally thereof, said stud being spaced from the inner walls of the head, a copper sleeve secured to the other end of said head internally thereof and extending longitudinally of the head and surrounding said stud, said sleeve being spaced from said stud, an electrical heating coil surrounding said stud, an electric thermometer including a controlling coil surrounding the outer surface of said sleeve, and a handle for supporting said head.

5. A surgical instrument including a hollow copper head, an internal copper stud secured to the head and projecting longitudinally thereof, said stud being spaced from the inner walls of the head, a copper sleeve secured to the other end of said head internally thereof and extending longitudinally of the head and surrounding said stud, said sleeve being spaced from said stud, an electrical heating coil surrounding said stud, an electric thermometer including a controlling coil surrounding the outer surface of said sleeve, a hollow hard rubber handle having a flange, a cap adapted to engage said head and secure the flange of the handle thereto, and gaskets interposed between the flange and the cap whereby a tight joint is made between the handle and the head.

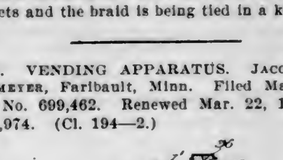
1,190,979. FILTER. SAMUEL F. BOWMAN, Kansas City, Mo. Filed Aug. 7, 1915. Serial No. 44,168. (Cl. 210—4.)



1. In a filter, the combination with a casing having an inlet tube and a bypass communicating therewith and a port at the lower end of the casing, of a valve mounted between the tube and bypass, a stem extending transversely through the tube and walls of the casing to which said valve is attached, one end of said stem being square in cross section, a valve rod having a square opening for engagement with the squared portion of said stem, a semicylindrical trough attached to one end of said valve rod, a balance weight adjustable on the opposite end of said valve rod, a shaft pivoted to the lower end of said casing, a valve at one end of said shaft adapted to close said port and a rod connecting the opposite end of said shaft to said trough whereby when the trough operates to open or close the first valve, said port will be opened or closed.

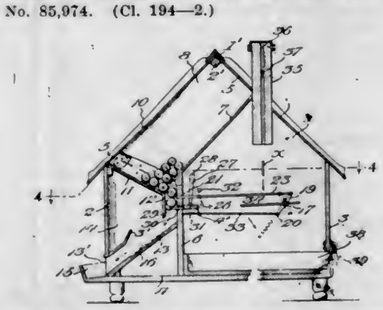
2. A filter comprising a casing, an inlet tube for said casing, a bypass communicating with said tube, a flared extension at the upper end of the inlet tube, the lower end of said extension having an inwardly and downwardly extending flange adapted to slightly restrict the passage of water through said extension, a spout communicating with said flared extension adjacent the upper end thereof, a stem extending transversely through the inlet tube adjacent its connection with the bypass, a valve attached to said stem and adapted to open or close the passage to the inlet tube, a valve rod attached to said stem, a trough secured to one end of said rod and positioned below the lower end of said spout whereby when the water arises in the flared extension and descends through said spout into the trough, said valve rod will be tilted and the valve operated, and a balance weight on the opposite end of said rod for swinging the valve in the opposite direction.

1,190,980. HAIR-CURLER. LETTITIA C. BOYERS, Cynthiana, Ky. Filed Oct. 11, 1912. Serial No. 725,263. (Cl. 132—19.)



The combination with a former, of a braid having inturned portions at opposite ends providing elongated and reinforced sockets engageable with the former, said inturned portions increasing the thickness of said sockets throughout their entire length whereby the ends of the braid are prevented from being withdrawn from the fingers when the former has been withdrawn from one of said sockets and the braid is being tied in a knot.

1,190,981. VENDING APPARATUS. JACOB J. BURKHARTZMEYER, Faribault, Minn. Filed May 24, 1912. Serial No. 699,462. Renewed Mar. 22, 1916. Serial No. 85,974. (Cl. 194—2.)

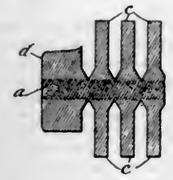


1. In a vending machine, an article storage compartment, a discharge chute leading therefrom, a rock shaft, an article retaining finger having connection with the said shaft, a pivotally supported link, a bar supported thereby, fingers projecting from the bar, connection between the said shaft and bar, the first and last mentioned fingers being arranged to be projected successively into the discharge chute upon rocking of the shaft, a trip member upon the shaft, and a coin chute located above the said trip member.

2. In a vending machine, an article storage compartment, a discharge chute leading therefrom, a rock shaft, a pair of fingers actuated by said rock shaft projecting through one wall of said chute, a bar mounted transversely in rear of said chute, fingers upon said bar projecting through the wall of said chute below said first mentioned fingers, a connection between said bar and said shaft, means connected with the bar for normally holding the same in position with the fingers thereon projecting into the discharge chute, and a trip plate secured to said shaft.

3. In a vending machine, an article storage compartment ending in a discharge chute, of a rock shaft, article retaining fingers actuated by said rock shaft projecting into said chute, a pivotally suspended link, a member carried by said link equipped with fingers, said link carried member being resiliently held, means of connection between said article retaining fingers and said rock shaft, and a trip plate carried by said rock shaft, all arranged substantially as and for the purpose set forth.

1,190,982. ELECTRODE FOR STORAGE BATTERIES. CAMPBELL C. CARPENTER, Buffalo, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Feb. 3, 1909. Serial No. 475,903. (Cl. 204—29.)



1. A grid for Planté battery plates comprising a central core of an alloy of lead and a stiffening metal, and parallel ribs formed on the opposite faces of said core, said ribs composed of pure lead integrally united to the opposite faces of said core, the bases of said ribs being thickened to reinforce the ribs at their juncture with said core.

2. A Planté plate, comprising a main body portion having oppositely extending ribs, said ribs being reinforced at the point of junction with said portion, the body consisting of metal integral with said ribs and having an intermediate antimonious stratum for stiffening purposes.

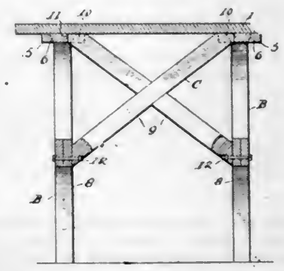
3. The method of forming a Planté battery plate which includes integrally uniting sheets of material, capable of being electro-chemically formed, to an intermediate sheet of material substantially inert to electro-chemical action and forming corrugations or ribs on the opposite faces of the composite structure to increase the superficial area of the plate and to provide pockets for retaining active material.

1,190,983. COMBINED PEN AND BLOTTER. EDWARD H. CLARK, Winnipeg, Manitoba, Canada. Filed June 23, 1915. Serial No. 35,886. (Cl. 120—1.)



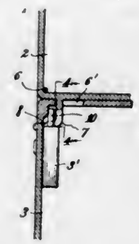
In combination with the body of a pen, a blotter encircling the body, a screw fitting into the body and engaging the blotter to hold the same against removal, a sheath for the blotter and encircling the body of the pen, a catch on the screw, and a projection on the sheath engageable with the catch to hold the sheath against accidental removal.

1,190,984. TABLE. GEORGE S. CLARK, Wetumpka, Ala. Filed July 26, 1915. Serial No. 41,955. (Cl. 45—48.)



In a table, a top, pairs of spaced parallel cleats fixed to the under side of the top and having inwardly beveled opposed edges forming dove-tail shaped locking guideways, slide rails correspondingly shaped to the guideways and freely slidable therein, cross legs united to each other and to the slide rails, the innermost cleats of each pair being formed with cut away portions, said slide rails being formed with notches to register with the cut away portion, cross brace members fitted between the legs and having their upper ends insertible into the cut away portions and the notches to lock the slide rails in the guideways, and removable members passed through the lower ends of the cross brace members and also passed through the legs at the points of crossing thereof.

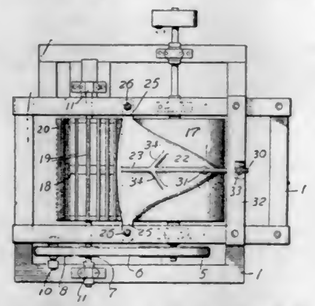
1,190,985. LOCK. FRANCIS E. CRAWFORD, Canon City, Colo. Filed Dec. 12, 1914. Serial No. 876,959. (Cl. 232—12.)



1. A box comprising upper and lower members having a pivoted connection, a lock for the upper member, a door for the lower member, a lock for the said door, the locking bolt of the said last-mentioned lock having an opening, the pivoted upper member being provided with a hook which is adapted to engage with the opening when the members are swung one over and in contact with the other.

2. A box comprising an upper and lower section having a pivotal connection, a lock for the upper section, a movable member in the lower section, a lock for said movable member, the bolt of said lock being provided with an opening and the said bolt when in locking position adapted to contact with the lower section to prevent the sliding of the movable element from the said section, the upper section having an angular finger member passing through an opening in the lower section and adapted to be received in the opening of the bolt when the said upper section is closed and locked on the lower section.

1,190,986. COTTON-GIN. WILLIAM GREEN DE RAMUS, Montgomery, Ala. Filed Dec. 22, 1915. Serial No. 68,201. (Cl. 13—7.)



1. A cotton gin, comprising a supporting frame, a drum having on its peripheral surface a coating of powdered emery, said drum being journaled for rotation on the frame, a separating head arranged above the drum, said head being substantially triangular and having its apex at the front of the drum and its base at the rear of the drum and extending approximately parallel with the axis of the drum, means in connection with the plate for adjusting the apex and the base toward and from the drum, a cleaning brush of cylindrical form at the rear of the drum and contacting with the periphery thereof, and means for rotating the drum and the cleaning brush, the adjusting means for the rear of the separating plate comprising rods connected with the frame in vertical position at the ends of the base of the plate, said plate having perforated lugs through which the rods extend, and adjusting nuts threaded onto the rod above and below the lugs.

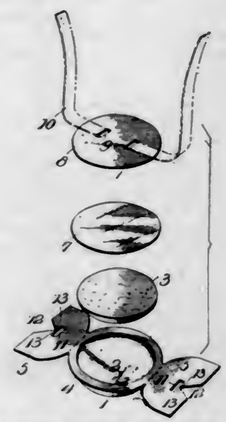
2. A cotton gin, comprising a supporting frame, a drum having on its peripheral surface a coating of powdered emery, said drum being journaled for rotation on the frame, a separating head arranged above the drum, said head being substantially triangular and having its apex at the front of the drum and its base at the rear of the drum and extending approximately parallel with the axis of the drum, means in connection with the plate for adjusting the apex and the base toward and from the drum, a cleaning brush of cylindrical form at the rear of the drum and contacting with the periphery thereof, and means for rotating the drum and the cleaning brush, the adjusting means for the apex of the separating plate comprising a rod having a threaded engagement with the plate, a bar on the frame through which the rod extends, and adjusting nuts on the rod above and below the bar.

3. A cotton gin, comprising a supporting frame, a drum having on its peripheral surface a coating of powdered emery, said drum being journaled for rotation on the frame, a separating head arranged above the drum, said head being substantially triangular and having its apex at the front of the drum and its base at the rear of the drum and extending approximately parallel with the axis of the drum, means in connection with the plate for adjusting the apex and the base toward and from the drum, a cleaning brush of cylindrical form at the rear of the drum and contacting with the periphery thereof, and means for rotating the drum and the cleaning brush.

4. A cotton gin, comprising a supporting frame, a drum having on its peripheral surface a coating of powdered emery, said drum being journaled for rotation on the frame, a separating head arranged above the drum, said head being substantially triangular and having its apex at the front of the drum and its base at the rear of the drum and extending approximately parallel with the axis of the drum, means in connection with the plate for adjusting the apex and the base toward and from the drum, and means for cleaning the drum.

5. A cotton gin, comprising a supporting frame, a drum having on its peripheral surface a coating of powdered emery, said drum being journaled for rotation on the frame, and means coöperating with the periphery of the drum for gradually forcing the seed toward the ends of the drum and in contact with the drum.

1,190,987. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 8, 1915. Serial No. 54,874. (Cl. 246—20.)



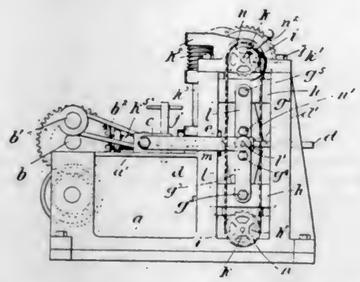
1. A railway signal torpedo comprising a fibrous case having a central portion with an explosive receiving recess, the central portion having an annular laterally projecting flange and oppositely extending integral inwardly folding flaps, an explosive within the recess, a disk having strap receiving openings, a strap passing through the said openings, the said flaps having strap openings, and passage ways extending from the outer edges of the flaps inward, and communicating with the said strap receiving openings, the disk and the flaps being cemented together and to the central portion.

2. An improved railway signal torpedo comprising a case having a central portion provided with an explosive receiving cavity, a surrounding laterally extending flange and integral inwardly folding flaps, an explosive within the cavity, a disk having strap openings, the disk fitting over the explosive and the said flange, the flaps having strap openings, and the outer edges of the flaps provided with V-shaped notches communicating with the strap openings for the purpose described, the flaps and the disk cemented together and to the central portion.

3. An improved railway signal torpedo comprising a central portion having an explosive receiving recess, a surrounding laterally projecting flange and integral oppositely arranged inwardly folding flaps, an explosive within the recess, a disk fitting over the explosive and against the flange, and cemented thereto, a second disk having strap openings, a strap passing through the said openings, the second disk placed upon and cemented to the first-mentioned disk, the said flaps having strap openings, and V-shaped connecting passage ways for the said openings, the flaps folded inwardly and cemented to the said second disk.

1,190,988. MACHINE FOR FORMING STORAGE-BATTERY PLATES. FRANK ENGEL, Buffalo, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Nov. 14, 1907. Serial No. 402,164. (Cl. 29—2.)

1. A machine for refining the crystalline structure of lead blanks and increasing the superficial area thereof, including means for supporting a lead blank, means operating on opposite sides of said blank to alternately apply pressure and release the same, said means comprising formers each having an arcuate outline to engage said lead blank, and having narrow parallel ribs with tapering edges spaced apart distances substantially equal to the width of the ribs, the parallel walls of adjacent ribs forming between them pockets having flaring openings formed by the tapering edges of the ribs and means for positively gradually advancing said first means toward each other an infinitesimal distance at each operation thereof, the ratio between the radius of said arcuate outline and the advance at each operation being so great that the line of pressure on said plate is practically normal to said plate, whereby the lead of the blank may be uniformly kneaded and refined by the repeated application of pressure, and whereby the lead of the blank displaced by said ribs may be formed into ribs or fins by being gradually forced into said pockets, the flaring openings of said pockets serving to densify and consolidate the ribs or fins as the lead is forced therethrough without disrupting or tearing the lead.



2. In a machine for making Planté battery plates, the combination of a reciprocable blank carrier and a pair of rocking formers, one on each side of said blank, each former being provided with thin parallel blades separated by narrow spaces, the working edges of said blades having a slight curvature to permit said formers to be gradually pressed into said blank with a rocking motion, the radius of curvature of the working edges being so great, and the distance the blades are pressed into the blank at each reciprocation being so small that the acute angle formed between the direction of pressure on the metal and the surface of the blank is always greater than the angle of pressure which will cause the metal to be pressed forward in the direction of reciprocation of the blank, whereby the metal is gradually forced between the blades to form ribs of density greater than the original density of the blanks.

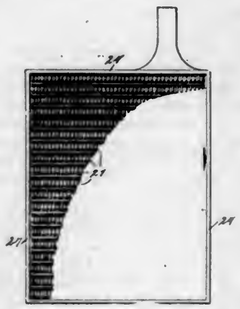
3. In a machine for making Planté battery plates, the combination of a reciprocable blank carrier, a pair of rocking formers, one on each side of said blank, each former being provided with thin parallel blades separated by narrow spaces, the working edges of said blades being tapered in the form of an acute angle and having a curvature of large radius as compared to the length thereof, and means for gradually pressing said tapered blades into the blank, the radius of curvature of the working edges being so great relative to the distance the blades are advanced at each reciprocation that the angle formed between the radius of the blades, co-incident with the direction of pressure on the blank and the radius normal to the blank surface, is always less than the angle beyond which if pressure is applied to the blank the metal of the blank will be displaced in the direction of reciprocation of the blank, the coördination of the parts producing lateral displacement of the metal of the blank by said tapered edges and compressing and densifying the metal between said blades as the same are advanced into the blank.

4. In a machine of the character described for producing Planté battery plates from a lead blank, means for supporting the blank, a pair of opposed formers having working faces substantially equal in length to the blank, said faces being curved on an arc of radius not less than the length of said faces, and means for simultaneously rocking said formers in contact with the blank and advancing the formers toward said blank through small increments, whereby pressure may be applied to the opposite faces of the blank substantially at right angles thereto to prevent the metal from rolling out ahead of said curved faces while consolidating said metal and rendering its crystalline structure finer and more uniform.

5. In a machine of the character described for producing a battery plate grid from a lead blank, means for supporting the blank, a pair of opposed formers having thin curved projecting ribs forming working faces, means for reciprocating said blank supporting means and oscillating said formers through ninety degrees or less to rock the working faces over the surface of the blank and exert pressure at substantially right angles thereto, and means for advancing said formers toward each other a small amount at each actuation thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,190,989. STORAGE-BATTERY PLATE AND PROCESS OF FORMING THE SAME. FRANK ENGEL, Buffalo, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Original application filed Nov. 14, 1907, Serial No. 402,164. Divided and this application filed Feb. 20, 1909. Serial No. 479,070. (Cl. 204—29.)



1. A battery plate having a plurality of rows of uniformly formed densified ribs upon the surface thereof.

2. A battery plate having a plurality of rows of uniformly formed ribs formed upon the surface thereof, the density of said ribs being increased, and reinforcing bars arranged between the rows of ribs, the length of said ribs being comparatively short so that the reinforcing bars occur at comparatively close intervals.

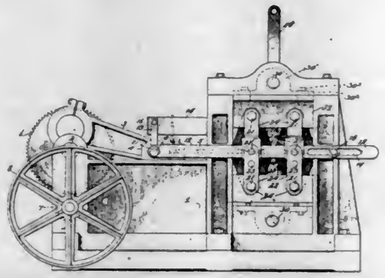
3. A battery plate having a plurality of rows of uniformly formed ribs formed upon the surface thereof, the density of said ribs being increased, and reinforcing bars arranged between the rows of ribs, the length of said ribs being comparatively short so that the reinforcing bars occur at comparatively close intervals, said reinforcing bars and ribs being integral.

4. A battery plate having a plurality of rows of uniformly formed ribs formed upon the surface thereof, the density of said ribs being increased, and reinforcing bars arranged between the rows of ribs, the length of said ribs being comparatively short so that the reinforcing bars occur at comparatively close intervals, said reinforcing bars and ribs being integral, the configuration being the same upon both sides of the plate.

5. The process of forming a battery plate from a lead blank which consists in applying a rocking pressure simultaneously to the opposite sides of the blank, the pressure being applied at an angle to the blank less than the angle beyond which, if pressure is applied to the blank, the metal of the blank will be displaced in the direction of the rocking of the pressure-applying means.

[Claims 6 to 29 not printed in the Gazette.]

1,190,990. MACHINE FOR FORMING STORAGE-BATTERY PLATES. FRANK ENGEL, Buffalo, N. Y., assignor, by mesne assignments, to U S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed June 17, 1909. Serial No. 502,786. (Cl. 29—2.)



1. In a machine of the class described, the combination of an oscillating former, means for supporting a blank in contact with said former, operating means for reciprocating said supporting means, said operating means being connected to said former to oscillate the same, the connection between said operating means and one of said operated elements including a means for varying the character of movement imparted to said element by said operating means, whereby said element may be operated in synchronism with said other operated element.

2. In a machine of the class described, the combination of pivoted oscillating formers, a blank holder for reciprocating the blank in contact with said formers, a common operating means for oscillating said formers and reciprocating said blank holder, the connections between one of said elements and said operating means including an eccentric whereby the speed of operation of said element may be accelerated or retarded.

3. In a machine of the class described, the combination of oscillating formers, a blank holder for reciprocating the blank in contact with said formers, a connecting rod connected to said formers for oscillating them, a shaft for actuating both said connecting rod and said holder, an eccentric mounted on said shaft and journaled in said connecting rod, and means for oscillating said eccentric.

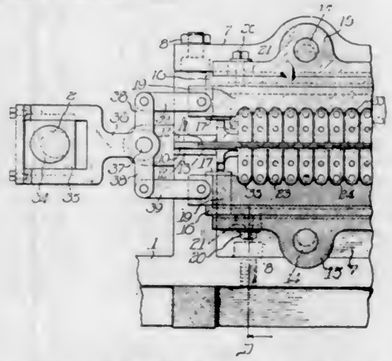
4. In a machine of the class described, the combination of oscillating formers, a blank holder for reciprocating the blank in contact with said formers, a connecting rod connected to said formers for oscillating them, an eccentric journaled in said connecting rod, an arm on said eccentric, said arm being loosely connected to a stationary part of the machine, and a pivot for connecting said eccentric to said blank holder eccentrically.

5. In a machine for forming storage battery plates, the combination with the main frame, of a reciprocating blank holder, oscillating formers adapted to act upon the blank simultaneously from opposite sides thereof, means for causing said formers to move toward the face of the blank, a connecting rod connected to said formers for oscillating them, a cross head imparting motion to said connecting rod and said blank holder, and compensating connections between said connecting rod and said blank holder.

[Claims 6 to 17 not printed in the Gazette.]

1,190,991. MACHINE FOR FORMING STORAGE-BATTERY PLATES. FRANK ENGEL, Buffalo, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Mar. 7, 1910. Serial No. 547,898. (Cl. 29—2.)

1. In combination, means for supporting a blank, means for simultaneously pressing small alined adjacent areas of said blank, said means including a plurality of blades, and means for imparting a slight rocking movement to said blades, whereby said blank is consolidated without material lengthening and the active edge of the former is not withdrawn from the blank.



2. In combination, means for holding a blank and formers applied to substantially the entire area of a side of said blank and means for manipulating said formers to simultaneously groove and condense said blank.

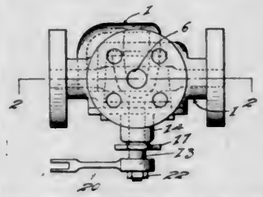
3. In a battery plate machine for operating on a metal blank, pivoted means for applying pressure to the blank, said means having a working edge straighter than the arc of the circle to which said edge is tangent and which has the pivot as a center.

4. A machine for working a blank to form a battery plate including formers and means for supporting a blank in operative relation to the formers, the formers being so constructed and pivoted that by a swinging movement in either direction they are caused to apply a gradually increasing pressure to the blank.

5. A battery plate machine having means for compressing a given area of a blank, said means including a pivoted means for pressing said area below the surface of the blank, said pivoted means being so shaped that by a swinging movement in either direction they are caused to apply a gradually increasing pressure to the blank, and means for manipulating said pivoted means to intermittently apply pressure to different portions of said area without withdrawing said pivoted means.

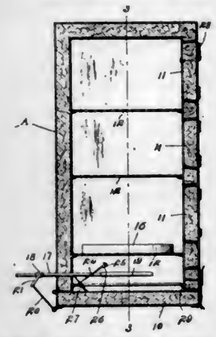
[Claims 6 to 35 not printed in the Gazette.]

1,190,992. FOUR-WAY VALVE. DAVID J. EVANS, Sharon, Pa. Filed May 10, 1915. Serial No. 27,132. (Cl. 137—26.)



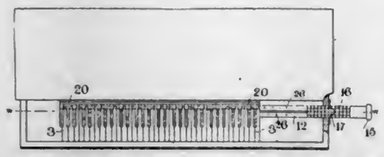
A four-way valve comprising a valve casing having a tapering seat therein, a removable cap inclosing said casing, an inlet port in said casing leading to the valve seat, a pair of discharge ports in said casing leading to said valve seat, located approximately 90° apart and situated in the opposite side of the valve casing from the inlet port, an exhanst port for said valve seat located between the discharge ports and communicating with a by-pass leading through the casing and terminating at a point between the inlet port and one of the discharge ports, a frusto-conical valve plug in said casing coöperating with said seat, said valve having a stem extending through said removable cap and surrounded by a helical spring, said valve having a circumferential groove intermediate its ends extending more than half-way therearound and a second circumferential groove intermediate the ends of the first groove and shorter than said first groove, the valve plug and seat being so proportioned that a space is left below said plug into which the valve is urged by the spring as wear of the coöperating parts takes place so as to always insure the proper seating of the valve.

1,190,993. COMBINED STOVE AND FIRELESS COOKER. CLAUDE R. FOUNTAIN, Athens, Ga. Filed Jan. 4, 1916. Serial No. 70,279. (Cl. 126—39.)



A combined stove and fireless cooker comprising an insulated body having doors at its bottom and one side, reticulated shelves within said body for forming compartments, means interiorly of the body for conducting heat downwardly from the top thereof after passing upwardly through the compartments, a heater located within the body near the bottom thereof, means for controlling the fuel supply to the heater and actuated by the bottom door, means for igniting the heater and operated by said bottom door, and gutters located interiorly of the body at the bottom thereof and having outlet drain conduits leading therefrom exteriorly of the body.

1,190,994. KEY-HOLDING DEVICE FOR KEYBOARD MUSICAL INSTRUMENTS. JOSEPH GORST, Northwich, England. Filed Dec. 26, 1914. Serial No. 879,168. (Cl. 84—58.)



1. In a keyboard-operated musical instrument, the combination with a keyboard, of a single member mounted on the instrument adjacent the keyboard and having a movement relative to the latter and adapted to lock all the keys of said keyboard against depression, said member being formed with recesses therein for permitting the depression of any or all of said keys, according to the position of said member.

2. In a keyboard-operated musical instrument, the combination with a keyboard, of a single roller arranged to lock all the keys of the keyboard against depression and having a longitudinal shifting movement and a rotary movement relative to said keys, said roller being formed with recesses for permitting the depression of certain combinations of keys or all of said keys, according to the position of said roller, substantially as described.

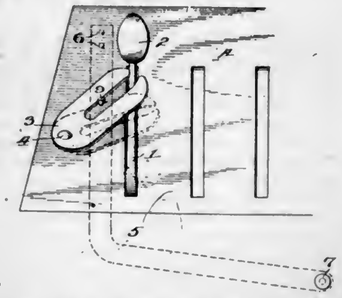
3. In a keyboard-operated musical instrument, the combination with a keyboard, of a single movable locking roller arranged substantially transversely to the keys of the keyboard and having depressions therein to correspond to a plurality of groupings of said keys, said roller having rotary and longitudinal shifting movements relative to said keys, and pegs on the keys of the keyboard adapted to engage the locking roller or to enter said recesses, when a recess is opposite a peg so as to allow the depression of the respective key.

4. In a key-operated musical instrument, the combination with the keyboard, of a single movable roller having recesses therein to correspond with the plurality of groupings of keys of the keyboard, said roller being arranged substantially transversely of said keys and having a scale selective movement and a key selective movement, pegs on the keys of the keyboard to enter said recesses when a recess is opposite a key, means to indicate the position of the roller for any desired scale, and means to indicate the position of the roller for any desired key in which said scale is to be played.

5. In a key-operated musical instrument, the combination with the keyboard, of a single movable roller having recesses therein to correspond to a plurality of groupings of keys of the keyboard, said roller being arranged substantially transversely of the keys and having a scale selective movement and a key selective movement, pegs on the keys of the keyboard to enter said recesses when a recess is opposite a key, means to indicate the position of the roller for any desired scale, means to indicate the position of the roller for any desired key in which said scale is to be played, and means for holding said roller in position.

[Claims 6 to 8 not printed in the Gazette.]

1,190,995. CLUTCH-PEDAL-REGULATING DEVICE. ARTHUR GOWDER and LAMONT O. BRAND, Riverside, Cal. Filed Mar. 8, 1916. Serial No. 82,968. (Cl. 74—81.)



1. In a pedal regulating device, the combination with a foot pedal, of a cam member in engagement therewith and adapted to be positively actuated at all times by the movement of said foot pedal, and means for limiting the movement of said cam member.

2. In a pedal regulating device the combination with a clutch pedal, of a cam member in engagement therewith, resilient means, a projection mounted thereon, means for actuating said resilient means, whereby the projection will engage said cam member for limiting its movement.

3. In a pedal regulating device the combination with a clutch pedal, of a bifurcated cam member in engagement therewith, so made as to constrict about said clutch pedal when it is moved to its extreme position, and stopping means in the path of the cam member to limit its movement.

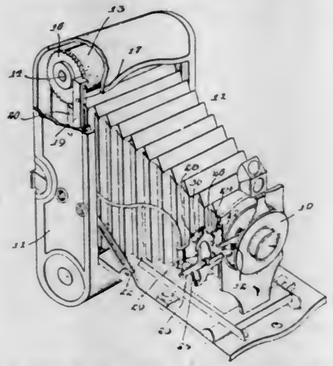
4. In a pedal regulating device the combination with a floor, of a clutch pedal, of a pivoted and bifurcated cam member in engagement therewith and adapted to constrict about said clutch member when it is moved to its extreme positions, resilient means fastened to said floor, a projection, said projection adapted normally to be above the surface of said floor and in the path of said cam member, and means for actuating the free end of said

resilient means, said projection adapted to limit the movement of said cam member.

5. In a pedal regulating device the combination with a floor, of a clutch pedal, of a pivoted bifurcated cam member in engagement therewith, a projection, and means for operating the same, said projection being normally in the path of the cam member and adapted to engage one edge of said cam member, but so made as to permit the passing of the clutch pedal to the forward position, whereby the projection may be raised to engage another edge of said cam member for limiting its movement.

[Claims 6 and 7 not printed in the Gazette.]

1,190,996. CAMERA AND ATTACHMENTS THEREFOR. EDWIN M. F. GUIGNARD, Peking, China. Filed June 18, 1915. Serial No. 34,954. (Cl. 95—32.)



1. In a camera including a shutter lever and a film winding mechanism, a ratchet wheel movable with said film winding mechanism, a pawl for association with said ratchet wheel, a cable for moving said pawl from initial position into relation with said ratchet wheel when said shutter lever is operated whereby said cable will not be returned to initial position until said pawl is actuated by the film winding mechanism and returned to initial position after the shutter has been actuated, and a slide carrying said pawl and connected with said cable.

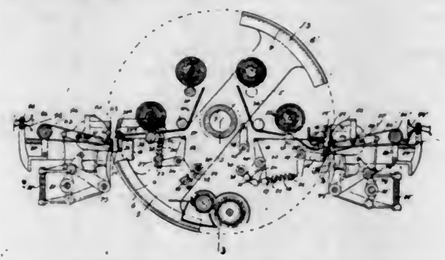
2. In a camera including a shutter lever and a film winding mechanism, a link operable by said shutter lever, a cable connected to said link, means adapted to be operated by said cable and associated with said film winding mechanism whereby when said shutter lever is actuated upon by said link to result in operation of said cable said means will be associated with said film winding mechanism whereby said film winding mechanism must be actuated to return said link to operative relation with said shutter lever.

1,190,997. COMBING-MACHINE. RUDOLF GÜTERMANN, Perosa Argentina, Italy. Filed July 31, 1914. Serial No. 854,302. (Cl. 19—6.)

1. A combing machine comprising combing segments adapted to pass through between the feeding and stripping devices, wherein the combing segments are arranged to revolve about an axis and the feeding device being located within the circle described by the revolving combing segments.

2. A combing machine comprising a double combing segment adapted to pass through between the feeding and stripping devices, wherein the double combing segment is arranged to revolve about an axis and the feeding device being located within the circle described by the revolving double combing segment.

3. A combing machine comprising combing segments adapted to pass right through between the feeding and stripping devices, wherein the combing segments are arranged to revolve about an axis and the feeding device being located within the circle described by the revolving combing segments.

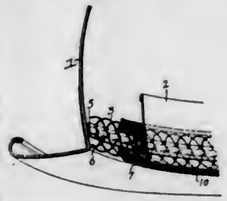


4. A combing machine comprising combing segments, feeding and stripping devices, wherein the combing segments are arranged to revolve about an axis parallel to the axes of the said feeding and stripping devices and the feeding device being located within the circle described by the revolving combing segments.

5. A combing machine comprising combing segments, feeding and stripping devices, wherein the combing segments are arranged to revolve about an axis and the feeding device, the wound rolls of fibrous material to be combed and the cleaning brush and doffing roller for the noils being located within the circle described by the revolving combing segments.

[Claims 6 to 8 not printed in the Gazette.]

1,190,998. HAT-CONFORMING MEANS. WHILLDIN D. HALFMANN, Philadelphia, Pa. Filed Oct. 7, 1915. Serial No. 54,575. (Cl. 2—114.)



1. The combination with a hat having a sweat band, of a normally-flattened coiled member forming a cushion and disposed on the inside of the crown of the same adjacent the portion normally contacting with the head, and means independent of the sweat band for securing said coiled member to the hat crown whereby said member is maintained in its partially flattened position.

2. The combination with a hat and the sweat band thereof, of a coiled spring disposed on the inside of the crown of the hat adjacent the portion normally contacting with the head, a continuous member independent of the sweat band to which the coils of said spring are attached for holding the spring in partially flattened position to provide a cushion between the head and the hat, and means for securing said spring and the continuous member to the hat.

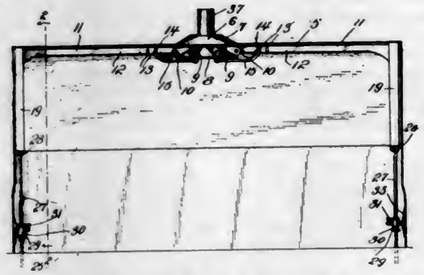
3. The combination with a hat and the usual sweat band therefor, of a coiled spring interposed between said hat and its sweat band, a continuous member independent of the sweat band and disposed within the spring to which coils of the latter are attached for holding the spring in a partially flattened condition to provide a cushion between the sweat band and the hat, and means for securing said continuous member to the hat to hold said coiled spring in place.

4. The combination with a hat and a sweat band therefor, of a cushioning member for the head disposed between the hat and its sweat band, said cushioning member comprising a coiled spring, a continuous member independent of the sweat band and to which the coils of the

spring are separately attached whereby said spring may be held in a partially flattened condition, means for holding said continuous member and the spring to the hat, and an inclosing cover for said spring and its continuous connecting member.

5. The combination with a hat and a sweat band therefor, of a cushioning member for the head disposed between the hat and its sweat band, said cushioning member comprising a coiled spring, and a continuous member independent of the sweat band disposed within the same, said member having prongs engaging the several coils of the spring whereby said spring may be held in a partially flattened condition, and means for securing said cushioning member in place.

1,190,999. FIELD-TENT. RICHARD G. HARRIS, Knoxville, Tenn. Filed Feb. 16, 1916. Serial No. 78,706. (Cl. 135—3.)



1. A supporting frame for tents embodying a cap, ridge poles pivotally connected with said cap, each ridge pole embodying inner members formed at their outer ends with hangers and a pair of outer members detachably connected with the hangers of each of said inner members and supporting the inner members in alinement when the frame supports one type of tent, each pair of outer members having detachable connection with the inner members and connected with the cap when the frame supports a different type of tent.

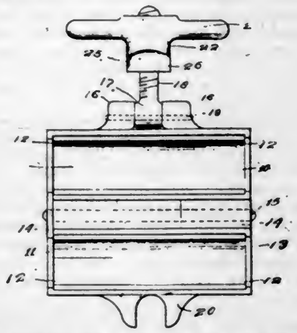
2. A supporting frame for tents embodying a cap, a series of ridge poles comprising inner and outer sections, said inner sections having pivotal connection with said cap, and the outer sections having detachable connection with the inner section when supporting one type of tent and the outer section having detachable connection with the cap when the frame supports another type of tent.

3. A frame adapted to support the canvas of different types of tents embodying a cap, ridge poles removably and adjustably connected with said cap, each pole constituting inner and outer sections, and a swinging hook member connected with the cap and adapted to interchangeably engage with a series of apertures formed in the innermost ridge pole sections for supporting the latter mentioned sections in constructing different types of tents.

4. A supporting frame for tents embodying a cap, ridge poles connected therewith, each ridge pole embodying inner members formed at their outer ends with hangers, a pair of outer members each formed with a hooked end having a convexed portion, the hooked ends of said outer members detachably engaging with the hangers of said inner members and disposing the convexed portion thereof in contact with said inner members when supporting one type of tent, the hooked ends of said outer section having connection with the cap when the frame supports another type of tent.

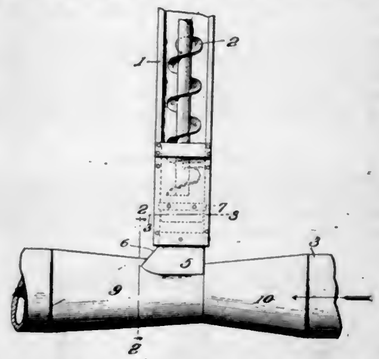
1,191,000. EMERGENCY LEAK-STOPPER. MORRIS HARRISON, New York, N. Y. Filed June 12, 1914. Serial No. 844,735. (Cl. 137—33.)

1. The combination of two relatively movable elements, a screw member pivoted on one, spaced lugs on the other to receive the screw therebetween, and a cam head threaded upon the screw, circular in cross section, of a diameter greater than the distance between the lugs and having a convex inner end including oppositely inclined cam faces constructed and adapted to be received with the screw between the lugs and to ride upon the lugs when the head is rotated, as described.



2. In a device of the class described two opposed relatively movable clamping members, means to draw the members together including a screw pivoted on one for movement into proximity with the other at times, two lugs spaced to receive the screw therebetween and having opposed faces divergent toward the end of the screw when the latter is between the lugs, a cam head threaded on the screw having similarly inclined cam faces forming a convex end adapted to engage snugly between the divergent faces of the lugs when the screw is between the lugs, and means to rotate the head.

1,191,001. COTTON-SEED PLUG. CHARLES C. HARTPENCE, Columbus, Ga., assignor to Lummus Cotton Gin Company, Columbus, Ga., a Corporation of Georgia. Filed Aug. 6, 1915. Serial No. 44,036. (Cl. 193—10.)



1. Conveyer mechanism comprising a conveyer, a discharge pipe adapted to conduct a current of air, a connection between said conveyer and said pipe, the cross sectional area of said pipe being gradually decreased to the point of said connection and gradually increased from said point, said connection being wholly within the gradually increasing portion of the restricted section of said pipe.

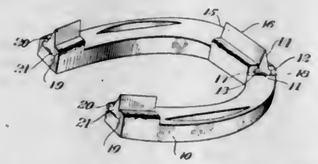
2. Conveyer mechanism comprising a conveyer, a discharge pipe adapted to conduct a current of air, a connection between said conveyer and said pipe, said pipe being constricted to the point of said connection and gradually expanded to its normal area at and beyond said connection, said connection between said conveyer and said pipe

being wholly within the expanded portion of the latter, and a flexible valve within said conveyer for preventing back flow therein.

3. Cotton seed conveying mechanism comprising a conveyer and a discharge pipe connected to the extremity of said conveyer and adapted to conduct a current of air, the cross sectional area of said pipe being gradually decreased to the point of connection with said conveyer and gradually increased from said point, the connection between said conveyer and said pipe being wholly within the gradually increasing area of the latter, and the farther wall of the extremity of said conveyer, relatively to the direction of flow through said pipe, being flared relative to the axis of said conveyer.

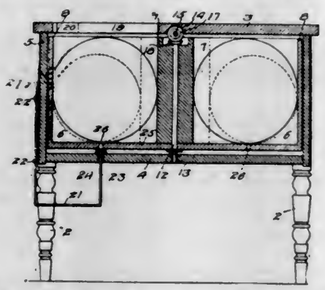
4. In a cotton seed conveying mechanism the combination with an air pipe and a conveyer in communication therewith, said pipe having its walls gradually converging in advance of said conveyer and gradually diverging at and beyond the intersection of said conveyer, of a thimble constituting the connection between said conveyer and said pipe, said thimble having its nozzle opening into said pipe in a direction that gradually coincides with the flow through said pipe.

1,191,002. HORSESHOE. JOHN H. HERSHBERGER, Wilkes-Barre, Pa. Filed Sept. 17, 1913. Serial No. 790,274. (Cl. 168—35.)



In a device of the class described, in combination a horse shoe formed with a pair of hook-shaped flanges forming a socket between them, each of said flanges having a substantially semi-circular inner edge and an outwardly beveled edge, the circular edges of said flanges formed in a plane with the flat surface of the horse shoe while the beveled edges thereof converge outwardly of the socket, and a calk consisting of a substantially V-shaped projection having lateral extending semi-circular flanges adapted to snugly fit the semi-circular edges of said socket, said calk being provided with a concave edge at its base joining said semi-circular flanges and arranged immediately opposite the flat surface at the base of said socket.

1,191,003. RECORD-HOLDER. JAMES W. HUGHES, Narberth, Pa., assignor to Hughes-Lippincott Company, Camden, N. J., a Corporation of New Jersey. Filed Aug. 11, 1914. Serial No. 856,277. (Cl. 211—16.)

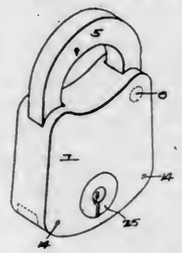


1. The combination in a record holder, of a casing; a carrier mounted within the casing and having radial partitions forming compartments, the top of the casing having a slot radiating from the center of rotation of the carrier; the bottom of the carrier having an opening therein communicating with each compartment; and means in line with the slot in the top of the casing arranged to extend through the opening in the bottom of the carrier and to project a record through the opening in the top of the casing.

2. The combination in a record holder, of a carrier having a hub and a rim; and a series of substantially wedge-shaped partitions all radiating from a common center at the hub and extending to the rim, said partitions being spaced to form long compartments and being recessed from their outer ends inwardly to form short compartments which alternate with the long compartments; said compartments being adapted to receive disk records of different diameters.

3. The combination of a casing having top, bottom and sides; a carrier located within the casing and mounted on a vertical shaft having its bearings within the casing; an operating shaft extending to one side of the casing and geared to the vertical shaft, whereby the carrier can be turned, said carrier having a series of partitions spaced apart to form compartments for the disk records and having a series of openings in its bottom, one opening communicating with each compartment; a lifter mounted in guides on the casing and having a projecting portion extending through the opening in the bottom of the carrier so as to lift a record, the casing having a radial slot through which the record can be projected.

1,191,004. PADLOCK. ARTHUR C. JACKSON and FRANK SOLEY, Philadelphia, Pa., assignors to Miller Lock Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 7, 1913. Serial No. 766,144. (Cl. 70—105.)



1. The combination in a padlock, of a casing made in a single piece open at one edge and having an opening in the front wall; two openings for the shackle; a plate arranged to close the opening of the casing; locking mechanism contained in the casing; a shackle pivotally mounted in the casing and arranged to be engaged by the locking mechanism; a key hub extending into the casing and through the locking mechanism; and a plate for locking the key hub to the casing.

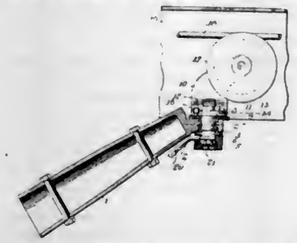
2. The combination in a padlock, of a casing; a bottom plate fitting the opening in the casing, the casing being countersunk; a frame carrying the locking mechanism mounted in the casing; a key hub extending through the front wall of the casing and into the frame, said key hub having a groove therein, the frame being countersunk; and a plate mounted in the countersunk portion of the frame and extending into the groove in the key hub, the bottom plate holding the last mentioned plate in position.

3. The combination in a padlock, of a hollow casing made in a single piece and open at one edge only; a plate fitting said opening; means for securing the plate to the casing; a frame carrying the locking mechanism; a shackle; a pivot for the shackle of less length than the width of said casing, said pivot extending short of either side of the casing, the metal of one side being forced over to cover the pivot pin so as to prevent the removal of the pin after it is once in place.

4. The combination in a padlock, of a cast metal casing made in a single piece and having an opening in the bottom; a key hub opening in the front plate and two openings in the top for the shackle; a shackle pivoted to the casing; a pivot pin for the shackle extending partly through the casing; a bottom plate mounted in the bottom of the casing; means for securing the bottom plate in position; a frame carrying the locking mechanism located in the casing and having an opening for the key hub; a key hub extending through the opening in the casing and into the frame and having a head fitting the opening in the casing; a groove back of the head, the frame being countersunk in a line with the groove of the hub; and a thin plate driven into the countersunk portion of the frame back of the casing, the said plate entering the groove in the hub and locking the hub to the casing.

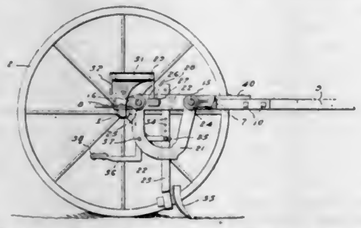
5. The combination of a hollow casing having an opening in one edge only; a single frame arranged to pass through the opening and to be located within the casing, said frame containing the assembled locking mechanism; a shackle; a pivot pin for the shackle extending through the opening in the casing and through openings in the frame, whereby the frame is properly alined with the casing; and a plate for closing the opening in said casing.

1,191,005. SAFETY TROLLEY-HARP. WILLIAM A. JENKINS and PURD J. LINCOLN, Birmingham, Ala. Filed Sept. 4, 1915. Serial No. 49,078. (Cl. 191—59.)



A trolley harp comprising a support, a pin fixed to the support and provided with a disk, said disk having at its upper surface an annular groove, a yoke turnably mounted upon the pin and having its side in close contact with the upper face of the disk, said yoke having an annular groove which registers with the groove in the disk, a wheel journaled in the yoke, spaced abutments fixed in the grooves of the disk and yoke respectively, the abutment which is fixed in the groove of the disk having its end in contact with the bottom wall of the groove in the yoke and the abutment which is fixed in the groove of the yoke having its end in contact with the bottom wall of the groove in the disk, and coil springs housed in both of the grooves and bearing at their ends against the abutments.

1,191,006. CULTIVATOR. LEWIS E. JONES, Bonneau, S. C. Filed Sept. 12, 1914. Serial No. 861,347. (Cl. 97—34.)



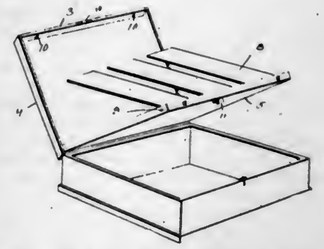
1. In a cultivator, an axle, a substantially rectangular frame having the rear side thereof secured to said axle, rods carried by said frame and extending transversely across the same, brackets adjustable along the length of said rods and supported thereby, rock shafts rockably supported by said rectangular frame and pivotally connected to said brackets, levers connected to said rock shaft whereby said brackets will be moved longitudinally upon said rods upon the rocking of said shafts, cultivator shovel carrying beams adjustably carried by said bracket.

2. In a cultivator, an axle, a substantially rectangular frame having the rear side thereof secured to said axle, rods carried by said frame and extending transversely across the same, brackets adjustable along the length of said rods and supported thereby, rock shafts rockably supported by said rectangular frame and pivotally connected to said brackets, levers connected to said rock shafts whereby said brackets will be moved transversely upon said rods upon the rocking of said shafts, cultivator shovel carrying beams carried by said bracket, said cultivator shovel carrying beams being provided with a plurality of spaced openings, levers connected to said shovel carrying beams and pivotally connected to said brackets, whereby said shovel carrying beams will be adjusted vertically upon the pivotal movement of said levers.

3. In a cultivator structure, the combination, of an axle, a rectangular frame having its rear side attached to said axle, a pair of spaced rods extending transversely across said frame, a pair of substantially U-shaped brackets having horizontal bearing bosses formed upon and extending transversely from the upper ends of the legs of said brackets, said bosses being slidably mounted upon said rods, cross bars connecting the upper ends of the legs of said brackets, angled levers pivotally connected to said cross bars, said levers being rockably supported by said frame for shifting said brackets transversely upon the rods upon rocking movements of said levers, and cultivating shovel carrying standards carried by said brackets.

4. In a cultivator structure, the combination, of an axle, a rectangular frame having its rear side attached to said axle, a pair of spaced rods extending transversely across said frame, a pair of substantially U-shaped brackets having horizontal bearing bosses formed upon and extending transversely from the sides of the upper ends of the legs of said brackets, said bosses being slidably mounted upon said rods, cross bars connecting the upper ends of the legs of said brackets, angled levers pivotally connected to said cross bars, said levers being rockably supported by said frame for shifting said brackets transversely upon the rods upon rocking movement of said levers, brackets secured to said cross bars, cultivator shovel carrying standards slidably extending through said last named brackets, foot levers adjustably connected to said standards and pivotally connected to said U-shaped brackets for moving said standards vertically upon pivotal movement of the foot levers.

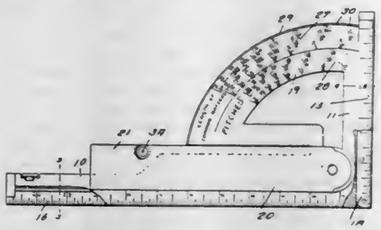
1,191,007. NECKTIE-PRESS AND COLLAR-BOX. ARTHUR A. KASSEL, Uniontown, Mo. Filed Sept. 3, 1915. Serial No. 48,856. (Cl. 100—57.)



A necktie press of the class described including a tray provided with a plurality of pockets or recesses, necktie receiving flaps or members, hinged to the tray at the pockets or recesses and adapted to have neckties wrapped around them, said flaps or members with the neckties thereon being also adapted to swing into the said pockets

or recesses and a hinged lid or cover connected with the tray and adapted to press neckties between it and the said tray.

1,191,008. CARPENTER'S SQUARE. EPHRAIM LAAKKONEN, Monessen, Pa. Filed June 21, 1915. Serial No. 35,379. (Cl. 33—93.)



A carpenter's square comprising a blade and tongue, a quadrant carried by the tongue on the inner edge thereof, a notched plate mounted in the curved edge of the quadrant, a forked setting arm pivoted to the square and embracing the quadrant, and a pivot latch mounted on the setting arm and selectively engageable in the notches of the plate to secure the setting arm in a desired adjustment.

1,191,009. SNAP-HOOK. MITCHELL LARAMIE, Willimantic, Conn. Filed July 29, 1915. Serial No. 42,542. (Cl. 24—237.)



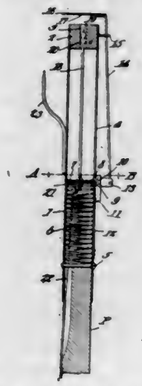
1. A snap hook comprising a piece of round metal wire one and a half times twisted upon itself to form at one end an eye and at its other end a bill and guard, the end of the guard cut concave throughout its entire width, the end of the bill lying across the end of the guard and within the concave portion thereof, the said concave portion extending parallel to the plane of the bill, the end of the bill projecting beyond the side of the guard rounded convex so as to be in the same plane as the outside of the guard whereby the joint between the bill and guard has the appearance of a continuous wire.

2. A snap hook comprising a piece of round metal wire one and a half times twisted upon itself to form at one end an eye and at the other end a bill and guard, the end of the guard cut concave throughout its entire width, the end of the bill lying across the end of the guard at substantially right angles thereto, and within the concave portion thereof, said concave portion extending parallel to the plane of the bill.

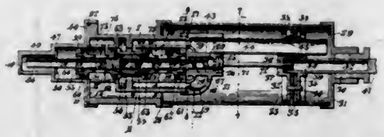
1,191,010. TRAP. ELMER I. LAUDERBAUGH, Jasper, Mo. Filed Sept. 16, 1915. Serial No. 51,049. (Cl. 43—21.)

1. An impalement trap including a tubular casing having a longitudinal slot, a head slidably mounted in the casing, a spear extending therefrom, a tongue extending from the head and through the slot, a spring bearing against the head, means for moving the head in one direction against the action of the spring to place the spring under compression and to retract the spear into the casing, a spring catch for engaging the tongue to hold the spring under compression, a rod pivotally connected to the catch, a guide outstanding from the casing and slidably engaged by the rod, and a tripping plate fixedly connected to the rod and supported thereby beyond one end of the casing, said plate having a spear receiving opening.

2. An impalement trap including a tubular casing having a longitudinal slot, a head slidably mounted in the casing, a spear extending therefrom, a tongue extending from the head and through the slot, a spring bearing against the head, means for moving the head in one direction against the action of the spring to place the spring under compression and to retract the spear into the casing, a spring catch for engaging the tongue to hold the spring under compression, a rod pivotally connected to the catch, a guide outstanding from the casing and slidably engaged by the rod, a tripping plate fixedly connected to the rod and supported thereby beyond one end of the casing, said plate having a spear receiving opening, and a ground engaging fork detachably connected to that end of the casing adjacent the tripping plate.



1,191,011. WATER-MOTOR. LEWIS CHARLES LEWIS, Columbus, Ohio, assignor to Llewellyn Lewis, Columbus, Ohio. Filed May 2, 1914. Serial No. 835,915. (Cl. 138—2.)



1. In an apparatus of the class described, a cylinder, a reciprocatory piston therein, a valve casing at one end of and alined with the cylinder, a reciprocatory valve responsive to fluid pressure, and mounted in the valve casing concentric therewith, another reciprocatory valve in and concentric with the first-named valve and connected to the piston for actuation thereby, said valves and valve casing having ports for the flow and control of motive fluid, and a pipe within the cylinder extending through the piston with one end of the pipe communicating with the valve casing and the other end opening into the cylinder on the side of the piston remote from said valve casing.

2. In an apparatus of the class described, the combination of a cylinder, a reciprocable piston mounted therein, a valve casing connected with the cylinder, conduits communicating with the valve casing and the opposite ends of the cylinder, the conduit connecting the casing to the end of the cylinder remote therefrom being located within the cylinder, inlet and outlet chambers for the casing, a fluid-actuated valve mounted for reciprocation in the casing controlling the flow of fluid through said conduits to reciprocate the piston, a mechanically-actuated valve axially located with respect to the fluid-actuated valve for admitting fluid to opposite ends of the casing to operate the fluid-actuated valve, and a lost-motion connection between the piston and the mechanically-actuated valve, the conduit for directing fluid to the end of the piston remote from the valve casing extending through said piston.

3. In a fluid motor, a motor cylinder, a piston therein, a valve casing at one end of and connected with the cylinder and in turn inclosing a cylinder of even internal diameter throughout, a removable closure for the end of the valve casing and second-named cylinder remote from the motor cylinder and containing a cylinder forming a continuation of the second-named cylinder and together with the latter constituting a valve cylinder of even internal diameter throughout, a mechanically actuated valve of even diameter throughout extending centrally through the valve cylinder and provided at one end with a connection to the piston, and a fluid actuated valve located and reciprocable wholly within the valve cylinder and surrounding the first-named valve, said second-named valve comprising spaced end members and a central member connecting them, spaced packing means carried by the end members exterior thereto and in position to engage the inner wall of the valve cylinder, and other packing means also carried by each end member at each end thereof interior to the second-named valve and in position to engage the outer wall of the first-named valve, said first-named packing means coacting with the corresponding valve members of the fluid actuated valve and with the valve cylinder to define chambers, and said second-named packing means coacting with the valve members of the fluid actuated valve and the first-named valve to define chambers.

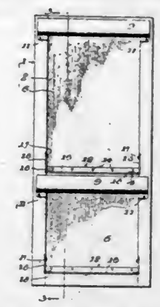
4. A fluid motor having a motor cylinder, a piston therein and a valve casing at one end inclosing a valve cylinder, a longitudinally extended valve of even diameter throughout located in the valve cylinder with the latter also of even internal diameter throughout and said valve being provided with a mechanical connection to the piston, and a second named valve within the valve cylinder surrounding and movable along the first-named valve and comprising end members each interiorly and exteriorly threaded and shouldered at both ends, and a central member interiorly threaded at both ends and coacting with the exterior shoulders at the corresponding inner ends of the other members to unite the latter and confine packing against the shoulders, nuts for the outer threaded ends of the first-named members coacting with the shoulders thereat for confining packing thereagainst, and means for confining other packing within both end portions of each end member in engagement with the first-named valve, whereby there are formed as many chambers between the fluid actuated valve and the valve casing and also between the two valves as there are members of the fluid actuated valve.

5. A fluid motor having a motor cylinder with a removable head at one end and a piston within the cylinder provided with a piston rod connected thereto for removal therefrom without dismantling the piston, said fluid motor being also provided with a valve casing at the end of the cylinder remote from the removable head and containing a valve cylinder of even diameter throughout and having a removable closure at the end remote from the motor cylinder, a mechanically-actuated valve of even diameter throughout extending through the valve cylinder and having a mechanical connection to the piston for removal therefrom on the removal of the piston rod from the piston, and a second valve surrounding the first-named valve and located and working wholly within the valve cylinder, whereby either or both valves are bodily removable from and introducible into the valve cylinder through that end thereof provided with the removable closure.

[Claims 6 and 7 not printed in the Gazette.]

1,191,012. COMBINED SCREEN AND STORM DOOR. ARCHIE H. MCEWEN, Tupper Lake, N. Y. Filed Nov. 8, 1915. Serial No. 60,328. (Cl. 156—39.)

1. In a combined screen and storm door having an opening therein, a spring roller, a water proof curtain thereon adapted to cover said opening, an L-shaped reinforcing member on the bottom of said curtain and adapted to slide between the sides of the opening in the door, and a right angular catch pivoted to each side of the opening, the feet of said catches being adapted to coact with the horizontal arm of said L-shaped member to hold said curtain in lowered operative position.



2. In a combined screen and storm door having an opening therein, a spring roller, a water proof curtain therein adapted to cover the opening, an L-shaped reinforcing member formed from a single strip of metal bent upon itself along its longitudinal center, the end of the curtain being secured therebetween, the lower portion being bent to form a horizontal arm adapted to slide between the sides of the opening in the door, and a pair of right angular catches having their long arm pivoted to the sides of the opening and to swing outwardly, the feet of said catches being adapted to coact with the horizontal arm of said L-shaped member to hold said curtain in lowered operative position.

3. In a combined screen and storm door having an opening therein, said door having a groove in the inner face of each side strip surrounding the opening, a spring roller, a water proof curtain thereon adapted to cover said opening, an L-shaped reinforcing member secured to the bottom of said curtain and adapted to slide between the sides of said opening, the vertical arm thereof being provided with runners adapted to slide in said grooves to guide the curtain, and a pair of right angular catches having their long arms pivoted to the sides of the opening to swing outwardly, the feet of said catches being adapted to coact with the horizontal arm of said L-shaped member to hold said curtain in lowered operative position.

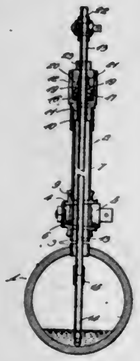
1,191,013. DEVICE FOR REMOVING ACCUMULATED LIQUID FROM GAS-MAINS. HARRY JAMES MCGILVRAY, Weston, W. Va., assignor of one-half to Hunter M. Bennett, Weston, W. Va. Filed Oct. 14, 1915. Serial No. 55,870. (Cl. 48—140.)

1. An apparatus for removing accumulated liquid from pressure-carrying gas mains and the like, comprising a passage member to be carried by the main, a portion of which is permanently attached thereto, a valve normally closing said member, a liquid discharge tube insertible into the main through the passage member when the valve thereof is opened, and means for establishing fluid tight engagement between the passage member and tube before the valve is opened and for maintaining such engagement after said valve is opened.

2. An apparatus for discharging accumulated liquid from pressure-carrying gas mains and the like, including a passage member and a fluid discharge tube insertible into the main through said member, a packing ring carried by the passage member and surrounding the tube, and a combined ring compressing and tube gripping device for simultaneously forcing the packing ring into snug contact with the tube and for holding said tube against being moved outwardly by the pressure within the main.

3. An apparatus for removing accumulated liquid from pressure-carrying gas mains and the like, including a

passage member having at one end a socket and a liquid discharge tube insertible into the main through said socket and passage member, a packing ring in the socket and surrounding the tube, an expansible and contractible tube gripping member surrounding said tube and disposed within the socket, and means for simultaneously contracting said gripping member around the tube and for forcing it against the packing ring to compress the latter around said tube.



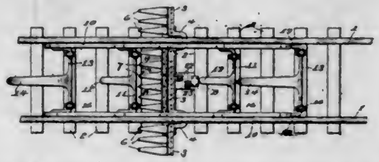
4. An apparatus for removing accumulated liquid from pressure-carrying gas mains and the like, comprising a tubular passage member to be carried permanently by the main, a valve for normally closing said member, a portable tubular passage member, coacting coupling means on the two members, a socket carried by one end of the portable member, a discharge tube inserted slidably through said socket and through said portable member, a packing ring in the socket snugly surrounding the tube, a split cone in said socket having its base presented toward the packing ring and having an axial bore receiving the tube, and a plug movable inwardly and outwardly in the open end of the socket and having in its inner end an additional socket receiving said split cone, whereby to contract the same around the tube and to simultaneously compress the packing ring, when said plug is moved inwardly.

5. An apparatus for removing accumulated liquid from pressure-carrying gas mains and the like, comprising a tubular passage member to be carried permanently by the main, a valve for normally closing said member, a portable tubular passage member, coacting coupling means on the two members, a socket having a depending neck received in the outer end of the portable member, a discharge tube inserted slidably through said socket into said portable member, said tube being formed in two sections disposed end to end below the socket, a coupling sleeve connecting said sections and adapted to bear against the neck of the socket to prevent excessive outward sliding of the discharge tube, a packing ring in the socket snugly surrounding the tube, a split cone in said socket having its base presented toward the packing ring and having an axial bore receiving the tube, and a plug movable inwardly and outwardly in the open end of the socket and having in its inner end an additional socket receiving said split cone, whereby to contract the latter around the tube and to simultaneously compress the packing ring, when said plug is moved inwardly.

[Claims 6 and 7 not printed in the Gazette.]

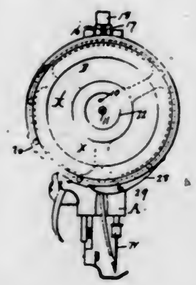
1,191,014. RAILWAY STOCK-GUARD. ALBERT DAVID MADDOX, McKenzie, Tenn. Filed Sept. 30, 1915. Serial No. 53,324. (Cl. 269—9.)

1. In a railway stock guard, a plurality of crank-levers journaled on certain of the railway ties, a train strike-arm projecting centrally from each lever, a gate pivoted under the railway rails and extending across a railway track, a pair of wheel-tread rails pivoted to the levers and to the gate, and a pair of springs having upwardly projecting arms engaging the sides of the gate for reversing the movement of the gate, the spring arms normally retaining the gate and strike arms in substantially vertical position.



2. In a railway stock guard, a gate pivoted to extend across a railway track, a pair of spaced crank arms on one side of the gate, a pair of spaced crank arms on the other side of the gate, a pair of wheel-tread rails pivoted to said cranks and to the gate, a spiral spring located at each side of the gate, and a vertical arm projecting from each spring and engaging opposite sides of the gate for reversing the movement of the gate, the spring arms normally retaining the gate and strike arms in substantially vertical position.

1,191,015. GUARD FOR SEWING-MACHINE TAKE-UPS. ALFRED L. MADISON, New York, N. Y., assignor to Willcox and Gibbs Sewing Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 26, 1915. Serial No. 10,744. (Cl. 112—26.)

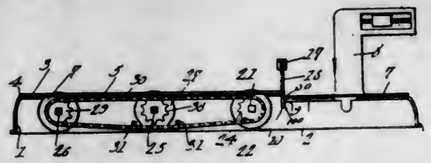


1. In a sewing machine, a rotary take-up having an exposed spider disk with central opening, in combination with a fixed guard disk mounted over the open end of the take-up and having a closed area coextensive with the open frame area of the spider disk to prevent accidental contact with the spider arms but having a central opening registering with the central opening of the spider disk through which thread ends may be picked up.

2. In a sewing machine, a rotary take-up having an inner and an outer spider disk spaced apart but secured together, the outer spider disk having a central opening while the inner disk has a central closed diaphragm, in combination with a fixed guard disk mounted beyond the exposed face of the take-up and having a closed area coextensive with the open frame area of the spider disks to prevent accidental contact with the spider arms and having a central opening registering with the central opening of the outer spider disk through which thread ends may be picked up.

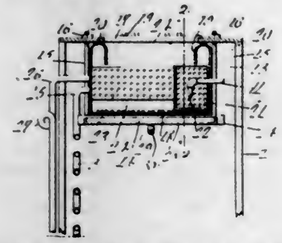
3. In a sewing machine, a rotary take-up having an exposed spider disk with surrounding guard band pivoted to the machine frame, in combination with a fixed guard disk secured to said band and overlying the exposed face of the spider disk and having a closed area coextensive with the open frame area thereof to prevent accidental contact with the spider arms.

1,191,016. MEAT-CUTTER. HENRY B. MARGRAVE, Harriman, Tenn. Filed Dec. 14, 1914. Serial No. 877,184. (Cl. 17—24.)



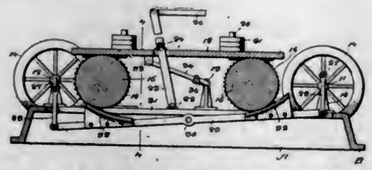
In a meat cutter, a supporting structure including a rim having opposed notches in its upper edge, the notches terminating at their lower ends in enlarged recesses defining overhanging fingers; stop blocks insertible endwise into the recesses and held therein against upward movement by the fingers; a platform carried by the rim and terminating adjacent the notches; a link pivoted at its lower end to the rim; and a cutter pivoted to the upper end of the link and adapted to enter the notches and to coöperate with the stop blocks, the link and the cutter being adapted to be swung laterally, to permit the endwise insertion of one of the stop blocks into one of the recesses.

1,191,017. COOLING APPARATUS. THOMAS L. MARSHALL, Decatur, Ala. Filed May 18, 1915. Serial No. 28,923. (Cl. 62—54.)



The combination with a refrigerator casing, of an ice chest therein, the sides of the ice chest having air inlet openings adjacent their upper edges and the upper edges of said sides having inwardly bent and downwardly projecting flanges forming baffles projecting downwardly below the horizontal plane of said openings, and a means for hanging the ice chest from the top of the casing and clamping it thereagainst.

1,191,018. WEIGHT-MOTOR. NORBERTO MARTINEZ, Cotulla, Tex. Filed Aug. 17, 1915. Serial No. 45,964. (Cl. 74—14.)



1. Mechanism of the class described comprising a support having rack teeth, walking beams pivotally mounted in the support, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the beams, beveled tread members on the beams, rollers movable on the support for working against the tread members to displace the beams and having peripheral gear teeth meshing with the rack teeth on the support, and mechanism operable upon the rollers to move the same.

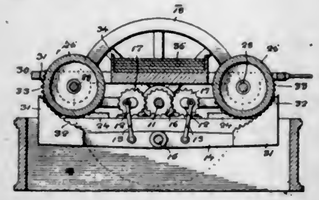
2. Mechanism of the class described comprising a support having rack teeth, walking beams pivotally mounted in the support, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the beams, beveled tread members on the beams, rollers movable on the support for working against the tread members to displace the beams and having peripheral gear teeth meshing with the rack teeth on the support, mechanism operable upon the rollers to move the same, and means for controlling the movement of said mechanism.

3. Mechanism of the class described comprising a support having rack teeth, walking beams pivotally mounted in the support, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the beams, beveled tread members on the beams, rollers movable on the support for working against the tread members to displace the beams and having peripheral gear teeth meshing with the rack teeth on the support, mechanism operable upon the rollers to move the same, means for controlling the movement of said mechanism, and rotatable elements connected to the crank shafts.

4. Mechanism of the class described comprising a support having rack teeth, walking beams pivotally mounted in the support, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the beams, beveled tread members on the beams, rollers movable on the support for working against the tread members to displace the beams and having peripheral gear teeth meshing with the rack teeth on the support, a shiftable table supported by the rollers and having rack teeth meshing with the peripheral teeth on said rollers, and means for reciprocating the table.

5. Mechanism of the class described comprising a support having rack teeth, walking beams pivotally mounted in the support, crank shafts journaled above the support, links loosely connected to the cranks and pivoted to the beams, beveled tread members on the beams, rollers movable on the support for working against the tread members to displace the beams and having peripheral gear teeth meshing with the rack teeth on the support, a shiftable table supported by the rollers and having rack teeth meshing with the peripheral teeth on said rollers, means for reciprocating the table, and means for limiting the movement of the table.

1,191,019. TRANSMISSION MECHANISM. NORBERTO MARTINEZ, Cotulla, Tex. Filed Feb. 12, 1916. Serial No. 77,892. (Cl. 74—14.)



1. In transmission mechanism, a base, a movable table superposed relative to the base, a rocking beam supported in the base, rollers journaled on the table and movable upon the base, tread shoes at opposite ends of the beam and acted upon by the rollers, and a rotary shaft having connection with the rocking beam and automatically driven thereby.

2. In transmission mechanism, a base, a movable table superposed relative to the base, a rocking beam supported in the base, rollers journaled on the table and movable upon the base, tread shoes at opposite ends of the beam and acted upon by the rollers, a rotary shaft having connection with the rocking beam and automatically driven thereby, and weights carried by the table.

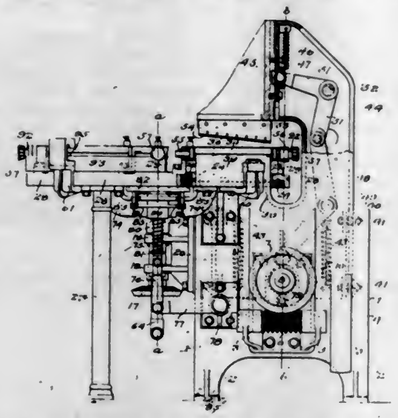
3. In transmission mechanism, a base, a movable table superposed relative to the base, a rocking beam supported in the base, rollers journaled on the table and movable upon the base, tread shoes at opposite ends of the beam and acted upon by the rollers, a rotary shaft having connection with the rocking beam and automatically driven

thereby, weights carried by the table, and rack toothed connections between the rollers and the shoes.

4. In transmission mechanism, a base, a movable table superposed relative to the base, a rocking beam supported in the base, rollers journaled on the table and movable upon the base, tread shoes at opposite ends of the beam and acted upon by the rollers, a rotary shaft having connection with the rocking beam and automatically driven thereby, weights carried by the table, rack toothed connections between the rollers and the shoes, and tracks on the base for the said rollers.

5. In transmission mechanism, a base, a movable table superposed relative to the base, a rocking beam supported in the base, rollers journaled on the table and movable upon the base, tread shoes at opposite ends of the beam and acted upon by the rollers, a rotary shaft having connection with the rocking beam and automatically driven thereby, weights carried by the table, rack toothed connections between the rollers and the shoes, tracks on the base for the said rollers, and rack toothed connections between the rollers and the said base.

1,191,020. LEAF-STEMMING MACHINE. RICHARD MARX and ROBERT J. BOLTZ, Philadelphia, Pa.; said Marx assignor to Defiance Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 16, 1914. Serial No. 832,320. (Cl. 131—57.)



1. The combination in a stemming machine of a table intermittently rotatable in a plane substantially at right angles to its axis; a series of leaf-holding devices carried thereby; and a reciprocatory stemming device mounted to successively remove the stems from leaves carried by said holding devices.

2. The combination in a stemming machine of a table intermittently rotatable in a plane substantially at right angles to its axis; a series of suction devices carried thereby for holding leaves thereto; a stemming device mounted to successively remove the stems from leaves carried by said holding devices; with a device for receiving the stemmed leaves from said holding devices.

3. The combination in a stemming machine of a table intermittently rotatable in a plane substantially at right angles to its axis; a series of independent leaf-holding devices carried thereby arranged to hold leaves in a relatively taut condition; a stemming device mounted to successively remove the stems from leaves while they are held by said holding devices; with a device for causing the stemmed leaves to be automatically discharged from said holding devices.

4. The combination in a stemming machine of an intermittently rotatable table; a series of suction boxes carried thereby for holding the leaves to be stemmed; and a device mounted to successively remove the stems from the leaves carried by said boxes.

5. The combination in a stemming machine of a table intermittently rotatable in a plane substantially at right angles to its axis; a series of independent suction boxes carried thereby for holding leaves to be stemmed; a device mounted to successively remove the stems from the leaves carried by said boxes; with means for causing the stemmed leaves to be automatically discharged from the suction boxes.

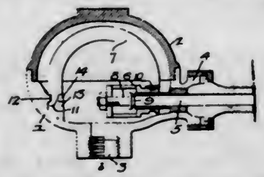
[Claims 6 to 27 not printed in the Gazette.]

1,191,021. DOUBLE-RATCHET WRENCH. NORRIS M. MENOLD, Espyville, Pa. Filed Mar. 22, 1915. Serial No. 16,259. (Cl. 81—63.)



A double ratchet wrench comprising a handle, a pair of bearing members connected at one of their ends to one end of the handle on opposite sides thereof, their free ends projecting beyond the end of said handle and cut away upon their inner faces, said bearing members provided with openings, the opening in one member being smaller with the opening in the other member and concentric therewith, a wrench head mounted to rotate in the larger opening of one of said members, said head provided with a smooth bearing surface, a ratchet wheel formed upon said head, a stud formed centrally on the upper face of said head and projecting through the opening in said member, and means extending through the stud and engaging the bearing member, preventing vertical movement of said head, a removable pin extending through said bearing members adjacent their outer ends, a double pawl rotatably mounted on said pins, said pawl provided with oppositely extending projections adjacent its free end, a flaring weight formed centrally between the projections of the pawl, the opposite sides of which are curved to conform to the configuration of the ratchet wheel for holding one of the projections into engagement with ratchet wheel.

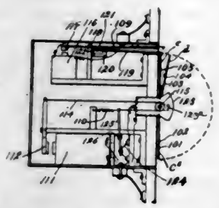
1,191,022. STEAM-TRAP. WILLIAM W. MORGAN, Jr., Philadelphia, Pa., assignor to E. F. Houghton & Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 26, 1914. Serial No. 814,435. (Cl. 236—9.)



1. The combination in a steam trap, of a casing having an inlet and an outlet, the inlet being at one side of the casing; a fixed tubular nozzle secured to the body of the casing and in line with the inlet opening and projecting into the chamber and closed by the casing, the inner end of the tubular nozzle forming a valve seat; a valve carrier surrounding the tubular nozzle and arranged to slide thereon and extending beyond the valve seat; a valve mounted within the carrier in line with the tubular nozzle and arranged to close against the seat at the end of said nozzle; and a curved tube detachably secured to the casing at one end and arranged to detachably engage the valve carrier at the opposite end, the movement of the carrier and its valve being controlled by the tube.

2. The combination in a steam trap, of a two-part casing, one part having an inlet at one side and an outlet at the bottom; a tubular nozzle at the inlet projecting into the chamber inclosed by the casing; a valve carrier mounted on the nozzle; a valve on the valve carrier; a recessed integral projection on the interior of the casing opposite the inlet opening; a U-shaped tube controlling the movement of the valve and having a projection at one end arranged to enter and rest in the integral projection and forked at the opposite end to engage the valve carrier.

1,191,023. APPARATUS FOR DISPLAYING ADVERTISEMENTS, SIGNALING, AND THE LIKE. JAMES PRIESTNALL NAYLOR, Dulwich, London, England. Filed Aug. 2, 1911. Serial No. 642,030. (Cl. 40—52.)



1. In an advertisement and signal display device comprising a plurality of self-contained elements, the combination of a board having perforations or cells constructed to receive said elements therein, said perforations being of substantially the same size as each element and said elements each comprising movable portions for display and non-display respectively, and being individually removable from and replaceable as a whole in the perforations or cells of said board from one side thereof.

2. In an electrically operated advertisement and signal display device the combination of a board having perforations therein and electric contact members adjacent to said perforations, and a plurality of self-contained display elements comprising movable portions for display and non-display respectively, electrical devices for operating the same and contact members for automatically connecting conductors feeding said electrical devices, the said elements being severally removable from and replaceable in the perforations of said board, and when in place automatically causing contact with the required electric contact members of said board.

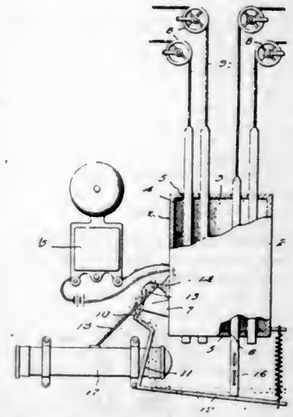
3. In an advertisement and signal display device the combination of a board having perforations therein, a plurality of self-contained display elements each comprising an electric lamp and movable portions for display and non-display respectively, said elements being severally removable from and replaceable in the perforations of said board, and electric contacts capable of cooperation on said elements and board respectively.

4. In an advertisement and signal display device the combination of a board having perforations therein and a plurality of self-contained elements each comprising a movable display member and internal operative mechanism for display and non-display respectively of said member, such mechanism being restricted to an area substantially not greater than the displayed member, and said elements being severally removable from and replaceable in the perforations of said board.

5. In an advertisement and signal display device the combination of a board having perforations therein, a plurality of self-contained display elements each comprising an electric lamp and controllable devices for initiating display and non-display respectively, said elements being severally removable from and replaceable in the perforations of said board, and coöperative electric contacts connectible with the said elements and board respectively.

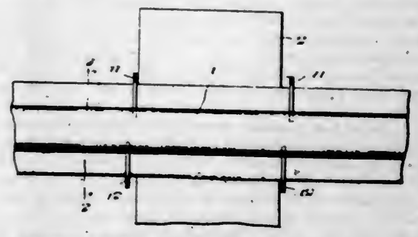
[Claims 6 to 11 not printed in the Gazette.]

1,191,024. FIRE-ALARM. JAMES T. NELSON, Belton, S. C., assignor of one-half to George H. Clement, Belton, S. C. Filed Dec. 15, 1915. Serial No. 66,987. (Cl. 177—359.)



In a fire alarm and annunciator, a casing, weights slidable through the casing, flexible members connected to the weights and leading to various parts of the building, the weights being provided with designating characters to indicate the location of the building, said characters being positioned at the lower terminals of the weights, the burning of the flexible members being adapted to allow the weights to fall so that the lower ends will be exposed, thereby allowing the designating characters to be seen, a lever pivoted to the side of the casing, an arm at the lower end of the lever adapted to extend beneath the weights to be engaged thereby when the weights drop, a finger at the upper end of the lever adapted to close a circuit through an alarm sounding device, an illuminating means adapted to direct light rays against the lower ends of the weights to render the characters thereon readily distinguishable in the dark and means connected to the finger to simultaneously operate the illuminating means upon the dropping of the weights.

1,191,025. RAIL-FASTENER. SWAN A. NELSON, Tunnelhill, Pa. Filed Jan. 29, 1916. Serial No. 75,076. (Cl. 238—4.)



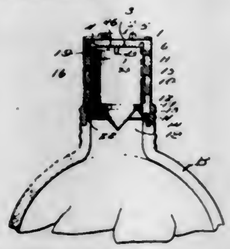
1. In combination, a tie and rails arranged upon the tie, a rail securing device comprising grab members adapt-

ed to engage with both the under and the upper faces of the base flanges of the rails, rods connected with the said grab members, means for adjusting the rods, a saddle plate arranged under the tie, a rod disposed centrally of the saddle plate, and a connection between the said rod and the said adjustable rods.

2. A tie and a rail seated upon the tie, grab hooks engaging the base flanges of the rail and disposed to the opposite sides of the tie, said grab hooks having rail engaging surfaces adapted to receive the base flanges of the rail, longitudinally movable elements connected with the grab hooks and adapted to swing the same into engagement with the rail, and a saddle plate arranged under the tie and connected with the said adjustable elements.

3. In combination with a tie and a rail resting upon the tie, a saddle plate provided with teeth arranged transversely of the tie and having its teeth contacting with the tie, a rod passing centrally through the saddle plate and having its ends projecting beyond the ends of the said saddle plate, threaded members pivotally secured to the opposite ends of said rod, turnbuckles connected with the said threaded members, threaded members secured to the opposite ends of said turnbuckles, grab hooks pivotally connected with the last mentioned threaded members, and said grab hooks engaging the base flanges of the rail, and means for securing the turnbuckles or the threaded members to the tie.

1,191,026. NON-REFILLABLE BOTTLE. RENÉ H. NÉRAT, New York, N. Y. Filed Oct. 1, 1915. Serial No. 53,628. (Cl. 215—103.)



1. In a non-refillable bottle, the combination with a bottle neck whose wall contains a spiral channel opening at its upper and lower ends into the bore of the neck, and a tubular valve seat secured within the lower end of the neck below said channel and made conical on its exterior; of a valve having a hollow cylindrical outer wall of less length than and slidably fitting within the neck, a frusto-conical wall making a sharp angle at its lower edge with said outer wall and extending thence inward and whose sides are of less pitch than the exterior of said seat, and a closure for the top of the frusto-conical wall, for the purpose set forth.

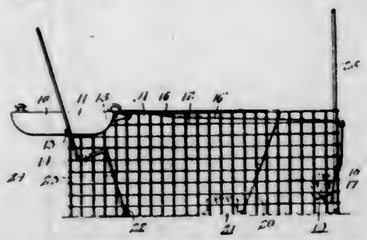
2. In a non-refillable bottle, the combination with a bottle neck whose wall contains channels opening at their ends into the bore of the neck near the extremities of said bore, and an annular valve seat secured within the lower end of said neck and made frusto-conical on its exterior; of a valve having a cylindrical hollow outer wall closely and slidably fitting within said neck, a frusto-conical wall rising obliquely from the lower edge thereof, a flat ring adapted to overlie the upper edge of said seat, a cylindrical inner wall depending from the inner edge of said ring, and a bottom closing the lower end of said inner wall.

3. In a non-refillable bottle, the combination with a bottle neck comprising spaced cylinders with ribs between them producing channels opening at their extremities through the inner cylinder near its ends; of an annular valve seat secured within the neck and having a frusto-conical exterior spaced from the inner end of the inner cylinder; and a valve comprising a hollow cylindrical shell slidably fitting within the bore of said inner cylinder, an internal truncated wall rising in a sharp angle from the lower edge thereof, the apex of said angle adapted to contact with the frusto-conical face of the seat, a ring within the smaller end of said truncated wall, and a closure across the ring.

4. In a non-refillable bottle, the combination with a bottle neck comprising spaced cylinders with ribs between them producing channels opening at their extremities through the inner cylinder near its ends; of an annular valve seat secured within the neck and having a frusto-conical exterior face spaced from the inner end of the inner cylinder; a valve having a cylindrical shell closely and slidably fitting within the inner cylinder, bent at its lower edge into a wall standing at a sharp angle to said shell, the apex of such angle adapted to contact with the face of said seat, and a bottom extending from such wall across the shell, and a guard rigidly mounted between the upper end of said inner cylinder and the mouth of the neck.

5. In a non-refillable bottle, the combination with a bottle neck comprising an outer shell connected at its lower end with the bottle, a tube disposed concentrically within and spaced from and shorter than said shell, spiral ribs uniting these elements and producing spiral channels opening into the bore of the tube at its upper and lower ends, and an annular plate within the upper end of the shell and having a central opening smaller than said bore; of a guard comprising a disk disposed between said plate and tube and spaced from both and having a peripheral bead on its outer face and fingers around its edge projecting into and secured to said tube; an annular seat having a frusto-conical body spaced from the inner end of said tube, and a flange at its larger end secured to the neck; and a valve slidably mounted within the bore of the tube and adapted alternately to rest on the seat and close said opening from the inner convolution, or to rise from said seat and abut at its upper end against said fingers.

1,191,027. ANIMAL-TRAP. NICHOLAS N. NESSA, Badger, Iowa. Filed May 5, 1916. Serial No. 95,635. (Cl. 43—19.)



1. A trap comprising a receptacle open at one end, a yoke member swingingly mounted on the receptacle and having offset terminals, a door pivotally mounted upon said terminals, means for normally holding the door in opened position and adapted to be tripped to permit the door to gravitate to closed position, and an automatic operable locking element adapted to coöperate with said yoke to hold said door closed.

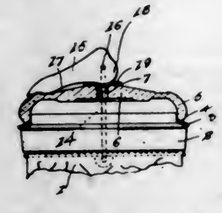
2. A trap comprising a receptacle open at one end, a yoke member swingingly mounted on the receptacle and having offset terminals, a door pivotally mounted upon said terminals and normally resting upon the top of the receptacle in opened position, a longitudinally movable arm mounted on the receptacle and having one end normally overlying the adjacent edge of the door to maintain the latter in opened position, and animal controlled means for adjusting said arm to release the door whereby the latter gravitates to closed position.

3. A trap comprising a receptacle open at one end, a yoke member swingingly mounted on the receptacle and having offset terminals, a door pivotally mounted upon said terminals and normally resting upon the top of the receptacle in opened position, a longitudinally movable arm mounted on the receptacle and having one end normally overlying the adjacent edge of the door to maintain the latter in opened position, animal controlled means for adjusting said arm to release the door whereby the latter gravitates to closed position, and an automatic operable locking element adapted to coöperate with said yoke to hold the door closed.

4. A trap comprising a receptacle open at one end, a yoke member swingingly mounted on the receptacle and having offset terminals, a gravitating door pivotally mounted upon the terminals and normally resting upon the top of the receptacle in opened position, means for holding the door in opened position, animal controlled means for releasing the door, and a second yoke swingingly mounted on the receptacle and coöperating with the first mentioned yoke to hold the door in closed position.

5. A trap comprising a receptacle open at one end, a yoke member swingingly mounted on the receptacle and having offset terminals, a door pivotally mounted upon said terminals, means for normally holding the door in opened position and adapted to be tripped to permit the door to gravitate to closed position, a second yoke swingingly mounted on the receptacle and formed with shoulders adapted to automatically assume a position in advance of said offset terminals to hold the door closed.

1,191,028. PRESERVING-JAR. JOHN B. NORTHROP, Fort Smith, Ark. Filed Mar. 13, 1914. Serial No. 824,402. (Cl. 215—88.)



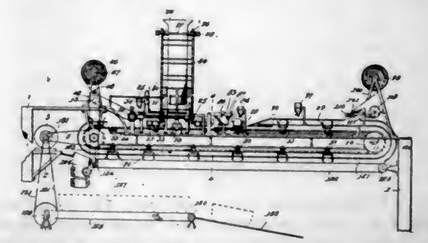
The combination with a jar provided on its exterior below its mouth with an annular flange, a cover fitted on the mouth of the jar and provided with a depending peripheral flange extending downwardly on the exterior of the jar to the said flange thereof, said cover being provided in its outer face adjacent to its periphery with an annular groove and having at its center a relatively large vent opening, a bail connected with the jar and extending over the cover, an elastic washer arranged on the center of the cover and the vent opening and a locking lever pivotally mounted on the bail and having an eccentrically arranged head presenting a curved face to the washer and arranged to compress same and bow the said washer downwardly within the vent opening, said locking lever terminating short of the outer edge of the cover and provided with an outer projecting portion fitting in the annular groove of the cover for holding the lever against displacement.

1,191,029. BREAD WRAPPING, LABELING, AND SEALING MACHINE. JAMES P. NORWOOD, Gary, Ind. Filed July 1, 1913. Serial No. 776,848. (Cl. 93—7.)

1. In a bread wrapping machine, a plurality of horizontally traveling carriers, mechanism operating to deliver loaves of bread singly to the carriers, each loaf of bread being partially wrapped during such delivery, means to rotate the carrier while traveling, and means to complete the wrapping operation by the mentioned rotation.

2. In a bread wrapping machine, an endless conveyer, a plurality of carriers mounted on the conveyer, mechanism to deliver loaves of bread singly to the carriers, each loaf of bread being partially wrapped during its delivery, and strips arranged to traverse the conveyer and to engage the partially wrapped loaves of bread, the strips operating automatically during continued movement of the carriers to complete the wrapping operation.

3. In a bread wrapping machine, an endless conveyer operating in a substantially horizontal plane, a plurality of carriers mounted on the conveyer, each carrier being individually rotatable with its axis of rotation extending vertically, mechanism to deliver loaves of bread singly to the carriers, each loaf of bread being partially wrapped during its delivery, means arranged in the path of movement of the partially wrapped bread to rotate the carriers, and means including a pair of wrapper-engaging strips arranged to extend at an angle across the conveyer to complete the wrapping operation during continued movement of the carriers.

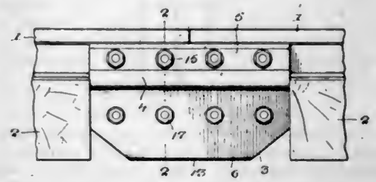


4. A bread wrapping machine including an endless conveyer, a plurality of carriers movable therewith, means for automatically supplying wrapping material over said carriers, means for automatically feeding the bread, one loaf at a time, on to the said material and within the said carriers, the bread feeding operation being controlled by movement of said conveyer, means for varying the position of the carriers at predetermined intervals with respect to the said conveyer and means disposed in the path of movement of said carriers for folding said material upon the said bread, as and for the purpose set forth.

5. In a bread wrapping machine, a plurality of traveling carriers, means to deliver loaves of bread singly to the carriers, each loaf of bread being partially wrapped during its delivery, strips arranged to traverse the carriers for folding the wrapping material upon the top of the loaves of bread, means applying adhesive substance to the wrapping material immediately previous to the folding operation aforesaid, and a roller operating in conjunction with each folding strip to press the wrapper subsequent to folding, as and for the purpose set forth.

[Claims 6 to 40 not printed in the Gazette.]

1,191,030. RAIL-JOINT. WILLIAM H. PATERSON, Des Moines, Iowa. Filed Feb. 9, 1916. Serial No. 77,222. (Cl. 239—10.)



The combination with the meeting ends of two rails, of a joint for the rails, said joint comprising two similar companion members each formed from a single plate of metal and one arranged upon each side of the sides of the rails, each of said members being shaped to provide a horizontally arranged longitudinally disposed rounded portion, the ends of which being extended inwardly to provide horizontal portions which are adapted to exert a tension toward each other and which are adapted to receive and contact with the opposite sides of the base flanges of the rails at points approximately in a line with the head of the said rails, the upper contacting portion being extended vertically and received in the fishing spaces of the rails and engaging with the underface of the heads of the rails, means for connecting said plates with the webs of the rails, the lower contacting portions having

their edges abutting and rounded and being extended downwardly in parallel relation with each other and having their lower edges rounded inwardly and contacting, and means for connecting said downwardly extending plates.

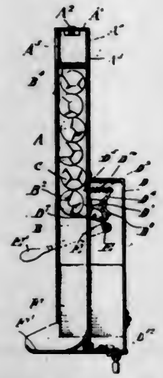
1,191,031. FISH-HOOK. ROBERT D. PETERS, Knox, Ind., assignor of fifteen-sixteenths to Nellie V. Peters, Knox, Ind. Filed Nov. 23, 1915. Serial No. 63,018. (Cl. 43—7.)



1. The combination with a fish hook, of a guard comprising an elastic band secured at one end to the shank of the hook, said band having an opening in the bight portion of its opposite end receiving the barb of the hook and dividing said portion into sections engaging the outer side of the point of the barb and the underside of the spur of the barb, said band being held under tension.

2. The combination with a fish hook, of a guard of elastic material directly engageable with the hook at any point under tension.

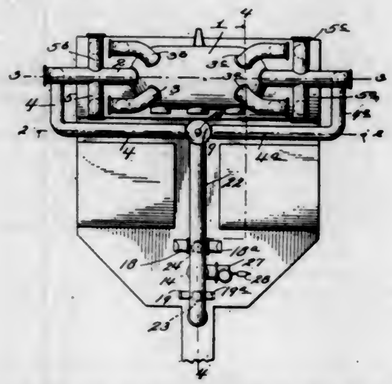
1,191,032. COIN-CONTROLLED COLLAR-VENDING MACHINE. JOHN J. PIERRE, Freeport, N. Y. Filed Feb. 5, 1916. Serial No. 76,384. (Cl. 194—88.)



1. In a coin-controlled vending machine, a plurality of vertical compartments, a common outlet therefor, a shaft extending lengthwise of said compartments, a discharge lever for each compartment loosely mounted on said shaft, a separating arm for each compartment carried by said lever, a main operating shaft, a stop arm on the discharge lever, an arm on said main operating shaft for supporting the coin between itself and said stop arm and arranged in the path of said discharge lever, and article supporting fingers movable with said discharge lever and adapted to be withdrawn as a separating finger is thrust between two adjacent packages.

2. In a coin-controlled vending machine, a plurality of vertical compartments, a common outlet therefor, a shaft extending lengthwise of said compartments, a discharge lever for each compartment loosely mounted on said shaft, a separating arm for each compartment carried by said lever, a main operating shaft, a stop arm on the discharge lever, an arm on said main operating shaft for supporting the coin between itself and said stop arm and arranged in the path of said discharge lever, article supporting fingers movable with said discharge lever and adapted to be withdrawn as a separating finger is thrust between two adjacent packages, said supporting fingers having stop shoulders, and springs acting on the separating fingers to hold them in their farthest outward position.

1,191,033. REVERSIBLE REGENERATIVE FURNACE. ALLEYNE REYNOLDS, London, England. Filed Oct. 18, 1912. Serial No. 726,528. (Cl. 158—7.5.)



1. In a gas-fired reversible regenerative furnace, wherein combustion of the gas is effected in more than one stage, comprising, a working furnace chamber, a regenerator system for the air connected with the air ports opening into said chamber, regulating and reversing valves controlling the supply of air and gas to the air and gas ports and situated in a cool part of the furnace, a separate auxiliary reversible regenerator system for air communicating with the main air and gas regenerator system at points outside of said chamber, and regulating and reversing valves controlling the gases traversing the auxiliary regenerator system and situated in a cool part of the furnace, substantially as described.

2. A gas-fired reversible regenerative furnace wherein combustion of the gas is effected in more than one stage, comprising, a working furnace chamber, regenerator systems for air and gas connected with air and gas ports opening into said chamber, regulating and reversing valves controlling the supply of air and gas and situated in a cool part of the furnace, a separate auxiliary reversible regenerator system communicating with the main air and gas system at a point outside said chamber, and regulating and reversing valves controlling the gases traversing the auxiliary regenerator system and situated in a cool part of the furnace, substantially as described.

3. A gas-fired reversible regenerative furnace wherein combustion of the gas is effected in more than one stage, comprising, a working furnace chamber, regenerator systems for air and gas connected with air and gas ports opening into said chamber, regulating and reversing valves controlling the supply of air and gas and situated in a cool part of the furnace, a separate auxiliary reversible air regenerator system communicating with the main gas system at a point outside said chamber, and regulating and reversing valves controlling the said auxiliary air regenerator system, substantially as described.

4. A gas-fired reversible regenerative furnace wherein combustion of the gas is effected in more than one stage, comprising, a working furnace chamber, regenerator systems for air and gas connected with air and gas ports opening into said chamber, regulating and reversing valves controlling the supply of air and gas and situated in a cool part of the furnace, a separate auxiliary reversible air regenerator system communicating with the gas ports leading from the main gas regenerator system to said chamber and regulating and reversing valves controlling the said auxiliary air regenerator system, substantially as described.

5. A gas-fired reversible regenerative furnace wherein combustion of the gas is effected in more than one stage, comprising a working furnace chamber, regenerator systems for air and gas connected with the air and gas ports opening into said chamber, regulating and reversing valves controlling the supply of air and gas and situated in a cool part of the furnace, said generator systems comprising a plurality of sets of spaced air and gas chambers and a duct between the air and gas chambers of each set, said duct communicating with the air and gas chambers whereby comparatively cool air may, without substantially raising the temperature, be diverted into the air and gas generator systems at a point at which hot gas enters the latter, and reversing valves situated in a cool part of the furnace for controlling the passage of fluid through the ducts.

1,191,034. COLOR PHOTOGRAPHY AND COLOR-PRINTING. JULIUS RHEINBERG and ERNEST RHEINBERG, London, England. Filed Aug. 31, 1914. Serial No. 859,502. (Cl. 95—2.)

1. In color photography, the method of converting a picture, which comprises color elements of microscopic size of a multicolor screen acting on the eye by the principle of additive color mixtures, into one which acts on the eye by the principle of subtractive color mixtures, such method consisting in transfusing the colors of adjacent color elements into one another.

2. In color photography, the method of converting a picture, which comprises color elements of microscopic size of a multicolor screen acting on the eye by the principle of additive color mixtures, into one which acts on the eye substantially by the principle of subtractive color mixtures, such method consisting in partially transfusing the colors of adjacent color elements into one another.

3. In color photography, the method of converting a picture, which comprises color-elements of microscopic size of a multicolor screen acting on the eye by the principle of additive color mixtures, into one which acts on the eye by the principle of subtractive color mixtures, such method consisting in transfusing the colors of adjacent color elements into one another by means of solvents.

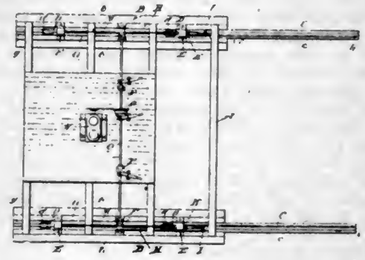
4. The method of producing a multi-colored picture consisting in preparing by means of a taking color screen which has color elements of microscopic size a photograph on a transparent medium, causing this photograph to register with a multicolor screen which has a colloid film with colored areas corresponding to but complementary to those of the taking color screen and a superposed light-sensitive layer, exposing this color screen through the said photograph, developing it, and treating it so as to cause the colors of adjacent color elements to run into one another.

5. In color photography, the method of producing a multi-colored picture consisting in preparing by means of a taking color screen which has color elements of microscopic size a photograph on a transparent medium, causing this photograph to register with a multicolor screen which has a colloid film with colored areas corresponding to but complementary to those of the taking color screen and a superimposed colloid film sensitized with media which render the colloid sensitized therewith impermeable to solvents to which after exposure to light it becomes permeable in proportion to the exposure, exposing this color screen through the said photographs, developing it, and treating it so as to cause the colors of adjacent color elements to run into one another.

[Claims 6 and 7 not printed in the Gazette.]

1,191,035. MEANS FOR SUPPORTING AND MOVING EXCAVATING-MACHINES. CHARLES W. ROOD, Britt, Iowa, assignor of one-half to Charles C. Jacobs, Amboy, Ill. Filed Feb. 3, 1909. Serial No. 475,741. (Cl. 21—124.)

1. In combination, a movable track adapted to lie upon the ground, a carriage mounted to run upon said track and having a shoe adapted to rest upon the ground and act as a brake, connecting mechanism between said track and said carriage arranged to move the track under the carriage while said shoe is resting upon the ground and then to lift said carriage so as to raise the shoe and move the carriage along the track in the same direction as that in which the track moved, and means for actuating said mechanism.



2. In combination, a pair of independent movable track members, a carriage mounted to run upon said track members, and connecting mechanism between said track members and said carriage constructed and arranged to shift said track members beneath the carriage independently of each other or in unison and then to shift the carriage over the track members in the same direction as that in which the track members moved.

3. In combination, a track adapted to lie upon the ground, a carriage, a shoe on the carriage adapted to rest upon the ground, a plurality of connected legs pivoted to said carriage and having wheels thereon arranged to ride upon said track, said legs being of such lengths that they normally lie at an angle to the vertical, and connecting mechanism between said track and said carriage including members fastened to said legs for moving said track beneath the carriage and then lifting the carriage through said legs and moving it over the track in the same direction as that in which the track moved.

4. In combination, a track adapted to lie upon the ground, a carriage above said tracks, said carriage being provided with shoes on opposite sides thereof so constructed and arranged as normally to rest upon the ground, and mechanism between said track and said carriage constructed and arranged to shift the track along the ground beneath the carriage and then to lift the carriage from the ground and move it along the track.

5. In combination, a track adapted to lie upon the ground, a carriage mounted to run on the track, means for supporting the carriage upon the ground so as positively to prevent movement longitudinally of the track in either direction which may be selected and leave it free to move in the opposite direction, and means adapted to produce a relative movement between the carriage and the track in the latter direction.

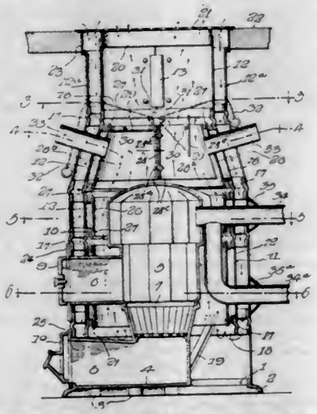
[Claim 6 not printed in the Gazette.]

1,191,036. FURNACE. ARTHUR SCHIMMEL, Evansville, Ind. Filed July 22, 1915. Serial No. 41,297. (Cl. 126—99.)

1. In combination, a furnace proper, a substantially cylindrical shell surrounding the same, rising therefrom, and having an open upper end provided with a horizontal grating, a plurality of upright radially located partitions in the shell between the furnace proper and the grating, said partitions meeting each other at a central point and extending to the shell to provide a plurality of segmental heat pockets, the latter having constantly open unobstructed lower ends disposed immediately above the furnace proper, removable segmental top plates for closing or opening the upper ends of said pockets to either allow or obstruct the passage of heat therefrom through the grating, and independent heat outlets leading from the pockets beyond the exterior of the shell.

2. In combination, an upright shell comprising a body portion of cylindrical formation, a frusto cone-shaped

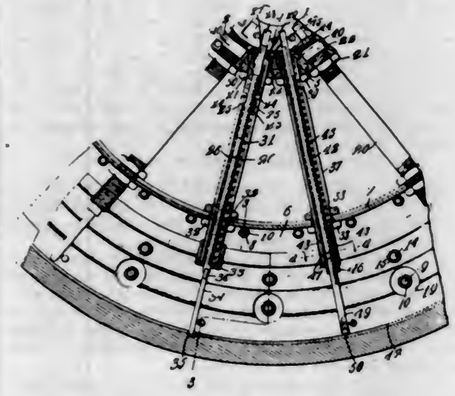
section rising therefrom, and a cylindrical upper section rising from said frusto cone-shaped section, a grate at the upper end of said upper section, an upstanding one-piece sheet metal partition extending diametrically across the aforesaid frusto cone-shaped section of the shell and having inclined ends bent laterally and forming attaching flanges, two pairs of radially located partitions disposed one pair on each side of the first named partition, each of said pairs being formed of a single sheet of metal bent into the form of a V with its ends inclined and bent laterally to form attaching flanges, the corners of the V-shaped formations being flattened and disposed in contact with opposite sides of said first named partition at the center thereof, bolts passed through said flattened corners and through the intervening partition, removable segmental cover plates positioned horizontally and filling the spaces between the upper edges of the numerous partitions, whereby to form therewith heat pockets, independent hot air outlets leading from such pockets beyond the exterior of the shell, means for admitting air into the lower end of said shell, and a furnace in said shell below the partitions.



3. In combination, an upright shell comprising a body portion of cylindrical formation, a frusto cone-shaped section rising therefrom, and a cylindrical upper section rising from said frusto cone-shaped section, a grate at the upper end of said upper section, a lining in the shell including a frusto cone-shaped section disposed within and spaced from the frusto cone-shaped section of said shell, an upstanding one-piece sheet metal partition extending diametrically across said section of the lining and having inclined ends bent laterally and forming attaching flanges secured to such section, two pairs of radially located partitions disposed one pair on each side of the first named partition, each of said pairs being formed of a single sheet of metal bent into the form of a V with its ends inclined and bent laterally to form attaching flanges secured to the aforesaid lining section, the corners of the V-shaped formations being flattened and disposed in contact with opposite sides of said first named partition at the center thereof, bolts passed through said flattened corners and through the intervening partition, removable segmental cover plates positioned horizontally and filling the spaces between the upper edges of the numerous partitions, whereby to form therewith heat pockets, independent hot air outlets leading from such pockets beyond the exterior of the shell, means for admitting air into the lower end of said shell, and a furnace in said shell below the partitions.

1,191,037. AUTOMOBILE-WHEEL. MATHIAS J. SCHMITT, Emporia, Kans. Filed Oct. 12, 1915. Serial No. 55,482. (Cl. 152—48.)

1. In a spring wheel, a hub; a felly; a rim movable with respect to the felly; spokes connecting the hub and the felly, one spoke being tubular; a screw slidable in the tubular spoke and coacting with the rim; a nut into which the screw is threaded, the nut being slidable in the said spoke; interengaging elements on the nut and the said spoke for holding the nut against rotation; a spring one end of which is engaged by the nut; and means for engaging the other end of the spring.



2. In a spring wheel, a hub; a felly; a rim movable with respect to the felly; spokes connecting the hub and the felly, one spoke being tubular; a screw slidable in the tubular spoke and coacting with the rim; a nut into which the screw is threaded, the nut being slidable in the said spoke; interengaging elements on the nut and the said spoke for holding the nut against rotation; a spring engaged at one end by the nut; means for engaging the other end of the spring; and means for rotating the screw.

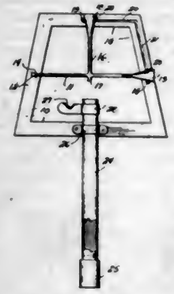
3. In a spring wheel, a hub; a felly; a rim movable with respect to the felly; spokes connecting the hub and the felly, one spoke being tubular; a screw slidable in the tubular spoke and coacting with the rim; a nut into which the screw is threaded, the nut being slidable in the said spoke; interengaging elements on the nut and the said spoke for holding the nut against rotation; a spring engaging at one end by the nut; means for engaging the other end of the spring; and a hub carried wheel in which the screw is slidable, the wheel and the screw being interengaged for simultaneous rotation.

4. In a spring wheel, a hub; a felly; a rim movable with respect to the felly; spokes connecting the hub and the felly, one spoke being tubular; a screw slidable in the tubular spoke and coacting with the rim; a nut into which the screw is threaded, the nut being slidable in the said spoke; interengaging elements on the nut and the said spoke for holding the nut against rotation; a spring engaged at one end by the nut; means for engaging the other end of the spring; a hub carried worm-wheel in which the screw is slidable, the worm wheel and the screw being interengaged for simultaneous rotation; and a hub carried worm meshing into the worm wheel.

5. In a spring wheel, a hub; a felly; a rim movable with respect to the felly; spokes connecting the hub and the felly, one spoke being tubular; a screw slidable in the tubular spoke; a tension connection between the outer end of the screw and the rim; a nut into which the screw is threaded, the nut being slidable in the said spoke and being located adjacent the hub; interengaging elements on the nut and on the said spoke for holding the nut against rotation; a spring abutting at its inner end against the nut; a spoke-carried abutment receiving the outer end of the spring; and hub-carried means operatively connected with the screw to rotate the screw.

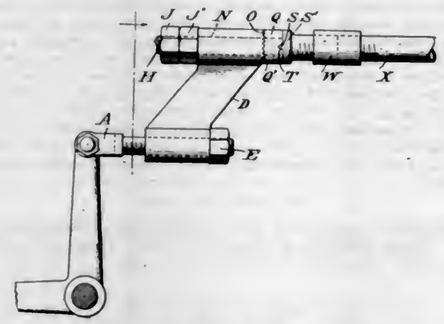
[Claims 6 and 7 not printed in the Gazette.]

1,191,038. NEEDLE-THREADING APPARATUS. JOHN SEIDEL, Seattle, Wash. Filed Mar. 1, 1913. Serial No. 751,597. (Cl. 223—36.)



In a needle threading device, a support provided with a needle receiving groove, a metallic tube mounted on said support and provided with an aperture to register with the terminus of said groove, said tube being conjunctively utilizable as a thread guide and as a means to hold the needle against displacement relatively to said groove, an ear formed on said tube, and a means penetrating said ear and said support to provide a fastening means for said tube, and to permit said tube to be disposed parallel to the support when the device is not in use.

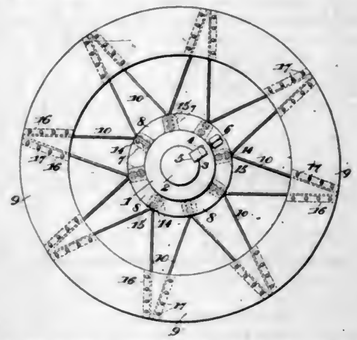
1,191,039. ADJUSTABLE OFFSET FOR RAILWAY SWITCHES AND SIGNALING APPARATUS. BERT SHERWOOD, Jordan, N. Y. Filed Oct. 19, 1915. Serial No. 56,729. (Cl. 74—47.)



1. An offset for switch and signal throwing apparatus comprising a plate having parallel apertures therein, one of which is interiorly threaded, a threaded rod engaging the threaded opening and having a forked end to which a crank arm is adapted to be fastened, a screw mounted loosely in the other opening and about which openings at the end thereof are serrations, jam nuts upon the screw, a serrated washer upon the screw, and means for holding the serrations upon the washer in engagement with the serrations upon said plate.

2. An offset for switch and signal throwing apparatus comprising a plate having parallel apertures therein, one of which is interiorly threaded, a threaded rod engaging the threaded opening and having a forked end to which a crank arm is adapted to be fastened, a screw mounted loosely in the other opening and about which openings at the end thereof are serrations, jam nuts upon the screw, a serrated washer upon the screw, said screw having a collar with integral teeth thereon and the washer being provided with notches for the engagement of said teeth upon the collar.

1,191,040. FAN-WHEEL. GEORGE F. SHERWOOD, Jacksonville, Fla. Filed Nov. 6, 1915. Serial No. 60,056. (Cl. 253—194.)

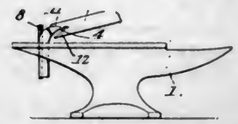


1. A fan wheel, comprising a hub, a pair of oppositely arranged rings concentric with the hub and tapering or frusto-conical and arranged with their large ends inward, and a series of substantially V-shaped blades arranged in spaced relation and connecting the rings with each other and with the hub, each blade being formed from sheet metal doubled upon itself to form a pair of leaves diverging from the integral connection at the peripheries of the rings toward the hub, the inner ends of the leaves of each blade being secured to the inner ends of the adjacent leaves of adjacent blades, the hub having pairs of radial lugs spaced apart to receive a pair of superposed blade lugs between the said pair of hub lugs, the hub having marginal radial flanges integral with the ends of the radial lugs.

2. A fan wheel, comprising a hub, a pair of spaced rings coaxial with the hub, and a series of fan blades arranged between the rings and connecting the rings with each other and with the hub, each blade being formed from sheet metal doubled upon itself to form a pair of leaves diverging from their connection at the peripheries of the ring toward the hub, and each leaf of each blade being rigidly connected to the adjacent leaf of the adjacent blade and with the hub.

3. A fan wheel comprising a hub and a series of fan blades, each blade being formed from a sheet doubled upon itself to form a pair of diverging leaves, and the blades being arranged with the connection of the leaves remote from the hub and with the ends of each leaf connected with the adjacent leaf of the adjacent blade.

1,191,041. TOOL-SHARPENING STAKE FOR ANVILS. THOMAS E. STEVENS, Glens Falls, N. Y. Filed Mar. 16, 1916. Serial No. 84,629. (Cl. 78—7.)

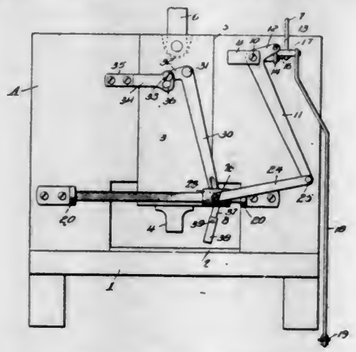


A split chisel attachment for anvils, comprising a rectangular body having at its upper end an outwardly curved portion, in combination with a wedge member sleeved within a recess upon the outer face of the tool, substantially as shown and for the purpose specified.

1,191,042. SAFETY DEVICE FOR PUNCHING-PRESSES. WILLIAM H. SUNDAY, Rochester, N. Y. Filed July 29, 1914. Serial No. 853,910. (Cl. 164—107.)

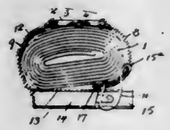
A safety device for punching presses and the like comprising in combination with a reciprocatory element of the press, a bell crank lever pivotally connected thereto and

actuated thereby, a guard finger arranged above the press bed and actuated by said bell crank lever, a guide parallel



to the press bed along which said guard finger slides, and a stationary support relatively to which one arm of said lever is adjustable.

1,191,043. MAIL-BAG LOCK. JOHN C. M. SUTTON, Bellevue, Nebr. Filed Aug. 31, 1915. Serial No. 48,341. (Cl. 150—15.)



1. A device of the class described comprising the combination with a mail bag, of a link secured thereto, arms pivoted to the side bars of the link, a lock carried by one of the arms and means carried by the other arm and coöperating with the lock to hold the arms connected and encircling the bag.

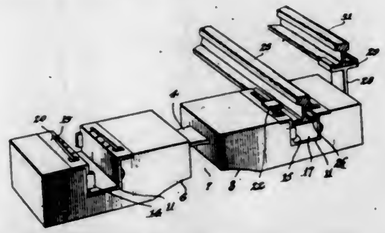
2. In combination with a mail bag, a link detachably secured to the bag, curved arms secured to opposite sides of the link, a lock carried by one of the arms and a staple carried by the opposite arm, said staple coöperating with the lock in holding the arms in position to encircle the bag.

3. In combination, a mail bag, a link, a strip secured to the link and provided with a central aperture, a bolt extending through the aperture in the strip and through the bag, means to retain the bolt in place, curved arms pivoted to the link, a lock carried by one of the arms and a staple carried by the coöperating arm to be engaged by the shackle of the lock to hold the arms in encircling position with the mail bag.

1,191,044. RAILWAY-TIE. WALDO DUANE THOW, Kalispell, Mont. Filed Feb. 9, 1916. Serial No. 77,220. (Cl. 238—3.)

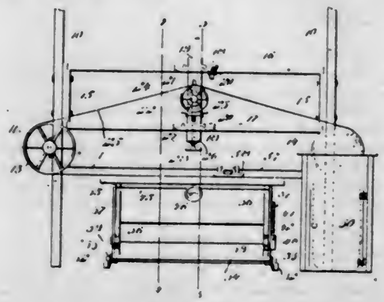
1. A tie comprising two plastic spaced members having metal reinforcements connecting the same, a trough member arranged transversely of each of the plastic ends of the tie and supported upon but insulated from the metal reinforcement, a cushion block within each of the troughs, means upon the sides of the troughs for securing the cushion blocks therein, a rail adapted to rest upon but insulated from each of the blocks, and members associated with the troughs at the upper edges thereof for retaining the rails upon the blocks.

2. A tie for railway rails including a pair of spaced plastic members having metal reinforcements therein and extending through the inner ends of the same, means for adjustably connecting the extending ends of said reinforcements, troughs arranged in the plastic ends and connected to and insulated from the metal reinforcements, said troughs having their upper ends bent over the plastic members of the tie and their said ends provided with longitudinally extending key hole slots, and apertures disposed adjacent the slots, and said slots adapted to receive T-shaped depending members of rail-engaging elements, and pins passing through the apertures to retain the said elements upon the said ends of the trough.



3. A tie comprising spaced plastic members having their lower adjacent edges cut-away, a metal reinforcement in each of the plastic members and projecting through the inner ends thereof, each of said reinforcements having a flat portion having one of its ends straight and bent upwardly in the tie adjacent the end of the tie and its opposite end straight and arched outwardly from the said flat portion and the ends of the arched and straight members adapted to overlap, means for adjustably connecting the said ends, a wire mesh wound around the arched and straight portions of the reinforcements, inverted U-shaped metal reinforcements arranged below and secured to the straight portions of the first mentioned reinforcements, a substantially U-shaped trough arranged transversely in the plastic ends and secured to the straight portion of each of said reinforcements, a cushon block within each of the troughs to receive a rail, means between the sides of the trough and the cushion blocks for retaining the same in the troughs, means connected with the upper edges of the troughs for securing the rail upon the cushion block, means for insulating said securing members from the rails, bolt members connected with the angular end of one of the first mentioned reinforcing members and extending through the end of one of the plastic members of the tie, and a rail supporting bracket connected to the said bolts.

1,191,045. SANDING AND POLISHING APPARATUS. HARRY VERWER, Pacific Grove, Cal. Filed Sept. 30, 1915. Serial No. 53,296. (Cl. 51—13.)



1. In an apparatus of the class described, the combination with a sanding belt, of a track arranged at right angles to the belt, a carriage movable over the track, a work supporting bed, pivotally connected legs carrying the bed, means detachably connecting a pair of the legs to the carriage, and means for acting upon the other pair

of legs to change the relative position of both pairs thereof for raising and lowering the bed.

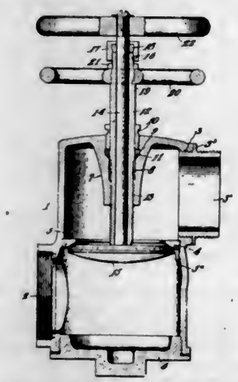
2. In an apparatus of the class described, the combination with a sanding belt and operating mechanisms, of a track arranged at right angles to the belt, a carriage movable upon said track, two pairs of crossed legs, one of said legs of each pair being hinged to the carriage, means for limiting the spreading of each pair of legs, a work support carried by the legs, and manually operable means for controlling the legs to raise or lower the work support relatively to the belt.

3. In a sanding and polishing apparatus, the combination with a sanding belt, of a work supporting mechanism, including a track disposed at right angles to the belt, a carriage upon the track, two pairs of cross legs, one leg of each pair being hingedly connected to the carriage, a yoke connected to the upper ends of two of the legs, a rod connected to the upper ends of the remaining two legs, a table mounted upon the legs, and an adjusting screw connected to both the yoke and the rod, whereby the two pairs of legs are moved to vary the height of the table relatively to the belt.

4. In a sanding and polishing apparatus, the combination with a sanding belt, of a work supporting mechanism, including a track disposed below and at right angles to the belt, a carriage upon the track, two pairs of cross legs, the lower end of one leg of each pair being hingedly connected to the carriage, a table carried upon the upper ends of the legs, a flexible connection between the lower ends of each pair of legs, a windlass carried by one leg of each pair and connected to one end of its respective flexible connection, a rod connecting both windlasses, and a lever and latch mechanism for the rod, whereby both windlasses are wound or released to vary the spread of the legs and the height of the table.

5. In a sanding and polishing apparatus, the combination with a sanding mechanism, of a work supporting mechanism, including a track, a carriage mounted upon the track, a table having two pairs of cross legs, one leg of each pair being hingedly connected to the carriage, a rod connected to the lower end of one leg of each pair, two windlasses carried by the rod, two flexible connections, one to each windlass, each connection connecting its windlass to the other leg of its pair, a lever and latch mechanism for operating the rod and both windlasses, a yoke connected to the upper end of one leg of each pair, a rod connected to the upper end of the remaining leg, and a manually operable screw mounted in the rod and yoke for moving the upper ends of the legs to and from each other to vary the height of the table.

1,191,046. VALVE CONSTRUCTION. ERNEST G. WAGNER, Lewiston, Idaho. Filed Jan. 23, 1914. Serial No. 813,939. (Cl. 137—4.)



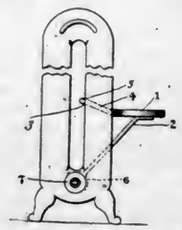
In a valve construction, an upright casing having a lateral outlet adjacent its upper end, a lateral inlet adjacent its lower end, a valve seat between the inlet and outlet, and a depending sleeve carried by said upper end, the upper end portion of the bore of the sleeve being enlarged to form a stuffing box below the upper end of the casing, a packing within said stuffing box, a gland threaded into said stuffing box, a tubular stem slidable through the gland and having screw threads engaging the inner portion of the sleeve bore, the screw threads being spaced below the stuffing box, and a valve seatable upwardly against the valve seat and having its stem slidable freely through the tubular stem.

1,191,047. ART OF PREPARING FOODS FOR COOKING. ROBERT WAHL and ARNOLD S. WAHL, Chicago, Ill. Filed Jan. 16, 1915. Serial No. 2,546. (Cl. 99—11.)

1. As an improvement in the art of preparing for cooking food containing as nutrient bases proteids and phosphates, introducing into the food material before cooking it lactic-acid liquor substantially free from the products of other fermentations containing, besides the acid, the unassimilated remnants and other fermented and unfermentable substances of the cereal matter from which said liquor was produced, thereby transforming basic phosphates into soluble phosphates and proteids into soluble nitrogenous substances and enhancing the palatable, wholesome, digestible and appetizing qualities of the cooked food.

2. As a step in the art of bread-making, introducing into the dough, preparatory to baking it, lactic-acid liquor substantially free from the products of other fermentations containing, besides the acid, the unassimilated remnants and other fermented and unfermentable substances of the cereal matter from which said liquor was produced, thereby transforming basic phosphates into soluble phosphates and proteids into soluble nitrogenous substances and enhancing the palatable, wholesome, digestible and appetizing qualities of the bread.

1,191,048. FOOT-REST FOR RADIATORS. WALTER WAIDLICH, Detroit, Mich. Filed May 29, 1914. Serial No. 841,862. (Cl. 155—9.)

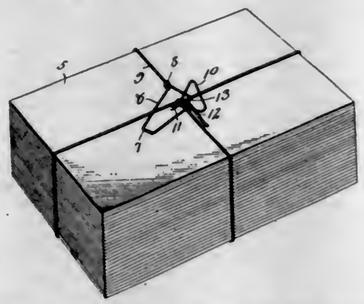


In a device of the class described, a shelf, legs connected with the shelf and engageable with the nipples on the radiator between the sections thereof, and a shank connected with the shelf and provided with a cross head for engagement with the side walls of the loops in the radiator sections adjacent said shank to cause one side edge of the shelf to contact with said sections, said shank extending upwardly and outwardly from said shelf to permit swinging movement of the shelf in one direction to remove said side edge and legs from contact with the radiator.

1,191,049. PACKAGE-TIE. PAUL F. WESTON, Scranton, and JOHN N. SHARPSTEEN, Honesdale, Pa. Filed Aug. 5, 1914. Serial No. 855,224. (Cl. 24—18.)

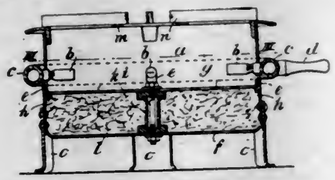
A package tie comprising a substantially triangularly shaped resilient frame formed from a single strand of relatively stiff wire having its ends united to each other, one side stretch of the frame being bent to form a protruding eye, the stretch of the frame opposite the eye being bent to form a substantially triangularly shaped loop and a bill projected into the frame, the said looped portion being offset relative to the wider end of the frame,

the said bill being slightly upwardly curved, the said frame and loop being formed respectively with bights, and a cord fixed in the eye at one of its ends and adapted to



be trained about the corners of the loop and between the bill for entrance into the loop to securely fasten the said cord.

1,191,050. GAS-HEATER. WILLIAM WHITE, London, England. Filed Sept. 15, 1914. Serial No. 861,880. (Cl. 126—40.)



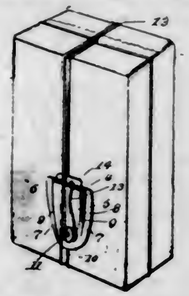
1. A portable heater comprising a gas burner of the non-atmospheric type, a casing around said burner and closing the burner in laterally, said casing having air inlet openings located beneath the burner, an air and gas obstruction plate over the burner and acting also as a utensil support, spaced perforated diaphragms located beneath the burner and above the air inlet openings in the casing and a conductor interposed between said diaphragms and holding them in spaced relation.

2. A portable heater comprising a gas burner of the non-atmospheric type, a casing around said burner and closing the burner in laterally, said casing having air inlet openings located beneath the burner, an air and gas obstruction plate over the burner and acting also as a utensil support, spaced perforated diaphragms located beneath the burner and above the air inlet openings in the casing a conductor interposed between said diaphragms and holding them in spaced relation, and a non-perforated diaphragm located within said casing beneath the air inlet openings thereto.

3. A portable heater comprising a gas burner of the non-atmospheric type, a casing around said burner and closing the burner in laterally, said casing having air inlet openings located beneath the burner, an air and gas obstruction plate over the burner and acting also as a utensil support, spaced perforated diaphragms located beneath the burner and above the air inlet openings in the casing, a conductor interposed between said diaphragms and holding them in spaced relation and an outer jacket around said casing and spaced therefrom, said outer jacket having air inlets located opposite the inlets in the casing, substantially as described.

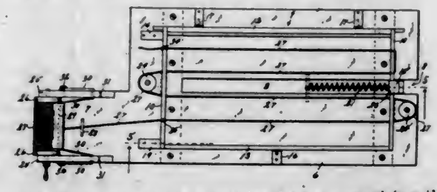
1,191,051. BAG-TYING DEVICE. FRANK J. WICHMANN, Belmont, Wis. Filed Feb. 11, 1916. Serial No. 77,692. (Cl. 229—63.)

1. A paper bag having an external pocket formed of two thicknesses of material partly overlapped, cemented together and each having an extended marginal portion attached to the bag, producing a reinforced portion of double thickness between the marginal edges, in combination with a tying twine, an attaching member for said twine extending through the double thickness of the pocket, and a reel for the twine accommodated in said pocket.



2. A paper bag, external pockets fixed on the two sides of the bag, fastening members connected with the pockets, a twine having an intermediate portion extended beneath the bag and connected with the fastening members, and reels on which the terminal portions of the twine are wound, said reels being accommodated in the pockets.

1,191,052. DEVICE FOR WIRING BEEHIVE-FRAMES. GEORGE W. WRIGHT, Azuza, Cal. Filed Mar. 16, 1916. Serial No. 84,729. (Cl. 140—93.)



1. A device for wiring a beehive frame, comprising the combination of a board provided with an extension on one end thereof and with a slot in the other end portion thereof, a wire-carrying reel arranged on the extension, abutments having pointed projections thereon and arranged at one end of the board, a pivotally mounted catch arranged at the other end of the board and extending through the slot, a spring connected to the catch and to the board, abutments arranged on the front and rear parts of the board, and rollers arranged at the ends of the board, substantially as described.

2. A device for wiring a beehive, comprising the combination of a board, abutments having pointed projections thereon and arranged at one end of the board, a pivotally mounted catch arranged at the other end of the board, a spring connected to the catch and to the board, abutments arranged on the front and rear parts of the board, a wire-carrying reel arranged on the board, and rollers arranged at the ends of the board.

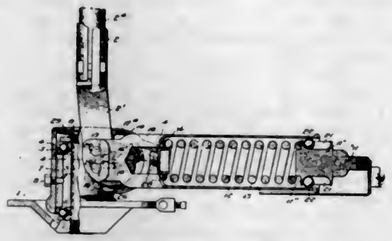
1,191,053. PROCESS OF CONCENTRATING METALLIC ORES BY FLOTATION. HOMER T. YARYAN, Toledo, Ohio. Filed Mar. 29, 1916. Serial No. 87,659. (Cl. 83—85.)

1. The process of concentrating metallic ores which consists in agitating the ores in comminuted form in a mixture of water, oil and a suitable resinate, and then, by flotation, recovering the froth thus produced together with its accompanying metallic particles.

2. In the concentration of metallic ores by flotation, the step which consists in agitating the ores in a mixture of water, oil and a resinate of an alkaline metal.

3. The process of concentrating metallic ores which consists in agitating the ores in comminuted form in water to which is added a mixture consisting of sixty-five per cent. oil and thirty-five per cent. resinate of soda,—petroleum constituting upward of fifty per cent. of the whole,—and then by flotation recovering the froth thus produced together with its accompanying metallic particles.

1,191,054. TROLLEY-STAND. MELVIN A. YEAKLEY, Canton, Ohio, assignor to John E. McLain, Canton, Ohio. Filed Nov. 3, 1908. Serial No. 460,919. (Cl. 191—70.)



1. The combination of a support having a vertical bearing, a trolley pole carrier, a contact member carried by the carrier and rockably engaging different portions of said bearing to permit swinging of the carrier thereon in vertical directions on different axes, and means engaging said carrier at one side of said contact member and tending to elevate said pole carrier and maintain said contact member in engagement with said bearing.

2. The combination of a support having a vertical bearing, a trolley pole carrier, a pivot member fixed to said carrier and provided with a plurality of contact members arranged to rockably engage with said support to permit said carrier to swing vertically, and means engaging said carrier at one side of said contact member and tending to swing said carrier upwardly.

3. The combination of a support having a vertical bearing, a trolley pole carrier having bifurcations, a pivot member fixedly supported at its opposite ends by said bifurcations and provided with a plurality of contact members arranged to rockably engage with said support between said bifurcations to permit said carrier to swing vertically, and means tending to swing said carrier upwardly.

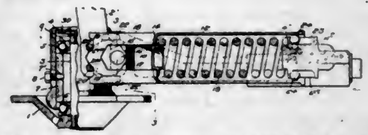
4. The combination of supporting means provided with a grooved bearing, a trolley pole carrier having bifurcations at its lower end arranged upon opposite sides of said bearing, a pivot element fixedly supported at its opposite ends by said bifurcations and provided with a contact member arranged to fit within and rockably engage said grooved bearing to permit the pole carrier to swing in vertical directions, and means acting on said carrier for elevating it and maintaining said contact member in engagement with said grooved bearing.

5. The combination with a support, a trolley pole carrier and means tending normally to hold the carrier against the support and in elevated position, of anti-friction devices between the said carrier and said elevating means and through which said elevating means operates upon the carrier, and anti-friction devices between the carrier and the support to take the thrust therebetween and permit the carrier to swing in vertical directions.

[Claims 6 to 56 not printed in the Gazette.]

1,191,055. TROLLEY-STAND. MELVIN A. YEAKLEY, Canton, Ohio, assignor to John E. McLain, Canton, Ohio. Filed Dec. 22, 1908, Serial No. 468,824. Renewed Dec. 7, 1915. Serial No. 65,473. (Cl. 191—70.)

1. The combination of a support, a trolley pole carrier, and contact elements between said support and carrier permitting the carrier to swing in vertical directions, one of said contact elements having rolling contact with the other element.



2. The combination of supporting means, a trolley pole carrier arranged to swing in vertical directions, a member carried by the said carrier and having rolling contact with the supporting means, and means operating to elevate the said carrier.

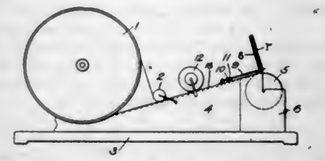
3. The combination of supporting means, a trolley pole carrier arranged to swing in vertical directions, a member carried by the said carrier and having rolling contact with the supporting means, and means operating to elevate the said carrier and maintain said member in engagement with the supporting means.

4. In a trolley stand, the combination of a support, a trolley pole carrier, means for fulcruming the carrier on the said support, said means comprising a bearing and a member having rolling contact engagement therewith, and means for elevating the carrier.

5. In a trolley stand, the combination of a support provided with a bearing, a trolley pole carrier, and a curved contacting member fixed to said carrier and arranged to roll on the surface of said bearing as the pole swings in vertical directions.

[Claims 6 to 39 not printed in the Gazette.]

1,191,056. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Boston, Mass., assignor to National Binding Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 10, 1908. Serial No. 410,098. (Cl. 91—14.5.)



1. A strip serving apparatus comprising in combination, strip holding means, strip moistening means in the service path of the strip, strip severing means, and a cone-shaped guiding roller extending transversely of the service path of the strip and having one end at least spaced therefrom, the strip being deflectable against said roller in the severing operation.

2. A strip serving apparatus comprising in combination, strip holding means, strip moistening means in the service path of the strip, strip severing means angularly positioned with respect to the normal service path of the strip, and strip guiding means extending transversely of and inclined to the normal service path of the strip, the latter being supported against said guiding means during severance.

3. A strip serving apparatus having means for holding a strip from which the latter may be drawn in a turned or partly turned condition, a tapering roll for guiding the strip, a strip severing blade adjacent the service path of the strip, the roller being located relatively to the blade to support the strip during severance, and strip moistening means.

4. A strip serving apparatus having means for holding a strip from which the latter may be drawn in a turned or partly turned condition, a tapering roller for guiding the strip, a substantially upright strip severing blade adjacent the service path of the strip, the roller being located relatively to the blade to support the strip during severance, and strip guiding means.

5. A strip serving apparatus having a support for a strip adapted to be drawn therefrom, said support being shaped to permit the temporary turning of the strip after leaving the holder and the return of the strip to its former unturned position, means inclined to the service path of the strip for guiding the strip at or about the region of turn thereof to distribute the strain evenly throughout, and moistening means positioned in the direct service path of the strip to moisten the strip when it has been turned back to its said former unturned position.

[Claims 6 to 32 not printed in the Gazette.]

1,191,057. MAILING-BOX. CHARLES J. ANDERSON, Philadelphia, Pa., assignor to William J. Lawson, Philadelphia, Pa. Filed Aug. 21, 1915. Serial No. 46,693. (Cl. 229—46.)

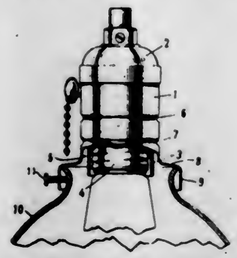


1. The combination of a box having a body portion and a lid; a receptacle at one end of the body portion, the body portion having an opening communicating with the receptacle; and a retaining cord located within the receptacle and having one end anchored to the box so that one end of the cord can be withdrawn from the box through the opening and wrapped around the box and secured.

2. The combination of a box having a body portion and a lid, the body portion having a receptacle at one end; a spool within the receptacle; a cord wrapped around the spool and attached thereto; and an opening in the box through which one end of the cord extends so that the cord can be drawn and wrapped around the box.

3. The combination in a box, of a body portion and a lid; a receptacle at one end of the body portion; a hole in the body portion communicating with the receptacle; a spool within the receptacle; a cord wrapped around the spool and attached thereto, the free end of the cord extending through the opening; and a button on the lid for anchoring the cord after it has been drawn from the receptacle and wrapped around the box.

1,191,058. SHADE-HOLDING SOCKET. FREDERIC BARR, Woodhaven, N. Y.; The Equitable Trust Company of New York, New York, N. Y., a Corporation of New York, executor of said Frederic Barr, deceased. Filed July 16, 1915. Serial No. 40,165. (Cl. 240—115.)



1. A socket shell having formed integrally therewith a dependent shade supporting member, said shell having a plurality of annularly depressed ribs, one of said ribs providing a seat for the contained socket parts and a second of said ribs preventing lateral movement of the said socket parts, and means carried by said dependent shade support-member for supporting the shade.

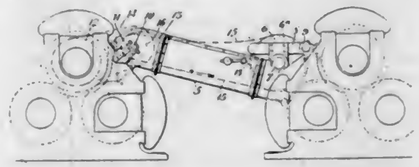
2. A socket shell consisting of a body-part, a cap and a lower dependent skirt formed integral with said body-part and provided with screw seats and adjusting screws engaging said seats and adapted to support a lamp shade, and annular ribs impressed in the body-part and extending into the inner periphery thereof, said ribs being spaced apart, one of said ribs forming a seat upon which the socket parts and insulation may rest, the other of said ribs forming a guide and gage for preventing lateral displacement of the socket and appurtenant parts which are contained within the socket shell.

3. A combined socket shell and shade holder formed of a single piece of metal, the shell part having impressed ribs extending into the inner wall of the shell, said ribs being spaced apart, the uppermost rib forming a seat for the socket mechanism and its insulating lining, the lower of said ribs forming a guide and preventing lateral movement of the parts extending below the seat, and a skirt integrally formed with the shell and provided with means for holding a shade.

4. A socket shell having a body-part formed from a single piece of metal and provided with a cap, annular ribs impressed circumferentially in said body-part and forming stiffeners therefor, one of said ribs serving as a seat for supporting the socket parts and insulating shell, and a continuous dependent skirt formed at the lower end of the body-part and provided with means for holding a lamp shade.

5. A socket shell having a cap and a main shell portion with a circumferentially and inwardly depressed rib, said rib serving to strengthen the shell and forming a seat and a guide for retaining an insulating lining and socket mechanism in position, said shell having at its lower end an enlarged dependent skirt formed integral with the shell and provided with means such as screws extending through the skirt for holding a lamp shade within the skirt.

1,191,059. INTERMEDIATE CONVEYER. JAMES FRANCIS BERRY, Jr., Honolulu, Hawaii, assignor to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed Aug. 24, 1914, Serial No. 858,225. Renewed June 6, 1916. Serial No. 102,088. (Cl. 193—8.)



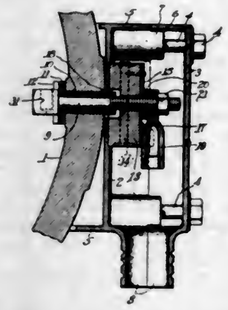
1. An intermediate conveyer comprising, a trough connecting two mills, a fourth roller revoluble in bearings hinged to the housings and coöperating with the discharge roller of the first mill, circumferential grooves in said fourth roller, a shaft at the rear end of said trough revolved by the second mill, endless chains running in said grooves and driven by said shaft, and plates attached to said chains adapted to engage the top of the blanket of bagasse and aid its movement in said trough, substantially as described.

2. In an intermediate conveyer, a fourth roller provided with circumferential grooves, belts in said grooves having plates attached, and means for keeping said grooves free of trash or bagasse, substantially as described.

3. The combination with two sugar cane mills, of an intermediate conveyer therefor comprising a fourth roller secured to the housing of each mill, one of said rollers having its surface in close proximity with the discharge roller of the corresponding mill, said roller also having a plurality of circumferential grooves, conveyer chains passing over said fourth rollers, each of the conveyer chains running in one of said grooves, and a plurality of conveyer plates attached to said chains.

4. The combination with two sugar cane mills, of a fourth roller associated with each of the mills, one of said fourth rollers being hingedly mounted on the mill and having its surface lying in close proximity with the surface of one of the rollers of the mill, said hingedly mounted roller having a plurality of circumferential grooves, a plurality of conveyer chains passing over said fourth rollers, each of said chains running in one of said grooves, and a plurality of conveyer plates attached to said chains.

1,191,060. TERMINAL BOX. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed May 4, 1912. Serial No. 695,057. (Cl. 247—13.)



1. In combination, a terminal box, a support therefor, a plurality of bolts passing through one of the walls of said terminal box for securing said terminal box to said support, said bolts also serving as branch circuit conductors.

2. In combination, a receptacle, an insulating member within said receptacle, a plurality of terminals on said insulating member, and a plurality of bolts serving as branch circuit conductors and to secure said receptacle to a support, said bolts passing through said insulating member and serving to clamp said terminal and to secure said receptacle to said support.

3. In combination, a generator provided with an inclosing casing, a terminal box for said generator, said box having terminal members passing through said generator casing and serving also to hold said box in position, generator conductors within said casing, and means for detachably connecting said terminals and generator conductors within said casing, said means being operable from the outside of said generator casing.

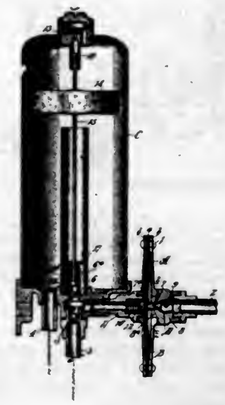
4. In combination, a support, a terminal box attached to the front end of said support, conducting members extending from said box through said support, conductors on the rear of said support, and means for detachably connecting said conductors and conducting members, said means being operable from the front of said support.

5. In combination, a terminal box, a generator field frame, a plurality of bolts for securing said box to said frame, said bolts being arranged with their heads within said field frame and having openings in said heads to receive conductors, said bolts serving also as branch circuit conductors leading from the outside to the inside of said generating field frame.

[Claims 6 to 9 not printed in the Gazette.]

1,191,061. DIAPHRAGM-PUMP. WILLIAM C. CARTER, St. Louis, Mo. Filed Dec. 7, 1914. Serial No. 875,942. (Cl. 158—36.)

1. A diaphragm pump provided with an imperforate diaphragm that is adapted to be moved in one direction by the pressure in a pressure line, a housing in which said diaphragm is arranged, one side of said housing communicating with a chamber or passageway through which the material being pumped passes, and means controlled by the diaphragm for preventing the diaphragm from being subjected to greater pressure than that which was required to move it after said diaphragm was moved in one direction.



2. A diaphragm pump provided with an imperforate diaphragm and with means controlled by the diaphragm for preventing the supply of pressure that operates the diaphragm from entering the diaphragm chamber of the pump after the diaphragm has been moved in one direction.

3. A diaphragm pump provided with a diaphragm chamber, one side of which has an opening that communicates with a pressure line in which the pressure rises and falls intermittently and the other side communicating with a passageway through which the material being pumped passes, an imperforate diaphragm in said chamber, and means controlled by the diaphragm for absolutely cutting off communication between said diaphragm chamber and pressure line after the diaphragm has been moved in one direction by the pressure in said line.

4. A diaphragm pump that is adapted to be operated by an expansible medium, said pump being provided with means controlled by the diaphragm for causing the supply of expansible medium that actuates the diaphragm to be absolutely cut off from the diaphragm chamber of the pump after said diaphragm has been moved in one direction, said means consisting of an element separate and distinct from the diaphragm and which can move independently of the diaphragm.

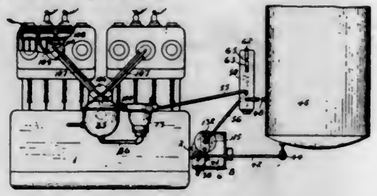
5. In a diaphragm pump that is adapted to be operated by an expansible medium, an imperforate diaphragm, and a valve that is held in its open position by the diaphragm, said valve being arranged between the diaphragm and the supply of pressure that operates the diaphragm and being adapted to be closed automatically by said pressure after the diaphragm has been moved in one direction by the pressure which entered the diaphragm chamber of the pump.

[Claims 6 to 17 not printed in the Gazette.]

1,191,062. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. THOMAS J. CLARK and LOUIS H. DYKE, Oakland, and GEORGE EDWARDS, Berkeley, Cal., assignors, by mesne assignments, to Thomas J. Clark, Oakland, Cal., and Frank W. Simpson, Berkeley, Cal., trustees. Filed Nov. 20, 1911, Serial No. 661,321. Renewed May 22, 1916. Serial No. 99,221. (Cl. 123—179.)

1. A starting device for an internal combustion engine, comprising means for transmitting the motion of said engine to compress air, means for applying the pressure of said compressed air to cause a stream of air to impinge on hydrocarbon and produce a jet or hydrocarbon and air, means for conveying said jet to a combustion chamber of said engine, means for introducing to said jet a supply of air, supplementary to, and independent of, the air supply used to produce said jet, and a sparking device, said means

for producing said jet being operable during the normal action of the engine.



2. A starting device for an internal combustion engine, comprising means for transmitting the motion of said engine to compress aid, means for applying the pressure of said compressed air to cause a stream of air to impinge on hydrocarbon and produce a jet of hydrocarbon and air, means for conveying said jet to a point adjacent to the inlet valve of said engine, means for causing to mingle therewith air, supplementary to and independent of the air supply used to produce said jet, means for conveying the mixture into a combustion chamber of said engine, and a sparking device.

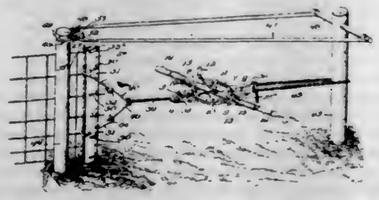
3. A starting device for an internal combustion engine, comprising means for transmitting the motion of said engine to compress air, means for applying the pressure of said compressed air to cause a stream of air to impinge on hydrocarbon and produce a jet of hydrocarbon and air, means for conveying said jet to a combustion chamber of said engine, means for introducing to said jet, a supply of air supplementary to, and independent of, the air supply used to produce said jet, and a sparking device.

4. A starting device for an internal combustion engine comprising means for ttransmitting the motion of said engine to compress air, means for applying the pressure of said compressed air to cause streams of air to enter the combustion chambers, means for applying said pressure to cause a second stream of air to impinge on hydrocarbon and produce a stream of spray or vapor, means for separating said stream into branch streams and causing said branch streams individually to mingle with the streams of air which enter the several combustion chambers and a sparking device.

5. In a starting device for an internal combustion engine, means for supplying to said engine fuel, supplementary to the normal fuel supply thereof, comprising a casing of a vessel for holding hydrocarbon, having an inlet for admitting compressed air, and being so constructed that the admission of compressed air produces a jet of vapor from the hydrocarbon therein, said casing having a mixing chamber into which said jet enters, and having an independent compressed air inlet into said mixing chamber, means for closing said independent inlet, and means for admitting compressed air to both of said inlets.

[Claims 6 to 10 not printed in the Gazette.]

1,191,063. WIRE-STRETCHER. JAMES F. COCHRAN, Jonesboro, Tenn. Filed Apr. 4, 1916. Serial No. 88,930. (Cl. 254—66.)

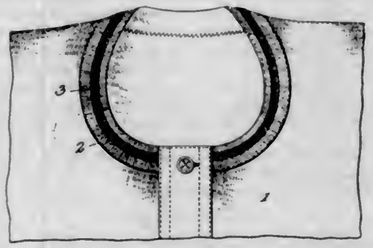


1. A wire stretcher comprising an elongated housing formed with parallel guide-ways, rack bars oppositely disposed in the guide-ways, said rack bars having teeth on their adjacent edges, means connected to and extending from one rack bar to engage a support, means engaging the other rack bar for engaging a clamp, a shaft rotatably mounted in the housing, a pinion on the shaft and engaging the teeth on the rack bars, a ratchet wheel on one end of the shaft, a hold-back pawl pivoted to the housing, an oscillating frame pivotally mounted on the shaft and straddling the housing and the ratchet wheel, handles on the frame, and pawls on the frame for engaging the ratchet wheel.

2. A wire stretcher of the class described comprising a housing, parallel guide-ways in the housing, toothed bars operating in the guide-ways in the housing, a shaft mounted in the housing between the toothed bars, a pinion on the shaft and engaging the teeth of the bars, a ratchet wheel on the shaft, a crank handle on the shaft for manually operating the ratchet wheel and the pinion to oppositely move the toothed bars to preliminarily take up the slack in the wire, an oscillating frame straddling the ratchet wheel and the housing comprising a pair of bars, pawls mounted between the bars and engaging the ratchet wheel, devices for releasing the pawls, handles at the opposite ends of the oscillating frame, a hold-back pawl pivoted to the housing engaging the ratchet wheel, a device for releasing the hold-back pawl, a connection attached to and extending from one of the toothed bars, and a connection attached to and extending from the opposite end of the adjacent toothed bar and adapted to be attached to a support.

3. A wire stretcher of the class described comprising a housing, parallel guide-ways in the housing, toothed bars operating in the guide-ways in the housing, a shaft mounted in the housing between the toothed bars, a pinion on the shaft and engaging the teeth of the bars, a ratchet wheel on the shaft, a crank handle on the shaft for manually operating the ratchet wheel and the pinion to oppositely move the toothed bars to preliminarily take up the slack in the wire, an oscillating frame straddling the ratchet wheel and the housing comprising a pair of bars, pawls mounted between the bars and engaging the ratchet wheel, devices for releasing the pawls, sockets at opposite ends of the frame, detachable handles fitting in the sockets, a locking device on each handle and engaging one of the sockets to lock the handle in position on the frame, a hold-back pawl pivoted to the housing engaging the ratchet wheel, a device for releasing the hold-back pawl, a connection attached to and extending from one of the toothed bars, and a connection attached to and extending from the opposite end of the adjacent toothed bar and adapted to be attached to a support.

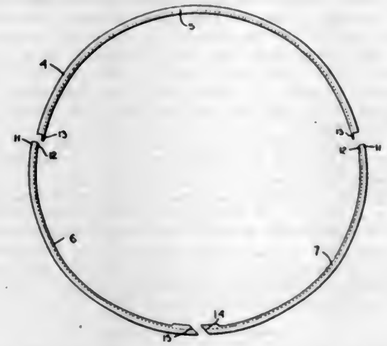
1,191,064. GARMENT. FREDERIC CONDÉ, Oswego, N. Y. Filed July 8, 1915. Serial No. 38,821. (Cl. 2—41.)



1. A garment having a folded collaret strip, said collaret strip having incorporated within it a stripe formed of threads of different character and appearance extending longitudinally of the collaret strip, located between the edge of the strip and the fold therein and serving to strengthen and reinforce and ornament said collaret.

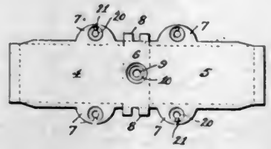
2. A garment having a folded collaret strip, said collaret strip having incorporated within it a wide stripe formed of threads of better quality extending longitudinally of the collaret strip and located between the edge of the strip and the fold therein, said strip being raised above the adjacent surface of the collaret and serving to strengthen and reinforce said collaret.

1,191,065. DEMOUNTABLE VEHICLE-RIM. WALTER E. COPITHORN, Natick, Mass. Continuation in part of application Serial No. 2,253, filed Jan. 14, 1915. This application filed Feb. 14, 1916. Serial No. 78,126. (Cl. 152—21.)



A demountable rim comprising a base member having a shape to present a central tire receiving portion, and a lip or flange at each edge thereof, said base member being made in a plurality of separable sections, the end of one section having an extension or lip and the adjacent end of the next section having a flange adapted to underlie said extension, said extension and flange provided with projections and slots respectively adapted to interlock the sections, two tire-holding rings encircling said base member and engaging the lips thereof, and means applied to said rim and coöperating with the adjacent ends of said other sections of the base member thereby to expand said base member outwardly into firm engagement with the tire holding rings.

1,191,066. CAMERA. ANGIE S. CRAMER, Covington, Ky. Filed Apr. 27, 1916. Serial No. 93,879. (Cl. 95—31.)



1. In a camera, a frame stamped from a single piece of sheet metal, the central portion forming the front wall of the frame and the portions at either side of said front wall being rearwardly bent to form the side walls of the frame, and film spool supports on said side portions.

2. In a camera, a frame stamped from a single piece of sheet metal, the central portion forming the front wall of the frame and the portions at either side of said front wall being rearwardly bent to form the side walls of the frame, and ears formed on said side walls and bent at right angles thereto to form bearings for film spools.

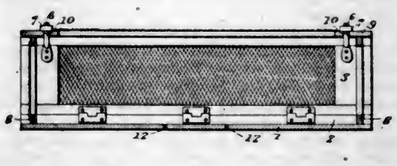
3. In a camera, a frame stamped from a single piece of sheet metal, the central portion forming the front wall of the frame and the portions at either side of said front wall being rearwardly bent to form the side walls of the frame, the extreme ends of said side walls being bent back upon themselves to form guides for the film, and ears formed on said side walls and bent at right angles thereto to form bearings for the film spools.

4. In a camera, a frame stamped from a single piece of sheet metal, the central portion forming an integral lens support and the portions at either side of said central portion being rearwardly bent to form guides for the film, and film spool supports formed on said rearwardly bent portions.

5. In a camera, a frame stamped from a single piece of sheet metal, the central portion forming an integral lens supporting front wall, and the portions at either side of said central portion being rearwardly bent to form side walls for guiding the film, and supports formed on said side walls having countersunk recesses to accommodate film spools.

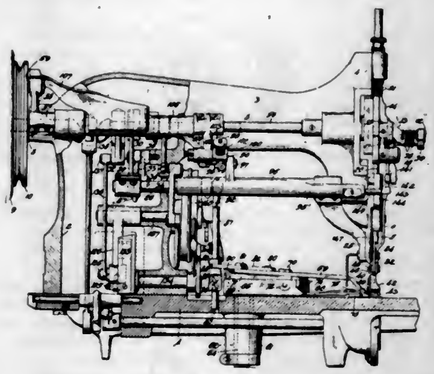
[Claims 6 to 9 not printed in the Gazette.]

1,191,067. FOLDING CRATE. HIRAM RICHARD DE LAYE, Birmingham, Ala. Filed Sept. 19, 1913. Serial No. 790,719. (Cl. 217—14.)



A folding crate comprising a bottom provided at a point within its edges with an opening adapted to receive a securing device, strips secured to two of the opposite edges of the bottom and provided at their inner sides with grooves, side panels hingedly connected with the strips and provided at their inner sides with grooves which register with the grooves in the strips, end panels adapted to slidably fit in the said grooves, the combined thickness of both of the end panels being equal to the vertical height of the strips, studs fixed on the side panels and movable with the same, and a top panel having openings adapted to receive the studs and provided with an intermediate screen section, and means for securing the top panel upon the studs.

1,191,068. FEEDING MECHANISM FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Sept. 19, 1912. Serial No. 721,140. (Cl. 112—8.)



1. In a sewing machine, the feeding-mechanism comprising a reciprocatory carrier, actuating means therefor, work-engaging members sustained by and movable with said carrier, and having work-engaging portions so disposed that one overlies the other, one work-engaging member being movable relative to the carrier, and means co-

acting with one of said members for varying its operative movement relative to the other.

2. In a sewing machine, the feeding-mechanism comprising a reciprocatory carrier, actuating means therefor, work-engaging members sustained by and movable with said carrier, and having work-engaging portions so disposed that one overlies the other, the first member being mounted upon the carrier for movement both parallel with and at an angle to the operative face of the other member, and means for retarding the parallel movement of said first member.

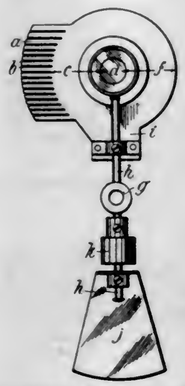
3. In a sewing machine, feeding-mechanism comprising a reciprocatory carrier, actuating means therefor, work-engaging members sustained by and movable with said carrier, and having work-engaging portions so disposed that one overlies the other, positively acting means for closing said members upon the work, means acting on one of said members to automatically vary its feeding movement relative to the other, and means for separating said members preparatory to each operative or feed-producing movement for the carrier.

4. In a sewing machine, a work feeding mechanism comprising a carrier, a fulcrum therefor, actuating means for said carrier, a stop member arranged at one side of said fulcrum, work-engaging members sustained by and movable with said carrier, and having work-engaging portions so disposed that one overlies the other, one of said work-engaging members being pivotally mounted upon the carrier and carrying a part movable into and out of operative engagement with said stop member, and means for separating the work-engaging portions of said members preparatory to each operative or feed-producing movement of the latter.

5. In a sewing machine, the feeding mechanism comprising a vibratory carrier, a fulcrum therefor, actuating means for said carrier, a stop member arranged at one side of said fulcrum, a feeding member rigidly secured upon said carrier, a coacting feeding member pivotally mounted upon said carrier for movement both parallel and at an angle with the operative face of the rigid member and carrying a part movable into and out of operative engagement with said stop member and means for separating the operative faces of said members preparatory to each operative or feed-producing movement of the carrier.

[Claims 6 to 15 not printed in the Gazette.]

1,191,069. SHUTTER FOR CINEMATOGRAPH APPARATUS. CHARLES DOWSON, St. John's Wood, London, England. Filed Dec. 14, 1915. Serial No. 66,717. (Cl. 88—19.3.)



1. A shutter comprising a shaft, a blade on said shaft, a second blade on said shaft, one edge of the second blade having a series of open elongated slots, and a lens mounted in the second blade adjacent the open slots.

2. A shutter comprising a shaft, a plurality of blades on said shaft, means permitting movement of said blades on said shaft, a plurality of extensions spaced apart upon one of the blades, said blade having a central opening, and a lens mounted in said opening.

3. A shutter comprising a shaft, a plurality of blades on said shaft, the edge of one of said blades having a series of elongated open slots, the blade with the open slots being provided with a central opening, a lens in said opening, and means carried by said blade adapted to regulate the size of the lens opening.

4. A shutter comprising a shaft, a plurality of blades on said shaft, a plurality of extensions spaced apart upon one of said blades, said blade being provided with a central opening, a lens in said opening, means carried by said blade adapted to regulate the size of the lens opening, said means comprising a member pivoted to the blade adjacent the spring and provided with different sized openings adapted to register therewith, and means for holding one of said openings in proper registration with the lens opening.

5. A shutter comprising a shaft, a blade on said shaft, a second blade on said shaft, a plurality of transversely extending members spaced apart on said blade, a pivoted member on said blade, means for holding said pivoted member in a plurality of independent positions, the blade on said member being provided with registering apertures, the apertures on the pivoted member being of graduated size in order to control the diameter of the aperture in the blade, and means for rotating said shaft.

[Claim 6 not printed in the Gazette.]

1,191,070. ELECTRIC BATTERY. PHILIP A. EMANUEL, Aiken, S. C. Filed Nov. 5, 1915. Serial No. 59,838. (Cl. 204—34.)



1. A battery including a couple, an electrolyte, a depolarizer under pressure in communication to force the electrolyte through the battery, means for collecting the salt produced in the battery, and an additional depolarizer automatically supplied to the battery by the action of the removed salt, substantially as described.

2. An electric battery including positive and negative electrodes, communicating vessels in connection with the battery through each of said electrodes, an electrolyte in one of the vessels connected to the positive electrode, a depolarizer in the companion vessel for mixture in said electrolyte, and a depolarizer in the vessels connected to said negative electrode, substantially as described.

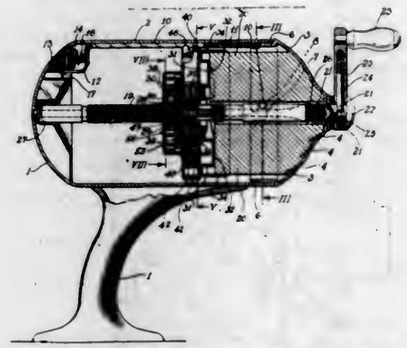
3. An electric battery including positive and negative electrodes, communicating vessels in connection with the battery through each of said electrodes, an electrolyte in one of the vessels connected to said positive electrode, a depolarizer under pressure in the companion vessel for mixture in said electrolyte and for circulating the latter through the battery, and an additional depolarizer in the vessels connected to said negative electrode, substantially as described.

4. In an electric battery, the combination of a pair of electrodes, communicating vessels connected at one end of the battery, an electrolyte in the lower vessel, a depolarizer in the upper vessel for mixture in the electrolyte, communicating vessels connected at the other end of said battery, for receiving the salt produced in the battery, and a depolarizer in said last-named vessels for displacement and delivery to the battery by the entrance of the removed salt, substantially as described.

5. In an electric battery, the combination of a pair of electrodes, porous means separating said electrodes, communicating vessels connected to the battery through one electrode, an electrolyte in one of said vessels for delivery to the battery, a depolarizer under pressure in another of said vessels for mixture in the electrolyte and for forcing the same to circulate throughout the battery, valve means for controlling communication between said vessels and the battery, other vessels connected to the battery through the opposite electrode for receiving the salt produced in the battery, a depolarizer in said last-named vessels for displacement and delivery to the battery by action of the removed salt, and valve means for controlling passage between said last-named vessels and the battery, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,191,071. SOAP-DISPENSING MACHINE. HENRY R. EVANS, New York, N. Y. Filed Mar. 13, 1912. Serial No. 683,495. (Cl. 146—11.)



1. In a machine of the class described, granulating means, means for rotating the material with respect to the granulating means, and means for positively feeding the material toward the granulating means, said feeding means being mechanically connected to said rotating means so that both may be driven from the same source of power, and said feeding means embracing a follower for the material and differential gearing carried by said follower whereby the speed of feed is very slow as compared with the speed of rotation.

2. In a soap dispensing machine a cutter, means for rotating the soap with respect to the cutter and positively feeding the soap toward the cutter, said means embracing differential gearing for positively feeding the soap with respect to the cutter, said gearing embracing two coaxially arranged gears and a unitary gear meshing with both of them.

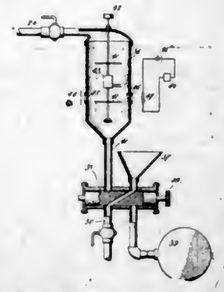
3. In a dispensing machine, comminuting means, means for rotating the material to be dispensed with respect to the comminuting means, and means for positively feeding the material with respect to the comminuting means, both of said means being mechanically connected together whereby they may be driven from the same source of power, said material feeding means embracing differential gearing whereby the material may be fed slowly as compared with the speed of rotation of the material with respect to the comminuting means.

4. In a dispensing machine, granulating means, means for rotating the material to be dispensed with respect to the granulating means, and positively feeding the material with respect to the granulating means, said means embracing a differential gearing for feeding the material whereby the material may be fed slowly as compared with the speed of rotation of the material with respect to the granulating means.

5. In a dispensing machine, a fixed frame, a cutter fixedly secured with respect to said frame, means for rotating the material to be dispensed with respect to the cutter, and means for positively feeding the material to the cutter, said feeding means being mechanically connected with the rotating means whereby both may be driven from the same source of power, and said feeding means embracing a follower carrying differential gearing to reduce the feeding speed.

[Claims 6 to 39 not printed in the Gazette.]

1,191,072. METHOD FOR UTILIZING PULVERULENT MATTER AS FUEL. REGINALD A. FESSENDEN, Brookline, Mass. Filed Dec. 26, 1911. Serial No. 667,844. (Cl. 123—23.)



1. The method of producing a mixture of pulverulent matter and gas, which consists in introducing, in a definite and predetermined ratio of matter to gas, the matter into a chamber containing compressed gas, maintaining the matter in said chamber in a state of suspension and in an unburned condition.

2. The method of producing a mixture of pulverulent matter and gas, which consists in introducing, in a definite and predetermined ratio of matter to gas, the matter into a chamber containing compressed gas, maintaining the matter in said chamber in a state of suspension and in an unburned condition, and heated to such a degree as to drive off volatile hydrocarbons from said matter.

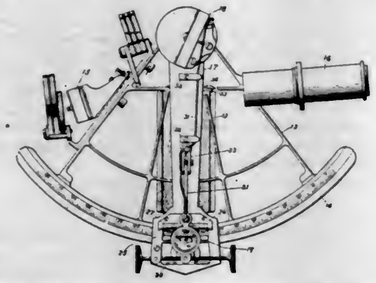
3. The method of producing a mixture of pulverulent matter and gas, which consists in introducing, in a definite and predetermined ratio of matter to gas, the matter into a chamber containing compressed gas, maintaining said matter in said chamber in a state of suspension, and governing the amount of pulverulent matter introduced into said chamber by means of the variation in the amount of radiation passing through said chamber.

1,191,073. SEXTANT. PHILIP HUSTON HAMMOND, U. S. Navy. Filed June 20, 1913. Serial No. 774,786. (Dedicated to the public.) (Cl. 240—2.)

1. The combination with a mathematical instrument provided with a graduated scale and an indicator arm adjustable relatively to the scale, the said instrument having a handhold portion by which it is grasped and held in position for use, of means for illuminating the scale comprising an electric lamp carried by and movable with the indicator arm, a battery arranged within the said handhold portion of the instrument, circuit wires leading from the battery to the lamp, and a circuit controlling switch adjacent to the battery.

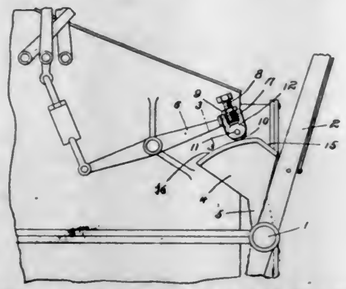
2. The combination with a mathematical instrument provided with a graduated arc, an indicator arm and a vernier adjustable relatively to the arc, the said instrument having a portion shaped as a handhold for grasping and supporting it in position for use, of means for illu-

minating the arc comprising an electric lamp carried by and movable with the indicator arm, light reflecting and diffusing members associated with the lamp, a battery



housed within the said handhold portion of the instrument and in circuit with the lamp, and a lamp controlling switch adjacent to the battery.

1,191,074. CLUTCH-RELEASE FOR MOTOR-VEHICLES. FRANK M. HARDESTY, Cambridge, Ohio, assignor of one-third to Elza W. Lawyer and one-third to Charles E. Lowry, Cambridge, Ohio. Filed Apr. 11, 1916. Serial No. 90,444. (Cl. 74—81.)



In a motor vehicle, the combination with the transmission clutch lever, and the cam with which said clutch lever coöperates, of an anti-friction roller, a carrier therefor in which said roller is journaled, said carrier being adapted to embrace said clutch lever, and means for fastening said carrier in place so that the roller will be held in contact with the working face of the cam, said carrier being provided with stop lips extending inwardly from the crown portion thereof and adapted to embrace the body of the clutch lever and bear against the enlarged end portion thereof.

1,191,075. DRIER. BURT S. HARRISON, Brooklyn, N. Y. Filed May 4, 1915. Serial No. 25,690. (Cl. 34—42.)

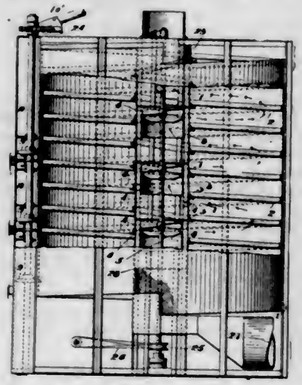
1. In a device of the character described, a shell, a spiral track therein, trays adapted to travel on said track, a fan set in the vertical core of the said spiral track and a baffle plate arranged above said fan, substantially as shown and described.

2. In a device of the character described, a shell, a spiral track therein, means for conveying a substance to be dried along said track, a fan set in the vertical core of the said spiral track and a baffle plate arranged above said fan, substantially as shown and described.

3. In a device of the character described, a shell, a spiral track therein, surrounding a vertical core, a fan in the said vertical core, intermediate the ends of said core, substantially as shown and described.

4. In a device of the character described, a shell, a spiral track therein, means for conveying a substance to be dried along said track, a fan set in the vertical core, of said spiral track, a baffle plate above said fan and a bell below said fan, substantially as shown and described.

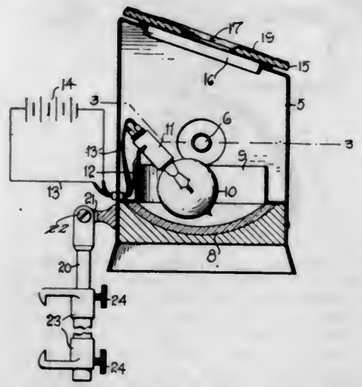
5. In a device of the character described, the combination of a shell, a spiral track therein, trays adapted to travel on said track, a vertical shaft adjacent said shell,



horizontal wheels mounted on said shaft and adapted to frictionally engage the sides of said trays substantially as shown and described.

[Claims 6 and 7 not printed in the Gazette.]

1,191,076. EGG-CANDLING DEVICE. LUDWIG IRVIN HEILBRUN, Sagamore, Pa. Filed July 12, 1915. Serial No. 39,433. (Cl. 99—6.)



1. An egg tester including a casing having an egg receiving opening in the top thereof, a reflecting medium within the casing and positioned below the opening, an upstanding flange surrounding the reflecting medium, a lamp, and means carried by the lamp whereby the same may be detachably engaged with the upstanding flange.

2. An egg tester comprising a casing having an egg receiving opening in its top and a depression in its bottom, a concaved reflector fitted within the depression in the bottom, an upstanding annular flange carried by the bottom of the casing and surrounding the reflector, and an illuminating member provided with means whereby it may be detachably engaged with the upstanding flange.

3. An egg tester comprising a casing having an egg receiving opening in its top and a depression in its bottom, a concaved reflector fitted within the depression in the bottom, an upstanding annular flange carried by the bottom of the casing and surrounding the reflector, an illuminating member provided with means whereby it may be detachably engaged with the upstanding flange, and means carried by a side wall of the casing for detachably supporting the illuminating member.

1,191,077. AIRSHIP. OSCAR HERMANSON, New York, N. Y. Filed Aug. 20, 1915. Serial No. 46,551. (Cl. 244—3.)



1. An airship skeleton consisting of a number of similar octagonal transverse frames, each formed of two pairs of crossed beams, that at the four crossings are braced by four longitudinal beams joining adjacent transverse frames; and of wire connecting peripherally the corners of each frame, and longitudinally the corners of adjacent frames.

2. In a skeleton frame, built of tubes, connections therefor at their meeting points comprising an easily removable cross carrying a plurality of arms, fitting into the joining tubes and provided at their bases with facets for the tubes to rest upon.

3. In a skeleton frame, built of tubes, easily removable rigging pins at the free ends of these tubes, that fit in the tubes and carry heads for fastening the rigging cables, and facets for the tubes to rest upon.

4. A protecting float of which the shell consists of one less and one more pliable half, so that when inflated with air, the shell acts as a float, but when the air filling the shell is withdrawn by means of a pump, the more pliable half of the shell folds in, forming a lining for the other half, and the whole filling with water acts as a mooring bucket.

5. Around the bottom of a floating ship an airtight and watertight pliable envelop, at its rim tightly fastened to the bottom of the ship, so that when this envelop is inflated with air, it forms a protecting air-cushion around the bottom of the ship.

1,191,078. ARMORED-CABLE COUPLING. RAYMOND M. HUTTON, Philadelphia, Pa. Filed Apr. 22, 1915. Serial No. 23,081. (Cl. 247—1.)



1. The combination with an armored cable and a coupling member, of a screw carried by the coupling member and adapted to bear against the armored cable, said coupling having a longitudinal slot therein, and a tongue bent from the cable armor and projected through the slot, substantially as described.

2. The combination with an armored cable and a coupling member, of a screw carried by the coupling member and adapted to be projected between the convolutions of the armored cable, said coupling having a longitudinal slot therein, a tongue bent from the cable armor and projected through the slot, said tongue bent against the outer face of the coupling member, and a screw-threaded extension on the end of the coupling member, substantially as described.

3. The combination with an armored cable and a coupling member, said coupling member located on the end of the armored cable and having an internal annular flange against which one end of the armor engages, said coupling member having a longitudinal slot therein, a tongue bent from the cable armor and projected through the slot, and a screw carried by the coupling member and bearing against the cable armor, substantially as described.

1,191,079. SEWING-MACHINE ATTACHMENT. JAMES S. JOHNSTON, Utica, N. Y. Filed June 11, 1910. Serial No. 566,463. (Cl. 112—9.)

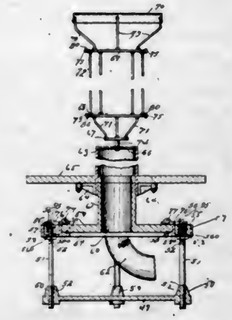


1. In an attachment for sewing machines, the combination of a head, a plate secured to said head, a revoluble guide in said plate, an annular groove in said guide, a presser-foot, and a guide having a knife edge mounted in said presser-foot, adapted to project into the annular groove in said guide to thereby separate the goods, passed through the machine, along either side of the main seam thereof.

2. In an attachment for sewing machines, the combination of a head, a plate, means for detachably securing said plate to said head, a circular guide revolubly mounted in said plate, an annular groove in said guide, a presser-foot, a guide rotatably mounted in said presser-foot and a knife edge on said guide mounted in said presser-foot, adapted to project into the annular groove in said guide in said plate, whereby to separate the goods, passed through the machine, along either side of the main seam thereof.

3. In an attachment for sewing machines, the combination of a head, a plate, screws for detachably holding said plate to said head, a circular guide revolubly mounted in said plate, an annular groove in said guide, a presser-foot, another guide rotatably mounted in said presser-foot and above said first named guide, and a knife edge on said guide mounted in said presser-foot adapted to project into the annular groove in said guide in said plate, whereby to separate the goods passed through the machine, along either side of the main seam thereof.

1,191,080. DRYING AND WINDING MACHINE. JAMES S. JOHNSTON, Utica, N. Y. Filed Sept. 11, 1911. Serial No. 648,731. (Cl. 26—16.)



1. A base or stand for fabric drying tubes embodying a relatively fixed table, a relatively rotatable tube-supporting head arranged above the same, and anti-friction roller bearings arranged between the table and head for rotatably supporting the latter.

2. A base for fabric drying tubes embodying a relatively fixed support, a fabric-receiving tube, and a head carrying said tube, said head and tube being freely rotatable relatively to said support and also capable of universal tilting motion under the influence of the fabric while the latter is being withdrawn from the tube.

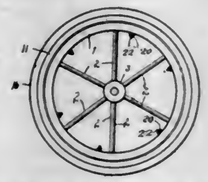
3. A base for fabric drying tubes embodying a relatively fixed support, a fabric-receiving tube, and a head carrying said tube, said head and tube being capable of universal tilting motion under the influence of the fabric while the latter is being withdrawn from the tube.

4. In a drying and winding machine, the combination of means for winding a fabric on a roller, means for stretching said fabric before the same is wound, a pipe adapted for the entrance of a hot air blast for drying said fabric, and a mounting for said pipe, whereby the same may be tilted to facilitate the disposition of the fabric thereon.

5. In a drying and winding machine, the combination of a pipe adapted for the admission of hot air for drying a fabric, and means for restraining the tilting and returning the pipe to normal position, said means comprising a base, a sub-base, adjustable uprights, whereby to hold said sub-base at any given distance from said base and pockets in said sub-base and springs.

[Claims 6 to 10 not printed in the Gazette.]

1,191,081. DEMOUNTABLE RIM. JAMES S. JOHNSTON, Utica, N. Y. Filed Feb. 23, 1912. Serial No. 679,305. (Cl. 152—21.)

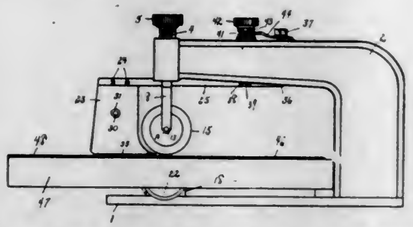


1. In a rim of the character described, the combination of a plurality of plates, secured to the inner surface of said rim, central recesses in said plates, circular recesses opening into said central recesses, recesses adjacent the surface of the rim, in said plates, bolts mounted upon a felly, heads on said bolts, said heads being adapted to engage the recesses adjacent the surface of the rim, in said plates, whereby to hold said rim to said felly.

2. In a rim, the combination of a plurality of plates, secured to the inner surface of said rim, central recesses in said plates, circular recesses connecting with said central recesses in said plates, bolts mounted upon a felly, elongated and tapering heads on said bolts, means for turning said bolts, whereby the elongated heads thereof will engage the circular recesses to hold said rim to said felly, substantially as described.

3. In a rim, plates secured to the inner surface thereof, recesses in said plates, other recesses opening into said first named recesses, other recesses adjacent the surface of said rim in said plates, bolts mounted upon a felly, heads on said bolts, said heads being adapted to engage the recesses adjacent the surface of the rim, in said plates, whereby to hold said rim to said felly.

1,191,082. FABRIC-CUTTER. JAMES S. JOHNSTON, Utica, N. Y. Filed Apr. 26, 1913. Serial No. 763,725. (Cl. 164—60.)



1. In a fabric cutter, a knife, a roller bearing against said knife, means for rotating said roller and said knife, a U shaped guide for directing a product to said knife and means for adjusting said U-shaped guide.

2. In a fabric cutter, a knife, a roller bearing against said knife, means for rotating said roller and said knife, a U shaped guide for directing a product to said knife, means for adjusting said knife with reference to said roller and means for adjusting said U-shaped guide.

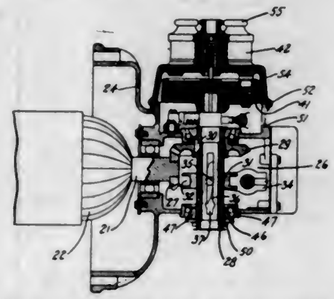
3. In a fabric cutter, the combination of a circular knife, a roller bearing against said knife, means for regulating the tension of said knife against said roller, a U shaped guide for directing a fabric to said knife and means for adjusting said U-shaped guide.

4. In a fabric cutter of the character described, the combination of a knife, flexible rolls disposed on either side of said knife, a roller bearing against said knife and said flexible rollers, means for rotating said rollers and said knife, a U shaped guide disposed in front of said knife, and means for adjusting said guide.

5. In a fabric cutter, the combination of a knife, flexible rollers disposed on either side of said knife, a roller bearing against said knife and said flexible rollers, means for rotating said rollers and said knife, a U shaped guide disposed in front of said knife, means for adjusting said guide, and means for adjusting said knife with reference to said roller.

[Claims 6 to 10 not printed in the Gazette.]

1,191,083. ELECTRIC MACHINE. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed May 24, 1912. Serial No. 699,400. (Cl. 123—166.)



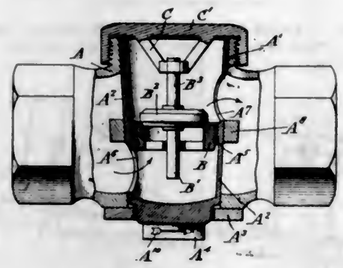
1. In a distributer mechanism, the combination with a distributer device, and means for rotating the same, including elements constructed to connect the main driving mechanism from the side; an electric machine having a driving shaft connected to said distributer driving means; and a housing covering both said electric machine and said distributer and serving as a support for said distributer, to attach the latter to the side of the electric machine driving the same.

2. In a device of the character described, the combination with an electric generator comprising an armature and shaft positioned at right angles to each other; of an ignition timing mechanism; of an end housing for the generator containing and supporting the timing mechanism; and connections between the armature shaft and the timing mechanism for operating the timing mechanism by said shaft.

3. In a device of the character described, in combination with an electric generator having an armature and a shaft positioned at right angles relative to each other; an ignition timing mechanism; a cover for said generator, containing said ignition timing mechanism; driving connection between the armature shaft and the timing mechanism; and means contained within the generator cover, operable to advance or retard the timing mechanism, independent of the normal actuation thereof, without affecting the operation of the armature shaft.

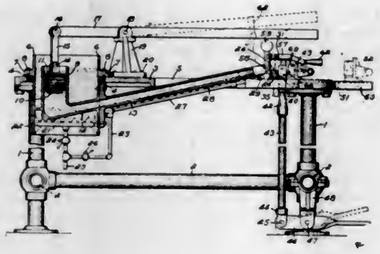
4. In a device of the character described, the combination with an electric machine having an armature, of an ignition timing and distributing mechanism; an end housing for said electric machine, comprising a casting having a body portion to fit over the end of the electric machine; a bearing positioned in said end housing for supporting said armature, said casting being provided with a plurality of chambers adapted to contain the timing and distributing mechanism; and means for connecting said mechanism in driven relation relative to the electric machine.

1,191,084. REVERSING-VALVE. ARTHUR KIRBY, Unionville, Mo. Filed Mar. 20, 1916. Serial No. 85,426. (Cl. 137—32.)



A reversible check valve comprising a casing provided with a central bearing which is apertured, a tapering sleeve seated in said casing, closed at one end and circumferentially threaded, its other end open, the inner wall of the sleeve being threaded and provided with diagonally disposed openings positioned above and below the threading, a valve seat engaging the threaded portion on the inner surface of the sleeve, a flanged cap fitted over said casing and having inclined spider arms extending into the open end of the sleeve and terminating in an apertured bearing, a valve having stems projecting from the opposite faces thereof and one having a bearing in said collar and the other in a central aperture in the valve seat.

1,191,085. METAL-CASTING MACHINE. JOSEPH E. LAFERRIERE, Boston, Mass., assignor to Spray Engineering Company, Boston, Mass., a Corporation of Maine. Filed Mar. 7, 1916. Serial No. 82,739. (Cl. 199—10.)



1. A casting machine comprising in combination, a melting pot having a mold member rigid with the mouth thereof, and a coöperating mold member slidable to and from the first mentioned member and combined from movement in other directions.

2. A casting machine having a melting pot provided with a mold member rigid with the mouth thereof, and a coöperating mold member movable in a right line toward and from the first mold member and confined from movement in other directions.

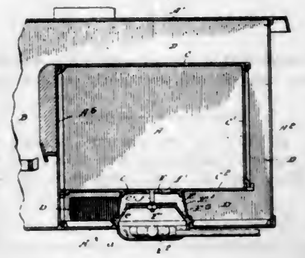
3. A casting machine having a melting pot provided with a mold member rigid with the mouth thereof, and a coöperating, manually controlled, mold member slidable toward and from the first mold member and confined from movement in other directions.

4. A casting machine having a melting pot provided with a mold member rigid with the mouth thereof, a coöperating mold member, and treadle means for moving the same toward and from the first mold member.

5. A casting machine having a melting pot provided with a mold member rigid with the mouth thereof, a slidable, coöperating mold member, and manual means to operate the same.

[Claims 6 to 55 not printed in the Gazette.]

1,191,086. COMBINED GAS AND COAL RANGE. JAMES A. LANSING, Scranton, Pa., assignor to Scranton Stove Works, Scranton, Pa., a Corporation of Pennsylvania. Filed May 1, 1916. Serial No. 94,765. (Cl. 126—36.)



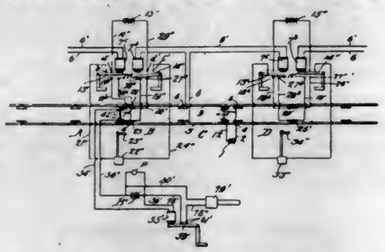
1. In a combined gas and coal range, a coal combustion chamber, an oven having upper and lower spaced bottom walls forming a flue for the circulation of gases from said coal combustion chamber, a flue passage connecting the space between said walls with the coal combustion chamber, a gas burner chamber within the space between said walls, said gas burner chamber composed of outer and inner flue members, the outer flue member bridging the space between the two bottom walls of the oven and the inner flue member having its upper end terminating below the upper bottom wall of the oven, both said flue members open at their upper and lower ends, openings in the upper and lower bottom walls of the oven adapted to register respectively with the open ends of the gas burner chamber, and a pair of connected cover plates adapted respectively to seat over the opening in the upper bottom wall of the oven and the upper end of said inner flue member.

2. In a combined gas and coal range, a coal combustion chamber, an oven having upper and lower spaced bottom walls forming a flue for the circulation of gases from said coal combustion chamber, a flue passage connecting the space between said walls with the coal combustion chamber, a gas burner chamber within the space between said walls, composed of an outer flue member bridging the space between the two bottom walls of the oven and an inner conical flue member having its upper end terminating below the upper bottom wall of the oven and provided with a seat, both said flue members open at their upper and lower ends, openings in the upper and lower bottom walls of the oven adapted to register respectively with the open ends of the gas burner chamber, a seat formed in the upper bottom wall of the oven around the opening therein and a pair of connected cover plates adapted respectively to engage the seats in said upper bottom wall and inner flue member.

1,191,087. TRAIN-CONTROL SYSTEM. EUGENE A. LAUGHON, Roanoke, Va. Filed Oct. 16, 1914. Serial No. 866,974. (Cl. 246—27.)

A train control system including traffic rails divided into insulated blocks, sources of electrical energy connected to the traffic rails of the respective blocks, a pair of electromagnets connected to the traffic-rails of two blocks and normally energized when said blocks are unoccupied, a pair of contact rails between said blocks, armature switches operated by said electromagnets, a source of electrical energy, a signal device, a normally closed circuit

including said switches, source of energy and signal device, whereby when either switch is released by its mag-



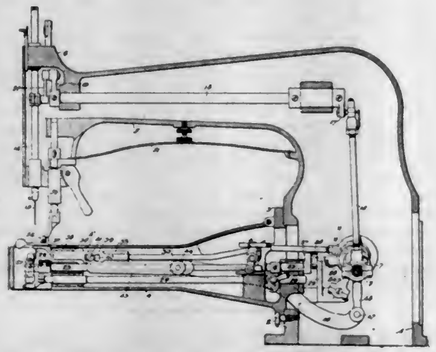
net, said circuit will be opened, and means whereby either switch when released will electrically connect the contact rails.

1,191,088. BATH-TUB. WILLIAM H. MERCER, Portland, Oreg., assignor of one-half to Harley D. Fear, Portland, Oreg. Filed July 23, 1915. Serial No. 41,600. (Cl. 4—27.)



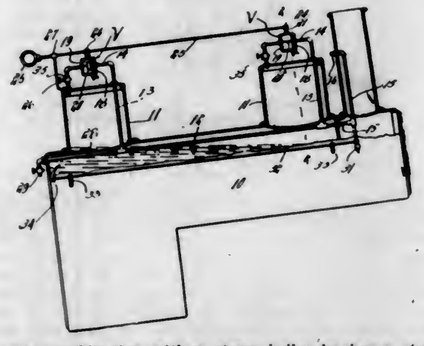
In a bath-tub provided with a basin-like depression in the bottom, said basin provided with a stoppered outlet in the bottom, an auxiliary outlet located in a side of the basin, and near the top thereof and below the bottom of the main body of the bath-tub, and means for closing said auxiliary outlet.

1,191,089. FEEDING MECHANISM FOR SEWING-MACHINES. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Jan. 26, 1914. Serial No. 814,291. (Cl. 112—8.)



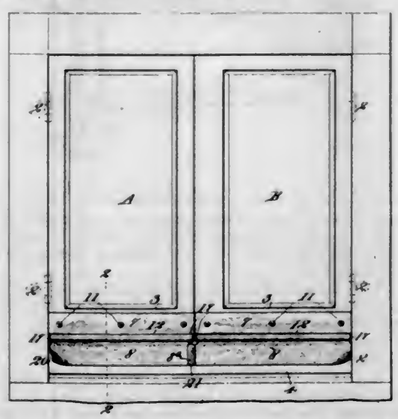
In a sewing machine, the combination with the frame comprising a hollow standard and a tubular work-supporting arm extending laterally therefrom, of a rotary shaft mounted within said standard and transversely thereof and of said work-supporting arm, feed-actuating and lifting eccentric elements upon said shaft, a feed-bar extending through said arm and having at one end a strap embracing the feed-actuating eccentric element, a feed-dog mounted upon the opposite end of said feed-bar, a rock-lever mounted upon a fixed fulcrum within and transverse to said work-supporting arm, and having an arm extending lengthwise of said feed-bar, a rectilinearly sliding connection between said arm of the rock-lever and the feed-bar and disposed intermediate said transverse fulcrum and the feed-dog, and a link connection within said standard at one end with another arm of said rock-lever and provided at the opposite end with a strap embracing the feed-lifting eccentric.

1,191,090. STEAM-BOILER. CHRIS O. MYHRE, Esmond, N. D. Filed May 26, 1914. Serial No. 841,061. (Cl. 122—490.)



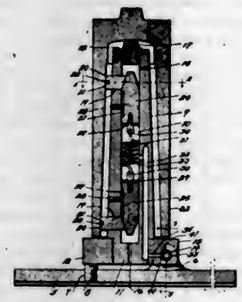
The combination with a steam boiler having a steam dome adjacent to each end of said boiler, of a steam pipe arranged within said boiler and having portions extending vertically through said domes, and projecting horizontally above and entering the heads of said domes, valves arranged within the horizontal portions of said steam pipe and formed with rotatable plugs having steam passages adapted to register with the said horizontal pipe portions, stems connected to said valves, a manually operable rod connected to said stem for simultaneously closing one valve and opening the other of said valves.

1,191,091. STORM-STRIP FOR CASEMENT-WINDOWS. ROBERT FLEETWOOD NICHOLS, Oakland, Cal. Filed July 14, 1914, Serial No. 850,907. Renewed June 2, 1915. Serial No. 31,789. (Cl. 20—65.)



A storm strip for casement windows and the like consisting of a lower and an upper metal strip, the upper side of the lower strip having an inverted U-shaped bend, the free edge of said bend having a pair of spaced slits the material between which slits is bent outwardly to form a tongue, the lower edge of the upper strip being bent in the form of a J to provide a socket to receive said bend, said socket being formed with a lateral pressed-out part to form a channel for receiving said tongue.

1,191,092. EXPANSIBLE CHUCK. HENRY J. NOTZ and GEORGE A. REEVE, Middletown, Ohio. Filed Mar. 7, 1916. Serial No. 82,714. (Cl. 29—138.)



1. In an expansible chuck of the character described, a tubular body portion having sets of approximately radial openings formed therein which are longitudinally spaced upon the tubular body portion, jaws mounted to slide within the approximately radial openings, a pair of pistons mounted to move longitudinally within the tubular body portion and adapted to contact with the sets of jaws to move them outwardly, and means for introducing pressure into the tubular body portion between the pistons to effect their movement.

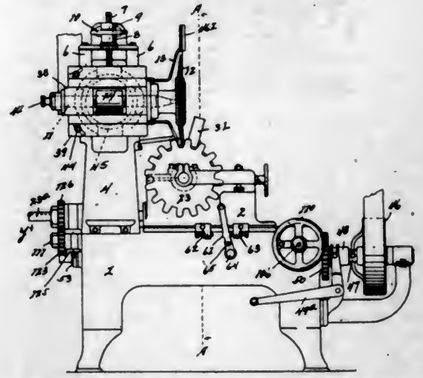
2. In an expansible chuck of the character described, a tubular body portion having spaced sets of approximately radial openings formed therein and a pressure supply port discharging into the interior of the tubular body portion between the sets of approximately radial openings, jaws mounted to slide within the approximately radial openings, a pair of pistons mounted within the tubular body portion upon opposite sides of the outlet end of the pressure supply port to be moved in opposite directions by the pressure and adapted to move the jaws outwardly, and means to supply pressure to the ports.

3. In an expansible chuck of the character described, a tubular body portion having sets of radial openings formed near the ends thereof, jaws mounted to slide within the radial openings, a pair of pistons mounted to move within the tubular body portion and having inclined portions to contact with the jaws to move them outwardly, a retractile coil spring connecting the inner ends of the pistons to move them toward each other, and means to supply pressure into the tubular body portion between the pistons.

4. In an expansible chuck of the character described, a tubular body portion having radial openings formed therein, jaws mounted to slide within the radial openings, a piston mounted to move within the tubular body portion to contact with the jaws and move them outwardly, a base, means pivotally connecting the tubular body portion and base, and means to supply pressure into the tubular body portion upon the swinging of the tubular body portion to the end of its travel in one direction with relation to the base.

5. In an expansible chuck of the character described, a tubular body portion having a radial opening formed therein, a jaw mounted to move within the opening, a piston mounted to slide within the tubular body portion to operate the jaw, a base secured to one end of the tubular body portion and having a circular opening communicating with a port which leads to the interior of the tubular body portion, a support, and a pipe attached to the support and extending through the circular opening of the base, to pivotally connect the tubular body portion and support, said pipe having a plug dividing the same into inlet and exhaust portions and separate ports communicating with the inlet and exhaust portions and adapted to be alternately moved into registration with the port formed in the base.

1,191,093. GEAR-GRINDING MACHINE. MAYHEW E. NOYES, Cleveland, Ohio, assignor to The Ohio Gear Grinding Company, a Corporation of Ohio. Filed Dec. 1, 1913. Serial No. 804,092. (Cl. 51—12.)



1. In mechanism of the kind described, a grinding device for operating on the face of a gear tooth, a reciprocable holder for carrying a toothed blank, means for reciprocating the work holder to bring a tooth of the blank into and out of engagement with the grinding device, and a templet carried by the work holder through the medium of which the path traversed by the tooth during its engagement with the grinding device is determined.

2. In mechanism of the kind described, a grinding device for operating on the face of a gear tooth, a holder for carrying a toothed blank, means for moving the holder to bring a tooth of the blank into and out of engagement with the grinding device, and a templet of the same size and contour as a finished gear tooth through the medium of which the tooth of the blank engages the driving device in a path having the contour of a finished gear tooth.

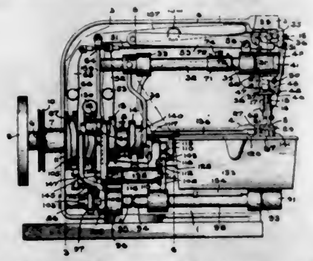
3. In mechanism of the kind described, a work-holding shaft, a frame having bearings for the shaft and being movable transversely of the longitudinal axis thereof, a templet having the contour of a finished gear tooth, grinding means for operating upon a gear tooth, and automatic mechanism for reciprocating the said frame to bring the shaft toward and from the grinding means, the templet determining the path of movement of the tooth in engaging the grinding means.

4. In mechanism of the kind described, an axially fixed work-holding member, a templet having the same size and contour as a finished gear tooth carried by said member, grinding means for operating upon a gear tooth, automatic mechanism for bringing the work-holding member toward and from the grinding means, a finder with which the templet engages, means whereby the engagement of the templet with the finder determines the path of movement of the tooth in engaging the grinding means, and indexing means for said gear adapted to operate the work-holding member at a time when the gear tooth is out of engagement with the grinding means.

5. In mechanism of the kind described, a rotatable grinding wheel, a holder for toothed blanks, mechanism for reciprocating the holder to bring a tooth of the blank into and out of engagement with the grinder, and a templet having the contour of a finished tooth through the medium of which the path of movement of the tooth of the blank in engaging the grinding wheel is determined.

[Claims 6 to 15 not printed in the Gazette.]

1,191,094. SEWING-MACHINE. BYRON FOSTER RHODES, Philadelphia, Pa., assignor of fifty-one one-hundredths to Ferdinand Keller, Philadelphia, Pa. Filed Feb. 25, 1915. Serial No. 10,511. (Cl. 112—20.)



1. A sewing machine, comprising a reciprocating needle having a barb thereon, a pivoted lever, an oscillatory shaft, and members on the lever and shaft respectively constructed to move in different directions and hold a thread in substantially horizontal position to be engaged by the barb of the needle, a presser foot and means actuated by said pivoted lever for clamping the presser foot during the period of reciprocation of said needle, substantially as described.

2. In a sewing machine, a reciprocating barbed needle, a pivoted lever, a transversely movable thread guiding hook on said lever, a reciprocating thread carrying finger coöperating with said hook to position the thread under the barb of the needle, a presser bar and foot, a fixed member, a stud on said presser bar, and a wedge on said lever arranged between said nxed member and said stud, as and for the purpose specified.

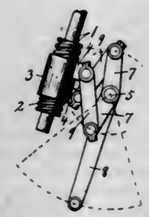
3. A reciprocating barbed needle, a thread supporting hook movable transversely of the direction of movement of the goods, a thread supporting finger having an eccentric curvilinear motion about the needle to engage the thread on said hook and position the same under the barb of the needle, substantially as described.

4. A reciprocating barbed needle, means for imparting a lateral movement to the needle to feed the goods, a thread supporting hook movable transversely of the direction of movement of the goods, a thread supporting finger having an eccentric curvilinear motion about the needle to engage the thread on said hook and position the same under the barb of the needle, substantially as described.

5. A sewing machine, comprising a reciprocating needle having a barb thereon, a rocker shaft parallel with said needle and eccentrically arranged with relation thereto, said shaft having a curved thread guiding hook at its lower end, and a finger movable transversely of the feed of the goods and coöperating with the hook to support a thread in horizontal position and receive the barb of the needle, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,191,095. STEERING-GEAR. FRANK A. ROBINSON, Auburn, N. Y., assignor to Stanford Harmon, Chicago, Ill. Filed Nov. 27, 1912. Serial No. 733,865. (Cl. 74—79.)



1. In a steering gear for motor vehicles, the combination of a steering post, a screw rigid thereon, a nut engaged with the screw, separate links pivoted to the nut on the same side thereof, a rock shaft at the same side of the nut as the links provided with oppositely projecting crank arms to which said links are pivotally connected and a separate crank arm secured to the rock shaft.

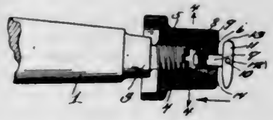
2. In a steering gear for motor vehicles, the combination of a steering post, a screw rigid thereon, a nut engaged with the screw, separate links pivoted to the nut on the same side thereof and extended in reverse directions across each other, and a rock shaft at the same side of the nut as the link and provided with oppositely projecting crank arms pivotally connected to their respective links, and a separate crank arm secured to the rock shaft.

3. In a steering gear for motor vehicles, the combination of a steering post, a screw rigid thereon, a nut engaged with the screw, separate links pivoted to opposite ends of the same side of the nut and extended in reverse directions across each other, and a rock-shaft at the same side of the nut as the links and provided with oppositely projecting crank arms pivotally connected to their respective links, and a separate crank arm secured to the rock-shaft for connection to the steering wheels of the vehicle.

4. The combination of a controlling member having a screw rigid thereon, a nut engaged with said screw, separate links pivoted to said nut and extended in reverse directions across each other and a rock shaft provided with oppositely projecting crank arms pivotally connected to said respective links.

5. The combination of a controlling member having a screw rigid thereon, a nut enveloping said member and meshing with said screw, separate links pivoted to said nut and extended in reverse directions across each other and a controlled member provided with oppositely projecting crank arms pivotally connected to said respective links.

1,191,096. NUT-LOCK. WALTER G. ROEPE and FREDERICK J. CASSING, Concordia, Mo. Filed Mar. 14, 1916. Serial No. 84,099. (Cl. 151—6.)

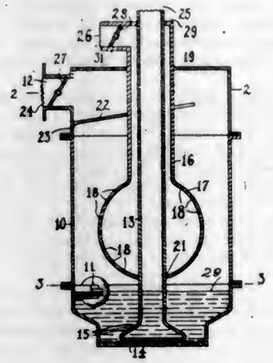


1. In a device of the kind set forth, the combination with a bolt having diametrically arranged slots at its extremity, of a nut having a rectangular opening in its extreme end wall, a spring tensioned detent mounted in said opening of the nut and designed to engage one or the other of the slots of the bolt, and means carried by the exterior end of the detent to engage the extreme outer end face of the nut for withdrawing the detent from the groove or slot with which it engages.

2. In a device of the kind specified, the combination with a bolt having diametrically arranged slots at the end extremity of the bolt, of a nut having a rectangular opening in the extreme end wall of the nut, a detent designed to engage either one of the slots and having its rectangular shank engaging through a rectangular opening of the nut, tensioning means for the detent, and a lever carried by the exterior extremity of the shank of the detent to cam against end surface of the nut to withdraw the detent from one of the slots.

3. In a device of the kind specified, the combination with a bolt having its extreme end face provided with grooves intersecting each other and extending at right angles, of a nut having a rectangular opening in the extreme end wall of the nut, a flat detent blade designed to engage either one of said grooves, said detent blade having a shank rectangular in cross section passing through the rectangular groove of the nut, a spring interposed between the blade and the inner end face of the nut to hold the detent blade in its groove, a lever having forks pivoted upon the exterior end extremity of the shank, the inner extremities of the forks having cammed ends to cam in either direction against the exterior end face of the nut to withdraw the detent blade from one or the other of said grooves.

1,191,097. CARBURETER. JAMES SPEIRS, London, England. Filed Aug. 24, 1915. Serial No. 47,209. (Cl. 48—166.)

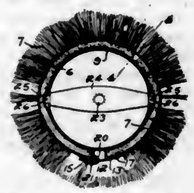


1. A carbureter comprising a vessel, means for maintaining a supply of liquid therein at a constant level, a primary air inlet pipe leading into said vessel and terminating near the bottom thereof in a perforated portion below the liquid level, a perforated chamber occupying the middle portion of the interior of said vessel above the liquid level and means for maintaining a secondary air supply to said chamber, said perforated chamber being of such size relatively to the size of the surrounding vessel as to leave a reduced annular space around the same in the vessel, whereby bubbles caused by the primary air supply are caused to pass up around the perforated chamber and to come in contact with the secondary air supply issuing from the perforations of said chamber, and an outlet for the resultant mixture from the upper part of said vessel.

2. A carbureter comprising a vessel, means for maintaining a supply of liquid therein at a constant level, a primary air inlet pipe leading into said vessel and terminating near the bottom thereof in a perforated portion below the liquid level, a perforated chamber occupying the middle portion of the interior of said vessel above the liquid level and means for maintaining a secondary air supply to said chamber, said perforated chamber being of such size relatively to the size of the surrounding vessel as to leave a reduced annular space around the same in the vessel, whereby bubbles caused by the primary air supply are caused to pass up around the perforated chamber and to come in contact with the secondary air supply issuing from the perforations of said chamber, an outlet for the resultant mixture from the upper part of said vessel, and adjustable means for controlling the secondary air supply and the outflow of the mixture respectively.

3. A carbureter comprising a vessel and means for maintaining a supply of liquid at a constant level therein, a primary air inlet pipe leading down the middle of said vessel nearly to the bottom thereof, a perforated footpiece on said pipe below the liquid level, a secondary air supply pipe surrounding said primary air inlet pipe and a perforated enlargement on said secondary air supply pipe above the liquid level, said enlargement leaving a narrow annular space between it and the wall of the vessel into which space the bubbles formed in the liquid by the primary air supply may rise, an outlet pipe at the upper part of said vessel for the resultant mixture, and means for controlling the proportion of secondary air relative to the primary air in the mixture.

1,191,098. MOP. EDWARD H. TATE, Malden, Mass., assignor to Tate Manufacturing Company, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Sept. 25, 1913. Serial No. 791,855. (Cl. 15—13.)



1. The combination of a mop-holder comprising a ring provided with a circumferential groove, a member located within said ring and having terminal portions extending through said ring into said circumferential groove and forming pivots for said member, means in said groove to secure said terminal portions to said ring, a handle attached to said member, a mop comprising a band encircling said ring and located in said groove, and means to secure said band in place in said groove.

2. The combination of a mop-holder comprising a ring provided with a circumferential groove, a member located within said ring and having reduced terminal portions extending through said ring into said circumferential groove and forming pivots for said member, the latter being provided with opposite shoulders engaging the inner circumferential surface of said ring, fastening means extending from said groove into said reduced portions, a mop comprising a band encircling said ring and located in said groove, and means to secure said band in place in said groove.

3. The combination of a mop-holder comprising a ring provided with a circumferential groove, a member located within said ring and having terminal portions extending through said ring into said circumferential groove and forming pivots for said member, means in said groove to secure said terminal portions to said ring, a handle attached to said member, a mop comprising a band encircling said ring and located in said groove and engaging the ends of said terminal portions, and means to secure said band in place in said groove.

4. The combination of a mop-holder comprising a ring, a grasping member located within and pivoted to said ring but separated therefrom on two sides by spaces for the introduction of the hand of the user and providing for the manipulation of the implement by grasp of the hand about the top, bottom and sides, of said grasping member, a mop encircling said ring, and means external to said ring to secure said mop thereto.

1,191,099. WATERPROOFED WALL-BOARD. JOHN H. THICKENS, Buffalo, N. Y., assignor to The Beaver Company, Buffalo, N. Y., a Corporation of Ohio. Filed Dec. 5, 1914. Serial No. 875,599. (Cl. 154—45.9.)



1. A rigid wall board of wood fiber, sized on the back more than on the front, so that the subsequent decoration

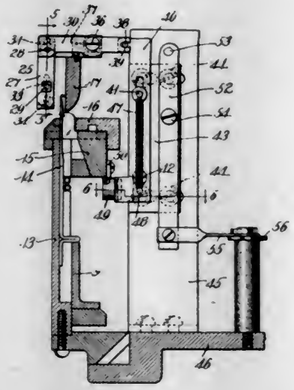
of the board may equalize the resistance to moisture of both sides of the board and reduce warping due to unequal expansion.

2. A wall board of wood pulp, sized on both the front and back sides, the sizing on the back being more resistant to moisture than the sizing on the front, so that when the board is installed and decorated, it will present substantially equal resistance to moisture on both sides.

3. A wall board of wood pulp, sized on both the front and back sides, the sizing on the back containing more waxy material than that on the front, so that the subsequent decoration of the board may equalize the resistance to moisture of both sides of the board; substantially as described.

4. A rigid wall board of wood fiber coated on the front with a sizing of about 37% resin, 16% wax and 47% solvent, and coated on the back with a sizing of about 32% resin, 25% wax and 43% solvent; substantially as described.

1,191,100. THREAD CUTTER AND HOLDER FOR CIRCULAR-KNITTING MACHINES. HENRY L. TRUDEL, Ipswich, Mass., assignor, by mesne assignments, to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Mar. 24, 1910, Serial No. 551,306. Renewed Nov. 14, 1912. Serial No. 731,431. (Cl. 66—12.)



1. A knitting machine having in combination with a rotary knitting element a sectional splicing device comprising a plurality of yarn guides, a movable connection for rendering one of said yarn guides operative and inoperative during each revolution of said element, a yarn severing mechanism, means for actuating said severing mechanism during each revolution, and means actuated by said connection for rendering said severing means inoperative.

2. In a knitting machine a needle cylinder and needles, yarn feeding means including a pivoted latch guard ring, means to clamp and cut a yarn removed from operative feeding position mounted on said latch rings, and actuating means for said cutting and clamping means including an element movable into and out of engagement with said cutting and clamping means, whereby the latch guard ring may be elevated freely when said means are disengaged.

3. In a knitting machine a needle cylinder and needles, yarn feeding means including a pivoted latch guard ring, means to clamp and cut a yarn removed from operative feeding position mounted on said latch ring, and actuating means for said cutting and clamping means including an element movable into and out of engagement with said cutting and clamping means whereby the latch guard ring may be elevated freely, and means for moving said element into and out of engagement with said cutting and clamping means at predetermined times.

4. In a yarn feeding device for knitting machines, in combination with a needle cylinder and needles therein, a movable yarn guide and means to move it at predetermined times from an operative position at the exterior of the knitting needles to an inoperative position above and toward the interior thereof, a latch guard ring, a relatively fixed yarn severing member mounted upon said ring having a depending portion within the circle of needles, said depending portion having a channel or notch therein to receive yarn from a yarn guide in an inoperative position, severing means for said yarn coöperating with said depending member, means independent of said latch guard ring to operate said cutting and holding means, and means to render said operating means inoperative at predetermined times.

5. In a knitting machine, a sectional splicing device comprising a plurality of yarn-guides, a cam shaft and pattern cams, and connections for rendering said yarn guides operative and inoperative, means coöperating with one of said connections for independently rendering one of said guides alternately operative and inoperative when permitted by its pattern-cam, a yarn-severing mechanism, and means for actuating said mechanism rendered operative and inoperative by the movement of said connection.

[Claims 6 to 10 not printed in the Gazette.]

1,191,101. DETACHABLE-RIM CLAMP. DONALD E. AGNEW, Portland, Oreg., assignor of one-half to Herbert F. Sullivan, Portland, Oreg. Filed Jan. 13, 1916. Serial No. 71,911. (Cl. 152—21.)



1. A clamping device of the character shown and described, comprising a body portion provided with a wedging portion adapted to be inserted underneath a detachable wheel rim, and a top portion adjustable thereon, whereby to increase or diminish the thickness of the portion inserted under said wheel rim.

2. A clamping device of the character referred to adapted for use with a detachable wheel rim, which clamping device has a two-part wedging portion, the parts of which are adjustable relative to each other, whereby to change the thickness of the wedging portion of said device, and means for securing said device in place.

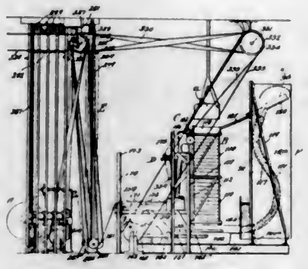
3. In combination with a wheel rim and a detachable rim, a clamping device having a two-part wedging portion adapted to be inserted therebetween, the parts of which are adjustable relative to each other, whereby to increase, or diminish, the thickness thereof, and means for securing said clamping device in place.

4. A demountable rim clamp of the character shown and described, comprising a body having a head of tapering form and provided in its upper face with notches, a top member of tapering form provided in its under side with notches adapted to mesh with the notches in said head, whereby as said top portion is adjusted in opposite directions relative to said head, the thickness of the wedging portion of said clamp is increased, or diminished, substantially as and for the purpose described.

5. In combination with a wheel rim and a demountable rim adapted therefor, a clamping device having a body with means for securing it to said wheel rim and having a head of tapering form adapted to be inserted between said wheel rim and said detachable rim, a top member adjustably mounted upon said head and having interfitting connections therewith to prevent movement relative thereto, said top member being adapted to increase or diminish the thickness of the portion of said head between said wheel rim and said detachable rim as it is adjusted in one direction or the other relative to said head, substantially as described.

[Claim 6 not printed in the Gazette.]

1,191,102. WINDER. HOWARD D. COLMAN, Rockford, Ill., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business as Barber-Colman Company, Rockford, Ill. Filed Apr. 1, 1909. Serial No. 487,347. (Cl. 28—14.)



1. A winder having, in combination, means for winding threads upon a beam; a carriage having a roll; and a plurality of stationary rolls, one of which is driven, the threads passing from said driven roll to the roll on said carriage, thence to another of said stationary rolls, and thence to said winding means.

2. The combination of a warper, means for driving the warper, means for disconnecting the warper from the driving means to stop the warper, and a thread-controlled reserve-supply-accumulating roll over which the yarn extends to the warper, said roll being arranged to render the disconnecting means effective.

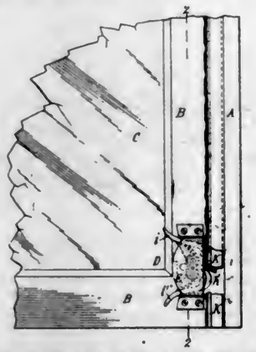
3. The combination, with beam rotating means, of means for accumulating a reserve supply in the threads, and means operated by said reserve-supply-accumulating means for stopping the beam-rotating means.

4. The combination, with beam-rotating means, of means to stop the beam-rotating means, means for accumulating a reserve supply in the threads, and means operated by said reserve-supply-accumulating means for restarting the beam rotating means.

5. A winder having, in combination, means for winding yarn; means tending to feed yarn to the winding means; and means for stopping the action of the second mentioned means without stopping the reception of yarn by the receiving means.

[Claims 6 to 120 not printed in the Gazette.]

1,191,103. SASH-HOLDING DEVICE FOR WINDOWS. OLIVER M. EDWARDS, Syracuse, N. Y. Filed Oct. 27, 1910. Serial No. 589,313. (Cl. 16—18.)



The combination with a window frame provided with a plurality of cut-outs having beveled faces, of a sash holder comprising a pair of spring pressed levers pivoted to the sash contiguous to each other on parallel axes and having eccentrically arranged peripheral and beveled cam faces complemental to the beveled faces of the cut-outs and curving about the axes of the levers, the levers being arranged to operate in opposite direction, substantially as and for the purpose specified.

1,191,104. PRODUCING ALUMINATE FROM ALUNITE. PAUL R. HERSHMAN, Chicago, Ill. Filed Jan. 18, 1916. Serial No. 72,689. (Cl. 23—13.)

1. The method of producing potassium aluminate from alunite, which comprises treating the raw alunite at temperatures not exceeding 1400° C. with an oxid of an alkaline earth, and subsequently dissolving out the potassium aluminate from the resulting mass, under pressure; substantially as described.

2. The method of producing potassium aluminate, from alunite, which comprises treating the raw alunite at temperatures not exceeding 1400° C. with an oxid of an alkaline earth and with a flux, and subsequently dissolving out the potassium aluminate from the resulting mass under pressure; substantially as described.

3. The method of producing potassium aluminate from alunite, which comprises treating the raw alunite at temperatures not exceeding 1400° C. with an oxid of an alkaline earth and with superheated steam, and subsequently dissolving out the potassium aluminate from the resulting mass under pressure; substantially as described.

4. The method of producing potassium aluminate from alunite, which comprises treating the raw alunite at temperatures not exceeding 1400° C. with an oxid of an alkaline earth, a flux, and superheated steam, and subsequently dissolving out the potassium aluminate from the resulting mass under pressure; substantially as described.

5. The method of recovering the alkali-insoluble alumina contained in alunite in an alkali-soluble form, which comprises treating the alunite at temperatures not exceeding 1400° C. with an oxid of an alkaline earth, and treating the resulting mass with a solution of an alkali in amount sufficient to combine with the excess of alumina, *i. e.*, that part of the alumina which does not combine with the potassium oxid from the potassium sulfate in the alunite; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,191,105. PROCESS OF PRODUCING ALUMINATE FROM ALUNITE. PAUL R. HERSHMAN, Chicago, Ill. Filed Jan. 18, 1916. Serial No. 72,690. (Cl. 23—13.)

1. A method of producing potassium aluminate from alunite, which comprises calcining the alunite under reducing conditions, and subsequently extracting the mass by water; substantially as described.

2. A method of producing potassium aluminate from alunite, which comprises calcining the alunite under reducing conditions, and subsequently extracting the mass by water, under pressure; substantially as described.

3. A method of producing potassium aluminate from alunite, which comprises calcining the alunite under reducing conditions with the aid of steam, and subsequently extracting the mass by water; substantially as described.

4. A method of producing potassuim aluminate from alunite, which comprises calcining the alunite under reducing conditions with the aid of fluxes capable of being reduced to oxid and combining with alumina, and subsequently extracting the mass by water; substantially as described.

5. The method of recovering in alkali-soluble form the alumina contained in alunite, which comprises calcining the alunite under reducing conditions, and subsequently extracting with water having caustic alkali in solution; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,191,106. PROCESS OF MAKING ALUMINATES FROM RAW ALUNITE. PAUL R. HERSHMAN, Chicago, Ill. Filed Feb. 1, 1916. Serial No. 75,492. (Cl. 23—13.)

1. The method of treating alunite and of recovering alumina and potash therefrom substantially free from sul-

furic acid, which comprises boiling the alunite with a water soluble compound of an alkaline earth metal forming an insoluble sulfate.

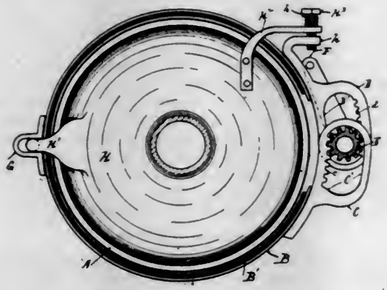
2. The method of treating alunite and of recovering alumina and potash therefrom substantially free from sulfuric acid, which comprises boiling the alunite under pressure with a water soluble compound of an alkaline earth metal forming an insoluble sulfate.

3. The method of treating alunite and of recovering alumina and potash therefrom substantially free from sulfuric acid, which comprises boiling the alunite with a water soluble compound of barium.

4. The method of treating alunite and of recovering barium and potassium aluminates therefrom substantially free from sulfuric acid, which comprises boiling the alunite under pressure with barium hydroxid.

5. The method of treating alunite and of recovering alumina and potash therefrom substantially free from sulfuric acid, which comprises boiling the alunite with barium hydroxid and thereby producing barium sulfate and a solution of potassium and barium aluminates, neutralizing the resulting solution with an acid and thereby precipitating alumina and forming the barium salt of the acid, and recovering barium hydroxid from said barium salt and from the barium sulfate, for reuse.

1,191,107. BRAKE-GEAR. FRANK HOFFMAN, Dunkirk, N. Y., assignor of one-half to Edwin K. Buttolph, Dunkirk, N. Y. Filed Nov. 19, 1914. Serial No. 872,984. (Cl. 74—37.)

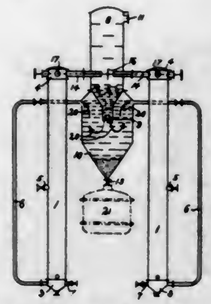


1. In a friction brake-gear, an open brake band, spaced slotted plates secured on one end of said brake-band, internal rack teeth in the side of the slots of said bars adjacent to said brake-band, a slotted plate secured to the opposite end of said brake-band, internal rack teeth in the side of the slot of said bar, farthest from said brake-band and a pinion in said slots intermeshing with said internal rack teeth and engaging the sides of the slots in said plates opposite said rack-teeth, substantially as set forth.

2. In a brake-gear, a drum, a brake-band partially inclosing said drum, gear-racks secured on each end of said band and overlapping each other, a gear-pinion between said gear-racks and intermeshing therewith and supported thereby, means to rotate said pinion, an arm rigidly supported with reference to the axis of said drum, means on said brake-band engaging said arm to support one side of said brake-band, another arm rigidly supported with reference to the axis of said drum, and an elastic connection between said arm and said brake-band, substantially as set forth.

1,191,108. EVAPORATOR. PAUL KESTNER, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 13, 1915. Serial No. 27,890. (Cl. 127—9.)

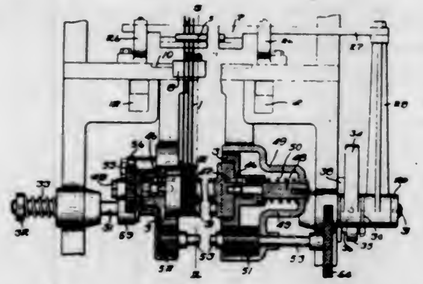
1. In a salt-making apparatus, the combination of a salt-separating chamber having a vapor outlet and means for discharging crystallized salt with a bottom fed vertical tube evaporator having at its top a liquid and vapor discharge conduit entering said separator at a point above the normal liquid level therein and a feed conduit for said evaporator connecting a point in said separator below said liquid level but above the salt discharging means with the bottom feed inlet of said evaporator.



2. In a salt-making apparatus, the combination of a salt-separating chamber having a vapor outlet and means for discharging crystallized salt with a plurality of bottom fed vertical tube evaporators having at their tops vapor and liquid discharge conduits entering said separator at points above the normal liquid level therein, feed conduits connecting the feed inlet at the bottom of each said evaporators with points in said separators below said liquid level but above the salt discharging means and a valve adapted to close or open the delivery ends of said discharge conduits in said separator.

3. In salt-making apparatus, the combination of a bottom fed vertical tube evaporator with a salt-separating chamber receiving liquid and vapor from the top of said evaporator and delivering liquid to the base of said evaporator, said separator comprising vapor discharge means at the top of the chamber and crystal discharge means at the bottom, an intermediate funnel shaped septum having a central opening, and located between the points of liquid inlet and liquid outlet from and to said evaporator and a rod controlled valve for closing said opening.

1,191,109. TUBING-MACHINE. CHARLES LEA, Boston, Mass., assignor to American Warp Drawing Machine Company, a Corporation of Maine. Filed July 6, 1911. Serial No. 637,144. (Cl. 139—94.)



1. In a machine for placing tuft yarns in carpet manufacture through the tubes of a tube frame, the combination with tubing means of a tube frame holder, an alining guide for the yarns, a holder for each end of the spool in which the end is removably placed and held, means for holding the holders fixed or released as required, and means connecting said holders for simultaneously turning the same.

2. In a machine for placing tuft yarns in carpet manufacture through the tubes of a tube frame, the combination with tubing means of a tube frame holder, an alining guide for the yarns, a holder for each end of the spool in which the said end is removably placed, means for holding the holders fixed or released as required, gears for turning said holders, and a rigid shaft connecting said gears.

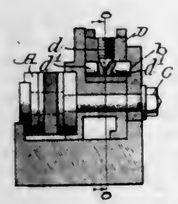
3. In a machine for placing tuft yarns in carpet manufacture through the tubes of a tube frame, the combination with a tube frame holder of tubing means, a yarn holding spool, a holder for each end of the spool in which the said end is removably held, spring-pressed means upon the holder to engage with the spool for turning the same, means for holding the holders fixed or released as required, and means connecting the holders to cause them to turn simultaneously.

4. In a machine for placing tuft yarns in carpet manufacture through the tubes of a tube frame, the combination with a plurality of needles, a toothed holder for holding separated the yarn ends in close approximation to the tubes, a spool holder wherein the spool is normally held, means for freeing the spool to release the yarn during the tubing operation.

5. In a machine for placing tuft yarns in carpet manufacture through the tubes of a tube frame, the combination with a plurality of needles, a toothed holder for holding the yarns separated in close association with the tubes, means for moving said holder to lay the yarn across the needles, means for holding the yarn spool fixed, and means for releasing the spool before subsequently again fixing the same to let out a predetermined length of yarn during the tubing operation.

[Claims 6 to 25 not printed in the Gazette.]

1,191,110. ADJUSTABLE BOX-BLANK MACHINE. JULIUS J. MILLER, St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Kittery, Me., a Corporation of Maine. Filed June 28, 1909. Serial No. 504,667. (Cl. 1—15.)



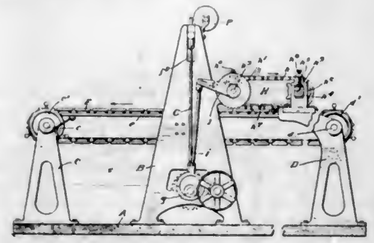
1. In a box blank machine, means for making blanks of different sizes, comprising a work-holder having a cleat channel, spacing blocks therefor, adjustable along the length thereof, and free of clamping pressure thereby, and means including a vertical screw in each block for holding the same in different positions on said work-holder, said work-holder having a longitudinal groove for engaging said means, the said blocks and means being entirely within the cleat channel of said work-holder, and each block being formed to engage the opposing ends of two adjacent cleats.

2. In a box blank machine, means for making blanks of different sizes, comprising a work-holder having a cleat channel, spacing blocks therefor, adjustable along the length thereof, and free of clamping pressure thereby, a screw in each block, and means carried by the blocks and actuated by the lower ends of said screws for holding the blocks in different positions on said work-holder, said work-holder having a longitudinal groove for engaging said means, the said blocks and means being entirely within the cleat channel of said work-holder, and each block being formed to engage the opposing ends of two adjacent cleats.

3. In a box blank machine, means for making blanks of different sizes, comprising a work-holder having a cleat channel, spacing blocks therefor, adjustable along the length thereof, a screw for each block, a grooved support for said blocks, and means carried by the blocks and actuated by said screws for engaging the groove of said support to hold the blocks in different positions on said work-holder, the said blocks and means being entirely within the cleat channel of said work-holder, and each block being formed to engage the opposing ends of two adjacent cleats.

4. In a box blank machine of the kind disclosed, a traveling work-holder having a cleat channel having a plurality of spacing blocks for spacing the cleats apart endwise in the direction of travel thereof, means on the work-holder for engaging one side of each spacing block, a vertical screw in each spacing block, a retaining member carried by and projecting from the other side of each spacing block, adapted to be operated by said screws, and means on said work-holder for engaging said retaining members, whereby the distance between the spacing blocks may be varied at will, all within the cleat channel of said work-holder, and means for stapling the blanks as they move along, each block being formed to engage the opposing ends of two adjacent cleats, and said blocks being free of clamping pressure except by said work-holder.

1,191,111. WIRE-BOUND CRATE OR BOX BLANK MACHINE. JULIUS J. MILLER, St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Kittery, Me., a Corporation of Maine. Filed June 28, 1911. Serial No. 635,787. (Cl. 1—14.)



1. A machine for making wire bound box blanks by wiring together the sheets and cleats of the previously unconnected side sections of each blank, comprising a plurality of endless belts, blocks for spacing the adjacent ends of the cleats at intermediate points in each blank, and at the ends of each blank, said blocks being carried by said belts, staplers having provisions for securing the binding wires to said sheets and cleats, and feed mechanism for engaging the blank materials to communicate the feeding motion to said blocks and belts.

2. A machine for making wire bound box blanks by wiring together the sheets and cleats of the previously unconnected side sections of each blank, comprising a plurality of endless belts, blocks for spacing the adjacent ends of the cleats at intermediate points in each blank, and at the ends of each blank, said blocks being carried by said belts, staplers having provisions for securing the binding wires to said sheets and cleats, and feed mechanism for engaging the blank material to communicate the feeding motion to said blocks and belts, said mechanism including link belts provided with teeth for engaging the sheets.

3. A machine for making wire bound box blanks by wiring together the sheets and cleats of the previously unconnected side sections of each blank, comprising a plurality of endless belts, blocks for spacing the adjacent ends of the cleats at intermediate points in each blank, and at the ends of each blank, said blocks being carried by said belts, staplers having provisions for securing the binding wires to said sheets and cleats, and feed mechanism for engaging the blank materials to communicate the feeding motion to said blocks and belts, said mechanism including teeth for engaging the upper surface of the sheets.

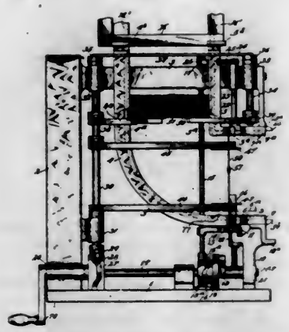
4. A machine for making wire bound box blanks by wiring together the sheets and cleats of the previously

unconnected side sections of each blank, comprising a plurality of endless belts, blocks for spacing the adjacent ends of the cleats at intermediate points in each blank, and at the ends of each blank, said blocks being carried by said belts, staplers having provisions for securing the binding wires to said sheets and cleats, and feed mechanism for engaging the blank materials to communicate the feeding motion to said blocks and belts, said belts having means for holding said blocks in fixed relation thereon.

5. A machine for making wire bound box blanks by wiring together the sheets and cleats of the previously unconnected side sections of each blank, comprising a plurality of endless belts, blocks for spacing the adjacent ends of the cleats at intermediate points in each blank, and at the ends of each blank, said blocks being carried by said belts, staplers having provisions for securing the binding wires to said sheets and cleats, and feed mechanism for engaging the blank materials to communicate the feeding motion to said blocks and belts, said mechanism having means for engaging the sheets.

[Claims 6 to 9 not printed in the Gazette.]

1,191,112. WARP-DRAWING MACHINE. BURT A. PETERSON, Rockford, Ill., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners doing business at Barber-Colman Company, Rockford, Ill. Filed Mar. 9, 1908. Serial No. 419,830. (Cl. 139—94.)



1. In a warp-drawing machine, in combination, heddle-guiding means, a member movable transversely of said guide means to locate the heddle for the threading operation, said member having a heddle-locating slot therein to receive a heddle situated in said guide means, and means for threading the located heddle.

2. In a warp-drawing machine, in combination, heddle-guiding means, a member movable transversely of said guide means, said member having a heddle-receiving slot therein to hold a heddle against movement in said guide means, said slot having a flaring entrance portion to locate the heddle, and means for threading the located and held heddle.

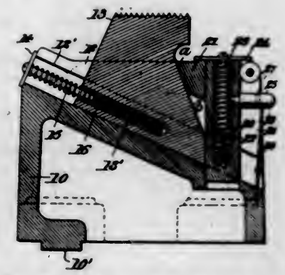
3. In a warp-drawing machine, in combination, heddle-guiding means; a member movable transversely of said guide means for holding a heddle against movement in said guide means; means for threading the held heddle; and a member movable transversely of said guide means for moving the threaded heddle in said guide means, said members being arranged for synchronous movement in the same direction.

4. In a warp-drawing machine, in combination, heddle-guiding means; a rock shaft; two arms fixed on said rock shaft; a member mounted on one of said arms for holding a heddle against movement in said guiding means; means for threading the held heddle; a member on the other arm for moving the threaded heddle in said guide means; and means for rocking said shaft to move said members transversely of said guide means.

5. In a warp-drawing machine, in combination, heddle-guiding means; means for threading a heddle situated in said guide means; a plurality of receptacles for threaded heddles; movable heddle-guiding means for connecting the first mentioned guide means with any of said receptacles; and means for moving a threaded heddle along both of said guide means into one of said receptacles.

[Claims 6 to 19 not printed in the Gazette.]

1,191,113. WORK-DRIVING DOG. SALMON WILDER PUTNAM, 3d, Fitchburg, Mass., assignor to Emma Park Putnam, Fitchburg, Mass. Filed Mar. 18, 1916. Serial No. 85,175. (Cl. 82—40.)



1. The combination with the sliding jaw of a driving-dog, of means engaging therewith for substantially continuously blocking the jaw against backward motion or rebound.

2. A driving-dog having a slidably-mounted jaw, and means movable in unison with the jaw and engaging said jaw and automatically blocking the same against rebound or return movement.

3. A driving-dog having a movably-mounted jaw adapted to automatically adjust itself in response to an increased resistance to a cutting tool, said dog having means movable in unison with and engaging the jaw and blocking said jaw against rebound or return movement due to a variation in the said cutting tool resistance.

4. The combination with a driving-dog having a gripping jaw constrained to move in a path oblique to the direction of movement of the dog, of means engaging and responding to the movement of the jaw and automatically blocking said jaw against rebound or return movement.

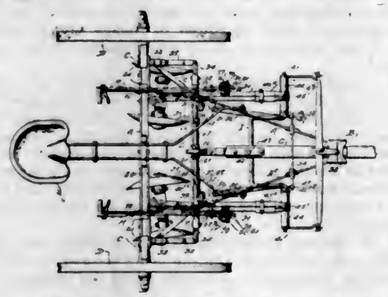
5. The combination with a driving-dog having a slidably-mounted gripping jaw constrained to move in a path oblique to the direction of movement of the dog, of a follower engageable with and responding to the movement of the jaw and blocking the rebound or return movement thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,191,114. CULTIVATOR. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Filed Nov. 25, 1914. Serial No. 873,971. (Cl. 97—35.)

1. In a soil-working implement, the combination of a frame, angularly adjustable supporting wheels, beams carrying earth working elements, a pole mounted to turn on a vertical axis, connections between the pole and the forward portions of the beams and connections between the wheels and pole and rear portions of the beams, the connections being so arranged that the pole is turned pivotally and the beams are moved bodily laterally when the supporting wheels are adjusted angularly.

2. In a soil-working implement, the combination of a frame, supporting wheels, means adapted to be actuated by the operator for adjusting the wheels on vertical axes, a pivoted pole, beams, soil-working elements carried by the beams, means for coördinating the pivotal adjustments of the pole and supporting wheels, connections between said means and the beams and connections between the pole and the beams, the said connections coöperating to cause the beams to be adjusted bodily laterally when the supporting wheels and pole are adjusted pivotally.



3. In a soil-working implement, the combination of a frame, axle spindles pivotally adjustable on vertical axes, supporting wheels upon the axle spindles, means connected to the axle spindles and operable to adjust the same, beams, soil working elements carried by the beams, means for suspending the forward ends of the beams, the said means having connection with the pole and being arranged to move the forward ends of the beams laterally when the pole is turned pivotally, means having connection with the axle spindles and movable transversely of the implement and connected to the pivot pole, and connections between the latter means and the beams for moving the rear portions of the beams laterally.

4. In a soil working implement, the combination of a frame, axle spindles pivotally adjustable on vertical axes, supporting wheels upon the axle spindles, means connected to the axle spindles and operable to adjust the same, a member movable transversely of the implement, connections between the ends of said members and the spindles, a pole having its rear end pivotally connected with said member, the pole being also pivoted in advance of said member, beams, soil working elements carried by the beams, and means connecting the beams with the pole, the said means being arranged to cause the forward portions of the beams to move transversely of the implement when the pole is turned pivotally.

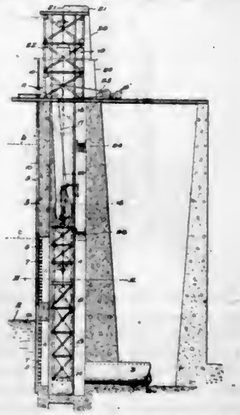
5. In a soil working implement, the combination of a frame, axle spindles pivotally adjustable on vertical axes, supporting wheels upon the axle spindles, means connected to the axle spindles and operable to adjust the same, a member movable transversely of the implement, connections between the ends of said members and the spindles, a pole having its rear end pivotally connected with said member, the pole being also pivoted in advance of said member, beams, soil working elements carried by the beams, an arch having outwardly extending ends connected to the front ends of the beam, said arch having pivotal connection with the pole at a place between the forward pivot of the latter and the transversely movable member, and said pivotal connection being arranged to cause the arch to move transversely of the implement when the pole is turned on its forward pivot.

[Claims 6 to 10 not printed in the Gazette.]

1,191,115. WATER-SCREENING APPARATUS. BENJAMIN S. REYNOLDS, Milwaukee, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 12, 1916. Serial No. 97,043. (Cl. 210—16.)

1. In a water screening apparatus, a wall having through it a plurality of openings at different levels, means for closing any of the openings at will, and a vertically adjustable water screen adapted to be moved into position opposite the uncovered opening.

2. In a water screening apparatus, a wall having through it a plurality of openings at different levels, means for closing the said openings, means for adjusting the closing means so as to close any opening at will, a water screen of a size to treat the water passing through any opening, and means for adjusting the screen into position opposite any unclosed opening.



3. In a water screening apparatus, a wall having through it a plurality of openings at different levels, means for closing any of the openings at will, an adjustable, self-cleaning, water screen adapted to be moved into position to treat the water flowing through any unclosed opening, and means for receiving and carrying off refuse discharged from the screen arranged at different levels.

4. In a water screening apparatus, a wall having through it a plurality of openings at different levels, means for closing any opening at will, a self-cleaning water screen of a size to treat the water supplied by any single unclosed opening, means for adjusting the said screen into working position opposite any opening, and independent means for receiving and carrying off refuse discharged from the screen arranged at different levels so as to receive such refuse as the screen is adjusted to one position or another.

5. In a water screening apparatus, a wall having through it a plurality of openings at different levels, an adjustable gate for closing any one of the openings, means for adjusting the gate, a vertically adjustable water screen of a length to treat the water passing through any single opening, means for adjusting the screen into position opposite an unclosed opening, separate receivers for the refuse taken up and discharged by the screen, arranged at different levels, and means for operating the screen.

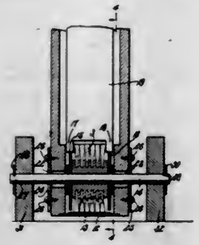
[Claim 6 not printed in the Gazette.]

1,191,116. MARKER. CARL F. SCHIPPELL, New York, N. Y., assignor to Herman W. Hoops, New York, N. Y. Filed Mar. 20, 1916. Serial No. 85,321. (Cl. 111—41.)

1. In a marker of the character described, a casing having a lower rounded end, said lower end having an aperture therein, a foraminous covering plate for said aperture, a rotatable brush arranged in said lower end and adapted to contact with an appreciable portion thereof, said brush covering said foraminous plate and acting as a closure for said aperture when not rotating, and traction means for rotating said brush whereby the marking material in the casing will be moved by the bristles of the brush to said foraminous plate and forced therethrough, the amount of discharge being proportioned to the speed of the device.

2. In a marker of the character described, a casing provided with a rounded lower end, a brush fitting said rounded end, said end having an opening covered by said brush, traction members for rotating said brush for feeding part of the material from the casing through said

opening, ratchet wheels connected to said brush, and a spring arranged in said casing engaging said ratchet wheels for jarring and agitating the marking material so that the same will readily feed into the brush.



3. In a marker of the character described, a casing provided with a rounded lower end having an aperture therein, a foraminous plate covering said aperture, a brush fitting said rounded end and contacting with said foraminous plate for feeding marking material from the casing through said aperture, an axle connected with said brush and extending through the side walls of the casing, said side walls having apertures an appreciable size larger than the axle so that the axle may be adjusted so as to move the brush toward or from the foraminous plate in order to take up wear, journal plates connected to said side walls and engaging said axle for supporting the same in any adjusted position, and means connected to said axle for rotating the same.

4. In a marker of the character described, a casing having an aperture in the lower end, a foraminous plate covering said aperture, a rotatable brush covering said foraminous plate and acting as a closure for said aperture when not rotating, and means for rotating said brush.

5. In a marker of the character described, a casing having an aperture in the lower end, a foraminous plate covering said aperture, a brush engaging said plate, means for rotating said brush, a ratchet wheel connected with said brush, and means operated by the ratchet wheel for agitating the marking material in the casing.

1,191,117. CASE FOR VACUUM-RECEPTACLES. WILLIBERT SIMPSON, Ottawa, Ontario, Canada, assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 9, 1915. Serial No. 54,997. (Cl. 215—3.)



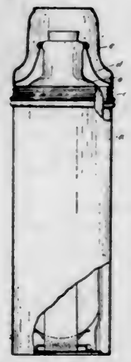
1. A case of the character described, comprising a body portion having at its upper end a plurality of exterior threads of different diameters, a vacuum receptacle located therein, a sleeve having threaded engagement with the thread of smaller diameter and apertured at its upper end to engage said receptacle, and a cap having threaded engagement with the thread of larger diameter.

2. A case of the character described, comprising a body portion having at its upper end a plurality of exterior threads of different diameters, a vacuum receptacle located therein, a sleeve threaded at its lower edge, overlying and engaging with the smaller thread on the case, its upper end being apertured to engage said receptacle, and a cap having threaded engagement with the larger thread.

3. A case of the character described having a plurality of exterior threads of different diameters at its upper end, the smaller thread being arranged immediately above the larger, a vacuum receptacle located therein, a sleeve provided for threaded engagement with the exterior of the thread of smaller diameter and apertured at its upper end to engage said receptacle, and a cap enveloping said sleeve and having threaded engagement with the thread of larger diameter.

4. A case for vacuum receptacles, a sleeve and an inclosing cap, said sleeve and cap being secured to said case exteriorly thereof and independently of one another.

1,191,118. CASE FOR VACUUM-RECEPTACLES. WILLIBERT SIMPSON, Ottawa, Ontario, Canada, assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 9, 1915. Serial No. 54,998. (Cl. 215—3.)



1. A case for vacuum bottles open at its upper end, a receptacle holder located therein, a vacuum receptacle supported in said holder, a retaining sleeve fitting over and engaged with the open end of said case, the upper portion of said sleeve being plain and inclining upwardly and inwardly to engage with the neck of said receptacle, and a cap enveloping said sleeve and engaged with the lower portion thereof.

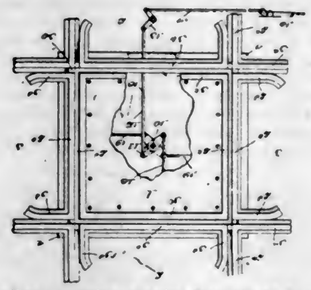
2. A case for vacuum receptacles provided with a tapering thread at its upper end, a sleeve provided with a straight thread adapted to engage the tapering thread on the case, and a cover threaded to engage the thread on the sleeve.

3. In a device of the character described, a case, a sleeve having threaded engagement with the case, and a cap having threaded engagement with said sleeve, and means for producing a greater frictional contact in the engagement of the sleeve with the case than in the engagement of the cap with the sleeve.

1,191,119. RAILROAD-CROSSING. LUTHER L. WARE, Terre Haute, Ind., assignor of one-third to Joseph Peter Stich, Terre Haute, Ind. Filed Dec. 4, 1915. Serial No. 65,083. (Cl. 104—116.)

1. In a railway crossing, gravity rail filler blocks normally disposed below the rails, flexible elements connected with the blocks, means for actuating the elements to raise the blocks to fill the gaps between the rails, and means for supporting the blocks in such position.

2. In a railway crossing, gravity blocks at the corners thereof disposed normally below the rails, flexible elements connected with the blocks, mechanism for winding the elements for elevating the blocks to fill the gaps between the rails, and means for supporting the blocks in such position.



3. In a railway crossing, gravity filler blocks at the corners thereof disposed normally below the tread surface of the rails, flexible elements connected with the blocks, mechanism for winding the elements to elevate the blocks, sliding means for supporting the blocks, and mechanism for actuating the said means to bring the same beneath the blocks when the blocks are elevated.

4. In a railway crossing, gravity filler blocks at the corners thereof disposed normally below the tread surface of the rails, flexible elements connected with the blocks, mechanism for winding the elements to elevate the blocks, sliding means for supporting the blocks, and mechanism for actuating the said means to bring the same beneath the blocks when the blocks are elevated and for moving the same from beneath the blocks to permit of the gravitating of the blocks to their initial position.

5. In a railway crossing, gravity rail filler blocks in the gaps at the corners thereof, one series being elevated to close one of the tracks, flexible elements connected with all of the blocks, shafts having spools upon which the elements are wound, and means for simultaneously rotating the shafts to wind certain of the flexible elements thereon and to unwind the remaining flexible elements to permit of the elevation of certain of the blocks to fill the gaps between the rails and the gravitating of the remaining blocks below the tread surface of the rails, and means for holding the elevated blocks in such position.

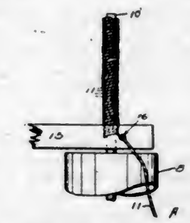
[Claims 6 to 11 not printed in the Gazette.]

1,191,120. SPATTER-BRUSH. REINHARD ANDACHT, Milwaukee, Wis. Filed Feb. 10, 1916. Serial No. 77,512. (Cl. 91—62.5.)



The combination in a spatter brush, of twisted steel strands, set in a handle and held in place by bolt and nut, and bound together at several points with their ends free and open, all substantially as set forth.

1,191,121. SPINNING-TOP. NATSUGORO ASAKAWA and DAITAKE OKAMOTO, Seattle, Wash. Filed Mar. 21, 1916. Serial No. 85,593. (Cl. 46—32.)



1. A top having a long axially-disposed spindle and a holder comprising a thin strip having a convex surface adapted to engage said spindle, and a perforation through which a string may pass.

2. A top comprising a cylindrical body portion having an axially-disposed spindle that projects above and below said body portion, a string for said spindle, and a holder comprising a thin strip having a convex surface adapted to engage one side of said spindle, said holder having a perforation through which said string may pass.

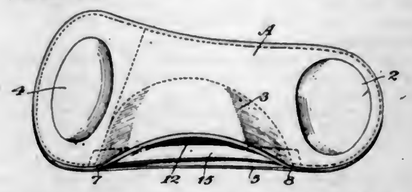
3. A top comprising a hollow cylindrical body-portion having a vertical slot provided therein, said slot having an angular undercut edge, disks secured within the ends of said body portion, an axially disposed spindle that projects above and below said body portion, a string for said spindle, and a holder having a convex surface adapted to coact with said spindle and a perforation through which said string may pass.

4. A top comprising a body portion having a flat upper end, an axially disposed spindle on which a string may be wound, and a holder having a convex bearing surface and a perforation through which a string may pass, said perforation being disposed at a distance from the bottom edge of said holder whereby when said string is wound downwardly on said spindle to a point near the top of said body portion and a pull is exerted thereon, the bottom edge of said holder will be caused to bear down on said body portion to act as a brake and prevent said top from spinning.

5. A top holder comprising a thin strip having a convex bearing surface and provided with a perforation through which a string may pass.

[Claim 6 not printed in the Gazette.]

1,191,122. FOOT-CORRECTOR. JAMES BROWN, San Francisco, Cal. Filed Oct. 5, 1915. Serial No. 54,152. (Cl. 36—71.)



1. A foot corrector comprising an inner sole, a lining piece stitched to the bottom side of the sole, said lining member being slitted at a plurality of points near the front end, and a pad member insertible between the sole and the slitted lining to thicken the sole at a point registering with the transverse arch of the foot.

2. A foot corrector comprising an inner sole and a transverse strip stitched to the bottom of the sole forming an inclosed pocket near the toe portion, said strip being slitted in several places to allow an insert at different points transversely of the sole.

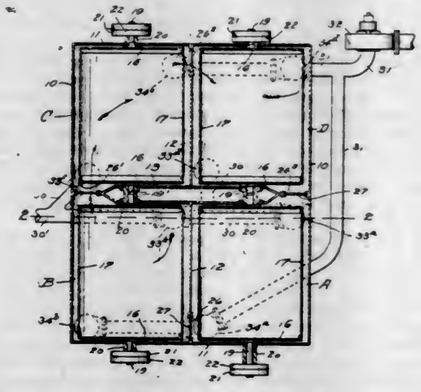
3. In a foot corrector, a member having a raised part forming a pocket thereunder, and a tensioning element secured to said member and disposed beneath the raised

part and being spaced from the inner longitudinal side of the pocket to admit inserts in said space between the element and the pocket inner side and to hold the insert in the pocket.

4. A foot corrector composed of a member having a pocket the bottom of which is formed with a series of spaced slits providing straps connected at each end to the bottom and having each of their sides free, whereby to engage an insert by extending thereacross and intermediate opposite sides or ends of the insert.

5. In a foot corrector, a member having a raised part forming a pocket thereunder, and means secured to said member and disposed beneath the raised part and being spaced from the inner longitudinal side of the pocket to admit inserts in said space between the means and the pocket inner side and to hold the insert in the pocket.

1,191,123. CLOTHES-DRYING MACHINE. CHARLES W. COLLINS, Seattle, Wash. Filed Feb. 13, 1915. Serial No. 7,944. (Cl. 34—3.)



1. A drier of the character described, having a casing divided into a plurality of compartments and provided with communicative connection therebetween, gates for each such connection, means for individually opening or closing selected of said gates, a rotary drum in each of said compartments, means for rotating the drums, an intake and outlet port for each compartment, means to supply air to the intake ports and withdraw the air from the outlet ports, valves for the respective ports, and means for simultaneously opening the inlet valve of one compartment and the outlet valve for another compartment whereby a flow of air ensues through a number of the compartments.

2. A drier of the character described, having a casing divided into a plurality of compartments and provided with communicative connection therebetween, gates for each such connection, means for individually opening or closing selected of said gates, a rotary drum in each of said compartments, means for rotating the drums, an intake and outlet port for each compartment, means to supply air to the intake ports and withdraw the air from the outlet ports, valves for the respective ports, and means for regulating said valves whereby the course of air through said compartments may be varied.

3. A drier of the character described, divided into compartments, means to afford communication between selected of said compartments, a conduit to supply air for drying into the compartments, a conduit to conduct the air from the compartments, valves for regulating the flow of air to and from said conduits with respect to all of the compartments, and a means operatively connected with all of said valves whereby the air in flowing between the aforesaid conduits is caused to flow through all but one of the compartments, said valve regulating means being adapted in coöperation with the first-named means to cause each of said compartments to become idle and the other operative in the successive cycles of operation of the drier.

4. A drier of the character described, having a plurality of communicating compartments, doors operable from the outside of the drier for closing the communication between any of said compartments and the adjacent ones, openings for the inlet and discharge of hot air from each of said compartments, valves for the respective openings, and means operatively connected with all of said valves whereby the hot air is supplied to one of said compartments and discharged from another compartment without passing through a selected one of said compartments.

1,191,124. FISH AND RAT TRAP. JOHN W. COTTON, Mahl, Tex., assignor of one-half to Thomas J. Tatom, Mahl, Tex. Filed May 5, 1916. Serial No. 95,620. (Cl. 43—23.)

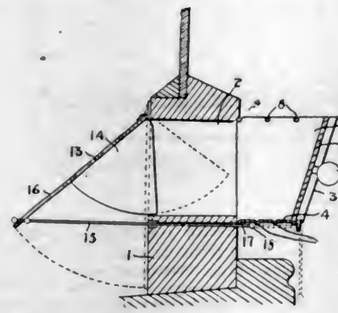


1. A trap comprising a shaft, a curved arm at one end thereof having a perforation therethrough, an operating spring having one end attached to the opposite end of the said shaft, a rectangular frame carried by the said arm in a plane perpendicular to the said shaft, said shaft having a lateral shoulder, a pivoted trigger upon the shaft adjacent the said shoulder having an offset pointed end, a trip plate having one end attached to the other end of the said spring and seated against the said shoulder when the spring is expanded with the trap in its set arrangement with the pointed end of said trigger positioned overlying the said opposite end of said plate, a line carried by said trigger, a hook upon said line depending through said arm perforation, bait attached to the said hook beneath the said frame, fish engaging members trunnioned at the opposite ends of the said frame and flexible operative connectors between the said spring and engaging members.

2. A trap comprising a shaft having a curved terminal lower end forming an arm and a suspending eye at its opposite end, a shoulder formed upon said shaft at the same side thereof as the said arm, an operating spring attached at one end to the said eye, a trip plate flexibly attached to the other end of said spring, the said shoulder being adapted for the abutting reception of said plate when the spring is extended, a bait carrying trigger pivoted to said shaft between said shoulder and arm in tripping engagement with said plate when the trap is in its set arrangement, trunnioned pronged catching members supported by the said arm and a connector between the said spring and catching members in slackened arrangement when the trap is set.

1,191,125. WINDOW-VENTILATOR. DAVID S. HUSBAND, Oakville, Ontario, Canada. Filed June 1, 1915. Serial No. 31,394. (Cl. 98—31.)

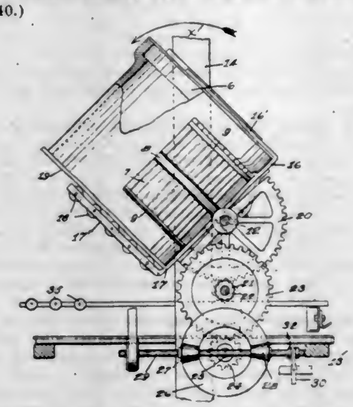
1. In a window ventilator, the combination with the sash having an orifice therethrough, of a sheet metal member secured to the inner side of the sash having a horizontal plate projecting inwardly and extending the full length of the orifice, said member having rigid end walls, and a movable plate adapted to rest upon the inwardly extending plate member and to rise upwardly therefrom between the ends and adapted to be held in adjusted positions.



2. In a window ventilator, the combination with the sash rail having an orifice therethrough, of a sheet metal member secured to the inner face of said sash and having a plate portion extending longitudinally of the orifice and projecting inwardly from the sash and provided with longitudinal grooves in its upper face and having end walls rising therefrom, said end walls having notched recesses, an adjustable plate member adapted to rest in the grooves in the longitudinal horizontal plate and adapted to engage the notches in said end plates and forming a baffle.

3. In a window ventilator, the combination with the sash rail having an orifice therethrough, of a member secured to the sash and extending longitudinally of the orifice and having upturned ends, said member having a longitudinal beveled surface adjacent to the face of the sash and grooves extending longitudinally parallel with said sash, the end portions of said member each having a notch adjacent to the sash formed with an inwardly beveled edge and notches in the upwardly extending portions, and an adjustable plate member adapted to extend between said end portions and having a beveled lower edge adapted to engage the longitudinal grooves in the aforesaid member, and projecting end portions adapted to engage the notches in said end plates.

1,191,126. PIPE-TURNER. JOHN F. KEENAN, Seattle, Wash. Filed June 22, 1915. Serial No. 35,545. (Cl. 25—40.)

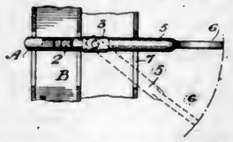


1. In devices of the class described, a turning cradle for pipe consisting in a plurality of normally semi-circular ribs of resilient material having unobstructed yielding flexibility at their outer extremities.

2. In devices of the class described, a turning cradle for pipe, consisting in a plurality of normally semi-circular ribs adapted to support a pipe and resiliently yield in lateral directions under the weight of said pipe.

3. In a turning cradle for pipe, a plurality of ribs of resilient material, said ribs being free at their outer extremities to yield in lateral directions under the weight of said pipe.

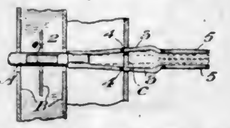
1,191,127. DOOR-KEY-SECURING DEVICE. MORRIS W. ROSENSHINE, San Francisco, Cal., assignor of one-half to Herbert E. Clayburgh, San Francisco, Cal. Filed Nov. 10, 1915. Serial No. 60,665. (Cl. 70—7.)



1. A lock having an inner ward containing portion, an escutcheon member having a key hole therein, and separated by an open space from the first-named portion, in combination with a key having a hinge joint between the lock and the keyhole, whereby the outer portion of the key may be turned to an angle and lie in the lower part of the keyhole slot.

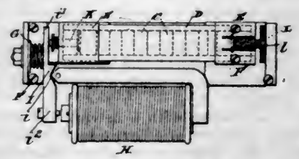
2. A lock having an inner key receiving portion and a keyhole plate with an interspace between the two, a key having a hinge in its shank between the lock and keyhole to allow the outer portions of the key shank to drop to the bottom of the keyhole in interlocking engagement.

1,191,128. DOOR-KEY-SECURING DEVICE. MORRIS W. ROSENSHINE, San Francisco, Cal., assignor of one-half to Herbert E. Clayburgh, San Francisco, Cal. Filed Nov. 10, 1915. Serial No. 60,666. (Cl. 70—7.)



The combination in a key of a shank having wards to fit the lock, elastic plates secured to the inner end of the shank, said plates arranged to form a rectangular outline and having shoulders formed at the outer ends and extensions terminating in compressible hand-grips.

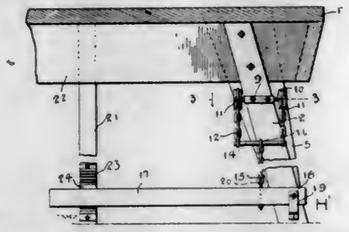
1,191,129. REGULATOR FOR USE IN CHARGING ACCUMULATOR-CELLS FOR MOTOR-CAR LIGHTING AND STARTING AND FOR SIMILAR PURPOSES. WILLIAM HARDING SCOTT, Norwich, England. Filed June 22, 1914. Serial No. 846,586. (Cl. 171—229.)



1. In regulators of the character described, a series of carbon blocks, an armature lever having an operative bearing on said blocks, a spring acting in one direction upon said lever and an electromagnet acting in the opposite direction thereon, and an armature supporting arm having a knife edge support for the armature in the magnetic circuit.

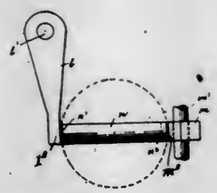
2. In regulators of the character described, a series of carbon blocks, an armature lever having an operative bearing on said blocks, a spring acting in one direction upon said lever and an electromagnet acting in the opposite direction thereon, said electro-magnet having a branch arm in the magnetic circuit and provided with a knife edge forming a support for the armature, substantially as described.

1,191,130. BENCH-VISE. HERBERT B. SEYMOUR, Denver, Colo.; Mattie E. Seymour administratrix of said Herbert B. Seymour, deceased. Filed Apr. 30, 1915. Serial No. 24,954. (Cl. 81—21.)



In a bench vise, a clamping jaw, a pair of tightening chains secured thereto, a yoke extending between said chains and connected to the same, a lever, and an additional chain connected to the yoke and adjustably connected to the lever.

1,191,131. MOTION-TRANSMITTING DEVICE. GOTTWALD SIEBER, Plauen, Germany, assignor to Vogtländische Maschinenfabrik, Plauen, Germany. Filed Feb. 3, 1914. Serial No. 816,227. (Cl. 74—17.)

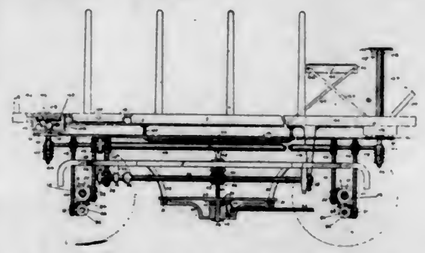


1. The combination with a driving and a driven part, having plane surfaces, of a device for transmitting motion from one of said parts to the other, consisting of a link loosely interposed between said parts and having spherically-shaped end surfaces adapted to positively bear against said plane surfaces and to roll thereon during transmission of movement.

2. The combination with a driving and a driven part, having plane surfaces, of a device for transmitting motion from one of said parts to the other, consisting of a link loosely interposed between said parts and having spherically-shaped end surfaces adapted to positively bear against said plane surfaces and to roll thereon during transmission of movement and means for preventing said link from displacement relative to the said parts other than by rolling.

3. The combination with a driving and a driven part, having plane surfaces, of a device for transmitting motion from one of said parts to the other, consisting of a link loosely interposed between said parts and having spherically-shaped end surfaces adapted to positively bear against said plane surfaces and to roll thereon during transmission of movement and means for preventing said link from displacement relative to the said parts other than by rolling, said means comprising a conical pin projecting from each bearing surface of said link and engaging a hole in the opposite part.

1,191,132. MOTOR-VEHICLE. CHARLES BREWSTER STEELE, New York, N. Y. Filed June 28, 1907. Serial No. 381,324. (Cl. 21—90.)



1. A vehicle provided with a plurality of supporting wheels each wheel being pivotally secured to the vehicle and capable of being swung through an angle of one hundred and eighty degrees, steering mechanism operatively connected to swing the wheels upon their pivotal connection through an angle of one hundred and eighty degrees, the vehicle being provided with recesses or ports adapted to receive the wheels when swung thereinto.

2. A motor vehicle provided with a motor, four supporting traction wheels operatively connected to be rotated by the motor, and arranged in pairs, one pair of traction wheels located at each end of the vehicle, each traction wheel being pivotally connected to the vehicle and adapted to be turned on a vertical pivot at right angles to the longitudinal axis of the vehicle either to the right or to the left, connecting mechanism between each traction wheel of a pair to cause both traction wheels of the pair to be turned in the same direction, mechanism connecting each pair of traction wheels provided with operating handles at each end of the vehicle and also with shifting mechanism adapted to cause each pair of traction wheels to be turned in the same direction, or in the opposite direction whereby the vehicle may be moved either in circumferences or circles whose radii may vary from infinity to substantially the length of the vehicle or to be translated bodily on any radii of a circle, and operated at either end.

3. A motor vehicle provided with four supporting traction wheels secured to vertical pivots, a motor attached to the vehicle, operating mechanism connecting the motor and the traction wheels to rotate the traction wheels, mechanism connecting the traction wheels in pairs to turn the traction wheels by pairs at right angles to the longitudinal axis of the vehicle in either direction to the right or to the left, connecting mechanism provided with operating handles at each end of the vehicle, and shifting mechanism in operative relation with said connecting mechanism for permitting each pair of traction wheels to be turned in the same or in opposite direction either to the right or to the left of the longitudinal axis of the vehicle.

4. A vehicle provided with four supporting traction wheels arranged in pairs, steering mechanism connecting each pair of traction wheels provided with shifting mechanism adapted to permit each pair of traction wheels to be turned in the same direction either to the right or to the left of the longitudinal axis of the vehicle, or in opposite directions to said axis of the vehicle through an angle of ninety degrees in either direction from the longitudinal axis of the vehicle, an operating mechanism located at each end of the vehicle for the steering mechanism.

5. In a motor vehicle, duplicate axles, spindles hinged to the end of each axle, shafts parallel with the axles, gearing connecting the shafts to the spindles, a steering post located at each end of the vehicle, a shaft running at right angles to the axles adapted to be operated by the steering posts at each end, gearing connecting said shaft with each of the first mentioned shafts, means forming part of said connecting gearing to cause said first mentioned shafts to rotate in the same or opposite directions, whereby the spindles are caused to swing in the same or in the reverse direction.

[Claims 6 to 23 not printed in the Gazette.]

1,191,133. METHOD OF MAKING INSOLES. JAMES E. JACKSON, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Sept. 18, 1911, Serial No. 650,020. Renewed Mar. 5, 1914, Serial No. 822,767. Divided and this application filed Oct. 4, 1915. Serial No. 53,993. (Cl. 12—146.)



1. The method of making reinforced insoles which comprises providing a blank with a marginal, upstanding lip or rib and outside feather portion, applying reinforcing fabric to the lipped face of the blank, and removing the fabric from the outer margin of the feather portion, at the shank portion of the blank at least and without reduction of the thickness of the feather, to cause its edge to lie within the edge of the blank.

2. The method of making reinforced insoles which comprises edge slitting a blank, upturning one of the two sections to produce a lip and feather, applying reinforcing fabric to the lipped face of the blank, and removing the fabric from the outer margin of the feather, at the shank portion of the blank at least and without reduction of the thickness of the feather, to cause its edge to lie within the edge of the blank.

3. The method of making reinforced insoles which comprises edge slitting a blank, upturning one of the two sections to produce a lip and a feather, applying reinforcing fabric to the lipped face of the blank, bending the lip inwardly, and drawing the fabric inward across the feather into the angle outside the lip until its edge lies within the edge of the blank.

4. The method of making reinforced insoles which comprises cutting the marginal portion of a blank to produce a lip and a feather, applying reinforcing fabric to the lipped face of the blank, consolidating the stock in the angle inside the lip, and drawing the fabric inward across the feather into the angle outside the lip until its edge lies within the edge of the blank.

5. That step in the manufacture of reinforced insoles which consists in removing the previously applied reinforcing fabric from the outer margin of the feather without weakening the feather by reducing its thickness.

[Claims 6 to 10 not printed in the Gazette.]

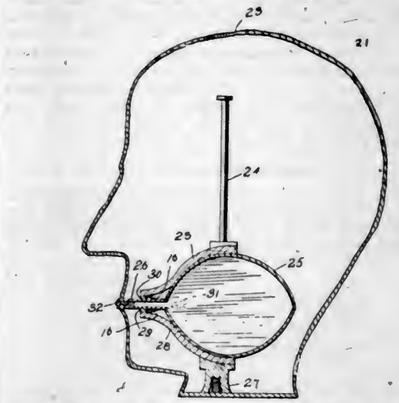
1,191,134. MOISTENER. ELIZABETH CATHARINE JONES, (now by marriage Elizabeth Catharine McCaslin,) Altus, Okla. Filed Apr. 18, 1914. Serial No. 832,838. (Cl. 91—54.4.)

1. A moistener comprising a flexible body, a flexible neck extending the width of said body, means to normally hold said neck closed, and means to eject the contents of said body and to open said neck.

2. A moistener comprising a flexible body, a flexible neck extending the width of said body, bars extending transversely across said neck, spring means connecting said bars and normally tending to draw the bars together to close the neck, and means to eject the contents of said body and to open said neck.

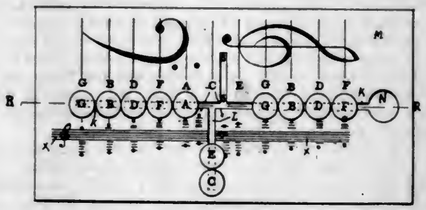
3. A moistener comprising a flexible body, a flexible neck extending the width of said body, a bar disposed on each side of and extending transversely across said neck, spring means connecting said bars normally tending to draw the bars together to close said neck, an arcuate handle secured to the central portion of each of said bars and embracing said flexible body whereby when said handles are compressed the contents of said body will be ejected and the neck opened.

4. A moistener comprising a body formed of flexible material, a flexible neck for said body, a liquid absorbent in the outer end of said neck, means for normally closing said flexible neck, a pair of oppositely disposed handles connected to said closing means, a support for the body



connected to the lowermost of said handles, an upright plunger secured at the top of said body to the other of said handles and in direct alinement with said support whereby said handles are compressed and the closing means released and the contents forced from said body when said plunger is pressed downward.

1,191,135. INSTRUCTIVE MUSICAL PUZZLE. JOSEPH HENRY MOORE, Sr., Sewickley, Pa. Filed Dec. 6, 1915. Serial No. 65,280. (Cl. 46—41.)



1. A plate of resisting material on which are marked the lines of the musical staff; letters to denote the characters on the lines and in the spaces, and sliders with the same letters, movable in a slot and in a transverse slot.

2. A plate showing on each side the five lines of the staff at least twice, once for the treble clef and once for the bass clef, and fixed letters denoting on one side the characters on the lines of the staff, and on the other side the characters in the spaces between the lines, said letters in the position belonging to the musical characters which they denote.

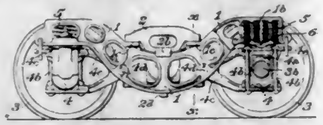
3. A plate with the five lines of the musical staff marked twice in one direction on each side of the plate, and twice in a direction normal to the first direction, also on each side of the plate; musical characters on the second set of lines, and fixed letters denoting these musical characters as well as the musical characters belonging to the first set of staff lines.

4. A plate, showing on each side the five lines of the musical staff twice in one direction, a longitudinal slot in said plate, button like sliders in said slot and guided by said slot, said sliders adapted to register with the lines of the staff, fixed letters on the lines on one side of the plate, and between the lines on the other side of the plate, said letters denoting the musical character of the lines and spaces in the location of the letters, and letters on the button like sliders corresponding with the fixed letters.

5. A plate, showing on each side the five lines of the musical staff twice in one direction, a longitudinal slot in said plate, button like sliders in said slot and guided by said slot, said sliders adapted to register with the lines of the staff, fixed letters on the lines on one side of the plate, and between the lines on the other side of the plate, said letters denoting the musical characters of the lines and spaces in the location of the letters, and letters on the button like sliders corresponding with the fixed letters, additional staff lines in a direction normal to that of the first mentioned staff lines, and musical characters above and below the second set of staff lines corresponding with the fixed letters.

[Claims 6 to 9 not printed in the Gazette.]

1,191,136. WHEELED SUPPORT FOR RAILROAD-VEHICLES. JOHN E. MUHLFELD, Scarsdale, and HERMAN F. BALL, New York, N. Y. Filed Apr. 28, 1915. Serial No. 24,496. (Cl. 105—248.)



1. In a railroad vehicle, the combination of a frame, two wheeled axles, journal boxes supported on said axles, arms fixed to said journal boxes and pivotally connected to the frame, means, connected with the journal boxes, for effecting their lateral engagement with the frame, while permitting relative vertical movement, and thereby transmitting lateral thrust between the journal boxes and the frame independently of the pivots of the journal box arms, and means for yieldingly supporting the frame on the journal boxes.

2. In a railroad vehicle, the combination of a frame, two wheeled axles, journal boxes supported on said axles, arms fixed to said journal boxes and pivotally connected to the frame, means for permitting relative vertical movement of the journal boxes and frame and transmitting lateral thrust between the journal boxes and the frame, and springs interposed between the journal box arms and the frame and disposed symmetrically relatively to the central planes of the journal boxes.

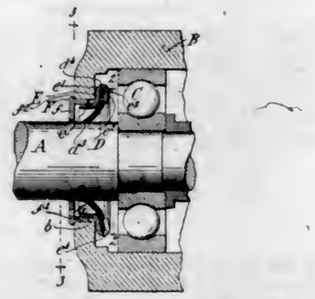
3. In a railroad vehicle, the combination of a frame, two wheeled axles, journal boxes supported on said axles, arms fixed to said journal boxes and pivotally connected to the frame, equalizing plates connected with the journal boxes and engaging laterally but not vertically with the frame, thereby transferring lateral thrust of the journal boxes to the frame independently of the pivots of the journal box arms, and springs interposed between said equalizing plates and the frame.

4. In a railroad vehicle, the combination of a frame, two wheeled axles, journal boxes supported on said axles, arms fixed to said journal boxes and pivotally connected to the frame, equalizing plates connected with the journal boxes and engaging laterally but not vertically with the frame, thereby transferring lateral thrust of the journal boxes to the frame independently of the pivots of the journal box arms, and springs interposed between the equalizing plates and the frame and disposed symmetrically relatively to the central planes of the journal boxes.

5. In a railroad vehicle, the combination of a frame comprising two side members, and a transverse connecting member, two wheeled axles, journal boxes supported on said axles, arms fixed to said journal boxes and pivotally connected to the side frame members, equalizing plates connected with the journal boxes and engaging laterally with the side frame members, thereby transferring lateral thrust of the journal boxes to the side frame members independently of the pivots of the journal box arms, and springs interposed between said equalizing plates and the side frame members.

[Claims 6 to 9 not printed in the Gazette.]

1,191,137. DUST-GUARD FOR BEARINGS. ALEXANDER M. POWERS, New York, N. Y. Filed Oct. 31, 1914. Serial No. 869,636. (Cl. 64—22.)



1. A shaft, a housing revoluble relative thereto and through which the shaft extends, bearings between the shaft and housing, a dust excluder comprising an annular holder secured in said housing and having ring retaining means inclined relative to said shaft, a ring of non-metallic tough material having resiliency, mounted in said holder and adapted to have its inner edge contact with the shaft, said ring inclined from its holder to its point of contact with the shaft, and having a tendency to spring toward said shaft whereby and by reason of its resiliency it is adapted to remain in contact with said shaft and compensate for wear.

2. A shaft, a housing revoluble relative thereto and through which the shaft extends, bearings between the shaft and housing, and a dust excluder comprising an annular holder secured in said housing and having ring retaining means inclined relative to said shaft, a ring of rawhide, mounted in said holder and adapted to have its inner edge contact with the shaft, said ring inclined from its holder to its point of contact with the shaft, and having a tendency to spring toward said shaft whereby and by reason of its resiliency it is adapted to remain in contact with said shaft and compensate for wear.

3. In a dust guard for bearings, a housing for the outer bearing members provided with a central aperture for the inner bearing member, an annular cap adapted to embrace the inner bearing member and having a sleeve adapted to extend within said aperture, a holder within the housing having a sleeve adapted to extend outward through said aperture and threaded to said cap sleeve, an outwardly extending flange on said holder, having its edge turned inwardly forming a channel, and a dust excluding ring mounted in said channel and adapted to bear against the inner bearing member.

4. In a dust guard for bearings, a housing for the outer bearing members provided with a central aperture for the inner bearing member, an annular cap adapted to embrace the inner bearing member and having a sleeve adapted to extend within said aperture, a holder within the housing having a sleeve adapted to extend outward through said aperture and threaded to said cap sleeve, an outwardly extending flange on said holder, having its edge turned inwardly forming a channel, and a dust excluding ring constructed of non-metallic tough material having resiliency, mounted in said channel and inclined toward the inner bearing member and adapted to contact therewith.

5. In a dust guard for bearings, a housing for the outer bearing members provided with a central aperture for the inner bearing member, an annular cap adapted to embrace the inner bearing member and having a sleeve adapted to extend within said aperture, a holder within the housing having a sleeve adapted to extend outward through said aperture and threaded to said cap sleeve, an outwardly extending flange on said holder, having its edge turned inwardly forming a channel, and a dust excluding ring constructed of rawhide, mounted in said channel and inclined toward the inner bearing member and adapted to contact therewith.

[Claims 6 to 11 not printed in the Gazette.]

1,191,138. HYDRAULIC CARTRIDGE WITH INDEPENDENTLY-OPERATING PISTONS. DAVY VANCE SICKMAN, Denver, Colo. Filed July 13, 1915. Serial No. 39,684. (Cl. 138—10.)



1. A hydraulic cartridge having a plurality of piston chambers, pistons therein and means for introducing fluid under pressure to certain of said chambers independently of other chambers.

2. A hydraulic cartridge having a plurality of piston chambers, pistons therein, and a number of conduits for carrying fluid under pressure, one conduit being in communication with one or more chambers of the cartridge and another conduit in communication with one or more other chambers, and valve controlled means for regulating the passage of fluid to one set of chambers.

3. A hydraulic cartridge having a number of piston chambers arranged at suitable intervals from front to rear, a conduit in communication with the rearmost chamber, and a distinct conduit in communication with the foremost chamber.

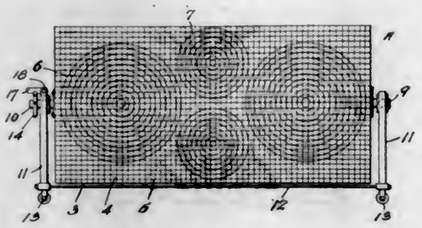
4. A hydraulic cartridge including a bar having a number of piston chambers arranged at suitable intervals from front to rear, a main conduit having its passage in communication with certain rearwardly located chambers, an auxiliary conduit whose passage is in communication with certain forwardly located chambers, and means for cutting off the fluid supply from one conduit while it is passing through the other conduit.

5. A hydraulic cartridge having a number of piston chambers suitably spaced from front to rear, a main conduit having its passage in communication with certain rearwardly located chambers, an auxiliary conduit having its passage in communication with certain forwardly located chambers, the two conduits being in communication by a branch passage, and a valve for controlling the passage of fluid from the main to the auxiliary conduit.

[Claims 6 to 11 not printed in the Gazette.]

REISSUES.

14,164. CURTAIN DRIER AND STRETCHER. WILEY P. BALLARD, Birmingham, Ala. Filed Mar. 15, 1916. Serial No. 84,448. Original No. 1,162,738, dated Dec. 7, 1915, Serial No. 35,298. (Cl. 34—17.)



1. The combination with a supporting frame of a stretcher frame having end trunnions revoluble in said frame, means for retaining the revoluble stretcher frame in adjusted position, and a canvas covering on said stretcher frame having guide lines for matching the edges of articles to be dried.

2. The combination in a fabric drying and stretching device with a stretcher frame, of a covering for the frame having guide markings thereon and adapted to retain articles.

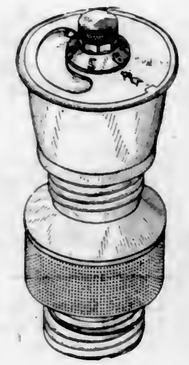
3. The combination in a fabric drying and stretching device with a stretcher frame of a canvas covering for the frame, and said canvas covering being provided on its external face with guide lines for guiding and matching the edges of the articles to be dried.

4. The combination with a supporting frame, of a stretcher frame having end hollow trunnions revoluble in the supporting frame, a covering on the stretcher frame having guide markings thereon and adapted to retain articles, and a steam coil in the stretcher frame with inlet and outlet through the trunnions.

5. The combination in a fabric drying device with its frame, of a covering for the frame having guide markings thereon and adapted to retain articles, and means for heating the exterior surface of the covering from the interior of the frame.

DESIGNS.

49,324. CASING OF A COFFEE-MILL. HARRY E. ASBURY and EDWARD E. PUNZELT, Philadelphia, Pa., assignors to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 24, 1915. Serial No. 10,377. Term of patent 14 years.



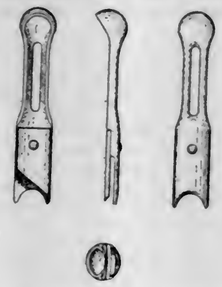
The ornamental design for the casing of a coffee mill substantially as shown in the accompanying drawing.

49,325. BADGE, BUTTON, PIN, OR INSIGNIA. HORACE W. BIKLE, Pittsburgh, Pa. Filed Jan. 28, 1916. Serial No. 74,892. Term of patent 7 years.



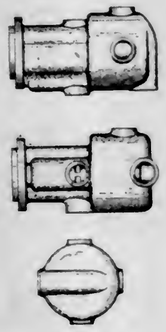
The ornamental design for a badge, button, pin, or insignia, as shown.

49,326. CAN-OPENER. JAMES HENRY BRADY, Louisville, Ky. Filed Jan. 31, 1916. Serial No. 75,455. Term of patent 14 years.



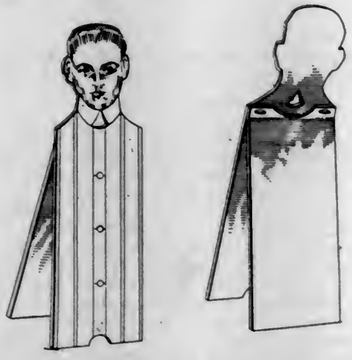
The ornamental design for a can opener as shown.

49,327. ENGINE-CYLINDER. WILLIAM F. A. BUEHNER, Newark, N. J., assignor, by mesne assignments, to Reuben H. Lindley. Filed Mar. 22, 1915. Serial No. 16,292. Term of patent 7 years.



The ornamental design for an engine cylinder, substantially as shown.

49,328. DISPLAY-RACK. QUADRIO DE SANTIS, Trenton, N. J. Filed May 22, 1916. Serial No. 99,246. Term of patent 7 years.



The ornamental design for a display rack as shown.

49,329. EMBLEM, BROOCH, BUTTON, FOB, OR SIMILAR ARTICLE. CECIL CLAY DICKOVER, New York, N. Y. Filed May 4, 1916. Serial No. 95,504. Term of patent 7 years.



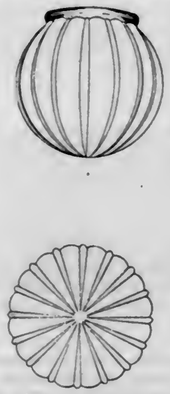
The ornamental design for an emblem, brooch, button, fob or similar article as shown.

49,330. GLASS DISH OR SIMILAR ARTICLE. PHILLIP EBELING, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Jan. 3, 1916. Serial No. 70,044. Term of patent 14 years.



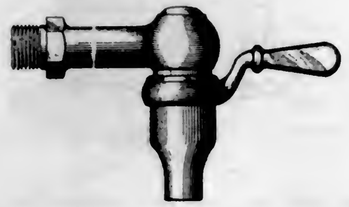
The ornamental design for a glass dish or similar article, substantially as shown.

49,331. LAMP-SHADE. HOWARD S. EVANS, Pittsburgh, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1913. Serial No. 755,803. Term of patent 14 years.



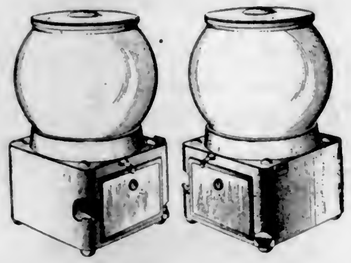
The ornamental design for a lamp shade as shown.

49,332. FAUCET. AUGUST ENGEL, Milwaukee, Wis., assignor to Milwaukee Brass Manufacturing Company, Milwaukee, Wis. Filed Sept. 23, 1915. Serial No. 52,324. Term of patent 14 years.



The ornamental design for a faucet, as shown.

49,333. COIN-OPERATED VENDING-MACHINE CASING. HARVEY GILES, Brooklyn, N. Y., assignor to Artemas Ward, New York, N. Y. Filed Apr. 29, 1916. Serial No. 94,502. Term of patent 3½ years.



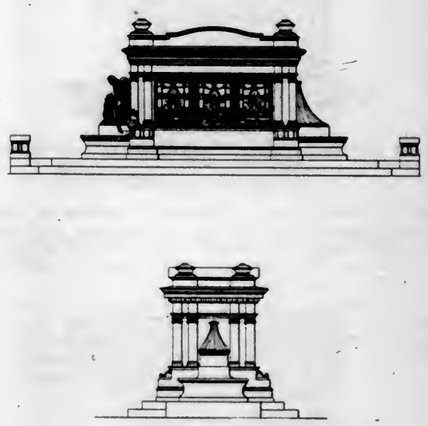
The ornamental design for a coin-controlled vending machine casing, as shown.

49,334. POCKET-KNIFE. FRANK GOSZTYLLA, Detroit, Mich. Filed Mar. 23, 1916. Serial No. 86,319. Term of patent 7 years.



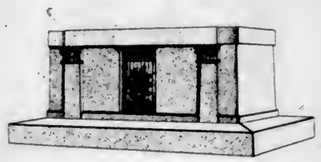
The ornamental design for a pocket knife, as shown.

49,335. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,973. Term of patent 3½ years.



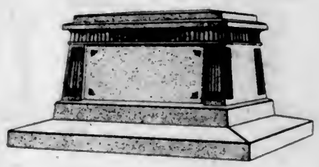
The ornamental design for a sepulchral memorial, as shown.

49,336. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,974. Term of patent 3½ years.



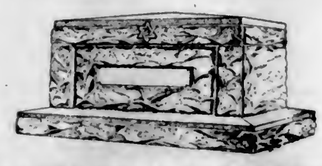
The ornamental design for a sepulchral memorial, as shown.

49,337. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,975. Term of patent 3½ years.



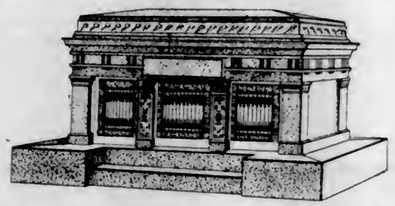
The ornamental design for a sepulchral memorial, as shown.

49,338. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,976. Term of patent 3½ years.



The ornamental design for a sepulchral memorial, as shown.

49,339. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,977. Term of patent 3½ years.



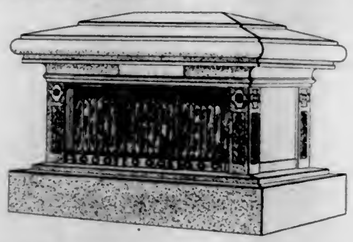
The ornamental design for a sepulchral memorial, as shown.

49,340. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,978. Term of patent 3½ years.



The ornamental design for a sepulchral memorial, as shown.

49,341. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,979. Term of patent 3½ years.



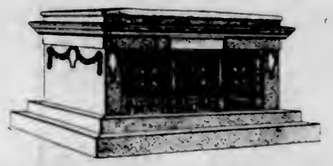
The ornamental design for a sepulchral memorial, as shown.

49,342. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,980. Term of patent 3½ years.



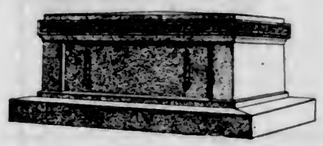
The ornamental design for a sepulchral memorial, as shown.

49,343. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,981. Term of patent 3½ years.



The ornamental design for a sepulchral memorial, as shown.

49,344. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,982. Term of patent 3½ years.



The ornamental design for a sepulchral memorial, as shown.

49,345. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,983. Term of patent 3½ years.



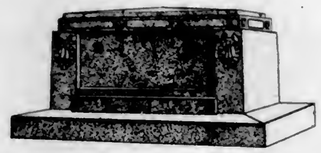
The ornamental design for a sepulchral memorial, as shown.

49,346. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,984. Term of patent 3½ years.



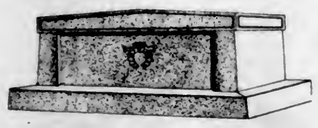
The ornamental design for a sepulchral memorial, as shown.

49,347. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,985. Term of patent 3½ years.



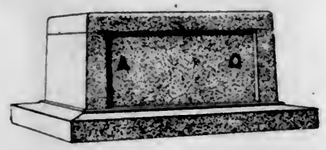
The ornamental design for a sepulchral memorial, as shown.

49,348. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,986. Term of patent 3½ years.



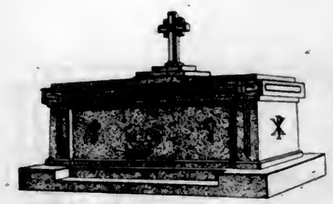
The ornamental design for a sepulchral memorial, as shown.

49,349. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,987. Term of patent 3½ years.



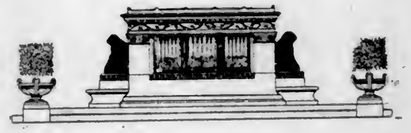
The ornamental design for a sepulchral memorial, as shown.

49,350. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,988. Term of patent 3½ years.



The ornamental design for a sepulchral memorial, as shown.

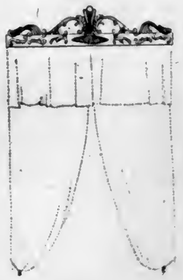
49,351. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,989. Term of patent 3½ years.





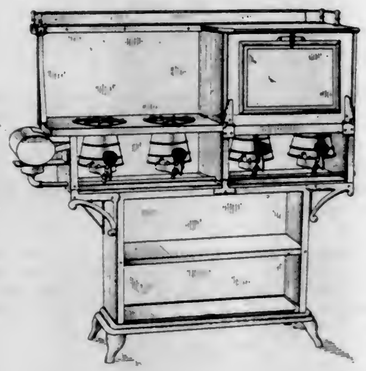
The ornamental design for a sepulchral memorial, as shown.

49,352. CURTAIN-PEDIMENT. CHARLES GRODKOWSKY, Baltimore, Md. Filed May 18, 1916. Serial No. 98,461. Term of patent 3½ years.



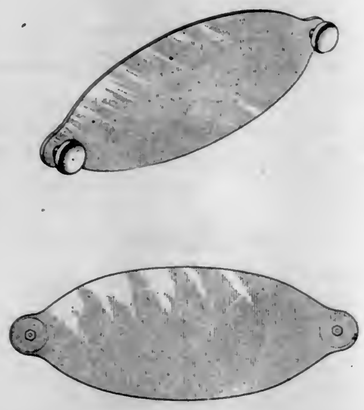
The ornamental design for a curtain pediment as shown.

49,353. RANGE. RUDOLPH HOFFMAN, Kankakee, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Dec. 20, 1915. Serial No. 67,905. Term of patent 7 years.



The ornamental design for a range, as shown.

49,354. GLARE-SCREEN. HERBERT H. ILLCH, New York, N. Y. Filed Sept. 24, 1915. Serial No. 52,529. Term of patent 7 years.



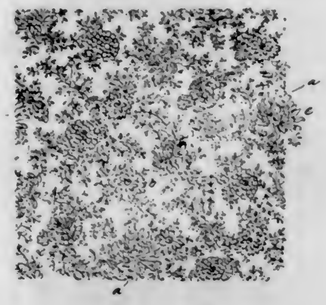
The ornamental design for a glare screen, as shown.

49,355. HANDLE OF A SPOON OR SIMILAR ARTICLE. ANTON W. JOHANSON, Chicago, Ill. Filed Apr. 20, 1916. Serial No. 92,554. Term of patent 7 years.



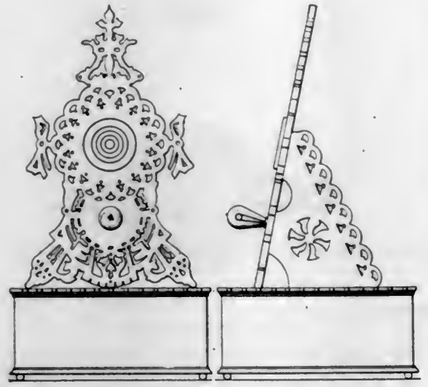
The ornamental design for the handle of a spoon or similar article, as shown.

49,356. WALL-PAPER. JOHN KORZINEK, Passaic, N. J., assignor to The Hobbs Wall Paper Company, a Corporation of New Jersey. Filed Mar. 24, 1916. Serial No. 86,517. Term of patent 3½ years.



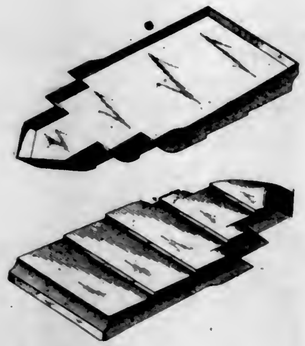
The ornamental design to be applied to wall paper as shown and described.

49,357. WATCH-HOLDER. ZYGMUNT KUCZABOWSKI, St. Paul, Minn. Filed May 27, 1916. Serial No. 100,398. Term of patent 7 years.



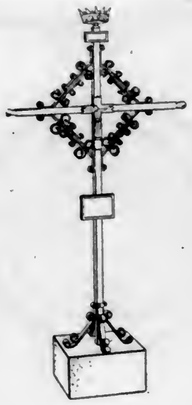
The ornamental design for a watch holder, as shown.

49,358. HULL OF A GLIDING BOAT. DUVAL LA CHAPELLE, Nyack, N. Y. Filed Jan. 13, 1916. Serial No. 71,984. Term of patent 14 years.



The ornamental design for the hull of a gliding boat, as shown and described.

49,359. MONUMENT. WILLIS MARKER, Atlanta, Ga. Filed Apr. 19, 1916. Serial No. 92,324. Term of patent 14 years.



The ornamental design for a monument, as shown.

49,360. EMBLEM. CHARLES A. MCNEIL, New York, N. Y. Filed Apr. 22, 1916. Serial No. 93,032. Term of patent 7 years.



The ornamental design for an emblem, as shown.

49,361. SHOWER-PAN FOR LIGHTING-FIXTURES. RENATO MINUTO, New York, N. Y., assignor to Universal Metal Spinning & Stamping Company, New York, N. Y., a Corporation of New York. Filed Jan. 6, 1916. Serial No. 70,691. Term of patent 7 years.



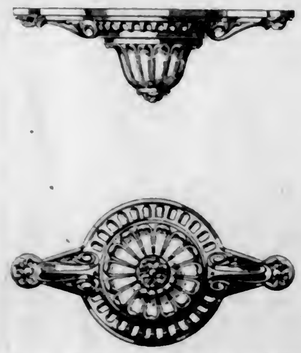
The ornamental design for a shower pan for lighting fixtures, as shown.

49,362. SHOWER-PAN FOR LIGHTING-FIXTURES. RENATO MINUTO, New York, N. Y., assignor to Universal Metal Spinning & Stamping Company, New York, N. Y., a Corporation of New York. Filed Jan. 6, 1916. Serial No. 70,692. Term of patent 7 years.



The ornamental design for a shower pan for lighting fixtures, as shown.

49,363. TWO-LIGHT SHOWER-PLATE. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1915. Serial No. 15,964. Term of patent 3½ years.



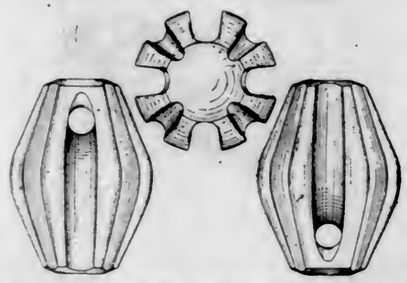
The ornamental design for a two-light shower plate, as shown.

49,364. BUTTON. JOHN S. MONAGHAN, Rochester, N. Y., assignor to German-American Button Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 28, 1916. Serial No. 87,367. Term of patent 3½ years.



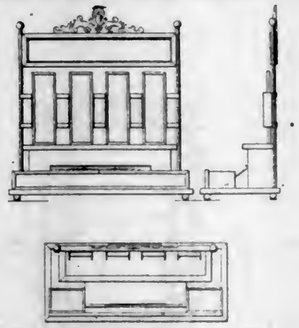
The ornamental design for a button substantially as shown and described.

49,365. STRAIN-INSULATOR. HENRY N. MÜLLER, Pittsburgh, Pa. Filed May 22, 1916. Serial No. 99,242. Term of patent 14 years.



The ornamental design of a strain insulator, substantially as shown.

49,366. DISPLAY-STAND. JOSEPH A. NONES, New York, N. Y. Filed May 3, 1915. Serial No. 25,611. Term of patent 3½ years.



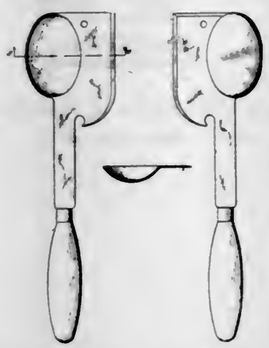
The ornamental design for a display stand, as shown.

49,367. PEACE-FLAG. ALFRED O'CONNOR, Northport, N. Y. Filed Mar. 17, 1916. Serial No. 84,972. Term of patent 3½ years.



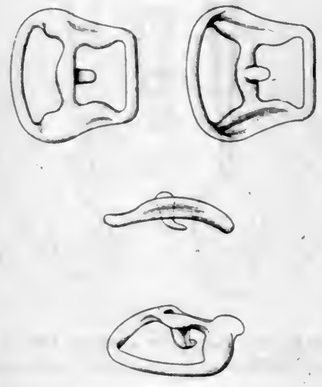
The ornamental design for a "Peace Flag" as shown.

49,368. COMBINATION KITCHEN ARTICLE. EDWIN J. OSTERBAUER, Rockford, Ill. Filed Apr. 13, 1916. Serial No. 90,990. Term of patent 14 years.



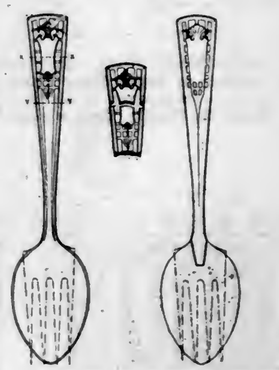
The ornamental design for a combination kitchen article, as shown.

49,369. HIP DROP TRACE-CARRIER. RUDOLPH A. SCHWAHN, Eau Claire, Wis. Filed May 3, 1916. Serial No. 95,247. Term of patent 14 years.



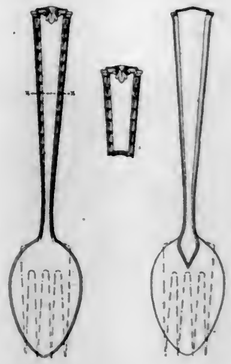
The ornamental design for a hip drop trace carrier as shown.

49,370. SPOON, FORK, OR SIMILAR ARTICLE. CHARLES FRANKLIN SIMMS, Attleboro, Mass., assignor to The Watson Company, Attleboro, Mass. Filed Feb. 26, 1916. Serial No. 80,747. Term of patent 14 years.



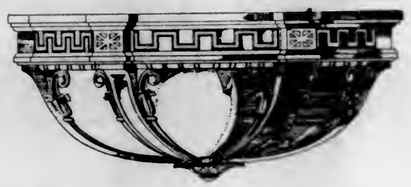
The ornamental design for a spoon, fork or similar article, as shown.

49,371. SPOON, FORK, OR SIMILAR ARTICLE. CHARLES FRANKLIN SIMMS, Attleboro, Mass., assignor to The Watson Company, Attleboro, Mass. Filed Feb. 29, 1916. Serial No. 81,274. Term of patent 14 years.



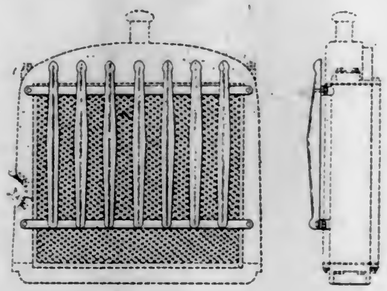
The ornamental design for a spoon, fork or similar article, as shown.

49,372. LIGHTING-FIXTURE. WILMER S. SNOW, Chicago, Ill. Filed May 22, 1916. Serial No. 99,244. Term of patent 3½ years.



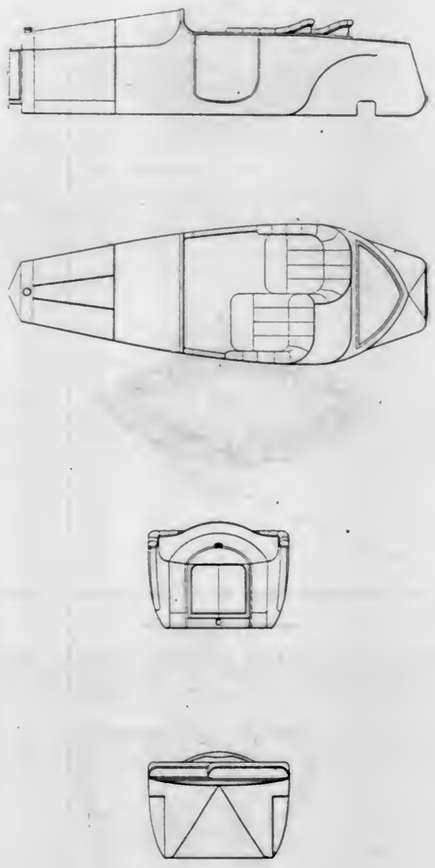
The ornamental design for a lighting fixture as shown.

49,373. RADIATOR-FENDER. JOHN SQUIRES, Detroit, Mich., assignor to Signal Motor Truck Company, Detroit, Mich., a Corporation of Maine. Filed Mar. 18, 1916. Serial No. 85,222. Term of patent 7 years.



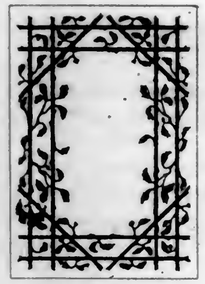
The ornamental design for a radiator fender, substantially as shown.

49,374. AUTOMOBILE-BODY. WILLIAM B. STOUT, Detroit, Mich., assignor to Scripps-Booth Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 15, 1916. Serial No. 91,494. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

49,375. TEXTILE FABRIC. ALGERMONT H. WALDO, St. Paul, Minn., assignor to Crex Carpet Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 15, 1916. Serial No. 91,485. Term of patent 14 years.



The ornamental design for textile fabric, as shown.

49,376. INKSTAND. FRANK A. WEEKS, Plainfield, N. J. Filed Apr. 22, 1916. Serial No. 93,030. Term of patent 7 years.



The ornamental design for an inkstand, as shown.

49,377. PLATE OR SIMILAR ARTICLE. AKSEL WESTERLIND, Chicago, Ill., assignor to Moe Levin & Company, Chicago, Ill. Filed May 20, 1916. Serial No. 98,961. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

49,378. ARTIFICIAL BAIT. LE ROY YAKELEY, Syracuse, N. Y. Filed Dec. 6, 1915. Serial No. 65,426. Term of patent 14 years.



The ornamental design for an artificial bait as shown.

TRADE-MARKS

PUBLISHED JULY 11, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 74,077. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DOLORES HERNANDEZ CAMPRINI, VIUDA DE ANTONIO LOPEZ ALDAO, La Coruna, Spain. Filed Nov. 19, 1913. Under ten-year proviso.



Particular description of goods.—Preserved Fish—Namely, Sardines and Calamaries, Cod, Eels, Bream, Gilt-heads, Lampreys, Sole, Pollack, Perch, Trout, and Shell Fish; Preserved Meat—Namely, Veal, Pork, Rabbits, and Hares; Preserved Chickens, Partridges, and Pigeons; Preserved Fruits and Jams.

Claims use since about Jan. 1, 1872.

Ser. No. 77,897. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WALTER SPENCER & Co. LIMITED, Sheffield, England. Filed Apr. 30, 1914.

ARDHO

Particular description of goods.—Steel in Bar, Rod, Sheet, and other Unwrought and Partly-Wrought Forms.

Claims use since the 14th of September, 1911.

Ser. No. 81,602. (CLASS 12. CONSTRUCTION MATERIALS.) DAVID CHARLES MEEHAN, Columbus, Ohio. Filed Oct. 1, 1914.



Said trade-mark consisting of a strip of light color fixed to the edge of the door, but which representation of the door is not claimed.

Particular description of goods.—Doors.

Claims use since Apr. 29, 1914.

Ser. No. 83,247. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE HARVARD COMPANY, Canton, Ohio. Filed Dec. 12, 1914. Under ten-year proviso.

HARVARD

Particular description of goods.—Surgical Chairs, Dental Chairs, Head-Rests for Surgical and Dental Chairs, Dental Instrument-Cabinets, Dental Tables, Dental Laboratory-Benches, Dental Wall-Brackets, Dental Electric Engines and Their Equipments, Dental Foot-Engines, Dental Electric Motors, Dental Lathes, Dental Lathe Equipment, Dental Furnaces, Dental Sterilizers, Dental Water-Heaters, Dental Hand and Angle Pieces, Hand and Fountain Spittoons, Dental Cuspidors, Saliva-Ejectors, Mouth-Mirrors, Air-Syringes, Dental Spatulas, Gold-Annealers, Plates for Mixing Filling Material, and Root-Driers.

Claims use since December, 1885.

Ser. No. 85,282. (CLASS 39. CLOTHING.) MAETRICH, EYRE & CO. INC., Brooklyn, N. Y. Filed Mar. 20, 1915.

Joan Sawyer

The trade-mark consists of a facsimile of the signature of Miss Joan Sawyer.

Particular description of goods.—Shoes and Slippers Made of Leather or Textile Material.

Claims use since about Mar. 11, 1915.

Ser. No. 86,204. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ELECTRO MECHANICAL BRAKE CO. LTD., West Bromwich, England. Filed Apr. 26, 1915.

EMB

Particular description of goods.—Electrical Resistances.

Claims use since 1911.

Ser. No. 86,894. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ABRAHAM WHITE, San Francisco, Cal. Filed May 25, 1915.

FIREX

Particular description of goods.—Dry Paints.

Claims use since July 1, 1913.

Ser. No. 87,083. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) FRANK ROBERTSON, New York, N. Y. Filed June 3, 1915.

Ambest

Particular description of goods.—Metallic Packing for Water, Steam, Gas, Air, Ammonia, for Bearings and All Moving Parts of Machinery.

Claims use since Oct. 31, 1901.

Ser. No. 87,198. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WEST DISINFECTING COMPANY, New York, N. Y. Filed June 8, 1915.

CIDOSECT

Particular description of goods.—Disinfectants and Insecticides.

Claims use since the 6th day of May, 1915.

Ser. No. 87,230. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE T. L. SMITH CO., Glenburn, N. D. Filed June 10, 1915.

TRIUMPH

Particular description of goods.—A Preparation to be Applied to Cut Seed-Potatoes for Preventing Insects from Attacking the Potato-Plant by Imparting to the Potato-Plant a Taste which is Unpleasant to the Insects.

Claims use since Mar. 18, 1915.

Ser. No. 87,282. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ABBOTT LABORATORIES, Chicago, Ill. Filed June 14, 1915.

AUTO-IODINE

No claim is made for the word "Iodine" apart from its use with the word "Auto."

Particular description of goods.—Antiseptic Medicaments, Consisting of a Combination of Calcium and Iodin Put Up in the Form of Powders, and Tablets for Therapeutic Application.

Claims use since May 20, 1915.

Ser. No. 88,525. (CLASS 39. CLOTHING.) UNITED HATTERS OF NORTH AMERICA, New York, N. Y. Filed Aug. 10, 1915. Under ten-year proviso.

THE UNITED HATTERS OF NORTH AMERICA

Particular description of goods.—Caps and Felt and Straw Hats.

Claims use since 1885.

Ser. No. 88,634. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) VOORHEES RUBBER MFG. CO., Jersey City, N. J. Filed Aug. 14, 1915.

Rub-Steel

The trade-mark consists of the hyphenated words "Rub-Steel."

Particular description of goods.—Rubber Valves.

Claims use since Dec. 30, 1913.

Ser. No. 89,225. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed Sept. 15, 1915.

KEEN KUTTER

Particular description of goods.—Picks, Mattocks, Bit-Braces, Pliers, Files, Rakes, Scythe-Blades, Garden-Trowels, Nail-Pullers, Shears—All Kinds; Grape-Fruit Knives, Lawn-Mowers, Wedges, Carpenters' Wrecking-Bars; Coal-Miners' Tools—viz., Needles, Blasting-Barrels, Bit-Drills, Double-End Scrapers, Sledges; Ship-Augers, Ship Car-Bits, Auger-Bits, Expansive Bits, Expansive Hollow Augers, Pointers, Bell-Hangers' Bits, Electricians' Bits, Wood-Bits, Drill-Bits, Gimlet-Bits, Reamer-Bits, Screw-Driver Bits, Countersink-Bits, Gimlets, Mallets, Trowels, Plasterers' Floats, Plasterers' Hawks, Cold-Chisels, Cape-Chisels, Cotter-Pin Lifters and Spreaders; Linemen's Tools—viz., Splicing-Clamps, Splicing-Tools, Splicing-Pliers, Vises, Wire-Tighteners, Climbers, Climber-Straps, Come-Alongs or Wire-Stretchers, Pike-Poles, Crow and Digging Bars, Wrenches; Saw-Tools—viz., Setting-Blocks, Tooth-Sets, Setting-Hammers, Circular Saws, Lathes, Formers, Mortising-Machines, Mortising-Machine Chisels, Combined Circular Scroll-Saws and Boring Attachments, Circular Rip-Saws; Saws, Saw-Blades—All Kinds; Saw-Frames, Saw-Sets, Twist-Drills, Post-Drills, Rakes, Forks, Hoes, Corn-Knives for Agricultural Purposes, Cane-Knives, Asparagus-Knives, Hedge-Knives, Beet-Topping Knives, Bush-Hooks, Tree-Pruners, Hedge-Shears, Pruning-Shears, Post-Hole Diggers, Post-Hole Augers, Horse and Mule Clippers, Pocket-Knives, Scissors, Carvers, Steels, Butcher-Knives, Table-Knives of Base Metal, Putty-Knives, Steak-Knives, Kitchen-Knives, Slicers, Bread-Knives, Mauls; Granitoid or Cement Tools—viz., Jointers, Edgers, Groovers, Corner-Tools, Rollers, Floats, Radius-Tools, Corrugating-Tools, Roller-Jointers, Roller-Edgers, Tampers or Rammers, Tuck-Pointers; Chain-Drilling Attachments—viz., an Automatic Contrivance Like a Brace Used in Connection with Drills, Straight-Bit Extensions, Automatic Hand-Drills, Breast-Drills, Chisels, Slicks, Gouges, Drawing-Knives, Screw-Drivers, Awl and Tool Sets, Scratch-Awls, Planes, Extra Parts for Planes, Cabinet-Scrapers, Veneer-Scrapers, Floor-Scrapers, Burnishers, Pincers, Clencher-Tongs, Cutting-Nippers; Punches—All Kinds; Rivet Sets and Headers, Nail-Sets, Hand-Screws, Handles for Tools and Implements Used in Agriculture, Blacksmithing, Carpentry and Mining; Grinding-Machines, Vises, Pipe-Cutters, Wrenches, Machine-Blowers, Stocks and Dies, Screw-Plates, Reamers, Grass-Hooks, Lawn-Edgers, Grass-Catchers, Garden-Forks, Garden-Weeders, Corn-Shellers, Bone-Shell and Corn Mills, Grist-Mills, Shovels and Spades, Drain-Cleaners, Scoops, Hair-Clippers, Shearing-Machines, Meat-Choppers, Food-Choppers, Cleavers, Kraut-Cutters, Mincing-Knives, Steak-Pounders, Can-Openers, Glass-Cutters, Ice-Picks, Corkscrews, Pruning-Knives, Farrier-Knives, Glaziers' Knives, Chip-Carving Knives, Sidewalk-Cleaners, Food-Chopper Parts, Garden Sets, Fetlock-Clippers, Razors, Sticking-Knives, Skinning-Knives, Lunch-Knives, Cook-Knives, Axes, Adzes, Hammers—All Kinds; Boring-Machines, Ship Auger-Bits, Spokeshaves, Brad-Awls, Garden-Plows, Snathes, Feed-Cutters, Hay-Knives, Hay-Carrying Tools, Cotton or Box Hooks, Box-Scrapers, Tack-Claws, Staple-Pullers, Tinners' Snips, Riveters, Safety-Razors, Hunting-Knives, Tobacco-Knives, Broom or Corn Knives, Shoe-Knives, Chicken-Sticking Knives, Scrapping-Knives, Sloyd-Knives, Stock-Cutters, Tobacco-Cutters, Meat-Cutter Parts, Lawn-Spuds, Budding-Knives, Scissor Sets, Boning-Knives, Ribbing-Knives, Kitchen-Carvers, Spatulas, Broadaxes, Hatchets, Grub-Hoes, Nut-Augers, Car-Bits, Plane-Irons, Miter-Boxes, Eye-Hoes, Extra Parts for Lawn-Mowers.

Claims use since Nov. 11, 1905.

Ser. No. 89,900. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) UNITED HARDWARE COMPANY, Boston, Mass. Filed Oct. 16, 1915.

COPAS

Particular description of goods.—Door-Checks, Door-Closers, Door-Hangers, Door-Springs, Metal Door-Holds, Door-Handles, Door-Hinges, Door-Knobs, Door-Buttons, Door-Rails, Awning-Fittings, Awning-Pulleys, Awning-Hinges, Sash-Balances, Sash-Cord Guides, Sash-Holders, Sash-Weights, Sash-Lifts, Sash-Chains, Sash-Pulleys, Window-Buttons, Window-Bead Fasteners, Blind-Stops, Shutter-Workers, Stair-Rod Fasteners, Cabinet-Hinges, Chest-Hinges, Trunk-Hinges, Butt-Hinges, Strap-Hinges, Spring-Hinges, Table-Hinges, Box-Hinges, Cabinet-Handles, Chest-Handles, Trunk-Handles, Cabinet-Knobs, Chest-Knobs, Carpet-Fasteners, Nut and Bolt Locks, Lock-Nuts, Bolts and Nuts, Curtain-Rings, Screw-Eyes, Screw-Hooks, Strap-Bolts, Staples, Bolt-Shields, Shelf-Braces, Shelf-Brackets, Tool-Handle Ferrules, Hasps, Floor-Plates, Ceiling-Plates, Kick-Plates, Push-Plates, T-Plates, Corner-Plates, Pipe-Hooks, Pipe-Racks, Pipe-Hangers, Wall-Hangers, Clothes-Line Pulleys, Ceiling-Pulleys, Steel and other Base-Metal Chains, Jack-Chains, Box-Strapping, Stovepipe-Wire, Wire-Cloth, Sinks, Basins, Bath-Fittings, Basin-Fittings, Hydrants and Plugs, Nozzles, Nozzle-Holders, Fountains, Sprayers, Check-Valves, Cocks and Faucets, Ball-Cocks, Siphons, Safety-Valves, Feeders, Float-Valves, Water-Closet Valves, Water-Traps, Sewer-Traps, Pipe-Traps, Waste-Traps, Pipe-Valves, Pipe-Coupling, Cross-Coupling, T-Coupling, Flange-Unions, Pipe-Unions, Pipe-Plugs, and other Water-Pipe Fittings, Iron Pipe, Lead Pipe, Brass Pipe, Hose-Coupling, Lawn-Sprinklers, Metal Fencing, Expansion-Bolts, Special Bolts, as T-Bolts, Cross-Bolts, Expansion-Bolts and Shields, Joints, Ladles, Swinging Brackets, Table-Forks, Kitchen-Forks, Carving-Forks, Meat-Forks, and Toasting-Forks, All of Base-Metal, Bread and Cake Spoons of Wood and Base Metal, Skimmers, Cake-Turners, Fruit-Lifters, Plate-Lifters, and Table-Tongs, Table-Spoons, Teaspoons, Dessert-Spoons, and Sugar-Spoons, of Base Metal.

Claims use since Apr. 1, 1915.

Ser. No. 89,901. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNITED HARDWARE COMPANY, Boston, Mass. Filed Oct. 16, 1915.

COPAS

Particular description of goods.—Table-Knives, Kitchen-Knives, Dessert-Knives, Pastry-Knives, Carving-Knives, and Butter-Knives All of Base Metal, Pocket-Knives, Penknives, Hunting-Knives, Shoemakers' Knives, Putty-Knives, Hay-Knives, Gage-Knives, Buttonhole-Knives, Scythes, Sickles, Razors, Razor-Blades, Razor-Blade Holders, Bread-Cutters, Cake-Cutters, Meat-Cutters, Twine-Cutters, Straw-Cutters, Can-Openers, Animal-Shears, Animal-Clippers, Barbers' Clippers, Fruit-Clippers, Household Scissors and Shears, Embroidery-Scissors, Buttonhole-Scissors, Hedge-Trimmers, Pruning Instruments, Pruning-Shears, Wire-Shears, Tinsmiths' Snips, Wood-Chisels, Wood-Gouges, Wood-Carving Tools, Draw-Shaves, Mortise-Trimmers, Metal-Saws, Metal-Saw Frames, Bracket-Saws, Bracket-Saw Frames, Scroll-Sawing Machinery, Carpenters' Handsaws, Circular Saws, Crosscut-Saws, Miter-Saws, Miter-Saw Boxes, Band-Saws, Bit-Frames, Bit-Stocks, Augers, Twist-Drills, Wood-Bits, Awls, Axes, Pick-axes, Hatches, Adz, Countersinks, Wood-Reamers, Metal-Reamers, Adjustable Metal-Reamers, Ratchet-Drills, Metal-Drilling Machines, Drill-Presses, Wood-Drilling Machines, Wood-Boring Machines, Boring-Heads, Drill-Holders, Drill-Heads, Metal-Screw-Threading Taps, Wood-Screw-Threading Taps, Metal Screw-Threading Dies, Wood Screw-Threading Dies, Wood Planers and Wood-Surfacing Machines, Edgers, Cutting-Pliers, Paper Wheels, Wood Files and Rasps, Metal Files and Rasps, Metal-Grinding Machines, Miter-Cutters, Gear-Cutters, Milling-Cutters, Tenon-Cutters, Metal-Working Cutters, Lathe Planer and Shaper Tools, Metal-Broaching Tools, Scraping-Planes, Carpenters' Wood-Planes, Carpenters' Wood-Surface Planes, Carpenters' Jack-Planes, Hay-Forks, Spading-Forks, Pitch-forks; Pipe-Tongs, Tweezers, Pincers, Solid Bolt and Nut Wrenches, Monkey-Wrenches, Pipe-Wrenches, Bench-Vises, Hand-Vises, Leather-Punches, Belt-Punches, Metal-Punches, Prick-Punches, Nail-Sets, Nail-Pullers, Scribers, Screw-Drivers, Crowbars, Mallets, Sledges, Claw-Hammers, Sledge-Hammers, Peen-Hammers, Shovels, Scoop-Shovels, Garden-Spades, Trowels, Speed-Lathes, Turret-Lathes, Screw-Lathes, Engine-Lathes, Fox-Lathes, Wood-Turning and Woodworking Lathes, Lathe-Mandrels, Lathe-Dogs, Lathe-Chucks, Steady-Rests, Tool-Rests, Lathe Work-Supports, Lathe Turning-Tools, Lathe Work-Holders, Lathe Face-Plates, Lathe-Centers, Index-Heads, Metal-Shaper Machines, Wood-Shaper Machines, Metal-Broaching Machines, Metal-Slotting Machines, Planer-Chucks, Tool-Sockets, Shaper-Chucks, Auger-Chucks, Screw-Tap Chucks, Wood-Clamps, Metal-Clamps, Metal Cutter-Heads, Lawn-Mowers, Surface-Scrapers, Machine-Blowers, Fire-Extinguishers, Jacks, and Lining for Machine-Brakes, Pipe-Threading Taps and Dies, Die-Stocks, Tap-Wrenches, Pipe-Cutters, Pulley-Blocks, Solder-Irons, and Pipe-Vises.

Claims use since Apr. 1, 1915.

Ser. No. 90,839. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTHERN JOBBING COMPANY, Chicago, Ill. Filed Nov. 22, 1915.

NJC

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Fish, Coffee, Cocoa, Yeast-Cakes, Rolled Oats, Corn-Starch, Corn Flakes, Catsup, Rice, Tapioca, Table-Syrup, Fruit Preserves, Cocoanut, Chocolate, Vinegar, Spices, Flavoring Extracts for Foods, Macaroni, Noodles, Spaghetti, Vermicelli, Olives, Peanut-Butter, Mustard, and Gelatin-Powder.

Claims use since January, 1915.

Ser. No. 90,912. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. W. & A. G. SOAR, Butte, Mont. Filed Nov. 24, 1915.

ROCKY MOUNTAIN BALM

The term "Balm" being disclaimed.

Particular description of goods.—A Topical Remedy for Colds in the Nose, Throat, and Lungs, Asthma, Hay-Fever, Catarrh, Catarrhal Deafness, Adenoids, Croup, Pneumonia, Earache, Tired Eyes, Rheumatism, Burns, Headache, Receding Gums, Itching Piles, or Any Itching, Blackheads, Use After Shaving.

Claims use since the month of October, 1905.

Ser. No. 91,493. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLORENCE MYRA COHAN, Oakland, Cal. Filed Dec. 15, 1915.

Ki-Ko

Particular description of goods.—Depilatory Preparations.

Claims use since Jan. 15, 1915.

Ser. No. 92,084. (CLASS 39. CLOTHING.) A. M. MALOUF, Salt Lake City, Utah. Filed Jan. 12, 1916.

The First National Stores

"The First National Stores." The words "The" and "Stores" are disclaimed.

Particular description of goods.—Hats, Caps, Dress, Work, Negligée, and Night Shirts, Collars and Cuffs, and Shoes Made of Leather Only.

Claims use since the 3d of January, 1916.

Ser. No. 92,802. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CHICAGO PNEUMATIC TOOL COMPANY, Chicago, Ill. Filed Feb. 12, 1916.



No claim is made to the words "Valve," "Trade Mark," "Durable," and "Efficient," nor to the representation of a label or tag.

Particular description of goods.—Metallic Valves for General Purposes.

Claims use since July, 1915.

Ser. No. 92,884. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) JOSEPH SCHWABER, Baltimore, Md. Filed Feb. 15, 1916.



No claim is made herein to the word "Oak" disassociated from the other features shown.

Particular description of goods.—Leather in the Piece Cut to Form What is Known in the Trade as Sides, Strips, Bends, Blocks, and Jumbos.

Claims use since on about Sept. 1, 1915.

Ser. No. 92,905. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) M. J. WOHL & Co., Brooklyn, N. Y. Filed Feb. 16, 1916.

DUPLEX

Consisting of the word "Duplex."

Particular description of goods.—Electric Lamps.

Claims use since October, 1914.

Ser. No. 93,094. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CARVACROL COMPANY, Norwalk, Conn. Filed Feb. 25, 1916.

Carvacrol

Particular description of goods.—A Preparation for the Treatment of Toothache, Headache, and Neuralgia.

Claims use since Sept. 26, 1915.

Ser. No. 93,098. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOBST BETHARD CO., Peoria, Ill. Filed Feb. 25, 1916.

Creve-Coeur

Particular description of goods.—Canned Tomatoes, Canned Apple Sauce, Canned Apple-Butter, Canned Apricots, Evaporated Apricots, Currants, Raisins, Fruit-Cake, Canned Wax-Beans, Canned Peas, Canned Green Beans, Canned Succotash, Canned Lima Beans, Canned Kidney-Beans, Canned Pork and Beans, Canned Pork and Beans with Tomato Sauce, Canned Peaches, Evaporated Peaches, Brandied Peaches, Preserved Prunes, Canned Grapes, Canned Shrimps, Canned Blueberries, Canned Blackberries, Canned Cherries, Canned Plums, Brandied Pears, Sweet-Pickled Pears, Canned Strawberries, Canned Raspberries, Canned Pineapples, Canned Plum-Pudding, Coffee, Vinegar, Bottled Cherries, Melange, Pickled Peaches, Barley-Duc, Cheese, French Maroons, Tomato Catsup, Crabapple Jelly, Pearl-Onions, Ginger, Fruit Preserves, Tea, Kumquats, Codfish-Cakes, Canned Tuna Fish, Canned Salmon, Canned Salmon-Cutlets, Canned Crab-Meat, Canned Lobster, Canned Little-Neck Clams, Canned Dry Shrimp, Canned Clam-Juice, Canned Soups, Canned Clam-Chowder, Olives, Canned Asparagus, Canned Beets, Canned Sardines, Preserved Figs, Olives, Oranges, Lemons, Salad-Dressing, Olive-Oil, Bottled Quince, Pickles, Chilli Sauce, Peanut-Butter, Table-Relish, Assorted Whole Fruits, Prepared Mustard, Maple-Syrup, Fresh-Fruit Salad, Fruit Preserves, Mince-Meat, Canned Meats, Bacon, Maple-Sugar, Jellies, Condiments, Canned Corn, Canned Pimentos, Canned Sweet Potatoes, Wheat and Rye Flour, Buckwheat Flour, and Patent-Flour.

Claims use since Mar. 1, 1903.

Ser. No. 93,186. (CLASS 10. FERTILIZERS.) THE MOLASSINE COMPANY LIMITED, Greenwich and London, England. Filed Feb. 29, 1916.

RITO

Particular description of goods.—Fertilizers for Agricultural and Horticultural Purposes.

Claims use since the 19th day of March, 1915.

Ser. No. 93,187. (CLASS 10. FERTILIZERS.) THE MOLASSINE COMPANY LIMITED, Greenwich and London, England. Filed Feb. 29, 1916.

HUMOSIN

Particular description of goods.—Fertilizers for Agricultural and Horticultural Purposes.
Claims use since the 24th day of June, 1915.

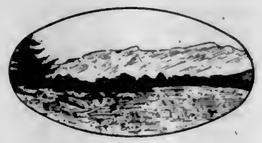
Ser. No. 93,229. (CLASS 39. CLOTHING.) GLOBE SHIRT & OVERALL CO., Abingdon, Ill. Filed Mar. 2, 1916.

PROTEXALL

No claim being made to the word "Protexall" apart from the mark as shown.
Particular description of goods.—Overalls.
Claims use since Aug. 1, 1915.

Ser. No. 93,279. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MT. MANSFIELD CREAMERY ASSOCIATION, Stowe, Vt. Filed Mar. 3, 1916.

MT. MANSFIELD



No claim being made to the term "Mt. Mansfield" apart from the mark shown in the drawing.
Particular description of goods.—Butter.
Claims use since June 1, 1915.

Ser. No. 93,334. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JOHN HAUENSTEIN BREW. CO., New Ulm, Minn. Filed Mar. 6, 1916.

Moccasin

Particular description of goods.—A Non-Alcoholic Brewed Malt Beverage.
Claims use since October, 1915.

Ser. No. 93,514. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SUREWAY MANUFACTURING COMPANY, St. Louis, Mo. Filed Mar. 13, 1916.

SUREWAY

Particular description of goods.—Glosses and Polishes for Furniture and Automobile Bodies.
Claims use since Dec. 26, 1915.

Ser. No. 93,554. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GIUSEPPE MADDI, New York, N. Y. Filed Mar. 15, 1916.



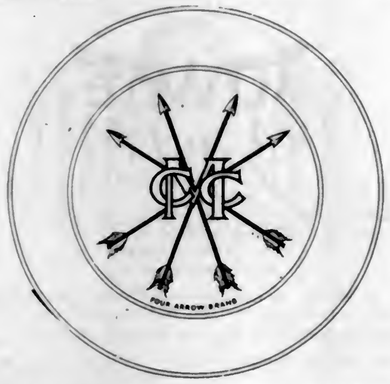
Particular description of goods.—Hair-Dressing and Dandruff Cure.
Claims use since Feb. 1, 1916.

Ser. No. 93,605. (CLASS 39. CLOTHING.) LUND-MAULDIN COMPANY, St. Louis, Mo. Filed Mar. 17, 1916.



No claim is made to the illustration of a shoe and the word "Shoe" except in connection with the other features of the mark shown.
Particular description of goods.—Leather Boots and Shoes.
Claims use since about Dec. 7, 1915.

Ser. No. 93,607. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MONMOUTH CHEMICAL COMPANY, Keyport, N. J. Filed Mar. 17, 1916.



No claim is made to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Chlorate of Potash.
Claims use since the 1st day of November, 1915.

Ser. No. 93,627. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. E. BURSLEY & CO., Fort Wayne, Ind. Filed Mar. 18, 1916.

SAVACAN

Particular description of goods.—Blended Coffee.
Claims use since May, 1915.

Ser. No. 93,662. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EUGENE W. PENLEY, Auburn, Me. Filed Mar. 18, 1916.



No right is claimed to the exclusive use of a blue tag, the tag being lined to indicate blue.
Particular description of goods.—Hams, Bacon, Lard, Sausage, Oleomargarin.
Claims use since June 1, 1900.

Ser. No. 93,690. (CLASS 38. PRINTS AND PUBLICATIONS.) BUSINESS CHRONICLE COMPANY, Seattle, Wash. Filed Mar. 20, 1916.

BUSINESS CHRONICLE
OF THE PACIFIC NORTHWEST

Particular description of goods.—Heading and Title of Periodical Business Publication.
Claims use since Mar. 8, 1916.

Ser. No. 93,788. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BLEECKER EXPORT & TRADING CO. INC., New York, N. Y. Filed Mar. 23, 1916.

BLEEKO

Particular description of goods.—Dyestuffs; Anilin, Sulfur, Dry and Coal-Tar-Product Colors; Sulfuric, Muriatic, and Acetic Acids, Salol, Acetanilid, Hexamethylenetetramin.
Claims use since on or about the 15th day of February, 1916.

Ser. No. 93,829. (CLASS 39. CLOTHING.) CHIPPEWA SHOE MFG. CO., Chippewa Falls, Wis. Filed Mar. 24, 1916.



Particular description of goods.—Leather Boots and Shoes.
Claims use since Feb. 1, 1916.

Ser. No. 93,874. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEHLOR FLOUR MILLS COMPANY, St. Louis, Mo. Filed Mar. 25, 1916. Under ten-year proviso.

LEVEL BEST

Particular description of goods.—Wheat-Flour and Self-Rising Flour.
Claims use since the year 1869.

Ser. No. 93,916. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAR LABORATORIES COMPANY, Pittsburgh, Pa. Filed Mar. 27, 1916.

Par

Particular description of goods.—An Aqueous Solution of Radium (Element) for the Treatment of Rheumatism, (Various Forms,) Neuralgia, Gout, Anemia, Neuritis, Nephritis, Stomach Disorders, Piles, Nervous Affections, Kidney and Liver Ailments, Tubercular Bones and Joints, Insomnia, Eczema, and All Skin Diseases.
Claims use since Mar. 16, 1916.

Ser. No. 93,925. (CLASS 39. CLOTHING.) ABRAHAM S. BECKER, Baltimore, Md. Filed Mar. 28, 1916.

MD

Particular description of goods.—Corsets.
Claims use since Sept. 1, 1915.

Ser. No. 93,989. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) DARWIN & MILNER, INC., New York, N. Y. Filed Mar. 30, 1916.

NEOR

Particular description of goods.—Bar-Steel and Steel Castings.
Claims use since Jan. 1, 1912.

Ser. No. 93,998. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL FILM MANUFACTURING COMPANY, New York, N. Y. Filed Mar. 30, 1916.

BIG

Particular description of goods.—A Series of Different Motion-Picture Photoplays.
Claims use since on or about the 5th day of January, 1915.

Ser. No. 94,163. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURT C. CHRISTEN, Toledo, Ohio. Filed Apr. 5, 1916.

CREME ADORA

The exclusive right to the word "Creme" being disclaimed.
Particular description of goods.—A Face-Cream.
Claims use since Nov. 1, 1915.

Ser. No. 94,185. (CLASS 39. CLOTHING.) BROOKLYN SHIELD & RUBBER CO., Brooklyn, N. Y. Filed Apr. 6, 1916.

Lily

Particular description of goods.—Rubber Gloves for General Use, Brassières, Rubber Bathing-Caps, and Infants' Bibs.
Claims use since January, 1891.

Ser. No. 94,212. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOWARD S. STARRETT, Jr., Brooklyn, N. Y. Filed Apr. 6, 1916.

ALLWITE

No claim is made to "Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—Liniment.
Claims use since August, 1913.

Ser. No. 94,267. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRED SIFFORD, Bloomfield, Mo. Filed Apr. 8, 1916.

DR. SIFFORD'S ANTISEPTIC HEALER F.S.D.V.M

The words "Dr. Sifford's Antiseptic Healer" being disclaimed.
Particular description of goods.—An External Remedy for Man and Beast and Applicable as a Healing Preparation for Wounds of the Skin and Mucous Membranes of Man or Beast, Such as Cuts, Burns, Bites, Scratches, Cracked Heels, Thrush, Mange, Saddle and Collar Galls, Eczema, Chapped Hands and Lips, and to Prevent Contamination of Open Wounds by Flies.
Claims use since the 1st of June, 1915.

Ser. No. 94,291. (CLASS 39. CLOTHING.) LLOYD KNITTING MILLS, Salt Lake City, Utah. Filed Apr. 10, 1916.



Particular description of goods.—Men's Union Suits, Sweaters, Mackinaws, Knitted Coats, and Shirts.
Claims use since April, 1915.

Ser. No. 94,392. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) CHARLES W. PARKER, Leavenworth, Kans. Filed Apr. 13, 1916.

CARRY-US-ALL
BUILT BY
C.W. PARKER
LEAVENWORTH
KANSAS

No claim being made to the right of exclusive use of the words "Built by C. W. Parker, Leavenworth, Kansas."
Particular description of goods.—Carousels.
Claims use since Sept. 30, 1892.

Ser. No. 94,398. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STETSON-BARRET CO., Los Angeles, Cal. Filed Apr. 13, 1916.

RED HUSSAR



Particular description of goods.—Canned Salmon, Canned Tuna Fish, Canned Ripe Olives, Cinnamon, Olive-Oil, Tea, Pancake-Flour, Powdered Sugar, Vinegar, Vanilla Extract, Fig Preserves, Imported Paprika, Mustard, Nutmegs, Mace, Allspice, Cloves, Black Pepper, White Pepper, Sage, Cayenne, Ginger, and Coffee, Raisins, Canned Oysters.
Claims use since the year 1911.

Ser. No. 94,415. (CLASS 17. TOBACCO PRODUCTS.) FALK TOBACCO CO., New York, N. Y. Filed Apr. 14, 1916.

Personal
Pipe Tobacco

No claim is made to the words "Pipe Tobacco" apart from the mark shown in the drawing.
Particular description of goods.—Smoking-Tobacco.
Claims use since June 22, 1915.

Ser. No. 94,478. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) JOSEPH F. MORGAN, Brooklyn, N. Y. Filed Apr. 17, 1916.



Particular description of goods.—Casket-Linings.
Claims use since Jan. 1, 1908.

Ser. No. 94,567. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ENDURANCE TIRE & RUBBER CO., New Brunswick, N. J., Filed Apr. 20, 1916.

ENDUROID

Particular description of goods.—A Substitute for Leather.
Claims use since Jan. 15, 1916.

Ser. No. 94,574. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ENTERPRISE ALUMINUM COMPANY, Rochester, N. Y. Filed Apr. 20, 1916.

ROCHESTER, N.Y. U.S.A.
WONDER WARE
GUARANTEED PURE
WEAR
ALUMINUM

No claim is made to the exclusive use of the words "Rochester, N. Y., U. S. A." or "Guaranteed Pure Aluminum."
Particular description of goods.—Aluminum Cooking Utensils—Namely, Frying-Pans, Pudding-Pans, Saucepans, Preserve, Berlin, Windsor, and Tea Kettles, Muffin, Bread, and Biscuit Pans, Jelly-Cake Pans, Pie-Plates, Teapots, Percolators, Double Roasters, Double Boilers, and Griddles.
Claims use since Feb. 10, 1916.

Ser. No. 94,594. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NATIONAL CARBONATING SYRUP COMPANY, Wilmington, Del., and Evansville, Ind. Filed Apr. 20, 1916.



The trade-mark "Trico," no claim being made to any other matter associated therewith.

Particular description of goods.—Non-Alcoholic Carbonated Soft Drink and the Syrup for Making the Same.

Claims use since Feb. 1, 1916.

Ser. No. 94,608. CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DOUGLAS CANDY CO., St. Joseph, Mo. Filed Apr. 21, 1916.

CARDINAL

Particular description of goods.—Chocolate Confection and Candy.

Claims use since 1910

Ser. No. 94,615. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) INLAND MACHINE WORKS, St. Louis, Mo. Filed Apr. 21, 1916.



No claim is made to the exclusive use of the representation of a piston-ring apart from the mark shown in the drawing.

Particular description of goods.—Metallic Packing-Rings.

Claims use since on or about July 22, 1913.

Ser. No. 94,685. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SYDNEY ROSS CO., New York, N. Y. Filed Apr. 24, 1916



No claim is made to the exclusive use of the words "Trade Mark Reg. U. S. Pat. Off." apart from the mark shown in the drawing.

Particular description of goods.—A Preparation for Colds and Malarial Troubles.

Claims use since September, 1915.

Ser. No. 94,763. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BOSCH MAGNETO COMPANY, New York, N. Y. Filed Apr. 28, 1916.



Particular description of goods.—Ignition and Starting Apparatus for Internal-Combustion Engines, Electric-Lighting Systems for Automobiles, Motor-Boats, and other Moving Vehicles and Parts and Accessories Thereof, Consisting of Magneto-Electric Generators, Spark-Plugs, Electric-Lighting Generators, Electric Starting-Motors, Headlights, Incandescent Lamps, Electric Switches, and Cable-Terminals, and Ignition-Coils, Interrupters, and Distributers for Ignition Systems.

Claims use since Apr. 15, 1916.

Ser. No. 94,776. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE PITTSBURGH GAME & NOVELTY CO., Pittsburgh, Pa. Filed Apr. 28, 1916.

"Get the Boys out of the Trenches"

Particular description of goods.—A Game.

Claims use since the 8th day of December, 1915.

Ser. No. 94,789. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EUREKA FIRE HOSE MANUFACTURING COMPANY, New York, N. Y. Filed Apr. 29, 1916.

NOBBY

Particular description of goods.—Rubber Hose Reinforced with Fabric.

Claims use since Dec. 31, 1915.

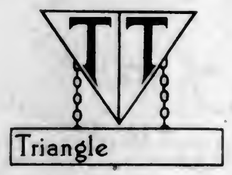
Ser. No. 94,792. (CLASS 33. GLASSWARE.) GILL BROTHERS COMPANY, Steubenville, Ohio. Filed Apr. 29, 1916.

FIRE KING

Particular description of goods.—Glass Cooking Utensils, Lamp-Chimneys, Lantern Globes, Shades, and Reflectors, Electric-Arc Light and Gas Globes and Gas-Chimneys, Globes for Incandescent Electric Lamps, and Glass Bulbs for Incandescent Electric Lamps.

Claims use since Dec. 1, 1915.

Ser. No. 94,815. (CLASS 39. CLOTHING.) BUTLER BROTHERS, Chicago, Ill. Filed May 1, 1916.



Particular description of goods.—Men's and Boys' Suits, Overcoats, and Rain-Coats.

Claims use since Jan. 27, 1916.

Ser. No. 94,822. CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FORE RIVER SHIPBUILDING CORPORATION, Quincy, Mass. Filed May 1, 1916.



Particular description of goods.—Marine Steam-Engines, Marine Turbines, Propeller-Planing Machines, Turret-Turning Machines, Turbine-Bucket-Setting Machines, Plate-Roller Tables, and Countersinking-Machines.

Claims use since Feb. 1, 1916.

Ser. No. 94,829. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) W. S. NOTT COMPANY, Minneapolis, Minn. Filed May 1, 1916.

BULL DOG



Particular description of goods.—Dry-Cell Batteries.

Claims use since about Jan. 1, 1912.

Ser. No. 94,861. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) V. VIVAUDOU, INC., New York, N. Y. Filed May 2, 1916.

La Bohème

Particular description of goods.—Perfumes, Toilet Waters, Face-Powders, Lotions, Talcum Powders, and Sachet-Powders.

Claims use since August, 1915.

Ser. No. 94,862. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) V. VIVAUDOU, INC., New York, N. Y. Filed May 2, 1916.



Particular description of goods.—Perfumes, Toilet Waters, Face-Powders, Lotions, Talcum Powders, and Sachet-Powders.

Claims use since August, 1915.

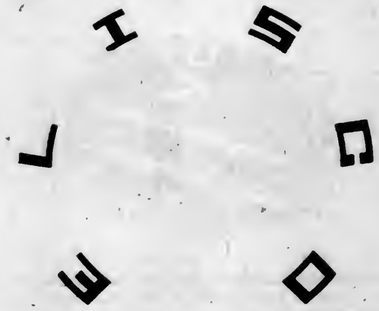
Ser. No. 94,864. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN PACKING CO., Everett, Wash. Filed May 3, 1916.

PRIMAL

Particular description of goods.—Canned Salmon.

Claims use since September, 1915.

Ser. No. 94,870. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE ELYRIA IRON AND STEEL COMPANY, Cleveland, Ohio. Filed May 3, 1916.



Particular description of goods.—Steel Tubes.

Claims use since Apr. 7, 1916.

Ser. No. 94,882. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TURNER & HAHN, Baltimore, Md. Filed May 3, 1916.

RENUT

Particular description of goods.—Liniment for Stiff and Swollen Joints, Pleurisy Pains in Back and Chest, Tired and Aching Feet and Limbs.
Claims use since on or about Apr. 1, 1916.

Ser. No. 94,909. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WHITE BAND MANUFACTURING CO. LTD., South Croydon, England. Filed May 4, 1916.



Particular description of goods.—Photographic Developers.
Claims use since Feb. 19, 1916.

Ser. No. 94,943. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLARA TETLOW, Philadelphia, Pa. Filed May 5, 1916.

Helene Varré

Particular description of goods.—Face-Powders.
Claims use since about May, 1910.

Ser. No. 94,957. (CLASS 17. TOBACCO PRODUCTS.) M. MARSH & SON, INC., Wheeling, W. Va. Filed May 6, 1916.



No claim being made to the representation of the two stogies except as associated with the other features shown in the drawing.
Particular description of goods.—Stogies.
Claims use since Mar. 15, 1916.

Ser. No. 94,968. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed May 6, 1916.

Poyntex

Particular description of goods.—A Knit Fabric in the Piece.
Claims use since about Feb. 21, 1916.

Ser. No. 94,989. (CLASS 39. CLOTHING.) R. H. MACY & CO., New York, N. Y. Filed May 8, 1916.

Chapeaux La Marquise

No claim being made to the word "Chapeaux" apart from the matter shown.
Particular description of goods.—Hats.
Claims use since Sept. 7, 1915.

Ser. No. 95,006. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE ELYRIA IRON AND STEEL COMPANY, Cleveland, Ohio. Filed May 9, 1916.



Particular description of goods.—Steel Tubes.
Claims use since Apr. 7, 1916.

Ser. No. 95,007. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE ELYRIA IRON AND STEEL COMPANY, Cleveland, Ohio. Filed May 9, 1916.



Particular description of goods.—Steel Tubes.
Claims use since Apr. 7, 1916.

Ser. No. 95,016. (CLASS 39. CLOTHING.) STAR HOSIERY MILLS, Spartanburg, S. C. Filed May 9, 1916.



Particular description of goods.—Hosiery.
Claims use since Apr. 21, 1916.

Ser. No. 95,029. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CORN PRODUCTS REFINING CO., New York, N. Y. Filed May 10, 1916.

Karo

Particular description of goods.—Aluminum Cooking Utensils—viz., Griddles, Preserving-Kettles, and Candy-Kettles.
Claims use since Sept. 15, 1915.

Ser. No. 95,038. (CLASS 39. CLOTHING.) JOEL ISAACS & SONS, New York, N. Y. Filed May 10, 1916.

Melva

Particular description of goods.—Ladies' and Misses' Shirt-Waists.
Claims use since December, 1910.

Ser. No. 95,045. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LA VALLIERE CO., New Orleans, La. Filed May 10, 1916.

Sweet Olive

Particular description of goods.—Talcum, Face-Powders, Toilet Waters, Perfumes, and Sachet-Powders.
Claims use since Jan. 1, 1912.

Ser. No. 95,051. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHARMACAL PRODUCTS CORPORATION, New York, N. Y. Filed May 10, 1916.



No claim being made to the words "Pharmacal Products Corporation, New York," apart from the mark shown in the drawing.
Particular description of goods.—Saline Laxatives, Uric-Acid Solvents, Hepatic Stimulants, and Eliminators of Toxic Products.
Claims use since Oct. 6, 1915.

Ser. No. 95,062. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNITED STATES TROPICAL FOOD CO., Boston, Mass. Filed May 10, 1916.

Neutrality

Particular description of goods.—Confections.
Claims use since Sept. 1, 1915.

Ser. No. 95,084. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) AGNES RAY, Oakland, Cal. Filed May 11, 1916.

Ray-Way

Particular description of goods.—Abdominal Bands for Corsets.
Claims use since Feb. 1, 1916.

Ser. No. 95,086. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LIDA V. SWANSON, Chicago, Ill. Filed May 11, 1916. Under ten-year proviso.

"JETUM"



Particular description of goods.—Hat-Dyes.
Claims use since prior to Feb. 20, 1895.

Ser. No. 95,094. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ASEPTINOL MANUFACTURING COMPANY, Baltimore, Md. Filed May 12, 1916.

ASEPTINOL

Particular description of goods.—Antiseptic Ointment and Antiseptic Powder.
Claims use since May 17, 1901.

Ser. No. 95,145. (CLASS 25. LOCKS AND SAFES.) JOHN B. HALL, Philadelphia, Pa. Filed May 15, 1916.

MAGIC

Particular description of goods.—Locks.
Claims use since Apr. 26, 1916.

Ser. No. 95,169. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) F. BLUMENTHAL COMPANY, Wilmington, Del., and New York, N. Y. Filed May 16, 1916.

No 53

Particular description of goods.—Leather.
Claims use since May 3, 1916.

Ser. No. 95,196. (CLASS 39. CLOTHING.) BALTIMORE BARGAIN HOUSE, Baltimore, Md. Filed May 17, 1916.

O.K

Particular description of goods.—Corsets.
Claims use since May 1, 1913.

Ser. No. 95,200. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELEANOR DOLE, San Francisco, Cal. Filed May 17, 1916.

NEO-PLASTIQUE

Particular description of goods.—Skin Cosmetic or Cream.
Claims use since May 15, 1904

Ser. No. 95,249. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE W. R. L. COMPANY, Athens, Ga. Filed May 18, 1916.

Leachim

Particular description of goods.—A Remedy for Cuts, Bruises, Sores, and All Open Wounds on Animals.
Claims use since Apr. 24, 1916.

Ser. No. 95,258. (CLASS 43. THREAD AND YARN.) BERNHARD ULMANN CO., INC., New York, N. Y. Filed May 19, 1916.

WOOLKRAFT

Consisting of the affix "Kraft," no claim being made to the word "Wool."
Particular description of goods.—Worsted, Cotton, Woolen, Linen, Silk, and Artificial-Silk Yarn and Thread.
Claims use since May 13, 1916.

Ser. No. 95,340. (CLASS 39. CLOTHING.) M. MARTIN & COMPANY, INC., New York, N. Y. Filed May 22, 1916.

PLUME

Particular description of goods.—Undergarments—Namely, Gowns, Envelop-Chemises, Combinations, Petticoats, Drawers, and Corset-Covers Made of Nainsooks, Cambrics, Batistes, Crêpe-de-Chines, Wash-Satins, and Tub-Silks.
Claims use since the year 1878.

Ser. No. 95,345. (CLASS 10. FERTILIZERS.) THE ROBIN JONES PHOSPHATE COMPANY, Nashville, Tenn. Filed May 22, 1916.

MAYFIELD

Particular description of goods.—A Raw Phosphate-Rock Finely Pulverized and Used as a Fertilizer.
Claims use since July, 1915.

Ser. No. 95,347. (CLASS 25. LOCKS AND SAFES.) SWIFT MACHINE COMPANY, Chicago, Ill. Filed May 22, 1916.

Swift

Particular description of goods.—Wheel-Locks, Padlocks, Door-Locks, Valve-Locks, Combination-Locks, and Keys.
Claims use since May 1, 1916.

Ser. No. 95,352. (CLASS 27. HOROLOGICAL INSTRUMENTS.) LOUIS F. SACKERMAN, Baltimore, Md. Filed May 22, 1916.

CUPID

Particular description of goods.—Alarm-Clocks.
Claims use since Jan. 10, 1916.

Ser. No. 95,359. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed May 23, 1916.

Union League

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Oct. 13, 1890.

Ser. No. 95,364. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DE FOREST RADIO TELEPHONE AND TELEGRAPH COMPANY, New York, N. Y. Filed May 23, 1916.

OSCILLION

Particular description of goods.—Radio Telegraph and Telephone Apparatus.
Claims use since January, 1915.

Ser. No. 95,390. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE BLACKBURN VARNISH CO., Cincinnati, Ohio. Filed May 24, 1916.

WW

Wear Spar

No claim being made to the words "Wear Spar" except in association with the mark as shown.
Particular description of goods.—Varnish.
Claims use since December, 1913.

Ser. No. 95,406. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed May 24, 1916.

BRONCHO

Particular description of goods.—Toilet-Paper.
Claims use since Nov. 4, 1914.

Ser. No. 95,418. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE HARTMAN CO., Chicago, Ill. Filed May 25, 1916.

MAJESTIC

Particular description of goods.—Hog-Oilers.
Claims use since Apr. 1, 1916.

Ser. No. 95,437. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE BRIDGEPORT WOOD FINISHING CO., New Milford, Conn. Filed May 26, 1916.



"Makes wood make good."

The panel being colored for red, no claim being made to the words "Makes Wood Make Good" apart from the mark as shown.

Particular description of goods.—Stain.

Claims use since May 10, 1916.

Ser. No. 95,447. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NOVO MANUFACTURING CO., INC., New York, N. Y. Filed May 26, 1916.

MAGNA

Particular description of goods.—Electric-Flash-Light Batteries and Casings Therefor.

Claims use since about Feb. 15, 1916.

Ser. No. 95,469. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DE FOREST RADIO TELEPHONE AND TELEGRAPH COMPANY, New York, N. Y. Filed May 27, 1916.

ULTRAUDION

Particular description of goods.—Radio Telegraph and Telephone Apparatus.

Claims use since March, 1914.

Ser. No. 95,504. (CLASS 15. OILS AND GREASES.) WHITE STAR REFINING CO., Detroit, Mich. Filed May 27, 1916.

Equapole

Particular description of goods.—Lubricating Oils and Greases.

Claims use since about April of 1913.

Ser. No. 95,544. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE FULTON COMPANY, Milwaukee, Wis. Filed May 31, 1916.

Mazda

Particular description of goods.—Spark-Plugs.

Claims use since May 23, 1916.

Ser. No. 95,549. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) A. G. HYDE & SONS, New York, N. Y. Filed May 31, 1916.

DURA

Particular description of goods.—Cotton Piece Goods.

Claims use since Mar. 1, 1916.

Ser. No. 95,561. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) L. PLAUT & CO., New York, N. Y. Filed May 31, 1916.

FOUR-IN-ONE

Particular description of goods.—Electric-Lighting Fixtures.

Claims use since about Feb. 15, 1916.

Ser. No. 95,583. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANCIS S. SMITH, Boston, Mass. Filed June 1, 1916.

MORNING CALL

The words "Morning Call."

Particular description of goods.—Coffee.

Claims use since January, 1898.

Ser. No. 95,588. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) OTTO BAYSDORFER, Omaha, Nebr. Filed June 2, 1916.

AFFINITY

Particular description of goods.—Spark-Plugs.

Claims use since Aug. 10, 1915.

Ser. No. 95,594. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed June 2, 1916.

GRAYHOUND

Particular description of goods.—Toilet-Paper, Paper Toweling, and Paper Napkins.

Claims use since Feb. 28, 1898.

Ser. No. 95,636. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAUKESHA PURE FOOD COMPANY, Waukesha, Wis. Filed June 5, 1916.

Jiffy

Particular description of goods.—Jelly-Powders, Ice-Cream Powders, and Gelatins.

Claims use on jelly-powder since Feb. 1, 1906; on gelatin since Apr. 4, 1914; on ice-cream powder since Apr. 4, 1914.

Ser. No. 95,657. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

UNION US SQUARE

Particular description of goods.—Gloves.

Claims use since about four years last past.

Ser. No. 95,673. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) KOPS BROS., New York, N. Y. Filed June 7, 1916.

NEMO

Particular description of goods.—Abdominal Belts Made of Rubber, Cloth, and Combinations of Rubber and Cloth.

Claims use since May 1, 1916.

Ser. No. 95,699. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHINOOK PACKING COMPANY, Chinook, Wash. Filed June 8, 1916.



The picture being fanciful.

Particular description of goods.—Canned Salmon.

Claims use since Apr. 24, 1916.

Ser. No. 95,700. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHINOOK PACKING COMPANY, Chinook, Wash. Filed June 8, 1916.



The picture being fanciful.

Particular description of goods.—Canned Salmon.

Claims use since Apr. 24, 1916.

Ser. No. 95,708. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., Eau Claire, Wis. Filed June 8, 1916.



Particular description of goods.—Canned Vegetables.

Claims use since Apr. 5, 1900.

Ser. No. 95,437. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE BRIDGEPORT WOOD FINISHING CO., New Milford, Conn. Filed May 26, 1916.



"Makes wood make good."

The panel being colored for red, no claim being made to the words "Makes Wood Make Good" apart from the mark as shown.

Particular description of goods.—Stain.

Claims use since May 10, 1916.

Ser. No. 95,447. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NOVO MANUFACTURING CO., INC., New York, N. Y. Filed May 26, 1916.

MAGNA

Particular description of goods.—Electric-Flash-Light Batteries and Casings Therefor.

Claims use since about Feb. 15, 1916.

Ser. No. 95,469. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DE FOREST RADIO TELEPHONE AND TELEGRAPH COMPANY, New York, N. Y. Filed May 27, 1916.

ULTRAUDION

Particular description of goods.—Radio Telegraph and Telephone Apparatus.

Claims use since March, 1914.

Ser. No. 95,504. (CLASS 15. OILS AND GREASES.) WHITE STAR REFINING CO., Detroit, Mich. Filed May 27, 1916.

Equapole

Particular description of goods.—Lubricating Oils and Greases.

Claims use since about April of 1913.

Ser. No. 95,544. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE FULTON COMPANY, Milwaukee, Wis. Filed May 31, 1916.

Mazda

Particular description of goods.—Spark-Plugs.

Claims use since May 23, 1916.

Ser. No. 95,549. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) A. G. HYDE & SONS, New York, N. Y. Filed May 31, 1916.

DURA

Particular description of goods.—Cotton Piece Goods.

Claims use since Mar. 1, 1916.

Ser. No. 95,561. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) L. PLAUT & CO., New York, N. Y. Filed May 31, 1916.

FOUR-IN-ONE

Particular description of goods.—Electric-Lighting Fixtures.

Claims use since about Feb. 15, 1916.

Ser. No. 95,583. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANCIS S. SMITH, Boston, Mass. Filed June 1, 1916.

MORNING CALL

The words "Morning Call."

Particular description of goods.—Coffee.

Claims use since January, 1898.

Ser. No. 95,588. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) OTTO BAYSDORFER, Omaha, Nebr. Filed June 2, 1916.

AFFINITY

Particular description of goods.—Spark-Plugs.

Claims use since Aug. 10, 1915.

Ser. No. 95,594. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG CO., Green Bay, Wis. Filed June 2, 1916.

GRAYHOUND

Particular description of goods.—Toilet-Paper, Paper Toweling, and Paper Napkins.

Claims use since Feb. 28, 1898.

Ser. No. 95,636. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAUKESHA PURE FOOD COMPANY, Waukesha, Wis. Filed June 5, 1916.

Jiffy

Particular description of goods.—Jelly-Powders, Ice-Cream Powders, and Gelatins.

Claims use on jelly-powder since Feb. 1, 1906; on gelatin since Apr. 4, 1914; on ice-cream powder since Apr. 4, 1914.

Ser. No. 95,657. (CLASS 39. CLOTHING.) WIMELBACHER & RICE, New York, N. Y. Filed June 6, 1916.

UNION US SQUARE

Particular description of goods.—Gloves.

Claims use since about four years last past.

Ser. No. 95,673. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) KOPS BROS., New York, N. Y. Filed June 7, 1916.

NEMO

Particular description of goods.—Abdominal Belts Made of Rubber, Cloth, and Combinations of Rubber and Cloth.

Claims use since May 1, 1916.

Ser. No. 95,699. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHINOOK PACKING COMPANY, Chinook, Wash. Filed June 8, 1916.



The picture being fanciful.

Particular description of goods.—Canned Salmon.

Claims use since Apr. 24, 1916.

Ser. No. 95,700. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHINOOK PACKING COMPANY, Chinook, Wash. Filed June 8, 1916.



The picture being fanciful.

Particular description of goods.—Canned Salmon.

Claims use since Apr. 24, 1916.

Ser. No. 95,708. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., Eau Claire, Wis. Filed June 8, 1916.

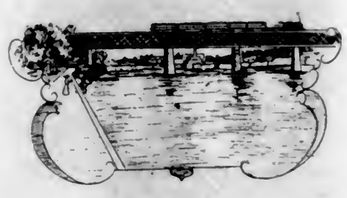


Particular description of goods.—Canned Vegetables.

Claims use since Apr. 5, 1900.

Ser. No. 95,709. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., Eau Claire, Wis. Filed June 8, 1916.

Dells



Particular description of goods.—Canned Vegetables.
Claims use since June 8, 1892.

Ser. No. 95,712. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., Eau Claire, Wis. Filed June 8, 1916.

Cone



Particular description of goods.—Canned Vegetables.
Claims use since June 12, 1891.

Ser. No. 95,715. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NOOKSACK PACKING COMPANY, Portland, Oreg. Filed June 8, 1916.

AGATE



Particular description of goods.—Canned Salmon.
Claims use since Apr. 21, 1916.

Ser. No. 95,718. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUSTAVO PRESTON, Boston, Mass., and Naguabo, Porto Rico. Filed June 8, 1916.

RAVEN



Particular description of goods.—Grape-Fruit and Oranges.
Claims use since May, 1915.

Ser. No. 95,722. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC PEA PACKING COMPANY, Eau Claire and Chetek, Wis., and Oakdale, Cal. Filed June 8, 1916.

THORNAPPLE



Particular description of goods.—Canned Fruits and Canned Vegetables.
Claims use since Mar. 30, 1915.

Ser. No. 95,725. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC PEA PACKING COMPANY, Eau Claire and Chetek, Wis., and Oakdale, Cal. Filed June 8, 1916.

Three P's

Particular description of goods.—Canned Fruits and Canned Vegetables.
Claims use since Apr. 14, 1907.

Ser. No. 95,757. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) H. G. MCFADDIN & CO., New York, N. Y. Filed June 9, 1916.

Thermolite

Particular description of goods.—Therapeutic Electric Lamps.
Claims use since on or about June 1, 1915.

Ser. No. 95,770. (CLASS 37. PAPER AND STATIONERY.) AMERICAN PAPETERIE COMPANY, Albany and New York, N. Y.; Chicago, Ill., and San Francisco, Cal. Filed June 10, 1916.

CLOTHCRAFT

Particular description of goods.—Writing-Paper.
Claims use since Mar. 28, 1913.

Ser. No. 95,773. (CLASS 37. PAPER AND STATIONERY.) AMERICAN PAPETERIE COMPANY, Albany and New York, N. Y.; Chicago, Ill., and San Francisco, Cal. Filed June 10, 1916.

Krafter

Particular description of goods.—Writing-Paper.
Claims use since Dec. 21, 1910.

Ser. No. 95,788. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSÉ MARTINEZ, Brownsville, Tex. Filed June 10, 1916.



José Martinez

The portrait being that of the proprietor, the trademark also including his facsimile signature.
Particular description of goods.—A Medicinal Plaster and Purgative Solution.
Claims use since Nov. 10, 1915.

Ser. No. 95,795. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



Particular description of goods.—Toilet-Paper.
Claims use since Mar. 30, 1915.

Ser. No. 95,796. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



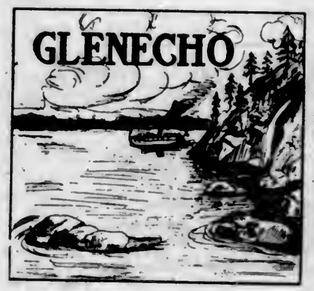
Particular description of goods.—Toilet-Paper.
Claims use since Jan. 4, 1915.

Ser. No. 95,797. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



Particular description of goods.—Toilet-Paper.
Claims use since Sept. 3, 1914.

Ser. No. 95,798. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



Particular description of goods.—Toilet-Paper.
Claims use since Jan. 18, 1914.

Ser. No. 95,802. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



Particular description of goods.—Toilet Paper.
Claims use since July 23, 1914.

Ser. No. 95,803. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



Particular description of goods.—Toilet-Paper.
Claims use since Mar. 20, 1915.

Ser. No. 95,845. (CLASS 39. CLOTHING.) GEORGE R. JONES COMPANY, Manchester, N. H. Filed June 13, 1916.



"Happy Hiker," no claim, however, being made to the pictorial representations.
Particular description of goods.—Boots and Shoes Made of Leather or Canvas with Leather, Felt, or Rubber Soles.
Claims use since Feb. 28, 1916.

Ser. No. 95,856. (CLASS 39. CLOTHING.) P. CENTEMERI & Co., New York, N. Y. Filed June 14, 1916.

ROMONA

Comprising the word "Romona."
Particular description of goods.—Gloves.
Claims use since July, 1906.

Ser. No. 95,859. (CLASS 39. CLOTHING.) P. CENTEMERI & Co., New York, N. Y. Filed June 14, 1916.

GRENETTE

Comprising the word "Grenette."
Particular description of goods.—Gloves.
Claims use since July, 1914.

Ser. No. 95,860. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) L. G. STELZLE & JOSEPH SIMON, TRADING AS THE CHARDEAU COMPANY, New York, N. Y. Filed June 14, 1916.

CHARDEAU

Particular description of goods.—Vermuth.
Claims use since Apr. 1, 1916.

Ser. No. 95,867. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) HOLTZ & FREYSTEDT RESTAURANT & WINE CO. INC., New York, N. Y. Filed June 14, 1916.

BANNOCKBURN

Particular description of goods.—Scotch Whisky.
Claims use since Mar. 1, 1916.

Ser. No. 95,992. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) HERMAN ALLENBERG, Memphis, Tenn. Filed June 20, 1916.

Crestfield

Particular description of goods.—Straight Whisky, Corn Whisky, and Gin.
Claims use since July 1, 1913.

TRADE-MARK REGISTRATIONS GRANTED

JULY 11, 1916.

111,334. FERTILIZERS. THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed March 18, 1916. Serial No. 93,618. PUBLISHED APRIL 25, 1916.

111,335. SOLDERING FLUID, SOLDERING-PASTE, AND SOLDERING-STICK. RICHARD L. ANDERSON, Autun, S. C.
Filed February 9, 1916. Serial No. 92,719. PUBLISHED APRIL 25, 1916.

111,336. REMEDY FOR RHEUMATISM, CROUP, COUGHS, AND COLDS. CHARLOTTE ARAGUEL, New Orleans, La.
Filed March 2, 1916. Serial No. 93,221. PUBLISHED APRIL 25, 1916.

111,337. PREPARATION FOR SCALP TREATMENT. BALDERINE COMPANY, Fort Worth, Tex.
Filed March 27, 1916. Serial No. 93,889. PUBLISHED MAY 2, 1916.

111,338. TANNED FINISHED CALF-LEATHER. BARNET LEATHER CO., New York, N. Y.
Filed January 31, 1916. Serial No. 92,514. PUBLISHED APRIL 4, 1916.

111,339. TANNED FINISHED CALF-LEATHER. BARNET LEATHER CO., New York, N. Y.
Filed January 31, 1916. Serial No. 92,515. PUBLISHED APRIL 11, 1916.

111,340. TANNED FINISHED CALF-LEATHER. BARNET LEATHER CO., New York, N. Y.
Filed January 31, 1916. Serial No. 92,516. PUBLISHED APRIL 4, 1916.

111,341. TANNED FINISHED CALF-LEATHER. BARNET LEATHER CO., New York, N. Y.
Filed January 31, 1916. Serial No. 92,517. PUBLISHED APRIL 11, 1916.

111,342. TANNED FINISHED CALF-LEATHER. BARNET LEATHER CO., New York, N. Y.
Filed January 31, 1916. Serial No. 92,518. PUBLISHED APRIL 11, 1916.

111,343. BLENDED COFFEE. THE BOUR COMPANY, Toledo, Ohio.
Filed March 18, 1916. Serial No. 93,629. PUBLISHED APRIL 25, 1916.

111,344. PREPARATION FOR THE TREATMENT OF ASTHMA, KNOWN AS BRUCE'S ASTHMA TREATMENT. DAVID E. BRUCE, Oklahoma, Okla.
Filed December 30, 1915. Serial No. 91,829. PUBLISHED APRIL 4, 1916.

111,345. CEREAL BREAKFAST FOOD CONSISTING OF WHEAT, CORN, AND RYE. JAMES R. BURLINGAME, Long Beach, Cal.
Filed January 17, 1916. Serial No. 92,184. PUBLISHED APRIL 11, 1916.

111,346. BEER. C. L. CENTLIVRE BREWING CO., Fort Wayne, Ind.
Filed March 27, 1916. Serial No. 93,892. PUBLISHED APRIL 25, 1916.

111,347. PAPER BAGS. THE CHATFIELD & WOODS COMPANY, Cincinnati, Ohio.
Filed April 23, 1915. Serial No. 86,129. PUBLISHED APRIL 25, 1916.

111,348. CANDY. THE CHERRY-CHEER COMPANY, INC., Sidney, Ohio.
Filed March 18, 1916. Serial No. 93,631. PUBLISHED APRIL 25, 1916.

111,349. LARD AND SMOKED MEATS—NAMELY, HAMS AND BACON. CHICAGO BUTCHER'S PACKING CO., Chicago, Ill.
Filed August 5, 1915. Serial No. 88,431. PUBLISHED APRIL 25, 1916.

111,350. CAEN-STONE CEMENT, PORTLAND AND OTHER STRUCTURAL CEMENTS, PLASTER PARIS, STUCCO, AND LIME. THE CLEVELAND BUILDERS SUPPLY CO., Cleveland, Ohio.
Filed February 9, 1916. Serial No. 92,726. PUBLISHED APRIL 25, 1916.

111,351. TELEPHONE-INDEXES. FREDERICK W. COLBY, Boston, Mass.
Filed January 18, 1916. Serial No. 92,214. PUBLISHED APRIL 25, 1916.

111,352. DERMATOLOGICAL LOTION. THE C. L. COTTON PERFUME & EXTRACT CO., Earlville, N. Y.
Filed March 7, 1916. Serial No. 93,360. PUBLISHED MAY 2, 1916.

111,353. DRESS-SHIRTS AND NEGLIGÉE SHIRTS. COLUMBIA SHIRT COMPANY, New York, N. Y.
Filed May 17, 1915. Serial No. 86,659. PUBLISHED AUGUST 3, 1915.

111,354. MATTRESSES. CRESCENT FEATHER COMPANY, San Francisco, Cal.
Filed March 14, 1916. Serial No. 93,524. PUBLISHED APRIL 18, 1916.

111,355. OLIVES. DIEGO GOMEZ Y HERMANO, Seville, Spain.
Filed June 7, 1915. Serial No. 87,166. PUBLISHED APRIL 25, 1916.

111,356. BOXED CANDY, CONFECTIONS, CONSERVES, CHOCOLATE-COATED CANDY, AND SUGAR CANDY. DINOU BROS., Chicago, Ill.
Filed January 6, 1916. Serial No. 91,957. PUBLISHED APRIL 25, 1916.

111,357. TALKING-MACHINES, ACCESSORIES AND SUPPLIES THEREFOR, AND CERTAIN NAMED MUSICAL INSTRUMENTS. THE EMPIRE TALKING MACHINE COMPANY, Chicago, Ill.
Filed December 20, 1915. Serial No. 91,603. PUBLISHED APRIL 25, 1916.

111,358. VEGETABLE REMEDY FOR KIDNEY, BLADDER, AND STOMACH TROUBLES, BRIGHT'S DISEASE, AND INDIGESTION. ROBERT S. FERREL, Fort Worth, Tex.
Filed March 13, 1916. Serial No. 93,495. PUBLISHED MAY 2, 1916.

111,359. PREPARATION FOR PRIMING, SURFACING, AND ENAMELING USED IN FINISHING VEHICLES. FLOOD & CONKLIN CO., Newark, N. J.
Filed March 13, 1916. Serial No. 93,494. PUBLISHED APRIL 25, 1916.

111,360. CANNED TAMALES. GOETJEN & WORKMAN, San Francisco, Cal.
Filed March 20, 1916. Serial No. 93,702. PUBLISHED APRIL 25, 1916.

111,361. AUTOMOBILE-RADIATORS. HARRISON MANUFACTURING COMPANY, INC., Lockport, N. Y.
Filed April 2, 1915. Serial No. 85,636. PUBLISHED APRIL 25, 1916.

111,362. STORAGE BATTERIES. HEISSLER STORAGE BATTERY COMPANY, Chicago, Ill.
Filed March 16, 1916. Serial No. 93,575. PUBLISHED APRIL 25, 1916.

111,363. CERTAIN NAMED TEXTILE SHOE FABRICS. ALBERT HERZOG, New York, N. Y.
Filed January 31, 1916. Serial No. 92,524. PUBLISHED APRIL 18, 1916.

111,364. PERIODICAL ISSUED WEEKLY. IMPLEMENT TRADE JOURNAL COMPANY, Kansas City, Mo.
Filed February 3, 1916. Serial No. 92,599. PUBLISHED APRIL 4, 1916.

111,365. COFFEE. J. M. KELLY CO., Lexington, Ky.
Filed March 18, 1916. Serial No. 93,654. PUBLISHED APRIL 25, 1916.

111,366. BLENDED COFFEE. J. M. KELLY CO., Lexington, Ky.
Filed March 18, 1916. Serial No. 93,655. PUBLISHED APRIL 25, 1916.

111,367. PEANUT-BRITTLE GLACÉ MIXTURE AND GLACÉ PEANUTS. EDWARD FIELD KEMP, Somerville, Mass.
Filed March 16, 1916. Serial No. 93,576. PUBLISHED APRIL 25, 1916.

111,368. CERTAIN NAMED FOODS. ANDREW KUEHN COMPANY, Sioux Falls, S. D.
Filed January 28, 1916. Serial No. 92,471. PUBLISHED APRIL 18, 1916.

111,369. DENTAL WASH. L. C. H. DENTAL MF'G CO., New Castle, Pa.
Filed March 27, 1916. Serial No. 93,910. PUBLISHED MAY 2, 1916.

111,370. LIQUID INSECTICIDE PREPARATION FOR WASHING LIVE STOCK AND POULTRY. LANMAN & KEMP, New York, N. Y.
Filed February 7, 1916. Serial No. 92,691. PUBLISHED MAY 2, 1916.

111,371. RAW FRUITS, DRIED AND EVAPORATED FRUITS, AND CANNED VEGETABLES. THOMAS P. LIPPITT, Charles Town, W. Va., and San Juan, Porto Rico.
Filed December 9, 1915. Serial No. 91,348. PUBLISHED APRIL 18, 1916.

111,372. COMBINATION PIANO AND PHONOGRAPH. MELVILLE CLARK PIANO COMPANY, Chicago, Ill.
Filed March 17, 1916. Serial No. 93,597. PUBLISHED APRIL 25, 1916.

111,373. TRADING-STAMPS. MERCHANTS STAMP CO., Cleveland, Ohio.
Filed November 13, 1914. Serial No. 82,566. PUBLISHED APRIL 25, 1916.

111,374. SWEATERS, HOODS, HOCKEY-CAPS, MUFFLERS, KNIT VESTS, AND KNIT CAPES. MERRILL KNITTING CO., Merrill, Wis.
Filed March 3, 1916. Serial No. 93,275. PUBLISHED APRIL 25, 1916.

111,375. GRAPE JELLY, CANNED PITTED CHERRIES, FLAVORING EXTRACTS FOR FOOD, PEANUT-BUTTER, AND MINCE-MEAT. JOS. MIDDLEBY, JR., INC., Boston, Mass.
Filed March 18, 1916. Serial No. 93,657. PUBLISHED APRIL 25, 1916.

111,376. CANNED SALMON. NORTH ALASKA SALMON CO., San Francisco, Cal.
Filed March 20, 1916. Serial No. 93,722. PUBLISHED APRIL 25, 1916.

111,377. MOVING-PICTURE FILMS. PACKARD MOTOR CAR COMPANY, Detroit, Mich.
Filed January 27, 1916. Serial No. 92,453. PUBLISHED APRIL 25, 1916.

111,378. HAIR-TONIC. LOUIS C. PANTAGES, Havre, Mont.
Filed February 7, 1916. Serial No. 92,698. PUBLISHED APRIL 25, 1916.

111,379. WRITING-INK. PEORIA INK COMPANY, Peoria, Ill.
Filed March 10, 1916. Serial No. 93,436. PUBLISHED APRIL 25, 1916.

111,380. DRYING-KILNS, DRYING-ROOMS, AND DRYING APPARATUS. ELMER E. PERKINS, Chicago, Ill.
Filed February 14, 1916. Serial No. 92,844. PUBLISHED APRIL 25, 1916.

111,381. PERIODICAL PUBLICATION ISSUED MONTHLY. THE PRESS PUBLISHING CO., San Francisco, Cal.
Filed December 16, 1915. Serial No. 91,526. PUBLISHED APRIL 11, 1916.

111,382. WHEELBARROWS. PUFFER-HUBBARD MANUFACTURING COMPANY, Minneapolis, Minn.
Filed February 17, 1916. Serial No. 92,924. PUBLISHED APRIL 25, 1916.

111,383. CANDY. A. M. RAMER CO., Winona, Minn.
Filed December 21, 1915. Serial No. 91,663. PUBLISHED APRIL 25, 1916.

111,384. PERIODICAL PUBLICATIONS. WALTER F. ROHM, Chicago, Ill.
Filed January 7, 1916. Serial No. 92,004. PUBLISHED APRIL 11, 1916.

111,385. GREASE-RETAINERS FOR AUTOMOBILE-AXLES. SHURNUFF MANUFACTURING COMPANY, St. Louis, Mo.
Filed March 22, 1916. Serial No. 93,778. PUBLISHED MAY 2, 1916.

111,386. ROOFING-CEMENTS AND BOILER-SETTING CEMENTS. THE W. E. SMITH MANUFACTURING COMPANY, Cleveland, Ohio.
Filed February 4, 1916. Serial No. 92,651. PUBLISHED APRIL 25, 1916.

111,387. ROASTED COFFEE. STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo.
Filed March 16, 1916. Serial No. 93,589. PUBLISHED APRIL 25, 1916.

111,388. PHONOGRAPHS. SUPERBA PHONOGRAPH CO., Chicago, Ill.
Filed February 18, 1916. Serial No. 92,958. PUBLISHED APRIL 18, 1916.

111,389. MEDICINAL PREPARATION USED IN TREATING ASTHMA OR OTHER DISEASES OF THE RESPIRATORY ORGANS. TOWER REMEDY CO., Paterson, N. J.
Filed December 11, 1915. Serial No. 91,407. PUBLISHED APRIL 25, 1916.

111,390. MOTOR-TRUCKS. TRUCK ATTACHMENT COMPANY, Seattle, Wash.
Filed December 21, 1915. Serial No. 91,738. PUBLISHED APRIL 11, 1916.

111,391. CERTAIN NAMED FOODS. THE TWITCHELL-CHAMPLIN COMPANY, Portland, Me., and Boston, Mass.
Filed January 2, 1915. Serial No. 83,635. PUBLISHED APRIL 25, 1916.

111,392. INTERNAL-COMBUSTION ENGINES. THE WARNER FENCE CO., Ottawa, Kans.
Filed March 8, 1916. Serial No. 93,405. PUBLISHED APRIL 25, 1916.

111,393. GLOVES AND MITTENS. WELLS-LAMONT MFG. CO., Minneapolis, Minn.
Filed March 7, 1916. Serial No. 93,378. PUBLISHED APRIL 25, 1916.

111,394. NUTRIENT COMPOUND. THE ARLINGTON CHEMICAL CO., Yonkers, N. Y.
Filed March 14, 1916. Serial No. 93,519. PUBLISHED MAY 2, 1916.

111,395. BRICKS FOR PAVING, BOILER AND TANK LININGS, AND CONSTRUCTION PURPOSES. GEO. F. BASON, Brooklyn, N. Y.
Filed March 12, 1915. Serial No. 85,109. PUBLISHED MAY 2, 1916.

111,396. CERTAIN NAMED FOODS. AUGUST F. BECKMANN, New York, N. Y.
Filed October 23, 1915. Serial No. 90,043. PUBLISHED MAY 2, 1916.

111,397. HAIR-TONIC. JOEL E. BERLFEIN, New York, N. Y.
Filed March 24, 1916. Serial No. 93,827. PUBLISHED MAY 2, 1916.

111,398. PLASTIC SOAP FOR SPECIAL USES AND FOR GENERAL USE. A. P. CAMP, College Park, Ga.
Filed November 29, 1915. Serial No. 90,997. PUBLISHED APRIL 25, 1916.

111,399. POMADE. CHESEBROUGH MANUFACTURING CO., (CONSOLIDATED,) New York, N. Y.
Filed March 15, 1916. Serial No. 93,546. PUBLISHED MAY 2, 1916.

111,400. POMADE. CHESEBROUGH MANUFACTURING CO., (CONSOLIDATED,) New York, N. Y.
Filed March 15, 1916. Serial No. 93,547. PUBLISHED MAY 2, 1916.

111,401. POMADE. CHESEBROUGH MANUFACTURING CO., (CONSOLIDATED,) New York, N. Y.
Filed March 15, 1916. Serial No. 93,548. PUBLISHED MAY 2, 1916.

111,402. WHEAT-FLOUR. CLARO MILLING CO., Waseca and Lakeville, Minn.
Filed February 21, 1916. Serial No. 93,001. PUBLISHED MAY 2, 1916.

111,403. TONIC FOR CERTAIN NAMED AFFECTIONS. DAE HEALTH LABORATORIES, Detroit, Mich.
Filed March 6, 1916. Serial No. 93,332. PUBLISHED MAY 2, 1916.

111,404. REMEDY FOR CONSTIPATION AND BILIOUSNESS. DAE HEALTH LABORATORIES, Detroit, Mich.
Filed March 6, 1916. Serial No. 93,333. PUBLISHED MAY 2, 1916.

111,405. TONIC FOR CERTAIN NAMED AFFECTIONS. DAE HEALTH LABORATORIES, Detroit, Mich.
Filed March 24, 1916. Serial No. 93,835. PUBLISHED MAY 2, 1916.

111,406. MATTRESSES, BED BOX-SPRINGS, AND PILLOWS. DIXIE COTTON FELT MATTRESS COMPANY, Chicago, Ill.
Filed March 18, 1916. Serial No. 93,641. PUBLISHED MAY 2, 1916.

111,407. HAIR-GROWER, BRILLIANTINE, SKIN-CREAM, AND SHAMPOO PREPARATION. REBECCA C. DOUGLAS, Helena, Ark.
Filed January 4, 1916. Serial No. 91,908. PUBLISHED MAY 2, 1916.

111,408. LAGER-BEER. ESSEX COUNTY BREWING CO., Newark, N. J.
Filed July 29, 1914. Serial No. 80,152. PUBLISHED MAY 2, 1916.

111,409. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed February 15, 1916. Serial No. 92,860. PUBLISHED MAY 2, 1916.

111,410. FACE-POWDER. RICHARD HUDNUT, New York, N. Y.
Filed March 24, 1916. Serial No. 93,844. PUBLISHED MAY 2, 1916.

111,411. DANDRUFF REMEDY. HAYES HUFFMAN, St. Louis, Mo.
Filed March 23, 1916. Serial No. 93,795. PUBLISHED MAY 2, 1916.

111,412. RIPE OLIVES. HUSE PACKING COMPANY, Oroville, Cal.
Filed February 14, 1916. Serial No. 92,834. PUBLISHED MAY 2, 1916.

111,413. SPECIALLY-DESIGNED NOSE-GUARDS FOR NOSE-GLASSES. JONES SHARK-SKIN GRIP COMPANY, San Francisco, Cal.
Filed December 13, 1915. Serial No. 91,486. PUBLISHED APRIL 25, 1916.

111,414. HAIR-BRUSHES, CLOTH-BRUSHES, HAT-BRUSHES, NAIL-BRUSHES. LEW JOSEPH, New York, N. Y.
Filed January 31, 1916. Serial No. 92,526. PUBLISHED MAY 2, 1916.

111,415. ARTIFICIAL TEETH. H. D. JUSTI & SON, Philadelphia, Pa.
Filed March 18, 1916. Serial No. 93,652. PUBLISHED MAY 2, 1916.

111,416. FASTENERS FOR BED-COVERS. KEEPWARM KLIP COMPANY, Roanoke, Va.
Filed March 10, 1916. Serial No. 93,432. PUBLISHED APRIL 25, 1916.

111,417. REMEDY FOR COLIC AND DISORDERS CONSEQUENT UPON TEETHING IN INFANTS. KOLOMON KOVACS, Duquesne, Pa.
Filed January 3, 1916. Serial No. 91,878. PUBLISHED MAY 2, 1916.

111,418. PHOSPHATES. LAKELAND PHOSPHATE CO., Lakeland, Fla.
Filed March 22, 1916. Serial No. 93,765. PUBLISHED MAY 2, 1916.

111,419. CANDIES. GEORGE W. LOFT, New York, N. Y., assignor to Loft, Incorporated, New York, N. Y., a Corporation of Virginia.
Filed December 10, 1915. Serial No. 91,377. PUBLISHED MAY 2, 1916.

111,420. COLD-CREAM. LONG ACRE COLD CREAM CO., New York, N. Y.
Filed March 13, 1916. Serial No. 93,501. PUBLISHED MAY 2, 1916.

111,421. DEODORANTS AND DISINFECTANTS. LYSTER CHEMICAL CO., New York, N. Y.
Filed January 19, 1916. Serial No. 92,248. PUBLISHED MAY 2, 1916.

111,422. BUILDING TOYS. THE MYSTO MFG. CO., New Haven, Conn., now by change of name The A. C. Gilbert Company, a Corporation of Connecticut.
Filed June 11, 1915. Serial No. 87,253. PUBLISHED MAY 2, 1916.

111,423. MALT EXTRACTS. NACIF P. HACHÉ & HERMANOS, New York, N. Y.
Filed April 1, 1916. Serial No. 94,037. PUBLISHED MAY 2, 1916.

111,424. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed January 16, 1915. Serial No. 83,909. PUBLISHED MAY 2, 1916.

111,425. ASBESTOS, RUBBER, AND COMPOSITION PACKING. NEPTUNE PACKING AND RUBBER CO., New York, N. Y.
Filed March 4, 1916. Serial No. 93,311. PUBLISHED MAY 2, 1916.

111,426. PEANUTS. NORFOLK STORAGE CO., Norfolk, Va.
Filed March 18, 1916. Serial No. 93,659. PUBLISHED MAY 2, 1916.

111,427. CHEESE. PHENIX CHEESE CO., New York, N. Y.
Filed March 6, 1916. Serial No. 93,343. PUBLISHED MAY 2, 1916.

111,428. NON-POISONOUS FLY-DESTROYER. PONTIAC EXTERMINATING COMPANY, Pontiac, Mich.
Filed March 8, 1916. Serial No. 93,395. PUBLISHED MAY 2, 1916.

111,429. HOG-CHOLERA AND A BLOOD AND BOWEL REMEDY AND TONIC FOR HORSES AND CATTLE. JOHN L. SAUSAMAN, Claypool, Ind.
Filed December 20, 1915. Serial No. 91,627. PUBLISHED MAY 2, 1916.

111,430. SALVE. SCHMITT & BRADY, Union Hill, N. J.
Filed March 24, 1916. Serial No. 93,860. PUBLISHED MAY 2, 1916.

111,431. SMOKING-TOBACCO, CIGARS, AND CIGARETTES. J. W. SURBRUG, New York, N. Y.
Filed March 3, 1916. Serial No. 93,284. PUBLISHED MAY 2, 1916.

111,432. REMEDY FOR DYSPEPSIA, INDIGESTION, AND OTHER STOMACH TROUBLES. THE TARRANT COMPANY, New York, N. Y.
Filed March 10, 1916. Serial No. 93,442. PUBLISHED MAY 2, 1916.

111,433. PRESERVATIVE COMPOUND FOR ALL KINDS OF STONE, CEMENT, AND WOOD. TECHNO CHEMICAL CORPORATION, New York, N. Y.
Filed March 20, 1916. Serial No. 93,731. PUBLISHED MAY 2, 1916.

111,434. EYE-TABLETS. TROPICAL PHARMACAL COMPANY, New York, N. Y.
Filed March 10, 1915. Serial No. 85,065. PUBLISHED MAY 2, 1916.

111,435. VACUUM VESSELS—NAMELY, BOTTLES, CARAFES, JUGS, CROCKS, AND FLASKS. VACUUM SPECIALTY COMPANY, Meriden, Conn.
Filed January 14, 1916. Serial No. 92,143. PUBLISHED MAY 2, 1916.

LABELS

REGISTERED JULY 11, 1916.

19,429.—*Title:* "SOVOLO OINTMENT." (For Ointment.) TEREZ KOSACH, Chicago, Ill. Filed May 27, 1916.

19,430.—*Title:* "PENGUIN." (For Refrigerating Apparatus.) LOETSCHER-RYAN MANUFACTURING COMPANY, Dubuque, Iowa. Filed December 12, 1914.

19,431.—*Title:* "A. G. SPALDING & BROS. RED HONOR GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 9, 1916.

19,432.—*Title:* "SPALDING BOB GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,433.—*Title:* "SPALDING BABY DIMPLE GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,434.—*Title:* "SPALDING WITCH GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,435.—*Title:* "SPALDING WIZARD GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,436.—*Title:* "SPALDING BULLET HONOR GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,437.—*Title:* "SPALDING ORANGE DOMINO GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,438.—*Title:* "SPALDING RED HONOR GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,439.—*Title:* "SPALDING BLACK DOMINO GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

19,440.—*Title:* "SPALDING GLORY DIMPLE GOLF BALL." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed May 19, 1916.

PRINTS

REGISTERED JULY 11, 1916.

4,383.—*Title:* "TO MARKET, TO MARKET, TO BUY US A TREAT—HOME AGAIN, HOME AGAIN—GOT CREAM OF WHEAT." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed May 15, 1916.

4,384.—*Title:* "THIS IS ALL YOU HAVE TO DO." (For Kleenit.) ROGER TAYLOR DAVIS, San Antonio, Tex. Filed May 8, 1916.

4,385.—*Title:* "BANG-OPEN YOUR SYSTEM TO SOME REAL SMOKE JOY!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,386.—*Title:* "THERE'S A PUNCH OF JOY IN EVERY PUFF OF PRINCE ALBERT TOBACCO!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,387.—*Title:* "PRINCE ALBERT TOBACCO IS SO GOOD YOU FEEL LIKE YOU COULD JUST EAT THE SMOKE!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,388.—*Title:* "TOBACCO THAT PUTS THE HUSH ON THAT HANKERING!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,389.—*Title:* "YOU'LL START AN OLD-PAL-PARTY." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,390.—*Title:* "THE SONG OF THE OLD JIMMY PIPE." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,391.—*Title:* "BEATS THE BAND HOW QUICK PRINCE ALBERT RINGS TRUE TO YOU." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,392.—*Title:* "CAUGHT P. A. PIPE-JOY ON THE FIRST PUFF!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,393.—*Title:* "PRINCE ALBERT PUTS THE WHOLE SMOKE WORLD AT EASE!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,394.—*Title:* "PRINCE ALBERT—THE NATIONAL JOY SMOKE—MAKES PIPE-PEACE AND MAKIN'S-PEACE REIGN." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,395.—*Title:* "WELL, SMOKE IT YOURSELF IF YOU WANT THAT ALL-FIRED-JOY-FEELING!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,396.—*Title:* "SOUND THE CYMBALS FOR TWO KINDS OF INDEPENDENCE JOY!" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,397.—*Title:* "PRINCE ALBERT—THE NATIONAL JOY SMOKE—HAS BROUGHT BACK TO THE FIRING LINE THOUSANDS OF FRIENDLY OLD JIMMY PIPES." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

4,398.—*Title:* "LOOSEN UP A BIT ON THIS SAY-SO:" (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. District Court—Southern District of New York.

THE BARRETT COMPANY AND SCHUTTE *v.* EWING, COMMISSIONER OF PATENTS.

Decided May 3, 1916.

1. PATENTABILITY—ANTICIPATING PATENT.

A patent which clearly describes a construction cannot be construed to be something different from what its language indicates, and therefore not a reference, because it purports to be an "improvement" on a prior patented device which may be a different construction.

2. SAME—SAME—SUBSTITUTION OF MATERIAL.

The substitution of one kind of cement for another in the making of a concrete roadway-base, not a matter of invention.

FINAL hearing in equity; action under Revised Statute 4915 to compel defendant, in his official capacity as Commissioner, to grant a patent to the Barrett Company as assignee of an alleged invention of Schutte's.

The action was begun by the Barrett Manufacturing Company. The name of the principal plaintiff has been changed pending suit and the record corrected by order entered at trial.

Mr. T. D. Mercin and *Mr. W. H. Swenerton* for the complainants.

Mr. H. Snowden Marshall, United States Attorney, and *Mr. William R. Ballard* for the defendant.

HOUGH, *Dis. J.*:

This action was begun by an acceptance of service on the part of Commissioner Ewing in substantial accord with the practice pursued in *Butterworth* v. *Hill*, (114 U. S., 128,) except that Mr. Ewing's acceptance contains a formal consent to the jurisdiction of this court.

The reason assigned for bringing suit in this jurisdiction is that the Commissioner in his private capacity is a resident of this district, a fact, however, not set forth in complainants' pleading.

Merely noting, but not dwelling upon this formal defect, the merits of the case will be considered.

Complainant Schutte and a subsequent applicant, one Groves, have each been denied patents by the Office and by the Court of Appeals of the District of Columbia. (*Re Groves*, 41 App. D. C., 316; *re Schutte*, 223 O. G., 1378.)

The claims of the proposed patents are set forth in these opinions with sufficient fullness. The question presented by each proceeding is whether at the time that Schutte (the first applicant) filed his proposed specification (January 26, 1907) there was any invention in what he proposed to do.

This question has been twice answered in the negative by the Court of Appeals of the District of Columbia, and by all the authorities of the Patent Office. This action confessedly seeks to make a kind of superior Patent Office out of this court and its appellate tribunals. The right to bring such an action is anomalous, and though as long as the statute stands it must be recognized, it remains in my opinion true that in order to hold that the decisions of the tribunals primarily charged with the adjudication of these questions are wrong, the very clearest evidence must be presented. (*Greenwood* v. *Dover*, 194 Fed. Rep., at 94.)

It is in the specification of a patent that the invention, if there be one, must be discovered. References to prior art are useful to clear up obscurities. (*Hall-Borchert, etc., Co.* v. *Ellanan, etc., Co.*, 213 Fed. Rep., 341.) Claims only define the invention disclosed by the specification.

Turning to Schutte's proposed specification, it appears that his—

> invention relates to the art of constructing pavements from Portland cement, stone and sand, commonly known as concrete, and consists in the application to the surface of such a pavement of a thin layer of bituminous compound and the sprinkling or spreading and embedding of sand or small stone fragments into this thin layer of bituminous compound.

It scarcely needs even a reference to patents or publications to ascertain that the making and using of concrete or concreted pavements or roadways with a bituminous or asphaltic top dressing was well known before 1907. And Schutte's application was accordingly denied, and such denial hitherto upheld by reference to eight patents enumerated in the answer and specified in the decision of Commissioner Ewing, filed June 9, 1915.

On the familiar principle that one good reference is better than any number of inferior ones, I find it necessary to advert only to Hubbell, No. 158,415, of December 19, 1875.

The obvious and striking similarity between Hubbell's specification and that of Schutte is such that

no time need be taken up in making comparisons between them.

The plaintiff endeavors to explain away these similarities and to that end has sought the forum of equity where it is supposed that there is greater freedom in the introduction of evidence than is to be found in Patent Office practice.

It seems to me that the nature of the explanation of Hubbell offered will be best understood by laying down certain definitions at the outset:

"Cement" is a kind of mortar which sets or hardens under water; hence often called hydraulic cement.

"Portland cement" is an artificial mixture based on chemical analysis of limestone and clay, or marl and chalk, shale and limestone, etc.

"Natural rock cement" is made from an argillaceous limestone which has the proper composition.

"Rosendale cement" is a natural rock cement.

"Concrete" is an artificial stone composed of sand, broken stone, and cement.

"Bitumen" is a name given to various forms of hydrocarbons.

"Bituminous cement" is a cement in which bitumen, especially in the form of asphalt, is the most important ingredient.

"Asphaltum" is a bituminous substance found in nature in various localities and differing considerably in chemical composition according to the place of secretion.

"Asphalt" is a bituminous material commonly made in the United States out of refuse tar from gas-houses mixed with slack lime and gravel.

These definitions are taken from the *Century Dictionary*, of an edition prior to 1907, and do not in my opinion differ from the definitions furnished at the trial by plaintiff's experts.

Hubbell invented a pavement which he thus described in 1874:

The pavement substantially consists of broken stone laid upon gravel or earth for a foundation and bound together by cement and coal ashes or sand between the interstices of the stone, binding them together and forming a wearing surface immediately above the surface of the broken stone.

In other words, he formed a concrete and made a pavement or roadway foundation out of it, which is exactly what Schutte says he wishes to do. If we turn to Schutte's statement of the method of practising his invention it is found that he lays "upon a sub-soil four to six inches of concrete."

Except that Schutte uses the word "concrete," which has become of common usage of late years, instead of (as Hubbell does) telling us what concrete consists of, I perceive no difference between Hubbell's statement and that of Schutte thus far.

When Schutte's concrete has "set hard," he spreads upon it—

a layer of one-quarter of an inch of suitable relatively pure bituminous composition, or a mixture of this composition with an amount of fine sand or dust. After the application of the aforesaid bituminous coating, I spread over its surface stone chips or sand and allow these chips to either be ground in by traffic or forced in by rollers, tamps or any other suitable means. In this manner I produce a pavement according to my invention.

Hubbell says that when his cement has "well set"—

I slush its surface with thin hot bitumen or pitch and dust the surface of bitumen over with dry cement and roll and sweep it on the surface to adhere to the bitumen and thus more effectively hold the particles of cement together and prevent them as far as practicable from forming dust.

Except for the economical addition by Schutte of stone chips or sand to the bituminous coating, no difference is perceived between what Schutte says he does and what Hubbell says he did.

Plaintiff's first explanation with regard to Hubbell is that the patent referred to is said to be for "an improvement upon the street pavements for which" Hubbell had received other Letters Patent in 1871. It is said to follow from this that the pavement construction set forth in the earlier patent must be read into and assumed to be the construction of the pavement (as distinct from the bituminous coating) of No. 158,415. To this I cannot agree, for, as above noted, the nature of invention is to be found from the specification, and in my opinion any person reading Hubbell's patent is told with accuracy what kind of a pavement he intends to make from the Letters Patent alone. It is not permissible to declare that Hubbell's pavement of 1874 must be his pavement of 1871, because he calls the former an improvement over the latter.

It is next sought to be shown that in 1874 the only cement obtainable in the United States for roadmaking, or almost any other purpose, was Rosendale, which although a hydraulic cement, as is Portland, is really an entirely different thing from Portland cement. Also that any pavement, made of Rosendale or any natural cement, and according to the recipe of Hubbell, is both porous and friable, so that Hubbell's bituminous covering, instead of producing the results claimed by him in his specification would sink into the concrete or cemented foundation and utterly fail to produce the results asserted in the patent. Consequently it is said that Hubbell's patent is operative.

But it is not and cannot be claimed that Portland cement was unknown in 1874; on the contrary it was said in argument (and the date is substantiated by technical dictionaries) that Portland cement was first made fifty years before Hubbell. But in 1874 it was expensive, and in this country unusual. But Hubbell says:

There are various brands of hydraulic cement, and I do not confine my invention to any one exclusively. The Rosendale or *other suitable and economical* cement should be used.

It is an assumption certainly most favorable to plaintiff that Portland cement is a different thing from Rosendale or other natural cement. If so, the rule of law seems to me applicable that there is rarely invention to be found in a mere change of material. (*Hicks* v. *Kelsey*, 18 Wall., at 673.) The exception to the rule is fully considered in *Union Hardware Co.* v. *Selchow* (112 Fed. Rep., 1006) and *George Frost Co.* v. *Cohn*, (112 Fed. Rep., 1009,) both adverted to in *George Frost Co.* v. *Samstag et al.*, (180 Fed. Rep., 739.)

The last case in this circuit on this subject is *Ambursen, etc.*, v. *Hydraulic Co.*, (211 Fed. Rep., 982,) where (as it happens) the substitution of concrete for other materials in the construction of dams was held not to display patentable invention.

At the very best, Schutte has done no more than to substitute Portland cement for Rosendale cement, for the rest of the apparent differences between him and Hubbell are merely words, *i. e.* Schutte says "concrete," and Hubbell described the concrete.

But in point of fact Rosendale and Portland cements are not different things; they are both hydraulic cements, they both operate in exactly the same way, and the only difference between them is the proportioning of their contents and the expense of manufacturing. If an earlier patentee set forth as an ingredient in his patented compound sugar, and a later patentee suggested granulated sugar for a similar compound designed for the same purpose, it would be impossible to discover invention in the light of the known art,—I think the analogy applicable to this case.

Much has been made in argument of the phrase "carpet coating," meaning thereby the adhesive bituminous covering of Schutte. It seems to me that this phrase is also mere words. The inventive idea of both Hubbell and Schutte is the same, viz: to make a firm concreted foundation and place upon it a covering of bitumen, bituminous cement or an asphaltic compound which shall produce resiliency while at the same time affording opportunities for repair without disturbing the solid bottom of the roadway. In my opinion the previous decisions in this matter are very obviously right; and certainly no evidence has been presented to overcome the extremely strong presumptions raised by the formal and unanimous action of so many competent tribunals.

The bill is dismissed with costs.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Fonseca patent, No. 655,549, for a cigar-wrapper, *Held* valid and infringed. *F. E. Fonseca & Co.* v. *Ruy Suarez & Co.*, 232 Fed. Rep. 155.

(U. S. D. C.) The Hull patent, No. 779,751, for closure for bottles, jars, and other receptacles, was not anticipated and is valid; also *Held* infringed. *Anchor Cap & Closure Corp.* v. *Pritchard*, 232 Fed. Rep., 156.

(U. S. D. C.) The Hull patent, No. 874,201, for a machine for sealing bottles, jars, and other receptacles, *Held* not anticipated, valid, and infringed. *Anchor Cap & Closure Corp.* v. *Pritchard*, 232 Fed. Rep., 156.

(U. S. C. C. A.) The Burke patent, No. 1,053,940, for a universal motor, *Held* not anticipated, to disclose invention, and valid as against the claims of prior use and insufficiency of the specifications; also *Held* infringed. *Burke Electric Co.* v. *Independent Pneumatic Tool Co.*, 232 Fed. Rep., 145.

(U. S. D. C.) The Mills patent, No. 1,109,858, for a necktie, *Held* void for lack of invention. *Slip Scarf Co.* v. *Church, Webb & Close*, 232 Fed. Rep., 161.

(U. S. D. C.) The Hull patent, No. 1,134,065, for machine for vacuum-sealing, claim 1 *Held* not anticipated, valid, and infringed; claims 14, 15, and 16 *Held* void for lack of invention. *Anchor Cap & Closure Corp.* v. *Pritchard*, 232 Fed. Rep., 156.

(U. S. D. C.) The Hull patent, No. 1,134,067, for closure, *Held* not anticipated and valid, and claims 4, 5, and 6 infringed. *Anchor Cap & Closure Corp.* v. *Pritchard*, 232 Fed. Rep., 156.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1916.

Weber-Browne Supply Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Willie Dackermann, 109 West One Hundred and Second street, New York, N. Y., and Weber-Browne Supply Co., 703 Odd Fellows' Building and 3740 Delmar avenue, St. Louis, Mo., for registration of trade-marks, and a letter sent to said Weber-Browne Supply Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Weber-Browne Supply Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 21, 1916.

Boessneck, Broesel & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of M. Heminway & Sons Silk Company, of Watertown, Conn., for registration of a trade-mark and trade-mark registered May 14, 1901, No. 36,400, to Boessneck, Broesel & Co., 464 Broome street, New York, N. Y., and a notice of such declaration sent by registered mail to said Boessneck, Broesel & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Boessneck, Broesel & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 228—No. 3. TUESDAY, JULY 18, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
Issue of July 18, 1916	765
Amendments to Rules of Practice	765
Briefs in Appealed Cases	765
Applications Under Examination	766
Patents Granted	767
Reissues	1049
Designs	1061
Trade-Marks—Registration Applied for	1069
Trade-Mark Registrations Granted	1087
Trade-Mark Registrations Renewed	1089
Labels	1091
Prints	1092
Commissioner's Decisions—	
Ex parte Gilmore, Jr., and Clark	1093
Decisions of the U. S. Courts—	
Carlin v. Crumpton	1093
Adjudicated Patents	1094
Interference Notices	1094
Changes in Classification	1095

ISSUE OF JULY 18, 1916.

Patents	796—No.	1,191,139 to No.	1,191,934, inclusive.
Designs	33—No.	49,379 to No.	49,411, inclusive.
Trade-Marks	81—No.	111,436 to No.	111,516, inclusive.
Labels	33—No.	19,441 to No.	19,473, inclusive.
Prints	13—No.	4,399 to No.	4,411, inclusive.
Reissues	4—No.	14,165 to No.	14,168, inclusive.
Total	960		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	.....	North Carolina	3	3
Arizona	2	.....	North Dakota	6	.....
Arkansas	3	.....	Ohio	44	8
California	39	5	Oklahoma	8	.....
Colorado	11	2	Oregon	8	1
Connecticut	21	.....	Pennsylvania	82	5
Delaware	5	.....	Rhode Island	2	11
Florida	3	.....	South Carolina	3	2
Georgia	2	.....	South Dakota	5	1
Idaho	.....	2	Tennessee	5	1
Illinois	81	12	Texas	14	2
Indiana	20	2	Utah	4	.....
Iowa	20	1	Vermont	2	.....
Kansas	8	.....	Virginia	4	1
Kentucky	5	2	Washington	18	.....
Louisiana	6	3	West Virginia	2	.....
Maine	1	.....	Wisconsin	15	2
Maryland	6	.....	Wyoming	1	.....
Massachusetts	60	6			
Michigan	20	10	Alaska, District of	.....	.....
Minnesota	12	3	Canal Zone	.....	.....
Mississippi	.....	1	District of Columbia	11	.....
Missouri	26	4	Hawaii Territory	2	.....
Montana	5	.....	Philippine Islands	.....	.....
Nebraska	6	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	2	1	U. S. Navy	.....	.....
New Jersey	36	.....			
New Mexico	1	.....	Total to residents of the United States	768	123
New York	123	32			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	1	.....
Belgium	.....	.....	New South Wales	1	.....
British India	1	.....	New Zealand	2	.....
British West Indies	.....	.....	Norway	3	.....
Canada	7	.....	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	.....	.....
Costa Rica	.....	.....	Scotland	1	.....
Cuba	.....	.....	South Australia	.....	.....
Denmark	1	.....	Spain	.....	.....
England	19	2	Sweden	.....	1
Finland	.....	.....	Switzerland	.....	1
France	8	.....	Transvaal, South Africa	.....	.....
Germany	16	.....	Tunis	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Wales	.....	.....
Ireland	.....	.....			
Italy	.....	.....	Total to residents of foreign countries	61	4
Japan	.....	.....			
Mexico	.....	.....			

Amendments to Rules of Practice.

(Order No. 2,259.)

Department of the Interior,
United States Patent Office,
Washington, D. C., June 9, 1916.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 12 of the Rules of Practice in the Patent Office is amended by inserting after "midnight," in the third line of the second paragraph, the words *on week-days, including holidays,* so that the rule as amended will read as follows:

12. Mail reaching the post-office at Washington, D. C., up to 4.30 p. m. on week-days, excepting holidays, and 1 p. m. on half-holidays, is entered as received in the Patent Office on the day it reaches the post-office.

Special-delivery letters and other papers may be deposited in a box provided at the watchman's desk a. the F street entrance of the Patent Office up to midnight *on week-days, including holidays,* and all papers deposited therein are entered as received in the Patent Office on the day of deposit.

Letters received at the Office will be answered, and orders for printed copies filled, without unnecessary delay. Telegrams, if not received before 3 o'clock p. m., cannot ordinarily be answered until the following day.

THOMAS EWING,
Commissioner.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 15, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 13	June 12	340
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Feb. 12	May 1	663
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	June 30	June 23	90
232	4. Conveyors; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	May 25	July 8	193
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 20	May 20	256
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 4	June 21	323
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Feb. 24	May 12	528
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 24	June 10	1310
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Feb. 3	June 1	499
235	10. Carriages and Wagons	Feb. 24	June 5	768
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 17	June 27	119
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 10	June 16	538
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 10	June 17	445
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 7	June 2	254
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 22	June 17	284
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Jan. 24	May 17	556
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 21	June 15	246
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	June 13	June 7	116
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	May 11	June 3	176
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	June 30	June 27	114

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Apr. 5	June 5	289
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 15	May 25	384
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 1	Feb. 13	501
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 10	May 9	399
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 7	June 17	154
106	26. Electricity, Generation; Motive Power.	Jan. 18	May 6	553
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	June 5	June 16	213
65	28. Internal-Combustion Engines	Mar. 24	June 9	464
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Mar. 29	June 16	309
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 27	June 29	280
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	June 1	387
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 12	June 21	687
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 20	May 31	388
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 28	May 1	339
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Mar. 4	June 21	471
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Mar. 9	May 29	835
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 28	June 10	677
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	June 3	June 10	260
321	39. Water Distribution	Feb. 23	May 5	360
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 2	June 19	737
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Mar. 25	June 7	351
244	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Nov. 29	Mar. 27	702
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 6	June 10	115

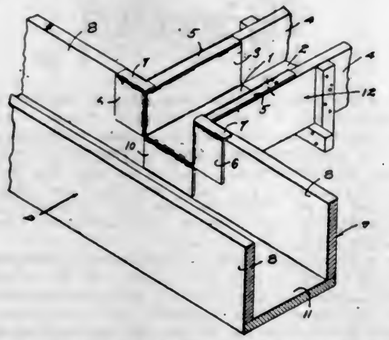
Oldest new case, Nov. 29; oldest amended, Feb. 13.
Total number of applications awaiting action..... 17,673

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	June 6	June 26	793
	Designs	June 13	June 28	240
	Labels and Prints	June 14	June 17	28

PATENTS

GRANTED JULY 18, 1916.

1,191,139. METAL CONNECTION FOR BEAM AND GIRDER MOLDS. WALTER P. AGNESS, Cincinnati, Ohio. Filed Nov. 17, 1915. Serial No. 62,044. (Cl. 25—131.5.)



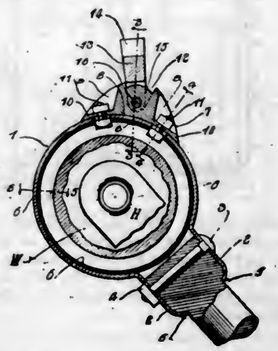
1. In a concrete mold, a beam form and a girder form, a metallic connection comprising a bottom, side walls formed integral therewith, said bottom and side walls being adapted to fit within the beam form and outturned flanges at the ends of the bottom and side walls adapted to fit the side wall of the girder form to form a tight connection between the girder and beam form.

2. In a form for concrete construction, a girder form and a beam form, a connection comprising a bottom, upturned side walls on the bottom, flanges at the upper edges of the side wall, said flanges being turned outwardly, the connections being adapted to seat within the girder form so that the flanges at the upper ends of the side walls engage the upper faces of the side walls of the beam forms, wings at the inner ends of the side walls and of the bottom, said wings being adapted to engage the inner face of one of the side walls of the girder form and outturned flanges at the upper edges of the wings on the side walls, said flanges being adapted to overlie the upper faces of the side walls of the girder form to coöperate with the first mentioned outturned flanges in preventing the concrete poured into the molds from passing between the form and the connection.

1,191,140. SLEET-SCRAPER FOR TROLLEY-WIRES. WILLIAM H. AHRENS, Canandaigua, N. Y. Filed Mar. 23, 1916. Serial No. 86,304. (Cl. 191—62.)

1. A device of the class described comprising a resilient band flexible throughout its length and adapted to encircle a trolley wheel, the ends of said band being extended radially therefrom to form attaching arms, said arms being apertured, an attaching element extending through said apertures to secure said band to the harp of the trolley, the free ends of the arms being bent inwardly from each other to grip the harp, and a sleet scraper carried by the band.

2. A device of the class described comprising a band adapted to encircle a trolley wheel, the free ends of said band being extended radially therefrom to form attaching arms, said arms being apertured, an attaching element extending through said apertures to secure said band to the harp of the trolley, lugs on the inner side of said band adapted to rest in the groove in said wheel, the ends of the lugs contacting with the flanges thereof, and a sleet scraper carried by the band.



3. A device of the class described comprising a resilient band flexible throughout its length and adapted to encircle a trolley wheel, the ends of said band being extended radially therefrom to form attaching arms, said arms being apertured, an attaching element extending through said apertures to secure said band to the harp of the trolley, the free ends of the arms being bent inwardly toward each other to grip the harp, lugs on the inner side of said band adapted to rest in the groove in said wheel, the ends of the lugs contacting with the flanges thereof, and a sleet scraper carried by the band.

4. In a device of the class described, a band adapted to encircle a trolley wheel, the ends of said band forming arms to be attached to the harp of a trolley, a block recessed at its opposite ends to provide attaching ears, said block being secured to the band by said ears, and an ice scraper attached to said block.

5. In a device of the class described, a band adapted to encircle a trolley wheel, the ends of said band forming arms to be attached to the harp of a trolley, a block recessed at its opposite ends to provide attaching ears, said block being secured to the band by said ears, and the intermediate portions of said block being also recessed, and an ice scraper pivoted in said last mentioned recess, its movement being limited by the walls thereof.

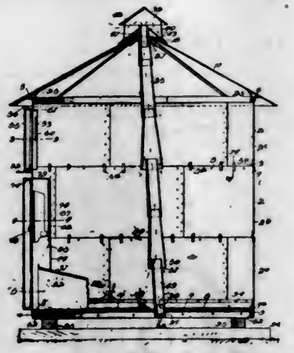
[Claim 6 not printed in the Gazette.]

1,191,141. METALLIC STORAGE-BIN. JOHN E. ALLSTEADT, Hastings, Nebr. Filed Jan. 28, 1914. Serial No. 814,959. (Cl. 189—3.)

1. A sheet metal structure comprising a body, a bottom having a depending rim arranged in contact with the lower edge portion of the body and an angle iron disposed beneath the bottom with its horizontal flange in contact with said bottom and its vertical flange in contact with the depending rim thereof, said body having its lower edge portion bent inward beneath the said depending rim and the vertical flange of the angle iron, thence upward and against the inner face of the said vertical flange, with its upper edge in contact with the horizontal flange of the angle iron.

2. A sheet metal structure comprising a body, a bottom having a depending rim arranged in contact with the

lower edge portion of the body, an angle iron disposed beneath the bottom with its horizontal flange in contact with said rim thereof, said body having its lower edge portion bent inward beneath the said depending rim and the vertical flange of the angle iron, thence upward and against the inner face of the said vertical flange, with its



upper edge in contact with the horizontal flange of the angle iron, and a metal strip attached at its upper edge to the body and having its lower edge portion bent inward to overhang the outer portion of the bottom and in contact therewith to confine the same upon the horizontal flange of the angle iron.

1,191,142. PROCESS OF PURING HARD OR VULCANIZED FIBER. CHARLES ALMY, Jr., Wilmington, Del., assignor to American Vulcanized Fibre Company, Wilmington, Del., a Corporation of Delaware. Filed Mar. 19, 1913. Serial No. 755,413. (Cl. 154—34.)

1. The process of puring hard or vulcanized fiber and similar products, which consists in washing the same with suitable puring solutions of progressively diminishing concentration, subjecting the fiber to an evaporative process, and thereafter washing and drying the same.

2. The process of puring hard or vulcanized fiber and similar products, which consists in washing the same with suitable puring solutions of progressively diminishing concentration, then subjecting the fiber to an evaporative process to induce a movement of the residual salt to or toward the surfaces thereof and to reduce the concentration of the salt in the central portion to about the desired minimum, and thereafter washing and drying the fiber.

3. In a process of puring hard or vulcanized fiber and similar products, the step which consists in subjecting the fiber to an evaporative process to induce a movement of the residual salt to or toward the surfaces thereof, before the final washing.

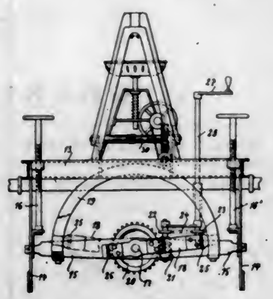
4. In a process of puring hard or vulcanized fiber and similar products, the step which consists in subjecting the fiber to an evaporative process to induce a movement of the residual salt to or toward the surfaces thereof and to reduce the concentration of the salt in the central portion to about the desired minimum, before the final washing.

5. In a process of puring hard or vulcanized fiber and similar products by repeated washings, the step which consists in subjecting the fiber to an evaporative treatment before the final washing.

[Claims 6 and 7 not printed in the Gazette.]

1,191,143. SELF-PROPELLED PLOW. HENRI AMIOT, Rheims, France. Filed July 21, 1914. Serial No. 852,219. (Cl. 97—30.)

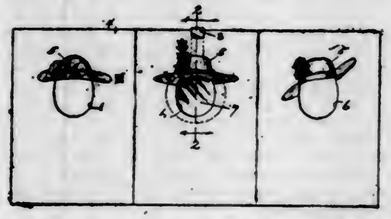
1. A self-propelled plow comprising in combination a carriage frame, a cross bar attached thereto, a rotary pivot mounted on said cross bar, means for turning the pivot in both directions, a frame serving as a plow-beam, double plowing elements mounted on said plow-beam and a bar to which the plow-beam is secured and which is mounted on the rotary pivot, as and for the purpose set forth.



2. A self-propelled plow comprising in combination a carriage frame, a cross bar attached thereto, a rotary pivot mounted on said cross bar, means for turning the pivot in both directions, a frame serving as a plow-beam, double plowing elements mounted on said blow-beam, a bar to which the plow-beam is secured and which is mounted on the rotary pivot, and an arc shaped guide for guiding the bar to which the plow-beam is secured, as and for the purpose set forth.

3. A self-propelled plow comprising in combination a carriage frame, a cross bar attached thereto, a rotary pivot mounted on said cross bar, means for turning the pivot in both directions consisting of a worm wheel arranged at the front end of the rotary pivot, a worm engaging with the worm wheel, a chain and chain wheels and an operating handle, a frame serving as a plow-beam, double plowing elements mounted on said plow-beam and a bar to which the plow-beam is secured and which is mounted on the rear of the rotary pivot, as and for the purpose set forth.

1,191,144. DISPLAY DEVICE. ARTHUR J. BALDAUF, Chicago, Ill. Filed Mar. 18, 1916. Serial No. 85,093. (Cl. 35—17.)



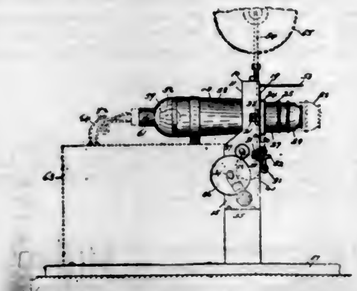
1. A display device comprising a support having an opening therein, a representation of the article advertised on the support adjacent to the opening and a mirror suitably supported back of the opening.

2. The combination of a mirror affixed by a hook or other simple method behind an opening in a sheet, on which is pictured an article advertised to be sold, the opening and mirror being so placed with reference to said pictured article as to illustrate to the person examining it how he would appear using the article in question.

3. The combination of a mirror affixed by any simple or usual method to a card, sheet or page on which is pictured an article advertised to be sold, the mirror being so proportioned in size and so placed with reference to the said pictured article as to illustrate to the person examining it how he would appear using the article in question.

4. The combination of a mirror with a hook at one end of such exact length that the same can be hooked over the top of a sheet of paper and will then hang on the back of that sheet of paper with the mirror fronting forward, so as to cover an opening which has been made at a definite distance from the top of the sheet.

1,191,145. KINETOSCOPE. FREDERIC E. BALDWIN, New York, N. Y., assignor to Palmer Motion Picture Company, a Corporation of New York. Filed Oct. 6, 1911. Serial No. 653,096. (Cl. 88—17.)



1. In a kinetoscope, the combination of a cylindrical member with open ends, and its interior surface serving as a reflector, said member having one of its ends disposed concentrically with the lens and its opposite end projecting in the optical axis therefrom, and a concave member having a cylindrical extension removably inserted telescopically in the cylindrical member, and having a lamp therein, and the interior surface of the concave member serving as a reflector, substantially as and for the purpose set forth.

2. In a kinetoscope of the character described, the combination of a reflector having a lamp therein, comprising a tubular member with two normally open ends, the interior surface thereof serving as a reflector, and a concave member for removably supporting the lamp with a cylindrical extension upon its open end removably inserted telescopically in one of the ends of the tubular member for closing one end so that the rays of the light may be concentrated and projected through the tubular member and from its open end, substantially as and for the purposes stated.

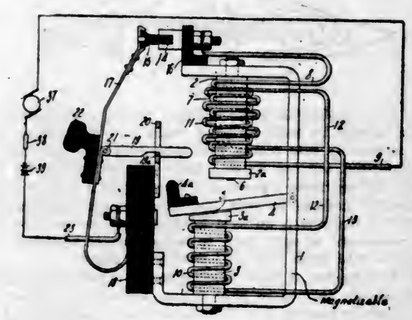
3. In a kinetoscope, the combination of a cylindrical member its interior surface serving as a reflector and having normally open ends, with a concave reflector for closing one end of the cylindrical member having a lamp centrally and removably disposed therein, said concave member having at its perimeter a tubular extension removably inserted telescopically in the end of the tubular member, substantially as and for the purposes set forth.

4. In a kinetoscope, the combination of a tubular member with an interior surface serving as a reflector and having open ends, a concave member removably closing one end and having an interior surface serving as a reflector and having a cylindrical extension upon its perimeter adapted to be removably inserted telescopically in one of the open ends of the tubular member, and having at its central portion a second cylindrical extension of less diameter than the perimeter, and an electric lamp with a plug removably inserted telescopically within the second cylindrical extension, substantially as and for the purpose stated.

5. In a kinetoscope, the combination with a front plate having an aperture for projection of light and a vertical groove midway between the sides thereof; of a grooved member in front of said opening a door on the front of the plate and provided with an opening to register with said aperture, means to move a film over the opening and including a toothed roller, a gate on the front plate and a spring pressed roller carried thereby and coacting with the toothed roller to receive the film therebetween, means to rotate the toothed roller, a reflector having a suitable source of light behind the plate aperture, and a guide vertically slidable in the groove and adjustably supported therein to rest on the reflector.

[Claim 6 not printed in the Gazette.]

1,191,146. CIRCUIT-BREAKER. HOWARD S. BEAKES, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Oct. 23, 1913. Serial No. 796,834. (Cl. 175—270.)



1. In combination, an electric circuit; and a circuit breaker comprising a winding energized from said circuit, a member adapted to be moved by said winding when the current in the circuit exceeds a given value, a second winding adapted to prevent movement of said member by the first winding, means controlled by current in said circuit and responsive to momentary surges of said current above the given value for energizing said second winding, and a contact controlled by said member for controlling said circuit.

2. In combination, a circuit carrying direct current; and a circuit breaker comprising a winding included in said circuit, a member adapted to be moved by said winding when the current in the circuit exceeds a given value, a second winding adapted to prevent movement of said member by the first winding, means for energizing said second winding inductively from said circuit whereby the second winding will be energized by a momentary surge of current above the given value in the circuit and will prevent movement of the member by such surge, but whereby the second winding will not be energized by a constant current in excess of said value and will therefore not prevent movement of the member by such constant current, and a contact controlled by said member for controlling said circuit.

3. A circuit breaker comprising a winding, a member adapted to be operated by said winding when the current in the winding exceeds a given value, a second winding adapted to prevent operation of the member by the first winding, a circuit for said second winding having a part in inductive relation to the first winding, and a contact controlled by said member.

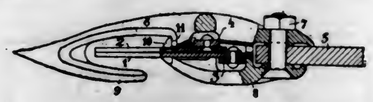
4. A circuit breaker comprising an electromagnet having two windings, means for energizing one of said windings with direct current, an armature adapted to be operated by said magnet when the current in the said energized winding exceeds a given value, a second electromagnet adapted to prevent operation of the armature by the first-mentioned magnet, the winding of the second magnet being connected with the remaining winding of the first magnet, and a contact controlled by said armature.

5. In combination, an electric circuit, a movable member, means controlled by current above a given value in said circuit for moving said member in one direction, means responsive to a momentary surge of current in said circuit above said given value for exerting a force on

said member in the opposite direction to prevent its movement, and a contact controlled by said member for opening said circuit.

[Claims 6 to 8 not printed in the Gazette.]

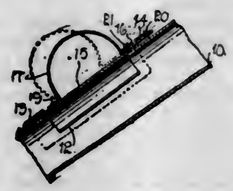
1,191,147. MEANS FOR REMOVING GRASS FROM MOWER-KNIVES. HANS CHRISTIAN BJERING, Gjövik, Norway, assignor to Kristian Halmrast, Söndre Land, Norway. Filed Mar. 26, 1915. Serial No. 17,111. (Cl. 56—44.)



1. In a mower, a knife holding frame, a reciprocable knife carried by said frame, a stationary protecting finger carried by said frame, and extending over said knife, a projection secured to said knife and extending up toward said stationary protecting finger, and a downwardly extending portion of said protecting finger coöperating with the projection on said knife during the reciprocating movement of said knife to remove grass accumulated between said knife and said protecting finger.

2. In a mower, a knife holding frame, a pair of reciprocable knives carried by said frame, a stationary protecting finger extending over said knives, a projection on the upper side of the upper knife, and a downwardly extending portion of said finger coöperating with the projection on said upper knife during the reciprocation of the latter to remove grass accumulating between said upper knife and said protecting finger.

1,191,148. GRAIN-SPOUT DOOR. OLE H. BRAATEN, Halliday, N. D. Filed Mar. 13, 1916. Serial No. 83,872. (Cl. 193—29.)



1. The combination with a grain spout having an opening in its wall, of a pocket formed upon the exterior face of the spout adjacent the lower end of the opening, a door having its lower end adapted to be inserted in said pocket, and means for latching the upper end of the door to the wall of the spout, said means comprising a resiliently projected latching member forming a handle for the door.

2. The combination with a grain spout having an opening in its wall, of a pocket formed upon the exterior face of the spout adjacent the lower end of the opening, a door having its lower end adapted to be inserted in said pocket, and means for latching the upper end of the door to the wall of the spout, said means comprising a keeper mounted upon the spout and a handle formed of a resilient strip bent into a loop, one extremity of the strip being attached to the door, the other extremity being extended parallel to the face of the door and beyond the edge thereof, and a guide strap onto which the straight end of the strip is projected.

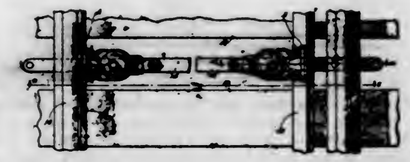
3. The combination with a grain spout having an opening, of a pocket formed at the lower edge of the opening, a keeper attached to the spout above the upper edge of the opening, a handle attached at its lower end to the face of the door and formed to provide an outwardly projecting loop and a straight portion adapted to engage beneath said keeper, and a guide strap through which the straight portion of the handle passes.

4. The combination with a closure, of a combined handle and latch mounted thereon comprising a resilient strip bent to form a loop and a straight portion, one end of the strip being attached to the closure, and a guide strap beneath which said portion of the handle passes.

5. The combination with a closure, of a combined handle and latch mounted thereon comprising a resilient strip bent to form a loop and a straight portion, one end of the strip being attached to the closure, and a guide strap beneath which said straight portion of the handle passes, the straight portion of the handle being slotted and the guide strap having a limiting stop projecting into said slot.

[Claim 6 not printed in the Gazette.]

1,191,149. INSULATED SWITCH-ROD. FRANK B. BRADLEY, Chicago, Ill., assignor to Ajax Forge Company, a Corporation of Delaware. Filed Mar. 2, 1915. Serial No. 11,588. (Cl. 104—96.)



1. In a device of the class described, an integral reach bar extending continuously between and beneath the fixed rails of a railway track, said reach bar having an upper plane surface, and means seated on said surface and secured to said reach bar for insulating the same from one of said rails.

2. In a device of the class described, a switch rod extending beneath a fixed rail of a railway track, said switch rod having an upper plane surface adjacent said rail, and means seated on said surface and secured to said switch rod for insulating the same from said rail.

3. In a device of the class described, a switch rod extending adjacent to a rail of a railway track, a plate seated on said rod adjacent said rail, a sheet of insulating material between said plate and said rod, means to secure said plate and said insulating material to said rod, and means to prevent an electric connection between said rail and said rod through said securing means.

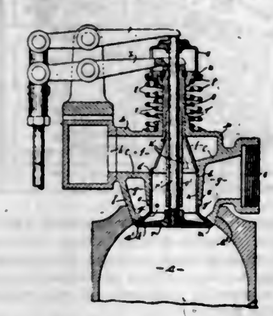
4. In a device of the class described, a pair of continuous rails, a pair of point rails, an integral reach bar secured to said point rails and extending beneath said continuous rails, means to insulate said reach bar from one of said point rails, and indepedent means to insulate said reach bar from one of said continuous rails.

5. In a device of the class described, a switch rod extending adjacent to a rail of a railway track, means to insulate said rod from said rail, means to secure said insulating means to said rod, and means to insulate said securing means from said rod.

[Claims 6 to 15 not printed in the Gazette.]

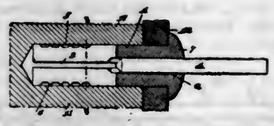
1,191,150. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. ALEXANDER T. BROWN, Syracuse, N. Y., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 20, 1908. Serial No. 411,585. (Cl. 123—188.)

The combination of the main body of an engine cylinder, said body being provided with an opening through the head of the cylinder and a self contained valve mechanism comprising a hollow casing provided at its lower end with a boss for fitting said opening and with an internal nipple extending into the boss forming inner and outer passages located entirely within the casing, said casing extending above said main body and being provided at its upper end above the main body with a port communicating with the upper end of the inner passage and a port communicating with the outer passage through a side wall thereof, one port being the main exhaust port of the engine and the other being the main inlet port thereof, the casing being also provided with a port common to said passages and located at the inner end of said boss, a main valve controlling the common port and seating against the inner end of said boss, a second valve seating against the inner end of said boss and engaging the rear face of the main valve, the second valve having a tubular stem portion slidable within and fitting the



nipple and a conical stem portion extending into the port communicating with the nipple, said conical stem portion having a passage in the side thereof, the passage opening into the last mentiond port, and the main valve being arranged to control the inner end of the passage of the tubular portion of the second valve and also the outer passage and having an axial stem projecting above the casing, and the inner valve terminating in a sleeve encircling said stem, and means coacting with the stem and the sleeve for actuating the valves together as a unit or for actuating the main valve independently of the second valve, substantially as and for the purpose specified.

1,191,151. EXPANSION-BOLT. ABBOTT P. BRUSH, Greenwich, Conn. Filed Dec. 6, 1913. Serial No. 804,967. (Cl. 85—2.)

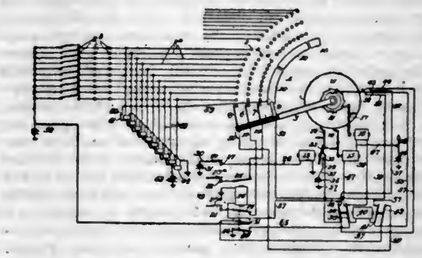


1. An expansion bolt having a body formed of a single piece of distortable material, said body having a shank and an enlarged head adapted to hold the work, said shank being of substantially the same diameter throughout and having a centrally located longitudinal opening extending from the head end of the body toward the point thereof, the shank having a slot extending from the point thereof toward the head, said slot meeting said opening and being of less width than the diameter of the opening, in combination with a pin of a diameter smaller than the opening but greater than the width of the slot so that when driven into the slot it will distort the material adjacent the slot to grip the pin at the point where it encounters the slot and permanently expand the material of that portion of the shank which is slotted.

2. An expansion bolt having a body formed of a single piece of distortable material, said body having a shank and an enlarged head adapted to hold the work, said shank being of substantially the same diameter throughout and having a centrally located longitudinal opening extending from the head end of the body toward the point thereof, said shank having two slots located at an angle to one another and made across the shank and intersecting at substantially the longitudinal axis of the same, said slots extending from the point of the shank toward the head, said slots meeting said opening, each being of less width than the diameter of the opening, in combination with a pin of a diameter smaller than the opening but greater than the width of a slot, so that when driven into the slots it will distort the material adjacent to the slots to grip the pin at the points where it encounters the slots and permanently expand the material of that portion of the shank which is slotted.

3. An expansion bolt having a body formed of a single piece of distortable material, said body having a shank and an enlarged head adapted to hold the work, said shank being of substantially the same diameter throughout a centrally located longitudinal opening extending from the head end of the body toward the point thereof, the shank having a slot extending from the point thereof toward the head, said slot meeting said opening and extending into the same, and being of less width than the diameter of the opening, in combination with a pin of a diameter smaller than the opening but greater than the width of the slot so that when driven into the slot it will distort the material adjacent to the slot to grip the pin for the length of the slot and permanently expand the material of that portion of the shank which is slotted.

1,191,152. AUTOMATIC TRUNK-SELECTOR. ALBERT M. BULLARD, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 10, 1906. Serial No. 333,875. (Cl. 179—18.)



1. In a selector, the combination of a group of trunk line terminals, a single arm adapted to traverse said terminals, and means carried by said arm for testing said terminals individually and by groups.

2. In a selector, groups of trunk line terminals arranged in a single plate, an arm adapted to move over said terminals in a plane parallel thereto, and means carried by said arm for testing said terminals individually and by groups.

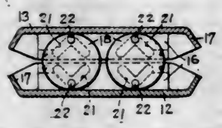
3. In a selector, groups of trunk line terminals, group terminals individual to each group, and test brushes adapted to simultaneously wipe over said line and group terminals to test such trunk lines by groups and individually.

4. The combination with groups of trunk line terminals, of a contact arm, means for stepping said arm past busy groups in long steps, and means for stepping said arm in short steps over a group containing an idle trunk line until said idle line is reached.

5. The combination with a selector carrying groups of trunk line terminals, of a contact arm therefor adapted to test said trunk lines by groups, means, actuated in case all the trunk lines terminating in a tested group are busy, for advancing said arm in a single long step to the next group, and so on until a group containing an idle trunk line is found, and means, operated when said last-mentioned group in reached for advancing said arm in short steps over the terminals of said group to the terminal of the first idle trunk line therein.

[Claims 6 to 11 not printed in the Gazette.]

1,191,153. VEHICLE-BODY BEARING. VINCENT J. BURRY, Coraopolis, Pa., assignor of one-half to Loren H. Turner, Pittsburgh, Pa. Filed Feb. 17, 1916. Serial No. 78,851. (Cl. 64—64.)



1. A bearing device comprising upper and lower housings or bearing-plates vertically movable the one with relation to the other and having plain bearing faces, a plurality of rollers interposed between said plates and means on said plates and said rollers to maintain the rollers constantly spaced at the same distance apart and constantly centered with respect to the application of the load.

2. In a bearing device, the combination with upper and lower housings or bearing plates vertically movable the one with relation to the other and having plain bearing faces, rotatable bearing members mounted between said plates with coöperative means on said plates and rotating members to maintain the latter constantly centered beneath the point of application of the load, and to maintain said rotatable members in such position when moved out of engagement with the bearing members by the tilting of the vehicle.

3. In a bearing device, the combination with upper and lower non-connecting housings or bearing plates having plain-faced runways, a plurality of rotatable members, said rotatable members being provided with a plurality of guide members, and guide members on said upper and lower plates adapted to coöperate with the first-named guide members to maintain the rotatable members properly spaced apart to center them constantly with respect to the point of application of the load and to retain them in such centered position when moved out of engagement with the bearing-plates by the tilting of the vehicle.

4. In a bearing device, the combination with upper and lower bearing plates vertically movable the one with relation to the other and having plain bearing faces forming runways, of a pair of bearing rollers each having a plurality of lugs on the ends thereof, said runways having guide paths on the sides formed therein to control said guide members on the rollers whereby said rollers will be maintained in central position beneath the point of application of the load at all times and will be retained in such centered position when moved out of engagement with the runways by the tilting of the car.

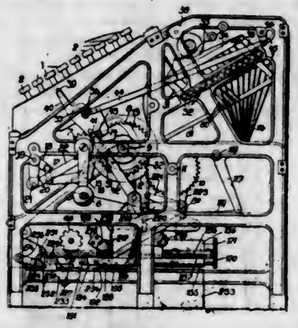
5. In a bearing device, the combination with upper and lower bearing plates vertically movable the one with relation to the other and having plain bearing faces forming runways, a pair of rollers interposed between said runways, means on said rollers and said upper runways to maintain said rollers suspended in centered position beneath the point of application of the load when raised out of engagement with the lower runway by the tilting of the car, and means on the lower runway to guide the rollers into centered position when the runways resume their normal position.

[Claims 6 to 8 not printed in the Gazette.]

1,191,154. SALES-SLIP-PERFORATING CASH-REGISTER. FRED M. CARROLL, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Sept. 15, 1913. Serial No. 789,832. (Cl. 235—3.)

1. In a machine of the class described, the combination with primary rolls constructed to feed a sales slip in one direction, of secondary rolls constructed to feed the slip at right angles to its first direction of feed and then return the slip to the position to which it was fed by the primary rolls, and operating means for the primary and secondary rolls.

2. In a machine of the class described, the combination with primary and secondary rolls, of means for operating the primary rolls for the purpose of feeding a sales slip to the secondary rolls, and means for first gripping the slip between the secondary rolls and then operating the latter to feed the slip in a direction at right angles to which it is fed by the primary rolls.



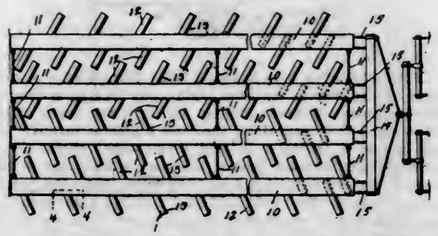
3. In a machine of the class described, the combination with pairs of primary and secondary rolls arranged at right angles to each other, of means for alternately operating said rolls for the purpose of feeding a sales slip, and means for separating each pair of rolls while the other pair is feeding the sales slip.

4. In a machine of the class described, the combination with pairs of primary and secondary rolls arranged at right angles to each other, the primary pair of rolls being normally in operative condition while the secondary rolls are normally in inoperative condition, of means for operating the primary rolls for the purpose of feeding a sales slip to the secondary rolls and then rendering the primary rolls inoperative, and means for rendering the secondary rolls operative and then operating said secondary rolls.

5. In a machine of the class described, the combination with a sales slip receptacle, of pairs of primary and secondary rolls arranged at right angles to each other and means for feeding the sales slip from the receptacle to the pair of primary rolls and by the latter directly to the secondary rolls.

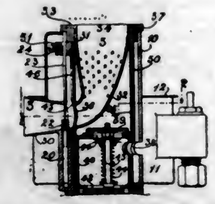
[Claims 6 to 31 not printed in the Gazette.]

1,191,155. ROAD-DRAG. BENJAMIN I. CHURCH, Traverse City, Mich. Filed June 22, 1914. Serial No. 846,637. (Cl. 37—5.)



A road drag comprising a plurality of longitudinal parallel drag bars, flexible connections between the members, a transverse draft beam disposed at one end of the said members, flexible connections between the beam and the forward ends of the bars, and removably mounted transversely extending road engaging scraping elements carried by the drag bars and extending obliquely to the line of movement thereof, the outer ends of the said scraping elements of each drag bar extending beyond the opposite sides of the bar in alternate opposite relation, and between the scraping elements of the adjacent bars, the scraping elements of certain of the bars extending obliquely opposite to those of the other bars.

1,191,156. SUCTION-INTENSIFYING CARBURETER. ERNEST F. CIGLIA and LOUIS F. PELLETIER, New York, N. Y. Filed Aug. 14, 1913. Serial No. 784,697. (Cl. 48—155.1.)



1. In a carbureter for explosion engines, a shell containing a fuel reservoir connected with a fuel supply and a fuel nozzle and containing a float adapted to regulate supply of fuel; a tubular wall of said shell forming a tubular passage and formed with guides and openings as hereinafter referred to; an inner tube smaller than, located in, and closing the end of said passage, and formed with openings as hereinafter referred to; a Venturi tube bent substantially through a right angle, having its throat substantially coinciding with an opening formed therefor in said inner tube, its inlet cone connected with an opening in said tubular wall, the fuel nozzle opening into its throat and its delivery port located in said inner tube and formed with a foraminous wall; a diaphragm in said inner tube exterior to said Venturi and containing a supplemental air port; a spring seated valve co-acting with said port; a cap closing the end of said tube exterior to said diaphragm and valve; said tubular wall and inner tube being formed with supplemental air inlets between said diaphragm and cap; a tubular throttle valve mounted on said inner tube, adapted to cover and uncover said inlets and formed with a circular port adapted to register with the Venturi throat opening in said inner tube and having a graduated tapered extension, a guide head formed on said throttle adapted to co-act with the guides of said tubular wall, a needle valve connected with said throttle adapted to throttle the outlet of the fuel nozzle, and means to reciprocate said tubular throttle valve.

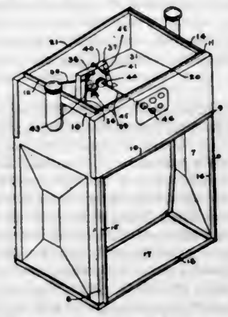
2. In a carbureter for explosion engines, a shell containing a fuel reservoir connected with a ful supply and a fuel nozzle and containing a float adapted to regulate the supply of fuel; a tubular wall of said shell forming a tubular passage and formed with guides and an opening as hereinafter referred to; an inner tube smaller than, located in, and closing one end of said passage and formed with an opening as hereinafter referred to; a Venturi tube bent substantially through a right angle, having its throat substantially coinciding with an opening formed therefor in said inner tube, its inlet cone connected with an opening in said tubular wall, the fuel nozzle opening into its throat and its delivery part located in said inner tube; a tubular throttle valve mounted on said inner tube, formed with a circular port adapted to register with the Venturi throat opening in said inner tube and having a graduated, tapered extension, a guide head formed on said throttle adapted to co-act with guides of said tubular wall, a needle valve connected with said throttle adapted to throttle the outlet of the fuel nozzle, and means to reciprocate said tubular throttle valve.

3. In a carbureter for explosion engines comprising a shell containing a fuel reservoir connected with a fuel supply and a fuel nozzle and containing a float adapted to regulate the supply of fuel, the combination therewith of a tubular wall of such shell forming a tubular passage and formed with a slot whose edges form guides, an axially extending recess and openings as hereinafter referred to; an inner tube, smaller than, located in and closing one end of such passage and formed with an opening hereinafter referred to; a Venturi tube bent substantially through a right angle, having its throat substantially coinciding with an opening formed therefor in said inner tube, its inlet cone connected with an opening in said tubular wall and the fuel nozzle extending into it and its delivery part located in said inner tube, a tubular throttle valve mounted on said inner tube, engaging said guides and adapted to regulate the passage of air through said Venturi tube and operating means operably connected with said throttle valve.

4. In a carbureter for explosion engines, comprising a shell containing a fuel reservoir connected with a fuel supply and a fuel nozzle and containing a float adapted to regulate the supply of fuel, the combination therewith of a tubular wall of such shell forming a tubular passage and formed with a slot whose edges form guides, an axially extending recess and openings as hereinafter referred to; an inner tube, smaller than, located in and closing one end of such passage and formed with an opening hereinafter referred to; a Venturi tube bent substantially through a right angle having its throat substantially coinciding with an opening formed therefor in said inner tube, its inlet cone connected with an opening in said tubular wall and the fuel nozzle extending into it and its delivery part located in said inner tube, a tubular throttle valve mounted on said inner tube, formed with a circular port adapted to register with the Venturi throat and a graduated extension of said port; on said throttle a head engaging said guides, and a rack, a pinion engaging said rack, extending through an opening in said tubular wall and fixed on a shaft revolubly mounted in said wall; an arm fixed to said shaft, a graduating screw in said arm adapted to engage a fixed stop and limit the stroke of said throttle, a lever on said shaft and clutch formations on said arm and lever adapted to engage them in adjusted angular relations.

[Claims 6 to 15 not printed in the Gazette.]

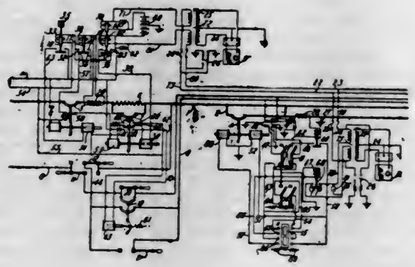
1,191,157. METER. MARSHALL CORNINE, Mount Vernon, N. Y. Continuation of application Serial No. 578,988, filed Aug. 25, 1910. This application filed June 14, 1915. Serial No. 33,866. (Cl. 73—1.)



A gas meter having a one-piece bottom, which overlaps and extends upwardly along the four upright sides of the

meter for a short distance and is soldered thereto near the bottom line, and is provided, along a portion of its upper edge, with a flange substantially parallel to the flat bottom portion, all substantially as set forth.

1,191,158. ELECTRICAL SYSTEM. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 4, 1913. Serial No. 788,088. (Cl. 179—2.)



1. The combination with a plurality of complete sets of message-communicating means, and a plurality of conductors for interconnecting said sets, of a control system normally embodying said conductors, a normally open switch for bridging said conductors, and an electrical condenser connected across said switch to permit of uninterrupted communication between said sets.

2. The combination with a plurality of complete telephone sets located at materially separated points, and a plurality of conductors for interconnecting said sets, of a control system normally embodying said conductors, a normally open switch for bridging said conductors, an electrical condenser connected across said switch to permit of uninterrupted telephonic communication, and a source of direct-current energy for intermittently energizing said conductors according to the position of said switch.

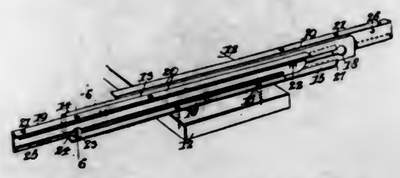
3. The combination with a plurality of complete telephone sets, and a plurality of conductors for interconnecting said sets, of a control system normally embodying said conductors, a source of direct-current energy adapted to intermittently energize said conductors, and means for permitting the passage of telephonic current through said conductors irrespective of their energization from said source of energy.

4. The combination with a plurality of complete telephone sets, and a plurality of conductors for interconnecting said sets, of an electric distribution system comprising main circuits and a plurality of auxiliary control circuits including said conductors, a normally open, electrically-controlled switch for bridging said conductors, the actuating coil of the switch being energized from said distribution system, a source of direct-current energy adapted to intermittently energize said conductors according to the position of said switch, and means for permitting the passage of telephonic current through said conductors irrespective of their energization from said source of energy.

5. The combination with a plurality of complete telephone sets, and a plurality of conductors for interconnecting said sets, of an electric distribution system comprising main circuits and a plurality of auxiliary control circuits including said conductors, a normally open, electrically-controlled switch for bridging said conductors, the actuating coil of the switch being energized from said distribution system, a source of direct-current energy adapted to intermittently energize said conductors according to the position of said switch, switching means energized by the closure of said switch to effect predetermined circuit changes in said distribution system, and an electrical condenser connected across said switch to permit of telephonic communication between said sets through said conductors irrespective of their energization from said source of energy.

[Claim 6 not printed in the Gazette.]

1,191,159. EXTENSION-TABLE. CHARLES P. CUNNINGHAM, Louisville, Ky. Filed May 21, 1915. Serial No. 29,511. (Cl. 45—115.)



1. An extension device comprising a bridge piece consisting of a substantially U-shaped body portion having lateral base flanges projecting from the longitudinal edges thereof, said body portion being provided in the sides thereof with opposed slots and enlarged openings communicating with one end of each slot, and a slide arranged on each side of said body portion and provided with guide lugs adapted to engage the slot in the adjacent side of said bridge piece, said lugs having a pivotal movement in the opening in said slot.

2. An extension device comprising a bridge piece consisting of a substantially U-shaped body portion having lateral base flanges projecting from the longitudinal edges thereof, said body portion being provided in the sides thereof with opposed slots and enlarged openings communicating with one end of each slot, a slide arranged on each side of said body portion and provided with guide lugs adapted to engage the slot in the adjacent side of said bridge piece, said lugs having a pivotal movement in the opening in said slot, and a projection on each side of the body portion of said bridge piece adapted for engagement with the adjacent slide for guiding the same.

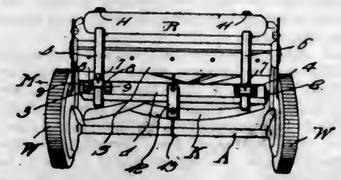
3. An extension device comprising a bridge piece consisting of a substantially U-shaped body portion having lateral base flanges projecting from the longitudinal edges thereof, said body portion being provided in the sides thereof with opposed slots and enlarged openings communicating with one end of each slot, a slide arranged on each side of said body portion and provided with guide lugs adapted to engage the slot in the adjacent side of said bridge piece, said lugs having a pivotal movement in the opening in said slot, a projection on each side of the body portion of said bridge piece adapted for engagement with the adjacent slide for guiding the same, and protuberances in the sides of said slides for spacing the same from said bridge piece.

4. An extension device for tables comprising a bridge piece having a slot terminating at one end in an enlarged opening, and a slide coöperating with said bridge piece and having means engaging said slot to guide said slide, said means having a pivotal movement in the enlarged end of said slot whereby said slide may be attached to and detached from said bridge piece.

5. An extension device for tables comprising a bridge piece having a guide slot therein and having a projection formed thereon, and bent to provide a guide groove, a slide member coöperating with said bridge piece and having a flange upon one edge thereof adapted for engagement with the guide groove formed by said projection, and means engaging said guide slot for guiding said slide.

1,191,160. LAWN-MOWER SHARPENER. RALEIGH L. DAVIDSON, Portland, Oreg. Filed Aug. 26, 1915. Serial No. 47,515. (Cl. 51—8.)

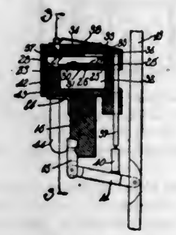
1. A sharpening attachment for lawn mowers comprising a cross bar, a grinding element carried thereby, spring arms extending laterally from said bar in one direction near opposite ends thereof, means carried by said arms for connecting them to a supporting member, a resilient arm extending laterally from said bar in a direction opposite to said first mentioned arms and in substantially the same plane, and an attaching member adjustably connected with said last mentioned arm and having means for engaging a support.



2. A lawn mower sharpener comprising a cross bar having a sharpening element secured to one face thereof and extending throughout its length, spring arms detachably connected at one end to the opposite ends of said cross bar, and provided at their free ends with hooks for engaging a member of the mower, a spring arm extending laterally from said cross bar in a direction opposite to said first mentioned arms and arranged midway the length of said arm, a rod detachably connected at one end with the other end of said last mentioned arm and having a hook at its free end for detachable engagement with a support on a mower.

3. A lawn mower sharpener comprising a cross bar having a sharpening element secured to one face thereof and extending throughout its length, spring arms adjustably connected at one end to the opposite ends of said cross bar and provided at their free ends with U-shaped upwardly extending hooks for engaging the roller of a mower, a spring arm extending laterally from said cross bar in a direction opposite to said first mentioned arms, and arranged midway the length thereof, a rod adjustably connected at one end with the free end of said last mentioned arm and having a hook at its free end for adjustable engagement with the support on a mower.

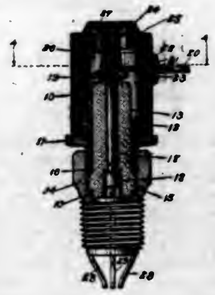
1,191,161. MUSICAL INSTRUMENT. THOMAS J. DAY and WILLIAM A. URICH, Boston, Mass. Filed June 12, 1915. Serial No. 33,821. (Cl. 84—198.)



1. A piano having, in combination, a piano action, an action rail therefor, a casing mounted upon said action rail at the rear of said piano action and between said action and the strings of said piano, said casing being provided with a reed cell, a reed arranged in said cell, a wind chest having communication with said reed cell, a valve adapted to regulate the passage of air through said reed, and means connecting said valve with said piano action constructed and arranged to operate said valve simultaneously with said piano action.

2. A piano having, in combination, an action rail, a piano action, an action lifter therefor, a sticker lever pivotally attached to said action rail and said action lifter and adapted to control the movements of said action lifter, a casing mounted upon said action rail between said action lifter and the strings of said piano, said casing being provided with a reed cell, a reed arranged in said cell, a wind chest having communication with said reed cell, a valve adapted to regulate the passage of air through said reed, and an adjustable plunger mounted on said casing between said valve and said sticker lever and adapted to be engaged by said sticker lever during the operation of said action lifter, to operate said valve.

1,191,162. SPARK-PLUG. LAURENS P. DIXON, New York, N. Y. Filed Sept. 11, 1914. Serial No. 861,177. (Cl. 123—169.)



1. In a spark-plug, the combination, with a gland connecting the metal body and the insulator for the central electrode, of an exterior shell consisting entirely of insulating material, said shell including a removable cap and completely incasing and exteriorly insulating the feed-wire connections.

2. In a spark-plug, the combination, with a gland connecting the metal body and the insulator for the central electrode, of an exterior shell consisting entirely of insulating material rigidly secured to said gland, said shell including a removable cap of the same material and the whole completely incasing and insulating the feed-wire connections.

3. In a spark plug, the combination, with a gland connecting the metal body and the insulator for the central electrode, of an exterior shell consisting entirely of insulating material carried by said gland, said shell including a removable sealing cap and the whole forming a shell completely incasing and insulating the feed-wire connections, and said cap being rigidly held in place through the medium of said central electrode.

4. In a spark-plug, the combination, with a gland connecting the metal body and the insulator for the central electrode, of an exterior insulating casing of self-hardening plastic material molded upon said gland, said casing including a cap of similar material and said cap including means for interiorly securing the same in place.

5. In a spark-plug, the combination, with a gland connecting the metal body and the insulator for the central electrode, of an exterior insulating casing of self-hardening plastic material molded upon said gland, said casing including a cap of similar material and said cap having molded therein a nut for securing the same in place through the medium of the central electrode.

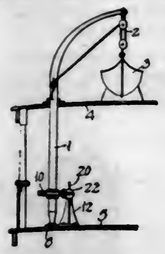
[Claims 6 to 11 not printed in the Gazette.]

1,191,163. BOAT-DAVIT GEAR. WINFIELD DUBOIS, Detroit, Mich. Filed Oct. 28, 1915. Serial No. 58,322. (Cl. 9—22.)

1. The combination with a boat davit, of a gear detachably connected thereto, a pillar adjacent said gear, a revoluble shaft having a ball and socket connection with said pillar, a worm on said shaft meshing with said gear, and a housing movably engaging said gear and adapted to maintain said worm in engagement therewith.

2. The combination with a rotatable boat davit, of a gear detachably connected thereto, a pillar adjacent said gear, a revoluble shaft supported by said pillar, a worm on said shaft meshing with said gear, a housing loose on

said shaft and having bearings at the sides of said gear, means in connection with said bearings adapted to maintain said worm normally in engagement with said gear.

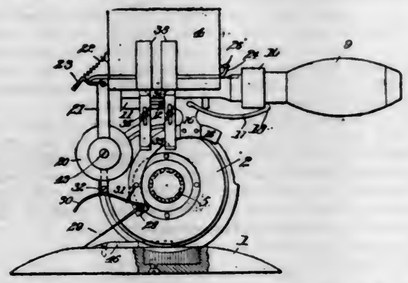


3. A turning mechanism for boat davits, comprising a gear adapted for attachment to a davit, a revoluble shaft adapted to adjust itself relative to said gear, a worm on said shaft meshing with said gear, and means inclosing said worm and engaging said gear adapted to maintain said worm normally in engagement with said gear.

4. A turning mechanism for boat davits comprising a gear adapted for attachment to a davit, said gear having internal annular tracks, a revoluble shaft adjacent said gear, and adapted to adjust itself relative to said gear, a worm on said shaft meshing with said gear, a housing loose on said shaft inclosing said worm and having bearing at the sides of said gear, and revoluble rollers carried by the bearings of said housing and engaging the annular tracks of said gear.

5. A davit turning mechanism comprising a gear adapted for attachment to a davit, said gear having annular tracks, a pillar adjacent said gear, a revoluble shaft having a ball and socket connection with said pillar, a worm on said shaft meshing with said gear, a housing loose on said shaft inclosing said worm and having bearing surfaces at the sides of said gear, revoluble rollers supported by the bearing surfaces of said housing and engaging the annular tracks of said gear, and means for imparting movement to said revoluble shaft.

1,191,164. CLOTH-CUTTER. JOHN B. EDWARDS, New York, N. Y. Filed Mar. 8, 1915. Serial No. 13,025. (Cl. 164—76.)



1. In a cloth cutter of the character described, the combination with a circular blade, of an arcuate guard for the edge of the blade, resilient means for normally holding the guard in position to protect the edge of the blade, a finger piece for moving said guard away from the cutting edge, and means on the end of said finger piece for locking the guard in its restricted position.

2. In a cloth cutter of the character described, the combination with a circular blade, of a handle, a collar on the handle, an arcuate guard for the edge of the blade, resilient means for normally holding the guard in a position to protect the cutting edge, and an arm attached to the guard and having a knob on its end to engage the collar on the handle for holding the guard in retracted position.

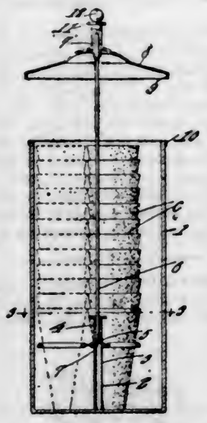
3. In a cloth cutter of the character described, the combination with a circular blade, of an arcuate guard for protecting the edge of the blade, a stationary tubular casing having a horizontal slot, a block fitted to slide in said casing and connected to the guard, a spring in the casing engaging the block for normally holding the guard in position to protect the cutting edge, and an arm for retracting the guard.

4. In a cloth cutter of the character described, the combination with a circular blade, of a grinder movable to and from the edge of the blade, and means for automatically locking the machine from cutting cloth while the grinder is in engagement with the cutting edge.

5. In a cloth cutter of the character described, the combination with a circular blade, of a guard for protecting the cutting edge, a grinder movable into and out of engagement with said cutting edge, and means mounted on the guard for automatically locking the machine against cutting cloth when the grinder is in engagement with the cutting edge.

[Claim 6 not printed in the Gazette.]

1,191,165. CONE-DISPENSER. WILLIAM J. EISENHARDT, Baltimore, Md. Filed Sept. 23, 1914. Serial No. 863,138. (Cl. 211—8.)



1. A dispenser of this character, comprising a sleeve, a receptacle holding means carried thereby, a rod slidably mounted within the sleeve for limited movement, and a cover for the receptacle carried by the rod at the opposite end to the sleeve.

2. A dispenser of this character, comprising a substantially cylindrical receptacle, a sleeve having a doubled diametered bore therethrough, a plurality of article receiving members carried by the sleeve, a rod mounted in the sleeve and provided with means to limit the movement thereof within the sleeve, and a cover connected to the opposite end of the rod and constituting a means for sliding the rod in the sleeve.

3. A dispenser of this character, having a sleeve, a plurality of article holders carried by the sleeve, a rod mounted for sliding movement in said sleeve and for limited movement in one direction, and a cover fixed to the opposite end of the rod.

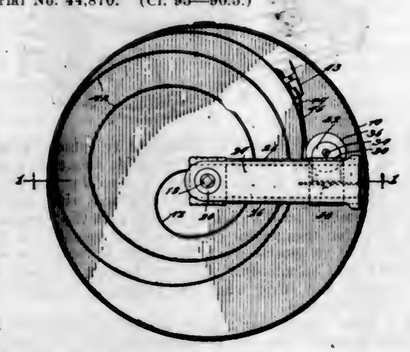
4. A dispenser of this character, having a sleeve, a plurality of article holders carried by the sleeve, a rod mounted for sliding movement in said sleeve and for limited movement in one direction, a cover fixed to the opposite end of the rod, and a manipulating knob carried concentrically of the cover and coaxial with the rod.

5. A dispenser of this character, having a sleeve, a plurality of radially disposed rings carried thereby and

constituting means for receiving nested articles, a rod having one end slidably mounted in the sleeve for limited movement, and a cover fixedly connected to the opposite end of the rod and constituting a means whereby the rod and sleeve are elevated simultaneously.

[Claims 6 to 14 not printed in the Gazette.]

1,191,166. DAYLIGHT TANK-DEVELOPER FOR ROLL-FILMS. WILLIAM E. ELLIOT, Jordan, and CHAUNCEY A. ELLIOT, Syracuse, N. Y. Filed Aug. 11, 1915. Serial No. 44,870. (Cl. 95—90.5.)



1. In a device of the class described, the combination of a case, a support for the film extending from point to point inside the case, a spool carrier mechanism adapted to travel along said support, and means for causing said spool carrier mechanism to so travel along said support whereby a spool of film on said carrier is unwound upon said support to be sustained thereby.

2. In a device of the class described, the combination of a closed case, a support for the film extending from point to point inside the case, a spool carrier mechanism adapted to travel along said support, and means operated from outside the case for causing said spool carrier mechanism to so travel along said support whereby a spool of film on said carrier is unwound upon said support to be sustained thereby.

3. In a device of the class described, the combination of a case, a spirally wound film supporting member inside the case, a spool carrier mechanism adjacent to said spiral support, and means for moving the spool carrier to cause it to travel along said spiral support to unwind film carried by the spool carrier and leave it sustained by said support.

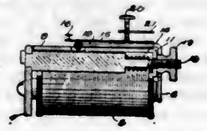
4. In a device of the class described, the combination of a closed case, a spirally wound film supporting member inside the case, a spool carrier mechanism adjacent to said spiral support, and means operated from outside the case adapted to cause the spool carrier to travel along said spiral support to unwind film carried by the spool carrier and leave it sustained by said support.

5. In a device of the class described, the combination of a closed case, a spiral film support inside the case, a spool carrier mechanism adapted to travel from point to point inside the case traversing said support to unroll film transported by the carrier and leave it sustained by said support, and mechanism operatable from outside the closed case adapted to so cause the spool carrier to so travel.

[Claims 6 to 9 not printed in the Gazette.]

1,191,167. RELAY. JOHN ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 7, 1912. Serial No. 724,455. (Cl. 175—325.)

1. In a relay, a pair of electromagnets, a yoke connecting the same, said yoke having a pair of notches, a plate having a pair of lugs at one end thereof registering with said notches, whereby said plate is supported by said yoke, means for adjusting said plate longitudinally, said means comprising a threaded screw and a nut whereby the plate may be moved by merely turning the nut for adjusting the armature either toward or away from the pole piece, and an armature for said magnets carried by the opposite end of said plate.



2. In a relay, a magnet, a yoke secured to one end thereof, a post secured to said yoke and extending substantially parallel to said magnet, a plate adjustably mounted on said yoke and having an end portion through which said post extends, an armature mounted on said plate, and means for adjusting said plate along said post to adjust the stroke of said armature.

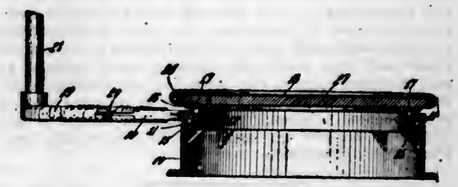
3. In a relay, an electromagnet, a yoke mounted at one end thereof, a post mounted on said yoke and extending substantially parallel to said magnet and having a reduced end portion, a non-magnetic plate adjustably mounted on said yoke and having a bent end portion through which the reduced portion of said post passes, a spring surrounding said post and engaging between said plate and a shoulder on the post, a thumb nut mounted upon the end of said post and bearing against said plate, whereby said plate may be longitudinally adjusted, and an armature mounted on said plate.

4. In a relay, an electromagnet, a yoke mounted at one end thereof, a plate adjustably mounted on said yoke, an armature mounted on said plate, a retracting spring bearing against said armature, and a thumb screw for regulating the pressure exerted upon said armature by said spring, means for adjusting said plate, said means comprising a threaded screw and a nut whereby the plate may be moved by merely turning the nut for adjusting the armature either toward or away from the pole piece.

5. In a relay, an electromagnet, a yoke having a pair of notches, a plate having a pair of lugs registering with said notches, whereby said plate is supported by said yoke, means for adjusting said plate longitudinally, and an armature for said electromagnet mounted on said plate.

[Claims 6 and 7 not printed in the Gazette.]

1,191,168. MARKER FOR SKIRTS. HENRY ESCH, Jr., Manitowoc, Wis. Filed May 24, 1915. Serial No. 29,956. (Cl. 33—10.)

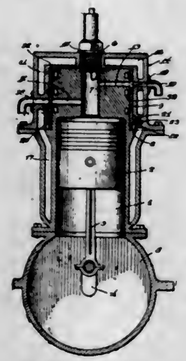


1. A marker for skirts, comprising a cylindrical base having an annular rabbet around its upper edge forming a bearing shoulder, an upstanding flange around the shoulder, a ring fitting within the annular rabbet and having a groove at its lower outer edge forming a ball-race with the shoulder and its flange, a series of balls contained in the ball-race, a platform secured to the base, there being a ball-race formed between the inner upper edge of the ring, the wall of the rabbet and the bottom of the platform, a series of balls contained therein, a standard carried by the ring, and a marking means adjustably mounted thereon.

2. A marker for skirts, comprising a cylindrical base having a rabbet around its upper edge forming a bearing

shoulder, an upstanding flange around the bearing shoulder, a ring fitting within the rabbet and having a groove at its lower outer edge forming a ball-race with the shoulder and the flange, a series of balls within the ball-race, an inwardly extending flange around the upper edge of the rabbet, a platform secured thereto and projecting over the base, a bearing ring secured to the under side of the projecting edge of the platform, there being a groove in the upper inner edge of the ring forming a ball-race with the wall of the rabbet and the bearing ring, a series of balls therein, a standard carried by the ring, and a marking device adjustably mounted thereon.

1,191,169. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. DON Z. FLOWER, Minneapolis, Minn. Filed Jan. 18, 1915. Serial No. 2,929. (Cl. 123—80.)

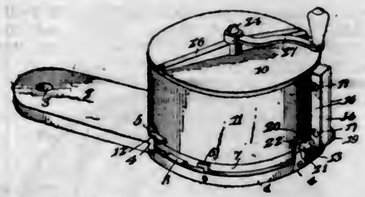


In an internal combustion engine, the engine cylinder, a relatively enlarged cylinder head having a cylindrical bore formed therein and leading to said cylinder, said head being further provided with an intake passage way and an exhaust passage way leading to said bore, a cylindrical valve member mounted to embrace said cylinder head, said valve member being provided with an intake port and an exhaust port adapted for successive registration with said intake passage way and said exhaust passage way, a gear formed upon said valve member at the base thereof, a cover structure designed for arrangement over said cylinder head and said valve member, said cover structure being provided with an interior recess in proximity to said gear and with a threaded opening in its closed end to register with said cylindrical bore, a means penetrating said cover and engaging said gear to rotate said valve member, a sparking means engaging in said threaded opening and extending into said bore for the purpose specified, and a plurality of pressure packing rings mounted in annular grooves therefor formed in said cylindrical head to bear against said valve member, substantially as described.

1,191,170. MIXER. JOHN FREE, Sr., East Pittsburgh, Pa. Filed Feb. 27, 1915. Serial No. 11,092. (Cl. 99—2.)

1. A mixer comprising a receptacle provided with a mixing member interior thereto and fixed to one side of the receptacle with a portion projecting to the exterior of the receptacle, a cover member provided with an elongated slot on one side for the passage therethrough of that portion of the mixing member in the receptacle projecting to the outside of the latter, and a mixing member adapted to the interior of the receptacle for co-action with the first-named mixing member and extending through the cover member.

2. A mixer comprising a receptacle, a cover member therefor, mixing members within the receptacle with one fixed to the receptacle and the other rotatable with respect to the first-named member, a support for the receptacle, locking means on the support, on the receptacle and on the cover, with the locking means on the receptacle and cover movable by rotative movements of the receptacle and cover about their longitudinal axis into and out of engagement with the locking means on the support.



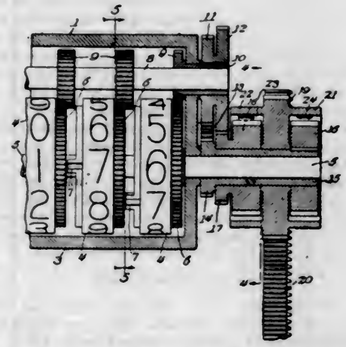
3. A mixer comprising a cylindrical receptacle, a support on which the receptacle is rotatable about its longitudinal axis for a limited distance, a cover for the receptacle, mixing members within the receptacle, and coacting locking members on the support and on both the receptacle and cover for engagement of the locking members on the support and receptacle when the latter is turned in one direction and engagement with the locking members on the support and cover when the receptacle is turned in the other direction.

4. A mixer comprising a basic member, a cylindrical receptacle adapted thereto, a cylindrical cover on the receptacle of an axial length to reach close to the basic member, mixing means within the receptacle, and coacting locking means on the basic member, cover and the receptacle and movable into and out of engagement by rotative movements of the receptacle and cover.

5. A mixer comprising a basic member or support, a cylindrical receptacle adapted to said basic member or support, a cover member telescoping on the receptacle, latch means on the receptacle, other latch means on the cover, and latch means on the basic member in coactive relation to either the latch means on the receptacle or the latch means on the cover in accordance with the direction of movement of the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,191,171. OPERATING MECHANISM FOR METERS. HERMAN C. FUHRMAN, Cedar Rapids, Iowa, assignor to The Tokheim Mfg. Co., Cedar Rapids, Iowa, a Corporation of Arizona. Filed June 18, 1912. Serial No. 704,373. (Cl. 74—54.)



1. In a device of the class described a ratchet and spur gear secured to rotate together, a second ratchet and a second spur gear secured to rotate together about the same axis as the first ratchet and gear, means for alternately rotating said ratchets in opposite directions, an idler gear meshing with said first spur gear, two spur gears secured to rotate together, one meshing with said second spur gear and the other meshing with said idler, said means for rotating the ratchets comprising a spur gear having flange portions surrounding said ratchets and pawls supported by said flange portions for engaging said ratchets.

2. In a device of the class described a shaft, a ratchet and spur gear secured to rotate together about said shaft, a second ratchet and spur gear secured together to rotate about said shaft, means for alternately rotating said ratchets in opposite directions, a third spur gear also rotatable about said shaft, an idler meshing with said first spur gear, a second shaft parallel to said first shaft, and three spur gears secured to rotate together about said second shaft, one meshing with said second spur gear, one meshing with said third spur gear and the other meshing with the idler.

3. In a device for converting the reciprocating rectilinear motion of a pump piston into the one way rotary motion of a register, the combination with a reciprocating rack, of a pair of ratchets, a member given rotary reciprocation by said rack, a pawl carried by said member and arranged to rotate one of said ratchets on the movement of said member in one direction, a second pawl carried by said member and arranged to rotate the other ratchet on the movement of said member in the opposite direction, a one way rotatable member, and a pair of gears operatively connected therewith, two pinions, one operatively connected with each of said ratchets, and an idler pinion meshing with one of said two pinions and with one of said gears, the other gear meshing with the other of said two pinions.

1,191,172. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Nov. 23, 1912. Serial No. 733,058. (Cl. 70—16.)

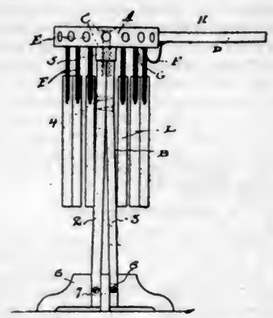


1. The combination with a pair of hinged frame members, of a spring actuated fastener secured to one of said frame members, adapted to hold said frame members together, and a locking device hingedly connected to one end of said fastener, and movable in the plane of said frame members into locking engagement with the outer sides of said frame members and operated independently from said fastener.

2. The combination with a pair of hinged frame members, of a chambered casing on one of said frame members, and a holding projection on the other of said frame members, said chambered casing being provided with an integral bearing formed at one end thereof, a locking member hingedly connected to the bearing of said chambered casing adapted to inclose said casing and movable in the plane of said frame members into locking engagement with the outer side of said frame members.

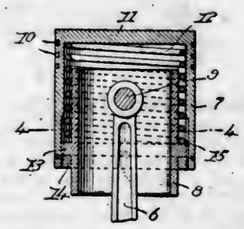
1,191,173. CLOTHES-DRIER. AMBROSE GARNET GALBRAITH, Parry Sound, Ontario, Canada. Filed Jan. 21, 1916. Serial No. 73,275. (Cl. 68—34.)

As a new article of manufacture; a clothes drier comprising a rotary head; a standard comprising two vertical pieces coupled together at their upper ends and sprung apart at their lower ends and for a suitable distance of their length thereby placing said pieces under strain so as to stiffen said standard, means whereby said rotary head is pivoted to the upper end of said standard, and a pair of cross pieces suitably interlocked; the lower ends of said vertical pieces each provided with a longitudinal slot whereby said lower ends are enabled to straddle one



of said cross pieces and on each side of the other cross piece.

1,191,174. PISTON FOR EXPLOSIVE-ENGINES. JOHN D. GILLIGAN, Rhinelander, Wis. Filed May 28, 1914. Serial No. 841,639. (Cl. 123—78.)



1. A piston for explosive engines including relatively movable piston sections, cushioning means interposed between said sections, means adjustable to vary the tension of said cushioning means, and means including a dovetailed enlargement formed upon one of said sections to fit a complemental groove therefor in the other of said sections to guide said sections during relative movement.

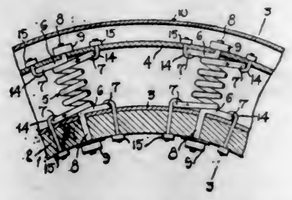
2. A piston for explosive engines including relatively movable piston sections, one of the said sections fitting within the other, a flange integral with one section, extensions formed upon the flange, the said extensions fitting grooves formed in the other of the said sections to prevent circumferential movement of one section independently of the other, the said extensions and grooves serving as guide means for the piston sections when moved relatively to each other, and spring means interposed between the flange of one section and one of the defining walls of the other section to form a cushion support, as and for the purpose set forth.

3. A piston for explosive engines including a piston proper closed at one end, an auxiliary piston extending into said piston proper, an annular flange formed integrally with the said auxiliary piston, a spring interposed between the closed end of said piston proper and said flange, said spring forming a cushion support for the piston proper, dove-tailed extensions formed upon the periphery of said flange, the said extensions fitting dove-tailed grooves formed in the piston proper to serve as guide means for the piston sections when moved relatively to each other, a band adjustable relatively to the piston proper, said band forming an abutment for the flange to limit movement of one of the piston sections, movement of said band permitting variation of the spring tension, as and for the purpose set forth.

4. A piston for explosive engines including a piston proper closed at one end, an auxiliary piston extending into said piston proper, the diameter of the auxiliary pis-

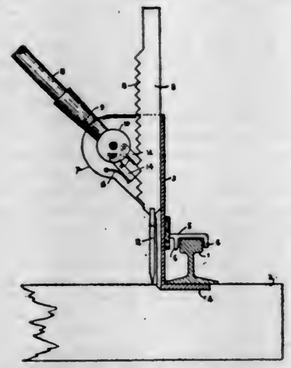
ton being less than the diameter of the bore of the piston proper to provide a space therebetween, an annular flange formed integrally with the auxiliary piston, a single spring interposed between the closed end of said piston proper and said flange, said spring embracing the auxiliary piston and fitting the space aforesaid, extensions formed upon the periphery of the said flange, the said extensions fitting grooves therefor within the piston proper to prevent circumferential movement of one piston section independently of the other, and an exteriorly threaded band adjustable relatively to the piston proper, said band forming an abutment for the said flange, adjustment of the band permitting variation of the spring tension, as and for the purpose set forth.

1,191,175. WHEEL STRUCTURE. ADAM HENRY GROSZ, New Orleans, La., assignor of one-half to Bennett W. Seidel, New Orleans, La. Original application filed Dec. 8, 1915, Serial No. 65,741. Divided and this application filed Mar. 27, 1916. Serial No. 87,077. (Cl. 152—37.)



A wheel structure including a felly, a rim concentrically disposed relative to the felly and in predetermined spaced relation thereto, a plurality of expansible members interposed between the felly and the rim, each of said members comprising a coil spring having each of its end convolutions provided with oppositely disposed loops of a width less than the width of the end convolutions and affording an increased bearing or contacting surface, the opposite extremities of the spring being longitudinally extended and positioned at substantially the axial center of the spring, said extensions being disposed through the rim and felly, and clamping members coacting with said loops and the rim and felly for anchoring the spring in applied position.

1,191,176. TIE-CUTTER. WILLIAM S. HARBER, Sheldon, Tex. Filed Dec. 24, 1915. Serial No. 68,563. (Cl. 144—2.)

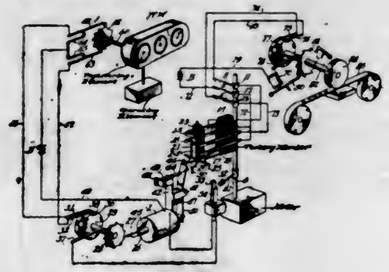


1. A tie cutter including a stand, laterally extending fingers carried by the lower end thereof to engage under a railway rail, a slidably mounted brace carried by the stand and engaging with the tread of said rail, a cutter bar slidably mounted in said stand, whose lower end is formed into a cutting blade and means for forcing said bar lengthwise relative to the stand.

2. A tie cutter including a stand, laterally extending fingers carried by the lower end thereof to engage under a railway rail, a slidably mounted brace carried by the stand and engaging with the tread of said rail, a cutter bar slidably mounted in said stand, whose lower end is formed into a cutting blade, said bar also having a rack face, a handle pivoted to the stand, a pair of dogs pivoted to the handle on opposite sides of the axial line thereof, which engage with said rack face and through which the reciprocation of said handle imparts a lengthwise movement of the bar relative to the stand.

3. A device of the character described including a stand, whose lower end is formed into fingers which engage under the rail of a railway track, a brace having a slidable engagement with the stand and engaging over the tread of said rail, a cutter bar slidably mounted relative to said stand and whose lower end is formed into a cutting blade and means for imparting a lengthwise movement to said bar relative to the stand.

1,191,177. ELECTRIC METERING SYSTEM. VIRGIL S. HARDEY, Chicago, Ill. Filed Sept. 7, 1915. Serial No. 49,369. (Cl. 171—34.)



1. In combination a plurality of meters, movable elements each adapted to be set by registration of a predetermined unit upon the corresponding one of said meters, a registering device, a testing member for engaging said movable members when the same are set, means jointly controlled by said testing member and said movable elements for actuating said registering device and means for preventing setting of said movable elements while the test is being made.

2. In combination a plurality of meters, a printing register, a setting relay for each meter, an operating circuit for each relay controlled by the corresponding meter, a pair of contacts in each circuit, movable elements for said relays, said elements being adapted to be set by energization of the corresponding relay, said printing register having controlling means, means to cause engagement between the controlling means of said printing register and any one of said elements when in set position, and means for opening said contacts when said controlling means is in position to engage one of said elements.

3. In combination a plurality of meters, a movable element for each meter, each element adapted to be set in accordance with predetermined advancement of the corresponding meter, common registering mechanism having movable means adapted to engage said movable elements to actuate said registering mechanism and means to prevent setting of said movable elements when the movable means is in position to be engaged.

4. In combination a plurality of meters, movable elements for said meters, setting of said elements being controlled by registration of a predetermined unit upon said meters, a register, having a testing member adapted to test said elements, said elements being adapted when set to engage said testing member and means controlled by engagement of said testing member with one of said elements for causing actuation of said register.

5. In combination a plurality of meters, movable elements for said meters, said elements being set by registration of a predetermined unit upon said meters, a register having a testing member adapted to test said elements, said elements being adapted when set to engage said testing member, operation of said register being controlled by engagement of said testing member with one of said elements, and means to prevent setting of said elements while said testing member is testing the same.

[Claims 6 to 30 not printed in the Gazette.]

1,191,178. PROJECTILE FOR FIREARMS. FRANCIS HENRY HARRISON and ALEXANDER JAMES BROWN, Calcutta, British India, assignors of one-fourth to Arthur Henry Wallis, Caterham, Surrey, England, and one-fourth to Frederick Llewellyn Wallis, Sanderstead, Surrey, England. Filed Aug. 27, 1915. Serial No. 47,714. (Cl. 102—28.)



1. A spherically shaped projectile for use with fire arms comprising a compressible outer shell, a hollow bullet in said shell, an annular layer of lubricating material between said outer shell and bullet, holes in said shell through which, on compression of the shell, the lubricant is extruded, readily collapsible projections on the inner surface of said outer shell for maintaining the concentricity of said bullet with said outer shell, substantially as described.

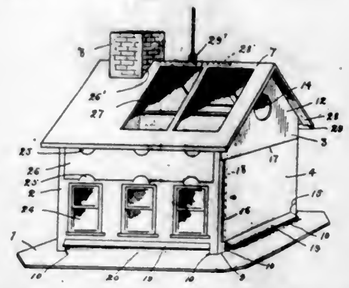
2. In a projectile of the type specified, a compressible outer shell, a hollow bullet in said shell, an annular layer of lubricating material between said outer shell and bullet, holes in said shell through which, on compression of the shell, the lubricant is extruded, readily collapsible projections on the inner surface of said outer shell for maintaining the concentricity of said bullet with said outer shell, and a substance of disruptive qualities contained in said bullet.

3. In a projectile of the type specified, a compressible outer shell shaped so as to comprise a plurality of partially separable segments, bases on said segments integrally attached to the projectile, said segments being partially separable to admit the contents of the projectile being placed within the said outer shell and adapted to be thereafter brought together to form an unbroken hemisphere in a spherical projectile, a substance of disruptive qualities contained in said bullet, and a plurality of slender and readily collapsible projections spaced around the inner surface of said outer shell.

4. A projectile of the character described comprising in combination an outer shell, partially separated segments forming said shell, a bullet in said shell composed of two separate hemispheres, a slightly under-cut projection or collar on one of said hemispheres allowing the attachment of the other hemisphere, an annular space between said bullet and the outer shell, a lubricant in said space, means for maintaining the bullet concentrically within said outer shell, holes in said shell allowing the lubricant to be extruded upon the compression of the outer shell during its passage through the gun barrel, a thin metal capsule inclosed in said bullet and a substance of disruptive qualities in said capsule for increasing the weight of the projectile.

1,191,179. COLLAPSIBLE FLY-TRAP. CARL P. HASSELGREN, Duluth, Minn. Filed Feb. 25, 1916. Serial No. 80,377. (Cl. 43—22.)

1. A collapsible fly trap of the character described, comprising a base, a foldable removable body portion supported upon the base, a foldable removable projecting roof supported upon the body portion, light admitting openings in the roof, fly entrances through the body portion, means for preventing light shining directly into the entrances, upwardly projecting walls spaced inwardly from the entrances and projecting above same and means for removing the flies from the trap.



2. In a collapsible fly trap of the character described, having a rectangular shaped foldable body portion, and a base, right angular shaped slits formed through the base adjacent the corners thereof, the ends of the slits extending laterally at an angle thereto, pedestal members upon the body portion for engaging the slits and having flaps thereupon, whereby after the pedestal members are extended through the slits the flaps will assume normal alinement with the rigid portion of the pedestals and thus lock the same within the base.

3. The combination with a collapsible fly trap of the character described, having a separable base, body portion and roof, of slits in the base, projections formed integral with the body portion for locking engagement through the slits, laterally projecting flanges upon the gables of the body and pockets in the roof for locking engagement with the flanges, substantially as shown and described.

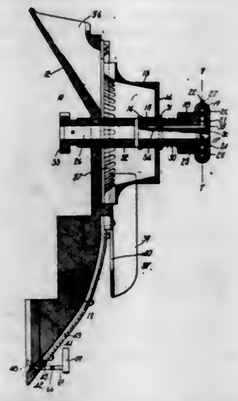
4. The combination with a collapsible fly trap of the character described, comprising a base, a foldable body portion removably supported by the base, a foldable projecting roof removably supported by the body portion and having light admitting openings therein, of fly entrances formed longitudinally the sides and adjacent the eaves by the upper edges of the side walls being turned down inwardly forming such entrances and exit guards thereto, similar entrances formed in the lower edges of the side walls, by turning a portion of the latter outwardly and upwardly forming such entrances and light shields therefor, and vertical guard walls fixed to the base within the body portion and spaced a distance from the entrances to prevent exit of the flies, substantially as shown and described.

1,191,180. MECHANISM FOR FEEDING RIVETS AND THE LIKE. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'f'g Co., a Corporation of Massachusetts. Filed Feb. 8, 1916. Serial No. 77,039. (Cl. 218—2.1.)

1. A hopper for feeding rivets and the like having, in combination, a stationary member, a rotary member constructed to hold a mass of rivets, a shaft upon which said rotary member is slidably mounted and yielding means on said rotary member arranged to normally project into a recess in said shaft but movable out of said recess for locking said rotary member against movement longitudinally of said shaft and for unlocking the same to permit such movement.

2. A hopper for feeding rivets and the like having, in combination, a stationary member, a rotary member constructed to hold a mass of rivets, a shaft upon which said rotary member is slidably mounted, and an arm pivoted to said rotary member and arranged to normally project into a recess in said shaft but movable out of said recess, for locking said rotary member against movement longi-

tudinally of said shaft and for unlocking the same to permit such movement.



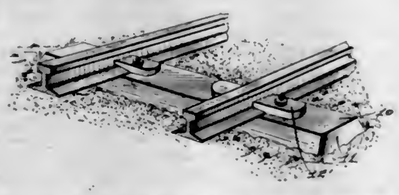
3. A hopper for feeding rivets and the like having, in combination, a stationary member, a rotary member constructed to hold a mass of rivets, a shaft upon which said rotary member is slidably mounted, an arm pivoted to said rotary member and arranged to project into a slot extending transversely of said shaft, and a spring acting to normally hold said arm in said slot, for locking said rotary member against movement longitudinally of said shaft and for unlocking the same to permit such movement.

4. A hopper for feeding rivets and the like having, in combination, a stationary member, a rotary member constructed to hold a mass of rivets, a shaft upon which said rotary member is slidably mounted, means movable transversely of said shaft, for locking said rotary member against movement longitudinally of said shaft and for unlocking the same to permit of such movement and a stop on said shaft to limit the extent of said longitudinal movement.

5. A hopper for feeding rivets and the like having, in combination, a stationary member, a shaft rotatably mounted therein, a rotary member mounted on said shaft and comprising a sleeve, a rivet holding member rotatably mounted on said sleeve, frictional means arranged to control the rotation of said rivet holding member upon said sleeve, a pin fast to said sleeve and projecting therefrom into a slot extending longitudinally of said shaft and a lever pivoted to said sleeve and normally projecting into a slot extending transversely of said shaft.

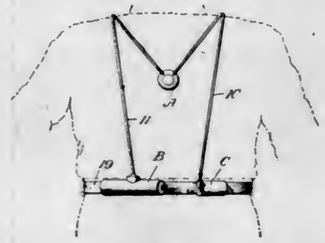
[Claim 6 not printed in the Gazette.]

1,191,181. TIE AND RAIL-FASTENER. CHARLES HENNIG, South Prairie, Wash. Filed Jan. 8, 1915. Serial No. 1,180. (Cl. 238—4.)



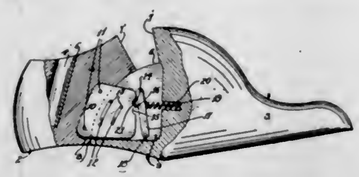
In combination with a tie having a plurality of keyhole openings formed therein, of a plurality of rail clamps having keys formed thereon conforming to the shape of said keyhole openings, and a plurality of clamp-retaining members having one portion thereof reduced so that said members can be moved to one end of the reduced portion of said keyhole opening, said member passing through said clamps for retaining the same to said tie and one portion of said members being of such size as to prevent the same from dropping through the reduced portion of said keyhole openings, as and for the purpose set forth.

1,191,182. DICTOGRAPH APPARATUS. WILLIAM HEYMANN, Washington, D. C. Filed Aug. 28, 1914. Serial No. 859,109. (Cl. 274—17.)



A portable dictograph apparatus adapted to be worn concealed upon the person comprising a shaft, means for rotating said shaft, a record blank on said shaft, an electric recorder mounted to record upon said record blank, a casing inclosing said mechanism, means on said casing for detachably securing the same on the person, an electric battery also adapted for ready attachment on the person, a cable connecting said battery with said electric recorder, and a receiver interposed in the circuit, substantially as set forth.

1,191,183. SHOE-LAST. PATRICK H. HICKMAN, Irvington, N. J. Filed June 26, 1915. Serial No. 36,543. (Cl. 12—136.)

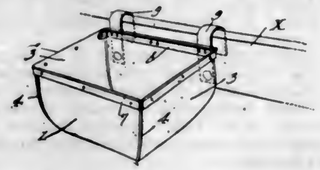


A last including a toe section, a heel section, a plate fixed to the heel section and having sliding engagement only with the toe section, said toe section being formed with a recess receiving said plate, the edge of the plate which projects within said recess being formed with spaced notches, a vertically extending latch member pivotally supported within the recess of the toe section, said latch member being formed with a projection adapted to enter the notches of the plate, whereby to hold the sections at the limit of their movement in either direction and a spring contacting with the latch member to maintain the same in contact with the notched edge of the plate.

1,191,184. FEED-TROUGH. FRANK B. HOOPER, Newport News, Va., assignor of forty one-hundredths to George T. Hardy, Newport News, Va., fifteen one-hundredths to Malcolm G. Isdale, London, England, and five one-hundredths to Benjamin G. Schaffer, Newport News, Va. Filed Feb. 19, 1915. Serial No. 9,318. (Cl. 119—61.)

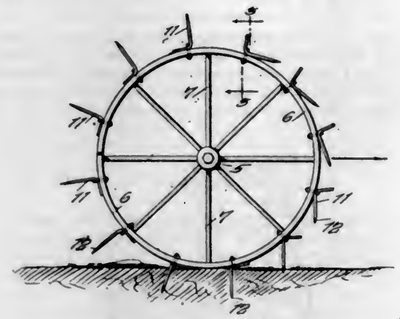
A stock feed trough of rectangular plan and having a rounded bottom, the same consisting of front and rear walls formed of a single blank of sheet metal, downwardly curved between said walls to form a bottom section having angular side incisions of which the sides diverge from points near the center of the bottom and extend respectively to the side edges of the front and rear walls, and side walls each formed of a single blank of sheet metal

extended and curved to provide an angular portion fitting in one of said angular incisions of the first named blank



to complete the bottom, the adjoining edges of said elements being overlapped and jointed.

1,191,185. PLOWING DEVICE. FREDERICK BARTLEY HULL, Lyons, Kans. Filed Sept. 25, 1915. Serial No. 52,666. (Cl. 97—68.)



1. A plowing device comprising a rotary element including a rim having openings therein, eye-bolts mounted in said openings, a plurality of substantiallly L-shaped cutting blades having openings in their bent portions receiving said eye-bolts, and a locking pin extending through the apertures in said eye-bolts and pivotally connecting said blades to said rim.

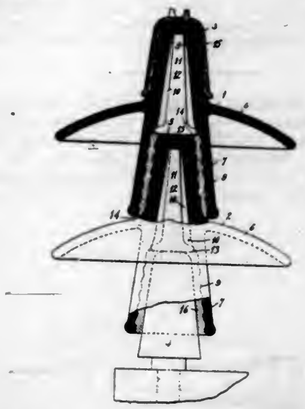
2. A plowing device comprising a rotary element including a rim having openings therein, eye-bolts mounted in said openings, a plurality of substantially L-shaped cutting blades having openings in their bent portions receiving said eye-bolts, and means engaging said eye-bolts for pivotally connecting said cutting blades to said rim.

3. A plowing device comprising a rotary element including a rim having openings therein, eye-bolts mounted in said openings, cutting blades adapted to enter the ground in a vertical position, and means engaging said eye-bolts for pivotally connecting said plates to said rim.

1,191,186. INSULATOR. RAY P. JACKSON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 21, 1910. Serial No. 598,515. (Cl. 173—318.)

1. The combination with a plurality of identical insulator sections arranged vertically, one within another and secured together by longitudinally spaced layers of cementing material, each section comprising a cap portion and a body portion having centrally disposed communicating recesses therein and an outwardly flaring petticoat portion located above the upper end of its inclosed layer of cementing material, of a spacing pin of insulating material disposed in the recess in said cap portion and adapted to rest against the upper end of the projecting cap portion of the adjacent lower section.

2. A built-up insulator comprising interchangeable nested units, top-closure diaphragms for each of said units, said diaphragms being spaced apart and serving to form inclosed air chambers together with a cap unit formed to receive an electric cable, the bottom unit receiving the supporting pin.



3. A built-up insulator, having nested units, in combination with means for spacing said units apart and preventing the entry of cement into the space between the heads of juxtaposed units.

4. A built-up insulator having nested units, the heads of which are air-spaced apart, in combination with means for preventing the entry of cement into said air space during the assembly of the parts.

5. A built-up insulator having nested units, the heads of which are air spaced apart, in combination with means supporting a nested unit during assembly in inverted position and excluding cement from said air space.

[Claim 6 not printed in the Gazette.]

1,191,187. AIR-BRAKE APPARATUS. OSCAR JOHNSON, Chicago, Ill. Filed Sept. 25, 1913. Serial No. 791,687. (Cl. 188—3.)



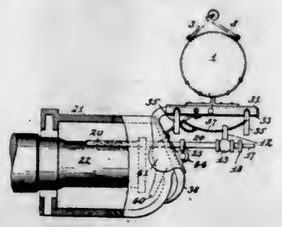
1. In a car, the combination of a car floor and a platform, the platform being below the horizontal plane of the floor; an air-brake pipe extending beneath the floor and the platform, the portion beneath the platform being below the plane of the portion that extends beneath the floor; and a motorman's brake-valve connected to said pipe and located below the platform, said brake-valve comprising an exhaust passage for air and moisture.

2. In a car, the combination of a car floor and a platform, the platform being below the horizontal plane of the floor; an air-brake pipe extending beneath the floor and the platform, the portion beneath the platform being below the plane of the portion that extends beneath the floor; a valve connected to said pipe and located below the platform, said valve having an outlet for air and moisture; and means for operating said valve, said operating means extending upwardly above the platform to a point convenient for operation by the motorman.

3. The combination of a car, a system of air brake pipes extending longitudinally of and beneath the car, a motorman's brake valve located at approximately the lowest point in said system, said valve comprising an exhaust outlet for air and moisture, and means for manually operating said valve.

4. The combination of a car, a system of air-brake pipes extending beneath the car, a motorman's brake-valve located at approximately the lowest point in said system, said valve comprising an exhaust outlet for air and moisture, said outlet being at the lower side of said valve, and means for manually operating said valve.

1,191,188. JOURNAL-BOX COOLER. BARTHOLOMEW JULIEN, Omaha, Nebr., assignor to Transportation Utilities Company, New York, N. Y., a Corporation of West Virginia. Original application filed Nov. 23, 1912, Serial No. 753,101. Divided and this application filed June 4, 1914. Serial No. 842,882. (Cl. 64—28.)

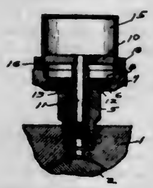


1. In a journal-box cooler the combination with a journal box, of a reservoir, means connected with the reservoir for attaching the same with, and supporting it on, the journal box, an adjustable delivery tube extending into the journal box, a conduit connecting the reservoir and delivery tube, and thermostatic means contained within said delivery tube whereby to control the flow of the cooling agent from the reservoir into said journal box in accordance with the temperature in the latter.

2. The combination with a journal box, of a journal therein, a source of cooling agent supply, a delivery tube connected with said source of supply and adjustably arranged in the journal box and alongside of, and adjacent to, the journal, and thermostatic means located within said delivery tube for automatically controlling the passage of the cooling agent from the source of supply to said delivery tube in accordance with the temperature in said journal box.

3. A journal box cooler comprising a reservoir, means carried by said reservoir for detachably securing the same to a journal box, a perforated delivery tube adapted to extend into the journal box, thermostatic means contained within said perforated delivery tube for automatically controlling the flow of the cooling agent therefrom into the interior of said journal box in accordance with the temperature in the latter, and a flexible conduit intermediate the reservoir and said perforated tube for continuously delivering the cooling agent from the former to the latter.

1,191,189. GREASE-CUP. HENRY C. KESTEL, Toledo, Ohio, assignor of one-half to William H. Minier, Toledo, Ohio. Filed Sept. 11, 1915. Serial No. 50,136. (Cl. 184—38.)



1. In a grease cup, the combination of a cup member, a plug, the grease cup swiveled on the plug and means for forcing the grease from the cup.

2. In a grease cup, the combination of a cup member, a plug, a ring connected to the plug and having inwardly extending fingers adapted to engage the rim of the cup, a spring located intermediate the fingers for yieldingly holding the cup on the ring.

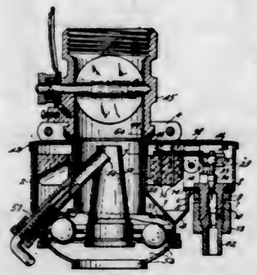
3. In a grease cup, the combination of a cup member, a plug, a ring connected to the plug and having inwardly extending fingers adapted to engage the rim of the cup, a spring located intermediate the fingers for yieldingly holding the cup on the ring, a plunger threaded in the plug and means connecting the plunger with the ring for rotating the plunger.

4. In a grease cup, the combination of a plug, a member permanently connected to the outer end of the plug, a cup releasably connected to the member and means for forcing the grease from the cup.

5. In a grease cup, the combination of a plug having internal threads, a cup swiveled on the plug, means operated by the internal threads of the plug for forcing the grease from the cup.

[Claims 6 to 8 not printed in the Gazette.]

1,191,190. CARBURETER-RECEPTACLE AND MECHANISM FOR MAKING SAME. FRANK L. KINGSTON, Cleveland, Ohio. Continuation of application Serial No. 695,425, filed May 6, 1912. This application filed June 6, 1913. Serial No. 772,121. (Cl. 113—1.)



1. An annular vessel drawn from a single piece of sheet metal, said vessel having an inner cylindrical wall, an outer cylindrical wall substantially concentric with said first wall, and an integral bottom connecting said walls, said bottom having flared or frusto-conical portions angularly related to each other.

2. An annular vessel of drawn metal, said vessel having an inner cylindrical wall, an outer wall substantially concentric with said first wall, and an integral bottom connecting said walls, said outer wall having at one side a hollow protuberance integral therewith for the reception of a float valve.

3. An annular vessel formed from a single piece of drawn metal without seams, said vessel having an inner cylindrical wall, an outer cylindrical wall, and an integral bottom connecting said walls, said outer wall having at one side a hollow laterally projecting protuberance integral therewith, the bottom of said protuberance being flat and apertured.

4. A vessel formed from a single piece of sheet metal, the central portion of the sheet being drawn upwardly to provide an inner cylindrical wall and the marginal portions being drawn upwardly to provide an outer cylindrical wall, the inner wall being higher than the outer wall and formed for the attachment of cover securing means.

5. A vessel formed from a single piece of sheet metal, the central portion of the sheet being drawn upwardly to provide an inner cylindrical wall and the marginal portions being drawn upwardly to provide an outer cylindrical wall, the upper end of the inner wall being flared for the reception of a clamping ring whereby the cover is held in place.

[Claims 6 to 10 not printed in the Gazette.]

1,191,191. COOLING MEANS FOR INTERNAL-COMBUSTION ENGINES. FREDERICK HARCOURT KITCHIN, Glasgow, Scotland. Filed Mar. 18, 1914. Serial No. 825,659. (Cl. 257—61.)



1. The combination with an internal combustion engine body provided with external ribs or flanges, of one or more separate radiator plates applied to said body between said ribs or flanges, and means engaging said ribs or flanges for retaining each of said plates in position on said body, said means including a helical spring secured at its ends to the corresponding plate.

2. The combination with an internal combustion engine body provided with external ribs or flanges, of one or more separate radiator plates applied to said body between said ribs or flanges, and means engaging said ribs or flanges for retaining each of said plates in position on said body, said means including one or more plate or ribbon springs secured at one end to the corresponding plate.

3. The combination with an internal combustion engine body provided with external ribs or flanges, of one or more separate radiator plates applied to said body between said ribs or flanges, and means engaging said ribs or flanges for retaining each of said plates in position on said body, said means comprising one or more plate or ribbon springs secured at one end to the corresponding plate, and a helical spring secured at both ends to said plate.

1,191,192. RECEPTACLE-CLOSURE. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer M'f'g Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 5, 1913. Serial No. 799,353. (Cl. 173—330.)



1. A face plate for electrical receptacles having an opening therein and a sliding closure for said opening, said closure having parts engaging the opposed faces of said plate to utilize said plate as a guide.

2. A face plate for electrical receptacles having an opening therein and a sliding closure for said opening, said closure bearing against the front face of said plate and being provided with parts projecting through said opening and overlapping the rear face of said plate whereby said closure is slidable upon said plate as a guide.

3. A face plate for electrical receptacles having an opening therein, a sliding closure for said opening and common means for securing said closure to said plate and biasing the same to close said opening.

4. A face plate for electrical receptacles having an opening therein, a sliding closure for said opening bearing against the outer face of said plate and projecting through said opening and a spring on the opposite side of said plate to engage and secure said closure to said plate and to bias the same to close said opening.

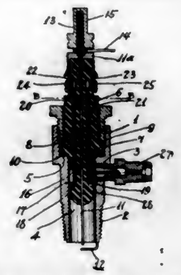
5. A face plate for electrical receptacles having an opening therein, a sliding closure comprising a plurality of spreading sections and a single spring biasing said sections together.

[Claims 6 to 12 not printed in the Gazette.]

1,191,193. COMBINED SPARK-PLUG AND VAPORIZER. MAX KLEIN and HUGH N. PORTER, Denver, Colo. Filed Jan. 26, 1915. Serial No. 4,517. (Cl. 123—169.)

1. In a combined spark plug and vaporizer, a pair of electrodes spaced to form a spark gap, means independent of the electrodes for producing heat near the spark gap, and means for causing a jet of fuel to come into contact with said heating means for vaporizing the same.

2. In a combined spark plug and vaporizer, a core, a pair of electrodes, a heating coil in proximity to said electrodes, means for causing a jet of fuel to come into contact with said coil for vaporizing the same, and wires from a source of electric current passing through said core independent of the electrodes and connected with said coil.



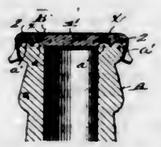
3. In a combined spark plug and vaporizer, the core and electrodes, heating means on the core independent of the electrodes, means for causing a jet of fuel to flow over said heating means for vaporizing the same, and other means for receiving such of said fuel as is not vaporized in flowing over said heating means and retaining the same in proximity to said heating means.

4. In a combined spark-plug and vaporizer, a casing, a core, fuel-receiving means formed upon said core, and means carried by said core and adjacent said receiving means for vaporizing the fuel therein.

5. In a combined spark plug and vaporizer, a core, a heating coil carried thereon, and means on said core and adjacent said coil for receiving and retaining fuel.

[Claims 6 to 13 not printed in the Gazette.]

1,191,194. SEALING-DISK. GEORGE F. KNOX, Louisville, Ky., assignor to Knox Patents Company, Louisville, Ky. Filed Sept. 8, 1915. Serial No. 49,650. (Cl. 215—10.)



1. A composite sealing disk comprising a core section formed from pliable material substantially impervious to action of material to be sealed, and a ring section fitted to the edge of the core section composed of material of less density than the latter, the side faces of both sections lying in respectively coincident planes.

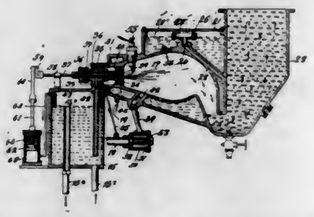
2. A sealing disk comprising a core section of one material and a ring section of another material, said sections having beveled contemporary engaging faces, the side faces of both sections lying in respectively coincident planes.

3. A composite sealing disk having a core section of fibrous material impervious to moisture, and an outer ring section fitted to the annular edge of the core section of cork material, the side faces of both sections lying in respectively coincident planes.

1,191,195. APPARATUS FOR THE PRODUCTION AND UTILIZATION OF WORKING FLUIDS. OTTO KRAUS, New York, N. Y., assignor to Kraus Engine Company, New York, N. Y., a Corporation of New York. Original application filed June 18, 1912. Serial No. 704,323. Divided and this application filed July 8, 1913. Serial No. 777,868. (Cl. 60—31.)

1. An apparatus of the character described, including a furnace; an air-compressor; a compressed-air reser-

voir supplied by the latter; a conduit which connects said air-compressor and furnace; a second conduit which connects the first-named conduit with said reservoir; and a valve which automatically prevents the backflow of air from said reservoir to said air-compressor through said conduits, while permitting the free flow of air from said air-compressor to said furnace through the first-named conduit.



2. An apparatus of the character described, including a furnace; a source of compressed air; a liquid-fuel reservoir arranged to communicate with said source; a fuel-spraying device which communicates with said reservoir; a conduit which leads air under pressure from said source to said furnace; and a regulating resistance which is mounted in said conduit and which prevents the passage of air therethrough unless the pressure of the air is sufficient to force fuel through said device.

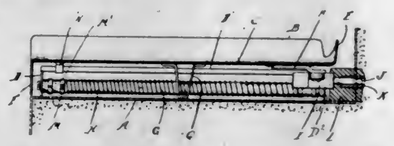
3. An apparatus of the character described, including an air-compressor; an engine for driving the same; a compressed-air reservoir supplied by the latter; a conduit which connects said air-compressor and engine; a second conduit which connects the first-named conduit with said reservoir; and means for automatically preventing the back-flow of air from said reservoir to said air-compressor, while permitting the free flow of air from said air-compressor to said engine through the first-named conduit.

4. An apparatus of the character described, including a furnace; pumping mechanism for furnishing fuel and water to the same; an engine which is driven by the working fluid from said furnace and drives said mechanism; and means for manually operating the latter, said means connecting said engine and mechanism.

5. An apparatus of the character described; including a furnace; a source of compressed air; a liquid-fuel reservoir arranged to communicate with said source; a fuel-spraying device which communicates with said reservoir; a conduit which leads air under pressure from said source to said furnace; and regulating means which will automatically cause the air flowing through said device to be of greater pressure than the air flowing into said furnace through said conduit.

[Claim 6 not printed in the Gazette.]

1,191,196. ELECTRIC-OVEN HEATING UNIT. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed May 8, 1915. Serial No. 26,789. (Cl. 219—63.)



1. The combination with an oven, of an electric heating unit therefor, comprising a pan forming a false bottom to the oven, a resistor mounted beneath said pan and in fixed relation thereto and contacts for coupling said resistor in circuit when said pan is in place.

2. The combination with an oven, of an electrical heating unit therefor, comprising a pan forming a false bottom for said oven and removably engaging the same, a depending frame on said pan forming a support therefor spaced from the oven bottom, an electrical resistor mounted in said depending frame, terminal contacts for said resistor, an insulator support for said terminal contacts secured to the bottom of said pan, and coöperating stationary contacts in said oven for engaging said terminal contacts when said pan is in place.

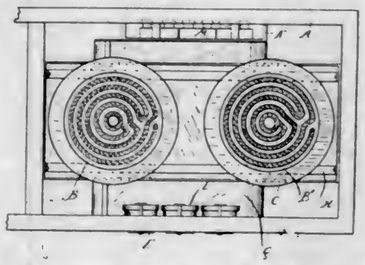
3. The combination with an oven, of an electrical heating unit therefor, comprising a pan forming a false bottom for the oven and having its edges spaced from the walls thereof, a depending support for said pan, an electrical resistor mounted in said depending support, terminal contacts for said resistor having an insulator support on said pan, coöperating contacts in said oven, and a guide in said oven for positioning said pan and for registering said terminal contacts with the coöperating contacts.

4. The combination with an oven, of an electrical heating unit therefor, comprising a pan forming a false bottom for the oven of slightly lesser dimensions to be spaced from the sides and rear wall thereof, upturned flanges at the sides and rear of said pan, a downturned flange at the front of said pan, a supporting frame for said pan to hold the same spaced from the oven bottom, an electrical resistor mounted in said supporting frame, terminal contacts for said resistor having an insulator support on the bottom of said pan, coöperating contacts in said oven, and deflector plates at the sides of the oven for engaging the upturned side flanges of said pan to guide the same into proper position and to register the contacts for engagement.

5. The combination with an oven, of a pan forming a false bottom for said oven, having upturned side and rear flanges and a downturned front flange, frames upon opposite sides of the bottom of said pan provided with top deflector plates spaced from said bottom of the pan and secured thereto, resistor coils mounted in said frames, terminal contacts having an insulator support on the bottom of said pan, and connectors between said contacts and resistor coils.

[Claims 6 to 8 not printed in the Gazette.]

1,191,197. ELECTRIC STOVE. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed May 8, 1915. Serial No. 26,790. (Cl. 219—19.)



1. In an electric stove, the combination with an open frame, of a unit directly supported on said frame, terminal connections for said unit beneath the same, and a shield surrounding said unit and closing the open spaces of said frame.

2. In an electric stove, the combination with an open frame, of a heating unit having a disk-shaped insulator body resting upon said frame, and a metallic ring surrounding said body detachably secured to said frame.

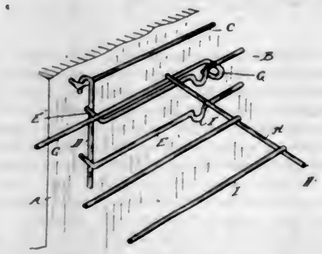
3. In an electric stove, the combiantion with an open frame, of a heating unit having a disk-shaped insulator body supported on said frame, and a ring surrounding said unit engaging the ledge thereon, said ring being provided with depending legs engageable with said frame and lockable thereto by a lateral movement.

4. In an electric stove, the combination with a supporting frame, of a disk heating unit resting upon said frame, a metallic ring for surrounding said disk and engaging the ledge thereon, legs on said ring engaging slots in said frame, and hooks on said legs for interlocking with said frame upon a lateral adjustment relative thereto.

5. In an electric stove, the combination with an open frame having cross bars, of an electrical heating unit supported on said cross bars, a protecting ring surrounding said unit and engaging a ledge thereon, depending legs on said ring engageable with slots in said cross bars and lockable thereto by a lateral movement, and a shield for covering the open spaces of said frame, apertured to receive said unit and ring and holding the same from lateral displacement.

[Claims 6 to 11 not printed in the Gazette.]

1,191,198. OVEN. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed May 8, 1915. Serial No. 26,791. (Cl. 126—339.)



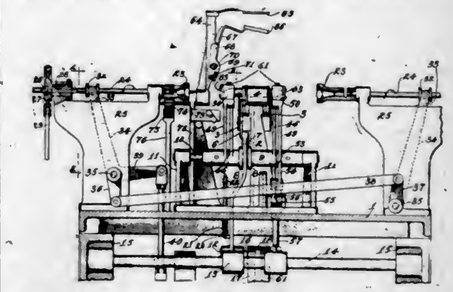
1. In an oven, the combination of a rack guide or support, comprising a horizontally-arranged wire bar having out-turned ends and a substantially U-shaped bend intermediate its ends forming a shoulder or stop, means for supporting said out-turned ends, and a rack having a side bar for resting upon one of said out-turned ends, the inner end of said side bar having a laterally inwardly extending loop or return-bend arranged to pass beyond the inner end of said guide when said rack is moved inward, and in the subsequent outward movement of said rack to pass over the angle-bent end of the guide and to embrace the intermediate portion thereof, said outward movement being limited by said stop.

2. In an oven, the combiantion of a rack guide or support formed of a wire rod having out-turned end portions engaging a support and an intermediate portion having a bend therein forming a stop, a rack provided with a side bar for resting upon one of the out-turned ends of said guide, said side bar being of greater length than said guide and having at its inner end a laterally-extending return-bent portion adapted to drop over the end of said guide and to embrace the same, in the subsequent outward movement said loop coöperating with the bend in said guied to form a stop for limiting the outward movement.

3. In an oven, a rack guide comprising a series of horizontal parallelly-arranged wire bars having out-turned angle bent portions, a support for said out-turned portions U-shaped, bends in said bars intermediate their ends forming integral stops, and a rack adapted to be supported on the out-turned portions of said horizontal bars and having at its inner end a portion engageable with and disengageable from said horizontal bars when in its innermost position of adjustment.

4. In an oven, a rack guide comprising a series of parallelly-arranged horizontal wire bars each having a substantially U-shaped bend therein to form a stop intermediate its ends and provided at its ends with out-turned portions, vertical bars to which said out-turned end portions are secured, and a rack having side bars for resting upon the out-turned portions of any one of said horizontal bars, said side bar having at its inner end a loop movable into registration with said horizontal bar when said rack is adjusted inward and limited by said stop when the rack is adjusted outward.

1,191,199. CIGAR-BUNCH SHAPER. HARRY SEYMOUR MARSH and CHARLES LINDBLAD, Brooklyn, N. Y., assignors to International Cigar Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 8, 1915. Serial No. 20,019. (Cl. 131—39.)



1. In a cigar bunch shaper, the combination with means adapted for engaging and supporting the major portions of an unfinished cigar bunch in uncompressed condition, of means acting only upon an end portion of the bunch so supported to transversely compress said end portion into definite and permanent form.

2. In a cigar bunch shaper, the combination with means adapted for engaging and supporting the major portion of an unfinished cigar bunch in uncompressed condition, of means for retaining a bunch on the supporting means, and means acting only upon an end portion of the bunch so supported and retained to transversely compress said end portion into definite and permanent form.

3. In a cigar bunch shaper, the combination with means adapted for engaging and supporting the major portion of an unfinished cigar bunch in uncompressed condition, of means acting only upon an end portion of the bunch so supported to transversely compress said end portion into definite and permanent form, and means for trimming the bunch while so supported.

4. In a cigar bunch shaper, the combination with means adapted for engaging and supporting the major portion of an unfinished cigar bunch in uncompressed condition, of means acting only upon an end portion of the bunch so supported to transversely compress the same into definite and permanent form, and means for transporting the bunch away from the supporting means.

5. In a cigar bunch shaper, the combination with means adapted for engaging and supporting the major portion of an unfinished cigar bunch in uncompressed condition, of means for longitudinally positioning the bunch on the support, and means acting only upon an end portion of the bunch so supported and positioned to transversely compress said end portion into definite and permanent form.

[Claims 6 to 30 not printed in the Gazette.]

1,191,200. CLOTHING-PROTECTOR. MAX J. LIEBENSTEIN and LEO H. EMSHEIMER, Chicago, Ill., assignors to A. Stein & Company, Chicago, Ill., a Corporation. Filed Apr. 28, 1914. Serial No. 834,943. (Cl. 128—5.)

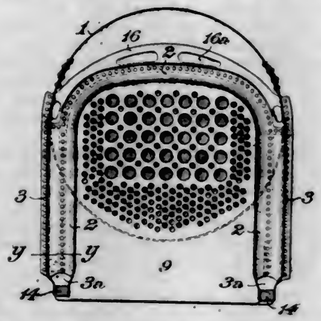
1. A clothing protector comprising a protective apron having its lower portion divided to form separate leg sections open at the front, said apron above said leg sections being adapted to extend across the seat of the wearer from a point some distance below the waist to approximately the knees, the vertical front edges of said apron being adapted to extend along the sides of the wearer's legs, a waist belt to the back and side portions of which the apron in connected, and leg encircling bands the rear portions of which are fastened to the separate leg sections to cause said sections to conform to the back portions of the wearer's legs.

2. A clothing protector comprising a protective apron formed of a single sheet of moisture proof material, having a portion cut away at its bottom to form separate leg sections, garters attached to said leg sections, said apron being adapted to extend from the knees of the wearer to



a point at a distance below the waist line, a belt for encircling the wearer's waist, straps extending downwardly from the sides of the belt to the upper corners of the protective apron, and a strap exending between the leg sections.

1,191,201. STEAM-BOILER FIRE-BOX. DAVID M. LIGHT and WILLIAM H. V. ROSING, Springfield, Mo. Filed Feb. 23, 1916. Serial No. 79,943. (Cl. 122—94.)

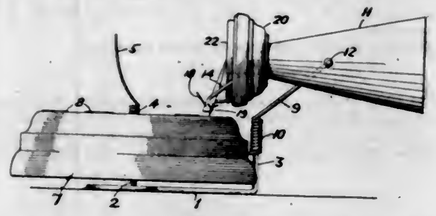


1. The combination, in a steam boiler firebox, of side water walls; a plurality of channel section crown sheet members extending between and connected to the side water walls; and a plurality of supporting beam members, of arched form, interposed between and connected to the crown sheet members, said supporting beam members terminating at the tops of the side water walls, and being unconnected to the roof sheet of the firebox.

2. The combination, in a steam boiler firebox, of a plurality of channel section members, of inverted U form, constituting the crown sheet and inner walls of the firebox; a plurality of supporting beam members, of arched form, interposed between and connected to said channel section members, and being unconnected to the roof of the firebox; and a plurality of outer side wall members, interposed between and connected to said crown sheet and inner wall members.

3. The combination, in a steam boiler firebox, of a plurality of channel section members, of inverted U form, constituting the crown sheet and inner walls of the firebox; a plurality of supporting beam members, of arched form, interposed between and connected to said channel section members, and being unconnected to the roof of the firebox; a plurality of outer side wall members, interposed between and connected to the crown sheet and inner wall members; and connections securing the tops of the outer side wall members to the ends of the supporting beam members.

1,191,202. TOY PHONOGRAPH. THOMAS J. LITLE, Jr., Woodbury, N. J., assignor to The Taux-Wel Talking Machine Co., a Corporation of New Jersey. Filed Dec. 30, 1914. Serial No. 879,625. Renewed Dec. 11, 1915. Serial No. 66,399. (Cl. 274—16.)



1. A toy phonograph comprising the combination of a wire forming a base loop and two upstanding posts, a coiled wire with end forming a crank, a ball in the coiled wire adapted to rest on the end of one of said posts, a concrete turn-table molded on said coil and provided with felt buttons, a second wire coiled to fit the end of the other post and constituting a horn support, a paper horn carried by said support, a one-piece sheet metal stylus arm having a cam slot and divergent feet, a spring clip in the cam slot, a concrete sound box carried by the horn and molded to said feet, a paper diaphragm connected with said arm, and a gelatinous ring applied to the sound box and in which the edge of the diaphragm is embedded to yieldingly support and space it.

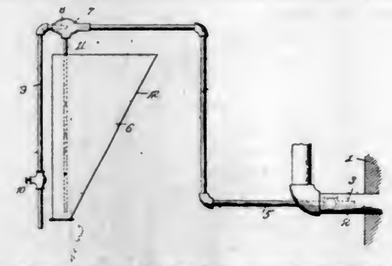
2. A toy phonograph comprising the combination of a wire forming a base and two upstanding posts, a coiled wire with end forming a crank mounted on one of said posts, a turn-table carried by said coil, a second wire coiled to fit the end of the other post and constituting a support, a horn carried by said support, a stylus arm, and a non-metallic sound box carried by said horn and provided with a diaphragm connected with the stylus arm.

3. A toy phonograph comprising the combination of a wire forming a base loop and two upstanding posts, a coiled wire with end forming a crank, a bearing piece in the coiled wire adapted to rest on the end of one of said posts, a turn-table molded on said coil, a second wire coiled to fit the end of the other post and constituting a horn support, a horn carried by said support, a one-piece stylus arm, a sound box carried by the horn, a diaphragm connected with said arm, and a ring applied to the sound box and in which the edge of the diaphragm is embedded to yieldingly support and space it.

4. A toy phonograph comprising the combination of a wire forming a base loop and two upstanding posts, a turn-table mounted on one of said posts, a horn support detachably and turnably mounted on the other of said posts, a horn carried by said support, a stylus arm having a cam slot and provided with a spring clip coöperating with said slot, a sound box carried by the horn and supporting the stylus arm, a diaphragm connected with the stylus arm, and a ring applied to the sound box and in which the edge of the diaphragm is embedded to yieldingly support and space it.

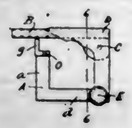
5. A toy phonograph comprising the combination of a wire forming a base and two upstanding posts, a coiled wire mounted on one of said posts and forming a bearing, a turn-table carried by said coil, a handle rigid with said coil, a second wire coiled to fit the end of the other post and constituting a support, a horn carried by said support, a stylus arm, and a non-metallic sound box carried by said horn and provided with a diaphragm connected with the stylus arm.

1,191,203. APPARATUS FOR FEEDING FINELY-DIVIDED FUEL. CHARLES LONGENECKER, Springfield, Mass., assignor to Quigley Furnace and Foundry Company, a Corporation of Massachusetts. Filed Sept. 22, 1913. Serial No. 791,173. (Cl. 110—104.)



In a system for conveying and burning pulverized fuel, the combination, with a furnace having a feed-hole, of a pulverized fuel reservoir having a normally closed bottom and open top, of an air-ejector located above the top of the said fuel and supplied with fluid under pressure and having its suction-pipe extended through the fuel near to the bottom of the reservoir to lift the fuel therefrom, a feed-nozzle connected with the feed-hole of the furnace and with an air-supply pipe, and the delivery pipe of the ejector being extended within the feed-nozzle near the feed-hole, and operating in connection with the feed-nozzle to drive the fuel into the combustion-chamber of the furnace.

1,191,204. SEWING-MACHINE ATTACHMENT FOR PRODUCING TUBES OR COVERING CORES. EVA LUCRETIA TILLOTSON, London, England. Filed Apr. 21, 1910. Serial No. 556,829. (Cl. 112—3.)

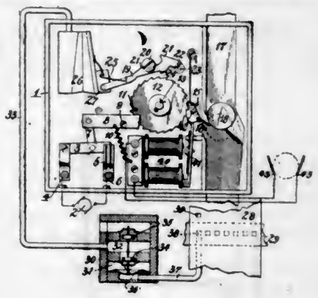


The combination with a U-shaped plate; of means at the extremity of one leg of the U adapted to attach said plate to a presser bar, the other leg of said U being provided with a screw receiving opening, a tubular member having a flat extension projecting along the last mentioned leg of the U and provided with an opening registering with the first mentioned opening, a guard plate having a lateral extension resting on said flat extension and provided with an opening registering with said openings, said guard plate partly surrounding said tubular member for a portion of its length, and a screw passing through the openings to hold said U-shaped plate, tubular member, and guard plate together and to secure the device to the cloth plate of a machine.

1,191,205. MECHANISM FOR CONTROLLING AUTOMATIC MUSICAL INSTRUMENTS. FRANK L. MCCORMICK, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Aug. 25, 1913. Serial No. 786,393. (Cl. 194—45.)

1. In a device of the character described, the combination of a switch, a single ratchet-wheel having a trip-pin controlling said switch, a feed pawl arranged to engage said wheel for turning it forwardly, a pneumatic for actuating said pawl, a spring tending to turn said wheel backwardly, and a coin-controlled detent also engaging said wheel.

2. In a device of the character described, the combination of a coin chute, a switch lever, a single ratchet-wheel having a trip-pin, an actuating lever connected with said switch-lever and arranged in the path of said trip-pin, a spring connected with said lever and tending to close said switch-lever, a feed pawl arranged to engage said wheel



for turning it forwardly, a pneumatic for actuating said pawl, a spring tending to turn said wheel backwardly, and a detent also engaging said wheel and having a trip-member which projects into said coin chute.

1,191,206. DOOR-KNOB. MARTIN MCDONALD, Washington, D. C., assignor of one-fourth to Patrick F. Martin, Baltimore, Md., and five twenty-fourths to Edward D. Talty, Washington, D. C. Filed Sept. 4, 1915. Serial No. 49,009. (Cl. 70—87.)

1. A door knob shank including longitudinal sections having complementary bores provided with ratchet teeth, one of the sections having a terminal transverse loop, and the other section having a projection embraced by said loop.

2. A door knob shank comprising longitudinal sections provided with complementary bores having ratchet teeth, one of the sections having a transverse opening, and the other section having a stud or projection extending through the opening and upset upon its outer end to hold the sections together.

3. A door knob shank comprising longitudinal sections provided with complementary bores having ratchet teeth, one section having a transverse terminal loop, the other section having a terminal projection embraced by said loop, and a stud and opening engagement between the sections at the other end of the shank, the stud being upset upon its outer end.

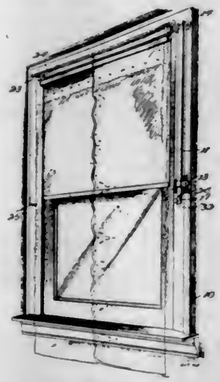
4. A door knob shank comprising longitudinal sections provided with complementary bores provided with ratchet teeth, said shank sections having complementary recesses leading to the ratchet teeth, and also provided with interfitting connecting portions.

5. A door knob shank comprising longitudinal sections provided with complementary bores provided with ratchet teeth, said shank sections also having complementary recesses leading to the ratchet teeth, one of the sections having a transverse terminal loop, the other section having a terminal projection embraced by the loop, and an open-

ing and projection engagement between the sections at the other end of the shank, the projection being upset on its outer end.

[Claim 6 not printed in the Gazette.]

1,191,207. COMBINED CURTAIN AND SHADE HOLDER. WILLIAM H. MCLESKEY, Nashville, Tenn. Filed Jan. 13, 1915. Serial No. 2,003. (Cl. 156—27.)



1. A device of the character described including a guide adapted to be attached to a window casing, a vertically adjustable supporting member mounted for turning movement in said guide, yieldable means carried by the guide at one extremity thereof and adapted to engage the member for holding it against turning movement, a head strip carried by said member and adapted to operatively support a window shade, and means normally gravitating to engage the said member for holding it at vertical adjustment.

2. A device of the character described including a sleeve adapted for attachment to a window casing, a lug struck from the sleeve and providing a resilient finger, a vertically adjustable supporting member mounted for turning movement in the sleeve and adapted to be engaged by said finger for holding it against rotation, a head strip carried by the sleeve and adapted to operatively support a window shade, and means freely engaging the said member for holding it at vertical adjustment.

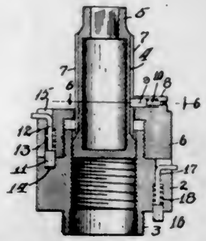
3. A device of the character described including a sleeve having a yieldable finger formed therefrom, and a vertically adjustable supporting member carried by the sleeve and shiftable to position for swinging movement while supported upon one end of the sleeve in engagement with said finger, the finger being adapted to engage the supporting member for holding it at adjustment in its swinging movement.

4. A device of the character described including a sleeve having a finger formed therefrom providing at its extremities attaching lugs for the sleeve, and a vertically adjustable supporting member carried by the sleeve and shiftable into engagement with said finger for swinging movement upon one end of the sleeve, the finger being adapted to yieldably engage the supporting member for holding it at adjusted position in its swinging movement.

1,191,208. LUBRICATING-CUP. PHILIP G. MARGETTS and CHARLES M. HUMMELL, Chicago, Ill. Filed Dec. 3, 1915. Serial No. 64,820. (Cl. 184—48.)

1. In a lubricating cup of the class described the combination with a base and plunger threaded therein, of a retaining collar threaded on said base to prevent detachment of the plunger therefrom, and locking mechanisms associated with said base and collar to lock said base to a member to which the same is attached and to lock the collar to said base to prevent retractive rotation of said plunger in said base.

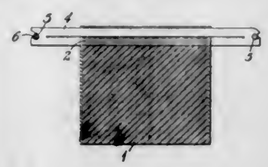
2. In a lubricating cup of the class described a base for attachment to a member to be lubricated, a plunger mounted therein to force lubricant therefrom into said member, means retaining said plunger attached to said base, and locking mechanism for positively locking said base to said member to prevent accidental detachment of the lubricating cup therefrom.



3. In a lubricating cup of the class described a base, a plunger threaded therein, a collar threaded on said base, locking means to interlock said collar with said base to prevent retractive rotational movement of said collar from said base, and ratchet means associated with said collar adapted to prevent retractive rotation of said plunger in said base.

4. A lubricating cup of the class described comprising a base, means forcing lubricant therefrom, a locking device to prevent accidental detachment of said means therefrom, and mechanism operating to lock said base from accidental detachment from a member to be lubricated.

1,191,209. INDUCTION-MOTOR WINDING. FREDERICK S. MARTIN, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 22, 1911. Serial No. 628,741. (Cl. 172—20.)



1. In a winding for dynamo-electric machines, the combination with a plurality of conductors having portions thereof spread apart and having notched ends, of binding rings seated in the notches and clamped therein by upset portions of the ends of the conductors.

2. A winding for dynamo-electric machines comprising a plurality of diamond-shaped coils having notched ends and binding rings seated in the notches and clamped therein by upset portions of the ends of the coils.

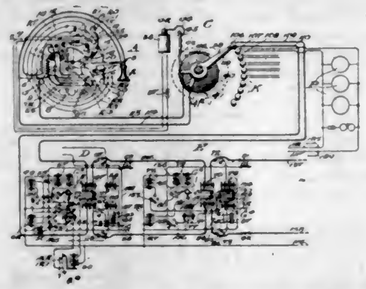
3. A winding for dynamo-electric machines comprising a plurality of overlapping short circuited diamond-shaped coils having notched end projections and binding rings seated in the notches and clamped therein by upset portions of the ends of the coils.

4. A dynamo-electric machine comprising a substantially cylindrical core member having peripheral slots, coils located in said slots and having notches in their ends that are inclined toward the center of the core and binding rings seated in the notches and clamped therein by upset portions of the ends of the conductors.

5. A winding for dynamo-electric machines comprising a plurality of overlapping short circuited diamond-shaped coils having end notches inclined toward the center of the winding and binding rings seated in the notches and clamped therein by upset portions of the ends of the coils.

[Claims 6 to 9 not printed in the Gazette.]

1,191,210. TELEPHONE INTERCOMMUNICATING AND SUPERVISORY SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1909. Serial No. 486,723. (Cl. 179—16.)



1. In a telephone system, a telephone line, devices at the substation thereof for receiving calls, means controllable from said substation for extending a call from said telephone line in the direction of a called subscriber, a plurality of lines, means at the substation of said telephone line for connecting the same directly with any one of said plurality of lines, a telephone on each one of said other lines, and means at the exchange or central station for seizing any one of said plurality of lines in response to a call from some other subscriber.

2. In a telephone system, a telephone line, a telephone on said line, devices at said telephone for receiving and sending calls, a plurality of other lines, a telephone on each one of said other lines, devices for extending calls to and from said other lines, and a switch at said first-mentioned telephone operative to open the line thereof and connect the said telephone with any one of said other lines.

3. In a telephone system, a telephone line, a telephone for said line, devices at said telephone for sending and receiving calls, another telephone line, a telephone on said other line, devices for extending calls to and from said other line, and a device at said first-mentioned telephone for switching the same into direct connection with said other telephone line.

4. In a telephone system, a telephone line, devices for extending calls to and from said line, another line, and means independent of said devices for extending connection directly between the substantion of said telephone line and said other line, said means provided with devices for automatically releasing it.

5. In a telephone system, a telephone line, a telephone set on said line, an individual interconnecting switch allotted to said telephone, suitable means for extending calls to and from said telephone line, and a plurality of lines terminating in the exchange, each of said other lines also terminating in said individual switch.

[Claims 6 to 25 not printed in the Gazette.]

1,191,211. STEERING AND REVERSING TILLER. CHRISTOPHER J. MEYER, Milwaukee, Wis., assignor to Evinrude Motor Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 1, 1915. Serial No. 11,415. (Cl. 115—18.)



1. A tiller provided with a releasing latch, and an operating handle, adapted, by rotation upon its own axis, to actuate the latch from one latching position to another on the opposite side of the axis about which the tiller swings.

2. The combination with a propeller supporting shaft, of a tiller in latch connection with said shaft, and a tiller operating handle having a longitudinally movable member operatively connected with the latch.

3. The combination with a propeller supporting shaft, of a catch connected therewith, a slide latch having an aperture to receive the catch and also provided with a set of catch engaging shoulders, and a tiller lever provided with a guide for the latch and having a handle connected with the latch and adapted to be manipulated to move the latch to positions for selective engagements of said shoulders with the catch.

4. A reversible boat propelling mechanism, including the combination of a propeller, a propeller supporting shaft adapted to rotate during reversing movements of the propeller, and a slide having an aperture to receive the upper end of said shaft, said slide being adapted to engage the shaft in either one of two positions of shaft and slide adjustment.

5. A reversible boat propelling mechanism, including a propeller supporting shaft provided at its upper end with an outwardly projecting catch, a tiller lever provided with a movable latch adapted to engage the catch on opposite sides of the shaft, and an operating handle, on the tiller lever, having an independent latch adjusting connection.

[Claims 6 to 11 not printed in the Gazette.]

1,191,212. GRASS CARPET. STANLEY G. MILLER, St. Paul, Minn., assignor to Crex Carpet Company, St. Paul, Minn., a Corporation of Delaware. Filed Sept. 13, 1915. Serial No. 50,317. (Cl. 139—9.)



1. In a grass carpet, the combination with a fabric having woof strands and warp strands, the woof strands being composed of fibers of undyed grass, of means for imparting a tone effect of said fabric comprising a spiral wrapping for said woof strands of a color different from said warp strands.

2. In combination with a fabric comprising warp strands and woof strands, the woof strands being composed of fibers of undyed grass, of means for holding said fibers together and for imparting a tone effect to said fabric consisting of threads wound spirally about said fibers in opposite directions and colored a different color from that of the warp strands of said fabric.

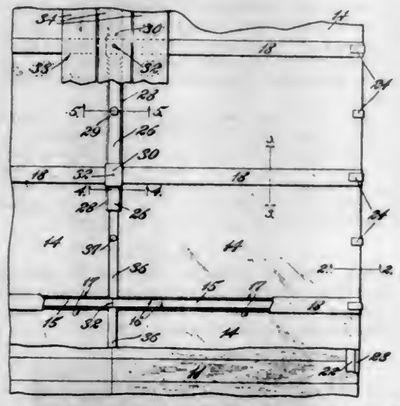
3. In combination with a fabric comprising woof strands and warp strands, the woof strands consisting of undyed grass fibers, of means for holding said fibers together in substantially cylindrical formation and for imparting a tone effect to said fabric, said means comprising wrappings consisting of threads wound spirally about said woof strands in opposite directions, and of a smaller diameter than said warp strands and colored a different color from said warp strands whereby a tone effect is imparted to said fabric depending upon the color and winding of said wrapping threads.

4. In a grass carpet in combination with a fabric comprising woof strands and warp strands, the woof strands being composed of undyed grass fibers, of color threads for imparting a tone effect to said fabric, said threads being wound spirally about said woof strands in opposite directions to form a double wrapping therefor, and being of a cotnrasting color to the color of said fibers and differing in color from the warp strands.

5. The herein described method of imparting tone effect to grass carpet, having woof strands of undyed grass fibers

arranged side by side, and warp strands interwoven with said woof strands, which consists of providing a spiral wrapping for said woof strands of a color different from the color of both said woof strand fibers and said warp strands, said wrapping being wound about said woof strands in opposite directions and arranged to hold said strands in substantially cylindrical formation.

1,191,213. METAL CAR-ROOF. ALBERT C. MURPHY, New York, N. Y., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Oct. 6, 1915. Serial No. 54,301. (Cl. 108—5.)



1. A car having a roof substructure in combination with metal roof sheets laid on said substructure crosswise of the car, metal ridge covers resting on said roof sheets in longitudinal alinement with the center line of said car and secured at their ends to said substructure, said ridge covers having pivot bosses at their middles and said roof sheets having pivot bosses registering with the pivot bosses of said ridge covers, and means for loosely securing the eaves ends of said roof sheets, whereby said roof sheets are retained on said substructure.

2. A car having a roof substructure in combination with metal roof sheets laid on said substructure crosswise of the car, metal ridge covers resting on said roof sheets in longitudinal alinement with the center line of said car, ridge caps overlying the ends of said ridge covers and secured to said substructure by means passing between the roof sheets, said ridge caps retaining said ridge covers in central alinement, said ridge covers having pivot bosses at their middles and said roof sheets having pivot bosses registering with the pivot bosses of said ridge covers, and means for loosely securing the eaves ends of said roof sheets, whereby said roof sheets are retained on said substructure.

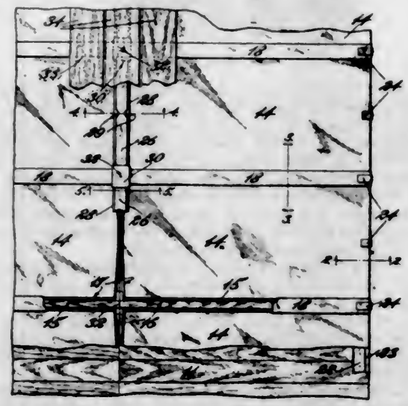
3. A car roof comprising roof sheets having upstanding flanges at their ridge ends provided with horizontal extensions adapted to lap over the ridge, pivot bosses at the middle points of said extensions, the bosses of overlapping roof sheets registering with each other, ridge seam covers straddling the overlapping extensions of the ridge flanges of oppositely arranged roof sheets, said seam covers having pivot bosses fitting the pivot bosses of said roof sheets, and means for retaining said ridge covers in central alinement on the car.

4. A car roof comprising spaced roof sheets having outwardly flanged up-standing ridge ends, pivots formed at the middle points of said ends, ridge seam covers straddling the ridge flanges of oppositely arranged roof sheets, said seam covers having pivot bearings formed at their middle points registering with the pivots of said ridge flanges, and means for retaining said ridge covers in central alinement on the car.

5. A car roof comprising roof sheets having up-standing flanges at their ridge ends, said ridge flanges having out-turned top margins provided with pivots at their middle points, ridge seam covers straddling the ridge flanges of oppositely arranged roof sheets, said seam covers having side walls which diverge from the ridge flanges of the roof sheets to provide wide spaces between their bottom edges, the top walls of said seam covers being provided at their middle points with pivot bearings for said ridge flanges, and means for retaining said ridge covers on the car, said ridge covers having out-turned flanges along the bases of their side walls which bear upon the roof sheets.

[Claims 6 to 9 not printed in the Gazette.]

1,191,214. METAL CAR-ROOF. ALBERT C. MURPHY, New York, N. Y., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Feb. 9, 1916. Serial No. 77,215. (Cl. 108—5.)



1. A flexible car roof comprising roof sheets having upstanding flanges at their ridge ends, the flanges of adjacent sheets approaching each other more closely at the middle than at the corners of the ridge ends of the sheets, ridge seam covers straddling the ridge flanges of oppositely arranged roof sheets, said seam covers having side walls adapted to touch said ridge flanges at their middle points only, and means for retaining said ridge covers in central alinement on the car.

2. A flexible car roof comprising roof sheets oppositely arranged on each side of the ridge and having upstanding flanges at their ridge ends, the ridge flanges of opposite roof sheets curving toward each other at the middle of their length, said ridge flanges having inturned top margins, ridge seam covers straddling the ridge flanges of oppositely arranged roof sheets, said seam covers having side walls provided with pivot bearings for said ridge flanges at their middle points, and means for retaining said ridge covers on the car, said ridge covers having outturned flanges along the bases of their side walls which bear upon the roof sheets.

3. A flexible car roof comprising loosely connected roof sheets having outwardly curved ridge ends, upstanding flanges along said ridge ends, ridge seam covers of inverted channel-shape covering said flanges, the side walls of said ridge seam covers having cylindrical depressions at their middle points constituting bosses adapted to bear against the curved ridge flanges of said roof sheets.

4. A flexible car roof comprising a series of pairs of oppositely disposed roof sheets extending from eaves to ridge and loosely connected along their side margins, the ridge ends of said roof sheets being curved outwardly and provided with marginal flanges, the middle points of the roof sheets of each pair being located in proximity to each other, ridge seam covers over the ridge flanges of said pairs of roof sheets, said ridge seam covers having inwardly projecting portions midway of their sides which are adapted to bear against said flanges near their middle points, whereby said roof sheets can pivot on their mid-lines against each other and against said inwardly projecting portions of the ridge seam covers.

1,191,215. KEY-RING SUPPORT. JAMES C. NAUGHTON, Rochester, N. Y. Filed Mar. 17, 1916. Serial No. 84,839. (Cl. 24—3.)



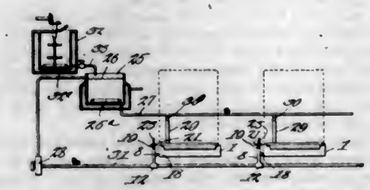
1. An article holder comprising in combination an integral body member of flat form the longitudinal axis of which when in operative position extends in a horizontal direction and is provided with down-turned hook portions extending to one side of said body member, and an intermediate upturned supporting hook for detachably receiving the article to be supported extending wholly from the opposite side of said body member.

2. An article holder comprising in combination an integral body member of flat form the longitudinal axis of which when in operative position extends in a horizontal direction and is provided with oppositely disposed attaching hooks at the ends thereof the latter extending to one side of said body member, and an intermediate hook for detachably receiving the article to be supported extending wholly from the opposite side of said body member.

3. An article holder comprising in combination a cambered body member the longitudinal axis of which when in operative position extends in a horizontal direction and is provided with suitable attaching clips near the ends thereof, an intermediate supporting hook for detachably receiving the article to be supported, and a flexible sheath suspended from said body member upon both sides of said supporting hook.

4. An article holder comprising in combination a cambered body member the longitudinal axis of which when in operative position extends in a horizontal direction and is provided with suitable attaching clips near the ends thereof, an intermediate supporting hook for detachably receiving the article to be supported, and a flexible sheath formed of front and back flaps of unequal length suspended from said body member upon opposite sides of the said supporting hook.

1,191,216. SIZING-TANK REGULATOR. WALTER A. NIVLING, Arlington, Mass. Filed Dec. 22, 1914. Serial No. 878,581. (Cl. 91—31.)



1. In an apparatus for sizing yarn, a size box; a constant level device comprising a casing including a partition, an outlet, and an inlet communicating with the size box; a gate slidable in the casing and coöperating with the partition to define a level in the size box; means for operating the gate to adjust the level in the size box; and means for guiding the yarn through the size box.

2. In apparatus for sizing yarn, a size box; a constant level device comprising a casing including a partition and opposed guides, the casing having an outlet and being provided with an inlet communicating with the size box; a gate located between the inlet and the outlet and slidable in the guides, the gate coöperating with the partition to define a level in the size box; means for moving the gate in the guides to adjust the level of the contents of the size box; and means for guiding the yarn through the size box.

3. In a device for sizing yarn, a size box having an outlet opening located at a distance below the desired level of the contents of the size box; a casing having an inlet opening communicating with the outlet opening of the size box and having a discharge opening from which the excess size in the box may flow; adjustable means within the casing for regulating the level of the size within the casing and the box; and means for guiding the yarn through the box at a predetermined distance from the bottom of the box.

4. An apparatus for sizing yarn comprising a receptacle for sizing liquid, means for supplying liquid thereto in excess of the amount used, means for controlling the level of the liquid in the receptacle, said level controlling means comprising a tank having an inlet opening communicating with the receptacle and a discharge opening, a partition across the tank between the inlet and the discharge openings, said partition having an opening at its bottom and also having an opening at a higher elevation, a gate for closing the opening through the bottom of the partition, a second gate for closing the second mentioned opening through the partition, vertical guides for the second gate, a threaded member carried by the gate, an adjusting screw passing through the threaded member and having its lower end in engagement with the tank whereby the gate may be adjusted in its guides or the gate and the adjusting screw may be lifted bodily from the guides and means for guiding the yarn through the receptacle.

5. An apparatus for sizing yarn comprising a receptacle for sizing liquid, means for supplying liquid thereto in excess of the amount required, means for controlling the level of the liquid in the receptacle, said level controlling means comprising a tank having an inlet opening communicating with the receptacle and a discharge opening, a partition across the tank between the inlet and the discharge openings, said partition having an opening at a height somewhat above the bottom of the tank, a gate for closing the opening through the partition, vertical guides for the gate, a threaded member carried by the gate, an adjusting screw passing through the threaded member and having its lower end in engagement with the tank whereby the gate may be adjusted in its guides or the gate and the screw may be lifted bodily from the guides; and means for guiding the yarn through the receptacle.

[Claims 6 to 9 not printed in the Gazette.]

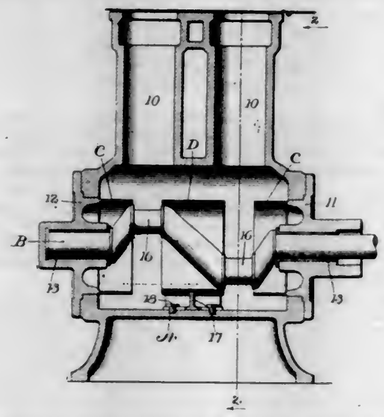
1,191,217. OIL-SPLASH SHIELD FOR ENGINE-CRANK CASINGS. ERIC HERMAN ODERMAN, Waynesboro, Pa., assignor to Frick Company, Waynesboro, Pa., a Corporation. Filed Nov. 20, 1915. Serial No. 62,568. (Cl. 184—11.)

1. The combination with an engine crank case of oil splash shields consisting of cylindrical parts surrounding the portions of the crank-shaft between the wrists thereof and supported from the crank casing, substantially as set forth.

2. In an engine, the combination with the crank casing and a crank-shaft mounted therein, of oil splash shields also mounted in said crank casing and each arranged to surround a crank between the wrists or bearings thereof, the central or intermediate shield being mounted to have an independent longitudinal adjustment in relation to the crank-shaft, substantially as set forth.

3. In an engine, the combination of an oil-containing crank casing, a crank-shaft mounted therein, oil splash shields in the form of annular flanges surrounding the ends of said crank shaft adjacent to the respective heads of the crank casing and secured to said heads, and another

oil splash shield of cylindrical form surrounding the central portion of said crank-shaft, and mounted on an



independent support within said crank casing, substantially as set forth.

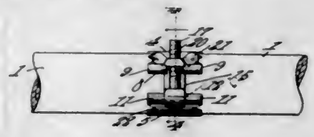
1,191,218. COLLAR-SUPPORTER. ODILE LEMAIRE PAYNE, Mount Vernon, N. Y. Filed Jan. 10, 1916. Serial No. 71,176. (Cl. 2—91.)



1. A support for a flexible and relatively limp collar comprising inclined spring supporting arms connected at the bottom by a loop secured to the base portion of the flexible and relatively limp collar and extending from said base portion substantially the full height of the collar to the upper edge portion thereof, and a substantially continuous, resilient spring supporting arm extending from the upper end of each of said inclined spring supporting arms projecting in opposite directions and terminating in free ends secured to the upper edge portions of the collar to thereby provide substantially continuous resilient spring supports for the upper edge of the otherwise limp and non-self-sustaining collar and curved longitudinally to fit the curvature of the neck.

2. A support for a flexible and relatively limp collar comprising upstanding spring supporting arms connected at the bottom by a loop secured to the base portion of the flexible and relatively limp collar and substantially continuous, resilient spring supporting arms extending in opposite directions from the upper ends of the upstanding spring supporting arms having free ends and secured to the upper edge portions of the collar to thereby provide substantially continuous resilient supports for the upper edge of the otherwise limp and non-self-sustaining collar and curved longitudinally to fit the curvature of the neck, the upstanding spring supporting arms diverging from the loop connecting the lower ends thereof to thereby render said arms freely yieldable toward each other to allow for contractive movements of the collar and provided with reverse bends on the upper ends thereof at the junctions with the oppositely extending spring supporting arms.

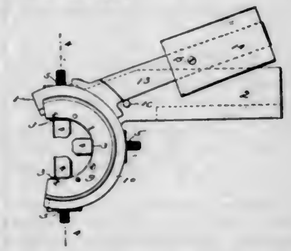
1,191,219. HOSE-CLAMP. CHARLES PELTER, Walla Walla, Wash., assignor of one-half to John L. Eggers, Walla Walla, Wash. Filed Nov. 18, 1915. Serial No. 62,175. (Cl. 137—28.)



1. A hose coupling comprising relatively movable members, one of which is provided with a tongue extended toward the other member; and a pivoted latch forming a detachable connection between the members, the latch having a pivoting eye provided with a cam edge engaging the tongue.

2. In a device of the class described, an annular clamp; a latch pivoted to one end of the clamp; and a wing nut threaded onto the latch, the other end of the clamp having ears against which the nut bears, the ears being extended to engage the periphery of the nut and to lie in the path of the wings on the nut.

1,191,220. AUTOMATIC BACK-REST. GUSTAF E. PETERSON, Hartford, Conn. Filed Apr. 15, 1916. Serial No. 91,312. (Cl. 82—39.)



1. A back rest having a yoke shaped body, radially arranged plungers loosely supported by the body, means for varying the length of the plungers, springs for thrusting the plungers outward, and a weight for moving the plungers inward.

2. A back rest having a yoke shaped body, radially extensible plungers loosely supported by the body, means for increasing or diminishing the length of the plungers, springs for thrusting the plungers outwardly, a cam plate for forcing the plungers inwardly, and a weight mounted on and adapted to turn the cam plate.

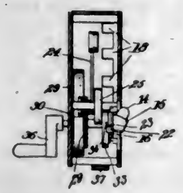
3. A back rest having a yoke shaped body, radially arranged plungers loosely supported by the body, means for adjusting the inner ends of the plungers independently of the body part of the plungers, springs for thrusting the plungers outwardly, a cam plate for forcing the plungers inwardly, and a weight for turning the cam plate and moving the plungers radially inward.

4. A back rest having a body, radially arranged extensible plungers loosely supported by the body, means for increasing or diminishing the length of the plungers, springs for thrusting the plungers outward, and a weight for moving the plungers inward.

5. A back rest having a yoke-shaped body, radially arranged sleeves loosely supported by the body, studs loosely carried by the sleeves, means for adjusting the studs longitudinally with relationship to the sleeves, means for thrusting the sleeves outwardly, and a weight for moving the sleeves and studs inwardly.

[Claim 6 not printed in the Gazette.]

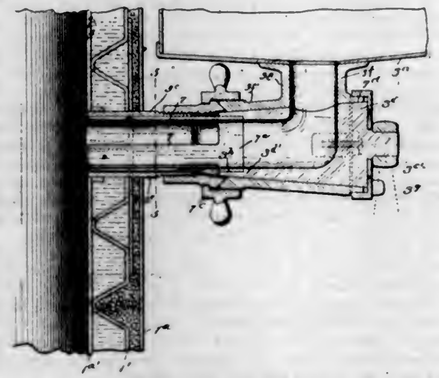
1,191,221. ALARM FOR REFRIGERATOR-PANS. ERNST PETTERSON, Astoria, N. Y. Filed Apr. 20, 1915. Serial No. 22,722. (Cl. 116—15.)



1. The combination with a clock movement including an escapement and a clapper carried thereby, of a spring pressed lever having means for locking the clock movement when the lever is in normal position, a gravity pawl carried by said lever and having an inclined path of movement, and a reciprocating member having a series of ratchet teeth adapted to engage the pawl and move the lever for releasing the clock movement when said reciprocating member is moved in one direction and for moving the pawl independently of the lever when said reciprocating member is moved in the opposite direction.

2. The combination with a clock movement including a clapper, of a lever having means for locking the clock movement when in normal position, said lever having an inclined pocket with a slot in its vertical wall, a gravity pawl arranged in said pocket and having a tooth extending through said slot, and a reciprocating member having ratchet teeth adapted to engage the tooth on the pawl for moving the lever to release the clock movement when the reciprocating member is moved in one direction and for moving the pawl independently of the lever when said reciprocating member is moved in the opposite direction.

1,191,222. FREEZER APPARATUS. LEROY S. PROUTS, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of New Jersey. Filed Mar. 21, 1910. Serial No. 550,644. (Cl. 137—21.)



1. In a freezer mechanism, the combination of a freezing cylinder, a tank for holding the material to be frozen, a conduit leading from said tank to said freezing cylinder, and a valve mechanism movably mounted in said conduit and provided with a device arranged to be moved therein by said valve mechanism.

2. In a freezer mechanism, the combination of a freezing cylinder, a tank for holding the matrial to be frozen, a conduit leading from said tank to said freezing cylinder, and a valve mechanism rotatably mounted in said conduit and provided with a plate extending longitudinally of said conduit and arranged to be revolved therein by said valve.

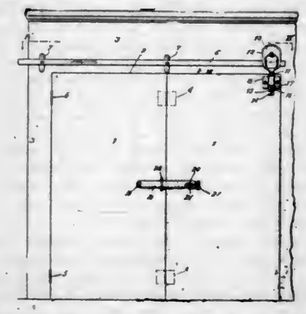
3. In a freezer mechanism, the combination of a freezing cylinder, a tank for holding the material to be frozen, a conduit leading from said tank to said freezing cylinder, and a valve mechanism rotatably mounted in said conduit and provided with a plate extending longitudinally of said conduit and arranged to be revolved therein by said valve, the said plate being arc-shaped in cross section and closely fitting the inner wall of said conduit.

4. The combination with a freezing mechanism having a cylinder and a tank for holding the material to be frozen, of a conduit leading from said tank to said cylinder comprising a member extending horizontally from said cylinder and a member extending at right angles to said horizontal member, a valve arranged in the elbow between said horizontal and vertical members for controlling the flow of material through said conduit, and a series of plates connected with said valve extending longitudinally of said horizontal member of the conduit and closely fitting its inner walls and arranged to be revolved by said valve.

5. The combination with a freezing mechanism having a cylinder and a tank for holding the material to be frozen, of a conduit leading from said tank to said cylinder comprising a member extending horizontally from said cylinder and a member extending at right angles to said horizontal member, a valve arranged in the elbow between said horizontal and vertical members for controlling the flow of material through said conduit, and a series of plates connected with said valve extending longitudinally of said horizontal member of the conduit and closely fitting its inner walls and arranged to be revolved by said valve, the free ends of said plates extending approximately to the inner end of said horizontal member of the conduit.

[Claims 6 to 9 not printed in the Gazette.]

1,191,223. DOOR STRUCTURE. THOMAS V. PLICE, Ashland, Ohio, assignor to W. V. B. Topping, Ashland, Ohio. Filed Oct. 25, 1915. Serial No. 57,700. (Cl. 20—20.)

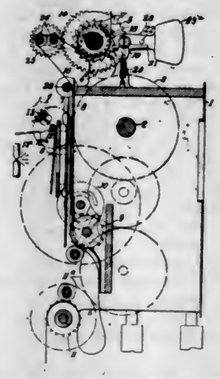


1. In a door structure, the combination of a suitable support; a two-part door, one part of which is hinged to such support and the other part of which is hinged to said first-named part; a hanger, a track fixed with relation to said support and parallel with the latter throughout its major portion, the end portion being spaced from the wall a distance equal to the sum of the two door thicknesses plus the extent of outward projection of the hanger, and curved inwardly to connect with said major portion on a radius substantially equal to the distance of said end portion from the wall and about a center in line with the axis of the hinged section, but in the plane of the track; and said hanger secured to said second-named door part, movable upon said track.

2. In a door structure, the combination of a suitable support; a two-part door, one part of which is hinged to such support and the other part of which is hinged to said first-named part; a track fixed with relation to said support; and a member secured to said second-named door part, movable upon said track; said track for the greater part of its length being parallel to the closed position of the door but being curved outwardly from the support

toward the rear, said curved portion of the track being limited both in its length and in its projection transversely to the main portion to the extent necessary to allow the door to assume its doubled and folded back position.

1,191,224. SAFETY DEVICE FOR MOTION-PICTURE-PROJECTING MACHINES. NICHOLAS POWER, Brooklyn, N. Y., assignor to Nicholas Power Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 6, 1913. Serial No. 740,379. (Cl. 88—17.)



1. In a motion picture projecting machine, the combination of successive film feeding devices operated to maintain a loop of film between them and for varying the dimensions of said loop, means for driving said devices, means for rendering one of said devices inoperative, said means having control mechanism comprising a film-engaging member normally engaging said film in the loop thereof and operating upon an abnormal variance in the size of the loop to render said driving means inoperative.

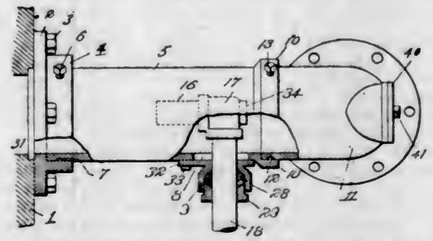
2. In a motion picture projecting machine, the combination of successive film feeding devices operated to maintain a loop of film between them, means for driving said devices, means for rendering one of said devices inoperative, and means for controlling said last named means comprising a film-engaging member positioned to be normally engaged by the film in the loop thereof and operating upon an abnormal enlargement of the loop to render said driving means inoperative.

3. In a motion picture projecting machine, the combination of successive film feeding devices operated to maintain a loop of film between them, means for driving said devices, means for rendering one of said devices inoperative, and means for controlling said last named means comprising a film-engaging member positioned to be engaged by the film in the loop thereof and a connection between said film-engaging member and said means to operate the latter upon movement of said connection, said film-engaging member being constructed to maintain its engagement with said film during a limited variance in the size of said loop without moving said connecting member.

4. In a motion picture projecting machine, the combination of successive film feeding devices for feeding the film across a path of light, means controlled by said film feeding devices for cutting off said light, means for driving said film feeding devices to maintain a loop of film between them, said driving means comprising a main driving shaft having geared driving connections with said film feeding devices, means for rendering one of said devices inoperative comprising a member adapted to engage and stop one element of said geared driving connections, and means for actuating said last named means comprising a member to be engaged by said loop of film and having a mechanical connection with said last named member.

5. In a motion picture projecting machine, the combination of successive film feeding devices for feeding said film across the path of light, means for cutting off the light from the film, means for driving said devices to maintain a loop of film between them, said driving means comprising a main driving shaft having geared driving connections with said film feeding devices, means for rendering said devices inoperative and simultaneously cutting off said light, comprising a member adapted to engage and stop one element of said geared driving connections, and means for controlling said last named means comprising a film-engaging member having direct mechanical connection with said last named member.

1,191,225. PULVERIZED-FUEL BURNER. WIRT S. QUIGLEY, New York, N. Y., assignor to Quigley Furnace and Foundry Co., a Corporation of Massachusetts. Filed Oct. 8, 1913. Serial No. 794,038. (Cl. 110—104.)



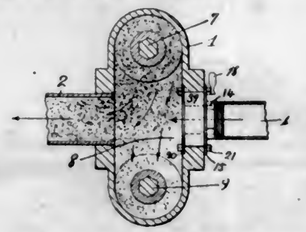
1. A pulverized fuel feeding device composed of standard elements capable of adjustment to suit different angles of connection to air-and-fuel-supply pipes and supplemental-air-supply pipes having in combination a flanged collar plate adapted to be fastened to a furnace wall, radial set screws in said collar, a main tubular section adapted to be inserted in said collar and grasped by said setscrews, provided with a side opening and with a bell mouthed flange at its outer end, radial setscrews in said bell mouthed flange, an elbow section adapted to be inserted in said bell mouthed flange and grasped by said setscrews, and a fuel feeding pipe passing through said side opening.

2. A pulverized fuel feeding device composed of standard elements capable of adjustment to suit different angles of connection to air-and-fuel-supply pipes and supplemental-air-supply pipes having in combination a flanged collar plate adapted to be fastened to a furnace wall, radial set screws in said collar, a main tubular section adapted to be inserted in said collar and grasped by said setscrews, provided with a side opening and with a bell mouthed flange at its outer end, radial setscrews in said bell mouthed flange, an elbow section adapted to be inserted in said bell mouthed flange and grasped by said setscrews, and a fuel feeding pipe passing through said side opening, said elbow section being provided with a peephole in line with the interior of the main section.

3. A pulverized fuel feeding device having in combination a main tubular section with a side inlet, means for rotatably securing said section to a furnace wall, a plate detachably fastened to said tubular section over said side opening, a stuffing box carried by said plate, a fuel feeding pipe passing through said stuffing box, an air supply connection and means for rotatably securing the same to the rear end of the main tubular section.

1,191,226. ADJUSTABLE AIR-BLAST APPARATUS. WIRT S. QUIGLEY, New York, N. Y., assignor to Quigley Furnace and Foundry Co., a Corporation of Massachusetts. Filed June 12, 1914. Serial No. 844,831. (Cl. 110—104.)

1. In an apparatus for feeding finely divided fuel the combination with a substantially horizontally disposed air conduit having an enlargement forming a chamber, and means for dropping a stream of finely divided fuel vertically through said chamber substantially at right angles to the axis of the air conduit, of a nozzle for the inlet side of the conduit enlargement, a source of compressed air at constant pressure connected to the inlet conduit, means for varying the area of opening of the nozzle, and independent means for removing any of the material which drops below the level of the nozzle.

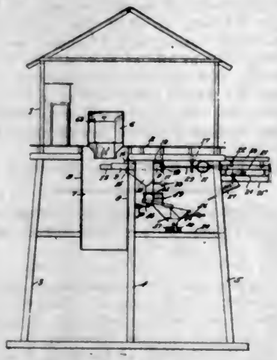


2. In an apparatus for feeding finely divided fuel the combination with a substantially horizontally disposed air conduit having an enlargement forming a chamber, and means for dropping a stream of finely divided fuel vertically through said chamber substantially at right angles to the axis of the air conduit, of a nozzle for the inlet side of the conduit enlargement, a source of compressed air at constant pressure connected to the inlet conduit, an iris shutter located in the extreme outer end of said nozzle, and independent means for removing any material which may fall below the level of said nozzle.

3. In an apparatus for feeding finely divided material by means of an air blast the combination of a vertically arranged fuel conduit, means for dropping a stream of the material down through said conduit, oppositely disposed air inlet and discharge conduits opening through the side walls of the conduit, and means for varying the area of the inlet opening together with independent means for removing any of the material which falls below the level of the air inlet and discharge openings.

4. In an apparatus for feeding finely divided material by means of an air blast the combination of a vertically arranged fuel conduit, means for dropping a stream of the material down through said conduit, oppositely disposed air inlet and discharge conduits opening through the side walls of the conduit, and an iris shutter located at said inlet opening together with independent means for removing any of the material which falls below the level of the air inlet and discharge openings.

1,191,227. MEANS FOR SAMPLING AND CHECKING MINERS' COAL. ERSKINE RAMSAY, Birmingham, Ala. Filed Apr. 6, 1914. Serial No. 830,092. (Cl. 214—1.)



1. In a sampling mechanism, in combination, a tipple for mine cars, manually and freely controllable means to catch a sample of any desired portion of the falling material from a mine car, and means to receive the sample from said catching means and grade it for size, substantially as described.

2. In a mechanism for sampling car loads of material, in combination, a car dump, a sample collecting means to catch a part of the falling material and withdraw it from said chute, and means to manually and freely manipulate said means to vary at will the point at which said sample is taken.

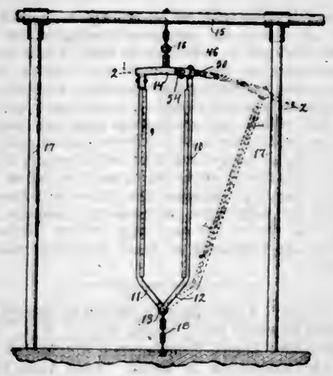
3. In a mechanism for sampling car loads of material, in combination, a car dump, means to collect a sample of the material discharged by each car over said dump, a multiple compartment receptacle, selective means to divert the sample into any desired compartment of said receptacle, and means to treat the samples collected in said several compartments separately.

4. In a sampling mechanism, in combination, means for dumping mine cars, sample catching means controllable to act on different parts of the material dumped from the mine car, and means to receive the sample from the catching means and grade it for size.

5. In a mechanism for sampling car loads of material, in combination, cars having designating indicia, means to collect a sample of the material dumped from the car, a chute to receive the sample, a screening means onto which the chute discharges the sample, and sample containers adapted to be marked to designate the car from which the samples are taken and to keep separate the screened from the unscreened material.

[Claims 6 to 15 not printed in the Gazette.]

1,191,228. STANCHION. ROBERT F. RASMUSSEN, Oshkosh, Wis., assignor to C. A. Libbey Company, Oshkosh, Wis., a Corporation of Wisconsin. Filed Feb. 10, 1916. Serial No. 77,371. (Cl. 119—150.)



1. In a stanchion, the combination of a hollow top bar and a movable side bar, extensible guides connected to the side bar and forming supports therefor, said guides being slidably mounted within said top bar, means for limiting the movement of said extensible guides, and means for locking the side bar to the top bar to close the stanchion.

2. In a stanchion, the combination, with a hollow top bar and a movable side bar, of extensible telescoping guides slidably mounted within said top bar operatively connected with said bars, means for limiting the movement of said extensible guides, and means for locking the side bar to the top bar to close the stanchion.

3. In a stanchion, the combination, with a hollow top bar and a movable side bar, of a pair of extensible telescoping guides, one of said guides having a groove and a longitudinally extending slot, the other of said guides telescoping within the groove and carrying a pin mounted in said slot to limit the movement of said guides with respect to each other, means connected to the top bar for engaging the first named guide to limit its outward movement, the second named guide being connected to the mov-

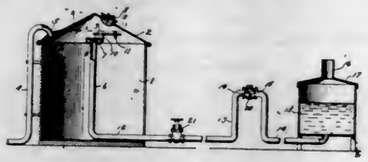
able side bar, and means for locking the side bar in closed position.

4. In a stall, the combination with the relatively fixed members of the stanchion, the movable side bar of the stanchion and the division standard of the stall, of means comprising oppositely disposed latches for locking said side bar to one of the fixed members of the stanchion and handles on said latches adapted to engage the division standard of the stall when the stanchion is open to prevent the animal from entering its head between the standard and the stanchion.

5. In a stanchion, the combination, with a transverse member of the stanchion and a movable side bar, of means for automatically locking said bar to said member, and means for guiding said bar into position comprising a guide slidably mounted within said transverse member and extending the length thereof, another guide slidably mounted within said first named guide and extending the length thereof and connected to said bar.

[Claims 6 and 7 not printed in the Gazette.]

1,191,229. SAFETY APPARATUS FOR OIL-WELLS. ROBERT H. REED, New Wilson, Okla., assignor of one-half to J. L. Long, New Wilson, Okla. Filed Oct. 28, 1914. Serial No. 869,036. (Cl. 220—121.)

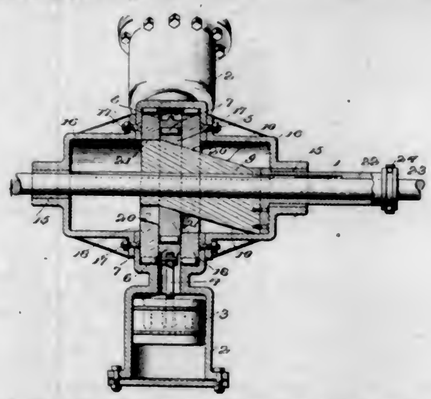


The combination with an oil storage tank, and a cover therefor, of means for supplying the oil to the tank, a standpipe disposed in said storage tank, a gas conducting pipe connected to the standpipe and leading from the tank, said gas conducting pipe provided with an elevated elbow intermediate its length, a water tank at the discharge end of the gas conducting pipe and into which gases from the storage tank are discharged, a valve within the elbow of the conducting pipe and disposed in a plane above the water level of the water tank, a second valve in the conducting pipe between the elbow and the storage tank, and an adjustable downwardly opening pressure valve at the top of the standpipe within the tank and controlling the admission of gases from the tank to the standpipe.

1,191,230. VARIABLE-ECCENTRIC MECHANISM. CHARLES CLAYTON RICH, Mount Vernon, N. Y., assignor to The Hydro-Kinetic Transmission Co., Mount Vernon, N. Y., a Corporation of Maine. Filed June 12, 1911. Serial No. 632,699. (Cl. 74—1.)

1. In mechanism of the type described, the combination of a casing, a drive shaft journaled in the ends of the casing, an eccentric surrounding said shaft and formed with an opening inclosing said shaft, an eccentric-shifting element mounted for longitudinal movement on said shaft but turning therewith and disposed within the opening of the eccentric and engaging the walls thereof whereby to shift the eccentric at right angles to the axis of the shaft, means for moving said element longitudinally, and independent bearing elements disposed at each side of said eccentric and having peripheral rolling engagement with the casing, the casing having portions engaging the outer side faces of said elements to prevent movement of the same and the eccentric longitudinally of the shaft.

2. In mechanism of the type described, a drive shaft, an eccentric case provided with extensions in line with the shaft and in which the shaft is journaled, the extensions being provided with end bearings for this purpose, an eccentric surrounding said shaft, an eccentric shifting element movable longitudinally on the shaft within the case extensions but compelled to turn with the shaft, said element passing through the eccentric, bearing rings mounted in the case approximately in line therewith and through which the eccentric shifting element also passes and has bearing, and anti-friction bearings interposed between the case and said rings.



3. In mechanism of the type described, a drive shaft, an eccentric case provided with extensions in line with the shaft and in which the shaft is journaled, the extensions being provided with end bearings for this purpose, an eccentric surrounding said shaft, an eccentric shifting element movable longitudinally on the shaft within the case extensions but compelled to turn with the shaft, said element passing through the eccentric, bearing rings mounted in the case approximately in line therewith and through which the eccentric shifting element also passes and has bearing, anti-friction bearings interposed between said case and the rings, and other bearings surrounding said eccentric.

4. In mechanism of the type described, a drive shaft, an eccentric having a cruciform opening surrounding the shaft, an eccentric shifting block splined on said shaft, said block being cruciform in cross section and working through said opening, a case in which the shaft is journaled, bearing rings mounted in said case in line therewith and on opposite sides of said eccentric, said bearing rings being also formed with cruciform openings through which the block extends, said bearing rings having rolling engagement with the case and means for moving said block longitudinally of the shaft.

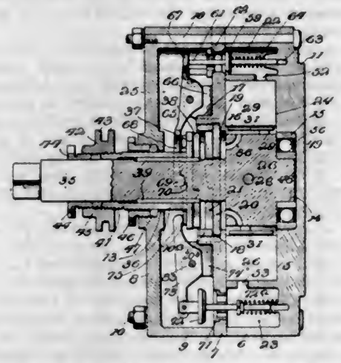
5. In mechanism of the type described, a drive shaft, an eccentric mounted upon the said drive shaft but shiftable in a plane at right angles thereto, an eccentric shifting element longitudinally movable on said shaft but turning therewith whereby to shift the eccentric at right angles to the shaft, bearing rings disposed around the eccentric shifting element and at each side of the eccentric, and an inclosing case having a body portion surrounding the rings and the lateral side walls of said body portion bearing against the rings, said case also including laterally extending reduced portions having shaft bearings at their ends.

[Claims 6 to 8 not printed in the Gazette.]

1,191,231. HYDRAULIC CLUTCH. CHARLES CLAYTON RICH, Mount Vernon, N. Y. Filed Mar. 3, 1913. Serial No. 751,797. (Cl. 192—18.)

1. A clutch including a driving element, a driven element, one of said elements containing a fluid chamber, means for admitting fluid from the fluid chamber to the space between the elements, means for compressing said fluid in said space, means for relieving the compression and permitting the ejection of the fluid from the space between the elements, and means for admitting air between said elements as the fluid is ejected.

2. A clutch including a driving element, a driven element spaced therefrom, one of said elements containing a fluid chamber, valve-controlled means for admitting air to the space between the driving and driven elements, valve-controlled means for admitting liquid from the fluid chamber to the space between the driving and driven elements and thereby ejecting the air, means for compressing the liquid between the driving and driven elements, and valve-controlled means for relieving the compression in said space and permitting the ejection of the liquid.



3. A clutch including a driving element, a driven element spaced therefrom to provide a space for the reception of a fluid medium, one of said elements containing a fluid chamber and one of the elements being provided with an inlet port and with a relief port, a valve controlling the communication between the inlet port and the fluid chamber, a valve controlling the communication between said chamber and the relief port, means for reversely actuating said valves to open the inlet port and close the relief port or close the inlet port and open the relief port as the fluid medium leaves said space, means for admitting air to the space between the driving and driven elements, and means for compressing the fluid medium within the space between the driving and driven elements.

4. A clutch including a driving element, a driven element spaced therefrom to provide a space for the reception of a fluid medium, one of the elements containing a fluid chamber, the driving element being provided with an inlet port and with an outlet port opening into the space between the elements and communicating with the fluid chamber, a valve controlling the outlet port and opening from the fluid chamber, means for compressing the fluid in the space between the elements to hydraulically connect the elements, and shiftable means for actuating said valve to relieve said compression to thereby disconnect the driving and driven elements.

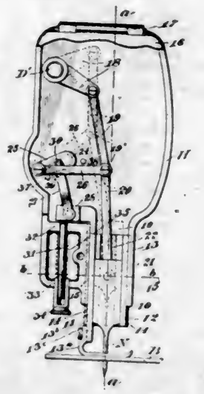
5. A clutch including a driving element, a driven element, means for admitting air between said elements, means for admitting a liquid medium between said elements thereby ejecting the air, means for compressing the liquid in the space between said elements, and means for relieving the compression between said elements and permitting the ejection of the said liquid medium.

[Claims 6 to 20 not printed in the Gazette.]

1,191,232. SEWING-MACHINE. FRANCIS H. RICHARDS, Hartford, Conn. Filed Jan. 24, 1901, Serial No. 44,547. Renewed Feb. 14, 1916. Serial No. 78,327. (Cl. 112—29.)

1. A stitch forming mechanism comprising the combination with a presser, a needle slide and a rock arm, of a series of pivoted links connecting the said rock arm and needle slide operatively reciprocating the needle slide when in a comparatively straight line, and a throw off device connected to said series of links and to the presser for bending the line of the links and raising the presser.

2. In a sewing machine mechanism, the combination with a reciprocatory needle and a presser, of a rock-arm, a needle slide, a pair of links pivoted together and to said arm and slide respectively and effective when said arm is at the limit of its stroke and the links are substantially in alinement for advancing the slide to the limit of its stroke, means for rendering the presser ineffectual, and means controlled thereby for deflecting the alinement of the links so that when the arm is at the said limit of its stroke the needle slide will be in a position short of its limit of stroke.



3. In a sewing machine mechanism, the combination with a reciprocatory needle and a presser, of a rock arm, a needle slide carrying the needle, a pair of links connecting said slide and arm and of sufficient length when occupying a position substantially in alinement to advance the slide to its lowest position when the arm is at its lowest position, means connected with the presser for shifting the same to an inoperative position, and means controlled by the shifting means for adjusting the links out of alinement for shortening the throw of the arm and controlling the limit of the down stroke.

4. The combination with a needle and means for actuating the same and comprising a movable member and a system of links connecting the two, of a presser, means for shifting the presser to an inoperative position and connected to said system of links for rendering the needle inoperative.

5. The combination with a driver, of a reciprocatory needle, a link pivoted to the driver, and a link pivotally connected to the needle, said links being pivoted together, a shifting device connected to said links adjacent to their interpivotal point, a presser, and means for moving the presser and operatively connected to said shifting device.

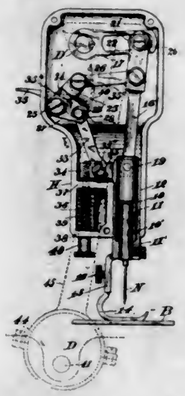
[Claims 6 to 20 not printed in the Gazette.]

1,191,233. SEWING-MACHINE. FRANCIS H. RICHARDS, Hartford, Conn. Filed Jan. 24, 1901, Serial No. 44,549. Renewed Feb. 18, 1916. Serial No. 79,220. (Cl. 112—29.)

1. In a sewing-machine, the combination, with a presser and a needle, of a shifting or throw-off device for simultaneously lifting the presser and moving the needle said elements being so organized that in its lowest position after the throw-off operation the point of the needle reaches a point at or near the bed-plate and below the top surface thereof but out of operative relation with the looper.

2. In a sewing machine embodying a looper, the combination with a presser and a needle, of presser lifting device and needle-stroke-changing device located and connected for lifting the presser and shortening the needle stroke so that the needle does not coöperate with the looper; said elements being so organized that when so prevented from coöperation the stroke of the needle may extend to the bed plate so as to enable the work to swivel upon the needle.

3. The combination, with a presser, of a needle, a rock arm constituting an actuator for said needle, of a slide-and-link connection between the actuator and needle, and a shifting device joined to said link by a pivoted link and also adapted to move the presser.

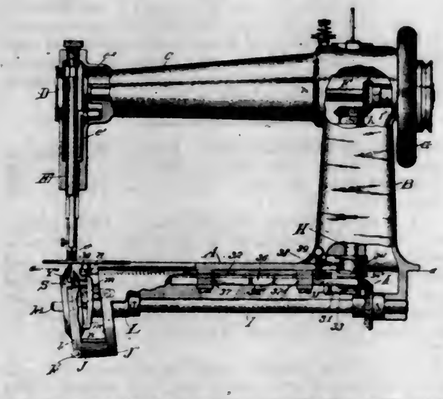


4. The combination, with a presser, a needle and an actuator for said needle embodying a pivoted body provided with ways, of a slide-and-link connection between the actuator and needle, and a shifting device comprising two crank portions which are joined to said link and to the presser by pivoted links.

5. The combination with a presser, a needle and an actuating member for said needle embodying a pivoted member provided with slideways, of a slide shiftable on said ways, a link connecting said slide and needle, a pair of connected cranks, a link connecting one of these to said slide and needle connecting link and a link connecting the other to the presser.

[Claims 6 to 22 not printed in the Gazette.]

1,191,234. ADJUSTABLE LOOPER FOR SEWING-MACHINES. FRANCIS H. RICHARDS, Hartford, Conn. Filed June 13, 1902. Serial No. 111,446. Renewed Apr. 11, 1916. Serial No. 90,521. (Cl. 112—22.)



1. In a sewing machine, the combination with needle mechanism, of a rotary looper embodying a body portion and a loop taker portion comprising a ring having therein a circular series of hooks, which loop taker portion is angularly adjustable into a plurality of positions relative to said body portion, means for maintaining said portions in each of their several positions of relative adjustment, and driving mechanism for engaging and rotating said body portion.

2. In a sewing machine, the combination with driving mechanism, of needle mechanism, a rotary two-part looper comprising a body portion in operative relation with said driving mechanism, and a loop-taker portion adjustable about the axis of rotation of the looper and relative to the body portion thereof and having a plurality of sets of loop-takers respectively effective in its several positions of adjustment, and means for maintaining the parts in their positions of adjustment.

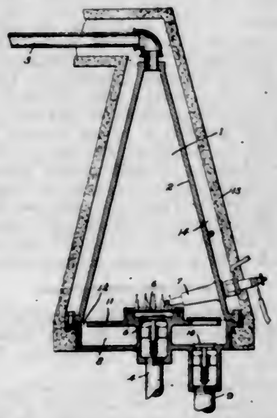
3. In a sewing machine, the combination with driving mechanism, of needle mechanism, a two part looper one part having operative connection with said driving mechanism and the other of said parts having a plurality of sets of loop takers and being adapted for adjustment relative to the part having operative connection with the driving mechanism, means for maintaining the said adjustment, a loop diverter coöperative with the looper, and means for shifting said stitch-changing device into and out of its coöperative position.

4. In a sewing machine, the combination with driving mechanism, of needle mechanism, a looper having a body portion operated by said driving mechanism and a portion adjustable relative thereto having a plurality of sets of loop takers, effective in the formation of different kinds of stitches, and so disposed that certain loop takers are located between other certain loop takers, means for maintaining the said adjustment for bringing certain loop takers into operative positions, and a loop diverter coöperative with the looper.

5. In a sewing machine, the combination with driving mechanism, of needle mechanism, a looper operated by said driving mechanism and having a body portion and loop taker having a plurality of sets of loop takers adjustable with reference to the body portion and effective in the formation of different kinds of stitches and so disposed that certain loop takers are located between other certain loop takers, means for maintaining the said adjustment, a loop diverter coöperative with the looper, and means for shifting said loop diverter into and out of its coöperative position.

[Claims 6 to 32 not printed in the Gazette.]

1,191,235. FLUID-PRESSURE GENERATOR. ERNST RICHTER, Cincinnati, Ohio. Filed Jan. 27, 1916. Serial No. 74,692. (Cl. 60—36.)



1. A fluid pressure generator comprising, a combustion-chamber having an inwall converging from its base to its top, an outlet pipe communicating with its top and adapted to convey expanded products therefrom to a device adapted to utilize them, an inlet-pipe leading to the base of the combustion chamber and adapted to convey a combustible mixture to the combustion chamber under pressure, a burner disposed between said inlet-pipe and the interior of the combustion-chamber, an igniting device disposed within the combustion chamber and adapted to ignite the combustible mixture coming into the combustion chamber through the burner, and an air entrance at the base of the inwall of the combustion-chamber independent of the inlet-pipe conveying the combustible mixture to the chamber, combined substantially as set forth.

2. A fluid pressure generator comprising, a combustion chamber having a smooth or uninterrupted interior surface, an outlet pipe communicating with its top and adapted to convey expanded products therefrom to a device adapted to utilize them, an inlet-pipe leading to the base of the combustion chamber and adapted to convey a combustible mixture to the combustion chamber under pressure, a burner disposed between said inlet-pipe and the interior of the combustion-chamber, an igniting device disposed within the combustion chamber and adapted to ignite the combustible mixture coming into the combustion chamber through the burner, and an air inlet-pipe entirely independent of the first-mentioned inlet-pipe and adapted to deliver air under pressure all around the base of the combustion chamber at the inwall thereof to jacket the core of burning gases within the combustion chamber, combined substantially as set forth.

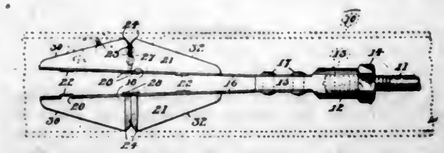
3. A fluid pressure generator comprising, a combustion chamber having a smooth or uninterrupted interior surface, an outlet pipe communicating with its top and adapted to convey expanded products therefrom to a device adapted to utilize them, an inlet-pipe leading to the base of the combustion chamber and adapted to convey a combustible mixture to the combustion chamber under pressure, a burner disposed between said inlet-pipe and the interior of the combustion chamber, an igniting device disposed within the combustion chamber and adapted to ignite the combustible mixture coming into the combustion chamber through the burner, an air inlet-pipe independent of the first-mentioned inlet-pipe adapted to deliver air under pressure to all around the base of the combustion chamber at the inwall thereof to jacket the core of burning gases within the combustion chamber, and a valve between said air-inlet pipe and combustion chamber and closing toward the air-inlet pipe but adapted to open when the pressure in the air-inlet pipe exceeds that in the combustion chamber, combined substantially as set forth.

4. A fluid pressure generator comprising, a combustion-chamber having an inwall converging from its base to its top, an outlet pipe communicating with its top and adapted to convey expanded products therefrom to a device adapted to utilize them, an inlet-pipe leading to the base of the combustion chamber and adapted to convey a combustible mixture to the combustion chamber under pressure, a burner disposed between said inlet-pipe and the interior of the combustion chamber, an igniting device disposed within the combustion chamber and adapted to ignite the combustible mixture coming into the combustion chamber through the burner, and an air inlet-pipe independent of the first-mentioned inlet-pipe adapted to deliver air under pressure to the base of the combustion chamber at the inwall thereof to jacket the core of burning gases within the combustion chamber, combined substantially as set forth.

5. A fluid pressure generator comprising, a combustion chamber having a smooth or uninterrupted interior surface, an outlet pipe communicating with its top and adapted to convey expanded products therefrom to a device adapted to utilize them, an inlet-pipe leading to the base of the combustion chamber and adapted to convey a combustible mixture to the combustion chamber under pressure, a burner disposed between said inlet-pipe and the interior of the combustion-chamber, an igniting device disposed within the combustion chamber and adapted to ignite the combustible mixture coming into the combustion chamber through the burner, an air-chamber disposed below the base of the combustion chamber, a passage leading therefrom to the combustion chamber all around the base of the inwall of the combustion chamber, and an air-inlet pipe connected with said air chamber independent of the first-mentioned inlet-pipe and adapted to convey thereto air under pressure to form an insulating jacket at the inwall of the combustion-chamber, combined substantially as set forth.

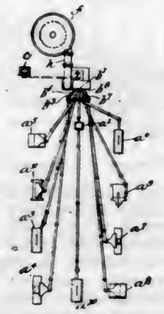
[Claims 6 to 8 not printed in the Gazette.]

1,191,236. FLUE-CLEANER. MICHAEL RIGÓ, Monaca, Pa. Filed Jan. 5, 1916. Serial No. 70,430. (Cl. 83—64.)



A flue cleaner comprising a head having a receiving socket at one end and an enlarged flattened portion at its other end, a push rod secured within the said socket, resilient normally outwardly flaring quadrilateral arms rigidly secured to the opposite face of said flattened head portion and having excisions at their opposite outer corners, scraper plates perpendicularly positioned longitudinally upon the outer faces of the said arms and having notches in their opposite outer corners, pairs of semi-circular plates secured together and positioned perpendicularly with respect to the said arms and plates and engaging within the said plate notches and having oppositely projecting sharpened edges overlying the sides of the said notches and positioned in alinement with the edges of the said excision.

1,191,237. SUCTION APPARATUS. MORITZ ROSENTHAL, Vienna, Austria-Hungary, assignor to the Firm Eta-Ventilatoren-Gesellschaft M. B. H., Vienna, Austria-Hungary. Filed Mar. 4, 1914. Serial No. 822,538. (Cl. 230—11.)



1. In a suction apparatus, the combination with a rotary exhaust or suction fan, of a plurality of throats communicating with the fan casing at different distances from the fan axis, for the purpose described.

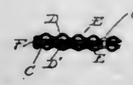
2. A suction apparatus comprising a plurality of suction conduits of different lengths, suction means, and connections between said conduits and suction means whereby air, etc., will be caused to travel at higher speed through a relatively long conduit than through a shorter one.

3. In a suction apparatus, the combination with a rotary exhaust or suction fan, and a plurality of conduits of different lengths, of means connecting said conduits with the fan casing, each conduit being connected with the casing at a distance from the axis of the fan depending upon the relative length of the conduit, for the purpose described.

4. In a suction apparatus, the combination of a rotary exhaust or suction fan, having a plurality of suction throats arranged at different distances from the axis of the fan, and a plurality of conduits of different lengths connected with throats relatively nearer the axis of the fan

connected wih hroas relaively nearer the axis of the fan than the throats connected with the longer conduits, for the purpose described.

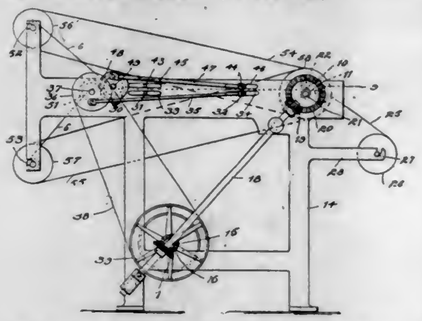
1,191,238. ELECTRICAL HEATING UNIT. FRANK E. SHAILOR, Detroit, Mich., assignor to Frank Kuhn, Detroit, Mich. Filed Oct. 25, 1913. Serial No. 797,186. (Cl. 219—63.)



1. An electrical heating unit comprising a resistor having an extended flat surface, flat insulating sheets disposed on opposite sides of said resistor, and an armor plate consisting of relatively thin corrugated metal sheets clamped to the exposed sides of the insulating sheets.

2. In an electrical heating unit consisting of a resistor, flat insulating sheets disposed on opposite sides of said resistor, and an armor plate consisting of corrugated sheets clamped to the opposite sides of the insulated sheets, the contacting parts of said corrugated sheet against the insulating sheets being embedded in said insulating sheets thereby increasing the heat conduction of the heater.

1,191,239. MACHINE FOR REMOVING THREADS FROM FABRIC. HENRY W. SHELP, Chicago, Ill. Filed Mar. 31, 1913, Serial No. 757,821. Renewed June 8, 1916. Serial No. 102,598. (Cl. 139—41.)



1. In a machine for removing threads from fabric, the combination of a wheel having teeth in the periphery thereof, a second wheel having teeth in the periphery thereof, meshing with the teeth of the first named wheel, said teeth being of substantially V-shape, with relatively dull edges, the arrangement being such that the teeth will break the longitudinal threads of a piece of fabric passed between the same, without injuring the transverse threads.

2. In a device of the character set forth, the combination of a pair of serrated cutting devices, having their teeth arranged to mesh a sufficient distance for breaking longitudinal threads of fabric passing between them without breaking the transverse threads.

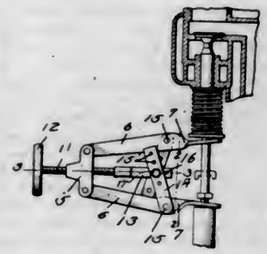
3. In a machine of the character set forth, the combination of a serrated disk or wheel, means for turning said disk or wheel, and a second disk or wheel mounted adjacent to and having its teeth meshing with the teeth of the first-named one and adapted to co-act therewith for severing threads in fabric.

4. In a machine of the character set forth, the combination of a serrated roller, means for turning said roller, and a plurality of serrated disks spaced from each other and co-acting with said serrated roller for cutting threads from fabric.

5. In a machine for making leaf hinges or the like, the combination of a plurality of cutters for cutting a sheet of fabric into strips, a serrated roller, means for turning said roller, a plurality of serrated disks mounted adjacent to the roller, and co-acting therewith for cutting the longitudinal threads from the centers of the strips, and means for removing the severed pieces of longitudinal threads from the transverse threads.

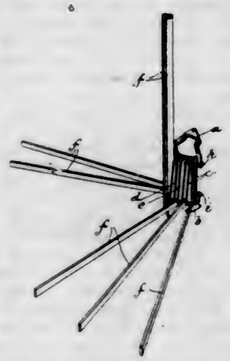
[Claims 6 and 7 not printed in the Gazette.]

1,191,240. VALVE-SPRING HOLDER. BERT R. SIMMONS, Kansas City, Kans. Filed July 28, 1915. Serial No. 42,408. (Cl. 29—87.1.)



A valve spring holder comprising a pair of members adapted to engage the ends of a spring, means for moving said members relatively to compress or expand the spring, and means adjustably connecting said members to said moving means whereby the initial relative positions of said members with respect to their operation by the moving means may be varied.

1,191,241. CLOTHES-DRYING RACK. ARTHUR D. SMITH, New York, N. Y., assignor to C. S. M. Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 13, 1915. Serial No. 14,077. (Cl. 68—34.)



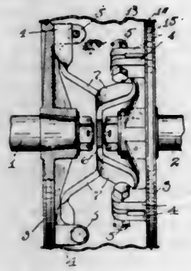
1. A clothes drying rack embodying therein a support and a plurality of rack arm units mounted upon said support each unit comprising a metal channel piece having substantially parallel side walls and a rack arm mounted between the sides of said channel piece by means of a rivet passing through the sides of said channed piece and an opening in said arm spaced away from the end thereof whereby said arm is connected directly with and supported directly from said channel piece and means positioned within each of said channel pieces adjacent the pivotal support of the arm carried thereby, the inner end of said arm being adapted to engage the under side of said means.

2. A clothes drying rack embodying therein a support and a plurality of rack arm units mounted upon said support each unit comprising a metal channel piece having substantially parallel side walls and a rack arm mounted between the sides of said channel piece by means of a rivet passing through the sides of said channel piece and an opening in said arm spaced away from the end thereof whereby said arm is connected directly with and supported directly from said channel piece and means positioned within each of said channel pieces adjacent the pivotal support of the arm carried thereby, the inner end of said arm being adapted to engage the under side of said means, each of said channel pieces being provided with abutments adapted to engage the abutment on adjacent channel pieces and prevent movement of said channel pieces relatively to each other.

3. A clothes drying rack embodying therein a support, a plurality of independent frames, a plurality of curved rods passing through all of said frames having their ends secured to said support whereby said frames are divergently extended from said support, said rods respectively being arranged adjacent the top and the bottom of said frames, and an arm mounted in each of said frames by means of a pivot passing through said frames below and in advance of the lowermost of said rods and spaced away from the end of said arm whereby the end of said arm is adapted to engage the under side of the lowermost of said rods.

4. A clothes drying rack embodying therein a support, a plurality of independent frames, a plurality of curved rods passing through all of said frames having their ends secured to said support whereby said frames are divergently extended from said support, said rods respectively being arranged adjacent the top and the bottom of said frames, and an arm mounted in each of said frames by means of a pivot passing through said frames and in advance of the lowermost of said rods and spaced away from the end of said arm whereby the end of said arm is adapted to engage the under side of the lowermost of said rods, each of said frames being provided with abutments adapted to engage the abutment on adjacent frames and prevent movement of said frames upon said rods.

1,191,242. UNIVERSAL COUPLING. HAROLD A. SOULIS, Brooklyn, N. Y., assignor of one-half to Wilbur T. Soulis, Brooklyn, N. Y. Filed May 1, 1914. Serial No. 835,605. (Cl. 64—13.)



1. The combination with two shafts having adjacently disposed ends; of a member disposed between such ends and having flexible arms formed integral therewith and extending alternately to either side of the plane of said member, each of such arms being connected to the adjacent one of such shaft ends, and such arms being disconnected from each other at their outer ends.

2. The combination with two shafts having adjacently disposed ends; of a plate-like member disposed between such ends and having radially extending flexible arms formed integrally therewith, such arms extending alternately to either side of the plane of said plate-like member, each of such arms being connected to the adjacent one of such shaft ends, and such arms being disconnected from each other at their outer ends.

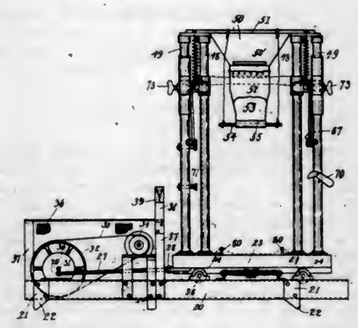
3. The combination with two shafts having adjacently disposed ends; of disks mounted upon the ends of said shafts; and a plate disposed between such ends and having radially extending flexible arms formed integrally therewith and extending alternately to either side of said plate, each of such arms being twisted and attached to the adjacent one of said disks.

4. The combination with two shafts having adjacently disposed ends; of a disk mounted upon the end of each of said shafts at right angles to the same; and a plate disposed between said disks and in parallelism therewith, said plate having a plurality of flexible, radially extending arms formed integrally therewith, and extending alternately to either side of said plate, each of such arms being twisted through ninety degrees and attached to the adjacent one of said disks.

5. The combination with two shafts having adjacently disposed ends; of equal sized disks mounted upon the end of each of said shafts at right angles to the same; a plate of substantially one-third the diameter of said disks disposed between said disks in parallelism therewith, said plate having a plurality of flexible radially extending arms formed integrally therewith and extending alternately to either side of said plate and each arm being twisted through ninety degrees, said plate and disks being so positioned that such arms are inclined toward said disks at an acute angle thereto, and means for attaching such arms to said disks.

[Claims 6 and 7 not printed in the Gazette.]

1,191,243. BAG-FILLING MACHINE. CHARLES F. STEHLIN, New Rochelle, N. Y. Filed Mar. 5, 1915. Serial No. 12,285. (Cl. 83—26.)



1. In a bag filling machine, a support for a bag to be filled whereby the bag is held in substantially vertical position, and means for imparting to said support and bag held thereby bodily recurrent lateral movement, the amplitude of such movement being substantially the same throughout the height of the bag, substantially as set forth.

2. In a bag filling machine, a support for a bag to be filled whereby the bag is held in substantially vertical position, means for imparting to said support and bag bodily recurrent lateral movement, the amplitude of such movement being substantially the same throughout the height of the bag, and means for damping such movement, substantially as set forth.

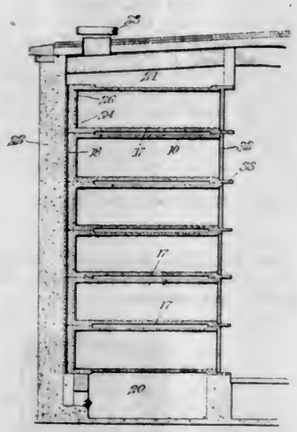
3. In a bag filling machine, a platform, means carried by said platform for holding a bag to be filled in substantially vertical position, and means for imparting bodily recurrent lateral movement to said platform, bag and holding means, the amplitude of such movement being substantially the same throughout the height of the bag, substantially as set forth.

4. In a bag filling machine, a platform, means carried by said platform for holding a bag to be filled in substantially vertical position, means for imparting bodily recurrent lateral movement to said bag, platform and holding means, the amplitude of such movement being substantially the same throughout the height of the bag, and means applied to said platform for damping such movement, substantially as set forth.

5. In a bag filling machine, a top support and a bottom support for a bag to be filled, said supports being connected together to move in unison, and means for imparting bodily recurrent lateral movement of substantially uniform amplitude to a bag and said supports, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,191,244. CRYPT. JAMES H. STEWART, York, Pa. Filed June 18, 1914. Serial No. 845,979. (Cl. 72—7.)



1. A crypt comprising a unitary hollow monolithic structure having a wall provided with a series of parallel flues, one of said flues being connected with and having communication with the interior of the crypt near the top and bottom thereof, the said crypt being otherwise closed to air circulation, whereby the draft through said flue communicating with said crypt will cause a circulation of air in the crypt.

2. A crypt comprising a unitary hollow monolithic structure having an end wall provided with a series of parallel flues, one of said flues being connected by separate passage-ways with the interior of the crypt near the top and bottom thereof, the said crypt being otherwise closed to air circulation, whereby the draft through said flue communicating with said crypt will cause a circulation of air in the crypt, and a series of parallel drainage passageways in said wall, one of said passageways communicating with the interior of said crypt at the bottom thereof.

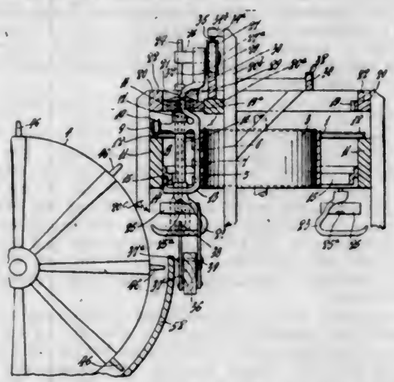
3. A crypt comprising a hollow structure provided with a series of ventilating passageways in its wall, one only of which communicates with the interior of said crypt, said crypt being provided with a drainage passageway and with spacing means at the ends thereof whereby the part intermediate the ends of said crypt will be spaced from adjoining crypts on all sides thereof and permit air circulation entirely around the crypt.

4. The combination of a series of separate similar crypts fitting together, the said crypts being provided with symmetrical spacing means around their ends and being also provided in corresponding walls with vertical registering ventilating passageways and drainage passageways.

5. A plurality of crypts each comprising a unitary monolithic structure closed at one end, having symmetrical spacing band like projections around its ends and provided with vertical ventilating passageways in the end wall extending through a band like projection, one of said passageways communicating with the interior of the crypt, the said crypts being adapted to be placed one on the other with the passageways registering.

[Claim 6 not printed in the Gazette.]

1,191,245. APPARATUS FOR EMPLOYMENT IN TREATING FLAX AND THE LIKE FIBERS. CHARLES SUTTIE, Auckland, New Zealand. Filed June 3, 1914. Serial No. 842,802. (Cl. 13—18.)



1. In apparatus for the treatment of fiber-bearing material, a horizontally arranged endless conveyer, a dressing drum located adjacent one stretch of said conveyer, and having two operating sections spaced apart, a holder for holding the material during its movement past both of said sections and attached to said conveyer, and means for turning the holder as it passes from one of said sections to the other.

2. In apparatus for the treatment of fiber-bearing material, a horizontally arranged endless conveyer, a dressing drum located adjacent one stretch of said conveyer, and having two operating sections spaced apart, a holder for holding the material during its movement past both of said sections and attached to said conveyer, means for turning the holder, and means for opening and closing the holder.

3. In apparatus for the treatment of fiber-bearing material, a horizontally arranged endless conveyer, a dressing drum located adjacent one stretch of said conveyer, and having two operating sections spaced apart, a holder for holding the material during its movement past both of said sections and attached to said conveyer, means for turning the holder, means for opening and closing the holder, and means for changing the position of the grip of the holder on the material.

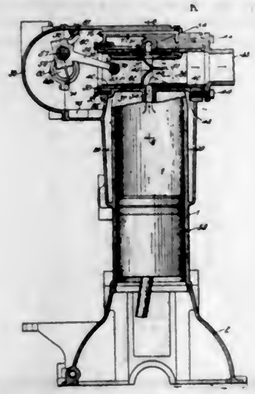
4. In apparatus for the treatment of fiber-bearing material, a horizontally arranged endless conveyer, a dressing drum located adjacent one stretch of said conveyer, a vertically disposed holder for the material having a hook at its lower end, means for gripping the material in the hook, and means for rotating the holder at desired intervals.

5. In apparatus for the treatment of fiber-bearing material, a horizontally arranged endless conveyer, a dressing drum located adjacent one stretch of said conveyer, a vertically disposed holder for the material having a hook at its lower end, means for gripping the material in the hook, means for rotating the holder at desired intervals, a non-circular block on said holder, and a surface coöperating with said block to prevent rotation of the holder excepting at the desired intervals.

[Claims 6 to 13 not printed in the Gazette.]

1,191,246. INTERNAL-COMBUSTION ENGINE. HARRY C. TILLOTSON, Chicago, Ill., assignor to Knight American Patents Company, Chicago, Ill., a Corporation of Illinois. Filed July 19, 1912. Serial No. 710,358. (Cl. 123—188.)

1. In an internal combustion engine, the combination of a cylinder having ports leading thereto, a piston within said cylinder, a pair of valve sleeves for controlling the admission and exhaust of the gases to and from said cylinder, means for reciprocating said valve sleeves, and a plurality of split rings surrounding said valve sleeves and held in stationary position on opposite sides of said ports.



2. In an internal combustion engine, the combination of a cylinder having circumferentially arranged ports leading thereto, a piston within said cylinder, a pair of valve sleeves for controlling the intake and outlet of the gases to and from said cylinder through said ports, means for reciprocating said valve sleeves, and a plurality of superposed rings arranged stationarily on opposite sides of said ports and around said valve sleeves.

3. In an internal combustion engine, the combination of a cylinder having intake and outlet ports, a piston within said cylinder, a plurality of slidable valve sleeves for controlling the intake and outlet of the gases to and from the said cylinder, means for reciprocating such valve sleeves, and a plurality of superposed split rings disposed stationarily around each of said valve sleeves, said rings forming a flexible stationary packing between said sleeves and said ports.

4. In an internal combustion engine, the combination of a cylinder having ports, a crank case below said cylinder, a piston within said cylinder, a pair of horizontally slidable valve sleeves for controlling the intake and exhaust of the gases to and from said cylinder, mechanism for reciprocating said valve sleeves, and a plurality of superposed split rings for packing said ports, said rings held so as to engage around the exterior of the valve sleeves.

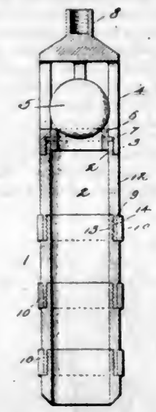
5. In an internal combustion engine, the combination of a cylinder having intake and exhaust ports, a piston within said cylinder, a gas admission valve sleeve operable at the top of said cylinder, a gas exhaust valve sleeve operable at the top of said cylinder, mechanism for reciprocating said valve sleeves, and a plurality of superposed rings stationarily mounted on opposite sides of said ports for engaging the outside surface of said valve sleeves.

[Claims 6 to 25 not printed in the Gazette.]

1,191,247. WORKING-BARREL VALVE. JAMES C. TIPPETT, Oil City, La. Filed May 10, 1915. Serial No. 27,180. (Cl. 103—63.)

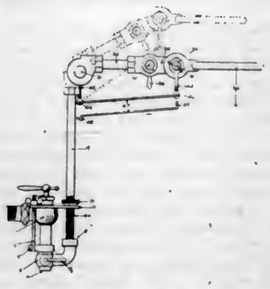
1. A valve of the class described including a cylindrical body portion provided with exterior annular grooves arranged at intervals, said body portion being composed of sections having interfitting male and female portions located at the said grooves and forming separable joints to permit the sections to be separated at the said grooves, and annular packing arranged in the said grooves.

2. A valve of the class described including a cylindrical body provided with exterior annular grooves arranged at intervals, said body being composed of sections and having interfitting male and female portions located at the said grooves and forming separable joints to permit the sections to be separated at the said grooves and cast iron packing rings arranged in the grooves and adapted to be



placed therein and removed therefrom when the sections are separated.

1,191,248. SHOWER-BATH APPARATUS. WARREN A. UPRIGHT, Los Angeles, Cal. Filed Sept. 7, 1915. Serial No. 49,326. (Cl. 4—26.)



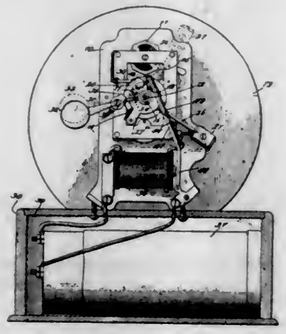
In a shower bath apparatus, a cock provided with a downwardly projecting discharge outlet and an upwardly projecting discharge outlet and a funnel-shaped intake, adapted to receive the discharge nozzle of a water supply faucet, a jointed pipe system consisting of a stationary member and a hinge-jointed vertically swingable member and a perforated yoke member hinge-jointed to said swingable member, all in circulatory connection with each other, and a regulating cock in said pipe system adjacent to said yoke member, and means for draining the water from said apparatus when not in use, and a pivoted rod connection between said stationary member and said yoke member adapted to maintain said yoke horizontally at all times irrespective of its vertical position and adjustment.

1,191,249. SELF-WINDING CLOCK. WILLIAM J. VAN OSDEL, Chicago, Ill., assignor of one-half to Louis Sperling, Chicago, Ill. Filed June 7, 1915. Serial No. 32,484. (Cl. 58—41.)

1. A self-winding clock embodying an operating shaft, gravity actuated means for actuating the shaft, electrically actuated means for returning the gravity actuated means, said electrically actuated means embodying spaced contacts and an additional contact disposed therebetween, said spaced contacts and said additional contact being movable into and out of engagement with each other, and provisions for causing sparking to take place between only

one of the said spaced contacts and the said additional contact.

2. A self-winding clock embodying an operating shaft, gravity actuated means for actuating the shaft, electrically actuated means for returning the gravity actuated means, said electrically actuated means embodying spaced contacts and an additional contact disposed therebetween, said spaced contacts and said additional contact being movable into and out of engagement with each other, and provisions for causing sparking to take place between only one of the said spaced contacts and the said additional contact, one of said contacts operating upon another of the contacts to cause the latter and the remaining contact to have a sliding engagement one with respect to the other.



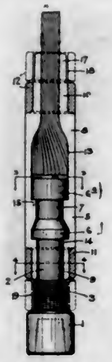
3. A self-winding clock embodying clock mechanism, said mechanism embodying a shaft, a ratchet wheel loosely connected with the shaft, a yielding connection between the shaft and wheel, said connection embodying an arm, a yielding member connected with and protected by the arm and having a portion spaced from said arm, and a pin adapted to contact with the yielding member to exert stress upon the same in a direction toward the arm, said arm and yielding member, and said pin being connected one with the shaft and the other with the ratchet wheel, a weighted actuating element, a pawl connected with the element and coöperating with the ratchet wheel for actuating the latter, and electro-responsive means for moving the weighted element from an inoperative to an operative position with respect to the ratchet wheel.

4. A self-winding clock, embodying clock mechanism, said mechanism embodying a shaft, a ratchet wheel loosely connected with the shaft, a yielding connection between the shaft and wheel, said connection embodying an arm, a leaf spring connected with and protected by the arm and having a portion spaced from said arm, and a pin adapted to contact with the yielding member to exert stress upon the same in a direction toward the arm, said arm and yielding member, and said pin being connected one with the shaft and the other with the ratchet wheel, a weighted actuating element, a pawl connected with the element and coöperating with the ratchet wheel for actuating the latter, and electro-responsive means for moving the weighted element from an inoperative to an operative position with respect to the ratchet wheel, said weighted element being moved a portion of its distance by its own momentum.

5. A self-winding clock embodying an operating shaft, a pivotally mounted weighted element for actuating the shaft, pawl and ratchet connections between the element and the shaft, and electro-responsive means for returning the said element, said electro-responsive means embodying spaced contacts and an intermediate element into and out of engagement with which both contacts are movable when the circuit of the electro-responsive means is made and broken, the said element operating to cause sparking to take place between said element and only one of the said spaced contacts.

[Claims 6 to 10 not printed in the Gazette.]

1,191,250. SWIVEL-SOCKET FOR OIL-WELLS. HENRY B. WALKER, Lancaster, Ohio. Filed Jan. 7, 1916. Serial No. 70,869. (Cl. 255—26.)



1. In a swivel rope socket, the combination of a mandrel member having outwardly projecting collars and a longitudinally divided bowl member having corresponding inwardly projecting collars, and means having integral fastening means engaging the bowl member to secure the sections thereof together.

2. In a rope socket, the combination of a mandrel member having a coupling at its base and outwardly projecting collars and a longitudinally divided bowl member having corresponding inwardly projecting collars, and above the same a rope socket cavity and means having integral fastening means engaging the bowl member to secure the sections thereof together.

3. In a swivel rope socket, the combination of a mandrel member having outwardly projecting collars and a longitudinally divided bowl member having corresponding inwardly projecting collars, and nuts engaging the ends of the bowl member to secure the sections thereof together.

4. In a rope socket, the combination of a mandrel member having a coupling at its base and outwardly projecting collars and a longitudinally divided bowl member having corresponding inwardly projecting collars, and above the same a rope socket cavity and nuts engaging the ends of the bowl member to secure the sections thereof together, the mandrel member having a neck portion between the coupling and mandrel body of smaller diameter than the nut uniting the sections of the bowl member and of as great length as said nut.

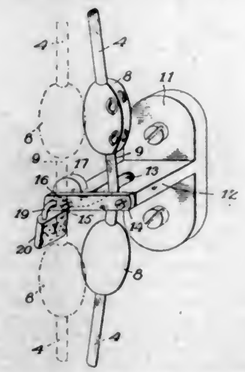
5. In a rope socket, the combination of a mandrel member having a coupling at its base and outwardly projecting collars and a longitudinally divided bowl member having corresponding inwardly projecting collars, and above the same a rope socket cavity and nuts engaging the ends of the bowl member to secure the sections thereof together, the upper ends of the bowl member sections having a reduced portion of less diameter than the upper nut uniting said sections and projecting above the same when the socket is assembled to provide for fishing purposes.

[Claim 6 not printed in the Gazette.]

1,191,251. LOCKING DEVICE FOR ELEVATORS. EDWARD G. WATKINS, Gardner, Mass. Filed Sept. 30, 1914. Serial No. 864,352. (Cl. 187—46.)

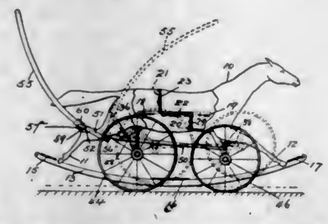
1. A locking device for elevators including a member having a slot adapted to receive a section of the shipper-rope when the latter is deflected from its normal path, an arm pivoted on said member and movable into position to close said slot and retain the shipper-rope therein, said arm having an opening to receive a member adapted to limit its movement in one direction, and means for preventing the movement of the arm in the other direction.

2. A locking device for elevators, including a member having a slot adapted to receive a section of the shipper-rope when the latter is deflected from its normal path, a second member pivoted on said first member and movable into position to close said slot and retain the shipper-rope therein, one of said members having an opening to receive a locking device adapted to limit the movement of said second member in one direction, and means for limiting the movement of said second member in the other direction.



3. A locking device for elevators, including a member having a slot adapted to receive a section of the shipper-rope when the latter is deflected from its normal path, a pivoted closure for said slot adapted to be moved into operative position to retain said rope therein, said rope having obstructions thereon adapted to limit its movement through said slot while thus retained therein, and means, comprising a stop carried by said member in the path of said closure, and a projection adapted to coöperate with a removable piece, for preventing the movement of said closure by said obstructions.

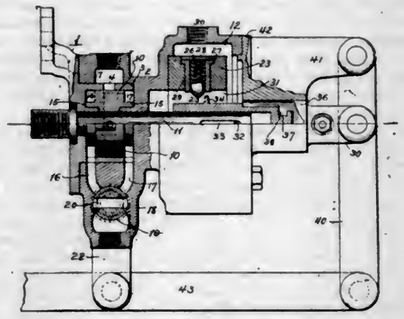
1,191,252. CONVERTIBLE VEHICLE. GEORGE C. WATSON, New York, N. Y., assignor of one-half to Israel Stein, New York, N. Y. Filed July 28, 1913. Serial No. 781,648. (Cl. 21—96.)



1. In a convertible vehicle, in combination, a hollow body, rocker runners provided upon the body, two axles pivotally held underneath the body, and having wheels mounted thereon, arms for the axles, a bar pivotally connected to the arms at the free ends thereof, a handle pivoted to the body and adapted to swing over, or in the rear thereof, a lever connecting the handle and the bar, said lever serving to direct the bar to swing the axles for moving the wheels free from the surface of the ground, or reversely moving the wheels when the handle is manually moved in a direction toward or from the body of the vehicle so that the vehicle may be alternately wheeled, or used as a rocker, and slidable means coöperative with the body and handle for locking the handle to the body against movement when the wheels are adjusted upon the ground for permitting the vehicle to be wheeled.

2. In a convertible vehicle, in combination, a hollow body, rocker runners provided upon the body, two axles pivotally held underneath the body and having wheels mounted thereon, extensions on said axles, a bar pivotally connected to the extensions of said axles, a U-shaped handle movably connected to the body to move above or in the rear of the same, a lever connecting the handle and the bar, said lever serving to direct the bar to swing the axles for moving the wheels free from the surface of the ground, or reversely moving the wheels when the handle is manually moved in a direction toward or from the body of the vehicle so that the vehicle may be alterantely wheeled, or used as a rocker, a lug projecting from the body, a sleeve slidable upon the handle, and adapted to be moved to engage the lug for locking the handle to the body against movement when the wheels are adjusted on the ground for permitting the vehicle to be wheeled.

1,191,253. INTERNAL-COMBUSTION ENGINE. WILLIAM B. S. WHALEY, Tulsa, Okla., assignor, by direct and mesne assignments, to OK Reversing Gas Engine Company, Tulsa, Okla., a Corporation of Oklahoma. Filed Dec. 10, 1914. Serial No. 876,514. (Cl. 123—181.)



1. The combination with the shaft of the electric timing mechanism for an internal combustion engine, of a valve secured to said shaft of the timing mechanism, a casing inclosed and carried by the valve and having air ducts for controlling the passage of compressed air to cylinders of an engine for starting the latter, a manually controlled air valve, and manually controlled means connected with said manually controlled air valve and also with a member of the timing mechanism whereby both may be shifted simultaneously.

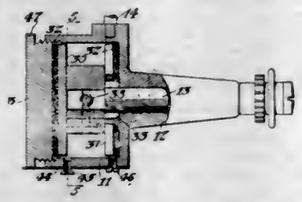
2. The combination with a casting provided with an annular valve seat and air outlet ducts communicating therewith, of a valve in said seat, a shaft to which said valve is secured, electric timing mechanism in said casting having its stationary contact member fixed therein and having its movable member mounted on said shaft, means for shifting said movable member to initially close a sparking circuit, means for controlling a supply of compressed air through said valve to the engine for starting the same, and connections whereby said shifting and controlling means may be operated simultaneously.

3. The combination with the shaft of timing mechanism, of compressed air starting mechanism including a controlling valve secured to said shaft of the timing mechanism, a manually controlled valve for controlling the admission of compressed air to said mechanism, manually controlled means for shifting the timing mechanism, and connections between said manually controlled means and said manually controlled valve.

1,191,254. CENTRIFUGAL SPEED-REGULATOR. HOWARD L. WHITE, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 30, 1913. Serial No. 798,210. (Cl. 74—45.)

1. The combination of a drive shaft, a pair of spaced disks rotatable with said shaft, pins extending between said disks and forming a driving connection between the

two disks permitting a relative movement of the disks toward and from each other, said shaft having a driving connection with one of the disks, centrifugal weights pivoted on said pins, a spring connecting said weights to hold them in an inoperative position, and coöperating cam surfaces on said weights and disks for spreading the disks when the weights are thrown outwardly by centrifugal force.



2. Governing mechanism for typewriter carriages comprising a casing, a shaft journaled therein, spaced disks within the casing connected to be rotated by the shaft, weighted members pivoted between said disks and rotatable about axes parallel with said shaft, said disks and weights having coöperating cam surfaces for spreading the disks, and brake members interposed between the disks and the walls of the casing.

3. Governing mechanism for typewriter carriages comprising a cylindrical casing, disks rotatable therein, compressible friction material interposed between the disks and the walls of the casing, a drive shaft journaled in the casing and having a driving connection with one of the disks, pins parallel with said shaft and forming a driving connection between the disks, and centrifugally operated weights pivoted on said pins, said weights and disks having coöperating cam surfaces for spreading the disks and compressing said friction material when the weights are operated by centrifugal force.

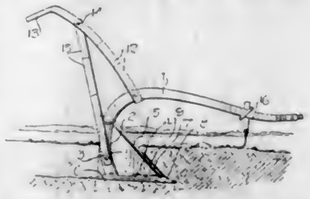
4. Governing mechanism for typewriter carriages comprising a cylindrical casing, disks rotatable therein, compressible friction material interposed between the disks and the walls of the casing, a drive shaft journaled in the casing and having a driving connection with one of the disks, pins parallel with said shaft and forming a driving connection between the disks, centrifugally operated weights pivoted on said pins, and cone-projections on said weights, said disks having correspondingly-shaped recesses to receive the cone-projections when the weights are in inoperative position.

5. Governing mechanism for typewriter carriages comprising a casing, a shaft journaled therein, parallel spaced disks within the casing, said shaft having a driving connection with and terminating at the first disk, pins parallel with the shaft and extending between the disks to form a driving connection between the disks and permitting relative movement of the disks toward and from each other, centrifugally operated weights pivoted on said pins, and normally bearing against the inner faces of the disks, coöperating conical bosses or projections and recesses formed on the faces of the weights and disks eccentrically of the pivots for said weights, said disks forming brake members, and coöperating brake members in the casing.

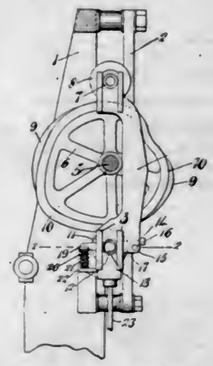
[Claims 6 to 22 not printed in the Gazette.]

1,191,255. ROOT-REMOVING PLOW. WILLIAM H. WILKES, Speigner, Ala., assignor of one-half to Alpha C. Rogers, Speigner, Ala. Filed May 31, 1913, Serial No. 771,032. Renewed Feb. 2, 1916. Serial No. 75,858. (Cl. 97—32.)

A plow of the class described comprising a vertical plate having its upper edge downwardly and forwardly beveled to provide a cutting edge, the lower portion of said plate being laterally projected, a plow beam having its rear portion downwardly curved and secured to the plate and having its lower extremity laterally bent to lie upon the similar portion of the plate, a plow point comprising a member reduced at its rear portion to substantially the thickness of the laterally turned portion of the plate, a vertical flange portion at one side of the point engaging against and forming a continuation of the plate and having its top beveled to form a continuation of the cutting edge of said plate, a strip secured on the top face of the reduced portion of the point and extending on to the laterally turned portion of the plate, a second strip disposed under the plate extending under the reduced portion of the point, and bolts passed through the plates and reduced portion of the point and through the strips and the laterally turned portion of the plate and through the laterally turned portion of the plow beam and the laterally turned portion of the plate and through the last named strip.



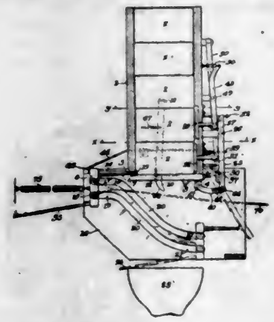
1,191,256. CAM DEVICE FOR PUMPS. GEORGE E. WILLERS, Lawrenceburg, Ind., assignor to August D. Cook, Lawrenceburg, Ind. Filed Feb. 6, 1914. Serial No. 816,905. (Cl. 74—14.)



In a pump, in combination with a cam, a cam frame therefor adapted to be reciprocated thereby to actuate the pump, connection between the pump and the frame at the lower end of said frame, a rocker member pivotally mounted at the rear of the frame, an antifriction roller carried by said rocker member, a shaft for the roller, slotted bearings in the cam frame members for said roller shaft, and a compression spring mounted between said frames and positioned to apply pressure at the forward end of the rocker, whereby a powerful spring leverage is applied to said roller to prevent knocking upon reciprocation of the pump.

1,191,257. SANDING APPARATUS FOR MOTOR-DRIVEN VEHICLES. CLIFTON WILLIAMS, Milwaukee, Wis. Filed Jan. 13, 1916. Serial No. 71,825. (Cl. 105—60.)

1. Sanding apparatus for motor vehicles, including the combination with a cabinet adapted to contain a series of sand boxes, of means for opening one of the boxes of the series and simultaneously opening the cabinet underneath said box to permit the discharge of sand from said box, a chute adapted to convey the sand to the roadway in front of the traction wheels of the vehicle, means for discharging the empty box from the cabinet, and means for subsequently closing the cabinet preparatory to the opening of a second sand box.



2. Sanding apparatus for motor driven vehicles, including the combination of a cabinet provided with a hinged bottom and adapted to contain a series of superposed sand containing boxes, a manually actuated movable member provided with means for cutting the bottom from the lower sand box and simultaneously swinging the bottom of the cabinet to open position, clamping means for holding the boxes in the cabinet while the bottom thereof is in open position and pending the discharge of sand from the opened box, means for permitting the empty box to drop from the cabinet without releasing the other boxes, and means for closing the bottom of the cabinet and allowing the remaining boxes to drop to the bottom thereof.

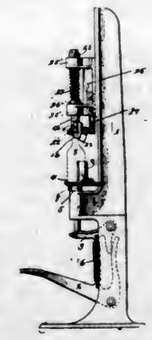
3. Sanding apparatus for motor driven vehicles, including the combination of a cabinet provided with a hinged bottom and adapted to contain a series of superposed sand containing boxes, a manually actuated movable member provided with means for cutting the bottom from the lower sand box and simultaneously swinging the bottom of the cabinet to open position, clamping means for holding the boxes in the cabinet while the bottom thereof is in open position and pending the discharge of sand from the opened box, means for permitting the empty box to drop from the cabinet without releasing the other boxes, and means for closing the bottom of the cabinet and allowing the remaining boxes to drop to the bottom thereof, said cabinet closing means being adapted to control the operation of the clamping devices.

4. Sanding apparatus for motor driven vehicles, including the combination of a cabinet provided with a hinged bottom and adapted to contain a series of superposed sand containing boxes, a manually actuated movable member provided with means for cutting the bottom from the lower sand box and simultaneously swinging the bottom of the cabinet to open position, clamping means for holding the boxes in the cabinet while the bottom thereof is in open position and pending the discharge of sand from the opened box, means for permitting the empty box to drop from the cabinet without releasing the other boxes, and means for closing the bottom of the cabinet and allowing the remaining boxes to drop to the bottom thereof, the operation of said clamping means being controlled from the cabinet bottom to first clamp the second box in the series, then release the open box and subsequently release the second box.

5. Sanding apparatus for motor driven vehicles, including the combination with a cabinet adapted to contain a series of superposed sand boxes and having a hinged bottom, said cabinet being also provided with a slot in one wall thereof adjacent to the bottom, of a carrier provided with knives adapted to enter said slot in a position to cut the bottom from the lower sand box, means for actuating said carrier horizontally during the cutting operation, means for subsequently moving the carrier downwardly to swing the bottom of the cabinet to open position for the discharge of sand from the box cut by the knives, a chute fitted to receive said sand and convey it to the roadway, spring actuated clamping means adapted to hold the lower sand box within the cabinet while the sand is being delivered therefrom, additional clamping means for holding the second box in the series in position pending the closing movement of the bottom of the cabinet, means actuated by the cabinet bottom while swinging to extreme open position, for retracting the first mentioned clamping means and allowing the empty box to drop from the cabinet, means for automatically retracting the carrier and allowing the cabinet bottom to close, and means for readjusting the sand boxes within the cabinet, controlled as to operation by said cabinet bottom and carrier.

[Claims 6 to 9 not printed in the Gazette.]

1,191,258. BOTTLE-CAPPING MACHINE. GEORGE A. WILLIAMS, Waterbury, Conn., assignor to The Williams Sealing Corporation, Waterbury, Conn., a Corporation of Connecticut. Filed Dec. 15, 1914. Serial No. 877,323. (Cl. 113—2.)



1. In a bottle capping machine, the combination with an upright frame and movable bottle support, a yieldingly supported chuck, a capping lever carried by said chuck and extending at right angles to the longitudinal axis of said chuck together with means attached to said frame and connected with said chuck for moving said capping finger as set forth.

2. In a bottle capping machine, the combination with a frame and movable bottle support, of a bearing member attached to said frame, a chuck yieldingly held in said bearing member, a capping finger carried by the chuck, said finger extending at right angles to the longitudinal axis of said chuck, and means carried by said chuck and bearing member for rotating said capping finger as set forth.

3. In a bottle capping machine, the combination of a main frame and movable bottle support, a bearing member attached to said frame, a chuck yieldingly supported in said bearing member, a casting attached to said chuck, a capping finger, mounted in said chuck casting and means carried by said bearing member for rotating said capping finger when the chuck moves vertically as set forth.

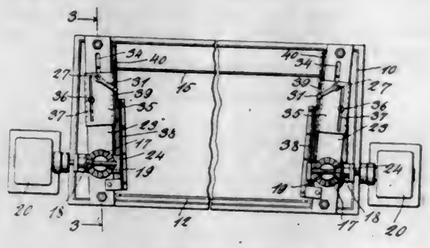
4. In a bottle capping machine, the combination with a yieldable chuck, of a bottle support, said support and chuck being movable one toward the other, a rotatable shaft carried by the chuck and having a finger extending across one face of said chuck together with means carried by said chuck for rotating said shaft and moving said finger when the said chuck is moved vertically.

5. In a bottle capping machine, the combination with a chuck having a transverse notch in one face thereof, a rotatable shaft arranged parallel with the face of the chuck and having a capping finger adapted to normally rest in the notch in the face of chuck, said chuck being

yieldably mounted and capable of vertical movement together with means carried by said chuck for rotating said shaft and operating said capping finger simultaneously with the vertical movement of said chuck, and a bottle support arranged beneath said chuck and adapted to cooperate therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,191,259. SUBMARINE PANORAMIC EXHIBITION APPARATUS. WILLIAM E. WINSTON, Pacific Grove, Cal. Filed Aug. 6, 1915. Serial No. 44,044. (Cl. 46—70.)



1. An exhibition apparatus comprising a water tank having a glazed sight opening, a panoramic web in the tank behind the sight opening and submerged in the water, and means for moving the web.

2. An exhibition apparatus comprising a water tank having a glazed sight opening, a panoramic web in the tank behind the sight opening and submerged in the water, and means for moving the web across the tank through the water parallel to the sight opening.

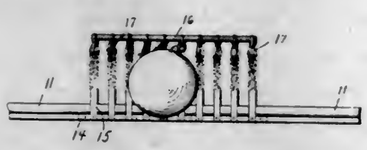
3. An exhibition apparatus comprising a water tank having a glazed sight opening, a panoramic web in the tank behind the sight opening and submerged in the water, means for moving the web, and means for varying the distance between the web and the sight opening.

4. An exhibition apparatus comprising a water tank having a glazed sight opening, a panoramic web in the tank behind the sight opening and submerged in the water, supports for the web invisible through the sight opening, and means for moving the web.

5. An exhibition apparatus comprising a water tank having a glazed sight opening, a panoramic web in the tank behind the sight opening and submerged in the water, rollers mounted in the tank to which the ends of the web are secured, and means for operating the rollers to wind the web on one roller and unwind the same from the other roller.

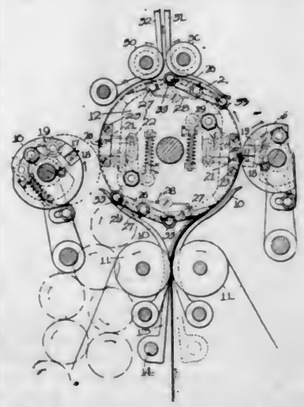
[Claims 6 to 9 not printed in the Gazette.]

1,191,260. BOWLING-BALL CLEANER. HERMAN E. WOLKEN, Leigh, Nebr. Filed Apr. 1, 1915. Serial No. 18,581. (Cl. 46—66.)



In a device of the class described, a plurality of metallic open rings having their ends turned outwardly, a strip secured to the upper closed portion of each of said rings to hold the latter in spaced relation, a pair of spaced parallel strips connecting the outturned ends at each side of said rings, and bristles projecting inwardly from the interior surface of each of said rings, substantially as described.

1,191,261. CONVERTIBLE FOLDING-MACHINE FOR INSERTS AND ONSERTS. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Oct. 1, 1910, Serial No. 584,795. Renewed Dec. 20, 1915. Serial No. 67,950. (Cl. 101—120.)



1. In a paper manipulating mechanism, the combination with a folding device adapted to receive a product, of means for operating said device in either direction to fold the product either side out.

2. In a paper manipulating mechanism, the combination with a reversible rotary folding cylinder adapted to receive a product, of means for operating said cylinder in either direction to fold the product either side out.

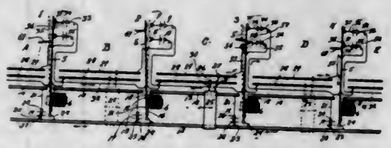
3. In a paper manipulating mechanism, the combination of means for bringing a web and sheet together, with a folding cylinder for folding said web and sheet and means for operating said cylinder in either direction to fold the product either side out.

4. In a paper manipulating mechanism the combination with means for bringing a sheet and web together, of a reversible folding cylinder for folding said web and sheet together with either out side.

5. In a paper manipulating mechanism, the combination with means for superposing one product upon another, of reversible means for folding said superposed products, whereby they may be folded with either product on the outside.

[Claims 6 to 43 not printed in the Gazette.]

1,191,262. ELECTRICAL BLOCK-SIGNALING APPARATUS FOR RAILWAYS. BENJAMIN F. WOODING, Denver, Colo. Filed Sept. 24, 1910. Serial No. 583,558. (Cl. 246—27.)

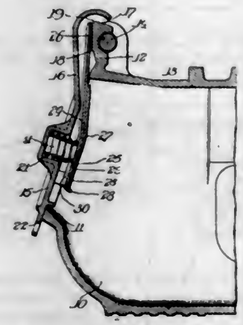


1. In a block signaling system, a track divided into blocks, a partial circuit having terminals in one block, means in the block ahead for controlling said partial circuit, a partial circuit on the train containing a distinctive signal and adapted to be completed by the aforesaid partial circuit, a second partial circuit having terminals in said first mentioned block, means in the block behind for controlling said second partial circuit, a second partial circuit on the train containing a second distinctive signal and adapted to be completed by said second partial circuit, an alarm upon the train, and means whereby said alarm is sounded whenever the normal condition of either of said circuits is disturbed.

2. In a block signal system, a circuit including a part on the train and a part on the track and having a normally closed break in the track portion, the part of said circuit on the train including an electro-magnet and a lamp of a distinctive color, a second circuit including a part on the train and a part on the track and having a normally closed break in the track portion, the part of said second circuit on the train including a second electro-magnet and a second lamp of another distinctive color, armatures for said electro-magnets, a local circuit being adapted to be closed by the falling of either of said armatures whereby when either of said normally closed circuits is broken, its lamp will be extinguished and the alarm sounded, substantially as described.

3. In a block signaling system, a track divided into blocks, a partial circuit having terminals in one block, means in the block ahead for controlling said partial circuit, a partial circuit on the train adapted to be completed by the aforesaid partial circuit, a second partial circuit having terminals in said first mentioned block, means in a block behind for controlling said second partial circuit, a partial circuit on the train adapted to be completed by said second partial circuit, an alarm upon the train, and means whereby said alarm is sounded whenever the normal condition of either of said circuits is disturbed.

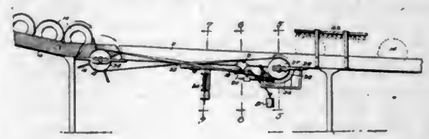
1,191,263. JOURNAL-BOX LID. GEORGE A. WOODMAN, Chicago, Ill., assignor to Kirby Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 9, 1912. Serial No. 735,669. (Cl. 64—23.)



The combination of a journal box having a lug formed thereon, a lid pivotally connected to said lug and provided with a keeper extending inwardly from said lid, a rigid member having a hooked end extending through and resting in said keeper and the other end overlying said lug, and a spiral spring interposed between the inner face of said lid and said member adjacent said keeper for pressing said member away from said lid and into engagement with said lug, whereby the lid is automatically and yieldingly held in open and closed positions.

1,191,264. CAN-LABELING MACHINE. JOHN F. WRIDE, Sodus, N. Y. Filed June 19, 1915. Serial No. 34,993. (Cl. 216—44.)

1. In a can-labeling machine, a runway, driving means operable by the movement of the cans, a pair of adhesive-applying members operable by said driving means, one of said members being adapted to apply adhesive to the cans, a label support positioned between the members so as to present an end of a label to a moving can to be engaged by the adhesive thereon, the second of said members being adapted to apply adhesive to the end of the label attached to the can while the can is moving thereover, and means for pressing the non-coated end of label to the can as the can is moved in the runway.



2. In a can-labeling machine, a runway, driving means operable by the movement of the cans in the runway, a pair of adhesive-applying members suitably spaced and operable by said driving means, one of said members being adapted to apply adhesive to a can as it moves over the member, a label support in the runway between said members, said label support having a depressible end adapted to present one end of a label to the can to engage the adhesive thereon, means retaining the other end of the label so as to cause said label to wind about the can as it moves in the runway, the other of said members being adapted to apply adhesive to the end of the label stuck to the can, and means for pressing the other end of label to the can after it has been disengaged from the retaining means.

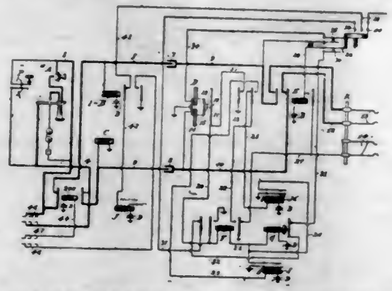
3. In a can-labeling machine, a runway, driving means therein operable by the movement of the cans in the runway, a pair of adhesive-applying members in said runway, said members being operable by said driving means, one of said members being adapted to apply adhesive to the can, a label support positioned between the members and adapted to present one end of a label to be engaged by adhesive on the can, yielding means engaging the other end of said label to cause the label to encompass the can moving thereover, said second member being adapted to apply adhesive to the end of the label stuck to the can, and means for pressing the other end of the label to the can after it has been disengaged from the yielding means.

4. In a can-labeling machine, a runway, driving means in the path of the cans, a pair of adhesive-applying members in the runway adapted to be operated by said driving means, one of said members being adapted to apply adhesive to the cans moving in the runway, a label support between said members and having a depressible end adapted to maintain one end of the labels in the path of the cans, said support being so located as to present the end of labels at the depressible end of the adhesive on the can whereby the label is engaged, yielding means engaging the other end of the labels on the support to cause an engaged label to encompass the can as the can moves over the support, said yielding means being adapted to release the engaged end of label as the can engaging the label exercises a pull on said means, said second member being adapted to apply adhesive material to the end of the label picked up by the can, and means for pressing to the can the end of label released by the yielding means.

5. In a can-labeling machine, a runway, driving means therein in the path of the cans, an adhesive-applying member associated with said driving member and adapted to participate in the movement thereof, said cams adapted to roll over said adhesive-applying member and receive adhesive material by contact therewith, a second adhesive-applying member spaced from the first, means transmitting the movement from the driving means to said second adhesive-applying member, a label support positioned between the members and adapted to present one end of a label to the adhesive on the can, yielding means engaging the other end of said label to prevent the movement of the label and cause the winding of said label on the moving can, said second member adapted to apply adhesive to the end of the label secured to the can while the can rolls over said member, and means for pressing the other end of label to the can after it has been disengaged by the moving can from the yielding means.

[Claims 6 to 11 not printed in the Gazette.]

1,191,265. TELEPHONE-EXCHANGE SYSTEM. JOSEPH L. WRIGHT, Cleveland, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 9, 1914. Serial No. 844,006. (Cl. 179—18.)



1. In a telephone exchange system, the combination with an automatic switch, a stepping magnet therefor, and a sound producing device, of a plurality of trunk circuits selectable by said switch, a receiving device associated with said switch and responsive to said sound producing device adapted to transmit impulses to said stepping magnet to cause said automatic switch to select any one of said trunk circuits, substantially as set forth.

2. In a telephone exchange system, the combination with an automatic switch, a stepping magnet therefor, and a receiving device of a sound producing device adapted to actuate the same, a plurality of circuits selectable by said switch, said receiving device being adapted to transmit impulses to said magnet to cause said automatic switch to select any one of said circuits, substantially as set forth.

3. In a telephone exchange system, the combination with a plurality of subscribers' lines, of automatic switching mechanism for selecting said lines, sound producing means, a stepping magnet for operating said switching mechanism, additional means associated with said automatic switching mechanism responsive to said sound producing means for operating said stepping magnet to cause said automatic switching mechanism to select said lines, substantially as set forth.

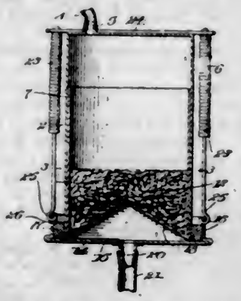
4. In a telephone exchange system, the combination with a calling and a called subscriber's line, of automatic switching mechanism for selecting the called line, a stepping magnet therefor, means associated with said automatic switching mechanism and responsive to audible signals over the calling line for transmitting impulses to said magnet to cause said automatic switching mechanism to select the called line, substantially as set forth.

5. In a telephone exchange system, the combination with an automatic switch, a stepping magnet therefor, of a plurality of circuits selectable by said switch, an audible controlling device, means associated with said switch and responsive to said audible device for transmitting impulses to said magnet to cause said automatic switch to select any one of said circuits, substantially as set forth.

[Claims 6 to 24 not printed in the Gazette.]

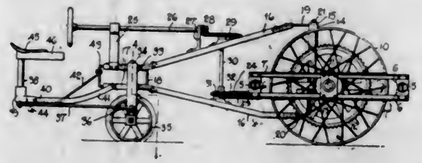
1,191,266. FUMIGATOR. ALBERT H. ZIEGLER, Kiester, Minn. Filed Feb. 27, 1914. Serial No. 821,410. (Cl. 43—5.)

1. A fumigator having a casing, air inlet means therefor, a closure member at the base of said casing, said closure member having an upstanding wall distanced from the exterior of the casing provided with openings, means to engage said upstanding wall to detachably connect the casing and closure member, the space provided by said wall containing packing and in addition to forming a packing chamber, enabling the said means to engage said openings, a fuel chamber within the casing resting on the closure member, outlet means leading from the closure member, and a grate arranged within the fuel chamber and resting on said closure member and spaced from said outlet means to prevent clogging thereof.



2. A fumigator having a casing, air inlet means therefor, said casing being closed at its top, a bar removably extending across said top, said closure member having an upstanding wall distanced from the exterior to provide a space, said wall having openings therein, hooks depending from said bar to detachably engage in said openings, means to permit yielding movement of the hooks to facilitate attachment and detachment in said openings, the space provided by said wall containing packing and in addition to forming a packing chamber, enabling the hooks to engage in said openings, a fuel chamber within the casing resting on the closure member, outlet means leading from the closure member, and a grate arranged within the fuel chamber and resting on said closure member and spaced from said outlet means to prevent clogging thereof.

1,191,267. STEERING MECHANISM FOR TRACTORS. HERMAN L. ALBERT, Jud, N. D. Filed Sept. 4, 1915. Serial No. 49,029. (Cl. 21—114.)



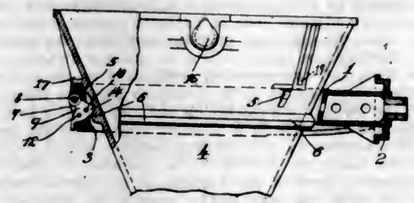
1. The combination with a tractor including a longitudinally extending frame, a wheel supported frame mounted upon the forward end of the longitudinal frame for turning movement upon a vertical axis, and a caster wheel mounted upon the rear end of the longitudinal frame, of a vertically disposed seat post, operating connections between the lower end of the seat post and the caster wheel, means for turning the wheel supported frame upon its axis, and means on the seat post whereby said post may be turned to simultaneously position the caster wheel at an angle with respect to the line of movement of the machine.

2. The combination with a tractor including a longitudinally disposed frame, a wheel supported frame mounted upon the forward end of said longitudinal frame for turning movement upon a vertical axis, a caster wheel mounted for angular turning movement upon the rear end of said longitudinal frame, of a rotatably mounted seat post, a transversely disposed bar fixed intermediate of its ends upon the lower end of said post, connecting bars between the extremities of the transverse bar and the caster wheel, hand operated means mounted upon the longitudinal frame and connected to the wheel supporting frame to turn the latter to an angular position with respect to the line of movement of the machine, and a knee engaging arm fixed upon the upper end of the seat post whereby said post may be rotated to simultaneously turn the caster wheel to an angular position.

3. In steering mechanism of the character described, a pivotally mounted frame, a caster wheel rotatable therein, a rotatably supported seat post spaced from said frame, and an operative connection between said seat post and pivoted frame whereby the caster wheel may be disposed at an angle with respect to the line of movement of the machine by a turning movement of the seat post.

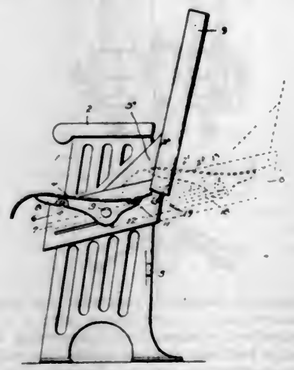
4. In steering mechanism of the chaarcter described, a pivotally mounted frame, a caster wheel rotatable therein, a rotatably supported seat post spaced from said frame, a rigid member operatively connecting the seat post to said frame, and manually operable means fixed to the seat post for turning said post whereby the caster wheel may be disposed at an angle with respect to the line of movement of the machine.

1,191,268. DUMPING-CAR. CARL P. ASTROM, East Orange, N. J., assignor to M. H. Treadwell Company, a Corporation of New York. Filed Sept. 17, 1912. Serial No. 720,719. (Cl. 266—39.)



The combination with a ladle having an external projection, of a slotted supporting bail adapted to receive said ladle and projection, a latch pivoted to said bail above said slot and weighted so as to normally swing inward to engage said projection when the ladle is lowered into the bail, and a pin for holding said latch in inward engaging position and outward in disengaged position.

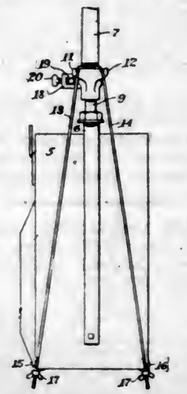
1,191,269. ARM-CHAIR WITH ADJUSTABLE SLIDING SEAT AND BACK. BENJAMIN BALSER, Des Moines, Iowa. Filed July 27, 1914. Serial No. 853,390. (Cl. 155—13.)



1. A chair comprising spaced upright side supports having rigid arm rests on their upper parts, upwardly and rearwardly inclined tracks fixed to the inner sides of the supports below the arm rests, a seat, seat supporting means slidably engaged with the tracks and including side box sections extending upwardly above the seat on opposite sides thereof, a seat back carried by the box sections, and an angular brace on each box section connecting the upper surface of the latter to the seat back and extending forwardly under the adjacent arm rest and between the side supports to constitute with the upwardly extending portion of the underlying box section, a seat guard, said seat guards being movable with the seat supporting means between the side supports.

2. A chair comprising spaced side members having inclined seats, I-shaped tracks in the seats of said members, a seat supporting box for each track having one end closed and the opposite end partly open, each box being provided with a slot extending throughout the length of the box to slidably engage the web of the respective track, said boxes receiving the flanges at the inner side of the track, integral trunnions on the boxes having bores extending completely therethrough, a seat on the trunnions, bolts passing through the bores for securing the seat thereon, the head of each bolt being countersunk to lie flush with the interior wall of the respective box, upper and lower rollers in the boxes, a second box telescopically arranged in a respective one of the first boxes and engaging with the rollers, each second box being hollow and having a slot registering with the slot of the first box, said second boxes slidably engaging the webs of the respective tracks, upper and lower rollers in the second boxes engaging said inner flanges of the tracks, and means to limit relative sliding between the boxes and the tracks.

1,191,270. HEADER FOR GAS-METERS. EDWARD BARTHOLOMAY and GEORGE A. LOEB, Jr., Rochester, N. Y. Filed Oct. 18, 1915. Serial No. 56,577. (Cl. 248—30.)



1. A header for a gas-meter having, in combination, fittings for connecting the meter with gas-pipes; angle-bars seated against the forward and rear lower angles of the meter-casing and extending to the sides of the casing; and rods connecting the ends of the angle-bars with the fittings.

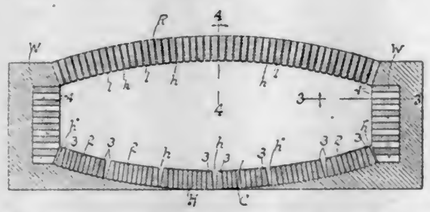
2. A header for a gas-meter having, in combination, a pair of hollow fittings adapted to connect the inlet and outlet posts of the meter with the gas-main, a pair of supports extending divergently downward from each fitting, and seats for the lower front and rear edges of a meter, each seat adapted to receive the lower ends of one pair of said rods.

3. A header for a gas-meter having, in combination, a pair of hollow fittings adapted to connect the inlet and outlet posts of the meter with the gas main, seats for the lower front and rear edges of a meter, and a pair of supports removably attached to each fitting and extending divergently downward for attachment to the ends of one of said seats.

1,191,271. FURNACE CONSTRUCTION. JAMES A. BOW and PETER THILL, Great Falls, Mont., and ARCHER E. WHEELER, London, England. Filed Dec. 17, 1914. Serial No. 877,706. (Cl. 263—46.)

1. In a furnace of the character described, a roof provided with longitudinally disposed expansion joints open-

ing into the treatment chamber, and transverse joints likewise opening into said chamber, the several joints being closed to the atmosphere.



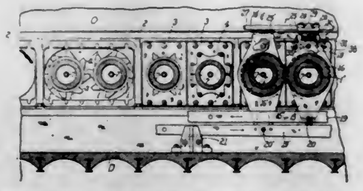
2. In a furnace of the character described, a roof composed of bricks bonded and laid in courses and forming longitudinal and transverse expansion joints opening into the treatment chamber, and means for closing said joints to the atmosphere.

3. In an arch or roof of a furnace of the character described, a pair of bricks positioned to form a joint opening into the treatment chamber but closed to the atmosphere, and means on the bricks outside the roof for preventing the bricks from dropping into the treatment chamber.

4. In a furnace of the character described, a roof provided with longitudinally disposed expansion joints opening into the treatment chamber, and transverse joints intersecting the longitudinal joints and likewise opening into said chamber, the several joints being closed to the atmosphere.

5. In a furnace of the character described, a roof composed of bricks bonded and laid in courses and forming longitudinal and transverse expansion joints opening into the treatment chamber, the joints being closed at points farthest away from the treatment chamber.

1,191,272. GRATE MECHANISM. JAMES A. BOW and PETER THILL, Great Falls, Mont., and ARCHER E. WHEELER, London, England. Filed Dec. 17, 1914. Serial No. 877,708. (Cl. 126—181.)



1. In a grate mechanism, a series of grate rolls collectively forming a fuel-supporting surface and disposed in pairs and spaced apart, a motor, and intermediate connections between the motor and rolls for singling out any pair of rolls and imparting simultaneous rotation to the individual members thereof in opposite directions.

2. In a grate mechanism, a series of grate rolls collectively forming a fuel-supporting surface and disposed in pairs and spaced apart, a motor, pawl and ratchet mechanism for actuating the several rolls, and intermediate means interposed between the motor and rolls for selectively operating the actuating mechanism of a predetermined pair of rolls and imparting rotation to the members thereof.

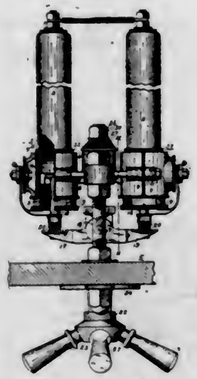
3. In a grate mechanism, a series of grate-rolls collectively forming a fuel-supporting surface and disposed in pairs and spaced apart, trunnions for said rolls, rockers mounted loosely on the trunnions, ratchet wheels on the trunnions adjacent the rockers, a motor, intermediate mechanism between the motor and rockers for rocking the latter, pawls on the rockers normally disengaged from the ratchet-wheels, and means on the rockers under the control of the operator for effecting engagement between the ratchet wheels of a predetermined pair of rolls, and their pawls, whereby rotation is imparted to said pair of rolls.

4. In a grate mechanism, a series of grate-rolls collectively forming a fuel-supporting surface and disposed in pairs and spaced apart, trunnions for said rolls, rockers mounted loosely on the trunnions, a motor, means interposed between the motor and rockers for oscillating the rockers of the rolls of any pair simultaneously in opposite directions, ratchet wheels on the trunnions positioned in proximity to the rockers, pawls on the rockers normally disengaged from the ratchets, and means on the rockers under the control of the operator for causing an engagement of the pawls with the ratchets of any predetermined pair of rolls, whereby simultaneous periodic advances in opposite direction are imparted to the ratchets of the respective members of any pair of rolls and to the rolls.

5. In a grate mechanism, a series of grate-rolls spaced apart and disposed in pairs and collectively forming a fuel-supporting surface, trunnions for the rolls, rockers mounted loosely on the trunnions, a motor, independent links connecting adjacent ends of alternate rockers, intermediate connections between the links and motor for imparting simultaneous reciprocations in opposite directions to the links, and corresponding oscillations to the rockers, ratchet disks secured to the trunnions adjacent the rockers, the teeth of the ratchet on one member of a pair of trunnions extending in a direction opposite to the teeth of the ratchet on the coacting member, means on the rockers under the control of the operator for effecting engagement between the ratchets of any predetermined pair of rolls and their pawls, whereby the members of such pair of rolls have imparted thereto a simultaneous periodic rotary advance in opposite directions.

[Claims 6 to 14 not printed in the Gazette.]

1,191,273. AUTOMATIC RESISTANCE-CONTROLLER. LYNDE BRADLEY, Milwaukee, Wis. Filed Jan. 22, 1914. Serial No. 813,665. (Cl. 219—51.)



1. An automatic resistance controller for compressible rheostats, comprising the combination with a set of compressible resistance columns, and compressing means, of an abutment, a resilient cushion located between the columns and interposed between the abutment and the compressing means, and a thermostatically operated member adapted by expansion, to relieve the pressure upon said cushion.

2. The combination with a current controlling compressible resistance member, of a thermostatically expansible casing therefor, means for compressing said member within the casing, and a resiliently cushioned abutment supporting said casing and to which the pressure is transmitted through said casing.

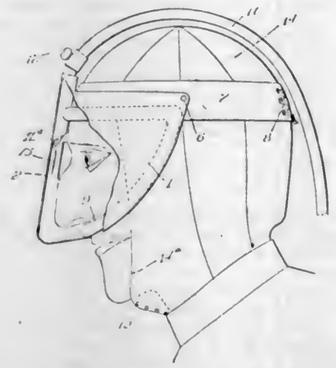
3. In an electric current controller, the combination of a plurality of compressible resistance mediums, containers for said mediums, means for producing pressure on said mediums, means for equalizing the pressure on said mediums, and supporting means for said containers, said containers, at the ends opposite to those upon which the thrust of the resistance medium is received, being attached to but insulated from, said supporting means near the end at which the pressure is applied.

4. In an electric current controller, the combination of a compressible resistance medium, a container for said medium, means for producing pressure on said medium, and a support attached to, but insulated from said container at the end opposite to that upon which the thrust of the compressed resistance medium is received and near the point where the pressure is applied.

5. The combination with a compressible resistance medium for controlling electric circuits, a spring adapted to maintain said medium under pressure, a member expansive under the influence of heat, means for heating said member, means for utilizing the expansion of said member to vary the tension of said spring in such proportion to its variation in conductivity due to heat, as to maintain a substantially constant conductivity of said resistance medium.

[Claims 6 to 8 not printed in the Gazette.]

1,191,274. PROTECTIVE MASK FOR WORKMEN. JAMES T. BRAYTON, Chicago, Ill.; Libbie Brayton executrix of said James T. Brayton, deceased. Filed Apr. 25, 1914. Serial No. 834,380. (Cl. 128—42.)



1. A device of the character described comprising a mask or shield of strong light material shaped into a nose piece having laterally-extending wings to cover the eyes and cheek bones of a wearer, lenses in the mask or shield on opposite sides of the nose piece, a member adapted to fit upon the head of a wearer, and a hinged connection between said member and said mask or shield at a point permitting the mask or shield to be swung up and rest upon the top of the head of a wearer and also to be swung down and be held by gravity in front of the face.

2. In a device of the character described, a mask or shield of strong light material shaped to fit over the upper portion of the face of a wearer, a continuous cushion on the rear side of the mask or shield of the size and shape to extend across the forehead down the cheeks and across the upper lip of a wearer, and means for supporting the mask or shield upon the head so as to permit it to be swung up and rest upon the top of the head and also to be swung down and be held by gravity in front of the face with the cushion engaging with the face.

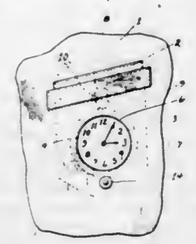
3. A device of the character described comprising a shield or mask of strong light material shaped to extend across the upper portion of the face of a wearer, a continuous cushion on the rear side of the mask or shield adapted to extend across the forehead down the cheeks and across the upper lip of a wearer, means for supporting the mask or shield on the head of the wearer so as to permit the cushion to be pressed against the face of the wearer by the weight of the mask or shield, and an air-supply conduit connected to the shield and opening into the space behind the same bounded by the annular cushion.

4. A device of the character described comprising a shield or mask of strong light material shaped to extend across the upper portion of the face of a wearer, a continuous cushion on the rear side of the mask or shield adapted to extend across the forehead down the cheeks and under the nose of a wearer, means for supporting the mask or shield on the head of the wearer so as to permit the cushion to be pressed against the face of the wearer by the weight of the mask or shield, and an air-supply conduit connected to the shield and opening into the space behind the same bounded by the cushion, lenses in the mask or shield in position to register with the eyes of the wearer, and there being long narrow slots in the mask or shield in the vicinity of the exterior of the lenses for the purpose of permitting air under pressure to flow across the outer faces of the lenses and keep them clean.

5. A device of the character described comprising an adjustable head band, and a mask or shield hinged at the upper rear corners to the head band, the mask or shield being shaped to cover the upper portion of the face of the wearer and having a central section shaped to cover the nose of the wearer and laterally-extending rearwardly-curved wings, and lenses arranged in the wings on opposite sides of the nose section, the parts being so constructed and arranged that the mask or shield may be swung up upon the head of the wearer and also be swung down in front of the face and be held down by gravity.

[Claims 6 to 13 not printed in the Gazette.]

1,191,275. GARMENT-POCKET. JOSEPH C. BREHL, Columbus, Ohio. Filed Jan. 14, 1916. Serial No. 72,163. (Cl. 2—154.)

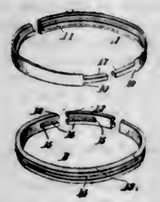


1. A clothes pocket construction comprising a pocket body portion, a garment body, both said pocket and garment bodies having concentric openings, a transparent cover for said openings, and means for holding a watch in position in back of said cover.

2. A clothes pocket construction comprising a pocket body portion, a garment body, both said pocket and garment bodies having concentric openings, a transparent cover for said openings, means for holding a watch in position in back of said cover, and a flap arranged to be hidden within the pocket or to lie on the outside of said garment body to cover said openings.

3. A clothes pocket construction comprising a pocket body portion, a garment body, both said pocket and garment bodies having concentric openings, a transparent cover for said openings, a clasp band secured at one end to the interior of said pocket, means on the other end of said band for detachably securing it to the inside of the pocket to form a loop, a flap arranged to be hidden within the pocket or to lie on the outside of said garment body to cover said openings, and means for detachably securing the free end of said flap in its outside position.

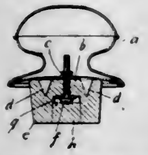
1,191,276. PACKING-RING. CLARENCE ROSS BRYANT, Memphis, Tenn., assignor to National Advertising Company, Memphis, Tenn. Filed Aug. 10, 1915. Serial No. 44,786. (Cl. 121—108.)



1. A packing ring embodying an outer split member eccentric in form, and an inner split member, the extremities of said members being out of line, a rib on the meeting face of the outer member, a flange on each side of the rib, said flanges being of uniform width of the inner member and terminating at their thinnest part short of the extremities of said rib, and the inner member being formed in its outer periphery with a groove extending to the extremities thereof to receive said rib.

2. A packing ring embodying an outer split member eccentric in form, and an inner split member also eccentric in form, the extremities of said members being out of line, a rib on the meeting face of the outer member, the body of each member being of uniform width and terminating at the thinnest part short of the extremities of said rib, and the inner member being formed in its outer periphery with an annular recess extending to the extremities thereof to receive said rib.

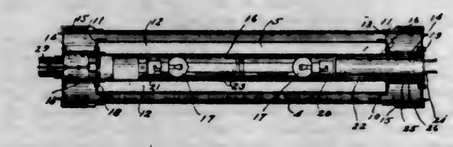
1,191,277. BOTTLE-STOPPER. FREDERICK E. CARLSON, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 2, 1914. Serial No. 859,784. (Cl. 215—51.)



1. In a device of the character described, a base having its under surface concaved, a flat-ended stopper fitted against said concaved surface, means for clamping said stopper against said concaved surface, and means on said base engaging said stopper to prevent its relative rotation.

2. In an article of the character described, a concave base having a central threaded aperture, a stopper having a flat surface arranged against said concave base, the stopper being centrally apertured, and a screw passing through the aperture in the stopper and engaging the threaded aperture in the base to draw the two parts together.

1,191,278. AUTOMOBILE SIGNALING APPARATUS. JOSEPH L. CAYER, Chicago, Ill., assignor to Cayer Signal Company, Chicago, Ill., a Corporation of Illinois. Filed June 1, 1915. Serial No. 31,467. (Cl. 40—77.)



1. In a device of the class described, the combination of a support, a hollow transparent indicator rotatably mounted thereon and having one end thereof open, mechanism for rotating said indicator, a lamp-holder mounted in said indicator and removable through said open end, a lamp carried by said holder, and resilient means adapted to secure said holder in position in said indicator.

2. In a device of the class described, the combination of a support, a hollow transparent indicator rotatably mounted thereon and having one end thereof open, mechanism for rotating said indicator, a lamp-holder mounted in said indicator and removable through said open end, a lamp carried by said holder, and a pair of resilient arms connected to said holder and arranged to engage the wall of said indicator for securing said lamp in position.

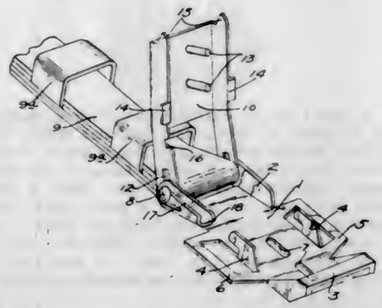
3. In a device of the class described, the combination of a support, a hollow transparent indicator rotatably mounted thereon and having one end thereof open, mechanism for rotating said indicator, a lamp-holder mounted in said indicator and removable through said open end, a lamp carried by said holder, a pair of resilient arms connected to said holder, and coacting shoulders on said indicator and arms adapted to have interlocking engagement for securing said lamp and holder in position.

4. In a device of the class described, the combination of a support, a hollow transparent indicator rotatably mounted thereon and having one end thereof open, mechanism for rotating said indicator, a lamp-holder mounted in said indicator and removable through said open end, a lamp carried by said holder, a pair of resilient arms connected to said holder, said indicator having notches in the wall thereof, and shoulders on said arms adapted to engage said notches for securing said lamp and holder in position.

5. In a device of the class described, the combination of a housing open along one side, a hollow prismatic indicator rotatably mounted within said casing, and open at one end, mechanism for rotating said indicator so as to register one or another of the faces thereof with said open side, a semi-cylindrical open-ended reflector mounted within said indicator in axial alinement therewith and secured against rotation, and a lamp mounted within said reflector and removable through said open ends of said reflector and indicator.

[Claims 6 to 10 not printed in the Gazette.]

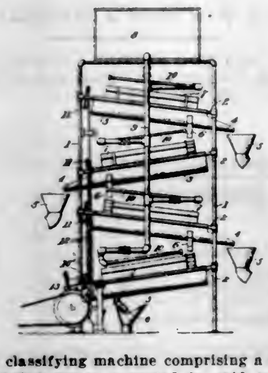
1,191,279. TRACE-BUCKLE FOR HARNESS. ARTHUR E. CLARK, Villard, Minn. Filed May 16, 1914. Serial No. 838,972. (Cl. 24—180.)



1. In a tug buckle, the combination with a body member having laterally spaced hinge lugs at one end, a tug holding loop at its other end and laterally spaced intermediate lock lugs, of a tongue plate equipped with a tug engaging tongue and provided with side and end lock lugs and with laterally spaced slotted arms, a bolt applied to the hinge lugs of said body member and passed through the slotted arms of said tongue plate, the intermediate lock lugs of said tongue plate being engageable with the intermediate lock lugs of said body member, and the end lock lugs of said tongue plate being engageable with the loop of said body member, by sliding movements of said tongue plate.

2. In a tug buckle, the combination with a body member having laterally spaced hinge lugs at one end, a tug holding loop at its other end and laterally spaced intermediate lock lugs, of a tongue plate having a detent equipped with a tug engaging tongue and provided with side and end lock lugs and with laterally spaced slotted arms, a bolt applied to the hinge lugs of said body member and passed through the slotted arms of said tongue plate, the intermediate lock lugs of said tongue plate being engageable with the intermediate lock lugs of said body member, and the end lock lugs of said tongue plate being engageable with the loop of said body member, by sliding movements of said tongue plate, and a spring lock applied to said body member and engageable with a lock detent on said tongue plate, to lock the latter against sliding movements in respect to said body member, and with the said tongue plate and body member interlocked.

1,191,280. ORE-CLASSIFYING MACHINE. SELDEN IRWIN CLAWSON, Salt Lake City, Utah. Filed July 20, 1910. Serial No. 574,563. (Cl. 83—56.)



1. An ore classifying machine comprising a support, an inclined swinging screen mounted in said support, and having an imperforate pan portion forming the bottom of the screen, and screening portions extending longitudinally thereof, and forming the sides of the screen, means for swinging the said screen, and means for retarding the movement of the material along the screen.

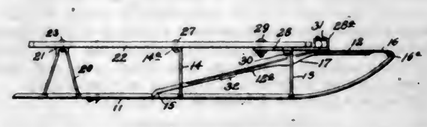
2. An ore classifying machine comprising a support, an inclined swinging screen mounted in said support, and having an imperforate pan portion forming the bottom of the screen, and screening portions extending longitudinally thereof and forming the sides of the screen, means for swinging said screen, means for retarding the movement of the material along the screen, a trough arranged underneath said screen, and means whereby jets of water may be thrown onto said screen for saturating the material and for cleansing the meshes of the screen as the same swings.

3. In an ore classifying machine, a support, a plurality of swinging screens mounted in said support, said screens being inclined relative to each other and arranged in a zigzag manner, each screen having an imperforate pan portion forming the bottom of the screen, and screening portions extending longitudinally thereof and forming the sides of the screens, means for swinging each screen, and means for retarding the movement of the material along the screens.

4. In an ore classifying machine, a support, a plurality of swinging screens mounted in said support, said screens being inclined relative to each other and arranged in a zigzag manner, each screen having an imperforate pan portion forming the bottom of the screen, and screening portions extending longitudinally thereof and forming the sides of the screens, means for swinging each screen, means for retarding the movement of the material along the screens, and a trough underneath each screen for discharging the contents passing through one screen into the screen beneath it.

5. In an ore classifying machine, a support, a plurality of swinging screens mounted in said support, said screens being inclined relative to each other and arranged in a zigzag manner, each screen having an imperforate pan portion forming the bottom of the screen, and screening portion extending longitudinally thereof and forming the sides of the screens, means for swinging each screen, means for retarding the movement of the material along the screens, a trough underneath each screen for discharging the contents passing through one screen into the screen beneath it, and means for directing jets of water onto each screen for saturating the material and for cleansing the meshes of the screens as the same are swung.

1,191,281. SLED. FRANCIS W. H. CLAY, Edgewood Park, Pa., assignor to Jo. Baily Brown, Pittsburgh, Pa. Filed Jan. 26, 1916. Serial No. 74,355. (Cl. 21—94.)



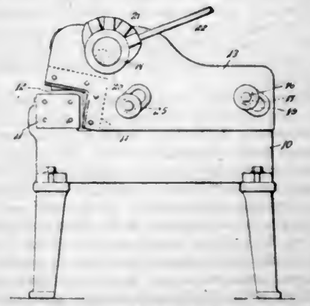
1. A safety steering sled comprising a rigid frame, flexible runner shoes attached thereto forward and back, a drag alongside the free portion of the runners and means to simultaneously flex the shoes between fixed supports and apply the brake.

2. A sled provided with a frame having two rigid supports for the runner shoe, means to flex the shoe between said supports, and to apply friction to the ground alongside the runner.

3. A steering sled provided with a rigid frame having two fixed supports for the runner shoe, means to flex said shoe between said fixed supports, a brake adapted to be brought in contact with the ground alongside the runner, and a single handle effecting both operations.

4. The combination of a sled provided with means for flexing the runner shoe, a drag adapted to be depressed on the ground alongside each runner, and a single handle adapted to flex both shoes laterally, to depress either one of said brakes alone, and to simultaneously depress both brakes, substantially as described.

1,191,282. ANGLE-IRON CUTTER. ROGER M. CLOUGH, Tolland, Conn. Filed Dec. 24, 1913. Serial No. 808,584. (Cl. 164—53.)



1. A metal shear comprising a fixed member having a cutting edge and a moving member having a coöperating cutting edge, means for imparting a movement of the said slide generally in one direction, and means serving to effect a tilting movement of the said slide comprising a stud secured to one of the said members, the other of the said members having a slot in which the said stud is positioned.

2. An angle iron shear comprising a fixed member having vertical and horizontal cutting edges, a slide having coöperating vertical and horizontal cutting edges, and means for imparting to said slide a longitudinal movement and a limited rocking movement in two directions relative to said fixed member to bring the cutting edges into operative relation.

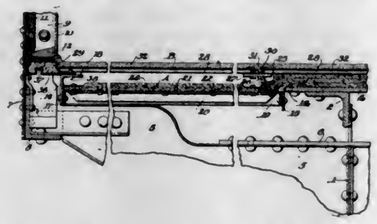
3. An angle iron shear comprising a fixed member having vertical and horizontal cutting edges, a slide having coöperating vertical and horizontal cutting edges, an eccentric engaged with said slide for causing its bodily movement relative to said fixed member, and an angularly arranged guide to provide a tilting motion to said slide.

4. An angle iron cutter comprising a fixed member having vertical and horizontal cutting edges, a moving member having vertical and horizontal cutting edges, an eccentric member having a shaft portion journaled in said frame and an eccentric portion engaged with said moving member, and means for guiding the said moving member for effecting an angular movement of the said moving member relatively to the said fixed member.

5. An angle iron cutter comprising a frame having a cutting blade and a slide member having a cutting blade, an eccentric member operatively connecting said frame and slide member, a stud on said frame, and said slide member having a guide slot engaged with said stud.

[Claims 6 to 8 not printed in the Gazette.]

1,191,283. CAR-FLOOR. WALTER L. CONWELL, Montclair, N. J., assignor to Transportation Utilities Company, New York, N. Y., a Corporation of West Virginia. Filed Oct. 3, 1914. Serial No. 864,844. (Cl. 72—70.)



1. A railway car structure including in combination, a car frame, a support mounted upon the car frame, a pressing secured to said support and provided with a lip portion, a corrugated sub-floor beneath said lip portion, and a wear surface upon said corrugated sub-floor..

2. A railway car structure including in combination, framing, supports carried by said framing, a corrugated sub-floor resting upon said supports, devices riveted to said supports and lapping the end of said corrugated sub-floor, said devices being provided with a lip extending over the edge of said corrugated sub-floor to hold the same in position upon said supports, and a wear surface covering said sub-floor.

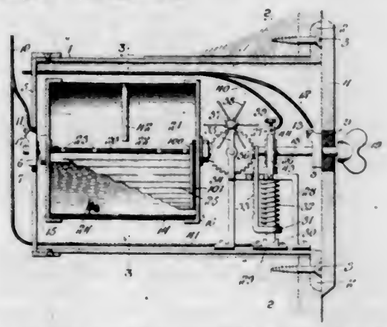
3. A railway car structure including in combination, a center sill, side members, a supporting device carried by said side members, supporting members intermediate the side members and coöperating with said center sill, a metallic sub-floor carried by said supporting members, said metallic sub-floor including a metallic sheet having corrugations extending transversely of the car and having valleys with the lower portions wider than the upper portions, devices extending longitudinally of said car and adapted to retain said metallic sub-floor in position upon the said supporting means, said devices including members having valleys with overhanging upper portions, and a composition wear surface entirely covering the sub-floor and interlocking with the said valleys to securely maintain the wear surface in position upon the sub-floor.

4. A railway car structure including in combination, framing, floor supports carried by said framing, a floor supported by said floor supports, said floor comprising a plurality of longitudinally extending corrugated sheets, means intermediate said corrugated sheets to retain said sheets in position on said supports, said means having a truncated triangular cross section, a device lapping the outer edge of the corrugated sheet adjacent the sides of the car and extending over the edge of the sheet, a composition wear surface interlocked with said sheets and said means, and a pressing adjacent the edge of said wear surface at the side of the car and adapted to interlock with said wear surface to prevent fracture of the same.

5. A railway car structure including in combination, a center sill, side members, a false floor extending between said center sill and said side members, a true floor above said false floor and over said center sill, said true floor including a sub-floor comprising longitudinal sections of corrugated sheet metal having the corrugations thereof extending transverse of said car with the valleys of the corrugations arranged to comprise interlocking means, securing devices intermediate each section of the said metallic sub-floor, said securing devices including members having valleys constituting interlocking means extending longitudinally of said car, and a wear surface entirely covering said sub-floor and filling all of said valleys to securely interlock said wear surface with said sub-floor.

[Claims 6 to 13 not printed in the Gazette.]

1,191,284. ELECTRIC SWITCH. WILLIAM BLACKNELL CROSSLAND, Newport, Ark. Filed Apr. 9, 1915. Serial No. 20,263. (Cl. 219—57.)



1. A variable resistance comprising a vessel adapted to contain a resistance liquid and provided with circuit terminals to be bridged by the resistance liquid, a tapering conducting element within the vessel permanently connected to one of the circuit terminals and having its taper end directed toward the other circuit terminal, and means for causing a relative progressive movement of the liquid lengthwise of the tapering conducting element to correspondingly progressively decrease or increase the active amount of resistance liquid included in the circuit.

2. A variable resistance comprising a vessel adapted to contain a resistance liquid, a tapering conducting element within the vessel, and means for causing a relative progressive movement of the liquid lengthwise of the tapering conducting element to correspondingly progressively decrease or increase the active amount of resistance liquid included in the circuit, said variable resistance including circuit terminals independent of the tapering element and associated to make contact and short circuit the resistance on the attainment of the resistance to the minimum effective amount.

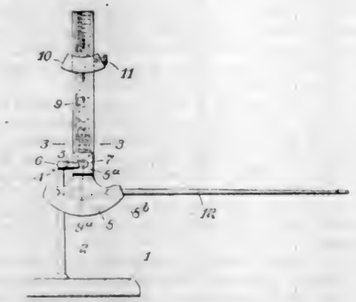
3. An adjustable rheostat device comprising a container for resistance liquid, said container having spaced conducting portions adapted to be electrically connected by the resistance liquid, a tapering conducting element in the container in association with the resistance liquid, and means for causing the liquid to engage the tapering portion of the conducting element in progression or retrogression to correspondingly reduce or increase the active amount of resistance liquid between the conducting portions of the container.

4. An adjustable rheostat structure comprising a container for a resistance liquid, said container having spaced conducting portions adapted to be electrically connected by the resistance liquid, a tapering conducting element within the container and carried by one of the conducting portions thereof and directed toward the other conducting portion, and means for causing the resistance liquid to encroach upon or recede from the conducting element along the tapering portion thereof.

5. A variable resistance switch comprising a rotatable insulating casing having conducting ends, and an intermediate wall dividing the casing into two longitudinal compartments with the division wall having passages therethrough, said casing containing a resistance liquid and having in one of the compartments a tapering conducting element extending lengthwise of the compartment, means for rotating the casing, and means for retarding the rotative movements.

[Claims 6 to 14 not printed in the Gazette.]

1,191,285. BATON-METRONOME. EDWARD O. CUSHING, Waverly, Mass. Filed Mar. 15, 1916. Serial No. 84,480. (Cl. 58—130.)



1. In a metronome, the combination of a freely suspended weight member, an upright bar extending therefrom, and a baton secured at one side of said weight member.

2. In a metronome, the combination of a freely suspended weight member, an upright bar, extending vertically therefrom, and a removable pointer or baton adapted to be carried at either side of said weight and extending horizontally therefrom.

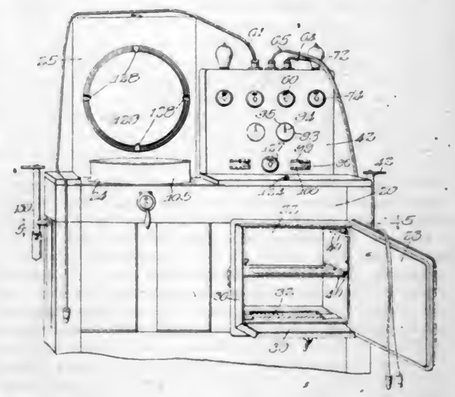
3. In a metronome the combination of a freely suspended weight member, an upright bar extending vertically therefrom, a baton extending horizontally from said weight and a slide member adjustably carried on said upright bar.

4. In a metronome the combination of a supporting stand, a swiveled bearing carried thereon, a weight member freely suspended from said bearing, a vertical graduated bar extending from said weight, a horizontally disposed baton removably attached at one side of said weight member.

1,191,286. ELECTRIC COOKING APPARATUS. FOREST V. DETWILER, Chicago, Ill. Filed Feb. 20, 1913. Serial No. 749,654. (Cl. 219—35.)

1. An apparatus of the character described, embodying a casing, electric heating means within the casing, and means for automatically making and breaking the heating circuit at predetermined temperatures, the second recited means embodying spaced opposed magnets, a core extending from one of the magnets to the other and a contact member connected with the core and bodily shiftable therewith, and means connected with the core for manually shifting the latter.

2. An apparatus of the character described, embodying a casing, electric heating means within the casing, and means for automatically making and breaking the heating circuit at predetermined temperatures, the second recited means embodying spaced opposed magnets, a core extending from one of the magnets to the other and a contact member connected with the core and bodily shiftable therewith, a handle connected with the core and extending to the outside of the casing through an opening in the wall of the casing and a shield connected to and movable with the handle for closing such opening.



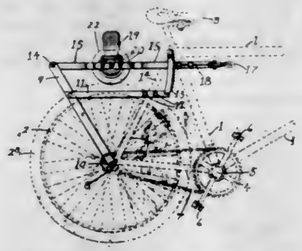
3. An apparatus of the character described, embodying a casing, electric heating means within the casing, means for automatically making and breaking the heating circuit at predetermined temperatures embodying opposed electric responsive devices including a core passing from one of the devices to the other and a contact connected with the core and bodily shiftable therewith thermostatic means for controlling the action of said devices, one of said devices being included in the heating circuit, a circuit for the other of the said devices, means for cutting out the last recited device to render it ineffective to the action of the said thermostatic means, additional means for directly shifting the contact, and a signal light included in the heating circuit.

4. An apparatus of the character described, embodying a casing, electric heating means within the casing, means for automatically making and breaking the heating circuit at predetermined temperatures embodying opposed electroresponsive devices including a core passing from one of the devices to the other and a contact connected with the core and bodily shiftable therewith, thermostatic means for controlling the action of said devices, one of said devices being included in the heating circuit, a circuit for the other of the said devices, means for cutting out the last recited device to render it ineffective to the action of the said thermostatic means, manual means for directly shifting the said contact for establishing or disestablishing the heating circuit, and means indicating the position of said contact.

5. An apparatus of the character described, embodying a casing, electric heating means within the casing, means for automatically making and breaking the heating circuit at predetermined temperatures embodying opposed electric responsive devices including a core passing from one of the devices to the other and a contact connected with the core and bodily shiftable therewith, thermostatic means for controlling the action of said devices, one of said devices being included in the heating circuit, a circuit for the other of the said devices, means for cutting out the last recited device to render it ineffective to the action of the said thermostatic means, a handle connected with the contact for manually shifting the latter, said handle passing through an opening in the casing wall, and a cover plate for the slot connected and movable with the handle.

[Claims 6 and 7 not printed in the Gazette.]

1,191,287. FRICTION DRIVE ATTACHMENT FOR BICYCLES. FRANK DE VAUX, San Jose, Cal, assignor of one-third to William H. Sliger, Stockton, Cal. Filed Oct. 11, 1915. Serial No. 55,220. (Cl. 21—90.)



1. In a device of the character described, comprising rear bars 9 connecting at their lower ends with bicycle wheel axle 10, said bars 9 extending upward and rearward a distance, longitudinal brace bars 11 fastened to said bars 9, said brace bars 11 extending a distance forward, and means by which the same are fastened to upright braces 1^a of the bicycle frame 1, an upright notched bar and means of fastening the same to longitudinal bars 11, and braces 1^a of bicycle frame 1, lever bars 15, and means by which the same are connected to bars 9 and upright notched bar 13, means by which said lever bars 15 are connected together at their outer ends, as shown and described.

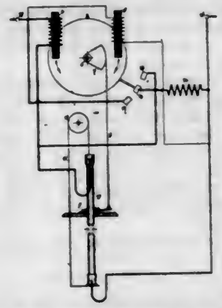
2. In a friction drive attachment for bicycles, the combination of rear bars 9 connecting with the rear wheel axle of a bicycle, longitudinal brace bars 11 fastened thereto, means by which said longitudinal bars 11 are fastened to a bicycle frame, an upright notched bar, and means by which said notched bar is fastened to said longitudinal bars and to said bicycle upright bars 1^a, lever bars 15 fulcrumed to the upper end of rear bars 9, a gas engine positioned between said lever bars 15, and means by which the same is fastened thereto, the fly-wheel of said gas engine having the face thereof concaved, adapted to engage the outer surface of a bicycle tire and drive said bicycle by friction contact, as shown and described.

1,191,288. OVERALLS. PETER L. DE VOIST, Duluth, Minn. Filed Sept. 23, 1915. Serial No. 52,263. (Cl. 2—140.)



A reversible garment having leg portions and two bibs uniform in construction, shoulder straps connecting the bibs, said leg portions having an open crotch, fastenings at each side of the garment at the top and at the front and rear of the crotch.

1,191,289. ARC-LAMP. WILHELM DIETZ, Leutzsch, near Leipzig, Germany, assignor to Körting & Mathiesen Aktiengesellschaft, Leutzsch, near Leipzig, Germany. Filed Apr. 30, 1914. Serial No. 835,469. (Cl. 176—12.)



1. In an arc lamp system, a plurality of lamps in series, certain of said lamps being provided with means operated by the electrode feeding mechanism for altering the amount of light given by the lamp on a change of current from normal, means for supplying a current of normal strength to the series of lamps and including means for momentarily varying the current from normal to operate said light altering means.

2. In an arc lamp system, a lamp having electrode feeding means, said means including a main lamp magnet, means operated by the electrode feeding mechanism for altering the amount of light given by the lamp on a change of current from normal through said magnet, means for supplying a current of normal strength to the series of lamps and including means for momentarily varying the current from normal to operate said light altering means.

3. In an arc lamp system, a plurality of lamps in series, electrode feeding means for said lamps, said means including a pair of magnets and a movable member operated thereby, certain of said lamps being provided with means operated by the electrode feeding mechanism for altering the amount of light given by the lamp on a change of current from normal, means for supplying a normal current to the series of lamps and including means for momentarily varying the current from normal to operate said light altering means.

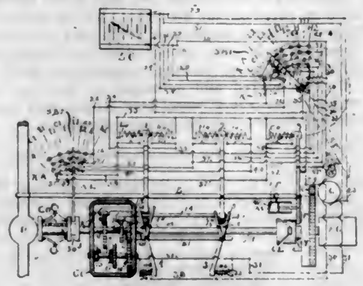
4. In an arc lamp system, a plurality of lamps in series, electrode feeding means for said lamps, said means including a pair of magnets and a movable member operated thereby, certain of said lamps being provided with means operated by the electrode feeding mechanism for altering the amount of light given by the lamp on a change of current from normal, said means comprising a switch member operated by said movable member, means for supplying a normal current to the series of lamps and including means for momentarily varying the current from normal to operate said light altering means.

5. In an arc lamp system, a plurality of lamps in series, electrode feeding means for said lamps including a pair of magnets, certain of said lamps being provided with means operated by the electrode feeding means for changing the strength of current through one of said magnets for altering the amount of light given by the lamp on a change of current from normal, means for supplying a current of normal strength to the series of lamps and including means for momentarily varying the current from normal to operate said light altering means.

[Claims 6 to 8 not printed in the Gazette.]

1,191,290. POWER-TRANSMITTING MECHANISM. HERBERT S. DILLON and MYER C. GASS, San Francisco, Cal. Filed Apr. 10, 1913. Serial No. 760,165. (Cl. 74—58.)

1. In an automobile, the combination of a driving shaft, a driving element, a rear shaft, means for transmitting power from the driving shaft to the rear shaft, an auxiliary shaft, means for transmitting power from the driving shaft to the auxiliary shaft, a plurality of speed change gears located on the auxiliary shaft and rear shaft for transmitting power from the auxiliary shaft to the rear shaft, a clutch for transmitting power from the driving element to the driving shaft, means for shifting the gears and clutch comprising a source of electric energy, a plurality of electro-magnets operative by said source, means for operating two or more of the electro-magnets in synchronism, means operative by the said electro-magnets for changing the relative positions of the gears, and means operative by at least one of the electro-magnets for disengaging the clutch.



2. In an automobile, the combination of a driving shaft, a driving element, a clutch for transmitting power from the driving element to the driving shaft, an auxiliary shaft, a rear shaft, means for transmitting power from the driving shaft to the rear shaft, means for transmitting power from the driving shaft to the auxiliary shaft, speed change gears located on the auxiliary shaft and rear shaft for transmitting power from the auxiliary shaft to the rear shaft, a source of electric energy, a plurality of electric circuits having their terminals connected with said source, electro-magnetically operative means for changing the relative position of the gears and for disengaging the clutch, an automatically operative switchboard, a manually operative switchboard, a plurality of electric switches included in the electric circuits and being located at predetermined points on said switchboards, means for deflecting the electric energy from at least one of the said circuits on the manually operative switchboard to at least one of the circuits on the automatically operative switchboard, means located on the manually operative switchboard for shunting the electric energy from the automatically operative switchboard, means for operating the electric circuits separately, and means for operating at least two of the electric circuits in unison.

3. In an automobile, the combination of a driving shaft, a driving element, an auxiliary shaft, a rear shaft, a clutch for transmitting power from the driving element to the driving shaft, means for transmitting power from the driving shaft to the rear shaft, means for transmitting power from the driving shaft to the auxiliary shaft, speed change gears located on the auxiliary shaft and rear shaft for transmitting power from the auxiliary shaft to the rear shaft, a series of operating electric circuits, a source of electric energy, a plurality of electro-magnets included in said circuits, means for operating said gears and clutch by said electro-magnets, a centrifugal governor connected to the rear shaft, a lever actuated by the centrifugal governor, means for opening and closing a plurality of said operating electric circuits, said means being actuated by said lever.

4. A power transmitting mechanism for automobiles comprising a driving shaft, a driving element, a clutch for transmitting power from the driving element to the driving shaft, an auxiliary shaft, means for transmitting power from the driving shaft to the auxiliary shaft, a rear shaft, means for transmitting power from the driving shaft to the rear shaft, speed change gears for transmitting power from the auxiliary shaft to the rear shaft, a centrifugal governor having one end attached to the rear shaft, a grooved drum attached to the opposite end of the centrifugal governor and being adapted to slide along the rear shaft, a sliding contact lever having one end in sliding contact in the groove of the grooved drum and the other end adapted to describe a portion of a circle, a plurality of electric circuits including a source of electric energy, means for shifting the speed change gears including shifting bars and levers, electro-magnets included in the electric circuits, the cores of the electro-magnets being attached to the gear shifting levers, a clutch lever, the core of at least one electro-magnet attached to the clutch lever, an electric switch board located near the centrifugal governor, the terminals of the electric circuits being located on the switch board, electric circuit closers attached to the sliding contact lever for closing the electric circuits leading to the terminals when the sliding contact lever passes over the terminals, the circuit closers being electrically insulated from the sliding contact lever and from each other, the electro-magnets being arranged in pairs for the speed change gear levers and singly for the clutch lever, the center point of the terminals for the electric circuits leading to the clutch lever electro-magnet being off center or in a different radius from the center point of the terminals for the electric circuits leading to the speed change gear electro-magnets, the said radius being the radius of that portion of a circle described by the sliding contact lever, the terminals being grouped so that when the sliding contact lever is over the center point of the terminals of the clutch circuit the circuit closers are not in contact with the terminals of the speed change gear circuits, and conversely, when the sliding contact lever is over the center point of the terminals of the speed change gear circuits the circuit closers are not in contact with the terminals of the clutch circuit, but when the sliding contact lever is off center of the terminals and in a radius between the centers of the terminals for the clutch circuit and the centers of the terminals for the speed change gear circuits, then the clutch circuit is closed by one of the circuit closers and at least one of the speed change gear circuits is closed by another of the circuit closers substantially as shown.

1,191,291. METAL-PICKLE AND METHOD OF PICKLING. LOUIS C. DREFAHL, Cleveland, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 19, 1916. Serial No. 79,317. (Cl. 148—42.)

1. A metal pickling bath which consists of an acid containing substance and cellulose pulp waste.

2. A metal pickling bath which consists of an acid containing substance and a small amount of cellulose pulp waste.

3. A metal pickling bath which consists of an acid containing substance and approximately six per cent. (6%) of cellulose pulp waste.

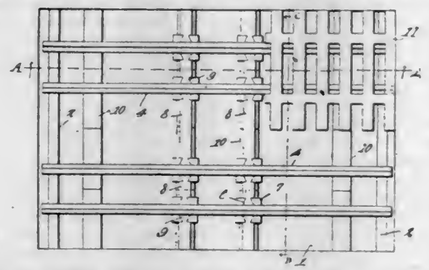
4. In a method of preventing the effervescing of a metal pickling solution the step which consists in adding to such solution a small amount of cellulose pulp waste, thereby producing a thick foam on such solution.

1,191,292. SECTIONAL GRATE. WILLIAM MORRIS EARL, Greensboro, N. C., assignor of one-fourth to Thomas H. Sikes and one-fourth to Max E. Block, Greensboro, N. C. Filed Mar. 31, 1916. Serial No. 88,048. (Cl. 126—168.)

1. A sectional grate including bearing bars having side sockets, of coupling bars between the bearing bars and insertible downwardly into engagement with the walls of the sockets, said coupling bars constituting means for holding the bearing bars against lateral shifting, spacing projections extending laterally from the bearing bars and contacting, and grate sections mounted on the bearing bars.

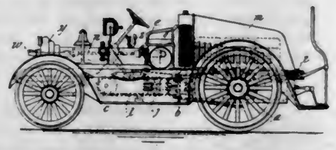
2. A sectional grate including bearing bars having side sockets, of coupling bars between the bearing bars and

insertible downwardly into engagement with the walls of the sockets, said coupling bars constituting means for holding the bearing bars against lateral shifting, spacing projections extending laterally from the bearing bars and



contacting, and grate sections mounted on the bearing bars, each grate section having depending ribs, the bearing bars being extended between the ribs to hold the grate sections against lateral displacement.

1,191,293. AUTOMOBILE FIRE APPARATUS. HERMAN G. FARR, Springfield, Mass. Filed Sept. 21, 1912. Serial No. 721,682. (Cl. 21—90.)



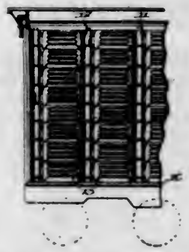
1. A motor-driven apparatus embodying in combination, a chassis structure, adapted to support an engine on the rear end thereof, a transmission mechanism in front of the engine and adapted to be driven therefrom by suitable driving connections including a clutch, a pump on the structure, means to drive the pump from said driving connection, a clutch to put said means into and out of operation, a rear axle mounted on the structure, driving connections from the transmission mechanism to the rear axle adapted to be operated from said transmission and arranged in overlapping relation to the driving connections first mentioned, and means to adjust the distance between said transmission and said rear axle whereby the tension of said last named driving connections may be regulated.

2. A motor-driven apparatus embodying in combination a chassis structure adapted to support an engine on the rear end thereof, a transmission mechanism mounted in front of the engine adapted to be driven therefrom by driving connections between the engine and said mechanism, an adjustable frame mounted on the chassis structure, a rear driving axle fixed to the adjustable frame, chain driving connections between the transmission mechanism and the rear axle, said chain driving connections adapted to be operated from said transmission, all constructed and arranged so that the driving connections from the engine to the rear axle allow a short wheel-base and the adjustable frame can be moved to regulate the tension of the chain driving connection.

3. A motor-driven apparatus embodying in combination a chassis structure adapted to support an engine on the rear end thereof, a transmission mechanism in front of the engine adapted to be driven therefrom, a frame adjustably mounted on the chassis structure carrying the rear axle with suitable springs and sprocket wheels, a bracket adjustably mounted on the frame having a shaft with two sprocket wheels thereon, means for properly distancing the shaft and rear axle, a sprocket wheel fixed to the frame and adapted to be driven from the transmission mechanism, a chain connecting the last mentioned sprocket wheel with one of those on the bracket, a second chain connecting the second sprocket wheel on the bracket with one on the rear axle, all constructed and arranged so that the bracket can move relatively to the frame by the distancing means and the frame can be moved as a whole after the sprockets carried thereby are distanced to properly distance them with respect to the sprocket wheel fixed to the frame, all for the purpose described.

4. A motor-driven apparatus embodying in combination, a chassis structure adapted to support an engine on the rear end thereof, a transmission mechanism in front of the engine adapted to be driven therefrom, driving connections between the two including a clutch, a pump on the structure, means to drive the pump from said driving connection, a clutch to put said means into and out of operation, a rear axle mounted on the structure, driving connections from the transmission mechanism to the rear axle adapted to be operated from said transmission and arranged in overlapping relation to driving connections first mentioned, all constructed and arranged so that the apparatus may have a short wheel-base length and embody the necessary element for the purpose described.

1,191,294. POULTRY-CAR. ROBERT E. FRAME, Michigan City, Ind., assignor to Frank X. Mudd, Chicago, Ill. Filed Nov. 18, 1914. Serial No. 872,723. (Cl. 119—12.)



1. In a poultry car having coops, in combination, a pair of stanchions, a downwardly opening coop door pivoted to and between the stanchions and having vertical movement, a lateral stud adjacent the swinging edge of the door, and a keeper attached to the side face of one of the stanchions and provided with a laterally opening stud-receiving recess having a downward forwardly inclined extension.

2. In a poultry car having coops, in combination, a pair of stanchions, a downwardly opening coop door pivoted to and between the stanchions and having vertical movement, studs projecting laterally from the door adjacent its swinging edge, and keepers fixed to adjacent side faces of the stanchions and each provided with a laterally opening stud-receiving recess having a downward forwardly inclined extension.

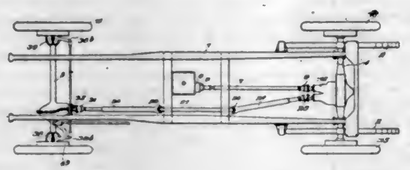
3. In a poultry car having coops, in combination, a pair of stanchions, a downwardly opening coop door pivoted to the stanchions and having vertical movement, studs projecting laterally from the door adjacent its swinging edge, and keepers fixed to the stanchions and each having a laterally opening and downwardly extending recess for receiving one of the studs, the front wall of the recess extension being forwardly inclined toward its lower end.

4. In a poultry car having coops, in combination, a pair of stanchions, a downwardly opening coop door pivoted to the stanchions and having vertical movement, studs projecting laterally from the door adjacent its swinging edge, and keepers fixed to the stanchions and each having a laterally opening and downwardly and upwardly extending recess for receiving one of the studs, the downward extension of the recess being inclined forwardly at its lower end.

5. In a poultry car having a plurality of tiers of coops, in combination, a series of stanchions each formed of a channel bar, bars set transversely through the flanges of the stanchions and projecting therefrom at both ends; outwardly bowed laterally recessed plates attached to the side faces of the stanchions, downwardly swinging coop doors located between adjacent stanchions, each door having vertical slots in its ends for receiving an end of a transverse bar as a pivot and laterally projecting studs for engaging recesses in the bowed plates, such recesses being downwardly extended.

[Claims 6 to 11 not printed in the Gazette.]

1,191,295. MOTOR-VEHICLE. JOHN F. FROMM, Rochester, N. Y. Filed May 28, 1915. Serial No. 30,954. (Cl. 21—90.)



1. In combination in a motor driven vehicle, divided front and rear drive axles each provided with a differential gearing between its sections, a motor connected to the drive gear of one of said differential gearings, and driving connection extending from said drive gear to the drive gear of the other differential gearing.

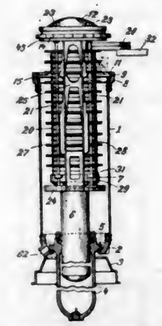
2. In combination with an axle housing, a divided axle supported therein, a differential gearing between the sections of the axle having crown gears on opposite sides of the driving member thereof, stub shafts journaled in the axle housing and having gears meshing with the crown gears and two other shafts, one a drive shaft and the other a driven shaft, each having a knuckle joint connection with one of the stub shafts.

3. In combination in a motor vehicle, divided rear and front drive axles, each provided with a differential gearing between its sections, a motor connected to the drive gear of one of said differential gearings, and driving connection from said drive gear to the drive gear of the other differential gearing, said connection embodying a shaft secured to the frame, stub shafts on the axle housings geared to drive gears of the differential gearings, and telescopic shafts having universal joint connection with the stub shafts and the shaft on the frame of the vehicle.

1,191,296. VULCANIZER. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Continuation of application Serial No. 629,274, filed May 25, 1911. This application filed Feb. 8, 1916. Serial No. 76,884. (Cl. 18—17.)

1. In a vulcanizer, the combination of a vulcanizer body having an open end, a cover for closing said end, interlocking means upon said body and cover adapted to be operated by the relative rotation of the two, means for exerting pressure within the vulcanizer tending to open the cover, and annular joint-forming members on said body and cover respectively, extending one within the other, one of said members having a laterally-acting expansible packing ring engaging the complemental joint-forming member, whereby a limited outward movement of the cover is permitted without causing leakage.

2. In a vulcanizing press, in combination, a vulcanizer body having one open end and means for the admission of a vulcanizing fluid thereto, interlocking means at the open end of said body, a cover provided with interlocking means adapted to be interlocked with the interlocking means on said body, the engagement of said interlocking means being loose so as to permit free engagement and disengagement thereof, a ram cylinder at the opposite end of said body, a ram for clamping molds against said cover, and a flexible packing ring for closing the joint between said cover and said body, said ring being mounted in a groove in the inside of said body and engaging a cylindrical side surface of said cover, whereby a limited lifting of said cover by the action of said ram is permitted without causing leakage.



3. In a vulcanizing press, in combination, a vulcanizer body having one open end and means for the admission of a vulcanizing fluid thereto, interlocking means at the open end of said body, a cover arranged to be detachably interlocked with said body, a ram cylinder at the opposite end of said body, a ram for clamping molds against said cover, and means for sealing the joint between said cover and body comprising a packing ring of flexible material mounted in a groove in said body having a lip projecting away from the open end of said body and adapted to be pressed into engagement with a cylindrical side surface of said cover by the pressure of the vulcanizing fluid contained in the body.

4. In a vulcanizing apparatus, a vulcanizer body having an open end, a cover for closing said end, interlocking means upon said body and cover adapted to be operated by the rotation of said cover upon said body, and anti-friction means carried by said body for supporting said cover.

5. In a vulcanizing press, in combination, a vulcanizer body having an annular groove formed inside of the same near one end thereof, the upper wall of said groove being notched, a cover for closing the end of said body having lugs projecting therefrom adapted to pass through the notches, and to engage with portions of the upper wall of said groove, said cover being rotatable to bring the lugs thereon into alinement with the said notches or with the portions of the upper wall of said groove between said notches, and anti-friction means for supporting said cover comprising balls mounted in a recess in the lower wall of said groove, and a retaining ring supported upon said balls.

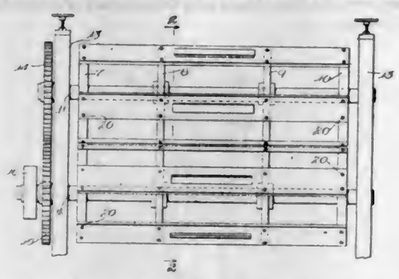
[Claims 6 to 8 not printed in the Gazette.]

1,191,297. MACHINE FOR PUNCHING ROOF MATERIAL. PERRY G. GARDNER, Rutherford, N. J., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed May 24, 1915. Serial No. 29,947. (Cl. 164—28.)

1. A machine for forming transverse slots in a sheet of prepared roofing material comprising coacting rotary rolls, of which one is provided with a circular series of punches, and the other of which is provided with a series of open dies adapted to permit the passage of punchings therethrough, the last mentioned roll consisting of a series of spaced peripheral longitudinally extending bars, widely separated to permit the discharge from the interior thereof of the punchings formed from the sheet of roofing material.

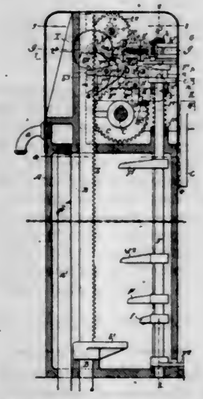
2. A machine for forming transverse slots in a sheet of prepared roofing material comprising coacting rotary rolls not less in length than the width of the said sheet, said rolls being each formed with widely spaced peripheral longitudinally extending bars, the bars of one roll being

provided with punches, and the bars of the other roll being formed with open dies arranged to permit passage of the punchings therethrough, substantially as set forth.



3. In a machine of the character described, the combination with a punch roll having a circular series of punches projecting from its periphery, of a die roll having an interrupted or slotted periphery formed by segmental parallel bars, said bars being apertured to constitute dies for coöperation with the said punches, the said bars being spaced apart to permit the discharge therebetween of the cuttings or punchings, said die roll having wheels or supporting members spaced beyond the ends of the die apertures so as not to interfere with the passage of punchings through said apertures.

1,191,298. MEASURING-PUMP. CHARLES A. GEHMAN, Philadelphia, Pa., assignor to Gehman Pump Company, Phoenix, Ariz., a Corporation of Arizona. Filed Oct. 8, 1910, Serial No. 586,008. Renewed May 1, 1914. Serial No. 835,768. (Cl. 221—103.)



1. The combination, in a measuring apparatus, of a series of registers; a selector; means for moving the selector into alinement with any one of the registers; a pumping device; a plurality of arms forming measuring stops disposed between the pumping device and the selector; and means for shifting any one of said stops into position to be moved by the pumping device so as to actuate a given register through the medium of the selector and to stop the discharge movement of the pumping device.

2. The combination of a cylinder; a pump-plunger; a pumping device connected to said plunger; a series of registers; selective means including a carrier having arms for engagement by the pumping device to actuate one of the registers; and means for operating the carrier to bring one of the arms carried thereby into position to be engaged by the pumping device.

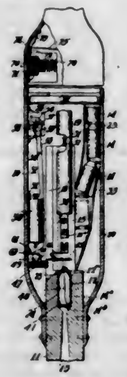
3. The combination of a casing; a pump-rod mounted therein; a register-actuating rod mounted in the casing; radially disposed arms spaced apart at predetermined distances mounted on said register-actuating rod; an arm-engaging member mounted on the pump-rod; means for rotating the shaft to bring any one of the radially disposed arms into the path of the pump-rod arm-engaging member; means for reciprocating the pump-rod; a cylinder; a plunger carried by the pump-rod and disposed in said cylinder; an outlet for said cylinder; a series of registers; and selective means operable by the pump-rod for connecting any one of the registers with the register-actuating rod.

4. The combination of a casing; a pump-rod mounted in the casing; a register-actuating rod also mounted in the casing; a plurality of radially-disposed arms mounted on said register-actuating rod and spaced apart at predetermined distances; an engaging member on the pump-rod adapted to contact with any one of said arms; means for moving the register-actuating rod to aline any one of the arms thereon with the engaging member of the pump-rod; means for reciprocating the pump-rod; a cylinder; a plunger on the pump-rod mounted in the cylinder; an outlet for said cylinder; a series of registers; means for connecting any one of the registers with the register-actuating rod, said means being operated by the pump-rod; a double pawl for engaging the pump-rod; and means for shifting said pawl on the movement of the register-actuating rod so that the said pump-rod must be moved its full extent to insure the delivery of the full quantity of liquid.

5. The combination, in a measuring pump, of a casing; a pump-rod; a cylinder; a plunger mounted in the cylinder and connected to the pump-rod; a discharge pipe connected to the cylinder; a series of independent registers; means for connecting any one of the registers with the pump-rod; and means for limiting the movement of said pump-rod; said pump discharging the liquid on the upward movement of the plunger.

[Claims 6 to 23 not printed in the Gazette.]

1,191,299. ROCKET APPARATUS. ROBERT H. GODDARD, Worcester, Mass. Filed Nov. 8, 1915. Serial No. 60,240. (Cl. 102—23.)



1. A rocket apparatus having, in combination, a casing, a member of great strength fixed in said casing and having a comparatively small combustion chamber therein, a movable breech block for closing said chamber, a guide for said block, and means to yieldingly resist movement of said block away from said chamber.

2. A rocket apparatus having, in combination, a casing, a member fixed in said casing and having a comparatively small combustion chamber therein, a sliding breech block mounted on guides fixed in said casing, and a spring effective to seat said breech block on said combustion chamber.

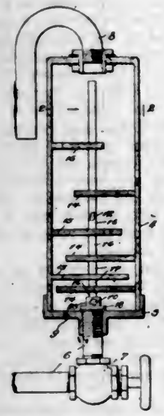
3. A rocket apparatus having, in combination, a casing, a member fixed in said casing and having a comparatively small combustion chamber therein, and a sliding breech block normally seated on said chamber, said member having an upward extension beyond said chamber effective to guide said breech block in its travel relatively to said chamber.

4. A rocket apparatus having, in combination, a casing, a member of great strength fixed in said casing and having a comparatively small combustion chamber therein, a movable breech block for closing said chamber, a guide for said block, and means to restore said block to normal position relatively to said chamber.

5. A rocket apparatus having, in combination, a casing, a member fixed in said casing and having a comparatively small combustion chamber therein, a movable breech block for closing said chamber, a guide for said block, and means to restore said block to normal position relatively to said chamber, said breech block having mounted thereon an extractor to remove the empty shell from the combustion chamber, and an ejector to force the shell outwardly through an opening in said casing.

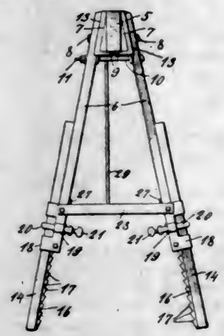
[Claims 6 to 14 not printed in the Gazette.]

1,191,300. AUTOMATIC ELECTROLYTIC CELL. JAY M. GOLDMAN, St. Louis, Mo. Filed Oct. 4, 1915. Serial No. 53,920. (Cl. 204—25.)



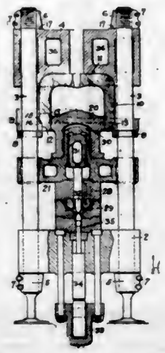
A structure comprising electrode elements of opposite polarity in alternate arrangement, of increasing relative spacing and of decreasing relative superficial areas, lengthwise of the electrode.

1,191,301. TRESTLE. ALBERT W. GUTHAT, Chicago, Ill. Filed June 12, 1915. Serial No. 33,781. (Cl. 20—83.)



The combination of a pair of members having a slidable connection to permit adjustment as to length, one of said members having a longitudinal ratchet bar and the other member having a recess opening to said ratchet bar, a pawl pivotally mounted in the recess and adapted to engage the ratchet bar, the rear end of the pawl projecting from the recess, a yoke carried by the last-mentioned member and straddling the other member, a link carried by the yoke and passing around both members, and a screw carried by the link and engageable with the pawl for locking the same to the teeth of the ratchet bar.

1,191,302. HYDRAULIC PRESS. JOHN M. HANSEN, Pittsburgh, Pa., assignor to Forged Steel Wheel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 23, 1913. Serial No. 775,344. (Cl. 188—10.)



1. In a hydraulic press, the combinations of an anvil block, a cap piece and columns connecting the same, and a separate hydraulic cylinder, the cap piece being of sufficient thickness to sustain the pressing strain brought upon it without deflection of its body, and having a recess in its lower face wholly located within the compression portion of the cap piece, and the cylinder being seated in said recess.

2. In a hydraulic press, the combination of an anvil block, a cap piece, and columns connecting the same, said cap piece having a recess in its lower face, the bottom of said recess being horizontal and exerting a direct bearing on said cylinder, a separate hydraulic cylinder fitting in said recess, and a cross head supported on said columns and extending around the open base of the hydraulic cylinder, said cap-piece being of sufficient thickness to sustain the strains brought on it without deflection of its body.

3. In a hydraulic press, the combination of an anvil block, a cap piece having a shallow recess having a flat bottom in its lower face, a cylinder having a flat upper face fitting in said recess, and a cross head connected to the columns and engaging with the lower open end of the cylinder, said cap piece being of sufficient strength to sustain the strains brought on it without deflection of its body.

4. In a hydraulic cylinder, the combination of an anvil block, a cap piece and columns connecting the same, a separate hydraulic cylinder, and a cross head supported on said columns, the cap piece being of sufficient thickness to sustain the pressing strain without deflection of its body and having a recess wholly in the compression portion thereof, the cylinder being seated within said recess, and the cross head surrounding the base of the cylinder.

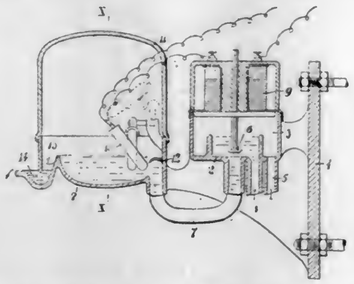
1,191,303. METHOD OF MAKING PAVEMENT. WALTER E. HASSAM, Worcester, and HAROLD PARKER, Lancaster, Mass., assignors to Hassam Paving Company, a Corporation of Massachusetts. Filed Aug. 1, 1912. Serial No. 712,803. (Cl. 94—1.)

1. The method of making a pavement, which consists in laying a concrete foundation, moistening the same, and

applying one or more thin layers of hot bitumen to the foundation under pressure.

2. The method of making a pavement, which consists in laying a concrete foundation, moistening the same, applying one or more thin layers of hot bitumen to the same under pressure, and rolling sand, pea stone or gravel into the bituminous layer.

1,191,304. APPARATUS FOR STERILIZING WATER BY MEANS OF ULTRA-VIOLET RAYS. ANDRÉ HELBRONNER, Paris, France, assignor, by mesne assignments, to The R. U. V. Company, Inc., a Corporation of New York. Filed Oct. 29, 1912. Serial No. 728,439. (Cl. 210—1.)



1. In an apparatus for sterilizing water, the combination of an open vessel adapted to contain the water to be sterilized and to have the water overflow its edges, a mercury vapor lamp arranged with its luminous portion above the edges of the vessel and with its electrodes depending within the vessel to be immersed in the water, an inlet pipe connected with the vessel for supplying water to the same, and means arranged within the vessel above the inlet pipe for deflecting the incoming water toward the bottom of the vessel.

2. In apparatus for sterilizing water, the combination of an open vessel in which the water is sterilized, a source of ultra-violet rays in proximity to the surface of the water therein, an inlet pipe opening to the bottom of the vessel, a tubular worm of material permeable to ultra-violet rays located in said vessel with an open end at the level of the water therein and its other end connected to the outlet pipe.

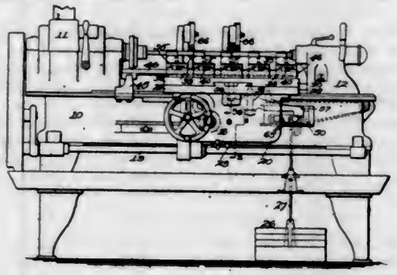
3. In apparatus for sterilizing water, the combination of an open vessel in which the water is sterilized, a source of ultra-violet rays in proximity to the surface of the water therein, a chamber inclosing the sterilizing vessel, an outlet pipe connected to said chamber, a water supply pipe and a pipe connected to the sterilizing vessel and through a three-way cock to the outlet pipe and to the water supply pipe.

4. In apparatus for sterilizing water, the combination of an open vessel, in which the water is sterilized, a source of ultra-violet rays in proximity to the surface of the water therein, a chamber inclosing the sterilizing vessel, an inlet pipe for supplying water to the sterilizing vessel, an outlet pipe for discharging water therefrom and an outlet pipe for discharging water from the interior of said inclosing chamber.

1,191,305. MULTIPLE-TOOL TURNING-LATHE. FRED K. HENDRICKSON, Worcester, Mass., assignor to Reed-Prentice Company, a Corporation of Massachusetts. Filed May 14, 1915. Serial No. 28,183. (Cl. 82—17.)

1. In a lathe, the combination of a tool carriage, a plurality of tool rests movably mounted thereon, means for forcing the tool carriage toward the work, and means whereby each of the tool rests is forced toward or from the work and each one controlled individually.

2. In a lathe, the combination of a main carriage, an auxiliary tool carriage movable crosswise thereon, a plurality of tool rests movably mounted on the auxiliary carriage, means for traversing the main carriage, means for individually adjusting the tool rests, means for positively forcing the auxiliary carriage toward the work and holding it in a definite position during the entire operative travel of the main carriage, and means whereby each of the tool rests is forced toward or from the work and each one controlled individually.



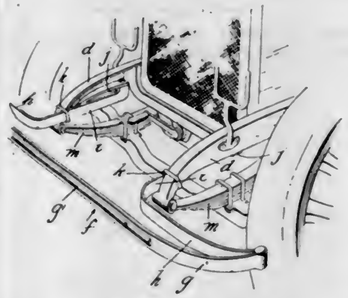
3. In a lathe, the combination of a tool carriage, means for traversing it along the work, a plurality of individual tool rests mounted on the tool carriage, and means whereby each of said tool rests is individually controlled and operated in exactly the same way at any definite point along the course of travel of the tool carriage.

4. In a lathe, the combination of a tool carriage movable back and forth and also transversely, a plurality of individual tool rests mounted thereon and each transversely adjustable, means for holding the tool carriage toward the work, and means extending throughout the length of the work and adapted to control any of the tool rests that come into contact with it for controlling the exact position of said tool rests at all times during the travel of the tool carriage.

5. In a lathe, the combination of a main tool carriage movable back and forth, a plurality of tool rests carried with the main tool carriage, a cam extending longitudinally with respect to the work, and means carried by each tool rest for engaging said cam and controlling the position of said tool rests on the carriage.

[Claims 6 to 15 not printed in the Gazette.]

1,191,306. BUMPER FOR VEHICLES. THOMAS A. HOOVER, Fresno, Cal. Filed Jan. 24, 1912. Serial No. 673,140. (Cl. 213—39.)



1. In a fender, the combination with a vehicle frame, of a continuous spring arranged transversely in front of the frame, the ends of the spring being bent upon itself to the rear and inwardly, the bends in said spring forming the ends of the fender, and means secured to the frame and to the said ends of the spring at a distance from the said bends and in rear of the main portion of the spring whereby the spring is supported.

2. An automobile bumper consisting of a single continuous strip of spring metal the body portion of which is substantially convex outwardly and sufficiently wide to span substantially the front end of the aumomobile and the end-portions of which are curved first rearwardly and then extend inwardly; and a pair of arms which project rearwardly from said inwardly extending end-portions and which are spaced apart a distance sufficient to engage the side members of the automobile frame and are formed with means for attachment thereto.

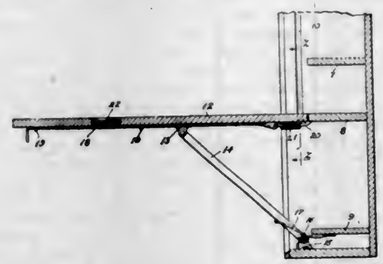
3. A bumper for vehicles, comprising a continuous spring buffer bar for extension transversely of the vehicle, said bar having integral spring-supporting members, the said supporting members constituting a continuation of the body member and being extended laterally therefrom, and then rearwardly.

4. A bumper for vehicles comprising a continuous spring buffer bar for extension transversely of the vehicle, said bar being bent inwardly upon itself adjacent each end thereof and then rearwardly to form spring supporting members, and strengthening means for each of said first mentioned bends.

5. A bumper for vehicles comprising a continuous spring buffer bar for extension transversely of the vehicle, said bar being bent inwardly upon itself adjacent each end thereof, and then rearwardly to form spring supporting members, and means for strengthening each of said first mentioned bends, said means comprising a pin within and conforming to said benda.

[Claim 6 not printed in the Gazette.]

1,191,307. COMBINED TABLE AND CABINET. OTTO F. HORNSCHUCH, Seattle, Wash. Filed Oct. 19, 1914. Serial No. 867,407. (Cl. 45—51.)



A kitchen cabinet including, a combined front closure wall and extension shelf slidably associated therewith, a link connection between the bottom face of the said closure wall and the bottom of said cabinet, an axial wire spring associated with the lower link pivot, said wire spring having one leg thereof engaging the link at a point spaced beyond the pivot thereof while the other leg engages the bottom face of the lower shelf to hold the link and front closure wall in vertical position when moved upwardly.

1,191,308. TIP FOR BILLIARD-CUES. CHARLES A. HOWE, Pittsburgh, Pa. Filed Aug. 23, 1915. Serial No. 46,898. (Cl. 46—9.)

1. A billiard cue, comprising a shaft provided with a sleeve having a frusto-conical smooth surfaced end cavity, and a frusto-conical member having a smooth surface frictionally held in said cavity and carrying a button.

2. A billiard cue, comprising a shaft having a sleeve provided with a smooth tapered socket, and a smooth tapered member fitting said socket and provided with a button.

3. A billiard cue, comprising a shaft having a sleeve provided with a smooth tapered socket, a smooth tapered thimble fitting said socket and provided with a backing surface, and a button in said thimble lying on said backing surface.

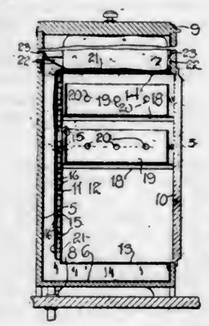


4. A billiard cue, comprising a shaft having a sleeve provided with a smooth tapered socket, a sheet metal thimble having a smooth tapered portion fitting said socket and provided with an annular shoulder, a washer within said thimble and abutting said shoulder, and a button in said thimble and lying adjacent said washer.

5. A billiard cue tip, comprising a member having a smooth tapered portion provided with a socket or seat, and a button secured to said seat.

[Claims 6 to 8 not printed in the Gazette.]

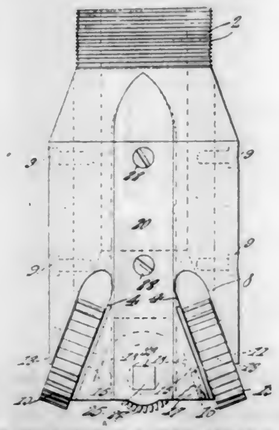
1,191,309. REFRIGERATOR. MARION F. HUDSON, Poplar Bluff, Mo. Filed July 10, 1915. Serial No. 39,072. (Cl. 45—133.)



1. In a refrigerator, a body, a provision compartment having its walls spaced from the body walls of the refrigerator, the rear wall of said compartment being provided with a plurality of spaced obliquely inclined slots and flanges projecting outwardly from the longitudinal edges of each slot, a porous sheet arranged upon the top of the provision compartment and hanging loosely over the rear wall in contact with said flanges, and metal plates hinged upon the refrigerator walls and resting at their free edges upon the porous sheet which is disposed over the top of the provision compartment, said free edges of the hinged plates being pressed downwardly by an ice cake engaged thereon.

2. In a refrigerator, a body, a provision compartment having its walls spaced from the body walls of the refrigerator, a removable fabric cover arranged upon the walls of the provision compartment, and metal plates hinged along one of their longitudinal edges to the side and rear walls of the refrigerator body and resting at their other free edges upon said fabric cover.

1,191,310. DRILL-BIT. GRANVILLE A. HUMASON, Shreveport, La. Filed Sept. 8, 1915. Serial No. 49,566. (Cl. 255—71.)



1. A drill bit including a head having a groove, a tongue detachably mounted within the groove and retained by the walls thereof, means upon the tongue and coöperating with the head for transmitting longitudinal thrust from the tongue to the head, a bearing pin detachably engaging the tongue, and a cutter carried by the pin.

2. A drill bit including a head having a dovetail groove, a dovetail tongue seated in the groove, means for securing the tongue to the groove, coöperating means upon the tongue and head for transmitting longitudinal thrust from the tongue to the head, a bearing pin detachably engaging the tongue, and a cutter carried by the pin.

3. A drill bit including a head having spaced longitudinal grooves in the outer face thereof, tongues detachably mounted within the grooves and retained by the walls thereof, means upon the tongues coöperating with the head for transmitting longitudinal thrusts from the tongues to the head, bearing pins having their outer ends detachably engaging the respective tongues and their inner ends engaging the head, and cutters mounted on the bearing pins.

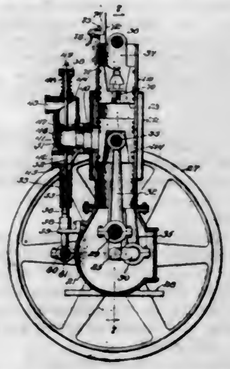
4. In a drill bit the combination with a head having inwardly converging side recesses, there being longitudinal grooves in the outer face of the head and communicating with the recesses, of tongues detachably secured in and lapped and retained by the walls of the grooves and constituting the outer side walls of the side recesses, means upon each tongue and coöperating with the head for transmitting longitudinal thrust from the tongue to the head, bearing pins detachably engaged by the tongues, and cutters mounted on the pins.

5. In a drill bit the combination with a head having inwardly converging side recesses, there being longitudinal grooves in the outer face of the head and communicating with the recesses, of tongues detachably secured in the grooves and constituting the outer side walls of the side recesses, means upon each tongue and coöperating with the head for transmitting longitudinal thrust from the tongue to the head, bearing pins detachably engaged at their ends by the tongues, each of said pins having expansible inner ends, means engaging said inner ends to expand them within the walls of the end recess, and cutters mounted on said pins and within the respective side recesses.

[Claim 6 not printed in the Gazette.]

1,191,311. INTERNAL-COMBUSTION ENGINE. GEORGE B. JACKSON, Chicago, Ill. Filed Oct. 27, 1911. Serial No. 657,039. (Cl. 123—51.)

1. An internal combustion engine comprising a cylinder, two pistons therein movable toward and from each other, a crank shaft, cranks thereon angularly spaced approximately ninety degrees apart and connecting rods for connecting the cranks to said piston, said cranks being so disposed on the shaft relatively to positions of the pistons when closest together that the cranks travel through the arcs of their throw between the shaft and cylinder during almost the entire period in which the force of the explosive energy is delivered through the pistons to the crank shaft.



2. An internal combustion engine comprising a cylinder, two pistons in the cylinder and movable toward and from each other, a crank shaft provided with cranks spaced approximately ninety degrees apart and connecting rods for connecting said pistons to said cranks, with the cranks disposed on the side of the shaft adjacent to the cylinder during the effective power stroke of the engine, one of the cranks being longer than the other crank to increase the expansion length between pistons.

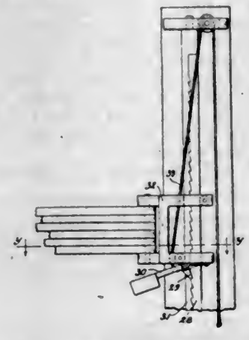
3. A four-cycle internal combustion engine comprising a cylinder, two pistons therein movable toward and from each other, a crank shaft, cranks thereon, each connected to one of said pistons, said cranks being spaced at an angular distance apart relatively to the positions of the pistons when closest together, so that one of the cranks operates through approximately its longest lever arm to turn the crank shaft at the time of the maximum pressure of the explosive energy on the pistons, and with the lever arm of the other crank increasing throughout and during the shortening of the lever arm of the first mentioned crank, said cylinder being provided with an inlet port across which one of the pistons travels in position to be covered by one of said pistons when the pistons are closest together in the compression stroke of the engine and to be uncovered by said piston during the charging stroke only after said pistons have moved away from each other a distance to create a substantial vacuum in the cylinder between said pistons.

4. An internal combustion engine comprising a single cylinder, two pistons therein movable toward and from each other, a single crank shaft, cranks thereon with means connecting each crank to one piston, said cranks being spaced at an angular distance apart relatively to the positions of the pistons when closest together so that the compressed charge of fuel between the pistons may be ignited at approximately the high point of compression and the maximum explosive pressure delivered to the pistons at the time one of the cranks is operating at approximately its longest lever arm to turn the crank shaft, and with the lever arm of the other crank increasing during and throughout the decrease of the lever arm of the first mentioned crank, and a single port opening into the cylinder and connected to inlet and exhaust passages and located to be covered by one of the pistons when the fuel charge is ignited, and to be uncovered by said piston during the charging stroke only after the pistons have moved away from each other a distance to create a substantial vacuum in the cylinder between the pistons.

5. An internal combustion engine comprising a cylinder, with means whereby an explosive mixture may be supplied thereto and spent gases exhausted therefrom, two pistons in the cylinder movable toward and from each other, a single crank shaft, cranks thereon, connecting rods for connecting the cranks to said pistons, said cranks being spaced at an angular distance apart, relatively to the positions of said pistons, when closest together, so that one of the cranks is operated through approximately its longest lever arm to turn the crank shaft at the time of the theoretical maximum explosive pressure on the pistons and with the leverage effect of one crank increasing during and throughout the decrease of the lever arm of the other crank, a spark plug carried by one of the pistons, an ignition circuit terminal connected to and movable with said latter piston, and a fixed terminal electrically connected to the movable terminal.

[Claim 6 not printed in the Gazette.]

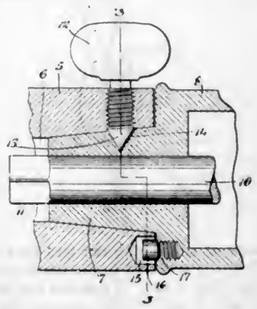
1,191,312. ADJUSTABLE CLOTHES-RACK. NELS JENSEN, Bellevue, Wash., assignor of one-half to N. C. Nelsen, Bellevue, Wash. Filed Aug. 23, 1915. Serial No. 46,765. (Cl. 68—34.)



In a clothes-rack of the class described, the combination with a supporting standard provided with two brackets disposed to project outwardly one from the top end portion and the other from the bottom end portion thereof, of a shaft disposed vertically to be rotatable in bearings formed in said two brackets; a toothed rack secured to said shaft in a position lengthwise thereof; a carrier slidably mounted on said shaft and adapted to be moved vertically to different points thereon; a weighted lever arm provided with an integral dog and pivotally attached to the bottom portion of said carrier in such position that said dog may be engaged and disengaged with a desired one of the teeth of said toothed rack; and a cord having one of its ends attached to said weighted lever arm to extend upwardly therefrom to adapt it to operate to actuate said weighted lever arm to cause its dog to engage and disengage with an adjacent one of the teeth of said toothed rack whereby said carrier may be raised and lowered on said shaft to a desired point thereon and securely maintained at such point.

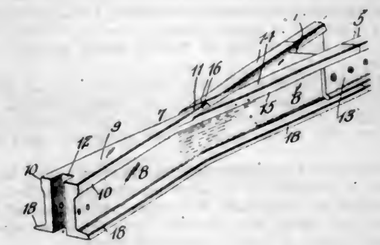
1,191,313. COUPLING DEVICE. HERBERT L. JOHNSTON, Troy, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a Corporation of Ohio. Filed June 19, 1913. Serial No. 774,567. (Cl. 74—8.)

In a coupling device, the combination with two shaft housings fitting one within the other and having tapered connection therebetween, of means for coupling the housings together comprising a set screw with a conical end mounted in the outer housing, the inner housing being provided with a conical socket adapted to receive the set screw, said socket being slightly out of alinement with the conical end of the set screw, and means for preventing rotation of the housings, said means at the same time removing the rotary strain from the coupling means and comprising a stud projecting from one housing member,



the other housing member being provided with a socket to receive the stud, said socket being of larger diameter than the stud.

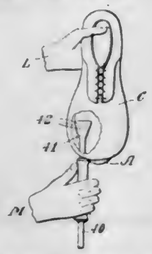
1,191,314. RAILWAY-SWITCH FROG. JOHN JOHNSON, Dupont, Ind. Filed Jan. 24, 1916. Serial No. 73,931. (Cl. 104—5.)



1. The herein described switch frog consisting of a single integral casting having a body portion gradually decreasing in thickness from each end of the frog to its center, one of the end portions of the frog body having a head formed thereon of uniformly greater width than the thickness of said end portion, said head at its inner end terminating in a point projecting beyond the longitudinal center of the frog, and spaced inwardly converging heads formed on the upper surface of the other end portion of the frog body at its opposite edges and projecting beyond the side faces thereof to form flanges, the inner opposed edges of said latter heads at their inner ends being obliquely inclined and extended beyond the terminal of said first named head and in parallel relation to the opposite sides thereof and terminating at the approximate center of the frog.

2. The herein described switch frog consisting of a single solid metal casting gradually decreasing in cross-sectional area from its opposite ends to its center and provided upon the upper surface of one of said end portions with a head of greater width than the thickness of the body of the frog and projecting beyond the side faces thereof to provide longitudinal flanges, said head tapering to a point at the center of the frog, and spaced inwardly converging heads formed upon the upper surface of the frog at its other end and having their inner edges extended in spaced parallel relation to the point of the first named head, said latter converging heads also projecting beyond the opposite side faces of the frog to provide longitudinal flanges thereon and a narrow longitudinally extending flange formed upon each side of the frog body at its base.

1,191,315. PROCESS OF MOISTENING SHOE-UPPERS. OSCAR P. JOHNSON, Nashua, N. H. Filed Oct. 5, 1914. Serial No. 865,162. (Cl. 12—145.)



1. The process of moistening the fore part of the upper of a shoe before it is attached to the inner sole which consists of placing it on a last, of holding the last in an upright position and of introducing steam under the upper between it and the last while the outer side of the upper is out of contact with said steam as described.

2. The process of moistening the upper of a shoe before it is attached to the inner sole which consists of holding the upper in an upright position and of introducing steam under it while the outer side of the upper is out of contact with said steam as described.

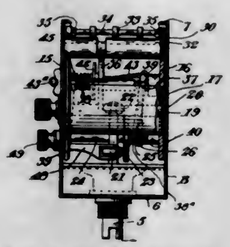
3. The process of moistening the upper of a shoe before it is attached to the inner sole which consists of placing it on a last, of holding the last in an upright position with the toe inclining downward, of inserting a steam conveyer with a plurality of small outlets at the top between the upper and the last, and of forcing steam through said outlets.

4. The process of moistening the upper of a shoe which consists of holding the upper in an upright position and of bringing the underside in contact with steam while the outer side of the upper is out of contact with said steam.

5. The process of moistening the upper of a shoe which consists of holding the upper in an upright position and of bringing the underside in contact with steam of low temperature and of low pressure while the outer side of the upper is out of contact with said steam.

[Claims 6 to 9 not printed in the Gazette.]

1,191,316. ROAD-INDICATOR. ORVILLE EARNEST JOSEPH, Chicago, Ill. Filed June 14, 1915. Serial No. 34,036. (Cl. 40—42.)



1. An indicator of the class described comprising a casing, interchangeable rollers mounted therein, a roller rotatably mounted intermediate of the said interchangeable rollers, a tape taking around the interchangeable rollers and engaging with the second said roller, a friction disk operatively connected to the second said roller, a stub spindle, a roller adjustably mounted on the stub spindle adapted to engage with the disk, and means for adjusting the roller to alter the direction of motion of the disk.

2. An indicator of the class described comprising a casing, interchangeable rollers mounted therein provided with flanges, a stub spindle rotatably mounted in the casing provided with a roller rigidly mounted on the upper end thereof, a friction disk rotatably mounted in the casing and adapted to engage the said roller, grooved pulleys operatively connected to the friction disk, belts taking around the grooved pulleys and flanges of the rollers, and means for rotating the stub spindle.

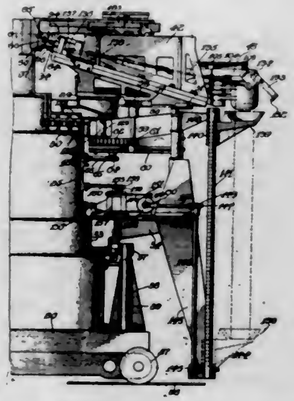
3. In an indicator of the class described and in combination, a casing, interchangeable rollers mounted therein, a roller located intermediate of the interchangeable rollers, a spindle having a reduced upper end substantially square in cross section, a roller adjustably mounted on the reduced end of the spindle, a friction disk coacting with the roller and operatively connected to the roller located intermediate of the interchangeable rollers, and means for adjusting the roller on the spindle to give a graduated motion to the roller located intermediate of the interchangeable rollers.

4. In an indicator of the class described and in combination, interchangeable rollers, a tape taking thereabout, a pair of power operated friction disks rotatably mounted in the casing, rollers coacting with the friction disks, tape winding and unwinding means operated by said rollers, and means for simultaneously disengaging the friction disks and the rollers whereby movement of the tape is stopped.

5. In an indicator of the class described and in combination, a casing, interchangeable rollers rotatably mounted therein, a tape taking around the interchangeable rollers, a pair of power operated friction disks rotatably mounted in the casing, rollers coacting with the friction disks, tape winding and unwinding means operated by said rollers, resilient means for holding the rollers and friction disks in contact, and means for simultaneously disengaging the rollers and friction disks whereby movement of the tape is stopped.

[Claims 6 and 7 not printed in the Gazette.]

1,191,317. MACHINE FOR MAKING GLASS CYLINDERS. AUGUST KADOW, Toledo, Ohio, assignor to The Westlake Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Sept. 11, 1912. Serial No. 719,864. (Cl. 49—1.)



1. The combination with means for automatically making a gather of glass comprising means for sustaining the upper end of said gather so that the gather may elongate by gravity, of means for automatically introducing air pressure into said gather in increasing volume as said gather elongates, a support arranged to receive the lower end of said gather only after it has partially elongated, and power driven means for thereafter lowering said support with the lower end of the gather thereon at a predetermined speed during the further elongation of the gather.

2. The combination with a gathering mold for making a gather of glass comprising means for sustaining said gather by its upper end so that the gather may elongate by gravity, of means for automatically opening the body of said mold at a predetermined time to relieve said gather hanging free from said supporting means, means for introducing air pressure into said gather during elongation, a support arranged to receive the lower end of the gather only after it has elongated to a predetermined extent, and power driven means for thereafter lowering said support with the lower end of said gather thereon at a predetermined speed during the further elongation and blowing of said gather.

3. The combination with means for automatically making a gather of glass comprising means for sustaining the upper end of said gather so that the gather may elongate by gravity, of means for automatically introducing air pressure into said gather in increasing volume as said gather elongates, a support arranged to receive the lower end of said gather only after it has partially elongated, power driven means for thereafter lowering said support with the lower end of the gather thereon at a predetermined speed during the further elongation of the gather, means for thereafter automatically releasing the upper end of said gather, and means for automatically reversing the movement of said support at a predetermined time after the upper end of said gather has been closed.

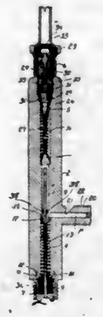
4. The combination with a central stationary support, of a frame constantly rotating around said support and means actuated by the travel of said rotating frame to gather and develop a body of glass in a predetermined recurring cycle of operations in regular time and order, comprising gathering mechanism provided with gathering molds for making a gather of glass, said molds comprising means for supporting the upper end of said gather when otherwise free from the support of said molds, means for forming an initial chamber in the upper end of said gather, means for admitting air under pressure into said gather as it elongates by gravity, a support arranged to receive the lower end of said gather only after it has elongated downwardly a certain distance, power driven means for thereafter lowering said support at a predetermined speed during the further elongation of the gather with the lower end of the gather supported thereon, and means for actuating said power driven means to lower said support during the elongation of the gather and to thereafter return said support to its original position.

5. The combination with a stationary support, of a rotating support arranged to constantly travel around the stationary support, means on said rotating support to engage the lower end of a gather after a certain amount of elongation by gravity, means for automatically lowering said gather support at a predetermined speed, and thereafter returning the same to its original position, in regular time and order, gathering mechanism on said rotating frame, means for periodically projecting said gathering mechanism into a furnace to make a gather of glass, means for arresting the angular travel of said gathering mechanism with the rotating frame during the gathering period without arresting the rotating frame, means for returning the gathering mechanism to its original position, in which position it is directly above the gather support, means for supporting the upper end of the gather during elongation, means for releasing the body in the lower end of the gather whereby it is permitted to elongate by gravity until it contacts with said gather support, and means for admitting air under pressure into the gather during elongation.

[Claims 6 to 8 not printed in the Gazette.]

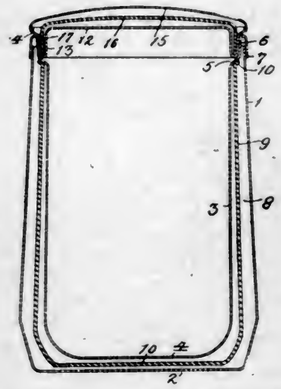
1,191,318. AUTOMATIC TIRE-ALARM. FRANK N. KELSEY, New Haven, Conn., assignor to Archibald H. Bowditch, New Haven, Conn. Filed July 20, 1914. Serial No. 851,968. (Cl. 116—1.)

1. In an automatic audible signal valve for indicating the deflation of pneumatic tires, the combination with a valve-body having a longitudinal air-passage and a signal-nipple, of an air-check-valve located in the outer end of the said body, a signal valve located in the inner end of the said body, co-acting stems for the respective valves, and a cap normally mounted upon the valve-body to close the outer end of its air-passage and adapted to be temporarily utilized as a closure for the said signal-nipple during the inflation of the tire.



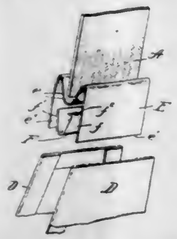
2. In an automatic audible signal valve for indicating the deflation of pneumatic tires, the combination with a valve-body provided at its outer end with an inflation nipple and with a lateral signal nipple, of an air-check-valve and a signal valve mounted in the said body, co-acting stems for the said valves, a spring for opening the signal valve when the pressure within the tire falls below a predetermined point, and means for sealing the signal nipple when the air-valve is being utilized for inflating the tire.

1,191,319. PLURAL-WALLED CAN. WALTER KLINE, Green township, Summit county, Ohio, assignor to F. A. Wilcox, Akron, Ohio. Filed Aug. 9, 1915. Serial No. 44,477. (Cl. 220—138.)



A receptacle comprising a cup-shaped inner member of sheet metal provided at the upper end with an outwardly flaring integral flange from which extends upwardly a wall flaring outwardly with an inclination less than the inclination of said flange, said wall terminating at its upper part with an integral down-turned portion, a cup-shaped member of non-metallic material larger than the first member arranged around and in spaced relation therewith and provided with an outwardly flaring upper portion adapted to be attached to the outer face of said flange, a cup-shaped metallic member larger than said last member positioned thereabout and in spaced relation therewith, the upper portion thereof secured to and lapping the down-turned upper portion of the first member, and a cover for said receptacle arranged to frictionally engage the inner face of the flaring wall of the first member substantially as described.

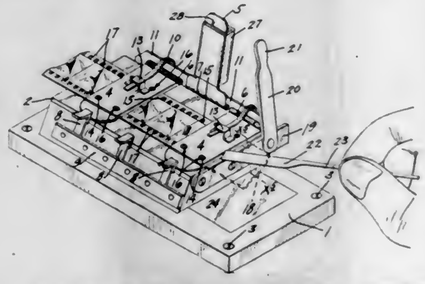
1,191,320. HOSE-SUPPORTER. CHARLES P. KUEHN, Chicago, Ill., assignor to A. Stein & Company, Chicago, Ill., a Corporation. Filed Feb. 1, 1915. Serial No. 5,508. (Cl. 241—6.)



1. The combination with a connecting member, of an elastic band and means for uniting one end of said band to the connecting member, comprising a metal clamp plate folded upon itself and having an inturned clamping edge to engage the fabric, the fabric strip covering said metal clamp plate and united to said connecting member, portions of said fabric strip and the end of said band being held between the jaws of said clamp plate.

2. In a hose supporter comprising an elastic leg encircling band and connecting member provided at its lower edge with a tab having a hose engaging fastening, and means for detachably uniting the front end of said leg encircling band to said connecting member, means for attaching the fixed end of said leg encircling band to said connecting member, comprising a metal clamp plate and a fabric strip, the end of said leg encircling band and portions of said fabric strip being within the jaws of said clamp plate, said fabric strip covering said clamp plate and being united to said connecting member.

1,191,321. FILM-MENDING DEVICE. WILLIAM H. KUNERT, Minneapolis, Minn. Filed June 2, 1915. Serial No. 31,712. (Cl. 154—42.)



1. In a device of the kind described, the combination with a film cutter, of a mirror so located below the cutter, that the operator may observe the relative position of the under face of the film and the cutter, and a clamp for holding the film while being cut.

2. In a device of the kind described, the combination with a bed-plate, of a film cutter carried by said bed-plate, means for holding a film longitudinally spaced on the bed-plate, with respect to the cutter, a mirror located below said cutter, and a clamp for holding the ends of a film on the bed-plate while cementing the same together.

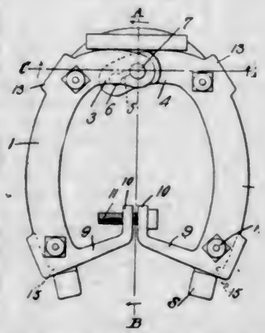
3. In a device of the kind described, the combination with a bed-plate, of a film cutter carried by said bed-plate, aligning pins on the bed-plate, arranged to enter the sprocket holes of a film, for holding the film longitudinally spaced, with respect to said cutter, a mirror located below said cutter, a clamp for holding the film on the bed-plate and affording a guide for a tool used in removing the emulsion from the film in making a splice-joint, and a clamp for holding the ends of the film while cementing the same together.

4. In a device of the kind described, the combination with a film cutter, of a mirror so located below the cutter that the operator may observe the relative position of the under face of the film and the cutter.

5. In a device of the kind described, the combination with a bed-plate having a guide for a tool used in picking up one of the end portions of a film while cement is being applied to the other thereof, of a pair of clamps for holding the end portions of the film on the bed-plate while cementing the same together.

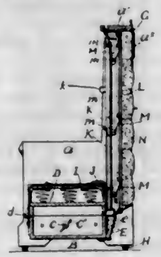
[Claims 6 to 8 not printed in the Gazette.]

1,191,322. HORSESHOE. HARRY H. LANDIS, Telford, Pa. Filed May 10, 1916. Serial No. 96,666. (Cl. 168—19.)



A calk attachment for horse shoes, including opposed bowed members having inwardly extending lapping portions, a stud projecting from one of said portions, there being a stud receiving slot in the other one of said lapping portions, said slot having enlargements at its ends, the stud being flattened, the greatest diameter of the flattened portion of the stud being substantially equal to the diameters of the enlarged end portions of the slot and the smallest diameter of the flattened portion being substantially equal to the width of the intermediate portion of the slot, and means for adjustably connecting the other ends of the members.

1,191,323. SOFA-BED. GEORGE LEHMAN, Chicago, Ill. Filed Apr. 24, 1915. Serial No. 23,662. (Cl. 5—48.)



1. In a sofa bed, a stationary frame, a bed pivotally mounted in said frame, arms pivotally mounted on said bed, a frame pivotally mounted on said arms, and abutments on said first named frame adapted to support said pivotally mounted frame and to change the relative position of said bed and pivotally mounted frame when said bed and last named frame are turned from a vertical to a horizontal position.

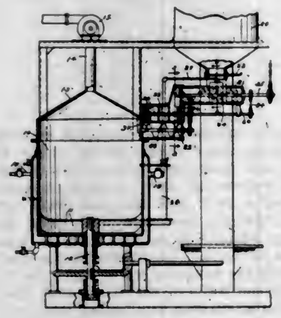
2. In a sofa bed, a stationary frame, including a receptacle to which the sides of said frame are rigidly attached, a cover to said receptacle, means to pivotally mount said cover on said receptacle, and handles on said cover adapted to form legs supporting one side thereof when said cover is turned on its pivots to open said receptacle, in combination with a bed pivotally mounted in said stationary frame, arms pivotally mounted on said bed, an additional frame pivotally mounted on said arms and abutments on said receptacle adapted to support said pivotally mounted frame in a predetermined position when said bed is in a vertical plane, and said pivotally mounted frame adapted to rest on the upper edges of said receptacle and cover, when said cover is turned to open said receptacle, and said arms adapted to support said bed spaced above said additional frame when said pivotally mounted frame is resting on said cover and receptacle.

3. In a sofa bed, a stationary frame comprising ends, a receptacle between said frame ends and means to attach said frame ends to said receptacle, in combination with a bed frame pivotally mounted on said frame ends, a cover pivotally attached to said receptacle, an additional frame, arms pivoted to said bed frame and to said additional frame, said cover adapted to maintain said additional frame in a substantially vertical plane when said cover is closed on said receptacle and to form a support for said additional frame when said cover is opened from said receptacle, and abutments on said receptacle adapted to force said additional frame into a pre-determined position relative to said bed frame as said bed frame is turned on its pivots.

4. In a sofa bed, a stationary frame, a bed, a mattress to said bed pivots attaching said bed to said frame, a rail pivotally attached to one side of said bed, and springs attached at one end to said rail and at the other end to said frame, said springs adapted to force said rail into position against the mattress on said bed when said bed is in a substantially vertical plane, and into position away from said mattress when said bed is in a horizontal plane.

5. In a sofa bed, a stationary frame comprising ends, a bed, pivots to attach said bed to said frame, a foot board and a head board respectively attached to the head rail and to the foot rail of said bed, said boards adapted to be turned into planes parallel to, and at right angles to said bed, means to yieldingly hold said boards in said planes and abutments on said boards arranged to come in front of said ends when said bed is in a horizontal plane and said boards are at right angles thereto to latch said bed in said horizontal plane.

1,191,324. APPARATUS FOR MAKING MODIFIED STARCHES. ADOLPH W. H. LENDERS, Cedar Rapids, Iowa. Filed Sept. 17, 1915. Serial No. 51,258. (Cl. 127—10.)



1. An apparatus for manufacturing modified starches, means for acidulating the starch comprising a hollow element having a perforated wall, means for mixing together starch and an acid in uniform proportions, and means for forcing the material through the perforated wall of said hollow element.

2. In apparatus for manufacturing modified starches, means for acidulating the starch comprising a hollow element the wall of which is formed with narrow slits, means for mixing together starch and an acid in uniform proportions, and means for forcing the material through the slits in the wall of said hollow element.

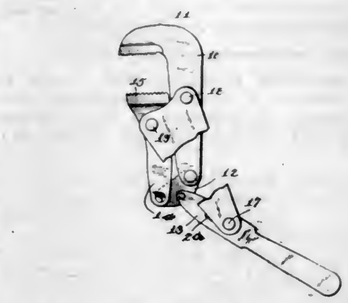
3. In apparatus for manufacturing modified starches, means for acidulating the starch comprising a hollow element having a perforated wall, means for mixing together starch and an acid in uniform proportions, and rotary beaters within said hollow element which revolve at a high speed and force the material through said perforations.

4. In apparatus for manufacturing modified starches, means for acidulating the starch comprising a hollow element the wall of which is formed with narrow slits, means for mixing together starch and an acid in uniform proportions, and rotary beaters within said hollow elements which further mix the particles of starch with the acid and force the material through said slits.

5. In apparatus for manufacturing modified starches, means for acidulating the starch comprising a perforated element, means for mixing starch and an acid together and delivering the same to said perforated element, and means for forcing the material through the perforations in said element.

[Claims 6 to 17 not printed in the Gazette.]

1,191,325. WRENCH. HENRY F. W. LIESEMEYER, Owensville, Mo. Filed July 23, 1915. Serial No. 41,593. (Cl. 81—91.)



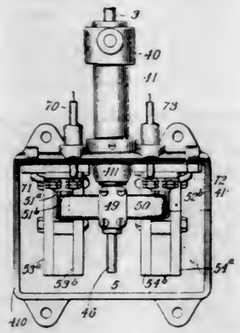
A wrench comprising a shank having a jaw on the outer end thereof, a movable jaw disposed to move toward and from the first named jaw and carrying a shank, a link having its ends pivoted directly to the inner ends of the shanks, a handle lever having one end pivoted to the central portion of the link, and a substantially triangular plate having two of its corners pivoted directly to the shanks intermediate their ends, the third corner of the plate being pivotally and slidably connected to the handle lever intermediate its ends.

1,191,326. ELECTRIC SWITCH. JAMES F. MCELROY, Albany, N. Y.; Susie H. McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Feb. 27, 1912. Serial No. 680,230. (Cl. 175—282.)

1. A switch of the character described comprising a casing, spaced apart insulating bars therein arranged in sets, the bars of each set being connected at one edge by an inner wall to form recesses, stationary contacts located within the recesses and extending parallel with said bars, a movable contact comprising an arched bar having end contacts extending approximately at right angles to said inner walls and movable parallel therewith, said end contacts overhanging said inner walls, and means for reciprocating said movable contact.

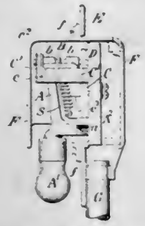
2. A switch of the character described comprising a casing provided with spaced apart elongated insulated

recesses, stationary contacts parallel with the walls of said recesses, a movable contact comprising an arched bar having end contacts arranged at right angles to the stationary contacts and movable parallel with the walls of said recess, and means for reciprocating said movable contact longitudinally of said recesses.



3. A switch of the character described comprising a casing provided with spaced apart elongated insulating recesses, stationary contacts parallel with the walls of said recesses, a movable contact comprising an arched bar the ends of which extend into the tops of said recesses at right angles to the bottom thereof and at right angles to said stationary contacts and means for reciprocating said movable contact longitudinally of the recesses.

1,191,327. PARTITION JUNCTION-BOX. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed July 15, 1914. Serial No. 851,160. (Cl. 247—13.)



1. A partition junction box comprising a section having means for engaging a partition wall and located to cause a portion thereof to project through said wall when engaged therewith, a removable cover attached to the portion to be projected through the wall, and provided with means to aid in securing said section in position, and means within said section for supporting terminal connections on the cover side of said wall and switch contacts on the other side of the wall.

2. A partition junction box comprising a section having means for engaging a partition wall and located to cause a portion thereof to project through said wall when engaged therewith, said section having a wide opening in one end, a removable cover attached to the portion to be projected through the wall, and provided with means to aid in securing said section in position, and means within said section for supporting terminal connections on the cover side of said wall and switch contacts on the other side of the wall.

3. A partition junction box comprising a section having means for engaging a partition wall and located to cause a portion thereof to project through said wall when engaged therewith, a removable cover attached to the portion to be projected through the wall, said cover having means for embracing a line wire tube, and means within said section for supporting terminal connections on the cover side of said wall and switch contacts on the other side of the wall.

4. A partition junction box comprising a section having means for engaging a partition wall and located to cause a portion thereof to project through said wall when engaged therewith, a removable cover attached to the portion to be projected through the wall, said cover having an extension for clamping a line wire tube against said wall, and means within said section for supporting terminal connections on the cover side of said wall and switch contacts on the other side of the wall.

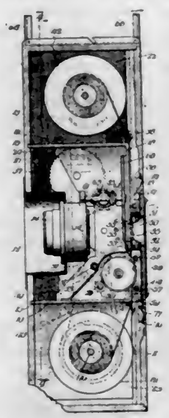
5. A partition junction box comprising a section having means for engaging a partition wall and located to cause a portion thereof to project through said wall when engaged therewith, said section having a wide opening in one end, a removable cover attached to the portion to be projected through the wall, said cover having means for embracing a line wire tube, and means within said section for supporting the terminal connection on the cover side of said wall, and switch contacts on the other side of said wall.

[Claim 6 not printed in the Gazette.]

1,191,328. LUBRICATING OIL OR GREASE. JOHN HENRY MACKLE, Watervliet, N. Y. Filed Oct. 17, 1914. Serial No. 867,090. (Cl. 87—9.)

A lubricating oil which consists of cottonseed oil 85% and castor oil 15% which mixture has been heated to boil off or deposit the impure matter or sediment and decanted for use as herein specified.

1,191,329. CONVERTIBLE MOTION-PICTURE MACHINE. LOUIS MANDEL, Chicago, Ill. Filed Apr. 16, 1915. Serial No. 21,638. (Cl. 88—17.)



1. In a device of the character described, a casing having an open side, a lens arranged in one of the walls of the casing, the side and front walls of the casing being provided with registering open grooves, a supporting frame embodying a face wall and end walls arranged perpendicularly thereto, said face wall being provided with an aperture adapted to register with the lens opening, film feeding mechanism mounted upon the said structure, intermediate the said end walls, film reel supports, supported by the end walls of the said frame, said frame and the supported mechanism being freely removable from and adapted to be inserted in the casing as a self-contained unit, the said grooves in the casing walls receiving the edges of the end walls of the frame to divide the casing into light tight compartments, and a closure for the casing.

2. In a device of the character described, a casing having an open side, a lens arranged in one of the walls of the casing, the side and front walls of the casing being

provided with registering open grooves, a supporting frame embodying a face wall and end wall arranged perpendicularly thereto, said face wall being provided with an aperture adapted to register with the lens opening, film feeding mechanism mounted upon the said structure, intermediate the said end walls, film reel supports, supported by the end walls of the said frame, a gate pivotally connected with said face wall and through which gate a flexible strip passes, said frame and supported mechanism being freely removable from and adapted to be inserted in the casing as a self-contained unit, the said grooves in the casing walls receiving the edges of the end walls of the frame to divide the casing into light tight compartments and a closure for the casing.

3. In a device of the character described, a casing having an open side, a lens arranged in one of the walls of the casing, the side and front walls of the casing being provided with registering open grooves, a supporting frame embodying a face wall and end walls arranged perpendicularly thereto, said face wall being provided with an aperture adapted to register with the lens opening, film feeding mechanism mounted upon said structure, intermediate the said end walls, film reel supports, supported by the end walls of the said frame, said frame and supported mechanism being freely removable from and adapted to be inserted in the casing as a self-contained unit, the said grooves in the casing walls receiving the edges of the end walls of the frame to divide the casing into light tight compartments, a closure for the casing, said closure having an opening adapted to register with the lens opening, and interchangeable attachments adapted to be attached to the said closure adjacent the opening therein.

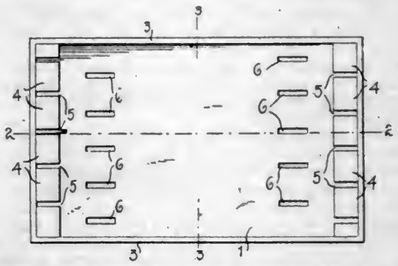
4. In a device of the character described, a casing having an open side, a lens arranged in one of the walls of the casing, the side and front walls of the casing being provided with registering open grooves, a supporting frame embodying a face wall and end walls arranged perpendicularly thereto, said face wall being provided with an aperture adapted to register with the lens opening, film feeding mechanism mounted upon the said structure, intermediate the said end walls, film reel supports, supported by the end walls of the said frame, said frame and the supported mechanism being freely removable from and adapted to be inserted in the casing as a self-contained unit, the said grooves in the casing walls receiving the edges of the end walls of the frame to divide the casing into light tight compartments, a closure for the casing, and a lens casing connected with the lens, said lens casing being disposed entirely with the plane of the outer face of the adjacent wall of the first said casing.

5. In a device of the character described, a casing having an open side, a lens arranged in one of the walls of the casing, the side and front walls of the casing being provided with registering open grooves, a supporting frame embodying a face wall and end walls arranged perpendicularly thereto, said face wall being provided with an aperture adapted to register with the lens opening, film feeding mechanism mounted upon the said structure, intermediate the said end walls, film reel supports, supported by the end walls of the said frame, said frame and the supported mechanism being freely removable from and adapted to be inserted in the casing as a self-contained unit, the said grooves in the casing walls receiving the edges of the end walls of the frame to divide the casing into light tight compartments, a closure for the casing, said film feeding mechanism embodying a train of gears and means whereby said train of gears may be actuated at different points in the train to vary the speed of movement of the flexible strip, and a shutter also mounted upon the support.

[Claim 6 not printed in the Gazette.]

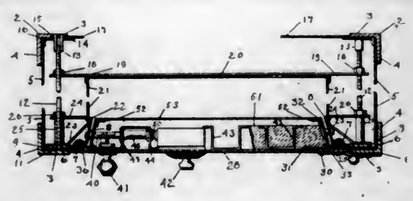
1,197,330. GAME. SAMUEL S. MARLEY, Wilmington, Del. Filed Apr. 8, 1916. Serial No. 89,899. (Cl. 46—61.)

In combination, a playing board having at each end a transverse series of receiving pockets, the pockets of one series being out of longitudinal alinement with the pockets of the second series, said board having a recess in alinement with each of the receiving pockets, and a rolling projectile adapted to be inserted within each of the



pockets, the recesses alining with one series of pockets being positioned in close proximity to the second series of pockets.

1,191,331. SAFE. CHARLES F. MEILINK, Toledo, Ohio. Filed Nov. 16, 1914. Serial No. 872,293. (Cl. 109—2.)



1. An angle door frame, a holder member adjacent said frame, and a bead adjustably mounted on said holder member.

2. A door casing having a bead receiving seat, and a door having a bead adjustable as to the door and as to said seat.

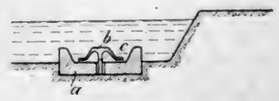
3. A structure comprising frame members, holding bolts for the members coacting therebetween, a housing in the frame, and brackets mounted on the bolts and engaging the housing to position the housing in the structure.

4. A structure comprising a frame, an inner housing having an open side, bracket means coacting between the housing and frame to position said housing as to the frame means for mounting the bracket means in position.

5. A structure comprising a frame, an inner housing having an open side, bracket means conected to the frame and engaging said housing about said open side, said bracket means having legs, a spacing sleeve between the legs and bolt means for mounting the legs and sleeve in housing holding position.

[Claims 6 to 17 not printed in the Gazette.]

1,191,332. TOWING SYSTEM FOR SHIPS. GEORG MEYER, Berlin-Charlottenburg, and RICHARD KOSS, Münster, Westphalia, Germany, assignors to Siemens-Schuckert Werke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Aug. 26, 1913. Serial No. 786,714. (Cl. 115—8.)



1. In a towing system for ships, the combination of a flexible rail or guide mounted upon the water bed, and fastening means interposed between said rail or guide and the water bed, said means comprising coacting members carried by the rail and the water bed respectively,

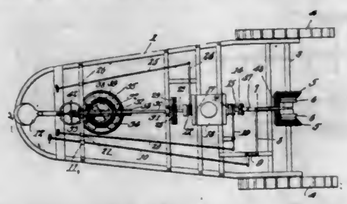
said members being detached from one another but adapted to operatively engage with one another when the rail is lowered, to prevent displacement of the rail in a horizontal direction.

2. In a towing system for ships, the combination of a flexible rail or guide mounted upon the water bed and adapted to be lifted during passage of a tug boat, and blocks arranged in the water bed, said blocks adapted to engage with said rail or guide when the latter is lowered for supporting the same and preventing motion thereof in a horizontal direction.

3. In a towing system for ships the combination of a flexible rail or guide mounted upon the water bed and means for preventing displacement of said rail in a horizontal direction, said means comprising a support carried by the rail and adapted to be lifted with the rail and disengaged from the water bed during passage of a tugboat.

4. In a towing system for ships the combination of the water bed and a flexible rail, and means carried by one of them and detached from the other, but adapted to operatively engage with the other, when the rail is lowered, to prevent displacement of the rail in a horizontal direction.

1,191,333. TRACTION-ENGINE. GEORGE WASHINGTON MONTGOMERY and MARK D. BOWMAN, Springboro, Pa. Filed Jan. 15, 1915. Serial No. 2,435. (Cl. 21—114.)



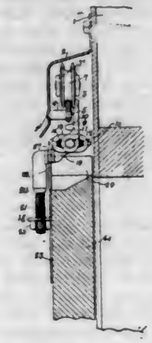
In a device of the class described, a frame; a forward shaft extended longitudinally of the frame and journaled thereon; a rear shaft extended longitudinally of the frame and journaled thereon; an engine operatively connected with both shafts; a yoke mounted to rotate on the forward end of the frame; a ground wheel carried by the yoke; means for operatively connecting the forward shaft with the ground wheel to rotate the ground wheel independently of the position of the yoke; a rear axle journaled in the frame; ground wheels carried by the rear axle; beveled pinions mounted to rotate on the rear axle; means for selectively coupling the beveled pinions to the rear axle; and a beveled pinion on the rear shaft and meshing into both beveled pinions.

1,191,334. HANGER FOR BARN-DOORS AND OTHER STRUCTURES. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brothers, a Copartnership consisting of Francis E. Myers and Philip A. Myers, Ashland, Ohio. Filed Jan. 14, 1916. Serial No. 72,011. (Cl. 16—7.)

1. In a hanger, a pendant member, a member for supporting a structure, a pin mounted upon one of said members and pivotally connecting the members, the other member having a sliding engagement with said pin, and an adjusting device for bodily moving the members relatively to each other.

2. In a hanger, a pendant member, a member for supporting a structure, a pin pivotally connecting said members together, and an adjusting device in engagement with said pin for bodily moving the members relatively to each other, and means upon one of the members for suitably guiding the pin during the relative movement of the members.

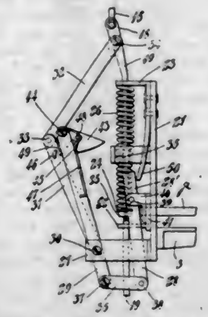
3. In a hanger, a truck having a pendant member, a member for supporting a structure, a pin pivotally connecting said members together, a screw rotatably mounted upon one of said members, said pin being provided with a screw-threaded opening through which the said screw passes, whereby the members may be relatively adjusted laterally, and means upon one of said members for suitably guiding said pin during the relative movement.



4. In a hanger, a pendant member, a member for supporting a structure, a pin pivotally connecting said members together, a screw held against axial movement but rotatably mounted on one of said members, said pin having a screw-threaded opening therein through which said screw passes, whereby the members are relatively adjusted, the member upon which said screw is mounted being nonrotatable relatively to said pin.

5. In a hanger, a truck having a pendant member, a member for supporting a structure, a pin pivotally connecting said members, an elongated member mounted upon one of said first-mentioned members, said elongated member having a slot embracing said pin, a screw rotatably mounted within said elongated member, and a screw-threaded opening in said pin through which said screw passes, whereby the elongated member may be adjusted laterally relatively to said pin.

1,191,335. SAFETY GAS CUT-OFF. GEORGE E. NEMBACH, Cincinnati, Ohio. Filed Aug. 23, 1915. Serial No. 46,869. (Cl. 67—117.)



1. In an automatic safety cut-off, in combination with a burner, a fuel supply pipe thereto, a cut-off valve interposed in said pipe to control the supply of fuel therethrough to said burner, a member adjacent to said burner adapted to expand and contract under influence of heat from said burner, closing means to automatically close said cut-off valve, resisting means distinct from said closing means, by which said closing means is resisted, means to automatically continue resistance-removing movement of the resisting means when such a movement has been initiated, and a disengageable operative connection from said member to said toggle links, whereby contraction of said member initiates said resistance-removing movement.

2. In an automatic safety cut-off, in combination with a burner, a fuel supply pipe thereto, a cut-off valve interposed in said pipe to control the supply of fuel therethrough to said burner, a member adjacent to said burner adapted to expand and contract under influence of heat from said burner, closing means to automatically close said cut-off valve, toggle links distinct from said closing means, by which said closing means is resisted, means to automatically continue resistance-removing movement of the toggle links when such a movement has been initiated, and a disengageable operative connection from said member to said toggle links, whereby contraction of said member initiates said resistance-removing movement.

3. In an automatic safety cut-off, in combination with a burner, a fuel supply pipe thereto, a cut-off valve interposed in said pipe to control the supply of fuel therethrough to said burner, a member adjacent to said burner adapted to expand and contract under influence of heat from said burner, closing means to automatically close said cut-off valve, toggle links, a pivotal connection between said links, a stationary fulcrum for one of said links, and an operative connection from the other link to said valve, whereby said toggle links resist said closing means and hold said valve open, means to automatically continue resistance-removing movement of said toggle links when such a movement has been initiated, and a disengageable operative connection from said member to said toggle links near their pivotal connection to each other, whereby said resistance-removing movement is initiated when said member contracts.

4. In an automatic safety cut-off, in combination with a burner, a fuel supply pipe thereto, a cut-off valve interposed in said pipe to control the supply of fuel therethrough to said burner, a member adjacent to said burner, adapted to expand and contract under the influence of heat from said burner, closing means to automatically close said cut-off valve, toggle links resisting said closing means and holding said valve open when in substantial alinement, a stop to limit movement of said toggle links out of said alinement in one direction, and an operative connection from this member to said toggle links whereby they are actuated away from said stop in the other direction and out of said alinement to remove their resistance from said closing means when said member contracts.

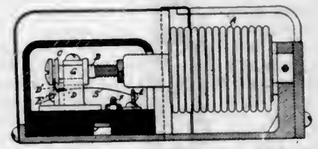
5. In an automatic safety cut-off, in combination with a burner, a fuel supply pipe thereto, and a cut-off valve interposed in said pipe and controlling supply of fuel therethrough to said burner, means to automatically close said cut-off valve, toggle links, operative connection from said links to said valve, whereby said links, when in substantial alinement, hold said valve open, a member adapted to expand and contract under the influence of heat from said burner, a trip lever, a projection on one of said toggle links, a dog on said trip lever adapted to engage with said projection, and operative connection between said member and said trip lever, whereby said trip lever is swung to engage said dog with said projection when said member contracts, the engagement of said dog with said projection pulling said toggle links out of their substantial alinement and permitting said valve to close.

[Claims 6 to 15 not printed in the Gazette.]

1,191,336. THERMOSTATIC SWITCH. CLAUDE C. NUCKOLS, Albany, N. Y., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Oct. 25, 1913. Serial No. 797,238. (Cl. 200—31.)

1. A thermostatic switch comprising spaced apart abutments, a contact spring having its ends engaging said abutments, the spring being of a greater length than the direct distance between said abutments, whereby the spring is normally bowed under longitudinal compression, a stationary contact coöperating with said spring contact, and means engaging and moving one end of said spring to vary the longitudinal compression thereof to throw it across its dead center.

2. A thermostatic switch comprising a thermostatic element, a longitudinally confined spring pivoted at one end and normally bowed between its confining members, an electric contact controlled by said spring and an operating connection between said element and the spring for rotating the pivoted end of the spring across its dead center.



3. A thermostatic switch comprising spaced apart abutments, a contact spring having its ends engaging said abutments, the spring being of a greater length than the direct distance between said abutments, whereby the spring is normally bowed under longitudinal compression, a stationary contact coöperating with said spring contact, a thermostatically operated member movable longitudinally with respect to the contact spring, and a lost motion connection between one end of the said contact spring and the said thermostatic member, for varying the longitudinal compression of the contact spring to throw it across its dead center.

4. A thermostatic switch comprising spaced apart abutments, a contact spring having its ends engaging said abutments, the spring being of a greater length than the direct distance between said abutments, whereby the spring is normally bowed under longitudinal compression, a stationary contact coöperating with said spring contact, an angle lever attached to one end of said contact spring, and means engaging said angle lever and movable longitudinally with respect to the contact spring to vary the longitudinal compression thereof to throw it across its dead center.

5. A thermostatic switch comprising spaced apart abutments, a contact spring having its ends engaging said abutments, the spring being of a greater length than the direct distance between said abutments, whereby the spring is normally bowed under longitudinal compression, a stationary contact coöperating with said contact spring, and a thermostatic element consisting of an expansible corrugated metal tube containing a vaporizable liquid and having means for engaging and moving one end of said contact spring to vary the longitudinal compression thereof, whereby it may be thrown across its dead center.

[Claims 6 and 7 not printed in the Gazette.]

1,191,337. CENTRIFUGAL PUMPING APPARATUS. JAMES P. NICHOLAS, Stuttgart, Ark. Filed Jan. 23, 1915. Serial No. 3,984. (Cl. 103—43.)

1. The combination with the pit top, the pump, the water discharge pipes extending from the pump to the top of the well, and the line shaft; of separate line shaft bearings located at intervals along the shaft, said bearings comprising spiders having seats for the discharge pipes, clamps for securing the pipes in their seats, sleeves carried by said spiders and bored to permit passage of the shaft, said sleeves having lubricant chambers in the upper ends and packing recesses in the lower ends, packing in said recesses, means for holding said packing in place, and a lubricant pipe line extending from the top of the well down to the various bearings and including laterals or branches for delivering lubricant into the several bearing chambers.

2. The combination with the pit top, the pump, the water discharge pipes extending from the pump to the top of the well, and the line shaft; of separate line shaft bearings located at intervals along the shaft, said bearings comprising spiders having seats for the discharge pipes, clamps for securing the pipes in their seats, sleeves carried by said spiders and bored to permit passage of the shaft, said sleeves having lubricant chambers in the upper ends and packing recesses in the lower ends, packing

in said recesses, means for holding said packing in place, a lubricant pipe line extending from the top of the well down to the various bearings and including laterals or branches for delivering lubricant into the several bearings, chambers and spacing rods connecting adjacent spiders.



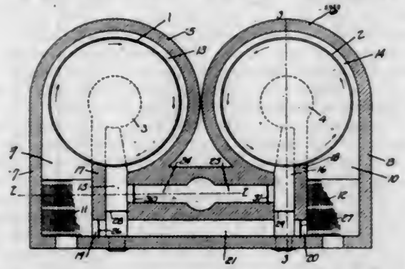
3. The combination with the pit top, the pump, the water discharge pipes extending from the pump to the top of the well, and the line shaft; of separate line shaft bearings located at intervals along the shaft, said bearings comprising spiders having seats for the discharge pipes, clamps for securing the pipes in their seats, sleeves carried by said spiders and bored to permit passage of the shaft, said sleeves having lubricant chambers in the upper ends and packing recesses in the lower ends, packing in said recesses, means for holding said packing in place, a lubricant pipe line extending from the top of the well down to the various bearings and including laterals or branches for delivering lubricant into the several bearing chambers, and bearing bushings held in said bearing sleeves between said lubricant chambers and said packing recesses to be lubricated by the lubricant from said chambers.

4. The combination with the pit top, the pump, the water discharge pipes extending from the pump to the top of the well, and the line shaft; of separate line shaft bearings located at intervals along the shaft, said bearings comprising spiders having seats for the discharge pipes, clamps for securing the pipes in their seats, sleeves carried by said spiders and bored to permit passage of the shaft, said sleeves having lubricant chambers in the upper ends and packing recesses in the lower ends, packing in said recesses, means for holding said packing in place, a lubricant pipe line extending from the top of the well down to the various bearings and including laterals or branches for delivering lubricant into the several bearing chambers, spacing rods connecting adjacent spiders, and bearing bushings held in said bearing sleeves between said lubricant chambers and said packing recesses to be lubricated by the lubricant from said chambers.

5. In an apparatus of the class described, the combination with the shaft and the discharge pipes paralleling the shaft, of guide bearings for the shaft located at intervals throughout the length of the same and comprising spiders having seats for the discharge pipes, clamps embracing the discharge pipes and secured to the spiders for holding the same in place, bearing sleeves carried by the spiders and formed to permit passage of the shaft, said sleeves having lubricant chambers in the upper ends and packing recesses in the lower ends, compressible packing in said recesses, packing nuts in threaded engagement with the sleeve for retaining the packing, and a lubricant duct for delivering lubricant into the lubricant chambers, substantially as shown and described.

1,191,338. FURNACE-SETTING FOR CONCENTRATION-POTS. FRANK H. NICKLE, Midland, Mich. Filed Dec. 18, 1915. Serial No. 67,540. (Cl. 127—9.)

1. In combination, a pot for liquor which is to be heated, said pot being arranged to allow free circulation of the liquor tangentially with reference to arcs struck about a vertical axis, a combustion chamber, and means for applying the products of combustion tangentially throughout substantially the whole periphery of the pot, whereby the liquor is caused to travel continuously in the general direction in which the products of combustion are applied.



2. In combination, a pot for liquor which is to be heated, said pot being of curved horizontal cross section and being arranged to allow free circulation of the liquor substantially horizontally about the periphery thereof, means for applying heat to the pot in quantities that gradually decrease from a predetermined point and in a given general direction throughout a major portion of a horizontal section of the pot, whereby the liquor is caused to travel continuously in the general direction of decreasing application of heat.

3. In combination, a pot for liquor which is to be concentrated, said pot being of curved horizontal cross section and being arranged to allow free circulation of the liquor substantially horizontally about the periphery thereof, means for applying heat to the pot in quantities that gradually decrease from a predetermined point and in a single direction therefrom horizontally with reference to a horizontal section of the pot, whereby the liquor is caused to continuously circulate in the general direction in which the heat decreases.

4. In a caustic pot setting, the combination of a metal pot, a pier supporting the pot, brickwork surrounding the pot and spaced therefrom, an opening in the said brickwork adapted to serve as a combustion chamber, another opening adapted to serve as an outlet for the flue gases, said flue gases being caused to travel tangentially in one direction around the pot.

5. In a pot setting, the combination of a pier, a pot resting on the pier, a wall surrounding the pot and spaced therefrom to form a passage for products of combustion, an opening in the wall adapted to serve as a combustion chamber, an outlet in the wall adapted for the withdrawal of the heating gases, said outlet being adjacent to the said combustion chamber to enable the products of combustion to travel substantially the entire distance around the pot.

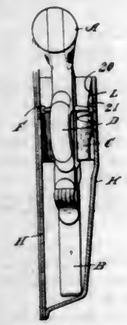
[Claims 6 to 15 not printed in the Gazette.]

1,191,339. REVOLVER-HOLSTER. JOSEPH V. M. NOYE, Lowell, Mass. Filed Aug. 17, 1915. Serial No. 45,979. (Cl. 224—2.)

1. A revolver holster having a relatively stiff back wall, a pliable front wall which is concave inside proximate and above the revolver cylinder, and an elastic detaining pad which is fixed to the concave inside of the front wall positioned to be above the revolver cylinder when in place and which has a top face which slants at a low angle and a bottom face which slants at a high angle with the front wall.

2. A revolver holster having a relatively stiff back wall, a pliable front wall which is concave inside proximate and above the revolver cylinder, and an elastic detaining pad which is fixed to the concave inside of the front wall and has a slanting top face.

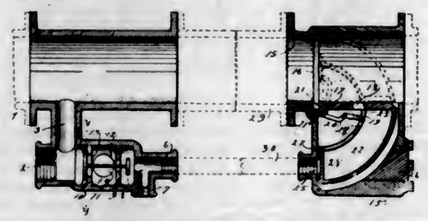
3. A revolver holster having a relatively stiff back wall, a pliable front wall which is concave inside proximate and above the revolver cylinder, and a detaining pad which is fixed to the concave inside of the front wall and has a slanting top face.



4. A revolver holster having a relatively stiff back wall, a pliable front wall which is concave inside proximate and above the revolver cylinder, and a detaining pad which is fixed to the concave inside of the front wall and has a slanting top face and a bottom face positioned to be above the revolver cylinder when in place.

5. A revolver holster which has a back wall, a front wall, and a detaining pad with a slanting top face, said pad being fixed to the inside of the front wall in a position to be above the revolver cylinder when in place.

1,191,340. SPRINKLER SYSTEM. JOHN T. O'BRIEN and WELLINGTON G. SARGENT, Grand Rapids, Mich. Filed Mar. 8, 1915. Serial No. 13,810. (Cl. 137—4.)



1. In combination with the supply pipe of an automatic sprinkler system, a main valve housing connected at one side of the supply pipe, a shaft passing laterally through the housing adjacent to the supply pipe, a main valve mounted on said shaft to swing open entirely to one side of the supply pipe, a drain pipe connected at one end with the housing, means connected with the main valve for automatically closing the drain pipe at its point of communication with the housing when the main valve is opened, and means for automatically draining the supply pipe when the main valve is closed.

2. In combination with the supply pipe of an automatic sprinkler system, a main valve housing and main valve connected with the supply pipe, a shaft pivotally carrying said valve, an auxiliary valve pivotally connected with the main valve to open and close before the main valve opens and closes, a drain valve housing connected at one end with the supply pipe and having two inlet openings therein in a direct line, a pipe connecting the other end of the drain valve housing with the main valve housing, valves in the drain valve housing on opposite sides of the respective inlet openings and connected to act simultaneously to automatically operate the drain valves to open one valve and to close the other valve when pressure is changed from one end of the drain valve housing to the other end thereof, and means for cutting off the flow of water from the main valve housing through the pipe to the drain valve housing when the main valve is opened.

3. In combination with the supply pipe of an automatic sprinkler system, a main valve mounted on a shaft and adapted to be thrown directly across the opening in the supply pipe and to fully close the same by a fraction of a revolution of the shaft, a housing for said valve located at one side of the supply pipe, a drain valve housing connected at one end to the supply pipe, a drain pipe connecting the main valve housing with the other end of the drain valve housing, valves in the drain valve housing arranged to automatically open and close the inlet openings in the drain valve housing as water under pressure is allowed to pass into one end, or the other end of the drain valve housing to drain water from the supply pipe beyond the main valve, or through the drain pipe from the main valve housing, as desired.

4. In combination with the supply pipe of an automatic sprinkler system, a main valve mounted on a shaft at one side of the supply pipe and adapted to be thrown directly across the opening of the supply pipe, a housing at one side of the supply pipe for the main valve, a drain valve housing connected at one end with the supply pipe beyond the main valve, a drain pipe connecting the main valve housing with the other end of the drain valve housing, the drain valve housing having two inlet openings and an outlet opening between the inlet openings, valves in the drain valve housing on opposite sides of the respective openings and connected to automatically open and close as pressure is passed into one end, or the other end of the drain valve housing to drain either supply pipe beyond the main valve, or the main valve housing, as desired.

5. In combination with the supply pipe of an automatic sprinkler system, a main valve housing at one side of the supply pipe, a shaft through said housing adjacent to the supply pipe, a valve mounted on said shaft and adapted to be thrown upon its seat directly across the opening of the supply pipe, and to be opened or closed by a fraction of a revolution of the shaft, a drain valve housing beyond the main valve and having an inlet opening at each end and an outlet opening between the inlet openings, one of the inlet openings communicating with the supply pipe, a drain pipe connecting the main valve housing with the other inlet opening of the drain valve housing, valves in the drain valve housing arranged to automatically open and close, respectively, as pressure of water is shifted in the supply pipe to act alternately in one end and then in the other end of the drain valve housing.

[Claims 6 and 7 not printed in the Gazette.]

1,191,341. APPAREL-BUCKLE. BENJAMIN FRANKLIN OREWILER, Chicago, Ill. Filed Mar. 20, 1915. Serial No. 15,719. (Cl. 24—191.)



1. The combination with a tipped web, of a frame arranged to position said web yieldingly to maintain the tip in pressure-receiving position and with the suspending course of the web passing over the yieldingly-positioned tip; and a pressure member having a web-engaging portion free from coaction with the frame and arranged to work in opposition to the tip through the interposed web, whereby the tip takes its pressure-opposing position according to web-thickness and coacts with the pressure member to clamp the suspension course of the web.

2. The combination of a frame, a locking lever pivoted thereto, and a tipped web, said web passing through the frame to form a pulling loop and a suspending course and yieldingly to locate the tip below the fabric of the suspending course, said lever having an edge coacting with the tip through said suspending course and positioning the yieldingly supported tip automatically in accordance with the web-thickness; and said frame having its lower portion disposed to afford supporting bearing for

the web, and lateral bearing for the tip, and to leave the pressure-edge of the lever unopposed by said frame.

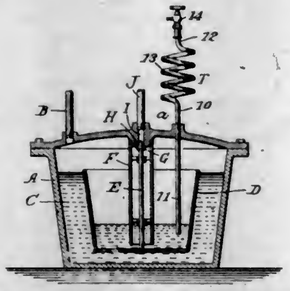
3. In a structure of the character described, the combination of a frame, providing separated shoulders, a hinge-bar portion thereabove, and portions therebelow to form a lateral abutment, of a tipped web passed through said frame from front to back over said shoulders to locate said tip against the lateral abutment, said web doubled below the frame to form a pulling loop and passed back through the frame above said shoulders to constitute the suspending web, and lever means hinged on said frame-bar-portion and having a pressure bar, effectively shorter than the space between the shoulders and free from clamping coaction with the frame, acting in opposition to the web tip between the shoulders, thereby to clamp the suspending course of fabric between the tip and the lever means.

4. In a device of the character described, the combination with a frame, providing shoulders spaced apart for web-guidance and arms below the shoulders making lateral abutment for a tip, of a web having a metallic tip provided with a hook to engage said arms, and a lever hinged to the frame above said shoulders and having a pressure-part for coaction with the tip through the interposed webbing and between the shoulders.

5. In a rustless buckle, a frame providing a hinge-bar part, spaced shoulders therebelow defining a web-guide space, and arms below the shoulders, for lateral bearing; a lever hinged to said hinge-bar part and having a pressure-edge effectively narrower than the space between the shoulders, and effectively less deep than the distance to the arms and a tipped web having its tip disposed to oppose the pressure edge of the lever and to abut laterally against said arms, said web being passed over said shoulders, looped below the buckle, and passed between the tip and the pressure edge, whereby the clamping action of the pressure edge is opposed solely to the tip, which is self-adjustable to compensate for the thickness of the web.

[Claims 6 to 8 not printed in the Gazette.]

1,191,342. GAGE FOR STEAM-TRAPS AND OTHER PURPOSES. FRANK E. PENDLETON, Montclair, N. J. Filed May 31, 1912. Serial No. 700,571. (Cl. 137—103.)



1. A steam trap consisting of a vessel containing steam and liquid, an inlet and an outlet therefor, a thermal indicator consisting of a tube of thin material and of a comparatively small diameter with relation to its length, said tube having an open end tapping the vessel at a point below the normal level of the liquid, the other end of the tube being at a substantial distance above the liquid as and for the purpose set forth.

2. A steam trap provided with a water seal, said trap having inlet and outlet ports respectively above and below the seal, a float valve controlling the outlet port, a thermal indicator consisting of a tube of thin material and of comparatively small diameter with relation to its length said tube having an open end connection to the trap between the upper and lower level of the water seal, the upper end of the tube extending substantially above the water seal as and for the purpose set forth.

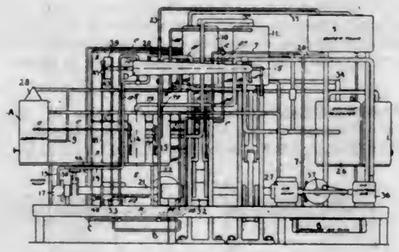
3. A steam trap provided with a water seal, said trap having inlet and outlet ports respectively above and below the seal, a float valve controlling the outlet port, a thermal indicator consisting of a tube of thin material and of comparatively small diameter with relation to its length, said tube having an open end connection to the trap between the upper and lower level of the water seal, the upper end of the tube having a valve therein and extending substantially above the water seal as and for the purpose set forth.

4. A steam trap provided with a water seal having inlet and outlet ports respectively above and below the seal, a valve normally closing said outlet port, means for opening said valve upon an excess of liquid accumulating in the traps, a thermal indicator consisting of a connection to the trap to normally remove the water of condensation, means for filling the tube with steam should the water seal be broken, substantially as and for the purpose set forth.

5. A steam trap, a liquid seal therein, a thermal indicator connected to the trap, means for cooling the indicator when the seal is effective, and means for heating the indicator when the seal is broken.

[Claim 6 not printed in the Gazette.]

1,191,343. ENGINE. WILLIAM R. PENSCHUCK, St. Paul, Minn. Filed Aug. 1, 1914. Serial No. 854,461. (Cl. 60—9.)



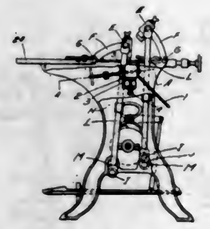
1. A power plant of the class described consisting of a source of water supply, a generator, means for generating steam therein, an engine operatively connected with the generator, means operable by the exhaust steam from the engine to compress air for forcing water from said source of supply to the generator, tanks operatively connected with the exhaust port of the engine to receive the exhaust steam therefrom, means for forcing the exhaust steam from said tanks to a second chamber, an air tank heated by the generator, and means for conducting the heated air to the second chamber for raising the temperature of the exhaust steam to operate said second means.

2. A power plant consisting of an engine, a generator, a source of water supply for the generator, coils, means for forcing water from the supply to said coils, and an air compressor operable by the exhaust steam from the engine for supplying air to force the water from said coils into the steam generator.

3. In a power plant of the class described including an engine, a source of water supply, a steam generator, means for forcing water from the supply to said generator, a chamber above the generator, a superheater chamber into which the exhaust steam from the engine is delivered, means for forcing air through the chamber above the generator and through the superheater chamber to be superheated for reheating the exhaust steam.

4. In a power plant of the class described including an engine, a source of water supply, a steam generator, a chamber above the generator, a superheater chamber into which the exhaust steam from the engine is delivered, means for forcing air through the chamber above the generator and then through the superheater chamber where it is superheated for heating the exhaust steam, and an air compressor operated by the heated exhaust steam to force water from the supply to the generator.

1,191,344. MACHINE FOR CUTTING BLOCK-SOLES. GEORGE QUARMBY, Saugus, Mass., assignor of one-half to Charles T. Hilliker, Lynn, Mass. Filed Feb. 27, 1915. Serial No. 11,075. (Cl. 164—19.)



1. In a sole block cutting machine, a beam movable from and toward the cutting-bed, a knife carrier suitably secured to the beam, a cutting block operatively located with respect to the beam, an apron suspended in front of the cutting block, and means for tightening the cutting block and apron in operative position simultaneously by a single operation.

2. In a sole block cutting machine, a beam movable from and toward the cutting bed, a knife carrier suitably secured to the beam, a cutting block operatively located with respect to the beam, an apron suspended in front of the cutting block, and means for adjusting the cutting block while the apron is suspended in front of the same.

3. In a sole-block cutting machine, a beam movable from and toward the cutting bed, a knife carrier suitably secured to the beam, a cutting block operatively located with respect to the beam, an apron suspended in front of and parallel with the cutting block, and means for tightening the cutting block and apron in operative position simultaneously by a single operation.

4. In a sole-block cutting machine, a beam movable from and toward the cutting bed, a knife carrier suitably secured to the beam, a cutting block operatively located with respect to the beam, an apron suspended in front of and parallel with the cutting block, the said apron being provided with slots or openings for the reception of headed-over bolts, a stationary abutting frame behind the cutting block, a floating head member behind the stationary frame, bolts extending through the floating member, a stationary member and apron for linking them together, retaining means on the bolts outside the floating member, and a suitable hand clamp extending operatively through the floating member and into engagement with a stationary member for tightly securing the apron and cutting block together.

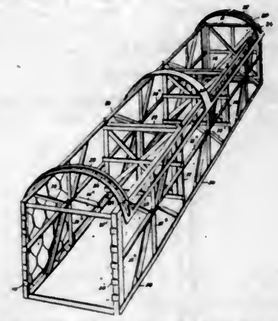
5. In a sole-block cutting machine, a beam movable from and toward the cutting bed, a knife carrier suitably secured to the beam, a cutting block operatively located with respect to the beam, a table for feeding stock to the cutting block, and a finger-guard extending parallel with the length of the cutting block and supported by the table the said finger-guard being adjustable to allow proper manipulation of the fingers inserted beneath the guard upon variation in thickness of the stock to be cut.

[Claims 6 and 7 not printed in the Gazette.]

1,191,345. ANIMAL-RACK. THOMAS H. QUEEN, New Virginia, Iowa. Filed Aug. 18, 1913. Serial No. 785,282. (Cl. 119—17.)

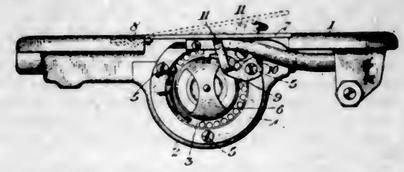
1. An animal rack comprising a frame having spaced end posts of angle iron material each arranged to have a flange extending inwardly toward the other post, said flanges being provided with a plurality of slits along their edges to form keepers which are bent outwardly from the remaining portions of the flanges, and a gate slidably engaged between the keepers and the flanges of the end posts.

2. An animal rack comprising side walls each having upper, lower and intermediate longitudinal frame members formed with inwardly extending horizontal flanges, a fixed end wall connecting the side walls at one end, a movable end wall slidably engaged with the side walls at the opposite end, a plurality of pintle bars passing through the horizontal flanges of longitudinal frame members of one side wall, upright bars passing through the flanges



of the frame members of the other side wall, and arranged opposite to the pintle bars, a gate hinged to each pintle bar and provided with projecting lugs on its free edge, and latches carried by the upright bars with which the lugs are adapted to engage.

1,191,346. BOBBIN-CASE LATCH FOR SEWING-MACHINES. WALTER RUCKSTUHL, Orange, Mass., assignor to The New Home Sewing Machine Company, Orange, Mass., a Corporation of Massachusetts. Filed Mar. 30, 1914. Serial No. 828,263. (Cl. 112—22.)



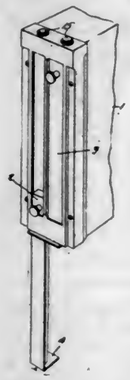
1. In a sewing machine and in combination, the bed-plate of the machine having an opening therein and a hinged vertically movable cloth-plate normally closing said opening, a looper, a bobbin-case removably contained in said looper, a pivoted bobbin-case latch supported independently of said cloth-plate and having a part thereof movably upwardly through the said opening in the bed-plate and into the path of movement of the hinged cloth-plate upon the movement of the latch to unlatching position, and means movably holding the latch in its raised or unlatching position and permitting of its downward movement to latching position by the engagement therewith of the hinged cloth-plate upon the downward movement of the latter to its closed position.

2. In a sewing machine and in combination, the bed-plate of the machine having an opening therein and a hinged vertically movable cloth-plate normally closing said opening, a looper, a bobbin-case removably contained in said looper, a pivoted bobbin-case latch supported independently of said cloth-plate and having its operating end movable upwardly through the said opening in the bed-plate and into the path of movement of the hinged cloth-plate upon the movement of the latch to unlatching position, and a spring movably holding the latch in its raised or unlatching position and permitting of its downward movement to latching position by the engagement therewith of the hinged cloth-plate upon the downward movement of the latter to its closed position.

3. In a sewing machine and in combination, the bed-plate of the machine having an opening therein and a vertically movable cloth-plate normally closing said opening, a looper, a bobbin-case removably contained in said looper,

a bobbin-case latch pivoted to a stationary support and having its operating end movable upwardly through the said opening in the bed-plate and into the path of movement of the cloth-plate upon the movement of the latch to unlatching position, and means movably holding the latch in its raised or unlatching position and permitting of its downward movement to latching position by the engagement therewith of the cloth-plate upon the downward movement of the latter to its closed position.

1,191,347. LOCK. EDWARD A. RUPERT, Aberdeen, Wash. Filed July 28, 1915. Serial No. 42,366. (Cl. 70—50.)



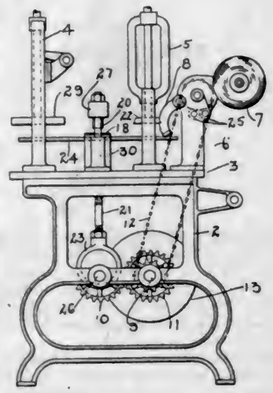
1. The combination with a case having separate doors, magnets adjacent the doors, a source of electrical energy, and means controlled by each door, when closed, for maintaining the electrical connections between said magnets and the source of electrical energy, of buttons for completing the circuits through the respective magnets when the doors are closed, and door engaging bolts movable with and projecting beyond the end of the armature of each magnet, said bolts being normally projected to door engaging positions.

2. The combination with a case having separate doors, a magnet adjacent each door, and a door engaging bolt movable with and projecting beyond the end of the armature of each magnet, of a source of energy, separate pairs of contacts disposed in series in the circuit with the magnets and source of energy, a circuit closer for each magnet, and means upon each door for closing the contact of its respective pair of contacts to maintain the circuits closed through said contacts when the doors are closed.

3. The combination with a case having a plurality of doors, of a magnet for each door, a bolt movable with and projecting beyond the end of the armature of each magnet, means for holding the bolt normally pressed into engagement with the respective doors, a source of electrical energy in circuit with the magnets, normally open circuit closers provided for the respective magnets, and separate pairs of contacts in circuit with the magnets and normally held together by the doors when closed, said contacts being adapted to break the circuits to all of the magnets when one of the doors is opened.

4. The combination with a case and doors movably connected thereto, of a magnet adjacent each door, a locking bolt movable with and projecting beyond the end of the armature of each magnet, yielding means for holding each bolt normally in engagement with the adjacent door, a source of electrical energy in circuit with the magnets, a separate pair of contacts adjacent each door, one of said contacts being yieldingly supported normally out of engagement with the other contact of the pair, means upon each door for engaging the adjacent yieldingly supported contact to hold it against the opposed contact when the door is closed, and a normally open circuit closer for each magnet adjacent to the door controlled by the magnet.

1,191,348. ENVELOP-MACHINE. FERDINAND L. SCHMIDT, New York, N. Y., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Feb. 4, 1909. Serial No. 475,985. (Cl. 93—61.)

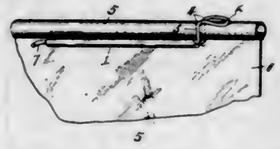


1. The combiantion with an envelop machine of the kind specified, comprising instrumentalities for gumming and folding an envelop blank and transferring the blank from the gumming mechanism to the folding mechanism, of means for forming an opening in the envelop blank between the gumming and the folding mechanisms.

2. The combination with an envelop machine of the kind specified, comprising instrumentalities for gumming and folding an envelop blank and transferring the blank from the gumming mechanism to the folding mechanism with a period of dwell, of means for forming an opening in the envelop blank during its period of dwell.

3. The combiantion with an envelop machine of the kind specified, comprising instrumentalities for gumming and folding an envelop blank and transferring the blank from the gumming to the folding mechanism, of means for forming an opening in the envelop blank between the gumming mechanism and the folding mechanism, consisting of a die, a stripper plate and a reciprocating punch, and means for reciprocating said punch.

1,191,349. WIND-SHIELD WIPER. JOSIAH SCOTT, Toledo, Ohio. Filed Jan. 14, 1916. Serial No. 72,063. (Cl. 15—59.)



1. A wiper of the class described having opposed wiper legs, a crown portion transversely offset from said legs, and portions connecting said crown and respective leg portions and serving to yieldingly embrace the frame of a windshield when the wiper is in one position of its movement with respect to the windshield.

2. A wiper of the class described formed in U-shape from spring material and having its crown portion connected to the inner ends of the respective leg portions by transversely extending yieldingly spaced frame embracing portions.

3. A wiper of the class described having opposed leg portions for wiping engagement with opposite sides of a windshield glass, and a screwn portion connected to the respective legs through intermediate transversely disposed frame embracing portions, said crown portion being of

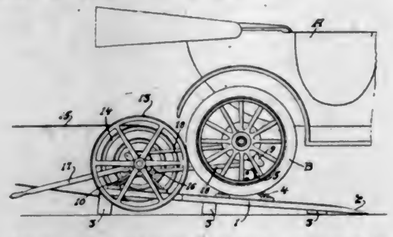
spring nature to resist an outward springing of the leg portions, and wiper parts carried by said leg portions.

4. A wiper of the class described formed of spring wire doubled upon itself and forming opposed glass wiping leg portions and an L-form crown portion, with the space between the knees of the crown portion restricted, and a wiping material carried by said leg portions.

5. A wiper of the class described, comprising a wire bent in U-shape and having parallel leg portions for coacting with opposite sides of a windshield glass, an offset crown portion for fulcruming on the outer edge of a windshield frame, and frame embracing portions connecting said crown and leg portions and disposed transversely thereof, the free ends of the leg portions being bent outward.

[Claims 6 and 7 not printed in the Gazette.]

1,191,350. AUTOMOBILE POWER MECHANISM. ROBERT N. SHAW, Savannah, Ohio. Filed Feb. 21, 1916. Serial No. 79,541. (Cl. 21—90.)



A device of the character described, comprising an inclined platform, brackets mounted upon the rear portion of said platform, a shaft journaled in said brackets, friction pulleys mounted upon said shaft, means on said shaft for transmitting power therefrom, a second pair of brackets mounted upon said platform, a shaft journaled in said last named brackets, axle supporting members mounted upon said last named shaft, each of said members comprising an upper channel member and a lower arm, a pair of levers pivotally mounted upon said first named shaft, and a pair of links pivotally connecting each of said levers to one of said axle supporting members, one of said links connecting the upper extremity of each lever to the upper extremity of the adjacent axle supporting member and one of said links connecting the lower extremity of each lever to the arm of the adjacent axle supporting member.

1,191,351. RAILWAY-TIE. HARRY E. SHELDON, Pittsburgh, Pa., assignor of one-half to William D. Forsyth, Youngstown, Ohio. Filed Oct. 22, 1914. Serial No. 867,995. (Cl. 238—5.)

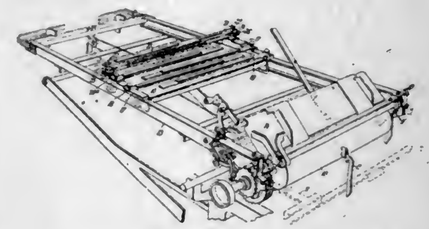


1. In a steel rail-tie, a sheet of steel contracted laterally at the center into a narrow high arch and having at each end a broad base, provided with an elevated portion connected thereto by inclined walls, and a longitudinally-extending depressed rib on the said elevated portion.

2. In a steel rail-tie, a sheet of metal contracted laterally at the center into a narrow high arch and having at each end a broad base, provided with an elevated portion connected thereto by inclined walls.

3. In a steel rail-tie, a sheet of metal contracted laterally at the center into a narrow high arch and having at each end a broad base, provided with an elevated portion connected thereto, and a rail-supporting seat secured on each elevated portion.

1,191,352. TYPE-WRITING MACHINE. JESSE A. B. SMITH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y. a Corporation of Delaware. Filed Feb. 10, 1916. Serial No. 77,393. (Cl. 197—126.)



1. A device for supporting a plurality of sheets in superposed relation, and spaced to provide for the passage of interleaved sheets or webs, said device comprising a carrying frame, supports at opposite ends of the frame, sheet-carrying blades mounted on each support and projecting horizontally toward the other support, the blades on one support overlapping and alternating with those on the other support, and spacing means separating the blades and providing space between each two adjacent overlapping blades.

2. A device for supporting a series of sheet-holding blades in spaced relation to separate sheets held thereby in superposed relation, and provide space for the passage of interleaved sheets or webs, said device comprising a carrying frame, supports extending upwardly from said frame, a set of sheet-carrying blades removably mounted on each support, the blades on each support projecting toward the other support, with the free ends of one set of blades alternating with and overlapping those of the other set, and spacing blocks arranged to space each two adjacent blades.

3. A device for supporting a series of sheet-holding blades in spaced relation to separate sheets held thereby in superposed relation, and provide space for the passage of interleaved sheets or webs, said device comprising a carrying frame, supports extending upwardly from said frame, a set of sheet-carrying blades removably mounted on each support, the blades on each support projecting toward the other support, with the free ends of one set of blades alternating with and overlapping those of the other set, and spacing blocks carried by said blades, the block on the lowermost blade of one set being of less thickness than the corresponding block of the other set, whereby the blades of one set are elevated with respect to the corresponding blades of the other set to provide space between the overlapping blades.

4. A device for supporting a series of sheet-holding blades in spaced relation to saparate sheets held thereby in superposed relation, and provide space for the passage of interleaved sheets or webs, said device comprising a carrying frame, a pair of supporting pins projecting upwardly therefrom, a series of sheet-carrying blades each removably mounted on said supporting pins, and spacing blocks carried by said blades, whereby the blades are held by said pins and blocks in parallel spaced relation to provide spaces between the sheets supported thereby.

5. A device for supporting a series of sheet-holding blades in spaced relation to separate sheets held thereby in superposed relation, and provide space for the passage of interleaved sheets or webs, said device comprising a carrying frame, a pair of pins carried by and projecting upwardly from said frame, sheet-carrying blades, each provided with openings to receive said pins, whereby the blades are removably supported on said pins to project horizontally therefrom, one over the other, and sheet-holding clips mounted on the blades to swing to and from sheet-clamping position and each provided with an opening to register with one of said openings in the blade when

the clip is in sheet-clamping position, whereby the clip is held in said clamping position by one of said pins when the blade is mounted on the pins.

[Claims 6 to 19 not printed in the Gazette.]

1,191,353. COMPOSITION AND MOLD FOR STEREOTYPES. JOHN J. C. SMITH, Passaic, N. J., assignor to Paul M. Hammalian, Hackensack, N. J. Filed Aug. 2, 1911. Serial No. 642,006. (Cl. 154—46.5.)



1. A composition for molds for the purpose specified, consisting of approximately sixty-four per cent. of clay, twenty-one per cent. of asbestos fiber and fifteen per cent. of asbestos powder.

2. A mold for casting stereotypes, said mold formed of a base of suitable yielding material and a layer of molding composition consisting of approximately sixty-four per cent. of potters' clay, twenty-one per cent. of asbestos fiber and fifteen per cent. of asbestos powder.

3. A mold for casting stereotypes, said mold formed of a base composed of an open woven fabric and a superimposed molding composition consisting of approximately sixty-four per cent. of potters' clay, twenty-one per cent. of asbestos fiber and fifteen per cent. of asbestos powder, suitably mixed together and keyed to the fabric base.

1,191,354. HANDLE FOR PNEUMATIC TOOLS. ROBERT H. SMITH, San Francisco, Cal. Filed Jan. 17, 1916. Serial No. 72,654. (Cl. 145—61.)



1. A device for holding a pneumatic tool to its work having at one end means for rigidly connecting it with the tool, the other end being free and resilient to form a body rest.

2. A device for holding a pneumatic tool to its work having at one end means for rigidly connecting it with the tool, the other end being free to form a body rest and resiliently connected with the first-named end.

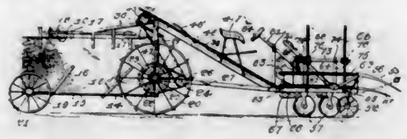
3. A device for holding a pneumatic tool to its work provided with means for securing one end thereof around the casing of the pneumatic tool, the remainder of the device extending freely from the pneumatic tool in a transverse direction and having a smooth surface in a plane transverse to the direction of operation of the pneumatic tool for receiving the forward pressure of the body when operated.

4. A device for holding a pneumatic tool to its work comprising a spring steel strap, of which one portion is provided with means for securing it around the casing of a pneumatic tool, another portion is twisted through a right angle, and a third portion extends freely in a direction transverse to the direction of operation of the pneumatic tool.

5. A device for holding a pneumatic tool to its work comprising a spring steel strap doubled upon itself near the middle and having portions extending from said middle substantially parallel with, and adjacent to, each other to form a rest for the body of the operator, and portions extending oppositely to each other in circular curves and having holes through their terminal portions, a bolt through said holes and a nut on said bolt to draw said terminal portions together and form, with said circular portions, a clamp adapted to secure the device to the casing of the pneumatic tool.

[Claim 6 not printed in the Gazette.]

1,191,355. BEET PULLING AND TOPPING MACHINE. CARL SMITHSON, Alva, Okla. Filed May 25, 1915. Serial No. 30,427. (Cl. 55—108.)



1. A beet harvester comprising a receptacle, a platform positioned in front of said receptacle, means for normally holding said platforms in spaced relation, means for drawing said platforms toward each other, digging means carried by said platforms, means carried by said platforms for engaging the tops of a row of beets and holding the same in an elevated position, means for removing the beets from the ground and conveying the same to a point above said receptacle, and means for severing the roots of the beets from the top of the beets to permit the beet roots to drop into said receptacle.

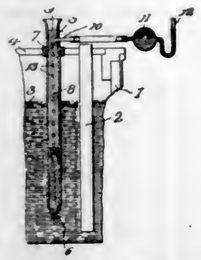
2. A beet harvester comprising a receptacle, platforms in front of said receptacle, supporting wheels for said platforms, digging means carried by said platforms, tongs having their lower ends connected with said platforms, springs carried by said tongs for normally opening said tongs to hold said platforms in spaced relation, means for drawing said tongs to a closed position to draw said platforms toward each other against the tension of the springs, means carried by said platforms for elevating and guiding the beet tops, means for removing the beets from the ground and conveying them from said platforms to said receptacle, and means for covering the roots of the beets from the tops whereby the roots will be permitted to drop into said receptacle.

3. A beet harvester comprising a receptacle, platforms in front of said receptacle, tongs carried by said platforms, resilient means for normally holding said tongs in an open position, bearings having their supporting standards connected with said platforms, a shaft rotatably supported in said bearings, drums carried by said shaft, cables wound upon said drums and engaging said tongs for drawing said tongs to a closed position, means for rotating said shaft to wind said cables upon said drums, digging means carried by said platforms, means carried by said platforms for elevating and guiding the tops of the row of beets, conveying means for engaging the tops of a row of beets to remove the beets from the ground and convey the beets to said receptacle, and means for cutting roots of the beets from the top of the beets and permitting the beets to drop into said receptacle.

4. A beet harvester comprising a receptacle, platforms in front of said receptacle, adjustable supporting means for said platforms, means for normally holding said platforms in spaced relation, means for adjusting the distance between said platforms, digging means carried by said platforms, rotary shafts carried by said platforms, sprocket wheels carried by said shafts, sprocket chains passing around said sprocket wheels, conveying means leading from said platforms to said receptacle, means for transmitting motion from said conveying means to said shafts, whereby said sprocket chains may be moved, and means for cutting the beet roots from the beet tops to permit the beet roots to drop into said receptacle.

5. A beet digger comprising a receptacle, platforms in front of said receptacle, digging means carried by said platforms, vertical shafts carried by said platforms, sprocket wheels mounted upon said shaft, sprocket chains passing around said sprocket wheels, brackets carried by said receptacle and platforms, sprocket wheels rotatably connected with said brackets, means for transmitting rotary motion from the sprocket wheels, means for transmitting rotary motion from the last mentioned sprocket wheels of said platform to said shafts, conveyer chains passing around the sprocket wheels carried by said brackets whereby beets may be conveyed from said platforms to said receptacle, digging means carried by said platforms, and means for cutting the beet roots from the beet tops to permit the beet roots to fall into said receptacle.

1,191,356. REPLENISHING ELECTROLYTIC CELLS. WALTON S. SMITH, Grosse Ile, Mich., assignor to Pennsylvania Salt Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 3, 1915. Serial No. 31,847. (Cl. 204—1.)



1. In the operation of electrolytic cells and similar devices, the process of maintaining a constant level of electrolyte therein which comprises maintaining the electrolyte of the cell in hydrostatic balance with an exterior replenishing source of electrolyte through an intermediate column of immiscible dielectric liquid.

2. In the operation of electrolytic cells and similar devices, the process of automatically maintaining a constant level of electrolyte in such a cell which comprises feeding electrolyte to said cell from a source of supply through a column of dielectric liquid immiscible with such electrolyte, the electrolyte at normal level and the said column conjointly having a head sufficient to balance the head under which said electrolyte from said source of supply tends to feed forward to said cell.

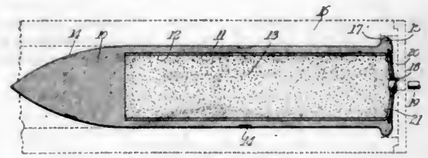
3. In the operation of electrolytic cells and the like, the process which comprises establishing and maintaining a balancing connection between a body of electrolyte in a cell and a body of replenishing electrolyte through an interposed column of immiscible dielectric liquid in liquid contact with said bodies, such balancing connection being so established and maintained that fall of liquid level in the first named body results in detachment of portions of liquid from the second named body and passage through the dielectric liquid to the first named body till balance is again obtained.

4. In the operation of electrolytic cells and similar devices, the process which comprises feeding electrolyte into such a cell from a source of supply in hydrostatic balance with the bath of electrolyte in such cell but insulated from such bath.

5. In the operation of electrolytic cells and similar devices, the process of automatically maintaining a constant level of electrolyte in such a cell which comprises establishing and maintaining a vertical column of immediate liquid in fluid communication with the electrolytic bath in said cell at one end of such column and feeding fresh electrolyte into the other end of such column to replenish such bath, the electrolyte at normal level and the said column conjointly having a head sufficient to balance the head under which said electrolyte from said source of supply tends to feed forward to said cell.

[Claims 6 to 8 not printed in the Gazette.]

1,191,357. CARTRIDGE-PROJECTILE. PARKE T. SNYDER, Chicago, Ill. Filed Aug. 9, 1915. Serial No. 44,368. (Cl. 102—12.)

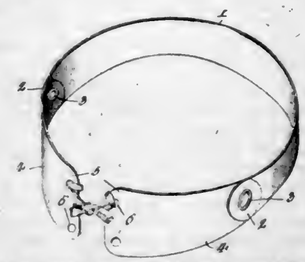


1. An article of manufacture, a projectile, comprising an integral, heavy, forward portion; a relatively light cylindrical charge-carrying portion, both portions being spirally fluted; a rear annular flange portion and a reinforcing open ended tube lining the charge carrying portion.

2. An article of manufacture, a projectile, comprising an integral, heavy, forward portion; a relatively light cylindrical charge-carrying portion, both portions being spirally fluted; a rear annular flange portion; a reinforcing, open-ended tube, lining the charge carrying portion, and a combustible closure for the latter portion and the tube.

3. As an article of manufacture, a projectile, comprising a heavy, forward portion; a relatively light cylindrical charge-carrying portion integral with said forward portion; a rear annular flange portion integral with the cylindrical portion; and a reinforcing open ended tube lining the charge carrying portion.

1,191,358. ELECTRICAL APPLIANCE. SOLOMON E. SPAULDING, Milton, Wash. Filed Apr. 13, 1916. Serial No. 90,926. (Cl. 174—88.)



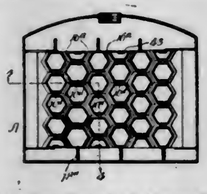
1. A neck band for medical use comprising a metal strip bent to fit the back of the neck, a strip of dis-similar metal connected to each end thereof and bent to engage the front of the neck and terminating short of each other, the first mentioned strip and one of the second mentioned strips forming an electrical couple, and the other of said second mentioned strips adapted to serve as a conductor whereby an electrical circuit may be completed through the neck of the wearer.

2. An electrical neck band comprising a metal strip bent to fit the back of the neck, a strip of dis-similar metal connected to each end thereof and bent to engage the front of the neck, and means whereby the band may be secured around the neck.

3. An electrical neck band comprising a metal strip bent to fit the back of the neck, a strip of dis-similar metal connected to each end thereof for relative movement, each of said strips bent to engage the front of the neck, and means carried by each of said strips whereby the band may be fastened around the neck.

4. An electrical neck band comprising a copper strip bent to fit the back of the neck, a zinc strip connected to each end thereof adapted for movement with relation thereto, each of said zinc strips being bent to fit the front of the neck and widening toward the free ends thereof to present a maximum surface for engaging the neck, and the free ends of said strips terminating short of each other and having apertures formed therein for the reception of means whereby the band may be fastened around the neck.

1,191,359. RADIATOR. CHARLES F. SPERY, Chicago, Ill., assignor to Chicago Utilities Manufacturing Company, a Corporation of Illinois. Filed Mar. 4, 1915. Serial No. 11,954. (Cl. 257—130.)



1. A radiator section including a plurality of vertically disposed, duplicate units of irregular contour, there being vertically spaced apart, horizontally extending, shallow water pockets in the opposing faces of each of said units, said units partially nesting into each other and joined together, there being substantially vertical water ways between adjacent units, following the contour of said units, said water ways being in communication with said water pockets, there being horizontal air passages through each of said units directly adjacent said water pockets, said horizontal air passages being connected together by vertical channels extending between said oppositely disposed water pockets, whereby a horizontal and a vertical flow of air is permitted through said units.

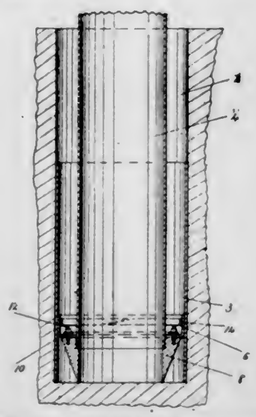
2. A radiator section including a plurality of vertically disposed duplicate units of irregular contour, there being vertically spaced apart, horizontally extending, shallow water pockets in the opposing faces of each of said units, said units partially nesting into each other and joined together, there being substantially vertical water ways between adjacent units, following the contour of said units, said water ways being in communication with said water pockets, there being horizontal air passages through each of said units directly adjacent said water pockets, said horizontal air passages being connected together by vertical channels extending between said oppositely disposed water pockets, whereby a horizontal and a vertical flow of air is permitted through said units, the inlets and outlets of said horizontal passages being substantially funnel shaped, to permit a freer entrance and exit of air.

3. A radiator including an upper tank, a lower tank and a plurality of duplicate units of irregular contour connecting the same, there being alternate upwardly and downwardly extending ribs on alternate units projecting into the upper and lower tanks respectively, to stiffen the marginal walls of said tank; there being vertically spaced apart, horizontally extending, shallow water pockets in the opposing faces of each of said units, said units partially nesting into each other and joined together, there being substantially vertical water ways between adjacent units, following the contour of said units, said water ways being in communication with said water pockets, there being horizontal air passages through each of said units directly adjacent said water pockets, said horizontal air passages being connected together by vertical channels extending between said oppositely disposed water pockets, whereby a horizontal and a vertical flow of air is permitted through said units.

4. A radiator including an upper tank, a lower tank and a plurality of duplicate units of irregular contour connecting the same, there being alternate upwardly and downwardly extending ribs on alternate units projecting into the upper and lower tanks respectively, to stiffen the marginal walls of said tanks; there being vertically spaced apart, horizontally extending, shallow water pockets in the opposing faces of each of said units, said units partially nesting into each other and joined together, there being substantially vertical water ways between adjacent units, following the contour of said units, said water ways being in communication with said water pockets, there being horizontal air passages through each of said units directly adjacent said water pockets, said horizontal air passages being connected together by vertical channels extending between said oppositely disposed water pockets, whereby a horizontal and a vertical flow of air is permitted through said units, the inlets and outlets of said horizontal passages being substantially funnel shaped, to permit a freer entrance and exit of air.

5. As an article of manufacture, a single, continuous, sheet metallic strip bent back upon itself medially of its length and having its free ends joined to each other, said strip being provided with a plurality of equally spaced transverse corrugations extending the entire width of said strip and intervening walls between said corrugations, the height of said walls being greater at the longitudinal margins of said strip than intermediate thereof, said walls having contact with opposite walls when said strip is so rebent and joined.

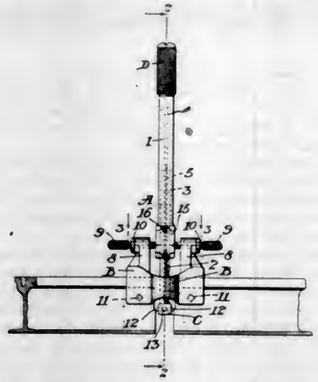
1,191,360. SUCTION-PIPE. ROBERT JAMES STOCKTON, Welsh, La. Filed Apr. 17, 1916. Serial No. 91,668. (Cl. 166—10.)



The combination, with a well pump suction-pipe, and a conical guide secured to the lower end portion thereof and projecting laterally around it, of a cup-leather having a cylindrical upper portion and a horizontal lower portion which rests on the projecting upper end of the said guide, means for pressing the upper portion of the cup leather outwardly, a ring resting on the horizontal lower portion of the cup-leather, and bolts arranged in holes in the said guide, horizontal portion and ring and securing the cup-leather to the guide.

1,191,361. APPARATUS FOR FORMING PARALLEL FACES ON THE ENDS OF ADJACENT ELEMENTS, SUCH AS RAILWAY-RAILS. FRANZ STÖHR, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 21, 1915. Serial No. 67,978. (Cl. 90—24.)

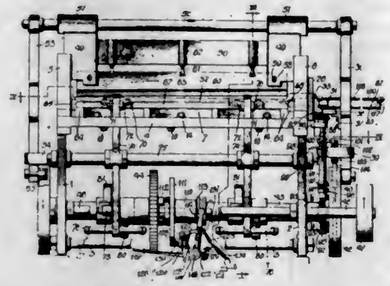
1. Apparatus for forming parallel faces on the ends of adjacent railway rails and the like comprising an oscillatory lever, oppositely projecting cutters rigidly carried by the lower end of the lever so as to oscillate therewith, means to pivotally support the lever intermediate its ends in such a manner as to bring the oppositely projecting cutters into operative relation with the rail ends, and means whereby said cutters may be fed longitudinally of the lever and between the rail ends during the oscillation of the lever.



2. Apparatus for forming parallel faces on the ends of adjacent railway rails and the like, comprising an oscillatory lever composed of two telescoping parts, means to pivotally support the lever to bring a portion of one of the parts of the lever into operative relation with the rail ends, a cutting element associated with such portion of one of the parts of the lever, and means for feeding that part of the lever which carries the cutting element out of the other part of the lever during the oscillation thereof to feed the cutting element between the rail ends, for the purpose described.

3. Apparatus for forming parallel faces on the ends of adjacent railway rails and the like, comprising an oscillatory lever pivotally supported intermediate its ends to bring the lower end of the lever into operative relation with the rail ends, a cutting element associated with the said lower end of the lever, a rotary handle at the upper end of the lever whereby the lever may be oscillated, and means whereby the rotation of said handle during the oscillation of the lever feeds said cutting element between the rail ends during the oscillation of the cutting element, for the purpose described.

1,191,362. TUBE-FORMING MACHINE. WARREN W. STOLER, Detroit, Mich., assignor to American Forging & Socket Co., Detroit, Mich., a Corporation of Michigan. Filed May 20, 1915. Serial No. 29,402. (Cl. 113—34.)



1. A machine of the type described comprising dies, a mandrel adapted to press a blank between said dies to a channel form, lateral opposed members adapted to move one in advance of the other and bend the edges of a blank on said mandrel, said mandrel having a longitudinal groove therein, a mandrel follower adapted to engage the bent edges of the blank and force the same into the groove of said mandrel, and means actuated at each end of the machine for moving the mandrel follower and thereby the mandrel.

2. In a machine of the type described, dies, a longitudinal grooved mandrel adapted to engage a blank on said dies and force said blank between said dies to a channel form, opposing members adapted to engage the edges of said blank and bend the same upon said mandrel, a mandrel follower adapted to force the edges of the blank in one of the grooves of said mandrel, means in the other groove of said mandrel adapted to eject a tube therefrom, and means actuated at each end of the machine for moving said mandrel follower and thereby the mandrel.

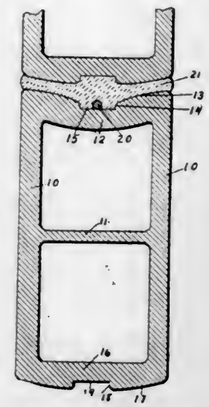
3. A tube forming machine adapted to form a tapering tube from a blank, comprising a bed plate, dies on said bed plate a grooved tapering mandrel adapted to engage a blank on said dies, a mandrel follower adapted to engage said mandrel and force said blank and mandrel between said dies whereby said blank assumes a channel shape, members adapted to bend the edges of said blank on to said mandrel, and means in a groove of said mandrel adapted to eject a tube therefrom.

4. A tube forming machine adapted to form a tapering tube from a blank, comprising dies, a mandrel adapted to descend by gravity and engage a blank on said dies, a mandrel follower adapted to engage said mandrel and force said blank and mandrel between said dies whereby said blank assumes a channel shape, means aadpted to raise and lower said follower, and means adapted to bend the edges of said blank on said mandrel in position to be clenched by said mandrel follower.

5. In a machine for producing tapering tubes, dies adapted to support a blank in a horizontal plane, a tapering mandrel normally held above said dies and adapted to descend by gravity on to a blank on said dies, a mandrel follower adapted to force said mandrel between said dies whereby the blank is formed on said mandrel, and actuating means for said mandrel follower normally supporting said mandrel and movable independently thereof whereby said mandrel follower may recede after forcing said mandrel between said dies.

[Claims 6 to 11 not printed in the Gazette.]

1,191,363. BUILDING-BLOCK. HALVER R. STRAIGHT, Adel, Iowa. Filed Oct. 7, 1912. Serial No. 724,448. (Cl. 72—42.)



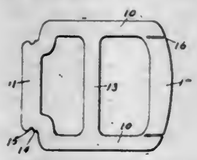
1. An improved building block having on its top surface a central, longitudinal groove, upright shoulders at the sides of the groove and inclined surfaces extending from the said shoulders outwardly and upwardly to the

sides of the building block, having on its under surface a central, longitudinal groove with downwardly extended shoulders at the sides thereof and with inclined surfaces from said shoulders to the sides of the block extended outwardly and upwardly, said inclined surfaces being at such relative angles that when two adjacent similar blocks are placed together, one above the other, there will be between them a space to receive mortar, which space will be thickest at its central portion and tapered toward both sides for the purposes stated.

2. An improved article of manufacture comprising a building block of vitrified clay, comprising two upright side walls, a central horizontal partition, a top member having a longitudinal groove at its center, upright shoulders at the sides of the longitudinal groove and inclined surfaces extending from said shoulders to the sides of the building block and being inclined upwardly and outwardly, the bottom member being provided on its under surface with a central, longitudinal groove with downwardly extended shoulders at its sides and with inclined portions extending from said shoulders to the sides of the block and inclined upwardly and outwardly, the latter inclination being arranged closer to a line at right angles to the sides of the block than the inclination of the corresponding surfaces at the top of the block, for the purposes stated.

3. An improved building block, having longitudinal openings through it and one of its longitudinal edges concaved and the other convexed, and said edges being provided with a central longitudinal groove having shoulders parallel with the longitudinal sides of said block, the concaved edge being of less curvature than the convexed edge.

1,191,364. BUILDING-BLOCK FOR DOOR-JAMBS. HALVER R. STRAIGHT, Adel, Iowa. Filed Nov. 6, 1912. Serial No. 729,912. (Cl. 72—98.)



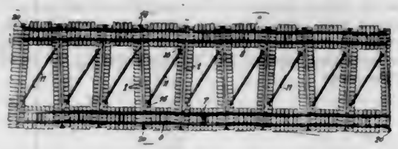
1. A building block formed of vitrified clay, and comprising parallel sides, an inner member, a convex outer member, the said inner member being narrower than the distance between the parallel sides to form shoulders, the outer member being provided with longitudinal notches, for the purposes stated.

2. In a building block for forming frames of openings in buildings comprising side walls parallel to each other, a longitudinal partition between said members and perpendicular to the inner and outer wall members, said inner wall members having longitudinal slots opposite the inner edges of said side members, and the outer members being provided with longitudinal shoulders to receive a door, and longitudinal grooves in each of said shoulders.

3. A building block formed of vitrified clay, and comprising parallel sides, an inner member, a convexed outer member, a central partition between the side members, the said inner member being narrower than the distance between the parallel side to form shoulders, the said shoulders being provided with longitudinal grooves, and the outer member being provided with longitudinal notches for the purposes stated.

4. In a building block for forming frames of openings in buildings, comprising parallel sides, an inner member, an outer member, a longitudinal partition between and parallel to said inner and outer members, said outer wall member having longitudinal slots opposite the edges of said side wall members, the inner member being contracted opposite the adjacent edges of said side wall members to form shoulders, said shoulders being provided with mitered ends.

1,191,365. RUNWAY FOR EXCAVATING-MACHINES. OSCAR EMIL STREHLOW, Evanston, Ill. Filed Feb. 8, 1916. Serial No. 77,107. (Cl. 104—45.)



1. A runway made up of detachable sections secured together, each section being oblong in shape and including side members and two pairs of cross-beams adjacent the ends of said side members and two pairs of rail sections supported by said cross-beams.

2. A runway made up of detachable sections secured together, each section being oblong in shape and including side members having a flanged base and two pairs of cross-beams having flanged bases and two pairs of rail sections supported by said cross-beams.

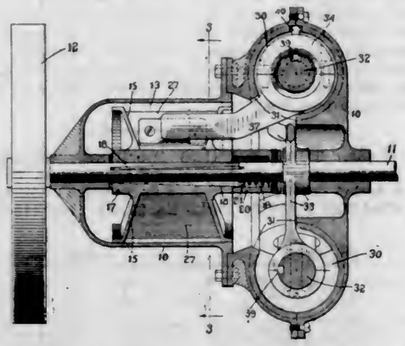
3. A runway made up of detachable sections secured together, each section being oblong in shape and including side members and two pairs of cross-benms adjacent the ends of said side members and two corresponding pairs of rail sections, the members of which are mounted respectively on said cross-beams.

4. A runway made up of detachable sections secured together, each section being oblong in shape and including side members, two pairs of cross-beams having flanged tops and two corresponding pairs of rail sections, the members of which are mounted respectively on the flanged tops of said cross-beams.

5. A runway made up of detachable sections secured together, each section including side members and cross-beams secured to said side members and rails mounted upon said cross members, and a diagonal brace extending between said side members.

[Claims 6 to 12 not printed in the Gazette.]

1,191,366. INTERNAL-COMBUSTION ENGINE. DE WITT E. TALLMADGE, South Norwalk, Conn. Filed Nov. 6, 1915. Serial No. 60,117. (Cl. 123—11.)



1. An internal combustion engine comprising a shaft, a non-rotating piston chamber, primary pistons secured to the shaft and having rearwardly extending end walls, secondary pistons mounted on the shaft independently of the primary pistons and forming with said pistons and end walls combustion chambers, and means for imparting accelerated movement to the secondary pistons to produce compression and exhaustion in the combustion chamber.

2. An internal combustion engine comprising a shaft, a piston chamber, primary pistons secured to the shaft and having rearwardly extending end walls, secondary pistons mounted on the shaft independently of the primary pistons, and forming with said pistons and end walls combustion chambers, a spirally grooved ring-shaped chamber having an opening around it, a spirally grooved ring centrally located in said chamber and carried by the shaft, hubs mounted upon the ring and having spring controlled pins adapted to engage the grooves in the chamber and the ring and having circumferential grooves, bearings in the circumferential grooves in which the hubs rotate, and arms connecting said bearings with the secondary pistons.

3. An internal combustion engine comprising a shaft, a piston chamber, primary pistons secured to the shaft and having rearwardly extending end walls and hub segments, together forming a hub, secondary pistons mounted to have rotary movement on said hub and forming with the primary pistons and end walls combustion chambers, and means for imparting accelerated movement to the secondary pistons, for the purpose set forth.

4. An internal combustion engine comprising a shaft, a piston chamber, primary pistons having rearwardly extending end walls and hub segments, together forming a hub, secondary pistons mounted to have rotary movement on said hub, and forming with the primary pistons and end walls combustion chambers, spring pressed tapering keys for securing the hub segments to the shaft and for forcing the primary and secondary pistons outward against the wall of the chamber, and means for imparting accelerated movement to the secondary pistons, for the purpose set forth.

5. An internal combustion engine comprising a shaft, a piston chamber, primary pistons having rearwardly extending end walls and hub segments, together forming a hub, secondary pistons mounted to have rotary movement on said hub, and forming with the primary pistons and end walls combustion chambers, tapering keys engaging the hub segments and the shaft, a spring pressed disk engaging the keys, for the purpose set forth, a hub 20 secured to the shaft in which the disk and spring are socketed, and means for imparting accelerated movement to the secondary piston.

[Claims 6 to 17 not printed in the Gazette.]

1,191,367. AMUSEMENT APPARATUS. CHARLES TANDY, Wellington, New Zealand. Filed May 13, 1916. Serial No. 97,301. (Cl. 46—61.)



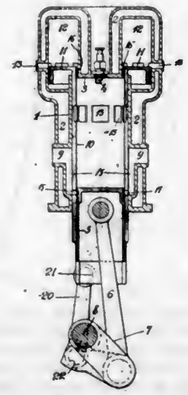
1. Amusement apparatus consisting in the combination with a traveling platform, of a fixed table or race alongside which the platform moves, provided with scoring nets or cages at intervals in its length, substantially as specified.

2. Amusement apparatus consisting in a circular rotating platform in combination with a circular fixed table or race surrounding the outer edge of the platform and provided with scoring nets or cages at intervals around it, substantially as specified.

3. Amusement apparatus consisting in a circular rotating platform, divided radially into a number of spaces by divisional bars, in combination with a circular fixed table or race surrounding the outer edge of the platform, having raised edges and provided with scoring nets or cages at intervals around it, substantially as specified.

4. Amusement apparatus consisting in a circular rotating platform, divided radially into a number of spaces by divisional bars, in combination with a circular fixed table or race surrounding the outer edge of such platform, formed with raised edges and with a bottom surface inclining upward from a point near its outer edges, and provided with scoring nets or cages at intervals around it, substantially as specified.

1,191,368. COMBUSTION-ENGINE. CORNELIUS HOAGLAND TANGEMAN, New York, N. Y. Filed Jan. 10, 1911. Serial No. 601,887. (Cl. 123—65.)



1. The combination in a combustion engine of means for compressing and firing a charge, a sleeve having exhaust ports disposed within the cylinder, a working piston within said sleeve controlling said ports, a crank shaft, elongated exhaust ports in said cylinder wall, and a direct actuating connection between said sleeve and said crank shaft whereby to permit exhaust during two-thirds of the upward stroke of the piston by simultaneous movement of the sleeve and piston in the same direction.

2. The combination in a combustion engine of means for compressing and firing a charge, a working cylinder having an elongated exhaust port, a sleeve sliding within said cylinder and having a port adapted to register with said exhaust port, a working piston moving in said sleeve and opening said sleeve exhaust port during a portion of the upward movement of said sleeve, a main shaft having two angularly displaced cranks, and connections between said cranks and said piston and said sleeve.

3. The combination in a combustion engine of means for compressing and firing a charge, a working cylinder having an elongated exhaust port, a sleeve sliding within said cylinder and having a port adapted to register with said exhaust port, a working piston moving in said sleeve and opening said sleeve exhaust port during a portion of the upward movement of said sleeve, a main shaft having two angularly displaced cranks, and connections between said cranks and said piston and said sleeve, the crank for said sleeve being in advance of the crank for said piston.

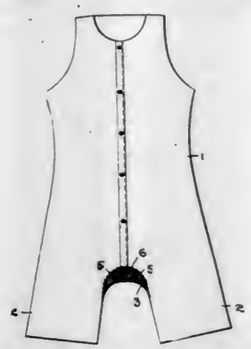
4. The combination in a combustion engine of means for compressing and firing a charge, a cylinder having an elongated exhaust port, a sleeve sliding within said cylinder and having a port adapted to register with said exhaust port, a piston moving in said sleeve and opening said sleeve exhaust port during a portion of the upward movement of said sleeve, a shaft having two angularly displaced cranks, and connections between said cranks and said piston and said sleeve, the crank for said sleeve being in advance of the crank for said piston, and having a less throw.

5. The combination in a combustion engine, of a cylinder, a working piston and a crank shaft, of a sleeve mounted to slide between the cylinder and the piston and having an exhaust port in its lower portion controlled by said piston, means for operating said sleeve in predetermined

angular relation less than 180° to said piston in the same direction to exhaust, and means for admitting, compressing and firing a charge.

[Claims 6 to 12 not printed in the Gazette.]

1,191,369. UNDERGARMENT. LOUIS TOPKIS, Wilmington, Del. Filed Sept. 25, 1915. Serial No. 52,555. (Cl. 2—144.)



1. A garment having leg portions with an opening adjacent the crotch thereof, a piece of flexible material fitting said opening and having its edges secured to the edges providing said opening, said piece having holes providing vents therein, a second piece of flexible material having opposite edges in alinement with and secured by stitching to opposite edges of said first piece, said second piece having two other edges which are secured by resilient stitches to said first piece, said second piece having holes in alinement with the holes of said first piece and forming vents, the edges forming the vents of each of said pieces being bound by stitching which passes through and secures both of said pieces together, substantially as described.

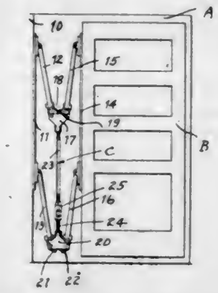
2. A garment having leg portions with an opening adjacent the crotch thereof, said opening having opposite portions produced by converging edges which intersect each other, a piece of flexible material fitting said opening and having its edges secured to the edges providing said opening, said piece having holes providing vents therein, a second piece of flexible material having opposite edges in alinement with and secured by stitching to opposite edges of said first piece, said second piece having two other edges which span the tapered portion of said first piece and are secured thereto by elastic stitching, said second piece having holes in alinement with the holes of said first piece and forming vents, the edges forming the vents of each of said pieces being bound by stitching which passes through and secures both of said pieces together, substantially as described.

1,191,370. MOUNTING FOR SLIDING DOORS. JONAS TONOLF, Taft, Cal. Filed June 1, 1914. Serial No. 842,267. (Cl. 16—156.)

1. The combination with a vertical studding and a horizontally sliding door, of one pair of upper and one pair of lower arms pivotally connected to the studding and door respectively, uniting elements connecting the free ends of the upper and lower arms respectively, meshing gears fixed to the free ends of one pair of arms, and a connecting rod between the upper and lower uniting elements.

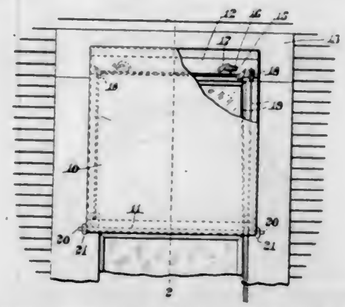
2. The combination with a vertical studding and a horizontally sliding door, of one pair of upper and one pair of lower arms pivotally connected to the studding and door, uniting elements connecting the free ends of the upper and lower arms respectively, meshing gears fixed to the free ends of the upper pair of arms, and a connecting rod between the upper and lower uniting elements.

3. The combination with a vertical studding and a horizontally sliding door, of one pair of upper and one pair of lower arms pivotally connected to the studding and door, uniting elements connecting the free ends of the upper and lower arms respectively, meshing gears fixed to the free ends of the lower pair of arms, and a connecting rod between the upper and lower uniting elements.



4. The combination with a vertical studding and a horizontally sliding door, of one pair of upper and one pair of lower arms pivotally connected to the studding and door, uniting elements connecting the free ends of the upper and lower arms respectively, gears fixed to the free ends of the upper and lower pairs of arms, the gears meshing on each pair, a connecting rod between the upper and lower uniting elements, and means for lengthening and shortening said connecting rod.

1,191,371. WINDOW-AWNING. JAMES L. TRAINER, Weymouth, Mass. Filed Sept. 15, 1914. Serial No. 862,255. (Cl. 156—15.)

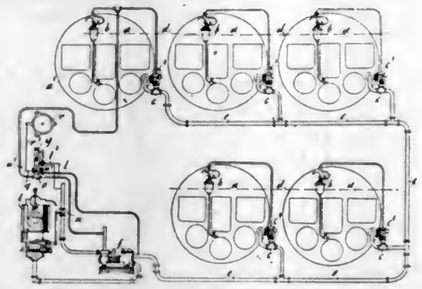


An awning having a rigid strip permanently secured to and extending throughout the length of the upper inside edge of the awning fabric, the strip having openings extending therethrough beneath the fabric, fastening means adapted to be permanently attached to a building and extending through the openings with their ends protected by the fabric, and securing means engageable with the fastening means beneath the fabric.

1,191,372. AUTOMATIC LIQUID-FEEDING APPARATUS FOR USE WITH STEAM-BOILERS AND LIKE PURPOSES. ARTHUR RONALD TRIST, London, England. Filed May 5, 1915. Serial No. 26,136. (Cl. 137—101.)

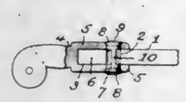
1. Apparatus for automatically controlling the supply of feed water to steam boilers or the like comprising in combination a battery of boilers or the like divided into two sets, a main set and a sentinel set, each boiler being provided with means for automatically controlling the supply of feed water by the water level in said boiler, a pumping device, a feed main from said pumping device

common to all the boilers, a fluid pressure power device controlled by the water level in the sentinel set adapted to control the supply of feed water up to a predetermined pressure to said sentinel set, a power device having a yielding resistance connected to the feed main, a device operated by said power device adapted to relieve the pressure of the said fluid pressure power device controlling the feed water supply to the sentinel set when the said predetermined pressure is exceeded and an alarm device adapted to operate when said increase of pressure has been set up.



2. Apparatus for automatically controlling the supply of feed water to steam boilers or the like comprising two or more boilers or reservoirs, a water level controlled device on each boiler or reservoir for regulating the supply of feed water thereto by the medium of fluid pressure, a pumping device common to all the boilers or reservoirs, a power device having an adjustable yielding resistance operated by the pressure of feed supply from the pump, a valve or the like operated by said power device in conjunction with the fluid pressure for controlling the feed water supply to one or more boilers or reservoirs acting as a sentinel unit and adapted to allow a certain amount of the fluid pressure to leak away when the water in the sentinel unit has reached a level greater than that in any of the other boilers of the battery or installation, an alarm device actuated by the said power device, when the predetermined pressure has been reached, a hot well or feed water reservoir for containing the feed water, a movable device controlled by the level of the water in said hot well and controlling means on said pump operated by the said movable device.

1,191,373. LENS-MOUNT. RICHARD H. UHLEMANN, Chicago, Ill. Filed July 13, 1914, Serial No. 850,632. Renewed Dec. 22, 1915. Serial No. 68,293. (Cl. 88—47.)



1. A lens mount comprising a clip having orificed side ears, and a fastening stud journaled in said ears and formed with a flat central portion, the parts being adapted for engagement with a lens formed with an orifice near its margin and with a slit connecting said orifice with the margin of the lens, substantially as set forth.

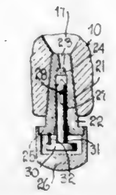
2. A lens mount comprising a clip having orificed side ears, and a fastening stud journaled in said ears and formed with a flat central portion and with headed ends, the parts being adapted for engagement with a lens formed with an orifice near its margin and with a slit connecting said orifice with the margin of the lens, substantially as set forth.

3. A lens mount comprising a clip having orificed side ears and a central web intermediate of said ears, and a fastening stud journaled in said ears and formed with a flat central portion, the parts being adapted for engagement with a lens formed with an orifice near its margin and with a slit connecting said orifice with the margin of the lens, substantially as set forth.

4. A lens mount comprising a clip having orificed side ears and a central web intermediate of said ears, and a fastening stud journaled in said ears and formed with a flat central portion and with headed ends, the parts being adapted for engagement with a lens formed with an orifice near its margin and with a slit connecting said orifice with the margin of the lens, substantially as set forth.

5. A lens mount comprising a clip having orificed side ears, and a fastening stud journaled in said ears and formed with a flat central portion, the parts being adapted for engagement with a lens formed with an open sided orifice near its margin, substantially as set forth.

1,191,374. AERIAL TORPEDO. SYLVANUS S. VAN KEUREN, Aberdeen, S. D. Filed Feb. 12, 1916. Serial No. 78,049. (Cl. 102—39.)



1. In a torpedo of the character described, a body having a firing plug formed with a longitudinal bore, a seat for a detonator and an exterior head, a firing pin longitudinally movable in the plug and having a head, a spring between the head of the firing pin and the head of the plug, a safety key disposed between the head of the plug and the head of the firing pin and a detachable cap inclosing the head of the firing pin and the key.

2. In an aerial torpedo of the character described, a body having a relatively heavy nose, the nose being longitudinally bored and the bore being screw threaded and tapering, a tapering firing plug having screw threaded engagement with the bore of the nose and also formed with a longitudinal bore and with a seat for a detonator and with an exteriorly screw threaded head, a spring resisting the inward movement of the firing pin, the inner face of the head of the firing pin and the outer face of the head of the plug having transversely extending registering grooves, and a safety key removably disposed in said grooves and holding the firing pin from inward movement.

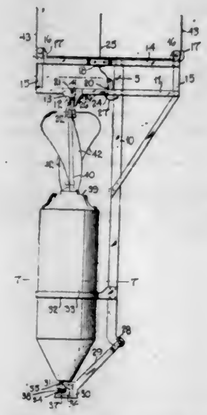
1,191,375. TORPEDO-DROPPING MECHANISM FOR AIRSHIPS. SYLVANUS S. VAN KEUREN, Aberdeen, S. D. Filed Feb. 12, 1916. Serial No. 78,050. (Cl. 244—1.)

1. Means for suspending and dropping aerial torpedoes including a hanger, a pivoted latch mounted upon the upper end of the hanger, means for operating the latch, and means engaging the lower extremity of the torpedo and holding it from lateral displacement while in the hanger, said means being shifted out of the way of the torpedo by gravity when the latch is released from its engagement with the torpedo.

2. Means for suspending and dropping aerial torpedoes including a skeletonic frame, a latch mounted upon the upper end of the frame and adapted to engage with the suspending eye of a torpedo, and means at the lower end of the hanger for protecting the firing head of the torpedo and movable automatically out of its engagement with the torpedo upon the operation of the latch, said means holding the torpedo from lateral displacement.

3. Means for suspending and dropping aerial torpedoes including a hanger and a pivoted latch mounted upon the upper end of the hanger and adapted to engage with the suspending eye of a torpedo, means for operating the

latch and means for protecting the firing head of the torpedo and holding the torpedo from lateral displacement while in the hanger comprising a pivoted arm having an open-ended socket for receiving the firing head of the torpedo.

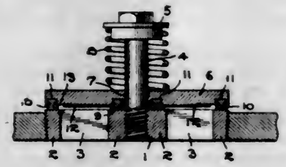


4. Means for suspending and dropping aerial torpedoes including a hanger, a pivoted latch mounted upon the upper end of the hanger, detachable means for holding the latch from movement, a cord operating the latch, and means for holding the torpedo from lateral displacement while in the hanger, said means engaging the lower extremity of the torpedo and movable automatically out of its engagement therewith upon the operation of the latch.

5. Means for suspending and dropping aerial torpedoes including a hanger having a vertically extending member and a laterally extending member at its top, a latch mounted upon the laterally disposed member and adapted to engage with the suspending eye of a torpedo, means at the lower end of the hanger for protecting the firing head of the torpedo and movable automatically out of its engagement with the torpedo upon the operation of the latch, means for operating said latch, and means for suspending the hanger from an airship.

[Claims 6 to 11 not printed in the Gazette.]

1,191,376. VALVE. JOHAN C. W. WEBER, Philadelphia, Pa. Filed Apr. 12, 1915. Serial No. 20,871. (Cl. 103—66.)

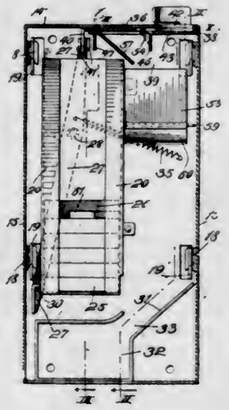


1. A valve of the character described, having on its under face concentric valve faces, and between said valve faces having a circular series of blades or vanes, said blades or vanes curved in the arc of a circle and increasing in depth from their inner to their outer ends, substantially as described.

2. A valve of the character described, having on its under face concentric valve faces, and between said valve faces having a circular series of blades or vanes, said blades or vanes curved in the arc of a circle and increasing in depth from their inner to their outer ends, and said valve having an annular passage communicating with the outer ends of all of the blades or vanes, substantially as described.

3. A valve of the character described, having on its under face concentric valve faces, and between said valve faces having a circular series of blades or vanes, said blades or vanes curved in the arc of a circle and increasing in depth from their inner to their outer ends, said valve faces projecting in a plane below the blades or vanes, substantially as described.

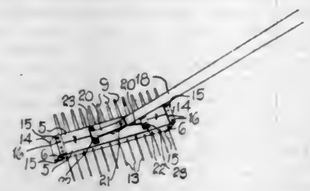
1,191,377. VENDING-MACHINE. LOUIS WEINSTEIN, New York, N. Y. Filed Nov. 28, 1914. Serial No. 874,433. (Cl. 194—57.)



1. In a vending machine, the combination of a casing, a hopper located in said casing and adapted to hold articles in superposed relation, a lever extending lengthwise of the hopper and having an angular end provided with a lip adapted to move entirely across the hopper to positively force an article therefrom, means for receiving the articles when delivered from the hopper, a spring normally forcing the lever in one direction, a slide having an angular end adapted loosely to engage a part of the ejecting lever, means for moving the slide in one direction, said slide having an opening for the reception of a coin, a locking element having one part adapted to lock the slide against movement and another part arranged in the path of the coin and adapted to be actuated thereby during the movement of the slide to release the slide from locking engagement with said element, and a spring normally forcing said element in position to again lock the slide when in its normal position.

2. In a vending machine, the combination of a casing, comprising two separable members, coin controlled mechanism, a part of which is mounted on each member comprising a hopper adapted to hold articles in superposed relation, a lever extending lengthwise of the hopper and having an angular lower end provided with a lip adapted to move entirely across the hopper to positively force an article therefrom, the upper end of the lever having lips or projections extending toward the front of the casing, means for receiving the articles when delivered from the hopper, a spring normally forcing the lever in one direction, a slide having an angular end adapted loosely to engage the lever between said lips or projections, means for moving the slide in one direction, said slide having an opening for the reception of a coin, a locking element having one part adapted to lock the slide against movement and another part arranged in the path of the coin and adapted to be actuated thereby during the movement of the slide to release the slide from locking engagement with said element, and a spring normally forcing said element in position to again lock the slide when in its normal position.

1,191,378. RAKE. DAVID W. WHITAKER, Oak Ridge, N. C. Filed Sept. 22, 1915. Serial No. 52,051. (Cl. 55—114.)

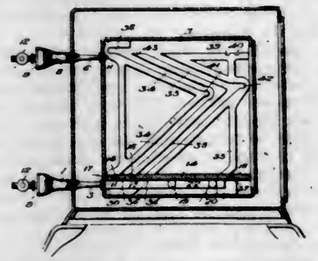


1. A rake including a head, consisting of two rectangular bars arranged in longitudinal parallel relation to each other, each provided with a series of teeth receiving openings, a series of metal rake teeth arranged in the openings of one bar, a series of wooden rake teeth arranged in the openings of the other bar, connecting bolts disposed through the head bars adjacent their ends to clamp the same together, and metal cap plates extending around the ends of the head bars and secured thereto.

2. A rake including a head, consisting of two rectangular bars, each provided with a series of teeth receiving openings, a series of metal rake teeth arranged in the openings of one bar, and a series of wooden rake teeth arranged in the openings of the other bar, the ends of the corresponding metal and wooden rake teeth being in abutting engagement, connecting bolts disposed through the head bars adjacent their ends to clamp the same together, metal cap plates extending around the ends of the head bars and secured thereto, a handle, obliquely disposed bracing irons connected at one of their ends to the handle in spaced relation to the rake head, and transversely disposed bolts extending through the other ends of said irons and through each of the head bars.

3. A rake including a head consisting of two bars, each having a series of teeth receiving openings, wooden teeth arranged in the openings of one of said bars, and metal teeth arranged in the openings of the other of the bars, said teeth projecting in relatively opposite directions from the respective head bars, clamping bolts disposed through the head bars adjacent their opposite ends, a handle, obliquely disposed bracing irons fired at one of their ends to the handle in spaced relation to the rake head, and bolts connecting the other ends of the bracing irons to each of the head bars and extending through said bars in a plane at right angles to said clamping bolts.

1,191,379. OVEN FOR COMBINATION COAL AND GAS RANGES. ROBERT M. WITMAN, Evansville, Ind., assignor to Evansville Stove Works, Evansville, Ind., a Corporation of Indiana. Filed Nov. 5, 1915. Serial No. 59,775. (Cl. 126—41.)



1. The combination with an oven, of a baffle slidable inwardly and outwardly in the oven and movable from a lower to a higher point in the oven, a gas burner carried by, and bodily movable with, said baffle, and separate means for supplying gas to said burner when in different positions in said oven, said burner being disconnected from said gas supplying means when slid outwardly and also when being moved from one position to a higher or lower position in the oven.

2. The combination with an oven, of a baffle movable from the bottom of the top of the oven, a gas burner carried by, and bodily movable with, said baffle, and gas supplying devices arranged and adapted to independently connect with, or disconnect from, the burner when it is at the lower and at a higher position in said oven, said burner being disconnected from said gas supplying devices when being moved from one position to another in said oven.

3. In an oven, the combination with tracks or guides at the sides thereof, of a movable baffle, a gas burner carried thereby, means on the baffle adapted to travel in said tracks or guides, whereby the baffle may be arranged at the bottom or at a higher position in the oven and shifted from one position to the other and separate gas supplying devices arranged to independently connect with, or disconnect from, said burner when the baffle is in different positions in the oven.

4. In an oven, the combination with tracks or guides having branches disposed angularly to each other at the sides thereof, of a movable baffle, a gas burner carried thereby, and means on the baffle adapted to travel in said tracks or guides, whereby the baffle may be arranged at the bottom or at a higher position in the oven and shifted from one position to the other.

5. In an oven, the combination with substantially V-shaped tracks or guides at the sides thereof, of a movable baffle, a gas burner carried thereby, and means on the baffle adapted to travel in the V-shaped guides, whereby the baffle may be disposed in lower or upper positions in the oven by manipulation and will have its movements controlled by said guides when shifting from one position to another.

[Claims 6 to 8 not printed in the Gazette.]

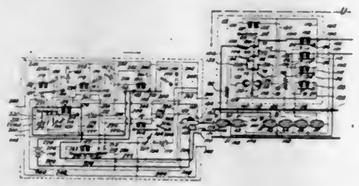
1,191,380. ARMORED AUTOMOBILE. CHESTER D. ZUMWALT, Center, Mo. Filed Sept. 22, 1915. Serial No. 52,019. (Cl. 89—40.)



1. In an armored automobile, the combination with the wheeled body, of a pair of shafts rotatably mounted within the body and extending longitudinally of the latter, said shafts being disposed one above the other, a plurality of guns fixed on each shaft and projecting through ports in the body, a second pair of shafts mutually connecting the guns carried by the first named shafts respectively, a link connecting the second named shafts, an arm on said link whereby the first named shaft may be manually rotated to train the guns carried thereby, and means cooperating with said arm to hold the first named shafts against rotation.

2. In an armored automobile, the combination with the wheeled body, of a plurality of guns pivotally mounted within the body for movement in a vertical plane, a trigger included in each gun, a rotatable shaft mutually connecting said guns and disposed in advance of said triggers, arms on said shaft for engaging the triggers when the shaft is rotated, means for rotating said shaft connections between the guns for effecting simultaneous pivotal movement thereof, an arm carried by said connections, a tubular portion included in said arm, a rack bar pivotally secured to said body and slidable through the tubular portion, and a spring latch carried by the tubular portion for coöperating with the teeth of said rack bar.

1,191,381. RAILWAY SAFE-RUNNING DEVICE. ARTHUR REGINALD ANGUS, Spit Road Mosman, New South Wales, Australia. Filed May 8, 1911. Serial No. 625,745. (Cl. 246—58.)



1. In a train-controlling system, track contacts arranged at two ends of a section of track, a safety-device carried by a train and adapted to be operated by non-electrical force, a contacting device carried by said train and adapted normally to assume a position to prevent the operation of said safety-device, but adapted to be moved by track contacts at both ends of said section out of said position so as to allow the operation of said safety-device, an electromagnetic device carried by said train and adapted on the completion of its circuit to prevent the operation of said safety-device when said contacting device is moved as aforesaid, current paths located on said track for said track contacts respectively, two electromagnetic switching instruments which are connected together and the armatures of which normally keep closed said current paths respectively, other track contacts located at the ends of said section and farther within said section than the aforesaid track contacts and adapted by contact with said contacting device to complete circuits through said switching instruments and thereby to operate said armatures so as to break said current paths.

2. In a train-controlling system, apparatus comprising a warning device and a stopping device carried by a train and both tending to come into operation, a contacting device carried by said train and adapted normally to prevent the operation of both said devices but adapted to allow of their respective operations when given different displacements, track contacts adapted to give said contacting device said different displacements, and electromagnetic means on the train for preventing the operation of each of said warning and stopping devices on the energization of said electromagnetic means when said contacting device is correspondingly moved by said track contacts.

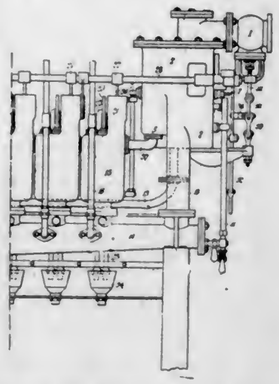
3. In a train-controlling system, a safety device carried by a train, track contacts adapted when said train makes contact therewith to actuate said safety device, and an electromagnetic device on said train which is adapted, when energized when the train is in contact with one of said track contacts by a current whose strength is between predetermined limits, to secure the location of its moving part in a position to prevent the operation of said safety device, but not to secure the location of said moving part in said position if the strength of said current is above or below said predetermined limits.

4. In a train-controlling system, electrical track-affecting means carried by a vehicle, electrical track-affecting means carried by another vehicle coupled to the aforesaid vehicle, an electromagnetic device located on the last mentioned vehicle and adapted when energized to switch out and so render said electrical track-affecting means on the last mentioned vehicle inoperative, an electrical circuit located partly on each of said vehicles and including said electromagnetic device, and means for breaking and closing said circuit.

5. In a train-controlling system comprising over-lapping blocks, at each end of each of said blocks a series of track contacts including a track contact adapted to actuate a safety-device on a train, and for each block two electromagnetic switching instruments electrically connected with each other and pertaining respectively to the two series of track contacts at the ends of the block, and electrical connections adapted to enable a train by making contact with the inmost track contact of a said series, to complete an electrical circuit through the said instrument pertaining to the last mentioned series and thereby to render operative the safety-device actuating track contact of the last mentioned series, by making contact with the inmost but one track contact of the last mentioned series to complete another electrical circuit through the last mentioned instrument and thereby both to render inoperative the last mentioned safety-device actuating track contact and also to connect the outmost but one and the outmost track contacts of the last mentioned series with said instrument pertaining to the other said series and thereby to enable a train by contact with said outmost but one track contact to complete an electrical circuit and thereby to render operative said safety-device actuating track contact pertaining to said other series and by contact with said outmost track contact to complete another electrical circuit and thereby to render inoperative the last mentioned safety-device actuating track contact.

[Claims 6 to 11 not printed in the Gazette.]

1,191,382. FILLING-MACHINE. HERBERT AVERAY-JONES, Fownhope, England, assignor of one-half to The Asiatic Petroleum Company, Limited, London, England. Filed June 3, 1915. Serial No. 31,968. (Cl. 226—18.)



1. In a machine for filling vessels, a chamber divided into four compartments, two of said compartments forming float chambers and the other two forming chute chambers, a float, one part of said float being in one float chamber and the other part in the other float chamber, a chute adapted to be moved by the float to deliver liquid alternately into one or other of the chute chambers, a measuring chamber in communication with each chute chamber, a siphon in each measuring chamber, and means for starting the siphons.

2. In a machine for filling vessels, a chamber divided into four compartments, two of said compartments forming float chambers and the other two forming chute chambers, a float, one part of said float being in one float chamber and the other part in the other float chamber, a chute adapted to be moved by the float to deliver liquid alternately into one or other of the chute chambers, two series of measuring chambers each of which is in communication with a chute chamber, a siphon in each measuring chamber, and means for starting all the siphons of one series of measuring chambers simultaneously.

3. In a machine for filling vessels, a chamber divided into four compartments, two of said compartments forming float chambers and the other two forming chute chambers, a float, one part of said float being in one float chamber and the other part in the other float chamber, a chute adapted to be moved by the float to deliver liquid alternately into one or other of the chute chambers, two distributing pipes each of which is in communication with a chute chamber, two series of measuring chambers each of which is in communication with a distributing pipe, a siphon in each measuring chamber, and means for starting all the siphons of one series of measuring chambers simultaneously.

4. In a machine for filling vessels, a chamber divided into four compartments, two of said compartments forming float chambers and the other two forming chute chambers, a float, one part of said float being in one float chamber and the other part in the other float chamber, a chute adapted to be moved by said float to deliver to the two chute chambers alternately, two measuring chambers one of which is connected to one chute chamber and the other to the other, a tipping bucket in each chute chamber, means whereby the bucket in that chute chamber leading to the measuring chamber which is filled is upset when the chute is moved to the other chute chamber and a siphon in each measuring chamber adapted to be started by the rise of liquid due to the upsetting of the bucket.

5. In a machine for filling vessels, a chamber divided into four compartments, two of said compartments forming float chambers and the other two forming chute chambers, a float, one part of said float being in one float chamber and the other part in the other float chamber, a chute adapted to be moved by said float to deliver to the two chute chambers alternately, two distributing pipes each of which is in communication with a chute chamber, two series of measuring chambers each of which is in communication with a distributing pipe, a siphon in each measuring chamber, a tipping bucket in each chute chamber, means whereby the bucket in that chute chamber leading to the series of filled measuring chambers is upset when the chute is moved to the other chute chamber thereby starting the siphons in the filled measuring chambers.

1,191,383. EXPANDED GRAPHITE. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Condensite Company of America, Bloomfield, N. J., a Corporation of New Jersey. Original application filed May 29, 1913, Serial No. 770,689. Divided and this application filed Dec. 4, 1914. Serial No. 875,431. (Cl. 87—9.)

1. As a new composition of matter, an improved flake graphite in which the attached laminæ of which each flake is composed are opened up or partly separated, the composition being of greatly and permanently increased volume and decreased specific gravity in comparison with natural untreated flake graphite, substantially as set forth.

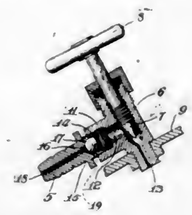
2. As a new composition of matter, an improved flake graphite in which the attached laminæ of which each flake is composed are permanently opened up or partly separated, with films of gas mechanically entrapped between the laminæ, substantially as set forth.

3. The process of treating flake graphite for the purpose described, which consists in thoroughly subjecting the particles thereof to the effect of an oxidizing agent such that on subsequent application of heat the particles will remain self-coherent and be greatly and permanently distended, and in then heating the particles so treated, substantially as set forth.

4. The process of treating flake graphite for the purpose described, which consists in converting by an oxidizing agent a part only of the graphite into graphitic acid in the form of films on the laminæ of the individual flakes of graphite, and in subsequently heating the flakes of graphite so treated to cause the graphitic acid to dissociate and the laminæ to separate but remain attached, with the consequent considerable permanent increase in bulk of the graphite, substantially as set forth.

5. The process of treating flake graphite for the purpose described, which consists in obtaining particles of a size too great to pass through a 200 mesh screen, then in thoroughly covering the particles with an oxidizing agent such that on application of heat the particles will be greatly distended, by the opening up of the laminæ thereof like the leaves of a partly opened book, and in then heating the particles so treated to redness, substantially as set forth.

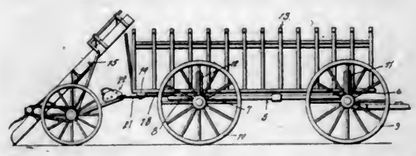
1,191,384. VALVE FOR PLUMBERS' FURNACES. ALBERT E. BACON, Germantown, Pa., assignor to Haines, Jones & Cadbury Incorporated, a Corporation of Pennsylvania. Filed Feb. 25, 1913. Serial No. 750,466. (Cl. 137—4.)



1. A valve comprising a channeled body having a main extension, a lug projecting from and substantially at right angles with the main extension, said lug having a channel communicating with the main channel and provided with a threaded open end, a channeled nozzle having an exteriorly threaded end for disengageable connection with the lug, said threaded end provided with an enlarged semi-spherical opening communicating with the nozzle channel and forming a ball receiving chamber, and a ball in said chamber normally maintained in channel closing position by gravity.

2. A valve comprising a channeled body having a main extension, a lug projecting from and substantially at right angles with the main extension, said lug having a channel communicating with the main channel, a channeled nozzle connected with said lug, a valve seat, a ball normally seated therein for controlling communication between the channels in the nozzle and the lug, and a radially extending channel in the threaded end of the nozzle as and for the purpose specified.

1,191,385. COUPLING APPARATUS FOR HAY-RACKS AND HAY-LOADERS. JAMES D. BAIRD, Red Oak, Iowa. Filed Oct. 19, 1915. Serial No. 56,722. (Cl. 21—75.)



1. In combination, the reach of a wagon, a member secured to the rear end of a hay rack arranged upon the wagon, a substantially U-shaped forward coupling member having its arms diverging rearwardly, means connecting the forward end of the coupling member with the rear end of the reach, a rear second substantially U-shaped coupling member having its arms diverging forwardly, common means securing the ends of the substantially U-shaped coupling members with the member secured to the rear end of the hay rack, and latch mechanism adapted to be attached to a hay loader and detachably engaging with the rear substantially U-shaped coupling member.

2. In combination, a structure adapted to be connected with a hay loader, a substantially flat plate secured to the forward end of the structure and having its forward end bent downwardly to form a curved lip and provided rearwardly of and near this curved lip with a longitudinal opening, an upstanding plate mounted upon the substantially flat plate, a vertically swinging latch pivotally connected with the upstanding plate and provided at its forward end with a notch and spaced tongues arranged upon opposite sides of the notch with the rear tongue being formed longer and projecting into the longitudinal opening for operation therein, a dog pivoted near the latch to

detachably engage therewith, a spring to move the dog in one direction, and a substantially U-shaped coupling member adapted to coöperate with the latch.

1,191,386. APPARATUS FOR USE IN AND IN CONNECTION WITH ELECTROLYTIC PROCESSES. ALBERT ERNEST BATTLE, Aldgate, London, England. Filed May 24, 1915. Serial No. 30,227. (Cl. 204—5.)



1. In electrolytic apparatus for treating disconnected sheet members, a vat adapted to contain liquid and having an elongated opening, self-closing flaps covering said opening, feed-rollers without and within the vat, means for keeping the feed-rollers in driving contact with the sheet members, and means for driving the feed-rollers.

2. In electrolytic apparatus for treating disconnected sheet members, a vat adapted to contain liquid and having an elongated opening at each end, self-closing flaps covering said openings, feed rollers without and within the vat, means for keeping the feed-rollers in driving contact with the sheet members, and means for driving the feed-rollers.

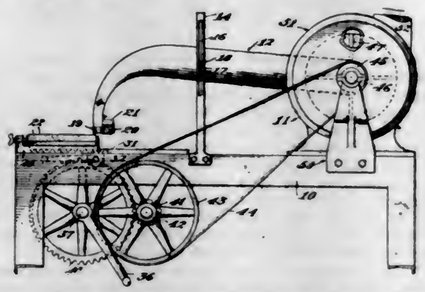
3. In apparatus for use in handling sheets in and in connection with electrolytic and similar processes, a vat adapted to contain solution and having an elongated opening at each end, and flaps and rollers closing said openings, said flaps being adapted to press upon said rollers.

4. In apparatus for use in handling sheets in and in connection with electrolytic and similar processes, a vat adapted to contain solution and having an elongated opening at each end, and rollers closing said openings.

5. In apparatus for use in handling sheets in and in connection with electrolytic and similar processes, a vat adapted to contain solution and having an elongated opening through which the sheets can pass, flaps covering said opening, one of said flaps having an extended portion b^4 for shielding one side of said sheets from electrolytic or chemical action while they are in motion through the vat.

[Claims 6 to 10 not printed in the Gazette.]

1,191,387. VACUUM CHALK-ERASER CLEANER. OTTO C. BAUMGART, Atascadero, Cal. Filed Aug. 16, 1915. Serial No. 45,733. (Cl. 15—25.)



1. A chalk eraser cleaner, comprising a rotary suction fan, a housing therefor, means for revolving said fan, a suction conduit pivotally connected to the housing, means for holding the conduit in various positions, a reciprocatable carriage, eraser holding means thereon, a crank, and means actuated by said crank for reciprocating the carriage to move erasers thereon back and forth beneath the intake end of the conduit.

2. A chalk eraser cleaner comprising a supporting frame, a suction fan mounted on said frame, a suction conduit pivoted upon the housing of said fan, a carriage for the erasers reciprocatively mounted on said frame, means for reciprocating said carriage to move the erasers under the suction end of said conduit, standards on said frame between which said conduit is adapted to swing on its pivot, and means for securing said conduit to said standards in various positions.

1,191,388. PROCESS OF MAKING A LIQUID FOOD. HERMAN C. BECKMAN and GEORGE E. DYCK, Chicago, Ill., assignors to National Synthetic Products Co., Chicago, Ill., a Corporation of New Jersey. Substitution and continuation of application Serial No. 631,791, filed June 7, 1911. (Abandoned.) This application filed Sept. 27, 1912. Serial No. 722,732. (Cl. 99—11.)

1. The process of making a liquid food product which consists in combining full milk, oleo oil and sucrate of lime, and pasteurizing and emsulsifying the same.

2. The process of making a liquid food product which consists in combining full milk, oleo oil and sucrate of lime, and pasteurizing and emulsifying the same and adding flavoring and coloring ingredients.

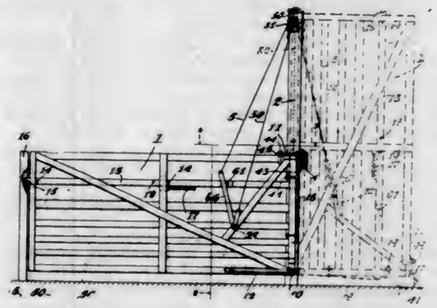
3. The process of preparing a liquid food product which consists in combining an edible oleaginous ingredient, a milk ingredient, lecithin, and a fixing ingredient, and pasteurizing and emulsifying the same.

4. In a process of making artificial cream, the steps of preparing a mixture of fat, lecithin, and a milk base, and then pasteurizing and emulsifying the same.

5. The process of making artificial cream which consists in preparing a mixture of fat, lecithin, a milk base, then pasteurizing and emulsifying the same, and adding sucrate of lime.

[Claims 6 to 8 not printed in the Gazette.]

1,191,389. GATE. JOHN P. BEIL, King county, Wash. Filed Apr. 7, 1915. Serial No. 19,649. (Cl. 39—44.)



1. In combination, a gate, an operating means therefor employing a cord or like strain conductor, two elevated supports for said strain conductor near the gate, but separated from each other, the end of said strain conductor distant from the gate being anchored, a second strain conductor connected to the first named between its said supports, and a guide for said second strain conductor located laterally from its direction of extent, and other guides for said last named strain conductor leading it to a distant point.

2. In combination, a gate, an operating means therefor employing a cord or like strain conductor, two elevated supports for said strain conductor near the gate but separated from each other, the end of said strain conductor distant from the gate being anchored, a second strain conductor connected to the first named between its said supports, and a guide for said second strain conductor located laterally from its direction of extent, other guides for said last named strain conductor leading it to a distant point.

and a tensioning weight connected with the end of said last named strain conductor adjacent the gate to normally relieve the first named strain conductor of the pull thereof.

3. In combination, a gate, mounted upon a transverse pivot axis located at an end, a reciprocating latch bar, a spring normally holding the latch bar in locking position, a latch throwing lever pivoted upon the gate, two cords, one connected with the swinging end of said lever and the other with the gate at the pivot of said lever, guides for said cords located in elevated position above the pivoted end of the gate, a counterweight secured to the end of the cord which is secured directly to the gate, and a stop member connected with the latch bar and engaging said pivoted lever to deflect it toward the swinging end of the gate when the gate is in closed position, an anchorage connection for the other end of the cord which is connected with the latch-throwing lever, an operating cord connected with the last mentioned cord between its anchorage and its elevated guide, a guide for the operating cord located laterally from the latch throwing cord, and guides for the operating cord leading it to a distance.

4. A gate having a pivot extending horizontal transversely of a lower corner and a counterweight consisting of a hollow case secured at the upper corner of the gate which is over the pivot when the gate is closed; said case having flanges extending over the top and end surfaces of the gate by which it is secured in place, the case serving as a strengthening member for the corner of the gate and a striking member, as the gate reaches its opened position.

5. In combination, a gate mounted upon a transverse axis located at one end thereof, a post alongside the gate adjacent its pivoted end, a line guide upon said post in an elevated position, an operating cord passing over said guide and extending downward to said gate, a reciprocating latch bar, a spring normally holding said latch bar in locking position, a latch-operating lever pivoted on the gate, said operating cord being secured to the operating lever, and a pin on said latch bar engaging said lever and deflecting it away from the pivot end of the gate when the gate is in closed position, said lever swinging away from the pin, and said lever and cord being in a straight line when the gate is in open position, a second elevated guide upon said post, a cord passing over said guide and being secured to the pivot of said operating lever and lying in a plane outside that of the first cord, and a counterweight secured to the other end of said cord.

1,191,390. PROCESS FOR MAKING CONDENSATION PRODUCTS FROM PHENOLS AND FORMALDEHYDE. LUDWIG BEREND, Amöneburg-on-the-Rhine, Germany. Filed Dec. 8, 1913. Serial No. 805,865. (Cl. 106—22.)

1. The process of making phenol-formaldehyde resins soluble in oil which consists in combining in a molten state the phenol-formaldehyde resins with natural resins until the mass thus obtained has become soluble in fatty oils and oil of turpentine.

2. The process of making phenol-formaldehyde resins easily soluble in oil consisting in treating the condensation products of a phenol with formaldehyde and with agents which are soluble both in the produced phenol-formaldehyde-resins and in fatty oils until the mass thus obtained has become fairly soluble in fatty oils.

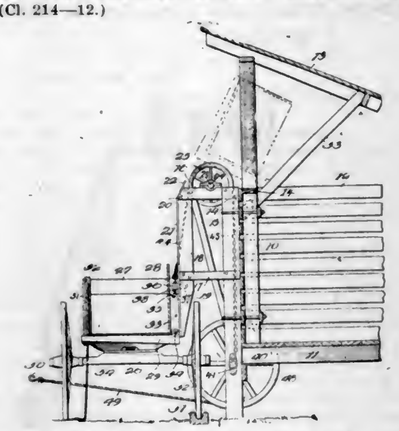
3. The process of making phenol-formaldehyde resins soluble in oil consisting in the phenol-formaldehyde resins being molten together with natural resins during so long a period that the mass obtained thereby will easily dissolve in fatty oils.

4. The process of producing phenol-formaldehyde resins consisting in condensing phenol with a formaldehyde substance and melting the thus obtained condensation product with a natural resin in such a quantity and during such a period that the mass obtained thereby will easily dissolve in fatty oils.

5. The process of making phenol-formaldehyde resins soluble in oil consisting in the phenol-formaldehyde resins being fused together with fossil natural resins.

[Claims 6 to 8 not printed in the Gazette.]

1,191,391. LOAD-DUMPER. WILLIAM F. BERGER, Harlan, Iowa. Filed Jan. 15, 1916. Serial No. 72,317. (Cl. 214—12.)



1. In an apparatus of the class described, vertical guides, a cable pulley extending above the upper line of said guides, a supporting device movable over said guides and over said pulley, a carrier device movably engaging said guides and coupled to said supporting device, a cable connected to said carrier device and bearing over said pulley, and means for applying strain to said cable, to cause said supporting device to travel over said guides and be overturned over said pulley.

2. In an apparatus of the class described, vertical guides spaced apart and including outer and inner bearing faces, a cable pulley extending above the upper line of said guides, a supporting device movable over the outer faces of said guides and over said pulley, a carrier device movably engaging the inner faces of said guides and coupled to said supporting device, a cable connected to said carrier device and bearing over said pulley, and means for applying strain to said cable, to cause said supporting device to travel over said guides and be overturned over said pulley.

3. In an apparatus of the class described, vertical guides adapted to be disposed adjacent to a receptacle, a cable pulley extending above the upper line of said guides, a supporting device movably engaging said guides and adapted to be overturned over said pulley when the supporting device is in its upper position, and a cable operating over said pulley and arranged to elevate said supporting device.

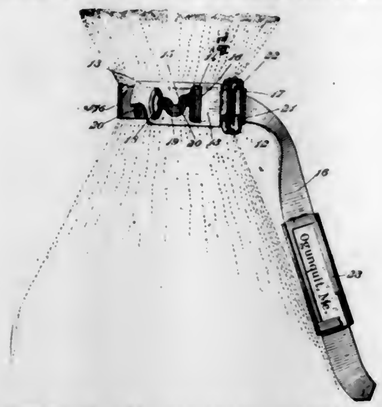
4. In an apparatus of the class described, vertical guides adapted to be disposed adjacent to a receptacle, a cable pulley above the upper line of said receptacle, a supporting device movably engaging said guides and having a recess in which the periphery of said pulley is received when the supporting device is in its upper position, a cable operating over said pulley and arranged to elevate said supporting device.

5. In an apparatus of the class described, vertical guides, a cable pulley extending above the upper line of said guides, a supporting device including a horizontal portion and a vertical portion, means carried by said horizontal portion of the supporting device for holding a container on the supporting device, a cable connected to the vertical portion of said supporting device and engaging over said pulley, and means for applying strain to said cable, to cause said supporting device to travel over said guides and be overturned over said pulley.

1,191,392. BAG OR PACKAGE TIE. FRED RAYMOND BREWSTER, Ogunquit, Me. Filed July 13, 1915. Serial No. 39,612. (Cl. 24—30.5.)

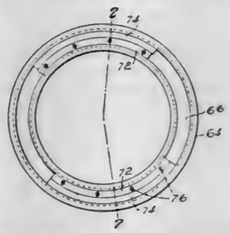
A tie or fastener consisting of a buckle, a hasp pivotally attached to one end of said buckle and provided with

a transverse slot and a crooked or serpentine slot communicating therewith, a strap attached to the other end of said buckle, a ring attached to said strap and adapted to



be passed through said transverse slot in said hasp, said ring having a neck adapted to be moved in the said crooked or serpentine slot in said hasp.

1,191,393. BALANCING-RING. CARL O. BERGSTROM, Boston, Mass., assignor to B. F. Sturtevant Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 12, 1912. Serial No. 714,618. (Cl. 74—6.)



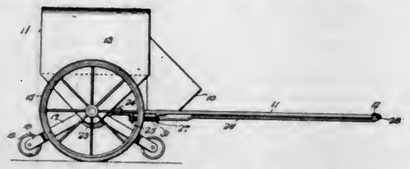
1. A balancing ring having, in combination, a metal ring having an undercut groove, arcuate balancing pieces fitted side by side to completely fill a section of the groove, and means for clamping the balancing pieces in the groove, substantially as described.

2. A balancing ring having, in combination, a metal ring having an undercut groove of substantially trapezoidal cross section, an arcuate balancing piece of substantially trapezoidal cross section adapted to be received in the groove, a second arcuate balancing piece of substantially rhomboidal cross section arranged to be fitted beside the first balancing piece to completely fill a section of the groove, substantially as described.

3. A balancing ring having, in combination, a metal ring having in its side an undercut groove of substantially trapezoidal cross section, an arcuate balancing piece of substantially trapezoidal cross section adapted to be received in the groove, a second arcuate balancing piece of substantially rhomboidal cross section arranged to be fitted beside the first balancing piece to completely fill a section of the groove, and means for wedging the two balancing pieces against each other and against the sides of the groove to clamp them in place, substantially as described.

4. A balancing ring having, in combination, a metal ring having in its side an under-cut groove of substantially trapezoidal cross section, an arcuate balancing piece of substantially trapezoidal cross section adapted to be received in the groove, a second arcuate balancing piece of substantially rhomboidal cross section arranged to be fitted beside the first balancing piece to completely fill a section of the groove and retain the first balancing piece in place, and a clamping screw in the first balancing piece arranged to be turned against the bottom of the groove to force the first balancing piece outward and wedge the two balancing pieces in place, substantially as described.

1,191,394. BABY-CART. JOSEPH E. BROWN and JASPER N. CURLEE, Argenta, Ark.; said Curlee assignor of one-half of the entire right to Hattie Rosberry, Memphis, Tenn. Filed Oct. 12, 1915. Serial No. 55,476. (Cl. 21—12.)



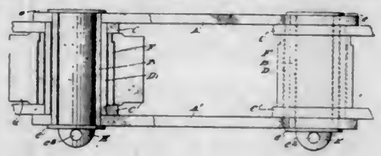
1. In a cart, the combination of a body, side members on the said body, an axle journaled in the side members, wheels journaled on the axle, a pair of three legged members rotatably mounted upon the axle and movable between the side members and the body of the cart, and rollers journaled in the legs of the members and protruded slightly beyond the peripheries of the wheels.

2. In a cart, the combination of a body, side members on the said body, an axle journaled in the side members, wheels journaled on the axle, a pair of three legged members rotatably mounted upon the axle and movable between the side members and the body of the cart, rollers journaled in the legs of the members and protruded slightly beyond the peripheries of the wheels, and means for braking the rotation of the three legged members.

3. In a cart, the combination of a body, side members on the said body, an axle journaled in the side members, wheels journaled on the axle, a pair of three legged members rotatably mounted upon the axle and movable between the side members and the body of the cart, rollers journaled in the legs of the members and protruded slightly beyond the peripheries of the wheels, means for braking the rotation of the three legged members, and coöperative means for locking the members against rotation.

4. In a cart, the combination of a body, side members on the said body, an axle journaled in the side members, wheels journaled on the axle, a pair of three legged members rotatably mounted upon the axle and movable between the side members and the body of the cart, rollers journaled in the legs of the members and protruded slightly beyond the peripheries of the wheels, means for braking the rotation of the three legged members, coöperative means for locking the members against rotation, and means for actuating the braking and locking means.

1,191,395. LINK BELT. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed July 8, 1910. Serial No. 570,946. (Cl. 74—32.)

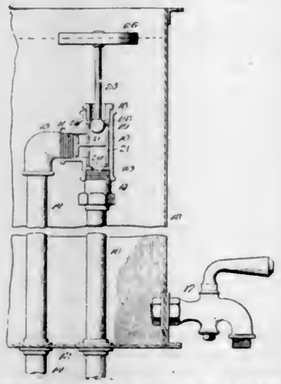


1. A link belt comprising inner and outer overlapping links, tubes having their opposite ends removably inserted in the outer links, said ends being formed to prevent rotation of the tubes relative to said outer links, and to space said outer links apart, sleeves mounted to rotate on said tubes, the opposite ends of said sleeves being removably and non-rotatably inserted in said inner links, and a member extending loosely through each tube and projecting from the ends thereof, the opposite ends of said members being provided with retaining means for preventing displacement of the outer links from the ends of said tubes, cylindric elements loosely mounted on said sleeves, and rollers on said elements, rotating therewith upon said sleeves.

2. A link belt comprising inner and outer over-lapping links, tubes having their opposite ends removably inserted in the outer links, said ends being formed to prevent rotation of the tubes relative to said outer links and to space said outer links apart, sleeves mounted to rotate on said tubes, the opposite ends of said sleeves being removably and non-rotatably inserted in said inner links, and a member extending loosely through each tube and projecting from the ends thereof, the opposite ends of said members being provided with retaining means for preventing displacement of the outer links from the ends of said tubes, cylindric elements loosely mounted on said sleeves, and rollers on said elements, rotating therewith upon said sleeves, said tubes and sleeves being flattened at opposite sides of both ends thereof, and said links having round openings flattened at opposite sides of each opening.

3. A link belt comprising inner and outer over-lapping links, tubes having their opposite ends removably inserted in the outer links, said ends being formed to prevent rotation of the tubes relative to said outer links and to space said outer links apart, sleeves mounted to rotate on said tubes, the opposite ends of said sleeves being removably and non-rotatably inserted in said inner links, and a member extending loosely through each tube and projecting from the ends thereof, the opposite ends of said members being provided with retaining means for preventing displacement of the outer links from the ends of said tubes, cylindric elements loosely mounted on said sleeves, and rollers on said elements, rotating therewith upon said sleeves, said elements being flattened at opposite sides of one end only thereof, and said rollers having round bores restricted at one end only.

1,191,396. TRANSPOSABLE VALVE. CHARLES H. CALTON, Bringhurst, Ind. Filed Dec. 7, 1915. Serial No. 65,544. (Cl. 137—104.)



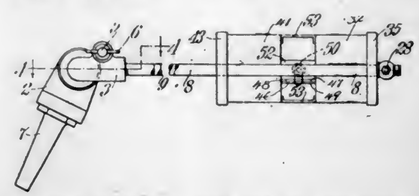
1. In a device of the class described, a casing having an intermediate branch extending at right angles therefrom, annular valve seats adapted to be interchangeably disposed within said casing and its branch, a float valve operative alternately upon said valve seats and having a stem adapted to project through the valve seat which is nearer the float, said float being carried by said stem.

2. In a device of the class described, a casing having an intermediate branch extending at right angles therefrom, sleeves adapted to be interchangeably engaged in the ends of said casing or its branch, annular valve seats supported from outward displacement by said sleeves, means for supporting said valve seats from inward displacement, a float valve operative alternately upon said valve seats and having a stem adapted to project through the valve seat and sleeve which are nearest the float, the float being carried by said stem.

3. In a device of the class described, a casing, sleeves adapted to be interchangeably engaged in the ends of said casing, annular valve seats supported from outward displacement by said sleeves, split resilient rings within said casing and engaging said valve seats and holding them from inward displacement, a float valve operative alternately upon said valve seats and having a stem adapted to project through the seat and sleeve which are nearest the float, said float being carried by said stem.

4. In a device of the class described, a casing, sleeves adapted to be interchangeably engaged in the ends of said casing, annular valve seats supported from outward displacement by said sleeves, split resilient rings within said casing and engaging said valve seats and holding them from inward displacement, a stay connecting said rings and holding them in spaced relation, a float valve operative alternately upon said valve seats and having a stem adapted to project through the seat and sleeve which are nearest the float, said float being carried by said stem.

1,191,397. TORCH APPARATUS. HENRY CAVE, Springfield, Mass. Filed Oct. 16, 1914. Serial No. 866,946. (Cl. 158—27.4.)



1. A torch apparatus, comprising, in combination, a torch body, a mixing chamber therein, a nozzle communicating with said chamber, oppositely disposed inlets to said chamber, a container for oxygen, a container for a combustible gas, connections between said containers and said inlets, valves in each of said containers mounted in opposed relation and balanced one against the other, said valves adapted to control the admission of gas to said containers, and means to vary the pressure in said containers equally and simultaneously.

2. A torch, comprising, in combination, a body portion, a mixing chamber formed therein, and a nozzle portion formed with a passageway therein in communication with said chamber, said body portion having an inlet for oxygen and an inlet for a combustible gas formed therein, said inlets arranged to enter said chamber from directly opposite points whereby the gases issuing from said passages impinge on each other and become thoroughly mixed in said chamber.

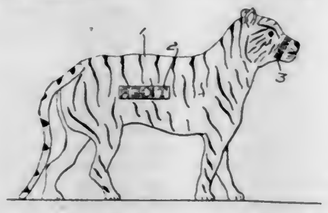
3. A torch, comprising, a body portion formed with a mixing chamber and an inlet thereto on either side thereof, said inlets being directly opposed one to the other, a nozzle removably mounted in said body having a passage therein adapted to communicate with said chamber, elbows on either side of said body, and means to secure the same thereto, said elbows formed with passages therein, adapted to register with said inlets.

1,191,398. EDUCATIONAL TOY. FRANK W. CHAPMAN, Minnesota Lake, Minn. Filed Feb. 9, 1916. Serial No. 77,184. (Cl. 46—40.)

1. An educational toy comprising an object, and type on the object, which will print a word that is the name of the object itself.

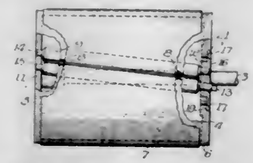
2. An educational toy comprising an object, type on the object, which will print a word that is the name of

the object itself, and other type on a specific part of the object, which will print a word that is the name of the specific part itself.



3. An educational toy comprising an object formed into the relief shape of the object itself, and type on the object, which will print a word that is the name of the object itself.

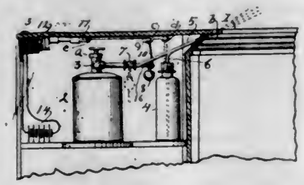
1,191,399. SURFACING-ROLL. ARTHUR E. CHAPPELL, Chicago, Ill. Original application filed Nov. 12, 1915, Serial No. 61,007. Divided and this application filed Feb. 4, 1916. Serial No. 76,099. (Cl. 51—1.)



1. A surfacing roll comprising a hollow cylinder having end walls formed integral with the circumferential walls, one of said end walls being provided with bearings adapted to receive the ends of a pair of clamping members and the opposite end wall being provided with an opening through which said clamping members may be inserted into said cylinder, and a block removably closing said opening and provided with bearings adapted to receive the opposite ends of said members, said members being removable from the cylinder through said opening upon removal of said block.

2. A surfacing roll comprising permanently connected end and side walls, a clamping device disposed within and extending longitudinally of said cylinder, one of said end walls being provided with an opening through which said clamping device may be introduced into and withdrawn from said cylinder, and a removable member normally closing said opening, said member and the opposite end wall of the cylinder being constructed to normally support said clamping device in operative position.

1,191,400. BURGLAR-GUARD. EARL O. CILLEY, Conklin, and ITHIEL J. CILLEY, Grand Rapids, Mich. Filed Apr. 13, 1914. Serial No. 831,670. (Cl. 137—67.)

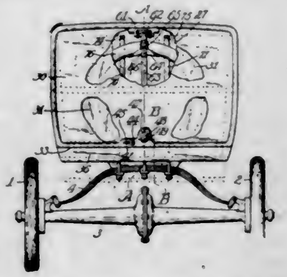


1. In combination with a counter having small openings at given points through the front, a strongly charged compression chamber back of the counter, a conductor pipe leading from the compression chamber, discharge pipes leading from the conductor pipe to the said small openings, tanks containing volatile liquid, pipes leading from the tanks into the discharge pipes, respectively, valves in the discharge pipes, and means for actuating said valves to open and close the discharge pipes, as and for the purpose set forth.

2. In combination with a counter having openings through the front near the top at given points, a strongly charged compression chamber back of the counter, a conductor pipe leading from the compression chamber, tanks located back of the counter adjacent to the said openings, discharge pipes leading from the conductor pipe to said openings, valves in said discharge pipes, a pipe leading from each tank into its respective discharge pipe, and electromagnets and weights arranged to operate the valves as desired.

3. In a combination with a counter structure having openings at given points, a strongly charged compression chamber back of the structure, a conductor pipe leading from the compression chamber, tanks located back of the structure, and containing volatile liquid, discharge pipes leading from the conductor pipe to the openings in the structure, pipes leading from the tanks into said discharge pipes, and means for holding the pressure in the compression chamber or discharging it through the pipes at pleasure.

1,191,401. TIRE-PROTECTING AUTOMOBILE-BODY. JOHN Q. CLARKE, Crawfordsville, Ind. Filed Jan. 10, 1914. Serial No. 811,348. (Cl. 21—7.)



1. An automobile body provided with a tire-receiving compartment, and an elastic guide bar secured at one end to the forward wall and extending upward and also toward the opposite rearward wall of the compartment.

2. An automobile body provided with a tire-receiving compartment, the rear wall of the compartment being plane-faced to form a supporting guide, and a plurality of elastic guide bars secured at one end to the lower portion of the forward wall and extending upward and also toward the rear wall of the compartment.

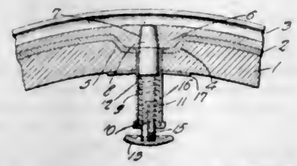
3. An automobile body provided with a tire-receiving compartment, the lower portion of the compartment being open and provided with a movable closure, the closure being constructed for bodily supporting a tire in the compartment, the rear wall of the compartment being plane-faced for guiding and laterally supporting the tire, and an elastic guide bar supported in the compartment and constructed for holding the tire in contact wtih the rear wall.

4. An automobile body provided with a tire-receiving compartment having tire-hoisting means supported in the upper portion thereof, the opposite forward and rearward walls of the compartment leaning rearwardly, the lower portion of the compartment being open, a door hinged to the body for closing the opening, and two elastic guide bars secured at one end to the lower portion of the front wall and extending upward and also rearward toward the upper portion of the rear wall of the compartment on opposite sides respectively of the tire-hoisting means.

5. An automobile body provided with a tire-receiving compartment having a pulley in the upper portion thereof, the lower portion of the compartment being open, a door hinged to the body for closing the opening, and a strap extending over the pulley and provided with a tire-supporter.

[Claims 6 to 10 not printed in the Gazette.]

1,191,402. DISMOUNTABLE RIM. ALBERT J. GLAU, San Ardo, Cal. Filed June 7, 1915. Serial No. 32,783. (Cl. 152—21.)



1. In a dismountable rim having an annular grooved tire-engaging member, a detachable grooved rim member, a metal band disposed between the tire-engaging member and the felly, and a felly, a plurality of radially disposed plunger casings, caps for the casings, said caps having a projection, a plunger mounted in each of the casings, said plunger having a substantially L-shaped groove adapted to receive the projection of the cap, a spring normally pressing the plunger into engagement with the tire-engaging member, and orificed portions for the plunger, whereby the plungers may be quickly secured either in engaged or nonengaged positions relative to the rim.

2. In a dismountable rim an inner tire-engaging member having a series of relatively large bosses spaced at a substantial distance apart, each having a tapered opening, a felly, a metal band disposed between the inner member and the felly and having substantially depressed portions over the bosses, tapered plungers engaging in the bosses, springs bearing on the plunger members, grooved means in the plungers for locking same out of engagement with the bosses to permit of quick dismounting of the rim, and a handle secured to the plunger for withdrawing same from engagement with its boss.

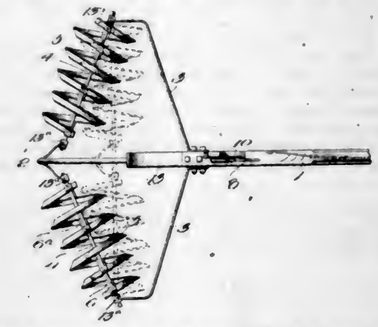
1,191,403. LIVE-ROLLER LUMBER-CONVEYER. WILLIAM D. CROCKER, Buhl, Ala. Filed Mar. 28, 1914. Serial No. 827,844. (Cl. 193—1.)



In a conveyer of the class described, a support, a series of shafts arranged in spaced relation along said support, a pair of independent conveyer rollers on each shaft, said rollers being substantially conical with their inner ends opposed and provided with recesses, sprocket wheels on the shafts between the rollers and having the ends of their hubs engaged in the recesses and with the adjacent ends of the rollers to limit the movement of the rollers toward each other, and a universally flexible chain engaged with the sprockets.

1,191,404. SPIRAL HARROW. ARTHUR J. CUMMER, Dubuque, Iowa, assignor of one-third to Charles Matz and one-third to Michael Matz, Dubuque, Iowa. Filed June 14, 1915. Serial No. 34,045. (Cl. 55—152.)

An implement of the character described comprising a tongue, side members secured rigidly thereto and diverging outwardly and rearwardly therefrom, bearings pivoted in the rear ends of said side members to swing in horizontal planes, a central member supported from the tongue and disposed in rear thereof and spaced therefrom, bearings pivoted in said central member for movement in a horizontal plane, shafts each journaled at its inner end in a bearing in said central member and at its outer end in a bearing in a side member, supporting bars radiating from said shafts, an earth-treating device connected with each shaft by the said supporting bars, each of said earth-treating devices consisting of a single continuous spirally wound ribbon encircling and spaced from the shaft and



having its ends secured to the supporting bars immediately adjacent the ends of the shaft, and means on the tongue for shifting the central member forwardly or rearwardly in the longitudinal plane of the tongue.

1,191,405. COMBINATION FIRE-ESCAPE AND COSTUMER. PETER E. DAUBENSPECK, Butler, Pa. Filed Mar. 26, 1915. Serial No. 17,184. (Cl. 227—9.)



1. In a combined fire escape and costumer, the combination of two upright sections hinged together at their adjacent ends and adapted to fold one on the other to form a costumer post and when extended adapted to form a ladder upright, post supporting legs for the free ends of the sections with the legs of the section that is uppermost when the parts are extended adapted to form hangers for the ladder upright, and step-forming devices carried by the sections.

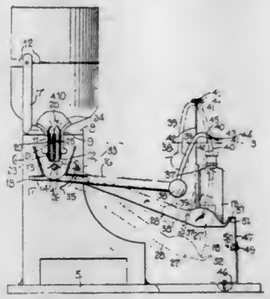
2. In a combined fire escape and costumer, the combination of two upright sections hinged together and adapted to fold one on the other to form a costumer post, foot members for the free extremities of the sections, a clip adapted to removably embrace the sections and hold them in folded relation, a chain securing the clip to one of the sections with the clip comprising a suspending means for the parts when extended to form a ladder, and step-forming projections on the sections.

3. A costumer comprising a post longitudinally divided and the sections pivoted together at the top of said post, supporting feet on each member, those on one member being so formed that they serve as hooks to suspend the

post in inverted position and each member having a series of arms regularly spaced and projecting from the opposite sides of the post and so formed that they may serve as foot supports when the members of the post are swung apart and into line so that in this arrangement the device may serve as a single-stile scaling ladder.

4. A costumer comprising an upright post provided with supporting base and clothes arms, said post composed of longitudinal sections arranged side by side to form the costumer post and adapted to be extended into longitudinal alinement to form the stile of a single stile scaling ladder, said base constructed and arranged to provide means for suspending said stile from a window sill and said arms to provide said stile with foot supports or steps.

1,191,406. BOTTLE-FILLING APPARATUS. FLOYD B. DAUGHERTY, Venice, Fla. Filed June 16, 1915. Serial No. 34,474. (Cl. 226—24.)



1. The combination of an oscillatory fluid receiving hopper, a conduit connected to said hopper, fluid supply means having its discharge end disposed within said hopper, a receptacle support also mounted for swinging movement, filling tubes connected to the conduit to supply the liquid to the several receptacles on the support, said conduit and the support being adapted for swinging movement in unison to permit the liquid to flow through the conduit and the filling tubes into the receptacles, and means for returning the support and conduit to their normal positions.

2. The combination of an oscillatory liquid receiving hopper, a conduit connected thereto, liquid supply means having its discharge and disposed within said hopper, a receptacle support also mounted for swinging movement, a spring yieldingly holding said support in its normal position, filling tubes connected to the conduit to supply the liquid to the several receptacles, said support and the conduit being adapted for swinging movement in unison to cause the flow of the liquid from the hopper through said filling tubes into the receptacles, and an adjustable stop to limit the return movement of the support under the action of said spring whereby the several receptacles are uniformly filled to a desired level.

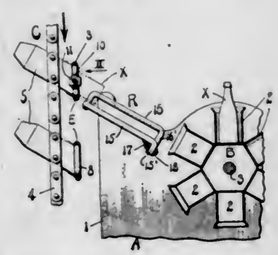
3. The combination of an oscillatory hopper, a conduit connected to said hopper, fluid supply means having its discharge end disposed within said hopper, a receptacle support mounted for swinging movement, a spring yieldingly holding the support in a normal position, filling tubes connected to the conduit to supply the liquid to the several receptacles, said support and the conduit being adapted for unitary swinging movement in one direction to cause the liquid to flow from the hopper through the conduit and filling tubes into the receptacles, and adjustable stop devices for engagement by the support to limit the return movement thereof under the action of said spring whereby the several receptacles are uniformly filled to a desired level.

4. The combination of an oscillatory hopper, a conduit connected to said hopper, fluid supply means having its discharge end disposed within said hopper, a receptacle support mounted for swinging movement, a spring yieldingly holding the support in a normal position, filling tubes connected to the conduit to supply the liquid to the several receptacles, said support and the conduit being adapted for unitary swinging movement in one direction to cause the liquid to flow from the hopper through the conduit and filling tubes into the receptacles, adjustable stop devices for engagement by the support to limit the return movement thereof under the action of said spring whereby the several receptacles are uniformly filled to a desired level, and means for supporting the conduit and filling tubes in an elevated inoperative position with respect to said receptacle support.

5. The combination of an oscillatory hopper, a conduit connected to said hopper, fluid supply means having its discharge end disposed within said hopper, a receptacle support mounted for swinging movement, a spring yieldingly holding the support in a normal position, filling tubes connected to the conduit to supply the liquid to the several receptacles, said support and the conduit being adapted for unitary swinging movement in one direction to cause the liquid to flow from the hopper through the conduit and filling tubes into the receptacles, adjustable stop devices for engagement by the support to limit the return movement thereof under the action of said spring whereby the several receptacles are uniformly filled to a desired level, a bar connecting the several filling tubes, and means carried by the receptacle support to engage said bar and sustain the conduit and filling tubes in an elevated inoperative position with the receptacle and the support.

[Claims 6 and 7 not printed in the Gazette.]

1,191,407. RUNWAY. JOSEPH W. DAWSON, St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, a Corporation of Missouri. Filed Apr. 23, 1915. Serial No. 23,311. (Cl. 193—1.)



1. The combination of a bottle carrier, and a bottle runway adapted to receive the bottles which pass from said carrier, said bottle runway comprising a series of flexible tracks adapted to support bottles, a support to which said flexible tracks are secured, the upper ends of said flexible tracks being free to spread apart in response to the pressure of a bottle at the intake end of the runway, so as to permit a projecting bottle to travel with said carrier.

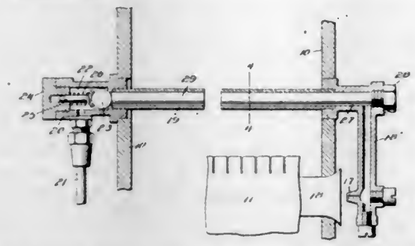
2. The combination of a bottle carrier, and a yieldable bottle runway associated with said bottle carrier, said yieldable bottle runway having flexible track members provided with free ends which lie adjacent to said bottle carrier, and said free ends being adapted to bend laterally to permit a projecting bottle to pass between them in response to the movement of said bottle carrier.

3. The combination of a bottle carrier, and a yieldable bottle runway associated with said bottle carrier, said yieldable bottle runway comprising a series of flexible tracks arranged in pairs and having free ends which lie adjacent to said bottle carrier, the free ends of each pair of tracks being adapted to spread apart in response to the pressure of a bottle projecting from said bottle carrier, thereby allowing the projecting portion of a bottle to pass between said free ends in response to the movement of said bottle carrier.

4. A bottle runway comprising a series of flexible track members adapted to support bottles, and a rigid support for said yieldable track members, said yieldable track members being secured, at the discharge end of the runway, to said rigid support, and the said yieldable track members being free to spread apart at the intake end of the runway so as to permit a bottle to be forced between them.

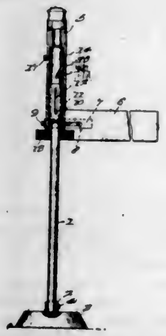
5. The combination of a runway comprising a support, a series of flexible track members secured to said support, said flexible track members being free to bend independently of each other at the intake end of the runway, and a bottle carrier adapted to discharge bottles onto the free portions of said track members, said bottle carrier being located adjacent to the free portions of said track members for the purpose described.

1,191,408. THERMOSTATIC FUEL-VALVE. ABNER DOBLE, Brookline, Mass. Filed June 1, 1912, Serial No. 701,105. Renewed June 5, 1916. Serial No. 101,870. (Cl. 158—31.)



In an apparatus of the class described, the combination of a pilot burner, a vaporizing tube arranged adjacent said pilot burner and adapted to be heated thereby, a main burner also adapted to heat said tube, means for supplying fuel from said tube to said main burner, a valve adapted to control the supply of fuel to said tube, a thermostatic rod arranged in said tube and adapted to open said valve when heated by either of said burners, and spring-pressed means acting in opposition to said rod and adapted to close said valve when said burners are not in operation.

1,191,409. FOAM-REMOVING DEVICE. MICHAEL EGAN, New York, N. Y. Filed May 10, 1915. Serial No. 27,290. (Cl. 225—8.)



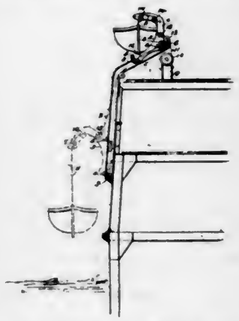
1. A device for removing foam from glasses comprising a supporting bar; and a horizontally-disposed blade mounted to have axial and angular sweeping movement thereon by lifting said blade with the glass for the purpose set forth.

2. A device for removing foam from glasses comprising a supporting bar; a head mounted to operate on said bar; a horizontally-disposed blade mounted on said head; and means for effecting an angular sweeping movement of the blade by lifting said blade with the glass for the purpose set forth.

3. A device for removing foam from glasses comprising a bar; a head fitted over said bar; a horizontally-disposed blade mounted on the head; a sleeve fitted on the bar and having a pin and slot engagement therewith; a second sleeve fitted on the bar secured to said head and having a diagonal pin and slot engagement with the bar; said sleeves and head operable to effect an angular sweeping movement of the blade by lifting said blade with the glass for the purpose set forth.

4. A device for removing foam from glasses comprising a vertically-supported bar; a head loosely fitted over said bar; a horizontally-disposed blade secured to said head; a sleeve on said bar having a straight pin and slot engagement therewith; a second sleeve secured to said head and disposed above the first named sleeve, and having a diagonal pin and slot engagement with the bar; and a contact member secured to said first sleeve immediately adjacent said blade, and operable through said sleeves and the head to effect an angular sweeping movement of the blade by lifting said blade with the glass for the purpose set forth.

1,191,410. MEANS FOR LAUNCHING A SHIP'S BOATS. DANIEL E. ERICKSON, Vancouver, British Columbia, Canada. Filed Apr. 8, 1916. Serial No. 89,849. (Cl. 9—22.)



1. Means for lowering a boat from the deck of a ship, said means comprising the combination with a track secured to the ship adjacent each end of the boat, said track extending from an inboard position on the deck to and down the side of the ship to a position intermediate the deck and the water line, a boat suspending davit connected to and endwise movable on each track, and means for lowering the davits down the track and the boat from the davits.

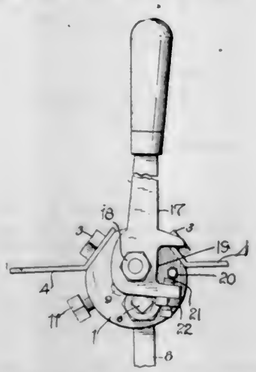
2. Means for lowering a boat from the deck of a ship, said means comprising the combination with a track secured to the ship adjacent each end of the boat, said track extending at a suitable incline from an inboard position on the deck to and down the side of the ship to a position intermediate the deck and the water line, a boat suspending davit connected to and endwise movable on each track, and means for lowering the davits down the track and the boat from the davits.

3. Means for lowering a boat from the deck of a ship, said means comprising in combination a track secured to the ship adjacent each end of the boat, said track extending at a suitable incline from an inboard position on the deck to and down the side of the ship to a position intermediate the deck and the water line, a boat suspending davit connected to and endwise movable on each track, and a line passing from a drum or reel rotatably mounted at the inner end of each track, over a sheave mounted at the inner end of the track, and under and over sheaves mounted adjacent the base and at the upper end of each davit for connection to the boat.

4. Means for lowering a boat from the deck of a ship, said means comprising in combination a track secured to the ship adjacent each end of the boat, said track extending at a suitable incline from an inboard position on the deck to and down the side of the ship to a position intermediate the deck and the water line, a boat suspending davit mounted on each track, said davit having a base the outer end of which projects under the end from which the boat is suspended and both ends of which are provided with rollers to bear on the outer and inner sides of the track, and a line passing from a reel rotatably mounted under each end of the track around a sheave mounted in the inner end of the track and around sheaves mounted in the davit adjacent the inner end of the base and at the place of suspension of the beat.

5. Means for lowering a boat from the deck of a ship, said means comprising the combination with a track secured to the ship adjacent each end of the boat, each track composed of parallel flanged angle irons with the angles turned toward one another, said tracks extending from an inboard position on the deck to the side and thereddown to a position intermediate of the deck and the water line, a davit endwise movable on each track, said davit having a base extending approximately under the place of boat suspension and rollers mounted on each end of the base to engage the outer and inner side of each track flange, said davit having also sheaves mounted adjacent the inner end of the base at the bend and at the head or place of boat suspension, a reel rotatably mounted under the inner end of each track, and a line passing from the reel around a sheave mounted on the inner end of the track and around the sheaves of the davit to be removably connected to a boat suspended therefrom.

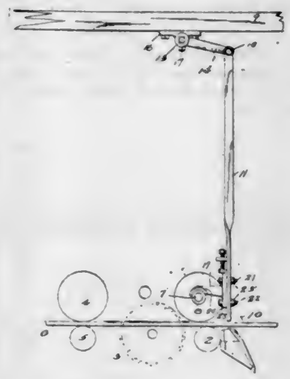
1,191,411. SAW-SWAGE. OLE ERICKSON, Elma, Wash. Filed Aug. 22, 1914. Serial No. 858,055. (Cl. 76—54.)



1. In a saw swage, a stock having a transverse saw receiving slot on its under face and formed with a die receiving passage intersecting said slot, a die disposed in the passage, an anvil also passing through the stock in conjunction with the die, the stock being formed with oppositely disposed flat downwardly inclined divergent faces extending obliquely to the axis of the die, gage plates disposed on the stock on each side of the die, each gage plate having a slotted face engaging with one of the flat faces of the stock, and clamp screws passing through the slots in the gage plates and holding them in adjusted positions.

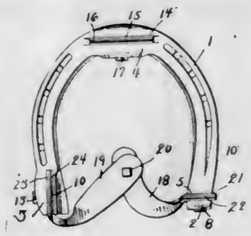
2. In a saw swage, a stock having a transverse saw receiving slot on its under face, a die passing transversely through the stock and intersecting the slot, an anvil cooperating with the die, the opposite faces of the stock on each side of the die and above the same being flat and downwardly and outwardly inclined obliquely to the axis of the die, gage plates disposed on the stock on each side of said die, each gage plate having a base engaging the adjacent flat face of the stock, each base having a plurality of longitudinally extending slots, and clamp screws passing through the slots in each gage plate and entering the stock and holding the gage plates in adjusted position, the plurality of slots and clamp screws holding the gage plates in parallel relation to the axis of the die.

1,191,412. GUARD FOR SAWING-MACHINES. CHARLES MARTIN GAGE, deceased, Portland, Oreg.; Julia Gage, administratrix, Portland, Oreg. Filed Aug. 10, 1914, Serial No. 856,094. Renewed Dec. 27, 1915. Serial No. 68,944. (Cl. 143—159.)



The combination with a vertically movable feed roll, of a guard comprising a plate in front of the roll, a rock shaft and a pair of rocker arms thereon, hanger arms suspended from the rocker arms and connected to the plate, and brackets adjustable on the plate having bearing plates for supporting said guard on the movable roll.

1,191,413. HORSESHOE. AIME GAUTHIER, Willow City, N. D. Filed May 21, 1915. Serial No. 29,638. (Cl. 168—29.)

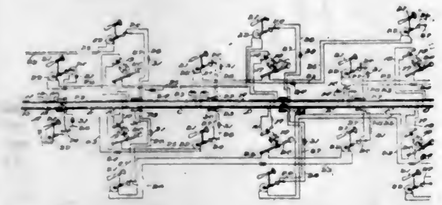


1. The combination with a horse shoe having sockets in the ends thereof, of calks detachably mounted in said sockets, integral arms extending from said calks and means for securing the arms together.

2. The combination with a horse shoe having a socket in one end thereof extending longitudinally of the adjacent side and a socket in the other end thereof extending transversely of the adjacent side, of calks detachably mounted in said sockets, arms extending from said calks and means for securing the arms together.

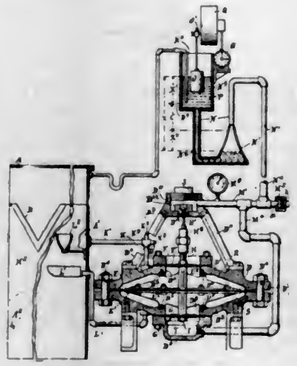
3. The combination with a horse shoe having a socket in one end thereof extending longitudinally of the adjacent side and a socket in the other end thereof extending transversely of the adjacent side, of calks detachably mounted in said sockets, arms extending from said calks and inwardly from the ends of the shoe and means for securing the arms together.

1,191,414. SAFETY BLOCK-SIGNAL. GEORGE W. GERLACH, Cumberland, Iowa. Filed May 6, 1913. Serial No. 765,859. (Cl. 246—31.)



In a block signaling system, a track divided into a plurality of blocks, each insulated from the other, the rails of each block being electrically bonded and included in a normally closed circuit, a separate source of electrical energy for the circuit of each block, a circuit breaker in each circuit normally held in closed position by such circuit, a signaling circuit normally completed through each circuit breaker, a separate source of electrical energy in each signaling circuit, a pair of circuit breakers in each signaling circuit normally held in closed position by the energization of the signaling circuit, track contact controlling circuits normally closed one through each of said last mentioned circuit breakers of the signaling circuit, separate sources of electrical energy in each track contact controlling circuit, and track contacts in each track contact controlling circuit normally held in inactive position by energization of such circuit, the track contacts being so arranged that each block controls track contacts two blocks in advance and one block at the rear to provide an overlapping system.

1,191,415. DIFFERENTIAL-PRESSURE-BALANCING MECHANISM. GEORGE HERBERT GIBSON, Montclair, N. J. Filed Aug. 24, 1912. Serial No. 716,803. (Cl. 73—167.)



1. In a differential pressure balancing device the combination of an inclosure forming two differential pressure chambers separated by a common flexible wall and a balancing chamber separated from one of said pressure chambers by a flexible wall, the other of said pressure chambers having a flexible wall externally exposed to the atmosphere, means mechanically connecting all of said flexible walls together for simultaneous movement, and means responsive to the movements of said flexible walls for maintaining a pressure within said balancing chamber tending to hold said flexible walls in a neutral position.

2. A differential pressure balancing mechanism comprising in combination an inclosure forming two differential pressure chambers, each having a flexible wall portion and a balancing chamber having a flexible wall portion and a vent connection, means mechanically connecting all of said flexible wall portions together for simultaneous movements, and means responsive to the movements of said flexible wall portions for regulating the pressure in said balancing chamber, comprising a pressure supply conduit connected to said balancing chamber by a restricted port, and a valve connected to said diaphragm and controlling said vent connection.

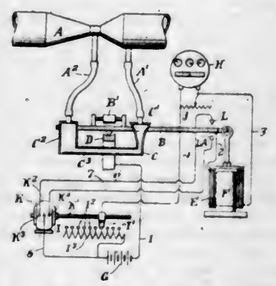
3. A differential pressure balancing device comprising a casing formed with an aperture in its wall, a flexible diaphragm closing said aperture, two diaphragms parallel to the first mentioned diaphragm and dividing the interior of said casing into three pressure chambers of which the one remote from said aperture contains pressure fluid for balancing the differential action on said central diaphragm of the pressures in the other two chambers, means connecting said diaphragms for simultaneous movement, and means controlled by the movements of said diaphragms for regulating the pressure in said balancing chamber.

4. A differential pressure balancing device comprising a casing formed with apertures in its opposite wall, a flexible diaphragm closing each aperture, a third flexible diaphragm parallel to the first mentioned diaphragms and dividing the interior of said casing into two pressure chambers, means connecting said diaphragms for simultaneous movement and means for balancing the differential action on said diaphragm of the pressures in said two chambers.

5. In a differential pressure balancing device, the combination of an inclosure forming a pressure chamber, two parallel flexible walls acted on internally of the chamber by one of the pressures to be differentiated and externally exposed, one to the pressure of the atmosphere and the other to the second of the two pressures to be differentiated, an inclosure forming a balancing chamber having a flexible wall exposed externally to said second pressure means mechanically connecting all said flexible walls, and means controlled by the movements of said flexible walls for maintaining a balancing pressure in said balancing chamber.

[Claims 6 to 25 not printed in the Gazette.]

1,191,416. MEASURING-APPARATUS. GEORGE H. GIBSON, Montclair, N. J. Filed Sept. 26, 1913. Serial No. 791,924. (Cl. 73—167.)



1. A measuring instrument comprising a movable member and balancing means therefor including an electromagnetic device adapted to exert a balancing force on said member varying in linear proportion to the intensity of the electric current energizing said device, and means

for supplying said device with an energizing current of regulated intensity, said movable member being provided with a liquid channel so shaped and disposed that liquid partially filling the channel and forming a liquid seal between the opposite ends of the channel will be displaced therein and the force which said device must exert on said member to hold the latter in a predetermined position will be varied on a change in the differential of the fluid pressures in the opposite ends of said channel.

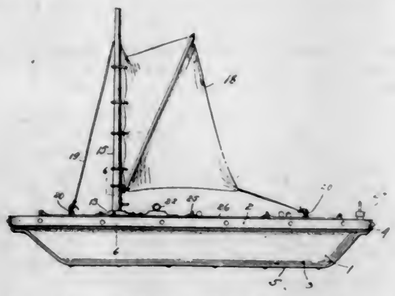
2. A measuring instrument comprising a movable member and balancing means therefor including an electromagnetic device adapted to exert a balancing force on said member tending to maintain the latter in a predetermined position and varying in linear proportion to the intensity of the electric current energizing said device, and means for supplying the latter with an energizing current of regulated intensity, said movable member being provided with a liquid channel of non-uniform cross section so shaped and disposed that liquid partially filling the channel and forming a liquid seal between the opposite ends of the channel will be displaced therein on a variation in the fluid pressures existing in the opposite ends of said channel, and the force which said device must exert on said member to hold the latter in a predetermined position will be varied in non-linear proportion to the changes in the differential of said pressures.

3. A measuring instrument comprising a movable member and balancing means therefor including an electromagnetic device adapted to exert a balancing force on said member tending to maintain the latter in a predetermined position and varying in linear proportion to the intensity of the electric current by which said device is energized, said movable member being provided with a liquid channel of non-uniform cross section so shaped and disposed that liquid partially filling the channel will be displaced therein on a variation in the fluid pressures existing in the opposite ends of said channel and the force which said device must exert on said member to prevent the latter from movement out of its predetermined position, will be varied in non-linear proportion to the changes in said pressure differential, and means responsive to slight movements of said member out of a neutral position for supplying said device with an electric energizing current of the proper intensity to maintain said member in said neutral position.

4. Apparatus for measuring the flow of a liquid through a conduit comprising in combination, a movable member, means for subjecting said member to a force tending to move said member and varying in linear proportion with the fluid rate of flow through said conduit, an electromagnetic device for exerting a balancing force on said member varying in linear proportion with the intensity of the electric current by which said device is energized, means for supplying said device with an electric energizing current of regulated intensity, and means for measuring said energizing current.

5. Fluid measuring apparatus comprising in combination, a conduit through which the fluid to be measured flows, a pivoted member provided with a liquid channel, a body of liquid partially filling the channel and forming a liquid seal between the opposite ends of said channel, said channel being so shaped and disposed that on a change in the differential of the pressures maintained in the opposite ends of said channel, the balancing force necessary to be exerted on said member to hold the latter in a predetermined position will be varied in linear proportion to the square root of said pressure differential, means for subjecting the opposite ends of said channel to pressures such that the differential thereof is proportional to the velocity head of the fluid flowing through said conduit, an electromagnetic device for exerting a balancing force on said member varying in linear proportion with the intensity of the electric current by which the device is energized, means responsive to slight movements of said member out of a neutral position for supplying said device with an electric energizing current of the proper intensity to maintain said member in said neutral position, and means for measuring said energizing current.

1,191,417. LIFE-RAFT. ROBERT H. GILBERT, Ontonagon, Mich. Filed Nov. 8, 1915. Serial No. 60,365. (Cl. 9—11.)



A life raft comprising a cork body, a deck secured to the upper surface of the said body, a covering of water proof fabric engaged with the body, and means for securing the edges of the covering to the edges of the deck and to the bottom of the body.

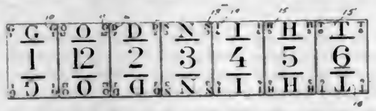
1,191,418. BREAST-STRAP. SCOTT A. HARRIS, Pawhuska, Okla. Filed Feb. 18, 1914. Serial No. 819,595. (Cl. 54—58.)



A breast strap comprising an upper section having openings formed therein, a lower section formed from a strip doubled intermediate its length to provide an eye having the end portions of the strip extending therefrom, and a coupling pin provided with a shank secured between the end portions of the strip forming the lower section and having a longitudinally curved stem arranged to extend from the shank through one of the openings of the upper section and terminating in a cross head arranged to project upon opposite sides of the stem and of the openings through which the stem passes and to engage the face of the upper section to releasably connect the upper and lower sections, the arrangement being such that the upper section extends substantially parallel to the ends of the strip forming the lower section.

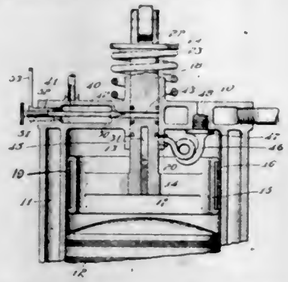
1,191,419. PLAYING-CARDS. REUBEN O. HARRISON, Doran, Minn. Filed June 1, 1914. Serial No. 842,185. (Cl. 46—25.)

A pack of cards comprising a plurality of series, the cards of each series bearing the same letter in each corner and being numbered in each corner consecutively, the cards of each series also being delineated transversely to divide same into three spaces and bearing in the outer spaces the letter appearing in the corner and in the central space the number appearing in the corner, the letters on the cards of respective series being different and



selected so that when the cards of the different series are properly arranged a predetermined word will be spelled.

1,191,420. INTERNAL-COMBUSTION ENGINE. RAY W. HARROUN, Indianapolis, Ind. Filed Nov. 25, 1911. Serial No. 662,436. (Cl. 123—180.)



1. In an internal combustion engine, the combination of a cylinder having in its side walls fuel inlet and exhaust ports, in different transverse planes; a valve rim, imperforate and of a depth to span and close both ports, coöperating therewith that by movement to three positions its opposite edges may respectively lie between the planes of the ports to open said ports respectively or may span both ports to close them simultaneously; a series of spider arms within said rim; a stem extending centrally from the spider through a guiding orifice in the head of the cylinder; a spring surrounding said stem, acting at opposite ends against the cylinder and the stem; and a cam acting on the extremity of said stem to move the valve against the resistance of said spring.

2. In an internal combustion engine, the combination of a cylinder; a piston therein arranged to leave a clearance space in the end of the cylinder, there being intake and exhaust ports opening to said clearance space, a valve in said clearance space comprising a head and a stem, the head coöperating with said intake and exhaust ports to open and close the same, and means for reciprocating said valve and stem, there being in said valve stem and the coöperating cylinder portions a stem passage and a cylinder port arranged to be brought into register while the valve head maintains its coöperating ports closed.

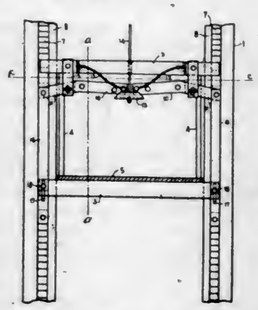
3. In an engine, the combination of a cylinder, a piston therein arranged to leave a clearance space in the end of the cylinder, a valve in said clearance space comprising a head and a stem, means for reciprocating said valve and stem in appropriate timed relation to the reciprocations of the pistons, there being inlet and outlet ports to the clearance space controlled by the valve head and there being a passage to be opened during the working stroke of the engine from said clearance space to the exterior of the engine, said passage being controlled by said valve.

4. In a four-cycle engine, the combination of a cylinder having three ports for communication with its clearance space, one said port adapted to be associated with a source of supply of fluid under pressure, another of said ports being adapted for association with a source of fuel supply, and the third said port being adapted and arranged to act as an exhaust port, a piston, a single valve structure, and means for moving said single valve structure successively to four positions during the four succeeding cycles of the engine, three of said positions to open the three ports respectively and the fourth position to close all of the ports, whereby said ports are successively opened for starting and running of the engine, and means for cutting off the first said port from its source of fluid supply after starting of the engine.

5. In an engine, the combination of a cylinder, a piston therein, a cylindrical slide valve arranged in the clearance space between the piston and cylinder, having its sides coöperating with the walls of the clearance space, there being in the cylinder structure ports controlled by said valve, adapted to be opened one during the power stroke of the piston to permit the introduction of starting fluids, and others during the suction and exhaust strokes of the piston to permit the ingress and egress of fuel and gases, respectively, and means to reciprocate said valve within said clearance space in timed relation to the operations of the piston to secure the stated openings of the ports.

[Claims 6 to 11 not printed in the Gazette.]

1,191,421. ELEVATOR. ROBERT A. HATHHORN, Houston Heights, Tex. Filed Mar. 12, 1915. Serial No. 13,904. (Cl. 187—83.)



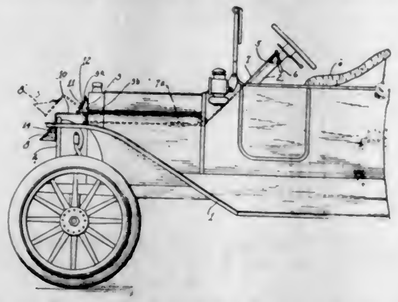
1. A device of the character described including opposing vertical tracks fixed in their relation to one another, vertical ribs carried by the facing sides of said tracks, whose opposite edges are provided with upwardly inclined ratchet teeth, a pair of cross beams spaced apart and fixed in their relation to each other, whose ends are bifurcated forming fingers which embrace the corresponding ribs, bearing members depending from the respective ends of the upper beam, a pair of levers, whose inner ends are adjacent and whose outer ends are bifurcated, forming resilient fingers, which are pivoted to the lower ends of said corresponding bearing members, resilient members pressing downwardly against the inner ends of said levers, a plate having upturned sides underneath the adjacent ends of said levers, a cable sustaining said plate, locking wedges whose inner sides have ratchet teeth secured to said resilient fingers, resilient straps depending from each of said wedges, similar locking wedges carried by the lower ends of said straps, said wedges resting against the inner sides of the corresponding fingers of said beams and being forced inwardly thereby as they are elevated and being thus locked with the ratchet teeth of said ribs.

2. A device of the character described including opposing vertical tracks fixed in their relation to each other, whose opposite edges are provided with ratchet teeth, a pair of cross beams spaced apart and fixed in their relation one above the other, whose ends are bifurcated forming fingers which embrace the corresponding tracks, an elevator car supported by said cross beams, a pair of levers pivoted relative to the upper beam whose inner ends are adjacent and whose outer ends are bifurcated forming resilient fingers, resilient members pressing downwardly against the inner ends of said levers, a plate underneath the adjacent ends of said levers, a cable sustaining said plate, locking wedges whose inner sides have ratchet teeth secured to said resilient fingers, resilient straps depending from each of said wedges, similar locking wedges carried by the lower ends of said straps, said wedges resting against the inner sides of the corresponding fingers of said beams

and being forced inwardly thereby as they are elevated and being thus locked with the ratchet teeth of said tracks.

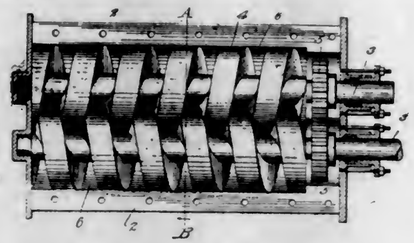
3. A device of the character described including opposing vertical tracks fixed in their relation to each other, whose edges are provided with ratchet teeth, a pair of cross beams spaced apart whose ends are bifurcated forming fingers which embrace the corresponding tracks, an elevator car supported by said cross beams, a pair of levers pivoted relative to the upper beam whose inner ends are adjacent and whose outer ends are bifurcated forming resilient fingers, resilient members pressing downwardly against the inner ends of said levers, a means engaging underneath the adjacent ends of said levers, a cable sustaining said means, locking wedges whose inner sides have ratchet teeth secured to said resilient fingers, resilient members depending from each of said wedges, similar locking wedges carried by the lower ends of said members, said wedges resting against the inner sides of the corresponding fingers of said beams and being forced inwardly thereby as they are elevated and being thus locked with the ratchet teeth of said tracks.

1,191,422. ADJUSTABLE LIGHT-SHADE FOR VEHICLE-LAMPS. CHRISTIAN HEILRATH, Sacramento, Cal. Filed Sept. 30, 1915. Serial No. 53,243. (Cl. 240—45.6.)



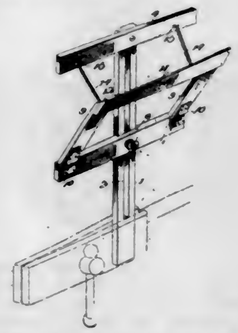
A device of the character described comprising the combination with a motor vehicle, of brackets disposed adjacent the lamps, a rod turnable in said brackets, shades secured to the ends of said rod, a projecting finger member on said rod, a spring arranged to pull on said finger member, another finger member on the rod, a cable connected with said last named finger member and projecting to a point adjacent the driver's seat of the vehicle, and a lever means connected with said cable, as described.

1,191,423. PUMP. WILLIAM S. HOLDAWAY, Provo, Utah, assignor to The H. & S. Pump Company, a Corporation of Utah. Filed Jan. 15, 1913. Serial No. 742,254. (Cl. 103—44.)



A pump including a casing having sockets in one head thereof constituting thrust-bearings, parallel shafts journaled within the heads of the casing and bearing against and engaging said thrust bearings, a screw secured to and revoluble with each shaft, the threads of one screw fitting snugly between the convolutions of the threads of the other screw, both screws extending up to said head, said thrust bearings coöperating with the ends of the shafts to relieve the head against thrusts from the screws, gears secured to the respective shafts and constantly meshing whereby the shafts are revoluble in opposite directions synchronously, said gears being interposed between the screws and the other head of the casing, the casing and screws forming separate non-communicating compartments between the convolutions of each screw, the screws and gears being completely housed in the casing, there being an inlet at one end of the casing and an outlet at the other end thereof.

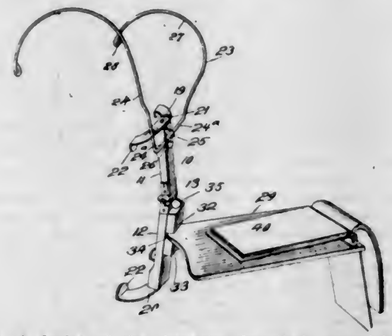
1,191,424. DRAWING-BOARD SUPPORT. HARVEY T. HOLLINGER, Concordia, Kans. Filed Mar. 19, 1915. Serial No. 15,524. (Cl. 45—129.)



1. A drawing-board support comprising a standard, a cross bar fixed to the standard, a second cross bar mounted upon the standard below the fixed cross bar and movable vertically upon the standard, a drawing-board rest mounted upon the said movable cross bar to swing about the same, and an adjustable connection between the said rest and the fixed cross bar.

2. A drawing-board support comprising a standard, a fixed cross bar thereon, a second cross bar adjustably mounted upon the standard below the fixed cross bar, supporting arms hinged to and rising from the said lower cross bar, a drawing-board rest fixed to and extending between the free ends of the said supporting arms, and adjustable connections between the said supporting arms and the fixed cross bar.

1,191,425. ADJUSTABLE TABLE. HERSCHEL J. HUDDLE, Jersey City, N. J., assignor of one-half to Henry Koch, Secaucus, N. J. Filed Aug. 13, 1915. Serial No. 45,345. (Cl. 45—59.)

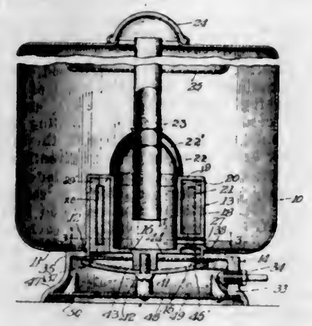


1. A device of the character described, comprising a two-part support having the parts hingedly connected,

a plate-like rest extending transversely of and secured to the lower section of the support and having bent over ends adapted to rest against the body of a person, adjustable and detachable hook-shaped arms held to the support and adapted to be adjusted to fit over the shoulders of the person, and a table leaf adjustably held to one part of the support.

2. A device of the character described, comprising a two-part support having the parts hingedly connected, means for holding the parts of the support in various positions, a plate-like rest extending transversely of each part of the support and secured to the free end of each hinged part and adapted to rest against the body of a person, adjustable and detachable hook-shaped arms held to the support and adapted to be adjusted to fit over the shoulders of the person, and a table leaf held to one part of said support.

1,191,426. ELECTRICALLY-HEATED UTENSIL. DAVIDD C. G. HUGHES, Chicago, Ill. Filed July 8, 1915. Serial No. 38,660. (Cl. 219—43.)



1. A combined base and heating unit for utensils comprising a hollow-walled cup, a heating unit therein, a base member, said cup and base member providing coacting surfaces to receive between them a portion of the utensil, and clamping means, comprising a circular plate screw connected to the cup at its center, its marginal portion bearing against the base member to force the coacting surfaces together.

2. The combination of a hollow-walled upwardly-opening cup having an external clamping flange, an electrical heating element contained in the hollow wall of said cup, a base, having a clamping surface opposed to said flange, and a clamping member connected with said cup at the center thereof and acting on the under side of said surface of the base to force said base surface toward the opposing flange.

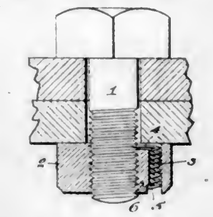
3. The combination, in a heating and base structure for utensils, of a heating coil, a structure containing said heating coil and having a flange to bear upon the bottom of the utensil, a base having a flange to bear against the other side of the utensil bottom, and spring means carried by the heater structure acting against the flange on the base and normally tensioned, yieldingly to force said flanges toward each other.

4. An electrically heated utensil comprising a vessel having a bottom opening, a metal cup having a double peripheral wall providing an upwardly opening central well and a downwardly opening channel, said channel opening to the exterior of the cup, a portion of said cup bearing on the bottom of the vessel around the opening, a base bearing against the bottom of said vessel around the opening, and a clamping plate bearing at its edges against the base and centrally mounted on the cup.

5. An electric heating structure for attachment to a utensil bottom comprising in combination a double wall cup providing an upwardly opening well and a downwardly opening channel having a border flange, an electrical heating element in said channel, a base structure having a top portion to underlie said flange, and a resilient clamp plate secured to said cup and having its edges arranged to underlie the top of the base to press the latter toward the flange of the cup.

[Claims 6 to 8 not printed in the Gazette.]

1,191,427. LOCKING MEANS FOR SCREW-THREADED PARTS. MORRIS JACOBS, Brooklyn, N. Y. Filed July 29, 1910. Serial No. 574,447. (Cl. 151—25.)



1. Means for locking from unintentional relative rotation two screw-threaded engaging parts, comprising, in combination with such parts, a locking member carried by one of the screw-threaded parts and coactive with the other screw-threaded part; such locking member comprising a spring coil forming a combined resilient torsional stem and rockable actuating stem extending longitudinally of the screw-threaded part by which the locking member is carried, locking means carried by such stem at one end thereof and adapted to have locking engagement with the other screw-threaded part, and releasable actuating means for holding the stem at the other end thereof from rotation and thereby releasably holding the locking means in locking position.

2. Means for locking from unintentional relative rotation two screw-threaded engaging parts, comprising, in combination with such parts, a locking member carried by one of the screw-threaded parts and coactive with the other screw-threaded part; such locking member comprising a spring coil forming a resilient torsional stem extending longitudinally of the screw-threaded part by which the locking member is carried, and locking means carried by such stem for having locking engagement with the other screw-threaded part.

3. Means for locking from unintentional relative rotation two screw-threaded engaging parts, comprising, in combination with such parts, a locking member carried by one of the screw-threaded parts and coactive with the other screw-threaded part; such locking member comprising a spring coil forming a resilient torsional stem extending longitudinally of the screw-threaded part, and a lateral extension from one of the turns of the coil forming a locking tongue extending transversely of the screw-threaded part.

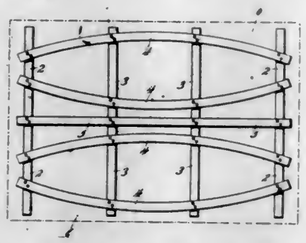
4. Means for locking from unintentional relative rotation two screw-threaded engaging parts, comprising, in combination with such parts, a locking member carried by one of the screw-threaded parts and coactive with the other screw-threaded part; such locking member comprising a spring coil forming a resilient torsional stem extending longitudinally of the screw-threaded part, means for restraining one of the turns of the coil from rotation relatively to the screw-threaded part by which the locking member is carried, and a lateral extension from another of the turns of the coil forming a locking tongue extending transversely of the screw-threaded part.

5. Means for locking from unintentional relative rotation two screw-threaded engaging parts, comprising, in combination with such parts, a locking member carried by one of the screw-threaded parts and coactive with the other screw-threaded part; such locking member comprising a spring coil forming a combined resilient torsional stem and rockable actuating stem extending longitudinally of the screw-threaded part, a lateral extension from one of the turns of the coil forming a locking tongue extend-

ing transversely of the screw-threaded part, a lateral extension from another of the turns of the coil forming an actuating lever extending transversely of the screw-threaded part, and latching means for releasably engaging the actuating lever.

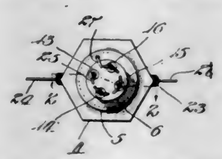
[Claims 6 to 8 not printed in the Gazette.]

1,191,428. REINFORCING MEANS FOR BUILDING-BLOCKS. JOSEPH JAMES, Vancouver, British Columbia, Canada. Filed Jan. 31, 1914. Serial No. 815,712. (Cl. 72—124.)



A reinforcing frame for building blocks which comprises a plurality of vertical members disposed parallel to one another in the same plane, a central horizontally disposed straight member secured to each of said vertical members and a plurality of bowed horizontal members at each side of said central member and secured to the respective vertical members, said central horizontal member and said bowed members lying in the same plane and parallel to the plane containing said vertical members and means for securing said members together to form an integral structure substantially as shown and described.

1,191,429. SPARK-PLUG AND SPARKING CIRCUIT. LAWRENCE H. JENSEN, St. Charles, Ill. Filed Dec. 26, 1914. Serial No. 879,003. (Cl. 123—169.)



1. In a spark plug, a plurality of spaced conductors comprising a portion of a circuit having a plurality of interruptions or spark gaps, and means for connecting one of the intermediate spaced conductors with a length of conductor that is unconnected with the remaining portion of said circuit.

2. In a spark plug, a plurality of spaced conductors comprising a portion of a circuit having a plurality of interruptions or spark gaps, and a conductor connected with one of the intermediate spaced conductors and unconnected with the remaining portion of said circuit.

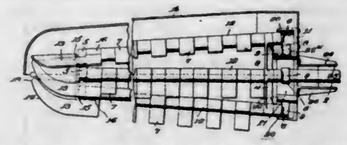
3. In a spark plug, a plurality of spaced conductors comprising a portion of a circuit having a plurality of interruptions or spark gaps, and a conductor connected with one of the intermediate spaced conductors and terminating in the atmosphere.

4. In a spark plug, a circuit having a plurality of interruptions forming a plurality of sparking points and means for connecting an intermediate portion of said circuit with a conductor terminating in the atmosphere.

5. In a spark plug, a circuit having a plurality of interruptions forming a plurality of sparking points and a conductor connected to an intermediate portion of said circuit and terminating in the atmosphere.

[Claim 6 not printed in the Gazette.]

1,191,430. CULTIVATOR. OLIVER W. JOHNSON, Cleveland, Ohio. Original application filed Apr. 18, 1914, Serial No. 832,997. Divided and this application filed Oct. 28, 1915. Serial No. 58,462. (Cl. 97—62.)



1. A rotary cultivator having a relatively large basal end and tapering toward its other end, said cultivator being provided at its tapered end with longitudinally extending blades having their working edges inclined outward and toward the axis of the cultivator each of said blades being rotatable about its own axis.

2. A rotary cultivator having a relatively large basal end and tapering toward its opposite end, and blades disposed longitudinally at the tapered end of the cultivator having working edges extending outward and toward the axis of the cultivator and provided on their opposite edges with fins projecting across their own axes.

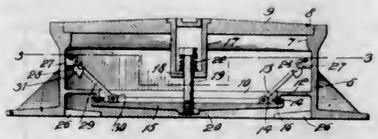
3. A rotary cultivator having a relatively large basal end and tapering toward its opposite end, and blades disposed longitudinally at the tapered end of the cultivator having working edges curved outward and toward the axis of the cultivator, said edges extending into line with the axial center of the cultivator and the opposite edges of the blades being provided with longitudinal fins extending across the axes of the respective blades.

4. A rotary cultivator including a central shaft, a plurality of sets of blades mounted upon said shaft and spaced therefrom, the axial center of each set of blades being inclined inwardly toward the said shaft from the basal portion of the cultivator toward the outer extremity thereof, and means disposed around the central shaft for swinging each set of blades around its own axis as it rotates around the central shaft.

5. A cultivator including a central shaft, a plurality of sets of blades mounted upon said central shaft, the axial center of each set of blades extending from the basal portion of the cultivator to the tapering end thereof and toward the central shaft of the cultivator, and blades mounted upon the small end of the cultivator and each having a working edge extending outward and toward the axial center of the cultivator.

[Claims 6 to 13 not printed in the Gazette.]

1,191,431. MANHOLE FRAME AND COVER. HARRY JONES, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed Apr. 24, 1915. Serial No. 23,734. (Cl. 94—7.)



1. An apparatus of the class described comprising a manhole frame, oppositely opening top and supplemental covers, a pocket member carried by said top cover, a bolt insertible through said pocket member and adapted to threadedly engage said supplemental cover, and resilient cushioning means disposed within said pocket member and located between said bolt and the bottom wall of said pocket member, said bolt adapted to resiliently draw said covers into their seated positions.

2. An apparatus of the class described comprising a manhole frame, oppositely opening top and supplemental covers, holding means extending between said covers and adapted to draw the same into their seated positions, and

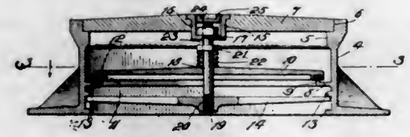
auxiliary holding means carried by said supplemental cover and detachably engaging the side walls of said manhole frame and adapted to hold said supplemental cover in its seated position upon the removal of said top cover.

3. An apparatus of the class described comprising a manhole frame, oppositely opening top and supplemental covers, holding means extending between said covers and adapted to draw the same into their seated positions, and auxiliary holding means including keepers pivotally carried by said supplemental cover, and lugs carried by the sides of said frame and adapted to be engaged by said keepers.

4. An apparatus of the class described, comprising a manhole frame with upwardly extending side walls, an upwardly removable top cover therefor, said top cover provided with an opening therein, a pocket member located within said top cover opening and terminating substantially flush therewith, a downwardly removable supplemental cover disposed between the side walls of said frame, and means disposed within, and extending through, said pocket member of the top cover, engaging said supplemental cover and adapted to draw the two into seated positions.

5. An apparatus of the class described comprising a manhole frame with upwardly extending side walls, and a ledge adjacent the lower extremity thereof, an upwardly removable top cover therefor, a downwardly removable supplemental cover seating against said ledge, said top cover provided with an opening therein, a pocket member disposed within said opening and extending below said top cover, a closing plug for said pocket member, and means extending through, and engaging, said pocket member and said supplemental cover, adapted to draw said top cover and supplemental cover into seated positions.

1,191,432. MANHOLE FRAME AND COVER. HARRY JONES, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed Apr. 24, 1915. Serial No. 23,735. (Cl. 94—7.)



1. A construction of the class described, comprising a manhole frame, top and supplemental covers therefor, said covers opening in an upward direction, and means engaging the said frame below the supplemental cover and independently engaging said top and supplemental covers and adapted to exert independently adjustable downward and seating forces upon the said covers.

2. A construction of the class described comprising a manhole frame, upwardly opening top and supplemental covers therefor, a detachable cross-bar engaging the frame below the said supplemental cover, a bolt member adjustably engaging said cross-bar and provided with a head above said supplemental cover, a resilient member interposed between said supplemental cover and head, adapted to exert a downward force upon the former, and means engaging the upper extremity of said bolt member and the top cover adapted to exert a downward force thereon.

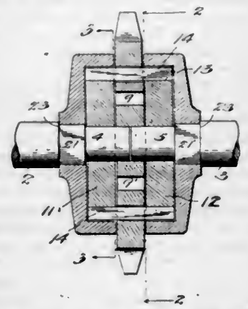
3. A construction of the class described comprising a manhole frame, upwardly opening top and supplemental covers therefor, a detachable cross-bar engaging the said frame, a bolt member adjustably engaging said detachable cross-bar, means associated with said bolt member adapted to exert an independently adjustable downward force upon said supplemental cover, and means engaging said bolt member adapted to exert an independently adjustable downward force upon said top cover.

4. An apparatus of the class described comprising a manhole frame, top and supplemental covers therefor, a member carried by said frame, a bolt threadedly engaging said member and provided with a head thereon, a resilient member interposed between said head and said supplemental cover, adapted to exert a downwardly seating force upon the latter, and means engaging the upper extremity of said bolt and said top cover adapted to exert a downwardly seating force thereon.

5. An apparatus of the class described, comprising a manhole frame provided with an upper ledge adapted to receive a top cover thereon, a top cover adapted to seat upon said ledge, an inwardly protruding flange carried by said frame, a supplemental cover adapted to seat thereon and effect a liquid-tight juncture therewith, a cross bar detachably engaging said frame below said inwardly protruding flange, and a bolt provided with threaded extremities and a head thereintermediate, the lower extremity of said bolt threadedly engaging said cross bar, resilient means interposed between the supplemental cover and bolt head adapted to exert a seating force upon said supplemental cover, and means carried by said top cover receiving the upper extremity of said bolt therein, and a securing nut engaging the protruding upper extremity of said bolt adapted to exert a downwardly seating force upon said top cover.

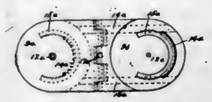
[Claim 6 not printed in the Gazette.]

1,191,433. DIFFERENTIAL FOR AUTOMOBILES. FRANK DOUGLAS KEERAN, Red Bluff, Cal. Filed Apr. 26, 1915. Serial No. 24,177. (Cl. 74—7.)



The combination in a differential gearing with a driving wheel having elongated slots and cam slots, and coupling disks at the sides of the wheel having radially movable pawls with pins in the cam slots, of keys passed through the elongated slots and attached to the disks, shaft sections supporting the disks and wheel, and a cup revoluble with each shaft section provided with slots for the accommodation of the pawls.

1,191,434. PLATFORM CONVEYER. THOMAS M. KEITH, Brooklyn, N. Y. Filed June 23, 1914. Serial No. 846,811. (Cl. 193—2.)



1. An endless platform-conveyer comprising a plurality of similar platform sections, the ends of each thereof formed in horizontal offset relation and constituting upper and lower joint members provided with circular terminal edges and engaging each other in adjacent sections and presenting alined upper surfaces, integral driving-lugs projecting from the engaging faces of said joint members in concentric arrangement with the circular terminal edges thereof and engaging each other in adjacent sections, clearance recesses formed in the engaging faces

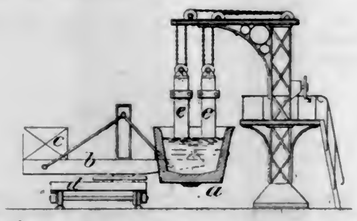
of said joint members for the reception of the driving-lugs of the adjacent sections, pins axially disposed with respect to said circular terminal edges and driving-lugs and pivotally connecting said adjacent sections, and means for supporting and propelling said connected sections.

2. In a platform-conveyer, a platform section having the ends thereof formed in horizontal offset relation and constituting upper and lower joint members provided with circular terminal edges and adapted to engage corresponding members in adjacent sections and present therewith an alined upper surface, perforations formed in said joint members in axial relation with the circular terminal edges thereof and adapted to receive pins for connecting said adjacent sections together, integral driving-lugs projecting from the engaging faces of said joint members in concentric relation with the circular terminal edges thereof and adapted to engage corresponding driving-lugs in said adjacent sections, and clearance recesses formed in the engaging faces of said joint members and adapted for the reception of the driving-lugs of said adjacent sections.

3. In a platform conveyer, a two-part platform section therefor, a vertically flexing hinge connection uniting said parts together, horizontally offset upper and lower joint members formed at the opposite ends of said two-part section and provided with circular terminal edges and adapted to engage corresponding members in adjacent sections and present therewith alined upper surfaces, integral driving-lugs projecting from the engaging faces of said joint members in concentric relation with the circular terminal edges thereof and adapted to engage corresponding driving-lugs in said adjacent sections, and clearance recesses formed in the engaging faces of said joint members and adapted for the reception of the driving-lugs of said adjacent sections.

4. An endless platform conveyer comprising a plurality of similar two-part platform sections, a vertically flexing hinge connection uniting the parts of each of said two-part sections together, horizontally offset upper and lower joint members formed at the opposite ends of each of said two-part sections and provided with circular terminal edges and engaging corresponding members in adjacent sections and presenting therewith alined upper surfaces integral driving-lugs projecting from the engaging faces of said joint members in concentric relation with the circular terminal edges thereof and engaging corresponding lugs in adjacent sections, clearance recesses formed in the engaging faces of said joint members for the reception of the driving-lugs of the adjacent sections, and means for supporting and propelling said sections.

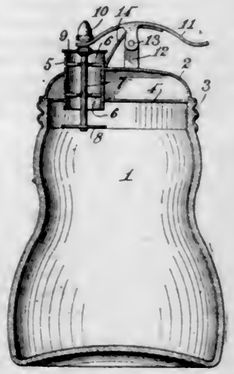
1,191,435. PROCESS FOR THE ELECTRIC MELTING OF METALS. CHARLES ALBERT KELLER, Paris, France. Original application filed Aug. 12, 1902, Serial No. 119,385. Divided and this application filed Dec. 23, 1913. Serial No. 808,333. (Cl. 204—64.)



1. The treatment of molten steel consisting in transferring it into an electric furnace when finished, molten and otherwise ready for casting, there maintaining it in the molten state, and thereafter casting.

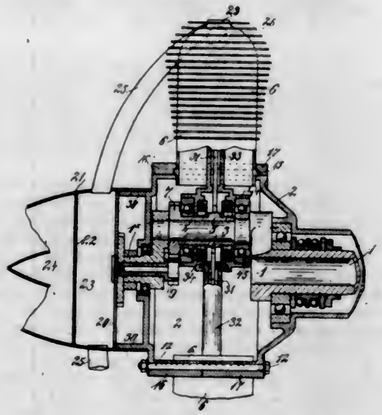
2. The treatment of molten steel consisting in transferring it into an acid-lined electric furnace when finished, molten and otherwise ready for casting, there maintaining it in the molten state, and thereafter casting.

1,191,436. SUGAR-DISPENSING DEVICE. ROBERT RUSSEL KENNEDY, West Wheeling, Ohio. Filed Dec. 12, 1914. Serial No. 876,953. (Cl. 221—114.)



In a measuring sugar container, a jar, a cap closing the mouth thereof having an inner wall engaging the top of the jar and forming the closure thereof and a top engaging the end of the jar, a measuring cylinder secured to the top and inner wall of said cap the ends of which are open and projecting above the top and below the inner wall of said cap, a stem extending through said cylinder, spiders secured within said cylinder and forming center guides for said stem, a valve disk fixed on each end of said stem coöperating with the ends of the cylinder in filling and emptying the cylinder, a finger lever connected to said stem and fulcrumed on the top of the cap, and a spring confined between said cylinder and the lever and exerting a force to maintain the outer end of the cylinder closed, substantially as specified.

1,191,437. INTERNAL-COMBUSTION ENGINE WITH ROTATING CYLINDERS. WILHELM KIELING, Frankfort-on-the-Main, Germany. Filed Aug. 20, 1912. Serial No. 716,037. (Cl. 123—44.)



1. In an internal combustion engine, the combination of a rotary casing having two parts provided with semicircular recesses coöperating to form circular recesses in the casing; cylinders engaging in said recesses, the successive cylinders being provided at their inner ends with contacting flat faces; and means for holding the cylinders in said recesses.

2. In an internal combustion engine, the combination of a rotary casing having two parts provided with semicircular recesses coöperating to form circular recesses in the casing; cylinders engaging in said recesses, the successive cylinders being provided at their inner ends with contacting flat faces; and coöperating grooves; and bolts passing through said grooves and engaging said parts.

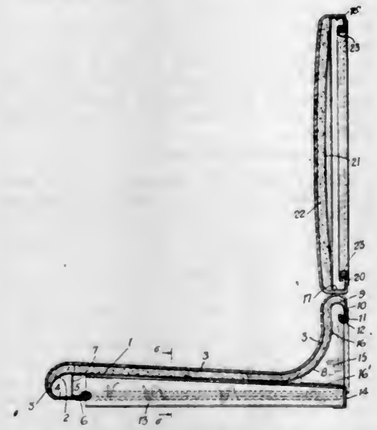
3. In an internal combustion engine, the combination of a rotary casing having two parts provided with semicircular recesses coöperating to form circular recesses in the casing; a ring slipped over each part of the casing and provided with recesses registering with the recesses of the casing, annular grooves being provided at the meeting lines of said recesses of the casing and the rings; and cylinders fitting on said recesses and provided with annular ribs engaging in said grooves.

4. In an internal combustion engine, the combination of a rotary casing having two parts provided with semicircular recesses coöperating to form circular recesses in the casing; a ring slipped over each part of the casing and provided with recesses registering with the recesses of the casing, annular grooves being provided at the meeting lines of said recesses of the casing and the rings; cylinders fitting on said recesses and provided with annular ribs engaging in said grooves, and with flat faces engaging the adjacent flat faces of the succeeding cylinders and provided with coöperating grooves forming a bore; and bolts passing through said bore.

5. In an internal combustion engine, the combination of a rotary casing having two parts provided with semicircular recesses coöperating to form circular recesses in the casing; a ring slipped over each part of the casing and provided with recesses registering with the recesses of the casing, annular grooves being provided at the meeting lines of said recesses of the casing and the rings; cylinders fitting in said recesses and provided with annular ribs engaging in said grooves, and with flat faces, the flat faces of each cylinder engaging the flat faces of the adjacent cylinders and provided with coöperating grooves forming a bore; and bolts passing through said bore and engaging said parts of the casing and the rings.

[Claims 6 to 8 not printed in the Gazette.]

1,191,438. CAR-SEAT CONSTRUCTION. JOHN EDWIN KILBURN, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Nov. 30, 1914. Serial No. 874,572. (Cl. 155—2.)



1. In car seats, the combination of a metal sheet adapted to support upholstery, extending the length of the seat, curved downwardly and then rearwardly at the front edge of the seat, a front rail comprising an angular metallic shape interposed between and secured to the said upper and lower portions of said sheet at the front thereof, and reinforcing members secured to said sheet, substantially as set forth.

2. In car seats, the combination of a metal sheet adapted to support upholstery, extending the length of the seat, curved downwardly and then rearwardly at the front edge of the seat, a front rail comprising an angular metallic shape interposed between and secured to the said upper and lower portions of the sheet at the front thereof, an angular metallic shape at each end of the seat, extending from the forward portion thereof to the rear, and secured to the under side of said sheet, and reinforcing members secured to the under side of said sheet, extending in a direction transverse to the length of the seat, between said metallic shapes at the ends of the seat, substantially as set forth.

3. In car seats, the combination of a metal sheet adapted to support upholstery, extending the length of the seat, curved downwardly and then rearwardly at the front edge of the seat, a front rail comprising a channel-bar interposed between and welded to the said upper and lower portions of said sheet at the front thereof, channel-bars extending transversely of the seat, welded to the lower side of said sheet, said bars at the ends of the seat having inwardly-turned lower flanges having their ends turned up, and upholstery covering said sheet and having its ends secured to said turned-up flange ends, substantially as set forth.

4. In car seats, the combination of a metal sheet adapted to support upholstery, extending the length of the seat, curved downwardly and then rearwardly at the front edge of the seat, and curved upwardly at the rear of the seat and thence downwardly at its rear edge, reinforcing members secured to said sheet, and upholstery covering said sheet and secured to the forward and rear edges thereof, substantially as set forth.

5. In car seats, the combination of a metal sheet adapted to support upholstery, extending the length of the seat, curved downwardly and then rearwardly at the front edge of the seat and curved upwardly at the rear of the seat and thence downwardly at its rear edge, a stiffening member extending lengthwise of the seat at the front thereof, interposed between the forwardly extending portion and the rearwardly extending portions of said sheet at the front thereof, and secured thereto, a metallic member extending the length of the seat at the rear thereof, secured to said sheet adjacent the upwardly curved portion thereof and extending rearwardly therefrom, reinforcing members secured to said sheet, and upholstery covering said sheet and secured thereto at the forward and rear edges thereof, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,191,439. PROCESS FOR THE PREPARATION OF NEW CELLULOSE ESTERS. JOSEPH KOETSCHET and MAX THEUMANN, Lyon, France, assignors to Société Chemique des Usines du Rhône (auct. Gilliard, P. Monnet et Cartier), Paris, France, a Corporation of France. Filed Sept. 5, 1914. Serial No. 860,456. (Cl. 23—24.)

1. The process of preparing new esters of cellulose, which consists in esterifying cellulose with an acid anhydrid in the presence of methylene sulfate.

2. The process of preparing new acetic esters of cellulose, which consists in actylating cellulose with acetic anhydrid in the presence of methylene surface.

3. The process of preparing new esters of cellulose, which consists in first treating cellulose with an organic acid and methylene surfate, and then esterifying the cellulose thus treated by an acid anhydrid.

4. The process of preparing new acetic esters of cellulose, which consists in first treating cellulose with acetic acid and methylene sulfate, and then acetylating the cellulose thus treating by acetic anhydrid.

5. The process of preparing new esters of cellulose, which consists in first treating cellulose with an organic acid in the presence of small quantities of an acid

anhydrid and of methylene sulfate, and after reaction esterifying the cellulose by adding the necessary quantities of anhydrid.

[Claims 6 to 9 not printed in the Gazette.]

1,191,440. NON-ALCOHOLIC CONCENTRATED BEVERAGE AND PROCESS FOR ITS MANUFACTURE. HERMANN LAESSIG, Berlin, Germany. Filed Aug. 6, 1914. Serial No. 855,464. (Cl. 99—11.)

1. A process of manufacture of a food preparation adapted for use in making therefrom a non-alcoholic beverage by addition of water, consisting in mixing a lactic-acid-containing material with a sugar component of such quality and under such conditions that the resulting mixture product contains lactic acid and invert sugar and on account of the sugar-content is stable upon exposure to the air.

2. A process of manufacture of a food preparation adapted for use in making therefrom a non-alcoholic beverage by addition of water, consisting in mixing a lactic-acid-containing material with a cane-sugar-containing material, securing conditions of reaction between the lactic acid and the cane-sugar so as to form invert sugar, the proportion of sugar used being such as to insure the formation of a product stable upon exposure to the air.

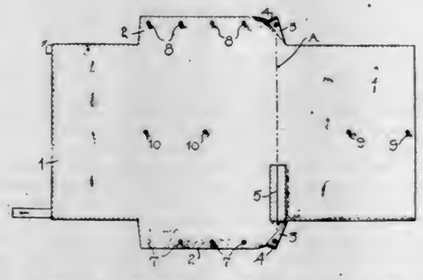
3. A process of manufacture of a food preparation adapted for use in making therefrom a non-alcoholic beverage by addition of water, consisting in mixing a lactic-acid-containing material with a sugar component of such quality and under such conditions that the resulting mixture product contains lactic acid and invert sugar and on account of the sugar content is stable upon exposure to the air, the content of lactic acid in the final product being about four parts by weight or more to each 100 parts by weight of sugar.

4. A process of manufacture of a food preparation adapted for use in making therefrom a non-alcoholic beverage by addition of water, consisting in mixing milk serum containing lactic acid with a sugar component of such quality and under such conditions that the resulting mixture product contains lactic acid and invert sugar and on account of the sugar content is stable upon exposure to the air.

5. A process of manufacture of a food preparation adapted for use in making therefrom a non-alcoholic beverage by addition of water, consisting in mixing milk serum containing lactic acid with a sugar component of such quality and under such conditions that invert sugar is formed within said mixture under the influence of the lactic acid present therein, the proportion of sugar used being such as to insure stability of the product upon exposure to the air.

[Claims 6 to 12 not printed in the Gazette.]

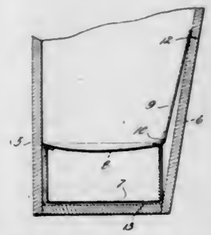
1,191,441. LAP-ROBE. ELLEN LEACH, Dillon, Mont. Filed Mar. 8, 1916. Serial No. 82,958. (Cl. 2—80.)



1. A lap robe comprising an elongated body having oppositely directed wings formed intermediate of its side edges, one end portion of the body and the wings being returned, the returned portions of the wings being permanently connected to the wings proper, and coacting means carried by the returned portion of the body and the wings whereby said wings may be held in a position overlying the returned portion of the body, said body to one side of its transverse center being provided with a slit at the fold afforded by the returned portion of the body.

2. A lap robe comprising an elongated body having oppositely directed wings formed intermediate of its side edges, one end portion of the body and the wings being returned, the returned portions of the wings being permanently connected to the wings proper, coacting means carried by the returned portion of the body and the wings whereby said wings may be held in a position overlying the returned portion of the body, and coacting fastening means carried by the inner face of the returned portion of the body and the inner face of the main portion of the body at substantially the transverse centers thereof for detachably connecting the main portion of the body and the returned portion of the body, said body to one side of its transverse center being provided with a slit at the fold afforded by the returned portion of the body.

1,191,442. SEED-CATCHER. GEORGE A. LIPSIUS, Marengo, Iowa. Filed Mar. 28, 1916. Serial No. 87,314. (Cl. 119—61.)

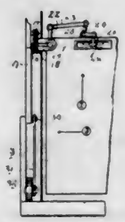


1. In combination with a manger, a receptacle adapted to be inserted within the manger at the lower end thereof, a foraminous cover for said receptacle, and a lid hinged to said cover and adapted to engage at its free end with the walls of the manger, substantially as described.

2. In combination with a feed trough, a receptacle adapted to be inserted in said trough at the bottom thereof, a foraminous cover hinged to the open end of said receptacle, and a top hinged at one edge to the free edge of said cover, substantially as described.

3. An attachment for feed troughs comprising a rectangular receptacle open at its upper end and adapted for insertion in a trough at the bottom thereof, a foraminous cover concaved laterally and hinged at one edge to the edges of said open end, a lid hinged to the free edge of said cover and means for holding said lid open, substantially as described.

1,191,443. ELEVATOR-LOCK. GEORGE LOCKHART, New York, N. Y. Filed May 10, 1911. Serial No. 626,145. (Cl. 187—49.)



1. An elevator lock having means for locking a car at a floor, a second locking means operable by the first said means for securing the power operating mechanism, and a releasing means for the gate, said releasing means controlled by and operable with said first locking means as herein specified.

2. An elevator lock having an upright, and a shoe carried by said upright, said shoe being provided with a reciprocating projection for preventing the operation of said shoe until the car has reached a predetermined position.

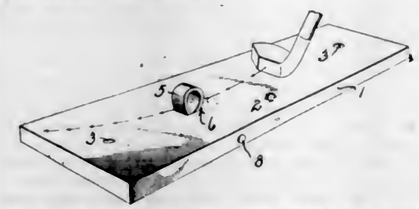
3. An elevator lock having an upright, a shoe carried by said upright, and operable over a floor, and an arm carried by said upright, a plurality of locking means operated by said arm and arranged, the one to secure the door, to be released by said arm, and the other to secure the arm, to be released by said door as herein specified.

4. In an elevator, a car, an upright carried by said car, a shoe carried by said upright and rotatable therewith, an arm carried by said upright and arranged at right angles to said shoe and a link, a bell crank, and a pin connected together and operated by said arm and a power controlling means secured by said pin and by the rotation of the upright as specified.

5. In combination with an elevator car, an upright carried by said car, a shoe carried by said upright and rotatable therewith, an arm carried by said upright and a link, a bell crank, and a pin connected together and operated by said arm and a power controlling means secured by said pin and by the rotation of the upright as herein specified.

[Claim 6 not printed in the Gazette.]

1,191,444. GOLF-PRACTISING DEVICE. ABRAHAM G. LOTT, Washington, D. C. Filed Apr. 8, 1916. Serial No. 89,840. (Cl. 46—4.)



1. A golf practising device comprising a base member, and a target consisting of an upstanding self-sustaining element of flexible material held to a fixed location on the base member.

2. A golf practising device comprising a base member, a target consisting of a single element of flexible material, and a fastener for holding said element in a fixed location and in an upstanding position on the base member.

3. A golf practising device comprising, in combination, a holding element, a flat base member adapted to rest on the ground or floor and engageable with said holding element, and a flexible target element fitted to and projecting above the base member.

4. A golf practising device comprising a base member and an elastic loop, constituting a target member held to a relatively fixed location on the base member.

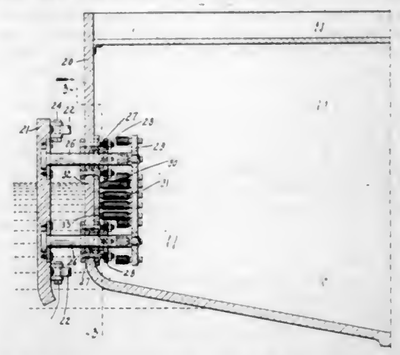
5. A golf practising device comprising a base member and an elastic hollow loop, constituting a target member held to a relatively fixed location on the base member.

[Claims 6 to 13 not printed in the Gazette.]

1,191,445. ARMOR FOR VESSELS, FORTS, AND THE LIKE. MORRIS LOWY, New York, N. Y. Filed Oct. 21, 1915. Serial No. 57,113. (Cl. 114—13.)

1. In an armor for vessels, forts and the like, the combination with the body to be protected, of an armor plate disposed in parallel relation to the outer face thereof and spaced therefrom, plungers carried by said plate and slidably supported by said body, and normally closed springs connecting said plungers and said body.

2. In an armor for vessels, forts and the like, the combination with the body to be protected, of an armor plate disposed in parallel relation to the outer face thereof and spaced therefrom, plungers carried by said plate and slidably supported by said body, a frame mounted upon the inner ends of said plungers, and normally closed springs connecting said frame and said body.



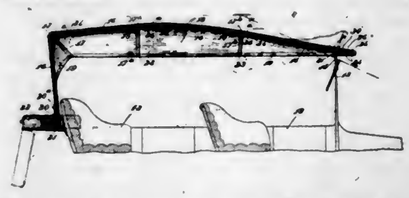
3. In an armor for vessels, forts and the like, the combination with the body to be protected, of an armor comprising a plurality of plates disposed in parallel relation to the outer face of said body and spaced therefrom, links connecting adjoining plates, plungers carried by each plate and slidably supported by said body, and normally closed springs connecting said plungers and said body.

4. In an armor for vessels, forts and the like, the combination with the body to be protected, of an armor comprising a plurality of plates disposed in parallel relation to the outer face of said body and spaced therefrom, links connecting adjoining plates, plungers carried by each plate and slidably supported by said body, a frame mounted upon the inner ends of the plungers of each plate, and normally closed springs connecting said frames and said body.

5. In an armor for vessels, forts and the like, the combination with the body to be protected, of an armor plate disposed in parallel relation to the outer face thereof and spaced therefrom, plungers carried by said plate and slidably extending through said body, and normally closed springs within said body connecting the latter and said plungers.

[Claims 6 to 10 not printed in the Gazette.]

1,191,446. VEHICLE-TOP. ALEXANDER G. MCGREGOR, Globe, Ariz. Filed Dec. 4, 1914. Serial No. 875,536. (Cl. 21—62.)



1. A vehicle top comprising main longitudinal bars rigidly supported at the front and rear parts of the vehicle, cross bars or bows slidingly mounted on said main longitudinal bars, a flexible cover attached to said cross bars or bows, and a receptacle at the rear of the vehicle in which the said cover, in folded condition, together with said cross bars or bows, may be inclosed, combined with means, at the front of the vehicle, for stretching said cover taut, said stretching means comprising a front cross-bar or bow, to which the front end of said cover is attached, and means for pivotally and adjustably connecting said front cross-bar or bow with the forward ends of said main longitudinal bars.

2. A vehicle top comprising main longitudinal bars rig-

idly supported at the front and rear parts of the vehicle, cross bars or bows slidingly mounted on said main longitudinal bars, a flexible cover attached to said cross bars or bows, and a receptacle at the rear of the vehicle in which the said cover, in folded condition, together with said cross bars or bows, may be inclosed, combined with members pivoted to the front ends of said main longitudinal bars, toggle rods having screw-threaded connections with said pivoted members and a front cross bar or bow to which the forward end of said cover is attached and which is removably supported by said toggle rods.

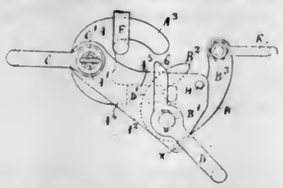
3. A vehicle top comprising main longitudinal bars rigidly supported at the front and rear parts of the vehicle, cross bars or bows slidingly mounted on said main longitudinal bars, a flexible cover attached to said cross bars or bows, and a receptacle at the rear of the vehicle in which the said cover, in folded condition, together with said cross bars or bows, may be inclosed, combined with members pivoted to the front ends of said main longitudinal bars, toggle rods having screw-threaded connections with said pivoted members, a front cross bar or bow, to which the forward end of said cover is attached, and spring clips for removably retaining said toggle rods in working position, and which front cross bar or bow is removably supported by said toggle rods.

4. A vehicle top comprising main longitudinal bars rigidly supported at the front and rear parts of the vehicle, cross bars or bows slidingly mounted on said main longitudinal bars, a flexible cover attached to said cross bars or bows, and a receptacle at the rear of the vehicle in which the said cover, in folded condition, together with said cross bars or bows, may be inclosed, combined with members pivoted to the front ends of said main longitudinal bars, toggle rods having screw-threaded connections with said pivoted members, and a front cross bar or bow to which the forward end of said cover is attached, said front cross bar or bow being provided with sockets removably receiving the forward ends of said toggle rods.

5. A vehicle top comprising main longitudinal bars formed in detachable sections and rigidly supported at the front and rear parts of the vehicle, cross bars or bows slidingly mounted on said main longitudinal bars, a flexible cover attached to said cross bars or bows, and a receptacle at the rear of the vehicle in which the said cover, in folded condition, together with said cross bars or bows, may be inclosed, said cross bars being provided with grooves and with slotted plates overlying said grooves, and said flexible cover being provided with straps having loops passing through said slotted plates into said grooves and adapted to receive fastening rods or pins.

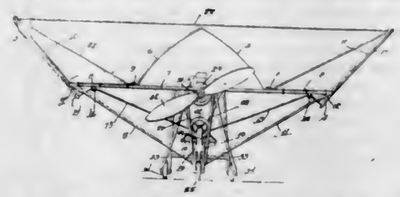
[Claims 6 to 9 not printed in the Gazette.]

1,191,447. RELEASING-GEAR FOR SHIPS' BOATS. THOMAS MACDERMOTT, Portsmouth, England. Filed Sept. 3, 1915. Serial No. 48,869. (Cl. 9—23.)



A releasing gear for ships' boats having in combination two supporting devices disposed within each boat and adapted to engage the boat falls, each of the said supporting devices being flexibly attached to the keel and one end of the boat and comprising a pivoted main or carrying hook of U-shape adapted to assume a vertical disposition under stress when uncontrolled, a pivoted retaining hook of U-shape adapted to engage with and control the said main or carrying hook with great mechanical advantage, a fore and aft cord or rope having a manually operable slip device adapted to control said pivoted retaining hooks, permit them to simultaneously release the said carrying hooks in both supporting devices, and act against the pull of the attachment of the supporting device for the end of the boat, a locking pin adapted to engage one of the said hooks and thereby prevent movement of the main or carrying hook when desired and pivoted tongues adapted to mouse the hook the said tongues being formed integrally with the keel anchoring shackle, substantially as described.

1,191,448. MONOPLANE. ANTHONY MARUCA, Anita, Pa. Filed Oct. 17, 1914. Serial No. 867,150. (Cl. 244—29.)



1. In an aeroplane, arched main planes forming a dihedral angle, intermediate horizontal planes, and outwardly inclined planes carried at the ends of said intermediate planes, the width of said first and last planes increasing upwardly.

2. In an aeroplane, an aerofoil including arched central planes, intermediate planes connected to said arched planes at their bases, outwardly inclined wing planes at the ends of said intermediate planes, a lever extremity carried by the forward edge of each of said wing planes, means for bracing the rearward edge of each of said wing planes, and means connecting with said lever extremities for warping said wing planes.

3. In an aeroplane, an aerofoil structure including spaced webs, arched planes centrally supported upon said webs, wing planes carried at the extremities of said webs in outward inclination, an intermediate horizontal plane resting directly upon said webs between each of said arched planes and a wing plane, a lever extremity carried by the forward edge of each wing plane, a brace extending from one of said webs to the rearward extremity of each of said wing planes, and means connecting with said lever extremities for manual warping of the forward edge of said wing planes.

4. In an aeroplane, an aerofoil including arched central planes, intermediate planes connected to said arched planes at their bases, outwardly inclined wing planes at the ends of said intermediate planes, a lever extremity carried by the forward edge of each of said wing planes, means for bracing the rearward edge of each of said wing planes, means connecting with said lever extremities for warping said wing planes, and means coördinating the action of said wing planes when warped.

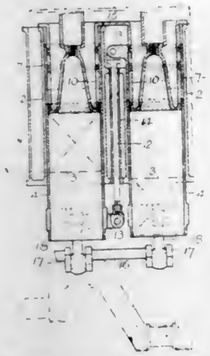
5. In an aeroplane, an aerofoil structure including spaced webs, arched planes centrally supported upon said webs, wing planes carried at the extremities of said webs in outward inclination, intermediate planes resting directly upon said webs between each of said arched planes and a wing plane, a lever extremity carried by the forward edge of each wing plane, a brace extending from one of said webs to the rearward extremity of each of said wing planes, means connecting with said lever extremities for manual warping of the forward edge of said wing planes, and means coördinating the action of said wing planes when warped.

[Claims 6 to 10 not printed in the Gazette.]

1,191,449. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. JACKSON CHARLES MEADOWS, Gainsborough, England. Filed Oct. 8, 1915. Serial No. 54,837. (Cl. 123—75.)

1. In an internal combustion engine of the character described the combination with a cylinder, of inlet and exhaust ports, a piston, an inwardly projecting cylinder head, two sleeve valves arranged one above the other, ports in said sleeve valves adapted to register with the cylinder inlet and exhaust ports respectively and to be sealed by said head at the proper moment, and mechanism for operating said sleeve valves substantially as described.

2. In an internal combustion engine of the character described, the combination with each cylinder of a pair of cylinders of a piston, an inwardly projecting cylinder head, two sleeve valves arranged one above the other and adapted to control the admission and exhaust respectively of the working fluid, one of said sleeves in each cylinder being in operative connection with the other of the two corresponding sleeves in the companion cylinder, and mechanism for operating said sleeves substantially as herein set forth.



3. In an internal combustion engine of the character described, the combination with a cylinder, of inlet and exhaust ports, a piston, an inwardly projecting cylinder head, an upper sleeve valve arranged between said cylinder and cylinder head, ports in said upper sleeve valve adapted to register with the cylinder exhaust ports and to be sealed by said head at the proper moments, a lower sleeve valve arranged between said cylinder and piston and having its upper end working between said cylinder and cylinder head, ports in said lower sleeve valve adapted to register with the cylinder inlet ports and to be sealed by said head at the proper moments, and means for operating said sleeve valves, substantially as described.

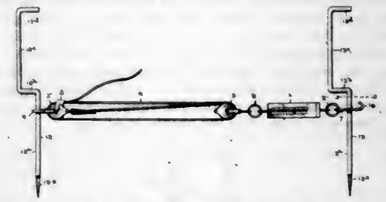
4. In an internal combustion engine of the character described, the combination with each cylinder of a pair of cylinders of a piston, an inwardly projecting cylinder head, an upper sleeve valve arranged between said cylinder and cylinder head, a lower sleeve valve arranged between said cylinder and piston and having its upper end working between said cylinder and cylinder head, said sleeve valves in each pair of cylinders being interconnected so that the lower sleeve valve of each cylinder moves in unison with the upper sleeve valve of the companion cylinder, and mechanism for operating said sleeve valves, substantially as herein set forth.

5. In an internal combustion engine of the character described, the combination with each ported cylinder of a pair of cylinders of a piston, an inwardly projecting cylinder head having port openings therein, a ported upper sleeve valve arranged between said cylinder and cylinder head, a lower sleeve valve arranged between said cylinder and piston and having a ported upper end working between said cylinder and cylinder head, means for operatively connecting the upper sleeve valve of each cylinder with the lower sleeve valve of the companion cylinder, and mechanism for operating said lower sleeve valves, substantially as herein set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,191,450. WIRE-TENSION DEVICE. MARSHAL R. MOORE, Monmouth, Ill. Filed Mar. 2, 1916. Serial No. 81,685. (Cl. 111—42.)

The combination in a wire tension device of an anchor rod provided with means for applying foot pressure and hand pressure thereto for fixing it in the ground and removing it therefrom; tension mechanism attached to the rod; locking means for retaining the tension secured; means, for measuring the degree of tension secured, attached to the tension mechanism; a plate attached to the measuring means and provided with a curved portion having a notch adapted to be used for attachment to a wire, and also provided with an orifice; and an anchor rod,



slidably mounted in said orifice and provided with means for applying foot pressure and hand pressure thereto for fixing it in the ground and removing it therefrom, for anchoring the plate independently from the rest of the device when the desired degree of tension has been secured, whereby the strain is removed from the rest of the device.

1,191,451. METHOD OF REMOVING SCALE FROM HEATING APPARATUS FOR PULP-DIGESTERS. EINAR MORTERUD, Jelöen, Norway. Filed Aug. 6, 1914. Serial No. 855,448. (Cl. 257—1.)



1. The method of removing scale from the outside of heating tubes in pulp digesters and the like, which method comprises first drying the scale by heating the tubes to a temperature below the temperature at which the scale is formed, subjecting the tubes to a temperature above the temperature at which the scale is formed, and suddenly cooling the tubes to a temperature below either of the aforesaid temperatures.

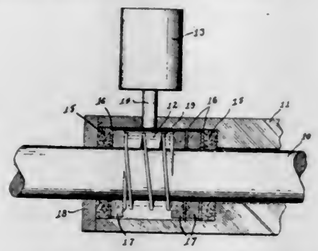
2. A method of removing incrustation or scale from the outside of heating tubes and the like in heating apparatus for solutions used in pulp digesters and the like comprising the following steps: discharging the solution from the apparatus, passing a heating medium through the tubes to dry the scale by a moderate heat, passing a heating medium of very high temperature through the tubes to heat the tubes to a higher temperature than that to which they are heated during the digesting process, and finally passing a cooling medium through the tubes so as to cause a rapid cooling and contraction of the tubes, thereby loosening the scale from the tubes so it may be knocked off.

3. The method of removing scale from the outside of heating tubes in pulp digesters and the like, which method consists in removing the digesting solution from in contact with the tubes, gradually drying the scale by passing steam through the tubes, subsequently passing steam of very high temperature through the tubes to increase the temperature of the tubes above that to which they are heated during the digesting process, thereby expanding the tubes and simultaneously rupturing the scale, and finally passing cold water through the tubes to rapidly cool and contract them.

1,191,452. LUBRICATING-BEARING FOR CENTRIFUGAL PUMPS. LAWRENCE A. MYERS, Porterville, Cal. Filed Aug. 30, 1915. Serial No. 48,083. (Cl. 137—117.)

1. In a machine of the character described, a sleeve having its passageway provided with an enlarged portion

forming a packing box, a rotatable shaft extending through said sleeve and packing box, an oil supply communicating with said packing box intermediate its length, packing positioned in said packing box at the ends thereof about said shaft, steel washers positioned in said packing box around said shaft and having their outer edges engaging the walls of the packing box and having their inner edges positioned in spaced relation to the shaft, bronze washers positioned in said packing box and fitting snugly upon said shaft to turn with the same and having their outer edge portion positioned in spaced relation to the walls of the packing box, and resilient means positioned upon said shaft and holding the washers in frictional engagement upon opposite sides of the oil supply whereby the steel washers will turn with the bronze washers.



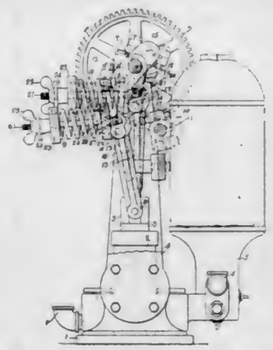
2. In a machine of the character described a sleeve provided with a packing box, a rotatable shaft extending through said sleeve and packing box, a lubricating container communicating with said packing box, washers of relatively hard material positioned in said packing box about said shaft and having their outer edge portions engaging the walls of the packing box and having their inner edge portions positioned in spaced relation to said shaft, washers of relatively tough material positioned upon said shaft within said packing box and turning with the shaft and having their outer edge portions positioned in spaced relation to the walls of said packing box, and resilient means engaging certain of said washers to hold the washers in contacting engagement whereby frictional engagement will cause said tough washers to slowly rotate said hard washers.

3. A device of the character described including a packing box, a rotatable shaft extending through said packing box, fabric washers positioned in the end portions of said packing box about said shaft, washers of relatively hard metal fitting snugly in said packing box about said shaft and having their inner edge portions positioned in spaced relation to said shaft, washers of relatively tough metal fitting snugly upon said shaft within said packing box and positioned in spaced relation to the walls of the packing box, and resilient means holding said washers in contacting relation to provide frictional engagement thereby turning said tough washers.

4. A device of the character described including a packing box, a rotatable shaft extending through said packing box, washers of relatively hard material fitting snugly in said packing box and loosely about said shaft, washers of relatively tough material fitting snugly upon said shaft and loosely within said packing box, and resilient means holding said washers in contacting relation to provide frictional engagement thereby turning said hard washers with said tough washers.

1,191,453. PUMP. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership consisting of Francis E. Myers and Philip A. Myers. Filed Sept. 18, 1915. Serial No. 51,298. (Cl. 103—85.)

1. In a pump, the combination, with a piston, and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected, respectively, with said shaft and said piston and having its two members pivotally connected one with the other on an axis arranged between but out of alinement with the axis of the first-mentioned connections, and a spring carried by said rod and acting thereon to hold the two members thereof against relative movement during the normal operation of said pump and to permit said members to have relative movement when abnormal resistance is offered to the movement of said piston.



2. In a pump, the combination, with a piston, and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected, respectively, with said shaft and said piston and having its two members pivotally connected one with the other on an axis arranged between but out of alinement with the axes of the first-mentioned connections, the two members of said rod having parts coöperating to prevent said intermediate axis from being moved into alinement with the axes of the said first-mentioned connections, and a spring carried by said rod and acting thereon to hold the two members thereof normally against relative movement about said axis.

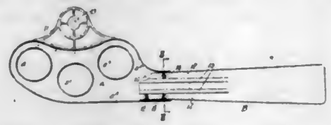
3. In a pump, the combination, with a piston, and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected, respectively, with said shaft and said piston and having its two members pivotally connected one with the other on an axis arranged between but out of alinement with the axes of the first-mentioned connections, and a spring connecting both members of said connecting rod and acting thereon to hold said members against relative movement during the normal operation of said pump and to permit said members to have relative movement when abnormal resistance is offered to the movement of said piston.

4. In a pump, the combination, with a piston, and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected, respectively, with said shaft and said piston and having its two members pivotally connected one with the other on an axis arranged between but out of alinement with the axes of the first-mentioned connections, one member of said rod having a part extending beyond such intermediate axis and arranged to engage a part carried by the other member of said rod to limit the movement of said intermediate axis toward a line extending through the two first-mentioned axes, and a spring connected with the two members of said rod and tending to move said intermediate axis toward said line.

5. In a pump, the combination, with a piston, and a crank shaft, of a two part connecting rod interposed between said piston and said shaft, the two part rod having its ends pivotally connected, respectively, with said shaft and said piston and having its two members pivotally connected one with the other on an axis arranged between but out of alinement with the axes of the first-mentioned connections, the two members of said rod having parts adapted for connection with the respective ends of a spring and arranged to be moved toward or away from each other when said members are moved about said intermediate axis, and a spring connected with said parts of said members.

[Claims 6 to 16 not printed in the Gazette.]

1,191,454. SIGNAL-SEMAPHORE. WALTER P. NEUBERT, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Oct. 17, 1913. Serial No. 795,697. (Cl. 246—15.)



1. A signal semaphore comprising a spectacle, a blade of thin sheet metal, and bolts whose heads are secured to the blade for attaching the blade to the spectacle, the heads of the bolts being hollowed out to reduce the mass of metal, and the blade and bolt heads being coated with enamel.

2. A semaphore comprising a spectacle, an enameled blade, bolts for attaching the blade to the spectacle, and means for rigidly securing the blade to the head of each bolt at a distance from the surface of the bolt which is in contact with the spectacle, whereby the blade is not in contact with the spectacle.

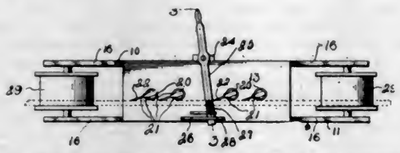
3. A semaphore comprising a spectacle, an enameled blade, bolts for attaching said blade to the spectacle, the heads of the bolts being provided with shoulders, and means for securing the blade to said bolt heads against said shoulders, whereby the blade is not in contact with the spectacle.

4. A semaphore comprising a spectacle, an enameled sheet metal blade whose edges are bent toward the spectacle to form stiffening flanges, the spectacle overlapping the edges of the blade so that the said stiffening flanges are opposite the spectacle, bolts for attaching the blade to the spectacle, and means for securing the blade to the head of each bolt at a distance from the surface of the bolt which is in contact with the surface of the spectacle, whereby the said flanges on the blade do not touch the spectacle.

5. A semaphore comprising a sheet metal spectacle, an enameled sheet metal blade, the edges of the blade being bent toward the spectacle to provide stiffening flanges, and the edges of the spectacle being bent toward the blade to likewise provide stiffening flanges, the flanges on the spectacle overlapping and lying outside of those on the blade, bolts for attaching the blade to the spectacle, and means for rigidly securing the blade to the head of each bolt at a distance from the surface of the bolt which is in contact with the spectacle.

[Claim 6 not printed in the Gazette.]

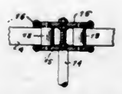
1,191,455. STROPPING DEVICE. THOMAS L. PARMETER, Westport, S. D., assignor to Royce Parmeter, Westport, S. D. Filed Aug. 11, 1915. Serial No. 44,965. (Cl. 51—16.)



1. A stropping device for safety razor blades comprising a base body, rotatable elements carried by the ends of the body for engagement with the edge of a strop, transverse shafts mounted in the body and extending through one side thereof where they are provided with razor blade gripping members, a rack bar slidable longitudinally in the body beneath the shafts, pinions carried by the shafts and engaging the rack bar, and means carried by the body and connected to the rack bar for moving the rack bar to partially rotate the shafts in opposite directions.

2. A stropping device for safety razor blades comprising a base body having rollers for engagement with the edge of a strop, rotatable blade holders carried by the body, and a handle movably carried by the body for partially rotating the blade holders in opposite directions for alternately engaging the opposite sides of the edges of the blades with the strop.

1,191,456. COTTON-CHOPPER. JOSEPH R. PENN, Duncanville, Tex. Filed Oct. 21, 1915. Serial No. 57,089. (Cl. 97—45.)



1. In a cotton chopper, the combination of a main frame, a chopping frame mounted under the main frame, means for shifting the forward end of the chopping frame laterally independently of the main frame, an adjustable pivotal support for the forward end of the chopping frame, means for raising and lowering the rear portion of the chopping frame, a hanger slidable forward and rearward on the chopping frame, a transversely shifting hoe carried by the hanger, means for shifting the hoe mounted on the hanger, means for sliding hanger, and a driving connection extending from the main frame to the hoe shifting means including devices compensating the independent adjustments of the frame and their parts.

2. In a cotton chopper, the combination of a main frame supported on ground wheels, a chopping frame suspended below the main frame, a sliding hanger mounted across the chopping frame, a lever for sliding said hanger longitudinally of the frames, shifting elements mounted on the hanger, a hoe suspended from the said elements, a crank shaft in fixed relation to the hanger and having one end carried thereby, the other end of the crank shaft slidable on the chopping frame, connections between the crank shaft and the shifting elements, and means for transmitting rotation from the ground wheels to the crank shaft.

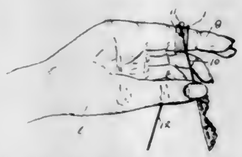
3. In a cotton chopper, the combination with a portable main frame, of a chopping frame suspended under the main frame, a slidable hanger adjustable longitudinally of the chopping frame and extending across the said frame, a slidable crank shaft connected with the hanger, laterally swinging shifting elements carried by the hanger, operating-connections between the crank shaft and the shifting elements, a hoe carried by the elements, and means for transmitting motion from the main frame to the crank shaft.

4. In a cotton chopper, the combination with a main frame mounted on ground wheels, of a chopping frame suspended under the main frame, a slidable hanger adjustably mounted on the chopping frame so as to move forward and rearward, means for adjusting the chopping frame with relation to the main frame, a slidable crank shaft connected with the hanger, a pair of levers mounted on the hanger, links extending from the crank shaft to the forward ends of the levers, compensating connections between the outer ends of the links and the levers, a connection between the rear ends of the levers, a hoe suspended from said connection, and means for transmitting motion from the ground wheels to the crank shaft.

5. In a cotton chopper, the combination with a main frame mounted on ground wheels, and a chopping frame disposed under the main frame; of a hanger slidable longitudinally of the chopping frame, a hoe support having its rear end suspended, operating mechanism mounted on the hanger and connected with the rear end of the hoe support whereby said support is shifted laterally of the hanger and the frames, a hoe mounted on the rear end of

the support, and a carriage slidable on the hanger transversely of the chopping frame and connected with the forward end of the hoe support whereby said support is maintained parallel with the longitudinal axis of the chopping frame.

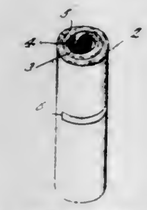
1,191,457. CROCHET-RING. SABINA PENROD, Yucahill, Nebr. Filed Feb. 16, 1915. Serial No. 8,590. (Cl. 66—17.)



1. A thread guide for use on one of the fingers of the hand including a ring of substantially arcuate cross section forming a channeled guide, a plurality of guiding and retaining elements thereon comprising loops formed from hook members having their extremities in overlapped spaced-apart relation for reception and movement therethrough of a thread or the like.

2. A device as specified, including a ring arcuate in cross section to provide a channeled guide, a plurality of overlapping hooks on said ring forming loops to receive a thread, said thread moving upon the base of said channel.

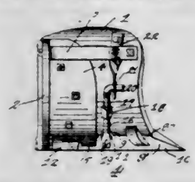
1,191,458. FIRE-KINDLER. LOREN R. PHILLIPS, Fruita, Colo. Filed Oct. 12, 1914. Serial No. 866,286. (Cl. 44—2.)



1. A fire kindler comprising a tubular roll of inflammable material, having its inner end extended with the opening of the roll to provide an initial igniter, and the roll being provided with a transverse slot between its ends to form a hinge connection between the sections thereof.

2. A fire kindler comprising a plurality of tubular rolls of inflammable material and their inner ends projecting within the openings of said rolls to provide initial igniters, said rolls being secured together side by side and having alining slots at the same side providing sections connected by hinge portions, whereby said sections can be swung relative to one another.

1,191,459. PLOW. JOSEPH A. PITNER, Minot, N. D. Filed June 3, 1915. Serial No. 31,980. (Cl. 97—18.)



In a plow, the combination with a mold-board, a share having a socket, a groove formed therein, lugs carried by the mold-board, one of said lugs being detachably engaged in said socket and having a fin for engaging said groove, the remaining lugs being engaged with one face of the share, a hook carried by the share, a perforated plate carried by the mold-board, a hook consisting of adjustably connected sections, one of said sections being pivotally and removably engaged with the first named hook, a bill carried by the other section of the hook and being adapted to removably engage the perforation of the plate, said second named hook serving to hold the share and mold-board in interlocked relation.

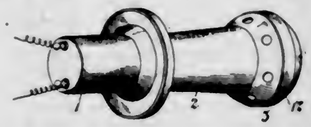
1,191,460. FIREARM. ALBERT B. PRATT, Lyndon, Vt. Filed Mar. 29, 1915. Serial No. 17,635. (Cl. 42—71.)



1. A firearm comprising a barrel, a main stock therefor, and a butt-stock to engage the shoulder of the marksman, having its comb substantially lower than said barrel to permit ready sighting of the firearm, and provided with a thumb recess beneath said comb, the portion of the butt-stock where engaged by the cheek of the marksman being inclined downward from the rear toward said recess away from the axis of the barrel, whereby recoil of the firearm carries both the thumb and the comb below and away from the cheek of the marksman and prevents injury thereto.

2. A firearm comprising a barrel 1, a main stock 5 therefor, a butt-stock to engage the shoulder of the marksman, having its comb 15 substantially lower than said barrel to permit ready sighting of the firearm, and provided with a thumb recess 9 beneath said comb, and a strengthening member 11 bridging said recess, the portion of the butt-stock where engaged by the cheek of the marksman being inclined downward from the rear toward said recess away from the axis of the barrel, whereby recoil of the firearm carries both the thumb and the comb below and away from the cheek of the marksman and prevents injury thereto.

1,191,461. SIGNALING-HORN. MAYO S. PURPLE, East Hampton, Conn., assignor to The Bevin Brothers Manufacturing Company, East Hampton, Conn., a Corporation of Connecticut. Filed Aug. 10, 1912. Serial No. 714,384. (Cl. 116—1.)



1. A signaling horn having a sound producing mechanism and a horn consisting of a substantially short drawn tapered cylindrical tube having its smaller end secured appurtenant to the sound producing mechanism and with a hollow spheroidal member provided with a neck secured within its larger end, said spheroidal member having an opening in axial alinement with the larger end of the tapered tube, said opening being smaller in diameter than the opening of said tube.

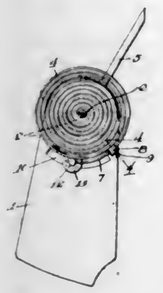
2. A signaling horn having a sound producing mechanism and a horn consisting of a gradually tapered tube with the smaller end of said tube secured appurtenant to the sound producing mechanism and with a hollow spheroidal casing secured to the larger end thereof, said spheroidal casing having a neck by which it is secured within the tube with a clear opening of smaller area than the neck diametrically opposite said neck and perforations in the spheroidal casing above the line of opening of the neck and the spheroidal casing.

3. A signaling horn having a sound producing mechanism and a horn consisting of a gradually tapered tube with the smaller end of said tube secured appurtenant to the sound producing mechanism and with a hollow spheroidal casing secured to the larger end thereof, said spheroidal casing secured to the tube and with a clear opening diametrically opposite said neck smaller in diameter than the opening of said neck, and provided with series of perforations through its walls intermediate the neck and opening whereby the vibrated air may pass through the spheroidal casing.

4. A device of the character described having a horn of comparatively thin metal comprising a gradually tapered tube having at its larger end a hollow spheroidal member reinforced about its medial line, an integral neck upon the spheroidal member fitting the outer end of the tapered tube, and an opening through the spheroidal member opposite to but axially alined with reference to the neck, said opening having a lesser area than the opening of the neck, and perforations through said spheroidal member on opposite sides of the medial reinforce and located outside the lines between the neck and opening of the spheroidal member.

5. A horn consisting of a tubular member having at its outer end a hollow spheroidal member having an opening alined with but smaller in diameter than the tubular member and provided with a series of perforations adjacent to the said opening and a series of perforations adjacent to the neck.

1,191,462. WATCH-BALANCE. DERWOOD B. RAFF, Thomas, Okla. Filed Nov. 29, 1913. Serial No. 803,795. (Cl. 58—109.)



1. In a watch balance, a balance cap provided with a slot therein, a collet adjustably mounted in said slot, a hair spring having its terminal end keyed to said adjustable collet, and stationary means carried by said balance cap at a point remote from said collet, in the direction of wind of the hair spring for adjustably anchoring said hair spring.

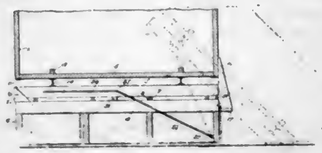
2. In a watch balance, a balance cap provided with a slot therein, a collet adjustably mounted in said slot, a hair spring having its terminal end keyed to said adjustable collet, and a stationary collet carried by said balance cap adjacent one end of said slot and connecting with the hair spring at a point remote from the adjustable collet with respect to the direction of wind of said hair spring.

3. In a watch balance, a balance cap provided with a slot therein, a collet adjustably mounted in said slot, said adjustable collet comprising a base member and a retainer plate, a hair spring having its terminal end keyed to said adjustable collet and a stationary collet carried by said balance cap adjacent one end of said slot and connecting with the hair spring at a point remote to the adjustable collet with respect to the direction of wind of said hair spring.

4. In a watch balance, a balance cap provided with an arcuate slot, a collet slidably fitted in said slot and capable of reciprocable adjustment therein, means for holding said collet in frictional engagement with said balance cap, a hair spring having its terminal end keyed to said adjustable collet and a stationary collet carried by said balance cap, adjacent one end of said slot and connecting with said hair spring at a point remote from the adjustable collet for adjustably anchoring said hair spring.

5. In a watch balance, a balance cap provided with a slot therein, a two-part collet slidably fitted in said slot and capable of reciprocable adjustment therein, said adjustable collet comprising a base member having a slot-engaging portion and a retainer plate in engagement with the said slot engaging portion, said plate disposed upon the upper face of said balance cap and arranged over said slot, means for connecting said plate and base member and securing the same against the cap to lock the collet in position, a hair spring having its terminal end fixed to said adjustable collet, and means carried by said cap adjacent one end of said slot, and in connection with said hair spring at a point remote from the adjustable collet for adjustably anchoring the hair spring.

1,191,463. DUMP-CAR. HARRY L. RANSBERGER, Lapaz, Ind. Filed Aug. 7, 1915. Serial No. 44,252. (Cl. 105—15.)



1. In a dump car, the combination of a railway truck, cross guide rails thereon, a car body having corresponding cross rails fastened to the bottom thereof and overlying the first named cross rails, side and end boards hinged to the floor of the car body and adapted to be folded outwardly, track rails for a wheeled ditching or hoisting machine extending lengthwise of the car body floor, extension track rails extending across the inner faces of the end boards and adapted to be brought into alinement with the first named track rails, and means for laterally sliding and dumping said car body.

2. In a dump car, the combination of a railway truck, cross guide rails thereon, a car body having corresponding cross rails fastened to the bottom thereof and overlying the first named cross rails, side and end boards hinged to the floor of the car body and adapted to be folded outwardly, track rails for a wheeled ditching or hoisting machine extending lengthwise of the car body floor, extension track rails extending across the inner faces of the end boards and adapted to be brought into alinement with the first named track rails, means for laterally sliding and dumping said car body, and transversely extending rests on the truck frame for supporting said end boards when said track rails and the extensions thereof are in line.

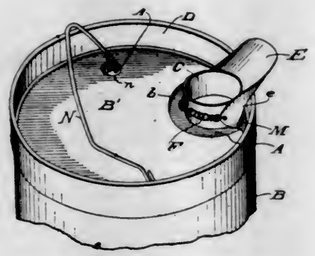
3. In a dump car, the combination of a railway truck, cross guide rails thereon, a car body having corresponding cross rails fastened to the bottom thereof and overlying the first named cross rails, side and end boards hinged to the floor of the car body and adapted to be folded outwardly, track rails for a wheeled ditching or hoisting machine extending lengthwise of the car body floor, extension track rails extending across the inner faces of the end boards and adapted to be brought into alinement with the first named track rails, means for laterally sliding and dumping said car body, comprising a compressed air cylinder, a piston therein, guiding sheaves journaled on the cross guide rails of the truck, and flexible operating elements actuated by said piston and connected to the car body.

4. In a dump car, the combination of a railway truck, cross guide rails thereon, a car body having corresponding cross rails fastened to the bottom thereof and overlying the first named cross rails, side and end boards hinged to the floor of the car body and adapted to be folded out-

wardly, track rails for a wheeled ditching or hoisting machine extending lengthwise of the car body floor, extension track rails extending across the inner faces of the end boards and adapted to be brought into alinement with the first named track rails, and means for laterally sliding and dumping said car body, and stay rods having a pivotal connection with the truck frame and a sliding connection with the car body.

5. In a dump car, the combination of a railway truck, cross guide rails thereon, a car body having corresponding cross rails fastened to the bottom thereof and overlying the first named cross rails, side and end boards hinged to the floor of the car body and adapted to be folded outwardly, track rails for a wheeled ditching or hoisting machine extending lengthwise of the car body floor, extension track rails extending across the inner faces of the end boards and adapted to be brought into alinement with the first named track rails, means for laterally sliding and dumping said car body, braces fastened to the side boards, and blocks interposed between said braces and the truck frame.

1,191,464. DISPENSING DEVICE, INCLUDING A POURING-LIP. GEORGE J. RECORD, Conneaut, Ohio. Filed Oct. 18, 1915. Serial No. 56,420. (Cl. 221—24.)



1. In combination with a shipping case or inclosure having a raised continuous rim around its top at least as high as the neck hereinafter mentioned, and a receptacle within said casing having a raised neck, a pouring lip yieldingly attached to said neck and free to turn around the latter, also adapted to be turned down within said rim for packing, or to be turned up to rest on the top of said rim for pouring.

2. In a combination with a receptacle having a neck raised above its top, a pouring lip held yieldingly to said neck and provided with rounded shoulders constantly bearing on said top, but permitting said lip to be tilted into pouring position or into position for packing as said shoulders turn on said top.

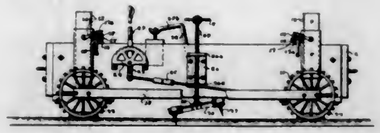
3. In combination with a can having a neck raised above its top, a pouring lip provided with a half-collar which fits on said neck and an attaching spring connecting the ends of said half-collar and permitting said lip to turn on said neck and to be tilted up and down, the under part of said half-collar being provided with downwardly extended shoulders near its ends, the lower edges of said shoulders being constantly supported by said can top and rounded to permit said lip to be tilted up and down as set forth.

4. A pouring lip provided with a half collar and downwardly presented shoulders rounded on their lower edges, in combination with a spring connecting the ends of said half-collar and a can having its top in contact with said shoulders which bear thereon, the said half-collar and neck having a horizontal bead and groove connection when the said lip is in position for pouring, the said shoulders permitting the lip to be tilted downward out of such pouring position and restored to the same at will, and the said spring permitting said lip to be turned around said neck so as to be presented outward beyond said top for pouring or inward above said top out of the way of external objects.

5. In combination with a receptacle having a neck raised above its top and a shipping case having a rim extending upward as high as said neck, a pouring lip held to said neck but permitted to turn around the same and to tilt upward into pouring position or downward below the level of said rim at will, said lip being provided with rounded shoulders always bearing on the top of said receptacle, said lip being also supported and braced in pouring position by the said rim and by the contact of the shoulders with said top.

[Claim 6 not printed in the Gazette.]

1,191,465. ROAD-GRADER. EDWIN M. REESE, Yorba Linda, Cal. Filed Aug. 22, 1914. Serial No. 857,992. (Cl. 37—50.)



1. A road grader comprising a wheeled frame, an earth breaking member extended transversely beneath said frame, a mechanism correlated with each end of said member to adjust said end vertically, and a weight acting upon said member tending to tilt the same about an axis transverse of the frame.

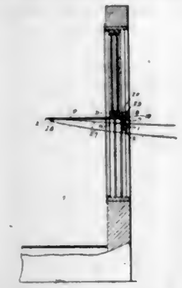
2. A road grader comprising a wheeled frame, an earth breaking member extended transversely beneath said frame, and free to tilt about an axis transverse of the frame, a weight acting upon said member tending to maintain it in a tilted position, a mechanism correlated with each end of said member to adjust said end vertically, and means for individually adjusting the wheels of the frame vertically.

3. A road grader comprising a wheeled frame, an earth breaking member extended transversely beneath said frame, and free to tilt about an axis transverse of the frame, a post extending rigidly and centrally upward from the earth breaking member, formed with an arm at its upper end substantially parallel to the direction of travel, and a weight suspended from the free end of said arm tending to maintain the earth breaking member tilted.

4. A road grader comprising a frame formed of side members and end members having hinged connection, an earth breaking member transversely extended beneath the center portion of said frame, and formed with rows of teeth respectively adjacent to its front and rear edges, vertical adjusting screws respectively secured to the side members of the frame above the end of the earth breaking member, means for manually communicating rotation to each adjusting screw, a ball and socket connection between the lower end of each adjusting screw and the corresponding end of the earth breaking member, manually operated means for vertically adjusting each transporting wheel, and means for simultaneously swinging the two wheels at each side of the grader about vertical axes.

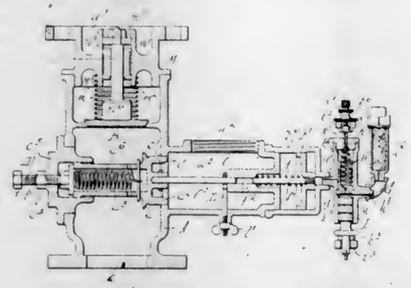
1,191,466. CLOTHES-LINE CRANE. CARL J. REICH, Mount Vernon, N. Y., assignor to Frederick A. Scheffler, New York, N. Y. Filed Dec. 18, 1915. Serial No. 67,661. (Cl. 68—12.)

In a clothes line crane, an attaching element comprising an angle plate, means to secure the angle plate to a window casing, a supporting element comprising an angle plate, means pivotally supporting the supporting element on the horizontal arm of the attaching element, a clothes line supporting arm pivoted to the vertical arm of the supporting element, a pin carried by the clothes line supporting arm and adapted for engagement with the vertical arm of the supporting element, means carried by the



supporting element to guide the clothes line and a pulley carried by the free end of the arm.

1,191,467. LOAD-CONTROLLING DEVICE. GEORGE M. RICHARDS, Erie, Pa. Filed Sept. 23, 1912. Serial No. 721,730. (Cl. 230—24.)



1. In a load controlling device for fluid compressors, the combination of a casing having inlet and outlet openings which connect, respectively, with the compressor and a receiver for the compressed fluid and an escape opening between said inlet and outlet openings, a valve controlling said escape opening which is yieldingly held in its open position when the compressor is starting to permit the air from the compressor to discharge to the atmosphere, and which is adapted to be closed automatically by the direct pressure thereon of the pumped fluid within the casing to cause the fluid to pass to said receiver, and means for unseating said valve when the fluid in the receiver reaches a certain predetermined pressure, substantially as set forth.

2. In a load controlling device for fluid compressors, the combination of a casing having inlet and outlet openings which connect, respectively, with the compressor and a receiver for the compresesd fluid and an escape opening between said inlet and outlet openings, a valve controlling said escape opening which is yieldingly held in its open position when the compressor is starting to permit the air from the compressor to discharge to the atmosphere, and which is adapted to be closed automatically by the direct pressure thereon of the pumped fluid within the casing to cause the fluid to pass to said receiver, and means controlled by the pressure of the pumped fluid for unseating said valve when the fluid in the receiver reaches a certain predetermined pressure, substantially as set forth.

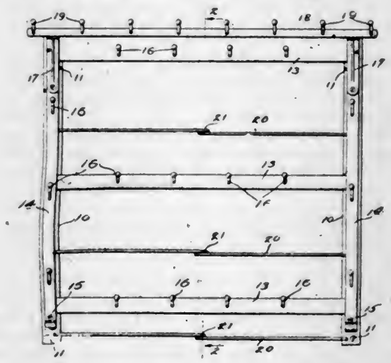
3. In a load controlling device for fluid compressors, the combination of a casing having inlet and outlet openings which connect respectively, with the compressor and a receiver for the compressed fluid and an escape opening between said inlet and outlet openings, a valve controlling said escape opening which is yieldingly held in its open position when the compressor is starting to permit the air from the compressor to discharge to the atmosphere, and which is adapted to be closed automatically by the direct pressure thereon of the pumped fluid within the casing to cause the fluid to pass to said receiver, a piston operatively connected with said valve, a cylinder in which said piston works, and a controlling device operated by the pressure in said receiver for admitting compressed fluid to said cylinder for causing said piston to unseat said valve, substantially as set forth.

4. In a load controlling device for fluid compressors, the combination of a casing having inlet and outlet openings and an escape opening between said inlet and outlet openings, a valve controlling said escape opening which is yieldingly held in its open position and is adapted to be closed by the pressure thereon of the fluid in the casing, a piston located in a cylinder for operating said valve and which is adapted to be actuated by the compressed fluid, and connections between said piston and said valve for unseating the valve by the movement of the piston in one direction, substantially as set forth.

5. In a load controlling device for fluid compressors, the combination of a casing having inlet and outlet openings and an escape opening between said inlet and outlet openings, a valve controlling said escape opening and having a hollow stem which extends across said casing, means on one side of said casing for guiding said valve, means on the opposite side of said casing for guiding said hollow stem, and a spring arranged in said hollow stem for yieldingly holding the valve in its open position, said valve being adapted to be closed by the direct pressure thereon of the fluid in the casing, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,191,468. RACK. JOHN H. RIGBY, Glass, Tenn. Filed July 15, 1915. Serial No. 40,103. (Cl. 65—65.)

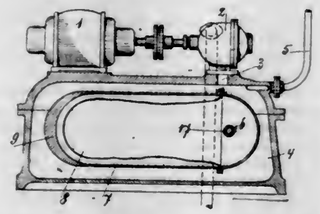


A rack comprising side bars, cross bars extending between said side bars, supporting means carried by said cross bars, and resilient abutment rods extending beneath said cross bars and bent intermediate their length to provide spring elements and having their end portions connected with the side bars, said abutment rods constituting bracing means for the side bars to hold the same in tight engagement with said cross bars.

1,191,469. DEVICE FOR THE PREVENTION OF AIR-LOSSES IN LIQUID-CONTAINERS UNDER AIR-PRESSURE. CARL JOHAN RIXEN, Aeröskôbing, Denmark. Filed Jan. 25, 1915. Serial No. 4,380. (Cl. 103—86.)

1. A device for the prevention of air losses in liquid containers under air pressure, comprising a container for the reception of a liquid, means for supplying liquid to the container, a bag having a compressible agent therein

received in the container and liquid, said compressible agent being adapted to be compressed by the liquid, and means actuated upon the increase and decrease of the compression of the agent for regulating the supplying of liquid to the container.



2. A device of the type specified, comprising a liquid container, a perforated hollow body movably suspended in the container and designed to be completely immersed in the liquid in the container, and an air bag in said hollow body, substantially as and for the purpose set forth.

3. A device of the type specified, comprising a liquid container, a hollow axle therein projecting with one end beyond the container, a valve to close said axle end, a float movably mounted with one end on said axle, and an air bag in said hollow body to communicate with the hollow in said axle, substantially as and for the purpose set forth.

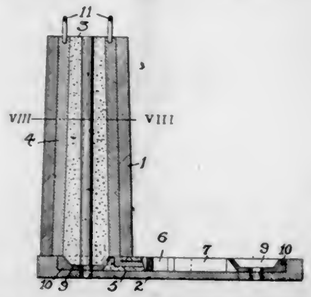
4. A device for the prevention of air losses in liquid containers under air pressure, comprising a container for the reception of a liquid, means for supplying liquid to the container, a bag having a compressible agent therein received in the container and liquid, said compressible agent being adapted to be compressed by the liquid, a switch for controlling the supply of liquid to the container, and means connecting the switch to the bag for causing the operation of the switch upon the increase and decrease of the compression of the agent of the bag for governing the supply of liquid to the container.

1,191,470. SPRING-HINGE. ELIJAH J. ROBERTS, Bothell, Wash. Filed Nov. 28, 1914. Serial No. 874,512. (Cl. 16—25.)



A spring hinge including in combination with a door frame, a door having a rounded edge, a pair of cylindrical casings, an ear projecting at right angles from one casing and securable to the side of the door frame to consequently dispose the casing at right angles to the frame, ears arranged tangentially to the other casing and extending in opposite directions and securable to one side of the door, the adjacent ends of each of the casings being closed and provided with openings, rods slidably mounted in the openings and having their free ends pivotally connected to each other, the ends of the rods disposed within the casing being screw threaded, coil springs disposed about said rods in the casing, disks mounted on the screw threaded ends of the rods and arranged in close relation with the inner walls of the casings for controlling the reception of the springs for guiding the rods during movement, and the spring controlled rods permitting the rounded edge of the door to bear against the door frame to allow the door to swing away from the door frame and also permit the outer side of the door to lie in juxtaposed relation with the door frame and to incidentally automatically close the door after the door has been opened.

1,191,471. APPARATUS FOR MAKING INGOT-MOLDS. CHARLES G. ROBINSON, Pittsburgh, Pa., assignor to Harry E. Sheldon, Pittsburgh, Pa. Filed Sept. 13 1912. Serial No. 720,175. (Cl. 22—127.)

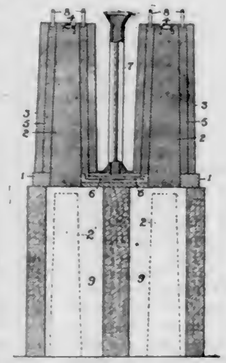


1. In a mold for casting steel ingot-molds, a core, a mold wall surrounding the core and inclosing a mold space for the ingot-mold between the core and mold wall, means for pouring the molten steel upwardly in the mold space, the mold wall being constructed to convey the heat away from the metal poured in the mold space so rapidly as to reduce the temperature of the poured metal below the fusing point of the core before the latter becomes fused with the poured metal.

2. In a mold for casting steel ingot-molds, a sand core, and a steel mold wall surrounding the core and inclosing a mold space for the ingot-mold between the core and the mold-wall, the thickness of the wall being such as to reduce the temperature of the poured metal below the fusing point of the sand before the latter becomes fused with the poured metal.

3. In a mold for casting steel ingot-molds, a hollow sand core, a mold wall surrounding the core and inclosing a mold space for the ingot-mold between the core and mold wall, the mold wall being so thick as to reduce the temperature of the poured metal in contact with the core below the fusing point of the sand before the latter becomes fused with the poured metal.

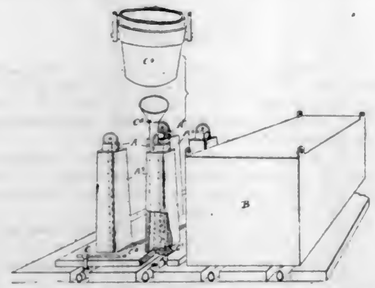
1,191,472. PROCESS FOR MAKING INGOT-MOLDS. CHARLES G. ROBINSON, Pittsburgh, Pa., assignor to Harry E. Sheldon, Pittsburgh, Pa. Filed Nov. 4, 1912. Serial No. 729,279. (Cl. 22—213.)



1. The process of making steel ingot molds which consists in pouring the molten metal for the ingot mold into a molding-space and into contact with a steel core, allowing the cast metal to cool until the color of its central portions begins to change to dark red, and then extracting the core.

2. The process of making steel ingot molds which consists in pouring the molten metal for the ingot mold into a molding-space and into contact with a steel core, allowing the cast metal to cool until it sets and its inner surface forms a chill, and extracting the core before the cast metal shrinks on the same.

1,191,473. MANUFACTURE OF MOLDS. CHARLES G. ROBINSON, Pittsburgh, Pa., assignor to Harry E. Sheldon, Pittsburgh, Pa. Filed Dec. 4, 1912. Serial No. 734,844. (Cl. 22—200.)



1. The method of surfacing the molding surface of a cast steel mold which consists in casting said molding surface in contact with a siliceous material while maintaining the contact below the temperature of combination of said siliceous material and steel.

2. The method of surfacing the molding surface of a cast steel mold which consists in casting said molding surface in contact with a siliceous material while maintaining the contact below the temperature of combination of said siliceous material and steel by proportioning the rate of flow to the loss of heat.

3. The method of making an ingot mold which consists in pouring molten steel into a molding space bounded externally by a metal mold and internally by a core composed of pure silica, about 95 per cent., and clay.

4. The method of making an ingot mold which consists in pouring molten steel into a molding space bounded externally by a metal mold and internally by a core composed of pure silica, about 95 per cent., and Welsh Mountain clay.

5. The method of preparing cores and molds for casting steel ingot molds which consists in forming hollow cores containing siliceous material, surrounding the cores with metal molds, drying the cores from inside outwardly, and uniformly heating the molds.

1,191,474. MOLD FOR CASTING STEEL ARTICLES. CHARLES G. ROBINSON, Pittsburgh, Pa., assignor to Harry E. Sheldon, Pittsburgh, Pa. Filed Jan. 20, 1913. Serial No. 743,042. (Cl. 22—113.)



1. In a device for casting metallic articles, a mold comprising a plurality of parts which compared with each other are respectively permanent and fragile, the permanent part being composed of a good heat-conducting material adapted and constructed to convey away the heat from the casting so as to prevent the fusion of the fragile part and the fragile part being arranged to be broken by the shrinkage of the casting.

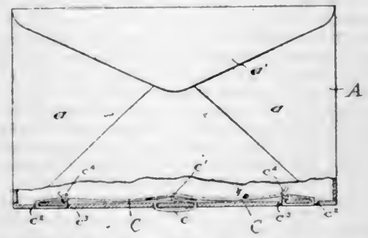
2. In a device for casting metallic articles, a mold comprising a plurality of parts which compared with each other are respectively permanent and fragile, the permanent part being composed of a good heat-conducting material adapted and constructed to convey away the heat from the casting so as to prevent the fusion of the fragile part and the fragile part being composed of hollow glass arranged to be broken by the shrinkage of the casting.

3. In a device for casting metallic articles, a mold having at least one face composed of hollow fragile material in combination with an adjacent good heat-conducting material, whereby heat tending to fuse the fragile material is removed and the fragile material is broken by the shrinkage of the casting.

4. In a device for casting metallic articles, a mold having a solid, coherent, hollow non-flexible fragile surface forming a part of the core of the mold, the said surface comprising a material which disrupts upon the shrinking of the cast metal, thereby permitting a ready release of the casting.

5. In a device for casting metallic articles with ribs, a mold having the surface thereof which forms the ribs composed of a solid, coherent, fragile glass surface which disrupts upon the shrinkage of the cast metal to permit the ready release of the casting.

1,191,475. DISRUPTIBLE ENVELOP. ABRAHAM M. ROSENBLATT, New York, N. Y. Filed Apr. 29, 1916. Serial No. 94,330. (Cl. 229—86.)



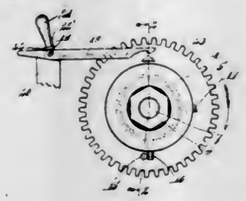
1. As a new article of manufacture, a disruptive envelop embodying a thread provided intermediate its ends with a loop sewed through the envelop at one of the creased edges thereof, the ends of said thread extending in opposite directions along the interior of the crease to substantially the opposite ends thereof, at which points the ends of said thread pass through apertures in the crease to the exterior of the envelop, said thread then converging toward the central loop and passing through apertures in the crease between the ends of the envelop and said loop, and the free ends of the thread being securely tied over the diverging interior portions of said thread, the exterior portions of the two end loops, thus formed, being impressed into the crease to such extent that they are substantially concealed thereby, and the intermediate loop being unimpressed and extending beyond the edge of the envelop into accessible position.

2. As a new article of manufacture, a disruptive envelop embodying a thread provided intermediate its ends with a loop sewed through the envelop at one of the creased edges thereof, the ends of said thread extending in opposite directions along the interior of the crease to substantially the opposite ends thereof, at which points the ends of said thread pass through apertures in the crease to the exterior of the envelop, said thread then converging toward the central loop and passing through apertures in the crease between the ends of the envelop and said loop, and the free ends of the thread being securely tied over the diverging interior portions of said thread, and depressed channels formed in the crease in juxtaposition with the end loops whereby said two end loops lie in the depressed channels in substantially concealed positions while the central loop extends beyond the envelop into accessible visible position.

3. As a new article of manufacture, an envelop embodying a piece of thread laid interiorly and along one of the edges thereof, said thread having a plurality of loops

sewed at intervals through the wall of the envelop, so that each loop embraces a portion of the crease along the edge, all of the loops, save one, having the exterior portions thereof impressed into the envelop so that the outer contours of said loops are flush with the edge of the envelop and are substantially concealed thereby, the said unimpressed loops extending beyond the edge into accessible visible position.

1,191,476. MAGNETO-DRIVING CONNECTION. PHILIPP RUDOLF and JOHN AUGUST LUND, Batavia, Ill., assignors to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 23, 1914. Serial No. 826,768. Renewed Apr. 27, 1916. Serial No. 94,049. (Cl. 123—149.)



1. A device of the kind described comprising a driving element; a driven element mounted adjacent said driving element; a spring operatively connecting said driving and driven elements; a stop on said driven element; a catch movably mounted and adapted to be moved into the path of said stop; a weight shiftably mounted on said catch and adapted to be manually shifted to maintain the latter in the path of said stop; and a cam carried by said driving element adapted to disengage said catch from said stop and shift said weight to maintain said catch out of the path of said stop, substantially as described.

2. A device of the kind described comprising a driving element; a driven element mounted adjacent said driving element; a spring operatively connecting said driving and driven elements; a stop on said driven element; a catch pivotally mounted and adapted to be moved into the path of said stop; a weight shiftably mounted on said catch and adapted to be manually shifted to maintain the latter in the path of said stop; and a cam carried by said driving element adapted to rock said catch from engagement with said stop and shift said weight to maintain said catch out of the path of said stop, substantially as described.

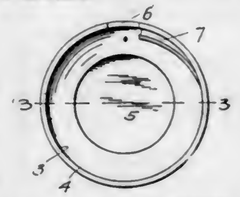
3. A device of the kind described comprising a driving gear; a hub mounted adjacent said gear; a spring operatively connecting said gear with said hub; a stop on said hub; a catch pivotally mounted and adapted to be rocked into the path of said stop; a weight shiftably mounted on said catch and adapted to be manually shifted to maintain the latter in the path of said stop; and a can carried by said gear adapted to disengage said catch from said stop and shift said weight to maintain said catch out of the path of said stop, substantially as described.

4. A device of the kind described comprising a driving gear; a hub mounted adjacent said gear; a spring operatively connecting said gear with said hub; a catch pivotally mounted and adapted to be rocked into the path of said stop; a weight pivotally mounted on said catch and adapted to be manually moved to a position in which said catch will be maintained in the path of said stop; and a cam carried by said gear adapted to disengage said catch from said stop and rock said weight to a position in which the same will maintain said catch out of the path of said stop, substantially as described.

1,191,477. AMUSEMENT DEVICE. GEORGE H. RUMKE, Denver, Colo. Filed Jan. 25, 1916. Serial No. 74,096. (Cl. 104—111.)

1. In an amusement device, an annular riding-surface surrounding a vertical axis, and a gap interrupting the continuity of said surface.

2. In an amusement device, an annular riding-surface surrounding a vertical axis, a gap interrupting the continuity of said surface, and an approach inclined from said surface toward said gap and terminating adjacent the forward edge of the same.



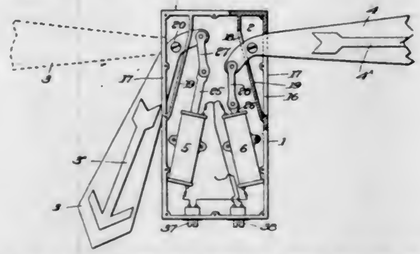
3. In an amusement device, an annular riding-surface surrounding a vertical axis, a gap interrupting the continuity of said surface, and a curved approach inclined from said surface toward said gap and terminating adjacent the forward edge of the same.

4. In an amusement device, an annular riding surface surrounding a vertical axis and comprising a continuous portion and adjacent thereto a portion the continuity of which is interrupted by a gap.

5. In an amusement device an annular riding surface surrounding a vertical axis and comprising a lower continuous portion and an upper portion the continuity of which is interrupted by a gap.

[Claims 6 and 7 not printed in the Gazette.]

1,191,478. SIGNALING DEVICE. STANLEY T. RUNYON, San Francisco, Cal. Filed Oct. 28, 1914. Serial No. 868,998. (Cl. 177—329.)



1. In a vehicle signaling device, a casing provided with a slot, a semaphore arm extending through said slot into the casing, means within said casing for actuating said arm, and an inclined wall extending to a point at the lower end of said slot to divert water or dust of the casing through said slot.

2. In a vehicle signaling device a casing provided with a slot, signaling means operating within said casing and projecting outwardly through said slot and an inclined wall extending to a point at the lower end of said slot to divert water or dust out of said casing through the slot.

1,191,479. COVER-ATTACHING MEANS. GUSTAV A. SCHMID, Peoria, Ill. Filed May 26, 1913. Serial No. 770,065. (Cl. 217—58.)

1. In a cover attaching means, the combination with a receptacle and a cover plate, of an attaching portion for attachment to the receptacle including one element of a hinge, a portion constituting the other element of the hinge and including a part to engage one edge of the cover plate and also including an extension, and a part to engage an opposite edge of the plate and including an extension with which the first said extension is adjustably connected.

2. In a cover attaching means, the combination with a receptacle and a cover plate, of an attaching portion for attachment to the receptacle including one element of a hinge, a portion constituting the other element of a hinge and including a part to engage one edge of the cover and also including an extension, a part engaging an opposite edge of the plate and also including an extension adjustable on the first described extension and extending across and spaced from the cover plate.



3. In a cover attaching means, the combination of an attaching portion constituting one element of a hinge, a part constituting the other element of a hinge and including a cover-plate holding portion and an extension, a second holding portion independent of and spaced from the first and including an extension adapted to engage the first described extension and adjustable thereon, both extensions being spaced from the plane of the holding portions.

4. In a cover attaching means, the combination of an attaching portion constituting one element of a hinge, a part consisting of the other element of the hinge and a plate-holding portion, and including an arm extended beyond the plane of the said portion and extending perpendicular to the axis of the hinge, and a second plate-holding portion including an arm extended beyond the plane of said holding portion and extended in the direction of and engaging the other described arm and adjustable relative thereto.

5. In a cover attaching means, the combination of an attaching portion constituting one element of a hinge, a part constituting the other elemenet of the hinge and including a recess and an arm extension, and a part also including a recess and an arm extension having threaded engagement with the first described arm extension.

[Claims 6 to 11 not printed in the Gazette.]

1,191,480. TANNING. OTTO SCHMIDT, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Dec. 4, 1913. Serial No. 804,745. (Cl. 149—5.)

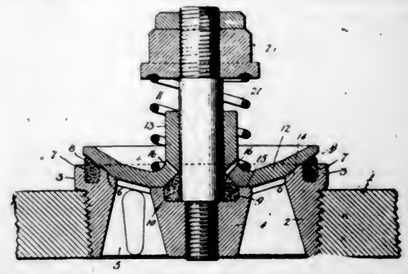
1. The process of tanning skins by treating them with a solution of an aromatic sulfonic acid of an amorphous character, which is free from phenolic hydroxyl and quinone groups, is soluble in water, is free from dyeing properties and is capable of precipitating glue or gelatin from solutions thereof.

2. The process of tanning skins by treating them with a solution of a product from napthalene, sulfuric acid and formaldehyde, which product is of an amorphous character, free from phenolic hydroxyl and quinone groups, is soluble in water, is free from dyeing properties and is capable of precipitating glue or gelatin from solutions thereof.

1,191,481. VALVE. EUGENE MCCLELLAN SCOVILLE Waipahu, Hawaii. Filed Dec. 10, 1915. Serial No. 66,180. (Cl. 103—66.)

1. A valve device comprising a valve seat having central and peripheral seating areas, a valve adapted to directly engage said areas, and a gasket of compressible material associated with the central seating area and adapted to be forced by fluid pressure against the valve, said valve having openings therethrough adjacent said gasket to induce a flow of fluid over the gasket and adjacent seating area to clean the same when the valve is open.

2. A valve device comprising a valve seat having central and peripheral seating areas, a valve adapted to directly engage said areas, and gaskets of compressible material associated with the central and peripheral seating areas and adapted to be forced by the fluid pressure against the valve, said valve having openings therethrough adjacent the gasket carried by the hub to induce a flow of fluid over the gasket and adjacent seating area to clean the same when the valve is open.



3. A valve device comprising a valve seat having a central seating area and a beveled peripheral seating area, a valve having a generally dish-shaped face adapted to directly engage said areas, and a gasket of compressible material positioned within a recess adjacent the central seating area and adapted to be forced by the fluid pressure against the valve, said valve having openings therethrough adjacent said gasket to induce a flow of fluid over the gasket and the adjacent seating area to clean the same when the valve is open.

4. A valve device comprising a valve seat having a central seating area and a beveled peripheral seating area, a valve having a generally dish-shaped face adapted to directly engage said areas, and gaskets of compressible material positioned in recesses adjacent the central and peripheral seating areas and adapted to be forced by the fluid pressure against the valve, said valve having openings therethrough adjacent the inner gasket to induce a flow of fluid over the gasket and the adjacent seating area to clean the same when the valve is open.

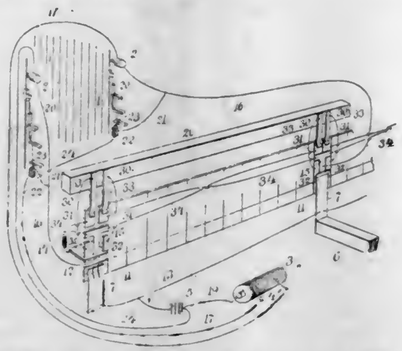
5. A valve device comprising a valve seat having a rim and a central hub, a beveled seating area on the rim, a seating area on the hub, a valve, having a generally dish-shaped face adapted to directly engage said areas and flexible gaskets positioned in recesses adjacent the seating areas and adapted to be forced by the flow of fluid pressure against the valve, said valve having openings therethrough adjacent the gasket and adjacent seating area to clean the same when the valve is open.

1,191,482. COUPLER FOR ELECTRIC MUSICAL INSTRUMENTS. MELVIN L. SEVERY, Arlington Heights, Mass., and GEORGE B. SINCLAIR, Georgetown, Me., assignors to Choralcelo Company, Boston, Mass., a Corporation of Maine. Filed July 20, 1912. Serial No. 710,637. (Cl. 84—131.)

1. In combination with a plurality of sonorous bodies tuned in musical relation to one another, electromagnets for causing vibration of said bodies; dampers for said bodies; electromagnets for withdrawing said dampers; electrical means, including a circuit-closer, for independently energizing the electromagnets associated with each sonorous body and with the damper thereof, pulsation-producing devices, one in circuit with each circuit-closer, for imparting timed electric pulsations to the vibration-producing magnets; and electrical connections between the actuating device of a selected body and of other sonorous bodies bearing predetermined musical relation thereto, for causing the simultaneous retraction of the several dampers and energizing of the several magnets of the selected and related sonorous bodies through the action of the single selected actuating device.

2. The combination with tuned sonorous bodies and electromagnetic means for their actuation, of pulsation-producing devices for imparting timed electric pulsations

to said magnets; dampers for the respective bodies; electrically-operated means for withdrawing the respective dampers; and means common to the actuating devices of a selected sonorous body and of another sonorous body bearing predetermined musical relation thereto, and common to their damper-withdrawing means, whereby the closing of the energizing circuit of the magnets of a selected sonorous body effects the simultaneous closing of the energizing circuit of the related sonorous body and of its damper-withdrawing devices.



3. The combination with tuned sonorous bodies and electromagnetic means for independently actuating the same, of pulsation-producing devices for imparting timed electric pulsations to said means; dampers for the respective bodies; electrically-operated means for withdrawing said dampers from the actuated sonorous bodies; and electrical connections between the actuating devices of a plurality of the sonorous bodies bearing predetermined musical relation, and between their damper-withdrawing devices, whereby operation of the actuating device of one of said sonorous bodies effects the simultaneous withdrawal of the several dampers, and the simultaneous actuation of said bodies.

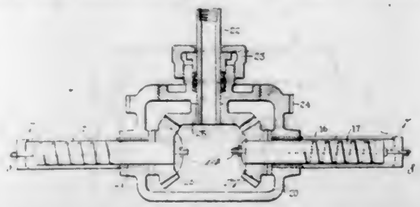
4. The combination with tuned sonorous bodies, of electric means for their actuation including a circuit closer for each; pulsation-producing devices, one in circuit with each circuit-closer, for imparting timed electric pulsations to said actuating means; an electrically-operated damper mechanism for causing the actuation of the dampers of a limited number of bodies bearing a predetermined musical relationship to one another, when a selected body is sounded; and means for simultaneously delivering current to the damper mechanisms of the several bodies sounded when the circuit closer of the actuating device of the selected body is moved to closed position.

5. The combination with tuned sonorous bodies, of means for their actuation comprising an electromagnet, an electric circuit and circuit-closer for each sonorous body; pulsation-producing devices, one in circuit with each circuit-closer, for imparting timed electric pulsations to said magnets; a damper for each of said bodies; an electromagnet for each damper serving, when energized, to withdraw the same, each damper magnet being connected in parallel to the actuating magnet of the body with which such damper is associated; and means for connecting in circuit the actuating electromagnets of a plurality of the sonorous bodies bearing predetermined musical relation to one another, whereby the closing of the circuit of a single selected sonorous body effects the closing of the circuits of the actuating and damper magnets of such related bodies.

[Claims 6 to 16 not printed in the Gazette.]

1,191,483. FLUID-DISTRIBUTING DEVICE. CARL C. THOMAS, Baltimore, Md. Filed Aug. 8, 1914. Serial No. 855,821. (Cl. 137—80.)

1. A device of the character set forth, comprising two closely fitting tubular members, one within the other, and having intersecting openings angularly related and of which at least one is a slot disposed in a general direction longitudinal of the member in which formed, at least one of said members rotatable with respect to the other, and constructed to rotate continuously while fluid is passing therethrough, in combination with means for supplying fluid under pressure to said tubular members.



2. A device of the character set forth, comprising two closely fitting tubular members, one within the other, and having longitudinally extending openings angularly related, at least one of said members rotatable with respect to the other and constructed to rotate continuously while fluid is passing therethrough, in combination with means for supplying fluid under pressure to said tubular members.

3. A device of the character set forth, comprising two closely fitting tubular members, one within the other, and having longitudinally extending openings angularly related, and one of which is helical, at least one of said members rotatable with respect to the other and constructed to rotate continuously while fluid is passing therethrough, in combination with means for supplying fluid under pressure to said tubular members.

4. A device of the character set forth, comprising a casing, two closely fitting tubular members, one within the other carried thereby, and having intersecting openings, at least one of said members rotatable with respect to the other, means for the supply of fluid under pressure to one of said members, and gearing connected to one of said members for continuously rotating it with respect to the other while fluid is passing therethrough.

5. A device of the character set forth, comprising a rotatable casing, two tubular members one within the other carried thereby and having intersecting openings, said members rotatable one with respect to the other, means for the supply of fluid under pressure to the inner of said members, and gearing connected to one of said members and operated by rotation of the casing for rotating such member with respect to the other member.

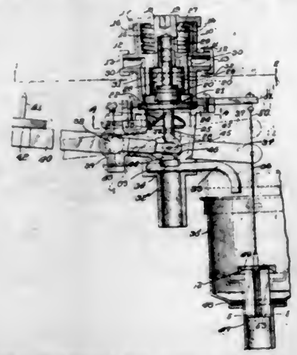
[Claim 6 not printed in the Gazette.]

1,191,484. LIQUID MEASURING AND DISPENSING DEVICE. ERNEST C. THORSCHMIDT, New York, N. Y. Filed Feb. 8, 1916. Serial No. 77,088. (Cl. 73—151.)

1. A liquid measuring and dispensing device comprising a valve, a valve casing having a discharge opening, a by-pass extending from the opening, a measuring receptacle for receiving the liquid from the by-pass, means in connection with the valve and measuring receptacle whereby the valve is closed when the desired amount of liquid has been drawn, and means operating in conjunction with the first mentioned means for discharging the liquid from the receptacle without tipping the latter.

2. A liquid measuring and dispensing device comprising a valve, a valve casing having a discharge opening, a by-pass extending from the opening, a measuring receptacle for receiving the liquid from the by-pass, means in connection with the valve and measuring receptacle whereby the valve is closed when the desired amount of liquid has been drawn, the receptacle having an opening in the bottom thereof, means for closing the opening, and means in connection with the valve closing means whereby the relative movement is caused between the closure and receptacle to empty the contents of the receptacle.

3. A liquid measuring and dispensing device comprising a valve, a valve casing having a discharge opening, a by-pass extending from the opening, means extending to the exterior of the casing for opening the valve, a measuring receptacle suspended by said means, and means whereby the closure of the valve empties the contents of the receptacle.

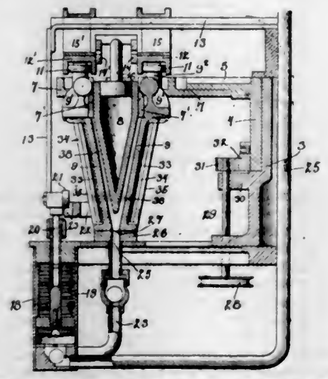


4. A liquid measuring and dispensing device comprising a valve, a valve casing having a discharge opening, a by-pass extending from the opening, a lever for opening and closing the valve extending to the exterior of the casing, a measuring cup suspended by said lever, and means whereby the overbalancing of said lever by the measuring cup empties the liquid therefrom.

5. A liquid measuring and dispensing device comprising a valve, a valve casing having a discharge opening, a by-pass extending from the opening, a lever for opening and closing the valve extending from the casing, provisions for applying a weight to the lever at one end thereof, and a measuring receptacle suspended from the other end of the lever, and means for emptying the contents of the receptacle when the weight is overbalanced.

[Claims 6 to 23 not printed in the Gazette.]

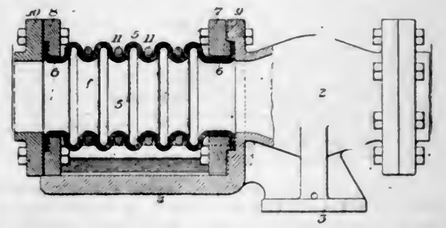
1,191,485. ICE-CREAM-CONE-BAKING MACHINE. WEBSTER A. TOMPKINS, Portland, Oreg., assignor to C. A. Clark, Vancouver, Wash. Filed July 15, 1915. Serial No. 40,139. (Cl. 107—58.)



1. A baking machine comprising, in combination with a frame having a central supporting column forming a bearing, a wheel having radiating arms and a rotatably mounted hub portion supported and journaled upon said column, oppositely disposed oven supports secured to said arms, depending rings secured to the supports, vertical cores movable within and guided by said rings, oven sections with integral supporting hinge portions pivotally mounted upon said oven supports, wheels journaled upon projections of said hinged portions, stationary grooved cam members against the walls of which grooves said wheels are adapted to contact to cause the opening and closing of the oven members, and means for raising and lowering the cores.

2. A baking machine comprising, in combination with a frame having a central supporting column forming a bearing, a wheel having radiating arms and a rotatably mounted hub portion supported and journaled upon said column, oppositely disposed oven supports secured to said arms, depending rings secured to the supports, vertical cores movable within and guided by said rings, oven sections with integral supporting hinge portions pivotally mounted upon said oven supports, wheels journaled upon projections of said hinged portions, stationary grooved cam members against the walls of which grooves said wheels are adapted to contact to cause the opening and closing of the oven members, bearing boxes upon the cam members, a shaft journaled in said boxes, wheels upon the shafts, upright staffs fixed to said cores and having cross bars at their upper ends positioned in the paths of said wheels which are journaled upon the cams.

1,191,486. EXPANSION-JOINT. EDWARD B. TYLER, Pittsburgh, Pa. Filed Mar. 20, 1914. Serial No. 826,044. (Cl. 137—28.)



1. An expansion joint, comprising a support, an end member rigid with said support, a corrugated expansible section fixed at one end to said end member, an opposite end member to which the other end of the expansible section is secured, the second end member being capable of movement longitudinally of the support, said end members having means for connecting the joint in a pipe line or conduit, together with clamping rings seated externally in the grooves of the expansible section, and a guide carried by said support and with which said rings have a sliding engagement; substantially as described.

2. An expansion joint for pipe lines, comprising a cradle-like supporting member having a circular ring rigid with one end portion thereof, another circular ring loosely seated in the opposite end portion of the supporting member, an expansible pipe section secured in and extending between said rings, and a clamp embracing said pipe section and also having a sliding engagement with said support; substantially as described.

3. An expansion joint for pipe lines, comprising a cradle-like supporting member having an integral circular ring at one end and a loose circular ring at the other end, a corrugated expansible pipe section secured in said rings, a plurality of tie members engaging the corrugations of said section and also engaging the supporting member at opposite sides of said section, and antifriction bearings between the tie members and the supporting member, whereby the tie members may move freely with the said section in its expansion and contraction movements; substantially as described.

1,191,487. FIGURED VELVET FABRIC. FRANK WARNER, London, England. Filed May 19, 1915. Serial No. 29,175. (Cl. 139—71.)

1. The manufacture of a figured velvet fabric which consists in arranging the pile of loops of selected threads at varying heights in successive wire picks, certain of said loops serving to produce a superimposed figure effect

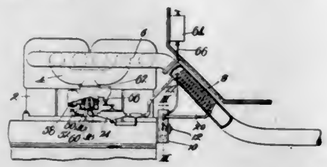
and the remaining loops forming a ground for the pattern.

2. The manufacture of a figured velvet fabric which consists in producing the figure by looping certain selected threads of the pile warp over varying heights of wires adapted to permit of a floral design being woven with two heights of pile and a ground woven with a third and shorter pile from other selected threads lifted by a wire of less depth than the figuring wires.



3. A figured warp velvet fabric in which the pattern is effected by interweaving the ground warp, the pile warp, and the weft threads to produce pile of varying heights by selecting the threads and inserting high, medium and low wires whereby a third pile effect is obtained which shows effectively above the lower pile.

1,191,488. CHARGE-FORMING DEVICE FOR INTERNAL-COMBUSTION ENGINES. JOHN WATTS, Kansas City, Mo. Filed June 21, 1913. Serial No. 775,019. (Cl. 123—122.)



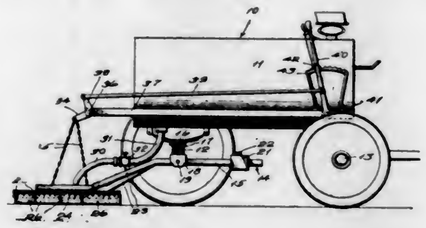
1. In an internal combustion engine, the combination with the intake and exhaust conduits, an air-pipe passing through a portion of the exhaust conduit and communicating with the intake conduit, said pipe having an opening intermediate the exhaust and intake conduits, and a sliding sleeve controlling passage through said opening, a thermostat in said pipe between said opening and the intake conduit and connections between said thermostat and sleeve for operating the latter to admit air into said pipe for maintaining the temperature of the air supplied to the intake conduit below a given point.

2. In a charge forming device for internal combustion engines, the combination with the intake and exhaust conduits, of a liquid fuel supply communicating with the intake conduit, an air-pipe passing through a portion of the exhaust conduit and communicating with the intake conduit at the point where said liquid-fuel supply communicates therewith, said pipe having an air inlet opening intermediate the exhaust and intake conduits and a valve controlling passage through said opening, a thermostat located in said pipe between said opening and the intake conduit, and connections between said thermostat and valve for operating the latter to admit air into said pipe for maintaining the temperature of the air supplied to the intake conduit below a given point.

1,191,489. STREET CLEANING OR WASHING MACHINE. SAMUEL WHINERY, East Orange, N. J. Filed July 30, 1915. Serial No. 42,713. (Cl. 15—14.)

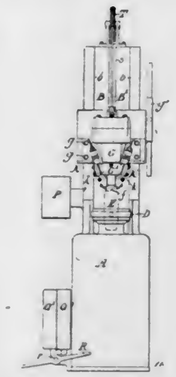
1. A street washing and cleaning machine, comprising a wheeled frame, a water tank thereon, a vertically movable frame connected with the wheeled frame, means for detachably securing said vertically-movable frame in raised position, squeegee blades connected with said frame and arranged one in front of the other in spaced relation, a conduit mounted on said frame and disposed above the squeegee blades and having discharges disposed forwardly of and adjacent to said blades, and a flexible conduit intermediate said conduit on the vertically-movable frame and the water tank.

2. A street washing and cleaning machine, comprising a wheeled frame, a water tank thereon, a vertically swinging frame arranged below and longitudinally of said wheeled frame and pivotally connected at an intermediate point of its length thereto, counter-balancing means on the forward portion of said vertically-swinging frame, means for detachably securing the rear portion of said frame in raised position, squeegee blades connected with



said rear portion of the frame and arranged one in front of the other in spaced relation, a conduit mounted on said rear frame portion and disposed above the blades and having discharges disposed forwardly of and adjacent to the blades, and a flexible conduit intermediate said conduit on the rear frame portion and the water tank.

1,191,490. MANUFACTURE OF EXPLOSIVE SHELLS. HERBERT AUSTIN, Bromsgrove, England. Filed Mar. 7, 1916. Serial No. 82,730. (Cl. 86—6.)

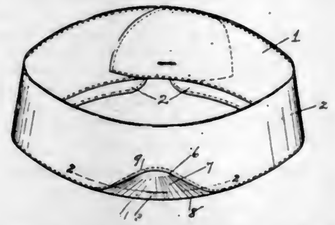


1. In the manufacture of an explosive shell in which a plate is screwed into a recess in the base thereof and is then further secured by riveting, submitting the plate, after it has been tightly screwed up, during the time that the riveting is effected, to a twisting strain exerted in the direction in which the plate has been screwed up.

2. In the manufacture of an explosive shell in which a plate is screwed into a recess in the base thereof and is then further secured by riveting, submitting the plate, after it has been tightly screwed up, during the time that the riveting is effected, to a twisting strain which is maintained by frictional resistance, substantially as set forth.

3. In an apparatus used in the manufacture of explosive shells, the combination of means for riveting to the base of a shell a protective plate screwed therein and means for imparting during the riveting operation a torsional stress to said plate in the direction in which the plate is screwed up, said stress being operative to prevent an unscrewing or loosening of the plate during such riveting operation.

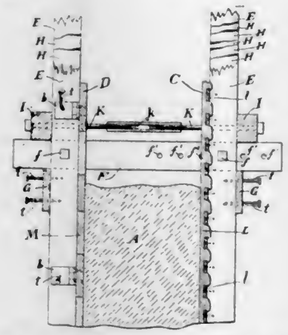
1,191,491. FOLD-COLLAR. WALTER J. BEATTIE, Cohoes, N. Y. Filed Mar. 6, 1916. Serial No. 82,313. (Cl. 2—67.)



1. A fold-collar having a band provided with a back buttonhole, and a folded-cover top formed with a notch in its lower edge opposite the back buttonhole in the band, and a fulled patch attached to the top bridging said notch and completing the contour of the lower edge of the top.

2. A fold-collar having a band provided with a back buttonhole, and a folded-over top formed of a plurality of plies with a notch in its lower edge opposite the back buttonhole in the band, and a patch inserted and secured between the plies of the top bridging said notch and completing the contour of the lower edge of the top, said patch having a fullness whereby it is adapted to bulge outwardly beyond the normal surface-lines of the top.

1,191,492. CONCRETE-FORM. EDMUND BECKER, Washington, D. C. Filed Apr. 23, 1910. Serial No. 557,280. (Cl. 25—131.)



1. A mold for casting monolithic concrete walls comprising a front mold wall and a rear mold wall, said front mold wall being a lath and plaster partition adapted to form externally projecting and closely set mortar keys to provide capillary ingress for water applied externally to modify the setting process.

2. A mold for casting monolithic concrete walls comprising a front mold wall and a rear mold wall, said front mold wall being a lath and plaster partition; and said rear mold wall being formed of widely spaced studs and comparatively heavy sheeting to provide access through its said spaced studs for building the said lath and plaster partition in position of use.

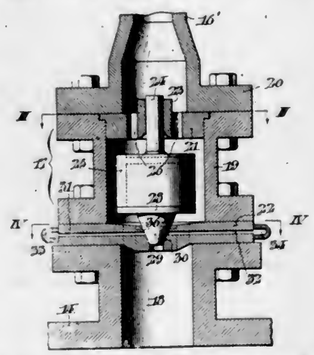
3. In a temporary wall for a mold to be used for casting monolithic concrete walls, a wooden framework comprising the combination with heavy vertical timbers or posts E spaced at relatively great intervals, and heavy horizontal timbers or wale-pieces I bolted externally to said vertival timbers to constitute therewith the fundamental heavy bolted frame of the wall; of a lighter secondary "tacked" framework supported and resting in the said heavier bolted frame and consisting of a series of relatively thin uprights or studs H arranged at proper intervals between said heavy posts E to bear outwardly against said heavy wale-pieces I; and relatively thin external horizontal stringer planks G "tacked" externally first to said posts E and then to said studs H, the depth of said studs and posts being the same to form an inside discontinuous but solid and even bearing face for a suitable lining.

4. In a temporary wall for a mold to be used for casting monolithic concrete walls, a wooden framework comprising the combination with heavy vertical timbers or posts E spaced at relatively great intervals, and heavy horizontal timbers or wale-pieces I bolted externally to said vertical timbers to constitute therewith the fundamental heavy bolted frame of the wall; of a lighter secondary "tacked" framework supported and resting in the said heavier bolted frame and consisting of a series of relatively thin uprights or studs H arranged at proper intervals between said heavy posts E to bear outwardly against said heavy wale-pieces I; and relatively thin external horizontal stringer planks G "tacked" externally first to said posts E and then to said studs H; the depth of said studs and posts being the same to form an inside discontinuous but solid and even bearing face for a suitable lining; said lining consisting in a latch supported plastic lining built directly upon such discontinuous face in a manner similar to that used in common house partition plastering.

5. In the framework for the temporary walls of a mold used for casting a monolithic concrete wall, the combination with two equal and oppositely arranged fundamental frames each composed of heavy vertical posts and external wale-pieces; of a horizontal transverse adjustable bond for connecting and spacing the opposite mold walls at every crossing point of the said heavy timbers in the one wall with the opposite crossing point of the heavy timbers in the opposite wall; such bond comprising a temporary space-gaging spreader-tie bolted laterally to the said vertical posts and a permanent space holding clamp bolt passed centrally through said four heavy timbers; said spreader-tie being sufficiently long to project in support of the said external wale-pieces, also having a series of bolt holes to permit of regulating the depth of the mold for any standard size of concrete wall.

[Claim 6 not printed in the Gazette.]

1,191,493. APPARATUS FOR ELEVATING LIQUIDS. GEORGE F. BIHN and ALBERT JONES, Philadelphia, Pa. Filed May 7, 1914. Serial No. 837,096. (Cl. 103—8.)



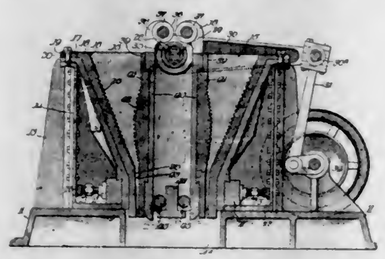
1. In an apparatus for elevating liquids the combination of a vessel having an inlet and an outlet for the said liquid; a valve comprising an outlet port for the air displaced in the said vessel, and oppositely disposed ports for compressed air; a float adapted to be operated by the liquid in the said vessel for controlling the said ports, and having means extending between said inlet ports for compressed air, substantially as set forth.

2. In an apparatus for elevating liquids the combination of a vessel having an inlet and an outlet for the liquid; a valve comprising an exhaust port for the air displaced in the said vessel and oppositely disposed ports

for compressed air; a float guided for movement between the said ports and adapted to be operated by the combined buoyancy of the liquid in the said vessel and the air pressure in said compressed air ports for controlling the said ports, and having means extending between said inlet ports for compressed air, substantially as set forth.

3. A controlling valve for liquid elevating apparatus comprising a float chamber; an upper valve seat forming the top of the said chamber; exhaust ports through the said upper valve seat; a lower valve seat forming the bottom of said chamber; a conical central port in the said lower seat, said conical port communicating through diametrical ducts with a source of compressed air supply; a float adapted for guided movement between the said seats, said float having a recessed upper face adapted to cooperate with the said upper valve seat and a conical plug adapted to coöperate with the central opening in the lower valve seat, substantially as shown and for the purpose described.

1,191,494. CRUSHER. JAMES W. BOILEAU, Chicago, Ill. Filed Feb. 8, 1913. Serial No. 747,001. (Cl. 83—53.)



1. A crusher comprising facing plates arranged at an inclination to each other, one being fixed and the other movable, means to reciprocate one end of the movable plate in a curved line, and means serving as a rocking support for the other end of the plate whereby to maintain a substantially uniform distance between the fixed plate and the portion of the movable plate opposite the support.

2. A crusher comprising facing plates arranged at a downward inclination to each other, one of the plates being vertically reciprocable and the other substantially stationary, means to reciprocate the upper end of the first plate in a curved line, and means serving as a rocking support for the lower end of the stationary plate whereby to maintain a substantially uniform distance between the stationary plate and a portion of the reciprocable plate opposite the support.

3. A crusher comprising facing plates having their upper portions arranged at a substantial downward inclination to each other and their lower portions more nearly parallel, one of the plates being vertically reciprocable and the other substantially stationary, means to reciprocate the upper end of the first plate in a curved line, means serving as a rocking support for the other lower end of the second plate whereby to maintain a substantially uniform distance between the stationary plate and a portion of the reciprocable plate opposite the support, and means to adjust the lower portion of the two plates toward and from each other.

4. A crusher comprising a freely suspended pivotally mounted plate having a wear face provided with horizontal corrugations diminishing in size downwardly, a rear fulcrum support for the bottom of the plate whereby to maintain a substantially uniform distance between the fixed plate and a portion of the movable plate opposite the support, a stationary second plate having a similarly corrugated face disposed in opposition to the first plate, and means to reciprocate the top of the first plate in a vertically disposed curved path, substantially as described.

5. A crusher comprising a pivotally suspended plate having a wear face provided with horizontal corrugations diminishing in size downwardly, a rear fulcrum support for the bottom of the plate to confine the same against lateral movement and to maintain a substantially uniform distance between the fixed plate and a portion of the movable plate opposite the support, a stationary second plate having a similarly corrugated face disposed in opposition to the first plate, means to reciprocate the top of the first plate in a vertically disposed curved path, and means to adjust the bottom of the second plate toward and from the bottom of the first plate, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,191,495. METHOD FOR SEPARATING NEON FROM GASES WITH WHICH IT IS MIXED. GEORGES CLAUDE, Boulogne-sur-Seine, France. Filed June 17, 1913. Serial No. 774,265. (Cl. 204—31.)



1. The method of obtaining neon purified from nitrogen, oxygen, helium, etc., in a closed receptacle, provided with electrodes contained therein, which comprises establishing within the receptacle a highly rarefied atmosphere containing neon, and passing an electric discharge between the electrodes, said discharge being continued until the impurities have been removed from the neon to such an extent that they will be practically invisible in the spectrum obtainable from the residual gas.

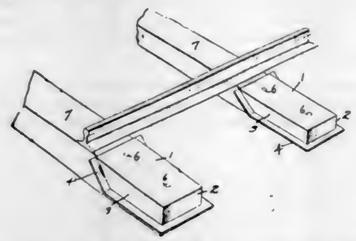
2. The method of obtaining neon purified from nitrogen, oxygen, helium, etc., in a closed receptacle containing electrodes having a surface large enough to practically avoid absorption of neon during operation, which comprises establishing within the receptacle a highly rarefied atmosphere containing neon, and passing an electric discharge between the electrodes, said discharge being continued until the impurities have been removed from the neon to such an extent that they will be practically invisible in the spectrum obtainable from the residual gas.

3. The method of obtaining neon purified from nitrogen, oxygen, helium, etc., in a closed receptacle, provided with electrodes contained therein, which comprises preliminarily expelling the occluded gases from the walls of the receptacle and from the electrodes, by creating a partial vacuum in the receptacle, and at the same time passing an electric discharge therethrough, then admitting into the receptacle a highly rarefied atmosphere containing neon, and passing an electric discharge between the electrodes, said discharge being continued until the impurities have been removed from the neon to such an extent that they will be practically invisible in the spectrum obtainable from the residual gas.

4. The method of obtaining neon purified from nitrogen, oxygen, helium, etc., in a closed receptacle, provided with electrodes contained therein, which comprises preliminarily expelling the occluded gases from the walls of the receptacle and from the electrodes, by creating a partial vacuum in the receptacle, and at the same time passing an electric discharge therethrough, then purging the receptacle by passing therethrough a quantity of the neon gas atmosphere to be purified, again creating a partial vacuum in the receptacle and at the same time passing an electric discharge therethrough, and so on, until the occluded gases have been practically removed and finally passing an electric discharge between the electrodes for a period sufficiently long to remove practically all of the impurities to such an extent that they will be practically invisible in the spectrum obtainable from the residual gas.

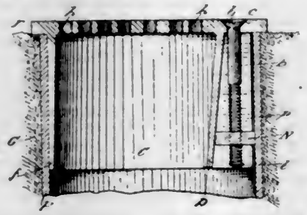
5. The method of obtaining neon purified from nitrogen, oxygen, helium, etc., which comprises confining such gases, together with a substance coacting with the impurities, within a receptacle from which atmospheric air has been to a great extent removed, and passing therethrough an electric discharge until the impurities have been removed from the neon to such an extent that they will be practically invisible in the spectrum obtainable from the residual gas.

1,191,496. TIE-PROTECTOR. ALEXANDER D. CURRY, Hawkinsville, Ga. Filed Nov. 29, 1915. Serial No. 64,077. (Cl. 238—5.)



A tie protector consisting of a rectangular cap member adapted to fit upon the top of the end portion of a railway tie, said cap being provided with perforations therethrough, securing elements adapted to be inserted through said perforations for fastening said cap upon said tie, and an outwardly disposed flange formed integrally with the rim of said cap member.

1,191,497. COVER FOR VENT-PIPES OR THE LIKE. HENRY H. DAUPHINEE, Providence, R. I. Filed Oct. 22, 1915. Serial No. 57,251. (Cl. 94—7.)

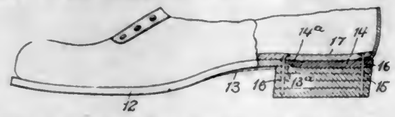


1. In a cap or cover for vent-pipes or the like, the combination with a depending flange fitted to the interior of the pipe and formed with an inclined web extending downwardly from the top of the cover, of a bolt rotatable in a bearing adjacent said web, and means on said bolt adapted to be slid along the web to cause it to wedge against the interior of the pipe within which the cover sets.

2. In an improved closure for pipes or manholes, the combination with a cover formed with a flange fitted to the interior of the pipe or other opening and having a web inclined to the side of the flange, of a nut adapted to slide along said web, and a screw for sliding the nut to cause it to be wedged against the inside of the pipe or other opening to bind the cover thereagainst.

3. In combination, a cover for pipes or manholes formed with a flange fitted to the inside of the pipe and having an inclined pocket or channel extending longitudinally of its side, of a nut adapted to slide in the channel without turning therein, and a screw reaching down through the top of the cover and engaging the nut to draw the latter along the channel and wedge it against the inside of the pipe.

1,191,498. SHOE AND FULL-LENGTH OUTER-SOLE THEREFOR. OSCAR C. DAVIS, Brockton, Mass. Filed Mar. 6, 1916. Serial No. 82,308. (Cl. 36—25.)



1. As an article of manufacture, a full length outer sole composed of a fore portion and a shank portion formed in one piece from relatively inelastic material, and a heel portion of elastic material formed separately from and attached to the shank portion and forming a cushioning heel seat.

2. As an article of manufacture, a full length outer sole composed of a fore portion and a shank portion formed in one piece from relatively inelastic material, and a heel portion of elastic material attached to the shank portion and forming a cushioning heel seat, the said shank and heel portions being provided with scarfed faces united by cement.

3. A shoe comprising an upper, an inner sole, a full length outer sole composed of a fore portion, a shank portion formed in one piece with the fore portion from relatively inelastic material, and a heel portion of elastic material attached to the shank portion, and a heel seated on said elastic heel portion and attached thereto and to the inner sole.

4. A shoe comprising an upper, an inner sole, a full length outer sole composed of a fore portion, a shank portion formed in one piece with the fore portion from relatively inelastic material, and a heel portion of elastic material attached to the shank portion, and a heel seated on said elastic heel portion and attached thereto and to the inner sole, the said shank and elastic heel portions being united by a transverse joint and the heel being formed to cover said joint.

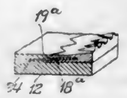
1,191,499. METHOD OF MAKING TURNED SHOES. OSCAR C. DAVIS, Brockton, Mass. Filed Apr. 5, 1916. Serial No. 89,049. (Cl. 12—142.)



1. That improvement in the method of making turned shoes which consists in assembling and securing together an upper turned inside out and a sole of normally flexible material provided with a stiffening agent adapted under certain conditions to render the sole relatively stiff, and under other conditions to become inoperative and render the sole flexible, turning the assembled parts while the stiffening agent is inoperative and the sole flexible, and then subjecting the stiffening agent to conditions rendering it operative and thereby stiffening the sole.

2. That improvement in the method of making turned shoes which consists in assembling and securing together an upper turned inside out and a sole of normally flexible material provided with a stiffening agent adapted when cold to render the sole relatively stiff, and when heated to become inoperative and render the sole flexible, heating the sole to render the stiffening agent inoperative, turning the assembled parts right side out while the sole is flexible, and then cooling the stiffening agent and thereby stiffening the sole.

1,191,500. SHOE AND OUTER-SOLE THEREFOR. OSCAR C. DAVIS, Brockton, Mass. Filed Apr. 5, 1916. Serial No. 89,050. (Cl. 36—25.)



1. An outer sole comprising a rubber body having a recessed marginal top face and an edge face at the inner edge thereof, and a marginal finishing strip of rubber formed to simulate a welt and having bottom and inner edge faces integrally united respectively to the top and edge faces of the body, said parts forming an outer sole attachable as one part to a shoe body and adapted to project therefrom with the said finishing strip exposed.

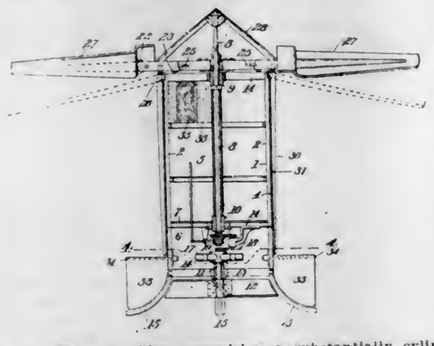
2. An outer sole comprising a rubber body having a recessed marginal top face and an edge face at the inner

edge thereof, and a marginal finishing strip of rubber formed to simulate a welt and having bottom and inner edge faces integrally united respectively to the top and edge faces of the body, said parts forming an outer sole attachable as one part to a shoe body and adapted to project therefrom with the said finishing strip exposed, the said edge faces being inclined and interengaged.

3. A shoe comprising an upper, an inner sole, and an outer sole composed of a rubber body having a recessed marginal top face and an edge face at the inner edge thereof, and a marginal finishing strip of rubber formed to simulate a welt and having bottom and edge faces integrally united respectively with the top and edge faces of the rubber body, said outer sole being attached as one part to the inner sole, and its finishing strip being exposed at the exterior of the shoe.

4. An outer sole comprising a rubber body and a marginal finishing strip set into the marginal portion of the upper side of the body and united thereto, said strip forming the marginal portion of the upper side of the sole, the finishing strip being provided with an inwardly projecting reinforcing flange united to the strip and body.

1,191,501. FLYING-MACHINE. MARK A. DEES, St. Louis, Mo. Filed Mar. 23, 1914. Serial No. 826,700. (Cl. 244—19.)



1. A flying machine comprising a substantially cylindrical body having separate compartments, upper and lower propellers for lifting the cylindrical body, means for operating said propellers at different speeds respectively, an automatically collapsible parachute attached to the upper edge of said body and alining sight openings in the body and parachute.

2. In a helicopter, a cylindrical car having a conical shaped head at its upper end attached to the propeller shaft and outwardly extending legs at its lower end, an upper propeller constructed to work against the air on the outer face of the car, a lower propeller to work against the atmosphere immediately in rear of or below the body of the car, means for revolving the lower propeller at a greater speed than the upper propeller and in the opposite direction, and a collapsible parachute attached to the car beneath the upper propeller.

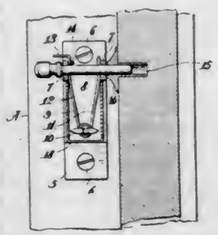
3. A flying machine comprising a substantially cylindrical body having a water tight compartment, upper and lower propellers for lifting the cylindrical body, means for operating said propellers at different speeds respectively, an automatically collapsible parachute attached to the upper edge of said body and alining sight openings in the body and parachute.

4. In a flying machine, a cylindrical car having an upper propeller, a hood attached to said propeller for forcing the air away from the car body and toward the propeller blades, a lower propeller acting against the air immediately below the body of the car, means for driving the lower propeller at a greater speed than the upper propeller and in the opposite direction, and a collapsible parachute attached to the car beneath the upper propeller.

5. A flying machine comprising a cylindrical car, a ring track attached to the upper end of said car, a propeller provided with rollers to ride upon said track, a parachute hinged to the under side of said track, a lower propeller and means for revolving the upper and lower propellers at different speeds and in opposite directions.

[Claims 6 to 12 not printed in the Gazette.]

1,191,502. SASH-LOCK. CHARLES A. EMME, Washington, D. C. Filed Nov. 22, 1915. Serial No. 62,855. (Cl. 16—119.)

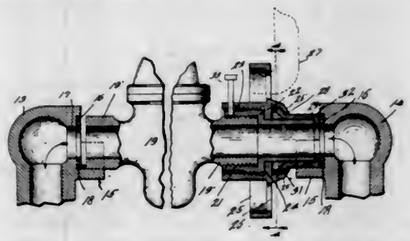


1. A device of the class described comprising a support, a locking element slidably mountel thereon, a spring fixed upon the support and having branch portions, one of said portions being associated with the element to yieldably support the latter, the other of said branches being adapted to coöperate with said locking element to hold the latter fixed relatively to the support, and means for holding the latter mentioned branch in inoperative position.

2. A device of the class described comprising a support, a locking element slidably mounted thereon, a spring fixed upon the support and having branch portions, one of said branches being associated with said element to yieldably support the latter, the other of said branches being adapted to be received within a groove in said element on a predetermined position of the latter, to hold said element fixed relatively to said support, and means for holding the last mentioned branch in inoperative position, whereby said element is free for sliding movement.

3. A device of the class described comprising a substantially U-shaped support, a locking element slidably mounted through openings in the parallel portions of the support, one of said parallel portions having spaced notches in its upper edge, a spring fixed upon the support and having relatively movable branches, one of said branches being associated with said element to yieldably support the latter, the other of said branches being adapted to engage said element and be moved into one of said notches to hold said locking element fixed in a predetermined position, and said branch being further adapted to be moved into the other of said notches and held in inoperative position, whereby said element is free for sliding movement.

1,191,503. METER ATTACHMENT FOR METER-BOX MOUNTING. EDWIN H. FORD, Wabash, Ind. Filed Oct. 21, 1915. Serial No. 57,054. (Cl. 73—167.)



1. The combination with a meter, of a fitting attached to one of its nipples, said fitting comprising an attaching member, a joint forming member longitudinally movable relative to the attaching member, and an intermediate rotary member arranged between the first two members and relatively rotatable thereon to produce relative longitudinal shifting of the first two members whereby the meter may be tightly positioned between opposed service members.

2. A fitting for meters, comprising a main sleeve provided with a thread for attachment to a meter nipple and also provided with an oppositely pitched thread, a second sleeve sleeved upon the first and axially movable thereon, a rotatable member threaded upon the oppositely pitched thread of the main sleeve and carrying a pair of hooked fingers embracing the second sleeve, and a packing gasket arranged around the main sleeve between the second sleeve and the said rotatable member, substantially as and for the purpose set forth.

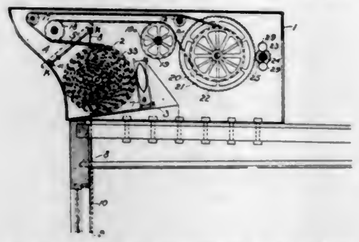
3. A fitting for meters, comprising a main sleeve provided with a thread for attachment to a meter nipple and also provided with an oppositely pitched thread, a second sleeve sleeved upon the first and axially movable thereon, a rotatable member threaded upon the said oppositely pitched thread of the first-mentioned sleeve, and a packing gasket arranged around the first sleeve between the second sleeve and the rotatable member, substantially as and for the purpose set forth.

4. The combination with a meter having induction and eduction openings, of a joint-forming member associated with one of said openings and carried by the meter body, and a member also carried by the meter body and engaging the joint-forming member to shift the same axially of the opening with which it is associated whereby the normal distance between the joint-forming portion of said joint-forming member and the opening other than the one with which it is associated may be varied and the meter thus established with relation to its service connections.

5. A fitting for meters, comprising a main sleeve provided with threads for attachment to a meter nipple and also provided with threads to receive an actuating member, the said actuating member mounted upon said threads, a second sleeve sleeved upon the first sleeve and axially movable thereon, and connections between said second sleeve and the actuating member whereby the second sleeve may be axially shifted upon the first sleeve.

[Claims 6 and 7 not printed in the Gazette.]

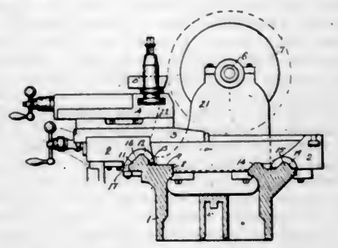
1,191,504. FIRE-ESCAPE. MAX GRAY, New York, N. Y. Filed Feb. 11, 1916. Serial No. 77,679. (Cl. 227—22.)



1. In a fire escape, the combination of an endless flexible ladder, means for winding said ladder into a coil, comprising a cylindrical member having an axial opening, means for rotating said cylindrical member, a removable spool having an axial opening, means for engaging a rung of said ladder with said spool, a removable locking member adapted to be inserted into the axial openings in the said cylindrical member and the said spool, whereby the rotation of the cylindrical member will cause rotation of said spool and thereby cause the winding of said ladder into a coil, and means for removing said locking member.

2. In a fire escape, the combination of an endless flexible ladder, means for winding said ladder into a coil, comprising two cylindrical members having slits through and parallel to their centers of rotation, a removable spool having a slit through and parallel to its center of rotation, means for engaging a rung of said ladder with said spool, a flat bar adapted to be inserted into the slits in the cylindrical members and the removable spool, whereby the rotation of the cylindrical members will cause rotation of said spool and thereby cause the winding of said ladder into a coil and means for removing said flat bar.

1,191,505. ENGINE-LATHE. WILLIAM A. GREAVES, Cincinnati, Ohio. Filed Apr. 21, 1915. Serial No. 22,935. (Cl. 82—32.)

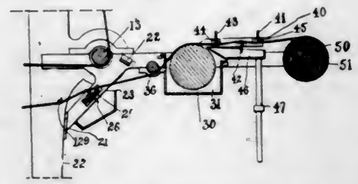


1. An engine lathe comprising a bed having formed thereon a front V and a rear V terminating on a level with the base of said front V, a carriage movably supported on said V's, a ledge extending rearwardly from the base of the front V, a head stock supported with its front portion thereon and provided with a live spindle located a predetermined distance rearwardly of the center of the bed, and a cross slide slidably supported on the carriage and in contact therewith its entire length.

2. In an engine lathe the combination of the bed having the front V thereon formed with the lower portion of its rear face at about one-third of the inclination from a vertical plane as that of the upper portion, and a carriage formed with a correspondingly angular rear wall of its front groove adapted to slidably engage therewith, for better compensating for wear, resisting the torque of the carriage on the shears from crawling upwardly thereon and for better resisting the forward and downward thrust on the tool.

3. An engine lathe having in combination, for the purposes specified, a bed having the front carriage V thereon formed with the upper and lower portions of its rear face inclined in the same direction and at different angles to a vertical plane and at an obtuse angle to each other, a carriage having corresponding portions of the rear face of the coacting groove therein correspondingly inclined to coact with said face on the V, a head stock supported on the bed and a cross slide.

1,191,506. DEINKING-MACHINE FOR PLATE-WIPERS. CHARLES GUTHERLET, Philadelphia, Pa., assignor of one-half to George D. Cox. Filed July 15, 1915. Serial No. 40,132. (Cl. 101—101.)



1. In a plate wiper deinking machine, the combination with the porous plate wiper, of an ink scraper placed in the path of the wiper, an oil permeator filling the wiper with oil placed in the path of the wiper beyond the ink scraper, an oil remover placed in the path of the wiper beyond the permeator, and a tensional wiper collector, the tension of which is strong enough to cause it to draw the

wiper but light enough not to tear the wiper when weakened by being filled with oil by the permeator.

2. In a plate wiper deinking machine, the combination with the porous plate wiper, of an ink scraper placed in the path of the wiper, an oil permeator filling the wiper with oil, placed at a point in the path of the wiper beyond and elevated above the ink scraper, whereby the oil will flow downward on the wiper toward the ink scraper, an oil remover placed in the path of the wiper beyond the permeator and a tensionally operated wiper collector, the tension of which is strong enough to cause it to draw the wiper but light enough not to tear the wiper while weakened by being filled with oil by the permeator.

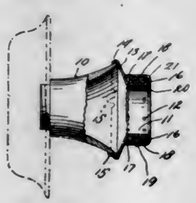
3. The combination in a plate wiper deinking machine, with the porous plate wiper, in the form of a feeding roll, a collecting roll and an intermediate portion, of a freely revoluble shaft carrying the feeding roll of the plate wiper, an ink scraper placed in the path of the wiper, an oil permeator filling the paper with oil placed in the path of the wiper beyond the ink scraper, an oil remover placed in the path of the wiper beyond the permeator, a tensional wiper collector, the tension of which is strong enough to cause it to draw the wiper but light enough not to tear the wiper when weakened by being filled with oil by the permeator, and a brake acting to retard the unrolling of the wiper upon the revoluble shaft.

4. In a plate wiper deinking machine the combination with a porous plate wiper, of an ink scraper placed in the path of the wiper, an oil permeator filling the wiper with oil placed in the path of the wiper beyond the ink scraper and elevated above same, positively operated mechanism for operating the oil permeator, an oil remover placed in the path of the wiper beyond the oil permeator and a tensional wiper collector, the tension of which is sufficient to cause it to draw the wiper and yet light enough not to tear the wiper while filled with oil by the permeator.

5. In a plate wiper deinking machine the porous plate wiper, the ink scraper, the oil permeator, the oil remover, a swiveling carriage for the oil remover pivoted to the frame of the deinking machine and a tensional wiper collector, the tension of which is sufficient to cause it to draw the wiper yet light enough not to tear the wiper when the latter is filled with oil by the permeator.

[Claims 6 to 11 not printed in the Gazette.]

1,191,507. ATTACHMENT FOR TELEPHONE-MOUTHPIECES. JOSEPHINE A. HALL, San Diego, Cal. Filed Dec. 10, 1914. Serial No. 876,451. (Cl. 179—185.)



A telephone mouth piece attachment comprising a cylindrical tubular member provided with perforations, a circumscribing flange on one end of the member, means on said flange for securing the member to a telephone mouth piece, a second circumscribing flange on the other end of the member forming in conjunction with the first flange a channel surrounding the member, a pad disposed in said channel, and a second tubular member engageable over the first named tubular member and pad to retain the latter in place by movement of the member over the outer end of the first named tubular member, said pad being of such thickness that the application of the second tubular member will compress the pad whereby the reaction from such compression will lock the second tubular member against accidental displacement from its holding position with respect to the pad.

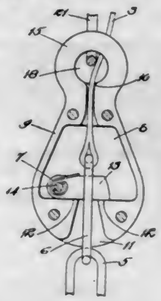
1,191,508. BAROMETER. WILLIAM J. HARTUNG, Rochester, N. Y. Filed Aug. 10, 1915. Serial No. 44,824. (Cl. 73—4.)



1. A barometer comprising a tube having two connected legs one of which has an enlarged air tight chamber at its upper end and the other of which is formed with an enlarged chamber near its lower end and is open at its upper end to the atmosphere, an expansion medium within said tube composed of two separated ingredients, one operating in the first named leg and the enlarged chamber of the second named leg and the other operating in the second named leg, and valves arranged in said tube to confine the ingredients within the tube in separated conditions during shipment of the instrument.

2. A barometer comprising a tube having a bulb portion integral therewith, a wall surrounding said bulb portion to provide a vacuum chamber about the bulb portion, said wall extending beyond the bulb portion and connecting with the tube portion to provide an extension of the vacuum chamber about the tube portion in order that the tube portion will not conduct heat to the bulb portion.

1,191,509. SUBMARINE-SALVAGE APPARATUS. BENJAMIN J. HASTINGS, Taunton, Mass. Filed Apr. 13, 1916. Serial No. 90,820. (Cl. 114—51.)



1. In a salvage apparatus for sunken vessels, a shell having an interior chamber and formed with a slot extending through the wall of the shell into said chamber, said shell being formed with ledges on each side of said slot and a bar pivoted within said shell on one side of said slot, the other end of said bar bridging across the top of said slot and resting on said other ledge.

2. In a salvage apparatus for sunken vessels, a shell having an interior chamber and formed with a slot extending through the wall of the shell into said chamber, said shell being formed with ledges on each side of said slot, and a bar pivoted within said shell on one side of said slot, the other end of said bar bridging across the top of said slot and normally resting on said other ledge, in combination with a link tapered toward one end, the tapered end being fitted to pass through the slot in said shell and turn the bar on its pivot to permit the end of the link to pass the bar and then permit the bar to pass through the eye of the link and drop back on its seat.

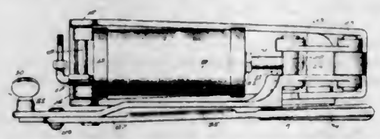
3. In a salvage apparatus for sunken vessels, a shell having an interior chamber and formed with a slot in one end thereof which extends into the interior chamber and is of increasing width transversely in one direction from the interior of the shell toward the outer end and is comparatively narrow in the transverse direction at right angles to said variable width direction of the slot, and a bar pivotally mounted within the shell on one side of said slot, the other end of the bar resting normally on a shoulder on the opposite side of the narrow width of the slot.

4. In a salvage apparatus for sunken vessels, a shell having an interior chamber with a slot in one end thereof which extends into the interior chamber and is of increasing width in one direction from the interior of the shell toward the outer end and is comparatively narrow in the transverse direction at right angles to said variable width direction of the slot, a bar pivotally mounted within the shell on one side of said slot, the other end of the bar resting normally on a shoulder on the opposite side of the slot, the other end of said shell being constructed with means whereby it may be connected with a cable, in combination with a chain adapted to be connected at one end with the sunken vessel and having at the other end a link tapered in a direction away from the vessel to which it is attached, and fitted to pass through the slot in said shell and enter the chamber above said slot and to be engaged by said cross bar in the shell.

5. In a salvage apparatus for sunken vessels, a shell having an interior chamber and an outwardly flaring passage extending from said chamber through one end of the shell, a bar pivoted within said shell on one side of said slot, said bar extending cross wise of the inner end of said slot, a support on which the swinging end of said bar normally rests, and a link which is narrowed toward one end and is fitted to enter said flaring passage and engage said bar to turn it back on its pivot until the said advance end of the link rides past the bar, the eye of the link being shaped to allow the swinging end of the bar to pass through the eye when the bar falls back on its seat.

[Claims 6 and 7 not printed in the Gazette.]

1,191,510. TIRE-PUMP. GEORGE I. HIPPLE, Chicago, Ill. Filed Jan. 27, 1914. Serial No. 814,813. (Cl. 230—27.)



1. In a pump, the combination with a pumping mechanism, of an operating lever connected thereto, an extension arm pivotally connected at one end to the said lever intermediate of the ends of the latter, and a screw swiveled upon the arm and threadedly engaging the lever to lock the lever against pivotal motion with respect to the arm.

2. In a pump, the combination with a pumping mechanism, of an operating lever connected thereto and comprising two pivotally joined members, the pivotal connection therebetween permitting the said members to be disposed either substantially alongside of each other or substantially in extension of each other; one of said members having a portion extending alongside a portion of the other member when the said members are in their last-named relative position; one of said members equipped with a shoulder formation engaging the other of said last members when the members are in their said last-named position.

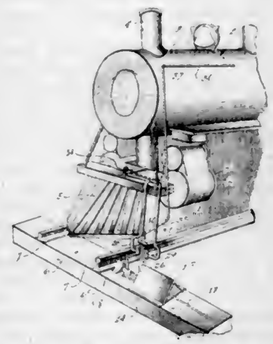
3. In a pump, the combination with a pumping mechanism, of an operating lever connected thereto and comprising two pivotally joined members, the pivotal connection therebetween permitting the said members to be disposed either substantially alongside of each other or substantially in extension of each other; one of said members having a portion extending alongside a portion of the other member when the said members are in their last-named relative position; one of said members equipped with a shoulder formation engaging the other of said members when the members are in their said last-named position; and manually operable means for locking the said members in their said last-named position.

4. In a pump, the combination with a pumping mechanism, of an operating lever connected thereto and comprising two pivotally joined members, the pivotal connection therebetween permitting the said members to be disposed either partially overlapped alongside of each other or substantially in extension of each other; one of said members having a portion extending alongside a portion of the other member when the said members are in their last-named relative position; one of said members equipped with a shoulder formation engaging the other of said members when the members are in their said last-named position; and a screw swiveled upon one of said members and threadedly engaging the other thereof when the members are in their said last-named position, the said screw being slidable with respect to the member upon which it is swiveled to permit the screw to be drawn back for allowing the said members to be moved to the other of their said relative positions.

5. In a pump, the combination with a reciprocable piston, of a pivoted operating member operatively connected thereto; and an extension member pivotally joined to the said actuating member and having a portion adapted to be disposed parallel with and overlapping a portion of the said actuating member; and clamping means for securing the said extension member and the said actuating member to each other in their said partially overlapped relation to each other.

[Claims 6 and 7 not printed in the Gazette.]

1,191,511. AUTOMATIC TRAIN-STOP. ALFRED P. HOCHSTEIN, Pittsburgh, Pa., assignor of one-fourth to W. F. Hazlett, Pittsburgh, Pa. Filed Apr. 1, 1914. Serial No. 828,881. (Cl. 246—59.)



1. In a train stop, a brake pipe, bleed pipes communicating with said brake pipe, and bleed valves carried by said bleed pipes, having their handles positioned below said bleed pipes arranged to extend toward each other when the valves are closed to prevent accidental opening thereof the valve stems forming guards to prevent engagement of the handles with a foreign object.

2. In a train stop, a brake pipe, bleed pipes connected to said brake pipe and extending angularly therefrom, and bleed valves carried by said bleed pipes, said valves having their handles positioned below the bleed pipes and in close proximity to the track, said handles normally extending toward each other to prevent accidental operation the[illegible]

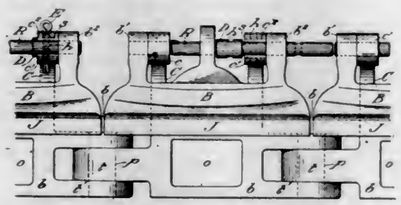
3. In a train stop, a brake pipe, bleed pipes communicating with said brake pipe and extending angularly and downwardly therefrom, and bleed valves carried by and disposed below said bleed pipes and in close proximity to the track, said valves having their handles arranged to extend toward each other when closed to prevent accidental opening thereof.

4. In a train stop, a brake pipe, bleed pipes communicating with said brake pipe and extending angularly therefrom in spaced parallel relation, and bleed valves carried by the lower ends of said bleed pipes said valves having their handles arranged to extend toward each other when in inoperative position to prevent the accidental opening of said valves.

5. In a train stop, a brake pipe, a branch pipe connected to said brake pipe and extending at right angles therefrom, bleed pipes connected to said branch pipe, said bleed pipes extending in spaced parallel relation therefrom, and bleed valves at the lower ends of said bleed pipes having their handles in close proximity to the track and extending toward each other to prevent accidental operation of the valves.

[Claims 6 and 7 not printed in the Gazette.]

1,191,512. CLOTH-CLAMP FOR TENTERING-MACHINES. JOHN J. HOEY, Providence, R. I. Filed Dec. 2, 1915. Serial No. 64,763. (Cl. 26—8.)



1. In a cloth-clamp for tentering-machine chains, the combination with the frame of the clamp provided with bearings, of a hinge-pin mounted in said bearings, means to allow the hinge-pin to be withdrawn laterally from the bearings, and a movable jaw pivoted on the hinge-pin to adapt it to be removed therewith for repair or replacement.

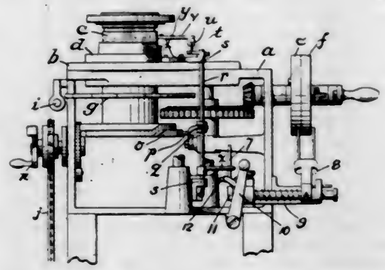
2. In a cloth-clamp for tenter-chains, the combination with the frame of the clamp provided with bearings having alining bores, of a hinge-pin mounted in said bearings to allow for its lateral withdrawal from the frame, a movable jaw-member pivoted to swing on the pin, and means to secure the hinge-pin against displacement from its bearings.

3. In a cloth-clamp for tenter-chains, the combination with the frame of the clamp provided with a fixed jaw, of a hinge-pin mounted in a slotted bearing on the frame to allow it to be withdrawn laterally therefrom, means to secure the pin against displacement from the bearing, and a movable jaw pivoted on the pin to adapt it to cooperate with the fixed jaw to clamp the cloth thereagainst.

4. In a cloth-clamp for tenter-chains, the combination with the frame thereof provided with arms having bearings at their ends, and one of said bearings slotted through its side, of a hinge-pin mounted in said bearings and formed with a portion of reduced thickness to adapt it to be withdrawn through the slot in the bearing, means to secure the pin against displacement from its bearings, and a movable jaw pivoted on the hinge-pin to adapt it to swing on the frame.

5. In a cloth-clamp for tentering-machines, the combination with a fixed-jaw member and a movable-jaw cooperating therewith, of bearings on the fixed-jaw member provided with alining bores and one of said bearings having a transverse slot cut through its side, of a hinge-pin extending through the bearings to support the movable jaw in pivotal relation to the fixed jaw, means for securing the hinge-pin against displacement from the bearings, and means whereby the hinge-pin may be withdrawn laterally from the slotted bearings after its end has been slid free from the other bearing.

1,191,513. STOP-MOTION FOR CIRCULAR-KNITTING MACHINES. HAROLD E. HOUSEMAN, Philadelphia, Pa., assignor to Standard Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 17, 1916. Serial No. 72,437. (Cl. 66—7.)



1. In automatic stops for circular knitting machines, in combination, a needle cylinder, vertically movable needles therein provided with butts, mechanism to stop the machine and a contrivance adapted to actuate the stop mechanism and controlled in its operation by the butts of needles.

2. In automatic stops for circular knitting machines, in combination, a needle cylinder, vertically movable needles therein provided with butts, mechanism to stop the machine, and a contrivance connected with the stop mechanism and movable toward and from the needle cylinder and located in operative relation to the butts of certain needles when the same are in one of their vertical positions and adapted to be controlled in its operation by said butts.

3. In automatic stops for circular knitting machines, in combination, a needle cylinder, vertically movable needles therein, mechanism for stopping the machine, and a contrivance adapted to control the operation of the stop mechanism and a part whereof is adapted to move into the space occupied by the butts of certain needles when the same are in one of their vertical positions and controlled in its operation by the position of said butts.

4. In automatic stops for circular knitting machines, in combination, a needle cylinder, vertically movable needles therein, mechanism for stopping the machine, and a contrivance adapted to control the operation of the stop mechanism and a part whereof is adapted to move into the space occupied by the butts of certain needles when the same are in one of their vertical positions and controlled in its operation by the position of said butts, and pattern mechanism independently controlling the positioning of the needle and the movement into operative position of said contrivance.

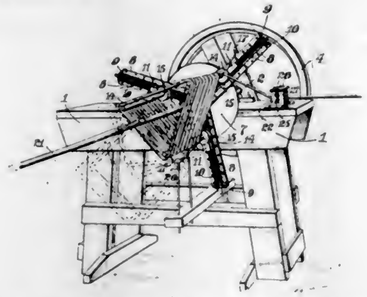
5. In automatic stops for circular knitting machines, in combination, a needle cylinder, vertically movable needles therein provided with butts, mechanism to stop the machine, and a contrivance operable by the butts of needles to actuate the stop mechanism.

[Claims 6 to 14 not printed in the Gazette.]

1,191,514. SYSTEM FOR FORMING POLYGONAL HELICAL COILS. LEON JAMETON, St. Louis, Mo. Filed July 1, 1915. Serial No. 37,441. (Cl. 153—65.)

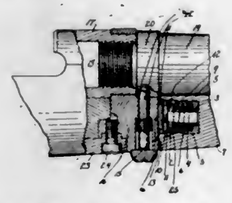
1. The method of forming polygonal helical coils which consists in forming under suitable tension a helical coil having a less number of sides than the desired finished coil and permitting the same to react under its natural resiliency when freed from the coiling means to form a helix of the desired form.

2. The method of forming a square helical coil which consists in forming a triangular helical coil under suitable tension and permitting the same to react under its natural resiliency when freed from the coiling means to form a square helix.



3. The method of forming square spiral wire reinforce which consists in forming a triangular helical coil under suitable tension and permitting the same to react under the natural resiliency of the wire when freed from the coiling means to form the desired square spiral reinforce.

1,191,515. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Apr. 20, 1916. Serial No. 92,479. (Cl. 42—75.)



1. A take-down firearm characterized by having the rear end of its forearm provided with a yielding take-up plunger for frictional engagement with the forward portion of the receiver of the arm for automatically taking up any shake in the take-down connection between the barrel and the receiver.

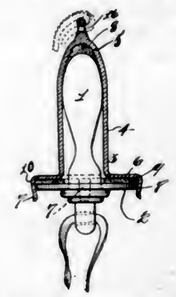
2. In a take-down firearm, the combination with the receiver thereof, of a barrel screwed thereinto, a forearm, a socket located in the rear end of the forearm, and a spring-actuated plunger located in the said socket and adapted to engage with the forward portion of the receiver for taking up any shake in the connection between the barrel and receiver.

3. In a take-down firearm, the combination with the receiver thereof, of a receiver-extension, a barrel adapted to be screwed into the said receiver, a forearm secured to the barrel, and a spring-actuated take-up plunger mounted in the rear end of the forearm for frictional engagement with the forward face of the lower portion of the receiver-extension whereby any shake in the connection between the barrel and the receiver due to the wearing of the threads, is automatically taken up.

1,191,516. NIPPLE-PROTECTOR. RUDOLF KEIL, New York, N. Y. Filed May 18, 1916. Serial No. 98,270. (Cl. 128—18.)

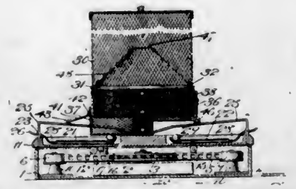
1. A protecting cap or sheath for nipples or the like, consisting of a cylindrical body portion to envelop the nipple, means to retain said body portion in position thereon, and antiseptic pads carried by said cap or sheath.

2. A sanitary protecting cap or sheath for nipples or the like, comprising a rigid cylindrical body portion having a closed end and adapted to envelop a nipple, resilient retaining-fingers or clips projecting from and integral with



the open end of said body portion, and an antiseptic pad retained within the body portion.

1,191,517. FLY-TRAP. STEPHEN KELTONIK, Conemaugh, Pa. Filed Feb. 23, 1915. Serial No. 9,960. (Cl. 43—32.)



1. A fly trap comprising a cage, a platform provided with a bait tray, means for reciprocating the platform to bring the tray beneath and away from the cage, and means for rocking the tray when under the cage.

2. A fly trap comprising a cage, a platform provided with bait trays, means for rocking the trays when under the cage, and means for reciprocating the platform to alternately bring the trays beneath the cage.

3. A fly trap comprising a housing having passages therethrough, gates for said passages, a cage mounted on said housing, a platform, means for reciprocating the platform into and out of said housing and means carried by the platform for operating said gates.

4. A fly trap comprising a housing having passages therethrough, vertically sliding gates for said passages, a cage mounted on said housing, a platform, means for reciprocating the platform into and out of said housing and means carried by the platform for operating said gates.

5. A fly trap comprising a housing having passages therethrough, gates for said passages, a cage mounted on said housing, a platform provided with bait trays, means for reciprocating the platform to alternately bring the trays into said housing, and means carried by the platform for operating said gates and rocking said trays.

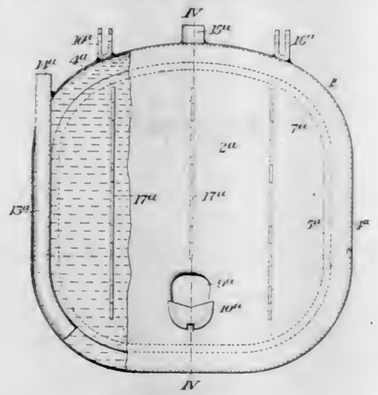
[Claims 6 to 13 not printed in the Gazette.]

1,191,518. HOLLOW SHEET-METAL FURNACE-DOOR STRUCTURE. LUTHER L. KNOX, Avalon, Pa., assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 1, 1915. Serial No. 64,452. (Cl. 122—498.)

1. A hollow sheet metal door structure having an inner plate member provided with a depression forming an inset lining seating portion, the surrounding wall of said seating portion having portions thereof curved to form rounded or arched corners, substantially as described.

2. A hollow sheet metal door structure, formed of an inner plate member and an outer plate member, one of said members having approximately right angled flanges which constitute the edge walls of the structure, and the free

edges of which are welded to the free edges of the other plate member, the inner member having a depression forming an integral inset lining seating portion whose surrounding wall is continuous and is rounded at the corners of the lining seating, substantially as described.



3. A hollow sheet metal door structure formed of an inner plate member and an outer plate member, the inner plate member having a depression forming an integral inset lining seating portion whose surrounding wall is continuous and is rounded at its corner portions, substantially as described.

4. A hollow sheet metal door structure formed of an inner plate member and an outer plate member, the inner plate member having a depression forming an integral inset lining seating portion whose surrounding wall is continuous and is rounded at its corner portions, the edge portions of the inner member around the lining seat being bent outwardly to form the edge walls of the structure, and being welded at their free edges to the free edges of the outer plate member, substantially as described.

5. A hollow sheet metal door structure formed of inner and outer plate members, the inner plate member having an integral inset lining seating portion formed with rounded corners, and the structure also having a depression with rounded top and bottom corners, substantially as described.

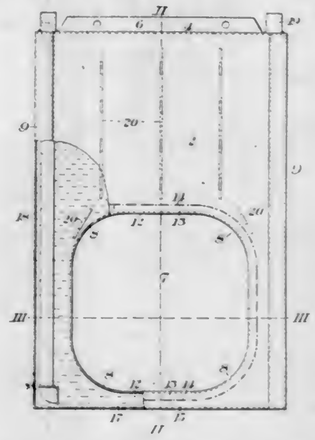
[Claims 6 to 8 not printed in the Gazette.]

1,191,519. WATER-COOLED FURNACE-DOOR FRAME. LUTHER L. KNOX, Avalon, Pa., assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 1, 1915. Serial No. 64,453. (Cl. 122—497.)

1. A hollow sheet metal door frame structure composed of inner and outer plate members, each of said members having a door opening formed therein, the metal surrounding the door opening in one of the members being bent at substantially right angles to form the wall of the door opening and its free edge portion again bent in a direction away from said opening and substantially parallel to the plane of the door, and welded to the edge of the other plate around said opening, substantially as described.

2. A hollow sheet metal door frame structure composed of inner and outer plate members, each of said members having a door opening formed therein, the metal surrounding the door opening in one of the members being bent at substantially right angles to form the wall of the door opening and its free edge portion again bent in a direction away from said opening and substantially parallel to the plane of the door, and welded to the edge of the other plate around said opening, the wall forming flange of said opening being continuous and rounded at the corners of the opening, substantially as described.

3. A hollow sheet metal door frame structure comprising inner and outer plates of sheet metal, the outer plate having a portion thereof cut away to form a door opening therethrough, and the inner plate also having a cut away portion, with the metal adjacent to said portion bent outwardly at substantially right angles to form the wall of said opening, and then again bent to meet the edge of the cut away portion of the other sheet to which it is welded, substantially as described.



4. A hollow sheet metal door frame structure comprising inner and outer plates of sheet metal, the outer plate having a portion thereof cut away to form a door opening therethrough, and the inner plate also having a cut away portion, with the metal adjacent to said portion bent outwardly at substantially right angles to form the wall of said opening, and then again bent to meet the edge of the cut away portion of the other sheet to which it is welded, the flange forming wall of the inner sheet being continuous and rounded at the corners, substantially as described.

5. A hollow sheet metal door frame structure comprising inner and outer plates of sheet metal, the outer plate having a portion thereof cut away to form a door opening therethrough, and the inner plate also having a cut away portion, with the metal adjacent to said portion bent outwardly at substantially right angles to form the wall of said opening, and then again bent to meet the edge of the cut away portion of the other sheet to which it is welded, and the structure having a continuous water circulating space entirely around said opening, substantially as described.

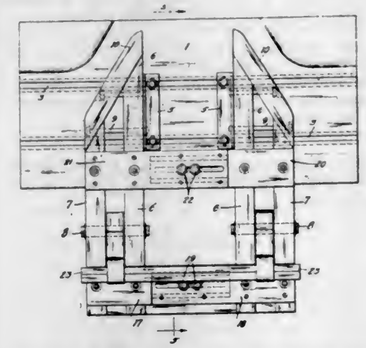
[Claims 6 to 8 not printed in the Gazette.]

1,191,520. AUTOMOBILE-JACK. JOSEPH PETER KOECHNER, Tipton, Mo. Filed Apr. 5, 1916. Serial No. 89,024. (Cl. 254—89.)

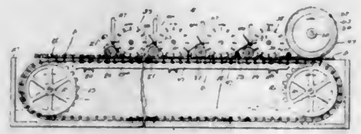
1. In an automobile jack, a base block, a lower adjustable cross beam, a frame formed of relatively adjustable frame-sides connecting said base block and adjustable cross beam, and standards pivotally arranged in said frame-sides.

2. In an automobile jack, a base block, a lower adjustable cross beam, a frame formed of relatively adjustable frame-sides connecting said base block and adjustable cross beam, standards pivotally arranged in said frame-sides, and upper adjustable cross beams connecting the said frame-side and serving as stops for the said standards.

3. In an automobile jack, a grooved base block, a lower adjustable cross beam, a frame formed of relatively adjustable frame-sides connecting said base block and adjustable cross beam, angle pieces carried by said frame-sides, bolts carried by said angle pieces and slidably disposed in the grooved portions of said base block, standards pivotally arranged in said frame-sides, and means adjustably connecting said frame-sides whereby the pivotal movement of said standards is limited.



1,191,521. WOOL-PELT-SCRUBBING MACHINE. ALBERT J. LA FRANCIS, Chicago, Ill. Filed July 23, 1915. Serial No. 41,522. (Cl. 149—15.)



1. A wool pelt scrubber, comprising in combination a vat, an endless traveling conveyer therein, a rotary feed roller co-acting with said conveyer to feed wool pelts along with the same, a water spraying pipe and a high speed cylindrical wool pelt scrubber adjacent said feed roller.

2. The combination of a traveling conveyer, a rotary spring pressed feed roller thereabove co-acting therewith to feed pelts along with the same, a high speed rotatory cylindrical scrubber adjacent said traveling conveyer and feed roller, a spray pipe adjacent said scrubber, means for supplying water to said spray pipe, and a rotatory wringer roller co-acting with said traveling conveyer to remove water from the pelts.

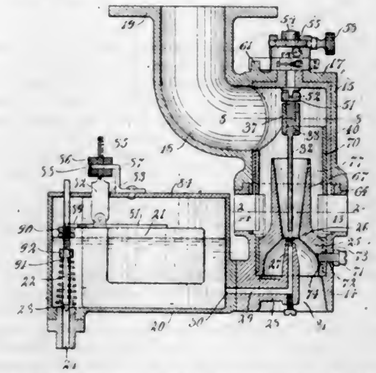
3. The combination of a vat, an endless traveling table therein for receiving the wool pelts to be cleaned, a plurality of corrugated feed rollers above said table and co-acting therewith to feed the pelts along with the top of said table, a plurality of cylindrical scrubbers adjacent said rollers, a plurality of spray pipes adjacent said scrubbers, means for supplying said spray pipes with water, a plurality of guide rollers adjacent the scrubbers, and a wringer roller co-acting with said traveling table to remove water from the pelts after they have been cleaned by the scrubbers.

4. In a wool scrubbing machine, the combination of a vat, sprocket wheels mounted therein, an endless conveyer having sprocket chains trained around said sprocket wheels, suitably supported tracks for supporting the upper portion of said conveyer, a plurality of corrugated feed rollers co-acting with said conveyer to feed wool pelts along the same, a plurality of cylindrical scrubbers mounted adjacent said feed rollers, water spraying pipes located adjacent said scrubbers, and means for supplying water to said pipes.

5. A wool pelt scrubbing machine, comprising the combination of a vat, an endless traveling, endless conveyer therein, a plurality of spring pressed corrugated feed rollers thereabove co-acting therewith to feed wool pelts along with the same, said rollers being spring-pressed toward the conveyer, water spraying pipes and high speed cylindrical wool pelt scrubbers arranged adjacent said feed rollers, and means for adjusting said scrubbers toward and away from said conveyer.

[Claims 6 to 9 not printed in the Gazette.]

1,191,522. CARBURETER. AMHERST G. LAMB, Torrington, Conn.; Ella A. Lamb, Torrington, Conn., administratrix of said Amherst G. Lamb, deceased. Filed May 3, 1910. Serial No. 559,186. (Cl. 48—155.1.)



1. A carbureter including in combination, a casing, a fuel inlet device located centrally of the casing, a main air inlet for directing air about said fuel inlet device, a valve for controlling said fuel inlet device, said casing having an auxiliary air inlet, a shutter for said auxiliary air inlet, means for connecting said shutter to said valve, an independent shutter for said auxiliary air inlet, and a third shutter, whereby the size of the auxiliary air inlet may be varied.

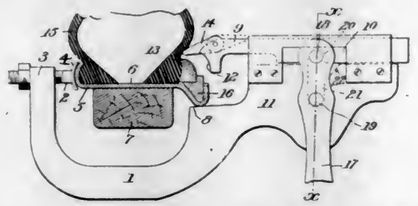
2. A carbureter including in combination, a casing, a fuel inlet device located centrally of the casing, a main air inlet for directing air about said fuel inlet device, a valve for controlling said fuel inlet device, said casing having an auxiliary air inlet, an outlet, a shutter for said auxiliary air inlet, a shutter for said outlet, means for connecting said shutters, whereby they may be simultaneously operated, an independent shutter for the auxiliary air inlet, and a third independent shutter for adjusting the size of the auxiliary air inlet.

3. A carbureter including in combination, a casing, a fuel inlet device located centrally of the casing, a main air inlet for directing air about said fuel inlet device, a valve for controlling said fuel inlet device, said casing having an auxiliary air inlet and an outlet, a shutter for said auxiliary air inlet, a shutter for the outlet, means for connecting said shutters, whereby they may be simultaneously operated, means for connecting said shutters to said valve including a spindle having a worm wheel thereon, and a worm whereby the position of the valve may be adjusted relative to the shutters.

1,191,523. TOOL FOR REMOVING TIRES. DONALD H. MCPHERSON, Le Roy, N. Y. Filed June 21, 1911. Serial No. 634,575. (Cl. 157—6.)

1. A tool, for removing detachable flanges from wheel rims, comprising a yoke adapted to extend through the wheel, said yoke having means on one end adapted to engage the integral flange of the rim, a movable member mounted on the other end of the yoke and adapted to engage the detachable flange for advancing the same, and a rigid shoulder on the end of the yoke carrying the movable member, said shoulder adapted to engage the

inner surface of said rim for retaining said movable member in contact with said detachable flange during its advancement.

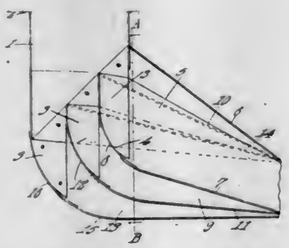


2. A tool, for removing detachable flanges from wheel rims, comprising a yoke adapted to extend through the wheel, said yoke having means on one end adapted to engage the integral flange of the rim, a movable member mounted on the other end of the yoke and adapted to engage the detachable flange for advancing the same, said movable member having its detachable flange-engaging portion inclined away from the yoke to fit the outer face of said ring, and a rigid shoulder on the end of the yoke carrying the movable member, said shoulder, adapted to engage the inner surface of said rim for retaining said movable member in contact with said detachable flange during its advancement.

3. A tool, for removing detachable flanges from wheel rims, comprising a yoke adapted to extend through the wheel, said yoke having means on one end adapted to engage the integral flange of the rim, a movable member mounted on the other end of the yoke and adapted to engage the detachable flange for advancing the same, and a pivoted projection on said movable member adapted to be extended beyond the same for separating a tire from said detachable flange before the latter is engaged by said movable member, said projection being also adapted to be turned back out of operative position, when desired.

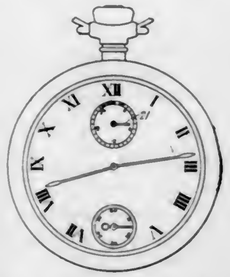
4. In a device of the type described, the combination of a yoke-member having an abutment on one end, adapted to engage a flange of a wheel-rim, a movable member oppositely mounted, upon said yoke, to said abutment and adapted to engage the detachable flange of said rim, said yoke having a shoulder thereon, adjacent one end of said movable member, adapted to engage the inner surface of said wheel rim as said movable member engages the detachable rim-flange, said movable flange-engaging member being equipped with a tire-engaging member, adapted to extend beyond said movable member and engage the tire in advance of the contact of the movable member with the detachable flange, and a common actuating means for both said flange engaging member and said tire engaging member for their synchronous movement.

1,191,524. FEED-CHUTE. PATRICK F. MALARKEY, Mount Carmel, Pa., assignor of one-half to Elmer E. Straub, Mount Carmel, Pa. Filed July 6, 1915. Serial No. 38,379. (Cl. 193—29.)



A feed chute for coal separators, including a main chute having tongues extending from the discharge end thereof, said tongues being disposed in stepped relation and each having a curved side, side delivery chutes having their bottoms secured to the respective tongues, upstanding walls upon the respective side delivery chutes, one of said walls constituting a deflector and being extended partly across the main chute and along the curved edge of the tongue to which the side delivery chute is secured, all of the side delivery chutes being disposed in superposed relation and having their bottoms constituting continuations of the bottom of the main chute.

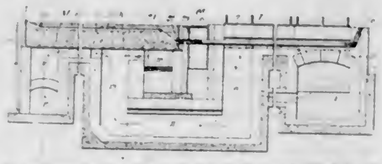
1,191,525. WINDING-INDICATOR. JOSEPH MAZER, McAlester, Okla. Filed Mar. 1, 1913. Serial No. 751,469. (Cl. 58—85.)



1. An indicator mechanism for watches and the like, the combination of a main-spring barrel, winding mechanism including a ratchet-wheel, gear-wheels, one connected directly with the ratchet-wheel and one directly with the main-spring barrel, sun-gears on said gear-wheels, an arbor on which said gear-wheels are loosely mounted, a supporting member carried by said arbor between said gears, pinions carried by said supporting member at opposite sides thereof meshing with the sun-gears in said gears, an indicator hand, and connections between said supporting member and the indicator hand.

2. In winding indicator mechanism for watches and the like, the combination of the main-spring barrel, winding mechanism including a ratchet-wheel, gear wheels, one meshing directly with said ratchet-wheel and one directly with said main-spring barrel, an arbor on which said wheels are loosely mounted, sun-gears carried by said wheels, a supporting member carried by said arbor between said wheels, pinions on the opposite side of said supporting member meshing with the s un-gears on said first gears, said supporting member having teeth formed therein, a gear wheel meshing with said teeth, an indicator hand, and connections between said gear wheel and said indicator hand.

1,191,526. PROCESS OF COATING WIRE WITH METAL. GUY L. MEAKER, Joliet, Ill. Filed June 27, 1913. Serial No. 776,151. (Cl. 21—70.2.)



1. A process of coating with metal consisting in forming a bath of non-adherent material and a bath of coating metal in contact with each other, raising the bath of non-adherent material to an annealing temperature and passing the article to be coated successively through the non-adherent material and the coating metal through the surfaces of contact thereof.

2. A process of coating wire with metal which consists in forming a bath of non-adherent material and a bath of coating metal in contact with each other, raising the bath of non-adherent metal to an annealing temperature and passing the wire successively through the non-adherent material and the coating metal through the surfaces of contact thereof.

3. A process of galvanizing consisting in forming a bath of spelter and a bath of lead in contact with each other, heating the bath of lead to an annealing temperature; passing the article to be galvanized through the bath of lead whereby it is annealed and through the surfaces of contact of the baths and into and through the bath of spelter.

4. A process of coating with metal consisting in supporting a bath of coating metal upon a bath of heavier non-adherent metal, heating the latter to an annealing temperature and passing the article to be coated first through the bath of non-adherent metal and then through the bath of coating metal.

5. A process of coating with metal consisting of maintaining a bath of non-adherent metal at an annealing temperature, maintaining a bath of coating metal at a materially lower temperature in contact therewith and passing an article to be coated through the annealing bath, the surfaces of contact between the annealing and coating bath and through the latter bath.

[Claims 6 to 12 not printed in the Gazette.]

1,191,527. TANNING OF HIDES AND SKINS. ERNEST WYNDHAM MERRY, Sheffield, England, assignor to International Pyrotan Company, Limited, London, England. Filed Jan. 12, 1916. Serial No. 71,652. (Cl. 149—5.)

1. In a process of tanning by means of alum and sodium pyrophosphate the treatment of the hides in a tanning solution in which the proportion of alum in terms of the crystallized salt with 24 molecules of water of crystallization to sodium pyrophosphate in terms of the pure anhydrous salt is in the ratio exceeding 5 up to 7 parts of alum to 1 part of sodium pyrophosphate.

2. In a process of tanning by means of alum and sodium pyrophosphate the treatment of the hides in a tanning solution in which the proportion of alum in terms of the crystallized salt with 24 molecules of water of crystallization to sodium pyrophosphate in terms of the pure anhydrous salt is in the ratio exceeding 5 up to 7 parts of alum to 1 part of sodium pyrophosphate the proportion of the said alum being substantially $\frac{1}{10}$ of the weight of hide treated.

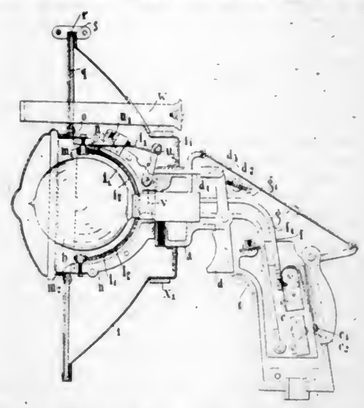
3. In a process of tanning by means of alum and sodium pyrophosphate the treatment of the hides in a tanning solution in which the proportion of alum in terms of the crystallized salt with 24 molecules of water of crystallization to sodium pyrophosphate in terms of the pure anhydrous salt is in the ratio exceeding 5 up to 7 parts of alum to 1 part of sodium pyrophosphate the restriction of the quantity of the water in the tanning bath to from 20% to 40% of the weight of hide treated.

4. A tanning solution of the following proportions on the weight of hide treated, water 27%, alum 10%, sodium pyrophosphate 1.66% and, say, 5% of a pore opening agent such as common salt.

1,191,528. LAMP-SIGNALING ARRANGEMENT. ALBERT HENRY MIDGLEY, Acton Vale, England, assignor of one-half to Charles Anthony Vandervell, Acton Vale, England. Filed Feb. 24, 1916. Serial No. 80,199. (Cl. 240—15.)

1. A lamp signaling device comprising in combination a revolver-shaped lamp holder, a trigger, a reflector and a lamp all mounted on said lamp holder, a pivoted hemispherical shutter, means for operating said shutter from said trigger, and an opaque member arranged in front of the lamp, as and for the purpose set forth.

2. A lamp signaling device comprising in combination a revolver-shaped lamp holder, a trigger, a reflector and a lamp all mounted on said lamp holder, a shutter consisting of two parts of a divided hemisphere, pivots for the two parts of said divided hemisphere, means for operating said shutter from said trigger, and an opaque member arranged in front of the lamp, as and for the purpose set forth.



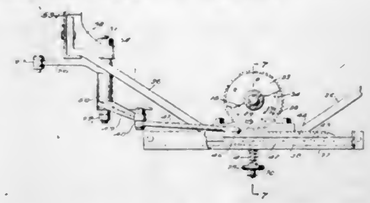
3. A lamp signaling device comprising in combination a revolver-shaped lamp holder, a trigger, a reflector and a lamp all mounted on said lamp holder, means for sliding the reflector on the lamp holder, a pivoted hemispherical shutter, means for operating said shutter from said trigger, and an opaque member arranged in front of the lamp, as and for the purpose set forth.

4. A lamp signaling device comprising in combination a revolver-shaped lamp holder, a trigger, a reflector and a lamp all mounted on said lamp holder, adjustable stops for the trigger, a pivoted hemispherical shutter, means for operating said shutter from said trigger, and an opaque member arranged in front of the lamp, as and for the purpose set forth.

5. A lamp signaling device comprising in combination a revolver-shaped lamp holder, a trigger, a reflector, a lamp and a switch all mounted on said lamp holder, a pivoted hemispherical shutter, means for operating said shutter from said trigger, and an opaque member arranged in front of the lamp, as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,191,529. COMBUSTION-ENGINE-STARTING DEVICE. FRANCIS A. MILLS, Lynn, Mass. Filed Feb. 17, 1912. Serial No. 678,276. (Cl. 123—185.)



1. In a combustion engine, the combination of a crank shaft, a toothed wheel adapted to be clutched to said crank shaft, an actuator for said toothed wheel comprising a longitudinally movable rack-bar extending transversely of the crank shaft, means for positively moving the rack-bar longitudinally, and means for causing the rack-bar to move into engagement with the toothed wheel as said bar is moved longitudinally in one direction and to be automatically disengaged from the toothed wheel and free the latter when movement of the rack-bar is reversed at any point of its traverse by reverse rotation of said toothed wheel.

2. In a combustion engine, the combination of a crank shaft, a toothed wheel adapted to be clutched to said crank shaft when turned in one direction, an actuator

for said toothed wheel for turning it in said direction, said actuator comprising a rack-bar extending transversely of the crank shaft, means for positively moving the rack-bar longitudinally in both directions, a sliding member, and connections between the sliding member and rack-bar for causing the rack-bar to engage and operate the toothed wheel when the rack-bar is moved by said means longitudinally in one direction and to be automatically disengaged from said toothed wheel and free the latter when movement of the rack-bar is reversed at any point of its traverse by said toothed wheel.

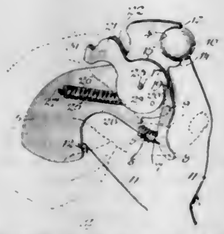
3. In a combustion engine, the combination of a crank shaft, a toothed wheel for turning said crank shaft, an actuator for said toothed wheel comprising a toothed member, and a second member, said members being bodily movable relatively and conjointly transversely of the crank shaft, means for causing the toothed member to engage the toothed wheel as said member is moved bodily transversely of the crank shaft in one direction relatively to the second member and to move out of engagement from said toothed wheel when moved bodily transversely of the crank shaft in the opposite direction, and means for moving the toothed member bodily transversely of the crank shaft relative to the second member and then move both of said members bodily transversely of the crank shaft.

4. In a combustion engine, the combination of a crank shaft, a toothed wheel for turning said crank shaft, an actuator for said toothed wheel comprising a toothed member and a second member, said members being bodily movable relatively and conjointly transversely of the crank shaft, means for causing the toothed member to engage the toothed wheel as said member is moved bodily transversely of the crank shaft in one direction relatively to the second member and to move out of engagement from said toothed wheel when moved bodily transversely of the crank shaft in the opposite direction, and means for retarding free bodily transverse movement of the second member.

5. In a combustion engine, the combination of a crank shaft, a toothed wheel for turning said shaft, a rack-bar longitudinally movable transversely of the crank shaft, means for positively moving said rack bar longitudinally in both directions, a second bar also movable longitudinally transversely of the crank shaft said bars having inclined engaging surfaces for causing the rack bar to engage the toothed wheel when moved longitudinally in one direction by its actuating means and to be disengaged from and free said toothed wheel when moved in an opposite direction either by said operating means or by reverse rotation of said toothed wheel.

[Claims 6 to 26 not printed in the Gazette.]

1,191,530. TOY SHOOTER. NELS G. NELSON, Rockford, Ill. Filed Mar. 31, 1916. Serial No. 87,892. (Cl. 124—12.)



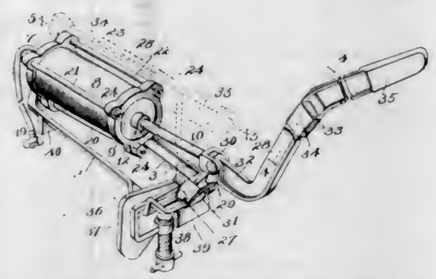
1. A toy shooter consisting of a plate in the form of a pistol having a recess therein containing a hammer tensioning spring, a hammer, means for holding an elastic ball by frictional engagement on said plate, and a trigger for controlling said hammer.

2. A toy shooter consisting of a flat body forming a hand grip approximately in the form of a pistol grip and having a recess which provides fixed jaws adapted to hold therebetween a ball pressed thereinto and held by frictional engagement, and a spring returned hammer arranged to strike said ball.

3. In a toy shooter, a disk of metal having the outlines of a pistol grip with a recess therein which forms a pair of jaws and takes the place of the usual pistol barrel, a hammer arranged to strike a ball held in said jaws, means for actuating the hammer, and a ball adapted to be held in said jaws.

4. In a toy pistol, a pistol grip having a recess therein forming a pair of jaws, a hammer formed of a sheet of metal straddling said grip and arranged to strike a ball held in said jaws, and means for actuating said hammer.

1,191,531. TIRE-PUMP. JOHAN LUDVIG NILSON, Chicago, Ill. Filed Oct. 3, 1914. Serial No. 864,736. (Cl. 230—27.)

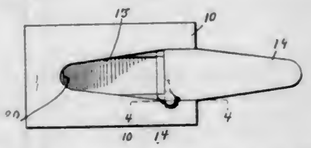


1. A running board tire pump comprising a base, means for clamping said base to the running board, a pivotally mounted pump cylinder, and an operating lever and extension or handle therefor arranged to fold over on the pump cylinder, said lever and handle having a lug and socket arrangement, said lug being when the lever is in inoperative position upwardly inclined to prevent jarring apart of the lug and socket engagement.

2. The combination with a pump of the class described, of an operating lever and handle separable from each other and engageable with each other in reverse relation to fold over onto the pump cylinder, and loosely interengaging means upon said lever and handle for supporting one upon the other in their folded position.

3. The combination with a pump of the class described, of a pivotally mounted pump cylinder, a lever and detachable handle therefor, means for reversibly engaging said lever and handle without fastening same to each other, and guards for said pump cylinder to protect it against indentations.

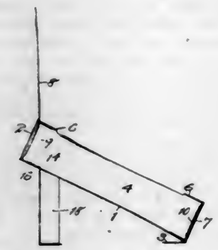
1,191,532. IRONING-BOARD TABLE. ANDREW PFAU, Topeka, Kans. Filed May 5, 1915. Serial No. 26,053. (Cl. 68—10.)



1. An ironing table having an opening in the top thereof, an ironing board pivotally, and slidably mounted in the outer end of said opening, said board being arranged for vertical swinging movement into and out of the opening, a pivoted frame mounted on the end of the table for supporting the outer portion of the board when extended, and means for supporting the board when swung into said opening.

2. In an ironing table provided in its upper face with an opening for the reception of a board, an ironing board arranged to fit within said opening, the said board being provided in its edges adjacent one end with a longitudinally disposed slot, pins projecting from the adjacent edges of said opening at the end of said table for engagement within said slots, the said pins being positioned beyond the sides of the table a distance short of the length of said slots, and a leg hinged to the end of said table and adapted to be swung beneath said board when extended to support the same.

1,191,533. COLLAPSIBLE CARTON. WILLIAM A. V. PORTER, New York, N. Y., assignor to David Weil's Sons Lithographic Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 21, 1916. Serial No. 73,373. (Cl. 229—16.)



1. A carton having a jointed element operative as a combined cover and easel, said element having one end secured to the bottom of the carton and its other end provided with a tongue, the bottom of the carton having a slit therein fitted to receive said tongue, whereby the said element may be folded on top of the carton to act as a cover, or be folded beneath the carton, and its tongue engaged with the slit to act as an easel for supporting the carton in an inclined position.

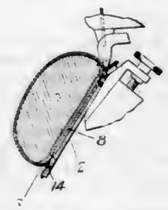
2. A carton having a jointed element operative as a combined cover and easel, said element having one end secured to the bottom of the carton and its other end provided with a tongue, the bottom of the carton having a slit therein fitted to receive said tongue, whereby the said element may be folded on top of the carton to act as a cover, or be folded beneath the carton and its tongue engaged with the slit to act as an easel for supporting the carton in an inclined position, and strengthening strips carried by said element and adapted to be folded out of the plane thereof to increase the rigidity of the said element when acting as an easel.

3. A carton having a jointed element operative as a combined cover and easel, said element having one end secured to the bottom of the carton and its other end provided with a tongue, the carton having a slit in its bottom and at one end of its top, said slits being adapted to receive said tongue, whereby the said element may be folded on top of the carton to act as a cover therefor and its tongue engaged with the slit at the end of the top, or be folded beneath the carton and its tongue engaged with the slit in the bottom thereof to act as an easel for supporting the carton in an inclined position.

1,191,534. PROCESS OF MAKING STITCH-DOWN SHOES. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 21, 1913. Serial No. 768,974. (Cl. 12—142.)

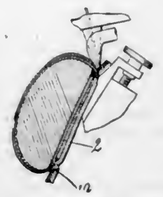
1. That improvement in the art of making stitch-down shoes which comprises forming an insole by attaching to a sole of the dimensions of the outsole a sole of a size and shape to fit inside the upper, the marginal portion of said smaller sole being left unattached to the larger sole, turning out the lower margin of the upper forcing the angle of the upper between the lower marginal face of the smaller sole and the upper face of the larger sole, permanently attaching the upper in this location, and then uniting an outsole to said upper and insole.

2. That improvement in the art of making stitch-down shoes which comprises forming an insole by attaching to a sole of substantially the dimensions of the outsole a sole of a size and shape to fit inside the upper, the marginal portion of said smaller sole being left unattached to the larger sole, assembling said insole and said upper upon a last, turning out the lower margin of the upper and forcing the angle of the upper between the lower marginal face of the smaller sole and the upper face of the larger sole, permanently securing the upper in this location by staples inserted in said angle and clenched upon the bottom face of the insole, and securing an outsole to said insole and upper.



3. That improvement in the art of making shoes which comprises forming an insole by attaching to a sole of substantially the dimensions of the outsole a sole of a size and shape to fit inside the upper and placing between these two soles before they are united a filling piece, the marginal portion of said smaller sole projecting beyond the edge of said filling piece and being left unattached to the larger sole, turning out the lower margin of the upper, forcing the angle of the upper between the lower marginal face of the smaller sole and the upper face of the larger sole, permanently securing the upper in this position, placing a welt upon the outturned margin of the upper with its inner edge extending into said angle, and securing an outsole to said welt, upper and insole.

1,191,535. SHOE. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed May 21, 1913, Serial No. 768,974. Divided and this application filed Sept. 15, 1914. Serial No. 861,821. (Cl. 36—16.)



1. A shoe comprising an upper, an insole proper located inside the upper, an extension insole secured to said insole proper and upon the projecting edge of which the upper is outturned, the edge portion of said insole proper being unattached to the extension insole and the upper having its angle located in the angle between the lower marginal face of the insole proper and the upper face of the extension insole, means attaching the upper permanently to said extension insole in said angle, and an outsole secured to said extension insole and said upper.

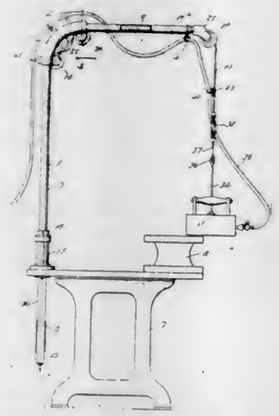
2. A shoe comprising an upper, an insole proper located inside the upper, an extension insole upon the projecting edge of which said upper is outturned, a filling piece between said insole proper and said extension insole, means for securing together said insole proper, filling piece and extension insole, means for securing said upper permanently to said extension insole, an outsole, and means for

securing said outsole to said extension insole and said upper.

3. A shoe comprising an upper, an insole proper, an extension insole and means for securing said insole proper to said extension insole at a short distance from the edge of said insole proper, said upper being outturned and having its angle located between the lower marginal face of the insole proper and the upper face of the extension insole, means for permanently securing the upper to the extension insole, located in said angle, a welt laid upon the upper flange and having its inner edge located in said angle, an outsole, and means for securing together said welt, upper, extension insole and outsole.

4. A shoe comprising an upper, an insole proper located inside the upper, an extension insole upon the projecting edge of which the upper is outturned, means for securing together the insole proper and extension insole at a distance from the edge of the insole proper, the angle between the upper and its outturned flange being located between the lower marginal face of the insole proper and the upper face of the extension insole, staples securing the upper permanently to the extension insole located in said angle and clenched upon the bottom face of said insole, an outsole, a welt located upon the upper flange, and means for securing together the outsole, extension insole, upper and welt.

1,191,536. PRESSING-IRON SUPPORT. JOSEPH SALTZMAN, Chicago, Ill. Filed June 9, 1915. Serial No. 33,063. (Cl. 68—9.)



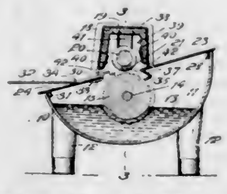
1. In apparatus of the character set forth, the combination of a base, an upright support on said base provided with a laterally-extending arm adapted to be adjusted to cause its outer extremity to extend closer to or farther away from said upright, a cable engaging and supported by said support and engaging the outer extremity of said arm, adapted to move lengthwise of said support and arm, a pressing-iron connected with the end of said cable adjacent to the outer end of said arm, and counterbalancing means connected with the other end of said cable.

2. In a device of the character set forth, the combination of a table, an upright hollow member journaled thereon to swing about a vertical axis, a hollow substantially horizontally-disposed member, means coupling the adjacent ends of said upright and said horizontal member together, pulleys supported adjacent said coupling, a pulley supported at the outer end of said horizontal member and adjustable toward and away from said upright, a cable extending through said upright and horizontal member and engaging said pulleys, a pressing-iron connected with the end of said cable which depends from the pulley at the outer end of said horizontal member, and a spring engaging at one end with said table and at its other end with the other end of said cable.

3. In apparatus of the character set forth, the combination of a table, a base secured thereon, an upright member pivoted to said base to swing about a vertical axis and provided with a laterally-extending arm, a cable supported by said upright member and arm, and adapted to be moved longitudinally thereof and engaging the outer end of said arm, a pressing-iron connected with the end of said cable adjacent the outer end of said arm, the opposite end of said cable extending below the top of said table, a bracket secured to said table and extending below its top, and a spring connected with said bracket and with the last-referred to end of said cable.

4. In a device of the character described, the combination of a table, an upright hollow member journaled thereon to swing about a vertical axis, a hollow substantially horizontally-disposed member, means coupling the adjacent ends of said upright and said horizontal member together, said means comprising clamp members applied to opposite sides of said upright and said horizontally-disposed member, and means clamping them in position, pulleys and means on said clamp members for journaling said pulleys thereon, a pulley supported adjacent the outer end of said horizontally-disposed member, a cable extending through said upright and said last-referred-to member and engaging said pulleys, a pressing-iron connected with the end of said cable which depends from the pulley at the outer end of said horizontal member, and a spring engaging at one end with said table and at its other end with the other end of said cable.

1,191,537. GUMMING-MACHINE. ALBERT M. SCHALL, Brooklyn, N. Y. Filed Sept. 30, 1913. Serial No. 792,558. (Cl. 91—51.)



1. In a machine of the class described, a receptacle for the liquid gum or paste, a gumming-roller mounted in the receptacle, a feed-roller coöperating therewith, and a casing containing a moisture-holding substance mounted over said rollers for preventing the undue hardening of the gum or paste.

2. In a machine of the class described, a receptacle for the liquid gum or paste having front and rear cover-plates separated from each other at their inner edges, a gumming-roller mounted in the receptacle and projecting into the space between the inner edges of said plates and a humidifier mounted over said roller and spanning said space.

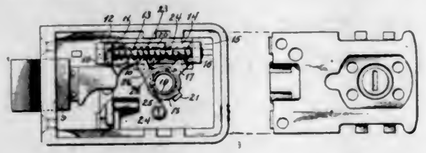
3. In a machine of the class described, a receptacle for the liquid gum or paste having front and rear cover-plates separated from each other at their inner edges, a gumming-roller mounted in the receptacle and projecting into the space between the inner edges of said plates and a humidifier mounted over said roller and spanning said space, said humidifier consisting of a removable casing open at its lower side and containing a water-holding substance.

4. In a machine of the class described, a receptacle for the liquid gum or paste having front and rear cover-plates separated from each other at their inner edges, a gumming-roller mounted in the receptacle and projecting into the space between the inner edges of said plates and a humidifier mounted over said roller and spanning said space, said humidifier consisting of a removable sheet metal casing open at its lower side and having a lining of water-holding substance, and the front and rear lower edges of said casing being flanged inwardly and upwardly to embrace the edges of said lining.

5. In a machine of the class described, a receptacle for the liquid gum or paste having front and rear cover-plates separated from each other at their inner edges, a gumming-roller mounted in the receptacle and projecting into the space between the inner edges of said plates and a humidifier mounted over said roller and spanning said space, said humidifier consisting of a removable sheet metal casing of inverted trough shape having closed ends and top and downwardly diverging sides and a lining of water-holding substance extending along the inner walls of the sides and top of the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,191,538. RIM-LATCH. REINHOLD SCHOELL, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 22, 1916. Serial No. 92,902. (Cl. 70—29.)



1. In a lock, the combination of a double throw bolt, means for holding the bolt in the semi-projected position when the door is open, means for releasing the bolt when the door is closed, and a spring actuated hub for automatically projecting said bolt into its double throw position when the door is closed.

2. In a lock, the combination of a double throw bolt, a carrying frame connected with the bolt shank and having a movement independent of the latter, and a spring actuated hub having means for moving the carrying frame and the bolt rearwardly and for moving the bolt rearwardly independently of the carrying frame, and also for throwing said bolt to its fully projected position.

3. In a lock, the combination of a double throw bolt, a carrying frame connected with the bolt shank and having a movement independent of the latter and a spring actuated hub having means for retracting the bolt and moving the carrying frame rearwardly for projecting the bolt from its fully retracted to its double throw position, and for dead-locking the bolt in its double throw position.

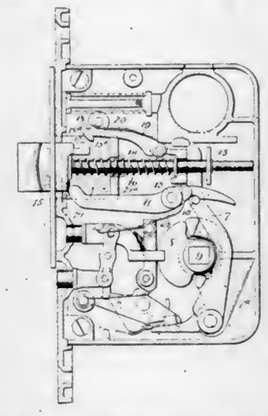
4. In a lock, the combination of a double throw bolt and spring actuated hub having means when the door is closed for automatically moving the bolt to its double throw position and for deadlocking the bolt when so projected.

5. In a lock, the combination of a carrying frame having a guide rod, a double throw bolt the shank of which is mounted to slide on said rod, a spring encircling the rod and bearing against the rear end of the carrying frame and the bolt shank and a spring actuated hub having an arm to engage the bolt shank and an arm to engage the carrying frame, the construction being such that when the bolt is forced inwardly by turning the knob or the key the carrying frame and bolt will move rearwardly together during the first part of said movement and the bolt move rearwardly independently of said frame during the remainder of said movement, and when released from its fully retracted position it will be projected by the spring on the carrying frame to the single or normal throw only.

[Claim 6 not printed in the Gazette.]

1,191,539. DOUBLE-THROW LATCH-BOLT. REINHOLD SCHOELL, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 22, 1916. Serial No. 92,903. (Cl. 70—29.)

1. In a lock, the combination of a double throw bolt, a spring for projecting the same, a lever having means to engage a shoulder on the bolt for holding the latter in its partly projecting position and a slide actuated by contact with the strike plate of the lock for holding the lever out of contact with the shoulder on the bolt when the latter is fully projected.



2. In a lock, the combination of a double throw bolt, a spring for projecting the same, a lever having means to engage a shoulder on the bolt for holding the latter in its partly projected position, the said lever also having a second shoulder, and a slide actuated by contact with the strike plate or keeper for holding the lever out of contact with the bolt when the latter is fully projected, the said slide being restrained against rearward sliding movement when the bolt is partly projected, by its engagement with the second shoulder on the lever.

3. In a lock, the combination of a spring actuated bolt, a pivoted lever having a hook engagement with the bolt for holding same in its partly projected position, the construction being such that the inward movement of the bolt elevates the lever and disconnects it from the bolt, and a slide movable rearwardly with the bolt and adapted to engage the lever and hold it out of the path of movement of the bolt thus permitting the latter to move to double throw position.

4. In a lock, the combination of a double throw spring actuated bolt, spring actuated means for holding the bolt in its partly projected position, and a slide movable rearwardly with the bolt and adapted to engage the spring actuated holding means and prevent its reëngagement with the bolt during the forward movement of the latter.

5. In a lock, the combination with a double throw spring actuated bolt, means for holding the bolt in its partly projected position, means to engage said holding means after the latter has been disconnected from the bolt and hold the same out of the path of movement of the bolt so as to permit the latter to be fully projected, and a lever for deadlocking the bolt when fully projected the said deadlocking lever being actuated to release the bolt, by the knob or key actuated mechanism of the lock.

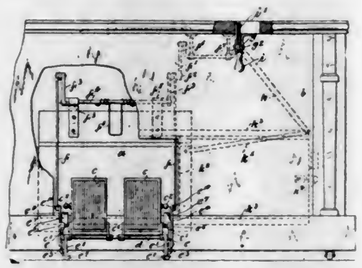
[Claims 6 and 7 not printed in the Gazette.]

1,191,540. MECHANICAL MUSICAL INSTRUMENT. PAUL SCHWARZE, Astoria, N. Y., assignor to Wessell, Nickel & Gross, New York, N. Y., a Corporation of New York. Filed May 20, 1914. Serial No. 839,682. (Cl. 84—169.)

1. The combination of a folding pedal mechanism, a movable panel, a single actuating handle movable in different planes, connections whereby the movable panel is operated through movement of the actuating handle in one plane, and connections whereby the folding pedal mechanism is actuated through movement of the actuating handle in the other plane.

2. The combination of a folding pedal mechanism, a movable panel, a single actuating handle movable in dif-

ferent planes, connections whereby the movable panel is actuated through movement of the actuating handle in one plane, connections whereby the folding pedal mechanism is actuated through movement of the actuating handle in the other plane, and devices whereby the handle, during movement in either plane, is locked against movement in the other plane.



3. The combination of a folding pedal mechanism, a movable panel, a revoluble member and operating connections therefrom to one of said first named parts, a longitudinally movable member and operating connections therefrom to the other of said parts, and a single actuating handle operatively connected to said revoluble member to rotate the same and to said longitudinally movable member to move the same longitudinally.

4. The combination of a folding pedal mechanism, a movable panel, a revoluble member and operating connections therefrom to one of said first named parts, a longitudinally movable member and operating connections therefrom to the other of said parts, a single actuating handle operatively connected to said revoluble member to rotate the same and to said longitudinally movable member to move the same longitudinally, and devices to prevent longitudinal movement of said longitudinally movable member during rotary movement of the revoluble member and vice versa.

5. The combination of a folding pedal mechanism, a movable panel, a rotary shaft and operating connections therefrom to one of said first named parts, said shaft being slotted longitudinally, a longitudinally movable bar lying normally in the slot of said shaft and operating connections therefrom to the other of said parts, and a single actuating handle pivotally connected to said bar and having a free pivot, whereby said handle may be swung upon its pivot to move the bar longitudinally or may be rotated about the axis of the shaft to rotate the shaft and bar.

[Claims 6 to 14 not printed in the Gazette.]

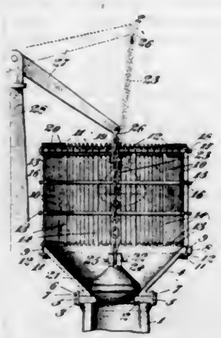
1,191,541. BLAST-FURNACE DISCHARGE-ARRESTER. EDWIN E. SLICK and EDGAR W. CLARKE, Westmont borough, Pa. Filed June 17, 1915. Serial No. 34,584. (Cl. 266—26.)

1. In a discharge arrester a valve seat, a relief valve adapted to rest upon the said seat, a hopper member mounted above the valve seat and a cage inclosing the interior of said hopper member, the valve and the valve seat.

2. A discharge arrester comprising a valve plate, an opening and valve seat formed therein, a relief valve adapted to rest upon the valve seat and normally close the opening therein, a hopper member surrounding the valve and valve seat, a cage mounted on the hopper inclosing the opening in the valve plate.

3. The combination with a blast furnace bleeder pipe of a valve plate mounted thereon, an opening and a valve seat therein, a relief valve adapted to close said opening, a cage inclosing the said valve and said opening, and means provided at the lower portion of said cage adapted to return the solid materials to the bleeder pipe.

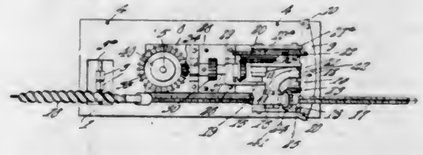
4. The combination with a blast furnace bleeder pipe of a valve plate mounted thereon, an opening and a valve seat therein, a relief valve adapted to close said opening, a hopper member mounted upon the valve plate, a cage mounted upon the upper edges of said hopper member and inclosing the said opening.



5. The combination with a blast furnace bleeder pipe of a valve plate mounted thereon; an opening and a valve seat therein; a relief valve adapted to close said opening; a hopper member mounted upon the valve plate; a cage of large diameter, as compared with the diameter of the said opening, inclosing the space communicating with the said opening.

[Claims 6 to 9 not printed in the Gazette.]

1,191,542. DRILL ATTACHMENT FOR DRILLING-MACHINES. HENRY J. SMITH, Florence, Colo. Filed Aug. 23, 1915. Serial No. 46,897. (Cl. 255—46.)



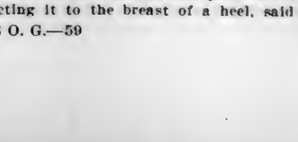
1. In a mechanism of the character described, a base plate, a shaft journaled therethrough, an arm pivotally engaged to said shaft and adapted to be swung at various angles relative to the base plate, a pair of friction clutch members carried by said shaft, one of the clutch members being movable upon the shaft, a gear disposed between the clutch members to be gripped thereby, a rotatable shank carried by said arm, and an operative connection carried by said arm between said shank and gear.

2. In a mechanism of the character described, a base plate, a shaft journaled therethrough, an arm pivotally engaged to said shaft upon said base plate, a friction clutch member secured to the shaft and bearing against said arm, a second friction clutch member threaded upon the shaft, a gear disposed between said clutch members to be gripped thereby, a rotatable shank carried by said arm, and an operative connection between said shank and gear carried by said arm.

3. In a mechanism of the character described, a base plate, a shaft journaled therethrough, an arm pivotally engaged to said shaft to swing relative to the base plate, a pair of clutch members carried by said shaft, one of said clutch members being movable upon the shaft, a gear disposed between said clutch members to be gripped thereby, standards carried by the arm, a sleeve trunnioned to one standard, a shaft journaled to the other standard coaxial with the trunnion of said sleeve, a link engaged to the second mentioned shaft, a shaft journaled through the free end of the link, meshing gears carried by the second and third mentioned shafts, a bevel gear carried by the third mentioned shaft, a shank extending through the first mentioned sleeve, a sleeve feathered upon the shank and bearing against the first mentioned sleeve, the second mentioned sleeve having a bevel gear meshing with the aforesaid bevel gear, and an operative connection between the first mentioned gear and second mentioned shaft.

4. In a mechanism of the character described, a base plate, a driving shaft journaled therethrough, an arm pivotally engaged to said shaft to swing upon the base plate, a clutch member secured to said shaft and bearing against said arm, a second clutch member threaded upon said shaft, a gear disposed between said clutch members to be gripped thereby, standards carried by said arm, a sleeve trunnioned to one standard, a drill shank threaded through said sleeve, a second shaft journaled to the other standard coaxial with the trunnion of said sleeve, a link engaged to said second shaft, a third shaft journaled through the free end of the link, meshing gears carried by the second and third shafts, a bevel gear carried by the third shaft, a sleeve feathered upon said shank and bearing against the first mentioned sleeve, the second mentioned sleeve having a bevel gear meshing with the aforesaid bevel gear, and gears carried by said arm operatively connecting the second shaft and first mentioned gear.

1,191,543. COMBINED ARCH AND SHOE-STRAIGHTENER. JAMES A. SMITH, Washington, D. C., assignor of one-half to William N. Dorsett, Washington, D. C. Filed July 2, 1915. Serial No. 37,791. (Cl. 36—71.)



1. A shoe shank arch cushion comprising a resilient block adapted to fit the outer surface of a shoe shank, and a reinforcing and connecting strip embedded in said resilient block and having a projecting end for engaging a shoe heel, said strip having a determinate flexing point between the ends of said block whereby its front end may be adjusted toward either edge of the shoe sole.

2. A shoe shank arch cushion comprising a resilient block thicker at one end than at the other, and a thin metal strip arranged therein with its edges extending toward the sides of the block, and a twist formed in said metal strip intermediately of its ends to permit the cushion to yield laterally toward either edge of the shoe sole to which it is applied to provide for varying the position of the front portion of said block to dispose it nearer to one side or the other of the shoe sole.

3. A shoe shank arch cushion comprising a solid rubber block tapering in thickness toward one end, a reinforcing strip of sheet metal extending longitudinally throughout the length of said rubber block, with its edges extending toward the sides of the block, and having a twist formed therein at the thicker end of said rubber block to present a vertically disposed flat member with its edges extending toward the top and bottom of said rubber block to provide for the lateral bending of said block intermediately of its ends, whereby its front end may be adjusted toward either edge of the shoe sole.

4. A shoe shank arch cushion comprising a resilient block thicker at one end than at the other and a reinforce embedded in said block and having a heel engaging element extending longitudinally through the thicker end thereof, said reinforce having a flexible connection between its ends whereby the thinner end of said block may be adjusted toward either side edge of the shoe sole.

5. A shoe shank arch cushion comprising a resilient block thicker at one end than at the other, and a reinforce embedded in said block, and having a cross bar projecting beyond the thicker end thereof and provided with means for connecting it to the breast of a heel, said reinforce having a flexible connection intermediately of its ends to adapt the cushion to yield laterally relative to the side edges of the shoe sole to which the cushion is applied.

[Claims 6 to 8 not printed in the Gazette.]

1,191,544. COMPOSITION FOR IMPARTING FLAMING AND NON-GLOWING PROPERTIES TO MATCH-SPLINTS. WILLIAM G. WEY, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1912. Serial No. 729,971. (Cl. 52—5.)

1. Composition for imparting flaming and non-glowing properties to match splints treated therewith, said composition comprising an organic substance and an inorganic material in solution therein, the former serving as a vehicle to transmit the flame from the igniting material to the body of the splint and the latter being capable of rendering the splints non-glowing after the flame has been extinguished.

2. Composition for imparting flaming and non-glowing properties to match splints treated therewith, said composition comprising an inflammable organic substance having incorporated therewith a solution of an inorganic material in an unctuous substance, the said material being of a character capable of imparting a non-glowing property to the splints and the said unctuous substance being miscible with the said inflammable organic substance.

3. Composition for imparting flaming and no-glowing properties to match splints treated therewith, said composition comprising an unctuous inflammable substance and an inorganic anti-glowing material in solution therein.

4. Composition for imparting flaming and no-glowing properties to match splints treated therewith, said composition comprising melted paraffin wax with which is incorporated a solution of an inorganic material in an unctuous substance, said material being of a character to impart the non-glowing property to the splints and the said unctuous substances being inflammable.

5. Composition for imparting flaming and non-glowing properties to match splints treated therewith, said composition comprising paraffin wax having incorporated therewith a solution of an inorganic material in an unctuous substance, the said material being of a character to impart the non-glowing property to the splints and the said unctuous substance being miscible with melted paraffin wax.

[Claims 6 to 9 not printed in the Gazette.]

1,191,545. TREATED MATCH-SPLINTS AND PROCESS OF PRODUCING THE SAME. WILLIAM G. WEY, Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Original application filed Nov. 7, 1912, Serial No. 729,971. Divided and this application filed Sept. 22, 1915. Serial No. 51,950. (Cl. 52—5.)

1. A method of treating match splints, which consists in impregnating at least a considerable portion of the length of the same with a solution comprising an anti-glowing inorganic material, a solvent therefor, and a flame transmitting vehicle miscible with said solvent.

2. A method of treating match splints, which consists in impregnating at least a considerable portion of the length of the same with a solution comprising a phosphorus compound, a solvent therefor, and a flame transmitting vehicle miscible with said solvent.

3. A method of treating match splints, which consists in impregnating at least a considerable portion of the length of the same with a solution comprising a phosphorus compound, a solvent therefor, and a hydrocarbon.

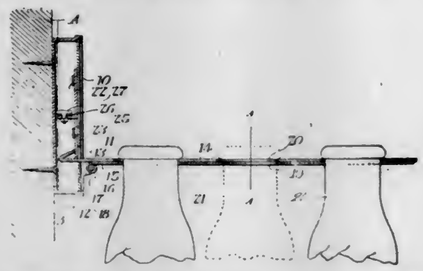
4. A method of treating match splints, which consists in impregnating at least a considerable portion of the length of the same with a solution comprising a phosphorus compound dissolved in an oil.

5. A method of treating match splints, which consists in impregnating at least a considerable portion of the

length of the same with a solution comprising a phosphorus compound dissolved in a substance miscible with molten paraffin wax.

[Claims 6 to 21 not printed in the Gazette.]

1,191,546. MILK-BOTTLE BRACKET AND LOCK. ARTHUR WHEATLEY, Philadelphia, Pa. Filed May 14, 1915. Serial No. 28,201. (232—42.)



1. A device of the class described comprising a housing, a bracket swingingly supported upon the housing and having holes for receiving the necks of bottles, a locking slide supported upon the bracket for the fastening of the necks of the bottles therein, and manually releasable means within the housing for locking the slide in its locking position.

2. A device of the class described comprising a housing, a bracket swingingly supported upon the housing and having holes for receiving the necks of bottles, a locking slide supported upon the bracket for the fastening of the necks of the bottles therein, manually releasable means within the housing for locking the slide in its locking position, and means acting upon the last-named means to normally hold the same in position for engagement with the slide.

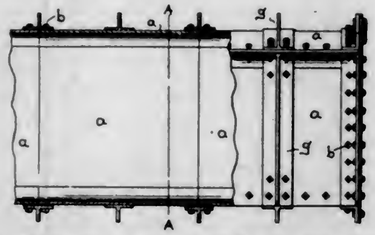
3. A device of the class described comprising a housing, a bracket swingingly supported upon the housing and having holes for receiving the necks of bottles, a locking slide supported upon the bracket for the fastening of the necks of the bottles therein, manually releasable means within the housing for locking the slide in its locking position, means acting upon the last-named means to normally hold the same in position for engagement with the slide, and a keeper on the slide for tripping the said locking means within the housing for its engagement with the said keeper when the slide is moved in one direction.

4. A device of the class described comprising a housing, a bracket swingingly supported upon the housing and having holes for receiving the necks of bottles, a locking slide supported upon the bracket for the fastening of the necks of the bottles therein, manually releasable means within the housing for locking the slide in its locking position, means acting upon the last-named means to normally hold the same in position for engagement with the slide, a keeper on the slide for tripping the said locking means within the housing for its engagement with the said keeper when the slide is moved in one direction, the said housing being formed with an opening in one side to permit access to the locking means for the slide.

1,191,547. TANK CONSTRUCTION. HENRY C. WIEDEMAN, Detroit, Mich. Filed Jan. 25, 1915. Serial No. 4,084. (Cl. 220—125.)

1. The method of constructing tank joints, which comprises the fitting of two plates together, edge to edge, the welding of studs to the outside of the plates adjacent the meeting edges, and the fastening of a connecting strip to the studs of adjacent plates.

2. The method of constructing tank joints, comprising the fitting of two plates together, edge to edge, the welding of studs to the outside of the plates adjacent the meeting edges, the fitting of a packing over the outside portions of the plates adjacent their meeting edges, said packing being disposed parallel with the plates, and the securing of a connecting strip over the free ends of the studs and the packing.



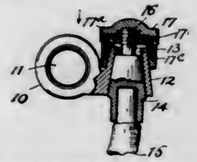
3. The method of constructing a tank joint, comprising the fitting of two plates together, edge to edge, the welding of studs, having their free ends screw-threaded, to the outside of the plates adjacent the meeting edges, the fitting of a connecting strip over the studs, and the placing of nuts upon the screw-threaded ends of the studs and drawing the connecting strip and the plates together.

4. The method of constructing a tank joint, comprising the fitting of two plates in edge to edge contact, the spot welding of partly hollow studs to the outside faces of the plates adjacent their meeting edges, and the securing of a connecting strip over the studs to hold the two plates together.

5. The method of constructing a tank joint, comprising the fitting of two plates in edge to edge relation, the welding of studs on the back of the plates adjacent the meeting edges, and the securing of a connecting strip T-shaped in cross section over the studs to hold the two plates together.

[Claims 6 to 9 not printed in the Gazette.]

1,191,548. CONNECTOR FOR STORAGE BATTERIES. THEODORE A. WILLARD, Cleveland, Ohio, assignor to The Willard Storage Battery Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 12, 1915. Serial No. 27,482. (Cl. 204—52.)



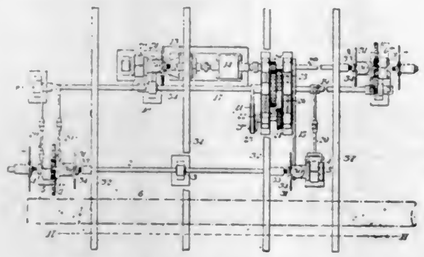
1. A connector for a storage battery having a part provided with a tapered socket, a tapered terminal member fitting into this socket, and means surrounding and engaging the outer surface of the socketed part to overcome the spreading action of the terminal member.

2. A connector for a storage battery, a portion having a tapered socket, a tapered terminal member fitted into the socket, means for drawing said terminal member into the socket and against the tapered wall thereof, said means having a part surrounding the tapered socket and serving to overcome the spreading action of the tapered terminal in the socket.

3. A connector for a storage battery comprising a part having a tapered socket, a tapered terminal member fitting into this socket, threaded clamping means for drawing the tapered terminal member against the tapered wall of the socket, said clamping means having a portion surrounding the socketed part and exerting an inward pressure on the same when the terminal is drawn into place.

4. A connector for a storage battery comprising a part tapered externally and provided with a tapered socket, a tapered terminal fitted into the socket, means for drawing the terminal into the socket and for counteracting the spreading action thereof, comprising a member having a threaded connection with the terminal member having a tapered part which fits tightly onto the outer tapered socketed part.

1,191,549. MAGNETIC TUBE-SAWING MACHINE. HOWARD M. WILSON, Pittsburgh, Pa. Filed Feb. 28, 1916. Serial No. 80,958. (Cl. 29—70.)



1. A tube-sawing machine comprising a saw, means for moving a tube to be cut into position with relation to the saw, and electro-magnetic means for retaining the tube in position with relation to the saw; substantially as described.

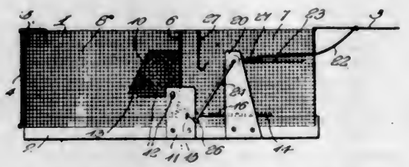
2. A tube-sawing machine comprising a rotary saw, means for moving the tube to be cut into position with relation to the saw, means to rotate the tube, and electro-magnetic means for retaining the tube in contact with the rotating means; substantially as described.

3. A tube-sawing machine comprising a saw, electro-magnetic means for moving the tube to be cut into position with relation to the saw, and rollers for rotating the tube, said electro-magnetic means being also arranged to hold the tube in frictional contact with the rollers; substantially as described.

4. A tube-sawing machine, comprising a plurality of rocking frames, tube supporting rollers on said frames, means to rotate said rollers, means to intermittently rock said frames to deliver the tube to the saw and to retain the tube in cutting relation to the saw, and electro-magnetic means for holding the tube in contact with the rollers during a portion of the travel with the rocking frames; substantially as described.

5. A tube-sawing machine, comprising a rotary saw, a plurality of rock frames, means for intermittently rocking said frames and tube supporting rollers on said frames, means for rotating some of said rollers to rotate the tube, an electro-magnet carried by one of said frames and arranged to hold the tube in contact with the rollers, and electrical connections for said magnet arranged to permit the circuit to flow through the magnet during a portion of the travel of the frame and to cut out said circuit in another portion of its travel; substantially as described.

1,191,550. RAT-TRAP. ROSEBERT A. WOOD, Pennington Gap, Va. Filed Mar. 30, 1914. Serial No. 828,325. (Cl. 43—24.)



The herein described animal trap comprising a body having a rectangular-shaped block forming a base, said block having a large cavity in its top projecting from one side of the transverse center of the same and a small cavity communicating with the large cavity and extending at the opposite side of the transverse center adjacent one side edge of the block, a plate covering said smaller cavity, a partition at the center of said body, a hooded opening in said partition, a pair of opposed upwardly projecting metal plates secured to the side edges of said block at the ends of the partition and having two sets of pivot openings therethrough, a treadle substantially covering said large cavity, a rock shaft mounted in said plates through one of the sets of pivot openings and supporting the treadle, an L-shaped weighted arm projecting from said shaft and positioned in the smaller cavity, a treadle beneath said hooded opening in the partition, a second rock shaft mounted through the other set of pivot openings in the plates and supporting said treadle, a weighted arm on said shaft, an additional pair of metal plates secured to the side edges of the block adjacent one end of the body and extending upwardly a distance greater than the height of the first mentioned plates, a door controlling shaft mounted through pivot openings adjacent the upper end of said last mentioned plates, an operating spring on the shaft having one end secured to the same and the other to a side of said body, and connections between said shafts and the rock shafts whereby the door controlling shaft will be intermittently rotated a limited distance upon alternate depression of the treadles.

1,191,551. SERUM MIXTURE. EMIL ABDERHALDEN, Halle-on-the-Saale, Germany. Filed Aug. 27, 1915. Serial No. 47,692. (Cl. 167—7.)

1. A method for determining the correspondence of the protective ferments in a given antiserum with the cancer tissue of a tumor carrier, comprising injecting said serum and the serum of said tumor carrier into a test animal to produce characteristic physiological disturbances if the constituents of said two serums are biologically related.

2. A method for determining the particular variety of cancer tissue in a tumor carrier which comprises injecting cancer-tissue substance of a known variety into a test animal and then introducing serum from the tumor carrier into the same animal, and repeating this operation with different cancer-tissue substances of known variety in different test animals until characteristic reactions occur, such as convulsions and fall of temperature which indicate a correspondence, or biological relation, between the serum generated in the test animal and the serum from the tumor carrier, substantially as described.

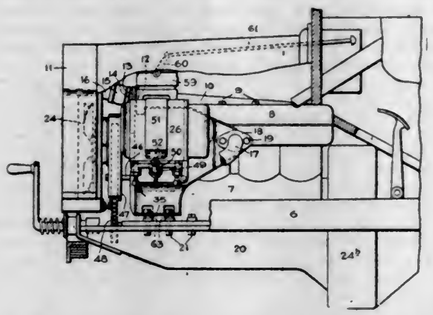
1,191,552. MAKING TUNGSTEN FILAMENTS. ERNST AUER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Aug. 10, 1910. Serial No. 576,522. (Cl. 176—132.)

1. The method of manufacturing tungsten filaments which consists in heating a filament comprising an oxygen compound of tungsten in an atmosphere rich in nitrogen to a temperature at which said filament is converted into a nitrogen compound and then decomposing said compound by heating to a materially higher temperature in hydrogen, to decompose the nitrogen compound and sinter the resulting tungsten metal.

2. The method of manufacturing tungsten filaments which consists in converting filaments comprising an oxygen compound of tungsten into a nitrogen compound of tungsten by heating the same in a nitrogen-containing gas to a temperature of about 700 to 900° C., and then heating said filaments by radiant heat to a temperature of bright incandescence in hydrogen to decompose the nitrogen compound and sinter the resulting tungsten filaments.

3. In a process for the manufacture of tungsten filaments the step which consists in heating filaments containing an oxygen compound of tungsten to a red heat in an atmosphere of ammonia to bring the metallic particles into intimate connection and then decomposing the resulting nitrogen compound to yield a metallic filament.

1,191,553. ADJUSTABLE MOUNTING FOR AUTOMOBILE STARTING-MOTORS AND GENERATORS. HENRY S. BALDWIN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 30, 1915. Serial No. 37,191. (Cl. 123—198.)



1. The combination with an internal combustion engine, of a bracket secured thereto at three separate points forming a three-point suspension therefor, a dynamo electric machine carried by said bracket, said machine being adjustable both vertically and horizontally on said bracket, and a driving connection between said machine and the engine shaft.

2. The combination with an internal combustion engine, of a bracket having a portion which extends along the side of the engine, and a portion at an angle thereto which extends in front of the engine, means for attaching the first named portion at its top and bottom to the engine, means for attaching the other portion at one point to the engine, a support carried by the bracket, a dynamo electric machine adjustably mounted on said support, and a driving connection between said machine and the engine shaft.

3. The combination with an internal combustion engine having a flange on its lower part, and conduit means for conveying cooling fluid to and from the engine, of a bracket that is supported by said flange and also by each of said conduit means thereby forming a three-point suspension, a dynamo electric machine carried by the bracket, and a driving connection between said machine and the engine.

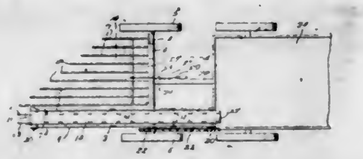
4. The combination with an internal combustion engine having a conduit for conveying cooling fluid thereto and a second conduit for conveying it therefrom, and means for attaching each of said conduits to the engine, of a bracket that is secured to the engine frame at one point and by said attaching means at two other points, a dynamo electric machine which is supported by the bracket, and a driving connection between the engine and said machine.

5. The combination with an internal combustion engine having a flange on its lower part, a flanged conduit for conveying cooling fluid to it, a flanged conduit for conveying cooling fluid therefrom, and bolts which pass through said flanges for attaching the conduits to the engine, of a bracket which is secured to the engine at two points by said flange attaching bolts, means for supporting said bracket at a third point on said engine flange, a dynamo electric machine carried by said bracket, and a driving connection between the engine shaft and the rotor of said machine.

[Claims 6 to 12 not printed in the Gazette.]

1,191,554. STONE-GATHERER. JOHN J. BERRES, Boyd, Wis. Filed Aug. 27, 1915. Serial No. 47,661. (Cl. 55—17.)

1. In a rock gatherer, a supporting structure, an axle carried by said supporting structure and extending transversely from one side thereof, supporting wheels mounted upon said axle, a sleeve rotatably mounted upon the transversely extending section of said axle, and a plurality of tines secured to and extending rearwardly from said sleeve, said tines gradually increasing in length from the outermost tine to the innermost tine which is positioned next to said supporting structure.



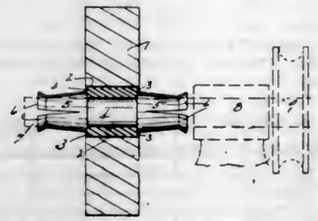
2. In a stone gatherer, a supporting structure, an axle carried by said supporting structure and extending transversely from one side of the structure, supporting wheels mounted upon said axle, a sleeve rotatably mounted upon the outwardly extending portion of said axle, a plurality of tines connected to said sleeve and extending rearwardly therefrom, said tines having their rear ends curved, each of said tines being slightly longer than the outer tine next thereto, and a conveyer carried by said supporting structure for receiving the rocks from said tines.

3. In a rock gatherer, a supporting structure, an axle carried by said supporting structure and extending transversely from one side thereof, supporting wheels mounted upon said axle, a sleeve rotatably mounted upon the transversely extending section of said axle, a plurality of tines secured to and extending rearwardly from said sleeve, said tines gradually increasing in length from the outermost tine to the innermost tine which is positioned next to said supporting structure, a bar engaging the under surface of said tines, a pivotally supported lever connected to said bar for moving said tines into or out of a rock engaging position.

4. In a rock gatherer, a supporting structure, an axle carried by said supporting structure and extending transversely from one side thereof, supporting wheels mounted upon said axle, a sleeve rotatably mounted upon the transversely extending section of said axle, a plurality of tines secured to and extending rearwardly from said sleeve, said tines gradually increasing in length from the outermost tine to the innermost tine which is positioned next to the said supporting structure, a bar engaging the under surface of said tines, a pivotally supported lever connected to said bar for moving said tines into or out of a rock engaging position, a conveyer carried by said supporting structure and having a plurality of fingers carried thereby for receiving the rocks from said tines and elevating them for deposit into a wagon, and means for operating said conveyer by the rotation of said axle.

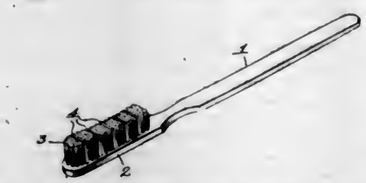
5. In a rock gatherer, a supporting structure, an axle carried by said supporting structure and extending transversely from one side thereof, supporting wheels mounted upon said axle, a sleeve rotatably mounted upon the transversely extending section of said axle, a plurality of tines secured to and extending rearwardly from said sleeve, said tines gradually increasing in length from the outermost tine to the innermost tine which is positioned next to the said supporting structure, a bar engaging the under surface of said tines, a pivotally supported lever connected to said bar for moving said tines into or out of a rock engaging position, a conveyer carried by said supporting structure and having a plurality of fingers carried thereby for receiving the rocks from said tines and elevating them for deposit into a wagon, means for operating said conveyer by the rotation of said axle, the tines next to said supporting structure having a transversely extending projection formed thereupon adjacent its rear end, and a pair of rearwardly extending relatively short tines, formed upon said transversely extending projection, for engaging the rocks for positioning them for engagement by said conveyer-carried fingers.

1,191,555. NEEDLE-SHARPENING ATTACHMENT FOR SEWING-MACHINES. BERTHA F. BLAGRAVE, Seattle, Wash. Filed May 10, 1915. Serial No. 26,999. (Cl. 51—7.)



In a device of the character described, the combination of an abrasive wheel having a cored center, a hollow hub having a shouldered internal channel secured within the said center, a resilient ring within the said channel, and tapered spring fingers extending from either end of the said hub, whereby the hub and wheel may be frictionally held to stems or shafts of varying sizes within the range of the device.

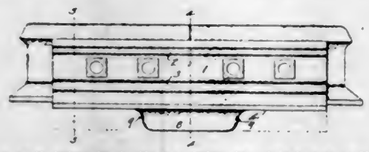
1,191,556. TOOTH-BRUSH. PHILIP W. BLAKE, Cumberland, Md. Filed Aug. 31, 1915. Serial No. 48,204. (Cl. 15—39.)



1. A tooth brush, embodying a series of thin flexible blades disposed transversely of the brush head in spaced relation, and bristles interposed between said blades.

2. A tooth brush, embodying a series of thin flexible blades passed through slots in the brush head and disposed transversely of the brush head in spaced relation, and bristles interposed between said blades.

1,191,557. RAIL-JOINT. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Mar. 27, 1916. Serial No. 87,038. (Cl. 239—6.)



1. A rail joint including a joint bar having a rail seating base member and a supplemental reinforcing member in supporting contact therewith.

2. A rail joint including a joint bar having a rail seating member and a supplemental reinforcing member having a depending girder flange, and also in supporting contact with the rail seating member.

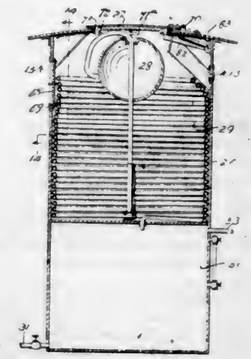
3. A rail joint including a joint bar having a rail seating member and a supplemental reinforcing member having a central depending girder flange, and also in supporting contact with the rail seating member.

4. A rail joint including a joint bar having a divided base portion including an upper continuous rail seating member, and a lower supplemental reinforcing member.

5. A rail joint including a joint bar having a divided base portion including a rail seating member and a supplemental reinforcing member having its end portions engaging the rail seating member and its central portion spaced therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,191,558. APPARATUS FOR RAISING SUNKEN VESSELS. ROBERT W. BRYANT and ALFRED E. MOORE, Pueblo, Colo. Filed July 7, 1915. Serial No. 38,567. (Cl. 114—16.5.)



1. In an apparatus for raising sunken vessels, a casing for holding air, means for connecting the casing to a ship, a housing, a flexible tube and a buoy in the housing, said tube being connected to the buoy whereby when the buoy moves it carries the said tube, a door for closing the housing, means for connecting the tube to deliver air to the casing, latches for holding the door closed, means for operating the latches to release the door, a plate having a rod, said plate being carried by the door, and hooks pivotally connected to the casing and adapted to engage said rod for holding the door in open position.

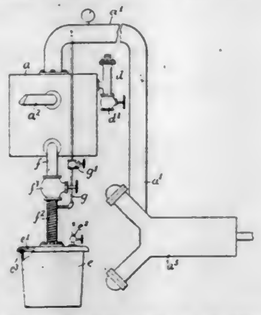
2. In an apparatus for raising sunken vessels, a housing adapted to be carried by the ship, said housing having a central partition dividing the same into an air compartment and a buoy compartment, a buoy in the buoy compartment, a flexible tube connecting the buoy and air compartments, casing formed in the side of the ship, flexible air holding means in the casings, means for providing connection between the flexible air holding means and air compartment, a closure for the housing, means for holding the closure in an open position.

3. In an apparatus for raising sunken vessels, a housing carried by the ship, said housing forming a buoy casing, casings formed in the sides of the ship, flexible air holding means in each of the casings, means for connecting the buoy and flexible air holding means, a closure for said housing, latch members for holding the closure in a locked position, and means for operating the latch members simultaneously.

4. In an apparatus for raising sunken vessels, a housing adapted to be carried by the ship, casing formed in the sides of the ship, said casings adapted to support flexible air holding means, a buoy in the housing, an air hose connecting the buoy and flexible air holding means, whereby air is forced through the air hose to inflate said flexible air holding means, frangible covers for the casings formed in the side of the ship, whereby expansion of the flexible air holding means remove said frangible covers to release said flexible air holding means.

5. In an apparatus for raising sunken vessels, a housing adapted to be carried by the ship, a partition in the housing dividing the same into an air compartment and a buoy containing compartment, a buoy in the buoy containing compartment, means for connecting the buoy and air compartment, casings formed in the sides of the ship, flexible air holding means in the casings, means for connecting the flexible air holding means and air compartment, whereby fluid forced into said air compartment feeds said air holding means simultaneously.

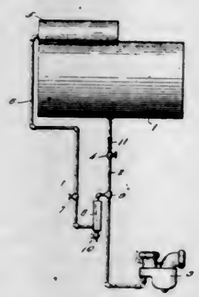
1,191,559. APPARATUS FOR PRODUCING ICE IN MOLDS. PAUL BUCK, London, England. Filed Mar. 25, 1916. Serial No. 86,648. (Cl. 210—1.)



1. Apparatus for producing ice in molds, having in combination a vacuum tank, means for producing a vacuum, a suction pipe connecting the vacuum apparatus with said tank, a water spraying apparatus in said tank, an atmospheric valve on said tank, a cut-off valve for shutting off the atmospheric valve, a pipe connecting the vacuum tank with a water container, a shut-off valve on said pipe, an equalizing pipe connecting that part of said pipe between the shut-off valve and the water container with the vacuum at the upper part of said tank, and a shut-off valve on the equalizing pipe, substantially as set forth.

2. Apparatus for producing ice in molds, having in combination a vacuum tank, means for producing a vacuum, a suction pipe connecting the vacuum apparatus with said tank, a perforated water inlet pipe entering the vacuum tank, a baffle plate in said tank located between the water inlet pipe and the suction pipe, an atmospheric valve on said tank, a cut-off valve for shutting the atmospheric valve, a pipe connecting the vacuum tank with a water container, a shut-off valve on said pipe, an equalizing pipe connecting that part of said pipe between the shut-off valve and the water container with the vacuum at the upper part of said tank, and a shut-off valve on the equalizing pipe, substantially as set forth.

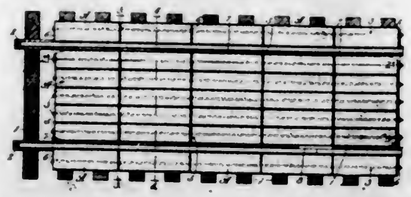
1,191,560. FIRE-EXTINGUISHER.. NORBERT BURAS and FRANK ADOLPH, Jr., Boothville, La. Filed Sept. 30, 1915. Serial No. 53,420. (Cl. 169—11.)



1. In means for extinguishing fire in an internal combustion engine, the combination with a fuel tank, a pipe leading from said tank to a part of the engine, and a valve arranged in said pipe at an intermediate point in the length thereof: of a receptacle connected with said pipe at a point below the valve thereof and having a drain cock, a water tank elevated above the first-named pipe, and a valved pipe leading from the water tank to the said receptacle.

2. In means for extinguishing fire in an internal combustion engine, the combination with a fuel tank, a pipe leading from said tank to a part of the engine, a valve arranged in said pipe, and a sight glass arranged in the pipe above said valve; of a water tank elevated above said pipe, and a valved conduit leading from the water tank to the first-named pipe at a point below the valve thereof.

1,191,561. RAILWAY-CROSSING. HOWARD E. BURNS, St. Louis, Mo. Filed Feb. 17, 1916. Serial No. 78,915. (Cl. 104—14.)



1. A railway crossing, composed of a number of members loosely connected one with another in such a manner that they are free to move slightly in a vertical direction with relation to each other without separating or pulling apart.

2. A railway crossing, composed of a plurality of rigid members connected together in such a manner that they form a flexible roadway whose road surface members are free to move relatively to each other in a certain way without pulling apart.

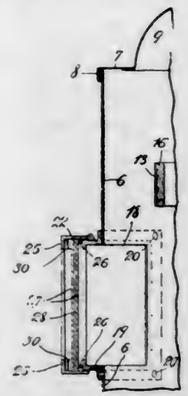
3. A railway crossing, composed of a plurality of rigid members permanently connected one with another in such a manner that they do not interfere with the natural wave motion of the track rails.

4. A railway crossing, composed of a plurality of durable members connected with each other in such a manner that they form longitudinally-disposed sections, each of which can flex slightly intermediate the ends of same.

5. A railway crossing, composed of a plurality of durable, rigid members loosely connected together in such a manner that the crossing as an entirety has sufficient flexibility to conform approximately to the bed of the track on which it is mounted without liability of said members becoming deranged or separated.

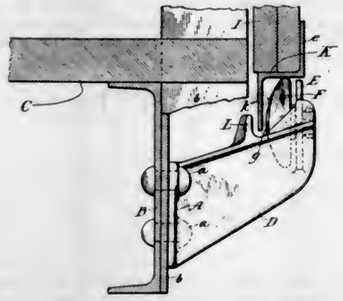
[Claims 6 to 22 not printed in the Gazette.]

1,191,562. WELDING-HOOD. WILLIAM L. CALLAHAN, Garwood, N. J., assignor to C. & C. Electric & Manufacturing Company, a Corporation of New Jersey. Filed Oct. 5, 1914. Serial No. 865,030. (Cl. 2—117.)



The combination with a welding hood having an opening for observing the work, a rectangular window casing secured to said hood and surrounding the said opening, a window frame hinged to the said window casing at the top thereof and provided with vertical front flanges on all sides thereof, lateral rods in said window frame adapted to abut the said casing when the window is closed, a plurality of differently colored glasses adapted to be inserted through an opening in the one side of said window frame, springs interposed between the said front flanges and the said glasses at the top and the bottom thereof for keeping said glasses in position against the said lateral rods and a spring on each side of said window frame and secured to the said hood for normally keeping the said window closed.

1,191,563. BRACKET FOR CAR-DOORS. FRED C. CAMERON, Chicago, Ill., assignor to Union Metal Products Company, Chicago, Ill., a Corporation of Delaware. Filed Apr. 17, 1916. Serial No. 91,599. (Cl. 16—89.)



1. In a car, the combination with a door having a longitudinal flange depending from its lower edge, of a bracket comprising a supporting-plate, an arm projecting therefrom, a front-plate supported by and projecting above the same, and a roller that supports said door having its side nearest the adjacent side of the car convex and adapted to be engaged by said flange, and means for journaling said roller that projects rearwardly from said wall and is provided with a head that retains said roller in position and has its rear end convexed and is engaged by said flange as the latter passes the axis of said roller.

2. In a car, the combination with a door having a longitudinal flange depending from its lower edge, of a bracket comprising a supporting-plate, an arm projecting outward therefrom, a front-plate supported by and projecting above the same, a tubular boss made integral therewith and having its axis at right angles thereto, a roller journaled upon said boss upon which said door travels which has its side nearest the car convexed and adapted to be engaged by said flange, and a bolt seated in the bore of said boss that has a head on its inner end the crown of which is convexed and which retains said roller on said boss and is engaged by said flange as the latter passes the axis of said roller.

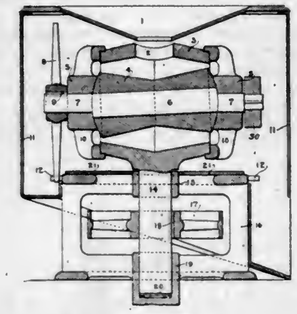
3. In a car, the combination with a door having a longitudinal flange depending from its lower edge, of a bracket comprising a supporting-plate, an arm projecting outward therefrom, a front-plate supported by and projecting above the same, a tubular boss made integral therewith and having its axis at right angles thereto, a roller journaled upon said boss upon which said door travels which has its side nearest the car convexed and adapted to be engaged by said flange, and a bolt seated in the bore of said boss that has a head on its inner end the crown of which is convexed and which is seated in the rabbeted edge of the inner side of the central opening of said roller with its convexed crown flush with the convexity of the same and is engaged by said flange as the latter passes the axis of said roller.

4. In a car, the combination with a door having a longitudinal flange depending from its lower edge, of a bracket comprising a supporting-plate, an arm projecting therefrom, a front-plate supported by and projecting above the same, a lug projecting upward from said arm between said front-plate and supporting-plate, and a roller having its side nearest the adjacent side of the car convex, and means for journaling said roller that projects rearwardly from said wall and is provided with a head that retains said roller in position and has its rear end convexed and is engaged by said flange as the latter passes the axis of said roller.

5. In a car, the combination with a door, a longitudinal Z-bar tread secured to the lower edge thereof and having a flange depending therefrom, of a bracket comprising a suitable supporting-plate, parallel arms projecting outward therefrom, a front-plate connecting the outer ends of said arms and having an integral boss the horizontal axis of which is at right angles thereto, a roller journaled on the inner portion of said boss and having its inner side convexed and the inner edge of its central opening rabbeted, and a bolt seated in the bore of said boss and having a head whose crown is convexed and is adapted to be seated in said rabbeted head with its crown flush with the convexity of said roller and is engaged by said flange as the latter passes the axis of said roller.

[Claims 6 to 8 not printed in the Gazette.]

1,191,564. ROCK AND ORE BREAKER. THOMAS W. CAPEN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed June 27, 1910. Serial No. 568,990. (Cl. 83—10.)



1. In a rock and ore breaker, an annular body, means for supporting said body to rotate on an axis at an angle to its axis of annularity, a head within said annular body forming with said body coacting breaking elements, means for rotating said body on said axis at an angle to its axis of annularity, and means for moving one of said breaking elements relative to the other to cause their breaking surfaces to approach and recede from each other.

2. In a rock and ore breaker, an annular body, means for supporting said body to rotate on an axis at right angles to its axis of annularity, a head within said annular body, means for gyrating said head, and means for rotating said body.

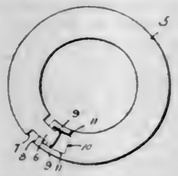
3. In a rock and ore breaker, an annular body, means for supporting said body to rotate on an axis at right angles to its axis of annularity, a head within said annular body forming with said body coacting breaking elements, means for rotating said body on said axis at right angles to its axis of annularity, and means for moving at least one of said breaking elements for causing relative gyration of one of said elements with respect to the other of said elements.

4. In a rock and ore breaker, two breaking elements, means for rotating said breaking elements about a common axis, and means for additionally moving at least one of said breaking elements for causing relative gyration of one of said elements with respect to the other of said elements.

5. In a rock and ore breaker, breaking elements forming a pair of opposed gyratory crushers the breaking elements of the one being independent of the breaking elements of the other, and means for rotating said elements on an axis passing between said gyratory crushers, said elements being formed to permit continuous feeding of material from end to end of said crushers.

[Claim 6 not printed in the Gazette.]

1,191,565. ADJUSTABLE WASHER. HARRY B. CHAMBERS, Fairbanks, Ind. Filed Oct. 6, 1915. Serial No. 54,400. (Cl. 85—50.)

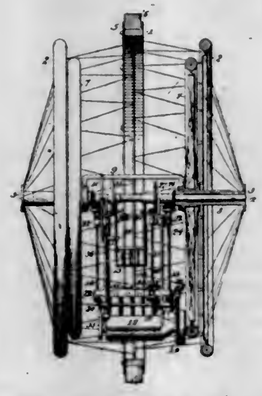


1. An adjustable washer including an annular body having relatively movable free ends, and means securing the free ends of said body against separation.

2. An adjustable washer including an annular body having a recessed end, and means at the opposite end slidably mounted within said recess preventing the removal of said ends.

3. An adjustable washer including an annular body having one end recessed, the opposite end being reduced, said recess having it outer end reduced to define a pair of shoulders, and lateral enlargements on said reduced end adapted to engage said shoulders to prevent the disengagement of said ends.

1,191,566. UNICYCLE. ELZA J. CHRISTIE, Marion, Iowa. Filed July 6, 1914. Serial No. 849,182. (Cl. 21—90.)



1. In a unicycle, the combination of a motor, driving mechanism connected therewith and with the unicycle, a clutch adapted to make such connection, and means adapted to permit the unicycle to move normally, though clutched to the motor, in case of the stoppage of said motor.

2. In a unicycle having balance wheels, a suspended motor and mechanism adapted to transmit motion from the motor to the balance wheels and to the unicycle proper, and means adapted for separate and independent engagement of the motor with said balance wheels and unicycle.

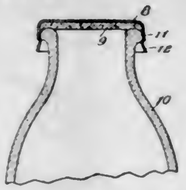
3. In a unicycle having balance wheels substantially as described, a motor suspended from the main axle, driving mechanism adapted to impart rapid revolution to said balance wheels, a clutch to make operative engagement of said mechanism, and means to impart positive rotation of the balance wheels in one direction, but permitting them to spin independently of the motor.

4. In a unicycle having a motor and connecting driving mechanism suspended from the main axle, a brake for said axle, and an operating lever connecting the brake with the suspending apparatus, whereby the setting of the brake tends to swing said apparatus into the rear part of the unicycle.

5. In a unicycle having a motor and its driving mechanism and an operator's seat suspended from the main axle, means adapted to bring the operator's seat into engagement with said other suspended parts, substantially as and for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,191,567. BOTTLE-CLOSURE. FRANCIS W. H. CLAY, Edgewood Park, Pa., assignor to Jo. Baily Brown, Pittsburgh, Pa. Filed Aug. 27, 1914. Serial No. 858,816. (Cl. 215—9.)



1. A bottle sealing cap having a generally conical shaped flange with horizontally slotted portions engaging by their edges the flange of the bottle, and means for spreading the said conical shaped flange to release the hold on the bottle.

2. The combination with a flanged bottle mouth of a metallic sealing cap comprising a cover, a circumferential flange of general conical form slotted at intervals and the slotted portions bowed inwardly to engage the bottle flange on the edge of the metal, of a pair of lugs arranged on the conical skirt and adapted to circumferentially spread the skirt, substantially as described.

3. A bottle sealing cap comprising a cover and a dependent flange having circumferentially slotted arched portions engaging the bottle by the edges of the arch, and manually operated means for enlarging the flange to release said arches.

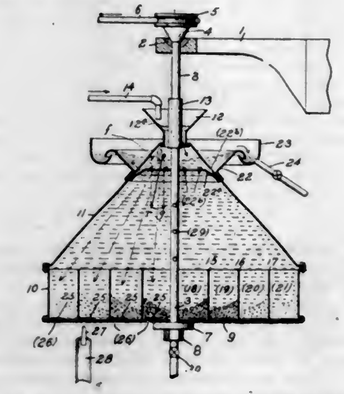
4. A bottle sealing cap having horizontally slotted arches adapted to be sprung into postion on the bottle and engaging the bottle by the edges of the metal and means for loosening the grip of such arches comprising projections on the skirt of the cap adapted to be moved by hand, substantially as described.

1,191,568. METHOD AND APPARATUS FOR GRADING SAND. FRANCIS W. H. CLAY, Edgewood Park, Pa., assignor to Jo. Baily Brown, Pittsburgh, Pa. Filed July 31, 1915. Serial No. 42,936. (Cl. 233—28.)

1. The method of grading sand which comprises maintaining a body of water in circular motion about a vertical axis, dropping the sand through said body of water from above and separating the grades of sand horizontally in zones about the axis at equal elevation by the combined action of centrifugal force and gravity, substantially as described.

2. The method of grading sand by dropping the sand in a body of water, meantime maintaining the body of water in circular motion and thereby subjecting each particle of sand to centrifugal force and the force of gravity, separating it into grades arranged in horizontally placed zones at equal elevation, and drawing off the sand from said zones by gravity.

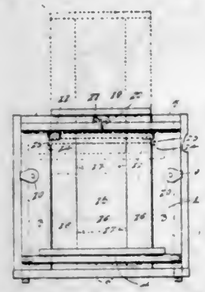
3. A sand grader comprising a vessel supported on a vertically rotating axle, and having a series of horizontally arranged grading compartments in its bottom, with means for drawing off grades separately, and means for continually removing surplus water and detritus, substantially as described.



4. Sand grading apparatus comprising a vessel of water, means to constantly rotate it about a vertical axis, means for introducing the sand into the water at the center of the top surface, and said vessel being provided with partitions dividing the bottom portion into horizontal zones, substantially as described.

5. Sand grading apparatus comprising a circular vessel having concentric partitioning walls dividing its bottom into horizontal zones, means for suspending the vessel and for continually rotating it, means to introduce the sand at the center of the vessel, and means to continually draw off surplus water from the vessel, substantially as described.

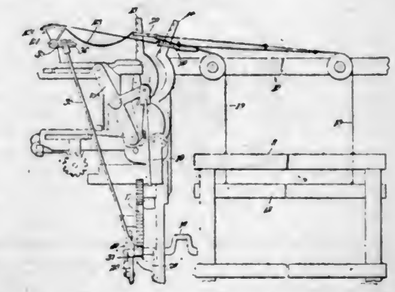
1,191,569. END-GATE FOR WAGONS. WARDNER N. CONBIT, Farragut, Iowa. Filed July 28, 1915. Serial No. 42,415. (Cl. 21—21.)



1. In an end gate for a wagon having a frame comprising a pair of vertical standards adapted to be detachably secured to the wagon bottom, a vertical jamb member secured at right angles to each one of said standards, an upper and a lower cross bar connecting said jamb members, each of said jamb members having a recess adjacent the upper portion thereof, a plate secured in each one of said recesses, a U-shaped guide member pivotally mounted in each one of said plates, and a panel adapted to engage in said U-shaped guide member whereby said panels can be raised or lowered and swung outwardly, and means to hold said panel in a closed position.

2. In an end gate for a wagon, having a frame comprising a pair of vertical standards adapted to be detachably secured to the wagon bottom, a vertical jamb member secured at right angles to each one of said standards, an upper and a lower cross bar connecting said jamb members, each of said jamb members having a recess portion adjacent the upper portion thereof, a plate secured in each of said recesses, a U-shaped guide member pivotally mounted in each one of said plates and a panel adapted to engage the said U-shaped guide members whereby said panels can be raised or lowered, and swung outwardly, a guide secured to said upper cross bar, a plate secured to the upper portion of said panel, said plate having an aperture formed therein, and an angular bolt slidably mounted in said guide and adapted to engage the aperture in said plate, whereby said panel is held in a closed position.

1,191,570. ATTACHMENT FOR LOOMS. FRED F. COWDEN, New Bedford, Mass. Filed Nov. 30, 1914. Serial No. 874,808. (Cl. 139—84.)



1. In a loom, the combination of a plurality of harness frames, mechanism for giving to said frames the normal full stroke movement, rocker means for actuating certain of said frames independently of said mechanism to give a half stroke movement thereto, a member having two revolutions to each complete cycle of movements of said mechanism, means actuated by said member and angularly adjustable relatively thereto about the axis of rotation, a bell crank lever, a link connecting one arm of said lever with the last mentioned means to oscillate the lever, and connections between the other arm of said lever and said rocker means.

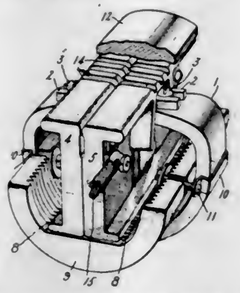
2. In a loom, the combination of a plurality of harness frames, mechanism for giving to said frames the normal full stroke movement, rocker means for actuating certain of said frames independently of said mechanism to give a half stroke movement thereto, a member having two revolutions to each complete cycle of movements of said mechanism, means actuated by said member and angularly adjustable relatively thereto about the axis of rotation, a bell crank lever having a fixed fulcrum and a slotted arm, a link connecting the last mentioned means with said slotted arm and adjustable relatively to the latter, and connections between the other arm of said lever and said rocker means.

3. In a loom, the combination of a plurality of harness frames, mechanism for giving to said frames the normal full stroke movement, rocker means for actuating certain of said frames independently of said mechanism to give a half stroke movement thereto, a member having two revolutions to each complete cycle of movements of said mechanism, a slotted arm carried by said member and angularly adjustable relatively thereto about the axis of rotation, a bell crank lever having a fixed fulcrum and a slotted arm, a link connecting said arms and adjustable along the slots thereof, an arm operatively connected with said rocker means, and a link connecting the last mentioned arm with the other arm of said bell crank lever.

4. In a loom, the combination of a plurality of harness frames, mechanism for giving to said frames the normal full stroke movement, rocker means for actuating certain of said frames independently of said mechanism to give a half stroke movement thereto, a member having two revolutions to each complete cycle of movements of said mechanism, a slotted arm carried by said member and angularly adjustable relatively thereto about the axis of rotation, a

bell crank lever having a fixed fulcrum and a slotted arm, a link connecting said arms and adjustable along the slots thereof, a slotted arm operatively connected with said rocker means, and a link adjustable along the slot in the last mentioned arm and connected with the other arm of said bell crank lever.

1,191,571. PROTECTIVE DEVICE. ELMER E. F. CREIGHTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 18, 1912. Serial No. 691,664. (Cl. 175—214.)



1. In an arc-extinguishing device, plates of refractory material forming a constricted arc chute, oppositely-disposed electrodes near one side of said chute, metallic plates situated transversely to said chute at its opposite side, and magnetic means for blowing an arc formed across said electrodes into and through said chute and across said plates.

2. In an arc-extinguishing device, a magnet nearly closed upon itself and having reëntrant pole tips, plates of refractory material forming a constricted arc chute between said pole tips, and arcing terminals in said chute in the vicinity of maximum field intensity.

3. In an arc-extinguishing device, a substantially U-shaped magnet having reëntrant pole tips, walls of refractory material between said poles constituting a constricted arc chute, arcing terminals in said chute, a refractory plate supported by the yoke of said magnet opposite said chute, and a plurality of metallic plates spaced apart in said plate whereby the arc vapors are cooled and deflected to extinguish the arc.

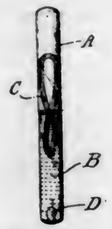
4. In an arc-extinguishing device, a substantially U-shaped magnet having inwardly turned pole tips, porcelain plates supported by said poles between said pole tips to constitute an arc chute, oppositely-disposed electrodes in said chute, a semi-cylindrical cooling and deflecting plate supported on the inner side of the magnet yoke opposite the chute, a gas vent for the chute on the side opposite the deflecting plate, and a protecting casing inclosing said apparatus.

5. In an arc extinguishing device, a permanent magnet nearly closed upon itself and having reëntrant pole tips, plates of refractory material between said poles forming a narrow constricted arc chute, coöperating flat arcing electrodes having diverging ends mounted at one end of said chute, a semi-cylindrical plate supported by the yoke of said magnet at the opposite end of said chute for cooling and deflecting an arc, said plate having an inner corrugated surface, a plurality of metallic plates mounted within the corrugations of said plate and transversely to said chute, a gas vent for the chute on the side opposite said plate, and a protective casing inclosing said apparatus.

[Claims 6 to 8 not printed in the Gazette.]

1,191,572. SURGICAL PACKAGE AND METHOD FOR INDICATING STERILIZATION THEREOF. CHARLES T. BAILEY, Brooklyn, N. Y. Filed May 24, 1916. Serial No. 99,536. (Cl. 99—1.)

1. A package comprising a sealed container having an article to be sterilized inclosed therein and a fusible substance carried by the container and adapted to fuse at a selected temperature and to indicate in its fused condition that the article within the container has been subjected to heat sterilization.



2. A surgical package comprising a sealed container having a fusible alloy and an article to be sterilized, both inclosed within the container.

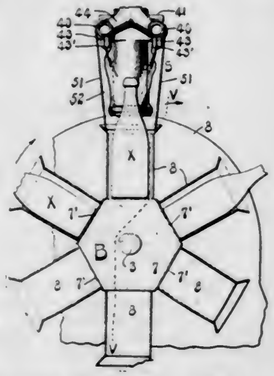
3. A surgical package comprising a sealed container having therein an article to be sterilized, a storing fluid and a fusible body all inclosed therein, said fusible body melting at a predetermined temperature to indicate that the article has been subjected to a predetermined degree of heat for sterilizing purposes.

4. A surgical package comprising a sealed glass tube having a suture, a storing fluid and a fusible body all sealed therein, said fusible body melting at a temperature below the predetermined heat sterlizing temperature for the suture.

5. A surgical package comprising a sealed glass tube having a storing fluid and an article to be sterilized inclosed therein, and a body of fusible alloy also inclosed and sealed within the glass tube, said fusible alloy being adapted to melt at a temperature below the predetermined heat sterlizing temperature for the article.

[Claims 6 to 10 not printed in the Gazette.]

1,191,573. BOTTLE-WASHING MACHINE. JOSEPH W. DAWSON, St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, a Corporation of Missouri. Filed Apr. 23, 1915. Serial No. 23,308. (Cl. 141—7.)



1. A bottle washing device comprising a bottle carrier, a water distributing device adapted to discharge water onto the bottles in said carrier, and a shield movable toward and away from said carrier, said shield being adapted to prevent the water from splashing from the bottle washing device at points near the bottles.

2. A bottle washing machine comprising a bottle carrier having bottle receiving pockets, a water distributing device for discharging water onto the bottles in said pockets, and a shield movable toward and away from said pockets and adapted to coöperate therewith to prevent water from splashing from the machine at points near said water distributing device.

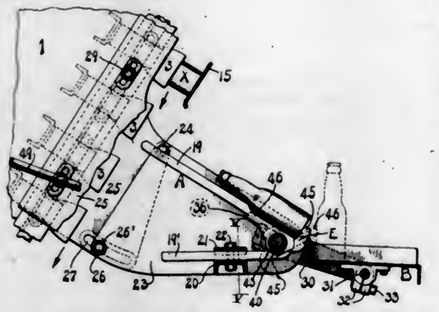
3. A bottle washing machine comprising a bottle carrier, a water distributing device arranged above the bottle carrier and adapted to discharge streams of water onto the outer faces of the bottles, a shield associated with said water distributing device to confine the water near the upper ends of the bottles, and means for moving said shield toward and away from the bottle carrier.

4. A bottle washing device comprising a bottle carrier having bottle receiving pockets the upper ends of which are flared outwardly, a shield arranged above the bottle carrier to confine the water during the washing operations, a water distributing device associated with said shield and adapted to discharge streams of water onto the bottles, and means for moving said shield toward and away from the upper ends of said bottle receiving pockets.

5. A rotary bottle carrier comprising a shaft, heads secured to said shaft, a series of polygonal partition members arranged between said heads, and bottle receiving pockets radiating from said polygonal partition members, said bottle receiving pockets being open at their inner ends to permit the drainage of water between said partition members and through the bottle carrier.

[Claims 6 to 17 not printed in the Gazette.]

1,191,574. BOTTLE-FEEDING DEVICE. JOSEPH W. DAWSON, St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed May 24, 1915. Serial No. 30,009. (Cl. 193—1.)



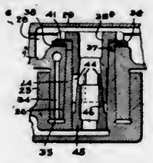
1. A bottle transferring device comprising a tiltable bottle holder having an abutment member adapted to engage the bottom of a bottle and a push member adapted to engage a side of the bottle, a bottle support adapted to receive the bottles passing from said tiltable bottle holder, and means for rocking said bottle holder, said abutment member being constructed and arranged to move upwardly and downwardly in the same path, said bottle support being located in a plane between the upper and lower positions of said abutment member so as to receive the bottle in an upright position while the abutment member is moving downwardly, and said push member being constructed and arranged to push the bottle out of the path of said abutment member before the latter returns to its elevated position.

2. An apparatus comprising a bottle support, a runway, and a bottle transferring device for moving bottles from said runway to said bottle support, said bottle transferring device comprising a tiltable bottle holder having an abutment member adapted to engage the bottom of a bottle and a push member adapted to engage a side of the bottle, the outer end of said abutment member being in a higher plane than the top of said bottle support when the bottle holder is positioned to receive a bottle, and means for turning said bottle holder so as to move the outer end of said abutment member downwardly in an arcuate path to a lower plane than the top of said bottle support, said bottle support being located adjacent to the arcuate path of said abutment member, so as to receive the bottle in an upright position while the abutment member is moving downwardly from its elevated position, said abutment member being free to move downwardly from the bottom face of the bottle after the latter has been deposited on said bottle support, and said push member being constructed and arranged to push the bottle along said bottle support while the abutment member is moving downwardly from the bottom of the bottle.

3. An apparatus comprising a bottle support, a tiltable bottle holder adjacent to said bottle support, said tiltable bottle holder having an abutment member adapted to engage the bottom of the bottle and a push member adapted to engage a side of the bottle, and means for operating said bottle holder to deposit the bottle on said bottle support in an upright position, said abutment member being movable away from the upright bottle after the latter has been deposited on said bottle support and said push member being adapted to push the upright bottle along the bottle support, said abutment member and push member being rigidly fixed together so that the push member will push the upright bottle along the table while the abutment member is moving away from the bottom of said upright bottle.

4. An apparatus comprising a bottle support, a tiltable bottle holder having an abutment finger adapted to engage the bottom of a bottle and a push finger adapted to engage a side of the bottle, said bottle holder being movable to deposit the bottle on said bottle support in an upright position, said abutment finger being movable away from the bottom of the bottle when the latter is resting upon said bottle support and said push finger being adapted to push the bottle along said support, said fingers being fixed together so that the abutment finger will move away from the bottom of the upright bottle while the push finger is pushing the bottle along the bottle support.

1,191,575. PIPE-JOINT. HEINRICH DECHAMPS, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1914. Serial No. 819,937. (Cl. 137—34.)



1. A pivotal joint for connecting adjacent pipe ends comprising hollow heads formed on adjacent pipe ends, telescoping projections having coöperating conical surfaces carried by adjacent heads, a hollow threaded bolt for securing the heads together, which bolt is threaded into the inner of said projections with its head overlapping both projections, a washer between the head of the bolt and one of the projections having a flange seating against the end of the other projection, and other washers coöperating with the first named washer for adjusting the relation of the heads.

2. A pivotal joint for connecting adjacent pipe ends comprising hollow heads formed on adjacent pipe ends and each having an opening therein, a projection surrounding one of said openings, a projection surrounding the other of said openings and adapted to telescope with the first named projection, a hollow threaded bolt having a cone shaped inner surface and provided with slots in its end for clamping said projections together, and a locking nut having a cone shaped surface coöperating with the similar surface of the bolt to lock the same in position.

3. A pivotal joint for connecting adjacent pipe ends, comprising hollow ends formed on adjacent pipe ends, telescoping projections having coöperating conical surfaces carried by adjacent heads, a hollow threaded bolt having

a cone-shaped inner surface and provided with slots in its end for securing the heads together, said bolt being threaded into the inner of said projections with its head overlapping both projections, a washer between the head of the bolt and one of the projections having a flange seating against the end of the other projection, other washers coöperating with the first named washer for adjusting the relation of the heads, and a locking nut having a cone-shaped surface coöperating with a similar surface of the bolt to lock the same in position.

4. A pivotal joint for connecting adjacent pipe ends, comprising hollow heads formed on adjacent pipe ends, and each having an opening therein, a projection surrounding one of said openings and having a groove therein, one side of the groove being straight to form a cylindrical guiding surface, and the other being angular to form a cone-shaped tapered seat, a projection surrounding the other of said openings and formed with a straight and an angular side and adapted to telescope into said groove, the side of the last named projection coöperating with the sides of the groove to form a tight joint and terminating short of the bottom of the groove to provide a lubricant chamber, a hollow threaded bolt for securing the heads together, which bolt is threaded into the inner of said projections with its head overlapping both projections, a washer between the head of the bolt and one of the projections having a flange seating against the end of the other projection, other washers coöperating with the first named washer for adjusting the relation of the heads, and means for locking the nut against turning movement.

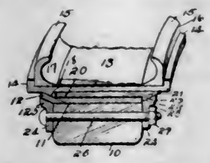
1,191,576. NECKTIE-HOLDER. CONRAD A. DIERIG, Lawrence, Mass. Filed Apr. 4, 1916. Serial No. 88,846. (Cl. 24—37.)



1. A tie holder including a split necktie-receiving ring having the free ends overlapped, and means carried by the overlapped ends of said ring for securing the latter in position upon a collar button.

2. A tie holder comprising a split tie-receiving ring having the free ends overlapped, and a substantially U-shaped collar button-engaging clip carried by the free ends of said ring.

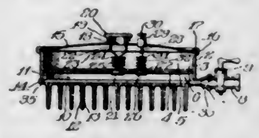
1,191,577. DEMOUNTABLE RIM. RUDOLPH A. ECKBERG, Des Moines, Iowa. Filed Aug. 9, 1915. Serial No. 44,644. (Cl. 152—21.)



In a demountable rim, a rim having ends adapted to be adjacent to each other to form a continuous rim, continuous side rings for preventing outward expansion of the rim, a continuous band or ring adapted to engage the inner surface of said rim, said rim having a shoulder adapted to engage one edge of said band, said band having at one edge a portion adapted to be engaged by a locking lug.

1,191,578. MASSAGE-BRUSH. OLOF ENGLUND, Chicago, Ill. Filed Apr. 12, 1915. Serial No. 20,657. (Cl. 15—48.)

1. The combination with a brush head, of hollow "bristles" therefor, a water chamber in said head communicating with said bristles and connected with a source of water supply under pressure, a massage mixture chamber adjacent to said water chamber and having a capped inlet thereto, said mixture chamber being compressible to force liquid from said massage mixture chamber to said water chamber.

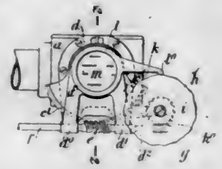


2. The combination in a brush, of tubular bristles, a back having a water chamber and a fluid chamber therein with a valve controlled opening therebetween, means for discharging a liquid from one chamber into the other either by the force of gravity and pneumatic discharging means or by air pressure.

3. The combination in a brush, of tubular bristles, a water chamber discharging through said bristles and having an opening for water under pressure leading thereinto, a fluid chamber in the head of said brush, said fluid chamber having a flexible wall, an opening between said chambers, and a valve controlling said opening and operable by pressure upon said flexible wall.

4. The combination in a brush, of tubular bristles, a back containing a water chamber adapted to be connected with a source of water supply and discharging through said bristles, a collapsible fluid chamber also in said back and normally closed to said water chamber, and means for discharging liquid from said fluid chamber to said water chamber by collapsing said fluid chamber.

1,191,579. HORIZONTAL TELEMETER. OTTO EPPENSTEIN, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Jan. 15, 1915. Serial No. 2,488. (Cl. 88—2.7.)



1. In a horizontal telemeter containing the base-line within itself a measuring device, an ocular system, an ocular reflecting system, at either side of the said ocular reflecting system an objective lens and a deflecting device, the said deflecting devices being adapted to displace in the direction of the base-line the images formed from the ray pencil systems entering the instrument at either end of the base-line, actuating means for effecting a joint displacement of the two images in the same direction by a joint alteration of the setting of the said deflecting devices, a cam adapted to be actuated by the said actuating means and translating means actuated by the said cam and connected with one of the said deflecting devices for transmitting motion thereto.

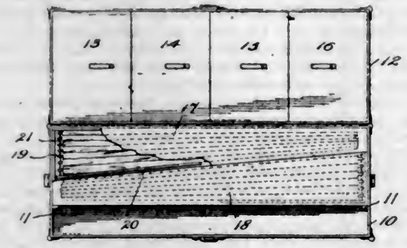
2. In a horizontal telemeter containing the base-line within itself a measuring device, an ocular system, an ocular reflecting system, at either side of the said ocular reflecting system an objective lens and a deflecting device, the said deflecting devices being adapted to displace in the direction of the base-line the images formed from the ray pencil systems entering the instrument at either end of the base-line, actuating means for effecting a joint displacement of the two images in the same direction by a joint alteration of the setting of the said deflecting devices, an additional deflecting device disposed in the path of the ray pencil system belonging to one end of the base-line, and a cam adapted to be actuated by the said actuating means and means actuated by said cam and connected with the said additional deflecting device.

1,191,580. PHENYLPROPIOLIC-ACID COMPOUNDS CONTAINING ARSENIC. EMIL FISCHER, Berlin, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Original application filed Nov. 27, 1914, Serial No. 874,308. Divided and this application filed Nov. 2, 1915. Serial No. 59,287. (Cl. 23—24.)

1. The hereindescribed new phenylpropiolic acid compounds containing arsenic, obtainable by combining a halogen compound of arsenic with phenylpropiolic acid and then splitting off the halogen, the new compounds yielding an oxid of arsenic when heated with an excess of alkali and being in the form of the free acid colorless crystals easily soluble in alcohol and almost insoluble in water, substantially as described.

2. The hereindescribed new phenylpropiolic acid compounds containing arsenic which are when dried and freed from water of crystallization substantially colorless powders containing about 17 per cent. of arsenic, which is split off in the form of oxid of arsenic upon heating the compounds with an excess of alkali, substantially as described.

1,191,581. TRUNK. EUGENE STANLEY FRANCIS, New York, N. Y. Filed Jan. 7, 1914. Serial No. 810,902. (Cl. 190—23.)



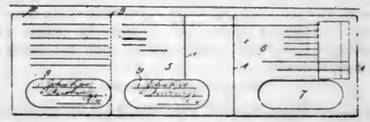
1. A trunk body and a pair of tapering movable trays superimposed therein with the deeper end of one of said trays over the shallower end of the other, substantially as described.

2. The combination with a trunk body, of a pair of wedge-shaped trays removably mounted therein, the deeper end of one tray registering with the shallower end of the other tray to form a parallelopipedon shape, with a panel hinged to the shallow end of each and adapted to form a tapering box therewith when in the closed position, and to form a pedestal support therefor when swung outward, substantially as described.

3. The combination with a trunk body, of a pair of wedge-shaped trays removably mounted therein, the deeper end of one tray registering with the shallower end of the other tray to form a parallelopipedon shape, with a panel hinged to the shallow end of each and adapted to form a tapering box therewith when in the closed position, and to form a pedestal support therefor when swung outward, with means for locking said panel in the supporting position, substantially as described.

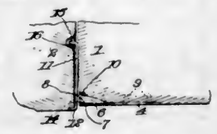
1,191,582. BILLING-CARD. LESLIE WINFIELD GATCHELL, Newberg, Oreg. Filed Aug. 10, 1915. Serial No. 44,703. (Cl. 120—74.)

1. A billing card of the character specified comprising a strip perforated transversely near one end to form a detachable stub and a bill proper, the entire strip and the bill proper being each scored transversely through their centers to form folding lines for the card, the bill proper having an opening in the end thereof opposite the stub, an address portion on the said stub and on the end of the said bill proper opposite the said opening, the said address portions lying beneath the said opening when the entire strip and when the bill proper only are folded centrally respectively, and means for fastening the ends of the folded card.



2. A billing card comprising a bill proper and a detachable stub shorter than the bill proper, the bill proper having an address exposing window in its end opposite the stub, an address space upon the stub and upon the end of the bill proper opposite the said window, the said address space adapted to lie beneath the said window when the entire billing card and when the bill proper only are folded once centrally.

1,191,583. ANTI-DOOR-SLAMMING DEVICE. SAMUEL G. GILLESPIE, Charleston, W. Va. Filed Sept. 2, 1915. Serial No. 48,668. (Cl. 20—77.)



In combination with a movable member and a support member, a yieldable cam track element on one of said members, the other of said members having a cut-away portion, the latter member having a tang provided with inwardly extending ears integral therewith, a pin mounted by said ears, and a roller on said pin disposed in said cut-away portion within the outer face of the tang to engage said yieldable track means to tension the same and check the door and prevent rattling thereof.

1,191,584. SHIRT. SIMON Y. GOLDBERG, Minneapolis, Minn. Filed Aug. 3, 1914. Serial No. 854,673. (Cl. 2—41.)



1. A shirt having in its body at or near the waist line parallel slits which extend lengthwise thereof for the passage of suspended tips therethrough, the body of the shirt between said slits being folded in reverse directions to form plaits that completely cover the slits throughout their entire length, and means for holding the plaits over the slits.

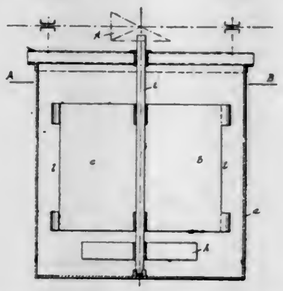
2. A shirt, having therein parallel slits, a plait, formed of the material between said slits and arranged to cover the same, and means connecting the outer edge portions of said slits and slightly drawing the same together, under said plait.

3. A shirt, having therein parallel slits, a plait, formed of the material between said slits and arranged to cover

the same, and a patch lining connecting the outer edge portions of said slits and slightly drawing the same together, under said plait, said patch lining having a slit cut therein.

4. A shirt having in its body a slit which extends lengthwise thereof for the passage of suspender tips therethrough, the body of the shirt being folded at one side of the slit to form a plait that completely covers the slit throughout its entire length, and means for holding the plait over the slit.

1,191,585. APPARATUS FOR STIRRING, AGITATING, OR MIXING LIQUIDS. BRONISLAW GOLDMAN, Charlottenburg, Germany. Filed Feb. 18, 1914. Serial No. 819,604. (Cl. 23—3.)



A mixing apparatus comprising a vessel, a shaft extending through the vessel, partitions radiating from the shaft, said partitions forming compartments of unequal sizes, the upper and lower edges of the compartments being spaced from the top and bottom of the vessel, a portion of the ends of the partitions being spaced from the inner walls of the vessel to provide communication between the compartments, and a stirring member mounted on one extremity of the shaft, whereby material stirred by the stirring member is thrown against the walls of the partitions, substantially as described.

1,191,586. ARTIFICIAL TOOTH. JOSEPH P. GOMES, New York, N. Y., assignor of one-half to C. Abbott Bush, Brooklyn, N. Y. Filed Feb. 8, 1916. Serial No. 76,943. (Cl. 32—9.)



1. In an artificial tooth, a facing having an undercut ledge extending across the tooth and an undercut cavity, a backing provided with an edge adapted to coact with said ledge and a hook arranged to engage said cavity for securing the facing to the backing.

2. In an artificial tooth, a facing having a beveled undercut ledge extending across the tooth and an undercut cavity, a backing provided with a beveled edge adapted to coact with said ledge and a hook arranged to engage said cavity for securing the facing to the backing.

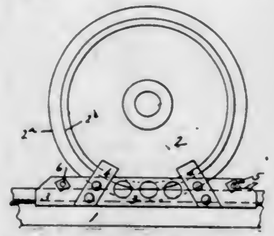
3. In an artificial tooth, a facing having an undercut ledge extending across the tooth and undercut cavities, and a backing provided with an edge adapted to coact with said ledge and a plurality of hooks arranged to engage said cavities for securing the facing to the backing.

4. In an artificial tooth, a facing having a beveled undercut ledge extending across the tooth and undercut cavities, and a backing provided with a beveled edge adapted to coact with said ledge and a plurality of hooks arranged to engage said cavities for securing the facing to the backing.

5. In an artificial tooth, a facing having an undercut ledge extending across the tooth, sockets in said ledge and an undercut cavity and a backing provided with an edge adapted to coact with said ledge, prongs for said sockets and a hook arranged to engage said cavity for securing the facing to the backing.

[Claims 6 to 8 not printed in the Gazette.]

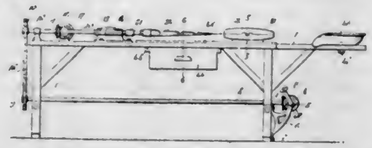
1,191,587. WHEEL-LOCKING DEVICE. THOMAS L. GRAY, Seattle, Wash., assignor to Car-Wheel Lock Company, King county, Wash. Filed Aug. 19, 1915. Serial No. 46,384. Renewed May 31, 1916. Serial No. 100,968. (Cl. 188—48.)



1. In a device for clamping the wheels of a car to the rail, the combination of a single angle bar, lugs upon the vertical leg of said angle bar, the upper end of each of said lugs being bent inwardly to project inside the outer lines of the said wheel, hook bolts passing through the upstanding leg of said angle bar and adapted to hook over the ball of said rail, whereby movement of the wheel with respect to the rail is prevented when the angle bar is adjusted and the hook bolts tightened.

2. In a device for clamping the wheels of a car to the rails, including a single angle bar having lugs upon the vertical leg, the upper ends of said lugs being bent inwardly to project inside the outer line of the said wheels, the combination of hook bolts passing through and coöperating with the upstanding leg of said angle bar and hooking over and engaging the ball of said rail, whereby the wheel is clamped and movement with respect to the rail is prevented when the angle bar is adjusted and the hook bolts tightened.

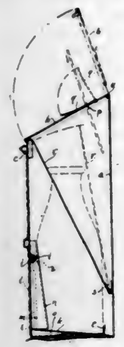
1,191,588. CORER. WESLEY G. GROOM, Storm Lake, Iowa. Filed Mar. 1, 1913. Serial No. 751,608. (Cl. 144—93.)



The combination with a coring machine including a rotatable corer and operating means therefor; of a plate having longitudinally disposed guides, a resilient plate having a centrally located upwardly bowed portion, the longitudinal edge portions of said resilient plate being disposed in said guides, and a work holder fixed to the bowed portion of said resilient plate in alinement with said corer; whereby said resilient plate will compensate for varying sizes of work by permitting the centering of said holder with respect to the corer.

1,191,589. COMBINED MILK AND MAIL BOX. ANTHONY GUTOWSKI and THADDEUS S. BLAZUCKI, Detroit, Mich. Filed Mar. 31, 1916. Serial No. 87,899. (Cl. 232—41.)

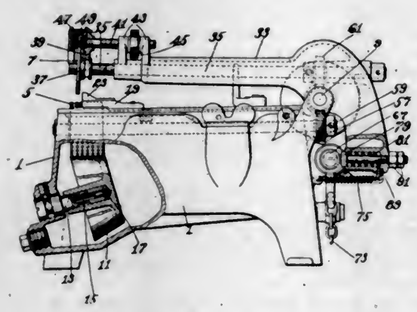
1. An automatic locking receptacle, having in combination, a casing provided with a hinged lid and a swinging door at the side, means for locking the lid, an outside-controlled latch on the swinging door, a second latch unsusceptible to control from the outside adapted to swing through an opening in the jamb, and a latch trap adapted to be drawn across the opening in the jamb by the weight of an article inserted in the casing.



2. An automatic locking receptacle, having in combination, a casing provided with a lid and with a swinging door, means for locking the lid, an outside-controlled latch, a second latch unsusceptible to outside control, a hook adapted to be drawn down in the path of the second latch to trap the same, a movable platform normally raised, and connections between the swinging platform and the hook to draw the hook down to trap the second latch when an article rests upon the platform.

3. An automatic locking receptacle, having in combination, a casing provided with a lid, means for locking the lid, a swinging door, a door jamb attached to the casing and provided with an opening, a spring-projected latch unsusceptible to outside control and arranged to pass through the opening in the door jamb, a hook or latch trap adapted to be drawn across the opening in the jamb, and a movable platform normally raised and which when depressed by the weight of an article carried thereon draws the said hook or latch trap across the opening in the door jamb.

1,191,590. CEMENTING-MACHINE. THOMAS PERCY HALL and ARTHUR BATES, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 21, 1912. Serial No. 721,658. (Cl. 91—50.)



1. A machine of the class described having, in combination, a comparatively wide, cement applying roll, a narrow presser member arranged to hold the work against said roll, and means whereby said presser member may be adjusted to coöperate with any selected zone of the applying roll.

2. A machine of the class described having, in combination, a comparatively wide, cement applying roll, a narrow presser roll arranged to hold the work against said applying roll, a rotary shaft to which said presser roll is keyed, and means for adjusting said presser roll along said shaft to cause it to coöperate with any selected zone of the applying roll.

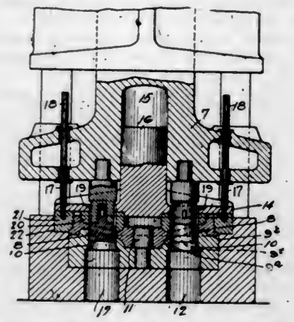
3. A machine of the class described having, in combination, a member for applying cement to a piece of stock, means for operating said member, and a shield extending partially over said member from one end thereof and adjustable across said member to vary its effective surface.

4. A machine of the class described, having, in combination, a roll for applying cement to a piece of stock, means for rotating said roll, a shield extending partly over said roll from one end thereof and adjustable longitudinally thereof to vary the exposed area of said roll, a narrow presser roll, and means whereby said presser roll may be adjusted to coöperate with any selected zone of said applying roll.

5. A machine of the class described having, in combination, a member for applying cement to a piece of stock, a shield extending partially over said member from one end thereof and adjustable across said member to vary the width of the band of cement applied to the stock, and an edge gage mounted upon said shield.

[Claims 6 to 14 not printed in the Gazette.]

1,191,591. APPARATUS FOR THE MANUFACTURE OF SPOKED WHEELS. JOHN M. HANSEN, Pittsburgh, Pa., assignor to Forged Steel Wheel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 7, 1911. Serial No. 653,433. (Cl. 164—90.)



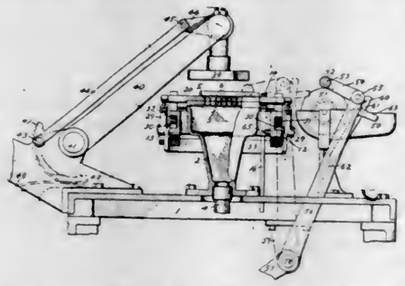
1. In wheel shearing apparatus, the combination of a bottom die having a supporting face corresponding in contour to the wheel face and having shearing openings in said face in line with the wheel web, a die head reciprocating parallel to the axis of the wheel and provided with shearing dies in line with said shearing openings, and a reciprocating clamping head having a rim clamping ring fitting around the rim face of the wheel to prevent distortion of the wheel during the shearing operation.

2. In wheel shearing apparatus, the combination of a bottom die having a supporting face corresponding in contour to the wheel face and having shearing openings in said face in line with the wheel web, a die head reciprocating parallel to the axis of the wheel and provided with shearing dies in line with said shearing openings, a reciprocating clamping head having a rim clamping ring fitting around the rim face of the wheel, and a hub clamping face engaging with the hub portion of the wheel whereby the wheel is rigidly held against radial distortion.

3. In wheel shearing apparatus, the combination of a bottom die having a supporting face corresponding in contour to the wheel face and having shearing openings in said face in line with the wheel web, a die head reciprocating parallel to the axis of the wheel and provided with shearing dies in line with said shearing openings, and a clamping head having a web clamping face corresponding

to and engaging with the web of the wheel and having shearing openings for the passage of the shears and a clamping ring engaging with the rim face of the wheel to prevent distortion of the wheel.

1,191,592. BUNCH-FORMING DEVICE FOR CIGAR-MACHINES. VICTOR EMILIUS HANSEN, Brooklyn, N. Y., assignor to International Cigar Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed July 14, 1915. Serial No. 39,772. (Cl. 131—42.)



1. In a bunch forming device for cigar machines, the combination with a Chianti belt, of a loop forming roller for the Chianti belt, and means for tilting said roller during the bunch forming operation.

2. In a bunch forming device for cigar machines, the combination with a Chianti belt, of a loop forming roller for the Chianti belt, and cam controlled means for tilting said roller during the bunch forming operation.

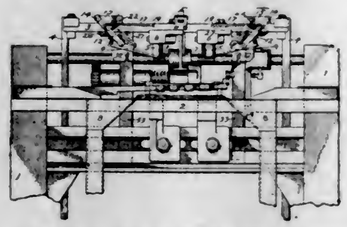
3. In a bunch forming device for cigar machines, the combination with a Chianti belt, of a loop forming roller for the Chianti belt, a pair of pivoted arms for supporting and advancing the roller during the bunch forming operation, and a pair of cams and operating connections for guiding the arms to cause said roller to be tilted during the bunch forming operation.

4. In a bunch forming device for cigar machines, the combination with a Chianti belt, of a loop forming roller for the Chianti belt, means for tilting said roller during the bunch forming operation, and means for gradually tightening the belt during the bunch forming operation.

5. In a bunch forming device for cigar machines, the combination with a Chianti belt, of a loop forming roller for the Chianti belt, means for tilting said roller during the bunch forming operation, and cam controlled means for gradually tightening the belt during the bunch forming operation.

[Claims 6 and 7 not printed in the Gazette.]

1,191,593. CIGAR-FILLER-FORMING MECHANISM. VICTOR EMILIUS HANSEN, Brooklyn, N. Y., assignor to International Cigar Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed July 19, 1915. Serial No. 40,648. (Cl. 131—39.)



1. In a cigar filler forming mechanism, the combination with means for supporting a filler section, of means for trimming one end of said section to prepare it for rolling into a bunch having a tapered end, and means for ejecting the trimmings from the mechanism.

2. In a cigar filler forming mechanism, the combination with means for supporting a filler section, of means comprising simultaneously acting devices for trimming both ends of said section to prepare it for rolling into a bunch having tapered ends, and means comprising simultaneously acting devices for ejecting the trimmings at both ends of said section from the mechanism.

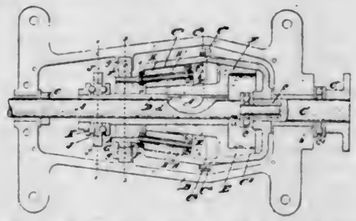
3. In a cigar filler forming mechanism, the combination with a table for supporting a filler section, of means for trimming one end of said section to prepare it for rolling into a bunch having a tapered end, and means for ejecting the trimmings from the mechanism.

4. In a cigar filler forming mechanism, the combination with means for supporting a filler section, of a chute adjacent the supporting means, means for trimming one end of said section to prepare it for rolling into a bunch having a tapered end, and means for ejecting the trimmings into the chute.

5. In a cigar filler forming mechanism, the combination with means for supporting a filler section, of a knife for trimming one end of said section to prepare it for rolling into a bunch having a tapered end, and means for ejecting the trimmings from the mechanism.

[Claims 6 to 14 not printed in the Gazette.]

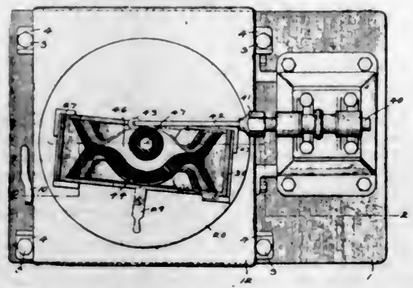
1,191,594. DRIVING AND REVERSING CLUTCH. GEORGE H. HAZELTON, Detroit, Mich. Filed Sept. 22, 1915. Serial No. 51,938. (Cl. 74—26.)



1. In a device of the character described, a supporting frame, a driving shaft journaled therein, a driven shaft, a pair of annular cones tapering in opposite directions mounted upon the driven shaft and operating as a single unit therewith, an annular shaft slidable upon the driving shaft keyed to rotate therewith, a cone carried by the annular shaft having a projecting, tapering hub and adapted to be forced into driving relation with one of the annular cones of the driven shaft, a frame surrounding the tapering hub having radial slots to receive the shafts of a plurality of rolls, a plurality of rolls rotatable upon shafts projecting into the slots of the frame, transverse pins for supporting said shafts in the slots of the frame, springs adapted to bear upon the shafts of the rolls to force them inwardly to the limit of their travel in the slots of said frame, and manually operated means for shifting said annular shaft, whereby the tapering hub of the cone carried by the annular shaft is adapted to force said rolls outwardly and into impinging relation with the other annular cone.

2. In a device of the character described a supporting frame, a driving shaft journaled therein, a driven shaft, a pair of annular tapering cones provided with flanges at one end thereof, said flanges being bolted together to form a single unit, the annular cones tapering respectively in opposite direction and carried by the driven shaft to rotate as a unit therewith, an annular shaft sleeved on a driving shaft, keyed to rotate therewith, but free to slide thereon, an annular ring carried by the annular shaft having a tapering, projecting hub and an annular flange extending from its periphery and tapering in a direction opposite to the hub, and adapted to engage one of the annular cones, a suitable frame surrounding the tapering hub to support a plurality of rolls, a plurality of rolls supported in the frame and adapted to be forced into contact with the other annular cone by the tapering hub upon the manual adjustment of the annular shaft and manually operated means for longitudinally shifting said annular shaft with reference to the driving shaft.

1,191,595. MACHINE FOR FORMING PORCELAIN WARE. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 9, 1908. Serial No. 419,925. (Cl. 77—5.)



1. A machine for forming curvilinear holes in unbaked porcelain ware comprising a rotary tool adapted to automatically change its cutting edge and be self-sharpening, a support for the ware, and means for determining the curvilinear path of the tool in the ware.

2. A machine for forming curvilinear holes in unbaked porcelain ware comprising a rotary tool adapted to automatically change its cutting edge and be self-sharpening, a holder for the ware, and an oscillating support for the said holder whose movement serves to determine the curvilinear path of the tool in the ware.

3. A machine for forming curvilinear holes in unbaked porcelain ware comprising a rotary tool adapted to automatically change its cutting edge and be self-sharpening, a holder for the ware, and a support adapted to guide said holder relative to said tool whose movement serves to determine the curvilinear path of the tool in the ware.

4. A machine for forming curvilinear holes in unbaked porcelain ware comprising a rotary tool adapted to automatically change its cutting edge and be self-sharpening, a holder for the ware, and a turret for supporting said holder, said tool and turret being relatively movable to determine the curvilinear path of the tool in the ware.

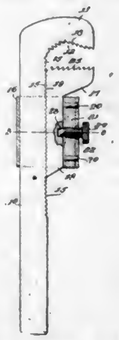
5. A machine for forming curvilinear holes in porcelain ware comprising a rotary tool, a holder for the ware, a pivoted support for said holder, and means for shifting the pivot bearing transversely to the pivotal axis and relative to said tool.

[Claims 6 to 11 not printed in the Gazette.]

1,191,596. WRENCH. DAVID C. HINDMAN, Rushville, Ill., assignor of one-third to Peter A. Schultz, Rushville, Ill. Filed May 10, 1916. Serial No. 96,663. (Cl. 81—132.)

1. A wrench including a stock having a stationary lateral jaw, a sleeve slidable on the stock, a movable jaw having an integral shank movable in the sleeve, a block secured within said sleeve, and means operating through the block for engaging the shank of said movable jaw and holding it with its teeth in engagement with the stock.

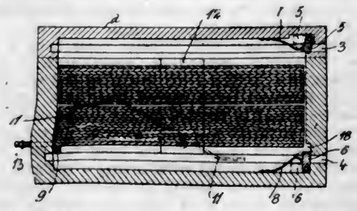
2. A wrench including a stock having teeth in one face and a stationary lateral jaw, a sleeve slidable on the stock, a movable jaw having an integral shank provided with a socket and movable in the sleeve and with teeth in the movable jaw and in its shank to engage the teeth of said stock, and a clamp screw operating through the sleeve and reduced at the inner end for engaging the socket of said movable jaw and holding it with its teeth and the teeth of the movable jaw in engagement with the teeth of the stock.



3. A wrench including a stock having teeth in one face and a stationary lateral jaw, a sleeve slidable on the stock, a movable jaw having an integral shank movable in the sleeve and with teeth to engage the teeth of said stock, and means operating through the sleeve for engaging the shank of said movable jaw and holding it with its teeth in engagement with the teeth of the stock.

4. A wrench including a stock having teeth in one face and a stationary lateral jaw, a sleeve slidable on the stock, a movable jaw having an integral shank movable in the sleeve and with teeth in the movable jaw and in its shank to engage the teeth of said stock, and means operating through the sleeve for engaging the shank of said movable jaw and holding it with its teeth and the teeth of the movable jaw in engagement with the teeth of the stock.

1,191,597. BOX FOR CONTAINING EXPOSED AND UNEXPOSED PHOTOGRAPH-PLATES. OLA HOEL, Rennebu, Norway. Filed Jan. 25, 1916. Serial No. 74,102. (Cl. 95—30.)



1. In a magazine for exposed and unexposed photographic plates, the combination of a box having a lid and adapted for the insertion of a dark slide in the top and in the bottom thereof; plate supporting means at the lower part of said box; and means for pushing the lowermost plate off of the supporting means.

2. In a magazine for exposed and unexposed photographic plates, the combination of a box having a lid and adapted for the insertion of a dark slide in the top and in the bottom thereof; plate supporting means at the lower part of said box; means for pushing the lowermost plate off of the supporting means; and means for preventing the lateral movement of the next to the lowermost plate.

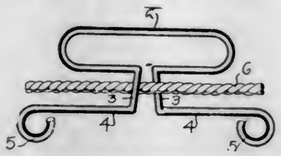
3. In a magazine for exposed and unexposed photographic plates, the combination of a box having a closed bottom and provided at the bottom part of its side walls with deep horizontal interior grooves in three side walls, a horizontal opening in the fourth side wall and a shallow groove in two adjacent side walls just above the level of the deep grooves; supporting means secured to the side walls opposite said shallow grooves; and means for pushing the lowermost plate off of a supporting means.

4. In a magazine for exposed and unexposed photographic plates, the combination of a box having a closed bottom and provided at the bottom part of its side walls with deep horizontal interior grooves in three side walls, a horizontal opening in the fourth side wall and a shallow groove in two adjacent side walls just above the level of the deep grooves; horizontal lists secured to the side walls opposite to said shallow grooves; and means for pushing the lowermost plate off of the lists.

5. In a magazine for exposed and unexposed photographic plates, the combination of a box having a closed bottom and provided at the bottom part of its side walls with deep horizontal interior grooves in three side walls, a horizontal opening in the fourth side wall and a shallow groove in two adjacent side walls just above the level of the deep grooves; horizontal lists secured to the side walls opposite to said shallow grooves; and outwardly spring-pressed pins passing through two of the side walls and provided on their inner ends with pushers disposed above the middle part of said lists and having the vertical thickness of a photographic plate.

[Claims 6 to 12 not printed in the Gazette.]

1,191,598. CLOTHES-LINE ADJUSTER AND WINDER. OSKAR HOFSTRAND, Brooklyn, N. Y. Filed June 28, 1915. Serial No. 36,831. (Cl. 24—71.3.)



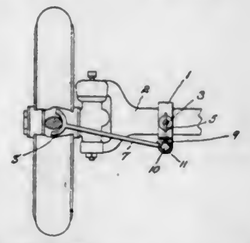
1. A line tightener and adjuster comprising a handle formed by an open loop, said handle having outwardly projecting approximately parallel spaced members extending from the opening of the loop forming a line engaging and winding portion, said members each having a radially projecting arm, the arms projecting in opposite directions and the extremities of the arms being formed with bends for engagement with the line as it is wound upon the tightener to prevent a reverse unwinding movement of the tightener.

2. A line tightener and adjuster comprising a handle having outwardly projecting approximately parallel spaced members forming a line engaging and winding portion, said members being spaced from each other along their entire extent to provide for the reception of the line between the members and the insertion of the line into the space between said members from the end opposite the handle, said members each having a radially projecting arm, the arms projecting in opposite directions and the extremities of the arms being formed with bends for engagement with the line after it is wound upon the tightener to prevent a reverse unwinding of the tightener.

3. A line tightener comprising a handle formed by an open loop and having outwardly projecting members extending from the handle at the opening of the loop and disposed in convergent relation toward the handle member, the ends of said spaced members having oppositely projecting radially extending arms disposed in the plane of the loop and formed on their ends with open hooks, the hooks being laterally deflected in opposite directions.

4. A line tightener and adjuster formed of a single piece of wire bent to provide an open loop forming an elliptical handle, the ends of the wire at the opening of the loop being bent outward in spaced divergent relation to form a rope engaging and winding member, the space between the inner ends of said outwardly bent portion being less than the diameter of the rope to be engaged, and the wire at the extremity of the outwardly bent portions being again bent to provide arms extending laterally outward and away from each other in the plane of the looped portion, said arms being formed at their extremities with open hooks, the hooks being laterally deflected in opposite directions.

1,191,599. AUTOMOBILE-WHEEL-HOLDING DEVICE. JOHN STEELE HOPSON, Asheville, N. C. Filed June 28, 1915. Serial No. 36,743. (Cl. 21—183.)

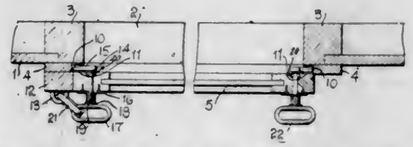


1. A device of the type described, including a pair of arms applicable to the spokes of the front wheels of an automobile or other vehicle on each side of the hub of the wheel, said arms including means for direct engagement with the spokes of the wheel to positively hold the wheel against both rotative and swinging movement and means for attachment of said arms to the wheel axle.

2. A device of the type described, including a bracket equipped for attachment to the axle of an automobile or other vehicle, and arms connected to said bracket and applicable to the spokes of the guiding or front wheel of an automobile or other vehicle, said arms including means for direct engagement with the spokes of the wheel to positively prevent both rotative and swinging movement of the wheel.

3. A device of the type described, including a bracket equipped for attachment to a vehicle-axle, and arms connected to said bracket and having divergent portions adapted for engagement with the wheel-spokes, the connection between said arms and said bracket comprising a bolt inserted through said arms, and a pendent stud on said bracket, said arms having tubular interlocking clutch-members which also receive said bolt.

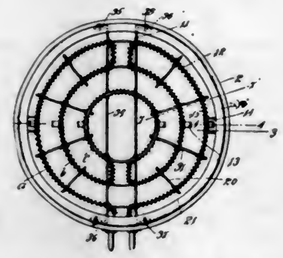
1,191,600. DOOR-LATCH. JOHN HERMAN JONESON, Chicago, Ill. Filed Apr. 8, 1916. Serial No. 89,930. (Cl. 70—102.)



The combination with a door frame having a keeper therein, of a door adapted to be moved over said frame, a bolt extending through and rotatably supported by said door, a laterally disposed elongated catch secured to one end of the bolt and overlying a face of the door and adapted for engagement with the keeper, said bolt being capable of endwise movement, the operating portion of the bolt being arranged beyond the opposite face of the door, a recess in the first named face of the door adapted to receive the catch when released from the keeper, said recess being adapted to snugly receive the catch and being of such a depth as to substantially entirely receive the catch, said recess serving, when the catch is positioned therein, to hold the bolt against rotatable movement, and an expansible spring interposed between the door and the operating portion of the bolt.

1,191,601. ELECTRICAL HEATER. JOSEPH F. LAMB, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed May 7, 1915. Serial No. 26,495. (Cl. 219—37.)

1. In an electrical heating utensil, a body and a resistor-supporting frame mounted therein, said frame comprising upper and lower frame members, each of which consists of a plurality of concentric rings and means for spacing said rings from one another, means for spacing said frame members from one another, and a resistor arranged between, supported by, and insulated from said frame members.



2. In an electrical heating utensil, a body and a resistor-supporting frame mounted therein, said frame comprising upper and lower frame members, each of which consists of a plurality of concentric rings and means for spacing said rings from one another, means for spacing said frame members from one another, and a resistor coiled about said frame between the corresponding rings of the two frame members, supported by and insulated from said frame members.

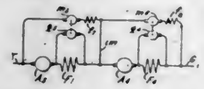
3. In an electrical heating utensil, a body and a resistor-supporting frame mounted therein, said frame comprising upper and lower frame members, each of which consists of a plurality of concentric rings and bars extending between said rings and interengaged therewith to space them apart, means arranged between corresponding rings of the upper and lower frame members to space and hold the latter apart, and a resistor arranged between corresponding rings of the upper and lower frame members and supported and insulated from said means.

4. In an electrical heating utensil, a body and a resistor-supporting frame mounted therein, said frame comprising upper and lower frame members, each of which consists of a plurality of concentric rings and means for spacing said rings from one another, apertured members located between and connected with said frame members, and a resistor supported by and insulated from said apertured members.

5. In an electrical heating utensil, a body and a resistor supporting frame mounted therein, said frame comprising upper and lower frame members, each of which consists of a plurality of concentric rings and means for spacing said rings from one another, means for spacing said frame members from one another, a resistor arranged between, supported by, and insulated from said frame members, and auxiliary supports secured to the inner side of said body and projecting under said frame.

[Claims 6 to 21 not printed in the Gazette.]

1,191,602. DEVICE TO PREVENT SKIDDING. JOHAN G. V. LANG, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 20, 1915. Serial No. 3,239. (Cl. 172—179.)



1. The combination of a plurality of traction motors arranged for regeneration, comprising armatures connected in series with one another and field windings, auxiliary sources of current connected to the respective field windings, and means whereby the potential of an auxiliary source is reduced when a motor skids.

2. The combination of a plurality of traction motors, arranged for regeneration, comprising armatures connected in series with one another and field windings, auxiliary sources of current connected to the respective field windings comprising dynamo-electric machines, and means whereby the excitation of a dynamo-electric machine is reduced when a motor skids.

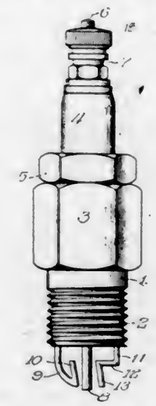
3. The combination of a plurality of traction motors arranged for regeneration, comprising armatures connected in series with one another and field windings, auxiliary sources of current connected to the respective field windings comprising dynamo-electric machines, and means whereby the speed of a dynamo-electric machine is reduced when a motor skids.

4. The combination of a plurality of traction motors arranged for regeneration, comprising armatures connected in series with one another and field windings, auxiliary sources of current connected to the respective field windings comprising dynamo-electric machines, and means whereby both the speed and the excitation of a dynamo-electric machine are reduced when a motor skids.

5. The combination of a source of supply, a plurality of series traction motors arranged for regeneration having series field windings therefor, conductors joining said motors in series with one another across said source, auxiliary generators connected across some part of the respective motor field windings, field windings for said generators energized from said source, and means for rendering the degree of energization of the field winding for an auxiliary generator dependent on the counter-electromotive force of a corresponding motor.

[Claims 6 and 7 not printed in the Gazette.]

1,191,603. SPARK-PLUG FOR INTERNAL-COMBUSTION ENGINES. ROBERT D. LOOSE, Fort Worth, Tex. Filed Jan. 18, 1915. Serial No. 2,958. (Cl. 123—169.)



1. An article of the class described including a body and a member insulated therefrom, passing through said body and therebeyond, a member non-insulated and depending from said body, and divergingly arranged with respect to said insulated member, and another member non-insulated and likewise depending from said body and convergingly arranged with respect to said insulated member.

2. An article of the class described including a body and a member insulated therefrom, passing through said body and therebeyond, a member non-insulated and depending from said body, and divergingly arranged with respect to said insulated member, and another member non-insulated and likewise depending from said body and convergingly arranged with respect to said insulated member, said non-insulated members being disposed in parallelism to each other.

3. An article of the class described including a body and a member insulated therefrom, passing through said body and therebeyond, a member non-insulated and de-

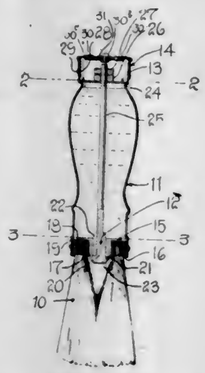
pending from said body, and divergingly arranged with respect to said insulated member, and another member non-insulated and likewise depending from said body and convergingly arranged with respect to said insulated member, said non-insulated members being disposed in parallelism to each other, and in adjacency to said insulated member.

4. An article of the class described including a body and a member insulated therefrom and passing through said body and there-below, a pair of depending members non-insulated from and depending from said body, both adjacent said insulated member; one convergingly thereto and one divergingly therefrom.

5. A spark plug including a-body, an electrode extending axially through and beyond said body, said electrode being insulated from said body, an electrode depending from said body, near the margin thereof, and non-insulated therefrom, said last named electrode extending radially toward said axial electrode to close adjacency therewith and terminating in a sharp corner, and an extension of said electrode extending divergingly from said axial electrode, thereby producing a spark gap of gradually increasing length between said electrodes.

[Claims 6 and 7 not printed in the Gazette.]

1,191,604. SHAVING-BRUSH. OSCAR S. MCCURDY, Wilkinsburg, Pa. Filed Mar. 31, 1915. Serial No. 18,338. (Cl. 15—50.)

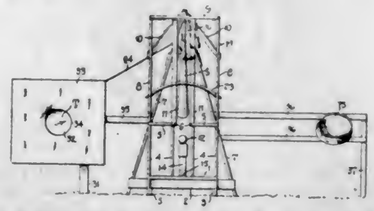


1. A brush including a hollow handle, a tuft of bristles connected to one end thereof, a valve controlling communication between the interior of the handle and the bristles, a valve stem for the valve, said stem extending longitudinally through the handle, a cap threaded on the end of the handle, remote from the bristles, an external shoulder formed in the handle at the cap-carrying terminal thereof, a flat spring resting terminally on said shoulder, a stop nut carried by the valve stem, and engageable by the spring, whereby the spring normally holds the valve in closed position, and a spring formed integrally with the cap member, said spring being adapted to be flexed inwardly into engagement with the adjacent terminal of the valve stem for opening the valve.

2. A brush including a hollow handle, a tuft of bristles connected to one end thereof, a cap threaded on the other end of the handle, said cap being provided with air vents and being relatively flexible, a sealing plate mounted against the inner face of the cap, and disposed to normally seal the openings therein, said sealing plate being adapted to retain its flat original shape when the cap is flexed inwardly, whereby the air vents are opened upon such inward flexing of the cap.

3. A brush including a hollow handle, a tuft of bristles secured to one end thereof, a cap for the other end thereof, said cap being relatively flexible and being provided with air vents, a sealing plate mounted against the inner face of the cap, a fastening member passing through the sealing plate and through the cap for securing the plate to the cap, said plate being relatively stiff and flat, and a non-metallic sealing member mounted on the sealing plate and engageable with the cap for normally sealing the air vents, said plate being adapted to retain its flat form when the cap is flexed inwardly, whereby such inward flexing of the cap will open the air vents.

1,191,605. GAME APPARATUS. MATT J. MERTZ, West Bend, Iowa. Filed Mar. 22, 1916. Serial No. 86,016. (Cl. 46—59.)



1. A game apparatus comprising, in combination, a movable target, an impelling mechanism including a swinging arm, automatic means for imparting movement to the arm in one direction, means for holding said arm against said movement, means under control of the movable target for releasing the last named means, and a projectile supporting pedestal positioned relative to the swinging arm for holding a projectile in the path of travel of said arm.

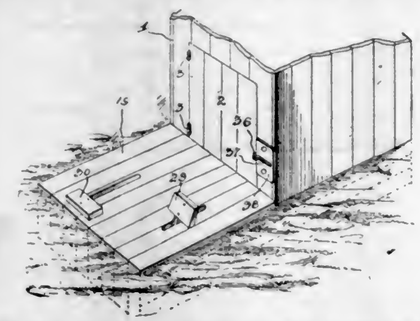
2. An apparatus of the character described comprising a striking arm, means for automatically imparting movement to said arm in one direction, releasable means coacting with the arm for holding the same against its automatic movement, a movable target, a weighted member supported adjacent the target and adapted to be released upon movement of the target in one direction, and a connection between the weighted member and the releasable holding means for disengaging the same from the striking arm upon falling of the weight.

3. A game apparatus comprising, in combination, a movable target, an impelling mechanism including a swinging arm, automatic means for imparting movement to the arm in one direction, means for holding said arm against said movement, means under control of the movable target for releasing the last named means, and a projectile supporting pedestal positioned relative to the swinging arm for holding a projectile in the path of travel of said arm, said pedestal being capable of swinging movement in the same general direction as the movement of the swinging arm after being released from the holding means.

4. An apparatus of the character described comprising a striking arm, means for automatically imparting movement to said arm in one direction, releasable means coacting with the arm for holding the same against its automatic movement, a movable target, a screen positioned in advance of the target and provided with an opening in horizontal alinement with the target, a weighted member supported adjacent the target and adapted to be released upon movement of the target in one direction, and a connection between the weighted member and the releasable holding means for disengaging the same from the striking arm upon falling of the weight.

1,191,606. DOOR-OPERATING MECHANISM. JOSEPH W. MILLER, Susquehanna township, Pa., assignor of one-half to Howard L. Arnold, Susquehanna township, Pa. Filed Mar. 1, 1915. Serial No. 11,297. (Cl. 268—9.)

1. Door operating mechanism of the class described including a main transverse lever, an angle or bell crank lever having an approximately L-shaped arm, means for connecting the other arm of the angle or bell crank lever with one of the arms of the main lever, a link for connecting the L-shaped arm with a door, and door opening and closing levers connected with the main levers, said door opening levers being spaced apart laterally and located at different distances from the door at the same side thereof.

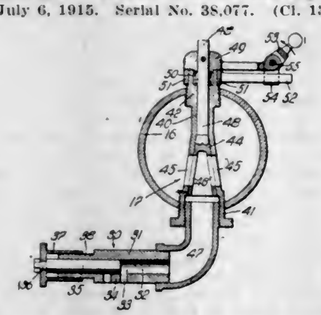


2. Door operating mechanism including operating mechanism connected with and adapted to open and close a door, a substantially vertical rock shaft adjacent to the free edge of the door connected with the said mechanism, a latch arm mounted on the rock shaft independently of the door and arranged to engage the free edge of the door, and yieldable means connected with the latch arm for urging the same toward the door.

3. Door operating mechanism of the class described including door opening and closing means, a substantially vertical rock shaft having an arm connected with the said means, a latch arm carried by the rock shaft and having a limited movement independently thereof and a spring for urging the latch arm toward the door.

4. Door operating mechanism of the class described including door opening and closing means, a substantially vertical rock shaft connected with the said means and provided with a polygonal portion, a latch arm having an opening receiving the polygonal portion of the rock shaft and having a limited movement independently of the said rock shaft, and a coiled spring connected with the latch arm and arranged to urge the same toward the door.

1,191,607. SPREADER VALVE AND PIPE FOR OIL DISTRIBUTION. EDWARD L. MILLS, Los Angeles, Cal. Filed July 6, 1915. Serial No. 38,077. (Cl. 137—63.)



1. In a device of the character described, a distributing pipe, and a plurality of outlet valves each including a hollow ported valve body extending across the interior of the distributing pipe and a valve plug in said body with a stem projecting exterior of the pipe, and means to move said valve stem embodying an arm rigidly mounted on the stem, an arm movable adjacent said stem arm, and means to connect said arms and means to circulate hot oil through said pipe and around said valves, said means comprising means to supply oil under pressure to the pipe.

2. In a device of the character described, a distributing pipe, and a plurality of outlet valves each including a hollow ported valve body extending across the interior of the distributing pipe, and a rotatable valve plug in said body with a stem projecting exterior of the pipe, an arm rigidly mounted on said stem exterior of the pipe, an arm loosely mounted around the stem, and disconnectible means to connect said arms and means to circulate hot oil through said pipe and around said valves, said means comprising means to supply oil under pressure to the pipe.

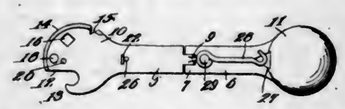
3. In an oil distributing device, a distributing pipe, a plurality of outlet valves for said pipe, each valve embodying a hollow ported valve body interior of the pipe, and means to circulate hot oil through said pipe and around said valves, said means comprising means to supply oil under pressure to the pipe.

4. In a device of the character described, a distributing pipe, a plurality of outlet valves therefor, valve stems for said valves, operating arms loosely mounted around the valve stems, means for moving said arms in unison, arms rigidly mounted on the valve stems, and disconnectible means for connecting the stem arms and operating arms so that any one or more of said valves may be rendered inoperative.

5. In an oil distributing device, a distributing pipe, a plurality of outlet valves for said pipe, each valve embodying a hollow ported valve body interior of the pipe, a means for circulating hot oil through the pipe and for supplying oil under pressure thereto, embodying a pump, a pipe leading from the delivery side of the pump to one end of the distributing pipe, another pipe with a valve therein leading from the other end of the distributing pipe and communicating with the intake side of the pump, and a connecting pipe with a valve between the two aforementioned pipes which lead to and from the ends of the distributing pipe.

[Claims 6 and 7 not printed in the Gazette.]

1,191,608. COMBINATION-TOOL. RAYMOND C. MINER, Faith, S. D., assignor of one-half to Hans P. Hanson, Faith, S. D. Filed Mar. 10, 1913, Serial No. 753,336. Renewed Dec. 9, 1915. Serial No. 66,023. (Cl. 30—3.)



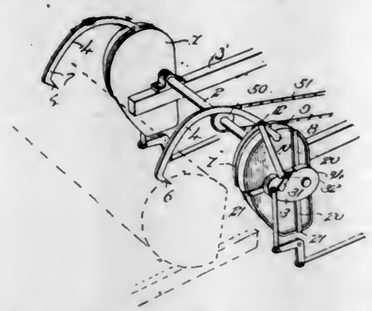
1. In a can opener, a handle embodying hinged sections having heads at their free ends, one section having a cutter, and can entering prong carried by the head of the said section, the heads being arranged to coincide when the sections are folded together, and the other head being dished to inclose the said prong.

2. In a can opener, a handle embodying hinged leaves having enlargements at their free ends, one leaf having a cutter and a pivoted can entering prong carried by the enlargement of the said leaf, the enlargements being arranged to coincide when the leaves are folded together and the other enlargement being dished to inclose the said prongs.

3. In a can opener, a handle embodying hinged sections, having angular heads at their free ends, and having a cutter adjoining the inner end of the respective head, and a can entering prong carried by the said head, the heads being arranged to coincide when the sections are folded together, and the other head being dished to inclose the said prong.

4. In a can opener, a handle embodying hinged leaves having circular enlargements at their free ends, the enlargements being bent angularly with respect to the planes of the leaves, one leaf having a cutter adjoining the inner end of the respective enlargement, and a can entering prong carried by the said enlargement, the enlargement and prong having means for limiting the movement of the prong, the enlargements being arranged to coincide when the leaves are folded together, and the other enlargement being dished to inclose the said prong when swung inwardly.

1,191,609. LOG-ROLLING DEVICE. ALLAN PAYNE, Courtenay, British Columbia, Canada. Filed June 7, 1913. Serial No. 772,374. (Cl. 143—97.)



1. In a log-rolling device, the combination of a shaft, a casing rigidly mounted upon said shaft, means carried by said casing for rolling the log to the right when said shaft is rotated in one direction, and means carried by said casing for rolling the log to the left when said shaft is rotated in the opposite direction.

2. In a log-rolling device, the combination of a shaft, a casing rigidly mounted upon said shaft, means carried by said casing for rolling the log to the right when said shaft is rotated in one direction, means carried by said casing for rolling the log to the left when said shaft is rotated in the opposite direction, and means for preventing said second named means from operating while said first named means is in operation.

3. In a log rolling device, a shaft, a casing on said shaft, a hook member pivotally mounted on said casing, and means on the shaft independently controllable for moving said hook into and out of object engaging position.

4. In a log rolling device, a shaft, a casing on said shaft, a hook pivotally mounted on said casing, a cam on said shaft, controlling means for said cam, and means operatively connecting said cam with said hook, whereby to move the latter into and out of operative position.

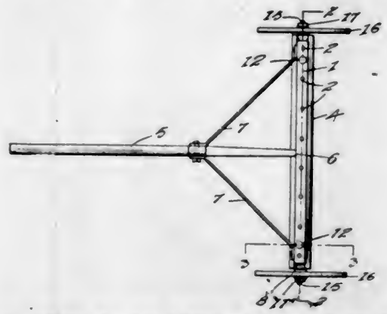
5. In a log-rolling device, the combination of a shaft, a casing mounted upon said shaft, a hook member carried by said casing, means carried by said casing and connected to said hook member for operating said hook member when said shaft is rotated in one direction, a plurality of bars carried by said casing, pointed projections formed upon the outer ends of said bars, and means for causing said bars to move out of said casing and engage a log for turning the same when said shaft is rotated in a predetermined direction.

[Claims 6 to 10 not printed in the Gazette.]

1,191,610. SELF-CLEANING RAKE. LYDIA A. PEASE, Jamesport, Mo. Filed Apr. 21, 1915. Serial No. 22,862. (Cl. 55—146.)

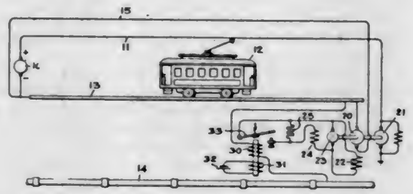
1. A self-cleaning rake of the class described including a cleaner bar provided with supporting wheels and having openings arranged at intervals, a rake head located above the cleaner bar, and provided with teeth extending through the openings, and rods mounted on the cleaner bar, and slidably receiving the rake heads limiting the relative movement of the rake head and cleaner bar, and said wheels adapted to move the cleaner bar downwardly when they are lifted clear of the ground and stripping said teeth substantially as described.

2. A self-cleaning rake of the class described including a cleaner bar tapered downwardly and provided in its upper face with a longitudinal groove, said cleaner bar being also provided with openings arranged at intervals; a rake head fitted in the groove of the cleaner bar and provided with teeth extending through said openings, said rake head being also provided with spaced openings, and standards mounted on the cleaner bar and extending through the openings of the rake head and provided with means for limiting the relative movement of said rake head and cleaner bar, wheels journaled on the opposite



end of cleaner bar, and adapted to move the bar downwardly over the teeth when lifted clear of the ground cleaning the same substantially as described.

1,191,611. SYSTEM FOR PREVENTING ELECTROLYSIS. WILLIAM B. POTTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1915. Serial No. 9,547. (Cl. 171—316.)



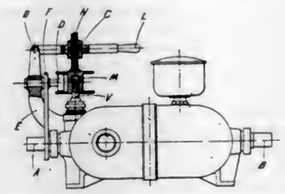
1. In combination an electric railway system comprising a plurality of return conductors, one of which is in contact with the ground and another of which is insulated from the ground, an adjacent earthed metallic structure, a source of E. M. F. in series with said insulated conductor, and means for controlling said source responsive to the potential difference between the conductor in contact with the ground and said earthed structure.

2. In combination an electric railway system comprising a plurality of return conductors, one of which is in contact with the ground and another of which is insulated from the ground, an adjacent earthed metallic structure, a source of E, M, F. in series with said insulated conductor, and means for controlling said source comprising a coil responsive to the potential difference between the conductor in contact with the ground and said earthed structure and a separately excited coil.

3. In combination an electric railway system comprising a plurality of return conductors, one of which is in contact with the ground and another of which is insulated from the ground, an adjacent earthed metallic structure, a source of E, M, F. in series with said insulated conductor, and means for controlling said source comprising electrically independent coils, one of which is excited from a source of approximately constant voltage and the other of which is responsive to the potential difference between the conductor in contact with the ground and said earthed structure.

4. In combination an electric railway system comprising a supply generator, a trolley conductor insulated from ground, a rail connected as a return conductor, an adjacent earthed metallic structure, a negative feeder connected between the negative terminal of said generator and a remote point in said rail and insulated from ground at all intermediate points, a booster in series with said feeder to aid the flow of current therein, and means for regulating the voltage of said booster in response to the potential difference between said rail near its connection to said feeder and said earthed structure.

1,191,612. CONTROLLING DEVICE FOR TRANSMISSION-GEARS. CHARLES RADIGUER, St.-Denis, France, assignor to The Societe Anonyme des Etablissements Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed Oct. 29, 1913. Serial No. 798,048. (Cl. 138—22.)



1. In a variable speed hydraulic transmission mechanism having a rotatable controlling rod, an actuated friction member keyed to said rod and comprising two spaced friction disks connected to rotate in unison, an actuating friction wheel disposed between said disks in a plane at right angles thereto and normally out of engagement with both of the disks, means to rotate said friction wheel, means to shift said actuated friction member to bring either of said disks into operative engagement with said friction wheel, and means to automatically move the actuated friction member back to its normal position after a predetermined rotation thereof.

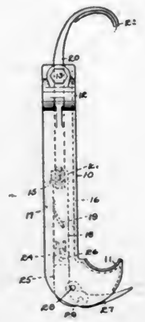
2. In a variable speed hydraulic transmission mechanism having a rotatable controlling rod, an actuated friction member designed to rotate said rod and comprising two spaced friction disks connected to rotate in unison, an actuating friction wheel disposed between said disks in a plane at right angles thereto and normally out of engagement with both of the disks, means to rotate said friction wheel, and means to shift said actuated friction members to bring either of said disks into operative engagement with said friction wheel and thereby derive rotation therefrom.

3. In a variable speed hydraulic transmission mechanism having a rotatable controlling rod, an actuated friction member designed to rotate said rod and comprising two spaced friction disks connected to rotate in unison, an actuating friction wheel disposed between said disks in a plane at right angles thereto and normally out of engagement with both of the disks, means to rotate said friction wheel, means to shift said actuated friction member to bring either of said disks into operative engagement with said friction wheel and thereby derive rotation therefrom, and means automatically operable during the rotation of said actuated friction member to return the same to its normal position.

4. In a variable speed hydraulic transmission mechanism having a rotatable controlling rod, an actuated friction member designed to rotate said rod and comprising two spaced friction disks connected to rotate in unison, an actuating friction wheel disposed between said disks in a plane at right angles thereto and normally out of engagement with both of the disks, means to rotate said friction wheel from a constantly rotating part of the transmission mechanism, and means to shift said actuated friction member to bring either of said disks into operative engagement with said friction wheel and thereby derive rotation therefrom.

5. In a variable speed hydraulic transmission mechanism having a rotatable controlling rod, an actuated friction member designed to rotate said rod and comprising two spaced friction disks connected to rotate in unison, an actuating friction wheel disposed between said disks in a plane at right angles thereto and normally out of engagement with both of the disks, means to rotate said friction wheel, means to shift said actuated friction member to bring either of the disks into operative engagement with said friction wheel comprising a threaded extension on said actuated friction member, a nut designed to be engaged by the threads of said extension, and a pivoted lever designed to act upon said nut to shift said actuated friction member, whereby one of the friction disks is brought into operative engagement with the friction wheel and whereby the rotation of said threaded extension in the nut will restore the actuated friction member to its normal position.

1,191,613. BOW REST AND CLAMPING DEVICE. NEWELL H. RANSOM, Fort Wayne, Ind. Filed Dec. 20, 1915. Serial No. 67,756. (Cl. 21—61.)



1. The combination with a support carrying a rest for the folded bows of a vehicle top, a clamp carrier revolubly and reciprocably mounted on the support, a sleeve secured to the clamp carrier and having a cam slot therein, a lever having a connection to the sleeve for reciprocating the sleeve and clamp carrier and means engaged in the cam slot for causing the sleeve and clamp carrier to rotate as they are reciprocated.

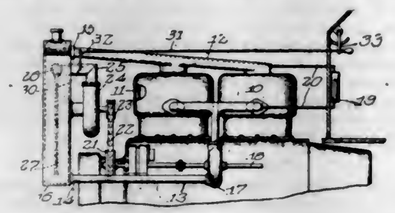
2. The combination with a support carrying a rest for the folded bows of a vehicle top, a clamp carrier having a clamp thereon, the carrier being revolubly and reciprocably mounted on the support, a sleeve secured to the clamp carrier and having a cam slot therein, a bolt loosely engaging the sleeve, a lever having a pivotal connection to the bolt and adapted to reciprocate the sleeve and clamp carrier and the clamp and means carried by the support and engaged in the cam slot for causing the sleeve and clamp carrier and the clamp to rotate as they are reciprocated.

3. The combination with a hollow support carrying a rest for the folded bows of a vehicle top, a clamp carrier revolubly and reciprocably mounted in the support, a clamp on the carrier adapted to engage the topmost bow of the vehicle top, a sleeve within the support and secured to the clamp carrier and having a cam slot therein, a pin mounted in the support and projecting into the cam and a lever having a connection to the sleeve for reciprocating the sleeve and the clamp carrier and the clamp, the pin and cam slot coöperating to cause the sleeve and clamp carrier and the clamp to rotate as they are reciprocated.

1,191,614. WATER-COOLING SYSTEM FOR HYDROCARBON-ENGINES AND THE LIKE. DYCKE H. REIMERS, Chicago, Ill., assignor of one-third to Donald W. Davidson and one-third to Mathias Weber, Chicago, Ill. Filed Jan. 8, 1915. Serial No. 1,110. (Cl. (123—170.)

1. In combination, a radiator possessed of inlets therein and outlets therefrom, an air impeller fixed to said

radiator, receiving its supply of air through said radiator from exteriorly thereof and discharging said air into said radiator, and means for operating said impeller.



2. In combination, a radiator possessed of inlets thereinto and outlets therefrom, an air impeller fixed to said radiator, receiving its supply of air through said radiator from exteriorly thereof and discharging said air into said radiator in a diffused condition, and means for operating said impeller.

3. In combination, a radiator possessed of inlets thereinto and outlets therefrom, an air impeller fixed to said radiator, receiving its supply of air through said radiator from exteriorly thereof and discharging said air into said radiator, and means for operating said impeller, there being means controlling the flow of said air into said radiator.

4. In combination, a radiator possessed of inlets thereinto and outlets therefrom, an air impeller fixed to said radiator, receiving its supply of air through said radiator from exteriorly thereof and discharging said air into said radiator in a diffused condition, there being means controlling the flow of said air into said radiator.

5. In combination, a radiator possessed of inlets thereinto and outlets therefrom, of a cylindrical hollow member located in said radiator, in its upper portion, horizontally, and substantially of its length thereof, a plurality of perforated hollow members depending from said horizontal member, an air impeller fixed to the exterior of said radiator and constructed to discharge air into said horizontal member, whereby air in a diffused condition is discharged within said radiator, and means for operating said impeller.

[Claim 6 not printed in the Gazette.]

1,191,615. PROCESS FOR PREPARING CONCENTRATED FERTILIZER. WILLIAM H. ROSS and ALBERT R. MERZ, Washington, D. C. Filed Apr. 11, 1916. Serial No. 90,487. (Dedicated to the public.) (Cl. 71—9.)

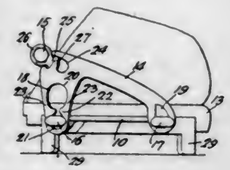
1. A process for producing a concentrated fertilizer having the composition represented by $KH_2PO_4 + NH_4H_2PO_4$ which consists in treating one equivalent of phosphate rock with ten equivalents of phosphoric acid to form three equivalents of calcium mono-phosphate with an excess of six equivalents of phosphoric acid; then adding ignited alunite in such a quantity that the sulfate present shall be equivalent to the calcium in the calcium mono-phosphate, filtering off the precipitated calcium sulfate, and adding gaseous ammonia to the filtrate until neutral to cochineal, when with proper concentration the whole mass on cooling becomes solid and consists of potassium and ammonium phosphate.

2. A process for producing a concentrated fertilizer having the composition represented by $KH_2PO_4 + NH_4H_2PO_4$ which consists in heating one equivalent of phosphate rock with ten equivalents of phosphoric acid to form three equivalents of calcium mono-phosphate with an excess of six equivalents of phosphoric acid; adding potassium sulfate equivalent to the calcium in the calcium mono-phosphate; filtering off the precipitated calcium sulfate; and adding gaseous ammonia to the filtrate until neutral to cochineal, when with proper concentration the whole mass on cooling becomes solid and consists of potassium and ammonium phosphate.

3. A process for producing a concentrated fertilizer having the composition represented by $KH_2PO_4 + NH_4H_2PO_4$ which consists in treating one equivalent of phosphate rock with four equivalents of phosphoric acid to form three equivalents of calcium mono-phosphate, adding a potassium compound having an acid radical which forms an insoluble compound with calcium, said potassium compound being added in quantity equivalent to the calcium in the calcium mono-phosphate, filtering off the precipitated calcium carbonate, and adding first six equivalents of phosphoric acid and then gaseous ammonia to the solution until neutral to cochineal when, with proper concentration, the whole mass on cooling becomes solid and consists of potassium and ammonium phosphate.

4. A process for producing a concentrated fertilizer having the composition represented by $xKH_2PO_4 + yNH_4H_2PO_4$ which consists in treating phosphate rock with a quantity of phosphoric acid in excess of that necessary to form calcium mono-phosphate; adding potassium sulfate in amount equivalent to the calcium in the calcium mono-phosphate, adding gaseous ammonia to the filtrate until neutral to cochineal when, with proper concentration, the whole mass on cooling becomes solid and consists of potassium and ammonium sulfate.

1,191,616. SUPPLEMENTAL HORSESHOE. ANTHONY ROTH, Sr., New Brunswick, N. J. Filed June 3, 1916. Serial No. 101,529. (Cl. 168—1.)



1. A supplemental horse shoe having adjustably connected calk carrying tread members, and holding means having side plates detachably connected with the tread members at the front and rear thereof, and adjusting means connecting the front ends of said plates above the plane of the tread members.

2. A supplemental horse shoe having adjustably connected calk carrying tread members, and holding means for securing the same to a hoof, said tread members being provided near their rear ends with bearing lugs for engagement with the inner edge of a horse shoe and provided at intermediate points with inwardly projecting overlapping arms the upper of which is slotted, and a headed stud carried by the lower arm to operate in said slot.

3. A supplemental horse shoe having adjustably connected calk carrying tread members, and holding means for securing the same to a hoof, the tread members having horizontally curved calks and concentric rockets for the reception of supplemental calks.

4. A supplemental horse shoe having adjustably connected calk carrying tread members, and holding means including headed front and rear studs on each tread member, said plates having keyhole slots to engage said studs and extending upwardly and forwardly to overlap a hoof, and an adjusting element connecting the side plates at said forward ends above the plane of the tread members.

5. A supplemental horse shoe having adjustably connected calk carrying tread members, and holding means including front and rear studs, having elongated heads, on the side edge of each tread member, side plates having keyhole slots to engage said headed studs, eyes having headed studs engaging keyhole slots in the forward ends of said plates above the plane of the tread members, and an adjusting bolt engaging said eyes to connect the plates.

[Claims 6 and 7 not printed in the Gazette.]

1,191,617. CLAMP. WILLIAM T. RUETE, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 28, 1913. Serial No. 797,884. (Cl. 137—28.)



1. A clamp comprising opposed portions suitably formed for gripping the part to be clamped and a member adapted to engage with both said portions and movable in a direction transverse with reference to their relative movement in gripping or releasing said part, one of the coacting surfaces of engagement of said member and one of said clamp portions being inclined with reference to the direction of relative movement of said clamp portions in gripping and releasing in such wise as to cause them to close upon said part and grip it when said member is moved one way, there being means in engagement with one of said clamp portions whereby reverse movement of said member as a result of the tendency of the parts to relax their grip is normally prevented.

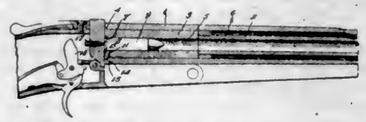
2. A clamp comprising opposed portions suitably formed for gripping the part to be clamped and a member having a screw portion in engagement with one of them and also having a portion adapted to engage a surface on the other which is inclined with reference to the axial direction of the screw and to the direction of their relative movement in gripping or releasing said part to be clamped, so that when said member is rotated in one direction it will cause the parts to close upon the part to be clamped and grip it.

3. A clamp comprising opposed portions suitably formed for gripping the part to be clamped and a member having a screw portion engaging with threads in one of said clamp portions and a head portion adapted to engage with an inclined surface on the other, the direction of motion of said member when rotated being transverse to the plane of the relative movement of said portions in gripping or releasing said part to be clamped, so that when it is rotated in one direction it will cause them to close upon said part to be clamped and grip it, and when it is rotated in the opposite direction it will permit them to separate and release said part.

4. A clamp comprising two parts suitably formed for gripping the part to be clamped and pivoted together so as to be capable of swinging toward and away from one another and having portions which overlap when the parts are swung together, and a headed screw member for securing together said overlapping portions, one of said overlapping portions having in it a threaded hole in which the screw member is engaged extending in the same direction as the pivotal axis of the parts, and the other of said overlapping portions having a slot for the passage of said screw member when the parts are swung together and an inclined surface for engaging the head of said member when said member is subsequently screwed farther into said hole, the engagement of said head with the inclined surface aforesaid when said screw is thus screwed into the hole acting to cause the parts to close upon the part to be clamped and grip it.

5. A clamp comprising two parts having collar portions adapted to surround and grip the part to be clamped and pairs of overlapping lugs, two of the overlapping lugs of said parts being secured together so that the parts may be opened up to admit the part to be clamped and subsequently brought together to grip it, and a screw member for securing the other two overlapping lugs together which has a conical head, one of the last-mentioned overlapping lugs having in it a threaded hole in which said screw member is engaged extending in the same direction as the part to be clamped and the other of said latter lugs having a slot for the passage of said screw member when the parts are brought together and a conical countersink for receiving the head of said member when said member is subsequently screwed farther into said hole, the engagement of said conical head with the surface of said countersink when said screw is thus screwed into the hole acting to cause the parts to close upon said part to be clamped and grip it.

1,191,618. SUBCALIBER ATTACHMENT FOR FIREARMS. RAY P. SAFFOLD, San Francisco, Cal. Filed Dec. 30, 1914. Serial No. 879,089. (Cl. 42—77.)



1. A sub-caliber casing provided with an exterior rim adapted to fit the breech of a gun barrel; a segmental extractor member provided with pins slidingly fitting said casing, having means to engage an extractor carried by the gun, and provided with a segmental recess adapted to receive the rim of a sub-caliber cartridge; and a plug having a firing pin fitting said casing and extractor member; substantially as described.

2. In a sub-caliber casing the combination of a rim adapted to fit the breech of a gun barrel; a segmental extractor member having a shoulder with which the gun extractor is adapted to engage and a recess on its interior; a plug provided with a firing pin and having a rim adapted to fit said recess; a cartridge shell extracting member carried by said segmental extractor member; and means to slidingly fit said segmental extractor member to said casing, substantially as described.

1,191,619. ELECTRIC CUT-OUT. HOWARD R. SARGENT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 20, 1915. Serial No. 3,226. (Cl. 175—273.)



1. In an inclosed fuse, the combination of a tubular casing having a lateral opening at one end, a cap detachably secured on the end of said casing and covering said opening, a connector part in said casing with a portion overlapping its end but leaving an unimpeded opening for the introduction of filler, and a screw for clamping a fuse conductor to said connector part threaded in said part opposite said opening in the casing so as to be accessible therethrough when said opening is uncovered by said cap.

2. In an inclosed fuse, the combination of a tubular casing having a lateral opening at one end, a cap on the end of said casing covering said opening, a connector part in the end of said casing so engaged with the same as to resist displacement inward lengthwise thereof and leaving an unimpeded opening for the introduction of filler, means opposite said opening in the casing and accessible therethrough when said opening is uncovered by said cap for securing a fuse conductor to said connector part, and a screw extending through the walls of said cap and said casing and threaded into said connector part.

3. In an inclosed fuse, the combination of a tubular casing having a lateral opening at one end; a cap detachably secured on the end of said casing and covering said opening; a fuse conductor in said casing having at its end adjacent said cap an endwise open notch; a connector part in the end of said casing so engaged with the same as to resist displacement inward lengthwise thereof and leaving an unimpeded opening for the introduction of filler when the cap is removed; and screw means opposite said lateral opening in the casing whereby said fuse conductor is clamped to said connector part; said screw means by-

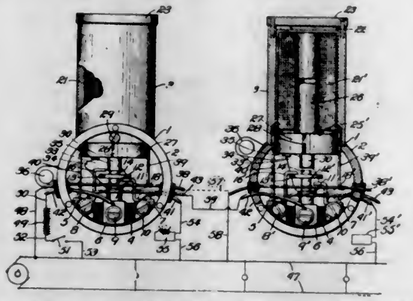
ing in said notch in the fuse conductor and being accessible through said lateral opening for the securing of said connector part to said fuse conductor when said opening is uncovered by removal of said cap, and said connector part being, in the absence of the cap and except for its attachment to the fuse conductor, freely removable through the opened end of the casing.

4. In an inclosed fuse, the combination of a tubular casing, a metal strip connector part extending cross-wise in the end of said casing in a plane parallel with its axis and having its ends bent parallel with said axis so as to lie against the casing walls, said connector part being so engaged with said casing as to resist displacement inward lengthwise thereof, a fuse conductor in said casing secured to one side connector part, a cap on the end of said casing, and screws extending through the walls of said cap and said casing and threaded into the ends of said connector part.

5. In an inclosed fuse, the combination of a tubular casing having a lateral opening at one end, a cap on the end of said casing covering said opening; a metal strip connector part extending cross-wise in the end of said casing in a plane parallel with its axis, having its ends bent parallel with said axis so as to lie against the casing walls, and also having a portion bent outward so as to overlap the end of the casing; a screw in said connector part opposite said opening in the casing, accessible therethrough when said opening is uncovered by said cap, for clamping a fuse conductor to the connector part; and screws extending through the walls of said cap and said casing and threaded into the ends of said connector part.

[Claims 6 to 8 not printed in the Gazette.]

1,191,620. ELECTRIC SHOT-FIRING DEVICE. ERICH SCHIETZEL, Arma, Kans. Filed Aug. 13, 1914. Serial No. 856,583. (Cl. 175—115.)



1. The combination with a switch comprising relatively fixed and movable members, of means for yieldingly retaining the movable member in operative position, a magnet having an armature arranged to move in the path of the movable switch member, and a latch for normally supporting the armature and adapted for automatic movement out of supporting position when the armature is moved in one direction.

2. The combination with a switch comprising relatively fixed and movable members, of means for yieldingly retaining the movable member in operative position, a magnet having an armature arranged to move in the path of the movable switch member, a latch for normally supporting the armature and adapted for automatic movement out of supporting position when the armature is moved in one direction, and circuit controlling means for effecting energization of the magnet to lift and release the armature when the magnet is energized and to drop the armature when the magnet is deënergized.

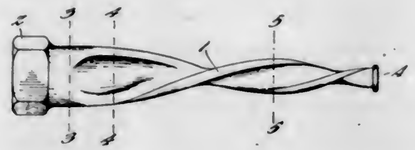
3. The combination with a magnet comprising an armature, of a latch for supporting the armature and arranged for automatic movement out of the path of the armature when the latter is lifted by the magnet, a switch comprising a fixed member and a plunger, the latter located in the path of the armature and adapted for engagement thereby when the latter is dropped, and means for normally retaining the plunger out of contact with the fixed switch member.

4. The combination with a magnet having an armature adapted for free gravitational movement, of a pivotally mounted latch normally engaging the armature to support the same and adapted for automatic movement out of supporting position when the armature is lifted by the magnet, and a switch comprising a fixed member and a plunger, the latter independent of but arranged in the path of the armature and having a member for contact with the fixed switch, means for yieldingly supporting the plunger to retain the switch in open position, and means for controlling a circuit through the magnet.

5. The combination with spaced switch members, of a plunger mounted between said members and adapted for independent engagement with either member, means for yieldingly retaining the common switch member in contact with one of the spaced members, an armature, means for normally retaining the armature above the plunger and adapted for automatic withdrawal when relieved of the weight of the armature, and a magnet for attracting the armature to release the yielding means and for dropping the armature to actuate the plunger.

[Claims 6 to 10 not printed in the Gazette.]

1,191,621. HOSE-NOZZLE. CHARLES G. SCHMIDT, St. Jacob, Ill. Filed Aug. 11, 1914. Serial No. 856,279. (Cl. 137—17.)



A tapering hose nozzle having a round threaded barrel and attaching nut, a portion U-shaped in cross section adjoining the round portion, and a spirally arranged flat portion bodily twisted between said U-shaped portion and the distal end of the nozzle.

1,191,622. HEEL-BREASTING MACHINE. RALPH C. SIMMONS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 10, 1912. Serial No. 714,444. (Cl. 12—47.)

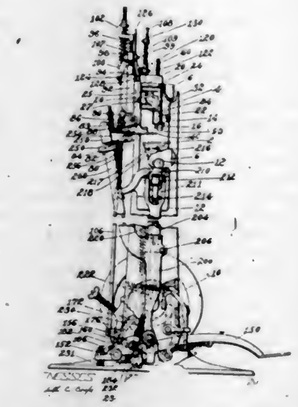
1. In a machine of the class described, a heel breasting knife, a knife clamp comprising rotatable abutments for the side edges of the knife, and means for clamping said abutments against the knife.

2. In a machine of the class described, a heel breasting knife sharpened at one edge, a knife clamp comprising movable holders having grooves adapted to engage opposite side edges of the knife other than the cutting edge to clamp it in a transverse direction, and means to move said holders equally and oppositely to clamp the knife.

3. In a machine of the class described, a heel breasting knife, a knife clamp comprising holders adapted to engage the side edges of the knife, means to move said holders equally and oppositely to clamp the knife between them and an abutment for the top edge of the knife to take the thrust of the knife.

4. In a machine of the class described, a knife, a knife clamp comprising holders adapted to engage the side edges of a knife, means to move said holders relatively to clamp the knife, and rotatable abutments in the holders formed to engage a corner and one face of the knife near each edge and to force the opposite corners against relatively fixed abutting faces on the holders when the holders are moved relatively.

5. In a machine of the class described, a knife, a knife clamp comprising holders each having a bearing for the front corner of a side edge of the knife, and rotatable members mounted in the holders which automatically ad-



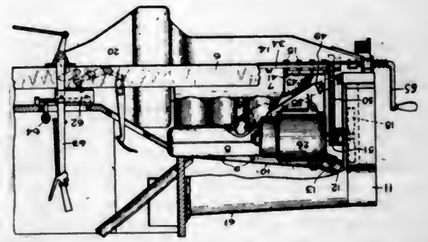
just themselves as the holders are moved toward each other to bear upon the rear face and also the rear corners of the knife whereby the knife is held at each side edge along three lines.

[Claims 6 to 35 not printed in the Gazette.]

1,191,623. STERILIZER. ALBERT L. SIMPSON, San Diego, Cal. Filed Aug. 27, 1914. Serial No. 858,912. (Cl. 132—11.)

In a sterilizing device, a cylindrical tube having both ends open, and being screw threaded, an imperforated partition extending transversely across said tube and located a short distance inwardly from the lower end thereof, caps internally screw threaded secured to the opposite end of said tube with air tight connection, one of said caps forming a compartment below the imperforated partition adapted to hold a disinfectant or sterilizing liquid therein, a pipe extending through said partition having its inner end curved upwardly toward the under face of said partition, the free end of said pipe extending upwardly into said tube and engaging the inner walls thereof, the opposite end curved horizontally and downwardly terminating at a point just above said partition, said pipe adapted to convey gases from the compartment below the imperforated partition to the other compartment of said tube.

1,191,624. ADJUSTABLE MOUNTING FOR AUTOMOBILE STARTING-MOTORS AND GENERATORS. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 10, 1914. Serial No. 876,449. (Cl. 123—195.)



1. The combination with an engine, of a dynamo electric machine for starting it, a means for attaching the motor to the engine comprising one part which is attached to the engine itself and a second part which carries the motor and is vertically adjustable as a whole relative to the first part, and means for transmitting motion between the motor and engine shafts.

2. The combination with an engine, of a dynamo electric machine for starting it, a bracket which is attached to the engine, a saddle which carries said machine, vertically adjustable means for securing the saddle to the bracket, and means for transmitting motion between the machine and engine shafts.

3. The combination with an engine, of a dynamo electric machine for starting it, a bracket which is attached to the engine, a saddle which carries said machine and is adjustable vertically thereon, means permitting relative longitudinal adjustment of said machine and saddle, and means for transmitting motion between the machine and engine shafts.

4. The combination with an internal combustion engine, of a dynamo electric machine, means for transmitting motion from the shaft of one to the other, said machine being located at one side of the engine, a bracket that is attached top and bottom to the engine, and a saddle for said machine that is adjustably supported by the bracket to permit of adjustment of the motion transmitting means.

5. The combination with an internal combustion engine having a conduit for conveying its cooling fluid, and a flange to which the crank casing is secured, of a bracket that is attached at its upper end to said conduit and at its lower end to said flange, a cradle mounted on the bracket, a dynamo electric machine carried by the cradle, and a driving connection between the engine and said machine.

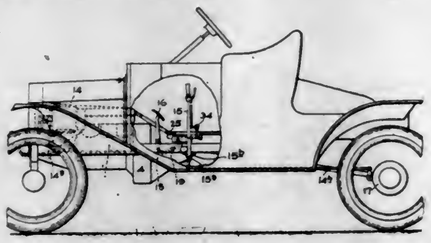
[Claims 6 to 15 not printed in the Gazette.]

1,191,625. CONTROLLING MECHANISM FOR AUTOMOBILES. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 17, 1914. Serial No. 877,696. (Cl. 171—315.)

1. A vehicle having an internal combustion engine for driving it, a means transmitting the power of the engine to the vehicle wheels, and a means controlling said transmitting means, in combination with a dynamo electric machine independent of the transmitting means whose rotor is connected to the engine shaft to drive it or be driven thereby, and a circuit controlling means for said machine which is responsive to movements of the power controlling means.

2. A vehicle having an internal combustion engine for driving it, speed changing gearing between the engine and vehicle wheels, and a means controlling the use of said gearing between the engine and vehicle wheels, in combination with a dynamo electric machine whose rotor is connected to the engine shaft, and a switch for said ma-

chine that is closed each time the controlling means is moved to one of its positions.



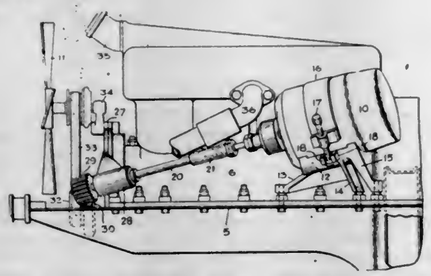
3. In combination, a vehicle having an internal combustion engine for driving it, a lever controlling the application of power of the engine to the vehicle wheels, a dynamo electric machine arranged to turn the engine shaft to start the engine and subsequently to be driven by it to supply current, and a switch in the circuit of the machine which is closed whenever the lever is in position to connect the engine to the vehicle wheels and is opened whenever the lever is moved to a position to disconnect the engine from said wheels.

4. In combination, a vehicle having an internal combustion engine, speed changing gearing for transmitting power from the engine to the vehicle wheels, a dynamo electric machine whose rotor is connected to the engine shaft for starting the engine, a switch in the machine circuit, means tending to open the switch, and a lever which has an oscillating movement and acts to control the gearing and closes the switch each time it is moved to a predetermined position.

5. In combination, a vehicle having an internal combustion engine, speed changing gearing between the engine and vehicle wheels, a dynamo electric machine whose rotor is connected to the engine for starting it, a switch in the machine circuit, a brake, and a lever which controls the gearing and also applies the brake, said lever holding the switch closed when in a forward position and permitting the switch to open before moving to a position to apply the brake.

[Claims 6 to 19 not printed in the Gazette.]

1,191,626. STARTING AND LIGHTING SET FOR AUTOMOBILES. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 31, 1915. Serial No. 48,207. (Cl. 74—7.)



1. In combination, an internal combustion engine, a dynamo-electric machine mounted in fixed relation to the engine which acts as a motor to start the engine, a horizontal shaft for the engine, a shaft for said machine which is located at an angle to the horizontal and at an acute angle to the plane of the engine shaft, and a pinion and spur gear between the two shafts.

2. In combination, an internal combustion engine, a dynamo-electric machine which acts as a motor to start the engine, said machine being located at one side of the engine and near the rear thereof, a bracket for supporting said machine, a horizontal shaft for the engine, a shaft for said machine which is located at an angle to the horizontal and at an acute angle to the plane of the engine shaft, and a pinion and spur gear between the two shafts.

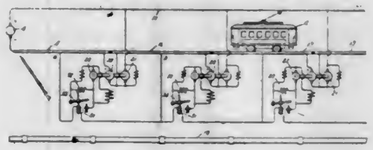
3. In combination, an internal combustion engine, a dynamo-electric machine which acts as a motor to start the engine, a horizontal shaft for the engine, a shaft for said machine which is located at an angle to the horizontal and at an acute angle to the plane of the engine shaft, the axes of said shafts being so arranged that they cross each other in different planes, and skew gearing between said shafts.

4. In an automobile, the combination of an internal combustion engine, a casing for its transmission means, a principal support for said engine and means which substantially coincides with the center of gravity thereof, a dynamo-electric machine which acts as a motor to start the engine, a means for attaching the machine to said engine and transmission casing at approximately their center of gravity, a shaft for said machine that is downwardly inclined with respect to the plane of the engine shaft and also makes an acute angle with respect to the engine shaft in a vertical plane, and gearing between the adjacent ends of said shafts.

5. In an automobile, the combination of an internal combustion engine, a dynamo-electric machine which acts as a motor to start the engine and is thereafter driven by the engine as a generator to supply current, said machine being located at one side of the engine and at the rear thereof, supporting means therefor, a horizontal shaft for the engine, a shaft for said machine that is downwardly inclined with respect to said shaft and makes an acute angle with respect to a vertical plane passing through it, a member secured to the front of the engine that carries a bearing for the shaft of said machine, a gear wheel on the engine shaft, and a pinion on the machine shaft that meshes therewith.

[Claims 6 to 12 not printed in the Gazette.]

1,191,627. SYSTEM FOR THE PREVENTION OF ELECTROLYSIS. JOHN B. TAYLOR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 4, 1915. Serial No. 521. (Cl. 171—316.)



1. In combination, a current carrying conductor divided into sections, a source of E. M. F. interpolated between two sections of said conductor, and means responsive to the difference in potential between fixed points in said conductor for regulating the E. M. F. of said source.

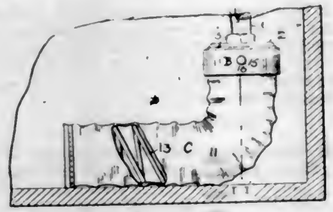
2. In combination, a current carrying conductor divided into sections, a source of E. M. F. interpolated between two sections of said conductor, and means for regulating the E. M. F. of said source so that the potential difference between fixed points in two sections is minimized.

3. In combination, a current carrying conductor divided into sections, a source of E. M. F. interpolated between two sections of said conductor, and means for regulating the E. M. F. of said source to maintain a constant potential difference between fixed points in two sections of the conductor.

4. In combination, a current carrying conductor divided into sections, a source of E. M. F. interpolated between adjacent sections, and means for controlling said source in response to the potential difference between substantially the mid points of said sections.

5. In combination, a current conductor, earthed throughout practically its entire length, points of said conductor being at a different potential than the adjacent earth, means for minimizing the escape of current from said conductor to earth comprising a plurality of sources of E. M. F. interpolated in said conductor at intervals, and means for regulating the E. M. F. of each source to minimize the potential difference between all points of said conductor.

1,191,628. FOOT-VALVE AND STRAINER MECHANISM. WILLIBALD TRINKS, Pittsburgh, Pa., assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Mar. 3, 1916. Serial No. 81,824. (Cl. 210—16.)



1. A strainer for the intake of a pump comprising a fabric bag secured by its throat to said intake and provided with an incompressible discharge end portion, the remainder of said bag being compressible, for the purpose described.

2. A strainer for the intake of a pump comprising a fabric bag secured by its throat to said intake, and means for holding the discharge end portion of said bag extended for the proper entrance of water to said intake, the remainder of said bag being laterally flexible, for the purpose described.

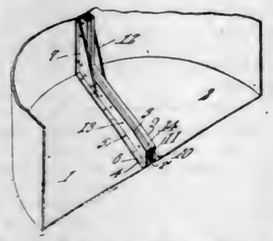
3. A strainer for the intake of a pump comprising a fabric bag secured by its throat to said intake, and means for holding the discharge end portion of said bag extended for the proper passage of water to said intake, the remainder of said bag being flexible and compressible, for the purpose described.

4. A strainer for the intake of a pump comprising a fabric bag secured by its throat to said intake, means for holding the discharge end of said bag extended for the proper entrance of water to said intake, and means for holding the body of said bag resiliently extended and laterally flexible.

5. A foot-valve and strainer structure for a pump comprising a valve mechanism, a strainer bag attached to the intake side of said mechanism, and a spring helix mounted in said bag to extend the latter.

[Claims 6 to 12 not printed in the Gazette.]

1,191,629. TANK. LEWIS K. WARNER, Lexington, Nebr. Filed May 26, 1915. Serial No. 30,643. (Cl. 220—125.)

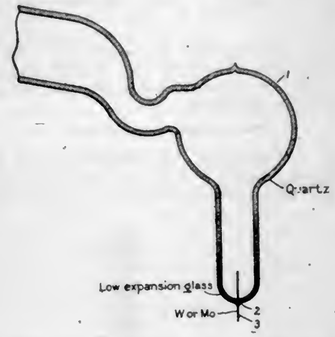


1. A sheet metal tank comprising opposed sections, inwardly extending channel portions along the free edges of the sections, reinforcing bars seated within the said channel portions, means for fastening the channel portions of the two sections together, and a longitudinal flange outstanding from the channel portions of one section and adapted to be lapped by the opposed section.

2. A sheet metal tank comprising opposed sections, the free edge portion of one section being folded to form an outstanding longitudinal flange, an inwardly extending inverted channel portion, and an attaching flange, the free edge portion of the other section being bent to form an offset portion, an inwardly extending channel portion, and an attaching flange, and reinforcing bars filling the channel portions on the two sections.

3. A sheet metal tank comprising opposed sections, the free edge portion of one section being folded to form an outstanding longitudinal flange, an inwardly extending inverted channel portion, and an attaching flange, the free edge portion of the other section being bent to form an offset portion, an inwardly extending channel portion, and an attaching flange, reinforcing bars filling the channel portions on the two sections, a packing material interposed between the channel portions of the two sections, and means extending transversely through said channel portions and bars for binding them upon the packing material.

1,191,630. COMPOSITION OF GLASS. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 8, 1912. Serial No. 695,936. (Cl. 106—36.1.)



1. A tough, strong, glassy material consisting of combined basic material and the oxids of boron and silicon, the last oxid being materially in excess of 73%, said material having a thermal coefficient of expansion less than about 3.5×10^{-6}.

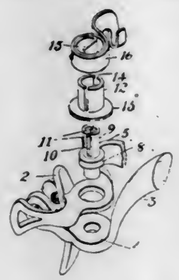
2. A tough, strong glass consisting of the oxid of an alkali metal, magnesium, boron and silicon, the silicon dioxid being in excess of about 73%, said glass having a thermal coefficient of expansion less than 3.5×10^{-6}.

1,191,631. EYEGLASSES. JOEL C. WELLS and HARRY H. STYLL, Southbridge, Mass. Division in part of application Serial No. 680,663, filed Feb. 29, 1912. This application filed Oct. 18, 1915. Serial No. 56,645. (Cl. 88—50.)

1. An eyeglass mounting comprising a nose bridge having a tubular stud having a slot one wall of which has a projection, a nose clip member pivotally mounted on said stud, a sleeve mounted on said stud and having a slot adapted to register with the slot of said stud, and a spring having an end extending through both of said slots, said spring being under tension whereby said sleeve is rotated to bring its slot into registry with said projection of the stud, substantially as described.

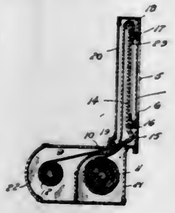
2. An eyeglass mounting comprising a nose bridge, a stud thereon having a slot provided at one edge with a spring engaging projection, a nose clip member pivotally mounted on said stud, a slotted thimble embracing said

stud and having a continuous wall adapted to bear against said nose clip member, and a coil spring embracing said thimble and having one end extending through the slot in said thimble and into said stud slot and the other end engaged with said nose clip member whereby the tension of said spring acts to hold the thimble with its slot in registry with said spring engaging projection.



3. An eyeglass mounting comprising a nose bridge having an integral stud having a pair of slots one of which has a laterally extending projection, a nose clip member pivotally mounted on said stud, a slotted thimble mounted on said stud and having a flange adapted to bear against said nose clip member, a coil spring embracing a part of said thimble and having an inner end portion extending through said slot of said thimble and through the stud slot having said projection, the extreme inner end of said spring seated in said second slot of said stud and the outer end of said spring secured to said nose clip member, substantially as described.

1,191,632. ROLL-FILM ATTACHMENT FOR PLATE-CAMERAS. RILEY V. WHATLEY, Decatur, Tex. Filed Dec. 8, 1913. Serial No. 805,342. (Cl. 95—34.)

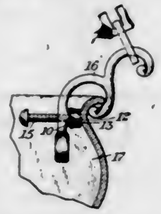


A film roll holder comprising an exposure casing, a film case secured to one end of the exposure casing and communicating with the latter, a partition extending from side to side of both of said casings and provided with a bowed portion disposed within the exposure casing adjacent its junction with the film casing, a roller in the exposure casing contiguous with the top edge of the partition, and a pair of rollers in the exposure casing extending across the front face of the partition for confining a film between same and the partition.

1,191,633. RESILIENT ATTACHMENT FOR SHADE-HOLDERS. EDWIN L. WHITE, New York, N. Y., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 26, 1916. Serial No. 74,292. (Cl. 240—111.)

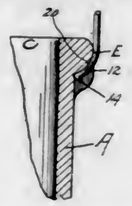
1. A device of the character described, comprising a disk having a screw threaded opening for attachment to a shade clamplug screw, arms projecting from said disk, and a pad gripped by said arms.

2. In a lighting fixture, the combination of a shade, a hanger for the same, a clamping screw passing through a screw threaded hole in said hanger, a disk having a screw threaded opening for attachment to said screw, arms projecting from said disk, and a pad gripped by said arms to contact with said shade.



3. In a lighting fixture, the combination of a shade, a support for the same, a screw passing through an opening in said support, a disk provided with an opening to receive the end of said screw and connect it with the disk, arms projecting from said disk, and a pad gripped by said arms and contacting with said shade.

1,191,634. JAR. RICHARD P. WHITE, Chicago, Ill. Filed Jan. 7, 1916. Serial No. 70,764. (Cl. 215—99.)



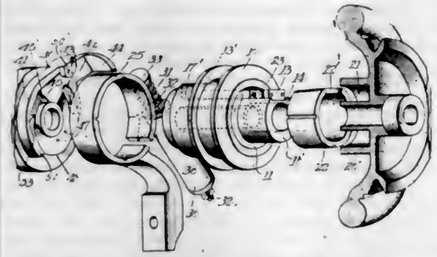
1. A jar, including a shell having a bottom and an open top, an integrally-formed bead along the upper edge of said shell, pairs of bail-ears depending from said bead, said bail-ears being formed integrally with said bead and said shell, and extending longitudinally of said shell, the outer marginal edges of said ears being tangent to the outermost surface of said bead, there being bail-openings through said ears, the marginal edges of said openings being tangent to said shell, and bails pivoted to said ears in said openings.

2. A jar, including a shell having a bottom and an open top, an integrally-formed maginal bead along the upper edge of said shell, there being formed a sharp corner along the lower surface of said bead at its junction with said shell, pairs of bail-ears depending from said bead, said bail-ears being formed integral with said shell, and extending longitudinally of said shell, the outer margins of said ears being tangent to the outermost surface of said bead, there being bail-openings through said ears, the marginal edges of said openings being adjacent to said corners and tangent to said shell and to the lower surface of said bead, arcuate bails, the lower ends of said bails being pivoted in said openings and partly embracing said bead, whereby when said bails are inrighted position, the same will be reinforced by said beads and when swung down the free end of said bail will be maintained away from said shell.

1,191,635. STOP MECHANISM FOR SEWING-MACHINES. JAMES WHITELAW, St. Louis, Mo. Filed Aug. 27, 1914. Serial No. 858,807. (Cl. 74—46.)

1. In a stop motion for stopping a shaft at a predetermined rotating position, the combination with brake means for the shaft, of a spring coöperating with said brake to set the brake when the spring is tensioned, a part for coaction with the spring movable rotatively with the shaft to tension spring, means for effecting coöperation of said part and spring and means to prevent initiation

of such coöperation during a predetermined interval in the shaft-cycle.



2. In a stop motion, the combination of a rotatable shaft, a loose striker, a spring for opposing rotation of said striker, means carried in rotation by the shaft, axially shiftable thereon to engage or disengage said striker, and means to prevent engagement of said shiftable means and the striker during a predetermined portion of the cycle of rotation of the shaft.

3. In a stop motion of the character described, the combination of a shaft, brake means therefor including a band brake, and a brake setting compression spring, a striker loose on the shaft arranged for coöperation with said spring to compress said spring and set said brake when said striker is turned with the shaft, and means on the shaft, carried in rotation therewith, to move the striker, the last said means and the striker relatively movable to engage or disengage them.

4. In a stop motion of the character described, the combination of a shaft, brake means therefor including a band brake, and a brake setting compression spring, a striker loose on the shaft arranged for coöperation with said spring to compress said spring and set said brake when said striker is turned with the shaft, means on the shaft, carried in rotation therewith, to move the striker, the last said means and the striker relatively movable to engage or disengage them, and a guard member for preventing engagement of said means with the striker during a predetermined portion of the rotating cycle of the main shaft.

5. In a device of the character described, the combination of a shaft, a loose power wheel thereon having an inwardly facing recess, a split circumferentially expansible clutch-band within said recess rotatable with the shaft, shaft stopping means normally disconnected from the shaft, an axially shiftable member carried in rotation by the shaft, movable in one direction to expand said clutch-band and in the other direction to actuate said stopping means.

[Claims 6 to 11 not printed in the Gazette.]

1,191,636. ORNAMENTAL ARTICLE OF MANUFACTURE, AS HAT-PIN, BUTTON, BROOCH, AND THE LIKE. CHARLES WHITELEY, Newark, N. J. Filed Jan. 27, 1916. Serial No. 74,550. (Cl. 63—20.)

1. In an article of the kind described, a shell, an ornament element seated within said shell, said shell having an upwardly extending marginal flange curled over and inwardly to form a tubular bead, said bead being provided with a series of spaced transverse and radially disposed depressed grooves, and inwardly extending gripping projections forced from said bead at the inner ends of said depressed grooves for engaging and securing said ornament element in place.

2. In an article of the kind described, a main shell, an ornament element, a disk seated within said shell, said ornament being supported upon said disk, said shell having an upwardly extending marginal flange curled over and inwardly to form a tubular bead adapted to engage and retain said disk within said shell, said bead being provided with a series of spaced transverse and radially disposed depressed grooves, and inwardly extending gripping projections forced out from said bead at the inner ends of said depressed grooves for engaging the marginal edges of said ornament element to secure the same in place.



3. In an article of the kind described, a head-shell closed at its bottom end and provided with a central perforation, an anchor-disk seated within said head-shell, said anchor-disk having a central perforation, a pin-shank extending downwardly through said perforations of said anchor-disk and the bottom of said head-shell, a laterally extending arm connected with the upper end of said pin-shank and resting upon said anchor-disk, a lock-disk seated within said head-shell and resting upon said laterally extending arm of said pin-shank, an ornament element seated within said head-shell and resting upon said lock-disk, and means connected with said head-shell for retaining said ornament element in place.

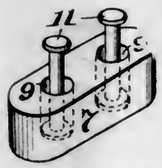
4. In an article of the kind described, a head-shell closed at its bottom end and provided with a central perforation, an anchor-disk seated within said head-shell, said anchor-disk having a central perforation, a pin-shank extending downwardly through said perforations of said anchor-disk and the bottom of said head-shell, a laterally extending arm connected with the upper end of said pin-shank and resting upon said anchor-disk, a lock-disk seated within said head-shell and resting upon said laterally extending arm of said pin-shank, said head-shell having an upwardly extending marginal flange curled over and inwardly to form a tubular bead adapted to engage said lock-disk to retain the same in place, an ornament element seated upon the upper surface of said lock-disk, and means connected with said head for engaging and retaining said ornament element in place.

5. In an article of the kind described, a head-shell closed at its bottom end and provided with a central perforation, an anchor-disk seated within said head-shell, said anchor-disk having a central perforation, a pin-shank extending downwardly through said perforations, of said anchor-disk and the bottom of said head-shell, a laterally extending arm connected with the upper end of said pin-shank and resting upon said anchor-disk, a lock-disk seated within said head-shell and resting upon said laterally extending arm of said pin-shank, said head-shell having an upwardly extending marginal flange curled over and inwardly to form a tubular bead adapted to engage said lock-disk to retain the same in place, an ornament element seated upon the upper surface of said lock-disk, and means connected with said bead for engaging and retaining said ornament element in place, comprising a series of spaced transverse and radially disposed depressed grooves, and inwardly extending gripping projections forced out from the side of said bead at the inner end of said groove adapted to engage said ornament element.

1,191,637. MOLD FOR MAKING ARTIFICIAL TEETH. GEORGE H. WHITELEY, Jr., York, Pa., assignor to The Dentists' Supply Company, a Corporation of New York. Filed Apr. 1, 1916. Serial No. 88,251. (Cl. 32—6.)

1. In a mold for molding teeth, the combination of mold parts having depressed portions which when assembled provide a tooth space, and one of said mold parts having the surface of its depressed portion provided with a recess, and a detachable loosely fitting block fitting the

said recess with its upper surface approximately flush with the surface of the depressed portion of the mold part and provided with a hole whose alinement is directed into the tooth space.



2. In a mold for molding teeth, the combination of mold parts having depressed portions which when assembled provide a tooth space, and one of said mold parts having the surface of its depressed portion provided with a recess, and a detachable loosely fitting block fitting the said recess with its upper surface approximately flush with the surface of the depressed portion of the mold part and provided with a hole extending entirely through the block so as to be closed at the bottom by the bottom of the recess and whose alinement is directed into the tooth space.

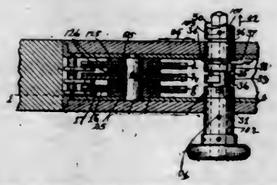
3. In a mold for molding teeth, the combination of mold parts having depressed portions which when assembled provide a tooth space, and one of said mold parts having the surface of its depressed portion provided with a recess, a detachable loosely fitting block fitting the said recess with its upper surface approximately flush with the surface of the depressed portion of the mold part and provided with a hole whose alinement is directed into the tooth space, and a pin detachably supported in the hole of the removable block and extending up into the tooth space in the mold, whereby said projecting part may be enveloped by the bisque material being molded.

4. In a mold for molding teeth, the combination of mold parts having depressed portions which when assembled provide a tooth space, and one of said mold parts having the surface of its depressed portion provided with a recess, a detachable loosely fitting block fitting the said recess with its upper surface approximately flush with the surface of the depressed portion of the mold part and provided with a hole whose alinement is directed into the tooth space, and a metal post detachably supported in the hole of the block and extending therefrom into the tooth space of the mold and about which the bisque material may be molded.

5. In a mold for molding teeth, the combination of mold parts having depressed portions which when assembled provide a tooth space, and one of said mold parts having the surface of its depressed portion provided with a recess, a detachable loosely fitting block fitting the said recess with its upper surface approximately flush with the surface of the depressed portion of the mold part and provided with a hole whose alinement is directed into the tooth space, a metal post detachably supported in the hole of the block and extending therefrom into the tooth space of the mold, and an anchor supported by the top of the post and about which the bisque material may be molded.

[Claims 6 to 8 not printed in the Gazette.]

1,191,638. COMBINATION-LOCK. WILLIAM W. WHITMARSH, Boston, Mass. Filed Dec. 23, 1915. Serial No. 68,432. (Cl. 70—53.)



1. In a lock of the character described, in combination, a bolt or latch, means for moving the same, a lever for locking said bolt in its locking position, a plurality of sets of tumbler wheels coöperating with said locking lever and rotatable independently of one another, each of said sets being capable of continuous rotation in one direction and having means to indicate the starting point, and means for rotating the tumbler wheels of each set from the outside of the lock and independently of the other tumbler wheels and movable within the lock into different positions to cooperate with the sets of tumbler wheels independently.

2. In a lock of the character described, in combination, a bolt or latch, means for moving the same, a lever for locking said bolt in its locking position, a plurality of sets of tumbler wheels coöperating with said locking lever and rotatable independently of one another, a casing within which said parts are located, means for rotating the tumbler wheels of each set from the outside of the lock and independently of the other tumbler wheels, an audible signal located in said casing and movable therewith, and means located in said casing and actuated by the tumbler wheels of each set to operate said audible signal.

3. In a lock of the character described, in combination, a bolt or latch, means for moving it, a device for locking said bolt or latch in its locking position, a plurality of sets of independently rotatable tumbler wheels coöperating with said device and capable of being turned a plurality of revolutions in either direction, each set comprising a master wheel provided with a notch in its periphery and a tumbler wheel provided with a plurality of notches in its periphery capable of registering with the notch in said master wheel, said tumbler wheel having a double notch to indicate the starting point, and means for rotating the tumbler wheels of each set independently of those of another set, to bring the notches in the master wheels in alinement with each other and with a notch in said tumbler wheels, to permit the locking device to be moved to unlock said bolt.

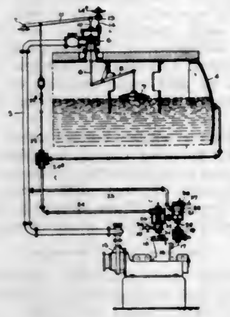
4. In a lock of the character described, in combination, a bolt or latch, means for moving it, a device for locking said bolt in its locking position, a plurality of sets of independently rotatable tumbler wheels coöperating with said device, each of said sets comprising a master wheel and a tumbler wheel, means accessible from outside the lock for rotating the wheels of each set independently of the wheels of another set, and means accessible from outside of the lock for holding said master-wheel stationary while its coöperating tumbler wheel is being rotated.

5. In a lock of the character described, in combination, a bolt or latch, means for moving it, a device for locking said bolt in its locking position, a plurality of sets of independently rotatable tumbler wheels coöperating with said device, each of said sets comprising a master wheel and a tumbler wheel capable of being rotated together and one of which is capable of being rotated independently of the other, and a common actuating device accessible from outside the lock and coöperating with the tumbler wheels of said sets to operate the tumbler wheels of one set independently of the tumbler wheels of another set.

1,191,639. FEED-WATER REGULATOR. OSWALD WILDHAGEN, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1915. Serial No. 5,026. (Cl. 103—85.)

1. An apparatus of the character described, the combination of a boiler, a feed-water supply pipe, a valve therein, means controlled by the level of the water in the boiler for operating said valve, a centrifugal pump for supplying water to the feed-water pipe, a motor for operating it, a regulator for controlling the application of power to the motor, a movable abutment connected to the regulator, means for subjecting the respective sides of said abutment to the feed-water pressure and the boiler pressure, the feed-water pressure tending to move the abutment to diminish the power and the boiler pressure tending to move it to increase the power, and means controlled by the water level in the boiler for relieving the abutment of the boiler pressure and permitting the feed-water pressure to move the abutment to shut off the power to the motor.

2. In an apparatus of the character described, the combination of a boiler, a feed-water supply pipe, a valve therein, means controlled by the level of the water in the boiler for operating said valve, a centrifugal pump for supplying water to the feed-water pipe, a motor for operating it, a regulator for controlling the application of power to the motor, a movable abutment connected to the regulator, pipes connecting the respective sides of said abutment to the feed-water pipe and to the boiler, a valve in the pipe which connects the abutment to the boiler which is closed when the valve in the feed-water pipe is closed, and means for relieving the boiler pressure on the abutment when said valves are closed whereby the water pressure will act thereon to quickly move the regulator to shut off the power to the motor.

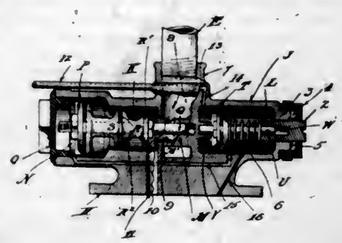


3. In an apparatus of the character described, the combination of a boiler, a feed-water supply pipe, a valve therein, means controlled by the level of the water in the boiler for operating said valve, a centrifugal pump for supplying water to the feed-water pipe, a motor for operating it, a regulator for controlling the application of power to the motor, a movable abutment connected to the regulator, means for subjecting the respective sides of said abutment to the feed-water pressure and the boiler pressure, the feed-water pressure tending to move the abutment to diminish the power and the boiler pressure tending to move it to increase the power, and means which is operated by the closing of the valve in the feed-water pipe for causing said abutment to move to cut off the power to the motor.

4. In an apparatus of the character described, the combination of a boiler, a feed-water supply pipe, a centrifugal pump for supplying water thereto, a motor for operating it, a regulator for controlling the application of power to the motor, a movable abutment connected to the regulator, means for subjecting the respective sides of said abutment to the feed-water pressure and to the boiler pressure, said feed-water pressure tending to move it to diminish the power and said boiler pressure tending to move it to increase the power, valve means for relieving the abutment of the boiler pressure, a valve in the feed-water pipe, and means responsive to the level of the water in the boiler for operating both said valve means and said valve.

5. In an apparatus of the character described, the combination of a boiler, a feed-water supply pipe, a centrifugal pump for supplying water thereto, a motor for operating it, a regulator for controlling the application of power to the motor, a movable abutment connected to the regulator, means for subjecting the respective sides of said abutment to the feed-water pressure and to the boiler pressure, said feed-water pressure tending to move it to diminish the power and said boiler pressure tending to move it to increase the power, valve means for relieving the abutment of the boiler pressure, a valve in the feed-water pipe, means responsive to the level of the water in the boiler for operating both said valve means and said valve, and manual means for also operating said valve means and said valve.

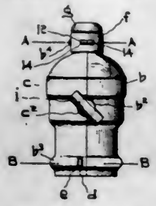
1,191,640. AUTOMATIC CUT-OFF AND PRESSURE-REGULATOR. CHARLES L. WILKINS, Peoria, Ill. Filed Mar. 6, 1913. Serial No. 752,402. (Cl. 103—93.)



1. In combination with a system for storing soft water including a soft water reservoir and means operated by city water pressure to store soft water under pressure in said reservoir, of a cut-off mechanism comprising a part having a cavity and including an imperforate diaphragm separating said cavity into two separate independent compartments, there being an inlet passage communicating with one of the compartments for the introduction of city pressure thereto, there also being an outlet from said compartment for the delivery therefrom of said city pressure, a differential piston in said compartment including therewith a valve to close the said inlet passage, there being a passage connecting the other of the compartments with the reservoir for the introduction of soft water to said compartment, there also being a second passage connecting that compartment with the first described compartment behind the large end of said differential piston, the latter lying between the inlet of said passage and the described inlet for the city water, a piston in the soft water compartment, means to hold it in an elastic manner normally between and separating the two passages of that compartment, said piston adapted to be operated by back pressure of soft water for the reservoir to move it against the said means and expose the passage leading to the compartment having the differential piston whereby to direct the soft water through said passage upon the said differential piston to close the valve thereof and cut off the flow of said city pressure.

2. In combination with a system for storing soft water including a soft water reservoir and means operated by pressure-water of a different source to store water under pressure in said reservoir, of a cut-off mechanism comprising a part having a cavity and including an imperforate diaphragm or wall separating said cavity into two independent compartments, one for soft water and the other for the pressure-water whereby the two waters are kept entirely separate from one another, there being an inlet passage including a valve seat, and connected with one of the compartments for the introduction of operating pressure-water thereto, there also being an outlet from said compartment for said operating pressure-water to said means, there being a conduit for soft water connecting the reservoir with the other compartment, there also being a second conduit connecting the last named compartment with the first described compartment for conducting soft water thereto, a piston in said other compartment normally positioned between the inlet and outlets of the conduit thereof, means to elastically hold said piston in said position, a differential piston lying in the said first described compartment between the opening of the soft water conduit and the described valve seat and including a valve to seat upon the latter, the large end of the piston lying in that portion of the compartment having the opening of said conduit, the back pressure from the reservoir adapted when it has reached a predetermined point, or that substantially equaling that of the pressure-water, to operate the piston in the compartment for soft water to direct the flow of soft water against the differential piston and stop the flow of pressure-water.

1,191,641. ELECTRIC-LAMP SOCKET. HARRY H. WILLETTS, Tetreaultville, Quebec, Canada. Filed Dec. 30 1912. Serial No. 739,311. (Cl. 173—362.)



1. An incandescent electric lamp socket shell having as integral component parts a body portion and cap, said shell being divided in a longitudinal axial plane into independent sheet-metal members, and means integral with the said members for locking the same together.

2. An incandescent electric lamp socket shell having as integral component parts a body portion and cap, said shell consisting of a sheet metal member divided longitudinally into two equal parts and means formed integral with the said parts for locking the same together.

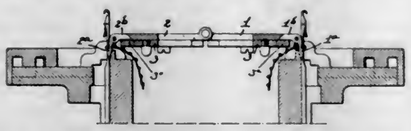
3. An incandescent electric lamp socket shell having as integral component parts a body portion and cap, said shell being divided in a longitudinal axial plane into independent sheet-metal members, said members having integral interlocking slits and sprung lugs for engagement with the slits.

4. The combination with an electric lamp socket and an axially split shell for inclosing said socket and having a split neck portion; of a split-ring fitted upon the said neck portion for fastening its parts together; an insulating-ring inserted within said split-ring and means passing through said split-ring and insulating-ring for preventing relative displacement of the whole.

5. The combination with an incandescent electric socket shell divided into two members by a plane passing longitudinally through the axis, said shell having a neck portion, the members whereof register with each other and have raised bosses, and a slip-ring consisting of inner and outer walls spaced to be slipped over the said members and having opposite slots for engagement by the bosses on the said members.

[Claims 6 to 8 not printed in the Gazette.]

1,191,642. STITCH TRANSFERRING AND UNITING DEVICE. LOUIS N. D. WILLIAMS, Ogontz, Pa. Filed Aug. 6, 1915. Serial No. 43,959. (Cl. 66—32.)



1. In a device for uniting knitted webs, two sets of stitch engaging points, a two-part carrier to which said points are pivoted so as to be capable of changing their angle of projection therefrom, said parts of the point carrier being adjustable in respect to one another so as to lie in the same plane, with the points of one set separated from those of the other set, or so as to overlap one another with the points butt to butt, in combination with looping mechanism whereby the stitches upon corresponding pairs of points can be united when said points are adjusted butt to butt.

2. In a device for uniting knitted webs, two sets of stitch engaging points, a two-part carrier to which said points are pivoted so as to be capable of changing their angle of projection therefrom, and means for temporarily locking said points to said carrier in one of their positions of adjustment in respect thereto, said parts of the point carrier being adjustable in respect to one another so as to lie in the same plane, with the points of one set separated from those of the other set, or so as to overlap one another with the points butt to butt, in combination with looping mechanism whereby the stitches upon corresponding pairs of points can be united when said points are adjusted butt to butt.

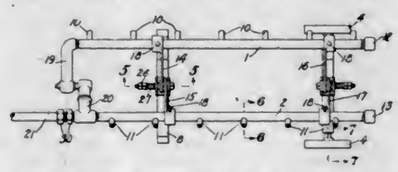
3. In a device for uniting knitted webs, a plurality of web carriers each having stitch engaging points pivotally mounted thereon so as to assume positions substantially at a right angle to one another, said web carriers being also adjustable in respect to one another so as to cause all of the stitch engaging points to project in the same direction or those of one carrier to project in a direction opposite to those of the other carrier.

4. In a device for uniting knitted webs, a web carrier having pivotally mounted thereon a series of stitch engaging points each comprising two members one at a right angle or thereabout to the other, and means mounted upon said carrier and movable into and out of engagement with one of said point members in order to lock the stitch engaging members in position or release the same.

5. In a device for uniting knitted webs, a web carrier having pivotally mounted thereon a series of stitch engaging points each comprising two members one at a right angle or thereabout to the other, said carrier being slotted for the reception of one of said point members.

[Claims 6 and 7 not printed in the Gazette.]

1,191,643. LAWN AND GARDEN SPRINKLER. ANDREW WILSON and ALBERT PINKAVA, Springfield, N. J. Filed Nov. 13, 1915. Serial No. 61,206. (Cl. 137—65.)



1. A lawn sprinkler, consisting in the combination with parallel pipes having nozzles thereon, of movable water-tight joint mechanism for connecting the pipes, and means for supporting the pipes consisting of interpivoted levers provided with means for causing them to frictionally press toward each other and be retained in any desired position, together with supporting legs for said levers.

2. In a lawn sprinkler, the combination of parallel pipes having nozzles thereon, a movable joint connecting said pipes and allowing the passage of water from one to the other, one or more pairs of interpivoted levers secured to the pipes, spring-provided pivots on which the levers are mounted so as to frictionally press toward each other and be retained in one position, and means for supporting said pivots.

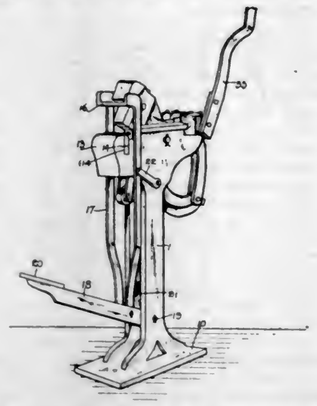
3. In a lawn sprinkler, the combination of parallel pipes having nozzles thereon, a movable joint connecting said pipes and allowing the passage of water from one to the other, one or more pairs of interpivoted levers secured to the pipes, spring-provided pivots on which the levers are mounted so as to frictionally press toward each other and be retained in one position, and frames having pairs of feet for supporting said levers and their pivoting mechanism.

4. In a sprinkling device, the combination of parallel pipes having nozzles, a pair of levers secured to the pipes, means for pivoting said levers together, said means provided with spring devices for holding the levers pressed toward each other, legs for supporting said pivotal means, another pair of levers secured to the pipes, means for pivoting said levers together, said means having spring devices for holding the levers pressed toward each other, a frame for carrying said pivoting means, said frame being provided with rollers.

5. In a sprinkler of the class described, the combination of pipes provided with nozzles, a pair of levers attached to said pipes near one end and pivoted to each other, another pair of levers attached to said pipes near the other end and pivoted to each other, a flexible water-tight joint uniting the pipes at one point and movable in correspondence with the adjustment of the pairs of levers so that the pipes may be placed at various angles and closer to or farther away from each other, and suitable supporting means for the levers, said means being adjustable at different supporting angles.

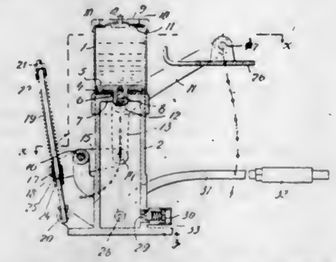
[Claim 6 not printed in the Gazette.]

1,191,644. MACHINE FOR FORMING HEEL-CALKS ON HORSESHOES. JAMES WOOD, Noblesville, Ind. Filed Mar. 16, 1914. Serial No. 825,018. (Cl. 59—65.)



A machine for forming calks on horseshoes including a frame, an anvil block, a die on which the horseshoe may be placed, means for treating the horseshoe to form the calk, a horseshoe holder adapted to hold the horseshoe on the block and anvil and having downwardly extending side bars, a pedal lever to which the lower ends of said bars are pivoted, and bars pivotally connecting said holder side bars to the frame to mount and hold them in their vertical movements.

1,191,645. PUMP. LEON WYGODSKY, New York, N. Y., assignor, by mesne assignments, to Baltimore Oil Engine Company, Baltimore, Md., a Corporation of Delaware. Filed May 8, 1914. Serial No. 837,212. (Cl. 230—27.)



1. A compression pump comprising a hollow piston, closed except for supply and discharge connections, the interior of such piston constituting a receiver space, a compression cylinder with which such piston is adapted to coact, an admission valve for admitting fluid compressed in said cylinder to said receiver space, and means for producing relative reciprocatory motion between said cylinder and piston.

2. A compression pump comprising a hollow piston, closed except for supply and discharge connections, the interior of such piston constituting a receiver space, a compression cylinder with which such piston is adapted to coact, an admission valve for admitting fluid compressed in said cylinder to said receiver space, and means for producing relative reciprocatory motion between said cylinder and piston, said receiver space provided with two discharge connections, and a loaded discharge valve for one such discharge connection, such discharge valve serving to prevent a higher pressure being reached in such receiver space than about the pressure at which such discharge valve is set to open.

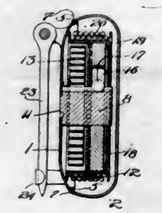
3. A compression pump comprising a hollow stationary pump piston, a compression cylinder arranged to reciprocate with respect to and over said piston, means for actuating said cylinder, and means for discharging compressed fluid from said cylinder into said hollow piston, the interior of such piston constituting a receiver space.

4. A compression foot pump comprising in combination a cylinder and a piston arranged to coöperate, one of said members being movable downward with respect to the other during the compression stroke, and means for actuating such movable member comprising two pivotally connected levers, one of which levers is fulcrumed at a fixed point, well to one side of the axis of movement of such movable member, the other of such levers, being the power lever, being fulcrumed on said movable member, and being extended beyond its point of pivotal connection to such movable member and being provided on its so-extended portion with a foot plate, the range of motion of such extended portion of the power lever being from above the horizontal to below the same, the relations of said levers being such that at the beginning of the compression stroke lines connecting the point of pivotal connection of such levers with the fulcrum points of such levers form approximately a right angle.

5. A compression foot pump comprising in combination a cylinder and a piston arranged to coöperate therewith, one of said members being movable with respect to the other, and means for actuating such movable member comprising two pivotally connected levers, one of which levers is fulcrumed at a fixed point, well to one side of the axis of movement of such movable member, and the other, being the power lever, is fulcrumed on said movable member, the relations of said levers being such that at the beginning of the compression stroke lines connecting the point of pivotal connection of said levers, with the fulcrum points of said levers, are nearly at right angles at the beginning of the compression stroke, the angle between such lines growing more acute as the compression stroke proceeds, said power lever provided with a depending foot plate pivotally connected to it.

[Claims 6 to 16 not printed in the Gazette.]

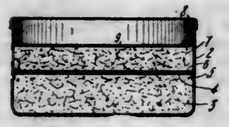
1,191,646. HOLDER FOR EYEGLASSES. CARL G. ALDRICH, Somerville, Mass. Filed Aug. 10, 1914. Serial No. 856,017. (Cl. 242—98.)



A holder for eyeglasses and the like comprising a casing consisting of a back plate and cover separably connected together; a fixed post upon the interior of said casing made from a single longitudinally grooved piece of drawn metal wire cylindrical throughout its length and having an extension at one end thereof of reduced diameter extending through a perforation in the back plate and upset at its outer end to rigidly fix said post to said plate; a reel rotatably mounted on said post and held in posi-

tion thereon by one of the parts of said casing so that by separating said parts the reel can be removed from said post; a coiled spring connected at one end with the reel and at its other end with the post; a cord or the like having one end thereof connected with said reel and the other end extending through an opening in the casing to the exterior of the latter and adapted to be connected with the eyeglass, and one or more clutch members carried by the reel and coöperating with the groove of the post.

1,191,647. METHOD OF GENERATING FORMALDEHYDE GAS. HENRY ANHALTZER, Pittsburgh, Pa. Filed June 12, 1914. Serial No. 844,694. (Cl. 167—3.)



1. The method of generating pure formaldehyde gas without oxidation of formaldehyde and evolution of formic acid, which consists in reacting upon a mixture of paraformaldehyde and a persulfate, with a hydroxyl forming alkali metal.

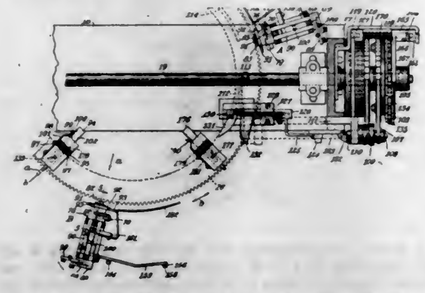
2. The method of generating pure formaldehyde gas without oxidation of formaldehyde and evolution of formic acid, which consists in reacting with a solution of a hydroxyl forming alkali metal upon a mixture of substantially equal parts of paraformaldehyde and a persulfate.

3. The method of generating pure formaldehyde gas without oxidation of formaldehyde and evolution of formic acid which consists in reacting with a saturated solution of a hydroxyl forming alkali metal upon a mixture of paraformaldehyde and a persulfate.

4. The method of generating pure formaldehyde gas without oxidation of formaldehyde and evolution of formic acid which consists in reacting with a solution of sodium hydroxid upon a mixture of paraformaldehyde and potassium or sodium persulfate.

5. The method of generating pure formaldehyde gas without oxidation of formaldehyde and evolution of formic acid which consists in reacting with a solution of sodium hydroxid upon a mixture of substantially equal parts of paraformaldehyde and potassium or sodium persulfate.

1,191,648. FEED MECHANISM FOR CIRCULAR KNITTING MACHINES. WILLIAM T. BARRATT, Bennington, Vt., assignor, by direct and mesne assignments, of one-third to Alexander J. Cooper and two-thirds to Elizabeth Cooper Stoddard, Bennington, Vt. Filed Oct. 19, 1912. Serial No. 726,668. (Cl. 66—12.)



1. A feed mechanism for a circular knitting machine having, in combination, a rotary member, a yarn guide adapted to feed yarn to the needles of said knitting machine, mechanism adapted to move said yarn guide into operative position relatively to said needles, said mechanism being adapted to hold said yarn guide in said position, means on said rotary member adapted to actuate said yarn guide actuating mechanism and mechanism adapted to move said last-named means into and out of operative position on said rotary member.

2. A feed mechanism for a circular knitting machine having, in combination, a rotary member, a yarn guide adapted to feed yarn to the needles of said knitting machine, mechanism, including a stationary support, outside said rotary member adapted to move said yarn guide into and out of operative position relatively to said needle, means on said rotary member adapted to actuate said yarn guide mechanism and mechanism adapted to move said last-named means to different positions relatively to the median axial line of said rotary member and into and out of operative position.

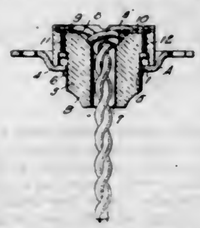
3. A feed mechanism for a circular knitting machine having, in combination, a rotary member, a sinker wheel with sinkers, a yarn guide, means adapted to sever the yarn between the needles of said knitting machine and said yarn guide, said means adapted to drop the free end of said yarn when severed and leave said free end floating on the upper edges of said sinkers, said sinker wheel being located between said yarn guide and severing mechanism, mechanism adapted to move said yarn guide into and out of operative position relatively to said needles and sinker wheel whereby the free end of said yarn, when said yarn guide is in operative position, may be laid across the ends of said sinkers and fed to said needles by said sinker wheel, and means movable with said rotary member adapted to actuate said yarn guide actuating mechanism and said severing mechanism.

4. A feed mechanism for a circular knitting machine having, in combination, a rotary member, a yarn guide adapted to feed yarn to the needles of said knitting machine, mechanism adapted to move said yarn guide into and out of operative position relatively to said needles, said mechanism adapted to hold said yarn guide in said positions, means adapted to sever said yarn between said needles and said yarn guide, means on said rotary member adapted to actuate said yarn guide actuating mechanism and said severing mechanism and mechanism adapted to move said last-named means into and out of operative position on said rotary member.

5. A feed mechanism for a circular knitting machine having, in combination, a rotary member, a yarn guide adapted to feed yarn to the needles of said knitting machine, a cam, mechanism actuated by said cam adapted to move said yarn guide into and out of operative position relatively to said needles, said cam adapted to hold said yarn guide in said positions, a plurality of arms fast to said cam, means on said rotary member adapted to engage one of said arms at a time and rotate said cam to alternately move said yarn guide into and out of operative position and mechanism adapted to move said arm engaging means into and out of operative position on said rotary member.

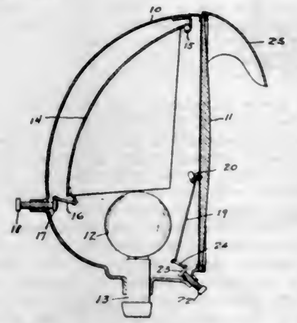
[Claims 6 to 69 not printed in the Gazette.]

1,191,649. CONDUIT-BOX ROSETTE FOR ELECTRIC WIRING. ARTHUR BARTHELS, San Francisco, Cal. Filed Oct. 8, 1915. Serial No. 54,764. (Cl. 173—327.)



The combination of a support having a circular opening provided with a slot in the edge of the opening, a rosette having a reduced portion projecting through the opening, and a shoulder bearing against the support, there being an annular groove around the reduced portion adjacent the side of the support opposite the side engaged by the said shoulder, a lug on the rosette engaging in the slot of the support, whereby the rosette is prevented from turning, and a split ring surrounding the reduced portion of the rosette and engaged in the groove to retain the rosette on the support, the slit of the ring accommodating the said lug.

1,191,650. ADJUSTABLE REFLECTOR. ADOLF BAUMGARTEN, Muncie, Ind., assignor of one-third to Harry L. Kitselman and one-third to William H. Schaufelberger, Muncie, Ind. Filed Oct. 21, 1915. Serial No. 57,074. (Cl. 240—44.)



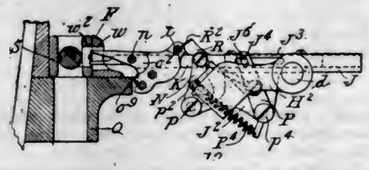
A headlight including a lamp, a casing, a downwardly extending reflector hinged at its upper end to the upper portion of said casing and extending to the rearward of said lamp, a second upwardly extending reflector pivoted to the sides of said casing forward of said lamp, and external means for adjusting said reflectors.

1,191,651. GASKET. LEONHARD BAUROTH, Toledo, Ohio, assignor to Charles H. Wacher, Chicago, Ill. Filed Oct. 11, 1913. Serial No. 794,590. (Cl. 137—28.)



A gasket having a non-metallic body part and an endless U-shaped non-expansible metallic binding for the outer edge portion of said part, the exposed portion of the body part being of greater thickness than the binding when mounted on the edge thereof, whereby a considerable compressing force may be exerted on the exposed portion of the body part before pressure is brought to bear on the binding.

1,191,652. WEFT BINDING AND SEVERING DEVICE FOR LOOMS. ELISHA F. BEAVERSTOCK, Holyoke, Mass. Filed Apr. 3, 1913. Serial No. 758,598. (Cl. 139—85.)



1. In a loom, in combination, the lay having thereon the shuttle box formed with a side opening at an intermediate portion thereof, a support on the loom frame having a slideway in a line at right angles to the length of the shuttle box opposite the apertured intermediate portion of such box, a slide bar movable in said slideway, its forward extremity forming a fixed jaw, an oscillatory device pivotally mounted on the slide-bar and comprising a jaw movably coacting with said fixed jaw, comprising a projection to constitute an abutment at a point offset from its pivot and distant from its jaw portion, and also having a laterally projecting stud, a lever having an engagement with and for the reciprocation of the slide bar, and means for swinging the said lever,—the arrangement of the oscillatory device, when inwardly projected relatively to the lay, being such that the projection constituting its abutment and the lay will be brought to engagement for a closing of the movable jaw, a member mounted on the slide bar support having an inclined lip, to be engaged by the lateral stud on said oscillatory device, for causing a reversed swinging of said device for an opening of its jaw during the movement of projection of the slide bar.

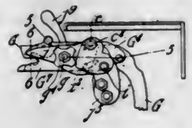
2. In a loom, in combination, the lay having thereon the shuttle box formed with a side opening at an intermediate portion thereof, a support on the loom frame having a slideway in a line at right angles to the length of the shuttle box opposite the apertured intermediate portion of such box, a slide bar movable in said slideway, its forward extremity forming a fixed jaw, an oscillatory device pivotally mounted on the slide-bar and comprising a jaw movably coacting with said fixed jaw, comprising a projection to constitute an abutment at a point offset from its pivot and distant from its jaw portion, and also having a laterally projecting stud, a lever having an engagement with and for the reciprocation of the slide bar, and means for swinging the said lever,—the arrangement of the oscillatory device, when inwardly projected relatively to the lay, being such that the projection constituting its abutment and the lay will be brought to engagement for a closing of the movable jaw, a member mounted on the slide bar support and yieldable in a downward direction, having an inclined lip, to be engaged by the lateral stud on said oscillatory device, for causing a reversed swinging of said device for an opening of its jaw during the movement to its inward position of the slide bar.

3. In a loom, in combination, the lay having thereon the shuttle box formed with a side opening at an intermediate portion thereof, a support on the loom frame having a slideway in a line at right angles to the length of the shuttle box opposite the apertured intermediate portion of such box, a slide bar movable in said slideway, its forward extremity forming a fixed jaw, an oscillatory device pivotally mounted on the slide-bar and comprising a jaw movably coacting with said fixed jaw, comprising a projection constituting an abutment at a point offset from its pivot and distant from its jaw portion, a lever having an engagement with the slide bar, another lever linked to the first named lever and provided with a laterally projecting stud and a retracting spring operatively applied to said link connected lever, the feeler controlled rock-shaft and an element movably actuated thereby adapted to engage with, and disengage from, the stud of the second-named lever for effecting the inward projection of the slide bar and its oscillatory device,—the arrangement of the latter upon its inward projection, relatively to the lay, being such that its abutment constituting projection and the lay will have an engagement for a closing of the movable jaw,—and means for causing a reversed swinging of the oscillatory device for an opening of the movable jaw during the movement of the slide bar.

1,191,653. WEFT BINDING AND SEVERING DEVICE FOR LOOMS. ELISHA F. BEAVERSTOCK, Holyoke, Mass. Filed July 8, 1914. Serial No. 849,648. (Cl. 139—85.)

1. In a device of the character described, a supporting and carrying member having a normally fixed cutter jaw and binders comprising a normally fixed binder member and movable binder jaws at opposite sides of such binder

member and a cutter jaw associated with one of the movable binder jaws for coaction with the normally fixed cutter jaw,—said double binder jaws and the movable cutter jaw being pivotally mounted for coaction respectively with the fixed binder member and the normally fixed cutter jaw.



2. In a weft binding and severing device of the character described, a supporting and carrying member having a normally fixed cutter jaw, and binders comprising a normally fixed binder member, having a vertical, forwardly opening recess within its thickness and extending vertically therethrough and movable binder jaws at opposite sides of such binder member and a cutter jaw associated with one of the movable binder jaws for coaction with the normally fixed cutter jaw,—said double binder jaws and the movable cutter jaw being pivotally mounted for coaction respectively with the fixed binder-member and the normally fixed cutter jaw, and a member pivotally hung in the said recess of the normally fixed binder member, and operative when swung to secure two bindings of the thread additional to those between said movable and fixed binder jaws, and means for imparting a swinging motion to the pivotally hung member.

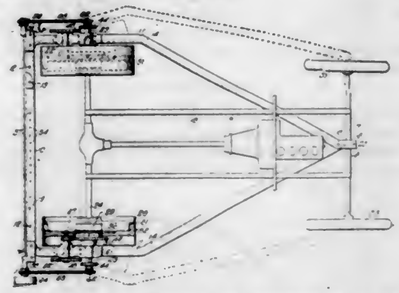
3. In a weft binding and severing device of the character described, a supporting and carrying member having a normally fixed cutter jaw, and binders comprising a normally fixed binder member, having a vertical, forwardly opening recess within its thickness and extending vertically therethrough and movable binder jaws at opposite sides of such binder member and a cutter jaw associated with one of the movable binder jaws for coaction with the normally fixed cutter jaw,—said double binder jaws and the movable cutter jaw being pivotally mounted for coaction respectively with the fixed binder member and the normally fixed cutter jaw, and a member formed with a forwardly opening recess pivotally hung to the said recess of the normally fixed binder member, and operative when upwardly swung to secure by its portion below the recess therein two bindings of the thread additional to those between said movable and fixed binder jaws, and to secure on its downwardly swung movement by its portion below the recess therein a clearing of the previously bound thread, and means for imparting a swinging motion to the pivotally hung member.

4. The combination with the supporting and carrying member of a normally fixed cutter jaw, the shank portion of which is secured on the side of the supporting member while its extremity is transversely deflectable relatively to the latter, a pivotally mounted cutter jaw for coaction with the normally fixed cutter jaw, a pair of spaced pivotally mounted binder jaws and a fixed member between and with which the latter jaws coact, means for transversely adjusting the deflective extremity of the normally fixed cutter jaw without disturbing the relation of the coacting binder members.

5. In a device of the character described, the combination with a supporting and carrying member, of a normally fixed cutter jaw, the shank portion of which is secured on the side of the supporting member while its extremity is transversely deflectable relatively to the latter, a pivotally mounted cutter jaw for coaction with the normally fixed cutter jaw, a pair of spaced pivotally mounted binder jaws and a fixed member with which the latter jaws coact, means for transversely adjusting the deflectable extremity of the normally fixed cutter jaw without disturbing the relations of the coacting binder members, and means, independent of the first named adjusting means, for adjusting the relations of the pivotally mounted binder jaws relatively to said fixed member.

[Claims 6 to 13 not printed in the Gazette.]

1,191,654. POWER ATTACHMENT FOR AUTOMOBILES. HEZEKIAH BICKFORD and CHARLES LEWIS OLMSTEAD, Great Falls, Mont. Filed Nov. 19, 1915. Serial No. 62,320. (Cl. 21—114.)



1. In a power attachment for automobiles, a frame adapted to be secured to an automobile and provided with bearings, a shaft journaled in the bearings, clamps for engaging the power wheels of the automobile, means for securing the clamps to the shafts, traction wheels disposed co-axially with the shafts, and gearing connecting the shafts with the traction wheels.

2. In a power attachment for automobiles, a frame adapted to be secured to an automobile and provided with bearings, spiders, shafts secured to the spiders and journaled in the bearings, clamps for engaging the power wheels of the automobile, means for adjustably securing the clamps to the spiders, traction wheels, and gearing connecting the shafts with the traction wheels.

3. In a power attachment for automobiles, a frame adapted to be secured to an automobile and provided with bearings, spiders, shafts journaled in the bearings and secured for rotating with the spiders, radially disposed clamps for engaging the power wheels of the automobile and provided with shoulders, guide means connecting the clamps with the spiders, means for engaging the shoulders for moving the clamps relatively to each other, traction wheels, and gearing connecting the shafts with the traction wheels.

4. In a power attachment for automobiles, a frame adapted to be secured to an automobile and provided with bearings, spiders, shafts secured for rotating with the spiders and journaled in the bearings, radially disposed clamps for engaging the power wheels of the automobile and provided with shoulders, guide means connecting the clamps with the spiders, annular members having cams for engaging the shoulders for moving the clamps relatively to each other, traction wheels, and gearing connecting the shafts with the traction wheels.

5. In a power attachment for automobiles, a frame adapted to be secured to an automobile and provided with bearings, spiders, shafts secured for rotating with the spiders and journaled in the bearings, radially disposed clamps for engaging the power wheels of the automobile and provided with shoulders, guide means connecting the clamps with the spiders, annular members having cams for engaging the shoulders for moving the clamps relatively to each other, there being ratchet and gear teeth on the annular cam members, pawls on the spiders engaging the ratchet teeth, gears journaled to the spiders and meshing with the gear teeth, means for rotating the gears, traction wheels, and gearing connecting the shafts with the traction wheels for rotating the latter.

[Claims 6 to 27 not printed in the Gazette.]

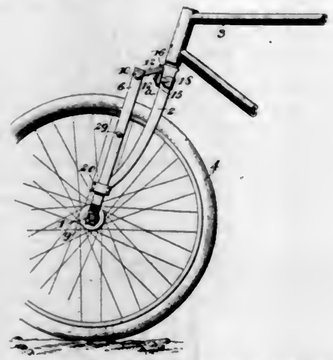
1,191,655. COMBINED HEEL AND ARCH SUPPORT. ALEXANDER E. BLOCK, St. Louis, Mo. Filed Nov. 25, 1914. Serial No. 873,911. (Cl. 36—71.)

1. In a heel- and arch-support an insole, a flap secured to the lower face of the insole and forming a pocket extending from a point on the rear edge of the insole at or near the median line thereof to a point at the side of the insole beneath the longitudinal arch of the wearer, and an insert arranged to fill said pocket.



2. In a heel- and arch-support, an insole; a plurality of flaps of various lengths secured to the lower face of the insole and to each other to form cavities of various lengths, each cavity extending from a point at the rear edge of the insole near the median line of said insole and extending to a point beneath the longitudinal arch of the foot of the wearer; and an insert arranged to be seated in each of said cavities.

1,191,656. SHOCK-ABSORBER. CHARLES S. BORDNER, Circleville, Kans. Filed Oct. 26, 1915. Serial No. 58,000. (Cl. 208—97.)

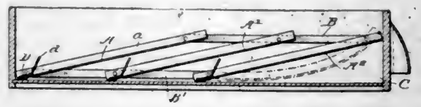


1. In combination with the front axle and the front fork of a bicycle, of a pair of slide bars connected at their lower ends to the axle, a plate hinged at one side edge to the upper ends of the bars, said plate being arranged between the bars, a support hinged to the opposite side of the plate and having means for adjustably connecting the same with the arms of the front fork, a clip movably disposed on each slide bar, means in connection with each clip for connecting the same to the adjacent arm of the front fork of the bicycle, and resilient means arranged between each clip and the adjacent slide bar for absorbing shock and preventing the imparting of the shock to the frame of the bicycle, each of the said resilient means comprising a coil spring, spring supporting bars connected with the ends of the spring, one of the said bars being connected at its upper end to the adjacent slide bar and the other of the said bars being connected at its lower end to the adjacent clip.

2. In combination with the front axle and the front fork of a bicycle, of a pair of slide bars connected at their lower ends to the axle, a plate hinged at one side edge to the upper ends of the bars, said plate being arranged between the bars, a support hinged to the opposite side of the plate and having means for adjustably connecting the same with the arms of the front fork, a clip movably disposed on each slide bar, means in connection with each clip for connecting the same to the adjacent arm of the front fork of the bicycle, and resilient means arranged between each clip and the adjacent slide bar for absorbing shock and preventing the imparting of the shock to the frame of the bicycle.

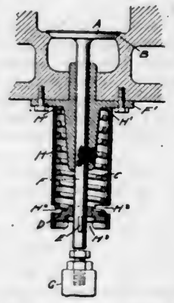
3. In combination with the front axle and the front fork of a bicycle, of a pair of slide bars connected at their lower ends to the axle, a connecting member hingedly connected at one end to the upper ends of said slide bars and at its opposite end to the front fork of the bicycle, clips movably disposed upon the lower portions of the slide bars above the axle and to which the lower ends of the front fork are connected, and springs extending upwardly along the said slide bars and connected at their upper ends thereto, the lower ends of said springs being connected to the said clips, all for the purposes described.

1,191,657. DRAWER-RACK. FREDERICK BRADY, Middletown, Del. Filed Feb. 7, 1914. Serial No. 817,243. (Cl. 45—7.)



A drawer rack comprising a plurality of partition plates each of which consists of a body provided with longitudinal side flanges, strips pivotally connecting the side flanges of the plates adjacent the upper and lower ends whereby to permit the plates to be folded or nested and to enable their disposition in variously inclined positions within a drawer, each of said plates being provided with longitudinal side series of key hole slots and a base strip for each plate having depending and shouldered studs for engagement in selected key hole slots and having an upwardly projecting flange extending transversely across the partition plate and inclined toward the upper end of the latter, all for the purpose described.

1,191,658. VALVE-SPRING RETAINER. DAVID L. BROWN, New York, N. Y. Filed Mar. 25, 1915. Serial No. 16,998. (Cl. 29—87.1.)



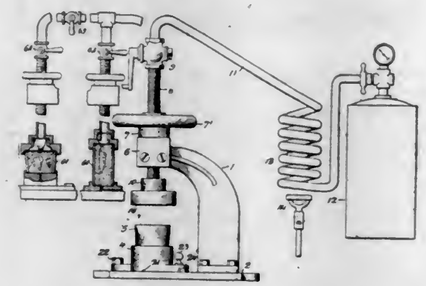
1. A valve spring retainer, comprising a casing inclosing the valve spring and provided at one end with a seat for one end of the valve spring to rest on, the other end of the casing being provided with a key slot, and a retaining key insertible into the said key slot at the time the valve spring is compressed and its other end is beyond the said key slot to allow this end of the spring to be seated on the said retaining key.

2. A valve spring retainer, comprising a casing inclosing the valve spring and provided at one end with a seat for one end of the valve spring to rest on, the other end of the casing being provided with diametrically opposite key slots and with cut-out portions for the insertion or removal of the valve stem key, and a U-shaped retaining key insertible in the said key slots and projecting into the path of the other end of the valve spring at the time the latter is compressed to allow this end of the valve spring to seat itself on the retaining key to support the compressed valve spring within the casing.

3. A valve spring retainer comprising a casing entirely inclosing the valve spring and provided at one end with a seat for one end of the spring to rest on, a key slot adjacent the other end of the casing, and a key adapted to engage the slot and support the inclosed spring while in its compressed state.

4. A valve spring retainer comprising a suitable casing permanently inclosing the spring, held in position on the engine cylinder by the pressure of one end of the spring on an annular bearing in one end of the casing, and having a removable key engaging slots in the other end of the casing and also engaging the other end of the compressed spring, for the purpose of locking the spring in its compressed state within the casing.

1,191,659. DENTAL CASTING-MACHINE. JOHN E. BURNS, Flushing, N. Y. Filed Sept. 15, 1915. Serial No. 50,833. (Cl. 22—69.)



1. In a dental casting machine, the combination with a flask open at opposite ends, of a compressed air tank and pipe, a hollow screw connected with and forming a part of the pipe, a cap adapted to fit the end of the flask, a nut to advance the screw and cause the cap to fit the end of the flask, and diffusing means at the end of the pipe.

2. In a dental casting machine, the combination with a vertically divided flask open at each end, of a compressed air tank and flexible pipe, an overhanging frame, a nut swiveled in the frame, a hollow screw forming a continuation of the flexible pipe and working in the nut, a cap carried at the lower end of the hollow screw, and a perforated thimble at the end of the screw and within the cap.

3. In a dental casting machine, the combination with a flask to contain a mold, of a laterally vented base piece for the flask, a plunger cap adapted to fit and seal the top of the flask, a tank for compressed air, a pipe from the tank vertically disposed above the flask, a hollow screw connected with the pipe and carrying the cap and communicating with its interior, a gasket within the cap, and a nut operating the screw to bring the cap and flask together to supply the latter with the compressed air.

1,191,660. LIFTING DEVICE. FRANK BUTLER, Oxnard, Cal. Filed Sept. 9, 1915. Serial No. 49,765. (Cl. 57—9.)

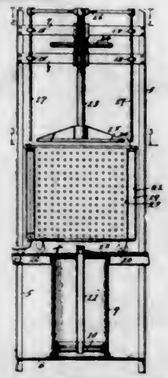
The herein described lifting device formed of two members, one member being U-shaped and including a pair of spaced shanks, joined at the top by an integral bar constituting a handle and the shanks terminating at the lower ends in gripping hooks, the other member presenting a single shank, disposed opposite to and approximately equidistant from the pair of shanks, said single shank terminating at its lower end in a hook disposed oppositely to the hooks of the pair of shanks, the said single shank having an integral transverse loop extending in opposite directions from said shank, the shanks of the pair being bent to form hinge eyes embracing the said loop near its ends below the said handle, and there being at the junc-

ture of the loop and single shank, an outwardly projecting lever member integral with said shank and loop and



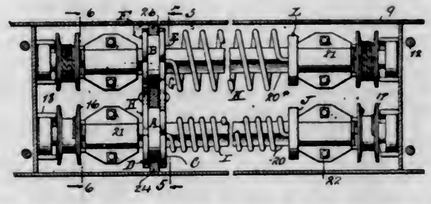
positioned relative to the handle for both to be engaged by the digits of one hand.

1,191,661. LAUNDRY-EXTRACTOR. IRVING WASHINGTON CADWELL, Denver, Colo. Filed Dec. 28, 1915. Serial No. 69,033. (Cl. 100—50.)



As an article of manufacture, for use in a press, a transportable tank, a perforated cylinder within said tank, and braces between said tank and cylinder having perforations adapted to receive guide rods on said press.

1,191,662. SPRING SUSPENSION DEVICE FOR WINDOW-SASHES. HARRY E. CAMPBELL, New York, N. Y. Filed May 1, 1916. Serial No. 94,566. (Cl. 16—148.)



1. A frame, a sash vertically slidable in said frame, a spring suspension device for said sash comprising a shaft and a helical spring surrounding the same and connected at its ends respectively to said shaft and said frame, independently supported means inclosing and rotatable on said shaft for adjusting the tension of said spring, and means for retaining said last-named means in adjusted position.

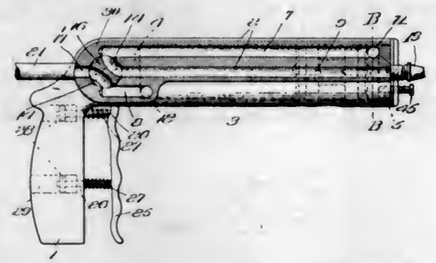
2. A frame, a shaft journaled in the upper member thereof, a helical spring surrounding said shaft having one end secured to said frame, a support on said frame, a ring connected to the other end of said spring, said ring being loose on said shaft and rotatable in said support to adjust the tension of said spring, means for retaining said ring in adjusted position, a sash vertically slidable in said frame, and suspension cords connecting said sash to said shaft.

3. A frame, a shaft journaled in the upper member thereof, a fixed support on said upper member, a ring loose on said shaft received and rotatable in said support, a ratchet disk fast on said ring, a pawl on said support engaging said ratchet disk, a helical spring surrounding said shaft having one end secured to said frame and the other end secured to said disk, winding drums on said shaft, a sash vertically slidable in said frame, and suspension cords connected to said drums and said sash.

4. A frame, a sash vertically slidable in said frame, a support disposed at right angles to and secured upon the upper member of said frame, a ratchet disk rotatably secured on said support, a pawl engaging said disk, the said disk and support having openings, a shaft journaled on said upper frame member and passing through said openings, a helical spring surrounding said shaft and connected at one end to said ratchet disk and at its opposite end to said shaft, drums on said shaft, and suspension cords connected to said sash and said drums.

5. A frame, comprising a lintel in closed box form, a transverse partition in said lintel having a recess on its under side, a ring in said recess, ratchet disks having central openings secured on opposite sides of said ring, means for retaining said ring in said recess, a pawl on said partition engaging one of said ratchet disks, a shaft journaled in said lintel and passing through said disks and ring, a helical spring connected at one end to one of said disks and surrounding said shaft and connected at its opposite end to said shaft, drums on said shaft, a sash slidable in said frame, and suspension cords connected to said sash and said drums.

1,191,663. OILING-TOOL. BERTRAM C. CANDEE, Buffalo, N. Y., assignor of one-half to Buffalo Metal Goods Company, Buffalo, N. Y. Filed July 25, 1914. Serial No. 852,989. (Cl. 221—102.)



1. A hand oiling tool comprising a suitable handle and a suitable barrel, said barrel being provided with a cylinder, an inlet, an outlet conduit, channels adapted to connect the inlet with the front and rear ends of the cylinder, a piston in the cylinder, a nozzle at the end of the conduit to deliver oil into an oil hole, a valve having ports, and means to move the valve to connect the inlet alternately with the respective channels and the respective channels alternately with the conduit.

2. A hand oiling tool adapted to deliver a measured quantity of oil, comprising a suitable handle adapted to fit the hand of the operator, an integral elongated barrel and an outlet nozzle on the end of the barrel adapted to be inserted in an oil hole, said barrel being formed with a cylinder, an inlet, and channels for connecting the inlet with opposite ends of the cylinder and a conduit connecting said opposite ends with the outlet nozzle and hand operated means to establish connection between the inlet and the channels alternately and simultaneously between the channel not so connected and the outlet nozzle.

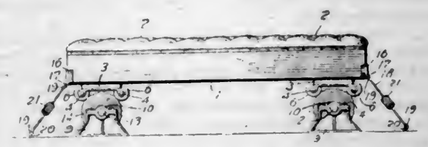
3. A hand oiling tool comprising a handle formed to fit the hand of the operator and an integral elongated barrel provided with a cylinder, a parallel outlet conduit, two parallel channels, one having a port communicating with the front end of the cylinder and one having a port communicating with the rear end of the cylinder and an inlet port adapted to be connected with either of said channels, and also comprising a piston in the cylinder, a pipe connected to the inlet for delivering the oil under pressure from the source of supply, a rotating valve journaled in the butt of the barrel and provided with two ports adapted one to connect the inlet with one channel and one to simultaneously connect the other channel with the conduit, a spring trigger arranged in the handle to be operated by the grip of the operator and connections between the trigger and the valve to rotate the latter, one step at each pressure on the trigger and reverse the connections of the inlet and the conduit with the channels.

4. A hand oiling tool comprising a handle formed to fit the hand of the operator and an integral elongated barrel provided with a cylinder, and at the side of the cylinder a parallel outlet conduit, two parallel channels, a longer channel having a port communicating with the front end of the cylinder and a shorter channel having a port communicating with the rear end of the cylinder and an inlet adapted to be connected with either of said channels, a nozzle at the end of the conduit to deliver oil into an oil hole, a pipe connected to the inlet for delivering the oil under pressure from a source of supply, a rotating valve journaled in the butt of the barrel and provided with two ports adapted one to connect the inlet with one channel and one simultaneously to connect the other channel with the conduit, a spring trigger arranged in the handle to be operated by the grip of the operator and connections between the trigger and the valve to rotate the latter one step at each pressure of the trigger and reverse the connections of the inlet and the conduit with the channels.

5. A hand oiling tool comprising a handle formed to fit the hand of the operator and an integral elongated barrel provided with a cylinder, a parallel outlet conduit, two parallel channels, one having a port communicating with the front end of the cylinder and one having a port communicating with the rear end of the cylinder and an inlet port adapted to be connected with either of said channels, a piston in the cylinder, a pipe connected to the inlet for delivering the oil under pressure from the source of supply, a rotating valve journaled in the butt of the barrel and provided with two parts adapted one to connect the inlet with one channel and one simultaneously to connect the other channel with the conduit, a spring trigger arranged in the handle to be operated by the grip of the operator, connections between the trigger and the valve to rotate the latter one step at each pressure on the trigger and reverse the connections of the inlet and the conduit with the channels, a screw plug fitted to and closing the front end of the cylinder and an adjustable stop pin in said plug to limit the stroke of the piston.

[Claims 6 to 8 not printed in the Gazette.]

1,191,664. COUCH. CHARLES CARROLL, Chicago, Ill. Filed Dec. 2, 1915. Serial No. 64,687. (Cl. 128—16.)



1. A couch, comprising a body, a pair of transversely alined standards at each end of the body, a roller journaled in each pair of standards, each roller having its peripheral

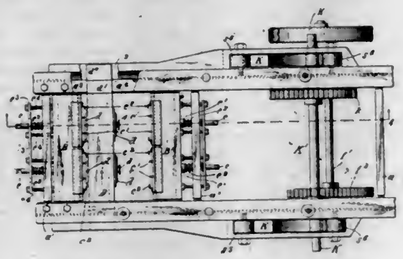
surface corrugated or grooved longitudinally of the roller, a pair of pedestals connected with the couch body at each end thereof and in alinement transverse to the body, a pair of shafts journaled in the pedestals at each end of the body and parallel with each other, wheels secured to each shaft near the ends thereof and engaging the roughened surface of the adjacent roller, the shafts being spaced apart a distance corresponding approximately to the diameter of the roller, and yielding mechanism for normally holding the couch in central position, said means comprising links pivoted to the corners of the couch body and extending outwardly and downwardly therefrom to a connection with the supporting surface for the standards, and a spring interposed in the length of each link.

2. A couch, comprising a body, a pair of transversely alined standards at each end of the body, a roller journaled in each pair of standards, each roller having its peripheral surface corrugated or grooved longitudinally of the roller, a pair of pedestals connected with the couch body at each end thereof and in alinement transverse to the body, a pair of shafts journaled in the pedestals at each end of the body and parallel with each other, wheels secured to each shaft near the ends thereof and engaging the roughened surface of the adjacent roller, the shafts being spaced apart a distance corresponding approximately to the diameter of the roller, and yielding mechanism for normally holding the couch in central position.

3. A couch, comprising a body, a roller having a roughened peripheral surface journaled transversely beneath the couch at each end thereof, wheels on the couch and resting on the rollers, and links connected with each corner of the couch and extending outwardly therefrom to a connection with a fixed support, said links being resilient to permit the couch to yield.

4. A couch, comprising a body, a roller having a roughened peripheral surface journaled transversely beneath the couch at each end thereof, wheels on the couch and resting on the rollers, and yielding means connected with the couch for normally holding the couch in position with respect to the rollers.

1,191,665. MACHINE FOR MAKING PAPER DISHES, &c. PINY FRANK CHAIKIN, Coney Island, N. Y., assignor to Alfred Bleyer & Co., New York, N. Y. Filed Mar. 24, 1916. Serial No. 86,335. (Cl. 18—19.)



1. In a machine of the character designated, the combination of two stationary die heads and dies and an intermediate reciprocatory die head carrying dies adapted to engage alternately with the dies in the stationary die heads, together with means for heating the dies, for the purpose described.

2. In a machine of the character designated, the combination of two stationary die heads and dies, an intermediate movable die head carrying dies adapted to engage alternately with the dies on the stationary heads, and means for positively reciprocating said intermediate die head, together with means for heating the dies, for the purpose described.

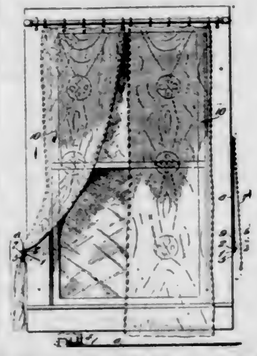
3. In a machine of the character designated, the combination of two stationary die heads provided with female dies, and an intermittent reciprocatory die head carrying male dies adapted to engage alternately with the female dies in said stationary die heads, together with means for heating the dies, for the purpose described.

4. In a machine of the character designated, the combination of two stationary die heads provided with female dies, an intermediate movable die head carrying male dies adapted to engage alternately with the female dies on the said stationary die heads, and means for positively reciprocating said intermediate die head, together with means for heating the dies, for the purpose described.

5. In a machine of the character designated, the combination of two stationary die heads and dies, an intermediate die head movably supported upon the frame of the machine, and positively reciprocated slides adapted to engage and move said intermediate die head for a portion only of their thrust in either direction together, with means for heating the dies, for the purpose described.

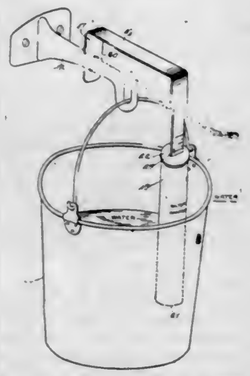
[Claims 6 to 8 not printed in the Gazette.]

1,191,666. CURTAIN-HOLDER. JOSEPH CHAPMAN and RUTH P. CHAPMAN, Bryn Mawr, Pa. Filed Jan. 8, 1916. Serial No. 70,926. (Cl. 156—33.)



A curtain holder comprising an arm, means for pivotally attaching one end of the arm to a window frame, said means being provided with an eye, and a flexible member secured to the other end of the arm and provided with means for engaging said eye, said flexible member being adapted to retain a curtain on said arm.

1,191,667. INDICATOR ATTACHMENT FOR FIRE-BUCKET SUPPORTS. JOSEPH O. CHARPENTIER, Concord, N. H. Filed Dec. 22, 1915. Serial No. 68,250. (Cl. 73—82.)



1. An indicator for fire buckets, comprising a guide having support-engaging means adapted to rigidly hold the guide in a vertical position with its upper portion above a bucket-containing space and its lower portion within said space, and a float adapted to slide vertically on said guide and to be supported by water in a bucket occupying said space, the guide being provided with a stop limiting downward movement of the float thereon, whereby, when the bucket is removed, the float is supported independently in position to be raised by water in a replaced bucket.

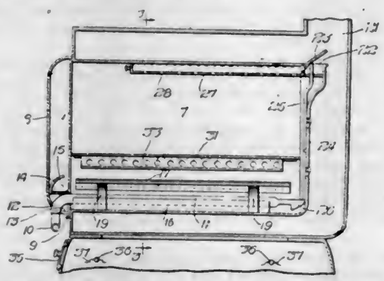
2. An indicator attachment comprising a guide having means for engaging the shank portion of a bucket-supporting hook, the engagement of said means and shank rigidly supporting the guide in a vertical position with its upper portion above the bucket containing space below said hook and its lower portion within said space, and a float adapted to slide vertically on said guide and to be supported by water in said bucket, the guide being provided with a stop whereby, when the bucket is removed, the float is supported independently in position to be raised by water in a replaced bucket.

3. An indicator attachment comprising a guide having means for frictionally and detachably engaging the tapering shank portion of a bucket-supporting hook, said means including an eye formed to have a driving fit on said shank portion, the guide being rigidly supported independently of the bucket by the engagement of said means and shank with its upper portion above the bucket-containing space below said hook, and its lower portion within said space, and a float adapted to slide vertically on said guide and to be supported by water in said bucket, the guide being provided with a stop whereby, when the bucket is removed, the float is supported independently in position to be raised by water in a replaced bucket.

4. An indicator attachment comprising a guide having means for engaging a bucket support, and adapted to stand vertically over the bottom of a bucket hung on said support, and a float adapted to slide vertically on said guide and to be supported by water in said bucket, said float being provided with a slotted head constituting an indicating member coöperating with the guide and inclined relatively to the guide to enable the indication to be read from a lower point.

5. An indicator attachment comprising a guide having means for engaging a bucket support, and adapted to stand vertically over the bottom of a bucket hung on said support, and a float adapted to slide vertically on said guide and to be supported by water in said bucket, said float being provided with a slotted head constituting an indicating member coöperating with the guide, and the guide being provided with a stop within the float to prevent separation of the float from the guide.

1,191,668. COMBINED COAL AND GAS RANGE. GEORGE W. CLARK, Chicago, Ill. Filed Feb. 12, 1914. Serial No. 818,202. (Cl. 126—36.)



1. The combination with the oven of a coal stove provided with a discharge outlet at the upper rear corner, a damper for said outlet, a perforated detachable flue adapted to be set in the upper portion of the oven in front of said damper, a burner adapted to be detachably mounted in the oven, and means controlled by the burner for actuating said damper.

2. The combination with the oven of a coal stove, of an oven door hinged at its lower end, a gas pipe arranged outside of the oven and terminating adjacent to said door, a burner adapted to be detachably set in the oven, said burner having an extension adapted to be engaged by the end of said gas pipe, said door having a section removed at its hinged edge to provide an opening for the passage of said extension, and an auxiliary gravity door carried by the main door and adapted to close said opening when the burner is removed.

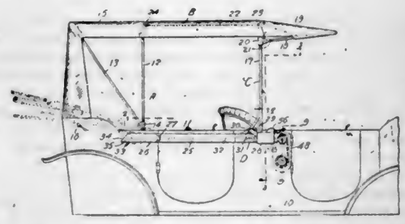
3. The combination with the oven of a coal stove, of an open door, a burner adapted to be detachably set in the oven, said burner having laterally and downwardly projecting wings forming with the burners an inverted trough adapted to rest at its edges upon the bottom of the oven, said oven door having an opening adapted to register with the front end of said trough, and a burner intake extending from said burner through said opening.

4. The combination with the oven of a coal stove, of an oven door, a burner adapted to be detachably set in the oven, said burner having laterally and downwardly projecting wings forming with the burner an inverted trough adapted to rest at its edges upon the bottom of the oven, said oven door having an opening adapted to register with the front end of said trough, a burner intake extending from said burner through said opening, and an auxiliary door mounted on the main door for closing said opening when the burner is removed from the oven.

5. The combination with the oven of a coal stove, of a burner adapted to be detachably set into the oven, said burner having a transverse deflector plate extending across the top of the same, and a perforated plate detachably supported within the oven at a short distance above said deflector plate, said perforated plate having ledges on the under side for engaging with a pan to support the same.

[Claims 6 to 10 not printed in the Gazette.]

1,191,669. VEHICLE-TOP. PERLEY C. CLARK, Montrose, Colo. Filed July 7, 1915. Serial No. 38,529. (Cl. 21—62.)



1. In a vehicle top, the combination of a frame movable horizontally of the vehicle, a track member supporting said frame, a slide mounted on said track member, a carriage releasably connected to said slide, a casing supported on said vehicle, and means mounted both interiorly and exteriorly of said casing for operating said slide to raise and lower said frame.

2. In a vehicle top, the combination of a frame movable horizontally of the vehicle, a track member supporting said frame, a slide mounted on said track member, a carriage releasably connected to said slide, a casing supported on said vehicle, means mounted both interiorly and exteriorly of said casing for operating said slide to raise and lower said frame, and means associated with said casing for preventing operation of the last-named means in one direction.

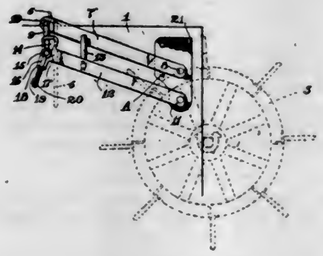
3. In a vehicle top, the combination of a frame adjustable longitudinally of the vehicle, a slide supporting said frame, a carriage associated with said slide and including a spring catch member, means carried by the carriage for releasing said catch member from said slide, and means associated with said carriage for adjusting said slide to raise and lower said frame.

4. In a vehicle top, the combination of a frame movable horizontally of the vehicle, a track secured to said vehicle, a slide member mounted on said track and supporting said frame, a carriage releasably connected to said slide member, and a flexible element secured to said carriage and movable longitudinally of said track to raise and lower said frame.

5. In a vehicle top, the combination of a frame movable horizontally of the vehicle, a track secured to said vehicle, a slide member mounted on said track and supporting said frame, a carriage releasably connected to said slide member, a flexible element secured to said carriage and movable longitudinally of said track to raise and lower said frame, and a device for winding and unwinding said flexible element when the frame is raised and lowered, said carriage being adapted to be disconnected from said slide before the frame is moved from raised to lowered position, whereby to permit the rewinding of said flexible element after the frame is lowered.

[Claims 6 and 7 not printed in the Gazette.]

1,191,670. MANURE-SPREADER. WILLARD J. COOK, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed June 5, 1912. Serial No. 701,720. (Cl. 111—40.)



1. In combination with a manure spreader, a rising and falling rake mechanism movable freely up and down automatically, said mechanism including a rake movable back and forth relatively thereto, and means acting automatically on the lowering of the said mechanism to lock the rake against said relative movement, said mechanism being so sustained when in lowered position that it will be raised automatically by the feed of the manure to the spreader.

2. In combination with a manure spreader, a rake mechanism movable upwardly automatically and adapted to move by gravity from an upper position downwardly to a lower position, and provided with a relatively movable rake, means controlled by the downward movement of the rake mechanism for locking the rake against said relative movement, and a stop device in position to limit the downward movement of the rake mechanism and to support the same in such position that it will be raised automatically by the feed of the manure.

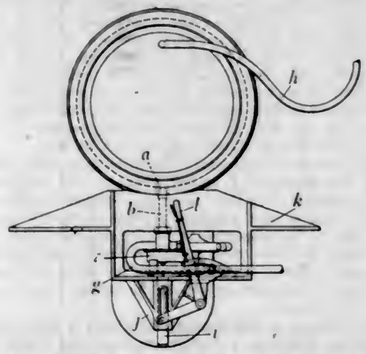
3. In combination with a manure spreader, a rake mechanism movable upwardly automatically and provided with a relatively movable rake adapted to be locked when the rake mechanism is in lowered position, means operating on the upward movement of the rake mechanism to automatically unlock the rake, and a stop device in position to limit the downward movement of the rake mechanism and to support the same in such position that it will be raised automatically by the feed of the manure.

4. In combination with a manure spreader, a rake mechanism movable up and down automatically and provided with a relatively movable rake adapted to be locked and unlocked respectively, means operating automatically on the downward movement of the rake mechanism to lock the rake, and operating automatically on the upward movement of the rake mechanism to unlock the rake, and a stop device in position to limit the downward movement of the rake mechanism and to support the same in such position that it will be raised automatically by the feed of the manure.

5. In a manure spreader, the combination of a rake support movable up and down automatically, a rake carried thereby and movable bodily with the support up and down and movable also relatively to the support, said rake adapted to be locked and unlocked respectively with reference to the support, means operating automatically to lock the rake on the downward movement of the support, and acting automatically to unlock the rake on the upward movement of the support, and a stop device in position to limit the downward movement of the rake support and to sustain the same in such position that it will be raised automatically by the feed of the manure.

[Claims 6 to 13 not printed in the Gazette.]

1,191,671. MEANS FOR CLEANSING THE INTERIOR OF BARRELS, JARS, AND LIKE VESSELS. HERBERT ARTHUR COUCHMAN, Burton-upon-Trent, England. Filed May 21, 1915. Serial No. 29,512. (Cl. 141—6.)



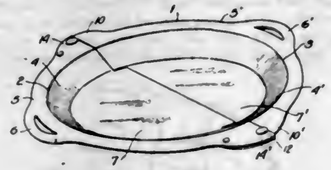
1. In an apparatus for cleansing the interior of barrels and other vessels, the combination with means for impingement of the cleansing fluid upon the interior surface of the vessel, of means for the admission of compressed air to the said vessel simultaneously with the admission of the said cleansing fluid, as set forth.

2. In apparatus for cleansing the interior of barrels and other vessels, the combination with a hollow spindle and a jet forming nozzle in attachment therewith, of a water supply conduit to the said spindle, a turbine wheel mounted in the said conduit, a speed reducing gear train between the said wheel and the said spindle, and means for the admission of compressed air to the vessel simultaneously with the admission of water by the aforesaid nozzle, as set forth.

3. In apparatus for cleansing the interior of barrels and other vessels, the combination consisting of a support for the vessel during cleansing, a jet forming element with a liquid supply thereto, means whereby the said element is rotated by the said liquid supply, means for inserting the jet forming element within the vessel and withdrawing same therefrom, and means for the admission of compressed air to the vessel simultaneously with the admission of liquid by the aforesaid jet forming element, as set forth.

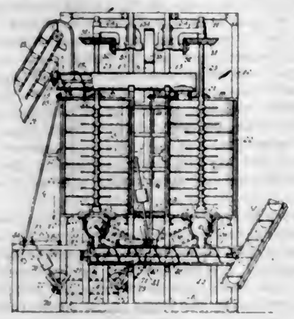
1,191,672. PIE-PAN. MAY T. CROSBY, Kansas City, Mo. Filed Sept. 8, 1915. Serial No. 49,600. (Cl. 53—6.)

1. The combination with separate pan sections, each consisting of a bottom and a side wall and a horizontal rim on the side wall, the horizontal rims having projecting flanges at their free facing edges, the flange on one rim having a stud and the flange on the other rim a slot for receiving the stud, a latch pivotally mounted in the slotted flange and having a transverse slot adapted for overlying the stud receiving slot and for also receiving said stud to lock the sections together.



2. A pan comprising separate sections, each consisting of a bottom, a side wall and a rim on the side wall, the side walls being set back from the edges of the bottom portions whereby the said bottom portions may overlap and the said rims having stud and slot members, the slotted members being provided with pivoted latches, having transverse slots for receiving the stud members on the opposite pan section whereby the sections are locked together.

1,191,673. LAMPBLACK-MACHINE. WILLIAM H. DAVIS, Muncie, Ind. Filed Oct. 10, 1914. Serial No. 866,101. (Cl. 134—60.)



1. A machine for making carbon black including a vertical agitating chamber for receiving the carbon black, means for supplying carbon black to the upper end thereof, means for removing the carbon black from the lower end thereof, and a rotary beater mechanism located within said chamber.

2. A machine for making carbon black including an agitating chamber, means for conveying previously formed carbon black to one end of said chamber, means for removing the carbon black from the other end of the chamber, and rotary beating mechanism within said chamber.

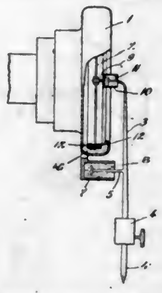
3. A machine for making carbon black including a beating chamber, means for intermittently charging said chamber with previously formed flakes of carbon black, and means within said chamber for beating said carbon black.

4. A machine for making carbon black including a beating chamber, means for charging said chamber with previously formed flakes of carbon black, means for removing the carbon black from said chamber and the said charging and removing means being arranged so as to be alternately operated, and means within said chamber for beating said carbon black.

5. A machine for making carbon black including a vertically disposed agitating chamber, an inlet opening at the upper end for previously formed carbon flakes, a valve for closing said opening, a conveyer for moving the carbon black from the lower end of said chamber, means for alternately opening said inlet valve and operating said carbon black removing means, and means within said chamber for agitating the carbon black while therein.

[Claims 6 to 8 not printed in the Gazette.]

1,191,674. METHOD OF CONSTRUCTION OF TALKING-MACHINES. PATRICK B. DELANY, South Orange, N. J. Original application filed July 19, 1913, Serial No. 779,947. Divided and this application filed Oct. 21, 1914. Serial No. 867,709. (Cl. 274—35.)



1. The method herein described of connecting parts of the reproducing mechanism of a talking machine, which consists in applying to the juncture of the diaphragm and sound box and to the juncture of metallically unconnected sections of the stylus arm adjacent the diaphragm, masses of a suitable meltable material inert to vibrations and subjecting the assembled parts to heat, whereby the parts assume normal positions relatively to one another and are so permanently held upon the cooling of the connecting masses.

2. The method herein described of connecting parts of the reproducing mechanism of a talking machine which consists in applying to the juncture of the diaphragm and sound box, of the stylus arm support and the sound box and of the metallically unconnected sections of the stylus arm adjacent the diaphragm, masses of a suitable meltable material inert to vibrations and subjecting the assembled parts to heat, whereby the parts assume normal positions relatively to one another and are so permanently held upon the cooling of the connecting masses.

3. The method herein described of connecting parts of the reproducing mechanism of a talking machine which consists in applying to the juncture of the metallically unconnected sections of the stylus arm adjacent the diaphragm and of the arm support and sound box masses of a meltable plastic material inert to vibrations and subjecting the assembled parts to heat for the adjustment of the parts in operative positions.

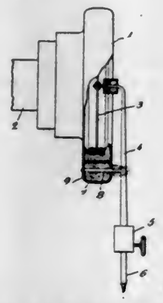
4. The method herein described of connecting parts of the reproducing mechanism of a talking machine, which consists in applying to the juncture of the diaphragm and the sound-box and to the juncture of the stylus arm and its holder masses of a suitable meltable material inert to vibrations, allowing said masses to harden and then heating the material to a sufficient degree to allow the diaphragm and stylus arm to relax and find neutral or equalized positions.

5. The method herein described of mounting a vibratory diaphragm which consists in arranging the diaphragm with a retaining gasket in a supporting frame and in fastening the diaphragm to the gasket and to the frame by a meltable mass while in a heated plastic condition but which hardens on cooling.

1,191,675. PHONOGRAPH OR TALKING-MACHINE. PATRICK B. DELANY, South Orange, N. J. Continuation of applications Serial No. 700,394, filed May 29, 1912, and Serial No. 779,947, filed July 19, 1913. This application filed Oct. 21, 1914. Serial No. 867,710. (Cl. 274—35.)

1. The combination of a diaphragm, its head, a cooperating vibrating arm, a support for said arm rigidly attached thereto and projecting laterally therefrom and attached directly to the head, and a fixed plastic mass inert to vibrations and embracing the sides of said support.

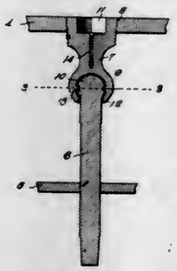
2. The combination of a diaphragm, a coöperating vibrating arm, a container fixed relatively to the diaphragm, a meltable mass of material inert to vibrations disposed within the container and a rod embedded in said mass with its ends rigidly attached respectively to the container and to said arm.



3. The combination of a diaphragm, its actuating member, a supporting rod rigidly attached at one end to said member and its other end rigidly secured to a support fixed relatively to the diaphragm and a meltable mass of material inert to vibrations embracing said supporting rod.

4. The combination of a diaphragm, its actuating member, a supporting rod rigidly attached at one end to said member, and means acting upon the juncture of said member and rod to deaden or absorb the vibrations thereof.

1,191,676. STAY-BOLT. PHILIP DI MAGGIO, Albany, N. Y. Filed Nov. 30, 1915. Serial No. 64,242. (Cl. 85—1.5.)

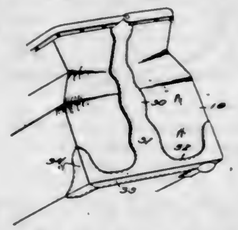


A flexible stay bolt comprising a bolt section having a spherical head, and a threaded plug having a spherical socket engaging the spherical head of the bolt, said spherical head of the bolt having diametrically opposite hemispherical recesses on the curved surface, and hemispherical projections in the periphery of the spherical socket engaging said recesses of the head.

1,191,677. TRAVELING-BAG. WILLIAM F. DORRIS, Rochester, N. Y. Filed Aug. 30, 1915. Serial No. 47,918. (Cl. 190—53.)

1. In a device of the class described, a receptacle having a bottom and sides, and end portions constituting continuations of the sides, said end portions meeting along the vertical axis of the receptacle, and a member connecting the lower corners of the receptacle with each other, connecting the end portions of a given end of the receptacle, and extending along said vertical axis, said member comprising a vertical portion, members extending laterally from the lower end of said portion and terminating in enveloping devices for the lower corners.

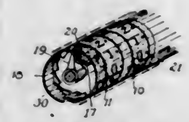
2. In a device of the class described, a receptacle having a bottom, sides, and end portions, said end portions meeting along a central vertical line, and a T-shaped member comprising a flat central supporting strip, a horizontal angle member extending on both sides of the central strip, and angle end members, said T structure connecting the lower corners of a given end of the receptacle and overlapping the sides, one end and the bottom, at the edge thereof, said strip connecting the aforesaid meeting edges.



3. In a device of the class described, a blank comprising a rectangular sheet having a central portion constituting the bottom of a bag having a broad base, portions constituting the sides of the bag, the ends of the side portions extending beyond the central portion, said blank being scored longitudinally between the central and side portions, and the side portions being scored along a line coincident with the ends of the central portion, a second blank of substantially the formation of the blank first mentioned but terminating on a line intermediate of the longitudinal score lines and the outer edges of the blank, and a brace extending over the meeting edges of both blanks, said brace including a central vertical portion and a lower member extending at substantially right angles therewith, on both sides thereof, forming an inverted T structure, and a triangular member located at each end of the lower member, embracing three sides of the folded blanks, and coöperating with said central portion.

4. As an article of manufacture, a brace comprising a vertical portion and a lower member extending at substantially right angles therewith, on both sides thereof, forming an inverted T structure, and an angular member located on each end of the lower member and including a portion extending in the plane of the vertical portion, and portions extending at substantially right angles therewith in two directions.

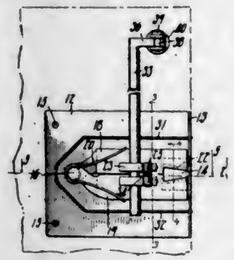
1,191,678. CALCULATING DEVICE. HARRY W. DYER, East Orange, N. J. Filed Oct. 21, 1912. Serial No. 726,966. (Cl. 235—142.)



1. An article of manufacture comprising a pair of indicators rotatively mounted on a common axis, a circular spring located between said indicators, said spring having a laterally projecting portion adapted to engage and operate one of said indicators, said spring also having a portion bowed inwardly, and an operating member carried by the other indicator and adapted to engage and straighten said bowed portion of the spring to cause the laterally projecting portion of said spring to operate the first mentioned indicator.

2. An article of manufacture comprising, a cylindrical holder, a pair of indicators rotatively mounted in said holder co-axially therewith, a circular spring positioned in said holder, said spring being secured at one end to said holder and having the opposite end free to move, said spring having on its free end a laterally projecting portion adapted to engage and operate one of said indicators, said spring also having a portion bowed inwardly, and an operating member carried by the other indicator and adapted to engage and straighten said bowed portion of the spring to cause the laterally projecting portion of said spring to operate the first mentioned indicator.

1,191,679. DOOR-LATCHING DEVICE. CLEMENS DZIEGIELEWSKI, Detroit, Mich. Filed July 31, 1915. Serial No. 42,900. (Cl. 70—49.)



1. In combination, two members, one a door frame and the other a door arranged to swing in respect thereto, mechanism for latching the door comprising a striker plate supported by one of the members, said striker plate including a T-shaped striker having a web extending transversely of the member by which it is carried and having flanges extending from the web in opposite directions in the plane of the last mentioned member, means for supporting said striker plate on the edge of the member by which it is carried and wholly between the inner and outer faces thereof, said striker plate including a base flange through which the supporting means passes, said flange lying in a plane at substantially right angles to the plane of the member by which the striker plate is carried, a pair of pivotally supported opposed latch bars carried by the other member, resilient means tending to force the latch bars together, said latch bars being in alinement with the striker, whereby they are forced apart as the door approaches a closed position and are thereafter snapped together beyond the flanges, a rotatable shaft arranged transversely of the latch bars, and a wedge carried by said shaft, said wedge being positioned to enter between the latch bars and force them out of alinement with the striker when the shaft is rotated.

2. In combination, two members, one a door frame and the other a door arranged to swing in respect thereto, mechanism for latching the door comprising a striker supported by one of the members, said striker including a web extending transversely of the member by which it is carried and oppositely extending flanges arranged in the plane of the last mentioned member, said web and flanges together being substantially arrow-head shape in cross-section, means for supporting said striker plate on the edge of the member by which it is carried and wholly between the inner and outer faces thereof, said striker plate including a base flange through which the supporting means passes, said flange lying in a plane of substantially right angles to the plane of the member by which the striker plate is carried, a pair of pivotally supported opposed latch bars carried by the other member, resilient means tending to force the latch bars together, said latch bars being in alinement with the striker, whereby they are forced apart as the door approaches a closed position and are thereafter snapped together beyond the flanges, a rotatable shaft arranged transversely of the latch bars, a wedge rigid therewith whereby, when the shaft is rotated, the latch bars is removed from alinement with the striker, and means for imparting angular movement to the shaft.

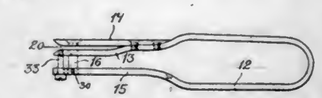
3. In combination, two members, one a door frame and the other a door arranged to swing in respect thereto, mechanism for latching the door comprising a striker plate supported by one of the members, said striker plate including a T-shaped striker, means for supporting said striker plate on the edge of the member by which it is carried and wholly between the inner and outer faces thereof, said striker plate including a base flange through which the supporting means passes, said flange lying in a plane at substantially right angles to the plane of the member by which the striker plate is carried, a pair of pivotally supported opposed latch bars carried by the other member, resilient means tending to force the latch bars together, said latch bars having beveled surfaces flaring transversely of the plane of the member by which they are carried in alinement with the striker whereby they are forced apart as the door approaches a closed position, the resilient means serving to thereafter force them toward each other beyond the flanges, a rotatable shaft arranged transversely of the latch bars, and a wedge carried by said shaft, said wedge being positioned to enter between the latch bars and force them out of alinement with the striker when the shaft is rotated.

4. In combination two members, one a door farme and the other a door arranged to swing in respect thereto, mechanism for latching the door comprising a striker plate supported by one of the members, said striker including a web and a flange projecting therefrom, the flange having a surface inclined transversely in respect to the plane of the door opening, means for supporting said striker plate on the edge of the member by which it is carried and wholly between the inner and outer faces thereof, said striker plate including a base flange through which the supporting means passes, said flange lying in a plane at substantially right angles to the plane of the member by which the striker plate is carried, a latch bar pivotally supported on the other member, a spring for normally holding the latch bar in alinement with the inclined surface on the striker, a rotatable shaft arranged transversely of the latch bar, a wedge rigid therewith whereby, when the shaft is rotated, the latch bar is removed from alinement with the striker, and means for imparting angular movement to the shaft.

5. In combination, a door frame having an opening, a door pivoted to swing in said opening, a striker supported on the frame, said striker including a surface inclined transversely in respect to the plane of the door opening, there being a depression in the striker beyond the inclined surface, means for supporting said striker plate on the edge of the member by which it is carried and wholly between the inner and outer faces thereof, said striker plate including a base flange through which the supporting means passes, said flange lying in a plane at substantially right angles to the plane of the member by which the striker plate is carried, a latch bar pivotally supported on the door, a spring for normally holding the latch bar in alinement with the inclined surface on the striker, a rotatable shaft arranged transversely of the latch bar, a wedge rigid therewith, whereby, when the shaft is rotated, the latch bar is removed from alinement with the striker, and means for imparting angular movement to the shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,191,680. CHECK OR TICKET PUNCH. FRED FARROW, Boston, Mass., assignor to Empire Ticket Company, Boston, Mass., a Voluntary Association of Massachusetts. Filed Apr. 6, 1916. Serial No. 89,256. (Cl. 164—119.)



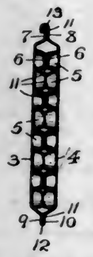
1. A check punch comprising a guide, a plunger movable therein, the outer end of the plunger being provided with a notch having two flat faces meeting at an angle which extends across the plunger, the intersection of said faces with the periphery of the plunger forming two acute angled cutting edges which are inclined in opposite direction relatively to the axis of the plunger, one of said faces projecting forward farther than the other, whereby

one of said cutting edges is caused to enter a check or ticket in advance of the other, an ear attached to the guide and provided with a female die separated from the guide by a check-receiving throat having a check-supporting side substantially at a right angle to the axis of the plunger, and manually operated means for projecting the plunger into the throat and die, resilient means being provided for retracting the plunger from the die and throat.

2. A check punch comprising a compressible resilient looped handle normally expanded by its own resilience, an arm on one end of said handle, a plunger loosely engaged with and projecting from said arm, another arm on the opposite end of the handle having a guide for said plunger, and an ear attached to the guiding arm and provided with a female die separated from the guiding arm by a check-receiving throat, the said arms being held yieldingly separated by the normal expansion of the handle to retract the plunger from said throat, and the plunger being projected through said throat and into the die by the compression of the handle, the loose engagement of the plunger with the plunger-carrying arm compensating for changes in the angular positions of said arms caused by the compression of the handle.

3. A check punch comprising a compressible resilient looped handle normally expanded by its own resilience, an arm on one end of said handle, a plunger loosely engaged with and projecting from said arm, another arm on the opposite end of the handle having a guide in which said plunger has a close sliding fit, an ear attached to the guiding arm and provided with a female die separated from the guiding arm by a check-receiving throat, the said arms being held yieldingly separated by the normal expansion of the handle to retract the plunger from said throat, and the plunger being projected through said throat and into the die by the compression of the handle, and means preventing the withdrawal of the plunger from the guide.

1,191,681. HOLLOW STRUCTURE FOR RADIATORS, CONDENSERS, AND THE LIKE. FREDERICK A. FELDKAMP, Newark, N. J., assignor to Electrolytic Products Co., a Corporation of New Jersey. Filed Mar. 26, 1914. Serial No. 827,264. (Cl. 257—130.)



1. As a new article of manufacture, a hollow structure comprising oppositely placed portions and connecting edge-portions, the oppositely placed portions being provided with interiorly extending and registering non-perforated hollow stud-like projections formed with contacting closed ends.

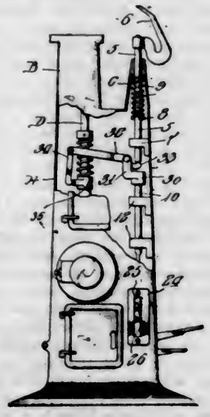
2. As a new article of manufacture, a hollow structure comprising oppositely placed portions and connecting edge-portions, the oppositely placed portions being provided with interiorly extending and registering non-perforated hollow stud-like projections formed with contacting closed ends, and means for permanently uniting the contacting closed ends of the said registering hollow like projections.

3. As a new article of manufacture, a hollow structure made from a blank doubled upon itself so as to be provided with doubled-over and longitudinally extending contacting portions forming one edge of said structure, and being formed furthermore with longitudinaly extending marginal portions lapped over and pressed together to form another edge of said structure, the doubled-over portions of the blank being provided with interiorly projecting and registering hollow stud-like projections formed with contacting closed ends.

4. As a new article of manufacture, a hollow structure made from a blank doubled upon itself so as to be provided with doubled-over and longitudinally extending contacting portions forming one edge of said structure, and being formed furthermore with longitudinally extending marginal portions lapped over and pressed together to form another edge of said structure, the doubled-over portions of the blank being provided with interiorly projecting and registering hollow stud-like projections formed with contacting closed ends, and means for permanently uniting the contacting closed parts of the said registering hollow projections.

5. As a new article of manufacture, a hollow structure made from a blank doubled upon itself so as to be provided with doubled-over and longitudinally extending contacting portions forming one edge of said structure, and being formed furthermore with longitudinally extending marginal portions lapped over and pressed together to form another edge of said structure, the doubled-over portions of the blank being provided with interiorly projecting and registering hollow stud-like projections formed with contacting closed ends, and the said doubled over and lapped marginal portions of the blank and the closed parts of the said registering hollow projections being united with solder.

1,191,682. ADJUSTABLE ANVIL FOR SHOE-NAILING MACHINES. MAURICE S. FINCH, St. Joseph, Mo., assignor to Specialty Shoe Machinery Company, St. Joseph, Mo., a Corporation of Missouri. Filed Apr. 5, 1915. Serial No. 19,196. (Cl. 1—41.)



1. In a shoe-nailing machine an anvil mounted upon a vertically reciprocal rod, means for reciprocating same comprising a spring engaging said rod and adapted to move the same to the limit of its downward movement, and a lever adapted to move the rod in its upward direction against said spring, and independent means for vertically adjusting the fulcrum of said lever.

2. In a shoe nailing machine an anvil, a vertically reciprocal rod upon which the same is mounted, a spring engaging said rod and adapted to move the same to the limit of one of its movements, a lever for moving said rod against said spring, and devices for vertically adjusting the fulcrum of said lever.

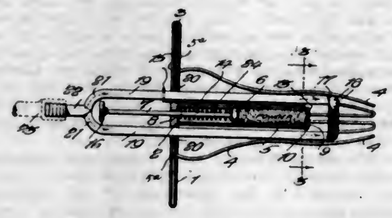
3. In a shoe nailing machine, an operating shaft, an anvil, a vertically reciprocal rod upon which said anvil is mounted, a spring engaging said rod and adapted to move the same to the limit of one of its movements, a lever operatively connected with said shaft at one end and having its opposite end engage the lower end of said rod, a vertically disposed rod below said anvil rod and upon the upper end of which said lever is fulcrumed, and means for adjusting said last mentioned rod and thereby raising or lowering the fulcrum of said lever.

4. In a shoe nailing machine, an operating shaft, an anvil, a vertically reciprocal rod upon which said anvil is mounted, a spring engaging said rod and adapted to move the same to the limit of one of its movements, a lever operatively connected with said shaft at one end and having its opposite end engage the lower end of said rod, a vertically disposed rod below said anvil rod and upon the upper end of which said lever is fulcrumed, and a foot lever to which the lower end of the last mentioned rod is connected for adjusting said last mentioned rod and thereby raising or lowering the fulcrum of said lever.

5. In a shoe nailing machine, an operating shaft, an anvil, a vertically reciprocal rod upon which said anvil is mounted, a spring engaging said rod and adapted to move the same to the limit of one of its movements, a lever operatively connected with said shaft at one end and having its opposite end engage the lower end of said rod, a vertically disposed rod below said anvil rod and upon the upper end of which said lever is fulcrumed, and means for adjusting said lower rod consisting of a foot lever to which the same is pivotally connected, pawl and ratchet mechanism for locking said foot lever in its adjusted positions, and means for disengaging said pawl and ratchet mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,191,683. SURGICAL INSTRUMENT. HULON KIRK FINLEY, Aspermont, Tex. Filed Nov. 26, 1915. Serial No. 63,457. (Cl. 128—45.)



1. An instrument of the character specified, comprising a support having a barrel extending laterally from one face thereof and at the center of the support, a cover or door hinged to the end of the barrel remote from the support, a latch for normally holding the door closed, a link connected with the latch and extending through the support for moving the latch to open the door, a plunger in the barrel and having a stem extending through the support for operating the plunger, a series of speculum blades connected to the support and encircling the barrel and movable toward and from the barrel, an irrigating ring provided with parallel branches, the support having openings through which the branches extend, and the said branches converging at the opposite end from the ring to a common connection, said branches being slidable with respect to the support for permitting the ring to expand the speculum blades, the ring having discharge openings at the face remote from the support.

2. An instrument of the character specified, comprising a support having a barrel extending laterally from one face thereof and at the center of the support, a cover or door hinged to the end of the barrel remote from the support, a latch for normally holding the door closed, a link connected with the latch and extending through the support for moving the latch to open the door, a plunger in the barrel and having a stem extending through the support for operating the plunger, a series of speculum blades connected to the support and encircling the barrel and movable toward and from the barrel, and a common means slidably mounted in the support between the barrel and the blades for expanding the blades and for discharging liquid through the blades.

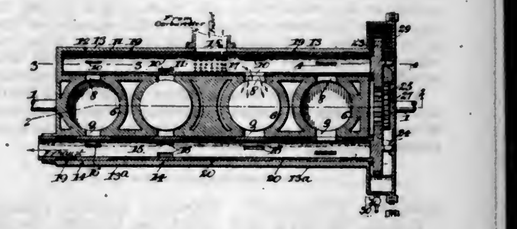
3. An instrument of the character specified, comprising a support having a barrel extending laterally from one face thereof and at the center of the support, a cover or door hinged to the end of the barrel remote from the support, releasable means for normally holding the door closed, a series of speculum blades connected to the support and encircling the barrel and movable toward and from the barrel, and a common means slidably mounted in the support between the barrel and the blades for expanding the blades and for discharging liquid through the blades.

4. An instrument of the character specified, comprising a support having a barrel extending laterally from one face thereof and at the center of the support, a cover or door hinged to the end of the barrel remote from the support, releasable means for normally holding the door closed, blades connected with the support and a common means slidably connected with the support between the blades and the barrel for expanding the blades and for discharging liquid past the blades.

5. An instrument of the character specified, comprising a support having a barrel extending laterally therefrom provided at its opposite end with a releasable door, blades connected with the support, a plunger in the barrel for ejecting the contents thereof, and an expander for the blades mounted to slide on the barrel toward and from the door.

[Claims 6 and 7 not printed in the Gazette.]

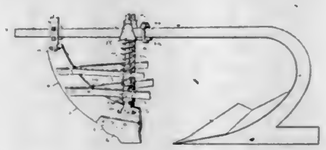
1,191,684. ROTARY VALVE FOR INTERNAL-COMBUSTION ENGINES. CYRILLE FRANK FOUNTAIN and WILLIAM A. LANGFORD, Park City, Utah. Filed June 29, 1915. Serial No. 37,065. (Cl. 123—59.)



1. The combination of a piston chamber having a piston, a casing arranged transversely thereof having a port in communication with the chamber the casing being open at one side and end, a tubular valve in the casing closed at one end by the wall of the casing and at the other end by a cap gear the valve having a port adapted to register with the cylinder port at times and also having a belt of minute perforations in communication with the side opening for the admission and atomization of the elements of the gaseous charge, and a driven gear for rotating the cap gear to move the valve port into registration with the cylinder port as the piston performs a suction stroke.

2. The combination of a piston chamber having a piston, a casing arranged transversely thereof having a port in communication with the chamber the casing having a side opening and an open end, a tubular valve in the casing closed at one end by the wall of the casing and at the other end by a cap gear, the valve having a port adapted to register with the cylinder port at times and also having a belt of minute perforations in communication with the side opening for the admission and atomization of the elements of the gaseous charge, a driving gear to move the valve port into registration with the cylinder port and admit a charge to the cylinder, the piston in the chamber being adapted to cover the cylinder port at the instant of the subsequent explosion of the charge.

1,191,685. PLOW-COLTER. MORGAN C. FRENCH, Craig, Colo. Filed Nov. 20, 1915. Serial No. 62,527. (Cl. 97—6.)



1. The combination with a plow beam, of a colter comprising a curved plate, a blade removably secured to the plate having stepped portions to form cutting faces, and means to adjustably attach the plate to the plow beam.

2. The combination with a plow beam, of a colter comprising a plate, a blade having cutting faces removably secured to said plate, a bar adjustably and pivotally secured to the forward end of said plate, means to adjustably secure the bar to the beam, a standard adjustably and pivotally secured to the opposite end of said plate, a guide member for the upper end of the standard, a spring surrounding the standard, an adjusting nut on the standard to regulate the tension of said spring, a brace rod attached to said standard and extending upwardly, said standard and rod being on opposite sides of the beam, and means to attach the guide member to the plow beam.

3. The combination with a plow beam, of a colter comprising a curved plate having a forward cutting edge, a blade removably secured to said plate and having cutting faces, means to adjustably and pivotally attach the forward end of the plate to the beam, a guide member having openings therethrough, means to attach the guide member to the beam, a standard adjustably secured to said plate and having its upper end extending through one of said openings in the guide member, a brace rod attached at its lower end to the standard and having its upper end introduced through the other opening of the guide member, said standard and brace rod being on opposite sides of the beam, a coil spring surrounding said standard, and means to adjust the tension of said spring.

4. The combination with a colter comprising a plate and a standard, of guards comprising outwardly curved fingers arranged in pairs on said plate, the separated ends thereof projecting on opposite sides of the standard.

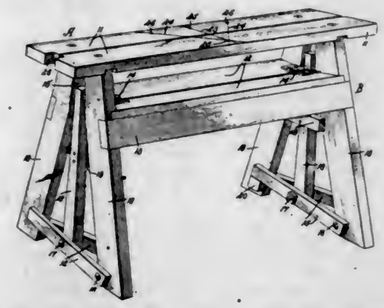
1,191,686. SHOE-LAST. TELEMACO ALLEGRO JOSEPH FUSARO, Cincinnati, Ohio. Filed Aug. 13, 1915. Serial No. 45,404. (Cl. 12—139.)



1. A shoe last comprising a heel plate arranged to fit against the bottom of the heel of said last, said last being provided with a groove in each side thereof, said grooves extending upward from the bottom of the last, lugs on the front end of said plate, said lugs being provided with slots and being arranged to slide in said grooves, and means passing through the slots in said lugs movably to secure said plate to said last.

2. A shoe last comprising a heel plate arranged to fit against the bottom of the heel of said last, said last being provided with a groove in each side thereof, said grooves extending upward from the bottom of the last, lugs on the front end of said heel plate, said lugs being provided with slots and being arranged to slide in said grooves, plates arranged to fit into said grooves loosely over said lugs, and means passing through the slots in said lugs movably to secure said heel plate to said last.

1,191,687. MECHANIC'S TRESTLE. FRED L. GILLETT, Montclair, N. J. Filed Apr. 25, 1916. Serial No. 93,411. (Cl. 20—83.)



1. The herein described trestle comprising two similar side parts, each side part comprising a pair of legs, a jaw member secured to the upper ends of said legs and a shelf member below the jaw members, hinges connected to the shelf members for securing the said parts together for relative movement of the jaws toward or from each other, and pairs of toggle levers connected to the lower ends of the legs to move the jaws forcibly toward each other.

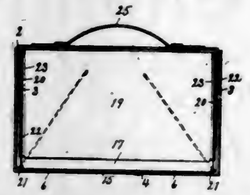
2. The herein described mechanics' trestle comprising the combination of a pair of similar side parts, each side part comprising a pair of legs, a jaw member connected to the upper ends of the legs, a shelf member beneath the jaw and a side flange meeting the outer edge of the shelf member, a pair of hinges connecting the shelf members with their inner edges adjacent each other whereby the side parts are adapted to move relatively to each other around a longitudinal axis, said shelf members and side flanges forming a tool holder when the trestle is collapsed, connections between the opposite legs of the several parts, and means movable downwardly at the end of the shelf members to actuate said connections to spread the legs, substantially as set forth.

3. The herein described trestle comprising supporting members movable toward and from each other, a pair of jaws connected to the upper ends of said supporting members and movable relatively to each other as a result of the aforesaid movement of the supporting members, said jaws lying substantially in the same plane when closest together and provided with horizontal and diagonal marks and having pin holes at the ends of the marks, substantially as set forth.

4. The herein described trestle comprising supporting members, hinges connecting the supporting members for movement relatively to each other around a longitudinal central axis, a pair of jaws connected to the upper ends of the supporting members and movable relatively to each other, pairs of toggle levers connecting the lower ends of the supporting members, a vertical plunger pivotally connected to each pair of toggle levers, the upper ends of the plungers extending into the spaces between and beneath said jaws in position to be engaged and forced downwardly by an article to be held between the jaws, and means to maintain the plungers in upright position.

1,191,688. FOLDING LUNCH-BOX. MYRON A. GILMAN, Westfield, Mass. Filed May 8, 1915. Serial No. 26,895. (Cl. 220—17.)

1. A folding box comprising an exterior box consisting in part of ends which have non-folding parts and parts that fold inwardly against one side of said exterior box, and of a bottom which has a non-folding part and parts that fold inwardly against said side, and an interior folding box which when unfolded fills said shell when expanded and retains the latter in expanded condition, said non-folding parts of said shell ends and bottom being adapted to receive said interior box, when the latter is folded and turned up edgewise between the sides of said shell when collapsed, with one side of said shell against the folded box on one side, and the folded portions of the ends and bottom of said shell against the folded box on the other side.



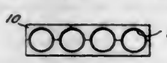
2. A folding box comprising an exterior shell consisting of side pieces, folding end pieces, and a folding bottom piece, said bottom piece having a portion adjacent to one edge which does not fold, and an interior box consisting of a bottom provided with folding side and end pieces, said interior box when folded being adapted to rest on said non-folding portion of said shell bottom and against one side of said shell, and the latter being adapted to be collapsed against said folded box, and said interior box when expanded being adapted to fit the interior of said shell when expanded and retain the latter in expanded condition.

3. A folding box comprising an exterior shell consisting of side pieces, folding end pieces, and a folding bottom piece recessed at the ends, said bottom piece having a portion adjacent to one edge which does not fold, and an interior box consisting of a bottom provided with folding side and end pieces, said interior box when folded being adapted to rest on said non-folding portion of said shell bottom and against one side of said shell, and the latter being adapted to be collapsed against said folded box, and said interior box when expanded being adapted to fit the interior of said shell when expanded, close the recesses in said shell bottom, and retain said shell in expanded condition.

4. The combination, in a folding box, with an interior folding box, of an exterior collapsible shell for said interior box, said interior box when folded being receivable in a vertical position against one of the sides of said shell, and the latter having in its ends and bottom intermediate folding creases and folding creases adjacent to the inner edges of the ends of said interior box, when the latter is folded and in place in the shell, to enable said ends and bottom to be folded against said folded box and leave a portion of the shell bottom unfolded to serve as a support for the folded box.

5. The combination, in a folding box, with a shell having creased folding ends and a creased folding bottom which permit the sides of such shell to be brought close together, of an interior box, for said shell and receivable on the shell bottom, such interior box comprising a bottom and two pairs of folding members connected with said bottom and having at their ends engaging means adapted to fasten said members to each other, with the members in one pair between the members in the other pair, to hold apart and brace said shell sides and retain said shell ends in unfolded condition.

1,191,689. METHOD OF MAKING WOODEN TUBES. BYRON B. GOLDSMITH, New York, N. Y. Filed Mar. 27, 1915. Serial No. 17,553. (Cl. 144—309.)

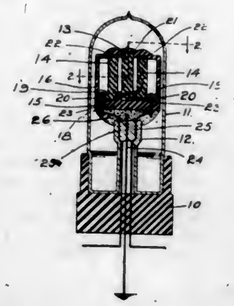


1. The process of making tubing which consists in channeling wooden blanks, cementing two of such blanks together on opposite sides of a suitable resisting tube fitting said channels, and imparting the desired final shape to the exterior of said united blanks.

2. The process of making tubing, which consists in channeling wooden blanks of suitable size and shape, cementing two of such blanks to opposite sides of suitable resisting tubes fitting said channels and dividing said blank between said holes.

3. The process of making tubing which consists in channel blanks of suitable size and shape, applying two of such blanks to opposite sides of thin paper resisting tubes with cement between meeting surfaces whereby to unite the whole, and dividing said blank between said tubes.

1,191,690. VACUUM LIGHTNING-ARRESTER. JOHN TYLER GREENE, Toledo, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 16, 1912. Serial No. 737,017. (Cl. 175—30.)



1. A lightning arrester comprising an evacuated vessel provided with an inwardly projecting stem, leading-in wires sealed through said stem, a base member within said vessel, a plurality of carbon blocks to serve the function of electrodes, each formed with a perforated foot, attaching devices extending through the perforations in said feet, and through said base member, with the extremities of which said leading-in wires are connected, a body of plastic, non-conducting material between said stem and said base, a yoke, rigid with the base, which extends around and engages the outer ends of the carbon blocks so as to hold the same in spaced relation.

2. A lightning arrester comprising an evacuated glass vessel formed with an inturned stem, leading-in wires sealed through said stem, a base arranged above and transversely to the stem, having a yoke member thereon, both of nonconducting refractory material, electrodes in parallel arrangement between and secured to said base and yoke and electrically connected with said leading-in wires respectively through the base, and a body of plastic, nonconducting material uniting the base to the stem and inclosing the upper ends of the leading in wires.

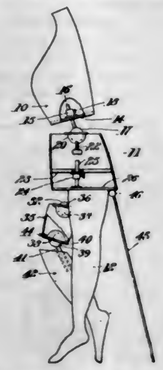
1,191,691. DISPLAY-FORM. MOIE GREENWALD, New York, N. Y. Filed Oct. 1, 1914. Serial No. 864,506. (Cl. 211—13.)

1. An improved display form comprising a hip section, a bust section, means whereby universal angular adjustment of said bust section with respect to the hip section may be effected, means whereby the bust section may be adjusted toward and from the hip section, and legs attached to said hip section.

2. An improved display form comprising a hip section provided with an upper cross piece, an upwardly extended rigid supporting member carried by said cross piece, a bust section having a lower cross piece engaging said supporting member, means whereby universal angular adjustment of said bust section with respect to the hip section may be effected, and means whereby the bust section may be adjusted toward and from the hip section.

3. An improved display form comprising a hip section provided with an upper cross piece, an upwardly extended

rigid supporting member having its lower end connected with said cross piece by a universal joint, a bust section vertically adjustable upon the upper portion of said supporting member, and legs attached to said hip section.

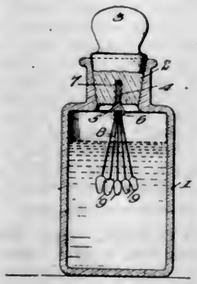


4. A display form comprising a hip section, a bust section attached to the hip section, a leg plate connected with said hip section and vertically adjustable with respect thereto, a rigid leg member attached to said leg plate, and a second leg member attached to said leg plate and formed of articulated sections, said leg plate and leg members having means whereby the relative positions of the legs may be varied.

5. A display form comprising a hip section, a bust section attached thereto, a supporting rod engaging said hip section, a rigid leg attached to the hip section, and a second leg attached to said hip section and formed of articulated sections to effect variations in the pose of the display form.

[Claims 6 to 9 not printed in the Gazette.]

1,191,692. PROCESS OF MATCHING TOOTH-CEMENT. GARRETT L. GRIER and FRANK L. GRIER, Milford, Del. Filed Jan. 21, 1913. Serial No. 743,333. (Cl. 88—14.)

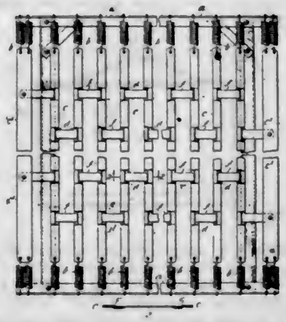


1. The herein described process of matching cement with teeth which consists in preparing a series of cement shade guides of different tints, subsequently altering the tints by immersing them in a liquid, and then matching the teeth with the cement samples.

2. The herein described process of matching cement samples with teeth which consists in preparing a series of cement shade guides of different tints, subsequently altering the tints by immersing them in water, and then matching the teeth with the cement samples.

3. The herein described process of matching cement samples with teeth which consists in preparing a series of cement shade guides of different tints, and subsequently altering the tints by immersing them in water and then matching the teeth with the wet cement samples.

1,191,693. METAL FABRIC. HENRY F. HAGER, Chicago, Ill., assignor to Henry Schomer Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 9, 1914. Serial No. 870,992. (Cl. 5—39.)



1. A metallic fabric including a plurality of slats placed side by side and formed of strip metal and rows of links formed of strip metal each row being disposed between adjacent slats, the links being staggered in adjacent rows and formed with opposing inturned hooks at their ends, the slats being slit where engaged with the links, portions of the slats margining the slits being removed from the general plane of the slats to enable the links to be received in the plane between the slats and the portions removed from the plane of the slats, the hook openings being in the plane of the slat portions that are removed from the general plane of the slats whereby the spreading movement of the slats is limited and the slats are permitted to move closer together.

2. A metallic fabric including a plurality of slats placed side by side and formed of strip metal and rows of links each row being disposed between adjacent slats, the links being staggered in adjacent rows and formed with opposing inturned hooks at their ends, the slats being slit where engaged with the links, portions of the slats margining the slits being removed from the general plane of the slats to enable the links to be received in the plane between the slats and the portions removed from the plane of the slats, the hook openings being in the plane of the slat portions that are removed from the general plane of the slats whereby the spreading movement of the slats is limited and the slats are permitted to move close together.

3. A metallic fabric including a plurality of slats placed side by side and formed of strip metal and rows of links each disposed between adjacent slats, the links being staggered in adjacent rows and formed with opposing inturned hooks at their ends, the slats being slit where engaged with the links, portions of the slats margining each of the slits being relatively spread apart vertically to form an opening in which the link there received may readily be transversely moved with respect to the engaging slat.

1,191,694. INDIVIDUAL-OFFICE-HEAT-REGULATING SYSTEM. EDWARD S. HALSEY, Lynn, Mass., assignor to Halsey Manufacturing Co., Wilmington, Del., a Corporation of Delaware. Filed July 12, 1909. Serial No. 507,071. (Cl. 236—6.)

1. The combination with a radiator having a valve, a thermostat containing a quantity of volatile liquid and having a wall movable by expansion of the vapor of such liquid, and a direct operating connection between the thermostat and valve, whereby the opening and closing of the valve is directly effected by the thermostat, said connection including a weighted lever having an inflexible link connection with the valve, and a flexible ligature connected to said lever.

2. In a temperature regulating system, a heat regulating valve, a thermostatic motor, a lever having connections for opening and closing the valve and tending to open the valve, a ligament connecting the lever and motor whereby the motor may operate the lever in one direction, and means for locking the valve in closed position until released by the action of said motor.



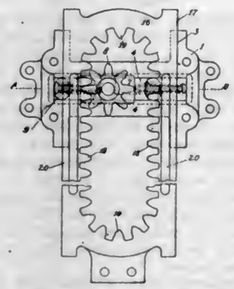
3. In a temperature regulating system, a heat regulating valve, a thermostatic motor, connections between said motor and valve whereby the former will actuate the latter, and means other than said motor for automatically and rigidly locking the valve in either closed or opened position.

4. In a temperature regulating system; a steam valve designed to move continuously from one extremity of its travel to the other; a thermostatic motor adapted to operate said valve; an elastic medium for transmitting the power and motion from said motor to the operating mechanism of said valve; a device for restraining the action of said elastic medium to cause the power developed by said motor to be gradually accumulated and stored in said elastic medium until sufficient in amount to automatically release itself, and connections whereby said valve will be operated to the opposite extremity of its travel when the power is released, and latching devices to hold the valve when so operated.

5. In a temperature regulating system; a steam radiator within a room it is designed to heat; a valve for said radiator; a thermostatic motor within said room designed to govern its temperature by operating said valve; a yielding resilient medium communicating the power and motion from said motor to the operating mechanism of said valve and an automatic device for locking and releasing said valve for the purpose specified.

[Claims 6 to 18 not printed in the Gazette.]

1,191,695. MECHANICAL MOVEMENT. ALBERT J. HARTLEY, Decatur, Ill., assignor of one-fourth to Porter J. Millikin, one-fourth to H. Clay Dempsey, one-fourth to Frank J. Temple, and one-fourth to Max H. Hurd, Decatur, Ill. Filed Mar. 13, 1915. Serial No. 14,119. (Cl. 74—27.)



1. In a mechanism of the character described and in combination, a supporting means having longitudinal guideways and also a transverse guide-way on each side of said longitudinal guide-ways, a driven member slidably arranged in said longitudinal guideways and having an internally toothed track, blocks slidably arranged in said transverse guideways, a driving shaft journaled in said blocks and having a gear thereon in engagement with said toothed track.

2. In a mechanism of the character described and in combination, a supporting means having longitudinal guideways and also transverse guideways, a driven member slidably arranged in said longitudinal guideways and having an internally toothed track, blocks slidably arranged in said transverse guideways, a driving shaft journaled in said blocks and having a gear thereon in engagement with said toothed track, said slidable blocks and said driven member having means coöperating to hold said gear in engagement with said toothed track.

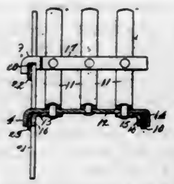
3. In a mechanism of the character described and in combination, a supporting means having longitudinal guideways and also transverse guideways, a driven member slidably arranged in said longitudinal guideways and having an internally toothed track, blocks slidably arranged in said transverse guideways, a driving shaft journaled in said blocks and having a gear thereon in engagement with said toothed track, said slidable blocks each having studs thereon and said driven member having flanges on each side, said studs and flanges coöperating to hold said gear in engagement with said toothed track.

4. In a mechanism of the character described and in combination, a supporting means having longitudinal guideways and also transverse guideways, a driven member slidably arranged in said longitudinal guideways and having an internally toothed track, blocks slidably arranged in said transverse guideways, a driving shaft journaled in said blocks and having a gear thereon in engagement with said toothed track, said slidable blocks each having studs and said driven member having flanges on each side, said studs and flanges coöperating to hold the gear in engagement with said toothed track, said flanges terminating short of the ends of the toothed track, whereby relative longitudinal movement only between the parts will be permitted during part of the travel of said driven member and transverse movement of the blocks and gear will be permitted when the gear is in engagement with the end portions of the toothed track.

5. In a mechanism of the character described and in combination, a supporting means having longitudinal guideways and also transverse guideways, a driven member slidably arranged in said longitudinal guideways and having an internally toothed track, blocks slidably arranged in said transverse guideways, a driving shaft journaled in said blocks and having a gear thereon in engagement with said toothed track, and means for absorbing the shock and jar of the movement of said slidable blocks.

[Claims 6 to 14 not printed in the Gazette.]

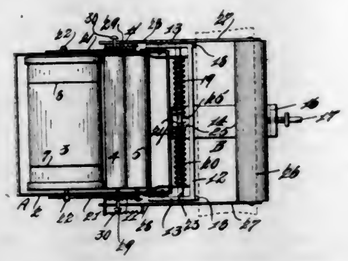
1,191,696. CRIB ATTACHMENT FOR BEDS. LOUIS S. HENDERSON, Blairs, S. C. Filed Feb. 8, 1916. Serial No. 77,026. (Cl. 5—59.)



A crib attachment for beds comprising a plurality of U-shaped strips disposed in spaced relation to each other, bars connecting the arm connecting portions of said strips, and having downwardly bent terminal portions, angle pieces secured to the under sides of said bars and including arms spaced from respective downwardly bent terminals of the bars, additional bars connecting the arms

of the U-shaped strips having their outer ends projecting beyond the outermost strip and provided with recesses respectively in their bottom edges, and a removable outer portion comprising leg members and bars connecting same, said bars being disposed respectively in the recesses of the second named bars and between the outer terminals of the first named bars and the adjacent angle pieces.

1,191,697. PRINTING DEVICE. VITALIS HIMMER, Jr., Bayonne, N. J., assignor to Charles K. Ash, Brooklyn, N. Y. Filed June 24, 1915. Serial No. 36,044. (Cl. 211—30.)



1. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by said frame on each side thereof, and a pin at each end of said bracket arranged to engage the adjacent plate on said frame.

2. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by said frame on each side thereof, a resilient plate located at each end of said bracket, and a pin carried by each plate releasably engaging the adjacent plate on said frame.

3. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by said frame on each side thereof, a pin at each end of said bracket engaging the adjacent plate on said frame, and means to lock said plate in adjusted positions.

4. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by said frame on each side thereof, a pin at each end of said bracket engaging the adjacent plate on said frame, a tooth or projection carried by each pivotal plate, said frame, at each side thereof, being provided with recesses located in the path of movement of the tooth on said pivotal plates.

5. In a printing device, a frame, printing elements carried thereby, a support for said frame, and means pivotally connecting said frame and support therefor, arranged to permit said frame to move or shift independently at each side thereof at a right angle to the axes of the pivotal connections.

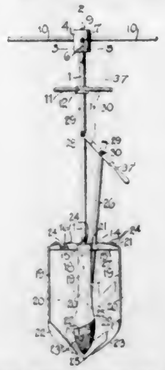
[Claims 6 and 7 not printed in the Gazette.]

1,191,698. POST-HOLE AUGER. ORVILLE L. M. HOOVER, Abilene, Tex., and SARAH J. ARDERY, Woodward, Okla. Filed May 22, 1915. Serial No. 29,824. (Cl. 255—66.)

1. The combination with a post-hole auger including a blade supporting member and a cage of blades supported thereon, of movable means located within said cage and for actuation to remove dirt therefrom, and means for normally maintaining said means in an inoperative position, substantially as described.

2. The combination in a post-hole auger, of a blade supporting member, a cage of blades mounted thereon, ratchet handle means, and means for withdrawing said auger from a hole, substantially as described.

3. The combination in a post-hole auger, of a blade supporting member, blades adjustably mounted thereon and arranged around a common axis, ratchet handle means, means for discharging the dirt from between said blades, and means for withdrawing said auger from a hole, substantially as described.



4. In a post-hole auger, including blades, mechanism for cleaning dirt from said blades, and means for securing said mechanism in an inoperative position during the operation of the auger, substantially as described.

5. In a post-hole auger the combination with ratchet means for turning said auger, of means in addition to said ratchet turning means for withdrawing said auger from a hole without placing any strain upon said ratchet turning means, substantially as described.

1,191,699. VEHICLE DRIVE-GEAR. HENRY S. HOPPER, Detroit, Mich. Filed Aug. 11, 1915. Serial No. 44,926. (Cl. 192—22.)



1. The combination with a drive axle and a driven wheel, of a friction clutch therebetween engageable by a rotation of the axle in either direction, a member other than the axle and wheel, and positively driven means mounted upon said member for preventing the engagement of said clutch when said wheel is driven in advance of said axle in the direction in which the latter is rotating.

2. The combination with a drive axle and a driven wheel, of a friction clutch therebetween engageable by a relative rotation of said parts in either direction, a stationary member, and positively driven means upon said stationary member controlled by the direction of rotation of said drive axle for preventing engagement of said clutch when said wheel is driven in the same direction as the axle in advance thereof.

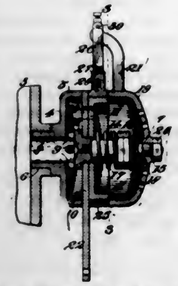
3. The combination with a drive axle and a driven wheel, of a roller clutch therebetween engageable by a relative rotation of said parts in either direction, a member other than the axle and wheel, positively driven means upon said member for preventing engagement of said clutch alternatively in opposite directions and means controlled by the direction of rotation of said axle for adjusting said preventing means to release said clutch when said wheel is rotating in advance in the same direction.

4. The combination with a drive axle and a driven wheel, of a roller clutch therebetween engageable by a relative rotation of said parts in either direction, a member other than the axle and wheel, a positively driven member mounted upon said member rotatably adjustable in relation to one of the members of said clutch, to alternatively prevent engagement thereof in opposite directions and means controlled by the direction of rotation of said axle for shifting said adjustable means.

5. The combination with a drive axle and a driven wheel, of a drum mounted on said wheel, a cam mounted on said axle within said drum, rolls between said cam and drum coöperating therewith to form a roller clutch engageable by a relative rotation of the axle and wheel in opposite directions, a member engaging the rolls of said clutch rotatably adjustable in relation to said cam to alternatively prevent engagement of said clutch in opposite directions, a lost motion driving connection between said cam and member for adjusting the same upon reversal in the direction of movement of said axle, and stationary means for supporting said member engaging the rolls of the clutch.

[Claims 6 and 7 not printed in the Gazette.]

1,191,700. AUXILIARY AIR-VALVE. WRIGHT E. HOWES, San Francisco, Cal., assignor of one-fourth to John P. Waters, San Francisco, Cal. Filed Dec. 24, 1914. Serial No. 878,872. (Cl. 48—180.)



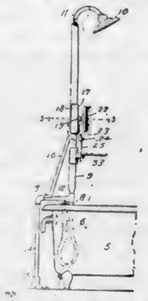
1. The combination with the throttle valve on a carbureter and the inlet manifold on the internal combustion engine of an automobile, of a casing connected with the manifold having an opening formed therein to admit air to the manifold, a pair of disk valves mounted on the casing, said valves having substantially triangular-shaped openings formed therein adapted to be brought into register with each other to control the volume of air admitted through the casing to the manifold, means connecting one of said valves with the throttle valve, and means connected with the other valve whereby this may be operated by the driver from the seat.

2. An auxiliary air valve for internal combustion engines comprising a casing which is adapted to be connected with the inlet manifold on the engine, said casing having an opening formed therein to admit air to the manifold, a disk valve turnable on the casing, said disk valve having an opening formed therein communicating with the opening in the casing, a second disk valve turnable on top of the first named disk valve, said valve having an opening formed therein adapted to be brought into and out of register with the opening in the first valve and also adapted to form a closure therefor, a perforated cover inclosing said disk valves, a spring interposed between the cover and the second valve to keep the valves in tight contact with each other and the casing, a lever connected with the second valve by which said valve may be manually operated, means for adjusting the position of the valve with relation to said lever and the first valve, and means for connecting the first valve to turn in unison with the throttle valve of the carbureter which is connected with the manifold.

3. An auxiliary air valve comprising a casing having an air passage formed therethrough, a central bearing stud formed on said casing, a disk valve turnable about said stud, said valve having an opening formed therein always adapted to form a communication with the air passage in the casing, a second disk valve turnable about the stud mounted on top of the first valve, said valve having an opening formed therein adapted to be brought into register with the opening in the first valve and also adapted to form a closure therefor, a stationary perforated cover section for the valves carried on the outer end of the stud, a spring interposed between said cover and the second valve to hold same in tight contact with each other and the casing, a clamping ring having a lever formed thereon surrounding the second valve, means for manually operating said lever to turn the second valve independently of the first valve, and means for turning the first valve independently of the second valve.

4. The combination with the throttle valve on a carbureter and the inlet manifold on an internal combustion engine, of a casing connected with the manifold having an opening formed therein to admit air to the manifold, a pair of disk valves mounted on the casing, said valves having openings formed therein adapted to be brought into register with each other to control the volume of air admitted through the casing to the manifold, means connecting one of said valves with the throttle valve, a split ring having a lever formed thereon surrounding the other valve, and a screw passing through the split part of the ring to lock the ring on the valve.

1,191,701. MASSAGING APPARATUS. JOHN JACOBY, Los Angeles, Cal. Filed Feb. 8, 1916. Serial No. 77,025. (Cl. 4—2.)



1. The combination of a bath fixture having a faucet, of a standard having a bore extending therethrough, connecting means between the faucet and standard whereby water may be directed through the latter, a shower head carried at the upper end of the standard, an upright arranged adjacent the bath fixture and having a base for supporting the upright, a horizontal member connecting the upright and standard, a brace connecting said horizontal member and standard for maintaining the latter in a rigidly vertical position, a plate slidable vertically upon the standard, a brush detachably carried by the plate, said plate being provided with a depending arm, a second plate arranged upon the standard below the first and having means for retaining the second plate in adjusted positions upon the standard, an arm carried by the second plate extending to one side of the standard, a lever pivotally mounted on said arm, a link pivotally connecting the inner end of the lever with the depending arm carried by the first plate, and a handle carried by said lever whereby the latter may be oscillated for imparting reciprocal motion to the brush.

2. The combination with a bath fixture including a faucet, of a standard having a bore extending therethrough, connecting means between the faucet and standard whereby water may be directed through the latter, a shower head carried by the standard at the upper end of the latter, means for supporting the standard in vertical position above the bath fixture, a plate slidably mounted for vertical movement upon the standard, a brush carried by said plate, a second plate mounted adjustably on the standard below the first plate and being provided with means for maintaining said second plate in adjusted position upon the standard, an arm carried by the second plate extending to one side of the standard, a lever pivotally mounted upon said arm, a link connecting the lever at one end with the first plate, and a handle carried by the lever whereby the latter may be oscillated to impart reciprocatory motion to the brush.

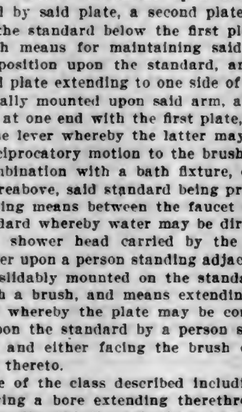
3. The combination with a bath fixture, of a standard arranged thereabove, said standard being provided with a bore, connecting means between the faucet of the fixture and the standard whereby water may be directed through the latter, a shower head carried by the standard for directing water upon a person standing adjacent the standard, a plate slidably mounted on the standard and being provided with a brush, and means extending laterally of the standard whereby the plate may be conveniently reciprocated upon the standard by a person standing adjacent thereto, and either facing the brush or having his back directed thereto.

4. A device of the class described including a vertical standard having a bore extending therethrough whereby water may be directed through the standard, a shower attachment carried at the upper end of the standard, means for supporting the standard, a brush, means for mounting the brush whereby the latter may be reciprocated upon the standard, and means extending laterally of the standard whereby the brush may be manually operated by a person standing under the shower head and either facing or standing with his back to the brush.

5. A device of the class described including a standard, means for supporting the same in a vertical position, a plate mounted for reciprocation on the standard and being provided with a brush, a second plate slidably mounted on the standard below the first and being provided with means whereby said second plate may be maintained in adjusted position upon the standard, a lever connected with the second plate and being provided with a handle, and a link connecting the lever with the first plate whereby the brush may be operated as the lever is oscillated.

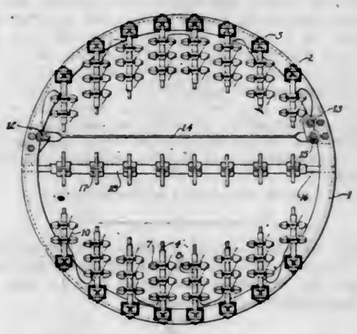
[Claim 6 not printed in the Gazette.]

1,191,702. GRIPPING-TOOL. BRONISLAW JANUSZCZAK, Point St. Charles, Montreal, Quebec, Canada. Filed June 11, 1915. Serial No. 33,611. (Cl. 57—113.)



A device of the character described, comprising a pole, a cap thereon provided with an arm, a pair of crossed pivotally connected arms terminating in coöperating jaws and fulcrumed on the arm of the aforesaid cap, rods pivotally connected to said pivotally connected arms at one end, the other end of said rods being pivotally connected together, loops pivotally connected on the pivotal connection of said rods, a bell crank lever carried by said pole near its upper end and provided with outwardly projecting pins adapted to engage the aforesaid loops, an elbow lever fulcrumed on said pole, connections between said levers and a spring secured to the pins of the pivotal connections of the arms and rods.

1,191,703. ELECTRIC-RESISTANCE THERMOMETER. FREDRICK JOHANNSMEYER, Milwaukee, Wis., assignor to Carl C. Thomas, Madison, Wis. Filed Aug. 16, 1912. Serial No. 715,431. (Cl. 219—63.)



1. A resistance thermometer unit comprising a frame adapted to be mounted within a conduit, a plurality of supporting rods carried by said frame and a resistance wire wound about said rods and carried by means mounted on said rods so that the wire is held in spaced relation and insulated from said rods and whereby the wire is distributed substantially uniformly across the area inclosed by the frame with a minimum portion of the wire in contact with the supporting means.

2. A resistance thermometer unit comprising a frame adapted to be mounted in a conduit, a plurality of supporting elements carried by said frame and arranged in substantially the same plane and means on said elements for supporting a resistance wire so that said wire is held spaced from and insulated from said elements and whereby the wire is distributed substantially uniformly over the area included by said frame with a minimum amount of wire in contact with the supporting means.

3. A resistance element comprising a plurality of parallel supporting frames arranged in the same plane and a resistance wire wound around said frames, said frames being built up of flat supporting elements suitably mounted and spaced apart.

4. A resistance thermometer unit comprising a frame, a plurality of supporting rods carried by said frame, a plurality of flat supporting elements mounted on each rod so as to present their edges to the flowing current of fluid and a resistance wire wound about said elements.

5. In a resistance thermometer, a series of flat supporting elements mounted so as to present their edges to the flowing current of fluid, insulators carried by each of said elements, and a resistance wire wound about said supports and carried by said insulators.

[Claims 6 to 11 not printed in the Gazette.]

1,191,704. FRONT SIGHT FOR MILITARY SHOULDER-ARMS. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Feb. 12, 1916. Serial No. 77,828. (Cl. 33—47.)

1. A military sight having a sight-base, overarching sight-cover or hood, and a barrel-embracing retaining-band, all made in one piece, in combination with a sight-piece applied to the said sight-base and located within the said overarching sight-cover.



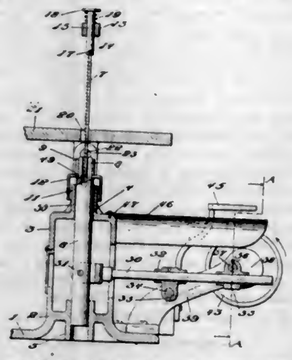
2. The combination with a gun-barrel having its muzzle-end formed with a key-slot, of a combined part comprising a sight-base, overarching cover or hood, and a retaining-band, all made in one piece, a sight-piece applied to the said sight-base and located within the said overarching-cover or hood, and a key set into the said slot and co-acting with the said part for securing the same in place upon the gun-barrel.

3. A military front-sight having a sight-base, overarching sight-cover or hood, and a retaining-band, all made in one piece and formed in its upper portion with transverse openings, in combination with a sight-piece adapted to be passed through the said transverse openings for being positioned within the overarching cover and applied to the said base.

4. A military front-sight having a sight-base, overarching sight-cover or hood, and a barrel-embracing retaining-band, all made in one piece and provided in its upper portion with transverse openings and formed in the inclined upper face of the said base with a transversely arranged dovetail slot, in combination with a sight-piece having a dovetail rib, the said sight-piece being passed through one of the said transverse openings for location within the overarching sight-cover or hood, and application to the said base.

5. The combination with a gun-barrel formed in the upper face of its muzzle-end with a key-slot, of a key fitting therein and extending above the upper face of the barrel, a one-piece combined part comprising a sight-base slotted to receive the said key, an overarching sight-cover or hood and a barrel-embracing retaining-band; means passing transversely through the sight-base and key for holding the said combined part against lateral and longitudinal movement with respect to the gun-barrel, and a sight-piece positioned within the said overarching sight-cover or hood and applied to the said base.

1,191,705. SAWING AND FILING MACHINE. ALLAN H. JONES, Newark, and ALFRED P. GLASTRE, Irvington, N. J.; said Glastre assignor to said Jones. Filed Apr. 30, 1912. Serial No. 694,126. (Cl. 29—74.)

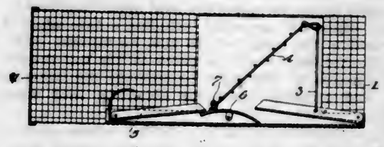


1. In a machine of the character described, the combination of a hollow standard having spaced apart vertical bearings at its top and bottom, a tool holder extending between said bearings and protruding from the top one, means attached intermediate the ends of said tool holder and projecting laterally through a side of the standard for reciprocating said tool holder, arms extending upward from said standard on opposite sides of said tool holder, a work table hinged to said arms upon a horizontal axis intersecting the axial central line of the tool holder, and set screws on opposite sides of said line of hinging for adjusting said table.

2. In a machine of the character described, the combination of a hollow standard having spaced apart vertical bearings at its top and bottom, the bottom one being inclosed and projecting upwardly within the standard and the top one being of less diameter than the standard and extending upwardly above the same, a tool holder in said bearings projecting at its upper end above the top one, a cap on said upper end of the tool holder of less diameter than the standard and depending over said upper bearing, tool holding means on said tool holder above said cap, table supporting arms extending upwardly from said standard free from said tool supporting means and cap, and a table above all of said parts apertured in alinement with the tool holder.

3. In a machine of the character described, the combination of a hollow standard having spaced apart vertical bearings at its top and bottom, the bottom one being inclosed and projecting upwardly within the standard and the top one being of less diameter than the standard and extending upwardly above the same, a tool holder in said bearings projecting at its upper end above the top one, and having a tool socket thereat, a cap on said upper end of the tool holder of less diameter than the standard and depending over said upper bearing, a collar on said reduced end above said cap, a set screw for clamping said collar on said reduced end and holding both a tool and said collar in place, and means attached intermediate the ends of said tool holder and projecting laterally through a side of the standard for reciprocating the tool holder.

1,191,706. ANIMAL-TRAP. ELIAS KESLER, Oklahoma, Okla. Filed Oct. 16, 1914. Serial No. 867,024. (Cl. 43—24.)



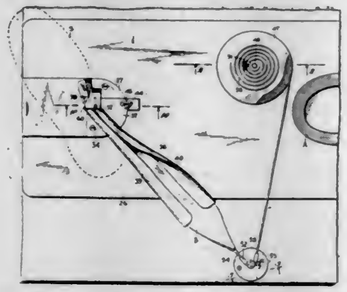
An entrance tunnel leading into the confining chamber of an animal trap, a platform pivoted in said tunnel, a reticulate gate pivoted at its upper end in the tunnel, connections between the gate and the platform to raise the gate upon depression of the said platform, a tilting lever upon which the lower end of the gate rests, said lever being provided with a hook, and a second pivoted platform having one end bearing on the tilting lever to force the hook into engagement with the lower cross-bar of the gate upon depression of the second-named platform.

1,191,707. SEWING-MACHINE ATTACHMENT. JOEL KIMMEL, New York, N. Y. Filed Dec. 15, 1915. Serial No. 66,938. (Cl. 112—1.)

1. The combination with the bed plate of a sewing machine, of a throat plate secured thereto and having its front portion recessed forming a pair of obliquely related shoulders, said throat plate also having a feed dog slot and a needle hole just at the rear of the point of convergence of said shoulders, and a folder for the binding fitted in said recessed portion of the throat plate and against said shoulders, substantially as set forth.

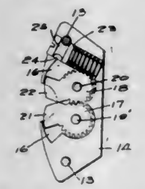
2. The combination of a horizontal throat plate having a cut-away portion at its front forming obliquely arranged shoulders converging toward each other adjacent

the needle hole, a folder comprising a guide member having upper and lower guide rolls for the binding, the upper guide roll forming a hem in the binding, said folder



also including a wing adapted to abut against one of said shoulders and above the same, and means to adjustably and removably secure the wing to the throat plate.

1,191,708. ADJUSTABLE RIFLE-SIGHT.. OSCAR G. KLUGEL, Indianapolis, Ind. Filed Jan. 24, 1916. Serial No. 73,908. (Cl. 33—53.)



1. An adjustable gun sight including a base adapted to be secured to the barrel of the gun, an upright sight secured to said base having a notch in the top thereof, movable means on said sight for reducing the size of said notch, and means for actuating said movable means.

2. An adjustable gun sight including a base adapted to be secured to the barrel of the gun, an upright sight secured to said base having a notch in the top thereof, a movable means on said sight for reducing the size of said notch, and a worm screw for actuating said movable means.

3. An adjustable gun sight including a base adapted to be secured to the barrel of the gun, an upright sight secured to said base having a notch in the top thereof, disks pivoted on said sight having projections adapted to extend into said notch, and means for actuating said disks.

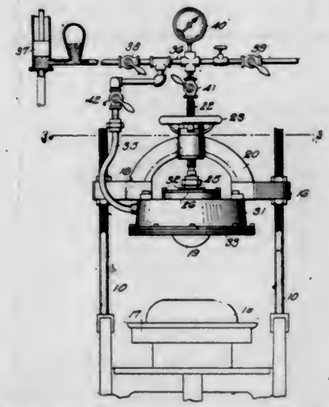
4. An adjustable gun sight including a base adapted to be secured to the barrel of the gun, an upright sight secured to said base having a notch in the top thereof, disks pivoted to said sight adapted to engage each other, projections on said disks extending into said notch adapted to reduce the size thereof when closed, and means for actuating said disks.

5. An adjustable gun sight including a base adapted to be secured to the barrel of the gun, an upright sight secured to said base, having a notch in the top thereof, toothed disks pivoted on said sight and adapted to engage each other, projections on said disks extending into said notch for reducing the size thereof when closed, and a worm screw for engaging said teeth, and actuating said disks.

[Claims 6 and 7 not printed in the Gazette.]

1,191,709. HAT-MACHINE. JAMES LAKE, Jr., New York, N. Y. Filed Dec. 1, 1915. Serial No. 64,465. (Cl. 223—31.)

1. A hat machine comprising a rigid crown mold; a rigid brim die; a flexible crown die corresponding with said crown mold; a flexible brim mold corresponding with said brim die; means for expanding said crown die and brim mold while in contact with the mold and die with which they are associated, said means embodying a hydraulic pressure mechanism; and means manually operative for controlling said hydraulic mechanism for exerting pressures of varied intensity on said molds and dies.



2. A hat machine comprising a rigid crown-shaping member; a rigid brim-shaping member; an expansible crown-forming member; an expansible brim-forming member; means for supplying liquid under pressure for expanding said crown-forming and brim-forming members; and means for regulating the supply of liquid to said expansible members for producing independent expansive pressures therein.

3. A hat machine comprising a rigid crown-shaping member; a rigid brim-shaping member; an expansible crown-forming member; an expansible brim-forming member; means for supplying liquid under pressure for expanding said crown-forming and brim-forming members; and means for regulating the supply of liquid to said expansible members for producing independent expansive pressures therein, said means embodying a pressure gage in open communication with said liquid, and cut-off valves interposed between said supply means and each of said expansible members.

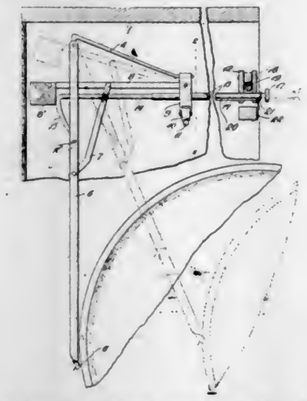
4. A hat machine comprising a rigid crown mold; a rubber crown head shaped in correspondence therewith; a rigid brim die disposed in juxtaposed relation to said mold; a pressure member for coöperating with said brim die, said member having a rubber face conforming with said die; means for supplying liquid under pressure operatively connected with said head and said pressure member; and means for cutting off the supply of said liquid from said members independently for producing different pressures in said die and member.

5. A hat machine comprising a rigid crown mold; a rubber crown head shaped in correspondence therewith; a rigid brim die disposed in juxtaposed relation to said mold; a pressure member for coöperating with said brim die, said member having a rubber face conforming with said die; means for supplying liquid under pressure operatively connected with said head and said pressure member; means for cutting off the supply of liquid from said member and said head independently for producing different pressures in said die and member; and a pressure gage operatively connected with the supply of said liquid for indicating the pressure thereon.

[Claims 6 to 9 not printed in the Gazette.]

1,191,710. CABINET. MICHAEL LANG, Los Angeles, Cal. Filed Feb. 23, 1915. Serial No. 10,133. (Cl. 211—16.)

1. In a record cabinet, a lever in operative position to the rear of a record, a track, a carriage movable on said track, a support on said carriage for said lever, a weighted bar pivotally connected to said carriage, a link connecting said lever and bar, a carrier, a track on which said carrier runs, a tube connecting said carriage and carrier, and a rod extending through said tube and operatively connected with said lever.

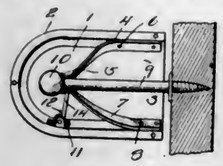


2. In a record cabinet, a lever in operative relation to the rear of a record, a track, a carriage movable on said track, a support on said carriage for said lever, a bar pivotally connected to said carriage means connecting said bar to said lever, means on said bar to hold said lever in normal position, a carrier, a track on which said carrier runs, a tube connecting said carriage and carrier, a rod extending through said tube and operatively connected with said lever to operate the same, and means to lock said rod against movement laterally when in operative position.

3. In a record cabinet, a lever in operative relation to the rear of a record, a rod connected with said lever and operable to eject a record, a carriage for said rod movable laterally to position said lever with respect to a desired record, a notched bar on said cabinet, and a means on said rod for engagement with the notches in said bar to prevent lateral movement of said rod when withdrawn.

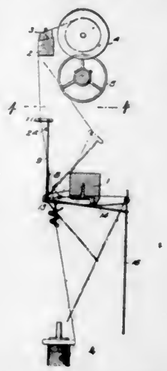
4. In a record cabinet, a lever in operative position to the rear of a record, a support for said lever, a rod operatively connected with said lever to eject a record, a support for said rod movable laterally to position said lever with respect to a desired record, a notched bar on said cabinet, and a key on said rod to engage the notches in said bar simultaneously with the operation of said rod.

1,191,711. CATCH AND LOCK FOR DOORS. ALFRED E. LINSTROM, Castlewood, S. D. Filed July 29, 1914. Serial No. 853,905. (Cl. 70—119.)



In a catch for doors, the combination with a casing adapted to be secured to a door, of a plunger having a spherical head on the end thereof adapted to be secured to a door jamb and to extend into said casing, and a pair of leaf springs having their ends in slight spaced relation and secured to the opposite sides of the casing, the working length of one of the springs being greater than that of the other so that it will be more readily flexed than the other spring.

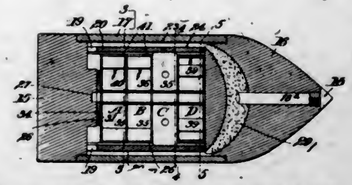
1,191,712. FALLER ATTACHMENT FOR SPINNER-FRAMES. WILLIAM ALBERT LUSH, Scranton, Pa. Filed Oct. 19, 1915. Serial No. 56,676. (Cl. 19—25.)



1. In a device of the character described, the combination with spools and a bobbin upon which the threads are wound, of a support intermediate of the spools and bobbin, fallers pivoted to the front of the support and having eyes for the passage of the threads, each faller being formed of a piece of wire provided with a plurality of coils through which the pivot loosely passes and with arms integral with the coils and standing approximately at right angles to the fallers, said arms terminating in laterally extending portions, and knock-off rods pivoted to the rear of the support and formed of a single piece of material provided with eyes through which the pivot loosely passes, said rods being adapted to be engaged by the laterally extending portions of the said arms to operate them when the fallers are lowered.

2. In a device of the character described, the combination with spools and a bobbin upon which the threads are wound, of pivoted fallers, each formed of a piece of wire provided with a plurality of coils terminating in rearwardly extending arms standing approximately at right angles to the fallers and having at their ends laterally extending portions, the fallers being provided with a guide eye and the coils receiving the pivot thereof, and knock-off rods pivoted in rear of the fallers and in the same horizontal plane therewith, said rods being adapted to be engaged by the laterally extending portions of the said arms to operate them.

1,191,713. SHELL. JOHN FAUNTLEROY MCGILL, Vallejo, Cal. Filed Dec. 17, 1915. Serial 67,325. (Cl. 102—29.)



1. An improvement in shells comprising a shell body, means for dividing the interior of the shell body into radial shot chambers adapted to effect a tangential discharge of the shot, and means coöperating with said dividing means to selectively vary the tangents on which the shot may be discharged.

2. An improvement in shells comprising a shell body, means for dividing the interior of the shell body into a plurality of superposed series of radial shot chambers adapted to effect a tangential discharge of the shot, and means coöperating with said dividing means to selectively vary the tangents on which the shot may be discharged.

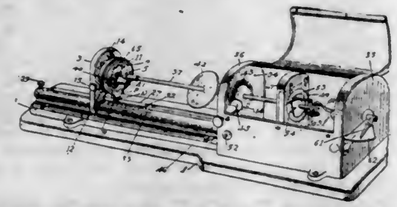
3. An improvement in shells, comprising a shell body, spacer members located within said body and having radiating arms dividing the interior of the shell into radial shot chambers adapted to effect a tangential discharge of the shot, and means coöperating with said dividing means to selectively vary the tangents on which the shot may be discharged.

4. An improvement in shells comprising a shell body, a locking ring inclosed therein, means coöperating with the locking ring for dividing the interior of the shell body into radial shot chambers adapted to effect a tangential discharge of the shot, and means coöperating with said dividing means to selectively vary the tangents on which the shot may be discharged.

5. An improvement in shells comprising a shell body, a locking ring formed of a plurality of sections inclosed within said shell, means coöperating with the locking ring for dividing the interior of the shell body into radial shot chambers adapted to effect a tangential discharge of the shot, and means coöperating with said dividing means to selectively vary the tangents on which the shot may be discharged.

[Claims 6 to 30 not printed in the Gazette.]

1,191,714. SCALE-FORMING APPARATUS. HENRY B. MATHEWSON, San Francisco, Cal., assignor to American Optical Company, Southbridge, Mass. Filed Nov. 26, 1915. Serial No. 63,552. (Cl. 33—1.)



1. In an apparatus of the character described, the combination with a holder for the measure to be corrected, of means adjacent the holder for engaging the measure and actuating the mechanism thereof a certain predetermined amount, and means coöperating with the indicator on the measure for recording the response of the indicator to the known actuation of the mechanism of the measure.

2. In a device of the character described, the combination with a base, of a holder supported thereby and adapted to receive a measure, means on the base adjacent the holder for actuating the mechanism of the measure a known amount, a shiftable sighting device carried by the base and mounted for movement corresponding with the movement of the indicating portion of the measure, means for manually alining the sighting device and indicator on the measure, and means for recording the movement of the sighting device.

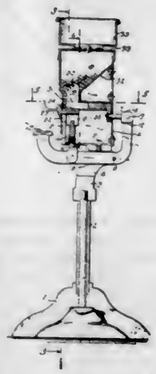
3. In an apparatus for testing a measure of the type having a movable contact point and a rotatable indicator, the combination with a holder for the measure, of means adjacent the holder for shifting the contact point known amounts, an alining arm mounted for movement corresponding to the movement of the indicator, means for moving the arm to coincide with the movement of the indicator, a slotted shutter movable with the arm, and means for causing the adjustment of the arm and shutter to be photographically recorded as desired.

4. In an apparatus of the character described, the combination with a holder adapted to receive a measure with a movable point and an indicator, of an inclined straight edge mounted for movement across the point of the indicator whereby different adjustments of the straight edge will cause known movements of the point of the indicator, recording mechanism, and means for shifting the recording mechanism to aline with the indicator at each movement of the indicator caused by the shifting of the straight edge to record the several positions of the indicator for known movements of the contact point of the measure.

5. In an apparatus of the character described, the combination with a support, of a holder on the support adapted to secure the instrument to be tested, a shiftable contact device on the support adjacent the holder adapted to engage and actuate the instrument to be tested, a second support on the base, a shaft journaled in said second support and bearing a sighting device for coöperation with the indicator of the instrument, a guide device in the shape to facilitate recording of the position of the shaft and sighting device and means for rotating the shaft to aline the sighting device with the indicator of the measure.

[Claims 6 to 17 not printed in the Gazette.]

1,191,715. TOOTHPICK-VENDING MACHINE. FRANK MESZAROS, New York, N. Y. Filed June 10, 1915. Serial No. 33,315. (Cl. 206—21.)



1. In a toothpick vending machine of the character described, a casing provided with a doorway, a door for normally closing said doorway, a reciprocating member for moving said door to an open position, said reciprocating member acting also as a toothpick guide, means for forcing a toothpick through said doorway when the door is in open position, and a manually operated member for actuating said moving parts in timed relation to each other.

2. A vending device for toothpicks, comprising a casing formed with a guideway and with a doorway arranged adjacent the bottom of said guideway, a door for normally closing said doorway, a pivotally mounted lever for actuating said door, a sliding ejecting member, and means for connecting said sliding ejecting member with said lever, whereby said ejecting member is moved simultaneously with the movement of said door for forcing a toothpick from said guideway through said doorway immediately after the door is moved to an open position.

3. In a vending machine for toothpicks, a casing for receiving a quantity of loose toothpicks, a reciprocating member arranged on said casing and projecting into the space occupied by the said toothpicks, said reciprocating member being arranged adjacent one side of the casing so as to provide a guideway for the toothpicks, a transversely movable ejector, a door, means for simultaneously opening said door for lowering said reciprocating member and moving said ejector so as to force the lowermost toothpick in said guideway from the casing, and means for restoring all of said members to their original position, whereby said reciprocating member will agitate the toothpicks in the casing so as to cause some of the same to aline themselves in said guideway ready for a second operation.

4. A toothpick vending machine, comprising a casing, a vertically movable stirring member arranged adjacent one of the walls of the casing and with said wall providing a guideway for the toothpicks, a pivotally mounted lever connected with said stirring member for moving the same in one direction, a spring for moving said stirring member in the opposite direction, and means connected with said lever for ejecting one of the toothpicks in said guideway upon each movement of said lever.

5. A toothpick vending machine, comprising a casing, a bottom member arranged therein inclined so as to direct toothpicks in the casing to one side of the casing, a stirring member arranged adjacent the side of the casing to which the toothpicks are directed by said bottom member, said stirring member and said casing forming a guideway for receiving a single line of toothpicks, said casing being formed with an opening adjacent the bottom of said guideway, a door normally closing said opening, an ejector arranged opposite said opening, and a lever connected with said door and said ejector for simultaneously opening said door and moving said ejector for ejecting the lowermost toothpick in said guideway from said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,191,716. CUFF-LINK. PASQUALE MILANO, New York, N. Y. Filed Apr. 22, 1916. Serial No. 92,803. (Cl. 24—97.)



1. A cuff button of the character designated, comprising a main or head button having a recessed shank consisting of a wire or rod doubled upon itself with the bight forming a pintle bearing loop and the overlapping ends rigidly attached to the back of said head button, and an insert button formed with a pintle seated in said bearing loop of the shank, with shoulders on either end of said pintle bearing against said bearing loop, and with integral snap jaws adapted to engage with the recesses in said shank, as and for the purpose set forth.

2. A cuff button of the character designated, comprising a main or head button having a shank consisting of a cylindrical wire or rod doubled upon itself with the bight forming a pintle bearing loop, and with its overlapped ends rigidly attached to the back of said head button, and an insert button formed with a pintle seated in said bight or bearing loop of the shank, also formed with shoulders on either side of said pintle adapted to contact with the opposite sides of said bearing loop, and also formed with an integral snap jaw adapted to be sprung over the curved cross section of the shank and into the space between the peripheries of the overlapped parallel portions of said shank, for the purpose set forth.

3. A cuff button of the character designated, comprising a main or head button having a shank consisting of a cylindrical wire or rod doubled upon itself with the bight forming a pintle bearing loop, and with its overlapped ends rigidly attached to the back of said head button, and an insert button formed with a pintle seated in said bight or bearing loop of the shank, also formed with shoulders on either side of said pintle adapted to contact with the opposite sides of said bearing loop, and also with opposed integral snap jaws adapted to be sprung over the curved cross section of the shank and into the spaces on either side thereof between the peripheries of the overlapped parallel portions of said shank, for the purpose set forth.

1,191,717. TOOL. JOHN B. MOORE, Latrobe, Pa. Filed Oct. 15, 1915. Serial No. 56,018. (Cl. 77—71.)

1. An improved tool comprising a shank of low grade metal having a socket in one end thereof, a body of high grade metal having one end inserted into said socket, the inserted portion of said body and the interior wall of said socket having complemental transverse shoulders for preventing longitudinal separation, and a body of brazing material wholly surrounding the inserted portion of said body and filling all intervening space between the same and the interior wall of the socket.

2. An improved tool comprising a shank of low grade metal having a socket in one end thereof, said socket having internal screw threads, a body of high grade metal having one end inserted into said socket, the inserted portion of said body being threaded to engage the threads of said socket, and a body of brazing material surrounding the inserted portion of said body, and filling all intervening space between the same and the wall of the socket, and including the space between the inter-engaged threaded portions.



3. An improved tool comprising a shank of low grade metal having a tapered socket in one end, said socket being internally threaded, a body of high grade metal having one end tapered to fit within said socket, the tapered end of said body being threaded to engage the threads of said socket, and a body of brazing material wholly surrounding the inserted portion of said body and filling all intervening space between the same and the wall of the socket and including the space between the interengaged threaded portions.

4. An improved tool comprising a shank of low grade metal having a socket in one end, a body of high grade metal having one end inserted into said socket, the inserted portion of said body being of a cross section to leave spaces between said body and the wall of said socket, the inserted portion of the body and the wall of the socket having complemental means for preventing longitudinal displacement, and a body of brazing material wholly surrounding the inserted portion of said body and filling all intervening space between the same and the wall of the socket.

5. An improved tool comprising a shank of low grade metal having a socket in one end thereof, a body of high grade metal having one end of X-shape in cross section inserted into said socket, the inserted portion of said body and the wall of said socket having complemental means for preventing longitudinal displacement, and a body of brazing material wholly surrounding the inserted portion of said body, and filling the space intervening between the same and the wall of the socket.

[Claim 6 not printed in the Gazette.]

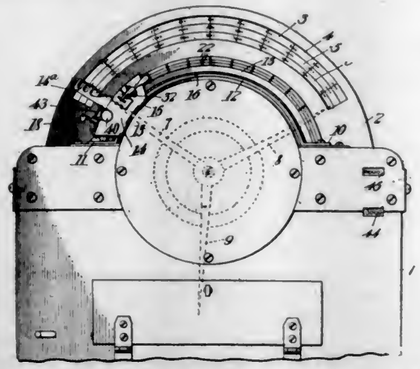
1,191,718. RECORDING APPARATUS FOR SCALES. CORNELIUS S. MORRIS, Rock Island, Ill. Filed Aug. 24, 1915. Serial No. 47,063. (Cl. 101—160.)

1. The combination in a scales having a quadrant indicator of a printing apparatus therefor comprising a quadrant track mounted concentric with the indicator, a type bar mounted parallel with said track, a carriage mounted on rollers to travel on said track, a rack bar mounted on the track, a ticket holder movably mounted on the carriage, means for moving the ticket holder independently of the carriage, and means carried by said carriage for impressing the tickets against the type bar, substantially as described.

2. The combination in a scales having a quadrant indicator of a printing apparatus therefor comprising a track mounted concentric with the indicator, a type bar having a plurality of rows of type mounted parallel with said track, a carriage mounted to travel on the track, a ticket holder mounted on the carriage, means for moving the ticket holder in different positions for printing the tickets, and selective means mounted on the carriage for impressing the tickets against the type bar, substantially as described.

3. The combination in a scales having a quadrant indicator arranged in parallel divisions, of a printing appa-

ratus therefor comprising a carriage movable parallel with said indicator, a type bar having a plurality of rows of type, a ticket holder mounted on said carriage, pointers for said indicator divisions mounted on said carriage and means for impressing the tickets against the type bar, substantially as described.

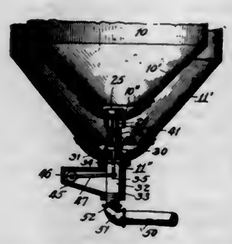


4. The combination in a scales having a quadrant indicator arranged in parallel divisions, of a printing apparatus therefor comprising a carriage movable parallel with said indicator, a type bar having a plurality of rows of type, pointers for said indicator divisions mounted on the carriage, a ticket holder mounted on said carriage, means for moving the ticket holder into positions for printing the tickets, and selective means mounted on the carriage for impressing the tickets against the type bar, substantially as described.

5. The combination in a scales having a quadrant indicator arranged in parallel divisions, of a printing apparatus therefor comprising a carriage movable parallel with said indicator, a type bar having a plurality of rows of type, pointers for said indicator divisions mounted on the carriage, a ticket holder mounted on said carriage, means for moving the ticket holder into different positions for printing the tickets, a plurality of plungers associated respectively with the positions to which the tickets may be moved, and means mounted on the carriage for selectively actuating the plungers to print the tickets, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,191,719. SAND-BLAST. WILLIAM P. MOTT, Chicago, Ill. Filed Nov. 4, 1912. Serial No. 729,458. (Cl. 51—12.)



1. In a device of the class described, an air tank, a receptacle located within said air tank, said air tank and receptacle being provided with outlet apertures and valves to control the flow through said apertures, said apertures being located one above the other and in alinement therewith, one of said valves being provided with a rod secured thereto, a rod operatively engaging the other of said valves, and means located outside said tank to actuate said rods and thereby open said valves.

2. In a device of the class described, an air tank, a receptacle contained therein, said air tank being provided with an outlet aperture, said receptacle being provided with an outlet aperture located above and in approximate alinement with said air tank aperture, a valve seated in said air tank aperture, said valve being provided with a rod secured to and extending upwardly therefrom, a second valve seated in said receptacle aperture, said second named valve being provided with a downwardly depending stem, said stem being apertured to permit the extremity of said rod to project therein.

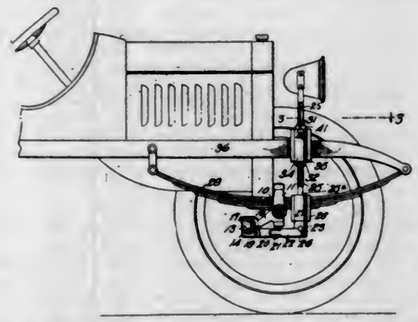
3. In a device of the class described, an air tank, a receptacle contained therein, said air tank being provided with an outlet aperture, said receptacle being provided with an outlet aperture located above and in approximate alinement with said air tank aperture, a valve seated in said air tank aperture, said valve being provided with a rod secured to and extending upwardly therefrom, and a second valve seated in said receptacle aperture, said second named valve being provided with a downwardly depending stem, said stem being apertured to permit the extremity of said rod to project therein, said rod being adapted to slide a predetermined amount in said aperture before contacting with the upper portion thereof.

4. In a device of the class described, an air tank a receptacle contained in and supported by said air tank, said air tank and receptacle being provided with outlet apertures, said apertures being located one above the other and in approximate alinement, a valve seated in said air tank aperture, a second valve seated in said receptacle aperture, said first named valve being provided with means tending to normally retain it in closed position with respect to said air tank aperture.

5. In a device of the class described, an air tank, a receptacle contained in and supported by said air tank, said air tank and receptacle being provided with outlet apertures, said apertures being located one above the other and in approximate alinement, a valve seated in said air tank aperture, a second valve seated in said receptacle aperture, said first named valve being provided with means tending to normally retain it in closed position with respect to said air tank aperture, said first named valve being further provided with means adapted to actuate said receptacle valve after a predetermined amount of movement of said first named valve.

[Claim 6 not printed in the Gazette.]

1,191,720. DIRIGIBLE-HEADLIGHT SUPPORT. CASIMIR F. NEEB, S. E. ¼ section 22, township 139, Billings county, N. D. Filed Jan. 28, 1916. Serial No. 74,765. (Cl. 240—62.)



1. A lamp-supporting and operating means of the class described including a fixture having means to secure the same to the knuckle-connecting rod of an automobile, a link connected at one end to said fixture by a horizontal pivot, an arm pivoted at its rear end to the opposite end of the said link by a vertical pivot, an upright lamp rod to which the opposite end of said arm is secured, and elements in which the lamp rod is mounted to turn, said elements including means to secure the same in vertical alinement and respectively to a vehicle spring and to a vehicle frame.

2. A lamp-supporting and operating means including a fixture adapted for attachment to the knuckle-connecting rod of an automobile to be moved by said rod, an upright lamp rod having connection with said fixture for turning said lamp rod by a movement of said fixture, and means including an upper and a lower sleeve adapted for separate attachment to a chassis and to a vehicle spring, in which sleeves the said lamp rod is adapted to turn, the said rod being vertically slidable in the upper sleeve.

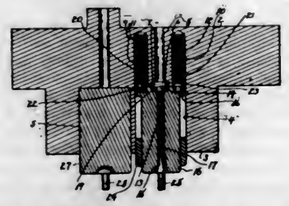
3. A lamp-supporting and operating means including a fixture adapted for attachment to the knuckle-connecting rod of an automobile to be moved by the said rod, a vertical lamp rod, connections for turning said rod by a movement of said fixture, a clip adapted to laterally receive a vehicle spring and having a sleeve thereon in which the lamp rod is adapted to turn, a clip adapted to laterally receive a frame member of an automobile and having a sleeve in which the lamp rod is adapted to turn, and to slide, and means to secure said clips in position.

4. A lamp-supporting and operating means including a fixture adapted for attachment to the knuckle-connecting rod of an automobile to be moved by said rod, an upright lamp rod, connections for turning said rod by a movement of said fixture, clips adapted for separate attachment to a chassis and to a vehicle spring respectively, and sleeves swiveled to said clips, the said sleeves receiving the said lamp rod and permitting a turning movement of the rod on its axis.

5. A lamp-supporting and operating means including an upright lamp rod, means connected with the lower end of said lamp rod and adapted to turn the same, the said rod having a round portion adjacent to its lower end, a sleeve embracing the said round portion of the lamp rod and in which sleeve the lamp rod is adapted to turn, means to secure said sleeve to a vehicle spring to move vertically with the movements of the spring, a second sleeve above the first sleeve and in which the lamp rod is adapted to slide, said second sleeve having means engaging with the lamp rod to be turned by the latter, a third sleeve embracing the second sleeve and in which the second sleeve is adapted to turn, and means to secure the third sleeve to a vehicle frame above the first sleeve.

[Claim 6 not printed in the Gazette.]

1,191,721. PUNCH-HOLDER FOR HEADING AND UPSETTING MACHINES. BOUGHTON T. NOBLE, Plantsville, Conn. Filed Feb. 28, 1916. Serial No. 80,869. (Cl. 10—12.)

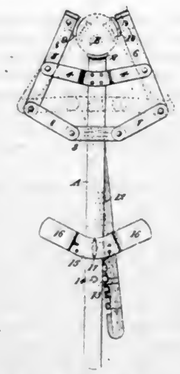


1. A punch holder for heading or upsetting machines formed with a chamber, a pin located in said chamber, a sliding punch extending into said chamber and formed with a passage for the clearance of the said pin, and with a tapered upsetting space at its outer end, means for holding the sliding punch in the head, and means for forcing said sliding punch outward.

2. A punch holder for heading or upsetting machines comprising a punch chamber, a recess in the bottom of said chamber, a disk mounted in said recess, a headed pin the head of which rests on said disk, a sliding punch extending into said chamber and formed with a passage for the clearance of said pin, said sliding punch also formed with a tapered upsetting space at its outer end around said pin passage, means for holding the sliding punch in the head, and means for forcing said sliding punch outward.

3. A punch holder for heading or upsetting machines comprising a punch chamber, a recess in the bottom of said chamber, a disk mounted in said recess, a headed pin the head of which rests on said disk, a sliding punch smaller in diameter than the diameter of said chamber and formed with a head corresponding in diameter to the diameter of the said chamber, said sliding punch formed with a longitudinal passage corresponding in diameter to the diameter of the pin over which it passes, said sliding punch formed in its outer end with an upsetting space, a collar around said punch and locked in said chamber, and springs adapted to force said sliding punch outward.

1,191,722. BELT-JACK. MICHAEL F. O'CONNOR, San Francisco, Cal., assignor of one-half to Milton H. Cook, San Francisco, Cal. Filed Mar. 13, 1916. Serial No. 83,812. (Cl. 64—51.)



1. A belt jack comprising a lever having a stationary shoe secured on one end which is adapted to engage a shaft, a pair of adjustable shoes carried by the lever adjacent the stationary shoe also engageable with the shaft, means for locking said shoes against movement, and a belt holder carried by the lever.

2. A belt jack comprising a lever having a stationary shoe secured on one end which is adapted to engage a shaft, a pair of adjustable shoes carried by the lever adjacent the stationary shoe also engageable with the shaft, means for locking said shoes against movement, a belt holder adjustably mounted on the lever, and means for locking said holder in any adjusted position.

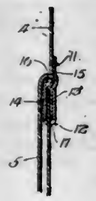
3. A belt jack comprising a lever having a stationary shoe secured on one end, a pair of bracket arms on the lever, a pair of crank arms pivotally mounted in said bracket arms, a shoe carried by each crank arm, a cross-head slidably mounted on the lever, a link connecting each crank arm with the cross-head, means for moving the cross-head to rock the crank arms and attached shoes, means for locking the cross-head against movement, and a belt holder carried by the lever.

4. A belt jack comprising a lever having a stationary shoe secured on one end, a pair of bracket arms on the lever, a pair of crank arms pivotally mounted in said bracket arms, a shoe carried by each crank arm, a cross-head slidably mounted on the lever, a link connecting each crank arm with the cross-head, a rod pivotally connected with the cross-head, means for locking said rod and cross-head against movement, and a belt holder carried by the lever.

5. A belt jack comprising a lever having a stationary shoe secured on one end, a pair of bracket arms on the lever, a pair of crank arms pivotally mounted in said bracket arms, a shoe carried by each crank arm, a cross-head slidably mounted on the lever, a link connecting

each crank arm with the cross-head, a rod pivotally connected with the cross-head, means for locking said rod and cross-head against movement, a belt holder adjustably mounted on the lever, and means for locking said holder in any adjusted position.

1,191,723. ATTACHMENT FOR CONNECTING TAPE-SECTIONS. BENJAMIN F. OREWILER, Chicago, Ill. Filed May 3, 1915. Serial No. 25,591. (Cl. 24—265.)



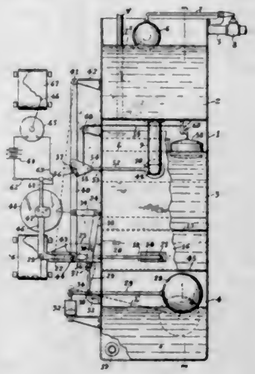
1. An attachment for connecting tape sections, comprising a metallic one-piece body bent to U-shaped formation, to provide a front section and a rear section, a horizontal recess formed in the front section, an inwardly extending flange on the upper end of the rear section alined with said recess, the space between the front and rear sections forming a pocket for the reception of the ends of tape sections, one tape section extending upward from said pocket along the rear of the front section, the other tape section extending from said pocket across the upper edge of the rear section, thence downward and across the back of said section, whereby a fabric covering for the back of the attachment is provided, and said rear section, when swaged toward the front section, forcing said tapes lying opposite said flange into said recess to maintain the tape sections in fixed relation to one another, substantially as described.

2. An attachment for connecting tape sections, comprising a one-piece metallic body bent to U-shaped formation to provide a front section and a rear section, said front section having formed therein a transversely extending recess, an inwardly extending flange on the upper end of the rear section alined with said recess, the space between the front and rear sections forming a pocket for the reception of tape sections, said body being formed with a slot in the wall connecting the front and rear sections, one tape section extending from said pocket across the rear face of the front section, the other tape section extending from a point beyond said attachment through the slot and into the pocket, thence across the top edge of the rear section, and thence across the back of the rear section to a point beyond the attachment, whereby a fabric covering for the back of the attachment is provided, and said rear section when swaged toward the front section forcing said tapes lying opposite said flange into said recess to maintain the tape sections in fixed relation to one another, substantially as described.

1,191,724. MEASURING AND REGULATING THE FLOW OF LIQUIDS. PERCY R. OWENS, New York, N. Y. Filed Mar. 12, 1915. Serial No. 14,009. (Cl. 137—68.)

1. In a liquid measuring apparatus, the combination of a receptacle having entrance and exit orifices therein, horizontally movable slide valves governing the effective areas of said orifices, means connecting said valves together for simultaneous movement, means for moving the valves together so that the effective openings of the orifices shall be substantially the same at all times, and means for maintaining substantially the same head at each orifice at all times, substantially as set forth.

2. In a liquid measuring apparatus, the combination of a receptacle, an inlet tank, an outlet tank, means including a submerged orifice in said receptacle, for causing liquid to flow from said inlet tank to said receptacle and thence to said outlet tank, means for maintaining a constant head of liquid in said receptacle above said orifice, a slide valve mounted to move horizontally over said orifice, to govern the extent of opening of said orifice, a rod on the outer side of said receptacle movable with said valve, a float in one of said tanks, and pivoted links connecting said rod and float, substantially as set forth.



3. In a liquid measuring apparatus, the combination of a receptacle, having a submerged rectangular exit orifice therein, having a knife edge, a receiving vessel, into which liquid flows from said orifice, means for maintaining a constant head of liquid above said orifice in said receptacle, a slide valve mounted in guides on the inner side of said orifice to move horizontally, for governing the extent of opening thereof, and having a thin edge adapted to coact with said knife edge, a rod on the outer side of said receptacle, connected to and movable with said slide valve, and means for moving said rod and thereby said valve in such manner that the area of opening of said valve varies in direct proportion to the rate at which liquid is drawn from said receiving vessel, substantially as set forth.

4. In a liquid measuring apparatus, the combination of a receptacle having a rectangular exit orifice therein, having its major axis horizontal, means for maintaining a constant head of liquid in said receptacle above said orifice, a receiving vessel, into which liquid flows from said orifice, and from which liquid is variably drawn as demanded, a slide valve mounted to move horizontally over said orifice, to govern the extent of opening of said orifice, a rod on the outer side of said receptacle movable with said valve, a float in said vessel, pivoted links connecting said rod and float, and a dash-pot connected with said links and float, substantially as set forth.

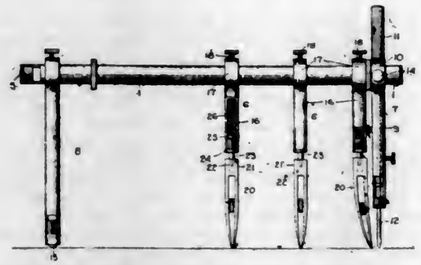
5. In a liquid measuring apparatus, the combination of a receptacle having submerged entrance and exit orifices therein, horizontally movable slide valves governing the effective areas of said orifices, a vessel receiving liquid from said exit orifice, and from which liquid is variably withdrawn as demanded, means connecting said valves together for movement, and means for moving the valves together in accordance with the demand for liquid from said vessel, in such manner that the product of the effective area of opening multiplied by head, at each orifice, shall be substantially the same at each orifice at all times, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,191,725. DRAFTING INSTRUMENT. NILS PAULSEN, New York, N. Y. Filed Aug. 9, 1915. Serial No. 44,545. (Cl. 33—41.)

1. A portable drafting instrument adapted to bear on and move over the surface to be marked, comprising a plurality of beams, bars connecting the beams together in fixed relation, and marking devices carried by the beams, whereby a plurality of parallel lines can be drawn.

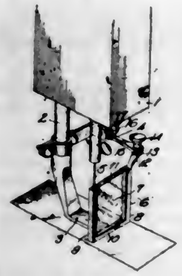
2. A portable drafting instrument adapted to bear on and move over the surface to be marked, comprising a plurality of beams, bars connecting the beams together in fixed relation, and marking devices carried by the beams, whereby a plurality of parallel lines can be drawn, said marking devices being adjustable longitudinally of the respective beams.



3. A drafting instrument comprising a plurality of beams, bars connecting the beams together in fixed relation, marking devices carried by the beams, whereby a plurality of parallel lines can be drawn, said marking devices being adjustable longitudinally of the respective beams, a guide member mounted on one of the beams at a point outwardly from the marking devices, and a steadying device mounted on one of the beams at the side of the marking devices opposite from the guide member.

4. A drafting instrument of the class described comprising a plurality of parallel beams, bars extending transversely to and connected with the beams for holding them in fixed spaced relation, a guide member on the central beam, a steadying member mounted on the central beam, marking devices adjustable longitudinally of the beams and adapted to be swung from a vertical operative position, and means for clamping each marking device on its respective beam in its operative or inoperative position.

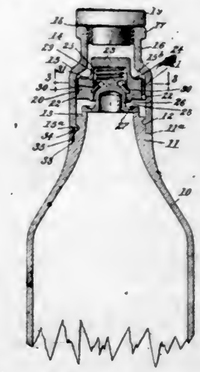
1,191,726. ADJUSTABLE NEEDLE-GUARD FOR FINGER PROTECTION. ALBERT W. PETERSON, New York, N. Y. Filed Oct. 12, 1915. Serial No. 55,489. (Cl. 112—29.)



1. A finger guard for sewing machines, comprising a frame having a glass mounted therein and provided with an arm having at its end a roughened surface and a vertical aperture, a clamp adapted to be secured to the foot post and provided with an arm having at its end a roughened surface and a horizontal aperture, a link having at one end a roughened surface and a horizontal aperture and at its other end a roughened surface and a vertical aperture and thumb screws securing the ends of the link to the arms of the frame and clamp.

2. A finger guard for sewing machines, comprising a frame having a glass mounted therein and provided with an arm, a clamp adapted to be secured to the foot post, said clamp comprising an arm and a clamping member adjustably secured to said arm, said arm and member having opposed curved portions to fit upon the foot post, and a link having one end adjustably pivoted to the arm of the clamp by a horizontal pivot, the arm of the frame being adjustably pivoted to the other end of the link by a vertical pivot.

1,191,727. NON-REFILLABLE BOTTLE. FREDERICK PETERSON, New Rochelle, N. Y. Filed May 13, 1915. Serial No. 27,750. (Cl. 215—69.)



1. In an apparatus of the character described, the combination with a bottle having a valve seat therein, of a valve for said seat, and means adapted to slide in a direction at an angle with respect to the vertical axis of the bottle, said means being arranged partly within the valve and partly within the portion of the bottle surrounding the valve for preventing the unseating of the valve when the bottle is agitated while supported in a vertical position, substantially as specified.

2. In an apparatus of the character described, the combination with a bottle, of a top, a valve seat therein, a valve supported upon said seat, means for maintaining said valve normally seated, and means adapted to slide in a direction at an angle with respect to the vertical axis of the bottle, said means being arranged partly in said top and partly in said valve for preventing the unseating of said valve when the bottle is agitated while supported in a vertical position, substantially as specified.

3. In an apparatus of the character described, the combination with a bottle, of a top, a valve seat therein, a valve supported upon said seat, spring means for yieldingly maintaining said valve in position upon said seat, a plurality of members disposed in said top and angularly engaging said valve whereby to prevent the unseating of said valve when the bottle is agitated while supported in a vertical position, but to permit of the unseating thereof under the weight of the liquid in said bottle when the same is tilted to pouring position, substantially as specified.

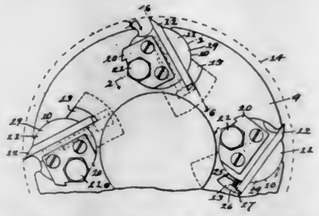
4. In an apparatus of the character described, the combination with a bottle, of a top, a valve seat therein, an obstructing member supported within said top, a valve movably mounted in said obstructing member, means for maintaining said valve normally seated, and holding members loosely supported in said valve and adapted to lie normally partly within the valve, and partly within said obstructing member for preventing the unseating of said valve when the bottle is agitated while supported in a vertical position, substantially as specified.

5. In an apparatus of the character described, the combination with a bottle, of a top, a valve seat therein, an obstructing member supported within said top, said obstructing member having a socket therein provided with an annular recess, a valve movably mounted in said socket, means for maintaining said valve normally seated, and a plurality of tumblers loosely mounted and adapted to lie normally partly within said valve and to extend into

the recess within said socket for preventing the unseating of said valve when the bottle is agitated while supported in a vertical position, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,191,728. CUTTER-HEAD. HAROLD HATHAWAY PLUMMER, Berkeley, Cal. Filed Mar. 30, 1915. Serial No. 17,973. (Cl. 144—227.)

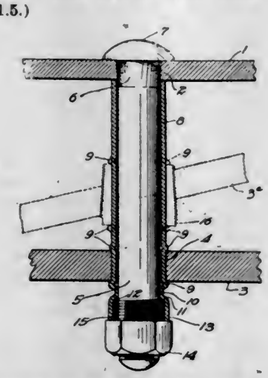


1. A cutter head provided with a cylindrical recess, a bit carrier rotatable therein, means for locking said carrier in desired position with respect to its recess, and means for radially adjusting said bit with respect to its carrier.

2. A cutter head provided with a cylindrical recess, a bit carrier therein, a bit in said carrier, screw-threaded means for feeding said bit outwardly of said carrier, and means for locking said carrier in desired position with respect to its recess and said head.

3. A cutter head provided with a cylindrical recess, a cylindrical bit carrier therein and comprising a main portion having inclined projections thereon, a bar similarly provided and bearing on said projections, means for adjusting said bar, a bit, and a segmental member holding said bit to said main portion.

1,191,729. BOILER STAY-BOLT. CHARLIE L. POOL, Birmingham, Ala. Filed Feb. 21, 1916. Serial No. 79,658. (Cl. 85—1.5.)



1. The combination with inner and outer boiler sheets, of a stay bolt therefor, a tube surrounding the bolt and adapted to engage the inside of the inner sheet and have its inner end closed thereby and to project through and beyond the outer sheet, said tube being free of perforations and having its inner end adapted to be expanded into the outer sheet wherever the latter happens to come on the tube, a nut on the threaded end of the bolt which projects from the outer open end of the tube, and means to pack the joint between the tube and bolt.

2. In combination, boiler sheets, a stay bolt therefor having threads at one end and having a head and an adjoining taper shoulder at the outer end, said shoulder being adapted to be driven with a steam tight fit through the inner boiler sheet, a tube adapted to fit over the bolt and to extend from opposite the taper shoulder to a point near the threaded bolt end, said tube being adapted to be expanded at an intermediate point into the outer sheet and to abut at its inner end against the inside of the inner sheet, a nut adapted to be screwed on the threaded end of the bolt, and a packing gland between the tube, bolt and nut.

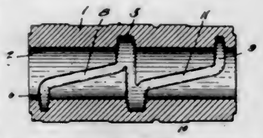
3. The combination with inner and outer boiler sheets, of a stay bolt having a head and a slightly tapering shoulder at its inner end, there being a taper opening extending through the inner sheet to receive said taper shoulder with a steam tight fit, a tube surrounding the bolt and engaging the inside wall of the inner sheet, there being a straight opening in the outer sheet through which said tube passes and into which an intermediate portion of the tube is expanded, a nut adapted to screw on an end of the bolt, a gland held by the nut and received between the bolt and tube, and packing means co-acting with the gland to pack the joint between the bolt and tube.

4. In combination, a stay bolt and a tube loosely surrounding the bolt, said tube having its end adjacent to the threaded end of the bolt expanded to receive packing, a nut screwed on the bolt, a packing gland held by said nut and disposed in the expanded end of said tube, and a packing ring engaged by the gland and adapted to pack the joint between the tube and bolt.

5. The combination with the inner and outer sheets of a boiler, there being alining openings in said sheets, of a bolt passed entirely through both openings and having its head engaging the outer side of the inner sheet, a taper shoulder on the bolt which is driven through the inner sheet and projects into the boiler space, a tube engaging the inside of said inner sheet and loosely surrounding the bolt and projecting through the opening in the outer sheet and being expanded thereinto, the inner end of said tube being substantially closed by said taper shoulder on the bolt which projects thereinto, the outer end of the tube being drawn in to snugly engage the bolt, and a nut on the bolt adapted to engage said outer end of the tube and tie the sheets together.

[Claims 6 to 8 not printed in the Gazette.]

1,191,730. HUB OR BUSHING. WILLIAM D. QUIGLEY, Melrose, Mass. Filed Mar. 8, 1916. Serial No. 82,915. (Cl. 64—24.)



1. A hub or bushing having a cylindrical bore, and grooves in the surface of said bore adapted to receive and provide for the circulation of oil, there being a main groove extended entirely around the bore, and other grooves extending partly around the bore at each side of the main groove, which are in open communication with the main groove at each end.

2. A hub or bushing having a cylindrical bore, and grooves in the surface of said bore adapted to receive and provide for the separation of oil, there bieng a main groove extended entirely around the bore, and other grooves arranged at each side of said main groove and at opposite sides of the bore, which are in open communication with said main groove at each end.

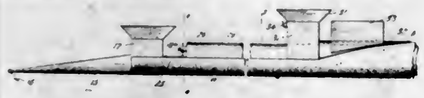
3. A hub or bushing having a cylindrical bore, and grooves in the surface of said bore adapted to receive and provide for the circulation of oil, there being a main groove extending entirely around the bore, and semi-annular grooves similarly extended, which are in open communication with the main groove at each end.

4. A hub or bushing having a cylindrical bore, and grooves in the surface of said bore adapted to receive and provide for the circulation of oil, there being a main groove extending transversely entirely around the bore, and two semi-annular grooves arranged in parallel relation with the main groove and in open communication therewith at each end, said semi-annular grooves being disposed on opposite sides of the bore.

5. A hub or bushing having a cylindrical bore, and grooves in the surface of said bore adapted to receive and provide for the circulation of oil, there being a main groove extending entirely around the bore, and other grooves in open communication therewith at each end, the connecting groove for each of said other grooves being arranged diagonally with respect to the axis.

[Claims 6 to 10 not printed in the Gazette.]

1,191,731. CONCRETE-PIPE MOLD. ERNEST L. RANSOME, Plainfield, N. J. Filed June 2, 1914. Serial No. 842,452. (Cl. 25—32.)



1. In an apparatus for forming concrete pipes, an invert mold operating on the interior of the pipe and a core connected to advance simultaneously.

2. An apparatus for forming concrete pipes having an invert mold operating on the interior of the pipe, a core connected to advance with the invert mold and a cap mold adapted to advance over the projected core.

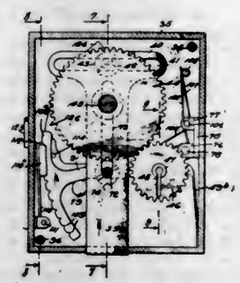
3. An apparatus for forming concrete pipes having an invert mold operating on the interior of the pipe and a hopper for the plastic concrete, whereby the advance of the mold supplies the concrete to the trench and simultaneously shapes and presses the invert.

4. An apparatus for forming concrete pipes having an invert mold operating on the interior of the pipe and a hopper for the plastic concrete, whereby the advance of the mold supplies the concrete to the trench and simultaneously shapes and presses the invert, and a core connected to advance with the invert mold.

5. An apparatus for forming concrete pipes having an invert mold including a hopper for the plastic concrete, whereby the advance of the mold supplies the concrete to the trench and simultaneously shapes and presses the invert and a core connected to advance with the invert mold and a cap mold including a hopper for the plastic concrete adapted to advance over the extended core for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,191,732. INDICATING-LOCK. WILLIAM AUGUSTUS RATCLIFF, Bellingham, Wash. Filed June 21, 1915. Serial No. 35,277. (Cl. 70—6.)



1. An indicating lock comprising a slidable bolt having a transverse and a longitudinal guideway therein and adapted to occupy a plurality of normal positions, mechanism controllable at the will of the operator cooperating with said guideways for actuating said movable member from one of its normal positions to the other, a plurality of arms connected with said mechanism and controllable by the movement thereof, each of said arms being pivoted at one end provided at its opposite end with display mechanism for making an indication, and means connected with said mechanism and controllable by movement thereof for locking said tumblers in a predetermined relative position.

2. An indicating lock comprising a casing, a bolt slidably mounted therein and adapted to occupy either of two normal positions, a gear mechanism controllable by a key for actuating said bolt, a plurality of swinging arms pivoted at one end and operable independently of each other and controllable by said key, each of said swinging arms being provided at its opposite end with a sector having a display character on its edge for registering an indication, and a locking bar controllable by movements of said key for temporarily securing said sectors in predetermined relative position.

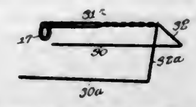
3. An indicating lock comprising a casing, a bolt slidably mounted within said casing and adapted to occupy two normal positions, mechanism including a revoluble member for actuating said bolt relatively to said casing, said revoluble member being provided with a passage into which the key may be thrust, a plurality of arms pivoted at one end located within said casing and positioned to be engaged by wards carried by the key so that movement of the key may actuate said arms, notched indicating sectors carried at the opposite end of said arms for the purpose of registering indications, and a locking mechanism for locking said sectors in different positions in order to enable said indicating devices to be observed.

4. In a device of the character described comprising a casing, a bolt slidably mounted therein and adapted to occupy two normal positions, a revoluble member journaled in said casing and provided with a passage for receiving a key, gearing connected with said revoluble member and said bolt for movement of said revoluble member to shift the position of said bolt, a plurality of swinging arms journaled within said casing and disposed within the path of travel of wards carried by said key, sectors mounted upon said swinging arms and provided with intelligible characters, and locking mechanism controllable by movements of said revoluble member for securing said sectors in predetermined fixed relative positions in order to cause predetermined intelligible characters carried by said sectors to be brought into alinement with each other.

5. In a device of the character described comprising a casing, a bolt slidably mounted therein and adapted to occupy two normal positions, a revoluble member journaled in the casing and provided with a passage for receiving a key, gearing connected with said revoluble member and said bolt for movement of said revoluble member to shift the position of said bolt, a plurality of groups of swinging arms journaled at one end within said casing and disposed within the path of travel of wards carried by the key, said arms carrying sectors at their free ends, said sectors provided with intelligible characters, a stationary sector between the groups of swinging sectors and preventing lateral movement of the same, and locking mechanism controlled by the movements of said sectors for securing the same in predetermined fixed relative positions in order to cause predetermined intelligible characters carried by said sectors to be brought into alinement with each other.

[Claim 6 not printed in the Gazette.]

1,191,733. SPOOL-HOLDER. WARREN EDMUND RAYMOND, Chicago, Ill. Filed Nov. 6, 1915. Serial No. 59,965. (Cl. 242—134.)



1. A holder for spools for yarn, cord, or the like, comprising a pair of diverging legs of spring metal lying sub-

stantially in a plane and adapted to rest upon a substantially horizontal surface, said legs being secured together and the metal thereof formed to provide a spool-holding arm normally above and substantially horizontal and extending substantially in a vertical plane intermediate said legs.

2. A holder for spools for yarn, cord, or the like, comprising a pair of diverging legs of spring metal adapted to rest upon a substantially horizontal surface, said legs being secured together and the metal thereof formed to provide a spool-holding arm normally above and substantially in a vertical plane intermediate said legs, and means carried by said arm adapted to hold said legs and said arm in relatively small compass when said legs and said arm are drawn toward each other and secured by said means.

3. A holder for spools for yarn, cord and the like comprising a single piece of wire formed to provide a base lying substantially in a plane and adapted to rest upon a substantially horizontal surface, said wire being twisted together above the normal plane of said base, and formed to provide a spool-holding arm normally above and substantially horizontal and extending substantially in a vertical plane falling within said base.

4. A holder for spools for yarn, cord and the like comprising a pair of wire legs of spring metal diverging from each other to form a base adapted to rest upon a substantially horizontal surface, and an arm carried by said legs substantially where they diverge, said arm extending therefrom so as to be positioned normally above and substantially in a vertical plane intermediate said legs, said arm having means thereon adapted to hold said legs and said arm in relatively small compass when said legs and said arm are drawn toward each other and secured by said means.

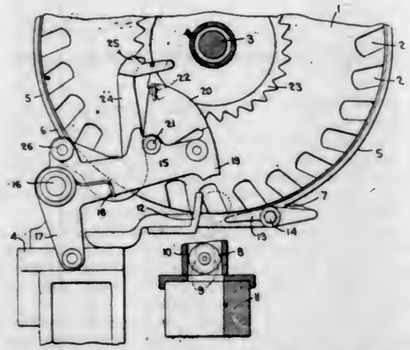
5. A holder for spools for yarn, cord and the like comprising a pair of wire legs of spring metal diverging from each other to form a base adapted to rest upon a substantially horizontal surface, and an arm carried by said legs substantially where they diverge, said arm extending upward and forward therefrom so as to be positioned normally above and substantially in a vertical plane intermediate said legs, said arm having two parts, one thereof normally above the other and spaced apart whereby a holding element may slide between said parts, and a holding element carried by said arm in said space, the portion of said arm accommodating said holding element being adapted to enter the axial hole of a spool to be held whereby such spool may rotate thereon, said spool-holding portion of said arm being normally at such an angle to the plane of the base that the axis of a spool thereon will be more horizontal than vertical, said holding element being adapted to engage said legs holdingly when the same are drawn sufficiently toward said arm when it is desired to hold the device in relatively small compass.

[Claim 6 not printed in the Gazette.]

1,191,734. FILLING-REPLENISHING MECHANISM FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 8, 1916. Serial No. 76,906. (Cl. 139—85.)

1. An automatic weft replenishing loom comprising a hopper stand, a hopper rotarily mounted thereon and provided with peripheral bobbin seats inclined to the radii of the hopper, a ratchet wheel connected to and rotating with the hopper, a transferrer pivotally mounted on the stand, a detent pawl coöperating with the ratchet wheel and pivotally mounted on the transferrer at a point which, when the transferrer is elevated, is above a line joining the pivotal axis of the transferrer with the effective point of contact of the detent pawl and ratchet whereby upon downward transfer movement of the transferrer a toggle action takes place causing the detent pawl to rotate the hopper to maintain the bobbin being transferred in the path of transfer until the bobbin passes from its seat.

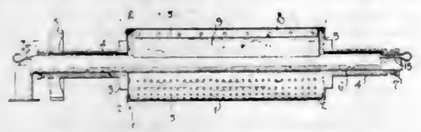
2. An automatic weft replenishing loom comprising a hopper stand, a hopper rotarily mounted thereon and provided with peripheral bobbin seats inclined to the radii of the hopper, a ratchet wheel connected to and rotating with the hopper, a transferrer pivotally mounted on the stand, an abutment to guide the bobbins in their discharge from the hopper seats during transfer, a detent pawl coöperating with the ratchet wheel and pivotally mounted on the transferrer at a point which, when the transferrer is elevated, is above a line joining the pivotal axis of the transferrer with the effective point of contact of the detent pawl and ratchet whereby upon downward transfer movement of the transferrer a toggle action takes place causing the detent pawl to rotate the hopper to maintain the bobbin being transferred in contact with the abutment until the bobbin passes from its seat.



3. An automatic weft replenishing loom comprising a hopper stand, a hopper rotarily mounted thereon and provided with peripheral bobbin seats inclined to the radii of the hopper, a ratchet wheel connected to and rotating with the hopper, a transferrer pivotally mounted on the stand, a detent pawl coöperating with the ratchet wheel and pivotally mounted on the transferrer at a point which, when the transferrer is elevated, is above a line joining the pivotal axis of the transferrer with the effective point of contact with the detent pawl and ratchet, the parts being so proportioned that, when the bobbin being transferred leaves its seat in the hopper, the detent pawl pivot is substantially on said line, whereby upon downward transfer movement of the transferrer a toggle action takes place causing the detent pawl to rotate the hopper to maintain the bobbin being transferred in the path of transfer until the bobbin passes from its seat, and whereby the toggle action substantially ceases when the bobbin leaves its seat in the hopper thus preventing further rotation of the hopper.

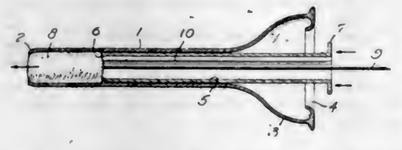
4. An automatic weft replenishing loom comprising a hopper stand, a hopper rotarily mounted thereon and provided with peripheral bobbin seats inclined to the radii of the hopper, a ratchet wheel connected to and rotating with the hopper, a transferrer pivotally mounted on the stand, an abutment to guide the bobbins in their discharge from the hopper seats during transfer, a detent pawl coöperating with the ratchet wheel and pivotally mounted on the transferrer at a point which, when the transferrer is elevated, is above a line joining the pivotal axis of the transferrer with the effective point of contact with the detent pawl and ratchet, the parts being so proportioned that when a bobbin being transferred leaves its seat in the hopper the detent pawl pivot is substantially on said line, whereby upon downward transfer movement of the transferrer the toggle action takes place causing the detent pawl to rotate the hopper to maintain the bobbin being transferred in contact with the abutment until the bobbin passes from is seat, and whereby the toggle action substantially ceases when the bobbin leaves its seat in the hopper, thus preventing further rotation of the hopper.

1,191,735. REVOLVING SUCTION-ROLL. PHILIP RICHARD, West Fitchburg, Mass. Filed Mar. 11, 1916. Serial No. 83,615. (Cl. 92—53.)



In combination with a stationary suction pipe, a perforate roll surrounding said pipe and provided with inwardly disposed lugs, heads for the roll secured to the lugs, each of said heads being provided with an outwardly extending trunnion, the outer end portion of which being in contact with the pipe, a packing nut coacting with the outer end portion of the trunnion, one of said trunnions being provided with operating means whereby the roll may be rotated around the pipe.

1,191,736. APPLICATOR. THOMAS EDGAR ROBERSON, Sheridan, Wyo. Filed Apr. 24, 1916. Serial No. 93,183. (Cl. 128—28.)



1. An applicator, comprising an outer casing or speculum and an inner casing or plunger, said speculum having a tubular cylindrical portion provided at one end with a flaring portion or bell having an inwardly turned annular lip at its outer end and the plunger fitting the cylindrical portion and having a flange at its outer end, and a longitudinally extending split for the purpose specified.

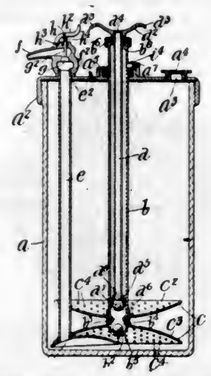
2. An applicator comprising an outer casing or speculum and an inner casing or plunger fitting within the outer casing, said casings being tubular, and the inner casing having a split extending longitudinally thereof and from one end to the other end for the purpose specified.

3. An applicator comprising an outer casing or speculum and an inner casing or plunger, said speculum having a tubular cylindrical portion provided at one end with a flaring portion or bell having an inwardly turned annular lip at its outer end and the plunger fitting the cylindrical portion and having a flange at its outer end.

1,191,737. SHAVING-LATHER PRODUCER. ELBERT V. D. ROUSSEAU, Boundbrook, N. J. Filed Dec. 14, 1914. Serial No. 877,127. (Cl. 221—94.)

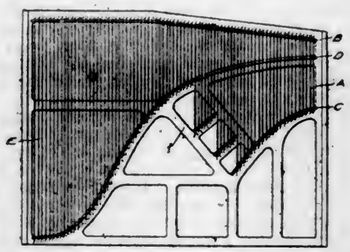
1. In a lather producing device, a receptacle provided with a cover, a tube fixed in one side portion thereof and passing out through the cover and provided with a discharge spout having a valve, and a combination plunger and pump device involving a main outer tube and a supplemental inner tube, said main outer tube being movable vertically through the cover and the supplemental inner tube being movable vertically in the main outer tube, and means for locking the main outer tube to the cover.

2. In a lather producing device, a receptacle provided with a cover, a tube fixed in one side portion thereof and one end of which passes out through the cover and is provided with a discharge spout, and the other end of which passes down into the receptacle and is provided with an inverted funnel-shaped head, and a combination plunger or pump device involving a main outer tube and a supplemental inner tube, said main outer tube being movable vertically through the cover, and the supplemental inner tube being movable vertically in the main



outer tube, and means for locking the main outer tube to the cover.

1,191,738. PIANO-STRINGING. WILHELM G. SCHEINPFLUG, New York, N. Y. Filed July 1, 1915. Serial No. 37,520. (Cl. 84—40.)



1. A piano provided with a string plate, strings carried by the said plate, the treble strings each being of a length which is a multiple of an ordinary string, bridges carried by the frame and over which the strings are stretched, and an auxiliary bridge carried by the plate intermediate of the first named bridges and over which the treble strings pass and engage at aliquot parts of their length.

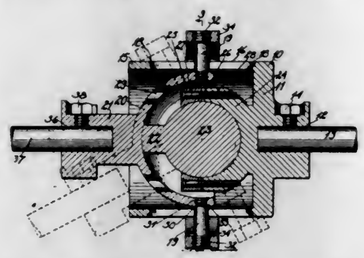
2. A piano provided with a string plate, strings carried by the said plate, the treble strings being each of a length which is a multiple of an ordinary string, bridges carried by the plate and over which the strings are stretched, an auxiliary bridge intermediate the first named bridges and over which the treble strings pass and engage at aliquot parts of their length, the pedal mechanism for moving the auxiliary bridge in and out of contact with the treble strings.

3. In a piano, a string plate, strings carried by the said plate, the treble strings each being of a length which is a multiple of the length of an ordinary string, bridges over which the strings are stretched, a bearing on the plate intermediate of the said bridges, an auxiliary bridge slidably mounted in the bearing below the strings, and a pedal mechanism for moving the auxiliary bridge in and out of contact with the strings.

1,191,739. UNIVERSAL JOINT. ERNEST F. SCHURMAN, New York, N. Y. Filed July 9, 1914. Serial No. 849,929. (Cl. 74—19.)

1. In a universal joint, a hollow member having longitudinally extending slots, the sides of each of the slots diverging for a distance from its center in the direction

of its ends, a member disposed in the hollow member, pins on the second member and disposed in the slots, a ring disposed around the hollow member to which the pins are secured, and means to prevent the longitudinal movement of the members relatively to each other.



2. In a universal joint, a hollow member having longitudinally disposed slots, the sides of each of the slots diverging for a distance from its center in the direction of its ends, a member disposed in the hollow member, pins on the second mentioned member and disposed in the slots, a ball and socket joint connecting the two members and disposed within the hollow member, and a ring around the hollow member to which the pins are secured.

3. In a universal joint, a hollow member having longitudinally disposed slots spaced apart, a member having an extended base and disposed in the hollow member, pins on the last mentioned member and disposed in the slots, a ring disposed around the hollow member, to which the pins are secured, and arms connecting the ring with the base of the second mentioned member, for holding the ring rigid relatively to the second mentioned member.

4. In a universal joint, a hollow member having longitudinally disposed slots and a head, the hollow member being provided with a concave bearing at the head, there being a threaded orifice in the concave bearing, a ball disposed on the concave bearing, a concavo-convex member secured to the ball and disposed between the slots in the hollow member and the concave bearing, pins on the concavo-convex member disposed in the slots, a companion bearing member having an orifice, disposed around the ball and against the first concave bearing, and a screw disposed in the orifice and meshing in the threaded orifice, there being an orifice on the concavo-convex member through which the screw may be inserted.

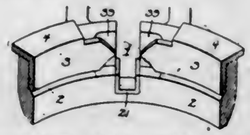
5. In a universal joint, a hollow member having longitudinally disposed slots and a head, the sides of each of the slots diverging from the center in the direction of its ends, the hollow member having a concave bearing extending from its head and provided with a threaded orifice, a ball disposed in the concave bearing, a concavo-convex member secured to the ball and disposed between the slots on the hollow member and the concave bearing, pins on the concavo-convex member disposed in the slots, a companion bearing member having an orifice and disposed around the ball and against the first mentioned concave bearing, and a screw disposed in the orifice and meshing in the threaded orifice, there being an orifice in the concavo-convex member through which the screw may be inserted.

[Claim 6 not printed in the Gazette.]

1,191,740. KNITTING-MACHINE. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Philadelphia, Pa., a Corporation of New Jersey. Filed Mar. 26, 1912. Serial No. 686,384. (Cl. 66—21.)

1. The combination, in a knitting machine, of a member having a gap therein for the operation of a plurality of yarn guides with a member operating independently of the yarn guides to close or open said gap.

2. The combination, in a knitting machine, of a member having a gap therein for the operation of a plurality of yarn guides, a member independent of said yarn guides, and automatic means for moving said latter member to close or open the gap.



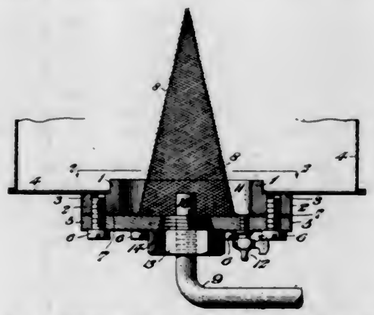
3. The combination, in a knitting machine, of a member having a gap therein for the operation of a plurality of yarn guides, and a member sliding back and forth across said gap and serving when in one position to open the same and when in the other position to close it.

4. The combination, in a knitting machine, of a latch guard having a gap therein for the operation of a plurality of yarn guides, and a gap closer independent of the yarn guides and mounted upon said latch guard but movable in respect thereto so as to open and close the gap therein.

5. The combination, in a knitting machine, of a swinging member having therein a gap for the operation of a plurality of yarn guides, a gap closer swinging with said member, a fixed cam for operating said gap closer, and connections between the gap closer and the cam, said connections being so disposed that the cam does not interfere with the swinging movement of the gap closer with its carrier.

[Claims 6 to 11 not printed in the Gazette.]

1,191,741. GASOLENE-STRAINER. JOHN L. SCULL, Philadelphia, Pa. Filed May 13, 1916. Serial No. 97,279. (Cl. 210—16.)



1. In a strainer of the character stated, a strainer proper, a ring, a plate on the latter forming the bottom thereof, said strainer proper rising from said plate within said ring, a discharge pipe in said plate adapted to enter said strainer proper, said ring having on its side an outturned flange on which a supply tank is seated and to which its bottom is secured around said ring.

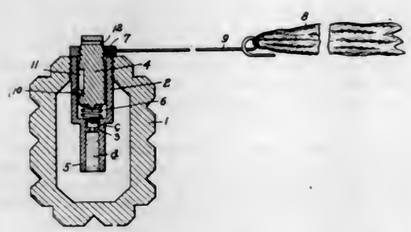
2. In a strainer of the character stated, a ring forming a chamber, the same having on its side an outturned flange on which a supply tank is seated and to which its bottom is secured around said ring, a plate adapted to close the base of said ring, means on said plate for connecting the latter with said flange, a strainer proper in said ring rising from said plate, and a discharge pipe connected with said plate having its upper end adapted to enter said strainer proper from below.

3. In a strainer of the character stated, a ring forming a chamber, the same having on its side an outturned flange on which a supply tank is seated and to which its bottom is secured around said ring, a plate adapted to close the base of said ring, means on said plate for connecting the latter with said flange, a strainer proper in said ring rising from said plate, a discharge pipe connected with said plate having its upper end adapted to enter said strainer proper from below, and a fitting adapted to engage said discharge pipe and connect it with said plate.

4. In a strainer of the character stated, a ring forming a chamber, the bottom of which is closed, a strainer rising from said bottom, an outturned flange on the exterior of said ring, the same having its upper face below that of the upper face of said ring, and a tank which is adapted to be supported on said flange around said ring, whereby the bottom of said tank is below the upper face of said ring.

5. In a strainer of the character stated, a ring forming a chamber, the bottom of which is closed, a strainer rising from said bottom, an outturned flange on the exterior of said ring, the same having its upper face below that of the upper face of said ring, a tank which is adapted to be supported on said flange around said ring, whereby the bottom of said tank is below the upper face of said ring, and an outlet conduit on said bottom, the same being adapted to project into the strainer and having its entrance end above said bottom.

1,191,742. PROJECTILE. JOHN B. SEMPLE, Sewickley, Pa. Filed Jan. 13, 1916. Serial No. 71,970. (Cl. 102—39.)



1. In a hand grenade the combination of two relatively movable parts one of said parts being provided with a primer and the other with a firing-pin, means normally holding said parts from relative movement, and further means effective as the grenade flies rotating as it flies on an axis angularly disposed to the line of flight and effective by such rotation for removing the means first named from such normal position.

2. In a hand grenade, the combination of a hammer member and an anvil member movable the one with respect to the other, a stop-nut screw threaded upon one of the two said members, and a drag-affording means borne by said stop-nut and non-symmetrically arranged with respect to the center of turning of the nut.

3. In a hand grenade the combination of two relatively movable parts provided one with a primer and the other with a firing pin, a locking nut screw threaded upon one of the two said parts, and a drag borne by said locking nut.

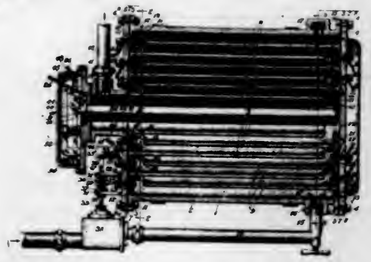
4. An essentially cylindrical grenade provided with a fuse structure which includes a movable element extending axially with respect to said cylindrical grenade, rotatable in unison with said grenade, and movable in axial line to effect firing, a stop member screw threaded to said member first named and limiting such member in its axial movement and a rotation preventing tail borne by said stop member.

5. In a hand grenade capable of being projected while rotating on an axis transverse to the line of its flight, a firing member movable in the direction of the axis of such rotation, and projecting through the end wall of the structure, a guard nut screw threaded upon the projecting end of said firing member, and a drag secured to said guard nut.

[Claim 6 not printed in the Gazette.]

1,191,743. ELECTRIC WATER-HEATER. MAURICE SIMON, St. Louis, Mo. Filed July 26, 1915. Serial No. 41,896. (Cl. 219—39.)

1. A water heater comprising a case, a water inlet to said case, a water outlet from said case, a series of baffle walls in the form of open-ended spaced cylinders of insulating material, a series of terminals for one end of an electric circuit, a single terminal constituting the other end of the electric circuit, said terminals entering said case, and a switch for placing selected ones of said first-named series of terminals in circuit, substantially as specified.



2. A water heater, comprising a case, a water inlet to said case, a water outlet from said case, and a series of baffle walls in the form of open-ended cylinders of insulating material interspaced and oppositely arranged in said case for deflecting the flow of water therethrough, in combination with an electrical terminal at one point in said case, and a second electrical terminal at another point in said case, the said baffle walls being interposed between said terminals.

3. A water heater, comprising a case, a water inlet to said case, a water outlet from said case, a series of insulated baffle walls mounted in said case and constituting deflectors for directing a tortuous flow of the water in said case, a series of terminals for one end of an electrical circuit entering said case, a single terminal constituting the other end of the electrical circuit entering said case, and an automatic circuit breaker in said circuit operable effectively to close the circuit when water is withdrawn from said outlet passage, substantially as specified.

4. A water heater comprising a case, an inlet passage to said case and an outlet passage from said case, a series of open-ended cylinders of insulating material forming communicating chambers, a series of terminals for one end of an electric circuit, each of said terminals of the series being arranged in communication with separate ones of said communicating chambers, a single terminal constituting the other end of the circuit entering said case, an optionally operable controlling device for cutting in one end of the circuit selectively to said first-named terminals, and an automatic circuit breaker for closing the circuit, substantially as specified.

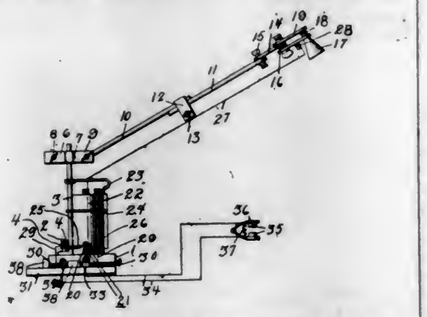
5. A water heater, comprising a case, an inlet passage to said case and an outlet passage from said case, an electrically energized circuit entering said case at separated points, an automatically operated circuit breaker in said circuit, a series of insulating baffle walls between the points at which the circuit enters the case, and a thermostatic device adapted to make and break said circuit independent of said automatic circuit breaker, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

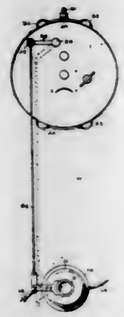
1,191,744. PORTABLE LAMP. GEORGE W. STANTON and RUFUS H. FRYE, Athens, Tenn. Filed July 20, 1915. Serial No. 40,928. (Cl. 240—8.5.)

1. In a portable lamp, the combination with a base having an open circuit thereon in which a lamp is included, the said circuit including also a pair of spaced binding posts, a spring switch pivotally mounted on one of said binding posts and adapted to engage the other, a pair of contacts mounted on the under face of said base, wires extending from said binding posts to said contacts, a base plate having contacts thereon adapted to engage the first mentioned contact and wires having a switch thereon connected to the contacts on the base plate.

2. In a portable lamp, the combination with a base of a standard mounted thereon, a telescopic arm adjustably mounted on the standard, an extension adjustably mounted on the arm, a plate secured to the extension and insulated therefrom, a second plate mounted on the extension, a lamp secured to the first mentioned plate and contacting with the second mentioned plate, the said plates being included in an electrical circuit and manually controlled means for closing said circuit.



1,191,745. TIME-SWITCH. ANDREW STRENG, Indianapolis, Ind., assignor of one-half to Michael J. Duffecy, Indianapolis, Ind. Filed Mar. 17, 1916. Serial No. 84,813. (Cl. 161—27.)

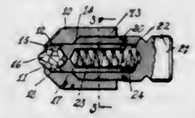


1. In a time actuated switch, the combination with a revoluble switch-shaft, a ratchet wheel rigidly mounted on said shaft, a lever, means carried by said lever for engaging and actuating said ratchet wheel, a clock mechanism, and means for connecting said clock mechanism and lever together.

2. In a time actuated switch, the combination with a revoluble switch-shaft, a ratchet wheel rigidly mounted on said shaft, a lever, means carried by said lever for engaging and actuating said ratchet wheel, means for normally holding said preceding means into engagement with said ratchet wheel, a clock mechanism, and means for connecting said clock mechanism and lever together.

1,191,746. DIAMOND-HOLDER. PAUL F. THOMSON, Indianapolis, Ind. Filed Apr. 25, 1914. Serial No. 834,412. (Cl. 51—11.)

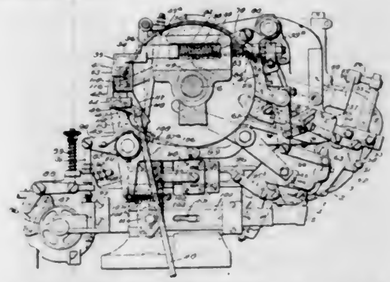
1. A diamond holder including a hollow casing with a reduced end opening for holding the diamond so that it will project outward therefrom, a sleeve adapted to screw into engagement with the other end of said casing, a movable holding member slidably mounted in said casing and sleeve and firmly held thereby with the outer end recessed for receiving the inner end of the diamond and the inner end tubular, and a helical spring lying in the tubular portions of said holder and sleeve for forcing the holder and diamond outward.



2. A diamond holder including a casing having a contracted end with an outwardly tapering opening for the diamond and a larger opening in said casing adjacent said diamond opening and a still larger opening at the other end of said casing where the casing is internally threaded, a sleeve externally threaded so as to screw into said casing and with an opening therein of the same diameter as the intermediate opening in the casing, a diamond holding member slidably mounted in said casing and sleeve and firmly held thereby and one end adapted to engage the inner portion of the diamond and with the major portion of said member tubular, and a helical spring in the tubular portion of said holding member and said sleeve.

3. A diamond holder including a hollow casing with a reduced end opening for holding the diamond so that it will project outward therefrom, a sleeve adapted to screw into engagement with the other end of said casing, and a movable holding member slidably mounted in said casing, the holding end being supported by said casing and the major portion supported by said sleeve.

1,191,747. SHOE-SEWING MACHINE. LAURENCE E. TOPHAM, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 30, 1912. Serial No. 728,579. (Cl. 112—20.)



1. A chain stitch shoe sewing machine, having, in combination, stitch forming devices including a hook needle and a looper, a main shaft from which said devices are operated, and mechanism to render the looper inactive during a forward cycle of movement of the machine and to cause the main shaft thereafter to come to rest with the needle in retracted position out of engagement with the work.

2. A chain stitch shoe sewing machine, having, in combination, stitch forming devices including a hook needle and a looper, a main shaft from which said devices are operated, and mechanism to render the looper inactive during the forward rotation of the shaft and thereafter to arrest the forward rotation of the shaft and thereby the movements of the parts of the machine when the needle is in retracted position out of engagement with the work.

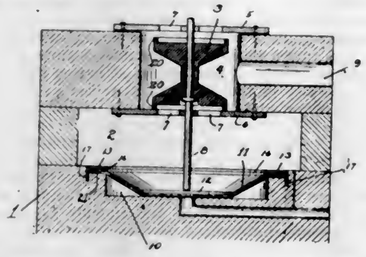
3. A chain stitch inseam shoe sewing machine, having, in combination, stitch forming devices including a hook needle and a looper, a welt guide, means to advance and retract the welt guide during each cycle of operation, a cam shaft mechanism for causing the needle to retract while its hook is empty and come to rest out of engagement with the work during the forward rotation of the cam shaft and means operated during the forward rotation of the cam shaft for imparting an increased retracting movement to the welt guide.

4. An inseam shoe sewing machine, having, in combination, stitch forming devices, a welt guide, mechanism for advancing and retracting the welt guide during each cycle of operations, a main shaft, and means actuated by the forward movement of the shaft for causing an increased retracting movement to be imparted to the welt guide to permit the removal and insertion of the work.

5. An inseam shoe sewing machine, having, in combination, stitch forming devices, a main shaft from which said devices are actuated, a welt guide, means to advance and retract the welt guide during each cycle of operations, and mechanism for causing an increased retracting movement to be imparted to the welt guide as the forward rotation of the shaft is arrested to stop the machine.

[Claims 6 to 31 not printed in the Gazette.]

1,191,748. PUFF-RETAINING RING. BURT R. VAN VALKENBURG, Oakland, Cal., assignor to American Photo Player Company, Berkeley, Cal., a Corporation of California. Filed Nov. 4, 1913. Serial No. 799,118. (Cl. 84—156.)



1. The combination of a chest having a cell formed therein, a puff having its edges overlying the edges of said chamber, the wall of said chest having a groove surrounding said chamber on the outside of the edges of said puff, a metal ring overlying the edges of said puff and having a portion projecting at right angles thereto and having firm contact with the edges of said groove, said portion being of slightly greater thickness than the original width of said groove, and a packing ring intermediate said puff and said first mentioned ring.

2. The combination of a chest having a cell formed therein, a puff having its edges overlying the edges of said cell, a paper ring overlying the edges of said puff, a metal ring overlying the said paper ring and the edges of said puff, and means carried by said metal ring for retaining the said metal ring, paper ring and the edges of said puff in place.

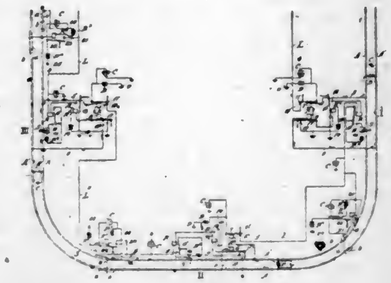
3. The combination of a chest having a cell formed therein, a puff having its edges overlying the edges of said cell, said puff being of substantially circular formation, a rigid disk carried by said puff and concentric therewith, a paper ring overlying the edges of said puff, a metal ring overlying the said paper ring and the edges of said puff, and means carried by said metal ring for retaining said metal ring, paper ring, and the edges of said puff in place.

4. The combination of a chest having a cell formed therein, a puff having its edges overlying the edges of said cell, a disk of rigid material carried by said puff, the wall of said chest having a groove surrounding said chamber on the outside of the edges of said puff, a metal ring overlying the edges of said puff and having a portion projecting at right angles thereto and having firm contact with the edges of said groove, said portion being of slightly greater thickness than the original width of said groove, and a packing ring intermediate said puff and said first mentioned ring.

5. The combination with the base member of a chest having a cell or chamber formed therein, a puff having its edges overlying the edges of said chamber, the wall of said member having a groove surrounding said chamber on the outside of the edges of said puff, and a metal ring overlying the edge of said puff and having a portion projecting at right angles thereto and having firm contact with the edges of said groove, said portion being of slightly greater thickness than the original width of said groove where the ring is inserted therein.

[Claims 6 to 12 not printed in the Gazette.]

1,191,749. ELECTRIC TRAIN-STOP SYSTEM. THEODORE W. VICKERS, Forsyth, Mont. Filed Aug. 28, 1914. Serial No. 859,049. (Cl. 246—59.)



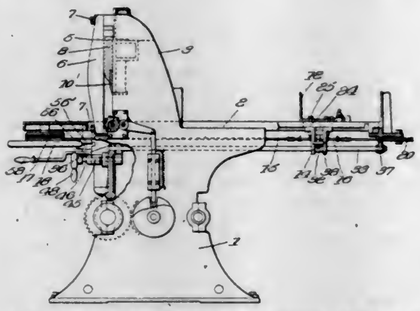
1. A block stop system of the class described comprising a track divided into blocks, a line wire extending from one block to another, a normally open switch at one end of each wire, a normally closed switch at the opposite end, a source of current connected with the closed switch end of each line wire, an electrically operated stop device at each block and including a normally open circuit, means in each line wire adjacent the normally open switch thereof for closing the circuit of the associated stop device, a normally energized circuit for each block and including a source of current connected with the track rails and also including electrical means for holding the closed switch of one line wire closed until the last electrical means is short circuited by a train on the said rails, and simultaneously effecting the closing of the open switch of another line wire, insulated rail sections at the end of each block, a source of current connected therewith, whereby a circuit is completed when a train contacts with the said rail sections, and means controlled by the flow of current through such circuit to connect a source of current with the line wire, whereby the train stop device will be maintained in clear position as a train is passing through a clear block.

2. A block stop system of the class described, comprising a track divided into blocks, a line wire extending from one block to another, a normally open switch at one end of each wire, a normally closed switch at the opposite end, a source of current connected with the closed switch end of each line wire, an electrically operated stop device at each block and including a normally open circuit, electrical means in each line wire adjacent the normally open switch thereof for closing the circuit of the associated stop device, a normally energized circuit for each block and including a source of current connected with the track rails and also including electrical means for holding the closed switch of an adjacent line wire closed until the last mentioned source of current is short circuited by a train on the said rails, insulated rail sections at the end of each block, a source of current connected therewith, whereby a circuit is completed when a train contacts with the said rail sections, and means including a source of current and controlled by the flow of current through the circuit of the insulated rail sections to connect said latter source of current with the line wire, whereby the train stop device will be maintained in clear position as a train is passing through a clear block.

3. A block stop system of the class described comprising a track divided into blocks, a source of current connected with the rails of each block, a relay connected with the rails and normally energized by the said source of current and adapted to be deënergized when short-circuited by a train, a line wire extending from one block to another, a switch in each line wire normally closed by the associated relay, a source of current connected with the closed switch end of each line wire, a normally open switch at the opposite end of each line wire and adapted to be closed upon the deënergizing of the associated relay, a relay in each line wire having normally separated contacts, a stop circuit in each block controlled by the associated line wire relay, insulated rail sections at the end of each block, a source of current connected therewith, whereby a circuit is completed when a train contacts with the said rail sections, and means controlled by the flow of current through such circuit to connect a source of current with the line wire, whereby the train stop device will be maintained in clear position as a train is passing through a clear block.

4. A block stop system of the class described comprising a track divided into blocks, a line wire extending from one block to another, a normally open switch at one end of each wire, a normally closed switch at the opposite end, a source of current connected with the closed switch end of each line wire, an electrically operated stop device at each block and including a normally open circuit, means in each line wire adjacent the normally open switch thereof for closing the circuit of the associated stop device, a normally energized circuit for each block and including a source of current connected with the track rails and also including electrical means for holding the closed switch of one line wire closed until the last electrical means is short circuited by a train on the said rails and simultaneously effecting the closing of the open switch of another line wire, insulated rail sections at the end of each block, a source of current connected therewith, whereby a circuit is completed when a train contacts with the said rail sections, a normally open switch controlled by the flow of current through such circuit to connect a source of current with the line wire, whereby the train stop device will be maintained in clear position as a train is passing through a clear block, means for grounding the forward end of a line wire when the normally closed switch is open, and means associated with the last mentioned switch for opening the line wire between the forward end thereof and said last-mentioned switch.

1,191,750. PAPER-CUTTING MACHINE. DARIUS T. WADHAMS, Oswego, N. Y., assignor to Niel Gray, Jr., Oswego, N. Y. Filed July 28, 1913. Serial No. 781,606. (Cl. 164—59.)



1. A machine of the character described having a supporting frame and a table thereon for the work to be cut, a gage for the work arranged to be movable on the table and locking means therefor connected to the gage and operative to effect a clamping engagement with the table whereby the gage is rigidly clamped in position.

2. A machine of the character described having a supporting frame and a table thereon for the work to be cut, a gage for the work arranged to be movable on the table, locking parts for the gage connected thereto and supported below the table and actuating means for the locking parts operative to effect a clamping engagement between the locking parts and the table.

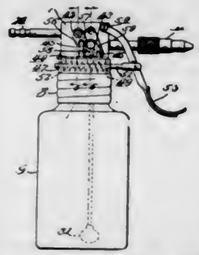
3. A machine of the character described having a supporting frame and a table thereon for the work to be cut, a gage for the work arranged to be movable on the table rear portion, means to move the gage on the table, locking means for the gage connected thereto and actuating means therefor operative to cause the locking means to effect clamping engagement with the table, said actuating means being extended forwardly to the front of the machine.

4. A machine of the character described having a supporting frame and a table thereon for the work to be cut, a gage for the work arranged to be movable on the table, said table having a guide-slot therein, a guide element on the gage fitted to the slot, an attachment piece secured to the gage and depending therefrom beneath the table, an engaging part arranged to engage the under surface of the table, an actuating cam adapted to work between the attachment piece and engaging part to exert an upward force on the engaging part and a downward force on the attachment piece to effect clamping engagement with the upper and lower surfaces of the table rigidly to secure the gage and means to operate the actuating cam.

5. A machine of the character described having a supporting frame and a table thereon for the work to be cut, a gage for the work arranged to be movable on the table, said table having a guide-slot therein, a guide-element on the gage fitted to the slot, an attachment piece secured to the gage and depending therefrom beneath the table, opposed ears on the attachment piece, an actuating shaft fitted to said ears, a locking cam slidably keyed on the actuating shaft and confined between the ears, and means to rotate the actuating shaft to cause the locking cam to effect the clamping of the gage in position.

[Claim 6 not printed in the Gazette.]

1,191,751. AIR-BRUSH. LIBERTY WALKUP, Rockford, Ill. Filed Feb. 15, 1916. Serial No. 78,353. (Cl. 91—45.)



1. In an air brush, the combination with a liquid container and an atomizing nozzle, of a valve case interposed between the same and having a conduit therethrough connecting the nozzle and container, a cylindrical valve mounted in the valve case intersecting said conduit and having ports adapted by oscillation of the valve to open and close the passage through said conduit, and packing at the ends of the valve extending beyond the periphery thereof so as to preclude leakage of liquid from the valve case.

2. In an air brush, the combination with a liquid container and an atomizing nozzle, of a conduit connecting said container and nozzle, a valve in said conduit for controlling passage of liquid therethrough, said valve being provided with a reservoir through which the liquid passes, and means for supplying air to the atomizing nozzle.

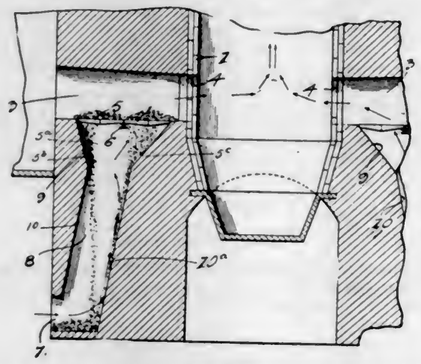
3. In an air brush, the combination with an atomizing nozzle, of means for supplying air and liquid color to the nozzle through separate conduits, a rotary valve in each conduit, a rocker arm attached to each valve, a movable operating member constantly urged by a spring to non-operating position, and means operable between said member and said rocker arms to open the air and liquid color valves respectively in succession upon movement of said operating member against the tension of said spring and to close said valves in inverse order upon releasing the operating member.

4. In an air brush, the combination with an atomizing nozzle, of means for supplying air and liquid color to the nozzle through separate conduits, a rotary valve in each conduit, a rocker arm attached to each valve and provided with a bifurcated end, a member slidably mounted and provided with portions engageable between the bifurcated portions of said arms by back and forth movement of the member to operate the valves so that upon movement of said member in one direction the air and liquid valves will be respectively opened in succession and upon movement of the member in the opposite direction the valve will be closed in inverse order.

5. In an air brush, the combination with an atomizing nozzle, of a pair of rotary valves one for controlling the supply of air and the other the supply of liquid color to the atomizing nozzle, a member mounted to travel in a back and forth movement, manually operable means for moving said member in one direction, a spring for moving said member in the opposite direction, means operable between said slidable member and said valves constructed to oscillate the same as said member is moved back and forth to open the air and liquid supply valves respectively in succession upon said member being manually operated and to close said valves in inverse order upon said member being moved in the opposite direction under the influence of the spring.

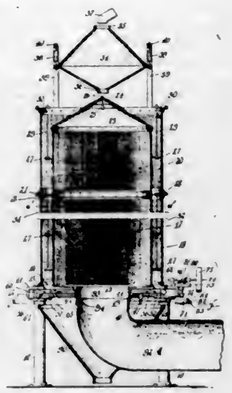
[Claim 6 not printed in the Gazette.]

1,191,752. APPARATUS FOR BURNING LIME. PATRICK A. WALSH and EDWARD J. WALSH, Round Rock, Tex. Filed Nov. 18, 1914. Serial No. 872,814. (Cl. 222—3.)



A lignite burning lime kiln comprising a combustion chamber, a grate in said chamber having the bars thereof spaced to permit particles of burning lignite to fall therethrough, an air distributing chamber located immediately below said grate and having downwardly converging front and rear walls, the inner surfaces of said walls being smooth to prevent the accumulation thereon of burning particles of lignite, an ash pit located below said distributing chamber and having a constricted air inlet opening, and an inclined air shaft equal in width to the width of the grate and having a depth less than the depth of the grate, said air shaft extending from the ash pit to the lower end of the distributing chamber and having inclined front and rear walls, the inner surfaces of these latter walls being smooth to prevent the accumulation thereon of the burning lignite particles, the inclination of the front and rear walls of the distributing chamber being greater than the inclination of the front and rear walls of the air shaft and extending from the upper ends of the latter walls to the front and rear ends of the grate in opposite directions beyond said latter walls, the said rear wall of the distributing chamber conveying the burning particles of lignite falling from the rear portion of the grate on to the said rear wall of the air shaft, and said front wall of the distributing chamber causing the burning particles of lignite falling from the front portion of said grate to fall the entire length of the air shaft, said air shaft receiving all the air used to support combustion and all of said air entering the shaft through the constricted opening of the ash pit, whereby lignite which is partially consumed in the grate will fall therethrough as it crumbles before it is consumed and being burned either in the air shaft or ash pit producing a long flame in the lime kiln.

1,191,753. GRAIN-DRIER. FREDERICK A. WEGNER, Buffalo, N. Y. Filed Apr. 30, 1913. Serial No. 764,665. (Cl. 34—34.)



1. In an apparatus of the kind described, the combination of a casing having a grain inlet at its upper end, and a series of discharge openings at its lower end, and a single regulating and controlling device provided with a series of openings to be brought into position to permit discharge of grain from said discharge openings, said device controlling the discharge of grain through said openings in proportion to the feeding of grain into said casing.

2. In an apparatus of the kind described, the combination of a casing having a grain inlet and an annular series of grain discharge openings, a spring-supported receptacle delivering grain into said inlet and adapted to be moved vertically in accordance with the weight of the grain therein, a single regulating and controlling device provided with an annular series of openings and being rotatable in a horizontal plane, and means between said spring-supported receptacle and said regulating and controlling device to actuate the latter and to control the discharge of grain through said discharge openings.

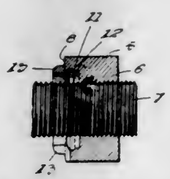
3. In an apparatus of the kind described, the combination of a casing having an outer wall and an inner wall separated from said outer wall to provide a grain chamber between the two and an air chamber within said inner casing, said air chamber being closed at both ends and having an air inlet at its lower end, both walls of said casings being constructed of foraminous material, said grain chamber being open at its upper end and closed at its lower end and having a series of discharge openings at said lower end, a regulating device beneath said discharge openings having openings therethrough adapted to be intermittently brought into position to permit the passage of grain therethrough.

4. An apparatus of the kind described comprising an outer casing and an inner casing separated from said outer casing to provide a grain chamber between the two, said inner chamber being closed at opposite ends and having an air inlet at its lower end and said grain chamber being closed at its lower end and having a series of discharge openings at said lower end, said casings having their side walls constructed of foraminous material, a feed hopper yieldingly mounted in a plane above said casings and adapted to feed grain into said grain chamber, a regulating device normally closing the discharge openings of said grain chamber, means for actuating said regulating device, and operative connection between said feed hopper and said regulating device to control the quantity of grain to be discharged from said grain chamber within any given period of time.

5. An apparatus of the kind described comprising an outer cylindrical casing and an inner cylindrical casing, said casings having their side walls formed of foraminous material and being separated to provide a grain chamber therebetween, said inner casing having a conical cap secured to its upper end and having its lower end closed and provided with an air inlet, a feed hopper yieldingly mounted and arranged above said conical cap to deliver grain thereon, means for regulating the discharge of grain from said grain chamber, and operative connection between said feed hopper and said regulating means whereby the latter is caused to permit the discharge of grain from said grain chamber in proportion to the weight of the grain within said feed hopper.

[Claims 6 to 19 not printed in the Gazette.]

1,191,754. LOCK-NUT. CHARLIE G. ANDERSON, Sikeston, Mo. Filed Dec. 7, 1914. Serial No. 875,877. (Cl. 151—21.)



1. A lock nut having an internally screw-threaded bore and an annular groove in the wall of said bore adjacent the object-engaging face thereof, and an annular flange formed on the object-engaging face of said nut and having a greater internal diameter than the bore of said nut and adapted to be turned inwardly into said groove as the nut is advanced against an object.

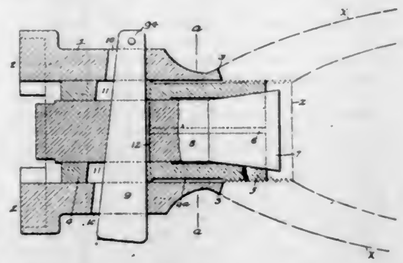
2. A lock nut having an internally screw-threaded bore and an annular groove formed in the wall of said bore adjacent the object-engaging face thereof, and a flange on the object-engaging face of said nut having a greater internal diameter than the diameter of said bore and having the outer corner rounded.

3. A lock nut having a threaded bore and an annular groove formed in the wall of said bore adjacent the object-engaging face thereof, the wall of said groove being flared outwardly toward the object-engaging face of said nut, and an annular flange formed on the object-engaging face of said nut of greater internal diameter than the diameter of said bore and adapted to be turned inwardly into said groove as the nut is advanced against an object.

1,191,755. CHUCK. AARON K. ANDREWS, Burnham, Pa. Filed Mar. 9, 1916. Serial No. 83,069. (Cl. 29—111.)

1. The combination in a chuck, of a body portion; a threaded mandrel mounted in the body portion, the threaded end of the mandrel being split and extending beyond the body portion; a tapered plug mounted in the mandrel; and means for drawing the plug into the mandrel.

2. The combination in a chuck, of a body portion having a longitudinal opening therein; a mandrel mounted in the opening and having a screw thread at the rear end thereof and slotted, the interior of the mandrel having an opening therethrough, the opening at the rear being tapered; a plug mounted in the mandrel having a tapered head, the threaded end of the mandrel extending beyond the end of the body portion; and means for drawing the plug into the mandrel.

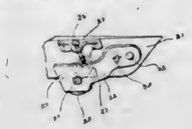


3. The combination of a body portion; a mandrel mounted in the body portion and having a screw threaded end projecting beyond the rear end of the body portion, said rear end of the mandrel being slotted; a plug mounted in the mandrel and having a tapered head; transverse slots in the plug, mandrel and body portion; and a wedge key adapted to the slots and arranged to draw the plug into the mandrel and to extend the threaded end thereof.

4. The combination in a chuck, of a body portion having a longitudinal opening therein, the said body portion having a beveled rear end arranged to fit against the end of the article to be secured to the chuck; a mandrel located within the body portion and having a threaded rear end, said rear end having longitudinal slots therein to allow it to expand, the mandrel having a central opening throughout its length, the rear end of the opening being beveled; a plug mounted in the mandrel and having a tapered head adapted to the tapered portion of the mandrel; a transverse slot in the plug and in the mandrel and body portion; and a key adapted to the slots and arranged to draw the wedge into the mandrel.

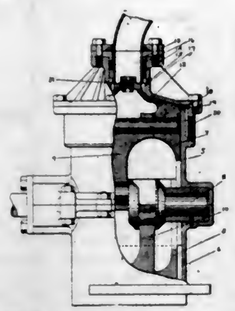
5. The combination of a body portion; a mandrel mounted in the body portion and having its rear end extending beyond the body portion and threaded, the mandrel being less in diameter directly in front of the head; longitudinal slots in the mandrel extending through the threaded and reduced portion; a plug mounted in the mandrel; and means for drawing the plug to expand the mandrel.

1,191,756. RAILROAD BALLAST-SPREADING DEVICE. CHARLES J. BAKER, Pueblo, Colo. Filed Jan. 2, 1912. Serial No. 668,880. (Cl. 37—22.)



In a railroad ballast spreader of the character described, provided with a share, the combination of guides attached by bracket means to said share adjacent to the inside of the rail, said guide consisting of a shoe, the bottom part of which is adapted to ride near and on the adjacent ties, the forward portion sloping upwardly; a spring housing attached to each of said shoes on the side adjacent to the rail; pin means adapted to adjust the relative height of said spring housing; screw means adapted to hold said bushing in position desired, and a flange wheel disposed between the rear end of said spring housing on a shaft operating in said spring housing and said bushing adapted to engage the top of the rail, all substantially as set forth.

1,191,757. PULSATOR FOR PULSATORY TOOLS. LEWIS CONDICT BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 25, 1913. Serial No. 791,712. (Cl. 230—32.)



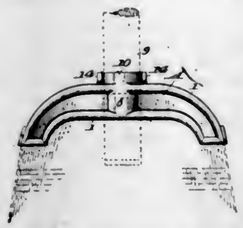
1. In a pulsator for pulsatory tools, a cylinder, its piston, a pressure line for a tool, and valve mechanism for shutting off said pressure line from said cylinder for a portion of the back stroke of said piston, and admitting outside fluid to said cylinder during said portion of the stroke.

2. In a pulsator for pulsatory tools, a cylinder, its piston, a pressure line for a tool, valve mechanism operated by contact with said piston for shutting off said pressure line from said cylinder for a portion of the back stroke of said piston and means for admitting outside fluid to said cylinder.

3. In a pulsator for pulsatory tools, a cylinder, its piston, a pressure line for a tool having an opening into said cylinder, a sleeve valve surrounding said opening, means to retain said valve in contact with said piston for a portion of the back stroke of said piston, and means for admitting outside fluid to said cylinder.

4. In a pulsator for pulsatory tools, a cylinder, its piston, a pressure line for a tool, having an opening into said cylinder, a sleeve valve surrounding said opening adapted to contact with said piston for a portion of its stroke, means for resiliently holding said valve in contact with said piston, and a check valve for admitting outside fluid to said cylinder.

1,191,758. BROOM-CLAMP. NORMAN H. BEEBE, Anthony, Kans., and HARRY E. SMITH, Davenport, Iowa, assignors to Modern Broom Machinery Company, Davenport, Iowa, a Corporation of Iowa. Filed Sept. 3, 1915. Serial No. 48,806. (Cl. 15—19.)

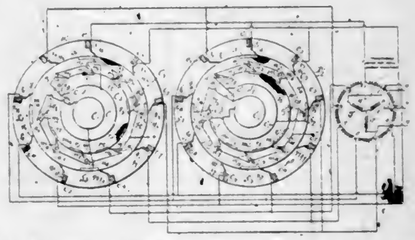


1. A broom clamp comprising two jaws having lips formed at the ends thereof, said lips provided with hooked ends, the hooks of one jaw adapted to enter the hooks of the other jaw, the lips of one jaw provided with openings and the lips of the other jaw adapted to enter the openings of the lips of the other jaw for securely fastening the ends of the jaws together.

2. A broom clamp comprising two jaws having lips formed at the ends thereof, said lips provided with hooked ends, the hooks of one jaw adapted to enter the hooks of the other jaw, the lips of one jaw provided with openings and the lips of the other jaw provided with projections which are adapted to enter the openings of the lips of the other jaw for securely fastening the ends of the jaws together, extensions formed at the center of the jaws provided with hooked ends, the hooked ends of one extension having openings therein and the hooks of the other extension provided with projections which projections are adapted to be received in the openings of the hooked ends of the other extension for securely locking the jaws together at the center.

3. The combination with two jaws having hooked ends, the hooks of one jaw entering the hooks of the other jaw for locking the ends of the jaws together, of extensions formed at the centers of the jaws provided with hooked ends, the hooked ends of one extension engaging the hooked ends of the other extension for locking the jaws together at the center, and a broom handle adapted to be received between the jaws, and provided with a groove into which said extensions are adapted to enter to lock the handle to the jaws.

1,191,759. ELECTRIC CONVERSION. SEWALL CABOT, Brookline, Mass. Filed Aug. 22, 1912. Serial No. 716,359. (Cl. 171—97.)



1. An electric conversion system comprising in combination, a source of polyphase current having a given number of phases, a transformer having a very small leakage-inductance adapted to change said current to polyphase current having a greater number of phases, a commutator and a plurality of brushes associated therewith for successively short-circuiting the secondaries of said transformer, means for creating relative motion between said commutator and brushes in synchronism with said current, a plurality of conductors connecting the secondaries of said transformer with said brushes, and means for taking off the resulting practically-unfluctuating direct current from said commutator.

2. An electric conversion system comprising in combination, a source of polyphase current having a given number of phases, a transformer having very small leakage-inductance adapted to change said current to polyphase current having a greater number of phases, and means for converting said last-mentioned polyphase current into practically-unfluctuating direct current, said means comprising apparatus for simultaneously connecting or disconnecting at a plurality of points in series the direct current circuit to or from the secondaries of said transformer.

3. An electric conversion system comprising in combination, a source of polyphase current of one system, a transformer having very small leakage-inductance adapted to change said current to polyphase current of a different system, a commutator, a plurality of brushes therefor, means for creating relative motion between said commutator and brushes in synchronism with said current, a plurality of conductors connecting the secondaries of said transformer with said brushes, and means for taking off

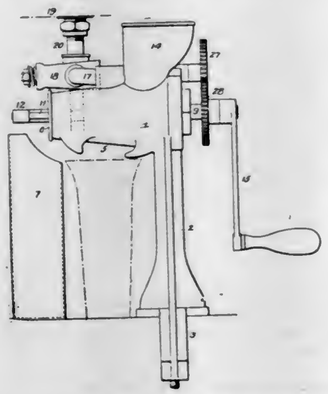
the resulting practically-unfluctuating direct current from said commutator, said means comprising apparatus for simultaneously connecting or disconnecting at a plurality of points in series the direct current circuit to or from the secondaries of said transformer.

4. An electric conversion system comprising in combination, a source of polyphase current, a transformer having a very small leakage-inductance, connections from the primaries of said transformer to said source, a commutator, a collecting device and brushes for successively short-circuiting the secondaries of said transformer and thereby converting said polyphase current into practically-unfluctuating direct current, and means for adjusting the position of said brushes with respect to said commutator.

5. An electric conversion system comprising in combination, a source of polyphase current of one system, a transformer having very small leakage-inductance adapted to change said current into polyphase current of a different system, a commutator, a collecting device and brushes for successively short-circuiting the secondaries of said transformer and thereby converting said polypahse current into practically-unfluctuating direct current, and means for adjusting the position of said brushes with respect to said commutator.

[Claims 6 to 40 not printed in the Gazette.]

1,191,760. APPARATUS FOR MAKING BEVERAGES. JOHN M. CANFIELD, North Glenside, Pa. Filed Feb. 5, 1916. Serial No. 76,360. (Cl. 100—48.)

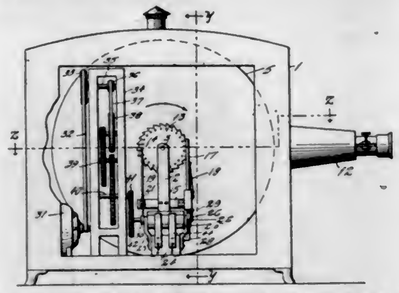


1. The combination in apparatus for making a beverage, of a casing; a compressing screw mounted in the casing; means for turning the said screw; a hopper, said casing having a discharge opening for the juice and another discharge opening for the pulp; a passage in the casing; a pipe connected to the passage; a valve casing connected to the pipe and to a liquid supply; and means connecting the valve with the screw so that on turning the screw the valve will be opened and closed.

2. The combination in apparatus for making a beverage, of a casing having an extracting chamber therein; a conical screw mounted in the chamber, the casing having a hopper and an outlet for juice and another outlet for the pulp; a valve casing communicating with the extracting chamber; a valve in the valve casing; a shaft coupled to the valve; a gear wheel on said shaft; and a gear wheel on the stem of the screw with which the first mentioned gear wheel meshes so that on turning the screw the valve will be opened and closed.

3. The combination in apparatus for making a beverage, of a casing having a conical extracting chamber; a feed screw adapted to the chamber and having a main compressing thread, the edges of the thread being notched; and supplemental shallow ribs formed on the screw and conforming to the shape of the thread, whereby the skin of the fruit is squeezed or buckled as it is passed through the apparatus.

1,191,761. PROJECTING APPARATUS. CHARLES E. CHAPMAN, Dallas, Tex. Filed June 19, 1915. Serial No. 34,982. (Cl. 88—27.)

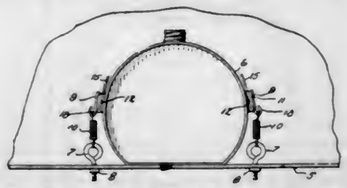


1. The combination in a projecting apparatus of a revolving slide carrier; a lamp acting in conjunction with the carrier; means for intermittently imparting periods of revolution to the carrier including a continuously operating member, a ratchet connected with the carrier, a pawl operating the ratchet, and a pawl operating element connected with the pawl and intermittently operated by the operating member; and a locking device normally engaging the ratchet and holding the carrier against revolution, said device being constructed to be withdrawn from the ratchet during the operation of the latter, and an operating element carried by the continuously operating member constructed to operate the locking device.

2. In an automatic projecting apparatus, the combination of a revolving slide carrier normally at rest, a continuously operating driving member, a ratchet connected with the carrier, a locking device engaging the ratchet and normally holding the same against operation, a pawl engaging the ratchet, a cam operated by the operating member, a lever for operating the pawl operated by the said cam, a second cam operated by the operating member constructed to operate the locking device, and a lamp acting in conjunction with the carrier.

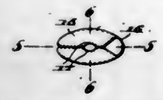
3. In an automatic projecting apparatus, the comoination of a casing, a post mounted in the casing, a revolving slide carrier journaled on the post, an electric lamp mounted in the carrier, a ratchet fixed to the carrier, a pawl mounted on the post and engaging the ratchet, said ratchet having a plurality of holes, a locking dog pivoted on the post and engaging the holes of the ratchet, a cam engaging the dog, a shaft carrying the cam, a second cam mounted on the shaft, a lever engaging the pawl and swung by the second cam, a circuit breaker also mounted on said shaft and electrically connected with the lamp, a train of gears revolving the shaft, and means for continuously operating the gears during the operation of the apparatus.

1,191,762. DEVICE FOR FASTENING OBJECTS TO VEHICLES. JOHN W. CONANT, Montoya, N. Mex. Filed July 22, 1915. Serial No. 41,571. (Cl. 224—29.)



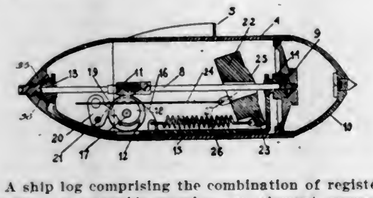
A securing device of the class described comprising a hook member formed of a single length of wire centrally bent in eye form to provide a grip and the material outwardly of said eye being extended divergently and then bent back and terminating short of the eye to form a bill and the wire from thence extended back again toward the free end of the bill, a securing member and a retractile spring connecting the last named portion of the hook and the said securing member.

1,191,763. CUFF-BUTTON LOCK. JAMES B. CONDE and CHARLES S. MOSCONY, Philadelphia, Pa. Filed Oct. 29, 1913. Serial No. 798,064. (Cl. 24—90.5.)



A device of the kind described comprising a pair of hollow opposed contacting jaws, each of said jaws being formed with an inwardly and angularly disposed edge, the angular edges of both jaws adapted to form a V-shaped portion, said jaws being together formed with an opening, and an integral segmentally bent neck formed upon said jaws and merging at its opposite ends with the angular edges of said jaws and providing with said edges a substantially sector-shaped opening, said neck adapted to force said jaws together and allowing them to open apart against the tension of said neck.

1,191,764. LOG AND STREAM-INDICATOR. WILLEM CORNELIS, Utrecht, Netherlands. Filed Mar. 22, 1915. Serial No. 16,246. (Cl. 73—122.)



1. A ship log comprising the combination of registering mechanism, a rotatable member, an element connecting said member and said registering mechanism, and means operated by the rotation of said member for causing intermittent movements of the latter, said movements placing additional tension on said connecting element, whereby said movements are transmitted to said registering mechanism, and the latter is operated.

2. The combination with registration mechanism, of a ship log comprising a rotatable casing, a pendulum within the casing, a hammer pivoted on said pendulum, means mounted on said pendulum and actuated by the rotation of said casing for operating said hammer whereby shock is caused in said casing, and means for connecting said casing and registering mechanism.

3. The combination with registering mechanism, of a ship log comprising a rotatable casing, a pendulum mounted within the casing, a hammer pivoted on said pendulum, a cam mounted on said pendulum and rotated by the movement of said casing, means connected with said hammer and actuated by said cam for operating said hammer to cause a shock within said casing, and means connecting said casing with said registering mechanism, whereby said shock is registered.

4. A ship log comprising a rotatable casing, a pendulum within the casing, a hammer pivoted on said pendulum, and means mounted on said pendulum and actuated by the rotation of the casing for operating said hammer to cause a shock within the casing.

5. The combination with a registering mechanism, of a fluid-operated rotatable member, an element connecting said registering mechanism and said member, and means actuated by the rotation of said member for causing intermittent movements of the latter, said element being adapted to communicate said movements to said registering mechanism whereby the latter is operated.

[Claim 6 not printed in the Gazette.]

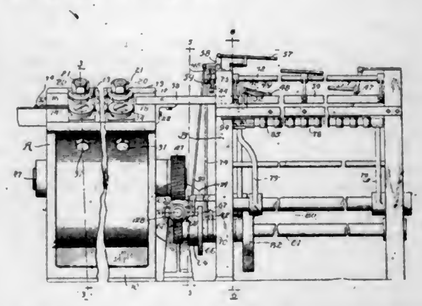
1,191,765. PLASTER-BOARD WITH REINFORCE-RIBS. GEORGE P. CRUMBAUGH, St. Louis, Mo., assignor of one-half to Edwin W. Grove, St. Louis, Mo. Filed Mar. 31, 1914. Serial No. 828,589. (Cl. 72—124.)



1. A wall board or covering consisting of a flat backing sheet, a front sheet firmly secured thereto and having corrugations extending in parallel relation and forming hollow inclosures which are clear throughout their length, the corrugations projecting solely from one side of the backing sheet, and solid stiffening ribs longitudinally and loosely inserted endwise in the hollow corrugations and shiftable from one corrugation to another throughout the area of the wall board or covering to increase and materially reinforce certain portions of the wall board or covering that may require greater strength or resistance, the ribs being held solely by frictional engagement with the portions of the hollow corrugations and the flat backing sheet.

2. A wall board or covering of a flexible character having a flat backing sheet, a front sheet firmly secured to the backing sheet and having corrugations extending in parallel relation and forming tubular inclosures relatively to the backing sheet, the inclosures being fully open throughout their entire length, and solid stiffening ribs longitudinally and loosely inserted in the tubular corrugations and shiftable from one corrugation to another, the ribs engaging the backing sheet and the apexes and side portions of the corrugations and prevented from turning in the corrugations.

1,191,766. METHOD OF MANUFACTURING EXPANDED METAL. LEWIS E. CURTIS, Kenilworth, Ill., assignor to Ames Steel Lath Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 7, 1915. Serial No. 44,192. (Cl. 164—6.6.)



1. The herein described method of forming expanded metal which includes, slitting an entire sheet and only partially expanding the sheet, the width of the sheet being increased by the partial expanding operation, and then concluding the expansion of the sheet in a separate operation.

2. The herein described method of forming expanded metal which includes, simultaneously slitting and partially expanding an entire sheet, and then completing the expanding by a distinct and separate expanding operation.

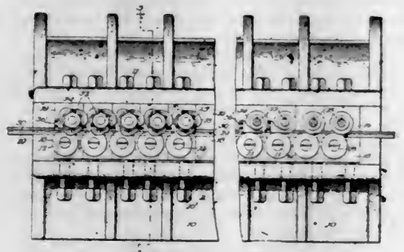
3. The herein described method of forming expanded metal which includes, slitting a sheet into bonded strands and partially opening up the strands thus formed and deflecting the sheet as an entirety into a plane at an angle to the original plane of the sheet, and then completing the expansion of the slitted and partially expanded sheet by a separate expanding operation.

4. The herein described method of forming expanded metal which includes, slitting a sheet and simultaneously partially expanding the same and thereby deflecting the sheet into a plane at an angle to the original plane of the sheet, and then completing the expansion by a separate operation.

5. The herein described method of forming expanded metal which includes, slitting a sheet into bonded strands and partially expanding the openings thus formed, the sheet as an entirety being deflected during the slitting and partial expanding operation into a plane substantially at right angles to the original plane of the sheet, and finally completing the expansion of the sheet in a separate operation by opening up the partially expanded sheet in the plane to which it has been deflected.

[Claims 6 to 13 not printed in the Gazette.]

1,191,767. PROCESS OF MANUFACTURING EXPANDED METAL. LEWIS E. CURTIS, Kenilworth, Ill., assignor to Ames Steel Lath Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 1, 1915. Serial No. 48,523. (Cl. 164—6.6.)



1. The herein described process of manufacturing expanded metal which includes, slitting a sheet to form bonded strands and directly opening up alternate series only of strands thus formed simultaneously with the slitting thereof, the alternate intermediate strands being opened up indirectly and subsequent to the slitting operation by which they are formed.

2. The herein described process of manufacturing expanded metal which includes, slitting a sheet into bonded strands and directly opening up only separated strands simultaneously with the slitting thereof, intermediate strands being opened up indirectly.

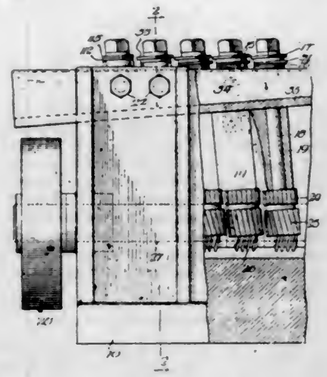
3. The herein described process of manufacturing expanded metal which includes, cutting and simultaneously opening one strand, cutting the adjacent strand, cutting and simultaneously opening the next strand, cutting the next strand, and so on for all the strands across the sheet, the cutting and simultaneous opening of one strand and the cutting of the adjacent strand being performed substantially in the same line transversely of the sheet.

4. The herein described process of manufacturing expanded metal which includes, simultaneously slitting the sheet with two adjacent strands having bonds therebetween, the slits and bonds being staggered, and opening up directly only one of the series of the strands thus formed simultaneously with the slitting thereof.

5. The herein described process of manufacturing expanded metal which includes simultaneously slitting the sheet with a plurality of adjacent strands with the slits and bonds staggered, opening directly part only of said strands simultaneously with the slitting thereof, and repeating the foregoing series of operations across the entire width of the sheet, the strands not directly opened up being indirectly opened up.

[Claims 6 and 7 not printed in the Gazette.]

1,191,768. METHOD OF MAKING EXPANDED METAL. LEWIS E. CURTIS, Kenilworth, Ill., assignor to Ames Steel Lath Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 1, 1915. Serial No. 48,524. (Cl. 164—6.6.)



1. The herein described method of manufacturing expanded metal which includes, slitting without expanding a portion of a sheet to form bonded strands, successively opening up the strands thus formed simultaneously with the slitting without expanding of an adjacent portion of the sheet to form bonded strands, and so on across the width of the sheet.

2. The herein described method of manufacturing expanded metal which includes, slitting without expanding a sheet to form a strand bonded at intervals to the body of the sheet, subsequently opening up said strand thus formed simultaneously with the slitting without expanding of the sheet to form another similar strand in proximity thereto, and repeating the foregoing sequence of steps across the width of the sheet.

3. The herein described method of manufacturing expanded metal which includes, slitting without expanding a portion of a sheet to form a plurality of parallel bonded strands, then slitting another adjacent portion of the sheet to form another plurality of bonded strands, the strands first formed being simultaneously opened with the slitting of the sheet to form the second set of strands.

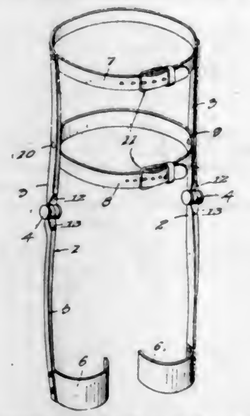
4. The herein described method of manufacturing expanded metal which includes, slitting a portion of a sheet, then slitting an adjacent portion of the sheet, and simultaneously with the latter operation, opening up the first slitted portion, the simultaneous slitting and opening taking place substantially in the same line transversely of the sheet.

5. The herein described method of manufacturing expanded metal which includes, slitting the sheet to form a pair of parallel bonded strands, then slitting the sheet to form another pair of parallel bonded strands, and simultaneously with the latter operation, opening up one of the previously formed strands directly and the other of the previously formed strands indirectly.

[Claims 6 to 8 not printed in the Gazette.]

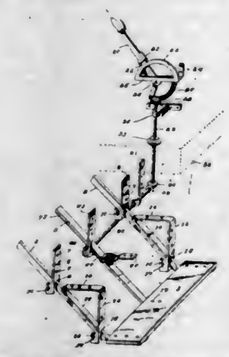
1,191,769. BODY-SUPPORT. EPHRAIM A. CURTS and JOHN C. NIDA, Anderson, Mo. Filed Aug. 12, 1914. Serial No. 856,484. (Cl. 2—93.)

1. A body support consisting of a pair of side-engaging members each formed of a pair of pivotally connected sections arranged one above the other, body encircling straps carried by the uppermost section, semicircular plates carried by the lowermost section and adapted to engage around the legs of the wearer at points above the knees, the said uppermost sections being adapted, when the body of the wearer is in stooped position, to lie at right angles to the lowermost sections, and means for limiting the downward movement of the upper section.



2. A body support consisting of a pair of side-engaging members, each formed of a pair of pivotally connected sections arranged one above the other, the uppermost sections having their lower ends provided with upwardly and outwardly beveled faces, and the lowermost sections having their upper ends provided with inwardly and upwardly beveled faces, body-engaging members carried by the uppermost sections and leg-engaging members carried by the lowermost sections, the said uppermost sections being adapted when the body of the wearer is in forward stooped position to lie at right angles to the lower sections and to have the beveled faces of the lower ends thereof engage the beveled faces of the upper ends of the lower sections so as to limit the downward movement of the uppermost sections for the purpose specified.

1,191,770. EXTENSION CAR-STEP. GABRIEL L. DAVIS, Visalia, Cal. Filed Nov. 30, 1915. Serial No. 64,341. (Cl. 105—87.)



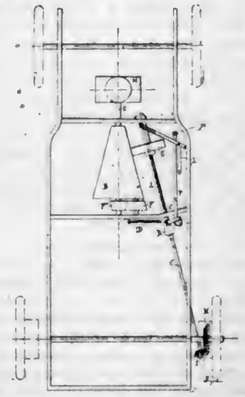
1. In an extension car step, an extension step tread, inclined slidable supports for said tread, a plurality of guiding hangers for each of said supports, an operating lever for shifting said tread and its slidable supports, a sector gear on said lever, an upright shaft actuated by said sector gear, a countershaft extending horizontally under the step line, rack and pinion means connecting said countershaft with extension tread, and a spring tensioned roller maintaining the rack and pinion elements of the last named means in working engagement with each other.

2. In an extension car step, an extension step tread, inclined slidable supports for said tread, a plurality of guiding hangers for each of said supports, an operating lever for shifting said tread and its slidable supports, a sector gear on said lever, an upright shaft actuated by said sector gear, a countershaft extending horizontally under the step line, rack and pinion means connecting said countershaft with the extension tread, and a bearing bracket for said upright shaft embodying a fixed section and a relatively movable and adjustable section in which said shaft is journaled.

3. In an extension car step, an extension step tread, inclined slidable supports for said tread, a plurality of guiding hangers for each of said supports, an operating lever for shifting said tread and its slidable supports, a sector gear on said lever, an upright shaft actuated by said sector gear, a countershaft extending horizontally under the step line, rack and pinion means connecting said countershaft with the extension tread, and stops on the inner ends of said slidable supports which contact with certain of said hangers to limit the outward movement thereof.

4. In an extension car step, an extension step tread, inclined slidable supports for said tread, a plurality of guiding hangers for each of said supports, an operating lever for shifting said tread and its slidable supports, a sector gear on said lever, an upright shaft actuated by said sector gear, a countershaft extending horizontally under the step line, rack and pinion means connecting said countershaft with the extension tread, a spring tensioned roller maintaining the rack and pinion elements of the last named means in working engagement with each other, and means for adjusting said pinion element toward said rack element.

1,191,771. TRANSMISSION MECHANISM. EDOUARD LUDOVIC DELACOUR, Paris, France. Filed Aug. 13, 1913. Serial No. 784,638. (Cl. 74—26.)



1. In transmission mechanism, the combination of a driving shaft, a conical gear member mounted upon said shaft, a jointed driven shaft extending parallel to the generating line of the gear member aforesaid, a gear element shiftable along said driven shaft, to obtain a variation of speed, tension means connected to the driven shaft and normally tending to move the same laterally to maintain the shiftable gear element in co-action with the conical gear member for transmission of motion to the driven shaft, and lever means for shifting the driven shaft laterally against the tension aforesaid to move the gear element away from the gear member.

2. In transmission mechanism, the combination of a driving shaft, a conical gear member mounted upon said

shaft, a movable driven shaft extending parallel to the generating line of the gear member aforesaid, a universal joint intermediate the length of the driven shaft, a lever operably connected to the jointed portion of the driven shaft, a gear element shiftable along said driven shaft, and a spring connected to the driven shaft adjacent to the universal joint and normally tending to move a section of said shaft on which the shiftable gear element is mounted toward the conical gear member whereby to maintain the shiftable gear element in co-action with the said conical gear member.

3. A transmission mechanism for motor vehicles including a frame and driving wheels, comprising in combination, a driving shaft, a conical gear element mounted upon said shaft, a driven shaft extending parallel to the generating line of the gear member aforesaid, said shaft being arranged diagonally upon the frame whereby to bring one end thereof contiguous to a driving wheel for the vehicle, a joint for said driven shaft disposed intermediate its length to permit lateral movement of the jointed portion, a gear element shiftable along said driven shaft, means for maintaining said shaft sections in alinement and the gear element in coöperation with the conical gear member, and means operably connected to the jointed portion of the shaft for moving the same laterally and the gear element out of coöperation with the conical gear member.

1,191,772. HOSPITAL-BED. JOHN H. DICKERSON, Hazleton, Pa. Filed July 29, 1914. Serial No. 853,871. (Cl. 5—12.)



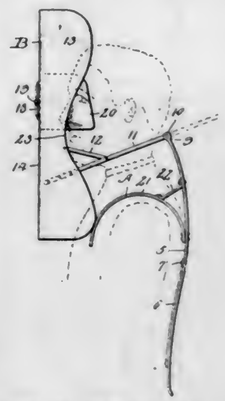
A hospital bed including a rigid frame, a spring frame pivoted within the rigid frame, a cylinder mounted to operate on the rigid frame, a piston operable within the cylinder, a lever pivotally mounted on the rigid frame, said lever being connected to the piston, a second lever pivotally mounted on the rigid frame, a pivoted head piece on the spring frame, a link connecting the upper end of the second lever with the pivoted head piece and arranged to raise said head piece, lugs carried by the second lever and arranged to engage the pivoted frame, and a link connected to the second lever and arranged to be connected to the upper or lower terminals of the first mentioned lever so that when the piston within the cylinder is operated the spring frame or head piece will be operated according to the link connection.

1,191,773. FACE-SHIELD. WILLIAM F. DINKUHN, Tarentum, Pa. Filed June 29, 1915. Serial No. 37,063. (Cl. 2—149.)

1. In a device of the class described, a body frame adapted to engage the back of the user, shoulder hooks carried thereby, arms pivotally connected with the upper end of said frame for vertical swinging movement, said arms normally extending forwardly at right angles to said frame, and a shield carried by the free end of said arms for the purpose described.

2. In a device of the class described, a body frame adapted to bear against the back of the user, shoulder hooks carried thereby at a point an appreciable distance below the upper end of said frame, a shield pivotally supported upon said upper end of the frame and having a sight opening therein, a transparent element covering said opening, and a pad secured to the inner face of said hood about three edges of the opening and adapted to shield the eyes from light entering from the back of the shield.

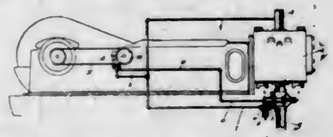
3. In a device of the class described comprising a body frame adapted to be supported upon the back of the user, shoulder hooks projecting forwardly from said frame at a point in its length, a shield pivotally supported upon the upper end of said frame and having a sight opening therein, a pad secured to said shield and surrounding said opening to protect the eyes and to exclude the entrance of light from the back of the shield, guide strips secured to the opposite side of the shield about the edges of said opening, and a transparent panel slidably fitted between said guides.



4. In a device of the class described, a body frame adapted to be supported upon the back of the user, shoulder hooks projecting forwardly therefrom at a point in its length, spaced parallel arms pivotally connected with the upper end of the frame and normally projecting forwardly at right angles to said frame, a substantially U-shaped shield carried by the free ends of said arms, and provided with a sight opening, a transparent element covering said opening, and a pad secured to the inner face of said shield and disposed about said opening to protect the eyes from light entering from the back of the shield.

5. A device of the class described comprising a body frame adapted to be supported upon the back of the user, shoulder hooks carried thereby at a point in its length, spaced parallel arms pivotally connected with the upper end of the frame above said shoulder hooks, and normally projecting forwardly at right angles to the frame, a substantially U-shaped shield carried by the free ends of said arms, the parallel members of said shield having their free longitudinal edges oppositely curved throughout their length, said shield having a sight opening, a transparent element covering said opening, and a pad secured to the rear face of the shield and arranged about the opening to protect the eyes from light entering from the back of the shield.

1,191,774. REGULATOR FOR COMPRESSORS. RICHARD W. DOUGLASS, White Plains, N. Y., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed July 19, 1912. Serial No. 710,371. (Cl. 230—24.)



1. In combination, a compressor, unloading means therefor, and means for operating said unloader at definite intervals irrespective of the compressing operation.

2. In combination, a compressor, driving means therefor, an unloader for said compressor, and means actuated by said driving means for operating said unloader at definite intervals irrespective of the compressing operation.

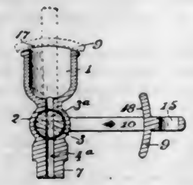
3. In combination, a compressor, unloading means therefor, means for operating said unloader at definite intervals irrespective of the compressing operation and means for varying the duration of the operation of said unloading means.

4. In combination, a compressor, driving means therefor, an unloader for said compressor, means actuated by said driving means for operating said unloader for definite periods at indefinite intervals irrespective of the compressing operation and means for varying the duration of said periods of operation.

5. In combination, a compressor, means for unloading said compressor comprising a fluid operated valve, and means for periodically admitting fluid to said unloading means to operate said valve.

[Claims 6 to 11 not printed in the Gazette.]

1,191,775. PRIMING-CUP FOR GAS-ENGINES. RHESA G. DU BOIS, East Orange, N. J. Filed Jan. 16, 1915. Serial No. 2,520. (Cl. 137—7.)



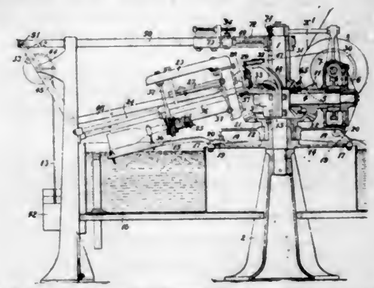
1. A priming cup for internal combustion engines and the like comprising a bowl having a member with a discharge duct from the bowl, a rotary valve for opening and closing said duct, and an exterior arm provided with a cover for said bowl, said arm being movable with the valve to pass the cover over the rim of the bowl to closed position as the valve closes the duct and to opened position as the valve opens the duct, the rim of the bowl forming oppositely located convex portions each extending approximately half way around said rim, the under surface of said cover being correspondingly curved to pass over the top edge of the rim completely around the same when the cover is in closed position.

2. A priming cup for internal combustion engines and the like comprising a bowl having a stem with a discharge duct from the bowl, a valve turnable for opening and closing said duct and provided with an exterior arm having a laterally extending cover for the top of said bowl, the rim of said bowl forming oppositely located semicircular convex portions, the under surface of said cover being correspondingly curved to pass over said rim and to fit the same completely around the bowl when the cover is in closed position.

3. A priming cup for internal combustion engines and the like comprising a bowl having a discharge outlet, the open end of said bowl being convexed throughout its width from one edge portion thereof to the opposite edge portion thereof, a cover for said open end of the bowl having its under surface correspondingly concaved to pass over the edge of the bowl and fit the same completely around said open end to close the bowl, a valve to close and open said outlet, and a radial arm carrying said cover and moving with said valve to close and open said end of the bowl as the valve closes and opens said outlet.

1,191,776. BOTTLE-WASHING MACHINE. CHARLES ALFRED ENSOR, Wellington, England Filed Oct. 29, 1915. Serial No. 58,668. (Cl. 141—7.)

1. A bottle-washing machine comprising a central driving element, means for imparting an intermittent rotatory motion thereto, a series of radial bottle-carrying arms pivoted to the driving element, a tank for containing the washing liquid, a sliding brush carriage, brushes carried thereby, a stationary cam track engaged by the bottle-carrying arms and adapted to operate said arms to cause the bottles to be immersed into and brought out of the liquid, said arms being adapted to move past the brushes, a weight for moving the brush carriage forward to cause the brushes to engage with the bottles when successively brought to rest opposite said brushes, and a cam for returning the brush carriage and withdrawing the brushes.



2. A bottle-washing machine comprising a central driving element, means for imparting an intermittent rotatory motion thereto, a series of radial bottle-carrying arms pivoted to the driving element, a tank for containing the washing water, a stationary cam track engaged by the bottle-carrying arms and adapted to operate said arms to raise and lower the bottles into and out of the water, a sliding brush carriage, brushes carried thereby for cleaning the interior of the bottles, a brush driving shaft, a driving wheel mounted within the carriage and feathered upon the driving shaft, means for rotating the brush spindles from said driving wheel, revolving brushes for the outsides of the bottles, revolving spindles carrying said brushes and arranged at right angles to the axes of the bottles, means for rotating said spindles from the brush driving shaft, means for moving the brush carriage forward to cause the brushes to engage with the bottles, and a cam for returning the brush carriage and withdrawing the brushes.

3. A bottle-washing machine comprising a central driving element, means for imparting an intermittent rotatory motion thereto, a series of radial bottle-carrying arms pivoted to the driving element, a tank for containing the washing liquid, a stationary cam track engaged by the bottle-carrying arms and adapted to operate said arms to raise and lower the bottles into and out of the liquid, a sliding brush carriage, brushes carried thereby, a pulley, a weight attached to the pulley by a cable, a pair of arms fixed to the pulley, a connecting rod between one of said arms and the carriage, a sliding member, a main driving shaft, a cam on said main driving shaft and engaging with the sliding member, and a connection between said sliding member and the other arm of the pulley.

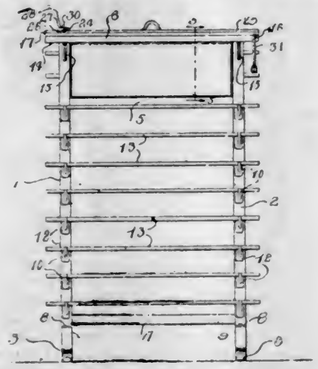
4. A bottle-washing machine comprising a central driving element, means for imparting an intermittent rotatory motion thereto, a series of radial bottle-carrying arms pivoted to the driving element, a tank for containing the washing liquid, a stationary cam track engaged by the bottle-carrying arms and adapted to operate said arms to raise and lower the bottles into and out of the liquid, a sliding brush carriage, brushes carried thereby, a weight for moving the brush carriage forward to cause the brushes to engage with the bottles, a cam for returning the brush carriage and withdrawing the brushes, a conical bottle-centering device, and means for moving said device into engagement with the neck of a bottle to center the latter while the brush is passed into same.

5. A bottle-washing machine comprising a central driving element, means for imparting an intermittent rotatory motion thereto, a series of radial bottle-carrying arms pivoted to the driving element, a tank for containing the washing liquid, a stationary cam track engaged by the bottle-carrying arms and adapted to operate said arms to raise and lower the bottles into and out of the liquid,

sliding bottle-rinsing nozzles, a spring for moving said nozzles into the bottle necks when the bottles are raised out of the liquid and brought to rest, and a lever for withdrawing said nozzles, and a cam for actuating the lever.

[Claims 6 to 10 not printed in the Gazette.]

1,191,777. CUTTING MECHANISM FOR DISPLAY-RACKS. FRED EARL FISHERING, Eureka, Cal. Filed Aug. 23, 1915. Serial No. 46,996. (Cl. 164—79.)



1. The combination of a supporting structure, a stationary shelf member having a longitudinal rib at its front edge, a cloth clamping member hinged to the rear edge of said stationary member and of a width slightly less than the width of said stationary member between said rib and its rear edge thereby providing a groove between said rib and the front edge of the hinge member when the latter is closed, a longitudinally disposed rail carried on the outer face of said hinge member adjacent its free front edge, a carrier slidable on said rail and having a blade projecting over the edge of said member in position to enter said groove, said clamping member being cut out longitudinally to form a passage for the material to be cut.

2. The combination of a supporting structure, a stationary shelf member having a longitudinal rib at its front edge, a cloth clamping member hinged to the rear edge of said stationary member and of a width slightly less than the width of said stationary member between said rib and its rear edge, thereby providing a groove between said rib and the front edge of the hinge member when the latter is closed, a longitudinally disposed rail carried on the outer face of said hinge member adjacent its free front edge, a carrier slidable on said rail and having a blade projecting over the edge of said member in position to enter said groove, said clamping member being cut out longitudinally to form a passage for the material to be cut, and means carried by one of said members for preventing slipping of the material to be cut when the clamping member is closed.

3. A clamping and cutting mechanism for fabric comprising a stationary plate having a longitudinally extending rib on one edge thereof on its upper face, the other edge thereof being beveled, a clamping member hinged at its rear edge adjacent the beveled edge of said stationary member and having said edge beveled to correspond with the bevel of said stationary member, a rail carried on the outer face of said hinged member adjacent its front edge, a block slidably mounted on said rail with its front edge arranged flush with the front edge of said member, and a cutting blade mounted on the front face of said block and extending below the inner face of said hinged member.

4. The combination of fixed and movable clamping members hingedly connected, the free edge of said fixed member projecting beyond the free edge of said movable member and having a cutter blade guide on its upper face adjacent to but spaced from the free edge of said movable member when the latter is in closed position, a guide on the outer face of said movable member adjacent its free edge, a block slidably engaged with said guide, a longitudinally slotted cutter blade longitudinally and laterally adjustable on the front face of said block, and positioned to extend over the free edge of said movable clamping member into the space between it and the guide of the fixed member.

1,191,778. NEEDLE-SPRAY AND TOWEL-RACK. MATTHEW J. FLANAGAN, West Hoboken, N. J. Filed May 6, 1916. Serial No. 95,839. (Cl. 4—26.)



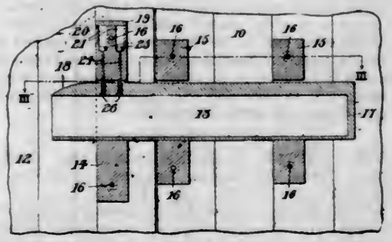
1. A combination needle spray and towel rack comprising a horizontal tube provided with jet apertures, wall brackets located at the ends of the tube and provided with couplings into which the said tube is secured, one of the couplings being also provided with a nipple to enable the tube to be connected with the fixture of a bath tub.

2. A combination needle spray and towel rack comprising spaced wall brackets having threaded shanks, couplings having angularly related approximately horizontally disposed arms, two of the arms being mounted on the said threaded shanks and the other two of the horizontally disposed arms being arranged opposite each other, one of the couplings being provided with means for enabling the tube to be connected with the fixture of a bath tub, a combined towel supporting tube and needle spray provided with jet apertures and having its terminals screwed into the opposite arms of the couplings.

3. A combination needle spray and towel rack comprising wall brackets having projecting stems or shanks provided with opposite sockets, couplings mounted on the ends of the shanks or stems and having opposite arms, a combined towel supporting tube and spray mounted in the said opposite arms and provided with jet apertures, an auxiliary towel supporting rod of less diameter than the tube located in rear of the latter and mounted in the said sockets and a nipple connected with one of the couplings.

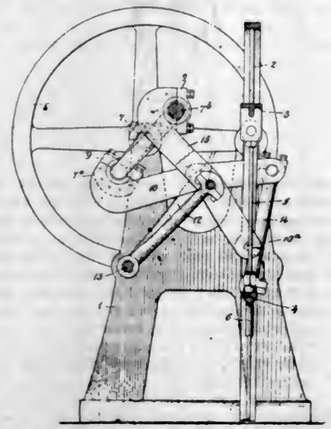
4. A combination needle spray and towel rack including spaced wall brackets provided with outwardly projecting horizontal stems, couplings mounted on the outer ends of the stems, a combined towel holding tube and spray supported by the said couplings and provided with jet apertures, a nipple connected with one of the couplings and an auxiliary towel supporting rod of less diameter than the said tube located in rear of the same so as to be substantially concealed by the said tube, said rod being supported by the wall bracket.

1,191,779. DOOR-LOCK. MICHAEL FRENCH, Mammoth, Cal. Filed Mar. 16, 1915. Serial No. 14,661. (Cl. 70—76.)



A device of the class described comprising a door and support, guides carried by the door, a keeper carried by the support, a bolt closed at one end and open at the other end slidably mounted in said guides, vertically movable pins carried by said keeper, there being openings in said bolt adjacent the open end thereof adapted to receive said pins when the bolt is projected within the keeper to prevent withdrawal of the same, the lower ends of the openings being flared outwardly and the lower ends of the movable pins being spaced from the lower ends of the openings and a key carrying a plurality of tapering pins adapted to be inserted through the open end of the bolt with the pins carried thereby received in the flared openings to engage the slidable pins and move the same upwardly out of the bolt openings.

1,191,780. PUMPING-JACK. CHARLES A. GASS, Red Rock, Ariz. Filed Aug. 4, 1915. Serial No. 43,549. (Cl. 103—82.)



1. In a pumping jack the combination with pump rods of a crank shaft having oppositely disposed cranks, a walking beam having one end directly pivoted to each of said cranks, a floating fulcrum for each walking beam, and links connecting the outer ends of the respective walking beams to the pump rods.

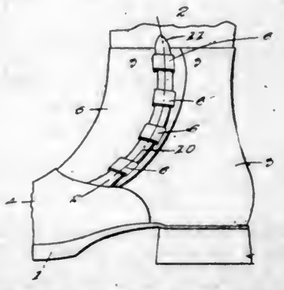
2. In a pumping jack the combination of a frame, a crank shaft having oppositely disposed cranks revolubly mounted therein, a walking beam having one end directly pivoted to each of said cranks, links pivotally supported by said frame and pivotally connected to the respective walking beams to form floating fulcrums therefor, a pair of pump rods, concentrically arranged, and links connecting the outer ends of said walking beams to the respective pump rods whereby the latter are adapted to be reciprocated simultaneously in opposite directions.

3. In a pumping jack the combination of a frame, a crank shaft having oppositely disposed cranks revolubly mounted therein, a walking beam connected directly at one end to each of said cranks, a rocking link for each walking beam adapted to form a floating fulcrum therefor, said links being supported by the frame, vertically disposed slideways on said frame, crossheads slidably mounted thereon, one at each end, a pump rod connected to each crosshead, said pump rods being concentrically arranged, and connecting links between the outer ends of said walking beams and the respective crossheads whereby said pump rods are adapted to be reciprocated simultaneously in opposite directions.

4. In a pumping jack the combination with pump rods of a frame, a crank shaft having oppositely disposed cranks mounted in said frame, a walking beam having one end directly pivoted to each of said cranks, links connecting the outer ends of said walking beams to the respective pump rods, and links pivotally supported by the frame and pivotally connected to the respective walking beams at points between the crank and pump rod link connections, the parts being so proportioned and dimensioned that the connection between the walking beam and the link going to the pump rod will trace a compound curved path substantially as described.

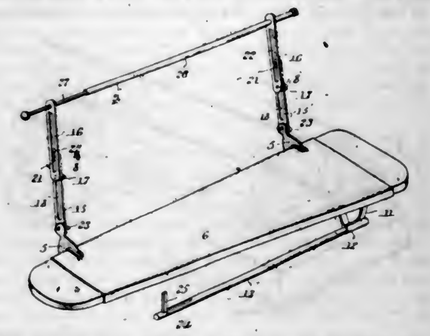
5. In a pumping jack the combination with pump rods of a crank shaft having oppositely disposed cranks, a walking beam having one end directly pivoted to each of said cranks, links connecting the outer ends of the respective walking beams to the pump rods and a floating fulcrum for each walking beam located at a point between its ends, the parts being so proportioned and dimensioned that the rate of stroke of each pump is substantially proportional to the rotation of the crank and the time during which the individual pumps lift is substantially in excess of the time during which they are depressed.

1,191,781. SHOE-FASTENER. LEO C. HARDEBECK, Elk Park, Mont. Filed May 11, 1914. Serial No. 837,813. (Cl. 24—205.)



The combination with the upper quarter and vamp, the upper and quarter being formed with a curved ankle opening and said upper being provided with a plurality of elongated openings arranged in a curved line, of a plurality of guides consisting of upper portions, downwardly extending side portions formed on the ends of the upper portions and provided with their lower ends bent at right angles to form feet adapted to rest on the quarter, means for securing the feet to the quarters and being so arranged that the side portions and upper portions may extend through the openings of the upper, and a strap approximately the width of the upper portions of the guides secured at one end between the meeting edges of the vamp and quarter and adapted to be threaded through the guides and upper.

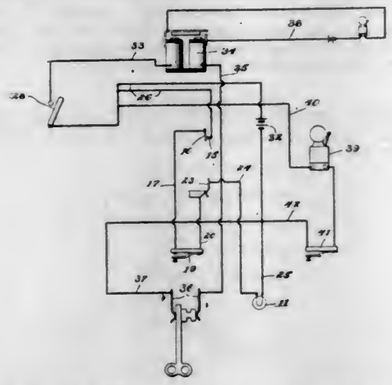
1,191,782. IRONING-BOARD ATTACHMENT. MARY L. HARRISON, Rochester, N. Y. Filed Nov. 15, 1915. Serial No. 61,719. (Cl. 68—10.)



An ironing board attachment comprising a pair of clamps secured to one longitudinal edge of the board, sup-

ports projecting therefrom comprising relatively slidable slotted sections, means for guiding said sections in their adjusted positions, and means for holding said sections in a fixed position, the lowermost section being pivotally connected to said clamp to fold upon said board, and a horizontally disposed rod carried by said supports.

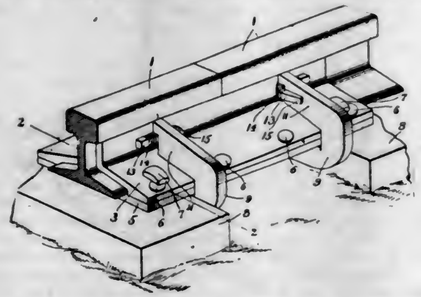
1,191,783. KEYHOLE-ILLUMINATING APPARATUS. PAUL R. HARSH, Toledo, Ohio. Filed June 11, 1915. Serial No. 33,551. (Cl. 177—311.)



1. In keyhole illuminating apparatus, a lamp disposed in proximity to the keyhole, an electric circuit including said lamp, a push button switch in said circuit carried by the door knob on the outer side of the door whereby the circuit may be closed to energize said lamp, door operated means closing said circuit at a point remote from said push button switch and adapted to open the circuit in the movement of the door to open position, said circuit including the latching bolt of the door, and a plate carried by the door jamb in the path of movement of the latching plate, whereby the circuit will be completed when the door is closed and latched.

2. In apparatus of the class described, a lamp disposed in proximity to the keyhole of the door, an electric circuit including said lamp, a switch in said circuit adjacent to the keyhole whereby the circuit may be closed to energize said lamp, an alarm circuit controlling relay keyhole contacts connected in circuit with said relay and adapted to be bridged by the key to energize the relay, and a bell, and a push button switch connected in series with each other.

1,191,784. RAIL-JOINT. MACK K. HART, Uniontown, Pa. Filed Nov. 27, 1915. Serial No. 63,794. (Cl. 239—6.)



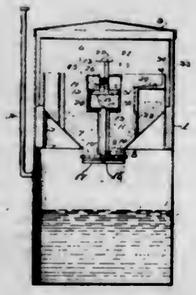
In combination with two alining rails having their flanges notched, a joint for the rails, said joint including a base plate upon which the rails rest, angle bars upon the opposite sides of the rails having their longitudinal edges thickened and riveted to the base plate, the bars having spike openings registering with the notches in the rails, yoke members straddling the plate and bars having their ends contacting with the vertical plates of the said angle bars, one end of each of the yokes being notched, and a wedge shaped serrated key passed through the said notched end in contacting relation with the vertical plate of one of the angle bars, and the reduced ends of the keys adapted to be bent against the sides of the yokes.

1,191,785. CORSET. FRANCES HEINDRICH, New York, N. Y. Filed Feb. 10, 1916. Serial No. 77,366. (Cl. 2—73.)



A corset comprising two fabric body halves, provided with a skirt extension closely fitting and surrounding the hips of the wearer, elastic stocking supporters depending therefrom, each body half provided with an integral bust supporter and at the rear with an upwardly extending shoulder blade extension, vertical stiffeners arranged in the body portion of each corset body half and extending from a point a substantial distance above the lower edge of the corset and terminating below the bust supporter, whereby said bust support and skirt portion are left freely flexible, elastic shoulder straps each bifurcated front and rear and connected at the front to the respective sides of the bust extension, and at the rear to the respective sides of the shoulder blade extension, said shoulder straps being normally under tension by the elastic stocking supporters when the corset is in position on the wearer.

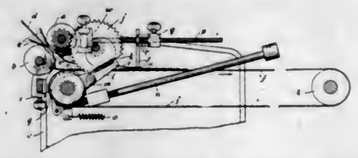
1,191,786. ACETYLENE-GAS GENERATOR. DANIEL B. HILL, Grayville, Ill. Filed May 18, 1915. Serial No. 28,904. (Cl. 48—52.)



1. In an acetylene gas generator, a generating tank, a carbid feed hopper having a downwardly extending discharge spout, a fixed valve disk having openings and arranged in said spout, a valve disk pivotally mounted in said spout under said fixed disk and having openings movable into and out of registry with those of the fixed disk, a shaft rising from the center of said pivotally mounted valve disk, a drum at the upper end of said shaft and having a cam slot, a tubular standard rising from and secured to the fixed disk and provided at its upper end with a fixed casing in which said drum is rotatably arranged, a vertically movable shaft arranged in said casing extending above the upper end thereof and having a cam stud engaging said cam slot of the drum, means to prevent the rotation of said vertically movable shaft, a gas bell to depress said shaft when the bell lowers and thereby turn the drum and movable valve disk and cause the openings of the latter to register with those of the fixed valve disk and a spring to move said vertically movable shaft upwardly when the bell rises.

2. In an acetylene gas generator, a generating tank, a carbid feed hopper having a discharge spout, a fixed valve disk having openings and arranged in said spout, a valve disk rotatably mounted in said spout and having openings movable into and out of registration with the openings of the fixed disk, a shaft rising from the center of said rotatably mounted valve disk, a drum at the upper end of said shaft and having a cam slot, a shaft adapted to be moved vertically with relation to said drum and having a cam stud engaging said cam slot, means to prevent the rotation of said vertically movable shaft, a gas bell adapted to engage and move said shaft downwardly with relation to said drum when the gas pressure in the generating tank falls below a predetermined degree, and a spring engaging said shaft and adapted to move it upwardly with relation to said drum when the gas pressure in the generating tank elevates the bell.

1,191,787. SHEET-DELIVERY MECHANISM. REUBEN HITCHCOCK, Cleveland, Ohio, assignor to The Cleveland Folding Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 4, 1914. Serial No. 829,695. (Cl. 101—29.)



1. In sheet-delivery mechanism, the combination with a traveling table, of means for supplying folded sheets or signatures thereto, and an automatic retaining member positioned above said traveling table to ride upon and hold the last delivered sheet against movement with the table, substantially as set forth.

2. In sheet-delivery mechanism, the combination with delivery rolls, of a traveling belt or apron coöperating therewith to receive and convey the sheets, an adjustable retaining member positioned above said traveling belt comprising an abutment for the edge of the sheet and an upwardly extending portion adapted to direct the sheet against said abutment, said member being above and partially supported by the sheets, substantially as set forth.

3. In sheet-delivery mechanism, the combination with delivery rolls, of a delivery table comprising a belt or canvas band, and inner and outer rolls over which it is adapted to travel for conveying the sheets, intermittently actuated mechanism for effecting the travel of the belt and an adjustable retaining member supported above said table, comprising an abutment for the edge of the sheet, a yielding support therefor, and a guide for directing the sheet against the abutment, substantially as set forth.

4. In a sheet-delivery mechanism, the combination with delivery rolls, of a traveling belt forming the delivery table, adjustable mechanism for effecting the travel of said table, and an adjustable retaining device comprising an abutment for engaging the edge of the sheet last delivered, a guide to direct the sheet against the abutment and a yielding support for said retaining devices, substantially as set forth.

5. In sheet-delivery mechanism, the combination with a traveling or movable table, of means for successively supplying folded sheets or signatures thereto, a guide for directing and holding said sheets, and an automatic retaining member positioned above said table and adapted successively to ride upon and to engage and hold the last delivered sheet against movement with said table, substantially as set forth.

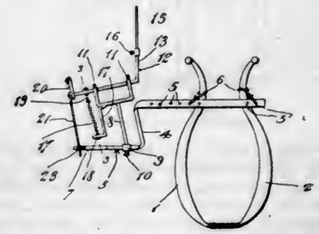
[Claims 6 to 11 not printed in the Gazette.]

1,191,788. WATER-SHOE. ARTHUR PAUL HORN, Fort Thomas, Ky. Filed Mar. 9, 1916. Serial No. 83,157. (Cl. 9—21.)



A water shoe comprising a frame made up of sections adapted to fold one upon another, a shoe upper secured to the intermediate of the frame sections, a sack secured to the sections of the frame and a pneumatic pouch secured to the sack, and clips secured to the outer end of one of said sections, and a feathering blade pivotally mounted between the insides of said clips.

1,191,789. WHIPPING APPARATUS. JOHN A. HUBER, Jr., Bentley, N. D. Filed Jan. 11, 1916. Serial No. 71,595. (Cl. 231—2.)



1. In a device as set forth, the combination, of a bracket for detachable attachment to harness hames, a Y-shaped bracket adjustably carried by said first named bracket, a rock rod rockably supported by said Y-shaped bracket, a whip detachably supported by said rock rod, and means for rocking said rod for oscillating said whip.

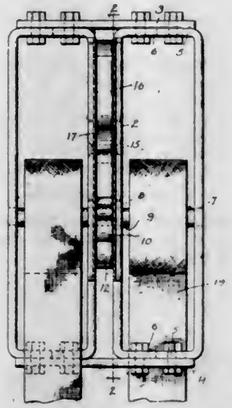
2. In a device as set forth, the combination, of a bracket adapted for detachable connection to harness hames, a Y-shaped bracket adjustably carried by said first named bracket, a rock rod rockably carried by said Y-shaped bracket and having one end angled, an ordinary whip detachably connected to the angled end of said rock rod whereby said whip will be oscillated upon rocking movement of the rod, means connected to said rod for rocking the rod for oscillating the whip, and means for automatically returning said rock rod to its normal position after the arresting of rocking movement thereof.

3. In a device as set forth, the combination, with a bracket adapted for detachable connection to harness hames, of a Y-shaped bracket adjustably carried by said first named bracket, a rock rod rockably supported by said Y-shaped bracket, one end of said rock rod being bent at substantially right angles to the rock rod, a socket formed upon the terminal of said angled end, a whip detachably connected to said socket, a bell crank arm connected to said rock rod, and flexible members connected to said bell crank arm for rocking the bell crank arm upon pulling movement of the flexible member for oscillating said whip.

4. In a device as set forth, the combination, with a bracket adapted for detachable connection to harness hames, of a Y-shaped bracket adjustably carried by said

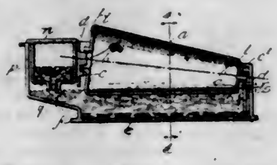
first named bracket, a rock rod rockably supported by said Y-shaped bracket, one end of said rock rod being bent at substantially right angles to the rock rod, a socket formed upon the terminal of said angled end, a whip detachably connected to said socket, a bell crank arm connected to said rock rod, flexible members connected to said bell crank arm for rocking the bell crank arm upon pulling movement of the flexible member for oscillating said whip, and a spiral spring connected to said rock rod and said Y-shaped bracket for automatically returning the rock rod to its normal position after the arresting of the rocking movement thereof.

1,191,790. FIRE-ESCAPE. LLOYD T. HUNTER, Revere, Mass. Filed Apr. 23, 1915. Serial No. 23,403. (Cl. 254—151.)



A fire escape of the class described including a frame comprising spaced vertically disposed oblong frame sections and top and bottom connecting bars maintaining the frame sections in spaced relation, each frame section being composed of inner and outer side bars having their terminals bent at an angle and secured to the top and bottom connecting bars and a relatively narrow vertical casing located at the space between the frame sections and secured to the inner side bars of the latter and extending outwardly therefrom at right angles to the said frame, a horizontal shaft journaled in and extending entirely across the frame at the lower portion of the casing, lines reversely wound around the horizontal shaft at opposite sides of the casing within the frame sections and escapement mechanism mounted within the said casing and connected with the shaft for controlling the rotation thereof.

1,191,791. ANIMAL-OPERATED LIQUID-DISTRIBUTER. HARRY L. IDE, Springfield, Ill. Filed Jan. 11, 1915. Serial No. 1,518. (Cl. 119—157.)



1. A device for enabling an animal to apply liquid to its skin including a trough for holding the liquid; a tapering distributing roller overhanging a longitudinal side of the trough to enable it to be turned by the animal to transfer liquid from the trough space to the animal, the axis of the roller being so inclined as to bring the bottom of the roller substantially horizontal.

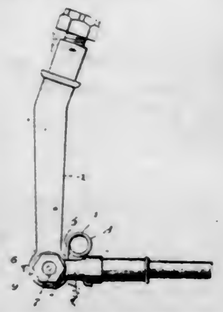
2. A device for enabling an animal to apply liquid to its skin including a trough for holding the liquid; a tapering animal operated distributing roller mounted over the bottom of the trough to transfer liquid from the trough to the animal, the axis of the roller being so inclined as to bring the bottom of the roller substantially horizontal.

3. A device for enabling an animal to apply liquid to its skin including a trough for holding the liquid; a tapering animal operated distributing roller mounted over the bottom of the trough to transfer liquid from the trough to the animal, the axis of the roller being inclined downwardly toward the small end of the roller.

4. A device for enabling an animal to apply liquid to its skin including a trough for holding the liquid; a tapering animal operated distributing roller mounted over the bottom of the trough and overhanging a side thereof to transfer liquid from the trough to the animal, the axis of the roller being inclined downwardly toward the small end of the roller.

5. A hog oiler comprising a medicament container, upstanding bearing standards carried at opposed ends of the container, a frusto-conical distributing roller journaled in the bearing standards, one of said standards being higher than the other, the smaller end of the distributing roller being disposed adjacent to the smaller of the standards, said distributing roller being disposed above the standards.

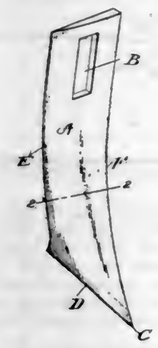
1,191,792. STEERING-GEAR ANTIRATTLER. EWING I. JEFFRIES, New Salem, Pa. Filed Sept. 15, 1914. Serial No. 861,858. (Cl. 74—17.)



The combination with the steering arm and yoke of the steering gear of a motor vehicle, said arm having a coupling end formed with reversely tapered external faces, and the coupling end of the yoke being forked to straddle the coupling end of the arm, of a spring embodying reversely wound coils, an arm formed by the inner terminal portions of the coils extending in parallel and touching relation to each other and having their extremities bent in the same direction to engage the inside of the fork of the yoke, the outer terminals of the coils being bent to form a U-shaped arm which is curved and deflected laterally to partially embrace and center itself upon and relatively to the coupling end of the steering arm and brace said coupling end against the pivot which connects the yoke and arm.

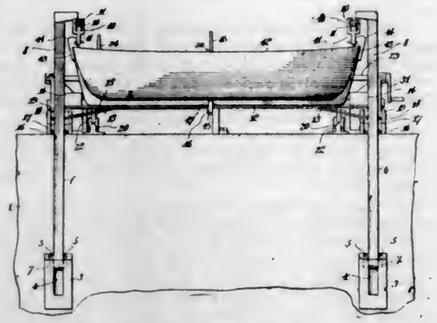
1,191,793. PLOW-SHOVEL. SEDGWICK M. JOHNSTON, Liberty, S. C. Filed May 21, 1914. Serial No. 840,046. (Cl. 97—11.)

A plow shovel comprising a plate of malleable metal gradually tapering and thinning uniformly toward one of its vertical longitudinal side edges, said side edge being of uniform thickness throughout, said plate having a lower obliquely extending cutting edge portion forming a point at the thickest portion of the shovel, the construction and arrangement being such that the surplus metal at the thicker portion of the plow may be worked obliquely



downward to the cutting edge of the body to repoint the shovel.

1,191,794. BOAT-DAVIT. ROBERT JONES, Florence, Oreg. Filed July 30, 1915. Serial No. 42,792. (Cl. 9—22.)

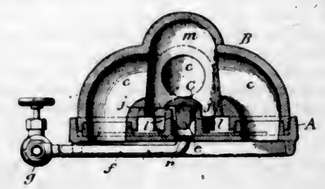


1. The combination with a ship, of davits, pivotal and sliding connections between the lower ends of said davits and the side of the ship, head blocks carried by the upper ends of said davits, respectively, sheave wheels in each head block, hangers suspended from said head blocks, a life boat supported by said hangers, cables reeved through said head blocks over the sheaves therein and having the outer ends thereof connected with said hangers, drums connected to the inner ends of said cables, and means for rotating said drums to pull said cables to elevate said life boat and draw said davits inwardly, and means for sliding the davits upwardly in the swinging movement thereof so that the life boat may clear the deck of the ship.

2. The combination with a ship, of davits, pivotal and sliding connections between the lower ends of said davits and the side of the ship, head blocks carried by the upper ends of said davits, respectively, sheave wheels in each head block, hangers suspended from said head blocks, a life boat supported by said hangers, cables reeved through said head blocks over the sheaves therein and having the outer ends thereof connected with said hangers, drums connected to the inner ends of said cables, and automatic means for sliding said davits upwardly in the swinging movement thereof so that the life boat may clear the deck of the ship.

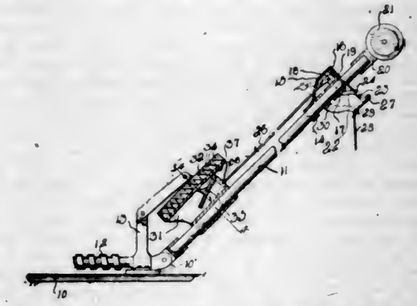
3. The combination with a ship, of davits, pivotal and sliding connections between the lower ends of said davits and the side of the ship, head blocks carried by the upper ends of said davits, respectively, sheave wheels in each head block, hangers suspended from said head blocks, a life boat supported by said hangers, cables reeved through said head blocks over the sheaves therein and having the outer ends thereof connected with said hangers, drums connected to the inner ends of said cables, and companion means carried by said davits and the deck of the ship and operable automatically to slide the davits upwardly so that the life boat may clear the deck of the ship.

1,191,795. VAPOR-BURNER. SAMUEL E. KEENER, deceased, Clay Center, Kans., by William E. Keener, administrator, Clay Center, Kans., assignor to The Keener Burner Company, Clay Center, Kans., a Corporation. Filed Dec. 22, 1915. Serial No. 68,290. (Cl. 158—66.)



A burner of the class described comprising a base provided with an opening therethrough through which to supply fuel to said burner, means for supplying fuel through such opening, a deflector supported above said opening and resting upon ribs or lugs placed on opposite sides of the under surface of said deflector whereby the deflector is permitted to rock thereon, an air-chamber above said deflector, air-pipes connecting with said air-chamber, the opposite ends of said air-pipes communicating with openings through said base, and means for supplying air to said pipes.

1,191,796. TROLLEY-POLE. OTEY R. KIRKPATRICK, Fort Worth, Tex. Filed Aug. 26, 1915. Serial No. 47,496. (Cl. 191—95.)

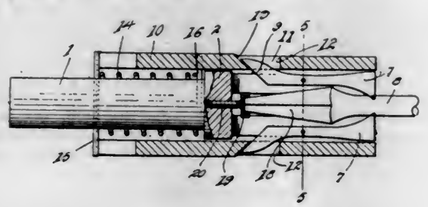


1. The combination with a base, a vertically swinging trolley pole mounted on the base, and spring means constantly urging the pole in one direction, of a head pivoted on the free end of said pole, a member fixed on the pole, a second member slidably connected to the first member, connections between the second member and the base whereby the movement of the pole will slide the second member relatively to the first member, ratchet teeth on one of said members, a pawl pivoted on the other member for coöperation with said teeth, spring means constantly tending to engage the pawl with the teeth to lock the second member against sliding movement under the influence of the upward movement of the pole, and connections between the pawl and the pivoted head adapted to hold the pawl out of engagement with the teeth when said head is in normal position and to en-

gage said pawl with the teeth when pivotal movement in one direction is imparted to the head.

2. The combination with a base, a vertically swinging trolley pole mounted on the base, and spring means constantly urging the pole in one direction, of a head pivoted on the free end of said pole, a trolley wheel journaled on said head, arms pivoted on opposite sides of the pole at the free end of the latter, a sliding connection between the head and corresponding ends of said arms, a link pivotally connected to the other ends of said arms, a member fixed on the pole, a second member slidably connected to the first member, connections between the second member and the base whereby the movement of the poles will slide the second member relatively to the first member, ratchet teeth on one of said members, a pawl pivoted on the other member for coöperation with the teeth, spring means constantly tending to engage the pawl with the teeth to lock the second member against sliding movement under the influence of the upward movement of the pole, and an arm on said pawl having its free end pivotally connected to said link whereby said pawl will be held out of engagement with the teeth when the pivoted head on the free end of the pole is in its normal position.

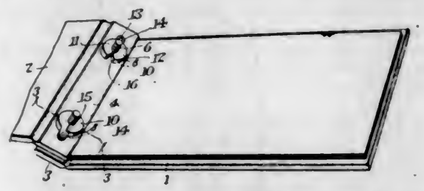
1,191,797. TOOL-HOLDER. EPHRIAM H. BAKER KNOWLTON, Milwaukee, Wis. Filed Sept. 30, 1913. Serial No. 792,683. (Cl. 145—94.)



In a tool holder, a shank having an enlarged head formed upon its outer end, a plurality of arms secured to and extending longitudinally from said head, each of said arms composed of a pair of plates disposed at right angles to each other, the plates of each of said arms being parallel to the corresponding plates of the arms next thereto, a plurality of jaws pivoted intermediate their ends to and positioned between the parallel plates of said arms, a slidable sleeve surrounding said shank and jaws, said sleeve being provided with a plurality of circumferentially spaced longitudinally extending openings, said openings having their inner walls inclined, the inner ends of said jaws being inclined to correspond with the incline of said end wall and provided for riding thereupon for rocking said jaws and forcing them into clamping engagement with the tool shank, means carried by said shank and engaging said sleeve for moving said sleeve longitudinally for forcing said inclined jaw ends upwardly along said inclined end walls, said head having a tool shank butt receiving socket adjustably carried thereby and extending forwardly toward the clamping ends of said jaws.

1,191,798. TEMPORARY BINDER. RICHARD LABARRE, New Orleans, La., assignor to Standard Loose Leaf Company, Inc., New Orleans, La. Filed July 3, 1915. Serial No. 37,832. (Cl. 129—12.)

1. A loose leaf binder comprising separate back members, one of which is provided with openings having attenuated entrances, posts carried by the other back member and arranged to pass through the entrances in the openings, nuts having hinged sections threaded upon the posts, means on the sections for limiting the swinging movement of the same while the nuts are being positioned upon or removed from the posts, and means on the nuts for coöperating with portions of said slots to prevent opening of the nuts and lateral displacement of the back members.



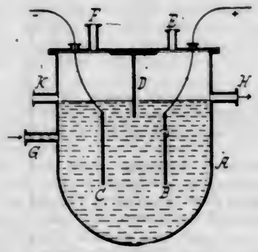
2. A binder comprising separate back members, posts carried by one of the back members, the other back member having slots with attenuated entrances, split nuts threaded upon the posts and arranged to clamp the back members together, and means on the nuts for coöperating with portions of said slots for holding the back members against displacement and preventing the nuts from opening.

3. A loose leaf binder comprising separate back members one of which is provided with openings having attenuated entrances, posts carried by the other back member and arranged to pass through the entrances into the openings, split nuts threaded upon the posts and adapted to be removed laterally therefrom, and means on the nuts adapted to fit the openings when the nuts are clamped upon the back members whereby the back members are held against displacement and the nuts held against opening.

4. A loose leaf binder comprising separate back members one of which is provided with openings having attenuated entrances, posts carried by the other back member and arranged to pass through the entrances into the openings, split nuts threaded upon the posts and adapted to be removed laterally therefrom, and a collar formed on the separate halves of the nuts and arranged to wedge or fit the openings whereby lateral displacement of the back members will be prevented and the nuts held against opening.

5. A loose leaf binder comprising separate back members one of which is provided with open slots, posts carried by the other back member arranged to engage the said slots, split nuts threaded upon the posts, springs for normally closing the nuts on the posts and means carried by the nuts for engaging the slots, said means coacting with the walls of the slots to prevent opening of the nuts and to prevent the lateral disengagement of the back members.

1,191,799. PROCESS OF PRODUCING ALKALI METALS. HANS LABHARDT, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Dec. 14, 1914. Serial No. 877,099. (Cl. 204—21.)

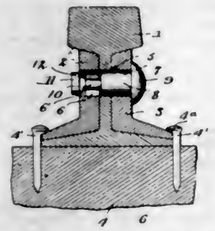


1. In the process of producing alkali metal by the electrolysis of molten caustic alkali, the step which consists in passing fresh anhydrous alkali into the cell and removing from the cell alkali which has absorbed water at the anode.

2. In the process of producing alkali metal by the electrolysis of molten caustic alkali, the step which consists in continuously passing fresh anhydrous alkali into the cell and continuously removing from the cell alkali which has absorbed water at the anode.

3. In the process of producing a mixture of sodium and potassium metal by electrolyzing a mixture of the hydroxids of said metals, the step which consists in continuously passing a fresh anhydrous molten mixture of the hydroxids into the cell and continuously removing from the cell a mixture of the hydroxids, which has absorbed water at the anode.

1,191,800. RAIL-JOINT. NOBLE W. LEADBETTER, Bickleton, Wash., assignor of one-third to Jens Nygaard, Bickleton, Wash. Filed May 28, 1915. Serial No. 31,017. (Cl. 239—11.)



The combination with the meeting ends of rails, ties upon which the rails rest and fish plates for connecting the rails, each of said fish plates having round openings which register with the bolt openings in the webs of the rails and having their longitudinal edges notched, one of the fish plates, upon its outer face, and to one of the sides of each bolt opening being formed with a cone-shaped depression which communicates with its said bolt opening, locking elements passing through the openings, each of said elements including a shank of a length equaling the thickness of one of the fish plates and the webs of the rails and a cross sectionally round reduced portion extending from the shank of a length equaling the length of the bolt opening at the juncture of the mentioned depressed portion therewith, said reduced extension being formed with a head having an inner cone-shaped surface whereby to engage with the mentioned depressions communicating with the openings in one of the fish plates when the said fish plate is moved longitudinally and the wall of its openings contacts with the reduced portion of the securing elements and spiked to the ties to retain the locking elements in such engagement with the fish plates.

1,191,801. PROCESS FOR MANUFACTURING PLASTIC SUBSTANCES FROM THE DERIVATIVES OF CELLULOSE. FEODOR LEHMANN and JOHANNES STOCKER, Berlin, Germany. Filed Mar. 16, 1914. Serial No. 825,158. (Cl. 106—37.)

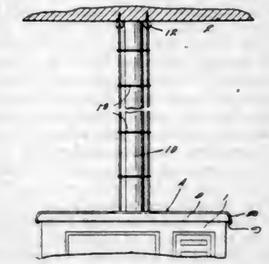
1. Process for manufacturing celluloid like substances consisting in treating cellulose esters by means of the polymers of cumarone and indene previously dissolved in a solvent.

2. Process for manufacturing celluloid like substances consisting in treating cellulose esters by means of the resinous cumarone and indene derivaties of tar oils.

3. Process for manufacturing celluloid like substances consisting in dissolving cellulose acetate in tetrachlorethane and in adding cumarone resin to the solution.

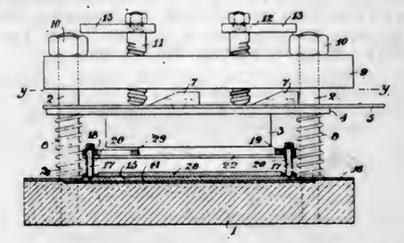
1,191,802. STOVEPIPE-SUPPORT. ALEXANDER C. LESLIE, Hallettsville, Tex., assignor of one-half to Edward Guthrie, Hallettsville, Tex. Filed Sept. 14, 1915. Serial No. 50,680. (Cl. 126—318.)

1. The combination with a stove, a stove pipe and ceiling of a building of a stove pipe support comprising a base plate, flanges on the base plate to secure the device to the top of a stove, rods extending upwardly from the base plate, and surrounding the stove pipe, means connecting the rods to the ceiling of the building, and wires connected to the rods and surrounding the pipe.



2. The combination with a stove, a stove pipe and ceiling of a building of a base plate having a central opening formed therein, flanges formed at opposite ends of the plate for engaging the under edges of the top of the stove, the opening in the base plate being adapted to receive the stove pipe, the plate being also formed with a plurality of apertures disposed in spaced relation and around the central opening, rods secured in the last named apertures and extending upwardly therefrom, means to secure the upper ends of the rods to the ceiling of the building, and wires welded to the rods and connecting the same to hold them in parallel relation, said wires surrounding the stove pipe and the ends of the wires being intertwisted.

1,191,803. MACHINE FOR MAKING SHOW-CARDS OR TICKETS. ANATOLE LÉVECQUE, Paris, France. Filed Sept. 19, 1912. Serial No. 721,305. (Cl. 41—1.)



1. In an apparatus for making show cards by cutting out characters in paper and simultaneously impressing them into the card, the combination of a base plate, type characters having cutting edges on said base plate, pillars on said base plate, a cross piece supported by said pillars, screws on said cross piece, a block, cams on said block, means whereby said cams may be moved relatively to said screws for the purpose of depressing the block gently on to the type characters, and means for subsequently imparting a quick movement to the block to operate its rapid descent on to said type characters.

2. In an apparatus for making show cards by cutting out characters in paper and simultaneously impressing them into the card, the combination of a base plate, type characters having cutting edges on said base plate, pillars on said base plate, a cross piece supported by said pillars, screws on said cross piece, a block guided on said pillars, springs normally supporting said block away from said base plate, cams on said block, means whereby said cams may be moved relatively to said screws for depressing the block gently on to the type characters, and means for imparting a quick movement to subsequently operate the rapid descent of said block on to said type characters.

3. In an apparatus for making show cards by cutting out characters in paper and simultaneously impressing

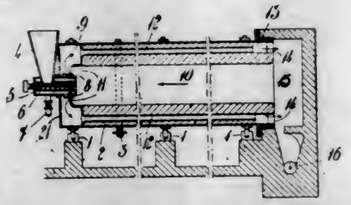
them into the card, the combination of a base plate, type characters having cutting edges on said base plate, pillars on said base plate, a cross piece supported by said pillars, screws having steep pitched threads on said cross piece, a block guided on said pillars, springs which normally support said block away from said base plate, a plate slidably mounted on said block, cams on said plate acting with the screws so that the block may be gently moved downward, and means for turning the screws so that the block may be sharply depressed on to the type characters.

4. In an apparatus for making show cards by cutting out characters in paper and simultaneously impressing them into the card, the combination of a base plate, type characters having cutting edges, adjustable longitudinal members for carrying the type, adjustable side members for carrying the type, pillars on said base plate, a cross piece supported by said pillars, screws having steep pitched threads on said cross piece, a block, cams on said block, means whereby said cams may be moved relatively to said screws for the purpose of depressing the block gently on to the type characters, and means for subsequently operating the rapid descent of such block on to said type characters.

5. In an apparatus for making show cards by cutting out characters in paper and simultaneously impressing them into the card, the combination of a base plate, type characters having cutting edges, adjustable longitudinal members for carrying the type, adjustable side members for carrying the type, pillars on said base plate, a cross piece supported by said pillars, screws having steep pitched threads on said cross piece, a block guided on said pillars, springs which normally support said block away from said base plate, a plate slidably mounted on said block, cams on said plate acting with the screws so that the block may be gently moved downward, and means for turning the screws so that the block may be sharply depressed on to the type characters.

[Claim 6 not printed in the Gazette.]

1,191,804. ROTARY TUBE-FURNACE FOR PRODUCING CONTINUOUSLY CALCIUM CYANAMID. JOHAN HJALMAR LIDHOLM, London, England. Filed Feb. 14, 1914. Serial No. 818,788. (Cl. 23—13.)

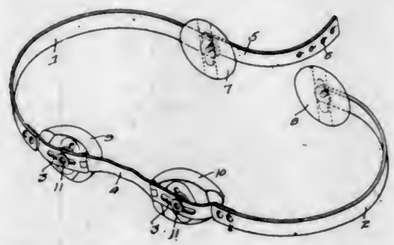


1. In a rotary tube furnace for producing calcium cyanamid, the combination of a main channel passing along the tube furnace, longitudinal channels extending through the furnace and communicating at both ends with said main channel, and injecting nozzles supplying the nitrogen to the furnace under pressure for causing the nitrogen contained in the furnace to circulate through the longitudinal channels and the main channel and from the latter back to the longitudinal channels, substantially as and for the purpose set forth.

2. In a rotary tube furnace for producing calcium cyanamid from calcium carbid and nitrogen, the combination of a central main channel passing along the tubular furnace, a chamber arranged at each end of the furnace and communicating with said main channel, longitudinal channels located in the wall of the furnace and extending through the furnace, said longitudinal channels communicating at each end with one of said chambers, and injecting nozzles supplying the nitrogen under pressure into one of said chambers and adapted to force the nitrogen through the longitudinal channels and the main channel and from the latter back to the longitudinal channels, substantially as and for the purpose set forth.

3. In a rotary tube furnace for performing a chemical reaction between a solid mass passing through the furnace and a gas contained in the furnace, the combination of a main channel extending along the tube furnace, longitudinal channels extending through the furnace and communicating at both ends with said main channel, and means for supplying gas under pressure to the furnace to produce a circulation of the gas contained in the furnace through the longitudinal channels and the main channel and from the latter back to the longitudinal channels.

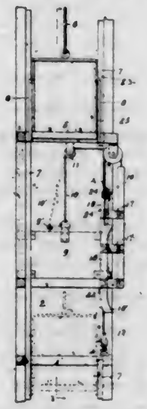
1,191,805. TRUSS. WILLIAM FRANKLIN LOUX, Philadelphia, Pa., assignor to William H. Horn & Brother, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 30, 1914. Serial No. 835,500. (Cl. 128—26.)



1. The combination in a truss of two spring members each having a rigid piece connected to one end; a third rigid piece having its ends respectively hinged to said pieces on the spring members; hernia pads respectively mounted on the rigid pieces of the spring members adjacent their points of connection with the third rigid piece; and pressure pads respectively mounted on the spring members adjacent their free ends.

2. The combination in a truss of a rigid front piece; two spring members respectively hinged to said piece; and hernia pads mounted on the spring members adjacent their points of connection to the front-piece.

1,191,806. MINE-SHAFT GATE. FRANK P. MCCLAIN and JOHN A. FUTCHER, Rillton, Pa. Filed Jan. 22, 1916. Serial No. 73,701. (Cl. 187—60.)



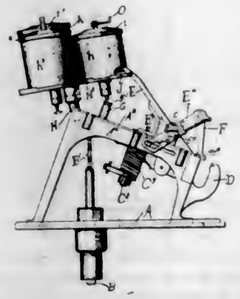
1. In combination, a normally-closed gate for a vertical shaft landing, a vertically movable cage in said shaft, a gate operating cable applied to said gate and provided with a counterweight, means arranging an intermediate portion of said cable to provide two vertical spaced oppositely-movable cable lengths in said shaft, each length

provided with a slide and trip device, a pair of vertical slideways in said shaft for said slides respectively, the cage being provided with gate-opening projections corresponding to said trips, respectively, each slideway being deflected outwardly at its upper and lower ends to remove the trip of its slide from the path of movement of its corresponding gate-opening projection of the cage, and means for adjusting the gate operating cable to maintain the slides in deflected ends of the slideways with both trips from operative relation with respect to both gate opening projections, substantially as described.

2. In combination, a normally closed gate for a shaft landing, a cage movable vertically in the shaft, a vertical slideway along the shaft with its upper and lower ends deflected outwardly, a counterweighted gate operating cable provided with a slide movable in said slideway, the cage and slide provided with coöperating devices to slip past each other when the cage is moving in one direction and to operatively engage to move the slide and cable with the cage to open the gate when the cage is moving in the opposite direction and to operatively disengage when the slide enters one deflected end of the slideway, and means whereby the cable can be abnormally adjusted to maintain the slide in the other deflected end of the slideway, substantially as described.

3. The combination of a normally closed gate for a shaft landing; a cage movable vertically in the shaft; a counterweighted gate operating cable; means arranging an intermediate portion of said cable to provide vertical oppositely movable cable lengths at one side of the shaft, each length provided with a slide carrying a trip device; parallel adjacent slideways for said slides; gate opening projections carried by one side of the cage and corresponding to said trip devices respectively; means for automatically disengaging a trip device and its corresponding cage projection at the end of each gate opening movement; said projections being swingable to and from operative relation with respect to the trip devices; and a manually operated rock shaft and link connections whereby said projections are simultaneously swung to and from operative relation with said trip devices, said rock shaft having a handle within the cage, substantially as described.

1,191,807. FEEDING MECHANISM FOR BUTTON-ATTACHING MACHINES. HARRY J. MACDONALD, Chicago, Ill. Original application filed Apr. 3, 1914, Serial No. 829,270. Divided and this application filed Jan. 2, 1915. Serial No. 22. (Cl. 218—12.)



1. In a button feeding mechanism, the combination of a revoluble table, a plurality of receptacles mounted thereon and carried thereby, a guide-way extending from the bottom of each of said receptacles, a downwardly inclined button chute adapted to register with the guide-way of each receptacle as it is brought into feeding position, and a mechanism for directing the movement of the buttons from the receptacles to the button chute, substantially as described.

2. In a button feeding mechanism, the combination of a revoluble table, a plurality of button receptacles of different sizes mounted thereon, a guide-way extending from the bottom of each of said receptacles, a downwardly inclined button chute registering with the guide-way of each receptacle as it is turned to feeding position, an agitator shaft extending vertically through each of said receptacles, driving mechanism having connection with said agitator shaft, and means for regulating the advance of the buttons through the receptacle, substantially as described.

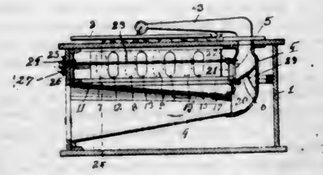
3. In a button feeding mechanism, the combination of a revoluble table, a plurality of button receptacles of different sizes mounted thereon, an agitator shaft extending vertically through each of said receptacles, a disk fixedly secured to the agitator shaft near the bottom of each receptacle, each disk having an opening of the proper size to permit a single button to drop therethrough, and means for regulating the advance of the buttons through the receptacle, substantially as described.

4. In a button attaching machine, the combination of a supporting frame, a drying shaft, a revoluble table, a plurality of hoppers supported thereon, each of said hoppers having a circumferential groove in the bottom thereof extending to the discharge opening, a disk in each of said hoppers upon which the buttons are supported, said disk having an opening therethrough through which the buttons are fed into the aforesaid groove, and means connected with the driving mechanism for agitating the buttons in the hopper with each operation of the machine, substantially as described.

5. In a button attaching machine, the combination of a supporting frame, a driving shaft, a revoluble table, a plurality of hoppers supported thereon, an agitator shaft in each of said hoppers, a revoluble disk in the bottom of each hopper, spring pressed agitator blocks carried with said disk, a disk mounted upon the agitator shaft above the revoluble disk, said disk having an opening through which the buttons fall upon the revoluble disk, and means for directing said buttons to the exit opening, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,191,808. SOUND-REGULATOR. ALEXANDER G. MARQUIS, Rochester, N. Y., assignor of one-fourth to George W. Rogers and one-fourth to Anita B. Rogers, Rochester, N. Y. Filed Apr. 12, 1915. Serial No. 20,702. (Cl. 274—2.)



1. In a sound producing apparatus the combination of a horn and a valve mounted in the side of the horn covering an opening in the side of the horn, said valve being adapted to be moved across the horn so as to uncover the opening in the side of the horn and close the passage through the horn, a chamber communicating with said opening to receive the waves of sound so deflected, and diaphragms in said chamber to modify the sound waves deflected into said chamber.

2. In a sound producing apparatus the combination of a horn and a valve mounted in the side of the horn covering an opening in the side of the horn, said valve being adapted to be moved across the horn so as to uncover the opening in the side of the horn and close the passage through the horn, and a muffling chamber separate from said horn to receive and silence the waves of sound so deflected.

3. In a sound producing apparatus the combination of a horn and a valve mounted in the side of the horn cov-

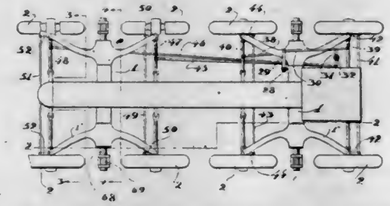
ering an opening in the side of the horn, said valve being adapted to be moved across the horn so as to uncover the opening in the side of the horn and close the passage through the horn, and a muffling chamber adjacent to said opening to receive and silence or modify the waves of sound so deflected, openings in said muffling chamber, a valve for varying the size of said openings and an auxiliary muffling chamber outside of said openings.

4. In a sound producing apparatus the combination of a horn and a valve mounted in the side of the horn covering an opening in the side of the horn, said valve being adapted to be moved across the horn so as to uncover the opening in the side of the horn and close the passage through the horn, separate from said horn to receive and silence the waves of sound so deflected, openings in said muffling chamber and a valve for varying the size of said openings.

5. In a sound producing apparatus the combination of a horn and a valve mounted in the side of the horn covering an opening in the side of the horn, said valve being adapted to be moved across the horn so as to uncover the opening in the side of the horn and close the passage through the horn and a muffling chamber adjacent to said opening to receive and silence or modify the waves of sound so deflected, openings in said muffling chamber, a valve for varying the size of said openings and a screen in combination with said valve openings.

[Claims 6 to 9 not printed in the Gazette.]

1,191,809. AUTOMOBILE. EUGENE MICHELIN, Jacksonville, Fla. Filed Oct. 5, 1914. Serial No. 865,122. (Cl. 21—90.)



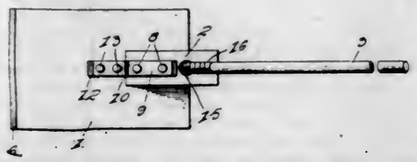
1. A motor vehicle including a pair of trucks, each truck having a transverse member, oppositely curved arms on opposite ends of said member, wheels mounted in said arms, axles connecting said wheels at the opposite sides of the trucks, means for driving the axles, a casing for the driving means, a body supported above the trucks, and means connecting the wheels together for turning them in either direction, a knuckle connection between the wheels and axles, a steering column, a turn bolt, means connected with the steering column and the turn bolt to turn said turn bolt upon rotation of the steering column in either direction and projecting in opposite directions from the turn bolt, connections between one of said arms of the turn bolt and the wheels of the front truck to turn the same upon rotation of the turn bolt, and connections between the remaining arms of the turn bolt and the wheels of the rear truck to turn the same in a reverse direction.

2. A truck for motor vehicles comprising a transverse member, a pair of arms pivotally mounted at points centrally between their ends upon said member, spindles pivotally mounted upon the ends of said arms, wheels journaled upon the spindles, a steering mechanism connected to said spindles, a support carried by said transverse member, a central axle section journaled upon said support, outer axle sections secured to said wheels, intermediate axle sections having universal connection with the central and outer axle sections, and a drive shaft journaled upon the support and geared to the central axle sections.

3. A truck for motor vehicles comprising a transverse member, a pair of arms pivotally mounted at points centrally between their ends upon said members, spindles mounted upon the ends of said arms, wheels journaled upon the spindles, a support carried by said transverse member, a central axle section journaled upon said support, outer axle sections secured to said wheels, intermediate axle sections having universal connection with the central and outer axle sections, and a drive shaft journaled upon the support and geared to the central axle sections.

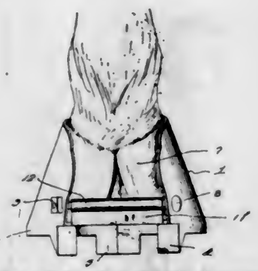
4. A truck for motor vehicles comprising a transverse member, a pair of arms pivotally mounted at points between their ends upon said member, spindles carried by said arms, wheels journaled upon said spindles, a support carried by said member, a drive shaft journaled upon said support and universally connected between said drive shaft and said wheels, a central axle section journaled upon said support, outer axle sections secured to said wheels, intermediate axle sections having universal connection with the central and outer sections, and a drive shaft journaled upon the support and geared to the central axle sections.

1,191,810. SNOW SHOVEL AND SCRAPER. GEORGE W. MILLER, Sharpsburg, Pa. Filed Oct. 15, 1915. Serial No. 56,066. (Cl. 55—14.)



A combined shovel and scraper including a blade, a block having a tapered front portion and provided with a longitudinal and laterally disposed socket, the laterally disposed socket extending from the upper or outer face of the block and the other face of the block being fitted against the blade, an angle brace having angularly disposed portions fitted against the blade and the block, fastening devices securing the angle brace and the block to the blade and a removable handle adapted to be fitted in either socket of the block.

1,191,811. HORSESHOE. JOHN H. MILLER, Meyersdale, Pa. Filed Mar. 15, 1915. Serial No. 14,452. (Cl. 168—2.)



A horse shoe of the class described comprising curved boot sections, hinges connected to opposite sides of said sections in the front face thereof adapted to allow the boot sections to move outwardly and inwardly, said sections arranged to conform to the configuration of a horse's hoof, a bottom plate or shield arranged to extend in and rest upon the foot sections of the boot, said plates provided with a rearwardly extending flange, said flange bent back upon itself to form a sleeve, and bolt arranged to extend transversely through the boot section and the sleeve of the plate for holding the bottom plate and boot sections securely together substantially as described.

1,191,812. ELECTRIC-LAMP-SOCKET CASING. HARRY J. MOREY, Syracuse, N. Y. Filed Apr. 16, 1914. Serial No. 832,292. (Cl. 173—362.)



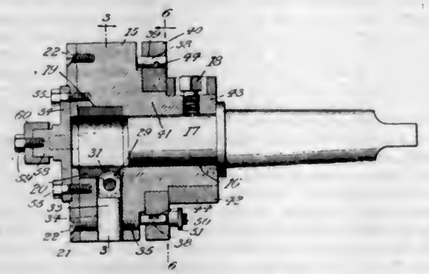
1. A cap of the class described comprising the combination of a block of insulating material having an opening extending centrally therethrough, and means whereby the cap may be attached to a socket shell, said means comprising a ring having lugs for attaching the same to said block, and a second ring carried by the first mentioned ring and provided with means for interlocking with portions on the socket shell.

2. A cap of the class described comprising the combination of a block of insulating material having an opening extending centrally therethrough and also having recesses in the lower side thereof on opposite sides of said opening, and means whereby the cap may be attached to a socket shell comprising a ring having lugs secured in said recesses in the block, and a second ring carried on the inner side of said first mentioned ring and having a series of recesses adapted to receive portions of the socket shell to secure the cap to the shell.

3. A cap of the class described comprising a substantially cylindrical body of insulating material having a central opening extending therethrough, a nipple secured to the top of said body coaxially with said opening, and a device whereby the cap may be attached to a socket shell, said device having means uniting the same to the body of insulating material, said uniting means being located within the margin of said body.

4. A cap of the class described comprising a body of insulating material having a centrally disposed opening flaring toward the lower side, a nipple secured to said body above the opening and coaxially therewith, and means on the lower side of said body for attaching the cap to a socket shell.

1,191,813. FACING-TOOL. ERVIN S. MUMMERT and JOSEPH O. DIXON, Hanover, Pa. Filed July 15, 1915. Serial No. 39,942. (Cl. 82—1.)



1. A self-feeding facing tool comprising a rotary head provided with a radially extending guideway, a forked tool holder slidable in said guideway, a feed screw carried by the head and engaging a threaded segmental recess in one fork of said tool holder for advancing the same, and means carried by the head for rotating said feed screw.

2. A self-feeding facing tool comprising a rotary head provided with a radially extending guide way, a forked tool holder engaging said guide way and provided with a threaded segmental recess in one fork, a feed screw loosely mounted in the head and engaging the tool holder-recess, means for preventing an axial displacement of the feed screw, and means for intermittently rotating the feed screw.

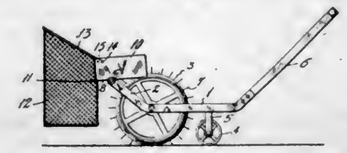
3. A self-feeding facing tool comprising a rotary head provided with a radially extending guide way, a forked tool holder engaging said guide way and provided with a threaded segmental recess, means for confining said holder within said recess, a circumferentially grooved feed screw loosely mounted in the head and engaging the tool holder recess, a forked plug carried by the head and engaging the feed screw-groove for preventing an axial displacement thereof, and means for intermittently rotating said feed screw.

4. A self-feeding facing tool comprising a rotary head provided with a radially extending guide way, a forked tool holder engaging said guide way and provided with a threaded segmental recess and a transverse square hole, a tool adapted to be fitted into said hole and having a beveled rear end, an adjusting screw engaging said end, a feed screw loosely mounted in the head and engaging the tool holder-recess, means for preventing an axial displacement of the feed screw, and means for intermittently rotating said feed screw.

5. A self-feeding facing tool comprising a rotary head provided with a radially extending guide way, a tool holder slidable in said guide way, a tool adjustably mounted within said holder, a disk secured to the head for confining the holder within the guide way and provided with a radial slot for accommodating the tool, a feed screw loosely rotatable within the head and engaging the tool holder, and means for rotating said screw.

[Claims 6 to 10 not printed in the Gazette.]

1,191,814. LEAF-GATHERING AND LAWN-TREATING IMPLEMENT. LOUIE T. MURRAH, Dallas, Tex. Filed Mar. 11, 1916. Serial No. 83,523. (Cl. 55—145.)



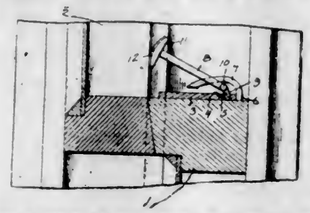
1. In an implement for gathering leaves and cultivating lawns, the combination of a frame having upwardly extending arms, a drum having radial peripheral projections arranged thereon in circumferential rows, a stripping device mounted on the arms and comprising a plurality of fingers projecting between the rows of teeth of the drum and also having upstanding wings at its sides, means for adjustably supporting the device on the arms whereby said device may be adjusted laterally of the drum and also arcuately to raise or lower the fingers with relation to the drum, and a receptacle removably suspended from the wings of the stripping device.

2. In an implement for gathering leaves and cultivating lawns, the combination with a frame having arms, and a leaf gathering and lawn cultivating drum having peripheral projections, of a stripping device comprising upstanding wings at its sides and rearwardly projecting fingers overhanging the drum between the projections of the latter, trunnions projecting from the device and penetrating the frame-arms, nuts on the trunnions engaging the arms on both sides whereby said device may be shifted laterally and locked in position and also adjusted arcuately and locked in position, a receptacle having portions removably engaging the wings of the stripping device, and means on the wings for supporting the receptacle.

1,191,815. WINDOW-LOCK. CARL NELSON, Brockton, Mass. Filed Nov. 9, 1915. Serial No. 60,546. (Cl. 16—19.)

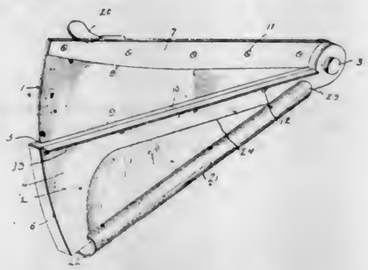
A window lock comprising a plate provided with a plurality of spaced recesses, a locking arm having an angular down-turned end adapted to engage said recesses when

said lock is in use, a pair of upwardly extending arms secured to the rear end of said plate, the free terminals of said arms being provided with arched arms extending forwardly over the face of said plate in parallel relation,



and a pair of laterally extending projections formed on said arm at opposite sides thereof adapted to engage said arched arms thereby preventing the angular end from riding out of said notches and forming a means to swing said arm out of engagement with a window.

1,191,816. ENVELOP-OPENER. AUGUST NOGAR, Reading, Pa. Filed Nov. 15, 1915. Serial No. 61,577. (Cl. 164—41.)



1. An envelop opener of the class described including two members pivoted together at one end of the device, one of the members consisting of spaced sides slidably receiving the other member and open at the bottom, one of the members being extended laterally beneath the other member and bent to form a longitudinal receptacle arranged to receive the severed portions of the envelop and also constituting a grip, and cutting edges carried by the said members.

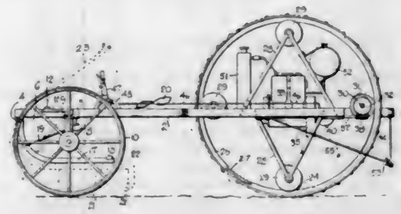
2. An envelop opener of the class described including two pivoted members, one of the members consisting of a casing receiving the other member and having a longitudinal flange forming a supporting ledge, a blade mounted within the casing adjacent to the said flange, a coacting blade mounted on the other member of the envelop opener and arranged to coact with the blade of the casing, and means carried by the last mentioned member and coacting with the blade of the casing for limiting the opening movement of the said members.

3. An envelop opener comprising two pivoted members, one of said members consisting of a casing provided at the bottom with a tubular portion forming a receptacle and constituting a grip and the other member being slidable into and out of engagement and having means arranged to be engaged by the thumb of the operator.

4. An envelop opener of the class described comprising two pivoted members, one of the members consisting of a casing composed of spaced sides and the other member being slidable into and out of the casing and having a stop located within the casing, a blade secured within the casing and arranged to be engaged by the stop for limiting the relative outward movement of the said members, and a coacting blade mounted on the other member of the envelop opener.

5. An envelop opener comprising two pivoted members, one of the members consisting of a casing provided at the bottom with a tubular portion forming a receptacle and constituting a grip, the other member being slidable into and out of the casing and having a laterally projecting thumb piece and cutting edges carried by the casing.

1,191,817. FARM-TRACTOR. JOHN B. O'DONNELL, Sheldon, Iowa. Filed July 14, 1915. Serial No. 39,874. (Cl. 21—114.)



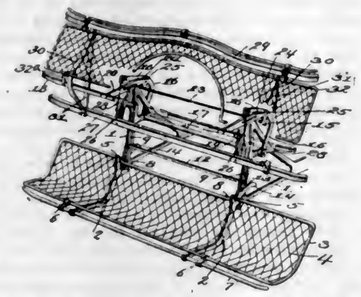
1. In a tractor of the character described, a supporting frame, a single annular spokeless drive wheel disposed with its middle plane in the median plane of the frame, a plurality of bearing wheels mounted upon the frame and engaging the inner face of the drive wheel to thereby support the frame upon the drive wheel, the several bearing wheels rotating in the same plane as the plane of the drive wheel and having their peripheries engaging with and bearing against the inner face of the drive wheel, a motor mounted upon the supporting frame within the drive wheel, and mechanism for transmitting the power of the motor to the drive wheel.

2. In a tractor of the character described, a supporting frame, steering wheels mounted at the forward end of the frame, upwardly and downwardly extending triangular braces mounted upon the rear end of the frame, grooved bearing wheels supported upon said braces, a grooved bearing wheel supported upon the frame forward of the braces, an annular spokeless drive wheel having an internal rib with which said grooved wheels engage and by which the frame is supported in proper relation to the drive wheel, a rack on the interior of the drive wheel, a gear wheel engaging said rack, and a motor mounted within the drive wheel and operatively engaged with said gear wheel.

3. In a tractor of the character described, a supporting frame, an annular spokeless drive wheel having an internal annular rib, a plurality of grooved bearing wheels operatively supported upon the frame and engaging said rib, said bearing wheels forming the sole means for supporting the spokeless drive wheel and holding the drive wheel in proper relation to the frame and from lateral movement but permitting the rotation of the drive wheel, a motor disposed within the drive wheel, and gearing operatively connecting the motor with said drive wheel.

4. In a tractor of the character described, a supporting frame, steering wheels mounted at the forward end of the frame, means disposed at the forward end of the frame for directing said steering wheels, an annular spokeless drive wheel disposed at the rear end of the frame and having internal gear teeth, supporting wheels upon which the drive wheel rotates and by which it is held in position from transverse movement, an engine supported upon the frame and disposed within the drive wheel, a driving shaft operatively connected to the engine, a miter gear wheel mounted upon the shaft, a second shaft in alinement with the first named shaft and forming an extension thereof, an oppositely disposed miter gear wheel mounted thereon, idle miter gear wheels engaged by both of said first named gear wheels, a clutch for connecting or disconnecting the first and second named shafts, a clutch for connecting the second named shaft with the second named gear wheel, means for operating said cdutches, a worm mounted upon the second named shaft, a worm wheel with which said worm engages, and a driving pinion engaging the teeth of the drive wheel and driven by said worm wheel.

1,191,818. AUTOMOBILE-FENDER. JOHN O'LEARY, Cohoes, N. Y., assignor of three-eighths to Edward Penrose, Cohoes, N. Y. Filed May 12, 1916. Serial No. 97,113. (Cl. 105—130.)



1. In an automobile fender, in combination, a pair of supporting brackets, and a fender basket including a pair of members which adjoin the respective brackets and are vertically slidable relatively thereto, the brackets and members having devices rigid therewith coacting as guides during the sliding movements of said members whereby the fender basket when in its upper position is retracted and when in its lower position is projected.

2. In an automobile fender, in combination, a pair of supporting brackets, and a fender basket including a pair of members which adjoin and form companions of the respective brackets, the members being vertically slidable relatively to the brackets, one of said companion elements having a pair of pins and the other having a slot through which the pins project and which is shaped to coact with the pins in holding the fender basket retracted when elevated and projected when lowered.

3. In an automobile fender, in combination, a pair of supporting brackets, and a fender basket including a pair of members which adjoin the brackets and are vertically slidable relatively thereto, the brackets having vertical slots with upper and lower portions thereof forwardly offset from the intermediate portions and the members each having upper and lower pins for engagement in said slots with their spacing from one another greater than the lengths of said offset portions.

4. In an automobile fender, in combination, a pair of supporting brackets, a vertically slidable fender basket including a pair of members which adjoin the brackets and coact with them as guides, said members having rearwardly directed arms provided with terminal lugs and movable latch fingers engaging said lugs to support the fender basket in an elevated position.

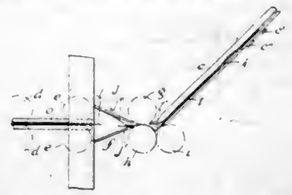
5. In an automobile fender, in combination, a pair of supporting brackets, a vertically slidable fender basket including a pair of members which adjoin the brackets and coact with them as guides, said members having rearwardly directed arms provided with terminal lugs, latch fingers engaging said terminal lugs, bumper means springheld in a normal position, and slidable arms guided by said brackets and actuated by said bumper means for moving said latch fingers to disengage said lugs.

[Claims 6 to 13 not printed in the Gazette.]

1,191,819. FOLDING-MACHINE. ANDREW OLSEN, Cleveland, Ohio, assignor to The Cleveland Folding Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 4, 1914. Serial No. 829,635. (Cl. 101—43.)

1. In a folding machine, the combination with paired rolls, of a guide associated therewith, through which the paper is adapted to be passed to said rolls, and resilient means within the guide for expelling the air from between the folded plies of the sheet, substantially as set forth.

2. In a folding machine, the combination with folding rolls, of a guide positioned before said rolls, through which the sheet is adapted to be passed thereto, and a plurality of spring-members engaging the folded sheet substantially throughout its entire width, and adapted to expel the air from between its folded plies, substantially as set forth.



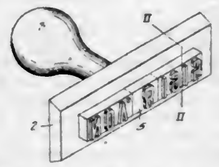
3. In a folding machine, the combination with right-angle folding and sheet-passing rolls, of a guide through which the sheet is directed to said rolls, and a series of light springs presenting substantially continuous surfaces adapted to bear upon the sheet and expel the air from between its folded plies, substantially as set forth.

4. In a folding machine, the combination with the right-angle folding-mechanism, of a guide in advance thereof, resilient air-expelling means adapted to engage the paper, an associated side-frame and a plurality of spaced spring-members therein laterally bearing against the paper and adapted to maintain it in closely folded condition, substantially as set forth.

5. In a folding machine, the combination with right-angle folding mechanism, comprising folding and buckling rolls and associated air-expelling mechanism, of a side plate positioned adjacent thereto, a paper stop therein, and an adjustable spring mechanism associated with said side plate and adapted to bear upon the folded sheet and maintain its surfaces in engagement while said sheet is traveling therein, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,191,820. STAMP. WILLIAM J. PANNIER, Jr., Pittsburgh, Pa., assignor to Pannier Bros. Stamp Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 11, 1915. Serial No. 60,861. (Cl. 101—58.)



1. A stamping device comprising a holding base having an inwardly enlarged wedge-shaped socket, and a resilient printing unit having a correspondingly shaped base formed of two normally separated resilient parts inserted therein.

2. A stamping device comprising a holding base having an undercut inwardly flaring socket, and a resilient printing unit having a correspondingly shaped base formed of two normally separated resilient parts inserted therein.

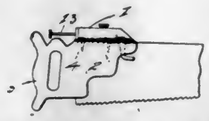
3. A stamping device comprising a holding base having an inwardly enlarged socket, and a resilient printing unit having a base formed of two normally separated divergent parts adapted to be pressed together and inserted therein, and to re-act into holding engagement with the socket walls.

4. A stamping device comprising a holding base having an inwardly enlarged socket, and a printing unit having a correspondingly shaped base formed of two normally separated compressible resilient parts inserted therein.

5. A stamping device comprising a holding base having a socket provided with inwardly diverging walls, and a printing unit having a projecting stamping portion and an integral base formed of two normally separated resilient holding parts diverging from the stamping portion and inserted therein.

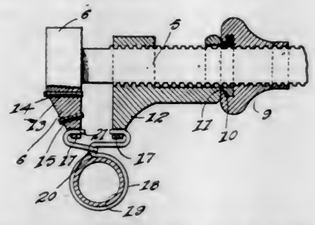
[Claims 6 to 9 not printed in the Gazette.]

1,191,821. SELF-OILING HANDSAW. ROBERT BARTLEY PEARSON, Galveston, Tex. Filed Feb. 8, 1916. Serial No. 77,065. (Cl. 145—35.)



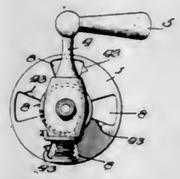
The combination with a saw having a blade provided with an opening, of a casing extending along the upper edge of the handle of the saw and provided with a spout extending into the opening and arranged to discharge a lubricant at opposite sides of the blade of the saw, an automatically closable check valve comprising two substantially semi-conical sections mounted at the said spout, a plunger located within the casing and having an operating rod extending to a point exteriorly of the casing and a spring for urging the plunger outwardly.

1,191,822. WRENCH. ALBERT PETERSON, Chicago, Ill., and WILLIAM H. DONAHUE, Whiting, Ind.; said Donahue assignor to said Peterson. Filed Feb. 13, 1915. Serial No. 7,990. (Cl. 81—180.)



A wrench comprising a shank having screws on the longitudinal edges thereof; a handle secured upon one end of said shank; a relatively stationary jaw rigidly secured to the opposite end of said shank; a relatively adjustable jaw; means for adjusting said jaws longitudinally of said shank; said relatively stationary jaw having a screw-threaded bore extending parallel with said shank and adjacent the latter and a second screwthreaded bore extending at an angle to the first mentioned bore, and clamping screws adjustably positioned in said bores and adapted to extend beyond the inner face of said jaw thereby converting said nut receiving jaws into pipe gripping jaws.

1,191,823. PROPORTIONAL GAS AND AIR MIXER. MINARD A. POSSONS, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Jan. 3, 1916. Serial No. 70,001. (Cl. 158—119.)



1. In a gas control for gas stoves, the combination of a valve casing having a gas port terminating in an outlet orifice, a main valve controlling the gas port in advance of the orifice, an adjustable member controlling the orifice, and an operative connection between the valve and the adjustable member, the operative connection including a slot having an initial straight wall extending in the direction of movement of the connection and a final cam-wall to permit the opening of the main valve in advance of the operation of the adjustable member.

2. In a gas control for gas stoves, the combination of a valve casing having a gas port terminating in an outlet orifice, a main valve controlling the gas port in advance of the orifice, an endwise adjustable member controlling the orifice, an oscillating member operatively connected with the main valve, having a slot and pin connection with the endwise adjustable member, the slot having a straight wall and a cam-wall, and an operative connection between the main valve and oscillating member for the purpose described.

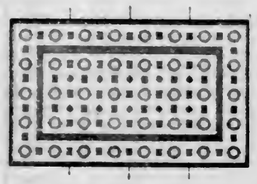
3. A shutter for gas stoves comprising a valve casing and a valve therefor, the valve casing having a projection, an oscillating gear member carried by the casing projection, a stationary shutter member and a movable shutter member, both having air openings for the purpose described, the oscillating gear member connected with the movable shutter member, and a gear operated by the gas valve and meshing with the oscillating gear member.

4. A shutter for gas stoves comprising a valve casing having a projection and a valve for the casing, an oscillating sleeve carried by the said projection, stationary and movable shutter members having air openings, the sleeve having a projection engaging the movable shutter member and a gear connection between the sleeve and the valve for the purpose described.

5. A shutter for gas stoves comprising a gas valve casing and a valve therefor, the valve and casing having gas ports, and adjustable orifice member for controlling the gas supply, movable and stationary shutter members for controlling the air supply, an operative connection between the gas valve and the shutter member, and a cam connection between the adjustable orifice member and the shutter, the connection having a straight way and an inclined way for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,191,824. PROCESS OF PRINTING RUGS. GEORGE PRIFOLD, Linwood, Pa., assignor to The Congoleum Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 28, 1916. Serial No. 80,879. (Cl. 101—182.)

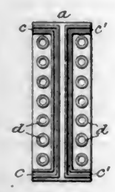


1. The process herein described of manufacturing a printed rug, said process consisting in providing two or more blocks to print the complete border and providing two or more cover blocks having designs thereon registering with the border designs so that a single cover block for each color can be used for printing the border and the body of a rug.

2. The process herein described of manufacturing printed rugs, said process consisting in providing three printing blocks, one of the series of three blocks having a right hand border design thereon, another block having a left hand border design thereon, and the third block having the intermediate side border design thereon, and providing one or more cover blocks having a cover design thereon which will register with the designs on all three of the first mentioned blocks so that a border design will be printed with the first three mentioned blocks to outline the rugs, while the fourth block will print a cover design on the surface receiving the impressions from all three of the first mentioned blocks.

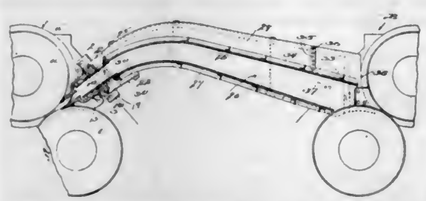
3. The process herein described of manufacturing printed rugs, said process consisting in providing a series of three printing blocks, one block having a right hand border design thereon, the other block having a left hand border design thereon; and a third block having a portion of the body design and a continuation of the border design thereon; and a block having a design thereon so spaced that it will print on each side of the border design and will also register with the design for the body of the rug printed by the first mentioned blocks.

1,191,825. PROCESS OF PRINTING RUGS. GEORGE PRIFOLD, Linwood, Pa., assignor to The Congoleum Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 29, 1916. Serial No. 81,188. (Cl. 101—182.)



The process herein described of printing bordered rugs, on continuous strips, said process consisting in forming the end border of two adjacent rugs on the same block; forming the design of the body portion of the rug, including sections of the side borders, on another block, then making the impressions on the strips of material with both blocks so that a series of complete rugs will be printed on the strip; and finally severing the strip on the lines of the rug designs, making individual rugs.

1,191,826. APPARATUS FOR MACERATING SUGAR-CANE. WILLIAM ARTHUR RAMSAY, Honolulu, Hawaii. Filed Apr. 6, 1914. Serial No. 830,000. (Cl. 100—47.)



1. The combination with a sugar mill of a macerating scraper including a shoe arranged adjacent the discharge side of the mill to define a passage through which the bagasse travels and to subject the bagasse issuing from the mill to mechanical pressure, and means for delivering water into the bagasse as it travels through said passage.

2. The combination with a sugar mill of a macerating scraper including a shoe arranged adjacent the discharge side of the mill to define a passage through which the bagasse travels and to subject the bagasse issuing from the mill to mechanical pressure, means for delivering water into the bagasse as it travels through said passage, and means adjacent the ends of said shoe for closing the ends of said passage.

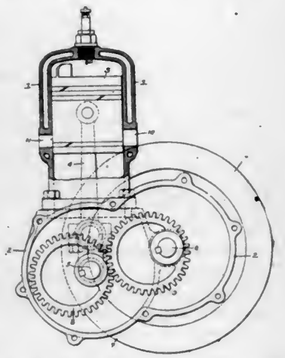
3. The combination with a sugar mill of a macerating scraper including a shoe arranged adjacent the discharge side of the mill and having a toe piece which projects into the discharge way of the mill and a water distribution chamber in the rear of the toe piece provided with a water inlet connection and a water discharge passage, the shoe defining a passage through which the bagasse travels and subjecting the bagasse as it is discharged by the mill to mechanical pressure, the water discharge passage communicating with the passage through which the bagasse travels.

4. The combination with a sugar mill of a macerating scraper including a shoe arranged adjacent the discharge side of the mill and having a toe piece which projects into the discharge way of the mill and a water distribution chamber in the rear of the toe piece provided with a water inlet connection and a water discharge passage, the shoe defining a passage through which the bagasse travels and subjecting the bagasse as it is discharged by the mill to mechanical pressure, the water discharge passage communicating with the passage through which the bagasse travels and being arranged to deliver the water into the bagasse in the direction of the travel thereof.

5. The combination with a sugar mill of a macerating scraper including a shoe arranged adjacent the discharge side of the mill and having a toe piece which projects into the discharge way of the mill and a water distribution chamber in the rear of the toe piece provided with a water inlet connection and a water discharge passage, the shoe defining a passage through which the bagasse travels, and subjecting the bagasse as it is discharged by the mill to mechanical pressure, that portion of the bagasse passage which is defined by the toe piece being narrower than the rest of said passage, the water discharge passage communicating with the passage through which the bagasse travels at a point immediately in the rear of the toe piece.

[Claims 6 to 34 not printed in the Gazette.]

1,191,827. INTERNAL-COMBUSTION ENGINE. GEORGE C. REESE, Darby, Pa. Filed Nov. 26, 1915. Serial No. 63,613. (Cl. 123—197.)



1. The combination in an internal combustion engine of a crank shaft; a counter shaft; means tending to maintain the speed of the counter shaft substantially uniform; and means connecting said shafts for causing the speed of the crank shaft to vary during each stroke.

2. The combination with an internal combustion engine having a crank shaft of a counter shaft; a fly wheel on said counter shaft; and means connecting the crank shaft and counter shaft for causing variation of the speed of the former while allowing the latter shaft to rotate at a substantially uniform speed.

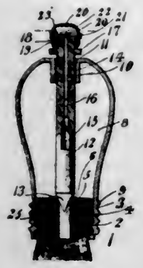
3. The combination with an internal combustion engine having a crank shaft of a counter shaft; elliptical gearing connecting said shafts; and a fly wheel on the counter shaft.

4. The combination with an internal combustion engine having a crank shaft of a counter shaft; eccentrically mounted gears connecting said shafts; and a fly wheel on the counter shaft.

5. The combination with an internal combustion engine having a crank shaft of a counter shaft; a fly wheel on the counter shaft; with eccentrically mounted gears connected between said shafts and set to cause a retardation of the piston speed during the exhaust of the products of combustion.

[Claim 6 not printed in the Gazette.]

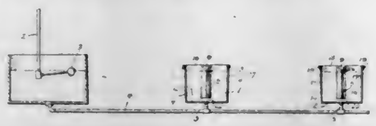
1,191,828. BRUSH-HANDLE. MATTISON G. REEVES, Fullerton, Nebr. Filed Oct. 16, 1915. Serial No. 56,268. (Cl. 15—50.)



1. A brush having a longitudinally arranged tube, the outer end of which being flared, a removable hollow handle connected with the brush and surrounding the tube, a longitudinally adjustable valve stem passing through the handle and normally seated in the flared end of the tube, said handle from its outer end being provided with a longitudinal opening and being formed with a slot entering from its side and communicating with the said opening, and a cap upon the end of the stem for closing the opening.

2. A brush having a longitudinally extending tube communicating with the bristles thereof, a hollow handle connected with the brush and surrounding the tube, said handle having its end thickened and formed with a threaded aperture, a valve stem having a threaded portion engaging the threads of the aperture and normally engaging the tube to close the same, a turning head for the stem, said stem from its outer end being provided with a central bore which terminates approximately central therewith, said stem having an elongated slot communicating with the bore and arranged at the end of the bore, a cap threaded upon the end of the stem, said cap including a spider member which is arranged over the end of the stem and having an aperture upon the outer face thereof communicating with the said spider member.

1,191,829. DRINKING-CUP FOR CATTLE-WATERING SYSTEMS. PETER M. ROSS, Granton, Wis. Filed Nov. 9, 1914. Serial No. 871,084. (Cl. 119—74.)



A watering system of the class described comprising a supply tank, a main feed pipe connected to the bottom of said tank extending outwardly therefrom, a plurality of vertical branch feed pipes connected to and communicating with said main feed pipe at spaced distance apart, and a series of water cups each provided in one of their side or end walls adjacent the upper edge with an air opening and an inlet opening, said air opening positioned above the inlet opening, the upper ends of said branch feed pipes being secured in said inlet openings of the cups, and triangular shaped spouts secured over the openings of said cup on the interior thereof, said spouts extending downwardly into said cup to a point just above the bottom thereof, and a screen secured over the lower open end of said spouts, said screen preventing dirt or floating particles of sediment from passing up through said spout and out into the branch feed pipe, the bottom of said cup provided with a central opening and means for closing the opening.

1,191,830. AUTOMOBILE-INDICATOR. PAUL ROUSSEY, Brooklyn, N. Y., assignor of one-half to John D. Books, Brooklyn, N. Y. Filed Aug. 7, 1915. Serial No. 44,229. (Cl. 175—287.)



1. An indicator comprising spaced terminals, a lever pivotally mounted and having a section provided with an arcuate flange, an arm turnably mounted and having a lug adapted to engage the terminals, spring means operatively connecting the arm with the lever and a pin carried by the arm and engageable with the flange, said flange adapted to pass beyond the path of movement of the pin.

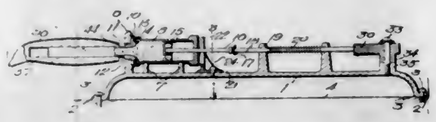
2. In an indicator spaced terminals, a lever pivotally mounted, a pin carried by the lever, an arm turnably mounted and having a lug adapted to engage the terminals, and a spring connected with the arm and having a fork which receives the pin.

3. In an indicator spaced terminals, a lever mounted upon a fulcrum point, an arm turnably mounted and having a lug adapted to engage the terminals and a spring operatively connecting the arm with the lever.

4. In an indicator spaced terminals, a fulcrumed lever, an arcuate flange carried by the lever, an arm turnably mounted and having a lug adapted to engage the terminals, pins carried by the arm and engageable with the flange and a spring operatively connecting the arm with the lever.

5. In an indicator spaced terminals, a lever mounted upon a fulcrum, means for swinging the lever, an arcuate flange carried by the lever, a pin mounted upon the lever, an arm turnably mounted and having a lug adapted to engage the terminals, spaced pins carried by the arm and adapted to engage the flange of the lever, a spring coiled about the support of the arm and connected at one end with the arm and having at its other end a fork which receives the pin upon the lever.

1,191,831. BANANAETTE-MACHINE. DAVID W. ROYER and JOHN W. VON NIEDA, Ephrata, Pa. Filed Oct. 28, 1915. Serial No. 58,423. (Cl. 107—1.)



1. A machine of the character specified, comprising a base, a cradle for receiving a cylinder at one end of the base, a lug extending upwardly from the base at the said end and having an internally threaded opening with its axis parallel with the long axis of the base, a head threaded into the opening and having a nozzle at the outer face of the lug, and an annular groove at the inner face for receiving the adjacent end of the cylinder, a cylinder for seating in the cradle, said cylinder having one end open and adapted to engage the annular groove, and the other end closed, a piston in the cylinder, a piston rod extending through the closed end of the cylinder and having a head at its outer end, a U-shaped packing ring in the groove for engaging the inner and outer faces of the cylinder to make a fluid tight joint, means on the base at the closed end of the cylinder for holding the same and for making counter-pressure against the said end, and means for forcing the plunger toward the nozzle.

2. A machine of the character specified, comprising a base having a supporting cradle for supporting a cylinder with its long axis parallel with the base, said cylinder having its outer end open and the other end closed, and the base having an upstanding lug at the outer end of the cylinder, a head for the cylinder detachably connected with the lug and extending through the lug, and having means for making a fluid tight joint with the open end of the cylinder, and having a nozzle at the outer face of the lug, means at the opposite end of the cylinder and base for making counter-pressure against the closed end of the cylinder, a piston in the cylinder, and means on the base for forcing the piston toward the nozzle, said cylinder having a laterally extending handle for convenience in handling the same.

3. A machine of the character specified, comprising a base having a supporting cradle for supporting a cylinder with its long axis parallel with the base, said cylinder having its outer end open and the other end closed, and the base having an upstanding lug at the outer end of the cylinder, a head for the cylinder detachably connected with the lug and extending through the lug, and having means for making a fluid tight joint with the open end of the cylinder, and having a nozzle at the outer face of the lug, means at the opposite end of the cylinder and base for making counter-pressure against the closed end of the cylinder, a piston in the cylinder, and means on the base for forcing the piston toward the nozzle.

4. A machine of the character specified, comprising a cylinder having one end open and the other end closed, a cradle for supporting the cylinder, said cradle having a lug at the open end of the cylinder, and a head for the cylinder detachably connected with the said lug and extending through the lug and having a nozzle at the face of the lug remote from the cylinder and having means at the inner face of the lug for forming a fluid tight joint with the open end of the cylinder, means at the opposite end of the cylinder for making counter-pressure against the cylinder, and manually operated means for forcing the contents of the cylinder toward the nozzle and detachable from the cylinder, said means making counter-pressure and comprising a guide plate consisting of spaced parallel arms, the cylinder having oppositely arranged heads at its closed end adapted to engage the arms or to register with the space between the arms, and a handle on the cylinder for convenience in manipulating the same, and extending laterally therefrom.

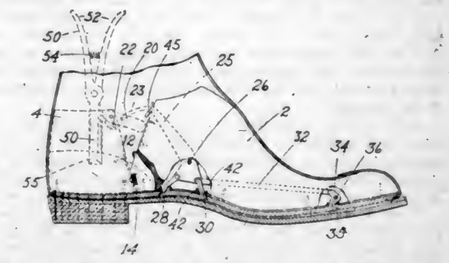
5. A machine of the character specified, comprising a cylinder having one end open and the other end closed, a cradle for supporting the cylinder, said cradle having a lug at the open end of the cylinder, and a head for the cylinder detachably connected with the said lug and extending through the lug and having a nozzle at the face of the lug remote from the cylinder and having means at the inner face of the lug for forming a fluid tight joint with the open end of the cylinder, means at the opposite end of the cylinder for making counter-pressure against the cylinder, and manually operated means for forcing the contents of the cylinder toward the nozzle and detachable from the cylinder.

[Claims 6 and 7 not printed in the Gazette.]

1,191,832. METHOD OF MAKING BOOTS AND SHOES. ARTHUR L. RUSSELL, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Aug. 29, 1910, Serial No. 579,580. Divided and this application filed Aug. 16, 1915. Serial No. 45,778. (Cl. 12—142.)

1. That improvement in methods of making shoes which comprises lasting and soling a shoe on a last having a separable heel part, securing the fore part of the last to the shoe in a manner to prevent movement thereof in a direction to permit relaxation of the lasting tension under which the upper is held, displacing the heel part of the last to uncover the heel seat, and attaching the heel to the shoe while the shoe is maintained in shape by the fore part of the last.

2. That improvement in methods of making shoes which comprises lasting a shoe and laying the outersole on a last having a separable heel part, fastening the shoe interiorly to the fore part of the last, withdrawing the heel part of the last, and heeling and finishing the shoe while the heel part is withdrawn and the fore part of the shoe is maintained in shape by the fore part of the last.



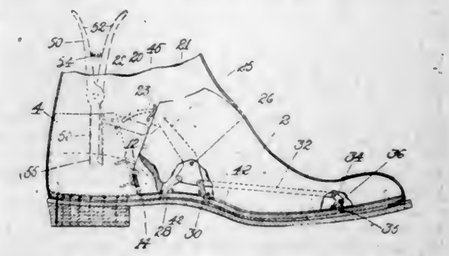
3. That improvement in methods of making shoes which comprises lasting and soling a shoe on a last having a separable rear part, maintaining the fore part of the last against rearward movement in the shoe, moving said rear part to uncover a surface for engagement by a supporting member, supporting the shoe on said member, and attaching the heel while the fore part of the shoe is maintained under tension over the fore part of the last.

4. That improvement in methods of making shoes which comprises so fastening a last to the inner side of an innersole at a plurality of points that the innersole will be held in assembled position on the last and the fore part of the last will be restrained from movement toward the rear end of the innersole, assembling, lasting and soling the shoe, moving the heel part of the last to uncover the heel seat while the fore part of the last is so restrained from displacement, attaching the heel, finishing the shoe and finally unfastening the fore part of the last from the innersole and removing it from the shoe.

5. That improvement in methods of making shoes which comprises superposing at the toe end an innersole and a last having retracted spurs, pressing the last and innersole into intimate contact at points substantially opposite to the spurs, projecting the spurs into the innersole, lasting and soling the shoe, removing the heel part of the last, attaching the heel of the shoe while the fore part of the shoe is maintained under tension by the fore part of the last, and withdrawing the spurs from the innersole and the fore part of the last from the shoe when the fore part of the shoe has become set on the last.

[Claim 6 not printed in the Gazette.]

1,191,833. APPARATUS FOR THE MANUFACTURE OF BOOTS AND SHOES. ARTHUR L. RUSSELL, Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 29, 1910. Serial No. 579,580. (Cl. 12—141.)



1. In a last, a forepart, a rear part having a surface arranged to engage the major portion of the inside of the counter of a shoe and separately removable from the shoe, and means carried by said forepart for securing the forepart against rearward displacement in the shoe while the rear part is removed.

2. In a last, a forepart, a heel part separately removable from a shoe, and means forming a part of said forepart for connecting the forepart of the last to the shoe independently of the heel part for the purpose described.

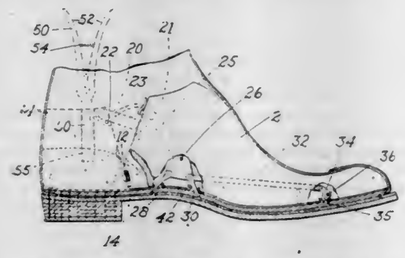
3. In a last, a forepart, a heel part separately removable from a shoe, and means carried by the forepart of the last for establishing connection with the sole of the shoe and for maintaining connection with the sole of the shoe after the heel part of the last has been withdrawn from the shoe.

4. In a last, a forepart, a heel part separately removable, and means for fastening the forepart of the last against rearward displacement in the shoe, comprising a member arranged in the forepart of the last for oblique rearward and downward engagement with the shoe sole.

5. In a last, a forepart, a heel part separately removable from a shoe, and a fastener located in the forepart and movable by the operator in a path inclined downwardly and rearwardly into engagement with the innersole to hold the forepart in position while the heel part is out of the shoe.

[Claims 6 to 18 not printed in the Gazette.]

1,191,834. APPARATUS FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ARTHUR L. RUSSELL, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Aug. 29, 1910, Serial No. 579,580. Divided and this application filed Aug. 16, 1915. Serial No. 45,777. (Cl. 12—141.)



1. The combination with a last having spurs and means to project the spurs from the last bottom into an inner sole, of a holder for an innersole having supporting means to sustain the innersole against the thrust of the spurs, and gages to position the last and the innersole relatively during the projection of the spurs into the innersole.

2. The combination with a last having spurs and means to project the spurs from the last bottom into an innersole, of a gage arranged to position the toe end of the last and the toe end of the innersole relatively to insure predetermined longitudinal relation of the innersole into which the spurs are projected, and means for sustaining the innersole against the thrust of the spurs.

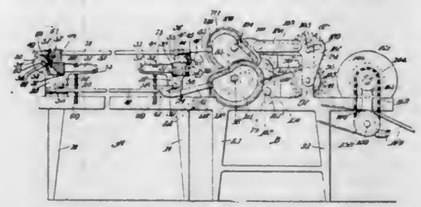
3. The combination with a last having spurs and means to project the spurs from the last bottom into an innersole, of a holder for innersoles having an innersole supporting face depressed between the toe and shank to adapt it to the longitudinal curvature of the last bottom and serving to sustain the innersole against the thrust of the spurs, and a side gage and an end gage to position the innersole and the last during operation of the spurs to attach the innersole.

4. The combination with a last having spurs to be projected into an innersole at a plurality of points, of an innersole holder having supports for the innersole located under the spurs and serving to sustain the innersole against the thrust of the spurs, said holder being formed between said supports to permit the innersole to bend down into conformity to the longitudinal curvature of the last bottom.

5. The combination with a last having spurs to be projected into an innersole at a plurality of points, of an innersole holder having supports for the innersole located under the spurs and serving to sustain the innersole against the thrust of the spurs, said supports being adjustable relatively for lasts of different sizes.

[Claims 6 and 7 not printed in the Gazette.]

1,191,835. MEANS FOR UNITING SHEETS OR PLATES. EDWARD W. SALMON, Jr., Baltimore, Md., assignor of one-half to Christian H. Nelson, Baltimore, Md. Filed July 3, 1912. Serial No. 707,544. (Cl. 113—54.)



1. A machine of the character described, including in combination, means for shearing and edging opposite ends of sheet material, means for transferring each sheet after it is sheared and edged into overlapping relation with a sheared and edged sheet, means operable upon the overlapped portions of the sheets to complete a single lock seam connection between the overlapping sheets, means for doubling the material at its single lock seam, means for flattening and double lock seaming the doubled material at the single lock seam, and means for feeding the material through the machine and winding it into a roll.

2. A machine of the character described, including in combination, means for automatically shearing and edging opposite ends of sheet material, automatic means for transferring each sheet after it is sheared and edged into overlapping relation with a sheared and edged sheet, means operable automatically upon the overlapped portions of the sheet to complete a single lock seam connection between the overlapped sheets, means operable automatically for doubling the material at its single lock seam, automatic means for flattening the doubled material at the single lock seam to convert the single lock seam into a double lock seam, means for automatically feeding the material through the machine and operating to wind the material into a roll subsequent to the single and double lock seam and doubling operations, and means whereby the rolled material may be discharged from the feeding and roll forming means.

3. A machine of the character described, including in combination, means for edging ends of sheet material, means for placing the edged ends of the sheets of material in overlapping relation, means for feeding the overlapped sheets through the machine, means operating upon the sheets at their overlapped portions to complete a single lock seam at the overlapping connection between said sheets, means operable on the material to double the same at the single lock seam, and means operable upon the single lock seam subsequent to the doubling of the latter to flatten out the doubled portion and provide a double lock seam at the joint between the sheets.

4. A machine of the character described, including in combination, means for single lock seaming sheets together, comprising means for edging the ends of sheet material, means for placing the edged ends of the sheets of material in overlapping relation, means for feeding the overlapped sheets through the machine, means operating upon the sheets at their overlapped portions to complete a single lock seam at the overlapping connections between said sheets, means for converting the single lock seam into a double lock seam comprising means operable upon the material at the single lock seam to double the material, means operable upon the single lock seam subsequent to the doubling of the latter to flatten out the doubled portion and complete a double lock seam at the joint between the sheets, and means for throwing out of operation the means which complete both the single and the double lock seaming operations, and also the means which doubles the material, when a predetermined number of sheets have been double lock seamed.

5. A machine of the character described, including in combination, means for placing edged sheets of material in overlapping relation, means for feeding the overlapped sheets through the machine, means operating upon the sheets at their overlapped portions to complete a single lock seam at the overlapping connection between said sheets, means operable on the material to double the same at the single lock seam, and means operable upon the single lock seam subsequent to the doubling of the latter to flatten out the doubled portion and provide a double lock seam at the joint between the sheets, said feeding means operating to wind the united sheets into a roll, and means whereby the rolled sheets may be discharged from the combined feeding and winding means.

[Claims 6 to 101 not printed in the Gazette.]

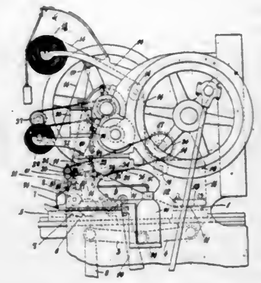
1,191,836. LIFE-PRESERVING JACKET. STANISLAW SAROSIEK, Nutley, N. J. Filed Dec. 13, 1915. Serial No. 66,601. (Cl. 9—20.)



1. A device of the class described comprising a vest, an inflatable cushion arranged within the body of the vest at the back portion thereof, a similar inflatable cushion having one edge thereof attached to one of the front side flat portions of the vest, buttonhole tabs on the opposite end of the said front cushion, engaging buttons for the said tabs carried by the opposite front side portion of the vest substantially beneath the adjacent arm portion thereof, an air tube attached over the shoulder portion of the vest and connecting the said cushions, an inflating tube having one end in communication with the said connecting tube, a valved inflating mouth-piece upon the opposite free end of the said inflating tube, and a positioning clip carried by the said mouth-piece.

2. A device of the class described comprising a vest having closable front portions, an inflatable cushion permanently secured at one end to one of the said front portions and adapted for overlying both of said front portions when the device is operatively positioned with the vest in its closed arrangement, buttons carried by the said vest adjacent one of the arm portions thereof, buttonhole tabs projecting from the free end of the said cushion and adapted for engagement with the said buttons, an inflating tube for the said cushion, a mouth-piece upon the free end of the said tube, a normally closed depressible check valve within the said mouth-piece, the said mouth-piece being provided with an annular groove, and a positioning clip for the tube and mouth-piece having a band member revolubly positioned within the said groove.

1,191,837. INKING APPARATUS. RUDOLPH SATTLER, Cincinnati, Ohio, and LEO J. MORAND, Covington, Ky. Filed Oct. 29, 1914. Serial No. 869,329. (Cl. 101—103.)



1. In combination with means for making an impression, from which means a portion of ink must be removed before the impression is made, means for removing this portion of ink, and means for actuating this removing means, ink-recovering means acting upon the removing means, additional actuating means for the removing means adjacent to the ink-recovering means, and operative connection from the aforesaid actuating means to this additional actuating means.

2. In combination with means for making an impression, from which means a portion of ink must be removed before the impression is made, a terminable web, actuating means for applying successive lengths of the web to remove successive portions of ink from the impression-making means and comprising a reel for said web, means bearing against the web to recover ink therefrom, actuating means for the web additional to the aforesaid actuating means and adjacent to the means that bears against the web, and operative connection between the aforesaid actuating means and this latter actuating means.

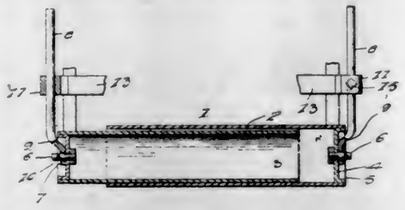
3. In combination with means for making an impression, said means having a smooth surface with a depression therein from which smooth surface all of the ink must be removed before the impression is made, and means for removing and carrying away, as a film, all of this ink from this surface, ink-recovering means acting upon said removing means to recover said film of ink, and means for applying liquid to but conserving said film of ink on said ink-removing means before it is removed by said ink-recovering means.

4. In combination with means for making an impression, said means having a smooth surface with a depression therein, from which smooth surface all of the ink must be removed before the impression is made, and means for removing and carrying away, as a film, all of this ink from this surface, ink-recovering means acting upon said removing means to recover said film of ink, means for applying liquid to but conserving said film of ink on said ink-removing means before it is removed by said ink-recovering means, and means receiving the recovered ink from said ink-recovering means separate and distinct from said means for applying liquid.

5. In combination with means for making an impression, said means having a smooth surface with a depression therein, from which smooth surface all of the ink must be removed before the impression is made, means supplying ink to said smooth surface and said depression, and means for removing all of the ink from said smooth surface, ink-recovering means acting upon said removing means to recover the ink from said removing means and deliver it to said means for applying ink to said smooth surface and said depression, and means for applying liquid to said ink-removing means before it is acted upon by said ink-recovering means.

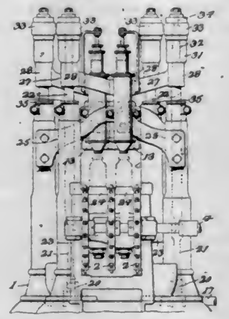
[Claims 6 to 31 not printed in the Gazette.]

1,191,838. ADJUSTABLE LAND-ROLLER FOR DRILLS. HERMANN H. SCHARMANN, Dunreith, Ind. Filed Aug. 28, 1915. Serial No. 47,826. (Cl. 55—6.)



The combination with a pair of rearwardly diverging beams adapted to be adjusted toward and from each other and provided at their ends with eyes having vertical openings, vertical standards capable of relative vertical and rotary adjustment in the said eyes and provided at their lower ends with bearings, and a transversely disposed roller composed of two telescopic sections provided at their outer ends with pivots secured in the bearing openings, said roller sections permitting the adjustment of the beams toward and from each other.

1,191,839. PROCESS OF PRESERVING FOOD PRODUCTS. EDWARD D. SCHMITT, Baltimore, Md., assignor, by mesne assignments, to The American Pure Food Process Company, Baltimore, Md., a Corporation of Delaware. Filed Aug. 27, 1913. Serial No. 786,940. (Cl. 99—8.)

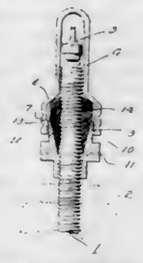


The method of preserving cooked or partially cooked food products in jars from mold, which consists in projecting heated air upon the food contents, instantly applying a cap to the jar, and then sealing the jar.

1,191,840. DUST-GUARD FOR VALVE-STEMS. CLEVE T. SHAFFER, San Francisco, Cal. Filed Apr. 15, 1913, Serial No. 761,295. Renewed Feb. 15, 1916. Serial No. 78,550. (Cl. 152—12.)

1. A quickly detachable dust guard for threaded valve stems, comprising a tubular member for loosely positioning over the valve stem, a dust cap associated with said tubular member and adapted for loosely positioning over and for inclosing said stem, an annular flexible gripping member interposed between said tubular and dust cap members and through which said stem extends, and a means carried by said cap and tubular members whereby the same may by a relative rotary movement be drawn together for forcing said gripping member into engagement with the valve stem to detachably secure the tubular member and dust cap.

2. A quickly detachable dust guard for threaded valve stems, comprising a tubular member for loosely positioning over the valve stem and through which the stem extends, a cap associated with said tubular member and adapted for loosely positioning over and for inclosing said stem, an annular flexible gripping member carried by one of said members and adapted to be engaged by the other of said members, and a threaded connection between said cap and tubular member whereby the same may by a rotary movement be drawn together for forcing said gripping member into engagement with the valve stem to detachably secure said tubular member and dust cap thereto and to provide a seal surrounding said stem below the open end thereof.



3. A quickly detachable dust guard for threaded valve stems, comprising a tubular member for loosely positioning over the valve stem and through which the stem extends, a dust cap associated with said tubular member and adapted for loosely positioning over said stem, an annular flexible gripping member carried by said tubular member and through which the valve stem extends, one end of said gripping member projecting beyond said tubular member, a threaded connection between said cap and tubular member for adjusting the same by a rotary movement relative to each other, and means carried by said cap for contacting with the projecting end of the said gripping member to force the same into engagement with the valve stem when the tubular member and cap are drawn together to detachably secure said tubular valve and dust cap to said stem.

4. A quickly detachable dust guard for threaded valve stems, comprising a tubular member or washer for loosely positioning over the valve stem, a dust cap for loosely positioning over the valve stem and coöperating with the tubular member, and a flexible member within said dust cap for engaging the valve stem to detachably secure the cap and tubular member or washer thereto on the drawing of said tubular member or washer and said dust cap together by a relative rotary movement thereof.

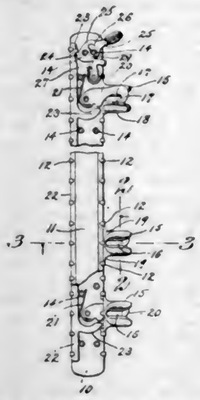
5. In combination with a threaded valve stem, coöperating tubular dust cap and washer members for simultaneous loose positioning over the valve stem, and a yieldable member adapted on the drawing together of said tubular dust cap and washer members upon a relative rotary movement thereof for engaging the valve stem to detachably secure said dust cap and washer members thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,191,841. FASTENER FOR CORSETS AND ANALOGOUS ARTICLES. HAROLD L. SIEGEL, New York, N. Y., assignor to Improved Stay Company, a Corporation of New Jersey. Filed June 11, 1915. Serial No. 33,434. (Cl. 24—205.)

1. In a fastener of the class described, a flexible stay comprising parallel members one of which is provided with clips which frictionally engage with the other member, said clips being substantially flush with said latter member, a plurality of keepers on one of said members, latches pivoted between the members and coöperating with the keepers, and means for actuating said latches.

2. In a fastener of the class described, a flexible stay comprising parallel members one of which is provided with beveled edges and the other having two series of clips and a plurality of keepers, said clips of one member being positioned in contact with the beveled edges of the other member and in substantially flush relation to the surface of said other member, latches pivoted between the members and coöperating with the keepers, and means for actuating said latches.



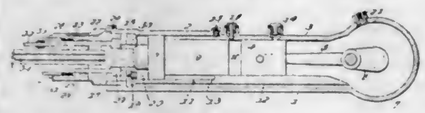
3. In a fastener of the class described, a stay provided with a plurality of slotted keepers each of which is composed of a piece of metal folded upon itself, one part of said folded keeper being provided with members positioned for contact with the other folded part and acting as a brace therefor, and a latch pivoted to the stay and partially incased within the folded keeper.

4. In a fastener of the class described, a stay provided with a plurality of slotted keepers each of which is composed of a piece of metal folded upon itself, said metal of the keeper being slotted and provided on one part thereof with lips and a flange positioned for contact with the other part of the keeper when the latter is folded over the first named part so that the lips and flange act as braces for the folded part, and a latch pivoted to the stay and partially incased within the folded keeper.

5. In a fastener of the class described, a stay provided with a series of keepers each provided with a slot extending through that end portion thereof which is distant from said stay, each keeper being composed of metal folded upon itself to produce two parts one of which is provided with a member positioned to act as a brace for precluding bending of the two parts relatively to each other, combined with latches operating to close the entrances to the slotted keepers.

[Claims 6 and 7 not printed in the Gazette.]

1,191,842. ROCK-DRILL. WILLIAM AUGUST SMITH, Denver, Colo., assignor of one-half to William W. Hassell, Colorado Springs, Colo. Filed July 20, 1912. Serial No. 710,635. (Cl. 125—20.)



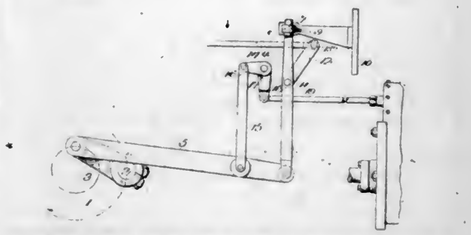
1. The combination with a cylinder having a large bore and a small bore and a crank case forming an extension of the small bore, a piston in the small bore, an air inlet valve communicating with the small bore, an inwardly opening air valve on the crank case, a hammer in the large bore having an extension that operates in the small bore, an inwardly opening relief valve in the large bore at the juncture between the bores, an outwardly opening valve between the relief valve and the air inlet valve of the large bore, said cylinder having a passage which communicates with the crank case and the front end of the hammer, a pair of chambers at the front end of the hammer and a relief valve between said chambers.

2. In combination with a cylinder having a crank case connected thereto, a piston in the cylinder, a hammer actuated by the piston, a relief valve in the hammer bore, said cylinder having a passage which connects the hammer bore and crank case, and an inwardly opening valve in the crank case.

3. In combination with a cylinder having a crank case connected thereto, a piston in the cylinder, a hammer actuated by the piston, means whereby the hammer is cushioned upon its return stroke, means to break the vacuum in the space between the piston and hammer when the piston reaches the limit of its backward stroke, and means whereby a partial vacuum is formed at the front and rear ends of the hammer upon movement of the piston on its working stroke.

4. In combination with a cylinder having a crank case connected thereto, a piston in the cylinder, a hammer actuated by the piston, means whereby the hammer is cushioned upon its return stroke, means to break the vacuum in the space between the piston and hammer when the piston reaches the limit of its backward stroke, means whereby a partial vacuum is formed at the front and rear ends of the hammer upon movement of the piston on its working stroke, and means to allow the air compressed between the hammer and piston to escape when the hammer has completed its working stroke.

1,191,843. VALVE-GEAR FOR LOCOMOTIVE OR OTHER ENGINES. GILBERT HAVEN SNIDER, Pulaski, Va. Filed Oct. 23, 1915. Serial No. 57,487. (Cl. 121—98.)



1. In a steam engine valve gear, the combination of a rocker shaft, means for simultaneously reciprocating and oscillating a pitman, a pitman connected to said means, a link rod pivoted to the pitman, a bearing in which the free end of the link rod slides, means for mounting the bearing to permit it to rock with the movement of the link rod, crank levers between the rocker shaft and the link rod to raise and lower same, and valve operating mechanism connected to the pitman.

2. In a steam engine valve gear, the combination of a rocker shaft, means for simultaneously reciprocating and oscillating a pitman, a pitman pivoted to said means, a link rod pivoted to the free end of the pitman, a swiveled bearing in which the link rod is mounted, a crank lever pivoted at its lower end to the link rod, a second crank lever extending from the rocker shaft and pivoted at its upper end to the first mentioned crank lever, a valve stem, and operating mechanism between the pitman and the valve stem.

3. In a steam engine valve gear, the combination of a rocker shaft, means for simultaneously reciprocating and oscillating a pitman, a pitman connected to said means, a link rod pivoted to the pitman, means for mounting the link rod to slide and to rock when the pitman is operated, a crank lever pivoted to the link rod, the pivot of said crank lever being in alinement with the rock shaft when the said link rod is in central position, a second crank lever pivoted at one end to the first mentioned crank lever and at its opposite end to the rocker shaft, a rod for rocking the rocker shaft, a valve stem, and a series of links between the pitman and the valve stem whereby

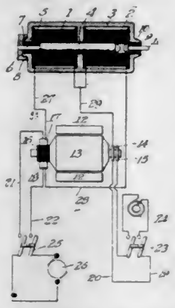
the position of the valve may be changed by movement of the reach rod.

4. In a steam engine valve gear, the combination of means for simultaneously reciprocating and oscillating a pitman, a pitman pivoted to said means, a link rod pivoted to the pitman, a rocking bearing in which the link rod slides when the pitman is moved, a valve stem, links between the pitman and the valve stem, and means for supporting the link rod for moving same to change the position of the valve stem.

5. In a steam engine valve gear, the combination of means for simultaneously reciprocating and oscillating a pitman, a pitman pivoted to said means, a link rod pivoted to the pitman, a pivoted bearing having a guide in which the upper end of the link rod slides, a rocker shaft, a crank lever extending from said rocker shaft, a second crank lever pivoted to the first mentioned crank shaft and to the link rod, a reach rod for operating the rocker shaft, a valve stem, a bell crank lever pivoted to the valve stem, and a link pivoted to the bell crank lever and the pitman.

[Claims 6 and 7 not printed in the Gazette.]

1,191,844. TRANSLATING DEVICE. WILLIAM R. SORGEL and WILLIAM H. GAULKE, Milwaukee, Wis., assignors to International Electric Tool Co., Milwaukee, Wis. Filed Dec. 18, 1913. Serial No. 807,412. (Cl. 172—240.)



1. A system of the character described including a pair of coils, and means for rapidly and alternately energizing and deënergizing said coils, said means including a source of current having direct electrical connection with said coils and from which said coils receive their current, potential varying means operated from said source, said potential varying means including a dynamo electric machine, and an electrical connection between one terminal of each of said coils and said potential varying means to thereby control the potential of the said terminals of said coils from said potential varying means.

2. A system of the character described including a pair of coils, and means for rapidly and alternately energizing and deënergizing said coils, said means including a source of current having direct electrical connection with said coils and from which said coils receive their current, potential controlling means operated from said source, said potential controlling means including a dynamo electric machine, and an electrical connection between one terminal of each of said coils and said potential controlling means to thereby control the potential of the said terminals of said coils from said potential controlling means.

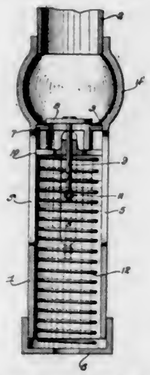
3. A system of the character described including a pair of coils, and means for rapidly and alternately energizing and deënergizing said coils, said means including a source of current from which said coils receive their current, potential varying means operated from said source, and an electrical connection between one terminal of each of said coils and said potential varying means to thereby control the potential of the said terminals of said coils from said potential varying means, said potential varying means including a dynamo electric machine, that portion of whose electrical conducting portions which is associated with said coils serving merely as a conducting circuit for the current from said coils in addition to its potential varying function.

4. A system of the character described including a pair of coils, and means for rapidly and alternately energizing and deënergizing said coils, said means including a source of current from which said coils receive their current, potential controlling means operated from said source, and an electrical connection between one terminal of each of said coils and said potential controlling means to thereby control the potential of the said terminals of said coils from said potential controlling means, said potential controlling means including a dynamo electric machine, that portion of whose electrical conducting portions which is associated with said coils serving merely as a conducting circuit for the current from said coils in addition to its potential controlling function.

5. A system of the character described including a pair of coils, and means for rapidly and alternately energizing and deënergizing said coils, said means including a source of current from which said coils receive their current, potential varying means operated from said source, and an electrical connection between one terminal of each of said coils and said potential varying means to thereby control the potential of the said terminals of said coils from said potential varying means, said potential varying means including a dynamo-electric machine of which that part of its electrical conducting portions which is connected with said coils serves only as a conducting circuit for the current from said coils in addition to its potential varying function.

[Claim 6 not printed in the Gazette.]

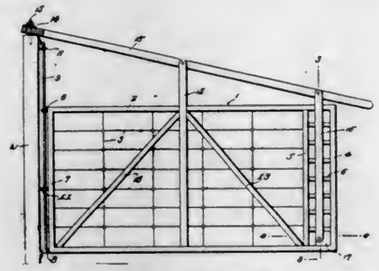
1,191,845. SWAB-VALVE. WILLIAM F. STAGGERS, Jr., Mannington, W. Va. Filed Apr. 29, 1916. Serial No. 94,444. (Cl. 166—19.)



In an oil well swab, a combined check and relief valve therefor comprising a casing carried upon the swab having passageways in the walls thereof and an internal shoulder thereabove, a check valve seat slidably mounted within the casing, a check valve thereabove having a depending stem, a spaced apart guide carried upon the under side of the seat guiding the stem and seat, a stop upon the valve stem below the guide, and an adjustable spring between the guide and bottom of the casing normally maintaining the check valve seat in seated engagement with the shoulder and allowing a movement thereof to uncover the casing wall passageways upon excessive weight above the check valve.

1,191,846. ADJUSTABLE GATE. WALTER STANCHFIELD, FRANK BIXLER, and HENRY BIXLER, Bruce Lake, Ind. Filed June 23, 1915. Serial No. 35,970. (Cl. 39—14.)

1. In combination with a post, a lever connected with the post, a link connected with the lever distant from the post, a block pivotally connected with one end of the link, and a gate connected with the post for vertical movement and with the lever and having a frame work at one end formed from spaced bars providing adjusting compartments transversely of the gate for the reception of said block.



2. In combination with a post, a lever connected with the post, a gate connected with the post for vertical movement and with the lever and having a frame work formed from spaced horizontal bars and spaced vertical bars arranged at the ends of the spaced horizontal bars, a block adapted to be located between the spaced horizontal bars and provided with a reduced end, and a link having its respective terminals connected with the block and lever for inserting and withdrawing the reduced end of the block from between the spaced vertical bars in the frame work.

1,191,847. RUG AND METHOD OF MANUFACTURE. SAMUEL KROSS, Memphis, Tenn., assignor of seventy-five one-thousandths to Louis Fry, Natchez, Miss. Filed Aug. 24, 1915. Serial No. 47,103. (Cl. 139—71.)

1. The method of forming a rug consisting in employing adjacent warp threads, inserting a loop of tufting thread upwardly upon one side of a warp thread and retaining it in such elevated position, passing a loop of the same warp thread upwardly upon the opposite side of the warp and inserting it through the first-mentioned loop to form a second loop, retaining the last-mentioned loop in elevated position and releasing the first-mentioned loop, and drawing the first-mentioned loop taut about the second-mentioned loop.

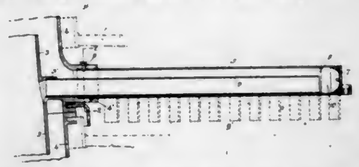
2. The method of forming a rug consisting in employing a plurality of parallel warp threads, inserting a loop of tufting thread upwardly upon corresponding sides of the several warp threads, retaining the upwardly inserted loop from withdrawal downwardly, forming a second loop upon the opposite sides of said several warp threads and inserting said second loop through the first-mentioned loop, retaining the second-formed loop against withdrawal and releasing the first-mentioned loop, exerting tension upon the tufting thread to draw the first-formed loop into a knot about the base of the second-formed loop, and weaving weft threads into the warp threads in juxtaposition to the knot.

3. A rug comprising a plurality of warp strands, tufting loops extending upwardly from some of the warp strands, and an integral knot formed about the base of each of the tufts in juxtaposition to the warp and knotting the tuft to a single warp strand.

4. A rug comprising a plurality of tufts composed each of two upwardly extending adjacent yarn extremities, and a knot integral with one only of such extremities formed as an extension from one side of the tuft loop knotted about the adjacent bases of both such extremities.

5. A rug comprising a plurality of warp threads, tufting threads extending upwardly from some of the warp threads, and a loop integral with one only of the tufting threads formed as an extension from one side of the loop forming a knot about the base of both such tufting threads and embracing the warp thread.

1,191,848. RABBLE-ARM. HARRY H. STOUT, New York, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Dec. 4, 1913. Serial No. 804,559. (Cl. 257—119.)



1, In combiantion, a double-walled shaft, a rabble arm comprising external and internal pipes, the internal pipe being of a diameter greater than the radius of the external pipe and being located in and supported substantially along its entire length by the external pipe, the inner end of the internal pipe being connected with the inner wall of the double-walled shaft by a telescopic joint and the delivery end of the internal pipe being located adjacent to the outer end of the external pipe, and a stop to prevent outward movement of the internal pipe as a whole.

2. A rabble arm construction comprising an external member, an internal member independent of said external member, the outer end of said internal member being spaced from the outer end of said external member, and a stop connected with said external member to limit the outward movement of said internal member relatively to said external member.

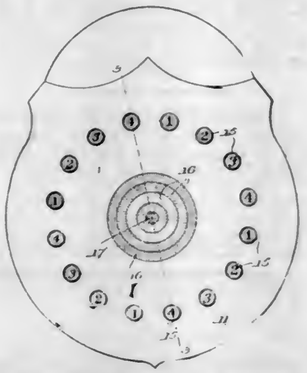
3. In combination, a double-walled shaft, a rabble arm comprising an external member connected with one of the walls of said shaft by a telescopic joint, an internal member connected with the other of said shaft walls by a telescopic joint, said internal member being movable independently of said external member and the outer end of said internal member being spaced from the outer end of said external member, and a stop connected with said external member to limit the outward movement of said internal member relatively to said external member.

4. In combination, a double-walled shaft, a rabble arm comprising an external member connected with one of the walls of said shaft by a telescopic joint, the portions of said shaft and said member constituting such joint being provided with alined openings, a pin extending into said openings to secure said shaft and said member together, an internal member connected with the other wall of said shaft by a telescopic joint, said internal member being movable independently of said external member and the outer end of said internal member being spaced from the outer end of said external member, and a stop connected with said external member to limit the outward movement of said internal member relatively to said external member.

1,191,849. TARGET. THOMAS J. SYLVESTER and JOHN BAPTIST FELICETTI, Philadelphia, Pa. Filed Oct. 2, 1915. Serial No. 53,812. (Cl. 124—15.)

1. A target comprising a casing having a central opening and a plurality of openings concentric to said central opening in the front thereof, a sectional bull's eye arranged in the center opening, an audible signal operated by the center section, a plurality of rocking arms pivotally supported within the casing and radiating from the center opening and adapted to be actuated by the remain-

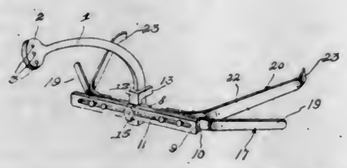
ing sections of the bull's eye, indicators on the arms and movable through the concentric openings, and manually reversible means for locking the arms when displaced by the sections of the bull's eye.



2. A target comprising a casing having a central opening and a plurality of openings concentric to said central opening in the front thereof, a sectional bull's eye arranged in the center opening, an audible signal operated by the center section, a plurality of rocking arms pivotally supported within the casing and radiating from the center opening and adapted to be actuated by the remaining sections of the bull's eye, indicators on the arms and movable through the concentric openings, manually reversible means for locking the arms when displaced by the sections of the bull's eye, and guides for the sections of the bull's eye.

3. A target comprising a casing having a central opening and a plurality of openings concentric to said central opening in the front thereof, a sectional bull's eye arranged in the center opening, an audible signal operated by the center section, a plurality of rocking arms pivotally supported within the casing and radiating from the center opening and adapted to be actuated by the remaining sections of the bull's eye, indicators on the arms and movable through the concentric openings, manually reversible means for locking the levers when displaced by the sections of the bull's eye, guides for the sections of the bull's eye, and means acting on the arms to normally hold the same in position to aline the sections of the bull's eye.

1,191,850. ATTACHMENT FOR CULTIVATORS. THEODORE D. TERRY, Jamesport, N. Y. Filed Jan. 6, 1915. Serial No. 835. (Cl. 97—9.)

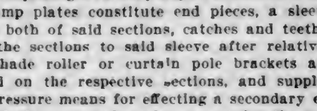


1. An attachment for cultivators of the character described comprising supporting bars arranged to be secured to the rear standard of the cultivator, and an outwardly extending gage and shovel elements secured to the supporting bars to cause the earth to be banked around the roots of the plants that are being cultivated.

2. A cultivator attachment of the character described comprising supporting bars, means to attach the bars to the rear standard of a cultivator, said bars being provided with a longitudinal slot, outwardly extending gage and shovel elements adjustably secured to the bars, bolts extending through the slot and adapted to hold the gage and shovel elements in adjusted position on the bars, and means to removably secure the whole to the rear standard of the cultivator.

3. A cultivator attachment of the character described comprising horizontal supporting bars, a plate secured to the supporting bar, rearward extensions formed at the upper and lower terminals of the plate, said extensions being parallel and being designed to engage the lateral faces of the rear cultivator standard upon which the device is used, laterally extending gage and shovel elements adjustably secured to the horizontal supporting bars, and means coöperating with the parallel extensions on the plate to support the whole on the rear standard of a cultivator.

1,191,851. PAINT-PACKAGE. HENRY J. THAYER, Chicago, Ill., assignor to Thayer & Chandler, Chicago, Ill., a Corporation of Illinois. Filed Dec. 27. 1915. Serial No. 68,797. (Cl. 41—5.)



A paint package comprising a palette plate; a box within whose body portion said palette plate is received; a mass of paint centrally disposed upon said plate; and a paint cover having a flat palette engaging border portion and a bulging paint cover portion surrounded by said border portion, the paint cover being free to shift within the box body and with respect to the palette, the mass of paint being sufficiently small to prevent its contact with the paint cover in all relative positions of the paint cover and palette.

1,191,852. ADJUSTABLE SHADE-BRACKET. CHARLES I. THOMAS, Wilkes-Barre, Pa. Filed Nov. 1, 1915. Serial No. 59,005. (Cl. 156—23.)

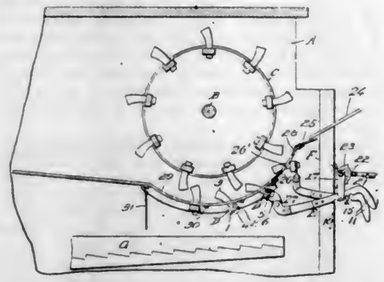


1. In a pressure-retained window shade or curtain pole support, the combination with clamp plates or members adapted to bear against the inner faces of the jamb of a window frame, of a shade roller or curtain pole bracket holder comprising relatively adjustable sections for which said clamp plates constitute end pieces, means for securing the sections in different positions of relative adjustment, shade roller or curtain pole brackets adjustably mounted on the respective sections, and a screw-threaded stem, an adjusting nut for turning the stem, and a jam nut on the stem constituting a supplementary screw pressure means for effecting a secondary expansion of the shade or curtain pole support for the purpose of exerting pressure on the clamp plate to hold them against the inner faces of the jamb, said jam nut being adapted to bear on the end of the section to prevent turning of the stem after adjustment.

2. In a pressure-retained window shade or curtain pole support, the combination with clamp plates or members adapted to bear against the inner faces of the jamb of a window frame, of a shade roller or curtain pole bracket holder comprising relatively adjustable sections for which said clamp plates constitute end pieces, a sleeve which receives both of said sections, catches and teeth for fastening the sections to said sleeve after relative adjustment, shade roller or curtain pole brackets adjustably mounted on the respective sections, and supplementary screw pressure means for effecting a secondary expansion of the shade or curtain pole support for the purpose of exerting pressure on the clamp plates to hold them against the inner faces of the jamb.

3. In a pressure-retained window shade or curtain pole support, the combination with clamp plates or members adapted to bear against the inner faces of the jamb of a window frame, of a shade roller or curtain pole bracket holder comprising relatively adjustable sections for which said clamp plates constitute end pieces, a sleeve which receives both of said sections, catches and teeth for fastening the sections to said sleeve after relative adjustment, shade roller or curtain pole brackets adjustably mounted on the respective sections, a screw-threaded stem, an adjusting nut for turning the stem, and a jam nut on the stem constituting a supplementary screw pressure means for effecting a secondary expansion of the shade or curtain pole support for the purpose of exerting pressure on the clamp plates to hold them against the inner faces of the jamb, said jam nut being adapted to bear on the end of the section to prevent turning of the stem after adjustment.

1,191,853. THRESHING-MACHINE. ORA THOMPSON, Earl Park, Ind. Filed Sept. 10, 1912. Serial No. 719,613. (Cl. 130—27.)



1. In a threshing machine, a casing, a pivoted tooth carrying bar comprising a body portion of approximately rectangular cross section having a rounded front corner and provided with journals at the ends adjacent to the front edge thereof to enable such bar to be bodily tilted, and means for tilting the bar and for supporting it in adjusted position.

2. In a threshing machine, a tooth carrying bar comprising a flat body portion having trunnions at the ends thereof adjacent to the front edge, a flat reinforcing bar extending the entire length of the body portion and having a crank at one end, and teeth having threaded shanks extending through the body portion and the reinforcing bar and provided with nuts whereby the parts are assembled together.

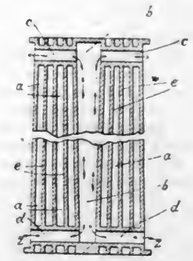
3. In a threshing machine, a grate comprising a plurality of longitudinal substantially parallel bars of triangular cross section, said bars being arranged with their flat faces downward to present oppositely inclined top faces, and means for assembling and supporting said bars, said bars being curved at their forward ends to present a concave grate, in combination with tooth carrying bars supported beneath the grate bars and having teeth extending upwardly therebetween, and a cylinder supported for coöperation with the toothed bars.

4. In a threshing machine, a cylinder, tooth carrying bars mounted below the cylinder in concentric series for coöperation therewith and concave grate bars interposed between the cylinder and the tooth carrying bars, the teeth of the latter projecting between the grate bars, said grate bars being of triangular cross section with oppositely inclined faces exposed upwardly to prevent lodgment thereon of grain detached by the joint action of the cylinder and the tooth carrying bars.

5. In a threshing machine, a concave including a plurality of pivotally supported toothed bars, means for adjusting the same and for supporting them at various adjustments, and a grate comprising a plurality of longitudinal substantially parallel bars of triangular cross section, and transverse connecting bars likewise of triangular cross section, said transverse supporting bars being disposed with their bases opposed to the bases of the longitudinal bars and adjacent to the front edges of the toothed bars.

[Claim 6 not printed in the Gazette.]

1,191,854. RETORT. CHARLES WILLIAM TOZER, London, England. Filed Mar. 15, 1915. Serial No. 14,518. (Cl. 48—123.)

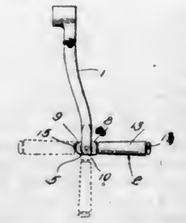


1. A retort of the class described comprising a plurality of tubes arranged within each other about a common axis, and a plurality of ribs arranged to hold said tubes in spaced relation to provide compartments in which the material to be treated is placed, said retort being formed with passages extending from the inner tube to the outside of the retort for providing a heat circulation through the latter, substantially as and for the purpose described.

2. A retort of the class described, comprising a plurality of tubes arranged within each other about a common axis, a plurality of ribs arranged to hold said tubes in spaced relation from each other, certain of said ribs being formed with passages extending from the inner tube to the outside of the retort, said retort being adapted to be charged at one end and discharged at the other end thereof.

3. In a retort of the class described comprising a plurality of tubes arranged within each other about a common axis, and a plurality of ribs arranged to hold said tubes in spaced relation, certain of said ribs being formed with passages extending from the inner tube to the outside of the retort thereby providing a heat circulation through the interior of the latter.

1,191,855. FOLDING CRANK-HANDLE. PAUL TUSZKA, Stevens Point, Wis. Filed May 11, 1916. Serial No. 96,928. (Cl. 74—33.)



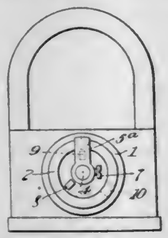
1. A crank handle comprising an arm having an ear projecting longitudinally from one of its ends and having a shoulder at the inner end of said ear, a pivot projecting laterally from the ear in spaced relation to said shoulder, and a hand hold provided with a head contacting with said ear, said head having a slot extending longitudinally of the hand hold and having a straight edge parallel with said slot, said slot receiving the aforesaid pivot and said edge being adapted to abut said shoulder when the hand hold is swung into angular relation with the arm and

then forced longitudinally toward said arm, the slot being of a length to permit said edge to clear said shoulder when the handle is shifted in the opposite direction, whereupon it may be swung to another position.

2. A crank handle comprising an arm having an ear projecting longitudinally from one of its ends and having a shoulder at the inner end of said ear, a pivot projecting laterally from the ear in spaced relation to said shoulder, and a hand hold provided with a head contacting with said ear, said head having a slot extending longitudinally of the hand hold and having a straight edge parallel with said slot, the outer end of said head being formed on an arc having its center disposed at the outer end of the slot, said slot receiving therein the pivot pin and said edge being adapted to abut said shoulder when the hand hold is swung into angular relation with the arm and then forced longitudinally toward said arm, said edge and said end of the head having sockets formed therein, and a spring pressed detent for engagement with said sockets to yieldably retain the hand hold in its adjusted positions.

3. A joint of the class described comprising a member having an ear and a shoulder at the inner end of said ear, a pivot projecting laterally from the car in spaced relation to said shoulder, a second member provided with a head contacting with said ear, said head having a slot extending longitudinally of said second member and having a straight edge parallel with said slot, said slot receiving the aforesaid pivot and said edge being adapted to abut said shoulder when the second member is swung into angular relation with the first named member and then forced toward the same, said slot being of a length to permit said edge to clear said shoulder when said second member is shifted in the opposite direction, whereupon it may be swung to another position.

1,191,856. INTERRUPTER FOR IGNITION-DYNAMOS. HARRY RANDOLPH VAN DEVENTER, Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 20, 1914. Serial No. 867,563. (Cl. 123—166.)



1. In an ignition dynamo, interrupter mechanism comprising fixed and movable members in slidable contact, and means operated by said dynamo for separating said members whereby the entire surface of said movable member is raised from said fixed member.

2. In an ignition dynamo, interrupter mechanism comprising fixed and movable members in slidable contact, and means operated by said dynamo for causing a break between said members whereby said movable member is lifted from sliding contact with said fixed member.

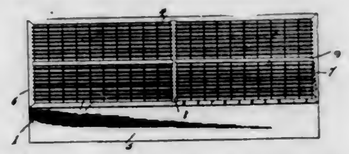
3. In an ignition dynamo, interrupter mechanism comprising fixed and movable members in slidable contact, and means operated by said dynamo for causing a break between said members, said means comprising cam operated mechanism whereby the movable member is lifted from sliding contact with the fixed member.

4. In an ignition dynamo, interrupter mechanism comprising members in sliding contact, and rotary means operated by said dynamo for suddenly breaking said contact by lifting one of said members from the other.

5. In an ignition dynamo, interrupter mechanism comprising a relatively fixed member, a second member rotating in sliding contact with said fixed member, and means operated by said dynamo for separating said members without stopping the rotation of said second member, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,191,857. PER-DIEM CAR-RECORD ACCOUNT CABINET AND CARDS. HENRY A. VAN HOUTEN, Bellingham, Wash. Filed Mar. 17, 1914. Serial No. 825,338. (Cl. 129—16.)



1. Means for the use of railroads in keeping a record of the cars of foreign railroads upon its tracks, comprising a cabinet having pockets or cells arranged in numbered vertical and transverse rows, and cards adapted to be placed in said pockets or cells, each card having appropriately designated spaces to receive the number of a car, the name of the road to which it belongs, and other data for indicating the routing and condition of the car, and a suitably designated space to receive a statement of per diem charges.

2. Means for use by railroads for keeping records of cars traveling on the tracks thereof, said means comprising a cabinet having vertical and transverse rows of pockets, numerical indications designating the respective vertical and transverse rows of pockets, and cards adapted to be placed within said pockets, each card having appropriately designated spaces to receive the number of a car, the name of the railroad to which it belongs, its routing, items pertaining to its disposition and condition, and a statement of per diem charges.

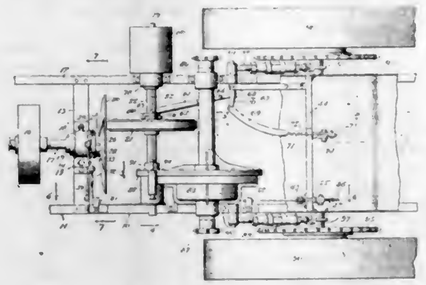
3. Means for use by railroads for keeping a record of the cars of foreign railroads on its tracks, comprising a cabinet disposed in an inclined plane and having cells or pockets arranged in numbered vertical and transverse rows, and cards adapted to be placed in said pockets according to car numbers placed thereon, each card having appropriately designated spaces to receive items respecting the number of a car, the name of the railroad to which it belongs, items respecting the routings and condition of the car at different times, and a statement of per diem charges, said cards being arranged in a set of different colors for different portions of a period of time.

4. Means for use by railroads for keeping a record of the cars of foreign railroads on its tracks, said means comprising a cabinet having cells or pockets arranged in numbered vertical and transverse rows, and cards adapted to be placed in said pockets according to car numbers placed thereon, each card having suitably designated spaces to receive the car number, the name of the railroad to which it belongs, items respecting the routings and disposition of the car at different times, together with the dates thereof, and a statement of per diem charges, said cards being differently colored to distinguish the same according to months.

5. Means for use by railroads for keeping a record of the cars of foreign railroads on its tracks, said means comprising a cabinet having cells or pockets arranged in numbered vertical and transverse rows and disposed in an inclined plane, and a group or series of cards adapted to be placed in said pockets according to car numbers placed thereon and being of contrasting appearance to distinguish the same according to months, each of said cards having a head portion with appropriately designated spaces for the number of the car and name of the railroad to which it belongs, and having its body portion provided with an appropriately designated column for routing indications, an associated column to receive items relative to various dispositions of the car and associated dates, a suitably designated space to receive an item respecting

delivery, and a suitably designated space to receive items respecting per diem charges, the construction and arrangement being such that by casual inspection of the cells of the cabinet an approximate determination at any time of the history of each car represented by a card may be quickly and conveniently made.

1,191,858. TRACTOR. HARRY C. WAITE, Chicago, Ill., assignor to Waite Tractor Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 9, 1915. Serial No. 1,284. (Cl. 21—114.)



1. In a tractor, a frame, a drive-shaft mounted longitudinally of the frame, a counter-shaft mounted transversely of the frame, variable speed driving and clutch connections between the drive-shaft and the counter-shaft, a jack-shaft beyond the drive shaft and parallel with the counter-shaft, driving connections between the counter-shaft and the jack-shaft, means for releasing said driving connections to permit independent rotation of the counter-shaft whereby the latter may be used for driving independent mechanism, an axle beyond the jack shaft, drive-wheels mounted on the axle, and driving connections between said jack-shaft and said wheels.

2. In a tractor, a frame, a drive-shaft mounted longitudinally thereof, a friction-disk carried by the end of the drive-shaft, a counter-shaft mounted transversely of the frame, a friction-drum carried by the counter-shaft and adapted to be engaged by the said disk, means for controlling the engagement of the disk and drum, a jack-shaft beyond the drive shaft and parallel to the counter-shaft, driving connections between the counter-shaft and the jack-shaft, means for releasing said connections, whereby the counter-shaft may rotate independently of the jack-shaft to drive independent mechanism, an axle beyond the jack shaft, drive-wheels mounted on said axle, and driving connections between said wheels and said jack-shaft.

3. In a tractor, a frame, a drive-shaft mounted longitudinally thereof, a friction-disk carried by the end of the drive-shaft, a counter-shaft mounted transversely of the frame and having one end extending beyond the same, whereby external driving connections may be applied to said counter-shaft, a friction-drum mounted on said counter-shaft in operative relation to said disk, means for shifting the disk toward and away from the drum, means for shifting the drum across the face of the disk, a jack-shaft mounted parallel to the counter-shaft, a driving gear mounted on said jack-shaft, a driving pinion mounted on said counter-shaft and meshing with the said driving gear, means for moving said pinion and gear out of mesh with one another, an axle, drive-wheels mounted on said axle, and driving connections between said wheels and said jack-shaft.

4. In a tractor, a frame, a drive-shaft mounted longitudinally of the frame, a friction-disk carried by the end of the drive-shaft, a rotatable collar, connections between said collar and shaft whereby rotation of the collar advances and retracts the shaft, an operating-arm secured to said collar and extending upwardly therefrom, a lever mounted parallel to said operating arm and pivoted to said frame intermediate its ends, a link connecting the upper ends of said lever and arm, a tension-spring secured to the lower end of said lever and extending transversely of the frame and beneath the said shaft, securing and adjusting means mounted on said frame member and connected with the other end of said spring, an operating cable attached to said lever and adapted to move the latter against the tension of the spring, drive-wheels, and drive-connections between said friction-disk and said drive-wheels.

1,191,859. ESCAPEMENT MECHANISM. HENRY E. WARREN, Ashland, Mass., assignor to Warren Clock Company, Portland, Me., a Corporation of Maine. Filed July 29, 1913. Serial No. 781,708. (Cl. 185—46.)



1. In an escapement device, a ring or wheel in a field of force acting thereon in certain directions, and held against movement axially, but free to move to a limited degree in all other directions, means to engage said ring alternately at points substantially at the respective ends of a straight line which passes at one side of the center of the ring and is approximately coincident with the direction of the resultant force which acts to move the ring when held at one only of said points.

2. In an escapement device, a ring or wheel held against movement axially, and free to make limited movements in all other directions, a fixed and a movable point of support for the ring, one above and one below its center of gravity and both upon the same side of a straight line passing through that center, whereby an unstable equilibrium in the ring is produced at each motion of the movable point toward the ring, and causes it to rotate a definite distance about that point as soon as the ring is released from the fixed point.

3. In an escapement device, a ring or wheel held against movement axially and adapted to make limited movements in all other directions, a fixed and a movable point of support for the ring, one above and one below its center of gravity and both upon the same side of a straight line passing through that center, whereby an unstable equilibrium in the ring is produced at each upward motion of the movable point, which causes it intermittently to rotate about that point when the ring is released from the said fixed point, and a second fixed point to engage the ring and determine the extent of each intermittent rotation.

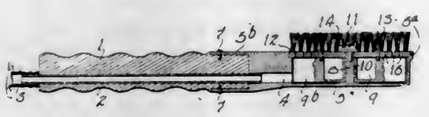
4. In an escapement device, a toothed ring or wheel rim held against movement axially and capable of limited movement in all other directions, a fixed point of support and a movable point of support for the ring, one above and the other below its center of gravity, and both upon the same side of a straight line passing through such center, and a fixed point of support for the ring upon the opposite side of said straight line through its center of gravity.

5. In an escapement device, a toothed ring held against movement axially and free to make limited movements in all other directions, a fixed point of support and a movable point of support for said ring, one above and the other below its center of gravity and both upon the same side of a straight line passing through such center, a fixed support for the ring upon the opposite side of said straight

line, means to give an upward and downward motion to the movable support, and an oscillating device which produces such motions.

[Claims 6 and 7 not printed in the Gazette.]

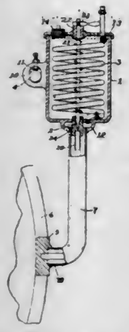
1,191,860. SANITARY REVOLVING BATH-BRUSH. HOWARD R. WESLEY, Detroit, Mich. Filed Aug. 19, 1915. Serial No. 46,248. (Cl. 15—51.)



1. A revolving bath brush, including a head formed with a cylindrical chamber which is open at one end thereof and has a water passage which enters the chamber tangentially, a pivot post projecting centrally into the chamber from the base thereof, a paddle wheel formed with a hub mounted upon the pivot post and with radially projecting blades arranged to clear the sides and bottom of the cylindrical chamber, a brush plate rigidly secured to the outer face of the paddle wheel and closing the open end of the cylindrical chamber, said brush plate having outlet openings therein, and tufts carried by and projecting from the brush plate.

2. A revolving bath brush including a head formed with a cylindrical chamber which is open at one end thereof and is provided with a water passage which enters the chamber tangentially, a paddle wheel rotatably mounted within the cylindrical chamber and formed with a hub and radially projecting blades arranged to clear the sides and bottom of the chamber and be acted upon by water from the tangential passage, a brush plate closing the open end of the cylindrical chamber and rigidly secured to the paddle wheel, the blades of the paddle wheel being inclined to the plane of the brush plate so that the rear edges of the blades are in advance of the forward edges thereof as the paddle wheel rotates, and the brush plate being provided with a radial series of water outlet openings arranged just in advance of the forward edge of each of the blades of the paddle wheel so that dead water from the pockets between the paddle wheel blades will be forced through the outlet openings of the brush plate as the paddle wheel rotates.

1,191,861. FLANGE-OILER FOR CAR-WHEELS. VINCENT JOSHUA WHITNEY, Seattle, Wash. Filed Sept. 2, 1913. Serial No. 787,815. (Cl. 184—3.)



1. A flange oiler comprising an oil container or font, an oil-applying shoe supported from said font, and a pivot support for the same located above and at that side of its center of gravity which is toward the wheel, the axis of said pivot extending in a direction paralleling a chord of the angle between wheel tread and flange.

2. A flange oiler comprising an oil font, an oil feed pipe extending downward from the font, an oil-applying shoe secured to the lower end of said pipe, and a pivotal support for the font located at that side of its center of gravity which is toward the wheel, the axis of said pivot extending in a direction paralleling a chord of the angle between wheel tread and flange.

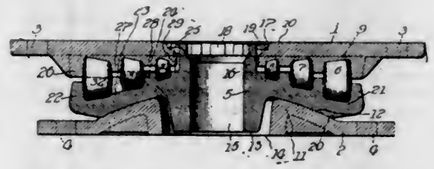
3. A flange oiler having a pivot support permitting movement of the oil discharge member toward and from the flange, the pivot members having a loose fit vertically to permit a slight rocking lengthwise the pivot, and means for adjusting the amount of the rocking movement lengthwise the pivot.

4. A flange oiler having an oil font and an oil discharge pipe, and a support therefor comprising a pivot pin and a perforated lug fitting thereon, the hole in the lug being a loose fit in a vertical direction, and a bolt screwing into said lug for adjusting the looseness of said pivot.

5. A flange oiler comprising an oil font having a supplemental chamber at its lower end separated from the oil storing chamber, an oil feed pipe passing through this supplemental chamber and connecting with the oil-storing chamber, a pipe connecting with said supplemental chamber and passing through the oil-storing chamber, a pipe surrounding the oil feed pipe and connecting with and extending downward from said supplemental chamber, said outer pipe having a drainage outlet at its lower end, and a shoe carried by the lower end of said outer pipe and having oil feed channels with which the inner oil feed pipe is connected.

[Claims 6 and 7 not printed in the Gazette.]

1,191,862. RAILWAY-CAR-TRUCK CENTER-BEARING. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed Aug. 27, 1914. Serial No. 858,793. (Cl. 64—64.)



1. The combination with a body bolster plate having below concentric race forming flanges and a truck bolster plate having a central upwardly projecting spherically curved projection, of an intermediate equalizer plate provided below with a concave frictional surface fitting said projection and above with integral flanges forming races registering, respectively with the races first mentioned, and annular sets of conical rollers filling the races vertically, the rollers of each set being of greater diameter than those of a set nearer the axis of the races, whereby the bodies of the bolster plate and the equalizer plate are of approximately uniform thickness and the most violent strains are borne by large rollers.

2. In a device of the class described, the combination with centrally apertured body and truck plates, of an intermediate equalizer member articulating with one of said plates, by means of a spherically curved projection engaging in a corresponding recess, and provided above and below with central projections extending into the apertures of said plates, respectively, and anti-friction devices between said member and the other of said plates.

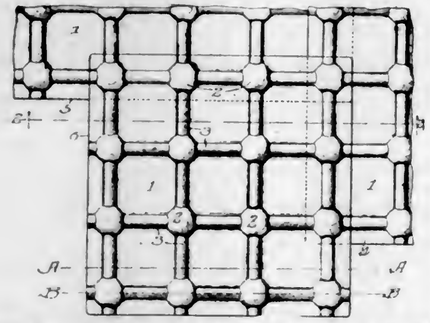
3. The combination with top and bottom plates gradually increasing in distance apart in passing outward from the axis of rotation, of an equalizing plate between said top and bottom plates, and concentric annular sets of rolling anti-friction members, between the equalizing plate and one of the other plates, having all their extreme upper and lower bearing points approximately equidistant from the outer faces of the two plates between which they lie.

4. In a device of the class described, the combination with top and bottom plates one of which is provided with a central spherical boss having a central opening, of an intermediate equalizer plate provided with a projection entering said opening and with a recess adapting it to fit over said boss and rock upon the same, and rotating anti-friction members interposed between the equalizer plate and the plate having no boss, said equalizer plate and the plate having no boss being locked against separation.

5. In devices of the class described, the combination with top and bottom plates and an intermediate equalizer plate, of concentric sets of frusto-conical rollers between said intermediate plate and one of the other plates, the rollers of each set being of greater diameter than the rollers of any set nearer the axis of the sets and all the rollers having their lines of contact with the outer plate approximately parallel to and equidistant from the outer face of said outer plate.

[Claim 6 not printed in the Gazette.]

1,191,863. MEANS FOR STIFFENING SHEETS OF METAL AND OTHER MATERIAL. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed Nov. 9, 1914. Serial No. 871,033. (Cl. 189—85.)



1. A sheet, consisting of material adapted to be molded or pressed and to afford strong resistance to distortion when formed, provided on one face with two series of hollow ribs or corrugations of substantially uniform cross section extending along intersecting sets of lines and merging into higher bosses located at the points of intersection, respectively.

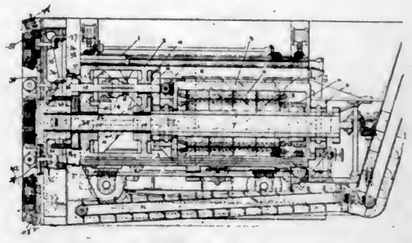
2. A sheet, consisting of material adapted to be molded or pressed into desired form and to strongly resist distortion when formed, provided on one face with hollow ribs or corrugations running along intersecting sets of lines and merging into hollow bosses higher and broader than the ribs.

3. A metal sheet of substantially uniform thickness having pressed up from one face ribs running along intersecting sets of lines and higher and broader bosses into which the ribs merge near the points of intersection.

4. A sheet, consisting of material adapted to be molded or pressed and to afford strong resistance to distortion when formed, provided upon one face with two series of hollow ribs or corrugations, of substantially uniform cross section from end to end, extending along intersecting sets of lines and merging into higher bosses located at the points of intersection, respectively, and further provided with marginal ribs in which the said sheet is bent sharply upward and doubled back upon itself, substantially as set forth.

1,191,864. TUNNELING-MACHINE. WILLIAM F. WITTICH, Erie, Pa. Filed July 3, 1911. Serial No. 636,704. (Cl. 125—14.)

1. In a tunneling machine, the combination of a main head; means for rotating the main head; a tool carrying head rotatively mounted on the main head with its axis in the same general direction as the main head; rotary tools relatively mounted on the tool carrying head, the axes of the tools being noncoincident with the axis of the tool carrying head; and means for rotating the tool carrying head relatively to the main head.



2. In a tunneling machine, the combination of a main head; means for rotating the main head; a tool carrying head rotatively mounted on the main head with its axis in the same general direction as the main head; rotary tools relatively mounted on the tool carrying head with their axes radial to the axis of the tool carrying head; and means for rotating the tool carrying head relatively to the main head.

3. In a tunneling machine, the combination of a main head; means for rotating the main head; a tool carrying head rotatively mounted on the main head with its axis in the same general direction as the main head; rotary tools rotatively mounted on the tool carrying head and provided with a series of radially extending cutting points, the axes of the tools being noncoincident with the axis of the tool carrying head; and means for rotating the tool carrying head relatively to the main head.

4. In a tunneling machine, the combination of a main head; means for rotating the main head; a tool carrying head rotatively mounted on the main head with its axis in the same general direction as the main head; rotary tools rotatively mounted on the tool carrying head and provided with a series of radially extending cutting points, said tools being arranged to operate by traction and the cutting points having a beveled surface extending therefrom in a position to be brought into contact with the face after the contacting of the cutting points, the axes of the tools being noncoincident with the axis of the tool carrying head; and means for rotating the tool carrying head relatively to the main head.

5. In a tunneling machine, the combination of a main head; a plurality of tool carrying heads rotatively mounted on the main head with their axes in the same general direction as the axis of the main head; tools rotatively mounted on said tool carrying heads, said tools having varying cutting faces for operating over the same surface of the tunnel face, the axes of the tools being noncoincident with the axis of the tool carrying head; and means for rotating the tool carrying heads relatively to the main head.

[Claims 6 to 8 not printed in the Gazette.]

1,191,865. UNDERGARMENT. FRANCES W. WORKMAN, Los Angeles, Cal. Filed Apr. 19, 1915. Serial No. 22,217. (Cl. 2—145.)

1. An undergarment comprising a corset cover portion formed of non-elastic fabric, an auxiliary body portion secured thereto formed of elastic fabric and hanging loosely under said corset cover portion to form a vest, union suit or other garment intended to be worn next to the body, said corset cover portion having a fullness with respect to said body portion.

2. An undergarment provided with shoulder straps having loops for detachably securing brassière or other garment straps adapted to be disposed beneath said under garment.

3. An undergarment provided with shoulder straps having loops for detachably securing brassière or other garment straps, and provided with an aperture at the front

disposed to permit the passage of a brassière tape therethrough.

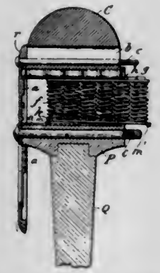


4. An undergarment comprising a corset cover portion formed of non-elastic woven fabric and provided with shoulder straps having loops for detachably securing brassière or other garment straps, a body portion formed of knitted fabric secured to said corset cover at the upper parts thereof.

5. An undergarment, comprising a corset cover portion formed of non-elastic woven fabric and provided with shoulder straps having loops for garments disposed beneath said undergarment, a body portion formed of knitted fabric secured at its upper portion to the upper part of said corset cover and provided with an aperture adjacent the waist line through which a garment attachment strap may be passed.

[Claims 6 and 7 not printed in the Gazette.]

1,191,866. VEHICLE-WHEEL. EMMANUEL AMODEO-SALVATOR, Brooklyn, N. Y. Filed Nov. 6, 1913, Serial No. 799,572. Renewed Sept. 17, 1915. Serial No. 51,285. (Cl. 152—8.)



1. A vehicle wheel comprising a felly, a rim surrounding the felly and provided with notches in its edges, pairs of opposing members extending across the rim, the inner members thereof having projections on their ends for engaging said notches, a plurality of springs between said members and extending throughout their length, a concentrically arranged flexible member surrounding the springs, a tire, and guide flanges.

2. A vehicle wheel comprising a felly, a rim surrounding the felly and provided with notches in its edges, a guide flange on each side of the wheel, laterally removable resilient members arranged in pairs and extending across the felly, and filling the space between said guide flanges, supports for said members forming cages and the inner supports engaging the notches in said rim, a flexible member surrounding said resilient members and connected thereto, a tire, and inwardly extending projections on the guide flanges engaging said flexible member coacting with said notches and inner supports engaged therein to retain the resilient members against circumferential movement.

3. A vehicle wheel comprising a felly, opposing members, a plurality of springs between said members, the outer members having projections on their outer surfaces, a continuous flexible member composed of links, each alternate pair of links having transverse grooves engaging said projections, a tire, and clamping-plates.

1,191,867. MOLD OF TYPE-CASTING MACHINES. SHANKER ABAJI BHISEY, London, England. Original application filed Oct. 13, 1915, Serial No. 55,660. Divided and this application filed Mar. 7, 1916. Serial No. 82,702. (Cl. 22—8.)



1. In a type casting machine, in combination, a mold composed of relatively movable parts, and a set width adjusting member carried by one of said parts and adjustable into the mold cavity to shorten said cavity and held in position to shorten said cavity when casting space types, said adjusting member being immovable relative to its supporting part during the complete casting cycle.

2. In a type casting machine in combination a mold composed of relatively movable half parts, and a set width adjusting member carried by one of said parts and adjustable into the mold cavity to shorten said cavity and held in position to shorten said cavity when casting space types, said adjusting member being immovable relatively to its supporting half part during the complete casting cycle.

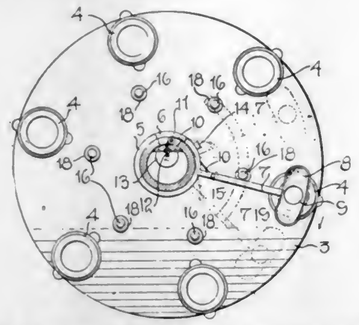
3. In a type casting machine, in combination a mold consisting of an upper part and a lower part, and slidable members associated with said parts having opposed ends adapted to overlap, said mold parts being shaped to receive said members whereby the opposing ends of said members may be placed in the mold cavity in position to shorten said cavity, said members being immovable relative to their supporting parts during the complete casting cycle.

4. In a type casting machine, in combination, a mold consisting of an upper and a lower part, and a slidable member associated with each part at the break or tang end of the mold, said members having opposing ends spaced apart vertically, said mold parts being shaped to receive said members whereby said members may be placed with their ends projecting into the mold cavity and overlapping to shorten the mold cavity, whereby the types are cast with a break extension within the mold, so that upon detachment of the break and its extension space types are produced.

1,191,868. MEANS FOR DISTRIBUTING MOLTEN GLASS. SAMUEL BENJAMIN BOWMAN, Blackwell, Okla., assignor to The Hazel Atlas Glass Co., Wheeling, W. Va., a Corporation of West Virginia. Filed Mar. 27, 1915. Serial No. 17,460. (Cl. 49—5.)

1. In a glass forming machine a series of molds movable continuously in a constant direction, and a transfer receptacle movable from a filling position with each mold for a predetermined portion of the travel of the mold and during this period discharging thereinto whereby the discharge period of the transfer receptacle shall be prolonged, said transfer receptacle being elongated in the direction of its movement whereby it may be filled while it is moving and thus the filling period of the transfer receptacle prolonged.

2. In a glass forming machine, a series of molds movable continuously in one direction, a transfer receptacle at all times movable in alinement with the path of travel of the molds and movable from a filling position with each mold for a predetermined portion of the movement of the latter and discharging thereinto during this period whereby the discharge period of the transfer receptacle shall be prolonged, said transfer receptacle being elongated in the direction of its movement whereby it may be filled while it is moving and thus the filling period of the transfer receptacle be prolonged.



3. In a glass forming machine, a series of molds movable continuously in one constant direction and a transfer receptacle movable from a filling position with each mold for a predetermined portion of the travel of the mold and during this period discharging thereinto whereby the discharge period of the transfer receptacle shall be prolonged, said transfer receptacle at all times moving in alinement with the path of travel of the mold, the transfer receptacle being elongated in the direction of its movement whereby it may be filled when it is moving and thereby the filling period of the transfer receptacle be prolonged, and means for returning the transfer receptacle to its initial filling position at the end of such predetermined period of travel with the mold.

4. In a glass machine, a plurality of receiving receptacles continuously movable in a closed path, and means for discharging molten glass into said receptacles in successive order said means moving with each receptacle during a predetermined portion of its movement and then returning to an initial position and coacting with the next following receptacle.

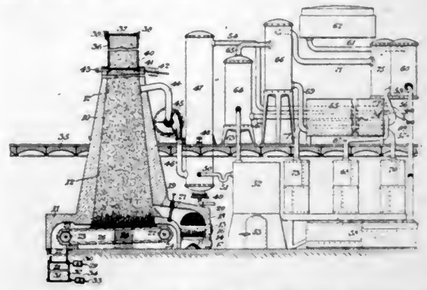
5. In a glass machine, a plurality of receiving receptacles movable uninterruptedly and continuously in a closed path, and means for distributing glass into each of these receptacles successively, said means including a member movable from an initial glass receiving position with each of said receiving receptacles successively and for a predetermined extent of movement of the latter and after said coincident movement returning to an initial position and coacting with the next successive receiving receptacle.

[Claims 6 to 12 not printed in the Gazette.]

1,191,869. METHOD OF EXTRACTING VOLATILES FROM COALS, SHALES, LIGNITES, AND SIMILAR MATERIALS AND FOR REFINING THE SAME. CHARLES C. BUSSEY, New York, N. Y., assignor to Coal By-Products Company. Filed May 12, 1914. Serial No. 838,173. (Cl. 196—19.)

1. The herein described method of extracting volatiles from materials having hydrocarbonaceous ingredients, consisting in progressively feeding a deep bed of material from which the volatiles are to be extracted through a receptacle in a given direction and passing a suitable heat agent around the particles of said material and through said receptacle in the opposite direction to extract the volatiles from said materials without producing any chemical action in said materials while the volatiles are being extracted therefrom.

2. The herein described method of extracting volatiles from materials having hydrocarbonaceous ingredients, consisting in progressively feeding a relatively deep bed of material from which the volatiles are to be extracted through a receptacle in a given direction and passing a suitable gas at a temperature of 800° Fahr., approximately, around the particles of said material and through said receptacle in the opposite direction to extract the volatiles from said materials without producing any chemical action in said materials while the volatiles are being extracted therefrom.



3. The herein described method of extracting volatiles from materials having hydrocarbonaceous ingredients, consisting in progressively feeding a deep bed of material from which the volatiles are to be extracted downwardly through a relatively deep conically shaped retort, and generating and passing upwardly through said retort and around particles of said material in the opposite direction, a heated gas to extract the volatiles from said materials without producing any chemical action in the material while the volatiles are being extracted therefrom.

4. The herein described method of extracting volatiles from materials having hydrocarbonaceous ingredients, consisting in progressively feeding a deep bed of material, from which the volatiles are to be extracted, downwardly through a relatively deep conically-shaped retort, generating a gas at the bottom of the retort and evenly distributing said gas around the particles of material in said retort to extract the volatiles therefrom and passing said gas and volatiles from the retort at the end opposite to that in which the gas is generated in order to extract the volatiles from said materials without producing any chemical action therein while the volatiles are being extracted therefrom.

5. The herein described method of extracting volatiles from materials having hydrocarbonaceous ingredients, consisting in progressively feeding a relatively deep bed of material, from which the volatiles are to be extracted, downwardly through a retort, generating a gas at the bottom of the retort and evenly distributing said gas around the particles of material in said retort to extract the volatiles therefrom and passing said gas and volatiles from the retort at the end opposite to that in which the gas is generated in order to extract the volatiles from said materials without producing any chemical action therein while the volatiles are being extracted therefrom, and finally separating the volatiles from the said gases.

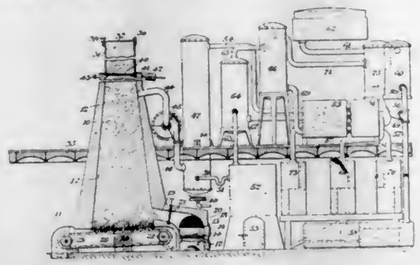
[Claims 6 and 7 not printed in the Gazette.]

1,191,870. APPARATUS FOR EXTRACTING VOLATILES FROM COALS, SHALES, LIGNITES, AND SIMILAR MATERIALS AND FOR REFINING THE SAME. CHARLES C. BUSSEY, New York, N. Y., assignor to Coal By-Products Company. Filed May 12, 1914. Serial No. 838,174. (Cl. 196—19.)

1. An apparatus for extracting volatile matters from materials having hydrocarbonaceous ingredients comprising a retort of sufficient length to provide a relatively deep bed of material, means at the top of the retort for admitting material to be threaded therein, and an endless conveyer placed at an angle to the horizontal beneath the retort to continuously withdraw laterally at all points from the bottom of the retort, an equal amount of the residue from the material under treatment.

2. An apparatus for extracting volatile matters from materials having hydrocarbonaceous ingredients comprising a conical retort of sufficient length to provide a relatively deep bed of material, means for admitting material to be treated at the top of the retort, an endless conveyer

placed at an angle to the horizontal beneath the bottom of the retort so as to continuously withdraw at all points across the bottom of the retort an equal amount of the residue from the material under treatment, and means for withdrawing the mixed gases and volatiles from the retort at the upper end thereof.



3. An apparatus for extracting volatile matters from materials having hydrocarbonaceous ingredients comprising a conical retort of sufficient length to provide a relatively deep bed of material, a hopper at the top of the retort through which the material to be treated therein is admitted, an endless conveyer placed at an angle to the horizontal beneath the bottom of the retort so as to continuously withdraw at all points across the bottom of the retort an equal amount of the residue from the material under treatment, and means for withdrawing the mixed gases and volatiles from the retort at the upper end thereof.

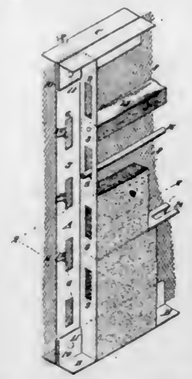
4. An apparatus for extracting volatile matters from material having hydrocarbonaceous ingredients, comprising a base, a conical retort mounted thereon and of sufficient length to provide a relatively deep bed of material, fireplaces in spaced positions in the said base in which there is a circumferential flue and flues leading therefrom to the said retort, a hopper at the top of the retort for admitting the material to be treated therein, and an endless conveyer inclined to the horizontal and extending beneath the bottom of the retort so as to withdraw at all points across the bottom of the retort an equal amount of the residue from the material under treatment in the retort, and means for withdrawing the mixed gases and volatiles from the upper end of the retort.

5. An apparatus for extracting volatile matters from material having hydrocarbonaceous ingredients, comprising a base, a conical retort mounted thereon and of sufficient length to provide a relatively deep bed of material, fireplaces in spaced positions in the said base in which there is a circumferential flue and flues leading therefrom to the said retort, dampers in said flues, a hopper at the top of the retort for admitting the material to be treated therein, and an endless conveyer so inclined to the horizontal and extending beneath the bottom of the retort as to withdraw at all points across the bottom of the retort an equal amount of the residue from the material under treatment in the retort, means for withdrawing the mixed gases and volatiles from the upper end of the retort, and devices for separating the said gases and volatiles after the same have been withdrawn from the upper end of the retort.

1,191,871. FIREPROOF BUILDING CONSTRUCTION. MARTIN H. CARRICK, San Francisco, Cal. Filed Nov. 30, 1914. Serial No. 874,713. (Cl. 72—46.)

1. In combination with spaced upper and lower horizontal rails, a bar secured at its ends to said rails, said bar being formed of a sheet of metal doubled upon itself and having its sides extended outwardly, wire netting received in the space between the doubled portion, wire netting engaged exteriorly over a side of the doubled portion, and horizontal bars extending over the wire netting and connected to the outwardly extending sides of the first named bar.

2. In combination with similar spaced upper and lower horizontal rails each of T-shape in cross section, a vertical bar independent of the rails and being doubled upon itself and having slots formed in its doubled edge and at the bar ends to receive the webs of the rails, and flanges extending outwardly from the bars at the sides thereof and engaged at their ends with the horizontal parts of said rails so as to be braced by the latter, said flanges acting as plaster gages and also as a means of support for reinforcing rods in use of the latter.



3. In combination with a bar composed of a metal sheet doubled upon itself and formed with openings located between the doubled and free side edges thereof, a section of wire netting received between the doubled parts of the sheet, a second section of wire netting engaged with one of the doubled parts but exteriorly with said doubled parts so as to lie adjacent the openings, and tie wires passed through both of the aforementioned sections of wire netting and through the openings so as to hold both sections in position.

1,191,872. MOP. JOHN CONGRAM, Seattle, Wash., assignor to Adolph Peterson, Seattle, Wash. Filed Feb. 19, 1913. Serial No. 749,319. Renewed Feb. 23, 1916. Serial No. 80,091. (Cl. 15—13.)



1. A mop of the class described having a plurality of strips pivotally connected together to form an angular frame, a mop fabric adapted to be secured to said frame, a handle, and means to detachably connect said frame to said handle.

2. A mop of the character described, consisting of a frame comprising a plurality of metal strips pivotally secured together, a mop fabric adapted to be secured to said frame, means to secure said frame in rigid angular relation, and a handle ararnged for connection with said means whereby the frame may be secured in various angular relations.

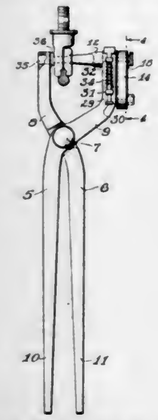
3. A mop of the character described, consisting of a frame comprising a plurality of metal strips pivotally secured together, the terminal said strips being of half-round material, a mop adapted to be secured to said frame, means to secure said terminal strips together, and a handle arranged for connection with said means whereby the frame may be secured in various angular relations.

4. In a mop of the character described, a plurality of strips pivotally connected together to form an angular frame, a mop-fabric adapted to be secured to said frame, and a handle connected to said frame in a manner to secure the handle and frame in adjusted angular relations.

5. In a mop of the character described, a frame comprised of a plurality of pivoted strips arranged to be folded in angular relation, a coupling member arranged to secure the terminal said strips in rigid connection, and a handle adapted to be screwed down upon said member and said frame in adjusted angular relation relative to the handle.

[Claims 6 and 7 not printed in the Gazette.]

1,191,873. AUTOMATIC TOOL. PETER AMES CRESSEY, Moss Beach, and WILLIAM JONES, Los Angeles, Cal. Filed June 14, 1915. Serial No. 33,904. (Cl. 81—3.)



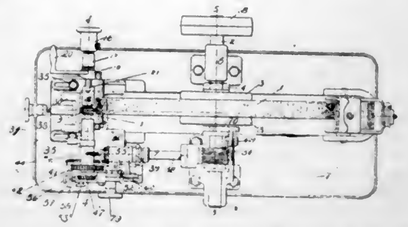
1. A tool, comprising a clamping jaw, a tool holder pivotally mounted on said jaw, a ratchet wheel secured to said tool holder, a member pivotally mounted on said jaw, a pair of dogs pivotally mounted on said member for engagement with said ratchet wheel, stops on said member to limit movement of said dogs, and a latching mechanism mounted on said jaw engaging the said member to maintain either dog in engagement with said ratchet wheel.

2. A tool, comprising a clamping jaw, a pivoted casing mounted on said jaw, a ratchet wheel loosely mounted in said casing, a pair of spring pressed dogs for engaging said ratchet wheel, means for limiting the movement of said dogs toward each other, a tool mounted in said jaw and operatively mounted within said ratchet wheel, and a latching mechanism mounted on said jaw and engaging said casing to maintain either dog in engagement with the ratchet wheel.

3. A tool, comprising a clamping jaw, a tool holder pivotally mounted on said jaw, a ratchet wheel secured to said tool holder, a member pivotally mounted on said jaw, a pair of dogs pivotally mounted on said member for engagement with said ratchet wheel, stops on said member to limit movement of said dogs, a latching mechanism mounted on said jaw engaging the said member to maintain either dog in engagement with said ratchet wheel, and a second jaw pivotally mounted on said first mentioned jaw for coöperation therewith.

4. A tool, comprising a pair of pivoted clamping jaws and operating means therefor, a pivoted casing mounted on one of said jaws, a ratchet wheel loosely mounted in said casing, a pair of spring pressed dogs for engaging the said ratchet wheel, means for limiting the movement of said dogs toward each other, a tool mounted in said jaw and operatively mounted within said ratchet wheel, and a latching mechanism mounted on said jaw and engaging said casing to maintain the same stationary in either of its positions.

1,191,874. LENS-EDGING MACHINE. GEORGE H. DAY, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Corporation of Massachusetts. Filed Aug. 9, 1910. Serial No. 576,419. (Cl. 51—3.)



1. In combination, in a lens edging machine, a revoluble lens holding spindle adapted to be pressed inwardly closer to the stone as the lens material is ground away, a stop for limiting said inward movement, and means operatively connected with said spindle for permitting said stop to be moved inwardly as the spindle revolves.

2. In combination, in a lens edging machine, a revoluble lens holding spindle adapted to be pressed inwardly closer to the stone as the lens material is ground away, driving means for said spindle, a stop for limiting said inward movement, and means actuated by said driving means for permitting said stop to be moved inwardly as the spindle revolves.

3. In combination, in a lens edging machine, a revoluble lens holding spindle adapted to be pressed inwardly closer to the stone as the lens material is ground away, a pattern or former fixed to said spindle, a pivoted lever provided with a shoe adapted to engage said pattern and with a contact member, a cam arranged to engage said contact member, and means for moving said cam with reference to the contact member as the spindle is revolved so as to definitely control the inward movement of said spindle.

4. In combination, in a lens edging machine, a revoluble lens holding spindle adapted to be pressed inwardly closer to the stone as the lens material is ground away, a pattern or former fixed to said spindle, a pivotal lever provided with a shoe adapted to engage said pattern and with an adjusting screw, a cam arranged to engage said adjusting screw, and means for moving said cam with reference to the adjusting screw as the spindle is revolved so as to definitely control the inward movement of said spindle.

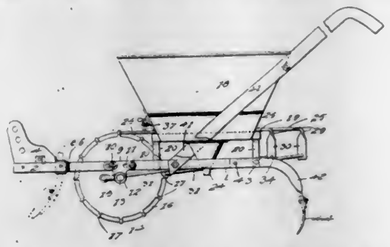
5. In combination, in a lens edging machine, a revoluble lens holding spindle adapted to be pressed closer to the stone as the lens material is ground away, a cam for regulating the approach of the spindle to the stone, means for advancing said cam by a definite amount for each revolution of the spindle, a clutch between said spindle and the driving gear, a clutch lever controlling said clutch and provided with a locking latch, and means fixed to said cam for releasing said locking latch.

[Claims 6 to 14 not printed in the Gazette.]

1,191,875. PLANTER. JOEL E. DEAN, Jr., and EUGENE CALLAWAY, Baconton, Ga., assignors of one-third to J. B. Miller, Baconton, Ga. Filed Aug. 20, 1915. Serial No. 46,575. (Cl. 111—32.)

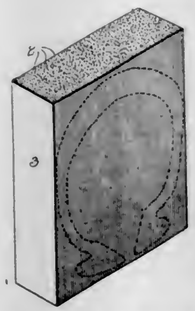
In a planter of the class described a frame comprising a pair of side bars arranged for the attachment of earth working implements thereto, a clevis having a base arranged and secured between the front ends of said bars, the said clevis being provided with means for the at-

tachment of the standard of an earth working implement thereto, bearings secured to the bars of the frame, an operating wheel having a double crank shaft mounted in said bearings, a hopper having a pair of longitudinally arranged seed compartments, supporting means for the hopper and secured to the bars of the frame and mount-



ing the hopper above the frame, seed dropping bars arranged one in the bottom of each hopper compartment for longitudinal reciprocating movement, extending entirely through the hopper and each provided at its rear ends with a depending arm arranged exteriorly of the hopper, and pitman rods connecting said arms to the cranks of the crank shaft.

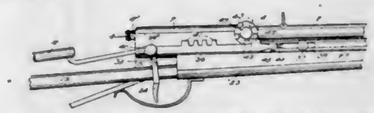
1,191,876. PROCESS OF MANUFACTURING SOLID RUBBER OR LIKE TIRES AND TREADS OF PNEUMATIC TIRES. JAMES WALTER HENRY DEW, London, England. Filed Dec. 30, 1912. Serial No. 739,405. (Cl. 154—12.)



1. A process for the manufacture of solid rubber or like tires and treads of pneumatic tires which consists in forming a number of thin fiber strips impregnating said strips with adhesive such as rubber, stamping therefrom sections of a shape corresponding to the transverse section of the finished tire and forming the tire or tread from a series of such sections side by side in the longitudinal direction of the tire with the fibers thereof extending in a plane at right angles to the road surface at the point of contact between the road and the tire tread, and subsequently vulcanizing or curing the whole.

2. A process for the manufacture of solid rubber or like tires and treads of pneumatic tires which consists in forming a number of thin fiber strips approximately one fiber thick, impregnating said strips with adhesive such as rubber, building the strips one upon another in such a manner that the fibers are arranged parallel to one another, stamping from the built up strips sections of a shape corresponding to the transverse section of the finished tire, forming the tire from a number of such sections laid in a suitable mold in the longitudinal direction of the tire with the fibers thereof extending in a plane at right angles to the road surface at the point of contact between the road and the tire tread, and subsequently vulcanizing the whole.

1,191,877. AIR-GUN. ARTHUR V. DICKEY, Seattle, Wash. Filed Nov. 30, 1914. Serial No. 874,668. (Cl. 124—8.)



1. In an air-gun of the class described, an air-reservoir, a valve for controlling the delivery of the air from said reservoir for discharging the gun, a hammer, springs for the hammer and valve, means to releasably hold the hammer in various positions relatively to the valve, a reciprocatory actuator, and devices adjustably connected to said actuator whereby the hammer is movable thereby to any of the aforesaid positions with a uniform travel of the actuator.

2. In an air-gun, in combination, a pump, an air-storage reservoir, a magazine chamber axially alined with the gun-barrel, a rotatable breech block interposed between said magazine and said barrel and provided with a passage adapted to register with the barrel of the rifle when in firing position, teeth formed upon an end of said breech-block, a reciprocable actuator provided with teeth adapted to engage said teeth upon the breech block, means whereby said breech-block may be turned until said passage registers with the magazine, and means for admitting air to said passage from said storage reservoir to discharge a projectile.

3. In an air-gun, in combination, a pump, an air-storage reservoir, a magazine chamber axially alined with the gun-barrel, a rotatable breech-block interposed between said magazine and said barrel and provided with a passage adapted to register with the barrel of the rifle when in firing position, teeth formed upon an end of said breech-block, a receptacle actuator provided with teeth adapted to engage said teeth upon the breech-block, means whereby said breech-block may be turned until said passage registers with the magazine, stops to limit the rotary movements of said breech-block, and means for admitting air to said passage from said storage reservoir to discharge the projectile.

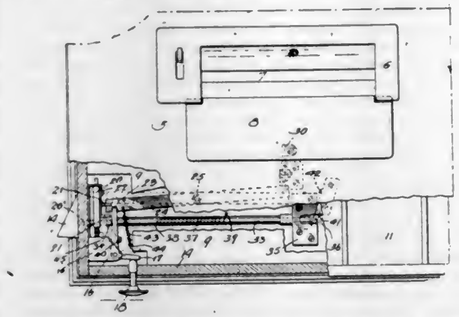
4. In an air gun of the class described, a barrel and air reservoir associated with the barrel, a rotary breech block positioned between the barrel and reservoir, a bullet compartment communicating with the breech block, teeth formed on the periphery of the projecting end of the breech block, and a rack bar slidably associated with said air reservoir adapted for engagement with the breech block teeth to rotate the breech block to cause the same to move to position to receive a bullet.

1,191,878. CONTROL-RELEASING DEVICE. HOWARD A. DODGE, Los Angeles, Cal. Filed Apr. 6, 1914. Serial No. 829,791. (Cl. 235—22.)

1. A releasing device for cash registers comprising the combination with a cash register drawer, of a spring-pressed tongue engageable with the drawer to retain the latter in a closed position, a pivoted latch, means whereby by rocking said latch will disengage the tongue from the drawer, a lever normally engaging said latch to prevent operation thereof, a pivoted plate, means whereby depression of said plate will actuate the lever to release the pivoted latch, a series of spring-pressed tumblers, and adjustable studs on said tumblers for preventing operation of said latch and adapted to be moved, on manipulation of the tumblers, into register with a slot in the latch to permit operation of the latter on depression of the pivoted plate.

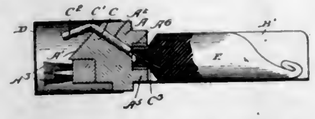
2. In a drawer-releasing device for cash registers, a plurality of spring-pressed tumblers, adjustable studs thereon, a pivoted latch having a longitudinal slot arranged to register with said studs on proper manipulation of the tumblers, means controlled by said latch for holding the drawer in a closed position, a pivoted plate on said latch, and means controlled by said plate for

normally locking said latch against operation and adapted to release the latch on depression of said plate.



3. A releasing mechanism, comprising a casing having a plurality of openings therein, a spring actuated plate adjacent one of said openings, a plurality of sliding tumblers mounted adjacent the second of said openings, studs mounted on said tumblers, a pivoted latch member having a slot adapted to register with a common combination of said studs, an operating plunger for said pivoted latch, a sliding latch adapted to engage a strike on the device to be secured, a pivoted lever mounted in the path of movement of said pivoted latch having a notch adapted to engage and lock said latch, spring actuated means to normally engage said lever and said pivoted latch, and a pivoted lever interposed between the pin of said pivoted plate and said lever, whereby a depression of said plate releases said pivoted latch locked by said lever, and permits the operation of the pivoted latch to shift said sliding latch.

1,191,879. SHOE-BLACKING DEVICE. WILLIAM E. ELAM, Washington, D. C. Filed Feb. 12, 1916. Serial No. 77,947. (Cl. 15—46.)



1. The combination with a block having an oblique working face, a brush alongside said face and a passage leading from said face through the block to the side opposite said face, of a blacking receptacle detachably secured to said side and internally continuous with said passage, and a removable cap engaging the block peripherally and hermetically covering said oblique face and brush.

2. The combination with a block having an oblique working face, a brush alongside that face, and a passage leading from that face through the block to the opposite side, of a removable cap peripherally engaging the block and hermetically inclosing said face and brush, a removable plug normally closing the passage, a collapsible blacking tube detachably secured to said opposite side and integrally continuous with said passage, and a trough handle fixed to the block, protecting three sides of the tube and provided with lateral slots to permit manipulating the block within the trough.

3. The combination with a rigid trough-like handle open at one end adapted to receive and protect a collapsible tube, of a block fixed in and projecting from one end of the trough, having an oblique blacking applying face, a threaded recess opposite that face in position to receive the usual threaded end of such tube, and with a passage leading from said recess to said face, and a removable plug adapted to close said passage and extend into the end portion of a tube when the latter is in place in the block.

4. The combination with an open trough-like handle of stiff material, of a blacking applying block fixed in and projecting from one end of the trough, and adapted to receive and distribute blacking from a collapsible tube secured in the block, said handle being cut away on opposite sides near said block to permit grasping a tube therein with the fingers.

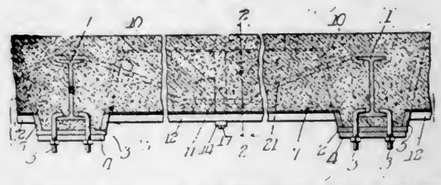
1,191,880. ORGANIC CHEMICAL PROCESS. CARLETON ELLIS, Montclair, N. J., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Mar. 18, 1916. Serial No. 85,021. (Cl. 23—24.)

1. The process of making an alkali salt on an aromatic sulfonic acid which comprises sulfonating aromatic material to form the sulfonic acid and in reacting on the resulting sulfonic acid with an alkali melt containing an alkali salt of an aromatic hydroxy body.

2. The process of making a sodium salt of an aromatic sulfonic acid which comprises sulfonating aromatic material to form the sulfonic acid and in reacting on said sulfonic acid with an alkali melt containing the sodium salt of an aromatic hydoxy body.

3. The chemical process which comprises sulfonating an aromatic hydrocarbon with strong sulfuric acid maintained in an anhydrous or a substantially anhydrous condition and continuing the action of said acid until substantially complete reaction with said aromatic hydrocarbon is obtained, in neutralizing the sulfonated material with alkali comprising sodium carbonate, in fusing the dried sodium sulfonate material with caustic soda, in passing carbon dioxid containing gases into an aqueous solution of the fused material; whereby sodium carbonate is formed, in separating the sodium carbonate liquors and employing these to neutralize the acid sulfonate.

1,191,881. FORM FOR CONCRETE FLOORS AND THE LIKE. HENRY ERICSSON, Chicago, Ill. Filed May 26, 1910. Serial No. 563,502. (Cl. 25—131.5.)



1. A device of the kind described, comprising contiguous transversely curved two part elements and a strip at each edge of each of said elements projecting laterally thereof and adapted to coöperate with a corresponding part upon a similarly formed element to close the space between adjacent elements and a longitudinal brace rigidly secured to each of said strips in combination with a plurality of partitions extending across each element and rigidly secured thereto, and means coöperating with said brace to rigidly connect the contiguous elements.

2. A device of the kind described, comprising contiguous transversely curved two part elements and a strip at each edge of each of said elements projecting laterally thereof and adapted to coöperate with a corresponding part upon a similarly formed element to close the space between adjacent elements and a longitudinal brace rigidly secured to each of said strips, in combination with a plurality of partitions extending across each element and rigidly secured thereto, and means attached to said partitions coöperating with said braces to rigidly connect contiguous elements.

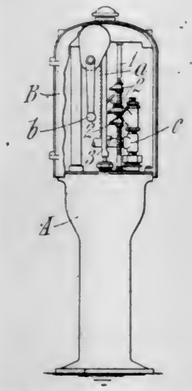
3. A device of the kind described, comprising contiguous transversely curved sheet metal elements, a strip at each edge of each of said elements formed integrally therewith, projecting laterally therefrom and adapted to coöperate with the corresponding part of a similarly formed element to close the space between adjacent elements, in combination with a plurality of partitions extending across each element and rigidly secured thereto

and a partition at each extremity of the element, a longitudinal brace rigidly secured to each of said strips, and means for rigidly locking the elements together.

4. A device of the kind described, comprising a transversely curved two-part element and a strip at each edge of said element projecting laterally thereof and adapted to coöperate with a corresponding part upon a similarly formed element to close the space between adjacent elements and a longitudinal brace rigidly secured to each of said strips, in combination with means for rigidly maintaining the form of said element transversely and means for rigidly locking said elements together.

5. A device of the kind described, comprising a transversely curved two part element and a strip at each edge of said element projecting laterally thereof and adapted to coöperate with a corresponding part upon a similarly formed element to close the space between adjacent elements, in combination with a plurality of transverse partitions and longitudinal braces each rigidly attached to said element and adapted to jointly maintain the form of said element both longitudinally and transversely and means upon said partitions adapted to coöperate with said braces to rigidly lock two of said elements together.

1,191,882. QUANTITY-STOP FOR DISPENSING-PUMPS. CHARLES E. FAIRBANKS, West Springfield, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a Corporation of Massachusetts. Filed Oct. 25, 1915. Serial No. 57,713. (Cl. 221—103.)

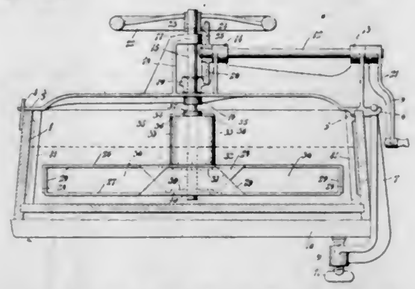


1. In a measuring pump, a supporting frame, a reciprocable bar for operating the pump having a projection thereon, a threaded rod rotatably mounted in said frame in parallel relation to said bar, a plurality of stop devices loosely engaging said rod, nuts threaded on said rod above and below each stop, whereby the stops may be vertically moved for adjustment, a set screw in each stop engaging said rod whereby the stops may be held in various positions of angular adjustment and the vertical adjustment preserved, irrespective of said nuts, means to seal said set screws, said stops arranged in angular relation one from another on the rod, and means to rotate said rod to swing any one of said stops into the path of said projection.

2. In a measuring pump, a reciprocable pump operating bar having an abutment thereon, a rotatable threaded rod in parallel relation to said bar, a plurality of vertically spaced stop devices arranged in angular relation one to another on said rod, and means to turn the latter through definite angular increments to bring each stop device successively into the path of said abutment, each stop device comprising a hub portion loosely mounted on the rod, a ledge laterally extending from the hub portion to contact with the abutment, integral spaced wings connecting the ledge and hub portion, threaded members on the rod above and below the hub portion whereby the latter may be vertically moved and accurately adjusted, said hub portion being freely revoluble on the rod without disturbing said vertical adjustment, securing means to hold the hub portion to the rod after the former has been angularly adjusted, said means being applied above the ledge and between the wings, a device constructed to fit between the latter and prevent access to the securing means, and sealable means to hold said device in position, all constructed and arranged so that each stop may be accurately adjusted vertically and angularly on the rod and thereafter sealed in its adjusted position.

3. In a measuring pump, a reciprocable operating bar for the pump having an abutment thereon, a rotatable threaded rod parallel with the bar, a plurality of vertically spaced stop devices arranged in angular relation one to another on said rod and means to turn the latter through definite angles to swing any one of the stops into the path of the abutment, each of said stops comprising a hub portion slidable on said rod, check nuts above and below the hub portion, whereby the latter may be moved and accurately adjusted vertically on the rod, a laterally outstanding ledge integral with the hub portion and adapted to engage said abutment, said ledge having upright spaced wings, a set screw applied to the hub portion above said ledge and between said wings to hold the stop in the desired position of angular adjustment on the rod, a block arranged to fit between said wings and lie upon said ledge to conceal the set screw and prevent access thereto, and sealable means to hold the block in position, as described.

1,191,883. APPARATUS FOR OPERATING UPON COMPOSITE SUBSTANCES. ALPHEUS FAY, Louisville, Ky. Filed Jan. 3, 1916. Serial No. 69,886. (Cl. 31—66.)



1. In a device of the class described, a vessel, an impeller having an air-tight opening, a driving shaft extending through the opening, a hollow shaft surrounding said driving shaft and composed of separable sections, means on the upper side of said impeller near said opening to hold the lower parts of said sections together, means for holding the upper parts of the sections together, means for holding the impeller up on the shaft against the sections of the hollow shaft, and means for rotating said driving shaft.

2. In a device of the class described, a vessel, an impeller having an air-inlet opening, a driving shaft extending through the opening, a hollow shaft surrounding said driving shaft and composed of separable sections, means on the upper side of said impeller near said opening to hold the lower parts of said sections together, means detachably mounted on the driving shaft and bearing down against the tops of the sections for holding the upper parts of the sections together, means on said driving shaft below the impeller, holding it up on the shaft against the sections of the hollow shaft, and means for rotating said driving shaft.

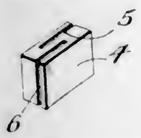
3. In a device of the class described, a vessel, an impeller having an air-inlet opening with a depression around it, a driving shaft extending through the opening, a hollow shaft surrounding said driving shaft and composed of separable sections, with the lower ends of these sections fitting in the depression, means detachably mounted on the driving shaft and bearing down against the tops of the sections for holding the upper parts of the sections together and down in the depression, means on said driving shaft below the impeller, holding it up on the shaft against the sections of the hollow shaft, and means for rotating said driving shaft.

4. In a device of the class described, a vessel, an impeller having an air-inlet opening, a driving shaft extending through the opening, a hollow shaft surrounding said driving shaft and composed of separable sections having tongues and grooves fitting together, means on the upper side of said impeller near said opening to hold the lower parts of said sections together, means for holding the upper parts of the sections together, means for holding the impeller up on the shaft against the sections of the hollow shaft, and means for rotating said driving shaft.

5. In a device of the class described, a vessel, an impeller comprising upper and lower members, and means spacing the members apart and leaving open sides to the impeller, whereby the impeller has comparatively broad plain upper and lower surfaces and comparatively shallow peripheral surfaces, the lower member having a small opening and the upper one having a larger opening with a depression around it, a driving shaft extending through the openings in the members, a hollow shaft composed of separable sections, with the lower ends of these sections fitting in the depression in the upper member, means detachably mounted on the driving shaft and bearing down against the tops of the sections, holding them together and down in the depressions, means on said driving shaft below the lower member holding the members up on the shaft against the sections of the hollow shaft, and means for rotating said driving shaft.

[Claims 6 to 13 not printed in the Gazette.]

1,191,884. BUILDING-BLOCK. STANLEY W. FINCH, Washington, D. C. Filed Feb. 8, 1916. Serial No. 76,964. (Cl. 46—35.)



1. In combination, a plurality of toy building-blocks, each having a recess therein for the reception of a connector; and a connector formed from a block of wood, with parallel slots extending lengthwise thereof, the slots overlapping at their inner ends.

2. In combination, a plurality of toy building-blocks, each having a recess therein for the reception of a connector; and a connector comprising a block of wood having inwardly-extending, substantially parallel, overlapping kerfs.

3. A connector for toy building-blocks, comprising a body provided with overlapping, substantially parallel kerfs.

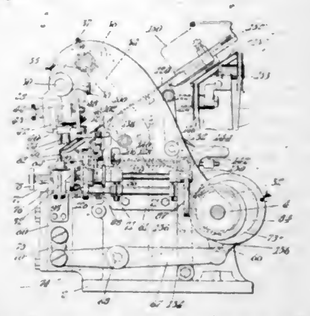
4. A connector for toy building-blocks, comprising a body provided with inwardly-extending, substantially parallel kerfs, the kerfs at their inner ends overlapping.

5. A connector for toy building-blocks, comprising a body portion having at least two oppositely-disposed, flattened faces with inwardly-extending, lengthwise-disposed kerfs, the kerfs at their inner ends overlapping.

[Claims 6 to 10 not printed in the Gazette.]

1,191,885. GANG FASTENER-SETTING MACHINE. PERLEY R. GLASS, Brookline, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 5, 1911. Serial No. 631,264. (Cl. 218—0.5.)

1. A machine of the class described having in combination, oppositely disposed gangs of setting dies, and automatically acting mechanism for spacing the dies of one of said gangs.



2. A machine of the class described having, in combination, coöperating gangs of setting dies, a controlling device, and automatically acting mechanism controlled by said device for spacing the dies of one of said gangs.

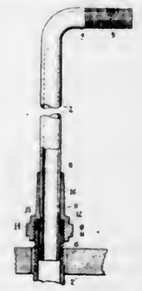
3. A machine of the class described having, in combination, coöperating gangs of setting dies, means for supplying fasteners to the dies in one of said gangs, and automatically acting mechanism for spacing the dies in said gang after they have been so supplied.

4. A machine of the class described having, in combination, oppositely disposed gangs of setting dies, a plurality of raceways for supplying fasteners to the dies in one of said gangs, means for moving said raceways to and from delivering position, and automatically acting mechanism for spacing the dies in a gang after the raceways have moved from delivering position.

5. A machine of the class described having, in combination, coöperating gangs of setting dies, means for varying the spacing of the dies of one of said gangs, and means operating automatically for correspondingly spacing the dies of another gang.

[Claims 6 to 54 not printed in the Gazette.]

1,191,886. COUPLING FOR BASINS, &c. JOSEPH H. GLAUBER, Cleveland, Ohio; The Citizens Savings & Trust Company executor of said Glauber, deceased. Filed Dec. 18, 1911. Serial No. 666,495. (Cl. 137—28.)



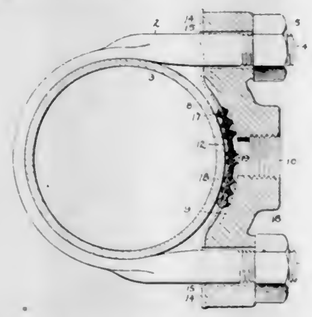
1. A tubular coupling member having multiple screw-threads over a relatively-extended surface at its end, in combination with a tubular connection having a single external screw thread thereon of the same lead as said multiple screw-threads, and an internal bore to telescopically receive the threaded end of said member, and a coupling nut having a separate tubular extension provided over a relatively small portion thereof with multiple screw-threads corresponding to the screw-threads on said member and the said nut having a single screw-thread corresponding to the screw-thread on said connection, and said separate tubular extension having an interlocking portion for the nut and a smooth bore to cover and protect the

multiple threaded portion of said coupling member under different adjusted relations between the parts.

2. In a coupling basin or other laboratory fixture, a coupling nut having an enlarged portion provided with a bore having a single screw-thread, a separate relatively long tubular extension having a smooth bore of less diameter than said threaded bore, and provided with an interlocking portion engaged with said nut and a relatively short and slightly reduced portion at the juncture or said extension and enlarged portion having plural screw-threads of the same lead as said single screw-thread.

3. A tubular coupling member having similar multiple screw threads externally and smooth internally at opposite ends thereof, in combination with separate tubular connections for the respective ends of said member having single screw threads externally of the same lead as said multiple screw threads and bores internally adapted to receive the ends of said coupling member, and coupling nuts having single screw threads internally corresponding to the screw threads on both connections and provided with separate relatively long smooth-bored extensions interlocked therewith in slidable relations and having internal multiple screw threads corresponding to the screws on the coupling member, the smooth bored extension adapted to telescope over the threaded tubular ends of said coupling member.

1,191,887. PACKING MEMBER FOR SERVICE-CLAMPS. JOSEPH H. GLAUBER, Cleveland, Ohio; The Citizens Savings & Trust Company executor of said Glauber, deceased. Filed May 5, 1913. Serial No. 765,566. (Cl. 137—28.)



1. A packing member for service clamps, comprising a solid disk of soft metal having concentric ribs and a pair of opposite extensions therewith of a different metal from said disk.

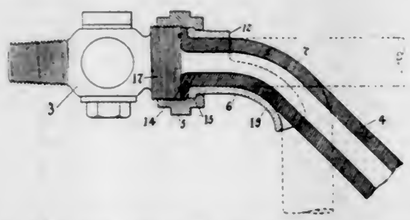
2. A packing member for service clamps, comprising a disk of soft metal having concentric ribs in its opposite sides and a centering guide at its middle and provided with lateral extensions at its edges having holes.

1,191,888. WATER-DISTRIBUTING DEVICE. JOSEPH H. GLAUBER, Cleveland, Ohio; The Citizens Savings & Trust Company executor of said Glauber, deceased. Filed Feb. 9, 1914. Serial No. 817,413. (Cl. 137—28.)

1. In a water distributing device, an attachment for a pipe comprising a short tubular section adapted to sleeve upon the pipe having a lip curved to one side thereof, said lip being segmental in cross section to provide an open channel the full length thereof.

2. In a water distributing device, a separable member for a pipe comprising an annular sleeve having a curved end extension of substantially semi-circular formation at its end and open the full length thereof at its top in cross section to form and seat a bend in the pipe.

3. In a water distributing device, a separable member for a pipe comprising a sleeve having an end lip of graduated curvature and open at its top the full length thereof and of uniform size in cross section its full length to form and support a bend in the pipe.

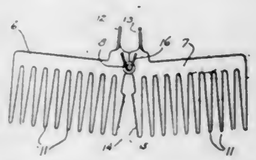


4. In a water distributing device, a coupling connection for a pipe comprising a sleeve having an annular collar at one end and a channeled lip at its other end, which is open at its top the full length thereof, said collar and lip being integral in combination with a coupling nut adapted to rotatably engage and confine said collar.

5. In a water distributing device, a coupling body and a nut therefor, and a tail-piece having a shouldered portion engaged by said nut and provided with a downwardly curved lip, in combination with a lead pipe sleeved within said tail piece in bent seating relation with said lip and having an outwardly-extending flanged end in abutting relation with said collar and coupling body.

[Claims 6 to 8 not printed in the Gazette.]

1,191,889. DEVICE FOR WAVING HAIR. DORA P. GLEASON, Cincinnati, Ohio. Filed July 21, 1915. Serial No. 41,035. (Cl. 132—18.)



1. In a hair waver, the combination of two combs arranged end to end, the abutting ends each having a series of serrations therein, a pivot connecting the combs, and a means adapted to hold the abutting ends yieldingly together whereby the serrated ends grasp the hair and retain the waver in position to hold the hair in a puff.

2. In a hair waver, the combination of two combs arranged end to end, the abutting ends each having a series of serrations therein, a pivot connecting the combs, and a spring adapted to hold the abutting ends together yieldingly whereby the serrated ends grasp the hair and retain the waver in position to hold the hair in a puff.

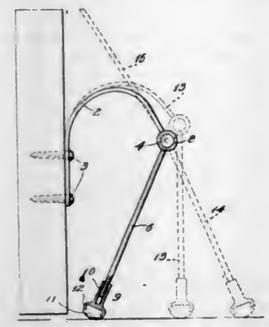
3. In a hair waver, the combination of two combs, each having a serrated end with an outwardly projecting handle, the combs being alined with the serrated ends adjacent to each other, a pivot connecting the combs, and a spring adapted to hold the serrated ends yieldingly together whereby the serrated ends grasp the hair and retain the waver in position to hold the hair in a puff.

1,191,890. STERLING SILVER. EDWARD D. GLEASON, Brooklyn, N. Y., assignor to Richard H. King, Brooklyn, N. Y. Filed Aug. 24, 1911, Serial No. 645,690. Renewed Oct. 9, 1915. Serial No. 55,112. (Cl. 75—1.)

Sterling silver including .925 of silver alloyed with cadmium.

1,191,891. DOOR-CHECK. JOHN F. GOLDING, Washington, D. C. Filed July 11, 1914. Serial No. 850,449. (Cl. 16—82.)

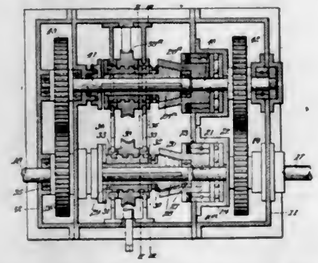
1. In an automatic door check operable in either direction by manipulation of the door, the combination of a bracket and attaching member adapted to be attached to a door, and a brace member pivoted to the outer end of the bracket member, one of said members being a metal spring, the brace member being arranged to be inclined in the direction of movement of the door and to trail loosely on the floor in both directions, and being inclinable automatically in the other direction so as to engage the floor and act as a stop, and having a spring toggle action as it passes the dead center from one inclination to the other.



2. In a door check the combination of a metal spring member adapted to be attached to a door so as to extend therefrom and which is upwardly and downwardly resilient, and a brace member pivoted to the outer end of the outwardly extending spring member and depending therefrom and freely swingable to either of the two opposite inclinations, and longer than the distance from its pivot to the floor, whereby the said brace member may trail loosely after the door in either direction, and bear at its lower end upon and engage with the floor, and be caused to pass over a dead center with a toggle action and be automatically inclined in either direction relative to the door, by the movement of the door.

3. In a door check, in combination: a spring adapted to be fixed to a door, and two brace members pivotally connected with said spring and freely swingable to either inclination, whereby the door may be held from closing by the operation of one or both of said brace members arranged at one inclination, or may be held from movement in either direction by said brace members when they are inclined oppositely to each other.

1,191,892. TRANSMISSION FOR AUTOMOBILES. GEORGE V. HARRIMAN, New York, N. Y. Filed Dec. 16, 1914. Serial No. 877,570. (Cl. 74—59.)



1. A casing for transmission gearing, comprising a middle section having four walls, and end sections detachably connected to said middle section, the end walls of the middle section constituting partitions of the casing as a whole and providing journals for the gearing.

2. A casing for transmission gearing, comprising a middle section having four walls and open at the top and bottom, end sections having three walls and detachably connected to the ends of the middle section, and removable top and bottom plates to cover the openings in said middle and end sections.

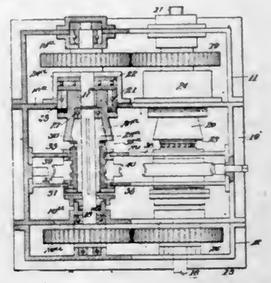
3. A casing for transmission gearing, comprising a middle section having four walls and open at the top and bottom, end sections having three walls, said sections having flanges at their meeting edges and at their upper and lower edges, and top and bottom plates detachably connected to said upper and lower flanges of said sections, the meeting flanges of said sections being also detachably connected.

4. The combination with a driving and a driven shaft arranged end to end, of a clutch member fixed on one of the shafts, a supplemental clutch member splined on the other shaft and having oppositely facing shoulders, a threaded sleeve fitted loosely around said supplemental clutch member between said shoulders, means for holding said sleeve against turning but permitting it to move axially, a secondary pair of shafts also arranged end to end and geared respectively to the driving and driven shafts of the first pair, clutch members on said secondary pair of shafts similar to those of the first pair of shafts, a sleeve on the splined member of the second clutch constructed and arranged like the one on the first clutch, worm gears having internal threads engaging the respective sleeves, means for retaining said worm gears against axial movement, the worm teeth on said gears being oppositely inclined, and a rock shaft having oppositely inclined worm sections meshing with the respective worm gears, whereby a movement of said rock shaft in one direction will simultaneously move both clutches in opposite directions.

5. The combination with a driving and driven shaft, of a secondary pair of shafts, a sectional casing comprising a middle section and detachable end sections, said shafts being journaled in both the middle and end sections of the casing, intermeshing gears arranged on said shafts in the end sections of the casing, and selective clutch mechanism arranged in the center section of the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,191,893. CLUTCH. GEORGE V. HARRIMAN, New York, N. Y. Original application filed Dec. 16, 1914, Serial No. 877,570. Divided and this application filed May 5, 1915. Serial No. 26,065. (Cl. 192—8.)



1. The combination with a driving and a driven shaft arranged end to end, of a clutch member fixed on one of said shafts, a supplemental clutch member splined on the other shaft and having oppositely facing shoulders, a threaded sleeve fitted loosely around said supplemental clutch member between said shoulders, means for holding said sleeve against turning but permitting it to move axially, a worm gear retained against axial movement and having internal threads engaging said sleeve, and means for actuating said worm gear for moving said splined clutch member into and out of driving connection with the other clutch member.

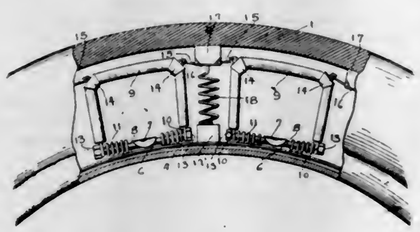
2. The combination with a driving and a driven shaft arranged end to end, of a clutch member fixed on one of said shafts, a supplemental clutch member splined on the

other shaft and having oppositely facing shoulders, a threaded sleeve fitted loosely around said supplemental clutch member between said shoulders, an antifriction bearing interposed between the shoulder, which is nearer the other clutch member, and the adjacent end of the sleeve for taking the thrust, means for holding said sleeve against turning but permitting it to move axially, and an internally threaded operating member engaging said sleeve and retained against axial movement for moving said splined clutch member into and out of driving connection with the other clutch member.

3. The combination with a driving and a driven shaft arranged end to end, of a clutch member keyed to one shaft, a journal cap housing the rear end of said clutch member, antifriction bearings arranged between the annular surface of said clutch member and inner annular surface of said cap, and between the ends of said clutch member and cap, a supplemental clutch member splined on the other shaft, and means for moving said splined clutch member into and out of driving connection with the other clutch member.

4. The combination with a driving and a driven shaft arranged end to end, a clutch member fixed on one shaft, a splined clutch member on the other shaft, a sleeve fitted loosely around said splined clutch member and having threads upon its outer surface and axial grooves across said threads, spools retained against movement and provided with keys engaging the grooves in said sleeve, an operating member arranged between said spools and having internal threads engaging the threads on the sleeve, and means whereby the longitudinal movement of the sleeve will actuate the splined clutch member.

1,191,894. SPRING-TIRE. JOHN E. HART and ALBERT BENZINGER, Columbus, Ohio. Filed Oct. 28, 1915. Serial No. 58,381. (Cl. 152—8.)



1. A spring tire comprising a circumferentially arranged plate, rods secured to said plate in pairs, U-shaped load sustaining springs connected to said rods, connecting rods for connecting the springs together and resilient means carried by said connecting rods.

2. A spring tire comprising a circumferentially arranged plate, U-shaped load sustaining springs secured to said plate and arranged in pairs thereupon, connecting plates connecting the load sustaining springs, rubber cushions mounted upon the outer faces of said connecting plates, and coil springs depending from the inner faces of said connecting plates.

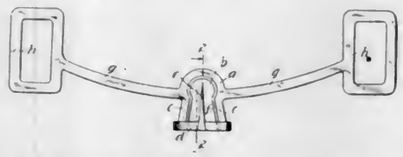
3. A spring tire comprising a circular plate adapted to rest within the casing of a tire for normally holding the opposite edges of the casing in spaced relation, clamping plates secured to the circular plate, rods carried by said clamping plates, U-shaped load sustaining springs adapted to rest upon the inner face of the tire casing, the ends of the load sustaining springs being coiled about said rods and means for adjusting said coils upon said rods.

4. A spring tire comprising a casing, a circular plate mounted with the casing, a plurality of load sustaining springs arranged in pairs upon said plate, means for connecting said springs together, a coil spring carried by each of said connecting means and resilient blocks carried by the opposite ends of said coil springs whereby the blocks at one end of the coil springs may rest upon said plate and the blocks at the opposite ends of the coil springs will rest upon the inner face of the tire casing.

5. A spring tire comprising a casing, a circular plate arranged therein, U-shaped load sustaining springs, means for connecting the ends of said springs to said plate and the medial portions of said springs extending outwardly from said plate, flexible means for connecting the medial portions of the springs together and resilient means carried by said flexible means for retaining the tire casing in spaced relation with said plate.

[Claim 6 not printed in the Gazette.]

1,191,895. NECKTIE-HOLDER. JAMES W. HARTNETT, Portland, Oreg. Filed Apr. 10, 1916. Serial No. 90,273. (Cl. 24—56.)



1. In a device of the character described, a center piece adapted for attachment to a collar-button and provided with an upwardly projecting pin for being removably engaged to the knot of a neck-tie.

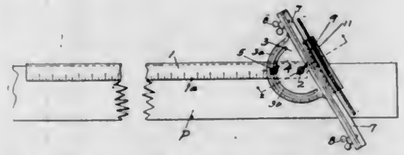
2. In a device of the character described, a center piece adapted for attachment to a collar-button and provided with an upwardly projecting pin for being removably engaged to the knot of a neck-tie, said center piece being also provided with means for holding the device against tipping.

3. In a device of the character described, a center piece adapted for attachment to a collar-button, and provided with an upwardly projecting pin for being removably engaged to the knot of a neck-tie, said center piece being also provided with laterally extending arms for holding the device against tipping.

4. In a device of the character described, a center piece provided with an opening and an entrance slot thereto having divergent sides, the edges of said opening and slot being chamfered, a lateral band formed at the outer end of the slot, the inside clearance of which is greater than the width of the outer end of the slot, and a pin secured to the band and projecting upward toward the opening.

5. In a device of the character described, a center piece adapted for attachment to a collar-button, and provided with a centrally located, upwardly projecting pin adapted to be removably engaged to the knot of a neck-tie.

1,191,896. MITER-TOOL. ARTHUR J. HELMS, Portland, Oreg., assignor to Boss Tool Mfg. Co., a Corporation of Oregon. Filed Jan. 18, 1915. Serial No. 2,773. (Cl. 143—88.)



1. A miter tool of the character referred to, comprising a straight edge member, a miter member adjustably connected thereto and adapted to be adjusted about an axis extending transversely of said straight edge member, a guide member adjustably attached to said miter member, and a saw holder mounted to slide freely in said guide member, said saw holder being adapted to hold a saw adjustably about an axis extending transversely of the saw blade, whereby said saw can be operated in any position in said saw holder.

2. A miter tool of the character referred to, comprising a straight edge member, a miter member pivotally connected to the end thereof, and adapted to be adjusted about an axis extending transversely of said straight edge member, a guide member adjustably attached to said miter member and adjustable about its longitudinal axis, and a saw holder mounted to slide freely in said guide member, said saw holder being adapted to hold a saw adjustable about an axis extending transversely of the saw blade, whereby said saw can be operated in any position in said saw holder.

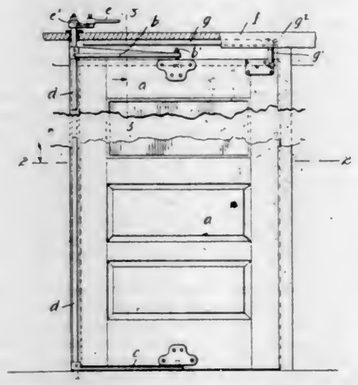
3. In a miter tool, a miter member, a guide member adjustably mounted thereon and adjustable about its longitudinal axis, said guide member being provided with a slideway along its straight outer side, and a saw holder mounted to slide freely in said slideway longitudinally of said guide member, said saw holder being adapted to hold a saw so that it can be turned in its own plane to any position about an axis extending transversely of the saw blade.

4. In a miter tool, in combination, a straight edge member, a miter member pivotally mounted thereon, a guide member of tubular form adjustably mounted on said miter member and adjustable about its longitudinal axis, said guide member having a straight outer edge and provided with a slideway therealong, a saw holder mounted to slide freely along said slideway, and means pivotally holding a saw in said saw holder, whereby said saw can be adjusted to any position in its own plane about an axis extending transversely of said saw blade.

5. A miter tool comprising a straight edge member, a miter member connected to one end thereof and adapted to be adjusted to different angles relative thereto about an axis extending transversely of said straight edge member, a guide member attached to said miter member and adjustable about its longitudinal axis, said guide member having its outer side square, whereby to rest squarely upon a flat surface in a plane at an angle to the planes of the straight edge and miter members, and a saw holding member mounted to slide freely along said guide member, said saw holding member being adapted to pivotally support a saw adjustably about an axis extending transversely of said saw blade, whereby said saw can be adjusted to different angles in its own plane.

[Claims 6 and 7 not printed in the Gazette.]

1,191,897. COMBINED DOOR HANGING AND OPERATING MEANS. FREDERIC W. HILD, FRANK P. MAIZE, and WILLIAM LEWIS COOP, Portland, Oreg. Filed Oct. 2, 1914. Serial No. 864,697. (Cl. 268—7.)



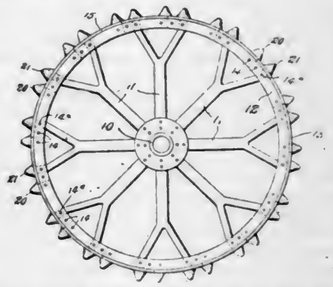
1. In means of the character described, the combination of a vertical rotatable shaft, a pair of horizontal arms rigid on such shaft and alined one above the other, a vertical pivot on the extremity of the lower of said arms, a pivot pendent from the extremity of the upper of said arms, the lower end of such pivot provided with a head, said pendent pivot adapted for being relatively shortened and lengthened, a door provided with a cavity at the top, near the middle, for receiving said headed end of said pendent pivot, a bearing-plate affixed to said portion of the door for the head of said pendent pivot to bear against, a guide element, means provided on the top of the door for holding the outer end thereof in coöperative relation with said guide element, and means for rotating the shaft.

2. In means of the character described, the combination of a vertical rotatable shaft, a pair of horizontal arms rigid on such shaft and alined one above the other, a vertical pivot on the extremity of the lower of said arms, a pivot pendent from the extremity of the upper of said arms, the lower end of such pivot provided with a head, said pendent pivot being inserted through the extremity of said upper arm, a door provided with a cavity at the top, near the middle, for receiving said headed end of said pendent pivot, a bearing-plate affixed to said portion of the door for the head of said pendent pivot to bear against, a guide element, means provided on the top of the door for holding the outer end thereof in coöperative relation with said guide element, and means for rotating the shaft.

3. In means of the character described, the combination of a vertical rotatable shaft, a pair of horizontal arms rigid on such shaft and alined one above the other, a door pivotally suspended between the extremities of said arms, the suspending means being adapted to hang the door from the upper of said arms and so as not to impose the weight of the door on the lower of said arms.

4. In means of the character described, the combination of a vertical rotatable shaft, a pair of horizontal arms rigid on such shaft and alined one above the other, a door pivotally suspended between the extremities of said arms, the suspending means being adapted to hang the door vertically adjustable from the upper of said arms and so as not to impose the weight of the door on the lower of said arms.

1,191,898. TRACTION-WHEEL. WALTER E. HOSCH, St. Louis, Mo. Filed Apr. 16, 1915. Serial No. 21,754. (Cl. 21—216.)



1. A traction wheel rim comprising a pair of spaced supports and a series of rim sections secured to said supports, each of which sections comprises a transversely disposed plate, studs projecting outwardly therefrom, and a pair of side plates, which latter are fixed to the spaced supports with their ends bearing directly against the ends of the side plates of the adjacent rim sections.

2. A traction wheel rim comprising a pair of spaced supports and a series of rim sections secured to said supports, each of which sections comprises a plate, one edge of which is inclined with respect to the opposite edge, a series of studs formed on said plate, and a pair of side plates which are secured to the spaced supports with their ends bearing directly against the ends of the side plates of the adjacent rim sections.

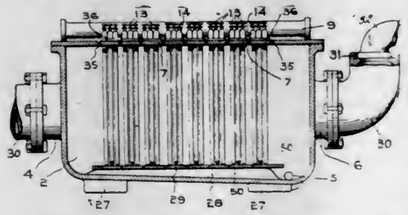
3. A traction wheel rim comprising a pair of spaced supports and a series of rim sections secured to said supports, each of which comprises a plate, one edge of which is curved inwardly with respect to the other edge, a series of studs projecting outwardly from said plate, and a pair of side plates which are secured to the spaced supports with their ends bearing directly against the ends of the side plates of the adjacent rim sections.

4. The combination with a pair of spaced supporting rings, of tread members positioned between said spaced rings, each of which members comprises a pair of side plates, the ends of which bear directly against the ends of the adjacent members, a plate integral with said side plates, which plate is curved transversely, and a series of studs integral with and projecting outwardly from said plate.

5. The combination with a pair of spaced supporting rings, of tread members positioned between and fixed to said rings, each of which members comprises a pair of side plates, the ends of which bear directly against the ends of the plates of the adjacent tread members, a transversely disposed plate integral with said side plates, a series of studs projecting outwardly from said transversely disposed plate, and flanges on said side plates which bear directly against the outer edges of the supporting rings.

[Claims 6 to 10 not printed in the Gazette.]

1,191,899. CONDENSER. ARTHUR HOUGH, Dragon, Quebec, Canada. Filed Feb. 9, 1915. Serial No. 7,204. (Cl. 257—199.)



1. A condenser unit for nitric acid vapor, comprising a container of dish form, consisting of acid resisting material having an intake and an outlet for the vapor to be condensed and a trapped outlet in the bottom thereof for the liquid acid; a cover divided into a plurality of parts; a series of condenser-members carried by the cover parts and having their ends protruding therethrough; a pair of inlet and outlet headers connecting with the opposite ends of the condenser members and from which a condensing fluid passes through said members.

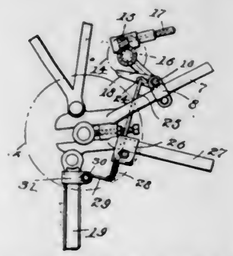
2. A condenser unit for nitric acid vapor, comprising a container of dish form consisting of acid resisting material, having an intake and an outlet for the vapor to be condensed and a trapped outlet in the bottom thereof for the liquid acid; a cover divided into a plurality of parts; a series of condenser-members carried by the cover-parts consisting of coils substantially equal in height to and resting upon the bottom of the container, and having their ends protruding through the cover; inlet and outlet headers connecting with the opposite ends of the condenser-members and from which a condensing fluid passes through said members.

3. A condenser unit for nitric acid vapor, comprising a container of dish form consisting of acid resisting material, having an intake and an outlet for the vapor to be condensed and a trapped outlet in the bottom thereof for the liquid acid; a cover divided into a plurality of parts; a series of condenser-members carried by the cover-parts consisting of coils substantially equal in height to and resting upon the bottom of the container, and having their ends protruding through the cover; inlet and outlet headers connecting with the opposite ends of the condenser-members and from which a condensing fluid passes through said members; the connection between the headers and coils consisting of nipples carried rigidly by the headers and flexible tubing uniting the nipples to the ends of the coils.

4. A condenser-unit for nitric acid vapor, comprising a container of dish form consisting of acid resisting material having an intake and an outlet for the vapor to be condensed and a trapped outlet in the bottom thereof for the liquid acid; a cover divided into a plurality of parts, a series of condenser-members carried by the cover parts consisting of coils substantially equal in height to and resting upon the bottom of the container, and having their ends protruding through the cover, inlet and outlet headers connecting with the opposite ends of the condenser-members and the connection between the headers and coils consisting of nipples carried rigidly by the headers and flexible tubing uniting the nipples to the ends of the coils, each of the said nipples having a tap.

5. A condenser unit of the type described having a cover divided into independently removable parts, each part having its side edges beveled and the portions near each end formed with holes and having a pair of transverse flanges flanking the holes; a series of condenser-members having their ends protruding through the holes in the cover parts; and cement between the flanges and within the recesses formed by the contiguous beveled edges of the said cover parts.

1,191,900. INDICATOR DRIVE CONNECTION. WILLIAM FLOYD KENDALL, Tenafly, N. J., assignor to Sears-Cross Company, New York, N. Y., a Corporation of New York. Filed Oct. 30, 1913. Serial No. 798,211. (Cl. 235—96.)



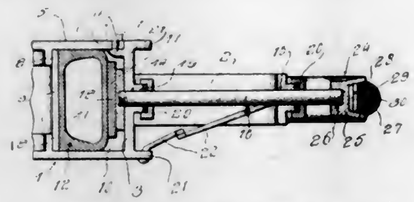
1. In an apparatus of the class described, in combination, a motor-cycle having a wheel adapted to rotate when the motor-cycle is driven, an indicating instrument carried by the motor-cycle, a drive-connection for actuating said instrument when said wheel rotates, supporting means movable into a supporting position to support said motor-cycle on the floor, and automatic means for opening said drive-connection when said supporting means is moved into its supporting position.

2. In an apparatus of the class described, in combination, a motor-cycle having a wheel adapted to rotate when the motor-cycle is driven, an indicating instrument carried by the motor-cycle, a drive-connection for actuating said instrument when said wheel rotates consisting of separable gear-wheels normally in mesh, supporting means movable into a supporting position to support said motor-cycle on the floor, and means actuated by said supporting means in moving into its supporting position to separate said gears to open the driving connection therebetween.

3. In an apparatus of the class described, in combination, a motor-cycle having a wheel adapted to rotate when the motor-cycle is driven, an indicating instrument carried by the motor-cycle, a driving gear wheel mounted to rotate when the motor-cycle is driven, a pinion normally meshing with said gear wheel for driving said indicating instrument, means for supporting said pinion in a position in which it is in mesh with said gear wheel and in a second position in which it is out of mesh with said gear wheel, resilient means tending to hold said pinion in mesh with said gear wheel, and supporting means movable into a supporting position to support said motor-cycle on the floor and having means for holding said pinion out of mesh with said gear wheel.

4. In an apparatus of the class described, in combination, a motor-cycle having a wheel adapted to rotate when the motor-cycle is driven, an indicating instrument carried by the motor-cycle, a driving gear-wheel adapted to rotate when the motor-cycle is driven, a pinion normally meshing with said gear-wheel for driving said indicating instrument, means for supporting said pinion in a position in which it is in mesh with said gear-wheel and in a second position in which it is out of mesh with said gear-wheel, resilient means tending to hold said pinion in mesh with said gear wheel, a stand movable into position for supporting said wheel off the floor and means carried by the stand for moving said pinion out of engagement with said gear-wheel.

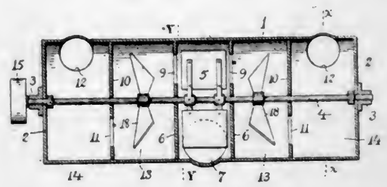
1,191,901. RESILIENT WHEEL. JAMES A. KOLBY, LOUIS P. LARSEN, and CHRISTIAN P. NEILSEN, Ephraim, Utah, assignors to Kolby Wheel Company, Inc., Ephraim, Utah. Filed Apr. 24, 1916. Serial No. 93,204. (Cl. 152—29.)



1. A vehicle wheel comprising an annular casing, radially extending annular flanges formed adjacent the inner and outer sides thereof, an annular pneumatic cushion in said casing, a rigid rim surrounding said casing and spaced therefrom, the annular portion of said casing and said rim having a plurality of alined apertures, plungers slidable in said alined apertures, the outer ends projecting beyond said outer rim, heads on the inner ends within said casing for engagement with the pneumatic cushion, pairs of tangentially arranged spokes disposed around said casing and having their outer ends secured in said rim, the inner ends of the alternate pairs of spokes being attached to opposite flanges, the spokes of each pair being crossed and disposed on opposite sides of said plungers, a sectional rim around the first mentioned rim and formed of a plurality of arcuate sections, each being disposed on the outer end of one of said plungers, and a tire around said sectional rim.

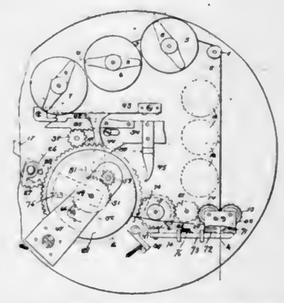
2. A vehicle wheel comprising an annular casing having flat parallel sides, said sides being extended radially outward to form flanges, the annular portion having a plurality of openings, an annular pneumatic cushion in said casing, said cushion being rectangular in cross section and having its upright walls at their junction with the inner annular side increased in size to prevent cutting of the same, a one-piece rigid rim surrounding said casing and spaced therefrom, said rim having a plurality of apertures alined with the openings in said casing, plungers slidable in said alined openings and apertures, the outer ends projecting beyond said rim, rectangular heads on the inner ends of the plungers within the casing, a rectangular cushioning member carried by each head for engagement with said pneumatic cushion, said members being larger than said heads, pairs of tangentially arranged spokes disposed around said casing and having their outer ends secured in said rim, the inner ends of the alternate pairs of spokes being attached to opposite flanges, the spokes of each pair being crossed and disposed on opposite sides of said plungers, a sectional rim surrounding the first mentioned rim and formed of a plurality of arcuate sections, each being disposed on the outer end of one of said plungers, and a tire surrounding said sectional rim.

1,191,902. MUFFLER. DENNIS F. LEARY, Chelsea, Mass. Filed Mar. 6, 1913, Serial No. 752,286. Renewed Oct. 19, 1915. Serial No. 56,797. (Cl. 123—194.)



A muffler comprising an elongated casing, several transversely disposed partitions therein forming compartments, one of which is central, each partition having an opening through it staggered relative to the openings in adjacent partitions, means for delivering exhaust to the central compartment, a fan located in said central compartment adapted to be rotated by said exhaust, and a transversely disposed discharge for the exhaust at each end of said casing.

1,191,903. FEEDING AND WINDING MECHANISM. WALTER LEWIN, San Francisco, Cal. Filed Mar. 9, 1912. Serial No. 682,744. (Cl. 242—55.)



1. A tape winding means adapted to be operated by the movement of a handle, comprising a take-up reel on which the tape is wound, a handle and a spring axially disposed with respect to said reel arranged between said handle and the take-up reel, said spring being arranged so that a rotation of the handle varies the tension of said spring.

2. In a tape winding device adapted to be operated by the movement of a handle, a handle and means for producing a movement of the tape in one direction through a movement of the handle in either direction.

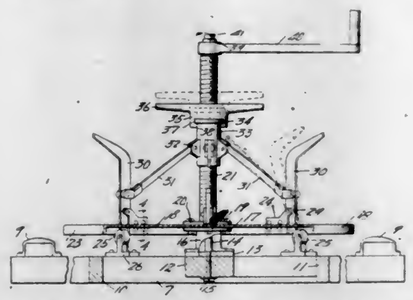
3. In a tape feeding device adapted to be operated by the reciprocation of a handle, a handle and means for producing a slight movement of the tape for a movement of the handle in one direction and a longer movement of the tape by the movement of the handle back to its original position.

4. A tape feeding means comprising a pair of feed rollers, a driving gear connected to said feed rollers, a handle, an arm connected to said handle and a spring held toothed quadrant on said arm adapted to engage the teeth on said driving gear for a movement of the handle in one direction.

5. A tape feeding means comprising a pair of feed rollers, a driving gear connected to said feed rollers, a handle, an element carrying gear teeth adapted to be moved by the movement of said handle, a pinion engaging said gear teeth and connections between said pinion and the driving gear.

[Claims 6 to 11 not printed in the Gazette.]

1,191,904. WIRE-REEL. BERT F. LUICK, Pomona, Cal., assignor to Arthur W. Risher, Spadra, Cal. Filed July 6, 1914, Serial No. 849,098. Renewed Oct. 11, 1915. Serial No. 55,357. (Cl. 242—114.)

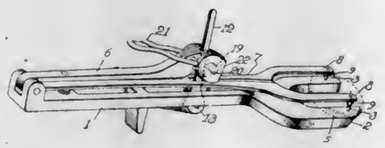


1. A wire reel, comprising the combination of a frame, a stationary standard thereon, an externally threaded tubular standard revolubly mounted on said stationary standard, a disk rigidly affixed to the threaded standard formed with a series of radially extending slots, blocks slidably mounted in certain of said slots, arms pivoted on said blocks, links connecting with said arms above their pivotal connection with the blocks, a sleeve slidably mounted on the threaded standard to which the inner ends of said links are pivotally connected, a flange on said sleeve, and a theraded sleeve on said standard formed with an inwardly extending flange detachably engaging the flange on the loose sleeve.

2. In a wire reel, a frame, a revoluble disk on said frame, a plurality of rollers normally positioned out of contact with the underside of said disk and adapted to engage therewith on deflection of the disk under pressure thereon, whereby binding of the disk is prevented.

3. A wire reel, comprising a frame, a rigid standard thereon, a hub revolubly mounted on said standard, a disk supported on said hub, a threaded tubular standard encompassing the stationary standard, said threaded standard, disk and hub rigidly connected together, a plurality of blocks slidably mounted in radial slots in said disk, rollers on said blocks engaging the upper and lower surfaces of the disk, pivoted arms carried by said blocks, a loose sleeve on the threaded standard, links connecting said sleeve to the pivoted arms, a threaded sleeve on said standard connected to the loose sleeve in revoluble relation thereto, whereby rotation of the threaded sleeve will operate to move the loose sleeve to rock the arms and shift the blocks.

1,191,905. LENS-HOLDER. ALBERT E. MAYNARD, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed June 11, 1914. Serial No. 844,572. (Cl. 51—3.)



1. In a device of the character described, the combination with a base member having a downwardly offset furcated clamping head at one end and having a depending rest near the other end for holding the handle portion of the device in raised position, of a supplemental rigid member pivotally secured to the handle end of the base member and terminating in a downwardly opening hook, a resilient clamp jaw secured to the second pivoted member near its point of pivotance and free therefrom adjacent the hook portion, a shaft journaled in the bight of the hook and having a cam member for engaging and forcing inward the spring clamp relative to the second pivoted member, a post carried by the base member and adapted for interlocking engagement with the second pivoted member, and means on the shaft for securing the post in said interlocking relation upon actuation of the cam, substantially as and for the purpose described.

2. A lens holder, comprising a pair of pivotally connected members, provided with clamping jaws, a post pivoted to one of the members and projecting through the other, said post having a serrated portion and the other member having a serrated jaw adapted to engage the serrations of the post, and a manually operable double cam member having a portion for forcing and securing the serrations of the post and jaw in interlocking relation and having a second portion for forcing the jaws into tight engagement with each other after they have been secured in adjusted position through the medium of the post and serrated jaw.

3. The combination with a pair of pivoted members, one of said members having clamping jaws, of a resilient clamping member carried by the other of said two first named members, means for locking the two first named members in desired relatively adjusted position, and additional means for swinging the resilient clamping member inward after the two pivoted parts have been secured in desired adjusted relation.

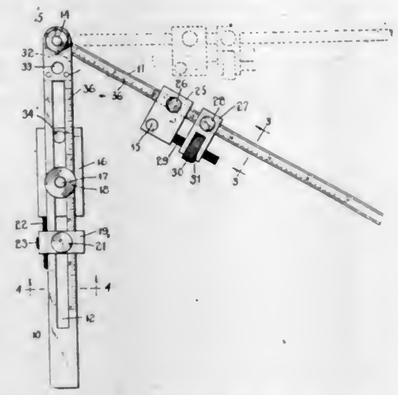
4. In a lens holder, the combination with a pair of pivoted members, of a resilient gripping member carried by one of said members, means carried by the other pivoted member and extending through the resilient gripping member and the other pivoted member for locking the parts in adjusted position, resilient means for holding the locking device normally in an operative position, means for shifting the locking device into operative position, and additional means operated upon movement of the locking means into operative position for exerting additional pressure against the resilient gripping member, substantially as described.

5. A device of the character described, including a main jaw member, a frame member pivoted to the jaw member, a resilient gripping member carried by the frame member, a post pivoted to the main jaw member and extending upwardly through the resilient gripping member and the frame member, said post having a serrated face, a serrated jaw carried by the frame member, means for normally swinging the post to hold its serrations out of engagement with those of the jaw member, a cam device for limiting the swinging movement of the post, a second cam operatively inter-related with the first mentioned cam member, and means for simultaneously operating said cam member, whereby the first cam member serves to force the post serrations in interlocking engagement with those of the jaw to secure the two pivoted members in desired adjusted relation, while the second cam member serves to spring the resilient gripping member inward into operative position.

1,191,906. MEASURING-TOOL AND DRILL-JIG. JAMES MILLER, Stratford, and WILLIAM MILLER, Bridgeport, Conn. Filed Nov. 29, 1915. Serial No. 63,944. (Cl. 33—189.)

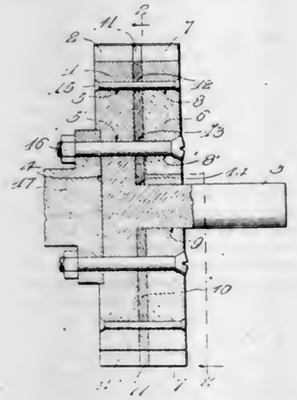
1. A measuring tool and drill jig comprising two arms pivoted together, one of said arms being provided near the pivoted point with a guide hole, slides upon said arms both provided with guide holes, means for adjusting the slides on the arms and means for locking the slides after adjustment whereby holes may be laid out and drilled at any distance apart and at any position relative to each other.

2. A tool of the character described comprising arms pivoted together, one of which is provided with a guide hole, slides upon the arms each provided with a guide hole, slotted blocks contiguous to the slides, screws fixed in the slides and passing through the blocks, nuts upon the screws and lying in the slots for adjusting the slides, and means for independently locking the slides and the blocks to the arms.



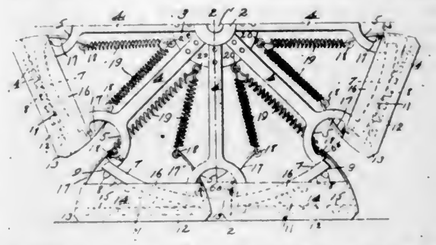
3. A tool of the character described comprising a slotted arm provided with a guide hole, a hinge comprising a block having a threaded stud passing loosely through said arm and provided with a nut, a second arm consisting of a rod flatted on its upper side and secured to the block, slides on said arms, each provided with a guide hole, means for adjusting said slides on the arms and means for locking the slides after adjustment.

1,191,907. GEAR-BODY. ANGEVINE NORTHUP, Greenport, N. Y. Filed Nov. 18, 1915. Serial No. 62,189. (Cl. 74—28.)



A device of the class described comprising a circular plate having teeth formed on its periphery, an integral centrally disposed solid stub shaft projecting from the inner side of the plate, said plate having a centrally disposed recess in its outer side, a raw hide annulus centrally apertured and correspondingly shaped to said plate positioned on the shaft and lying flush with the inner side of the plate, an additional plate correspondingly shaped to said annulus disposed on the shaft and lying flush against the outer side of the same, said plates and annulus having annular spaced series of apertures therethrough adjacent the periphery and axis of the same, fastening members positioned through the apertures adjacent the periphery to secure the parts together, and additional fastening members positioned through the apertures adjacent the axis and projecting through the recess in the outer side of said plate whereby a coupling member may be securely engaged therewith.

1,191,908. TRACTION-WHEEL OF THE PORTABLE-TRACK TYPE. FRANK PETRAK, Quincy, Wash. Filed Mar. 24, 1915. Serial No. 16,655. (Cl. 21—150.)



1. In a traction wheel, in combination with the hub of a wheel, a plurality of spokes secured to said hub, said spokes provided with bifurcated portions on their outer extremities, segment plates secured to the adjacent legs of said spokes, gear teeth formed on the outer faces of said plates, a plurality of shoes each adapted to cover one of said segment plates, gear teeth formed on the inner faces of said shoes adapted to mesh with said gear teeth on said plates, and means secured to said shoes and said wheel whereby said shoes are retained in engagement with said plates.

2. In a traction wheel, in combination, a wheel formed in segments, gear teeth formed on the outer face of said wheel, a plurality of geared shoes adapted to engage said wheel, and resilient means interposed between said shoes and said wheel adapted to retain said shoes in contact with said wheel.

3. In a traction wheel, in combination with the hub of a wheel, a plurality of radial spokes secured to said hub, bifurcated portions formed on the outer extremities of said spokes, segment plates secured to the adjacent sides of said bifurcated portions, gear teeth formed on the outer faces of said plates, tread rims formed on said plates, a plurality of shoes each adapted to engage one of said plates, gear teeth formed on the upper faces of said shoes adapted to mesh with the gear teeth of said plates, a track formed on said shoe adapted to contact with said tread rims, and means secured to said hub adapted to retain said shoes in engagement with said plates.

4. In a traction wheel, in combination, a hub, spokes radially disposed in pairs from said hub, radially disposed legs formed on each of said spokes, segment plates interposed between the adjacent legs of each two of said spokes, gear teeth formed on the outer face of said segment plates; tread rims formed on both sides of said gear teeth, a shoe adapted to seat upon each of said segment plates, gear teeth formed on the inner face of said shoe adapted to mesh with the gear teeth on said segment plate, and resilient means interposed between said shoes and said hub.

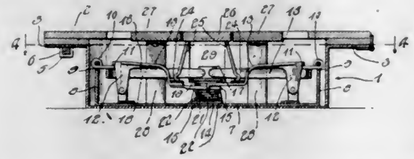
5. The combination in a traction wheel of a wheel having a rim formed with a plurality of segmental sections rigidly connected, ground engaging elements associated with said sections, the free end portions of said ground engaging elements being yieldably connected with the hub of the wheel, and anti-friction means associated with said ground engaging elements to facilitate their oscillation during operation, whereby to permit said elements to automatically adjust themselves to the surface of the ground over which the wheel is traveling.

[Claims 6 and 7 not printed in the Gazette.]

1,191,909. TRAP. CHARLES M. PHILLIPS, Hurlock, Md. Filed May 22, 1916. Serial No. 99,196. (Cl. 42—23.)

1. A trap comprising a casing having in its top an opening, a pair of posts rising from the bottom of said casing

in spaced relation, a pair of locking fingers pivoted to said posts, a pair of U-shaped jaws adapted to be held in lowered position within the casing by said fingers, keepers for holding said fingers in operative position, keeper releasing arms extending inwardly toward each other from said keepers, a depressible platform within the opening in the top of the casing, legs rising from said keeper releasing arms and supporting said platform, and spring means for forcing the jaws upwardly toward each other when the aforesaid keepers are released by depression of the platform.



2. A trap comprising a casing having in its top an opening, a pair of posts rising from the bottom of said casing in spaced relation, a pair of locking fingers pivoted to said posts, a pair of U-shaped jaws adapted to be held in lowered position within the casing by said fingers, keepers for holding said fingers in operative position, keeper releasing arms extending inwardly toward each other from said keepers, a pair of transverse bars secured one to each of said keeper releasing arms, legs rising from said bars, a depressible platform carried by the upper ends of said legs and disposed within the opening in the top of the casing, and means for forcing the two jaws upwardly toward each other when the aforesaid keepers are released by depression of the platform.

3. A trap of the class described comprising a casing having in its top an opening, a metal bar secured to the bottom of said casing and having its ends bent upwardly to form a pair of spaced posts, a pair of locking fingers pivoted to the upper ends of said posts, a pair of U-shaped jaws adapted to be swung downwardly and held in lowered position by said fingers, a pair of keepers pivoted to and rising from the aforesaid bar to retain said fingers in operative position, a pair of keeper releasing arms secured to and extending inwardly toward each other from said keepers, a depressible platform disposed in the opening of the casing, legs depending from said platform to the aforesaid keeper releasing arms, and spring means for forcing the aforesaid fingers are released by depression of the platform.

4. A trap of the class described comprising a casing having in its top an opening, a metal bar secured to the bottom of said casing and having its ends bent upwardly to form a pair of spaced posts, a pair of locking fingers pivoted to the upper ends of said posts, a pair of U-shaped jaws adapted to be swung downwardly and held in lowered position by said fingers, a pair of keepers pivoted to and rising from the aforesaid bar to retain said fingers in operative position, a pair of keeper releasing arms secured to and extending inwardly toward each other from said keepers, a depressible platform disposed in the opening of the casing, legs depending from said platform to the aforesaid keeper releasing arms, a metal plate secured at its center to the center of the aforesaid bar and extending transversely thereof, said plate having upwardly turned ends to which the arms of the jaws are pivoted, a jaw operating bar having openings receiving said arms of the jaws, and spring means beneath said operating bar for forcing the same upwardly when the aforesaid keepers are released by depression of the platform.

1,191,910. CORSET-FASTENER. ADOLPH E. POLLOCK, New York, N. Y., assignor to Improved Stay Company, a Corporation of New Jersey. Filed Apr. 3, 1915. Serial No. 18,905. (Cl. 24—205.)

1. In a fastener, the combination with a stay having studs, a second stay, and slotted keepers on said second stay, of latches pivoted to the second stay for coöperation with said keepers and adapted to retain the studs of the first stay within the slots of said keepers, and a releasing bar for imparting movement to said latches, said releasing bar being free from direct attachment to said latches and coöperating therewith to secure a limited lost motion whereby the second stay is free to flex or bend and the latches are adapted to conform thereto without being acted upon by said releasing bar to free the studs from the keepers or from the latches.



2. In a fastener, the combination with a stay having studs, a flexible second stay, and keepers on said second stay, of latches free from direct attachment to the keepers and pivoted to the second stay, whereby the latches are adapted to conform to the bending or flexing movements of the second stay while operating to retain the studs within the keepers, and a releasing bar free from direct attachment to said latches to secure a limited lost motion between said bar and the latches so as to retain the releasing bar in operative relation to said latches.

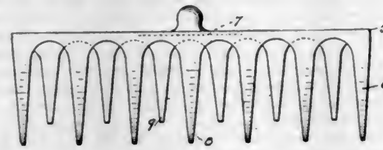
3. In a fastener, the combination with a flexible stay and keepers provided with slots which extend through the ends thereof distant from the stay, of latches each pivoted to said stay and free from attachment to the keeper with which the latch is associated, means for retaining each latch in a position to close the open end of the slot of said keeper with which the latch coöperates, and a flexible releasing member slidable with respect to the stay, said releasing member having operating means free from direct attachment to the latches and adapted to operate said latches simultaneously by a movement in one direction of said releasing member.

4. In a fastener of the class described, a stay provided interiorly thereof with a substantially continuous chamber, and a plurality of chambered keepers positioned exteriorly to said stay, the chambers of said keepers being in substantial register with said chamber of the stay, combined with disconnected latches incased partially within the chamber of the stay and each latch being incased partially within a chamber of one of said keepers, and releasing means incased by the stay and coöperating with the incased parts of said latches.

5. In a fastener, the combination of a flexible stay provided with a substantially closed latch-receiving space or chamber, a plurality of keepers each provided with a latch-receiving space or chamber and with a stud-receiving slot, a plurality of latches pivoted to the stay, said latches being substantially incased within the space of the stay and the space of the keepers, and a releasing member incased also by the stay and coöperating with the latches.

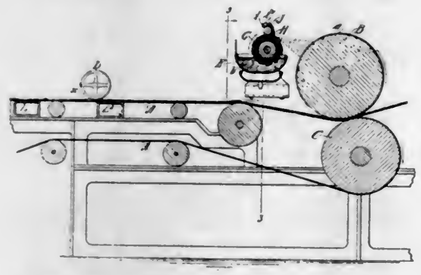
[Claims 6 to 15 not printed in the Gazette.]

1,191,911. RAKE. JAMES RITCHIE, New York, N. Y. Filed July 19, 1915. Serial No. 779,999. (Cl. 55—114.)



In a rake head, a body plate, a plurality of raking teeth extending from the same side of the body plate at opposite edges thereof, the set of teeth upon one edge being shorter than the teeth on the opposite edge, said teeth being disposed at a slight diverging angle to each other, the teeth formed upon one edge of said plate being disposed staggeredly with relation to the teeth formed on the other plate, said teeth having their sides at their bases arcuate and merging into the side edges of said base for reinforcing the connection between said teeth and base, and the body plate being provided with a longitudinally extending slot for facilitating the adjustment of the body plate to a handle.

1,191,912. MANUFACTURE OF PAPER. WILLIS H. SANBURN, Springfield, Mass., assignor to Strathmore Paper Company, Mittineague, Mass., a Corporation of Massachusetts. Filed May 5, 1915. Serial No. 26,177. (Cl. 92—40.)



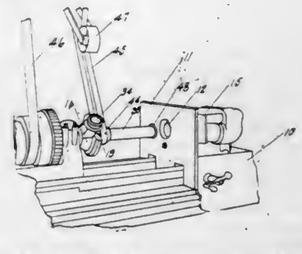
1. The combination with a Fourdrinier machine comprising a dandy roll and the couch rolls, and operable for the production of a web of paper having prominent and depressed portions at and within the upper surface thereof, of a tank for containing a liquid color, arranged alongside and adjacent the upper couch roll and having a rotatively driven cylindrical brush, a portion of which is submerged in the liquid color in the tank, and a blade having an impingement against the bristles of the brush, whereby under the revoluble movement of the latter in conjunction with such blade the liquid color is sprayed onto the surface of the upper couch roll.

2. The combination in a paper machine adapted and operable for the production of a web of paper having prominent and depressed portions at and within one side thereof, of a roll in conjunction with which the uneven surface of the web runs, a tank for containing liquid color arranged adjacent said roll and having a cylindrical rotatively driven brush to be partially submerged in the tank, a blade adjacent an unsubmerged portion of the brush and adapted to have an impingement against the bristles of the brush whereby, under the revoluble movement of the latter in conjunction with such blade, the color taken up by the brush is sprayed upon the surface of the adjacent roll, and further means for imparting a rolling pressure to the paper.

3. The combination in a paper machine, which is adapted and operable for the production of a web of paper having prominent and depressed portions at and within one side thereof, of a roll in conjunction with which the uneven surface of the web runs, a tank for containing liquid color adjacent said roll and having a rotatively driven cylindrical brush partially submerged therein, a blade adjacent the brush and adapted to impinge against the bristles of the latter and operable to cause a spraying of the brush-carried liquid onto the surface of the adjacent roll, means for adjusting the blade whereby the degree of its impingement in relation to the brush may be varied, and further means for imparting rolling pressure to the paper.

4. The combination in a paper machine, which is adapted and operable for the production of a web of paper having prominent and depressed portions at and within one side thereof, of a roll in conjunction with which the uneven surface of the web runs, a tank for containing liquid color adjacent said roll and having a rotatively driven cylindrical brush partially submerged therein, a blade adjacent the brush and adapted to impinge against the bristles of the latter and operable to cause a spraying of the brush-carried liquid onto the surface of the adjacent roll, a rocking-support on which the blade is mounted, means for confining said support against rocking movement, and further means for imparting a rolling pressure to the paper.

1,191,913. CYLINDER-GRINDING ATTACHMENT FOR ENGINE-LATHES. CHARLES H. SCHOLER and FRANK W. NEWTON, Minneapolis, Minn., assignors, by direct and mesne assignments, to Continental Grinder Company, Minneapolis, Minn., a Corporation. Filed Mar. 5, 1915. Serial No. 12,376. (Cl. 51—4.)



1. A cylinder grinding attachment for engine lathes comprising means for supporting said attachment from the lathe spindle, grinding means enveloping said supporting means and rotatable thereon, means to adjust the supporting means laterally at right angles to the lathe spindle, and means to independently drive the grinding means.

2. A cylinder grinding attachment for engine lathes comprising a supporting rod attached to the lathe spindle parallel with the axis of the lathe and adjustable laterally at right angles to said lathe axis, a sleeve rotatable on said supporting rod and having a grinding wheel attached to it, and means for independently driving said sleeve.

3. A cylinder grinding attachment for engine lathes comprising a supporting rod attached to the lathe spindle parallel with the axis of the lathe and adjustable laterally at right angles to said lathe axis, a sleeve rotatable on said supporting rod and having a grinding wheel attached to it, and a pulley on said sleeve for driving it.

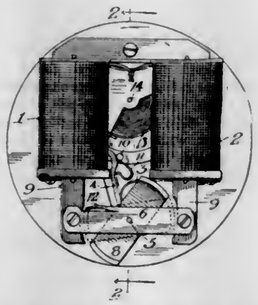
4. A cylinder grinding attachment for engine lathes comprising a head secured to the lathe spindle, a pair of parallel guides on said head in a plane at right angles to the spindle, a plate slidably mounted on said guides, means for adjusting said plate along said guides, a supporting rod parallel with the lathe axis and attached to said plate, a sleeve rotatably mounted upon said rod and carrying a grinding wheel, and means to drive said sleeve.

5. A cylinder grinding attachment for engine lathes comprising a supporting rod attached to the lathe spindle parallel with the axis of the lathe and adjustable laterally at right angles to said lathe axis, a fixed conical bearing on the end of said supporting rod nearest the lathe

spindle, a removable conical bearing on the free end of said supporting rod, a sleeve rotatable about said rod on said conical bearings, a cap carrying a grinding wheel attachable to said sleeve, and means to independently drive the sleeve.

[Claim 6 not printed in the Gazette.]

1,191,914. ELECTRICAL WINDING DEVICE FOR CLOCK-MOVEMENTS. EDWARD M. THOMPSON, Beloit, Wis. Filed Jan. 13, 1914. Serial No. 811,824. (Cl. 58—41.)



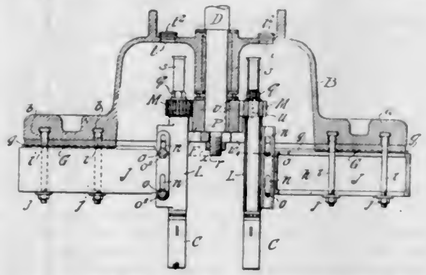
1. In an electrically operated winding device for clocks, and in combination with the clock movements, main wheel and main spring, of a pin carried by the main wheel, an impulse arm, electro-magnets, means operated thereby to move said arm, a flexible contact spring connected at one end to said arm, and bent relative thereto for the free end thereof to extend toward said arm in a direction to intersect the arc of movement of the pin as the main wheel rotates in one direction, and to be engaged by said pin in a wiping contact as the pin approaches the impulse arm, said arm and pin being included in the circuit of said magnets, whereby said circuit is completed to cause the impulse arm to move toward and to engage the pin to impart a rotative impulse to the main wheel in opposition to the action of the main spring and means to restore the impulse arm to its initial or retracted position.

2. In an electrically operated winding device for clocks, and in combination with the clock movement, main wheel and main spring, of a pin carried by the main wheel, an impulse arm, an armature connected thereto, electro-magnets to move said armature, a flexible contact spring connected to said arm, and positioned relative thereto to cause the free end thereof to extend toward the arm from a point in advance of the operating edge of said arm and in a direction inclined to and to intersect the arc of movement of the pin as the main wheel rotates in one direction, and to be engaged by said pin in a wiping contact as it moves therealong to approach said impulse arm, said arm and pin being included in the circuit of said magnets, whereby completion of said circuit is insured before the pin reaches the arm, thereby causing the arm to advance toward the pin to engage the same and therethrough to impart a rotative impulse to the main wheel in opposition to the action of the main spring, thereby breaking said circuit, and means to restore the impulse arm to its initial or retracted position.

3. In an electrically operated winding device for clocks, and in combination with the clock movement, main wheel and main spring, of a pin carried by the main wheel, an impulse arm, an armature connected thereto, electro-magnets to move said armature, a flexible contact spring connected at one end to the forward or working edge of said arm and deflected therefrom to permit its free end to extend toward the working edge of said arm and in a direction to intersect the arc of movement of said pin as the main wheel rotates under the influence of the main spring, said spring and arm being included in the circuit of said magnets, the contact of said spring and pin operating to complete said circuit to cause the arm to advance toward said pin and to engage the same, and therethrough to impart a rotative impulse to the main wheel against the action of the main spring, the impulse arm and pin moving in intersecting arcs whereby in its impulse movement the arm moves past said pin and in a constantly changing point of contact therewith, the said circuit being broken between the arm and pin when these members separate in the impulse movements thereof, and at a point on the arm and pin removed from the initial contacts thereof.

4. In an electrically operated winding device for clocks, and in combination with the clock movement, main wheel and main spring, of a pin carried by the main wheel, a pivotally mounted impulse arm having its free end arranged to engage said pin to impart a rotative impulse to the main wheel against the action of the main spring when said arm is rocked, an armature connected to said arm, electro-magnets between the poles of which said armature operates, said arm and pin being included in the circuit of said magnets, a flexible contact spring carried by said arm and having its free end deflected to extend across the path of the pin when moved by the main spring, and toward that edge of said arm which engages the pin, the axes of said arm and main wheel being out of line with each other, the contact of the pin and flexible spring operating to close the magnet circuit to actuate said armature thereby locking the free end of the arm toward the pin to engage the latter, the continued forward rocking movement of said arm causing a shifting of the point of contact of said arm and pin till the latter leaves the arm and breaks said circuit, and a spring engaging said arm to restore the latter to initial position.

1,191,915. DRILLING-MACHINE. ROBERT B. WEAVER, Detroit, Mich., assignor to Bausch Machine Tool Company, Springfield, Mass., a Corporation of Massachusetts. Filed Sept. 15, 1913. Serial No. 789,737. (Cl. 77—24.)



1. In a drilling machine, in combination, a hollow downwardly opening non rotative head having a driving spindle entered centrally therethrough and provided with a gear wheel, a plurality of drill spindle supports engaged under and with the circular lower portion of said head and individually bodily circumferentially adjustable thereabout, means for restraining the drill spindle supports in relations radial to the central driving spindle, means for the individual confinement of the supports in their circumferentially adjusted positions relatively to the head, and drill spindles carried by the supports having gear wheels thereon in mesh with the gear wheel on the driving spindle.

2. In a drilling machine, in combination, a hollow downwardly opening non rotative head having a driving spindle entered centrally therethrough which is provided with a gear wheel, a plurality of drill spindle supports engaged under and with the circular lower portion of said head which are individually bodily circumferentially adjustable therearound and also radially adjustable relatively thereto, means for restraining the drill spindle supports in relations radial to the central driving spindle, means for the individual confinement of the supports in their adjusted positions relatively to the head, and drill spindles carried by the supports having gear wheels thereon in mesh with the gear wheel on the driving spindle.

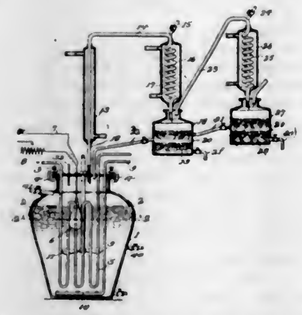
3. In a drilling machine, in combination, a hollow downwardly open feed head having a driving spindle entered centrally therewithin which is provided with a gear wheel, a plurality of plates provided at the underside of the marginal portion of the downwardly opening head,—each plate and such head portion having the one an arc shaped rib and the other a correspondingly curved groove for the circumferentially adjustable engagement therein of the rib,—means for the confinement of each plate in its circumferential adjustment relatively to the head as controlled by said rib and groove engagement, members carried by said plates, and drill carrying spindles which are each provided with a gear wheel in mesh with the driving-spindle gear-wheel.

4. In a drilling machine, in combination, a hollow downwardly open feed head having a driving spindle entered centrally therewithin which is provided with a gear wheel, a plurality of plates provided at the underside of the marginal portion of the downwardly opening head,—each plate and such head portion having the one an arc shaped rib and the other a correspondingly curved groove for the circumferentially adjustable engagement therein of the rib,—means for the confinement of each plate in its circumferential adjustment relatively to the head as controlled by said rib and groove engagement, members carried by said plates, and adjustable relatively thereto on lines radially of the head, and carrying drill spindles which are each provided with a gear wheel in mesh with the driving-spindle gear-wheel.

5. In a drilling machine, in combination, a hollow downwardly open feed head having a driving spindle entered centrally therewithin which is provided with a gear wheel, a plurality of plates provided at the underside of the marginal portion of the downwardly opening head; and each plate and such head portion having the one an arc shaped rib and the other a correspondingly curved groove for the adjustable engagement therein of the rib, bolts engaging the plates and head, for the confinement of the former on the latter, members carried by said plates having drill spindles which are each provided with a gear wheel in mesh with the driving spindle gear wheel.

[Claims 6 to 13 not printed in the Gazette.]

1,191,916. PROCESS OF AND APPARATUS FOR CHLORINATING. BENJAMIN T. BROOKS, HARRY ESSEX, and DILLON F. SMITH, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Dec. 8, 1915. Serial No. 65,826. (Cl. 23—24.)



1. The process of chlorinating organic materials wherein a liquid body of such material is exposed to irradiation at one end by a source of actinic light while chlorin is introduced at the other end in such manner as to pass toward the illuminated end.

2. The process of chlorinating organic materials which comprises placing a body of such material in liquid form in an opaque container, irradiating the upper end of the body of liquid by a source of actinic light and passing chlorin into the lower end of the container.

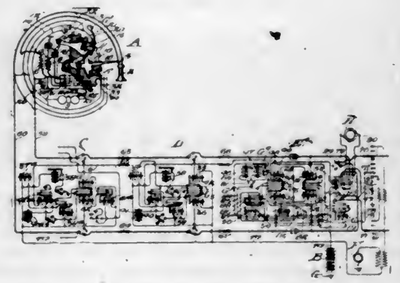
3. The process of chlorinating gasolene fractions which comprises placing a body of such gasolene fractions in an opaque container, irradiating the upper end of the body of such gasolene fraction by a source of actinic light and passing chlorin into the lower end of the container.

4. In the chlorination of organic liquids the process which comprises establishing and maintaining a body of such liquid, illuminating one end by means of actinic light, introducing chlorin at the other end and producing a progressive movement of such liquid from the point of chlorin introduction to the point of illumination.

5. In the chlorination of organic liquids the process which comprises establishing and maintaining a vertical body of such liquid in a suitable opaque container, illuminating the upper end of the body by actinic light, introducing chlorin gas into the lower end and stirring in such manner as to bring chlorin solution upwardly toward the light.

[Claims 6 to 14 not printed in the Gazette.]

1,191,917. TELEPHONE TRUNKING AND SUPERVISORY SYSTEM. WILSON L. CAMPBELL, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed Feb. 26, 1907. Serial No. 359,406. (Cl. 179—27.)



1. A telephone system comprising a special service line, a plurality of operators' positions on said line, automatic means by which a calling subscriber extends connection to said line, and a switch at one position for transferring incoming calls to another position.

2. A telephone system comprising a special service line, automatic means by which a calling subscriber extends connection to said line, a plurality of operators' positions on said line, and one or more switching devices by which each operator, except the last, may transfer incoming calls to the next operator.

3. A telephone system comprising a special service line, a connector adapted to make connection with said line, automatic means for trunking a calling subscriber into connection with said connector, means by which the subscriber controls the connector to establish connection with the special service line, a plurality of operators' positions on said line, and means for transferring incoming calls from one position to another.

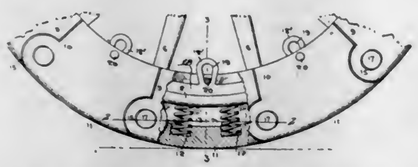
4. In a telephone system, the combination of a special service line, a plurality of operators' positions on said line, means by which each operator, except the last, may direct the incoming calls to the next operator, an automatic connector adapted to connect with said line, automatic means for trunking a calling subscriber into connection with said connector, and means by which the subscriber controls the connector to complete connection with the said line.

5. A telephone system comprising a special service line, a relay having two windings one of which is normally bridged across the said line, a battery, a local circuit including said battery and the other winding of the relay, said relay controlling said local circuit, circuit controlling means by which the calling subscriber projects current onto the line to initially energize said relay, and automatic

progressively movable switching apparatus by which the calling subscriber extends connection to said line prior to the energizing of the relay.

[Claims 6 to 23 not printed in the Gazette.]

1,191,918. TIRE FOR VEHICLES. JOHN WILLIAM COOK, Miami, Fla., assignor of one-third to J. L. Megathlin, Miami, Fla. Filed May 6, 1915. Serial No. 26,250. (Cl. 152—8.)



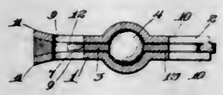
1. In combination, spokes, a rim, ring plates on opposite sides of the spokes and rim, having oval-shaped slots, U-shaped tire sections having their sides on the outsides of said ring plates, springs between the tire sections and the rim, and bolts passing through the sides of the tire sections, and through the oval-shaped slots in the ring plates and connecting the sides of the tire sections with the ring plates.

2. In combination, spokes, a rim, ring plates on opposite sides of the spokes, having oval-shaped slots, a metal ring secured on the outside of the rim and having inturned edges, U-shaped tire sections having their sides on the outsides of said ring plates, springs between the tire sections and the metal ring, and bolts passing through the sides of the tire sections and through the oval-shaped slots in the ring plates, connecting the sides of the tire sections with the ring plates.

3. In combination, spokes, a rim, ring plates on opposite sides of the rim and having oval-shaped slots, tire sections pivoted together end to end, springs between the tire sections and the rim, and bolts passing through the tire sections and through the oval-shaped slots in the ring plates for slidably connecting the tire sections with the ring plates.

4. In combination, spokes, a rim, ring plates on opposite sides of the rim and having oval-shaped slots, tire sections pivoted together end to end, springs between the tire sections and the rim, means upon said rim and said tire sections for preventing casual displacement of the springs, and bolts passing through the tire sections and through the oval-shaped slots in the ring plates for slidably connecting the tire sections with the ring plates.

1,191,919. FUSIBLE LINK. WILLIAM W. HAWKINS and JOHN M. DUNCAN, Philadelphia, Pa. Filed Nov. 13, 1915. Serial No. 61,216. (Cl. 236—16.)



1. A fusible link, comprising three plates located side by side and soldered together, the outside plates having registering openings at one end of the link, the intermediate plate having an opening at the other end of the link, and a ball coupling the three plates together and tending to force the outside plates away from the intermediate plate when the plates are moved longitudinally relative to each other, substantially as described.

2. A fusible link, comprising three plates located side by side and soldered together, the outside plates having registering openings at one end of the link, the intermediate plate having an opening at the other end of the link, said intermediate plate having an opening therein, said outside plates having sockets registering with the opening, and a ball in said opening and sockets, substantially as described.

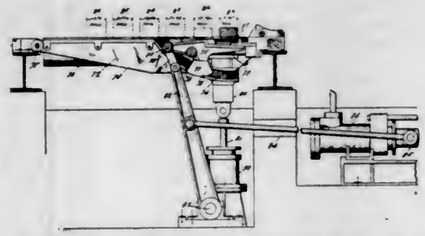
3. A fusible link consisting of three elements held together by fusible solder, the intermediate element having an opening therein, the outside elements having sockets therein, and a ball projecting through the opening and into both sockets, substantially as described.

4. A fusible link comprising three plates located side by side, and said plates held together by fusible solder, the intermediate plate having a central opening, the outside plates having central sockets, and a ball projecting through the opening and into both sockets, substantially as described.

5. A fusible link, comprising three plates located side by side, the intermediate plate having an opening therein, the outside plates having sockets therein, a ball located in the opening and projecting into both of said sockets, and fusible solder interposed between the links and between the ball and the outside links, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,191,920. BAR-MILL. CARL W. A. KOELKEBECK, Pittsburgh, Pa., assignor to The National Roll & Foundry Company, Avonmore, Pa., a Corporation of Ohio. Filed Jan. 10, 1916. Serial No. 71,162. (Cl. 80—48.)



1. The combination, with the receiving table of a rolling mill, of a bar turner comprising a track structure arranged substantially parallel with the rolls, a vertically swinging turner mounted in said track structure and cooperating therewith to simultaneously swing and slide to engage and turn a bar upon the table, and means for simultaneously swinging the turner vertically and for shifting the same in the track structure in the direction opposite to the lateral shifting of the bar material, whereby the bar material may be turned through an angle of 180° with sufficient lateral shifting to register with a new pass of the rolls.

2. The combination, with the receiving table of a rolling mill, of a bar turner comprising a track structure arranged substantially parallel with the rolls, a vertically swinging turner mounted in said track structure and cooperating therewith to simultaneously swing and slide to engage and turn a bar upon the table, means for vertically swinging said track structure, and means for simultaneously swinging the turner vertically and for shifting the same in the track structure in the direction opposite to the lateral shifting of the bar material, whereby the bar material may be turned through an angle of 180° with sufficient lateral shifting to register with a new pass of the rolls.

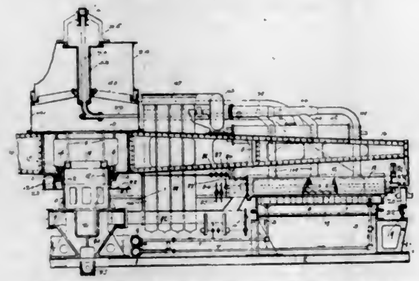
3. The combination, with the receiving table of a rolling mill, of a bar turner comprising a track structure, a turner mounted in said track structure and coöperating therewith to simultaneously swing and slide to engage and turn a bar upon the table, means for vertically swinging said track structure, and means for shifting the turner in said track structure.

4. The combination, with the receiving table of a rolling mill, of a bar turner comprising a track structure, a turner mounted in said track structure and coöperating therewith to simultaneously swing and slide to engage and turn a bar upon the table, said turner having its pivot support shifted laterally beneath the turning bar, and means for shifting the turner in said track structure.

5. The combination with the receiving table of a rolling mill, of a track structure extending transversely of the table and provided with a pair of tracks, a swinging turner provided with a pair of pivots arranged each to traverse one of said tracks and also provided with a bar cradle, and means for shifting said turner along said tracks whereby the turner is elevated into engagement with material lying upon the table and swung to turn said material over, the said pivots shifting laterally beneath and in a direction opposite to the movement of such material.

[Claims 6 to 14 not printed in the Gazette.]

1,191,921. DRYING MECHANISM. WILLIAM R. MACKLIND, Cleveland, Ohio, assignor to George A. Martin, trustee, Cleveland, Ohio. Filed Aug. 10, 1912. Serial No. 714,323. (Cl. 127—9.)



1. In drying mechanism, the combination of an annular drying table; a column centrally disposed with respect to said table; a vertically removable sleeve mounted in such upper column end; a frame comprising a central spider surrounding said sleeve and radial arms extending over said table; said spider being rotatably supported upon said column; and material feeding and removing means carried by said frame in operative relation to said table.

2. In drying mechanism, the combination of an annular drying table; a column centrally disposed with respect to said table; a vertically removable sleeve mounted in such upper column end; a frame comprising a central spider surrounding said sleeve and radial arms extending over said table; means rotatably supporting said spider from said column; and material feeding and removing means carried by said frame in operative relation to said table.

3. In drying mechanism, the combination of an annular drying table; a column centrally disposed with respect to said table and laterally flanged at its upper end; a vertically removable sleeve mounted in such upper column-end; a frame comprising a central spider surrounding said sleeve and radial arms extending over said table; ball-bearings interposed between said spider and the flange on said column, whereby said frame is rotatably supported on the latter; and material feeding and removing means carried by said frame in operative relation to said table.

4. In drying mechanism, the combination of an annular drying table; a column centrally disposed with respect to said table and laterally flanged at its upper end; a vertically removable sleeve mounted in such upper column-end; a frame comprising a central spider surrounding said sleeve and radial arms extending over said table; ball-bearings interposed between said spider and the flange on said column, whereby said frame is rotatably supported on the latter; roller bearings interposed between said spider and said sleeve; and material feeding and removing means carried by said frame in operative relation to said table.

5. In drying mechanism, the combination of an annular drying table; a frame rotatably supported on said table; material feeding and removing means carried by said frame in operative relation to said table; electric motors for operating said feeding and removing means; and electric connections for said motors including circular trolley-tracks at the center of said table and trolleys carried by said frame and contacting with said tracks.

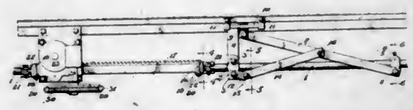
[Claims 6 to 18 not printed in the Gazette.]

1,191,922. STEP-LADDER. WILLIAM T. PYLE, Pekin, Ill., assignor to Safety Folding Ladder Company, Pekin, Ill., a Corporation of Illinois. Filed Jan. 23, 1915. Serial No. 3,994. (Cl. 228—16.)



In a step ladder, the combination of a pair of legs each consisting of a pair of spaced members, a series of steps pivoted at their ends between said members, a bolt at each end of and constituting the pivots for one of the steps and extending through the same and the said members, a prop leg for each of the first named legs, a hinge secured to each, the said bolt also extending through said hinge, the hinges and their prop legs adapted to swing laterally upon said bolts, and cross rods connected at opposite ends to opposite prop legs.

1,191,923. WINDOW-SASH OPERATOR. OLIVER H. QUERNHEIM and HECTOR NEUHOFF, Jr., St. Louis, Mo., assignors to Metallic Sash-Operator Company Corporation, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 23, 1916. Serial No. 79,852. (Cl. 16—28.)



1. A window sash operating device comprising a longitudinally movable shaft, a rack in connection with said shaft and relative to which said shaft is revoluble, means preventing relative longitudinal movement of said rack and shaft, mechanism for actuating said rack and thereby said shaft longitudinally, and connections between said shaft and the window sash whereby the window sash will be opened and closed as an incident to the longitudinal movement of said shaft in opposite directions.

2. A window sash operating device comprising a shaft, bearings supporting said shaft for longitudinal and rocking movements, a rack, means connecting said rack and said shaft in such manner that they are relatively fixed as to longitudinal movement and enabling the shaft to rotate relative to the rack, gearing for operating said rack longitudinally, means for operating said gearing, and connections between said shaft and the window sash whereby the sash will be opened and closed as an incident to longitudinal movement of said shaft in opposite directions.

3. A device of the character described comprising a shaft, bearings in which said shaft is supported for longitudinal and rotary movements, connections between said shaft and the window sash whereby the sash will be moved to opened and closed positions by the movement

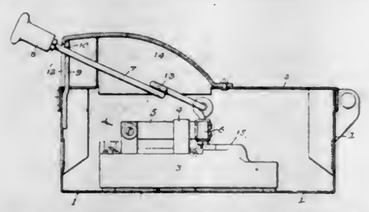
of said shaft in opposite directions and whereby said shaft will be turned in said bearings by the movement of said sash, a rack, devices connecting said rack and said shaft and enabling the shaft to turn relative to the rack, means preventing relative longitudinal movement of said rack and shaft, and mechanism for operating said rack longitudinally in opposite directions.

4. A device of the character described comprising a shaft, bearings supporting said shaft for longitudinal and rotary movements, a rack, devices connecting said rack with said shaft and enabling said shaft to turn relative to said rack, elements preventing longitudinal movement of said rack relative to said shaft, mechanism for actuating said rack longitudinally in opposite directions and effective to hold said rack in any of its longitudinal adjustments, a link connecting said shaft with the window sash and being effective to raise and lower the window sash by the longitudinal movement of the shaft and to turn the shaft by raising and lowering of the sash, and additional links coöperating with the first-mentioned one.

5. A device of the character described comprising a shaft, bearings in which said shaft is supported for longitudinal and rotary movements, a link connecting said shaft with the window sash and arranged to raise and lower the window sash and to turn the shaft as an incident to longitudinal movement of the shaft, a rack, elements holding the rack in connection with the shaft in such manner that the rack and shaft are fixed as to longitudinal movement, and enabling the shaft to rotate relative to the rack, gearing for actuating said rack, and a device for operating said gearing and holding it and thereby the shaft in different positions.

[Claims 6 to 11 not printed in the Gazette.]

1,191,924. ELECTRIC SWITCH. JAMES F. BURNS, Philadelphia, Pa. Filed Nov. 10, 1915. Serial No. 60,740. (Cl. 175—282.)



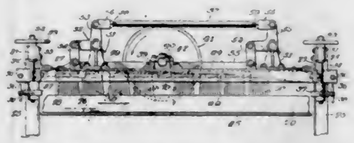
1. In an electric switch, a box, a switch mechanism within said box, a hinged cover forming, with said box, a complete inclosing casing for said switch mechanism, an operating rod for said switch mechanism projecting through said cover, said cover being slotted to permit the raising and lowering of the same.

2. In an electric switch, a box, switch mechanism within said box, a rod secured at one end to said switch mechanism and at the opposite end projecting beyond a wall of said box, a guide for said rod, said guide projecting upwardly from said wall, a hinged cover for said box having a chamber into which said guide projects, a wall of said cover being slotted to permit the opening and closing of the same.

3. An electric switch with an inclosing casing, a switch mechanism within said casing, including a hinged contact member adapted, upon the opening of said switch, to swing toward a wall of said casing, an operating rod secured to said hinged contact member and extending through said wall, means on said wall for maintaining said rod in operative position, and a hinged cover on the casing having a slot in that portion which passes over the operating rod.

4. An electric switch with an inclosing casing, a switch mechanism within said casing, an operating rod for said switch mechanism, said rod extending through a wall of said casing, a lug on said wall for supporting said operating rod, a stop on said operating rod arranged to cooperate with said lug for limiting the motion of the rod, and a hinged cover on the casing having a slot through which the operating rod extends, said slot permitting the opening and closing of the cover.

1,191,925. BRICKMAKING-MACHINE. FRANK W. BUTTERWORTH and GRANT HOLMES, Danville, Ill., assignors to Western Brick Company, Danville, Ill., a Limited Partnership. Filed Mar. 22, 1916. Serial No. 85,788. (Cl. 25—1.)



1. In a brick-making machine, the combination of a conveyer adapted to carry a ribbon of ceramic material through said machine, a stippling brush adapted to engage the surface of said ribbon, means for carrying said brush, an eccentric adapted to move said brush-carrying means toward and away from the surface of said ribbon, and means for automatically keeping said brush-carrying means in alinement with respect to said ribbon, said alining means comprising mechanism for selectively changing the angular position of said brush-carrying means with relation to the surface of said ribbon.

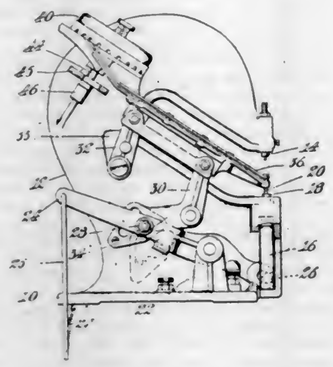
2. In a brick-making machine, the combination of a conveyer adapted to carry a ribbon of ceramic material through said machine, a stippling brush adapted to engage the surface of said ribbon, a plate carrying said brush, an eccentric adapted to move said plate and brush toward and away from said ribbon, a pair of bell-crank levers having connection with said plate near the ends thereof, and an equalizing rod extending between said levers, whereby said plate is kept in alinement with respect to said ribbon upon actuation of said plate by said eccentric.

3. In a brick-making machine, the combination of a conveyer adapted to carry a ribbon of ceramic material through said machine, a stippling brush adapted to engage the surface of said ribbon, a plate carrying said brush, an eccentric adapted to move said plate and brush toward and away from said ribbon, a pair of bell-crank levers having connection with said plate near the ends thereof, and an equalizing rod extending between said levers, said equalizing rod being adjustable to selectively move the connected arms of said bell-crank levers toward or away from each other, whereby the angular alinement of said plate with respect to said ribbon may be adjusted and said plate is automatically maintained in its adjusted alinement upon actuation of said plate by said eccentric.

4. In a brick-making machine, the combination of a conveyer adapted to carry a ribbon of ceramic material through said machine, a stippling brush adapted to engage the surface of said ribbon, means for carrying said brush, an eccentric adapted to move said brush-carrying means toward and away from the surface of said ribbon, means for automatically keeping said brush-carrying means in alinement with respect to said ribbon, and means for adjusting the position of said brush-carrying means and its associated eccentric with relation to the surface of said ribbon.

5. In a brick-making machine, the combination of a conveyer adapted to carry a ribbon of ceramic material through said machine, a stippling brush having bristles adapted to engage the surface of said ribbon, means for carrying said brush, a yoke, a shaft carried by said yoke, said shaft having an eccentric portion thereon, a bearing on said brush-carrying means and engaged by the eccentric portion of said shaft, means for adjusting the position of said yoke toward and away from said ribbon, means for rotating said shaft, whereby said brush-carrying means will be actuated toward and away from said ribbon, and means for maintaining said brush-carrying means in alinement with respect to the surface of said ribbon.

1,191,926. MACHINE FOR SETTING EYELETS OR SIMILAR FASTENERS. DANIEL W. COLBY, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 12, 1911. Serial No. 654,241. (Cl. 218—15.)



1. A machine for setting fasteners having, in combination, a reciprocatory setting die at the front of the machine, a raceway supported near its forward end by an angular lever having one arm extending toward the rear and provided with a closed cam, an actuating lever for the die having a coöperating cam roller located at the rear of its fulcrum and projecting into the cam, and adjustable stops for limiting the extreme positions of the actuating lever.

2. A machine for setting D-shaped eyelets, having, in combination, a raceway extending from the back toward the front of the machine and having its delivery end curved transversely whereby D-shaped eyelets may be presented with the flat side of each eyelet disposed substantially at right angles to the length of the raceway as a whole, coöperating setting dies of D-shaped cross section disposed with their flat sides also substantially at right angles to the length of the raceway, and a yielding stop arranged to engage the barrel of the endmost D-shaped eyelet in the raceway.

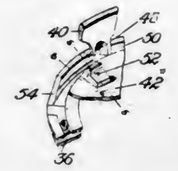
3. A machine for setting fasteners having, in combination, a reciprocatory setting die, a raceway mounted on pivoted supporting members one of which comprises an angular lever having a closed cam formed in its end remote from the raceway, said cam having dissimilar oppositely disposed surfaces for imparting movements in opposite directions and of different timing to the raceway during the uniform movements of the setting die, and a movable roller for moving the cam.

4. A machine for setting fasteners, having, in combination, a frame, a reciprocatory setting die mounted therein, an ear arranged parallel with one side of the frame, an actuating lever pivotally mounted between said frame and ear and connected at its forward end to said setting die and having an offset portion in its rear end, a movable raceway, and a cam connecting said lever and raceway at the rear of the axis of the lever and in the offset portion thereof.

5. A machine for setting D-shaped eyelets, having, in combination, coöperating D-shaped setting dies disposed with their flat sides toward the front of the machine, a raceway extending from the back toward the front of the machine and having its delivery end curved transversely of the machine and opening toward the front whereby a D-shaped eyelet may be presented with its flat side toward the front, and a yielding stop extending over the barrel of the endmost eyelet in the raceway and engaging its flat side.

[Claim 6 not printed in the Gazette.]

1,191,927. ASSORTING AND DELIVERING MECHANISM. DANIEL W. COLBY, deceased, Boston, Mass., by Daniel L. Smith, executor, Needham, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 12, 1911, Serial No. 654,241. Divided and this application filed July 10, 1915. Serial No. 39,207. (Cl. 218—15.1.)



1. Eyelet assorting mechanism, including a base plate with a depressed track therein, means for carrying eyelets resting upon their sides along the track, a raceway communicating with said track, and means for tipping the eyelets so that they rest on their flanges when they arrive at the raceway.

2. Eyelet assorting mechanism, including a base plate having a circular shoulder therein, a raceway communicating with the base plate outside said shoulder, and a carrier having eyelet receiving recesses opening inwardly for moving eyelets over said base plate with their flanges abutting against said shoulder.

3. Eyelet assorting mechanism, including a base plate having a track, a raceway merging into said track, and a section between said raceway and track shaped to turn the eyelets endwise in passing from one to the other and before they reach the raceway.

4. Eyelet assorting mechanism, including a base plate having a circular track therein, a cylindrical casing arranged for rotation with its lower edge resting on said track, the casing having recesses opening radially in its lower edge, the walls of which taper from the inner wall of said casing, and a raceway communicating with said track.

5. Fastener assorting mechanism, including a base plate having a circular shoulder therein, a cylindrical casing arranged for rotation upon said base plate with its inner wall concentric with, and outside, said circular shoulder, and a raceway communicating with said base plate outside said shoulder.

[Claims 6 to 10 not printed in the Gazette.]

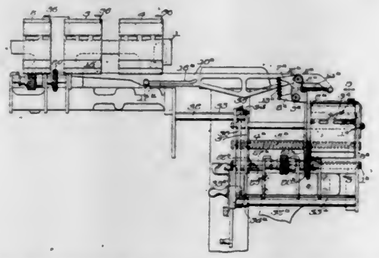
1,191,928. CALCULATING-MACHINE. ARTHUR F. POOLE, Chicago, Ill., assignor to Wahl Adding Machine Co., Wilmington, Del., a Corporation of Delaware. Original application filed Sept. 16, 1912, Serial No. 720,619. Divided and this application filed Oct. 6, 1913. Serial No. 793,636. (Cl. 235—59.)

1. In a calculating machine of the type described the combination of a columnar totalizer, a universal totalizer adapted to be intermittently connected to said columnar totalizer, and means between said universal and columnar totalizers whereby the shock of connection is diminished.

2. In a calculating machine of the type described the combination of a decimal carriage having a series of connecting locations, a second decimal carriage adapted to be intermittently connected to said first decimal carriage, and elastic connecting means between said first and second carriages whereby the shock of connection of said second carriage with said first carriage is diminished.

3. In a calculating machine of the type described the combination of a decimal carriage having a series of ad-

justable connecting locations, a second decimal carriage adapted to be intermittently connected to said first decimal carriage, and elastic connecting means between said first and second carriage whereby the shock of engagement of said second carriage with said first carriage is diminished.

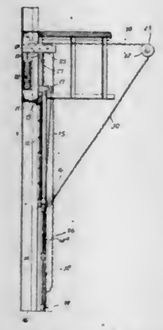


4. In a calculating machine of the type described the combination of a series of columnar totalizers, a universal totalizer adapted to be intermittently connected to any of said columnar totalizers and elastic connecting means between said columnar totalizer and said universal totalizer whereby the shock of engagement is diminished.

5. In a calculating machine of the type described the combination of a series of columnar totalizers having connecting locations, a universal totalizer, a connecting bar adapted to engage said connecting locations, and an elastic mounting for said connecting bar on said universal totalizer.

[Claims 6 to 26 not printed in the Gazette.]

1,191,929. TWO-LIFT DOOR. ARTHUR T. PRESCOTT, East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y., a Corporation of New York. Filed Feb. 21, 1916. Serial No. 79,659. (Cl. 20—16.)



1. A door comprising an upper section pivotally supported from above, a lower section adapted to slide upon the upper section, a flexible hoisting member adapted to successively raise the lower section upon the upper section and swing the upper section about its pivotal support, and means on the upper section for guiding the flexible member when the lower section is sliding upon the upper, said guide means constituting a point of attachment between the flexible member and the door while the upper section is being swung about its support.

2. A door comprising an upper section pivotally supported from above the door opening and having vertical guideways near its edges, a lower section adapted to slide in the guideways upon the upper section and having projections near its lower corners extending beyond the guideways and adapted to engage the lower end of the guideways when the doors are overlapped, guide pulleys on the upper section near its lower corners, and flexible hoisting members extending over the guide pulleys and attached to the aforesaid projections on the lower sections.

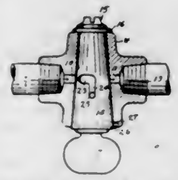
3. A door comprising an upper section pivotally supported from above the door opening and having vertical guideways near its edges, a lower section adapted to slide in the guideways upon the upper section and having projections near its lower corners extending beyond the guideways and adapted to engage the lower end of the guideways when the doors are overlapped, guide pulleys on the upper section near its lower corners, stationary guide sheaves above the door opening, and flexible hoisting members extending over the guide sheaves on the upper section, then over the stationary guide sheaves and secured to the projections of the lower section.

4. A door comprising an upper section pivotally supported from above the door opening and having guideways, a lower section adapted to slide in the guideways on the upper section, stationary guide pulleys above the door pivot, stationary guide pulleys spaced inwardly a distance substantially equal to the length of the pivotally supported door section, a guide pulley near the bottom of the upper section, a counterweight pulley, a counterweight, a flexible member extending from the counterweight over the counterweight pulley, then over the spaced pulley, around the pulley on the upper door section and connected to exert a pull upon the lower section to cause it to slide upward on the upper section and upon the upper section causing it to swing inwardly about its pivotal support.

5. A door comprising an upper section pivotally suspended from above the door opening and having guideways, a lower section adapted to slide in the guideways on the upper section, stationary guide pulleys above the door pivot, stationary guide pulleys spaced inwardly a distance substantially equal to the length of the pivoted door section, a counterweight pulley, a counterweight, a flexible member extending from the counterweight over the counterweight pulley, then over the spaced pulley, around the pulley on the upper door section, over the stationary pulley above the door pivot and downwardly to connect with the bottom of the lower section.

[Claims 6 to 9 not printed in the Gazette.]

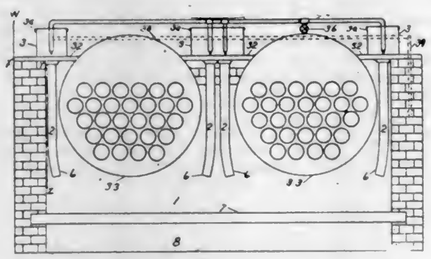
1,191,930. GAS-VALVE. MILES A. TERRY, Middleport, Ohio, assignor of one-half to Maynard L. Davis, Middleport, Ohio. Filed Oct. 29, 1915. Serial No. 58,575. (Cl. 67—115.)



1. In a valve of the kind described, the combination of a housing having an inlet port and an outlet port alined therewith, a valve provided with a chamber and with alined inlet and outlet ports for this chamber and fitted for rotation to said housing, a plug movably fitted to said chamber and adapted to be actuated by the gas pressure to control passage between the ports in the valve, a duct in the valve open to the lower part of the chamber therein, a groove in the outside of the valve between the ports thereof which communicates with said duct, manipulating means permitting rotation of the valve to aline its inlet port or the groove in its outside with the inlet port in the valve-housing, and means to limit the rotation of the valve so that when in closed position, the groove in the valve is in open communication with this inlet port in the valve-housing, to admit gas to the chamber in the valve for the purpose of acting against the underside of the plug therein.

2. In a valve of the kind described, the combination of a housing having an inlet port and an outlet port alined therewith, a valve having a cylindrical chamber with alined inlet and outlet ports therefor and fitted for rotation to said housing and in a manner that when the valve is open, the inlet ports are alined on one side and aline with the alined outlet ports on the other side and form a direct and straight passage for the gas, a plug movably fitted to the chamber in the valve so as to have a vertical movement therein subject to control by the pressure of the gas and whereby this plug is held above the ports in the valve while the gas passes below its lower end through the alined ports and from which position it is adapted to drop to close the ports in the valve when not sustained by the gas pressure, a duct leading to the chamber in the valve and opening into the same at a point below the lowermost position of the plug, a groove in the outside of the valve between the ports in the same and a channel whereby this groove communicates with the duct, said groove being so positioned that closing of the valve places it in open communication with the inlet port in the valve-housing so as to permit gas to pass through it and through the channel and duct mentioned, into the chamber in the valve below the plug therein, for the purpose of raising the same.

1,191,931. STEAM-BOILER FURNACE AND AN APPARATUS FOR FEEDING AIR TO FURNACES. FRANK H. DILLON and MARCUS L. HENDERSON, Rock Island, Ill., assignors of one-third to Ely & Bush, a Copartnership composed of Nathan D. Ely and Arthur G. Bush, Davenport, Iowa. Continuation in part of application Serial No. 779,216, filed July 12, 1913. This application filed Dec. 9, 1913. Serial No. 805,641. (Cl. 110—60.)



1. In a steam boiler furnace, suitable supports secured at each side of the boiler in the top of the furnace, a series of air tubes seated in each support extending downward to a point a suitable distance above the grate bars, the lower end of each tube being formed to deflect the air current toward the middle of the firebox under the boiler.

2. In a steam boiler furnace, suitable supports secured at each side of the boiler in the top of the furnace, a series of air tubes seated in each support extending downward to a point a suitable distance above the grate bars, and having their lower ends curved inwardly and formed to deflect the air current downward and toward the middle of the grates.

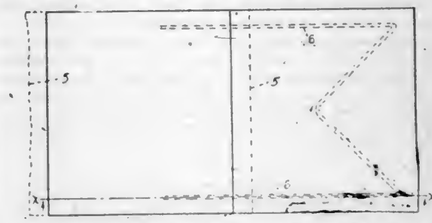
3. In a steam boiler furnace, suitable supports secured at each side of the boiler at the top of the furnace carrying staggered series of air tubes secured therein, the lower end of each air tube being formed to direct the air current downward and toward the middle of the grates.

4. In a steam boiler furnace, suitable supports secured at each side of the boiler in the top of the furnace, each support carrying a series of air tubes secured therein, the tubes of the opposite series being staggeredly arranged, and having the lower ends of the air passage therein curved to deflect the air toward the middle of the grates.

5. In a steam boiler furnace, suitable supports secured in the top of the furnace at each side of the boiler, each support carrying a series of air tubes secured therein and the tubes of the opposite series being staggeredly arranged, and a nozzle formed at the lower end of each tube to deflect the air stream or current toward the middle of the grates.

[Claims 6 to 9 not printed in the Gazette.]

1,191,932. COMPOSITION SHINGLE. JOSEPH C. LOYER and OLIVER M. LOYER, Detroit, Mich. Filed Dec. 27, 1915. Serial No. 68,758. (Cl. 108—8.)



1. A composition shingle comprising a base formed of a cementitious material and an aggregate, and being pliable in character, a tarred paper or felt covering and adhering to its entire lower and a portion of its upper surface, and a metal reinforcement wholly embedded in the cementitious material extending part way of the length of the shingle from the butt end, the uncovered portion only of the shingle being exposed to weather when laid.

2. A composition shingle comprising a base formed of asphaltum, ground cinders or the like, thicker at the butt than at the top end, a tarred paper or felt covering and adhering to its entire lower and a portion of its upper surface, the uncovered portion only being exposed when laid, and a metal reinforcement wholly embedded in the base.

3. A composition shingle comprising a base formed of pliable cementitious material and an aggregate, a tarred paper or felt covering on its entire lower and a portion of its upper surface, the uncovered portion only being exposed when laid, and a metal reinforcement wholly embedded in the base consisting of a wire extending in parallel lines adjacent each longitudinal side of the shingle and a connecting portion near the butt end of the shingle of a form adapted to prevent transverse warping of the shingle.

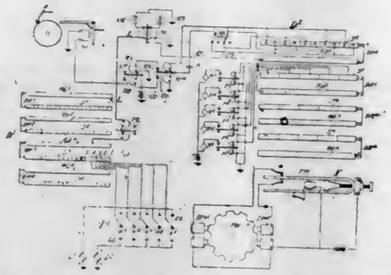
4. A composition shingle comprising a base formed of a pliable cementitious material and an aggregate, a tarred paper or felt covering on its entire lower and a portion of its upper surface, the uncovered portion only being exposed when laid, and a metal reinforcement wholly embedded in the base, the length of which is not less than the length of the exposed portion of the shingle and consisting of a wire extending in parallel lines adjacent each longitudinal side of the shingle, and a connecting portion extending between the parallel portions near the butt end of the shingle along lines out of parallelism with said side portions.

5. A composition shingle comprising a base of pliable cementitious material of a character that hardens after molding, a tarred paper or felt covering on the entire lower and a portion of its upper surface adhering to the base, the tarred paper or felt being embedded in the base on the upper side so that the exposed surface of the base and the upper surface of the felt are in the same plane, and a metal reinforcement embedded in the base.

1,191,933. MEANS FOR SYNCHRONIZING ROTARY DEVICES. GEORGE M. YORKE, New York, N. Y., and GEORGE R. BENJAMIN, Jersey City, N. J., assignors to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Original application filed Jan. 5, 1915, Serial No. 654. Divided and this application filed Aug. 21, 1915. Serial No. 46,642. (Cl. 178—53.)

1. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided

into segments, and a brush for such commutator, means arranged to produce relative motion between said commutator and said brush, a line relay arranged to apply current of alternately opposite sign to said brush in response to signalling impulses in a line circuit, a polar relay having its operating magnet connected to alternate segments of said commutator, and its armature connected to the intermediate segments of said commutator and correcting means controlled by said polar relay and arranged to be operated or to be idle according as the first portion of an impulse transmitted through said commutator to the operating magnet of said polar relay is too brief or is of sufficient length to actuate said polar relay, said correcting means arranged to operate immediately upon failure of such polar relay to operate, the length of such impulses depending upon whether the commutator and brush are or are not in proper phase relation with respect to the operation of said line relay.



2. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided into segments, and a brush for such commutator, means arranged to produce relative motion between said commutator and said brush, a line relay arranged to apply current of alternately opposite sign to said brush in response to signaling impulses in a line circuit, a polar relay having its operating magnet connected to alternate segments of said commutator, and its armature connected to the intermediate segments of said commutator, and correcting means comprising a further relay having an armature and magnet coils arranged to move such armature in opposite directions, one such magnet coil connected to one contact stop of the polar relay, the other to an opposite stop of the polar relay, said further relay arranged to operate immediately upon failure of said polar relay to operate following a current reversal by the line relay.

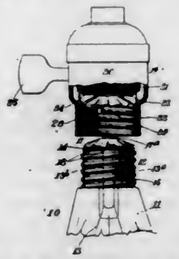
3. In a synchronous telegraph system the combination of a rotary distributer comprising a commutator divided into segments, and a brush for such commutator, means arranged to produce relative motion between said commutator and snid brush, a line relay arranged to apply current of alternately opposite sign to said brush in response to signaling impulses in a line circuit, a polar relay having its operating magnet connected to alternate segments of said commutator, and its armature connected to the intermediate segments of said commutator, and correcting means comprising a further relay having an armature and magnet coils arranged to move such armature in opposite directions, one such magnet coil connected to one contact stop of the polar relay, the other to an opposite stop of the polar relay, said further relay arranged to operate immediately upon failure of said polar relay to operate following a current reversal by the line relay, and a condenser interposed in the circuit connecting the armature of said polar relay and the commutator segments to which that armature is connected by such circuit.

4. In a synchronous telegraph system the combination of two rotary distributers to be operated in synchronism and a line circuit connecting the same, means for transmitting current impulses from the one distributer to the other and for varying such impulses for the transmission of signals, one of said distributers comprising a commutator divided into segments, and a brush for such commutator, and means for maintaining synchronism between said distributers, comprising a line relay arranged to apply current of alternately opposite sign to said brush in response to signaling impulses in the line circuit, a polar relay having its operating magnet connected to alternate segments of said commutator, and its armature connected to intermediate segments of said commutator, and correcting means controlled by said polar relay and arranged to be operated or to be idle according as the first portion of an impulse transmitted through said commutator to the operating magnet of said polar relay is too brief or is of sufficient length to actuate said polar relay, said correcting means arranged to operate immediately upon failure of such polar relay to operate, the length of impulses depending upon whether the commutator and brush are or are not in proper phase relation with respect to the other distributer.

5. In a synchronous telegraph system the combination of two rotary distributers to be operated in synchronism and a line circuit connecting the same, means for transmitting current impulses from the one distributer to the other and for varying such impulses for the transmission of signals, one of said distributers comprising a commutator divided into segments, and a brush for such commutator, and means for maintaining synchronism between said distributers, comprising a line relay arranged to apply current of alternately opposite sign to said brush in response to signaling impulses in the line circuit, a polar relay having its operating magnet connected to alternate segments of said commutator, and its armature connected to the intermediate segments of said commutator, and correcting means comprising a further relay having an armature and magnet coils arranged to move such armature in opposite directions, one such magnet coil connected to one contact stop of the polar relay, the other to the opposite stop of the polar relay, said further relay arranged to operate immediately upon failure of said polar relay to operate following a current reversal by the line relay.

[Claim 6 not printed in the Gazette.]

1,191,934. LOCKING MEANS FOR INCANDESCENT LAMPS. HENRY ALTSHUL, Hartford, Conn. Filed Dec. 27, 1913. Serial No. 808,982. (Cl. 173—356.)



1. The combination with an electric lamp and a socket, of a contact member frangibly secured to one of the terminals of said lamp and comprising locking means, and means within said socket adapted to engage the locking means of said contact member when the lamp is secured to the socket whereby to prevent the removal of the lamp from the socket without detaching said contact member from the terminal, substantially as specified.

2. The combination with an electric lamp and a socket, of a contact member frangibly secured to one of the terminals of said lamp, and a coöperating member within said socket, said contact member and said coöperating member being provided with co-acting locking means for locking the lamp within the socket whereby to prevent the removal of the lamp from the socket without detaching said contact member from the terminal, substantially as specified.

3. The combination with an electric lamp and a socket, of a locking device comprising a contact member frangibly secured to one of the terminals thereof, engageable means on said contact member, and a coöperating locking member secured to said base, engaging means on said locking member adapted to interlock with the engageable means on said frangible member, whereby to prevent the removal of said lamp from said socket without severing said frangible member from said lamp, and said terminal, substantially as specified.

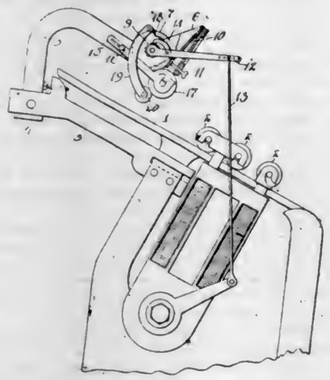
4. The combination with an electric lamp and a socket, of a locking device comprising a contact member frangibly secured to one terminal of said lamp, a series of radial members extending outwardly from said contact member, and a coöperating member secured within said socket, a series of radial members secured to said coöperating member adapted to interlock with the radial members of said contact member whereby to prevent the removal of said lamp from said socket without rupturing the connection between said contact member and the lamp terminal secured thereto, substantially as specified.

5. The combination with an electric lamp and a socket, of a locking device comprising a contact member frangibly secured to one terminal of said lamp, a series of inclined resilient members extending radially outwardly from said contact member, and a coöperating member formed of insulating material secured within said socket and provided with an opening to receive the contact member above specified of said lamp, and a series of inclined radial members adapted to interlock with the radial members of said contact member whereby to prevent the removal of said lamp from said socket without severing said contact member from the lamp terminal connected thereto, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

REISSUES.

14,165. INK-FOUNTAIN. ALTON B. CARTY, Washington, D. C. Filed May 1, 1915. Serial No. 25,299. Original No. 1,076,482, dated Oct. 21, 1913, Serial No. 774,956. (Cl. 101—79.)



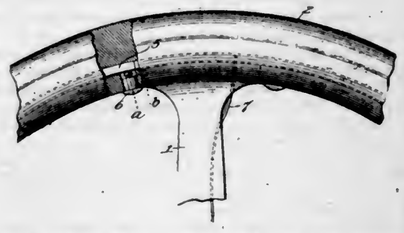
1. In inking means, the combination of an ink plate; a form roller movable thereover; an ink fountain supported above and spaced from the plate and having a metallic roller and means for rotating said roller; a composition roller permanently contacting with the forward lower portion of said metallic roller; a swinging support; and a metallic roller carried in the swinging support and normally contacting with the rear lower portion of the composition roller and movable backwardly by the form roller and arranged to remain in contact with and be rotated by said form roller until the latter passes forwardly under the composition roller that is in permanent contact with the first-named metallic roller.

2. In inking means, the combination of an ink plate; a form roller movable thereover; an ink fountain supported above and spaced from said plate and having a roller and means for rotating said roller; a second roller supported in contact with the forward lower portion of said fountain roller; a swinging support; a third roller carried in said support and normally retained in contact with said second roller, said third roller being movable backwardly from such normal position by said form roller and arranged to remain in contact therewith and be rotated thereby until the same passes forwardly under said second roller.

3. In inking means, the combination of an ink plate; a form roller movable thereover; an ink fountain supported above and spaced from said plate and having a roller and means for rotating said roller; a second roller supported in contact with the forward lower portion of said fountain roller; and a third, swingably supported roller normally contacting with said second roller, said third roller being movable backwardly by said form roller and arranged to remain in rotary contact therewith until the same passes forwardly under said second roller.

4. In inking means, the combination of an ink plate; a form roller movable thereover; an ink fountain supported above and spaced from said plate and having a roller and means for rotating said roller; a second roller supported in contact with the forward lower portion of said fountain roller; a support movable back and forth in the general direction of travel of said form roller; and a third roller carried in said support and normally contacting with said second roller, said third roller being movable backwardly by said form roller and arranged to remain in contact therewith and be rotated thereby until the same passes forwardly under said second roller.

14,166. STEERING-WHEEL. RUDOLPH H. SCHEIBERT, Cincinnati, Ohio, assignor to The Safety Electric Rim Company, Middletown, Ohio, a Corporation of Ohio. Filed June 21, 1915. Serial No. 35,496. Original No. 1,103,438, dated July 14, 1914, Serial No. 795,838. (Cl. 200—27.)



1. A steering-wheel comprising, a rim, arms supporting said rim, a pair of electrical conductors carried by the rim of the wheel and forming portions of a single electric circuit, and a circular series of push-buttons carried by the rim and adapted to be individually operated and to individually place said conductors in electrical communication with each other and close the common electric circuit formed by said pair of conductors, combined substantially as set forth.

2. A steering-wheel comprising, a rim, arms supporting said rim, a pair of electrical conductors carried by the rim of the wheel and forming portions of a single electric circuit, and a circular series of push-buttons disposed upon the interior surface of the rim and adapted to be individually operated and to individually place said conductors in electrical communication with each other and close the common electric circuit formed by said pair of conductors, combined substantially as set forth.

3. A steering-wheel comprising, a rim, arms supporting said rim, a pair of metallic rings embedded within the rim but separated from each other and forming portions of a single electric circuit, electrical conductors connected with said rings, and a circular series of push-buttons carried by the rim and adapted individually to place said conductors in electrical communication with each other and close

the common electric circuit formed by said pair of rings, combined substantially as set forth.

4. A steering-wheel comprising, a rim, arms, a pair of electrical conductors carried by the rim of the wheel and forming portions of a single electric circuit, and a circular series of push-buttons carried by the rim and disposed one at each side of each of the arms, and adapted individually to place said conductors in electrical communication with each other and close the common electric circuit formed by said pair of conductors, combined substantially as set forth.

5. A steering-wheel comprising, a rim, arms supporting said rim, electric conductors carried by the wheel and forming portions of a single electric circuit, and a circular series of push-buttons carried by the wheel and adapted to be individually operated and to individually place said conductors in electrical communication with each other and close the common electric circuit formed by said conductors, combined substantially as set forth.

6. A steering wheel comprising a rim and supporting arms, substantially circular, adjacent electric conductors carried by the wheel and forming portions of a single, normally-open electric circuit, and a series of push buttons arranged substantially circularly and carried by the wheel, each of the push buttons being adapted to be operated individually and to connect said conductors to close said electric circuit.

14,167. CATALYZER AND PROCESS OF MAKING SAME AND FOR EFFECTING CATALYTIC REACTIONS THEREWITH. NATHAN SULZBERGER, New York, N. Y. Filed May 4, 1916. Serial No. 95,509. Original No. 1,143,332, dated June 15, 1915, Serial No. 820,874. (Cl. 23—28.)

1. A process of making a catalyst, which comprises reducing a silicate of a catalytic metal with a reducing agent free from anti-catalytic material.

2. A process of making a catalyst, which comprises reducing a silicate of catalytic metals with a reducing agent free from anticatalytic material.

3. A process of making a catalyst, which comprises reducing nickel silicate with a reducing agent free from anticatalytic material.

4. Process of making a catalyst, consisting in reducing a silicate of a catalytic metal by means of hydrogen.

5. Process of making a catalyst, consisting in reducing a silicate of catalytic metals by means of hydrogen.

6. Process of making a catalyst, consisting in reducing nickel silicate by means of hydrogen.

7. Process of making a catalyst, consisting in precipitating a soluble salt of a metal possessing catalytic action with a soluble alkali silicate, and reducing the precipitate to a catalytically active form.

8. Process of making a catalyst, consisting in precipitating a soluble nickel salt with sodium silicate, and reducing the precipitate to a catalytically active form.

9. Product possessing catalytic action containing silica finely impregnated with metals possessing catalytic action, such impregnated silica being of uniform appearance under the microscope.

10. The method of preparing a catalyst, which comprises reducing a chemical compound of a metal possessing catalytic action and elements forming a solid promoter therefor; substantially as described.

11. The method of preparing a catalyst, which comprises co-precipitating a metal possessing catalytic action and a carrier therefor in the form of a chemical compound, and reducing the compound; substantially as described.

12. The method of preparing a catalyst, which comprises reducing a chemical compound of nickel and elements forming a solid promoter therefor; substantially as described.

13. The method of preparing a catalyst which comprises co-precipitating nickel and a carrier therefor in the form of a chemical compound, and reducing the compound; substantially as described.

14. The method of preparing a catalyst which comprises co-precipitating nickel and a carrier therefor in the form of a chemical compound, and reducing the compound to a uniform black product; substantially as described.

15. The method of preparing a catalyst, which comprises co-precipitating a metal possessing catalytic action and a carrier therefor of an acid nature in the form of a chemical compound, and reducing the precipitate to convert the metal into a catalytically active state without complete reduction of the carrier; substantially as described.

16. The method of preparing a catalyst, which comprises co-precipitating nickel and a carrier therefor of an acid nature in the form of a chemical compound, and reducing the precipitate to convert the nickel into a catalytically active condition; substantially as described.

17. The method of preparing a catalyst, which comprises reducing chemical compounds of metals possessing catalytic action and elements forming a promoter therefor; substantially as described.

18. The method of preparing a catalyst, which comprises reducing chemical compounds of metal possessing catalytic action and elements forming a promoter therefor, at least one metal being in chemical combination with elements of the promoter; substantially as described.

19. The method of preparing a catalyst, which comprises co-precipitating metals possessing catalytic action and a carrier therefor of an acid nature, one at least of the metals being in chemical combination with elements of the carrier, and reducing the precipitate to convert the metals into a catalytically active state; substantially as described.

20. The method of preparing a catalyst, which comprises co-precipitating nickel and palladium and a carrier therefor, one at least of the metals being in chemical combination with elements of the carrier, and reducing the precipitate to convert the metals into a catalytically active state; substantially as described.

21. The method of preparing a catalyst, which comprises co-precipitating nickel and palladium and a carrier therefor of an acid nature, one at least of the metals being in chemical combination with elements of the carrier, and reducing the precipitate to convert the nickel and palladium into a catalytically active state without complete reduction of the carrier; substantially as described.

22. The method of preparing a catalyst, which comprises co-precipitating a metal possessing catalytic action and elements forming a carrier therefor in the form of a chemical compound, and reducing the precipitate to a catalytically active state.

23. The method of preparing a catalyst, which comprises reducing precipitated silicate of nickel to a black catalytically active material of homogeneous appearance under the microscope.

24. The method of preparing a catalyst, which comprises reducing a precipitated silicate of a metal possessing a catalytic action to a catalytic active state.

25. A catalyst adapted for use in the hydrogenation of oil comprising a reduction product of a chemical compound of a metal possessing catalytic action and a co-precipitated carrier therefor, said catalyzer being of a homogeneous nature and of uniform appearance under the microscope; substantially as described.

26. A catalyst comprising a chemical compound of a metal possessing catalytic action and a promotor therefor, reduced to a catalytically active state; substantially as described.

27. A catalyst comprising a chemical compound of a metal possessing catalytic action and a promotor therefor, reduced to a catalytically active metallic state; substantially as described.

28. A catalyst of a unitary nature comprising a reduction product of a chemical compound of a metal possessing catalytic action and a carrier therefor, said catalyst being of uniform appearance under the microscope; substantially as described.

29. A catalyst comprising a reduction product of a chemical compound of nickel with elements forming a carrier for the nickel when subjected to reduction; substantially as described.

30. A catalyst comprising a chemical compound of a metal possessing catalytic action and a carrier, reduced to a catalytically active state, said carrier being of an acid nature; substantially as described.

31. A catalyst adapted for use in the hydrogenation of oil comprising a reduction product of a chemical compound of nickel and a co-precipitated carrier therefor, said catalyzer being of a homogeneous nature and of uniform appearance under the microscope; substantially as described.

32. A catalyst comprising a reduction product of a chemical compound containing nickel in a black metallic state and a co-precipitated carrier therefor, said catalyzer being of a homogeneous nature and of uniform appearance under the microscope; substantially as described.

33. A catalyst of a unitary nature comprising a chemical compound of nickel and a promoter therefor, reduced to a catalytically active state; substantially as described.

34. A catalyst of a unitary nature comprising a chemical compound of nickel and a carrier therefor, reduced to a catalytically active state, said carrier being of an acid nature; substantially as described.

35. A catalyst comprising co-precipitated metals possessing catalytic action and a co-precipitated carrier containing silicon, said co-precipitated product being reduced to a catalytically active state; substantially as described.

36. A catalyst comprising co-precipitated nickel and palladium and a co-precipitated carrier therefor, said co-precipitated product being reduced to a catalytically active state; substantially as described.

37. A catalyst comprising co-precipitated nickel and palladium and a co-precipitated carrier therefor, said co-precipitated product being reduced to a catalytically active state, and said carrier being of an acid nature; substantially as described.

38. A catalyst comprising precipitated silicate of nickel reduced to a black catalytically active state.

39. A catalyst comprising a chemical compound containing silicon and a metal possessing catalytic action, reduced to a catalytically active state.

40. In the art of effecting catalytic reactions, the step which comprises bringing together the reacting materials in the presence of a catalytically active reduction product of a chemical compound of a metal possessing catalytic action and elements forming a carrier therefor.

41. In the art of effecting catalytic reactions, the step which comprises bringing together the reacting materials in the presence of a catalytically active reduction product of co-precipitated nickel and elements of an acid nature forming a carrier therefor.

42. In the art of effecting catalytic reactions, the step which comprises bringing together the reacting materials in the presence of a catalytically active reduction product of a precipitated metal silicate.

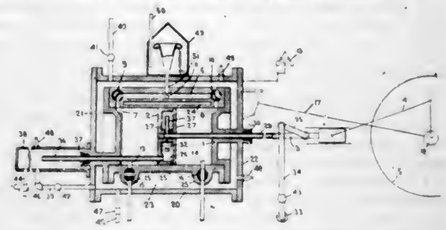
43. In the art of effecting catalytic reactions, the step which comprises bringing together hydrogen and oil to be hydrogenated in the presence of a catalytically active reduction product of a precipitated metal silicate.

44. In the art of effecting catalytic reactions, the step which comprises bringing together hydrogen and oil to be hydrogenated in the presence of a catalytically active reduction product of precipitated nickel silicate.

45. In the art of effecting catalytic reactions, the step which comprises bringing together the reacting materials in the presence of a catalytically active reduction product of precipitated nickel silicate.

14,168. METHOD AND APPARATUS FOR OBTAINING WORK FROM VAPOR. JOSEPH G. PROSSER, Chicago, Ill. Filed May 31, 1916. Serial No. 100,754. Original application filed Apr. 22, 1915, Serial No. 23,253. Original patent a continuation of application Serial No. 684,396, filed Mar. 18, 1912. Original No. 1,165,626, dated Dec. 28, 1915. (Cl. 121—105.)

1. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to prevent the initial cooling of the vapor entering the cylinder.



2. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to prevent initial liquefaction.

3. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantial saturated condition at the end of the expansion.

4. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall follow the saturated curve to the end of the expansion whenever after cut off it reaches a saturated condition.

5. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to secure a predetermined capacity and insure the vapor being in a saturated condition at the end of the expansion.

6. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor from predetermined surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to secure a predetermined capacity and insure the vapor being in a saturated condition at the end of the expansion.

7. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the quality of vapor admitted to the cylinder, the other ther-

mal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

8. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to regulate the amount of heat abstracted from the working vapor.

9. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor from predetermined surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to regulate the amount of heat abstracted from the working vapor.

10. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, in exhausting the main body of the vapor at alternate strokes from opposite ends of the cylinder, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affectingg thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

11. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, in exhausting vapor at alternate strokes through separate ports at opposite sides of the center of the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces adjacent said ports which are exposed to the higher temperature of the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

12. The method of obtaining work from a vapor engine comprising a cylinder with a piston receptacle therein which consists in admitting vapor to the cylinder, in preventing the vapor in the cylinder from materially cooling the vapor prior to its admission to the cylinder, in exhausting vapor at alternate strokes through separate ports at opposite sides of the center of the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces adjacent said ports which are exposed to the higher temperature of the working vapor, in supplying heat from outside sources independently of the working vapor to other surfaces, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

13. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in preventing the vapor in the cylinder from materially cooling the vapor prior to its admission into the cylinder, in supplying heat from outside sources independently of the working vapor to the face of the piston and to other surfaces in contact with the working vapor, in exhausting vapor at alternate strokes through separate ports at opposite sides of the center of the cylinder, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

14. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, and the thermal conditions will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

15. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the timing of the moving parts, the structural characteristics affecting thermal conditions, and the other thermal conditions will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

16. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor through the cylinder and piston walls to the working vapor, and in limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, and the other thermal conditions, will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

17. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces adjacent the exhaust port, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, and the other thermal conditions, will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

18. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to establish and maintain, during any variation in the number of expansions demanded by the variation in the load up to the point when the terminal pressure is reduced below the exhaust pressure, such temperature of the surfaces in contact with the working vapor as are necessary to insure that the vapor in the cylinder at the end of the expansion shall be in not less than a substantially saturated condition.

19. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the

thermal conditions and the piston speed to establish and maintain, during any variation in the number of expansions demanded by the variation in the load, such temperatures of the surfaces in contact with the working vapor as are necessary to insure that the vapor in the cylinder at the end of the expansion shall be in not less than a substantially saturated condition.

20. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting to the cylinder vapor with sufficient superheat to permit of some expansion and of a volume which upon expansion requires the greatest amount of heat per degree difference in temperature to be transmitted from outside sources to the working vapor, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion, whereby the number of expansions may then be increased or decreased indefinitely without causing the vapor to be below a substantially saturated condition at the end of the expansion.

21. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting to the cylinder vapor with sufficient superheat to permit of some expansion and of a volume which upon expansion requires the greatest amount of heat per degree difference in temperature to be transmitted from outside sources to the working vapor, in supplying heat from outside sources independently of the working vapor to the working vapor, in exhausting the main body of the vapor at alternate strokes from opposite ends of the cylinder, and in correlating the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion, whereby the number of expansions may then be increased or decreased indefinitely without causing the vapor to be below a substantially saturated condition at the end of the expansion.

22. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to cause more heat to be transmitted to the working vapor during the working stroke than is abstracted from or through it by the surrounding walls and to insure that the vapor shall be in a substantially saturated condition at the end of the expansion.

23. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting to the cylinder vapor in a saturated or slightly superheated condition and of such a quality as to be in a saturated condition at or before cut off, in supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor, and in correlating the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to insure that the vapor shall be in a substantially saturated condition at the end of the expansion whereby the correlation will be maintained regardless of any increase in the number of expansions.

24. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting to the cylinder vapor in a saturated or slightly superheated condition and of such a quality as to be in a satnrated condition at or before cut off, in supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor, in exhausting the main body of the vapor at alternate strokes from opposite ends of the cylinder, and in correlating the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to insure that the vapor shall be in a substantially saturated condition at the end of the expansion whereby the correlation will be maintained regardless of any increase in the number of expansions.

25. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

26. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces of the exhaust valve which are exposed to the high temperatures of the freshly admitted vapor, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

27. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces of the exhaust valve and the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal condition, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

28. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, in supplying heat from outside sources through the piston wall to the face thereof, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of

the expansion to be in not less than a substantially saturated condition.

29. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources through the piston wall to the face thereof, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

30. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the surfaces of the exhaust valve and the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

31. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources through the cylinder end walls to the faces thereof, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

32. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, to secure a predetermined capacity which consists in admitting vapor to the cylinder, in eliminating moisture to the extent required to secure the said capacity from the vapor admitted to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to cause the vapor in the cylinder at the end of the expansion to be in a substantially saturated condition.

33. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, in exhausting the vapor from the cylinder without bringing it into material contact with the walls exposed to the working vapor in the cylinder and thereby preventing cooling of the working vapor by the exhausted vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

34. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in preventing material cooling of the vapor prior to its admission into the cylinder by the vapor in the cylinder, in exhausting the vapor from the cylinder without bringing it into material contact with the walls exposed to the working vapor in the cylinder and thereby preventing cooling of the working vapor by the exhausted vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

35. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from an outside agent through the walls to some of the interior surfaces, in automatically maintaining the exterior surfaces in condition to abstract heat freely from the said agent, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

36. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, in automatically preventing the retention or collection of moisture on any of the surfaces transmitting or absorbing heat, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

37. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, in automatically preventing the retention or collection of moisture on the surfaces of the admission valve and admission passage, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

38. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable thereinñ which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, in automatically preventing the retention or collection of moisture on the surfaces of or adjacent to the exhaust valve and passage, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

39. The method of obtaining work from a vapor motor which consists in admitting vapor to the motor, in controlling radiation and conduction from and to the vapor working in the motor, insupplying heat from outside sources to the surface of the element movable by the action of the vapor, and in correlating the volume of vapor admitted to the motor, the resistance to the movement of said element, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor to bring the vapor to, and maintain it in, a substantially saturated condition during a material and predetermined period of its passage through the motor.

40. The method of obtaining work from a vapor motor which consists in admitting superheated vapor to the motor, in controlling radiation and conduction from and to the vapor working in the motor, in supplying heat from outside sources to the surface of the element movable by the action of the vapor, and in correlating the volume and quality of vapor admitted to the motor, the resistance to the movement of said element, the structural characteristics affecting thermal conditions, and the other thermal conditions in the motor to cause the vapor after it reaches the saturated condition to be maintained in such condition during a predetermined amount of expansion.

41. The method of obtaining work from a vapor motor which consists in admitting vapor to the motor, in controlling radiation and conduction from and to the vapor working in the motor, in supplying heat from outside sources to the surface of the element movable by the action of the vapor, and in correlating the volume of vapor admitted to the motor, the speed of the said element, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor to bring the vapor to, and maintain it in, a substantially saturated condition during a material and predetermined period of its passage through the motor.

42. The method of obtaining work from a vapor motor which consists in admitting superheated vapor to the motor, in controlling radiation and conduction from and to the vapor working in the motor, in supplying heat from outside sources to the surface of the element movable by the action of the vapor, and in correlating the volume and quality of vapor admitted to the motor, the structural characteristics affecting thermal conditions, the other thermal conditions, and the speed of said element to cause the vapor after it reaches the saturated condition to be maintained in such condition during a predetermined amount of expansion.

43. The method of obtaining work from a vapor motor which consists in admitting vapor to the motor, in controlling radiation and conduction from and to the vapor working in the motor, in supplying heat from outside sources to the surface of the element movable by the action of the vapor, and in correlating the volume of vapor admitted to the motor, the resistance to the movement of said element, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor to regulate the amount of heat abstracted from the working vapor.

44. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the volume of clearance space, the other structural characteristics affecting thermal conditions, the thermal conditions in the cylinder, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

45. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in supplying vapor to the cylinder, in supplying heat to some of the interior surfaces through the walls, and in maintaining the thermal conditions of a character to insure that the vapor at the end of the expansion shall be in not less than a substantially saturated condition.

46. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting vapor to the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the resistance to the movement of the piston to maintain the thermal conditions of a character to insure that the vapor at the end of the expansion shall be in a substantially saturated condition.

47. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions and the piston speed to prevent the initial cooling of the vapor entering the cylinder.

48. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to prevent initial liquefaction.

49. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

50. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall follow the saturated curve to the end of the expansion whenever after cut off it reaches a saturated condition.

51. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions and the piston speed to secure a predetermined capacity and insure the vapor being in a saturated condition at the end of the expansion.

52. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor from predetermined surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to secure a predetermined capacity and insure the vapor being in a saturated condition at the end of the expansion.

53. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the quality of vapor admitted to the cylinder, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

54. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to regulate the amount of heat abstracted from the working vapor.

55. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying a predetermined amount of heat from outside sources independently of the working vapor to the working vapor from predetermined surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and

the piston speed to regulate the amount of heat abstracted from the working vapor.

56. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for exhausting the main body of the vapor at alternate strokes from opposite ends of the cylinder, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

57. A vapor engine comprising a cylinder, a piston reciprocable therein, separate exhaust ports at opposite sides of the center of the cylinder, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for exhausting vapor at alternate strokes through the said ports, means for supplying heat from outside sources independently of the working vapor to the surfaces adjacent said ports which are exposed to the higher temperature of the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

58. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for preventing the vapor in the cylinder from materially cooling the vapor prior to its admission into the cylinder, means for exhausting vapor at alternate strokes through separate ports at opposite sides of the center of the cylinder, means for supplying heat from outside sources independently of the working vapor to the surfaces adjacent said ports which are exposed to the higher temperature of the working vapor, means for supplying heat from outside sources independently of the working vapor to other surfaces, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

59. A vapor engine comprising a cylinder, a piston reciprocable therein, exhaust ports at opposite sides of the center of the cylinder, means for admitting vapor to the cylinder, means for preventing the vapor in the cylinder from materially cooling the vapor prior to its admission into the cylinder, means for supplying heat from outside sources independently of the working vapor to the face of the piston and to other surfaces in contact with the working vapor, means for exhausting vapor at alternate strokes through said ports and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

60. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, and the thermal conditions will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

61. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the timing of the moving parts, the structural characteristics affecting thermal conditions, and the other thermal conditions will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

62. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor through the cylinder and piston walls to the working vapor, and means for limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, and the other thermal conditions, will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

63. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the surfaces adjacent the exhaust port, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means for limiting the piston to a speed which correlated with the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, and the other thermal conditions, will insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

64. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to establish and maintain, during any variation in the number of expansions demanded by the variation in the load up to the point when the thermal pressure is reduced below the exhaust pressure, such temperature of the surfaces in contact with the working vapor as are necessary to insure that the vapor in the cylinder at the end of the expansion shall be in not less than a substantially saturated condition.

65. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the strucural characteristics affecting thermal conditions, the thermal conditions and the piston speed to establish and maintain, during any variation in the number of expansions demanded by the variation in the load, such temperatures of the surfaces in contact with the working vapor as are necessary to insure that the vapor in the cylinder at the end of the expansion shall be in not less than a substantially saturated condition.

66. A vapor engine comprising a cylinder, a piston reciprocable therein, means for causing the admission to the cylinder of vapor with sufficient superheat to permit of some expansion and of a volume which upon expansion requires the greatest amount of heat per degree difference in temperature to be transmitted from outside sources to the working vapor, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion, whereby the number of expansions may then be increased or decreased indefinitely without causing the vapor to be below a substantially saturated condition at the end of the expansion.

67. A vapor engine comprising a cylinder, a piston reciprocable therein, means for causing the admission to the cylinder of vapor with sufficient superheat to permit of some expansion and of a volume which upon expansion requires the greatest amount of heat per degree difference in temperature to be transmitted from outside sources to the working vapor, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for causing the main body of the vapor to be exhausted at alternate strokes from opposite ends of the cylinder, and means acting to correlate the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion, whereby the number of expansions may then be increased or decreased indefinitely without causing the vapor to be below a substantially saturated condition at the end of the expansion.

68. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to cause more heat to be transmitted to the working vapor during the working stroke than is abstracted from or through it by the surrounding walls and to insure that the vapor shall be in a substantially saturated condition at the end of the expansion.

69. A vapor engine comprising a cylinder, a piston reciprocable therein, means for causing the admission to the cylinder of vapor in a saturated or slightly superheated condition and of such a quality as to be in a saturated condition at or before cut off, means for supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor, and means acting to correlate the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to insure that the vapor shall be in a substantially saturated condition at the end of the expansion whereby the correlation will be maintained regardless of any increase in the number of expansions.

70. A vapor engine comprising a cylinder, a piston reciprocable therein, means for causing the admission to the cylinder of vapor in a saturated or slightly superheated condition and of such a quality as to be in a saturated condition at or before cut off, means for supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor, means for causing the main body of the vapor to be exhausted at alternate strokes from opposite ends of the cylinder, and means acting to correlate the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to insure that the vapor shall be in a substantially saturated condition at the end of the expansion whereby the correlation will be maintained regardless of any increase in the number of expansions.

71. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

72. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the surfaces of the exhaust valve which are exposed to the high temperature of the freshly admitted vapor, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

73. A vapor engine comprising a cylinder, a piston reciprocable therein, an exhaust valve, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the surfaces of the exhaust valve and the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

74. A vapor engine comprising a cylinder, a piston reciprocable therein, an exhaust passage, an exhaust valve, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the surfaces of the exhaust passage and adjacent thereto which are exposed to the high temperature of the freshly admitted vapor, means for supplying heat from outside sources through the piston wall to the face thereof, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

75. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources through the piston wall to the face thereof, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

76. A vapor engine comprising a cylinder, a piston reciprocable therein, an exhaust passage, an exhaust valve therefor, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the surfaces of the exhaust valve of the exhaust passage and the surfaces adjacent thereto which are exposed to the high temperature of the freshly admitted vapor, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means act...

to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

77. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources through the cylinder end walls to the faces thereof, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the heat so supplied, the other thermal conditions, and the piston speed to establish and maintain during the operation of the engine such temperatures of the surfaces in contact with the working vapor as are necessary to cause the vapor in the cylinder at the end of the expansion to be in not less than a substantially saturated condition.

78. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for eliminating moisture from the vapor admitted to the cylinder to the extent required to secure a predetermined capacity, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume and quality of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the other thermal conditions, and the piston speed to cause the vapor in the cylinder at the end of the expansion to be in a substantially saturated condition.

79. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for causing the vapor to be exhausted from the cylinder without bringing it into material contact with the walls exposed to the working vapor in the cylinder and thereby preventing cooling of the working vapor by the exhausted vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

80. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for preventing material cooling of the vapor prior to its admission into the cylinder by the vapor in the cylinder, means for causing the vapor to be exhausted from the cylinder without bringing it into material contact with the walls exposed to the working vapor in the cylinder and thereby preventing cooling of the working vapor by the exhausted vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the strucural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

81. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from an outside agent through the walls to some of the interior surfaces, means for automatically maintainingg the exterior surfaces in condition to abstract heat freely from the said agent, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

82. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for automatically preventing the retention or collection of moisture on any of the surfaces transmitting or absorbing heat, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in substantially saturated condition at the end of the expansion.

83. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for automatically preventing the retention or collection of moisture on the surfaces of the admission valve and admission passage, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

84. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, means for automatically preventing the retention or collection of moisture on the surfaces of the exhaust valve and passage, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

85. A vapor motor comprising an element movable by the action of the vapor, means for admitting vapor to the motor, means for controlling radiation and conduction from and to the vapor working in the motor, means for supplying heat from outside sources to the surface of the said element, and means acting to correlate the volume of vapor admitted to the motor, the resistance to the movement of said element, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor to bring the vapor to, and maintain it in, a substantially saturated condition during a material and predetermined period of its passage through the motor.

86. A vapor motor comprising an element movable by the action of the vapor, means for causing the admission of superheated vapor to the motor, means for controlling radiation and conduction from and to the vapor working in the motor, means for supplying heat from outside sources to the surfaces of the said element, and means acting to correlate the volume and quality of vapor admitted to the motor, the resistance to the movement of said element, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor to cause the vapor after it reaches the saturated condition to be maintained in such condition during a predetermined amount of expansion.

87. A vapor motor comprising an element movable by the action of the vapor, means for admitting vapor to the motor, means for controlling radiation and conduction from and to the vapor working in the motor, means for supplying heat from outside sources to the surface of the said element, and means acting to correlate the volume of vapor admitted to the motor, the speed of the said element, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor to bring the vapor to, and maintain it in, a substantially saturated condition during a material and predetermined period of its passage through the motor.

88. A vapor motor comprising an element movable by the action of the vapor, means for causing the admission of superheated vapor to the motor, means for controlling radiation and conduction from and to the vapor working in the motor, means for supplying heat from outside sources to the surfaces of the said element, and means acting to correlate the volume and quality of vapor admitted to the motor, the structural characteristics affect- thermal conditions, the other thermal conditions, and the speed of said element to cause the vapor after it reaches the saturated condition to be maintained in such condition during a predetermined amount of expansion.

89. A vapor motor comprising an element movable by the action of the vapor, means for admitting vapor to the motor, means for controlling radiation and conduction from and to the vapor working in the motor, means for supplying heat from outside sources to the surfaces of the said element, and means acting to correlate the volume of vapor admitted to the motor, the resistance to the movement of said element, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor to regulate the amount of heat abstracted from the working vapor.

90. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder the volume of clearance spaces, the other structural characteristics affecting thermal conditions, the thermal conditions in the cylinder, and the piston speed to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

91. A vapor engine comprising a cylinder, a piston reciprocable therein, means for causing vapor to be supplied to the cylinder, means for supplying heat to some of the interior surfaces through the walls, and means acting to maintain the thermal conditions of a character to insure that the vapor at the end of the expansion shall be in not less than a substantially saturated condition.

92. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the resistance to the movement of the piston to maintain the thermal conditions of a character to insure that the vapor at the end of the expansion shall be in a substantially saturated condition.

93. A vapor engine comprising a cylinder, a hollow piston reciprocable therein provided with face walls of a material having a materially greater degree of heat transmissibility than iron, means for admitting vapor to the cylinder, means for supplying heat to the interior of the piston, means for supplying heat through the walls to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the speed of the piston, the amount of heat so supplied to the piston and other surfaces, the other structural characteristics affecting thermal conditions, and the other thermal conditions to insure that the vapor in the cylinder shall be in a substantially saturated condition at the end of the expansion.

94. A vapor engine comprising a cylinder, a hollow piston reciprocable therein provided with face walls of a material having a materially greater degree of heat transmissibility than iron, means for admitting vapor to the cylinder, means for supplying heat to the interior of the piston, means for supplying heat through the walls to other surfaces in contact with the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the speed of the piston, the amount of heat so supplied to the piston and other surfaces, the other structural characteristics affecting thermal conditions, and the other thermal conditions to insure that the vapor in the cylinder shall follow the saturated curve to the end of the expansion whenever after cut off it reaches a saturated condition.

95. A vapor engine comprising a cylinder provided with jacketed end and side walls, a hollow piston reciprocable therein and provided with face walls of a material having a materially greater degree of heat transmissibility than iron, means for admitting vapor to the cylinder, connections through the cylinder to the interior of the piston, means for supplying vapor to said jacket and through said connections to the piston to raise the interior walls of the cylinder to not less than substantially the initial temperature of the working vapor, and means acting to correlate the volume of vapor admmitted to the cylinder, the speed of the piston, the said and other structural characteristics affecting thermal conditions, and the said and other thermal conditions to maintain all the interior surfaces at a temperature sufficient to insure that the said surfaces shall be dry at the end of the expansion.

96. A vapor engine comprising a cylinder, a hollow piston reciprocable therein having the absorbing and transmitting faces thereof shaped materially to increase their area over that presented by plain surfaces, means for admitting vapor to the cylinder, means for supplying heat to the interior of the piston, and means acting to correlate the volume of vapor admitted to the cylinder, the speed of the piston, the amount of heat supplied to the piston, the other thermal conditions, and the structural characteristics affecting thermal conditions to insure that the piston faces shall be dry at the end of the expansion.

97. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources through the walls to the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, means for increasing the area of the said surfaces abstracting heat from outside sources, and means acting to correlate the volume of vapor admitted to the cylinder, the speed of the piston, the mount of heat so supplied, the other thermal conditions, the said and other structural characteristics affecting thermal conditions to insure that the vapor shall be in a saturated condition at the end of the expansion.

98. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for supplying heat from outside sources through the walls to the surfaces adjacent the exhaust which are exposed to the high temperature of the freshly admitted vapor, means for increasing the area of the outer surfaces abstracting heat from outside sources and for decreasing the heat transmissibility of the inner surfaces adjacent the exhaust, and means acting to correlate the volume of vapor admitted to the cylinder, the speed of the piston, the amount of heat so supplied, the other thermal conditions, the said and other structural characteristics affecting thermal conditions to insure that the vapor shall be in a saturated condition at the end of the expansion.

99. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, means for decreasing the heat transmissibility of the inner surfaces adjacent the exhaust, and means acting to correlate the volume of vapor admitted to the cylinder, the speed of the piston, the thermal conditions, and the said and other structural characteristics affecting thermal conditions to insure that the vapor shall be in a saturated condition at the end of the expansion.

100. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, an exhaust passage, an exhaust valve reciprocable therein, a jacket for the portion of the cylinder containing said passage, means for supplying heat to said jacket, means for reciprocating said valve to cause that portion of the valve exposed to the freshly admitted vapor when the valve is closed to be brought into contact with the jacketed surface when the valve is open and thus heated, means for supplying heat from outside sources other than the working vapor to some of the interior surfaces of the cylinder, and means acting to correlate the speed of the piston, the volume of vapor admitted to the cylinder, the heat so supplied, the other thermal conditions, and the said and other structural characteristics affecting thermal conditions to cause the vapor at the end of the expansion to be in a substantially saturated condition.

101. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, an exhaust passage, an exhaust valve having the surface in contact with the freshly admitted vapor substantially equal to the area of the exhaust passage, a jacket for the portion of the cylinder containing said passage,

means for supplying heat to said jacket, means for operating said valve to cause that portion of the valve exposed to the freshly admitted vapor when the valve is closed to be brought into contact with the jacketed surface when the valve is open and thus heated, means for supplying heat from outside sources other than the working vapor to some of the interior surfaces of the cylinder, and means acting to correlate the speed of the piston, the volume of vapor admitted to the cylinder, the heat so supplied, the other thermal conditions, and the said and other structural characteristics affecting thermal conditions to cause the vapor at the end of the expansion to be in a substantially saturated condition.

102. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, an exhaust passage, an exhaust valve therefor, means for supplying heat from outside sources other than from or through the freshly admitted vapor to the surfaces of the exhaust valve, the exhaust passage, and the surfaces adjacent thereto which are exposed to the high temperature of the freshly admitted vapor, means for retarding the conduction of heat from the surfaces of the exhaust valve exposed to the freshly admitted vapor, means for supplying heat from outside sources other than the working vapor to some of the interior surfaces of the cylinder, and means acting to correlate the volume of vapor admitted to the cylinder; the speed of the piston, the heat so supplied, the other thermal conditions, and the said and other structural characteristics affecting thermal conditions to cause the vapor at the end of the expansion to be in a substantially saturated condition.

103. A vapor engine comprising a cylinder, a piston reciprocable therein, means for admitting vapor to the cylinder, a jacketed steam chest, admission ports opening from the steam chest into the cylinder, means adjacent said ports to prevent any moisture in the steam chest for running into the cylinder, means for automatically draining any such moisture from the steam chest, means for supplying heat from outside sources through the walls to some of the interior surfaces of the cylinder, and means acting to correlate the volume of vapor admitted to the cylinder, the speed of the piston, the heat so supplied, the other thermal conditions and the said and other structural characteristics affecting thermal conditions to cause the vapor at the end of the expansion to be in a substantially saturated condition.

104. A vapor motor comprising a jacketed movable element adiabatically acted upon by the vapor and having that wall, the surface of which is so adiabatically acted upon, of a material having a materially greater degree of heat transmissibility than iron, means for admitting vapor to the motor, means for controlling radiation and conduction from and to the vapor working in the motor, means for supplying vapor to the said jacket, and means acting to correlate the volume of vapor admitted to the motor, the speed of the said element, the thermal conditions in the motor, and the structural characteristics affecting thermal conditions to bring the vapor to, and maintain it in, a substantially saturated condition during a material and predetermined period of its passage through the motor.

105. A vapor motor comprising a jacketed movable element adiabatically acted upon by the vapor and having the area materially increased of the heat absorbing surface of that wall, the surface of which is so adiabatically acted upon, means for admitting vapor to the motor, means for controlling radiation and conduction from and to the vapor working in the motor, means for supplying vapor to the said jacket, and means acting to correlate the volume of vapor admitted to the motor, the speed of the said element, the thermal conditions in the motor, and the structural characteristics affecting thermal conditions to bring the vapor to, and maintain it in a substantially saturated condition during a material and predetermined period of its passage through the motor.

106. The method of obtaining work from a vapor motor which consists in admitting to the motor vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the motor, in supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the vapor working in the motor, and in correlating the volume of vapor admitted to the motor, the speed of the movable element acted upon by the vapor, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor, to insure that the vapor shall be in not less than a substantially saturated condition at the end of the expansion under normal running conditions of the motor.

107. The method of obtaining work from a vapor motor which consists in admitting to the motor vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the motor, in supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the working vapor, in automatically maintaining the exterior surfaces in condition freely to abstract said heat from the heating agent, and in correlating the volume of vapor admitted to the motor, the speed of the movable element acted upon by the vapor, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor, to insure that the vapor shall be in not less than a substantially saturated condition at the end of the expansion under normal running conditions of the motor.

108. A vapor motor comprising an element movable by the action of the vapor, means for causing the admission to the motor of vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the motor, means for supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the vapor working in the motor, and, means acting to correlate the volume of vapor admitted to the motor, the speed of the movable element acted upon by the vapor, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor, to insure that the vapor shall be in not less than a substantially saturated condition at the end of the expansion under normal running conditions of the motor.

109. A vapor motor comprising an element movable by the action of the vapor, means for causing the admission to the motor of vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the motor, means for supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the working vapor, means for automatically maintaining the exterior surfaces in condition freely to abstract said heat from the heating agent, and means acting to correlate the volume of vapor admitted to the motor, the speed of the movable element acted upon by the vapor, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor, to insure that the vapor shall be in not less than a substantially saturated condition at the end of the expansion under normal running conditions of the motor.

110. The method of obtaining work from a vapor motor which consists in admitting to the motor vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the motor, in supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the vapor working in the motor, and in correlating the volume of vapor admitted to the motor, the speed of the movable element acted upon by the vapor, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor, to insure that during normal operation of the motor the vapor shall not contain substantially more moisture at the end of the expansion than that due to cooling of the vapor by the work performed by it during its passage through the motor plus any moisture carried in with the vapor; whereby cumulative losses are prevented.

111. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein, which consists in admitting to the cylinder vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the cylinder, in supplying heat from outside sources through the piston wall to the face thereof, in supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the working vapor, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that during normal operation of the engine the vapor shall not contain substantially more moisture at the end of the expansion than that due to cooling of the vapor by the work performed by it during the stroke plus any moisture carried in with the vapor, whereby cumulative losses are prevented.

112. The method of obtaining work from a vapor engine comprising a cylinder with a piston reciprocable therein which consists in admitting to the cylinder vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the cylinder, in supplying heat from outside sources independently of the working vapor to the working vapor, in order to control radiation and conduction of heat from and to the working vapor, in exhausting the main body of the vapor at alternate strokes through separate ports at opposite sides of the center of the cylinder during normal operation of the engine, and in correlating the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that during normal operation of the engine the vapor shall not contain substantially more moisture at the end of the expansion than that due to cooling of the vapor by the work performed by it during the stroke plus any moisture carried in with the vapor, whereby cumulative losses are prevented.

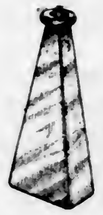
113. A vapor motor comprising an element movable by the action of the vapor, means for causing the admission to the motor of vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the motor, means for supplying heat from outside sources independently of the working vapor to some of the surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the vapor working in the motor, and means acting to correlate the volume of vapor admitted to the motor, the speed of the movable element acted upon by the vapor, the structural characteristics affecting thermal conditions, and the thermal conditions in the motor, to insure that during normal operation of the motor the vapor shall not contain substantially more moisture at the end of the expansion than that due to cooling of the vapor by the work performed by it during its passage through the motor plus any moisture carried in with the vapor; whereby cumulative losses are prevented.

114. A vapor engine comprising a cylinder with a piston reciprocable therein, means for admitting to the cylinder vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the cylinder, means for supplying heat from outside sources through the piston wall to the face thereof, means for supplying heat from outside sources independently of the working vapor to other surfaces in contact with the working vapor in order to control radiation and conduction of heat from and to the working vapor, and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that during normal operation of the engine the vapor shall not contain substantially more moisture at the end of the expansion than that due to cooling of the vapor by the work performed by it during the stroke plus any moisture carried in with the vapor, whereby cumulative losses are prevented.

115. A vapor engine comprising a cylinder with a piston reciprocable therein, means for admitting to the cylinder vapor of such volume and quality as to be reduced below a saturated condition by work performance in its passage through the cylinder, means for supplying heat from outside sources independently of the working vapor to the working vapor in order to control radiation and conduction of heat from and to the working vapor, means for exhausting the main body of the vapor at alternate strokes through separate ports at opposite sides of the center of the cylinder, during normal operation of the engine and means acting to correlate the volume of vapor admitted to the cylinder, the structural characteristics affecting thermal conditions, the thermal conditions, and the piston speed to insure that during normal operation of the engine the vapor shall not contain substantially more moisture at the end of the expansion than that due to cooling of the vapor by the work performed by it during the stroke plus any moisture carried in with the vapor, whereby cumulative losses are prevented.

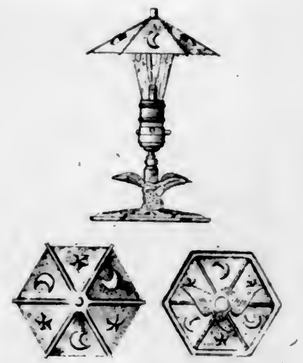
DESIGNS.

49,379. BOTTLE. ROGER S. ALLAN, Louisville, Ky. Filed Mar. 17, 1916. Serial No. 84,987. Term of patent 7 years.



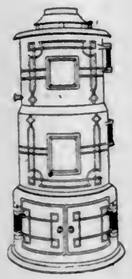
The ornamental design for a bottle, as shown.

49,380. ELECTRIC LAMP. LUIGI ANGIULLI, New York, N. Y. Filed May 20, 1916. Serial No. 98,958. Term of patent 7 years.



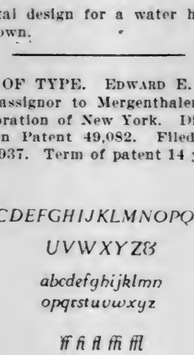
The ornamental design for an electric lamp as shown.

49,381. WATER-HEATER SHELL. CHARLES A. BACKSTROM, Crafton, Pa., assignor to Pittsburg Water Heater Company, a Corporation of New Jersey. Filed June 1, 1916. Serial No. 101,188. Term of patent 14 years.



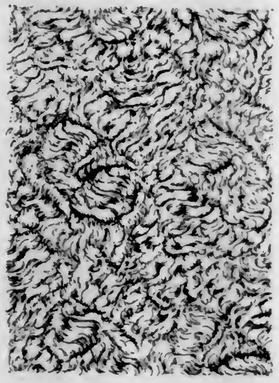
The ornamental design for a water heater shell, substantially as shown.

49,382. FONT OF TYPE. EDWARD E. BARTLETT, New York, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Divisional application of Design Patent 49,082. Filed May 11, 1916. Serial No. 96,937. Term of patent 14 years.



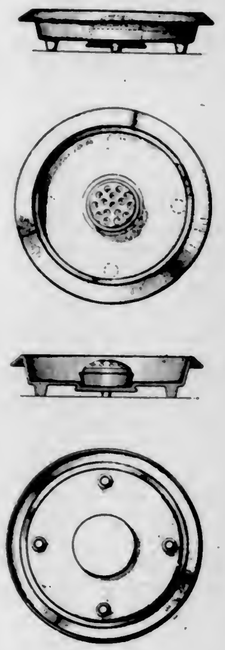
The ornamental design for a font of type, as shown.

49,383. WALL-PAPER. CASPAR BECKER, Willow Grove Avenue, Montgomery county, Pa., assignor to Becker, Smith & Page, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 6, 1916. Serial No. 95,984. Term of patent 7 years.



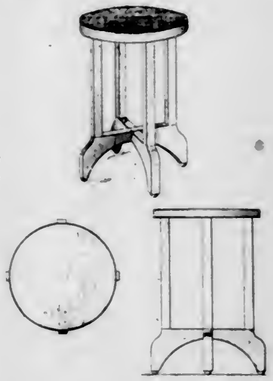
The ornamental design for wall paper, as shown.

49,384. COMBINED CENTERPIECE AND FLOWER-HOLDER. ARTHUR J. BENNETT, Cambridge, Ohio. Filed Feb. 17, 1916. Serial No. 78,996. Term of patent 7 years.



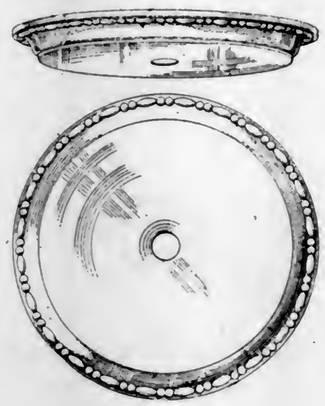
The ornamental design for a combined centerpiece and flower holder, as shown.

49,385. STOOL OR TABORET. ABRAHAM G. FELDMAN, Chicago, Ill., assignor to The Glass Novelty Co., Chicago, Ill. Filed Feb. 18, 1916. Serial No. 79,195. Term of patent 7 years.



The ornamental design for a stool or taboret, as shown.

49,386. REFLECTOR FOR LIGHTING-FIXTURES. EDWIN F. GUTH, St. Louis, Mo., assignor to Luminous Unit Co., St. Louis, Mo., a Corporation of Missouri. Filed June 8, 1916. Serial No. 102,592. Term of patent 7 years.

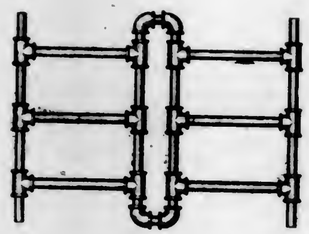


The ornamental design for a reflector for lighting fixtures, as shown.

49,387. GAME-TABLE. CICERO HINE, Chicago, Ill., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed May 31, 1916. Serial No. 100,975. Term of patent 14 years.

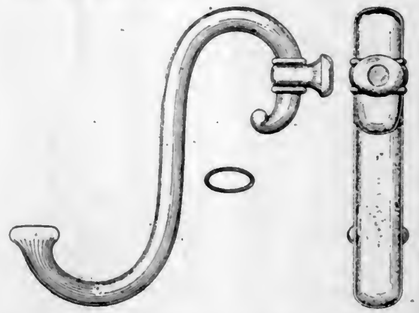
The ornamental design for a game table as shown.

49,388. GATE. CHARLES F. HOGUE, Cunningham, Kans. Filed Oct. 23, 1915. Serial No. 57,619. Term of patent 7 years.



The ornamental design for a gate, as shown.

49,389. OVAL ARM FOR CHANDELIERS AND BRACKETS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 27, 1916. Serial No. 94,080. Term of patent 3½ years.



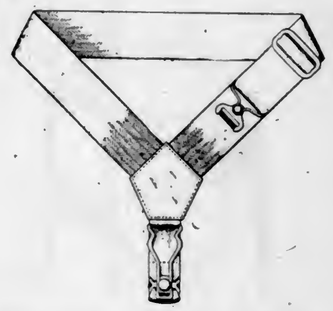
The ornamental design for an oval arm for chandeliers and brackets, as shown.

49,390. BADGE. ELLIE ALEXANDER LEVY, Fort Worth, Tex. Filed May 9, 1916. Serial No. 96,454. Term of patent 14 years.



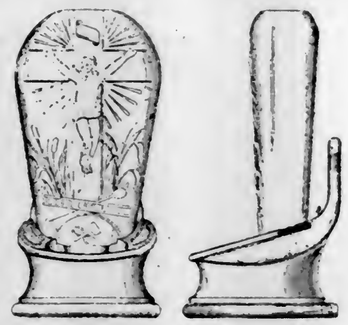
The ornamental design for a badge, substantially as shown.

49,391. GARTER. MAX J. LIEBENSTEIN, Chicago, Ill., assignor to A. Stein & Company, Chicago, Ill., a Corporation. Filed Feb. 1, 1915. Serial No. 5,574. Term of patent 3½ years.



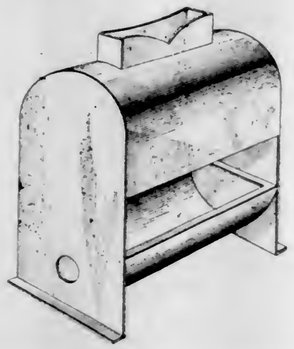
The ornamental design for a garter as shown.

49,392. HOLY-WATER FONT. THOMAS LLOYD, Boston, Mass. Filed May 2, 1916. Serial No. 95,004. Term of patent 14 years.



A design for holy water font, as shown.

49,393. EGG-CANDLER. THOMAS MOORE, Davenport, Iowa. Filed May 5, 1916. Serial No. 95,720. Term of patent 14 years.



The ornamental design for an egg candler, as shown.

49,394. EGG-CANDLER. THOMAS MOORE, Davenport, Iowa. Filed Apr. 7, 1916. Serial No. 89,721. Term of patent 14 years.



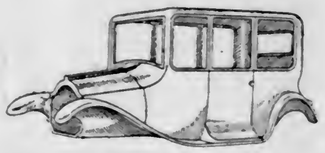
The ornamental design for an egg candler, as shown.

49,395. SCOOTER. JACQUE L. MORGAN, Kansas City, Mo. Filed Apr. 17, 1916. Serial No. 91,816. Term of patent 14 years.



The ornamental design for a scooter, as shown.

49,396. AUTOMOBILE-BODY. DOCTOR FRANKLIN OLIVER, Oakland, Cal. Filed Apr. 12, 1916. Serial No. 90,789. Term of patent 7 years.



The ornamental design for an automobile body as shown.

49,397. HAIR ORNAMENT. HERMAN PICHEL, New York, N. Y., assignor to Samstag & Hilder Bros., New York, N. Y., a Corporation of New York. Filed May 16, 1916. Serial No. 97,949. Term of patent 3½ years.



The ornamental design for a hair ornament as shown.

49,398. HAIR ORNAMENT. HERMAN PICHEL, New York, N. Y., assignor to Samstag & Hilder Bros., New York, N. Y., a Corporation of New York. Filed May 16, 1916. Serial No. 97,950. Term of patent 3½ years.



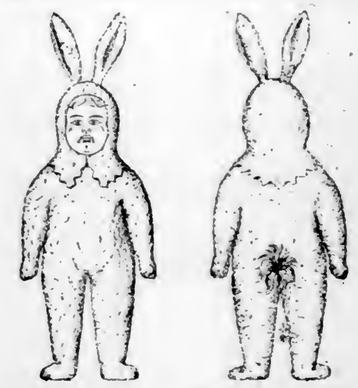
The ornamental design for a hair ornament as shown.

49,399. HAIR ORNAMENT. HERMAN PICHEL, New York, N. Y., assignor to Samstag & Hilder Bros., New York, N. Y., a Corporation of New York. Filed May 16, 1916. Serial No. 97,951. Term of patent 3½ years.



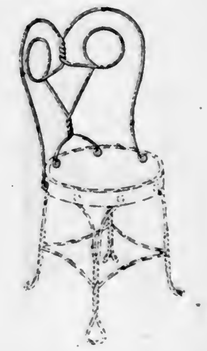
The ornamental design for a hair ornament as shown.

49,400. DOLL. MINNIE A. SAXTON, Washington, D. C. Filed Mar. 25, 1916. Serial No. 86,822. Term of patent 7 years.



The ornamental design for a doll, substantially as shown and described.

49,401. WIRE CHAIR-BACK. JOSEPH SILVERMAN, Chicago, Ill. Filed Dec. 30, 1915. Serial No. 69,495. Term of patent 7 years.



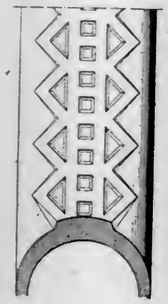
The ornamental design for a wire chair back as shown.

49,402. FERN-DISH HANGER. BENNETT SONBERG, New York, N. Y. Filed Dec. 21, 1915. Serial No. 68,098. Term of patent 7 years.



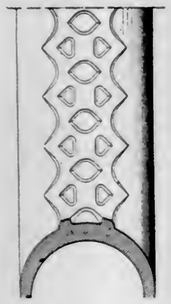
The ornamental design for a fern dish hanger, as shown.

49,403. VEHICLE-TIRE. ROBERT J. STOKES, Trenton, N. J., assignor to Thermold Rubber Company, Trenton, N. J., a Corporation of New Jersey. Filed May 29, 1916. Serial No. 100,692. Term of patent 14 years.



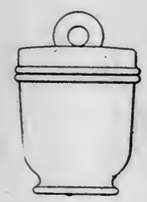
The ornamental design for a vehicle tire, substantially as shown.

49,404. VEHICLE-TIRE. ROBERT J. STOKES, Trenton, N. J., assignor to Thermold Rubber Company, Trenton, N. J., a Corporation of New Jersey. Filed May 29, 1916. Serial No. 100,693. Term of patent 14 years.



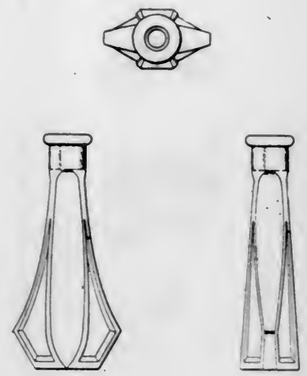
The ornamental design for a vehicle tire, substantially as shown.

49,405. EGG-BOILER. THOMAS TAYLOR, Hanley, England. Filed May 22, 1916. Serial No. 99,243. Term of patent 7 years.



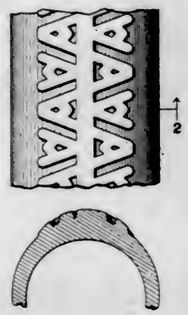
The ornamental design for an egg boiler, as shown.

49,406. BOTTLE. VICTOR VIVAUDOU, New York, N. Y. Filed May 24, 1916. Serial No. 99,701. Term of patent 7 years.



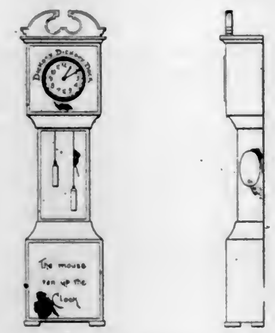
The ornamental design for a bottle as shown.

49,407. ELASTIC VEHICLE-TIRE. WESLEY E. WILSON, Akron, Ohio, assignor to The American Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Apr. 24, 1916. Serial No. 93,336. Term of patent 14 years.



The ornamental design for an elastic vehicle tire, as shown.

49,408. CLOCK-CASE. CAROLINE C. WISE and CALLY T. RYLAND, Richmond, Va. Filed Apr. 24, 1916. Serial No. 93,335. Term of patent 7 years.



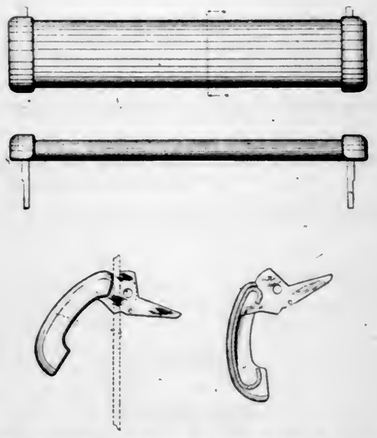
The ornamental design for a clock case, as shown.

49,409. FLORAL BORDER TO BE APPLIED TO WALL-PAPER. JOHN KORZINEK, Passaic, N. J., assignor to The Hobbs Wall Paper Company, a Corporation of New Jersey. Filed Mar. 22, 1916. Serial No. 86,006. Term of patent 3½ years.



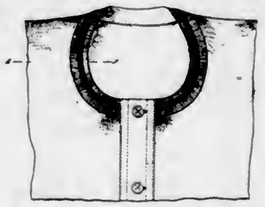
The ornamental design for a floral border to be applied to wall paper as shown and described.

49,410. OPERATING-BAR FOR EMERGENCY-EXIT LOCKS. HENRY B. SARGENT, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 28, 1916. Serial No. 74,864. Term of patent 14 years.



The ornamental design for an operating bar for emergency exit locks, substantially as shown.

49,411. GARMENT-COLLARETTE. FREDERIC CONDÉ, Oswego, N. Y. Filed July 8, 1915. Serial No. 38,759. Term of patent 14 years.



The design for a garment collarette as shown.

TRADE-MARKS

PUBLISHED JULY 18, 1916

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 69,201. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) EDWARD S. MILLER, New York, N. Y. Filed Mar. 20, 1913.

OLD ABBEY

Particular description of goods.—Brandies and Cordials.
Claims use since Dec. 10, 1910.

Ser. No. 71,597. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) WINFIELD J. TAYLOR, Ord, Nebr. Filed July 8, 1913.

Comfy

Particular description of goods.—Eyeglasses and Spectacles.
Claims use since the 1st day of April, 1913.

Ser. No. 74,779. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) I. HESSEL, Kansas City, Mo. Filed Dec. 22, 1913.

Paristyle

Particular description of goods.—Hair-Nets.
Claims use since Oct. 1, 1912.

Ser. No. 79,626. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CENTRAL CALIFORNIA CANNERIES, San Francisco, Cal. Filed July 8, 1914.

HOTCHKISS
"GLASS JAR"
LABEL BRAND

No claim being made to the words "Glass Jar Label Brand" except in association with the mark as shown.
Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Fish, Canned Oysters, Canned Shrimps, Canned Muscat Grapes, Olives, Canned Pork and Beans, Tomato Sauce, Tomatoes with Chilli.
Claims use since January, 1912.

Ser. No. 80,081. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE JAMESON COMPANY, Chicago, Ill. Filed July 25, 1914.

THE JAMESON COMPANY
PIANEX
CHICAGO

Specifically disclaiming, however, the words "The Jameson Company" and "Chicago."
Particular description of goods.—Piano-Player Actions.
Claims use since on or about the 26th day of February, 1914.

Ser. No. 82,414. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE WHITE COMPANY, Cleveland, Ohio. Filed Nov. 4, 1914.

White

Which is a facsimile of the signature of Windsor T. White, the president of the applicant corporation.
Particular description of goods.—Automobiles and Motor-Trucks.
Claims use since January, 1909.

Ser. No. 85,796. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. WIDRIG, INC., Seattle, Wash. Filed Apr. 8, 1915.

PICCADILLY

Particular description of goods.—Prepared Bean-Soup Flour Made from Beans, Rice, and Seasoning.
Claims use since Mar. 24, 1915.

Ser. No. 86,698. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOLEY BROS. & QUINLAN, INCORPORATED, St. Paul, Minn. Filed May 18, 1915.

Fort Snelling



Particular description of goods.—Canned Soups, Dried Fruits, Jams, Candied Citron-Peel, Candied Lemon-Peel, Candied Orange-Peel, Candied Cherries, Candy, Table Sauce, Chilli Sauce, Salad-Dressing, Prepared Mustard, Catsup, Vinegar, Olives, Spaghetti, Vermicelli, Macaroni, Sago, Hominy, Corn-Starch, Chocolate, Cocoa, Cocoanut, Cured Fish, Mince-Meat, Poultry-Seasoning, Jelly, Jelly-Powder, Apple-Butter, Peanut-Butter, Maple-Syrup, Honey, Sugar, Sage, Marjoram, Savory, and Thyme.
Claims use since on or about Sept. 1, 1897.

Ser. No. 86,996. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OGDEN PACKING & PROVISION CO., Ogden, Utah. Filed May 29, 1915.

MOUNTAIN

Particular description of goods.—Lard, Smoked Hams, Bacon, Boiled Hams.
Claims use since March, 1915.

Ser. No. 88,811. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MORRIS & COMPANY, Chicago, Ill. Filed Aug. 25, 1915.

MARIGOLD

Particular description of goods.—Oleomargarin.
Claims use since about the 1st day of March, 1907.

Ser. No. 89,729. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HUGO FISCHER, Brooklyn, N. Y. Filed Oct. 8, 1915.

POIRÉE

Consists of the word "Poirée."
Particular description of goods.—Furs for Garments.
Claims use since June 15, 1915.

Ser. No. 90,250. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALICE BROWN, Shelburne Falls, Mass. Filed Nov. 1, 1915.



Particular description of goods.—Maple-Sugar, Maple-Syrup, and Maple Candies.
Claims use since July 1, 1915.

Ser. No. 90,279. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LIME COLA CO., Montgomery, Ala. Filed Nov. 1, 1915.

LIME COLA

No claim being made for the words "Lime Cola" apart from the mark shown on the drawing.
Particular description of goods.—An Extract and Flavoring-Syrup for Soft Drinks.
Claims use since Sept. 1, 1915.

Ser. No. 90,906. (CLASS 39. CLOTHING.) MECK & Co., Schuylkill Haven, Pa. Filed Nov. 24, 1915.

FORMETEX

Particular description of goods.—Knit Underwear.
Claims use since June 1, 1915.

Ser. No. 91,137. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE NACHMAN COMPANY, Chicago, Ill. Filed Dec. 3, 1915.

KOMFY

Particular description of goods.—Combined Spring and Felted Cushions and Mattresses.
Claims use since about Aug. 1, 1915.

Ser. No. 91,683. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. GÖBEL, Brooklyn, N. Y. Filed Dec. 22, 1915.

QUALITY Göbel's PURE MEAT PRODUCTS FIRST

No claim being made to the words "Pure Meat Products" or "Quality First" apart from the mark shown in the drawing.
Particular description of goods.—Hams, Pork, (Fresh, Smoked, and Corned,) Bacon, Sausages, Meat-Rolls, Roast Meat, and Spiced Meat.
Claims use since July 12, 1915.

Ser. No. 91,726. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 23, 1915.

VENA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 18, 1915.

Ser. No. 91,742. (CLASS 5. ADHESIVES.) EASTERN RUBBER COMPANY, Philadelphia, Pa. Filed Dec. 24, 1915.

MAGIC



No claim being made to the representation of a pneumatic tire apart from the mark shown in the drawing.
Particular description of goods.—Vulcanizing Substitutes or Aperture-Fillers for Articles of Rubber, Rubber Compounds, and Articles Having a Soft-Rubber Base.
Claims use since on or about the 1st day of November, 1915.

Ser. No. 91,752. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN T. STANLEY CO., INC., New York, N. Y. Filed Dec. 24, 1915.

ROSO

Comprising the word "Roso."
Particular description of goods.—Soap.
Claims use since May, 1910.

Ser. No. 92,109. (CLASS 37. PAPER AND STATIONERY.) LUTZ & SHEINKMAN, INC., New York, N. Y. Filed Jan. 13, 1916.

Elandes REGISTERED TRADE MARK NEW YORK

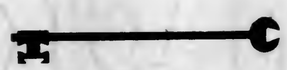
No claim is made to the words "Registered Trade-Mark" or "New York."
Particular description of goods.—Stock-Certificate Forms.
Claims use since Oct. 1, 1915.

Ser. No. 92,135. (CLASS 37. PAPER AND STATIONERY.) THE PEERLESS MFG. CO., Norristown, Pa. Filed Jan. 14, 1916.

CASTILE CREPE

No claim being made to the words "Castile Crepe" except in association with the mark as shown.
Particular description of goods.—Toilet-Paper.
Claims use since June 15, 1914.

Ser. No. 92,197. (CLASS 12. CONSTRUCTION MATERIALS.) THE MASTIC WALL BOARD & ROOFING CO., Cincinnati, Ohio. Filed Jan. 17, 1916.



Particular description of goods.—Stucco or Plastic Board and Wall-Board.
Claims use since November, 1913.

Ser. No. 92,405. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FRANKLIN BAKER COMPANY, Philadelphia, Pa. Filed Jan. 26, 1916.

BAKOLENE

Which consists of the word "Bakolene."
Particular description of goods.—Vegetable Cooking-Oil.
Claims use since about Jan. 1, 1916.

Ser. No. 92,409. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DIGESTIVE FERMENTS CO., Detroit, Mich. Filed Jan. 26, 1916.

"DIFCO"

Particular description of goods.—Bacteriological Products—Namely, Lecithin, Nucleinic Acid; Oxgall, Purified, U. S. P.; Bacto-Peptone, Bacto-Agar, Bacto-Lactose, Bacto-Liver; Iron, Albuminized, Five Per Cent.; Diastase of Malt, Renzyme, Bacto-Oxgall, Bacto-Beef, Bacto-Gelatin, Bacto-Veal.
Claims use since May 1, 1915.

Ser. No. 92,886. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALLEN & HANBURYS, LIMITED, London, England. Filed Feb. 16, 1916.



Particular description of goods.—Food for Infants.
Claims use since the 29th of October, 1914.

Ser. No. 92,888. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN RING COMPANY, Waterbury, Conn. Filed Feb. 16, 1916.



No claim is made for the words "Superior Quality Brand."
Particular description of goods.—Brass and Nickel Plated Goods—Namely, Robe-Hooks, Curtain-Pole Brackets, and Brass Rod Ends.
Claims use since Jan. 13, 1916.

Ser. No. 92,993. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) AMERICAN TOY MFG. CO., Salem, Mass. Filed Feb. 21, 1916.

American Boy's

Particular description of goods.—Ring-Toss, a Toy Comprising a Parachute with Bow and Arrow, a Toy Comprising a Motorman Set.
Claims use since Jan. 1, 1910.

Ser. No. 93,116. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ETIENNE BEJEAN, Paris, France. Filed Feb. 26, 1916.

ARTHRILENOL

The trade-mark consists of the word "Arthrilenol."
Particular description of goods.—A Preparation for the Treatment of Gout and Rheumatism.
Claims use since Apr. 27, 1915.

Ser. No. 93,215. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BERNHARD MITTELSTAEDT, New York, N. Y. Filed Mar. 1, 1916.



The words "Natural Hair Invisible Fringe Net" being disclaimed.
Particular description of goods.—Human-Hair Nets.
Claims use since Mar. 1, 1915.

Ser. No. 93,234. (CLASS 39. CLOTHING.) MME. P. KLEIN, New York, N. Y. Filed Mar. 2, 1916.

"The Sappho"
Reducing Bandage Corset

Comprising the words "The Sappho" "Reducing Bandage Corset," no claim being made to the exclusive use of the words "Reducing Bandage Corset" apart from the mark as shown in the drawing.
Particular description of goods.—Corsets.
Claims use since Feb. 1, 1916.

Ser. No. 93,685. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WORDEN GROCER COMPANY, Grand Rapids, Mich. Filed Mar. 18, 1916.

ROYAL CLUB



Particular description of goods.—Coffee.
Claims use since Jan. 3, 1916.

Ser. No. 93,774. (CLASS 12. CONSTRUCTION MATERIALS.) PLASTIC CEMENTS & FIBRASTIC LTD., Westminster, London, England. Filed Mar. 22, 1916.

FIBRASTIC

Particular description of goods.—Plastic Cement and Compositions of Cement and Fibrous Material.
Claims use since the 26th of March, 1914.

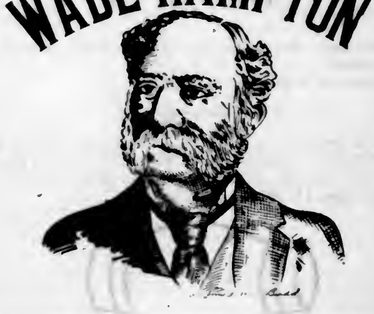
Ser. No. 93,904. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GURLEY CANDY COMPANY, Minneapolis, Minn. Filed Mar. 27, 1916.

JULEPS

Particular description of goods.—Cherries in Chocolate and Cream.
Claims use since September, 1914.

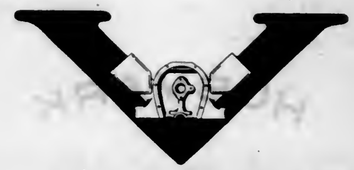
Ser. No. 94,093. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BUDD CLAY WALL, Augusta, Ga. Filed Apr. 3, 1916.

WADE HAMPTON



Particular description of goods.—Wheat-Flour and Self-Rising Flour.
Claims use since Apr. 24, 1902.

Ser. No. 94,145. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE FERRO MACHINE & FOUNDRY CO., Cleveland, Ohio. Filed Apr. 4, 1916.



Particular description of goods.—Gasolene-Engines.
Claims use since Mar. 25, 1916.

Ser. No. 94,202. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) KRUSIUS BROTHERS, New York, N. Y. Filed Apr. 6, 1916. Under ten-year proviso.

KRUSIUS

Comprising the word "Krusius."
Particular description of goods.—Cutlery—viz., Scissors, Shears, Razors, Files, Tweezers, Carvers, Hair-Clippers, Nippers, Pocket, Pen, and Jack Knives, and Parts Thereof.
Claims use since about the year 1889.

Ser. No. 94,260. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) MENAGH DENTAL SUPPLY CO., Newark, N. J. Filed Apr. 8, 1916.

DENT-KRAFT

Particular description of goods.—Cements, Alloys, Wax, and Modeling Compounds for Dentists' Use.
Claims use since about Dec. 1, 1915.

Ser. No. 94,331. (CLASS 39. CLOTHING.) LEOPOLD & PRICE, INC., Houston, Tex. Filed Apr. 11, 1916.

HOU-TEX

Particular description of goods.—Suits, Overcoats, Rain-Coats.
Claims use since Mar. 22, 1916.

Ser. No. 94,340. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Apr. 11, 1916.



Particular description of goods.—Rubber Hose Reinforced with Fabric.
Claims use since Mar. 23, 1916.

Ser. No. 94,341. (CLASS 35. BELTING HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Apr. 11, 1916.

HUBMARK

Particular description of goods.—Rubber Hose Reinforced with Fabric.
Claims use since Mar. 23, 1916.

Ser. No. 94,342. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Apr. 11, 1916.

HUB

Particular description of goods.—Rubber Hose Reinforced with Fabric.
Claims use since Mar. 23, 1916.

Ser. No. 94,390. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE PA PRO COMPANY, Lowville, N. Y. Filed Apr. 13, 1916.

SAN LAC SEAL

No claim being made to the word "Seal" apart from the mark shown in the drawing.
Particular description of goods.—Caps or Closures for Receptacles Such as Bottles and the Like.
Claims use since Jan. 1, 1913.

Ser. No. 94,410. (CLASS 43. THREAD AND YARN.) BLODGETT & ORSWELL CO., Pawtucket, R. I. Filed Apr. 14, 1916.

PENNANT



Particular description of goods.—Spool-Cotton or Sewing-Thread, Darning-Cotton, and Embroidery-Cotton.
Claims use since February, 1906.

Ser. No. 94,421. (CLASS 33. GLASSWARE.) KEPPLER GLASS CONSTRUCTIONS INC., New York, N. Y. Filed Apr. 14, 1916.

KEPPLER
Glass Constructions N Y

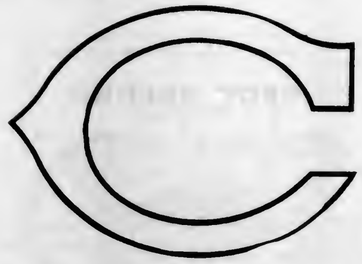
No claim, however, is made for the words "Keppler Glass Constructions N. Y." apart from their use in connection with this mark.
Particular description of goods.—Glass Tiles and Glassware.
Claims use since Apr. 1, 1915.

Ser. No. 94,433. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THOMAS E. STEVENS, Glens Falls, N. Y., assignor to Ernest Le Blond, Glens Falls, N. Y. Filed Apr. 14, 1916.



Particular description of goods.—Granite-Cleaner in the Form of a Liquid Compound for Cleaning Granite.
Claims use since May 6, 1915.

Ser. No. 94,533. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM COULBOURN CO., Sanford, Fla. Filed Apr. 19, 1916.



Particular description of goods.—Fresh Celery, Lettuce, Tomatoes, Peppers, Squash, Corn, Beets, Pineapples, Persimmons, Egg-Plant, Guavas, Beans, Cauliflower, Okra, and Cabbage.
Claims use since Jan. 27, 1916.

Ser. No. 94,590. (CLASS 37. PAPER AND STATIONERY.) THE SAMUEL C. TATUM CO., Cincinnati, Ohio. Filed Apr. 20, 1916.

PILOT

Particular description of goods.—Punching-Machines as Office Appliances for Perforating Sheets.
Claims use since Apr. 12, 1916.

Ser. No. 94,630. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) FRANK N. STUCKEY, Flushing, N. Y. Filed Apr. 21, 1916.

KLENSAUTO

The word "Klensauto" not being a part thereof.
Particular description of goods.—A Polish and Cleaner for Furniture, Woodwork, and Vehicles.
Claims use since July 1, 1915.

Ser. No. 94,667. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DARLING & COMPANY, Chicago, Ill. Filed Apr. 24, 1916.



Particular description of goods.—Prepared Stock and Poultry Foods.
Claims use since Dec. 17, 1913.

Ser. No. 94,668. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE WILLIAM FLOOD COMPANY, Cleveland, Ohio. Filed Apr. 24, 1916.



The trade-mark consists of the representation of a small boy dressed in overalls holding a pail in one hand, wielding a painter's brush with the other hand, and smiling over his shoulder, and an inverted triangle inclosing the same, no claim being made to the compound word "Aqua-Stain" apart from the mark shown in the drawing. The words "Wm. Flood Co. Cleveland" shown on the drawing and specimens are not claimed as forming any part of the trade-mark.
Particular description of goods.—Painters' Stains and Dyes Used in Finishing the Surfaces of Wooden and Analogous Structures.
Claims use since about Nov. 1, 1915.

Ser. No. 94,673. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE IDEAL FOOD COMPANY, Chicago, Ill. Filed Apr. 24, 1916.

O·EAT·IT

Particular description of goods.—Breads and Breakfast Foods.
Claims use since October, 1914.

Ser. No. 94,691. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD J. TARPLEY, Dublin, Ga. Filed Apr. 24, 1916.



Particular description of goods.—Liver and Kidney Medicine.
Claims use since about 1900.

Ser. No. 94,735. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UPDIKE MILLING COMPANY, Omaha, Nebr. Filed Apr. 26, 1916.



Particular description of goods.—Wheat-Flour.
Claims use since May 1, 1914.

Ser. No. 94,801. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PLASTIC ART NOVELTY & SPECIALTY CO., INC., New York, N. Y. Filed Apr. 29, 1916.

PANSCO

The trade-mark is made up from the initials or first letters of the name of the corporation.

Particular description of goods.—The Products of Its Manufacture of Reproductions and Imitations of Natural and Physical Objects Sold and Used as Novelties, Souvenirs, Toys, Advertising Specialties, Art, Educational, and Anatomical Exhibits, All of Which are Made by a Combination of Plastic Material the Component Parts of Which are Gypsum, Wax, Paraffin, Flour, Starch, Salt, Papier-Mâché, Etc.
Claims use since Apr. 20, 1916.

Ser. No. 94,808. (CLASS 37. PAPER AND STATIONERY.) STAR CRAYON MANUFACTURING COMPANY, INC., New York, N. Y. Filed Apr. 29, 1916.

CRAYARTO

Particular description of goods.—Crayons.
Claims use since about April, 1915.

Ser. No. 94,846. (CLASS 12. CONSTRUCTION MATERIALS.) UNITED STATES SPOT GROUND CORPORATION, Omaha, Nebr. Filed May 1, 1916.

SPOT GROUND

No claim being made to the words "Economical, Efficient, Practical, Tested and Approved" apart from the mark shown in the drawing.

Particular description of goods.—Floor and Wall Screeds.
Claims use since Apr. 10, 1916.

Ser. No. 94,886. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ENRIQUE R. BALAGUER, New York, N. Y. Filed May 4, 1916.



Particular description of goods.—A Medicine for Purification of the Blood.
Claims use since June 1, 1902.

Ser. No. 94,897. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) EASTMAN KODAK COMPANY, Rochester, N. Y. Filed May 4, 1916.

KODALAK

Particular description of goods.—Lacquers.
Claims use since Apr. 10, 1916.

Ser. No. 94,903. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMIL W. ROESKY, Coffeyville, Kans. Filed May 4, 1916.

ROESKY'S OLD STYLE WHOLE WHEAT BREAD

No claim being made to the words "Roesky," "Old Style," and "Bread" and the representations of wheat and a potato apart from the mark shown.

Particular description of goods.—Bread.
Claims use since Feb. 1, 1916.

Ser. No. 94,928. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the words "Extra High Patent" and "Flour," apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.
Claims use since March, 1916.

Ser. No. 94,929. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the words "Self Rising Flour" and "Highest Patent" apart from the mark shown in the drawing.

Particular description of goods.—Self-Rising Flour.
Claims use since November, 1914.

Ser. No. 94,930. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the word "Flour" apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.
Claims use since October, 1915.

Ser. No. 94,932. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the word "Flour" apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.

Claims use since May, 1915.

Ser. No. 94,933. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the word "Flour" apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.

Claims use since November, 1914.

Ser. No. 94,934. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the words "Soft Wheat Flour" apart from the mark shown in the drawing.

Particular description of goods.—Soft-Wheat Flour.

Claims use since October, 1914.

Ser. No. 94,935. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the word "Flour" apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.

Claims use since January, 1915.

Ser. No. 94,936. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the words "Self-Rising Flour" apart from the mark shown in the drawing.

Particular description of goods.—Self-Rising Flour.

Claims use since December, 1914.

Ser. No. 94,937. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



Particular description of goods.—Self-Rising Flour.

Claims use since November, 1915.

Ser. No. 94,940. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the word "Flour" apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.

Claims use since September, 1914.

Ser. No. 94,941. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



No claim is made to the word "Flour" apart from the mark shown in the drawing.

Particular description of goods.—Soft-Wheat Flour.

Claims use since August, 1915.

Ser. No. 94,962. (CLASS 38. PRINTS AND PUBLICATIONS.) THE NEWSPAPER ENTERPRISE ASSOCIATION, Cleveland, Ohio. Filed May 6, 1916.

THE OUTBURSTS OF EVERETT TRUE

"The Outbursts of Everett True."

Particular description of goods.—Newspaper Publications.

Claims use since the year 1905.

Ser. No. 94,977. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AUTOMATIC CONCRETE MIXER CO., Providence, R. I. Filed May 8, 1916.

HAINS MIXER

No claim is made for the exclusive right to the use of the words "Hains Mixer" apart from the mark shown.

Particular description of goods.—Concrete Mixers, Hoppers, Conveying Buckets, and Dumping Buckets.

Claims use since Apr. 18, 1916.

Ser. No. 94,984. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH HAMILTON, Chicago, Ill. Filed May 8, 1916.

OLD SOUTHERN

Particular description of goods.—Salad-Dressing.

Claims use since Apr. 28, 1916.

Ser. No. 95,046. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE MAGNIPHONE COMPANY, Chicago, Ill. Filed May 10, 1916.

Magniphone

Particular description of goods.—Electrically-Actuated Devices to Aid in Defective Hearing.

Claims use since the 20th day of December, 1913.

Ser. No. 95,053. (CLASS 38. PRINTS AND PUBLICATIONS.) THE SPERRY & HUTCHINSON COMPANY, New York, N. Y. Filed May 10, 1916.

GOOD AS GOLD 10 J.H.Sperry TRADING STAMP 1/10 Mill

The words "Good as Gold Trading Stamp 1/10 Mill 10" being disclaimed.

Particular description of goods.—Trading-Stamps.

Claims use since 1905.

Ser. No. 95,054. (CLASS 38. PRINTS AND PUBLICATIONS.) THE SPERRY & HUTCHINSON COMPANY, New York, N. Y. Filed May 10, 1916.

SPERRY & HUTCHINSON 10 TRADING STAMP 10 NEW YORK CITY 1/10 MILL

The words "Trading Stamp, New York City, 1—10 Mill 10" being hereby disclaimed.

Particular description of goods.—Trading-Stamps.

Claims use since Oct. 25, 1900.

Ser. No. 95,061. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE FRED F. SABEY CO. INC., Rochester, N. Y. Filed May 10, 1916.

Protex

Particular description of goods.—Awnings and Tents.

Claims use since Mar. 17, 1916.

Ser. No. 95,063. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VALECIA EVAPORATED MILK CO., Madison, Wis. Filed May 10, 1916.

Golden Key

Particular description of goods.—Evaporated Milk.

Claims use since November, 1912.

Ser. No. 95,071. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LANDLIN B. BISHOP, Detroit, Mich. Filed May 11, 1916.

HOLD-FAST It Can't Pull Out It's Locked

No claim being made to the representation of the safety-pin and the words "Hold-fast, It can't pull out it's locked trade-mark" apart from the mark shown in the drawing.

Particular description of goods.—Safety-Pins.

Claims use since Mar. 1, 1916.

Ser. No. 95,113. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WM. SIMPSON, SONS & CO., Philadelphia, Pa. Filed May 12, 1916.



Particular description of goods.—Cotton, Silk, Worsted, and Woolen Goods in the Piece.

Claims use since about Dec. 1, 1915.

Ser. No. 95,133. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TROY CHEMICAL CO., Binghamton, N. Y. Filed May 13, 1916.

Tang-Leaf

Particular description of goods.—A Liniment for Varicose Veins.

Claims use since May 1, 1916.

Ser. No. 95,146. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LYONS MILLING COMPANY, Lyons, Kans. Filed May 15, 1916.

TELEGRAM

Particular description of goods.—Wheat-Flour.

Claims use since the year 1904.

Ser. No. 95,158. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed May 15, 1916.

JOHNNY HOPE AND OLD MAN EXPERIENCE

Particular description of goods.—A Newspaper-Section.

Claims use since Jan. 1, 1916.

Ser. No. 95,170. (CLASS 37. PAPER AND STATIONERY.) DETROIT BOARD OF COMMERCE, Detroit, Mich. Filed May 16, 1916.

MADE IN USA

The right to the exclusive use of the words "Made in U. S. A." apart from the mark as shown is disclaimed.

Particular description of goods.—Writing-Paper and Envelops.

Claims use since Mar. 1, 1915.

Ser. No. 95,203. (CLASS 17. TOBACCO PRODUCTS.) THE HARKERT CIGAR CO., Davenport, Iowa. Filed May 17, 1916.

HARKERT'S HCC MILD 5¢ CIGARS

No claim being made to the words "Harkert's Quality Sign Mild 5¢ Cigars" apart from the mark shown in the drawing.

Particular description of goods.—Cigars.

Claims use since Apr. 28, 1916.

Ser. No. 95,216. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BLUFFTON CHEMICAL CO., Bluffton, Ind. Filed May 18, 1916.



MEAT SMOKER

No claim being made to the words "Meat Smoker" apart from the mark shown in the drawing.

Particular description of goods.—A Meat-Preserver Consisting of a Distillate Obtained from Wood.

Claims use since August, 1915.

Ser. No. 95,224. (CLASS 39. CLOTHING.) JAMES P. MAGENIS, Boston, Mass. Filed May 18, 1916.



No claim being made to the word "Shoe" apart from the mark shown in the drawing.

Particular description of goods.—Leather, Canvas, and Rubber Shoes.

Claims use since Apr. 1, 1916.

Ser. No. 95,248. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) UNITED STATES RUBBER COMPANY, New Brunswick, N. J. Filed May 18, 1916.

UTILUS

Particular description of goods.—Rubber Hose Reinforced with Fabric.

Claims use since May 8, 1916.

Ser. No. 95,252. (CLASS 38. PRINTS AND PUBLICATIONS.) WILLIAM J. WESSEL, Milwaukee, Wis. Filed May 18, 1916.



No claim being made to the use of the word "Pictures" apart from the mark shown.

Particular description of goods.—Pictures of Outdoor Scenes.

Claims use since August, 1915.

Ser. No. 95,260. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GEO. B. CARPENTER & CO., Chicago, Ill. Filed May 19, 1916.

OLD COLONY

Particular description of goods.—Rubber Belting, Rubber Hose, and Rubber Packing.

Claims use since Nov. 11, 1897.

Ser. No. 95,285. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN LA FRANCE FIRE ENGINE CO., INC., Elmira, N. Y. Filed May 20, 1916.

TETRIDE

Particular description of goods.—Chemical Fire-Extinguishers.

Claims use since May 11, 1916.

Ser. No. 95,305. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) T. P. JONES & CO., New York, N. Y. Filed May 20, 1916.

BANQUET

Particular description of goods.—Coffee.

Claims use since the year 1889.

Ser. No. 95,307. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MICHIGAN WIRE GOODS CO., Niles, Mich. Filed May 20, 1916.



No claim being made to the representation of the goods, nor to the descriptive terms "Bamboo Joint" and "No Child Labor," apart from the mark shown in the drawing.

Particular description of goods.—A Folding Wire Doll-Bed.

Claims use since 1911.

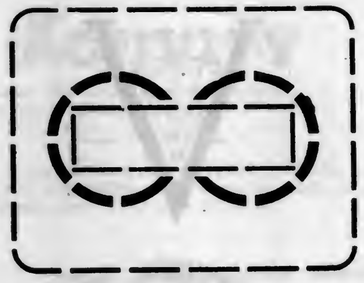
Ser. No. 95,308. (CLASS 31. FILTERS AND REFRIGERATORS.) NATIONAL REFRIGERATOR & FIXTURE COMPANY, St. Louis, Mo. Filed May 20, 1916.

NATIONAL

Particular description of goods.—Refrigerators, Cold-Storage Rooms, and Cold-Store Doors.

Claims use since about Nov. 19, 1915.

Ser. No. 95,338. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) INTERNATIONAL CORK COMPANY, New York, N. Y. Filed May 22, 1916.



Particular description of goods.—Bottle-Stoppers.

Claims use since May 2, 1916.

Ser. No. 95,344. (CLASS 17. TOBACCO PRODUCTS.) SAMUEL LA FAYETTE PRICE, Chicago, Ill. Filed May 22, 1916.

PREPAREDNESS

Particular description of goods.—Cigars.

Claims use since May 1, 1916.

Ser. No. 95,403. (CLASS 12. CONSTRUCTION MATERIALS.) PITTSBURGH WOOD PRESERVING COMPANY, Pittsburgh, Pa. Filed May 24, 1916.

CENTURY

Particular description of goods.—Wood Paving-Blocks.

Claims use since about Apr. 20, 1914.

Ser. No. 95,428. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROYAL EMBROIDERY WORKS; NADAY & FLEISCHER, New York, N. Y. Filed May 25, 1916.

NAFLE

Comprising the word "Nafle."

Particular description of goods.—Silk or Silk-Mixed Fabrics in the Piece.

Claims use since about June, 1915.

Ser. No. 95,459. (CLASS 39. CLOTHING.) SIDNEY J. TWYMAN, Hamilton, Ohio. Filed May 26, 1916.

HUMPTY DUMPTY

Particular description of goods.—Children's Play-Suits, Boys' Outer Garments—to wit, Combination-Suits-Consisting of Overalls and Shirts—and Caps.

Claims use since about Aug. 1, 1915.

Ser. No. 95,460. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) VON BRETHORST & PRIESTLY, Webster City, Iowa. Filed May 26, 1916.

NATIONAL

Particular description of goods.—Checkwriters.

Claims use since June 1, 1915.

Ser. No. 95,484. (CLASS 12. CONSTRUCTION MATERIALS.) SOUTHWESTERN PORTLAND CEMENT CO., El Paso, Tex. Filed May 27, 1916.



Particular description of goods.—Portland Cement.

Claims use since August, 1907.

Ser. No. 95,516. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CLIPPER BELT LACER CO., Grand Rapids, Mich. Filed May 29, 1916.



No claim being made to the word "Clipper" outside of its particular association with the other features of the mark.

Particular description of goods.—Belt-Hooks, Metal Belt-Lacers, and Belt-Pins.

Claims use since May 5, 1916.

Ser. No. 95,558. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) MAGNOLIA METAL COMPANY, New York, N. Y. Filed May 31, 1916.

MAG

Particular description of goods.—Antimony.

Claims use since November, 1915.

Ser. No. 95,630. (CLASS 39. CLOTHING.) MORTON SAMUELS, Baltimore, Md. Filed June 5, 1916.



Particular description of goods.—Leather and Canvas Shoes and Slippers Having Fiber-Rubber Soles.
Claims use since May 27, 1916.

Ser. No. 95,681. (CLASS 32. FURNITURE AND UPHOLSTERY.) MUELLER BROTHERS ART AND MANUFACTURING COMPANY, Chicago, Ill. Filed June 7, 1916.



Particular description of goods.—Picture-Frames, Mirror-Frames, and Frames for Holding Photographs.
Claims use since Dec. 15, 1915.

Ser. No. 95,682. (CLASS 12. CONSTRUCTION MATERIALS.) GEORGE W. MUTTART, Jersey City, N. J. Filed June 7, 1916.



Particular description of goods.—Stucco-Boards.
Claims use since May 17, 1916.

Ser. No. 95,726. (CLASS 39. CLOTHING.) RECIPROCAL JOBBERS INC., New York, N. Y. Filed June 8, 1916.



Particular description of goods.—Corsets.
Claims use since May 15, 1916.

Ser. No. 95,748. (CLASS 39. CLOTHING.) HARRY C. GINGRICH, Reading, Pa. Filed June 9, 1916.

"Triad"

Particular description of goods.—Union Undersuits.
Claims use since Dec. 15, 1915.

Ser. No. 95,839. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) AUGUSTA ICE & BEVERAGE CO., Augusta, Ga. Filed June 13, 1916.

H&S
BRANNEW

The word "Brannew" not being claimed except in connection with the other features of the mark.
Particular description of goods.—A Non-Alcoholic Beverage to be Sold as a Soft Drink.
Claims use since May 12, 1916.

Ser. No. 95,853. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MAX STRAUSS, New York, N. Y. Filed June 13, 1916.

Soi Du Monde

Comprising the words "Soi Du Monde."
Particular description of goods.—Silk Piece Goods.
Claims use since May 27, 1916.

Ser. No. 95,943. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HIGHLAND PARK MANUFACTURING COMPANY, Charlotte, N. C., and Rockhill, S. C. Filed June 17, 1916.

ACTIVITY

Particular description of goods.—Ginghams.
Claims use since June 1, 1912.

Ser. No. 95,981. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WM. SIMPSON, SONS & CO., Philadelphia, Pa. Filed June 19, 1916.



Particular description of goods.—Cotton, Cotton and Silk, Silk, Worsted, and Woolen Goods in the Piece.
Claims use since about June 10, 1916.

Ser. No. 95,999. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GOODALL WORSTED CO., Sanford, Me., and New York, N. Y. Filed June 20, 1916.



Particular description of goods.—Woolen Piece Goods, Mohair Piece Goods, and Piece Goods of Combinations of Cotton, Wool, Mohair, Alpaca, Camel-Hair, Silk, and Artificial Silk.
Claims use since May 1, 1916.

Ser. No. 96,000. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GOODALL WORSTED CO., Sanford, Me., and New York, N. Y. Filed June 20, 1916.



Particular description of goods.—Woolen Piece Goods, Mohair Piece Goods, and Piece Goods of Combinations of Cotton, Wool, Mohair, Alpaca, Camel-Hair, Silk, and Artificial Silk.
Claims use since May 1, 1916.

TRADE-MARK REGISTRATIONS GRANTED

JULY 18, 1916.

111,436. MALT PREPARATION IN POWDERED FORM FOR LAUNDRY USE. ADVANCE MALT PRODUCTS COMPANY, Chicago, Ill.
Filed January 15, 1916. Serial No. 92,149. PUBLISHED MAY 2, 1916.

111,437. CEREAL PREPARATION IN POWDERED FORM FOR BAKERY USE FOR IMPROVING THE QUALITY OF BREAD. ADVANCE MALT PRODUCTS COMPANY, Chicago, Ill.
Filed January 15, 1916. Serial No. 92,150. PUBLISHED APRIL 25, 1916.

111,438. PURE MALT-FLOUR. ADVANCE MALT PRODUCTS COMPANY, Chicago, Ill.
Filed March 20, 1916. Serial No. 93,688. PUBLISHED MAY 2, 1916.

111,439. CANNED OLIVE-OIL. MICHELE AJELLO, Brooklyn, N. Y.
Filed January 20, 1916. Serial No. 92,261. PUBLISHED MARCH 28, 1916.

111,440. MINERAL WATERS. AKTIEBOLAGET RAMLÖSA HÄLSOBRUNN, Hälsingborg, Malmö, and Brunnby, Sweden.
Filed January 17, 1916. Serial No. 92,178. PUBLISHED MAY 2, 1916.

111,441. LIQUID MEDICINE FOR THE TREATMENT OF PELLAGRA AND BLOOD DISEASES. JOHN HENRY ARNOLD, Lumberton, N. C.
Filed October 19, 1915. Serial No. 89,936. PUBLISHED MAY 2, 1916.

111,442. TOPS, COVERS, AND CURTAINS, WHERE THEY ARE PROVIDED WITH LIGHTS, FOR AUTOMOBILES, BUGGIES, &c. AUTO PATENT EQUIPMENT COMPANY, Cincinnati, Ohio.
Filed March 31, 1916. Serial No. 94,004. PUBLISHED MAY 2, 1916.

111,443. REMEDY FOR CERTAIN NAMED DISEASES AND AILMENTS. ALICE E. BAXTER, Dobbs Ferry, N. Y.
Filed October 19, 1915. Serial No. 89,939. PUBLISHED MAY 2, 1916.

111,444. TONIC AND RECONSTRUCTIVE. THE BAYER COMPANY, INC., New York, N. Y.
Filed March 15, 1916. Serial No. 93,545. PUBLISHED MAY 2, 1916.

111,445. CERTAIN NAMED FOODS. JOBST BETHARD Co., Peoria, Ill.
Filed February 25, 1916. Serial No. 93,097. PUBLISHED MAY 2, 1916.

111,446. RICE. M. J. BRANDENSTEIN & Co., San Francisco, Cal.
Filed March 3, 1916. Serial No. 93,254. PUBLISHED MAY 2, 1916.

111,447. CERTAIN NAMED VEHICLES, NOT INCLUDING ENGINES. THE BUCKEYE STEEL CASTINGS COMPANY, Columbus, Ohio.
Filed January 25, 1916. Serial No. 92,389. PUBLISHED MAY 2, 1916.

111,448. HAND-WAGONS. THE BUFFALO SLED COMPANY, North Tonawanda, N. Y.
Filed April 3, 1916. Serial No. 94,058. PUBLISHED MAY 2, 1916.

111,449. WHEAT-FLOUR. WILLARD N. BURGESS, Colorado Springs, Colo., assignor to The Crescent Mill & Elevator Co., Denver, Colo., a Corporation of Colorado.
Filed October 16, 1914. Serial No. 81,931. PUBLISHED APRIL 27, 1915.

111,450. GOLF-CLUB HEADS. THE BURKE GOLF COMPANY, Newark, Ohio.
Filed December 7, 1915. Serial No. 91,263. PUBLISHED APRIL 25, 1916.

111,451. OINTMENT. CLAYTON E. COSTENBADER, Palmerton, Pa.
Filed March 14, 1916. Serial No. 93,523. PUBLISHED MAY 2, 1916.

111,452. LAXATIVE MINERAL WATER. WILLIAM C. CRISMAN, Colfax, Iowa.
Filed May 18, 1915. Serial No. 86,694. PUBLISHED MAY 2, 1916.

111,453. TALCUM POWDER. WILLIAM MORE DECKER, Buffalo, N. Y.
Filed March 17, 1916. Serial No. 93,600. PUBLISHED MAY 2, 1916.

111,454. PORTABLE ACETYLENE-LAMPS. DEWAR MANUFACTURING COMPANY, Brooklyn, N. Y.
Filed February 5, 1916. Serial No. 92,662. PUBLISHED MAY 2, 1916.

111,455. BELT COUPLINGS OR FASTENERS KNOWN AS STEEL BELT-LACING. FLEXIBLE STEEL LACING COMPANY, Chicago, Ill.
Filed April 3, 1916. Serial No. 94,067. PUBLISHED APRIL 25, 1916.

111,456. CERTAIN NAMED FOODS. HAAS BROTHERS, San Francisco, Cal.
Filed January 20, 1916. Serial No. 92,269. PUBLISHED MAY 2, 1916.

111,457. HAMS, BACON, AND LARD. HEIL PACKING COMPANY, St. Louis, Mo.
Filed October 20, 1915. Serial No. 89,957. PUBLISHED MAY 2, 1916.

111,458. OLEOMARGARIN. JOHN F. JELKE COMPANY, Chicago, Ill.
Filed September 4, 1915. Serial No. 89,046. PUBLISHED APRIL 18, 1916.

111,459. LARD. JOHN F. JELKE COMPANY, Chicago, Ill.
Filed February 14, 1916. Serial No. 92,837. PUBLISHED MAY 2, 1916.

111,460. FACE AND GREASELESS CREAMS, TALCUM AND FACE POWDERS, AND SHAMPOO PREPARATIONS. B. J. JOHNSON SOAP COMPANY, Milwaukee, Wis.
Filed October 2, 1915. Serial No. 89,602. PUBLISHED MAY 2, 1916.

111,461. SMOKERS' PIPES. KAUFMANN BROS. & BONDY, New York, N. Y.
Filed March 23, 1916. Serial No. 93,799. PUBLISHED MAY 2, 1916.

111,462. SMOKING AND CHEWING TOBACCO, SNUFF, CIGARS, CIGARETTES. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed October 14, 1914. Serial No. 81,866. PUBLISHED NOVEMBER 23, 1915.

111,463. COVERINGS AND PROTECTORS FOR MANICURE INSTRUMENTS, MADE OF FELT. MAX KLAAS, New York, N. Y.
Filed January 21, 1916. Serial No. 92,292. PUBLISHED MAY 2, 1916.

111,464. BATH-SALT AND WATER-SOFTENER. HAROLD KORN, New York, N. Y.
Filed March 4, 1916. Serial No. 93,304. PUBLISHED MAY 2, 1916.

111,465. WHISKY. CARL F. LAUBER, Philadelphia, Pa.
Filed April 4, 1916. Serial No. 94,149. PUBLISHED MAY 2, 1916.

111,466. MATERIAL FOR INSULATING AGAINST HEAT, SOUND, ELECTRICITY, AND VIBRATION. THE LUNDIN COMPANY, INC., New York, N. Y.
Filed February 3, 1916. Serial No. 92,601. PUBLISHED APRIL 25, 1916.

111,467. CEREAL BREAKFAST FOOD. THE MARTHA JONES PURE FOOD CO., Nashville, Tenn.
Filed December 18, 1915. Serial No. 91,574. PUBLISHED MAY 2, 1916.

111,468. REFRIGERATORS AND REFRIGERATING APPARATUS. ALFRED W. MELLOWES, Fort Wayne, Ind., assignor to The Guardian Frigerator Company, Detroit, Mich., a Corporation of Michigan.
Filed March 15, 1916. Serial No. 93,553. PUBLISHED MAY 2, 1916.

111,469. CERTAIN NAMED FOODS. MERRELL-SOULE COMPANY, Syracuse, N. Y.
Filed March 23, 1915. Serial No. 85,336. PUBLISHED MAY 2, 1916.

111,470. CERTAIN NAMED PAPER AND STATIONERY. MILWAUKEE LACE PAPER COMPANY, Milwaukee, Wis.
Filed March 13, 1916. Serial No. 93,503. PUBLISHED MAY 2, 1916.

111,471. REMOVER COMPOUND FOR CARBON-SCALE. WILLIAM M. MITCHELL, Louisville, Ky.
Filed March 8, 1916. Serial No. 93,390. PUBLISHED MAY 2, 1916.

111,472. PLAYING-CARDS AND GAMES. M. J. MORIARTY, Norwood, Ohio.
Filed March 24, 1916. Serial No. 93,850. PUBLISHED MAY 2, 1916.

111,473. POULTRY-SALVE. JOHN G. MURRAY, Jr., Edisto Island, S. C.
Filed February 29, 1916. Serial No. 93,185. PUBLISHED MAY 2, 1916.

111,474. CIGARS. JULIUS C. NEWMAN, Cleveland, Ohio.
Filed March 13, 1916. Serial No. 93,505. PUBLISHED MAY 2, 1916.

111,475. POLISH AND CLEANSER FOR SILVER, GOLD, CUT GLASS, MIRRORS, WINDOWS, WOODWORK, AND KITCHENWARE. PEERLESS CO., Buffalo, N. Y.
Filed October 29, 1915. Serial No. 90,214. PUBLISHED APRIL 25, 1916.

111,476. NIGHT CANDLE-LAMPS AND NURSERY CANDLE-LAMPS. PRICE'S PATENT CANDLE COMPANY LIMITED, London, Battersea, and Cheshire, England.
Filed February 28, 1916. Serial No. 93,155. PUBLISHED APRIL 25, 1916.

111,477. TALKING-MACHINES OR PHONOGRAPHS. LOUIS A. PRIESS, Minneapolis, Minn.
Filed March 24, 1916. Serial No. 93,854. PUBLISHED APRIL 25, 1916.

111,478. CORNMEAL, CHICKEN FEED, AND HORSE AND COW FEED. F. RAIDT MILLING CO., Louisville, Ky.
Filed January 24, 1916. Serial No. 92,368. PUBLISHED MAY 2, 1916.

111,479. DENTIFRICES. FRANCIS JOSEPH RHODES, Malton, England.
Filed March 16, 1916. Serial No. 93,585. PUBLISHED MAY 2, 1916.

111,480. CERTAIN NAMED RAW OR PARTLY-PREPARED MATERIALS. GEBRÜDER SCHMID, Basel, Switzerland.
Filed March 3, 1916. Serial No. 93,283. PUBLISHED MAY 2, 1916.

111,481. LAXATIVE PREPARATION. THE SENNA SISTERS, St. Louis, Mo.
Filed March 17, 1916. Serial No. 93,612. PUBLISHED MAY 2, 1916.

111,482. MOTOR-TRUCKS. SIGNAL MOTOR TRUCK COMPANY, Detroit, Mich.
Filed March 18, 1916. Serial No. 93,677. PUBLISHED MAY 2, 1916.

111,483. MEDICINE FOR THE TREATMENT OF EPILEPSY. JENNIE L. STOTT, Nashua, N. H.
Filed March 25, 1916. Serial No. 93,880. PUBLISHED MAY 2, 1916.

111,484. CONTINUING SERIES OF EDUCATIONAL BOOKS. ARTHUR W. SWAIN, New York, N. Y.
Filed January 3, 1916. Serial No. 91,894. PUBLISHED MAY 2, 1916.

111,485. PERFUME, TALCUM TOILET POWDER, ROUGE, AND COLD-CREAMS. HENRY TETLOW CO., Philadelphia, Pa.
Filed March 18, 1916. Serial No. 93,678. PUBLISHED MAY 2, 1916.

111,486. OINTMENT FOR THE TREATMENT OF NEURALGIA, RHEUMATISM, AND SCIATICA, FOR EXTERNAL USE. MILDRED THOMAS, Poughkeepsie, N. Y.
Filed March 18, 1916. Serial No. 93,680. PUBLISHED MAY 2, 1916.

111,487. SELF-RISING FLOUR. THREEFOOT BROS. & CO., Meridian, Miss.
Filed January 7, 1916. Serial No. 92,008. PUBLISHED MAY 2, 1916.

111,488. BUTTER, EGGS, CHEESE, AND CANNED VEGETABLES. JOHN F. TONER, Denver, Colo.
Filed December 2, 1915. Serial No. 91,111. PUBLISHED MAY 2, 1916.

111,489. SHINGLE-STAINS AND READY-MIXED PAINTS. THE VAN TILBURG OIL COMPANY, Minneapolis, Minn.
Filed January 3, 1916. Serial No. 91,900. PUBLISHED MARCH 21, 1916.

111,490. TOY PISTOLS. OTTO G. VOSS, Cleveland, Ohio.
Filed March 22, 1915. Serial No. 85,328. PUBLISHED MAY 2, 1916.

111,491. LUMBER. THE R. W. WALKER LUMBER COMPANY, Salisbury, N. C.
Filed February 29, 1916. Serial No. 93,196. PUBLISHED MAY 2, 1916.

111,492. PAPER BOXES. YORK-BRADFORD CO., San Francisco, Cal.
Filed March 15, 1916. Serial No. 93,566. PUBLISHED APRIL 25, 1916.

111,493. REMEDY FOR NEURALGIA AND RHEUMATISM AND BLOOD-PURIFIER. MARJ GALAMBOS, Chicago, Ill.
Filed February 14, 1916. Serial No. 92,835. PUBLISHED MAY 2, 1916.

111,494. LIQUID USED EXTERNALLY FOR THE TREATMENT OF SKIN DISEASES. D. F. ARTHUR & CO., Blackfoot, Idaho.
Filed March 9, 1916. Serial No. 93,406. PUBLISHED MAY 2, 1916.

111,495. FISH LINES, HOOKS, AND LEADERS. DUNHAM, CARRIGAN & HAYDEN CO., San Francisco, Cal.
Filed August 21, 1915. Serial No. 88,728. PUBLISHED MAY 2, 1916.

111,496. BEER. THE JOHN EICHLER BREWING CO., New York, N. Y.
Filed April 14, 1916. Serial No. 94,414. PUBLISHED MAY 9, 1916.

111,497. CERTAIN NAMED DENTAL, MEDICAL, AND SURGICAL APPLIANCES. FELIX GOTTSCHALK, New York, N. Y.
Filed March 3, 1916. Serial No. 93,269. PUBLISHED MAY 2, 1916.

111,498. PEANUTS. GWALTNEY-BUNKLEY PEANUT CO., Smithfield, Va.
Filed March 20, 1916. Serial No. 93,700. PUBLISHED MAY 2, 1916.

111,499. GUMMED PAPER IN SHEETS FOR USE IN THE MANUFACTURE OF LABELS. IDEAL COATED PAPER CO., Brookfield, Mass.
Filed February 29, 1916. Serial No. 93,180. PUBLISHED MAY 2, 1916.

111,500. GUMMED PAPER TAPE. IDEAL COATED PAPER CO., Brookfield, Mass.
Filed February 29, 1916. Serial No. 93,181. PUBLISHED MAY 2, 1916.

111,501. ENAMELED HOUSEHOLD UTENSILS KNOWN TO THE TRADE AS ENAMELED WARE. GEORGE W. JEFFORDS, St. Louis, Mo.
Filed June 10, 1914. Serial No. 78,969. PUBLISHED APRIL 6, 1915.

111,502. ENGRAVING COMPOUND. OSCAR B. JOHNSON, Boise, Idaho.
Filed February 10, 1916. Serial No. 92,895. PUBLISHED MAY 2, 1916.

111,503. CERTAIN NAMED FOODS. LAUDERBACH-BARBER COMPANY, Philipsburg, Pa.
Filed January 18, 1916. Serial No. 92,219. PUBLISHED MAY 2, 1916.

111,504. BOOTS AND SHOES OF LEATHER AND OF LEATHER AND FABRIC. W. H. MCELWAIN COMPANY, Boston, Mass.
Filed Jan. 22, 1916. Serial No. 92,342. PUBLISHED APRIL 11, 1916.

111,505. EXTRACT OF PLANT DRUGS EMPLOYED IN THE TREATMENT OF CANCER. THE WILLIAM S. MERRELL CHEMICAL COMPANY, Cincinnati, Ohio.
Filed March 3, 1916. Serial No. 93,277. PUBLISHED MAY 2, 1916.

111,506. EXTRACT OF DRUGS EMPLOYED FOR THE TREATMENT OF ACUTE, SUBACUTE, AND CHRONIC TUBERCULOSIS. THE WILLIAM S. MERRELL CHEMICAL COMPANY, Cincinnati, Ohio.
Filed March 3, 1916. Serial No. 93,278. PUBLISHED MAY 2, 1916.

111,507. BEER. NACIF P. HACHÉ & HERMANOS, New York, N. Y.
Filed April 1, 1916. Serial No. 94,036. PUBLISHED MAY 2, 1916.

111,508. FLAVORING-SYRUP FOR SODA-WATER. THE PEPSI-COLA CO., Newbern, N. C.
Filed March 19, 1915. Serial No. 85,262. PUBLISHED MAY 9, 1916.

111,509. SODIUM SILICATE. PHILADELPHIA QUARTZ COMPANY, Philadelphia, Pa.
Filed March 22, 1916. Serial No. 93,772. PUBLISHED MAY 2, 1916.

111,510. CUT-OUT DOLLS. REELY-TROOLY CO., Boston, Mass.
Filed April 10, 1915. Serial No. 85,873. PUBLISHED MAY 2, 1916.

111,511. BICYCLES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed April 3, 1916. Serial No. 94,086. PUBLISHED MAY 2, 1916.

111,512. PORT AND OTHER WINES. ALEX. D. SHAW & CO., New York, N. Y.
Filed April 8, 1915. Serial No. 85,789. PUBLISHED MAY 9, 1916.

111,513. DRIED FISH, AND PARTICULARLY COD-FISH. UNION FISH CO., San Francisco, Cal.
Filed January 10, 1916. Serial No. 92,056. PUBLISHED MAY 2, 1916.

111,514. PERFUMES, TOILET POWDERS, TOILET PASTES, TOILET LOTIONS, TOILET CREAMS, ROUGE, TOOTH-SOAPS, MOUTH-WASH. V. VIVAUDOU, INC., New York, N. Y.
Filed January 12, 1916. Serial No. 92,093. PUBLISHED MAY 2, 1916.

111,515. PERFUMES, TOILET POWDERS, TOILET PASTES, TOILET LOTIONS, TOILET CREAMS, ROUGE, TOOTH-SOAPS, MOUTH-WASH. V. VIVAUDOU, INC., New York, N. Y.
Filed January 12, 1916. Serial No. 92,094. PUBLISHED MAY 2, 1916.

111,516. COCKTAILS. HENRY C. WHITE, Portland, Oreg.
Filed January 22, 1916. Serial No. 92,345. PUBLISHED MAY 9, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

13,271. WOVEN SILK FABRICS. R. & H. SIMON, Union, N. J.; R. & H. Simon Company, Union Hill, N. J., assignee.
Registered May 4, 1886. Renewed May 4, 1916.

13,623. TOILET SOAP. JAMES S. KIRK & COMPANY, Chicago, Ill.
Registered August 31, 1886. Renewed August 31, 1916.

13,624. SOAP FOR HOUSEHOLD AND ALL OTHER PURPOSES. LEVER BROS., Warrington, Lancaster, England; Lever Brothers Company, a Corporation of Maine, assignee.
Registered August 31, 1886. Renewed August 31, 1916.

13,814. WHISKY. CAHN, BELT & CO., Baltimore, Md.
Registered November 23, 1886. Renewed November 23, 1916.

13,839. SOAP FOR ANTISEPTIC AND DISINFECTING PURPOSES. FELS & CO., Philadelphia, Pa.
Registered November 30, 1886. Renewed November 30, 1916.

LABELS

REGISTERED JULY 18, 1916.

19,441.—*Title:* "TO THE DEALER A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,442.—*Title:* "GUMMI-WALZEN." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,443.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,444.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,445.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,446.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,447.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,448.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,449.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,450.—*Title:* "TO THE DEALER! A FEW SELLING POINTS." (For Clothes-Wringers.) THE AMERICAN WRINGER COMPANY, Woonsocket, R. I., and New York, N. Y. Filed June 17, 1916.

19,451.—*Title:* "GIOTTO." (For Cigars.) EMILIO A. CAUCEGLIA, New York, N. Y. Filed March 10, 1916.

19,452.—*Title:* "YONAH COFFEE." (For Coffee.) COLUMBIA TEA CO., INC., Port Chester, N. Y. Filed March 10, 1916.

19,453.—*Title:* "BEST-O." (For Corn-Syrup and Cane Products.) COLUMBIA COFFEE MILLS, LTD., New Orleans, La. Filed May 31, 1916.

19,454.—*Title:* "PIETRO & VINCENZO FORMUSA." (For Olive-Oil.) VINCENT FORMUSA, Chicago, Ill. Filed May 22, 1916.

19,455.—*Title:* "GORDON & CO'S." (For Scotch Whisky.) THE GORDON'S DRY GIN COMPANY, LTD., New York, N. Y. Filed June 19, 1916.

19,456.—*Title:* "HARRISON'S." (For Harrison's Honeysuckle Cream.) HERBERT P. HARRISON, Newport, R. I. Filed June 14, 1916.

19,457.—*Title:* "HOMO." (For Cigars.) HOMO CIGAR M'F'G CO., East Chicago, Ind. Filed May 11, 1916.

19,458.—*Title:* "NORMAN BRAND." (For Cheese.) J. L. KRAFT & BROS. CO., Chicago, Ill. Filed June 12, 1916.

19,459.—*Title:* "CASTRELLINA." (For Castrellina Water.) VINCENZO MARCHESE, New York, N. Y. Filed February 23, 1916.

19,460.—*Title:* "MARTIN'S SANITARY FLOOR SWEEP." (For Sweeping Compositions.) C. J. MARTIN & SONS, Austin, Tex. Filed June 16, 1916.

19,461.—*Title:* "MINNEHAHA MAID." (For Candies.) THE MINNEHAHA CANDY CO., Sioux Falls, S. D. Filed June 10, 1916.

19,462.—*Title:* "DIVINIA." (For a Hair-Wash.) JOSEPH PALAZZOLO, New York, N. Y. Filed May 18, 1916.

19,463.—*Title:* "RADIO BRAND UNEXCELLED I R COTTON-FABRICS, TRADE-MARK." (For Cotton Fabrics.) ISADORE RADIN, New York, N. Y. Filed June 16, 1916.

19,464.—*Title:* "CAPITOL CONSTRUCTION BLOCKS." (For Construction-Blocks of Stone.) F. AD. RICHTER & Co., New York, N. Y. Filed June 14, 1916.

19,465.—*Title:* "METEOR." (For Meteor Marbles.) F. AD. RICHTER & Co., New York, N. Y.. Filed June 14, 1916.

19,466.—*Title:* "DISTRESS—RELIEF." (For Catarrhal Jelly.) BERT SEWELL & Co., Kansas City, Mo. Filed May 27, 1916.

19,467.—*Title:* "'SALCO' ABSORBENT COTTON." (For Absorbent Cotton.) SOUTHERN ASEPTIC LABORATORIES, Columbia, S. C. Filed May 27, 1916.

19,468.—*Title:* "SPALDING GOLF BALLS FOR THE PROFESSIONAL THE EXPERT AND THE BEGINNER." (For Golf-Balls.) A. G. SPALDING & BROS., New York, N. Y. Filed June 5, 1916.

19,469.—*Title:* "UNCLE SAM'S BEST." (For Metal Oil-Cans, Dairy-Pails, Strainer-Pails, and Washboilers.) STUBER & KUCK CO., Peoria, Ill. Filed October 7, 1915.

19,470.—*Title:* "VITALITAS." (For a Remedy.) VITAL REMEDIES COMPANY, Houston, Tex. Filed June 21, 1916.

19,471.—*Title:* "CAMP FIRE TEA." (For Tea.) WARNER M. VAN NORDEN, New York, N. Y. Filed June 2, 1916.

19,472.—*Title:* "LITTLE COWBOY." (For Overalls and Coats.) THEO. WEISS & Co., New Orleans, La. Filed May 25, 1916.

19,473.—*Title:* "THE LITTLE ENGINEER." (For Overalls and Coats.) THEO. WEISS & Co., New Orleans, La. Filed May 25, 1916.

PRINTS

REGISTERED JULY 18, 1916.

4,399.—*Title:* "THE LITTLE BROWN JUG WITH THE BIG BLACK SHINE." (For Shoe-Polish.) ALDEN T. CLEVELAND MFG. CO., Boston, Mass. Filed April 12, 1916.

4,400.—*Title:* "GOOD FOR NOTHING EXCEPT TO EAT." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed June 20, 1916.

4,401.—*Title:* "THERE IS A YOUNGSTER IN ALMOST EVERY HOME WHO DEMANDS KELLOGG'S TOASTED CORN FLAKES." (For Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,402.—*Title:* "SHE 'ADORES CRISPY THINGS AND CRACKLY THINGS.'" (For Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,403.—*Title:* "BABY KNOWS THE DIFFERENCE AT ONCE." (For Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,404.—*Title:* "EVEN BABY CAN TELL THE DIFFERENCE!" (For Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,405.—*Title:* "HE WANTS THE ORIGINAL TOASTED CORN FLAKES." (For Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,406.—*Title:* "THE CRISPNESS AND FLAVOR OF KELLOGG'S ARE THERE." (For Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,407.—*Title:* HE'S A LIVE WIRE." (For Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed April 13, 1916.

4,408.—*Title:* "KELLOGG'S." (For Kellogg's Toasted Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed June 14, 1916.

4,409.—*Title:* "LILAC BRAND BACON." (For Bacon.) JACOB MOSCHEL'S SONS, INC., Buffalo, N. Y. Filed May 26, 1916.

4,410.—*Title:* "DRINK MOXIE." (For Moxie.) THE MOXIE COMPANY, Boston, Mass. Filed June 20, 1916.

4,411.—*Title:* "DOLLAR BOX OF BAKED GOODS." (For Bread and Cakes.) WARD BAKING COMPANY, New York, N. Y. Filed May 24, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE GILMORE, JR., AND CLARK.

Decided May 4, 1916.

APPLICATION—FILING DATE—INFORMAL PAPERS.

Where the specification filed October 4 was returned because unsigned and a carbon copy thereof filed October 5 was returned because not in permanent ink and the original duly signed was received on October 22, *Held* that, in the absence of special reasons to the contrary, the case was properly given the filing date of October 22.

ON PETITION.

SUBMARINE OR UNDERSEA BOAT.

Lyman Gilmore, Jr., and *Marie Clark pro se.*

EWING, *Commissioner:*

On October 4, 1915, the applicants deposited in this Office their petition, affidavit, specification, four sheets of drawings, and fee of fifteen dollars. The specification, comprising fifty-one pages of typewritten matter, was not signed by either of the applicants and for this reason was returned. The acceptance of the unsigned specification would have necessitated the requirement for a signed copy thereof as a substitute and the entirely unnecessary work of comparing the substitute specification with the original to guard against departures.

On October 5 the applicants, realizing their failure to sign the original, filed a signed carbon copy, which carbon copy was refused for the reason that it was not written in permanent ink, as required by the rules of the Office.

On October 22 the original specification, duly signed, was filed in the Office, and this last-mentioned date was given as the filing date of the complete application.

Under date of the 8th of February the applicants again filed the carbon copy of the specification and requested that a filing date of October 5, 1915, the date of the first receipt in this Office of the said carbon copy, be given the application. The carbon copy was not acceptable on October 5, 1915, and it is not now acceptable under the rules of the Office.

The applicants have not indicated any reason why the difference between the two filing dates is of importance to them. The fear that someone may have filed an application between the two dates is not sufficient.

Under the circumstances it would seem clear that the action of the Office in giving the filing date of the completed application as of October 22, 1915, was correct.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

CARLIN *v.* CRUMPTON.

Decided April 24, 1916.

INTERFERENCE — RIGHT TO MAKE THE CLAIMS — DEVICE NOT PRACTICALLY OPERATIVE.

Where the calculating-machine of one of the parties will fail under certain circumstances to give the correct result unless the critical circumstances are noticed by the operator and corrections made according to a more or less complicated set of rules not referred to in the disclosure of the application, *Held* that the device does not have the practical utility and operativeness necessary to support the claims of the issue.

Mr. B. C. Stickney, *Mr. Delos G. Haynes*, *Mr. H. C. McCarteney*, and *Mr. Edward Thomas* for the appellant.

Mr. L. A. Williams for the appellee.

VAN ORSDEL, *J.:*

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding awarding priority of the invention in issue to appellee Crumpton. The issue of the interference is in nine counts, of which the following are descriptive:

1. In a totalizer the combination of figure wheels, means for moving the units figure wheel one step whenever the figure wheel of highest order crosses the zero point, said figure wheels having complementary sets of figures, and means for indicating which of said sets of figures is to be read.

6. A totalizer provided with figure wheels and having means for moving the units wheel one step whenever the figure wheel of highest order, crosses the zero point.

7. In a calculating mechanism, adding and registering means and tens carrying mechanism therefor adapted to operate in an endless chain of carrying operations from first to last and from last to first, and selector keys to determine and regulate the extent of operations of said registering means.

The invention is described by the Examiner of Interferences in his opinion, as follows:

The invention in issue is an improvement or modification of the well-known register or totalizer used in the construction of cash registers, adding machines, etc. As commonly found in the prior art it consists of a series of number wheels equal in number to the number of digits of the largest number to be registered. The number wheel corresponding to each digital order, that is, units order,

tens order, hundreds order, etc., bears the numerals from one to nine followed by a zero, the ten characters being equally spaced about its periphery. Each number wheel is also provided with means for engaging with a carrying device in such manner that as it passes from nine to zero it will advance the number wheel of the next higher order one-tenth of a revolution. It is also commonly true of such devices that each number wheel when passing its carrying position in a reverse direction, that is, from zero to nine, will cooperate with the carrying device to rotate the number wheel of next higher order one-tenth of a revolution in the same, that is, the reverse direction. It is believed that such devices are so well known as a part of the prior art that further description is unnecessary.

With a register or totalizer such as that described in the preceding paragraph a number may be added to another previously registered by successively advancing the number wheels corresponding to the various digital orders of the number to be added angular distances relatively proportional to the digits of such number. With such a register any series of numbers may be added arithmetically and numbers may also be subtracted except only that the correct result will not be directly indicated when a number is subtracted which is greater than the sum of the numbers previously added.

It appears from the applications of each of the parties to this interference that the invention in issue was intended to enlarge the scope of usefulness of the register or totalizer of the prior art by making it possible to add and subtract numbers irrespective of their relative magnitude, if within the limits of the machine, and to indicate the result directly both in magnitude and in character, that is, whether positive or negative.

The manner in which this result could be attained by the invention is stated by the Assistant Commissioner as follows:

If each number wheel of a totalizer is provided with a second set of numerals paired with the original set and arranged so that the sum of each pair is nine, the result of the subtraction where a large number is taken from a smaller can be read directly from the added set of numerals except that there will be an error of one unit. The machine of each party was designed to eliminate this error. This was done by gearing the numeral wheel of highest order to the numeral wheel of lowest order so that when the register "passes through zero" one unit would be added in on the wheel of lowest order. The machine of Carlin will not give the correct result if the carrying continue back to the numeral wheel being operated upon.

As found by the tribunals below, it is unnecessary to review the voluminous record before us, since the case turns wholly upon the inoperativeness of the Carlin device. Crumpton made a motion to dismiss the interference on this ground. The Primary Examiner denied the motion, and a large volume of evidence was taken. On final hearing, Crumpton again assailed the operativeness of Carlin's machine, whereupon Carlin set out certain rules the application of which by the operator would obviate the objection interposed and enable the desired result to be reached on his machine. The Examiner of Interferences upon a full consideration of the case held the Carlin device inoperative and lacking in that degree of practical utility which would warrant the issuance of a patent. This decision was affirmed by the Board of Examiners-in-Chief, whose decision was affirmed by the Commissioner.

The single issue of inoperativeness and lack of practical utility within the Carlin specification is here advanced. It is not denied by Crumpton that correct results can be obtained on the Carlin machine by the application of his rules. But he insists that the application of the rules is so involved as to render the use of the device impractical. Not only is this contention well founded, but nowhere in Carlin's specification is it suggested that rules must be applied in order to reach the objective result. In other words, the machine of the issue is designed to make a correct calculation whether the result be a plus or minus quantity. It was intended to obviate the error of one unit in "passing through zero." This cannot be accomplished by the Carlin machine directly—

in an endless chain of carrying operations from first to last and from last to first,

as required by the counts. Before he can make the proper calculation for which the machine is designed, he must invoke his rules and make two other calculations, or, by observing closely the dials, add one additional unit under certain conditions.

The failure of the Carlin machine to indicate correctly the true result in algebraic calculations is due fundamentally both to construction and theory of operation. The art to which this invention belongs is a highly-technical one. The fact that the rules would only have to be applied at irregular intervals does not aid Carlin's contention. It only adds to the difficulty of successful operation. Without the intervention of the rules the device is inoperative. With the rules its operation becomes so complex as to render it impractical when compared with the Crumpton machine.

This case, we think, falls within the ruling of this court in *McKenzie* v. *Cummings*, (24 App. D. C., 137.) The invention there involved was a vote-registering machine. It appeared that about one in one hundred times it failed to register correctly. It was held that a machine for the purpose of registering votes which was not completely accurate would be worthless. So, here, a machine which fails to give with absolute certainty the correct result is so impractical and inoperative as to be worthless. The application of the rules at irregular and uncertain intervals makes the correct resultant so dependent upon the attention and skill of the operator as to bring the Carlin device in principle, at least, within the condemnation of the McKenzie case.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Plym patent, No. 852,450, for a structure for holding plate-glass in position, *Held* not anticipated, valid, and infringed. *Kawneer Mfg. Co.* v. *Toledo Plate & Window Glass Co.*, 232 Fed. Rep., 362.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 13, 1916.

Weiss & Segal, their heirs or legal representatives, take notice:

The Patent Office on July 5, 1916, instituted an interference between the application of Charles Kaufman & Bros., of No. 230 Market street, Chicago, Ill., for registration of a trade-mark and trade-mark registered October 3, 1905, No. 46,733, to Weiss & Segal, of No. 8 Washington Place, New York, N. Y. The notice sent by registered mail to Weiss & Segal has not yet been returned; but a verified showing filed by Charles Kaufman & Bros. constitutes a *prima facie* showing that Weiss & Segal are no longer in business.

In view of the above, Weiss & Segal, their heirs or assigns, are hereby notified that unless they shall enter an appearance herein within thirty days from the first publication of this order a judgment will be entered permitting Charles Kaufman & Bros. to register notwithstanding the registration of Weiss & Segal.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1916.

Weber-Browne Supply Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Willie Dackermann, 109 West One Hundred and Second street, New York, N. Y., and Weber-Browne Supply Co., 703 Odd Fellows' Building and 3740 Delmar avenue, St. Louis, Mo., for registration of trade-marks, and a letter sent to said Weber-Browne Supply Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Weber-Browne Supply Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

Changes in Classification.

(ORDER NO. 2,268.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1916.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 34, Driers, (Division XXXVI,) abolish subclass—

2. **Baffles and screens.**

The patents formerly contained in this subclass have been placed in class 183, Gas Separation, hereinafter established.

In class 48, Gas, Heating and Illuminating, (Division XXXI,) abolish the following subclasses, with their definitions:

Purifiers—
129. Washer and dry purifier,
130. Washer and scrubber—
131. Float,
132. Reciprocating,
133. Rotary—
134. Vertical,
135. Spray—
136. Rotary,
137. Boxes,
138. Condensers,
139. Trays,
140. Separators—
141. Centrifugal,
142. Float-valve,
143. Revivifying.

Carbureters—
145. Regulating,
146. Series,
147. Fixer,
148. Heater—
149. Air,
150. Oil-feed—
150.1. Multiple supply,
150.2. Multiple jet—
150.3. Progressive,
151. Float-valves,
152. Pump,
153. Rotary,
154. Spray,
154.1. Suction-controlled valve,
155. Atomizers—
155.1. Constant level—
155.2. Automatic dilution,
156. Capillary—
157. Spiral passage,
158. Vertical screen,

Carbureters—
Capillary—
159. Zigzag passage,
163. Osmotic,
164. Pivoted—
165. Revolving,
166. Submerged blast—
167. Coil,
168. Surface—
169. Float,

Processes—
220. Purifying.

Compositions—
224. Purifying.

The patents formerly contained in these subclasses have been placed in classes 183, Gas Separation, and 261, Gas and Liquid Contact Apparatus, hereinafter established.

In class 62, Refrigeration, (Division XXXII,) add to the definition of subclass 122, Gas liquefiers and separators, the following search note:

Search Class—
183—GAS SEPARATION, subclass 115, Processes, Separating gases from gases, for processes of separating gases from gases.

In class 75, Metallurgy, (Division III,) abolish subclass—

30. **Fume-arresters.**

The patents formerly contained in this subclass have been placed in classes 183, Gas Separation, and 261, Gas and Liquid Contact Apparatus, hereinafter established.

In class 83, Mills, (Division XXV,) abolish subclasses—

Dust-collectors—
47. Reciprocating,
48. Rotating.
90. **Steam-separators.**

The patents formerly contained in these subclasses have been placed in classes 183, Gas Separation, and 261, Gas and Liquid Contact Apparatus, hereinafter established.

In class 98, Pneumatics, (Division II,) abolish subclasses—

Ventilation—
Combined ventilators and cleaners—
34. Absorbent surface,
35. Drip-surface,
36. Water-tanks—
37. Spray-wheel,
38. Dry filters,
39. Air moistening, cooling, and cleansing—
40. Atomizers,
41. Centrifugal,
42. Drip-surfaces,
43. Sprinkling-chamber,
44. Absorbent surface,
45. Water-tanks—
46. Spray-wheel,
47. Vaporizing-pans,
48. Dry filters.

The patents formerly contained in these subclasses have been placed in classes 183, Gas Separation, and 261, Gas and Liquid Contact Apparatus, hereinafter established.

In class 110, Furnaces, (Division XIX,) abolish the following subclasses, with their definitions:

Spark-arresters—
130. Stack—
131. Feeding air,
132. Return-current,
133. Annular receptacle—
134. Conductor,
135. Central discharge downward,
136. Central discharge upward,
137. Rotary baffle,
138. Spiral baffle, stationary—
139. Separator,
140. Tangential separator,
141. Heads, symmetrical,
142. Steam or water spray,
143. Water-receptacle,
144. Water-receptacle.
183. **Smoke-purifiers.**

The patents formerly contained in these subclasses have been placed in classes 183, Gas Separation, and 261, Gas and Liquid Contact Apparatus, hereinafter established.

In class 137, Water Distribution, (Division XXXIX,) establish subclass—

154. **Surface diffusers.**

The patents contained in this subclass have been taken for the most part from classes 98, Pneumatics, subclass 44, Ventilation, Air moistening, cooling, and cleansing, Absorbent surface, hereinbefore abolished, and 167, Medicines, subclass 3, Disinfectants.

Abolish in Division XXXII class—

209.—**CARBONATING BEVERAGES.**

The patents formerly contained in this class have been placed for the most part in class 23, Chemicals, subclasses 3, Apparatus, and 10, Metalloids, and in class 261, Gas and Liquid Contact Apparatus, hereinafter established.

In class 236, Dampers, Automatic, (Division XIX,) establish subclass—

27. **Moisture-responsive.**

The patents contained in this subclass have been taken for the most part from class 98, Pneumatics, subclass 39, Ventilation, Air moistening, cooling, and cleansing, hereinbefore abolished.

Establish in Division XXV class 183, Gas Separation, with the following subclasses and definitions:

183.—GAS SEPARATION.

1. Miscellaneous.
2. Separating gases from gases.
3. With liquid separation.
4. Absorbent.
5. Gas treatment.
6. Combustion.
7. Electrical.
8. Liquid treatment—
9. With filtration—
10. Subsequent—
11. Heat-exchanging,
12. Unitary structure—
13. Fluid distribution—
14. Superposed filter,
15. Superposed filter,
16. Fluid distribution,
17. Preliminary—
18. Heat-exchanging,
19. Unitary structure,
20. Fluid distribution,
21. With deflection—
22. Subsequent—
23. Heat-exchanging,
24. Unitary structure—
25. Fluid distribution—
26. Liquid-circuit,
27. Fluid distribution,
28. Preliminary—
29. Heat-exchanging,
30. Unitary structure,
31. Fluid distribution.
32. Thermal.
33. Fluid distribution—
34. Systems,
35. Impelling—
36. Inlet,
37. Gas-outlet,
38. Residue-outlet,
39. Valved—
40. Inlet,
41. Gas-outlet,
42. Residue-outlet,
43. Conducting.

183.—GAS SEPARATION—Contd.

44. Filtration—
45. Loose material—
46. Renewing,
47. Compressing,
48. Flow control,
49. Supporting—
50. Trays,
51. Reticulated screen—
52. Cleaning—
53. With cut-off—
54. Shaking,
55. Jarring,
56. Brushing,
57. Pneumatic,
58. Shaking,
59. Jarring,
60. Brushing,
61. Pneumatic,
62. Movable—
63. Rotatable—
64. Vaned,
65. Flow control—
66. Inlet and residue,
67. Inlet,
68. Residue,
69. Layered,
70. Multiple,
71. Zigzag,
72. Conical,
73. Cylindrical,
74. Transverse.
75. Deflection—
76. Deflector-cleaning,
77. Rotatable deflector—
78. Wind-vane,
79. Curved passage,
80. Vortical whirl—
81. Vertical—
82. Tangential inlet—
83. Upflow-outlet—
84. Supplemental chamber,
85. Residue-flow control,
86. Adjustable deflector,
87. Vaned deflector,

183.—GAS SEPARATION—Contd.

Deflection—
Vortical whirl—
Vertical—
Tangential inlet—
Upflow-outlet—
88. Curved deflector,
89. Conical deflector,
90. Horizontal inlet,
91. Upflow-inlet,
92. Downflow-inlet,
93. Upflow-inlet—
94. Upflow-outlet—
95. Residue-flow control,
96. Perforated deflector—
97. Reticulated,
98. Grid,
99. Oblique deflector,
100. Tubular deflector,
101. Adjustable deflector,
102. Spiral deflector,
103. Conical deflector—
104. Ribbed,
105. Downflow-inlet—
106. Upflow-outlet,
107. Downflow-outlet,
108. Horizontal inlet—
109. Upflow-outlet,
110. Horizontal outlet—
111. Residue-flow control,
112. Perforated deflector,
113. Ribbed deflector.
114. Processes—
115. Separating gases from gases,
116. Chemical—
117. Liquid material,
118. Solid material,
119. Thermal—
120. With liquid treatment,
121. Liquid treatment,
122. Filtration or deflection.

In class 261, Gas and Liquid Contact Apparatus, (Division XXXII,) abolish the existing subclasses and establish in lieu thereof the following subclasses and definitions:

261.—GAS AND LIQUID CONTACT APPARATUS.

1. Miscellaneous.
2. With liquid separation—
3. In circuit,
4. On inlet,
5. Filtering—
6. Unitary structure,
7. Decanting—
8. Unitary structure.
9. With heating or cooling—
10. Interchanging,
11. Cooling,
12. Heating—
13. Gas—
14. Incoming,
15. Liquid.
16. Multiple gas—
17. Furnace-gas type.
18. Multiple liquids.
19. Fluid distribution—
20. Systems—
21. Series—
22. Gas connections,
23. Parallel,
24. Pumping—
25. Liquid-operated,
26. Automatic control—
27. Liquid-inlet,
28. Gas and liquid—
29. Liquid-circuit,
30. Gas-inlet—
31. Churn type—
32. Rotary dasher,
33. Reciprocating dasher,
34. Liquid—
35. Gas-operated,
36. In circuit,
37. Inlet,
38. Valved—
39. Hygrostatic or thermostatic,
40. Multiple jet—
41. Progressive,
42. Multiple valves—
43. Connected—
44. Contact-space,

261.—GAS AND LIQUID CONTACT APPARATUS—Continued.

Fluid distribution—
Valved—
Multiple valves—
Connected—
45. Gas by-pass—
46. With gas-inlet,
47. With gas-outlet,
48. With liquid-inlet,
49. Liquid-inlet—
50. With gas-inlet,
51. With gas-outlet,
52. Gas inlet and outlet,
53. Contact-space,
54. Gas by-pass—
55. With gas-inlet,
56. With gas-outlet,
57. With liquid-inlet,
58. Liquid-inlet—
59. With gas-inlet,
60. With gas-outlet,
61. Gas inlet and outlet,
62. Contact-space,
63. Gas by-pass,
64. Gas-inlet,
65. Gas-outlet,
66. Liquid-inlet—
67. Plural—
68. Float and manual,
69. Gas-pressure controlled,
70. Float-controlled,
71. Manual,
72. Liquid-supply tank—
73. Barometric,
74. Contact-receptacle.
75. Contact devices—
76. Injector type—
77. Submerged blast,
78. Atomizer type,
79. Rotating gases,
80. Traveling strip,
81. Reciprocating—
82. Piston,

261.—GAS AND LIQUID CONTACT APPARATUS—Continued.

Contact devices—
83. Rotating—
84. Impeller—
85. Hollow shaft—
86. Gas-trapping,
87. Gas-delivering,
88. Liquid-spraying,
89. Sprayed—
90. Horizontal axis,
91. Dipping—
92. Horizontal axis,
93. Submerged blast,
94. Porous mass—
95. Surface contact,
96. Gas-flow control,
97. Liquid-flow control—
98. Spray,
99. Capillary feed,
100. Porous sheet—
101. Surface contact—
102. Gas-flow control,
103. Liquid-downflow,
104. Capillary feed,
105. Gas-flow control,
106. Liquid-downflow,
107. Capillary feed,
108. Wet baffle—
109. Gas-flow control,
110. Liquid-flow control—
111. Spray,
112. Film,
113. Perforated baffles,
114. Overflow-baffles,
115. Liquid-spray—
116. Aspirating,
117. Opposed,
118. Transverse,
119. Liquid-tank—
120. Floating distributer,
121. Submerged blast—
122. Submerged screen,
123. Submerged baffle,
124. Multiple jet,
125. Multiple receptacle,
126. Upflowing gases.

THOMAS EWING, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 228—No. 4. TUESDAY, JULY 25, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF JULY 25, 1916	1097
CHANGES IN CLASSIFICATION	1097
AMENDMENTS	1097
APPLICATIONS UNDER EXAMINATION	1098
PATENTS GRANTED	1099
REISSUES	1414
DESIGNS	1419
TRADE-MARKS—REGISTRATION APPLIED FOR	1431
TRADE-MARK REGISTRATIONS GRANTED	1451
TRADE-MARK REGISTRATIONS CANCELED	1455
LABELS AND PRINTS	1456
COMMISSIONER'S DECISIONS—	
Fleming v. Gardner	1457
Ex parte Bryant	1457
DECISIONS OF THE U. S. COURTS—	
Braun v. Wahl	1458
Murphy v. Cooper	1458
ADJUDICATED PATENTS	1459
ADVERSE DECISIONS IN INTERFERENCE	1459
INTERFERENCE NOTICES	1459

ISSUE OF JULY 25, 1916.

Patents	902—No.	1,191,935 to No.	1,192,836,	inclusive.
Designs	59—No.	49,412 to No.	49,470,	inclusive.
Trade-Marks	161—No.	111,517 to No.	111,677,	inclusive.
Labels	12—No.	19,474 to No.	19,485,	inclusive.
Prints	1—No.	4,412.		
Reissues	5—No.	14,169 to No.	14,173,	inclusive.
Total	1140			

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	1	North Carolina	2	2
Arizona	2	1	North Dakota	1	.....
Arkansas	6	.....	Ohio	73	12
California	33	5	Oklahoma	8	.....
Colorado	5	1	Oregon	10	.....
Connecticut	15	3	Pennsylvania	93	16
Delaware	1	.....	Rhode Island	8	.....
Florida	3	.....	South Carolina	1	.....
Georgia	5	2	South Dakota	8	.....
Idaho	2	.....	Tennessee	9	2
Illinois	86	10	Texas	9	3
Indiana	26	1	Utah	4	.....
Iowa	21	.....	Vermont	4	.....
Kansas	11	1	Virginia	4	1
Kentucky	5	3	Washington	18	3
Louisiana	2	1	West Virginia	4	.....
Maine	6	.....	Wisconsin	26	8
Maryland	10	5	Wyoming	1	.....
Massachusetts	59	5			
Michigan	29	4	Alaska, District of	.....	.....
Minnesota	11	3	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	6	.....
Missouri	19	3	Hawaii Territory	1	.....
Montana	5	.....	Philippine Islands	.....	.....
Nebraska	8	2	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	2	1	U. S. Navy	.....	.....
New Jersey	43	8			
New Mexico	1	.....	Total to residents of the United States	896	170
New York	182	63			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	3	1	New South Wales	1	.....
Belgium	2	.....	New Zealand	.....	.....
British India	.....	.....	Norway	1	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	13	.....	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
China	.....	.....	Russia	.....	.....
Costa Rica	.....	.....	Scotland	2	.....
Cuba	.....	.....	South Australia	.....	.....
Denmark	.....	.....	Spain	.....	.....
England	15	.....	Sweden	2	.....
Finland	.....	.....	Switzerland	3	1
France	2	1	Transvaal, South Africa	1	.....
Germany	13	1	Victoria	2	.....
Guatemala	.....	.....	Wales	1	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	3	.....	Total to residents of foreign countries	64	4
Japan	.....	.....			
Mexico	.....	.....			

Changes in Classification.

(ORDER No. 2,271.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 14, 1916.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 119, Animal Husbandry, (Division XXXVIII,) abolish the following subclass, with its definition:

Restraining devices—
Hitching—
Releasers—
113. Electric.

The patents formerly contained in this subclass have been placed for the most part in class 74, Machine Elements, subclass 98, Trips.

In same class, in subclass 110, Restraining devices, Hitching, Releasers, add to the search notes following the definition the following:

70—LOCKS AND LATCHES, subclass 50, Locks, Electric, for electrically tripped or actuated locks *per se*.

74—MACHINE ELEMENTS, subclass 98, Trips, for trip devices, including those designed to release machine parts, doors, vestibule-curtains, tetbered animals, supporting devices, etc.

THOMAS EWING,
Commissioner.

Amendments.

In order to insure the prompt delivery of amendments to the proper examining division, applicants are requested in their actions on applications to give the division number and the room number appearing on the last Office letter, as well as the date of such letter.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 22, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications waiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	June 1	June 17	335
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Feb. 15	May 1	688
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	June 30	July 7	96
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	May 29	July 8	226
167	5. Bookbinding; Harvesters; Jewelry; Music	Apr. 20	May 20	259
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 13	June 24	324
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Feb. 28	May 23	529
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 24	June 12	1307
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Feb. 14	June 1	478
235	10. Carriages and Wagons; Spring Devices	Feb. 28	June 13	780
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 17	July 7	136
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Feb. 10	June 16	545
329	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 15	June 17	443
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 7	June 2	245
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 29	June 17	279
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Jan. 24	May 17	541
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making	Mar. 21	June 26	246
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Ju'y 1	July 3	115
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces	May 22	June 3	174
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	July 6	July 3	123
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Apr. 11	June 19	289
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 20	May 27	385
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Feb. 5	Apr. 8	494
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Jan. 10	May 9	428
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers.	June 20	June 20	167
106	26. Electricity, Generation; Motive Power	Jan. 20	May 6	565
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	June 14	June 16	213
65	28. Internal-Combustion Engines	Apr. 3	June 7	484
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Apr. 7	July 1	316
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	May 3	July 11	264
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	June 12	410
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 24	July 6	683
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 23	June 2	390
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Jan. 28	May 1	332
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Mar. 16	July 10	486
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Mar. 23	June 12	815
107	37. Electric Lamps; Electricity, Conduits; Electricity, General Applications	Feb. 2	June 21	697
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	June 3	June 12	236
321	39. Water Distribution	Feb. 25	May 5	363
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 9	June 16	735
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Mar. 29	June 15	360
244	42. Electricity-Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Nov. 18	Mar. 27	688
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 17	June 10	123

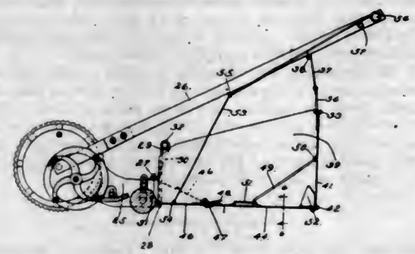
Oldest new case, Nov. 18; oldest amended, Mar. 27.
Total number of applications awaiting action..... 17,792

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-marks	May 22	July 5	774
	Designs	June 19	June 28	261
	Labels and Prints	June 14	June 17	85

PATENTS

GRANTED JULY 25, 1916.

1,191,935. GRASS-CATCHER. LYMAN ANDREWS, Dundee, Ill.; Minnie Andrews executrix of said Lyman Andrews, deceased. Filed June 20, 1914. Serial No. 847,930. (Cl. 56—114.)



1. A grass catcher for a lawn mower comprising a frame, side panels, a rear end, and a bottom, the bottom and end being hinged to the frame, and a stiff rod arranged to communicate motion from the bottom to the end whereby they may be actuated so as to discharge the grass collected by the device.

2. A grass catcher for a lawn mower comprising side panels, a rear end, and a bottom, the end being hinged at its upper edge and the bottom at its rear edge, and a stiff rod arranged to communicate motion from the bottom to the end, whereby they may be actuated so as to discharge the grass collected by the device.

3. A grass catcher for a lawn mower comprising side panels, a front bottom panel, a rear bottom panel and an end panel, said rear bottom panel being hinged so as to tilt obliquely, and front bottom panel being hinged to the forward edge of said rear bottom panel.

4. A grass catcher for a lawn mower comprising side panels, an end panel hinged at its upper edge, a rear bottom panel hinged at its rear edge, and a front bottom panel hinged to the front edge of the rear bottom panel.

5. A grass catcher for a lawn mower comprising side panels, an end panel hinged at its upper edge, a rear bottom panel hinged at its rear edge, a front bottom panel hinged to the front edge of the rear bottom panel, and fingers on said front bottom panel positioned to engage the rear bottom panel after the front bottom panel has been tilted, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,191,936. SURVEYING INSTRUMENT. EDWARD WRIGHT ARMS, Troy, N. Y. Filed Dec. 3, 1915. Serial No. 64,857. (Cl. 33—46.)



1. In a surveying instrument, the combination of a base plate; a standard surmounting the plate, said standard comprising side members, and a pair of upwardly-extending brace members connecting said side members, all of said members having a bearing upon and secured to the plate; and a telescope mounted between and supported by said side members.

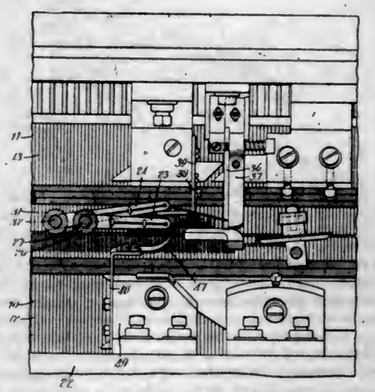
2. A standard for transits and the like, comprising a single casting having a vertically-disposed side members and a pair of oppositely-arranged brace members connecting said side members, said brace members having the form of an inverted bow and merging into said side members.

3. A standard for transits and the like, comprising a single casting having vertically-disposed telescope-supporting members, and a pair of oppositely-arranged bow-shaped brace members connecting said side members, all of said members being provided with feet lying in a common plane.

4. A standard for transits and the like, comprising a single casting having two vertically-disposed telescope-supporting members, and a pair of oppositely-arranged brace members connecting said supporting members at a point above the lower portion thereof, all of said members being L-shaped in cross-section and each having a foot at its lower portion, the bottoms or soles of said feet lying in a common plane.

5. A standard for transits and the like, comprising a single casting having two vertically-disposed telescope-supporting members, said members being oval in outline with the larger end of the oval at the base; and a pair of oppositely-disposed bow-shaped brace members connecting said supporting members in pairs, said bow-shaped members extending outwardly and downwardly from their point of connection with said supporting members.

1,191,937. SINKER-WHEEL MECHANISM. WILLIAM T. BARRATT, Bennington, Vt., assignor, by direct and mesne assignments, of one-third to Alexander J. Cooper and two-thirds to Elizabeth Cooper Stoddard, Bennington, Vt. Filed Jan. 13, 1914. Serial No. 811,869. (Cl. 66—12.)



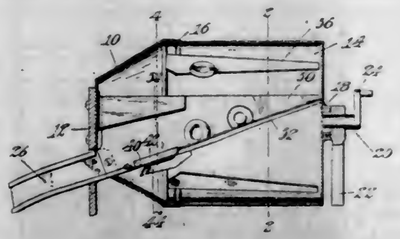
1. A circular knitting machine having, in combination, a needle cylinder, a set of needles therefor, a sinker wheel, a plurality of sinkers adapted to slide in grooves thereon, a cam adapted to move said sinkers in and out between said needles, a movable yarn guide adapted to guide yarn

having a loose end extending therefrom into line with the ends of said sinkers, mechanism adapted to move said movable yarn guide into and out of alinement with said ends of said sinkers and a stationary yarn guide interposed between the outer end of said movable yarn guide and said sinkers, said stationary yarn guide being constructed and arranged to bridge the space between said sinkers, and the nearer of said needles and immediately adjacent to and in advance of the sinker which is about to be advanced, whereby said loose end may be guided to said sinkers and by said sinkers fed to said needles.

2. A circular knitting machine having, in combination, a needle cylinder, a set of needles therefor, a sinker wheel, a plurality of sinkers adapted to slide in grooves thereon, a cam adapted to move said sinkers in and out between said needles, a movable yarn guide adapted to guide yarn having a loose end extending therefrom into line with the ends of said sinkers, mechanism adapted to move said movable yarn guide into and out of alinement with said ends of said sinkers and a stationary yarn guide located beneath said movable yarn guide and having a free end projecting upwardly and terminating between the outer end of said movable yarn guide and said sinkers, and between said sinkers and the needles adjacent said sinkers and in close proximity to the intermeshing point of said sinkers with said needles, whereby said loose end may be guided to said sinkers and by said sinkers fed to said needles.

3. A circular knitting machine having, in combination, a needle cylinder, a set of needles therefor, a sinker wheel, a plurality of sinkers adapted to slide in grooves thereon, a cam adapted to move said sinkers in and out between said needles, a movable yarn guide adapted to guide yarn having a loose end extending therefrom into line with the ends of said sinkers, mechanism adapted to move said movable yarn guide into and out of alinement with said ends of said sinkers and a stationary yarn guide terminating in a free end located between the outer ends of said movable yarn guide and said sinkers and between the outer ends of said sinkers and said needles, and constructed and arranged to bridge the space between said sinkers and said needles, whereby said loose end may be guided to said sinkers and by said sinkers fed to said needles.

1,191,938. ASSORTING AND DELIVERING MECHANISM. LEWIS J. BAZZONI, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 31, 1911. Serial No. 641,486. (Cl. 218—15.1.)



1. In mechanism for assorting circular articles having dissimilar faces, the combination with an inclined runway down which the articles roll on edge, of means for supplying the articles promiscuously thereto, said runway having a deflecting device located out of the path of the periphery of all the articles but in position to act upon the side face of each of those articles having similar faces disposed in one direction to cause said articles to be deflected and leave the runway by gravity.

2. In mechanism for assorting circular articles having dissimilar faces, the combination with supplying means, of an inclined runway having a projecting flange, a cut out portion in said flange, and a deflecting member disposed with its acting face substantially parallel with said flange and above said cut out portion.

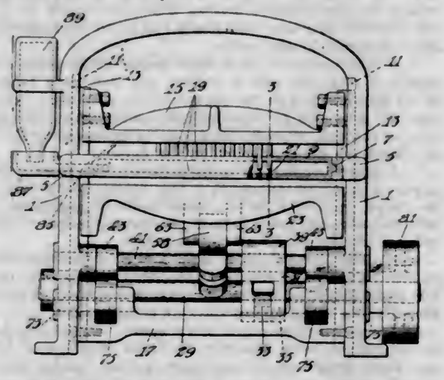
3. In mechanism for assorting circular articles having dissimilar faces, a runway having a bottom portion along which the articles may roll on edge in a straight path if disposed with similar faces in one direction, said bottom portion having a cut out portion by which articles disposed in the opposite manner may drop from the runway, means for dropping articles promiscuously upon the runway, and a shield located above the cut out portion of the bottom to prevent the articles dropped from striking those passing said cut out portion.

4. In mechanism for assorting circular articles having dissimilar faces, a runway having a bottom portion along which the articles may roll on edge in a straight path if disposed with similar faces in one direction, and means for deflecting from the straight path those oppositely disposed, said bottom portion having an opening through which deflected articles may leave the runway.

5. In mechanism for assorting circular articles having dissimilar faces, a runway having a back portion inclined slightly from the vertical, a bottom portion along which the articles may roll on edge while they are supported by the back portion in substantially vertical position, the bottom portion having a gap therein, and a deflecting member mounted on said back portion above said gap.

[Claims 6 to 8 not printed in the Gazette.]

1,191,939. PUNCHING-MACHINE. LEWIS J. BAZZONI, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 29, 1912. Serial No. 717,747. (Cl. 164—90.)



1. A machine of the class described, comprising in combination, means arranged to form a perforation in the stock, and means arranged to measure a predetermined quantity of fluid substance and to carry such predetermined quantity in such perforation.

2. A machine of the class described comprising in combination, means arranged to form a perforation in the stock, a reservoir for a fluid substance, and means arranged to measure a predetermined quantity of such substance and to transfer such predetermined quantity from said reservoir into such perforation.

3. A machine for operating upon a perforated piece of stock, comprising in combination, a support for the stock, a fluid-holding chamber, a carrier having an external fluid-receiving recess movable into the fluid in said chamber and movable into a perforation in the stock, and means arranged to coact with said carrier to confine the fluid in said recess until such fluid enters such perforation.

4. A machine for operating upon a perforated piece of stock, comprising in combination, a support for the stock, a fluid-holding chamber, a carrier having an external fluid-receiving recess movable into the fluid in said chamber and movable into a perforation in the stock, means arranged to coact with said carrier to confine the fluid in said recess until such fluid enters such perforation, said means and said stock support being relatively movable to press the stock adjacent such perforation, and means arranged to cause such pressure.

5. A machine for operating upon a perforated piece of stock, comprising in combination, a support for the stock, a fluid-holding chamber above said support, a carrier having an external fluid-receiving recess movable into the fluid in said chamber and movable into a perforation in the stock, and means arranged to coact with said carrier to confine the fluid in said recess until such fluid enters such perforation, said carrier being formed to close communication between said chamber and perforation when said recess is in register with said perforation.

[Claims 6 to 10 not printed in the Gazette.]

1,191,940. GROUND-TERMINAL CONNECTION FOR ELECTRIC CONDUCTORS. WILLIAM H. BLOOD, Jr., Wellesley, Mass. Filed July 9, 1915. Serial No. 38,983. (Cl. 173—273.)



1. A grounding-device for electric conductors, consisting of a wire conductor bent to form an embracing-portion for embracing the ground terminal, and having loop-like ends, a connecting-plate having slots extended inward from its opposite edges to receive the wire at the loop-like ends of the embracing-portion, and means to engage the ground terminal and to exert upon said plate an outward thrust to cause the embracing-portion to tightly engage the terminal.

2. A grounding-device for electric-conductors, consisting of a wire conductor bent to form an embracing-portion for embracing the ground terminal, and having loop-like ends, a connecting-plate having slots extended inward from its opposite edges to receive the wire at the loop-like ends of the embracing-portion, and a bolt associated with said plate, its screw extending through a hole in the plate and engaging the terminal and its nut arranged for engagement with the inside of the plate.

3. A grounding-device for electric-conductors, consisting of a wire conductor bent to form an embracing-portion for embracing the ground terminal, and having loop-like ends, a connecting-plate arranged for engagement with the wire at the loop-like ends of the embracing-portion, a bolt associated with said plate, its screw extending through a hole in the plate and engaging the terminal, and its nut arranged on the threaded shank of the screw at the inside of the plate, which nut is held from turning by engaging the loop-like ends of the embracing-portion.

1,191,941. COLOR PHOTOGRAPHY. PERCY D. BREWSTER, East Orange, N. J. Filed Feb. 11, 1913. Serial No. 747,712. (Cl. 95—2.)

1. The process of making color negatives which comprises exposing to an image projected in colors against one side thereof a film composed of a transparent support having on one side an emulsion sensitized chiefly to light of one group of colors and having on the other side an emulsion sensitive to light of other colors, developing and fixing the said film on both sides, and staining the similar images on the two sides of the said film, in registration with each other, on one side in one color and on the other side in another color.

2. The process of making color negative films which comprises exposing through one side in a suitable camera a film having on one side an emulsion made as transparent as possible and sensitized chiefly for light of one group of colors and on the other side an emulsion sensitized for light of other colors, developing and fixing the said film on both sides, and staining the images on the two sides of the said film, op one side in one color and on the other side in another color.

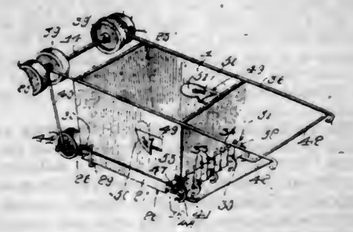
3. The process of making color negative films which comprises exposing through one side a film consisting of a transparent support having on one side an emulsion sensitized chiefly for light of one group of colors and stained a color adapted to prevent the passage through it of material quantities of light of the said group of colors that are adapted to act chiefly upon it, and having on the other side an emulsion sensitized for light of other colors, developing and fixing the said film on both sides, and staining the images on the two sides of the said film, on one side in one color and on the other side in another color.

4. The process of making color negative films which comprises exposing simultaneously to light from the same colored object both sides of a film composed of a transparent support having on one side an emulsion sensitized chiefly for light of one group of colors and on the other side an emulsion sensitized for light of other colors, developing and fixing the said film on both sides to produce two registering photographic images of the object, and staining the images on the two sides of the said film on one side in one color and on the other side in another color.

5. The process of making color negative films which comprises simultaneously exposing to light from the same colored object both sides of a film composed of a transparent support having on one side an emulsion sensitized chiefly for green, blue, indigo and violet light and on the other side an emulsion sensitized for red, orange and yellow light, developing and fixing the said film on both sides to produce registering photographic images of the object, and staining the images on both sides of the said film, on one side in one color and on the other side in another color.

[Claims 6 to 11 not printed in the Gazette.]

1,191,942. DISTANCE POWER EXCAVATING-MACHINE. WILLIAM F. BRINTON, Washington, Iowa. Filed Nov. 1, 1913. Serial No. 798,741. (Cl. 37—24.)



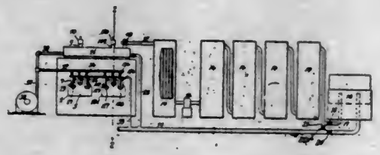
1. A scoop comprising a body provided with a hinge cutting plate upon one end thereof, a plurality of cutting points carried by the under face of said cutting plate, a transversely extending beam carried by the bottom end of said body and provided with a plurality of notch portions formed therein, and a plurality of rearwardly curved fingers carried by the front face of said cutting plate and adapted to fit in said notches for limiting the downward swing of said cutting plate relative to said body.

2. A scoop comprising a body provided with a plurality of side apertures, and plows extending through said apertures for cutting the side of an embankment and directing the material into said body for automatically filling the same.

3. A scoop comprising a body provided with a plurality of apertures formed in the side thereof, plows carried by

said body and provided with mold-boards projecting through said apertures for directing plowed material into the interior of said body for automatically filling said body, and means for facilitating the removal of material from said body.

1,191,943. PROCESS OF MAKING COKE. HENRY W. BUHLER and CHARLES J. EMERSON, Boston, Mass., assignors of seven-eighths to George D. Haskell, Boston, Mass. Filed Nov. 7, 1914. Serial No. 870,809. (Cl. 202—8.)



1. The method of coking coal and recovering a portion of the by-products therefrom, comprising the following steps: first, subjecting a body of coal to a partial coking operation by heating it in a closed oven sufficiently to distil therefrom the more volatile gases under conditions preventing combustion; second, extracting by-products from gases so distilled; third, completing the coking of a body of coal partially coked by the above described first step by burning over it and in the same oven gases purified by the above described second step.

2. The method of coking coal and recovering a portion of the by-products therefrom, comprising the following steps: first, subjecting a body of coal to a partial coking operation by heating it in a closed oven sufficiently to distil therefrom the more volatile gases under conditions preventing combustion; second, extracting by-products from gases so distilled and storing said gases; third, completing the coking of a body of coal partially coked by the above described first step by burning over it and in the same oven gases purified and stored by the above described second step.

3. The method of coking coal and recovering a portion of the by-products therefrom, comprising the following steps: first, subjecting a body of coal to a partial coking operation by heating it in a closed oven sufficiently to distil therefrom the more volatile gases under conditions preventing combustion; second, extracting by-products from gases so distilled; third, completing the coking of a body of coal partially coked by the above described first step by burning over it and in the same oven gases purified by the above described second step together with the residual gases distilled from the said body of coal in this final stage of the coking operation.

4. The method of coking coal and recovering a portion of the by-products therefrom which comprises the following steps: first, subjecting the coal in a suitable oven to heat sufficient to distil off the more volatile gases under conditions preventing combustion thereof; second, removing said distilled gases from the oven and extracting the by-products therefrom; third, returning the purified gases to the interior of the oven at a later stage, and burning them, together with the residual gases distilled from the charge, above said charge, until the coking operation is completed.

5. The method of coking coal and recovering a portion of the by-products therefrom, comprising the following steps: first, subjecting a body of coal to a partial coking operation by heating it in a closed oven sufficiently to distil therefrom the more volatile gases under conditions preventing combustion; second, extracting by-products from gases so distilled; third, completing the coking of a body of coal partially coked by the above described first step, by discharging simultaneously into the oven containing it, gases purified by the above described second step and air under pressure and burning in said oven the combustible mixture so formed.

1,191,944. BUTTON. LEONARD R. CARLEY, Waterbury, Conn. Filed Feb. 17, 1916. Serial No. 78,832. (Cl. 24—95.)



1. A button of the class described comprising a base formed with an eyelet having a substantially cylindrical shank, the lower extremity of said eyelet formed as a ring, a die fixedly secured to said eyelet and enlarging at its upper extremity, a button head including a downwardly extending hub, the lower extremity of said hub loosely engaging the shank of said eyelet and adapted to shift therealong, an anvil located in said button head and extending across the upper open extremity of said hub, said anvil adapted to rest upon said die head when the head of said button is in its retracted position, the upper extremity of said eyelet formed to prevent the lower extremity of said hub passing above the upper extremity of the ring of the eyelet.

2. A button comprising an eyelet having a supporting plate at its lower extremity with an upturned outer edge, a die secured to said eyelet, a head including a hub with a bottom plate loosely fitting around the shank of said eyelet, the upturned outer edge of the supporting plate of said eyelet extending adjacent the lower extremity of the bottom plate of said hub when the head of said button is in its extended position.

3. A flexible button comprising a base formed with an open eyelet, the lower extremity of said eyelet outwardly flared and forming a supporting plate, an upstanding ring carried at the outer edge of said supporting plate, a button head including a hub with a bottom plate, the bottom plate of said hub fitting around the shank of said eyelet, the lower extremity of said hub adapted to be contained within the upstanding ring of said supporting plate, a die with an upper closed end fixedly secured to said eyelet and adapted to receive a fastening member therein.

4. A button of the class described comprising a base formed with an eyelet, a die fixedly secured to said eyelet and enlarging at its upper extremity, a button head comprising upper and lower plates, the lower plate provided with a downwardly extending hub the lower extremity of which loosely engages the shank of said eyelet and adapted to shift therealong, an anvil carried between the upper and lower plates of said button head and extending across the upper open extremity of said hub, said anvil adapted to rest upon said die when the head of said button is in its retracted position.

5. A button comprising an eyelet having a supporting plate at its lower extremity with an upturned outer edge, and with a cylindrical shank, a die secured to said eyelet, a head including a hub with a bottom plate loosely fitting around the shank of said eyelet, the upturned outer edge of the supporting plate of said eyelet extending adjacent the lower extremity of the bottom plate of said hub when the head of said bottom is in its extended position.

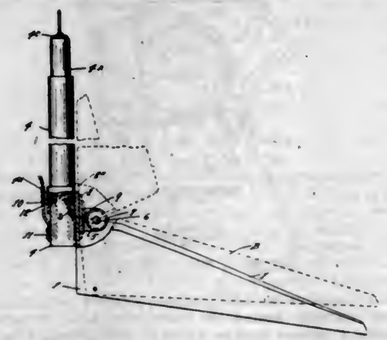
[Claims 6 and 7 not printed in the Gazette.]

1,191,945. DUST-PAN. OTTO CARLSON, Bergland, Mich. Filed Apr. 17, 1914. Serial No. 832,440. (Cl. 65—20.)

1. The combination with a dust pan, of a telescoping handle hinged thereto, spring-connection between said handle and pan and an ear made integral with said pan and projected into said handle in the path of movement of the telescoping portions of said handle.

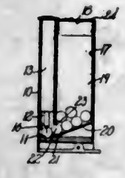
2. The combination with a dust pan, of a telescoping handle hinged thereto, spring-connection between said handle and pan, an ear made integral with said pan and projected into said handle in the path of movement of the telescoping portions of said handle and means associated with said handle and projected thereinto for limiting the movement of the telescoping portions thereof.

3. The combination with a dust pan, of a telescoping handle hinged thereto, spring-connection between said handle and pan, an ear made integral with said pan and projected into said handle in the path of movement of the



telescoping portions of said handle, an angular resilient member secured to said handle and a lug carried by said member and removably projected into said handle for limiting the movement of the telescoping portions thereof.

1,191,946. LIGHTING DEVICE. DANIEL L. CHANDLER, Ayer, and JOHN H. TRAYNE, Groton, Mass., assignors to Chantray Mfg. Co., a Corporation of Maine. Filed June 28, 1915. Serial No. 36,654. (Cl. 67—7.)



1. In a lighter the combination of a receptacle constructed and arranged to contain ignitible pellets, said receptacle having a discharge orifice adjacent the lower end thereof, a pocket arranged beneath said discharge orifice adapted to receive pellets one at a time from said receptacle, and a needle adapted to be moved toward said pocket to pierce the pellet contained therein and to remove said pellet from said pocket.

2. In a lighter a receptacle constructed and arranged to contain ignitible pellets, said receptacle having an inclined bottom with a discharge orifice located adjacent to the base of said inclined bottom, a needle constructed and arranged to pierce the pellet located adjacent to said discharge orifice and to remove the same therefrom, and a holder for said needle.

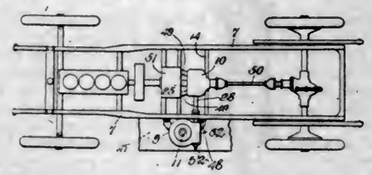
3. In combination means for holding a pellet, a pointed instrument adapted to pierce said pellet and remove the same from said holder, said pointed instrument having an enlargement formed at a distance from the pointed end thereof, a tube adapted to surround the body portion of said pointed instrument, a holder having a recess in one end thereof adapted to receive said tube, and means to secure said tube within said holder.

4. In combination a receptacle constructed and arranged to hold pellets, said receptacle having a discharge orifice for said pellets; a pocket arranged beneath said orifice adapted to hold one of said pellets, a needle adapted to pierce the pellet contained in said pocket, means for guiding said needle toward and from said pocket to pierce and remove said pellet therefrom, and means actuated by the movements of said needle adapted to retain the pellet centrally with respect to said pocket.

5. In combination a pocket constructed and arranged to hold a pellet, a pointed instrument adapted to pierce and remove said pellet from said holder, means constructed and arranged to hold and guide said instrument during the piercing and removing operation thereof, and a pellet receptacle detachably secured to said pocket, said receptacle having a discharge orifice communicating with said pocket.

[Claims 6 and 7 not printed in the Gazette.]

1,191,947. VALVE-OPERATING DEVICE FOR FLUID-CONDUITS. EDWARD S. CLARK, Boston, Mass. Filed Jan. 2, 1915. Serial No. 287. (Cl. 21—90.)



1. A device for opening and closing wrench valves, consisting of a vehicle, an adjustable wrench carried thereon, mechanism for turning said wrench secured to said vehicle, and means of propulsion carried by said vehicle and operatively connected to drive the said wrench mechanism.

2. A device for opening and closing wrench valves, consisting of a vehicle, a portable sliding wrench carried thereon, mechanism for turning said wrench secured to said vehicle, and means of propulsion carried by said vehicle and operatively connected to drive said wrench turning mechanism.

3. A device for turning the polygonal stem of wrench valves, consisting of a vehicle, a portable wrench bar one end of which is shaped to engage with said stem and which is carried by said vehicle, mechanism for turning said wrench bar secured to said vehicle, and means of propulsion carried by said vehicle and operatively connected to drive said wrench turning mechanism.

4. A device for opening and closing wrench valves consisting of a motor vehicle, an adjustable wrench and wrench socket therefor mounted upon said vehicle, mechanism secured to said vehicle for turning said socket, said mechanism being operatively connected with the motive power of said vehicle.

5. A device for opening and closing wrench valves, consisting of a motor vehicle, a portable sliding wrench carried by said vehicle and adjustable to and from the wrench valve, mechanism secured to said vehicle for turning the said wrench and operatively connected with and driven by the motive mechanism of said vehicle.

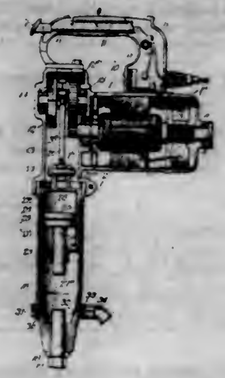
[Claims 6 to 12 not printed in the Gazette.]

1,191,948. POWER-HAMMER. CHARLES B. COATES, Chicago, Ill. Filed Nov. 9, 1914. Serial No. 870,956. (Cl. 125—20.)

1. In a power hammer, the combination of a barrel, a power operated hollow cylinder slidably fitting therein and having complete circumferential contact with the interior walls of the barrel, said cylinder having ports in two different points intermediate its length and communicating with the interior of the cylinder, means affording communication between the two ports, said barrel walls being imperforate with respect to the external atmosphere where traversed by the cylinder; and a piston movable in the cylinder and having a stem projecting through one end of the cylinder and adapted to deliver its blow upon a working tool.

2. In a power hammer, the combination of a barrel, a power operated hollow cylinder slidably fitting therein and having complete circumferential contact with the interior walls of the barrel, said cylinder having ports in two different points intermediate its length and communicating with the interior of the cylinder, one of said parts having means of communication between the two ports, and a piston movable in the cylinder and having a stem

projecting through one end of the cylinder and adapted to deliver its blow upon a working tool.



3. In a power hammer, the combination of a barrel, a power operated hollow cylinder reciprocable therein and having its intermediate portion reduced in diameter to form an annular air space between it and the inner walls of the barrel, said barrel walls being imperforate where traversed by the cylinder, and the cylinder having ports in two different points intermediate its length communicating between its interior and said annular space, and a piston movable in the cylinder and having a stem projecting through one end of the cylinder and adapted to deliver its blow upon a working tool.

4. In a power hammer, the combination of a barrel, a power operated hollow cylinder reciprocable therein and having its intermediate portion reduced in diameter to form an annular air space between it and the inner walls of the barrel, said barrel walls being imperforate where traversed by the cylinder, and the cylinder having ports in two different points intermediate its length communicating between its interior and said annular space, and a piston movable in the cylinder and having a stem projecting through one end of the cylinder and adapted to deliver its blow upon a working tool, said ports being arranged at a distance from the ends of the cylinder to provide air compression spaces for the piston after closing the ports and such ports together with the annular space forming a by-pass for the air on opposite sides of the piston when the latter is in a position between the two ports.

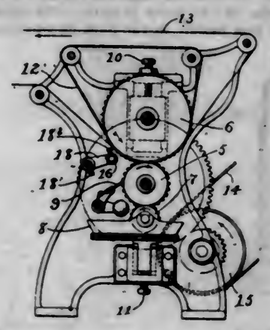
1,191,949. APPARATUS FOR INTAGLIO PRINTING. FREDERICK T. CORKETT, Ashtead, England, assignor to American Lithographic Company, New York, N. Y., a Corporation of New York. Filed June 23, 1915. Serial No. 35,751. (Cl. 101—104.)

1. An apparatus for intaglio printing comprising a continuously rotating design cylinder, means for inking such cylinder, means for removing surplus ink, and means for directing a blast of air against the surface of the cylinder after the removal of the surplus ink therefrom.

2. An apparatus for photogravure printing comprising a design cylinder, means for continuously rotating said cylinder, means for inking said cylinder, a scraper for removing the surplus ink, and means for directing an air blast against the scraped portion of the cylinder.

3. An apparatus for intaglio printing comprising a design cylinder, means for continuously rotating said cylinder, means for inking said cylinder, a scraper for removing the surplus ink, and means for directing a regulable air blast against the scraped portion of the cylinder.

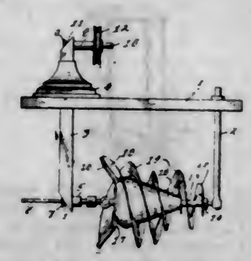
4. An apparatus for intaglio printing comprising a design cylinder, means for inking the same, a pressure cylinder, a scraper between the said cylinders for removing surplus ink, means for directing an air blast against the cylinder between the scraper and the pressure cylinder, and means for adjusting the position of the same between said scraper and pressure cylinder.



5. An apparatus for intaglio printing comprising a design cylinder, means for inking the same, a pressure cylinder, a scraper between the said cylinders for removing surplus ink, means for directing an air blast against the cylinder between the scraper and the pressure cylinder, means for adjusting the position of the same between said scraper and pressure cylinder, and means for regulating the blast of air.

[Claim 6 not printed in the Gazette.]

1,191,950. WATER-MOTOR. CHARLES T. CUSTER, Pasco, Wash. Filed July 20, 1915. Serial No. 40,942. (Cl. 170—27.)



1. In a water motor, the combination with a rotary shaft, of a rotor mounted thereon, the said rotor including a core having a frusto-conical portion and a hemi-spherical portion, a pair of arms extending outwardly in opposite directions from the hemi-spherical portion and spiral blades secured to the arms and extending about the said core.

2. In a water motor, the combination with a shaft, of a rotor mounted thereon, the said rotor including a core having a pair of outwardly extending arms, a blade secured to one of said arms and passing about the core in a spiral path, a sleeve mounted on the shaft, the said blade being engaged with the shaft between the end of the sleeve and the adjacent end of the core, a second blade secured to the other of said arms and extending about the core and sleeve in a spiral path and engaged with the shaft at the other end of the sleeve and a nut adjustably mounted on the shaft to maintain the ends of the blades in place.

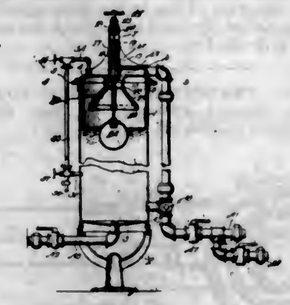
1,191,951. WRIST-WATCH. CHARLES L. DEPOLLIER, New York, N. Y. Filed Sept. 18, 1915. Serial No. 51,320. (Cl. 224—4.)

1. The combination with a watch-case having diametrically opposite eyes, of a strap secured to one of said eyes and having its other end passed through the other of said eyes, and provided with a fastening device to engage the body of the strap, such fastening device comprising one member to be slipped from one side of the strap between the strap and the wrist of the wearer and another member movably connected therewith to hold the fastening device in adjusted position.



2. The combination with a watch-case having diametrically opposite eyes, of a strap secured to one of said eyes and having its other end passed through the other of said eyes, and provided with a fastening device to engage the body of the strap, such fastening device comprising one member to be slipped between the strap and the wrist of the wearer and another member to coöperate therewith to hold the fastening device in adjusted position, said members being hinged together at one end and provided at the other end with a catch.

1,191,952. APPARATUS FOR CHARGING LIQUOR WITH GAS. ADOLPH DIRIAN and WILLIAM BIEL, Chicago, Ill. Filed Apr. 16, 1915. Serial No. 21,824. (Cl. 209—14.)



1. In an apparatus of the class described, a closed tank, a hollow conical mixing shell hung pendant within the upper portion of the tank, oblique deflecting vanes arranged within the shell, a pipe extending from a source of gas supply, a valve casing connected to said pipe and depending into the tank over the shell, a valve in said casing, controlling the flow of gas, a pipe for supplying liquid and a hollow coupling in the tank connected to said liquid supply pipe and having its inner extremity opening into the shell over the vanes.

2. In an apparatus of the class described, a closed tank, a hollow conical mixing shell hung pendant within the upper portion of the tank, oblique deflecting vanes arranged within the shell, a pipe extending from a source of gas supply, a valve casing connected to said pipe and depending into the tank over the shell, a valve in said casing controlling the flow of gas, a float in the tank having a stem connected to the valve, a pipe for supplying liquid and a hollow coupling in the tank connected to said liquid supply pipe and having its inner extremity opening into the shell over the vanes.

1,191,953. RAILWAY-BRAKE APPARATUS. ULYSSES S. DRAYER, Altoona, Pa. Filed Dec. 4, 1911. Serial No. 663,881. (Cl. 188—49.)

1. In a railway brake rigging, the combination with a primary power applying member and the brake shoes, of power transmitting connections between said member and shoes including a part having a bearing surface, a lever rocking on said surface and having a contact portion through which it engages said surface, moving along the latter as the parts change position in the brake application and release operation and two pivotal connections to said lever at spaced apart points, the line connecting which lies at one side of the axis on which said lever rocks.



2. In a railway brake rigging, the combination with a primary power applying member and the brake shoes, of power transmitting connections between said member and shoes including a part having a bearing surface, a lever rocking on said surface and having a contact portion through which it engages said surface, moving along the latter as the parts change position in the brake application and release operation and two pivotal connections to said lever at spaced apart points, the line connecting which lies at one side of the axis on which said lever rocks, said surface being inclined to said line so that said lever is bodily cammed away from said part during one stage of the movement of said contact portion along said surface.

3. In a railway brake rigging the combination of a brake lever, a second lever, a link connection between one end of said second lever and said brake lever, a power transmitting link connection to the opposite end of said second lever and a stationary cam member against which said second lever fulcrums and adapted as said lever turns on the brake application to cam the lever bodily away from said member.

4. In a railway brake rigging the combination of a brake lever, a second lever, a link connection between one end of said second lever and said brake lever, a power transmitting link connection to the opposite end of said second lever, a stationary cam member against which said second lever fulcrums and adapted as said lever turns on the brake application to cam the lever bodily away from said member and a yielding connection tending to hold said levers in their brake released positions.

5. In a railway brake rigging the combination with the truck brake levers F and G, of a spreader link connecting one end of each lever with one end of the other, a lever P, a link P′ connecting one end of the lever P to the free end of the lever G, a lever O, a link O′ connecting one end of lever O to the free end of the lever F, a spreader link connecting the ends of the levers O and P remote from the connections to the levers F and G, a power transmitting connection J′ to the lever O between the ends of the latter, said lever P having a lateral projection, and a truck carried part B having a surface on which said lateral projection fulcrums, said lever and surface of the member B being so inclined to each other that the lever P is cammed away from said part B on the change in position of said lever P occurring when a pull is exerted on the member J′.

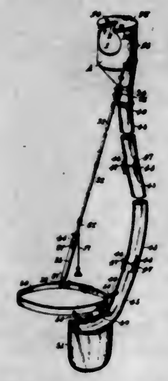
[Claims 6 to 8 not printed in the Gazette.]

1,191,954. FRUIT-PICKER. JOHN ENOCH ELKINS, Junet, Ark., assignor of one-half to James E. Simmons, Pine Bluff, Ark. Filed July 14, 1915. Serial No. 39,851. (Cl. 56—99.)

1. A fruit picker comprising a hollow head having a V-shaped opening, blades mounted on the hollow head and along the edges of the opening, said blades crossing each other and provided with elongated slots, means passing through the slots for fastening the blades to the hollow head, and means engaging the inner terminals of the blades for sliding the blades across the hollow head and causing the outer terminals of the blades to be moved toward and across each other for producing a severing operation.

2. A fruit picker comprising a hollow head having a V-shaped notch, blades mounted upon the head and along the edges of the notch, said blades having elongated slots

and toothed cutting edges, means passing through the elongated slots for connecting the blades to the hollow head, and means for sliding the blades across the head and causing the cutting edges to move toward and across each other for severing the stem of the fruit.



3. A fruit picker comprising a hollow head having a V-shaped notch therein, a plate connected to the hollow head provided with a V-shaped notch forming blades, said blades projecting beyond the edges of the notch of the hollow head, movable blades mounted upon the head and crossing each other, said blades having elongated slots and toothed cutting edges normally lying along the edges of the notch of the head and above the blades of the plate, and means for actuating the movable blades for causing the toothed cutting edges to be brought toward and across each other to coöperate with the blades of the plate for severing the stem from the fruit.

4. A fruit picker comprising a hollow head having a V-shaped notch therein, a plate connected to the hollow head provided with a V-shaped notch forming blades, said blades projecting beyond the edges of the notch of the hollow head, movable blades mounted upon the head and crossing each other, said blades having elongated slots and toothed cutting edges normally lying along the edges of the notch of the head and above the blades of the plate, means for actuating the movable blades for causing the toothed cutting edges to be brought toward and across each other to coöperate with the blades of the plate for severing the stem from the fruit, and means for returning the movable blades to their normal position.

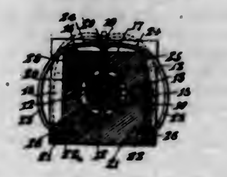
5. A fruit picker comprising a hollow head having a V-shaped notch, a plate connected to the hollow head having a notch therein forming blades along the edges of the notch, said blades located along the edges of the notch of the hollow head and projecting beyond said edges, movable blades mounted upon the hollow head having toothed cutting edges, means for sliding the movable blades across the hollow head to cause the teeth of the movable blades to move toward and cross each other and to coöperate with the blades of the plate for severing the fruit from the stem, and means for returning the movable blades to their normal position.

[Claim 6 not printed in the Gazette.]

1,191,955. AUTOMATIC NUT-LOCK. ARTHUR ELLISON, Twig, Minn. Filed Feb. 18, 1916. Serial No. 79,186. (Cl. 151—6.)

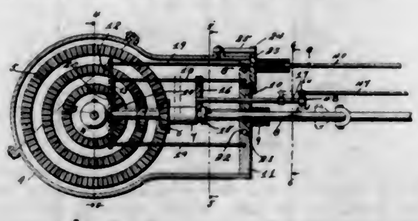
1. In a nut lock, the combination with a longitudinally recessed bolt, a nut threaded upon the bolt and having a peripheral groove therein and a radial slot intersecting the recess, a pawl carried by the nut in said slot, and a spring snapped into said groove and engaging the outer end of said pawl, said spring being adapted to yieldingly hold said pawl inwardly against said bolt and having its opposite sides bowed outwardly beyond the peripheral edge of the nut.

2. In a nut and bolt lock, a bolt having longitudinal recesses in the sides thereof, a nut threaded on the bolt and having a radial slot in one side and a peripheral groove intersecting the outer end of the slot, a pawl slidable in the slot for engagement in the recesses of the bolt, and a curved spring engaging in said groove and having connection at its intermedaite portion with the outer end of said pawl, said spring having its opposite sides bowed outwardly beyond the peripheral edge of the nut whereby to press the intermediate portion of the spring inwardly and hold the pawl against the bolt, said sides being adapted to be compressed to flatten said spring and retract the pawl from engagement with the bolt.



3. In combination with a longitudinally grooved bolt, and a nut threaded upon the bolt having a radial slot therein, a pawl mounted in said slot and movable toward and away from the bolt, and a bowed spring having its ends rigidly fastened in the nut and its intermediate portion bent around the nut and connected to the outer end of the pawl, the sides of the spring being adapted to be compressed to flatten the same and retract the pawl from engagement with the bolt.

1,191,956. TRANSMISSION-GEARING FOR AUTOMOBILES. FRANK L. FRAIZER, Troy, Ohio. Filed Dec. 2, 1913. Serial No. 804,235. (Cl. 74—58.)



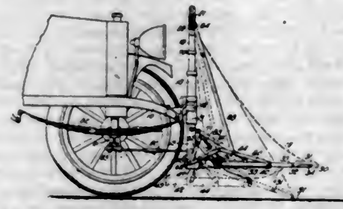
1. A transmission device comprising a casing, a master gear provided with a plurality of different size rows of gear teeth for producing a variable speed transmission gear, a main driving shaft, a slidably mounted driving gear mounted thereon, a driven member, means for moving said driving gear longitudinally upon said shaft, an eccentric plate positioned upon said casing, a frame carried within said casing, a journal plate carried by said casing and receiving the inner end of said main driving shaft, an eccentric lever secured to said eccentric, a fork rod, a guiding band, said eccentric lever extending and working through said guiding band, said fork rod adapted to straddle said eccentric lever, a spring engaging said fork rod for normally exerting an inward pressure thereon, said casing provided with a plurality of apertures for receiving the ends of said fork rod, said spring holding the inner ends of said fork rod within said sockets formed within said casing for preventing the operation of said eccentric without first removing said fork rod from engagement with said eccentric lever, and means for swinging said eccentric lever.

2. A transmission device comprising a casing, a variable speed transmission gear positioned therein, a backward drive master gear positioned within said casing, a main driving shaft, a slidably mounted driving gear working thereon, a driven member, a frame supporting the rear end of said main driving shaft, an eccentric carried by the front end of said casing and adapted to swing said main driving gear laterally within said casing, an eccentric lever carried by said eccentric, a bell crank lever engaging said eccentric lever, a link rod engaging said bell crank, a loosely mounted collar provided with radiating arms, said link rod connected to one of said radiating arms, an operating lever provided with a projecting arm engaging the other of said radiating arms of said collar for moving said link rod longitudinally and rotating said eccentric, means for locking said eccentric against operation, and a quadrant adapted to be engaged by said operating lever for indicating the different speeds of travel.

3. A transmission device comprising a master gear provided with a plurality of different size rows of gear teeth for producing a variable speed transmission gear, a main driving shaft, a slidably mounted driving gear mounted thereon, a driven member, means for moving said driving gear longitudinally upon said shaft, an eccentric plate, said driving shaft extending through said eccentric plate, means for supporting the inner end of said driving shaft and permitting a slight lateral swing of said shaft as said eccentric plate is rotated, means for rotating said eccentric plate, and means for locking said eccentric plate in a plurality of adjusted positions.

4. A transmission device comprising a variable speed transmission gear, a main driving shaft, a slidably mounted driving gear mounted thereon, a driven member, means for moving said driving gear longitudinally upon said shaft, means engaging said driving shaft and capable of moving said driving shaft laterally, means for supporting the inner end of said driving shaft and permitting a slight lateral swing of said shaft as said last mentioned means is operated, and means coöperating with said driving shaft for locking the same in a plurality of adjusted positions.

1,191,957. FENDER FOR AUTOMOBILES. JOHN P. GERAGHTY, Jersey City, N. J. Filed Nov. 17, 1915. Serial No. 61,930. (Cl. 105—30.)



1. A fender for automobiles and similar power-driven vehicles, comprising an approximately vertical guideway on the front end of the vehicle on which the fender is used, an apron, an apron frame having an upright section, and an approximately horizontal section provided with a swing frame, the said apron being attached at its forward end to the forward end of the swing frame, and the rear end of the said apron being connected with the upper end of the said upright apron frame section, the latter being mounted to slide in the said guideway, the said horizontal section being normally held in forward position and being adapted to slide rearwardly on the upright section to release the latter to allow it to drop and to cause the spring frame to swing downward.

2. A fender, comprising a vertical guideway fixed on the front end of the vehicle on which the fender is used, an apron, an apron frame supporting the apron and having a vertical section slidable in the said guideway and a normally horizontal section slidable on the said vertical section, the said horizontal section having releasing means normally holding the said vertical section locked in raised position and releasing the said vertical section when the front end of the horizontal section strikes an obstacle during the forward movement of the vehicle.

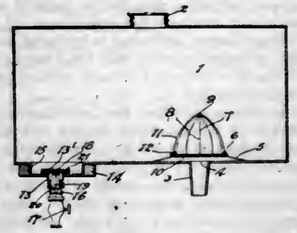
3. A fender, comprising a vertical guideway fixed on the front end of the vehicle on which the fender is used, an apron, an apron frame carrying the said apron, the said apron frame having a vertical section provided with horizontal bearings, and a normally horizontal section bodily slidable in a rearward direction on the said bearings, the said horizontal apron section having a supporting and releasing means engaging the said vertical section to normally hold the latter in raised position and to release the said vertical section and allow it and with it the horizontal section to drop when the front end of the horizontal section strikes an obstacle during the forward movement of the vehicle.

4. A fender, comprising a vertical guideway fixed on the front end of the vehicle on which the fender is used, an apron, an apron frame carrying the said apron, the said apron frame having a vertical section provided with horizontal bearings, a normally horizontal section bodily slidable in a rearward direction on the said bearings, the said horizontal section having a swing frame provided with a pivoted guard to which the forward end of the apron is secured, a supporting and releasing means on the said horizontal section and engaging the said vertical section to normally support the latter in raised position and to allow the said vertical section to drop on the said guard striking an obstacle during the forward movement of the vehicle, and means for imparting a swinging movement to the said swing frame during the bodily rearward movement of the horizontal section.

5. A fender, comprising a vertical guideway fixed on the front end of the vehicle on which the fender is used, an apron, an apron frame carrying the said apron, the said apron frame having a vertical section provided with horizontal bearings, a normally horizontal section bodily slidable in a rearward direction on the said bearings, the said horizontal section having a swing frame provided with a pivoted guard to which the forward end of the apron is secured, a supporting and releasing means on the said horizontal section and engaging the said vertical section to normally support the latter in raised position and to allow the said vertical section to drop on the said guard striking an obstacle during the forward movement of the vehicle, means for imparting a swinging movement to the said swing frame during the bodily rearward movement of the horizontal section, and means controlled by the said vertical section and connected with the said swing frame to swing the forward end thereof upward at the time the vertical section moves into lowermost position.

[Claims 6 to 8 not printed in the Gazette.]

1,191,958. AUTOMOBILE-TANK. ROBERT ANGUS GILLIES, Raymond, Alberta, Canada. Filed Dec. 4, 1913. Serial No. 804,656. (Cl. 210—5.)



1. The combination with a tank having an out turned flange, of a cap screw on said flange, a draw off pipe attached to said cap screw opening to the interior of the tank and providing at the upper end and at the entrance to the tank a valve seat and a valve operating on the valve seat, said valve seat being slightly above the bottom inner face of said cap screw, the specific gravity of the valve being such that it sinks in gasolene and floats in water.

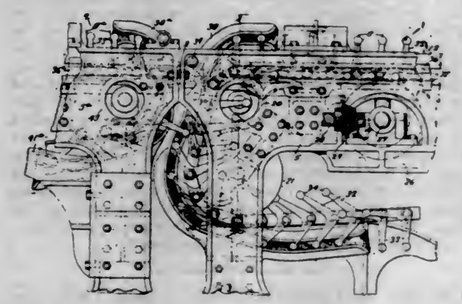
2. The combination with a tank, of a draw off pipe opening to the bottom of the tank and presenting a valve seat at the point where it opens to the tank, a spider and a bracket located in the pipe, a valve stem slidably mounted in the bracket and the spider and a valve mounted on

the stem and arranged to seat on the valve seat aforesaid, the specific gravity of the valve being such that it sinks in gasolene and floats in water.

3. The combination with a tank, of a draw off pipe opening to the bottom of the tank and presenting a valve seat at the point where it opens to the tank, a spider and a bracket located in the pipe, a valve stem slidably mounted in the bracket and the spider and a valve carried by the stem and arranged to seat on the valve seat aforesaid, said valve being formed from connected disks, one of light material such as cork and the other of a heavier material such as aluminium, the proportions of cork and aluminium being such that the valve sinks in gasolene and floats in water.

4. The combination with the bottom of a tank provided with an out-turned screw threaded flange, of a cap screw fitted on the flange, a drain pipe carried by the cap screw and opening to the interior of the tank, said drain pipe protruding a short distance through the cap screw and having the upper end thereof providing a valve seat, a spider and a bracket located in the pipe, a valve stem slidably mounted in the bracket and the spider and a valve mounted on the stem and operating on the seat, the specific gravity of the valve being such that it sinks in gasolene and floats in water.

1,191,959. HACKLE-CHAIN APPARATUS. JOHN GOOD, Brooklyn, N. Y., assignor to Good Inventions Co., Brooklyn, N. Y., a Corporation of New York. Filed June 15, 1915. Serial No. 34,143. (Cl. 19—6.)



1. In hackle-chain apparatus, the combination with a series of gill-bars rotatably mounted in parallel series of links, and main and auxiliary dog-trackways, of dogs on the ends of the gill-bars, each dog comprising main and auxiliary arms coöperative with said trackways, the said arms being disposed at an angle to each other and having reverse lateral inclinations.

2. In hackle-chain apparatus, the combination with a frame provided with chain-guiding means and main and auxiliary dog trackways, of a chain comprising parallel gill-bars rotatably mounted in and joining two parallel series of connected links, the joints whereof are independent of the gill-bars, and dogs on the ends of the gill-bars, each dog comprising main and auxiliary arms disposed at approximately a right angle to each other and extending obliquely to the axis of the gill-bar, the two arms being reversely inclined.

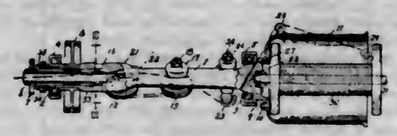
3. In hackle-chain apparatus, the combination of a chain of gill-bars rotatably mounted in two parallel series of links, dogs on the ends of said gill-bars having each two arms at an angle to each other and inclining respectively outward and inward with respect to the lateral plane of the chain, and trackways in laterally offset planes for guiding said arms.

4. In hackle-chain apparatus, a gill-bar dog coöperative with trackways to control the rake of the hackle-pins, said dog comprising arms having reverse lateral inclinations.

5. A dog for hackle-pin and other chain apparatus comprising a hub, and arms projecting therefrom in angular relation to each other and at reverse lateral inclinations, having oppositely projecting bosses at their extremities.

[Claims 6 to 22 not printed in the Gazette.]

1,191,960. FLIER-SPINDLE. JOHN GOOD, Brooklyn, N. Y. Filed Jan. 8, 1916. Serial No. 70,899. (Cl. 118—58.)



1. A spindle of the character described, comprising a straight shaft constituting the spindle body, having separated journal portions, capstans carried laterally by the straight shaft portion between the journal portions thereof, with their axes transverse to the axis of the shaft, a yarn inlet through one of the journal portions and a passage leading therefrom through the side of the shaft to permit the yarn to pass to the capstans.

2. A spindle of the character described, comprising an approximately straight shaft having separated journal portions, capstans carried laterally by the straight shaft portion between the journal portions thereof, with their axes transverse to the axis of the shaft, one of said journals being tubular for the entrance of the sliver, and a passage leading from said tubular journal obliquely through the adjacent portion of the shaft to a lateral outlet, enabling the yarn to pass substantially directly to one of the capstans.

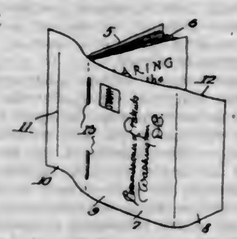
3. A spindle of the character described, comprising a shaft bearing hauling-off capstans mounted to revolve on transverse axes separated longitudinally of the shaft and having a yarn entrance through its end terminating in a lateral outlet between the axes of the capstans.

4. A spindle of the character described, comprising an approximately straight shaft having a laterally projecting capstan revolubly mounted on a transverse axis on its straight shaft portion, and further provided with an oblique passage for conducting the yarn to the capstan.

5. In a long-line spinner, a live spindle having spaced journal portions rotatable in bearings and carrying a flier at one end outside the adjacent bearing and being substantially stright between its bearings, a yarn tube within its other journal portion, and hauling-off mechanism on the said straight shaft portion comprising laterally projecting capstans revoluble on transverse axes, the said shaft being formed with a yarn passage leading obliquely from the inner end of the yarn tube to a lateral outlet whence the yarn passes to the hauling-off mechanism.

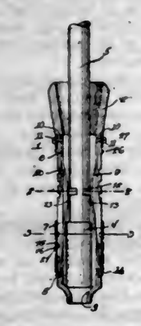
[Claims 6 to 18 not printed in the Gazette.]

1,191,961. DETACHABLE AUXILIARY COVER FOR BOOKLETS. ROY GRIFFITH, Melrose, Mass. Filed June 21, 1915. Serial No. 35,454. (Cl. 11—4.)



A combined book cover protector and envelop consisting of a sheet divided into three connected parts arranged in horizontal alinement, one of said parts being smaller than either of the other two and said part having its sides beveled, another of said parts, the one not adjacent to the aforementioned part, having a slit therein into which the first named part with the beveled sides is adapted to be inserted to secure the otherwise free ends together, in combination with a substantially flat booklet having a cover and a plurality of leaves, the combined protector and envelop and said booklet being bound together during the process of binding by means of staples, said combined protector and envelop being of substantially the same width as said booklet whereby the protector and envelop protects said booklet when the ends of the combined protector and envelop are connected together.

1,191,962. WHIP-SOCKET. OSCAR W. GUGELER, Burlington, Iowa. Filed Sept. 16, 1915. Serial No. 51,038. (Cl. 21—130.)

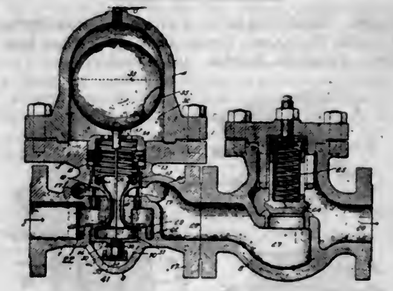


1. A lock for whip sockets including a socket provided on its its inner periphery with oppositely disposed longitudinal grooves and slots communicating with the lower ends of the grooves and further provided on the outer surface of the socket with recesses positioned at the ends of the slots, longitudinally curved, resilient members secured within the grooves and projecting through the slots, clamping elements resiliently connected to the inner surfaces of the resilient members, locking means slidably and rotatably associated with the outer periphery of the socket for engagement with the resilient elements for forcing the members within the socket until the lower end of the members engage the recesses whereby to removably maintain the clamping means in frictional engagement with the whip, and means carried by the outer surfaces of the resilient members for limiting the downward movement of the locking means.

2. A lock for whip sockets including a socket, clamping means secured on the inner periphery of the socket and having a portion thereof extending exteriorly of the socket, said socket having its outer periphery provided with a plurality of annular grooves and with a longitudinal groove intersecting the annular grooves, a plurality of rings associated with the outer periphery of the socket, a ring holder for encompassing the rings, lugs on the inner peripheries of the rings for engagement with the annular grooves and with the longitudinal grooves, lugs on the ring holder for engagement with the longitudinal groove, said ring holder being slidable in the longitudinal groove when the lugs on the rings are in alinement with the longitudinal groove to force the clamping means into engagement with a whip within the socket, and said rings being rotatable to removably lock the whip.

3. A whip socket lock including a socket provided in its inner periphery with longitudinal grooves and communicating longitudinal slots, longitudinal curved resilient members secured in the grooves and disposed through the slots and arranged to extend exteriorly of said socket, clamping members carried by the inner surfaces of the resilient members, said socket being further provided on its outer periphery with a plurality of annular grooves adjacent the upper and lower ends thereof and with a longitudinal groove intersecting said annular grooves, a ring holder slidably mounted on said socket and guided by said longitudinal groove, and a plurality of rings associated with the ring holder and adapted to rotate in the annular grooves and slide in the longitudinal groove to removably maintain the resilient clamping members in engagement with a whip.

1,191,963. DEVICE FOR AUTOMATICALLY MAINTAINING THE WATER IN BOILERS AT A CERTAIN LEVEL. GUSTAF A. GUSTAFSON, Harvey, Ill., assignor of one-half to Olaf E. Oleson, Chicago, Ill. Filed Feb. 7, 1913. Serial No. 746,684. (Cl. 137—101.)



1. In a device of the class described, the combination of a casing having an inlet and an outlet opening and having a loop-shaped port, a hollow cylindrical valve having two cut-offs, a guide below said loop-shaped port for said valve, one of said cut-offs being for the outlet opening and the other controlling communication between the inside and the outside of the valve, said valve having a portion coöperating with the inlet opening to reduce the cross section of inlet communication when the valve is operated, and a chamber in said casing below said guide for containing water under pressure to operate said valve.

2. In a device of the class described, the combination of a casing having an inlet and an outlet opening and having a loop-shaped port, a hollow cylindrical valve having two cut-offs, a guide below said loop-shaped port for said valve, one of said cut-offs being for the outlet opening and the other controlling communication between the inside and the outside of the valve, said valve having a portion coöperating with said inlet opening to reduce the cross section of inlet communication when said valve is operated, a chamber in said casing below said guide for containing water under pressure to operate said valve, a spring engaging said valve tending to hold said valve in open position, and devices for changing the tension of said spring.

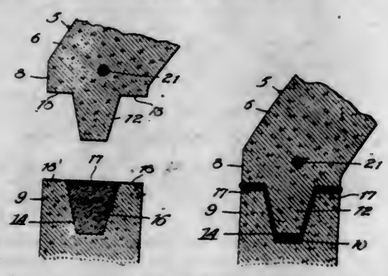
3. In a device of the class described, the combination of a casing containing inlet and outlet ports, a hollow valve member constituting a cut-off for one of said ports, and having another portion for changing the effective size of another of said ports, a loosely fitting guide for said member below the lower port, an operating chamber in said casing below said guide and around the lower end of said member, and a pilot valve in the lower end of said member to control communication between said chamber and the interior of said member.

4. In a device of the class described, the combination of a casing containing inlet and outlet ports, a hollow valve member constituting a cut-off for one of said ports, and having another portion for changing the effective size of another of said ports, a loosely fitting guide for said member below the lower port, an operating chamber in said casing below said guide and around the lower end of said member, a pilot valve in the lower end of said member to control communication between said chamber and the interior of said member, a float chamber for connection with a boiler to be fed, a float in said chamber, and an operating rod extending from said float through said hollow member to said pilot valve.

5. In a device of the class described, the combination of a casing containing inlet and outlet ports, a hollow valve member constituting a cut-off for one of said ports, and having another portion for changing the effective size of another of said ports, a loosely fitting guide for said member below the lower port, an operating chamber in said casing below said guide and around the lower end of said member, a pilot valve in the lower end of said member to control communication between said chamber and the interior of said member, and mechanism for maintaining the water pressure in said ports a desired amount in excess of the pressure in said hollow valve member.

[Claim 6 not printed in the Gazette.]

1,191,964. SELF-SEALING VAULT OR RECEPTACLE. WILBERT W. HAASE, Forest Park, Ill. Filed Mar. 27, 1916. Serial No. 86,964. (Cl. 72—7.)



1. A vault comprising in its construction a main body member and a vault cover member, one of said members having a groove adapted to contain cement, cement in said groove, and a groove cover extending across said groove and adapted to be opened by the other of said vault members, to permit the latter to come into contact and sealed engagement with the grooved member and the cement.

2. A vault comprising in its construction a main body member and a vault cover member, one of said members having a groove adapted to contain plastic cement, cement in said groove, and a groove cover normally extending across said groove and its contents, and the other of said vault members having a marginal portion adapted to be mounted in contact with said cement and in sealed engagement with the grooved member and across said groove when the groove cover is open.

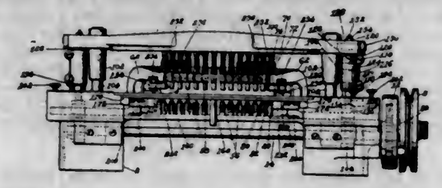
3. A vault comprising in its construction a main body member and a vault cover member, one of said members having a cement-containing marginal groove, and a groove cover extending normally across said groove and its contents, and a tongue on the other of said vault members adapted to be inserted through the groove cover and into said groove and in sealed engagement with the grooved member.

4. A vault comprising in its construction a main body member and a vault cover member, one of said vault members having a cement-containing marignal groove, and a groove cover normally extending across said groove and its contents, and the other of said vault members having a marginal portion adapted to engage and break said groove cover and extend in sealed engagement with the grooved member and the cement when the vault cover member is in position upon the main body member.

5. A vault comprising in its construction a main box body member having side and end walls provided with a groove in the upper edges thereof adapted to contain plastic cement, cement in said groove, a groove cover normally extending across said groove and its contents and in sealed engagement with the grooved main box body member, and a vault cover member provided with a marginal portion adapted to engage said groove cover and extend into and in sealed engagement with the cement-containing groove.

[Claims 6 to 8 not printed in the Gazette.]

1,191,965. MACHINE FOR MARKING SHOE-UPPERS. WILLIAM HAMANN, Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 25, 1913. Serial No. 797,241. (Cl. 164—93.)



1. In a buttonhole marking machine, a series of markers relatively movable to adjust them according to variations in buttonhole locations, and means operated by said adjusting movement of the markers to effect an additional adjustment of the markers.

2. In a shoe-upper marking machine, a series of markers movable to vary their spacing and means operated by spacing movement of the markers to effect an additional adjusting movement of the markers.

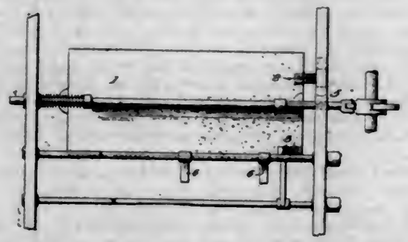
3. In a shoe-upper marking machine, a plurality of markers, means for adjusting the markers and means operated by the first named means to effect an additional adjustment of the markers.

4. In a shoe-upper marking machine, a series of markers, means for spacing the markers, and means operated by the spacing means to effect an additional adjusting movement of the markers relatively to each other.

5. In a shoe-upper marking machine, a series of markers, means for spacing the markers, and means operated automatically by the spacing means to effect relative movement of the markers out or in transversely of the edge of the work.

[Claims 6 to 94 not printed in the Gazette.]

1,191,966. BAG-FEEDER. CHARLES W. HARROLD, Warren, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Oct. 29, 1915. Serial No. 58,667. (Cl. 101—39.)



1. In a bag-tube feeder, means for applying pressure against the top of a pile of bag-tubes near one side thereof, means for separating the two sides of the topmost bag-tube while pressure is applied thereto by the first mentioned means, such separating means serving to raise and draw inwardly one longitudinal edge of the topmost bag-tube, and means for removing said bag-tube from the pile.

2. In a bag-tube feeder, means for applying pressure against the top of a pile of bag-tubes near one side thereof, means for separating the two sides of the topmost bag-tube while pressure is applied thereto by the first mentioned means, such separating means serving to raise and draw inwardly one longitudinal edge of the topmost bag-tube, and feeding means for engaging said longitudinal edge.

3. In a bag-tube feeder, means for applying pressure against the top of a pile of bag-tubes near one side thereof, means for entering between the upper and lower sides of the topmost bag-tube while pressure is applied thereto by the first mentioned means, a hold-down member for engaging the pile, and means for engaging and feeding such topmost bag-tube from the pile.

4. In a bag-tube feeder, means for applying pressure against the top of a pile of bag-tubes near one side thereof, means for entering between the upper and lower sides of the topmost bag-tube while pressure is applied thereto by the first mentioned means, a hold-down member for engaging the pile near the other side thereof and upon which the topmost bag-tube is designed to rest, and means for engaging and feeding such topmost bag-tube from the pile.

5. In a bag-tube feeder, means for applying pressure on the top of a pile of bag-tubes near one of its corners, means for entering between the two sides of the topmost bag-tube and drawing one side edge toward the side upon which such pressure is applied, hold-down means engaging such pile when such topmost bag-tube is moved by said entering means, and means for feeding the topmost bag-tube from the pile.

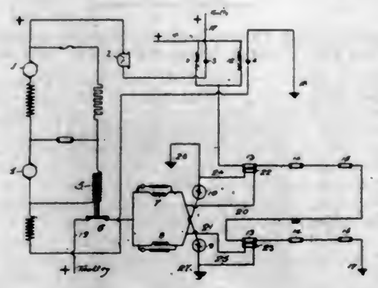
[Claim 6 not printed in the Gazette.]

1,191,967. WRENCH. LEVI HENRIKSEN, Hampton, Nebr. Filed Oct. 27, 1911. Serial No. 657,082. (Cl. 81—59.)



A wrench including a main head having two divergently held jaws one of said jaws having its face cut into gripping teeth the other jaw having a smooth active face, said gripping teeth being hardened, two guard plates of material softer than said head in outline conforming to the shape of said head located upon opposite sides of said head said soft plates having teeth guarding the hardened teeth of said wrench head, and means to hold said soft plates to said main head.

1,191,968. AUXILIARY CONTROL DEVICE FOR CAR-DOORS. FRANK HEDLEY, Yonkers, and JAMES S. DOYLE, Mount Vernon, N. Y. Filed Oct. 14, 1914. Serial No. 866,611. (Cl. 246—61.)



1. The combination with a car door controlling device, a circuit therefor, including a control switch, of an auxiliary circuit for said device around said switch, and means to control said auxiliary circuit independently of said switch and without affecting the operation thereof.

2. The combination with a car door controlling device, a circuit therefor including a relay switch operated by the counter-electro-motive force of the car propelling motor circuit, said controlling device circuit also including a control switch, of a by-pass circuit connection around said control switch, and included in said controlling device circuit and means to control said by-pass circuit.

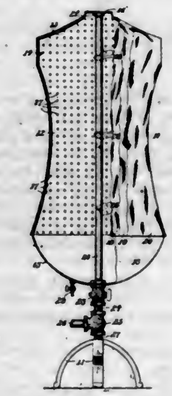
3. In a control system for car doors, a safety control circuit, a propelling motor operating circuit and a door control circuit, said door control circuit including an auxiliary by-pass circuit connection, means arranged in the motor operating circuit to control the door control circuit, and means in the safety control circuit to control the auxiliary by-pass circuit.

4. In a control system for car doors, safety devices, a propelling motor circuit, a door control circuit, a relay in said door control circuit, said relay operating to maintain said circuit open while the motors are operating, an auxiliary circuit for the door control, and means operated by the actuation of a safety device for closing said auxiliary circuit.

5. In a control system for car doors, safety devices, a propelling motor circuit, a door control circuit, a relay in said door control circuit, said relay operating to maintain said door control circuit open while the motors are operating, a manually controlled switch in said door control circuit, a by-pass auxiliary circuit around said manually controlled switch and connected to the door control circuit, and means to control said auxiliary circuit.

[Claim 6 not printed in the Gazette.]

1,191,969. GARMENT-STEAMING FORM. THEODOR HLUBUČEK, Cedar Rapids, Iowa. Filed July 22, 1915. Serial No. 41,420. (Cl. 223—17.)

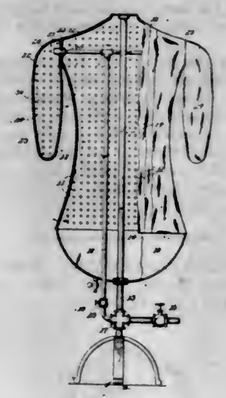


1. A garment steaming form constructed of sheet metal including a bowl-shaped base portion, a waist-line or body-portion, an arm portion, a shoulder portion and a neck portion, the said waist-line or body and shoulder portions being provided with a plurality of adjacently-arranged perforations, a plurality of layers of fabric placed upon the metal form and gradually increasing in fineness toward the outer layer, a threaded cap carried by the neck portion within the form, a steam conductive pipe connected at its upper end to said cap, a controlling valve at the lower end of said form to which the steam conducting pipe is connected, a supply pipe connected to said valve, perforations within the steam conducting pipe whereby steam may escape therefrom into the form, and a drain cock for the base portion of the form.

2. In a device of the kind described, a supporting stand, a steam pipe fixed at its lower end to said stand and extending vertically upwardly therefrom, said steam pipe including a steam inlet and a valve, a garment steaming form having a lower bowl-shaped portion engaging over the pipe and resting on the valve, a nut on the pipe clamping the lower bowl-shaped portion of the garment steaming form against the valve to hold the same fixed on the pipe, a cap on the upper end of the pipe against which the top of the garment steaming form bears, said cap being carried by the neck portion of said form, said pipe having

steam outlet perforations in its upper end, the garment steaming form being provided throughout its upper portion with steam outlet perforations, and a drain cock for the base portion of the form.

1,191,970. GARMENT-ARM-STEAMING DEVICE. THEODOR HLUBUČEK, Cedar Rapids, Iowa. Filed Oct. 7, 1915. Serial No. 54,553. (Cl. 223—17.)



1. A garment form comprising in combination with a main steaming body, a steam pipe positioned therein, nozzles at the opposite ends of the said pipe projecting outwardly of the arm portions thereof, arm forms comprising slightly flattened casings provided with perforations therethrough and each having an annular flange at one end thereof, a covering for the said casings, a flexible disk secured to the said flange, and a tapered hub carried by the said disk inwardly of the said casing and removably positioned upon the said nozzle.

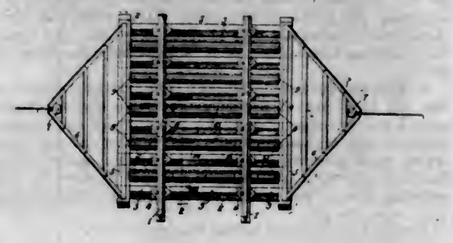
2. In combination with a steam form having arm portions, steam nozzles projecting through the said portions, and arm forms flexibly and removably positioned upon the said nozzles.

3. A garment steaming device comprising a main body having opposite arm portions, a steam pipe positioned within the said body, a cross pipe carried by the upper end of the said steam pipe and having its opposite ends screw-threaded through the said arm portions and projecting outwardly thereof, set nuts upon the said cross-pipe in engagement with the said portions, and arm steaming forms removably and flexibly attached to the outer projecting ends of the said cross pipe.

4. A garment steaming device comprising a main body having opposite arm portions, a steam pipe positioned within the said body, a cross pipe carried by the upper end of the said steam pipe and having its opposite ends screw-threaded through the said arm portions and projecting outwardly thereof, set nuts upon the said cross-pipe in engagement with the said portions, and arm forms comprising perforated elongated slightly flattened casings having annular flanges at one end thereof, flexible disks carried by the said flanges, and tapered hubs centrally carried by the said disks removably positioned upon the said nozzles.

5. A garment steaming device comprising a main body having opposite arm portions, a steam pipe positioned within the said body, a cross pipe carried by the upper end of the said steam pipe and having its opposite ends screw-threaded through the said arm portions and projecting outwardly thereof, set nuts upon the said cross-pipe in engagement with the said portions, arm forms comprising perforated elongated slightly flattened casings having annular flanges at one end thereof, flexible disks carried by the said flanges, tapered hubs centrally journaled in the said disks, and removably positioned upon the said nozzles, and a fabric covering for the said casings.

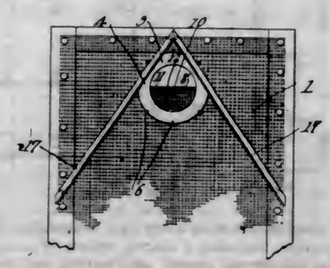
1,191,971. CATTLE-GUARD. JOHN ROBERTS HORTON, Crossett, Ark. Filed Sept. 21, 1915. Serial No. 51,901. (Cl. 256—16.)



1. In combination with a pair of spaced apart rails, a transverse shaft arranged beneath the rails and extending laterally therebeyond, said shaft having blade receiving faces in its periphery, a plurality of tangential blades engaging at their inner edges against said faces of the shaft, a plurality of radial blades having angled foot portions adapted to bear upon the inner edges of said tangential blades and over the blade receiving faces of the shaft, and securing means engaging the foot portions of the radial blades and the inner edges of the tangential blades for holding the same against the peripheral faces of the shaft.

2. In combination with the rails of a railroad track, a shaft extending transversely across the under side of the track and projecting beyond the sides of the rails, a plurality of tangential blades secured to the shaft and extending throughout the entire length thereof, a plurality of radial blades having angled foot portions resting against the inner edges of the tangential blades and extending throughout the entire length of the shaft, securing means for holding the tangential and radial blades in pairs against the sides of the shaft, all of said blades having tongues cut from the outer edges thereof in registry with the said rails to receive the latter upon the rotation of the shaft, said tongues being overturned upon the body of the blades.

1,191,972. FLY-TRAP. JACOB L. HUSHAW, Sodus, Mich. Filed Dec. 11, 1915. Serial No. 66,321. (Cl. 43—22.)



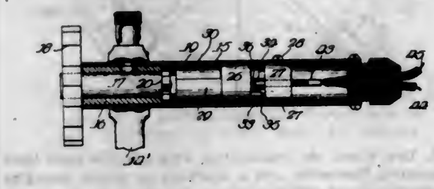
1. A trap including a tubular support having open ends, means for fastening said support within a structure, a sleeve detachably mounted on the support, a foraminous portion extending from the sleeve and closed at its free end, a foraminous partition within the sleeve and forming a passage of gradually diminishing area, there being an opening at the small end of the passage and giving access to the interior of the foraminous portion, a swinging closure at one end of the partition and closing the space above the partition, the tubular support constituting means for holding the closure in shut position.

2. A trap including a tubular support having open ends, means for fastening said support within a structure, a sleeve detachably mounted on the support, a foraminous portion extending from the sleeve and closed at its free end, a foraminous partition within the sleeve and forming a passage of gradually diminishing area, there being an opening at the small end of the passage and giving access to the interior of the foraminous portion, a swinging closure at one end of the partition and closing the space above the partition, a swinging handle movable with the closure, and means on the sleeve coöperating with the handle for holding the closure in shut position.

3. A trap including a tubular support, means for securing it to a supporting structure, a sleeve detachably engaging the support, a foraminous portion extending from the sleeve and having its free end closed, a diagonally disposed foraminous partition within the sleeve and forming a passage gradually reduced in area toward one end, there being an opening in the reduced end of the passage affording communication with the interior of the foraminous portion, and means for closing the space within the sleeve above the large end of the passage.

4. The combination with a foraminous structure having an opening therein, rings clamped upon opposite faces of said structure and extending around the opening, and a tubular support carried by one of said rings and extending through said structure and the other ring, of a sleeve detachably engaging said tubular support, a foraminous portion at one end of the sleeve and having a closed free end, a partition within the sleeve forming a passage gradually reduced in area toward one end, there being an opening in the small end of the passage affording communication with the interior of the foraminous portion, and a closure within the sleeve and above the large end of the passage.

1,191,973. VEHICLE SIGNALING DEVICE. HOBART S. JOHNSON, Madison, Wis. Filed Feb. 17, 1915. Serial No. 8,787. (Cl. 200—27.)



1. A circuit controlling mechanism for vehicle signaling devices comprising, in combination with the terminals of a normally open circuit, a stationary contact member in said circuit, a movable contact member, a stop limiting the separating movement of said contact members, and means adapted to be geared to a wheel of the vehicle for actuating said movable contact member into engagement with said stationary contact member during backward movement of said wheel, said contact actuating means including a friction clutch operative to permit slip after said contact members have been brought into engagement with each other.

2. A circuit controlling mechanism for vehicle signaling devices comprising, in combination with the terminals of a normally open circuit, a stationary contact member in said circuit, a movable contact member, a stop limiting the separating movement of said contact members, and contact engaging means adapted for operative connection to an element of the vehicle that moves relatively to the latter in one direction while the vehicle is traveling forward and in another direction while the vehicle is traveling backward, said contact engaging means including a friction clutch operative to permit slip after said contact members have been brought into engagement with each other, and also a positive automatic one-way clutch coöperating with one member of said friction clutch to actuate the latter under backward movement only of the vehicle.

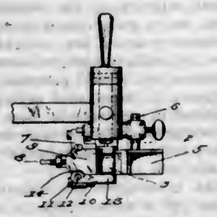
3. A circuit controlling mechanism for vehicle signaling devices comprising, in combination with the terminals of a normally open circuit, a stationary contact member in said circuit, a movable contact member, a stop limiting the separating movement of said contact members, and means adapted to be geared to a wheel of the vehicle for actuating said movable contact member into engagement with said stationary contact member during the backward movement of said wheel, said contact actuating means including a friction clutch operative to permit slip after said contact members have been brought into engagement with each other, and also a positive automatic one-way clutch coöperating with one member of said friction clutch to actuate the latter under backward movement only of said wheel.

4. A circuit controlling mechanism for vehicle signaling devices comprising, in combination with the terminals of a normally open circuit, a rotatable contact head carrying an eccentrically mounted contact pin, a stationary contact head carrying a contact pin, and also a stop pin, both disposed across the path of movement of said first-named contact pin, a rotary friction clutch member coöperating with said rotatable contact head, an actuating shaft adapted to be geared to a wheel of the vehicle, and a positive automatic clutch between said shaft and said friction clutch member, said positive clutch being operative upon backward rotation, and idle upon forward rotation, of said vehicle wheel.

5. A circuit controlling mechanism for vehicle signaling devices comprising, in combination with the terminals of a normally open circuit, a rotatable contact head carrying an eccentrically mounted contact pin, a stationary contact head carrying a contact pin and also a stop pin, both disposed across the path of movement of said first-named contact pin, a spring normally urging said contact pins apart, a rotary friction clutch sleeve coöperating with said rotatable contact head, an actuating shaft adapted to be geared to a wheel of the vehicle, and a rotary cam clutch between said shaft and said friction clutch sleeve, said cam clutch being operative upon backward rotation, and idle upon forward rotation, of said vehicle wheel.

[Claim 6 not printed in the Gazette.]

1,191,974. SKIVING-MACHINE. LOUIS JOHNSON, Orland, Cal. Filed Apr. 5, 1916. Serial No. 89,033. (Cl. 69—13.)

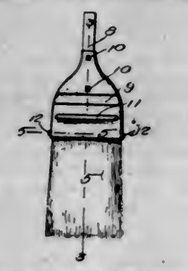


1. In a skiving machine, the combination with a work guide and a blade, of an attachment located adjacent thereto and forming a guide and support for the work and a guard.

2. In a skiving machine, the combination with a work guide and a blade, of an attachment consisting of a plate having one end rigidly secured to a part of the machine and the other end forming a support for the work and a guard and located adjacent the knife and work guide.

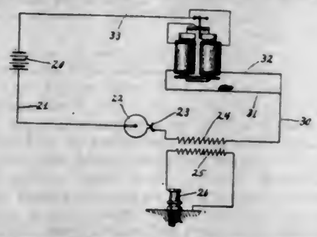
3. In a skiving machine, the combination with a work guide and a blade, of an attachment located adjacent thereto and forming a guide and support for the work and a guard, said attachment consisting of a plate having an intermediate anchoring device, and one end secured by one of the fastenings which fastens the knife in position.

1,191,975. BROOM. EDMUND L. KENOYER, Selma, Cal. Filed Dec. 13, 1915. Serial No. 66,537. (Cl. 15—19.)



The combination of a brush, a handle, opposite plates secured to the handle, between which plates the brush is held, said plates having transverse grooves on the inside, and plates on opposite sides of the brush, said plates having outstanding flanges seating in the grooves.

1,191,976. CURRENT-INTERRUPTER. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed June 29, 1910. Serial No. 569,440. (Cl. 123—148.)



1. In a current interrupter, the combination with a source of current, and a main circuit including a timer; of a polarized armature and a low resistance coil in a main circuit, and an auxiliary high resistance coil shunted around said low resistance coil and polarized armature, said coils constructed to operate said armature to break the circuit through the low resistance coil and hold said armature in such circuit breaking position by the high resistance coil.

2. In a current interrupter, the combination with a source of current, and a main circuit including a timer; of a polarized armature and a low resistance coil in the main circuit; and an auxiliary high resistance coil shunted around low resistance coil of said polarized armature and wound in a direction to repel said polarized armature, said coils constructed to coöperate to move said armature out of contact making position to break the main circuit and hold said armature in circuit breaking position by the high resistance coil.

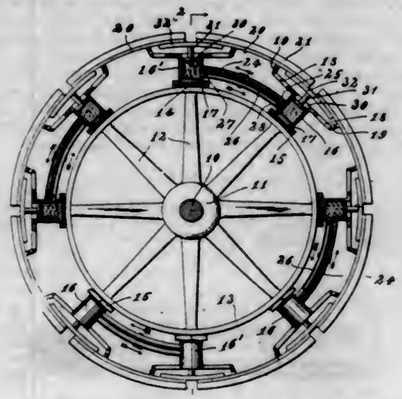
3. In a current interrupter the combination with a source of current, and a main circuit including a timer, of an interrupter comprising a polarized armature and a low resistance coil in the main circuit and an auxiliary high resistance coil shunted around said low resistance coil and armature; said coil constructed to operate said armature to break the circuit through the low resistance coil and hold said armature in such circuit breaking position by the high resistance coil; and a stop adjacent to said armature located to limit the throw of said armature to cause the same to be restored to normal contact making position, under the influence of its own polarity, when the main current is broken by the timer.

4. In a current interrupter, the combination with a source of current, and a main circuit including a timer; of an electro-magnet having a low resistance coil connected with said circuit; a polarized armature located adjacent to the core of said coil; circuit connection between said low resistance and said armature; a make and break contact point between said armature and said main circuit; and a high resistance coil shunted around low resistance coil and armature and forming a part of said electro-magnet, said coils constructed to operate said armature to break the circuit through the low resistance coil and hold the armature in such circuit breaking position by the high resistance coil.

5. In a current interrupter, the combination with a source of current, and a main circuit including a timer, of a polarized armature and a low resistance coil connected with the main circuit; a make and break contact point between said armature and said main circuit; a high resistance coil including core therefor, shunted around said low resistance coil and said armature, said coils constructed to operate said armature to break the circuit through the low resistance coil and hold armature in such circuit breaking position by the high resistance coil; and a stop in proximity to said armature located to limit the throw thereof so as to retain the same always within the region of influence of the core of the high resistance coil.

[Claims 6 and 7 not printed in the Gazette.]

1,191,977. RESILIENT WHEEL. FREDRICK HERMANN LUDWIG KUNTZE, Brooklyn, N. Y., assignor of one-third to Jacob Gottlieb, Brooklyn, N. Y. Filed Nov. 4, 1915. Serial No. 59,550. (Cl. 152—31.)

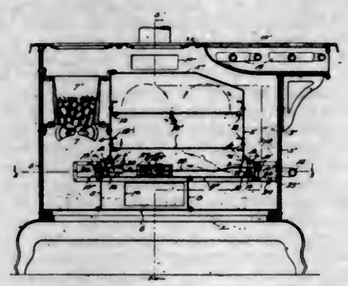


1. In a wheel, the combination with a hub, a rigid band concentric therewith, and a plurality of spokes engaging therebetween, of cylinders secured to said band in register with said spokes, and connected in pairs, pistons movable in said cylinders, cross-heads carried by said pistons, segments linked at their ends to said cylinders, said segments forming the rim of the wheel, and means whereby liquids contained in said cylinders are caused to circulate from one cylinder to the other in each pair as the wheel is rotated.

2. In a wheel, the combination with spokes extending radially therefrom and a rigid band engaging the outer ends of said spokes, hydraulic cylinders on said band in register with said spokes, tubes connecting said cylinders in pairs, pistons operative in said cylinders, cross-heads attached to said pistons, cushioned segments constituting the wheel tire, flexible links engaging said tire elements and said cylinders, and means in said connecting tubes whereby the contents of said cylinders are partially transferred from one to the other as the wheel travels.

1,191,978. COOKING-STOVE. ALBERT J. LINDEMANN and WALTER C. LINDEMANN, Milwaukee, Wis., assignors to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed D[illegible] 9. 1914. Serial No. 876,321. (Cl. 126—36.)

1. In a combined solid and fluid fuel stove, an oven, including a single unobstructed bottom plate, a fluid fuel burner disposed within the oven adjacent a bottom edge portion thereof, and a baffle plate secured to the adjacent side of the oven above the burner and extending downwardly between said burner and the intermediate portion of the oven.



2. In a combined solid and fluid fuel stove, an oven, the lower edge portion of one side of the oven being outwardly offset, a burner in said offset portion, and a downwardly extending baffle plate secured to said side wall and extending past said offset.

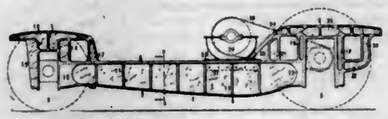
3. In a combined solid and fluid fuel stove, an oven, a burner disposed in a lower edge portion of the oven, a baffle plate secured to the adjacent side wall and extending diagonally inward, and said baffle plate terminating short of the floor, of the oven, and being provided in its upper edge portion with apertures.

4. In a combined solid and fluid fuel stove, an oven having the lower portion of one side provided with a series of air passages, a burner disposed adjacent said air passages, an air supply duct communicating with the air passages and a valve for closing the duct.

5. In a combined solid and fluid fuel stove, an oven having the lower portion of one side provided with a series of air passages, a burner disposed adjacent said air passage, and air supply duct communicating with all of the air passages and taperingly enlarged toward one end and a valve at said enlarged end for closing the duct.

[Claims 6 to 10 not printed in the Gazette.]

1,191,979. TRUCK CONSTRUCTION. WILLIAM RILEY MCKEEN, Jr., Omaha, Nebr., assignor to McKeen Motor Car Company, Omaha, Nebr., a Corporation of New Jersey. Filed May 18, 1909. Serial No. 496,853. (Cl. 105—243.)



1. In truck construction, in combination, a pair of side bars each having a pedestal at one end thereof extending upwardly above the body of said side bars; a motor support connecting the side bars and resting thereon; and an inclined brace extending downward from the upper part of each of said pedestals to the motor support, and secured at its ends to said pedestals and motor support, respectively.

2. In truck construction, a pedestal comprising four spaced, upright portions, means connecting the lower ends of said portions in pairs, and means connecting together the upper ends of said four portions.

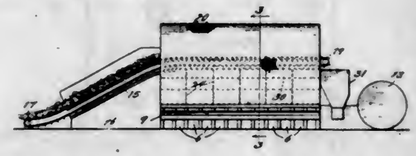
3. In truck construction, a pedestal comprising four spaced upright portions, means connecting the lower ends of said portions in pairs, and means connecting together the upper ends of said four portions, said portions and said connecting means being of flanked construction.

4. In truck construction, in combination, a side-bar, a pair of spaced, upright portions one of which is connected with said side-bar, means connecting said upright portions and projecting at one end over said side-bar, and means connecting said projecting end with said side-bar.

5. In truck construction, in combination, a side-bar, a pair of spaced, upright portions one of which is connected with said side-bar, means connecting said upright portions and projecting at one end over said side-bar, means connecting said projecting end with said side-bar, and an inclined brace extending from said projecting end to said side-bar.

[Claims 6 to 13 not printed in the Gazette.]

1,191,980. APPARATUS FOR CURING FRESHLY-CUT CROPS. ARTHUR J. MASON, Chicago, Ill. Filed Oct. 24, 1914. Serial No. 868,505. (Cl. 34—12.)



1. In an apparatus for curing freshly made crops, the combination of a conveyer, a furnace having a smoke flue discharging beneath said conveyer, and means for supplying air under pressure to, and directing the same upwardly within, said flue.

2. In an apparatus for curing freshly made crops, the combination of a conveyer, a furnace having a smoke flue discharging beneath said conveyer, a baffle over said flue, and means for supplying air under pressure to, and directing the same upwardly within, said flue.

3. In an apparatus for curing freshly made crops, the combination of a furnace, an air conductor in rear of said furnace, a mixing and equalizing chamber above said furnace, a conveyer extending through the upper part of said mixing and equalizing chamber, a smoke flue extending from said furnace into said mixing and equalizing chamber, and communicating with said air conductor, and means for supplying air under pressure to said air conductor.

4. In an apparatus for curing freshly made crops, the combination of a furnace, an air conductor in rear of said furnace, a mixing and equalizing chamber above said furnace, a conveyer extending through the upper part of said mixing and equalizing chamber, a smoke flue extending from said furnace into said mixing and equalizing chamber and communicating at its lower end with said air conductor, a baffle over said flue, and means for supplying air under pressure to said air conductor.

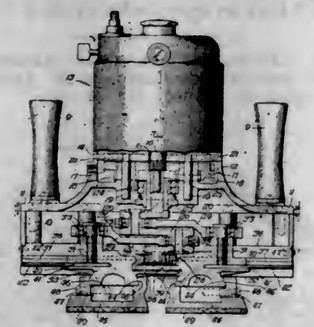
5. In an apparatus for curing freshly made crops, the combination of a furnace, an air conductor in rear of said furnace, a mixing and equalizing chamber above said furnace, a conveyer extending through the upper part of said mixing and equalizing chamber, a smoke flue extending from said furnace into said mixing and equalizing chamber and communicating at its lower end with said air conductor, a baffle over said flue, means for supplying air under pressure to said air conductor, and a hood surmounting said mixing and equalizing chamber and the portion of the conveyer therein.

[Claims 6 to 9 not printed in the Gazette.]

1,191,981. SURFACING-MACHINE. CARL LAWRENCE MATTISON, Beloit, Wis., assignor to C. Mattison Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Dec. 21, 1914. Serial No. 878,228. (Cl. 51—13.)

1. A surfacing machine having, in combination, a rectangular base frame, a top member closing the upper side of said frame and having a central circular chambered portion projecting upwardly, an electric motor disposed with its axis in a vertical plane and having its casing shaped to fit upon and be supported by the upper edge of said circular portion, the motor having an armature shaft

projecting down into the circular portion, a horizontal web extending across said circular portion and having bearings therein, reducing gearing supported in certain of said bearings and connected to said armature shaft, a drive member mounted in a bearing in said web in alinement with the armature shaft and connected to said gearing to be driven at a reduced speed by the latter, a pair of slidable rubbing heads mounted in said base frame, and means operatively connecting said heads to said driving member.



2. In a surfacing machine, in combination, a body having an open lower side, a centrally positioned stationary member partially closing the said open side, and a pair of surfacing elements reciprocably mounted on the body at opposite sides of said member and arranged to move toward and away from said member, said elements having parts coöperating with said stationary member to assist in closing said open side.

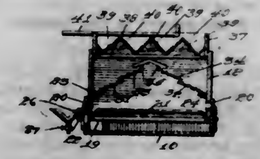
3. In a surfacing machine, in combination, a body having an open lower side, a pair of surfacing elements reciprocably mounted at the lower side of the body, a stationary horizontal plate mounted on the body between said elements, and horizontal guard flanges on the surfacing elements projecting toward each other and lying one above and one below said horizontal plate to coöperate therewith in closing the said open side of the body.

4. In a surfacing machine, in combination, a body having an open lower side, members fixed at opposite ends of the body to close said lower side at the ends thereof, and surfacing elements reciprocably mounted on the body and being slotted to receive the said members in the sliding movements of said elements.

5. In a surfacing machine, in combination, a body having an open side, a pair of surfacing elements reciprocably mounted on the body, stationary plates extending inwardly from opposite ends of the body for closing said open side at the ends thereof, and flanges adapted to slidably coact with said plates to assist in closing the said open side.

[Claims 6 to 15 not printed in the Gazette.]

1,191,982. COVER FOR EVAPORATING-PANS. LEWIS N. MOODY, Plover, Iowa, assignor of one-half to Amos M. Tower, Barton, Vt. Filed Mar. 5, 1915. Serial No. 12,401. (Cl. 127—9.)



1. In an evaporator, in combination an evaporating pan, a cover fitting upon said pan, a gutter mounted in said cover adjacent the lower edge thereof, a drain pipe carried by said cover and communicating with said gutter, a removable top for said cover, an interrupated partition in said cover formed of longitudinally extending strips positioned in overlapping relation, the lower strips engaging the side walls of said cover and forming gutters, gutters carried by said cover beneath said interrupted partition, and a drain pipe carried by said cover and communicating with said last mentioned gutters and provided with branches communicating with the gutters formed by the lower strips of said interrupted partition.

2. In an evaporator, in combination an evaporating pan, a cover for said evaporating pan, an interrupted partition in said cover engaging the side walls thereof to form gutters, gutters carried by said cover beneath said partition, a drain pipe carried by said cover and communicating with said last mentioned gutters, branches leading from said drain pipe and communicating with the gutters formed by said interrupted partition, a gutter carried by said cover adjacent the lower edge thereof, and a drain pipe communicating with said last mentioned gutter.

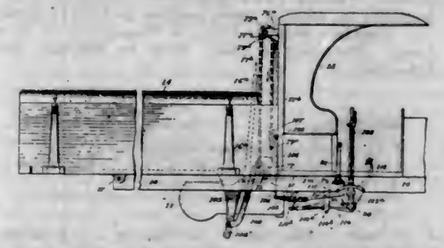
3. In an evaporator, in combination a cover, a top for said cover, an interrupted partition for said cover forming gutters at the sides thereof, a drain communicating with said gutters, and gutters spanning the space between the side portions of said interrupted partition.

4. In an evaporator, in combination a cover, a top for said cover, an interrupted partition for said cover forming gutters at the sides thereof, gutters carried by said cover beneath said interrupted partition, drain pipes communicating with all of said gutters, and bridges spanning the space between the side sections of said interrupted partition.

5. In an evaporator, in combination a cover, an interrupted partition mounted in said cover and formed from a plurality of side sections positioned in overlapping relation, certain of said side sections engaging the sides of said cover to form gutters, gutters carried by said cover beneath said interrupted partition, and drain means communicating with said last mentioned gutters and with the gutters formed by said interrupted partition.

[Claims 6 and 7 not printed in the Gazette.]

1,191,983. DUMPING MECHANISM FOR MOTOR-TRUCKS. FRANK MUELLER, Allentown, Pa., assignor to International Motor Company, Wilmington, Del., a Corporation of Delaware. Filed Oct. 16, 1912. Serial No. 726,029. (Cl. 21—20.)



1. In a motor vehicle or the like, the combination with the engine, the transmission mechanism, the clutch and the clutch lever operatively connected to the clutch, of a tiltingly mounted body, means for tilting said body, normally inoperative means for transmitting power from the transmission mechanism to said body tilting means, means for rendering said normally inoperative means effective to transmit power from the transmission mechanism to said body tilting means, and means controlled by said body tilting means to move the clutch lever to render the clutch inoperative when the body has reached the predetermined limit of its movement in either direction, substantially as specified.

2. In a motor vehicle or the like, in combination, a frame, an engine, a transmissioin mechanism, a clutch for connecting said engine and transmission mechanism, means for actuating said clutch, a body tiltingly mounted upon said frame, normally inoperative means for tilting said body, means for operatively connecting said transmission mechanism with said body tilting means, a bodily-movable locking member, means for shifting said locking member into position to hold said clutch in position to connect said engine with said means for tilting said body, and means actuated by said body tilting means for tripping said locking member whereby to release said clutch when said body portion has reached a predetermined limit of its movement in either direction, substantially as specified.

3. In a motor vehicle or the like, in combination, a frame, an engine, a transmission mechanism, a clutch for operatively connecting said engine and transmission mechanism, means for shifting said clutch, a body tiltingly mounted upon said frame, normally inoperative means for tilting said body, a locking member controlling said clutch, normally inoperative means for connecting said transmission mechanism with said body tilting means, a lever for actuating said connecting means and for shifting said locking member to maintain said clutch in operative position, and means actuated by said body tilting means for tripping said locking member to release said clutch when said body has reached a predetermined position in the course of its movement in either direction, substantially as specified.

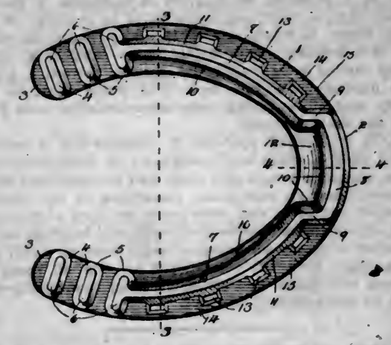
4. In a motor vehicle, or the like, in combination, a frame, a body tiltingly mounted thereon, means for tilting said body, an engine, a transmission mechanism, a clutch for operatively connecting said engine and transmission mechanism, a lever for actuating said clutch, a bodily-movable pivoted locking member for controlling said clutch, a link connecting said locking member with the lever for actuating said clutch, normally inoperative means for transmitting power from said transmission mechanism to said body-tilting means, a lever for rendering said normally inoperative means effective and for shifting said locking member into position to maintain said clutch in operative position, and means carried by a traveling portion of said body-tilting means for releasing said clutch when said body has about reached a predetermined position in the course of its movement in either direction, substantially as specified.

5. In a motor vehicle or the like, in combination, a frame, an engine, a transmission mechanism, a clutch for operatively connecting said engine and transmission mechanism, a body tiltingly mounted upon said frame, means for tilting said body, a bodily-movable locking member, means for normally maintaining said locking member in neutral position to permit of the free operation of said clutch, means releasing the means for maintaining said locking member in its neutral position, and means for shifting said clutch to its operative position and said locking member into position to hold said clutch locked to its operative position, and means for releasing said locking member whereby to actuate said clutch to disconnect said engine when said body has reached a predetermined limit of its movement in either direction, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

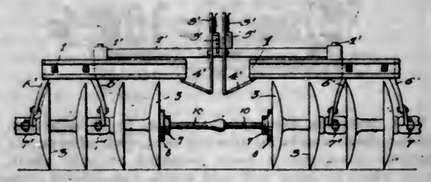
1,191,984. HORSESHOE. JAMES NEIL, Washington, D. C., assignor of one-half to John F. Russell, Washington, D. C. Filed Nov. 17, 1915. Serial No. 61,879. (Cl. 168—21.)

A horse shoe including a main body having a toe portion and heel portions, a plurality of transverse calks at the heel portions spaced apart, each of which is provided with a relatively wide base and a narrow face to prevent the anchoring of accumulations therebetween, a main body calk formed on a regular curve conforming substantially to the contour of the body, said main body calk being disposed on the body so as to present a supporting surface relatively narrow with respect to the body of the shoe and lying about centrally of said body, the heel end of said main body calk merging into the foremost of said transverse heel calks, a toe calk, a connecting wall connecting with each end of said toe calk, the said main body calk merging into the connecting walls, said main body calk, toe calk and connecting walls being provided with relatively wide bases and a narrow continuous face, said



formation providing a chamber at the toe portion of the shoe to break the regularity between the said main body calk and the toe calk, substantially as described.

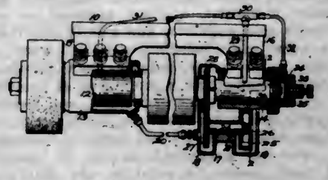
1,191,985. ATTACHMENT FOR DISK HARROWS. FERD NOECKER, Sanborn, N. D. Filed May 18, 1915. Serial No. 28,927. (Cl. 55—81.)



1. In an attachment for disk harrows, having a pair of spaced adjustable disk shafts, a pair of rods swivelly connected together, caps on the ends of said rods, and socket members detachably secured to said caps and adapted to be secured to the inner ends of said shafts.

2. In an attachment for disk harrows having a pair of spaced adjustable disk shafts, a pair of socket members adapted to be secured to the inner ends of said shafts and having flanges thereon, caps mounted on said socket members, plates formed on said caps and embracing the said flanges, additional plates detachably secured to the first mentioned plates to maintain them on the flanges and a plurality of connected rods extending between and slidably engaged with the said caps.

1,191,986. OILING DEVICE FOR GRINDING-MACHINES. CHARLES H. NORTON, Worcester, Mass., assignor to Norton Grinding Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 28, 1915. Serial No. 24,562. (Cl. 184—6.)



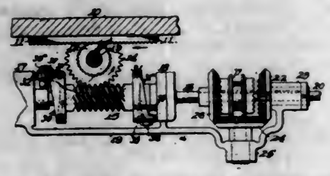
1. In a grinding machine, in combination, a movable wheel slide, a wheel shaft supported in bearings on said slide, means to rotate said shaft, and self-contained means to produce a forced circulation of oil through said bear-

ings, said oil-circulating means being entirely supported by said slide and movable therewith, and being positively and directly driven from the wheel shaft.

2. In a grinding machine, in combination, a movable wheel slide, a wheel shaft supported in bearings on said slide, means to rotate said shaft, and oil-supplying means for said bearings, said latter means comprising an oil pump carried by said slide and movable therewith, a positive driving connection from said wheel shaft to said pump, and oil-conveying connections between said pump and the shaft bearings.

3. In a grinding machine, in combination, a movable wheel slide, a wheel shaft supported in bearings on said slide, means to rotate said shaft and oil supplying means for said bearings, said means comprising an oil collecting chamber carried by said slide below the level of said bearings, oil conducting connections from said bearings to said chamber, a rotary oil pump in said chamber, direct gear connections from the wheel shaft to said oil pump for driving said pump, and oil distributing connections from said oil pump to said bearings.

1,191,987. REVERSING MECHANISM. CHARLES H. NORTON, Worcester, Mass., assignor to Norton Grinding Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 5, 1915. Serial No. 59,855. (Cl. 74—36.)



1. A reversing mechanism having, in combination, a driving shaft, means for rotating said shaft alternately in opposite directions, a worm mounted on said shaft, a worm wheel meshing with said worm, and driving connections between said shaft and worm effective to move said worm wheel after reversal at a gradually accelerating speed, and to thereafter drive said worm wheel positively at normal speed.

2. A reversing mechanism having, in combination, a driving shaft, means for rotating said shaft alternately in opposite directions, a worm mounted on said shaft, a worm wheel meshing with said worm, and driving connections between said shaft and worm effective to move said worm wheel after reversal at a gradually accelerating speed until substantially normal speed is attained and to thereafter drive said worm wheel positively at normal speed.

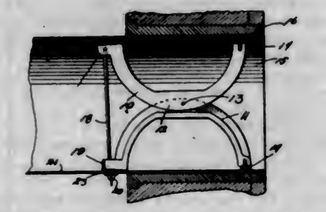
3. A reversing mechanism having, in combination, a driving shaft, means for rotating said shaft alternately in opposite directions, a worm mounted on said shaft and movable both angularly and axially relatively to said shaft, a worm wheel meshing with said worm, and means to give said worm, upon reversal of said shaft, an initial axial movement of gradually increasing velocity followed by a positive movement of rotation with said driving shaft.

4. A reversing mechanism having, in combination, a driving shaft, means for rotating said shaft alternately in opposite directions, a worm mounted on said shaft and movable both angularly and axially relatively to said shaft, a worm wheel meshing with said worm, means to move said worm bodily endwise upon reversal of said shaft, thereby imparting a movement of rotation in the reverse direction to said worm wheel, and means to positively rotate said worm when the movement of said worm wheel approximates its normal speed of rotation.

5. A reversing mechanism having, in combination, a driving shaft, means for rotating said shaft alternately in opposite directions, a worm mounted on said shaft and movable both angularly and axially relatively to said shaft, a worm wheel meshing with said worm, and driving connections between said shaft and said worm, said connections including a cam and a driving arm at each end of said worm effective to give said worm a limited movement both axially and angularly relatively to said shaft at each reversal thereof.

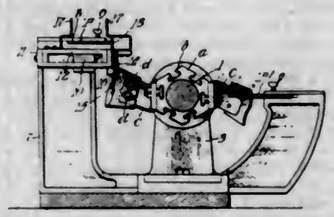
[Claims 6 to 10 not printed in the Gazette.]

1,191,988. STOVEPIPE STAY OR CLAMP. HENRY V. OLDHAM, Jonesboro, Ark. Filed Dec. 14, 1915. Serial No. 66,825. (Cl. 126—318.)



A stove pipe stay, comprising a pair of pivotally connected arcuate members, the corresponding ends of the said members having transversely extending arcuate portions formed thereon, the other end of one of the members having a movably connected bolt, the corresponding end of the other member having a recess for the reception of the outer end of the bolt, and an adjusting nut carried by the bolt.

1,191,989. APPARATUS FOR MARKING KNIFE-BLANKS. ERNEST A. OVERSTEDT, Beloit, Wis., assignor to C. Mattison Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Sept. 22, 1915. Serial No. 51,945. (Cl. 33—42.)



1. An apparatus for marking knife blanks having, in combination, an arbor for rotatably supporting a cutter-head, means for supporting a pattern extending longitudinally of the arbor, a slide supported for movement longitudinally of the pattern and arranged for limited turning movement in a plane parallel with the plane of the pattern, a tracer on the slide adapted to follow the pattern, and a marker on the slide adapted to engage a knife blank on the cutter-head.

2. An apparatus for marking knife-blanks having, in combination, an arbor for rotatably supporting a cutter-head, guide means extending parallel to the arbor, means for supporting a pattern extending longitudinally of the guide means, a slide movable longitudinally of said guide means and adapted to turn in one plane only, a tracer on the slide adapted to follow the pattern, and a marker on the slide adapted to engage a knife blank on the cutter-head.

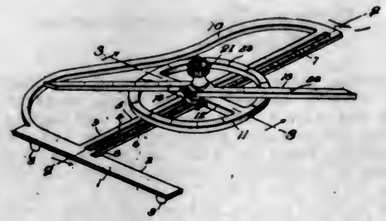
3. An apparatus for marking knife blanks having, in combination, an arbor for rotatably supporting a cutter-head, a guide member extending parallel with the arbor, means for supporting a pattern extending longitudinally of the guide member, a slide movable along said guide member, a tracer on the slide adapted to follow the pattern, and a marker axially alined with the tracer and fixed to the slide, said marker being adapted to engage a knife blank on the cutter-head.

4. An apparatus for marking knife blanks having, in combination, means for rotatably supporting a cutter-head, a guide member extending parallel with the axis of the cutter-head, means for supporting a pattern extending longitudinally of the guide member, a slide movable along said guide member, a tracer on the slide adapted to follow the pattern, and a marker on the slide adapted to engage a knife blank on the cutter-head.

5. An apparatus for marking knife blanks having, in combination, means for rotatably supporting a cutter head, means for supporting a pattern extending longitudinally of the axis of the cutter-head, a tracer movable along the pattern, and a marker fixed to the tracer and adapted to engage a knife blank on the cutter-head.

[Claims 6 and 7 not printed in the Gazette.]

1,191,990. DRAFTING INSTRUMENT. WILLIAM REW PEARSON, Sheridan, Oreg. Filed Nov. 3, 1913. Serial No. 798,980. (Cl. 33—94.)



1. In an instrument of the class described, a head, an arm extending from the head and having a straight edge, a protractor head longitudinally adjustably mounted upon the said arm, an angle indicating arm angularly adjustable upon the protractor head, and an arm slidably mounted upon the angle indicating arm and extending laterally therefrom.

2. In a device of the class described, a head, an arm extending from the head and having a straight edge, a protractor head disposed upon the arm, the arm being formed with a longitudinally extending slot and the protractor head being provided with means slidably engaging in the slot, a clamp having a head coöperating with the straight edge of the arm and provided with a threaded shank fitting axially through the protractor head, an arm supported for angular adjustment by the said shank, anad a set nut threaded upon the shank and bearing against the arm.

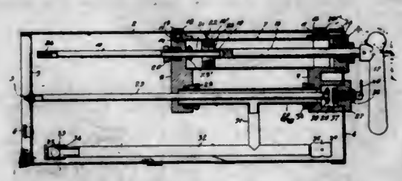
3. In a device of the class described, a head, an arm extending from the head and having a straight edge, a protractor head disposed upon the arm, the arm being formed with a longitudinally extending slot and the protractor head being provided with means slidably engaging in the slot, a clamp having a head coöperating with the straight edge of the arm and provided with a threaded shank fitting axially through the protractor head, an arm supported for angular adjustment by the said shank, and a set nut threaded upon the shank and bearing against the arm, the said set nut serving both to hold the clamp head in clamping engagement with the straight edge of the said arm and to hold the protractor arm at angular adjustment.

4. In an instrument of the class described, a head, an arm extending from the head and having a straight edge, the arm being formed with a longitudinally extending slot, a protractor head disposed against the arm and provided with means slidably engageable in the slot in the said arm, a clamping member having a shank fitted axially through the head and having its axis perpendicular to the straight edge of the arm, the said member including a head engaging the straight edge of the arm, and a set nut threaded upon the shank and clamping the protractor head to the said arm.

5. In an instrument of the class described, an arm having a straight edge, a protractor head disposed against the arm, coöperating means upon the protractor head and arm for holding the said head against turning movement thereon, a clamp removably securing the head to the arm, and a protractor arm angularly adjustably mounted upon the said head.

[Claims 6 to 8 not printed in the Gazette.]

1,191,991. FIRE-EXTINGUISHER. GEORGE T. PEARSONS, New York, N. Y. Filed Feb. 5, 1916. Serial No. 76,244. (Cl. 169—17.)



1. In a syringe, the combination with a reservoir having an outlet, of a piston chamber in said reservoir having intakes from the exterior of the reservoir; a piston reciprocable in said chamber; a tube reciprocable with the piston and slidably engaging in one end of the piston chamber within the reservoir to connect the piston chamber with the reservoir, said tube having ports within the piston chamber the opening and closing of which ports is controlled by the piston during the reciprocation thereof to alternately connect the tube through the ports with the piston chamber at opposite sides of the piston, substantially as and for the purpose specified.

2. In a syringe, the combination with a reservoir having an outlet, a cylinder therein having air intakes at opposite ends from the exterior of the reservoir; a piston to reciprocate in the cylinder; a tube reciprocable with the piston and slidable in one end of the cylinder within the reservoir to connect the cylinder with the reservoir; and a rod to reciprocate the piston and tube from the end of the cylinder opposite to the tube, and said piston during the reciprocation thereof alternately connecting the inner end of the tube to the cylinder at opposite sides of the piston, substantially as and for the purpose specified.

3. In a syringe, the combination with a reservoir having an outlet, of a cylinder therein having air intakes at its ends from the exterior of the reservoir and having an outlet in one end; a tube slidably engaging in the cylinder outlet and having ports adjacent the end within the cylinder; a piston reciprocable in the cylinder mounted on said tube to control the opening and closing of the tube ports and alternately connect the tube with the cylinder at opposite sides of the piston; and means extending to the exterior of the cylinder anad reservoir opposite to the tube to reciprocate the piston and tube, substantially as and for the purpose specified.

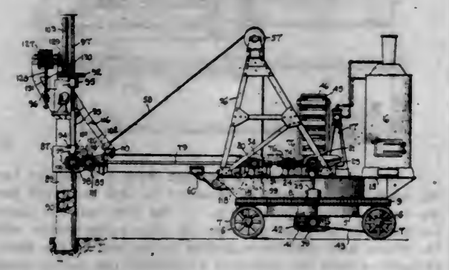
4. In a syringe, the combination of a reservoir having an outlet; a cylinder having suction air intakes at its ends from the exterior of the reservoir and having an opening in one end; a tube slidable in the opening in the cylinder end to connect the cylinder with the reservoir and having spaced apart ports at the end within the cylinder; a piston reciprocable in the cylinder slidably mounted on said tube to draw air into the cylinder and to control the opening and closing of the tube ports to alternately connect the tube to the cylinder at opposite ends of the piston; and a rod to reciprocate the piston and tube extending exterior of the cylinder and reservoir opposite to the tube.

5. In a syringe, the combination of a reservoir having an outlet; a cylinder therein having air suction inlets adjacent its ends from the exterior of the reservoir and an opening in one end into the reservoir; a tube slidable in the cylinder opening to connect the cylinder with the reservoir and having a series of spaced apart lateral ports

at the end within the cylinder; abutments at opposite sides of the ports; a piston on the tube to have movement between the abutments to control the opening and closing of the ports; and a rod extending from the end of the cylinder and reservoir opposite to the tube to reciprocate the piston and tube and cause the piston to cover and uncover the tube ports to alternately connect the tube with the cylinder at opposite ends of the piston, substantially as and for the purpose specified.

[Claims 6 to 19 not printed in the Gazette.]

1,191,992. DIGGING-MACHINE. JOHN J. PETERS, Fords, N. J. Filed Apr. 26, 1916. Serial No. 93,748. (Cl. 255—21.)



1. In an excavating machine, a turn-table, a boom mounted upon the table, excavating mechanism carried by the boom, a conveyer mounted upon the boom, a bed plate upon which the excavated material is discharged by the conveyer, an elevator, means for rotating the turn table, and means for discharging the material from the bed plate upon the elevator in the rotation of the table.

2. In an excavating machine, a turn-table, a boom mounted upon the table, excavating mechanism carried by the boom, a conveyer mounted upon the boom, a bed plate upon which the excavated material is discharged by the conveyer, an elevator, means for rotating the turn-table, and a scraper movable over the surface of the bed plate in the rotation of the table to discharge the material from the bed plate upon the elevator.

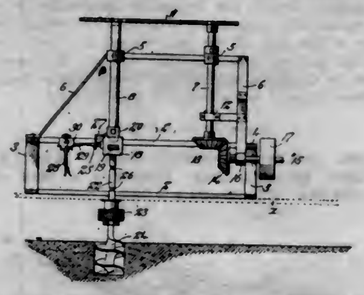
3. In an excavating machine, a turn-table, a boom mounted upon the turn table, excavating mechanism mounted upon the outer end of the boom, a conveyer mounted upon the boom to receive the excavated material, a relatively stationary bed plate, a discharge spout connected to the inner end of the boom to receive the material from the conveyer and deliver the same upon the bed plate, said bed plate having an opening therein, an elevator, a rotatable shaft extending centrally through the bed plate and the turn table, a scraper arm fixed upon said shaft, and mechanism for simultaneously rotating the turn table and said shaft whereby the arm will direct the excavated material through the opening in the bed plate and upon the conveyer.

4. In an excavating machine, a stationary annular rack, a turn-table rotatably mounted upon said rack, a boom pivotally mounted upon the turn-table, excavating mechanism on the outer end of said boom, a bed plate fixed upon the rack, means carried by the boom to receive and discharge the excavated material upon said bed plate, means on the turn-table coöperating with the rack to lock the table against rotation in the operation of the machine, an elevator, mechanism for rotating the turn-table including a vertically disposed shaft having a gear fixed thereon meshing with the stationary rack, and means movable over the surface of the bed plate in the rotation of the table to discharge the material from said plate upon the elevator.

5. In a post hole digging machine, the combination with a turn table and a boom mounted thereon for vertical swinging movement, of a tubular casing mounted upon the outer end of said boom for axial movement, an auger rotatably mounted in said casing, and mechanism for lowering the casing into the hole as the digging progresses and simultaneously rotating the auger.

[Claims 6 to 16 not printed in the Gazette.]

1,191,993. DRILLING-MACHINE. ANDREW P. PETERSON, Dwight, Ill. Filed Jan. 14, 1916. Serial No. 72,117. (Cl. 255—19.)



A drilling machine comprising a stationary frame, a shaft rotatably mounted in said frame, means for rotating said shaft, a guide member for said shaft, a rod movable longitudinally within said shaft and adapted for rotation within the latter, said rod having reduced portions, a longitudinally movable locking pin, guiding means for said pin, means for resiliently retaining said pin in operative position with one end engaged with one of the reduced portions of said rod, a lever pivoted upon said frame for withdrawing said locking pin to inoperative position, a locking segment for said lever mounted upon said stationary frame whereby the locking pin may be held in inoperative position, a drilling member, and means for connecting said drilling member with said rod.

1,191,994. STRAINER. ANNA M. PIERSON, Newark, N. J. Filed Oct. 22, 1915. Serial No. 57,219. (Cl. 210—16.)



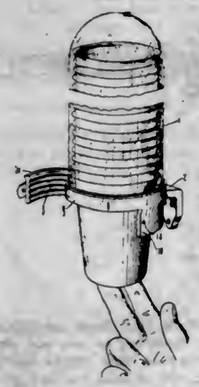
1. A strainer comprising a screen, a supporting rim on the screen, and radial wire handles secured to the rim, the handles being formed of substantially parallel strands bent so as to form vertically disposed corrugations of substantial depth.

2. A strainer comprising a screen, radially arranged handles secured to the screen, each handle comprising an end loop to form a holding end, and two strands connecting the loop and the screen, the strands being corrugated alike to form downwardly opening recesses spaced apart and of substantial depth.

3. A strainer comprising a perforated member, and radially arranged handles projecting from opposite sides thereof, and substantially in line, the handles being formed of spaced wires, the wires being secured to the member and terminating in loops, the wires in each handle being corrugated alike to form downwardly opening recesses of substantial depth to receive the top edges of utensils of different sizes.

4. A strainer comprising a screen, handles secured to the screen, the handles being substantially in line and projecting from opposite sides of the screen, the handles each having their side edges formed to provide downwardly opening recesses of substantial depth and having the space between the edges on the same handle open to receive the edge of a curved receptacle.

1,191,995. DISPENSING DEVICE. WILLIAM P. HAMMOND, Passaic, N. J., assignor to Individual Drinking Cup Company, New York, N. Y., a Corporation of Maine. Filed Apr. 14, 1915. Serial No. 21,229. (Cl. 211—8.)



1. In a dispenser of the character described, the combination of a support, a cup container closed at the top and irremovably connected with said support, cup sustaining means operably associated with said support and means whereby said cup supporting means may be moved into non-supporting position to permit the insertion of cups into the container.

2. In a cup dispenser of the character described, the combination with a support provided with circumferentially arranged cup supporting means, said cup-supporting means being adapted to engage the cup to be dispensed at a zone near its geratest diameter and support the same in delivery position, a cup reservoir permanently closed at its top and irremovably supported in substantially vertical position by the cup supporting means, and means for rendering inactive the cup supporting means to permit the filling of the device with cups.

3. In a cup dispensing apparatus, the combination with a support, of a cup reservoir closed at the top and irremovably connected to the support, said support having a movable part adapted to be moved to permit the filling of the reservoir with cups.

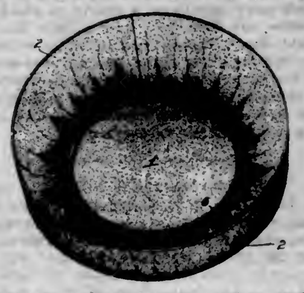
4. In a cup dispensing device, the combination of a cup receiving reservoir and a cup supporting means having a delivery opening therethrough and having a plurality of inwardly projecting ribs surrounding said opening, portions of said ribs being movably mounted to permit cups to be received in the cup receiving reservoir, a cup dispensing member having an opening therethrough and having a plurality of inwardly projecting cup supporting ribs surrounding said opening, portions of said ribs being movable to permit the cups to freely pass through said opening.

5. In a cup dispensing device, the combination of cup supporting means comprising a plurality of vertically-spaced inwardly extending ribs, adapted to support a stack of cups, the maximum diameter of which is slightly greater than the inner diameter of said ribs, and means for moving portions of said ribs to permit the cups to pass the same without contact therewith.

[Claims 6 to 10 not printed in the Gazette.]

1,191,996. LINING FOR HATS. GEORGE RAWAK, New York, N. Y. Filed Nov. 13, 1914. Serial No. 871,945. (Cl. 2—113.)

A hat lining comprising a crown member, an apron member, a folded strip having its meeting edges secured between the meeting edges of the crown and apron members and forming an annular pocket projecting from the



juncture of said crown and apron members, and a core inclosed within said annular pocket.

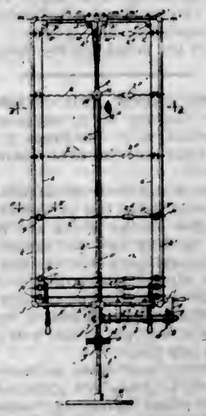
1,191,997. MIXTURES OF ALKALI SALTS OF 4.4¹-DIOXY-3.3¹-DIAMINO-ARSENOBENZENE AND PROCESS OF MAKING SAME. BAPTIST REUTER and KARL STRAITWOLF, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Dec. 29, 1914. Serial No. 879,578. (Cl. 167—7.)

1. As new products, intimate mixtures of alkali-salts of 4.4¹-dioxy-3.3¹-diaminoarsenobenzene with polyvalent alcohols, being yellow powders readily soluble in water with alkaline reaction, almost insoluble in alcohol and ether, its aqueous solution separating on addition of diluted hydrochloric acid dioxydiaminoarsenobenzene which is redissolved by adding an excess of the acid.

2. As new products, intimate mixtures of the di-sodium salt of 4.4¹-dioxy-3.3¹-diaminoarsenobenzene with mannite, being yellow powders readily soluble in water with alkaline reaction, almost insoluble in alcohol and ether, its aqueous solution separating on addition of diluted hydrochloric acid dioxydiaminoarsenobenzene which is re-dissolved by adding an excess of the acid.

3. As a new process, the preparation of an intimate mixture of the alkali salts of the dioxydiaminoarsenobenzene with mannite, which process consists in mixing alcohol and ether with the aqueous solution containing said alkali salts and mannite.

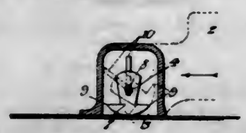
1,191,998. CLOTHES-DRIER. PATRICK D. RIORDAN. New York, N. Y. Filed Nov. 13, 1915. Serial No. 61,209. (Cl. 68—34.)



A clothes-drier including a stand; a frame rotatably mounted thereon; a windlass carried by said frame; a

series of substantially horizontally-disposed clothes-carrying lines; substantially vertically-disposed collapsible cables which carry said lines; a sheave to which the ends of said cables are attached; and a rope that is rove through said sheave and one end of which is fastened to said frame and the other end of which passes around said windlass, the turning of which windlass winds up said rope and shifts said sheave and raises said lines successively into clothes-receiving position and into spaced relation with respect to one another.

1,191,999. VACUUM-CLEANER NOZZLE. AUGUST E. ROEVER, Brooklyn, N. Y., assignor to James B. Kirby, Cleveland, Ohio. Continuation in part of application Serial No. 859,952, filed Sept. 3, 1914. This application filed Oct. 26, 1915. Serial No. 57,911. (Cl. 15—60.)



1. A cleaner nozzle having a lengthwise extending opening therein, and a plurality of thread-removing members suspended within said nozzle and each having a tapered portion extending transversely of such opening.

2. A cleaner nozzle having a lengthwise extending opening therein, and a plurality of rocking members spaced apart within said nozzle and each comprising a depending body portion provided at its lower end with thread-removing projecting portions and means for suspending said members to permit the rocking thereof during the operation of the nozzle.

3. A cleaner nozzle having a lengthwise extending opening therein, a rod extending lengthwise thereof, and a plurality of flexible rocking thread-removing members mounted upon said rod and spaced apart within said nozzle and each comprising a depending body portion provided at its lower end with oppositely extending projecting portions.

4. A cleaner nozzle having a lengthwise extending opening therein, a plurality of rocking flexible thread-removing members suspended within said nozzle and each comprising a depending body portion having oppositely tapered portions, and means extending transversely through said flexible members for suspending the same for rocking movement during the operation of the nozzle.

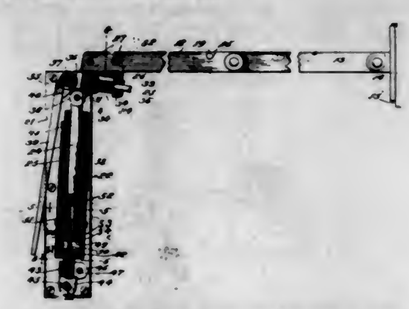
5. A cleaner nozzle having an opening therein, rocking means suspended within said opening for rocking movement during the operation of the nozzle and having along said opening a thread-removing pointed-end projections extending transversely to such opening.

[Claims 6 to 14 not printed in the Gazette.]

1,192,000. DOOR CHECK AND CLOSER. ALBERT J. ROSENTRETER, Boonton, N. J., assignor to Edgar Zabriskie, Maplewood, N. J., and Frank E. Hutchins, New York, N. Y. Filed July 29, 1914. Serial No. 853,878. (Cl. 16—88.)

1. In a door check and closer mechanism a checking cylinder having a solid lower end and containing a piston, piston rod and door closing spring and provided with a by-pass for the checking fluid and means to control the checking action comprising a hole through the piston and an interior fixed tapered pin secured to the solid lower end of the cylinder and extending through said hole, said cylinder being adjustable lengthwise of the piston rod to vary the relation of said pin to said hole and control the passage through said hole.

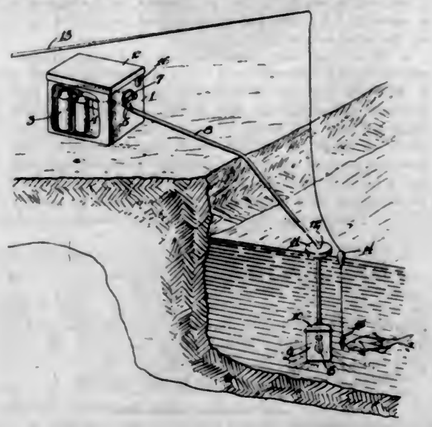
2. In a door check and closer mechanism, a checking cylinder containing a piston and piston rod, a door closing spring, lever means operatively connected with the outer end of said rod and pivoted at a fixed point, means pivotally securing said cylinder, and means for adjusting the outer end of said rod with relation to the pivot of said lever means for varying the stroke of the piston and the closing force of said spring, said adjusting means comprising a nut and a screw carried by said lever means and which also serve as the means for pivotally connecting the piston rod with said lever means, the nut being on the screw and pivoted to said rod.



3. In a door check and closer mechanism, a checking cylinder pivotally mounted at one end and containing a piston and a piston-rod, lever means operatively connected with the outer end of said rod and pivoted at a fixed point, a door closing spring, and means at the end of said cylinder for permitting the adjustment of said cylinder lengthwise of the piston rod to modify the cushioning action of the check, said means comprising a threaded stem and a threaded socket therefor, one of said parts being nonrotary and the other rotary with said cylinder.

4. In a door check and closer mechanism, a checking cylinder pivotally mounted at one end and containing a piston and a piston rod, lever means operatively connected with the outer end of said rod and pivoted at a fixed point, a door closing spring, and a manually operative pivoted handle-lever also operatively connected with the outer end of said rod and immediately adjacent thereto and to said cylinder and also with said lever means for moving said rod outwardly in opposition to the force of said spring.

1,192,001. FISHING APPARATUS. WILLIAM J. RYAN, Sapulpa, Okla. Filed Jan. 3, 1914. Serial No. 810,248. Renewed May 27, 1916. Serial No. 100,376. (Cl. 43—20.)



In a fishing apparatus a shore anchoring means including a holder and a source of current, a lamp, a conductor connecting said lamp and said source of current, a tube disposed about said conductor for protecting the conductor from contact with water, said conductor and said tube being of sufficient rigidity to resist flexure under

flow of current to hold said lamp in its postion of adjustment in a stream from the shore line, a transparent protective casing carried by said conductor in proximity to said lamp and encompassing said lamp, a disk float having an opening therein, said float being slidably and frictionally mounted on the tube through the medium of the opening and held in adjusted position at a bend of flexure thereon, and said float holding said lamp at a desired depth in a stream and being prevented from having sliding movement on the tube by the bend of flexure when the casing is accidentally moved.

1,192,002. ATTACHMENT TO BABY-CARRIAGES. CARL SCHILLER, Winnipeg, Manitoba, Canada. Filed Apr. 16, 1915. Serial No. 21,862. (Cl. 21—12.)



1. The combination with a carriage frame front and rear axles, wheels, and a handle carrying the frame, of rearwardly extending and upwardly inclined skids, the forward ends of which depend from the front axle and the rear ends of which depend from the handle.

2. The combination with a carriage frame and wheels carrying the frame, of rearwardly extending upwardly inclined skids located beneath the frame and passing in a direction tangential to the circumference of the front wheels and maintaining this position regardless of whether the carriage is used as a slide or as a vehicle.

3. The combination with a carriage frame and wheels carrying the frame, of rearwardly extending upwardly inclined skids located beneath the frame and passing in a direction tangential to the circumference of the front wheels and means for adjusting the rear wheels to expose the skids beneath the same.

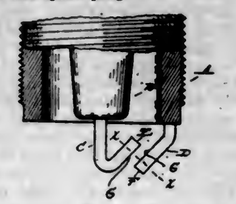
4. The combination with a carriage frame and wheels carrying the frame, of a pair of downwardly extending rods secured to the frame forwardly and a pair of inclined skids connecting the lower ends of the rods with the frame rearwardly.

5. The combination with a carriage frame, of a pair of bowed front springs secured to the frame, a front axle carried by the springs, front wheels mounted on the axle, a pair of guide rods secured to the frame and extending downwardly and connected slidably to the front axle, a pair of inclined skids secured forwardly to the lower ends of the rods and rearwardly to the rear end of the frame, said skids passing in a direction tangential to the front wheels and adjustable rear wheels carrying the rear of the frame and arranged to swing upwardly to expose the skids.

1,192,003. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Aug. 31, 1914. Serial No. 859,567. (Cl. 123—169.)

1. In a spark plug, coöperating electrodes having portions formed of an approximate wedge shaped section providing longitudinally extended thin edges opposite and substantially parallel to each other and in substantially the same plane.

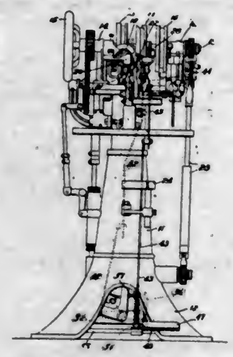
2. In a spark plug, a spark plug and coöperating electrodes each having portions extending obliquely of the longitudinal axis of the plug and opposite and substantially parallel to each other, said portions being of an approximate wedge shaped cross section providing thin edges on opposite sides of the spark plug.



3. In a spark plug, an insulated electrode having a return bent portion and a portion extending upward obliquely of the longitudinal axis of the spark plug, a coöperating electrode extending downward obliquely of the longitudinal axis of the spark plug, said electrodes being formed of a wedge shaped cross section in their oblique portions forming thin edges arranged opposite and substantially parallel to each other in the plane of the spark gap.

4. In a spark plug, an electrode having a portion extending obliquely of the longitudinal axis of the plug, said portion being provided with a thin longitudinally extended edge and a coöperating electrode having a portion provided with a corresponding thin longitudinally extending edge substantially in the plane with said first-mentioned portion, said thin longitudinally extending edges being substantially opposite and parallel to each other.

1,192,004. SEWING-MACHINE. AUGUST R. SCHOENKY, Somerville, Mass., assignor to The Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Oct. 5, 1915. Serial No. 54,113. (Cl. 112—20.)



1. A sewing machine including in combination a work-engaging member or presser foot movable toward and from the work, a clamp adapted to clamp the presser foot against the work during a portion of each stitch, a releasing device adapted when actuated to release the presser foot from such clamping action, and a pair of independent pedals both engageable by the operator's foot in the same downward movement, the first pedal being slightly the higher, connections from the first pedal for actuating said releasing device, and connections from the second pedal for lifting the released presser foot.

2. A sewing machine including in combination a work-engaging member or presser foot movable toward and from the work, a clamp adapted to clamp the presser foot against the work during a portion of each stitch, a releasing device adapted when actuated to release the presser foot from such clamping action, and a pair of independent pedals both engageable by the operator's foot in the same downward movement, the first pedal being slightly the higher, connections from the first pedal for actuating said releasing device, and connections from the second pedal

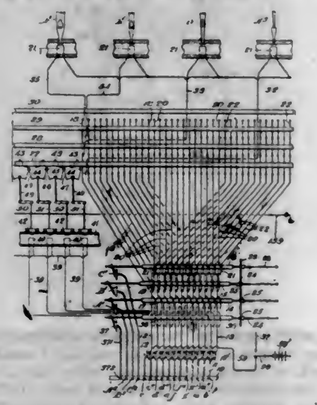
for lifting the released presser foot, said pedals being located one directly in front of the other.

3. A sewing machine including in combination a work-engaging member or presser foot movable toward and from the work, a clamp adapted to clamp the presser foot against the work during a portion of each stitch, a releasing device adapted when actuated to release the presser foot from such clamping action, and a pair of independent pedals both engageable by the operator's foot in the same downward movement, the first pedal being slightly the higher, connections from the first pedal for actuating said releasing device, and connections from the second pedal for lifting the released presser foot, said pedals extending crosswise with the higher one to the rear of the other.

4. A sewing machine including in combination a work-engaging member or presser foot movable toward and from the work, a clamp adapted to clamp the presser foot against the work during a portion of each stitch, a releasing device adapted when actuated to release the presser foot from such clamping action, and a pair of independent pedals both engageable by the operator's foot in the same downward movement, the first pedal being slightly the higher, connections from the first pedal for actuating said releasing device, and connections from the second pedal for lifting the released presser foot, said pedals extending crosswise with the higher one to the rear of the other and a fixed part serving as a foot gage.

5. A sewing machine including in combination a work-engaging member movable toward and from the work, means to clamp the same against the work, a first pedal having connections for releasing the clamping action, and a second pedal having connections for lifting said member, said pedals being independent of each other but arranged to be depressed by the same foot movement so as to first release and then lift the work engaging member.

1,192,005. AUTOMATIC MUSICAL INSTRUMENT. ERNEST M. SKINNER, Boston, Mass. Filed May 28, 1915. Serial No. 30,942. (Cl. 84—243.)



1. An automatic musical instrument, comprising a plurality of sounding devices tuned to furnish the notes of a scale and divided into sub-groups consisting of consecutive devices, a group of selector-controlled note controllers equal in number to the sounding devices of one sub-group, and selector-controlled mechanism for selecting said sub-groups for operation.

2. An automatic musical instrument, comprising a plurality of sounding devices tuned to furnish the notes of a scale and divided into sub-groups consisting of consecutive devices, a group of selector-controlled note controllers equal in number to the sounding devices of each sub-group, and selector-controlled controllers, one for each said sub-group of sounding devices, for selecting or conditioning said sub-groups for operation in any predetermined order.

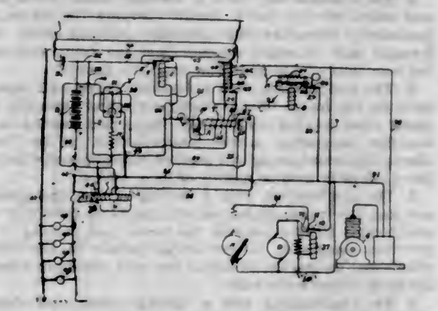
3. An automatic musical instrument, comprising a plurality of sounding devices tuned to furnish the notes of a scale and divided into sub-groups consisting of consecutive devices, a group of note-controllers equal in number to the sounding devices of one sub-group, controllers equal in number to said sub-groups for selecting said sub-groups for operation, and a tracker board having selector-controlled means for energizing all of said controllers.

4. An automatic musical instrument, comprising a plurality of sounding devices having a compass of several octaves and divided into sub-groups each having a compass of one octave, a tracker board having connected therewith note controllers equal in number to the sounding devices of a single octave, and selector-controlled mechanism for causing said controllers to control the operation of all of said sounding devices.

5. An automatic musical instrument, comprising a tracker board, and note controllers equal in number to the notes of an octave, in combination with a plurality of sounding devices tuned to furnish the notes of a scale comprising a plurality of octaves, and selector-controlled mechanism by which each note controller may cause the operation of the corresponding sounding device of each octave independently of the like sounding devices of the other octaves.

[Claims 6 to 25 not printed in the Gazette.]

1,192,006. ELECTRIC SYSTEM. FRANK M. SLOUGH, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed July 10, 1912. Serial No. 708,551. (Cl. 171—314.)



1. In an electric system, an accumulator, a pair of dynamo electric machines, one of which is employed for charging said accumulator, a prime mover for actuating said charging dynamo electric machine, said prime mover adapted to be started by the other dynamo electric machine, means for automatically connecting one of said dynamo electric machines and said accumulator when the voltage of the accumulator reaches a predetermined value and means for automatically disconnecting said accumulato rand said starting dynamo electric machine when said prime mover is in inoperative condition.

2. In an electric system, an accumulator, a dynamo electric machine for supplying energy to said accumulator, a prime mover for actuating said dynamo electric machine, a second dynamo electric machine for starting said prime mover, means acting automatically for connecting said second dynamo electric machine to said accumulator when the condition of said accumulator reaches a predetermined state, means for disconnecting said accumulator and said second dynamo electric machine when said prime mover is inoperative and a slow acting relay controlling said last named means.

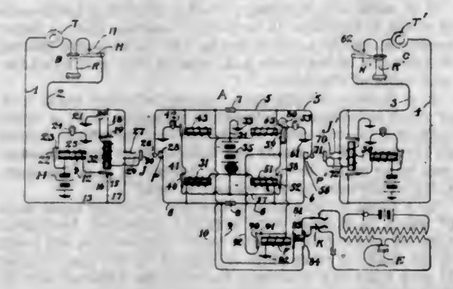
3. In an electric system, the combination of an accumulator, a dynamo electric machine for charging said accumulator, a prime mover for operating said dynamo electric machine, a motor for starting said prime mover, means for automatically connecting said motor to said accumulator for starting said prime mover when the condition of the accumulator reaches a predetermined state and means for automatically connecting said dynamo electric machine in circuit with said accumulator when said prime mover has started the operation of said dynamo electric machine.

4. In an electric system, the combination of an accumulator, a dynamo electric machine for charging said accumulator, a prime mover for operating said dynamo electric machine, a motor for starting said prime mover, means for automatically connecting said motor to said accumulator to start said prime mover when the condition of said accumulator reaches a predetermined state, and electro-magnetic means controlled by said dynamo electric machine for connecting the same in circuit with said accumulator when said prime mover starts to operate said dynamo electric machine.

5. In an electric system, the combination of an accumulator, a dynamo electric machine for charging said accumulator, a prime mover for operating said dynamo electric machine, a motor for starting said prime mover, means for automatically connecting said motor to said prime mover to start the same, means for automatically disconnecting said motor from said accumulator should said prime mover be inoperative, a circuit for connecting said accumulator to said dynamo electric machine, and means controlled by said dynamo electric machine for automatically closing said circuit when said prime mover begins to operate said dynamo electric machine.

[Claims 6 to 15 not printed in the Gazette.]

1,192,007. TELEPHONE SYSTEM. FRANK M. SLOUGH, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed July 24, 1912. Serial No. 711,194. (Cl. 179—70.)



1. In a telephone system, the combination of a main station, a plurality of substations, telephone lines extending from said substations to said main station, connecting means at the main station for connecting said telephone lines together, a pair of supervisory relays in the calling end of said connecting means, an operator's set at said main station and means controlled by the joint action of said relays controlling the connection of said operator's set to said connecting means.

2. In a telephone system, the combination of a main station, a plurality of substations, means at the main station for connecting such telephone lines together, a calling sleeve supervisory relay at the main station, an operator's set at the main station, means for connecting said operator's set to said connecting means and locking apparatus for locking said operator's set connecting means, such operator's set connecting means being under the joint control of the calling sleeve supervisory relay and the called subscriber.

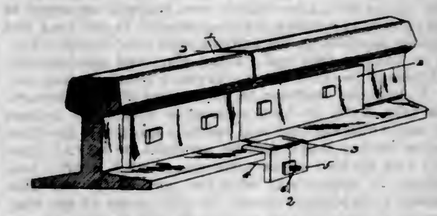
3. In a telephone system, the combination of a main station, a plurality of substations, telephone lines for connecting said stations together, means at the main station for connecting said telephone lines together, an operator's set at the main station and means under the control of the called subscriber for connecting said set to said connecting means and a device for automatically removing such control from the called subscriber after the called subscriber has responded.

4. In a telephone system, the combination of a main station, a plurality of substations, telephone lines connecting said main and substations, link conductors to connect said telephone lines together, an operator's set, means to connect said set to said link conductors, means including a portion of the talking circuit for disconnecting the operator's set from such link conductors and locking apparatus for said last named means.

5. In a telephone system, the combination of a main station, a plurality of substations, telephone lines connecting said main and substations, a cord circuit at the main station for connecting said lines together, an operator's set at the main station and means to connect said set to the cord, electro-magnetic means controlled by the called subscriber for interrupting the connection of the operator's set to the cord circuit and locking means for such electro-magnetic means.

[Claims 6 to 10 not printed in the Gazette.]

1,192,008. RAIL JOINT AND FASTENING. JABEZ M. SMITH, Malvern, Ark. Filed Apr. 19, 1916. Serial No. 92,100. (Cl. 239—6.)

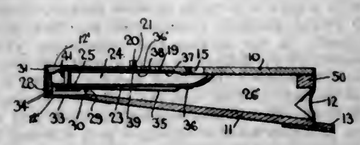


1. A rail joint and fastening, consisting of twin members, each having a portion engaging the upper face of the foot of the rail, an inward extending arm and a vertical flange, and a clamping device for securing the members to provide a support and fastening for the rails, said arms having their opposing faces inclined to form co-acting wedges and having engaging teeth.

2. A rail joint and fastening, consisting of twin members, each having an elongated portion engaging the upper face of the foot of the rail, a series of inward extending wedge shaped arms, vertical flanges integral with the wedge shaped arms, opening in said vertical flanges, and clamping rods passing through said openings for clamping the twin members about the meeting ends of the rails.

3. A rail joint and fastening consisting of twin members, each having a portion engaging the upper face of the foot of the rail, an inward extending wedge shaped arm and an integral vertical flange having an opening therein, and a clamping rod passing through said opening, the wedge shaped arm of one of said twin members being formed on either side with guides which serve to retain the wedge shaped arms in proper position.

1,192,009. PLAYER-PNEUMATIC. CHARLES H. SPENCER, Baltimore, Md. Filed Jan. 27, 1915. Serial No. 4,680. (Cl. 84—178.)



1. In a playing pneumatic for player pianos a fixed and a movable member, a fold connecting the fixed and the movable members and constituting a bellows which is provided with an inlet port and an exhaust port, a partition in the bellows forming a chamber which is provided with a port arranged in coaxial alinement with the aforesaid inlet port of the bellows, a valve held normally in engage-

ment with said partition port, a diaphragm in the chamber, a valve operating arm operable under the influence of said diaphragm to unseat said valve with relation to said partition port and position the valve in coöperative relation with the inlet port of the bellows to close the latter, the diaphragm having a bleed hole.

2. In a playing pneumatic, a bellows composed of a fixed member, a movable member, and a fold connecting said members, the fixed member having an exhaust port and a relatively small aperture, a partition in the bellows to form a chamber therein and into which said small aperture leads, the partition having a port therein, a valve seat member connected to the fixed member and provided with a port, and to which valve seat the movable member of the bellows is connected, a valve held normally in engagement with the port in said partition, and means in the chamber operable under the influence of pressure or suction through said small aperture of the fixed member to shift said valve from coöperative relation with the partition port into sealing relation with the port in the valve seat member, said means having a bleed hole.

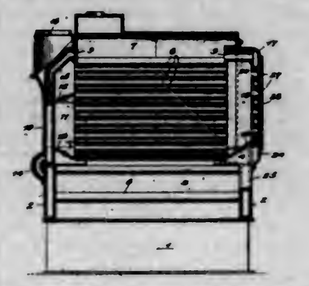
3. In a playing pneumatic, a bellows composed of a fixed member, a valve seat member connected thereto and provided with a port, a movable member hingedly connected to said valve seat member, a fold connected to the fixed and movable members of the bellows, said fixed member having an exhaust port and a relatively small aperture, the underside of the fixed member having a relatively long cavity, a channeled partition in the bellows which coöperates with said cavity to form a chamber within the bellows and into which chamber said aperture leads, said partition member having a port therein arranged in coaxial alinement with the port of the valve seat member, a valve held normally in engagement with the port of the partition member, a diaphragm located in said cavity of the fixed member, a yieldable arm secured in said cavity and provided with a stem disposed in alinement with the axes of said valve seat member port and said partition port and which is movable with the diaphragm under the influence of pressure or suction entering the said chamber through said small aperture in the fixed members so as to shift said valve from the port of the partition member into sealing relation with the port of the valve seat member, the diaphragm having a bleed hole.

4. In a playing pneumatic, a bellows composed of a fixed member, a valve seat member secured to the fixed member and provided with a port, a movable member hingedly connected to said valve seat member, a fold connecting the fixed and movable members, the fixed member having a port and a relatively small aperture, a portion adjacent the fixed member forming a chamber in the bellows into which chamber said small aperture leads, a yieldable arm secured at one end to the underside of the chamber, the chamber having a port leading into the bellows, a valve secured to said arm and normally closing the port leading from the chamber, and means located in the chamber for actuation under the influence of pressure or suction through said small aperture to operate said valve against the tension of said yieldable arm to force the valve from the port of the chamber and hold the valve in tight engagement with the port in said valve seat member.

5. In a playing pneumatic, a bellows comprising a fixed member, a member secured to the fixed member and provided with a port, a movable member hingedly connected to said ported member, a channeled partition disposed longitudinally in the bellows and coöperating with the fixed member of the bellows to form a relatively long narrow shallow chamber, the fixed member having a relatively large port leading into the bellows and also provided with an exhaust aperture leading from said chamber, said partition member having a port disposed in coaxial alinement with the port of the aforesaid ported member, a valve located normally over the port of the partition member, a diaphragm in said chamber operable for downward movement in the chamber under the influence of pressure or suction, and a relatively long yieldable arm disposed in the chamber, said arm having a stem and being movable under the influence of downward movement of the diaphragm to cause its stem to engage said valve and shift the latter from the port in the partition into sealing relation with the port of said ported member, said diaphragm having a bleed hole.

[Claims 6 to 13 not printed in the Gazette.]

1,192,010. FURNACE. GEORGE FANTON SPENCER, Thompson, Pa. Original application filed Apr. 29, 1915, Serial No. 24,764. Divided and this application filed July 17, 1915. Serial No. 40,369. (Cl. 122—74.)



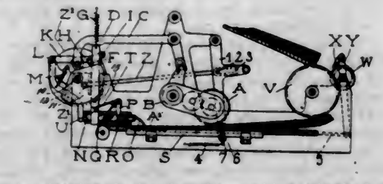
1. A structure of the character described including a fire box, a head provided in its upper part with a cutaway portion, a boiler supported over the fire box on the head, a jacket secured to the boiler and provided with a cutaway portion in its lower part to supplement the head cutaway portion in forming a doorway, and a door for the doorway formed.

2. A furnace comprising a fire box including heads each of which is formed with inwardly extending arms, a boiler supported on the arms of heads, and cover plates seating on the arms of the heads and defining flues with the adjacent walls of the boilers.

3. A furnace comprising a fire box including heads each of which is formed with inwardly extending arms, a boiler supported on the arms of the heads, cover plates seating on the arms of the heads and defining flues with the adjacent walls of the boilers, and a damper in each flue journaled in the arms of the respective head.

4. A furnace comprising a fire box including heads each of which is formed with inwardly extending horizontal arms having vertical posts, a boiler supported on the posts of the heads, a cover plate seating on the horizontal arms of each head and defining a flue with the adjacent wall of the boiler, and a damper for the flue.

1,192,011. RELEASING DEVICE FOR THE COMBING-WHEELS IN SHEET-FEEDERS. GEORG SPIESS, Leipzig, Germany. Filed June 25, 1915. Serial No. 36,174. (Cl. 101—36.)



1. A releasing device for the combing wheels in sheet feeders comprising a finger adapted to be operated by the front edge of a passing sheet, a catch actuated by said finger, a bar to which said catch is pivoted, and a brake lever actuated by said bar.

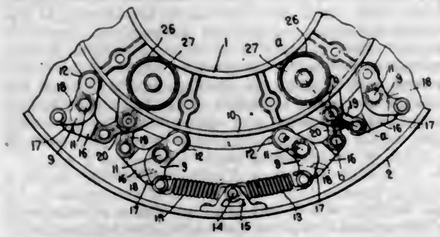
2. A releasing device for the combing wheels in sheet feeders comprising a finger adapted to be operated by the front edge of a passing sheet, a catch actuated by said finger, a movable tooth rack adapted to be limited in its movement, a bar to which said catch is pivoted, and a brake lever actuated by said bar.

3. A releasing device for the combing wheels in sheet feeders comprising a finger adapted to be operated by the front edge of a passing sheet, a swing arm supporting the finger, a catch actuated by said finger and swing arm, a movable tooth rack adapted to receive periodically the catch to limit its movement, a bar to which said catch is pivoted, and a brake lever actuated by said bar.

4. A releasing device for the combing wheels in sheet feeders comprising a finger adapted to be operated by the front edge of a passing sheet, a catch actuated by said finger, a bar to which said catch is pivoted, a brake lever actuated by said bar, and means in connection with said brake lever to release the combing wheels.

5. A releasing device for combing wheels in sheet feeders comprising a finger adapted to be operated by the front edge of a passing sheet, a catch actuated by said finger, a bar to which said catch is pivoted, a brake lever actuated by said bar, means in connection with said brake lever to release the combing wheels, and means for advancing the bank of sheets to bring the top sheets successively underneath the said combing wheels.

1,192,012. LUBRICATING SYSTEM FOR CONNECTED MOVABLE PARTS. JOHN A. STAHLE, Dorchester, Mass., assignor to Stahle Mechanical Tire Company, Ltd., Boston, Mass., a Corporation of Maine. Filed Sept. 18, 1913. Serial No. 790,560. (Cl. 64—17.)



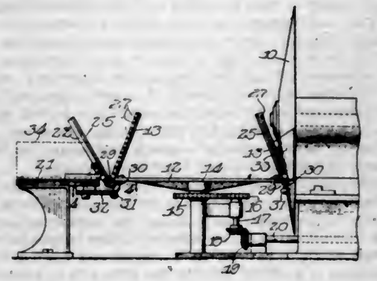
1. The combination with two annular members concentrically arranged, of spring-actuated levers pivotally sustained by the outer member and adapted to bear against the inner member, hollow pivotal pins carried by the inner member, connections between said pins and said spring-actuated levers by which the latter are turned when the concentric members move radially relative to each other, each connection comprising a plurality of sections pivotally connected together and each section having an oil duct extending the length thereof, said pivotally-connected sections having at their joints means to constitute a communication between the oil ducts, and also having means constituting a communication between said ducts and the interior of said hollow pins, oil reservoirs carried by the inner member, and ducts extending from said reservoirs to the interior of said pins.

2. The combination with two annular members concentrically arranged, of a plurality of levers pivotally sustained by the outer member and bearing against the inner member, pivotal pins carried by the outer member on which said levers are mounted, hollow pivotal pins carried by the inner member, a jointed connection between each lever and a hollow pivotal pin, each jointed connection having an oil duct extending from one end to the other thereof, and also having means constituting a communication between said oil duct and the interior of the corresponding hollow pivotal pin, oil chambers carried by the inner member, and ducts forming communication between said oil chambers and the hollows of said hollow pivotal pins.

3. In a device of the class described, the combination with two annular members concentrically arranged, of a plurality of levers pivoted to the outer member and bearing against the inner member, a plurality of pivotal pins carried by the inner member, each pivotal pin having an axial chamber closed at the ends, a link pivotally mounted on each pivotal pin, each link having a duct extending longitudinally thereof, each pivotal pin having ports communicating with the ducts in the links, other links pivotally connected to the first-named links and operatively connected with the levers, said other links having oil ducts therein, each pair of links having means at the joint thereof to provide communication between the oil ducts of said links.

4. In a device of the class described, the combination with two annular members concentrically arranged, of a plurality of spring-actuated levers pivotally connected to one of said members and bearing against the other member, a plurality of hollow pivotal pins carried by said other member, a jointed connection between each hollow pivotal pin and each lever, each connection having an oil duct extending from one end to the other thereof and through the joint, and also having means constituting a communication between the oil ducts and the interior of the corresponding pivotal pin, and means to supply oil to the interior of said pivotal pin.

1,192,013. ATTACHMENT FOR MEAT-SLICING MACHINES. EDWARD M. STILES, Mount Pleasant, Iowa, assignor to U. S. Slicing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 30, 1912. Serial No. 723,120. (Cl. 17—24.)



1. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom and traveling in a circular path, means for imparting motion to the receiver, an inclined collector support, and means other than the said motion imparting means for lifting the slices from the receiver and depositing them against the support.

2. The combination of a meat slicer, a receiver rotatable in a circular path adjacent the slicer for receiving the slices therefrom, said receiver having a constant direction of rotation, means for imparting such movement to the receiver, an inclined collector support, and means other than the said motion imparting means for lifting the slices from the receiver and delivering them to the support.

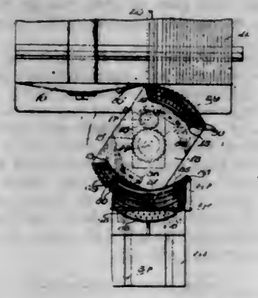
3. The combination of a meat slicer, an upright receiver rotatable in a circular path adjacent the slicer for receiving the slices therefrom, means for imparting such movement to the receiver, an inclined collector support, and means for dumping the slices from the receiver to the support.

4. The combination of a meat slicer, a receiver rotatable in a circular path and adjacent the slicer for receiving the slices therefrom, means for rotating the receiver, a collector support, and means for lifting the slices from the receiver and delivering them to the support.

5. The combination of a meat slicer, a receiver rotatable in a circular path and adjacent the slicer for receiving the slices therefrom as they are cut, means for rotating the receiver, an inclined collector support adjacent the path of movement of the receiver, and means for lifting the slices from the receiver and delivering them to the said support.

[Claims 6 to 26 not printed in the Gazette.]

1,192,014. ATTACHMENT FOR MEAT-SLICING MACHINES. EDWARD M. STILES, Mount Pleasant, Iowa, assignor to U. S. Slicing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 18, 1912. Serial No. 726,459. (Cl. 17—24.)



1. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom and traveling in a circular path, means for imparting motion to the receiver, a collector support, and means connected with the support and with respect to which last recited means the receiver is movable, for supporting and transferring the slices from the receiver to the collector support.

2. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom and traveling in a circular path, said receiver having a constant direction of rotation, means for imparting motion to the receiver, a collector support, means connected with the support and with respect to which last recited means the receiver is movable, for transferring the slices from the receiver to the collector support, and means for intermittently actuating the said transferring means.

3. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom and traveling in a circular path, means for imparting motion to the receiver, a collector support, means connected with the support and with respect to which last recited means the receiver is movable whereby the slice will be carried by the receiver into a position to be engaged by the last said means, and means controlled by the movement of the receiver for actuating the last recited means to transfer the slices from the receiver to the collector support.

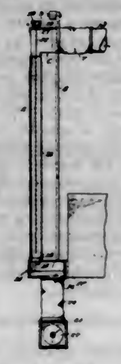
4. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom and traveling in a circular path, means for imparting such movement to the receiver, a collector support, and an intermittently actuated fly operating to support and lift the slices from the receiver and deliver them to the collector support, said fly being separate from the receiver and connected with the collector support, and being adapted to assume such a position with respect to the slice engaging surface of the receiver that the movement of the receiver will position the slice to be engaged by the fly.

5. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom as they are cut, said receiver traveling in a circular path, means for imparting such movement to the receiver, a collector support for the slices, and means separate from the receiver and movable across the path of movement of the slice engaging surface of the receiver for taking the slices from the receiver and delivering them to the collector support.

[Claims 6 to 38 not printed in the Gazette.]

1,192,015. CLEANER AND DUST-COLLECTOR. JOHN P. STOFFEL, Los Angeles, Cal. Filed Jan. 25, 1916. Serial No. 74,158. (Cl. 83—47.)

1. In a dust collector, the combination with a movable sifter, of a distributing housing, means for delivering air and dust to said housing, a receiving housing carried by the sifter, a screen duct having its upper end opening to the interior of the distributing housing and its lower end opening to the interior of the receiving housing, and means within said duct for impacting same on movement being imparted to the sifter.



2. In a dust collector, the combination with a movable sifter, of a distributing housing, means for delivering air and dust to said housing, a receiving housing carried by the sifter, a plurality of screen ducts having their upper ends opening to the interior of the distributing housing and their lower ends opening to the interior of the receiving housing, and depending chains within the ducts.

3. In a dust collector, a distributing housing having discharge apertures in its lower wall, screen ducts depending from said housing and opening thereto through the discharge apertures, a flexible strap depending through the discharge apertures, and chains suspended from said straps within the ducts, adapted to impact the walls of the ducts on movement of same.

4. In a dust collector, a distributing housing having a discharge opening in its lower wall and an opening in its upper wall opposite the discharge opening, a strap depending through said openings, means for detachably supporting said strap, a chain depending from the lower end of the strap, and a screen duct communicating at its upper end with the discharge opening and in which the chain is arranged.

5. In a dust collector, a distributing housing having a discharge opening in its bottom wall and an opening in its upper wall opposite the discharge opening, a flange encircling the upper opening forming a seat, a block adapted to be supported on said seat, a strap depending from said block and extending through the discharge opening, a chain depending from said strap, and a screen duct encompassing the chain and communicating with the discharge opening.

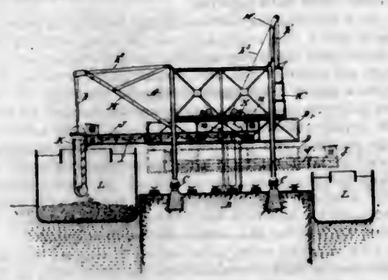
[Claims 6 to 10 not printed in the Gazette.]

1,192,016. LOADING APPARATUS. FRANCIS LEE STUART, Baltimore, Md. Original application filed Oct. 18, 1915, Serial No. 55,620. Divided and this application filed Apr. 7, 1916. Serial No. 89,595. (Cl. 193—3.)

1. Loading apparatus comprising a tower, a shuttle cage adjustable vertically in the tower, an extensible conveyer carried by the cage, a main conveyer belt having a looped portion delivering to the cage conveyer and a frame supporting said looped portion of the belt having a pivotal connection with the cage and which is raised and lowered therewith.

2. Loading apparatus comprising a tower mounted to move from place to place, a vertically adjustable cage therein, an extensible conveyer carried by the cage, a hopper in the cage delivering to said conveyer, an endless conveyer belt having a looped portion delivering to said hopper and a supporting frame for said loop pivotally connected with the cage above the hopper and having a pivotal support at its lower end.

3. Loading apparatus comprising a tower mounted to move from place to place, a horizontally arranged conveyer within the tower and vertically adjustable to different horizontal planes, a main conveyer belt having a looped portion delivering to said conveyer, a frame supporting said loop and which is adjustable vertically to different horizontal planes, and a truck to which the lower end of said loop-supporting frame is pivotally connected.

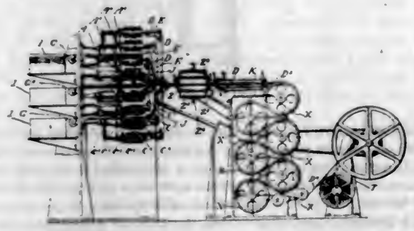


4. Loading apparatus comprising a tower mounted to move from place to place, a horizontally arranged conveyer within the tower and vertically adjustable to different horizontal planes, a main conveyer belt having a looped portion delivering to said conveyer, a frame supporting said loop and which is adjustable vertically to different horizontal planes, a truck to the upper part of which the lower end of said loop-supporting frame is pivotally connected, and a roller supporting the belt adjacent said pivotal connection.

5. Loading apparatus comprising a tower mounted to move from place to place, a main conveyer belt having a looped portion delivering to the upper portion of said tower, a frame for supporting said belt, a truck mounted to move from place to place and having an inclined upper portion, and a pivotal connection between said truck and the lower end of the loop-supporting frame.

[Claim 6 not printed in the Gazette.]

1,192,017. AUTOMATIC DEVICE FOR COATING AND COVERING FIBROUS ELEMENTS WITH A FLUID AND SOLID ADHESIVE. LAWRENCE A. SCHERS, East Cleveland, Ohio. Filed July 27, 1914. Serial No. 853,328. (Cl. 154—1.)



1. In combination, in a device for constructing a laminated, cohering and interwound fabric band, a central mandrel, tubular mandrels exterior to said central mandrel for guiding adhesive bands to the exterior sides of said central mandrel, means for winding series of spaced fibrous elements upon the central mandrel, means for winding similar series of fibrous elements upon said exterior mandrels, concentric with said first-named series, and means for pulling the tubular band thus formed from the mandrel, said means serving also to lay said adhesive bands longitudinally upon said first wound series, and interposed between said first wound and last wound series of fibrous elements.

2. In combination in a device for constructing a laminated, cohering, interwound fabric band, a central mandrel means for winding crossing series of spaced, fibrous elements thereon, a pair of tubular outer mandrels, adjacent to said central mandrel through which bands of solid adhesive can pass, means for winding series of spaced and crossed fibrous elements upon said outer mandrels, concentric with the said first wound series, and means for drawing the concentric series of fibrous elements and interposed bands of solid adhesive from said mandrel.

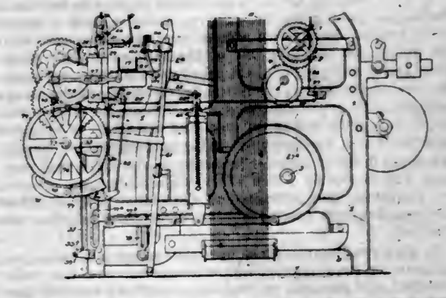
3. In means for interposing adhesive bands between series of interwound fibrous elements in a fabric band, a central mandrel, means for winding crossing series of spaced fibrous elements thereon, outer tubular mandrels through which solid bands of adhesive material are guided to the central mandrel, said outer mandrels being closely adjacent thereto, the extremities of said outer mandrels being bent about said central mandrel, means for winding similar series of spaced fibrous elements upon said outer mandrels, concentric with said first wound series, and means for drawing all said series and interposed bands of adhesive from all said mandrels, said drawing means serving as a flattening means therefor.

4. In a device for constructing a laminated, cohering, interwound fabric band, and for incorporating a mass of adhesive therein, in combination, inner and outer mandrels, means for winding crossing series of parallel spaced fibrous elements thereon, means for eliminating moisture from said fibrous elements, a coating chamber, the centers of said mandrels within the coating chamber lying on a straight line transversely of the coating chamber, means upon one of said mandrels for separating said fibrous elements in said coating chamber to give access for the coating material to them, said outer mandrels being hollow to permit the passage of bands of solid adhesive therethrough, and between the series of fibrous elements, and means for drawing the band from the mandrel.

5. In a device for introducing bands of solid adhesive between the series of fibrous bands, in a laminated, interwound fabric band, a central mandrel, means for winding series of parallel, spaced, crossing fibrous bands upon the maindrel, hollow outer mandrels extended parallel with said central mandrel for the passage of bands of adhesive material, means for winding a second series of parallel spaced crossing fibrous bands upon said outer mandrels and concentric with said first wound series, the extremities of said outer mandrels being curved to apply said bands of adhesive about the edges of said fabric band.

[Claims 6 to 12 not printed in the Gazette.]

1,192,018. HAIRCLOTH-WEAVING LOOM. GEORGE TAYLOR, Philadelphia, Pa., assignor to Charles H. Feldstein Company, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 19, 1911. Serial No. 639,362. (Cl. 132—11.)



1. The combination in a hair cloth loom, of heddle mechanism including a pattern drum shaft, a driving shaft, differential gears whereby said heddle mechanism is driven from said driving shaft, and reversely differentiated gears through which uniform rotating movement is imparted to the pattern drum shaft.

2. The combination of the hair selecting nippers, a lever carrying the movable nipper, means for closing the nippers, a second lever acting upon the nipper-carrying lever to open the nippers, means for moving said second lever

out of operative position, a locking device for temporarily retaining it in such inoperative position, and means for actuating said locking device.

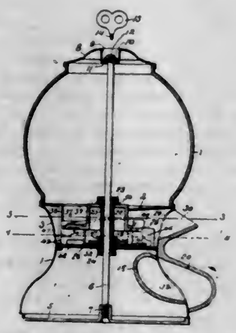
3. The combination of the hair selecting nippers, a lever carrying the movable nipper, means for closing the nippers, a second lever acting upon the nipper-carrying lever to open the nippers, means for moving said second lever out of operative position, a locking device for temporarily retaining it in such inoperative position, means for moving said locking device to cause it to lock the lever, and means for releasing said locking device when the nippers are to be opened.

4. The combination of the hair selecting nippers, a lever carrying the movable nipper, means for closing the nippers, a second lever acting upon said nipper-carrying lever to open the nippers, a reciprocating arm for moving said second lever to inoperative position, a pin for locking said second lever in such inoperative position, a lever carrying said pin, and a set screw engaging said lever when the latter approaches one extreme of its movement and thereby tripping said lever.

5. The combination, in a hair cloth loom, of the hair pan, a cam whereby uniform movement is imparted to such hair pan in all positions of the same, and means for operating said cam.

[Claim 6 not printed in the Gazette.]

1,192,019. VENDING-MACHINE. JESSE E. TAYLOR, Kansas City, Mo., assignor to De Witt Embree, Kansas City, Mo. Filed June 28, 1915. Serial No. 36,858. (Cl. 194—85.)



1. In a vending machine, an article receptacle having a discharge opening for the articles to be vended, a guard covering said opening, an oscillatory delivery member having means for engaging one of the articles in said receptacle and moving it past said guard to said discharge opening, an oscillatory valve normally closing said discharge opening, said valve and said delivery member being provided each with means for engaging a coin so as to move said valve to a position uncovering said discharge opening when the delivery member is swung to the delivering position, and means by which the valve and delivery member are simultaneously retracted to the closed position, after the coin has been carried to a pre-determined position and released.

2. In a vending machine, an article receptacle having an opening for the discharge of articles to be vended, a guard covering said opening, an oscillatory delivery member having means for engaging one of the articles in said receptacle and moving it past said guard to said discharge opening, an oscillatory valve normally closing said discharge opening, said valve and said delivery member being provided each with means for engaging a coin so as to move said valve to a position uncovering said discharge opening when the delivery member is swung to the delivering position, means for retracting the delivery member to the closed position, and means carried by the delivery member for retracting the valve to the closed position.

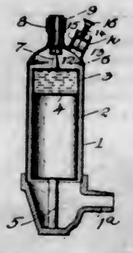
3. In a vending machine, an oscillatory delivery member, an oscillatory valve, the valve and delivery member having means for engaging a coin by which, when the delivery member is moved in one direction to the discharge position, the coin will move the valve to the discharge position, the delivery member having means for retracting the valve from said position.

4. In a vending machine, a casing having an article receptacle and a coin receptacle and provided with an opening connecting said receptacle for the passage of coins, and having an opening for the discharge of articles to be vended, a guard covering both of said openings, an oscillatory delivery member having means for moving an article in the article receptacle past said guard to the article discharge opening, and provided with means for engaging a coin and for discharging it into the opening connected with the coin receptacle, and an oscillatory valve normally closing the article discharge opening and having means for being engaged by said coin and for being moved thereby to a position uncovering the article discharge opening.

5. In a vending machine, a casing having an article receptacle and a coin receptacle and provided with an opening connecting said receptacles for the passage of coins, and having an opening for the discharge of articles to be vended, a guard covering both of said openings, an oscillatory member having means for moving an article in the article receptacle past said guard to the article discharge opening, and provided with means for engaging a coin and for discharging it into the opening connected with the coin receptacle, and an oscillatory valve normally closing the article discharge opening and having means for being engaged by said coin and for being moved thereby to a position uncovering the article discharge opening, and movable by said delivery member to the closed position.

[Claims 6 to 21 not printed in the Gazette.]

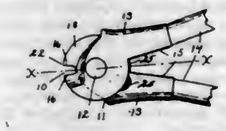
1,192,020. AIR-VALVE. FREDERICK H. TWEED, Chicago, Ill. Filed Aug. 23, 1909. Serial No. 514,086. (Cl. 137—122.)



An air valve for radiators comprising a casing provided with an escape passageway leading therefrom, a valve controlling said passageway, a tube connected with said casing, a portion extending across said tube and provided with an opening, a valve controlling said opening, a piece above said portion extending across the tube at a distance below its upper end and through which the stem of the valve passes, said latter piece provided with an opening out of alinement with the valve opening.

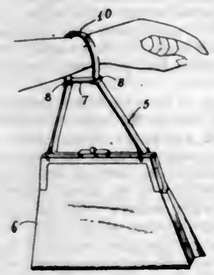
1,192,021. END-CUTTING PLIERS. WILLIAM S. THOMSON, Plantsville, Conn., assignor to The H. D. Smith & Company, Plantsville, Conn. Filed Feb. 4, 1915. Serial No. 6,067. (Cl. 30—17.)

A pair of pliers composed of a pair of mating members having overlapping portions pivotally connected by means of a pin, the said members being similar and comprising each a body portion engaged with the said pin of generally circular form having a bearing surface on the inner face, a shank connected to the said body portion and of greater thickness than the said body portion suitably to provide a shoulder at the junction with the said body portion extending outwardly from the said bearing surface, the said shoulder being concentric with the said pin and engaged with the opposed periphery of the body portion of the mating member, and the said shoulder being slightly conical so as to overhang the said bearing surface and the opposed



periphery being also conical to fit the same, whereby a slightly conical bearing engagement will be provided for the periphery of each of the members with the shoulder provided on the shank of the mating member.

1,192,022. WRIST-LOCK FOR BAG-HANDLES OR THE LIKE. JOSEPH S. WALLENSTEIN, New York, N. Y. Filed Feb. 7, 1916. Serial No. 76,567. (Cl. 224—28.)



1. In combination with a looped handle for handbags and like articles, a wrist-lock comprising an elongated member having terminal eyes slidably embracing the handle, and a stop device provided on the intermediate portion of the handle to keep the locking member centered thereon.

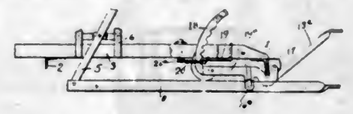
2. In combination with a looped handle for handbags and like articles, a wrist-lock comprising an elongated member having terminal eyes slidably embracing the handle, and a stop device provided on the intermediate portion of the handle, and presenting abutments spaced apart a distance substantially equal to the length of the locking member for limiting contact with the eye portions of the latter.

3. In combination with a looped handle for handbags and like articles, a wrist-lock comprising an elongated member having terminal eyes slidably embracing the handle, and a stop device provided on the intermediate portion of the handle by thickening and reinforcing the same to present abutments for engagement with the respective eye portions of the locking member when the latter is in inoperative position resting against the said thickened portion of the handle.

4. In combination with a looped handle for handbags and like articles, a wrist-lock comprising an elongated member having hinged eyes at its ends slidably embracing the handle, and a stop device provided on the intermediate portion of the handle and presenting abutments spaced apart a distance substantially equal to the length of the locking member for limiting contact with the eye portions of the latter.

5. A wrist-lock adapted for attachment to a looped handle for handbags and the like articles comprising an elongated member having terminal eyes through which the handle may be threaded, and a stop device adapted to be secured to the intermediate portion of the handle and to present abutments for contact with the eyes of the lock member associated therewith to limit the movement of the latter upon the handle.

1,192,023. DISK HARROW. FREDERICK C. WARNE, Mansfield, Ohio, assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Original application filed June 20, 1914, Serial No. 846,225. Divided and this application filed Feb. 12, 1915. Serial No. 7,701. (Cl. 55—81.)



1. In a disk harrow, the combination with the draft frame provided with disk gangs, and adjusting mechanism including draft bars extending beneath said draft frame and leading to said disk gangs; of a pivoted leveling block interposed between said draft frame and said draft bars and provided at its free end with an upwardly extending rack arm and foot lever.

2. In a disk harrow, a draft frame provided with disk gangs, draft bars extending beneath and adjustably connected to said draft frame, a snubbing block pivoted beneath said draft frame above said bars and provided at its free end with a foot lever projecting above said draft frame and adapted to be depressed to depress said snubbing block and said draft bars, and means for securing said foot lever in depressed adjusted position.

3. In a disk harrow, a draft frame provided with disk gangs, gang adjusting mechanism including draft bars extending horizontally beneath said draft frame and connected to said disk gangs, a snubbing block pivoted at one end to said draft frame and extending forwardly above said draft bars, an upwardly extending foot lever carried upon the free end of said snubbing block and extending upwardly above said draft frame, and means for automatically securing said foot lever in depressed adjusted position.

4. In a disk harrow, a draft frame including a stub pole and a transversely extending bar, gang adjusting levers mounted on said stub pole and provided with adjustable draft bars extending beneath said transverse bar, a snubbing block pivotally connected at one end and extending forwardly between said transverse bar and said draft bars, a depressing rack arm carried on the free end of said snubbing block and provided with a foot lever above said stub pole, and a rack engaging member mounted on said stub pole.

5. In a disk harrow, the combination with a draft frame, and adjusting mechanism including draft bars extending beneath said draft frame; of a snubbing block interposed between said draft frame and said draft bars and fulcrumed at one end above said draft bars, said snubbing block being provided at its free end with an upwardly extending foot lever projecting above said draft frame and adapted to be depressed to depress said snubbing block and said draft bars, and means for securing and releasing said foot lever in various adjusted positions.

[Claims 6 to 10 not printed in the Gazette.]

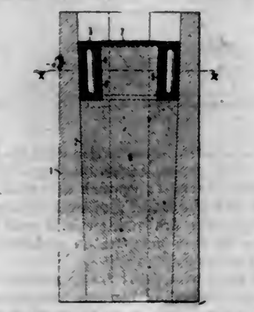
1,192,024. CASTING APPARATUS. EDWIN C. WASHBURN, Englewood, N. J. Filed Mar. 21, 1912. Serial No. 685,157. (Cl. 22—147.)

1. A molding device comprising an upright tubular chamber and an annular refractory member adapted to surround heated material held in said chamber, said annular member inclosing a hollow metallic ring having air therein.

2. A molding device comprising an upright tubular chamber provided with tapered walls, an annular refractory member adapted to be supported by said walls on the inner periphery of said chamber, said annular refractory member comprising an inner hollow metallic ring having air therein, and an outer sand ring inclosing said metallic ring.

3. In an apparatus of the kind described, in combination, a chamber adapted to receive metal therein, an an-

nular refractory member provided with a carbonaceous coating on the inner periphery thereof adapted to be set within said chamber, and carbonaceous material adapted to be sprinkled on the surface of the metal held within said chamber.

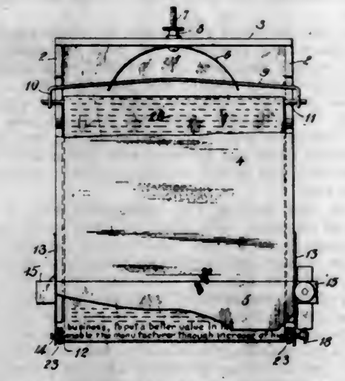


4. A heat insulating device comprising a plurality of annular members, one of said members including refractory material and another of said members provided with an inclosed hollow chamber.

5. A heat-insulating device comprising an annular refractory member incasing a metallic ring providing an air space therewithin.

[Claims 6 to 9 not printed in the Gazette.]

1,192,025. STENOGRAPHER'S PRACTICE DEVICE. JOHAN A. WEINGART, New York, N. Y. Filed Feb. 23, 1912. Serial No. 679,470. (Cl. 120—30.)



1. In a device of the character described, in combination, a frame, a manuscript supported therein, an element movably mounted upon said frame and in engagement with the supporting surface, when the frame is supported upon a surface in its normal position of use, said frame having a sight opening to exose a line of the manuscript, said element being moved upon movement of the frame along the surface upon which it is supported, and mechanism for moving the manuscript as the element is moved, to expose successive lines of the manuscript through the sight opening.

2. In a device of the character described, in combination, a frame, a manuscript supported therein, an element movably mounted upon said frame and in engagement with the supporting surface, when the frame is supported upon a surface in its normal position of use, said frame having a sight opening in the vicinity of the element to expose a line of the manuscript, said element being moved upon movement of the frame along the surface upon which it is supported, and mechanism for moving the manuscript as the element is moved, to expose successive lines of the manuscript through the sight opening.

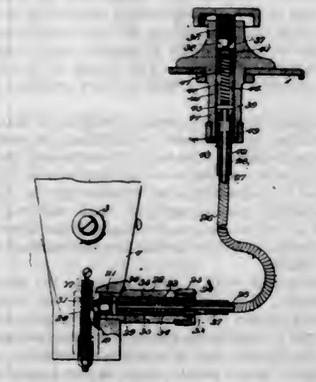
3. In a device of the character described, a pair of rolls, spring tensioning means for drawing the rolls apart, an endless band of manuscript passing over said rolls with entries thereon written in reverse order of reading, a supporting frame for said rolls inclosing said manuscript except for a sight opening at the lower portion of the frame, and friction wheels carried by the lower roll and protruding at the lower portion of the frame for contact with a flat surface along which the device may be moved progressively while supported in the hand of the operator; substantially as described.

4. In a device of the character described, the combination of a pair of rolls, a frame furnishing bearings for the lower roll and carrying a spring for yieldingly supporting the upper roll to draw said rolls apart, an endless band of manuscript passing over said rolls and capable of advancement upward across the fronts of said rolls, and feed mechanism for advancing the manuscript by equal steps corresponding to the distance between successive lines thereon, said feed mechanism comprising rotating elements protruding at the lower portion of said frame for frictional engagement with a surface over which said frame may be moved while supported by the hand of the operator, said feed mechanism also including a star wheel and spring detent engaging therewith to arrest the manuscript in its successive positions; substantially as described.

5. In a device of the character described, in combination, a frame, a manuscript supported therein and having the lines thereof written in reverse order of reading; an element movably mounted upon said frame and in engagement with the supporting surface, when the frame is supported upon a surface in its normal position of use, said frame having a sight opening to expose a line of the manuscript, said element being moved upon movement of the frame along the surface upon which it is supported, and mechanism for moving the manuscript as the element is moved, to expose successive lines of the manuscript through the sight opening.

[Claims 6 to 9 not printed in the Gazette.]

1,192,026. SPEED-GOVERNOR. CLINTON E. WOODS, Bridgeport, Conn. Filed Aug. 30, 1913. Serial No. 787,460. (Cl. 74—45.)



1. In a talking-machine, the combination of a speed governor for the motor, a screw for adjusting the same, a fixed threaded socket engaged by the screw, and means including a Bowden wire for transmitting the movement of the screw to the governor.

2. In a talking-machine, the combination of a speed governor for the motor comprising a friction disk and a coacting friction device, with a screw for adjusting the relation of said coacting device to said disk, a fixed threaded socket engaged by the screw, and means including a Bowden wire for transmitting the movement of the screw to said coacting friction device.

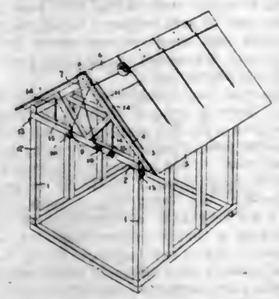
3. In a talking-machine, the combination of a speed governor for the motor comprising a motor-driven friction element and a coacting friction device, with a screw for adjusting the relation of said parts to each other, a fixed threaded socket engaged by the screw, and means including a Bowden wire for transmitting the movement of the said screw to one of said parts to effect corresponding changes in the speed of the motor.

4. In a talking-machine, the combination of a speed governor for the motor comprising a disk revolved by the motor and having translatory movement imparted thereto by centrifugal action and a friction pad coacting with said disk, with means for adjusting the relation of said pad with said disk, said means including a Bowden wire having one end in operative relation with the pad mounting, a screw in operative relation with one element of said wire for moving it with relation to the other element, and a fixed threaded socket engaged by the screw.

5. In a talking-machine, the combination of a speed governor for the motor comprising two members adjustable with relation to each other to control the speed of the motor, a Bowden wire having one end in operative relation with one of said members, and an adjusting device in operative relation with the other end of said Bowden wire and comprising a screw and a fixed threaded socket therefor, whereby movement of said screw is transmitted by said Bowden wire to adjust the relation between the members of the speed governor.

[Claims 6 to 30 not printed in the Gazette.]

1,192,027. BUILDING CONSTRUCTION. JAMES FALLIS ACHESON, Proton Station, Ontario, Canada. Filed May 4, 1914. Serial No. 836,173. (Cl. 108—1.)

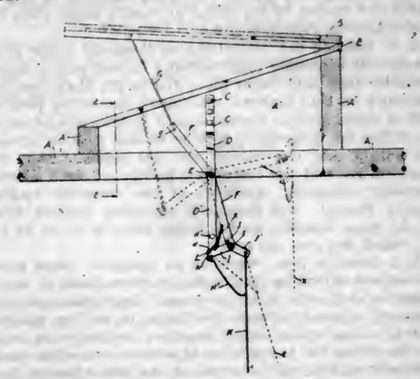


1. In a building construction, the combination with the roof truss frame, of a plurality of wire brace members bracing said truss frame and extending through the roof covering and over the roof surface.

2. In a building construction, the combination with the roof truss frame, of a plurality of lengths of wire formed with the center loop extending over the ridge member, the ends thereof passing through the roof covering and extending angularly downward and secured to the truss frame and forming braces therefor.

1,192,028. SKYLIGHT SUPPORTING AND ADJUSTING APPARATUS. HANS ARZBERGER, Milwaukee, Wis. Filed May 15, 1916. Serial No. 97,547. (Cl. 108—31.)

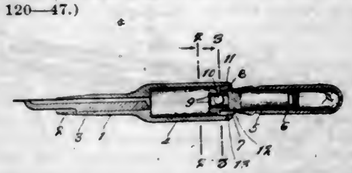
1. Operating mechanism for sky light sash, including a hanger bracket, an operating lever pivotally connected therewith, said hanger bracket having a depending portion below the point of pivotal connection, means for connecting the operating lever with the sky light sash, a latch connected with the operating lever and adapted to resiliently engage the depending portion of the hanger bracket, depending flexible actuating connections for the operating lever, and branch connections extending therefrom to the latch, whereby the latter may be retracted by swinging the operating connection out of a vertical position.



2. Sky light sash operating mechanism, comprising the combination with a hinged sky light sash, of a hanger bracket, an operating lever pivotally connected therewith, a link connecting one arm of the operating lever with the sides of the sash at points distant from the hinged margin thereof, a flexible actuating connection secured to another arm of said operating lever on the opposite side of its pivotal connection with the hanger bracket, a latch pivotally connected with the operating lever and adapted to engage said bracket, and means connected with the flexible actuating connection for retracting said latch when the actuating connection is swung out of normal position.

3. Operating mechanism for sky light sash, comprising the combination with the walls of a light well, of a sky light sash having a margin in hinge connection with one of said walls, hanger bars secured to the walls of said well and projecting inwardly from opposite sides thereof and downwardly in substantially parallel relation to each other at their inner ends, a lever pivotally connected with said downwardly extending portions of the hanger bars, said lever comprising a flat bar having its central portion extending between the hanger bars and supported therefrom by a pivot bolt, a link rod passing through one arm of said lever and pivoted to the sides of the sash frame, a flexible actuating connection attached to the other arm of said lever, a latch pivotally connected with the lever and adapted to engage the lower extremities of the hanger bars when the lever is actuated to raise the sash, and a flexible branch connection between said actuating connection and the free end portion of said latch adapted to transmit motion from the actuating connection to the latch when said actuating connection is swung in one direction from normal position.

1,192,029. FOUNTAIN-PEN. FRANK M. ASHLEY, New York, N. Y. Filed Aug. 1, 1912. Serial No. 712,645. (Cl. 120—47.)



1. A fountain pen comprising an elongated finger portion having an elongated bore, a feed plug extending the length of the bore, a comparatively short reservoir of larger diameter than said finger portion and larger than can conveniently be held between the fingers in writing position, a piston fitting within said reservoir, and a piston rod connected to said piston and projecting outward

through said barrel a distance corresponding to the stroke of the piston, said piston rod being adapted to rest in the crotch formed by the thumb and index finger when the pen is held in writing position.

2. A fountain pen comprising an elongated finger piece, a reservoir extending longitudinally thereof and of larger diameter than said finger piece and larger than can conveniently be held between the fingers in writing position and of comparatively short length, a reciprocating member for filling the reservoir, a portion of said member extending within said reservoir at the side opposite from the finger piece, and the remaining portion of said member normally extending exteriorly of the reservoir longitudinally thereof, said exteriorly extending portion being of the same diameter as the finger piece so as to fit the cap which fits over the latter.

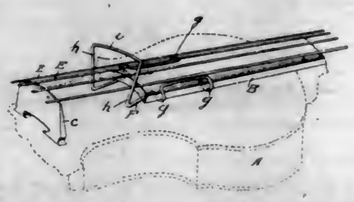
3. A fountain pen comprising an elongated finger piece, a reservoir extending longitudinally thereof and of larger diameter than said finger piece and larger than can conveniently be held between the fingers in writing position and of comparatively short length, a reciprocating member for filling the reservoir, said member extending longitudinally within said reservoir at the side opposite from the finger piece, and a feed plug extending through said finger piece up to the interior of the reservoir, so as to eliminate all air space between the feed plug and reservoir.

4. A fountain pen comprising a casing, the exterior of which is reduced in diameter for substantially half its length at its forward end to form a finger piece, a bore extending through said reduced portion, a feed plug fitted in said bore and extending substantially the length thereof, a pen point held between said feed plug and casing, said casing having an enlarged portion extending from the finger piece to a point substantially corresponding to the crotch between the index finger and thumb when the pen is held in writing position, the bore of the casing being of increased diameter extending the length of the enlarged portion, a piston fitting said bore and provided with a handle extending longitudinally to the exterior of the casing, and means for preventing the withdrawal of the piston from said bore.

5. A fountain pen comprising a casing having an elongated finger piece of comparatively small diameter, said finger piece being entirely free from joints and having a bore extending therethrough, a reservoir of comparatively large diameter extending from the finger piece and of a length substantially that of the finger piece, a feed plug disposed within the latter and extending to the end wall of the reservoir, a piston head disposed within the reservoir and adapted to be reciprocated therein, and a stem extending from said head adapted to normally extend for practically its entire length from the reservoir and to rest in the crotch formed by the index finger and the thumb when the pen is held in position for writing.

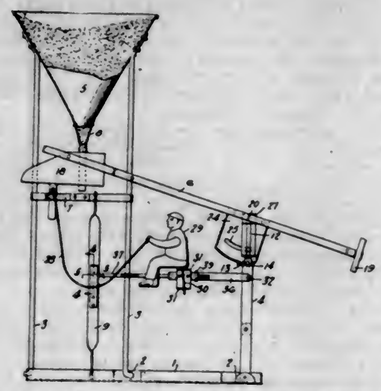
[Claims 6 to 10 not printed in the Gazette.]

1,192,030. ATTACHMENT FOR VIOLINS. FRANK M. ASHLEY, New York, N. Y. Filed Mar. 11, 1916. Serial No. 83,562. (Cl. 84—72.)



A bow-guide formed of a single piece of spring material having two upright portions connected by a cross piece, and two side portions having clamping members adapted to engage the sides of the finger-board and held thereto by the spring formed by the uprights and cross piece.

1,192,031. MECHANICAL TOY. BENJAMIN F. BAIN, Pittsburgh, Pa. Filed Mar. 24, 1916. Serial No. 86,413. (Cl. 46—37.)



1. A mechanical toy, comprising a supply hopper, a support therefor, a swinging bucket carrying arm, a support therefor, one of said supports being yielding, and an adjustable connection between said supports.

2. A mechanical toy, comprising a supply hopper provided with a delivery gate, a support therefor, a swinging arm carrying a bucket coöperating with said gate, a support therefor, one of said supports being yielding and an adjustable connection between said supports.

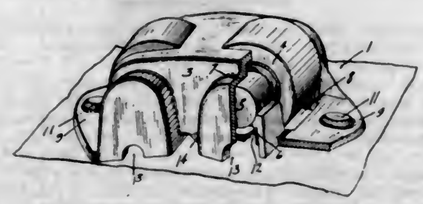
3. A mechanical toy, comprising a supply hopper provided with a delivery gate, a support therefor, a swinging arm carrying a bucket coöperating with said gate, a support therefor, one of said supports being yielding, a connection between said supports, and means for adjusting the length of said connection to vary the position of said bucket relatively to the gate.

4. A mechanical toy, comprising a supply hopper provided with a delivery gate, a support therefor, a swinging arm carrying a bucket coöperating with said gate, a support therefor, one of said supports being yielding, and a connection between said supports comprising two members adjustable longitudinally relatively to each other.

5. A mechanical toy, comprising a supply hopper provided with a delivery gate, a support therefor, a swinging arm carrying a bucket coöperating with said gate, a support therefor, one of said supports being yielding, and a connection between said supports comprising two members adjustable longitudinally relatively to each other, one of said members being detachably connected to one of said supports, and the other of said members being hinged to the other support.

[Claims 6 to 15 not printed in the Gazette.]

1,192,032. SIDE BEARING FOR CARS. FRANKLIN L. BARBER and CHARLES S. WALTON, Chicago, Ill., assignors to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 19, 1916. Serial No. 92,295. (Cl. 64—64.)



1. A side bearing for cars comprising a base member, a roller journaled on the base member, a housing incasing the base member, and means for securing the housing to a support.

2. A side bearing comprising a base member, a roller journaled on the base member with freedom for radial displacement, a housing incasing the base member and holding the roller against lateral displacement therefrom, and means for securing the housing to a support.

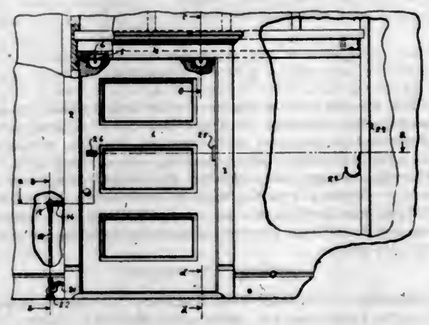
3. A side bearing comprising a base member, a pin journaled on the base member with freedom for axial or lateral displacement, a roller on the pin, a housing incasing the base member and holding said pin against both endwise and lateral displacement therefrom, and means for securing the housing to a support.

4. A side bearing for cars comprising a base member, a roller journaled on the base member, a housing incasing the base member and having interlocking engagement therewith for holding the members of the side bearings assembled as an entirety, and means for securing the housing to a support.

5. A side bearing for cars comprising a base member, a housing incasing the base member, coöperating half-seats formed in the base member and housing, a roller having trunnions journaled in said coöperating half-seats, and means for securing the housing to a support.

[Claims 6 to 11 not printed in the Gazette.]

1,192,033. SLIDING-DOOR MECHANISM. THOMAS M. BEARDON, Godley, Tex., assignor of one-half to Frank Gibbs, Godley, Tex. Filed July 11, 1914. Serial No. 850,334. (Cl. 70—118.)

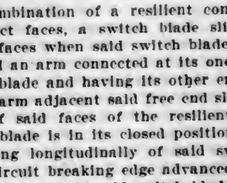


In a device of the character described, the combination with a wall formed with a doorway, of a sliding door entering the doorway in its closed position, and formed with a recess in its front edge, a bell crank pivoted in said recess having an upper arm formed with a convex head and hooked lower arm, a latch bar carried by the front door jamb and engaged by the latch member in the closed position of the door, a sliding bolt horizontally mounted in the door jamb perpendicular to the door, its head being opposite to the upper arm of said bell crank, a spring acting upon said bolt maintaining its head spaced from the bell-crank, and a pedally operated mechanism correlated with said bolt to subject the same to a sliding displacement whereby the bell-crank is rocked disengaging it from the latch bar, and the door is thrown open through force of impact of said bolt with the convex head of the latch member.

1,192,034. CLAMP OR CONNECTOR. HUGO BRISACHER, New York, N. Y., assignor of one-half to F. P. Dodge, New York, N. Y. Filed Jan. 13, 1915. Serial No. 1,932. (Cl. 173—259.)

1. A connector comprising an upwardly and inwardly flaring spring socket member, a post positioned within said socket and a nut adapted to coöperate with said post and having a downwardly and outwardly flaring base.

2. A connector comprising a spring socket member having its walls flaring upwardly and inwardly to a point of minimum diameter and thence outwardly, a screw threaded post positioned within said socket and a nut adapted to coöperate with said post and having a downwardly and outwardly flaring base of greater diameter than the minimum diameter of the socket and adapted to contact with the walls of said socket beneath said point of minimum diameter.



3. A connector comprising a spring socket member having upwardly and inwardly flaring walls, a conductor in electrical contact with said socket member, a post positioned within said socket member and a nut adapted to coöperate with said post and having a downwardly and outwardly flaring base adapted to contact the walls of the socket when inclamping position relative to the conductor.

4. A connector comprising a supporting plate, an externally threaded post affixed thereto, a spring socket member having upwardly and outwardly flaring walls mounted about said post, a contact piece clamping the socket to the supporting plate and an internally threaded nut adapted to coöperate with the post and having a downwardly and outwardly flaring base adapted to contact the inner walls of the socket.

5. In a connector, the combination of a member having a base and flanges of resilient material extending toward one another, a threaded stem disposed between said flanges and in stationary relation to said base and a nut mounted on said stem and having its base projecting to frictionally engage said resilient flanges and a head extending beyond said flanges.

1,192,035. ELECTRIC SWITCH. HUGO BRISACHER, New York, N. Y., assignor of one-half to F. P. Dodge, New York, N. Y. Filed Jan. 13, 1915. Serial No. 1,933. (Cl. 175—282.)



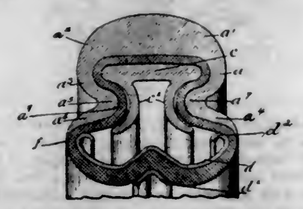
1. The combination of a resilient contact having opposite contact faces, a switch blade slidingly engaging one of said faces when said switch blade is in its closed position, and an arm connected at its one end directly to said switch blade and having its other end free, the portion of said arm adjacent said free end slidingly engaging the other of said faces of the resilient contact, when said switch blade is in its closed position, said arm portion extending longitudinally of said switch blade and having its circuit breaking edge advanced relative to the circuit breaking edge of said switch blade.

2. The combination of a pair of substantially vertically extending, side by side, resilient contacts, a switch blade pivoted to move in a substantially vertical plane and adapted to slidingly engage one face of each said contacts, oppositely disposed arms of resilient conducting material each having one end fixed to and centrally of said blade and its other end free and respectively slidingly engaging said contacts on a face opposite to said one face thereof when said blade is moved to closed position, said arms at their respective free end portions having a width less than the width of said blade.

3. The combination of a switch blade, a flat contact adapted to be slidingly engaged on one face thereof by said blade, and an auxiliary contact having one end fixed to and electrically connected with said blade and having

its other end free, said auxiliary contact having a flat portion intermediate its ends and provided with an indention for stiffening said flattened portion.

1,192,036. RESILIENT TIRE. TITO LIVIO CARBONE, Charlottenburg, Germany. Original application filed Feb. 12, 1910. Serial No. 543,525. Divided and this application filed Oct. 4, 1913. Serial No. 793,312. (Cl. 152—36.)



1. In resilient tires having normally spaced rigid rings, connections connecting the rings arranged around the circumference of both sides of the rings, vulcanized to permanent mean normal shape, laterally bent inwardly with respect to the central plane of the rings, which inwardly bent connections, when distorted in any direction, react simultaneously throughout the circumference to return to initial position, said connections remaining inwardly bent when the load is applied and at all times, and always tending to return to their original shape, whereby all the strains undergone by said connections are transverse bending strains.

2. In resilient tires having normally spaced rigid rings, a cover connecting the rings, having folds around the circumference of both sides of the rings, vulcanized to permanent mean normal shape, sharply and laterally bent inwardly with respect to the central plane of the rings, which inwardly bent folds, when distorted in any direction, react simultaneously throughout the circumference to return to initial position, said connections remaining inwardly bent when the load is applied and at all times, and always tending to return to their original shape, whereby all the strains undergone by said connections are transverse bending strains.

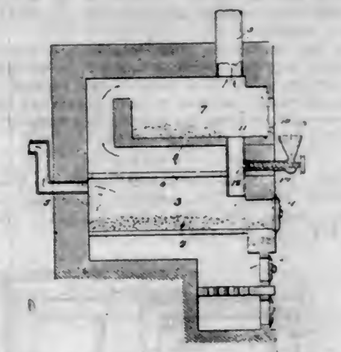
3. In resilient tires having normally spaced rigid rings, a cover connecting the rings, having continuous folds around the circumference of both sides of the rings and at the sides of the same, inclined to permanent mean normal shape, bent sharply inwardly from the sides of the rings laterally, with respect to the central plane of the rings in opposite directions to each other and having lateral fabric reinforcement, which folds, when distorted in any direction, react simultaneously throughout the circumference, to return to initial position, said connections remaining inwardly bent when the load is applied and at all times, and always tending to return to their original shape, whereby all the strains undergone by said connections are transverse bending strains.

4. In resilient tires having normally spaced rigid rings, one of said rings having strengthening ribs, connections connecting the rings arranged around the circumference of both sides of the rings, vulcanized to permanent mean normal shape, sharply and laterally bent inwardly with respect to the central plane of the rings, said connections remaining inwardly bent when the load is applied and at all times, and always tending to return to their original shape, whereby all the strains undergone by said connections are bending strains, said connections being provided with cushioning fabric at the interior thereof at those portions of said connections adjacent the sides of the rings and adjacent said strengthening ribs, the portions of said connections adjacent said strengthening ribs being freely movable with respect thereto.

5. In resilient tires having normally spaced rigid rings, one of the rings acting as a stretching ring, and the other acting as a floating ring, the stretching ring extending laterally outwardly, and provided with curved edge portions, and the floating ring being provided with curved strengthening ribs, a cover connecting the rings and having a tread, said cover having folds around the circumference of both sides of the rings vulcanized to permanent mean normal shape, and laterally bent inwardly with respect to the central plane of the rings, which inwardly bent folds, when distorted in any direction, react simultaneously throughout the circumference to return to initial position, the peak of the folds coöperating with the strengthening ribs.

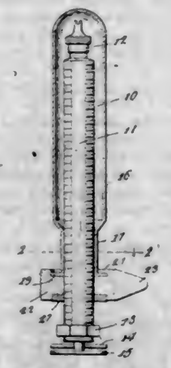
[Claim 6 not printed in the Gazette.]

1,192,037. PROCESS OF VOLATILIZING METALS. SELDEN IRWIN CLAWSON, Salt Lake City, Utah. Filed Oct. 28, 1912. Serial No. 728,187. (Cl. 75—17.)



The process of treating ores consisting in heating and rabbling the powdered ore in the presence of an abundance of air and an excess of sulfur to form sulfates, adding to the said ore halogen salts, heating and rabbling said ore with the halogen salts therein with slight admission of air for forming volatile halogen compounds out of the sulfates and gold in the ore and collecting said volatile compounds with an arrester, condenser, baghouse or other suitable means.

1,192,038. DUST-CAP FOR VALVES. CLYDE W. CLEVELAND, Louisiana, Mo. Filed Jan. 22, 1915. Serial No. 3,794. (Cl. 152—12.)



1. A valve housing a cap for said valve housing, a dust cap fitting upon said valve housing and secured against rotation thereon and a locking nut threaded upon said valve housing and provided with a seat in its outer face, a collar extending from the inner end of said dust cap and fitting within said seat and provided with a cutout, and a securing finger extending from said nut and across said seat in spaced relation to the inner wall thereof, said finger passing through the cutout of said collar when said collar is moved into said seat and said finger engaging the outer face of said collar when said nut is turned to a locked position.

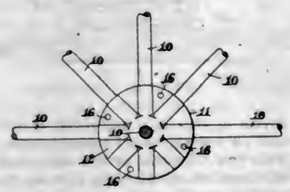
2. A valve housing, a locking nut threaded upon said valve housing, a finger, a dust cap inclosing the outer end portion of said valve housing and secured against rotation thereon, and a collar extending from said dust cap and provided with a cutout through which said finger passes when said dust cap is placed upon the valve housing, said finger engaging said collar when said nut is turned to a locking position to clamp said collar between said finger and the outer face of said nut.

3. A valve housing having flattened sides, a securing nut threaded upon said housing, a finger for said nut, a dust cap inclosing said valve housing and provided with a reduced neck having flattened sides engaging the flattened faces of said valve housing to permit no rotation of said dust cap upon said valve housing, and a collar extending from said neck and engaging said nut and provided with a cut out through which said finger passes whereby said finger may engage the outer face of said collar when said nut is turned to a locking position and clamp said collar against the outer face of said nut.

4. A dust cap provided with a reduced neck shaped to conform to a valve housing in cross section to prevent rotation of said cap upon said housing, a collar extending from said neck and provided with a cutout, and a securing nut provided with a seat to receive said collar and with a finger passing through the cutout of said collar and engaging the outer face thereof to hold said collar in said seat when said nut is turned to a locking position.

5. A valve housing, a locking nut screwed upon said valve housing, said valve housing having one side flattened, a dust cap fitting upon said valve housing and having one portion reduced to conform to the contour of said valve housing in cross section, a collar extending from said dust cap and provided with a cutout, said locking nut being provided with a depression forming a pocket to receive the collar of said dust cap, and a finger extending from the wall of said pocket toward the center thereof, the pin passing through the cutout of said collar and said collar being then turned to move beneath the pin.

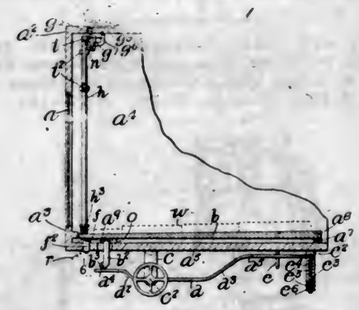
1,192,039. TOY CONSTRUCTION-BLOCK. ATHERTON D. CONVERSE, Winchendon, Mass. Filed July 8, 1915. Serial No. 39,169. (Cl. 46—35.)



1. In a toy, the combination of a plurality of rods; and a connecting member consisting of two disks of yielding material secured together and having central annular flanges extending toward each other forming a continuous opening through said disks with its wall slightly inclined inwardly from each end, said disks having oppositely disposed radial curved portions forming sockets the mouths of which are of the same diameter as the mouths of said opening.

2. In a toy, the combination of a plurality of rods; and a connecting member consisting of two disks of yielding material secured together and having central annular flanges extending toward each other forming a continuous opening through said disks with its wall slightly inclined inwardly from each end, said disks having oppositely disposed radial curved portions forming sockets the mouths of which are of the same diameter as the mouths of said opening, and the walls of which are inclined slightly toward each other.

1,192,040. SAFETY APPLIANCE FOR DISPLAY-WINDOWS. ROBERT R. COURTNEY, Fort Wadsworth, N. Y. Filed Apr. 15, 1915. Serial No. 21,572. (Cl. 268—2.)



1. In a safety appliance for windows, a movable shelf placed within the window and having a depending member, a pivoted lever mounted beneath said shelf and one end of which serves to support said shelf by means of the depending member connected therewith, a vertically movable guard device mounted in connection with the window, means for raising said guard device, devices for holding said guard device in a raised position, and an open electric circuit in which said devices and said shelf are placed whereby pressure applied to said shelf will close the circuit and operate said devices to release said guard device.

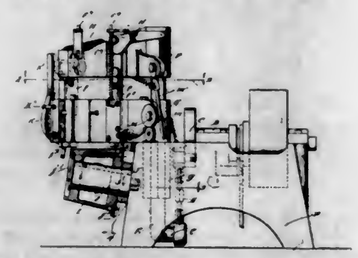
2. In a safety device for display windows, a vertically movable shelf mounted within the window and having a depending member, a lever pivoted beneath the window and one end of which serves to support said shelf by means of the depending member connected therewith, operative adjusting devices connected with the other end of said lever, a contact below said shelf, another contact connected with said shelf, a vertically movable guard device mounted in connection with the window, supporting devices for holding the guard device in a raised position, and an open electric circuit in which said contact devices and said supporting devices are placed whereby pressure applied to said shelf will close the circuit through said contact devices and operate the supporting devices to release said guard device.

3. In a safety apparatus for display windows, a movable shelf mounted within the window and having a depending member, a lever pivotally mounted below the window and one end of which serves to support said shelf by means of the depending member connected therewith, co-acting electric contact devices supported below the window and in connection with said shelf, a vertically movable guard device mounted in connection with the window, a magnet mounted above the window and provided with a pivoted armature arm, electrically operated devices of which said armature arm forms a part for holding said guard device in a raised position, and an open electric circuit in which said contact devices and said last named devices are placed whereby pressure applied to said shelf will close the circuit through said contact devices and operate said last named devices to release the guard device.

4. In a safety appliance for display windows, a movable guard device mounted in the window, a lever pivoted beneath the window, a movable shaft supported by one end of said lever and the other end of which is provided with means for adjusting the position of said lever, said guard device being normally held in an open position, and means whereby pressure applied to said movable shelf will release and close the guard device.

5. In a safety apparatus for articles placed on display, a guard device, a vertically movable shelf on which said articles are placed, a lever pivoted beneath said shelf and one end of which is adapted to support said shelf, adjusting devices connected with the other end of said lever by means of which the first named end of said lever may be adjusted vertically, said shelf being in an open electric circuit, and means whereby pressure applied to said shelf will close said circuit and operate said guard device.

1,192,041. CLIMAX-BASKET MACHINE. EDWARD CRAIG, St. Joseph, Mich., assignor to Saranac Machine Co., St. Joseph, Mich., a Corporation of Michigan. Filed Oct. 8, 1909. Serial No. 521,742. (Cl. 1—11.)



1. In a staple driving mechanism, a reciprocating driving head, means for operating said head, a reciprocating cross-head actuated by the means for operating the driving head, wire feeding mechanism carried by the cross-head, actuating means for the wire feeding mechanism operated by the driving head, and staple forming and driving mechanisms working in guides carried by the cross-head and having actuating connections with the driving head; substantially as described.

2. In a staple driving mechanism, a cross-head having wire feeding mechanism connected thereto, a reciprocating staple former slidably mounted on the cross-head, a reciprocating staple driver also slidably mounted on the cross-head, a reciprocating driving head, connections arranged for operating the driving head and having means arranged to give the cross-head a limited vertical movement on the down and up strokes of the driving head, means connected to the driving head for actuating the wire feeding mechanism, and actuating connections between the staple former and driver and the driving head; substantially as described.

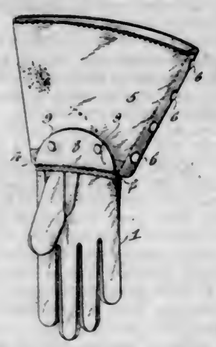
3. In staple driving mechanism, a vertically movable cross-head, having wire feeding mechanism connected thereto, guides or housings secured thereto, staple forming and driving devices mounted in said housings, a vertically movable driving head, elements forming a connection between the driving head and the cross-head, means for operating said elements to actuate both heads upwardly, connections between the wire feeding mechanism and the driving head, and independent actuating connections between the driving head and the staple forming and driving devices; substantially as described.

4. In staple driving mechanism, a cross-head having a guide or housing, a wire feeding-device carried by the cross-head, a staple driver mounted to reciprocate in the housing, a staple former also mounted to reciprocate in said housing, a vertically movable driving head, actuating connections between the driving head and the wire feeding mechanism, independent actuating connections between the driving head and the staple driver and the staple former, and a connection between the driving head and the cross-head through which both heads may be operated; substantially as described.

5. In staple driving mechanism, a reciprocating driving head, means for operating said head, a reciprocating cross-head actuated by the operations of the means for operating the driving head, wire feeding mechanism carried by the cross-head, actuating means for the wire feeding mechanism operated by the driving head, staple forming and driving mechanisms working in guides carried by the cross-head and having actuating connections with the driving head, a work clamp carried by the cross-head, and means mounted on the driving head for operating said clamp.

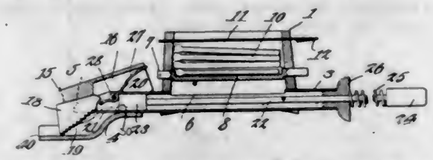
[Claims 6 to 9 not printed in the Gazette.]

1,192,042. GLOVE. HARTSELL H. CROSS and SAMUEL MCDANIELS, Hendricks, W. Va. Filed Apr. 10, 1914. Serial No. 830,990. (Cl. 2—9.)



In combination a glove, a wrist band reinforcing the upper portion thereof, a gauntlet, a plurality of stud members secured upon the outside of said gauntlet at one side thereof, a flap secured upon said wrist band, socket members carried by said flap, said flap adapted to extend around the inner edge of said gauntlet whereby to cause said socket members to engage said stud members, a plurality of socket members secured upon the lower edge of said gauntlet, a plurality of stud members secured upon said wrist band engageable by said last-named socket members whereby to allow said gauntlet to be held folded around said wrist band to further reinforce said glove with its secured sides disposed at one side of said flap.

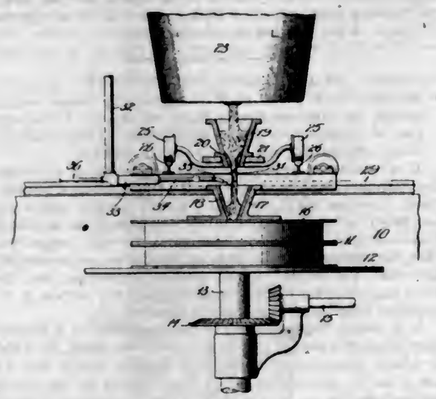
1,192,043. MATCH-LIGHTER. JOHN A. CUNNINGHAM, South Bethlehem, Pa. Filed Sept. 1, 1915. Serial No. 48,502. (Cl. 206—26.)



1. In a device of the class described, a tube having a slot at one end; a trough-shaped support mounted on said end of the tube and depressed at one end below the tube; a striker fulcrumed intermediate its ends on the tube, one end of the striker coacting with the slot and lying within the contour of the support; resilient means for actuating the striker; a receptacle discharging into the tube; and a plunger mounted to reciprocate in the tube.

2. In a device of the class described, a tube having a slot at one end, and provided with a match-inlet opening; a trough-shaped support mounted on said end of the tube, and depressed at one end below the tube; a striker fulcrumed intermediate its ends on the tube, one end of the striker coacting with the slot and lying within the support, the other end of the striker being extended toward the match inlet opening and constituting means whereby the striker may be tilted to release a match from the support; spring means for actuating the striker to cause the same to coact with a match when the latter is advanced through the tube; and a match advancing plunger mounted to reciprocate in the tube.

1,192,044. CASTING APPARATUS AND PROCESS. JAMES CAREY DAVIS, Hinsdale, Ill. Filed Oct. 7, 1909, Serial No. 521,622. Renewed Oct. 18, 1915. Serial No. 56,595. (Cl. 22—79.)



1. The combination with a rotatable mold, a ladle, and means for rotating the mold, of a choke device whereby the flow of metal from the ladle to the mold may be governed, and a device for introducing a modifying element into the stream of metal as it comes from the choke device.

2. The combination with a mold and a ladle, of a choke device whereby the flow of metal from the ladle to the mold may be governed, said choke device being supported by a truck movable on rails which in turn are movably supported by other rails.

3. The combination with a mold and a ladle, of a portable choke device supported on a truck and traveling on wheels, and a device for introducing a modifying element into the flowing metal as it runs toward the mold, such introducing device being situated for use between said choke device and the gate of the mold, substantially as described.

4. The combination of a choke device for governing the flow of metal to a mold, and a device for introducing a modifying element into the stream of metal as it comes from the choke device.

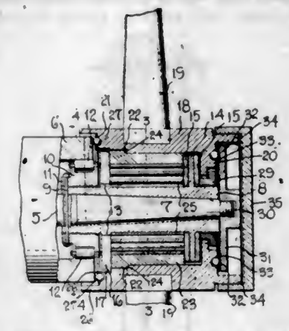
5. The combination of a choke device for governing the flow of metal to a mold and a ladle, the choke device having a discharge orifice smaller than the discharge orifice of the ladle.

[Claims 6 to 17 not printed in the Gazette.]

1,192,045. RESILIENT WHEEL. CHARLES M. G. DELANO, Augusta, Me. Filed Dec. 13, 1915. Serial No. 66,561. (Cl. 152—45.)

1. The combination with a vehicle axle, of a wheel having a hub, a boxing fixed upon the axle, a sleeve keyed within the bore of the wheel hub, plates mounted upon the axle boxing at opposite ends of said sleeve, said boxing being provided with means co-acting with one of the plates to prevent the relative rotation thereof, said latter plate having means coöperating with the wheel hub to prevent circumferential shifting movement of the same with respect to the axle, and cushioning means arranged within said sleeve to cushion the radial movement of the wheel with respect to the axle.

2. The combination with a vehicle axle, of a wheel having a hub, a boxing fixed upon the axle, a sleeve keyed within the bore of the wheel hub, plates mounted upon the axle boxing at opposite ends of said sleeve, said boxing being provided with means co-acting with one of the plates to prevent the relative rotation thereof, said latter plate having means coöperating with the wheel hub to prevent circumferential shifting movement of the same with respect to the axle, and a spiral leaf spring fixed at one of its ends to the inner wall of said sleeve and at its other end to the axle boxing to cushion the radial movement of said wheel with respect to the axle.



3. The combination with an axle, of a wheel having a hub, a boxing fixed upon the axle, a sleeve keyed within the hub bore, said boxing having a polygonal-shaped shoulder upon its periphery, a plate fitted upon said shoulder and held against rotation thereby, said plate being provided upon its periphery with spaced lugs, the wheel hub having recesses in its inner wall to receive said lugs, whereby the hub is held against circumferential movement with respect to the axle, and cushioning means arranged within the sleeve between the wall thereof and the axle boxing to cushion the radial movement of the wheel with respect to the axle.

4. The combination with an axle, of a wheel having a hub, a boxing fixed upon the axle and provided adjacent one of its ends with an annular flange, washer plates arranged upon opposite sides of said flange, said boxing adjacent its opposite end being formed with a polygonal-shaped shoulder, a plate fitted upon said shoulder and held against rotation thereby, said plate being provided with spaced lugs on its periphery, the wheel hub having recesses in its wall to receive said lugs whereby the hub is held against circumferential movement with respect to the axle, a sleeve keyed within the bore of the hub and disposed between said latter plate and one of the washer plates, and a spiral spring fixed at one of its ends to the inner wall of said sleeve and at its other end to the axle boxing to cushion the radial movement of the wheel with respect to the axle.

5. The combination with a vehicle axle, of a wheel having a hub, a boxing fixed upon the axle provided adjacent one of its ends with an integral flange, a non-rotatable annular plate engaged upon the boxing adjacent its other end and provided with peripheral means coöperatively engaged with the wheel hub to prevent rotation of the latter with respect to the axle boxing, a sleeve disposed between said plate and the flange and provided with means for locking engagement with the wheel hub, and cushioning means permanently fixed to the bore of the sleeve and to the boxing.

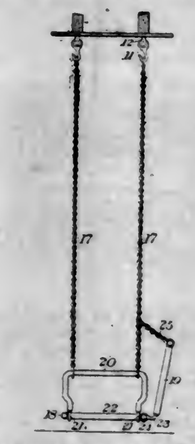
[Claim 6 not printed in the Gazette.]

1,192,046. PORCH-SWING. THOMAS M. FREEBLE, Rochester, and CARL SCHUSTER, Pittsburgh, Pa. Filed Aug. 12, 1911. Serial No. 643,768. (Cl. 155—35.)

1. A porch swing comprising a rectangular seat frame, arms in the form of inverted U members having eyes at their lower ends which pivotally engage the end members of said seat frame, an inverted U member forming the back and having eyes at its lower ends which pivotally engage the rear bar of the seat frame, said arms and back by means of such pivotal connections being foldable over upon the seat frame, and suspension members engaging the upper bars of the arm members; substantially as described.

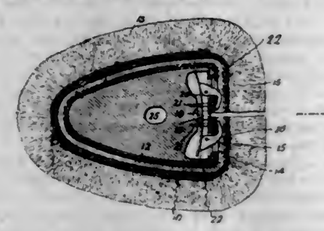
2. A porch swing comprising a rectangular seat formed of metallic tubing, U members formed of metallic tubing

having eyes at their lower ends which pivotally engage the end member of said seat frame, an inverted U member formed of metallic tubing forming the back and having eyes at its lower ends which pivotally engage the rear bar of the seat frame, said arms by reason of such pivotal



connections being foldable over upon the seat frame, while the back by reason of its pivotal connections being foldable over upon said arms, and a plurality of suspension chains connected to the upper bar of each arm; substantially as described.

1,192,047. DUST-MOP. CHARLES F. J. DUPUY, New York, N. Y., assignor to Channell Chemical Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 17, 1914, Serial No. 825,264. Renewed Dec. 17, 1915. Serial No. 67,486. (Cl. 15—13.)



1. A mop, comprising an open-ended mitt having a fringed ring-shaped edge; and a relatively thickened mat mounted in the nether surface of said mitt.

2. A mop, comprising an open-ended mitt having a fringed edge provided with free ends adapted to close said mitt; means for fastening said ends; a filling member for said mitt, having a handle socket; and a handle fitting said socket.

3. A mop, comprising an open-ended mitt having a fringed edge; a block to fill said mitt, said block being provided with an annular groove; a girdle about said block to fill said groove and extending beyond the edge thereof, said girdle being adapted to close the open end of said mitt to hold said block therein; and a handle engaging said block and extending through said mitt.

4. A mop, comprising an open-ended mitt; a girdle mounted within said mitt and provided with a fringed ring, said girdle having free end extensions adapted to overfold the open end of said mitt to close the same; a filling block for said mitt; and a plurality of hook-like fingers mounted on said block to engage and hold the ends of said girdle in service position.

5. A mop, comprising an open-ended mitt; a girdle mounted within said mitt and provided with a fringed ring, said girdle having free end extensions adapted to overfold the open end of said mitt to close the same; a filling block for said mitt; a plurality of hook-like fingers mounted on said block to engage and hold the ends of said girdle in service position; and spring locking means for holding said fingers in holding relation to said girdle.

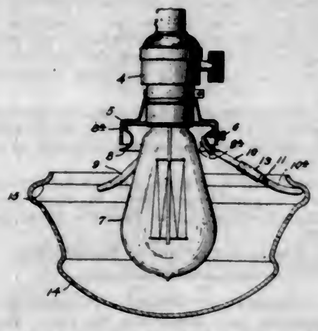
[Claim 6 not printed in the Gazette.]

1,192,048. GLASS BATCH OR MIXTURE. ELIAS L. ELLIOTT, New York, N. Y., assignor, by mesne assignments, to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 17, 1914. Serial No. 851,611. (Cl. 106—36.1.)

1. A batch for producing glass consisting of a foundation mixture capable when fused of producing a substantially colorless glass, combined with a sulfate which will not affect or be affected by silica and alkalis in the batch, and aluminum and fluorin compounds in such proportions that the weight of the element fluorin is not materially less than the weight of the element aluminum and free from any material tending to decompose the sulfate at the working temperature of a glass furnace.

2. A batch for producing glass consisting of a foundation mixture adapted to produce colorless glass, to which is added compounds containing a sulfate, which will not affect or be affected by silica and alkalis in the batch, compounds containing aluminum, and compounds containing fluorin, the total aluminum and fluorin contents being approximately equal in quantity and the sulfate being in such quantity as to leave suspended in the final melted mass undecomposed particles of sulfate, substantially as described.

1,192,049. LAMP-GLOBE ATTACHMENT. HOWARD S. EVANS and WILLIAM F. M. HAWE, Pittsburgh, Pa., assignors to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 18, 1916. Serial No. 72,738. (Cl. 240—114.)

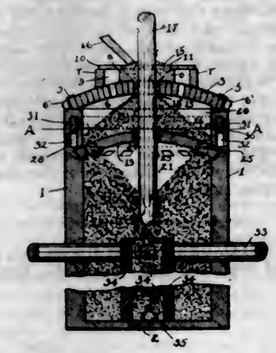


1. A shade holder comprising a rigid grooved ring, two rigid supporting arms attached to the ring, and a third arm composed of two parts pivoted together and provided with means to hold the parts rigidly in alined position, substantially as described.

2. A lamp globe and holder comprising a globe having an interior circumferential flange, a metal frame having an exterior reëntrant circumferential groove adapted to fit inside a socket provided with radial holding screws and having several rigid arms adapted to engage the interior flange of the globe, one of said arms being composed of two pivoted parts and having means to hold said parts in alinement.

1,192,050. ELECTRIC FURNACE. SAMUEL H. FLEMING, Cleveland, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Jan. 7, 1914. Serial No. 810,720. (Cl. 204—64.)

1. In electric furnaces, inclosing walls, a cover coöperating with the said walls to form an inclosure and having a central opening, a partition in the interior of the furnace dividing it into two chambers, said partition having a plurality of openings near its junction point with the walls and a central opening in line with the opening in the cover, means for admitting air to the upper chamber, an electrode extending through the said central openings and a second electrode coöperating with the first electrode to produce electric heat beneath said partition.



2. In electric furnaces, inclosing walls, a cover coöperating with said walls to form an inclosure and having an opening for admitting a charge to be heated, a partition in the interior of the furnace dividing it into an upper and a lower chamber, said partition having a plurality of openings near its junction point with the walls to permit the passage of the charge from the upper to the lower chamber and gaseous products from the lower to the upper chamber, means for admitting air to the upper chamber, means for removing the gaseous products from the upper chamber and means for introducing electric heat into said charge beneath the partition.

3. In electric furnaces, inclosing walls, a vertical electrode, a cover coöperating with said walls to form an inclosure and having an opening for admitting said electrode and a surrounding charge, a partition in the interior of the furnace charge supporting the entering charge and having an opening for the passage of the electrode therethrough and a plurality of openings for the passage of the charge and means for passing an electric current through the electrode and the charge beneath said partition.

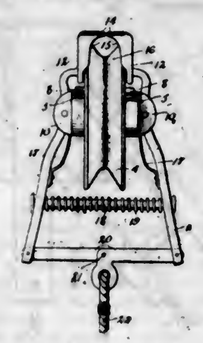
4. In electric furnaces, inclosing walls, a cover coöperating with said walls to form an inclosure and having an opening for admitting a charge, a partition in the interior of the furnace dividing it into an upper and a lower chamber and having openings for permitting the passage of the charge, an opening for admitting air to the upper chamber to burn the gaseous products therein, and means surrounding said upper chamber to preheat the air.

5. The method of heating material capable of giving off combustible gases, which consists in sliding it in a thin layer down a slanting surface, introducing air to burn the gases given off from the material in said layer, whereby it is heated, moving the heated material from the base of said surface passing it to an electric heating region, below the slanting surface and removing it after passing through said region.

[Claims 6 to 11 not printed in the Gazette.]

1,192,051. TROLLEY-WHEEL GUARD. GEORGE B. FOUTS, Alliance, Ohio. Filed May 5, 1915. Serial No. 26,035. (Cl. 191—80.)

The combination with a trolley wheel harp, of a guard comprising levers pivoted to the respective limbs of the harp, jaws carried by the upper ends of said levers respectively, each jaw comprising a segmental side wall with its upper edge curved in an arc parallel with the periphery of the wheel and a curved flange formed integral with the curved upper edge of said side wall, and overlying the periphery of the trolley wheel, the confronting edges of



the flanges of said jaws being cut away at the opposite sides of the central portions to provide entrance mouths, and means acting upon the lower ends of said levers to hold said jaws normally in active position.

1,192,052. TROLLEY-SWITCH. GEORGE B. FOUTS, Alliance, Ohio. Filed July 30, 1915. Serial No. 42,795. (Cl. 191—38.)

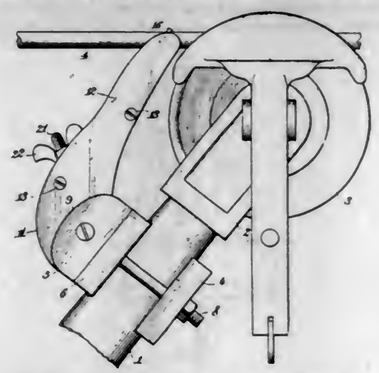


A trolley switch comprising a supporting plate, arms on the ends of said plate projecting outwardly therefrom, alining trolley wire holding bars carried by said arms respectively and corresponding to the main line trackway and having the inner ends thereof spaced apart, a trolley wire holding bar carried by one of said arms adjacent to the first-mentioned bar thereon and corresponding to the branch line, a bridging bar pivoted between said first-mentioned bars and normally in alinement therewith, a shoe pivoted upon said plate adjacent to said bridging bar and having one end lying normally in contact with said second trolley wire receiving bar and adapted to be swung under the action of the trolley wheel on said bar, a link connection between said shoe and swinging bar whereby the latter will be swung into a position to bridge said second-named bar and one of said first-named bars, said plate being formed with a slot, a rod in said slot, a block on the upper edge of said swinging bar working within said slot and slidably receiving said rod, and a spring surrounding said rod and acting upon said block to hold said shoe and swinging bar in normal position.

1,192,053. DEVICE FOR REMOVING SNOW AND ICE FROM TROLLEY-WIRES. GEORGE B. FOUTS, Alliance, Ohio. Filed Aug. 2, 1915. Serial No. 43,222. (Cl. 191—62.)

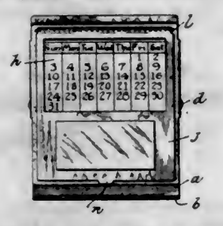
A device for scraping ice from trolley wires comprising a scraper formed of longitudinal side bars spaced apart in parallelism and having the confronting faces thereof formed with longitudinal grooves, a scraper blade in said grooves and removable therefrom and adapted to engage a trolley wire, a spacer block between said side bars at the lower end of the scraper blade, a clamp adapted to engage the trolley pole, a pivotal connection between said clamp and side bars, a spring interposed between said

clamp and spacer block and acting to hold the scraper blade normally in engagement with the trolley wire, and



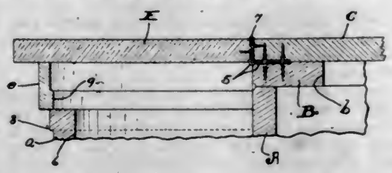
means for limiting the movement of the scraper under the action of said spring.

1,192,054. CALENDAR. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 4, 1915. Serial No. 331. (Cl. 40—122.)



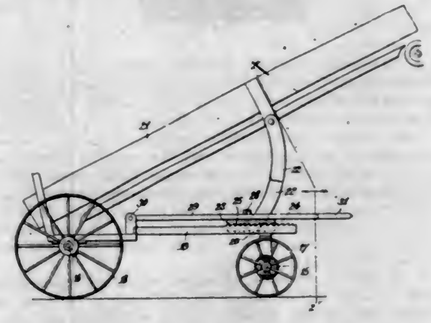
A device of the character described, comprising a plate, a pintle at one end of the plate, a cover provided with an embossed portion and with a cut-out portion, said cover further provided with a downwardly-extending flange, the flange at one edge of the cover being curled inwardly to form a tubular bearing for pivotally arranging said cover on said pintle, holding or positioning lugs formed on the plate to which the cover is secured, adapted to hold a card or the like in position, a holding lug on the plate having holding engagement with said cover, a supporting plate pivotally connected to the first-named plate intermediate of their ends, the front edge of the first-named plate engaging the front edge of the supporting plate and a spring coiled around the pivot to normally hold the plates together at one end of the same.

1,192,055. CABINET FOR SEWING-MACHINES, TYPEWRITERS, &C. JOSEPH J. GEDEON, Lakewood, Ohio, assignor to Theodor Kundtz, Lakewood, Ohio. Filed Oct. 13, 1914. Serial No. 866,510. (Cl. 45—27.)



In a cabinet of the character indicated, a stationary portion comprising a table-top, a leaf hinged to said top and arranged to swing in a vertical plane, which leaf lies on said top, or is arranged in line endwise with said top, according as said leaf is in the one or the other of its extreme positions, and another leaf which is smaller than and operatively connected to the first-mentioned and larger leaf and adapted to be lowered or elevated during swinging of the larger leaf in the one or the other direction, the stationary portion of the cabinet having a compartment-forming part which extends under the smaller leaf in either extreme position of the larger leaf and is provided at its upper end with a laterally and outwardly projecting member and covered by the smaller leaf in either extreme position of the larger leaf, said smaller leaf having an apron which embraces said compartment-forming part in the lower position of said leaf and is provided at its lower end with a laterally and inwardly projecting member, and the relative arrangement of the parts being such that the said apron rests at its aforesaid inwardly projecting member on the aforesaid outwardly projecting member of the compartment-forming part in the upper position of the smaller leaf.

1,192,056. HAY-LOADER. HENRY GIESELMAN, Syracuse, N. Y. Filed Sept. 10, 1915. Serial No. 50,029. (Cl. 193—18.)

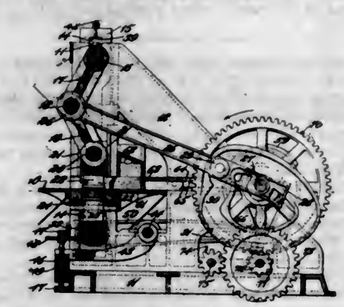


1. In a device of the class described, a wheel supported frame structure including front and rear axles and a reach bar, a conveyer frame pivoted on the rear axle, a slide member having depending flanges engaging the side faces of the reach bar, the opposed faces of said reach bar and slide member being provided with interengaging teeth, links connecting the slide member with the conveyer frame, and a lever fulcrumed on the reach bar and having slidable engagement with the slide member.

2. In a device of the class described, a wheel supported frame structure including front and rear axles and a reach bar, a conveyer frame pivoted on the rear axle, a slide member supported on the reach bar, the opposed faces of said slide member and the reach bar being provided with interengaging teeth, and said slide member being provided with an upwardly extending apertured lug, a lever fulcrumed on the reach bar and extending through the apertured lug which slidably engages said lever, and links connecting the slide member with the conveyer frame.

1,192,057. BRICK-MACHINE. WALTER P. GRATH, St. Louis, Mo. Filed Aug. 10, 1914. Serial No. 856,107. (Cl. 25—98.)

1. A brick machine having a mold with open top and bottom, the top portion of the side walls of said mold being formed to permit the escape of air, upper and lower movable plungers forming the top and bottom of said mold, means for causing said plungers to approach each other to form a brick, and means for retracting the upper plunger before the completion of the working stroke and concurrently raising the lower plunger to a point short of the top of the mold, whereby the partly formed brick is raised to the top of the mold to allow the escape of imprisoned air.



2. A brick machine having a mold with open top and bottom, and tapering walls slightly narrower at the bottom than at the top, upper and lower movable plungers forming the top and bottom of said mold, means for causing said plungers to approach each other to form a brick, and means for retracting the upper plunger before the completion of the working stroke and concurrently raising the lower plunger to a point short of the top of the mold, whereby the partly formed brick is raised to the top of the mold to allow the escape of imprisoned air.

3. In combination in a brick machine, a mold having open ends, one of which is larger than the other, oppositely facing plungers adapted to enter the ends of the mold to compress a brick between them, means for moving said plungers toward each other simultaneously, and means for relatively moving said plungers jointly with respect to said mold during the compressing operation, whereby the brick is moved toward the larger end of the mold.

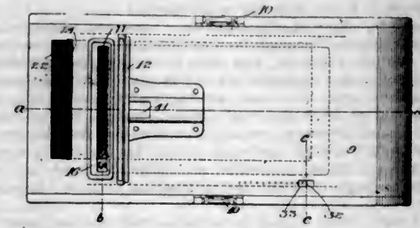
4. In combination in a brick machine, a mold having open ends, one of which is larger than the other, oppositely facing plungers adapted to enter the ends of the mold to compress a brick between them, means for moving said plungers toward each other simultaneously, and means for successively moving the brick first toward the larger end of the mold, and then toward the smaller end of the mold, during the compressing operation.

5. A brick machine comprising a frame, a mold supported in said frame, a toggle mounted in said frame, an upper plunger forming the top of said mold and connected to the lower end of said toggle, a lower plunger forming the bottom of said mold, links connecting the upper end of said toggle and said lower plunger, the upper end of each of said links being slotted, a support for the upper end of said toggle independent of said links, an actuating shaft, and a pitman directly connecting said shaft and the middle pivot of said toggle, said frame having vertically alining upper and lower guideways for the opposite ends of said links, and the lower plunger being fixed to the lower ends of the links and held in alinement thereby, said links and lower plunger being independently movable with respect to said frame and upper plunger, and means for operating said lower plunger independently of said upper plunger.

[Claims 6 to 10 not printed in the Gazette.]

1,192,058. PHOTOGRAPHIC CAMERA OR HOLDER. HARRY LE B. GRAY, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed May 18, 1914. Serial No. 839,232. (Cl. 95—1.1.)

1. In a holder for sensitized photographic material, the combination with a casing having an exposing aperture at the front, of a back for said holder having an opening extending through it, and a guide located on one side of said opening, extending parallel to said back and adapted to hold a flat sheet, said back being provided with a light tight passage extending therethrough arranged on the side of the opening opposite the pocket.



2. In a holder for sensitized photographic material, the combination with a casing having an exposing aperture at the front, of a back for said holder having an opening extending through it, and a pocket located on one side of said opening, said back being provided with a light tight passage extending therethrough located on the opposite side of said opening, and a sheet of material located in the pocket and extending across the opening and having its free end extending through the light tight opening, said sheet being normally impermeable by actinic light but capable of being rendered light permeable by writing thereon with a stylus.

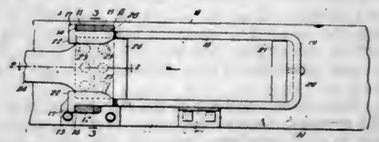
3. In a holder for sensitized photographic material, the combination with a casing, of a removable covering member extending over the sensitized material in the casing having an opening therein, and a pocket in the covering member on one side of the opening adapted to receive a flat sheet extending lengthwise of the holder, there being a light tight passage on the opposite side of said opening leading to the exterior of the holder.

4. In a holder for sensitized photographic material, the combination with a casing having an exposing aperture at the front, of a back for said holder having an opening extending through it, a pocket located on one side of said opening, and a movable sheet of flexible material located in the pocket and extending beneath a portion only of the opening in the back, said sheet being normally impermeable by actinic light but capable of being rendered light permeable by writing thereon with a stylus.

5. In a holder for sensitized photographic film, the combination with a casing having an exposing aperture at the front and film receptacles at the ends, of a removable back extending over said receptacles and aperture and having an opening extending through it near one end of the exposing aperture, there being a sight opening near the opposite end of said aperture, said back also having a pocket on one side of said first mentioned opening extending parallel with the back and adapted to contain a flat sheet of material normally impermeable to actinic light but capable of being rendered permeable by writing thereon.

[Claims 6 and 7 not printed in the Gazette.]

1,192,059. RAILWAY-CAR DRAFT-RIGGING. JOSEPH HARRIS, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 30, 1914. Serial No. 874,660. (Cl. 213—42.)



1. In a draft rigging for railway cars, the combination with draft members, of a draw bar having shoulders, a yoke, each arm of which is provided with inwardly and outwardly turned shoulders, and stationary means mounted on the sills adapted to engage the outturned shoulders

of said yoke and preventing the latter from moving rearwardly, said means also acting as front stops for a front follower, said inturned shoulders of the yoke engaging the shoulders of the draw bar under draft.

2. In a draft rigging for railway cars, the combination with center sills, of an inverted U-shaped member secured to the inner sides of said sills, a transversely extending removable key mounted in slots in said sills, a U-shaped yoke having the free ends thereof slidable between the upper wall of said U-shaped member and said key, a draw bar, means operatively connecting the yoke with the draw bar upon forward movement of the latter, and integral means on the yoke arranged to engage the upper wall of said U-shaped member and said key to prevent rearward movement of the yoke under buff.

3. In a draft rigging for railway cars, the combination with center sills, of an inverted U-shaped casting secured to the inner sides of said sills, a horizontal removable key mounted in said sills, a draw bar having upper and lower shoulders, a vertical yoke having inturned shoulders cooperable with said shoulders of the draw bar under draft, and integral outturned shoulders on the ends of the arms of said yoke engageable with the upper wall of said U-shaped member and with said key.

4. In a draft rigging for railway cars, the combination with draft members, of upper and lower stationary members extending horizontally between said draft members, a draw bar having shoulders, and a yoke, the ends of the arms of said yoke being T-shaped and arranged to have the outer portions thereof engage said horizontal members and the inner portions engage said draw bar shoulders, whereby the yoke and draw bar are movable together under draft and the yoke held stationary under buff.

5. In a draft rigging for railway cars, the combination with draft members, of upper and lower stationary members extending horizontally between said draft members, a drawbar the butt of which is positioned between said members, a vertical yoke having the free ends of the arms thereof extending between said upper and lower members and the drawbar butt, means operatively connecting the yoke with the drawbar upon forward movement of the latter, and integral means on said yoke arranged to engage said upper and lower members to thereby prevent rearward movement of the yoke under buff.

1,192,060. FENCE STRUCTURE. ERNEST HERZOG, Atchison, Kans. Filed Mar. 15, 1916. Serial No. 84,383. (Cl. 256—39.)



1. A fence structure comprising a plurality of posts each having chambers therein, spindles rotatably journaled in certain of said chambers, means in the other chambers for tensioning the said spindles, spools fixed to said spindles, runner wires connected to and adapted to be wound on and unwound from the spools for retracting and extending the said wires, tensioned hooks on the posts for detachable engagement with the free ends of the runner wires, and anchoring plates detachably supporting the posts.

2. A fence structure comprising a plurality of posts each having chambers therein, spindles rotatably journaled in certain of said chambers, means in the other chambers for tensioning the said spindles, spools fixed to said spindles, runner wires connected to and adapted to be wound on and unwound from the spools for the retracting and extending of the said wires, tensioned hooks on the posts for detachable engagement with the free ends of the runner wires, and anchoring plates detachably supporting the posts, the said posts being formed with slots for the extending of the runner wires without the same.

1,192,061. PROCESS OF REGENERATING THE WASTE PRODUCTS OF GALVANIC BATTERIES. WILHELM HICKMANN, Frankfort-on-the-Main, Germany, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany, a Corporation of Germany. Filed May 10, 1911. Serial No. 626,218. (Cl. 204—38.)

1. A process for treating the spent electrolyte and depolarizing mass of a galvanic cell of the Leclanche type which includes the addition thereto of a substance containing chlorin in the negative radical thereof and a suitable oxidizing agent.

2. The process of regenerating the spent electrolyte and depolarizing mass of a galvanic cell of the Leclanche type which comprises separating the electrolyte components from the whole mass by lixiviation with a substance producing free chlorin ions in aqueous solution, treating the remaining portion with acid whereby a manganese salt is brought into solution, and then subjecting to the action of a suitable oxidizing agent the manganese salt brought into solution.

3. The process of regenerating the spent electrolyte and depolarizing mass of a galvanic cell of the Leclanche type which comprises separating the electrolyte components from the whole mass by lixiviation with dilute hydrochloric acid, then treating the remaining portion with dilute hydrochloric acid, and then subjecting to the action of an oxidizing means the manganese salt which has been brought into solution in this manner.

4. The process of regenerating the spent electrolyte and depolarizing mass of a galvanic cell of the Leclanche type which comprises separating the electrolyte components from the whole mass by lixiviation with dilute hydrochloric acid, then treating the remaining portion with dilute hydrochloric acid, and then oxidizing with permanganate the manganese salt brought into solution in this manner.

5. The process of regenerating the spent electrolyte and depolarizing mass of a galvanic cell of the Leclanche type which comprises separating the electrolyte components from the whole mass by lixiviation with a substance producing free chlorin ions in an aqueous solution, then treating the remaining portion with a substance producing free chlorin ions in an aqueous solution, and then oxidizing with permanganate the manganese salt brought into solution in this manner.

[Claim 6 not printed in the Gazette.]

1,192,062. PROCESS OF MAKING CARBON ARTICLES. ARTHUR T. HINCKLEY, Niagara Falls, N. Y., assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Oct. 11, 1912. Serial No. 725,220. (Cl. 204—65.)

1. The process of increasing the viscosity of a carbonaceous mix containing a hydrocarbon binder which consists in adding ammonium sulfate thereto and heating it to melt the binder.

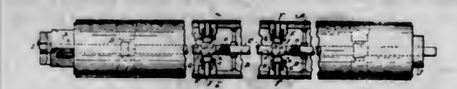
2. The process of making carbon articles, which consists in mixing ammonium sulfate with a carbonaceous mix containing a hydrocarbon binder, heating the agglomeration, and forming an article therefrom.

3. The process of making carbon articles, which consists in mixing ammonium sulfate with a carbonaceous mix containing a hydrocarbon binder, heating the agglomeration, forming it into an article, and then baking it to set the binder.

4. A mix for making carbon articles containing coke, pitch and ammonium sulfate amounting to substantially 5 to 15% of the pitch content.

5. The process of making carbon articles which consists in mixing a chemical compound containing sulfur with carbonaceous material, forming it into a shaped article and baking it.

1,192,063. WINDING-ROLLER. FRANK H. HOSMER, Green Bay, Wis. Filed Feb. 21, 1914. Serial No. 820,166. (Cl. 242—68.)

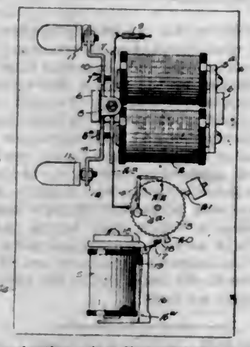


1. A winding roller adapted to receive sets of paper package cores, in end to end relation, comprising a tubular core receiving member adapted to receive and support a plurality of cores in end to end adjustment, plural sets of blunt ended pins radially socketed therein and adapted to be projected through its periphery, the pins of each set being adapted to engage one of said cores, and means for actuating said pins into and out of frictional pressure contact with package cores through which said roller passes.

2. A winding roller for sets of paper package cores, comprising a cylindrical member, a plurality of sets of blunt ended core engaging pins radially socketed in said cylinder and adapted to be projected through its periphery at different points along its surface, and means for projecting said pins through the cylinder wall into positions to engage a plurality of package cores through which said roller passes, said actuating means comprising a longitudinally movable rod within the roller, tapered pin actuating expanders on said rod, and retracting springs operatively connected with said pins.

3. A winding roller for sets of paper package cores comprising a cylindrical member provided with a series of apertures, socket members each having screw threaded engagement with the wall of one of said apertures and projecting inwardly, pins each enlarged at its inner end and seated in the respective socket members with their outer ends projecting through the socket members to the exterior of said cylindrical member, springs interposed between the outer end portions of the socket members and the interior heads of said pins, a longitudinally movable rod within said cylindrical member provided with tapered pin actuating expanders adapted when the rod is moved in one direction to push the pin outward radially in opposition to the pressure of said springs, said pins having blunt outer ends adapted to frictionally engage cylindrical tapered cores mounted on said cylindrical member, substantially as described.

1,192,064. SELECTIVE SIGNALING SYSTEM. JOHN A. HULIT, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 3, 1912. Serial No. 723,726. (Cl. 77—343.)



1. In a selective signaling system, a selector having means responsive to impulses of one polarity to advance it, said means also responsive to impulses of another polarity, means responding to impulses of but one polarity to release it, and means arranged to at times render said releasing means inoperative.

2. In a selective signaling system, a selector having a neutral operating magnet, a polarized release magnet, means for transmitting a plurality of impulses of one polarity over two sides of a line circuit in series to operate said operating magnet to advance said selector, and means for transmitting an impulse of the opposite polarity over said line circuit to operate said operating magnet to advance said selector and to operate said release magnet.

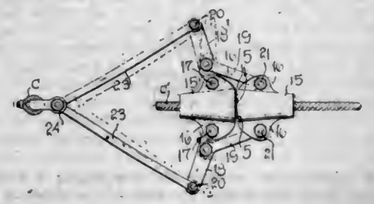
3. In a selective signaling system, a line circuit, a plurality of selectors, means for transmitting a plurality of impulses of one polarity over said line circuit to advance said selectors, and means for transmitting an impulse of the reverse polarity over said line circuit to advance certain of said selectors and to release other of said selectors.

4. In a selective signaling system, a line circuit, a plurality of selectors, means for transmitting a plurality of impulses of one polarity over said line circuit to advance said selectors, means for transmitting an impulse of the reverse polarity over said line circuit to advance certain of said selectors and to release other of said selectors, and selective means for determining which selectors are released by said reverse impulse.

5. In a selective signaling system, a line circuit, a plurality of selectors connected to said circuit, an operating and a release magnet for each of said selectors, means for operating said operating magnets to advance said selectors by impulses of either polarity, means for operating said release magnets to release the selectors by an impulse of but one polarity, and selective means for determining which selectors are advanced and which released by said last-mentioned impulse.

[Claims 6 to 16 not printed in the Gazette.]

1,192,065. CABLE-GRIP. VILAS H. JACKSON, Cleveland, Ohio. Filed Nov. 3, 1915. Serial No. 59,413. (Cl. 24—133.)



1. A cable grip including a plurality of gripping jaws each having its outer face inclined, opposed relatively slidable elements engaged upon the inclined faces of the jaws, operating connections between said elements, and means connected to said operating connections to actuate the same and simultaneously shift said elements upon the relatively stationary jaws to force the jaws into gripping engagement upon a cable arranged between the same.

2. A cable grip including a plurality of jaws having their outer faces tapered from the center of the jaw to its opposite ends, cones slidably engaged upon the tapering end portions of said jaws, levers connected to one of the cones, means for connecting said levers to a pulling cable at their outer ends, and links connecting said levers adjacent their other ends to the other cone, whereby said cones are moved inwardly upon the jaws in the operation of the drum to simultaneously force said jaws inwardly into gripping engagement upon the cable.

3. A cable grip including a plurality of jaws having their outer faces tapered from the center of the jaw to its ends, cones slidable upon the tapered end portions of the jaws, means connecting the cones to each other for relative movement toward or from each other upon the jaws, actuating means connecting the latter means to a pulling cable whereby the cones are moved inwardly upon the jaws by the pull of said cable and the jaws forced inwardly into gripping engagement with a second cable, and means carried by each of the cones coöpera-

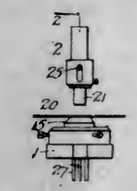
tively engaged with the opposed jaws to limit the outward sliding movement of the cones and also prevent turning movement of the jaws within said cones.

4. A cable grip including a plurality of jaws each having its outer face tapered from the center of the jaw to its ends, opposed cones slidable upon the tapered end portions of the jaws toward or from each other, and operating connections between said cones to simultaneously shift the same inwardly upon the jaws toward each other and exert a radial pressure upon the relatively stationary jaws to cause the same to grip upon a cable arranged between said jaws.

5. A cable grip including a plurality of jaws having their outer faces tapered from the center of the jaw to its ends, cones slidable upon the tapered end portions of the jaws, means connecting the cones to each other for relative movement upon the jaws, means for connecting the latter means to a pulling cable whereby the cones are moved inwardly upon the jaws by the pull of said cable and the jaws forced inwardly into gripping engagement with a second cable, means carried by each of the cones coöperatively engaged with the opposed jaws to limit the outward sliding movement of the cones and also prevent turning movement of the jaws within said cones, and additional means for holding the jaws out of frictional contact with the cable when the cones are moved to their released positions, and also preventing relative longitudinal shifting movement of the jaws.

[Claims 6 to 11 not printed in the Gazette.]

1,192,066. SHAPING AND CUTTING DIE. EDWARD I. JAFFE, New York, N. Y., assignor to O. K. Button Moulds M'f'g Co., New York, N. Y., a Corporation of New York. Filed June 30, 1914. Serial No. 848,137. (Cl. 113—42.)



1. A shaping and cutting die, comprising a bed, cooperating male and female die members, a shape, a post therefor mounted in said bed and extending laterally beyond the base of the shape, said shape being supported by said post and being removable independently of the post, said post being arranged to coöperate with a die member to sever the material at the base of the shape.

2. A shaping and cutting die, comprising coöperating male and female die members, a shape, a post therefor having a top extending laterally beyond the base of the shape, said post being arranged to coöperate with a die member to sever the material at the base of the shape.

3. A shaping and cutting die, comprising coöperating male and female die members, a shape, a post therefor, having a top extending laterally beyond the base of the shape, said post being arranged to coöperate with a die member to sever the material at the base of the shape, and a ring sliding on said post and coöperating with a die member to draw the material over said shape.

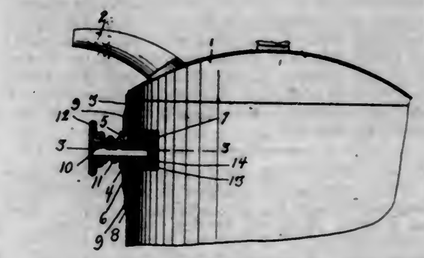
4. A shaping and cutting die, comprising a female die member for cutting the blank, a shape stationarily arranged relative to said die member, a post for said shape adapted to operate as a male die member in definite relation to the shape, a die member having inner and outer cutting edges and adapted to operate as a male and female die member, said latter die member coöperating with said first-mentioned die member to sever the blank, and then cooperating with the die member comprised by said post to sever the material near said shape, and means coöperating with said third die member to draw the material over said shape.

1,192,067. BOTTLE-STOPPER FASTENER. EDWARD G. KAYSER, Chicago, Ill. Filed Sept. 30, 1914. Serial No. 864,269. (Cl. 215—40.)



The combination with a bottle and a stopper therefor; of a fastener for the stopper comprising a supporting member fastened to the bottle, a stopper holding member pivoted to said supporting member and adapted to extend across the top of the stopper, a locking bail straddling the bottle, the branches of which bail are pivoted to the support adjacent to the pivot of the stopper holding member and the connecting portion of said bail branches being adapted to engage the side of the bottle when said bail is in locking position, and a bail adapted to engage the free end of the stopper holding member and having its branches pivotally connected to the branches of the locking bail adjacent to the pivot thereof, that part of the second-mentioned bail which engages the holding member being on one side of the bottle, and the aforesaid connecting portion of the locking bail being on the diagonally opposite side of the bottle the two bails forming an obtuse angle when in locked position.

1,192,068. SPOUT. SAMUEL M. KEKUEWA, Lahaina, Hawaii. Filed Sept. 25, 1915. Serial No. 52,661. (Cl. 221—22.)

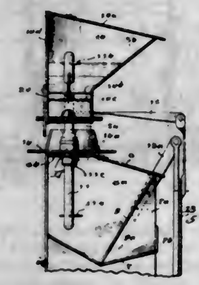


1. In combination with a can having an opening formed in its side, of a plate adapted to be attached to the can, a seat carried by the plate and projecting into said opening, a packing carried by the seat, a sleeve engaged centrally of the plate, a spout having threaded engagement with the sleeve, said spout having its inner end adapted to engage the packing, as and for the purpose set forth.

2. In combination with a can having an opening formed therein, of a plate adapted to be secured exteriorly of the can, a sleeve engaged centrally of the plate, a seat carried by the plate and projecting through said opening, a spout comprising a hollow body having threaded engagement with said sleeve, a packing carried by the seat and adapted to be engaged by the inner end of the spout body, a head fixed to the outer end of the spout body, as and for the purpose set forth.

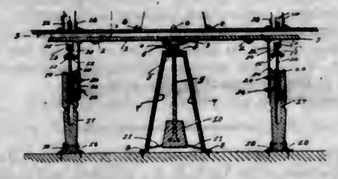
1,192,069. POULTRY-FEEDING DEVICE. ONIDA KEPHART, Osceola Mills, Pa. Filed June 5, 1912. Serial No. 701,717. (Cl. 119—54.)

1. A feeding device comprising a bin and a hopper arranged above the bin, agitating means arranged in said bin and hopper, a slotted gate hinged to swing in front of the bin and adapted to permit fowls to get access to the contents of said bin, and reciprocating and rotatable means operable by the swinging of the gate acting upon said agitating means whereby the contents of the hopper will be fed and scattered from said hopper.



2. A feeding device comprising a bin and a hopper arranged above the bin, a gate hinged to swing in front of the bin and adapted to permit access to the contents of the bin, a spring-actuated feed distributing device mounted below said hopper, feed agitating means arranged in said hopper and bin, and means operable by said gate for operating said agitating and distributing devices.

1,192,070. SHIP'S DINING-TABLE. CORNELUS KERKHOF, Hackensack, N. J. Filed Nov. 23, 1914. Serial No. 873,612. (Cl. 114—195.)

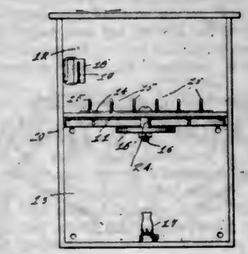


1. A ship's table comprising a table board, a semi-spherical member secured to the lower face and centrally thereof, a collar, a plurality of legs for supporting said collar, a plurality of ball-bearings in said collar, the said spherical member being constructed and arranged to be supported by the bearings for universal movement, a rod secured to said spherical member and extending downwardly through said collar, a weight on the lower end of said rod, springs attached to said weight and constructed and arranged to be attached to the floor at opposite sides of the weight, legs located adjacent the ends of the table board and having their lower ends rigidly connected to the floor, and rods slidably mounted in said legs and universally secured to the table board, the swinging movement of the rods in one direction being less than in another.

2. A self leveling table comprising a table board, means for supporting the table board for universal movement, legs disposed in fixed position under each end of the board, rods having their upper ends swivelly connected with the table board, said rods being slidably connected to the legs, and means for allowing greater swinging movement of the rods in one direction than in another.

1,192,071. DOUGH-RAISER. EDWARD KLEEMAN and EFFIE A. KLEEMAN, Canton, S. D. Filed Mar. 11, 1915. Serial No. 13,652. (Cl. 126—282.)

A dough raiser including a cabinet having a lower heating chamber and an upper dough receiving chamber, said chambers being separated by a horizontal floor, a source of heat disposed in the lower chamber, a securing means disposed through the floor, a non-combustible disk carried by the lower end of the securing means and disposed over



the source of heat, and a sleeve carried by the securing means between the floor and said disk for holding the disk out of contact with the floor.

1,192,072. SNAP-BUTTON. CHRISTIAN F. KLETT, Parkersburg, Pa., assignor of one-half to Paul Alexy, Philadelphia, Pa. Filed Aug. 11, 1915. Serial No. 45,030. (Cl. 24—220.)



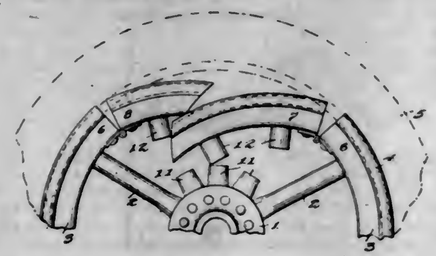
1. A snap button, comprising a stud-receiving socket member and a holding member adapted to be projected through the material to be secured, and a clamping washer against which the holding member is bent, said clamping washer arched in cross section and adapted to have its opening contracted by the pressure of the holding member thereagainst and to clamp the material against the outer face of the holding member, substantially as described.

2. A snap button member comprising a stud-receiving member, a holding member, said stud-receiving and holding members having outwardly projecting flanges, a body member clamping the said flanges, said holding member adapted to be projected through an opening in the material to which it is to be secured, whereby the material is caused to bend against the outer face of the holding member, and a clamping washer having its opening adapted to be contracted by the pressure of the holding member when the end of the latter is flared outwardly against the same, said clamping washer adapted to clamp the material against the outer face of the holding member, substantially as described.

3. A snap button member adapted to be projected through the material to which it is secured, a holding member constituting a part of the snap button, and a clamping washer adapted to be located between the holding member and the material to be secured, said washer having its opening adapted to be contracted by the holding member, whereby its inner wall is adapted to clamp the material against the snap button member, substantially as described.

4. A snap button comprising a stud-receiving member, a holding member, said stud-receiving and holding members having outwardly projecting flanges, a body member clamping the said flanges, said holding member adapted to be projected through the material to which it is to be secured, whereby the material around the holding member is bent, a clamping washer having a central opening large enough to receive the bent portion of the material around the holding member, said washer curved in cross section, and said holding member adapted to be bent inwardly against the washer to flatten the same and to cause the inner wall of the washer to grip the bent portion of the material, substantially as described.

1,192,073. WHEEL CONSTRUCTION. EPHRAIM G. KLINE, Millerstown, Pa. Filed Feb. 11, 1916. Serial No. 77,677. (Cl. 152—20.)



1. In wheel construction, a hub, spokes radiating from said hub, a felly surrounding said hub and secured to the outer ends of said spokes and embodying a stationary section and movable sections placed end to end and having the other ends thereof hinged to the extremities of said stationary section, said movable sections being capable of inward swinging movement and secured to the outer ends of certain of the spokes, each spoke carrying said movable sections embodying a removable section whereby the movable sections of the felly may be swung inwardly toward the hub when the spoke sections are removed.

2. In wheel construction, a hub, spokes radiating from said hub, a felly surrounding said hub and secured to the outer ends of said spokes and embodying a stationary section and movable sections placed end to end and having the other ends thereof hinged to the extremities of said stationary section, said movable sections being capable of inward swinging movement and secured to the outer ends of certain of the spokes, each spoke carrying said movable sections embodying a removable section whereby the movable sections of the felly may be swung inwardly toward the hub when the spoke sections are removed, and a clamp surrounding each of said sectional spokes to hold the latter intact.

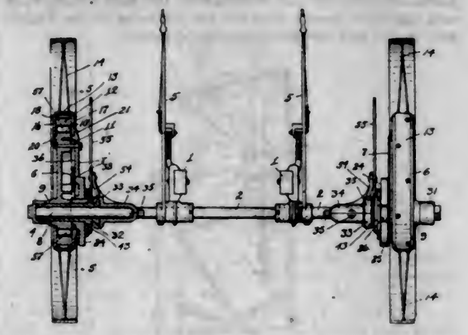
3. In wheel construction, a hub, spokes radiating from said hub, a felly surrounding said hub and secured to the outer ends of said spokes and embodying a stationary section and movable sections placed end to end and having the other ends thereof hinged to the extremities of said stationary section, said movable sections being capable of inward swinging movement and secured to the outer ends of certain of the spokes, each spoke carrying said movable sections embodying a removable section whereby the movable sections of the felly may be swung inwardly toward the hub when the spoke sections are removed, and a two-part clamp surrounding each of said sectional spokes to hold the latter intact and capable of removal from said spokes.

1,192,074. POWER-LIFT FOR PLOWS. GEORGE A. KNOBLOCK, South Bend, Ind. Filed Mar. 15, 1916. Serial No. 84,273. (Cl. 95—55.)

1. A power lift comprising a tractive wheel, a hub therefor movable independently thereof, a lifting axle eccentrically mounted in said hub, clutch mechanism cooperating with the hub and wheel to interlock the same, and means for controlling the clutch mechanism.

2. A power lift for plows and the like including a ground wheel, a free hub therefor, a crank axle eccentrically mounted in the hub and adapted to be connected to a plow beam, clutch mechanism coöperating with the hub and wheel, a trip member controlling said clutch mechanism, and manually operable means for governing the trip member.

3. A clutch mechanism for power lifts including a wheel, a free hub member therefor, a lifting element eccentrically arranged in the hub member, a locking bolt carried by the hub, the wheel being formed with teeth to be engaged by said bolt, a trip member mounted for free rotation on the hub, a dog connecting the trip member and locking bolt, and means for manually controlling the free rotation of the trip member.



4. A clutch mechanism for power lifts for wheel plows including a free wheel hub, a locking bolt arranged within said hub, the wheel proper being formed with teeth to coöperate with said bolt, a lifting member eccentrically mounted in the hub, a trip member mounted for free rotation, an operating dog connected with the trip member and with the bolt, a manually operable lever, and a cam formed on the hub to control the position of the lever with respect to the trip member.

5. A power lift for wheel vehicles including a traction wheel, a free hub therefor, a lifting member mounted eccentrically in the hub, interlocking elements carried by the hub and wheel proper, a trip member mounted for free rotation with respect to the hub, lugs projecting from said member, a connection between said member and one of the interlocking elements, a manually operable lever, and a cam formed to hold said lever beyond the path of the lugs of the trip member throughout a predetermined portion of the movement of said cam.

[Claims 6 to 9 not printed in the Gazette.]

1,192,075. PURIFICATION OF WATER. HEINRICH KRIEGSHEIM, New York, N. Y., assignor to The Permutit Company, New York, N. Y., a Corporation of Delaware. Filed May 16, 1916. Serial No. 97,923. (Cl. 210—1.)

1. In the purification of water by treatment with exchange silicates, the process which comprises adding to water a small amount of silica in soluble form and thereafter passing such water over or through a granular bed of such silicate.

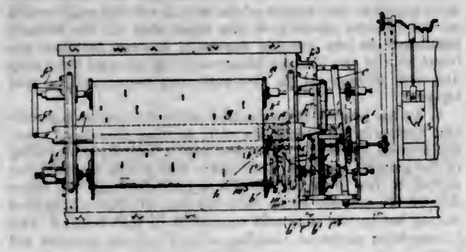
2. In the purification of water by treatment with exchange silicates, the process which comprises adding thereto a small proportion of sodium silicate and thereafter passing such water over or through a granular bed of such silicate.

3. In the purification of water, the process which comprises clarifying such water with a salt of a sesquioxid, thereafter adding a small proportion of silica in soluble form and passing the so-treated water over or through a granular bed of an exchange silicate.

4. In the purification of water, the process which comprises clarifying such water with an alumina salt, thereafter adding a small proportion of silica in soluble form and passing the so-treated water over or through a granular bed of an exchange silicate.

1,192,076. TRACKER FOR MUSICAL INSTRUMENTS AND THE LIKE. ERVIN J. KRUCK and WALTER A. KRUCK, New York, N. Y. Filed July 12, 1915. Serial No. 39,262. (Cl. 84—161.)

1. A tracker for automatic musical instruments and the like, comprising a roll, a tracker-bar, one of the two parts last named being relatively movable longitudinally with respect to the other, a detector for contact with the edge of the music sheet, variable mechanical shifting means for shifting the relatively movable part, a mechanical actuator therefor, and means whereby the movement of said shifting means is controlled by the detector.



2. A tracker for automatic musical instruments and the like, comprising a roll, a tracker-bar, one of the two parts last named being relatively movable longitudinally with respect to the other, means for shifting the relative position of said parts, an actuator for said means having a definite movement, a detector for contact with the edge of the traveling sheet, and means under the control of the detector for changing the effective relation between the shifting means and the actuator.

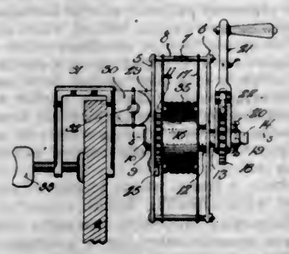
3. A tracker for automatic musical instruments and the like, comprising a roll, a tracker-bar, one of the two parts last named being relatively movable longitudinally with respect to the other, means for shifting the relative position of said parts, a cam for actuating said means, a detector for contact with the edge of the traveling sheet, and means under the control of the detector for changing the effective relation between the shifting means and the cam.

4. A tracker for automatic musical instruments and the like, comprising a roll, a tracker-bar, one of the two parts last named being relatively movable longitudinally with respect to the other, a shifting lever for changing the relative position of said parts, a cam for actuating said shifting lever, a detector for contact with the edge of the traveling sheet, means under the control of the detector for changing the effective relation between the shifting lever and the cam.

5. A tracker for automatic musical instruments and the like, comprising a roll, a tracker-bar, one of the two parts last named being relatively movable longitudinally with respect to the other, a detector for contact with the edge of the music sheet, a shifting lever movable bodily and operatively connected with the relatively movable part, a cam for engagement with the shifting lever and inclined in the direction of bodily movement of the shifting lever, and means whereby the movement of the detector is caused to impart bodily movement to the shifting lever.

[Claims 6 to 12 not printed in the Gazette.]

1,192,077. ANCHOR-WINCH FOR SMALL CRAFT. ADOLPH H. KURTH, Milwaukee, Wis. Filed Apr. 11, 1916. Serial No. 90,409. (Cl. 254—186.)

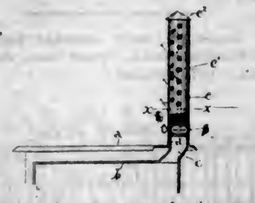


1. A winch of the class described comprising a body member provided with a central bearing, a ratchet wheel, a hub sleeve on the ratchet wheel journaled in the bearing and having a squared bore, a drum including a hub portion having a squared bore, a second ratchet wheel having a squared bore, a spacing sleeve disposed between said second ratchet wheel and the hub portion, a squared shaft passed through the hub sleeve, the drum hub, the said spacing sleeve and the second ratchet wheel, an operating lever journaled on the spacing sleeve, and a pawl on the operating lever for coaction with the second ratchet wheel.

2. A winch of the class described comprising the combination of a pair of side members secured in spaced relation and provided with bearings, a locking ratchet wheel, a hub sleeve for said wheel journaled in the bearing of one side member, and having a squared bore, a drum including a hub having a squared bore, a spacing sleeve journaled in the bearing of the other side member, an actuating ratchet wheel having a squared bore, a squared shaft passed through the said hub sleeve, the drum hub, the spacing sleeve and the actuating ratchet, a holding sleeve on the shaft adjacent the actuating ratchet, an actuating lever having inner end furcations embracing the actuating ratchet wheel and journaled on the spacing sleeve and the holding sleeve, and a pawl on the lever engageable with the actuating ratchet wheel.

3. A winch of the class described comprising a pair of side members secured in spaced relation, a bearing projecting outwardly from one side member, a second bearing projecting inwardly from the other side member, a holding ratchet wheel, a hub sleeve therefor, journaled in the first named bearing, a drum including a hub having a squared bore, a spacing sleeve journaled in the second named bearing and extending outwardly of the respective side member, an actuating ratchet wheel having a squared bore, a squared shaft passed through the hub sleeve, the drum hub, the spacing sleeve and the actuating ratchet wheel, a holding sleeve on the shaft outwardly of the actuating ratchet wheel, an operating lever journally mounted on at least one of said sleeves, and a pawl carried by the lever and engageable with the actuating ratchet wheel.

1,192,078. ATTACHMENT FOR GAS-RANGES. CHARLES LABERGE, Westbrook, Me. Filed Feb. 25, 1916. Serial No. 80,351. (Cl. 126—39.)



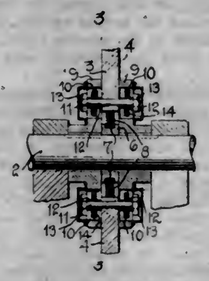
1. An attachment for gas ranges having an oven ventilating flue near the rear of the range, said attachment consisting of a pipe or tube closed at the top and connected at the bottom with the flue and having a series of holes on the front side only for diffusing the oven gases through the ascending column of heated air rising from the range proper.

2. An attachment for gas ranges having an oven ventilating flue near the rear of the range said attachment consisting of a pipe or tube closed at the top and connected at the bottom with the flue and having a series of holes on the front side only for diffusing the oven gases through the ascending column of heated air rising from the range proper and having a lining of woven netting.

1,192,079. SPRING-HUB. WILLIAM A. LENTS, Hardin, Ky. Filed Nov. 11, 1915. Serial No. 60,931. (Cl. 152—45.)

1. A cushion hub comprising a centrally disposed ring adapted to snugly embrace a shaft, or axle, a spoke ring concentric to the shaft ring, radially disposed springs supporting the spoke ring on the shaft ring, a laterally dis-

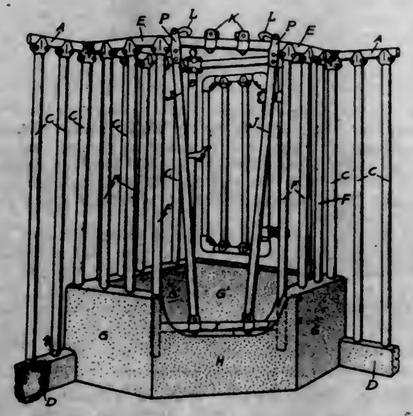
posed disk having a plurality of openings, pins on the spoke ring extending into the openings, and a plurality of springs disposed between each pin and the wall of the opening.



2. A cushion hub comprising a centrally disposed ring adapted to embrace a shaft or axle, a spoke ring concentric to the shaft ring, radially disposed springs located between the shaft ring and the spoke ring, disks disposed one on each side of the spoke ring and shaft ring and adapted to be rotatably engaged with the shaft to bear thereon, said disks having alining openings, pins passing through the spoke ring and into said openings, and a plurality of springs in each opening engaging the corresponding pin and the wall of the opening.

3. The combination with a shaft, of an annulus surrounding the shaft and rotatable with relation thereto, a spoke ring surrounding the annulus and spaced therefrom, radially disposed coil springs between the annulus and the spoke ring, oppositely disposed disks disposed on each side of the annulus and the spoke ring and operatively engaged for rotation with the shaft, pins carried by the spoke ring and projecting laterally therefrom, the disks being formed with alining openings into which the pins pass, the openings being considerably larger than the pins, sleeves mounted upon the projecting ends of the pins, and a plurality of coiled springs disposed in each opening of each disk, bearing at their outer ends against the wall of the opening and at their inner ends against the corresponding sleeve.

1,192,080. MANGER FOR ANIMAL-PENS. WILLIAM LOUDEN, Fairfield, Iowa. Filed Nov. 26, 1915. Serial No. 63,452. (Cl. 119—20.)



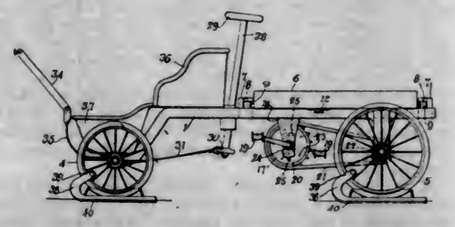
1, In an animal pen, a manger located in one of the corners within the inclosure of the pen, a partition separating the manger from the remainder of the pen and having an opening to admit an animal's head into the manger compartment, and means to hold the animal's head in the manger compartment and to release it therefrom.

2. In an animal pen provided with horizontal top-rails and vertically disposed side rails secured thereto, a manger located in one corner of the pen, a top-rail conforming to the general contour of the inner side of the manger connected to the outside top-rails, a curb forming the inner side of the manger below said top-rail and vertically disposed railing set in the curb and connected to said top-rail.

3. In an animal pen provided with horizontal top-rails and vertically disposed side rails secured thereto, a manger located in one corner of the pen, a top-rail conforming to the general contour of the inner side of the manger connected to the outside top-rails, a curb forming the inner side of the manger below said top-rail, vertically disposed railing set in the curb and connected to said top-rail, and a stanchion mounted therein, as and for the purpose set forth.

4. In a device of the character described, a manger located in a pen and having a railing forming a partition between the manger and the pen, a curb surrounding the manger, a cut-out in the inner side of the curb, vertically disposed spaced apart railing members adjoining the ends of the cut-out, a horizontally disposed member located immediately above the central portion of the cut-out and having its ends embedded in the raised portions of the curb and connected to the spaced apart railing members, and a stanchion mounted on the horizontal member.

1,192,081. COMBINED WAGON AND VELOCIPEDE. WALTER M. LOXLEY and SAMUEL E. LOXLEY, Dayton, Ohio. Filed Feb. 12, 1916. Serial No. 77,851. (Cl. 208—118.)



1. In a vehicle, foot-operated devices to propel the same, and a body portion comprising parts each foldable laterally toward the other, said parts being so arranged that when in their extended positions they will form a wagon bed and when in their folded positions will form a narrow elevated support for a velocipede seat.

2. In a vehicle, foot-operated devices for propelling the same, and a body portion comprising parts mounted for movement into extended positions to form a wagon bed and for movement into upright positions to form a support for a velocipede seat.

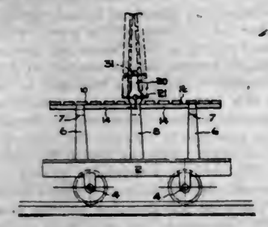
3. In a vehicle, steering wheels and driving wheels, foot-operated devices to actuate said driving wheels, a body portion supported adjacent to said foot-operated devices and comprising two parts, both of which are adjustable into different positions to constitute either a wagon bed or a support for a velocipede seat, a steering device mounted adjacent to said body portion in a position to permit of the adjustment of said body portion and operatively connected with said steering wheels, and another device connected with said steering wheels to move and steer the vehicle when said body portion is adjusted to form a wagon bed.

4. In a vehicle, a frame, wheels to support said frame, foot operated wheel-actuating devices supported by said frame, a body portion comprising two parts mounted on said frame and movable either into a substantially horizontal position or a substantially vertical position, and a seat adapted to be supported by said body portion when the two parts thereof are in substantially vertical positions.

5. In a vehicle, a frame, wheels to support said frame, foot operated wheel-actuating devices supported by said frame, a body portion comprising two parts mounted on said frame and movable either into a substantially horizontal position or a substantially vertical position, a seat, and means for attaching said seat to said body portion when the latter is in a vertical position and for retaining said body portion in a vertical position.

[Claims 6 to 24 not printed in the Gazette.]

1,192,082. BRICK-DRIER CAR. LACHLAN W. MCARTHUR, Montreal West, Quebec, Canada, assignor to himself, and Percival Stafford McKergow, Westmount, Quebec, Canada. Filed Feb. 21, 1916. Serial No. 79,772. (Cl. 21—122.)



1. A drier car consisting of the combination with a truck having a pair of standards located at each end thereof and a pair of standards located midway the length of the truck, deck-members independently hinged transversely to the truck to the tops of the intermediate standards, means upon the end standards for supporting the deck-members in horizontal position and means for locking the said deck-members in raised position.

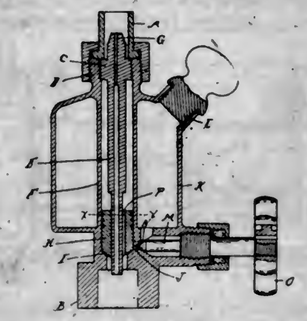
2. In a drier car the combination with a truck-frame having transverse members, of a fixed deck mounted upon said truck-frame and consisting of a plurality of parallel spaced longitudinal strips extending throughout the length of the truck, a pair of middle standards located midway the length of the truck and an upper deck consisting of two members independently hinged to said standards transversely to the length of the truck each of said deck-members consisting of stringers and parallel spaced transverse strips mounted on said stringers, means for locking the deck-members in raised position said means consisting of a lateral projection upon one of said members and a hook pivotally connected to the other of said members and adapted to engage said lateral projection, substantially as described.

3. A drier car for the purpose set forth having a fixed deck; end standards; a pair of intermediate standards located midway the length of the truck; a pair of deck-members hinged transversely to the length of the car to the intermediate standards which have projections for the purpose of limiting the movement of the said pivoted deck-members toward the transverse center of the car; and a locking device detachably connecting together the said deck-members when in raised position, as described.

4. A drier car for the purpose set forth having a fixed deck; end standards; a pair of intermediate standards located midway the length of the truck; a pair of deck-members hinged transversely to the length of the car to the intermediate standards which have projections for the purpose of limiting the movement of the said pivoted deck-members toward the transverse center of the car; and a locking device detachably connecting together the said deck-members when in raised position, as described.

1,192,083. LUBRICATOR. ELIJAH MCCOY, Detroit, Mich., assignor of fifty-two one-hundredths to Francis H. Warren, Detroit, Mich. Filed Jan. 15, 1916. Serial No. 72,213. (Cl. 184—76.)

1. In a lubricator, the combination with a lubricant cup having a central tubular wall forming a portion of a lubricant conduit, of a choke-plug in said conduit having a portion extending concentrically within said tubular wall, an annular valve between said concentric tubes controlling a passage from said lubricant cup, a seat for said valve below said passage, and means permitting the restricted passage of fluid from one side of said valve to the other.



2. In a lubricator, the combination with a cup having a tubular central wall forming a portion of the tallow-pipe or conduit from an independent lubricator, said cup being provided with a port connecting with said conduit, a choke-plug or restriction in said conduit having a depending portion spaced from and concentric with said tubular wall, an annular valve surrounding said depending portion and slidably engaging said tubular wall, a seat for said valve below the passage from said lubricant cup, and means permitting the restricted passage of fluid from one side of said valve to the other.

3. In a lubricator, the combination with a casing forming a lubricant cup and having a central tubular wall constituting a portion of the tallow-pipe or conduit from an independent lubricator, said cup also communicating with said conduit, of a choke-plug within said conduit extending below the point of communication with said cup, and an automatic valve for closing communication with said cup adapted to be unseated by back pressure.

4. In a lubricator, the combination with a casing constituting a lubricant cup and having a central tubular wall therethrough forming a portion of the tallow-pipe or conduit from an independent lubricator, the lower end of said cup also communicating with said conduit, of a choke-plug in said conduit having a portion extending downward below the point of communication with said cup, a valve for cutting off said communication slidable upon said depending portion of the choke-plug, and a seat for said valve.

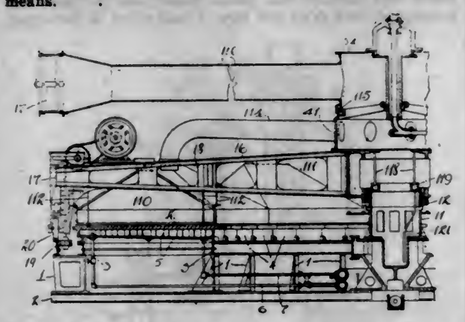
5. In a lubricator, the combination with a casing constituting a lubricant cup and having a tubular wall therethrough forming a portion of a tallow-pipe or conduit from an independent lubricator, said cup also communicating at its lower end with said conduit, of a choke-plug in said conduit having a depending portion spaced from and concentric with said tubular wall, a valve slidable upon said depending portion for cutting off communication with said cup, and a second valve controlling said communication manually operable from outside of said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,192,084. VAPOR-REMOVING APPARATUS FOR DRYING MECHANISM. WILLIAM R. MACKLIND, Cleveland, Ohio, assignor to George A. Martin, trustee, Cleveland, Ohio, for the use and benefit of said Macklind and The Sherwin-Williams Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Aug. 10, 1912, Serial No. 714,323. Divided and this application filed Aug. 4, 1915. Serial No. 43,594. (Cl. 127—9.)

1. The combination with an annular drying table, of vapor-collecting means circularly movable about said table with the center of the latter as an axis.

2. The combination with an annular drying table, of vapor-collecting means circularly movable about said table with the center of the latter as an axis, and a centrally located vapor drum connected with said vapor-collecting means.



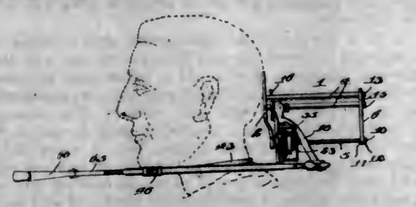
3. The combination with an annular drying table, of vapor-collecting means circularly movable about said table with the center of the latter as an axis, a centrally located vapor drum, and a series of radial pipes connecting said vapor-collecting means with said drum.

4. The combination with an annular drying table, of a series of vapor-collecting hoods disposed thereover and movable in a circular direction with the center of said table as an axis, a centrally located vapor drum, connected with draft means, and a series of radial pipes connecting said hoods, respectively, with said drum, said pipes being graduated in size to vary the draft effect in different hoods.

5. The combination with an annular drying table, of material-feeding means movable in a circular path over said table, a series of vapor-collecting hoods disposed over said table and similarly movable in unison with said feeding means, a centrally located vapor drum connected with draft means, and a series of radial pipes connecting said hoods, respectively, with said drum, said pipes being graduated in size to reduce the draft effect in the hoods based on their distance from said feeding means, in a direction opposite to that of the movement of said means.

[Claims 6 to 10 not printed in the Gazette.]

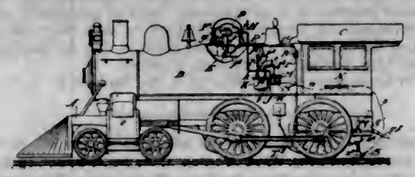
1,192,085. HAIR-CUTTING DEVICE. CHRIST MARCHINS, Portland, Oreg. Filed Feb. 29, 1916. Serial No. 81,248. (Cl. 30—1.)



1. A hair cutting device including a frame, a traveling cutter mounted upon the frame and having fixed and movable handles, a handle bar adapted for connection with the fixed handle, means upon the handle bar for actuating the movable handle, a neck yoke, and means upon the handle bar for connecting it with the neck yoke.

2. A hair cutting device including a supporting frame, a cutter mounted to travel upon the frame, and including fixed and movable handles, a handle bar adapted to detachably engage the fixed handle, means upon the handle bar for transmitting motion to the movable handle, a sliding collar on the handle bar, means for adjusting the same, a neck yoke carried by said bar, and a closure for the throat of said yoke.

1,192,086. AUTOMATIC TRAIN-STOPPING DEVICE. JESSE MARCROFT, Providence, R. I. Filed May 5, 1913. Serial No. 765,638. (Cl. 246—58.)



1. In an automatic stopping device for railroad trains, the combination with a locomotive having manually-operated power-controlling means, of means outside the control of the operator for shutting off the power without operating the manual means, a fluid-controlled device for operating said shut-off means, means controlled by the power-controlling means to maintain pressure in said fluid-device during the operation of the locomotive, and automatically-actuated means controlled by danger conditions to release the pressure to operate the shut-off means.

2. In an automatic stopping-device for railroad trains, the combination with a locomotive having manually-operated power-controlling means, of means outside the control of the operator for shutting off the power without operating said first-named means, a fluid-controlled device for operating said shut-off means, means operated by the power-controlling means to maintain pressure in said fluid-device when the power is on, and electrically-controlled means to release the pressure to operate the shut-off means.

3. In an automatic stopping-device for railroad trains, the combination with a locomotive having manually-operated power-controlling means, of means outside the control of the operator for shutting off the power without operating said first-named means, a fluid-controlled device for operating said shut-off means, means connected with the power-controlling means to maintain pressure in said fluid-device during the operation of the locomotive, a signal-system, and means operated through said signal-system to release the pressure to operate the shut-off means.

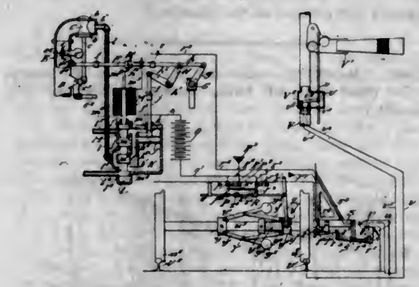
4. In an automatic stopping-device for railroad trains, the combination with a locomotive having manually-operated power-controlling means and power-actuated brakes, of means outside the control of the operator for shutting off the power and applying the brakes without operating the manual means, a fluid-controlled device for operating said shut-off means and brake-applying devices, means operated by the power-controlling means to maintain pressure in said fluid-device during the operation of the locomotive, and automatically-operated devices controlled by danger conditions to release the pressure to simultaneously shut off the power and apply the brakes.

5. In an automatic train-stopping device, the combination with a locomotive having manually-operated throttle-valve for controlling the steam supplied to the cylinders, of an auxiliary shut-off valve adapted to be operated without operating the throttle-valve, a fluid-pressure device for operating said shut-off valve, means controlled by the operation of the throttle-valve to maintain pressure in the fluid-device during the operation of the locomotive, and automatically-operated means controlled by danger conditions to release the pressure to cause the closing of the shut-off valve to effect the stopping of the train.

[Claims 6 to 15 not printed in the Gazette.]

1,192,087. AUTOMATIC TRAIN-STOPPING DEVICE. JESSE MARCROFT, Cranston, R. I. Filed May 8, 1914. Serial No. 837,141. (Cl. 246—58.)

1. In an automatic train-stopping device, the combination with a locomotive having manually-operated power-controlling means, of auxiliary means for shutting off the power independently of said manually-operated means, gravity-controlled devices for operating said shut-off means, a fluid-pressure device for operating the shut-off means positively, a detent-means to prevent the operation of said shut-off means by either of said operating-means, a governor-device operated from a going part of the locomotive, and means actuated by said governor-device to release the detent-means and cause action of the auxiliary shut-off means when the speed of the locomotive exceeds a predetermined limit.



2. In a safety-stop device, the combination with a locomotive having manually-operated power-controlling means, of auxiliary means for shutting off the power independently of said manually-operated means, gravity-controlled means to actuate said auxiliary shut-off means, power-operated means to actuate said auxiliary shut-off means positively, a detent-means for normally maintaining both of said actuating-means inoperative, a governor-device operated from a going part of the engine, and means actuated by said governor-device at a predetermined speed of the engine to release the detent-means.

3. In a safety-stop device, the combination with a locomotive having manually-operated power-controlling means, of auxiliary means for shutting off the power independently of said manually-operated means, gravity-controlled devices for actuating said shut-off means, power-operated devices for actuating said shut-off means positively, a detent-means for preventing the action of both of said actuating-devices for the shut-off means, electrically-operated devices for releasing the detent-means, a switch for controlling the electrically-operated devices, and a governor-device for operating the switch when the locomotive exceeds a predetermined speed limit.

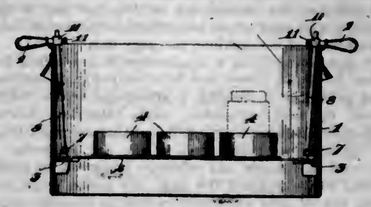
4. In a device of the class specified, the combination with a locomotive having manually-operated power-controlling means, of auxiliary means for shutting off the power independently of said manually-operated means, gravity-controlled devices for actuating said shut-off means, a separate power-operated device for actuating the shut-off means, a detent-means for maintaining both of said actuating-means normally inoperative, an electro-magnet for releasing said detent-means, an electric circuit connecting said magnet with a source of current, a switch in said circuit, and means controlled by the speed of the locomotive to operate the switch when a predetermined limit is exceeded.

5. In a device of the class specified, the combination with a locomotive having manually-operated power-controlling means, of auxiliary means for shutting off the power independently of said manually-operated means, gravity-controlled devices for actuating said shut-off means, an additional power-operated device for actuating the shut-off means, a detent-means for preventing the operation of both of said actuating-means, an electro-magnet, and means operated from said magnet to release the detent-means and cause the operation of the shut-off actuating-means.

[Claims 6 to 14 not printed in the Gazette.]

1,192,088. COOKING UTENSIL. CLAUDE R. MEEKER, Chicago, Ill. Filed Feb. 23, 1915. Serial No. 10,006. (Cl. 53—1.)

1. A device of the class described comprising a container open at its upper side; a jar holder loosely mounted in said container; inwardly projecting portions on the lateral walls of said container for supporting said holder above the bottom of said container; elongated members arising from opposite sides of said holder; and exteriorly projecting handle pieces mounted on said members for longitudinal adjustment; and means for locking said handle pieces in positions of longitudinal adjustment on said members, substantially as described.



2. A device of the class described comprising a container open at its upper side; a jar holder loosely mounted in said container; inwardly projecting portions on the lateral walls of said container for supporting said holder above the bottom of said container; elongated members arising from opposite sides of said holder; exteriorly projecting handle pieces mounted on said members for longitudinal adjustment; and set screws for locking said handle pieces in positions of longitudinal adjustment on said members, substantially as described.

3. A device of the class described comprising a container open at its upper side; a jar holder loosely mounted in said container, said holder comprising a horizontally disposed plate; jar sockets provided upon the upper side of said plate; members of less diameter than said sockets adapted for insertion in the latter to adapt said sockets to accommodate jars of less diameter; and exterior projections on said rings for engagement against the inner surfaces of said sockets, substantially as described.

4. A device of the class decribed comprising a container open at its upper side; a jar holder loosely mounted in said container, said holder comprising a horizontally disposed plate; circular jar sockets provided at the upper side of said plate; rings of less diameter than said sockets adapted for insertion in the latter to adapt said sockets to accommodate jars of less diameter; and exterior beads on said rings for engagement against the inner surfaces of said sockets, substantially as described.

1,192,089. GAGE. ALEXANDER MELDRUM, Syracuse, N. Y., assignor to The L. S. Starrett Company, Athol, Mass., a Corporation of Massachusetts. Filed June 22, 1914. Serial No. 846,422. (Cl. 33—143.)



1. A gage for setting dividers comprising a longitudinally graduated gage bar and a graduated sleeve, said bar and sleeve being relatively rotatable and yieldably seated against each other and a spiral pitch indication continuously about one of said members in intersecting relation to the graduations thereof and coöperating with the graduations of the other member to set off distances.

2. A gage comprising a longitudinally graduated gage bar, hollow for substantially its entire length and closed at one end having a reduced extension providing a bearing, a graduated sleeve rotatably mounted on said extension and yieldably seated against said closed end of the bar, and a pitch indication continuously about one of said members and coöperating with the graduations of the other of said members to set off distances.

3. A gage comprising a longitudinally graduated hollow gage bar having a closed end terminating in a reduced extension providing a bearing, a graduated sleeve rotatably mounted on said extension and yieldably seated against

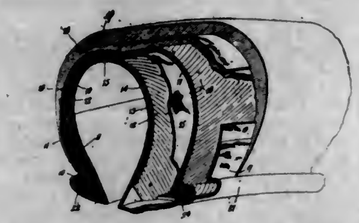
said closed end of the bar and a pitch indication spirally about one of said members and coöperating with the graduations of the other of said members to set off distances.

4. A gage comprising a longitudinally graduated hollow gage bar having a closed end terminating in a reduced extension providing a bearing, a graduated sleeve rotatably mounted on said extension, said extension having a threaded bore, a screw set up in said bore for seating the sleeve against the closed end of the bar and a spring associated with said screw and effective therewith to yieldably seat said sleeve against the gage bar.

5. A gage comprising a longitudinally graduated hollow gage bar having a closed end terminating in a reduced extension providing a bearing, a graduated sleeve rotatably mounted on said extension, said extension having a threaded bore, a screw set up in said bore for seating the sleeve against the closed end of the bar, a spring associated with said screw and effective therewith to yieldably seat said sleeve against the gage bar and a pitch indication on one of said relatively rotatable members and coöperating with the graduations on the other of said members to set off distances.

[Claims 6 to 11 not printed in the Gazette.]

1,192,090. AUTOMOBILE-TIRE. ROBERT M. MERRIMAN, Akron, Ohio. Filed Apr. 6, 1916. Serial No. 89,430. (Cl. 152—13.)



1. A casing for pneumatic tires including an inner ply of fabric, an inner ply of strands of cord extending transversely across the tread and at an angle, an outer ply of strands of cord extending transversely across the tire and at substantially right angles to the first, and bead forming rings inserted between the inner cord ply and outer cord ply, the inner cord ply bearing against the inner faces of the bead forming rings, the outer cord ply bearing against the outer and lower faces of the rings and the inner fabric ply being folded outwardly about the bead and extended upwardly over the sides of the tire.

2. A casing for pneumatic tires including an inner ply of fabric, an inner ply of strands of cord extending transversely across the tread and at an angle, a parting ply of fabric over the cord ply, an outer ply of strands of cord extending transversely across the tire and at substantially right angles to the first, bead forming rings inserted between the inner cord ply and parting ply, the inner cord ply bearing against the inner faces of the bead forming rings, the parting ply and outer cord ply bearing against the outer and lower faces of the rings and the inner fabric ply being folded outwardly about the bead and extended upwardly over the sides of the tire, and reinforcing plies of fabric engaging at one edge along the inner faces of the side portions of the tire and folded about the beads and engaging at their other edges against the outer faces of the outwardly folded portions of the inner fabric ply.

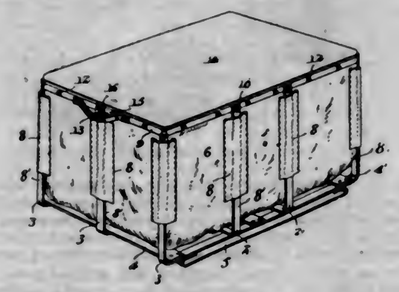
3. In a cord tire casing, a ply embedded in the casing and made up of substantially parallel strands of cord extending transversely of the tire and engaging one against another, and a fabric sleeve inclosing each strand of cord.

4. In a cord tire casing, a ply embedded in the casing and made up of substantially parallel strands of cord extending transversely of the tire and engaging one against another, and a fabric sleeve inclosing each strand of cord, each sleeve having a laterally directed flap forming a seat for the next adjacent sleeve inclosed strand of cord.

5. In a pneumatic tire casing, inner and outer plies of cord, and a parting ply of fabric disposed between the plies of cord, each ply of cord including a plurality of substantially parallel strands extending transversely and diagonally of the tire, the strands of one ply extending at an angle substantially opposite to the strands of the other and each strand of each ply being inclosed in a fabric sleeve.

[Claim 6 not printed in the Gazette.]

1,192,091. BASKET. EDWARD M. MILLER, Salisbury, N. C. Filed Sept. 11, 1915. Serial No. 50,239. (Cl. 150—51.)



1. A basket comprising a bottom frame member, uprights rising therefrom, a pouch body slidably and detachably connected with the uprights, an upper frame member detachably connected with the uprights and having a receiving channel, and means detachably clamping the edge of said pouch body within said channel.

2. A basket comprising a bottom frame member, uprights rising therefrom, a pouch body slidably and detachably engaging said uprights, an upper frame member detachably connected with the uprights, and means detachably securing the upper edge of the pouch body to said upper frame member.

3. A basket comprising a lower frame member, uprights rising therefrom, a channeled upper frame member detachably connected with the uprights, a pouch body slidably and detachably engaging the uprights, said pouch body having its upper edge seated in the channel of said channeled member, and a sectional clamping strip detachably connected with the channeled member and clamping the edge of the pouch body within the channel thereof.

4. A basket comprising a bottom frame member, uprights rising therefrom, a pouch body provided with pockets upon the exterior thereof slidably and detachably engaging said uprights, an upper frame member detachably connected with the uprights, and a clamping element detachably connected with the upper frame member and detachably clamping the upper edge of the pouch body thereto.

5. A basket comprising a frame including longitudinally and transversely extending substantially U-shaped members, an upper frame member detachably connected with the upper ends of the vertical arms of said members, a pouch body within the frame and having external pockets slidably and detachably engaging said vertical arms, and means detachably clamping the edge of the pouch body to said upper detachable frame member.

[Claim 6 not printed in the Gazette.]

1,192,092. GEM-SETTING. LEWIS MOSES, North Attleboro, Mass., assignor to H. D. Merritt Company, North Attleboro, Mass., a Corporation of Rhode Island. Filed June 25, 1906. Serial No. 323,221. (Cl. 63—28.)

1. A multiple gem setting comprising a bar of metal having a longitudinally cut groove on one side and cut cross-groves intersecting said groove, whereby the metal between said grooves projects from the base as prongs.

2. A multiple gem setting comprising a bar of metal having a longitudinally cut groove on one side and cut cross-grooves of substantially the same depth as and intersecting said groove, whereby the metal between said grooves projects from the base as prongs.



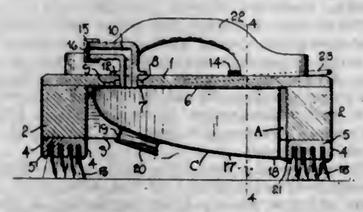
3. A multiple gem setting comprising a bar of metal having a longitudinally cut groove on one side and cut cross grooves intersecting said groove, whereby the metal between said grooves projects from the base as prongs, and cut depressions in the base between said cut-grooves.

4. In a gem setting a bar of metal having a series of upstanding prongs arranged in pairs along the side edges of said bar, the relative positions of the prongs upon one side edge corresponding with those upon the opposite side edge, the corresponding pairs of prongs upon opposite side edges marking off the face of the bar into sections.

5. In a gem setting a bar of metal having a series of upstanding prongs arranged in pairs along the side edges of said bar, the relative positions of the pairs upon one side edge corresponding with those upon the opposite side edge, the corresponding pairs of prongs upon opposite side edges marking off the face of the bar into substantially square sections.

[Claim 6 not printed in the Gazette.]

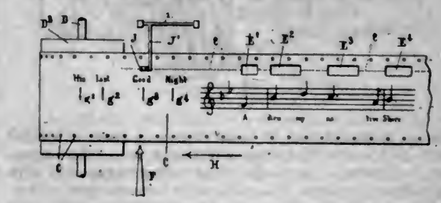
1,192,093. SCRUBBING DEVICE. CHARLES R. MOSS, Richmond, Va., assignor to Charles R. Moss, Edward M. Hall, and Charles W. Moss, doing business under the firm-name of Crystal Stone-Yeast Company, Richmond, Va. Filed Dec. 18, 1915. Serial No. 67,628. (Cl. 15—51.)



1. A device of the character described comprising an elongated body, brushes carried by the under surface of the body and disposed transversely thereof, said brushes being spaced apart longitudinally of the body, a container carried by the under surface of the body intermediate the brushes, the bottom of the container adjacent one end being provided with a transverse row of restricted openings, the bottom of the container being inclined outwardly relative to the body toward the end of the bottom provided with the openings, the upper end portion of the bottom being provided with a filling opening at a point inwardly of and spaced from said upper end, and removable means for sealing the filling opening.

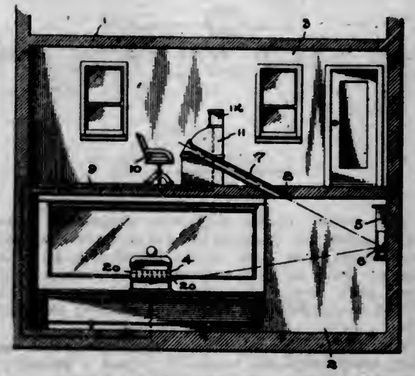
2. A device of the character described comprising an elongated body, brushes carried by the under surface of the body and disposed transversely thereof, said brushes being spaced apart longitudinally of the body, a container carried by the under surface of the body intermediate the brushes, the bottom of the container adjacent one end being provided with a transverse row of restricted openings, the bottom of the container being inclined outwardly relative to the body toward the end of the bottom provided with the openings, the upper end portion of the bottom being provided with a filling opening at a point inwardly of and spaced from said upper end, and removable means for sealing the filling opening, the end of the body provided with the openings being provided with an extension disposed transversely thereof and inclined outwardly relative to the body and in continuity with the bottom of the container, the outer surface of the extension serving to carry the liquid discharged through the restricted openings in the bottom of the container upon the adjacent brush when the device is being reciprocated in a vertical direction.

1,192,094. CINEMATOGRAPHIC APPARATUS. JEAN-JOSEPH MOUIS, Châlon-sur-Saône, France. Filed June 10, 1911. Serial No. 632,515. (Cl. 88—16.2.)



In a cinematographic apparatus, the combination with a projector, and a film containing pictures, of a synchrone band bearing musical characters, a work syllable arranged opposite each of said characters, said band having perforations corresponding to such characters as described, said characters being arranged on the band so as to synchronize with the pictures on the film, synchronizing propelling devices intermediate the said band and the projector, and a pivotal time-beater arranged adjacent the band and adapted to be operated and controlled by the perforations in said band, as set forth.

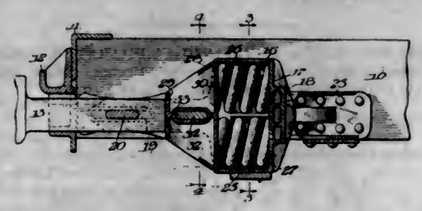
1,192,095. FRAUD-DETECTOR. HENRY MÜLLER, Philadelphia, Pa. Filed Aug. 19, 1914. Serial No. 857,459. (Cl. 235—23.)



1. A cash register in combination with an indicator remote therefrom, means for actuating said indicator upon operation of the cash register, and means for reflecting the image of the cash register to a point adjacent said indicator, substantially as described.

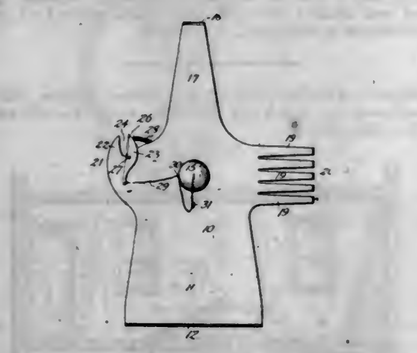
2. The combination with a cash register having movable indicators, of an electric indicator located at a distance from the cash register, a metal bar in the upper portion of the cash register and insulated therefrom, a bar of insulation secured to the metal bar, a series of movable contacts secured to the bar of insulation, said movable contacts having their free ends bent downwardly and projected forwardly and positioned over the indicators, stationary contacts secured to the first-mentioned bar, each stationary contact having a recess in its free end to receive the movable contact, and an electric indicator included in electric circuits with said contacts and a source of electricity supply, substantially as described.

1,192,096. DRAFT-RIGGING FOR CARS. CHARLES J. NASH, Chicago, Ill., assignor to Universal Draft Gear Attachment Co., Chicago, Ill., a Corporation of Illinois. Filed Sept. 23, 1914. Serial No. 863,062. (Cl. 213—42.)



In a draft rigging, in combination, a pair of slotted draft plates having buffing abutments, a coupler extension comprising a spring-inclosing casing engageable with the buffing shoulders and open at its forward end, a bearing block normally forward of and slidable within the open end of the casing, a spring housed within the casing and reacting between the inner end thereof and the bearing block, and a key set through the block and slots in the draft plates.

1,192,097. HOE. ARTHUR F. NELSON, Bayfield, Wis. Filed Aug. 30, 1915. Serial No. 48,114. (Cl. 55—39.)



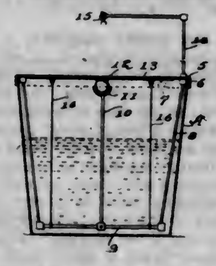
1. A manual garden implement comprising a metal plate having tool elements formed on three sides and a hook-shaped shear blade on the fourth side, all of said elements being integral with the metal plate, a pivoted shear blade on the plate to coöperate with the hook-shaped shear blade, and means for operating the pivoted blade.

2. A manual garden implement comprising a metal plate with which are integrally formed a plurality of tools for working a garden and a hook serving as one blade of a cutting and pruning shears, a second shear blade pivotally mounted on the metal plate, means for normally holding the shear blades apart, and means for optionally closing them.

3. A manual garden implement comprising a metal plate, a socket projecting substantially from the center of one face of said plate, a handle seated at one end in said socket and fixedly secured therein, a plurality of tools for working a garden integral with said plate, and a hook serving as one blade of a cutting and pruning shears, a second blade pivotally mounted on the metal plate, a spring for normally holding said blades apart, and a flexible connection from the pivoted blade to the distant end of the handle for closing the blades.

4. A manual garden implement comprising a metal plate with which are integrally formed a plurality of tools for working a garden and a hook serving as one blade of a cutting and pruning shears, said tools projecting outwardly from the sides of the metal plate in the plane of the plate, a second shear blade pivotally mounted on the metal plate, and means for operating said blade.

1,192,098. TRAP. WALTER NELSON, New York, N. Y. Filed May 20, 1916. Serial No. 98,842. (Cl. 43—24.)



A trap comprising a ring having a marginal flange adapted for detachable telescopic engagement with the mouth edge of a receptacle, a frame depending from said ring, a standard rising centrally from the frame and having a fulcrum head, a spherical member seated in said fulcrum head, a platform centrally fixed to the fulcrum member, means for sustaining a bait over the platform, and means connected at a plurality of points with the platform and the frame to tension said platform and normally hold the same in a plane with the ring.

1,192,099. FIRE-BRICK AND METHOD OF MAKING SAME. SVEN H. NORDIN, Tacoma, Wash. Filed Aug. 7, 1914. Serial No. 855,663. (Cl. 106—24.)

1. The process of constructing bricks which consists in separately heating quartz and calcium carbonate to a temperature of approximately 1500° centigrade, in crushing and sifting the quartz and resultant lime so heated to form a flour, in mixing the quartz and lime with water to form a brick making paste, in forming bricks from the paste, and in subsequently tempering the bricks under high steam pressure.

2. The process of constructing bricks which consists in separately heating quartz and calcium carbonate to a temperature of approximately 1500° centigrade, in crushing and sifting the quartz and resultant lime so heated to form a flour, in mixing the quartz and lime with water to form a brick making paste, in forming bricks from the paste, and in subsequently tempering the bricks under high steam pressure, the tempering being performed before the bricks have had an opportunity to become surface dried.

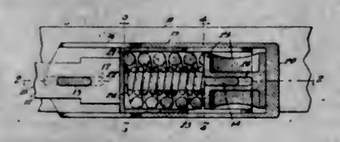
3. The process of constructing bricks which consists in separately heating quartz and calcium carbonate to a temperature of approximately 1500° centigrade, in crushing and sifting the quartz and resultant lime so heated to form a flour, in mixing the quartz and lime with water to form a brick making paste, in forming bricks from the paste, and in subsequently tempering the bricks under high steam pressure, the quantity of water employed being substantially 6%.

4. The process of manufacturing high fire resistance bricks which consists in separately heating calcium carbonate and quartz to expel all moisture and volatile impurities, in forming a flour from the quartz, in mixing the resultant lime with a portion of the quartz, in adding water to the mixture, in supplying additional water and the remainder of the quarts to the mixture thus formed, in forming bricks from the paste thus obtained, and in tempering the bricks under high steam pressure for a considerable length of time.

5. The process of constructing bricks, which consists in separately heating calcium carbonate and quartz to a temperature of not less than 1500° centigrade, in reducing the quarts and resultant lime to powders, one-third of the quarts being reduced to consist of grains from one and one-half to two millimeters in diameter, and the other two-thirds being more finely reduced, in mixing the lime and a portion of the quarts while dry, in adding water and the remaining quarts and thoroughly mixing the resultant paste, and in forming and tempering bricks from the paste thus obtained, the quantity of lime employed approximating 6% of the quantity of quarts employed.

[Claim 6 not printed in the Gazette.]

1,192,100. SPRING DRAFT-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 23, 1914. Serial No. 868,208. (Cl. 213—42.)



1. In a railway draft rigging, the combination with draft sills, of a stationary key mounted in said sills, a drawbar, two casings, one telescoped within the other and both of which are slidable with respect to said key, one forwardly only and the other rearwardly only, cushioning means mounted within said casings, and a coupler key connecting one of said casings with said drawbar, said coupler key being slidable with respect to said casing.

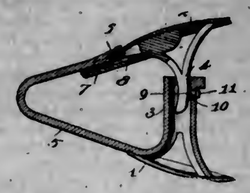
2. In a railway draft rigging, the combination with draft members, of a stationary key mounted in slots in said draft members, a casing slidably mounted on said stationary key, said casing being provided with arms extended forwardly of the key and also with portions thereof extending rearwardly of the key, said forwardly extended arms being slotted and adapted to be connected to a drawbar by a coupler key, a second casing telescoped within the first named casing and slidable rearwardly with respect to said stationary key, said casing being adapted to have its front end engaged by the butt end of the drawbar under buff, and cushioning means within said casings.

3. In a draft rigging for railway cars, the combination with draft sills, of a stationary key in said sills, two telescoped casings slidably mounted on said key, each of said casings having a closed end, said closed ends being oppositely disposed, a follower separate from either casing and slidably mounted on said key and engaging the closed end of one of said casings, springs mounted within said casings and between said follower and the closed end of the other casing, and means for connecting one of said casings to the draw bar.

4. In a draft rigging for railway cars, the combination with draft sills, of a horizontal stationary key mounted between said sills, two telescoped casings, the outer of said casings being closed at its rear end and the inner at its front end, both of said casings having longitudinally extending slots and thereby slidably mounted on said key, the outer casing being provided with forwardly extended side arms slotted to receive a coupler key, a draw bar, a coupler key extended through said draw bar and the slotted arms of said outer casing, the rear end of said draw bar engaging the front end of the inner casing, and a spring mounted within the inner casing.

5. In a draft rigging for railway cars, the combination with the draft sills, of a stationary key mounted in said sills, two telescoped casings slidably mounted on said key, the outer of said casings being closed at its rear end and the inner at its forward end, a follower slidably mounted on said key and within said casings, a spring mounted within the inner casing between the front end thereof and said follower, and means for connecting the outer casing with a draw bar.

1,192,101. CUFF-LINK. THOMAS M. OBSDOUM, Chicago, Ill., assignor, by direct and mesne assignments, to The O. Z. O. Jewelry Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1915. Serial No. 17,612. (Cl. 24—102.)

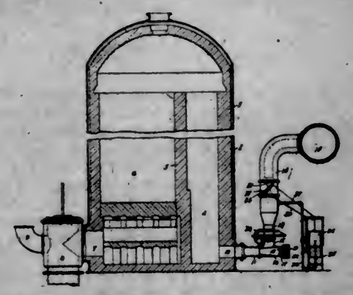


1. A cuff link comprising a V-shaped bar adapted to embrace the edges of a cuff, and two interengaging securing members adapted to pass through the button-holes of the cuff, one of said members being rigidly connected to one end of said bar, the second of said members being pivotally connected to the other end of said bar for movement toward and away from the other.

2. In a cuff link, the combination of a substantially rigid bent bar adapted to embrace the edges of a cuff, two securing members adapted to pass through the button-holes of a cuff and attached to said bar, said members consisting of a socket secured to one end of said bar, and a projection adapted to enter said socket, said projection being pivoted to the other end of said bar, and a spring tending to hold said projection in said socket.

3. In a cuff link, the combination of a substantially rigid bent bar adapted to embrace the edges of a cuff, a socket secured to one end of said bar, a projection adapted to enter said socket, said projection being pivoted to the other end of said bar, and a spring tending to hold said projection in said socket, one of the two last mentioned parts having an opening, and the other of said parts having a locking member adapted to enter said opening.

1,192,102. HOT-BLAST-STOVE APPLIANCE. CHESTER A. ORR, Cleveland, Ohio. Filed Aug. 3, 1915. Serial No. 43,452. (Cl. 158—109.)



1. A hot blast stove appliance comprising in combination a mixing pipe for supplying gas and air to the stove combustion chamber, a gas supply main, a gas inlet pipe connecting the mixing pipe and gas supply main, an air inlet pipe having an extension projecting forwardly within the mixing pipe, and a turbine driven fan at the inlet end of said extension for supplying air under pressure to said mixing pipe.

2. A hot blast stove appliance comprising in combination a mixing pipe for supplying gas and air to the stove combustion chamber, a gas supply main, a gas inlet pipe connecting the mixing pipe and gas supply main, an air inlet pipe having an extension projecting forwardly within the mixing pipe, a turbine driven fan on said extension for supplying air under pressure to said mixing pipe, and means for regulating the gas supply to said mixing pipe.

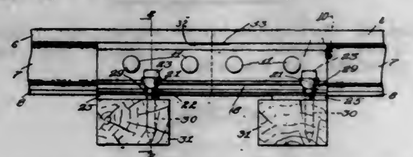
3. A hot blast stove appliance comprising in combination a mixing pipe movable into and out of position to supply gas and air to the stove combustion chamber, means for moving said mixing pipe into and out of operative position relative to the stove combustion chamber, a gas supply main, a gas inlet pipe connecting the mixing pipe and gas supply main, an air inlet thereon having an extension for supplying air to said mixing pipe, a fan mounted in said extension, and a variable speed turbine for driving said fan to supply air under pressure to said mixing pipe.

4. A hot blast stove appliance comprising in combination a mixing pipe movable into and out of position to supply gas and air to the stove combustion chamber, means for moving said mixing pipe into and out of operative position relative to the stove combustion chamber, a gas supply main, a gas inlet pipe connecting the mixing pipe and branch pipe on the gas supply main, an air inlet pipe having an extension for supplying air to said mixing pipe, a fan mounted in said extension, a variable speed turbine for driving said fan to supply air under pressure to said mixing pipe, and means on the gas supply main for regulating the gas supply to said mixing pipe.

5. A hot blast stove appliance comprising in combination a mixing pipe movable into and out of position for supplying gas and air to the stove combustion chamber, a gas supply main, means for moving said mixing pipe into and out of operative position, a gas inlet pipe on said mixing pipe connecting the mixing pipe and gas supply main, an air inlet pipe on the mixing pipe having an extension for supplying air to said mixing pipe, a fan mounted in said extension to supply air under pressure to said mixing pipe, a variable speed turbine for driving said fan, a valve in said gas supply main, and a gasometer operatively connected to said valve for actuating the valve to automatically regulate the gas supply to said mixing pipe.

[Claim 6 not printed in the Gazette.]

1,192,103. RAIL-JOINT. ALPHONSO T. PALMER, Cicero, Ill. Filed Nov. 18, 1915. Serial No. 62,135. (Cl. 239—9.)



1. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish plates secured to the rail ends and engaging the upper and lower edges of the webs of the said ends; tie plates on the under sides of the flanges of the rail ends; a wedge between the lower edge of each fish plate and the flanges of the rail ends adjacent such lower edge; and bolts passing through the tie plates and having connections with the wedges holding the latter against retrograde movement.

2. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges, the upper sides of the flanges being inclined toward the webs; fish plates secured to the rail ends and engaging the upper and lower edges of the webs, the lower edge surfaces of the fish plates being inclined away from the webs and meeting the upper sides of the flanges at relatively sharp angles; tie plates on the under sides of the flanges; wedges having their toe portions disposed between the inclined surfaces of the fish plates and flanges; and headed bolts threaded in the tie plates at the outer edges of the flanges, extending across the heels of the wedges and connected with the latter to hold the wedges against retrograde movement.

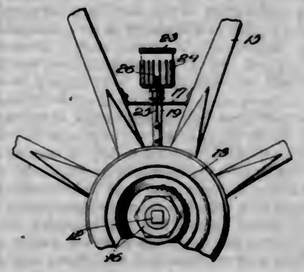
3. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish plates secured to the rail ends and engaging the latter at the junctures of the webs and flanges, and webs and heads thereof; tie plates under the rail ends; wedges between the lower edges of the fish plates and the flanges of the rail ends adjacent such edges, there being notches in the rear edges of the wedges and inclined surfaces adjacent such notches; and headed bolts passing through the tie plates and said notches, said bolts exerting force downwardly on said inclined surfaces and holding the wedges in operative positions.

4. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish plates secured to the rail ends and engaging the latter at the junctures of the webs and flanges, and webs and heads thereof; tie plates under the rail ends; wedges between the lower edges of the fish plates and the flanges of the rail ends adjacent such edges, there being notches in the rear edges of the wedges and inclined surfaces adjacent such notches; headed bolts passing through the tie plates and said notches; and followers on the bolts against the heads of the latter and having inclined lower surfaces engaging the inclined surfaces of the wedges holding said wedges against retrograde movement.

5. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish plates secured to the rail ends and engaging the latter at the junctures of the webs and heads, and wedges and flanges thereof; tie plates under the rail ends; wedges between the lower edges of the fish plates and flanges of the rail ends adjacent such edges there being notches in the rear edges of the wedges; headed bolts threaded in the tie plates and passing through said notches; followers on the bolts and between the heads of the bolts and wedges holding the latter in operative positions; and projections on the followers dove-tailed in the lower edges of the fish plates.

[Claims 6 to 8 not printed in the Gazette.]

1,192,104. LUBRICATOR FOR VEHICLE-WHEELS. FREDERICK W. PARK, Oxford, Mich. Filed July 1, 1915. Serial No. 37,529. (Cl. 64—27.)



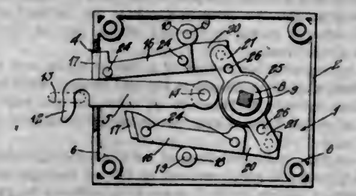
1. A lubricator including a stem having a lubricant receiving cup communicating therewith, a bracket for supporting the stem and adapted for attachment to a vehicle wheel with the stem communicating with the wheel skein, a cap adjustable longitudinally of the cup, and a detent carried by the stem and engaging the cap for holding the cap at adjustment with the bracket freely engaging the detent to provide a guide therefor.

2. A lubricator including a stem having a lubricant receiving cup communicating therewith, a bracket for supporting the stem and adapted for attachment to a vehicle wheel with the stem communicating with the wheel skein, a cap rotatably adjustable upon the cup, and a detent carried by the stem and having its free end engaging the cap for holding the cap at adjustment with the free extremity of the detent engaged by the bracket to hold the free end of said detent against turning movement with the cap.

3. A lubricator including a stem having a lubricant receiving cup communicating therewith, a cap adjustable upon the cup, a bracket for supporting the stem and adapted for attachment to a vehicle wheel with the stem communicating with the wheel skein, and a detent carried by the stem with its free end guided by the bracket to engage the cap for holding the cap at adjustment.

4. A lubricator including a stem having a lubricant receiving cup communicating therewith, a cap rotatably adjustable upon the cup, a bracket for supporting the stem and adapted for attachment to a vehicle wheel with the stem communicating with the wheel skein, there being a notch formed in the bracket, and a detent fixed at one end to the stem with its free extremity extending through said notch to be guided by the bracket to engage the cap for holding the cap at adjustment.

1,192,105. LATCH. WILLIAM PATTERSON, Correctionville, Iowa, assignor of one-third to Fritz Bohle, Correctionville, Iowa. Filed Mar. 22, 1916. Serial No. 85,962. (Cl. 70—45.)



1. The combination of a lock casing, a latch pivoted in and projecting through the same, locking bars mounted freely in the casing above and below the latch and adapted to engage the casing respectively above and below the latch whereby to lock the latch in a set position, and means for operating said locking bars.

2. The combination of a casing, a latch pivotally mounted in the casing and projecting through the same, locking bars mounted freely in the casing above and below the latch and adapted to engage opposite sides of the same, means within the casing to guide the said locking bars into engagement with the casing at the side of the latch whereby to hold the latch in a set position, and means for imparting movement to the locking bars simultaneously in opposite directions.

3. The combination of a casing, a latch pivoted to and projecting through the casing, a knob spindle mounted in and extending through the casing, locking bars disposed above and below the latch, and connections between the knob spindle and the locking bars whereby to cause either of said locking bars to engage between the latch and the casing to hold the latch in a set position.

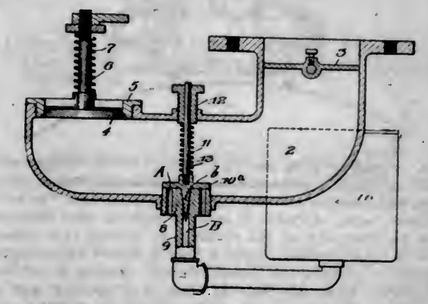
4. The combination of a casing, a latch pivoted therein and projecting therethrough, locking bars mounted within the casing above and below the latch, a knob spindle mounted in and extending through the casing, said knob spindle having a longitudinal sliding movement and also a rotary movement, connections between said knob spindle and the locking bars whereby either locking bar may be caused to engage between the latch and the casing to hold the latch in a set position, means for yieldably holding the spindle against sliding movement, and means for positively holding the spindle against rotary movement.

5. The combination of a casing having a slot in one end, a latch pivoted within the casing and projecting through said slot, locking bars mounted freely within the casing above and below the latch, and means for causing the outer end of either tumbler to fill the slot in the casing between the end of the same and the side of the latch whereby to hold the latch in a set position.

[Claims 6 to 8 not printed in the Gazette.]

1,192,106. CARBURETER. WINFIELD P. PEMBROKE, Rochester, N. Y. Filed Mar. 16, 1914. Serial No. 824,885. (Cl. 48—154.1.)

1. In a carbureter, the combination with a casing in which a partial vacuum is maintained, of a head insertible through a wall of the casing and having a reduced tubular extension positioned exteriorly of the casing forming a fuel inlet communicating with said casing, said head having air inlets formed therethrough communicating with the casing and terminating outwardly substantially at a point where the tubular extension connects with said head, and a valve normally closing the inlets and adapted to be opened by air currents passing through said air inlets and serving, when opened, to deflect the liquid current into the path of the air currents.



2. In a carbureter, the combination with a casing in which a partial vacuum is maintained, of a head inserted in the wall of the casing having a plurality of air inlets therein and provided with a centrally disposed fuel inlet and a valve normally closing the fuel and air inlets and adapted to be opened by air currents passing through the air inlets.

3. In a carbureter, the combination with a casing in which a partial vacuum is maintained, of a head inserted in the wall of the casing having a plurality of air inlets therein and provided with a centrally disposed inwardly tapering fuel inlet and a valve normally closing the air inlets and adapted to be opened by air currents entering the latter and having a pin projecting into the fuel inlet.

1,192,107. NUT-LOCK. WILLIAM B. PEOPLES, Elberton, Wash., assignor of one-fourth to Augustus R. Metz and one-fourth to Hugh R. Penn, Elberton, Wash. Filed Nov. 11, 1913. Serial No. 800,321. (Cl. 151—3.)

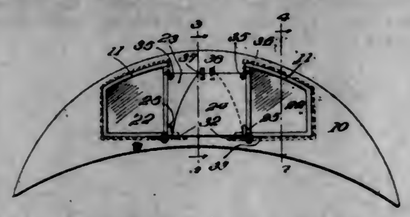


In a nut lock, a bolt having a threaded shank, a locking plate and a nut including means for holding one against independent rotation with respect to the other and said plate having a smooth cylindrical hole equal in diameter to the maximum diameter of the threaded portion of the bolt to pass over the threads thereof with a working clearance, said hole being formed with its axis oblique to the plane of the plate thereby disposing the latter at an oblique angle to the axis of the bolt, the material of the plate being softer than the material of which the bolt is composed whereby shifting movement of the plate under pressure from the nut will jam and mutilate marginal portions of the hole against the threads to fix the plate against rotation with respect to the bolt, substantially as and for the purposes set forth.

1,192,108. HEAD-COVERING. EDWIN A. PETERSON, Brattleboro, Vt., assignor of one-half to Elmer V. Peterson, St. Paul, Minn. Filed Jan. 27, 1915. Serial No. 4,724. (Cl. 2—106.)

1. A head covering having a vizor provided with a sight opening, a translucent closure mounted in said opening, a relatively rigid curtain swingingly adjustable to close the said opening, and a soft facing carried by the curtain and adapted to ride over the closure upon the curtain for cleaning the closure.

2. A head covering having a visor provided with a sight opening, a translucent closure mounted in said opening, a metallic facing surrounding the opening, and elements fitting over the facing and provided with prongs engaging the visor for connecting the facing therewith.



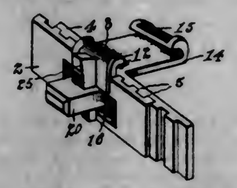
3. A head covering having a vizor provided with spaced sight openings, translucent closures mounted in said openings, and curtains entirely covering said closures, the said curtains being shiftable to entirely uncover said closures to a position between the openings to overlap each other.

4. A head covering having a vizor provided with a sight opening, a translucent closure for said opening, a curtain adjustable upon the vizor to close said opening, and a pivot pin for the curtain having arms operatively and yieldably engaging the curtain for holding the curtain at adjustment.

5. A head covering having a vizor provided with a sight opening, a translucent closure mounted in said opening, a pivot pin fixed to the vizor and provided with prongs, and a curtain having a hinge member swingingly mounted on said prongs, the prongs of said pin being adapted to provide stop shoulders disposed to respectively engage the curtain when swung to inoperative position away from said opening and to engage the curtain when swung to operative position to close the said opening for limiting the curtain in its movement in each direction.

[Claims 6 and 7 not printed in the Gazette.]

1,192,109. RAIL-ANCHOR AND TIE-SPACER. ALBERT L. PIER, Louisburg, Wis. Filed Mar. 20, 1914, Serial No. 825,946. Renewed May 12, 1916. Serial No. 97,180. (Cl. 238—4.)

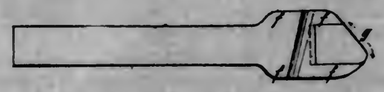


1. In a device of the character described, two members each having one irregular surface adapted to be engaged by the irregular surface of the other, means for adjusting the members longitudinally to adapt them to engage ties set at different distances apart, means connected with the members for grasping a rail, and means for locking the two members together while in engagement with a rail and in their adjusted position between two ties.

2. In a device of the character described, two members provided with corrugations adapted to engage each other, means connected with the members for engaging the opposite edges of the flange of a rail, means for adjusting the members to adapt them to engage adjacent sides of ties spaced at different distances apart, and a plug and key for locking the two members together in their adjusted position.

3. In a device of the character described, two members each provided with one uneven surface adapted to engage each other and restrain the movement of either, means for adjusting the members longitudinally to adapt them to fill different spaces between the ties, hooks on each member for grasping the opposite edges of a rail and each member provided with a slot, a plug provided with a slot and adapted to be inserted in the slots in the members, and a key engaging the slot in the plug to lock the two members together and space the ties and anchor the rails.

1,192,110. CUTTING-TOOL. THOMAS PILKINGTON, Wilkinsburg, Pa. Filed Jan. 25, 1916. Serial No. 74,109. (Cl. 29—96.)



1. A cutting tool consisting of a holder bar of metal, a tip of tool steel welded or brazed thereto, and metal reinforcing strips welded, brazed or soldered to the sides of the tip and holder bar so as to increase the vertical cross-sectional area of metal in tip and holder bar at the cutting end of the tool.

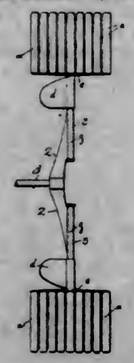
2. A cutting tool consisting of a bar of metal and a tip of tool steel welded or brazed to the end thereof with metal which also extends to the side or sides of tool steel tip and bar so as to form a reinforcement between tool steel tip and bar.

3. A cutting tool consisting of a bar of metal, together with a tip of hard metal welded or brazed thereto, and a metal boss or bosses welded, brazed or soldered to one or more sides of the tip and holder.

4. A cutting tool consisting of a holder of metal with cutting means of hard metal integrally united thereto, and metal reinforcing strips integrally united to the entire, or the greater part of the side or sides of the cutting means and to a portion of one or both sides of the holder.

5. A cutting tool consisting of a four-sided bar of metal with one end formed to a flat surface which is inclined at any angle to the longitudinal axis of the metal bar, and a tool steel tip of four sided cross section, welded, brazed or soldered thereto, together with one or more bosses of metal, welded, brazed or soldered to the cutting end of the tool in such a manner as to enlarge the cross sectional area of the cutting end.

1,192,111. CONSTRUCTION OF PROPELLERS. WALTER CHARLES PITTER, Woolwich, England. Filed Dec. 5, 1910. Serial No. 595,740. (Cl. 170—162.)



1. In a fan, the combination of a shaft, a plurality of fan blades in serial alinement carried by said shaft, said fan blades being spaced from each other a distance large enough to permit a relatively large volume of air to pass between adjacent blades, said distance being not large enough to cause the inclusion of dead air between adjacent blades.

2. In a fan, the combination of a shaft, a plurality of fan blades in serial alinement carried by said shaft, said fan blades being uniformly spaced from each other, the intervening spaces between each two fan blades being large enough to permit a relatively large volume of air to pass between adjacent blades, said spaces, however, being not large enough to cause the inclusion of dead air between adjacent blades.

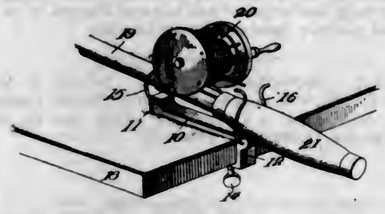
3. In a fan, the combination of a shaft, a plurality of fan blades in serial arrangement along a line forming an angle with the axis of said shaft, the distance between any two adjacent blades of the series located farther back from the front end of the fan than any other pair being not larger than the distance between the blades of said other pair.

4. A propeller comprising in combination a plurality of sets of blades, each set of blades being mounted for independent rotation about an individual axis radiating from the axis of rotation of the propeller as a whole, and a guide vane for each set of blades mounted to rotate with the propeller in air undisturbed by said blades, said vane when the propeller is working lying in the direction of the resultant of the forward velocity and the linear rotary velocity of the meeting edges of the blades.

5. A propeller comprising in combination a plurality of sets of blades, each set of blades being mounted for independent rotation about an individual axis radiating from the axis of rotation of the propeller as a whole, and a guide vane for each set of blades mounted to rotate with the propeller in air undisturbed by said blades, said vane when the propeller is working lying in the direction of the resultant of the forward velocity and the linear rotary velocity of the leading edges of the blades, a plane passing through the centers of the blades of each set including also the individual axis of the set.

[Claims 6 and 7 not printed in the Gazette.]

1,192,112. HOLDER FOR FISHING-POLES. JOHN H. PORTER, Jackson, Mich. Filed June 5, 1915. Serial No. 32,441. (Cl. 248—37.)



1. A device of the character described including a body portion, an arm carried thereby, and a holding member mounted upon the body portion, said arm being adapted to engage a reel to operatively coöperate therewith with a pole supporting the reel engaged by said holding member.

2. A device of the character described including a body portion, spaced arms carried thereby, and a holding member mounted upon the body portion, said arms being adapted to engage a reel rested thereon with a pole supporting the reel disposed between the arms and engaged by said holding member with the arms adapted to hold the pole against lateral shifting movement.

3. A device of the character described including a body portion, an arm carried by the body portion, and a holding member mounted upon the body portion, the arm being adapted to engage a reel to coact with a line upon the reel whereby to provide a brake for the reel with a pole supporting the reel engaged by said holding member.

4. A device of the character described including a body portion, spaced yieldable arms carried thereby and extending above the body portion in spaced relation thereto, and a holding member carried by the body portion, said arms being adapted to engage a reel having a line wound thereon to frictionally coact with the line to provide a brake for the reel with a pole supporting the reel disposed between said arms and normally gravitating to urge the reel toward the said arms and with the pole engaged by said holding member.

5. A device of the character described including a body portion, spaced arms mounted upon the body portion and curving rearwardly toward the inner end of the body portion in spaced relation thereto, and a holding member swingingly connected to the body portion, the said arms being adapted to engage a reel with a pole supporting the reel disposed between said arms and embraced by said holding member.

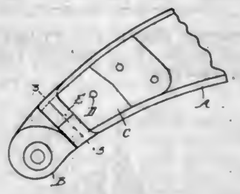
[Claims 6 and 7 not printed in the Gazette.]

1,192,113. RELIEF-VALVE. ANDREW POSPESEL, Oswego, N. Y. Filed Mar. 14, 1916. Serial No. 84,134. (Cl. 236—9.)



In a device for the purpose set forth, the combination of a thermostatic tube, a head fitted to and extending over the outer end of the bore of said tube and provided with a laterally projecting guide, the head being constructed with an outlet leading from the tube, a pin projecting longitudinally from the outer end of said head, a bar disposed at one side of and fixed at one end to the tube and projecting at its opposite end beyond said head and through the guide thereon, a valve seating against the inner end of the outlet from the head and having a stem passing longitudinally through the head, a lever pivoted to the outer free end of the fixed bar and having its intermediate portion mounted to oscillate on the pin, the free end of said lever bearing against the outer end of the valve stem, an adjusting nut mounted upon the said pin and bearing against the outer side of the lever, a stop on the valve stem, and a spring coiled around the valve stem between said stop and the end of the head whereby the valve will be normally seated and upon contraction of the tube will be moved longitudinally in the same and unseated.

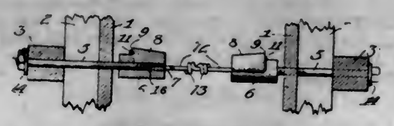
1,192,114. VEHICLE-FRAME. ALDEN L. PUTNAM, Detroit, Mich., assignor to Detroit Pressed Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 8, 1914. Serial No. 876,098. (Cl. 21—182.)



1. In a vehicle frame, the combination with a channel sill having a tapering end portion, of a horn provided with a flaring shank fitting the channel of said sill, ears integral with the flanges of said sill bent to overlap said shank and to abut against each other, the ends of said ears also abutting against a shoulder on the shank; and said abutting edges being welded to each other.

2. In a vehicle frame, the combination with a sill of channel section having a tapering end portion, of a horn provided with a flaring shank fitting the channel and provided also with a shoulder bearing against the end of the sill, and integral ears projecting from the flanges of said channel and bent to overlap said shank, the joint between the edges of said ears and that between the end of the sill and the abutting shoulder on the horn being welded.

1,192,115. SECURING DEVICE FOR CONCRETE-FORMS. HANS RASMUSSEN, Chicago, Ill. Filed Jan. 31, 1916. Serial No. 75,384. (Cl. 25—131.)

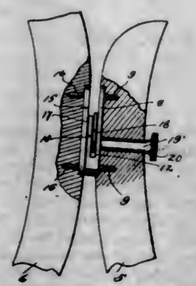


1. A fastening device for securing the walls of concrete forms in spaced relation to each other, comprising, in combination, complementary anchoring members adapted to be located within the wall-space away from but near to the respective side-walls of a form, said members having interior screw-threads for receiving lag-screws adapted to be extended inwardly thereto through said walls, each of said anchoring members being provided with peripheral wire engaging means to enable a wire to be looped over the body thereof and extended and secured between them in the plane of their axes and a looped wire tie for engaging said engaging means to form a connection between said anchoring members.

2. A fastening device for securing the walls of concrete forms in spaced relation to each other, comprising, in combination, complementary anchoring members adapted to be located within the wall-space away from but near to the respective side walls of a form, said members having interior screw-threads for receiving lag-screws adapted to be extended inwardly thereto through said walls, each of said anchoring members being provided with peripheral wire engaging means to enable a wire to be looped over the body thereof and extended and secured between them in the plane of their axes, a looped wire tie for engaging said peripheral engaging means to form a connection between said anchoring members and lag-screws for securing said anchoring members to the walls of said form.

3. A fastening device of the class described, comprising, in combination, elongated complementary anchoring members adapted to be located in the wall-space at a predetermined distance from the respective side-walls of a form, said members having interior screw-threaded bores for receiving lag-screws adapted to be extended inwardly from opposite directions through said walls in alinement with said anchoring members, each of said anchoring members having a peripheral shoulder extending outwardly from its body, and partially surrounding said member, for receiving a wire loop thereover to form a connecting tie between said members and holding said wire in the axial plane of the latter.

1,192,116. MIRROR HINGE AND CLAMP. HERBERT C. RAY, Spokane, Wash. Filed Mar. 28, 1916. Serial No. 87,309. (Cl. 16—142.)



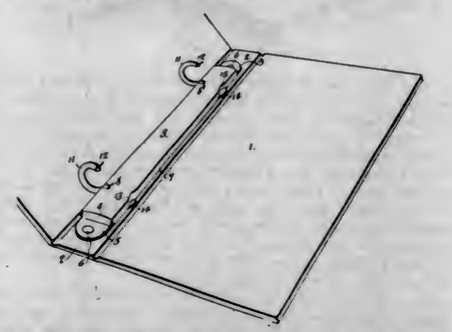
1. In a device of the class described, the combination with a standard and a swinging frame, an arm extending outwardly and upwardly from said standard to provide a channel between said arm and standard, a pintle on said frame, a bearing at the end of said arm in which said pintle rocks, a fixed plate on said pintle and suspended into said channel, and means for binding said plate against said arm, substantially as described.

2. In a device of the class described, the combination with a standard and a swinging frame, an arm projecting outwardly and upwardly from said standard to provide a channel between said standard and arm, the end of said arm being bifurcated, a pintle projecting outwardly from said frame and adapted to rest in said bifurcated portion, a rigid plate depending from said pintle for sliding movement within said channel, the said arm being provided with an opening, and the said plate being provided with an arcuate slot registering with said opening, and means adapted for engagement in said opening and slot for binding said plate against said arm, substantially as described.

3. In a device of the class described, the combination with a standard and a swinging frame, of bars secured to the adjacent faces of said standard and frame, an arm secured to and in spaced parallel relation to said standard bar, a bearing at the extremity of said arm, the said arm being provided with an interiorly threaded opening, the said standard bar being provided with an opening alined with said arm opening and of slightly greater diameter, a pintle on said frame bar adapted to rest in said bearing, a plate fixed on said pintle between said frame and standard bar, the said plate being provided with an arcuate slot alined with the openings in said arm and bar and being of slightly less width than the diameter of the latter a shank, a threaded stem at the end of said shank for engagement within the opening in said arm, and a shoulder on said shank adapted to impinge upon the edges of said arcuate slot, substantially as described.

4. In a device of the class described, the combination with a standard and a swinging frame, of a pintle extending laterally of said frame, a fixed plate depending from said pintle, the said plate having an arcuate slot concentric with said pintle, an arm secured to said standard and lying beneath said plate and rotatably supporting said pintle at one end, the said arm being provided with a threaded aperture alined with said slot, and a stem extending through said standard and slot and engaged at its end in said aperture, substantially as described.

1,192,117. LOOSE-LEAF BINDER. WILBUR E. REED, St. Joseph, Mo., assignor to Western Tablet Company, St. Joseph, Mo., a Corporation. Filed Dec. 22, 1915. Serial No. 68,233. (Cl. 129—24.)



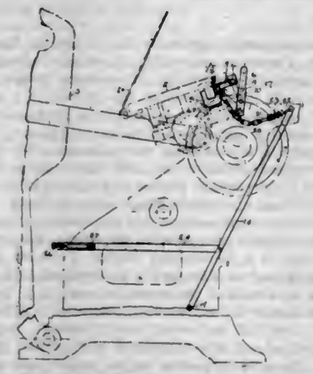
1. In a temporary binder, the combination with a frame plate and an arch carrying pivot rod, one edge of said plate being bent around said rod to form a pivot bearing therefor, the opposite edge of said plate having arch end receiving recesses, said recessed portions of said plate having provision for engaging the rod arch ends with retaining friction, substantially as shown and described.

2. In a temporary binder, a body plate having arch receiving notches at one edge and arch end engaging and retaining recesses at the other edge opposite to said notches, and an arch carrying rod concealed beneath said base plate and having arch members projecting through said arch receiving notches, and means for fastening said plate to a binder, said body plate at the retaining recesses being designed to engage the ends of said arches with retaining friction.

3. In a temporary binder, the combination with the base section having an engaging bearing groove on one side and a pair of engaging notches bent in on the other side, two paper engaging arches and a pivot rod connecting the same, said pivot rod being held in said bearing groove and said arches projecting above said base and adapted to have their ends seated in said engaging notches, substantially as shown and described.

4. In a temporary binder, a fixture comprising a plate having side walls, arch receiving notches in one side wall and arch end engaging and retaining recesses formed in the opposite side walls, arch members pivoted to said base and projecting through said arch receiving notches, said arch members being adapted to be swung over with their ends in engagement with said recesses, the construction of the aforesaid parts being such that the arches will be held in engagement with the recesses by retaining friction.

1,192,118. SAFETY DEVICE FOR PLATEN-PRESSES. WILLIAM M. REICHART, Cleveland, Ohio, assignor to The Chandler and Price Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 12, 1915. Serial No. 13,925. (Cl. 164—107.)



1. In a safety device for a machine having two jaws, one movable relatively to the other, the combination of a rock-shaft mounted on one such jaw; a guard pivotally attached to said shaft eccentrically of the latter's axis; a link connecting said guard with a point fixed relatively to said shaft; and means adapted to rock said shaft.

2. In a safety device for a machine having two jaws, one movable relatively to the other, the combination of a rock-shaft mounted on one such jaw; a guard pivotally attached to said shaft eccentrically of the latter's axis; a link connecting said guard with a point fixed relatively to said shaft; and means adapted to rock said shaft including an arm on said shaft and a lost-motion connection between said arm and a relatively fixed point on said machine.

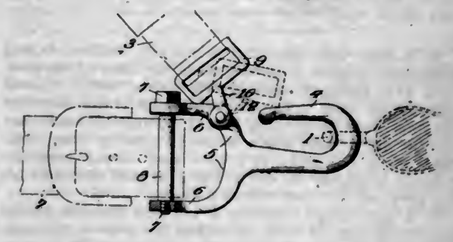
3. In a safety device for a machine having two jaws, one movable relatively to the other, the combination of a rock-shaft mounted on one such jaw; a guard pivotally attached to said shaft eccentrically of the latter's axis; a link connecting said guard with a point fixed relatively to said shaft; and means adapted to rock said shaft including an arm on said shaft and a flexible link connecting said arm and a relatively fixed point on said machine.

4. In a safety device for a machine having two jaws, one movable relatively to the other, the combination of a rock-shaft mounted on one such jaw; a guard pivotally attached to said shaft eccentrically of the latter's axis; a link connecting said guard with a point fixed relatively to said shaft; and means adapted to rock said shaft, said means being operable by such movable jaw.

5. In a safety device for a machine having two jaws, one movable relatively to the other, the combination of a rock-shaft mounted on one such jaw; a guard pivotally attached to said shaft eccentrically of the latter's axis; a link connecting said guard with a point fixed relatively to said shaft; means normally positioning said guard; and other means, operable by such movable jaw, adapted to rock said shaft against said first-named means.

[Claims 6 to 20 not printed in the Gazette.]

1,192,119. NECK-YOKE CONNECTOR AND THE LIKE FOR HARNESS. JOHN REICHERT, Racine, Wis. Filed July 14, 1915. Serial No. 39,824. (Cl. 54—59.)



1. A device of the character substantially as described, comprising a hook provided with a yoke, said yoke in the same plane as said hook, and a loop pivotally mounted upon said yoke arranged in the same plane as said hook and yoke, and adapted to swing in a path coincident with the plane of said hook and yoke.

2. A neck yoke connector and the like for harness, comprising a hook having an upwardly extending bill, said hook at its rear end having a vertically arranged yoke, and a vertically swingable loop joined to the upper side of said yoke by a transverse pivot to swing forwardly onto said bill and rearwardly onto the upper rear portion of said yoke.

3. A device of the character substantially as described, comprising a hook formed at its rear end with a yoke, said yoke in the same plane as said hook, said hook having an upwardly and rearwardly extending hook bill and provided in rear of the hook bill with a loop adapted to swing in a path in the plane of said hook and yoke.

4. A neck yoke connector and the like for harness, comprising a hook formed at its rear end with means for detachably receiving a breeching strap, and at its upper side provided with a hame strap loop swingable in the plane of the hook, said loop formed with an arm extending downwardly therefrom at an inclination and pivotally joined to said hook, the arrangement being such that said loop may act as a guard for said hook, substantially as described.

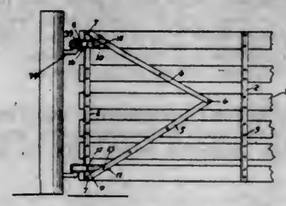
5. A device of the character substantially as described, comprising a hook formed at its rear end with means for detachably receiving a strap, a loop having an arm extending downwardly and at an acute angle to the lower bar of said loop, and a pivot carried by said hook, said arm being so arranged that said loop may swing forwardly at an inclination to close the mouth of said hook and rearwardly at a greater inclination to the shank of said hook.

[Claims 6 and 7 not printed in the Gazette.]

1,192,120. GATE-HINGE. ALVIN V. ROWE, Galesburg, Ill. Original application filed Aug. 15, 1912, Serial No. 715,292. Divided and this application filed June 1, 1914. Serial No. 842,002. (Cl. 16—49.)

1. In a gate, a hinge formed of two parts or members, each part or member being extended to provide a brace or truss member adapted to extend along the sides of the gate, each part or member having a pintle receiving portion corresponding with a similar portion on the other part or member and adapted to form a pintle receiving opening therewith, said parts or members being provided with means whereby they may be pivotally connected to-

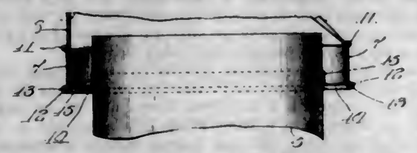
gether at their outer ends, said extensions of said parts or members of the hinge being provided with a plurality of apertures adapted to receive the securing means so that the hinge member may be used with different sized gates.



2. A gate hinge including a two-part member having extensions adapted to be secured to the sides of the gate, each part having a semi-circular recess, which recesses complement each other to provide the pintle receiving openings, said parts being hinged together at their ends on the side of said pintle receiving opening away from the end of the gate, each part also having shoulders adapted to engage the end of the gate, said shoulders being provided with interfitting portions.

3. A gate hinge including a two-part member having extensions adapted to be secured to the sides of the gate, each part having a semi-circular recess, which recesses complement each other to provide the pintle receiving openings, said parts being hinged together at their ends in the side of said pintle receiving opening away from the end of the gate, each part also having shoulders adapted to engage the end of the gate, said shoulders being provided with interfitting portions, said interfitting portions including projections near the top and bottom of one of said parts and intermediate projections adapted to fit between said first mentioned projections on the other part.

1,192,121. BOOT FOR HOT-AIR STACKS. ALBERT G. SCHERER, Chicago, Ill., assignor to Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1915. Serial No. 16,833. (Cl. 137—75.)



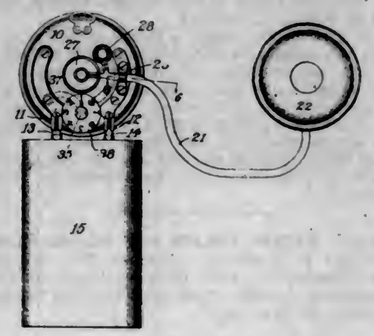
1. Means for connecting a pipe of circular section, a hot air stack of rectangular cross-section comprising a ring adapted to be secured to an opening in the stack and provided with a continuous lateral member adapted to circumferentially contact and engage the adjacent portion of the pipe.

2. A boot for air stacks comprising a body portion, a base therefor, and a ring secured to said base and extended inwardly therefrom and provided at its inner edge with a continuous lateral flange adapted to lie adjacent and circumferentially engage the adjacent portion of a pipe when inserted therein.

3. Means for connecting a pipe of circular section to a hot-air stack of rectangular section comprising a ring adapted to be secured to an opening in the stack and provided with a continuous laterally extending flange adapted to circumferentially contact and engage the adjacent portion of the pipe.

1,192,122. APPARATUS FOR AIDING THE HEARING. EUGENE W. SCHNEIDER, New York, N. Y.; Elizabeth Catherine Schneider executrix of said Eugene W. Schneider, deceased. Filed Sept. 3, 1915. Serial No. 48,755. (Cl. 179—107.)

1. A telephone apparatus to aid the hearing, comprising a transmitter having a casing, the said transmitter being provided with a resistance inside of its casing, a circular series of contact points connected with the resistance, a rotatable terminal adapted to engage any one of the points, a rotatable finger-piece outside the transmitter casing to rotate the said terminal, and a scale and pointer to indicate the point on which the terminal rests, the said scale and rotatable finger piece being adapted to cover and prevent tampering with the contact devices.



2. In a telephonic apparatus for aiding the hearing, the combination with a transmitter having a casing, of a resistance arranged inside the transmitter casing and having a terminal in circuit with the transmitter, a circular series of contact points carried by the transmitter casing and electrically connected with the resistance, a finger-piece rotatably mounted on the casing outside the same, and a terminal rotatable by said finger-piece in engagement with said contact points and electrically connected in circuit with the transmitter, said contacts and rotatable terminal being covered by the aforesaid finger-piece.

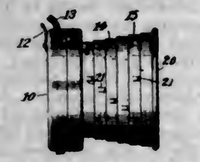
3. In a telephonic apparatus for aiding the hearing, the combination of a transmitter having a circuit and a casing forming part of said circuit, an insulating plate mounted in the back wall of the casing, a resistance mounted on the plate inside the casing and having a terminal in said circuit, a circular series of contact-points connected to different points of the resistance and carried by said insulating plate, a rotatable finger button carried by the plate outside of the transmitter casing, a rotatable terminal actuated by said button and coöperating with said contact-points, and an electrical connection between the rotatable terminal and said circuit.

4. In a telephonic apparatus for aiding the hearing, the combination of a transmitter having a conducting casing, a plate of insulating material set in the back wall of the casing, a resistance coil mounted on the insulating plate inside the casing, a circular series of contact points surrounding the coil and extending from the outside through said plate and connected to the coil inside the casing, a finger button concentric with the circular series of contact points and rotatably mounted on said insulating plate outside the transmitter casing, and a conducting terminal carried and rotated by the finger button to engage the said contact points.

5. In a telephonic apparatus for aiding the hearing, the combination of a transmitter having a casing, a resistance mounted inside the casing, a circular series of contact points insulated from each other and extending through a wall of the casing and connected to the resistance, a post mounted on the outside of the casing at the center of said circular series of contact points and having a head, a finger button comprising a disk rotatable on the post and having a peripheral flange extending toward the circular series of contact points outside thereof to conceal the same, and a spring terminal carried by the finger button to engage the contact points and press the finger button outwardly against the head of said post.

[Claim 6 not printed in the Gazette.]

1,192,123. SOUND-CONCENTRATOR FOR DEVICES FOR AIDING THE HEARING. EUGENE W. SCHNEIDER, New York, N. Y.; Elizabeth Catherine Schneider executrix of said Eugene W. Schneider, deceased. Filed Oct. 15, 1915. Serial No. 55,941. (Cl. 179—185.)



1. The combination with a telephonic transmitter, of a collapsible sound-concentrator on the face of the transmitter, comprising a plurality of sliding concentric rings or shells having inner and outer shoulders to prevent separation of the rings when extended and provided with yielding devices adapted to bear laterally on the successive rings when the latter are nested or collapsed one into the other.

2. A sound-concentrator for the purpose described, comprising a plurality of concentric sliding rings or shells adapted to nest or collapse one into the other, means to prevent separation of the rings when extended, and yielding devices adapted to hold the rings in extended position and to bear laterally on the rings to prevent looseness thereof when nested or collapsed.

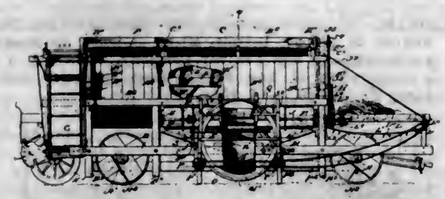
3. A sound-concentrator for the purpose described, comprising a plurality of concentric sliding rings or shells, having spring tongues adapted to bear laterally on the successive rings to prevent looseness thereof when nested or collapsed.

4. A sound-concentrator for the purpose described, comprising a plurality of concentric sliding rings or shells, inner and outer shoulders on the edges of the rings to prevent separation thereof when extended, and inwardly yielding spring tongues on the outside of the rings to coöperate with the inner shoulders and hold the rings in extended position and adapted to bear outwardly on the inner surfaces of the successive rings when the same are nested or collapsed.

5. The combination of a transmitter having a central extension, an inner ring or shell fastened to the transmitter around the said extension, and one or more sliding rings concentric with the inner ring, the said extension serving to reinforce or brace the rings against bending or distortion when they are nested or collapsed.

[Claim 6 not printed in the Gazette.]

1,192,124. PEA AND BEAN HULLER. ROBERT P. SCOTT, Columbus, Ohio. Filed Jan. 6, 1915. Serial No. 817. (Cl. 130—30.)



1. In a hulling machine, a wheel supported frame embodying lower side beams, front uprights disposed in the rear of the forward ends of the lower side beams, and pairs of rear uprights, a hulling mechanism arranged between the front uprights and the first pair of uprights at the rear of the machine, a cleaner disposed in the rear of the hulling mechanism and between the rear pairs of uprights, front wheels arranged in advance of the front uprights, and rear wheels mounted upon the rear portions of the side beams between the rear pairs of uprights and directly below the cleaner.

2. In a hulling machine, a main frame and an under frame, the latter embodying a middle and side longitudinal beams, front uprights and rear pairs of uprights connecting the under frame with the main frame, the longitudinal beams of the under frame projecting forward of the front uprights, a hulling mechanism arranged between the front uprights and the first pair of uprights at the rear of the machine, a cleaner disposed in the rear of the hulling mechanism and between the rear pairs of uprights, a front axle operatively connected to the middle longitudinal beam and having its ends underlapping the side beams, wheels mounted upon the ends of the axle between the forward extensions of the middle and side beams, a rear axle supported by the rear ends of the longitudinal beams at a point between the rear pairs of uprights, and wheels mounted upon end portions of the rear axle and disposed within the side beams.

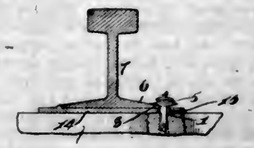
3. A machine of the character specified comprising a main and an under frame, the latter comprising longitudinal side beams, front uprights and rear pairs of uprights connecting the main frame with the under frame, a hulling mechanism mounted upon the main frame between the front and the first pair of rear uprights, a cleaner mounted upon the main frame between the rear pairs of uprights, front wheels disposed in advance of the front uprights and rear wheels disposed between the rear ends of the side beams and between the rear pairs of uprights comprising the rear pair and arranged directly below the cleaner.

4. A hulling machine comprising a main frame embodying front uprights, rear pairs of uprights and lower longitudinal side beams having their front ends extended forward of the front uprights, a hulling mechanism disposed between the front uprights and the rear pairs of uprights, a cleaner arranged between the rear pairs of uprights, a separator located wholly at one side of the main frame, front wheels mounted upon the front extensions of the lower side beams in advance of the front uprights and between the forward extensions of the side beams, and rear wheels mounted upon the rear ends of the side beams between such beams and the rear pairs of uprights directly below the cleaner.

5. In a machine of the character set forth, a framework, a hulling mechanism mounted upon the framework, a separator located at one side of the framework and connected thereto and supported thereby, means for collecting the berries after they are hulled and directing the same into the separator, and independent means for delivering the clean berries and the refuse from the separator.

[Claims 6 and 7 not printed in the Gazette.]

1,192,125. RAILWAY-SPIKE. MARCEL K. SESSLER and HEYMAN ROSENBERG, New York, N. Y., assignors to Parker Supply Company, New York, N. Y., a Corporation of New York. Filed Aug. 18, 1915. Serial No. 46,022. (Cl. 85—20.)

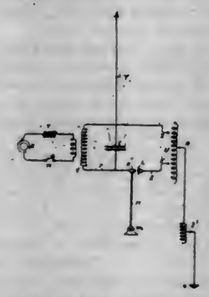


1. A spike consisting of a twisted strip of material having flat sides, and ridges or fins carried by said strip located at the meeting edges of said flat sides, each ridge or fin having a straight wall, said straight wall being a continuation of one of the adjacent flat sides, the other wall being angularly disposed relative to the other adjacent flat side.

2. A spike consisting of a shank, said shank being provided with a plurality of helically disposed channels, said channels having an obtuse angular formation, each channel terminating in a flat surface at one end of said shank; the combined flat surfaces forming a square, one wall of said channel being of greater length than the other.

3. A spike consisting of a shank twisted throughout the greater part of its length, the twisted portion forming in cross-section, a parallelogram having extended corners, providing projecting fins, the said extension of the parallelogram forming one side of the fin, the other side of each fin being angularly disposed to form an obtuse angle relative to the adjacent wall of the parallelogram, substantially shown and described.

1,192,126. WIRELESS-TELEGRAPH TRANSMITTER. ARCHIBALD SHAW, Randwick, near Sydney, New South Wales, Australia. Filed June 29, 1912. Serial No. 706,638. (Cl. 250—38.)



1. In a wireless telegraph transmitter, the combination, with a primary circuit including a source of alternating currents, of a radiator exciting circuit including a condenser and proportioned to fix its charging and discharging period in correspondence with the period of reversal of the primary alternating current and containing electrodes in the form of a blunt nosed cone and a flat plate, with a short intervening gap between them, said cone electrode having a hole through it directed toward the plate electrode, in combination with means for forcing a needle jet of gas under a pressure of approximately 110 lbs. per square inch through said hole.

2. In a wireless telegraph transmitter including a source of high potential alternating current in the primary circuit, the combination with an exciting circuit coupled to a radiator and connected to said source of alternating current and proportioned to be charged and discharged once every half cycle of the primary alternating current, of a short gap in said exciting circuit the electrodes of which gap are respectively a blunt nosed cone and a flat plate, said cone being pierced with a hole, and means for forcing gas through said hole under a pressure approximating to 110 lbs. per square inch squarely against the face of said flat electrode.

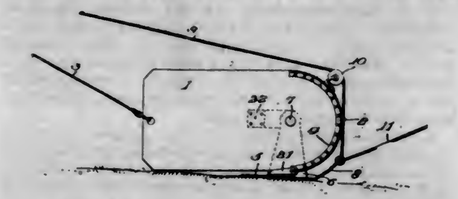
3. In a wireless telegraph transmitter, the combination of a primary circuit including a primary source of high tension alternating current, a free radiator which is a poor oscillator and has its values proportioned to the transmitting wave length, an exciting circuit feeding said radiator on the shock excitation principle, said exciting circuit proportioned to be charged and discharged once every half cycle of the primary alternating current and having a gap the electrodes of which are located at a relatively short distance apart and consist respectively of a flat plate and a blunt nosed cone, means for forcing a needle jet of gas through a hole in said cone electrode under a pressure of approximately 110 lbs. per square inch against the face of said flat plate electrode, said source of high tension primary alternating current of high initial periodicity energising said exciting circuit, and a sending key in the primary circuit.

4. In a wireless telegraph transmitter, a radiator exciting circuit and a primary circuit inductively connected thereto, said primary circuit including a source of alternating electro-motive-force, said exciting circuit including a condenser and proportioned to fix its charging and discharging period in correspondence with the period of said source, a rectifying spark gap in said exciting circuit, an aerial connected to one side of said condenser, and means including a variable inductance for connecting said aerial to the ground.

5. In a wireless telegraph transmitter, the combination with a step-up transformer having in its primary circuit a source of alternating electro-motive-force and a sending key, of a rectifying spark-gap in the secondary circuit, a condenser in series with said spark-gap, a variable inductance in said secondary circuit between said spark gap and condenser whereby said secondary circuit may be proportioned to be charged and discharged once every half cycle of said primary alternating circuit, an aerial connected to one side of said condenser, the other side of said condenser being grounded, and a variable inductance between said condenser and the ground whereby the aerial may be tuned.

[Claims 6 to 11 not printed in the Gazette.]

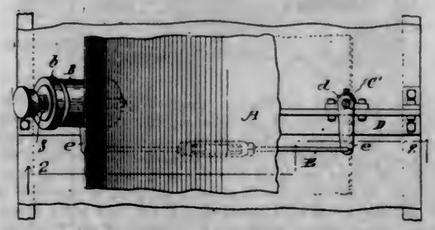
1,192,127. SCRAPER. JOHN SHOSTROM, Tacoma, Wash. Filed July 13, 1915. Serial No. 39,569. (Cl. 37—19.)



1. The combination with a scraper, of brackets secured to the sides thereof and offset therefrom, a runner plate, standards at the ends of the runner plate intermediate the front and rear edges of the same and having their upper ends disposed between the sides of the scraper and the offset brackets, pivots inserted through said brackets and the upper ends of the standards into the sides of the scraper, a pulley upon the rear end of the scraper near the top thereof, a draft cable connected to the front end of the scraper, a cable secured to and extending rearwardly from the runner plate, and a second cable secured to the runner plate and passing upwardly therefrom and forwardly over the said pulley and secured to the draft cable.

2. The combination with a scraper, of a runner plate, standards rising from the ends of the runner plate intermediate the front and rear edges thereof and having their upper ends pivoted to the sides of the scraper, and means for moving the runner plate to a position in rear of the scraper or to a position under the rear end of the same.

1,192,128. GUIDING DEVICE FOR CONVEYER-BELTS. SAMUEL D. SIBLEY, Detroit, Mich., assignor, by mesne assignments, to Semet-Solvay Company, Solvay, N. Y., a Corporation of New York. Filed June 24, 1915. Serial No. 36,046. (Cl. 193—23.)

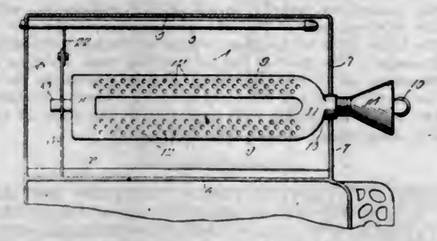


1. The combination with a conveyer belt, of a guiding idler located at the side of and underneath the belt and adapted to be moved into angular relation with the belt by friction of the belt thereon, a shaft for said idler, and a normally non-rotating pulley, mounted on the same shaft with the idler and adapted to be contracted by the belt when the belt travels sidewise entirely across the idler and to be moved into a rotating position by the pressure of the belt thereon.

2. The combination with a conveyer belt, of a guiding idler located at the side of and underneath the belt and adapted to be moved into angular relation with the belt by friction of the belt thereon, an independently rotatable pulley mounted on the same shaft as the idler and adapted to be contacted by the belt when the latter, in departing from its center line of travel, moves entirely across the idler, and means for retarding the rotation of the pulley.

3. The combination with a conveyer belt, of a guiding idler located at the side of and underneath the belt and adapted to be moved into angular relation with the belt by friction of the belt thereon, an independently rotatable pulley mounted on the same shaft as the idler and adapted to be contacted by the belt when the latter in departing from its center line of travel moves entirely across the idler, means for retarding or preventing the rotation of the pulley when in its normal position, and means for causing the pulley to rotate when its axis is moved into angular relation with the center line of the belt.

1,192,129. GAS-BURNER FOR STOVES. MAX SINGELMANN and CARL BRINKMANN, Chicago, Ill. Filed Sept. 22, 1915. Serial No. 51,910. (Cl. 158—8.)



1. The combination with a stove having walls, of a gas burner arranged horizontally within said stove and having a rectangular loop body and oppositely projecting end extensions, one of which is supported from a wall of the stove and a transverse removable partition also arranged within the stove and having a hole in which the opposite extension of the gas burner seats.

2. The combination with a stove, having walls, of a gas burner arranged horizontally within said stove and having one end supported from a wall of the stove and a transverse extensible removable partition also arranged within the stove and adapted to support the opposite end of the burner in place.

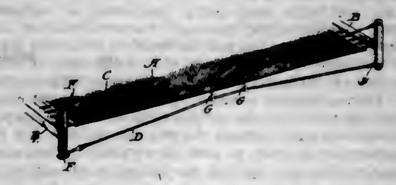
3. The combination with a stove having walls, of a gas burner arranged horizontally within said stove and having one end supported from a wall of the stove and a transverse extensible removable partition consisting of two lapping plates also arranged within the stove and adapted to support the opposite end of the burner in place.

4. The combination with a stove having walls, of a gas burner arranged horizontally within said stove and having a rectangular loop body and oppositely projecting end extensions, one of which is supported from a wall of the stove and a transverse removable partition also arranged within the stove and having a series of holes arranged in a vertical row in any one of which an extension of the gas burner may be seated.

5. In a device of the class described, the combination with a stove, of a gas burner having an extension at each end thereof, one of which is mounted in the wall of the stove, and an extensible partition removably fitted in the stove for supporting the opposite extension.

[Claims 6 to 8 not printed in the Gazette.]

1,192,130. WIRE MATTRESS. GEORGE F. SISBOWER, East Orange, N. J., and LOUIS E. PITTONI, New York, N. Y., assignors to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed Jan. 16, 1915. Serial No. 2,601. (Cl. 5—39.)



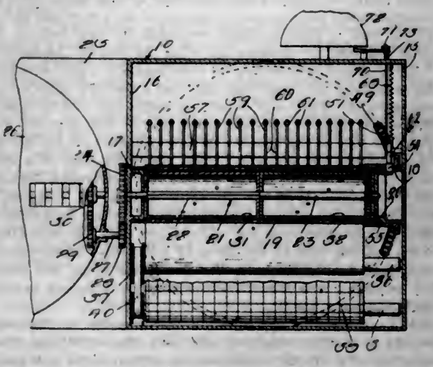
1. The combination with a wire mattress, of uprights positioned on both sides of the mattress and attached thereto at its ends, cables positioned above the respective side edges of said mattress and connecting said uprights in pairs, means connecting said cables to the contiguous edges of said mattress, and tensioning means connecting the uprights of each pair below the plane of the mattress.

2. The combination with a wire mattress, of uprights positioned on both sides of the mattress and attached thereto at its ends, cables positioned above the respective side edges of said mattress and connecting said uprights in pairs, and tensioning cables positioned below the mattress and also connecting said uprights, and means for connecting the contiguous edges of said mattress to said cables.

3. The combination with a wire mattress, of uprights positioned on both sides of the mattress and attached thereto at its ends, cables positioned above the respective side edges of said mattress and connecting said uprights in pairs, means connecting said cables to the contiguous edges of said mattress, tensioning means connecting the uprights of each pair below the plane of the mattress, and means for varying the tension upon said cables and said tensioning means.

4. The combination with a wire mattress, of uprights positioned on both sides of the mattress and attached thereto at its ends, cables positioned above the respective side edges of said mattress and connecting said uprights in pairs, tensioning cables positioned below the mattress and also connecting said uprights, and devices connecting said cables and also attached to the mattress intermediate the ends thereof.

1,192,131. AUTOMATIC ROAD-GUIDE. LLOYD E. SMALL, Reynolds, Ind. Filed Nov. 18, 1914. Serial No. 872,840. (Cl. 40—42.)



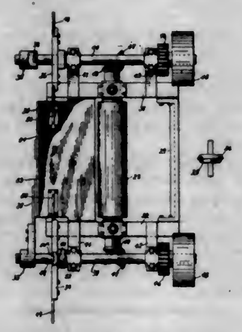
1. An automatic road guide comprising a casing, a shaft rotatably mounted in said casing and adapted to be connected to a mileage instrument and rotated thereby during the advance of a vehicle, a cylinder fixedly mounted on

said shaft, and a cylinder rotatably mounted thereon, a cylinder rotatably mounted in the said casing and encircling the two first mentioned cylinders, a film passing over the said last mentioned cylinder and means coöperating with the second mentioned cylinder to arrest the film at predetermined intervals.

2. An automatic road guide comprising a rotatably mounted cylinder, a film passing over said cylinder, and having holes therein, the said cylinder having soles registering with the holes in the said film, a plurality of cylinders rotatably mounted within and movable with relation to the first mentioned cylinder, said last mentioned cylinders having holes therein, a plurality of fingers adapted to successively pass through the holes in the film and the first mentioned cylinder to lock the cylinder against rotation and to drop into the hole in the last mentioned cylinders to permit the rotation of the first mentioned cylinder and means for causing such rotation.

3. In an automatic road guide, the combination with a cylinder having a helical series of holes thereof, a plurality of fingers mounted above the cylinder, resilient means tending to move said fingers into said holes, a cylinder mounted within the first mentioned cylinder and movable relative thereto and having a helical series of holes therein through which the fingers are adapted to extend and means fo rretracting the fingers immediately after their movement into the holes in the last mentioned cylinder.

1,192,132. ROOFING-MACHINE. ALEXANDER S. SPIEGEL, Chicago, Ill. Filed Mar. 8, 1916. Serial No. 82,826. (Cl. 164—61.)



1. In a roofing machine, a die table having a lateral notch at its edge and a cutting edge at one end, a transverse shaft arranged above the level of the table carrying cutting blades adapted for coöperation with the said lateral notch, and a cutting blade mounted on the end of the shaft adapted for coöperation with the end of the table.

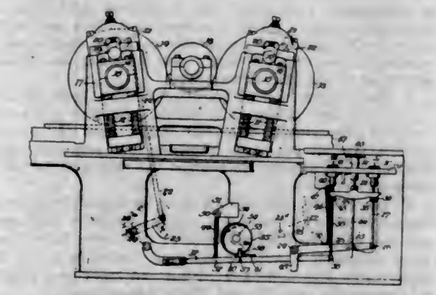
2. In a roofing machine, in combination, a die table having a lateral notch at one side and a cutting edge at one end parallel with said notch, a horizontal shaft located above the level of the table and beyond but parallel with the said side of the table, a series of radial blades carried by the shaft and equally spaced about its axis in a common plane for successive downward movement through the lateral notch of the die table during the rotation of the shaft, a single blade carried by the shaft and projecting radially therefrom for coöperation with the said transverse cutting edge of the table by downward movement by said edge during the said rotation of the shaft and means for moving a web over the die table in a direction parallel with the said shaft.

3. In a roofing machine, in combination, a die table having a lateral notch at one side, and a cutting blade substantially fitting the said notch mounted for downward movement through the notch about an axis which is above the level of the table and beyond but parallel with the said side of the table, the blade being radial to the said axis.

4. In a roofing machine, in combination, a die table having a lateral notch at each side and a cutting edge at one end parallel with said notch, a pair of horizontal shafts located above the level of the table, one of said shafts being beyond but parallel with each side of the table, a series of radial blades carried by each shaft and equally spaced about the axis of the shaft in a common plane for successive downward movement through the lateral notch at the adjacent side of the table during the rotation of the shaft, each blade being constructed to substantially fill the corresponding notch during its movement through the same, a single blade carried by each shaft and projecting radially therefrom for coöperating with an adjacent part of the said transverse cutting edge at the end of the table, means for moving a web over the die table in a direction parallel with the said shafts, and a pair of slitting rolls operating centrally between the shafts.

5. In a roofing machine, in combination, a die table having a lateral notch at each side and a cutting edge at one end parallel wiht said notch, parts of the said cutting edge at each side of the longitudinal median line of the table each comprising a pair of relatively offset portions and an intermediate connecting shoulder, a pair of horizontal shafts located above the level of the table, one of said shafts being beyond but parallel with each side of the table, a series of radial blades carried by each shaft and equally spaced about the axis of the shaft in a common plane for successive downward movement through the lateral notch at the adjacent side of the table during the rotation of the shaft, each blade being constructed to substantially fill the corresponding notch during its movement through the same, a single blade carried by each shaft and projecting radially therefrom for coöperating with the adjacent part of the said cutting edge at the end of the table, each of the last mentioned blades conforming in shape to the part of the said cutting edge which is at the same side of the longitudinal median line of the table, means for moving a web longitudinally over the die table and a pair of slitting rolls operating in the plane of the said longitudinal median line of the table.

1,192,133. PRINTING-PRESS TRIPPING DEVICE. BURT D. STEVENS and JOSEPH R. BLAINE, Chicago, Ill., assignors to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 10, 1913. Serial No. 778,239. (Cl. 101—111.)



1. In a multi-cylinder press, the combination of separate means to trip the respective cylinders, and a single manually operable actuating device common to the several cylinder-tripping means for individually actuating the same.

2. In a multi-cylinder press, the combination of separate means to trip the respective cylinders, a single actuating device common to the several cylinder tripping means for individually actuating the same, and means to prevent actuation of one of the cylinder-tripping means.

3. In a multi-cylinder press, the combination of separate means to trip the respective cylinders, a single actuating device common to the several cylinder-tripping means for individually actuating the same, and means

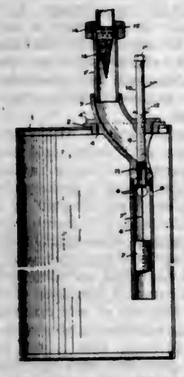
to prevent actuation of any one of the cylinder-tripping means.

4. In a multi cylinder press, the combination of separate means to trip the respective cylinders, a single actuating device common to the several cylinder-tripping means for individually actuating the same, and means to prevent the actuation of either or both of the cylinder-tripping means.

5. In a multi-cylinder press, the combination of separate means to trip the respective cylinders, a single actuating device common to the cylinder-tripping means for individually actuating the same, and means normally preventing actuation of one of the cylinder-tripping means and driven by the press to release said cylinder tripping means and permit actuation thereof by the actuating device.

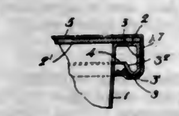
[Claims 6 to 14 not printed in the Gazette.]

1,192,134. TANK-FILLER. RALPH P. STEVENS, Palo Alto, Cal. Filed Jan. 8, 1915. Serial No. 1,165. (Cl. 220—120.)



A filling device for tanks comprising a tank plug having a filling and an air escape opening therethrough, an air escape pipe extending through the air escape opening in the tank plug and having its lower end out of the path of the incoming liquid whereby the incoming liquid and escaping air can not mix, a pipe secured to and depending from the lower side of said tank plug, a float slidable in said pipe, the float pipe having air inlet holes thereinto above the float, and an indicator rod connected with the float and passing out of the air escape pipe and being of such length as to permit the float to close the air escape pipe when the tank is filled up to the desired level.

1,192,135. CLOSURE FOR CONTAINING VESSELS. WILLIAM F. STONE, Portland, Me., assignor to National Metal Seal Corporation, a Corporation of Maine. Filed Jan. 20, 1915. Serial No. 3,200. (Cl. 220—62.)

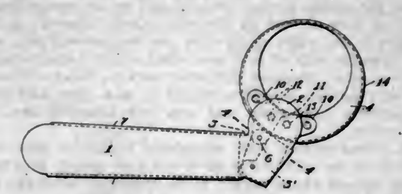


1. In combination with a container having a curved shoulder portion, a cap having a hinge member disposed for pivotal engagement with said shoulder, said member having an arched basal portion curved substantially concentric with said curved portion of the shoulder and terminating in a deformable tip portion disposed to ride over said curved portion in the opening movement of the cap and to be drawn downwardly over the edge of said curved portion by the arch of said basal portion.

2. In combination with a container having a shoulder including a portion extending substantially as the arc of a circle and a portion extending substantially tangentially thereto, a closure having a hinge member bent in substantial conformity to said arcual portion of the container shoulder and disposed to normally conform to said arcual portion, but deflected into a position of non-conformity by said tangential portion in the opening movement of the closure wherein it binds over the edge of said tangential portion.

3. In combination with a container having a shoulder about its mouth, said shoulder having a circularly curved portion terminating in an edge portion extending substantially tangentially from said curved portion, a closure disposed to cover the mouth of said container, and a hinge member on said closure having an arched basal portion and a deformable tip portion normally disposed in a position of substantial conformity to said curved portion of the container shoulder and deflected by said tangential portion of said shoulder out of its normal position of conformity to a position of non-conformity in which it binds over the edge of the tangential portion.

1,192,136. WRENCH. WILLIAM F. STONE, Woodfords, Me., assignor to National Metal Seal Corporation, Deering Junction, Me., a Corporation of Maine. Filed Apr. 10, 1916. Serial No. 90,026. (Cl. 81—64.)



1. A wrench, comprising a split grip ring adapted to be opened by manual pressure applied directly thereto, a handle member, an arm secured to said ring at one side of the split thereof and pivoted to the handle, and another arm fixed to said ring on the opposite side of the split thereof and pivoted to the handle.

2. A wrench, comprising a split grip ring adapted to be opened by manual pressure applied directly thereto, a handle member, an arm secured to said ring at one side of the split thereof and pivoted to the handle, and another arm fixed to said ring on the opposite side of the split thereof and pivoted to the handle in alinement with the pivot of the first-named arm.

3. A wrench, comprising a handle member having a head obliquely disposed with relation to the longitudinal axis thereof and having a portion extending at substantially right angles to said head and constituting a pivot bearing portion, and a cap engaging member pivoted on said portion.

4. In a wrench, a one-piece handle member consisting of a shank having a head at one end and a laterally extended portion turned under said head and defining therewith a covered recess, a pair of arms pivoted in said recess, and a cap engaging member carried by said arms.

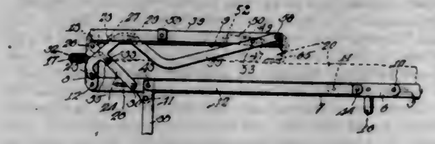
5. In a wrench, a one-piece handle member consisting of a shank having an obliquely disposed head at one end and a laterally extended portion turned under said head and fastened thereto, and defining therewith a covered recess, a pair of arms pivoted in said recess on the same fastenings which connect said head and lateral portion to each other and disposed in the same horizontal plane, and a cap engaging member carried by said arms.

[Claims 6 to 9 not printed in the Gazette.]

1,192,137. CONVERTIBLE FURNITURE. HENRY M. SVEBILIUS, Chicago, Ill., assignor to Pullman Couch Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1915. Serial No. 40,393. (Cl. 5—50.)

1. A foldable sectional bed bottom comprising a foot section, a medial section and a connecting section therefor, a leg turnably connected to the foot section adjacent to its free edge, a pair of coacting locking bars slidably con-

nected and having turnable relation to each other, each having one end turnably connected to said connecting section adjacent to its ends respectively, said bars being disposed crosswise when said foot section is folded upon the medial section, the opposite ends of said bars being slidably connected for movement longitudinally of said foot and medial sections respectively, and a link operatively connecting one of said bars and said leg.



2. A foldable sectional bed bottom comprising a head section, a middle section, a foot section and two connecting sections, legs turnably connected to the foot section on opposite sides adjacent to its free end, a cross bar connecting said legs, locking means on each side of the bed bottom for securing the foot section in folded relation upon the middle section, each of said means comprising a pair of bars pivoted to the bed bottom adjacent to the joints of the outer connecting section respectively, and the opposite ends of said bars being slidably connected to the oppositely disposed adjoining sections, means connecting said bars slidably with respect to each other, and links operatively connecting said legs and adjacent bars respectively.

3. A bed section lock comprising a pair of bars connected to the sections to be folded and locked, said bars being formed and arranged to lie crosswise when the bed is folded and substantially parallel when the bed is unfolded, one of said bars having a medial guide slot and the other a medial coacting shoulder, and means actuated by the folding and unfolding of the bed connected to one of said bars for setting and releasing the lock.

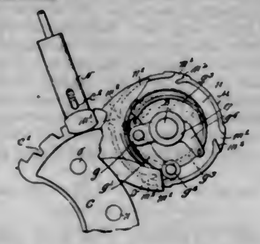
4. A bed bottom, comprising a pair of bed sections arranged to fold one upon the other in spaced relation, and spacing means hinged at its edges to said sections respectively, in combination with locking means for securing said sections in their spaced folded relation, including a pair of bars each turnably connected at one end to said bed bottom adjacent to the hinges respectively for said spacing means, said bars coacting intermediately of their ends, one being slotted and the other shouldered to cooperate, said bars having their other ends slidably connected to the sections which are connected to said spacing means at the ends thereof that are opposite from the pivoted ends of said bars respectively, and means for setting and releasing said locking means.

5. A bed bottom, comprising an outer section, a medial section, and connecting means hinged thereto and arranged to space said sections apart when folded, in combination with a leg turnably connected to said outer section adjacent to its free edge, and locking means including a bar pivoted at one end to the bed bottom adjacent to one of the hinges for said connecting means and at its other end connected slidably to the opposite of said sections, and another bar attached similarly with respect to the other hinge and section, said sections being slotted longitudinally to receive said bars slidably, said bars being slotted and shouldered respectively for coaction intermediately of their ends, and means operatively connecting said leg and the adjacent end of the nearest of said bars, said bars being disposed crosswise of each other when said sections are folded.

[Claims 6 to 11 not printed in the Gazette.]

1,192,138. CORN-PLANTER. JOHN TEDELL, Moline, Ill., assignor to Rock Island Plow Company, Rock Island, Ill., a Corporation of Illinois. Filed May 5, 1910. Serial No. 559,465. (Cl. 111—5.)

1. In a planting machine, a rotary seed-shaft, a clutch wheel secured upon said shaft, said clutch wheel provided with a peripheral flange having openings therein, a pivoted dog working inside of said clutch wheel, adapted to engage and disengage said openings, and means for causing said pivoted dog to skip one or more of said openings before engaging therewith.



2. In a planting machine, a rotary seed-shaft, a clutch wheel secured upon said shaft, said wheel provided with a peripheral flange having openings therein, a rotary element which is loose on said shaft, a dog pivoted on said element, adapted to engage and disengage said openings, a spring for forcing the dog into the openings, means for disengaging the dog from the openings, and means for causing the dog to skip one or more of said openings before engaging therewith.

3. In a planting machine, a rotary seed-shaft, a clutch wheel secured upon said shaft, said clutch wheel being provided with a peripheral flange having openings therein, a rotary element which is loose on said shaft, a dog pivoted upon said element, adapted to move in and out of said openings, about an axis parallel but non-coincident with said shaft, means for engaging said dog to disengage the latter from said openings, and a spring controlling said dog, said dog being movable backward in a direction opposite the forward rotation of the seed-shaft to disengage it from any one of said openings.

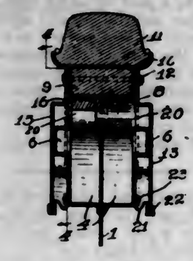
4. In a planting machine, a rotary-seed-shaft, a clutch member secured thereon, said clutch member having a peripheral flange provided with openings therein, a rotary element, a dog pivoted on said element, said dog having a hook-shaped portion adapted to travel on said flange until it engages one of said openings, each opening being provided with a beveled portion to be engaged by the hook-shaped portion of the dog, and means for engaging said dog to move it backward out of engagement with the bevel-shaped portions of said openings, and a spring for forcing the dog into said openings.

5. In a planting machine, a rotary seed-shaft, a clutch member secured thereon, said clutch member having a flange provided with openings therein, a rotary element which is loose on said shaft, a dog pivoted on said rotary element, adapted to engage said openings, a spring controlling said dog, whereby the dog rides on the flange until it encounters one of said openings, means for engaging said dog to disengage the same from said openings, said means involving a cam for causing said dog to skip one or more of said openings, and mechanism for changing the position of said cam, whereby the extent of rotation of the shaft may be varied at will.

1,192,139. RESILIENT WHEEL. JAMES MILTON WAUGH, Chicago, Ill. Filed Mar. 18, 1912. Serial No. 684,376. (Cl. 152—38.)

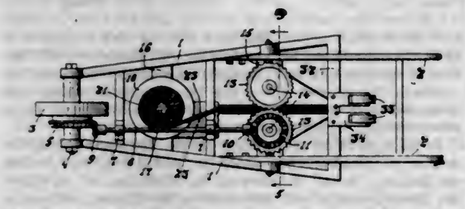
1. In a resilient wheel, the combination with an inner wheel rim, an outer rim surrounding the same and resilient means therebetween, of annular plates secured to said outer rim and inclosing said inner rim, said plates being provided with outwardly tapering radial pockets, and lateral projections on said inner rim for engaging said pockets to cause the rims to rotate together.

2. In a resilient wheel, the combination with an inner wheel rim, an outer rim surrounding the same, stops disposed on the inner periphery of said outer rim, and groups of spring friction plates of equal length arranged between said rims with their ends bearing against said stops and at their middle contacting with the inner rim, of annular plates secured to said outer rim and inclosing said inner rim, said plates being provided with outwardly tapering



radial pockets, and lateral projections on said inner rim for engaging said pockets to cause the rim to rotate together.

1,192,140. TRANSPLANTING-MACHINE. ROY N. WERSTLER, Hartville, Ohio, assignor of one-half to The H. L. Hurst Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Jan. 13, 1916. Serial No. 71,815. (Cl. 55—72.)



1. In a transplanting machine, the combination of a frame, a trough carried by the frame, a shovel located at the front end of the trough, a magazine spool carried by the frame, said magazine spool located in front of the trough and means for tensioning the magazine spool, take-up wheels carried by the frame, means for imparting intermittent rotary motion to the take-up wheels, two tapes adapted to be located face to face, means for connecting said tapes to the take-up wheels, guide rolls adapted to space the tapes, all arranged, substantially as and for the purpose specified.

2. In a transplanting machine, the combination of a frame, a trough carried by the frame, a shovel located at the front end of the trough, a magazine spool carried by the frame, said magazine spool located in front of the trough and means for tensioning the magazine spool, take-up wheels carried by the frame means for imparting intermittent rotary motion to the take-up wheels, two tapes adapted to be located face to face, means for connecting said tapes to the take-up wheels, guide rolls adapted to space the tapes, spaced plates located at the rear of the trough and converging blades located in a plane below the trough.

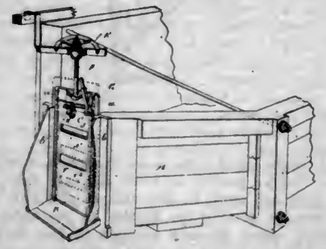
3. In a transplanting machine, the combination of a traveling frame, a magazine spool carried by the frame, means for frictionally holding the magazine spool against free rotation, two plant carrying tapes adapted to be located face to face and wound upon the magazine spool, guide rolls adapted to separate the plant carrying tapes and two take-up wheels adapted to intermittently move the plant carrying tapes and means for imparting intermittent rotary motion to the take-up wheels, a trough located intermediate the guide rolls and the magazine spool and a shovel located in a plane below the trough and covering blades located behind the trough.

4. In a transplanting machine, the combination of a traveling frame, a magazine spool carried by the frame, means for frictionally holding the magazine spool against free rotation, two plant carrying tapes adapted to be located face to face provided with plant spacing designations, and wound upon the magazine spool, guide rolls adapted to separate the plant carrying tapes and two take-up wheels adapted to intermittently move the plant carrying tapes and means for imparting intermittent rotary motion to the take-up wheels, a trough located intermediate the guide rolls and the magazine spool and a shovel located in a plane below the trough and covering blades located behind the trough.

5. In a plant transplanting machine, the combination of a traveling frame, a magazine spool carried by the frame, means for frictionally holding the magazine spool against free rotation, two plant carrying tapes located face to face, take-up wheels, means for connecting the two tapes to the take-up wheels, a trough adapted to carry the plant carrying tapes, a furrow shovel located at the forward end of the trough and covering blades located at the rear end of the trough and means for separating the tapes and means for imparting intermittent rotary motion to the take-up wheels.

[Claims 6 and 7 not printed in the Gazette.]

1,192,141. GATE FOR SLUDGE-BOXES. JAMES H. WHITE, Holt, Ala., assignor, by mesne assignments, to Semet-Solvay Company, Solvay, N. Y., a Corporation of New York. Filed Aug. 26, 1915. Serial No. 47,535. (Cl. 61—46.)



1. In a sludge-box gate the combination of a main gate having upper and lower ports therein, a secondary gate arranged by its movement to open and close said ports, means whereby the upward movement of said secondary gate opens said ports in succession, and means for independently raising said secondary gate.

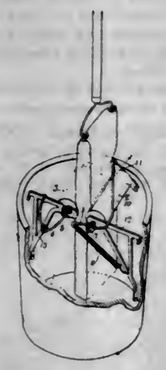
2. In a sludge-box gate, the combination of a main gate having a plurality of ports therein, a secondary gate, means whereby the upward movement of said secondary gate opens said ports in succession from the upper to the lower, and means for independently raising said secondary gate.

1,192,142. MOP-PAIL. JOHN A. WHITE, Oxford, Ohio. Filed Jan. 14, 1916. Serial No. 72,006. (Cl. 15—12.)

1. In a device of the character described, a pail, a pair of rollers mounted in said pail, a single bracket to support one end of each of said rollers, separate brackets to support the other ends of said rollers, said separate brackets and said rollers being spaced apart to receive a mop-head between them and one of said rollers being movable toward and away from the other of said rollers, a spring tending to move said movable roller toward said other roller, a guard lever pivotally mounted on one of said separate brackets and having a part extending above said rollers and diagonally across the same in the path of the mophead as the latter is drawn upward between said rollers, said guard lever also having a part arranged below the axes of said rollers at one end thereof and movable across the space between said separate brackets, and a spring to hold the last mentioned part of said guard lever normally in a position at one side of said space between said separate brackets.

2. In a device of the character described, a pail, a pair of rollers mounted in said pail, a single bracket to sup-

port one end of each of said rollers, separate brackets to support the other ends of said rollers, said separate brackets and said rollers being spaced apart to receive a mophead between them and one of said rollers being movable toward and away from the other of said rollers, a spring tending to move said movable roller toward said other roller, a pivoted guard mounted on one of said separate brackets and having an actuating portion arranged above the rollers in the path of said mophead as the latter is drawn upward between the rollers, and also having a portion arranged below the axes of said rollers, held normally at one side of the space between said separate brackets and adapted to be moved across the space between said separate brackets when movement is imparted to said actuating portion by the mophead.



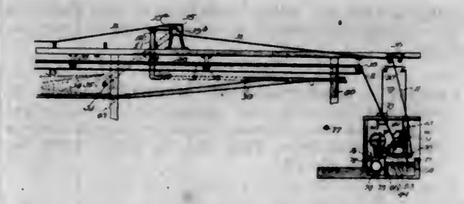
3. In a device of the character described, a pail, a pair of rollers having pintles at their opposite ends, a single bracket arranged close to the wall of said pail and having bearings to receive the pintles at the outer ends of said rollers, other brackets secured to the wall of said pail, extending inwardly to points near the center thereof and having bearings to receive the pintles at the inner ends of said rollers, said last mentioned brackets having their inner ends spaced apart and having their bearings so arranged that said rollers will be normally spaced apart, the bearings for the pintles of one of said rollers being elongated to permit said rollers to move bodily toward and away from the other roller, a spring to hold the movable roller normally in its position nearest the other roller, a guard lever pivotally mounted on the inner pintle of that roller which is held against bodily movement, having a downward extending portion, and also having a portion extending upwardly to a point above said roller and then extending diagonally across said rollers, said diagonal portion having an arm mounted on the outer pintle of that roller which is held against bodily movement.

4. In a device of the character described, a pail, a pair of rollers of a length less than the diameter of said pail, separated supporting devices arranged near the center of said pail for the inner ends of said rollers, one of said rollers being yieldable bodily relatively to the other roller, and said rollers and said separated supporting devices being spaced apart to permit a mophead to be moved laterally between said rollers, and a guard device comprising a part adapted to be moved across the space between said supporting devices and having a part arranged above said rollers in a position to be engaged by said mophead when the latter is drawn between said rollers, said last mentioned part being operatively connected with the first mentioned part whereby the movement of the last mentioned part will cause the first mentioned part to be moved across the space between said supporting devices.

5. In a device of the character described, a pail, a pair of rollers mounted in said pail and having their inner ends spaced away from the wall of said pail, means for supporting said rollers in spaced relation one to the other and with the space at the inner ends of said rollers open to permit a mophead to be moved laterally between the same, and a guard having a part arranged normally at one side of the space between said rollers and movable across that space below the axes of said rollers, and having another part arranged in the path of the mophead as the latter is drawn between said rollers and operatively connected with the first mentioned part to cause the latter to be moved across the space between said rollers when the mop is being acted upon by said rollers.

[Claims 6 and 7 not printed in the Gazette.]

1,192,143. MACHINE FOR COATING FABRICS. JOHN F. WHITE and LABRON B. ROSS, Chicago, Ill.; said Ross assignor to said White. Filed Apr. 15, 1914. Serial No. 831,919. (Cl. 91—21.)



1. In a machine for coating a moving web of fabric, a split reel traversed by the fabric, and means within the control of the operator to angularly adjust the same to regulate the tension upon the fabric and to rotate the same whereby to wind the fabric thereon to absorb slack, substantially as described.

2. In a machine for coating fabric, coating mechanism, means to conduct the fabric to and from the coating mechanism, means to reverse the direction of travel of the fabric, a split reel traversed by the fabric, and means to rotate the reel whereby to wind the fabric thereon to absorb slack as the direction of travel is reversed, substantially as described.

3. In a machine for coating fabric, coating mechanism, means to conduct the fabric to and from the coating mechanism, means to reverse the direction of travel of the fabric, a split reel traversed by the fabric, means to rotate the reel, and a connection between the means for reversing the travel of the fabric and the means for rotating the reel whereby to operate the same in unison to absorb the slack in the fabric as the direction of movement is reversed, substantially as described.

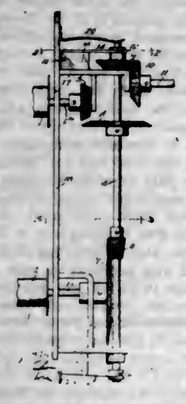
4. In a machine for coating fabric, coating mechanism, means to conduct the fabric to and from the coating mechanism, means to reverse the direction of travel of the fabric, a rectangular wheel split diametrically for the passage of the fabric therethrough, and means operating simultaneously with the reversal of the movement of the coated fabric to rotate the reel in order to absorb the resulting slack in the uncoated fabric, substantially as described.

5. In a machine for coating fabric, coating mechanism, means to conduct the fabric to and from the coating mechanism, means to reverse the direction of travel of the fabric, a dusting chamber traversed by the coated fabric, brushes rotatably mounted therein to act on the fabric, and means acting simultaneously with the reversal of the fabric movement to intermit the action of the brushes on the fabric, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,192,144. MUSIC-SHEET-DRIVING MECHANISM. AURA E. WHITEHEAD, Chicago, Ill. Filed Mar. 29, 1915. Serial No. 17,587. (Cl. 84—166.)

1. The combination with the spools for the music sheet, of a longitudinally adjustable shaft and gearing on said shaft and on the spindles of said spools, said gears being of different sizes with relation to each other, said gearing being thrown into and out of mesh by the longitudinal movement of said shaft and means provided at opposite ends of the shaft whereby said shaft is actuated in opposite endwise direction.



2. The combination with the spools for the traveling music sheet, of a movable driving member and means whereby said driving member may engage said spools for driving the same at relatively different speeds, one of said spools being engaged while the other is disengaged, and vice versa, said means being provided at the ends of said movable member.

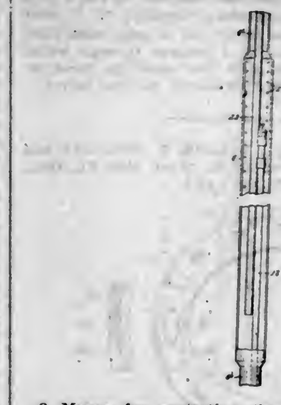
3. The combination with the music spools of a movable driving member and differential gearing between said spools, said gearing being adapted to be thrown into and out of operation by the movement of members provided at opposite ends of the movable member.

4. The combination with the music spools and the spindles therefor of gears carried by said spindles, a longitudinally movable shaft carrying relatively different sized gears arranged to mesh with said gears on said spindles, the gears on said shaft being thrown into and out of engagement with the gears on said spindles by means whereby longitudinal movement is imparted to said shaft, means for driving said shaft in opposite directions, said means including a spring and a lever provided at opposite ends of said shaft, and means for preventing a disengagement of said driving means when said shaft is moved longitudinally.

5. The combination with the music spools and spindles for the same, of relatively different sized gears mounted on said spindles, a longitudinally movable shaft provided with gears adapted to mesh with the gears on said spindles, said gears on said shaft being thrown into and out of mesh with said music roll gears by a longitudinal movement of said shaft, a driving gear mounted on said shaft, said driving gear being mounted slidably on said shaft to permit longitudinal movement of the latter, and means for preventing longitudinal movement on the part of said gear when said shaft is moved longitudinally, said means including a stationary bracket having members which engage the opposite ends of said gear.

1,192,145. PUMPING DEVICE FOR OIL-WELLS. HERMAN R. WILLIAMS, Mannington, W. Va. Filed Dec. 31, 1915. Serial No. 69,556. (Cl. 103—61.)

1. Means for protecting the producing sand of oil-wells, comprising a tubular anchor projected through said sand, a tubular packer located above said sand, a coupling interposed between said anchor and said packer and preventing communication between said parts, a perforated tube located above and connected to said packer, a stand-pipe connected to said coupling and extending upward into said tube, said stand-pipe affording communication between said anchor and said tube, and a pipe depending within said tube to a point below the level of the upper end of said stand-pipe, said depending pipe affording a passage through which fluid is pumped from the well.



2. Means for protecting the producing sand of oil-wells, comprising a tubular anchor projected through said sand, a tubular packer located above said sand, a coupling interposed between said anchor and said packer and preventing communication between said parts, a perforated tube located above and connected to said packer, a working barrel located above said tube, a stand-pipe connected to said coupling and extending upward into said tube, said stand-pipe affording a passage through which oil rises to said tube, and a pipe depending within said tube to a point below the level of the upper end of said stand-pipe, the suction produced in the working barrel acting to withdraw oil from the tube until the lower end thereof is uncovered.

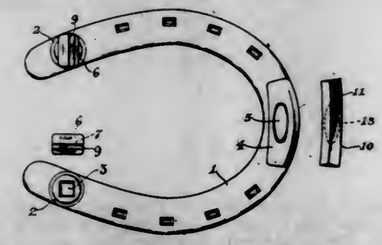
3. Means for protecting the producing sand of oil-wells, comprising a tubular anchor projected through said sand, a tubular packer located above said sand, a coupling interposed between said anchor and said packer and preventing communication between said parts, a perforated tube located above and connected to said packer, a working barrel located above said tube, a stand-pipe connected to said coupling and extending upward into said tube, said stand-pipe affording a passage through which oil rises to said tube, a coupling interposed between said tube and said working barrel, a pipe depending from the last-mentioned coupling to a point within the tube below the upper end of said stand-pipe, said depending pipe affording a passage through which the oil is withdrawn from said tube under the force exerted by the parts operating within the working barrel.

4. Means for protecting the producing sand of oil-wells, comprising a tubular anchor projected through said sand, a tubular packer located above said stand, a coupling interposed between said anchor and said packer and preventing communication between said parts, an apertured tube located above and connected to said packer, a working barrel located above said tube, a stand-pipe connected to said coupling and extending upward into said tube, said stand-pipe affording a passage through which oil rises to said tube, a check-valve controlling the upper end of said stand-pipe, and a pipe depending within said tube to a point below the level of the upper end of said stand-pipe, the suction produced in the working barrel acting to withdraw oil from the tube until the lower end thereof is uncovered.

5. Means for protecting the producing sand of oil-wells, comprising a tubular anchor projected through said sand, a tubular packer located above said sand, a coupling interposed between said anchor and said packer and preventing communication between said parts, an apertured tube located above and connected to said packer, a working barrel located above said tube, a stand-pipe connected to said coupling and extending upward into

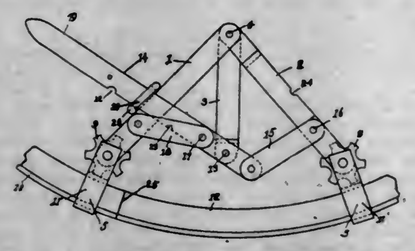
said tube, said stand-pipe affording a passage through which oil rises to said tube, a check-valve controlling the upper end of said stand-pipe, a reducing coupling interposed between said tube and said working barrel, a pipe depending from the last-mentioned coupling to a point within the tube below the upper end of said stand-pipe, said depending pipe affording a passage through which the oil is withdrawn from said tube under the force exerted by the parts operating within the working barrel.

1,192,146. HORSESHOE. WILLIAM T. WILLIAMS and JOSEPH HICKEY, Detroit, Mich. Filed May 27, 1912. Serial No. 699,850. (Cl. 168—41.)



A horse shoe having a depending boss at the toe portion thereof extending transversely of the shoe and having side walls extending inwardly from the walls of the shoe and the forward wall of the boss curved to conform to the curvature of the forward wall of the shoe, said boss having an opening formed therein extending through said shoe, said opening being oval in plan and having walls converging to the top of the shoe, and a toe calk having a shank to snugly engage the walls of the opening of said boss with the end thereof removed from the top of the shoe, said calk corresponding in length to said boss and having beveled end walls and shoulders bearing against said boss and over-hanging the walls thereof, said calk having walls thereof beveled to provide a sharp edge throughout the length of said calk with the front wall at a greater inclination than the rear wall whereby the greater part of the body of said calk will be forward of a line at right angles to the plane of the shoe and intersecting the sharp edge of the calk to resist a clawing blow by said calk.

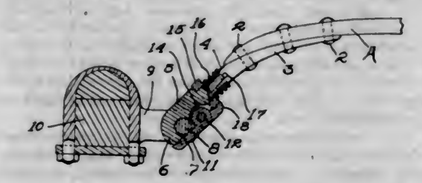
1,192,147. DEMOUNTABLE-RIM TOOL. ORSON A. WOOD, Blissfield, Mich. Filed Apr. 21, 1916. Serial No. 92,576. (Cl. 157—1.)



1. In a tool of the kind and for the purpose described, a fulcrum bar, a pair of compass arms pivoted at their upper end to the upper end of the fulcrum bar, said arms having their lower ends bifurcated and each provided with a clamping screw having opposite projecting right and left threaded end portions, a pair of jaws mounted respectively on the threaded end portions of each screw and adapted to be run toward each other when the screw is turned in one direction and away from each other when the screw is turned in the opposite direction, a lever pivoted to the lower end portion of the fulcrum bar to form a short arm extending below the pivot and a long arm above the pivot, a link bar connecting the free end portion of the short arm of the lever with one of the compass arms near above its bifurcations, a companion link bar connecting the long arm of the lever above the pivot with the other compass arm near above its bifurcations, and means to lock the lever to the second compass arm in different positions of the lever; said lever and its link bars being adapted, when the long arm of the lever is moved transverse the first compass arm to increase the angle of the compass arms, and when transverse the second compass arm to diminish said angle.

2. In a tool of the kind and for the purpose described, a fulcrum bar, a pair of compass arms pivoted at their upper end to the upper end of the fulcrum bar, said arms having their lower ends bifurcated, a clamping screw journaled centrally and transversely in the bifuractions of each compass arm, and having opposite projecting right and left threaded end portions, a pair of jaws mounted respectively on the threaded end portions of each screw and adapted to be run toward each other when the screw is turned in one direction and away from each other when the screw is turned in the opposite direction, means nxedly mounted on each screw between the bifurcations of the compass arms to rotate the screws, a lever pivoted to the lower end portion of the fulcrum bar to form a short arm extending below the pivot, and a long arm above the pivot, a link bar connecting the free end portion of the short arm of the lever with one of the compass arms near above its bifurcations, a companion link bar connecting the long arm of the lever above the pivot with the other compass arm near above its bifurcations, and means to lock the lever to the second compass arm in different positions of the lever; said lever and its link bars being adapted, when the long arm of the lever is moved transverse the first compass arm to increase the angle of the compass arms, and when transverse the second compass arm to diminish said angle.

1,192,148. THILL-COUPLING. OLE T. AASEN, Starbuck, Minn. Filed Feb. 24, 1914. Serial No. 820,400. (Cl. 21—57.)

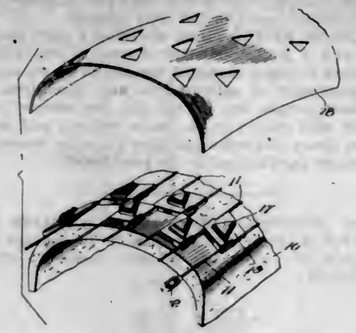


In a thill-coupling, the combination with a fixed jaw terminating at one end in a hook portion having a squared end, said jaw being reduced adjacent its other end to form a shank adapted for attachment to a thill, and being provided with a square shoulder at the intersection of the shank and jaw, a second jaw pivoted adjacent one end to said first mentioned jaw and having its longer portion adapted to seat upon the squared end of said hook portion, and a ring slidable upon the shank of said fixed jaw adapted to abut said shoulder and to engage under the shorter portion of said pivoted jaw to hold the same positively seated.

1,192,149. TIRE-ARMOR. PETER W. ANDERSON and JOSEPH T. KENNELLY, Rawlins, Wyo. Original application filed Oct. 14, 1914, Serial No. 866,664. Divided and this application filed Apr. 19, 1915. Serial No. 22,423. (Cl. 152—16.)

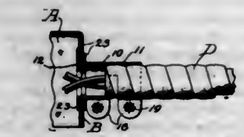
A device of the character described including a plurality of annular members, a plurality of plates freely mounted thereon and supported between adjacent members in staggered relation with the ends of the plates abutting each other for holding the plates in proper spaced

relation circumferentially of the said members, radial knobs carried by said plates, and a band adapted to encircle



the said members to fit over the said plates with the knobs projected through the band.

1,192,150. CONNECTOR. ERNEST G. APPLETON, Chicago, Ill., assignor to Chicago Fuse Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 10, 1914. Serial No. 876,393. (Cl. 247—1.)



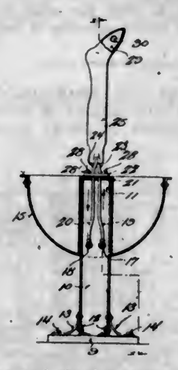
A connector of the character described, comprising a cylindrical thimble adapted to pass through a box-opening, the thimble having a flange at its inner end to engage the wall at the edge of said opening and having an external annular groove positioned to lie adjacent to the outer face of the box wall, and a sheet-metal cylindrical clamp transversely slotted to provide two partially separated and independently acting clamp-sections, and longitudinally slotted to provide two pairs of parallel and adjacent ears on the respective clamp sections, said ears being perforated, and means engaging in the perforation for independently contracting said clamp-sections to grip said thimble and a cable respectively, one of said clamp-sections having an inturned edge providing an annular flange at its end adapted to engage in the annular groove in said thimble.

1,192,151. STOCKING DRYING AND SHAPING APPARATUS. EBY R. APPLIN, Waupun, Wis. Filed May 3, 1915. Serial No. 25,360. (Cl. 223—17.)

1. A drying and shaping apparatus comprising a frame, a pair of troughs carried at the sides of the frame, a table member connecting the inner edges of the troughs, form members carried on the table, steam pipes extended between the troughs and lateral extensions connected with said pipes and extending through the table to the form members.

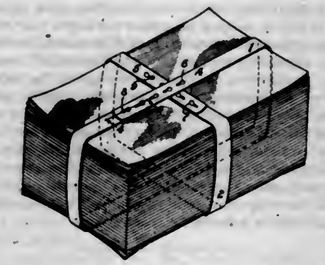
2. A drying and shaping apparatus comprising a strip of metal bent in substantially inverted U-shape, twin troughs formed of a sheet of metal bent downwardly about the bight portion of the said strip, with its ends bent upwardly, end plates closing the ends of the troughs, the bight portion of the U-shape member and the adjacent trough sheet portion forming a table, form members carried on the table and steam pipes extending into the space between the troughs and connected to the form members.

3. In a shaping and drying apparatus, the combination with a table member having steam pipes extended therethrough, of a form member, steam pipes extended from the form member and telescopically receiving the steam pipes of the table, a securing plate carried by the ends of the form pipes and countersunk adjacent said ends, washers in said countersinks adapted to surround the steam pipes of the table and means for clamping the plate to the table.



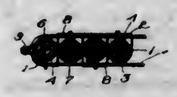
4. In a drying and shaping apparatus, a form member comprising a plate having substantially the outline shape of the work article, a pair of plates at the sides of the first mentioned plate and having their edges bent there around, with their body portions spaced therefrom, the first plate having an opening therein adjacent one end of the form and pipes carried at the other end of the form and communicating with the passages formed by the outer plates.

1,192,152. PACKAGE-TIE. CHARLES M. ATKINSON, Chicago, Ill. Filed Apr. 16, 1914. Serial No. 832,368. (Cl. 24—17.)



In a device of the class described, a pair of flexible straps having means adapted adjustably and detachably to connect their respective ends to provide a plurality of closed loops about an article to be wrapped, said straps being pivotally connected to each other at approximately their centers and at a single point, whereby they may be adjusted at a right angle to each other for use or turned to lie in parallel flat relation for storage.

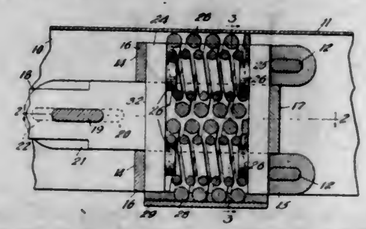
1,192,153. FLEXIBLE ELECTRIC HEATER. JAMES I. AYER, Cambridge, Mass., assignor to Simplex Electric Heating Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Aug. 14, 1913. Serial No. 784,731. (Cl. 219—46.)



As an article of manufacture, an electrically heated rug, foot-warmer, or the like, comprising a flexible elec-

trical heating element arranged as a flat but coiled form, an outer textile covering of suitable form and size for a rug, foot-warmer, or the like, and adapted to inclose the electrical heating coils, a fireproofing substance between said electric heating element and said outer textile covering, a flexible protecting armor for the electrical heating element, and means to hold the coils of the electrical heater and the outer textile covering in desired shape and form.

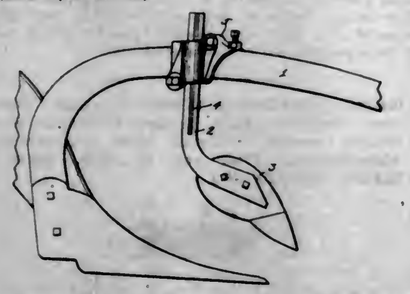
1,192,154. RAILWAY-CAR DRAFT-RIGGING. MAUDE F. BACK, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 23, 1914. Serial No. 868,161. (Cl. 213—42.)



1. In a draft rigging, the combination with slotted draft sills, of three U shaped members, one of said members being adapted to act as a yoke and slidable between the other two of said members, two removable keys located one above the other and passing through slots in said sills and slots near the free ends of said two members, followers disposed within said members, and cushioning means between said followers, said two keys acting as one set of stops and said two members as the other set of stops, said followers and cushioning means being removable from below without removing any of said three U shaped members.

2. In a draft rigging, the combination with slotted draft sills, of three U shaped members arranged one above the other, the upper and lower of said members having their free ends extending rearwardly and the middle one of said members having its free ends extended forwardly and adapted to be connected to a drawbar, upper and lower horizontal keys extending through slots in said sills and slots near the free ends of said upper and lower U shaped members, and shock absorbing mechanism mounted within said members, said keys forming the rear stops and the transverse portions of said upper and lower U shaped members forming the front stops, said shock absorbing mechanism being removable from below.

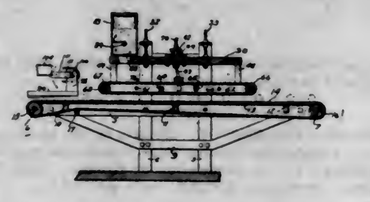
1,192,155. CLAMP FOR JOINTER-STANDARDS. ARTHUR D. BAKER, South Bend, Ind., assignor to South Bend Chilled Plow Co., South Bend, Ind., a Corporation of Indiana. Filed Apr. 21, 1915. Serial No. 22,914. (Cl. 97—6.)



1. A jointer standard clamp including a main member formed with a jointer standard channel, a free member formed with a jointer standard channel and a rib extending longitudinally of said channel and offset from the longitudinal median line thereof, the free member being reversible with respect to the main member.

2. A jointer standard clamp including a main member formed with a jointer standard channel, a free member formed with a jointer standard channel and a rib extending longitudinally of said channel and offset from the longitudinal median line thereof, the free member being reversible with respect to the main member, and means extending above and below the plow beam for connecting said members together and to the plow beam.

1,192,156. CUTTING AND ROLLING MACHINE FOR PLASTIC MATERIALS. GEORGE K. BAINBRIDGE, San Francisco, Cal. Filed Aug. 25, 1915. Serial No. 47,304. (Cl. 107—4.)



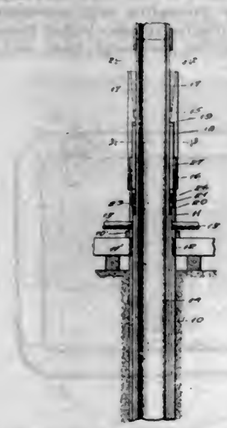
1. A confectionery rolling machine comprising a frame having a fixed bed, and endless apron movable over the bed, a vertically adjustable frame carried by the first frame, a second endless apron carried by the movable frame over the first apron, means to move the adjacent surfaces of the two belts in the same direction at different rates of speed, and means carried by the adjustable frame to give the upper belt a horizontal circular movement in addition to its longitudinal travel.

2. A confectionery rolling machine comprising a frame having a fixed bed, an endless apron movable over the bed, a vertically adjustable frame carried by the first frame, a second endless apron carried by the movable frame over the first apron, means to move the adjacent surfaces of the two belts in the same direction at different rates of speed, means carried by the adjustable frame to give the upper belt a horizontal circular movement in addition to its longitudinal travel, means to feed lumps of material intermittently on the lower belt, and means to dust flour on the upper belt from which it is discharged to the lower belt.

3. A confectionery rolling machine comprising a frame, having a fixed bed, an endless apron movable over the bed, a secondary frame supported in the first frame over its bed, means to vertically adjust said frame with respect to said bed, a second belt carried by said adjustable frame, means to move the adjacent faces of the belts in the same direction at different rates of speed, a crank supported by the adjustable frame and connected with the upper belt to give it a circular movement, and means to feed lumps of material to the lower belt so they will pass under the upper belt to be rolled thereby.

1,192,157. CASING-HEAD PACKER. JOHN BERGSTEN, Taft, Cal. Filed May 29, 1916. Serial No. 100,590. (Cl. 166—10.)

1. In apparatus of the character described, an outer casing having an interior shoulder, a gas take off pipe connected with the outer casing, a casing head having screw-threaded engagement with the outer casing and provided with an interior shoulder and having a portion of its bore tapered, a tube extending longitudinally within the outer casing and casing head, tapered wedges arranged within the tapered bore of the casing head and contacting with the inner tube to hold it against downward movement, packing surrounding the tube and supported by the lower shoulder formed upon the outer casing, and a compression sleeve surrounding the tube and resting upon the packing and adapted to contact with the shoulder of the casing head whereby the weight of the tube may be transmitted to the packing by rotation of the casing head.

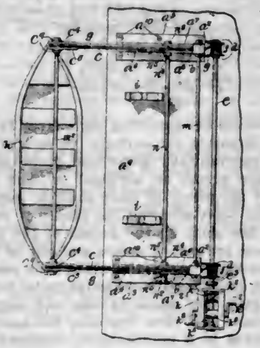


2. In apparatus of the character described, an outer casing having an interior shoulder, a gas draw off pipe connected with the outer casing, means for supporting the outer casing against downward movement, a casing head having screw-threaded engagement with the outer casing and provided with an interior shoulder and having a portion of its bore tapered, a tube extending longitudinally within the outer casing and casing head, wedges arranged within the tapered portion of the bore of the casing head and contacting with the tube to prevent its downward movement, a packing supporting ring arranged within the outer casing and engaging the shoulder thereof, packing arranged upon the packing supporting ring, and a compression sleeve surrounding the tube and resting upon the packing and having its upper end adapted to contact with the shoulder of the casing head so that the weight of the tube may be transmitted to the packing by the turning of the casing head.

3. In apparatus of the character described, an outer casing, a tubular coupling having screw-threaded engagement therewith and provided with an interior shoulder, a gas draw off pipe connected with the tubular coupling, means to support the tubular coupling against downward movement, a casing head having screw-threaded engagement with the tubular coupling and provided with an interior shoulder and having a portion of the bore tapered, a tube extending longitudinally within the outer casing and casing head, wedges arranged within the tapered portion of the bore of the casing head and having clamping engagement with the tube to prevent its downward movement, a packing supporting ring arranged within the outer casing and supported by the shoulder thereof, packing supported by the ring, and a compression sleeve surrounding the tube and resting upon the packing and having its upper end adapted to contact with the shoulder of the casing head whereby the weight of the tube may be transmitted to the packing.

1,192,158. APPARATUS FOR LOWERING AND HOISTING LIFE-BOATS. CORNELIUS A. BINKS, Matawan, N. J. Filed Jan. 4, 1916. Serial No. 70,178. (Cl. 9—22.)

1. An apparatus of the class described involving two parallel supports provided with standards, davits pivoted at the bottom of said standards, a winch shaft mounted back of said standards and provided at one end of the apparatus with a winch, arc-shaped members composed of parallel side parts and in which said davits are movable, said arc-shaped members being provided with arc-shaped slots, and a davit lock shaft passing through said slots and through said davits, said shaft being adapted to be operated from the end thereof adjacent to said winch and being provided with means whereby the operation thereof will lock said davits in said arc-shaped members or release them according to the direction in which said lock shaft is turned.



2. In an apparatus of the class described, supports adapted to be secured to the deck of a vessel in parallel position, said supports involving vertical standards and arc-shaped braces, said arc-shaped braces being composed of parallel parts between which the davits are movable and being also provided with arc-shaped slots, and a davit lock shaft passed horizontally through said slots and through said davits and provided with means whereby the turning thereof will lock said davits in said arc-shaped braces or release them according to the direction in which said shaft is turned.

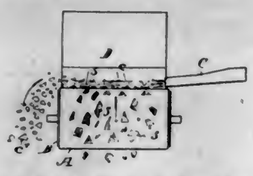
3. In an apparatus of the class described, supports adapted to be secured to the deck of a vessel in parallel position, said supports involving vertical standards and arc-shaped braces, said arc-shaped braces being composed of parallel parts between which the davits are movable and being also provided with arc-shaped slots, and a davit lock shaft passed horizontally through said slots and through said davits and provided with means whereby the turning thereof will lock said davits in said arc-shaped braces or release them according to the direction in which said shaft is turned, said apparatus being also provided rearwardly of said supports with a davit operating shaft provided at one end with a winch device through which said shaft passes.

4. In an apparatus of the class described, supports adapted to be secured to the deck of a vessel in parallel position, said supports involving vertical standards and arc-shaped braces, said arc-shaped braces being composed of parallel parts between which the davits are movable and being also provided with arc-shaped slots, and a davit lock shaft passed horizontally through said slots and through said davits and provided with means whereby the turning thereof will lock said davits in said arc-shaped braces or release them according to the direction in which said shaft is turned, said apparatus being also provided rearwardly of said supports with a davit operating shaft provided at one end with a winch device through which said shaft passes that part of said winch shaft which passes through the winch device being formed separately therefrom and detachably connected therewith.

5. An apparatus of the class described involving supports adapted to be secured to the deck of a vessel, davits mounted in said supports, a winch shaft mounted rearwardly of said supports and operated by a winch at one end of the apparatus, and a davit lock shaft operating in connection with said davits and adapted to be operated from the end thereof adjacent to the winch.

[Claims 6 to 8 not printed in the Gazette.]

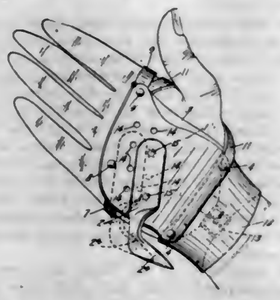
1,192,159. PROCESS OF SEPARATING SLATE FROM COKE. WARREN S. BLAUVELT, Grosse Ile, and WILLIAM T. HARMS, Detroit, Mich., assignors, by mesne assignments, to Semet-Solvay Company, Solvay, N. Y., a Corporation of New York. Filed July 8, 1914. Serial No. 849,849. (Cl. 83—54.)



1. The process of separating slate from fine coke which consists in disposing the material to be treated in a thin layer in a substantially horizontal plane and moving it in such plane across an air-blast in such manner that the edges of the pieces of slate shall be presented to the action of the blast whereby the pieces of coke are separated from the slate by the action of the blast and the pieces of slate are moved across and out of the air blast.

2. The process of separating slate from coke which consists in first assorting the material to be treated so that it shall contain only pieces of coke and slate of approximately the same size, then disposing the assorted material in a thin layer in a substantially horizontal plane and moving it in such plane across an air blast in such manner that the edges of the pieces of slate shall be presented to the action of the blast, whereby the pieces of coke are separated from the slate by the action of the blast and the pieces of slate are moved across and out of the blast.

1,192,160. CORN-HUSKING DEVICE. WILLIAM T. BOICE, Foley, Minn. Filed Jan. 21, 1916. Serial No. 73,353. (Cl. 130—4.)



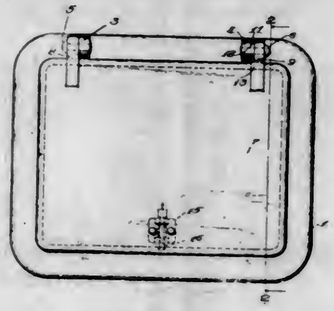
1. A husking device comprising a plate having means for anchoring it to the hand of the operator, and a husking peg secured to the said plate and with its point projecting below the lower edge thereof in a downward and rearward direction.

2. In a husking device, the combination with an anchoring plate having means for detachably securing the same to the hand of the operator, and a husking peg secured to said plate and provided with a hook-like point offset from the lower edge of said plate and projecting in a rearward direction.

3. A husking device comprising a plate having means for anchoring it to the hand of the operator, and a husking peg secured to the said plate with its point projecting in a downward direction transversely of the hand of the operator.

1,192,161. COAL-CHUTE DOOR. ALLEN A. BOWSER, Fort Wayne, Ind. Filed Aug. 26, 1915. Serial No. 47,549. (Cl. 16—106.)

1. In combination, a vertically swinging coal chute door, a hinge for said door having the parts thereof connected for pivotal movement relative to one another and for relative movement transverse to the axis of said pivotal movement, interlocking members secured to the parts of said hinge and arranged to be moved into coöperative position by the weight of said door when said door is in its upper or open position to retain said door in said position, and means for preventing said movement of the parts of said hinge relative to one another transverse to the axis of said pivotal movement when said door is in its closed position.



2. In combination, a door frame, a pair of pintle carrying members mounted on said frame, a door having a pair of knuckles pivotally supported by said pintle carrying members for movement about a horizontal axis, interlocking devices on one of said knuckles, and pintle carrying members arranged to be automatically moved into coöperative relation to one another by the weight of said door when said door is raised to its open position for holding said door in said position, and means for preventing movement of said door transverse to the axis of the pivotal movement thereof when in its closed position.

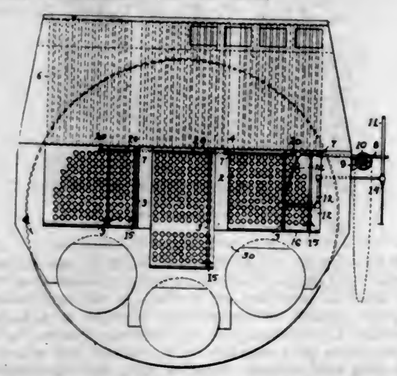
3. In a device of the character described, a vertically swinging door, a hinge for said door having a horizontal pivot and two relatively movable parts secured together by said pivot, one of said parts being provided with an elongated slot to permit lateral movement thereof relative to said pivot, interlocking shoulders carried by said parts and arranged to be automatically moved under the weight of said door by the lateral movement of said parts relative to one another into position to hold said door from closing when it has been raised to open position and means for preventing movement of said door in the direction of said slot when said door is closed.

4. A coal chute door comprising a door frame, a door pivotally mounted on said frame for movement about a horizontal axis, a hinge for securing said door to said frame provided with two parts having a pin and slot connection to permit lateral movement of said parts, interlocking members for preventing pivotal movement of said door on said hinge and arranged to be moved into or out of operative relation by the lateral movement of the parts of said hinge relative to one another when said door is open, and means for preventing lateral movement of the parts of said hinge relative to one another in the direction of the slot of said pin and slot connection when said door is closed.

5. In combination, a door frame, a pintle-carrying member secured to the upper portion of said frame, a door for said frame having a knuckle secured to its upper edge, a loose motion pivotal connection between said pintle-carrying member and said knuckle arranged to permit vertical swinging opening and closing movement of said door and also lateral movement thereof relative to said frame, interlocking members on said knuckle and pintle-carrying members arranged to be moved into contact with one another by said lateral movement to lock said door in open position, a latch for holding said door in closed relation with said frame, and means on said frame arranged, when said door is in closed position, to prevent lateral movement of said door and knuckle relative to said frame and pintle-carrying member transversely to the axis of said pivoted connection and consequent displacement of said latch.

[Claims 6 to 8 not printed in the Gazette.]

1,192,162. BLOW-OUT DEVICE FOR BOILER-FLUES. DOUGLAS BREWS, Cleveland, Ohio. Filed Apr. 20, 1914. Serial No. 833,189. (Cl. 122—391.)



1. A blow-out installation for boilers comprising a breeching and vertically disposed flues at the top thereof, in combination with a steam distributing pipe slidably mounted in the angle of said breeching and blow-out pipes at right angles to one another carried by said pipe, and means at the free ends of said blow-out pipes adapted to sustain the same against back pressure of the steam and to support the weight of said pipes.

2. A blow-out installation for boilers as described comprising a breeching and vertically disposed exhaust flues at the top thereof, in combination with a single steam distributing pipe mounted to slide lengthwise in the angle of said breeching and provided with operating means outside said breeching, blow-out pipes disposed at right angles to each other on said distributing pipe, and means on the free ends of said blow-out pipes adapted to carry the same and thereby relieve the weight on said distributing pipe.

3. In a blow-out installation as described, a breeching and exhaust flues at the top thereof, in combination with a steam distributing pipe slidably supported in the angle of said breeching and provided with sets of blow-out pipes at right angles to each other in front of said boiler and exhaust flues respectively, and supports for said blow-out pipes and a breeching inclosing said pipes.

4. A blow-out installation as described comprising a breeching and vertically disposed flues at the top thereof, in combination with a steam distributing pipe in the angle of said breeching and a plurality of branch pipes thereon in vertical and horizontal sets respectively provided with jets to simultaneously eject steam therefrom, guides in which said distributing pipe is slidable lengthwise and rollers carrying the ends of said branch pipes.

5. An installation as described having a breeching, a steam distributing pipe in the angle thereof adapted to be moved in a direct line and fixed guides therefor and provided with operating means at one end, branch pipes on said distributing pipe at right angles to each other provided with nipples and adapted to be moved simultaneously, a roller on the end of each of said branch pipes and separate tracks for said sets of pipes and rollers.

[Claim 6 not printed in the Gazette.]

1,192,163. METHOD OF MAKING PAINTS. ROBERT V. BROWN, Pullman, Ill., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 3, 1913. Serial No. 793,127. (Cl. 134—39.)

1. The method of making paints and the like, which consists of mixing together a pigment in water, lead linoleate, and linseed oil having a relatively high acid content, whereby the oil replaces the water and incorporates the pigment and linoleate.

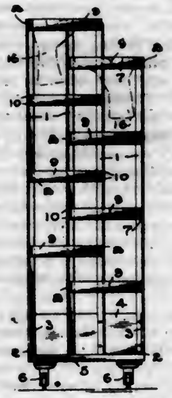
2. The method of making paints and the like, which consists of mixing together a pigment in water, lead linoleate, and linseed oil having a relatively high acid content, and heating the mixture, whereby the oil replaces the water and incorporates the pigment and linoleate.

3. The method of making paints and the like, which consists of mixing together a water-insoluble soap of a drying vegetable oil and a drying vegetable oil, and adding the mixture to a pigment in water, whereby the oil replaces the water and incorporates the pigment and soap.

4. The method of making paints and the like, which consists of mixing together lead linoleate and linseed oil, and adding the mixture to a pigment in water, whereby the oil replaces the water and incorporates the pigment and linoleate.

5. The method of making paints and the like, which consists of mixing together lead linoleate and linseed oil having a relatively high acid content, adding the mixture to a pigment in water, and heating the resulting mass, whereby the oil replaces the water and incorporates the pigment and linoleate.

1,192,164. SHOE-RACK. JAMES S. BUNKER, Chester, Pa. Filed July 13, 1914. Serial No. 850,578. (Cl. 211—14.)



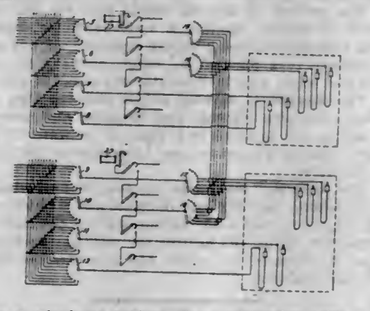
1. A metal shoe rack, comprising a plurality of end bars disposed vertically, two vertical series of shoe supporting trays connecting the end bars, the trays of one series interposed between and having staggered relationship to the trays of the other series, each of said trays comprising parallel bars, and a series of slats secured at their respective ends to the bars, said slats of inverted V-shape having sharp upper edges and inclined sides with spaces between the slats, substantially as described.

2. A metal shoe rack, comprising a tray consisting of parallel bars, a series of slats secured at their respective ends to the bars, said slats of inverted V-shape having sharp upper edges and inclined sides with spaces between the slats, said slats composed of sheet metal having inwardly turned lower rounded edges, and a cover for each slat, each cover positioned around the sloping sides of the slat and connected at a point below the slat, substantially as described.

1,192,165. CALL-DISTRIBUTING SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Oct. 1, 1915. Serial No. 53,585. (Cl. 179—27.)

1. In a telephone system, the combination with an operator's connective means controlled by a connecting operator, of automatic switching means, telephone lines extending from substations to the central office and terminating in said switching means, one or more of said

switching means being extended directly to said connective means, automatic distributing means for extending the remainder of said means to any one of a plurality of operators' positions, and means to prevent said switching means from being extended by distributing means to said operator's position when an unanswered call exists at the position.



2. In a telephone system, the combination with a plurality of telephone lines, of automatic switching means associated with said lines, of connecting plugs permanently associated with a plurality of said switching means, automatic distributing means associated with a plurality of said switching means, auxiliary connecting plugs associated with said distributing means, and means to prevent the auxiliary plugs from being automatically associated with one of said lines when an unanswered call is associated with one of said connecting plugs.

3. In a telephone system, the combination with a plurality of lines, of selecting switches in which said lines terminate, operator's connective means directly connected to a plurality of said switches, operator's auxiliary connective means associated with a plurality of operator's, automatic distributing switches associated with said auxiliary connective means and with one or more of said selecting switches, and means to automatically extend one of said lines to an auxiliary connective means when the directly connected connective means of a position are idle.

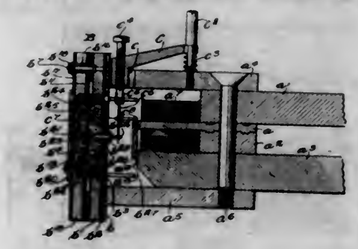
4. In a telephone system, subscribers' lines divided into groups, a plurality of selecting switches for each group, connective means individual to an operator associated with said selecting switches, auxiliary connective means associated with a plurality of operators' positions, automatic distributing switches, and means whereby a desired percentage of the telephone traffic of a group is associated with the auxiliary connective means through the selecting switches and the distributing switches, the connective means directly associated with the selecting switches being used for traffic in excess of the desired percentage.

5. In a telephone system, subscribers' lines divided into groups, a plurality of selecting switches for each group, trunk lines, a plurality of connective means each being individual to one of said trunk lines associated with said selecting switches, auxiliary connective means associated with a plurality of said trunk lines, automatic distributing switches, and means whereby a desired percentage of the telephone traffic originating in a group is associated with the auxiliary connective means through the selecting switches and the distributing switches, the connective means directly associated with the selecting switches being used for traffic in excess of the desired percentage.

[Claims 6 and 7 not printed in the Gazette.]

1,192,166. DIFFERENTIAL-MICROPHONE REPEATER. JOHN J. COMER, Chicago, Ill., assignor to Automatic Enunciator Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 13, 1911, Serial No. 614,000. Renewed Sept. 12, 1914. Serial No. 861,485. (Cl. 129—171.)

1. In a telephone amplifier, a microphone transmitter, a resilient diaphragm therefor, a lever, a connection from said diaphragm, to the lever, a fulcrum for said lever, a pivoted support on which said fulcrum is adjustably mounted, an electromagnet, an armature therefor, a connection from said armature to said lever, and means for adjusting said support about its axis, the adjustment of the fulcrum on said support serving to vary the leverage, and the adjustment of the said support serving to vary the air gap between said magnet and armature.



2. In a telephone amplifier, a microphone transmitter, a resilient diaphragm therefor, a lever, a connection from the lever to said member, a fulcrum for said lever, a pivoted support on which said fulcrum is adjustably mounted, an electromagnet, an armature therefor, a connection from said armature to said lever, and means for adjusting said support about its axis, the adjustment of the fulcrum on said support serving to vary the leverage, and the adjustment of the said support serving to vary the air gap between said magnet and armature.

3. In a telephone amplifier, a microphone transmitter, a resilient diaphragm therefor, an electromagnet, an armature therefor, a lever, a link connection from the diaphragm to the lever, said connection being secured to said diaphragm, a connection from the lever to the armature, a fulcrum for said lever, and means for adjusting said fulcrum to regulate the air gap between said magnet and armature.

4. In a telephone amplifier, a microphone transmitter, a resilient diaphragm therefor, a lever connected to said diaphragm, an electromagnet provided with an armature for operating said lever, means for changing the leverage, and pivoted means for mechanically regulating the tension of said diaphragm and the air gap between said magnet and armature.

5. In a telephone amplifier, a microphone transmitter, a resilient diaphragm therefor, a lever connected to said diaphragm, an electromagnet provided with an armature for operating said lever against the tension of said diaphragm, a screw for moving said lever longitudinally for changing the leverage, and a screw for mechanically regulating the tension of said diaphragm and the air gap between said magnet and armature.

[Claims 6 to 11 not printed in the Gazette.]

1,192,167. GAME APPARATUS. MAX CONDÉ, New York, N. Y., assignor, by mesne assignments, to Hermann Korber, New York, N. Y. Filed Aug. 9, 1913, Serial No. 783,879. Renewed Dec. 18, 1915. Serial No. 67,552. (Cl. 46—56.)

1. A game apparatus consisting of a casing, a rotary table therein, means to rotate the same, a receptacle adjacent the table, indicating elements normally located in said receptacle, means to force said elements, one at a time out of the receptacle onto said table, and means to rotate the table.

2. A game apparatus consisting of a casing, a plurality of compartments within the casing, one of said compartments comprising a rotary table, the other of said compartments comprising receptacles, indicating elements normally located in said receptacles, a rotatable ring adjacent said receptacles provided with an opening adapted to place the said receptacles in communication with the table, means to rotate said ring to cause the opening therein to aline with any one of the indicating elements, means to force any one of said elements through the alined opening and onto said table, and means to rotate said table.

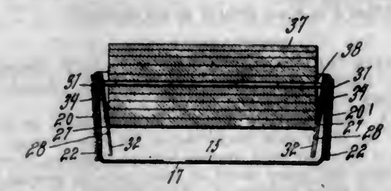
3. A game apparatus consisting of a casing, a plurality of compartments within the casing, one of said compartments comprising a rotary table, the other of said compartments comprising receptacles, indicating elements normally located in said receptacles, a rotating ring adjacent said receptacles provided with an opening adapted to place the said receptacles in communication with the table, teeth carried by said ring, a gear meshing with said teeth, means to rotate said gear, thereby rotating said ring to cause the opening therein to aline with any one of the indicating elements, means to force any one of said elements through the alined opening and onto said table, and means to rotate said table.

4. A game apparatus consisting of a casing provided with a receptacle, indicating elements normally located in said receptacle, a compartment adjacent said receptacle, means to force any one of said indicating elements out of the receptacle into the compartment adjacent thereto, and means to cause said elements to change their position relative to a starting point adjacent the said compartment.

5. A game apparatus consisting of a casing, a plurality of compartments within the casing, one of said compartments comprising a rotary table, the other of said compartments comprising receptacles, indicating elements normally located in said receptacles, a rotatable ring adjacent said receptacles provided with an opening adapted to place the said receptacles in communication with the table, teeth carried by said ring, a gear meshing with said teeth, means to rotate said gear, thereby rotating said ring to cause the opening therein to aline with any one of the indicating elements, means to force any one of said elements through the alined opening and onto said table, a gear carried by said table, a pivoted rack meshing therewith, and means to actuate said rack to cause said table to rotate.

[Claims 6 to 9 not printed in the Gazette.]

1,192,168. RECEPTACLE FOR HOLDING GAUZE OR THE LIKE. WILLIAM EDWARD COOK, Northfork, W. Va. Filed June 25, 1915. Serial No. 36,245. (Cl. 206—52.)



1. A receptacle for holding a roll carried by a spindle, comprising a body portion including end portions, and flaps formed integral with the upper ends of the end portions and bent downwardly upon said upper ends to extend downwardly into the body portion and provided at points spaced a substantial distance from said upper ends with openings to receive the spindle.

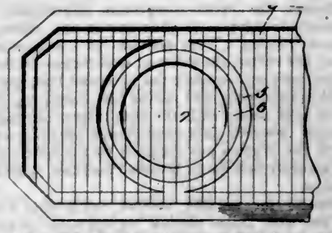
2. A receptacle for holding a roll carried by a spindle, comprising a body portion including end portions, and flaps formed integral with the upper ends of the end portions and bent downwardly upon said upper ends to extend downwardly within the body portion, each flap having its material at its lower end bent transversely upon itself for forming the flap in two thicknesses with the free end of said material of the flap bent transversely adjacent the said upper end of the end portion, each flap being provided near its lower end with an opening to receive a portion of the spindle.

3. A blank for forming a box; comprising a bottom provided with end extensions foldable upon transverse scores on the bottom; a side foldable upon a longitudinal score upon the bottom and carrying end flaps foldable upon transverse scores upon the side; a second side foldable upon a longitudinal score upon the bottom and carrying end flaps foldable upon transverse scores upon such side; pivot-holding flaps carried by the end flaps of the second named side and adapted to be arranged inwardly of all of the end flaps; and means for connecting the end flaps of one side with the end flaps of the other side.

4. A blank for forming a box; comprising a bottom provided with end extensions foldable upon transverse scores on the bottom; a side foldable upon a longitudinal score on the bottom and carrying end flaps foldable upon transverse scores upon the side; a second side foldable upon a longitudinal score upon the bottom and carrying end flaps foldable upon transverse scores upon such side; pivot-holding flaps carried by the end flaps of the second named side and bodily foldable upon a transverse score upon such end flaps, the pivot-holding flaps being foldable upon themselves upon a transverse score and provided at their ends with spring flaps foldable upon transverse scores; and means for connecting the end flaps of one side with the end flaps of the other side.

5. A blank for forming a box; comprising a bottom provided with end extensions foldable upon transverse scores upon the bottom; a side flap foldable upon a longitudinal score upon the bottom and carrying end flaps foldable upon transverse scores upon the side; a second side foldable upon a longitudinal score upon the bottom and carrying end flaps foldable upon transverse scores upon such side; pivot holding flaps provided with openings and carried by the end flaps of the second named side; means for connecting the end flaps of one side with the end flaps of the other side; a cover carried by the second named side and foldable upon a longitudinal score thereof; and a flap carried by the cover.

1,192,169. CASKET. JAMES W. DE CAMP, Blackwell, Okla., assignor of one-fourth to John P. Miller, McAllen, Tex., and one-fourth to Charles E. De Camp, Blackwell, Okla. Original application filed July 20, 1915, Serial No. 40,999. Divided and this application filed Dec. 28, 1915. Serial No. 68,408. (Cl. 27—14.)

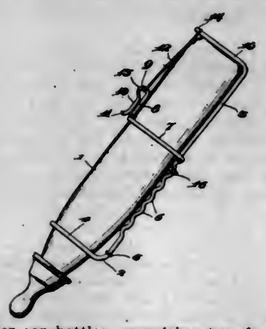


1. A casket lid of transparent material provided interiorly with a lining including a permanently fixed section and a removable lining section.

2. A casket lid of transparent material, a lining arranged within the lid, a frame surrounded by the lining and providing a sight opening, and a lining section removably fitted in the said frame.

3. A casket lid of transparent material, a lining arranged within the lid, a frame surrounded by the lining, a second frame removably fitted into the first mentioned frame and held therein by friction, and a lining section removably arranged within the second mentioned frame.

1,192,170. HOLDER FOR NURSING-BOTTLES. CHARLES F. DEVENNY, Philadelphia, Pa. Filed Mar. 1, 1916. Serial No. 81,339. (Cl. 215—116.)



1. A holder for bottles comprising two frames adjustably connected together and free to slide one on the other, one frame having a portion adapted to engage the end of the bottle, the other frame having portions designed to clamp the neck and body portions of the bottle, and means on one of said frames whereby the bottle may be securely held in an inverted position, substantially as described.

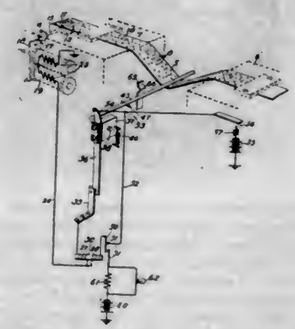
2. A holder for bottles comprising two frames adjustably connected together and free to slide one on the other, one of said frames having a portion designed to engage the end of the bottle, the other of said frames having ring-shaped portions designed to encircle the neck and body portions of the bottle, the ring-shaped portion which encircles the body of the bottle being provided with a hook whereby the bottle may be securely held in an inverted position, substantially as described.

3. A holder for bottles comprising two frames adjustably connected together and free to slide on the other, one of said frames having a portion designed to engage the end of the bottle, the other of said frames having ring-shaped portions designed to encircle the neck and body portions of the bottle, the ring-shaped portion which encircles the body of the bottle having ends terminating in the form of hooks normally spaced apart, said end-engaging frame having an eye, and a cord extending through said eye and said hooks whereby when the weight of the bottle is suspended from said cord, the ring-shaped portions will be clamped around said body and said first frame will have its portion clamped against the end of the body, substantially as described.

4. A holder for bottles comprising two frames adjustably connected and free to slide one on the other, one of said frames having a bent portion for engagement with the end of the bottle, the other of said frames having ring-shaped portions surrounding the neck and body portion of the bottle respectively, and means for connecting the bent portion of said frame with the ring-shaped portion of the other frame, whereby said ring-shaped portions and bent portion of the frames are clamped to the bottle and the latter is securely held in an inverted position, substantially as described.

5. A holder for nursing bottles, comprising two wire frames, one wire frame having corrugations therein, and the other wire frame having eyes adjustable on the corrugated portions of the first-mentioned frame, one of said frames having a ring thereon adapted to receive the neck of a bottle, the other of said frames having a portion positioned against the end of the bottle with an eye at its free end, said first-mentioned frame having a pair of hooks thereon and a pair of clamping portions around the sides of the bottle supporting said hooks, and a supporting cord positioned through said eye and having its ends projecting in opposite directions through the hooks, substantially as described.

1,192,171. CONTROLLING SYSTEM. AMOS F. DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Jan. 24, 1914. Serial No. 814,131. (Cl. 178—17.)



1. A tape controlling system comprising a tape moving device, an electromagnet for controlling said device, means for supplying intermittent current to said electromagnet to cause the advancement of the tape, and means controlled by the tape to alter the magnetic conditions of said electromagnet to arrest the advancement of the tape.

2. A tape controlling system comprising a tape moving device, an electromagnet for controlling said device, means for supplying intermittent current to said electromagnet to cause the advancement of the tape, and means controlled by the tape for supplying steady current to said electromagnet to arrest the movement of the tape.

3. A tape controlling system comprising an electrically actuated tape moving device, a circuit therefor having two branches, a relay having two windings, one in each of said branches, and means for opening one of said branches to cause said relay to open the other of said branches.

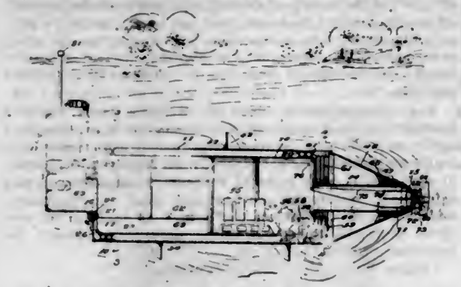
4. An electromagnetic tape controlling system comprising an electrically actuated tape moving device, a circuit therefor having two branches, a relay having two windings, one in each of said branches, a locking circuit for said relay independent of said branches, and means for causing said relay to open a branch circuit and close said locking circuit.

5. A tape controlling system comprising a tape moving mechanism, means for causing the operation of said mechanism, a relay having two differential windings for controlling the effect of said means, an arm arranged to be acted upon by a tape for controlling the action of said relay, and a locking circuit for causing the continuing action of said relay.

[Claims 6 to 8 not printed in the Gazette.]

1,192,172. SUBMARINE BOAT. WILLIAM F. DOHERTY, Jr., Bisbee, Ariz. Filed Aug. 14, 1915. Serial No. 45,563. (Cl. 114—16.)

1. A submarine boat including an inner shell, an outer shell, the inner shell projecting at its ends through the ends of the outer shell, stuffing box constructions between the inner and outer shells at their ends to prevent entrance of water between the shells, bearing races carried by the shells, ball bearings in the races to support the outer shell for turning movement about the inner shell, a helical propeller blade carried by the outer shell, means for rotating the outer shell respective to the inner shell, a conning tower formed upon one end of the inner shell and exteriorly of the outer shell, a conical head plate secured upon the opposite end of the inner shell and extending rearwardly over the adjacent end of the outer shell, a rudder carried by the head, and means controlled from the conning tower for operating the rudder.



2. A submarine boat including an inner shell, an outer shell, the inner shell projecting at its ends through the ends of the outer shell, stuffing box constructions between the inner and outer shells at their ends to prevent entrance of water between the shells, bearing races carried by the shells, ball bearings in the races to support the outer shell for turning movement about the inner shell, a helical propeller blade carried by the outer shell, means for rotating the outer shell with respect to the inner shell, a conning tower formed upon one end of the inner shell and exteriorly of the outer shell, a conical head plate secured upon the opposite end of the inner shell and extending rearwardly over the adjacent end of the outer shell, a rudder carried by the head, and means controlled from the conning tower for operating the rudder, said means including pivoted hand levers, cables connected at one end to each hand lever above and below its point of pivotal support, rods reciprocally mounted through stuffing boxes in the head to which the opposite ends of the cables are attached, and ball and socket connections between the rods and rudder.

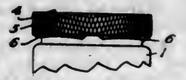
3. A submarine boat including a body terminating at its forward end in a substantially conical head plate formed at its apex with a socket, a rudder including a horizontal blade and a vertical blade formed with a ball member to seat in the socket, whereby the rudder may be swung to either side or up and down, rods reciprocally mounted through the head, ball and socket connections between the rods and rudder blades, a rod being connected to the rear edge of each blade and adjacent each side thereof, hand levers, and operating cables connecting the hand levers and rods.

4. A submarine boat including a cylindrical shell terminating at its forward end in a frusto-conical extension, an inner cylindrical shell terminating at its forward end in a cylindrical extension projecting through the extension of the outer shell, a substantially conical head secured to the extension of the inner shell and projecting over a portion of the extension of the outer shell, a rudder carried by the head, a conning tower projecting from the rear end of the inner shell through the rear end of the outer shell and above the upper portion of the outer shell, means between the inner and outer shells adjacent their ends to prevent entrance of water between the shells, ball bearings located between the shells to support the outer shell for turning movement with respect to the inner shell, means for rotating the outer shell with respect to the inner shell, and a propeller blade carried by the outer shell.

5. A submarine boat including an outer cylindrical shell terminating at its forward end in a frusto-conical extension, an inner cylindrical shell terminating at its forward end in a cylindrical extension projecting through the extension of the outer shell, a substantially conical head secured to the extension of the inner shell and projecting over a portion of the extension of the outer shell, a rudder carried by the head, a conning tower projecting from the rear end of the inner shell through the rear end of the outer shell and above the upper portion of the outer shell, means between the inner and outer shells adjacent their ends to prevent entrance of water between the shells, ball bearings located between the shells to support the outer shell for turning movement with respect to the inner shell, means for rotating the outer shell with respect to the inner shell, a propeller blade carried by the outer shell, and a false bottom within the inner shell providing a water receiving tank.

[Claims 6 and 7 not printed in the Gazette.]

1,192,173. CLOSURE FOR CONTAINING VESSELS. JOHN E. DOLDT, Portland, Me., assignor to National Metal Seal Corporation, Boston, Mass., a Corporation of Maine. Filed Feb. 12, 1913. Serial No. 747,876. (Cl. 215—85.)



1. In combination, a container having spaced lugs about its mouth, each lug having continuous laterally disposed cam surfaces sloped toward each other from the ends of the lug, and having their points of greatest height at the center of the lug, a rotatable closure having a depending flange provided with spaced inturned substantially horizontal lips terminating each in an upwardly arched resilient tip portion beginning at the ends of the inturned portion and having its point of greatest arch at the center of the lip whereby to draw the closure downwardly and inwardly onto the container as the closure is tightened.

2. In combination with a container having spaced lugs about its mouth, each lug having cam surfaces sloped outwardly toward each other from opposite ends of the lug and having an underneath bearing surface, a closure for said container having resilient depending lips, the depending portion of each lip being disposed for progressive engagement with said lateral cam surfaces upon rotation of the closure and each lip terminating in an inturned convex end disposed for engagement with the under face of the lug whereby to draw the closure downwardly and inwardly onto the container as it is tightened.

1,192,174. CLEANING-ROD. JARSLEY DVORAK, Melvin, Iowa. Filed Feb. 7, 1916. Serial No. 76,654. (Cl. 42—92.)



1. A device of the character described including coacting adjustably connected rod sections, and coacting members pivoted respectively to the said sections and adapted to coöperate therewith and with each other for simultaneously locking said members against pivotal movement.

2. A device of the character described including coacting rod sections, and coacting members pivoted respectively to the said sections, said members being adjustable one upon the other to coact with each other and with the said sections for simultaneously locking the said members against pivotal movement with the said members and the sections arranged in alinement.

3. A device of the character described including coacting rod sections, a locking member pivotally connected to one of said sections, and a locking member pivotally connected

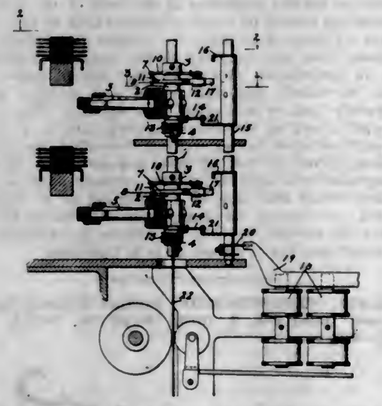
to the other of said sections and movable upon said first mentioned locking member to engage said first mentioned rod section with the said last mentioned rod section engaging the said first mentioned locking member for locking the locking members against pivotal movement with the rod sections and the said locking members arranged in alinement.

4. A device of the character described including coacting rod sections, and coacting locking members pivoted respectively to the said sections, the said members being adapted to coact with each other with their free extremities coacting with the adjacent extremities of said sections for locking the said members against pivotal movement with the rod sections and the said locking members arranged in alinement.

5. A device of the character described including coacting rod sections, a sleeve pivotally connected to one of said sections, and a locking member pivotally connected to the other of said sections and adjustable upon the sleeve to engage said first mentioned section with the sleeve abutting the adjacent terminal of said last mentioned section for holding the said sleeve and locking member against pivotal movement.

[Claims 6 to 8 not printed in the Gazette.]

1,192,175. SELECTOR-SWITCH. ALFRED H. DYSON, Montclair, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 25, 1915. Serial No. 47,258. (Cl. 179—27.5.)



1. In an automatic telephone switch, a longitudinally movable brush shaft, a plurality of brush sets mounted thereon, a series of stationary contacts for each brush, means normally maintaining said brushes in an inoperative position at one side of their rows of contacts, brush selecting mechanism, and means for operating said mechanism to permit a desired brush to assume its operative position.

2. In an automatic telephone switch, a longitudinally movable brush shaft, a plurality of brush sets rotatably mounted on said shaft, a series of stationary contacts for each brush, means normally maintaining said brushes in an inoperative position at one side of their rows of contacts, brush selecting mechanism, and means for operating said mechanism to permit a desired brush to assume its operative position.

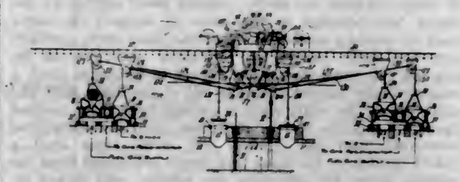
3. In an automatic telephone switch, a brush shaft, a plurality of brush sets rotatably mounted on said shaft, a series of stationary contacts arranged to be traversed by each brush, a pawl and ratchet device for each brush normally maintaining said brush in an inoperative position at one side of its row of contacts, a brush tripping mechanism, and means for operating said mechanism to permit a desired brush to assume its operative position.

4. In an automatic telephone switch, a brush shaft, a plurality of brush sets rotatably mounted on said shaft, a series of stationary contact sets for each brush set, a pawl and ratchet device for each brush set normally maintaining the brushes thereof in an inoperative position at one side of their rows of contacts, a tension device for each brush set tending to rotate said set to its operative position, brush tripping mechanism, and means for operating said mechanism to retract the holding pawl of a desired brush set to permit said set to assume its operative position.

5. In an automatic telephone switch, a brush shaft, a plurality of brush sets rotatably mounted on said shaft, a series of stationary contacts for each brush, means normally maintaining said brushes in an inoperative position at one side of their rows of contacts, means for rotating said shaft, means for moving said shaft longitudinally, and means dependent on the degree of rotation of said shaft prior to the longitudinal movement thereof for selecting a desired brush set.

[Claim 6 not printed in the Gazette.]

1,192,176. FURNACE-VALVE-OPERATING MECHANISM. LOUIS C. EDGAR, Swissvale, and ADOLF SUTER, Beaver, Pa. Filed May 22, 1914. Serial No. 840,396. (Cl. 137—150.)



1. A furnace valve operating mechanism a valve, a rocking arm, means for actuating said arm, and flexible means connecting the valve to the rocking arm, said means being adjustable on the arm to vary the opening movement of said valve from zero to a maximum.

2. A furnace valve operating mechanism comprising a plurality of valves, rocking arms, means for simultaneously actuating said arms, and means connecting the valves to the arms, said connecting means being independently adjustable to vary the extent of movement of said valves from zero to a maximum.

3. A furnace valve operating mechanism comprising a plurality of pairs of valves, swinging arms for actuating the valves, means connecting the valves to the swinging arms, said means being adjustable on the arms to vary the extent of movement of the valves from zero to a maximum and means for simultaneously swinging said arms to move the valves in opening and closing.

4. A furnace valve operating mechanism comprising valves, rocking arms for actuating said valves, means operatively connecting the arms to the valves, a shaft for rocking said arms, a worm wheel on the shaft, a worm for actuating the worm wheel, a motor for actuating the worm, means connecting the arms for actuating said arms simultaneously and in opposite directions in opening and closing the valves and means for automatically stopping the motor, at the end of the opening and closing movement of said valves.

5. A furnace valve operating mechanism comprising a valve, a swinging arm adjustably connected to said valve, a crank shaft operatively connected to the swinging arm, a worm wheel on the shaft, a worm for actuating the worm wheel, a motor for actuating the said worm and means for automatically stopping the motor after a predetermined amount of travel of said valve.

[Claims 6 to 26 not printed in the Gazette.]

1,192,177. HANDLE FOR TOOLS OR THE LIKE. FRED C. EHINGER, Palmyra, Mich. Filed May 29, 1915. Serial No. 31,242. (Cl. 145—61.)

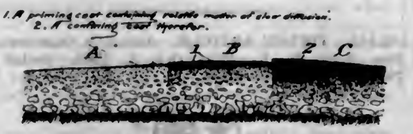
1. In a handle for tools or the like, the combination of a handle proper having a tapering neck portion and having a head at the small end of the tapering neck portion of greater diameter than the latter at the junction between the head and the neck, said head having a transversely-rounded peripheral portion, and a seamless ferrule formed of comparatively heavy gage metal whereby the ferrule is non-expansible, said ferrule being provided with a tapering band portion fitting the tapering neck of the handle proper and having an enlarged socket portion of greater diameter than the band at the junction between the latter and the socket, said socket being shaped to fit the head and having an opening in its forward end, and the handle being made of soft wood whereby the head is compressible and expansible, said head being compressed by said tapering band portion during the engaging movement of the ferrule upon the handle proper and expanding at the completion of said movement.



2. The method of forming handles for tools, comprising forming a handle proper with a neck portion terminating at its inner end in an enlarged solid head of compressible expansible material and forming a seamless non-expansible ferrule having a band portion of a size to fit the neck portion of the handle proper, and having a socket portion at one end thereof of a size to fit the head, said socket being of considerably greater diameter than the band at the junction between the latter and the socket, and in then assembling the ferrule and handle by forcing the head through the band portion into engagement with the enlarged socket, the head being compressed by said band portion during the forcing operation and expanding at the completion of said operation.

3. The method of forming handles for tools, comprising forming a handle proper with a tapering neck portion terminating at its inner end in an enlarged solid head of compressible expansible material and forming a seamless, non-expansible ferrule having a tapering band portion of a size to fit the neck portion of the handle proper, and having a socket portion at one end thereof of a size to fit the head, said socket being of considerably greater diameter than the band at the junction between the latter and the socket, and in then assembling the ferrule and handle by forcing the head through the band portion into engagement with the enlarged socket, said head being compressed by said band portion during the forcing operation and expanding at the completion of said operation.

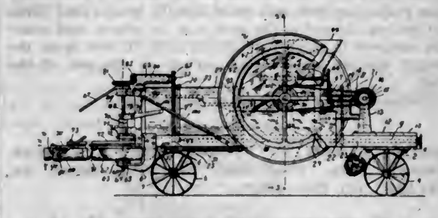
1,192,178. METHOD OF TREATING ROADWAYS. SAM EVERETT FINLEY, Atlanta, Ga. Filed Feb. 15, 1915. Serial No. 8,370. (Cl. 94—1.)



1. The method of treating road-beds which consists in applying to the road surface a penetrating and priming coat of light bituminous substance containing a large percentage of volatile matters capable of slow diffusion, and then before the volatile matters escape, applying a coat of heavier bituminous substance capable of confining and retaining the volatile matters in the road bed, the priming coat being capable of binding the top coat to the road surface and of gradually cutting back the same to utilize its cementive value below the original road surface.

2. The method of treating road-beds which consists in first removing the loose dust from the road surface, applying to the cleaned road surface a penetrating and priming coat of light bituminous substance containing a large percentage of volatile matters capable of slow diffusion, and then before the volatile matters escape, applying a coat of heavier bituminous substance capable of confining and retaining the volatile matters in the road bed, the priming coat being capable of binding the top coat to the road surface and of gradually cutting back the same to utilize its cementive value below the original road surface.

1,192,179. CONCRETE-MIXER. SAMUEL FINLEY, Geneseo, N. Y.; Jennie E. Finley administratrix of said Samuel Finley, deceased. Filed Dec. 27, 1910. Serial No. 599,578. (Cl. 83—73.)



1. In a concrete mixer the combination of a drum formed of a wheel and an annular channel member having one side thereof fastened to the periphery of said wheel, said channel member opening inwardly toward the axis of said wheel, division plates in said channel member forming pockets therein, said pockets being adapted to receive material therein when at the bottom of the drum and discharge the material therefrom when at the top of the drum, said wheel having a small number of narrow spokes therein with large openings between said spokes through which openings building material may be shoveled into the pockets at the bottom of the drum, a stationary chute projecting into and across said drum near the top thereof, said chute being adapted to receive the material from the pockets in said drum as they become inverted at the top of the drum, said wheel having an annular flange thereon just outside of said pockets, said flange projecting laterally over said chute and serving to deflect the material from the pockets to said chute.

2. In a concrete mixer, the combination of a pair of drums mounted on the opposite ends of a common axis, each of said drums being formed of a wheel and an annular channel member having one side thereof fastened to the periphery of its wheel and having its free side overhanging between said wheels, each of said channel members having an annular opening therein facing the axis of the wheels, division plates in said channel member forming pockets therein, said pockets being adapted to receive material therein when at the bottom of the drum and discharge the material therefrom when at the top of the drum, each of said wheels having a small number of narrow spokes therein with large openings between said spokes through which openings building material may be shoveled into the pockets at the bottom of the drum, a stationary chute mounted between said drums and projecting into and across each of said drums near the top thereof, said chute being adapted to receive the material from the pockets in said drum as they become inverted at the top of the drum.

3. In a concrete mixer, the combination of a pair of drums mounted on the opposite ends of a common axis, each of said drums being formed of a wheel and an annular channel member having one side thereof fastened to the periphery of its wheel and having its free side overhanging between said wheels, each of said channel members having an annular opening therein facing the axis of the wheels, division plates in said channel member forming pockets therein, said pockets being adapted to receive material therein when at the bottom of the drum and discharge the material therefrom when at the top of the drum, each of said wheels having a small number of narrow spokes therein with large openings between said spokes through which openings building material may be shoveled into the pockets at the bottom of the drum, a stationary chute mounted between said drums and projecting into and across each of said drums near the top thereof, said chute being adapted to receive the material from the pockets in said drum as they become inverted at the top of the drum, said wheel having an annular flange thereon just outside of said pockets, said flange projecting laterally over said chute and serving to deflect the material from the pockets to said chute.

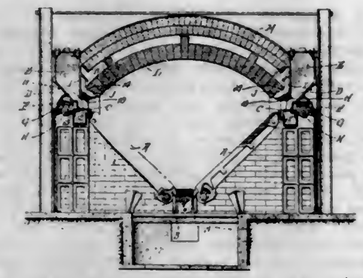
4. In a concrete mixer the combination of a drum comprising a wheel having a hub, spokes and a rim on one side thereof and an annular channel member having one side thereof fastened to the rim of the wheel, said channel member opening inwardly toward the hub of the wheel and having division plates placed tangentially therein

forming pockets having radial openings, said pockets being adapted to receive material therein when at the bottom of the drum and elevate and discharge it over the side of the pocket at the top of the drum.

5. In a concrete mixer the combination of a drum comprising a wheel having a hub, spokes and a rim on one side thereof and an annular channel member having one side thereof fastened to the rim of the wheel, said channel member opening inwardly toward the hub of the wheel and having division plates placed tangentially therein forming pockets having radial openings, said pockets being adapted to receive material therein when at the bottom of the drum and elevate and discharge it over the side of the pocket at the top of the drum, a stationary chute projecting into and substantially across said drum near the top thereof to the spokes of the wheel, said chute being adapted to receive the material as it falls from the forward side of the inverted pockets at the top of the wheel.

[Claims 6 to 14 not printed in the Gazette.]

1,192,180. AUTOMATIC STOKER. JOHN R. FORTUNE, Detroit, Mich. Filed Jan. 16, 1914. Serial No. 812,590. (Cl. 110—109.)

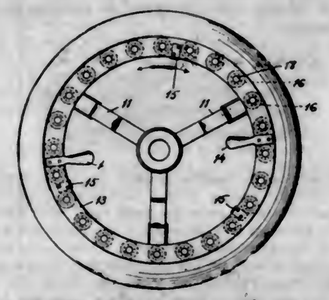


1. In an automatic stoker, the combination with a magazine, one side of which is formed by an arch plate having a laterally extending lower end portion forming the upper side of the throat of the magazine, a horizontally disposed coking plate beneath said end portion of the arch plate, and stoking devices movable horizontally across the coking plate, of a member secured to the arch plate with the lower surface of said member substantially parallel with the coking plate and meeting a free side surface of the member at an angle positioned above the horizontal plane of the upper sides of said devices, said member being formed with a longitudinally extending air channel to cool said member.

2. In an automatic stoker, the combination with an arch plate having a lower end portion inclined to the plane of the plate and forming an arch seat with an imperforate lower surface, a coking plate beneath the lower end of the arch plate and stoker boxes reciprocable upon said coking plate, of an angle bar comprising two flanges meeting to form an outer angular corner forward of and above the horizontal plane of said boxes and secured to said lower surface of the end portion of the arch plate with the edges of its flanges in contact with said surface to form a longitudinal air channel within the angle of said flanges along the lower side of the arch seat throughout its length.

3. In an automatic stoker, the combination with a magazine, an arch plate forming one side of the magazine and having an inclined laterally extending lower end portion forming the upper side of the throat of the magazine, a coking plate forming the lower side of the throat, and stoker boxes movable across the throat over the coking plate, of an angle bar formed of a pair of meeting flanges with the free edges of the flanges formed to fit against the lower surface of said inclined end of the arch plate with the lower surface of one flange substantially parallel with the coking plate and the outer surface of the vertical flange substantially in the vertical plane of the inner surface of the arch plate, said bar forming an air flue along the entire length of the arch-seat and its angle forming a cutting edge adjacent to and above the path of movement of the stoker plate, and means for detachably securing the bar in place upon the lower surface of said arch seat.

1,192,181. BEAD-ROLLING DEVICE FOR PNEUMATIC TIRES. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed July 2, 1915. Serial No. 37,709. (Cl. 154—9.)



1. A bead-rolling device for pneumatic tires comprising a rotatable frame having means for guiding and centering it on the tire-forming core, and an annular series of bead-applying rollers mounted on said frame.

2. A bead-rolling device for pneumatic tires comprising a portable frame having a pair of handles at opposite points, and an annular series of bead rollers on said frame.

3. A bead-rolling device for pneumatic tires comprising an annular frame having means for centering and guiding it on the tire-forming core, and an annular series of freely-journaled bead rollers mounted on said frame with their axes parallel with the axis of the frame.

4. A bead-rolling device for pneumatic tires comprising a supporting ring having a series of lugs parallel to its axis for guiding and centering it on the tire core, a pair of handles at opposite points on said ring, an annular series of studs projecting laterally from said ring on the same side as the lugs, and a series of concave tapered rollers mounted to turn freely on said studs and having their larger ends adjacent to the ring.

5. The combination with a tire-forming core, of a series of bead-rollers distributed about its circumference for centering the bead and rolling it in place on the tire carcass, said rollers being circumferentially shiftable relative to the core.

1,192,182. TOILET ARTICLE. ABRAHAM GERSTENZANG, New York, N. Y. Filed Oct. 6, 1913. Serial No. 793,545. (Cl. 132—11.)



1. A toilet article, which comprises a casing, a two part receptacle for dentifrice, said two parts being connected by a slip joint, the said casing having a cover carrying a stopper for closing the receptacle and retaining its parts in position.

2. A toilet article, which comprises a casing, a removable receptacle for dentifrice and a removable pocket carrying a tooth brush, the said casing having a cover carrying a closure for the pocket, said closure forming an abutment for holding the brush in position.

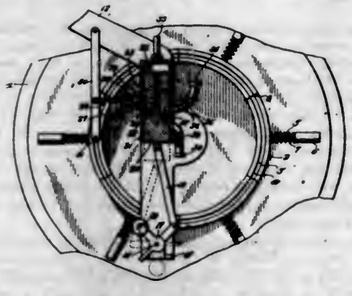
3. A toilet article, which comprises a casing, a separable receptacle for dentifrice and a pocket carrying a tooth brush, the said casing having a hinged cover carrying a stopper for the receptacle, said stopper serving to hold the parts of the receptacle together; and a closure for the pocket, said closure forming an abutment for holding the brush in position.

4. A toilet article, which comprises a casing, a removable, separable dentifrice receptacle, a removable brush pocket within the casing, an elastic engaging means for the receptacle carried by the pocket, and a cover for the casing, said cover carrying means for closing the receptacle and pocket and retaining them in position.

5. A toilet article which comprises in combination a casing, a removable pocket within the casing, a cover for the casing, a collapsible brush within the pocket, an abutment carried by the cover to close the pocket and retain it in position and to retain the brush in collapsed condition, and means for ventilating the pocket.

[Claim 6 not printed in the Gazette.]

1,192,183. AUTOMATIC TRAIN CONTROL. WILLIAM J. GLADISH, Sr., Chattanooga, Tenn., assignor of one-half to Lawrence N. Cox, Chattanooga, Tenn. Filed May 1, 1915. Serial No. 25,233. (Cl. 246—59.)



1. In an automatic train stop, train carried mechanism comprising segmental grooved tracks carried by one of the wheels of the locomotive, a lever having one of its extremities adapted to work in the grooves of said tracks, resilient means for allowing said tracks to move by a centrifugal action, and means under the control of said lever for bleeding the train line.

2. In an automatic train stop, train carried mechanism comprising segmental grooved track sections adapted when in one position to form a continuous circular groove, a pivoted lever having one extremity working in the grooves of said track section, means for allowing outward movement of said sections through centrifugal force and a valve under the control of said lever for bleeding the train line.

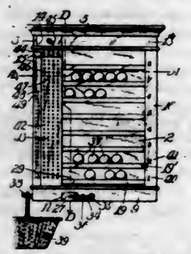
3. In an automatic train stop, train carried mechanism comprising a valve casing having communication with the train line, a plunger working therein, a trip connected to said plunger, a second plunger working in conjunction with said first mentioned plunger for regulating the rapidity with which the air from the train line feeds to the atmosphere and means for actuating said second plunger.

4. In an automatic train stop, train carried mechanism comprising a valve casing having communication with the train line, a plunger working therein and provided with a bypass, said casing being provided with a pair of ports one of which being arranged to communicate with the bypass and the other arranged to establish communication between the upper portion of the casing and the atmosphere upon a predetermined movement of said plunger, and means connected to said plunger whereby the travel of the latter may be varied.

5. In an automatic train stop, train carried mechanism comprising a valve casing communicating with the train line, a plunger working therein and provided with a bypass, said casing being provided with a pair of ports one of which being arranged to communicate with the bypass and the other arranged to establish communication between the upper portion of the casing and the atmosphere upon a predeterinmed movement of said plunger, means connected to said plunger whereby the travel of the latter may be varied, and a second plunger arranged to close one of the openings of said casing.

[Claims 6 to 8 not printed in the Gazette.]

1,192,184. POOL-BALL RACK AND SCORE-BOARD. JASPER E. GLASCOCK, Greenfield, Ind., assignor of one-half to George E. Lacy, Greenfield, Ind. Filed Oct. 21, 1915. Serial No. 57,174. (Cl. 46—6.)



1. A pool ball rack including a frame, a plurality of shelves hingedly supported at one end in the frame, a partition in the frame at the opposite ends of the shelves and having apertures therein, an operating-shaft mounted in the frame under and in adjustable relation with the lowermost one of the shelves for adjustably supporting the free end thereof relative to the adjacent aperture in the partition, and a coupling rod having pivotal connection with all the shelves adjacent to the partition.

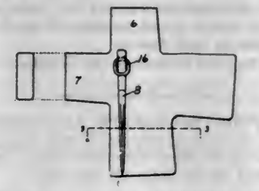
2. A pool ball rack including a frame comprising a bottom and two side panels and also a vertical partition arranged between the panels relatively close to one of the panels, the partition having apertures therein; a plurality of shelves hingedly supported at one end adjacent to the opposite one of the side panels and extending approximately to the partition, a coupling bar adjacent to the partition and having pivotal supporting connection with all the shelves, and a crank shaft mounted rotatively in the frame below the lowermost one of the shelves and normally supporting the coupled ends of the shelves on planes above the bottoms of the apertures in the partition.

3. A pool ball rack including a frame having a vertical partition therein and also a bottom extending from one side of the partition, the space on the opposite side of the partition being clear, a plurality of shelves hingedly supported at one end in the frame at a distance from the partition, two coupling rods pivotally connected to opposite sides respectively of the shelves adjacent to the partition, and an operating shaft rotatively mounted upon the bottom of the frame and having two crank arms thereon, one of the arms being under the lowermost one of the shelves for raising or lowering the coupled ends of all the shelves, the other one of the arms extending opposite to the front of the frame.

4. A pool ball rack including a frame comprising a bottom, a back board secured to the bottom and extending laterally beyond one end thereof, a side panel secured to the back board beyond the end of the bottom, a side panel secured to the opposite end of the bottom and to the back board, a partition secured to the back board and to the first-mentioned end of the bottom and having a plurality of apertures therein; a plurality of shelves hingedly sup-

ported at one end adjacent to the last-mentioned side panel, two coupling rods adjacent to the inner side of the partition and pivotally connected to the opposite end portions of the shelves, and means mounted on the frame for supporting and raising or lowering the coupled end portions of the shelves.

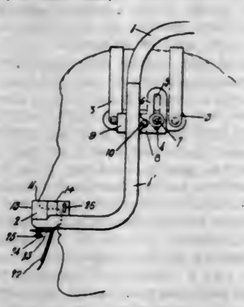
1,192,185. BUCKING-WEDGE. AMABLE GRAVEL, Portland, Oreg. Filed Jan. 25, 1916. Serial No. 74,165. (Cl. 254—104.)



1. A wedge of the character described having a fin 8 extending longitudinally thereof on one side, said fin being concaved in each of its sides and bladed at its free edge, a smaller fin on the opposite side of the wedge extending in like manner and bladed at its free edge, substantially as described.

2. A cruciform wedge of the character described comprising a wedge arm 6 having a fin 8 extending longitudinally thereof on one side, said fin being concaved in each of its sides and bladed at its free edge, a smaller fin on the opposite side of the wedge extending in like manner and a transverse wedge arm 7, substantially as described.

1,192,186. RESPIRATOR. SAMUEL WARD GREENE, East Greenwich, R. I. Filed Sept. 20, 1910. Serial No. 582,844. (Cl. 128—13.)



1. A respirator comprising an air-tube having a rigid end portion formed to extend down the side of the face and across to the upper lip, a delivery nozzle secured to the end of said rigid end portion, and means on the top of the head of the user for supporting said air-tube and delivery nozzle.

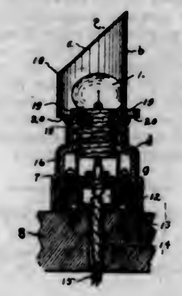
2. A respirator comprising an air-tube, a delivery nozzle secured to the end of said air-tube, means for securing the air-tube upon the head, and means whereby the delivery nozzle may be adjusted vertically and laterally.

3. A respirator comprising an air-tube, a delivery nozzle secured to the end of said air-tube, means for securing the air-tube upon the head, means whereby the delivery nozzle may be adjusted vertically and laterally, and means for adjusting said delivery nozzle longitudinally.

4. A respirator comprising an air-tube, a delivery nozzle secured to the end of said air-tube, a head clamp, a supporting member secured to the air-tube and mounted to slide and revolve upon a post secured to said head-clamp, means for clamping said supporting member in position, and a lateral extension upon said supporting member provided with a turned over end portion carrying an adjusting thumb-screw arranged to engage said lateral extension.

5. A respirator comprising a rigid air-tube having a closed end and a portion of said tube cut away, a delivery nozzle secured to said air-tube over said cut away portion, an extension upon the bottom of said delivery nozzle arranged to extend longitudinally within said air-tube and form a central partition therein, an inlet opening in the bottom of said delivery nozzle upon each side of said extension, and an air-outlet upon the face side of said delivery nozzle.

1,192,187. ELECTRIC-LIGHT CASING. WILLIAM E. GUNTHER, Omaha, Nebr. Filed May 8, 1916. Serial No. 96,130. (Cl. 240—2.)



1. An electric light housing, comprising, in combination with a reflector having a cylindrical part provided with an inwardly projecting, annular flange, a base member provided with an upright, annular wall, an upright sleeve circumscribed by and having an annular stop member adapted to bear upon the upright annular wall of said base member, said sleeve being provided near its upper end with an inwardly projecting, annular ledge to provide a seat for the annular, inwardly projecting flange of the reflector, and having a terminal, annular flange projecting above said ledge adapted to be circumscribed by the flange of said reflector.

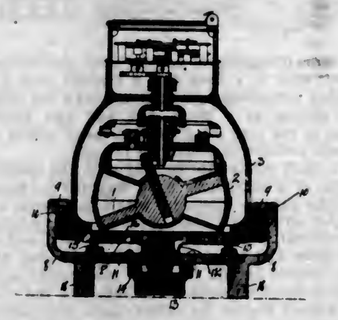
2. An electric light housing, comprising, in combination with a reflector having a cylindrical part provided with an inwardly projecting, annular flange, a base member provided with an upright, annular wall and with a pair of upright prongs, an upright sleeve supported by the base and provided near its upper end with an inwardly projecting annular ledge to provide a seat for the annular, inwardly projecting flange of the reflector, and having a terminal, annular flange projecting above said ledge for engagement with the flange of the reflector, the prongs of the base member projecting above the annular ledge of the sleeve for engaging the cylindrical part of said reflector.

3. An electric light housing, comprising, in combination with a reflector having a cylindrical part provided with an inwardly projecting, annular flange, a base member provided with an upright, annular wall and with a pair of prongs, an upright sleeve circumscribed by and having an annular stop member adapted to bear upon the upright, annular wall of said base member, said sleeve being provided near its upper end with an inwardly projecting, annular ledge to provide a seat for the annular, inwardly projecting flange of the reflector, and having a terminal, annular flange projecting above said ledge adapted to be circumscribed by the flange of said reflector, the prongs of the base member extending above the inwardly projecting, annular ledge of the sleeve for engaging opposed sides of the cylindrical part of the reflector.

4. An electric light housing, comprising, in combination with a reflector having a cylindrical part provided with an inwardly projecting, annular flange, a base member provided with an upright, annular wall and with a pair of upright prongs each having an inwardly convergent part, an upright sleeve supported by the base, said sleeve being formed between its ends with an inwardly convergent part and being provided near its upper end with an inwardly projecting annular ledge to provide a seat for the annular inwardly projecting flange of the reflector, and having a terminal annular flange projecting above said ledge for engagement with the flange of the reflector, the prongs of the base member being adapted to be disposed in engagement with the cylindrical part of the reflector, the convergent parts of said prongs engaging the inwardly convergent part of the sleeve.

5. An electric light housing, comprising, in combination with a reflector having a cylindrical part provided with an inwardly projecting, annular flange, a base member provided with an upright, annular wall and with a pair of prongs each having an inwardly convergent part, an upright sleeve circumscribed by and having an annular stop member adapted to bear upon the upright, annular wall of said base member, said sleeve being formed intermediate its ends with an annular, inwardly convergent part and being provided near its upper end with an inwardly projecting, annular ledge to provide a seat for the annular, inwardly projecting flange of the reflector, and having a terminal, annular flange projecting above said ledge for engaging the flange of said reflector, the prongs of the base member being adapted to be disposed in engagement with opposed sides of the cylindrical part of the reflector, their inwardly convergent parts engaging the annular, inwardly convergent part of said sleeve.

1,192,188. CLOSURE FOR WATER-METERS AND THE LIKE. FREDERICK W. HANKS, Cleveland, Ohio. Filed Mar. 26, 1912. Serial No. 686,350. (Cl. 220—124.)



1. The combination with the casing of a water meter or the like, of a closure for such casing, and means for securing said closure in place comprising one-piece arms adapted to detachably engage said casing at their outer ends, said arms being weaker than the parts of the casing so as to break under undue internal pressure and release the closure before such casing yields, a bearing on the closure for said arms, and means inside the bearing for pressing the inner portion of said arms toward the closure.

2. The combination with the inner casing and the outer casing of a water meter or the like, of a closure for said outer casing adapted to support said inner casing, and means for securing said closure in place comprising independent, one-piece arms engaging said outer casing at their outer ends, said arms being weaker than the parts of the casing so as to break under undue internal pressure and release the closure and inner casing before such outer casing yields, a bearing on the closure for said arms, and means inside the bearing for pressing the inner portion of said arms toward the closure.

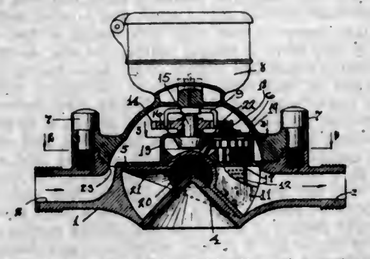
3. The combination with inner casing 2 and outer casing 3, of closure 7 supporting said inner casing 2 and having bearings 15, independent, one-piece, radial arms 8 engaging said bearings and having their outer ends detachably engaging the casing 3, said arms being weaker than the parts of the casing so as to break under undue internal pressure and release said closure before such casing yields, and a screw device acting between the closure and arms inside the bearings to press the inner ends of the arms toward the closure.

4. The combination with inner casing 2 and outer casing 3 having external lugs 10, of closure 7 supporting casing 2 and having bearings 15, independent, one-piece, radial arms 8 engaging said bearings and having their outer ends detachably hooked over lugs 10, said arms being weaker than said lugs so as to break under undue internal pressure and release said closure before such casing yields, and a screw device acting between the closure and arms inside the bearings to press the inner ends of the arms toward the closure.

5. In a device of the character described, the combination of a suitable casing; a closure therefor; and means for securing said closure in place comprising a plurality of independent, one-piece arms adapted to directly detachably engage said casing at their outer ends, said arms being weaker than the parts of the casing so as to break under undue internal pressure and release the closure before such casing yields; a screw-member threaded on said closure and adapted to draw the inner ends of said arms toward said closure, said arms bearing against the latter between their ends, and a resilient washer interposed between such inner arm-ends and said screw-member.

[Claim 6 not printed in the Gazette.]

1,192,189. WATER-METER. FREDERICK W. HANKS, Cleveland, Ohio. Filed Aug. 28, 1914. Serial No. 859,086. (Cl. 73—98.)



1. In a water meter, the combination of a casing having a conical bottom; a ported partition in the casing forming a measuring chamber between itself and the bottom; an inlet passage extending above the partition, and communicating through the port thereof with the measuring chamber; an outlet passage extending from the measuring chamber; and a gyratory conical valve mounted on the bottom of the casing.

2. In a water meter, the combination of a casing having a conical bottom; a ported partition in the casing forming a measuring chamber between itself and the bottom; an inlet passage extending above the partition, and communicating through the port thereof with the measuring chamber; an outlet passage extending from the measuring chamber; a duct extending downwardly from the port and formed with a wall separating it from the outlet passage and with a foraminous wall facing the measuring chamber; and a gyratory conical valve mounted on the bottom of the casing.

3. In a water meter, the combination of a casing section having a conical bottom; a ported partition removably seated on the section and forming a measuring chamber between itself and the bottom; a cover removably secured to the section; an inlet passage extending to the space between the partition and the cover; an outlet passage extending from the measuring chamber; and a gyratory conical valve mounted on the bottom of the section.

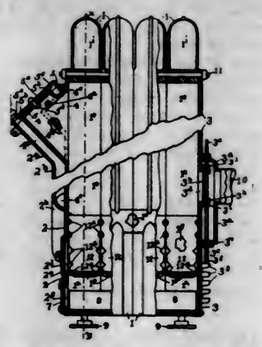
4. In a water meter, the combination of a casing; a convex spherical bearing formed of self-lubricating material mounted therein; and a gyratory valve having a concave spherical portion mounted on the bearing.

5. In a water meter, the combination of a casing; a convex spherical bearing formed of self-lubricating, sub-

stantially non-expansible material mounted therein; and a gyratory valve having a concave spherical portion mounted on the bearing.

[Claims 6 and 7 not printed in the Gazette.]

1,192,190. HEATING-STOVE. JACQUES J. HARDIN, Bellingham, Wash. Filed June 16, 1915. Serial No. 34,338. (Cl. 126—60.)



1. In a stove of the character described, the combination of a fuel magazine having a stoke hole and also a smoke outlet opening into a stack flue, a cover making a gas-tight closure of said stoke hole during normal operation of said stove, a damper seated over said smoke outlet making a gas-tight closure of the same during normal operation of said stove, a firepot continuous with the lower end of said magazine and having grate openings in its bottom, an ashpit beneath said firepot, a smoke flue connecting said ashpit with the stack flue, and controllable means of admitting ambient air into said ashpit.

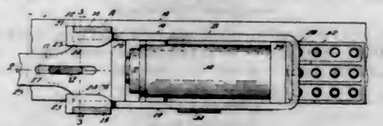
2. In a stove of the character described, the combination of a fuel magazine having a stoke hole and also a smoke outlet opening into a smoke pipe, a cover making a gas-tight closure of said stoke hole during normal operation of said stove, a damper seated over said smoke outlet making a gas-tight closure of the same during said normal operation, a firepot continuous with the lower end of said magazine and having grate openings in its bottom, an ashpit beneath said firepot, vertical radiator-flues leading upward from said ashpit to a chamber on top of said magazine, vertical radiator flues leading downward from said chamber to a smoke flue, a smoke flue leading from said downward flues into said smoke pipe, and controllable means for admitting ambient air into said ashpit.

3. In a stove of the character described, the combination of a plurality of similar vertical units each comprising a section of a fuel magazine, firepot, ashpit, also two vertical, return, radiator smoke flues, the lower end of each up flue of which connects with said ashpit section and the lower end of each down flue of which connects with a section of a horizontal, radiator, smoke flue, and vertical, return, radiator, smoke flues, the lower end of a stoke hole, with a tightly closable cover, leading into said fuel magazine, a controllable draft flue leading into said ashpit and an ashpit door; a back plate having a tightly closable smoke outlet leading from said fuel magazine into a smoke flue, and said smoke flue leading from said horizontal flues and from said smoke outlet into a smoke pipe; and means to fasten said vertical units and said front and back plates together.

4. In a stove comprising a plurality of similar, vertical units, each having a section of a fuel magazine, firepot and ashpit, fastened between front and back end plates, the combination of a plurality of said similar, vertical units; two sections of horizontal, radiator, smoke flues in each of said units; two vertical, return, radiator, smoke flues embracing said fuel magazine and firepot sections in each of said units, the up flue of each of said return flues connected with said ashpit section and the down flues of the same leading into said horizontal-flue sections; said front plate having a stoke hole chute leading into said fuel magazine, an ashpit door, and a draft flue leading into said ashpit, the top of which surrounds said stoke hole chute, and a cover which makes a tight closure of said stoke hole chute and a controllably variable closure of said draft flue; said back plate having a tightly closable smoke outlet leading from said flue magazine into a smoke flue, and said smoke flue leading from said horizontal flues and said smoke outlet into a smoke pipe; and means to fasten said vertical units and said front and back plates together.

5. In a stove comprising a plurality of similar, vertical units, each having sections of a fuel magazine and ashpit, said units fastened together in operative relation with front and back end plates, the combination of said plurality of similar, vertical units; two sections of horizontal, radiator, smoke flues in each of said units; two vertical, return, radiator, smoke flues in each of said units, each leading into one of said horizontal flue sections; said front and back end plates; and means to fasten said similar, vertical units between said end plates in operative relation.

1,192,191. DRAFT-RIGGING. JOSEPH HARRIS, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 30, 1914. Serial No. 874,661. (Cl. 213—42.)



1. In a draft rigging for railway cars, the combination with draft sills, of a draw bar, a vertical yoke, a hood-like member surrounding the yoke and draw bar butt, said member serving as a front stop, and also preventing spreading of the yoke arms and detachable means for securing said member stationary to the sills.

2. In a draft rigging for railway cars, the combination with sills, of a continuous band mounted between said sills, a yoke slidable forwardly within said band, a draw bar slidable within said band, means for preventing rearward movement of the yoke within said band, and engaging the latter and means for holding said band stationary with respect to said sills, said band maintaining the operative connection between the yoke and the drawbar.

3. In a draft rigging for railway cars, the combination with draft sills, of a draw bar, a yoke, a hood-like member surrounding the yoke and draw bar butt, said member serving as a front stop, and means for detachably securing said member stationary to the sills, said means comprising a key passing through slots in said member, draw bar and sills.

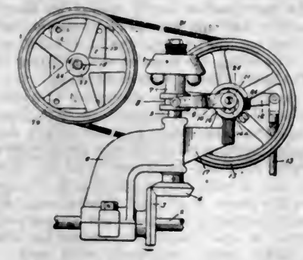
4. In a draft rigging for railway cars, the combination with sills, of a draw bar, a yoke, said yoke and draw bar having interengaging shoulders, a hollow box-like member, said yoke being provided with shoulders arranged to engage said member, said member acting as a front stop for a front follower, and means for securing said member to the sills, said means comprising a key passing through said member and the draw bar.

5. In a draft rigging for railway cars, the combination with sills, of a member stationary with respect to said sills, a yoke, said member preventing rearward movement of the yoke, a draw bar, means for pulling the yoke forwardly upon forward movement of the draw bar, and a key for detachably supporting said member.

[Claims 6 and 7 not printed in the Gazette.]

1,192,192. SPEED-REGULATING DEVICE. WILLIAM R. HARRIS, Springfield, Ohio, assignor to P. J. Shouvlin, Springfield, Ohio. Filed Jan. 14, 1916. Serial No. 72,045. (Cl. 264—3.)

1. In a throttle controlling mechanism, a throttle operating device, an automatic governor, a shaft having an operative connection with said governor and also with the throttle operating device, an eccentric bearing for said shaft, and a manually operated throttle regulating device having a connection with said eccentric bearing for changing the position of the same so as to cause said shaft to thereby change the position of said throttle operating device.



2. In a throttle controlling mechanism, a throttle operating device, an automatic governor, a movable bearing, a shaft eccentrically mounted in said bearing, a crank arm on said shaft having an operative connection with said governor, a second crank arm on said shaft having a connection with the throttle operating device, and manually operated means for moving said bearing to thereby change the position of said shaft to regulate the postion of the throttle operating device.

3. In a throttle controlling mechanism, a throttle operating device, an automatic governor, a stationary bearing, a movable bearing concentrically mounted in said stationary bearing, a shaft eccentrically mounted in said movable bearing, a crank arm on said shaft having an operative connection with said governor, a second crank arm having an operative connection with the throttle operating device, and means for revolving said movable bearing in said stationary bearing to change the postion of said shaft and hence said throttle operating device.

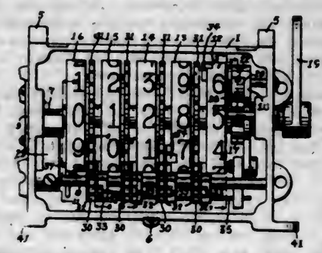
4. In a throttle controlling mechanism, an automatic governor, a throttle operating device, a stationary bearing, a movable bearing concentrically mounted in said stationary bearing, a shaft eccentrically mounted in said movable bearing, a pair of crank arms on said shaft connected respectively with said governor and said operating device, a grooved wheel connected with said movable bearing, a second grooved wheel arranged to be manually operated, a cord or cable connecting said wheels, and means for yieldably holding said manually operated wheel in its operative position.

5. In a throttle controlling mechanism, a throttle operating device, an automatic governor, a rotatable part, a connection between said governor and said throttle operating device eccentrically and loosely mounted in said rotatable part, and manually operated devices connected with said rotatable part for changing the position of the same.

[Claim 6 not printed in the Gazette.]

1,192,193. REGISTER. RAY E. HART, Battle Creek, Mich. Filed May 24, 1915. Serial No. 30,085. (Cl. 235—117.)

1. The combination of number wheel and transfer and pinion shafts, a series of number wheels mounted on said number wheel shaft for rotative and axial movement, said number wheels being provided with indented transfer teeth and with the exception of the units wheel with transfer gears, transfer pinions mounted on said transfer pinion shaft for rotative and axial movement, and having teeth meshing with said number wheel gears and Geneva stop gear teeth coacting with the peripheries of said number wheels and their said indented transfer teeth, said transfer pinions being provided with flanges disposed at each side of the number wheel gears so that the pinions are moved axially with their number wheels, means for locking said number wheels against axial movement, and means for driving said units number wheel.

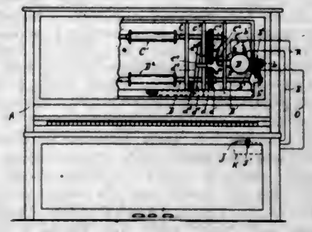


2. The combination of number wheel and transfer and pinion shafts, a series of number wheels mounted on said number wheel shaft for rotative and axial movement, said number wheels, with the exception of the units wheel, being provided with transfer gears, transfer pinions mounted on said transfer pinion shaft for rotative and axial movement, and having teeth meshing with the gears of succeeding number wheels and with intermittent gear connections with preceding number wheels, said transfer pinions being provided with flanges disposed at each side of the number wheel gears so that the pinions are moved axially with their number wheels, a lock pivotally mounted on said transfer shaft to rest on the number wheel shaft at the outside of the last number wheel supporting said number wheels against axial movement, and means for driving said units number wheel.

3. The combination of number wheel and transfer and pinion shafts, a series of number wheels mounted on said number wheel shaft for rotative and axial movement, said number wheels with the exception of the units wheel, being provided with transfer gears, transfer pinions mounted on said transfer pinion shaft for rotative and axial movement, and having teeth meshing with the gears of succeeding number wheels and with intermittent gear connections with preceding number wheels, said transfer pinions being provided with flanges disposed at each side of the number wheel gears so that the pinions are moved axially with their number wheels, means for locking said number wheels against axial movement, and means for driving said units number wheel.

4. The combination of number wheel and transfer pinion shafts disposed parallel, a set of number wheels mounted on said number wheel shaft for rotative and axial movement, the said shiftable number wheels being provided with transfer gears, transfer pinions mounted on said transfer pinion shaft for rotative and axial movement and having teeth meshing with the transfer gears of said number wheels, and driving connections with the preceding number wheels, said transfer pinions being provided with flanges disposed at each side of the number wheel gears so that the pinions are moved axially with their respective number wheels.

1,192,194. MUSIC-PLAYER. DAVID J. HAUSS, Aurora, Ind. Filed Oct. 23, 1909. Serial No. 524,119. (Cl. 84—166.)



1. In a music player, a pair of sheet feeding rolls, an electric motor having a driving member at each end of its

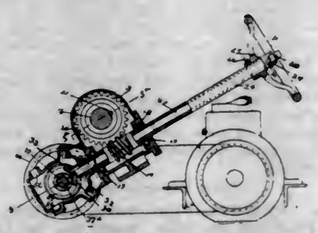
shaft, gear trains driven from opposite ends of the motor shaft to feed the sheet from one roll to the other in either direction, mechanism to reciprocally engage one of said sheet feeding rolls in driving relation with said motor and disconnect the opposite sheet feeding roll from driving relation with said motor, and controlling means to stop, start, and vary the speed of said motor.

2. A music player driving mechanism comprising a pair of sheet feeding rolls, an electric motor having a slow speed driving gear at one end of its shaft and a higher speed driving gear at the opposite end of its shaft, gear trains leading from said gears at opposite ends of the motor shaft to drive the respective sheet feeding rolls in opposite directions at relatively different speeds, and a controlling lever to alternately connect one of said gear trains in driving relation with its sheet roll and to disconnect the other gear train from driving relation with its sheet roll.

3. A music player driving mechanism comprising a pair of sheet feeding rolls, an electric motor having a slow speed driving gear at one end of its shaft and a higher speed driving gear at the opposite end of its shaft, gear trains leading from said gears at opposite ends of the motor shaft to drive the respective sheet feeding rolls in opposite directions at relatively different speeds, a reciprocally operated lever to alternately connect one of said gear trains in driving relation with its sheet roll and to disconnect the other gear train from driving relation with its sheet roll, and motor controlling means to stop, start, and vary the speed of said motor.

4. A music player driving mechanism comprising a pair of sheet feeding rolls, an electric motor having a worm gear mounted at one end of its shaft and a higher speed driving gear mounted at the opposite end of the motor shaft, gear trains leading from said gears at opposite ends of the motor shaft to drive the respective sheet feeding rolls in opposite directions at relatively different speeds, and mechanism to reciprocally engage one of said feeding rolls in driving relation with said motor and to disconnect the opposite feeding roll from driving relation with said motor.

1,192,195. GEARING. ROBERT O. HENDRICKSON, Portland, Oreg., assignor, by mesne assignments, to Wallis Tractor Company, Racine, Wis., a Corporation of Wisconsin. Filed Aug. 11, 1911. Serial No. 643,620. (Cl. 74—59.)



1. In a device of the class described, a power shaft, means for driving the same, gears loose on said power shaft, a clutch for engaging said gears alternately with the power shaft, a second shaft having a pinion thereon engaged by the gears on the power shaft, a driven shaft, gearing between said second shaft and driven shaft, a rotary shaft for shifting said clutch, a hand wheel and means for connecting said hand wheel at will with either said second shaft or the clutch shifting shaft.

2. In a device of the class described, a power shaft, means for driving the same, a pair of gears loosely mounted on the power shaft, a clutch for alternatively engaging said gears with the power shaft, a rotary shaft having means thereon for shifting the said clutch, a hollow shaft surrounding said rotary shaft and having a pinion engaged by the gears on the power shaft, a driven shaft, gearing between the hollow shaft and the driven shaft for transmitting motion to the latter, a hand wheel and means for connecting a hand wheel at will with either the clutch shifting shaft or the concentric shaft.

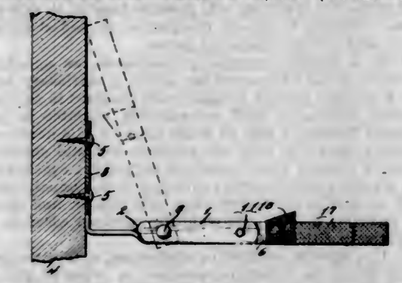
3. In a gearing, a driven shaft, a power shaft parallel thereto, pinions loose on said power shaft, a clutch for connecting either pinion at will to said power shaft, an intermediate gear meshing with said pinions, a hollow rotary shaft connected to said gear, a rotary shaft extending through said hollow shaft, means on the last mentioned shaft for shifting the clutch, means on said hollow shaft for driving the driven shaft, a hand wheel, and means for connecting the same at will to either the hollow shaft or the shaft extending therethrough.

4. In a device of the class described, a driven shaft, a power shaft substantially parallel thereto, gears loosely mounted on the power shaft, a clutch on the power shaft for alternately locking either of said gears therewith, concentric shafts arranged transversely of the power shaft, a gear on one of said concentric shafts engaged by the gears upon the power shaft, and driving connections from the last said concentric shaft to said driven shaft, means on the other of said concentric shafts for shifting the clutch, a hand wheel concentric with said concentric shafts and longitudinally shiftable means for connecting the hand wheel to said concentric shafts alternatively.

5. In a gearing, a driven shaft, a gearing element mounted thereon, a sleeve shaft having a gear element thereon intermeshing with the element on the driven shaft, a power shaft, intermeshing gears on the power shaft and sleeve shaft respectively, a clutch for locking the gear on the power shaft thereto, a rod for operating the clutch extending through the sleeve shaft, a hand wheel and means for connecting the hand wheel at will to the sleeve shaft and to the rod.

[Claims 6 to 12 not printed in the Gazette.]

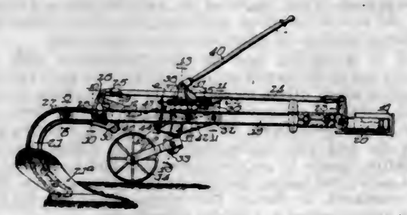
1,192,196. HEN-NEST. JOSEPH HEBERT, Orange, Tex. Filed Oct. 26, 1915. Serial No. 58,009. (Cl. 119—45.)



1. In a nest of the class described, the combination of a pair of side bars, a frame pivotally secured to said side bars, means for releasably retaining said frame in a horizontal plane when in use, said frame being adapted to be swung upwardly when not in use for preventing fowls from roosting thereon, a pocket portion carried by said frame, and a nest carried by said frame and communicating with said pocket portion, whereby as said frame is swung upwardly the nest egg carried by said nest portion may be caught by said pocket so as to be held in a position to again move into said nest portion when the nest is swung to a horizontal plane.

2. In a nest of the class described, the combination of a pair of side bars, said side bars being adapted to be fixedly secured to a support, a U-shaped frame pivotally secured to said side bars, said frame and side bars provided with registering openings, a pin removably carried by said side bars and frame by passing through said openings, a wire mesh carried upon the outer portions of said frame for forming a nest portion, a brace bar carried by said frame, said mesh engaging said brace bar whereby the mesh will be positively retained in its correct position, and a second mesh positioned upon said brace bar and extending outwardly from the inner portions of said wire mesh, whereby when said frame is swung upwardly so as to prevent fowls from roosting thereon, said mesh strip may catch the nest egg for preventing its displacement.

1,192,197. ENGINE GANG-PLOW. EDWARD M. HEILMAN, Rock Island, Ill., assignor to Rock Island Plow Company, Rock Island, Ill., a Corporation of Illinois. Filed Nov. 4, 1912. Serial No. 729,812. (Cl. 97—69.)



1. In a gang plow, a main frame, a plow beam pivotally mounted at its forward end in said frame, a gage-wheel adapted to travel along the surface of the ground, a plow body carried by said plow beam and adapted to be raised or lowered corresponding to similar movements of said gage-wheel, and means for maintaining said plow body in the same angular relation during such movement.

2. In a gang plow, a main frame, a plow beam pivotally connected at its forward end to said frame, a plow standard pivotally connected to the rear end of said plow beam, a plow body carried by said standard, means for raising and lowering said plow beam, and means acting on said pivoted plow standard for maintaining the heel and toe of said plow body in the same angular relationship to ground line during the raising and lowering of said plow beam.

3. In a gang plow, a main frame, a plow beam pivotally mounted at its forward end in said main frame, a plow standard pivotally connected at the rear end of said plow beam, a plow body carried by said standard, a connecting rod extending substantially parallel to said first-mentioned beam and pivotally connected at its forward end to said main frame and at its rear end to said plow standard, whereby when said plow beam is raised and lowered said plow is always maintained in the same angular position.

4. In a gang plow, a main frame, a plow beam pivotally connected at its forward end to said frame, a connecting rod pivotally connected at its forward end to said main frame, a bell crank carried by said plow beam and having one end connected to the rear end of said connecting rod, a plow body carried by said plow beam, and connections from the other arm of said bell crank to said plow body, whereby said plow body is maintained in the same angular position when said plow beam is raised and lowered.

5. In a gang plow, a main frame, a plow beam pivotally connected at its forward end to said main frame, a plow supporting member pivotally connected to the rear end of said plow beam, a plow body carried by said second beam, a connecting rod connected at its forward end to said main frame, a bell crank carried by said first plow beam and having one arm connected to said connecting rod, and a link connection between the other end of said bell crank and said supporting member, whereby said plow body is maintained in the same angular position when said plow beam is raised and lowered.

[Claims 6 to 15 not printed in the Gazette.]

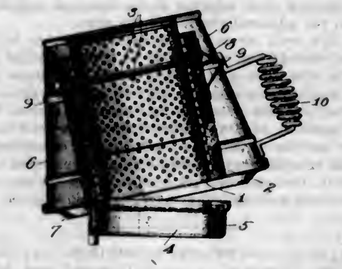
1,192,198. SHADE-PULL. ALFRED G. O. HIX, Los Angeles, Cal. Filed Mar. 9, 1915. Serial No. 13,117. (Cl. 156—40.)

A shade pull comprising: a rear member having a flat inclined attaching portion with prongs projecting inwardly, a wide bent slat bearing and spacing portion extending inwardly from the lower side of the attaching portion, and a flat bearing portion extending downwardly from the forward edge of the slat bearing and spacing portion; and a front member having an oppositely inclined clamping portion in opposition to said attaching portion, a second spacing portion extending inwardly from the lower side of the clamping portion, and a second flat bearing portion extending downwardly from said second spacing portion and fitting against the first bearing portion, an eyelet pressed from the center of one flat bearing



portion and extending through the center of the other bearing portion and upset so as to pivotally connect the members, the line of the pivot being crosswise of the line of the shade slat when applied, said rear and front members being formed of resilient metal and said attaching and clamping portions being over bent toward each other so as to be spring pressed against a wedge shaped shade slat and hold said slat bearing and spacing portion firmly against the lower edge of the slat when applied.

1,192,199. BLUE-FLAME OIL-BURNER. RUDOLPH HOFFMAN, Chicago Heights, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed May 26, 1915. Serial No. 30,488. (Cl. 158—90.)



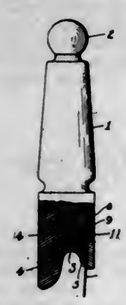
An oil burner having, in combination, an inner and an outer combustion tube rigidly secured together, a drum surrounding said tubes and having an interior annular groove, and a plurality of brackets spaced around the periphery of the outer tube, each bracket formed of a strap member comprising a U-shaped body portion and end portions bent at an angle to the U-shaped body portion and rigidly fixed in a vertical position to the outer side of the outer tube between the ends thereof, the middle body portion of each bracket being arranged to project from the side of the outer tube and to frictionally engage in said groove in the drum, the engagement of said brackets and groove being capable of being broken by forcing the drum upwardly, whereby the latter may be disassociated from the combustion tubes.

1,192,200. CUTTER. NORMAN W. HOWARD, Bath, Me. Filed Dec. 27, 1915. Serial No. 68,599. (Cl. 30—9.)

1. A tool of the class described, comprising a member having a curved recess at one end providing spaced portions of different lengths having rounded bearing surfaces, one of said portions adapted to engage the lateral edge of a tire bead and the other portion being adapted to be disposed in the groove between said bead and the adjacent portion of the shoe, and a cutter carried by said last named portion and adapted to be inserted through the tire at the juncture of the bead with the shoe.

2. A tire tool comprising a handle member adapted to be applied to the lateral edge of a tire bead, and having

spaced guiding portions adapted to be disposed on opposite sides of the bead when the tool is in use, and a cutter guided by one of said portions and insertible between the bead and the adjacent portion of the shoe.

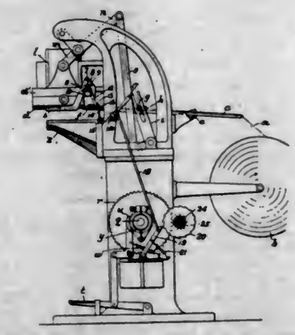


3. A tool of the class described, comprising a member having spaced guiding portions adapted to bear upon the lateral edge of a tire bead, and a cutter carried by one of said portions in angular relation thereto and adapted to be inserted between the bead and the adjacent portion of the shoe.

4. A tool of the class described, comprising a member having a recess across one end providing spaced guiding portions adapted to be applied to the lateral edge of a tire bead on opposite sides thereof, and a cutter effectively disposed relative to said guiding portion and having a curved cutting edge adapted to be inserted between the bead and the adjacent portion of the shoe.

5. A tire tool, comprising a handle member having a recess across one end adapted to be applied to the lateral edge of a tire bead and having guiding portions spaced by said recess and adapted to bear on opposite sides of the bead when the tool is in use, and a cutter carried by one of said portions and insertible between the bead and the adjacent portion of the shoe, said cutter consisting of a relatively straight blade having an end curved and tapered to a point, the edge of said blade on the shorter radius of said curved portion being sharpened to said point.

1,192,201. SAFETY-STOP FOR BOX-STAYING MACHINES. HENRY W. JACKSON, Cynwyd, and JOHN O. HORTON, Montrose, Pa., assignors to National Metal Edge Box Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 22, 1915. Serial No. 57,386. (Cl. 164—107.)



1. In a staying machine the combination with the anvil, the movable die, the driving wheel, driven mechanism for reciprocating the movable die, and a driving connection between the driving wheel and driven mechanism, of tripping mechanism located alongside said anvil and die, and normally stationary means adapted to be actuated by said tripping mechanism to disrupt the driving connection between the driving wheel and driven mechanism.

2. In a staying machine, the combination with the anvil, the reciprocating die coöperating with the anvil, the driving wheel, driven mechanism for reciprocating the die, and a driving connection between the driving wheel and the driven mechanism, of tripping mechanism located alongside the coöperating parts of the anvil and die when the die is approximated toward the anvil, and normally stationary means adapted to be actuated by the tripping mechanism, when displaced by an obstruction adjacent to the face of the anvil, to disrupt the driving connection between the driving wheel and driven mechanism.

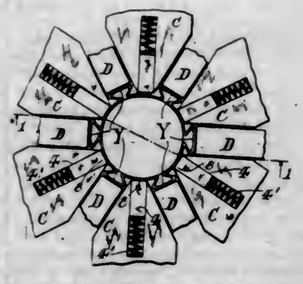
3. In a staying machine, the combination with the anvil, the reciprocating die coöperating with the anvil, the driving wheel, driven mechanism for reciprocating the die, and a driving connection between the driving wheel and the driven mechanism, of a tripping lever movable with the die and also displaceable from its normal position relative thereto by an obstruction adjacent to the face of the anvil, and means operable by the tripping lever, when so displaced, to disrupt the driving connection between the driving wheel and driven mechanism.

4. In a staying machine, the combination with the anvil, the die, the driving wheel, driven mechanism for reciprocating the die, and a driving connection between the driving wheel and driven mechanism, of a tripping lever movable with the die and extending alongside the lower working edge thereof, a spring holding the tripping lever in normal position, and mechanism adapted, when the tripping lever is moved against the action of its spring, to be released to disrupt said driving connection.

5. In a staying machine, the combination with the anvil, the die, the driving wheel, driven mechanism for reciprocating the die, and a driving connection between the driving wheel and driven mechanism, of a tripping lever extending alongside the anvil and die, mechanism to disrupt said driving connection, a holding lever normally maintaining said mechanism out of operation, and means controlled by said tripping lever to operate the holding lever to release said mechanism.

[Claims 6 to 19 not printed in the Gazette.]

1,192,202. MACHINE FOR MAKING PAPER BOTTLES. EDWARD H. JOHNSON, New York, N. Y., and CHARLES SCHIEFL, Montclair, N. J., assignors to Greenfield Paper Bottle Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 9, 1915. Serial No. 54,976. (Cl. 93—60.)



1. A paper bottle machine comprising in combination with a central bottle form or mold a set of loop-forming members and a set of plait-pressing members both of which sets are capable of movement in a radial direction toward the bottle form, and an adjustable face-member mounted upon each of the loop-forming members.

2. A paper bottle machine comprising in combination an interior forming mold having the configuration or shape of a bottle to be constructed, a plurality of loop-forming members arranged about said mold, a plurality of plait-pressing members arranged about said mold, and means for forcing said members toward said mold in such a manner that the plait-pressing members will lag behind the loop-forming members, each of said loop-forming members having upon the part thereof which is opposite the neck portion of the mold an adjustable face member which can adapt itself to the paper tube as it is being pressed and up to the time the tube assumes its final form.

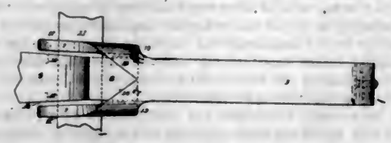
3. A paper bottle machine comprising in combination with an inner forming mold, which forming mold has the conformation or shape of a bottle to be constructed, a duplex set of forming members at least a part of which have adjustable face-members that are opposed to the throat and neck portions of the mold.

4. A paper bottle machine having in combination with an inner bottle-forming-mold that comprises a body, throat, and neck, forming members arranged about the forming mold, and means for forcing the forming-members toward said mold, the mold being arranged with the neck part uppermost and the forming-members being provided opposite the neck part of the mold with yieldable means having faces the upper ends of which move outwardly relative to the forming-members as the latter are forced toward the mold.

5. A paper bottle machine comprising in combination with an inner forming mold having the conformation or shape of a bottle to be constructed and arranged with the neck or throat part thereof uppermost, a plurality of forming-members arranged about the mold, and means for forcing the upper ends of the forming-members toward the mold, said forming members being provided with face members which yield relative to the forming-members and which are arranged so that they can adapt themselves to the paper of a tube as the latter is being pressed to the form of a bottle body with loops between the forming members.

[Claims 6 to 12 not printed in the Gazette.]

1,192,203. DRAFT-YOKE FOR RAILWAY-CAR DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Sept. 13, 1912. Serial No. 720,151. (Cl. 213—42.)

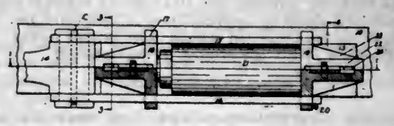


1. A vertical draft yoke for railway draft riggings which consists of a strap of substantially U shape, the upper and lower arms of said strap being connected at their forward ends by loops, each of said loops being of substantially V shape with the apex thereof extended forwardly, the arrangement being such that where said loops connect with the arms of the strap, V shaped recesses are formed with the apices thereof extended rearwardly at the top and bottom of the yoke.

2. A metallic yoke comprising two parallel bars united at their rear ends and their opposite ends merged into arms, each arm having a web and a V-shaped flange with a bearing at the apex for a key, said arms being spaced apart to receive the end of a draw bar between them, the cross sectional areas of the metal in the arms between the points (apices) and the points where the arms merge with the bars being substantially the same.

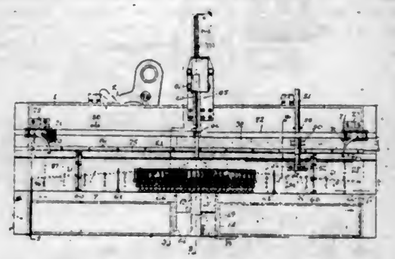
1,192,204. DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Dec. 17, 1913. Serial No. 807,243. (Cl. 213—42.)

In a draft rigging for railway cars the combination with front and rear followers and a shock absorbing mechanism therebetween, each of said followers being provided with upper and lower horizontal slots therethrough, of upper and lower links extending through said slots and above and below said shock absorbing mechanism, each of said links having a T head at its rear end which engages



the rear side of the rear follower and is adapted to move the latter forwardly under draft.

1,192,205. TYPOGRAPH-MACHINE. OLIVER W. JOHNSON and WILLIAM A. READE, Cleveland, Ohio; said Johnson assignor to said Reade. Filed Sept. 29, 1913. Serial No. 792,410. (Cl. 199—5.)



1. In mechanism of the character described, the combination with a suitable support provided with type-bar casting mechanism; of two sets of matrix bars individually movable on said support into varied operative relation to said casting means, the bars of one set bearing series of matrices similar to those of the other set but in reverse order and such sets of bars being normally collected into groups entirely separate from each otner.

2. In mechanism of the character described, the combination with a suitable support provided with type-bar casting mechanism; of two sets of laterally tapered matrix bars individually movable on said support into varied operative relation to said casting means, the bars of one set bearing series of matrices similar to those of the other set but in reverse order and such sets of bars being normally collected into groups entirely separate from each other with the thin ends of the bars directed toward each other.

3. In mechanism of the character described, the combination with a suitable support provided with transversely disposed type-bar casting means; of two sets of matrix-bars individually movable on said support into varied operative relation to said casting means, the bars of one set bearing series of matrices similar to those of the other set but in reverse order and such sets of bars being normally collected into entirely separate groups respectively lying on opposite sides of said casting means.

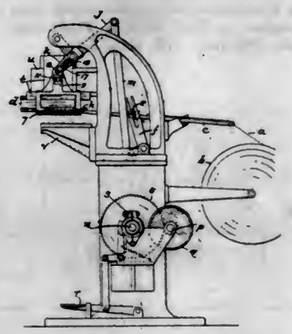
4. In mechanism of the character described, the combination with a suitable support provided with transversely disposed type-bar casting means; of two sets of laterally tapered matrix-bars individually movable on said support into varied operative relation to said casting, the bars of one set bearing series of matrices similar to those of the other set but in reverse order and such sets of bars being normally collected into entirely separate groups respectively lying on opposite sides of, and with the thin ends of the bars directed toward, said casting means.

5. In mechanism of the character described, the combination with a suitable support provided with transversely disposed type-bar casting means; of two sets of laterally tapered matrix-bars individually movable on said support into varied operative relation to said casting means, the bars of one set bearing series of matrices

similar to those of the other set but in reverse order, such matrices terminating short of the thin ends of the bars whereby such ends are left blank, and such sets of bars being normally collected into two entirely separate groups respectively lying on opposite sides of, and with the thin ends of the bars directed toward, said casting means.

[Claims 6 to 101 not printed in the Gazette.]

1,192,206. SAFETY-STOP FOR BOX-STAYING AND SIMILAR MACHINES. BENJAMIN L. KABACK and SAMUEL SHELLY, Philadelphia, Pa., assignors to National Metal Edge Box Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 22, 1915. Serial No. 62,734. (Cl. 164—107.)



1. In safety stops for machinery, the combination with a member the operation of which it is desired to automatically arrest, of driving mechanism, a releasable driving connection affording in its normal position a rigid connection between the driving mechanism and said member, a normally inoperative tripping lever, and means controlled by the tripping lever to release said driving connection.

2. In safety stops for machinery, the combination with a member the operation of which it is desired to automatically arrest, of driving mechanism, a releasable driving connection affording in its normal position a rigid connection between the driving mechanism and said member, a normally inoperative stop for arresting the operation of said member, a normally inoperative tripping lever, and means controlled by the tripping lever to actuate said stop and release said driving connection.

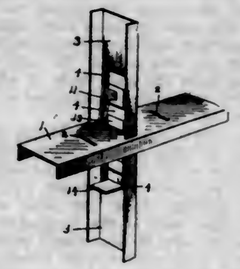
3. In safety stops for machinery, the combination with a member the operation of which it is desired to automatically arrest, of driving mechanism and connections between the same and said member to operate the latter, said connection being normally in operative position, a normally inactive stop carried by said member, and a normally inoperative trip lever carried by, but movable relatively to, said member and normally holding said stop inoperative but adapted, when displaced by an obstruction, to cause the stop to operate and thereby arrest the movement of said member.

4. In safety stops for machinery, the combination with a member the operation of which it is desired to automatically arrest, of driving mechanism, and connections between the driving mechanism and said member to operate the latter, a normally inactive stop carried by said member and tending to move into operative position, a relatively fixed member coöperating with said stop when the latter is operated, and a tripping lever normally restraining the stop from operating but adapted when displaced to release the stop.

5. In safety stops for machinery, the combination with a member the operation of which it is desired to automatically arrest, of driving mechanism, a normally inactive stop carried by said member, a trip lever carried by, but movable relatively to, said member and normally holding said stop inoperative but adapted, when displaced, to cause the operation of the stop, and a releasable driving connection between the driving mechanism and said member normally in operative position but actuable by the stop when the latter is so operated, to sever the driving connection between the driving mechanism and said member.

[Claims 6 to 17 not printed in the Gazette.]

1,192,207. STRUCTURAL JOINT. JULIUS KAHN, Youngstown, Ohio. Filed Feb. 6, 1915. Serial No. 6,432. (Cl. 189—36.)



1. In a metal structure, the combination of a plurality of slotted flat-sided bars engaging at an angle, a connector lying against a flat side of one of the bars and extending through a slot in another and having the extending end bent over to prevent movement out of said slot, and a two-armed key having one arm extending through slots in the first bar and in the connector to force the bars together, the other arm extending into engagement with said second mentioned bar.

2. In a metal structure, the combination of a pair of channel bars, one of said bars having a transverse slot through its web and the other having a stirrup struck up from its web transversely to its flanges, a connector extending beneath said stirrup and through said slot, and means engaging the connector and one of said channels to force it against the other channel.

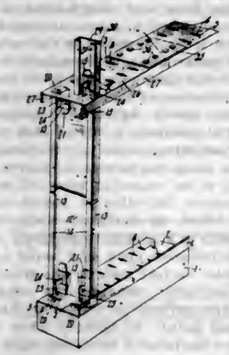
3. In a metal structure, the combination of a plurality of slotted flat-sided bars engaging at an angle, a connector extending through a slot in one of the bars and lying flat against the second, said second bar having a stirrup struck therefrom by which the connector is held in position, said connector passing through between the stirrup and the rest of the bar, means on the connector for limiting its movement in one direction relative to one of the bars, and a tapering key extending through slots in said connector and second bar to draw the two bars together.

4. In a metal structure, the combination of a plurality of slotted bars engaging at an angle, a connector extending through a slot in one of the bars, a plurality of alined stirrups struck from the other bar whereby the connector is held in sliding engagement with a side thereof, one end of the connector being formed to prevent its movement relative to the first bar, and a tapering key extending through slots in the connector and in the second bar to draw the bars together.

5. In a metal structure, the combination of a plurality of slotted bars engaging at an angle, a connector extending through a slot in one of the bars and being held in sliding engagement with the side of the other bar, one end of the connector being formed to prevent its movement relative to the first bar, and a two-armed key having a tapering arm extending through slots in the connector and the second bar to draw the bars together and having a second arm extending into engagement with the first bar at a distance from the point of engagement of said bars.

[Claims 6 to 13 not printed in the Gazette.]

1,192,208. BUILDING CONSTRUCTION. JULIUS KAHN, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 23, 1915. Serial No. 46,799. (Cl. 189—36.)



1. In a building structure, a metal bar having two transversely alined spaced stirrups near one of its ends, a second metal bar extending across the end of the first bar, said second bar having a pair of transversely alined transverse slots spaced from each other to correspond to the spacing of the stirrups, a third metal bar alined with the first bar and engaging the second bar from the opposite side, said third bar having a transverse stirrup near its end, a pair of connectors, one passing through one of the stirrups on the first bar and one of the slots in the second bar, the other passing through the second stirrup on the first bar, through the second slot in the second bar and through the stirrup on the third bar, and wedges engaging the connectors for clamping the parts together.

2. In a building, a metal stud having two transversely spaced stirrups near its upper end, a metal cap plate surmounting the stud and having a pair of transversely alined transverse slots spaced from each other to correspond to the spacing of the stirrups, a second metal stud of lesser transverse dimension than the first mentioned stud and rising from the cap plate, said second bar having a transverse stirrup near its end, a pair of connectors, one passing through one of the stirrups on the first mentioned stud and through one of the slots in the cap plate, the other passing through the second stirrup on the first mentioned stud, through the second slot in the cap and through the stirrup on the second stud, and wedges engaging the connectors for clamping the parts together.

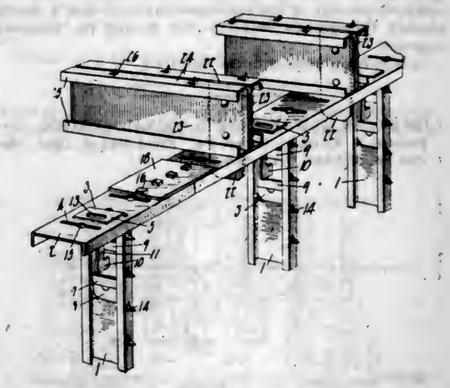
3. In a building structure, a metal bar having two transversely alined spaced stirrups near one of its ends, a second metal bar extending across the end of the first bar, said second bar having a pair of transversely alined transverse slots spaced from each other to correspond to the spacing of the stirrups, a third metal bar alined with the first bar and engaging the second bar from the opposite side, said third bar having a transverse stirrup near its end, a pair of connectors, one passing through one of the stirrups on the first bar and one of the slots in the second bar, the other passing through the second stirrup on the first bar, through the second slot in the second bar and through the stirrup on the third bar, and wedges engaging the connectors for clamping the parts together, said wedges engaging the second bar at points removed longitudinally from the slots whereby bracing against swinging is secured.

4. In a building structure, a metal bar having two transversely alined spaced stirrups near one of its ends, a second metal bar extending across the end of the first bar, said second bar having a pair of transversely alined transverse slots spaced from each other to correspond to the spacing of the stirrups, a third metal bar alined with the first bar and engaging the second bar from the opposite side, said third bar having a transverse stirrup near its end, a pair of connectors, one passing through one of the stirrups on the first bar and one of the slots in the second bar, the other passing through the second stirrup on the first bar, through the second slot in the second bar, and through the stirrup on the third bar, and wedges engaging the connectors for clamping the parts together, said first bar including a flange and said third bar including a flange in the same plane with the flange on the first bar.

5. In a metal structure, the combination of a pair of structural members engaging at an angle, one having a plurality of rows of alined transverse slots and the other having a plurality of struck-up stirrups spaced to correspond to the spacing between the rows of transverse slots, a plurality of connectors, each extending beneath a stirrup and through the corresponding slot, and a plurality of two-armed keys, each having a wedge-shaped arm engaging the corresponding connector and one structural member to force it against the second and each having another arm provided with a pointed end adapted to engage the second member a distance from said slot whereby swaying of one member either longitudinally or transversely in respect to the other is prevented.

[Claims 6 to 9 not printed in the Gazette.]

1,192,209. BUILDING CONSTRUCTION. JULIUS KAHN, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 23, 1915. Serial No. 46,800. (Cl. 189—36.)



1. In a building structure, a metal floor beam support including a flat portion having a plurality of spaced transverse slots, a metal floor beam having its end resting on the support, said floor beam including a flat depending perforated tongue rigid with the rest of the beam and adapted to pass through any desired slot, and a wedge passing through the perforation in the tongue, said wedge engaging the lower side of the slotted flat portion of the floor beam support, whereby the floor beam is rigidly clamped in position.

2. In a building structure, a metal floor beam support including a flat portion having a plurality of spaced transverse slots, a metal floor beam having its ends resting on the support, said floor beam including a pair of channel bars secured together back to back and a flat perforated tongue interposed between the channel bars and depending therefrom, said tongue being adapted to pass through any desired slot, and a wedge passing through the perforation in the tongue, said wedge engaging the lower side of the slotted flat portion of the floor beam support, whereby the floor beam is rigidly clamped in position.

3. In a building structure, a plurality of metal studs, a metal cap plate supported on the upper ends of the studs, said cap plate having a plurality of transverse slots, connectors passing through some of the slots for securing the cap plate and the studs together, and a metal floor beam

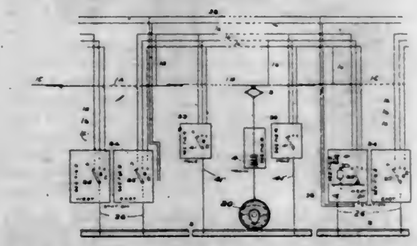
resting on the cap plate between a pair of the studs, said floor beam having a perforated tongue which projects through one of the slots, and a wedge passing through the tongue and engaging with the lower surface of the cap plate for clamping the floor beam to the cap plate.

4. In a building structure, a metal stud, a metal cap plate supported on the upper end of the stud, said cap plate having a plurality of transverse slots arranged symmetrically about the longitudinal central line thereof, a flat connector secured to the stud and passing through one of the slots, a floor beam resting on the upper surface of the cap plate, said floor beam having a depending perforated tongue passing through another of the slots and wedge means passing through the perforation in the tongue and engaging the lower surface of the cap plate for securing the floor beam in position, the arrangement being such that the stud and floor beam may be interchanged with respect to the slots through which the connector and the tongue respectively pass.

5. In a building structure, two flat-sided metal members intersecting each other, the first member having a plurality of transverse slots including enlarged portions intermediate their ends, the second member having a stirrup formed thereon near its end, a flat connector passing through the stirrup, said connector having a perforated end bent at right angles to the remainder thereof, the arrangement being such that the connector may either be passed through any desired one of the slots or may be placed with its bent end on the side of the first member nearest the second member and secured in position by passing a bolt through the hole in the connector and the enlarged portion of the corresponding slot, and a wedge passing through the connector for forcing the members together.

[Claim 6 not printed in the Gazette.]

1,192,210. RAILWAY SAFETY-SIGNAL SYSTEM. ALPHONSO S. KEATING, Corry, Pa. Filed Mar. 4, 1911. Serial No. 612,343. (Cl. 246—26.)



1. In a railway safety signal the combination with a railway, electrical conductors, one of said conductors being divided by insulating means into sections, the other of said conductors being continuous, a source of electric current adapted to be connected to said conductors, of a signaling equipment including a switch board, contact points thereon, an electrical conductor connecting each of said points to a separate section of said divided conductor, a switch lever upon said board and adapted to engage any of said contact points, a conductor leading from said switch lever to the continuous conductor, and electric means included in said last mentioned conductor for coöperation with the switch lever to maintain the same in contact with any one of said points and for automatically disengaging said lever and point upon the deënergization of the circuit through said lever.

2. In a railway safety signal, the combination with a railway, electrical conductors, one of which is divided by insulating means into sections, the other of said conductors being continuous, a source of electrical current adapted to be connected to said conductors, of a signaling equipment including a switch-board, contact points thereon, an electrical conductor connecting each of said points to a separate section of said divided conductor, a switch-lever upon said board adapted to engage any of said contact points selectively, manually engageable means arranged to retain said lever in engagement with a selected point when the signaling equipment is not electrically energized, a conductor leading from said switch-lever to the continuous conductor, and electrical means arranged to coöperate with said switch lever to maintain the same in contact with a selected point when said equipment is energized and to automatically disengage said lever from said point upon the deënergization of the circuit through said lever.

3. In a railway safety signal, the combination with a railway, electrical conductors, one of said conductors being divided by insulating means into sections, the other of said conductors being continuous, a source of electrical current adapted to be connected to said conductors, of a signaling equipment including a switch-board, contact points on said board, an electrical conductor connecting each of said points to a section respectively of the divided conductor, a switch-lever upon said board adapted to engage any of said contact points selectively, means arranged to be manually actuated into engagement with said lever for the purpose of retaining same in contact with any of said points as selected when the signaling equipment is not electrically energized, said manually actuated means being adapted to be automatically disengaged when the current flows, a conductor leading from said switch lever to the continuous conductor, and electrical means arranged to coöperate with said lever to maintain the same on any of said points as selected during the electrical energization of said equipment, and to automatically disengage said lever from such point when said equipment becomes electrically dormant.

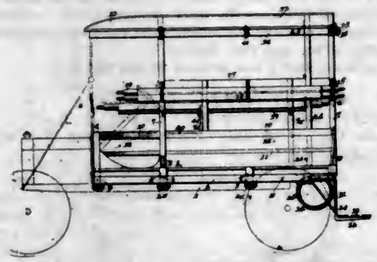
4. In a railway safety signal of the electrical type, the combination with a railway, electrical conductors, one of said conductors being divided by insulating means into independent sections, the other of said conductors being continuous, a portable source of electrical current adapted to be movably connected to said conductors and adapted to form one end of a possible circuit, of a signaling equipment including a switch-board, contact points thereon, an electrical conductor connecting each of said points respectively to a separate section of said divided conductor, a switch-lever upon said board adapted to engage any of said points selectively and to close said circuit by such engagement, a conductor leading from said switch-lever to said continuous conductor, means adapted to be manually engaged with said lever to retain the same in said selective contact when said equipment is electrically dormant, and to be automatically, electrically actuated out of such engagement when said equipment becomes energized, and electrical means arranged to coöperate with said switch-lever to maintain the same in said selective contact with said points, and to cause the automatic disengagement of said lever from said point upon the deënergization of said equipment.

5. In a railway safety signal, the combination with a railway having electrical conductors arranged adjacent thereto, one of said conductors being divided by insulating means into sections, the other of said conductors being continuous, and a source of electrical current adapted to be connected to said conductors, of a signaling equipment including a plurality of conductors connected respectively to one section of a predetermined length of said divided conductor, a switch board, contact points thereon, each forming a terminal of one of said plurality of conductors, a lever mounted on the switch board and adapted to engage any of said contacts, an electrically operated means to coöperate with and hold the lever upon the coöperation of the lever with an energized contact point.

[Claims 6 to 20 not printed in the Gazette.]

1,192,211. AMBULANCE-BODY. WALTER C. KERN, Leavenworth, Kans., assignor to The Wm. G. Hesse & Son Mfg. Co., Incorporated, Leavenworth, Kans. Filed Apr. 21, 1916. Serial No. 92,719. (Cl. 21—80.)

1. In an ambulance body, longitudinal beams, brackets for securing said beams to the chassis frame of an automobile, cross sills on said beams, a flooring on said sills, side posts extending up from said sills, said longitudinal beams extending forwardly of the front pair of side posts, a top on said posts overhanging the front pair of side posts, a dash fixture on the front of said beams, side paneling structure extending from the back end of the bed to the dash on one side of the body and terminating at the front side post on the other side of the body, a front center post and a rear center post, a hinge connection between the rear center post and the top whereby said rear center post may be swung up against the top when not in use, means for securing the free end of said rear center post, litter carriers supported from said center posts and one side of the body, a driver's seat between the front side and center posts and extending rearwardly at one side of the central plane of the body, and a locker seat to the rear of the driver's seat.



2. In an ambulance body, longitudinal beams, brackets for securing said beams to the chassis frame of an automobile, cross sills on said beams, a flooring on said sills, side posts extending up from said sills, said longitudinal beams extending forwardly of the front pair of side posts, a top on said posts overhanging the front pair of side posts, a dash fixture on the front of said beams, side paneling structure extending from the back end of the bed to the dash on one side of the body and terminating at the front side post on the other side of the body, a front center post and a rear center post, the front center post being fixed, a hinge connection between the rear center post and the top whereby the said rear center post may be swung up against the top when not in use, means for securing the free end of said rear center post, litter carriers supported from said center posts and one side of the body, a driver's seat between the front side and center posts and extending rearwardly at one side of the central plane of the body, and a locker seat to the rear of the driver's seat.

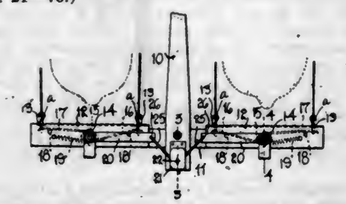
3. In an ambulance body, longitudinal beams, brackets for securing said beams to the chassis frame of an automobile, cross sills on said beams, a flooring on said sills, side posts extending up from said sills, said longitudinal beams extending forwardly of the front pair of side posts, a top on said posts overhanging the front pair of side posts, a dash fixture on the front of said beams, side paneling structure extending from the back end of the bed to the dash on one side of the body and terminating at the front side post on the other side of the body, a front center post and a rear center post, the front center post being fixed, a hinge connection between the rear center post and the top whereby said rear center post may be swung up against the top when not in use, means for securing the free end of said rear center post, litter carriers supported from said center posts and one side of the body, a driver's seat between the front side and center posts and extending rearwardly at one side of the central plane of the body, a locker seat to the rear of the driver's seat, and a foldable seat on the litter carrying side opposite said locker seat.

4. In an ambulance body, longitudinal beams, brackets for securing said beams to the chassis frame of an automobile, cross sills on said beams, a flooring on said sills, side posts extending up from said sills, said longitudinal beams extending forwardly of the front pair of side posts, a top on said posts overhanging the front pair of side posts, a dash fixture on the front of said beams, side paneling structure extending from the back end of the bed to the dash on one side of the body and terminating at the front side post on the other side of the body, a front center post and a rear center post, the front center post being fixed, a hinge connection between the rear center post and the top whereby said rear center post may be swung up against the top when not in use, means for securing the free end of said rear center post, litter carriers supported from said center posts and one side of the body, a driver's seat between the front side and center posts and extending rearwardly at one side of the central plane of the body, a locker seat to the rear of the driver's seat, lazy backs secured to said posts above said last named seats.

5. In an ambulance body, longitudinal beams, brackets for securing said beams to the chassis frame of an automobile, cross sills on said beams, a flooring on said sills, side posts extending up from said sills, said longitudinal beams extending forwardly of the front pair of side posts, a top on said posts overhanging the front pair of side posts, a dash fixture on the front of said beams, side paneling structure extending from the back end of the bed to the dash on one side of the body and terminating at the front side post on the other side of the body, a front center post and a rear center post, the front center post being fixed, a hinge connection between the rear center post and the top whereby said rear center post may be swung up against the top when not in use, means for securing the free end of said rear center post, litter carriers supported from said center posts and one side of the body, a driver's seat between the front side and center posts and extending rearwardly at one side of the central plane of the body, a locker seat to the rear of the driver's seat, a foldable seat on the litter carrying side opposite said locker seat, lazy backs secured to said posts above said last named seats.

[Claims 6 to 15 not printed in the Gazette.]

1,192,212. HORSE-DETACHER. ABRAHAM KYDLAND, Telstad, Mont. Filed Jan. 27, 1916. Serial No. 74,702. (Cl. 21—75.)



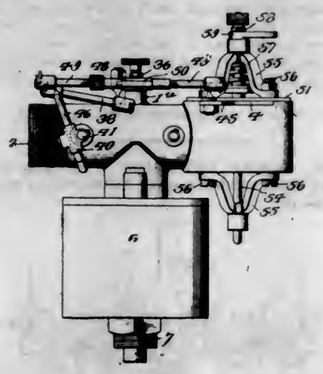
1. The combination with a draft appliance, of a whiffletree coacting therewith, the whiffletree being hollow and having trace hook receiving slots at its ends, a pivot pin passing through the whiffletree and upon which it is oscillatably supported, a member mounted upon the pin and extending in diametrically opposite directions therefrom and rotatable therewith, trace-hook engaging bolts having their inner ends connected to said member at diametrically opposite points, the outer ends of the bolts coacting with the trace hook engaging slots and being adapted to engage through trace hooks disposed in said slots, a spring normally acting to urge said member to a position to retract the bolts, an arm mounted upon the pin and rotatable therewith, a link on the end of said arm, and means for detachably engaging said link to thereby hold the trace-engaging bolts from retraction under the influence of the spring.

2. The combination with a tongue, of an evener bar mounted thereon, hollow swingletrees mounted upon the ends of the evener bar and having trace-hook receiving slots, a pin passing through each swingletree and pivoting it to the evener bar, a rectangular member mounted upon the pin and rotatable therewith, trace-hook-engaging bolts having their inner ends connected to said member diametrically opposite each other, the outer ends of the bolts coacting with the trace-hook engaging slots and being adapted to engage through trace-hooks in said slots, a

spring normally acting to urge said member to a position to retract the bolts, an arm mounted upon the pin, a link on the end of each of said arms, and means for detachably engaging said links to thereby hold the trace-engaging bolts from retraction under the influence of the spring.

3. The combination with a tongue, of an evener bar mounted thereon, swingletrees pivotally mounted upon the ends of the evener bar, each of said trees being hollow, a pivot pin forming the pivotal axis for each swingletree and extending therethrough, a plate rotatable with said pin and disposed within the swingletrees, trace-hook engaging bolts connected to diametrically opposite points of the plate, a spring connected to the plate to urge its rotation in one direction to cause the retraction of said bolts, guides for the bolts, an arm mounted upon each pivot pin and rotatable therewith, and means for holding said arms in a bolt projecting position comprising links connected to said arms and having eyes, a U-shaped bracket, and a spring actuated pin disposed in said bracket and engaging said eyes.

1,192,213. CARBURETER. AMHERST G. LAMB, Torrington, Conn.; Ella A. Lamb, Torrington, Conn., administratrix of said Amherst G. Lamb, deceased. Filed Oct. 13, 1913, Serial No. 795,009. Renewed June 19, 1916. Serial No. 104,576. (Cl. 48—155.1.)



1. A carbureter including in combination a mixing chamber, a source of fuel supply, an air passage surrounding said fuel supply, an outlet for said mixing chamber, and means for augmenting the combined fuel and air, including a plurality of air inlet valves arranged upon one side of said fuel supply so as to direct the air in alinement with the outlet and at right angles to the fuel supply.

2. A carbureter including in combination a chamber provided with an outlet, a source of fuel supply for the explosive mixture delivering to said chamber, a controlling valve for regulating the flow of said mixture to said outlet, means connected to said controlling valve for automatically admitting additional fuel and additional air to said mixture at right angles to each other, and means operating independent of said controlling valve for admitting still further additional air to said mixture, so as to direct the additional air in alinement with the outlet and at right angles to the fuel supply.

3. A carbureter including in combination a mixing chamber provided with an outlet, a source of fuel supply for the explosive mixture delivering to said mixing chamber at right angles thereto, a controlling valve for regulating the flow of said mixture to said outlet, an air inlet valve arranged to one side of said mixing chamber for admitting air in alinement with the outlet and at right angles to the fuel supply, and means including connections between the source of fuel supply, controlling valve and said air inlet valve whereby the several parts are moved simultaneously for proportionately augmenting the mixture.

4. A carbureter including in combination a mixing chamber provided with an outlet, a source of fuel supply for the explosive mixture delivering to said mixing chamber, a controlling valve for regulating the flow of said mixture to said outlet, and means including a plurality of valved controlled air inlets arranged to present the air in alinement with said outlet in said mixing chamber and to one side of the fuel supply for augmenting the explosive mixture.

5. A carbureter including in combination a mixing chamber provided with an outlet, a fuel supply valve for the explosive mixture delivering to said mixing chamber, a controlling valve for regulating the flow of said mixture to said outlet, a valve controlled air inlet arranged to one side of said mixing chamber above the fuel supply valve for delivering air in alinement with the outlet and at right angles to the fuel supply, and means including adjustable connections between the fuel supply valve, controlling valve and valved controlled air inlet for proportioning the quantity of air and fuel desired.

[Claims 6 and 7 not printed in the Gazette.]

1,192,214. ARCH-SUPPORT. DANIEL H. LAWTON, Chicago, Ill. Filed July 17, 1915. Serial No. 40,410. (Cl. 36—71.)



1. An arch support comprising an upwardly bowed arch plate; a supplemental plate arranged thereunder; headed studs on the under side of said bowed plate, there being a key hole slot in the body of said supplemental plate and a notch in one edge thereof both engaging said studs; and a yielding stop member on said bowed plate engaging an edge of said supplemental plate to yieldingly hold said slot and notch in engagement with said studs, substantially as described.

2. An arch support comprising an upwardly bowed arch plate; a supplemental plate arranged thereunder; headed studs on the under side of said bowed plate, there being a key hole slot in the body of said supplemental plate and a notch in one edge thereof both engaging said studs; and a yielding stop bead on said bowed plate engaging an edge of said supplemental plate to yieldingly hold said slot and notch in engagement with said studs, substantially as described.

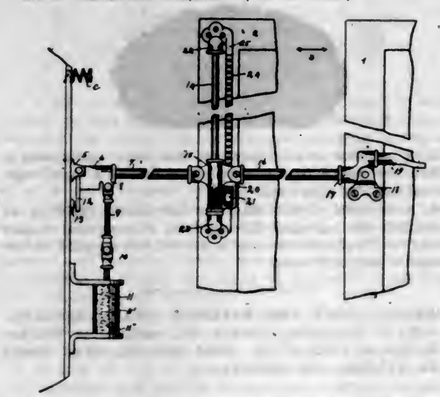
3. An arch support comprising an upwardly bowed arch plate; a supplemental plate arranged thereunder; laterally shiftable fastenings between said plates; and a stop member on said bowed plate engaging said supplemental plate to yieldingly hold said fastenings together, substantially as described.

4. An arch support comprising an upwardly bowed arch plate; a supplemental plate arranged thereunder; laterally shiftable fastenings between said plate, and a stop bead on said bowed plate engaging said supplemental plate to yieldingly hold said fastenings together, substantially as described.

5. An arch support comprising an upwardly bowed arch plate; a supplemental plate arranged thereunder; headed studs on the under side of said bowed plate adjacent one end thereof, there being a key hole slot in the body of said supplemental plate and a notch in one edge thereof both engaging said studs; and a headed stud on the under side of said bowed plate adjacent the other end thereof, there being a plurality of longitudinally elongated slots in the corresponding end of said supplemental plate located at different longitudinal positions and adapted to engage said last mentioned stud, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,192,215. DOOR CLOSING AND LOCKING DEVICE. GEORGE LOCKHART, New York, N. Y. Filed Apr. 30, 1914. Serial No. 835,354. (Cl. 70—102.)



1. A device of the character described comprising a guide rod, a slide thereon, a plurality of rods pivoted thereto, a dog rotatable therein and a rack in operable relations therewith all combined for joint operations as and for the purpose set froth.

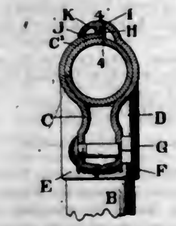
2. A device of the character described comprising a guide rod, a slide thereon, a plurality of rods pivoted thereto, a dog rotatable therein and a rack in operable relations therewith and provided with means at each end thereof for operating said dog all combined for joint operations as and for the purpose set forth.

3. A device of the character described having in combination a door opening and closing device, comprising a plurality of pivoted rods in approximate alinement, a means connected therewith for returning said rods to a locking position, and means for preventing the re-opening of a door during its closing motion and means for disengaging said last mentioned means at the end of the closing motion, means for retaining a door in open position all combined for joint operation as herein specified.

4. A device of the character described comprising a door closing and locking means, and in combination therewith a door retaining means, said means consisting of a balanced dog and means for operating it, said dog being adapted to be returned by the extreme motion of a door in either direction as herein specified and for the purpose set forth.

5. A device of the character described comprising a guide, a slide thereon, a rod pivoted to said slide, means remote from said slide for operating said slide and a rack and dog operable therewith and adapted to prevent a reverse motion thereof as herein specified.

1,192,216. STRUCTURAL COUPLING. WILLIAM LOUDEN, Fairfield, Iowa. Filed Feb. 5, 1913. Serial No. 746,323. (Cl. 189—36.)



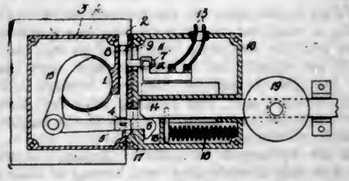
1. A structural coupling, comprising two mating members designed to hold frame elements between them, said members having at one of their meeting edges interfitting portions constituting a positive overhanging interlocking means for said edges, outwardly-extending lugs on the other edges of the members, said lugs being spaced apart and provided with inwardly extending flanges adapted to abut each other at the edges, the meeting edges of said flanges being beveled in opposite directions, whereby when they are drawn together, the interlocking means is tightened and the circumferential clamping effect upon the frame elements is increased, and means to draw said lugs together.

2. In a device of the character described, two mating members designed to hold frame elements between them, an outstanding flange on one end of one of the members, an outwardly arched portion on the mating end of the other member, adapted to pass over said outstanding flange and lap on the body of the other member, a centrally-located inwardly-extending lip on the inner or concave side of said arched portion adapted to catch against the outstanding flange on the other member, and means to draw the other ends of the members together.

3. In a device of the character described, two mating members designed to hold frame elements between them, an outstanding flange on one end of one of the members, an outwardly arched portion on the mating end of the other member, adapted to pass over said outstanding flange and lap on the body of the other member, a centrally-located inwardly-extending lip on the inner or concave side of said arched portion adapted to catch against the outstanding flange on the other member, and means to draw the other ends of the members together, the ends of the outstanding flange being cut away, and the edges of the outwardly arched portion being rounded down to inclose the cut-away ends of the outstanding flange.

4. In a device of the character described, two mating members designed to hold frame elements between them, an outstanding flange on one end of one of the members, an outwardly arched portion on the mating end of the other member, adapted to pass over said outstanding flange and lap on the body of the other member, a centrally-located inwardly-extending lip on the inner or concave side of said arched portion adapted to catch against the outstanding flange on the other member, and means to draw the other ends of the members together, the ends of the outstanding flange being cut away, and the edges of the outwardly arched portion being rounded down to inclose the cut-away ends of the outstanding flange, and the free end of the arched portion being drawn in to come in contact with the body of the other member.

1,192,217. DOOR LOCK AND CONTACT FOR ELECTRIC ELEVATORS. HENRY PERCY MCCOLL, Melbourne, Victoria, Australia. Filed Jan. 4, 1915. Serial No. 367. (Cl. 200—30.)



1. A door latch and contact for controlling a control circuit of an elevator, comprising a lock casing, a catch on the elevator door, terminals for connection in said circuit arranged out of the longitudinal plane of movement of the catch, and a contact carried by the latch in the plane of and adapted to contact with the terminals when the catch drops into locking position.

2. A door lock and contact for controlling a control circuit of an elevator, comprising a lock casing, a catch on the elevator door, terminals for connection in said circuit, a vertically guided member carried by said catch, and a contact on said member adapted to engage said terminals.

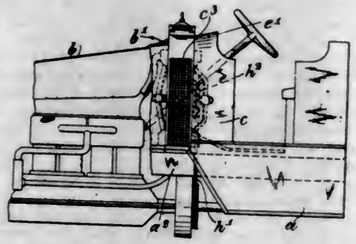
3. A door lock and contact for controlling a control circuit of an elevator, comprising a lock casing, a catch on the elevator door, contacts for connection in said circuit, a contact pivotally connected with said catch to make contact in the frame portion of the lock casing and adapted to be raised and positively removed from said contacts when the door is opened.

4. A door lock and contact for controlling a control circuit of an elevator, comprising a lock casing, a catch on the elevator door, contacts for connection in said circuit, a catch casing on the door, a vertically guided bar therein loosely connected with said catch, a laterally projecting contact on said bar adapted to engage said contacts in the control circuit.

5. A door lock and contact for controlling a control circuit of an elevator, comprising a lock casing, a catch on the elevator door, contacts for connection in said circuit, a catch casing on the door, a vertically guided bar therein loosely connected with said catch, a laterally projecting contact on said bar adapted to engage said contacts in the control circuit, and means to prevent said circuit being closed until the catch has dropped into locking position.

[Claims 6 and 7 not printed in the Gazette.]

1,192,218. RADIATOR FOR AUTOMOBILES. ALFRED F. MASURY, New York, N. Y., assignor to International Motor Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 16, 1915. Serial No. 50,962. (Cl. 21—90.)



1. In an automobile, in combination with cowl plates therefor, a radiator disposed between the motor and the driver's seat and between the cowl plates and forming therewith a cowl and dash.

2. In an automobile, in combination with cowl plates therefor, a radiator disposed between the motor and the driver's seat and freely exposed to the air within the motor bonnet and to the air in the space around the driver's seat and forming with the cowl plates a cowl and dash.

3. In an automobile, in combination with cowl plates therefor, a radiator disposed between the motor and the driver's seat and supported detachably on the cowl plates.

4. In an automobile, in combination with the cowl plates therefor, a radiator disposed between the motor and the driver's seat, and forming with the cowl plates a cowl and dash and means to support the radiator unit detachably on the cowl plates.

5. In an automobile, a radiator disposed between the motor and the driver's seat and having a reservoir extended rearwardly to form a dash.

[Claims 6 to 9 not printed in the Gazette.]

1,192,219. SMOOTHING MATERIAL. JOHN R. MONTGOMERY and GEORGE M. MONTGOMERY, Windsor Locks, Conn., assignors to The J. R. Montgomery Company, Windsor Locks, Conn., a Corporation of Connecticut. Filed May 25, 1915. Serial No. 30,414. (Cl. 29—180.)

1. A material of the character described, comprising a pliable core and a metallic ribbon wound about said core.

2. A material of the character described, comprising a pliable core and a metallic ribbon wound about said core, the resulting strand being formed into a loose tangled mass.



3. A material of the character described, comprising a pliable core and a flat metallic ribbon having a sharp edge wound spirally about said core.

4. A material of the character described, consisting of a tangled snarled mass formed from a composite strand comprising a pliable core and a flexible flat metallic ribbon wound about said core.

1,192,220. YOKE FOR RAILWAY DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Jan. 12, 1914. Serial No. 811,603. (Cl. 213—42.)



1. A cast yoke for railway draft riggings which consists of two separate and like parts having at their rear ends integral means for detachably connecting the same together, said connecting means being separable by relative movement in vertical planes, and said parts having relative longitudinal movement which is limited in extent by said connecting means, substantially as specified.

2. A cast yoke for railway draft riggings, which consists of two separate parts having integral means arranged near the central horizontal plane of the yoke for detachably connecting the said parts together, said two parts having relative longitudinal movement which is limited in extent by said detachably connecting means.

3. A yoke of the character described consisting of two separable loops each of which is provided with a filler at its rear end, said fillers being provided on their adjacent faces with interlocking parts for detachably connecting said loops together.

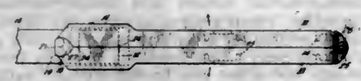
4. A yoke of the character described consisting of two separable and like parts each of which is provided with an integral filler at the read end thereof, each filler, on its inner side, having an integral hook-shaped flange, said flanges being adapted to overlap when the parts are assembled, substantially as specified.

5. A cast yoke for railway draft riggings, which consists of two separable parts having integral means, arranged within the outline of the yoke, for detachably connecting the said parts together, said two parts having relative longitudinal movement which is limited in extent by said detachably connecting means.

[Claim 6 not printed in the Gazette.]

1,192,221. KEYLESS YOKE. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 14, 1914. Serial No. 866,592. (Cl. 213—42.)

1. A yoke of the character described comprising two like members having coöperating, interengaging, integral bosses and grooves arranged to prevent either relative lateral or longitudinal movement when the parts are operatively assembled.



2. A yoke of the character described comprising two like castings each having a pocket to receive cushioning means and provided with coöperating, interengaging, integral bosses and grooves, said bosses and grooves detachably connecting said castings and preventing relative longitudinal or lateral movement when the parts are assembled.

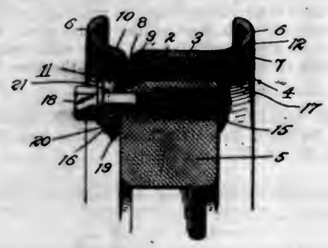
3. A yoke of the character described comprising two loop members each having coöperating, interengaging bosses and grooves on the tops and bottoms thereof at the forward ends, said bosses and grooves preventing relative longitudinal or lateral movement of the parts when the same are operatively assembled.

4. A yoke of the character described, comprising two separable loop members each having coöperable, integral, interfitting hinge uniting means at the front end thereof.

5. A yoke of the character described comprising, two loop members each having a boss and a groove at the front end of each arm thereof, the bosses and grooves being located on the inside faces of said arms, the bosses being arranged to slide into grooves as the two loop members are swung from a position where they are at an angle to each other to a position where the same are parallel.

[Claim 6 not printed in the Gazette.]

1,192,222. RIM FOR AUTOMOBILE-TIRES. JOHN S. O'GORMAN, Portland, Oreg. Filed Sept. 26, 1912. Serial No. 722,404. (Cl. 152—21.)



1. A demountable wheel rim for holding elastic tires which comprises in combination two rings formed of metal bands of substantially uniform thickness throughout shaped to form tire-retaining flanges on their opposite edges and having their other portions extending substantially parallel to the common axis of the rings and telescoping one inside of the other, the inner ring being cut transversely and being slightly curved in cross-section to form a circumferential groove on its outer surface, and a supporting ridge on its inner surface, and the outer ring being slightly curved in cross section to form an inwardly extending circumferential bead adapted to fit into the beforedescribed circumferential groove in the inner ring.

2. A demountable wheel rim for holding elastic tires which comprises in combination two rings formed of metal bands of substantially equal and uniform width shaped to form tire retaining flanges on their opposite edges, and telescoping one inside of the other, the inner ring being cut transversely and provided with a circumferential groove in its outer surface, and the outer ring being provided on its inner surface with an inwardly projecting circumferential bead adapted to fit into the before described groove in the inner ring.

3. A demountable wheel rim for holding elastic tires which comprises in combination two rings formed of metal bands of approximately equal and uniform width shaped to form retaining flanges on their opposite edges and telescoping one into the other, the inner ring being cut transversely and provided with a circumferential depression which forms a groove on its outer surface and a supporting rib on its inner surface, and the outer ring being provided on its inner surface with an inwardly projecting circumferential bead adapted to fit into the beforedescribed groove in the inner ring.

4. A demountable wheel rim for holding elastic tires which comprises, in combination, two rings formed of metal bands of substantially equal and uniform width and thickness throughout, the inner ring being cut transversely to facilitate its being telescoped part way into the outer ring, said rings being bent up at their opposite edges to form tire retaining flanges equally distant from, and symmetrically disposed with reference to, the common axis of the rings, one of said rings having a recess in its unflanged portion and the other ring having a radially extending pin interlocking with said recess when the rings are assembled to form the rim.

5. A demountable wheel rim for holding pneumatic tires composed of two telescoping flanged rings, provided with interlocking grooves and beads, the inner ring being split transversely, the said split ring having a radial perforation near each end, and the outer solid ring having inwardly extending radial projections adapted to enter said perforations when the parts are assembled.

1,192,223. RUNNER AND SIDE-RAIL CONNECTOR FOR FLEXIBLE SLEDS. OTTO PEARSON, Mount Jewett, Pa. Filed Jan. 17, 1916. Serial No. 72,585. (Cl. 21—94.)



1. In a sled, the combination with a cross bar connecting the front ends of flexible runners, and side rails; of elements carried by one of said members and engaging the other for preventing said cross bar from interlockingly engaging the side rails on the flexing of the runners.

2. In a sled having flexible runners, the combination with a runner-connecting cross bar and side rails, of connectors for said side rails and cross bar carried by one of said members and movably engaged with the other.

3. In a sled having flexible runners, the combination with a runner-connecting cross bar and side rails, of connectors for said side rails and cross bar carried by one of said members and movably engaged with the other, said connectors and cross bar having coöperating means for limiting the flexing of the runners.

4. In a sled having flexible runners, the combination with a runner-connecting cross bar and side rails, of connectors for said side rails and cross bar carried by one of said members, said connectors and cross bar being one apertured to receive the other to provide for the movement of one relatively to the other.

5. In a sled having flexible runners, the combination with a runner-connecting cross bar and side rails, of connectors for said side rails and cross bar carried by said side rails and apertured to slidably receive said cross bar.

[Claim 6 not printed in the Gazette.]

1,192,224. CORE FOR USE IN MAKING ELECTRIC STORAGE-BATTERY PLATES. GUSTAV H. RABENALT, Buffalo, N. Y. Filed Nov. 17, 1914. Serial No. 872,592. (Cl. 204—29.)

1. A core for use in making duplex storage battery plates, comprising a member of suitable dimensions which is non-fragile, acid-resistant and having sufficient lubricating qualities to allow it to be readily removed from a plate after the same has been pasted.

2. A core for use in making duplex storage battery plates, comprising a thin piece of rigid material rendered acid-proof and lubricated to prevent the lead oxid paste from adhering thereto.



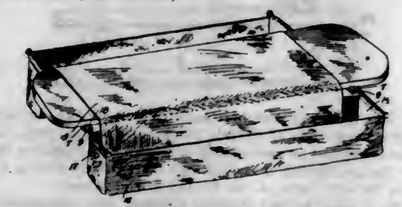
3. A core for use in making duplex storage battery plates, comprising a thin piece of non-fragile material being acid-resistant and having sufficient lubricant qualities to allow it to be readily removed from a plate after the same has been pasted and dried or hardened.

4. A core for use in making duplex storage battery plates, comprising a member of non-fragile material which is not attacked by sulfuric acid and having a material thereon for lubricating said member, whereby it may be placed in position before the plate is pasted and readily removed therefrom after it is pasted.

5. A core for use in making duplex storage battery plates, comprising a thin piece of steel having a coating of lead thereon to render it acid-proof and a coating of paraffin thereon to lubricate it so that it may be readily removed from the plate after it is pasted without injury to said paste.

[Claim 6 not printed in the Gazette.]

1,192,225. IRONING-BOARD ATTACHMENT. DORA RAND, Kirkland, Ill. Filed Apr. 15, 1916. Serial No. 91,358. (Cl. 68—10.)



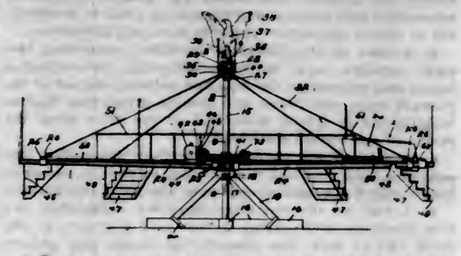
An attachment for ironing boards embodying a series of plates each having an aperture, a plurality of supporting arms, each formed with an offset end, the offset end of the supporting arms being inserted in the openings of said plates for detachably connecting said arms thereto and disposing the same at right angles with respect to the opposite side edges of the board, and a bag formed at its opposite ends with loops for receiving the projecting ends of the supporting arms and disposing the bag to opposite sides and in a longitudinal plane with respect to the side edges of the board, to prevent the contact of the overhanging portions of the clothes being pressed with the floor surfaces.

1,192,226. AMUSEMENT DEVICE. GEORGE M. REAGEN, Coshocton, Ohio, assignor of one-half to Fred A. Schwartz, Coshocton, Ohio. Filed Dec. 15, 1915. Serial No. 66,981. (Cl. 46—27.)

1. An amusement device comprising an upright, an element supported for rotation thereon and including radially extending arms, floor sections supported on said arms in circumferential series, and stairways supported between the radial arms to provide means of access to the floor sections.

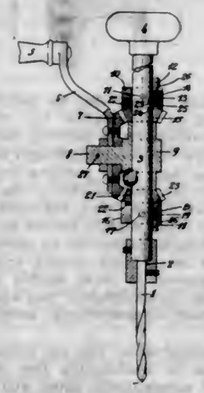
2. An amusement device comprising an upright, an element supported for rotation thereon and including radially extending arms, floor sections supported on said arms in circumferential series, and stairways supported between the radial arms to provide means of access to the floor sections, said floor sections being provided with guard rails and suspension rods being provided to support the stairways clear of the ground.

3. In an amusement device, a relatively stationary upright having a cap at its upper end, an element mounted for rotation on the upright, said element including a sleeve, a spider, radial arms socketed in the sleeve, and guy rods connecting the arms with the spider, said spider having a bevel gear, a stem extending upwardly from the cap through the spider and having laterally extending arms provided with pinions meshing with the bevel gear, said pinions having wrist pins, a body perched on the stem, wings pivotally connected with the body, and pitmen connecting the wings with the wrist pins of the pinions.



4. In an amusement device, a mast or upright, an element mounted for rotation therein and having radially extending arms, a bevel gear fixed on the upright, a motor mounted on some of the radial arms and having a driven shaft provided with a pinion meshing with the fixed gear wheel, a passenger vehicle swingingly supported with respect to some of the radial arms, said vehicle being provided with a bracket, means for rocking the vehicle including a driven shaft supported for rotation on the rotary element and having a crank at one end, and a pitman connecting said crank with the bracket on the vehicle; the rotary element being provided with floor sections supported on the radial arms and arranged in circumferential series, steps connected with some of the radial arms, and suspension rods also connecting the steps with some of the radial arms to support the steps above the floor level.

1,192,227. DRILL GEAR-AND-RATCHET MECHANISM. EMIL RENDANO, Brooklyn, N. Y. Filed May 27, 1915. Serial No. 30,737. (Cl. 74—7.)



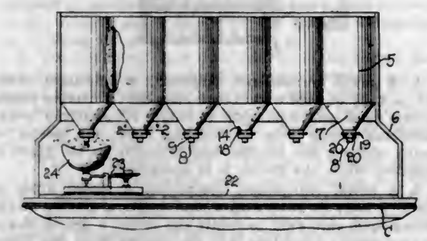
1. In a drill, the combination with a driving shaft, of oppositely disposed stop members fixed to said shaft, a main gear, secondary gears meshing with said main gear and respectively positioned adjacent each said stop member, a series of ratchet teeth disposed on the face of each secondary gear and directed toward its corresponding stop member, each said stop member being provided with an opening, and pawls in said openings coöperating respectively with said ratchet teeth.

2. In a drill, the combination with a driving shaft, of oppositely disposed stop members fixed to said shaft, a main gear, secondary gears meshing with said main gear and respectively positioned adjacent each said stop member, a series of ratchet teeth disposed on the face of each secondary gear and directed toward its corresponding stop member, each said stop member being provided with an opening, and pawls in said openings coöperating respectively with said ratchet teeth, said pawls having ends adapted to be manipulated and extending exteriorly of said respective openings.

3. In a drill, the combination with a vertical driving shaft, of oppositely disposed circular stop members, a vertical main gear, horizontal secondary gears meshing with said main gear and positioned respectively adjacent said stop members, each said secondary gears having a horizontal series of ratchet teeth, vertical openings in said stop members and vertical pawls having manipulatable ends extending freely exteriorly of said openings, said pawls coöperating respectively with said series of ratchet teeth.

4. In a drill, the combination with a driving shaft, of a main gear, secondary gears meshing with said main gear, said secondary gears being disposed opposite to one another, members fixed to said shaft for maintaining the position of said secondary gears relative to said shaft, a series of ratchet teeth on said secondary gears, said members having openings therethrough and extending respectively toward said series of ratchet teeth, pawls in said openings coöperating respectively with said series of ratchet teeth and means extending exteriorly of said members for setting said pawls.

1,192,228. GROCER'S BIN. ABRAHAM RHODES, Corydon, Ind. Filed Oct. 13, 1915. Serial No. 55,641. (Cl. 221—62.)



1. The combination with a container having a discharge spout, of a sliding valve plate traversing the discharge spout, a length of resilient wire having a spring coil intermediate of its ends and opposed bowed arms, one of said arms being fixed and the other arm having a sliding connection with one end of the valve plate to normally hold said valve plate in position to close the discharge spout, said valve plate being provided with an opening therein whereby, when the arms are moved toward each other, said openings are disposed in registration with the bore of the discharge spout.

2. The combination with a container having a discharge spout and a closed casing fixed to the wall of the container and surrounding the discharge spout, said spout extending through the bottom wall of the casing; of a valve plate slidably mounted within said casing and traversing the discharge spout, said plate being provided with an opening to register with the bore of the discharge spout, and a length of resilient wire having a spring coil intermediate of its ends and oppositely related bowed arms, one of said arms being fixed to the exterior of said casing and the other arm having a slidable connection with the onter end of the valve plate, said latter arm normally holding the valve plate in its closed position, the opening in the plate being disposed in registration with the bore of the discharge spout when the extremities of the arms are forced together.

3. The combination with a container having a discharge spout and a closed casing fixed to the wall of the container and surrounding the discharge spout, of a valve plate slidably mounted within said casing and traversing the discharge spout, said plate being provided with an opening to register with the bore of the discharge spout, and operating means for said plate fixed to the exterior of said casing and including a movable part slidably connected to one end of the valve plate.

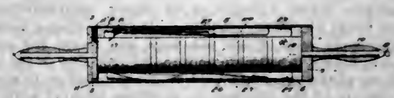
1,192,229. FLY-TRAP FOR SCREEN-DOORS. IRA E. SAGER, Victor, Colo. Filed Oct. 23, 1915. Serial No. 57,506. (Cl. 43—22.)



1. The combination with a screen door, of a cross strip on the door arranged in spaced relation with the top rail thereof, a rod removably connected with the top rail of the door, a frame supported in an inclined position by said rod and having an inclined bottom wall provided with spaced openings arranged adjacent said cross strip, and an imperforate plate closing one side of the frame and extending below the inclined bottom face of the frame and cross strip, and coacting with said strip in directing the insects through the opening in the inclined bottom face of the frame.

2. The combination with a screen door, of a rod mounted on the top rail of the door, a frame disposed below said rail and having a side connected with the rod to normally support the said frame in an inclined position with relation to the door, said frame having an inclined bottom face provided with spaced openings, an imperforate plate closing one side of the frame and extending below the inclined bottom face, and a cross strip on said door having a beveled face for closing said openings when the frame is moved to a position to lie in a plane parallel with the door.

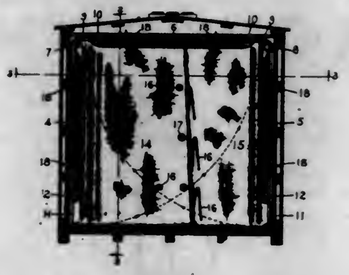
1,192,230. ROLLING-PIN. LOUIS H. SCHAPPELL, Schuylkill Haven, Pa. Filed Aug. 5, 1915. Serial No. 43,857. (Cl. 107—50.)



A device of the class described comprising a pair of telescoping sections of co-extensive lengths including a cylindrical body portion and a core portion, each of said portions being formed with a closed end and an open end, a handle attached to the closed ends of said telescopic sections, the closed end of the core having formed on its peripheral edge a series of spaced grooves, the open end of the body portion being provided with a series of inwardly extending spaced keepers, the inwardly extending spaced keepers of the body portion adapted to interlock in the concentric grooves upon the engagement of the open end of the core with the closed end of the body

portion, thereby holding the closed end of the core within the open end of the body portion and serving to close the latter, thus preventing any accidental longitudinal movement of the core with respect to said body.

1,192,231. PORTABLE PARTITION FOR FREIGHT-CARS. ALLEN C. SCOTT, Omaha, Nebr. Filed Mar. 1, 1916. Serial No. 81,491. (Cl. 105—15.)



1. A partition for freight cars, comprising a frame having a top-member, and side-members foldably and adjustably connected with the ends of the top-member, a flexible curtain having its upper and lateral edges secured respectively to the top and side members of the frame, and means for detachably securing the frame in vertical transverse position within a car.

2. The combination with a refrigerator car, of a temporary partition disposed vertically and transversely in said car, said partition comprising an upper horizontal frame-member detachably secured to the ceiling of the car, vertical frame-members connected terminally with the upper frame-member and detachably secured to the sides of the car, means for adjusting the position of the vertical members transversely, and a two-part centrally-divided flexible curtain having its upper and lateral edges secured to said frame-members.

3. A temporary partition for freight cars, comprising a foldable frame having a transverse upper member, and extensible vertical side-members connected with the ends of the upper member and foldable to positions parallel therewith, and a fabric sheet secured to said frame so that its upper and lateral edges may be held thereby in engagement with the ceiling and sides of a car.

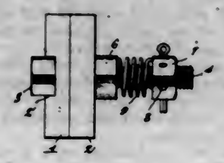
4. A temporary partition for freight cars, comprising a two-part fabric curtain and an adjustable frame for sustaining said curtain in vertical position with its edges engaging the ceiling and sides of a car, said frame consisting of a horizontal upper member, and extensible vertical side-members having their upper ends connected with the ends of the upper member in variable longitudinal relation thereto.

5. In a device of the class described, a foldable and adjustable frame comprising an upper horizontally-disposed metal angle-bar, angle-iron side-bars, hinges secured to the upper ends of said side-bars, and means for securing said hinges in variable longitudinal relation to the end-portions of the upper bar, said hinges being offset to enable the folding of the side-bars to positions parallel with the upper bar and with the flanges thereof overlapping the same.

[Claims 6 and 7 not printed in the Gazette.]

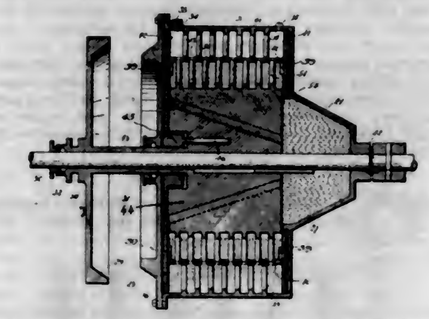
1,192,232. NUT-LOCK. JOHN L. SEABERG, Coal Center, Pa. Filed Feb. 23, 1916. Serial No. 80,047. (Cl. 151—15.)

The combination with a plate and a bolt having a slotted shank passing through the plate, of a nut screwed upon the bolt and contacting with the plate, a second nut also screwed upon the bolt but spaced from the first mentioned nut, a coil spring surrounding the bolt and having its ends connected with the nuts, and means comprising a member



passing through the outer nut and through the slot of the bolt for locking the said nut to the bolt.

1,192,233. POWER-TRANSMISSION MECHANISM. MELVIN L. SEVERY, Arlington Heights, Mass., assignor to Severy Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 18, 1912. Serial No. 737,392. (Cl. 138—22.)



1. A power transmitter comprising a fluid-tight chamber; a body of fluid within said chamber; a driving means acting upon said fluid body to rotate it; a driven means absorbing energy from the rotating fluid; and means for bodily shifting the driving fluid laterally to the plane of rotation, while the device is in operation.

2. A power transmitter comprising a closed drum or shell; a body of fluid within said shell; a driving means acting upon said fluid to rotate the same; a driven means having fingers extending into the moving fluid and thereby absorbing energy from the rotation of said fluid; and means for bodily reciprocating said driving fluid in the direction of the axis of rotation, during operation of the device.

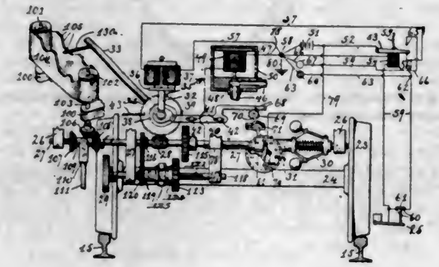
3. A power transmitter comprising, in combination, a sealed containing shell or drum; a fluid contained within said drum; a driving member acting upon said fluid to rotate the same; a driven member absorbing energy from the rotation of said fluid; and means for producing relative lateral movement between said fluid and said members, during rotation of the parts.

4. A power transmitter comprising a closed containing drum or shell; a fluid contained therein; a driving member acting upon the fluid to rotate the same; a driven member absorbing energy from the rotation of said fluid; and means for producing relative reciprocatory lateral movement between said fluid and said rotating members during the rotation of said members.

5. A power transmitter comprising a closed shell or drum; a fluid medium contained therein; a driving member provided with radial pins or projections extending into and serving to give rotary motion to the fluid medium; a driven member provided with radial projections arranged to pass between those of the driving member, the radial pins or projections of the driving and driven members coacting to create in the fluid medium zones having different rates of forward or rotary motion; and means for laterally shifting the fluid medium and thereby causing the fluid of the fast-moving zones to displace the slower-moving zones, and vice versa.

[Claims 6 to 13 not printed in the Gazette.]

1,192,234. SYSTEM FOR CONTROLLING MOVING VEHICLES. PAUL J. SIMMEN, Indianapolis, Ind. Filed Sept. 24, 1913. Serial No. 791,452. (Cl. 246—58.)



1. The combination with a vehicle, of an actual speed indicator, a permissive speed indicator, means outside the vehicle for bringing the permissive speed indicator into operation, and a hazard member carried by the vehicle and adapted to symbolize the relatively different permissive speeds for the vehicle corresponding to the hazards along the way traveled by the vehicle.

2. The combination with a vehicle, of an actual speed indicator, a permissive speed indicator normally inactive, means outside of the vehicle for rendering the permissive speed indicator operative, and a device normally active and adapted to symbolize relatively different speeds allowable to the vehicle corresponding to the hazards encountered by it along its way.

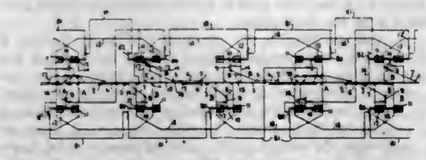
3. The combination with a vehicle, of an actual speed indicator, a permissive speed indicator normally inactive, means for rendering the permissive speed indicator active, and means for altering the maximum speed indicated by it corresponding to the nature and extent of the hazards encountered by the vehicle along its way.

4. The combination with a vehicle, of means adapted to indicate its permissive speed corresponding to a temporary hazard along the way, and a second means adapted to symbolize relatively different permissive speeds corresponding to permanent hazards along the way.

5. The combination with a vehicle, of means adapted to indicate its permissive speed corresponding to a temporary hazard along the way, and a second means adapted to symbolize relatively different permissive speeds corresponding to permanent hazards along the way, and means for limiting the speed of the vehicle to the maximum speed indicated by both of said means.

[Claims 6 to 38 not printed in the Gazette.]

1,192,235. AUTOMATIC RAILROAD BLOCK SYSTEM. PAUL J. SIMMEN, Buffalo, N. Y. Original application filed June 3, 1907, Serial No. 377,062. Divided and this application filed Oct. 14, 1914. Serial No. 866,639. (Cl. 246—27.)



1. In apparatus of the character described, the combination of a single track having sidings therein, a series of signal controlling devices for trains moving in one direction, a separate series for trains moving in the opposite direction, means actuated by the presence of a train successively setting at positions corresponding to danger the devices behind the train of the series corresponding to the direction in which the train is moving, and means actuated by the arrival of a train at one siding for setting at positions corresponding to danger the devices at the siding ahead, said means including a circuit on the train that is closed between the signal controlling devices, but is opened and electrically connected to said devices when the train arrives thereat.

2. An automatic railway block signal system, comprising a trackway divided into main blocks, each comprising sub-blocks on each side of the track, each main block and sub-block being equipped with a signal rail arranged in an indicating circuit, and a signal rail arranged in a setting circuit, in combination with a normally closed cab circuit including a source of electrical energy and an alarm element on a train, and means connecting the sub-blocks and actuated by a train for automatically setting the indicating circuits in the sub-block immediately in the rear of the train to danger and the sub-block immediately in the rear of it to safety on the same side of the track as the train and setting an indicating circuit on the opposite side of the track to danger, when such train reaches a sub-block.

3. An automatic railway block signal system, comprising a trackway divided into main blocks, each comprising sub-blocks on each side of the track, each main block and sub-block being equipped with a pair of solenoids, a circuit changer adapted to be moved thereby, a pair of indicating signal rails adapted to be in a closed circuit with a cab circuit when the circuit changer is in one position and in an open circuit when it is in another position, and a setting signal rail adapted when brought into contact with the cab circuit to energize the solenoid at a sub-station other than the one at which the signal rail is located, in combination with a normally closed cab circuit including a source of electrical energy and an alarm element on a train, whereby as such a train reaches a sub-block its passage automatically sets the indicating circuit in the sub-block in the rear of it to safety on the same side of the track as the train and sets an indicating circuit on the opposite side of the track.

4. An automatic railway block signal system, comprising a trackway divided into main blocks, each comprising sub-blocks on each side of the track, each main block and sub-block being equipped with a signal rail arranged in an indicating circuit, and a signal rail arranged in a setting circuit, in combination with a normally closed cab circuit, including a source of electrical energy and an alarm element on a train, means on the train for automatically opening the cab circuit when a sub-block is reached, and electrical means automatically and simultaneously connected to the source of energy of the cab circuit to set the indicating circuit on the same side of the track in the first sub-block in rear of the train to danger, the second sub-block in rear of the train on the same side of the track to safety and an indicating circuit on the opposite side of the track to danger.

5. An automatic railway block signal system, comprising a trackway divided into main blocks, each comprising sub-blocks on each side of the track, each main block and sub-block being equipped with a pair of solenoids, a circuit changer adapted to be moved thereby, a pair of indicating signal rails adapted to be in a closed circuit with a cab circuit when the circuit changer is in one position and in an open circuit when it is in another position, and a setting signal rail adapted when brought into contact with the cab circuit to energize the solenoid at a sub-station other than the one at which the signal rail is located, in combination with a normally closed cab circuit including a source of electrical energy and an alarm element on a train, and means carried by the train and electrically connected to the cab circuit for automatically opening the same when a sub-block is reached and simultaneously delivering current from said source of electrical energy through the signal rails and through certain of the solenoids to set the circuit in a sub-block in rear of the train

on the same side of the track to safety conditions and set all the indicating circuits on the opposite side of the track within the main block to danger conditions.

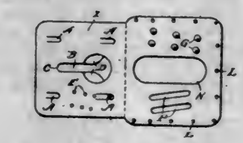
[Claims 6 to 11 not printed in the Gazette.]

1,192,236. NECKTIE-FASTENER. THOMAS C. SPELLING, New York, N. Y. Filed Apr. 24, 1916. Serial No. 93,108. (Cl. 24—56.)



A tie fastener of the class described comprising a relatively thin plate having an offset slot formed therein to receive the shank of a collar button, resilient tongues formed in said plate and bent from the plane thereof to frictionally engage a collar, a supplemental and thicker plate carried by said first mentioned plate having a corresponding offset slot formed therein of a wider measurement to receive the head of a collar button therein, and a plurality of holes formed in said plates to receive fastening means carried by a necktie.

1,192,237. COMBINATION BAND-HOLDER, BUTTON-HOLDER, AND NECKTIE-HOLDER. THOMAS C. SPELLING, New York, N. Y. Filed May 9, 1916. Serial No. 96,269. (Cl. 24—56.)



1. A necktie holder comprising a plate bent to form overlying jaws, one of said jaws having a slot formed therein to engage a collar button, resilient tongues formed on said plate to engage a collar frictionally, threadholes formed in said plate to permanently receive fastening means carried by one end of a neck-band, the other of said jaws having an enlarged opening formed therein overlying the slot in said first mentioned jaw to engage the free end of a neck-band inserted between said jaws.

2. A necktie holder comprising a plate forming coacting jaws, one of said jaws having means formed therein to receive a collar button, said jaw having holes formed therein for the reception of threads on one end of a neck-band, the other of said jaws having threadholes formed on said second mentioned jaw to coact with said first mentioned jaw to temporarily hold a normally free end of a neckband therebetween.

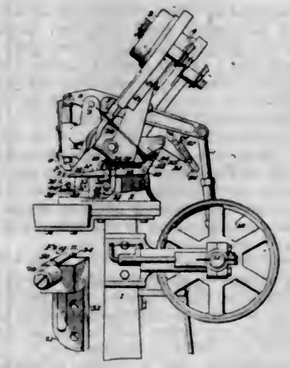
1,192,238. INNER TUBE FOR PNEUMATIC TIRES. ROPER C. SPRATLING, Opelika, Ala., assignor to Opelika Pneumatic Tube Company, a Corporation. Filed May 26, 1916, Serial No. 100,061. Substituted for application Serial No. 84,374, filed Mar. 15, 1916. (Cl. 152—13.)

An inner tube for pneumatic tires formed of soft rubber and having a relatively thick tread portion provided with inwardly extending hollow, approximately semi-spherical nodes, those portions of the tread of the tube between the nodes constituting approximately semi-spherical connections between the nodes and coöperating to produce sinuous intersecting ribs upon the tread portion of the tube, the walls of the nodes and connecting portions being extended



along continuous curved lines to form, in cross section, ogee curves having their reverse arcs equal.

1,192,239. FEED MECHANISM FOR RIVETING-MACHINES. FREDERICK E. STANLEY, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 17, 1916. Serial No. 91,771. (Cl. 218—7.)



1. A feed mechanism for riveting machines, having a tack supplying mechanism, a feed trough into which the tack supplying mechanism opens and delivers tacks one by one, a reciprocating push-finger pivotally mounted above said trough, and a spring-pressed hold-down acting upon the push finger transversely to its direction of motion and adapted to exert the least tension on the push-finger at the beginning of the forward stroke of such push-finger.

2. A feed mechanism for riveting machines, having a tack supplying mechanism, a feed trough into which the tack supplying mechanism opens and delivers tacks one by one, a reciprocating push-finger pivotally mounted above said feed trough and having an inclined leading end, and a spring-pressed hold-down acting upon the push-finger transversely to its direction of motion and adapted to exert the least tension on the push-finger at the beginning of the forward stroke of such push-finger when in contact with the inclined leading end and increasing its tension as the high points of the push-finger come into contact with the hold-down.

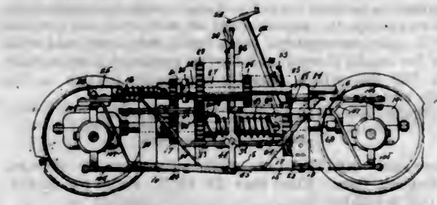
3. A feed mechanism for riveting machines, having a tack supplying mechanism, a feed trough into which the tack supplying mechanism opens and delivers tacks one by one, a reciprocating push-finger pivotally mounted above said feed trough and having an inclined leading end beveled on its underside to ride over a tack point on the backward movement, and a spring-pressed hold-down acting upon the push-finger transversely to its direction of motion and adapted to exert the least tension on the push-finger at the beginning of the forward stroke of such push-finger when in contact with the inclined leading end and increasing its tension as the high points of the push-finger come into contact with the hold-down.

4. A tack feeding mechanism for riveting machines, comprising a tack supply, a setting anvil, a feed trough connecting the delivery end of the tack supply and the setting anvil, a reciprocating push-finger pivotally mounted above the feed trough, and a variable tension hold-down comprising a slide, a stationary mount in which it is arranged, a roller on said slide overlying the push-finger, and a spring to draw said roller into contact with the push-finger.

5. A tack feeding mechanism for riveting machines, comprising a tack supply, a setting anvil, a feed trough connecting the delivery end of the tack supply and the setting anvil, a reciprocating push-finger pivotally mounted above the feed trough and having an inclined leading end extending rearwardly toward its middle, and a spring-pressed hold-down arranged transversely of the push-finger and operating upon its upper surface so as to exert a minimum of pressure on the leading end as it reaches the limit of its rearward movement and a maximum of pressure as the inclined portion of the push-finger advances forward of the hold-down.

[Claim 6 not printed in the Gazette.]

1,192,240. AUTOMOBILE. VIRGIL A. STAGER, Clearwater, Fla. Filed Dec. 18, 1914. Serial No. 877,928. (Cl. 21—90.)



1. In a self-propelled vehicle, a chassis, wheels pivotally connected to said chassis, means for constantly driving one front wheel and one rear wheel, means for driving all of said wheels on the straightaway, and means permitting the intermittently driven wheels to act as idlers or to rotate faster than said constantly driven wheels.

2. In a self-propelled vehicle, a chassis, wheels pivotally connected to said chassis, a half axle for each wheel alined in pairs, a differential casing for each pair of alined half axles, a driven shaft entering each differential casing, means forming a positive driving connection between said driven shaft and two of said half axles, and clutch means contained in said differential casing permitting the remaining wheels to act as idlers or to rotate at a more rapid rate than said constantly driven wheels.

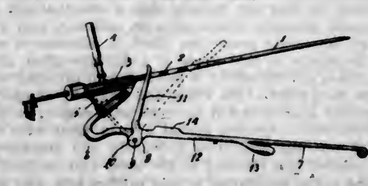
3. In a self-propelled vehicle, a chassis, wheels pivotally connected to said chassis, a half axle for each wheel, pairs of said axles being axially alined transversely of the machine, a differential casing at the juncture of the alined axles of each pair, a driven shaft longitudinally extending into each casing, positive driving connections between said shaft and one axle of each pair, said positively driven axles being oppositely disposed as regards said chassis, and clutch means operable within said differential casing to permit the non-positively driven wheels to act as idlers or to rotate at a more rapid rate than said positively driven wheels.

4. In a self-propelled vehicle, a chassis, wheels pivotally connected to said chassis, a half axle for each wheel, alined in pairs, a differential casing for each pair of alined half axles, a driven shaft entering each differential casing, means forming a positive driving connection between said driven shaft and two of said half axles, clutch means contained in said differential casing permitting the remaining wheels to act as idlers or to rotate at a more rapid rate than said constantly driven wheels, and means for steering all four of said wheels.

5. In a self-propelled vehicle, a chassis, wheels pivotally connected to said chassis, a half axle for each wheel, pairs of said axles being oppositely alined transversely of the machine, a differential casing at the juncture of the alined axles of each pair, a driven shaft longitudinally extending into each casing, positive driving connections between said shaft and one axle of each pair, said positively driven axles being oppositely disposed as regards said chassis, clutch means operable within said differential casing to permit the non-positively driven wheels to act as idlers or to rotate at a more rapid rate than said positively driven wheels, and means for steering all four of said wheels.

[Claims 6 to 14 not printed in the Gazette.]

1,192,241. ATTACHMENT FOR MAIL-BAG CATCHERS. CHARLES SUTTER, Pittsburgh, Pa. Filed Feb. 2, 1916. Serial No. 75,714. (Cl. 258—22.)



1. An attachment for mail bag catchers comprising the combination with a catcher including a horizontally disposed supporting rod and a permanently inclined catcher arm having its rear end formed with a substantially U-shaped crook pivotally connected with said rod, said arm having an outwardly projecting offset in advance of and in close proximity to said crook, of a shiftable plate pivotally mounted on said offset, a shifting arm integral with said plate forwardly of the crook and normally extending in a direction toward and at an angle with respect to said rod, said shifting arm having its free end seating on said rod whereby the space between the latter and catcher arm is bridged, a forwardly extending pusher arm integral with the plate and normally superposed on said catcher arm forwardly of the crook and inclined to correspond to the inclination of said catcher arm, and said rod having spaced diagonally disposed notches any one of which is capable of receiving said pusher arm to lock it after being shifted in a rearward direction from normal position by the impact of a mail bag against said shifting arm.

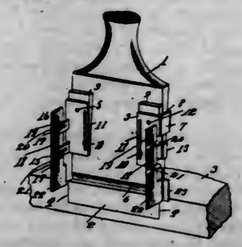
2. An attachment for mail bag catchers comprising the combination with a catcher including a horizontally disposed supporting rod and a permanently inclined catcher arm having its rear end formed with a substantially U-shaped crook pivotally connected with said rod, said arm having an outwardly projecting offset in advance of and in close proximity to said crook, of a shiftable plate pivotally mounted on said offset, a shifting arm integral with said plate forwardly of the crook and normally extending in a direction toward and at an angle with respect to said rod, a forwardly extending pusher arm integral with the plate and normally extending forwardly and superposed on said catcher arm forward of the crook and inclined to correspond to the inclination of said catcher arm, and said rod having spaced diagonally disposed notches any one of which is capable of receiving said pusher arm to lock it after being shifted in a rearward direction by the impact of a mail bag against said shifting arm, said pusher arm having its forward arm provided with a handle offset with respect to the catcher arm.

3. An attachment for mail bag catchers comprising the combination with a catcher including a horizontally disposed supporting rod and a permanently inclined catcher arm having its rear end formed with a substantially U-shaped crook pivotally connected with said rod, said arm having an outwardly projecting offset in advance of and in close proximity to said crook, of a shiftable plate

pivotally mounted on said offset, a shifting arm integral with said plate forwardly of the crook and normally extending in a direction toward and at an angle with respect to said rod, said shifting arm having its free end seating on said rod whereby the space between the latter and catcher arm is bridged, a forwardly extending pusher arm integral with the plate and normally superposed on said catcher arm forwardly of the crook and inclined to correspond to the inclination of said catcher arm, and said rod having spaced diagonally disposed notches any one of which is capable of receiving said pusher arm to lock it after being shifted in a rearward direction from normal position by the impact of a mail bag against said shifting arm, said pusher arm having the inner side near the rear end thereof provided with an elongated lateral offset normally extending toward said rod.

4. An attachment for mail bag catchers comprising the combination with a catcher including a horizontally disposed supporting rod and a permanently inclined catcher arm having its rear end formed with a substantially U-shaped crook pivotally connected with said rod, said arm having an outwardly projecting offset in advance of and in close proximity to said crook, of a shiftable plate pivotally mounted on said offset, a shifting arm integral with said plate forwardly of the crook and normally extending in a direction toward and at an angle with respect to said rod, a forwardly extending pusher arm integral with the plate and normally extending forwardly and superposed on said catcher arm forward of the crook and inclined to correspond to the inclination of said catcher arm, and said rod having spaced diagonally disposed notches any one of which is capable of receiving said pusher arm to lock it after being shifted in a rearward direction by the impact of a mail bag against said shifting arm, said pusher arm having its forward arm provided with a handle offset with respect to the catcher arm, and said pusher arm further provided on its inner side near its rear end with an elongated lateral offset normally extending toward said rod.

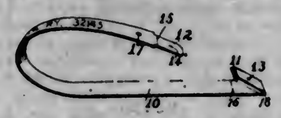
1,192,242. GAGE FOR CHISELS. EDWARD E. TAFT, Fort Dodge, Iowa. Filed Oct. 13, 1914. Serial No. 866,466. (Cl. 145—26.)



The combination with a chisel having a blade provided with a cutting edge, of a gage device therefor comprising a pair of hooked members adapted to be positioned upon the blade, means for detachably wedging the hooked members to the opposite side edges of the blade, a pair of relatively spaced arms projecting outwardly and forwardly from the front face of each of said hooked members and formed integral with the outermost longitudinal edges thereof, the said arms being provided with longitudinally arranged slots, a gage member having a guide portion adapted to be disposed parallel to the blade, and clamping bolts mounted within the said slots of the arms and being engaged with the gage member, said gage member being provided with a longitudinal slot for the slidable reception of the said bolt members.

1,192,243. SEAL. GEORGE H. TAYLOR, Richmond, Va. Filed Oct. 8, 1915. Serial No. 54,746. (Cl. 70—98.)

1. A seal comprising a strip of bendable material having the opposite ends thereof placed in contact and both ends then bent backward upon the body of the strip to form a seal, each end being provided with a weakened portion adjacent the outer edge of the bent portions to effect separation thereof from the body of the strip.



2. A seal comprising a strip of bendable material having the opposite ends thereof placed in contact and both ends then bent backward upon the body of the strip to form a seal, each end being provided with a weakened portion disposed parallel to and adjacent the outer edge of the bent portions.

3. A seal formed of a strip of bendable material having a socket portion at one end to receive the opposite inserted end thereof, said portion and inserted end being folded backward upon the body of the material for the length thereof and provided with a weakened line adjacent the outer edge of the folded portion to effect the separation thereof from said body.

4. A seal comprising a strip having at one end flanges adapted to be bent inward to form a socket portion thereon to receive the opposite end of said strip, said socket portion and inserted end being bodily bent upon said strip for the length thereof.

5. A seal comprising a strip having at one end flanges adapted to be bent inward to form a socket portion thereon to receive the opposite end of said strip, said socket portion and inserted end being bodily bent upon said strip for the length thereof, and having weakened lines parallel the fold line which connects the socket portion to the strip and the inserted end thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,192,244. ARTIFICIAL ARM. RALEIGH W. TUCKER, Bandon, Oreg. Filed Sept. 24, 1915. Serial No. 52,419. (Cl. 3—12.)



1. An artificial arm comprising a socket adapted to receive the handless forearm, means for securing said socket to the forearm, a wrist section on the outer end of said socket, a hook carried by the outer end of said wrist section and formed of two sections, one of which is capable of movement relatively to the other to open and closed positions, means operable by movement of the forearm for swinging said movable hook sections including a fulcrumed element, movable means upon which said element is fulcrumed, and means for moving said last-named means to change the fulcrum point of said element whereby the opening movement of said hook sections may be varied.

2. An artificial arm comprising a socket adapted to receive the handless forearm, an annulus on the outer end of said socket having the outer end thereof formed with outside notches, a wrist section mounted upon said annulus and capable of rotary movement thereon, and a lever pivoted within said wrist section and adapted to engage in any one of the notches in said annulus to hold the wrist section against turning movement, and a hook carried by said wrist section.

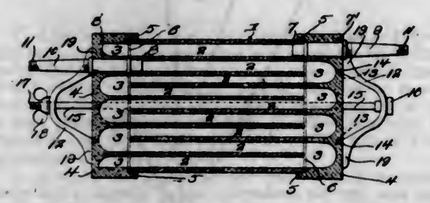
3. An artificial arm comprising a socket adapted to receive the handless forearm, an annulus on the outer end of said socket having the outer end thereof formed with notches, a wrist section mounted upon said annulus and capable of rotary movement thereon, a lever pivoted within said wrist section and adapted to engage in any one of the notches in said annulus to hold the wrist section against turning movement, a hook carried by said wrist section, a spring within said wrist section holding said lever normally in locking position, and means on said lever projecting through said wrist section whereby the lever may be swung against the action of the spring to release the wrist section.

4. An artificial arm comprising a socket adapted to receive the handless forearm, a wrist section on the outer end of said socket, a hook carried by the outer end of said wrist section and formed of two sections, one of which is capable of movement relatively to the other to open and closed positions, a bar slidably mounted upon said socket, a lever pivoted between its ends upon said bar, means connected to one end of said lever and operable in the movement of the forearm to swing the lever, and a connection between the remaining end of said lever and said movable hook section whereby the latter may be swung in the movement of the forearm.

5. An artificial arm comprising a socket adapted to receive the handless forearm, a wrist section on the outer end of said socket, a hook carried by the outer end of said wrist section and formed of two sections, one of which is capable of movement relatively to the other to open and closed positions, a bar slidably mounted upon said socket, a lever pivoted between its ends upon said bar, means connected to one end of said lever and operable in the movement of the forearm to swing the lever, a connection between the remaining end of said lever and said movable hook section whereby the latter may be swung in the movement of the forearm, said bar being capable of sliding movement to change the pivot point of said lever whereby the movement of said movable hook section may be varied, and means for locking said bar in adjusted position.

[Claim 6 not printed in the Gazette.]

1,192,245. COOLING APPARATUS. HARRY ROSS TURNER, Philadelphia, Pa. Filed May 15, 1914. Serial No. 838,630. (Cl. 257—250.)



1. A cooling apparatus of the character described, made of glazed porcelain, consisting of a ring provided with circulating passages, caps connected to said ring and having sockets forming a continuation of said circulating coils, and means for securing said caps in position upon said ring, said means consisting of a pair of clamps engaging said caps and a rod passing through the clamps and having an adjusting nut for binding the clamps upon the caps, said clamps being of yoke shape and having at their ends, a flat portion to rest against the caps and a contiguous lug to engage openings in said caps.

2. A cooling apparatus consisting of a ring provided with a series of longitudinal circulating passages, caps fitting upon the ends of said ring and having sockets forming a continuation of said passages, an inlet pipe mounted in one of the caps and an outlet pipe mounted in the other cap and communicating with the said circulating passages, a pair of yoke-shaped clamping members having lugs engaging said caps to retain said clamping members, and a rod passing through said members and having means for clamping said members in position upon said caps.

1,192,246. CLOTHES-DRAINER. GEORGE H. ULRICH, Farlin, Iowa. Filed July 12, 1915. Serial No. 39,483. (Cl. 68—30.)

1. A drain pan, having a bottom, end members and a back member, a downwardly inclined flange on the forward end of the bottom member, a pair of bracket members secured to the bottom of said pan and adapted to coact with said flange for securing the drain pan upon the wall of a receptacle for draining into the receptacle, each of said brackets being comprised of alined members pivotally mounted on the bottom of said drain pan, a portion connecting said alined portion including a vertical portion adapted to engage the outside of a receptacle wall, and a vertical portion spaced from said first vertical portion, a connecting brace, a bar for said brackets having at its ends loop members, each having a free end, said loop members being adapted to receive the first described vertical portion of said brackets, and means for securing the free ends of said loop portion to the body of said brace member.



2. A drain pan, open at one side, means at the bottom of said drain pan at the open side thereof for engaging a support, brackets pivoted to the bottom of said pan and adapted to drop by gravity to position for engaging such support and for coacting with said means for supporting said drain pan with its bottom inclined upwardly from its open side, and a detachable brace adapted to be mounted on the pivoted brackets for holding them properly spaced.

1,192,247. CORE FOR FORMING CONCRETE PILES. MAXWELL MAYBELL UPSON, Englewood, N. J., and HARRY R. DAY, Brooklyn, N. Y., assignors to Raymond Concrete Pile Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 1, 1913. Serial No. 792,742. (Cl. 189—23.1.)



1. A core for the purpose set forth, comprising in combination, a sectional outer member, a wedging member longitudinally movable therein for effecting the expansion and collapse of the same, and a locking means movable rotatively about the axis of the core into and out of locking position to respectively prevent and permit longitudinal movement of the said wedging member.

2. A core for the purpose set forth, comprising in combination, a sectional outer member, a wedging member longitudinally movable therein, a rotary locking device between the two members, and an actuating spring for automatically operating said device when the two members are brought to the relative positions necessary to secure expansion of the outer member.

3. A core for the purpose set forth, comprising in combination, an inner wedging member and an outer sectional

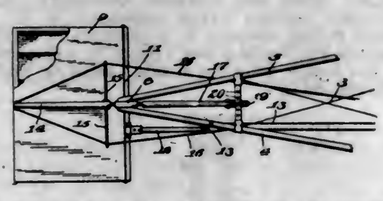
member, adapted to be expanded by a given movement of the wedging member into the same, and a locking device consisting of a series of lugs movable around the wedging member and coöperating with a corresponding series of lugs on the sectional member.

4. A core for the purpose set forth, comprising in combination, an expansible and collapsible member composed of radially movable sections, a wedging member movable longitudinally in the other in one direction to expand the same, radial links pivoted at their inner ends to the wedging member and at their ends to the sections of the other member to limit the expanding movement of the sections, and to positively cause collapsing movement of the sections when the wedging member is moved in the direction opposite to the first-mentioned direction, outwardly projecting devices rigidly mounted on the wedging member, and inwardly projecting members rigidly mounted on the radially movable sections adjacent to and overhanging the said outwardly projecting devices on the wedging member to receive the impact of said devices when the wedging member is raised to lift the core as a whole.

5. A core for the purpose set forth, comprising in combination, a wedging member, a collapsible sectional member, and a head connected with lost motion to the lower end of the wedging member and presenting a flat upper surface to the end of the sectional member.

[Claims 6 and 7 not printed in the Gazette.]

1,192,248. TAIL CONSTRUCTION FOR FLYING-MACHINES. GEORGE M. WANEE, Oakland, Cal. Filed Jan. 17, 1916. Serial No. 72,597. (Cl. 244—29.)



In a tail plane structure for aeroplanes, the combination of a tail frame having its side members formed of rearwardly converging spars extending to a V-point, a horizontal transverse bar secured to the converging spars of said side members and rigidly uniting the latter, uprights connecting the spars of the side members at points in advance of said bar and forming therewith intervening triangular spaces at the rear ends of the side members, horizontal rudder planes hinged to the rear edges of the transverse bar on opposite sides of the transverse center thereof, a vertical rudder hinged to the bar and disposed between the proximate ends of the horizontal rudders, a supporting plane extending transversely of the tail frame in advance of the transverse bar, said plane being hinged at its rear end to said bar for vertical movement and having its end portions extending through and movable in the said triangular spaces of the side members, and means upon said supporting plane for adjustable engagement with the uprights of the side members, whereby said plane may be tilted upwardly at its forward edge to different angles of incidence.

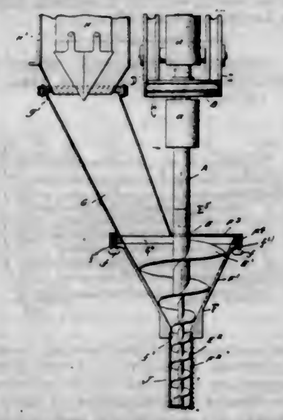
1,192,249. COLLAPSIBLE UMBRELLA-FRAME. THEODORE G. WARD, Pattonsburg, Mo. Filed June 1, 1915. Serial No. 31,529. (Cl. 135—46.)

A folding umbrella frame comprising an upper handle section in the form of a one-piece tube having near its lower end an aperture opening into its interior, a lower handle section in the form of a one-piece rod inserted slidably in the lower end of the tube and having a hand hold below the same, the upper end of said rod having a circumferentially extending groove, a one-piece tubular runner slidable on the upper handle section, ribs pivoted at their inner ends to the upper end of said upper section and having braces pivoted to the upper end of the runner, the latter being movable downwardly to raise said ribs, and a spring actuated runner and handle catch carried by the runner and adapted to spring through the aperture in the upper tubular handle section into contact with the lower handle section therein when the runner is lowered,



thus locking said runner against upward movement, said catch being then adapted to spring farther through the aforesaid aperture into the circumferentially extending groove in the lower handle section when the latter is sufficiently withdrawn from the upper section, thereby locking the handle in extended position.

1,192,250. PACKING-MACHINE. HARRY SPENCER WHYANT, Yonkers, N. Y. Filed Aug. 23, 1912. Serial No. 716,599. (Cl. 100—56.)



1. In a package filling and packing machine, the combination with a vertical shaft supported to rotate and means for rotating the same, of a vertically disposed screw connected to said shaft, said screw having a spiral with an uninterrupted flat conveying surface and comprising an upper portion gradually diminishing in diameter from its upper to its lower end and a lower portion of constant diameter; an inclosing casing for said screw comprising an upper tapering portion closely fitting over the tapering portion of the screw and a lower portion closely fitting over the entire length of the lower portion of the screw and adapted to fit closely within the package to be filled and packed, whereby a predetermined load of material delivered at the upper end of said casing may be packed within a package of given size.

2. In a package filling and packing machine, the combination with a vertical shaft supported only at its upper end and means at such upper end for rotating the same, of a screw connected to said shaft, said screw having a spiral with an uninterrupted flat conveying surface and comprising an upper tapering portion gradually diminishing in diameter from its upper to its lower end and a lower portion of constant diameter; an inclosing casing for said screw supported independently thereof and comprising an upper portion closely fitting over the tapering portion of the screw and a lower portion closely fitting over the entire length of the lower portion of the screw, and adapted to enter and closely fit within the package to be filled, a cover for said casing and a feeding chute communicating with said casing at one side of its longitudinal axis and extending upwardly at an angle to such axis, whereby a predetermined load of material delivered to said device may be evenly packed within a package of given size.

3. In a package filling and packing machine, the combination with a vertical shaft supported at its upper end and means for rotating the same, of a screw detachably connected to said shaft, said screw having a spiral with an uninterrupted flat conveying surface and comprising an upper portion gradually diminishing in diameter from its upper to its lower end and a lower portion of constant diameter; an inclosing casing for said screw supported independently thereof and comprising separable upper and lower sections fitted together to provide a flush inner surface, the upper section fitting closely over the tapering portion of the screw and the lower section fitting closely over the entire length of the lower portion of the screw and adapted to enter and closely fit within the package to be filled and packed.

1,192,251. HOLDER AND DASH-FASTENER. JOSEPH P. WILSON, Ogdensburg, N. Y. Filed Dec. 29, 1915. Serial No. 69,282. (Cl. 224—4.)



1. A device of the type described comprising a fastening body construction including a support for an instrument thereon, spaced fastening members formed integrally having engaging projections on their upper terminals disposed to engage separated recesses contained on a dash projection, means to clamp said fastening body to the said dash projection, and means to bind the said instrument on the said support.

2. A holder and dash fastener comprising a fastening body and a support for an instrument thereon, said fastening body having a member with a tooth which is adapted to engage a recess and the part adjacent contained on the rear of the described dash projection, the said recess being formed by the turned up end of the said dash projection, and means to fasten the said member to the said dash projection.

3. A device of the character described having an integral bracket tongue struck from one of the fastening members, and being positioned between a fastening projection (as indicated by 2) and a fastening means (as indicated by 8) contained on the said fastening member.

4. A holder and dash fastener comprising a fastening body construction and a support for a device thereon, toothed projections on the fastening body members which grip a dash projection more securely than the body of the fastening members, an angular projection extending from one of said members adapted to support a device at a relative angle, means for securing said device to said angular projection, and means for actuating the fastening body members to clamp to the said dash projection.

5. A holder and dash fastener of the described kind comprising fastening members which fasten to an established automobile dash projection, and a support for a device thereon, said fastening members extending upward from a fastening means contained thereon, teeth on the terminals of said fastening members that engage recesses of varying heights contained on the front and rear of a vertical dash projection, means for actuating said fastening members to engage the said recesses and to clamp to the said dash projection, and means for securing said device to said support.

[Claims 6 to 8 not printed in the Gazette.]

1,192,252. ROPE-SOCKET FOR WELL-TOOLS. JACOB H. WILT, Toledo, Ohio. Filed Nov. 27, 1915. Serial No. 63,862. (Cl. 255—29.)



1. A device of the class described, comprising a casing having a longitudinally extending bore, a sleeve removably mounted in said bore, means for retaining the sleeve within the casing disposed between said sleeve and casing, a plunger mounted to slide and turn in said bore and sleeve and having a centrally disposed channel, and a socket member removably mounted in said plunger.

2. A device of the class described comprising a casing having a longitudinally extending bore, a plunger mounted to turn and slide in said bore, a sleeve disposed in said bore for limiting the sliding movement of said plunger in one direction, fusible material interposed between said sleeve and casing, a socket member disposed in said plunger and provided with a centrally arranged channel providing a rope socket, and means for retaining the socket member within the plunger.

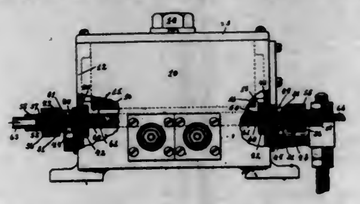
3. A device of the class described comprising a casing having a longitudinally extending bore, a plunger mounted to turn and slide in said bore, a shoulder former in said bore for limiting the sliding movement of the plunger in one direction, a sleeve disposed in the path of movement of the plunger above said shoulder and removably connected with the casing, a socket member extending longitudinally of the plunger and provided with a reduced portion, and means for retaining said socket member within the plunger interposed between the reduced portion on the socket member and the plunger.

4. A device of the class described comprising a casing having a longitudinally extending bore, said bore being enlarged and corrugated for a portion of its length, a plunger mounted to turn and slide in said bore having a reduced end extending through said enlarged portion, a sleeve encircling the reduced end of said plunger and disposed in the enlarged portion of said bore, a reduced portion on said sleeve provided with corrugations adapted to register with the corrugations in the enlarged portion of the bore and in spaced relation therewith, fusible material interposed between the reduced portion of the sleeve and the corrugated portion of the bore, a cap threadedly engaged with the tool holder and having a portion thereof overlying the fusible material and provided with openings, and a socket member carried by said plunger.

5. A device of the class described comprising a casing having a longitudinally extending bore and an opening communicating with the bore between the ends thereof, a plunger mounted to slide and turn in said bore and provided with a centrally disposed channel extending throughout its length, said channel having an enlarged portion between its ends and an opening communicating with the enlarged portion through the side wall of the plunger, and

a socket member disposed in the channel of the plunger and having a reduced portion between its ends coacting with the enlarged portion of the channel in the plunger to provide a chamber adapted to receive fusible material.

1,192,253. LUBRICATOR. ROBERT WOOD, Brooklyn, N. Y., assignor to The Nathan Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1915. Serial No. 63,703. (Cl. 184—104.)



1. The combination with a reservoir for a lubricant, of a source of steam supply, a conduit for the steam passing through the reservoir, and a conduit surrounding the steam conduit and spaced apart therefrom and without communicating therewith and which surrounding conduit communicates with the air at both ends.

2. The combination with a lubricant reservoir, of a source of steam supply, a pipe adapted to conduct the steam to and through the reservoir, and means for keeping the pipe out of contact or communication with the lubricant in the reservoir, comprising an outer inclosing pipe open at both ends to the atmosphere.

3. A device of the character described, comprising an oil reservoir and means for forcing the oil therefrom through a suitable conduit to the parts to be lubricated, means for maintaining the oil in a heated condition without burning, comprising a steam pipe located within the body of oil in the reservoir and means for cooling its outer surface.

4. A device of the character described, comprising an oil reservoir and means for forcing the oil therefrom through a suitable conduit to the parts to be lubricated, means for maintaining the oil in a heated condition without burning, comprising a steam pipe located within the body of oil in the reservoir, and means for cooling its outer surface, consisting of a device adapted to cause a current of air to pass along the outside of the pipe and to be maintained in contact therewith during such passage.

5. The combination with a reservoir adapted to hold a supply of lubricant, of means for heating the lubricant and at the same time preventing it from attaining an undesirable temperature, comprising a pipe adapted to conduct a heating fluid to and through the reservoir and an outer pipe surrounding the first pipe so arranged that a substantial space is provided between the two pipes.

[Claim 6 not printed in the Gazette.]

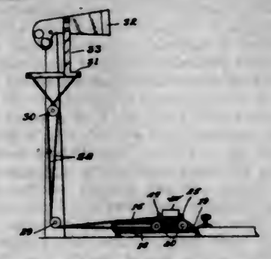
1,192,254. AUTOMATIC TRAIN-STOP. FRANK H. WORKMAN, Cleveland, Ohio. Filed June 25, 1915. Serial No. 36,353. (Cl. 246—59.)

1. In combination, a track instrument comprising a pair of spaced substantially U-shaped track sections, a track instrument adapted to roll between the limbs of each U-shaped track section, and means for rolling the said track instrument.

2. In combination, a pair of spaced track sections, portions overhanging said track sections and formed integral with the latter, a frame having wheels mounted upon the track sections, and means for moving said frame.

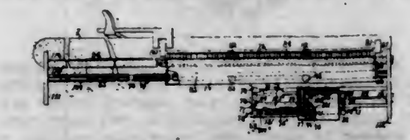
3. In combination, a pair of spaced track sections, portions overhanging said track sections and formed integral with the latter, a frame having wheels mounted upon the track sections, and means for moving said frame, said means comprising semaphore actuated cables.

4. In combination, a pair of spaced track sections each bent into the shape of a U, a frame provided with wheels arranged between and of a diameter equal to the spaces between the limbs of said U-shaped track section, and means for reciprocating said frame between said spaced track sections.



5. In combination, a pair of spaced track sections, each bent into the shape of a U, a frame provided with wheels arranged between and of a diameter equal to the spaces between the limbs of said U-shaped track section, each of said wheels being provided with flanges arranged to contact with the sides of a track section, and a roller mounted upon said frame and having its axis arranged at right angles to the axis of said wheels, and means for moving the said frame in a direction parallel to the said track section.

1,192,255. COMBINED TYPE-WRITING AND COMPUTING MACHINE. WALTER WRIGHT, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed July 27, 1911. Serial No. 640,798. (Cl. 235—139.)



1. A computing mechanism comprising computing wheels, each having a circular periphery, and tens-carrying devices, the latter each comprising a pinion mounted so that alternate teeth thereof are engageable two at a time by the periphery of the associated computing wheel, to lock said pinion against rotation, and so that one of the intervening teeth normally stands radially across said periphery, each computing wheel having a mutilated gear portion at its periphery to coöperate with all the teeth on its pinion to rotate the latter intermittenly, a gear coaxial with each pinion and engaging the next higher computing wheel, and means to cause the pinion and gear to turn as one.

2. A computing mechanism comprising computing wheels each having a smooth circular periphery, and tens-carrying wheels, the latter each comprising a pinion mounted so that the alternate teeth thereof overlap said periphery and are engageable two at a time by said periphery to lock said pinion against rotation, other teeth on said pinion by which it is positively driven in carrying-over, said computing wheel having at least one tooth to coöperate with all the teeth on said pinion to rotate the same intermittently, and means for releasably gearing said pinion to the computing wheel higher in denomination.

3. A computing mechanism comprising computing wheels, each having a circular periphery, and tens-carrying devices, the latter each comprising a pinion mounted so that alternate teeth thereof are engageable two at a time by the periphery of the associated computing wheel to lock said pinion against rotation, and so that one of the intervening teeth normally stands radially across said periphery, each computing wheel having a mutilated gear portion at its periphery to coöperate with all the teeth

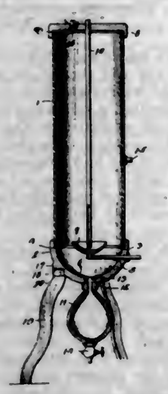
on its pinion to rotate the latter intermittently, each tens-carrying device also comprising a second pinion rotated by the first pinion, a gear meshing with each last-named pinion and connected to the next higher computing wheel, said tens-carrying pinions separately rotatable, and means to cause them to rotate togther in pairs.

4. A computing mechanism comprising computing wheels, each having a circular periphery, and tens-carrying devices, the latter each comprising a pinion mounted so that alternate teeth thereof are engageable two at a time by the periphery of the associated computing wheel to lock said pinion against rotation, and so that one of the intervening teeth normally stands radially across said periphery, each computing wheel having a mutilated gear portion at its periphery to coöperate with all the teeth on its pinion to rotate the latter intermittently, each tens-carrying device also comprising a second pinion forming a pair with said first pinion and rotated thereby, a gear meshing with each last-named pinion and connected to the next higher computing wheel, and coupling devices for the pairs of pinions, said alternate teeth passing between the gear and the computing wheel.

5. A computing mechanism comprising computing wheels, each having a circular periphery, and tens-carrying devices, the latter each comprising a pinion mounted so that alternate teeth thereof are engageable two at a time by the periphery of the associated computing wheel to lock said pinion against rotation, and so that one of the intervening teeth normally stands radially across said periphery, each computing wheel having a mutilated gear portion at its periphery to coöperate with all the teeth on its pinion to rotate the latter intermittently, each tens-carrying device also comprising a second pinion forming a pair with said first pinion and rotated thereby, a gear meshing with each last-named pinion and connected to the next higher computing wheel, and coupling devices for the pairs of pinions, said alternate teeth passing between the gear and the computing wheel, the latter in the form of an annulus secured upon a hub with which the gear is provided.

[Claims 6 to 8 not printed in the Gazette.]

1,192,256. RANGE-BOILER. FRANK P. ZEIGLER, Renovo, Pa. Filed Mar. 25, 1916. Serial No. 86,628. (Cl. 126—361.)

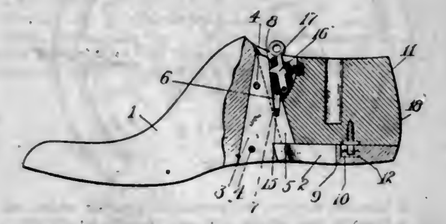


1. In combination with a boiler a sediment chamber mounted upon the lower end of the boiler, a cold water induction pipe extending into the boiler, a cold water discharge pipe extending into the boiler at a point above the sediment chamber and having one end thereof terminating adjacent the inner end of the induction pipe, and a deflecting plate mounted upon the end of the discharge pipe for the purpose described.

2. In combination with a boiler having a semi-spherical bottom member, a cold water induction pipe vertically arranged within the boiler, a sediment chamber communicating with the said bottom member, a cold water discharge pipe arranged within the bottom member and having its one end thereof arranged in vertical alinement with the said induction pipe and a deflecting plate mounted on the said end of said discharge pipe for the purpose described.

3. In combination with a boiler, having a top and a bottom member removably connected therewith, a cold water induction pipe extending through the top member and into the boiler, a cold water discharge pipe arranged within the bottom chamber and extending transversely thereof, and having its inlet end disposed in vertical alinement with an outlet end of said induction pipe, and a concave deflecting plate mounted upon the said end of the discharge pipe for the purpose described.

1,192,257. LAST. FREDERICK L. ALLEY, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 11, 1916. Serial No. 77,762. (Cl. 12—135.)



1. A last having a longitudinally continuous sole portion and a removable heel-block, adapted to engage the inside of the counter of a shoe and constructed and arranged to uncover, when removed, a surface for engagement by the heeling machine.

2. In a last, a forepart, a heel plate attached to said forepart, and a heel block adapted to engage the inside of the counter of a shoe and removable from the heel plate while the latter remains in the shoe thereby uncovering a surface for engagement by the heeling machine.

3. A last having a forepart, a removable heel block engaging the rear counter portion of the shoe, and a strut constructed and arranged to engage the heel portion of the shoe and to hold the forepart under lasting pressure in the shoe.

4. In a last, a forepart, a heel plate and a heel block constructed and arranged to interlock with each other, there being a rib and slot connection between said forepart and heel block so constructed and arranged that said heel block may slide into locked relation with said forepart and heel plate.

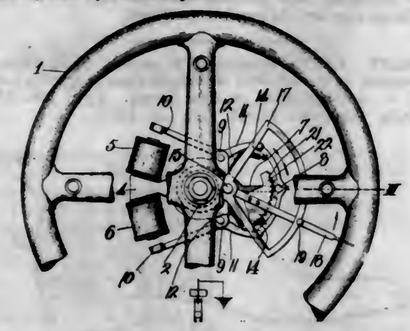
5. In a last, a forepart, a heel plate having substantially the contour of the counter portion of a last, and a heel block removable from the shoe and from said heel plate while the latter remains in the shoe in position to hold the forepart under lasting pressure therein.

[Claims 6 to 9 not printed in the Gazette.]

1,192,258. THROTTLE CONTROL. HERBERT ARCHER ALLEN, Willow Creek, Mont. Filed June 25, 1914. Serial No. 848,319. (Cl. 136—15.)

1. A throttle control, comprising a steering wheel column, a throttle rod carried adjacent thereto, a trip pin, a pair of electro-magnets, rock levers constituting armatures for said magnets respectively, means for yieldingly holding the armatures withdrawn from the magnets, pawls carried by the armatures and normally held in inoperative position by said trip pin, a pair of oppositely toothed segments movable with the throttle rod, and yielding means for causing either of said pawls to engage one of said segments and impart rotative movement thereto and to the throttle rod, when one of the electro-magnets attracts the armature equipped with such pawl.

2. A throttle control, comprising a steering wheel column, a throttle rod carried adjacent thereto, a trip pin, a pair of electro-magnets, rock levers constituting armatures for said magnets respectively, means for yieldingly holding the armatures withdrawn from the magnets, pawls carried by the armatures and normally held in inoperative position by said trip pin, a pair of oppositely toothed segments movable with the throttle rod, and yielding means for causing either of said pawls to engage one of said segments and impart rotative movement thereto and to the throttle rod, when one of the electro-magnets attracts the armature equipped with such pawl; said pawl being adapted under the return movement of the armature when the magnet is deënergized to be tripped from engagement with the segment by the said pin.



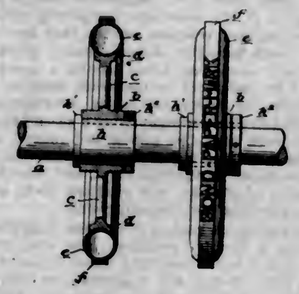
3. A throttle control, comprising a steering wheel column, a throttle rod carried adjacent thereto, a trip pin, a pair of electro-magnets, rock levers constituting armatures for said magnets respectively, means for yieldingly holding the armatures withdrawn from the magnets, pawls carried by the armatures and normally held in inoperative position by said trip pin, a pair of oppositely toothed segments movable with the throttle rod, yielding means for causing either of said pawls to engage one of said segments and impart rotative movement thereto and to the throttle rod, when one of the electro-magnets attracts the armature equipped with such pawl, and one or more electric switches electrically connected with each of said magnets for energizing either of the same.

4. A throttle control, comprising a steering wheel column, a throttle rod carried adjacent thereto, a trip pin, a pair of electro-magnets, rock levers constituting armatures for said magnets respectively, means for yieldingly holding the armatures withdrawn from the magnets, pawls carried by the armatures and normally held in inoperative position by said trip pin, a pair of oppositely toothed segments movable with the throttle rod, yielding means for causing either of said pawls to engage one of said segments and impart rotative movement thereto and to the throttle rod, when one of the electro-magnets attracts the armature equipped with such pawl, electric connections for each of said magnets, and an electric switch adapted for movement in one direction to complete the circuit through one magnet and for movement in the opposite direction to complete the circuit through the other magnet.

5. A throttle control, comprising a steering wheel column, a throttle rod carried adjacent thereto, a trip pin, a pair of electro-magnets, rock levers constituting armatures for said magnets respectively, means for yieldingly holding the armatures withdrawn from the magnets, pawls carried by the armatures and normally held in inoperative position by said trip pin, a pair of oppositely toothed segments movable with the throttle rod, yielding means for causing either of said pawls to engage one of said segments and impart rotative movement thereto and to the throttle rod, when one of the electro-magnets attracts the armature equipped with such pawl, a source of electric energy in circuit with both magnets, a pair of contacts each in circuit with said source of electric energy through one of said magnets, another contact in circuit with said source of electric energy, and means for causing the last-named contact to engage either of the first-named contacts.

[Claims 6 and 7 not printed in the Gazette.]

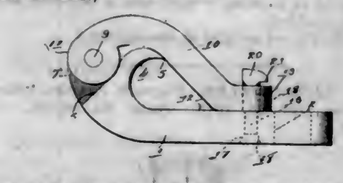
1,192,259. WATERMARKING APPLIANCE. JOHN N. ANDERSON, Lincoln, N. H. Filed Nov. 6, 1915. Serial No. 60,017. (Cl. 92—48.)



1. A water-marking wheel embodying an annular pneumatic tire-like tube having on its tread surface water-marking characters.

2. A water-marking wheel embodying an annular pneumatic tire-like tube having on its tread surface water-marking characters, means being provided for varying the pressure in said tube.

1,192,260. CHOKER-HOOK. ARTHUR G. ASHBY, Carrollton, Wash. Filed Aug. 3, 1914. Serial No. 854,745. (Cl. 24—241.)

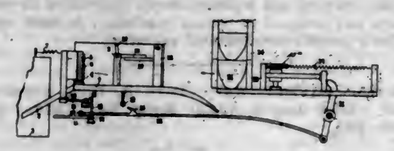


1. A choker hook including a relatively flat shank having an opening in one end thereof for adjustment with a cable, a flat pointed hook formed on the opposite end of the shank for supporting a logging cable, an arcuate locking element pivotally mounted on the outer face of the hook and arranged to contact intimately with the free end of the hook and the shank and coöperating with the shank and hook for efficiently clamping a cable thereon, and fastening means associated with the free end of the locking element for removably holding the locking element in engagement with the shank.

2. A choker hook including a relatively flat shank having an opening in one end thereof, a flat pointed hook integral with the opposite end of the shank, an arcuate locking element pivotally mounted on the outer face of the hook and arranged to contact intimately with the free end of the hook and thereby reduce the possibility of breakage of the element to a minimum, a flange formed on the free end of the element and arranged in intimate contact with the shank for efficiently clamping a cable in the opening provided by the element to the shank, and fastening means associated with the shank for removably holding the flange in engagement with the shank.

3. A choker hook including a shank having an opening in one end thereof for attachment with a cable, the opposite end of the shank being enlarged, an arcuate hook having a flat point formed on the enlarged end of the shank for supporting a cable, the outer face of the hook slanting diagonally, an upstanding ear formed on the outer face of the hook, an arcuate locking element pivotally mounted about the ear and arranged in intimate contact with the under surface of the hook for reducing the possibility of breakage of the element to a minimum, a flange extending from the free end of the element and adapted for intimate contact with the shank and being so arranged to provide a V-shaped opening for causing the element to efficiently clamp the hook of a cable in the V-shaped end of the opening, and a locking pin rotatably mounted in said shank for removably engaging and holding the flange in intimate cotact with the shank.

1,192,261. AUTOMATIC SHUTTLE-CHANGING MECHANISM FOR LOOMS. MAX AUERBACH, Berlin, Germany. Filed Jan. 23, 1914, Serial No. 813,967. Renewed Mar. 25, 1916. Serial No. 86,783. (Cl. 139—85.)



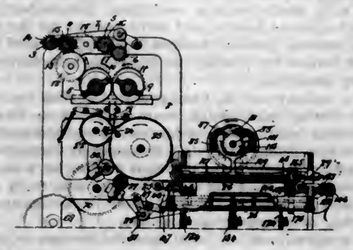
1. In an automatic shuttle changing mechanism for looms the combination of a shuttle box; a spring controlled rear wall pivoted thereto, providing for the ejection of an empty shuttle, a vertically sliding front wall for said shuttle box; a swinging plate mounted forwardly of said sliding front wall; a shuttle magazine; means coöperating between said magazine and shuttle box, for feeding a full shuttle to said shuttle box, upon the operation of said pivoted wall and the forward movement of said shuttle box; and means coöperating between said swinging plate and said sliding front wall for raising the latter, as said full shuttle is advanced into engagement with and past said swinging plate, to admit of the passage of said full shuttle into operative position in said shuttle box, substantially as described.

2. In an automatic shuttle changing mechanism for looms, the combination of a shuttle box; a spring controlled rear wall pivoted thereto, providing for the ejection of an empty shuttle; a vertically sliding front wall for said shuttle box, having a forwardly projecting member; a swinging plate mounted forwardly of said sliding wall, having a rearwardly projecting member, engaging beneath the member on said sliding wall; a shuttle magazine; and means coöperating between said magazine and shuttle box, for feeding a full shuttle to said shuttle box, upon the operation of said pivoted wall and the forward movement of said shuttle box, said swinging plate being disposed in the path of travel of the advancing full shuttle, and the inward swing of said swinging plate causing said sliding front wall to rise, to admit of the passage of said full shuttle into operative position in said shuttle box, substantially as described.

3. In automatic shuttle changing mechanism for looms, the combination of a shuttle box; a spring controlled rear wall pivoted thereto; a vertically movable front wall for said shuttle box; a shuttle magazine; a slide member adapted to engage the lowermost shuttle in said magazine and feed same forward into said shuttle box; a lever engaging said slide for operating the latter; a longitudinally movable rod pivotally connected at one end to said lever, said rod having a projection thereon and being adapted to swing in a vertical plane; a projection on said shuttle box adapted to engage the projection on said rod, when the latter is swung upwardly, means disposed between said pivoted wall and said rod for elevating the latter, when said pivoted wall is swung outwardly for ejecting an empty shuttle, and means for elevating said front wall upon the advancement of a full shuttle, to admit of the passage of said full shuttle into operative position in said shuttle box, substantially as described.

4. In automatic shuttle changing mechanism for looms, the combination of a shuttle box; a spring controlled rear wall pivoted thereto; a vertically sliding front wall for said shuttle box; a swinging plate pivotally mounted forwardly of said sliding wall; coöperating projections carried by said swinging plate and sliding wall to elevate the latter upon the inward swing of said swinging plate; a shuttle magazine; a slide member adapted to engage the lowermost shuttle in said magazine and feed same forward into said shuttle box, said sliding plate being disposed in the path of travel of said advancing shuttle; a lever engaging said slide for advancing the latter; a longitudinally movable rod pivotally connected at one end to said lever, said rod having a projection thereon and being adapted to swing in a vertical plane; a projection on said shuttle box adapted to engage the projection on said rod, when the latter is swung upwardly and the shuttle box moves forwardly; and a system of levers disposed between said pivoted rear wall and said rod for elevating the latter when said pivoted wall is swung outwardly for ejecting an empty shuttle, substantially as described.

1,192,262. CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor, by mesne asignments, to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed June 26, 1906. Serial No. 323,463. (Cl. 101—120.)



1. A sheet handling machine including in combination, a table, means for cutting sheets from a printed web, means for assembling the sheets and feeding them onto said table, and means for feeding an extra sheet from a separate source of sheet supply onto said table to be combined thereon with the sheets cut from the web either as an insert or a cover sheet according to the position of the extra sheet in the combination.

2. A sheet handling machine including in combination, a table, means for cutting sheets from a printed web, means for assembling the sheets and feeding them onto said table, and means for feeding extra sheets from separate sources of sheet supply onto said table to be combined thereon with the sheets cut from the web either as insert sheets or as cover and insert sheets according to the positions of the extra sheets in the combination.

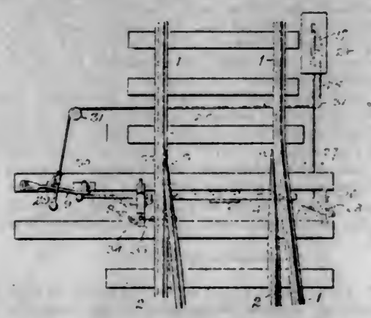
3. In a cutting and folding machine, a table, means for assembling a plurality of groups of sheets thereon cut from a previously printed web and means for feeding an extra sheet from a separate source of sheet supply to be combined on the said table with the sheets cut from the previously printed web.

4. In a cutting and folding machine, a table, means for assembling a plurality of groups of sheets thereon cut from a previously printed web and means for feeding extra sheets from a plurality of separate sources of sheet supply to be combined on the said table with the sheets cut from the previously printed web.

5. In a cutting and folding machine, a table, means for assembling a plurality of groups of sheets thereon cut from a previously printed web and means for feeding an extra sheet from one or more of a plurality of separate sources of sheet supply to be combined on the said table with the sheets cut from the previously printed web.

[Claims 6 to 30 not printed in the Gazette.]

1,192,263. AUTOMATIC SWITCH-OPERATING DEVICE. FRANK BAYLESS, Springfield, Ohio, assignor to The Automatic Safety Device Company, a Corporation of Ohio. Filed May 6, 1914. Serial No. 836,787. (Cl. 104—23.)



1. In a railway switch, the movable rail or rails thereof, hand-operated devices normally connected to said rail or rails, train-operated devices for disconnecting the rail or rails from the hand operated devices and operating said rail or rails under certain conditions independently of said hand-operated devices, and setting means for the train operated devices operated independently of the said hand operated devices for placing the train operated devices in operative condition.

2. In a railway switch, hand operated devices for opening and closing said switch, train operated devices for disconnecting said switch from said hand-operated devices and for closing the switch independent thereof upon the operation of said train operated devices by a moving car or train, and resetting means for the said train operated devices necessarily operated prior to the opening of the switch, substantially as specified.

3. In a railway switch, hand operated devices for opening and closing the movable rails of said switch, train operated devices to operate the movable rail or rails of said switch under certain conditions, said train operated devices comprising a pivoted trip lever normally lying in inoperative position, and a manually operated setting lever normally extending into the path of said hand operated device for throwing said trip lever to operative position when said pivoted trip lever is operated, substantially as specified.

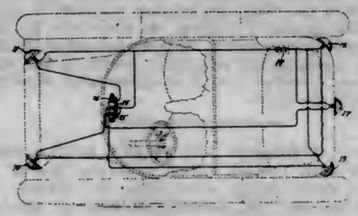
4. In a railway switch, hand operated devices normally connected to the movable rail or rails thereof for opening and closing the same, a train operated pivoted lever normally lying in inoperative position, means for throwing said lever to operative position upon the opening of the switch and means for disconnecting said rail or rails from said hand operated devices and closing the switch by the operation of said train operated lever, and means for automatically locking the movable rail or rails in operated position.

5. In a railway switch, the movable rail or rails, a hand lever detachably connected to said rails, devices operated by a moving car or train and normally disconnected from said rails, for disconnecting said hand lever and operating said rails, and two interengaging locking members both actuated in unison with the movement of the rail or rails for locking the movable rail or rails in operated position.

[Claims 6 to 20 not printed in the Gazette.]

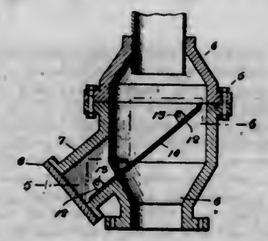
1,192,264. SAFETY-SIGNAL FOR VEHICLES. WILLIAM N. BEST, New York, N. Y., assignor of one-fourth to Cecilia Wupper, Brooklyn, N. Y. Filed Sept. 9, 1915. Serial No. 49,773. (Cl. 177—337.)

The combination with a vehicle, of a plurality of electric lights, one arranged at each corner of the vehicle body and each directing its rays both laterally and in the direction of travel of the vehicle, an electric circuit including the lights at two diagonally opposite corners, a second circuit including the lights at the other two diagonally



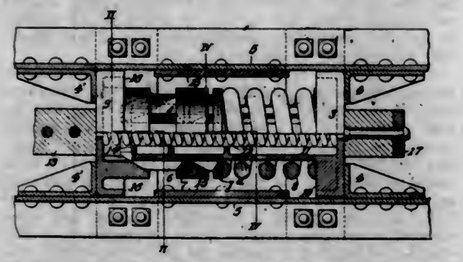
opposite corners, and separate circuit controllers for said circuits and designed to remain indefinitely in their open or closed position after manual operation.

1,192,265. SAFETY-TRAP. DAVE R. BIRD, Pineland, Tex. Filed July 3, 1915. Serial No. 37,916. (Cl. 210—16.)



A safety trap comprising a shell having an inlet and outlet in alinement with each other and also provided with a downwardly inclined branch nipple in one side thereof at a point between the inlet and outlet to form a trap, a closure plate for said branch nipple and detachable therefrom, and a foraminous plate having ears at its opposite edges secured to opposite sides of the shell for holding the foraminous plate inclined in the direction of the branch nipple, the lowermost end of said plate being extended into the nipple.

1,192,266. FRICTION DRAFT-RIGGING. WILLIAM BLACKMORE, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 6, 1914. Serial No. 843,429. (Cl. 213—64.)



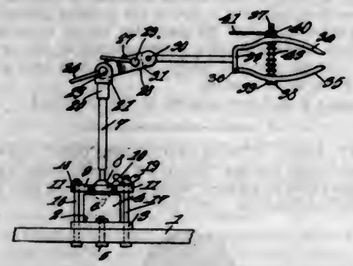
1. In frictional shock absorbing mechanism, a central friction member having a broad flat base of resistance and a plurality of outwardly-radiating arms having friction faces on their sides forming with each other reëntrant angles, a plurality of friction shoes, each seating against the sides of a reëntrant angle, a wedge in engagement with said shoes, the wedge being integral and encircling said friction member, a compression spring encircling said friction member bearing at one end against said base and

at the other end against a follower, said follower encircling said friction member, and a releasing spring centrally contained in said friction member and bearing at its outer end against said wedge.

2. In frictional shock absorbing mechanism, a central friction member having a broad flat base of resistance and a plurality of outwardly-radiating arms, said arms having friction faces forming with each other reëntrant angles, a plurality of friction shoes, each shoe bearing against the friction faces of a plurality of said arms, a wedge in engagement with said shoes, the wedge being integral and encircling said friction member, a compression spring encircling said friction member and bearing at one end against said base and at the other end against an intermediate follower, said follower encircling said friction member, and a releasing spring having a bearing on said friction member at one end and at its other end against said wedge.

3. In frictional shock absorbing mechanism, a follower having integral therewith a longitudinally-extending stem comprising a central friction member cruciform in cross section, a plurality of friction shoes, each seating in a reentrant angle of the central friction member, a second follower in engagement with said shoe, the said second follower being integral and encircling said friction member, a compression spring encircling said friction member and bearing at one end against the said first follower and at the other end against an intermediate follower, said intermediate follower encircling said friction member, and a releasing spring inclosed in the central friction member and engaging said second follower.

1,192,267. ARMED VISE. ULYSSES GRANT BOND, Muscatine, Iowa, assignor of one-half to John M. O'Brian, Muscatine, Iowa. Filed Mar. 24, 1916. Serial No. 86,484. (Cl. 113—99.)



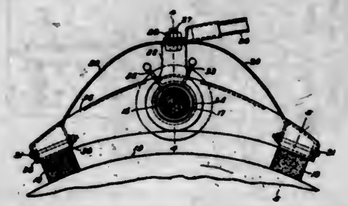
1. In a device of the class described, a base; a staff upstanding from the base; a ball and socket mechanism operatively uniting the staff with the base; means for holding the constituent parts of the ball and socket mechanism against relative movement; an arm pivoted to the staff; means for preventing relative swinging movement between the staff and the arm; an extension; a work holding grip at the outer end of the extension; a ball and socket mechanism connecting the inner end of the extension to the outer end of the arm; and means for preventing relative movement between the constituent parts of the last specified ball and socket mechanism.

2. In a device of the class described, a base comprising a foot plate and a pedestal upstanding from the base, the pedestal being provided in its top with a socket; a staff having a ball received within the socket; a yoke including a seat coacting with the ball to hold the ball to the socket; standards upstanding from the foot plate and engaged with the ends of the yoke; a clamping means on one standard and coacting with the yoke; a work holder; and means for connecting the holder with the staff.

3. In a device of the class described, a staff provided at its upper end with ears; an arm received between the ears; a combined clamping and pivot means uniting the arm with the ears; an extension; a work grip carried by one end of the extension; a base; a ball and socket connection between the other end of the extension and the arm; and a ball and socket connection between the lower end of the staff and the base.

4. In a device of the class described, an arm having spaced ears; an extension embodying a ball received between the ears; means uniting the ears for causing the ears to clamp the ball; a work holder carried by the extension; a staff to which the arm is pivoted; means for holding the staff and the arm against relative movement; a base; and a ball and socket connection between the staff and the base.

1,192,268. BRUSH-HOLDER. ROBERT W. BORCHARD, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed July 31, 1911. Serial No. 641,532. (Cl. 200—23.)



1. In combination, a stud, oppositely disposed pressure arms mounted on said stud, brushes carried by said arms, and a single spring mounted over said stud and acting on both of said pressure arms.

2. In combination, a stud, oppositely disposed interchangeable pressure arms mounted on said stud, brushes carried by said arms, and a single spring mounted over said stud and acting on both of said pressure arms.

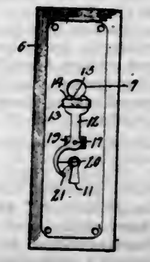
3. In combination, a stud, oppositely disposed interfitting pressure arms having notches mounted on said stud, brushes carried by said arms, and a spring the ends of which engage said notches for biasing said pressure arms in opposite directions.

4. In combination, a stud, oppositely disposed interfitting pressure arms mounted on said stud and having notches and openings, brushes carried by said pressure arms, a support mounted over said stud, pig-tails from said brushes passing through said openings and connected to said support, and a spring engaging said notches and biasing said pressure arms in different directions.

5. In combination, a stud, a sleeve mounted on and insulated from said stud, oppositely disposed pressure arms loosely mounted on said sleeve, brushes carried by said pressure arms, and a spring mounted over said sleeve and engaging said arms and biasing said arms in different directions.

[Claims 6 to 12 not printed in the Gazette.]

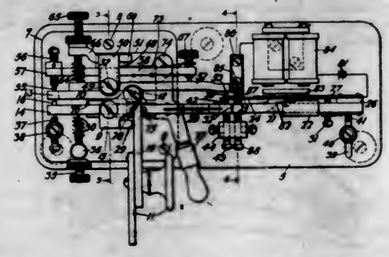
1,192,269. KNOB-SPINDLE FASTENER. DELOSS BORLAND, Charleston, Miss. Filed Nov. 24, 1914. Serial No. 873,782. (Cl. 70—41.)



The combination with the knob spindle of a door latch, of a vertically movable bar adapted to engage said spindle

to hold the latter against turning movement, a strap at one end of the bar for holding the latter in position and guiding the same in its movement, means at the other end of the bar for sliding the same to release and engage the knob spindle, and means formed on one end of said bar and having a curved edge adapted to receive a key whereby the bar may be actuated independently of said means.

1,192,270. TELEGRAPH-KEY. WALTER ANDERSON BOYD, Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 29, 1914. Serial No. 853,841. (Cl. 178—82.)



1. In a telegraph key, a key lever, a lever actuated by said key lever, a vibrator carried by said lever, a local circuit under the control of said vibrator, and means operable upon the closure of said local circuit to insure the sending of complete dots.

2. In a telegraph key, a lever, a vibrator carried thereby, a key lever for actuating said vibrator, a leaf spring mounted on said vibrator, a contact carried by said leaf spring, a local circuit, a contact coöperating with said first mentioned contact for closing the local circuit, and means included in said local circuit for preventing the sending of clipped dots irrespective of the period of actuation of said key lever.

3. A telegraph key comprising a lever, a vibrator carried thereby, a leaf spring mounted on said vibrator, a contact mounted thereon, contacts coöperating with said first mentioned contact, a local circuit including an electromagnet, said first mentioned contact and one of said coöperating contacts, an armature for said electromagnet carried by said lever, and means for actuating said vibrator to cause said first mentioned contact and said contacts coöperating therewith to engage and disengage in rapid succession causing thereby the simultaneous sending out of "dots" and the energization and deënergization of said electromagnet.

4. In a telegraph key, a lever, a vibrator carried thereby, a local circuit including an electromagnet, an armature therefor carried by said lever, a key lever for actuating said vibrator, contacts controlled by said vibrator for closing said circuit of said electromagnet and for causing the sending out of "dots", the simultaneous opening of said contacts being dependent upon the completion of a vibrating movement of said vibrator.

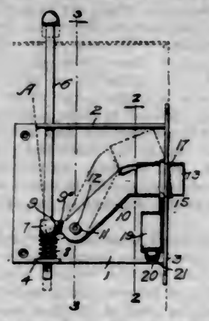
5. In a telegraph key, a key lever, a vibrator controlled thereby, and electromagnetic means for maintaining said vibrator in its actuated position a sufficient length of time for the completion of a cycle of vibration irrespective of the period of actuation of said key lever.

[Claims 6 and 7 not printed in the Gazette.]

1,192,271. LATCH. WILLIAM ROWLEY BRENNAN, Hawthorn, near Melbourne, Victoria, Australia. Filed Jan. 3, 1916. Serial No. 69,859. (Cl. 70—64.)

1. In a latch, a pivoted latching member, a spring-urged actuating rod, a spring-urged pawl to hold said member in unlatching position and a strike-plate having a slot for said member and an abutment to strike the pawl and release said member.

2. In a latch, a pivoted latching member having a V-shaped head, a spring-urged pawl to hold said member in unlatching position, a strike plate having a buffer for engaging and releasing said pawl, and a V-shaped slot having its inclined side adjacent said buffer.



3. In a latch, a spring-urged, pivoted, sheet-metal latching member having a head in which the metal is bent over upon itself to substantially V-shape in section, a pivoted, spring-urged pawl whose nose engages under said head, and a strike-plate having a yielding buffer arranged to strike the tail of said pawl to release said member, and a V-shaped slot having one side vertical and the inclined side adjacent the buffer.

4. In a latch, a sheet metal frame plate having a front member provided with a slot, a top member provided with a slot extending from its rear edge for an actuating rod and a bottom member having a perforation in line with the latter slot for said rod.

5. In a latch, a sheet metal frame plate having a front member provided with a slot, a top member provided with a slot extending from its rear edge for an actuating rod, a bottom member having a perforation in line with the latter slot for said rod, and a boss punched from the body plate for a latch member.

[Claims 6 to 9 not printed in the Gazette.]

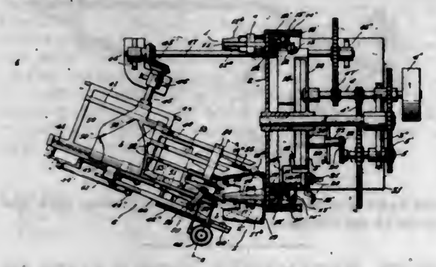
1,192,272. PNEUMATIC-TIRE CORE. HOWARD C. BROWN and GEORGE WILLIAMS, Akron, Ohio, assignors of one-third to Edward McSweeney. Filed Dec. 3, 1913. Serial No. 804,449. (Cl. 18—45.)



A collapsible core comprising a series of sections, said sections being provided in their opposing faces with mating recesses forming wedge-shape passages and coacting pairs of diverging grooves intersecting said passages, wedge-shape blocks adapted to be inserted in said passages and provided with convergent projections to engage said grooves, the reduced end of each block being provided with a threaded stem, and a nut adapted to engage the stem to hold the block in position.

1,192,273. RECEPTACLE-FORMING MACHINE. FRANK W. BURPEE and EUGENE T. HOSKINS, Bellingham, Wash.; said Hoskins assignor to said Burpee. Filed June 19, 1912. Serial No. 704,676. (Cl. 93—79.)

1. In a forming machine of the character described, a carrier supported for movement, means for rotating said carrier continuously, a forming device on said carrier comprising a mandrel and outer form sections, and means at the side of the path of said carrier for feeding a blank between the mandrel and outer form sections in a direction parallel with the axis of the mandrel during movement of said carrier.



2. In a forming machine of the character described, a carrier supported for movement, a plurality of forming devices on said carrier spaced lengthwise thereof, said forming devices comprising non-rotatable mandrels and outer form sections, means for operating said carrier continuously, and means at the side of the path of said carrier for feeding blanks and placing the same into said forming devices successively during movement of said carrier.

3. In a forming machine of the character described, a carrier supported for movement, a mandrel and outer relatively movable form sections on said carrier with their axes substantially perpendicular to their direction of movement, means for moving said carrier, means at the side of the path of said carrier for feeding a blank lengthwise of said mandrel to thereby place a blank on said outer form sections, means for operating said outer form sections to bend the blank about said mandrel, and means for operating said blank feeding means to feed a blank during movement of the carrier.

4. In a forming machine of the character described, a carrier supported for movement, means for moving said carrier continuously, companion forms arranged on said carrier one in advance of the other and with their axes perpendicular to the plane of their path of movement, and means for feeding the blanks parallel with the axes of the formers during movement of said carrier.

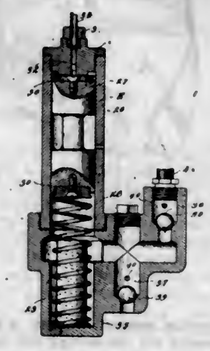
5. In a forming machine of the character described, a carrier supported for movement, a forming device comprising relatively fixed and movable interior and exterior forms supported on said carrier one in advance of the other in the path of their movement, means for placing a blank between said forms by movement lengthwise the forms and during movement of said carrier, and means for effecting movement of said movable form with respect to said fixed form by and during movement of said carrier.

[Claims 6 to 28 not printed in the Gazette.]

1,192,274. LUBRICATING-PUMP. FREDERICK J. CARNEY, Erie, Pa. Filed Dec. 3, 1910, Serial No. 595,388. Renewed May 20, 1916. Serial No. 98,954. (Cl. 103—68.)

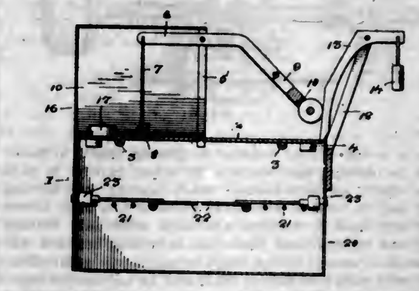
1. A pump adapted to be automatically operated by the rise and fall of the pressure within the compressor cylinder of an air compressor comprising a cylinder provided at one end with means for leading fluid pressures therein from the compressor, a cap closing the opposite end of the cylinder and adapted to rest upon a support and having a bore of the same diameter as that through the cylinder, said cap being provided at its side with a port which communicates with the interior of the cylinder, a piston slidably mounted in the cylinder and a spring interposed between the cap and the piston and being under tension with a tendency to hold the piston toward the pressure inlet end of the cylinder.

2. A pump adapted to be automatically operated by the rise and fall of the pressure within the compressor cylinder of an air compressor comprising a cylinder provided at one end with means for leading fluid pressure therein from the compressor, a cap closing the opposite end of the cylinder and having a bore of the same diameter as that through the cylinder, said cap being provided at its side



with a port, a stop located in the cap and having an end portion which extends above the lower side of the said port at the point through which it communicates with the interior of the cylinder, a piston slidably mounted in the cylinder and a spring interposed between the cap and piston and surrounding the stop and being under tension with a tendency to hold the piston toward the pressure inlet end of the cylinder.

1,192,275. RAT-TRAP. FRANCIS M. CLOUD, New Palestine, Ind. Filed Apr. 15, 1916. Serial No. 91,352. (Cl. 43—24.)

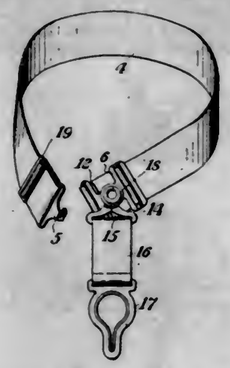


In a self-setting rat trap, a frame, trap doors within said frame arranged end to end and having the outer ends pivotally connected to the frame, means holding said doors normally in closed position, standards uprising from said frame, a lever pivoted between its ends between said standards, a connection between one end of said lever and one of said trap doors whereby the lever will be swung in the downward movement of said trap doors under the weight of a rodent, a weighted lever fulcrumed above the remaining door and engaging the same to hold such door normally against downward movement, and a roller carried by said first lever and adapted to swing said weighted lever in the movement of the first-mentioned lever to release the door held by the second-named lever.

1,192,276. GARTER. JOHN P. CROASDALE, Berwyn, Pa., assignor to Pioneer Suspender Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 28, 1909. Serial No. 498,842. (Cl. 241—6.)

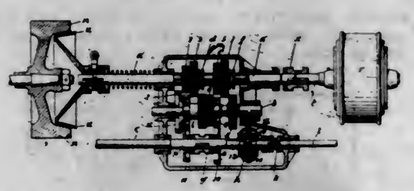
The combination of a leg band, a slotted connecting member having the leg band threaded therein to com-

pletely cover the underside thereof to form a pad adapted to be held in a stationary position against the leg, means for disengageably connecting the other end of the band



with said connecting member, a clasp, a supporting band therefor and means for connecting the band to the connecting member so it will have a free swinging movement in a plane beyond that of the pad.

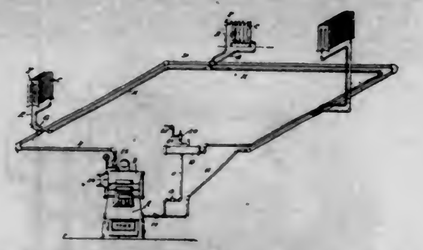
1,192,277. GEARING. PAUL DAIMLER, Untertürkheim, Germany, assignor to the Firm of Daimler Motoren-Gesellschaft, Untertürkheim, near Stuttgart, Germany. Filed Oct. 25, 1906. Serial No. 340,548. (Cl. 74—58.)



In a motor driven vehicle, a driving shaft, a motor shaft for driving said shaft, a fly wheel carried by said motor shaft, an intermediate shaft beneath said driving shaft and in vertical alinement therewith, a first driven shaft arranged in vertical alinement with said driving shaft and intermediate shaft and extending beneath said fly-wheel, a second driven shaft extending in axial alinement with said first driven shaft and in a direction opposite thereto, a differential gearing connecting both of said driven shafts, and change speed gearing operatively connecting said driving and intermediate shafts and said differential gearing.

1,192,278. VAPOR VACUUM HEATING SYSTEM. BANKS O. DAUBERT, Norfolk, Nebr. Filed Apr. 28, 1914. Serial No. 835,033. (Cl. 237—68.)

In combination with a vapor vacuum heating system and a furnace, said system including a plurality of radiators and a supply pipe connecting said radiators with the boiler of the furnace, of a return pipe having connection with said radiators, a drip pipe for connecting the supply pipe to the boiler below the water level and having a check valve, a cylinder having connection with the end of the return pipe, a pipe connecting the cylinder with the drip pipe and having a check valve, a column rising from the cylinder and projected into the latter to form a valve seat, a float arranged within the cylinder and having a stem working within the column, a valve formed at the juncture of the stem with the float and engageable with the valve seat, an outlet pipe leading from said column, a thermostatic valve arranged in said outlet pipe, and a



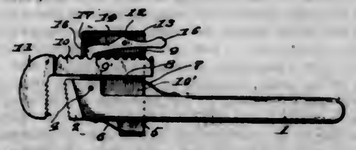
check valve located in said outlet pipe to prevent back flow therein to the cylinder.

1,192,279. ROOF-FLASHING. SAMUEL M. DAWSON and MELVIN SMITH, Kansas City, Mo. Filed Feb. 27, 1915. Serial No. 11,102. (Cl. 108—26.)



A vent pipe flashing comprising a truncated conical base portion to fit around a vent pipe extending through a pitched roof, the lower end of said portion being pitched to correspond with said roof and provided with outwardly projecting flanges for securement to said roof, said portion also having diametrically opposite outwardly-projecting pivot pins extending parallel to the ridge line of the pitched roof, a tube fitting around the vent pipe and provided with an enlarged lower end fitting over the truncated upper end of the base portion and pivoted on said pivot pins and provided with curved recesses in its lower end at right angles to said pivot pins to space the lower end at the recessed points outward from the conical base portion and thereby accommodate pivotal movement between the tube and the base portion at right angles to the said ridge of the roof; the lower edge of said enlarged portions being flanged inward to effect a close fit with the base portion adjacent the pivot pins, and to diminish the width of the space between said enlarged portion and the base portion at the recessed edges of the former without interfering with proper pivotal movement between said portions.

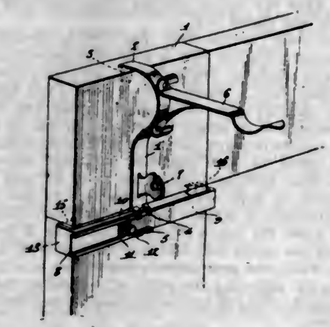
1,192,280. WRENCH. FRANK DA COTIS, New York, N. Y. Filed Nov. 6, 1915. Serial No. 60,109. (Cl. 81—103.)



In a wrench of the class described, a handle provided with a jaw, a movable jaw having a toothed shank, a

housing divided into three longitudinally arranged compartments, the handle at the jaw end thereof being pivotally secured in one of the end compartments, the shank of the movable jaw being arranged in the intermediate compartment, a locking dog pivotally secured in the second end compartment and having a tail portion extending through the said compartment, said dog having its end opposite its tail formed with a single tooth which is arranged adjacent an opening in the partition dividing said end from the intermediate compartment, and a spring member contacting with the outer wall of the end compartment and engaging with the dog opposite the tooth thereof to force the tooth of the dog into the intermediate compartment and into engagement between two of the teeth of the shank of the movable jaw.

1,192,281. CURTAIN-BRACKET. JOHN F. DE HAVEN, East Liverpool, Ohio. Filed Feb. 29, 1916. Serial No. 81,199. (Cl. 156—24.)

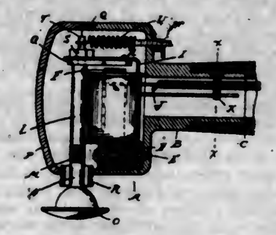


1. In a device for the purpose set forth, a hanger formed from a flat plate having an angular end provided with a downturned lip, its opposite end provided with outwardly disposed angular spring fingers arranged in spaced pairs, a guide brace comprising two telescopic members each having their longitudinal edges formed with inwardly flanged spring members, the flanges of one of the members adapted to be received by the flanges of the other member, said members being arranged to be contacted by the fingers of the bracket member, a locking element between the members, each of the said members having its outer edge formed with a right angular extension, and the said extension being provided with inturned teeth.

2. In a device for the purpose set forth, a hanger including a member having an angular end provided with a downturned lip and its opposite end formed with outwardly disposed angular spring fingers arranged in spaced pairs, a guide brace comprising two telescopic members each having their ends flanged and said flanges formed with inturned teeth, the inner member having its longitudinal edges flanged and the said flanges being engaged by the referred to spring fingers of the hanger member, and an adjustable locking element upon the outer telescopic member adapted to contact with the inner member to force the edges of the said outer member into contacting engagement with the flanges of the inner member.

1,192,282. MASSAGING-TOOL. CONSTANT DE MATTIA, Detroit, Mich. Filed Aug. 23, 1915. Serial No. 46,900. (Cl. 128—16.)

1. A massaging tool, comprising a casing having a hollow head portion and hollow shank, an electro-magnet located in the head portion, an armature therefor, a vibrator arm attached to said armature and extending into said shank, means for anchoring the end of said arm, a shank extending laterally from the free end of said vibrator arm and passing out from the case, and a tool outside the case secured to said shank and operated thereby.



2. A massaging tool, comprising a case having a hollow head portion and a hollow shank, a horseshoe electro-magnet arranged in said hollow head with its poles at one side of the axis of the shank, an armature for said magnet, a vibrator secured to said armature and laterally offset into the central plane of said shank and extending therein, securing means for the end of said vibrator in said hollow shank, a shank connected to the free end of said vibrator extending laterally therefrom in registration with an aperture in said case, and a tool having a shank extending through said aperture and engaging the shank within the case.

3. A massaging tool, comprising a case having a hollow head portion and a hollow shank, a horseshoe electro-magnet secured within said hollow head and having its poles arranged at one side of the plane of the axis of said shank, an armature for said magnet, a vibrator secured to said armature and offset into the plane of said hollow shank, extending thereinto, securing means for said vibrator within said shank, a rod or shank secured to the free end of said vibrator and extending laterally within said hollow head, a cap for said casing having a threaded engagement therewith, said cap and casing being apertured in registration with said laterally-extending shank, a bushing engaging the aperture of said cap and casing and locking the same from disengagement, and a tool having its shank extending through said bushing and into engagement with said laterally-extending shank within the case.

4. A massaging tool, comprising a hollow casing having a hollow shank, a horseshoe electro-magnet secured within said casing having its poles at one side of the plane of said hollow shank, an armature for said magnet, a vibrator secured to said armature laterally offset into the plane of said hollow shank and extending into the same, means for securing the end of said vibrator within said shank, a rod or shank secured to the free end of said vibrator, extending laterally therefrom into registration with an aperture in said case, a tool having its shank passing through said aperture and engaging said laterally-extending shank, an extension of said laterally-extending shank upon the opposite side of said vibrator, a spring secured to said extension, and an adjusting screw attached to the opposite end of said spring and extending out through said case, whereby the tension of said spring may be altered.

1,192,283. PAWL-AND-RATCHET MECHANISM. COLUMBUS F. DENNY, Durham, N. C. Filed June 11, 1915. Serial No. 33,589. (Cl. 74—16.)



1. In a ratchet mechanism, a rotatable element, a ratchet wheel stationarily supported relative to said element, a ratchet pawl carried by the said element and normally held in working engagement with the ratchet, and

a ratchet pawl lifting member mounted in juxtaposition to the ratchet wheel, said ratchet pawl lifting member being provided with a series of concentrically spaced interrupted ratchet teeth, the said interrupted ratchet teeth of the ratchet pawl lifting member engaging with the ratchet pawl for intermittently releasing the ratchet pawl from the ratchet wheel.

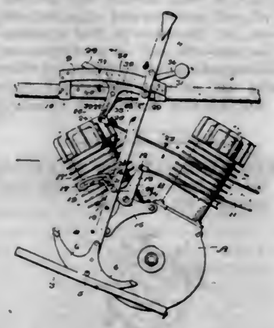
2. In a ratchet mechanism, a rotatable element, a ratchet wheel stationarily supported relative to said element, a ratchet pawl carried by the said element and normally held in working engagement with the ratchet, and a ratchet pawl lifting member mounted in juxtaposition to the ratchet wheel, said ratchet pawl lifting member being provided with a series of concentrically spaced interrupted ratchet teeth, the said interrupted ratchet teeth of the ratchet pawl lifting member engaging with the ratchet pawl for intermittently releasing the ratchet pawl from the ratchet wheel, and means for holding the pawl in positive engagement with the ratchet wheel.

3. In a ratchet mechanism, a rotatable element, a ratchet wheel stationarily supported relative to said element, a ratchet pawl carried by the said element and normally held in working engagement with the ratchet, and a ratchet pawl lifting member mounted in juxtaposition to the ratchet wheel, said ratchet pawl lifting member being provided with a series of concentrically spaced interrupted ratchet teeth, the said interrupted ratchet teeth of the ratchet pawl lifting member engaging with the ratchet pawl for intermittently releasing the ratchet pawl from the ratchet wheel, means for holding the pawl in positive engagement with the ratchet wheel, and the said ratchet pawl lifting member.

4. In a ratchet mechanism, a rotatable element, a ratchet wheel stationarily supported relative to said element, a double-toothed ratchet pawl carried by the said element and normally held in working engagement with the ratchet, and a ratchet pawl lifting member mounted in juxtaposition to the ratchet wheel for intermittently releasing the ratchet pawl from the latter.

5. In a ratchet mechanism, a rotatable element, a ratchet wheel stationarily supported relative to said element, a double-toothed ratchet pawl carried by the said element and normally held in working engagement with the ratchet, a ratchet pawl lifting member mounted in juxtaposition to the ratchet wheel for intermittently releasing the ratchet pawl from the latter, and means for holding one tooth of the pawl in positive engagement with the ratchet wheel and the other tooth of the pawl in positive engagement with the said ratchet pawl lifting member.

1,192,284. GEAR AND CLUTCH CONTROL. ORIE O. DISNEY, Richland, Kans. Filed Nov. 17, 1915. Serial No. 61,986. (Cl. 74—39.)



1. A one lever transmission and clutch control, embodying, in combination with a gear shifting connection, and a clutch shifting connection, a manually operable main shifting lever, a clutch shifting lever acted upon by said main shifting lever and operating on the clutch shifting connection to throw the clutch out and in again in each complete forward movement of the main shifting lever and again in each complete backward movement thereof, and a gear shifting lever acted upon by said main shifting lever in each complete movement of the latter in either direction to actuate the gear shifting connection at a time when the clutch shifting connection is in position to hold the clutch out.

2. A one lever transmission and clutch control, embodying, in combination with a gear shifting connection, and a clutch shifting connection, a manually operable main shifting lever, a clutch shifting lever acted upon by said main shifting lever and operating on the clutch shifting connection to throw the clutch out and in again in each complete forward movement of the main shifting lever and again in each complete backward movement thereof, and a gear shifting lever having arms in angular relation to each other which are acted upon by said main shifting lever in each complete movement of the latter in either direction to actuate the gear shifting connection at a time when the clutch shifting connection is in position to hold the clutch out.

3. A one lever transmission and clutch control, embodying, in combination with a gear shifting connection, and a clutch shifting connection, a manually operable main shifting lever, a clutch shifting lever acted upon by said main shifting lever and operating on the clutch shifting connection to throw the clutch out and in again in each complete forward movement of the main shifting lever and again in each complete backward movement thereof, a gear shifting lever acted upon by said main shifting lever in each complete movement of the latter in either direction to actuate the gear shifting connection at a time when the clutch shifting connection is in position to hold the clutch out, said gear shifting lever having an arm to which the gear shifting connection is attached, and means for adjusting the point of connection between the last named lever arm and connection to vary the throw of the latter.

4. A one lever transmission and clutch control, embodying, in combination with a gear shifting connection, and a clutch shifting connection, a manually operable main shifting lever, a clutch shifting lever acted upon by said main shifting lever and operating on the clutch shifting connection to throw the clutch out and in again in each complete forward movement of the main shifting lever and again in each complete backward movement thereof, a gear shifting lever acted upon by said main shifting lever in each complete movement of the latter in either direction to actuate the gear shifting connection at a time when the clutch shifting connection is in position to hold the clutch out, said gear shifting lever having an arm to which the gear shifting connection is attached, and means for adjusting the point of connection between the last named lever arm and connection to vary the throw of the latter, said throw-adjusting means being mounted on the gear shifting lever.

5. A one lever transmission and clutch control, embodying, in combination with a gear shifting connection, and a clutch shifting connection, a manually operable main shifting lever, a clutch shifting lever acted upon by said main shifting lever and operating on the clutch shifting connection to throw the clutch out and in again in each complete forward movement of the main shifting lever and again in each complete backward movement thereof, a gear shifting lever acted upon by said main shifting lever in each complete movement of the latter in either direction to actuate the gear shifting connection at a time when the clutch shifting connection is in position to hold the clutch out, said gear shifting lever having an arm to which the gear shifting connection is attached, means for adjusting the point of connection between the last named lever arm and connection to vary the throw of the latter, said throw-adjusting means being mounted on the gear shifting lever and embodying a throw-changing lever pivoted out of line with the gear shifting lever, and a link connecting the throw-changing lever with the gear shifting connection.

[Claim 6 not printed in the Gazette.]

1,192,285. SAW-SET. MOSES C. DOWLING, Kenney, Ill. Filed July 24, 1913. Serial No. 780,951. (Cl. 76—71.)



1. In a device of the character described, in combination an elongated body, said body having an oblique slot at one end, a strap straddling said slot, a peg passing through said strap and said slot, a spring bearing on said body and a screw member passing through the top of said strap, through said spring and into the slot, said screw member bearing against said first-named peg.

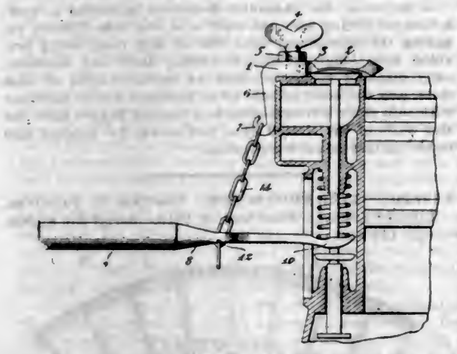
2. In a device of the kind described, in combination, an elongated member, said member having an inclined slot at one end, a wooden peg mounted in said slot, means for adjustably holding said peg in said slot, and a screw-bolt passing through said elongated member at the rear of and at right angles relatively to said wooden peg.

3. The described device consisting of a body having an oblique slot therein, a strap straddling said body and carrying a peg movable within said slot.

4. The described device consisting of a body having an oblique slot therein, a strap straddling said body and carrying a peg movable within said slot, said strap having parallel ends with elongated openings therein in which said peg is mounted.

5. The described device consisting of a body having an oblique slot therein, a strap straddling said body and carrying a peg movable within said slot, said strap having parallel ends with elongated openings therein in which said peg is mounted, means for normally holding said peg toward the inner end of said slot.

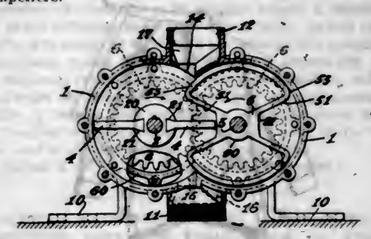
1,192,286. VALVE-SPRING LIFTER. LOUIS DUQUESNOY, Hiawatha, Utah. Filed Mar. 15, 1916. Serial No. 84,385. (Cl. 29—87.1.)



In a valve spring lifter of the class described, a head piece adapted to be secured to the upper end of the cylinder, an arm formed on said head piece and depending therefrom, an operating lever having a forked end adapted to engage beneath the valve spring, and a handle end, and formed centrally with a cross-shaped slot, a chain having one end adapted to be secured to said arm and the other end adapted to be passed through said cross-shaped slot in said lever, the link of said chain immediately below said slot engaging the lever to form a fulcrum, and wings formed integral with said head piece and overlapping the valve heads.

1,192,287. ROTARY PUMP. WILLIAM S. EASTON, Seattle, Wash. Filed Mar. 18, 1915. Serial No. 15,155. (Cl. 103—44.)

1. A rotary pump having two impelling members mounted to turn upon parallel axes, one having radially placed wings extending lengthwise thereof, and the other having recesses complemental to said wings, the coöperating surfaces of said members being of different radii, said coöperating surfaces being separated sufficiently to permit a small amount of leakage, a casing inclosing said impelling members, said casing having an inlet port at one side and an outlet port at the other side of the portion of said casing occupied by the impeller which carries the wings, and means for securing synchronous rotation of the impellers.



2. A rotary pump having two impelling members mounted to turn upon parallel axes, one having radially placed wings extending lengthwise thereof, and the other having recesses complemental to said wings, the coöperating surfaces of said members being of different radii, said coöperating surfaces being separated sufficiently to permit a small amount of leakage, a casing inclosing said impelling members, said casing having an inlet port at one side and an outlet port at the other side of the portion of said casing occupied by the impeller which carries the wings, gears upon the shafts carrying the impelling members, and without the pump casing, said gears intermeshing to maintain synchronous rotation of the impellers, and a water tight casing secured upon the end of the pump casing and entirely surrounding said gears, said water-tight casing being adapted to be filled with a clean liquid.

3. A rotary pump having two impelling members mounted to turn upon parallel shafts, one having radially placed wings extending lengthwise thereof, and the other having recesses complemental to said wings, said wings extending more than half the distance between the shafts, and the recessed member having surfaces extending more than half the distance between the shafts, the coöperating surfaces of said impelling members being separated sufficiently to permit a small amount of leakage, a casing surrounding said impelling members, said casing having an inlet port at one side and an outlet port at the other side of the portion of said casing occupied by the impeller which carries the wings, and means for securing synchronous rotation of the impellers.

1,192,288. GARMENT. ELIJAH J. EMERY, Pottsville, Pa. Filed Oct. 13, 1915. Serial No. 55,697. (Cl. 2—144.)

1. In a combined overall and blouse, a back including a body portion and leg portions, front body portions secured to the edges of the back body portion above the waistline of the said body portion, front leg portions secured to the inner edges of the rear leg portions and to the crotch of the back body portion, said front and rear leg portions having free outer edges, said front leg portions extending above the waistline of the rear body portion, an apron member formed with the front leg portions, means for removably securing the apron to the front body portions, and means for removably connecting the free edges of the front leg sections to the free edges of the rear leg portions throughout their entire length and to the rear body portion above the waistline thereof.

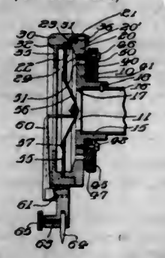
2. In a garment for the purpose described, a back including a body portion and leg portions extending from the crotch of the back and below the waistline of the said back, front body portions secured one to each of the outer edges of the rear body portion above the waistline and in

a line with the crotch thereof, said front and body portions having their lower edges rounded toward the outer edges thereof, and one of the said outer edges adapted to overlap the outer edge of the second member, clasps for securing the overlapping edges, one of said members being arranged upon the outer faces of each of the overlapping members, outer leg members secured to the inner edges of the inner leg members at the crotch of the back body portion of the garment, said front and rear leg mem-



bers having free outer edges, said outer leg members extending above the waistline of the rear body portion, clasp members upon the free edges of the front and rear leg sections and upon the body member above the waistline thereof for temporarily connecting the outer leg sections to the rear leg sections throughout their entire length and to the rear body, said front leg sections having extending apron portions, said apron having clasp members engaging with the clasp members, upon the members comprising the front body portions.

1,192,289. SOUND-BOX. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Jan. 23, 1912. Serial No. 672,961. (Cl. 274—24.)



1. A sound box casing comprising two spaced portions, yielding substantially non-resilient means connecting said portions and means arranged to limit the outward radial expansion of said first-named means.

2. A sound box comprising an annular supporting member provided with a tubular extension rigid therewith, an annular marginal member surrounding and spaced from said supporting member, and yielding means surrounding said tubular extension and connecting said supporting member and said annular marginal member.

3. A sound box comprising an annular supporting member provided with a tubular extension, an annular marginal member surrounding said supporting member, a diaphragm carried by said marginal member, and yielding means surrounding said tubular extension and connecting said supporting member and said marginal member.

4. A sound box comprising an annular supporting member, an annual marginal member surrounding said supporting member and spaced therefrom, yielding means connecting said members and forming a closure for the space between the same, and a diaphragm carried by said marginal member.

5. A sound box comprising an annular supporting member provided with a tubular extension rigid therewith, a second annular member surrounding said first-mentioned annular member, a diaphragm carried by said second annular member, and yielding means connecting said annular members.

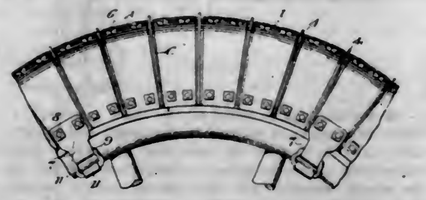
[Claims 6 to 16 not printed in the Gazette.]

1,192,290. EXTENSION CRUTCH OR CANE. ERNST F. ENGSTROM, Omaha, Nebr. Filed Aug. 4, 1915. Serial No. 43,631. (Cl. 135—50.)



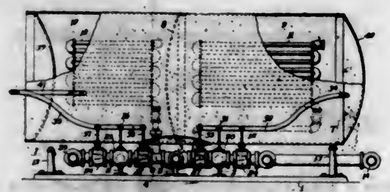
A device of the character described including a staff, a tube projecting from the staff, a second tube slidably engaging the first-named tube, one of said tubes being provided with longitudinally extending slots and diametrically disposed keeper recesses at opposite sides of said slots, and the other of said tubes having a pin to interlock with said slots, strengthening and bracing flanges upon the slot walls of the slotted tube, and means for holding said tubes against relative movement.

1,192,291. TIRE-PROTECTOR. ROSWELL G. FALCONER, Litchfield, Ohio. Filed Mar. 3, 1916. Serial No. 81,968. (Cl. 152—16.)



A protector for pneumatic tires consisting of an annular flexible body comprising an inner circular series of sheet metal sections, an outer circular series of sheet metal sections which overlap and break joint with the outer sections, an intermediate circular series of sheet metal sections each formed on its outer face with a projecting rib extending lengthwise thereof and transversely of the protector body and lying between the adjacent edges of adjoining outer sections, all of the sections of the three series extending transversely of the tire, fasteners inserted through the overlapping portions of the several series of sections, and means for securing the protector as a whole in place upon a tire.

1,192,292. APPARATUS FOR HANDLING AND DELIVERING WATER. FREDERICK C. FARNSWORTH, Brooklyn, N. Y., assignor to Farnsworth Manufacturing Company, a Corporation of Massachusetts. Filed June 29, 1914. Serial No. 847,887. (Cl. 261—4.)



1. In a device of the character stated, the combination of a tank divided into two separate compartments, water supply and delivery pipes, a steam supply pipe, independent means forming communication between the two compartments and the respective water and steam pipes, a valve controlling each steam communicating means, and means controlled by the volume of water in said compartments for alternately operating said valves to cause said compartments to discharge their contents alternately.

2. In a device of the character stated, the combination of a tank having a partition dividing said tank into two separate compartments one having a greater volume than the other, means adjacent said partition for supporting said tank for tilting movement, a water supply pipe, a delivery pipe, a steam supply pipe, independent means forming a communication respectively between said water and steam pipes and each of said compartments, a separate valve controlling each steam communicating means, and means controlled by the movement of said tank when an excess weight in one of said compartments causes it to oscillate for alternately operating said steam valves to cause said compartments to discharge the contents alternately.

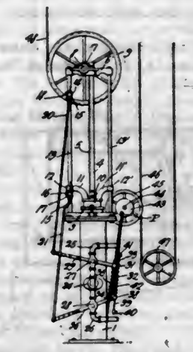
3. In a device of the character stated, the combination of a tank mounted for tilting movement and divided into two separate compartments one compartment having a greater volume than the other, water supply and delivery pipes, separate flexible means forming communication between said pipes and each compartment, check valves operatively arranged in said water pipes adjacent the connection of said flexible means for preventing back flow into the supply pipe, a steam pipe, separate flexible means forming communication between said steam pipe and each of said compartments, a valve controlling the admission of steam to each flexible means, a relief valve adjacent each controlling valve, and means operable by the movement of said tank for alternately opening said steam controlling valves and simultaneously closing the adjacent relief valve and vice versa, whereby said tank normally discharges its contents from the two compartments alternately.

4. In a device of the character stated, the combination of a tank mounted for tilting movement and divided into two separate compartments one compartment having a greater volume than the other, a water supply pipe, a delivery pipe, separate flexible means forming communication between said pipes and each compartment, check valves operatively arranged in said water supply and delivery pipes adjacent the connection of each of said flexible means to prevent back flow, a steam pipe, a heating coil located in each compartment and having free communication therewith at one end, separate flexible means forming a communication between each coil and said steam pipe, a separate valve controlling the admission of steam to each flexible means, a separate relief valve adjacent each controlling valve, and means operable by the movement of said tank for alternately opening said controlling valves and simultaneously alternately closing the adjacent relief valve and vice versa whereby said tank normally discharges its contents from the two compartments alternately.

5. In a device of the character stated, the combination of a tank mounted for tilting movement and divided into two separate compartments one compartment having a greater volume than the other, a water supply pipe, a delivery pipe, flexible means forming a communication between said pipes and each compartment, check valves operatively arranged in said water pipes adjacent the connection of said flexible means to prevent back flow, a steam pipe, a heating coil located in each compartment and having free communication therewith at one end, separate flexible means forming a communication between each coil and said steam pipe, a separate valve controlling the admission of steam to each flexible means, a separate relief valve adjacent each controlling valve, means operable by the movement of said tank for alternately opening said controlling valves and simultaneously alternately closing the adjacent relief valve and vice versa whereby said tank discharges its contents from the two compartments alternately, a return pipe forming a communication between the outlets of said relief valves and said water supply pipe, and a check valve in said return pipe.

[Claims 6 to 13 not printed in the Gazette.]

1,192,293. VALVE-OPERATING MECHANISM FOR MOTORS. JOHN E. W. FOGAL, Quincy, Ill. Filed Nov. 19, 1914, Serial No. 873,039. Renewed Apr. 24, 1916. Serial No. 93,272. (Cl. 138—8.)



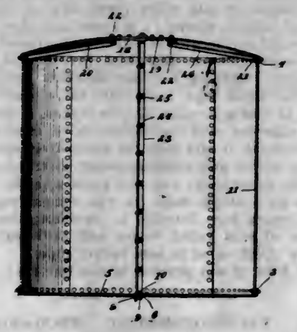
1. An elevator door or gate operating motor, including a cylinder provided with a port, a plunger mounted therein, a power transmitting means connected to the plunger, a pipe connected to the cylinder and in communication with the port, a supply valve and a drain valve connected to said pipe, two levers one connected to each valve, two rods, one slidably connected to each lever, a spring mounted upon each rod and forming a resilient connection between the rod and its lever, and manually controlled means connected to both rods, whereby the rods are actuated to selectively open one valve at a time.

2. An elevator door or gate operating motor, including a cylinder provided with a port, a plunger mounted therein, a power transmitting means connected to the plunger, a pipe connected to the cylinder and in communication with the port, a supply valve and a drain valve connected to said pipe, two levers, one connected to each valve, two rods, one slidably connected to each lever, a spring mounted upon each rod and forming a resilient connection between the rod and its lever, manually controlled means connected to both rods, whereby the rods are actuated to selectively open the valves, and means operably connected to both levers of the valves and in the path of the plunger, whereby the supply valve is closed at one extreme movement of the plunger while the drain valve is closed at the other extreme movement of the plunger.

1,192,294. TANK. JOHN S. GANTZ, Sapulpa, Okla. Filed Nov. 2, 1915. Serial No. 59,235. (Cl. 220—140.)

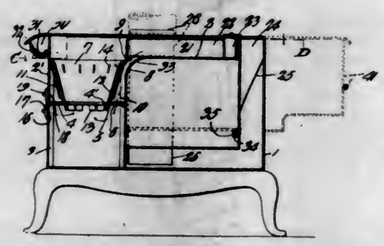
A tank of the class described having a bottom and top, a centrally arranged transversely reinforcing bar under

the bottom, radially arranged reinforcing bars under the top, vertically arranged reinforcing bars connecting the top and bottom and attached at their upper ends to said



radial reinforcing bars and cross bars connecting said vertically arranged reinforcing bars and coacting therewith to form a ladder in the tank.

1,192,295. RANGE. GEORGE G. GAREY, Indianapolis, Ind. Filed June 18, 1913. Serial No. 774,458. (Cl. 126—1.)

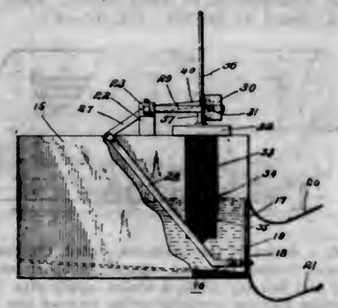


1. The combination with a casing and an oven supported therein, of a fire box, a fire pot mounted within the fire box and surrounded by an air space, said fire pot having hollow ribs forming flues for maintaining communication between said space and the interior of the fire pot, a hollow partition supported between the oven and the top of the casing, there being passages at opposite sides of the partition for the escape of combustion products, means for closing one of said passages, said hollow partition having a valved air inlet and an outlet, there being a passage extending from said outlet into the space surrounding the fire pot.

2. The combination with a casing, and an oven supported therein, of a partition supported between the oven and the top of the casing, there being passages at opposite sides of the partition for the flow of combustion products, a partition extending into the space between one end of the oven and one end of the casing and dividing said space into continuations of said passages, the lower end of the partition being obliquely disposed for deflecting products of combustion toward the end wall of the casing.

3. In a range, the combination with a casing, an oven therein, and spaced from the walls thereof, of a hollow partition upon the middle portion of the oven and forming separate passages extending throughout the length of the oven and constantly in communication with the space between the end of the oven and the end of the casing, said partition being closed at its ends and having a fresh air inlet at one end extending through the top of the casing, and an outlet adjacent its other end, a fire pot, and means for directing air from said outlet to the interior of the fire pot.

1,192,296. COAL-JIG. MICHAEL J. GASPER, Hazleton, Pa. Filed Mar. 25, 1916. Serial No. 86,635. (Cl. 83—58.)



1. In a device of the class described, a jig tank having an inclined screen bottom and a slate gate hingedly supported above the low end of said screen bottom with its free edge adjacent thereto, means including a rock shaft having radial arms, and connecting links or bars for controlling the movement of the gate, and means including a vertically movable floating plunger for actuating the rock shaft, said plunger having a predetermined limited movement independently of its connection with the rock shaft.

2. In a device of the class described, a jig tank having an inclined screen bottom and a slate gate hingedly supported above the low end of said screen bottom with its free edge adjacent thereto, means including a rock shaft having radial arms, and connecting links or bars for controlling the movement of the gate, and means including a vertically movable floating plunger for actuating the rock shaft, said plunger having a predetermined limited movement independently of its connection with the rock shaft, said rock shaft having radially extending weight carrying arms to balance the weight of the slate gate.

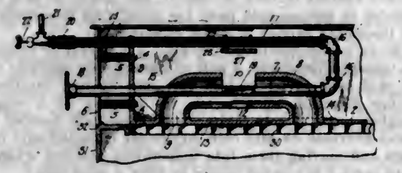
3. In a device of the class described, a jig tank having a slate gate, actuating means for said gate including a rock shaft and suitable connections, adjustable counterweights connected with the rock shaft to maintain the slate gate normally in closed position, and gate actuating means including an arm extending from the rock shaft, a plunger guided for vertical movement in the tank and having an upwardly extending stem, and engaging means on said stem for the radial arm of the rock shaft, and a guide for said plunger having its lower end reduced to form an inclined recess.

4. In a device of the class described, a jig tank having a front wall over which coal may flow, and a slate gate hinged at the lower edge of said wall, operating means for closing the gate including a rock shaft, connections between said shaft and the gate, and counterweight carrying arms extending from the rock shaft, and operating means for opening the gate including a vertically movable plunger, an arm extending from the rock shaft, a plunger stem, and arm engaging means adjustably mounted on said stem whereby the plunger and the plunger stem may have a predetermined limited movement with respect to the arm extending from the rock shaft.

5. In a device of the class described, a jig tank having a front wall over which coal may flow, and a slate gate hinged at the lower edge of said wall, operating means for closing the gate including a rock shaft, connections between said shaft and the gate, and counterweight carrying arms extending from the rock shaft, and operating means for opening the gate including a vertically movable plunger, an arm extending from the rock shaft, a plunger stem, and arm engaging means on said stem, and a cylindrical guide for said plunger, said guide being provided at its lower end with a reduced portion forming a recess facing the wall with which the slate gate is connected.

[Claims 6 to 8 not printed in the Gazette.]

1,192,297. HYDROCARBON-BURNER. GEORGE F. GAVARD, Denver, Colo., assignor of one-half to Lon E. Steele, Denver, Colo. Filed July 27, 1915. Serial No. 42,190. (Cl. 158—8.)



1. A hydro-carbon burner comprising a base, a mixing-chamber thereon, having an air-inlet and a vapor-outlet, a plate connected with the base, to occupy an opening in the side of a stove in whose fire-chamber the burner is installed, a vaporizing pipe and a therewith connected apertured vapor-feed-pipe extending respectively over and through the mixing-chamber and both projecting through openings in the said plate, and means for the connection of the vaporizing pipe with a source of fuel-supply, exteriorly of the plate.

2. A hydro-carbon burner comprising a base, a mixing-chamber composed of a conduit spaced from the base and connected at its ends with inlets in the under surface of the same, the said chamber having intermediate of the said inlets, a vapor outlet, a vaporizing-pipe and an apertured vapor-feed pipe connected at one of their ends, and extending respectively longitudinally over and longitudinally through the mixing-chamber, a closure for the opposite end of the feed pipe, and means for the connection of the opposite end of the vaporizing pipe with a source of fuel-supply.

3. A hydro-carbon burner comprising a base having a priming-tray, a mixing-chamber composed of a conduit spaced from the base and connected at its ends with inlets in the under surface of the same, the said chamber having intermediate of the said inlets, a vapor outlet, and an outlet for the discharge of liquid into the priming-tray, a vaporizing-pipe and an apertured vapor-feed pipe connected at one of their ends, and extending respectively longitudinally over and longitudinally through the mixing-chamber, a closure for the opposite end of the feed pipe and means for the connection of the opposite end of the vaporizing pipe with a source of fuel-supply.

4. The combination with the fire-chamber of a stove, of a hydrocarbon burner including a mixing chamber in the fire-chamber, having an air-inlet and a vapor-outlet, a vaporizing pipe and an apertured vapor-feed pipe connected within the fire chamber and extending respectively over and through the mixing chamber, the said pipes projecting at their unconnected ends exteriorly of the fire chamber, means for connecting the exterior end of the vaporising pipe with a source of fuel supply, and a removable means closing the exterior end of the vapor-feed pipe.

5. The combination with the fire chamber of a stove, of a hydro-carbon burner including a vaporizing pipe and an apertured vapor-feed pipe connected within the fire chamber and projecting at their unconnected ends exteriorly of the fire-chamber, means for connecting the exterior end of the vaporizing pipe with a source of fuel supply, and a removable means closing the exterior end of the vapor-feed pipe.

[Claims 6 to 8 not printed in the Gazette.]

1,192,298. TOOTH-BRUSH. ABRAHAM GERSTENZANG, New York, N. Y. Original application filed Oct. 6, 1913, Serial No. 793,545. Divided and this application filed Mar. 29, 1915. Serial No. 17,585. (Cl. 15—39.)

1. A tooth brush having a back, a range of bristles, a handle section offset relatively to the back, and a movable member engaging the handle section, said member and section being in line with the longitudinal center of the brush, the lateral dimensions of the handle section and member being less than a lateral dimension of the back and range of bristles.



2. A tooth brush having a back, a range of bristles, a handle section offset relatively to the back, and a plurality of movable members engaging the handle section, and one within another, said members and section being in line with the longitudinal center of the brush, the lateral dimensions of the section and outside member being less than a lateral dimension of the range of bristles and the back.

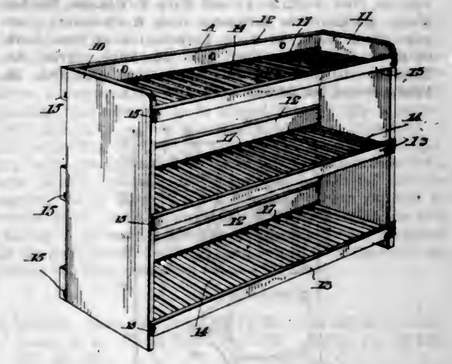
3. A tooth brush having a back, a range of bristles, a handle section offset relatively to the back, a plurality of movable members engaging the handle section, and one within another, said members and section being in line with the longitudinal center of the brush, and each of a diameter less than the lateral dimension of the back and bristles, and means for securing the members together and to the section against movement in any direction.

4. A tooth brush having a back, a range of bristles extending longitudinally of and projecting from one side thereof, a handle section integral with the back and offset relatively thereto, said section extending in the same longitudinal direction as the back and in line with the longitudinal center of the brush, screw threads on the extremity of the section, a tubular member, a female thread on the member and engaged by the thread on the section, a male thread on the opposite end of the member, a second tubular member having a female thread engaging the male thread on the first mentioned member, the diameter of the second tubular member being less than the greatest lateral dimensions of the range of bristles and the back.

5. A tooth brush having a back, a range of bristles, a handle section offset relatively to the back, a plurality of hollow, open ended movable members engaging the handle section and one within the other, said members and section being in line with the longitudinal center of the brush, the diameters of the members being less than the lateral dimension of the back and bristles, and means for securing the members together and to the section against movement in any direction.

[Claim 6 not printed in the Gazette.]

1,192,299. DRAIN-RACK. FRANK ALBERT GOEBEL, Port Arthur, Ontario, Canada. Filed Mar. 27, 1916. Serial No. 87,055. (Cl. 141—11.)



1. A drain rack comprising end members, a plurality of longitudinally extending bars operatively supporting the end members in spaced relation, and provided with longitudinally extending grooves in the inner faces thereof, a metallic channel mounted in each of the said grooves and a plurality of transversely extending slats equidistantly

spaced having their ends frictionally embraced by the said channels.

2. A drain rack comprising end members, a plurality of longitudinally extending bars operatively supporting the end members in spaced relation, and provided with longitudinally extending grooves in the inner faces thereof, metallic channels mounted in each of the said grooves provided with flanges along the longitudinal edges designed to snugly engage the face of the bar, and a plurality of equidistantly spaced transversely extending slats having their ends frictionally embraced by the said channels.

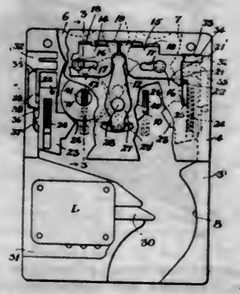
1,192,300. METALLIC TIE. WILLIAM GOTTLIEB, Port Jervis, N. Y. Filed Apr. 14, 1916. Serial No. 91,167. (Cl. 238—5.)



1. The combination with a hollow metal tie, of rail seats upon the tie, spring members between the rail seats and the ties, each of said rail seats having one of its ends formed with rail engaging hooks, rail-engaging clips connected with the other end of the rail seats, and guide members secured to the tie contacting with the rail seats between the rail engaging elements thereof and having inturned portions which overlie the base flanges of the rail.

2. The combination with a hollow metal tie, of rail seats comprising flat plates having socket members which extend through openings in the tie, a helical spring in each of the sockets and exerting a pressure between the rail seat and the lower wall of the tie, the rail supporting plate of each of the seats having one of its edges provided with rail engaging hooks, removable rail engaging clips secured to the opposite edge of each of said seats, guide members for the rail seats disposed to the opposite sides of the said seats and connected to the ties and contacting with the seats between the rail engaging elements thereof, said guide members having their upper edges flanged inwardly to overlie the rail seats and to normally contact with the upper face of the base flange of the rails.

1,192,301. WASHER-CATCHING DEVICE FOR COIN-CONTROLLED VENDING-MACHINES. ALBERT D. GROVER, New York, N. Y., and EARL E. BARBER, Malden, Mass., assignors to Autosales Gum & Chocolate Company, New York, N. Y., a Corporation of New York. Original application filed Apr. 22, 1913, Serial No. 762,810. Divided and this application filed Oct. 29, 1915. Serial No. 58,544. (Cl. 194—97).



1. In a coin-controlled lock having a coin-chute for receiving the deposited coin, the combination with a coin-carrier movable within said coin-chute for conveying the deposited coin into operative position, of a yieldable pawl arranged to project normally into said chute but adapted to be repressed by a good coin on the carrier, so that a ring or washer on said coin-carrier allows said pawl to enter the opening thereof, whereby the coin-carrier is locked against further movement, and means on said coin-carrier to repress said pawl for permitting free operation of the empty carrier in either direction.

2. In a coin-controlled machine, a coin-carrier rotatable in opposite directions, a pair of members on opposite sides of said coin-carrier to lock the same against rotation in either direction by entering the opening of a ring or washer on said coin-carrier, and oppositely beveled surfaces provided on said coin-carrier for engaging said members and moving them into inoperative position when the coin-carrier is rotated empty or with a good coin.

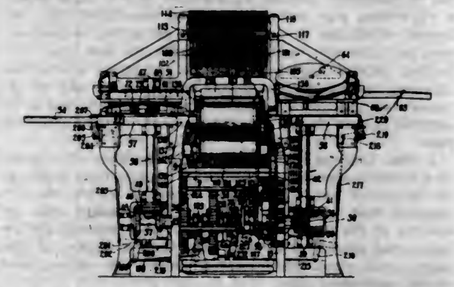
3. In a coin-controlled machine, a coin-carrier rotatable in opposite directions, a pair of members on opposite sides of said coin-carrier to lock the same against rotation in either direction by entering the opening of a ring or washer on said coin-carrier, and means on said coin-carrier to repress said members for permitting free operation of the coin-carrier in either direction when empty or when carrying a proper coin.

4. In a coin-controlled machine, a movable coin-carrier, a movable pawl adapted to project into the opening of a ring or washer on said coin-carrier and thereby positively stop said carrier against further operation, and means on said coin-carrier to move said pawl into inoperative position when the carrier is empty.

5. In a coin-controlled machine, a casing having a coin-slot or passage, a rotatable coin-carrier, a yieldable member supported at one end and provided at its other or free end with a head projecting normally into said coin-slot or passage, whereby said head is adapted to enter the opening of a washer on said coin-carrier, said head having a beveled surface and an abrupt surface so arranged that said abrupt surface unyieldingly engages the inner edge of the washer and thereby positively locks said washer and coin-carrier against forward movement, said beveled surface permitting removal of the inserted washer through said coin-slot.

[Claims 6 to 9 not printed in the Gazette.]

1,192,302. LOOM. ROBERT A. HAMMOND, Sandwich, SIDNEY E. TAFT, South Framingham, and CHARLES S. GOODING, Brookline, Mass.; said Taft and Gooding assignors to said Hammond. Filed Oct. 14, 1907, Serial No. 397,315. Renewed Sept. 9, 1914. Serial No. 860,965. (Cl. 139—39.)



1. In a loom, a reel for the filling, a slide upon which said reel is journaled, a carrier slide on which said reel slide is adapted to reciprocate, and means to impart a reciprocatory movement to said slides transversely of and between the warp strands.

2. In a loom, a carrier for the filling, instrumentalities adapted to impart a reciprocatory movement to said carrier transversely of and between the warp strands, and a guide supported upon and extending laterally from said carrier and longitudinally of the warp strands adapted to guide said filling between the warp strands of the shed.

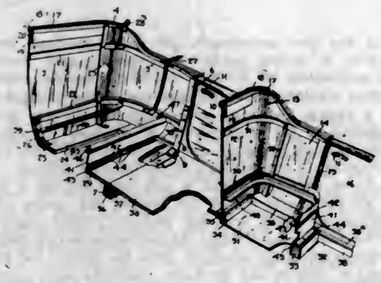
3. In a loom, a carrier for the filling, instrumentalities adapted to impart a reciprocatory movement to said carrier transversely of and between the warp strands, a guide frame secured to said carrier, and a pair of guide rolls journaled on said frame and adapted to guide said filling between the warp strands of the shed.

4. In a loom, a reel for the filling, a slide upon which said reel is journaled, a carrier slide on which said reel slide is adapted to reciprocate, a rack on said carrier slide, ways on opposite sides, respectively, of the shed in which said carrier slide is adapted to move, and gears on opposite sides, respectively, of said shed adapted to engage said rack, whereby said reel and the slides are adapted to be moved through said shed.

5. In a loom, a reel for the filling, a slide upon which said reel is journaled, a carrier slide upon which said reel slide is adapted to reciprocate, stops on said carrier slide at opposite ends thereof, respectively, adapted to limit the distance to which said reel slide may move on said carrier slide, and means to impart a reciprocatory movement to said carrier slide transversely of and between the warp strands.

[Claims 6 to 23 not printed in the Gazette.]

1,192,303. VEHICLE-BODY. JAMES G. HEASLET, Detroit, Mich., assignor to The Studebaker Corporation, a Corporation of New Jersey. Filed Feb. 4, 1915. Serial No. 6,075. (Cl. 21—7.)



1. In a vehicle body, the combination of a rigid base frame, upstanding door posts at opposite sides of the frame, a back plate extending around the rear of the frame from one post to the other with its ends secured to said posts, an upstanding plate extending across the back plate and near the forward ends thereof, means at the upper edge of said plate for supporting the forward edge of a seat, a plurality of stiffening ribs arranged interially of the back plate, and in engagement therewith, for maintaining it in shape, and a transverse brace, secured at its opposite ends on one of said horizontal stiffening ribs, for supporting the rear portion of the seat.

2. An automobile body construction embodying a base frame for the body, a sheet metal plate rigidly mounted on the frame and shaped to form the back and sides of a seat, a horizontal wooden rib extending around the inner surface of said plate, and in engagement therewith, to maintain the plate in form, a seat, a seat supporting member suspended on the wooden rib for supporting the rear portion of the seat, and a transverse brace extending across the interior of said plate, near its forward edges, and underlying and supporting the forward portion of said seat.

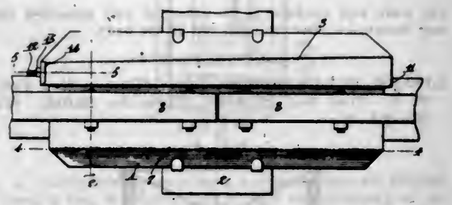
3. A vehicle body including the sides and floor of a body structure, a transverse supporting plate adapted to engage the sides and the floor, and an angle iron strip, one edge of said plate being doubled upon itself to engage and retain in clamping relation one flange of the angle iron strip.

4. A vehicle body having a transverse supporting plate provided with a plurality of longitudinal reinforcing beads, one edge of said plate being bent to form a retaining flange at substantially right angles to the plate, while the other edge of said plate is doubled upon itself and into engagement with a member of an angle iron to retain the angle iron in coöperative relation to one of said beads.

5. A vehicle body including the sides, floor and transverse seat plate of a body structure, a substantially rectangular seat support of angular members mounted on said sides and seat plate, and a transverse supporting plate having a floor engaging flange and one of its edges bent to frictionally engage a member of the rectangular seat support to support the same.

[Claims 6 to 15 not printed in the Gazette.]

1,192,304. RAIL-JOINT CHAIR. WILLIAM RUFUS HEDRICK and ARIS CRITTENDEN THROCKMORTON, Rapidan, Va. Filed May 1, 1916. Serial No. 94,849. (Cl. 239—6.)



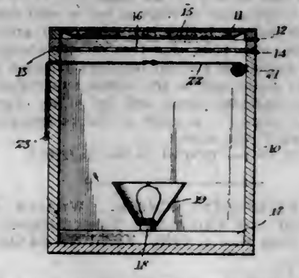
1. A rail joint chair including a base which is adapted to be centrally secured to a tie, a longitudinally extending rib upon the base adjacent one of the edges thereof, and projecting beyond one of the ends of the base, said rib having its inner face channeled and being of a greater width at one of its ends than at its other and projecting end, and the channel being likewise deeper at the wider end of the rib than at the reduced end thereof, the base adjacent its opposite edge having longitudinal openings, the inner ends of which being disposed coincident with the sides of the tie, and the opposite ends being reduced, an angle plate having depending lugs provided with fingers which are adapted to be passed through the openings and to be moved outwardly of the base to permit of the fingers contacting with the underface of the base, a second removable side having its horizontal portion wedge-shaped and adapted to be received in the groove of the rib and by virtue of the contacting with the inner wall of the groove to be moved laterally toward the first mentioned side, a bolt member removably secured to the narrower end of the last mentioned side, a plate for the projecting end of the rib having an opening through which the bolt passes, and a nut for the bolt.

2. A joint chair for connecting the meeting ends of two railway rails, including a base having a channeled rib arranged longitudinally adjacent one of its edges and having substantially L-shaped slots adjacent its opposite edges, a removable side having substantially L-shaped depending lugs adapted to be passed through the L-shaped slots and to be moved laterally of the base to permit of the projecting portions of the said L-shaped lugs engaging with the underface of the base, a second removable side having an angularly disposed horizontal portion adapted to be received in the channel of the rib and by virtue of the engagement with the inner wall of the said channel to be moved laterally of the base in the direction of the first mentioned side, and means for adjustably securing the last mentioned side to the base.

1,192,305. EGG-TESTING DEVICE. CHRISTIAN P. HEIL, Avon, S. D. Filed Nov. 26, 1915. Serial No. 63,582. (Cl. 99—6.)

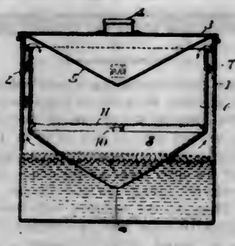
An egg tester comprising a box-like body, a reticulated egg supporting tray swingingly connected to the body at the top thereof, a cover swingingly connected to the tray at the side of its connection with the body and having a padded lining, an electric fixture arranged within the body and including a reflector and electric light socket, an elec-

tric circuit including the socket, a cut-off switch arranged in the circuit, and a roller shade mounted in the top of



the body and adapted to be extended and retracted for any distance across the open top of the body.

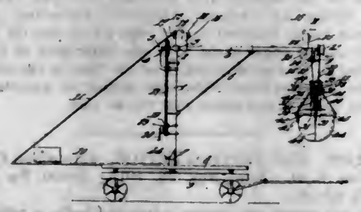
1,192,306. STEAM-COOKER. LUCIEN HEISER, New York, N. Y. Filed May 21, 1915. Serial No. 29,615. (Cl. 53—2.)



1. A cooker comprising a boiler, a cover for the boiler, said cover having a depending conical section, a receptacle adapted to be supported in the boiler with its sides spaced from the sides of the boiler and its bottom spaced from the bottom thereof, the bottom of the receptacle being provided with an opening and a screen supported in the receptacle above the bottom thereof.

2. A cooker comprising a boiler, brackets mounted at the inner surfaces of the sides of the boiler, a cover for the boiler having a depending conical section, a receptacle having lugs adapted to engage the brackets whereby the receptacle is supported in the boiler with its sides spaced from the sides thereof and its bottom spaced from the bottom thereof, the bottom of the said receptacle being con-shaped and provided at its lowest point with an opening, brackets located within the receptacle above the bottom thereof and a screen resting upon the brackets.

1,192,307. LITTER-CARRIER. HENRY B. HESTER, New Haven, Ind. Filed Nov. 20, 1914. Serial No. 873,183. (Cl. 57—9.)



1. In apparatus of the class described, a frame, a cable connected thereto for raising and lowering the same, a ratchet bar mounted to slide within the frame, radial arms pivotally mounted and movable with the bar, load engaging members fixedly connected to said arms, link connections between the outer ends of the arms and the frame, means upon the frame for engaging the bar to hold said bar against downward movement and the load engaging members in load supporting position, a tripping element in the path of the frame, and means carried by the frame and movable against the tripping element for disengaging the ratchet bar to shift the loading engaging elements apart.

2. In apparatus of the class described, a frame, means for raising and lowering the frame, a ratchet bar slidably mounted in the frame, load engaging devices pivotally connected to the ratchet bar, links connecting said devices to the frame, a pawl carried by the frame and normally engaging the ratchet bar to hold said bar in raised position relative to the frame and to hold the load engaging devices in load retaining position, a yieldably supported tripping element slidably mounted in the frame, and means operated by the final upward pull of the frame for depressing said element against the pawl to release the ratchet bar.

1,192,308. TOY GUN. EDWIN P. HICKS, Greenwood, Ark. Filed Apr. 29, 1916. Serial No. 94,404. (Cl. 124—13.)



1. A toy gun including a gun body provided with a magazine, a spring actuated carrier, trigger governed latch mechanism for holding the carrier set for action, a projector pivotally mounted upon the carrier and provided with a charge receiving pocket adapted by the pivotal movements of the projector to be disposed in receiving and discharging positions, and means operative for tilting the projector in the setting and discharging actions.

2. A toy gun comprising a gun body having a magazine, an automatic cut-off for closing the outlet of the magazine, a spring actuated carrier, trigger controlled latch mechanism for holding the carrier in setting position, a projector pivotally mounted upon the carrier for tilting motions to receive and discharge positions, said projector being provided with a charge receiving pocket and adapted to retract said cut-off when said pocket is moved into registry with the outlet of the magazine, and means operative for setting the aforesaid elements and tilting the projector to the stated positions.

3. A toy gun comprising a gun body having a magazine provided with an outlet, an automatically closed cut-off for the outlet, a longitudinally movable carrier, a motor spring adapted to be tensioned on the rearward movement of the carrier for subsequently actuating said carrier, trigger controlled latch mechanism for holding the carrier in set position, a pivotally mounted projector on the carrier having a charge receiving pocket and tiltable to receiving and discharging positions, said projector adapted when set to engage and hold the automatic cut-off retracted, a slidably mounted device movable to set the carriage and tension the motor spring and tilt the projector to receiving position, and means for tilting the receiver to discharge position upon the limit of forward motion of the carriage.

4. A toy gun including a gun body, a magazine upon the body having an outlet, an automatic cut-out for closing the outlet, a longitudinally movable carrier, a contractile motor spring for actuating the carrier, a cushioning connection between the spring and body operating to control the contractile motion of the spring, a projector pivotally mounted upon the carrier and having a charge receiving pocket, means for setting the carrier and tilting the projector to receiving position and means for tilting the projector to discharge position at the limit of forward movement thereof.

5. In a toy gun, the combination of a gun body, having a magazine provided with an outlet, a bracket upon the body providing an abutment surface and an arm, a carrier, trigger controlled latch mechanism for holding the carrier in setting position, a contractile motor spring connected at one end with the carrier and adapted to be expanded on the setting motion of the carrier for subsequent reaction to actuate said carrier, a sliding spring controlled cushioning connection between the other end of the motor spring and the said bracket arm, a projector pivotally mounted upon the carrier on tilting movements to receiving and discharging positions, said projector having a pocket to receive the charge and being adapted on its forward movement to engage and be tilted to discharge position by said abutment surface of the bracket, and means for setting the carrier and tilting the projector to receiving position.

1,192,309. MOTOR-CAR LOCK. PAUL HINKLEY, Los Angeles, Cal. Filed May 3, 1915. Serial No. 25,387. (Cl. 70—90.)



1. In a locking device for levers the combination with a lever having a notch on its edge, of a ring encircling the lever, a slidable sleeve on the lever having a transverse opening therethrough overlapping the edge of the lever adapted to register with the notch when the sleeve is within the ring, and means insertible through the opening engageable with the notch for locking the sleeve against movement in relation to the lever and ring.

2. In a locking device for levers, the combination with a lever having a transverse notch on one edge thereof, of a ring encircling the lever adjacent its fulcrum, having an inwardly extending wall, a sleeve slidably mounted on said lever adapted to seat on the wall having a transverse opening therethrough communicating with the interior of the sleeve and overlapping the edge of the lever so as to register with the notch in the latter when the sleeve is in its seated position, and means insertible through the opening engaging the notch for locking the sleeve against movement in relation to the lever and seat.

1,192,310. CAOUTCHOUC-LIKE SUBSTANCES AND PROCESS OF MAKING THEM. HENRY STALAY ARTHUR HOLT, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed July 30, 1913. Serial No. 782,028. (Cl. 23—24.)

1. The process of producing substances resembling or related to caoutchouc by treating a hydrocarbon of the butadiene series with an alkali metal in the presence of carbon dioxid.

2. The process of producing substances resembling or related to caoutchouc by treating a hydrocarbon of the butadiene series with an alkali metal in the presence of carbon dioxid at a raised temperature.

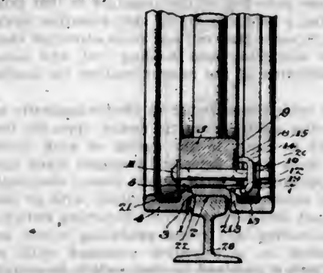
3. The process of producing substances resembling or related to caoutchouc by treating a hydrocarbon of the butadiene series with an alkali metal in the presence of carbon dioxid and of a suitable solid body.

4. The process of producing substances resembling or related to caoutchouc by shaking a butadiene hydrocarbon with an alkali metal and zinc balls in the presence of carbon dioxid.

5. The process of producing substances resembling or related to caoutchouc by treating a butadiene hydrocarbon with an alkali metal in the presence of carbon dioxid, and then, when a dark colored mass has been obtained, adding a further quantity of butadiene hydrocarbon, and allowing polymerization to proceed, also in the presence of carbon dioxid.

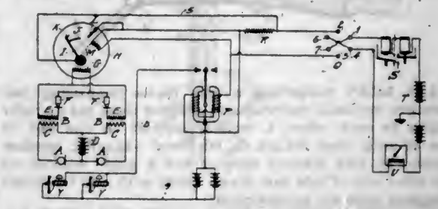
[Claims 6 to 9 not printed in the Gazette.]

1,192,311. VEHICLE-WHEEL. WILLIAM F. HOLT, Redlands, Cal. Filed June 7, 1915. Serial No. 32,495. (Cl. 21—154.)



A vehicle wheel comprising a felly having an annular recess, a rim, a binding ring around the periphery of the felly composed of a fixed section and a removable section, said removable section being wedgedly seated between the fixed section and rim, said fixed section being provided at one edge with an inwardly extending annular flange seated in the annular recess and provided with orifices, the removable section being provided with notches, retainers having teeth seated in said notches, each of said retainers having an orifice and having the end opposite the tooth extended inward beyond the plane of said tooth to form a finger engaging said annular flange, bolts passing through the retainers and through said annular flange and through the felly, the outer end of each retainer being provided with a curved socket, washers having curved faces seated in said curved sockets, and nuts on the bolts to hold the washers in place.

1,192,312. BURGLAR OR DETECTION SYSTEM. RICHARD M. HOPKINS and JOSEPH F. D. HOGE, New York, N. Y., assignors to American District Telegraph Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 6, 1915. Serial No. 65,194. (Cl. 177—314.)



1. An alarm system comprising in combination a relay having an actuating coil, one or more sound detectors inductively associated with the relay actuating coil to cause actuation of that relay, and one or more rectifiers in the circuit or circuits through which the relay is operated by such detector or detectors, such rectifier or rectifiers serving to insure the supply to the actuating coil of the relay of uni-directional current.

2. An alarm system comprising in combination one or more induction coils, a sound detector connected to the primary of each such induction coil and arranged by its operation to vary the flow of current through that primary coil, a relay having an actuating coil in the circuit of the secondary of each such induction coil, a rectifier also in the secondary circuit of each such induction coil, and

means operated by operation of the relay for sending an alarm.

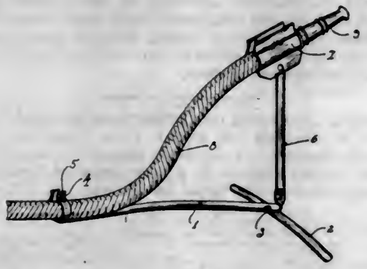
3. An alarm system comprising a relay having a movable armature, one or more sound detectors arranged when operated to cause deflection of the armature of that relay, said relay having electro-magnetic holding means arranged to attract said armature when so deflected, means for energizing or deënergizing at will said electro-magnetic holding means, and means operated by deflection of the relay armature for sending a signal.

4. An alarm system comprising a relay having a movable armature, one or more sound detectors arranged when operated to cause deflection of the armature of that relay, said relay having a holding coil, the said armature having a core adapted to enter that coil and to be attracted thereby, means for energizing said holding coil, and means operated by deflection of the relay armature for sending a signal.

5. An alarm system comprising an electro-magnetic circuit closer having electro-magnetic means operable from a distant point to assist in the action of such circuit closer, one or more sound detectors arranged when operated to cause operation of such circuit closer, electrically operated sound producing means associated with at least one of said sound detectors, a current reversing switch, a polar relay controlling said sound producing means, and circuits controlled by such switch arranged with one polarity of current determined by that switch to energize the holding means of the first mentioned relay without operation of such sound producing means, and arranged with the other polarity determined by such switch to energize such holding means of the first mentioned relay, and also to operate the polar relay to cause operation of such sound producing means.

[Claims 6 to 8 not printed in the Gazette.]

1,192,313. LAWN-HOSE HOLDER. JOHN E. HOWELL, Sacramento, Cal. Filed Sept. 7, 1915. Serial No. 49,175. (Cl. 248—29.)

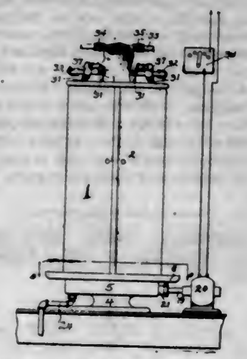


1. A holder comprising a base frame comprising two members pivotally mounted and adapted to be set at right angles to each other, a vertical support on one end of one of said base frames, a frictional engaging member carried by said vertical support and a guide member at the other end of said base frame alined with said frictional engaging member, as described.

2. A holder comprising a base frame consisting of two members pivotally mounted and adapted to be set at right angles to each other, a vertical supporting member hinged to one of said base members, a frictional engaging member fixed to the top of said supporting member, a guide member at the other end of said base member alined with said frictional engaging member, the upper end of said guide member being open to admit of the insertion of a hose, as described.

1,192,314. BATHING-MACHINE. PEYTON LEON HOWLETT, Brownwood, Tex. Filed Apr. 23, 1915. Serial No. 23,362. (Cl. 4—2.)

1. In combination with a bathing apparatus, of an annular series of vertically disposed rotary brushes, each having at one end a driven gear, and a common driving gear concentric with the annular series of brushes and in driving relation to all of said driven gears.



2. In combination with a bathing apparatus, of an annular series of vertically disposed rotary brushes, each having at one end a driven gear, and a common driving gear concentric with the annular series of brushes and in driving relation to all of said driven gears; said gears having frictional driving surfaces whereby any brush may be arrested, without interrupting the remaining brushes.

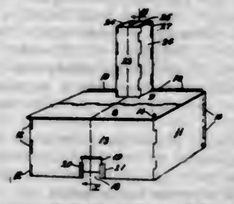
3. In combination with a bathing apparatus, of an annular series of vertically disposed rotary brushes, each having at one end a driven gear, and a common driving gear concentric with the annular series of brushes and in driving relation to all of said driven gears; said gears co-acting through the medium of friction faces and the driving gear having another face, constructed to coact with a power-transmitting element.

4. In a bathing apparatus, an annular series of vertically disposed rotary brushes adapted to surround the body of the user, and a mounting for said brushes comprising a water pipe with radially presented branch pipes, each having a bearing in which a brush rotates and through which water is supplied to the brush.

5. In a bathing apparatus, an annular series of vertically disposed rotary brushes adapted to surround the body of the user, and a mounting for said brushes comprising a water pipe with radially presented branch pipes, each having a bearing in which a brush rotates and through which water is supplied to the brush; said water pipe being in annular form and said branch pipes being extended inwardly therefrom.

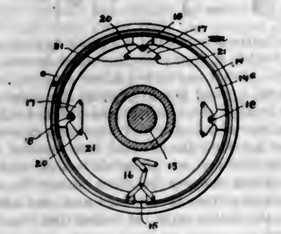
[Claims 6 to 10 not printed in the Gazette.]

1,192,315. COLLAPSIBLE STOVE. EASTER M. HUGHES, Seattle, Wash. Filed Oct. 13, 1915. Serial No. 55,610. (Cl. 126—9.)



A sheet metal collapsible stove of the class described embodying a blank plate including a vertical back wall; two plates, one end of each of which is hinged to a different one of the opposite ends of said back wall and each of which is disposed at right angles to said back wall to form opposite vertical side walls; a fourth plate having one of its ends hinged to the front end of one of said vertical side walls and its other end releasably connected with the front end of the other of said vertical walls whereby said fourth plate may serve as a vertical front wall; a controllable inlet passageway for air extending upwardly from the lower edge of one of said vertical walls; a top side wall comprising two members hinged one to the other, one of said members being hinged to the top edge of said vertical back wall to adapt said top side wall to engage with the top edges of said side walls and said front wall, the releasable connection between the front and end wall engaging the front section of the top wall, an outlet passage way for smoke disposed to extend through said top side wall; and a collapsible stove-pipe removably associated with said outlet passageway for smoke.

1,192,316. BRAKE. WILLIAM S. HUTCHINSON, Oyster Bay, N. Y. Filed Aug. 4, 1915. Serial No. 43,692. (Cl. 74—13.)



1. A brake comprising a rotatable member, a shoe arranged within said member and movable back and forth in relation thereto, a lever block pivotally connected with the back of the shoe, and stationary abutments between the lever block and the axis of the rotatable member, said lever block seating and rocking upon said abutments.

2. A brake comprising a rotatable member a shoe essentially concentric with and lying within said rotatable member, the shoe having a limited rotary movement with said rotatable member, a plurality of oscillating blocks pivotally connected with the shoe, and a plurality of abutments for each block upon which the block seats and rocks, said abutments being located between the shoe and the axis of the rotatable member.

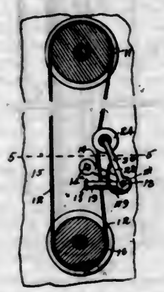
3. A brake comprising a rotatable member, a shoe arranged within the member and movable into and out of frictional engagement with said member, said shoe also having a limited rotary movement in both directions with said rotatable member, a plurality of blocks pivoted to the back of the shoe, and each provided with seats spaced apart, and abutments for said block seats, said abutments being located between the shoe and the axis of the rotatable member.

4. A brake comprising a rotatable member, an expansible shoe arranged within the member and essentially concentric therewith, said shoe having a limited rotary movement with said rotatable member, a plurality of blocks pivoted to the back of the shoe, and stationary abutments for each block, said abutments being spaced apart and serving as fulcrums for the oscillating block.

1,192,317. FAN GUIDE AND TENSION DEVICE. WILLIAM ROY ILLINGWORTH, Bondurant, Iowa. Filed Oct. 12, 1915. Serial No. 55,572. (Cl. 64—5.)

1. A guide and tension device for fan belts comprising a rod, means for securing said rod to a support, a pair of spaced arms on said rod extending at right angles to said rod in parallel relation to each other, an arm pivotally mounted on said first rod at right angles thereto having at its outer end a right angled extension, a rotary member mounted on said extension, and a yielding device tending to move said last described arm in one direction.

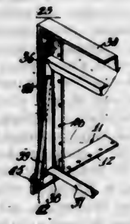
2. A guide and tension device for fan belts, comprising a rod having an arm on one end thereof arranged at right angles to said rod, means for securing said rod to a support, a pair of spaced arms on said rod extending therefrom at right angles to said rod in parallel relation to each other, an arm pivotally mounted on said rod at right angles thereto having at its outer end a right angled extension, a spool mounted on said extension, and a yielding device tending to move said last described arm in one direction, and sleeves rotatably mounted on said second described rods.



3. A guide and tension device for fan belts comprising a rod having an arm on one end thereof arranged at right angles to said rod, means for securing said rod to a support, a pair of spaced arms on said rod extending at right angles to said rod in parallel relation to each other, an arm pivotally mounted on said rod at right angles thereto having at its outer end a right angled extension, a sleeve rotatably mounted on said extension, a spool rotatably mounted on said sleeve having hollow ends, grease cups mounted in said hollow ends.

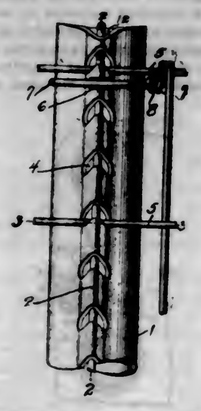
4. A guide and tension device for belts comprising a supporting member adapted to stand adjacent to a belt, a pair of guide arms on said supporting member adapted to receive the belt between them and a tension member pivotally mounted on said supporting member adapted to engage said belt for yieldingly moving it in one direction.

1,192,318. SANITARY COT. FRANCIS S. INCO, Los Angeles, Cal. Filed Aug. 24, 1915. Serial No. 47,170. (Cl. 5—47.)



In a cot a body portion forming a frame, a back pivoted to said body portion and forming an extension to said frame when let down into the lowered position or a back when raised at right angles to said frame, a spring structure secured inside said frame and said back in such a manner as to form a continuous approximately plane surface when the back is let down into the lowered position, an outer leg pivoted to the outer edge of said back, and a pair of braces each secured to said body portion and said outer leg in such a position that they lock said leg in a vertical position when the back is let down and also cooperate with said leg to lock said back with relation to said body when said back is in the raised position the lower edge of said leg frictionally engaging said body portion when the back is raised for the purpose of assisting in locking said back in the raised position.

1,192,319. FENCE-POST. HENRY ISBRANDS, George, Iowa. Filed Feb. 16, 1916. Serial No. 78,713. (Cl. 256—52.)



1. In combination with a fence post having a plurality of angularly disposed seats therein, said seats adapted to receive and support a plurality of fence wires, a tie wire arranged adjacent said seats, said tie wire having a reversed curve portion formed adjacent one end thereof and engageable with the adjacent fence wire, and a second tie wire arranged about said post and engageable with the remaining portion of said reversed curve, whereby the same may be locked in position.

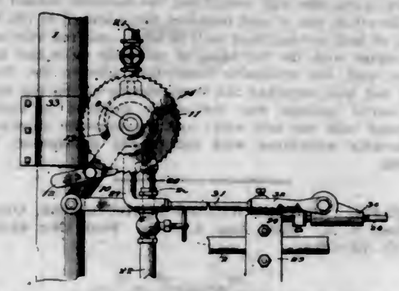
2. In combination with a fence post, having a vertically disposed rib extending for a portion throughout the length thereof, and a plurality of angularly disposed wire receiving seats arranged in said rib, of a stay wire arranged adjacent said rib and said seats, said stay wire having a reversely curved portion formed adjacent one end thereof, one portion of said reversed curve engageable with the adjacent fence wire, a locking wire encircling said post and engageable with the remaining portion of said reversed curve whereby the stay wire may be locked in position, and means formed by bending one end of the stay wire upon itself for extracting the same.

3. A fence post comprising a hollow cylinder, a ridge formed on said cylinder having angularly disposed slots cut therein for the reception of strands of wire, a stay wire having an S-shaped bend formed therein at one end thereof, a locking wire extending around said cylinder and through a horizontal slot formed in said ridge, said locking wire engaging the bend in said stay wire, and a handle formed on the end of said stay wire.

4. A fence post, including a hollow cylindrical body, a longitudinally disposed ridge arranged exteriorly of said body and extending for a portion throughout the length thereof, a plurality of slots arranged in said ridge for receiving fence wires, a tie wire arranged interiorly of said body and adjacent said seats, said tie wire having a reversed curved portion formed adjacent one end thereof and engageable with the adjacent fence wire, and a second tie wire arranged about said body and engageable with the remaining portion of said reversed curve, whereby the first mentioned tie wire may be locked in position.

1,192,320. POWER-FEED OIL-DROPPER. ANDREW OTIS JACKSON, Corvallis, Oreg. Filed June 2, 1915. Serial No. 31,762. (Cl. 184—71.)

1. In a lubricator, a casing having an oil inlet and an oil outlet, a plug valve fitted within the casing and having an oil pocket, a ratchet wheel secured to the valve, a pivoted arm, a pawl mounted upon the arm and adapted to engage the teeth of the ratchet wheel, a stop for limiting the movement of the arm in one direction, a spring yieldingly holding the arm in engagement with the stop, a reciprocating member, and an adjustable connection between the reciprocating member and pivoted arm for varying the movement of the latter and thereby regulating the feed of the oil by governing the frequency of the oil discharge.



2. A lubricator comprising a casing having an oil inlet and an oil outlet, a plug valve mounted in the casing and having an oil pocket, a ratchet wheel secured to the valve, a pivoted arm, a pawl mounted upon the pivoted arm and adapted to engage the teeth of the ratchet wheel, a stop to limit the movement of the pivoted arm in one direction, a spring for pressing the pivoted arm against the stop, a reciprocating member, an adjustable stop connected with the reciprocating member to move therewith, and a connection extending from the pivoted arm and adapted to be engaged by the latter stop for regulating the delivery of the lubricant.

3. A lubricator including a bracket having vertically spaced arms formed with alined passages, coupling members threaded in the passages, a sight glass clamped between the coupling members, a valve casing having an inlet port and an outlet port communicating with the passage in the upper arm of the bracket, and a plug valve fitted within the casing and having an oil pocket movable successively into communication with the inlet and outlet ports.

4. A lubricator including a casing having an oil inlet and an oil outlet, a turn plug valve mounted in the casing and having an oil pocket co-acting with the inlet and outlet, a lever mounted for oscillation, means operable upon oscillation of the lever for imparting movement to the valve, a guide rod adapted for attachment to a reciprocating member of a machine, a stop upon the guide rod, a sleeve slidable on the guide rod and engageable against the stop, a link pivoted at one end to the sleeve and at the other end to the lever, a stop limiting the movement of the lever in one direction, and means yieldably holding the lever against such stop.

1,192,321. HOOK-AND-EYE FASTENING. JOHAN EMIL JANSSON, Hampstead, England. Filed June 26, 1915. Serial No. 36,423. (Cl. 24—228.)



1. For hook and eye fastenings, a hook consisting of a pair of side arms and a central tongue lying between the side arms, the side arms being contracted by bends therein extending to points adjacent the tongue intermediate of its length, to form retaining means to coöperate with the tongue, and the side arms being continued beyond the end of the tongue and formed into loops.

2. For hook and eye fastenings a hook consisting of a pair of side arms and a central tongue lying between the side arms, the side arms being contracted by a bend which extends inward toward the tongue at different points and then away from the tongue again so as to form a spring retaining lock, the said side arms after bending away from the tongue being carried forward beyond the end of the tongue and provided at their ends with loops for attachment, the said terminal portions being bent toward one another until the attaching loops lie closely together.

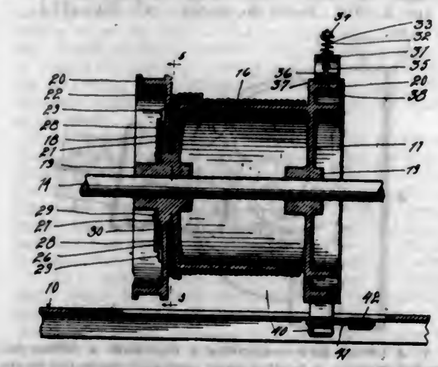
3. For hook and eye fastenings a hook consisting of a pair of side arms and a central tongue lying between the side arms, the side arms being contracted by a bend which extends inward toward the tongue spaced from the free end thereof toward the base of the tongue and then away from the tongue again so as to form a spring retaining lock, the said side arms after bending away from the tongue being carried forward beyond the end of the tongue and provided at their ends with loops for attachment, the said contracted bend being placed at different positions along the length of the tongue.

4. For hook and eye fastenings a hook consisting of a pair of side arms and a central tongue lying between the side arms, the side arms being contracted by bends which extend inward toward the tongue at points intermediate of its length and then away from the tongue again so as to form a spring retaining lock, the said side arms after bending away from the tongue being carried forward in parallel relation and beyond the end of the tongue and provided at their ends with loops for attachment, said tongue and side arms being disposed in different planes.

5. A hook for hook and eye fastenings consisting of a pair of side arms and a central tongue lying between the side arms, the side arms being contracted by bends extending inward toward the tongue at different points in the length thereof between the root and end of the tongue, and then bent away from the tongue before reaching the end thereof so as to form a spring retaining lock situated rearwardly of the tip of the tongue, the said side arms after bending away from the tongue being carried forward beyond the tip of the tongue so as to form a protecting inclosure therefor into which the tongue projects.

[Claim 6 not printed in the Gazette.]

1,192,322. HOISTING MECHANISM. HARRY E. JENKINS, Joplin, Mo., assignor of one-half to George H. Glade, Joplin, Mo. Filed Sept. 27, 1915. Serial No. 52,928. (Cl. 242—117.)



1. In hoisting mechanism, a winding drum provided near one end with a cable receiving groove which has a width substantially equal to the diameter of the cable and has a substantial depth so that a plurality of turns of the cable may be arranged therein, said groove being inclined inwardly with relation to its longitudinal axis.

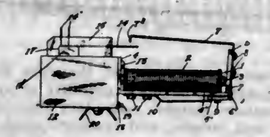
2. In hoisting mechanism, a winding drum provided near its ends with flanges and adjacent one flange with a cable receiving groove which has a width substantially equal to the diameter of the cable and has a substantial depth so that a plurality of turns of the cable may be arranged therein, said groove being inclined inwardly with respect to the longitudinal axis of the drum.

3. In hoisting mechanism, a drum provided with flanged ends and having a groove formed in one end and inclined inwardly with respect to the longitudinal axis of the drum and an opening leading into the groove and passing to the exterior of such end, a cable passing through the opening and adapted to be wound within the groove and upon the drum, and means to clamp the cable to the exterior of the grooved end of the drum.

4. In hoisting mechanism, a drum provided with flanged ends and having a groove formed in one end and inclined inwardly with respect to the longitudinal axis of the drum and an opening formed in the grooved end and leading into the groove and passing to the exterior of such end, a cable passing through the opening and adapted to be wound within the groove and upon the drum, adjustable means for clamping the cable to the exterior of the grooved end, and means carried by the exterior surface of the grooved end for receiving surplus cable.

5. In hoisting mechanism, a drum provided with a cable receiving groove and having a lateral opening adjacent the bottom of the groove for the passage of the cable, and an equalizing wedge arranged within the bottom of the groove adjacent the lateral opening and tapering away from the opening.

1,192,323. RELAY. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1914. Serial No. 872,489. (Cl. 175—330.)



1. A device of the character described comprising an electromagnet, a rail for supporting one or more of such magnets upon its side, a plurality of resilient contact members insulatingly mounted upon the top of said rail, a heel piece for said electromagnet attached to said rail and having its free end extending forward and beneath said electromagnet, an armature pivotally supported by said heel piece in front of said electromagnet, and a contact arm carried by said armature extending back above said electromagnet, and resilient members whereby when said electromagnet is energized said contact arm presses down upon and electrically connects said resilient members.

2. A device of the character described comprising an electromagnet, a rail for supporting said electromagnet, a block of insulating material provided with longitudinal slots mounted upon said rail, resilient contact members for said slots, means for attaching one end of said members to said block whereby their opposite ends are free to move vertically in said slots, an armature for said electromagnet, and a contact arm for said armature for contacting with said contact members.

3. A device of the character described comprising a mounting rail, an electromagnet attached to the side of said rail, a slotted block of insulating material mounted upon the top of said rail, resilient contact members adapted to fit into the slots of said block of insulating material and having free ends extending forward, and an armature and a contact arm for said magnet for engaging and electrically connecting said contact members.

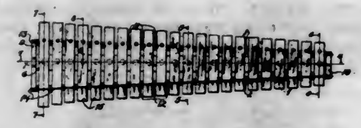
4. A device of the character described comprising a mounting rail, an electromagnet attached to one side of said rail, a plurality of resilient contact members insulatingly mounted upon the top of said rail and having free ends extending toward the free end of said electromagnet, an angular armature pivotally supported by said heel iron at the free end of said electromagnet, adjusting means carried by said armature for regulating the air gap between the core of said electromagnet and said armature, and a contact arm rigidly attached to said armature and having a contact end extending back over said electromagnet into operative relation with said resilient contact

members whereby when said electromagnet is energized said resilient contact members are electrically connected through said contact arm.

5. A device of the character described comprising a mounting rail, an electromagnet, an angular heel iron attached to said rail for supporting said electromagnet having its free end extending forward and beneath said electromagnet, resilient contact members mounted upon the top of said rail and having their free ends extending toward the free end of said electromagnet, an armature for said electromagnet pivotally supported by said heel iron, a contact arm rigidly attached to said armature having a contact end extending back over said electromagnet and said contact members, and means for energising said electromagnet whereby said armature is attracted and said contact arm impinges down upon said resilient members in rubbing contact.

[Claim 6 not printed in the Gazette.]

1,192,324. PERCUSSION MUSICAL INSTRUMENT. JOHN B. KOHLER, Chicago, Ill., assignor to The Kohler-Liebich Company, Wilmington, Del., a Corporation of Delaware. Filed Apr. 26, 1915. Serial No. 23,849. (Cl. 84—31.)



1. In a musical instrument of the class described, a long integral member having a plurality of apertures in the upper surface thereof, resonators inserted through the side of said member and communicating with said apertures, and sounding members suspended above said apertures.

2. In a device of the class described, the combination with a long integral member having a plurality of apertures in the upper surface thereof, of sounding members suspended one above each of said apertures, and resonators communicating through one of the side walls of said long integral member with certain of said apertures.

3. In a device of the class described, the combination with resonators, of sounding members one disposed above each thereof, cords supporting said sounding members, one end of each of said sounding members inserted between two of said cords, and means secured on each of the sounding members near the other end thereof to engage beneath another of said cords.

4. In a device of the class described, the combination with a plurality of resonators, of sounding members, one disposed above each of said resonators, sets of screw eyes arranged in spaced relation above said resonators, a single heavy cord trained through one set of said screw eyes upon which said sounding members rest at one of their ends, means secured rigidly on each sounding member engaging beneath said cord, and a plurality of cords trained through the other set of said screw eyes with the other ends of each of the sounding members inserted between said cords and supported thereby.

5. In a musical instrument of the class described, a sounding member, and means supporting the same comprising a single cord, means on one end of the sounding member engaging beneath said cord to hold the sounding member in position on the cord, and a pair of cords forming a part of said first mentioned means arranged to receive the other end of the sounding member inserted therebetween.

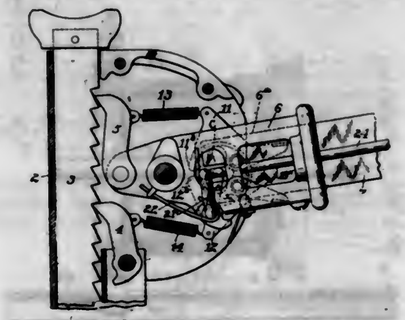
1,192,325. FASTENER FOR STORM-SASH. WILLIAM CARL JOHN KURTH, Edgemont, S. D., assignor of one-half to William Bartlett, Edgemont, S. D. Filed June 26, 1911. Serial No. 635,408. (Cl. 16—18.)

The combination with a window casing having the usual outwardly inclined sill, of upper and lower keepers in said casing provided with inner faces inclining inwardly and upwardly, said lower keepers comprising flat plates secured to the inner sides of the window casing and having inturned flanges inclined inwardly and upwardly, a frame adapted to fit in the outer side of the casing against the outside bead thereof, upper and lower bearing members on the frame for engagement with said keepers, said lower members being cut away at one side, and handles on the lower members for turning the same out of the



path of the lower keepers during the positioning of the bearing members in line with the keepers, the lower bearing members having cams thereon adapted to work against the lower keepers, upon the turning of the handles to draw said frame inwardly over said inclined sill and raise the frame, the upper and lower keepers directing the frame inwardly against the outside bead during such upward movement to bind the frame throughout its length against said bead.

1,192,326. LIFTING-JACK. GEORGE LANE, Poughkeepsie, N. Y., assignor to Lane Brothers Company, Poughkeepsie, N. Y. Original application filed Jan. 15, 1916, Serial No. 72,297. Divided and this application filed Apr. 3, 1916. Serial No. 88,631. (Cl. 254—111.)

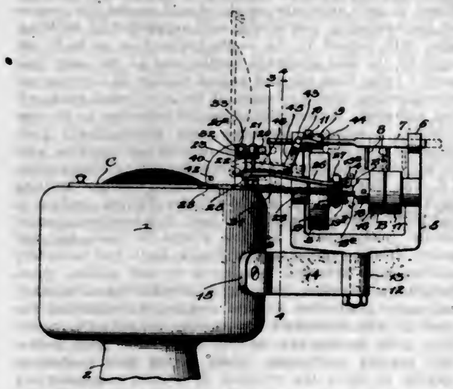


1. A lifting jack comprising a standard, a lifting bar guided thereby, a holding pawl pivotally connected to the standard to engage the ratchet bar, an actuating lever having a socket, an operating pawl pivoted to the lever to engage the lifting bar, spring means for pressing said pawls normally toward the ratchet bar, spring pressed contact means on the actuating lever for alternately applying yielding tension to said pawls, said contact means having a part lying in the socket and movable lengthwise thereof, and a hand lever having an end detachably held in the socket and having a member longitudinally movable in said socket and abutting against said part of the contact means.

2. A lifting jack comprising a standard, a lifting bar guided thereby, a holding pawl pivotally connected to the

standard to engage the ratchet bar, an actuating lever having a socket, an operating pawl pivoted to the lever to engage the lifting bar, spring means for pressing said pawls normally toward the ratchet bar, spring pressed contact means on the actuating lever for alternately applying yielding tension to said pawls, said contact means having a part lying in the socket and movable lengthwise thereof, a hand lever detachably held in said socket and having a recess in the end wall in line with said contact part, and an operating device carried by the hand lever having a part projecting into said recess for operating said contact piece.

1,192,327. SAFETY-COVER FOR LAUNDRY-EXTRACTORS. HOLGER EDWIN LARSEN, Janesville, Wis. Filed Aug. 12, 1915. Serial No. 45,176. (Cl. 74—46.)



1. In a safety device, a movable member, a rotating shaft, means for locking said member in one position, releasing means for said locking means, and means on said shaft for holding the releasing means against actuation while the shaft is rotating.

2. In a safety device, a movable member, a rotating shaft, means for locking said member in one position, releasing means for said locking means, sliding means carried by said shaft and connected with said releasing means to control the operation thereof, and means on said shaft for preventing the shifting of said sliding means in a direction to release said locking means during the rotation of the shaft.

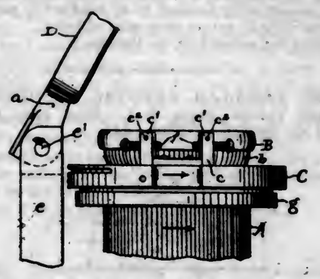
3. In a safety device, a movable member, a rotating shaft, means for locking said member in one position, resilient means for holding said locking means in operative position, manually operated means for releasing said locking means against the tension of said resilient holding means, and means carried by said shaft and connected to lock said releasing means while the shaft is rotating and to release said releasing means when the shaft is still.

4. In a safety device, a movable member, a rotating shaft, means for locking said member in one position, a cam member slidable on said shaft, releasing means for said locking means connected with said cam member and operable to shift said member in one direction on the releasing of said locking means, and a coöperating cam member fixed on said shaft and having means to prevent the engagement therewith of the sliding cam member during the roation of the shaft and thus preventing said sliding member from shifting in a direction to permit the actuating of the lock releasing means while the shaft is rotating.

5. In a safety device, a movable member, a rotating shaft, means for locking said member in one position, a cam member slidable on said shaft, releasing means for said locking means connected with said cam member and operable to shift said member in one direction on the releasing of said locking means, and a coöperating cam member fixed on said shaft, said cam members having longitudinal extending curved projections on their meeting faces adapted to engage and ride over each other during the rotation of the shaft whereby said sliding cam member is held away from said fixed cam member and the lock releasing means held against actuation while the shaft is rotating.

[Claims 6 to 14 not printed in the Gazette.]

1,192,328. CIRCULAR-KNITTING MACHINE. JOHN LAWSON, Central Falls, R. I. Filed May 31, 1912, Serial No. 700,569. (Cl. 66—26.)



1. In a circular knitting-machine, the combination with a revoluble needle-cylinder, of a sinker-carrying ring secured to and revoluble with said cylinder, a frictionally mounted normally non-revoluble sinker-cam-ring supported by said sinker-ring, a manually controlled pivoted latch-guard normally encircling the upper portion of the needles, and peripherally spaced stops secured to said cam-ring and normally engageable with the latch-guard for controlling the short angular movements of the cap-ring during the production of normal circular and reciprocatory knitting, arranged whereby upon elevating the latch-guard the latter is automatically disengaged from said stops, the knitting threads rendered inactive and the cam-ring is carried around in unison with the needle-cylinder, as in transferring, thereby temporarily preventing the sinkers from endwise radial movement.

2. In a circular knitting-machine, the combination with a revoluble needle-cylinder, a stationary post member, and an annular latch-guard pivoted to the post, of a sinker cam-ring mounted for normal vibratory movement in a horizontal plane at the upper end of the needle-cylinder, and laterally spaced stops fixed to the said sinker-ring; said stops being normally engageable with a member of the latch-guard for limiting the vibratory movements of the sinker cam-ring, the latter being adapted to revolve freely, in unison with the needle-cylinder when the latch-guard is swung upwardly from the circular path of said stops.

3. In a knitting-machine of the general character described, the combination of the revoluble needle-cylinder, a sinker-cam-ring normally mounted for vibratory movement on top of the needle-cylinder, a pivoted latch-guard, and means constituting stops, carried by the cam-ring and engageable with a member of the latch-guard when the latter is in the normally dropped position for limiting the angular vibratory movements of the cam-ring; said stops being adjustable relatively to each other for varying the degree of said angular vibratory movements of the cap-ring, the latter being capable of complete rotation concurrently with the needle-cylinder upon swinging the latch-guard upwardly from its normal position to disengage it from said stops.

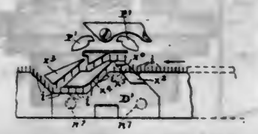
4. In a circular knitting-machine provided with a revoluble needle-cylinder, a sinker-ring secured to the cylinder and a sinker-cam-ring frictionally supported thereon, the combination therewith of a bracket member fixed to the cam-ring, said bracket member having a pair of horizontally arranged stops alining with each other adjustably mounted thereon, means for holding the stops in such adjusted positions, and a manually controlled relatively stationary pivoted latch-guard normally positioned above the needle-cylinder, said guard having a member engageable with said stops for limiting the angular movements of the

cam-ring, arranged whereby upon swinging the latch-guard upward out of the circular path of the stops the cylinder and cam-ring are adapted to revolve bodily in unison so as to temporarily prevent endwise movements of the sinkers in the said sinker and cap-rings for the purpose set forth.

5. In a knitting machine, the combination, with a revoluble needle-cylinder, of a sinker-ring revoluble with said cylinder, a sinker-cam-ring frictionally mounted on said sinker-ring, and means for normally holding said sinker-cam-ring from rotating with said needle-cylinder, said holding means being adapted to be released to permit said sinker-cam-ring to rotate with said cylinder.

[Claim 6 not printed in the Gazette.]

1,192,329. CIRCULAR-KNITTING MACHINE. JOHN LAWSON, Central Falls, R. I. Filed June 14, 1912. Serial No. 703,628. (Cl. 66—24.)



1. In a circular knitting machine, the combination of a needle-cylinder provided with alternating long and short butt needles, means for feeding main and secondary threads to the needles, main knitting cams positioned to engage and actuate all said needles to knit with the main thread, a second set of knitting cams comprising a cam constructed to engage and actuate the alternating long-butt needles to knit with the secondary thread and to cause the alternating short-butt needles to pass by said second set of knitting cams without knitting, and pattern-controlled means for moving said last-named cam into and out of needle-engaging position.

2. In a circular knitting-machine, the combination of a needle-cylinder provided with alternating long and short-butt needles, independent means for feeding main and secondary threads to the needles at oppositely disposed points, a main cam-block provided with needle-elevating and needle-depressing cams positioned to be engaged at that point by the butts of all the needles during rotary knitting, a secondary cam-block provided with normal needle-elevating and normal needle-depressing cams, said needle-elevating cam arranged to raise the butts of the long-butt needles only, an auxiliary needle-depressing cam located intermediate the said needle-elevating and needle-depressing cams of the secondary cam-block, whereby during the said rotary knitting all the long-butt needles are normally actuated to cast loops from the latches and take in the secondary thread, while at the same time the alternate or short-butt needles pass direct to said auxiliary cam and are deflected by it without casting loops from the latches or taking in the secondary thread, the two classes of needles later reuniting in a single column to be successively normally acted upon by the knitting-cams of said main cam-block, means for moving radially the secondary cam-block bodily from the needle-cylinder, and means for actuating the latter in a rotary-reciprocatory manner.

3. In a circular knitting-machine, the combination of a needle-cylinder provided with alternate groups of long and shorter-butt needles, a main cam-block provided with needle-elevating and needle-depressing cams positioned to be normally and operatively engaged by the butts of all the needles, means for feeding a main thread to said needles during rotary knitting, a secondary cam-block provided with normal needle-elevating and normal needle-depressing cams for operative engagement with the long-butt needles, an auxiliary needle-depressing cam located intermediate the two said secondary needle actuating cams for moving the short-butt needles only, said auxiliary cam being secured to the secondary cam-block, and means for introducing a secondary thread to the long-butt needles, constructed and arranged whereby during the knitting of rotary courses all the long-butt group of needles in passing the secondary cams are normally actuated to cast their loops and take in the secondary thread, while at the same time the alternate or short-butt group of needles are deflected by means of said auxiliary cam to reject the secondary thread, all the needles of the cylinder later passing in succession to the main cam-block to be acted upon by its cam in knitting the corresponding circular course, substantially as described.

4. The combination, in an automatic circular knitting-machine, of a grooved knitting-cylinder having a circular row of needles mounted therein, oppositely positioned main and supplemental knitting-cams, means for feeding a main knitting-thread to all the needles to be normally and successively acted upon by the main knitting-cams, means for successively feeding a secondary knitting-thread to each alternate needle of said needle row, means for automatically positioning said supplemental knitting-cams with respect to the needle-cylinder so as to be engaged by the said alternate needles and at the same time casting loops from the last named needles in knitting the corresponding circular course of the web being produced, said secondary thread-feeding means including in its construction a mounted swinging lever automatically positioned to feed its thread to the needles concurrently with the act of positioning the said supplemental knitting-cams.

5. The combination, in an automatic circular knitting machine, of a rotary needle-cylinder having groups of long-butt, short-butt and short-butt jack-needles mounted therein, independently movable guides for main and secondary knitting-threads, respectively, main and secondary knitting-cams arranged in relation to said guides, speed-changing mechanism, including a movable clutch member, and means controlled by said member for rendering the long-butt and short-butt jack-needles temporarily inoperative upon moving the said clutch-member from mechanism causing continuous rotary action into mechanism adapted to move the cylinder in a rotary-reciprocatory manner.

[Claims 6 to 10 not printed in the Gazette.]

1,192,330. MOP-HOLDER. JOHN H. LEPPART, Rome, N. Y. Filed Mar. 18, 1916. Serial No. 85,078. (Cl. 15—56.)



1. A mop holder comprising a handle, a sleeve detachably secured to one end of the handle, a substantially circular jaw formed on the lower end of the sleeve and extending downwardly and outwardly therefrom, a substantially circular jaw pivoted to the sleeve adjacent the stationary jaw, said jaws provided with a plurality of notches to form serrated gripping faces, and means carried by the handle and secured to the movable jaw for bringing said jaw into engagement with the stationary jaw.

2. A mop holder comprising a handle, a sleeve detachably secured to the lower end of the handle, a substantially circular jaw formed on the sleeve and extending downwardly and outwardly therefrom, said jaw provided with its edges curved downwardly and notched to provide serrating gripping faces, a movable jaw pivoted to the sleeve adjacent the stationary jaw and provided with a plurality of notches to provide a serrated gripping face, and means carried by the sleeve and extending to the stationary jaw and secured to the pivoted jaw for moving said pivoted jaw into an engagement with the stationary jaw.

3. A mop holder comprising a handle, a pair of sections secured to the lower end of the handle to form a sleeve, a substantially circular jaw formed on one of said sections and extending downwardly and outwardly therefrom to provide a stationary jaw, a projection formed on the last mentioned section of the sleeve adjacent the stationary jaw, a substantially circular jaw pivoted on the lower end of said sleeve to provide a movable jaw, a curved rod secured to the movable jaw and extending to the stationary jaw, and means carried by one of the sections of the sleeve and connected to the free end of the curved rod for moving the movable jaw into an engagement with the stationary jaw.

4. A mop holder comprising a handle, a sleeve detachably secured to the lower end of the handle, a substantially circular jaw formed on the lower end of the sleeve and extending downwardly and outwardly to provide a stationary jaw, a movable jaw pivotally secured to the lower end of the sleeve adjacent the stationary jaw, said jaws provided with notches to form serrated gripping faces, an operating lever pivotally secured to the sleeve adjacent the upper end thereof, a curved rod pivotally secured to the movable jaw and extending upwardly through the stationary jaw and secured to the operating lever for moving the movable jaw into an engagement with the stationary jaw when the operating lever is swung upwardly.

1,192,331. APPARATUS FOR THE CONTROL OF FLUID-PRESSURE BRAKES. LLOYD V. LEWIS, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed May 8, 1913. Serial No. 766,291. (Cl. 188—1.)

1. In fluid pressure braking apparatus for railway vehicles, a brake pipe and a brake cylinder, means for permitting reduction of the pressure in the brake pipe for causing the admission of fluid pressure to the brake cylinder, and means controlled by the relation between brake pipe pressure and the pressure in the brake cylinder for limiting the reduction of pressure in the brake pipe.

2. In fluid pressure braking apparatus for railway vehicles, a brake pipe and a brake cylinder, a valve cylinder, an exhaust port therein, a piston movable in the valve cylinder and adapted to cover or uncover the port, means for exposing one side of said piston to brake pipe pressure to tend to move the piston to uncover the port, and means for exposing the other side of the piston to the pressure in the brake cylinder.

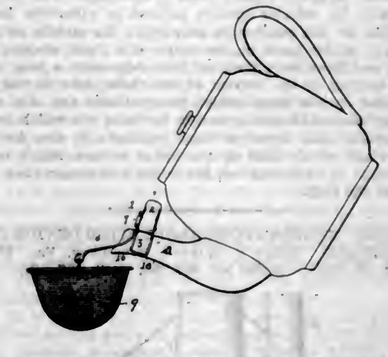
3. In fluid pressure braking apparatus for railway vehicles, a brake pipe and a brake cylinder, a valve device comprising a valve cylinder, a port in the latter cylinder, a piston adapted to move in the latter cylinder and to uncover or cover the port, means for connecting the brake pipe with such end of the valve cylinder that the pressure in said pipe tends to move the piston to uncover the port so that the brake pipe pressure is reduced through said port, and means for connecting the brake cylinder with the valve cylinder on the other side of the piston so that when the brake cylinder pressure reaches a predetermined value the piston is moved to close the port thereby stopping the reduction of pressure in the brake pipe.

4. In fluid pressure braking apparatus for railway vehicles, a brake pipe and a brake cylinder, a valve cylinder and a piston movable therein, an exhaust port controlled by the piston for permitting reduction of pressure in the brake pipe, means for at times exposing such face of said piston to brake pipe pressure as to move the piston to open the said port, and means for exposing the other face of the piston to the pressure in the brake cylinder.

5. In fluid pressure braking apparatus for railway vehicles, a brake pipe and a brake cylinder, a valve cylinder and a piston movable therein the two sides of said piston being of different areas, a port controlled by said piston for permitting reduction of pressure in the brake pipe, means for subjecting such face of said piston to brake pipe pressure as to move the piston to open the port, and means for subjecting the other face of the piston to the pressure in the brake cylinder.

[Claims 6 to 13 not printed in the Gazette.]

1,192,332. TEA-STRAINER. MAX LOEWENSTEIN, New York, N. Y. Filed May 25, 1914. Serial No. 840,809. (Cl. 210—16.)



1. In a strainer the combination of a clip adapted to engage the spout of a vessel, a plate pivotally mounted thereon, a bail rigidly secured to the plate and a strainer basket secured to the outer end of the bail whereby the basket may position itself in the path of the poured liquid.

2. In a strainer, a clip composed of two members, a hinge pin holding the members together; a swivel plate rotatably mounted on the hinge pin, a bail secured to the swivel plate and a strainer basket secured to the outer ends of the bail.

3. In a strainer the combination of a clip composed of two members hinged together, the gripping jaws being flared at the edges, means for pressing said jaws together, a bail pivotally secured to the clip and a strainer basket on the outer ends of the bail.

4. A tea strainer having a clasp including a pair of jaws pivoted on a pin; a support pivoted on said pin; and a strainer carried by said support.

1,192,333. LOCK-PIN. ROBERT L. MCELROY, New York, N. Y. Filed Dec. 23, 1915. Serial No. 68,328. (Cl. 74—8.)

1. In a locking device for the purpose described, a resilient member having a locking-pin affixed to one end, and an attaching means at the other end thereof.

2. In a locking device for the purpose described, a helical spring having attaching means at one end, and a locking-pin at the other end thereof.

3. In a locking device of the class described, a helical spring, having integral means at one end thereof for af-



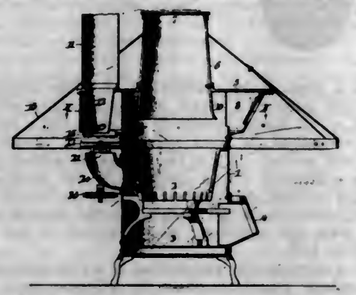
fixing the same to a vehicle-top; and a securing-pin fixedly held in the other end thereof by the terminal coils of the helical spring.

1,192,334. ROACH-TRAP. FERDINAND C. MARTIN, Newberry, S. C. Filed May 18, 1916. Serial No. 98,436. (Cl. 43—22.)



A roach-trap oblong in shape and comprised of three sections, the lower section being in the shape of an oblong box with its exterior surface painted or otherwise made suitable for the roaches to crawl up; the middle section being a lid for same in the shape of a chute sloping inward and downward from all four sides with a long narrow opening at the bottom of the chute, also having an extended curved flange which passes under the said narrow opening, said middle section having a rim which holds the middle and lower sections together; it also having two wings which hold up the upper section which is in the shape of an oblong box but wider and longer than the rest of the trap.

1,192,335. TEMPERATURE-REGULATING DEVICE FOR HEATERS. PERRY S. MARTIN, Broadway, Va. Filed Oct. 27, 1914. Serial No. 868,796. (Cl. 237—3.)

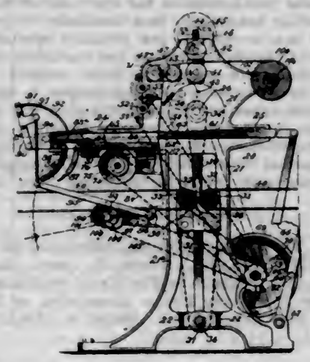


1. In a brooder heater, the combination of a combustion chamber, a deflector hood surrounding the same; said combustion chamber being provided with a grate, and having a main draft aperture and a check draft aperture of substantially the same size and in proximity to each other both beneath the deflector hood and a valve capable of alternatively controlling either aperture, and permitting the draft of either to be satisfied with air from beneath the deflector hood whereby a substantially uniform circulation of air is always maintained beneath said deflector hood.

2. In a brooder heater, the combination of a combustion chamber; a deflector hood surrounding the same, said combustion chamber being provided with a grate and a main draft aperture beneath said deflector hood; an annular drum surrounding the upper part of the combustion chamber and a flue leading from the combustion chamber by way of the drum, said drum being also beneath said hood and provided with a check draft aperture in proximity to the main draft aperture, and a valve capable of alternatively controlling either aperture and satisfying the draft with air from beneath the deflector hood.

3. In a heater provided with a combustion chamber, a grate and a main draft aperture, an annular drum surrounding the upper part of the combustion chamber and communicating therewith; a flue leading from the combustion chamber by way of the drum; a depending sleeve forming a prolongation of the flue within the drum, said drum having a check draft aperture adjacent the lower end of said sleeve and also adjacent the main draft aperture, a valve capable of alternately controlling either aperture and thermostatic means for controlling the same.

1,192,336. MACHINE FOR FOLDING NOODLES. SAMUEL MUELLER, Jersey City, N. J. Filed Dec. 2, 1909. Serial No. 531,048. (Cl. 107—7.)



1. In a machine of the character described, the combination of means for folding a strip of dough at an intermediate portion, means for spacing apart the ends of said strip sidewise in the plane of the folded strip, and means for folding said folded strip crosswise, substantially as specified.

2. In a machine of the character described, the combination of means for folding a long, relatively narrow body of dough at an intermediate portion, means for spacing apart the ends of said body sidewise in the plane of the folded body, and means for folding said folded body crosswise, substantially as specified.

3. In a machine of the character described, the combination of means for forming a strip from a sheet of dough, means for folding said strip of dough at an intermediate portion, means for spacing apart the ends of said strip sidewise in the plane of the folded strip, and means for folding said folded strip crosswise, substantially as specified.

4. In a machine of the character described, the combination of means for transversely folding a series of side by side, long, relatively narrow bodies of dough, and means for interlocking said bodies, substantially as specified.

5. In a machine of the character described, the combination of means for transversely double-folding a series of side by side strips of dough, and means for concurrently therewith interlocking the adjacent strips, substantially as specified.

[Claims 6 to 45 not printed in the Gazette.]

1,192,337. SOUND-BOX FOR PHONOGRAPHS. HUBERT A. MYERS, Toledo, Ohio. Filed Apr. 12, 1916 Serial No. 90,687. (Cl. 274—24.)

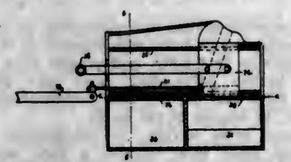
1. In an instrument of the class described, a swinging arm having a passage longitudinally therethrough and having its free end terminating at its lower side in a circular face through which said passage opens, a sound-box having a circular upper end part in rotatable engagement with said face and having a sound transmitting passage extending transversely thereof and opening into the face end of said arm passage, means pivotally securing said sound-box to said arm, and a stylus carried by said sound-box at the edge thereof opposed to its pivotal end, said stylus having its axis coincident to the pivotal axis of said sound-box.



2. In an instrument of the class described, a hollow arm mounted for swinging movements and having its outer end terminating in a head, which head is provided on its under side with an inclined circularly flanged face through which the outer end of the arm passageway opens, a sound-box having a circular part at its upper end in rotatable engagement with said head face and having a sound transmitting passage extending transversely thereof and in communication with the passage through said head, means for yieldingly securing said sound-box in pivotal engagement with said face, and a stylus carried by said sound-box at the edge thereof opposed to said face, and with its axis coincident with the turning axis of said sound-box.

3. In an instrument of the class described, a hollow swinging arm having a head at its outer end through which the arm passage extends, a sound-box having its upper end in rotatable engagement with said head, with its sound communicating passage in communication with the head passage, a pivot-screw projecting through a portion of the head and into the adjacent end of said sound-box to connect the two, means yieldingly coacting with said screw and head to retain the sound-box and head in yielding rotatable engagement, and a stylus carried by the sound-box at its outer end, and with its axis coincident with the axis of said pivot-screw.

1,192,338. VENDING-MACHINE. HENRY NOARK and SAMUEL C. DUKE, Waller, Tex. Filed Oct. 26, 1915. Serial No. 57,931. (Cl. 194—82.)



1. In a device of the character described, an actuating mechanism, a coin block slidably mounted and having a coin chute therein and operatively connected with said mechanism through the coin deposited in said chute, said block also having a diverting chute through which spurious coins may pass without bringing the block into operative connection with said mechanism.

2. A device of the character described embodying a plurality of actuating mechanisms, a manually movable means having a plurality of coin chutes therein and which is operatively connected with the corresponding mechanism through the coin placed in the chute corresponding to said mechanism to be operated and an indicating device actuated through said mechanism and indicating the denomination of the coin deposited in the corresponding chute.

3. A valve operating mechanism embodying a slidably mounted block having a coin chute therein, an operating rod, one end of which projects through said block but which is locked against movement relative to the block by means of the coin placed in said chute, said block also having a diverting chute through which spurious coins may pass without bringing the block into operative connection with said rod.

4. A valve operating mechanism embodying an operating rod, a means slidably mounted on said rod and having a coin chute provided to receive a coin which locks said means against movement relative to the rod, and also having a coin diverting chute through which spurious coins may pass without locking said means against movement relative to the rod.

5. A valve operating mechanism embodying an operating rod, a means slidably mounted on said rod and having a coin chute provided to receive a coin which locks said means against movement relative to the rod and also having a coin diverting chute through which spurious coins may pass without locking said means against movement relative to the rod, and a magnet arranged so as to attract said spurious coins into said diverting chute.

1,192,339. VALVE FOR INTERNAL-COMBUSTION ENGINES. HARVEY C. NUGENT, Winslow, Wash. Filed Dec. 3, 1913. Serial No. 804,391. (Cl. 123—59.)



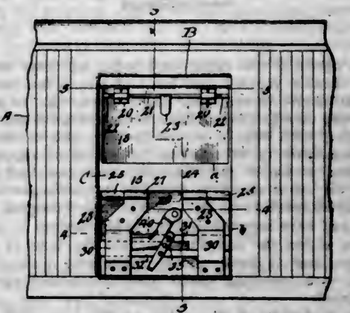
1. In a structure of the character described, an exhaust manifold having pairs of opposing exhaust ports leading to a common passageway, and a deflector adjacent each port for directing the exhaust gases.

2. In a structure of the character described, an exhaust manifold having pairs of opposing exhaust ports leading to a common passageway, and a deflector within said passageway adjacent each port, and adapted to direct the exhaust gases away from the opposing ports.

3. In a structure of the character described, a casing, an exhaust manifold having pairs of opposing exhaust ports leading to a common passageway, means controlling communication of the ports with the casing, and deflector means adjacent each port for directing the exhaust gases from the opposing ports, certain of the deflector means gradually tapering toward the adjacent inner port.

4. In a structure of the character described, an exhaust manifold having pairs of opposing exhaust ports leading to a common passageway, and a deflector within said passageway adjacent each port, and adapted to direct the exhaust gases in a common direction away from the opposing ports, said deflectors being tapered toward the next axially adjacent port.

1,192,340. FREIGHT-CAR DOOR. OLE OLSEN, Ferguson, Iowa. Filed Feb. 18, 1916. Serial No. 79,179. (Cl. 20—31.)



In a sliding door for grain cars, a door body comprising inner and outer substantially H-shaped frames united to-

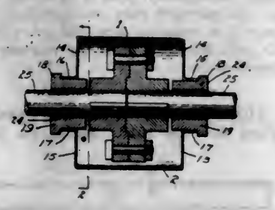
each other, toothed racks fixed vertically between the frames, a panel slidable between said frames to span the space between either the upper or the lower arm of the H and having means to engage the racks to hold said panel in either or in any selected intermediate position, and a swinging panel supported upon the frame for closing the lower opening or so much thereof as is not covered by the sliding panel.

1,192,341. WAISTBAND. ADOLPHUS G. PEINE, Chicago, Ill., assignor to Alfred Decker & Cohn, Chicago, Ill., a Copartnership composed of Alfred Decker, Abraham Cohn, and Adolphus G. Peine. Filed May 17, 1915. Serial No. 28,528. (Cl. 2—142.)



A garment waistband comprising a belt-like strip sewed within the upper edge portion of the garment, having a line of stitching extending parallel with and between the upper and lower edges of the belt-like strip, said stitching providing a fold line for the waistband and passing entirely through both of the belt-like strip and the waist portion of the garment, the lower edge of said belt-like strip being unattached and the said upper edge thereof being stitched to the upper edge of the garment, thereby adapting said waistband to be turned wrong side out and upside down when it is desired to tighten the garment on the wearer, devices to connect the front ends of the belt-like strip in both positions thereof, belt straps on the outside of said waist portion, said straps extending vertically across said line of stitching, and means for attaching said straps between their upper and lower ends at points located on said line of stitching, said straps thereby being foldable with the waistband when the belt-like strip is turned outside for use, and said straps being adapted to receive an ordinary belt when said means are removed.

1,192,342. COUPLING OR SHAFT COVER. CHARLES E. PELTON, Milwaukee, Wis. Filed Aug. 11, 1915. Serial No. 45,069. (Cl. 64—12.)



1. A device of the class described comprising two half shells suitably secured together and means for mounting said half shells on revolving shafts or the like, to provide a covering therefor, for protection against accidents caused by contact with objects carried thereby, said means being interchangeable to fit required conditions of support.

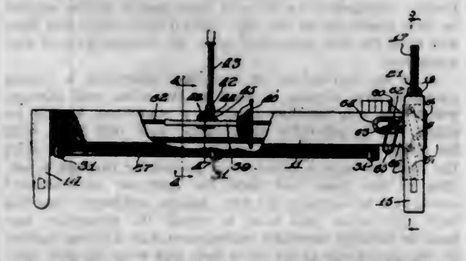
2. In a device of the class described two half shells, means for securing them together, interchangeable half bushings adapted to be held by the end terminals of the shells, and keys inserted between said bushings to provide a stress within the structure, to hold the same in locked condition and to hold said bushings free from binding contact with revolving shafts upon which the same may be mounted.

3. In a device of the class described, a shell to be mounted over revolving objects, adapted to form a protecting covering therefor, in combination with means for providing an interchangeable mounting for said shell, to hold said shell approximately concentric with said revolving objects and free to revolve upon the same.

4. In a device of the class described, in combination with half shells suitably secured together, whose end terminals are formed concentric with the periphery thereof, suitable bushings held by said terminals and means for holding said bushings in frictional contact with said end terminals and to prevent binding contact with shafts or other rotatable objects upon which the same may be mounted.

5. A device of the class described comprising two half shells, connected together, interchangeable half bushings adapted to engage with the end terminals of the shells and provided in opposite faces with recesses, and key members engageable in the recesses to produce a stress between said half shells whereby the bushings are held in position and held separate to prevent binding contact with the revolving shafts or the like upon which the device may be mounted.

1,192,343. CHEESE-PRESS. WILLIAM E. PENN, Lakemills, Wis., assignor to The Creamery Package Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1914. Serial No. 851,709. (Cl. 100—55.)



1. A cheese press having, in combination, an end frame, a body movable up and down with relation to said frame, the latter having a cam slot thereon, and a presser head mounted on said body and having a projection engaging in said cam slot whereby said presser head will be moved longitudinally of the body during the descent of the latter.

2. A cheese press having, in combination, an end frame, a body movable up and down with relation to said frame, a presser head on said body, said presser head and said end frame having coöperating cams and projections adapted to force said presser head longitudinally of the body during the descent of the latter.

3. A cheese press having, in combination, an end frame having guide slots thereon, a body movable up and down with relation to said end frame and having projections engaging in said guide slots, the latter being disposed in the natural line of movement of the projections, a presser head mounted on said body, and coöperating means on said presser head and said end frame for forcing the presser head to move longitudinally in the body during the descent of the latter.

4. A cheese press having, in combination, an end frame, a body movable up and down with relation to said frame, said frame having guide slots at opposite sides thereof, projections carried by said body and moving in said guide slots, the latter being disposed in the natural line of movement of said projections, said end frame further having cam slots at opposite sides thereof, and a presser head mounted in said body and having trunnions engaging in said cam slots.

5. A cheese press having, in combination, a support, a body movable up and down with relation to said support, a presser-head on said body, and coöperating cam means on said presser head and said support acting to move the presser-head longitudinally of the body.

[Claims 6 to 18 not printed in the Gazette.]

1,192,344. HARVESTER'S BAG. JOHN F. PETERSON and THOMAS S. KIRBY, Madison, Ala. Filed Jan. 22, 1916. Serial No. 73,651. (Cl. 150—2.)



1. A harvester's bag comprising a bag with an upwardly opening mouth, an apron extending upwardly from and forming a continuation of one side of said mouth, a device arranged within the mouth of the bag to maintain it in an open position, said device being collapsible to close said mouth, said apron being adapted for engagement across the back of a person and to be folded down over the mouth of the bag when closed to hold the mouth in closed position, a pair of shoulder straps secured to the apron and extending upwardly therefrom, securing means for engagement with the free ends of the straps to hold the straps looped over the shoulders and support the apron and the bag, and a second securing means at the bottom of the bag to hold the straps taut when the apron is in its folded position.

2. A harvester's bag comprising a bag having an upwardly opening mouth, an apron extending upwardly from and forming a continuation of one side of said mouth, a pair of shoulder straps carried by the apron and adapted for engagement over the shoulders of a person to support the bag, and a pair of rings carried at the upper portion of the apron and adapted to receive the shoulder straps to hold the apron in extended position, said apron when the bag is filled being adapted to be folded forwardly over the mouth of the bag with said straps passed through said rings to hold the apron in closed position.

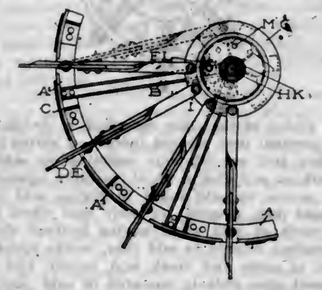
3. A harvester's bag comprising a body portion having an open upper end, an apron adapted to fit across the back of the person and extending upwardly to support the bag below the waist or seat, a pair of shoulder straps carried by the apron and adapted for engagement over the shoulders of the person to support the bag, a pair of rings carried upon the upper corners of the apron and adapted to receive the ends of the shoulder straps to hold the same in position, said apron when the bag is filled being adapted to be folded forwardly over the open end of the bag and said straps being adapted to be crossed and passed through said rings to draw the corners of the apron tightly over the top of the bag, and means for securing said straps in taut position against the bag.

4. A harvester's bag comprising a bag and an upwardly extending apron at one side of the bag, a two-part ring secured in the mouth of the bag and having interlocking looped eyes at the meeting ends of the parts, the looped eyes of one of the parts having stop fingers projecting into the path of the opposite part to hold the parts in extended position when the bag is open, supporting straps carried by the apron for engagement over the shoulders of the harvester, means for holding the supporting straps in position, the parts of said ring being adapted to be folded to close the upper end of the bag, said apron being adapted to be drawn over the top of the bag and down against the opposite side thereof and means for holding said shoulder straps taut against the side of the bag to bind the apron over the top of the bag.

5. A harvester's bag comprising a bag with an upwardly opening mouth, an apron extending upwardly from and forming a continuation of one side of said mouth, a device arranged within the mouth of the bag to maintain it in an open position, said device being collapsible to close said mouth, said apron being adapted for engagement across the back of a person and to be folded down over the mouth of the bag when closed to hold the mouth in closed position, and means connected with the apron for suspending the bag from the shoulders of the person with the apron over the back of the latter, said suspending means constituting means for holding the apron in its closed position over the mouth of the bag.

[Claims 6 to 8 not printed in the Gazette.]

1,192,345. TRACTION-WHEEL. GUSTAV PÖHL, Gossnitz, Germany. Filed Feb. 12, 1915. Serial No. 7,767. (Cl. 21—209.)



1. A gripper wheel for motor plows comprising adjustable gripper arms with gripper plates thereon, a wheel proper composed of two wheel rims, and guides with slits pivotally mounted in the walls of the wheel rims, said gripper plates passing through the slits and adapted to project beyond the wheel rims.

2. A gripper wheel for motor plows comprising adjustable gripper arms with grippers thereon, two angular wheel rims beyond which said grippers reach, traverses spacing the angular portions of the rim apart, guides pivotally mounted in the walls of the wheel having slits through which the grippers pass, and inner mechanism for moving the gripper arms with the grippers mounted within the hub of the wheel so as to protect it against clogging by soil.

3. A gripper wheel for motor plows comprising adjustable gripper arms with grippers thereon, two angular wheel rims beyond which said grippers reach, traverses for spacing said angular portions, inner mechanism for moving the gripper arms consisting essentially of a ring to which the grippers are linked having teeth on the inner surface, and a pinion, said gear mechanism being covered by the said ring.

4. In a gripper wheel for motor plows having gripper arms with grippers thereon and angular wheel rims with traverses spacing them apart, an adjusting device for drawing the grippers in and out and consisting essentially of a ring with interior gear and pinion mechanism, and means for locking the ring in the adjusted position, so arranged that the adjusting device is protected against clogging by soil.

5. In a gripper wheel for motor plows having gripper arms with grippers thereon and angular wheel rims with traverses spacing them apart, a guiding device for the grippers composed of cylindrical bolts mounted in the wheel rims and having slits through which the grippers pass, means for drawing said grippers in and out, and means for securing the grippers in the desired position.

1,192,346. ELECTRIC-SWITCH MECHANISM. BENJAMIN S. PUTTS, Erie, Pa. Filed Aug. 9, 1915. Serial No. 44,491. (Cl. 175—282.)

1. In a device of the class described, an electric circuit, a swinging lever adapted to make and break said circuit,

a central post, a wheel mounted on said post, teeth on said wheel, means on said wheel to operate said lever, spring-pressed pins adapted to engage the teeth and operate said wheel in one direction, a spring to operate said wheel in the opposite direction, ratchet mechanism to prevent the backward movement of said wheel, and other spring-pressed pins to operate said ratchet mechanism, substantially as set forth.



2. In a device of the class described, a circular case, a central terminal post secured thereon, a spring-pressed disk slidably and non-rotatably mounted on said post, ratchet teeth on said disk, a wheel rotatably supported on said post, means on said wheel to engage said ratchet teeth on said disk, a spring to move said wheel in one direction, teeth on said wheel having inclined sides, an electric terminal secured to said case, means operable by said wheel to make and break said circuit, and radial spring-pressed pins slidably mounted in said case, some of which are adapted to engage said teeth on said wheel, and some of which are adapted to engage said ratchet disk, substantially as described.

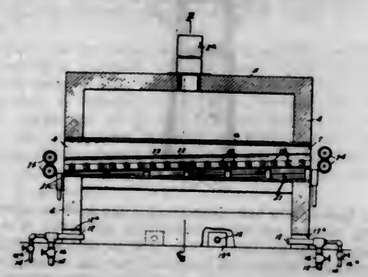
3. In a device of the class described, a circular case, a central post secured thereon, a spring-pressed disk non-rotatably and slidably mounted on said post, ratchet teeth on said disk, a rotatable wheel supported by said post, teeth on said wheel, means on said wheel to engage the ratchet teeth on said disk, a stud-pin on said wheel, an electric terminal secured to said case, a swinging lever pivoted to said case and adapted to be engaged by said stud-pin, and the opposite end of said lever adapted to contact with said terminal, and radial, spring-pressed pins mounted in said case, some of which are adapted to engage the teeth on said wheel for the purpose of giving limited rotation to said wheel, and others of said pins adapted to engage said disk to move it away from said wheel to disengage said ratchet teeth, substantially as described.

4. In a device of the class described, a circular plate, annular flanges thereon, a terminal post secured in said plate, a terminal secured on one of said flanges, a rocking post pivoted in said plate, an eccentric shoulder on said post, a switch lever adapted to rotate said rocking post and contact with said terminal post so that said eccentric extension will be moved toward the terminal secured on said peripheral flange, a swinging lever pivoted on one of said flanges, and adapted to bridge the space between said eccentric shoulder and the terminal secured on the peripheral flange, a wheel mounted on said central post, a spring to move said wheel in one direction, teeth on said wheel, radial spring-pressed pins to engage said teeth and move said wheel in the opposite direction, ratchet mechanism to prevent backward movement of said wheel, means on said wheel to engage and operate said swinging lever to close said electric circuit, other spring-pressed pins to operate said ratchet mechanism, substantially as set forth.

5. In a device of the class described, circuit making and breaking mechanism, a wheel, teeth on said wheel, means on said wheel to engage and operate said circuit making and breaking means, radial spring-pressed pins so located radially around said wheel as to consecutively engage the teeth on said wheel when said pins are operated consecutively so that the last pin to be operated will cause said wheel to operate said circuit making and breaking mechanism, ratchet mechanism to prevent backward movement of said wheel, and spring-pressed pins to release said ratchet mechanism, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,192,347. METHOD OF BLUING SHEETS AND PLATES. AMBROSE RIDD, Farrell, Pa. Filed Mar. 27, 1916. Serial No. 86,927. (Cl. 148—41.)



1. In the manufacture of blued sheets and plates the steps consisting in heating individual sheets or plates equably within a muffle furnace to a black-red color, then withdrawing the uniformly heated sheet or plate from the muffle into the atmosphere, protecting the edges of the sheet or plate in heating and gradually exposing the heated sheet or plate to the action of the atmosphere in the withdrawal thereof to thereby fix the color of the blued sheet or plate.

2. In the manufacture of blued sheets and plates the steps consisting in heating individual sheets or plates equably within a muffle furnace to a black-red color, then withdrawing the equably heated sheet or plate from the muffle into the atmosphere, and gradually exposing the heated sheet or plate to the action of the atmosphere in the withdrawal thereof to thereby fix the color of the blued sheet or plate.

1,192,348. WHEEL STRUCTURE. WILLIAM J. ROEPKE, Los Angeles, Cal., assignor to Charles B. McCoy, Los Angeles, Cal. Filed Dec. 16, 1912. Serial No. 737,122. (Cl. 152—9.)



1. A wheel for automobiles, trucks and the like comprising a rim having inwardly extending annular flanges, a tire comprising segmental blocks composed respectively of outer segmental block members grooved to receive the flanges, an intermediate block member seated between said outer block members and holding the outer block members engaged with the rim, segmental metal straps on the outside of said outer block members, said straps having their ends in alinement with the ends of said outer block members, and means free from the intermediate member to secure said straps and outer segmental block members together.

2. A wheel for automobiles, trucks and the like comprising a rim having inwardly extending annular flanges, a tire comprising segmental blocks composed respectively of outer segmental block members grooved to receive the flanges, an intermediate block member seated between said outer block members and holding the outer block members engaged with the rim, means securing the segmental block members together, segmental metal straps on the outside of said outer block members, and bolts securing said straps and outer segmental block members together independently of the intermediate block member.

3. A wheel for automobiles, trucks and the like comprising a rim having inwardly extending flanges; segmental block members seated between the flanges and having grooves in which the flanges fit; and segmental straps fastened to the blocks respectively and resting on the flanges.

4. A wheel for automobiles, trucks and the like comprising a rim having inwardly extending circular flanges; outer segmental block members grooved to fit the flanges and having countersunk holes in their inner faces; segmental straps at the outer edges of the grooves to rest on the rim; bolts or rivets having heads in said holes and securing the segmental straps on the outer blocks only; and intermediate key blocks between the outer blocks.

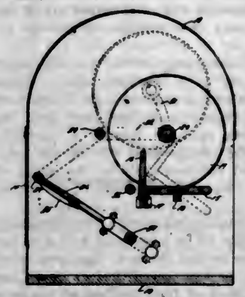
5. A wheel comprising a rim having flanges, a tire composed of outer segmental blocks and intermediate segmental blocks seated between said outer blocks to hold the outer blocks against the rim flanges, means to fasten said outer and intermediate segmental blocks together, straps bearing on the rim flanges and means to fasten the straps to said outer segmental blocks.

1,192,349. TOOL-HOLDER. NELS ROSENDALL, Vienna, S. D. Filed Oct. 14, 1915. Serial No. 55,865. (Cl. 24—8.)



A tool holder formed wholly of wire and comprising a hook-shaped loop which forms a pivot bar, the wires forming the sides of the said loop being bent over toward each other to form two springs, a stem extending crosswise of the middle part of the said pivot bar and formed of two straight extensions of the said springs arranged side by side and having tool holding jaws at their free ends, and a fastening lever pivoted on the said bar and provided with a jaw adapted to clamp a portion of a garment against the two members of the said stem.

1,192,350. SLICING-MACHINE. INGEBRIGT SATHER, Madison, Minn. Filed Nov. 4, 1915. Serial No. 59,591. (Cl. 146—12.)



1. A slicing machine comprising in combination with a plurality of rotatable knives, a tiltable table, means for rotating said knives, said means comprising a bell-crank lever, to one end of which the shaft carrying said knives is journaled, a sprocket wheel keyed to said shaft, a chain passing over said sprocket wheel to a second wheel, a gear integral therewith, a gear meshing with said last mentioned gear, and a drive wheel integral with said gear, means for causing said knives to approach said table and means for tilting said table.

2. A slicing machine comprising in combination with a plurality of rotatable knives, a tiltable table, means for rotating said knives, means for causing said knives to approach said table, said last mentioned means comprising a bell-crank lever to one end of which the shaft carrying said knives is journaled, a connecting rod journaled thereto at its opposite end, a crank-shaft to which said connecting-rod is journaled, means for rotating said shaft, and means for tilting said table.

3. A slicing machine comprising in combination with a plurality of rotatable knives, a tiltable table, means for rotating said knives, means for causing said knives to approach said table, and means for tilting said table, said last mentioned means comprising a rock-shaft to which said table is secured, a slotted link adjustably secured to said shaft having a hook at the end thereof, a gear carrying a pin adapted to engage said hook, and means for rotating said gear.

4. A slicing machine comprising in combination with a plurality of rotatable knives, a tiltable table, means for rotating said khives, said means comprising a bell-crank lever, to one end of which the shaft carrying said knives is journaled, a sprocket wheel keyed to said shaft, a chain passing over said sprocket wheel to a second wheel, a gear integral therewith, a gear meshing with said last mentioned gear, and a drive wheel integral with said gear, means for causing said knives to approach said table, said last mentioned means comprising a connecting rod journaled at its opposite end to said bell-crank, a crank-shaft to which said connecting-rod is journaled, means for rotating said shaft, and means for tilting said table.

5. A slicing machine comprising in combination with a plurality of rotatable knives, a tiltable table, means for rotating said knives, said means comprising a bell-crank lever, to one end of which the shaft carrying said knives is journaled, a sprocket wheel keyed to said shaft, a chain passing over said sprocket wheel to a second wheel, a gear integral therewith, a gear meshing with said last mentioned gear, and a drive wheel integral with said gear, means for causing said knives to approach said table, and means for tilting said table, said last mentioned means comprising a rock-shaft to which said table is secured, a slotted link adjustably secured to said shaft, having a hook at the end thereof, a gear carrying a pin adapted to engage said hook, and means for rotating said gear.

[Claim 6 not printed in the Gazette.]

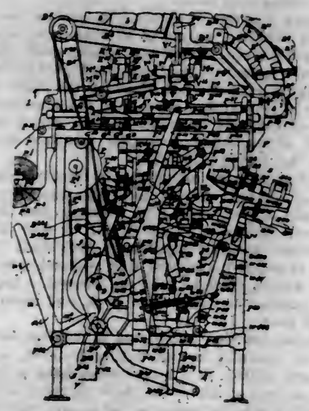
1,192,351. PACKAGE-WRAPPING MACHINE. SIGMUND SCHIFF, New York, N. Y., assignor of one-half to Raoul Fleischmann, New York, N. Y. Filed June 5, 1913. Serial No. 771,874. (Cl. 93—2.)

1. A wrapping machine comprising wrapper-supply means, unit supply means, unit-grasping and feeding means adapted to grasp a unit and wrapper and impart feed motion thereto, and wrapping means adapted to contact and co-act with such unit and wrapper grasped in said grasping means, and by contact with and the ensuing feed-motion of said unit and wrapper, to be wrappingly positioned relatively thereto, said wrapping means being flexibly supported so as to engage around the irregular corners of the unit being wrapper.

2. A wrapping machine comprising wrapper-supply means, unit-supply means, unit-grasping and feeding means adapted to grasp a unit and wrapper and impart feed motion thereto, and wrapping means adapted to contact and coact with such unit and wrapper grasped in said grasping means, and by contact with the ensuing feed-motion of said unit and wrapper, to be wrappingly positioned relatively thereto, said wrapping means being elastically supported so as to engage around the irregular corners of the unit being wrapped.

3. In a wrapping machine, a wrapping plate, the edges of which are free to facilitate the passage thereof into sharp corners formed by the wrapping paper, and flexible

means on which said plate is mounted to facilitate the free movement of said plate to slide in a path directed by the wrapper being wrapped.

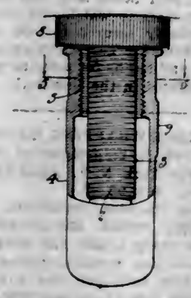


4. In a wrapping machine, a rigid wrapping plate, the edges of which are free, and flexible means on which said plate is mounted.

5. In a wrapping machine, a rigid wrapping plate, the edges of which are free to facilitate the passage thereof into the sharp corners formed by the wrapping paper, and a pivotally mounted means, said plate being pivotally connected to said pivotally mounted means to facilitate the free movement of said plate to slide in a path directed by the wrapper being wrapped.

[Claims 6 to 117 not printed in the Gazette.]

1,192,352. VALVE-STEM CAP. OSCAR A. SMITH, Cleveland, Ohio, assignor of one-half to Edwin C. Henn, Cleveland, Ohio. Filed Dec. 29, 1914. Serial No. 879,435. (Cl. 152—12.)



1. The combination with a valve stem having a mutilated thread, of a valve cap longer than the projecting portion of said stem and having a mutilated thread interior, the threads of said cap being of greater pitch than the threads of said stem whereby there is a frictional locking between said cap and stem.

2. The combination with a valve stem having mutilated threads throughout its length, of a valve cap of greater length than the projecting portion of said stem and having mutilated threads throughout a portion of its length, the threads of one of said parts being of greater pitch than the threads of the other part.

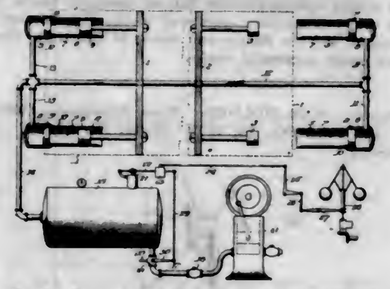
3. The combination with a valve stem having one or more flat portions and a mutilated thread portion, of a valve cap having a mutilated thread portion and a smooth portion, the threads of one of said parts being of different pitch than the threads of the other part.

4. The combination with a valve stem having one or more flat portions and a mutilated thread portion, of a valve cap having a mutilated thread portion and a smooth portion, the threads of said cap being of different pitch than the threads of the stem.

5. The combination with an inflatable tire having a stem adapted to carry a valve, said stem having one or more interrupted or mutilated thread portions, of a valve cap similarly formed, the coöperating mutilated threads of said parts formed to provide locking surfaces in addition to the usual coöperating action of the threads.

[Claims 6 to 10 not printed in the Gazette.]

1,192,353. AIR-CUSHION CONTROL FOR PRINTING-PRESSES. BURT D. STEVENS, Riverside, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 10, 1915. Serial No. 7,227. (Cl. 74—69.)



1. In an air cushioning device, the combination with a reciprocatory body to be cushioned and a coöperating cylinder and piston acting thereon, of a compressed air reservoir sealed with reference to the cylinder, a movable portion of the cylinder wall cushioned by the compressed air in the reservoir, and means to vary the pressure of the air in the reservoir.

2. In an air cushioning device, the combination with a reciprocatory body to be cushioned and a coöperating cylinder and piston acting thereon, of a compressed air reservoir having a greater capacity than that of the cylinder, a movable portion of the cylinder wall cushioned by the compressed air in the reservoir, and means controlled automatically by the speed of the reciprocatory body to vary the pressure of the air in the reservoir.

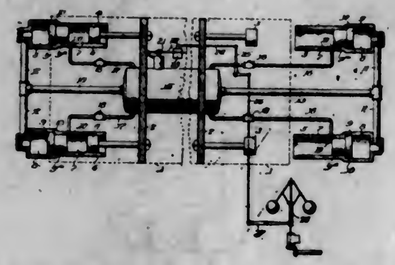
3. In an air cushioning device, the combination with a reciprocatory body to be cushioned and a coöperating cylinder and piston acting thereon, of a compressed air reservoir and having a greater cross sectional area than that of the cylinder, a movable portion of the cylinder end wall cushioned by the compressed air in the reservoir, and means to vary the pressure of the air in the reservoir.

4. In an air cushioning device, the combination with a reciprocatory body to be cushioned and a coöperating cylinder and piston acting thereon, of a compressed air reservoir having a greater cross sectional area than that of the cylinder, the cylinder having a movable end wall cushioned by the compressed air in the reservoir, and means controlled automatically by the speed of the reciprocatory body to vary the pressure of the air in the reservoir.

5. In an air cushioning device, the combination with a reciprocatory body to be cushioned and a coöperating cylinder and piston acting thereon, the bore of the cylinder comprising two portions, a disk forming a movable portion of the end wall of that portion of the bore traversed by the piston and separating the two bore portions, that portion of the bore to the rear of the disk forming a compressed air reservoir, and means controlled automatically by the speed of the reciprocatory body to vary the pressure of the air in the reservoir at the rear of the disk.

[Claims 6 to 14 not printed in the Gazette.]

1,192,354. AIR-CUSHION CONTROL. BURT D. STEVENS, Evanston, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 15, 1916. Serial No. 72,198. (Cl. 74—69.)



1. In an air cushioning device, the combination with a reciprocatory body to be cushioned, and a dash-pot device acting thereon, of a compressed air reservoir, a movable portion of the dash pot wall cushioned by the compressed air in the reservoir, and a bleeder connection leading from the dash pot interior to the reservoir, the two being otherwise out of communication.

2. In an air cushioning device, the combination with a reciprocatory body to be cushioned, and a dash-pot device acting thereon, of a compressed air reservoir, a movable portion of the dash-pot wall cushioned by the compressed air in the reservoir, and a bleeder connection leading from the dash pot interior to the reservoir, the two being otherwise out of communication, and means to vary the pressure of the air in the reservoir.

3. In an air cushioning device, the combination with a reciprocatory body to be cushioned, and a dash-pot device acting thereon, of a compressed air reservoir, a movable portion of the dash pot wall cushioned by the compressed air in the reservoir, and a bleeder connection leading from the dash pot interior to the reservoir, the two being otherwise out of communication, and means controlled by the speed of the reciprocatory body to vary the pressure of the air in the reservoir.

4. In an air cushioning device, the combination with a reciprocatory body to be cushioned, and a dash-pot device acting thereon, of a compressed air reservoir having a greater capacity than that of the dash pot, a movable portion of the dash pot wall cushioned by the compressed air in the reservoir, and a bleeder connection leading from the dash pot interior to the reservoir, the two being otherwise out of communication.

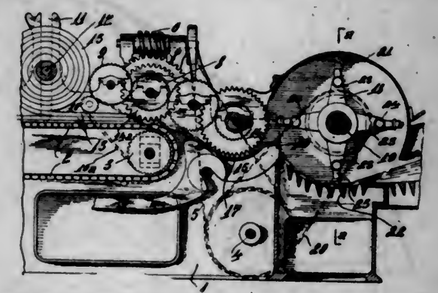
5. In an air cushioning device, the combination with a reciprocatory body to be cushioned, and a dash-pot device acting thereon, of a compressed air reservoir having a greater capacity than that of the dash pot, a movable portion of the dash pot wall cushioned by the compressed air in the reservoir, and a bleeder connection leading from the dash pot interior to the reservoir, the two being otherwise out of communication, and means controlled by the speed of the reciprocatory body to vary the pressure of the air in the reservoir.

[Claims 6 to 13 not printed in the Gazette.]

1,192,355. MACHINE FOR CLEANING TEXTILE FIBERS, IN PARTICULAR COTTON FIBERS. ANDREAS STREIFF, Telfs, Austria-Hungary. Filed Dec. 11, 1913. Serial No. 806,099. (Cl. 19—19.)

1. In a machine for cleaning textile fibers, a beater for opening and carding, cleaning and beating the fibers and acting upon the latter at a point as far away as possible from the clamping point of the fibers, comprising a rotatable shaft, a plurality of arms connected thereto and adapted to lie radially thereto under the action of centrifugal force, and a plurality of teeth on said members deeper in the front than at the rear.

2. In a machine for cleaning textile fibers, a beater for opening and carding, cleaning and beating the fibers and acting upon the latter at a point as far away as possible from the clamping point of the fibers, comprising a rotatable shaft, a plurality of arms connected thereto and adapted to lie radially thereto under the action of centrifugal force, and a plurality of teeth on said members deeper in the front than at the rear, and of rectangular cross-section in a plane at right angles to the plane of rotation of the shaft.

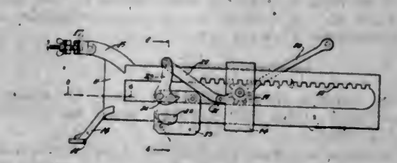


3. In a machine for cleaning textile fibers, a beater for opening and carding, cleaning and beating the fibers and acting upon the latter at a point as far away as possible from the clamping point of the fibers, comprising a rotatable shaft, a plurality of arms connected thereto and adapted to lie radially thereto under the action of centrifugal force, and a plurality of teeth on said members deeper in the front than at the rear, and of concave sided triangular cross-section in a plane at right angles to the plane of rotation of the shaft.

4. In a machine for cleaning textile fibers, a beater for opening and carding, cleaning and beating the fibers and acting upon the latter at a point as far away as possible from the clamping point of the fibers, comprising a rotatable shaft, a plurality of arms connected thereto and adapted to lie radially thereto under the action of centrifugal force and a plurality of teeth on said members deeper in the front than at the rear and of truncated triangular cross-section in a plane at right-angles to the plane of rotation of the shaft.

5. In a machine for cleaning textile fibers a beater for opening and carding, cleaning and beating the fiber and acting upon the latter at a point as far away as possible from the clamping point of the fibers, comprising a rotatable shaft, a plurality of arms connected thereto and adapted to lie radially thereto under the action of centrifugal force, and a plurality of teeth on said members deeper in the front than at the rear and of concave sided truncated triangular cross-section in a plane at right angles to the plane of rotation of the shaft.

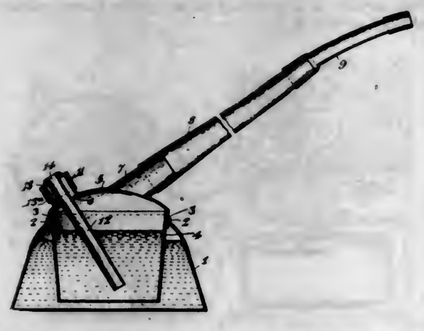
1,192,356. CABLE-SPLICING TOOL. CARL A. SWANSON, Chicago, Ill. Filed Sept. 23, 1915. Serial No. 52,221. (Cl. 254—66.)



A cable splicer comprising a frame consisting of a rack-bar and track, a carriage reciprocably mounted on said track, a slide reciprocably mounted on said frame, a ratchet carried by said slide engaging said rack-bar, an anvil on said carriage, a lever pivoted to said carriage

having one arm thereof approach said anvil, and a link pivotally connecting the other arm of said lever with said slide.

1,192,357. INHALER. WALTER R. THATCHER, Oskaloosa, Iowa, and HENRY DIXON, Dayton, Ohio. Filed Nov. 20, 1914. Serial No. 873,202. (Cl. 128—13.)

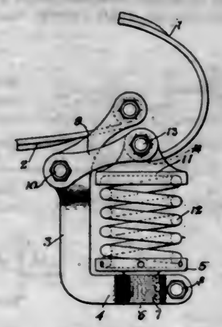


1. An inhaler comprising a water container, a medicament receptacle projecting into the container, a dome closing the top of the receptacle, a filling nipple at one side of the dome for filling the receptacle and being outwardly and upwardly inclined to prevent the formation of air and vapor pockets, a filler cap fitting over said nipple to close the same, an air tube mounted on the filler cap and extending therethrough at an angle downwardly and centrally into the bottom of the receptacle to admit the easy discharge of air to the central portion of the body of the medicament for uniform distribution of air throughout the same, a closure cap fitting over the filler cap to close the air tube, an outlet nipple leading from the top of the dome to carry off all of the vapor rising therein, and to prevent air and vapor pockets in the top of the dome, and a second closure cap fitting over the outlet nipple to seal the same, and prevent evaporation when the device is not in use.

2. An inhaler comprising a container to receive water, a receptacle fitting into the upper end of the container to receive a medicament, a dome closing the upper end of the receptacle, a filling nipple projecting from one side of the dome and being inclined outwardly and upwardly to prevent the formation of air and vapor pockets, an outlet nipple projecting from the opposite side of the dome and opening at its base into the top of the dome for carrying off vapor collecting therein, a nozzle detachably connected to the outlet nipple to conduct vapor to a point of discharge, a filler cap detachably engaging over the filling nipple to close the same, an air tube carried by the filler cap opening at its outer end through the top of the cap and projecting at an angle downwardly and centrally into the bottom of the receptacle to uniformly distribute air throughout the body of the medicament, and to insure the free passage of air from the lower end of the tube, a heater for the outer receptacle, and closure caps for the filler cap and the outlet nipple to close the air tube and the outlet nipple, and to prevent evaporation of the medicament when not in use.

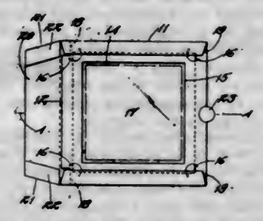
1,192,358. SHOCK-ABSORBER. WILLIAM S. THOMPSON, Toledo, Ohio. Filed July 6, 1915. Serial No. 38,055. (Cl. 267—19.)

In a device of the character described, a hanger adapted to be connected with one part of a vehicle spring and having at its lower end a portion provided with a screw-threaded socket, a plate having a stud screw-threaded into said socket, said portion of said hanger having a slot opening into said socket, a bolt extending through said slot to clamp the socket about said stud, a link pivotally mounted on said hanger, and adapted for connection with the other part of said vehicle spring, a plate carried by



said link and arranged above the first-mentioned plate, and a spring interposed between said plates.

1,192,359. TEMPORARY COVER FOR CANDY-BOXES AND THE LIKE. PETER R. WARREN, Boston, Mass. Filed Jan. 12, 1916. Serial No. 71,784. (Cl. 229—44.)



1. The improved temporary cover for boxes formed of a single sheet of box board and comprising a panel having a sight opening therein, a second panel secured to the first panel and having a sight opening which registers with the sight opening of the first panel, a transparent member interposed between said panels which closes said sight openings, and an edge member which is secured to one of said panels and is capable of insertion in the box with which the said cover is used.

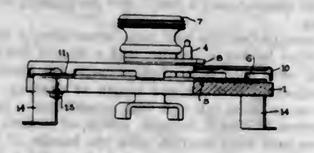
2. The temporary cover for candy boxes and the like, made from a single sheet of box board and comprising two superposed panels having sight openings therein, there being a sheet of transparent material interposed between said panels to close the sight openings, one of said panels having cut away corners and the other of said panels being provided with side flaps which are secured by adhesive to the edges of the other panel and to the first panel at the points exposed by the cut away corners.

3. The temporary cover for candy boxes and the like, made from a single sheet of box board and comprising two panels with registering sight openings, a sheet of transparent material interposed between said two panels to close the said sight openings, one of said panels having flaps which are secured to the other of said panels, and the other of said panels having tucks formed by slots into which the adjacent portions of the said transparent material are inserted to position the said transparent material relatively to the sight openings.

1,192,360. FIELD-RHEOSTAT. HENRY J. WIEGAND, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 22, 1914. Serial No. 858,071. (Cl. 219—48.)

1. A rheostat having a flat insulating base, a resistance arranged on the surface thereof, a layer of cementitious material applied to said base to embed said resistance and

a series of flat contact plates resting upon the surface of said base and connected to said resistance, each of said contacts having a part extending beneath said cementitious layer and each having a plurality of anchoring lugs projecting downwardly into said base, one of said lugs being disposed beneath the cementitious layer and the other at the free end of its respective contact plate.



2. In a device of the character described, in combination, a substantially flat insulating base, a resistance element thereon, contact plates on said base and electrically connected to said resistance element, a cementitious insulating layer embedding said resistance element, and a metallic cover for said base having its margin spaced therefrom for insuring free ventilation thereunder.

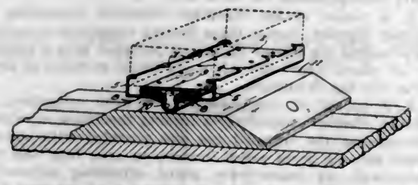
3. A rheostat provided with a base, a circuit resistance element mounted upon a face thereof, a controlling element for said resistance pivoted concentrically therewith and a cover for said resistance element having radially disposed lugs for attachment to said base, said cover being spaced from said base for ventilation and having ventilating apertures in the top thereof.

4. A rheostat having a base and a resistance element thereon, a cementitious insulating layer embedding said resistance element, a metallic cover for said base, and means for attaching said cover to said base at points outside the area of the current-carrying parts thereon.

5. A rheostat including an insulating base, a resistance mounted thereon, a metallic cover for said resistance having lugs or feet for attachment to said base, separate supporting lugs or feet for said base, said sets of lugs or feet overlapping and common means securing both sets of said lugs or feet to said base.

[Claim 6 not printed in the Gazette.]

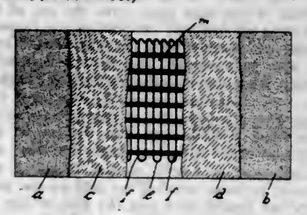
1,192,361. WEATHER AND DUST PROOFING DEVICE. BERNARD WISTROM, Stromsburg, Nebr. Filed Apr. 7, 1916. Serial No. 89,687. (Cl. 20—69.)



1. A weather and dust proofing device comprising oppositely disposed toothed angle pieces formed with adjacent looped lateral terminations, a strip having bent lateral portions inserted into said looped lateral terminations and a flexible element frictionally retained between said looped lateral terminations and said strip and formed with an outwardly and downwardly bulged portion.

2. A weather and dust proofing device comprising oppositely disposed angle pieces each of which is formed with right-angled sides, teeth formed on one of said sides, a lip formed on the other of said sides of each angle piece to form a loop therewith; a strip formed with curved lateral portions having flared terminations disposed in the said loops, and a flexible strip having its lateral edges frictionally retained between said loops and the aforesaid strip and its central portion bulged outwardly and downwardly between the said angle pieces.

1,192,362. POWER-TRANSMISSION BELTING. JESSE S. YOUNG, Chicago, Ill. Filed Nov. 9, 1912. Serial No. 730,504. (Cl. 74—65.)



1. An article of the character referred to comprising, in combination, a plurality of fibrous layers joined together and an unstretchable reticulated metallic reinforcement therebetween, said reinforcement having a greater number of filaments per square inch disposed transversely of the belting than are disposed longitudinally thereof, said first mentioned filaments being arranged to support said last mentioned filaments and restrain lateral movement thereof.

2. An article of the character referred to comprising, in combination, a plurality of fibrous layers cemented together and an unstretchable reticulated metallic reinforcement therebetween, said reinforcement having a greater number of filaments per square inch disposed transversely of the belting than are disposed longitudinally thereof, said first mentioned filaments being arranged to support said last mentioned filaments and restrain lateral movement thereof.

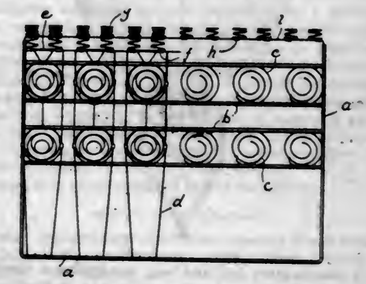
3. An article of the character referred to comprising, in combination, a plurality of fibrous layers and a reticulated metallic reinforcement interposed therebetween, one of said layers being of relatively thick and hard leather and another being of relatively thin and soft leather, and the several layers being joined together with elastic cement.

4. An article of the character referred to comprising, in combination, a relatively hard leather layer, a relatively soft leather layer, and a reticulated metallic reinforcement therebetween, the several layers being joined together.

5. An article of the character referred to comprising, in combination, a fibrous outer layer, a fibrous inner layer, and a reticulated metallic reinforcement therebetween having spaced transversely arranged woof members and longitudinally arranged warp members arranged in groups, the several layers being cemented together and the fibers of the inner layer felted into the cement and the reticulations of the reinforcement gripped by such fibers.

[Claims 6 to 11 not printed in the Gazette.]

1,192,368. SEAT-BACK SPRING. LEONARD A. YOUNG, Highland Park, Mich. Filed Jan. 8, 1916. Serial No. 70,893. (Cl. 155—25.)



1. In a seat back spring, the combination of a base frame, a front structure, a plurality of helical springs

connecting the front structure and the base frame, the said front structure including wire units having loops at the top, a plurality of zig-zag wire arches connecting the said loops of the wire units with the top of the base frame, and clips for hingedly connecting the forward ends of the zig-zag wire arches with the tops of said loops.

2. In a seat back spring, the combination of a base frame, a front structure including wire units having loops at the top, helical springs connecting the front structure and the base frame, a plurality of zig-zag wire arches connecting the tops of said loops and the top of the base frame, and said front structure including also a border wire running along the tops of said loops of the wire units, the said forward ends of the said arches being connected with the border wire and the tops of the loops of the wire units in hinging relation.

3. In a seat back spring, the combination of a base frame, a front structure including a plurality of wire units having loops at their tops, helical springs spacing the front structure and the base frame, a plurality of zig-zag wire arches connecting the tops of said loops and the top of the base frame, said front structure including also a border wire running along the tops of said loops, and clips bound around the forward ends of the said arches, the border wire and the tops of the loops, and arranged to hold the forward ends of the wire arches in hinging relation.

4. In a seat back spring, the combination of a base frame, a front structure including a plurality of wire units, each having two loops at its top, a plurality of spring arches connecting the tops of the said loops with the top of the base frame, the said arches being arranged in pairs, each pair being constructed of one piece of wire having a connecting run at the forward end, and means for hingedly connecting each pair of arches with each pair of loops of a wire unit.

5. In a seat back spring, the combination of a base frame, a front structure, a plurality of helical springs connecting the front structure and the base frame, a plurality of arch springs disposed in substantially vertical planes and in parallel relation and formed in pairs, each member of a pair being integrally connected at the front by connecting runs of wire substantially perpendicular to the arches, and loose clips for engaging about the connecting runs of wire and parts of the front structure for hinging the arch springs thereto.

1,192,364. COMBINATION FAN AND BAG. SAMUEL ZUCKER, New York, N. Y. Filed Feb. 5, 1916. Serial No. 76,331. (Cl. 230—33.)



1. A combination fan and bag, comprising a fan-shaped body portion having a handle, and a bag of flexible material attached to said body portion with its mouth adjacent the handle thereof.

2. A combination fan and bag, comprising a fan-shaped body portion having a handle, and a bag of flexible material attached at one side to said body portion to partake of the general form thereof and having its mouth adjacent the handle of said body portion.

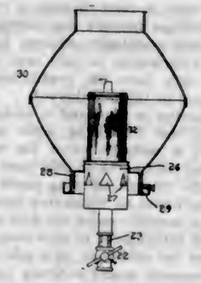
3. A combination fan and bag, comprising a fan-shaped body portion having a handle, a bag of flexible material attached to said body portion with its mouth adjacent the handle thereof, and a draw cord for closing said mouth of the bag.

4. A combination fan and bag, comprising a fan-shaped body portion having a handle, and a bag of flexible material fitted over said body portion with the handle of the latter projecting through the mouth of the bag.

5. A combination fan and bag, comprising a fan-shaped body portion having a handle, a bag of flexible material fitted over said body portion with the handle of the latter projecting through the mouth of the bag, and a draw cord for closing said mouth of the bag.

[Claim 6 not printed in the Gazette.]

1,192,365. GAS-BURNER. JOHN H. ACKROYD, Hartford, Conn. Filed May 26, 1915. Serial No. 30,555. (Cl. 67—96.)



1. A burner of the character described comprising a mixing chamber, burner tubes leading therefrom, a casing surrounding the burner tubes and provided with air ports, and an imperforate guard secured to the casing above the air ports and extending outward and downward over said ports at a distance from the casing, said guard being open at the bottom only and preventing outside air currents from affecting the flame jets.

2. A burner of the character described comprising a mixing chamber, burner tubes leading therefrom, a casing surrounding the burner tubes and provided with a plurality of spaced apart side air ports which increase in area from the top downward.

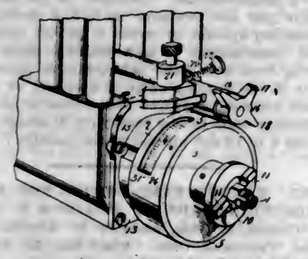
3. A burner of the character described comprising a mixing chamber, burner tubes leading therefrom, a casing surrounding the burner tubes and provided with spaced apart side air ports which increase in area from the top downward, an imperforate guard extending outwardly from the casing, and means forming a heat chamber and resting on the guard.

4. A burner of the character described comprising a mixing chamber, burner tubes leading therefrom, a casing surrounding the burner tubes and provided with air ports which increase in area from the top downward, an inwardly extending flange in the casing curved to correspond with the curvature of the burner tubes and leaving a space between the flange and the tubes, an imperforate guard extending outwardly from the casing and means forming a heat chamber and resting on the guard.

5. A burner of the character described comprising a mixing chamber, burner tubes leading therefrom, a casing surrounding the burner tubes and provided with spaced apart side air ports, an imperforate guard over the air ports open at the bottom only, and a mantle guard extending above the tops of the burner tubes.

[Claims 6 to 11 not printed in the Gazette.]

1,192,366. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. BUTLER AMES, Lowell, Mass. Filed Feb. 1, 1915. Serial No. 5,888. (Cl. 123—149.)



1. In a generator having an armature shaft, and a driving shaft connected thereto by a spring; a coupling mounted to turn upon the armature shaft; a disk having a flanged portion overlying the circumferential surface of the coupling, there being a slot in said flange; and a cavity in the circumferential surface of the coupling; a finger whose end lies and moves in the plane of said slot and said cavity, and which may be moved into said slot and thereby engage said disk until the finger is moved out of said cavity, thereby releasing the engagement between the finger and the disk, and permitting the power stored up in the spring, to drive the armature shaft with greater speed than that of the driving shaft, to develop the proper ignition spark.

2. In a generator having an armature shaft, and a driving shaft connected thereto by a spring; a coupling mounted to turn upon the armature shaft; a disk fixed upon the armature shaft, and having a flanged portion overlying the circumferential surface of the coupling; there being a circumferential slot in said flange upon the disk; and a cavity in the circumferential surface of the coupling; a spring operated finger whose free end lies in the plane of said slot and said cavity, and may be moved into said slot and engage its advancing end and hold stationary said armature disk until the driven coupling moves its cavity so as to permit the finger to be moved downward into and out of it to release the engagement between the finger and the armature disk, and to permit the power stored up in the spring to drive the armature shaft with greater speed than that of the driving shaft to develop the proper ignition spark.

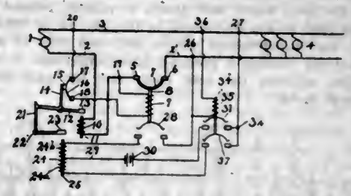
1,192,367. RAZOR. BUTLER AMES, Lowell, Mass. Filed July 2, 1915. Serial No. 37,681. (Cl. 30—12.)



1. A U-shaped magnet having two adjacent pole pieces; a metallic blade; a bar of non-magnetic material mounted upon the pole pieces said magnet to serve as an abutting surface for said blade; a cap of magnetic material serving with the blade as an armature for the magnet, means to prevent the longitudinal and lateral movements of said blade and said cap in relation to said bar.

2. A magnet having two adjacent, separate, soft iron pole pieces; a bar of non-magnetic material extending across and being recessed to receive said pole pieces; a flat headed screw with spanner holes whereby each pole piece and each end portion of the bar may be secured to their respective leg of the magnet; a pin centrally mounted in the axis of each screw; a metallic blade with suitable holes for said pin to engage; and a cap of magnetic material also engaged by said pin, and serving as an armature for the magnetic circuit to confine the blade in abutment with the non-magnetic bar.

1,192,368. AUTOMATIC CIRCUIT-BREAKER. ARVID R. ANDERSON, Columbus, Ohio. Filed Mar. 22, 1915. Serial No. 16,060. (Cl. 175—294.)



1. In an automatic circuit breaker adapted to open an electric circuit, the combination with a main break switch, of automatic reclosing devices controlled by a governing means comprising two electromagnetic elements adapted to be energized in opposition to each other when the resistance of the circuit is abnormally low, and a source of electromotive force, independent of the main source of electric supply, to energize the governing means.

2. In an automatic circuit breaker adapted to open an electric circuit, the combination with a main break switch, of automatic reclosing devices controlled by a governing means comprising two electromagnetic elements adapted to be energized in opposition to each other when the resistance of the circuit is abnormally low, a source of electromotive force independent of the main source of electric supply, to energize the governing means, and means to retard the energizing of the governing means.

3. In an automatic circuit breaker, adapted to open an electric circuit, the combination with a main break switch, of automatic reclosing devices controlled by a governing means comprising two electromagnetic elements adapted to be energized in opposition to each other when the resistance of the circuit is abnormally low, a source of electromotive force independent of the main source of electric supply to energize the governing means, and means actuated by the electromotive force of the load to retard the energizing of the said governing means.

4. In an automatic circuit breaker adapted to open an electric circuit, the combination with a main break switch, of automatic reclosing devices controlled by a governing means, comprising two electromagnetic elements adapted to be energized in opposition to each other to prevent the actuation of the reclosing devices when the resistance of the circuit is abnormally low, and to permit the actuation of the reclosing devices upon the restoration of normal working conditions in the circuit, and a source of electromotive force independent of the main source of electric supply to energize the governing means.

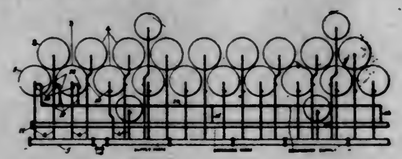
5. In an automatic circuit breaker adapted to open an electric circuit, the combination with a main break switch, of automatic reclosing devices controlled by a governing means comprising two electromagnetic elements adapted to be energized in opposition to each other to prevent the actuation of the reclosing devices when the resistance of the circuit is abnormally low, and to permit the actuation of the said reclosing devices upon the restoration of normal working conditions in the circuit, a source of electromotive force independent of the main source of electric supply to energize the governing means and means to retard the actuation of the governing means.

[Claims 6 to 13 not printed in the Gazette.]

1,192,369. DRAINAGE SYSTEM. GEORGE HALE BARBUS, Brookline, Mass. Filed Nov. 18, 1914. Serial No. 872,876. (Cl. 34—48.)

1. In a drainage system the combination of a multiple number of steam heating units divided into two or more sets, a principal drainage main, individual drainage con-

nections between each of the said units of one set and said principal drainage main, a secondary drainage main, individual drainage connections between each of the units of a second set and said secondary drainage main, means for supplying steam to the first of said sets of units, means for permitting a predetermined amount of said steam to pass along with the water of condensation to the said principal drainage main, means for separating from the said water said steam so passed, means for supplying said steam so passed to the second of said sets of units, and independent means for each unit of said second set for causing a predetermined difference in pressure to exist between the said units and the said secondary drainage main.



2. In a drainage system the combination of a multiple number of steam heating units divided into two or more sets, a principal drainage main, individual drainage connections between each of the said units of one set and said principal drainage main, a secondary drainage main, individual drainage connections between each of the units of a second set and said secondary drainage main, means for supplying steam to the first of said sets of units, means for causing a predetermined difference in pressure to exist between each unit of said first set and said principal drainage main and for permitting a predetermined amount of said steam to pass along with the water of condensation to the said principal drainage main, means for separating from the said water said steam so passed, and means for supplying said steam so passed to the second of said sets of units.

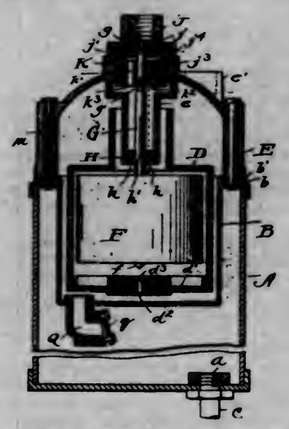
3. In a drainage system the combination of a multiple number of steam heating units divided into two or more sets, a principal drainage main, individual drainage connections between each of the said units of one set and said principal drainage main, a secondary drainage main, individual drainage connections between each of the units of a second set and said secondary drainage main, means for supplying steam to the first of said sets of units, means for causing a predetermined difference in pressure to exist between each unit of said first set and said principal drainage main and for permitting a predetermined amount of said steam to pass along with the water of condensation to the said principal drainage main, means for separating from the said water said stream so passed, means for supplying said steam so passed to the second of said sets of units, and independent means for each unit of said second set for causing a predetermined difference in pressure to exist between the said units and the said secondary drainage main.

4. In a drainage system the combination of a multiple number of steam heating units divided into two or more sets, means for supplying steam to one of said sets of heating units, a principal drainage main, means for passing a predetermined amount of said steam along with the water of condensation to said principal drainage main, means for separating from said water said steam so passed, means for supplying said separated steam to the units of the second of said sets, and a secondary drainage main, connections between the units of said second set and said secondary main, means for causing a predetermined difference in pressure to exist between said second set of heating units and said secondary drainage main and for maintaining the pressure in said secondary drainage main at least equal to atmospheric pressure.

5. In a drainage system the combination of a multiple number of steam heating units divided into two or more sets, a primary steam main with connections therefrom to supply each of said units of one set with steam, a primary drainage main, connections from each of said units of the first set to said primary drainage main, said connections having a constricted passage in each for maintaining a predetermined difference in pressure between said units and said drainage main and through which a predetermined amount of steam is passed along with the water of condensation to said drainage main, means for separating from said water said steam so passed and supplying it to the heating units of a second of said sets, a secondary drainage main and connections from said second set of heating units to said secondary drainage main.

[Claims 6 to 13 not printed in the Gazette.]

1,192,370. VACUUM FEED DEVICE FOR INTERNAL-COMBUSTION ENGINES. FRIEDRICH W. BAUMGAERTNER, Cleveland, Ohio, assignor to Windsor T. White, trustee, Cleveland, Ohio. Filed May 15, 1915. Serial No. 28,482. (Cl. 158—36.)



1. In a vacuum feed device, the combination of a suction tank having an air outlet adapted for connection with an air exhauster, an air inlet, a liquid inlet adapted for connection with a supply tank, and a liquid outlet, a valve for said liquid outlet, a suction valve for said air outlet, which valve moves outwardly to its seat, a float chamber which communicates with the suction tank, which float chamber has also a liquid outlet in its lower end, a float in said float chamber, and means connecting said float with said suction valve.

2. In a vacuum feed device, the combination of a suction tank having an air outlet adapted for connection with an air exhauster, an air inlet, a liquid inlet adapted for connection with a supply tank, and a liquid outlet, a valve for said liquid outlet, a suction valve for said air outlet which valve moves outwardly to its seat, a float chamber which communicates with the suction tank, which float chamber has also a liquid outlet in its lower end, an outlet valve for said float chamber, a float in said float chamber, and means connecting said float with said suction valve and float chamber outlet valve.

3. In a vacuum feed device, the combination of a suction tank having an air outlet adapted for connection with an air exhauster, an air inlet, a liquid inlet adapted for connection with a supply tank, and a liquid outlet, a valve for said liquid outlet, a suction valve for said air outlet which valve moves outwardly to its seat, a float chamber which communicates with the suction tank, which float chamber has also a liquid outlet in its lower end, an outlet valve for said float chamber, an air valve for the air inlet to said suction chamber, a float in said float chamber, and means connecting said float with said suction valve, the air valve, and float chamber outlet valve.

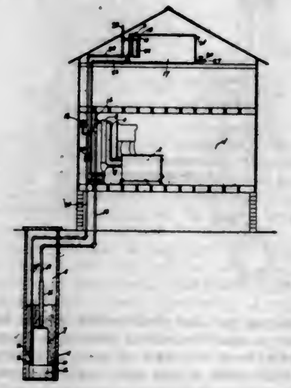
4. In a vacuum feed device, the combination of a suction tank having an air outlet adapted for connection

with an air exhauster, an air inlet, a liquid inlet adapted for connection with a supply tank, and a liquid outlet, a valve for said liquid outlet, a suction valve for said air outlet which valve moves outwardly to its seat, a float chamber having a large liquid inlet which communicates with the suction tank at a point such that the float chamber will be suddenly flooded when the liquid level in said suction tank reaches a predetermined height, which float chamber has also a liquid outlet in its lower end, a float in said float chamber, and means connecting said float with said suction valve, and a storage tank subject always to atmospheric pressure and arranged to receive liquid discharged through the liquid outlets of the suction tank and float chamber.

5. In a vacuum feed device, the combination of a suction tank having a fuel inlet, a fuel outlet, an air inlet, and an air outlet, an open top float chamber which is fixed in said suction tank, and has a fuel outlet in its bottom, a float in said chamber having a valve for said fuel outlet on its bottom, an upwardly extended valve stem which is fixed to said float and extends upward therefrom in alinement with said air outlet from the suction tank, and has a valve formed on its upper end for closing said air outlet.

[Claims 6 to 8 not printed in the Gazette.]

1,192,371. MEANS FOR RAISING WATER. GEORGE HENRY BECKETT, Mission City, British Columbia, Canada. Filed Aug. 28, 1915. Serial No. 47,857. (Cl. 103—8.)



1. Means for raising water, comprising, in combination, a steam generator, a cylindrical member adapted to be submerged in a reservoir below the level of said generator, said member comprising a pair of cylinders closed at both ends disposed one within the other and having a dead air space therebetween, the inner cylinder having inlet passages near its lower end extending through the dead air space provided with automatically operated inlet valves located exteriorly of the outer cylinder and an outlet passage also extending through the dead air space and exteriorly of the outer cylinder, the outer cylinder having a tubular extension the upper end of which is closed extending vertically and communicating with the said dead air space, a pipe connection between the generator and the upper end of the said inner cylinder, said pipe connection being of less diameter than the said tubular extension and passing through the closed end thereof, a main storage tank, a small tank disposed within the main tank, said smaller tank having an opening near its upper end whereby it is in communication with the main tank, a pipe connection between the outlet opening of the inner cylinder and the small tank, and a pipe connection between the small tank and the said generator.

2. Means for raising water, comprising, in combination, a steam generator, a pressure collector adapted to be submerged in a reservoir below the level of said generator, said collector comprising two similar domes located one within the other forming an insulating space therebetween, the inner dome having inlet passages near its lower end provided with automatically operated inlet valves located exteriorly of the outer dome and an outlet passage also extending exteriorly of the outer dome, a pipe connection between the generator and the upper end of the inner dome, a main storage tank, a small tank disposed within the main tank and in communication therewith, a pipe connection from the outlet opening of the inner dome opening into the small tank and also to the atmosphere, and a pipe connection between the small tank and the generator.

3. A device of the class described, comprising, a double-walled cylinder designed to be submerged in water the space between the walls being open to the atmosphere, the inner cylinder being provided with a water inlet, a non-return valve in the inlet, a steam generator, a water reservoir disposed at a level higher than that of the generator, a discharge pipe from the said inner cylinder opening to the said reservoir and also to the atmosphere, a supply pipe from said reservoir to the generator, a steam pressure supply pipe from the generator to the submerged tank, and means whereby the said pipes drain automatically to stand empty when the device is inactive.

4. In a device of the class described, a pressure generator, a water reservoir, a pipe constantly supplied with water extending from the reservoir to the desired altitude, and a double walled dome shaped pressure collector connected to said generator immersed in said reservoir and communicating with said pipe whereby the pressure raises the water in the pipe the space between the walls of said collector being open to the atmosphere.

5. In a device of the class described, a pressure generator, a water reservoir, a pipe constantly supplied with water extending from the reservoir to the desired altitude, and a double walled pressure collector having a weighted base connected to said generator immersed in said reservoir and communicating with said pipe whereby the pressure raises the water in the pipe the space between the walls of said collector being open to the atmosphere.

[Claims 6 to 17 not printed in the Gazette.]

1,192,372. IMITATION SNOW. MARTIN L. BEISTLE, Shippensburg, Pa. Filed June 29, 1914. Serial No. 848,048. (Cl. 252.)

1. An imitation snow comprising a combination of fire-proofed raw cotton, asbestos and flaked mica.

2. An imitation snow comprising the combination of raw cotton, asbestos fiber and flaked mica.

3. An imitation snow, a body of fire-proofed raw cotton constituting the bulk of the mixture, a quanntity of asbestos giving "clinging" quality to the mixture, and flaked mica.

4. An imitation snow comprising fifty per cent. of fire-proofed raw cotton, forty-five per cent. of absestos and five per cent. of flaked mica.

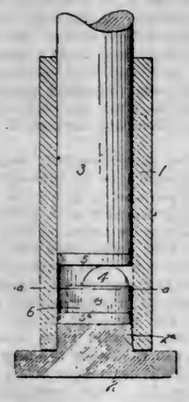
1,192,373. THRUST-BEARING. ROBERT B. BENNETT, New York, N. Y., assignor to Erastus S. Bennett, New York, N. Y. Filed July 9, 1912, Serial No. 708,487. Renewed Dec. 15, 1915. Serial No. 67,081. (Cl. 64—49.)

1. A thrust bearing comprising a support, a cylindrical ball inclosure, a shaft having its lower end within said inclosure, a single ball interposed between the support and shaft, and a cylindrical cage encircling the ball of a height exceeding the radius of the ball.

2. A thrust bearing comprising a support, a cylindrical ball container, a shaft having its lower end rotating in said container, a single ball between said support and shaft of a diameter less than the diameter of the shaft, but exceeding the radius of the shaft, and a cylindrical ring in excess of the diameter of the ball but less than the diameter of the ball containing chamber.

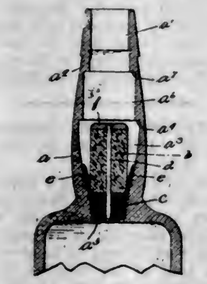
3. A thrust bearing comprising a cylindrical member, a shaft fitted to and journaled therein, a disk at the end

of the shaft, a second disk spaced from said first disk, a suitable support, and a single ball interposed between said disks, said disks having plain surfaces for the ball to travel on and one of them having a central projection



for maintaining the ball out of alinement with the shaft, the said ball having a one point bearing on each of the said disks at the point of traveling contact with the main portions of said disks respectively.

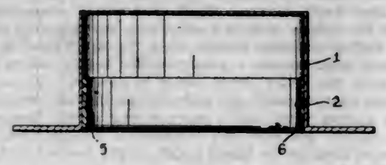
1,192,374. NON-REFILLABLE BOTTLE. ARTHUR J. BENSON, Malden, Mass. Filed Mar. 8, 1916. Serial No. 82,909. (Cl. 215—69.)



1. A bottle having the passageway through its neck provided with a contracted throat at its outer end, a contracted seating portion at its inner end, and an enlarged portion therebetween, a stopper having a main portion arranged to fit said throat, and an end-portion to seat against said seating portion, to close said portions, and oppositely disposed engaging means on the stopper and on the interior of said passage way to hold the stopper against removal, when in position to close said throat, and to hold it in a position intermediate said enlarged portion, when the bottle is being emptied.

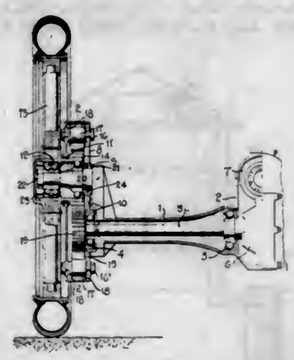
2. A bottle having the passage way through its neck provided with a contracted throat at its outer end, a contracted seating portion at its inner end, and an enlarged portion therebetween, and inwardly facing shoulders at the inner end of said throat intermediate said enlarged portion, a stopper having a main body portion arranged to fit tightly in said throat and having a valve portion at its inner end adapted to seat against said seating portion, and spring arms connected to said stopper between its valve portion and its body portion, and extending in a direction to overlie the latter in position to engage the outer shoulder, when the stopper is in position in said throat, and the inner shoulder, to hold the stopper in an intermediate position in said enlarged portion.

1,192,375. LEATHER OR SWEAT-BAND FOR STRAW HATS. PAUL D. BERNARD, New York, N. Y. Filed Mar. 15, 1916. Serial No. 84,270. (Cl. 2—32.)



In the manufacture of straw hats, the steps which comprise, providing an over-size hat, providing a leather cut on a curve substantially throughout its length, introducing the leather and a pad into the hat, sewing the convex basal edge of the leather to the hat, working the base of the leather over said pad so as to produce a basal level, and removing the pad.

1,192,376. DRIVE-MECHANISM. FLOYD FITZ-TARR BINGHAM, San Jose, Cal. Filed Jan. 11, 1916. Serial No. 71,545. (Cl. 21—90.)



1. In a motor car, the combination with a hollow supporting axle, a shaft journaled therein, a casing extending upwardly from the end of said axle and provided above the same with a stub axle, a driving wheel having a hub journaled on said axle, a gear provided upon said hub, an internally toothed gear rotatably mounted in said casing and engaging said hub gear, and a gear provided upon the end of said shaft for also engaging said internally toothed gear.

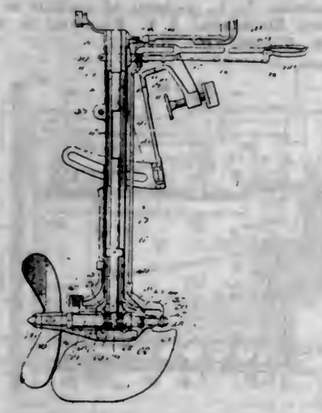
2. In a motor car, the combination with a hollow supporting axle, a shaft journaled therein, a casing extending upwardly from the end of said axle and provided above same with a stub axle, a driving wheel having the hub which is journaled on said axle, a gear provided upon said hub, an internally toothed gear rotatably mounted in said casing and engaging said hub gear, and a gear provided upon the end of said shaft for also engaging said internally toothed gear, said hub gear and shaft gear being in vertical alinement.

3. In a motor car, the combination with a hollow supporting axle, a shaft journaled therein, a casing extending upwardly from the end of said axle and provided also above the same with a stub axle, a driving wheel having a hub journaled on said axle, a gear provided upon said hub, a plurality of freely rotatable rollers mounted in said casing, an internally toothed gear having its periphery engaging said rollers, said hub gear engaging said internally toothed gear, and a gear provided upon the end of said shaft and engaging said internally toothed gear.

4. In a motor car, the combination with a hollow supporting axle, a shaft journaled therein, a casing extending

upwardly from the end of said axle and provided above same with a stub axle, a driving wheel having a hub journaled on said axle, a gear provided upon said hub, a plurality of freely rotatable rollers mounted in said casing, an internally toothed gear having its periphery engaging said rollers, a hub gear engaging said internally toothed gear above said shaft, and a gear provided upon the end of said shaft and engaging said internally toothed gear below the shaft, substantially as described.

1,192,377. BOAT-MOTOR. EDWARD B. BLAKELY, Muskegon, Mich., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed June 24, 1915. Serial No. 36,007. (Cl. 115—18.)



1. A boat motor having, in combination, an engine, an upright drive-shaft rotated thereby, a depending bearing on the engine in which the upper end of said shaft is mounted, an axially rotatable tube surrounding said shaft and receiving said bearing in its upper end, a second bearing fixed in the lower end of said tube in which said shaft is mounted, a gear casing fixed with relation to the lower end of said tube and said lower bearing, a rudder-plate fixed to said gear casing beneath the latter, a transverse shaft mounted in said gear casing, a propeller fixed on one end of the latter shaft, a bevel gear fixed on the lower end of said drive-shaft, two opposed bevel gears meshing with the mentioned gear and rotatably mounted on said propeller shaft, two clutch elements fixed respectively to the two latter bevel gears, an intermediate clutch element slidably surrounding said propeller shaft, a slidable clutch shifter rod fixed with relation to said intermediate clutch element, a tiller for rotating said tube, said tiller being pivoted to the tube for swinging movement in a vertical plane, and connections between the tiller and said shifter rod for sliding the latter by vertical swinging movement of the tiller.

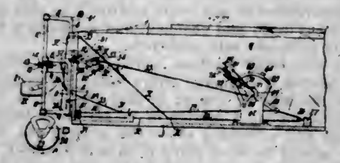
2. A boat motor having, in combination, an engine, a bearing thereon, a rotatable tubular device receiving said bearing in its upper end, a bearing in the lower end of said tubular device, a drive-shaft rotated by the engine and mounted in said bearings within said tubular device, a gear casing fixed with relation to the lower end of said tubular device, a rudder fixed with relation to said gear casing, a transverse propeller shaft mounted in said gear casing, a propeller fixed on said propeller shaft, a disengageable connection between said two shafts, a shifter element slidable in said gear casing for operating said connection, a pivoted lever arranged to slide said shifter element, a vertical link connected at its lower end to said lever, a tiller pivoted at the upper end of said tubular device for swinging movement up and down and arranged to rotate said tubular device, the upper end of said link being attached to said tiller, a manually operable dog carried by said tiller, and a series of teeth on said tubular device coöperating with said dog.

3. A boat motor having, in combination, a drive shaft, an axially-rotatable tube inclosing the shaft, a sleeve rigidly connected to the upper portion of the tube, a yoke pivoted to the sleeve for swinging movement in a vertical plane, a tiller detachably connected to the yoke, and a locking device movably supported upon the detachable tiller and arranged to engage coacting locking means on the sleeve.

4. A boat motor having, in combination, a drive shaft, a propeller, reversible clutch means for connecting said shaft and propeller, an axially-rotatable tube inclosing the shaft, a sleeve rigidly connected to the upper portion of the tube, a yoke pivoted to the sleeve for swinging movement in a vertical plane, a link connected to the clutch means and to the yoke, a tiller detachably connected to the yoke, and means for locking the yoke in vertically adjusted position.

5. A boat motor having, in combination, an engine, a drive-shaft rotated thereby, a propeller shaft, a propeller on the latter shaft, a disengageable connection between said two shafts, means for operating said connection, a link connected at its lower end to said means, a hand-lever pivoted adjacent to said engine, the upper end of said link being operatively connected to said hand-lever, a manually operable dog carried by said hand-lever, and stationary teeth to coöperate with said dog for holding the hand-lever in different positions.

1,192,378. MOTOR-BOAT. HARRY L. BOWERS, Bay City, Mich. Filed Sept. 25, 1915. Serial No. 52,593. (Cl. 115—1.)



1. A motor boat comprising a hull, a steering rudder movable between upper and lower positions thereon, a steering wheel also movable between upper and lower positions, and means for simultaneously moving the two steering devices in opposite directions.

2. A motor boat comprising a hull, a steering rudder movable between upper and lower positions thereon, a steering wheel also movable between upper and lower positions, means for simultaneously moving the two steering devices in opposite directions, and means for locking both rudder and wheel in either position.

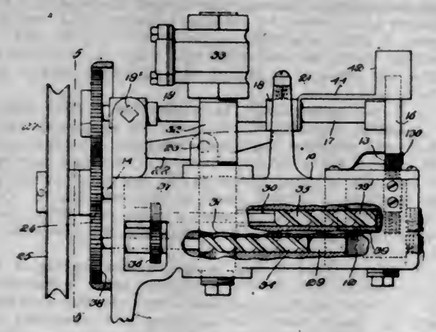
3. A motor boat comprising a hull, a steering rudder movable from a lower to an upper position, a steering wheel movable from an upper to a lower or carrying position, means for locking the rudder in the lower position, means whereby, when the rudder is in the lower position and strikes an obstruction, the locking means is caused to release the rudder to allow the latter to rise, and means for communicating the movement of the rudder in reverse direction to the wheel to cause the latter to lower.

4. A motor boat comprising a hull, a steering rudder movable from a lower to an upper position, a steering wheel movable from an upper to a lower position, means for causing the wheel to move simultaneously with and oppositely to the rudder, said means allowing a limited initial movement of the rudder independently of the wheel.

5. A motor boat comprising a hull, a steering rudder movable between upper and lower positions thereon, a pair of laterally spaced steering wheels also movable between upper and lower positions thereon, and means for simultaneously moving the rudder and the wheels in opposite directions.

[Claims 6 to 22 not printed in the Gazette.]

1,192,379. CEMENTING-MACHINE. FRANK A. BRACKETT, Binghamton, N. Y., assignor of one-half to Fred L. Emerson, Binghamton, N. Y. Filed Jan. 20, 1910. Serial No. 539,195. (Cl. 91—51.)



1. A cementing machine for applying cement to the under side of flexible material, comprising an upper work-pressing roll, a narrow lower cement-applying roll, a chamber having a slotted top or cover from which a portion of said applying roll upwardly emerges for engagement with the work, said chamber being formed with an overflow which determines the height of the cement therein and the depth of immersion of the applying roll into said cement, a closed reservoir for cement, ducts connecting said chamber with said reservoir, one of said ducts being arranged to receive cement from said overflow, and screw conveyers arranged in said ducts positively to feed cement into and away from said chamber, and mechanism for rotating said rolls and said conveyers.

2. In a cementing machine, a reservoir for cement, a chamber having a discharge outlet which determines the height of the body of cement in said chamber, a cement applying roll having a portion of its periphery below the said outlet and a portion above the level of the cement to apply cement to work exterior to said chamber, ducts communicating with said outlet and with said chamber respectively and also with said reservoir, discharge and feeding screw conveyers in said respective ducts, a power shaft, and power-transmitting mechanism actuated by said shaft for operating said conveyers at different speeds.

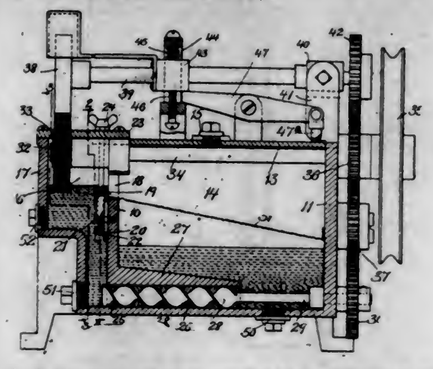
3. In a cementing machine, a closed reservoir for cement, a chamber lower than the reservoir and closed except for a slot in its top, an overflow, two closed ducts communicating one with the reservoir and the lower part of the chamber and the other with said reservoir and the overflow, a cement-applying roll dipping into the cement in the chamber and having a portion emerging through the slot, and screw conveyers in said ducts, one for feeding cement from the reservoir and the other for feeding cement from the overflow back to the reservoir.

4. A cementing machine, comprising a chamber, a cement-feeding roll dipping into the cement into said chamber and having a portion of its periphery projecting out of said chamber for engagement with the work, a closure for said chamber having a slot through which said roll projects, a cement-containing supply chamber laterally removed from the first-mentioned chamber and in approximately the same horizontal planes therewith, horizontal supply and discharge conduits connecting said chambers, and means for circulating cement from said supply chamber through the supply conduit to said first-mentioned chamber and through said discharge conduit to said supply chamber.

5. A cementing machine, comprising a tank or chamber for cement, an external source of cement, a feeding roll the periphery of which is rotatably movable into and out of said chamber to apply cement to work exterior to said chamber, a slotted closure for said tank or chamber through which said roll projects an inlet or feeding duct and a discharge or return duct extending from said external source to said chamber, said return duct opening into said receiving chamber above the plane of the lowest part of said roll, and said inlet duct opening into said chamber below the return duct, means for circulating cement through said inlet duct from said external source to said chamber, and through said return duct from said chamber to said external source, thereby maintaining a predetermined level of the cement in said chamber irrespective of the withdrawal of cement by said roll, and a manually controlled spring-tensioned pressure roll above and coöperating with said cement feeding roll.

[Claims 6 to 10 not printed in the Gazette.]

1,192,380. CEMENTING-MACHINE. FRANK A. BRACKETT, Binghamton, N. Y., assignor of one-half to Fred L. Emerson, Binghamton, N. Y. Filed July 29, 1910. Serial No. 574,496. (Cl. 91—51.)



1. A cementing machine, comprising a closed tank for containing a body of cement and having a slotted cover, a cement-applying device dipping into the cement in said tank and applying cement to work exterior to the tank, an outlet from said tank for determining the height of cement in said tank, a reservoir adjacent said tank, into which reservoir said outlet directly opens, the body of cement being at a lower level in said reservoir than in said tank, a rotary pump for forcing cement directly from said reservoir into said tank, an adjustable dam at said outlet for varying the level of the cement in said tank, and means accessible exteriorly of said tank for adjusting said dam.

2. In a cementing machine, a casing forming a reservoir and a tank separated by a wall and connected by an outlet port from said tank and an inlet port to said tank, said ports being formed in said wall, said outlet maintaining the level of the cement in said tank above the level of cement in said reservoir, a rotary pump for forcing cement from said reservoir through said inlet to said tank, and means located on said casing and comprising a cement-applying device dipping into said tank, for applying cement from said tank to the work.

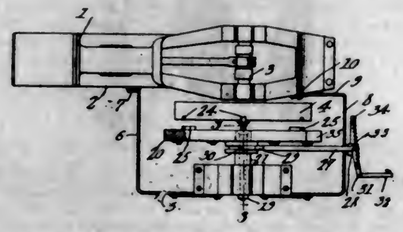
3. In a cementing machine, a casing forming a reservoir and a tank, an outlet from said tank to the reservoir, an inlet from the reservoir to the tank, and entering the tank below the outlet, a pump located in said inlet for forcing the cement from the reservoir into the tank, and a screen in the reservoir for screening the cement flowing back into the reservoir from the tank, said screen being inclined downwardly from said outlet and a roll dipping into the cement in the tank for conveying cement therefrom for its application to the work.

4. In a cementing machine, a box-like bed or frame divided to form a cement-reservoir and a tank, an inlet duct leading from the bottom of the reservoir to the tank, a spiral conveyer in said duct for forcing cement from the reservoir into the tank, an outlet between the tank and the reservoir located to maintain a predetermined height of cement in said tank, the walls of said reservoir converging toward said inlet duct, and means for applying the cement in said tank to the work.

5. A cement-applying machine, comprising a boxlike casing having a partition wall dividing it into a tank and a reservoir for the reception of cement, an outlet in said wall determining the height of cement in the tank, and permitting surplus cement in the tank to return to the reservoir, an inlet duct leading from the reservoir to the bottom of the tank, a screw conveyer in the inlet duct, means for rotating said conveyer, a cement-applying roll dipping into the cement in the tank, and means for closing said tank and reservoir to prevent the evaporation of the cement.

[Claim 6 not printed in the Gazette.]

1,192,381. BALANCE-WHEEL. FRANK C. BRESSON, Apple Creek, Ohio. Filed Feb. 23, 1916. Serial No. 80,026. (Cl. 74—6.)



1. In a device of the character described, a fly wheel, a balance wheel, said wheels having interengageable portions, means for shifting said balance wheel into and out of engagement with the fly wheel including a lever, and a spring connected to said lever for holding it in either position.

2. In a device of the character described, a fly wheel, a spindle, a balance wheel having its hub slidable upon said spindle, the balance wheel being movable into and out of engagement with the fly wheel, and means for adjustably supporting said spindle whereby the balance wheel can be brought into coaxial relation with the fly wheel.

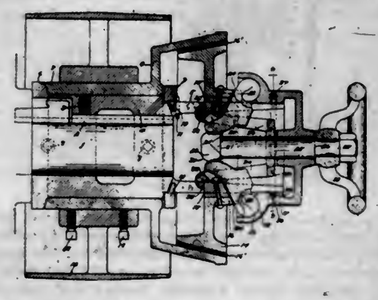
3. The combination with a drilling engine, its shaft and a fly wheel mounted on said shaft, of a balance wheel disposed adjacent the fly wheel, and adjustable means independent of said shaft for mounting the balance wheel coaxial with and for movement into and out of engagement with the fly wheel.

4. The combination with an engine having a bed, a shaft, and a fly wheel upon said shaft, of a pedestal, a strap terminally attached to said bed and attached between its ends to said pedestal, a spindle carried by the pedestal and projecting toward and in alinement with said shaft, a balance wheel slidable upon said spindle to move into and out of engagement with the fly wheel, and means for shifting the balance wheel.

1,192,382. CLUTCH. JULIEN A. BRIED, Oakland, Cal. Filed July 24, 1915. Serial No. 41,678. (Cl. 192—8.)

1. A friction clutch comprising a drive shaft, a bearing sleeve carried thereby, a friction clutch member rotatably mounted on said bearing sleeve, a friction clutch member coöperating with said first mentioned clutch member and supported by said bearing sleeve, one of said clutch members movable to and from the other member, engaging means for contacting with said movable clutch member for forcing the same into engagement with the cooperating clutch member, releasing means for contacting with the movable clutch member for disengaging the same from contact with the coöperating clutch member, and a manually controlled means for operating said engaging and releasing means in alternation.

2. A clutch comprising a drive shaft, friction clutch members associated therewith, one of said clutch members capable of rotation independently of said shaft and the other of said members being rotatable with said shaft and slidable into engagement with the first mentioned member, engaging means for contacting with said slidable clutch member at one face for forcing the same into engagement with the coöperating clutch member, releasing means contacting with said slidable clutch member at its opposite face for disengaging the same from contact with the cooperating clutch member, and a manually controlled means for operating said engaging and releasing means in alternation.



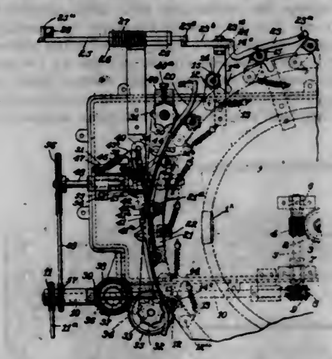
3. A clutch comprising a drive shaft, a bearing sleeve carried thereby and rotatable therewith, coöperating friction clutching members, one of said members rotatably mounted on said bearing sleeve, and the other of said members rotatable with and slidable along said bearing sleeve for coöperating with said first mentioned clutch member, fulcrumed clutch levers having cam surfaces for contacting with said slidable clutch member for forcing the slidable clutch member into contact with its associated clutch member, releasing means contacting with said slidable clutch member for disengaging the same from its associated member, manually controlled means for operating said clutch levers and releasing means in alternation, and a single means whereby the position of the fulcrum point of said clutch levers may be varied relative to the nonslidable clutch member.

4. A clutch comprising a drive shaft, coöperating friction clutch members associated therewith, one of said cutch members capable of rotation independently of said shaft and the other of said members being rotatable with said shaft and slidable into engagement with the first mentioned member, pivotally mounted clutch levers provided with cam surfaces for coöperating with said slidable clutch member for forcing the same into engagement with the cooperating clutch member, an adjustable means rotatable with said shaft for varying the pivotal point of said levers relative to the non slidable clutch member, releasing means for contacting with said slidable clutch member for disengaging the same from its associated member, and manually controlled means for operating said clutch levers and clutch releasing means in alternation.

5. A clutch comprising a drive shaft, a bearing sleeve carried thereby and rotatable therewith, said sleeve overhanging the end of said shaft and slotted at its outer end, coöperating friction clutch members, one of said clutch members rotatably supported on said bearing sleeve and the other of said members slidably supported on the outer end of said bearing sleeve and rotatable therewith, a collar fitted on the outer end of said bearing sleeve and adjustable thereon, clutch levers extending through said slots in said bearing sleeve and fulcrumed against said adjustable collar, said levers provided with cam surfaces for contacting with said slidable clutch member for forcing the same into engagement with the coöperating member, releasing means within said bearing sleeve and contacting with said slidable clutch member for disengaging the same from its associated member, and manually controlled means for operating said clutch levers and clutch releasing means in alternation.

[Claims 6 to 10 not printed in the Gazette.]

1,192,383. BEAD-FORMING MACHINE. WILLIAM A. BRUBAKER and FERDINAND F. BRUCKER, Akron, Ohio. Filed Feb. 23, 1916. Serial No. 79,957. (Cl. 18—5.)



1. A machine of the class described comprising a conveyer, form carrying devices rotatably carried by said conveyer, an inclined rotary bead forming roll mounted in proximity to said conveyer to swing toward and from said forms, pressure means normally forcing said roll yieldingly toward the form, means for rotating said roll, and means for rotating the forms as they travel past said roll.

2. A machine of the class described comprising a conveyer, form carrying devices rotatably carried by said conveyer, an inclined rotary bead forming roll mounted in proximity to said conveyer to swing toward and from said forms, pressure means normally forcing said roll yieldingly toward the forms, means for holding the forms in place on the form carrying devices, means for rotating said roll, and means for rotating the forms as they travel past said roll.

3. A machine of the class described comprising a conveyer, form carrying devices, forms adapted to be placed on said devices to interlock therewith, a rotary bead forming roll having its upwardly moving surface adapted to act on the article carried by the form near its lower edge, said roll having its axis inclined to the plane of the conveyer, means for holding the forms in locking engagement with the carrying devices while subjected to the action of the bead forming roll, and means controlled by the position of the forms on the carrying devices to stop the movement of the machine in case a form is not properly seated on its carrying device.

4. In a machine of the character described, a rotary table, annularly arranged form carrying devices rotatably carried by said table, a roll shaft mounted approximately tangential to the periphery of said table, and having a free end spring pressed toward the forms carried by said table, a bead forming roll carried by the free end of said shaft, said roll and shaft inclining upwardly with relation to the plane of the table, means for holding the forms on said form carrying devices, means for rotating the form carrying devices, and means for rotating said forming roll.

5. A machine of the class described comprising a conveyer, form carrying devices supported thereby, forms adapted to be placed on said form carrying devices to have non-rotatable connection therewith, means adapted to act on said forms to effect said non-rotatable connection, a spring pressed bead forming roll having its axis inclined to the plane of the conveyer for acting on the articles carried by the forms, and means for rotating the carrying devices while they are so acted upon.

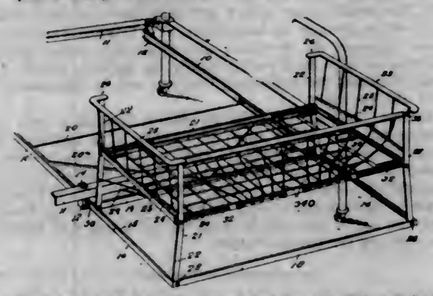
[Claims 6 to 13 not printed in the Gazette.]

1,192,384. GARMENT-PRESSER. STANISLAW MICHAL BRYA, Minneapolis, Minn. Filed Dec. 13, 1915. Serial No. 66,594. (Cl. 100—57.)

A device of the class described comprising substantially rectangular presser boards having correspondingly arranged garment accommodating notches at one end thereof and with tapered portions at each side of their opposite ends, hinge connections between one pair of adjacent parallel edges of the said boards, lugs carried by the adjacent tapered edges of the boards, hinges connecting the lugs and being in alinement with the aforesaid hinges, slotted keeper fingers and pivoted clamping bolts carried by the opposite edges of the said boards, the finger connecting the swinging tapered ends being longer than the other ones to cause the same to be positioned in alinement when the boards are folded to closed position, the said boards being provided with transversely-arranged inwardly opening receiving portions for garment cuffs adjacent the tapered ends of the said boards, and a separating board for garment members of similar dimensions and of less length than the said presser boards having a garment crotch accommodating notch at one end thereof, and positioned in clamping arrangement between the opposite portions of the garment when operatively positioned between the said presser boards.



1,192,385. BED ATTACHMENT. WILLIAM G. BUSSE, Brooklyn, N. Y. Filed June 17, 1911, Serial No. 633,704. Renewed Dec. 27, 1915. Serial No. 68,946. (Cl. 5—59.)



1. A bed attachment comprising tracks adapted to be secured transversely beneath a bed, and a collapsible and slidable structure adapted to be disposed beneath the bed or to be erected at the side thereof, said structure comprising a bottom frame slidable on said tracks, foldable end frames pivoted to said bottom frame and a horizontal member connected between said end frames so as to be raised and lowered thereby.

2. In a bed attachment, the combination with guides adapted to be secured transversely beneath a bed and a bottom frame slidable on said guides in and out beneath the bed, of foldable end frames pivoted to said bottom frame, and a horizontal member having slidable engagement with said end frames so as to be lowered and raised and supported thereby.

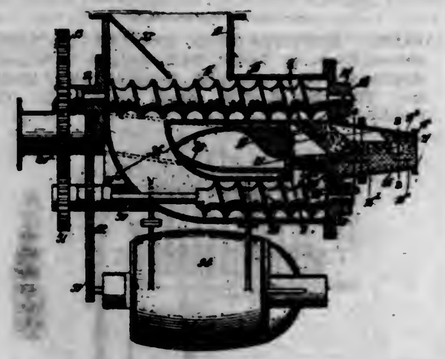
3. In a bed attachment, the combination with guides adapted to be secured transversely beneath a bed and a bottom frame slidable in and out on said guides, of end frames pivoted to said bottom frame so as to fold down, a horizontal member having longitudinal slots, and projections on said end frames entering said slots in the horizontal member whereby the latter is raised and lowered by the end frames.

4. A bed attachment, comprising guiding and supporting means adapted to be secured beneath a bed, a bottom frame slidable in and out on said means, foldable end frames having their side pieces pivoted to said bottom frame, a horizontal member embraced by the side pieces of said end frames and having longitudinal slots at its sides, and projections carried by said side pieces and entering said slots whereby the horizontal member is raised and lowered by the end frames.

5. A bed attachment comprising guiding and supporting means adapted to be secured beneath a bed, a bottom frame slidable in and out beneath the bed on said means, end frames pivoted to said bottom frame, being foldable toward each other and adapted to be swung upward away from each other, a horizontal member connected with said end frames so as to be raised and lowered by the end frames jointly, and a foldable outer side frame mounted to swing about an axis at right angles to the axes of pivoting of said end frames.

[Claim 6 not printed in the Gazette.]

1,192,386. APPARATUS FOR FEEDING PULVERIZED FUEL. VIRGINIUS Z. CARACRISTI, Bronxville, N. Y. Filed July 23, 1914, Serial No. 852,771. Renewed June 12, 1916. Serial No. 103,343. (Cl. 110—105.)



1. An apparatus for feeding pulverized fuel, comprising means for feeding a stream of air in a shape and state to form an upper supporting gathering surface, means for guiding said stream of air, and means for delivering on the upper supporting gathering surface of the stream of air in the grinding means quantities of fuel to be carried by the air stream.

2. An apparatus for feeding pulverized fuel, comprising means for feeding a stream of air in a shape and state to form an open upper supporting gathering surface, means for guiding said stream of air, means for delivering on the top of the open upper supporting gathering surface of the air in the guiding means quantities of fuel to be carried by the air stream, and means for shaping the air stream to envelop the fuel delivered on its upper supporting surface.

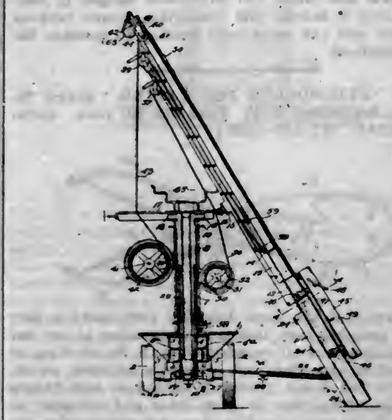
3. An apparatus for feeding pulverized fuel, comprising means for feeding a stream of air, means for shaping the stream of air to form an upper supporting gathering surface, means for guiding the air stream, means for delivering in the guiding means on the upper supporting gathering surface of the air stream quantities of fuel to be carried by the air stream, means for shaping the air stream to envelop the fuel delivered on its open upper supporting surface for completely enveloping the same, and means for simultaneously accelerating it.

4. An apparatus for feeding pulverized fuel, comprising means for feeding a stream of air, means for shaping said stream of air to form an open upper supporting gathering surface, means for guiding the air stream, means for delivering in the guiding means on the top of the open upper supporting gathering surface of the air quantities of fuel to be carried by the air stream, means for shaping the air stream to envelop the fuel delivered on its upper supporting surface for completely enveloping the same, and inclined plates in the path of the air current, impinged by the periphery of the air stream for increasing the speed of movement of the air stream and fuel enveloped thereby.

5. An apparatus for feeding pulverized fuel comprising means for feeding a stream of air in a shape and state to form an upper supporting gathering surface, means for guiding said stream of air, means for delivering on the top of the upper supporting gathering surface of the air in the guiding means, quantities of fuel to be carried by the air stream, and means for simultaneously imparting to the fuel while being delivered to the air stream a movement in the same direction as the stream of air.

[Claims 6 to 9 not printed in the Gazette.]

1,192,387. FIRE-LADDER TRUCK. EMILIO CARDARELLI, Boston, Mass. Filed Dec. 10, 1913. Serial No. 805,836. (Cl. 228—28.)



1. In a fire ladder truck, the combination with the body thereof, of a turret rotatably mounted on said truck body with provision for bodily adjustment lengthwise of said truck body, and an extension ladder adjustably mounted on the turret.

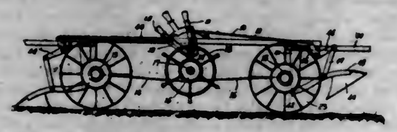
2. In a fire ladder truck, the combination with the body thereof, of a turret rotatably mounted on said truck body with provision for bodily adjustment lengthwise thereof, means on said body for shifting said turret lengthwise of the body, and an extension ladder adjustably mounted on the turret.

3. In a fire ladder truck, the combination with the body thereof, of a turret rotatably mounted thereon, an extension ladder, a turret top carried by said turret and connected to the turret by means which permit the turret top to tilt on a horizontal axis lying in the plane of the ladder, said ladder being pivoted to the turret top on an axis and at right angles to the tilting axis of the turret, and means for holding the turret top in adjusted position on the axis.

1,192,388. PLOW. CHARLES A. CARLSON, Everett, N. J. Filed Apr. 22, 1914. Serial No. 833,607. (Cl. 97—50.)

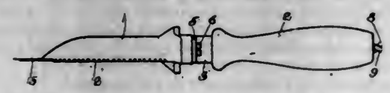
A reversible vehicle, a plow at each end of the vehicle, both of said plows being pointed toward the central transverse plane of the vehicle, means for simultaneously rais-

ing the plow at one end of the vehicle and lowering the plow at the other end thereof and other means for in-



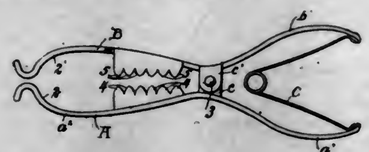
dependently adjusting the vertical position of either of the plows.

1,192,389. ELECTRICALLY-HEATED IMPLEMENT. EDWIN N. CHANDLER, Braintree, Mass. Filed Dec. 17, 1914. Serial No. 877,633. (Cl. 219—21.)



An electrically heated hand tool of the kind described, comprising a metallic body portion cored to receive a removable heating unit, and having a tool recess on the outer surface of said body portion, tool retaining flanges overhanging a portion of the recess, a removable tool fitted within said recess and under said flanges, in combination with a handle, and connecting means between said handle and the cored body portion to insulate the handle therefrom.

1,192,390. TAIL-HOLDER FOR CATTLE. RALPH W. CORBIN, Bainbridge, N. Y. Filed Oct. 31, 1914. Serial No. 869,587. (Cl. 119—105.)



1. A device of the class described comprising a pair of spring operated jaws, said jaws terminating at one end in rounded portions for engagement with the hind leg of a cow and at the other end in handle portions, an inwardly directed flange carried by each jaw, said flanges being disposed opposite to each other and provided at their free ends with serrations for engagement with the tail of the cow, inwardly directed pivot ears carried by each jaw member, a pivot pin extending through said pivot ears whereby the jaw members are pivotally secured together and a spring interposed between the handle portions of the jaw members for normally bringing together the rounded portions of the jaws and the flanges to clamp the leg and tail of the cow.

2. A device of the class described comprising a pair of jaw members formed of sheet metal each jaw member being provided at one end with a rounded portion for engaging the leg of a cow, flange members bent inwardly from each jaw member and disposed opposite each other, the free ends of said flanges being serrated and adapted to lie in close proximity to each other when the jaw members are in normal position to engage the tail of the cow, pivot ears extending inwardly from the jaw members, a pivot pin passing through said pivot ears and a spring interposed between the jaw members for normally bringing together the rounded portions of the jaw and flanges to clamp the leg and tail of the cow.

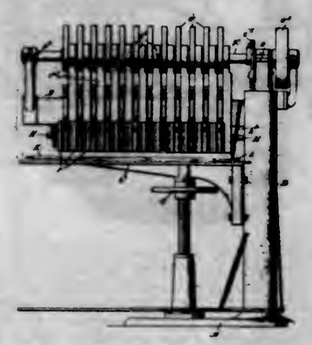
1,192,391. INSECT-TRAP. FRANK M. CRABTREE and WILLIAM H. CRABTREE, Dorrance, Kans. Filed Dec. 16, 1913. Serial No. 807,116. (Cl. 43—22.)

In a trap of the class described, a wire frame bent in cylindrical form and having vertically extending wires contacting throughout their length at its meeting ends, a wire fabric encircling said frame exteriorly thereof and having overlapping ends overlying the contacting vertical wires, U-shaped clips having arms receiving the vertically extending wires and passing through the overlapping portions of the wire fabric, the ends of said arms being bent



in opposite directions to lie in a plane parallel with the closed ends of the clips and contact with the overlapping portions of the wire fabric whereby, any tendency of the wire frame to expand will cause the overlapping ends of the wire fabric to bind against the arms of the clips and maintain the same in contact with the overlapping portions of the wire fabric.

1,192,392. MULTIPLE-HEAD STAPLER-MACHINE. EDWARD CRAIG, St. Joseph, Mich., assignor to Saranac Machine Co., St. Joseph, Mich., a Corporation of Michigan. Filed Aug. 5, 1910. Serial No. 575,642. (Cl. 1—11.)



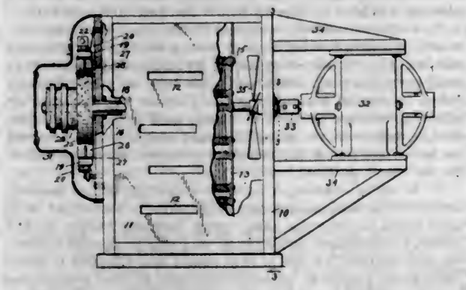
1. A machine for driving fasteners, comprising a bar, a series of fastener driving units strung on said bar, an operating shaft extending through said units, means for holding said bar and shaft in position, means for rotating said shaft, and a support for the work, each unit including a member having a bearing for said shaft, and means for detachably securing said members on said bar, said units being arranged to drive the fasteners obliquely across the line of insertion, each unit having a cam on said shaft, and means for feeding wire to said units in directions oblique to said shaft.

2. A machine for driving fasteners, comprising a bar, a series of fastener driving units strung on said bar, an operating shaft extending through said units, means for holding said bar and shaft in position, means for rotating said shaft, and a support for the work, each unit including a member having a bearing for said shaft, and means for detachably securing said members on each bar, said member having a channel, a driver sliding in said channel, a cam on said shaft, and means on said driver to engage said cam, said units being arranged to drive the fasteners obliquely across the line of insertion, each unit having a cam on said shaft, and means for feeding wire to said units in directions oblique to said shaft.

3. A machine for driving fasteners, comprising a bar, a series of fastener driving units strung on said bar, an operating shaft extending through said units, means for holding said bar and shaft in position, means for rotating said shaft, and a support for the work, each unit including a member having a bearing for said shaft, and means for detachably securing said members on said bar, said units being arranged to drive the fasteners obliquely across the line of insertion, each unit having a cam on said shaft, and means for feeding wire to said units in directions oblique to said shaft, said means for feeding wire comprising a feed-shaft extending parallel with said operating shaft, means for rotating said operating shaft, and means actuated by said operating shaft to intermittently rotate said feed-shaft.

4. A machine for driving fasteners, comprising a bar, a series of fastener driving units strung on said bar, an operating shaft extending through said units, means for holding said bar and shaft in position, means for rotating said shaft, and a support for the work, each unit including a member having a bearing for said shaft, and means for detachably securing said members on said bar, each member having a channel, a driver sliding in said channel, a cam on said shaft, and means on said driver to engage said cam, said units being arranged to drive the fasteners obliquely across the line of insertion, each unit having a cam on said shaft, and means for feeding wire to said units in directions oblique to said shaft, said means for feeding wire comprising a feed-shaft extending parallel with said operating shaft, means for rotating said operating shaft, and means actuated by said operating shaft to intermittently rotate said feed-shaft.

1,192,393. CURRENT-CONVERTING APPARATUS. LAWRENCE P. CRECELIUS, Cleveland, Ohio. Filed June 9, 1913. Serial No. 772,550. (Cl. 175—364.)

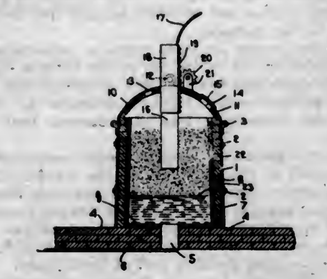


1. In a current converting apparatus, an inclosed frame, a resistance supported by the frame within the inclosure, a commutator supported in fixed position at one end of the frame, said resistance adapted to be connected at the outer terminals thereof to the positive and negative sides of a direct current circuit, taps connecting the bars of the commutator to spaced points of the resistance, a shaft extending through the frame, a pair of brushes engaging the bars of the commutator and connected to the shaft so as to be rotated thereby, and a motor supported at the opposite end of the frame and connected to said shaft for driving the same, all said parts of the apparatus being in the form of a self-contained portable unit.

2. In a current converting apparatus, a supporting frame and inclosure, a resistance supported within the inclosure, a stationary commutator at one end of the inclosure, taps connecting the bars of the commutator with spaced points of the resistance, brushes engaging the commutator, a shaft for driving the brushes, and a motor located outside of the inclosure and having its shaft in alinement with and coupled to said first named shaft, all said parts of the apparatus being in the form of a self-contained portable unit.

3. In a current converting apparatus, an inclosure, a resistance supported therein, a stationary commutator at one end of the inclosure, the bars of the commutator being connected to spaced points of the resistance, a pair of rotating brushes engaging the commutator, a shaft extending through the inclosure, a driving motor at the opposite end of the inclosure, said shaft at one end being connected to the brushes and at its opposite end being connected to the motor, all of said parts being in the form of a self-contained portable unit.

1,192,394. PROCESS OF UTILIZING THE WASTE PRODUCTS OF GARNET-WORKS. JOHN DAVENPORT, Brighton, Mass. Filed Jan. 27, 1915. Serial No. 4,763. (Cl. 204—64.)

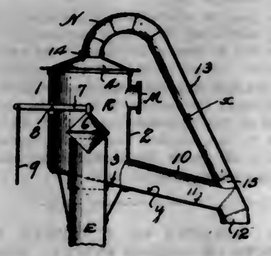


1. The method of treating garnet which consists in forming a mixture of pulverized garnet with a reducing agent in sufficient amount to reduce the constituents of the garnet other than alumina and insufficient in amount to reduce the alumina, heating the mixture to the fusing temperature of alumina, maintaining said temperature substantially constant until complete fusion of the mass is attained and until the constituents of the garnet other than alimina having been reduced, then gradually reducing the heat supplied and cooling the molten mass slowly to permit crystallization of the alumina and solidification of the products of reduction.

2. The method of salvaging garnet dust or flour to produce artificial alumina and a ferrosilicon alloy which consists in mixing in an electric furnace the garnet dust or flour with an amount of pulverized carbon sufficient to reduce the constituents of the garnet other than alumina and insufficient to reduce the alumina, electrically heating the mixture to the fusing temperature of alumina, maintaining said temperature substantially constant until the complete fusion of the mass is attained and the ferrosilicon alloy reduced therefrom, gradually reducing the heat supplied by the electric current and finally cooling the mass slowly to permit complete crystallization of the alumina and the formation of the ferrosilicon alloy into lumps or nodules.

3. The method of producing artificial alumina and its ferrosilicon alloy from garnet consisting in mixing the pulverized garnet with carbon sufficient to reduce the constituents of the garnet other than alumina and insufficient to reduce the alumina, adding to the mixture an amount of silica sufficient to insure the complete reduction of the iron content of the mass to a ferrosilicon alloy, heating the mixture to the fusing temperature of alumina and maintaining the same at such temperature until the ebullition ceases and the reduction of the constituents of the garnet other than alumina is complete, gradually reducing the heat supplied and finally cooling the molten mass slowly to permit the complete crystallization of the alumina and the solidification into lumps or nodules of the ferrosilicon alloy.

1,192,395. BLAST-FURNACE. PASQUALE DE SIMONEY, Youngstown, Ohio. Filed May 5, 1916. Serial No. 95,654. (Cl. 266—26.)



1. An attachment for blast furnaces, comprising a receiver carried by the upper end of the furnace explosion pipe and having separate gravity return surfaces arranged at different pitches and both discharging into the charging port of the furnace.

2. An attachment for blast furnaces comprising a receiver carried by the outlet end of the furnace explosion pipe and comprising a receiving and collecting drum having inclined gravity return surfaces arranged at different pitches and discharging into the charging port of the furnace.

3. An attachment for blast furnaces, comprising a receiver carried by the outlet end of the furnace explosion pipe and comprising a receiving and collecting drum having inclined gravity return surfaces leading respectively from the upper and lower ends of the drum and having a common point of discharge below the lower edge of the drum into the said charging port of the furnace.

4. An attachment for blast furnaces, comprising a receiver carried by and fitting over the outlet end of the furnace explosion pipe, said receiver having an inclined floor disposed below the outlet end of the explosion pipe, a fine material gravity return surface communicating with the upper end of said drum, and a coarse material gravity return surface communicating with said drum at its lower end, said gravity return surface at the lower end of the drum being coincident with the inclined floor at the bottom of the drum.

5. An attachment for blast furnaces, comprising a receiving and collecting drum fitted to the outlet of the furnace explosion pipe and having an inclined floor at its lower end, a conical cap member at its other end having a central opening, a fine material conducting pipe connecting with said cap member at the outlet thereof, and a coarse material conducting pipe section communicating with the drum at its lower portion and having the lower inner face thereof coincident with the inclined portion of the drum, said pipes having a common discharge outlet opening into the furnace charging portion.

[Claim 6 not printed in the Gazette.]

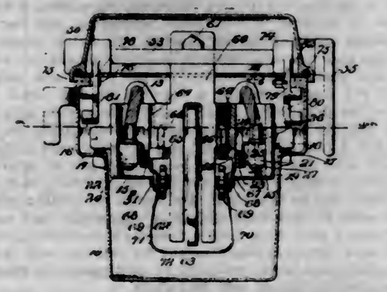
1,192,396. FUSIBLE LINK. WARREN V. DEVEREUX, Aurora, Ill., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Nov. 15, 1915. Serial No. 61,524. (Cl. 236—16.)



1. A fusible link comprising, in combination, two members arranged in overlapping relation, the opposed faces of said overlapping members abutting and being in intimate contact with each other, side flanges on each member projecting in opposite directions, a transverse shoulder intermediate the ends of each member, and a lip at one end of each of said members, the lip of each member engaging the shoulder of the other member, a fusible material applied over the outer faces of the flanges of the overlapping portions of the two said members.

2. A fusible link comprising, in combiantion, two members arranged in overlapping relation, the opposed faces of said overlapping members abutting and being in direct contact with each other, each of said members having an inclined lip at one end and an inclined transverse shoulder intermediate its ends, the lip of each member engaging the shoulder of the other, side flanges on the overlapping portion of each member, the flanges of one member projecting in a direction opposite to those on the other member, and a fusible material applied to the outer faces of said flanges and over the joint formed by said lip and shoulder for connecting the flanges together.

1,192,397. OIL-SWITCH AND FUSE. LOUIS W. DOWNES and ALFRED W. FAXON, Providence, R. I.; said Faxon assignor to D & W Fuse Co., Providence, R. I., a Corporation of Rhode Island. Filed June 25, 1914. Serial No. 847,286. (Cl. 175—282.)



1. The combination of a casing, circuit terminal contacts therein, a cover for said casing, an oscillating insulating member on said cover adapted in normal position to depend below said terminal contacts, contacts on said oscillating member adapted to engage said terminal contacts, and a fuse member connecting the contacts on said oscillating member and extending around the portion thereof adapted to depend below the terminal contacts.

2. In an oil switch, a casing containing oil, circuit terminal contacts located in said casing below the surface of the oil, a cover for said casing, an oscillating member on said cover adapted to depend below said terminal contacts when in normal position, contacts on the sides of said oscillating member adapted to engage said terminal contacts, and a fuse member connecting said contacts and adapted to be located below the terminal contacts when the switch is in "on" position.

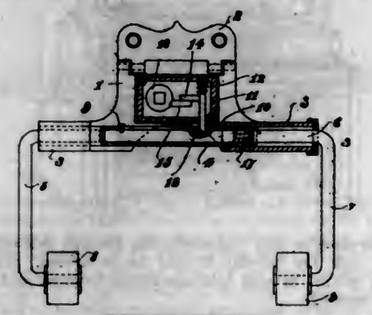
3. In an oil switch, a casing containing oil, an insulating block in said casing, terminal contacts associated with said block, a cover for said casing, rotating shafts in said cover, a two-legged insulator having side projections thereon and mounted on one of said shafts and adapted to move therewith, electrical contacts attached to said projections and adapted to engage said terminal contacts, and a fuse member connecting said electrical contacts and adapted to pass below the ends of said insulator, said insulator straddling a portion of the non-conducting member when in vertical position.

4. In an oil switch containing a fuse, the combination of a casing with oil therein, an insulating block in said casing, terminal contacts mounted on said block, a cover for said casing, a shaft in said cover adapted to be moved by a member extending outside said cover, an insulating member carrying electrical contacts associated with said shaft, said contacts engaging said terminal contacts, and a fuse joining said electrical contacts and movable with said insulating member into the lower part of said casing.

5. In an oil switch containing a fuse, the combination of a casing with oil therein, an insulating block in said casing, terminal contacts mounted on said block, a cover for said casing carrying shafts adapted to be moved by an external member, an insulating member carrying electrical contacts associated with one of said shafts, said contacts adapted to engage the terminal contacts, a fuse joining said electrical contacts and movable with said insulating member into the lower part of said casing, and lugs mounted on the other of said shafts adapted to interlock with inward projections on said casing when the contacts are closed on each other.

[Claims 6 to 14 not printed in the Gazette.]

1,192,398. HOLDER FOR TOILET-PAPER. JAMES DUNLOP, Braamfontein, Transvaal, South Africa. Filed Oct. 5, 1914. Serial No. 865,184. (Cl. 211—31.)



In a holder for rolls of toilet paper a bracket adapted to be secured to a support, a frame hingedly connected to this bracket, a pair of sockets at the lower ends of this hinged frame a tubular connection between these sockets, a depending arm secured in the tubular connection in the socket at one end of the frame and an inturned end to this depending arm carrying a roller adapted to engage in one end of the roll of toilet paper; a second depending arm with inturned end carrying a roller adapted to engage in the other end of the roll of toilet paper, a horizontal member at the upper end of this depending arm slidably engaged in the tubular connection in the other socket on the hinged frame so that the two depending arms with their inturned ends and rollers are located opposite to one another, a coil spring around the horizontal member of the slidable depending arm located in the socket at that end of the hinged frame and adapted to press the slidable arm away from the fixed arm to allow of the placing of the roll of toilet paper in position, a lock upon the hinged frame, and a bolt in the said lock, adapted to be operated by means of a key so as to engage in a recess in the slidable arm to lock same in position when the said slidable arm has been pressed inward to secure the roll of toilet paper.

1,192,399. HOLDER FOR WRITING OR MANIFOLDING PADS. WILLIAM E. DUNNING, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 24, 1911. Serial No. 645,864. (Cl. 11—11.)



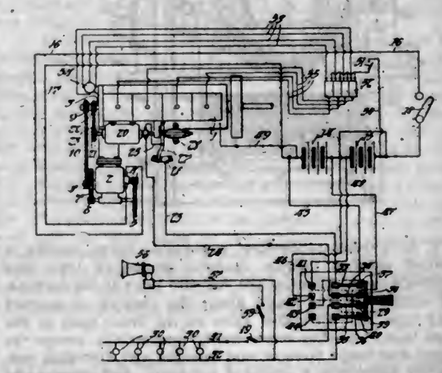
1. A holder for manifolding pads comprising a back plate, means for securing a pad at one end of said back plate, a hand tablet, and a flexible sheet connecting the other end of the back plate with one end of the hand tablet, whereby the tablet may be moved endwise relative to the back plate.

2. A holder for manifolding pads comprising a back plate, means for securing a pad at one end of said back plate, a hand tablet, and a flexible sheet of greater length than the back plate connecting one end of the hand tablet with the other end of the back plate.

3. A holder for manifolding pads comprising a back plate, means for securing a pad at one end of said back plate, a hand tablet, a flexible sheet connected to the other end of the back plate and to one end of the hand tablet, said sheet being foldable on transverse lines to permit the extension of the hand tablet in an endwise direction relative to the back plate.

4. A holder for manifolding pads comprising a back plate, means for securing a pad at one end of said back plate, a tablet forming a hand rest or a cover for said pad, and a flexible sheet connected to the other end of the back plate and to one end of the tablet, said sheet being of greater length than the back plate and being foldable on transverse lines to permit the tablet to lie flat against the back plate, to be moved endwise relative thereto, or to be folded around the secured end of the pad and lie flat against the upper side thereof.

1,192,400. ELECTRICAL SYSTEM FOR AUTOMOBILES. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed May 23, 1912. Serial No. 699,110. (Cl. 171—315.)



1. In a system of the class described, an internal combustion engine, an electric motor for starting the same, a storage battery for operating said motor, substantially all of said battery being available for supplying current to said motor to start the engine, a generator arranged to be driven by said engine, a lighting circuit, and means for connecting said generator and lighting circuit to different sections of the battery, substantially as described.

2. In a system of the class described, an internal combustion engine, an electric motor for starting the same, a storage battery for operating the motor, a generator arranged to be driven by said engine, means for connecting said battery to said motor independently of said generator, a lighting circuit, and means for interchangeably connecting said generator and lighting circuit to different sections of the battery, substantially as described.

3. In a system of the class described, an internal combustion engine, an electric motor for starting the same, a storage battery for operating the motor, an ignition system for the engine connected to be supplied from the battery, a generator arranged to be driven by said engine, means for connecting said battery to said motor independently of said generator, a lighting circuit, and means for interchangeably connecting said generator and lighting circuit to different sections of the battery, substantially as described.

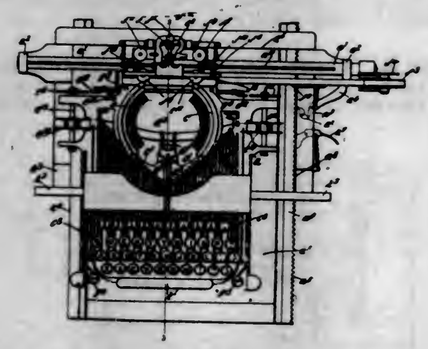
4. In a system of the class described, an internal combustion engine, an electric motor for starting the same, a storage battery for operating the motor, a generator arranged to be driven by said engine, means for connecting

said battery to said motor independently of said generator, a lighting circuit, and a switch for connecting said generator and lighting circuit to different sections of the battery, substantially as described.

5. In a system of the class described, an internal combustion engine, an electric motor for starting the same, a storage battery for operating the motor, a generator arranged to be driven by said engine, means for connecting said battery to said motor independently of said generator, a lighting circuit, and a switch for interchangeably connecting said generator and lighting circuit to different sections of the battery, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,192,401. TYPE-WRITING MACHINE. CRAWFORD ELLIOTT, Old Trafford, Manchester, England, assignor to The Elliott Visible Book and General Typewriters Limited, Glasgow, Scotland. Filed June 29, 1914. Serial No. 847,955. (Cl. 197—2.)



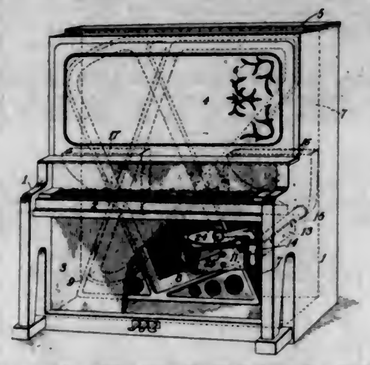
1. In a book typewriter, a movable frame having a central opening therein, opposed groups of type bars mounted on the frame at the opposite sides of the opening, an annulus on the frame about the opening to support said type bars, elongated axles on the lower ends of the type bars extending substantially tangentially across the upper and lower faces of said annulus and diverging outwardly therefrom, a standard key-board, and connections between the spaced-apart diverging ends of the axles and the keys of the key-board.

2. In a book typewriter, a movable frame having a central sight opening therein, a supporting ring on the frame about the sight opening, opposed groups of closely nested type bars rising from the ring, elongated axles on the lower ends of the type bars traversing the upper and lower faces of the ring and diverging outwardly therefrom, a key-board, and connections between the keys and the diverging ends of the axles.

1,192,402. MUSICAL INSTRUMENT. VICTOR H. EMERSON, New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Sept. 20, 1912. Serial No. 721,432. (Cl. 274—2.)

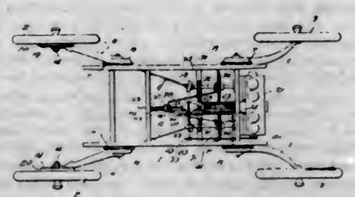
1. A musical instrument, comprising a cabinet inclosing a sound-chamber, a sound-board constituting one wall of said chamber, a plurality of tuned strings extending across said chamber parallel to said sound-board, and a talking-machine movably mounted within said cabinet and having a sound-passage discharging into said sound-chamber adjacent said sound-board and in a direction parallel to the surface thereof.

2. A musical instrument, comprising the combination of a cabinet containing a sound-chamber one outer vertical wall of which is a sound-board and the opposite wall of which is cut away to permit insertion of a talking-machine, a talking-machine located therein, two hollow hinge-members journaling together and secured respectively to the inner face of said cabinet and to the talking-machine, a swinging sound-conveyer carrying a diaphragm and stylus in operative engagement with a sound-record upon said



talking-machine and communicating through said hollow hinge with the interior of said sound-chamber, and an apron carried by said talking-machine to close said cut-away opening.

1,192,403. GEARING. JOHN A. ESPITALLIER, Chicago, Ill. Filed Sept. 14, 1911. Serial No. 649,386. (Cl. 74—97.)



1. In combination, a motor, a driven member, a speed-changing driving mechanism between said motor and said member, and automatic governing means constructed and arranged gradually to increase the speed of the driven member relative to that of the motor when the motor reaches a predetermined speed and irrespective of any subsequent increase in the speed of the motor.

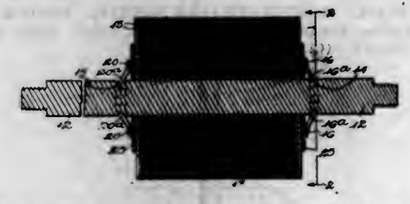
2. In combination, a motor, a driven member, a speed-changing driving mechanism between said motor and said member, means for gradually shifting said speed-changing mechanism, and means governed by the speed of the motor for automatically setting the aforesaid means in operation when the motor reaches a predetermined speed.

3. In combination, a motor, a driven member, a speed-changing driving mechanism between said motor and said member, and means governed by the speed of the motor for automatically shifting said mechanism from the lowest speed to the highest speed when the motor reaches and maintains the predetermined speed.

4. In combination, a motor, a driven member, a speed-changing driving mechanism between said motor and said member, an actuator for said mechanism, and a reversing driving mechanism for said actuator governed by the speed of the motor.

1,192,404. SHAFT OR SPINDLE AND MEANS FOR SECURING BODY-CONFINING ABUTMENTS THERETO. JAMES B. EWART, North Andover, Mass., assignor to Steel Specialties Company, Waltham, Mass., a Corporation of Massachusetts. Filed Feb. 8, 1916. Serial No. 76,949. (Cl. 74—8.)

1. In combination, a shaft having a fixed annular inner abutment and a peripheral groove spaced from said abutment, a member mounted on the shaft and confined at its inner end by said inner abutment, and an outer abutment formed as an annulus composed of an inexpansible annular body having an inner annular face bearing on said member, an outer annular face forming an abutment for a driving tool, and a plurality of fingers projecting inwardly from said body and inclined relatively to the plane of the margin of the body, said fingers being forced into said groove to hold the outer abutment against the outer end of said member, the member and outer abutment being successively applied to the shaft.



2. In combination, a shaft having an inner and an outer peripheral groove, a member mounted on the shaft between said grooves, an inner abutment formed as an annulus composed of an inexpansible annular body having an inner annular face bearing on said member, an outer annular face forming an abutment for a driving tool, and a plurality of fingers projecting inwardly from said body and inclined relatively to the plane of the margin of the body, said fingers being forced into the inner groove, and an outer abutment formed like the inner abutment and including fingers inclined oppositely to those of the inner abutment, and forced into the outer groove to hold the outer abutment against the outer end of the member, the inner abutment, the member, and the outer abutment being successively applied to the shaft.

3. A shaft having a peripheral groove and an abutment formed as an annulus composed of an inexpansible annular body having an inner annular face formed to bear on a member mounted on said shaft, an outer annular face forming an abutment for a driving tool, and a plurality of resilient fingers projecting inwardly from the body and forced into said groove.

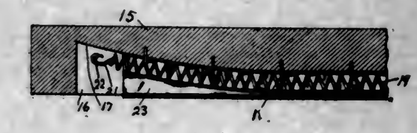
4. A shaft having a peripheral groove and an abutment composed of an inexpansible annular body having an inner annular face formed to bear on a member on said shaft, an outer annular face forming an abutment for a driving tool, and a plurality of resilient fingers projecting inwardly from said body and normally inclined relatively to the plane of the margin of the body, and forced into said groove, the inclination of said fingers causing them to act as struts coöperating with one side of the groove in resisting movement of the annulus lengthwise of the shaft.

5. A shaft having a peripheral groove and an abutment composed of an inexpansible annular body having an inner annular face formed to bear on a member on said shaft, an outer annular face forming an abutment for a driving tool, and a plurality of resilient fingers projecting inwardly from the body and formed to be laterally deflected by the periphery of the shaft and thereby put under tension causing them to spring into said groove when brought into registry therewith, the said abutment being engaged with the shaft by moving the abutment on the shaft toward the groove until the fingers spring into the groove.

[Claim 6 not printed in the Gazette.]

1,192,405. CURTAIN-POLE. GISELLA FÁBIÁN, Washington, Pa. Filed Dec. 1, 1915. Serial No. 64,493. (Cl. 156—19.)

1. A curtain fixture comprising a pole having a longitudinal groove in one side, the bottom of said groove being curved longitudinally of the pole, the groove gradually increasing in depth from the middle of its length to the ends thereof, and a helical spring pivoted within the groove at one end thereof and having its other end removably attached within the opposite end of the groove.

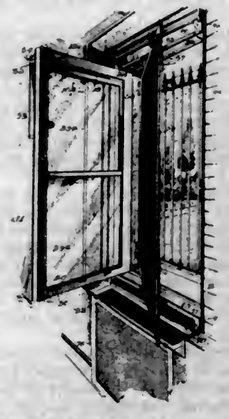


2. A curtain pole of concentric form provided with a longitudinal side groove having a curved bottom, outwardly projecting receiving pins carried by the said bottom, a helical spring having one end thereof pivoted within one end of the said groove and its other end removably attached within the opposite end of the said groove when the spring is in its operative expanded position with said pins arranged within the body of the said spring.

3. A curtain pole of concentric form provided with a longitudinal side groove having a curved bottom, outwardly projecting receiving pins carried by the said bottom, a helical binder having one end thereof pivoted within one end of the said groove, a curtain folded over the said binder, a post arranged within the opposite end of the said groove, and a hook upon the opposite end of the said binder removably positioned over the said post with the said pins projecting through the curtain and extending between the helixes of the binder within the body of the latter to substantially its longitudinal axis.

4. A curtain pole of concentric form provided with a longitudinal side groove having a curved bottom, outwardly projecting receiving pins carried by the said bottom, a helical binder having one end thereof pivoted within one end of the said groove, a curtain folded over the said binder, a post arranged within the opposite end of the said groove, and a hook upon the opposite end of the said binder removably positioned over the said post with the said pins projecting through the curtain and extending between the helixes of the binder within the body of the latter to substantially its longitudinal axis, the pivotal end and the said hook of the binder being positioned from the bottom of the groove a distance equal to the radius of the said binder and whereby the binder assumes a uniform curvature when operatively positioned with the curtain arranged within the said groove.

1,192,406. COMBINED DOOR OR WINDOW AND VENTILATING STRUCTURE. GEORGE A. FAIR, Los Angeles, Cal. Filed Dec. 18, 1913. Serial No. 807,527. (Cl. 189—69.)

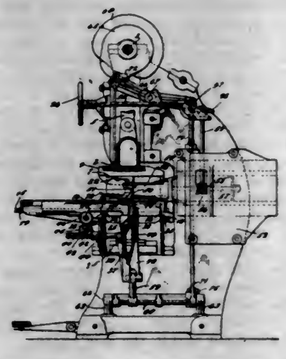


1. A structure having a window opening, a window frame fitted in said opening and having a hollow lintel and a hollow sill and provided with pivot-receiving re-

cesses in said lintel and sill, a hollow sash frame fitting within the window frame, pivots detachably mounted in the upper and lower ends of the sash frame adjacent one side of said frame to engage the pivot-receiving recesses in the window frame, a pivot-retaining block removably fitted in one of said recesses against the pivot therein, and fastening devices mounted in the sash frame at the sides thereof to engage the sides of the window frame.

2. A frame for a window opening consisting of inner and outer plates forming open frames, webs secured to and extending transversely between said plates intermediate the inner and outer edges thereof, transverse plates connecting the outer edges of said inner and outer plates, the plates connecting the vertical side edges of the inner and outer plates being arcuate, pivots at the upper and lower ends of the open frames concentric with the arcuate plates, and sash guides on the inner face of the transverse vertical webs.

1,192,407. MACHINE FOR MAKING BOX-BLANKS. FRANK G. FEELEY, Chicago, Ill., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 26, 1915. Serial No. 10,711. (Cl. 164—58.)



1. In a slotting machine for operating upon box blanks, the combination of two parallel slotting knives for forming a flap on the blank, and trimming mechanism operating between the slotting knives to reduce the length of the flap from the base thereof to its outer edge, said trimming mechanism permitting adjustment of the slotting knives toward and away from each other, for the purpose described.

2. In a slotting machine for operating upon box blanks, the combination of two parallel slotting knives for forming a flap on the blank, and trimming mechanism operating between the slotting knives to reduce the length of the flap from the base thereof to its outer edge, said trimming mechanism being adjustable to produce a flap of the proper length and permitting adjustment of the slotting knives toward and away from each other, for the purpose described.

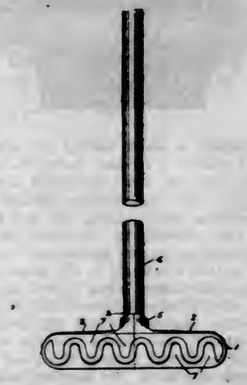
3. In a slotting machine for operating upon box blanks, the combination of two parallel slotting knives for forming a flap on the blank, and trimming mechanism operating between the slotting knives to reduce the length of the flap from the base thereof to its outer edge, said trimming mechanism being operative to produce a continuous cut across the flap for all adjustments of the slotting knives toward and away from each other within predetermined limits.

4. In a slotting machine for operating upon box blanks, the combination of two parallel slotting knives, and trimming mechanism to reduce the length of the flap made by said slotting knives, comprising one set of cutting elements adapted to cut part way across the flap, and a second set of cutting elements adapted to complete the cut across the flap.

5. In a slotting machine for operating upon box blanks, the combination of two parallel slotting knives, and trimming mechanism to reduce the length of the flap made by said slotting knives, comprising one set of cutting elements arranged at right angles to the slotting knives and adapted to cut part way into the flap from the slots made by said knives, and a second set of cutting elements adapted to complete the cut across the blank.

[Claims 6 to 15 not printed in the Gazette.]

1,192,408. VACUUM-CLEANER NOZZLE. ABRAHAM L. FRAME, Reading, Pa. Filed Dec. 5, 1912. Serial No. 735,015. (Cl. 15—60.)



1. A vacuum cleaner nozzle comprising a chambered head having a pair of side walls and a bottom plate for contact with the surface to be cleaned, said bottom plate provided with an uninterrupted serpentine inlet opening lengthwise of said head, whereby the nozzle is provided with an uninterrupted inlet opening of considerably greater length than the length of the nozzle.

2. A vacuum cleaner nozzle comprising a chambered head having a pair of side walls and a bottom plate for contact with the surface to be cleaned, said bottom plate provided with an uninterrupted serpentine inlet opening lengthwise of said head, whereby the nozzle is provided with an uninterrupted inlet opening of considerably greater length than the length of the nozzle, said opening having substantially uniform width throughout substantially its entire length.

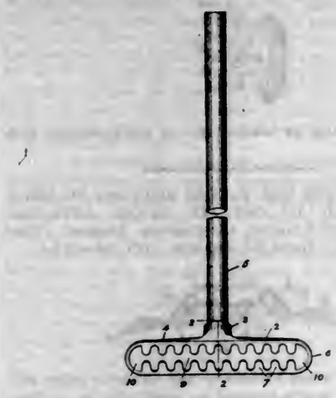
3. A vacuum cleaner nozzle comprising a chambered head having a pair of side walls and a bottom plate for contact with the surface to be cleaned, said bottom plate provided with an uninterrupted zigzag opening lengthwise of said head with the diagonal portions thereof extending substantially from side to side of such head, whereby the nozzle is provided with an uninterrupted inlet opening of considerably greater length than the length of the nozzle.

4. A vacuum cleaner nozzle comprising a chambered head having a pair of side walls and a bottom plate for contact with the surface to be cleaned, said bottom plate provided with an uninterrupted zigzag opening lengthwise of said head with the diagonal portions thereof extending substantially from side to side of such head, whereby the nozzle is provided with an uninterrupted inlet opening of considerably greater length than the length of the nozzle, said opening being of substantially uniform width throughout substantially its entire length.

5. A vacuum cleaner nozzle comprising a chambered head having a bottom plate for contact with the surface to be cleaned, said bottom plate having an uninterrupted inlet opening from one end of the nozzle to the other extending alternately in diagonally opposite directions.

[Claims 6 to 17 not printed in the Gazette.]

1,192,409. VACUUM-CLEANER NOZZLE. ABRAHAM L. FRAME, Reading, Pa. Filed Dec. 5, 1912. Serial No. 735,016. (Cl. 15—60.)



1. A vacuum cleaner nozzle comprising a chambered head provided in its bottom surface with a single inlet opening having tortuous side walls forming a series of elliptical openings connected by narrower openings of oppositely curved formation.

2. A vacuum cleaner nozzle comprising a chambered head provided in its bottom surface with a single inlet opening having tortuous side walls forming a series of elliptical openings connected by narrower openings of oppositely curved formation, the opening at each end of said nozzle being substantially semi-circular and also connected to its adjacent elliptical opening by one of said narrower openings.

3. A vacuum cleaner nozzle comprising a chambered head having a bottom plate provided midway of its length with an elongated slot having all along its length oppositely extending openings forming a series of inwardly extending projections.

4. A vacuum cleaner nozzle comprising a chambered head having a bottom plate provided midway of its length with an elongated slot having all along its length oppositely extending openings forming a series of inwardly extending projections, said oppositely extending openings forming transverse elliptical openings in said plate.

5. A vacuum cleaner nozzle comprising a chambered head having a bottom plate provided with a series of equally spaced alternate openings and projections forming a pair of tortuous side walls with the projections spaced apart midway of the length of the nozzle thereby to form an elongated slot of relatively narrow dimensions between the ends of opposite projections and of relatively wide dimensions at each side of such projections.

1,192,410. APPARATUS FOR WELDING TUBING. WILLIAM C. FRICK, Deal Beach, N. J. Filed Oct. 22, 1914. Serial No. 868,064. (Cl. 78—87.)



1. In apparatus of the character described, the combination of means for feeding a slotted tube, and frictional means for heating the edges of said tube as said tube is fed by said frictional heating means.

2. In apparatus of the character described, the combination of means for feeding a slotted tube, frictional disks, rotatable at high speed, for heating the edges of said tube as said tube is fed by said frictional heating means, each of said disks having a double periphery, with an air space between the parts thereof.

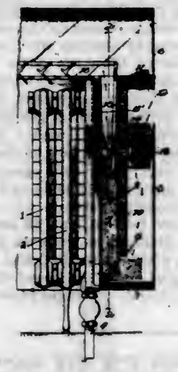
3. In apparatus of the character described, the combination of means for feeding a slotted tube, frictional disks, rotatable at high speed, for heating the edges of said tube as said tube is fed by said frictional heating means, each of said disks being formed of two plates, with a filling of fire-resisting material between them, said plate having an air space between them at the periphery thereof.

4. In apparatus of the character described, the combination of means for feeding a slotted tube, frictional disks, rotatable at high speed, for heating the edges of said tube as said tube is fed by said frictional heating means.

5. In apparatus of the character described, the combination of a series of rollers for feeding a slotted tube, and frictional disks, rotatable at high speed, for heating the edges of said tube as the latter is fed by said rollers.

[Claims 6 and 7 not printed in the Gazette.]

1,192,411. RADIATOR-CASING. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Aug. 28, 1914. Serial No. 859,060. (Cl. 236—6.)



1. A radiator casing comprising a radiator-receiving portion provided with dampers and a second portion adapted to be separated therefrom by an end section of the radiator, said second portion having a floor of insulating material and a top wall, a vertical partition of insulating material dividing the space therein into a down-passage and an up-passage open to each other through said partition near said floor, one of said passages being in heat-interchanging relation with the end of the radiator and opening through said top wall, and the other passage being insulated from the radiator and opening through the end wall of the casing below said top wall to receive air from the room, and a thermostat located near the opening of the down-passage and operatively connected with said casing dampers.

2. A radiator casing comprising a radiator-receiving portion provided with dampers and a portion adapted to be separated therefrom by an end section of the radiator, means preventing conduction of heat from the walls of one casing portion to the other, said second portion having a floor of insulating material and a top wall, a vertical partition of insulating material dividing the space therein into a down-passage and an up-passage open to each other through said partition near said floor, one of said passages being in heat-interchanging relation with the end of the radiator and opening through said top wall, and the other passage being insulated from the radiator and opening through the end wall of the casing below said top wall to receive air from the room, and a thermostat located near the opening of the down-passage and operatively connected with said casing dampers.

3. A radiator casing comprising a radiator-receiving portion provided with dampers and a second portion adapted to be separated therefrom by the end section of the radiator, a hood surmounting both portions, heat insulating means preventing conduction of heat from the walls of one casing portion to the other, said second portion having a floor and a top wall both of insulating material, a vertical partition of insulating material dividing the space therein into a down-passage and an up-passage open to each other through said partition near the said floor, the up-passage being in heat-interchanging relation with said end section of the radiator and open to the hood through said top wall, and the down-passage being insulated from said radiator section and open below said top wall to receive air from the room, and a thermostat located in said down-passage near said opening and having connections with the casing dampers.

4. A radiator casing provided with dampers, a radiator therein having an end wall adapted to divide the casing into a radiator-receiving section and an extension thereof and provided with an inlet connection underneath the radiator, heat insulating means preventing conductcion of heat from the walls of one casing section to the other, said extension section having a heat insulating floor located above and beyond said connection and a top wall, a vertical partition of heat insulating material dividing the extension space into a down-passage and an up-passage open to each other through said partition near the said floor, one of said passages opening through said top wall and in heat-interchanging relation with said radiator wall and the other insulated from the latter and open below said top wall to receive air from the room, and a thermostat located in said down-passage near said opening and having connections with the casing dampers.

5. A radiator casing provided with a hood and divided into a radiator-receiving chamber having openings into the hood, dampers controlling said openings, and an air circulating conduit open to said hood and having one portion in heat interchanging relation with the first-named chamber and another portion out of heat-interchanging relation with said first-named chamber for receiving air from the room, and a thermostatic device in the inlet end of the last-named portion of said conduit for controlling said dampers by variation of temperature of air entering from the room.

1,192,412. PROCESS FOR THE MANUFACTURE OF FLEXIBLE CORRUGATED WALLS. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Oct. 8, 1914. Serial No. 865,748. (Cl. 153—73.)



The process of making expansible and contractible corrugated tubular walls consisting in subjecting a seamless metal tube having thin walls to a drawing operation to work the metal of the denser surface layers into each other and produce uniform density in the wall, and then corrugating the wall to render the same expansible and contractible.

1,192,413. BUTTON-FASTENER. CHARLES F. GAUNT, Montreal, Quebec, Canada. Filed June 8, 1914. Serial No. 843,841. (Cl. 24—106.)

A unitary device for the purpose set forth consisting of a pair of limbs folded together and sprung apart at one end and having their ends beveled and abutting, one of the limbs having a center loop and the limbs being in contact from the loop approximately to one end of the device, the



other limb having an inward rise in justa-position with the loop.

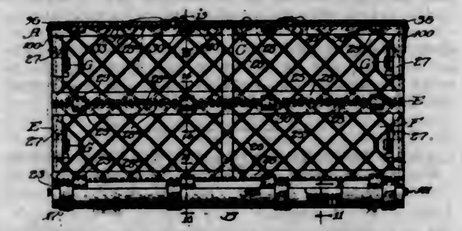
1,192,414. MEANS FOR FIXING BUTTONS TO BELT-CLASPS AND TO CERTAIN OTHER ARTICLES. WALTER FRANCIS GAUNT, Birmingham, England. Filed Sept. 3, 1914. Serial No. 860,818. (Cl. 24—218.)



1. Means for fixing buttons to belt clasps or other articles of the kind herein referred to, comprising in combination a front plate or mount having a recess adapted to receive a button, a slot in the recessed portion of the plate adapted to receive the shank of the button, a cover or back plate secured to the front plate and having a domed central portion to accommodate the shank, and a clip member located between the plates and consisting of a strand of wire bent to present portions intersecting the said slot and adapted to grip the shank of a button inserted through the slot.

2. Means for fixing buttons to belt clasps or other articles of the kind herein referred to, comprising in combination a front plate or mount having a recess adapted to receive a button, a slot in the recessed portion of the plate adapted to receive the shank of the button, a cover or back plate secured to the front plate and having a domed central portion to accommodate the shank, and a clip member located between the plates and consisting of a strand of wire bent to present portions intersecting the said slot, such portions being recessed and adapted to partially encircle and grip the shank of a button inserted through the slot.

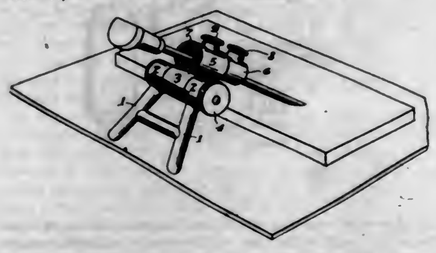
1,192,415. COLLAPSIBLE CRATE. JOHN J. GISEKE, Chicago, Ill. Filed Aug. 25, 1915. Serial No. 47,362. (Cl. 220—132.)



1. A collapsible shipping crate, comprising, in combination, a bottom member, said bottom member being a sheet metal plate, said plate having upstanding marginal flanges, a substantially semicircular metallic trough at opposing upstanding margins of said bottom member, said troughs being secured to said upstanding margins, the outer marginal edges of said troughs being inwardly turned, there being on the said marginal edges of said troughs notches, side members, said side members being wire structures, said side members being comprised each of two articulately connected panels, the lower one of said panels being connected to the notched portions in the marginal edges of said troughs, end members, said end members being metallic wire structures, said end members being hingedly connected to the upstanding marginal edges of said bottom member, a cover, said cover being a metallic wire structure, said cover being articulately connected to the upper marginal edges of the upper panels of said side members, there being downwardly extending ledges on the end portions of said cover constructed to overlap said end members, trip locks, said trip locks being pivotally connected to the end members and constructed to retain the several panels of the side members in upstanding position, a door in said cover, and means on said cover constructed to lock said cover to the bottom member when the crate is in collapsed condition.

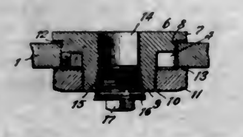
2. In a collapsible crate, the combination, of a metallic bottom member, said bottom member being of pan-shaped contour, end members hingedly connected to said bottom member, and side members articulately connected to said bottom member, there being on each side member trip locking devices constructed to detachably lock said side members to said end members, said trip locking devices including each a bent rod, one member of said bent rod being pivotally connected to the end member, there being at the other end of said bent rod an eccentrically pivoted clamping member constructed to engage said side member, said clamping member being constructed to release said side member when being rotated on said bent rod.

1,192,416. HOLDER FOR SHARPENING GRAVERS AND OTHER TOOLS. EDGAR A. GRAVES, Rochester, N. Y. Filed Apr. 28, 1916. Serial No. 94,278. (Cl. 51—7.)



A tool holder comprising a sleeve, a second sleeve rotatively adjustable in the first named sleeve and projecting from one end of the latter, a set screw mounted in the projecting portion to secure a tool in said second named sleeve, means for binding the second named sleeve against the inner wall of the first named sleeve to prevent the turning of the second named sleeve, a hub on the under side of the first named sleeve, a pair of legs having spaced hubs receiving the hub on the sleeve between them, a pin extending through all of said hubs and serving as a pivot about which the legs swing on the sleeve, and a nut connected to said pin to produce friction between the hubs.

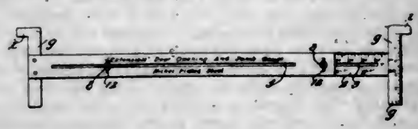
1,192,417. SAFETY HAND-HOLE COVER FOR STEAM-BOILERS AND AIR AND OIL RESERVOIRS. FRANK A. GRIFFIN, Hornell, N. Y. Filed May 14, 1914. Serial No. 838,426. (Cl. 220—124.)



1. In a safety hand hole cover, the combination with a wall or plate having an oval opening, of a correspondingly-shaped flanged cover having a central passage running through the same from one side to the other, and a screw-threaded boss around the outer end of said passage, the inside of the passage being also screw-threaded for a distance, said cover being adapted to be passed through the oval opening from the outside and turned by hand and caused to fit snugly over the opening on the inside, a nut screwing upon the screw-threaded boss and against the outside face of the wall, and a removable screw plug in the central passage.

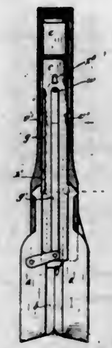
2. In a safety hand hole cover, the combination with a wall or plate having an oval opening, of a correspondingly-shaped flanged cover having a central passage running through the same from one side to the other, and a screw-threaded boss around the outer end of said passage, the inside of the passage being also screw-threaded and tapered for a distance, said cover being adapted to be passed through the oval opening from the outside and turned by hand and caused to fit snugly over the opening on the inside, a nut screwing upon the screw-threaded boss and against the outside face of the wall, and a removable tapered screw plug in the central passage.

1,192,418. EXTENSIBLE DOOR OPENING AND JAMB GAGE. CARL J. HALLBERG, Galesburg, Ill. Filed Aug. 11, 1915. Serial No. 44,977. (Cl. 33—194.)



In a tool, a pair of blades each of which is provided with a longitudinally arranged slot, bolts seated each in the body of one of said blades and adapted to move in the slot of the other, nuts, each engaging one of said bolts, and a cross-head fixed to each blade and having an outwardly turned projection.

1,192,419. ROTARY DRILL. HARRY D. HAMPTON, Fresno, Cal., assignor of one-sixth to Oscar Bowman, Fresno, Cal. Filed July 12, 1915. Serial No. 39,293. (Cl. 255—75.)



1. The combination with a retaining shell, of a stem movable through the shell, hangers carried by the stem, bits flexibly connected with the hangers, means whereby the hangers may be placed in stationary position with respect to the shell, said stem being movable with respect to the hangers and adapted to move between the bits to extend same when the hangers are held stationary, as described.

2. The combination with a retaining shell, of a stem movable through the shell, hangers slidably mounted on the stem, expansible bits suspended on the hangers, means for fixing the hangers stationary within the shell, said stem being movable between the bits to expand and hold them expanded while the hangers are held stationary, as described.

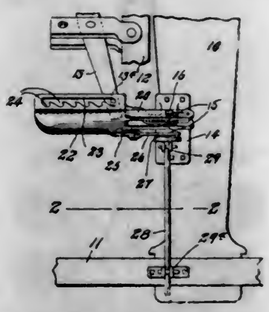
3. The combination with a retaining shell, of a stem movable through the shell, hangers slidably disposed on the stem, bits flexibly engaged with the hangers, lifters on the stem arranged to normally hold the bits in folded position, means on the hangers engageable with the stem to hold the stem in predetermined position while the bits are suspended on the lifters, means on the hangers engageable with the shell to hold the hangers in fixed position and to release the stem whereby it can gravitate to move between the bits to expand and hold same expanded while the hangers are held stationary, as described.

4. The combination with a retaining shell, of a stem movable through the shell, hangers slidably mounted on the stem and provided with engaging means for holding the stem in predetermined position with respect to the hangers, bits flexibly connected with the hangers, lifters mounted on the stem and engageable with the bits to hold same in folded position when the stem is held engaged with the hangers, means for holding the hangers stationary within the shell and to release the stem, the stem being arranged to gravitate to release the bits from suspension on the lifters, and to allow the stem to move between the bits, as described.

5. The combination with a retaining shell, of a stem movable through the shell, hangers slidably mounted on the stem, bits, links connecting the hangers with the bits, lifters on the stem fixedly connected with the bits and arranged to pull the bits into folded position, means on the hangers engageable with the stem to hold the stem fixed stationary with respect to the hangers when the bits are in such folded position, means on the hangers engageable with the shell to hold the hangers stationary with respect to the stem and to release the stem from engagement with the hangers, said stem being arranged to gravitate to release the bits from the suspension on the lifters and to allow the stem to move between and expand the bits, as described.

[Claims 6 and 7 not printed in the Gazette.]

1,192,420. SLACK-ADJUSTER FOR CAR-BRAKES. CHARLES HARTER, St. Louis, and ROBERT WARE, Maplewood, Mo. Filed Nov. 8, 1915. Serial No. 60,270. (Cl. 188—49.)



1. In a slack adjuster for railway brakes, the combination with a car truck and the brake rigging associated therewith, which rigging includes a dead lever, of means mounted on the bolster of the truck for shifting the fulcrum of said dead lever, a portion of which means extends to the side of said car truck.

2. In a slack adjuster for railway brakes, the combination with a truck and the brake rigging associated therewith, which rigging includes a dead lever, of means mounted on the bolster of the truck and connected to said dead lever for shifting the position of the fulcrum thereof, and means extending to the side of the car truck for actuating said fulcrum shifting means.

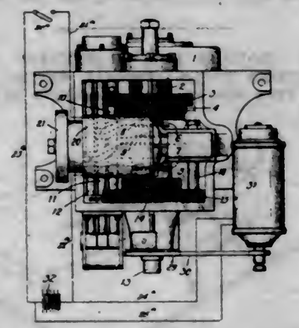
3. In a slack adjuster for railway brakes, the combination with a truck and the brake rigging associated therewith, which latter includes a dead lever, of a guide for the upper end of the dead lever which guide is mounted upon the truck bolster, and means associated with said guide for shifting the fulcrum of said lever, which shifting means is operable from the side of the car truck.

4. In a slack adjuster for railway car brakes, the combination with a truck and the brake rigging associated therewith, which latter includes a dead lever, of manually operated means mounted on the truck bolster and side frame for shifting the position of the fulcrum of said dead lever.

5. In a slack adjuster for railway car brakes, the combination with a truck and the brake rigging associated therewith, which latter includes a dead lever, of adjusting means mounted on the bolster of the truck for engaging the upper end of the dead lever, and manually operable means extending to the side of the truck frame for actuating the first mentioned means.

[Claims 6 to 14 not printed in the Gazette.]

1,192,421. COMBINED ELECTRICAL STARTER AND TRANSMISSION MECHANISM. EDWARD VASSALLO HARTFORD, Deal, N. J. Filed July 26, 1913. Serial No. 781,325. (Cl. 74—58.)



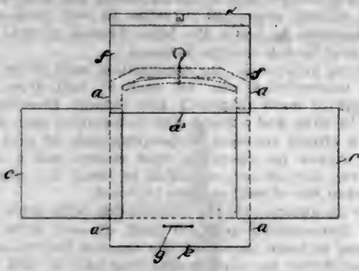
1. Means for starting an internal combustion engine comprising in combination, an automobile, a selective vehicle transmission mechanism, a high-speed low voltage starter motor in operable association therewith through gearing mounted within the transmission housing, said gearing including an overrunning clutch operating to free the motor from the transmission mechanism after the latter has received its starting power, and to regain control of the transmission mechanism when the speed of the engine falls below the driving speed of the motor to prevent the stalling of the former.

2. Means for starting an internal combustion engine comprising in combination a drive shaft, a selective vehicle transmission mechanism operably associated therewith, a gear wheel fixed to said drive shaft, a starter motor and releasable means interposed between the gear wheel and the transmission mechanism, including an overrunning clutch which operates to relieve the motor of its load after it has performed its engine starter work and to couple the motor with the engine when the speed thereof falls below the driving speed of the motor.

3. The combination of a selective transmission mechanism, a small high-speed starter motor in gear connection therewith, and means comprising an overrunning clutch for automatically disconnecting the transmission mechanism from the starter motor when the speed of the former exceeds the speed imparted to it by the starter motor.

4. Means for starting an internal combustion engine comprising in combination a drive shaft, a transmission mechanism associated therewith, a counter shaft connected with said drive shaft through intermediate gears, a high-speed starter motor releasably connected with the main or drive shaft through an overrunning clutch and a housing for the counter shaft and transmission mechanism, substantially as described.

1,192,422. ENVELOP OR BAG FOR HOLDING GARMENTS. LILLY COOPER HEATON, Pendleton, England. Filed May 17, 1915. Serial No. 28,780. (Cl. 206—7.)



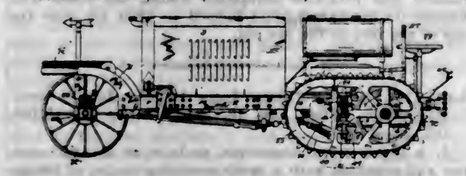
1. A suspensible garment envelop or bag comprising a pocket at the top, flaps below the said pocket extending from each side edge of the envelop or bag adapted to fold upon each other, a flap extending from the bottom edge of the envelop or bag adapted to fold upon the said side flaps and a flap extending from the open end of the said pocket adapted to fold upon the said side and bottom edge flaps and completely cover the said side edge flaps.

2. A suspensible garment envelop or bag comprising a pocket at the top, a plait along the top edge and the side edges of the envelop or bag, flaps below the said pocket extending from the plate at each side edge of the envelop or bag adapted to fold upon each other, a flap extending from the bottom edge of the envelop or bag adapted to fold upon the said side flaps and a flap extending from the open end of the said pocket adapted to fold upon the said side and bottom edge flaps, and completely cover the said side edge flaps.

3. A suspensible garment envelop or bag comprising a pocket at the top, flaps below the said pocket extending from each side edge of the envelop or bag adapted to fold upon each other, a flap extending from the bottom edge of the envelop or bag adapted to fold upon the said side flaps, a flap extending from the open end of the said pocket adapted to fold upon the said side and bottom edge flaps and completely cover the said side edge flaps, and means at each side and bottom edge for securing the flap extending from the open end of the said pocket to the envelop or bag.

4. A suspensible garment envelop or bag comprising a pocket at the top, a hanger in the said pocket, flaps below the said pocket extending from each side edge of the envelop or bag adapted to fold upon each other, a flap extending from the bottom edge of the envelop or bag adapted to fold upon the said side flaps and a flap extending from the open end of the said pocket adapted to fold upon the said side and bottom edge flaps and completely cover the said side edge flaps.

1,192,423. TRACTOR. CLARENCE A. HENNEUSE, Marysville, Cal., assignor to The Yuba Construction Company, a Corporation of California. Filed Aug. 10, 1914. Serial No. 855,954. (Cl. 21—114.)



1. In a tractor, a driving engine, endless movable tractor chains on opposite sides of said tractor, two alined transverse shafts each operatively connected to one of said tractor chains, two longitudinal shafts each connected to one of said transverse shafts, and a reversing mechanism between each longitudinal shaft and the engine.

2. In a tractor, a driving engine, endless movable tractor chains arranged at opposite sides of said tractor, sprockets engaging said chains, two alined transverse shafts each engaging one of said sprockets, two longitudinal shafts each connected to one of said transverse shafts, a reversing mechanism connected to each longitudinal shaft, and means including variable speed gears connecting said mechanisms with the engine.

3. In a tractor, a frame, an engine and endless movable tractor chains mounted on said frame, sprockets engaging said chains, transverse shafts engaging said sprockets, a closed casing secured to the frame in which said shafts are journaled, means independently connecting said shafts with the engine arranged in said casing, and a reversing mechanism in each of said independent means.

1,192,424. PROCESS FOR RESTORING BLEMISHED MOVING-PICTURE FILMS. FREDERICK W. HOCHSTETTER, New York, N. Y., assignor to Paul M. Pierson, Scarboro-on-the-Hudson, N. Y. Filed June 20, 1913. Serial No. 774,864. (Cl. 15—8.)

1. The process of restoring blemished moving picture films, which consists in coating said film with an oily material capable of softening the surface thereof; rubbing and buffing the surface so treated to first clean and then remove the scratches therefrom; and then removing the oily material from the surface of the film.

2. The process of restoring blemished moving picture films which consists in coating said film with an oily material capable of softening the surface of the emulsion thereon; then removing a portion of said oily material and the foreign matter collected thereby; then rubbing and buffing the surface of the film to remove the surplus oily coating and burnish the softened emulsion to close the scratches in such manner that the surfaces of the film are restored to their original condition.

1,192,425. INGOT MOLD AND FEEDER. BLOOMFIELD H. HOWARD, Aspinwall, and ERNEST J. TURNER, Pittsburgh, Pa. Filed Oct. 2, 1915. Serial No. 53,835. (Cl. 22—47.)



A metallic mold having its walls relatively thin at the top and increasing in thickness toward its lower end, and a feeder of refractory material resting upon the upper edge of the mold, and the feeder and mold having interlocking members and the inner walls of the feeder and mold being flush.

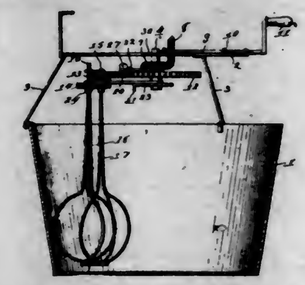
1,192,426. EGG-BEATER. JAMES W. HUDSON, Seattle, Wash. Filed July 14, 1914. Serial No. 850,973. (Cl. 259—129.)

1. In an egg beater, a rotatable element, means to rotate said element, means to move said element in the path of a circle while rotating, and means to lock said element against such circular movement.

2. In an egg beater, a pair of rotatable beating elements, means to move the elements bodily in the path of a circle while rotating, and means to lock said elements against such bodily movement.

3. In an egg beater, a pair of rotatable beating elements, means to rotate the elements in opposite directions.

means to move the elements bodily in the path of a circle while rotating, and means to lock the said elements against such bodily movement.

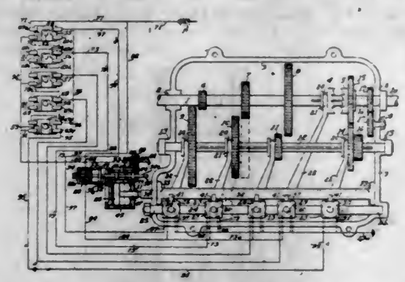


4. In an egg beater, a pair of rotatable beating elements, an operating shaft, means mounted on said shaft to rotate the said elements in opposite directions, means mounted on the said shaft, to move the elements bodily in the path of a circle while rotating, and means to lock the said elements against such bodily movement while rotating.

5. In an egg beater, a pair of rotatable beating elements, an operating shaft, means including a member movable relatively to the shaft, said member being actuatable to move the elements bodily in the path of a circle while rotating, a second member movable relatively to the shaft, said second member being actuatable to lock the elements against bodily roation.

[Claim 6 not printed in the Gazette.]

1,192,427. SPEED-CHANGING TRANSMISSION FOR AUTOMOBILES. MERION J. HUGGINS, New York, N. Y. Filed July 3, 1913. Serial No. 777,175. (Cl. 74—58.)



1. In an automobile, the combination with drive gears, and a transmission gear for each of said drive gears adaptable to mesh therewith and unmesh therefrom, of a circuit, a circuit closer for each coöperating pair of said gears connected in series in said circuit, a selecting device for each coöperating pair of said gears, mechanism for meshing the gears, branch circuits operating said devices, and said devices and mechanism being actuated to select and mesh any coöperating pair of said gears by making and breaking of said circuits with said circuit closers.

2. In an automobile, the combination with drive gears, and a transmission gear for each of said drive gears adaptable to mesh therewith and unmesh therefrom, of a main circuit, a selecting device for each coöperating pair of said gears, a branch circuit for each of said devices, a closer for each of said branch circuits connected in series in said main circuit, each of said circuit closers when closed adaptable to break the branch circuit of its adjacent closer, and means to select and mesh any coöperating pair of said gears by closing said circuits.

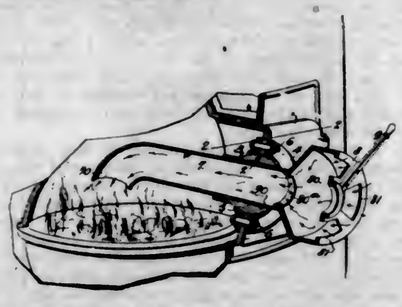
3. In an automobile, the combination with drive gears, and a transmission gear for each of said drive gears adaptable to mesh therewith and unmesh therefrom, of a main circuit, means to mesh and unmesh any coöperating pair of said gears, branch circuits having means for operating said means, and a circuit closer for each of said branch circuits connected in series in said main circuit and adaptable to break the other branch circuits when one of said branch circuits is closed.

4. In an automobile, the combination with drive gears, and a transmission gear for each of said drive gears adaptable to mesh therewith and unmesh therefrom, of means to mesh and unmesh any coöperating pair of said gears, a circuit for each coöperating pair of said gears having means for operating said means, and a circuit closer for each circuit adaptable to break the other circuits when one of said circuits is closed.

5. In an automobile, the combination with drive gears, and a transmission gear for each of said drive gears adaptable to mesh therewith and unmesh therefrom, of a selecting device for each coöperating pair of said gears, a shiftable rod, means to connect any one of said devices to said rod, and means to shift said rod and connected device to mesh and unmesh its coöperating pair of gears.

[Claims 6 to 44 not printed in the Gazette.]

1,192,428. SUPPLEMENTAL AIR-FEEDING MEANS FOR FURNACES, BOILERS, OR STOVES. CHARLES WESLEY HUSE, Gary, Ind. Filed May 9, 1916. Serial No. 96,300. (Cl. 110—175.)

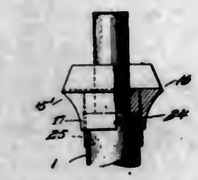


In a stove, boiler or furnace, the combination with the door or casing and the fire pot; of a collar having a convexed portion projected through the door or casing, the said collar having its outer end rockably mounted in the said door or casing and means for holding the said collar to its said position relatively to the door, the said means consisting of a pair of opposing clamping rings having concaved bearing surfaces that engage the convexed portion of the collar, one of the said rings engaging the inside and the other of the rings engaging the outside of the door or casing, clamp bolts that pass through the door casing and the rings, nuts engaging the said bolts for drawing the rings into tight engagement with the convexed portion of the collar whereby to fixedly hold the collar to its adjusted positions, an air intake tube projected through the said collar, said tube having longitudinal and rotatable movement within the collar and having its discharging end formed to eject air onto the top of the fuel in the fire pot.

1,192,429. SPOKE-CLIP. JOHN MORGAN JONES, Nashville, Tenn. Filed Aug. 16, 1915. Serial No. 45,766. (Cl. 21—176.)

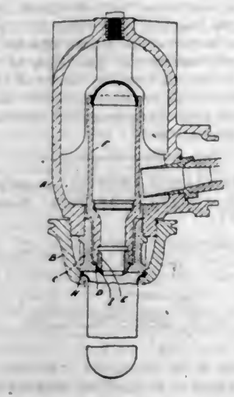
1. A spoke clip or connector, made in an integral casting and provided with a spoke receiving socket of irregular shape and having a reduced opening to receive the spoke end, said body being further provided with two parallel felly embracing flanges, the outer sides of which are divergent to provide a reinforced portion, and two resilient tongues projecting from the socket, each of which is provided with a spoke entering prong.

2. The combination with a felly having a spoke receiving opening, and a spoke having a reduced end for insertion in the opening of the felly, of a spoke attaching device comprising a member to straddle the felly and receive the spoke end, and a two membered wedge for positioning between the first member and the felly for wedging such member upon the spoke end, each member of the two membered wedge coöperating to hold each other from separation.



3. The combination with a felly having a spoke receiving opening, and a spoke having a reduced end for insertion in the opening of the felly, of a spoke attaching device comprising a member to straddle the felly and receive the spoke end, and a wedge for positioning between the member and the felly, said wedge comprising a U-shaped member, the terminals of which are wedge shaped, and are malleable, and a T-shaped member for coöperation with the U-shaped member, the arms of the T-shaped member being received by the bent up ends of the U-shaped member to lock the members about the spoke and between the member and felly.

1,192,430. GAS-LAMP. GEORGE KEITH, London, England, assignor of one-half to James Keith, London, England. Filed Jan. 25, 1916. Serial No. 74,100. (Cl. 67—94.)



1. In a gas lamp, in combination, a tube for passage of the mixture of gas and air, a bush supported independently of the tube, said bush formed with an internal shoulder, and a nozzle connected to the tube and supported by the shoulder.

2. In a gas lamp, in combination, a gas and air heater, a refractory bush secured to said heater, said bush formed with an internal shoulder, a tube extending from the interior of said heater into said bush, and a nozzle connected to said tube and supported by said shoulder.

3. In a high pressure incandescent gas lamp, in combination, a mantle-support, a non-conducting bush between which and the mantle-support the mantle may be lightly held, a tube projecting into the bush, and a nozzle proper connected to the tube and separate from, but supported by, the bush.

1,192,431. CENTERING DEVICE FOR ENGINE-COUPLINGS. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Feb. 2, 1916. Serial No. 75,683. (Cl. 213—59.)

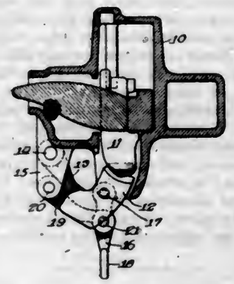


1. A device of the class described, comprising in combination a pocket adapted to be secured to the end sill of a car, a coupler having an apertured shank, a vertical pin for securing said shank pivotally within said pocket, a lever mounted on said pin and connected to said coupler at a point near the head thereof, and a transverse rod engaging said lever and extending to the side of the car, whereby said coupler may be swung on said pin by an operator at the side of the car, substantially as described.

2. In a device of the class described, the combination with a housing, a coupler and a pin, said pin adapted to rotatably connect said coupler to said housing, a bar extending transversely of said housing and mounted for longitudinal movement, a lever pivoted on said pin and underlying said housing and coupler and connected at one end to said coupler and at the other end to said bar, and means for imparting movement to said bar, substantially as described.

3. In a device of the class described, the combination with a car sill of a housing secured thereto, a coupler and a pivot pin, said coupler being pivotally mounted on said pin within said housing, said pin having an extension through the lower wall of said housing, a bar extending longitudinally of said sill and mounted for longitudinal movement thereon, a lever underlying said housing and coupler and pivotally mounted on the extension of said pin, said lever being connected at one end to the coupler and at the other to the bar, stops on the ends of said bar, and handles pivoted to said sill and having forked ends adapted to straddle the ends of said bar between said stops, substantially as described.

1,192,432. BOTTOM-OPERATING COUPLING. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Feb. 5, 1916. Serial No. 76,314. (Cl. 213—59.)



1. In a car coupler, the combination of a lock and an oscillating lifter, a lug depending from said coupler and providing a fulcrum for said lifter, a vertical lifting link pivoted to said lifter and a connecting link also fulcrumed on said depending lug and connected to said lifting link at a point intermediate its ends, said lifting link being provided at its free end with means to be engaged by a suitable manipulating device, substantially as described.

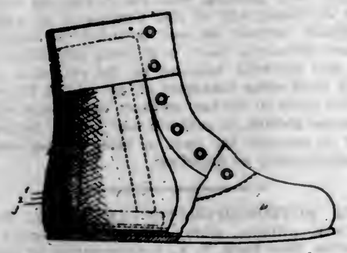
2. In a car coupler, the combination of a head having a depending apertured lug, a lock within said head and a

bottom operating lifting means for said lock, said means including an oscillating lifter pivoted to said lug, a lifting link mounted for oscillation on said lifter and a connecting link also pivoted to said lug and connected to said lifting link at a point intermediate its ends, said lifting link being provided at its free end with means to be engaged by a suitable manipulating device, substantially as described.

3. In a car coupler, the combination of a lock and an oscillating lifter, a lug depending from said coupler and providing a fulcrum for said lifter, a substantially vertical lifting link pivoted to said lifter and provided with an eye in its free end, and a connecting link also fulcrumed on said coupler and located vertically beneath said lifter and pivotally connected to said lifting link, the length of said lifter and said connecting link being substantially equal, the parts being so arranged that said lifting link is caused to occupy a substantially vertical position in all positions of oscillation of said lifter, substantially as described.

4. In a car coupler, the combination of a lock and a weighted lifter, an arm connecting said lifter to said coupler, a substantially vertical lifting link attached to said lifter and provided with means at its lower end for connection to an operating rod, a connecting link located vertically beneath the arm of said lifter and of substantially equal length, said connecting link being fulcrumed to said coupler and to said lifting link, whereby said lifting link is caused to occupy a substantially vertical position in all positions of said lifter, substantially as described.

1,192,433. ANKLE-BRACE. GUSTAVE KRIEGER, Brooklyn, N. Y. Filed Nov. 15, 1915. Serial No. 61,464. (Cl. 128—3.)



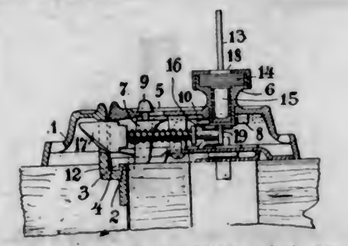
1. An ankle brace comprising an inner layer, an outer layer, an intermediate stiffening layer, pockets formed between the intermediate layer and the outer layer, and stays housed within said pockets, the stiffening layer extending over the inner layer at the stays and also over the portions of the inner layer intermediate the stays whereby the pressure is uniformly transmitted to the entire contacting surface of the foot.

2. An ankle brace comprising an inner layer of leather, an outer layer of canvas, an intermediate layer of sized buckram, pockets formed between the intermediate layer and the outer layer, and stays housed within said pockets, the layer of sized buckram extending over the inner layer at the stays and also over the portions of the inner layer intermediate the stays whereby the pressure is uniformly transmitted to the entire contacting surface of the foot.

1,192,434. LOCK. ERNST KÜRSTEINER, Christiania, Norway. Filed Nov. 22, 1915. Serial No. 62,785. (Cl. 70—91.)

1. A snap lock comprising a keeper, a lock case, a knob, a latch bolt adapted to be retracted from the indoor side by means of the knob, a projecting rib in front of the keeper, a groove between the keeper face and said rib, and means in the lock case for preventing the operation of the knob and adapted to be locked in turn by means of the said groove and rib on the keeper.

2. A snap lock comprising a keeper, a lock case, a knob, a latch bolt adapted to be retracted from the indoor side by means of the knob, a projecting rib in front of the keeper, a groove between the keeper face and said rib, and a sliding bar in the lock case coöperating in one position with the knob so as to prevent the movement of the same and being locked in the same position by means of the rib and groove on the keeper.



3. A snap lock comprising a keeper, a lock case, a knob, a latch bolt adapted to be retracted from the indoor side by means of the knob, a projecting rib in front of the keeper, a groove between the keeper and rib, means in the lock case for preventing the operation of the knob and adapted to be locked in turn by means of the said groove and rib on the keeper, and means independent of the knob for actuating the latch bolt from inside.

4. A snap lock comprising a keeper, a lock case, a knob, a latch bolt adapted to be retracted from the indoor side by means of the knob, a projecting rib in front of the keeper, a groove between the keeper and rib, means in the lock case for preventing the operation of the knob and adapted to be locked in turn by means of the groove and rib on the keeper, and an auxiliary lock on the inside of the lock case for actuating the latch bolt independent of the knob.

5. A snap lock comprising, a keeper, a lock case, a knob, a latch bolt adapted to be retracted from the indoor side by means of the knob, a projecting rib in front of the keeper, a groove between the keeper and rib, means in the lock case for preventing the operation of the knob and adapted to be locked in turn by means of the groove and rib on the keeper, and an auxiliary lock inside the knob but independent from the same for actuating the latch bolt from the indoor side.

1,192,435. GAS-SAVING DEVICE. JOSEPH J. LAMPERT, Seattle, Wash. Filed Oct. 18, 1915. Serial No. 56,452. (Cl. 48—180.)

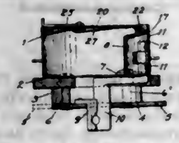


1. In a device of the character described, including an open flange adapted to be inserted between the carbureter and manifold of a gas engine and to be secured in place by the connecting means of the said manifold and carbureter, the combination of an annular groove around the opening in said flange, a light coiled spring cone terminating at its longer end in a clench ring adapted to removably fit into said groove and hold said cone in place, the vibration of said gas engine being sufficient to keep the said cone in constant motion, whereby air and gas from the carbureter are churned and thoroughly intermixed into a highly explosive mixture.

2. In a device of the class described including a flange having a circular opening therethrough, the combination of an annular groove around the inside of said opening, a fully vibrating coiled spring cone, a spring clench ring formed integrally with the base of said cone and adapted to be removably retained in said annular groove by means of the inherent spring in said clench ring.

3. In a device of the class described including a cylindrically cored flange having an air admitting valve on one side thereof and communicating with said core, the combination of an open groove around the inner periphery of said core and communicating with a passage leading to said air valve, a freely vibrating coiled spring cone positioned in the cored portion of said flange and projecting above said flange, and means removably retaining said core in said cone, said means including a clench ring integral with the base of said cone, and a projection upon said clench ring, the said projection extending into said air passage and the clench ring fitting into said open groove, whereby the inherent spring of the clench ring will retain the said ring in the said groove and the apex of the cone will be entirely free to vibrate.

1,192,436. CARRIER FOR CABLE-CARRIER-DESPATCH SYSTEMS. MILLARD B. LAWRENCE, Philadelphia, Pa., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Dec. 8, 1914. Serial No. 876,141. (Cl. 186—32.)



1. A carrier for cable carrier apparatus, comprising a receptacle having a cover, a gripping device for engaging the cable and guides for engaging the rails of said apparatus, said receptacle having connected thereto a casing, to which said cover is pivotally connected, a spring in said casing for controlling an element of said gripping device, said casing having an interlocking lug and slot connection with a wall of said receptacle, and detachable and attachable threaded means for maintaining said casing and receptacle in interlocked relationship.

2. A carrier for cable carrier apparatus, comprising a receptacle having a cover, a gripping device for engaging the cable and guides for engaging the rails of said apparatus, said receptacle having attached thereto a casing to which said cover is pivotally connected, a spring in said casing for controlling an element of said gripping device, said casing having a separable connection with a lateral wall of said receptacle, and a removable member for connecting said casing to the bottom of said receptacle, said separable connection being adapted to hold the casing and receptacle in locked relationship only so long as said casing is connected to the bottom of said receptacle by said removable member.

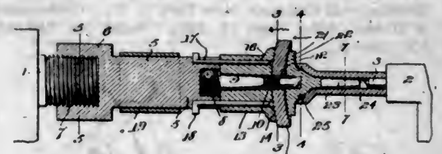
3. A carrier for cable carrier apparatus, comprising a receptacle having a cover, a gripping device for engaging the cable and guides for engaging the rails of said apparatus, said receptacle having attached thereto a casing to which said cover is pivotally connected, a spring in said casing for controlling an element of said gripping device, said casing having a separable connection with a lateral wall of said receptacle, and a removable member for connecting said casing to the bottom of said receptacle, and for also connecting said guides to said receptacle.

4. A carrier for cable carrier apparatus, comprising a receptacle having a cover, a gripping device for engaging the cable and guides for engaging the rails of said apparatus, said receptacle having attached thereto a casing to which said cover is pivotally connected, a spring in said casing for controlling an element of said gripping device, said casing having a separable interlocking connection with a lateral wall of said receptacle, and a connection between said spring and casing, said casing cover and grip controlling spring being removable together from said receptacle.

5. A carrier for cable carrier apparatus, comprising a receptacle having a cover, a gripping device for engaging the cable and guides for engaging the rails of said apparatus, said receptacle having connected thereto a casing, to which said cover is pivotally connected, a spring in said casing for controlling an element of said gripping device, said casing having an interlocking lug and slot connection with a wall of said receptacle, and means distinct from said casing and receptacle for maintaining the latter in their interlocked relationship.

[Claim 6 not printed in the Gazette.]

1,192,437. LATHE-CHUCK. WILLIAM T. LINGO, Philadelphia, Pa. Filed Dec. 7, 1915. Serial No. 65,597. (Cl. 82—40.)



1. A chuck for the purpose specified comprising a rotary stock adapted to be mounted upon the live spindle of a lathe, a head carried by said stock and rotating therewith, a work holding mandrel located centrally of said head, a rotatable work engaging pressure head working in opposition to the first named head, and holding means for said pressure head, one of said heads having a convex work engaging and distorting face and the other head having a concaved work engaging face which permits distortion of the work.

2. A chuck for the purpose specified comprising a rotary stock adapted to be mounted upon the live spindle of a lathe, a head carried by said stock and rotating therewith, work-displacing means carried by said head, a work holding mandrel located centrally of said head, a rotatable work engaging pressure head working in opposition to the first named head, and holding means for said pressure head.

3. A chuck for the purpose specified comprising a rotary stock adapted to be mounted upon the live spindle of a lathe, a head carried by said stock and rotating therewith, a work holding mandrel located centrally of said head, a rotatable work engaging pressure head working in opposition to the first named head and having a work distorting face, and holding means for said pressure head, said mandrel having a uniformly tapered and serrated face to engage in the bore of the washer.

4. A chuck for the purpose specified, comprising a rotary stock adapted to be mounted upon the live spindle of a lathe, a head carried by said stock and rotating therewith, a washer holding mandrel located centrally of said head, a rotatable washer engaging pressure head working in opposition to the first named head, holding means for said pressure head, a washer displacing pin carried by the first named head, and a knocker sleeve coöperating with said pin and loosely surrounding the stock.

5. A chuck for the purpose specified comprising a rotary stock adapted to be mounted upon the live spindle of a lathe, work displacing means carried by said stock, a rotatable work engaging pressure head working in opposition to the first named head, and holding means for said pressure head.

1,192,438. METHOD OF CONVEYING OIL. MILO D. LOOMAN, Orcutt, Cal., assignor of one-half to Edward E. Forbes, Orcutt, Cal. Filed Mar. 25, 1914. Serial No. 827,133. (Cl. 137—75.)

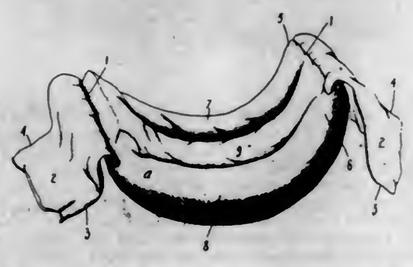


1. The method of conveying oil, which consists in passing the oil over a relatively stationary track of water held in the bottom of a conduit.

2. The method of conveying oil, which consists in passing the oil over a plurality of more or less connected relatively stationary bodies of water held in the bottom of a conduit.

3. The method of conveying oil, which consists in passing the oil over a plurality of relatively stationary bodies of water held in a conduit.

1,192,439. CATAMENIAL BANDAGE. LAWRENCE W. LUELLEN, Mountain Lakes, N. J., assignor to Individual Drinking Cup Company, New York, N. Y., a Corporation of Maine. Filed Sept. 11, 1913. Serial No. 789,398. (Cl. 128—5.)



1. As a new article of manufacture, a substantially rectangular catamenial bandage comprising a woven tube of absorbent fabric with a filling of absorbent material of tough-like formation distributed throughout an intermediate portion thereof, said material being stitched at its ends to the fabric.

2. As a new article of manufacture, a substantially rectangular catamenial bandage comprising superimposed layers of absorbent fabric with a filling of absorbent material distributed throughout an intermediate portion thereof, said material being in the form of a trough with its edges in lengthwise direction relatively thicker than its central portion.

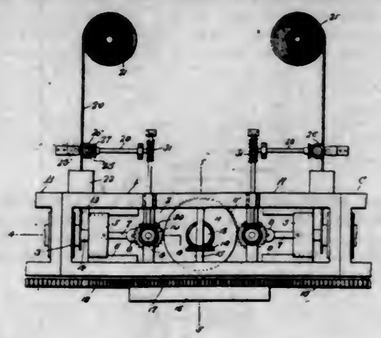
3. As a new article of manufacture, a catamenial bandage comprising superimposed layers of absorbent fabric with a filling body of absorbent material pocketed therein and stitched at its ends thereto, the edges of said absorbent material in lengthwise direction being thicker than the intermediate center portion.

4. As a new article of manufacture, a catamenial bandage comprising superimposed layers of absorbent fabric with a filling body of absorbent material pocketed therein and stitched at its ends thereto, said body of absorbent material being tapered toward its ends with its edges in lengthwise direction thicker than the intermediate center portion so as to form a trough extending substantially lengthwise between thickened portions thereof.

1,192,440. PAPER CUTTING AND SHAPING MACHINE. JOHN AUGUST LUTHER, Schenectady, N. Y. Filed Nov. 29, 1915. Serial No. 64,126. (Cl. 18—19.)

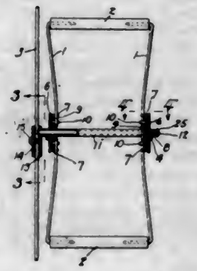
1. In a paper forming and shaping machine, the combination of a stationary cutting and shaping die, a movable cutting and shaping die, paper feed elements for feeding a web of paper between said dies, a motion transmitting shaft, crank mechanism actuated by said shaft for reciprocating the movable die, a gear on said motion transmitting shaft, a mutilated drive gear operative to intermittently engage and operate the transmitting gear for alternately projecting and retracting the movable die, with dwells or pauses between intervals of operation, a shaft driven from the transmission shaft, and gearing actuated by said shaft for intermittently operating the paper feed elements in timed accord with the movable die.

2. In a paper cutting and shaping machine, the combination of a stationary combined cutting and shaping die, a movable combined cutting and shaping die, paper feed elements for intermittently feeding a web of paper between said dies, a transmission shaft, crank mechanism actuated by said shaft for projecting and retracting the movable die, a gear on said transmission shaft, a drive shaft, an intermediate shaft in gear therewith, a mutilated drive gear on said intermediate shaft operated to intermittently



engage and release the gear on the transmission shaft, to alternately project and reciprocate the movable die with pauses or dwells between intervals of action, a shaft in gear with the transmission shaft, and gearing actuated by said shaft for intermittently operating the paper feed elements in timed accord with the movable die.

1,192,441. ROTARY PERCH. JOHN GEORGE LYDECKER, New York, N. Y. Filed Apr. 2, 1915. Serial No. 18,642. (Cl. 119—26.)

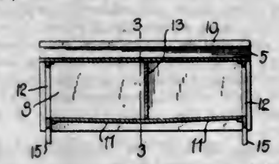


1. In a perch for bird cages and the like, the combination of a central stationary support, a sleeve revolving thereon, frames carried by the sleeve and arranged to be relatively movable for closing and opening, said frames when open forming a wheel structure having perch devices in the periphery and a resilient connection between the frames.

2. In a rotary perch for bird cages, the combination of a stationary rod, a central member revoluble thereon, notched disks on the central member, a frame secured to said notched disks, another frame adjustable relatively to the first frame and adapted to be engaged by the notched disks, and rotary disks revolving on the central member and attached to the movable frame.

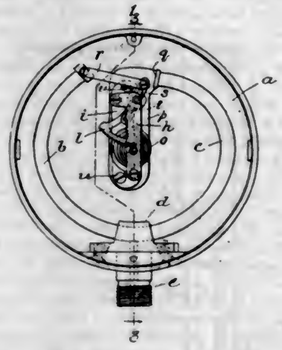
3. In a rotary perch for bird cages and the like, the combination with a stationary member, a central support revoluble thereon, disks secured thereon and provided with notched projections, a frame consisting of parallel wires fastened to said disks intermediate of the notched projections and carrying outer rollers, other disks arranged rotatably on the central support, and a frame consisting of parallel wires rigidly affixed to said latter disks and carrying also outer rollers, said latter wires being adapted to engage the notched projections in the first mentioned disks when the frames are extended.

1,192,442. DESK. CHARLES E. MCCANLESS, Bartlesville, Okla. Filed May 1, 1915. Serial No. 25,261. (Cl. 155—34.)



A desk of the character described including supporting end frames, front and back walls connecting the frames and closing the opposite sides of the desk, a top for the desk arranged upon said end frames, and a bottom wall supported by the end frames between said side walls and inclined inwardly and downwardly from one of the end frames, said frame having an opening therein through which access may be had to the interior of the desk at one end thereof.

1,192,443. DOUBLE-SPRING GAGE. COLEMAN J. MANNING, Medford, Mass., assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Sept. 4, 1912. Serial No. 718,482. (Cl. 73—109.)



1. A pressure gage comprising oppositely arranged spring tubes adapted to receive the fluid of which the pressure is to be measured, a pointer actuating movement including motion-accelerating gearing carried by one of said tubes, and an actuating connection between said movement and the other of said tubes.

2. A double spring gage for measuring fluid pressures, comprising a pair of oppositely arranged curved spring tubes, a movement frame secured to the free end of one of said tubes and movable therewith, an indicator-operating movement mounted in said frame, and an actuating connection extending to said movement from the free end of the other tube.

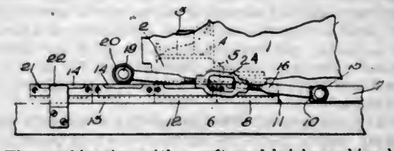
3. A pressure gage comprising a pair of spring tubes, a holder secured to one of said tubes, a movement frame mounted upon said holder, an indicator actuating movement held in said frame and including a pivotally mounted segment, and a link connected with the other of said tubes and with said segment eccentrically of the pivot of the latter.

4. A pressure gage comprising a pair of spring tubes, a holder secured to one of said tubes, a movement frame mounted upon said holder, an indicator actuating movement held in said frame and including a pivotally mounted segment, and a link connected with the other of said tubes and with said segment eccentrically of the pivot of the latter, said movement frame being adjustable on the holder in such manner that the part carrying the pivot of the segment may be moved toward or from said other spring tube.

5. A pressure gage comprising two curved spring tubes each adapted to receive the same fluid, a case inclosing said tubes, an indicator actuating movement, a frame connecting the parts of said movement, an actuating connection between said movement and one of the tubes, and means by which said movement is carried bodily by the other tube, the movement and its frame being otherwise separated from the case.

[Claims 6 to 9 not printed in the Gazette.]

1,192,444. SOFT-MUD-BRICK MACHINE. JAMES P. MARTIN, Lancaster, Pa., assignor to American Clay Machinery Company, Bucyrus, Ohio, a Corporation of Ohio. Filed Jan. 30, 1914. Serial No. 815,533. (Cl. 25—104.)

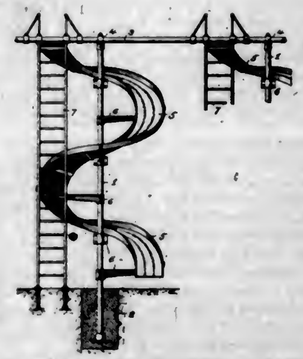


1. The combination with a soft mud brick machine having mechanism to press plastic brick material into a plurality of movable molds, means to automatically move said molds when filled away from the pressing mechanism, of means actuated by said mold-moving mechanism to additionally compress and compact the brick material in said molds by working backwardly and forwardly over the surface of the brick material in the molds.

2. The combination with a soft mud brick machine having mechanism to press plastic brick material into a plurality of movable molds, a reciprocating carriage adapted to remove filled molds from under the pressing mechanism, of a yieldable roller adapted to move backwardly and forwardly over the face of the brick material in said molds to constitute an additional compressing and compacting device, said roller being actuated by the reciprocating movements of the said carriage.

3. The combination with a soft mud brick machine having mechanism to press plastic brick material into a plurality of movable molds, a reciprocating carriage adapted to move molds into position under the pressing mechanism and to remove the filled molds therefrom while re-positioning other molds under the pressing mechanism, of a yieldable roller adapted to move backwardly and forwardly over the face of the brick material in said molds to constitute an additional compressing and compacting device, said roller being actuated by the reciprocating movements of the said carriage.

1,192,445. PLAYGROUND-SLIDE. PHILIP S. MEDART, St. Louis, Mo. Filed June 10, 1915. Serial No. 33,325. (Cl. 46—69.)



1. A playground slide, comprising an individual central post arranged in a fixed vertical position, a rider bar

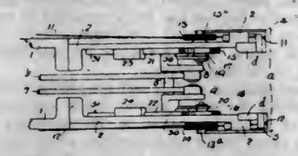
secured to said post and forming a lateral top extension thereof, a runway of a spiral trough form surrounding said post and supported wholly thereon, and a stairway disposed at the side of said runway with its upper end attached to and supported by the rider bar aforesaid.

2. A playground slide, comprising an individual central post arranged in a fixed vertical position, a rider bar secured to said post and forming a lateral top extension thereof, a runway of a spiral trough form surrounding said post, a series of lateral supporting braces intermediate of the central post and the runway, and a stairway disposed at the side of said runway with its upper end attached to and supported by the rider bar aforesaid.

3. A playground slide, comprising a plurality of individual central posts having fixed vertical positions, a single horizontal rider bar connecting the upper ends of said posts together, individual runways of a spiral trough form surrounding the individual central posts aforesaid and supported wholly thereon, and individual stairways disposed at the sides of the runways with the upper ends of said stairways attached to and supported by the rider bar aforesaid.

4. In a playground slide, comprising a plurality of individual central posts having fixed vertical positions, a single horizontal rider bar connecting the upper ends of said posts together, individual runways of a spiral trough form surrounding the individual central posts aforesaid, a series of lateral supporting braces intermediate of each central post and its runway, and individual stairways disposed at the sides of the runways with the upper ends of said stairways attached to and supported by the rider bar aforesaid.

1,192,446. STAPLING-MACHINE. JOHN WILLIAM NASMITH, Heaton Mersey, England. Filed Aug. 2, 1910. Serial No. 575,132. (Cl. 1—11.)



1. In a stapling machine the combination of a main frame; a plurality of outwardly projecting arms mounted some distance apart upon the frame and with their outer lateral faces approximately parallel; and staple forming and driving mechanisms mounted upon the inner faces of the said arms, said mechanisms being independent of each other for individual operation, and the extremities of the arms with their stapling mechanisms being adapted to be introduced into the inside of a box to drive the staples outward.

2. In a stapling machine the combination of a main frame; a plurality of outwardly-projecting arms mounted some distance apart upon the frame; and staple forming and driving mechanisms mounted upon the inner faces of the said arms, said mechanisms being independent of each other for individual operation, and the extremities of the arms with their stapling mechanisms being adapted to be introduced into the inside of a box to drive the staples outward.

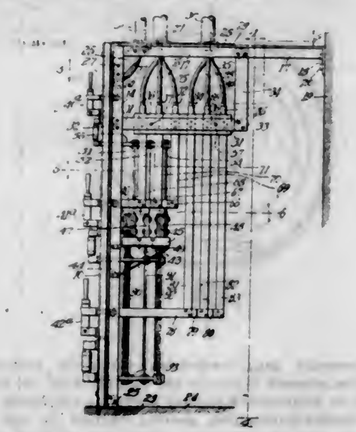
3. In a stapling machine the combination of a main frame; a plurality of outwardly-projecting arms mounted some distance apart on the said frame; mechanisms for cutting, forming and driving staples, the said mechanisms being situated between the outwardly-projecting arms and adjacent to the outer extremities thereof; and means for feeding wire for the staples to the said cutting mechanisms, the cutting, forming, and driving mechanism of each member being independent for individual operation, and the extremities of the arms with their stapling mechanisms being adapted to be introduced into the inside of a box to drive the staples outward.

4. In a stapling machine the combination of a main frame; a plurality of outwardly-projecting arms mounted some distance apart on the said frame; mechanisms for cutting, forming, and driving the staples, the said mechanisms being fixed in an inclined position between the outwardly-projecting arms and adjacent to the outer extremities thereof; and means for feeding wire for the staples to the said cutting mechanisms, the cutting, forming and driving mechanism of each member being independent for individual operation, and the extremities of the arms with their stapling mechanisms being adapted to be introduced into the inside of a box to drive the staples outward.

5. In a stapling machine the combination of a main frame; a plurality of outwardly-projecting arms mounted some distance apart on the said frame; mechanisms for cutting, forming, and driving staples, each of the said mechanisms being mounted on the inner face of one of the outwardly projecting arms and adjacent to the outer extremities thereof; and means for feeding wire to each of the said cutting mechanisms, the cutting, forming and driving mechanism of each arm being independent for individual operation, and the extremities of the arms with their stapling mechanisms being adapted to be introduced into the inside of a box to drive the staples outward.

[Claims 6 to 9 not printed in the Gazette.]

1,192,447. SWITCHBOARD FOR ELECTRIC CIRCUITS. JULIAN J. NIELSEN, Chicago, Ill. Filed May 7, 1915. Serial No. 26,607. (Cl. 175—298.)

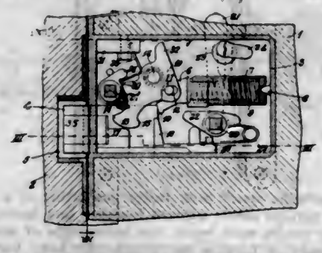


1. A switch board, comprising a front panel; switches mounted thereon, having terminals on the rear surface thereof; rearwardly extending panel supports; feeder terminals arranged near the top of the board and supported in a line at substantial right angles to said panel, by said panel support; obliquely deflected conductors, extending rearwardly and obliquely in a horizontal plane from said switch terminals for connection with said feeder terminals; and vertically extending conductors for connection with said obliquely extending conductors, the upper ends whereof are connected to said feeder terminals.

2. A composite-panel switch board, comprising a series of instrument-receiving vertical panel plates of insulating material; instruments mounted thereon having terminals at the back thereof; wall-engaging braces connected to the top of each panel and extending rearwardly therefrom; a longitudinal series of feeder terminals arranged substantially in parallel line with said braces and a top cover plate supported on said braces, extending rearwardly over said feeder terminals and having openings for support of feeder carrying conduits.

3. A composite-panel switch board, comprising a series of instrument-receiving, vertical plates of insulating material; instruments mounted thereon, having terminals at the back thereof; wall-engaging braces connected to the upper part of each panel and extending rearwardly therefrom; a longitudinal series of feeder-terminals arranged in substantial parallel line with said braces; connections from said instruments extending rearwardly and obliquely for connection with said feeder terminals and a top cover plate supported on said braces, extending rearwardly over said feeder terminals in line substantially parallel therewith and having openings for support of feeder-carrying conduits.

1,192,448. LATCH. LEON OTTINGER, New York, N. Y. Filed Mar. 26, 1915. Serial No. 17,087. (Cl. 70—64.)



1. A latch comprising a latching member, an opposed latch-engaging member, a handle for withdrawing said latching member, a spring for holding said latching member under oppositely acting spring pressure when in retracted and extended positions, and means carried by said latching member to wedge the same within said latch-engaging member under spring pressure when the parts of the latch are engaged.

2. A latch comprising a latching member, a handle for withdrawing the same, an opposed latch-engaging member, a spring for holding said latching member under pressures acting in opposite directions when in retracted and extended positions, and means for transmitting the outward pressure of said member transversely thereof when in latched position.

3. A latch comprising a latching member, a handle for withdrawing the same, an opposed latch-engaging member, a spring for holding said latching member under pressures acting in opposite directions when in retracted and extended positions, and a connection between said spring and said handle to shift said spring to withdraw said latching member when said handle is operated.

4. A latch comprising a latching member having a wedging portion, a spring acting to hold the same under positive spring pressure in both retracted and extended positions, a trip connected with said member and adapted to move said latching member to its extended position, and an opposed latch-engaging member adapted to receive the wedging portion of said latching member and to be held under spring pressure by the action of said spring.

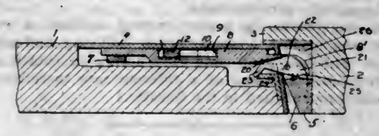
5. A latch comprising a latching member, an opposed latch-engaging member, means for holding said latching member under spring pressure acting in opposite directions when in retracted and extended positions, means operated by said latch engaging member for tripping said latching member, a handle, and a connection between said latching member and handle for retracting said member, said connection being inoperative when said latching member is being extended.

[Claims 6 to 16 not printed in the Gazette.]

1,192,449. LOCK OR LATCH. LEON OTTINGER, New York, N. Y. Filed Mar. 15, 1916. Serial No. 84,407. (Cl. 70—42.)

1. In a latch, a latching member, an opposed latch-engaging member, means for limiting the transverse movement of said latching member in one direction when extended, and means acting between said latch-engaging member and latching member for forcing the latter yieldingly toward said limiting means when the parts are latched.

2. In a latch, a latching member, an opposed latch-engaging member, a stop, and means acting between said latch-engaging member and said latching member for forcing the latter yieldingly toward said stop when the parts are latched.



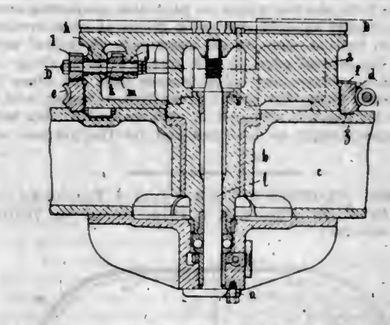
3. In a latch, a stop, a latching-member having its outer side relative to said stop parallel therewith, and means acting between said latch-engaging member and said latching member for forcing the latter yieldingly toward said stop when the parts are latched.

4. In a latch, an expansible latching member, an opposed recessed latch-engaging member, and means for expanding said latching member within said recess to engage the wall thereof with yielding pressure when latched.

5. In a latch, an expansible latching member, an opposed recessed latch-engaging member, and a spring acting upon said latching member to expand the same within said recess to engage the wall thereof with yielding pressure when latched.

[Claims 6 to 11 not printed in the Gazette.]

1,192,450. GEAR-CUTTING MACHINE. CHARLES A. PARSONS and ALFRED QUINTIN CARNEGIE, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Carnegie and Cook assignors to said Parsons. Original application filed Mar. 25, 1913, Serial No. 756,762. Divided and this application filed Dec. 13, 1913. Serial No. 806,567. (Cl. 90—4.)



1. A gear cutting machine, comprising a table on which the work is mounted, a parent gear, having a driving and a driven member means between said driven member and said table whereby said table is rotated by said driven member but at a different rate therefrom.

2. A gear cutting machine comprising a table on which the work is mounted a parent gear having a driving and a driven member said driven member being concentric with said table means between said driven member and said table whereby said table is rotated by said driven member but at a different rate therefrom.

3. A gear cutting machine comprising a parent gear having a driving and a driven member a table on which the work is mounted a train of gearing attached to said table and gearing with said driven member of the parent gear whereby said table is rotated by said driven member but at a different rate therefrom.

4. A gear cutting machine comprising a work carrying table a ring member concentric therewith worm teeth upon said member bevel teeth upon said member a worm engaging said worm teeth whereby said ring member is rotated two parallel shafts mounted in said table a bevel pinion on one of said shafts whereby its shaft is rotated

by the ring member a spur wheel on the same shaft a spur wheel on the other shaft engaged by the first mentioned spur wheel whereby the latter shaft is rotated a worm wheel on the latter shaft, and a worm engaging said worm wheel and secured to a stationary shaft positioned coaxially with the table.

5. In combination in a gear cutting machine, a worktable, a ring member, means to rotate said ring, and means between said table and said ring acting to rotate said table from said ring and at a different rate therefrom.

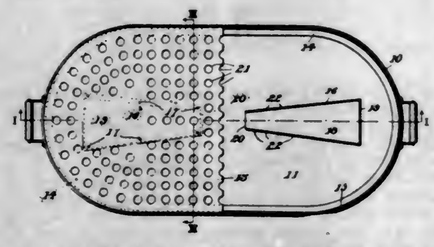
[Claim 6 not printed in the Gazette.]

1,192,451. DEVICE FOR SEVERING THE HIDES AND SKINS FROM THE KILLED ANIMALS. WILLY PFEFFERKORN, Zug, Switzerland. Filed Apr. 5, 1915. Serial No. 19,343. (Cl. 17—13.)



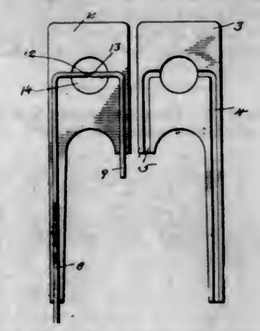
In a device of the character described the combination of a frame having two shields, a disk rotatably secured between both shields, wings on said disk projecting over the outer edge of said shields, a group of semi-circular grounded beating edges on the outer ends of each of said wings, the central edge of said group, of each group of said beating edges protruding farther over the edges of said shields than that of the other two, a casing, and a spindle horizontally disposed in said frame carrying said disk, substantially as described and for the purpose set forth.

1,192,452. CLOTHES-BOILER. JULIAN PLASZKIEWICZ, Albany, N. Y. Filed Feb. 7, 1916. Serial No. 76,673. (Cl. 68—30.)



As an article of manufacture, a boiler attachment comprising a perforated false bottom, a side edge portion surrounding the said bottom and having an inturned flange parallel with the bottom, oppositely arranged tapered casings carried by the said bottom arranged inwardly of and substantially of the same width as the said edge portion, the said casings being closed at their enlarged outer ends and being provided with closed bottoms in the same plane as the said flange, the said casings being provided with perforations through the opposite sides thereof, adjacent their inner smaller ends, the inner ends of the said casings being open and the portions of the said bottom, lying adjacent the said closed end portions of the said casings and being imperforate.

1,192,453. DEVICE FOR TESTING THE EFFICIENCY OF A SPARK-PLUG. JAMES W. PRASKY, Pittsburgh, Pa. Filed July 15, 1914. Serial No. 851,102. (Cl. 175—83.)



1. A portable spark plug tester consisting of a pair of similarly formed shells secured together and having bores therein, wires in said bores, the inner ends of which are spaced apart to form a spark gap, the body portion of said tester being substantially flat and having an opening therethrough into which said ends project, and a glass disk forming a closure for one end of said opening, a dark disk for the other end of said opening, forming a closure, and a back ground for said ends.

2. A portable spark plug tester consisting of a pair of similarly formed shells secured together and having bores therein, wires in said bores, the inner ends of which are spaced apart to form a spark gap, the body portion of said tester being substantially flat and having an opening therethrough into which said ends project, and a glass disk forming a closure for one end of said opening.

3. A portable spark plug tester consisting of a pair of similarly formed shells secured together and having bores therein, wires in said bores, the inner ends of which are spaced apart to form a spark gap, the body portion of said tester being substantially flat and having an opening therethrough into which said ends project, a glass disk forming a closure for one end of said opening, and a back ground for said ends.

4. A portable spark plug tester consisting of a pair of similarly formed shells secured together and having bores therein, wires in said bores, the inner ends of which are spaced apart to form a spark gap, the body portion of said tester being substantially flat and having an opening therethrough into which said ends project, a glass disk forming a closure for one end of said opening, a back ground for said ends, and said tester having a long and a short arm projecting from said body portion, the outer ends of said wires projecting beyond said arms.

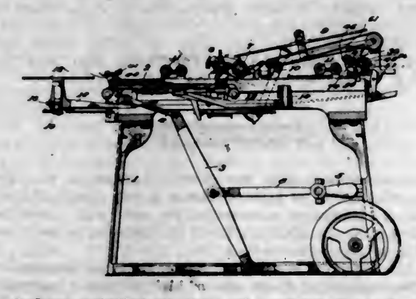
5. In a testing device an insulating body comprising a pair of members at least one of which has an opening therethrough, a pair of conducting members the ends of which are bent at right angles and terminate in said opening, said conducting members being arranged between said first mentioned pair of members.

[Claim 6 not printed in the Gazette.]

1,192,454. INKING MECHANISM. FRANK H. QUADE, Jr., Fresno, Cal. Original application filed Aug. 2, 1913, Serial No. 782,729. Divided and this application filed Jan. 27, 1915. Serial No. 4,777. (Cl. 101—78.)

1. In a printing machine, the combination of a main frame, a reciprocating type bed mounted thereon, a rotatable ink table carried by the end of the type bed, a ratchet wheel locked to said ink table and concentric therewith, a turning plate pivotally mounted concentric with the ratchet wheel, a pawl on said plate engaging the ratchet wheel, a lever carried by the type bed, a link connecting said lever with the turning plate, and means for vibrating said lever.

2. In a printing machine, the combination of a main frame, a reciprocating type bed mounted thereon, a rotatable ink table carried by the end of the type bed, a ratchet wheel locked to said ink table concentric therewith, a turning plate pivotally mounted concentric with the ratchet wheel, a pawl on said turning plate engaging the ratchet wheel, a transverse lever carried by the type bed, a link connecting said lever with the turning plate, a yieldable post on the main frame in the path of said lever, and a spring acting on the free end of the lever at the side thereof more remote from the post.



3. In a printing machine, the combination of a reciprocating type bed, an ink table carried by the type bed, an ink trough, a fountain roll arranged to take ink from the trough, a ductor roll adapted to engage the fountain roll and the ink table, a pivoted rod below the trough, arms projecting from said rod and supporting the ductor roll, a latch pivoted on one of said arms and adapted to lock the ductor roll therein, one end of said latch being cut obliquely and adapted to limit the downward movement of the latch by engaging with one side of the pivoted rod and to limit the upward movement of the latch by engaging the adjacent side of the rod when raised, a spring adapted to normally hold said latch in a lowered position, means for propelling the fountain roll while the machine is printing, and means to swing said rod about its pivot.

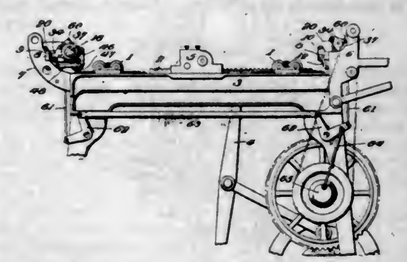
4. In a printing machine, the combination of a reciprocating type bed, an ink table carried by the type bed, an ink trough, a fountain roll arranged to take ink from the ink trough, a weight suspended in the ink trough, means to prevent rotation of said weight, means for propelling the fountain roll while the machine is printing, and means for transferring ink from the fountain roll to the ink table.

5. In a printing machine, the combination of a reciprocating type bed, an ink table carried thereby, a stationary support arranged above said type bed, an ink trough on said support, a fountain roll arranged to take ink from said trough, a rod pivoted in the stationary support, a ductor roll carried by said rod, means actuated by the type bed to move the ductor roll to and from the fountain roll, a stop arm carried by the pivoted rod, and projecting upwardly therefrom adjacent the support, and a segmental disk carried by the free end of said stop arm and adapted to engage the support to permit or prevent the raising and lowering of the ductor roll.

1,192,455. INK-FOUNTAIN. FRANK H. QUADE, Jr., Fresno, Cal. Filed Apr. 6, 1915. Serial No. 19,505. (Cl. 101—74.)

1. The combination of a support having a longitudinally extending rail, an ink trough mounted on the support above said rail, a fountain roll carried by the support and fitting in the trough between the sides thereof, a bracket pivoted to the support below the said rail and provided on its upper side with spaced stops disposed at opposite sides of the rail and adapted to impinge against the same, a ductor roll carried by said bracket, and means for moving the said bracket upon its pivot.

2. The combination of a support having spaced lugs upon its upper and lower sides, a depending rail extending between the lugs on the lower side of the support, an ink trough pivotally mounted between the lugs on the upper side of the support, a bracket pivotally mounted between the lugs on the lower side of the support and provided on its upper side with spaced stops disposed at opposite sides of the said rail, a ductor roll carried by said bracket, and means for vibrating said bracket.



3. The combination of a support having lateral arms and provided on its upper and lower sides with perforated lugs, the lugs adjacent one of said arms having slotted portions, an ink trough having perforated ears fitted between the lugs on the upper side of the support, a bracket fitted between the lugs on the lower side of the support, a pivot inserted through the upper lugs and the ears on the trough, a pivot inserted through the lower lugs and through said bracket, a spring secured upon the support and having its ends fitted in the slotted portions of the lugs to engage the said pivots, a ductor roll carried by said bracket, a fountain roll carried by the said lateral arms of the support and fitting in the end of the trough, means for vibrating the said bracket, means for limiting the pivotal movement of the bracket, and means for limiting the pivotal movement of the trough.

4. The combination of a support, an ink trough mounted thereon, an ink roll carried by the support and fitting in the end of the trough, a ductor roll disposed below the ink roll, a driving member mounted on the support concentric with the ink roll, means to periodically connect said member with the ink roll to rotate said roll in one direction, a driven member also mounted concentrically with the ink roll and in frictional engagement with the driving member, and connections between said driven member and the ductor roll whereby the ductor roll will be moved to and from the ink roll.

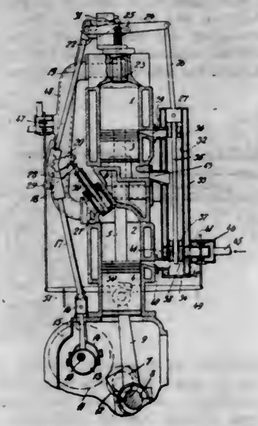
5. The combination of a support, an ink trough mounted thereon, an ink roll fitting in the end of the trough, a ductor roll disposed below the ink roll, a vibratory plate mounted concentric with the ink roll, means actuated by said vibratory plate to periodically rotate the ink roll in one direction, a ring frictionally engaging the said vibratory plate, and connections between said ring and the ductor roll whereby the ductor roll will be moved away from and to the ink roll during a portion of the movement of the said vibratory plate.

[Claims 6 to 11 not printed in the Gazette.]

1,192,456. INTERNAL-COMBUSTION ENGINE. GEORGE J. RATHBUN, Toledo, Ohio. Filed Dec. 21, 1914. Serial No. 878,414. (Cl. 123—57.)

1. In an engine, the combination of two tandem arranged cylinders, pistons therefor, a crank shaft, a connecting rod, corresponding valves for said cylinders, and valve gear for operating corresponding valves of both cylinders, comprising a single reciprocating member and roller-path valve-operating means for each such valve operated thereby, and arranged, the one to operate its valve during one portion of the movement of said reciprocating member, the other to operate its valve during another portion of the movement of said reciprocating member, each of said roller-path valve-operating means

comprising a roller-path lever pivoted to said reciprocating member and a complementary roller-path member cooperating therewith, one of said roller-path members being operatively connected with the valve.



2. In an engine, the combination of two tandem arranged cylinders, pistons therefor, a crank shaft, a connecting rod, corresponding valves for said cylinders, and valve gear for operating corresponding valves of both cylinders, comprising a single reciprocating member and roller-path valve-operating means for each such valve, such roller-path means for one valve comprising a swinging rocker pivotally mounted at one end and pivotally connected at the other end to said reciprocating member, and a coacting rocker pivotally mounted at one end and connected at the other end to the corresponding valve, the roller-path means for the other valve comprising a fixed roller path cam and a roller-path lever to coact therewith and connected at one end to the corresponding valve and connected at another point to the said reciprocating member.

3. In an engine, the combination of two tandem arranged cylinders, pistons therefor, a crank shaft, a connecting rod, corresponding valves for said cylinders, a valve shaft driven from said crank shaft, an eccentric on said valve shaft, an eccentric rod, a reciprocating member reciprocated by such eccentric rod, and extending generally lengthwise of the cylinders, and roller-path valve-operating means for corresponding valves of said two cylinders, operated by said reciprocating member, and arranged to be operated in alternation, each of said roller-path valve-operating means comprising a roller-path lever pivoted to said reciprocating member and a complementary roller-path member coöperating therewith, one of said roller-path members being operatively connected with the valve.

4. In an engine, the combination of two tandem arranged cylinders, pistons therefor, a crank shaft, a connecting rod, corresponding valves for said cylinders, the valve for the cylinder nearest the crank shaft being located on an oblique axis, and valve gear for operating the valves of said cylinders comprising a single reciprocating member and valve-operating means for each such valve operated thereby, the said reciprocating member being of bent form in proximity to the oblique valve, whereby room is provided between said reciprocating member and the said oblique valve for the means which operates such valve and which is operated by said reciprocating member.

5. In an internal combustion engine, the combination with a plurality of single acting internal combustion cylinders, pistons therein, a crank shaft and means for communicating motion from said pistons to said crank shaft, one of said cylinders arranged for air compression in its end opposite its internal combustion end, of corresponding valves for said cylinders, valve gear for operating such corresponding valves of both cylinders comprising a single reciprocating member, which operates both valves, and means for admitting air compressed in the air compression end of one of said cylinders into both said cylinders in alternation comprising valve gear also operated by said reciprocating member.

[Claims 6 to 20 not printed in the Gazette.]

1,192,457. RESISTANCE-WIRE FOR ELECTRIC HEATERS. ROBERT H. READ, Washington, D. C., assignor to General Electric Company, a Corporation of New York. Original application filed July 19, 1910, Serial No. 572,778. Divided and this application filed May 28, 1914. Serial No. 841,544. (Cl. 219—63.)



1. A resistance wire for electric heaters or the like comprising a core of high resistance metal, a body of heat refractory insulation surrounding the core, and a metallic armor having the same coefficient of expansion as the core-wire inclosing the insulation.

2. An insulated resistance wire for electric heaters or the like comprising a core-wire of high resistance material, a closely packed refractory insulating powder surrounding the core-wire, and a metallic armor of similar expansion coefficient inclosing the powder.

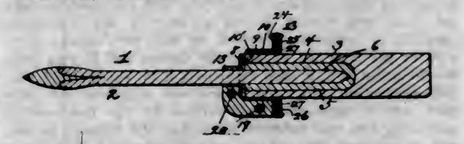
3. The method of making a resistance wire for electric heaters or the like consisting in curling a sheet metal tape around a wire of high resistance, causing the tape to close into a long tube surrounding the wire, simultaneously feeding any insulating material into the space between the resistance wire and the tube, then inclosing the tube in a seamless metal jacket, and reducing the whole in cross-section.

4. A resistance wire for electric heaters comprising a high resistance core-wire surrounded with heat refractory powder insulation, a metal sheath around the core-wire, and insulating means for stopping the ends of the core-wire against leakage of powder.

5. A resistance wire for electric heaters comprising a high resistance core-wire surrounded with heat refractory insulation, a metallic sheath around the core-wire, and an insulating cement between the core-wire and the sheath at the ends of the element.

[Claims 6 to 9 not printed in the Gazette.]

1,192,458. TOOL-HANDLE AND ATTACHING MEANS THEREFOR. ALBERT S. REAVIS, Washington, D. C. Filed July 13, 1915. Serial No. 39,707. (Cl. 16—170.)



1. In a tool, the combination with a handle and a shank, of a core of heat non-conducting material seated in a recess in the handle, and a collar arranged upon the shank of the tool and having a facing of heat non-conducting material seating against the inner end of the handle and also against the inner end of the said core.

2. In a tool, the combination with a handle and a shank, of attaching means comprising a collar-shaped portion embracing the handle and provided with alined apertures, a second collar embracing the shank of the tool and provided with alined apertures, an intermediate link provided at opposite ends with apertures alining with the apertures in the said collars, threaded bolts passing through the various alined apertures, and tightening nuts carried by said bolts.

3. In a tool, the combination with a handle and a shank, of a collar embracing the handle and provided with alined apertures, a lining of heat non-conducting material within said collar, a second collar embracing the shank of the tool and provided with alined apertures, an intermediate link having apertures at opposite ends alining with the apertures in the said collars, threaded bolts passing through the various alined apertures, and tightening nuts carried by said bolts.

4. In a tool, the combination with a handle and a shank, of a collar embracing the handle and terminating in parallel ears provided with alined apertures, a second collar embracing the shank and provided with parallel ears having alined apertures, a link having its ends arranged between the ears of the said collars and having apertures alining with the apertures in said ears, threaded bolts passing through the various alined apertures, and nuts carried by said bolts.

5. In a tool, the combination with a handle and a shank, of a shield arranged upon the handle and comprising metallic plates with an intermediate layer of heat non-conducting material, and a facing of heat non-conducting material upon one of the outer faces, as set forth.

1,192,459. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Original application filed Nov. 18, 1914, Serial No. 872,682. Divided and this application filed May 1, 1916. Serial No. 94,546. (Cl. 197—39.)



1. The combination of a sheet metal bar having an offset portion providing an annular, tapered bearing surface, said offset portion having a threaded opening therein, a bearing screw threaded into said opening and having a tapered head which forms a complemental bearing surface, and a nut on the screw having its inner face tapered or inclined and bearing squarely against the rear face of the bar.

2. The combination of a sheet metal bar having a drawn or offset portion forming a projecting, conical bearing surface on one face of the bar, and a conical depression on the opposite face of the bar, said offset portion being provided with a central, screw-threaded opening, a bearing screw extending through said opening and having a tapered head forming a bearing surface complemental to said first-named bearing surface, and a nut on said screw seated in said depression and bearing against the bar.

3. The combination of a sheet metal bar having a drawn or offset portion forming a projecting conical bearing surface on one face of the bar and a conical depression on the opposite face of the bar, said offset portion being provided with a central screw-threaded opening, a bearing screw threaded through said opening and having a tapered head forming a bearing surface opposite said first-named bearing surface, a nut on said screw seated in said depression and bearing against the bar, a coöperating bearing member having a circular opening therein whose wall is provided with an annular recess which forms with said bearing surface an annular raceway, and bearing balls in said raceway.

4. The combination of a sheet metal type-bar having on one side a ball-bearing cone and on the other side a depression formed by pressing the metal of the bar into the shape of said cone, a hanger having an interiorly-grooved eye within which said cone is inserted, an adjustable screw threaded through said type-bar at the center of said cone and having a conical head to coöperate with said cone and with said groove to form a complete raceway, a set of balls running in said raceway, and a set nut threaded upon said screw and seated in said cone-shaped depression in said type-bar.

5. The combination with a sheet metal type-bar having a bearing surface, and a perforated hub portion projecting therefrom, of a screw threaded into said hub portion and having a complemental bearing surface to form with the bearing surface of the type-bar an annular ball-race for the type-bar, said type-bar being drawn or forced to form said bearing and hub, to give a threading surface prolonged beyond or greater than the normal thickness of the type-bar.

1,192,460. METHOD OF MANUFACTURING LEATHER SUBSTANCES. CARL ROESSLER, Hamburg, Germany. Filed Aug. 28, 1913. Serial No. 787,143. (Cl. 106—29.)

1. The method of manufacturing leather substances, which comprises grinding leather waste with asbestos, magnesium oxid, kieselguhr and a color to obtain a triturated fibrous product, and then adding about one-fourth part of magnesium sulfate.

2. The method of manufacturing leather substances, which comprises grinding 100 kilograms of leather waste with 20 kilograms of asbestos, 162 kilograms of magnesium oxid, 10 kilograms of kieselguhr and 15 kilograms of coloring material, and mixing the resulting product with magnesium sulfate sufficient to bind the mass.

1,192,461. EXTENSION BOB-SLEIGH. HANS O. ROISUM, Morrisonville, Wis. Filed July 28, 1915. Serial No. 42,335. (Cl. 21—48.)



1. An extension sleigh including an axle provided with a longitudinal slot having transverse notches, a sleeve slidably mounted on the axle and provided with a key operating in the slot and having means for engaging the notches, and a runner connected with the sleeve.

2. An extension sleigh including an axle provided with a longitudinal slot having transverse notches located at intervals, a slidable sleeve arranged on the axle and movable inwardly and outwardly and a key provided with upper and lower surfaces arranged at an angle and operating in the said slot, the upper portion being movable into and out of engagement with the notches to lock the sleeve in its adjustment.

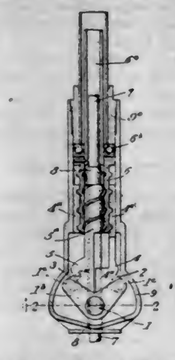
3. An extension sleigh including an axle provided with longitudinal slots and having opposite transverse notches arranged at intervals, slidable sleeves arranged on the axle and keys operating in the said slots and provided with transversely disposed portions arranged to engage the notches for locking the sleeves in their adjustment.

4. An extension sleigh including a front axle, front runners having knees adjustably connected to the axle, a tongue or pole provided with an extensible cross bar and having terminal members movable inwardly and outwardly and provided with pivots connected to the front runners, and braces connected with the said members and adjustably secured to the tongue or pole.

1,192,462. STEERING-GEAR. DAVID E. ROSS, La Fayette, Ind., assignor to Ross Gear and Tool Company, La Fayette, Ind., a Corporation of Indiana. Filed May 5, 1913, Serial No. 765,654. Renewed June 19, 1916. Serial No. 104,578. (Cl. 74—79.)

1. In a steering gear, the combination of a rocker-shaft, opposite arms thereon, shoes pivoted on said arms, cams having surfaces slidably and frictionally engaging said shoes to resist wear and at the same time prevent casual slip, and means for simultaneously moving the cams in such manner that the shaft is rocked while the shoes re-

main in frictional contact with the opposed cams, each cam and its relative shoe moving in the same direction.



2. In a steering gear, the combination of a rocker-shaft, opposite shoes pivotally connected therewith at equidistant points therefrom, opposite cams frictionally engaging the respective shoes to resist wear and at the same time prevent casual slip, means for shifting said cams simultaneously and equally in opposite directions, and an intermediate brace and guide for said cams with which they have sliding contact, each cam and its related shoe moving in the same direction.

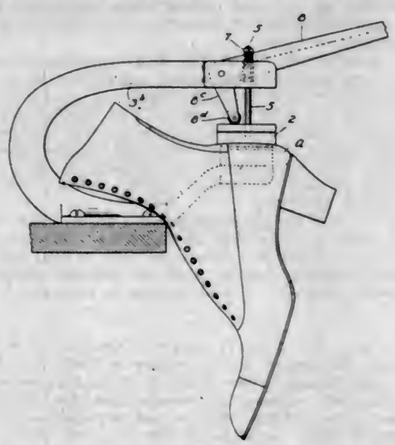
3. In a steering gear, the combination of a rocker-shaft, opposite arms connected therewith, shoes pivotally connected with said arms and equidistant from the shaft, oppositely facing longitudinally movable cams having surfaces slidably and frictionally engaging said shoes to resist wear and at the same time prevent casual slip, each cam and its related shoe moving in the same direction, each cam member having a worm threaded portion on its shank; with a rotatable worm member engaging the threaded portions of the shanks of the cam members, and means for operating the rotatable worm member.

4. The combination of a rocker-shaft, opposite arms connected therewith, shoes pivotally connected with said arms and equidistant therefrom, oppositely movable cams frictionally engaging the shoes, an internally threaded worm member connected with one cam, an externally threaded worm member connected with the other cam, fixed means for guiding the cams interposed therebetween, a rotatable externally and internally threaded worm sleeve member engaging the worm sleeve members of the cams, and means for operating the worm sleeve member, substantially as described.

5. In a steering gear, the combination of a rocker-shaft, a double armed lever on said shaft, shoes pivotally connected to the arms of said lever at points equidistant from the shaft, oppositely movable and oppositely inclined cams frictionally engaging said shoes, and adapted to effect the rocking of the shaft and the locking thereof in adjusted position, each cam and its related shoe moving in the same direction, one cam having an external worm threaded portion on it sshank, and the other cam having an internally worm threaded portion on its shank; a fixed bar extending between the cams to guide them in their movements, a rotatable worm sleeve engaging the worm threaded portion of both the cams, and a steering post for operating said rotatable worm sleeve.

1,192,463. MACHINE FOR OPENING AND SOFTENING COUNTERS OF SHOES. WILLIAM H. SARGENT, Lynn, Mass. Filed Feb. 21, 1916. Serial No. 79,655. (Cl. 12—130.)

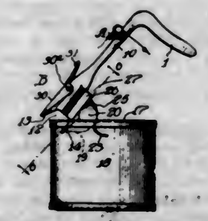
1. A machine for opening and softening counters of shoes, comprising an inside block or presser-member adapted to receive upon and around it the counter of a shoe and to support the counter at opposite sides of its apex to or substantially to the upper edge of the counter, an outside block or presser-member adapted to act upon the exterior of the back of such counter and through coöperation with said inside block or presser-member flatten the curvature of the back of the counter so as to open or spread the counter laterally and render it flexible, and means for producing relative movement of approach and separation of the said blocks or presser-members.



2. A machine for opening and softening counters of shoes, comprising an inside block or presser-member having a concave working face adapted to receive upon and around it the counter of a shoe and to support the counter at opposite sides of its apex to or substantially to the upper edge of the counter, an outside block or presser-member adapted to act upon the exterior of the back of such counter and through coöperation with said inside block or presser-member flatten the curvature of the said back so as to open or spread the counter laterally and render it flexible, and means for producing relative movement of approach and separation of the said blocks or presser-members.

3. A machine for opening and softening counters of shoes, comprising an inside block or presser-member adapted to receive upon and around it the counter of a shoe and to support the counter at opposite sides of its apex to or substantially to the upper edge of the counter, an outside block or presser-member having a convex working face adapted to act upon the exterior of the back of such counter and through coöperation with said inside block or presser-member flatten the curvature of the said back so as to open or spread the counter laterally and render it flexible, and means for producing relative movement of approach and separation of the said blocks or presser members.

1,192,464. EMPTYING-FAUCET FOR MILK AND THE LIKE CANS. JOHN C. SARTER, Chicago, Ill. Filed Oct. 15, 1915. Serial No. 55,978. (Cl. 221—23.)

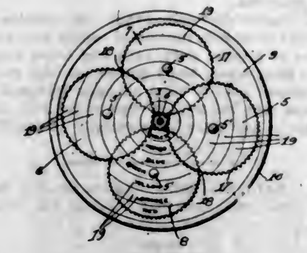


1. An article of the class described, including a spout, a jaw in spaced relationship with said spout, said jaw having a pointed cutting edge and arcuate lower edges there being an open throat between said spout and said jaw; a body in connection with said spout, said body having a reduced neck connected to said jaw, there being a longitudinal groove throughout said jaw in the lower face thereof, a handle member, said handle member extending from said body; a yielding washer on said neck, and a closure for said spout, there being an interior passage in said body, said passage connecting said groove and said spout.

2. An article of the class described, including a spout, a jaw in spaced relationship with said spout, there being an open throat between said spout and said jaw; a body in connection with said spout, said body having a reduced neck connected to said jaw, there being a longitudinal groove throughout said jaw in the lower face thereof, said jaw having a pointed end and depending side walls, said side walls having arcuate lower edges; a handle member, said handle member extending from said body; a yielding washer on said neck, and a closure for said spout, there being an interior passage in said body, said passage connecting said groove and said spout.

3. An article of the class described, comprising, an integrally-formed body; a handle, a spout, a jaw, and a reduced neck, there being an open throat between said spout and said jaw, said jaw having a longitudinal groove in its lower face, said jaw having a pointed cutting edge and arcuate lower edges, said body and said reduced neck having an interior passage connecting said spout and said groove, there being an opening in said neck, a yielding washer for said neck closing said opening, and a closure for said spout.

1,192,465. SPINNING-TOP. GEORGE HENRY LOUIS SCHNEIDER. Clinton, Mo. Filed June 4, 1914. Serial No. 843,018. (Cl. 46—32.)



1. In a spinning top, a shaft, a frame having a weighted periphery mounted for rotation on said shaft, means carried by said frame and in engagement with the shaft to produce a color effect, and means detachably associated with the upper end of said shaft for controlling the rotation of the latter to effect a change in the color effect produced.

2. In a spinning top, a frame rotatably mounted upon a shaft, and a plurality of colored disks rotatably mounted on said frame, said disks being operatively engaged with the shaft, whereby to rotate the disks when motion is imparted to the frame.

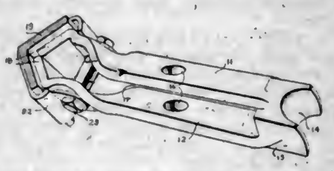
3. In a spinning top, a frame rotatably mounted upon a shaft, disks rotatably mounted on said frame for producing a color effect, and means on the shaft for engagement with the said rotatable disks, for imparting movement to the disks when the frame is rotated.

4. In a spinning top, a shaft, a frame rotatable on said shaft, color effect producing means on said frame, and means carried by the shaft for controlling the rotation thereof by friction against the surrounding air.

5. In a spinning top, a shaft, a frame having a weighted periphery and adapted for rotation on said shaft, colored disks rotatably mounted on said frame, and means on said shaft and in engagement with said disks for rotating the same.

[Claims 6 to 9 not printed in the Gazette.]

1,192,466. FORGED BRAKE-BEAM FULCRUM. FREDERICK J. SCHROEDER, Cleveland, Ohio, assignor, by mesne assignments, to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio, (Incorporated Feb. 25, 1916.) Original application filed July 30, 1914, Serial No. 854,151. Divided and this application filed Oct. 28, 1915. Serial No. 58,419. (Cl. 188—22.)

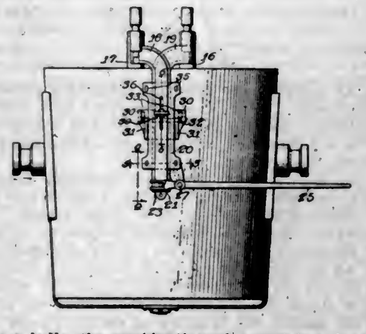


1. A forged metal fulcrum for brake beams, comprising a pair of substantially parallel wrought metal arms spaced apart to provide a lever slot therebetween, said arms having their ends formed with a solid, integral head provided with a recessed seat for a truss member extending diagonally across the planes of said parallel arms, the portions of said solid head at the respective sides of the medial longitudinal plane of said recessed seat constituting originally integral portions of both of said spaced arms.

2. A forged metal fulcrum for brake beams, comprising a pair of substantially parallel wrought metal arms spaced apart to provide a lever slot therebetween, said arms having their ends formed with a solid, integral head provided with a recessed seat for a truss member extending diagonally across the planes of said parallel arms, each of the side walls of said diagonally-extending, recessed seat constituting originally integral portions of both of said spaced arms.

3. A forged metal fulcrum for brake beams, comprising a pair of substantially parallel wrought metal arms spaced apart to provide a lever slot therebetween, said arms having their ends formed with a solid, integral head extending across the entire width of said pair of parallel arms and provided with a recessed seat for a truss member extending diagonally across the planes of said arms, each of the side walls of said diagonally-extending, recessed seat constituting originally integral portions of both of said spaced arms.

1,192,467. DUPLEX LADLE. GEORGE E. SCOTT, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Mar. 18, 1916. Serial No. 85,001. (Cl. 22—85.)



1. In a ladle, the combination of a container having a division wall whereby a plurality of compartments are provided, a single pouring outlet being provided for said plurality of compartments, manually controlled means for controlling the discharge of metal from either of said compartments or from all thereof, and means for locking said manually-controlled means for unitary operation, substantially as described.

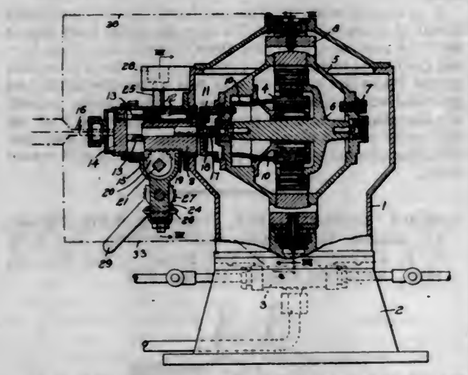
2. In a device for handling molten metal, the combination of a shell having a division wall, thereby providing a plurality of compartments, each compartment being provided with an outlet opening which terminates in a common pouring outlet, and means for controlling the flow of metal from said compartments, whereby metal may be discharged through said common outlet from either or all of said compartments by a single actuation, substantially as described.

3. In a device of the class described, the combination of a shell having a division wall whereby the shell is divided into a plurality of compartments, an outlet opening being provided at the bottom of each compartment, which openings join in a common outlet, or pouring opening, a manually controlled stopper for each outlet, and means for locking or releasing one or all of said stoppers, substantially as described.

4. In combination, a ladle, providing a plurality of compartments for the reception of different kinds of molten metal, pouring openings for said compartments, stoppers for said pouring openings, and means for locking said stoppers together for actuation in unison, substantially as described.

5. In combination, a ladle having a plurality of compartments and provided with a pouring outlet for each compartment, which pouring outlets are joined into a common outlet, a stopper for each outlet and means for locking said stoppers for actuation in unison, substantially as described.

1,192,468. ELECTRIC-MOTOR GYROSCOPE. HAROLD W. SHONNARD, Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 3, 1915. Serial No. 59,360. (Cl. 74—78.)



1. An electric motor gyroscope comprising gimbal rings, a stator and a rotor; contactors borne by a gimbal and electrically connected to said stator, and a member movable to and from such contactors for making and breaking a circuit through them.

2. An electric motor gyroscope comprising gimbals and motor elements, contactors carried by one of said gimbals and electrically connected to a motor element, a slide member provided with conductors adapted to contact with said contactors, and means for moving said slide member.

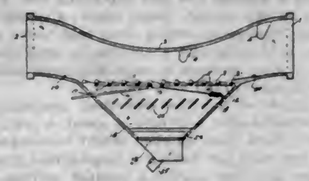
3. An electric motor gyroscope comprising gimbal rings, and an electric motor suspended therein, in combination with a single movable member for locking the gyroscope and for making and breaking an electric circuit through the motor thereof.

4. An electric motor gyroscope comprising gimbals and motor elements, contactors borne by one of said gimbals and electrically connected to a motor element, and a movable member provided with a centering pin adapted to engage and lock said contactor-provided gimbal and further provided with electrical conductors adapted to contact with said contactors.

5. An electric motor gyroscope comprising in part a gimbal and a non-rotatable inductor, contactors carried by said gimbal and electrically connected to the inductors, and a slide member provided with electrical conductors adapted to contact with said gyroscope contactors, said slide member being further provided with a centering pin for locking the gyroscope.

[Claims 6 to 16 not printed in the Gazette.]

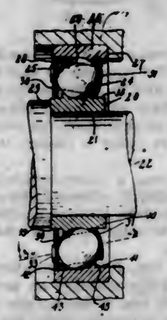
1,192,469. COTTON-CLEANER. GROVER CLEVELAND STACY, Birmingham, Ala. assignor of one-third to T. H. Spencer and one-seventh to J. G. Tidwell, Birmingham, Ala. Filed Apr. 15, 1915. Serial No. 21,599. (Cl. 13—19.)



1. In a cotton cleaner of the character described, the combination of a suction cotton conveying tube, a shutter valve in said tube, a convex wall in the tube opposite the valve and adapted to deflect the cotton against the valve, pivoted slats forming the valve and having each one side edge bent up to form a raised shoulder and then bent over and down to overlap and engage the adjacent slat, said slats forming in operating position shallow transverse pockets which are closed except for restricted bottom openings therethrough, and a hopper below the valve, substantially as described.

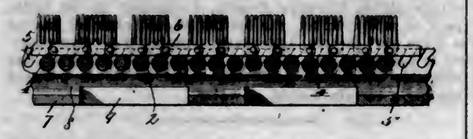
2. In a cleaner for seed cotton, the combination of a shutter valve located in the cotton supply tube and formed by a series of pivoted slats, each slat being formed by a perforated plate which has a perforated edge portion bent up and rounded over to form an open bottomed tubiform head, pivots near the headed edge of the slat, and a hopper bridged by the valve, substantially as described.

1,192,470. BALL-BEARING. FRANK STARIN, Springfield, Mass. Filed June 26, 1915. Serial No. 36,529. (Cl. 64—59.)



In a ball bearing, the combination with two bearing rings having raceways, one of said raceways being of curved cross section and the other one having a curved portion and a straight portion running from the curved portion toward one of the sides of the respective rings, balls running in said raceways, a supporting ring disposed outside of said raceways, and a plurality of U-shaped ball retaining members embracing said balls and being attached to said supporting ring, said retaining members extending at an acute angle to the longitudinal axes of said bearing rings, said supporting ring, retaining members and balls forming a unit, and the diameter of said straight portion of one of the raceways being equal to one of the extreme diameters of the unit therein.

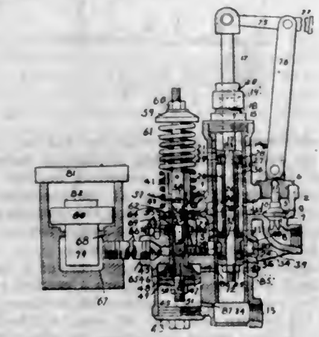
1,192,471. ROLLER-BEARING BED FOR THRESHING-CHAINS. THADEUS H. STEWART, Riverside, Okla. Filed Mar. 26, 1915. Serial No. 17,227. (Cl. 130—30.)



1. A device of the kind described comprising side members, plates arranged adjacent the inner faces of said side members, rollers removably seated in said plates, a bottom member below said rollers, said bottom member having a V-shaped groove upon its upper surfaces and being provided with longitudinal slots, and a thresher chain adapted to travel on said rollers.

2. The combination with a broom seed thresher having a chain, of vertically arranged plates spaced apart, one of said plates being provided with circular openings and the other plate being provided with obliquely arranged slots rounded at their inner ends, said slots inclining in the direction of the travel of the chain, and rollers having reduced end portions fitting respectively in said circular openings and said slots, as and for the purpose set forth.

1,192,472. COMPOUND REGULATING-VALVE. GEORGE J. STUART, Bellevue, Pa. Filed Sept. 22, 1915. Serial No. 52,016. (Cl. 138—16.)



1. In a valve, a casing, a chamber therein, means for admitting a fluid under pressure thereto, means for admitting a fluid under a higher pressure to the said chamber, the second means being operated by the first-named fluid when it reaches a predetermined value and an exhaust passage connectible to the chamber, but only after the second means cuts off from the chamber the fluid under the higher pressure.

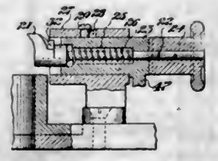
2. In combination, a casing, a chamber therein, means for admitting a fluid under pressure to the chamber, means for causing the pressure in the chamber to be temporarily below the normal pressure of the said fluid, means controlled by the said fluid in the chamber, when the pressure thereof is built up to a predetermined value, for admitting to the chamber a fluid having a pressure higher than that of the first-named fluid and an exhaust passage connectible to the chamber, but only after the third means cuts off from the chamber the fluid under the higher pressure.

3. In combination, a casing, a chamber therein, means for admitting a fluid under pressure to the chamber, means for causing the pressure in the chamber to be temporarily below the normal pressure of the said fluid, means controlled by the said fluid in the chamber, when the pressure thereof is built up to a predetermined value, for admitting to the chamber a fluid having a pressure higher than that of the first-named fluid, means for adjusting the said predetermined value and an exhaust passage connectible to the chamber, but only after the third means cuts off from the chamber the fluid under the higher pressure.

4. In a valve, a casing, a chamber therein, means for admitting a fluid under pressure to the chamber, means for admitting a fluid under a higher pressure to the chamber, the second means being operable automatically by the pressure in the chamber when the pressure reaches a predetermined value, and an exhaust passage, the first means being adapted to arrest the flow to the chamber of the fluid under the lower pressure or to connect the chamber to the exhaust passage.

5. In a valve, a casing, a chamber therein, means for admitting a fluid under pressure to the chamber, means for admitting a fluid under a higher pressure to the chamber, the second means being operable automatically by the pressure in the chamber when the pressure reaches a predetermined value, and an exhaust passage, the first means being adapted to arrest the flow to the chamber of the fluid under the lower pressure without opening the exhaust passage or to connect the chamber to the exhaust passage.

1,192,473. SWITCH-CAM MECHANISM FOR CIRCULAR-KNITTING MACHINES. HARRY SWINGLEHURST, Laconia, N. H., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Original application filed Oct. 5, 1911, Serial No. 653,002. Divided and this application filed Jan. 30, 1915. Serial No. 5,291. (Cl. 66—24.)



1. Knitting mechanism for rotary and reciprocal knitting comprising in combination, a needle cylinder, a cam ring, means to impart relative rotation and reciprocation thereto, a switch cam automatically movable into elevated and depressed positions, means permitting manual movement of said cam, and means adapted to prevent manual movement of said switch cam into elevated position from a depressed position automatically attained.

2. Knitting mechanism for rotary and reciprocal knitting comprising in combination, a needle cylinder, a cam ring, means to impart relative rotation and reciprocation thereto, a pivoted switch cam, means connected to a moving part of the machine to move said cam into elevated and depressed positions, means permitting manual movement of said cam and means to prevent manual movement of said switch cam into elevated position from a depressed position caused by said means.

3. A knitting machine having means for rotary and reciprocal knitting comprising a needle cylinder, high and low butt needles therein, a cam ring, means to impart relative rotation and reciprocation thereto, a switch cam and actuating means therefor acting to switch up the high butt needles and switch down all the needles, and means permitting manual movement of said cam to level the needles in combination with automatic means for preventing manual movement to switch up the needles contrary to the indication of said actuating means.

4. Knitting mechanism for rotary and reciprocal knitting comprising in combination, a needle cylinder, a cam ring, means to impart relative rotation and reciprocation thereto, a pivoted switch cam to render a series of successive needles active and inactive, said cam being manually movable from an elevated position to depressed position, and means operatively connected with the moving

parts of the machine to raise the cam into elevated position, said means being adapted to prevent manual movement from a depressed position attained thereby.

5. Knitting mechanism for rotary and reciprocal knitting comprising in combination, a needle cylinder, a cam ring, means to impart relative rotation and reciprocation thereto, a switch cam movable into elevated and depressed positions to render a series of successive needles active or inactive, means for locking said cam against manual movement from a depressed position, and means connected to a moving part of the machine to raise the cam into elevated position, said locking means permitting manual movement when the cam is elevated.

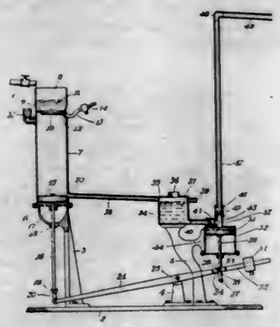
[Claims 6 to 14 not printed in the Gazette.]

1,192,474. GLASS. WILLIAM C. TAYLOR, Corning, N. Y., assignor to Corning Glass Works, Corning, N. Y., a Corporation of New York. Filed Sept. 17, 1914, Serial No. 862,252. Renewed Dec. 27, 1915. Serial No. 68,920. (Cl. 49—90.)

1. A glass containing silica, boric oxid and lithia, in the proportions specified, and having a co-efficient of expansion of less than .0000056.

2. A glass containing silica, boric oxid, lithia and alumina and having a co-efficient of expansion of less than .0000056.

1,192,475. HYDRAULIC RAM. WILLIAM W. TAYLOR, Kansas City, Mo. Filed July 3, 1915. Serial No. 37,980. (Cl. 103—67.)



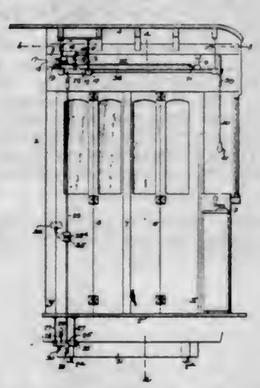
1. A hydraulic pump comprising a pair of vertically disposed cylinders of unequal lengths, pistons in said cylinders having unequal strokes, means for actuating either piston by reverse movement of the other piston, means for periodically dropping a charge of water upon the long-stroke piston, a water reservoir above the short-stroke piston and equal in capacity to the short cylinder, a gravity water conduit from the lower part of the long cylinder to said reservoir, a riser pipe connected with the top of the short cylinder, and suitable check-valves, all operating substantially as described.

2. A hydraulic pump comprising a pair of vertically disposed cylinders of unequal lengths, pistons in said cylinders having unequal strokes, a lever for actuating either piston by reverse movement of the other piston, means for periodically dropping a charge of water upon the long-stroke piston, a water reservoir above the short-stroke piston and equal in capacity to the short cylinder, a gravity water conduit from the lower part of the long cylinder to said reservoir, a riser pipe connected with the top of the short cylinder, and suitable check-valves, all operating substantially as described.

3. A hydraulic pump comprising a long vertical cylinder, a long-stroke piston therein, a short vertical cylinder, a short-stroke piston therein, piston-rods, a lever operatively connecting said piston-rods, whereby either piston reversely actuates the other, the bottom of the long cylinder being higher than the top of the short cylinder, means for periodically dropping a charge of water sufficient to actuate either piston, upon the long-stroke piston, a water reservoir above the short cylinder and capable of holding said charge, a water conduit from the long cylinder to the top of said reservoir, a riser pipe connected to the top of the short cylinder, and suitable check-valves; all operating substantially as described.

4. In a hydraulic pump, a vertical cylinder, a long-stroke piston traveling therein, a chamber in the upper part of said cylinder, the bottom of said chamber having a large port therein, a pivotally mounted trip-valve adapted to seat upon and close the lower side of said port, and yieldable means to hold said valve in closed position against a certain weight of water.

1,192,476. DOUBLE CONTROL MECHANISM FOR DOORS. HENRY TRABBOLD, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 4, 1915. Serial No. 12,032. (Cl. 268—7.)



1. The combination of a passenger car having a door at one side; an overhead operating mechanism including a longitudinal shaft having two operating devices, one at the motorman's station and one at the conductor's station; and clutch mechanism by which the operating device at the motorman's station may be connected to or disconnected from the said longitudinal shaft.

2. The combination in a passenger car, of a door; an overhead shaft connected to the door; a vertical rod connected to the overhead shaft; means for raising and lowering said rod to open and close the door; a wheel at the motorman's station; means for turning the wheel in either direction; and clutch mechanism between the wheel and the overhead shaft so that the wheel can be disconnected from the shaft when necessary.

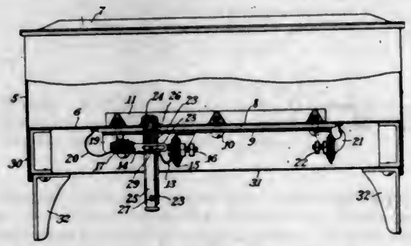
3. The combination in a passenger car, of a platform; a door at the side of the platform; a shaft; means connecting the shaft with the said door; a second shaft arranged to be coupled to the first mentioned shaft; a rope wheel on said last mentioned shaft; a rope extending from the said wheel in a position to be actuated by the motorman; means for retaining the last mentioned shaft in either of its two positions so that, when it is in engagement with the first mentioned shaft, it can be used to open or close the door.

4. The combination in a passenger car, of a platform; a door at the side of the platform; an overhead operating shaft having an arm connected to the door, said shaft also having a second arm; a rod connected to the latter arm and extending in a position to be actuated by the conductor, one end of said shaft being shaped to form one member of a clutch; a motorman's operating shaft in line with the first mentioned shaft and having one end also shaped to form one face of a clutch and arranged to engage the clutch face of the first mentioned shaft; means for turning the motorman's operating shaft; and means for holding the shaft in either of its two positions.

5. The combination in a passenger car, of a platform; a door at the side of the platform; an overhead operating shaft; an arm thereon; a sleeve having an arm connected to the first mentioned arm and having another arm; a rod connecting the last mentioned arm with the door; a second arm on the shaft; an operating rod attached to the arm and located at the conductor's station, the said shaft having a clutch face at one end; and a motorman's operating shaft in line with the first mentioned shaft and also having a clutch face arranged to engage the clutch face of the first mentioned shaft, said motorman's operating shaft being capable of being moved longitudinally into and out of engagement with the first mentioned shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,192,477. ELECTRICALLY-HEATED VESSEL. WEEDEN B. UNDERWOOD, Rochester, N. Y., assignor to Wilmot Castle Company, Rochester, N. Y., a Corporation. Filed Dec. 14, 1915. Serial No. 66,822. (Cl. 219—44.)



1. The combination, with a heating-unit, of a circuit-breaker connected therewith, and means for controlling the latter, comprising a hollow post adapted to engage the heated body, a plunger slidable in the post, and connected with the circuit-breaker, and a fusible shear-pin normally connecting the plunger and the post and preventing relative movement thereof.

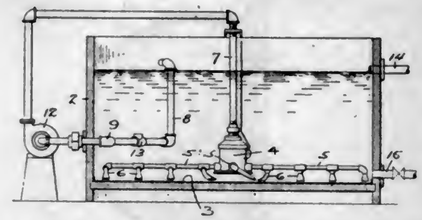
2. A circuit-breaker comprising a hollow post adapted to engage a heated body, a plunger slidable in the post, and connected with the circuit-breaker, and a fusible shear-pin normally connecting the plunger and the post, preventing relative movement thereof and adapted to receive heat from the heated body through the hollow post.

3. In an electrically-heated vessel, the combination, with the body of the vessel, and a heating-unit attached thereto, of a circuit-breaker connected with the heating-unit; and means, for controlling the circuit-breaker, comprising a hollow post engaging the body of the vessel, a plunger slidable in the post, and connected with the circuit-breaker, and a fusible shear-pin normally connecting the plunger and the post and preventing relative movement thereof.

4. In an electrically-heated vessel, a circuit-breaker comprising a fixed contact-member and a pivoted contact-member; a hollow post adapted for connection, at one end, with the heated body of the vessel; a plunger movable in the post; a spring inclosed in the post and engaging the plunger; a fusible shear-pin connecting the post and the plunger and normally preventing movement of the latter; and pin-and-slot connections between the plunger and the pivoted contact-member.

1,192,478. AMALGAMATOR. ALBERT E. VANDERCOOK, Alameda, Cal., assignor to California Macvan Company, a Corporation of California. Filed June 16, 1914. Serial No. 845,387. (Cl. 83—68.)

1. In an amalgamator, a tank, a mercury covered plate arranged in said tank, a hollow armed rotatable structure arranged above said plate, nozzles on said structure directed toward said plate, a pump arranged externally of said tank and arranged to force liquid through said structure and nozzles, a suction pipe for said pump opening into the tank below the normal level of the liquid therein and a feed pipe extending into said tank and terminating below the normal level of the liquid therein and in close relation to the end of the suction pipe, whereby material discharging from the feed pipe is drawn directly into the suction pipe.



2. In an amalgamator, a tank, a mercury covered plate arranged in said tank, a hollow rotatable hub arranged above said plate, hollow arms extending from said hub and provided with apertures directed toward said plate, a pump arranged externally of said tank, connections between the discharge side of said pump and said hub, a suction pipe for said pump opening into the tank below the normal level of the liquid therein and a feed pipe connected to the suction pipe within the tank and below the normal level of the liquid therein.

3. In an amalgamator, a tank, an amalgamating plate in said tank, a rotatable structure arranged to be rotated by the passage of liquid therethrough arranged adjacent said plate, a pump for withdrawing liquid from said tank and discharging it through said structure, and a feed pipe terminating within the tank and adjacent the intake end of said suction pipe.

4. In an amalgamator, a tank, an amalgamating plate arranged in said tank, a rotatable structure arranged to be rotated by the passage of liquid therethrough arranged above said plate, a pump connected at its discharge side to said structure, and a feed pipe passing through said tank and connecting with the suction side of the pump, provided with an aperture connecting the interior of said pipe with the liquid in the tank.

5. In an amalgamator, a tank adapted to contain slimes, an amalgamating plate in said tank, a stationary conductor depending into said tank, a rotatable structure adapted to be rotated by the passage of slimes therethrough mounted on said conductor and in close relation to said plate, a pump for withdrawing the slimes from said tank and discharging them through said structure, a pump suction pipe opening into the tank below the normal level of the slimes therein, and a slimes feed pipe extending into said tank and connected to the suction pipe below the normal level of the slimes in the tank.

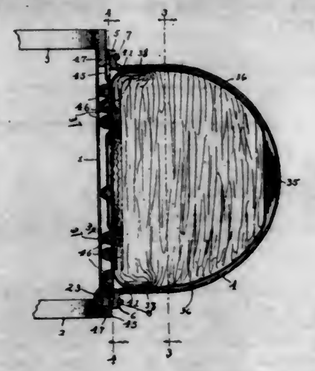
1,192,479. AVIATORY LIFE-BUOY. SOLOMON LEE VAN METER, Jr., Lexington, Ky. Filed Mar. 27, 1911. Serial No. 617,196. (Cl. 244—21.)

1. The combination with a parachute having a collapsible flexible body without means of rigid support for said body, a frame adapted to distend the throat of said parachute and spring means carried by said frame and operable to positively expand the parachute at the throat thereof.

2. The combination with a parachute of expansible means therefor, means operable to hold said expansible means normally inoperative, said holding means being automatically detachable from the parachute upon the release thereof, and means to release said holding means.

3. The combination with a parachute of an annular spring within said parachute at the throat thereof, an annular spring compressing member, catch means to hold the latter member in holding position and means to release said catch means.

4. The combination with a parachute of radially expansible means therefor, automatically detachable means to hold said expansible means compressed, means to release said holding means, means to inclose said parachute when in folded condition, also automatically separable from the parachute.



5. The combination with a parachute of a radially expansible spring secured to the parachute at the throat thereof, a member automatically separable from the parachute and having means to inclose said parachute when collapsed and means to hold said spring normally compressed and manually controlled means to release said member from the parachute and spring.

[Claims 6 to 11 not printed in the Gazette.]

1,192,480. AERONAUTICAL SAFETY DEVICE. SOLOMON LEE VAN METER, Jr., Lexington, Ky. Filed Aug. 8, 1913. Serial No. 783,729. (Cl. 244—21.)



1. In an aeronautical safety device, in combination with a parachute and an inclosing member therefor to confine the parachute and hold it folded, releasable means to lock the inclosing means, a supporting member for the inclosing means detachably mounted on the aeroplane and power means operable to exert force upon the supporting member for casting the same from the aeroplane upon actuation thereof, substantially as described.

2. In an aeronautical safety device, in combination with a parachute, inclosing means therefor, carrying means for said inclosing means, a lever for casting said carrying means from the aeroplane, said lever supporting said carrying means at one end thereof away from the aeroplane, power means attached to and adapted to operate said lever and means controlled by the aviator for releasing said power means, substantially as described.

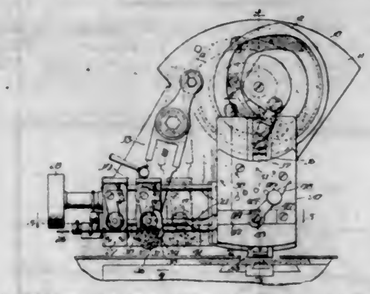
3. In an aeronautical safety device, in combination with a parachute, an inclosing hood therefor having a continuous portion at one end thereof adapted to receive the upper end of the parachute, said hood having outwardly and circumferentially expanding portions at the other end thereof operable to suddenly release the parachute, spring means bearing against the free extremities of said portions to positively expand the same, means for holding said portions closed and means for releasing said holding means, substantially as described.

4. In an aeronautical safety device, in combination with a parachute, an inclosing hood therefor comprising a body portion forming one end of the hood and pivoted slats forming the side of the hood, means to hold said slats closed and means to release said holding means, substantially as described.

5. In an aeronautical safety device, in combination with a parachute, a parachute expanding spring, means to confine said parachute and spring within a limited space, means to release said confining means and automatically detachable connections between said parachute and expanding spring, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,192,481. FEEDING MECHANISM. HENRY WEBER, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 13, 1914. Serial No. 824,393. (Cl. 1—7.)



1. The combination of a reciprocating clutch adapted to draw wire in one direction, and mechanism whereby said clutch may be rendered inoperative and automatically rendered operative after a predetermined number of reciprocations.

2. The combination of a reciprocating clutch adapted to draw wire in one direction, and mechanism whereby said clutch may automatically be rendered inoperative during a predetermined number of reciprocations.

3. The combination with apparatus for drawing wire in one direction, of mechanism for rendering the apparatus inoperative during predetermined intervals, comprising a rotatable notched disk engaging the apparatus to remove it from the wire, said apparatus engaging the periphery of the disk when removed from the wire and engaging the notches of the disk when in contact with the wire.

4. The combination of a reciprocating device for drawing wire in one direction, an extension upon said device, a disk engaging said extension to withhold the device from contact with the wire and notched for engagement with the device to allow the device to grip the wire, and means for rotating the disk.

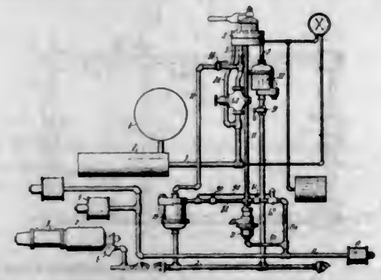
5. The combination of a clutch operable to draw wire in one direction, means for reciprocating the clutch, an extension upon the clutch, a rotatable disk adapted to render the clutch inoperative when the extension rides upon the periphery of the disk, and notched to drop the extension from said periphery and render the clutch operative, and means for rotating the disk step by step.

[Claims 6 to 20 not printed in the Gazette.]

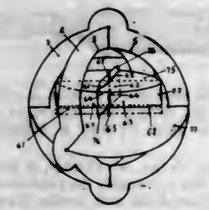
1,192,482. AIR-BRAKE SYSTEM. PETER WERTZ, Pittsburgh, Pa. Filed June 28, 1913. Serial No. 776,250. (Cl. 188—1.)

1. In an air brake system, the combination of a main reservoir, a brake cylinder, an engineer's brake valve, valve mechanism arranged upon variations in train pipe pressure to control communication between the main reservoir and brake cylinder, a valve between the main reservoir and brake cylinder, and a movable abutment cooperating with said valve and controlled by main reservoir pressure and arranged upon heavy reductions in train pipe pressure to hold said valve open.

2. In an air brake system, the combination of a main reservoir, a brake cylinder, an engineer's brake valve, valve mechanism arranged upon variations in train pipe pressure to control communication between the main reservoir and brake cylinder, a valve between the main reservoir and brake cylinder, and a movable abutment cooperating with said valve and controlled by main reservoir pressure and arranged upon service reduction in train pipe pressure to limit the brake cylinder pressure and upon heavy reduction in train pipe pressure to hold said valve open.



1,192,483. MATHEMATICAL MODEL. ALBERT HARRY WHEELER, Worcester, Mass. Filed Sept. 3, 1914. Serial No. 860,041. (Cl. 35—16.)



1. In a device of the character described, the combination of three members of sheet material having slits for receiving portions of each other and connected together at the slits so that each member crosses one of the others, one member being capable of rotating through an angle with respect to a second member independently of the position of the third member, and without becoming disengaged from either of said other members.

2. As an article of manufacture, a model comprising a plurality of members of sheet material connected together so as to cross each other and define a body having three dimensions, certain of said members being provided with slits for receiving portions of another member and being movable on said other member toward and from each other, whereby said other member constitutes guides for them.

3. As an article of manufacture, a mathematical model of the class described comprising three plane members having means at their edges constituting guides for each other, certain of said members being movable relatively to others along said guides while connected therewith, one member being rotatable on an axis located in the plane of the second member, and the third member being rotatable on the second in all positions of the second member.

4. As an article of manufacture, a mathematical model comprising a plurality of members formed of sheet material, said members having slits at their edges, receiving each others' edges and constituting guides for each other, said members being rotatable relatively to each other while connected together and guided by the slits.

5. As an article of manufacture, a mathematical model comprising a plurality of plane members of geometrical form, two of said members being rotatable about an axis relatively to each other and both being rotatable about said axis together relatively to a third, said members each having means for engaging and guiding the edge of one of the other members.

[Claims 6 to 21 not printed in the Gazette.]

1,192,484. REMOVABLE HANDLE DEVICE FOR A WHISK BROOM OR BRUSH. STEPHEN G. WILSON, Philadelphia, Pa. Filed Dec. 21, 1915. Serial No. 68,027. (Cl. 15—22.)



1. In a removable handle and sleeve device for a whisk broom, the latter being provided with a dowel in the head portion thereof, a handle and divided sleeve adapted to be fitted on said dowel, the walls of the division of said sleeve forming spring jaws and a divided key member having its bit adapted to be passed through said sleeve into said dowel, and to interlock with the walls of the division or spring jaws of the sleeve.

2. In a removable handle and sleeve device for a whisk broom, the latter being provided with a dowel in the head portion thereof, an expansible divided sleeve adapted to be fitted on said dowel and having therein a slot extending laterally from the division of the sleeve.

3. In a removable handle device for a whisk broom, the latter being provided with a dowel in the head portion thereof, an expansible sleeve adapted to be fitted on said dowel, and means for interlocking said sleeve with said dowel, said sleeve being divided in the direction of its length and having on the walls of the division, a tongue and recess respectively, said tongue being adapted to be guided in said recess and freely retained therein in the expansion and contraction of the sleeve.

4. A removable handle device applicable to the dowel of the head portion of a whisk broom comprising a handle proper, a sleeve adapted to be fitted on said dowel and carry said handle proper, and a key member adapted to be passed through said sleeve into said dowel and secure said sleeve to said dowel.

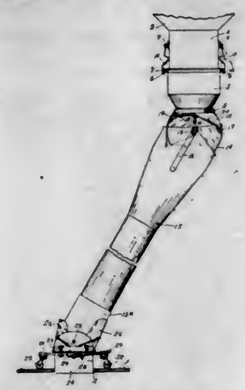
5. In a removable handle device applicable to the dowel of the head portion of a whisk broom, a sleeve adapted to be fitted on said dowel, and a handle proper adapted to be carried by said sleeve, the latter being provided with an inturned spring member, and an outturned stud member, said stud member being adapted to engage the inner wall of said handle proper, and said spring member being adapted to engage the side of said dowel.

[Claims 6 to 8 not printed in the Gazette.]

1,192,485. FLEXIBLE GRAIN-SPOUT. LEONARD E. WRAY, Minneapolis, Minn. Filed Jan. 31, 1916. Serial No. 75,205. (Cl. 193—39.)

1. The combination with an upper spout section, of a distributing spout receiving therefrom and pivotally supported at its upper end for swinging movements to either side of a vertical line, and yielding joint devices mounted on the pivotal support of said spout and extensibly con-

necting the opposite sides of said distributing spout to the said upper spout.



2. The combination with an upper spout section and a hood swiveled thereon, of a distributing spout pivoted to said hood at its upper end for swinging movements to either side of a vertical line, and segmental joint plates mounted on the pivotal connection between said distributing spout and hood and constituting extensible connections between said hood and the sides of said distributing spout.

3. The combination with an upper spout section and a hood swiveled thereon, said hood having opposite segmental surfaces, a distributing spout pivoted at its upper end to the sides of said hood, yieldingly held joint plates pivoted on their pivotal connection between said distributing spout and hood and having segmental surfaces cooperating with the segmental surfaces of said hood, and having depending portions arranged to be engaged by the sides of the upper end of said distributing spout, and movable downward with the downwardly moved side thereof.

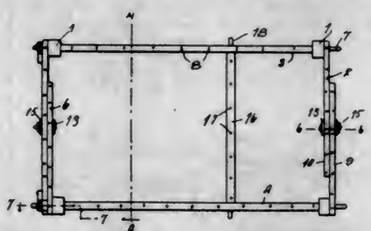
4. The combination with an upper spout section and a hood swiveled thereon, of a distributing spout pivoted to said hood at its upper end for swinging movements to either side of a vertical line, and segmental joint plates mounted on the pivotal connection between said distributing spout and hood and constituting extensible connections between said hood and the sides of said distributing spout, the pivotal connection between said distributing spout and hood permitting vertical movements of the latter, and means operative by upward movement of the distributing spout to lock the latter against pivotal movements in respect to said hood.

5. The combination with an upper distributing spout, of a hood swiveled thereto, said hood having laterally spaced flat sides and opposite segmental walls, of a distributing spout pivoted to said hood with freedom for limited vertical movements, means whereby upward movement of said distributing spout, in respect to said hood will lock the former against pivotal movements in respect to the latter, and joint plates having laterally spaced sides pivoted on the pivotal connection between the distributing spout and hood, said jointed plates having segmental portions coöperating with the segmental portions of said hood and having depending portions engageable with the sides of said distributing spout for downward movement with the latter, and springs yieldingly holding said joint plates normally in their upper positions.

[Claims 6 and 7 not printed in the Gazette.]

1,192,486. COMBINED QUILTING-FRAME AND CURTAIN-STRETCHER. MARIA J. YOUNG, Barnesville, Minn. Filed Sept. 18, 1914. Serial No. 862,346. (Cl. 45—24.)

A combined curtain stretcher and quilting frame comprising vertical supports provided at their upper ends with openings, side bars each provided with a longitudinally extending series of openings, trunnions at the ends of said bars, said trunnions passing through the first mentioned openings and projecting beyond the supports, a removable bar provided at its ends with reduced projections adapted to be inserted in an alined pair of openings in said side



bars, end bars comprising adjustably connected sections mounted on the projecting ends of said trunnions, said end bars holding said side bars in proper relative position and adapted to permit them to be moved relatively when it is desired to apply and remove said removable bar in adjusting it along the length of said side bars.

1,192,487. FEEDING DEVICE. CLEMENS ZOK, Muskegon, Mich. Filed Apr. 12, 1916. Serial No. 90,570. (Cl. 119—51.)



1. In a feeding device, a cylinder, a piston movable in said cylinder, a lid removably secured to said cylinder, a spout secured to said lid and a deflector within said spout.

2. In a feeding device, a cylinder, a piston movable in said cylinder, a lid removably secured to said cylinder, a spout secured to said lid and means formed within said spout whereby its bore is divided into separate channels.

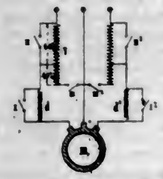
3. In a feeding device, a cylinder, a piston movable in said cylinder, a lid removably secured to said cylinder, a spout secured to said lid and a head piece pivotally secured to said spout.

4. In a feeding device, a cylinder, a piston movable in said cylinder, a lid removably secured to said cylinder, a spout secured to said lid, a deflector within said spout, and a head piece secured to said spout.

5. In a feeding device, a cylinder, a piston movable in said cylinder, a lid removably secured to said cylinder, a spout secured to said lid and formed with an enlarged month with a V-shaped opening, and a deflector arranged within said mouth and projected into the open portion thereof to divide the bore in said spout and mouth into separate channels.

1,192,488. STARTING OF ALTERNATING-CURRENT MOTORS. ALBERT AICHELE, Baden, Switzerland, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Filed May 7, 1914. Serial No. 837,037. (Cl. 172—274.)

1. In dynamo electric machinery in combination a three-phase motor, three line terminals and an auto-transformer, a connection from one line terminal to the motor and from the other line terminals respectively to two limbs of the transformer, two switches connecting the other ends of the limbs of the auto-transformer to the aforesaid connection to the motor, two choking coils, connections between each coil respectively to the motor and from the remaining ends of the coils to a point in each limb of the auto-transformer, switches electrically connected in parallel with said coils and further switches connected between the line terminals and the tapping points of the transformer.

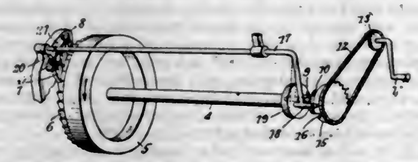


2. In dynamo electric machinery in combination a three-phase motor, three line terminals and an auto-transformer, a connection from one line terminal to the motor and from the other line terminals respectively to two limbs of the transformer, two switches connecting the other ends of the limbs of the auto-transformer to the aforesaid connection to the motor, two choking coils, said coils being of electrical dimensions to give the maximum permissible starting current, connections between each coil respectively to the motor and from the remaining ends of the coils to a point in each limb of the auto-transformer, switches electrically connected in parallel with said coils and further switches connected between the line terminals and the tapping points of the transformer.

3. In dynamo electric machinery in combination, means for starting a three-phase alternating current motor including a single-step auto-transformer, two choking coils electrically connected between the tapping points and the motor and means for short-circuiting the choking coils.

4. The method of starting a three phase motor, provided with starting auto-transformers and choking coils connected between certain of the motor terminals and points in the auto-transformers, which consists in connecting one terminal of each of the auto-transformers together and to one motor terminal, short-circuiting the choking coils, opening the said connections of the auto-transformers, and short-circuiting the parts of the transformers in which current still flows.

1,192,489. SAFETY STARTING DEVICE FOR GAS-ENGINES. JOSEPH A. ANGLADA, New York, N. Y., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 11, 1914. Serial No. 823,870. (Cl. 74—16.)



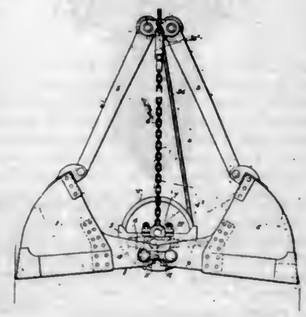
1. In a gas engine, the combination with a pawl and ratchet device for preventing a backward revolution, of a starting device, and an interlocking mechanism having one position for throwing the pawl and ratchet device into engagement and permitting the operation of the starting device, and another position for releasing the pawl and ratchet device, and serving as a stop to prevent the application of the starting device.

2. In a gas engine, the combination with a pawl and ratchet device for preventing a backward revolution, of a starting device including a longitudinally movable jaw clutch, and an interlocking mechanism adapted in one position to release the pawls and serve as a stop to prevent the longitudinal movement of the jaw clutch and in another position to throw the pawls into engagement and to remove the stop.

3. In a gas engine, the combination with a pawl and ratchet device for preventing a backward revolution, of a starting device including a longitudinally movable jaw clutch, and a manually operated shaft having a connection for actuating said pawl and means for preventing said longitudinal movement of the jaw clutch.

4. In a gas engine, the combination with a pawl and ratchet device for preventing a backward revolution, of a starting device including a longitudinally movable jaw clutch having a flange provided with a slot, and a disengagement shaft having a connection for actuating the pawl and a bent end adapted to engage said slot.

1,192,490. GRAB. DUDLEY JAMES BARNARD, East Ham, England. Filed Apr. 26, 1915. Serial No. 23,985. (Cl. 37—30.)



1. In a grab, the bucket sections of which are mounted on pivot pins carried by a beam, the combination of means to check or retard the opening action of such sections, said means being partly carried by the beam and partly by one of said pins, such pin being actuated by the rotative movement of the bucket sections during the opening and closing movements.

2. In a grab, the bucket sections of which are pivotally mounted on independent pivot pins carried by a beam, the combination of a dash pot actuated by the rotative movement of the bucket sections to check or retard the opening action of such sections, a part of said dash pot being carried by the beam and part by one of the pivot pins which is arranged to turn in the beam and with the bucket sections.

3. In a grab, the bucket sections of which are mounted on a beam, the combination of means actuated by the rotative action of the bucket sections to check or retard the opening action of such sections, comprising a boss formed on the beam, a lug formed on said boss, a pivot pin located in said boss, a squared portion formed on said pivot pin, clutch members mounted on said squared portion, a dash pot cylinder pivotally connected to said lug, a piston rod in said cylinder and links connecting said piston rod with said clutch members.

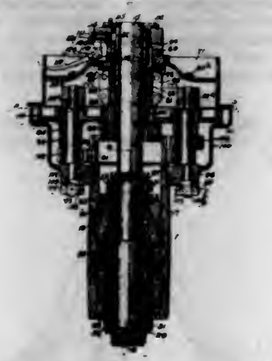
4. In a grab of the kind herein described the bucket sections of which are pivoted on a beam the combination of means actuated by the rotative action of the bucket sections to check or retard the opening action of such sections, comprising bosses formed on the ends of said beam, independent pivot pins for each of said bucket sections rotatively mounted in said bosses, a lug formed on one of said bosses a squared portion formed on the pivot pin mounted in said boss, clutch members mounted on said squared portion, a dash pot cylinder pivotally connected to the lug on said boss, a piston rod in said cylinder and links connecting said piston rod with said clutch members.

1,192,491. GEARING. JOHN BECKER, Hyde Park, Mass. Filed Dec. 7, 1909. Serial No. 531,779. (Cl. 74—58.)

1. A machine of the class described comprising, in combination, a shaft, a driving pulley loosely mounted thereon, means to couple said pulley to said shaft and a plurality of sets of back gears for transmitting different speeds from said pulley to said shaft.

2. A machine of the class described comprising, in combination, a plurality of gears, an eccentrically journaled

shaft for one of said gears, a split collar loose on said shaft, a handle on the latter and means coöperating with said sleeve and handle to limit the movement of the latter.



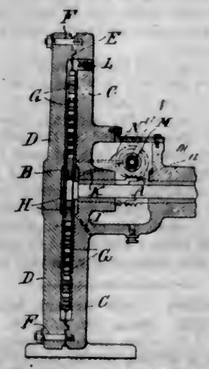
3. A machine of the class described comprising, in combination, a plurality of gears, an eccentrically journaled shaft for one of the same, a handle for turning said shaft to throw one of said gears into or out of engagement with the other, a stationary collar loosely mounted on said shaft, abutments on said collar, and a pin on said handle adapted to engage said abutments to limit the adjustments of said handle.

4. A machine of the class described comprising, in combination, a gear, an eccentrically journaled shaft, its support, a gear on said shaft, a handle for turning the latter to throw one of said gears into mesh with the other, a collar loose on said shaft having a lug thereon, stops threaded into said support and engaging said lug for adjusting the position of said collar, and a pin movable with said handle and limited by said collar.

5. A machine of the class described comprising, in combination, a plurality of gears, an eccentric shaft for one of said gears, means to turn said shaft to vary the depth of mesh of said gears, means to limit the turning movement of said shaft and means for holding said shaft in its position of adjustment.

[Claims 6 to 12 not printed in the Gazette.]

1,192,492. PRODUCTION OF EMULSIONS. SÖREN HÖY BLICHFELDT, Southall, England, assignor to Flakes A./S., Copenhagen, Denmark. Filed Aug. 25, 1914. Serial No. 858,505. (Cl. 99—2.)



1. A process for the production of emulsions consisting in passing one ingredient of the emulsion in a continuous stream from the center to the circumference of a narrow channel formed between two disk surfaces having relative rotation and in adding the second ingredient to the said channel at successive stages from the center, while the emulsion so produced escapes at the circumference.

2. In emulsifying apparatus, a casing, a rotatory disk forming with the casing an emulsifying channel at each side, means for supplying the ingredients of the emulsion to both sides of the disk and means for supplying one ingredient at successive stages from the inner to the outer edge of the emulsifying channel.

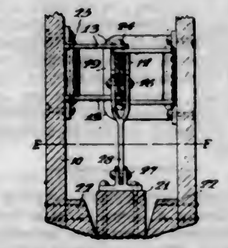
3. In emulsifying apparatus, a casing and an emulsifying disk within the casing having openings which admit of the free passage of the liquid from one side of the disk to the other.

4. In emulsifying apparatus, a casing of disk type, a driving shaft, an emulsifying member of disk type within the casing, mounted on the said shaft so as to turn with it while otherwise free to adjust itself thereon, and means for supplying the ingredients of the emulsion to both sides of the said member.

5. In emulsifying apparatus, a disk shaped casing having an outlet toward the periphery, an emulsifying rotatory member of disk type in the said casing, means for admitting one ingredient of the emulsion to the middle of the casing and means for admitting the second ingredient at a number of points at different distances from the center.

[Claims 6 to 9 not printed in the Gazette.]

1,192,493. CORE FOR USE IN THE CONSTRUCTION OF HOLLOW CONCRETE WALLS. JOHANNES BLOMBERG, Täby, Sweden. Filed Oct. 7, 1912. Serial No. 724,441. (Cl. 25—31.)



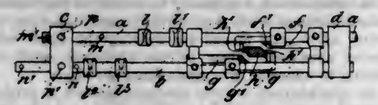
1. In a core for use in the construction of hollow concrete walls, a mechanism for collapsing one set of the core walls first and then the other, comprising in combination, side and end walls, a common central supporting member for both the side and the end walls, means connecting the central member with the end walls of the core adapted to collapse said end walls upon the raising of said central member, and means connecting said side walls with said central member for collapsing the same after the collapse of said end walls, substantially as described.

2. In a core for use in the construction of hollow concrete walls, a mechanism for collapsing one set of the core walls first and then the other, comprising in combination, side and end walls, a slotted common central supporting member for both the side and the end walls, links connecting the central member with the end walls of the core adapted to collapse said end walls upon the raising of said central member, a guiding bracket secured to one of the side walls for guiding the slotted central member, links connecting the central member with said side walls, a bolt guided within the slots of said central member for effecting said connection and allowing the collapse of the side walls after the collapse of the end walls upon the engagement of the lower edge of said slot by said bolt, substantially as described.

1,192,494. BELT-SHIFTER. FRANZ BRUNNER, Stockerau, near Vienna, Austria-Hungary. Filed Dec. 27, 1915. Serial No. 68,909. (Cl. 64—4.)

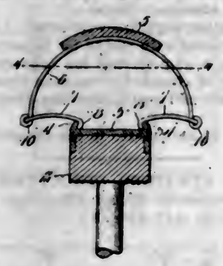
In a belt-shifter, in combination, a pair of independently displaceable belt-fork bars, a shifting lever adapted to

oscillate parallel with and between said bars and also toward one or the other bar, catches for said lever on said



bars and cam faces on said bars adapted to press said lever against the catches of either one or the other bar.

1,192,495. RESILIENT TIRE. JOHN F. CARLSON, Attica, Ind. Filed May 24, 1915. Serial No. 30,010. (Cl. 152—8.)



1. A vehicle tire including a supporting ring, an outer rim, an annular series of spaced, separate and independent bowed springs extending transversely between the supporting ring and outer rim with their concaved sides facing the supporting ring and their end portions projecting laterally beyond the sides of the supporting ring and substantially in line with the face of said ring, and yielding connections between the ends of the bowed springs and the adjacent sides of the supporting ring.

2. A vehicle tire including a supporting ring, an outer rim, an annular series of spaced, separate and independent bowed springs extending transversely between the supporting ring and outer rim with their concaved sides facing the supporting ring and their end portions projecting laterally beyond the sides of the supporting ring and substantially in line with the face of said ring, and pivotal connections between the ends of the springs and the supporting ring.

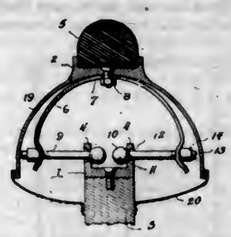
3. A vehicle tire including a supporting ring, an outer rim, an annular series of spaced, separate and independent bowed springs extending transversely between the supporting ring and outer rim with their concaved sides facing the supporting ring and their end portions projecting laterally beyond the sides of the supporting ring and substantially in line with the face of said ring, and curved resilient links joining the ends of the bowed springs to the adjacent sides of the supporting ring, whereby the bowed springs may be compressed inwardly toward the ring and laterally thereof.

4. A vehicle tire including a supporting ring, an outer rim, an annular series of spaced, separate and independent bowed springs extending transversely between the supporting ring and outer rim with their concaved sides facing the supporting ring and their end portions projecting laterally beyond the sides of the supporting ring and substantially in line with the face of said ring, and bowed spring metal links pivotally connecting the ends of the springs with the adjacent sides of the supporting ring.

5. A vehicle tire including a supporting ring, an outer rim, an annular series of spaced, separate and independent bowed springs extending transversely between the supporting ring and outer rim with their concaved sides facing the supporting ring and their end portions projecting laterally beyond the sides of the supporting ring and substantially in line with the face of said ring, and oppositely disposed coupling members pivotally connecting the respective ends of the bowed springs with the respective adjacent sides of the supporting ring.

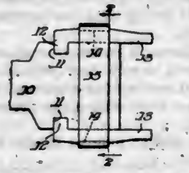
[Claims 6 to 8 not printed in the Gazette.]

1,192,496. RESILIENT TIRE. JOHN F. CARLSON, Attica, Ind. Filed Nov. 18, 1915. Serial No. 62,166. (Cl. 152—32.)



A resilient tire including a channeled inner rim having parallel side flanges, the said flanges having oppositely disposed outwardly flaring openings therein, an outer rim, bowed springs having reversely curved ends arranged between the inner and outer rims and fixedly connected at their central portions to the outer rims, the reversely curved portions of the springs having inwardly flaring openings therein, links connecting the inner rim to the springs, each link including a head at one end to limit the insertion through the flange openings, and being threaded at the opposite ends and passed through the spring openings, and nuts having curved inner ends threaded on the links for engagement with the reversely curved portions of the springs.

1,192,497. DRAFT-YOKE. GEORGE S. CHILES, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed May 10, 1915. Serial No. 26,993. (Cl. 213—42.)



1. In a device of the class described, the combination of a draw-bar having shoulders, and a yoke having hooks engaging said shoulders, said yoke being notched and thickened at its notched end to compensate for said notches, and an endless band compressed into said notched portion and adapted to hold the parts in proper relation, substantially as described.

2. In a device of the class described, the combination of a draw-bar having shoulders, a yoke having hooks engaging said shoulders and preventing relative longitudinal movement between the parts, said yoke having a notch at a point near the end of the draw-bar, and a band compressed into said notch and shrunk around the parts whereby to hold the parts in operative relation without the use of other fastening means, substantially as described.

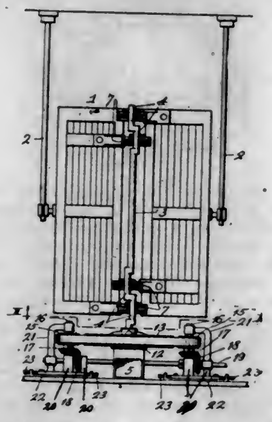
3. In a device of the class described, the combination of a draw-bar, a yoke strap having end and intermediate lugs engaging said draw-bar and preventing relative longitudinal movement of the parts, said strap having a notch in its upper and lower surface near the forward end of the strap, and a band occupying said notches and shrunk around said draw-bar and yoke and adapted to hold the parts in operative relation, substantially as described.

1,192,498. GYRATORY STRUCTURE. GEORGE W. COMBS, Leavenworth, Kans. Filed Aug. 18, 1908. Serial No. 449,077. (Cl. 83—38.)

1. In combination, a body, a vertically-positioned shaft mounted therein, a stationary support for said shaft independent of the body, antifriction means interposed be-

tween the shaft and said support, and endless flexible restraining means for steadying said shaft.

2. In combination, a gyratory structure, a shaft thereto, a pulley fixed to said shaft, and flexible means for driving said pulley and restraining abnormal throw of the structure.



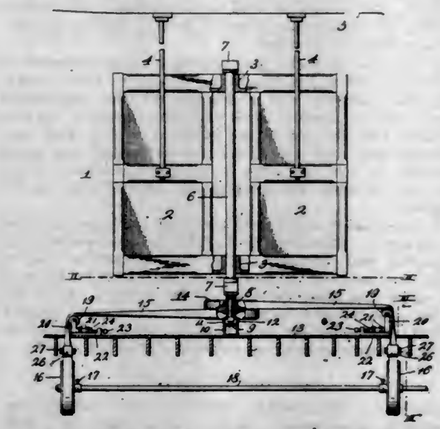
3. In combination, a freely-supported structure, means for preventing rotation thereof, a pulley for the structure, and a flexible member for driving said pulley and restraining abnormal throw of the structure.

4. In combination, a gyratory structure, a shaft therefor, a support for said shaft independent of the structure, a pulley fixed to said shaft, and an endless flexible member for driving said pulley and restraining abnormal throw of the structure.

5. In combination, a gyratory structure, a shaft thereto, a member fixed to said shaft, endless means for driving said member and restraining abnormal throw of the structure, and one or more stationary drivers for driving the endless member.

[Claims 6 to 36 not printed in the Gazette.]

1,192,499. GYRATORY STRUCTURE. GEORGE W. COMBS, Leavenworth, Kans. Filed Apr. 26, 1909. Serial No. 492,594. (Cl. 83—38.)



1. In combination, a gyratory structure, a shaft therefor, a support for said shaft independent of the structure, and a plurality of driving and restraining means for driving said shaft and restraining abnormal throw of the structure, said driving and restraining means extending in different directions from the shaft.

2. In combination, a gyratory structure having centrally-disposed bearings, a shaft mounted in said bearings, and a plurality of flexible means for driving the shaft and restraining abnormal throw of the structure, said means extending in opposite directions from the shaft.

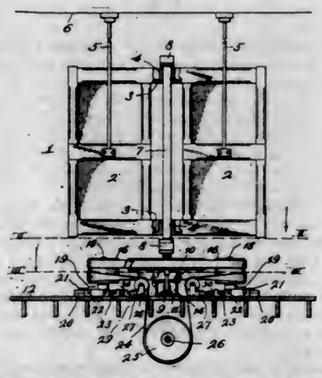
3. In combination, a body freely-supported, a vertically-positioned shaft mounted therein, and a plurality of constantly-traveling flexible means for driving the shaft and restraining the body from abnormal throw.

4. In combination, a gyratory structure, a shaft mounted therein and provided with means for imparting a gyratory motion thereto, and a plurality of constantly-traveling flexible means for driving the shaft and restraining the structure from abnormal throw.

5. In combination, a gyratory structure, a shaft mounted therein and provided with means for imparting a gyratory motion thereto, a step-bearing for supporting the shaft, and a plurality of constantly-traveling flexible means for driving the shaft and restraining the structure from abnormal throw.

[Claims 6 to 84 not printed in the Gazette.]

1,192,500. GYRATORY STRUCTURE. GEORGE W. COMBS, Leavenworth, Kans. Filed July 17, 1909. Serial No. 508,100. (Cl. 83—38.)



1. In combination, a gyratory structure, a shaft thereto, a step-bearing independent of the structure for supporting the shaft, a steadying device including an endless member which drives said shaft and tends to hold the structure in its true gyratory path, and means for driving said steadying device, said driving means being independent of the shaft.

2. The combination of a normally-gyratable structure, a shaft for said structure, two diametrically-opposed pulleys adjacent said shaft, flexible means traveling around said shaft and the pulleys tending to restrain the structure from abnormal throw, and flexible means for driving said pulleys.

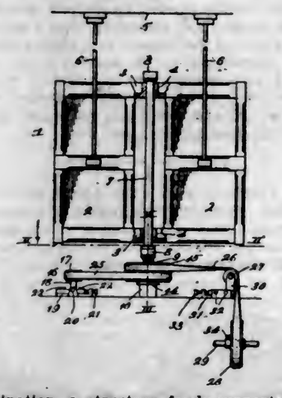
3. The combination of a normally-gyratable structure, a shaft thereto, a plurality of pulleys adjacent said shaft, means for adjusting said pulleys relatively to the shaft, flexible means engaging the pulleys and the shaft for driving the latter and tending to restrain the structure from abnormal throw, and yielding means for driving said pulleys.

4. In combination, a normally-gyratable structure, a vertically-positioned shaft journaled in said structure, a plurality of pulleys adjacent said shaft, endless means traveling around said pulleys and the shaft to drive the latter and restrain the structure from abnormal throw, shafts carrying said pulleys and capable of lateral adjustment in any direction, a driver, an endless member arranged to travel around said driver and the pulleys to drive the latter, and independently-supported adjustable means for guiding said endless driving member.

5. In combination, a gyratory structure, an endless member for steadying and driving said structure, an endless member independent of the structure for driving the first-mentioned endless member, and independent means for tensioning said endless members.

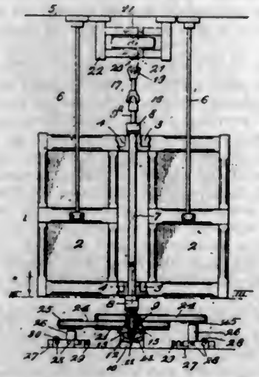
[Claims 6 to 8 not printed in the Gazette.]

1,192,501. GYRATORY STRUCTURE. GEORGE W. COMBS, Leavenworth, Kans. Filed June 28, 1910. Serial No. 569,404. (Cl. 83—38.)



In combination, a structure freely-supported for gyration, a shaft thereto, a pulley fixed to said shaft, a stationary driver, an endless element running around said driver and the pulley to drive the latter and restrain the structure from lunging, an endless element running around the pulley and extending in an opposite direction from the first-mentioned element to assist the same only in restraining the structure from lunging, a support adjacent the pulley for the second endless element, and means for adjusting said support.

1,192,502. GYRATORY STRUCTURE. GEORGE W. COMBS, Leavenworth, Kans. Filed July 8, 1910. Serial No. 570,935. (Cl. 83—38.)



1. In combination, a freely-suspended structure, a shaft for actuating the same, a step-bearing for said shaft, steadying means for said structure including oppositely-extending flexible members which restrain but do not drive the structure, a stationary driver, and yielding means connecting said driver and the shaft to drive the same.

2. In combination, a freely-suspended structure, a gyrator therefore, a support for said gyrator independent of the structure, flexible means engaging said gyrator and tending to restrain the structure from abnormal throw, a stationary driver in axial alinement with the gyrator support, and yielding means operably-connecting said driver and the gyrator.

3. In combination, a normally-gyratable structure, a pulley thereto, endless means engaging said pulley to restrain the structure from abnormal throw, idlers engaged by said endless means, and means for adjusting said idlers.

4. In combination, a normally-gyratable structure, a pulley thereto, an independent support near said pulley, means for adjusting said support laterally, means for adjusting said support longitudinally, endless flexible means engaging the pulley and said support to restrain the structure from abnormal throw, a stationary driver, and yielding means between said driver and the structure whereby the latter is actuated by the former.

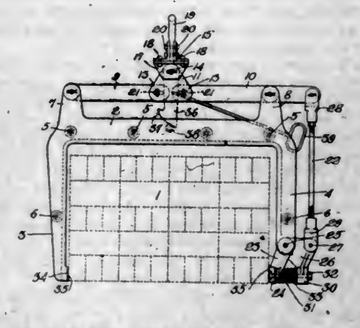
1,192,503. SAFETY POCKET-RAZOR. WILLIAM HENRY CRANE, Philadelphia, Pa. Filed Apr. 27, 1916. Serial No. 93,880. (Cl. 30—12.)



1. A hollow handle having an open side and a cover-plate hinged to said handle to cover said side opening, in combination with a plate pivotally mounted in said handle to turn laterally in and out of said open side and a razor mounted on said plate, said plate and razor lying wholly within the handle when in their folded position and the cover plate being held flush with the edges of said side opening by the resiliency of the handle as a whole.

2. A hollow handle having an open side and an open end, and a cover plate hinged to said handle to cover said side opening and having a depending lug to partially close said end opening, in combination with a plate pivotally mounted in said handle to turn laterally in and out of said open side and end, and a safety razor mounted on said plate to turn in the plane in which the axis of the pivot of said plate lies, said plate and cutter lying wholly within the handle when in their folded position and the cover plate being held flush with the edges of said side opening by the resiliency of the handle as a whole.

1,192,504. BRICK-LIFTER. HOLLIS B. CRUM, Chicago, Ill., assignor to Raymond C. Penfield, Chicago, Ill. Filed Nov. 1, 1918. Serial No. 798,761. (Cl. 57—9.)



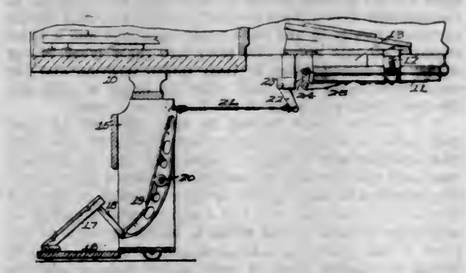
1. A brick handling apparatus adapted to be positioned adjacent a pile of brick comprising a plurality of superimposed rows, a frame having U-shaped arms depending for a greater length than the height of brick pile to be lifted, means on the lower end portions of the depending

members on one side of the stack adapted to engage the bottom row of the brick stack at a plurality of points, and means to exert a compressive tension on said bottom row between the depending members to lift the entire stack upon application of lifting power to said frame.

2. A brick handling apparatus, comprising a plurality of U-shaped frame members adapted to be positioned over a plurality of brick in super-imposed rows, a pivoted brick engaging member carried by one arm of each U-shaped frame to engage the lowermost row of brick of the stack at a plurality of points, means to actuate said pivoted member toward and from the brick stack by a link operated through the lifting of the apparatus.

3. A brick handling apparatus, comprising a plurality of U-shaped members adapted to be lowered over a pile of brick in super-imposed rows, the U-shaped arms of each member being longer on one side than upon the other, a link connected with the shorter arms movable toward and from the lowermost portion of the opposite rigid arm, and means to actuate said link yieldingly to clamp the bottom row of the brick pile, upon application of a lifting power to the frame, whereby the lowermost row of the pile is engaged with sufficient clamping force to carry said lower row and the super-imposed rows thereon.

1,192,505. PEDAL MECHANISM FOR GRAND PLAYER-PIANOS. THOMAS DANQUARD, New York, N. Y., assignor to The Auto Pneumatic Action Company, a Corporation of New York. Filed Nov. 18, 1914. Serial No. 872,694. (Cl. 84—169.)



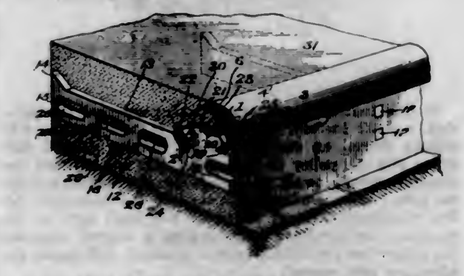
1. In a grand player piano, the combination with a depending pedal support, pedals carried thereby, a hinged plate at the bottom of said support forming part of the front thereof when closed, and a horizontal pumping bellows at the rear of said support, of a lever pivoted on said pedal support and extending upwardly within the same substantially to the top thereof and forwardly at the bottom to the front of said support and housed entirely therein, said lever being connected with one of the pedals at the bottom, and means connected with the top thereof for operating said bellows.

2. In a grand player piano, the combination with the horizontal case and a horizontally disposed pumping bellows at the rear thereof, of a depending pedal support, a pair of pedals carried thereby, a horizontal rod extending through the pedal support, a pair of levers pivoted to swing freely on said rod and located in substantially vertical position and housed within the pedal support in all their positions, said levers being connected with the pedals at the bottom, a flexible connection from the top of each of said levers extending to a point adjacent to the bellows, and mechanism located at the front of the bellows for expanding them when the flexible connections are drawn forward by the movement of the levers.

3. In a grand player piano, the combination with the horizontal case and pumping bellows at the rear thereof, of a pedal support, a pair of pedals foldingly connected therewith, a pair of levers carried by and housed within said pedal support and connected at their lower ends with the pedals, flexible cords extending from the tops of said levers, a bell crank connected with each cord and a short vertical link extending downwardly from the upper end of each bell crank to a movable leaf of said bellows, whereby when the lower end of either lever is pushed in the respective short link will be depressed and the corresponding bellows expanded.

4. In an automatic horizontal grand piano, the combination of a key-bed, a support extending downwardly therefrom and provided with a hinged front plate, a pair of pumping treadles carried by said hinged front plate which of itself forms a part of the front of said support when the treadles are in inoperative position, levers operated by said treadles pivoted on an axis spaced from the rear of said support and extending from a point adjacent to the lower part of the support to a point adjacent to the upper part thereof and to the key-bed of the instrument and located and movable entirely within said support, pumping bellows, and connections arranged closely beneath the key-bed and connecting the upper ends of said levers with the pumping bellows.

1,192,506. CURB-GUARD AND ANCHORING AND POSITIONING DEVICE THEREFOR. ANTHONY ELTON DAVIS, Philadelphia, Pa., assignor of one-half to Frederick J. Geiger, Philadelphia, Pa. Filed Oct. 1, 1914. Serial No. 864,382. (Cl. 94—2.)



1. A device of the character stated, comprising anchoring devices having upwardly extending lugs at their forward ends and inclined walls adjacent to said lugs and a bar having a web with apertures therein, whereby when the anchoring devices are positioned and the apertures in the web register with said lugs said bar may be lowered onto said anchoring devices to seat on the inclined walls thereof, said lugs passing through the apertures of said bar.

2. A device of the character stated, comprising a bar having a web with apertures therein, and an anchoring device comprising a member arranged at right angles to said bar and provided at its forward end with an upwardly extended lug adapted to pass into an aperture of said web, and means to interlock said web with said lug.

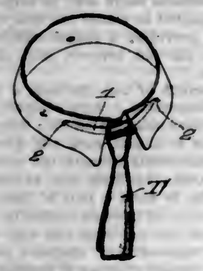
3. A device of the character stated, comprising a bar having a head and web with apertures therein, anchoring devices each comprising a member having near its forward end an upwardly and rearwardly inclined lug with inclined seats to receive the head and web, said lugs extending through said apertures and provided with an opening, and binding material embedding the web and the anchoring devices.

4. A device of the character stated, comprising a bar having a head and web with apertures therein, anchoring devices each comprising a member having near its forward end an upwardly and rearwardly inclined lug with inclined seats to receive the head and web, said lugs extending through said apertures and provided with an opening, binding material embedding the web and the anchoring devices, and locking means in the apertures of the lugs.

5. A device of the character stated, comprising a curb bar having a web with apertures therein, and an anchoring device comprising a member arranged at an angle to said bar and provided near its forward portion with a rearwardly inclined lug adapted to pass into an aperture of said web, and binding material embedding said anchoring device and the web of said bar.

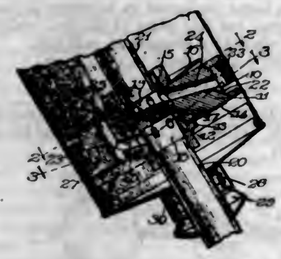
[Claims 6 to 8 not printed in the Gazette.]

1,192,507. NECKTIE-SUPPORT. ISAAC M. DEPPEN, Scranton, Pa. Filed Apr. 26, 1915. Serial No. 23,995. (Cl. 24—49.)



A necktie support comprising a resilient strip of sheet metal curved longitudinally throughout its length and adapted to be sprung to curve it to a greater extent and then placed in the fold of a turn down collar whereby it will remain under tension, said strip being the same width substantially throughout its length with its end portions tapered to sharp points, the terminals of said end portions being bent laterally at right angles and extended from the convex side of the strip to form collar engaging spurs adapted to be forced into the inner face of the outermost collar flap by the tension of the strip, said spurs being the sole means of anchoring the strip in the collar and serving to prevent both longitudinal and lateral shifting of said strip.

1,192,508. PUMP. EDMUND J. FEENY, Muncie, Ind., assignor to The Feeny Manufacturing Company, Muncie, Ind., a Corporation of Indiana. Filed May 4, 1911. Serial No. 625,060. (Cl. 230—34.)



1. The combination with a cylinder, of a piston movable therin and provided with a packing of sponge rubber loosely mounted in the periphery of such piston, and provided with an air inlet communicating from the outside of such piston to the edges of such packing.

2. The combination with a cylinder of a piston provided with a recess in its periphery, a sponge rubber packing ring, the recess being deeper than the thickness of the ring and wider than the width of such ring, and communicating passages through the piston to the edges of such packing ring whereby the suction in the operating of the piston will assist in a compression of the packing ring.

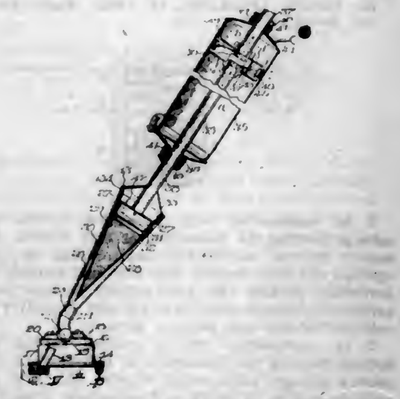
3. The combination with a cylinder of a piston provided with a sponge rubber ring mounted in its periphery.

4. A pump comprising a tubular stem having non-communicating inlet and discharge portions, a piston of greater diameter than the stem with a circumferential groove therein, valved passages leading from the inlet portion of the stem to the opposite faces of the piston, and a passage leading from the circumferential groove to the discharge portion of the stem, a cylinder of greater diameter than the piston encompassing said piston and provided at its end with packing glands slidably engaging the tubular stem, and a packing arranged within the circumferential groove of the piston and engaging the interior of the cylinder, said packing being a strip of sheet resilient material of less width than the width of said groove, and of less thickness than the depth between the cylinder wall and the bottom of said groove, and of a length exceeding the internal perimeter of the cylinder.

5. A pump comprising a tubular stem having non-communicating inlet and discharge portions, a piston of greater diameter than the stem with a circumferential groove therein, and valved passages leading from the inlet portion of the stem to the opposite faces of the piston and a passage leading from the circumferential groove to the discharge portion of the stem, a cylinder of greater diameter than the piston encompassing said piston and provided at its ends with packing glands slidably engaging the tubular stem, and a packing arranged within the circumferential groove of the piston and engaging the interior of the cylinder, said packing being a strip of sheet sponge rubber of less width than the width of said groove, and of a length exceeding the internal perimeter of the cylinder.

[Claims 6 and 7 not printed in the Gazette.]

1,192,509. PNEUMATIC-CLEANER PUMPING MECHANISM. EDMUND J. FEENY, Muncie, Ind., assignor to Feeny Manufacturing Company, Muncie, Ind., a Corporation of Indiana. Filed June 29, 1911. Serial No. 635,931. (Cl. 230—27.)



1. Pneumatic cleaner pumping mechanism comprising a tubular stem with a handle at one end, an air pumping mechanism mounted on the tubular stem between the free end and the handle, the ends of the tubular stem constituting an inlet and an outlet for the pump, said air pumping mechanism comprising a member reciprocable and rotatable on the stems provided with a handle lying between the first mentioned handle and the free end of the stem whereby the operator grasping the two handles in his two hands may operate the pumping mechanism and control the movements of the free end of the stem.

2. Pneumatic cleaner pumping mechanism comprising a double action suction pump embodying a piston with hollow tubes connected with either side thereof, a cylinder through the ends of which the tubes extend surrounding said piston and movable relatively both reciprocably and rotatably upon the tubes with respect thereto, a relative reciprocable movement thereof being operative to draw fluid in through one tube and to expel it from the other.

3. Pneumatic cleaner pumping mechanism comprising a piston with hollow tubes connected to both sides thereof, means adapted to form connection between each tube and either side of the piston and one of the tubes having a handle at its outer end, a cylinder surrounding the piston with closed ends through which the tubes extend and upon which the cylinder is relatively movable both rotatably and reciprocably with respect to the piston, the said cylinder being provided with a hand graspable portion which may be held while the piston and the tubes connected thereto are reciprocated and rotated in the cylinder by means of the handle at the end and for guiding the free end of the tubular stem.

4. Pneumatic cleaner pumping mechanism comprising a tubular stem provided with a handle at one end, an air pumping mechanism mounted on the tubular stem between the free end thereof and the handle and comprising a reciprocable and relatively rotatable member having a handle lying between the handle of the stem and the free end whereby an operator grasping the two handles may operate the pumping mechanism and direct and guide the movement of the free end of the stem.

5. Pneumatic cleaner pumping mechanism comprising a tubular stem provided with a handle at one end, an air pumping mechanism mounted on the tubular stem between the free end and said handle, said air-pumping mechanism comprising a reciprocable and relatively rotatable member provided with a handle lying between the first-mentioned handle and the free end of the stem, whereby an operator grasping the two handles separately with his hands may operate the pumping mechanism and control the necessary movement of the free end of the stem.

[Claims 6 to 11 not printed in the Gazette.]

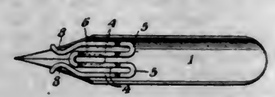
1,192,510. CUSHION. MAX FISCHMANN, Toronto, Ontario, Canada. Filed Feb. 15, 1915. Serial No. 8,254. (Cl. 5—13.)



1. In combination with a cushion, having primary springs forming the foundation of said cushion, and secondary springs, substantially shorter than said primary springs, and upon common axes with said primary springs, individual pockets also substantially shorter than said primary springs adapted to retain said secondary springs coaxially within said primary springs.

2. In combination with a cushion having primary springs forming the foundation of said cushion, and secondary springs, substantially shorter than said primary springs, pockets in which said secondary springs are inclosed and maintained in a state of partial compression.

1,192,511. FOUNTAIN ATTACHMENT FOR PENS. FRANK L. FITHIAN, Haddonfield, N. J. Filed Oct. 5, 1915. Serial No. 54,146. (Cl. 120—114.)



1. As a new article of manufacture, a fountain attachment for pens, comprising a wire of metal bent to form clamping members engaging respectively the upper and lower surface of a pen and providing laterally acting spring jaws for engaging the side edges of the pen and also a tongue between the jaws substantially alined with the longitudinal axis of the pen for guiding ink toward the point of the pen.

2. As a new article of manufacture, a fountain attachment for pens, comprising a wire bent to form longitudinally disposed end portions lying along the upper surface of a pen and longitudinally disposed fingers lying along the lower surface of the pen, said fingers having upwardly disposed end portions adapted to clamp the pen against said upper members, the wire between the respective upper and lower portions being bent to form offset laterally disposed jaws adapted to clamp the side edges of the pen and said fingers providing a tongue adjacent to the jaws adapted to feed the ink between said jaws toward the point of said pen.

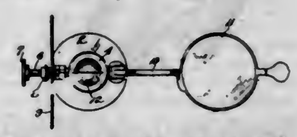
3. As a new article of manufacture, a fountain attachment for pens comprising a wire of spring material bent to form end portions adapted to seat longitudinally upon the upper surface of a pen, each end portion being bent laterally and downwardly beneath the body of the pen to provide lateral clamping jaws and extended rearwardly and longitudinally to form a pair of fingers, said fingers being bent upwardly to provide means to clamp said pen against the upper end portions and also being reversely bent to form a longitudinally disposed tongue extending toward the jaws for the purpose of feeding the ink toward the point of the pen.

4. As a new article of manufacture, a fountain attachment for pens comprising a wire of metal bent to form end portions adapted to seat longitudinally upon the upper surface of a pen, each end portion being bent laterally and downwardly beneath the body of the pen to provide jaws to laterally clamp the pen and extended rearwardly and longitudinally to form a pair of fingers, said fingers being respectively bent upwardly to clamp said pen against the upper end portions and also being reversely bent to form a longitudinally disposed tongue said tongue having its end upwardly bent toward the jaws whereby it may terminate in close proximity to the under surface of the pen, so that the ink is fed from said device toward the point of said pen.

5. As a new article of manufacture, a fountain attachment for pens comprising a wire of metal bent to form members adapted to seat upon the upper surface of a pen and members adapted to seat against the lower surface of said pen, said sets of members being arranged to clamp against the pen by spring action, the respective upper and lower members being connected by laterally disposed jaws adapted to engage the side edges of the pen, whereby said attachment is removably clamped to said pen.

[Claims 6 and 7 not printed in the Gazette.]

1,192,512. SHADOW-PUPILLOMETER. GEORGE W. FITZ, Peconic, N. Y. Filed Feb. 10, 1912. Serial No. 676,886. (Cl. 88—20.)



1. An instrument for measuring the pupil of the eye, comprising an opaque object, means for holding such object closely in front of the eye in the axis of vision, and at the same time permitting the general illumination to remain unchanged, such object being so movable as to intercept more or less of the light rays entering the eye, and means for indicating the width of that portion of the object in the axis of vision, or of the projection thereof perpendicular to such axis.

2. An instrument for measuring the pupil of the eye, comprising an opaque object, a holder therefor adapted to be so placed with respect to the eye as to hold the opaque object in the axis of vision in such position that a shadow of the object is cast on the retina, without changing appreciably the general illumination of the eye and therefore without causing a change in the size of the pupil, said object being movable to intercept more or less of the light rays equally on both sides of the axis of vision, and an indicator, arranged to show the width, perpendicular to the axis of vision, of that part of the object which crosses the axis of vision.

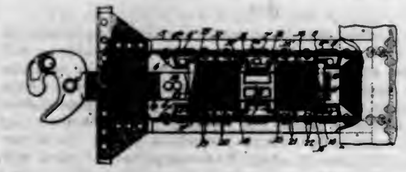
3. An instrument for measuring the pupil of the eye, comprising an opaque object adapted to be held close to the eye across the axis of vision, without appreciably interfering with the general illumination of the eye, and so movable as to vary the extent of projection thereof transverse to such axis, and indicating means whereby such extent of projection may be determined.

4. A method of measuring the diameter of the pupil of the eye, which consists in holding an opaque object in the axis of vision and so close to the eye as to cause its shadow to be projected on the retina, without appreciably diminishing the general illumination of the eye, enlarging or diminishing the interceptive area of the object until an opaque shadow of the same, having substantially no width, appears projected in the field of vision, and determining the width of such interceptive area.

5. A method of measuring the pupil of the eye, which consists in holding an opaque object in the axis of vision within an inch of the eye, whereby a shadow of the object is thrown on the retina, causing that part of the object lying directly in the axis of vision to be altered in width till such part appears to the subject as an opaque point substantially without width, and finding the width, projected in the axis of vision of such part.

[Claims 6 to 19 not printed in the Gazette.]

1,192,513. DRAFT-RIGGING. GEORGE H. FORSYTH, Chicago, Ill., assignor, by mesne assignments, to Waugh Draft Gear Company, a Corporation of Illinois. Filed Feb. 21, 1912. Serial No. 679,035. (Cl. 213—64.)



1. In a draft rigging, the combination of a draw-bar, a yoke thereon, an end follower abutting said draw-bar, an end follower abutting said yoke, a longitudinally movable block, a follower abutting each end respectively of said movable block, an abutment stop between said last-mentioned followers, one of which followers is adapted to contact said abutment stop under draft strains and the other is adapted to contact the same under buffing strains, and spring elements disposed between said end followers and said second-mentioned followers respectively, the arrangement being such that the total movement of the draw-bar under draft or buffing strains is equal to the combined movement of said spring elements, substantially as described.

2. In a draft rigging, the combination of a draw-bar, an extension thereon, end followers in abutment with said draw-bar and extension respectively, end abutment stops normally in engagement with said end followers respectively, a pair of intermediate followers, an intermediate abutment stop between and normally out of engagement with said intermediate followers, but adapted to be engaged by one of said intermediate followers under buffing strains and by the other under draft strains, rigid strain-transmitting means between the intermediate followers, and spring elements between said intermediate and end followers respectively, the arrangement being such that the total movement of the draw-bar equals the combined movement of said spring elements, and said abutment stop takes part of the buffing and draft strains, substantially as described.

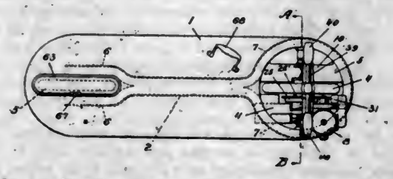
3. In a draft rigging, the combination of a draw-bar, an extension thereon, a plurality of sets of spring elements actuated by said draw-bar and extension, a rigid spacing element disposed between the sets of spring elements, end stops normally in engagement with said spring elements, an intermediate stop normally out of engagement with said spring elements but adapted to be engaged by one of said spring elements under buffing strains and by the other under draft strains, whereby said intermediate stop receives part of the buffing and draft strains applied to said draw-bar, substantially as described.

4. In a draft rigging, the combination of a draw-bar, an extension thereon, end and intermediate stops, end followers normally in engagement with said end stops, an intermediate follower member comprising a pair of rigidly spaced elements disposed on opposite sides of and normally out of engagement with said intermediate stops, and spring elements between said end and intermediate followers respectively, there being no fixed connection between either said draw-bar or said extension and any of said followers or spring elements, substantially as described.

5. In a draft rigging, the combination of a draw-bar, a connection therefor, end and intermediate stops, end and intermediate followers, spring elements between said end and intermediate followers respectively, the intermediate follower comprising a pair of elements disposed on opposite sides of the intermediate stop, and a spacing block, movable with said intermediate follower relative to said draw-bar and stop, between said pair of elements.

[Claims 6 and 7 not printed in the Gazette.]

1,192,514. SELF-PROPELLED VEHICLE. ARTHUR HUGO CECIL GIBSON, New York, N. Y., assignor to Auto-Ped Company of America, a Corporation of Delaware. Filed July 26, 1913, Serial No. 781,297. Renewed Sept. 28, 1915. Serial No. 53,158. (Cl. 21—90.)



1. In combination, in a self-propelled vehicle having two road wheels in tandem, a platform frame extending between said wheels and adapted to carry a person standing thereon, a motor, means for connecting the motor to one of said wheels to rotate the latter for propelling the vehicle, and controlling means having an articulated stabilizing handle member extending to a position in which a person mounted on said platform may control the same, and a connection from said stabilizing member for controlling the application of the motive power by movement of said stabilizing member on its articulation.

2. In a self-propelled vehicle, a plurality of road wheels including front and rear wheels, a platform frame extending between the front and rear wheels, a motor for one of said wheels forming a driving wheel, means including a clutch for connecting the motor with the driving wheel, steering means connected with the driving wheel and including an articulated upwardly extending operating handle, and connections whereby the movement of the articulated handle in one plane is adapted to control the clutch and the movement of said handle in another plane is adapted to effect the steering of the driving wheel.

3. In a self propelled vehicle, the combination of a plurality of road wheels including front and rear wheels, a platform frame extending between the front and rear wheels and adapted to carry a person standing on the platform, a steering wheel frame rotative in the forward end of the platform frame and in which one of said road wheels constituting a steering wheel is mounted, an upwardly extending combined steering and controlling bar pivotally attached to the steering wheel frame and extending into position accessible to the occupant for turning the steering wheel frame to steer the vehicle, said bar be-

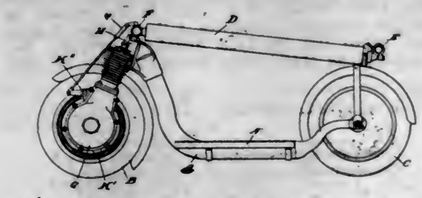
ing adapted to be rocked on its pivot to different degrees of inclination to control the power transmitted by a motor to a driving wheel, a motor mounted on the steering frame in conjunction with the steering wheel, and driving connections from the motor to the steering wheel including a clutch controlled by said bar.

4. In a self-propelled vehicle having a plurality of road wheels one of which is a steering wheel, a motor mounted to partake of the steering movement of the steering wheel and adapted to be connected thereto, an upwardly extending articulated bar adapted to steer the steering wheel and to be moved on its articulation to different positions of inclination, a brake for said steering and driving wheel, and connections between said bar and the brake so that the movement of said bar on its articulation operates the brake.

5. In a self-propelled vehicle, two road wheels in tandem, a platform frame extending between said wheels and adapted to carry a person standing thereon, a motor, driving connections therefor with one of said wheels including a clutch, an articulated upright having rigid stabilizing connections, and means for controlling the clutch by movement of said upright on its articulation.

[Claims 6 to 23 not printed in the Gazette.]

1,192,515. SELF-PROPELLED VEHICLE. ARTHUR HUGO CECIL GIBSON, New York, N. Y., assignor to Auto-Ped Company of America, a Corporation of Delaware. Filed Jan. 21, 1914, Serial No. 813,376. Renewed Dec. 24, 1915. Serial No. 68,582. (Cl. 21—90.)



1. In a self-propelled vehicle, in combination, two wheels in tandem, an engine for driving one of said wheels, a shaft forming an axle for said drive wheel, said engine having a frame supported on said axle, a vehicle frame on which the other wheel is mounted, said engine frame having a pivotal steering connection with said vehicle frame, a platform on said vehicle frame for the rider to stand upon, and a stabilizing upright at the forward end of said vehicle frame.

2. A self-propelled vehicle adapted to carry a person standing thereon, such vehicle comprising two wheels in tandem, a drop frame between said wheels, an engine, said engine having a frame supporting one of said wheels and connected to one end of said drop frame, a substantially upright stabilizing bar, and connections with said drop frame for holding said bar laterally rigid.

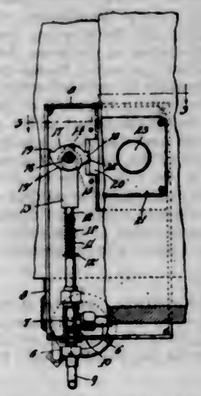
3. A self-propelled vehicle adapted to carry a person standing thereon, such vehicle comprising two wheels in tandem, an intermediate frame, a platform on said frame in close proximity to the plane of the lowest points of the vehicle, an engine for driving one of said wheels, the engine having a frame connected to one end of said intermediate frame, and transmission mechanism supported by said engine frame substantially within said driving wheel.

4. A self-propelled vehicle adapted to carry a person standing thereon, such vehicle comprising wheels in tandem one of which is a driving wheel, an intermediate frame, a platform on said frame at a level substantially below the centers of the wheels, an engine, transmission mechanism for connecting the engine to the driving wheel, the engine having a frame supporting the driving wheel on the intermediate frame, a combined brake and clutch mechanism coöperative with the driving wheel and with the transmission mechanism, and a control bar at the forward end of said frame mounted for substantially forward and back movement for operating said brake and clutch mechanism.

5. In a vehicle, in combination, two wheels in tandem relation, an intermediate frame supporting one of the wheels, the other wheel being a steering wheel, and a steering frame for the steering wheel located on one side only of the steering wheel and pivoted on the intermediate frame.

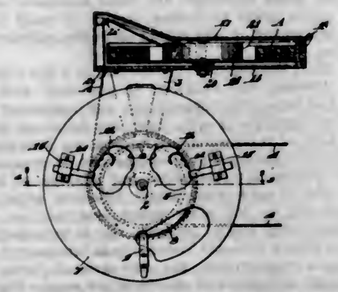
[Claims 6 to 17 not printed in the Gazette.]

1,192,516. AUTOMOBILE SAFETY-LOCK. CHRISTIAN E. P. GEBERT and CHARLES F. SCHREIBER, Chicago, Ill., assignors of one-third to Carl J. Klein, Chicago, Ill. Filed Dec. 22, 1914. Serial No. 878,529. (Cl. 137—4.)



The combination of a valve; an operating shaft; an operative connection between said shaft and valve; a lock provided with a spring bolt having a notch in its end; and a cam member on said shaft provided at one side with a projection having abrupt shoulders on each side thereof and adapted to engage and interlock with said notch and at its other side with a projection having an abrupt shoulder at one side adapted to engage and interlock with said notch and a cam surface at the other side adapted to force back said bolt upon rotation of said shaft in one direction, the arrangement being such that said first mentioned projection engages said notch when said valve is closed and said second mentioned projection engages said notch when said valve is open, substantially as described.

1,192,517. FILM-WINDING APPARATUS. HENRY J. HAMANN, South Chicago, Ill. Filed Sept. 2, 1914. Serial No. 859,748. (Cl. 88—18.7.)

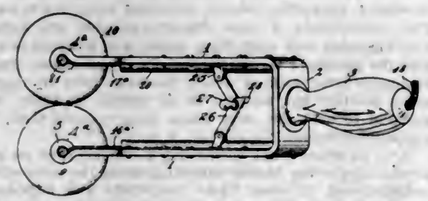


1. An apparatus of the class described comprising a magazine, a horizontally disposed film support rotatably mounted in said magazine, a central hub on the upper side of said support and a stationary guiding roller arranged adjacent said hub for coöperation with the film in unwinding, said roller having its axis substantially parallel to the axis of the reel and lying between the planes of the ends of the hub, substantially as described.

2. An apparatus of the class described comprising a magazine, a horizontally disposed film support rotatably mounted in said magazine, a central hub on the upper side of said support, a supporting arm hingedly connected with the outer wall of said magazine and projecting inwardly therefrom, and a guiding roller mounted on said arm and positioned adjacent said hub for coöperation with the film in unwinding.

3. An apparatus of the class described comprising a magazine; a horizontally disposed film support rotatably mounted in said magazine; a central hub on the upper side of said support; a supporting arm hingedly connected with the outer wall of said magazine and projecting inwardly therefrom; and a pair of guiding rollers mounted on said arm and positioned adjacent said hub for coöperation with the film in unwinding, substantially as described.

1,192,518. DEVICE FOR PRESSING CLOTHES. GEORGE F. HAMMOND, Cleveland, Ohio. Filed Sept. 6, 1912. Serial No. 718,847. (Cl. 68—9.)



1. The combination of a frame having opposite branches, opposite ironing drums carried by said branches, the frame being elastic and shaped to normally press said drums together by its own elasticity, and means for springing the frame to separate said drums.

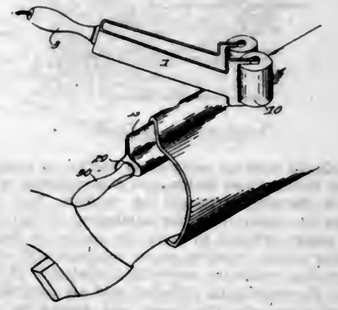
2. In a device of the character described, the combination, with a U-shaped frame of resilient material having forwardly extending spaced arms, of ironing drums secured to the forward end of each of said arms, the resilience of the frame being such as normally to draw said drums toward each other, a handle secured to a portion of said frame removed from said drums, and means for spreading apart the arms of said frame so as to separate said drums.

3. In a device of the character described, the combination with a U-shaped frame of resilient material having forwardly extending spaced arms, of an ironing drum secured to the forward end of each of said arms, the resilience of the frame being such as normally to draw said drums together, a handle secured to a portion of said frame removed from said drums, and a pair of links having their inner ends pivoted together and having their outer ends pivoted to the arms of said frame so as to form a toggle joint, whereby said arms can be spread apart and said drums separated.

4. In a device of the character described, the combination, with a frame having a pair of forwardly extending spaced arms, each of said arms being formed at its forward end with a pair of spaced, forwardly extending brackets substantially in the plane thereof, of an ironing drum mounted between each of said brackets and adapted to engage the drum carried by the brackets of the opposite arms, a handle secured to a portion of said frame removed from said drums, means for drawing said drums toward each other so as to press upon articles introduced therebetween, and means for separating said drums forcibly from each other so as to permit the introduction of such articles therebetween.

5. In a device of the character described, the combination, with a U-shaped frame having spaced, forwardly extending arms, of cylindrical ironing drums rotatably journaled at the ends of said arms with their axes substantially in the plane of said arms, a handle secured to the end of the frame remote from said drums and central with respect to the frame, and means for varying the distance between said arms so as to move said drums toward and from each other.

1,192,519. DEVICE FOR PRESSING CLOTHES. GEORGE F. HAMMOND, Cleveland, Ohio. Filed Feb. 21, 1913. Serial No. 749,892. (Cl. 68—9.)



1. As a new article of manufacture, a crease defining device that may be inserted into a garment while on the wearer, said device comprising a straight and comparatively slender base having a rib or flange projection therefrom.

2. As a new article of manufacture, a crease defining device that may be inserted into a garment while on the wearer, said device comprising a wooden base and a metal sheathing applied to opposite sides of said base and having an upwardly projecting fin or rib adapted to enter and define a crease and support the same while being operated upon by a moistening or pressing device.

3. As a new article of manufacture, a crease defining device that may be inserted into a garment while on the wearer, said device comprising a base portion having a thin central longitudinal rib the side surfaces of which merge gradually into the surface of the base.

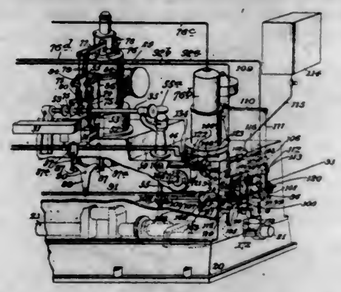
4. As a new article of manufacture, a crease defining device that may be inserted into a garment while on the wearer, said device comprising a wooden base of generally triangular cross section having concave sides, and a sheathing applied to said base and fitting said sides and having a fin or rib formed by bending the metal upon itself, the rib or fin being adapted to enter or define a crease in the garment and support the same during the moistening or pressing operation.

1,192,520. INTERNAL-COMBUSTION ENGINE. LEONARD B. HARRIS, Haddon Heights, N. J., assignor to Harris Patents Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 30, 1914. Serial No. 869,392. (Cl. 23—71.)

1. In an internal combustion engine, in combination, a power cylinder and piston, and a scavenging cylinder and piston therefor, arranged in tandem, means for controlling the admission of fuel charges to said power cylinder to drive the engine on fuel, and means operable by or independently of said last named means for controlling admission of compressed air to said scavenging cylinder to drive the engine by compressed air alone.

2. In an internal combustion engine, in combination, a power cylinder and piston, and a scavenging cylinder and piston therefor, arranged in tandem, means for controlling the admission of fuel charges to said power cylinder to drive the engine on fuel, means operable by or independently of said last named means for controlling admission of compressed air to said scavenging cylinder to drive the engine by compressed air alone, and means for connecting said last two means to operate to drive the en-

gine on fuel and simultaneously by compressed air admitted to said scavenging cylinder.



3. In an internal combustion engine, in combination, a power cylinder and piston, and a scavenging cylinder and piston therefor, arranged in tandem, fuel controlling means for controlling the admission of fuel charges to said power cylinder to drive the engine on fuel, air controlling means operable by or independently of said fuel controlling means for controlling admission of compressed air to the scavenging cylinder, said air controlling means including an operating lever, and means for connecting the same to said fuel controlling means to enable both said fuel controlling means and said air controlling means to be operated simultaneously by said fuel controlling means.

4. In an internal combustion engine, in combination, a power cylinder and piston and a scavenging cylinder and piston therefor, arranged in tandem, fluid operated valve means controlling the flow of air from said scavenging cylinder to said power cylinder, means for controlling the admission of fuel to said power cylinder to drive the engine on fuel, and means driven by a moving part of the engine for controlling said valve to effect air admission to said scavenging cylinder to drive the engine by compressed air alone when the fuel is cut off.

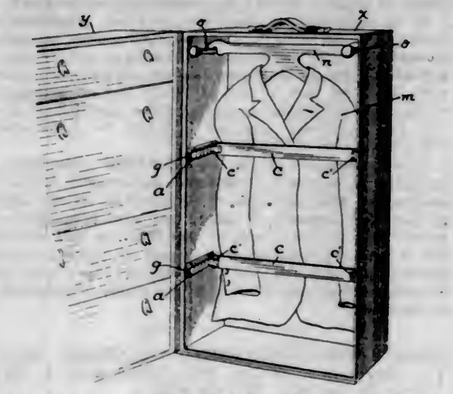
5. In an internal combustion engine, in combination, a power cylinder and piston and a scavenging cylinder and piston therefor, arranged in tandem, valve means controlling the flow of air from said scavenging cylinder to said power cylinder, means for controlling the admission of fuel to said power cylinder to drive the engine on fuel, and means for automatically controlling said valve by the admission of air to said scavenging cylinder to drive the engine by compressed air alone when the fuel is cut off.

[Claims 6 to 119 not printed in the Gazette.]

1,192,521. RETAINING DEVICE FOR GARMENT-SUPPORTERS. EUGENE W. HAWLEY, Philadelphia, Pa. Filed Nov. 4, 1915. Serial No. 59,513. (Cl. 190—13.)

1. A wardrobe trunk comprising a compartment for garments, supporting frames extending alongside the sides of the compartment, a cross frame adjustably engaging said supporting frames and adapted to be moved into and out of position to confine the garments in position in the compartment, a locking device movable independently of the cross frame and adapted to be moved into and out of position to hold the cross frame from removal from the supporting members, and a closure for said compartment adapted when moved into closing position to effect the movement of said locking device into operative position.

2. A wardrobe trunk comprising a compartment for garments, supporting frames extending along the sides of the compartment, a cross frame adjustably engaging said supporting frames and adapted to confine the garments in position in the compartment, a locking device adapted to hold the cross frame from removal from the supporting members, a spring normally holding said locking device in inoperative position, and a closure hinged to said compartment and adapted when moved into closing position to move said locking device against the action of its spring into operative position.



3. A wardrobe trunk comprising a compartment for garments, supporting frames extending along the sides of the compartment, a cross frame removably and adjustably engaging said supporting frames and adapted to confine the garments in position in the compartment, and a spring-actuated locking device normally held in inoperative position but adapted to be moved manually into position to hold the cross frame from removal from the supporting frames.

4. A wardrobe trunk comprising a compartment for garments, supporting frames extending along the sides of the compartment, a cross frame removably and adjustably engaging said supporting frames and adapted to confine the garments in position in the compartment, a locking device movably mounted on one of the supporting frames, and a spring normally holding the locking device in inoperative position, said locking device being movable into position to hold the cross frame in any position to which it may be adjusted.

5. A wardrobe trunk comprising a compartment for garments, a cross frame, supporting frames extending along the sides of the compartment one of which is provided with slots any of which are adapted to receive an end of the cross frame, and a locking bar movable along the slotted supporting frame and provided with slots adapted to be brought either into registry with the slots in the supporting frame to permit the entry or removal of the cross frame, or out of registry with the slots in the supporting frame to lock said end of the cross frame from withdrawal.

[Claims 6 and 7 not printed in the Gazette.]

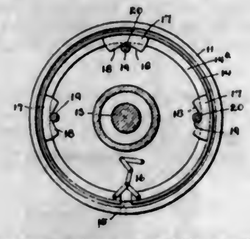
1,192,522. SAFETY-PIN. NEVILLE HUNSBERGER, Alden, Pa., assignor to Samuel Sternberger, Philadelphia, Pa. Filed May 1, 1915. Serial No. 25,169. (Cl. 24—156.)



1. In a safety pin, a pin proper having on its point portion a neck, the side faces of which are tapering, and a shield composed of a back and side walls and having on the inner terminals of said walls inwardly-extending lips, the inner edges of which have swells thereon, said side faces of the neck being adapted to be engaged by said swells and pressed thereby upwardly toward said back of the shield and held resiliently thereat.

2. In a safety pin, a pin proper having on its point portion a neck, the side faces of which are tapering, and a shield composed of a back and side walls and having on the inner terminals of said walls inwardly-extending lips, the inner edges of which have swells thereon, said side faces of the neck being adapted to be engaged by said swells and pressed thereby upwardly toward said back of the shield and held resiliently thereat, the lower portion of said neck being comparatively free of said swells.

1,192,523. DRUM-BRAKE. WILLIAM S. HUTCHINSON, Oyster Bay, N. Y. Filed Aug. 4, 1915. Serial No. 43,691. (Cl. 74—13.)



1. A brake comprising a rotatable member, a shoe arranged within and adjacent to said rotatable member, means for moving the shoe into and out of frictional engagement with said rotatable member, a block on the shoe thinnest near its central portion and with oppositely inclined faces converging toward such central portion, and a stationary abutment opposite and in contact with the inclined faces.

2. A brake comprising a rotating member, an expansible shoe substantially concentric with said member and within the same, means for expanding and contracting the shoe, blocks spaced apart on the inner portion of the shoe, said blocks being thinned near the central part and having oppositely inclined faces converging toward said central part, and abutments having fixed relation to the shoe rim and arranged to extend opposite the inclined faces of the blocks.

3. The combination of a rotatable member, a shoe arranged within the member and adapted to impinge against the same, means for moving the shoe into and out of frictional engagement with the rotatable member, inclined faces on the shoe, said faces converging toward each other, and a roller journaled on a stationary support and lying opposite said inclined faces.

4. A brake comprising a rotatable member, an expansible shoe substantially concentric with and lying within said member, means for expanding and contracting the shoe, blocks secured to the shoe and having inner inclined faces, the faces of each block converging toward the shoe, and rollers supported by stationary supports and lying opposite the inclined faces of the several blocks.

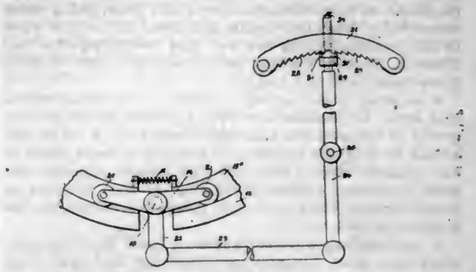
5. A brake comprising a rotatable member, a shoe arranged within the said member and having an inclined plane on the back thereof, and a roller mounted on a stationary support and lying opposite said inclined plane.

[Claim 6 not printed in the Gazette.]

1,192,524. BRAKE-OPERATING MECHANISM. WILLIAM SANFORD HUTCHINSON, Oyster Bay, N. Y. Filed Sept. 25, 1915. Serial No. 52,639. (Cl. 74—13.)

1. The combination with a drum brake comprising a drum, and a shoe extending along the inner surface of the drum with its ends spaced apart and adapted to engage the drum throughout essentially its whole length, of means for holding the shoe out of contact with the drum, means actuated by frictional contact of the shoe and drum for increasing the pressure of the shoe against the drum, and selective means for forcing either end portion of the shoe into contact with the drum.

2. A drum brake having a drum, a shoe extending along the inner surface of the drum and adapted to engage the drum throughout essentially its whole length, the end portions of the shoe being spaced apart, means independent of the setting mechanism for forcing the shoe against the drum, means for normally holding the shoe out of contact with the drum, and means for forcing the desired end portion of the shoe into frictional contact with the drum.



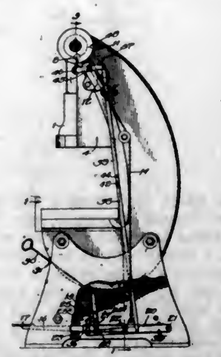
3. In a drum brake having a drum, a shoe extending around the inner surface of the drum rim and with its end portions spaced apart, and means independent of the setting mechanism for forcing the shoe into firm contact with the drum, means for normally holding the shoe out of such frictional contact with the drum, and a crank mechanism for separately forcing either end portion of the shoe into such frictional contact with the drum.

4. A drum brake having a drum, a shoe extending along the inner surface of the drum and adapted to engage the drum throughout essentially its whole length, the end portions of the shoe being spaced apart, means independent of the setting mechanism for forcing the shoe against the drum, means for normally holding the shoe out of contact with the drum, a crank arm located adjacent to the end portions of the shoe, and means actuated by the rotation of the crank arm to force said shoe ends against the drum.

5. In a drum brake having a drum, a shoe acting against the inner face of the drum and with its ends spaced apart, and mechanism actuated by the frictional contact of the shoe and drum for increasing the pressure of the shoe against the drum rim, means for normally holding the shoe out of frictional contact with the drum, means for forcing either end portion of the shoe against the drum, and locking means for holding the shoe and drum in contact.

[Claim 6 not printed in the Gazette.]

1,192,525. ATTACHMENT FOR RENDERING POWER-PRESSES NON-REPEATING. ERNST G. JENNER, Chicago, Ill. Filed Dec. 22, 1915. Serial No. 68,162. (Cl. 74—46.)



1. In a safety attachment for power presses, a power press having a clutch and a clutch-controlling lever, in combination with a treadle, and means manually actuated to connect and manually actuated to disconnect the treadle

to and from the lever whereby said lever and treadle will operate in unison, or said treadle will be movable independently of said lever.

2. A power press having a clutch and a clutch-controlling lever, in combination with a treadle pivotally supported at its inner end adjacent to said lever, and a crank connected to both the treadle and lever, said crank when in one position locking the lever and treadle together and when in another position permitting the lever to move independently of the treadle.

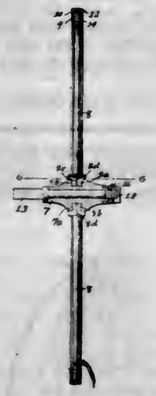
3. A power press having a clutch and a clutch-controlling lever, in combination with a treadle pivotally supported at its inner end adjacent to said lever, a crank connected to both the treadle and lever, said crank when in one position locking the lever and treadle together and when in another position permitting the lever to move independently of the treadle, and means for controlling the position of said crank.

4. A power press having a slide, a main shaft for operating said slide, a clutch for throwing said shaft into and out of connection with the power, and a lever for controlling said clutch; in combination with a treadle, a crank connected to both the treadle and lever for coupling and uncoupling them, and automatic means operated by said shaft for throwing said crank to the position in which the treadle and lever will be uncoupled.

5. A power press having a slide, a main shaft for operating said slide, a clutch for throwing said shaft into and out of connection with the power, and a lever for controlling said clutch; in combination with a treadle, a crank connected to both the treadle and lever for coupling and uncoupling them, a cam on said shaft, and connections between said cam and said crank for throwing said crank to non-acting or uncoupled position when acted upon by said cam.

[Claims 6 to 14 not printed in the Gazette.]

1,192,526. VEHICLE-WHEEL. GEORGE GREEN JOHNSON, Muskogee, Okla. Filed Jan. 14, 1916. Serial No. 72,066. (Cl. 21—31.)

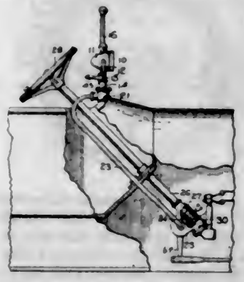


1. A vehicle wheel, comprising a hub provided with a circumferential channel of dovetail form in cross section, said channel being intercepted by an entry slot having parallel sides, a plurality of spokes having beveled butts fitting said channel, a spoke having a parallel sided butt to fit said slot, and a felly at the outer ends of said spokes.

2. A vehicle wheel, comprising a hub provided with a circumferential channel of dovetail form in cross section, said channel being intercepted by an entry slot having parallel sides, a plurality of spokes having beveled butts fitting said channel, a spoke having a parallel sided butt to fit said slot, means for locking said spokes against lateral movement with respect to each other, and a felly at the outer ends of said spokes.

3. A vehicle wheel, comprising a hub provided with a circumferential channel of dovetail form in cross section, said channel being intercepted by an entry slot having parallel sides, a plurality of spokes having beveled butts fitting said channel, a spoke having a parallel sided butt to fit said slot, means for preventing relative spoke movement laterally comprising tongues and grooves on and in contacting butt surfaces, and a felly at the outer ends of said spokes.

1,192,527. ADJUSTABLE SPOT-LIGHT. GILBERT HENRY JOHNSON, Jr., New York, N. Y. Filed Nov. 5, 1915. Serial No. 59,761. (Cl. 240—61.)



1. An adjustable spot light for automobiles and other vehicles, comprising a lamp having a pivot, a bearing in which the pivot of the lamp is mounted to turn and slide, gearing in the bearing, a clutch connecting one of the gears of the gearing with the pivot of the lamp, gearing driven from the steering gear of the vehicle, a shaft connecting the last-named gearing with the first gearing, and manually controlled means for sliding the pivot of the lamp from the said gearing.

2. An adjustable spot light for automobiles and other vehicles, comprising a lamp having a pivot, a bearing in which the said pivot is mounted to turn and to slide in the direction of the axis of the pivot, and a hand lever pivotally connected with the said pivot and fulcrumed on the said bearing to raise and lower the lamp and to turn the same.

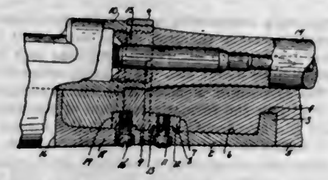
3. An adjustable spot light for automobiles and other vehicles, comprising a lamp having a pivot, a bearing in which the said pivot is mounted to turn and to slide in the direction of the axis of the pivot, and a hand lever pivotally connected with the said pivot and provided with a set screw resting on the said bearing.

4. An adjustable spot light for automobiles and other vehicles, comprising a bracket adapted to be attached to the vehicle and provided with a bearing, a lamp having a pivot mounted to turn and to slide in the said bearing, a gearing in the said bearing, a clutch normally connecting the said pivot with the said gearing, a flexible shaft with the said flexible shaft and driven from the steering gear of the vehicle, and a hand lever mounted to swing on the bearing as its fulcrum and connected with the said pivot to permit of lifting the latter to disconnect the members of the clutch and to allow of turning the lamp independent of the gearing.

5. An adjustable spot light for automobiles and other vehicles, comprising a bracket adapted to be attached to the vehicle and provided with a bearing, a lamp having a pivot mounted to turn and to slide in the said bearing, a gearing in the said bearing, a clutch normally connecting the said pivot with the said gearing, a flexible shaft connected with the said gearing, a driving gear connected with the said flexible shaft and driven from the steering gear of the vehicle, a hand lever mounted to swing on the bearing as its fulcrum and connected with the said pivot to permit of lifting the latter to disconnect the members of the clutch and to allow of turning the lamp independent of the gearing, and means for limiting the sliding movement of the said pivot.

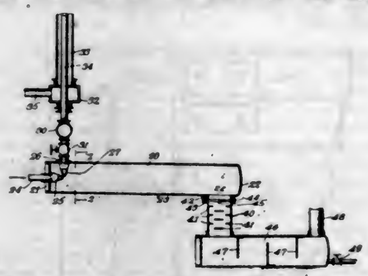
[Claims 6 to 9 not printed in the Gazette.]

1,192,528. MILITARY SHOULDER-ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Nov. 8, 1915. Serial No. 60,177. (Cl. 42—75.)



In a military shoulder-arm, the combination with the receiver thereof, of a receiver-extension having a forwardly projecting lug, a forestock formed in its lower face with a locking-recess, and a forestock-lock entering the said recess and having its rear end fastened to the said lug.

1,192,529. PROCESS FOR EXTRACTING LIGHT LIQUEFIABLE HYDROCARBONS FROM NATURAL GAS. EDWARD D. KENDALL, Elizabeth, N. J., assignor of one-third to the estate of William A. Megrath, Brooklyn, N. Y., and one-third to Louis T. Haggin, Closter, N. J., Margaret V. Haggin and Allan McCulloh, New York, N. Y., and H. Eek Moller, Montclair, N. J., executors of James B. Haggin, deceased. Filed Dec. 4, 1912. Serial No. 734,816. (Cl. 196—25.)



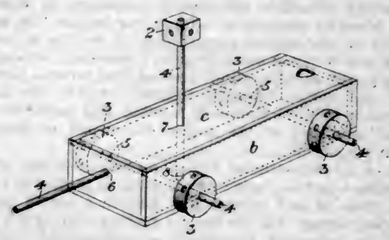
1. The process of extracting gasolene from natural gas containing gasolene, which consists in subjecting liquid hydrocarbons heavier than gasolene and at a lower temperature to a current of said natural gas, whereby the separated particles of hydrocarbons and gasolene will be mixed, causing the particles of hydrocarbons and gasolene to pass through restricted passages to promote their coalescence, collecting the coalesced particles and separating the gas from the coalesced particles.

2. The process of extracting gasolene from natural gas containing said gasolene, which consists in subjecting liquid hydrocarbons heavier than said gasolene and at a lower temperature to a current of said natural gas whereby the sprayed particles of hydrocarbons and gasolene will be mixed, causing the particles of hydrocarbon and gasolene to pass through screens of varying mesh on which the sprayed particles are caused to coalesce, collecting the coalesced particles from said screens, and separating the gas from the coalesced particles.

1,192,530. TOY. LOUIS H. KIRK, New York, N. Y., assignor to Peg Lock Block Company Inc., New York, N. Y., a Corporation of New York. Filed Apr. 1, 1916. Serial No. 88,198. (Cl. 46—35.)

1. A toy comprising building elements and a container therefor, the building elements including rods and perforated disks adapted to be fitted on said rods, and the container being provided with openings in its opposite sides to removably receive one of the rods with disks located on its opposite ends exterior of the container, for the purpose described.

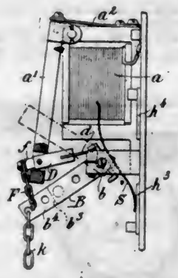
2. A toy comprising building elements and a container therefor, the building elements including rods and perforated disks adapted to be fitted on said rods, and the container being provided with two pairs of openings in its opposite sides and adjacent the opposite ends of the container to removably receive two rods with disks on their opposite ends exterior of the container, for the purpose described.



3. A toy comprising building elements and a container therefor, the building elements including rods and perforated disks adapted to be fitted on certain of said rods, and the container being provided with openings in its opposite sides and also with an opening in one end thereof, the openings in the sides of the container being adapted to removably receive one of the rods with disks on its opposite ends exterior of the container serving as wheels, and the opening in the end of the container adapted to removably receive one of the rods to serve as a wagon tongue.

4. A toy comprising building elements and a container therefor, the building elements including rods and perforated disks adapted to be fitted on certain of said rods, and the container having a removable cover and being provided with openings in its opposite sides and also in the cover and bottom thereof, the openings in the sides of the container being adapted to removably receive one of the rods with disks on its opposite ends exterior of the container serving as wheels, and the openings in the cover and bottom being oppositely located and adapted to removably receive one of said rods and support the same with one end projecting above the cover, for the purpose described.

1,192,531. MAGNET-ACTUATED DEVICE. FREDERICK T. KITCHEN, West New Brighton, N. Y., assignor to Compressed Metal Co., New York, N. Y., a Corporation of New York. Filed Jan. 21, 1914. Serial No. 813,498. (Cl. 175—281.)



1. A magnet-actuated device comprising a magnet, two contact pieces, a tilting member pivotally mounted in a fixed part of said device, a spring adapted to hold said member in adjusted position, a spring switch positively connected to said tilting member and positively moved by the movement of said tilting member and adapted to contact with one or the other of said contact pieces and to remain in contact therewith until said tilting member passes the dead center, and a dog movably mounted upon a moving element of said magnet and adapted, when the

magnet is energized, to tilt said member and throw said switch.

2. A magnet-actuated device comprising a pivoted switch operating member, an electric circuit, a magnet included therein, a spring switch positively connected to said operating member so as to be positively moved thereby into or out of contact with the terminal of said circuit, and means for moving said switch operating member from a moving element of said magnet comprising an operating dog pivotally mounted on said moving element, the spring action of said switch permitting it to remain in contact with said terminal until the switch operating member has been moved past its center, a connection between said dog and said switch operating member, whereby the dog is moved by relative movement between said parts, whereby upon energizing of the magnet the switch is mvoed to open the circuit.

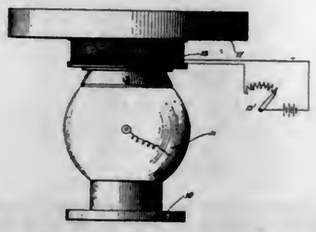
3. A magnet-actuated device, comprising a pair of terminals, a rocking spring switch adapted to engage one or the other of said terminals, a magnet, a spring pressed moving element and devices for rocking said switch actuated by successive energizings of said magnet, whereby when the circuit is closed through the magnet and one of said terminals by said switch the switch is rocked and its spring action permits it to keep the circuit closed until the moving element has traveled a substantial part of its way toward the magnet.

4. A magnet-actuated device, comprising a pair of terminals, a magnet, a rocking switch actuator pivotally mounted adjacent said magnet, and adapted to be rocked by the movable element of said magnet when the magnet is energized, a switch having spring arms carried by said rocking actuator, said switch adapted to contact with either of said terminals through one or the other of said arms, and to remain in contact with the terminal through which current is passing until the said moving element has moved said actuator past its center position, and to break the circuit when the actuator is moved to its extreme opposite position.

5. A magnet-actuated device, comprising a pair of terminals, a magnet, a rocking switch actuator pivotally mounted adjacent said magnet, a dog movably mounted in a moving element of said magnet and adapted to rock said actuator as the magnet is energized, a switch having spring arms carried by said rocking actuator, said switch adapted to contact with either of said termianls through one or the other of said arms and to remain in contact with the terminal through which current is passing until the said moving element has moved said actuator past its center position and to break the circuit when the actuator is moved to its extreme opposite position.

[Claims 6 to 12 not printed in the Gazette.]

1,192,532. GYROSCOPE. EMIL KLAHN, Weehawken, N. J. Filed July 15, 1912. Serial No. 709,367. (Cl. 74—78.)



1. A gyroscope, comprising a rotatable gyroscopic member, a driving member therefor upon which said member is mounted free to turn about one axis and free to make limited oscillations about two other axes, and means to rotate the gyroscopic member from the driving member without actual contact between the same.

2. A gyroscope comprising a rotatable gyroscopic member, a driving member therefor upon which said member is mounted free to turn about one axis and free to make limited oscillations about two other axes, and magnetic means to rotate the gyroscopic member from the driving member while maintaining the former's freedom of movement.

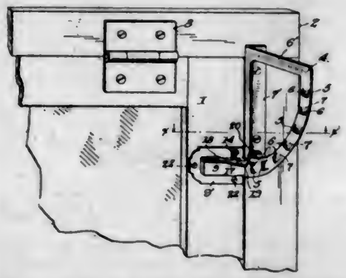
3. A gyroscope, comprising a rotatable gyroscopic member, a driving member therefor upon which said member is mounted free to turn about one axis and free to make limited oscillations about two other axes, magnetic means to rotate the gyroscopic member from the driving member while maintaining the former's freedom of movement and to transmit the gyroscopic property of the former to the latter, and means to control said magnetic means.

4. A gyroscope, comprising a rotatable gyroscopic member, a driving member therefor upon which said member is mounted free to turn about one axis and free to make limited oscillations about two other axes, and magnetic means carried by and rotating with said driving member to rotate the gyroscopic member while maintaining its freedom of movement.

5. A gyroscope, comprising a suitable driving member, and a shaft rotated thereby; a gyroscopic member, and a universal joint connecting the same with said sahft; and magnetic means in operative relation to said shaft and in proximity to said gyroscopic member to rotate the latter and transmit its gyroscopic property to the said driving member.

[Claims 6 and 7 not printed in the Gazette.]

1,192,533. WINDOW-LOCK. RUDOLPH W. KOCH, Milwaukee, Wis. Filed Oct. 18, 1915. Serial No. 56,409. (Cl. 16—28.)

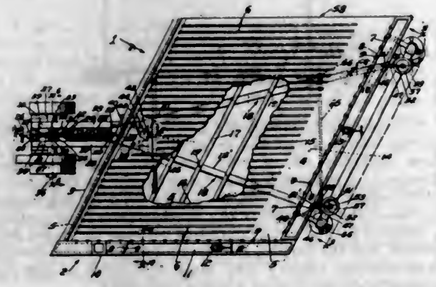


1. In a device of the described class, the combination of a window frame, a bracket provided with a series of stops secured to said frame, a window sash, means for pivotally suspending said window sash from said frame, a bolt slidably attached to said window sash and adapted as the latter is raised to automatically engage any one of the series of stops of said bracket, means for holding said bolt out of engagement with said bracket as the window sash is closed, and means for automatically releasing said bolt from engagement with said holding means as the window sash is brought to its closed position.

2. In a device of the described class, the combination of a window frame, a bracket provided with a series of stops secured to said frame, a window sash, means for pivotally suspending said window sash from said frame, a bolt slidably attached to said window sash and adapted as the latter is raised to automatically engage any one of the series of stops of said bracket, a pin attached to the side of said bolt, a bolt inclosing case, a latch pivotally connected with said case provided with a shoulder, said shoulder being adapted as the window sash is opened to be automatically thrown into engagement with said bolt and to hold said bolt out of contact with said bracket as said window sash is closed.

3. In a device of the described class, the combination of a window, frame, a bracket provided with a series of stops secured to said frame, a window sash, means for pivotally suspending said window sash at its upper edge from said frame, a bolt slidably attached to said window sash and adapted as the latter is raised to automatically engage any one of the series of stops of said bracket, a pin attached to the side of said bolt, a bolt inclosing case, a latch pivotally connected with said case provided with a shoulder, said shoulder being adapted as the window sash is opened to be automatically thrown into engagement with said bolt and to hold said bolt out of contact with said bracket as said window sash is closed, said latch being also adapted to contact with a stop as said window sash is closed, whereby said bolt is automatically released from said holding means preparatory to again holding said window sash as the latter is raised.

1,192,534. ORE-CONCENTRATOR. JACOB LAMPERT, Rapid City, S. D. Filed July 29, 1911. Serial No. 641,389. (Cl. 83—88.)



1. A concentrator table set forth comprising a body composed of a riffled deck, joists that run transversely with relation to the riffles of the deck, and diverging thrust beams which are fastened to and support the joists; the adjacent ends of the thrust beams practically abutting together at the head motion side of the table at the center of gravity of such side; a supporting bearing for the adjacent ends of the thrust beam; adjustable links connected to the divergent ends of the beams; and means to apply motion to the abutting ends of the beams.

2. A concentrator comprising a riffled table provided with divergent beams having adjacent ends, the angle between which beams is bisected by a line parallel with the riffles of the table; a single central support at the adjacent ends of the beams, and two links at the concentrates discharge side of the table to uphold the table and to allow it to be reciprocated; and means to apply power at the adjacent ends of the beams to reciprocate the table in a path the traces of which are parallel with said line; said links being suspended from above the table and the table being thus supported at three points only.

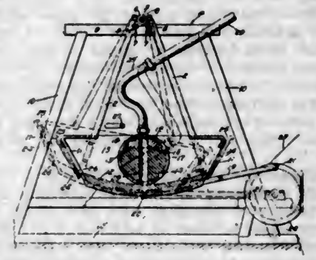
3. In a concentrator, the combination with the concentrating table, of means to permit universal movement of one side of the table, swinging means to support the other side of the table, an adjustable truss to allow and to prevent tilting movement of said table, and means to adjustably hold the truss.

4. The combination with a table mounted for reciprocation and adapted to tilt, of an adjustable truss hinged to the table, and means to adjustably hold the truss in different table-tilting positions.

5. In a concentrator the combination of a concentrating table mounted to tilt and reciprocate, beams fastened to the under-side of the table and having their ends meet at one side and diverging thence to the concentrates side of the table, a support under the meeting ends of the beams, a post adjacent the diverging end of each beam, supporting means swung from the posts to the table to support the table and adapted to allow practically horizontal movement of the table, and a rod provided to steady the concentrates side of the table, said rod fastened to one of the posts at one end and to the beam removed from the post at its other end.

[Claims 6 to 10 not printed in the Gazette.]

1,192,535. SWINGING ORE-MILL. JACOB LAMPERT, Rapid City, S. D. Filed Jan. 20, 1912, Serial No. 672,500. Renewed Dec. 20, 1915. Serial No. 67,953. (Cl. 83—53.)



1. An ore mill comprising a pan, a crusher in the pan, means to cause relative movement between the crusher and the pan, terminal screens for pan, means to hold the screens at different heights above the floor of the pan, and blocks insertible below the screens when the same are raised to govern the depth of pulp in the pan.

2. An ore mill comprising a pan, means to suspend the pan, a roller in the pan provided with a feed-way therethrough closed by the pan in one position, thereby, and means to swing the pan to cause alternate opening and closing of the feed-way.

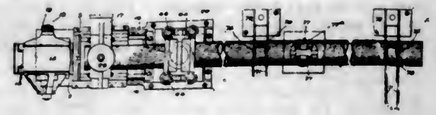
3. The ore mill crushing roller set forth consisting of a hollow cylindrical shell and a heavy segmental core in the shell to overbalance one side thereof.

4. The ore mill crushing roller set forth consisting of a hollow cylindrical shell; a heavy segmental core in the shell to overbalance one side thereof; and a light block in the top of the shell above the segmental core.

5. The combination with a swinging pan; of a crushing roller comprising a core in the form of a segment of a cylinder and a cylindrical shell thereon adapted to be overbalanced by said core.

[Claims 6 to 8 not printed in the Gazette.]

1,192,536. APPARATUS FOR FINISHING PIPES. JOSEPH W. LATSHAW, Pittsburgh, Pa., assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 25, 1916. Serial No. 93,521. (Cl. 29—33.)



1. Apparatus for finishing pipes comprising rotary pipe facing and chamfering means, and pipes supporting means in front of said facing and chamfering means, said supporting means having sets of rollers to support the pipes when moving the pipes endwise, a second set of rollers to support the pipes when being rotated or turned axially, and means for causing a relative adjustment of said sets of rollers whereby a pipe supported on one set is transferred to the other set thereof.

2. Apparatus for finishing pipes comprising rotary pipe facing and chamfering means, pipe rounding mechanism in front of and in alinement with said means, and pipe supporting means in front of said facing means and rounding mechanism, said supporting means having sets of rollers to support the pipe when moving the pipe endwise, a second set of rollers to support the pipe when being rotated or turned axially, and means for causing a relative vertical movement of said sets of rollers whereby a pipe supported on one set is transferred to the other set thereof.

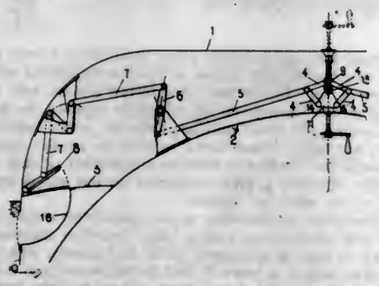
3. Apparatus for finishing pipes comprising rotary pipe facing and chamfering means, pipe rounding mechanism in front of and in alinement with said means, pipe supporting means in front of said facing and chamfering means and rounding mechanism, said supporting means having sets of rollers to support the pipes when moving the pipes endwise, a second set of rollers to support the pipes when being rotated or turned axially, and means for causing a relative vertical movement of said sets of rollers whereby a pipe supported on one set is transferred to the other set thereof, and horizontal skids extending on opposite sides of the rollers on which the pipes are rolled transversely into and out of position on said sets of rollers.

4. Apparatus for finishing pipes comprising rotary pipe facing and chamfering means, pipe rounding mechanism in front of and in alinement with said means, and pipe supporting means in front of said facing and chamfering means and rounding mechanism, said supporting means having a set of rollers to support the pipes when moving the pipes endwise, a second set of rollers to support the pipes when being rotated or turned axially, and means for causing a relative movement of said sets of rollers whereby a pipe supported on one set is transferred to the other set thereof, and horizontal skids extending on opposite sides of the rollers on which the pipes are rolled transversely into and out of position on said sets of rollers, said skids and rollers being vertically adjustable to hold pipes of varying sizes in alinement horizontally with the rotary facing means.

5. Apparatus for finishing pipes comprising a facing machine having cutting tools for facing and chamfering the pipe ends, means movably mounted on the facing machine for gripping and moving the pipes lengthwise into cutting engagement with said cutting tools, a pipe rounding mechanism in front of said facing machine having relatively movable dies adapted to engage with and round the ends of pipes to be faced and chamfered and having means for causing a relative approach of said dies, and means in front of said rounding mechanism forming a horizontal pipe support, said means having sets of horizontal rollers with the axes thereof extending at right angles to the axis of the pipe for supporting the pipes in moving the pipes lengthwise, horizontal rollers with the axes thereof extending parallel to the longitudinal axis of the pipe for supporting the pipes when being turned or rotated, and means for causing a relative vertical movement of the sets of rollers to transfer the pipes from one to the other thereof.

[Claims 6 to 10 not printed in the Gazette.]

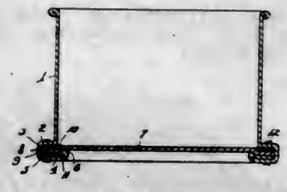
1,192,537. SUBMARINE VESSEL. CESARE LAURENTI, Turin, Italy, assignor to Società Fiat-San Giorgio, Spezia, Italy. Filed Oct. 7, 1915. Serial No. 54,573. (Cl. 114—16.)



1. A submarine or submersible vessel having a water compartment, and valves adapted to open and close said compartment to the sea, means for simultaneously operating a plurality of said valves, said means comprising a compensating device adapted to permit limited independent seating of the valves.

2. A submarine or submersible vessel having a hollow superstructure, valves adapted to open and close said superstructure to the sea, said valves being arranged above the normal water line of the vessel, said valves being symmetrically distributed on each side of the vessel, and means for simultaneously operating symmetrically disposed valves, said means comprising a compensating device adapted to permit limited independent seating of the valves.

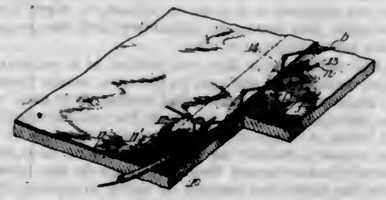
1,192,538. SHEET-METAL TANK. JOHN F. LESLIE, Madison, Wis. Filed Aug. 8, 1914. Serial No. 855,727. (Cl. 220—125.)



1. A receptacle comprising a side wall having its lower portion bent laterally and outwardly and then inwardly to form relatively spaced upper and lower joint sections, a downwardly projecting ridge being formed at the juncture of the upper joint section and side wall, a bottom extending beyond the side wall and between said joint sections, a yielding sealing strip interposed between the upper joint section and the bottom, and retaining means for drawing said elements together and cause said ridge to bite into the sealing strip to form a water tight joint.

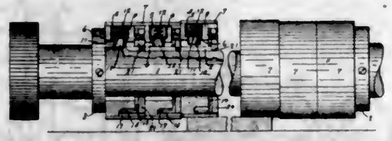
2. A receptacle comprising a side wall having its lower portion bent to provide an upper laterally and outwardly extending joint section with the point of bend forming an inner and downwardly projecting ridge, thence bent inwardly in spaced relation with said upper joint section and folded upon itself to form a lower joint section having a bead at the point of its inner bend extending above the upper surface of said fold and disposed inwardly of the projecting ridge of the upper joint section, a bottom member extending beyond the side wall and between said joint sections having a marginal depression forming shoulders on the upper and lower sides thereof, the shoulder on the lower side engaging the bead of the lower joint section to prevent outward spread of the side wall, a yielding sealing strip disposed between the upper joint section and the depressed portion of the bottom member, and retaining elements adapted to draw the joint sections, bottom member, and sealing strip into binding engagement and cause the projecting ridge of the upper joint section to bite into the sealing strip, the shoulder on the upper side of the bottom member being adapted to prevent inward spread of the sealing strip.

1,192,539. SEAM FOR SEWED ARTICLES. JOHN G. LEWIS, St. Louis, Mo. Filed Jan. 30, 1914. Serial No. 815,398. (Cl. 112—34.)



A hem or seam for sewed articles comprising a base layer, an edge-presenting superimposed fabric, and two connected rows of lock stitches, one thereof local to the base layer, the other local to the superimposed fabric, all stitches of both rows lying, in their portion penetrating the goods, parallel to the direction of the seam, thereby to dispose the emergence points of the stitches always at the same distance from the edge-line regardless of variations in thickness or number of plies of the superimposed fabric.

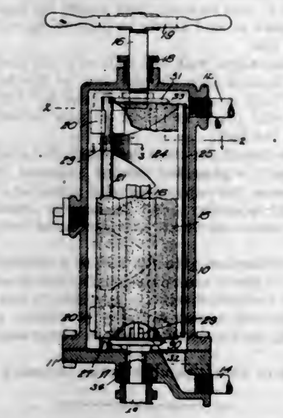
1,192,540. FEED-ROLLER FOR LUMBER-WORKING MACHINES. ARTHUR LIBERT, Green Bay, Wis. Filed Aug. 15, 1913. Serial No. 784,862. (Cl. 144—250.)



1. A feed roller provided with a central shaft, yielding annular sections constituting core pieces surrounding said shaft and each provided with sockets extending inwardly from the periphery and terminating inwardly in reduced openings, headed pins mounted in the sockets, the points of said pins projecting through the openings in the bottoms of the sockets, an outer sleeve covering the sockets, and springs located between the heads of the pins and the sleeve.

2. A feed roller provided with a central shaft, yielding annular sections surrounding said shaft and each provided with sockets extending inwardly from the periphery partially through the sections, the bases of said sockets having inwardly extending openings of less diameter, headed pins mounted in the sockets with the shanks of said pins projecting through the openings in the bottoms of the sockets, separable means for closing the outer ends of said sockets, and springs located between the heads of the pins and the socket-closing means.

1,192,541. SELF-CLEANING LIQUID-FILTER. THEODORE LINKE, New York, N. Y. Filed Sept. 11, 1915. Serial No. 50,254. (Cl. 210—11.)



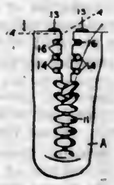
1. A filter, comprising a casing provided at its inner face with pairs of integral retaining lugs, a filtering medium mounted to be turned within the said casing, a scraper blade holder in the form of a bar engaging the said retaining lugs and having notches opposite the inner surface of the casing, and a scraper blade of resilient material and having one end provided with tongues engaging the said notches and being bent around the bar, the free end of the said blade being in scraping contact with the said filtering medium.

2. A filter comprising a casing provided on its inner face with pairs of undercut retaining lugs, a filtering medium rotatably mounted within said casing, a scraper blade holder in the form of a bar engaging and removably held in place by said undercut lugs, a scraper blade of sheet material, means carried at one edge by said blade for engaging said blade holder bar, the free end of the said blade being in scraping contact with said filtering medium.

3. A filter comprising a casing provided on its inner face with vertical guides, a filtering medium rotatably mounted within said casing, a scraper blade holder in the form of a bar removably engaging and held by said guides, a scraper blade of resilient material and having one end provided with tongues, the blade holder bar provided with means for engaging said tongue, the free end of the scraper blade being in scraping contact with said filtering medium.

4. A filter comprising a casing provided on its inner face with pairs of undercut retaining lugs, a filtering medium mounted to be turned within said casing, a scraper blade holder in the form of a bar having one flat face and a pair of inclined faces to fit within the undercut lugs, and having notches in the flat face, and a scraper blade of resilient material and having one end provided with tongues engaging the said notches and bent around the bar, the free end of the blade being in scraping contact with said filtering medium.

1,192,542. SHOE ATTACHMENT. ALPHONSE LORRAINE LUSSIER, Springfield, Mass. Filed Jan. 14, 1916. Serial No. 72,065. (Cl. 24—235.)

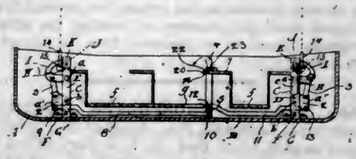


1. The combination of a shoe having oppositely arranged recesses in the sides of its opening, a casing inclosed in each side and having recesses registering with the recesses of the shoe, and a slide in each casing and provided with tongues adapted to extend across the outer portions of the said recesses.

2. The combination of a shoe having guide-ways in the sides of its opening and oppositely arranged recesses in the guide-ways, and a slide mounted in each guide-way and provided with tongues adapted to extend across the outer portions of the said recesses.

3. As a new article of manufacture, a lace holding and releasing device for shoes, consisting of a casing having recesses in one edge, and a slide mounted in the casing and provided with tongues adapted to extend across the recesses of the casing, one of the said parts having a projection and the other a slot to receive the projection, whereby the slide will be held in the casing and its movement therein limited.

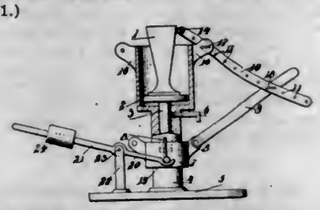
1,192,543. COUPLING MEANS FOR LIFE-BOATS. JOHN ALEXANDER MCNABB and GILBERT EMERY, Collingwood, Ontario, Canada, assignors of one-third to George Tinegate, Collingwood, Ontario, Canada. Filed Mar. 7, 1916. Serial No. 82,575. (Cl. 9—23.)



The combination with a life boat, of a pair of standards supported within said life boat one near each end thereof, the upper end of each standard being provided with an

eye; a hook pivoted to each of said standards, the free end of each of which normally rests within its respective eye; a stripper carried by each of the said standards and positioned underneath the free end of each of the said hooks; the outer end of each of said strippers being hook-shaped; a lever; means whereby said lever is pivoted in place; connecting means between said lever and each of the said hooks whereby when said lever is moved in a certain direction said hooks will be simultaneously opened to release the boat, and suitable locking means for said lever.

1,192,544. FIXING DEVICE FOR GLASS VESSELS TO BE GROUND. MAURICE MATHY, Flémalle Grande, Belgium. Filed May 18, 1915. Serial No. 28,953. (Cl. 51—11.)



1. In a device for securing glass vessels during the grinding thereof, the combination of a post, a supporting plate capable of adjustment on said post, a sleeve slidably mounted on said post, a plurality of arms pivoted to said sleeve, a plurality of gripping levers adjustably pivoted to said post, grippers pivoted to the ends of said levers, adjustable pivotal connections between said arms and levers, and means for displacing said sleeve to cause the grippers to engage with or release the glass vessel.

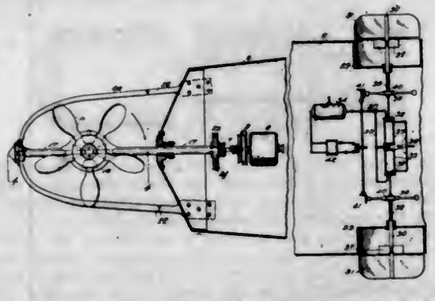
2. In a device for securing glass vessels during the grinding thereof, the combination of a post, a supporting plate secured at a suitable height upon said post, a sleeve slidably mounted on said post, arms jointed to said sleeve, ears fixed to the post, gripping levers pivotally mounted on said ears and jointed to the end of the aforesaid arms, grippers jointed to the end of the gripping levers, means for varying at will the point of the lever to which the corresponding arm is jointed, means for varying the position of the pivot of the levers, two pins provided on the sleeve, an operating lever turning on a fixed pivot, a fork provided at the end of said operating lever, the two arms of which fork terminate in hooks in which the two pins are arranged, and a weight slidably mounted on the operating lever.

3. In a device for securing glass vessels during the grinding thereof, the combination of a post, a supporting plate secured at a suitable height upon said post, a sleeve slidably mounted on said post, a plurality of arms jointed to said sleeve, ears fixed to the post, gripping levers pivotally mounted on said ears and jointed to the end of the aforesaid arms, grippers jointed to the end of the gripping levers, means for varying at will the point of the lever to which the corresponding arm is jointed, means for varying the position of the pivot of the levers, a stanchion jointed to each of the gripping levers between the pivot of the lever and its buffers, an elastic gripper provided at the end of said stanchion and adapted to be applied against the foot of the vessel to be ground, means for varying the length of said stanchion and means for moving the sleeve on the post with the purpose of causing the grippers of the gripping levers to be removed from or driven nearer to each other.

1,192,545. TREATING PHOSPHATES. CHRISTOPHER G. MEMMINGER, Lakeland, Fla., assignor to Coronet Phosphate Company, New York, N. Y., a Corporation of New York. Filed Dec. 4, 1915. Serial No. 64,958. (Cl. 71—7.)

The hereinbefore described method of treating raw phosphate material, containing free silica, to increase the percentage of phosphoric acid therein, consisting in applying sufficient heat to the raw phosphate material under oxidizing conditions to decompose the calcium carbonate therein, and cause the calcium oxid thus formed to combine with the free silica.

1,192,546. SUBMARINE PROPULSION. DANIEL FRANCIS MURPHY, Prince Rupert, British Columbia, Canada. Filed Oct. 5, 1915. Serial No. 54,167. (Cl. 115—34.)



1. In combination with the hull of a submarine vessel, a propeller located adjacent the bow of the hull; means for rotating said propeller; means for adjusting the position of said propeller about an axis extending longitudinally of the hull; two outwardly-opening recesses formed one in each side of the hull; a fin adapted to be moved into and out of each of said recesses; and means for moving said fins into and out of said recesses.

2. In combination with the hull of a submarine vessel, a propeller located adjacent the bow of the hull; means for rotating said propeller; means for adjusting the position of said propeller about an axis extending longitudinally of the hull; two outwardly-opening recesses formed one in each side of said hull; a reciprocating shaft associated with each of said recesses; means for reciprocating said shafts; a fin carried by each of said shafts and movable into and out of said recesses; and means for imparting angular movement to said shafts to thereby vary the inclination of said fins.

3. In combination with the hull of a submarine vessel, a propeller located adjacent the bow of the hull; means for rotating said propeller; and means for adjusting the position of said propeller about an axis extending longitudinally of the hull.

4. In a device of the class described, the hull of a submarine vessel; a propeller located adjacent the bow of the hull; means for supporting said propeller; means for rotating said propeller; and means for adjusting said supporting means about an axis extending longitudinally of the hull.

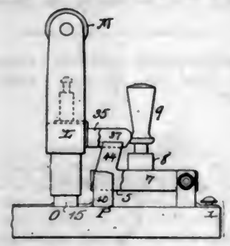
5. The combination with the hull of a submarine vessel, of a rotatable shaft extending longitudinally of said hull and through the bow thereof; a propeller driven from said shaft; supporting means for said propeller; and means for adjusting said supporting means about said rotatable shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,192,547. METER-TESTING CUT-OUT. THOMAS E. MURRAY, Jr., Brooklyn, N. Y., assignor to Thomas E. Murray, New York, N. Y. Filed Dec. 2, 1915. Serial No. 64,692. (Cl. 175—183.)

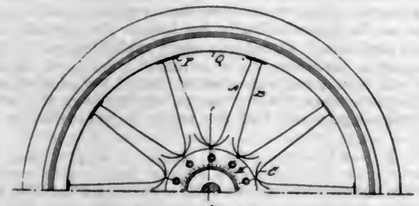
1. In combination with line conductors, a meter of the type set forth, and a service switch comprising a plurality of pivoted levers, a separate device for shunting the load around the meter, a removable bridge connecting the meter coils in series, contacts on said separate device, and testing apparatus in circuit with said contacts; the said switch levers coöperating with said contacts to establish circuit through said meter and said testing apparatus.

2. In combination with line conductors, a meter of the type set forth, a base, meter and line conductor terminals thereon, and a service switch on said base comprising a plurality of pivoted levers, two rows O, P of fixed contacts on said base, corresponding contacts in each row being connected in series to said line conductor terminals, a gang plug coöperating with row O of said rows of contacts to shunt the load around the meter, a plurality of



contacts 35, 36, 37, 38, 39 carried by said plug, testing apparatus connected to said contacts 35, 36, 37, 38, 39, and a removable bridge coöperating with two of said meter terminals for connecting the meter current coils in series: the said switch levers being movable into coöperation with the other row P of said fixed contacts to open and close circuit from supply to load, and with the contacts 35, 36, 37, 38, 39 on said plug to open and close circuit through said meter and said testing apparatus.

1,192,548. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Feb. 18, 1916. Serial No. 79,049. (Cl. 21—69.)



1. A metal vehicle wheel, comprising a plurality of hollow spokes having frusto-wedge-shaped enlargements at their inner ends, the inclined sides of said enlargements being placed in juxtaposition to form a nave, and the inclined sides of each spoke having a struck up recess tapering inwardly from opposite faces of said spoke and registering with similar recesses in the inclined sides of the adjacent spokes to form tubes extending through said nave, and tapered pins received in opposite ends of said tubes and locking said spokes together.

2. A metal vehicle wheel, comprising a plurality of hollow spokes having frusto-wedge-shaped enlargements at their inner ends, the inclined sides of said enlargements being placed in juxtaposition to form a nave, and the inclined sides of each spoke having a struck up recess tapering inwardly from opposite faces of said spoke and registering with similar recesses in the inclined sides of the adjacent spokes to form tubes extending through said nave, rings in contact with the opposite faces of said nave, and tapered projections on said rings received in opposite ends of said tubes and locking said spokes together.

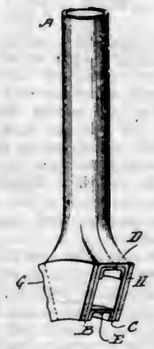
3. A metal vehicle wheel, comprising a plurality of spokes having frusto-wedge-shaped enlargements at their inner ends, the inclined sides of said enlargements being placed in juxtaposition to form a nave, and the inclined sides of each spoke having a recess tapering inwardly from opposite faces of said spoke and registering with similar recesses in the inclined sides of the adjacent spokes to form openings through said spokes, rings in contact with the opposite faces of said nave, and struck up tubular projections on said rings received in opposite ends of said openings and locking said spokes together.

4. A metal vehicle wheel, comprising a plurality of spokes having frusto-wedge-shaped enlargements at their inner ends, the inclined sides of said enlargements being placed in juxtaposition to form a nave, and the inclined sides of each spoke having a recess tapering inwardly from opposite faces of said spoke and registering with similar recesses in the inclined sides of the adjacent spokes to form openings through said spokes, a hub, ring flanges on said hub in contact with opposite faces of said nave, and projections on said flanges received in said openings and locking said spokes together and to said hub.

5. A metal vehicle wheel, comprising a plurality of spokes having frusto-wedge shaped enlargements at their inner ends, the inclined sides of said enlargements being placed in juxtaposition to form a nave, and the inclined sides of each spoke having a recess tapering inwardly from opposite faces of said spoke and registering with similar recesses in the inclined sides of the adjacent spokes to form openings through said spokes, a hub, ring flanges on said hub in contact with opposite faces of said nave, and projections on said flanges received in said openings and locking said spokes together and to said hub and centrally supporting said nave.

[Claim 6 not printed in the Gazette.]

1,192,549. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Feb. 18, 1916. Serial No. 79,050. (Cl. 21—69.)



1. A metal vehicle wheel, comprising a cylindrical hub, flanges thereon, tubular spokes, each having at its inner end parallel frusto-wedge shaped plates disposed between said flanges with the inclined edges of said plates in contact, and a plurality of flanged curved plates D disposed end to end to form a circle and seated between said frusto-wedge shaped plates, the said curved plates closing the tubular portion of said spokes and having their flanges welded to said frusto-wedge shaped plates.

2. A metal vehicle wheel, comprising a cylindrical hub, flanges thereon, tubular spokes, each having at its inner end parallel frusto-wedge shaped plates disposed between said flanges with the inclined edges of said plates in contact, and a plurality of flanged curved plates E disposed end to end to form a circle and seated between and having their flanges welded to said frusto-wedge shaped plates.

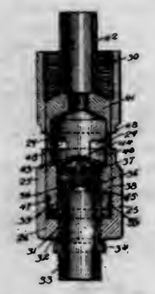
3. A metal vehicle wheel, comprising a hub, flanges thereon, hollow spokes, each having at its inner end parallel frusto-wedge shaped plates disposed between said flanges, with the inclined edges of said plates in contact and curved flanged bracing plates seated between said wedge-shaped spoke plates and having their flanges welded thereto.

4. A metal vehicle wheel, comprising a hub, flanges thereon, hollow spokes, each having at its inner end parallel frusto-wedge shaped plates disposed between said

flanges, with the inclined edges of said plates in contact, and a flanged bracing ring also seated between said wedge-shaped spoke plates and having its flanges welded thereto.

5. A metal vehicle wheel, comprising a hub, flanges thereon, hollow spokes, each having at its inner end parallel frusto-wedge shaped plates disposed between said flanges, with the inclined edges of said plates in contact, curved flanged bracing plates seated between said wedge-shaped spoke plates and having their flanges welded thereto, and a flanged bracing ring also seated between said wedge-shaped spoke plates and having its flanges welded thereto.

1,192,550. GAS-MIXER. JOSEPH NEEDHAM, Passaic, N. J. Filed Apr. 17, 1915. Serial No. 21,952. (Cl. 158—119.)



1. A device of the character described comprising a stationary tubular casing having an air port therein, a stationary gas port within the said casing, and a mixing chamber within the said casing movably disposed with respect to the same, the said mixing chamber being provided with auxiliary air and gas ports coöperating respectively with the first mentioned air and gas ports and adapted to simultaneously increase or decrease the effective openings of the said first mentioned air and gas ports according to the direction of the movement of the said movable mixing chamber with respect to the said stationary tubular casing.

2. A device of the character described comprising a stationary tubular casing having an air port therein, a stationary gas port within the said casing and a tubular mixing chamber within the said casing movably disposed therein, the said mixing chamber being provided with auxiliary air and gas ports coöperating respectively with the first mentioned air and gas ports and adapted to simultaneously increase or decrease the effective openings of the said first mentioned air and gas ports according to the direction of the movement of the said movable mixing chamber with respect to the said stationary tubular casing.

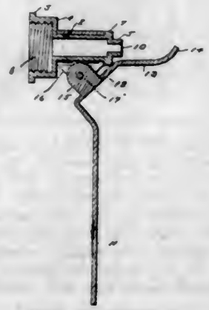
3. A device of the character described comprising a stationary tubular casing having an air port therein, a stationary gas port within the said casing and a tubular mixing chamber, having a forward contracted injector portion, within the said casing movably disposed therein, the said mixing chamber being provided with auxiliary air and gas ports coöperating respectively with the first mentioned air and gas ports and adapted to simultaneously increase or decrease the effective openings of the said first mentioned air and gas ports according to the direction of the movement of the said movable mixing chamber with respect to the said stationary tubular casing.

4. A device of the character described comprising stationary means having air and gas admission orifices, and movable means disposed within the said stationary means having auxiliary air and gas orifices, the said movable means being adapted by their movement to simultaneously control the effective opening of the said stationary air and gas orifices in such a manner as to always preserve the same percentage of gas and air in the mixture.

5. A device of the character described comprising a tubular casing provided with a stationary air port, a stationary gas port within the said casing and a mixing chamber movable within the said casing and adapted by its movement to simultaneously control the effective opening of the said stationary gas and air ports in such a manner as to always preserve the same percentage of gas and air in the mixture.

[Claims 6 and 7 not printed in the Gazette.]

1,192,551. SPRINKLING DEVICE. LEWEN R. NELSON, Peoria, Ill. Filed Oct. 14, 1912. Serial No. 725,614. (Cl. 137—57.)



1. In combination with a nozzle, a support and deflector made integrally of a strip of metal tapered at one end to form a spike and curved at its opposite end to form the deflector, the strip between the spike and deflector being angularly bent to position the latter in operative relation to the nozzle outlet, a lug formed integral with the bent portion and turned at a right angle thereto, a collar embracing the nozzle freely to permit rotation of the latter and having lugs engaging the lug of the support, and a clamping screw for the lugs to rigidly fasten the collar on the support and hold the nozzle in line with the deflector.

2. In combination with a nozzle, a support and deflector made integrally of a strip of sheet metal tapered at one end to form a spike and curved at its opposite end to form the deflector, the strip between the spike and deflector being first angularly bent to one side of the spike, then again bent substantially at a right angle in the opposite direction, and finally the end of the strip carrying the deflector being bent perpendicular to the spike, an integral lug on the second bent portion turned at a right angle thereto, a collar embracing the nozzle freely to permit rotation of the latter and having lugs engaging the lug on the support, and a clamping screw for the lugs to rigidly fasten the collar on the support and hold the nozzle in line with the deflector.

3. A nozzle support and deflector made integrally of a strip of sheet metal tapered at one end to form a spike and curved at its opposite end to form the deflector, the strip between the spike and deflector being first angularly bent to one side of the spike, then again bent substantially at a right angle in the opposite direction, and finally the end of the strip carrying the deflector being bent perpendicular to the spike, and an integral lug on the second bent portion turned at a right angle thereto.

1,192,552. BUCKLE. GEORGE R. NETTLETON, New Haven, Conn., assignor to The W. & E. T. Fitch Co., New Haven, Conn., a Corporation. Filed Nov. 2, 1915. Serial No. 59,314. (Cl. 24—170.)

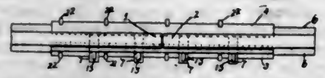
1. A buckle comprising a frame including a pivot bar, a lever mounted on said pivot bar, said lever formed with an integral spring-tongue, and a lug in the path of said tongue and on which the spring-tongue bears.

2. A buckle comprising a frame including a pivot bar, said pivot bar formed with a lug, a lever mounted on said pivot bar and formed with an integral spring tongue adapted to bear upon said lug.



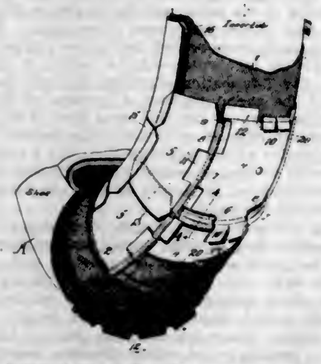
3. A buckle comprising a frame having a front bar, a rear bar, an attaching bar forward of the rear bar, a pivot bar between the ends of the buckle, said pivot bar formed with a lug and a lever pivotally mounted on said pivot bar, said lever adapted to co-act with the front bar of the buckle said lever formed with a rearwardly projecting finger-piece and with a spring tongue formed integral with the lever and projecting into contact with the said lug.

1,192,553. RAILWAY-RAIL JOINT. WATT. M. NICHOLS, Mambrino, Tex., assignor of one-third to John T. Chanler, Granbury, Tex., and one-third to Joseph L. Harber, Neri, Tex. Filed May 4, 1916. Serial No. 95,292. (Cl. 239—11.)



A joint for the abutting ends of railway rails comprising fish-plate rail chairs, one of said fish-plates having integral lugs projecting through the webs of the rails and through the other fish-plate, said lugs having openings therethrough and having racks in the outer wall of the opening, toothed keys for entering said openings and engaging said racks, and compressible braces between the webs of the rails and said last mentioned fish-plate.

1,192,554. INTERNAL ARMOR FOR PNEUMATIC TIRES. ANDREW NIELSEN, Brigham, Utah. Filed Feb. 7, 1916. Serial No. 76,651. (Cl. 152—18.)

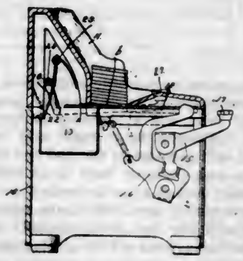


1. An internal armor for tires, comprising a series of middle plates, a wire extending around three sides of each plate and fastened thereto to form pintles, a hook on each plate for engaging the wire of the next plate, and side plates having hooks engaging the wires of the middle plates, a flexible covering in the form of strips covering all the plates.

2. An internal armor for tires, comprising a series of middle plates, a wire extending around three sides of each plate and fastened thereto to form pintles, a hook on each plate for engaging the wire of the next plate, and side plates having hooks engaging the wires of the middle plates, a flexible covering in the form of strips covering all the plates, and fabric fillers overlying each middle plate and lying within the margin of each plate and under the covering, whereby the covering will have a substantially smooth support.

3. An internal armor for tires, comprising a series of middle plates, a wire extending around three sides of each plate and fastened thereto to form pintles, a hook on each plate for engaging the wire of the next plate, and side plates having hooks engaging the wires of the middle plates, a flexible covering in the form of strips covering all the plates, and fabric fillers overlying each middle plate and lying within the margin of each plate and under the covering, whereby the covering will have a substantially smooth support, in combination with a tire shoe, and pocketed elements fastened in the tire shoe to receive the outer edges of the side plates, said pocketed elements being in the form of pairs of plates arranged end to end.

1,192,555. ATTACHMENT FOR CHANGE-MAKING MACHINES. FREDERICK A. NIEMANN, Chicago, Ill., assignor to Niemann & Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 3, 1916. Serial No. 69,972. (Cl. 133—1.)



1. The combination with a change making machine comprising a coin holder for holding coins in a stack and a coin ejecting mechanism; of a pivoted replacing member which is independent of said coin ejecting mechanism and which normally stands out of contact with the coin holder, and means for rocking the same into contact with a coin partially ejected from said stack so as to replace the same in its normal position.

2. The combination with a change making machine comprising a casing provided with coin holders for holding coins in stacks and ejecting mechanism which operates to eject coins from said stacks; of a coin replacing member pivoted in said casing on the other side of the coin holders from said ejecting mechanism, a spring to hold said member away from the coin stacks, and means comprising a lever located on the outside of the casing for rocking said replacing member against any coin partially ejected from one of said stacks to replace the same in normal position.

3. The combination with a change making machine comprising a casing provided with coin holders for holding coins in stacks and ejecting mechanism which operates to eject coins from said stacks; of a coin replacing member pivoted in said casing on the other side of said coin holders from the ejecting mechanism, a spring to hold said member away from said coin stacks, and a shaft revolubly mounted in said casing provided with a crank which bears against said replacing member and with an operating lever on the outside of said casing.

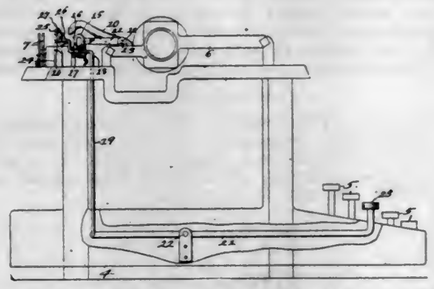
4. The combination with a change making machine comprising a casing provided with coin holders of different diameters arranged in line with each other at their forward edges, and ejecting devices which operate against

the forward edges of the coins in the holders; of a coin replacing member pivoted in said casing on the other side of the coin stacks from said ejecting devices which is formed with tongues in an angular relation with each other corresponding to the relative positions of the coin stacks along their rear edges, and means for rocking said replacing member.

5. In a coin handling machine having a plurality of coin holders, the combination with means for ejecting coins from said holders, of a single movable element for replacing in their respective holders all coins partially ejected from said holders.

[Claims 6 to 13 not printed in the Gazette.]

1,192,556. TYPE-WRITER ATTACHMENT. GEORGE HORATIO PACKWOOD, Sr., Tampa, Fla. Filed Dec. 30, 1914. Serial No. 879,645. (Cl. 197—176.)

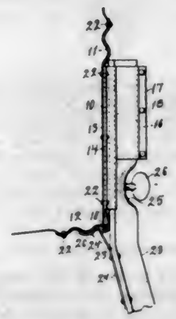


1. In a typewriting machine comprising a frame, a carriage movable thereon, an escapement pinion, a rack bar engaging the same and a plurality of keys, a tabulating attachment consisting of a rigid arm projecting rearwardly from said carriage, a toothed bar pivotally secured to the frame and normally held in an oblique position, a stop adjustably locked to said toothed bar on its toothed edge, a supplemental key, and means operable by the depression of said key for simultaneously lifting the rack bar from the escapement pinion and swinging the toothed bar on its pivots to a horizontal position to carry the stop into the path of said arm, said rack bar and stop being returned to normal position in the upward movement of the supplemental key.

2. In a typewriting machine, provided with a frame, a carriage movable thereon, an escapement pinion, and a rack bar engaged therewith and a plurality of keys, a tabulating attachment consisting of a rigid arm detachably secured to said carriage and projecting rearwardly therefrom, two standards detachably secured to the frame, a bar having its lower edge toothed and pivotally mounted on said standards, said toothed bar normally held in an oblique position, a stop adjustably locked to the toothed edge of said bar, a supplemental key, a lever therefor in detachable connection with said frame, and means operable by said supplemental key for simultaneously lifting said rack bar from the pinion and swinging said toothed bar on its pivots to a horizontal position to carry the stop into the path of the rigid arm on the carriage.

3. In a typewriting machine comprising a frame, a carriage movable thereon, a plurality of keys, an escapement pinion, and a vertically movable rack bar engaging said pinion, said rack bar being inverted U-shape, the front wall having a toothed lower edge, the lower edge of the rear wall being smooth, the front wall normally engaged by the escapement pinion, a tabulating attachment consisting of a rigid arm projecting rearwardly from the carriage, a bar pivotally mounted on the said frame, a supplemental key lever, a vertically disposed rod pivotally connected at its lower end to said lever and bent horizontally adjacent its upper end forming an axle arm extending under the pivotally mounted bar, a grooved roller mounted on said axle arm, said roller supporting the rear wall of the rack bar, and an adjustable stop carried by the pivotally mounted bar, whereby upward movement of the vertically disposed rod by the key lever, will disengage the front wall of the rack bar from the escapement pinion and simultaneously swing the pivotally mounted bar to a position to carry the stop thereon into the path of the aforesaid rigid arm projecting from the carriage.

1,192,557. LEG AND SOCKET CONSTRUCTION. ERNST E. PFEFFER, Milwaukee, Wis., and FRANK PFEFFER, Chicago, Ill. Filed Sept. 16, 1915. Serial No. 50,949. (Cl. 68—31.)



1. A leg and socket construction formed of commercial strip metal, comprising a socket member formed of a strip of metal bent to form attaching side flanges and a socket extending therethrough of T-shape in cross section, and a leg member of T-shape in cross section fitting into said socket, one of said members having means co-acting with the other member for limiting the length of the portion of the leg member which is extended into the socket.

2. A leg and socket construction, comprising a leg member of elongated form provided with a stop means, and a socket member provided with an opening of the same cross sectional shape as the leg member and into which opening one end of the leg member extends and also having an extension portion which fits beneath the receptacle to which it is attached, the stop means of said leg member engaging the extension portion of the socket member.

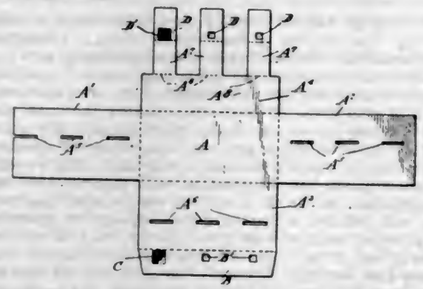
3. A leg and socket construction, comprising a socket member formed of metal bent to form side and top and bottom attaching flanges and a tubular space, said tubular portion of the socket member having a slotted portion, and said bottom flange bent at an angle, a leg member of T-shape in cross section having one end portion extending into the tubular space and a portion of one of the flanges of the T-formation extending through the slotted portion of the socket member, a portion of the flange which extends through the slot being bent at an angle, a screw threaded through said bent flange portion and engaging a portion of the socket member, and a stop projection mounted on the leg member and positioned to engage the bottom flange of the socket member and form a bracing connection therewith.

4. A leg and socket construction, comprising a leg member of angular form in cross section and provided with a stop means, and a socket member provided with an opening of the same cross sectional shape as the leg member and into which opening one end of the leg member extends, said socket member having side flanged portions and an angular lower end extension portion for attachment to a receptacle and which extension portion is engaged by the stop means of the leg members.

5. A leg and socket construction, comprising a socket member formed of metal bent to form side and top and bottom attaching flanges and a tubular space, the inner wall of the tubular member being corrugated to reinforce said inner wall and to offset the outer portions of said wall outwardly, said tubular portion of the socket member having a slotted portion, and said bottom flange bent at an angle, a leg member of T-shape in cross section having one end portion extending into the tubular space and a portion of one of the flanges of the T-formation extending through the slotted portion of the socket member, a portion of the flange which extends through the slot being bent at an angle, a screw threaded through said bent flange portion and engaging a portion of the socket member, and a stop projection mounted on the leg member and positioned to engage the bottom flange of the socket member and form a bracing connection therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,192,558. ENVELOP. RALPH JOSEPH PROVENÇAL, St. Johnsbury, Vt. Filed Apr. 4, 1916. Serial No. 88,830. (Cl. 229—82.)



An envelop comprising a sheet which has wings adapted to be folded over one another to form bottom and end closures, said wings having slots formed in alinement and adapted, when folded, to register with one another, a bottom wing having a flap provided with pockets with meltable material therein, a portion of the blank having a flap provided with tongues spaced apart and projecting therefrom and having openings therein which, when the tongues are folded, are adapted to form pockets with a meltable material therein, said tongues adapted to engage the registering slots, and openings and pockets filled with said meltable material being adapted to contact one with another.

1,192,559. PROCESS OF FILTERING HOG-CHOLERA ANTITOXIN WITH THE AID OF CHEMICALS AND A COMPOSITION OF MATTER RELATED TO THE PROCESS. JOHN REICHEL, Philadelphia, and HENRY WERNER, Glen Olden, Pa., assignors to H. K. Mulford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 15, 1915. Serial No. 66,908. (Cl. 167—10.)

1. In the art of treating hog cholera antitoxin, to obtain the same freed of insoluble inert material, the step of adding to a definite amount or quantity of hog cholera antitoxin as an admixture therewith of a chemical to provide insoluble salt crystals in the antitoxin to separate the cellular debris, substantially as disclosed.

2. In the art of treating hog cholera antitoxin to obtain the same freed of insoluble inert material, the admixture therewith comprising the addition of solution of salts capable of reacting to provide insoluble crystals within the antitoxin to separate the cellular debris to facilitate filtration, substantially as disclosed.

3. The art of treating hog cholera antitoxin to facilitate filtration of the same to free the same of insoluble inert material in suspension and obtain the liquid portion, comprising the admixture therewith of sodium citrate in the proportion substantially of seventy-five grams of salt to one thousand cubic centimeters of hog cholera antitoxin and twenty-five grams of calcium chlorid, substantially as herein described.

4. As a new composition of matter, a mixture of a definite amount or quantity of hog cholera antitoxin and calcium citrate, in suitable proportion, as disclosed, to facilitate filtration of the composition and assist in the removal of the insoluble inert material contained in the mixture.

5. As a new composition of matter, a mixture of a definite amount or quantity of hog cholera antitoxin and calcium citrate in the proportion substantially of seventy-five grams of the sodium citrate to one thousand cubic centimeters of hog cholera antitoxin and twenty-five grams of calcium chlorid, to facilitate filtration of the composition and assist in the removal of the insoluble inert material, substantially as described.

1,192,560. PROCESS FOR PRODUCING A STERILE HOG-CHOLERA ANTITOXIN. JOHN REICHEL, Philadelphia, and HENRY WERNER, Glen Olden, Pa., assignors to H. K. Mulford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 10, 1916. Serial No. 83,254. (Cl. 167—10.)

1. In the art of obtaining a sterile product from hog cholera antitoxin, the step of subjecting the antitoxin system to centrifugal force, in sufficient amount of force and sufficiently long in amount of time, to clarify the liquid to the extent of obtaining a sterile product.

2. In the art of treating hog cholera defibrinated blood antitoxin to obtain substantially a sterile product therefrom, the step of subjecting the antitoxin system to centrifugal force of sufficient intensity and at such rate of flow of the system as to obtain a liquid substantially free of all solid particles and contaminating organisms contained therein at the beginning of such separation.

3. In the art of obtaining a sterile product from hog cholera antitoxin, the step of subjecting the antitoxin system to centrifugal force in a centrifugal tube or bowl machine separator, in a sufficient amount of force and in sufficient amount of time, to clarify the system and discharge a clear liquid, freed of the bacteria which were in the hog cholera antitoxin.

4. In the art of obtaining a sterile product from hog cholera antitoxin, the step of subjecting the antitoxin system to centrifugal force in a centrifugal tube or bowl machine separator and causing the same to separate the system to the extent that a clear liquid will be discharged, which liquid, upon filtration, can be thereupon passed through a sterilizing filter, and be rendered sterile thereby.

5. In the art of obtaining a sterile product from hog cholera antitoxin, the steps of subjecting the antitoxin system to centrifugal force in a centrifugal tube or bowl machine separator, and thereby causing the system to separate to the extent that a clear liquid is discharged from the separator, and thereupon, filtering the liquid through filters composed of a layer of moist infusorial earth, and, thereafter, passing the filtrate through a sterilizing filter or Berkefeld candle.

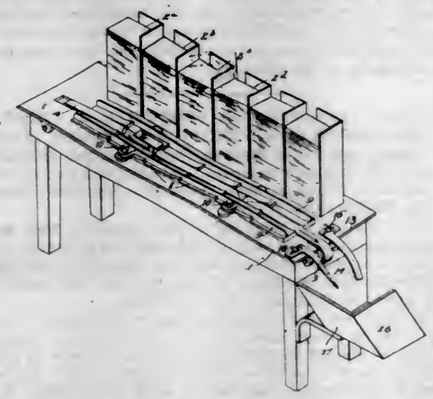
[Claims 6 and 7 not printed in the Gazette.]

1,192,561. SIGNATURE-GATHERER. DANIEL REISER, Cleveland, Ohio. Filed Jan. 24, 1914. Serial No. 814,151. (Cl. 193—1.)

1. The combination, with mechanism for transferring superposed sheets of paper, such mechanism consisting of a horizontal support and a pusher member movable thereabout and arranged to shove said sheets along said support, of means for effecting an orderly discharge of said sheets from said mechanism, and comprising a pair of forwardly projecting downwardly deflected arms carried by said support and arranged to receive said sheets, said arms being spaced apart a distance less than the width of said sheets, and a receiving receptacle disposed beneath said arms and having an upright wall opposite the ends of said arms and spaced from said support a distance greater than the length of said sheets.

2. The combination, with mechanism for transferring superposed sheets of paper, such mechanism consisting of a horizontal support, a conveyer belt passing along the top thereof, and a projection carried by said belt and arranged to shove said sheets along said support, of means for effecting an orderly discharge of said sheets from said

mechanism, and comprising a pair of forwardly projecting arms carried by said support and arranged to receive said sheets, said arms being spaced apart a distance less than the width of said sheets, and a striking member carried by said belt and arranged to strike said sheets from above and force them downwardly between said arms.



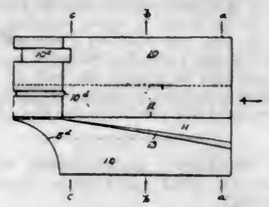
3. Mechanism for transporting and ejecting in an orderly manner piles of superposed flexible sheets, comprising, in combination, a substantially horizontal support, a pulley at the discharging end of said support, a second pulley at a distance from said first pulley, a belt passing around said pulleys, a projection carried by said belt and arranged to shove said piles of sheets along said support, a pair of forwardly projecting arms carried by said support, one at each side of said support and arranged to receive the sheets from said belt, the distance between said arms being slightly less than the width of said sheets, a receiving box beneath said arms, and a rearwardly projecting tail carried by said projection and arranged to strike said sheets from above as said projection passes around the first mentioned pulley, whereby said sheets will be deposited in said box in regular order.

4. Mechanism for transporting and ejecting in an orderly manner piles of superposed flexible sheets, comprising, in combination, a substantially horizontal support, a pulley at the discharging end of said support, a second pulley at a distance from said first pulley, a belt passing around said pulleys, a projection carried by said belt and arranged to shove said piles of sheets along said support, a pair of forwardly projecting, downwardly curved arms carried by said support, one at each side of said support and arranged to receive the sheets from said belt, the distance between said arms being slightly less than the width of said sheets, a receiving box beneath said arms, and a rearwardly projecting tail carried by said projection and arranged to strike said sheets from above as said projection passes around the first mentioned pulley, whereby said sheets will be deposited in said box in regular order.

5. Mechanism for transporting and ejecting in an orderly manner piles of superposed flexible sheets, comprising, in combination, a substantially horizontal support, a pulley at the discharging end of said support, a second pulley at a distance from said first pulley, a belt passing around said pulleys, a projection carried by said belt and arranged to shove said piles of sheets along said support, a pair of forwardly projecting arms carried by said support, one at each side of said support and arranged to receive the sheets from said belt, the distance between said arms being slightly less than the width of said sheets, a receiving box beneath said arms, and a rearwardly projecting tail of flexible material carried by said projection and arranged to strike said sheets from above as said projection passes around the first mentioned pulley, whereby said sheets will be deposited in said box in regular order.

[Claim 6 not printed in the Gazette.]

1,192,562. HOOP-FORMING MACHINE. EDWARD W. ROBINSON, Savannah, Ga., assignor to International Barrel Company, Savannah, Ga., a Corporation of Georgia. Filed June 18, 1915. Serial No. 34,855. (Cl. 153—32.)



1. In a machine for bending sheet metal strips, a block having therethrough a longitudinal passage presenting horizontal and vertical members communicating with one another at the angle, the horizontal member receiving approximately one half of the width of the strip and being of such dimensions as to vertically confine the same, and the vertical member receiving approximately the other half of the width of the strip and being of such dimensions as to permit upward bending of the same, said vertical member having one longitudinal wall parallel with the longitudinal line of the block and the opposite longitudinal wall inclined in respect thereto, whereby it gradually approaches the first wall from the inlet end to the discharge end of the block, said longitudinally inclined wall being also vertically inclined at its inlet end but said inclination gradually diminishing until at the discharge end said wall is parallel with the vertical wall, in combination with means for moving the sheet metal strip forwardly through said passage.

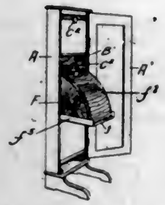
2. In a machine for bending sheet metal strips, a block having therethrough a longitudinal passage presenting horizontal and vertical members communicating with one another at the angle, the horizontal member receiving approximately one half of the width of the strip and being of such dimensions as to vertically confine the same, and the vertical member receiving approximately the other half of the width of the strip and being of such dimensions as to permit upward bending of the same, said vertical member having one longitudinal wall parallel with the longitudinal line of the block and the opposite longitudinal wall inclined in respect thereto, whereby it gradually approaches the first wall from the inlet end to the discharge end of the block, in combination with a roll for drawing the sheet metal strip through the passage in the block and a side roll for pressing upon the upturned flange of the strip, the delivery end of said block having therein a concave recess for receiving a portion of said draft roll and another concave recess at a right angle to that first mentioned for receiving a portion of the side presser roll.

3. In a machine for bending sheet metal strips, a block having therethrough a longitudinal passage presenting horizontal and vertical members communicating with one another at the angle, the horizontal member receiving approximately one half of the width of the strip and being of such dimensions as to vertically confine the same, and the vertical member receiving approximately the other half of the width of the strip and being of such dimensions as to permit upward bending of the same, said vertical member having one longitudinal wall parallel with the longitudinal line of the block and the opposite longitudinal wall inclined in respect thereto, whereby it gradually approaches the first wall from the inlet end to the discharge end of the block, in combination with a pair of rolls for drawing the sheet metal strip through the passage in the block and a side roll for pressing upon the upturned flange of the strip, the delivery end of said block having therein upper and lower concave recesses for receiving portions of said draft rolls and another concave recess at a right angle to those first mentioned for receiving a portion of the side presser roll.

4. In a machine for bending sheet metal strips, a block having therethrough a longitudinal passage presenting horizontal and vertical members communicating with one another at the angle, the horizontal member receiving approximately one half of the width of the strip and being of such dimensions as to vertically confine the same, and the vertical member receiving approximately the other half of the width of the strip and being of such dimensions as to permit upward bending of the same, said vertical member having one longitudinal wall parallel with the longitudinal line of the block and the opposite longitudinal wall inclined in respect thereto, whereby it gradually approaches the first wall from the inlet end to the discharge end of the block, in combination with a roll for drawing the sheet metal strip through the passage in the block, said roll having a convex rib thereon, and the delivery end of the block having therein a concave recess for receiving a portion of said roll, said concave recess having therein a concave groove for receiving the convex rib on the roll.

5. In a machine for bending sheet metal strips, a block having therethrough a longitudinal passage presenting horizontal and vertical members communicating with one another at the angle, the horizontal member receiving approximately one half of the width of the strip and being of such dimensions as to vertically confine the same, and the vertical member receiving approximately the other half of the width of the strip and being of such dimensions as to permit upward bending of the same, said vertical member having one longitudinal wall parallel with the longitudinal line of the block and the opposite longitudinal wall inclined in respect thereto, whereby it gradually approaches the first wall from the inlet end to the discharge end of the block, in combination with a roll for drawing the sheet metal strip through the passage in the block, said roll having thereon a convex rib and a square-faced rib, and the delivery end of the block having therein a concave recess for receiving a portion of said roll, which concave recess has therein a concave groove for receiving the convex rib of the roll and a square-faced groove for receiving the square-faced rib of said roll.

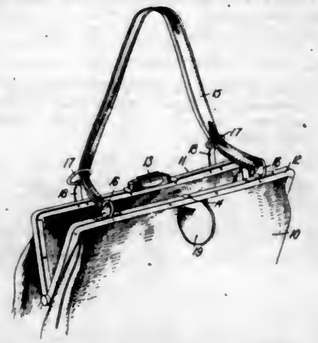
1,192,563. FILING-CABINET. MANUEL R. RODRIGUES, New York, N. Y. Filed Feb. 4, 1914. Serial No. 816,594. (Cl. 45—2.)



In a filing cabinet, a casing, a file having a divided bottom part forming a hinge, the file having a rear portion or back held within the casing and secured to the rear part of the hinge, a lid attached to the forward portion of the hinge, a plurality of interior leaves connecting the rear and lid and forming filing receptacles, means to support the lid in either an open or closed relation comprising an element located within the casing and having an elevated horizontal portion to sustain the rear part of the hinge and to support the entire file when in a closed relation, and a spaced lower projecting part to sustain the forward portion of the hinge and attached lid when in an open relation, the joint of the hinge being located at the forward end of the upper horizontal portion of the said supporting element.

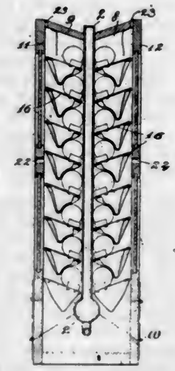
1,192,564. SAFETY ATTACHMENT FOR HAND-BAGS. EDWARD E. ROGERS, New York, N. Y. Filed Jan. 28, 1916. Serial No. 74,777. (Cl. 150—33.)

1. In a hand bag, the combination of relatively fixed and movable jaws, an arm strap having its ends connected to one of the jaws, and a pair of loops loosely pivoted to the other jaw opposite the points of connection between the strap and the first mentioned jaw, the strap being slidable through said loops with the opening and closing of the bag.



2. In a hand bag, the combination of a pair of jaws movable toward and from each other, means to lock the jaws closed, a flexible arm strap, a pair of rings connecting the ends of the strap to one of the jaws, rigid vertical supports secured to the other jaw opposite the rings, and a pair of loops pivotally connected to said supports and through which the end portions of the strap are slidable, said loops being adapted to engage over the rings when the bag is suspended normally from the arm strap.

1,192,565. INCUBATOR. RALPH R. ROOT, Nottingham, Ohio. Filed Feb. 18, 1909. Serial No. 478,654. (Cl. 119—42.)



1. In an incubator, a casing, a heating device within the casing, and means for supporting a plurality of eggs within the casing and against the heating device whereby each and every egg receives heat by contact with the heating device.

2. In an incubator, a casing, a heating device within the casing, a plurality of slanting shelves within the casing adapted to support the eggs; said shelves have their lower edges adjacent to the heating device whereby each egg on each shelf gravitates toward the heating device and receives heat by contact with the heating device.

3. In an incubator, a casing, a heating device within said casing, and means for supporting separate rows of eggs in contact with the wall of the said heating device whereby the eggs will be maintained in contact with the heating device at substantially a single point of contact.

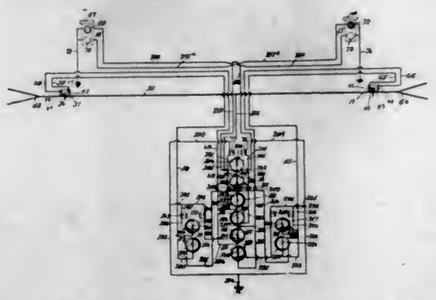
4. In an incubator, a casing, a vertical heating device within said casing, a slanting shelf upon which the eggs

are supported, and in contact with the heating device, and means carried by the shelf for turning the eggs.

5. In an incubator, a casing, a vertical heating device therein, a slanting shelf upon which the eggs are supported and in contact with the heating device, and a sleeve of flexible material enveloping said shelf, the eggs resting upon said sleeve.

[Claims 6 to 16 not printed in the Gazette.]

1,192,566. BLOCK-SIGNAL SYSTEM. WILLIAM VERNON RYDER, Northampton, Mass. Filed June 25, 1908, Serial No. 440,256. Renewed Nov. 27, 1915. Serial No. 63,906. (Cl. 246—36.)



1. In a block signal system, the combination of signals at each end of the block, a main switch for controlling said signals, electromagnetic means for moving the switch in one direction, a second electromagnetic means for moving the switch in an opposite direction, each of said electromagnetic means having two circuits, means for closing a circuit through one of said electromagnetic means when a car enters the block at one end and for closing the other circuit therethrough when a car leaves the block at that end, the circuits of the other electromagnetic means being similarly controlled at the other end of the block, the circuits closed by cars entering the block including contacts normally closed at the main switch and the circuits closed by cars leaving the block including contacts normally open at the main switch, the operation of the main switch by one of said electromagnetic means breaking the normally closed contacts and closing the normally open contacts included in the circuits of the other electromagnetic means.

2. In a block signal system, the combination of signals at each end of the block, a main switch for controlling said signals, electromagnetic means for moving the switch in one direction, a second electromagnetic means for moving the switch in an opposite direction, each of said electromagnetic means having two circuits, means for closing a circuit through one of said electromagnetic means when a car enters the block at one end and for closing the other circuit therethrough when a car leaves the block at that end, the circuits of the other electromagnetic means being similarly controlled at the other end of the block, an auxiliary switch and electromagnets for moving the same in opposite direction, connections operated by the main switch when moved by one of said electromagnetic means for disconnecting the other electromagnetic means from the circuit closed by a car entering the block and connecting in said circuit an electromagnet for moving the auxiliary switch, and connections operated by said auxiliary switch when so moved for disconnecing said other electromagnetic means from the circuit closed by a car leaving the block and connecting therein an electromagnet for moving the auxiliary switch in an opposite direction.

3. In a block signal system, the combination of signals at each end of the block, a main switch for ocntrolling said signals, electromagnetic means for moving the switch in one direction, electromagnetic means for moving the switch in an opposite direction, each of said electromagnetic means having two circuits, means for closing a circuit through one of said electromagnetic means when a car enters the block at one end and for closing the other circuit therethrough when a car leaves the block at that end, the circuits of the other electromagnetic means being similarly controlled at the other end of the block, an auxiliary switch formed with a rotatable shaft, a plurality of contact arms radiating therefrom, a metallic segment for each of said arms, and an insulating segment for each of said arms co-acting with said metallic segment for making a complete circle over which said arms are adapted to move, electromagnets for moving said shaft in opposite directions, connections operated by the main switch when moved by one of said first mentioned electromagnetic means for disconnecting the other of said first mentioned electromagnetic means from the circuit closed by a car entering the block, and connecting in said circuit one of said electromagnets to move said auxiliary switch, and connections operated by said auxiliary switch when so moved for disconnecting said other first mentioned electromagnetic means from the circuit closed by a car leaving the block and connecting therein an electromagnet for moving the auxiliary switch in an opposite direction.

1,192,567. METHOD OF MANUFACTURING SOUND-RECORD TABLETS. JOSEPH SANDERS, Washington, D. C. Filed Jan. 11, 1908. Serial No. 410,456. (Cl. 18—48.4.)

1. The method of manufacturing sound record tablets with a record-receiving surface coating of suitable fiber-containing record material, which consists in first causing an adhesive condition of the surface to be coated, then applying fibrous material in a dry state to such surface while the latter is in the adhesive condition, then permitting the surface coated to become solid or hard and anchor the powdered material thereto, then heating the tablet to soften the record-receiving material, and impressing a sound-record matrix therein.

2. The method of manufacturing sound record tablets with a record-receiving surface coating of suitable fiber-containing record material, consisting in first applying a solution or emulsion of suitable record receiving material free from fiber containing record-material, and then applying fibrous material to the same before the solvent has evaporated.

3. In the production of sound record tablets, first providing a suitable tablet base or understructure, then applying thereto a coating of a solution or emulsion of suitable record material free from fibrous material, and then applying to the said coating suitable record material containing fibrous material, said fiber-containing record material being in dry powdered form and applied before the solvent of the first named coating has evaporated.

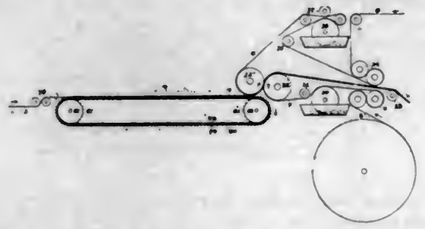
4. The method of producing sound record tablet blanks consisting in first coating the basic portion of the tablet with an adhesive and then applying powdered record material containing fibrous material to said adhesive while the latter is in condition to bind the powdered material to the base.

5. The method of producing sound record tablets consisting of coating the basic portion of the tablet with a thin solution or emulsion of record material, then while the first coating is still wet applying fibrous material and then applying another coating composed of a thin solution or emulsion of record material.

[Claims 6 to 16 not printed in the Gazette.]

1,192,568. MACHINE FOR MAKING REINFORCED PAPER. THEODORE SCHERF, Cleveland, Ohio, assignor to The Cleveland-Akron Bag Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 9, 1915. Serial No. 49,684. (Cl. 154—1.)

1. In a machine for producing reinforced paper, means to produce a conjoint feed of a pasted strip of paper and a series of longitudinal threads, means to feed a series of parallel threads transversely of said longitudinal threads, means to sever said transverse threads into predetermined lengths, transfer devices to hold said severed threads, and a spacing conveyer beneath said transfer devices to deliver said severed threads to said paper strip.



2. In a machine for producing reinforced paper, paper feeding mechanism, means to deliver a series of threads to the paper fed by said mechanism, and means to moisten the threads preliminary to delivery thereof.

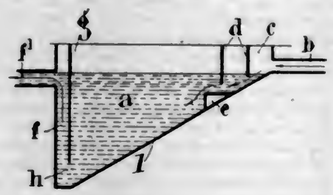
3. In a machine for producing reinforced paper, paper feeding mechanism, means to convey a series of threads to the paper fed by said mechanism, means to moisten the threads, and means to deliver the moistened threads in a straight condition to said conveying means.

4. In a machine for producing reinforced paper, thread feeding mechanism, comprising a conveyer, a transversely movable carriage having thread gripping and releasing devices thereon, and transfer hoppers between said conveyer and carriage.

5. In a machine for producing reinforced paper, a set of paper and thread pressure rollers, a thread conveyer co-acting with said rollers, a set of thread transfer hoppers and a supporting frame coacting with said conveyer, a reciprocal carriage having thread grippers to carry the threads lengthwise of the hoppers, severing devices for the threads, means to open and close said grippers, and means to operate said severing devices.

[Claims 6 to 16 not printed in the Gazette.]

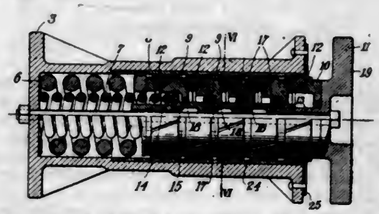
1,192,569. APPARATUS FOR CLARIFYING WASTE WATERS. RUDOLF SCHILLING, Schöneberg, Germany. Filed Mar. 5, 1912. Serial No. 681,793. (Cl. 210—5.)



1. An apparatus for clarifying waste waters by separating out the floating matter and matter of light specific gravity, comprising a tank having a sloping bottom and converging side walls, said walls forming with said bottom a basin which is narrow and deep at one end and broad and shallow at the other end, an inlet conduit entering into the broad and shallow end of the basin above the level of the liquid contained in the tank, an outlet conduit in unrestricted communication with the narrow, deep end of the basin adjacent its bottom, said outlet conduit being of sufficiently small cross sectional area to cause the force of the liquid discharging therethrough from the basin to carry with it the heavier matter which sinks to the bottom of the basin, and baffle plates in said basin for reducing the surface flow of the liquid in the tank.

2. An apparatus for clarifying waste waters by separating out the floating matter and matter of light specific gravity, comprising a tank having a sloping bottom and converging side walls, said walls forming with said bottom a basin which is narrow and deep at one end and broad and shallow at the other end, an inlet conduit entering into the broad and shallow end of the basin above the level of the liquid contained in the tank, an outlet conduit in unrestricted communication with the narrow, deep end of the basin adjacent its bottom, said outlet conduit being of sufficiently small cross sectional area to cause the force of the liquid discharging therethrough from the basin to carry with it the heavier matter which sinks to the bottom of the basin and having its discharge opening at a level slightly below the level of the discharge through the inlet conduit, and baffle plates in said basin for reducing the surface flow of the liquid in the tank.

1,192,570. FRICTION DRAFT-RIGGING. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 11, 1912, Serial No. 683,035. Renewed Feb. 17, 1916. Serial No. 78,961. (Cl. 213—64.)



1. In frictional shock absorbing mechanism, a longitudinally-extending friction member, a plurality of sets of friction shoes in frictional engagement with said friction member, a plurality of wedging members in wedging engagement with said shoes, said wedges and sets of shoes being arranged alternately and in tandem, means including the wedges for transmitting pressure to said friction shoes, a compression spring, and a release spring, said release spring having at one end a bearing against an abutment fixed relative to the longitudinally-extending friction member and reacting at its other end against a member more remote from the compression spring than the set of shoes nearest the compression spring, to relieve the wedging pressure between a wedge and a set of shoes.

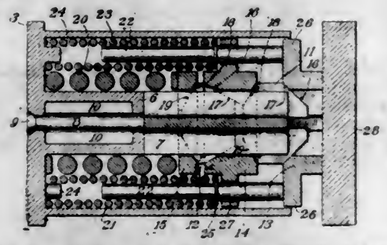
2. In frictional shock absorbing mechanism, a longitudinally extending friction member, a plurality of sets of friction shoes in frictional engagement therewith, wedging members in wedging engagement with said shoes, said wedges and sets of shoes being arranged alternately and in tandem, a compression spring, a release spring, and a releasing member coöperating with said release spring, said releasing member having shoulders spaced apart and adapted to engage the wedge members to release the wedging engagement between said members and sets of shoes.

3. In frictional shock absorbing mchanism, a longitudinally extending friction member, a plurality of sets of friction shoes in frictional engagement with said friction member, wedging members in wedging engagement with said shoes, said wedges and sets of shoes being arranged alternately and in tandem, a compression spring, a release spring, and a releasing member coöperating with said release spring, said releasing member having shoulders spaced apart and adapted to engage the wedging members successively, beginning with that wedge which is farthest removed from the compression spring, to release the wedging engagement between said wedges and sets of shoes.

4. In frictional shock-absorbing mechanism, a longitudinally-extending friction member, a follower, a plurality of sets of friction shoes in frictional engagement with said friction member, a plurality of wedging members in wedging engagement with said shoes, said wedges and sets of shoes being arranged alternately and in tandem, a compression spring and a release spring, said release spring having at one end a bearing against an abutment

fixed relatively to the longitudinally-extending friction member and reacting at its other end against the follower to relieve the wedging pressure between the wedges and sets of shoes.

1,192,571. FRICTION DRAFT-RIGGING. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio. Filed Dec. 3, 1912, Serial No. 734,766. Renewed Feb. 17, 1916. Serial No. 78,962. (Cl. 213—64.)



1. In frictional shock absorbing mechanism, a longitudinally-extending included friction member, a set of friction shoes arranged about said friction member and adapted to contact frictionally therewith, each shoe having a wedging face inclined in substantially the same direction as the wedging faces on the other shoes, wedging means co-acting with the wedging face of each shoe for wedging the shoes against the friction member, a compression spring, and a releasing spring coöperating with the wedging means to return the parts to normal position after buffing or draft.

2. In frictional shock absorbing mechanism, a friction member having a plurality of outwardly radiating arms, sets of friction shoes located between said arms, wedging members completely surrounding said friction member, said shoes and wedging members being arranged alternately and in tandem, and a compression spring.

3. In frictional shock absorbing mechanism, a centrally located friction member, friction segments bearing against the member, wedges engaging the friction segments, a compression spring, and means for releasing the wedging engagement between the friction segments and the wedges comprising spring and plunger mechanism.

4. In a frictional shock absorbing mechanism, a longitudinally movable case having therein a centrally located friction member, friction segments bearing against the member, wedges engaging the friction segments, a compression spring, pockets in the case containing mechanism for actuating the wedges to release the wedging engagement between the wedges and the friction segments.

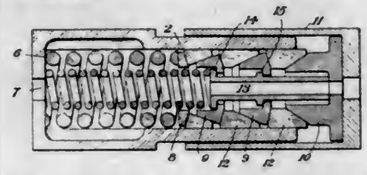
5. In frictional shock absorbing mechanism, a friction member having a plurality of outwardly radiating arms forming with each other reëntrant angles, a plurality of friction shoes, each seating in a reëntrant angle, a wedge in engagement with said shoes, said wedge being in the form of a continuous ring completely encircling said friction member, and a compression spring.

[Claims 6 to 9 not printed in the Gazette.]

1,192,572. FRICTION DRAFT-RIGGING. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 3, 1913, Serial No. 739,952. Renewed Dec. 30, 1915. Serial No. 69,470. (Cl. 213—64.)

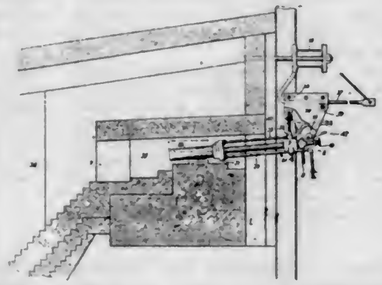
1. In a draft rigging, a barrel, frictional and spring mechanism contained therein, a follower arranged externally of the barrel, and spring mechanism on the exterior of the barrel adapted to restore the follower and the coupler to normal position after buffing or draft.

2. In a draft rigging, a barrel, frictional and spring mechanism contained therein, a follower having a telescopic engagement therewith, the follower and barrel having longitudinally extending registering chambers disposed around the central axis of the frictional mechanism, and separating springs between said barrel and follower seated in said chambers.



3. In a draft rigging, telescoping casings, one of said casings comprising a barrel, and containing spring and frictional mechanism, and the other of said casings being adapted under the impact of buffing or draft to force the friction mechanism rearwardly of the casing, and spring mechanism disassociated from the friction mechanism for moving the casings relative to each other after buffing or draft.

1,192,573. HYDROCARBON-BURNER. REINHOLD SCHNEIDER, Sharon, Pa. Filed Dec. 13, 1912. Serial No. 736,573. (Cl. 158—76.)



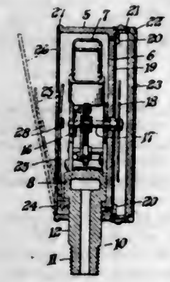
1. A liquid fuel burner comprising in combination, a fuel conduit having a discharge outlet, an annular air passage surrounding the fuel conduit and having an annular discharge outlet around the fuel discharge outlet, the fuel conduit and air passage having coacting means for centering the discharge end of the conduit within the annular discharge outlet, the discharge end of said air passage having a double wall forming a hollow water jacket on the nose of the burner and a header secured to the rear end of the water jacket having water supply and outlet openings therein, said air passage and fuel conduit extending rearwardly through the header and having air and fuel supply connections thereon.

2. A liquid fuel burner comprising in combination, a fuel conduit having a discharge outlet, an annular air passage surrounding the conduit and having an annular discharge outlet around the fuel discharge outlet, the discharge end of said air passage having a double wall forming a hollow water jacket surrounding the nose of the burner, means for supplying air to the air passage and water to the water jacket, a removable needle valve adjustably mounted in said conduit and arranged to engage with the fuel discharge outlet for closing the fuel conduit, said needle valve being removably secured in said fuel conduit, and means on the inner wall of said fuel conduit for centering the end of the needle valve within the conduit.

3. The combination with a furnace having a fuel inlet port, of a fluid fuel burner projecting into said port, a trolley, means pivotally connecting said burner to the trolley, said means being arranged to adjust the burner vertically relative to the trolley, a trolley track secured to the furnace on which the trolley is mounted, said trolley being movable on the track to shift the burner into and out of position within said port, and means on the trolley engaging the rear of the burner for adjusting the burner angularly within said port.

4. The combination with a furnace having a fuel inlet port, of a liquid fuel burner projecting into said port, a trolley from which said burner is suspended, a track secured to the furnace on which the trolley is mounted, said trolley being movable on the track to shift the burner into and out of operative position in said port, and a cam on the trolley arranged to engage the rear end of the burner to adjust the burner nose angularly relative to a horizontal plane.

1,192,574. PRESSURE-GAGE. FREDERICK SCHUBERT, Sellersville, Pa. Filed May 8, 1915. Serial No. 26,679. (Cl. 73—109.)



1. In a single faced pressure gage, a cup shaped casing having its open side disposed to the rear and its strong substantial wall disposed to the front, indicating means disposed in front of said wall, a face glass mounted in front of said indicating means, and a pressure sensitive element mounted in the interior of said casing behind the said wall for controlling said indicating means, said wall being adapted to resist the force of rupture of the pressure sensitive element and to thereby prevent breakage of said glass.

2. In a single faced pressure gage, a cup shaped casing having its open side disposed to the rear and its strong substantial wall disposed to the front, indicating means disposed in front of said wall, a face glass mounted in front of said indicating means, and a pressure sensitive element mounted in the interior of said casing behind the said wall for controlling said indicating means, said wall being adapted to resist the force of rupture of the pressure sensitive element and to thereby prevent breakage of said face glass, and a plate for closing the rear side of said casing lightly retained therein whereby the force of such rupture may be permitted to expend to the rear of the casing.

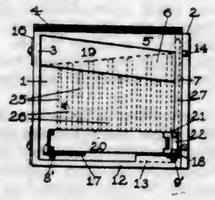
3. In a pressure gage, a casing, a pressure sensitive element mounted therein, a face glass mounted in the front of the casing, a strong substantial wall interposed between said pressure sensitive element and said face glass adapted to resist the force of a rupture of the pressure sensitive element and thereby prevent breakage of the face glass, and a plate for closing the rear of the casing lightly retained therein whereby the force of such rupture may be permitted to expend to the rear of the casing.

4. In a pressure gage, a cup shaped casing having a strong substantial wall disposed toward the front of the casing, indicating means disposed in front of said wall, a face glass mounted in front of said indicating means, a pressure sensitive element mounted in the interior of said casing behind said wall for controlling said indicating means, a plate for closing the rear of said casing, and spring means for lightly retaining said plate in position under normal conditions.

5. In a pressure gage, a cup shaped casing having a strong substantial wall disposed toward the front of the casing, indicating means disposed in front of said wall, a face glass mounted in front of said indicating means, a pressure sensitive element mounted in the interior of said casing behind said wall for controllig said indicating means, a plate for closing rear of said casing, and means for lightly retaining said plate in position under normal conditions comprising an internally arranged spring having an extending arm engaging said plate.

[Claims 6 to 8 not printed in the Gazette.]

1,192,575. DRILL-CASE. JOHN SJUNNE SELANDER, New York, N. Y. Filed Feb. 2, 1916. Serial No. 75,783. (Cl. 206—17.)



1. A drill case comprising four joined members having each a pair of free edges, a pair of oppositely hinged lids secured to the two free edges of one of said members, and means upon the inner surfaces of said lids and within said case for supporting a drill stand, said means comprising cleats or plates containing slots or orifices, substantially as described.

2. A drill case including four joined sides constituting a front, a back, a top and a bottom, respectively a pair of lids being attached to the free edges of said back, said lids being hinged and adapted to swing away from each other when opened; a pair of cleats spaced apart to provide an intermediate slot being secured to said bottom parallel with the free edges of the same and abutting the back; a plate or extended block located on the inner side of each of said lids in a position near the free end of the same and near the bottom and parallel with the latter; a longitudinal slot in the upper horizontal surface in each of said longitudinal blocks or plates, said slot and aforesaid intermediate slot being adapted to receive the pegs or feet of an interfolding collapsible drill stand, substantially as described.

3. A drill case including a casing having a back, a front, a top and a bottom joined together, and a pair of lids hinged to said back means located on said bottom and upon said lids for receiving and seating a detachable drill stand and means within said top for retaining drills in position, said latter means comprising parallel longitudinal cleats secured to and within said top to provide drill abutments, substantially as described.

4. In a drill case, in combination, a rectangular casing having hinged lids attached thereto and means within said casing and on said lids for receiving and seating an interfolding or collapsible drill stand, with means secured in said casing for retaining in position drills in said stand when in collapsed or folded position, said means comprising longitudinal drill abutments within the top of said case, said abutments having several different oblique edges adapted to abut and retain drills, substantially as described.

5. A drill case including four sides, comprising a top, bottom, front and back, said back and bottom being joined; means for seating a drill stand in said case comprising a slot in an addition to said bottom, said slot abutting said back and being substantially parallel with said bottom; a pair of doors or lids being hinged to said back, additional means for seating said drill stand being located on the inner surfaces of said lids in the form of plates with longitudinal slots therein, said slots being parallel with said inner surfaces of said lids and lying in substantially the same plane as aforesaid slot within said case, substantially as described.

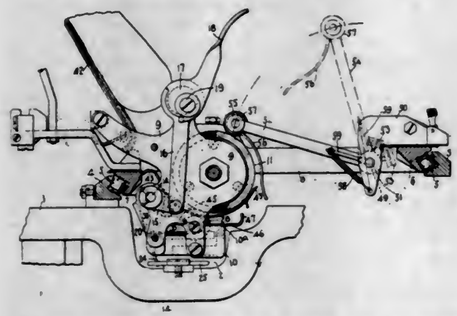
1,192,576. SHADE-ROLLER HOLDER. PAUL C. SHAFFER, New York, N. Y. Filed May 2, 1914. Serial No. 836,012. (Cl. 156—24.)



1. A structure embracing coöperating parts, the one being a sheet metal shade roller bracket provided with a projecting attaching tongue, the other being a sheet metal casing part provided with a recess for the tongue permitting passage of the tongue therethrough and access to the tongue from the outer side to bend the tongue into engaging position.

2. A structure embracing coöperating parts, the one being a sheet metal shade roller bracket provided with a plurality of projecting attaching tongues, the other being a sheet metal casing part provided with a corresponding number of recesses for the same permitting passage of the tongues therethrough and access to the tongues from the outer side to bend the tongues into engaging position.

1,192,577. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation. Filed Apr. 27, 1916. Serial No. 93,862. (Cl. 197—127.)



1. In a typewriting machine, the combination of a platen carrier, a platen thereon, an end stop, a support on which said end stop is loosely mounted, an abutment against which said end stop rests, and means for moving said support and thereby causing movement of said end stop to operative relationship with said platen, said end stop remaining throughout such movement in contact with said abutment.

2. In a typewriting machine, the combination of a platen carrier, a platen thereon, a support movable by a hand operation, an end stop device pivoted to said support, and an abutment against which said stop device rests, said stop device sliding over said abutment to the operative relationship with the platen when said hand controlled support is moved.

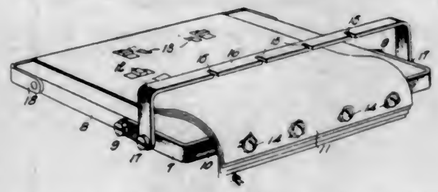
3. In a typewriter machine, the combination of a platen carrier, a platen thereon, a movable support controlled by hand, an end stop device pivoted at one of its ends to said support and provided at its opposite end portion with an end stop proper, and an abutment intermediate the ends of said device and against which said device rests, said device sliding over said abutment to operative relationship with the platen when said support is moved.

4. In a typewriting machine, the combination of a platen carrier, a platen thereon, a hand controlled pivoted end stop device, and an abutment against which said end stop loosely rests and over which it slides to operative position.

5. In a typewriting machine, the combination of a platen frame, a platen thereon, a feed roller, a feed roller carrier, an end stop loosely supported on said carrier, and an abutment over which said end stop slides to operative position when said feed roller is released.

[Claims 6 to 17 not printed in the Gazette.]

1,192,578. REMOVABLE TYMPAN-HOLDER FOR PRINTING-PRESSES. HENRY G. SONNENBERG, Chicago, Ill. Filed Oct. 30, 1915. Serial No. 58,809. (Cl. 101—22.)

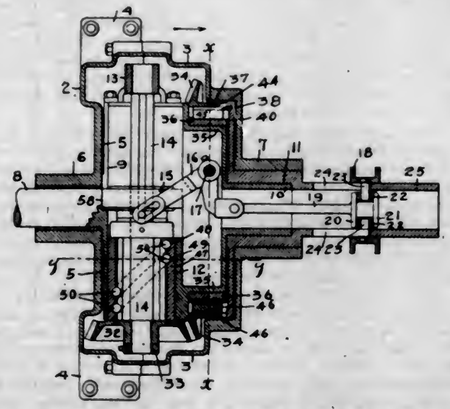


1. A holder as characterized comprising a frame adapted to be removably attached in fixed relation to a printing press platen; a plurality of clamping screws operatively mounted therein; and a swinging bail pivotally mounted on said frame, said bail having end-opening slots to engage the shanks of said screws.

2. A holder as characterized comprising a frame adapted to be removably attached in fixed relation to a printing press platen; a plurality of clamping screws operatively mounted therein; a swinging bail pivotally mounted on said frame, said bail having end-opening slots to engage the shanks of said screws; and a plurality of removable screws for holding said frame rigidly on said platen.

3. A holder as characterized comprising a rectangular bail frame for infolding the upper edge of a printing press platen; a plurality of clamping screws operatively mounted therein, a swinging bail pivotally mounted on said frame, said bail having end-opening slots to engage the shanks of said screws; and a plurality of removable screws for holding said frame rigidly on said platen.

1,192,579. VARIABLE-SPEED TRANSMISSION. EDWIN GUSTAVE STAUDE, Minneapolis, Minn., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn., a Corporation. Filed Jan. 9, 1911. Serial No. 601,644. (Cl. 240—32.)



1. A power transmission mechanism comprising a driving member, a driven member, an automatic braking device interposed between said members and arranged to become operative during a period when the driven member temporarily becomes the driving member.

2. A power transmission comprising a driving member, a driven member, operative connections interposed between said members, said connections including a gear 34, having surfaces 38, rollers 45, a flange 36, and driven members 41 between which and said surfaces 38 said rollers are inserted.

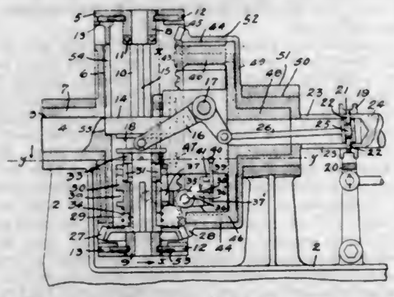
3. A power transmission device comprising a driving member, a gear operatively connected with said driving member and having projections thereon, a driven member also having projections adjacent to said gear projections, rollers loosely interposed between the projections of said gear and said driven member to be forced against the projections of the latter, a seat for said rollers, and means for checking the speed of said driven member and projections when it exceeds the speed of said gear.

4. A power transmission device comprising a driving member, a gear connected therewith and having projections thereon, a driven member having projections, rollers interposed between the projections of said gear and said driven member, a seat for said rollers, a stationary member encircling said projections and said rollers, and braking means arranged to be forced into contact with said stationary member when said driven member and its projections exceed the speed of said gear.

5. A power transmission comprising a driving member, a driven member, gears 32 and 34 meshing with one another and interposed between said members, a sleeve mounted on said gear 32, and means in connection with said sleeve for retarding and controlling said gear 34.

[Claims 6 to 11 not printed in the Gazette.]

1,192,580. VARIABLE-SPEED TRANSMISSION. EDWIN GUSTAVE STAUDE, Minneapolis, Minn., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn., a Corporation. Filed Jan. 26, 1911. Serial No. 604,820. (Cl. 192—13.)



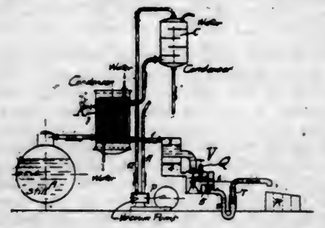
1. The combination, with a driving member, of a normally stationary driven member, a shaft mounted to revolve transversely of said driven member, a friction wheel splined on said shaft and movable radially with respect to said driving member, means for radially moving said friction wheel and means having a friction surface for said wheel, gears interposed between said shaft and said driven member, said shaft gear revolving loosely on said shaft, and mechanism actuated by the relative rotation of said shaft and gear for connecting said driving and driven members.

2. The combination, with a driving member and a friction disk, of a normally stationary driven member having a gear, a shaft mounted transversely of said driving member, a friction wheel splined on said shaft and arranged to contact with said disk, a gear loosely mounted on said shaft and meshing with said driven member gear, and mechanism actuated by the relative rotation of said shaft and gear for connecting said driving and driven members.

3. The combination, with a driving member, of a normally stationary driven member, a shaft mounted to revolve with said driving member, a disk having a friction surface, a friction wheel splined on said shaft and arranged to contact with said driving member, and with said disk, a collar having an inclined surface mounted on said shaft, a sleeve slidable on said shaft and having antifriction wheels to engage said surface, said sleeve being actuated by the relative rotation of said shaft and sleeve, and mechanism actuated by the movement of said sleeve for connecting said driving and driven members.

4. The combination, with a driving member, of a normally stationary driven member having a gear mounted thereon, a speed controlling mechanism, including a shaft having a loosely mounted gear meshing with the gear of said driven member, means actuated by said driving member for revolving said shaft at a variable speed, said actuating means being adjustable radially with respect to said driving member, and mechanism, including a clutch member, actuated by the relative rotation of said shaft and its gear for operatively connecting said driving and said driven members.

1,192,581. APPARATUS FOR DISTILLING PETROLEUM, TAR, OR OTHER SUBSTANCES UNDER VACUUM. LEO STEINSCHNEIDER, Brünn, Austria-Hungary, assignor of one-third to Philipp Porges, Vienna, Austria-Hungary, and one-third to Richard Neumann, Brünn, Austria-Hungary. Filed Oct. 8, 1914. Serial No. 865,632. (Cl. 196—16.)



1. A vacuum distilling device comprising a receiver for distillates, said receiver being of relatively small capacity and having an inlet for the incoming fluid and an outlet for the outgoing fluid, pressure reducing means, and means for periodically at relatively short intervals opening and closing said inlet and outlet for governing the action of said pressure reducing means upon said receiver.

2. A vacuum distilling device comprising a receiver for distillates having an inlet and an outlet, said receiver being of relatively small capacity, auxiliary openings, positively actuated means for periodically at relatively short intervals opening and closing said auxiliary openings, a vacuum pump, the inlet and exhaust sides thereof being alternately brought in communication with the auxiliary openings to establish vacuum and pressure in the receiver, the vacuum being established prior to the opening of the inlet and the pressure being established prior to the opening of the outlet.

3. A vacuum distilling device comprising a receiver for distillates, said receiver being of relatively small capacity and having an inlet for the incoming fluid and an outlet for the outgoing fluid, an opening in communication with pressure reducing means, and an opening communicating with a medium adapted to establish atmospheric pressure, and means for opening and closing said inlet and outlet and said openings, said means operating to periodically at relatively short intervals open and close said inlet and outlet, and, in conjunction therewith, to open and close said openings in communication with the pressure reducing means and the zone at atmospheric pressure.

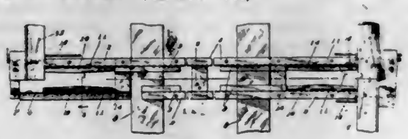
4. A vacuum distilling device comprising a receiver for distillates, said receiver being of relatively small capacity and having an inlet for the incoming fluid and an outlet for the outgoing fluid, an opening in communication with pressure reducing means, and an opening communicating with a medium adapted to establish atmospheric pressure, and means for opening and closing said inlet and outlet and said openings, said means operating to periodically at relatively short intervals open and close said inlet and

outlet, and, in conjunction therewith, to open and close said openings in communication with the pressure reducing means and the zone at atmospheric pressure, and said controlling means operating to place said receiver in communication with a pressure reducing means prior to the opening of the inlet, and being adapted to establish substantially atmospheric pressure in the receiver prior to the opening of said outlet.

5. A vacuum distilling device comprising a receiver for distillates having an inlet valve for the incoming fluid and an outlet valve for the outgoing fluid, means for opening said inlet and outlet, and a vacuum pump adapted to have the inlet and exhaust sides thereof alternately in communication with said receiver.

[Claims 6 to 13 not printed in the Gazette.]

1,192,582. UNDERFRAME-REINFORCE. THOMAS H. SYMINGTON, Rochester, N. Y. Filed Nov. 30, 1914. Serial No. 874,621. (Cl. 105—76.)



1. In a wooden underframe car, substitute sills in the form of metal channels extending from end to end of the car the web of the channel being vertical, wooden sill strips secured to the top flange of each channel, draft sills in the form of channels having their webs each in the plane of the web of the corresponding substitute sill, a flange of each draft beam being secured to the corresponding flange of the substitute sill providing a flat, vertically disposed seating surface for the cheek plates, cheek plates secured to the draft sills, and seating means for the cheek plates, the said seating means overlying the draft beams and extending upward into contact with the vertical face of the substitute sill, and means securing said means to both of said sills.

2. In an underframe for cars, longitudinal channels forming center sills, draft sills in the form of short channel sections secured to the center sills at the ends, both sets of channels being placed with their webs vertical and in alinement, and the flanges contacting and secured to each other, and cheek plates secured to the draft sills, the same having supporting means secured to both the draft and the center sills.

3. In an underframe for cars, longitudinal channels forming center sills, draft sills in the form of short channel sections secured to the center sills at the ends, both channels being placed with their webs vertical and in alinement, and their flanges contacting and secured to each other, and cheek plates secured to the draft sills, the same having supporting means secured to both the draft and the center sills, the center sills extending the full length of the car and having reinforcing means in the form of short channel sections secured thereto over the bolster.

1,192,583. COMBINATION-GARMENT. FREDERICK E. SZEMERE, New York, N. Y. Filed Aug. 26, 1915. Serial No. 47,391. (Cl. 2—144.)

1. A combination garment, comprising a body split in a vertical direction along the median line of the front and back to form overlying front and back flaps, fastening means connecting all the front and back flaps with each other at the crotch, and fastening means for connecting the lower portion of each back flap to the lower portion of a corresponding front flap to provide leg portions at the lower end of the garment body.

2. A combination garment, comprising a body split in a vertical direction along the median line of the front and back to form overlying front and back flaps, the flaps being provided with buttonholes, a button engaging registering buttonholes of both front and back flaps for connecting the front and back flaps with each other at the crotch, and buttons on the front lower portions of the body and adapted to be engaged by buttonholes of the said back flaps.



3. A combination garment, comprising a body split in a vertical direction along the median line of the front and split in a vertical direction along the median line of the lower portion of the back to form overlying front and back flaps, the upper portions of the front flaps being provided with fastening devices for closing the upper front portion of the body, the lower portions of the said front flaps being provided with buttonholes, the said back flaps being provided with buttonholes, a main button engaging registering buttonholes of the said front and back flaps with each other, and buttons on the lower portions of the body and adapted to be engaged by buttonholes of the said back flaps.

4. A combination garment, comprising a body split in a vertical direction along the median line of the front, and split in a vertical direction along the median line of the lower portion of the back to form overlying front and back flaps, the upper portions of the front flaps being provided with fastening devices for closing the upper front portion of the body, the lower portions of the said front flaps being provided with buttonholes, the said back flaps being provided with buttonholes, a main button engaging registering butonholes of the said front and back flaps with each other, buttons on the lower portions of the body and adapted to be engaged by buttonholes of the said back flaps, and supplementary buttons for fastening the overlapping front flaps together above the said main button.

5. A combination garment, comprising a body split in a vertical direction along the median line of the front and split in a vertical direction along the median line of the lower portion of the back to form overlying front and back flaps, the upper portions of the front flaps being provided with fastening devices for closing the upper front portion of the body, the lower portions of the said first front flaps being provided with buttonholes, the said back flaps being provided with buttonholes, a main button engaging registering buttonholes of the said front and back flaps with each other, and two buttons on the front of each lower portion of the body and adapted to be engaged by the lowermost buttonhole of the corresponding back flap.

1,192,584. PROCESS IN MAKING DIASTATIC PRODUCT. JOKICHI TAKAMINE, New York, N. Y. Continuation of application Serial No. 548,402, filed Mar. 10, 1910. This application filed July 1, 1912. Serial No. 707,053. (Cl. 167—7.)

1. As a new composition of matter, a non-alkaline composition of salt and fungi characterized by the possession of starch converting enzyms combined with an abnormal resistance to antiseptic power.

2. As a new composition of matter, a non-alkaline composition of salt with koji characterized by the possession of starch converting enzyms combined with an abnormal resistance to antiseptic power.

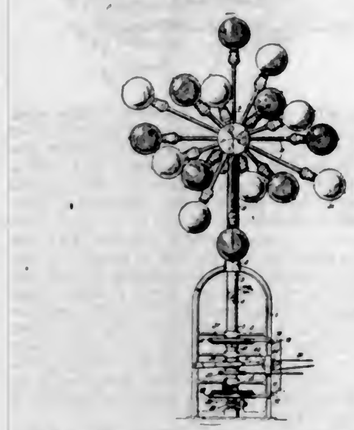
3. The improvement in the manufacture of diatase containing starch converting enzyms, which consists in increasing the yield of diatase by growing a fungus possessing starch converting enzyms on a suitable culture medium moistened with a salt solution, and under non-alkaline conditions.

4. The improvement in the manufacture of diatase containing starch converting enzyms, which consists in increasing the yield of diatase by growing a fungus possessing starch converting enzyms on a suitable culture medium moistened with a solution of sodium chlorid, and under non-alkaline conditions.

5. The improvement in the manufacture of diatase containing starch converting enzyms, which consists in increasing the yield of diatase by growing a fungus possessing starch converting enzyms on a suitable culture medium moistened with a salt solution, under non-alkaline conditions and in presence of antiseptic.

[Claims 6 to 11 not printed in the Gazette.]

1,192,585. ELECTRIC DISPLAY DEVICE. CHARLES TREGONING, New York, N. Y. Filed Mar. 8, 1916. Serial No. 82,868. (Cl. 240—9.)



1. In an electric display device of the character described, a pair of wheel structures, electric lamps arranged on the spokes of said wheels, means for rotating said wheels in parallel planes and in opposite directions, means for supplying current to said lamps while rotating, a rotatable member for rotating bodily said wheels in a plane at right angles to the plane of the wheels, and a controlling member for throwing said rotatable member into and out of operation.

2. In an electric display device of the character described, a pair of rotatable wheels, electric lamps arranged on said wheels, a beveled gear connected with each of said wheels, a shaft supporting said gears, a third beveled gear meshing with both of the first mentioned beveled gears, a rotatable tubular member connected with said last mentioned beveled gear, a rotatable tubular member connected with said shaft, means for supplying current to said lamps, and means for rotating said tubular shafts together and independently at will so as to cause said wheels to rotate in vertical planes or vertical and horizontal planes simultaneously.

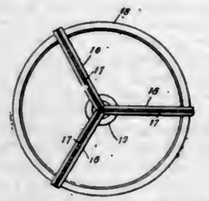
3. In an electric display device of the character described, a pair of rotatable wheel structures, lamps arranged on each of the wheel structures, a pair of propelling members connected with said wheel structures so as to cause the same to rotate in parallel vertical planes and also in a horizontal plane, a driving member, and a pair of clutches connected with said driving member, one of said clutches acting to connect one of said propelling members with said driving member and the other of said clutches acting to connect the other propelling member with said driving member.

4. In a display device of the character described, a pair of rotatable members, lamps arranged on said members, means for supplying current to said lamps, a pair of propelling members for moving the rotatable members in a vertical plane and also in a horizontal plane, a power member, a clutch for connecting said power member with one of said propelling members, a second clutch for connecting the power member with the other propelling member, and means for automatically shifting in cycles said power member so that the respective clutches will be operated alternately for part of the time and simultaneously for part of the time.

5. In a display device of the character described, a plurality of rotatable wheel structures, lamps on each of said wheel structures, a propelling member for rotating said lamps in a vertical plane, a propelling member for rotating the lamps in a horizontal plane, a power member, a pair of clutches associated with said power member for connecting the power member with either of the propelling members, a lever for shifting the position of said power member, a cam member for operating said lever, a prime mover, and means for connecting the prime mover with the cam and with said power member, said means causing the cam to operate slowly and said power member to operate rapidly.

[Claims 6 to 9 not printed in the Gazette.]

1,192,586. PROJECTILE. ARTHUR B. WARING, New York, N. Y. Filed May 17, 1915. Serial No. 28,526. (Cl. 102—26.)

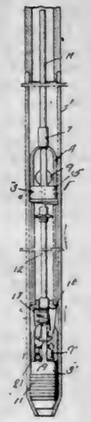


The combination of a projectile body adapted to be discharged from a rifle, and a separate projectile rider arranged to be disposed beyond the muzzle of the rifle before the rifle is discharged, said rider comprising a ring-shaped body and contracting resilient projections extending forwardly and inwardly therefrom, adapted to be wedged onto the projectile body and propelled with it, and a plurality of symmetrically disposed inclined arms extending outwardly and backwardly from the ring and rigidly affixed thereto, said arms having saw toothed edges, and means for rigidly interconnecting said arms at points back of said ring.

1,192,587. TRIP-VALVE FOR OIL-WELL PUMPS. ROBERT Y. WATSON, Taft, Cal. Filed Sept. 28, 1914. Serial No. 864,003. (Cl. 103—60.)

1. In a device of the class described, a casing, a plunger slidably mounted in said casing, a valve secured to the upper end of said plunger, said valve comprising a seat, a spherical member removably mounted in said seat, and a cage to limit the movement of said ball, a valve in the lower end of said casing, said valve comprising a seat, a spherical member mounted in said seat and a cage inclosing said spherical member, an upwardly extending rod secured to the upper end of said cage and adapted to project within the plunger, an inverted U-shaped member slidably mounted on said rod, levers pivotally secured to the said cage, a collar located beneath the said last mentioned spherical member, a link connecting said levers to said collars, and a resilient member interposed between the

upper end of the said cage and the said U-shaped member to maintain the same in its uppermost position.



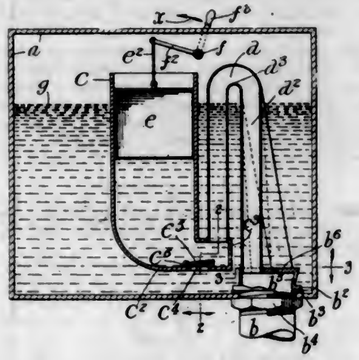
2. In a device of the class described, a casing, a hollow cylindrical plunger slidably mounted in said casing, a valve on the upper end of said plunger, said valve consisting of a seat, and a spherical member mounted in said seat, a rod for reciprocating said plunger, a valve located in the lower end of said casing comprising a seat and a spherical member mounted in said seat, a cage mounted on said valve and extending over the spherical member therein, an upwardly extending rod secured to said cage and adapted to project within said plunger, a U-shaped member slidably mounted in said rod, a collar located beneath the lowermost spherical member, levers operatively connected to said U-shaped member and to said collar, and a spring interposed between the upper end of the said cage and the said U-shaped member to normally maintain the collar in its lowermost position, the said rod adapted to engage the uppermost ball on the downward movement of the plunger and unseat the same and the said U-shaped member being so constructed and arranged that the lower end of the plunger will engage the same during the downward movement and unseat the lowermost ball.

3. In a device of the class described, a casing, a plunger mounted in said casing, a valve in said casing, said valve consisting of a collar, legs extending upwardly from said collar and converging at the upper end thereof, a rod extending upwardly from said legs, a U-shaped member slidably mounted on said rod, a spring interposed between the end of the legs and the said U-shaped member, levers pivotally secured to the said legs, a valve seat located within the collar, a spherical member adapted to be seated in said seat, a collar situated between said spherical member, and links connecting the aforementioned levers and the said collar to normally lift the ball when the said U-shaped member is depressed.

1,192,588. FLUSH-TANK. WALTER J. WHITEHEAD, Hackensack, N. J. Filed May 22, 1914. Serial No. 840,164. (Cl. 4—5.)

1. In an apparatus of the class described, a main flush tank, a main discharge pipe secured in the bottom thereof and which extends upwardly thereinto, and the end of which within said tank is closed, a supplemental tank placed in the main tank and the bottom of which is above the bottom of the main tank and provided with a valve which opens upwardly, a plunger float placed in the supplemental tank, and a plurality of siphon tubes, the shorter legs of which are connected with the bottom portion of the supplemental tank and the longer legs of which are connected with the discharge pipe.

2. In an apparatus of the class described, a main flush tank, a main discharge pipe secured in the bottom thereof and which extends upwardly thereinto, and the end of which within said tank is closed, a supplemental tank placed in the main tank and the bottom of which is above the bottom of the main tank and provided with a valve which opens upwardly, said bottom of the supplemental tank being also provided with a lateral extension, a float plunger placed in the supplemental tank, a discharge pipe secured in the bottom of the main tank and the end of which within said tank is closed, and a plurality of siphon tubes the shorter legs of which are connected with the extension of the supplemental tank and the longer legs with the closed end of the discharge pipe.

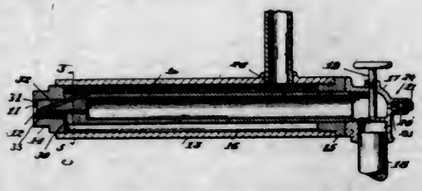


3. In an apparatus of the class described, a main flush tank, a supplemental tank placed therein, the bottom of which is above the bottom of the main tank and is provided with a valve which opens upwardly, said bottom of the supplemental tank being also provided with a lateral extension, a float plunger placed in the supplemental tank, a discharge pipe secured in the bottom of the main tank and the end of which within said tank is closed, and a plurality of siphon tubes the shorter legs of which are connected with the extension of the supplemental tank and the longer legs with the closed end of the discharge pipe.

4. In an apparatus of the class described, the combination of a flush tank, a main discharge pipe associated therewith, a plurality of siphon tubes each of relatively small cross sectional area as compared with the main discharge pipe, the longer legs of the tubes being connected with said main discharge pipe and means for starting a flow through said tubes.

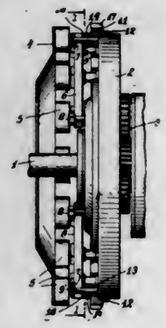
5. In an apparatus of the class described, the combination of a flush tank, a main discharge pipe associated therewith, a plurality of siphon tubes, each of relatively small cross sectional area as compared with the main discharge pipe, the longer legs of the tubes being connected with said main discharge pipe, whose entrance is otherwise closed, and means for starting a flow through said tubes.

1,192,589. CRUDE-OIL BURNER. HERBERT C. WHITNEY, Redlands, Cal. Filed Aug. 31, 1915. Serial No. 48,205. (Cl. 158—75.)



An oil burner comprising a horizontal oil feed tube, a valve controlled oil supply pipe communicating therewith, a steam jacket surrounding said feed tube, valve controlled means supplying steam to said jacket, a burner nozzle provided with a reduced horizontal oil duct communicating with said feed tube, a steam duct extending from the outlet of said oil duct at an angle to said steam jacket and a second steam duct located below the outlet of said oil duct for spreading and atomizing the fuel, said steam ducts being inclined to each other.

1,192,590. GEAR-RING FOR FLY-WHEELS. JULIUS E. WILD, Plainfield, N. J., assignor to Bosch Magneto Company, New York, N. Y., a Corporation of New York. Filed Mar. 1, 1916. Serial No. 81,345. (Cl. 74—28.)



1. The combination with the fly wheel of an engine, of a segmental gear ring made up of segments each having a laterally directed flange closely fitting the periphery of the fly wheel and an inwardly directed flange abutting the side of the fly wheel and having perforated bosses, and fastening devices passing through the bosses and into the fly wheel for fastening the segments rigidly thereto; substantially as described.

2. The combination with the fly wheel of an engine, of a segmental gear ring having perforated bosses, connecting members fastened to the bosses adjacent the abutting ends of the segments to hold the segments in a rigid ring, and fastening devices passing through the other bosses and into the fly wheel to fasten the ring rigidly thereto; substantially as described.

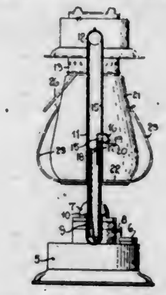
3. The combination with the fly wheel of an engine, and a plurality of magnets, of a gear ring of magnetic material having perforated bosses, non-magnetic spacing members interposed between the bosses and the magnets, and fastening devices of non-magnetic material passing through some of the magnets and through the bosses into the fly wheel to fasten those magnets and the gear ring rigidly to the fly wheel; substantially as described.

4. The combination with the fly wheel of an engine, and a plurality of magnets, of a gear ring of magnetic material having perforated bosses and clearance recesses between certain ones of the bosses, spacing members of non-magnetic material interposed between the bosses and the magnets, fastening devices passing through some of the magnets and through the bosses into the fly wheel to fasten those magnets and the gear ring rigidly to the fly wheel, and other fastening devices of non-magnetic material passing through the other magnets and the clearance recesses to fasten those magnets rigidly to the fly wheel; substantially as described.

5. The combination with the fly wheel of an engine, and a plurality of magnets, of a segmental gear ring of magnetic material having perforated bosses and clearance recesses between certain ones of the bosses, spacing members of non-magnetic material interposed between the bosses and the magnets, connecting members fastened to the bosses adjacent the abutting ends of the segments to hold the segments in a rigid ring, fastening devices of non-magnetic material passing through some of the magnets and the bosses into the fly wheel to fasten those magnets and the gear ring rigidly to the fly wheel, and other fastening devices of non-magnetic material passing through the other magnets and the clearance recesses into the fly wheel to fasten those magnets rigidly to the fly wheel; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

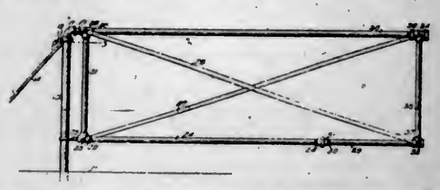
1,192,591. LANTERN. FRED A. WILSON, Adrian, Mich., assignor of one-half to W. Hal Marshall, Adrian, Mich. Filed Apr. 8, 1916. Serial No. 89,891. (Cl. 240—32.)



1. A lantern including a fuel reservoir, vertical standards fixed to the opposite sides thereof, a globe frame having spaced tubular arms to telescopically receive the respective standards and provided with means for supporting the lantern globe, one of said arms having spaced slots therein, and a latch device fixed to one of the standards consisting of a length of spring wire bent upon itself and provided with a guide loop on one end in which the other end of the wire is movable, and a latch eye formed upon the latter end of the wire and adapted to project through either of the slots in said tubular frame arm to retain the frame in its adjusted position upon said standards.

2. A lantern including a reservoir, spaced tubular standards fixed upon the reservoir, a globe carrying frame having spaced parallel tubular arms to telescopically receive the respective standards and provided with means for supporting the lantern globe, one of said arms being provided with spaced slots, and a latch device arranged within one of the tubular standards and consisting of a single length of resilient wire bent upon itself and formed with a guide loop on one end and a curved terminal portion extending from said loop and permanently fixed to the wall of said standard, the other end of said wire projecting upwardly through said loop above the standard and movable in the loop, said latter end of the wire being formed with a laterally projecting eye adapted to extend through either of the slots in the tubular frame arm to retain the globe carrying frame in an adjusted position upon said standards.

1,192,592. GATE. CHRISTIAN WINTER, Oskaloosa, Iowa. Filed Aug. 18, 1915. Serial No. 46,078. (Cl. 39—87.)

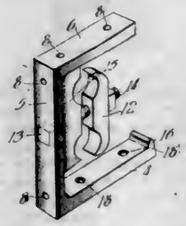


1. In a gate, the combination of a tubular post having a ring at its upper end, and a gate having at its upper rear end a downwardly extending member having a flange resting upon the upper end of the post and its ring and provided with a plug projecting from its flanged end and extending into the post, said gate being provided at its rear lower end with a member loosely engaging and partially encircling the post.

2. In a gate, the combination of a tubular post, and a gate formed of pipe sections united by T's and provided with a downwardly curved member projecting from the T at the upper rear end of the gate, said member having a reduced end projecting into the post and a flange resting upon the post, the T at the lower rear end of the gate being provided with a Y-bearing engaging the post.

3. A gate formed of pipe sections united by T's and provided with a brace extending from the T at the rear upper end of the gate to the T at the front lower end thereof, a short pipe section projecting from the upper rear T, a curved tubular member secured to the short pipe section and having a plug projecting therefrom and adapted to enter a post and a flange to rest on the top of the post, and a Y-shaped member secured to and projecting rearwardly from the lower rear T and adapted to loosely engage a post.

1,192,593. REFRIGERATOR-COUNTER BRACKET. OSCAR M. WOLFF, Chicago, Ill. Filed Nov. 15, 1915. Serial No. 61,590. (Cl. 248—36.)



1. A refrigerating counter bracket, comprising an inwardly extending supporting base, a standard and a top integral with each other, and means on said bracket for supporting refrigerating pipes, said base being shaped to form a seat for supporting a drip pan directly below such pipes.

2. A refrigerating counter bracket comprising an inwardly extending supporting base, a standard and a top integral with each other, inwardly facing seats located one above another on said standard for receiving refrigerator pipes, and a vertically disposed clamping member on said standard and shiftable relatively thereto for securing refrigerator pipes between said standard and clamping member, said base being shaped to form a seat for supporting a drip pan directly below such pipes.

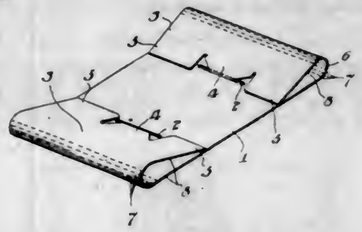
3. A refrigerating counter bracket comprising an inwardly extending base, a standard and a top integral with each other, means on said standard providing two inwardly facing concave seats, one above the other, for refrigerator pipes, a clamp head having corresponding seats therein, and a bolt connecting said head and bracket between said seats.

1,192,594. COLLAPSIBLE FABRIC-HOLDER. WILLIAM W. WOODRUFF, Ardmore, Pa., assignor to Brown & Bailey Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 6, 1915. Serial No. 54,456. (Cl. 206—50.)

1. In a device of the character described, a blank having a body provided with slots, ends provided with tongues adapted to enter said slots, and sections intermediate of said slots and tongues, said sections being adapted for bending.

2. In a device of the character described, a paper board blank having a flat intermediate section with engaging means at limits thereof and ends adapted to be bent to the form of loops, said ends having engaging means adapted to interlock with said engaging means first named and hold said ends in their looped relation, said blank being adapted for providing a collapsible fabric holder having a plain intermediate body with loops at the extremities thereof.

3. In a device of the character described, a sheet having ends respectively provided with tongues and bearings, said sheet containing slots adapted for receiving said tongues.



4. In a device of the character described, a body provided with transverse slots, ends provided with tongues adapted to enter said slots and bearings adapted to engage said body and bent sections disposed between the respective slots and tongues.

1,192,595. VENTILATOR. EDWARD L. YOUNGS, Detroit, Mich. Filed Feb. 1, 1915. Serial No. 5,338. (Cl. 98—31.)



1. In a ventilator, the combination of a frame, structure carried by said frame for obstructing part of the opening through the frame, a pair of turned-over strips attached to the face of the frame, and a pair of slides guided by the said turned-over strips, one slide serving to fit the ventilator to different sized windows and the other slide serving as a valve to regulate the opening through the ventilator.

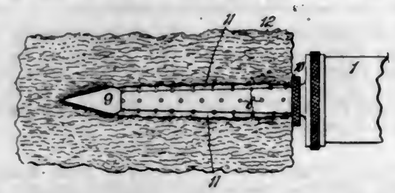
2. In a ventilator, the combination of a frame, and structure carried by said frame for obstructing the opening through said frame including a sheet of metal formed into a vertical tube open at the top and bottom and communicating through one side with the inside of the room.

3. In a ventilator, the combination of a frame, structure carried by said frame for obstructing the opening through the said frame and including a tube open at both ends communicating through one side with the inside of the room, and a deflector carried by said frame and positioned in front of the said communicating passage-way leading into the room for causing the air to travel in a path substantially parallel with the ventilator.

4. In a ventilator, the combination of a frame, structure carried by said frame for obstructing the opening through said frame provided with two tube-like vertical air passages open at both ends and communicating with the inside of the room through one side, a deflector carried by the frame and bowed out over the passage-way leading into the room from one intake, the said deflector being open at the side toward the other tube, and a second deflector carried by the frame and interposed obliquely across the passage-way leading from the other tube and also being arranged to direct air currents in substantially the same path that the first mentioned deflector directs air currents.

5. In a ventilator, the combination of a frame, structure carried by said frame for obstructing the opening through the frame and including two vertical tubes open at both ends and located at opposite ends of the frame, each of said tubes communicating through one side with the interior of the room, the said structure also formed at the center into a third vertical tube to open at both ends and communicating through one side with the interior of the room, a deflector carried by the frame and located in front of the passage-way leading from the said third tube and open at both sides to direct currents in paths substantially parallel with the ventilator, and a pair of deflectors, one for each end tube carried by the frame and located in front of the passage-way leading into the room from said end tubes and arranged to direct air currents in paths substantially parallel with the ventilator frame and substantially coinciding with the paths that the first mentioned deflector directs the air currents.

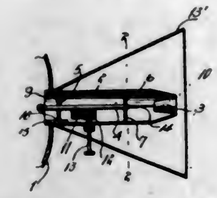
1,192,596. APPARATUS FOR INJECTING BRINE INTO MEAT. BENJAMIN K. ALBRECHT, Rowayton, Conn. Filed Sept. 16, 1915. Serial No. 50,965. (Cl. 99—2.)



1. A meat salting tool comprising a brine reservoir and means for ejecting the brine therefrom, a meat penetrating nozzle communicating with the reservoir and having discharge openings, and a pointed head surmounting the nozzle and being of greater diameter than the major portion of the nozzle to prevent the said nozzle contacting with the meat.

2. A meat salting tool comprising a brine reservoir and means for ejecting the brine therefrom, a hollow nozzle communicating with the reservoir, and having discharge openings therein, a pointed head surmounting the nozzle, the nozzle tapered from its base to the head, the diameter of the base and head greater than the rest of the nozzle, so that a chamber is formed about that portion of the nozzle between said base and head when the nozzle is inserted into a piece of meat.

1,192,597. DEVICE FOR CLEANING BURNER-TIPS. VERNER B. ALLEN, Clinton, Ind. Filed Nov. 22, 1915. Serial No. 62,833. (Cl. 158—20.)

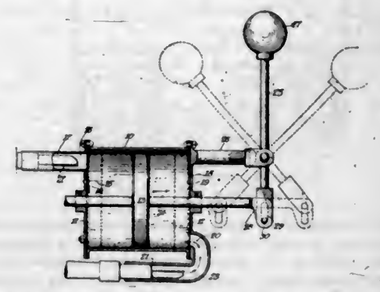


In a burner cleaner, the combination with a burner tube, of a rod mounted therein, disks carried by the rod and having their peripheries slidably engaged with the interior of the tube, said disks having perforations formed therein to permit passage of gas, and means operable exteriorly of the tube to reciprocate the rod.

1,192,598. AUTOMOBILE-HORN. GEORGE A. ARNOLD, Boston, Mass., assignor of two-thirds to Solomon A. Campbell, Waltham, Mass. Filed Dec. 1, 1915. Serial No. 64,397. (Cl. 116—19.)

1. A warning signal including a cylinder having separate valve controlled inlets at opposite ends and separate outlets at opposite ends of said cylinder, vibratory sound producing devices connected to said outlets, a piston within said cylinder adapted upon reciprocation to deliver air alternately through said outlets to operate said sound producing devices, a bracket carried by said cylinder, a lever pivotally mounted on said bracket, a piston rod connected to said piston, and slot and pin connections between said piston rod and one end of said lever.

2. A warning signal including a cylinder having separate valve controlled inlets at opposite ends and separate outlets at opposite ends, a tube extending from one of said outlets in the general direction of the axis of the cylinder, a tube extending from the other of said outlets and including an elbow portion and a straight portion extending in the same general direction as said first mentioned tube, separate vibratory sound producing devices within said tubes, a piston within said cylinder and means for reciprocating said piston to deliver air past said sound producing devices alternately and deliver the sound from both in the same general direction.



3. A warning signal including a cylinder, a piston therein, separate valve controlled air inlets permitting the admission of air to said cylinder at either side of said piston, separate outlet tubes connected to opposite ends of said cylinder, one of said tubes including an elbow and both of said tubes extending in the same general direction and both including vibratory sound producing devices, a bracket rigid with said cylinder adjacent the upper side thereof and an upwardly extending lever pivoted intermediate of its ends on said bracket and having a handle at its upper end and connections at its lower end with said piston.

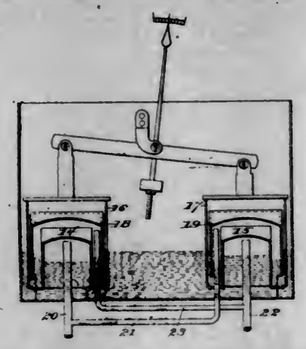
4. A warning signal including a cylinder, a piston therein, separate outlet tubes connected at opposite ends of said cylinder, vibratory sound producing mechanism operated by the delivery of air through said tubes, a bracket extending rearwardly from one end of said cylinder adjacent the upper side thereof and an upwardly extending lever, pivoted intermediate of its ends on said bracket and having its lower end connected to said piston, and its upper end presenting a handle whereby said piston may be reciprocated and the signal operated by the delivery of air through either of said tubes.

1,192,599. PRESSURE-GAGE. ERVIN G. BAILEY, Newton Highlands, Mass., assignor to Bailey Meter Company, a Corporation of Massachusetts. Filed Apr. 30, 1913. Serial No. 764,501. (Cl. 73—31.)

1. In a pressure gage the combination with a bell partially submerged in and sealed by a liquid, of a pivotally supported beam to which said bell is pivotally connected at one side of the axis of said beam; means for subjecting the interior and exterior of said bell respectively, to pressures, the difference between which is to be measured; and a displacing member pivotally connected to said beam at the other side of the axis thereof, and partially submerged in and sealed by the same liquid, the horizontal cross-sectional areas of the walls of said bell and of said displacing member being inversely proportional to the moment arms through which the said bell and displacing member act respectively.

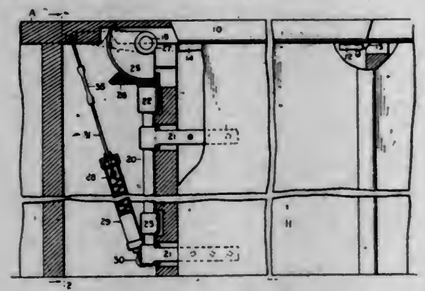
2. The combination with an oscillating indicating member; of two bells connected with said indicating member at opposite sides of the axis of oscillation thereof, the horizontal cross-sectional areas of the walls of said bells being inversely proportional to the lengths of the moment arms through which they act respectively, and the said

bells being partially submerged in and sealed by the same liquid; means for inclosing the exterior surface of said bells and means for admitting pressures, the difference between which is to be measured, to the inclosed interior and exterior surfaces of said bells respectively.



3. The combination with a pivotally supported oscillating member; of two bells suspended from said member at opposite sides of the axis thereof, the horizontal cross-sectional areas of the walls of said bells being inversely proportional to their respective moment arms, and the said bells being partially submerged in and sealed by a liquid; and means for admitting pressures, the difference between which is to be measured, to the interior surfaces of said bells respectively.

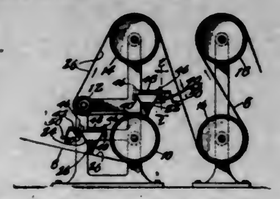
1,192,600. COÖPERATING COUNTER-GATES. JOSEPH T. BERTHELOTE, Havre, Mont. Filed Dec. 29, 1915. Serial No. 69,194. (Cl. 268—3.)



In a counter, a top gate, hinged to swing in a vertical plane, a side gate, a gear connection between the hinge of the top gate and the hinge of the side gate to swing the side gate by the raising and lowering of the top gate, a counter-balance spring for the top gate, a cylinder in which the said spring is mounted, the cylinder being pivoted at its lower end, a rod connected with the said spring and extending through the cylinder, and an arm on the top gage to which the opposite end of said rod is connected.

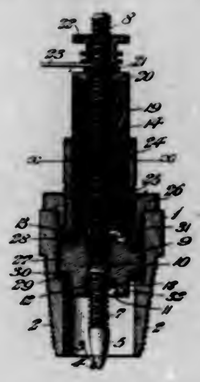
1,192,601. ASPHALT-ROOFING-MAKING MACHINE. DAVID E. BOISMENUE and NICHOLAS J. WAGNER, Chicago, Ill., assignors to International Roofing Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1914. Serial No. 856,129. (Cl. 91—43.)

1. In combination with a traveling strip of material to be surfaced with material of different colors, a color material receptacle adjacent to said strip divided into compartments having discharge openings discharging to desired portions of said strip, a mounting for said receptacle permitting lateral movement thereof with reference to the passing strip and means for selectively moving said receptacle laterally of the strip.



2. In combination with means for longitudinally propelling a strip of roofing material, a receptacle for surfacing material slidably mounted to be movable transversely of the strip, and means operatable by an observer at the side of the strip for selectively moving said receptacle transversely of the strip.

1,192,602. SPARK-PLUG. CHARLES H. BOND, Philadelphia, Pa. Filed Oct. 4, 1915. Serial No. 53,891. (Cl. 123—169.)



1. A spark plug, comprising an insulating body of fiber, a metal sleeve surrounding said body, a plug at the forward portion of said body, an electrode longitudinally adjustable with respect to said body and plug, said electrode being carried by said plug and removable as a unit of structure with said insulating body and plug, means to secure said electrode in its adjusted position, a body portion, an electrode carried thereby, and means engaging said sleeve and body portion to secure said insulated body with respect to said body portion, said metal sleeve extending outwardly beyond said sleeve engaging means to form a protection for the insulating body of fiber.

2. In a spark plug, an insulating body, an electrode passing through said body, an insulating member at the forward end of said body, said electrode being removable as a unit with said insulating body and member, nuts contacting with opposite sides of the insulating member and in threaded engagement with said electrode to effect the relative adjustment of said electrode and insulating member, and means to fix said electrode with respect to said body.

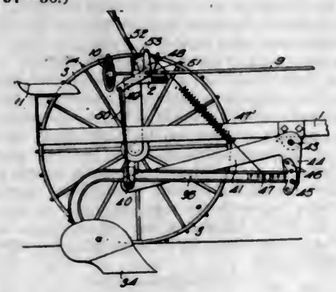
3. In a spark plug, an insulating body, a sleeve on said body, an electrode extending through said body and having threads of different pitch thereon, nuts to engage the different threads, an insulating member through which said electrode passes and located between said nuts, whereby said member may be longitudinally adjusted on said electrode and means carried by said sleeve to fix said electrode with respect to said insulating body.

4. In a spark plug, a body portion, an insulating body, an electrode passing therethrough, an insulating member carried by said electrode, a sleeve fixed to the forward portion of said insulating body, and a nut fixed to said sleeve and engaging said body portion to secure said insulating body and insulating member in position, said sleeve extending outwardly beyond said nut to form a protection for said insulating body.

5. In a spark plug, an outer insulating body of fiber having an aperture, extending longitudinally therethrough, a positive electrode extending through said aperture and having a thread thereon, the thread at one end of said electrode being of a different pitch from the thread at the opposite end thereof, nuts engaging said threads, an insulating member having an aperture through which said electrode passes and located between said nuts, said nuts serving to effect the longitudinal adjustment of said electrode and insulating member, means to fix said electrode with respect to said insulating body, a body portion adapted to receive said insulating member and said electrode, a negative electrode carried at the forward end of said body portion, and means carried by said insulating body to secure it with respect to said body portion.

[Claims 6 to 11 not printed in the Gazette.]

1,192,603. MOTOR-PLOW. OLIVER O. BOWERS, Cape Girardeau, Mo. Filed Oct. 8, 1915. Serial No. 54,785. (Cl. 97—36.)



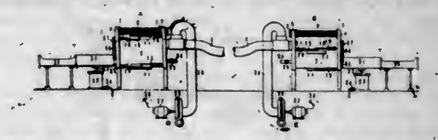
1. In a device of the character described, a frame, a plow, a swing mounted on said frame, a clevis for said swing, said clevis being adapted to surround the beam of said plow adjacent the rear of the beam, and a rod engaging the front of said beam and said swing for connecting the front of the swing with the front of said beam.

2. In a motor plow of the character described, a frame, a plurality of plows provided with beams, a swing for each of said plows, each of said swings being provided with a clevis overlapping the rear part of said beams, a pin extending through said swings at the front and through said beams, and means acting on said swings for raising and lowering the same pivotally, whereby said plows are raised and lowered as desired.

3. In a device of the character described, a frame, a plurality of plows provided with beams, a swing for each of said plows, each of said swings being formed with a long arm extending toward the rear and a short arm extending downwardly, means for pivotally mounting said swings at the juncture of the long arm and the short arm to said frame, means for connecting the forward end of the beam of each of the plows to the respective depending arm of the respective swings, means for connecting the rear end of the respective long arms of the beams of the respective plows, and means connected with the rear end of the long arm for raising and lowering the swing and the plow connected therewith.

1,192,604. CONVEYER. CHARLES H. BURTON, Washington, D. C., assignor to United States Pneumatic Company, New York, N. Y., a Corporation of Maine. Filed May 11, 1912. Serial No. 696,583. (Cl. 243—19.)

1. In a conveyer, a rotatable member containing a plurality of chambers, a tube, locking means connected with each chamber for maintaining alinement between it and the tube, means for rendering inoperative the locking means of all of the chambers which are out of alinement with the tube, a carrier, and means operated by the entrance of the carrier in to the alined chamber for releasing the locking means and permitting the member to rotate and thus carry the chamber to a new position.



2. In a conveyer, a rotatable member containing a plurality of chambers, a tube, independent locking means associated with each chamber for maintaining it in alinement with the tube, means for rendering inoperative the locking means of the chambers which are out of alinement, a carrier, and means in each chamber for unlocking the rotatable member, such means operated by the entrance of the carrier into the chamber which is in alinement with the tube; the rotatable member being so mounted that when it is unlocked the weight of the carrier causes it to move to a new position and bring another chamber into alinement with the tube and locking place.

3. In a conveyer, a tube, a receiving table out of line with the tube, a rotatable member containing a plurality of chambers between the tube and the receiving table, a carrier, the rotatable member being so shaped and mounted that the weight of the carrier moves the receiving chamber out of alinement with the tube and into alinement with the receiving table and brings another chamber into alinement with the tube, locking means associated with each chamber, means for rendering inoperative the locking means of the chambers which are out of alinement with the tube, and means operated by the carrier entering the chamber which is in alinement with the tube for unlocking the rotatable member.

4. In a conveyer, a tube, a receiving table out of line with the tube, a rotatable member containing a plurality of chambers between the tube and the receiving table, a carrier, the rotatable member being so shaped and mounted that the weight of the carrier moves the receiving chamber out of alinement with the tube and into alinement with the receiving table and brings another chamber into alinement with the tube, locking means associated with each chamber, means for rendering inoperative the locking means of the chambers which are out of alinement with the tube, and means operated by the carrier entering the chamber which is in alinement with the tube for unlocking the rotatable member, and a pawl preventing the rebound of the rotatable member.

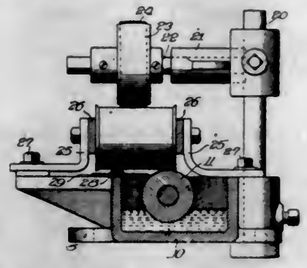
5. In a conveyer, a carrier, a rotatable member containing a plurality of chambers, a supporting frame therefor, locking means between the member and the frame associated with each chamber, means for rendering inoperative some of the locking means, and means located substantially midway of each chamber for unlocking the rotatable member, such means actuated by the entrance of a carrier into the chamber, whereby said member rotates to bring another chamber into alinement with the tube.

[Claims 6 to 14 not printed in the Gazette.]

1,192,605. METHOD OF SEALING CANS. WILLIAM CAMERON, Chicago, Ill., assignor to Torris Wold & Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 26, 1914. Serial No. 858,585. (Cl. 113—116.)

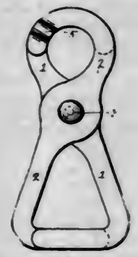
1. The method of sealing cans, which consists in applying a sealing medium to that face only of the can body flange which is a continuation of the outer face of the wall of the can body, whereby to position the sealing medium on the exterior face only of said flange, assembling a cap on the can body with its flange overlapping the body flange, and then effecting seaming of the cap and body flanges with the sealing medium confined wholly between the marginal portions of the cap flange and said exterior face of the body flange and remote from the interior of the sealed can.

2. The method of sealing cans, which consists in applying a sealing medium to that face only of the can body flange which is a continuation of the outer face of the wall of the can body, whereby to position the sealing medium on the exterior face only of said flange, assembling a cap on the can body with its flange overlapping the



body flange, pressing the flange of the cap into engagement with said face of the body flange to which the sealing medium has been applied, and finally seaming the cap and body flanges with the sealing medium confined by the seam at a point wholly outside of the joint between the wall of the body and the inner wall of the groove of the cap.

1,192,606. PLUMBER'S LINK. LOUIS A. CORNELIUS, Grand Rapids, Mich. Filed Jan. 29, 1912. Serial No. 674,155. (Cl. 24—232.)

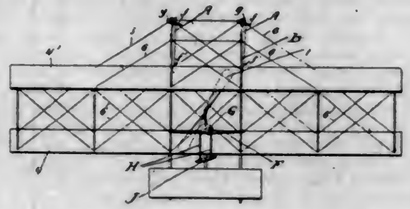


1. In a device of the character described, a pair of cooperating link-members pivotally connected, one having a lug portion extending across a limb thereof at an angle to the direction of the interrelative swinging movement of the link-membera and projecting from the face of said link member in a direction substantially parallel with the axis of the pivotal connection of the link-members, said lug being adapted to engage and yieldingly hold a limb of the other link-member, at least one link-member being resilient.

2. In a device of the character described, a pair of cooperating link-members pivotally connected, one having a shoulder extending at an angle to the direction of the interrelative swinging movement of the link-members and projecting from the face of said link-member in a direction substantially parallel with the axis of the pivotal connection of the link-members, against which shoulder the extremity of a limb of the other link-member is adapted to abut and to be yieldingly held thereby when the device is in closed position, at least one link-member being resilient.

1,192,607. FLYING-MACHINE. HERMANN F. CUNTZ, Hartford, Conn. Filed June 25, 1910. Serial No. 568,776. (Cl. 244—29.)

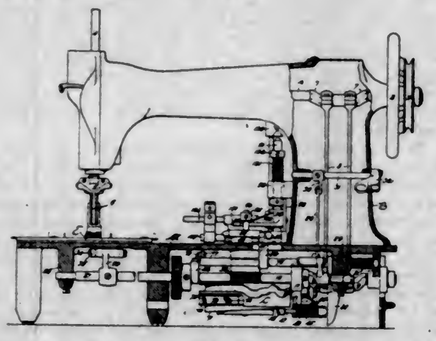
1. In a flying machine, fixed horizontal supporting planes, a vertical stabilizing plane section in a vertical line above the longitudinal axis of the machine, and above the supporting planes and means for adjusting said vertical plane section back of its forward edge, means embodied in the construction of said plane and in the deflecting adjustment thereof, whereby a helical or screw surface is produced upon the deflection of the same, and with relation to the axis of the flying machine and its center of gravity, and whereby the reaction of said stabilizing plane will have a tilting and no lateral deflecting action in the nature of a rudder.



2. In a flying machine, rigid substantially horizontal supporting planes, planes in substantially vertical planes above the center of gravity of the machine and disposed symmetrically about a vertical plane through the longitudinal axis of the machine, each of said stabilizing planes having its forward portion flexibly secured and its rear portion deflectable, and means for symmetrically deflecting said planes, as and for the purpose described.

3. In a flying machine, a fixed horizontal supporting plane, vertical stanchions extending above said fixed supporting planes, laterally inclined braces extending from the upper portion of said vertical stanchions to lateral members of the supporting planes, a vertical stabilizing plane articulated to the forward stanchion, means to truss the forward stanchion against longitudinal strain, and means coöperating with the rear stanchion to deflect the rear end of the stabilizing plane laterally with relation thereto, and means accessible to the occupant to effect such lateral deflection.

1,192,608. FEEDING MECHANISM FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Original application filed Sept. 6, 1912, Serial No. 718,807. Patent No. 1,164,789, dated Dec. 21, 1915. Divided and this application filed Nov. 10, 1913. Serial No. 800,037. (Cl. 112—8.)



1. In a sewing machine, the combination with stitch-forming mechanism, of feeding mechanism comprising a feed-dog, successively and independently acting means for moving the feed-dog in the same direction, and automatically acting means for controlling the successive action of said feed actuating means.

2. In a sewing machine, the combination with stitch-forming mechanism, of feeding-mechanism comprising a feed-dog, means whereby said feed-dog is confined against lateral movement, a first actuating means for causing said feed-dog to feed the work during a series of stitch-forming cycles, a second actuating means for causing said feed-dog to feed the work during another series of stitch-forming cycles, connections between said feed-dog and said first and second actuating means and automatically acting controlling means for rendering said actuating means successively active.

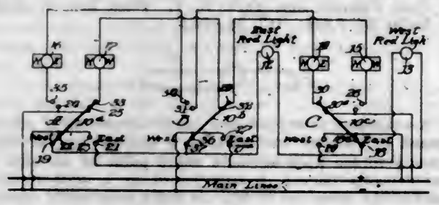
3. In a sewing machine, the combination with stitch-forming mechanism, of feeding-mechanism comprising a feed-dog, and means whereby the feed-dog is maintained in engagement with the work throughout a succession of stitch-forming cycles and moved in the same direction in consecutive cycles, and is given a plurality of rising and falling and reciprocatory feeding movements in another succession of stitch-forming cycles.

4. In a sewing machine, the combination with stitch-forming mechanism, of feeding mechanism comprising a feed-dog, and means whereby the feed-dog is maintained in operative relation with the work and moved continously in the same direction to advance the work during one succession of stitch-forming cycles and is given a plurality of rising and falling and reciprocatory feeding movements in another succession of stitch-forming cycles.

5. In a sewing machine, the combination with stitch-forming mechanism, and feeding mechanism comprising a feed-dog and normally acting lifting and reciprocating means therefor for advancing the work for each stitch-forming cycle, of means for causing the feed-dog to remain elevated and to move in the same direction in consecutive cycles, of a series of stitch-forming cycles.

[Claims 6 to 26 not printed in the Gazette.]

1,192,609. SAFETY-SIGNAL FOR BALANCED HOISTS. THOMAS G. FEAR, Birmingham, Ala. Filed Nov. 3, 1915. Serial No. 59,450. (Cl. 177—339.)



1. In a signal system for hoists, switches positioned at each end of the hoist and in the hoist house, signal lights in the hoist house and circuits controlled by said switches, whereby a danger signal is lighted when any of said three switches is disposed in a different relation to the others thereof and a safety signal is displayed when all switches are in the same relation, substantially as described.

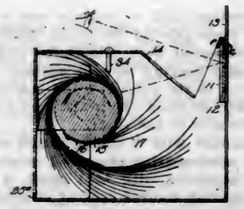
2. In a signal system for balanced hoists, the combination of a plurality of manually operable switches located respectively at the bottom of the hoist, at the top thereof and in the hoist house, a danger signal and a safety signal in said hoist house, and circuits controlled by said switches and connected to said signals, the connections being such that the danger signal is in view when any of said three switches is disposed in a different relation to the others thereof, and said safety signal is in view when all of said switches are disposed in the same relation, substantially as described.

3. In a signal system for balanced hoists, the combination of electrical circuits, the top thereof and the hoist house, switches located at said points, said switches being manually operable and serving to connect two circuits in one position of each switch, a danger light and a safety light located in the hoist house, the arrangement of the circuit and switches being such that the danger light is active when any of the switches is disposed in a different relation from the others thereof, and the safety light is active when all the switches are in the same relation and the workmen at the top and bottom of the hoist are clear, substantially as described.

4. In a signal system for hoists, the combination of a plurality of electrical circuits, switches located respectively at the bottom and top of the hoist and in the hoist house, each of said switches engaging four contacts in either of two positions of the switch, danger and safety lights located adjacent to the hoist house, the arrangement being such that the disposition of any switch in a relation different from that of the switch in the hoist house, the danger light is active, substantially as described.

5. In an electric signal system, the combination of sets of signal lights and switches, the switches provided with pairs of contact points, levers adapted to be actuated to engage two pairs of contacts at one time, the lights being connected in series with similarly placed contact points on the several switches, one set of lights adapted to light when the levers are thrown all in the same direction, and the other set to light when one of the levers is thrown in the opposite direction, substantially as described.

1,192,610. TOY MOVING-PICTURE MACHINE. ARTHUR S. FERGUSON, Springfield, Mo., assignor of one-half to Stephen L. McIntire, Springfield, Mo. Filed Nov. 1, 1915. Serial No. 59,038. (Cl. 88—19.)



1. A toy picture machine including a box approximately rectangular and formed with a member at the upper end of the front rising above the top of the box, a rearwardly facing mirror on the front below the said member, there being a depression in the top of the box adjacent to the mirror, and a picture wheel mounted to turn in the box and carrying picture films, the top of the wheel being directly in the range of the mirror, and the films at the top of the wheel turning in said range and toward the mirror.

2. A toy picture machine including a box, a rearwardly facing mirror mounted on the front of the box and extending below the top of the box, there being a depression in the top of the box adjacent to the mirror, and a picture wheel mounted to turn in the box and having films turning at the top of the wheel in range with the mirror.

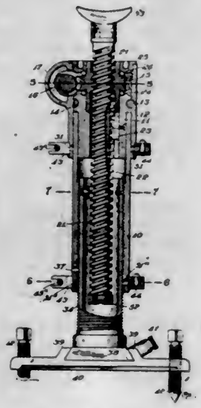
3. A toy picture machine including a box, a rearwardly facing mirror mounted on the front of the box and extending below the top of the box, there being a depression in the top of the box adjacent to the mirror, and a picture wheel mounted to turn in the box and having films turning at the top of the wheel in range with the mirror, there being a depending flipper at the top of the box in the path of movement of the films.

4. A toy picture machine comprising a box, a picture wheel mounted to turn in the rear end of the box and having a series of films, a flipper depending from the top of the box into the path of movement of the films and adjacent to the front of the wheel, and a rearwardly facing mirror on the front of the box and directly in range with the films.

5. In a toy picture machine, a picture wheel comprising a core and a film pad, said pad including a strip and a series of films disposed in stepped form on the strip and secured at their inner ends to the latter, the said strip being connected at one end to the core and otherwise free from the latter.

[Claims 6 to 10 not printed in the Gazette.]

1,192,611. LIFTING-JACK. WILLIAM A. FIELD, Chicago, Ill. Filed Mar. 29, 1916. Serial No. 87,440. (Cl. 254—103.)



1. The combination with a standard and a shaft movable therein, of worm-gearing the wheel member of which is operatively connected with said shaft, and a supporting device for said gearing secured against longitudinal movement relative to the standard and rotatively mounted on the standard to allow the gearing as a whole to be rotated about the axis of the shaft.

2. The combination with a standard and a shaft movable therein, of worm-gearing the wheel member of which is operatively connected with said shaft, a supporting device for said gearing secured against longitudinal movement relative to the standard and rotatively mounted on the standard to allow the gearing as a whole to be rotated about the axis of the shaft, and means for locking said supporting device against such rotation.

3. The combination with a standard and a screw-threaded shaft longitudinally movable therein, of worm-gearing the wheel member of which is secured in screw-threaded engagement on the shaft, and a supporting device for said gearing rotatively mounted on the standard to allow the gearing as a whole to be rotated about the shaft.

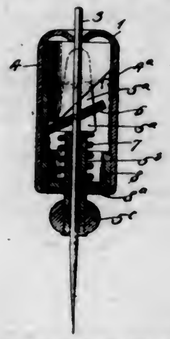
4. The combination with a standard and a screw-threaded shaft longitudinally movable therein, of a head mounted rotatably on the standard, a worm-wheel and a worm meshing therewith, said wheel being secured in screw-threaded engagement upon said shaft, and both said worm-wheel and worm being located within the head and rotating around the axis of the shaft when said head is rotated.

5. The combination with a standard and a screw-threaded shaft longitudinally movable therein, of a head mounted rotatably on the standard, a worm-wheel in said head secured in screw-threaded engagement upon said shaft, a worm carried by said head and in engagement with said worm-wheel, and means for locking said head against rotation.

[Claims 6 to 10 not printed in the Gazette.]

1,192,612. CLUTCH FOR SCARF-PINS. ROBERT FISCHER, Brooklyn, N. Y., assignor to Maximilian H. Fischer, New York, N. Y. Filed Aug. 28, 1913. Serial No. 787,048. (Cl. 24—155.)

1. In a pin holder the combination with a suitable thimble, of a tilting piece connected thereto at its upper end and provided with an inclined portion, said tilting means being U-shaped in cross-section, a frame movable longitudinally relatively to said thimble and having a bifurcated portion extending upwardly on opposite sides of said U-shaped tilting piece, a perforated clutch plate carried by said frame and adapted to engage the inclined face of said tilting piece, a spring for normally retaining the clutch plate in engagement with said inclined surface and means for permitting the movement by the user of such clutch plate against the action of the spring.



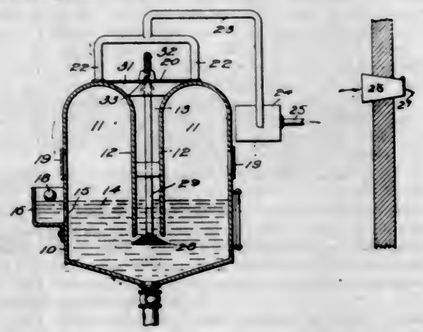
2. The combination with a scarf pin holder, of a thimble adapted to receive the end of the scarf pin, a tiltable clutch plate movable longitudinally relative to said thimble and having a perforation to receive the pin, a separate tilting piece fixed within the thimble, means for forcing the clutch plate toward said fixed tilting piece and means for permitting the user to retract the clutch plate from engagement with the tilting piece.

1,192,613. COMBINED SAFETY-PIN AND CLASP. CARL FISHER, New York, N. Y. Filed Feb. 2, 1915. Serial No. 5,674. (Cl. 24—85.)



A combined safety-pin and clasp comprising a single strand of resilient wire forming a straight bar, a reëntrantly turned hook having a sharp point at one end, a parabolically curved element joined by a semi-circular bend at the other end of said bar and a reëntrantly curved open loop formed at the other end of said parabolic element, said loop being normally in contact with said straight bar near its center at the sides thereof, the entire structure being substantially in the same plane.

1,192,614. STORAGE AUTOMATIC RAREFIER. JOHN C. FLEMING, Boston, Mass. Filed May 24, 1915. Serial No. 30,244. (Cl. 98—45.)



1. An apparatus for purifying air comprising a receptacle provided with spaced apart domes having their lower edges sealed within an air cleansing solution, an air-receiving chamber being provided between said domes above said solution, means for causing air to pass from said receiving chamber into said domes through said solution, and means submerged in said solution for controlling the volume and degree of rarefication of air passing from said air-receiving chamber to said domes.

2. An apparatus for purifying air comprising a receptacle provided with spaced apart domes, the inner sides of the domes being spaced from each other to form an air receiving chamber, the bottom edges of said sides being spaced from the bottom of the receptacle and submerged within an air cleansing solution, means for introducing air into said chamber, means for withdrawing air from said domes, and means submerged in said solution and coöperating with the inner sides of the domes to control the volume and degree of rarefication of air passing through the apparatus.

3. An apparatus for purifying air comprising a receptacle provided with spaced apart domes, the inner sides of the domes being spaced from each other to form an air receiving chamber, the bottom edges of said sides being spaced from the bottom of the receptacle and submerged within an air cleansing solution, means for introducing air into said chamber, means for withdrawing air from said domes, a valve submerged in said solution and coöperating with the inner sides of the domes to control the volume and degree of rarefication of air passing through the apparatus, and means for adjusting said valve.

4. An apparatus for purifying air comprising a receptacle provided with spaced apart domes, the inner sides of the domes being spaced from each other to form an air receiving chamber, the bottom edges of said sides being spaced from the bottom of the receptacle and submerged within an air cleansing solution, means for introducing air into said chamber, means for conducting air from said domes, a valve submerged in said solution and closing the bottom of said air chamber, a stem attached to said valve and passed through said air chamber, and means coöperating with said stem to vary the position of said valve.

5. An apparatus for purifying air comprising a receptacle provided with spaced apart domes having their lower edges sealed within an air cleaning solution, an air-receiving chamber being provided between said domes above said solution, means for causing air to pass from said receiving chamber into said domes through said solution, means submerged in said solution for controlling the volume and degree of rarefication of air passing from said air-receiving chamber to said domes, an auxiliary trough for supplying the solution to said receptacle, and means for automatically maintaining a uniform depth of said solution within said auxiliary trough.

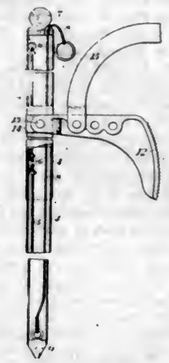
1,192,615. FIRE-ESCAPE. JOHN E. FREY, Pittsburgh, Pa. Filed Dec. 16, 1915. Serial No. 67,132. (Cl. 227—32.)

1. A fire escape, comprising a sliding pole having a plurality of telescopic sections, flexible supporting members within said sections and connected thereto, in such a manner that all of the sections are adapted to be supported thereby, and a suspending member connected to the upper section and arranged to form a support for the device; substantially as described.

2. A fire escape, comprising a sliding pole having a plurality of telescopic sections, flexible supporting members within said sections and connected thereto, in such a manner that all of the sections are adapted to be supported thereby, a suspending member connected to the upper section and arranged to form a support for the device, and a flexible member within the telescoping sections arranged to close the device; substantially as described.

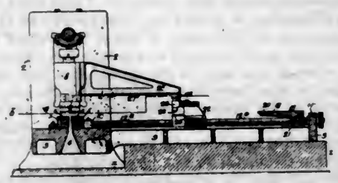
3. A fire escape, comprising a flexible member, means for securing the upper end to a building, and a metallic casing for said flexible member formed of a plurality of telescopic members, each of said members being connected to the flexible member and arranged to be supported thereby; substantially as described.

4. A fire escape comprising a flexible member, means for connecting the upper end of the flexible member to a building, and a metallic casing for said flexible member formed of a plurality of telescopic members connected thereto and arranged to be supported thereby; substantially as described.



5. A fire escape, comprising a sliding pole having a plurality of telescopic sections, flexible supporting members within said sections and connected thereto, in such a manner that all of the sections are adapted to be supported thereby, and a clamping device connected to the upper section and arranged to form a support for the device; substantially as described.

1,192,616. SPRING SHEARING AND NIBBING MACHINE. LAWFORD H. FRY, Yeagertown, and AMOS G. COLE and WALTER H. FOSTER, Lewistown, Pa. Filed Apr. 10, 1915. Serial No. 20,575. (Cl. 164—15.)



1. The combination in a spring plate shearing and nibbing machine, of a punch; a gage for the plate; a nibbing punch located between the gage and the shearing die; and means for moving the two elements in unison so that the nibbing punch will always be located centrally with respect to the ends of the sheared plate.

2. The combination in a shearing and nibbing machine, of a shearing die; a gage carriage and a nibbing punch carriage; a screw for actuating the gage carriage and a screw for actuating the punch carriage, said screws being so geared together that, when one of the screws is turned, the gage carriage will travel in a given relation to the punch carriage.

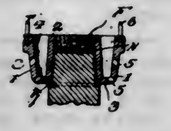
3. The combination of a housing; a lower die; a plunger; an upper die carried by the plunger; a frame projecting from the housing; a gage carriage mounted on the frame; a punch carriage also mounted on the frame between the housing and the gage carriage; means for actuating the two carriages in unison so that the gage carriage will move twice the distance of the punch carriage; a punch plunger on the punch carriage; and an arm on the shearing plunger arranged to come in contact with and to depress the punch plunger simultaneously with the cutting of the strip.

4. The combination in a shearing and nibbing machine, of housings; a base located between the housings; a round end die and a straight end die mounted on the base; a

plunger having cutters corresponding with the dies; a frame projecting from the base; a gage carriage mounted on the frame; a nibbing punch carriage also mounted on the frame between the gage carriage and the base; the nibbing punch carriage having two punches, one in line with one set of cutters and the other in line with the other set of cutters; a carriage having two gage plates, one in line with one set of cutters and the other in line with the other set of cutters; and means for moving the gage carriage and punch carriage in unison.

5. The combination of housings; a base; a plunger; two sets of cutting dies mounted on the base and plunger; a frame extending from the base; a gage carriage mounted on the frame and having two gage plates, one in line with one shearing die and the other in line with the other shearing die; a nibbing punch carriage, also mounted on the frame between the gage carriage and the shears, having two punches, one in line with one shearing die and the other in line with the other shearing die; three longitudinal screws; gears on one end of each screw; nuts on the gage carriage, the threads of which mesh with the threads of the side screws; and a nut on the punch carriage having threads meshing with the threads of the central screw, the gear on the central screw being twice the diameter of the gears on the side screws so that, when one of the shafts is turned, the punch carriage will be moved one-half the distance of the gage carriage.

1,192,617. SINK-HEAD FOR MOLDS. EMIL GATHMANN, Baltimore, Md. Filed Sept. 19, 1913. Serial No. 790,597. (Cl. 22—147.)



1. The combination with a mold of a sink head or feeder having a chamber to receive the fluid metal and to contain the upper end of the ingot, a flange projecting from its base into the mold chamber to prevent the escape of fluid metal between the base of the feeder and the top of the mold and to thus form fins, and having a chamber to contain material for conserving the heat of the outer end of the ingot, the bottom wall of which feeder supports the heat-conserving material and is removable with the inner and outer walls of the feeder from the mold.

2. The combination with an ingot mold of a removable sink-head or feeder having a chamber to receive fluid metal above the mold cavity and to contain the upper end of the ingot and having an annular chamber to contain material for conserving the heat of the upper end of the ingot, said feeder having inner and outer walls for said annular chamber, and a bottom wall formed integrally with the outer wall which supports the inner wall of the feeder and supports also the heat conserving material, said bottom wall resting on the top of the ingot mold and being removable with the inner and outer walls of the feeder, substantially as described.

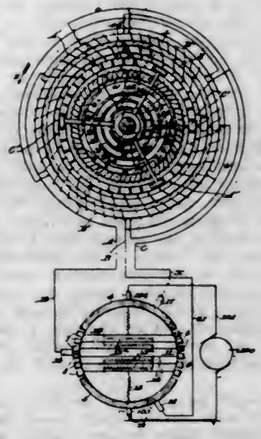
3. The combination with an ingot mold of a sink-head or feeder having a chamber to receive the fluid metal and to contain the upper end of the ingot, a flange of less internal diameter than the upper end of the mold cavity projecting from the base of the feeder into the mold cavity and covering the joint of the feeder with the top of the mold to prevent fluid metal from escaping laterally from the top of the mold chamber and to thus form a fin, said feeder having a chamber to contain material for conserving the heat of the upper end of the ingot.

4. The combination with an ingot mold of a sink-head or feeder, comprising a bottom wall resting on the top of the mold, and inner and outer walls with a chamber between them for insulating material, and a flange formed integrally with said bottom wall the inner diameter of which is less than the diameter of the mold cavity at its upper end and which flange is of substantially the same external diameter as that of the upper end of the mold cavity and prevents the lateral escape of fluid metal from said cavity.

5. A feeder for ingot molds, comprising a plate having a central opening and adapted to rest upon the top of a mold, and two concentric walls carried by the plate and forming a combustion chamber, the inner wall being of refractory material.

[Claims 6 to 9 not printed in the Gazette.]

1,192,618. MOTOR WITH ROTATING FIELD FOR REPEATING ANGULAR MOVEMENTS AT A DISTANCE OVERCOMING GREAT RESISTANCE. RICCARDO GIRARDELLI, Rome, Italy. Filed Sept. 24, 1910. Serial No. 583,642. (Cl. 172—237.)



1. In motors for repeating angular movements at a distance the combination of a polyphase winding, a reëntrant winding, a commutator provided on that part of the motor which carries the reëntrant winding, brushes sliding against said commutator, and a movable brush holder for said brushes, means establishing connection between the motor shaft and the brush holder in such manner that the brush holder is rotated with a different angular speed simultaneously with the motor shaft, so that the angle with which the rotor advances is different from the angle with which the direction of the polyphase field is rotated; said means comprising an intermediary member having positive connection with the part carrying the polyphase winding and also with the brush holder.

2. In motors for repeating angular movements at a distance the combination of a stator, a main rotor, an auxiliary rotor mounted on the shaft of the main rotor, a commutator on the main rotor, brushes sliding on the commutator of the main rotor, a holder for said brushes, and connections between the brush holder and the auxiliary rotor, said connections being arranged in such a manner that on rotating the auxiliary rotor the brush holder turns the brushes into the position in which the driving torque acting on the main rotor has the highest value; said means comprising an intermediary member having positive connection with each of the rotors and also with the brush holder.

3. In a motor having a stator, a main rotor with a commutator and an auxiliary rotor for the transmission of angular movements, a pin secured to the auxiliary rotor, a two armed lever mounted to rotate on said pin, one arm of said lever being provided with a slot, the brush holder with brushes sliding on said commutator, an extension on the brush holder, a roller mounted on the main rotor and engaging in said slot, a pivot on the other arm of the lever projecting into an opening in said extension of the brush holder in such a manner that, on starting the auxiliary rotor, the brush holder is rotated, thereby increasing the angle between the direction of the field of the main rotor and the stator, subsequently starting the main rotor whereby the brush holder is rotated so as to diminish the angle between the direction of the field of the main rotor and the stator.

1,192,619. PLUNGER AND VALVE FOR ARTESIAN OR WATER AND OIL WELLS. EDGAR SECKLER GOSS and SYLVESTER A. BARRICKMAN, Franklin, Pa. Filed Aug. 19, 1915. Serial No. 46,385. (Cl. 103—60.)

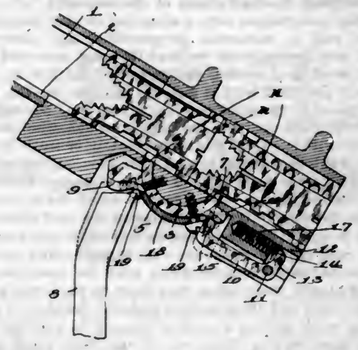


1. In a device for elevating liquids, a tabular casing of substantially one uniform diameter having a disk valve seat, an inner valve casing movable within the first casing and being yieldably mounted on said valve seat, a valve mechanism in said valve casing and including a ball valve and seat therefor, and a plunger rod having a piston and a ball valve mechanism to coöperate with the first valve mechanism for lifting the fluid.

2. In a device for elevating liquids, a tubular casing of substantially one uniform diameter having a disk valve seat, an inner valve casing movable within the first casing and being yieldably mounted on said valve seat, a valve mechanism in said valve casing and including a ball valve and seat therefor, and a plunger rod having a piston and a ball valve mechanism to coöperate with the first valve mechanism for lifting the fluid, said first valve mechanism including a member adapted to raise its valve when the mechanism is depressed, the second valve mechanism including a member adapted to raise its valve, and which second member, when the plunger rod is moved downwardly, contacts with and moves the first valve mechanism causing the first member to raise its valve, and while the rod moves the second valve mechanism downwardly causes the second member to raise its valve, thereby permitting a free passage, whereby the refuse may pass out.

3. In a device for elevating liquids, a tubular casing of substantially one uniform diameter having a disk valve seat, an inner valve casing movable within the first casing and being yieldably mounted on said valve seat, a valve mechanism in said valve casing and including a ball valve and seat therefor, and a plunger rod having a piston and a ball valve mechanism to coöperate with the first valve mechanism for lifting the fluid, said first valve mechanism including a member adapted to raise its valve when the mechanism is depressed, the second valve mechanism including a member adapted to raise its valve, and which second member, when the plunger rod is moved downwardly, contacts with and moves the first valve mechanism causing the first member to raise its valve, and while the rod moves the second valve mechanism downwardly causes the second member to raise its valve, thereby permitting a free passage, whereby the refuse may pass out, and means for restoring the valve mechanisms and their ball valve to their seats.

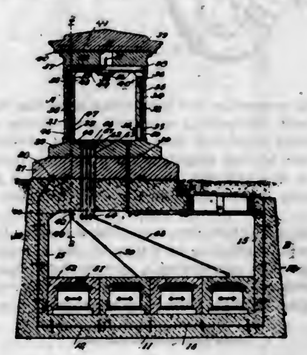
1,192,620. LINOTYPE-MACHINE. EDWARD M. GOODBODY, Brooklyn, N. Y., assignor to The Intertype Corporation, New York, N. Y., a Corporation of New York. Filed Nov. 30, 1912. Serial No. 734,362. (Cl. 199—7.)



1. In a linotype machine, the combination of a matrix-containing magazine, a semi-cylindrical bar having semi-circular grooves in its under side, a series of matrix-controlling escapements mounted in the semi-circular grooves in said bar, and a guard detachably fitted to the outer surface of said bar and engaging the escapements to retain the escapements in place.

2. The combination of a matrix magazine, a bar arranged at the under side thereof, a set of substantially semi-circular matrix-controlling escapements coöperative with the under side of said bar, and a guard slidable longitudinally of said bar and coöperative with the escapements to retain them in operative position.

1,192,621. VENTILATION OF SEPULCHRAL MEMORIALS. ANDREW W. GRAHAM, Buffalo, N. Y., assignor of one-half to Ellis M. Treat, Pittsburgh, Pa. Filed Sept. 4, 1915. Serial No. 48,972. (Cl. 72—7.)



1. The combination with a sepulcher located beneath the ground and a memorial structure located above the ground; of a vent pipe leading from the bottom of the memorial to the bottom of the sepulcher, and a second vent pipe leading from the top of the sepulcher to the top of the memorial.

2. The combination with a sepulcher located beneath the ground and a memorial structure located above the ground; of a vent pipe leading from the bottom of the memorial to the bottom of the sepulcher and provided with a swivel joint immediately beneath the roof of the sepulcher, and a second vent pipe leading from the top of the sepulcher to the top of the memorial.

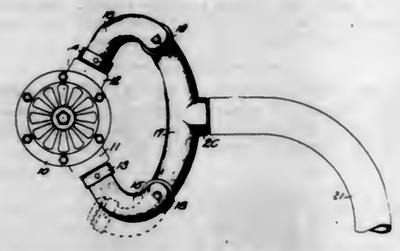
3. The combination with a sepulcher located beneath the ground and a memorial structure located above the

ground and having inlet vents in its lower part and vertically spaced roof stones, of a vent pipe leading from one of the inlet vents to the bottom of the sepulcher, and a second vent pipe leading from the top of the sepulcher to the space between the roof stones of the memorial.

4. The combination with a sepulcher located beneath the ground and a memorial structure located above the ground and having inlet vents at its lower part and vertically spaced roof stones, the memorial further having a side wall provided with a metallic chamber having a surface exposed to the sun's rays; of a vent pipe leading from one of the inlet vents to the bottom of the sepulcher and provided with a swivel joint immediately beneath the roof of the sepulcher, and a second vent pipe having one section which leads from the top of the sepulcher to the metallic chamber and a second section which leads from the metallic chamber to the space between the roof stones.

5. A memorial structure having side walls and vertically spaced roof stones, the lower roof stone having an opening therethrough communicating with the space between the roof stones, there being inlet vents in the lower part of the side walls and there being a metallic chamber in one of the side walls having a surface exposed to external heat, a vent pipe leading from one of the inlet vents to the chamber, and a second vent pipe leading from the chamber and having an outlet end turned up into the opening in the lower roof stone; in combination with a sepulcher beneath the memorial, and ventilating pipes leading from the sepulcher to the metallic chamber.

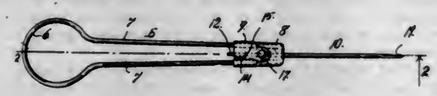
1,192,622. TWIN CONNECTION FOR FIRE-HYDRANTS. WILLIAM H. B. HALAHAN, Rye, N. Y. Filed Dec. 2, 1915. Serial No. 64,705. (Cl. 137—13.)



1. A twin connection for connecting a suction hose with a fire hydrant, comprising a branch pipe having a nipple for connecting a suction hose thereto and provided with swiveled ends having couplings for attaching them to the outlets of a fire hydrant, the nipple being of a diameter approximately double that of the swiveled ends of said pipe.

2. A twin connection for connecting a suction hose with a fire hydrant, consisting of a pipe having a centrally arranged nipple for connecting a suction hose thereto and provided with curved members swiveled to the ends thereof and having couplings for attaching them to a fire hydrant.

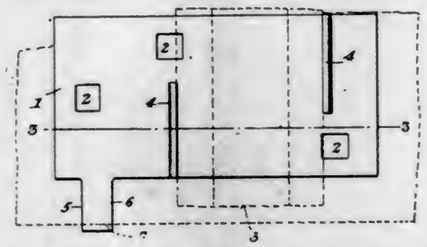
1,192,623. CROCHET-HOOK. CHARLES R. HALLETT, Denver, Colo. Filed Apr. 27, 1915. Serial No. 24,181. (Cl. 66—17.)



1. A crochet hook comprising a handle member, and a needle member suitably connected with the handle member to permit extension, one of the members having a spring lip provided with a recess, the other member having a projection adapted to enter said recess to temporarily lock the parts in position for use.

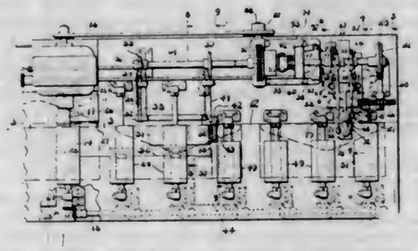
2. A crochet hook composed of a handle member and a needle member, the handle member being composed of spaced arms connected at one extremity by a spring and at their opposite extremities by a band which is open between the arms, a needle member passing through the opening in the band between the arms of the handle, a clasp mounted upon the handle member and slidably engaging the arms of the latter, said clasp being provided with a lip and the inner extremity of the needle having an opening formed therein adapted to receive the said lip, for the purpose set forth.

1,192,624. DEVICE FOR HOLDING RAILWAY-RAILS. HENRY HANCOCK, Baraboo, Wis. Filed May 4, 1916. Serial No. 95,452. (Cl. 238—2.)



A railway plate of substantially rectangular shape, provided with two upwardly extending flanges, each projecting from an opposite edge partially across the plate, said plate being provided with angular outlined openings intermediate each flange and the adjacent edge of the plate, one edge of the plate having a lateral extension with a downwardly bent end adapted to be secured to an object to anchor the plate, the latter having an aperture intermediate said projection and the opposite edge of the plate, the under surface of the latter being provided with diagonal rows of spurs, as shown and described.

1,192,625. ENVELOP SEALING AND STAMPING MACHINE. WADE HAMPTON HANGER, Wilkinsburg, Pa., assignor of one-fourth to Forrest C. Reed, Easton, Pa. Filed June 17, 1912. Serial No. 704,023. (Cl. 216—3.)



1. In an apparatus of the character described, means for moistening the envelop flaps, a swinging folder for folding the flaps back against the envelop bodies, means for sealing the envelops, means, operative during the folding and sealing operation for applying moisture to the stamp receiving portion of the envelop and means for applying a stamp to the moist portion of the envelop.

2. In an envelop sealing and stamping machine, a flap-folder, a wiper for moistening the stamp-receiving portion of the envelop, means for moving the envelop past the wiper, means for holding the folder in engagement with the envelop during the moistening operation, and means for applying a stamp to the moist portion of the envelop.

3. In a envelop sealing and stamping machine, a table along which the envelops to be sealed and stamped pass,

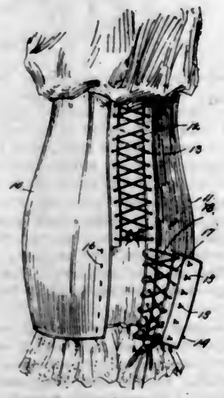
a stamp affixing plunger for pressing a stamp against each envelop and for clamping the envelop on the table during the affixing operation, and a stamp perforating means for perforating stamps delivered to the plunger and for severing each stamp from the stamp roll, while the envelop is clamped in place on the table.

4. In a machine of the character described, a table, means for moving envelops along the table, a stamp perforating mechanism, a stamp affixing plunger and a stamp feeding mechanism for feeding stamps to the perforating mechanism and past the perforating mechanism to the plunger, and meaus for actuating the plunger to affix stamps on envelops located on the table.

5. In a machine of the character described, a stamp affixing mechanism, comprising, a stamp feed mechanism, a perforator to which stamps are fed, a stamp affixing plunger located adjacent to the perforator and means for simultaneously actuating the perforator and the plunger.

[Claims 6 to 23 not printed in the Gazette.]

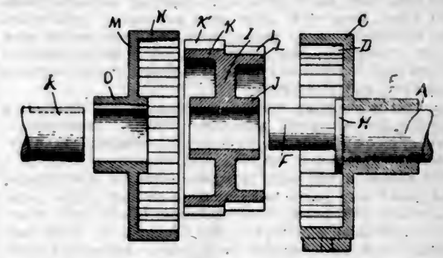
1,192,626. CORSET. KIRK L. HARDING, Buchanan, Saskatchewan, Canada. Filed Mar. 15, 1915. Serial No. 14,425. (Cl. 2—73.)



A corset comprising a pair of sections, one of said sections being provided with eyes along its entire rear edge and the other section having a cutaway portion forming a recess opening through the bottom and rear edges thereof, said second named section being provided with eyes along its rear edge from its top to the cutaway portion, a lace engaged through the eyes of the second named section and the corresponding eyes of the other section, a separate member independent of said section and detachably secured thereto along the edge of the recess which extends parallel to the rear edge of said section, the free edge of said member forming a continuation of the rear edge of the second named section and being provided with a series of eyes, a lace engaged through said eyes and through the corresponding eyes of the first named section, hooks on said member, and eyes on the second named section through which the hooks are adapted to be detachably engaged.

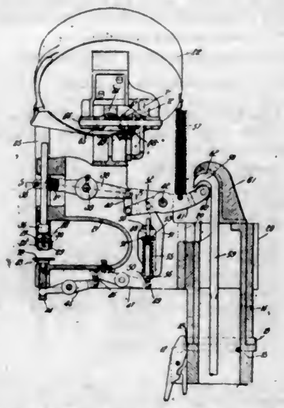
1,192,627. SPEED-REDUCER. DAVID H. HATLEE, Mechanicsville, N. Y. Filed Dec. 9, 1915. Serial No. 65,966. (Cl. 74—35.)

A speed reducing gear, consisting, in combination with a shaft, a gear wheel having a hub projecting in opposite directions and keyed to said shaft and provided with an interiorly toothed flange, a second gear wheel with a hollow hub and a flange with internal teeth, the said flanges being of different diameters, a driving shaft journaled in said hollow hub, a crank pin projecting eccentrically from the end of the driving shaft and extending beyond the marginal edge of the flange of the wheel on which it is mounted, a planetary gear having a hub journaled upon said crank pin, the end of the pin being flush with one end of the hub of the planetary gear, and bearing against the adjacent end of the shaft to which said gear wheel is keyed, the hub portion of the planetary gear bearing



against the end of the projecting hub of the adjacent gear, said planetary gear being provided with two series of staggered teeth, each series being of different diameters and designed to conform to and engage respectively the teeth upon the flanges of said wheels.

1,192,628. RIVET-SETTING MACHINE. ARTHUR R. HAVENER, Waltham, Mass., ass'gnor to Judson L. Thomson M'f'g Co., a Corporation of Massachusetts. Filed Feb. 15, 1915. Serial No. 8,161. (Cl. 218—2.)



1. A rivet setting machine having, in combination, a stationary rivet guide constituting a work-abutment, a rivet holder in two parts located above said guide and movable simultaneously toward and away from each other, a plunger located above said holder, an anvil located beneath said guide, and mechanism constructed and arranged to move said plunger and anvil toward each other, whereby a rivet located in said holder may be driven and clenched in a piece of material located between said anvil and rivet guide.

2. A rivet setting machine having, in combination, a stationary rivet guide constituting a work-abutment, a plunger and an anvil oppositely disposed relatively to each other, a rivet holder in two parts interposed between said plunger and guide, said parts being movable simultaneously toward and away from each other, yielding means constructed and arranged to move said parts toward each other, said holder being interposed between said plunger and anvil, a raceway constructed and arranged to guide a rivet into said holder and mechanism constructed and arranged to move said plunger and anvil toward each other, whereby a rivet located in said holder may be driven, guided and clenched in a piece of material located between said plunger and anvil.

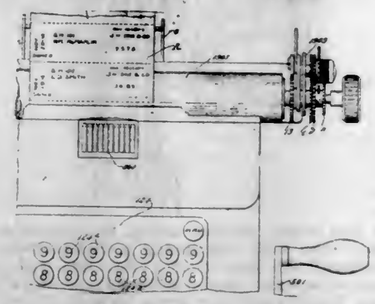
3. A rivet setting machine having, in combination, a plunger and an anvil oppositely disposed relatively to each other, a stationary rivet guide constituting a work-abutment interposed between said plunger and anvil, a rivet holder in two parts interposed between said plunger and guide, said parts being simultaneously movable toward and away from each other, and mechanism constructed and arranged to move said plunger and anvil toward each other, whereby a rivet located in said holder may be driven and clenched in a piece of material located between said anvil and rivet guide.

4. A rivet setting machine having, in combination, a plunger and an anvil oppositely disposed relatively to each other, a stationary rivet guide constituting a work-abutment interposed between said plunger and anvil, a rivet holder in two parts interposed between said plunger and guide, said parts being slidable on said guide, yielding means arranged to move said parts toward each other, and mechanism constructed and arranged to move said plunger and anvil toward each other, whereby a rivet located in said holder may be driven and clenched in a piece of material located between said anvil and rivet guide.

5. A rivet setting machine having, in combination, a work-abutment, an anvil and mechanism constructed and arranged to move said anvil toward said work-abutment and embodying therein a driving lever and a driven lever, a link connecting said driving lever and driven lever and comprising an arm pivoted to one of said levers, a rod pivoted to the other of said levers and slidable on said arm and a spring interposed between said rod and arm and arranged to yield when said anvil encounters abnormal resistance, whereby said anvil may be employed to clench rivets in pieces of material of different thicknesses clamped by said anvil to said work-abutment.

[Claims 6 to 11 not printed in the Gazette.]

1,192,629. PLATEN-FEED MECHANISM. AMOS H. HAWLEY, Terre Haute, Ind., assignor to International Money Machine Company, Terre Haute, Ind. Filed Jan. 5, 1916. Serial No. 70,463. (Cl. 197—114.)



1. In platen feed mechanism, the combination of a platen, driving means therefor, variable speed gearing intermediate said platen and the driving means, and control means for the gearing.

2. In platen feed mechanism, the combination of a platen, driving means therefor, variable speed gearing intermediate said platen and the driving means including transmission gears for communicating to the platen movement corresponding with that of the driving means, and other transmission gears adapted to move the platen with greater speed than that of the driving means.

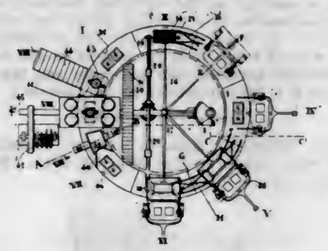
3. In platen feed mechanism, the combination of a platen, driving means therefor, variable speed gearing intermediate said platen and the driving means, control means for the gearing, and means to vary the driving action of said driving mechanism.

4. In platen feed mechanism, the combination of a platen, driving means therefor comprising a ratchet wheel, means to variably operate said wheel, and means to communicate differential movement from said wheel to the platen.

5. In platen feed mechanism, the combination of a platen, driving means therefor comprising a driving member, means to increase and decrease the driving stroke of said member, and change speed gearing intermediate the platen and said driving member.

[Claims 6 to 19 not printed in the Gazette.]

1,192,630. APPARATUS FOR MAKING TILES. ARTHUR HENROZ, Brussels, Belgium. Filed July 2, 1913. Serial No. 777,033. (Cl. 25—66.)



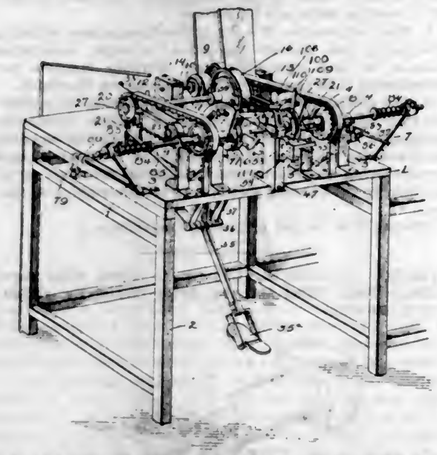
1. In an apparatus for the automatic manufacture of patterned or fancy tiles, the combination of an intermittently revolving table carrying molds, a plurality of devices for filling said molds with color, each of said devices feeding one color only to the molds and being provided with a counter pattern sliding on the table, said counter pattern being moved away from the mold and reversed to empty it of superfluous material after colored material has been passed through it, mechanism for pressing the tiles, means for removing the tiles from the molds, means for bringing successively said molds opposite each of said filling devices, and means for feeding a determined amount of colored material to the counter pattern.

2. In an apparatus for the automatic manufacture of patterned or fancy tiles, the combination of an intermittently revolving table carrying molds, means for filling said molds with color, each of said means feeding one color only to the molds and being provided with a counter pattern sliding on the table, means for moving said counter pattern away from the mold and reversing it to relieve it of superfluous material after colored material has been passed through it, means for pressing the tiles, means for removing the tiles from the molds, means for bringing successively said molds opposite each of said machines, and hoppers on the means feeding the different colors to the molds provided with two sliding doors the upper one of which is open and then closed before the lower door is opened.

1,192,631. WIRE-COILING MACHINE. HARRY J. HICK, Alliance, Ohio, assignor to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed July 2, 1915. Serial No. 37,704. (Cl. 140—82.)

1. A wire coiling machine including a wire clamping head having a mandrel on each side thereof, a pair of wire twisting heads including reverse bending levers and twisting dies, twisting shafts upon which said heads are mounted, means for rotating said shafts, shifting levers for shifting said heads into engagement with the free ends of a wire blank held by said clamping head to grip them for rotation around said mandrels with the heads, and means for stopping said reverse bending lever and the free ends of the wire when a predetermined number of turns have been made, the twisting die continuing to rotate for substantially a half revolution to form reverse bends in the free ends of the wire.

2. In a wire coiling machine, a wire clamping head, a mandrel located on each side of said head, a pair of twisting heads, twisting shafts upon which said heads are mounted, means for rotating said shafts, shifting levers for shifting said twisting heads into engagement with the free ends of a wire blank held by said clamping head to form coils thereon around said mandrels, means for stopping the free ends of the wire when a predetermined number of turns have been made, the twisting heads continuing to rotate, and means for stopping the twisting heads when they have rotated substantially a half revolution for the formation of reverse bends in said wire.



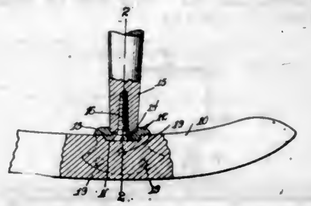
3. In a wire coiling machine, means for holding a wire blank, a mandrel on each side thereof, twisting heads for coiling the free ends of said wire blank on said mandrels each comprising a twisting shaft, a twisting die rigidly mounted in said shaft, a body having a pair of substantially diametrically opposite stops thereon, a reverse bending lever rotatably mounted in said body having a radially extending arm thereon, a retaining ring on the body for said reverse bending lever, a spring normally holding the arm of said reverse bending lever against one of said stops on the body, a pin on the retaining ring, and a cam notch on the reverse bending lever; means for rotating said twisting shafts, means for shifting said twisting heads into engagement with the free ends of the wire blank, said free ends of the wire blank being held between said pin and cam notch during the formation of the coils, means for stopping the rotation of the arm of the reverse bending lever when a predetermined number of turns have been made, the twisting die and body continuing to rotate until the other one of the stops on the body engages said arm to form a reverse bend in the free end of the wire blank.

4. In a wire coiling machine, a wire clamping head having a mandrel on each side thereof, twisting heads including a twisting die for coiling the free ends of a wire blank on said mandrels, a reverse bending lever rotatably mounted in each of said heads having a cam notch therein, means for stopping the rotation of said levers relative to the twisting heads when a predetermined number of turns have been made on the coils, the free ends of the wire engaging with said notch, whereby reverse bends are formed in the free ends of the wire blank by the continued rotation of the twisting die, and a stop on the twisting heads adapted to engage with the reverse bending levers for stopping the heads when the reverse bends have been formed.

5. In a wire coiling machine, a table, a wire clamping head having a mandrel on each side thereof, operating means for said clamping head, twisting heads, twisting shafts upon which said heads are mounted, means for driving said twisting shafts, a power shaft having a friction pulley thereon adapted to be swung into engagement with said driving means, shifting levers for said shifting heads, means for operating said shifting levers, an operating bar slidably mounted on the table, adapted to substantially simultaneously actuate the clamping-head-operating means, shift the friction pulley into engagement with the driving means for the twisting shafts, and actuate the means for operating the shifting levers to shift the twisting heads into engagement with the free ends of a wire blank held by said clamping head for the formation of coils thereon around said mandrels.

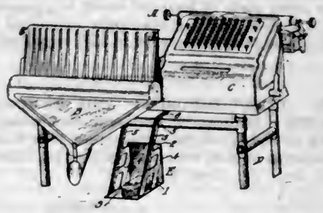
[Claims 6 to 33 not printed in the Gazette.]

1,192,632. ROCKER-FASTENER. CHARLES F. HILTON, Jonesboro, Tenn. Filed Oct. 9, 1913. Serial No. 794,241. (Cl. 155—18.)



A socket comprising a head, side flanges extending from said head and provided with fasteners receiving openings, said head being provided with an inwardly extending thickened portion terminating short of the side flanges and the ends of said head, the thickened portion being provided with a counter-sunk leg receiving well and with a fastener receiving opening communicating with said well.

1,192,633. ATTACHMENT FOR PAYING-MACHINES OR THE LIKE. HENRY D. HOFFMAN, Pittsburgh, Pa., assignor to International Money Machine Company, Terre Haute, Ind. Filed Nov. 24, 1915. Serial No. 63,282. (Cl. 248—18.)



1. A holder attachment for money paying and like machines, the same comprising an angular shaped plate one portion of which forms a back and another portion forming a bottom, and spaced sides connected with the back and bottom, each side being formed with an upwardly projecting arm having a rearward extension, said arms having support engaging interlocking means on their upper and under sides.

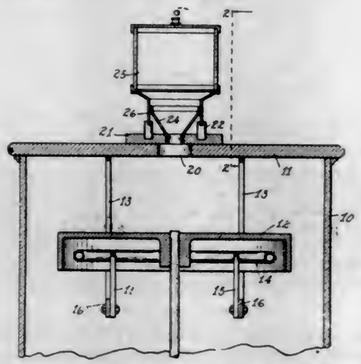
2. A holder attachment for money paying and like machines, the same comprising a back, a bottom, and spaced sides connected with the back and bottom, each side being formed with an upwardly projecting arm having a rearward extension at an angle thereto, said arms having support engaging seats in their under sides, a projection extending downwardly from each rearward extension of the arms and located at the rearmost portion of its seat, and an upwardly arranged projection at the rear extremity of each rearward extension aforesaid.

3. As a new article of manufacture, a holder attachment for money paying and like machines, the same consisting of an angularly shaped plate, a portion of which constitutes the back of the holder attachment and another portion of which constitutes the bottom, and sides in spaced relation connecting said portions of the angularly shaped plate and formed with upwardly and rearwardly inclined bracket arms, each bracket arm having a rearward

extension provided on its under edge with a seat and a downward projection adjacent to said seat.

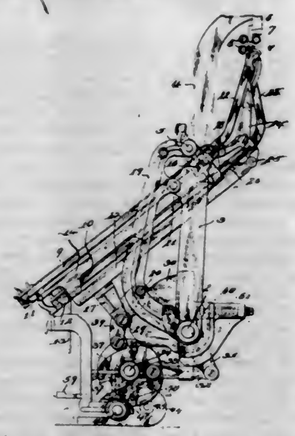
4. In combination, spaced horizontal members, and a holding attachment for envelops or the like, the same comprising a back, bottom and sides, the sides having upwardly and rearwardly extending bracket arms formed with portions seated on and interlocking with one of said horizontal supporting members and extensions of said arms engaging beneath the other of said members and interlocking with the latter to prevent accidental displacement of the attachment.

1,192,634. CORN-POPPING MACHINE. JAMES I. HOLCOMB, Indianapolis, Ind. Filed Oct. 13, 1913. Serial No. 794,865. (Cl. 53—4.)



A corn popping machine including a casing adapted to contain heating means, a board mounted on the top of said casing, posts projecting upward therefrom, said board and posts being made of material which is a non-conductor of heat, a hopper, and a downwardly extending plate on each side of the hopper mounted in and supported by said posts.

1,192,635. LINE-COMPOSING AND TYPE-CASTING MACHINE. THOMAS S. HOMANS, Hempstead, N. Y., assignor to The Intertype Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1913. Serial No. 807,501. (Cl. 199—7.)



1. The combination of a plurality of magazines, each movable to and from operative position, a distributing device therefor, and movable supports whereby the distributing device is held in constant relative position to the magazines.

2. The combination of a plurality of magazines, each movable to and from operative position, a distributing device common to said magazines, and movable supports whereby said distributing device is held in constant relation therewith.

3. The combination of a plurality of magazines, each movable to and from operative position, a single distributer common to said magazines, and movable supports whereby said distributer is maintained in constant operative relation with said magazines.

4. The combination of a plurality of magazines shiftable alternately into operative position, a single distributer common to said magazines, and movable supports for maintaining it in constant operative relation therewith.

5. The combination with a plurality of magazines shiftable to bring different ones in operative position, distributer mechanism shiftable with the magazines, and an elevator for conveying matrices to the distributer mechanism, said elevator being adapted to stop in different positions corresponding to the varying positions of the distributer mechanism.

[Claims 6 to 14 not printed in the Gazette.]

1,192,636. NUT-LOCK. LUEMAN A. HOWE, West Terre Haute, Ind. Filed Mar. 19, 1915. Serial No. 15,501. (Cl. 151—12.)



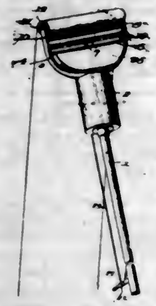
In combination a bolt having a threaded end, a nut threaded upon the threaded end of said bolt and having a V-shaped depression so as to provide a pair of oppositely but inwardly inclined side walls having their inner parts spaced to provide a kerf-communicating opening of the nut, said bolt being provided with a circumferentially spaced apart series of longitudinal grooves, each of said grooves having a relatively short and long edge, the pitch of the longer edges of said grooves being such as to dispose any of these edges flush with one of the inclined sides of the nut, a pair of studs secured directly opposite the inclined walls of said nut in said depression, a dog pivoted upon one of said studs and having a straight edge adapted to simultaneously engage one of said inclined walls of the nut and the longer edge of one of said grooves, and a flat spring supported upon the other stud having one end bearing against the other of said inclined walls and a single portion engaging said dog to hold its straight edge in contact against the mentioned edge of the groove.

1,192,637. WALL-PAPER-HANGING APPARATUS. FRANK HUDDLESTON, Radisson, Wis. Filed Oct. 26, 1915. Serial No. 58,003. (Cl. 216—6.)

1. In a paper hanging apparatus, a roller upon which the paper is wound, a receptacle containing paste arranged below the roller, a brush connected with the receptacle, a compressed air tank communicating with the paste receptacle, and means for admitting air from the tank to the receptacle for ejecting paste therefrom to the brush.

2. In a paper hanging apparatus, a roller upon which the paper is wound, a receptacle containing paste arranged below the roller, a brush connected with the receptacle, a compressed air tank communicating with the receptacle, means for admitting air from the tank to the receptacle for ejecting paste therefrom to the brush, and mechanism for regulating said means.

3. In a wall paper pasting apparatus, a staff, an air tank containing compressed fluid connected with the staff, a receptacle containing paste, a pipe leading from the air tank and communicating with the receptacle, a regulating valve for the air tank, a brush connected with the receptacle, a plurality of tubes arranged between the receptacle and the brush, a valve member between the tubes and the receptacle, means for actuating the said valve member to open the receptacle to the tube, and a roller trunnioned upon the staff opposite the brush.



4. In a device for the purpose set forth, a staff, a tank containing a compressed fluid secured thereon, a receptacle containing paste arranged above the fluid tank, a pipe member communicating with the fluid tank and surrounding the paste receptacle and having solid extensions, a brush member secured to the said extensions, tubular members between the brush member and the said pipe member, a tubular valve in the pipe member having perforations communicating with the tubes, means connected with the staff for actuating the valve, and a roller journaled in bearings in the solid extensions of the pipe disposed above and in contacting relation with the brush.

1,192,638. UMBRELLA. FLETCHER C. HULL, Toledo, Ohio. Filed Sept. 16, 1914. Serial No. 862,016. (Cl. 135—31.)



1. An umbrella comprising a plurality of ribs each having the metal of a portion thereof compressed to present a flattened flexible section, said rib being of the channel type and having the side walls thereof folded over toward each other until said walls are parallel with the base of the rib for a predetermined distance adjacent the outer end of the rib, to increase the flexibility of a portion of the rib near the unconfined end thereof and preserve the strength of the rib at the flattened portion.

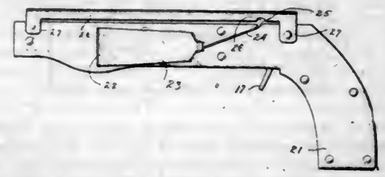
2. An umbrella, comprising a plurality of ribs and a cover, said ribs having the metal of a portion thereof compressed to provide a flattened flexible section of the same width as the remainder of the rib.

3. An umbrella, comprising a plurality of channeled ribs, each rib having a section thereof rendered more flexible than the remainder of the rib by compressing the side walls of the channeled rib inwardly against the base thereof to maintain the flexibility and strength of the rib at the reduced section.

4. An umbrella rib of the channeled type comprising a base and side walls, said rib having a section thereof rendered more flexible than the remainder of the rib by folding the side walls inwardly into substantially abutting engagement and against the base.

5. An umbrella rib of the channel type comprising a base and side walls, said rib having a section thereof near its unconfined end rendered more flexible than the remainder of the rib by folding the side walls into parallel relation to the base of the rib and with the edges of the side walls into substantially abutting engagement, said side walls being gradually varied from a substantially right angle to the base to be in a position superimposed in a plane parallel to said base to form a flexible portion of approximately the same width as the base.

1,192,639. BOW-GUN. JOHN F. HUNHOLZ, Wamego, Kans. Filed Feb. 1, 1916. Serial No. 75,571. (Cl. 124—7.)



1. A bow gun comprising a pair of strips of suitable material, a filler disposed between and secured to the strips, said filler consisting of two portions, the abutting faces of which are formed with grooves, one of the filler members and the strips having alining notches, a bow stick disposed through the strips and filler, a cord connecting the ends of the bow stick and adapted to be engaged in the said notches, a trigger member pivotally mounted in the lower end of the groove of one filler member and a pivoted releasing member mounted in the groove above the trigger and having a depending portion for engagement by the trigger, said releasing member having an upper eccentrically curved face for engagement with and movement of the cord upwardly and rearwardly from the notches.

2. A bow gun comprising a pistol-shaped body portion, a bow carried by the body portion and including a cord, an inverted semi-cylindrical member disposed in spaced relation above and secured to the barrel of the body portion, said inverted member and barrel portion having oppositely disposed notches, one of the notches being adapted to receive the cord and a trigger mechanism including a finger movable upwardly and rearwardly to release the cord from one of the said notches.

3. A bow gun comprising a pistol-shaped body, having a longitudinal groove and a notch, a bow carried by the body and including a cord for engagement in the notch, a trigger mechanism for releasing the cord and a housing secured to and spaced above the body and cooperating with the grooved portion of the body to form a dart receiving barrel, and a stop wall carried by the inverted member above the said notch.

1,192,640. PROCESS OF PRODUCTION OF AN ACID MAGNESIUM-SULFITE SOLUTION. JAMES LOCKHART JARDINE, Penicuik, Scotland. Filed Jan. 29, 1916. Serial No. 75,048. (Cl. 23—13.)

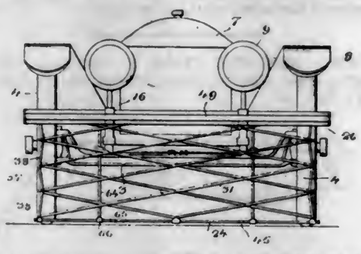
1. A process for the production of an acid magnesium-sulfite solution for the extraction of cellulose from fibrous vegetable materials, which consists in maintaining the liquor at such temperature during the formation of the solution that there is dissolved by the SO_2 that desired greater proportion of the base than is dissolved at normal temperature.

2. A process for the production of an acid magnesium-sulfite solution for the extraction of cellulose from fibrous vegetable materials, which consists in dissolving the base in the liquor at a temperature above 70° F. and in the presence of sulfur dioxid.

3. A process for the production of an acid magnesium-sulfite solution for the extraction of cellulose from fibrous

vegetable materials, which consists in subjecting a suspension of magnesium oxid to the action of hot sulfur dioxid to raise the temperature of the liquor above 70° F., for the purpose set forth.

1,192,641. AUTOMOBILE-FENDER. CLYDE B. JUGLE, Jamestown, N. Y. Filed Nov. 22, 1915. Serial No. 62,881. (Cl. 105—130.)



1. In a fender for automobiles, supporting members fastened to the forward ends of the side frame bars of the vehicle, guide rods extending forwardly from said members, a collapsible and folding fender body comprising horizontal top and bottom bars movable toward and away from each other, supporting arms carrying the top fender bar and slidable on said guide rods in a fore and aft direction, braces attached at their forward extremities to the bottom bar of the fender and extending rearwardly therefrom, and guide and stop blocks on the axle relatively to which said braces are slidable and adapted to swing.

2. In a fender for automobiles, supporting members fastened to the forward ends of the side frame bars of the vehicle, guide rods extending forwardly from said members, a collapsible and folding lazy-tong fender body comprising horizontal top and bottom bars movable toward and away from each other, supporting arms carrying the top fender bar and slidable on said guide rods in a fore and aft direction, braces attached at their forward extremities to the bottom bar of the fender and extending rearwardly therefrom, and guide and stop blocks on the axle relatively to which said braces are slidable and adapted to swing.

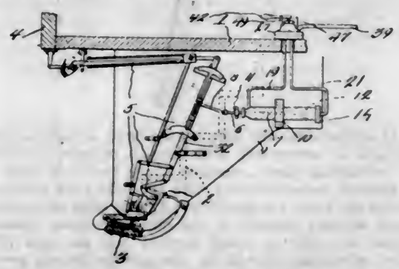
3. In a fender for automobiles, supporting members fastened to the forward ends of the side frame bars of the vehicle, guide rods extending forwardly from said members, a collapsible and folding fender body comprising horizontal top and bottom bars movable toward and away from each other, supporting arms carrying the top fender bar and slidable on said guide rods in a fore and aft direction, a housing carried by said fender supporting arms and adapted to conceal the fender body when collapsed, braces attached at their forward extremities to the bottom bar of the fender and extending rearwardly therefrom, and guide and stop blocks on the axle relatively to which said braces are slidable and adapted to swing.

4. In a fender for automobiles, supporting members fastened to the forward ends of the side frame bars of the vehicle, guide rods extending forwardly from said members, a collapsible and folding fender body comprising horizontal top and bottom bars movable toward and away from each other, supporting arms carrying the top fender bar and slidable on said guide rods in a fore and aft direction, braces attached at their forward extremities to the bottom bar of the fender and extending rearwardly therefrom, guide and stop blocks on the axle relatively to which said braces are slidable and adapted to swing, a spring sustained bumper bar arranged in front of said fender supporting arms, and fender upholding catches arranged to be actuated by said bumper bar to release the fender body.

5. In a fender for automobiles, supporting members fastened to the forward ends of the side frame bars of the vehicle, guide rods extending forwardly from said members, a collapsible and folding fender body comprising horizontal top and bottom bars movable toward and away from each other, supporting arms carrying the top fender bar and slidable on said guide rods in a fore and aft direction, braces attached at their forward extremities to the bottom bar of the fender and extending rearwardly therefrom, guide and stop blocks on the axle relatively to which said braces are slidable and adapted to swing, a spring sustained bumper bar arranged in front of said fender supporting arms, fender upholding catches arranged to be actuated by said bumper bar to release the fender body, and manually controlled means for operating said catches from the driver's seat.

[Claims 6 to 8 not printed in the Gazette.]

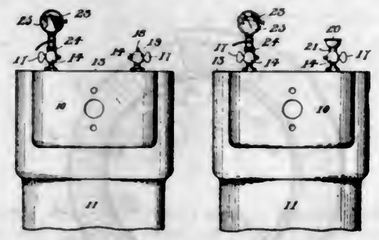
1,192,642. PNEUMATIC MECHANISM FOR OPERATING AN EXTENSIBLE CAR-STEP. HIRAM D. KIRKLEY, Paragould, Ark. Filed Oct. 26, 1915. Serial No. 57,959. (Cl. 105—86.)



1. In combination with the car steps having an extensible and collapsible step, an operating lever therefor, a pneumatic cylinder having a piston therein connected to said lever, a valve casing, said casing having a pair of oppositely disposed openings in its bottom, said openings having tubes of communication with the pneumatic cylinder forwardly and in the rear of the piston, a tube connected to the valve casing for introducing air under pressure thereinto, diametrically opposite portions of the sides of the valve casing having openings adjacent and extending at right angles to the first openings, a disk valve rockable in said casing, said valve having a vertical opening adjacent its side adapted to alternately register with the first openings to permit air to pass through first one and then the other of said tubes of communication with the cylinder for actuating the piston, said valve having an angular or L-shaped opening diametrically opposite the vertical opening to throw one of the first openings in communication with one of the second adjacent openings, and then connect the other first opening and its respective second opening alternately to exhaust the air from either side of the piston, said disk valve having a central stem and provided with a handle for operating the valve, and means for coöperating with the handle for limiting the valve in its rocking movement.

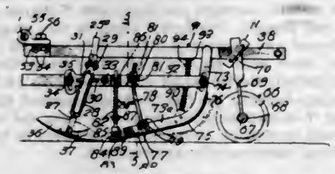
2. A valve for operating pneumatic means of an extensible step, comprising a valve casing having a pair of oppositely disposed openings in its bottom having communications with said pneumatic means, and provided with a tube for introducing air under pressure into the valve casing, diametrically opposite portions of the sides of the valve casing having openings adjacent and extending at right angles to the first openings, a disk valve rockable in said casing, said valve having a vertical opening adjacent its side adapted to alternately register with the first openings to operate the pneumatic means, said valve having an L-shaped opening diametrically opposite the vertical opening to coöperate with the first and second openings alternately to exhaust the air from the pneumatic means, said disk valve having a vertical centrally disposed stem provided with an operating handle, and means to be alternately engaged by the handle for limiting the valve whereby its openings may alternately coöperate with the first and second openings of the casing.

1,192,643. CYLINDER TESTING AND PRIMING DEVICE. GEORGE KITCHEN, Jr., St. Ignace, Mich. Filed Dec. 16, 1915. Serial No. 67,281. (Cl. 137—7.)



A cylinder testing device comprising in combination with a cylinder having an explosive chamber therein, a valve removably carried by the said cylinder in direct communication with the chamber thereof, an externally threaded fluid pressure gage receiving stem projecting outwardly of the said valve in axial alinement with the line of communication between the said valve and chamber and providing an annular shoulder upon the valve surrounding the said stem, and a priming cup having a threaded boss at its base end adapted for mounting on the said stem in seated engagement with the said annular shoulder.

1,192,644. BEET-HARVESTER. JOHN A. KITE, Las Animas, Colo. Filed July 10, 1914. Serial No. 850,158. (Cl. 55—107.)



1. In a beet harvester, a main frame, an auxiliary frame connected to the main frame and mounted to yield with respect to the said main frame, crowning mechanism for the beets, said mechanism comprising a disk, means for supporting the disk for rotation on an approximately vertical axis, a guide for determining the point at which the beets will be crowned arranged in front of the crowning mechanism and adapted to move over and in contact with the tops of the beets, a support for the guide yieldingly connected with the auxiliary frame, a pivotal connection between the support and the guide, and a yielding connection between the guide and the auxiliary frame for permitting the guide a limited movement with respect to its support.

2. In a beet harvester, a supporting frame, crowning mechanism for the beets, a guide for determining the point at which the beets will be crowned arranged in front of the crowning mechanism, a common support for the crowning mechanism and the guide, said support connected to the frame and mounted to yield with respect to to the frame.

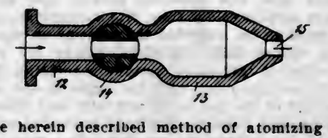
3. In a beet harvester, comprising a main frame, an auxiliary frame, topping and crowning mechanism for topping and crowning the beets, a guide for determining the point at which the beets will be topped and crowned, arranged in front of the crowning mechanism, a common support for the guide and the crowning mechanism, a yielding connection between the said common support and the auxiliary frame for permitting the support to yield upwardly, and a yielding connection between the guide and the common support.

4. In a beet harvester, comprising a main frame, an auxiliary frame, topping and crowning mechanism for topping and crowning the beets, a guide for determining the point at which the beets will be topped and crowned arranged in front of the crowning mechanism, a common support for the guide and the crowning mechanism, a yielding connection between the said common support and the auxiliary frame for permitting the support to yield upwardly, said guide comprising an approximately horizontal plate adapted to ride over the beets and having its front end curved upwardly, a hinge connection between the plate and the common support intermediate the ends of the plate, and near the rear end thereof, said read end being mounted to yield upwardly, and resilient means normally pressing the said end downward.

5. In a beet harvester, comprising a main frame, an auxiliary frame, topping and crowning mechanism for topping and crowning the beets, a guide for determining the point at which the beets will be topped and crowned arranged in front of the crowning mechanism, a common support for the guide and crowning mechanism, a yielding connection between the said common support and the auxiliary frame for permitting the support to yield upwardly, said crowning mechanism comprising a disk, means for supporting the disk for rotation on an approximately vertical axis, a connection between the said supporting means and the common support for permitting the inclination of the axis of rotation of the disk to be varied, and oppositely arranged approximately radial deflecting vanes for the beet tops on the upper face of the disk.

[Claims 6 and 7 not printed in the Gazette.]

1,192,645. METHOD OF ATOMIZING LIQUIDS. ERNST KOERTING, Pegli, Italy, assignor to the Firm of Schutte & Koerting Co., Philadelphia, Pa. Continuation in part of application Serial No. 229,448, filed Oct. 21, 1904. This application filed Nov. 13, 1913. Serial No. 800,804. (Cl. 137—80.)



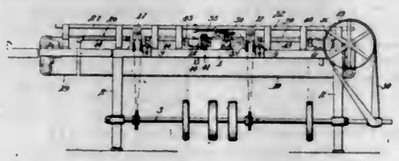
1. The herein described method of atomizing a liquid which comprises supplying the liquid under pressure and in a superheated condition to a chamber, the pressure of the liquid being reduced as it enters the chamber whereby it will generate vapor therein, the chamber and liquid supply means being so related that an intimate mixture of the liquid and its vapor occurs within the chamber, and allowing the mixture to escape from the chamber into a space at a lower pressure than the pressure in said chamber, so that the liquid is atomized by the entraining and expansive action of its vapor.

2. The herein described method of atomizing a liquid which comprises supplying the liquid under pressure and in a superheated condition to a chamber through a constricted inlet so that the pressure of the liquid will be so reduced that it will generate vapor within the chamber and the latter being of such character that the liquid and vapor therefrom will become intimately mixed therein, and allowing the mixture to escape from the chamber into a space at a lower pressure than the pressure in said chamber, so that the liquid is atomized by the entraining and expansive action of its vapor.

1,192,646. SOLDERING-MACHINE. ALFRED L. KRONQUEST and CHARLES BULOT, Chicago, Ill., assignors, by mesne assignments, to Continental Can Company, Inc., a Corporation of New York. Filed Aug. 22, 1912. Serial No. 716,490. (Cl. 113—78.)

1. A machine for soldering the bottoms on square cans including soldering stations, each of which includes yielding spaced soldering devices disposed on opposite sides of the cans, means for supplying said devices with solder, means for presenting a square can first to one soldering station and then to the other and giving said can a quarter turn between the soldering stations, whereby two opposite end seams are simultaneously soldered at one

station and the other two opposite end seams are simultaneously soldered at the other station.



2. A machine for soldering the bottoms on square cans including soldering stations, each of which includes yielding spaced soldering disks disposed on opposite sides of the cans, means for supplying said disks with molten solder, means for rotating said disks, means for presenting a square can first to one seaming station and then to the other and giving said can a quarter turn between the seaming stations, whereby two opposite end seams are simultaneously soldered at one station and the other two opposite end seams are simultaneously soldered at the other station.

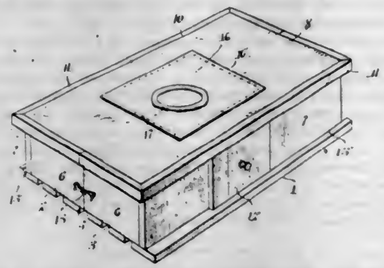
3. A machine for soldering the bottoms on square cans including spaced soldering devices for simultaneously soldering the opposite end seams on the same end of the can, means whereby said soldering devices are yieldingly pressed against the seams, and means for moving said can in contact with said soldering devices.

4. A machine for soldering the bottoms on square cans including spaced soldering devices for simultaneously soldering the opposite end seams on the same end of the can, means whereby said soldering devices are yieldingly pressed against the seams, means for moving said can in contact with said soldering devices, and means for wiping the surplus solder from said soldered seams.

5. A machine for soldering the bottoms on square cans including spaced soldering disks, means for supplying molten solder to said disks, means for rotating the disks, means for moving a can with the opposite end seams on the same end of the can in contact with said disks, means for causing said disks to yieldingly press the end seams, and means for wiping the surplus solder from said end seams.

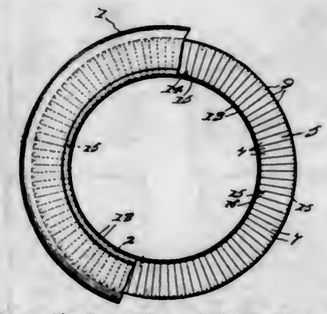
[Claim 6 not printed in the Gazette.]

1,192,647. INVALID'S BED. LOUIS J. KUHN, Latrobe, Pa. Filed Dec. 4, 1915. Serial No. 65,088. (Cl. 5—12.)



A bed of the class described comprising a frame consisting of a pair of members, hinges connecting said frame members together so that one frame member may be folded on the other, a fabric covering on the upper side of said frame, the ends of the cover or top of the bed being arranged on the outer sides of the sides and ends of the frame, moldings secured on the sides and ends of the frame and securing the cover or top in place and also forming guides, the sides of the frame members having openings and being also provided with lower guides, and sliding doors to open and close said openings and operate in said guide moldings and lower guides.

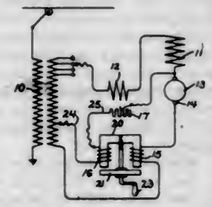
1,192,648. TIRE-PROTECTOR. JOSEPH THOMAS LANDAICHE, Remy, La. Filed Jan. 21, 1916. Serial No. 73,314. (Cl. 152—18.)



1. The combination with a vehicle tire shoe, and an inner tube adapted to be fitted in said shoe, of a tire protector independent of said shoe and tube and adapted for removable mounting between the same, said protector including a sheath having a series of V-shaped slots along both edges of the same, and a series of central incisions alternating with and overlapping the inner ends of said slots, substantially as described.

2. In a device of the character described, the combination of a vehicle tire shoe, and an inflatable inner tube fitted therein, of a tire protector constructionally independent of said shoe and tube and adapted for removable insertion therebetween, said protector comprising a plurality of metallic sections provided with T-shaped grooves in one end thereof, triangular slots in the longitudinal edges thereof and central incisions between and overlapping the inner ends of said slots, tabs projecting from the longitudinal slotted edges of said sections and adapted to engage beneath the tire beads and against the wheel rim, and T-shaped tongues projecting from the opposite end of each section for occupying the grooves in the adjacent section, substantially as described.

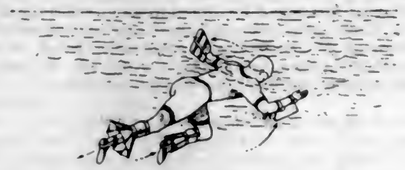
1,192,649. ALTERNATING-CURRENT MOTOR. MARIUS C. A. LATOUR, Paris, France, assignor to General Electric Company, a Corporation of New York. Filed Oct. 28, 1914. Serial No. 869,101. (Cl. 172—276.)



The combination with an alternating current motor having a compensating winding an exciting winding and an armature winding conductively connected in series, and a transformer having its primary winding included in the series circuit of said three motor windings and having an air gap in its magnetic circuit, of a local circuit including said armature winding and the secondary winding of said transformer and an auxiliary electromotive force dependent in phase upon the voltage impressed on the motor.

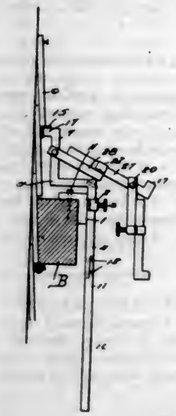
1,192,650. ATTACHABLE SWIMMER'S DEVICE. FRANK LEITNER, Roebling, N. J. Filed Dec. 30, 1915. Serial No. 69,497. (Cl. 9—21.)

In a swimming device for the leg, upper and lower and intermediate leg encircling straps, connecting means for the ends of each of said straps, side straps joining said encircling straps, the upper strap being adjustable vertically relative to said intermediate strap, a canvas web,



connected to said intermediate strap by means of a leather hinge, and connecting means for the ends of said web.

1,192,651. SHINGLING-GAGE. MICHAEL J. LEONARD, Scranton, Pa. Filed July 3, 1915. Serial No. 38,015. (Cl. 33—188.)



1. In a gage of the class described, the combination with a rest, a clip thereon, and a set screw through the clip; of a member bent in two right angles to form an upper part having a foot below its upper end and a lower part passing through said clip and provided with graduation marks, its lower end being notched, an extension member having its upper end notched to complement said notched lower end, the extension being also graduated, and means for detachably connecting the notched ends.

2. In a gage of the class described, the combination with a rest, a clip thereon, and a set screw through the clip; of a main member having a double angle in its body with its lower part passing through said clip, a series of other members each made in two parts adjustable with relation to each other, and a detachable pivotal connection between the lower part of each member and the upper part of the member below.

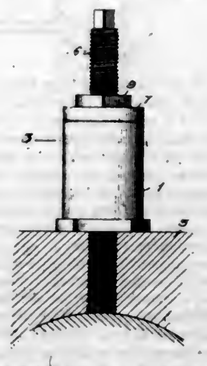
3. In a gage of the class described, the combination with a rest, a clip thereon, and a set screw through the clip, of a main member having a double angle in its body with its lower part passing through said clip, a series of other members each made in two parts adjustable with relation to each other, the lower part of each member lying alongside the upper part of the member below, a bolt passing removably through the lapping parts, and a thumb nut on said bolt.

4. In a gage of the class described, the combination with a main member, a rest, and means for adjustably mounting the main member in the rest; of a series of additional members whereof each is composed of a lower part pivoted alongside the upper part of the member next below it and having a right angular arm, an upper part parallel with the lower portion of the lower part, said arm having an opening through which said upper part is adjustably mounted at a distance from said lower portion sufficient to permit the next member to swing therethrough, and a set screw through said arm against the upper part for the purpose set forth.

5. In a gage of the class described, the combination with a main member having a foot beneath its upper end, a rest, and means for adjustably mounting the main member in the rest; of a series of additional members whereof each is composed of a lower part pivoted alongside the upper part of the member below and having its upper end bent aside into a right angular arm, an upper part parallel with the lower portion of the lower part and having a foot beneath its upper end, and means for adjustably attaching the upper part to said arm at a distance from said lower portion sufficient to permit the next member to swing therethrough.

[Claim 6 not printed in the Gazette.]

1,192,652. GREASE-CUP. WILLIAM HENRY LINDENFIELD, Lexington, Tenn. Filed Apr. 7, 1916. Serial No. 89,647. (Cl. 184—48.)



1. A force feed lubricator comprising a cup interiorly screw threaded, a cover for closing the cup and having a threaded engagement therewith, and a combined plunger and stem having screw thread engagement with the cup and cover, respectively.

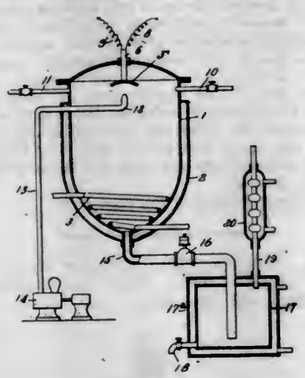
2. A force feed lubricator comprising a cup having its inner wall formed with screw threads, a cover having a portion reduced and externally screw threaded to make engagement with the interior screw threads of the cup, such cover having a central opening which is internally screw threaded, a plunger having screw thread engagement with the inner wall of the cup, and a stem projecting from the plunger and passing through the opening of the cover and externally screw threaded to match the inner screw threads of the cover.

3. A force feed lubricator comprising a cup having its inner wall screw threaded throughout its length, a cover having a portion reduced and formed with external screw threads to engage the internal screw threads of the cup, said cover having a central opening which is internally screw threaded, a plunger formed with external screw threads to match and engage the internal screw threads of the cup, and a stem projecting from the plunger and passing through the opening of the cover and externally threaded to match the inner screw threads of the opening formed in said cover.

1,192,653. PROCESS OF MAKING GASOLENE. FRANK S. LOW, New York, N. Y. Filed Apr. 24, 1913. Serial No. 763,387. (Cl. 196—25.)

1. The process of converting high boiling oils into lower boiling oils which comprises contacting such a high boil-

ing oil in the form of a spray against a localized heated element maintained at a sufficient temperature sufficient to crack said high boiling oils into low boiling oils while insufficient to form substantial amounts of gas, said element being in a chamber of less temperature, collecting the vapors and gases and condensing the vapors of low boiling products formed.



2. The process of converting high boiling oils into lower boiling oils which comprises contacting such high boiling oil in the form of a spray against a localized heated element contained in a chamber under greater pressure than atmospheric and of less temperature than said element, said heated element being maintained at a temperature sufficient to crack said high boiling oils into low boiling oils while insufficient to form substantial amounts of gas, collecting the vapors and gases and condensing the vapors of low boiling products formed.

3. The process of converting high boiling oils into lower boiling oils which comprises maintaining a body of such oil in a still at a temperature below that at which any substantial distillation or cracking of such oil will take place, maintaining a heated element within such still at a temperature above the cracking temperature of such oil and continuously spraying oil from such body against said element while allowing unchanged high boiling oil to flow back to such body and removing vapors of cracked products.

4. The process of converting high boiling oils into lower boiling oils which comprises maintaining a body of such oil in a still at a temperature below that at which any substantial distillation or cracking of such oil will take place, maintaining a heated element having a surface of catalytic material within said still at a temperature above the cracking temperature of such oil and continuously spraying oil from such body against said element while allowing unchanged high boiling oil to flow back to such body and removing vapors of cracked products.

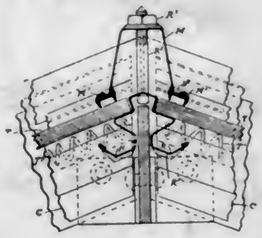
5. The process of making gasolene and kerosene which comprises atomizing liquid high-boiling petroleum material by a gas comprising hydrogen under pressure against a surface heated to a temperature above the boiling point of such material and contained in a chamber of lower temperature than such surface and recovering low boiling oils thereby produced.

[Claims 6 to 12 not printed in the Gazette.]

1,192,654. SKYLIGHT CONSTRUCTION. WALLACE C. LYON, Hyattsville, Md. Filed Apr. 14, 1916. Serial No. 91,251. (Cl. 108—16.)

1. In a roof construction, and in combination with a panel thereof, a cushioning member for supporting said panel, said member consisting of a helix formed of a strip or wire composed of a yielding material, upon the upper surface of the convolutions of which the lower face of said panel rests.

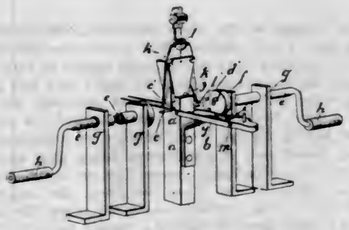
2. In a skylight construction and in combination with panels thereof, cushioning members for supporting said panels, each of said members consisting of a helix formed of a strip or wire composed of yielding material, upon the upper surfaces of the convolutions of which the lower face of said panels rest, and water tight sealing members, making a line contact with the upper surface of said panels and being water tightly connected to covering caps or crown pieces of the skylight astragal.



3. In a skylight, an astragal having trough-shaped outstanding wings or flanges, cushioning members removably and replaceably supported upon the trough of said wings or flanges, each cushioning member consisting of a helix formed of a strip or wire composed of a yielding material, and glass panels having their under surfaces resting upon the top surface of the convolutions of said helix.

4. The combination with an astragal cap having a laterally flanged edge of a sealing strip having a channel in its top surface adapted to receive said flanged edge and one or both walls of the channel being folded down behind said flange.

1,192,655. WIRE-COILING MACHINE. EDGAR SAMUEL LYONS, Toronto, Ontario, Canada, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed June 22, 1914. Serial No. 846,487. (Cl. 140—103.)



1. A wire coiling machine comprising means for holding a wire blank, means for coiling the ends of said blank, and automatically positioned means coöperating with the coiling means to bend the ends of the coils reversely to the direction of the spirals.

2. A wire coiling machine comprising means for holding a wire blank, means for coiling two sides of the same, said coiling means including coil shapers and winders revoluble in one direction for twisting the wire around said shapers for the formation of the coils, and benders automatically movable lengthwise of the coils to engage with the ends of the wire when the revolution of the winders is reversed whereby the winders can bend the ends of the coils reversely to the direction of the spirals for the formation of the attaching members by which the coils are tensioned and secured to a holder.

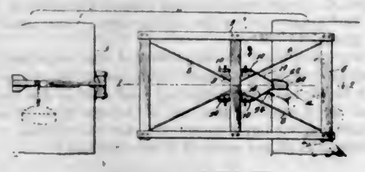
3. A wire coiling machine comprising means for holding a wire blank and means for coiling two sides of the same, said coiling means including coil shapers and winders revoluble in one direction for twisting the wire around said shapers for the formation of the coils, and spring tensioned benders fulcrumed to the apparatus, having hook-shaped ends automatically movable lengthwise of the coils to engage with the ends of the wire when the revolution of the winders is reversed, whereby the winders can bend the ends of the coils over said hook-shaped ends of the benders reversely to the direction of the spirals for the formation of the attaching members by which the coils are tensioned and secured to a holder.

4. A wire coiling machine comprising means for holding a wire blank and means for coiling two sides of the same, said coiling means including coil shapers and winders revoluble in one direction for twisting the wire around said shapers for the formation of the coils, and spring tensioned benders fulcrumed to the apparatus, having hook-shaped ends automatically movable lengthwise of the coils to engage with the ends of the wire when the revolution of the winders is reversed, whereby the winders can bend the ends of the coils over said hook-shaped ends of the benders reversely to the direction of the spirals for the formation of the attaching members by which the coils are tensioned and secured to a holder, the sides of said hook-shaped ends opposed to the direction of the spirals being beveled so that the wire will displace the benders and pass them without difficulty during the formation of the coils.

5. A wire coiling machine comprising means for holding a wire blank, means for coiling it, and benders automatically movable lengthwise of the coils to engage with the ends of the blank when the revolution of the coiling means is reversed.

[Claims 6 and 7 not printed in the Gazette.]

1,192,656. MAIL-TRANSFERRING APPARATUS. JOSEPH MCGRATH, Manteno, Ill. Filed Sept. 14, 1915. Serial No. 50,682. (Cl. 258—18.)



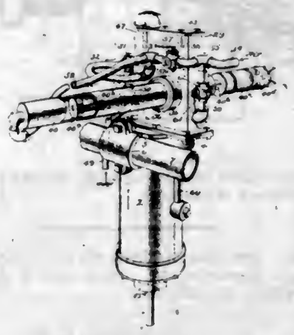
1. In a mail delivery apparatus, a removable support for the mail bag to be delivered, a retaining means engaging and holding said support in a position for delivery, said support accompanying the bag when delivered, and a guide means leading to said support.

2. In a mail delivery apparatus, a removable support for the mail bag to be delivered, spring actuating jaws engaging and holding said support in a position for delivery, said support accompanying the bag when delivered, and a guide means leading to said support.

3. In a mail delivery apparatus, a support for the mail bag to be delivered comprising a single strip of material bent to provide a looped retaining portion and arms leading therefrom, spring actuated clamping jaws engaging the respective arms to maintain the support in a position for delivery, guide plates leading to said support, each of the mentioned guide plates having openings formed therein through which the arms of the said support extend, substantially as described.

4. In a mail delivery apparatus, a mail bag support comprising a looped retaining member having divergent arms leading thereto, each of said arms having an opening formed therein, opposed retaining devices adapted to engage the respective arms, each of said devices comprising a fixed jaw and a spring actuated movable jaw adapted for contact therewith, the said movable jaws fitting openings aforesaid, and guide plates leading to said support means, the mentioned guide plates extending in divergent relation and being provided with openings through which the said arms pass, substantially as described.

1,192,657. DRILL-OPERATING MECHANISM. JOSEPH D. MACDONALD, Butte, Mont.; Frank C. MacDonald, administrator of said Joseph D. MacDonald, deceased, assignor of one-half to Cathrine MacDonald and one-half to Frank C. MacDonald, San Francisco, Cal. Filed June 10, 1911, Serial No. 632,435. Renewed Dec. 23, 1915. Serial No. 68,459. (Cl. 255—43.)



1. In an apparatus of the character specified, the combination of a drill-bar; a pneumatic hammer carried thereby; an oscillating clamp for supporting said bar; an air-line leading to the hammer; a pump adapted to force water into said air-line; and a motor for actuating the pump and oscillating the clamp.

2. In an apparatus of the character specified, the combination of a drill-bar; a pneumatic hammer carried thereby; an oscillating clamp for supporting the drill-bar; an air-line leading to the hammer; a pump adapted to force water into the air-line; a motor for actuating the pump and oscillating the clamp; and means for securing the mechanism as a unitary structure upon a suitable support.

3. In an apparatus of the character specified, the combination of a drill-bar; a pneumatic hammer carried thereby; an oscillating clamp supporting and clamping said bar; and a motor for imparting motion to said clamp.

4. In an apparatus of the character specified, the combination of a drill-bar; a pneumatic hammer carried thereby; an oscillating clamp for supporting said bar and through which it may be longitudinally adjusted; an air-line leading to the hammer; a pump for forcing water into the air-line of the hammer; and a motor for actuating the pump and oscillating the clamp.

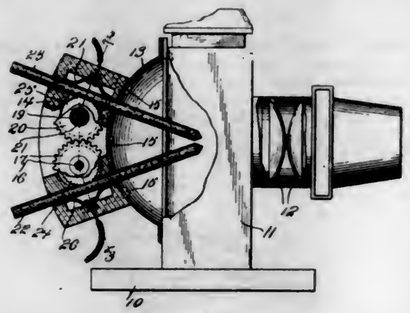
5. In an apparatus of the character specified; the combination of a suitable housing; an oscillating drill-bar clamp; a drill-bar mounted in said clamp; a pneumatic hammer carried by said bar; an air-line leading to the hammer; a pump likewise supported by the housing and discharging water into the air-line leading to the hammer; and a motor secured to the housing and actuating the clamp and pump.

[Claims 6 and 7 not printed in the Gazette.]

1,192,658. LAMP-HOUSE FOR PROJECTING APPARATUS. ELISHA E. MAGGARD, Morehead, Ky. Filed Dec. 19, 1913. Serial No. 807,754. (Cl. 176—103.)

The combination with a lamp house, of a substantially semi-spherical shaped closure swingingly mounted on the rear of the lamp house, an arcuate shaped block fixed to the said closure, spaced axles journaled transversely in said block, gears fixed to the said axles and meshing with each other, carbons slidably fitted in the blocks in forwardly convergent relation to each other for projection

through the closure into the lamp house, feed wheels mounted on the axles and engaging the carbons to move the



same, and a hand knob mounted on the end of one of the axles exteriorly of the block.

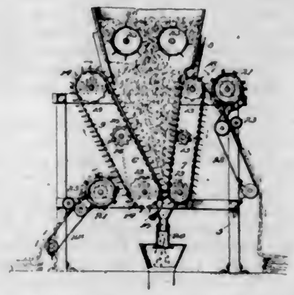
1,192,659. DOUBLE MIXING-SPOON. JAMES EDWARD MALLOY, Montpelier, Vt. Filed Apr. 2, 1915. Serial No. 18,788. (Cl. 30—22.)



1. A device of the class described comprising a pair of normally overlapping members, a shank for each of said members, a manipulating member on the outermost end of each shank, said manipulating members being pivoted together in overlapping relation, and disposed at an angle with respect to their respective shanks, the extremities of both members extending beyond the opposite sides of the adjacent member, whereby the lowermost corresponding extremities of said members are adapted to be engaged and moved in opposite directions to spread the said normally overlapping members.

2. A device of the class described comprising a pair of normally overlapping members, a shank for each of said members, a manipulating member on the outermost end of each shank, said manipulating members being pivoted together in overlapping relation and disposed at an angle with respect to their respective shanks, the extremities of both members extending beyond the opposite sides of the adjacent member, whereby the lowermost corresponding extremities of said members are adapted to engage and move in opposite directions to spread the said normally overlapping members, and one of said shanks being offset with relation to its associated members, whereby the adjacent longitudinal edges of said shanks are normally disposed in contacting engagement.

1,192,660. COTTON-GIN. MARK W. MARSDEN, Philadelphia, Pa. Filed May 19, 1915. Serial No. 29,155. (Cl. 13—9.)



1. In a machine of the type recited, the combination of confronting upwardly ranging aprons whereof each is equipped with ginning teeth, ginning members coöperating with the aprons, rotary supports for the aprons, and means for adjusting them to provide a V shape feed space between the aprons.

2. In a machine of the type recited, the combination of V spaced confronting aprons, ginning teeth detachably applied to the aprons, ginning members coöperating with the aprons, apron supports, and means for driving them.

3. In a machine of the type recited, the combination of confronting upwardly ranging aprons whereof each is equipped with ginning devices, ginning members coöperating with the apron, rotary supports for the aprons, means for adjusting them to provide a V shape feed space between the aprons, and a feed hopper above the apron.

4. In a machine of the type recited, the combination of V spaced confronting aprons, ginning teeth detachably applied to the aprons, ginning members coöperating with the aprons, apron supports and means for driving them, and a feed hopper above the aprons and co-extensive with the V space.

5. In a machine of the type recited, the combination of upstanding traveling aprons equipped with coöperative ginning teeth, means for feeding seed cotton downwardly between the aprons, a ginning rib at the take-off end of each apron, and doffing mechanism for the aprons.

[Claims 6 to 30 not printed in the Gazette.]

1,192,661. SHOT RETARDING AND OBTURATING ELEMENT. MARK W. MARSDEN, Philadelphia, Pa. Filed Nov. 6, 1915. Serial No. 60,054. (Cl. 114—69.)

1. A shot-retarding and obturating material possessed of marked yielding and resilient and absorptive properties, consisting of a compressed mass of mineral wool and asbestos intermixed or matted together.

2. A shot-retarding and obturating material possessed of marked yielding and resilient and absorptive properties, consisting of a compressed mass of mineral wool, asbestos, and a fiber of vegetable origin primarily fire and waterproofed, said elements being intimately commingled and matted together, substantially as described.

3. Material for the purposes stated, consisting of a highly absorptive yielding and resilient mat of more than fifty per cent. mineral wood and less than forty per cent. asbestos.

1,192,662. OBTURATING MATERIAL. MARK W. MARSDEN, Philadelphia, Pa. Filed Dec. 13, 1915. Serial No. 66,512. (Cl. 114—69.)

1. Obturating material consisting of a compressed product of mineral fiber and an element adapted and arranged to prevent undue compacting.

2. Obturating material consisting of a compressed product of mineral wool and asbestos and an element adapted and arranged to prevent undue compacting.

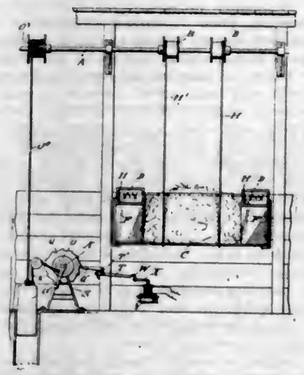
3. Obturating material consisting of a mixture of mineral wool and asbestos and springy separating elements scattered throughout the same.

4. Obturating material consisting of a mineral wool and asbestos combined in loose or flocky form with a light, buoyant, flexible, fireproofed material.

5. Obturating material consisting of a dense or compressed product of a mixture in loose form of granular cork and mineral fiber.

[Claims 6 and 7 not printed in the Gazette.]

1,192,663. AUTOMATIC STOCK-FEEDING APPARATUS. WILLIAM THOMAS MASEK, David City, Nebr. Filed May 20, 1916. Serial No. 98,894. (Cl. 119—56.)

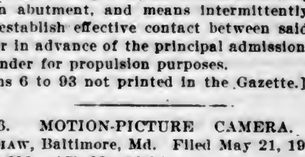


1. An automatic stock feeding apparatus comprising a rack and a manger to which the same is hinged, feed boxes having upper ends projecting above the hinged part of the rack and adapted to engage over the wall of the manger when the box is elevated to a dumping position, a rotatable weight-actuated shaft, drums thereon, ropes secured to the swinging edges of the rack and adapted to wind about said drums, a second shaft a ratchet wheel fixed to the latter, a reel rotating with the ratchet wheel, a rope winding about the reel, and a weight secured to the rope which passes about said reel, a pawl engaging the ratchet wheel, automatic means for releasing the ratchet wheel to allow the weight to cause the drums to rotate and elevate the shaft and feed boxes to dumping positions.

2. An automatic stock feeding apparatus comprising a rack and a manger to which the same is hinged, feed boxes having upper ends projecting above the hinged part of the rack and adapted to engage over the wall of the manger when the box is elevated to a dumping position, a rotatable weight-actuated shaft, drums thereon, ropes secured to the swinging edges of the rack and adapted to wind about said drums, a second shaft a ratchet wheel fixed to the latter, a reel rotating with the ratchet wheel, a rope winding about the reel, and a weight secured to the rope which passes about said reel, a pawl engaging the ratchet wheel, a lever having connections with said pawl, and an automatically-operated trip engaging said lever.

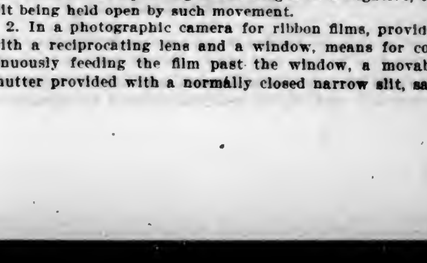
1,192,664. PLOW. JAMES MATNEY, Livingston, Mont., assignor of one-half to Elwood Roberts, Livingston, Mont. Filed Mar. 13, 1916. Serial No. 83,851. (Cl. 97—4.)

In a plow, a plow share provided at its front end portion with an overhanging wing having a curved front edge and which projects laterally away from the landside and which has its base or line of juncture with the share arranged at an acute angle with the horizontal and extending upwardly and rearwardly from the share point, and a triangular fin or cutter which projects laterally toward the landside from the said line of juncture of the wing with the share, said fin or cutter having a point at



its front and lower end which is arranged adjacent to the share point.

1,192,665. ROTARY POWER-TRANSFORMER. WILLIAM NICHOLS MEARS, Brookline, Mass., assignor to American Rotary Motor Company, Boston, Mass., a Corporation of Maine. Filed Mar. 19, 1909. Serial No. 484,485. (Cl. 123—15.)



1. An engine comprising in combination a cylinder, its rotor, a fluid admission port and means to scavenge it through that portion of said cylinder which is at the opposite side of said rotor from that at which motive power is admitted thereto through said port.

2. An engine comprising in combination a cylinder, its rotor, an admission port and means to split the admission from said port to scavenge through the cylinder at one side said rotor and to supply motive fluid at an opposite side thereof.

3. An engine comprising in combination a cylinder, its rotor, an abutment and means independent of said rotor and carried by the abutment separately to control the scavenging period and initial admission of fresh fluid.

4. An engine comprising in combination a cylinder, its rotor, an abutment, fluid controlled packing means between said abutment and rotor, and means to admit fluid to render effective said packing means in advance of the main admission of fluid to said cylinder for propulsion purposes.

5. An engine comprising in combination a cylinder, its rotor, an abutment, and means intermittently to admit fluid to establish effective contact between said abutment and rotor in advance of the principal admission of fluid to said cylinder for propulsion purposes.

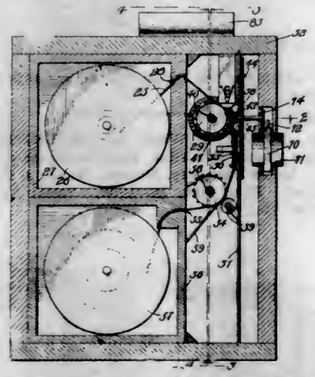
[Claims 6 to 93 not printed in the Gazette.]

1,192,666. MOTION-PICTURE CAMERA. MERRILL MEUSHAW, Baltimore, Md. Filed May 21, 1915. Serial No. 29,692. (Cl. 88—16.8.)

1. In a photographic camera for ribbon films, provided with a reciprocating lens and a window, means for continuously feeding the film past the window, a movable shutter provided with a normally closed narrow slit, said shutter and said lens being positively driven by said means in such a manner that the slit passes the window once for each complete exposure of a length of the film before the window corresponding to the length of a negative, the slit being held open by such movement.

2. In a photographic camera for ribbon films, provided with a reciprocating lens and a window, means for continuously feeding the film past the window, a movable shutter provided with a normally closed narrow slit, said

shutter and said lens being positively driven by said means in such a manner that the slit passes the window in transverse direction to the direction of the movement of the film once for each complete exposure, of a length of the film before the window, corresponding to the length of a negative, the slit being held open by such movement.



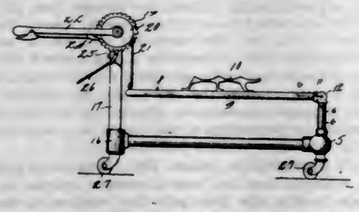
3. In a photographic camera for ribbon films, provided with a reciprocating lens and a window, means for continuously feeding the film past the window, a circular revoluble shutter provided with a normally closed narrow radial slit, said shutter and said lens being positively driven by said means in such a manner that the slit passes the window once for each complete exposure of a length of the film before the window corresponding to the length of a negative, the slit being held open by such movement.

4. In a photographic camera for ribbon films, provided with a reciprocating lens and a window, means for continuously feeding the film past the window, a revoluble shutter comprising two semi-circular leaves connected near the periphery, whereby the centrifugal force will cause relative movement between the leaves to form a narrow slit between their radial edges, said shutter and said lens being positively driven by said means in such a manner that the slit passes the window once for each complete exposure of a length of the film before the window corresponding to the length of a negative.

5. In a photographic camera for ribbon films, provided with a reciprocating lens and a window, means for continuously feeding the film past the window, a revoluble shutter comprising two semi-circular leaves connected near the periphery, whereby the centrifugal force will cause relative movement between the leaves to form a narrow slit between their radial edges, the width of said slit varying with the speed of the moving film, said shutter and said lens being positively driven by said means in such a manner that the slit passes the window once for each complete exposure of a length of the film before the window corresponding to the length of a negative.

[Claims 6 to 14 not printed in the Gazette.]

1,192,667. LIFTING-JACK. ALBERT G. MIELKE, Howard Lake, Minn. Filed Apr. 27, 1916. Serial No. 94,045. (Cl. 254—3.)



A jack of the class described comprising a frame consisting of a main bar, a cross bar carried by one end of the main bar, tubular posts connected with the ends of the cross bar, rods adjustably mounted in the posts, a lifting frame pivotally connected to the rods, a post connected with the other end of the main bar, and means supported by the last named post for swinging the lifting frame.

1,192,668. FOUNTAIN TOOTH-BRUSH. EDWARD C. MILES, Oakland, Cal. Filed Oct. 8, 1915. Serial No. 54,846. (Cl. 15—52.)



1. A fountain brush including a handle, a shank removably secured to said handle having a longitudinal bore or passage, a pair of arms carried by said shank, one of said arms having a longitudinal opening thereon communicating with said longitudinal bore or passage and having a discharge opening therein, a brush removably engaged between said arms, and a sleeve slidably mounted on said arm for closing said discharge opening.

2. A fountain brush including a handle, a shank connected with said handle having a longitudinal opening therein, a flexible tube connected with said shank, and means removably fitted in said handle for twisting said tube longitudinally to eject the contents thereof.

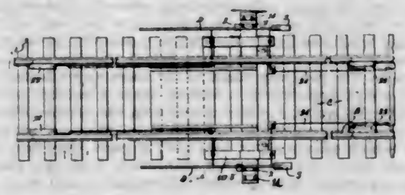
3. A fountain brush including a hollow handle, a flexible dentifrice containing tube arranged in said handle, means for twisting one end of said tube to eject the contents of the latter, the last mentioned means including a slidable connection designed to permit contraction of the tube incident to twisting thereof.

4. A fountain brush including a hollow handle, a flexible dentifrice containing tube arranged in said handle, means for twisting said tube longitudinally to eject the contents thereof, the last-mentioned means including a slidable connection designed to permit contraction of the tube incident to twisting thereof.

5. A fountain brush including a hollow handle, a flexible dentifrice containing tube arranged in said handle, a cap rotatable mounted in said handle, and means associated with said cap for twisting said tube to eject the contents thereof.

[Claim 6 not printed in the Gazette.]

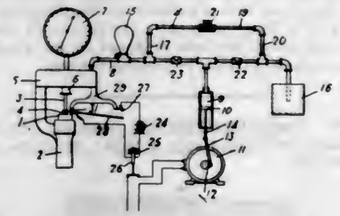
1,192,669. AUTOMATIC RAILWAY-GATE. HENRY MONROE, Sabetha, Kans. Filed Oct. 30, 1914. Serial No. 869,425. (Cl. 269—5.)



1. A railway gate consisting of a pair of gate bars, upstanding standards, said gate bars being pivoted to the standards intermediate their ends and being balanced relative to said standards, integral base plates carried by the lower ends of the standards and having their inner ends shaped to conform to and arranged to engage the outer faces of the rail at a railway crossing, a transverse pulley supporting bar carried by each of said base plates, pulleys carried on the ends of said bars and disposed on opposite sides of pivot point of the gate bars, flexible elements secured at their ends on opposite sides of the pivot points of said bars, and directed downwardly under said pulleys and on opposite sides of the gate bars and means to be arranged in advance of the railway crossing on either side thereof to be engaged by a train to communicate a pull to the flexible elements.

2. A railway gate consisting of a pair of gate bars, upstanding standards, said gate bars being pivoted to the standards intermediate their ends and being balanced relative to said standards, integral base plates carried by the lower ends of the standards and having their inner ends shaped to conform to and arranged to engage the outer faces of the rail at a railway crossing, a transverse pulley supporting bar carried by each of said base plates, pulleys carried on the ends of said bars and disposed on opposite sides of pivot point of the gate bars, flexible elements secured at their ends on opposite sides of the pivot points of said bars, and directed downwardly under said pulleys and on opposite sides of the gate bars and means to be arranged in advance of the railway crossing on either side thereof to be engaged by a train to communicate a pull to the flexible elements, said means serving to move the gate bars into and out of closed position, and means to limit the downward movement of the gate bars and support them in closed position.

1,192,670. HARDNESS-TESTING APPARATUS AND METHOD. RALPH W. E. MOORE and HENRY R. EDGECOMB, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 4, 1915. Serial No. 25,817. (Cl. 73—51.)



1. The method of testing the hardness of metals and the like that comprises pressing an impression member of symmetrical contour into the material to form an indentation of predetermined area, and measuring the pressure necessary to make such indentation.

2. The method of testing the hardness of metals and the like, by forming surface indentations in the materials to be tested, that comprises determining by a series of preliminary tests upon a given class of material the indentation area that gives a substantially uniform ratio between the area of the indentation and the applied pressure, forming an indentation of the selected area in the material to be tested, and measuring the pressure necessary to make such indentation.

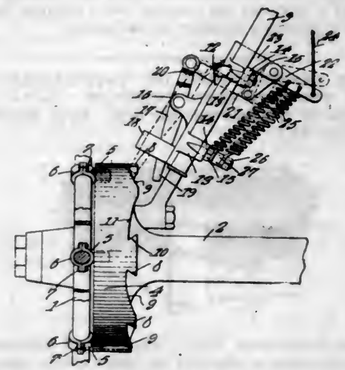
3. A hardness-testing machine comprising means for supporting a sample of material to be tested, means for forcing an impression member of predetermined contour a predetermined distance into the said sample and for thereby forming an indentation of predetermined area therein, and means for indicating the pressure required to make the said impression.

4. A hardness-testing machine comprising means for supporting a sample of material to be tested, means for forcing a spherical impression member a predetermined distance into the said sample, and means for indicating the ratio between the area of the impression so produced and the pressure required to make the said impression.

5. A hardness-testing machine comprising means for supporting a sample of material to be tested, means for forcing an impression member into the said sample with increasing force, and means for stopping such increase of force when the said member has penetrated the said sample to a predetermined distance.

[Claims 6 to 8 not printed in the Gazette.]

1,192,671. SAFETY AUTOMOBILE-CLUTCH. WINFIELD SCOTT MULLIN, Hyndman, Pa. Filed Mar. 27, 1916. Serial No. 87,024. (Cl. 21—8.)



1. A device of the character described comprising a ring attachable to an automobile wheel and having one edge notched to provide undercut shoulders, and a dog having a terminal engageable with said shoulders.

2. A device of the character described comprising a ring attachable to an automobile wheel and having one edge notched to provide under cut shoulders facing in opposite directions, and a dog having a dove-tail shaped terminal engageable with said shoulders to prevent the rotation of the ring in either direction.

3. A device of the character described comprising a notched ring attachable to an automobile wheel, a plate having U-clips projecting to one side to straddle a radius rod and a lug projecting to the opposite side, means engageable with said clips for clamping said plate against said rod, a dog pivotally connected with said lug and swingable into engagement with said ring, and means for swinging said dog.

4. A device of the character described, comprising a notched ring attachable to an automobile wheel, a plate attachable to a radius rod and having a lug outstanding therefrom, and an outstanding loop-shaped guide, a dog pivoted between its ends to said lug and having one arm working in said guide, the terminal of said arm being engageable with said ring, and means connected to the other arm of the dog for swinging the same.

5. A device of the character described comprising a notched ring attachable to an automobile wheel, a plate attachable to a radius rod and having a lug between its ends, an outstanding loop-shaped guide at one end, and a bracket at its other end, a dog pivoted between its ends to said lug and having one arm working in said guide, said arm having its terminal engageable with said ring, the other arm of the dog being offset, a lever pivoted to said bracket, a link connecting the second mentioned arm of the dog and said lever, and a spring connected to said lever for swinging the dog away from said ring.

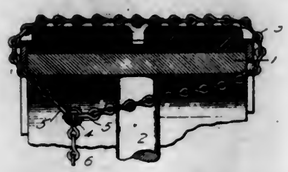
1,192,672. ADJUSTABLE SHOE-BUTTON. MORRIS A. MYER, New York, N. Y. Filed Feb. 6, 1915. Serial No. 6,516. (Cl. 24—105.)



An adjustable shoe button comprising a button, a metal shank extending parallel to the rear face of said button and bent intermediate its length to form a substantially U-shaped loop embedded within said button, the ends of

said shank being bent at right angles away from said button to provide bearing members, a cross bar provided intermediate its end with an internally screw-threaded opening and having its ends journaled within said bearing members, and a threaded pin adapted to be engaged by said opening to provide a fastener for the button.

1,192,673. ANTISLIPPING OR ANTISKIDDING DEVICE FOR WHEELED VEHICLES. FRANK NACE, Trenton, N. J. Filed Feb. 25, 1915. Serial No. 10,562. (Cl. 152—14.)



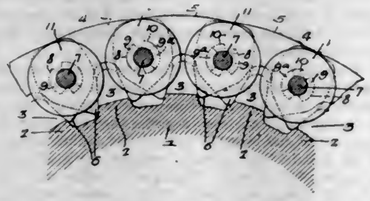
1. The combination with a wheel, of an anti-skidding device comprising a plurality of radial chains encircling the rim of the wheel and a flexible floating ring to which all of said radial chains are solely attached.

2. In an anti-skidding chain device for wheels, the combination of a series of chains adapted to encircle the rim and tire, each having a ring on one end and a hook on the other, the rings being adapted to be engaged with a ring safety chain having detachable ends, said ring safety chain being adapted to pass through the rings carried by the felly and tire encircling chains.

3. An anti-skidding device comprising a series of independent chains encircling the rim of a wheel, and a ring on the outer side of the wheel to which all of the chains are slidably connected.

4. A traction device for a vehicle wheel, comprising a plurality of radially arranged chains, and a floating ring connecting the same and directly connected to both ends of each of the chains.

1,192,674. DRIVE-CHAIN. FRANK J. OAKES, Indianapolis, Ind., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1915. Serial No. 69,455. (Cl. 74—31.)



1. The combination of a drive chain and a toothed sprocket wheel adapted thereto and having an annular groove extending through the teeth thereof, the said chain being composed of a series of multiple toothed links; pivot pins connecting said links; and rollers mounted on the pivot pins and extending into the annular groove in the sprocket wheel and acting to retain the chain laterally in position.

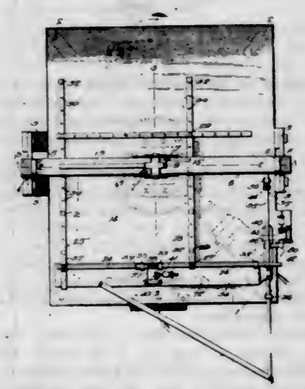
2. A chain adapted to a sprocket wheel having an annular groove therein, said chain being made of a series of toothed links; pivot pins connecting said links, said pins being loosely mounted in openings in the links; segmental bearings connecting the links of each set and bearing upon the pivot pins; a roller secured to one of the pivot pins and mounted between the sides of the chain and arranged to travel in the groove of the sprocket wheel, the roller being of such a width that it will have a frictional bearing against the side walls of the groove of the sprocket wheel so that, as the teeth of the chain engage the teeth of the sprocket wheel, the roller will have a limited rotary movement which will be imparted to its pivot pin.

3. The combination of a sprocket wheel having teeth and having an annular groove in its periphery, said groove extending part way to the base of the teeth; and a chain composed of sets of series of toothed plates forming links; pivot pins connecting the links; segmental bearings connecting the plates of each series; a roller secured to each pivot pin, said roller being of such diameter that it will clear the base of the groove and being of such width that it will have a frictional contact with the side walls of the groove as it enters the groove, causing the pin to have a limited rotary movement which will be imparted to its pivot pins.

4. The combination of a drive chain and a sprocket wheel adapted thereto and having an annular groove in its periphery, the groove extending through the teeth of the wheel, said chain being composed of a series of links made of toothed plates arranged side by side, the teeth of the plates being arranged to extend into the spaces between the teeth of the wheel; pivot pins connecting the said links; a roller of a diameter to extend into the groove of the wheel when the chain is seated thereon; and segmental bushings connecting the plates of each series, said bushings being located on opposite sides of the roller.

5. The combination of a drive chain and a sprocket wheel adapted thereto and having an annular groove in the periphery thereof, said groove extending through the teeth of the wheel intermediate the sides thereof, said chain composed of a series of links having teeth extending into the spaces between the teeth of the wheel; pivots connecting the links; and rollers mounted on the pivots, said rollers being of a diameter to enter the grooves in the teeth of the wheel when the chain is seated on the wheel so as to hold the chain laterally in position thereon.

1,192,675. PRINTING DEVICE. ASHLEY GUY OGDEN, Baltimore, Md. Filed July 1, 1915. Serial No. 37,524. (Cl. 95—73.)



1. In a device for printing sensitized plates, a stationary source of light, a statnonary negative disposed in the field of said source of light, and means for shifting a sensitized plate to different printing positions relative to said stationary negative.

2. In a device for printing sensitized plates, a stationary source of light, a stationary negative disposed in the field of said source of light, means for shifting a sensitized plate to different printing positions, relative to said stationary negative, and means for clamping said plate to said negative in each printing position.

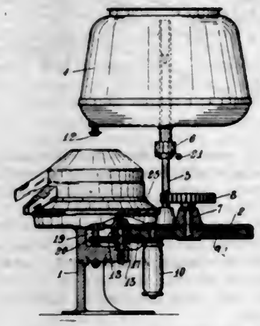
3. In a device for printing sensitized plates, a stationary source of light, a stationary negative holder disposed adjacent to said source of light, a negative carried by said stationary negative holder, means for adjustably securing said negative within the holder, a sensitized plate being movable with respect to the negative holder, and means for clamping said sensitized plate above said negative in any of the positions of the plate.

4. In a device for printing sensitized plates, a stationary source of light, a stationary negative holder disposed adjacent to said source of light, a negative carried by said stationary negative holder, means for adjustably securing said negative within the holder, a sensitized plate being movable with respect to the negative holder, means for clamping said sensitized plate above said negative in any of the positions of the plate, and means for automatically raising said plate from the negative when the plate is unclamped.

5. In a device for printing sensitized plates, a stationary source of light, a stationary negative holder disposed adjacent to said source of light, a negative carried by said stationary negative holder, means for adjustably securing said negative within the holder, a sensitized plate being movable with respect to the negative holder, means for clamping said sensitized plate above said negative in any of the positions of the plate, means for automatically raising said plate from the negative when the plate is unclamped, said means comprising a weight, a pulley, and a cord connecting said weight at one end and said plate at the other and arranged to pass over said pulley.

[Claims 6 to 11 not printed in the Gazette.]

1,192,676. COMBINED CHURN AND MILK-SEPARATOR. JOHAN ABRAHAM OHLSSON, Stockholm, Sweden. Filed Jan. 13, 1915. Serial No. 1,965. (Cl. 31—7.)



1. In a combined churn and milk separator, the combination with a suitable base, of a separator bowl supported thereon, a support located adjacent to said bowl, a churn vessel rotatably mounted on said support, and means for securing said churn vessel to said support in such position that it can serve as a milk reservoir for said separator.

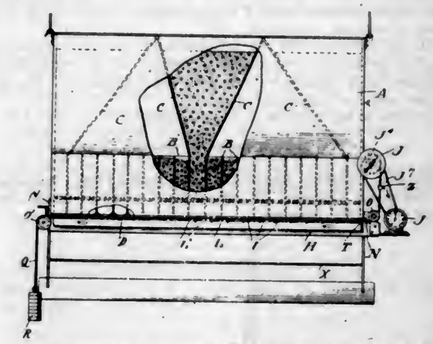
2. In a combined churn and milk separator, the combination with a suitable base, of a separator bowl rotatably mounted thereon, a support also located on said base, a churn vessel rotatably mounted on said support, means for rotating either said bowl or said vessel, and means for non-rotatably securing said vessel to said support in elevated position, whereby it can serve as a milk receptacle for said separator.

3. In a combined churn and milk separator, the combination of a separator bowl, a churn vessel arranged and located to serve as a milk receptacle for said separator, a common driving mechanism for said bowl and vessel, and means for connecting and disconnecting said driving mechanism from said churn vessel.

4. The combination with a suitable base, of a driving gear thereon, a spindle and a separator bowl thereon rotated by said gear, a vertical rod mounted on said base, a pinion and a churn vessel slidable on said rod and also rotated by said gear when in normal position, and means for holding said vessel in non-rotatable elevated position with said pinion disconnected from said gear.

5. The combination with a suitable base, of a driving gear thereon, a fixed vertical shaft on said base, a slidable sleeve surrounding said shaft, a pinion on said sleeve, driving connections intermediate said gear and said pinion for rotating the latter, a churn vessel on said sleeve, a vertical rotatable spindle on said base, a separator bowl mounted thereon, a pinion also on said spindle, connections intermediate said pinion and said gear, said vessel and said bowl being of such size as to interfere with each other if both were at the same vertical height whereby said vessel, when elevated on said shaft, overhangs said bowl and may act as a milk reservoir therefor, said first pinion being disconnected from said driving gear when in elevated position, and means for holding said parts in non-rotatable elevated position on said shaft.

1,192,677. AUTOMATIC POULTRY-FEEDER. FREDERICK ROW PARKS, Fulton, N. Y. Filed Feb. 18, 1916. Serial No. 79,128. (Cl. 161—10.)



1. An automatic poultry and animal feeding apparatus comprising a hopper with partitions therein and having openings in the bottom thereof, a series of separate and pivotal doors regulating the openings, horizontally disposed pivotal levers for supporting the free ends of the doors, a weighted rope and pulley about which the same winds, clock mechanism for releasing the rope, a movable trip upon the rope and a link fixed to the latter adapted to move the trip successively against the corresponding ends of said levers to release the same from said doors, and means for limiting the movements of the levers in one direction.

2. An automatic poultry and animal feeding apparatus comprising a hopper with partitions therein and having openings in the bottom thereof, a series of separate and pivotal doors regulating the openings, horizontally disposed pivotal levers for supporting the free ends of the doors, a weighted rope and pulley about which the same winds, clock mechanism for releasing the rope, and a movable trip upon the rope and a link fixed to the latter adapted to move the trip successively against the corresponding ends of said levers to release the same from said doors.

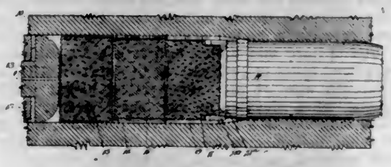
1,192,678. AMMUNITION. JOHN PATTEN, Baltimore, Md. Filed Nov. 12, 1915. Serial No. 61,142. (Cl. 102—1.)

1. A powder charge comprising a main core of explosive and a surrounding belt of tubular containers having ammonium carbonate or its equivalent therein and which are woven together by strips of combustible material.

2. A powder charge comprising a main core of explosive inclosed in a suitable fabric and a surrounding belt of hermetically sealed tubular containers having ammonium carbonate or its equivalent therein and secured together by one or more strips of explosive material.

3. A powder charge comprising a main core of explosive inclosed in a suitable fabric, and a surrounding

belt of hermetically sealed containers having ammonium carbonate or its equivalent therein, said containers being woven together by one or more strips of explosive material to form a tubular fabric.

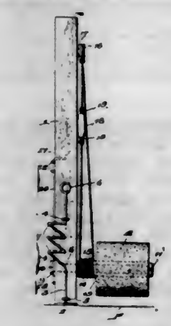


4. A powder charge comprising a fabric container filled with explosive and a metallic container having therein a tubular fabric composed of hermetically sealed tubes having ammonium carbonate or its equivalent therein, said tubes being formed of explosive material and woven together by one or more strips of explosive material and the fabric formed thereof being adapted to surround the first mentioned container.

5. An endless belt of hermetically sealed containers having granular ammonium carbonate or its equivalent therein, said containers being woven together by one or more strips of explosive material.

[Claim 6 not printed in the Gazette.]

1,192,679. SHOE-BRUSHING APPARATUS. LAURITS PEDERSEN, Chicago, Ill. Filed Nov. 1, 1915. Serial No. 59,090. (Cl. 15—2.)



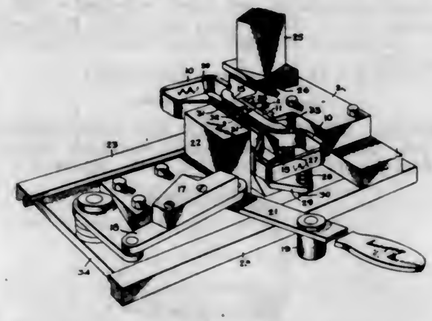
1. In a shoe brushing machine, the combination of a vertically adjustable upright standard, a brush rotatably mounted thereon, means for rotating said brush, a support for said standard having a plurality of longitudinally spaced laterally extending elements, a member carried by said standard and having a coöperating element for engagement with said spaced support carried elements for holding the standard in adjusted position.

2. In a shoe brushing machine, the combination of a vertically adjustable upright standard, a brush rotatably mounted thereon, means for rotating said brush, a support for said standard having a plurality of vertically spaced projections, a locking element carried by said standard having a laterally extending member for engagement with the projections on said standard support for locking the standard in adjusted position.

3. In a shoe brushing machine, the combination of a vertically adjustable upright standard, a rotatably mounted brush carried by said standard, means for rotating said brush, a support for said standard comprising a rod having means for engagement with a supporting surface, bearings on said standard through which said rod loosely passes, said rod being bent intermediately of its ends to form a plurality of ratchet teeth, a spring member secured at one end to said standard and having a laterally extending arm at its other end projecting normally beyond the standard into the path of said ratchet teeth and adapted to engage said teeth, and means for operating said arm to engage or disengage it from the teeth.

4. In a shoe brushing machine, the combination of a vertically adjustable upright standard, a rotatably mounted brush carried by said standard, means for rotating said brush, a support for said standard comprising a rod having means for engagement with a supporting surface, bearings on said standard through which said rod loosely passes, said rod being bent intermediately of its ends to form a plurality of ratchet teeth, a spring rod secured at one end to said standard and having a laterally extending arm at its other end projecting normally beyond the standard into the path of said ratchet teeth and adapted to engage said teeth, and means for operating said arm to engage or disengage it from the teeth.

1,192,680. METHOD OF SHOEING PERMANENT MAGNETS. ALBERT D. PENTZ, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 5, 1914. Serial No. 860,349. (Cl. 29—148.)



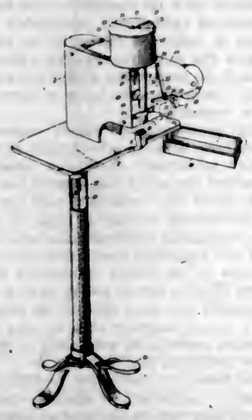
The method of securing a shoe having extending lugs to a permanent magnet which consists in squeezing the lugs of the shoe under normal temperature conditions onto the magnet with a pressure sufficient to virtually crush the lugs of the shoe into intimate contact with the magnet, and maintaining the state of stress between the lugs of the shoe and the magnet occasioned by such squeezing action for a length of time sufficient to prevent material rebound of the lugs from the magnet after the pressure has been removed.

1,192,681. BUTTON-SETTING MACHINE. JOHN S. PETERS, Scottdale, and LLOYD A. SIMMONS, Everson, Pa., assignors to M. Miller & Brother, Scottdale, Pa., a Firm composed of Max Miller and Benjamin Miller, Scottdale, Pa. Filed Sept. 10, 1915. Serial No. 49,986. (Cl. 218—8.)

1. In a button setting machine, in combination, a staple former, a staple driver, a main operating lever, a lever for operating the former and provided with an angular slot, a pin on the main lever engaging in said slot and acting on the former operating lever only so long as it remains in a certain portion of said slot, thereafter moving through said slot without effect on the former operating lever, and an operating lever for the driver also operatively connected to said main lever and operable therefrom during the period that the pin has ineffective movement through said slot.

2. In a button setting machine, in combination, a staple former, a staple driver, a main operating lever, a lever for operating the former and provided with an angular slot, a pin on the main lever engaging in said slot and acting on the former operating lever only so long as it remains in a certain portion of said slot, a lug on the driver and a lever operatively connected to said main lever to operate the driver, said last-named lever having spaced driving lugs at opposite sides of and for engagement with the lug on the driver.

3. In a button setting machine, in combination, a staple former, a reciprocating anvil coöperating therewith, a main lever, a lever for operating the former operatively connected to said main lever, a lever for operating the anvil and provided with a lug, and driving lugs on said main lever at opposite sides of and for engagement with said first-named lug.

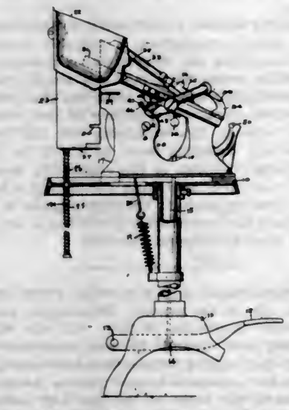


4. In a button setting machine, in combination, a staple former, a reciprocatory chute-like button magazine, a hopper feeding buttons to the magazine in consequence of the reciprocation thereof, and means for reciprocating the magazine after each operation of the former.

5. In a button setting machine, in combination, a reciprocatory staple former, a reciprocatory chute-like button magazine, a hopper feeding buttons to the magazine in consequence of the reciprocation thereof, means for reciprocating the former, and means acting subsequent to the operation of the former for reciprocating the magazines.

[Claims 6 to 18 not printed in the Gazette.]

1,192,682. BUTTON-ATTACHING MACHINE. LORA E. POOLE, Anderson, Ind., assignor to Anderson Button Attaching Machine Company, Anderson, Ind. Filed July 10, 1915, Serial No. 39,077. Renewed June 5, 1916. Serial No. 101,873. (Cl. 218—8.)



1. A button attaching machine including a framework, a button race, an operating member, a cut-off ram slidable in said frame, a staple driver slidable in said ram, yielding means on said cut-off ram, and a projection on said member for engaging said means and yieldingly operating said ram.

2. A button attaching machine including a frame work, a button race, a disk, means for operating said disk, a cut off ram slidable in said frame, a staple driver slidable in said ram, yielding means on said cut off ram, and a pin on said disk for engaging said means and yieldingly operating said ram.

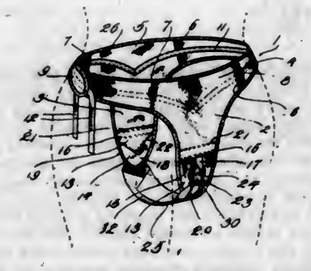
3. A button attaching machine including a framework, a button race, a cut off ram slidable in said frame, a staple driver slidable in said ram, a spring secured to the lower side of said ram, a cam lever pivoted to the end of said ram for engaging the end of said spring and means operated by said machine for engaging said cam lever and forcing it against said spring so as to yieldingly operate said ram.

4. A button attaching machine including a framework, a button race, a staple forming block at one end of said race, a cut off ram slidable in said frame, a staple driver slidable in said ram, means connected with said machine for feeding wire in said machine, a staple forming anvil, a disk, means for operating said disk, yielding means on said cut off ram, and a pin on said disk for engaging said means and yieldingly operating said ram.

5. A button attaching machine including a framework, a button race, a staple forming block at the end of said race, a cut off ram slidable in said frame, a staple driver slidable in said ram, a plate spring secured to the lower side of said ram, a cam lever pivoted to the end of said ram for engaging the end of said spring, a disk, means connected with said machine for operating said disk, and a pin on said disk for engaging said cam lever and forcing it against said spring so as to yieldingly operate said ram.

[Claims 6 to 11 not printed in the Gazette.]

1,192,683. CATAMENIAL APPLIANCE. SARAH B. POTTER, Washington, D. C. Filed Mar. 23, 1916. Serial No. 86,307. (Cl. 128—5.)



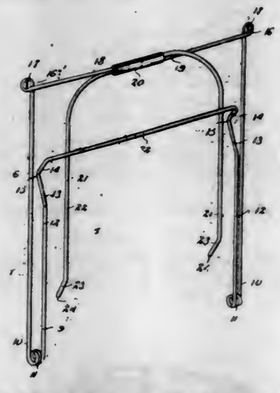
1. In a device of the class described, the combination with a waist encircling belt comprising front and rear substantially triangular sections cut on the bias to prevent binding, side strips arranged between said sections and connected thereto by downwardly and outwardly inclined seams, whereby the belt is shaped to conform to the figure of the wearer and to fit flat around the hips and abdomen below the waistline, one of said side strips being transversely split and provided with coöperating fastening elements, a reinforcing and anti-stretching tape extending longitudinally of said belt intermediately between its side edges and stitched to said belt, the ends of said tape extending beyond the split ends of the belt to form auxiliary connecting means, reinforced tabs secured to the lower ends of said triangular sections, elastic loops secured to the upper ends of said tabs, buckles carried by said loops, and a bandage having tongues for engagement with said buckles.

2. A catamenial bandage comprising a substantially square absorbent element having a combined reinforcing and attaching strip extending diagonally from one corner to the center of said element and secured thereto, the ends of said strip being unattached and extended beyond the corner and center respectively of said element to form

projecting attaching tongues when said element is folded into position ready for use.

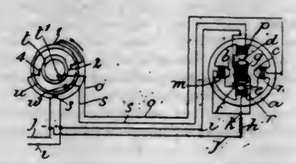
3. A catamenial bandage comprising a substantially square napkin foldable in planes at right angles to each other to form a square four-ply member when so folded, said folded square member being folded diagonally to position it in form ready for use, and a strip secured to said napkin from one corner thereof diagonally across to the center of the napkin when said napkin is in open position, the ends of said strip being free and extended beyond said corner and center, said strip extending from one corner diagonally across to the other when the napkin is folded into position for use, the free ends of said strip projecting beyond said corners to form tongues for attaching it to a support.

1,192,684. DUST-PAN HANGER. ARTHUR RAPPLEYE and CHARLES V. SLAGHT, Interlaken, N. Y. Filed Apr. 20, 1915. Serial No. 22,693. (Cl. 24—261.)



A hanger adapted for supporting a dust pan comprising a single strand of wire bent to form an inverted V-shaped frame and a second frame, the lower ends of the limbs of the rigid frame being coiled inwardly for resiliently connecting the second frame thereto, a guiding frame terminating in rear of the second frame for guiding the dust pan between the said rigid and second mentioned frames, the free extremities of the guiding frame being provided with downwardly and inwardly inclined portions for limiting the inward movement thereof, and the upper extremities of the second mentioned frame being formed with substantially V-shaped clamping members for engaging the dust pan and preventing any accidental displacement of the latter from the said hanger.

1,192,685. ELECTRICAL SIGNALING SYSTEM. WILLIAM JOHN RICKETS, Brockley, London, England, assignor to Alfred Graham & Company and William John Rickets, Brockley, England. Filed Mar. 2, 1914. Serial No. 821,992. (Cl. 177—337.)



1. In signaling means, electric supply conductors, two magnetizable members between which there is adapted to be relative rotary movement, energizing windings upon one of such members connected together at one end, a resistance through which said connected ends are connected to the supply conductors, signaling leads to which the free ends of the energizing windings aforesaid are respectively connected and switching mechanism adapted to connect such windings to the supply conductors in different orders but always directly across points having a constant difference of potential less than that of the supply, one winding being first excited alone, then maintained excited simultaneously with its companion, the latter thereafter alone remaining excited and continuing thus until the first winding is reëxcited but with its polarity reversed after which the said first winding alone again remains excited until the companion winding is excited with reversed polarity, whereupon the cycle of abrupt angular field variation is repeated.

2. In signaling means, electric supply conductors, two magnetizable members, between where there is adapted to be relative rotary movement, energizing windings upon one of such members connected together at one end, a resistance through which said connected ends are connected to the supply conductors, signaling leads to which the free ends of the energizing windings aforesaid are respectively connected and switching mechanism adapted to connect such windings to the supply conductors in different orders but always directly across points having a constant difference of potential less than that of the supply, thereby producing an abrupt angular step by step field variation and operating mechanism producing a step by step movement of the switching mechanism.

3. In signaling means, a stationary magnetizable member, electric supply conductors, a movable magnetizable member, and energizing coil thereon and a resistance winding connected in series with said coil across the supply conductors, energizing windings upon the stationary magnetizable member connected together at one end and to the juncture between the energizing coil and resistance winding aforesaid, and signaling leads, to which the free ends of the energizing windings of the stationary member are respectively connected, adapted to connect such windings in different orders to the supply conductors.

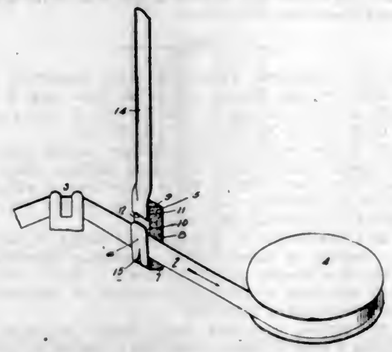
4. In signaling means, a stationary magnetizable member, electric supply conductors, a movable magnetizable member, an energizing coil thereon and a resistance winding connected in series with said coil across the supply conductors, energizing windings upon the stationary magnetizable member connected together at one end and to the juncture between the energizing coil and resistance winding aforesaid, signaling leads to which the free ends of the energizing windings of the stationary member are respectively connected and switching mechanism adapted to connect the signaling leads to the supply leads in different orders.

5. In signaling means, a stationary magnetizable member, electric supply conductors, a movable magnetizable member, an energizing coil thereon and a resistance winding connected in series with said coil across the supply conductors, energizing windings upon the stationary magnetizable member connected together at one end and to the juncture between the energizing coil and resistance winding aforesaid, signaling leads, to which the free ends of the energizing windings of the stationary member are respectively connected, switching mechanism adapted to connect the signaling leads to the supply leads in different orders and operating mechanism producing a step by step movement of the switching mechanism.

1,192,686. TREATING DEVICE FOR TYPE-WRITER RIBBONS. JOHN G. RIEGER, Pittsburgh, Pa. Filed Sept. 4, 1915. Serial No. 49,014. (Cl. 91—62.5.)

1. A treating device for ink ribbons consisting of a solvent applying pad, and a holder therefor formed of thin sheet metal bent to conform to and inclose the back, ends, and a portion of the front of the pad and embodying a resilient tongue providing an entrance opening for a ribbon and adapted to press it directly against the face of the pad.

2. A treating device for ink ribbons consisting of a solvent applying pad, and a holder therefor formed of thin sheet metal bent to conform to and inclose the back, ends, and a portion of the front of the pad and embodying at one end an inwardly turned retaining lip and at the other end an oppositely disposed inwardly turned resilient tongue terminating adjacent the edge of said lip and providing an intervening entrance opening.



3. A treating device for ink ribbons consisting of a solvent applying pad, and a holder therefor formed of thin sheet metal bent to conform to and inclose the back, ends, and a portion of the front of the pad and embodying a resilient tongue forming an extension of the holder adapted to bear directly against the face of the pad but having its terminal disposed outwardly therefrom and providing for insertion of the ribbon between said tongue and the pad and for pressure of the ribbon by the tongue directly against the face of the pad.

4. In combination, a solvent applying pad and a holder therefor of thin sheet metal bent to conform to and inclose the back and end portions of the pad, and front wall portions, one of said portions being resilient and terminating adjacent the edge of the other with an intervening ribbon insertion opening.

5. In a device of the class described, a solvent applying pad, and a holding frame therefor formed of a strip of thin sheet metal bent to provide a retaining back, a top and a bottom wall at right angles to the back, an upper front wall formed by bending the metal at right angles to the top wall, and a lower front wall formed by bending the metal at right angles to the bottom wall and extending it upwardly to within a short distance of the edge of the upper front wall.

[Claims 6 to 10 not printed in the Gazette.]

1,192,687. INCLOSED FUSE. HOWARD R. SARGENT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 22, 1913. Serial No. 786,070. (Cl. 175—273.)

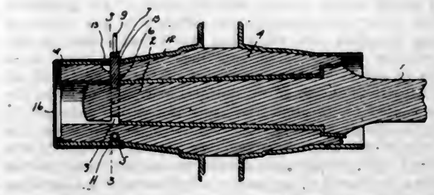


1. In an inclosed fuse, a tubular insulating shell, a disk at one end of said shell having a slot extending inward from its periphery, a supporting blade having a contracted portion engaged in said slot in the disk so that said blade and said disk cannot move lengthwise with reference to one another, and a metallic cap having an end slot for said blade secured on the end of the shell with said disk within it, said blade and disk being separable from one another by movement of said blade outward in said slot.

2. In an inclosed fuse, a tubular insulating shell, a disk at one end of said shell having a radially extending slot, a supporting blade having a contracted portion engaged in said slot so that said blade and said disk cannot turn or move lengthwise with reference to one another, and a metallic cap having an end slot for said blade secured on the end of the shell with the disk within it, said blade and disk being separable from one another by movement of said blade outward in said slot.

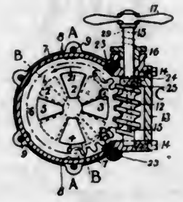
3. In an inclosed fuse, a tubular insulating shell, a metallic cap with an end slot secured on the end of said shell, a disk abutting against the end of said shell within said cap and having a slot extending inward from its periphery, and a supporting blade extending through the aforesaid slot in said cap and having an angular contracted portion so engaged in said slot in said disk that the slot lies at an angle to that in the cap and that both turning and lengthwise movement of the blade with reference to the disk are prevented, said blade and disk being separable from one another by movement of said blade outward in said slot.

1,192,688. VEHICLE-HUB-LOCKING DEVICE. JOHN B. SARGENT, Statesboro, Ga. Filed Jan. 14, 1916. Serial No. 72,111. (Cl. 21—30.)



In combination with an axle spindle having an annular groove formed adjacent its outer end, a hub rotatably mounted on the spindle, said hub having an annular groove formed adjacent its outer end, said hub being further provided with a slot which opens into the last named groove and coincides with the groove of the spindle, a latch operable in the slot of the hub and adapted to engage the groove of the spindle, a coil spring seated in the groove of the hub and having its terminals connected to the sides of the latch for holding the same in yielding engagement with the groove of the spindle, said latch having a head carried by its upper edge, and a ring pivotally connected in the head, as and for the purpose set forth.

1,192,689. SLUICE, VALVE, TAP, AND THE LIKE. ROBERT COOKE SATER, Redland, England. Filed July 1, 1915. Serial No. 37,526. (Cl. 137—7.)

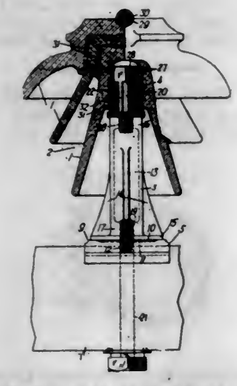


1. The combination of a rotary valve having a plurality of ports and provided with peripheral teeth, a worm positioned to mesh with said teeth, a shaft connected to turn said worm, means for restricting the valve at intervals, said means acting against the full width of the periphery of the valve and permitting its rotation to any extent, a casing inclosing said valve and worm, guide lugs on the approaches to said valve, said lugs tapering from knife edges to points between each port of the valve to fill up the interstices and to afford uniform area and speed to the fluid passed to, through and from the valve, passages to regulate the pressure on the valve seat so that when the valve is closed, closing or open, the pressure is equally distributed.

2. The combination of a rotary valve having a plurality of ports and provided with peripheral teeth, a worm positioned to mesh with said teeth, a shaft connected to turn said worm, means for restricting the valve at intervals, said means acting against the full width of the periphery of the valve and permitting its rotation to any extent, a casing inclosing said valve and worm, guide lugs on the approaches to said valve, said lugs tapering from knife edges to points between each port of the valve to fill up the interstices and to afford uniform area and speed to the fluid passed to, through and from the valve, passages to regulate the pressure on the valve seat so that when the valve is closed, closing or open, the pressure is equally distributed, a peripheral double wedge split lap ring, packing and seat, and a similar split ring and packing, the pressure side of the valve being always free to be thrust by similar or less pressure from the main pipe against the valve to prevent leakage.

3. The combination of a rotary valve having a plurality of ports and provided with peripheral teeth, a worm positioned to mesh with said teeth, a shaft connected to turn said worm, means for restricting the valve at intervals, said means acting against the full width of the periphery of the valve and permitting its rotation to any extent, a casing inclosing said valve and worm, guide lugs on the approaches to said valve, said lugs tapering from knife edges to points between each port of the valve to fill up the interstices and to afford uniform area and speed to the fluid passed to, through and from the valve, passages to regulate the pressure on the valve seat so that when the valve is closed, closing or open, the pressure is equally distributed, split peripherally double wedge lap rings, exterior packing to fit said rings, passages and entrances admitting pressure from the main supply to act upon said rings and packing direct, and to laterally increase pressure on the valve and its seat and thereby render its joints tight.

1,192,690. INSULATOR-SUPPORTING STRUCTURE. WILLIAM SCHAAKE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 5, 1913. Serial No. 771,869. (Cl. 173—321.)



1. The combination with an insulating unit having a transversely-extending groove adapted to receive a conductor, of a support therefor comprising a body member, a separable base having a seat for the body member, a separable thimble secured to the insulating unit, and separate and distinct bolts severally coöperating with the upper and lower portions of said body member for firmly securing said thimble upon the body member and said body member upon said base in order to aline the groove and the insulating member with the conductor to be supported thereon.

2. The combination with an insulating unit, of a support therefor comprising a body member and a separable thimble, said thimble consisting of a hollow shell portion having a rectangular opening and a transverse opening, a square-headed bolt received in the rectangular opening and having its shank projecting downwardly to engage said body member, and a binding cement flowed into and around said hollow shell portion of the thimble for securing said insulating unit thereto.

1,192,691. ELASTIC LEATHER AND PROCESS OF MAKING SAME. MAURICE SCHEUER, New York, N. Y., assignor to Carrie Scheuer, New York, N. Y. Filed Aug. 7, 1913. Serial No. 783,522. (Cl. 91—68.)

1. As a new article of manufacture, leather impregnated under tension with an elastic medium which is allowed to dry while the leather is under tension whereby elasticity is uniformly imparted to the leather without gathering or puckering the same.

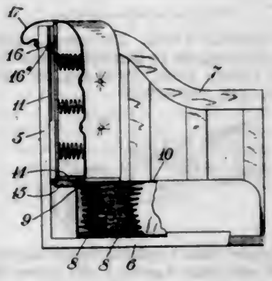
2. As a new article of manufacture a facing of leather and a backing of elastic medium uniformly distributed over the back thereof while the leather is under tension whereby elasticity is uniformly imparted to the leather without puckering or gathering.

3. The process of making elastic leather consisting in stretching a piece of leather, applying a coating of elastic medium thereto, uniting the same to a stretched sheet of elastic material, drying the elastic medium and stripping the leather and medium from the sheet.

4. The process of making elastic leather consisting in stretching a piece of leather, applying a coating of elastic medium thereto, uniting the same to a stretched sheet of elastic material, drying the elastic medium and stripping the leather and medium from the sheet, repeating the stretching, coating, drying, uniting and stripping operations until a plurality of films have been applied to the leather.

5. The process of making elastic leather consisting in stretching a piece of leather, applying a coating of elastic medium thereto, uniting the same to a stretched sheet of elastic material, drying the elastic medium and stripping the leather and medium from the sheet, repeating the stretching, coating, uniting, drying and stripping operations until a plurality of films have been applied to the leather, the tension on the sheet and leather being increased at each successive set of operations.

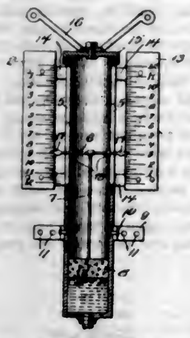
1,192,692. VEHICLE-SEAT. ADOLPH F. SCHRAMM, Columbus, Ohio. Filed Nov. 6, 1915. Serial No. 60,119. (Cl. 155—25.)



1. The combination with a main frame including a rear upright portion, of a yielding seat and a back slidingly connected with said rear upright portion to have a rectilinear movement but not connected with the seat and resting by gravity upon the rear edge of the seat.

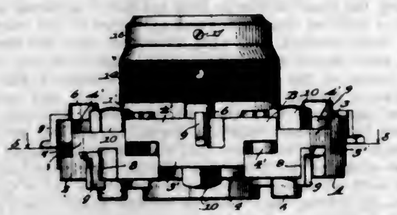
2. The combination with a main frame including a rear upright portion, of a yielding seat, and a back removably but slidingly connected with said rear frame to have a rectilinear movement but not connected with the seat and resting by gravity upon the rear edge of the seat.

1,192,693. LIQUID-LEVEL INDICATOR. EMIL H. SCHULTZ, Everett, Wash., assignor of one-half to William C. Courtney, Everett, Wash. Filed Oct. 17, 1914. Serial No. 867,238. (Cl. 73—82.)



In a liquid level indicator, a standpipe the height of which is approximately twice as great as the liquid storage tank in connection with which the indicator is used, said pipe being formed at diametrically opposite points with slots extending longitudinally of the upper half thereof and also having a liquid entrance opening at the bottom thereof, graduated scale plates located at opposite sides of said standpipe and supported thereby, a float in said pipe, a stem extending upwardly from said float, a cross bar on the upper extremity of said stem extending through said slots and having indicating pointers at the opposite ends thereof projecting from opposite sides of the standpipe and movable along said scale plates, and guiding shoulders on said cross bar contacting with the inside wall of said standpipe at diametrically opposite points.

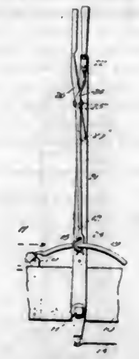
1,192,694. CUTTER-HEAD. ELMER STOUT SHIMER, Milton, Pa., assignor to Samuel J. Shimer & Sons, Milton, Pa., a Corporation of Pennsylvania. Filed Mar. 18, 1916. Serial No. 85,114. (Cl. 144—218.)



1. A cutter-head composed of sections, each section comprising a flange and hub, one hub adapted to be received within the other, each flange subdivided by curved recesses which extend therethrough, and having curved posts extending from the periphery toward the hub, and reaching from recess to recess, and corresponding in shape, size, and thickness with said recesses which they are adapted to fit and with which they interlock, each flange radially grooved, cutters adjustably mounted in said grooves, and means for securing the cutters in the grooves.

2. A cutter-head comprising two sections, each composed of a flange and a threaded hub, one hub adapted to receive and substantially fit the other, each flange having a plurality of curved recesses extending throughout the entire thickness of the flange, which recesses are of a size between a circle and a semi-circle, and enlarged or thickened post portions which extend from the peripheries of the flanges inwardly, reaching from one recess to another, and corresponding in shape and size to said recesses which they are adapted to fit, each thickened portion of a flange radially grooved and counterbored to receive a cutter and a mortised bolt, means for tightening these bolts whereby to hold the cutters adjustably in the grooves, and means for rigidly fastening the two sections together and adjusting them with respect to each other.

1,192,695. LEVER. CHARLES SMITH, Houghton, Mich. Filed Aug. 16, 1915. Serial No. 45,703. (Cl. 74—39.)



1. In combination, an arcuate bar provided at one end, a lever associated with said bar and including a main portion, a clutch member pivoted to said portion and adapted to normally lock the same in engagement with said bar, and a spring member secured at one end to said main portion and having its other end provided with a bifurcation adapted to straddle said clutch member for retaining the same in locking position.

2. In combination, a curved bar, a lever associated therewith, and a clutch member pivoted to said lever and normally extending at an oblique angle thereto, said clutch member being provided with a tapered opening adapted to receive said bar, the edges of the clutch member around said opening being adapted to engage said bar at three points of contact to retain the same in locking position.

3. In combination, a bar, a lever associated therewith, a pivoted clutch member having its axis of rotation parallel with said lever and provided with an opening adapted to receive said bar and bind against the same, and means engaging said clutch member for retaining the same in locking position.

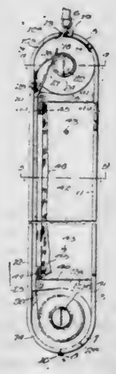
4. In combination, a curved bar pivoted at one end, a lever associated therewith, a clutch member pivoted to said lever and extending laterally therefrom, said clutch member being provided with a tapered opening adapted to receive said bar, the edges of said clutch member around said opening normally binding against said bar to retain the lever in locking position, and means for shifting said clutch member whereby to move said bar about its pivot and release the clutch.

1,192,696. CAMERA-CASING. GEORGE O. SMITH, Anaheim, Cal. Filed Oct. 1, 1915. Serial No. 53,552. (Cl. 95—32.)

1. A camera casing having a rearwardly swinging rigid one-piece back, and a reel magazine whose rear side is formed by said back, an outwardly swinging member located on the exterior of and pivoted to one end of the reel magazine, said member carrying a reel winding device projecting into said magazine, fastening means on the back for normally preventing outward swinging of the aforesaid member, a releasable catch for holding the back against outward movement, and spring means for forcing the back outwardly when said catch is released.

2. A camera casing having a rearwardly swinging back, and a reel magazine whose rear side is formed by said back, an outwardly swinging member at one end of the reel magazine carrying a reel winding device projecting

into said magazine, fastening means on the back for normally preventing outward swinging of the aforesaid member, a releasable catch for holding the back against outward movement, and a spring secured to the back and projecting therefrom into the reel magazine for contact with a film member wound on a reel in said magazine, whereby said spring serves to prevent slippage of the film member on the reel when initially winding, and as a break for preventing slack in said film member, and acts to swing the back outwardly when the aforesaid catch is released.



3. A camera casing of flat elongated formation with rounded ends, and having an outwardly swinging one-piece back whose ends are curved forwardly and form half of the aforesaid curved ends of the casing, a reel magazine in each rounded end of the casing, an outwardly swinging member adjacent one end of one of the reel magazines and carrying a reel winding device projecting into said magazine, a stop on the adjacent curved end of the back overlying a portion of said outwardly swinging member to prevent outward swinging thereof until the back is swung out, a catch for normally connecting the last named end of the back with the casing proper, and a hinge connecting the other end of said back with said casing proper.

4. A camera casing of flat elongated formation, a pair of transverse sheet metal partitions in said casing spaced from the ends thereof whereby to provide a pair of reel magazines in said ends, and a pair of elongated sheet metal plates formed integrally with the ends of the partition and secured in contact with the sides of the casing, the rear edges of said partitions and plates being bent laterally inward to form gripping flanges, and the inner edges of said flanges being bent upon the bodies thereof to form additional gripping flanges in combination with a bellows having its rear end gripped between the two sets of flanges.

5. The combination with a camera casing having a pair of parallel elongated side walls, and a rearwardly swinging back, of a plate hinged to one side wall adjacent one end thereof and having a rearwardly facing shoulder, said plate being formed with a recess in its outer side opening through said shoulder, a laterally extending flange on the back having its end disposed in contact with the shoulder and provided with an integral tongue projecting into the recess, and a film winding device carried by said plate and projecting into the casing.

[Claim 6 not printed in the Gazette.]

1,192,697. BITE-FINDER. LAWRENCE A. SMITH, Port Gibson, Miss. Filed July 28, 1915. Serial No. 42,446. (Cl. 33—174.)

1. A device of the character specified, comprising a yoke-shaped frame consisting of a body adapted to be arranged transversely of the head of the patient, and arms depending from the ends of the body, a lever pivoted to each arm near the lower end of the lever and at the lower end of the arm, each lever having a shoe at its lower end transverse to the long axis of the lever, a bar movable through each shoe and provided at its inner end with a head, a set screw threaded through each shoe and engaging the adjacent bar to hold the bar in adjusted position, a plate of segmental form connected to the body at the center thereof, and with its curved edge downward, said plate having scales at its curved edge extending from the center of the edge in opposite directions, a pair of indicators pivoted to the center of the plate and having teeth concentric with their pivotal connection and designed to coöperate with the scales, a rack bar pivoted to each lever at the upper end thereof and engaging the teeth of one of the indicators, resilient means for holding each rack bar in engagement with the teeth, a spring normally holding each lever in vertical position and parallel with the other lever, and means connected with each arm and adjustable transversely thereof for engaging the head of the person operated upon to make counter-pressure against the opposite spring and to steady the frame.



2. A device of the character specified, comprising a yoke-shaped frame consisting of a body adapted to be arranged transversely of the head of the patient, and arms depending from the ends of the body, a lever pivoted to each arm near the lower end of the lever and at the lower end of the arm, each lever having a shoe at its lower end transverse to the long axis of the lever, a bar movable through each shoe and provided at its inner end with a head, a set screw threaded through each shoe and engaging the adjacent bar to hold the bar in adjusted position, a plate of segmental form connected to the body at the center thereof, and with its curved edge downward, said plate having scales at its curved edge extending from the center of the edge in opposite directions, a pair of indicators pivoted to the center of the plate and having teeth concentric with their pivotal connection and designed to coöperate with the scales, a rack bar pivoted to each lever at the upper end thereof and engaging the teeth of one of the indicators, resilient means for holding each rack bar in engagement with the teeth, and a spring normally holding each lever in vertical position and parallel with the other lever.

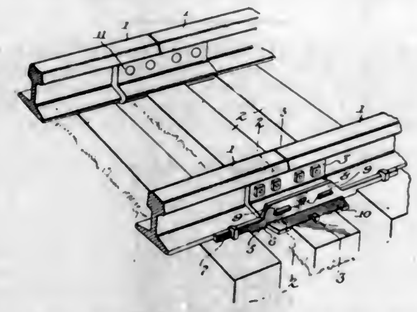
3. A device of the character specified, comprising a substantially U-shaped frame comprising a body and arms extending laterally therefrom, a pair of indicators pivoted to the body of the frame at the center thereof, each indicator having teeth concentric with its pivotal connection, a lever pivoted to each arm of the frame, a rack bar pivoted to the upper end of each lever and engaging the teeth of one of the indicators, a head connected with the lower end of each lever and adjustable transversely thereof, yielding means for holding the rack bars in engagement with the teeth, springs normally holding the levers in parallelism and in vertical position, and means in connection with each arm of the frame for engaging the side of the head of the patient to make counter-pressure against the spring of the opposite lever and to assist in holding the frame in vertical position.

4. A device of the character specified, comprising a substantially U-shaped frame comprising a body and arms extending laterally therefrom, a pair of indicators pivoted to the body of the frame at the center thereof each indicator having teeth concentric with its pivotal connection, a lever pivoted to each arm of the frame, a rack bar pivoted to the upper end of each lever and engaging the teeth of one of the indicators, a head connected with the lower end of each lever and adjustable transversely thereof, yielding means for holding the rack bars in engagement with the teeth, and springs normally holding the levers in parallelism and in vertical position.

5. A device of the character specified, comprising a substantially U-shaped frame adapted to fit over the head of the patient, a pair of indicators pivoted at the center of the frame and depending from their pivotal connection, a lever pivoted on each end of the frame and provided with a head at its lower end adjustable transversely of the frame, means detachably connecting the upper end of each lever and one of the indicators, for swinging the indicator in the opposite direction to the movement of the upper end of the lever, a spring normally holding each lever in vertical position, and means connected with each arm of the frame and adjustable toward and from the head for making counter-pressure against the spring of the opposite lever, each of the said means comprising a wing or vane for engaging the head of the patient, means connecting each wing and the adjacent arm for permitting the wink to swing away from the arm toward the head of the patient and for preventing reverse movement of the wing, said connection being detachable.

[Claims 6 to 9 not printed in the Gazette.]

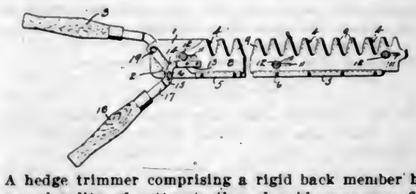
1,192,698. RAIL-JOINT. WILLIAM T. SMITH, Bellefontaine, Ohio. Filed May 14, 1915. Serial No. 28,144. (Cl. 239—6.)



1. A joint member for rails comprising a chair having its base resting on three of the supporting ties and having vertical side flanges which are of a height approximately equal to the thickness of the edges of the flanges of the rails and which engage with the said flanges, said sides at the portion thereof arranged over the central tie, being widened and formed with spaced longitudinal slots which have their lower walls disposed slightly below the tops of the flanges, the chair below the widened portions of the side flanges having laterally extending horizontally disposed members which rest on the central tie, angle bars for the rails having the edges of their horizontal portions provided with extending tongues which are received in the mentioned slots in the side flanges of the base, and members having angular depending heads, said members being inserted through the horizontal extensions of the chair and forced into the central tie, said members hugging the side and the widened portions thereof of the chair and having their heads engaging with the inner face of the said widened portions of the sides and overlying the horizontal portions of the angle bars.

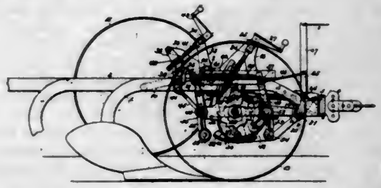
2. A joint member for rails including a chair having a flat base on which the rails rest, said chair being of a length to rest on three of the supporting ties and being formed with a central depending flange which is let into the ties, the base of the chair having vertical side flanges to contact with the edges of the rail flange and the said side flanges at the portions thereof which overlie the central tie being widened vertically and being formed with longitudinal slots disposed approximately in a line with the edges of the flanges of the rails, the base of the chair having outwardly extending flat portions at the center thereof and which are let into the mentioned central tie, angle bars of a length approximately equal that of the mentioned extension of the side flanges of the chair arranged upon the opposite sides of the rails, the horizontal plate of each of the angle bars having outwardly projecting tongues which pass through the referred to slots in the central widened portion of the side flanges of the chair, and members having hook shaped heads passing through openings in the lateral extensions of the base of the chair and into the central tie, and the hook shaped head of each of the said members embracing the central widened portion of the side flanges of the chair and overlying the horizontal plates of the angle bars.

1,192,699. HEDGE-TRIMMER. LOUIS H. SOISSON, Scottdale, Pa., assignor of one-half to Eugene F. Soisson, Latrobe, Pa. Filed Oct. 28, 1915. Serial No. 58,448. (Cl. 56—16.)



A hedge trimmer comprising a rigid back member having a plurality of cutter teeth and guide means, a fixed handle carried by said back member, a reciprocating cutter blade also having a plurality of cutter teeth carried upon said back member and working in the guide means thereof, and a movable handle having an angular end portion the extremity of which is pivoted to the face of the back member, a pin carried by said angular end portion, and a relatively narrow extension member carried by the end of said reciprocating cutter blade and having an angular end, said member being arranged to provide a working clearance for the angular end of the movable handle, and the angular end thereof having a slot for receiving said pin.

1,192,700. ENGINE GANG-PLOW. WILLIAM N. SPRINGER, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Apr. 10, 1915. Serial No. 20,403. (Cl. 97—55.)



1. The combination with an axle, a plow, and a wheel in which said axle is mounted, of a frame pivotally supported at its forward end and mounted on said axle, a bracket secured to the plow, adjusting means connecting said bracket and pivoted frame for adjusting the plow, and means for raising said pivoted frame and bracket simultaneously on the pivotal support of the frame to raise the plow out of the ground.

2. The combination with the two crank axles, one forwardly of the other, and wheels in which said crank axles are mounted, of a plow connected with both of said axles, a pivoted frame operatively associated with the forward axle, means adjustably connecting said pivoted frame with the plow, adjusting mechanism for the plow connected

with the other axle, means connecting said adjusting mechanism with the forward axle, and means for swinging said pivoted frame to raise the forward portion of the plow and operate said other axle simultaneously.

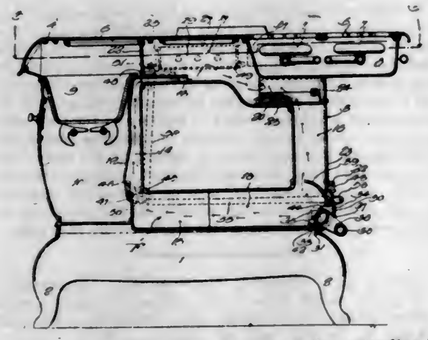
3. The combination with an axle, a wheel in which said axle is mounted, and a plow mounted on said axle, of a pivoted frame movably mounted on the axle, a bracket secured by the plow, a manually operable screw mounted on the bracket, and a threaded part on said frame through which said screw passes.

4. The combination with an axle, a wheel in which said axle is mounted, and a plow connected at its forward end with said axle, of a frame mounted on the axle, a support for said frame coincident with the axis of the body of the axle, a bracket secured to the plow, coöperating segmental guiding means on said frame and bracket, a manually operable screw swiveled to the bracket, and a threaded part on the frame through which said screw passes.

5. The combination with a crank axle, a wheel in which said crank axle is mounted, and a plow having its forward end connected with said axle, of a frame pivotally supported in line with the axis of the body of said axle and having a segmental slot through which the spindle portion of said axle passes, a bracket secured to the plow, a manually operable screw swiveled to said bracket, a threaded part on the pivoted frame through which said screw passes, and means for swinging said pivoted frame on its pivotal support.

[Claims 6 to 9 not printed in the Gazette.]

1,192,701. STOVE. WILLIAM JOHN STAFFORD, Quincy, Ill. Filed Apr. 27, 1916. Serial No. 94,016. (Cl. 126—36.)



1. In a convertible stove, an oven, a flue extending beneath and along the ends of said oven, said flue having a contracted portion, a fire-box in dampered communication with said flue, a burner mounted non-rotatably in one angle of the flue and extending substantially throughout the width of said flue, and a shield plate pivotally mounted in the flue and adapted to swing over said burner when solid fuel is being consumed in the fire-box, said shield plate otherwise serving to partially close a part of the flue to prevent the discharge of heat through the larger portion thereof with greater ease than through the contracted portion.

2. In a convertible stove, an oven, a flue extending beneath and along the ends of said oven, a fire-box, a damper for controlling communication between said fire-box and flue, a burner mounted non-rotatably in said flue and extending substantially throughout the width of the latter, a pivotally mounted shield plate adapted to swing over said burner when the damper is open to permit consumption of solid fuel in the fire-box, and operating connections between said damper and shield plate for operating the two simultaneously.

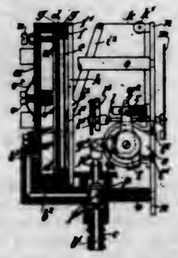
3. In a convertible stove, an oven, a flue extending beneath and along the ends of said oven, said flue having a contracted portion, a fire-box, a damper for controlling communication between said fire-box and flue, a burner mounted non-rotatably in one angle of said flue and extending substantially throughout the width of the latter, a pivotally mounted shield plate adapted to swing over said burner when the damper is opened to permit consumption of solid fuel in the fire-box, said plate otherwise serving to partially close a part of the flue to prevent the discharge of heat through the larger portion thereof with greater ease than the contracted portion, and operating connections between said damper and said shield plate for operating the two simultaneously.

4. In a convertible stove, an oven, a smoke and gas outlet, a flue extending beneath and along both ends of the oven, a damper controlling communication between said flue and said outlet, a fire-box, a second damper controlling communication between the same and the flue, a burner mounted non-rotatably in the flue, a shield plate mounted pivotally in the flue and adaptd to swing over the burner when the aforesaid dampers are opened to allow consumption of solid fuel in the fire-box, and operating connections between said dampers and said shield plate for operating the three simultaneously.

5. In a convertible stove, an oven spaced downwardly from the top of the stove, a fire-box at one end thereof, a flue passing beneath the oven and along the ends thereof, the portion of said flue between the oven and fire-box being contracted and extending laterally along the top of the oven, a burner in said flue, a pivoted damper controlling communication between the fire-box and the space above the oven, and an outlet from said space, said damper when opened lying on the top wall of said laterally extending portion of the flue and protecting the same against the intense heat from the fire-box.

[Claims 6 to 8 not printed in the Gazette.]

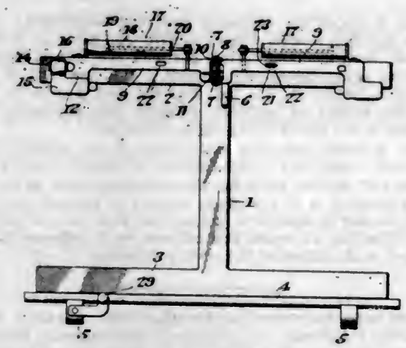
1,192,702. PNEUMATIC SPEED AND DISTANCE INDICATOR. EUGEN STEIGER, Zurich, Switzerland, assignor to Johann Nielsen Jebsen, Zurich, Switzerland, and Johann Christian Buol, Davos, Switzerland. Filed Mar. 25, 1914. Serial No. 827,221. (Cl. 264—14.)



1. A pneumatic speed indicator for motor driven vehicles, comprising a dial and finger for indicating the speed, an air chamber one side of which has an air outlet port and the other side of which forms a diaphragm, a partition dividing the said chamber into two compartments and having a port connecting the said compartments together, a cylinder connected with a pulsator actuated from the vehicle axle, a passage leading from the said cylinder to the said air chamber, a piston in the said cylinder adapted to alternately admit air pressure from the said pulsator into the said chamber and cut off the same therein to actuate the said diaphragm and means between the said diaphragm and the said indicating finger for transmitting motion from the said diaphragm to the said finger on each revolution of the vehicle wheel, substantially as set forth.

2. A pneumatic speed indicator for motor driven vehicles, comprising a dial and finger for indicating the speed, an air chamber one side of which has an air outlet port and the other side of which forms a diaphragm, a partition dividing the said chamber into two compartments and having a port connecting the said compartments together, a cylinder connected with a pulsator actuated from the vehicle axle, a passage leading from the said cylinder to the said air chamber, a piston in the said cylinder adapted to alternately admit air pressure from the said pulsator into the said chamber and cut off the same therein to actuate the said diaphragm, means between the said diaphragm and the said indicating finger for transmitting motion from the said diaphragm to the said finger on each revolution of the vehicle wheel and adjustable means for controlling the passage of the air through the said ports to more or less throttle the same, substantially as set forth.

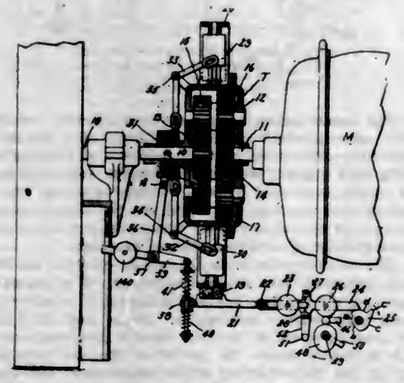
1,192,703. MUSIC-TURNER. WILLIAM H. STEPP, Winkelman, Ariz. Filed Nov. 20, 1915. Serial No. 62,597. (Cl. 84—135.)



1. A music leaf turner comprising a hollow frame, including an upper cross bar, a lower cross bar and an upright connecting the bars, leaf turning arms pivotally supported on the upper cross bar, clamps carried by the free ends of the arms, springs for moving the arms in one direction, a latch for holding the arms against movement under the influence of the springs, a means for releasing the latch, and dash-pots connected with the arms for retarding their movement.

2. A music leaf turner including a frame, spring operated leaf turning arms pivotally mounted thereon, a latch for holding the arms against the influence of the spring, two dash-pots pivotally mounted on the frame, one connected to each arm, and clamping members carried by the free ends of the arms.

1,192,704. SPEED CONTROL FOR TEXTILE-MACHINES. OTTO STÖBE, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Nov. 20, 1913. Serial No. 802,083. (Cl. 118—32.)



1. The combination with a ring spinning machine, of a constant speed motor for driving it, planetary gearing connecting said motor and machine, a brake lever for controlling the revolutions of said gearing, centrifugal weights driven by said gearing and having a yielding connection with said lever, and a cam rotating with the ring rail and acting upon said lever.

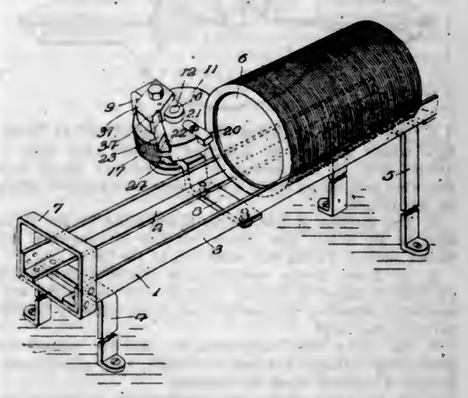
2. The combination with a ring spinning machine, of a constant speed motor for driving it, planetary gearing connecting them, a weighted brake lever for controlling the revolutions of said gearing, an auxiliary weight, and a cam actuated and controlled in accordance with the movement of the ring-rail for adding said auxiliary weight to the weighted lever and withdrawing it therefrom at regular periods.

3. The combination with a ring spinning machine, of a constant speed motor for driving it, planetary gearing connecting them, a weighted brake lever for controlling the revolutions of said gearing, an auxiliary weight, a cam actuated and controlled in accordance with the movement of the ring-rail for adding said auxiliary weight to the weighted lever and withdrawing it therefrom at regular periods, and means for advancing and retarding the phase of said cam with respect to the movement of the ring rail.

4. The combination with a ring spinning machine, of a constant speed motor for driving it, planetary gearing connecting them, a weighted brake lever for controlling the revolutions of said gearing, an auxiliary weight, a cam actuated and controlled in accordance with the movement of the ring-rail for adding said auxiliary weight to the weighted lever and withdrawing it therefrom at regular periods, and means for suspending the action of said cam during the initial portion of the bobbin building.

5. The combination with a ring spinning machine, of a constant speed motor for driving it, planetary gearing connecting said motor and said machine, a rotatable casing containing said gearing, brake mechanism for controlling the speed of revolution of said casing, means for automatically varying the braking pressure in accordance with the movements of the ring rail, and means responsive to variation in the speed of revolution of said casing for supplementing and reinforcing the action of the aforesaid means in varying the braking pressure.

1,192,705. COUNTER FOR CAN-COVERS. JOHN C. TALIAFERRO, DANIEL P. ROBINSON, and JOHN COYLE, Baltimore, Md., assignors to Continental Can Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed May 8, 1914. Serial No. 837,325. (Cl. 193—29.)



1. An apparatus for counting and separating a predetermined number of articles from a stack including in combination a support for the stack, a separating device, means actuated by the articles in the stack upon a movement of said stack relative to said separating device for operating the separating device, said separating device

having means for separating the counted section of the stack from the remaining articles of the stack.

2. An apparatus for counting and indicating a predetermined number of can ends in a stack, including in combination a support for the stack, a counting device adapted to be actuated by the can ends upon a movement of said counting device relative to the stack, and means carried by said counting device for indicating a predetermined number of counted ends.

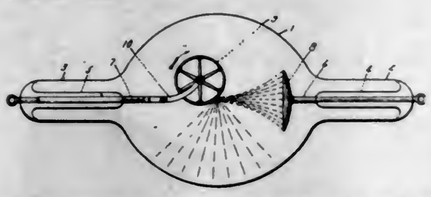
3. An apparatus for counting and separating a predetermined number of can ends from a stack, including in combination a support along which the stack may be slid, a counting and separating disk located adjacent said support and adapted to be operated by the can ends in the stack, said disk having means for separating the counted section of the stack from the remainder of the ends in the stack.

4. An apparatus for counting and separating a predetermined number of can ends from a stack including in combination a support for the stack along which the stack may be slid, counting and separating device located adjacent said support, and means actuated by the movement of the stack along said support for opearting the counting and separating device, said counting device having a separating finger mounted thereon, and means for projecting said separating finger between the counted section of can ends and the remainder of the stack for separating the same.

5. An apparatus for counting and separating a predetermined number of can ends in a stack including in combination a support for the stack along which the same may be slid, a counting device adjacent said support and having vertical grooves formed therein, each of which is adapted to engage a can end whereby the movement of the stack will cause said disk to rotate, a separating finger mounted on and traveling with said disk, and means for causing said separating finger to enter between the section of counted ends and the remainder of the stack for separating the same.

[Claims 6 to 8 not printed in the Gazette.]

1,192,706. X-RAY TUBE. ELIHU THOMSON, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 14, 1914. Serial No. 861,519. (Cl. 250—35.)



1. The method of increasing the capacity of an X-ray tube which consists in directing cathode rays upon a limited area of the surface of a refractory target and renewing said target surface while said rays are impinging on the target.

2. The method of preventing overheating of the focal spot in an X-ray tube which consists in renewing the target surface during the operation of the tube.

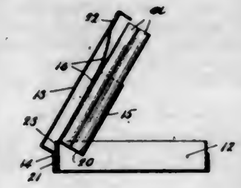
3. An X-ray device comprising a gas-tight envelop, a cathode, a target of regular contour, and means for successively renewing the surface subjected directly to the cathode discharge.

4. An X-ray tube comprising an envelop, means for generating cathode rays and a rotatable anti-cathode comprising a circular band of tungsten.

5. In an X-ray device, the combination of means for producing cathode rays, a target comprising a band of refractory metal upon which said rays impinge, and means movably supporting said target to permit a change of surface subjected to the bombardment of the cathode rays.

[Claims 6 to 8 not printed in the Gazette.]

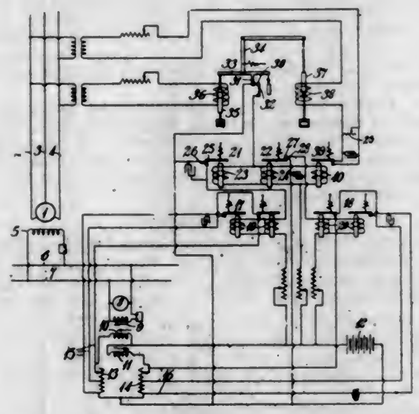
1,192,707. CIGARETTE-BOX. ROTHCHILD F. THORNDIKE, Chelsea, Mass. Filed May 26, 1916. Serial No. 99,969. (Cl. 206—4.)



1. A box of the character described comprising a bottom member, a cover hinged thereto, and a pocket having front, rear, side and bottom portions, the bottom portion having a flap adhesively secured to the rear wall of the bottom member of the box, and the rear portion of the pocket having an upwardly extended flap adhesively secured to the inside of the cover of the box.

2. A pocket attachment for boxes of the character described, comprising a blank folded to present front, rear, side and bottom portions, the bottom portion having a flap adapted to be adhesively secured to the rear wall of the bottom member of a box and the rear portion having an upwardly extended flap adapted to be adhesively secured to the inside of the cover of the box.

1,192,708. ELECTRICAL REGULATOR. ALLEN A. TIRRILL, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1914. Serial No. 822,131. (Cl. 171—229.)



1. The combination with a dynamo-electric machine having opposing field magnet windings, of a regulator comprising coöperating contact members, a winding for causing said contact members to engage and disengage, three relays controlled by said contact members, one of which in turn controls the circuit of the said regulator winding, and the other two of which respectively control the energization of said field magnet windings.

2. The combination with a dynamo-electric machine having opposing field magnet windings, of a regulator comprising coöperating contact members, a winding for causing said contact members to engage and disengage, three relays controlled by said contact members, one of which in turn controls the circuit of the said regulator winding, and the others of which respectively and oppositely control the energization of said field magnet windings.

1,192,709. CRYSTALLINE FUSED ALUMINA AND THE MANUFACTURE THEREOF. FRANK J. TONE, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Dec. 1, 1914. Serial No. 875,009. (Cl. 204—64.)

1. As a new article of manufacture, crystalline fused alumina, in which the major portion of the alumina crystals have an average diameter of about one tenth millimeter.

2. As a new article of manufacture, crystalline fused alumina, in which the major portion of the alumina crystals have a diameter of less than .15 millimeter.

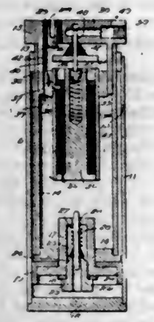
3. As a new article of manufacture, crystalline fused alumina, in which the major portion of the alumina crystals range in size from .01 to .3 millimeter.

4. As a new article of manufacture, crystalline fused alumina, in which the major portion of the alumina crystals are of an average lower order of magnitude than .3 millimeter.

5. As a new article of manufacture, crystalline fused alumina comprising alumina crystals and residual basis and in which the residual basis is substantially uniformly distributed.

[Claims 6 to 23 not printed in the Gazette.]

1,192,710. EXPOSURE ATTACHMENT FOR CAMERAS. REW TROXELL, San Francisco, Cal. Filed Oct. 6, 1914. Serial No. 865,228. (Cl. 95—54.)



1. In an apparatus of the class described, an outer shell, an inner shell adapted to telescope within the outer shell, a piston carried by the inner shell, an inlet valve carried by the piston to allow the entrance of compressed air into the inner shell upon relative closing movement of said shells, an outlet valve adapted to control the exit of compressed air from the inner shell, and electrically operable means for controlling said outlet valve.

2. In an apparatus of the class described, an outer shell, an inner shell telescopically supported in the outer shell, means for allowing the entrance of compressed air from the outer to the inner shell as the shells are closed relatively to each other, an outlet valve adapted to control the exit of compressed air from the inner shell, an electro-magnet supported by the inner shell, said magnet having its core provided with a bore at one end, a spring disposed within the bored end of the core, a spring guide within the said bored end, a valve stem supported at one end by the stem guide, said outlet valve being carried by said valve stem, a magnet armature carried by said valve stem, and means for energizing the magnet at will.

3. In a device of the class described, the combination of an inner shell, means for compressing air therein, an outlet valve for controlling the exit of compressed air from the inner shell, an electromagnet carried by the inner shell and adapted to control said outlet valve, a battery, means for carrying the same independently of the inner shell, a conducting socket carried by the inner shell, an electrical conductor between said socket and one end of the magnet winding, the opposite end of said winding being grounded in the magnet core, and means for establishing an electrical circuit through the magnet for controlling the outlet valve.

4. In a device of the class described, an inner shell, a head, a depending flange provided on said head and threaded within said shell at one end thereof, a piston carried at the opposite end of the shell, an inlet valve carried by the piston, means adapted to co-act with said inner shell for forcing compressed air therein through said inlet valve, a sleeve carried by said depending flange, an electromagnet supported by said sleeve, an outlet vent formed in said head, said sleeve provided with an opening for forming communication between said inner shell and outlet vent, a valve for controlling the passage through said vent, an armature for the magnet, said valve being operable by movement of the armature, and means for energizing said magnet at will.

5. A device of the class described comprising an inuer shell, means for compressing air therein, an outlet valve adapted to control the exit of air from said inner shell, an electromagnet adapted to control the operation of said valve, a head for said inner shell, a flange carried by said head and extending within said shell, a sleeve supported by the flange, said electromagnet being supported by said sleeve, said sleeve provided at one side with an opening therein, a conducting plug carried by and insulated from said head, a conducting strip connected at one end with said plug and extended at its opposite end into the opening in said sleeve, one end of the magnet winding being connected to said opposite end of the conducting strip, an insulator disposed between said strip and said flange, the opposite end of said magnet being in electrical communication with said head, a battery, and means for throwing the magnet into electrical circuit with the battery.

[Claims 6 to 9 not printed in the Gazette.]

1,192,711. HAIR-DUSTER. GEORGE S. TURNER, Gowanda, N. Y. Filed Feb. 17, 1916. Serial No. 78,860. (Cl. 15—48.)

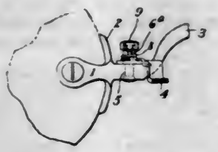


1. In combination with a brush having its head provided with an opening, and a hollow handle removably connected to said head, of a member resting upon the head and sustained thereon, said member having an opening registering with the opening of the head having a transverse channel in its upper face which intersects the opening, a flat valve in the channel for normally closing the opening, a stem for the valve passing through the member and through one side of the hollow handle, spring means co-acting with the stem for moving the valve to inoperative position, a protector plate bridging a portion of the channel and inclosing said spring means, and a spring element associated with said plate and co-acting with the valve to retain the latter seated.

2. In a device for the purpose set forth, the combination with a brush having its head formed with a depending sleeve, and a hollow handle threadedly engaging with the sleeve, of a member arranged on the head and sustained thereon by contacting engagement with the handle, said member having an opening alining with the sleeve and being further provided upon its upper face with a longitudinal channel, said member being provided with a lug in the channel adjacent the opening in the member, a flat valve in the channel for closing the opening, a stem for the valve passing through the lug, the member and through the hollow handle, a collar on the stem, a spring upon the stem co-acting with the lug and with said collar, a plate

secured to the upper face of the member and bridging a portion of the channel to inclose a portion of the stem, the spring and the lug, said plate having a spring tongue contacting with the stem of the valve, and depending lips upon the plate disposed to the opposite sides of the stem and contacting with the lug to close the opening therein.

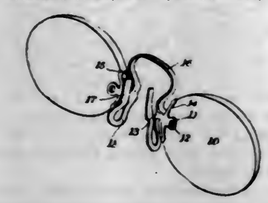
1,192,712. EYEGLASS-MOUNTING. JOHN RUTSON VAN TASSEL, Geneva, N. Y., assignor of one-half to Standard Optical Company, Geneva, N. Y., a Corporation, and one-half to Gustav A. Bader, Rochester, N. Y. Filed Aug. 18, 1915. Serial No. 46,111. (Cl. 88—50.)



1. An eyeglass-mounting having, in combination, a bridge, means for securing the lenses to the bridge, a stud fixed to the bridge at each end thereof and having a transverse opening, a nose-clamp lever loosely pivoted on each stud, a spring having a coiled portion which is loosely mounted on each stud and extends to and engages the corresponding nose-clamp lever, so as to retain the lever against its bearing on the bridge, said coiled portion being of sufficient diameter to pass freely over the end of the stud, and means, for removably securing the spring and the nose-clamp lever in place, comprising a cross-pin seated in said transverse opening in the stud and engaged by the other end of the spring.

2. An eyeglass-mounting having, in combination, a bridge, means for securing the lenses to the bridge, a stud fixed to the bridge at each end thereof and having a slot extending inwardly from its free end, a nose-clamp lever loosely pivoted on each stud, a spring having a coiled portion which is loosely mounted on each stud and extends to and engages the corresponding nose-clamp lever, so as to retain the lever against its bearing on the bridge, said coiled portion being of sufficient diameter to pass freely over the end of the stud, and means for removably securing the spring and the nose-clamp lever in place, comprising a cross-pin seated in said slot and a nut threaded upon the end of the stud and securing said pin in place in said slot.

1,192,713. EYEGLASS-MOUNTING. JOHN RUTSON VAN TASSEL, Geneva, N. Y., assignor of one-half to Standard Optical Company, Geneva, N. Y., a Corporation, and one-half to Gustav A. Bader, Rochester, N. Y. Filed Aug. 18, 1915. Serial No. 46,112. (Cl. 88—47.)



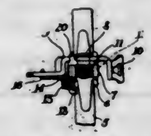
1. In an eyeglass-mounting, a pair of ears between which the lens is clipped, and independent arms extending upwardly and downwardly from the ears and lying flat against the margins of the lens, the arms having lugs at their ends, which are bent inwardly to engage the edge of the lens.

2. In an eyeglass-mounting, a sheet-metal member shaped and bent to form, integrally, an ear which lies against the side of the lens, and independent arms extending upwardly and downwardly from the ear and lying flat against the margin of the lens, the arms having lugs, at their ends, which engage the edge of the lens.

3. In an eyeglass-mounting, a sheet-metal member shaped and bent to form, integrally, a U-shaped clip which embraces the lens, and independent arms which extend upwardly and downwardly from the ears of the clip and lie flat against the margins of the lens, the arms having lugs, at their ends, which engage the edge of the lens.

4. In an eyeglass-mounting, a sheet-metal member shaped and bent to form, integrally, a U-shaped clip which embraces the lens, independent arms extending upwardly and downwardly from each ear of the clip, a nose-guard extending from the bottom of the middle part of the clip, and a spring-bow extending from the top of the middle part of the clip.

1,192,714. EYEGLASS-MOUNTING. JOHN RUTSON VAN TASSEL, Geneva, N. Y., assignor of one-half to Standard Optical Company, Geneva, N. Y., a Corporation, and one-half to Gustav A. Bader, Rochester, N. Y. Filed Aug. 18, 1915. Serial No. 46,113. (Cl. 88—50.)



1. In an eyeglass-mounting, the combination, with a bridge, a nose-clamp lever, and a stud, upon which the lever is pivoted, fixed in the bridge, of a bearing-plate interposed between the bridge and the lever and having a lug arranged to engage the lever to limit the swinging movement thereof.

2. In an eyeglass-mounting, the combination, with a bridge, a nose-clamp lever, and a stud, upon which the lever is pivoted, fixed in the bridge, of a bearing-plate interposed between the bridge and the lever and having an arm, which extends substantially parallel with the pivot-stud and alongside the bridge, for the support of a coiled spring, and two stop-lugs, which extend in the opposite direction from the body of the plate, to engage the lever and limit the swinging movement thereof.

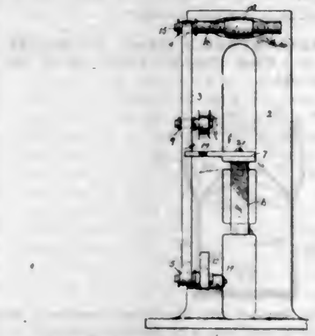
3. In an eyeglass-mounting, the combination, with a bridge, a nose-clamp lever, and a stud, upon which the lever is pivoted, fixed in the bridge, of a bearing-plate interposed between the bridge and the lever and having an arm, extending substantially parallel with the pivot stud, for the support of a coiled spring, and a lug arranged to engage the lever to limit the swinging movement thereof.

1,192,715. MACHINE FOR DRESSING THE EDGE PORTIONS OF METAL-WARE ARTICLES. FRED J. VELMURE, Medford, Mass. Filed Feb. 15, 1916. Serial No. 78,385. (Cl. 51—11.)

1. In a machine of the class described, an upright frame, upper and lower pulleys carried thereby, an upright flexible abrasive belt carried by said pulleys, a work holder located about midway of the length of said belt, an idler pulley located within said belt adjacent to and spaced apart from the work holder and bearing against the inner side of the belt to stiffen the same, said belt having a rearwardly inclined stretch located between said idler pulley and said lower pulley, the stiffening portion of said stretch between said idler pulley and said work holder being the operative portion.

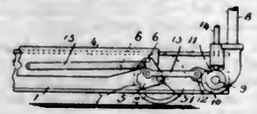
2. In a machine of the class described, an upright frame, a member pivoted to said frame and extending outwardly therefrom, an upper driver pulley, a lower pulley upon said pivoted member, and an upright flexible abrasive belt carried by the pulleys, said lower pulley and said pivotal member being suspended in the lower bight of the belt and normally stretching the same.

3. In a machine of the class described, an upright frame, a member pivoted to said frame and extending outwardly therefrom, an upper driver pulley, a lower pulley upon said pivoted member, and an upright flexible abrasive belt carried by the pulleys, said lower pulley and said pivotal member being suspended in the lower bight of the belt and normally stretching the same, and an adjusting screw carried by said frame and bearing at its forward end against the rear surface of pivoted member.



4. In a machine of the class described, an upright frame carrying pulleys, an upright flexible belt carried by said pulleys, having a coating of abrasive material and located at one side of and spaced apart from said frame, a bracket, and an oblique work holder upon said bracket and extending outwardly adjacent to the front face of said belt, said work holder having a clamp bolt connection with said bracket and a slot engaging said bolt for adjustment lengthwise and pivotally.

1,192,716. TRANSPORTER, TRUCK, AND THE LIKE. FREDERICK WILLIAM VICKERY, London, England, assignor to Vickery's Patents Limited, London, England. Filed Dec. 19, 1913. Serial No. 807,766. (Cl. 254—6.)

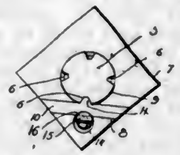


1. In an apparatus of the class described, in combination, a main frame, a platform movable vertically of said frame, connections between the platform and the frame to support and operate the former, said connections having a plurality of inter-engaging elements, a handle arranged at the end of the frame, and means whereby the handle may be operatively connected to or disconnected from said connections, said handle being pivotally movable in a vertical plane and actuating said connections in their platform elevating function, the elements being self locking to prevent descent of the platform at the completion of each operative movement of the handle.

2. In an apparatus of the class described, in combination, a main frame, a platform movable vertically of said frame, a handle arranged at the end of the frame and pivotally movable in a vertical plane, connections among the platform, frame, and handle to support the platform from the frame and to elevate the platform consequent to a pivotal movement of the handle, said connections having a plurality of inter-engaging elements and means for engaging and disengaging the handle relatively to the connections to provide for a step-by-step operation of said connections consequent to repetitions of the operative pivotal movements of the handle, the elements being self locking to prevent descent of the platform at the completion of each operative movement of the handle.

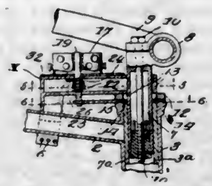
3. In an apparatus of the class described, in combination, a main frame, a platform movable vertically of said frame, a handle arranged at the end of the frame and pivotally movable in a vertical plane, connections among the platform, frame, and handle to support the platform from the frame and to elevate the platform consequent to a pivotal movement of the handle, and means for engaging and disengaging the handle relatively to the connections to provide for a step-by-step operation of said connections consequent to repetitions of the operative pivotal movements of the handle, the connections being self locking to prevent descent of the platform at the completion of each operative movement of the handle, and including quadrants provided on the frame and having edge recesses and devices on the platform for engagement by said recessed quadrants.

1,192,717. NUT-LOCK. THOMAS F. WALDEN, Shawnee, Okla. Filed June 4, 1915. Serial No. 32,120. (Cl. 151—5.)



In a nut lock, a nut having a transverse bolt-receiving bore and an oblique groove in the outer face thereof intersecting said bore and terminating centrally of two of the adjacent side faces thereof, a locking element removably seated in said groove having beveled ends terminating flush with the side faces of the nut and including a laterally projecting tooth projecting into said bore, said locking element having a recess formed in the edge opposite said tooth, a screw threaded shank fitted in said nut and arranged in parallel relation to said bore, and an eccentric head on said shank adapted to engage in the recess in said locking element to lock the latter against removal and movably outwardly to release said locking element.

1,192,718. BICYCLE-LOCK. GEORGE A. WEHNER, Savannah, Ga. Filed May 6, 1913. Serial No. 765,836. Renewed Jan. 11, 1916. Serial No. 71,574. (Cl. 70—90.)



1. The combination with the steering fork of a bicycle provided with oppositely arranged longitudinally extending grooves, of a plate having an opening for receiving the fork and having tongues for engaging the grooves, said plate having at its free end spaced notches or recesses, a casing connected with the bicycle above the plate, said casing having an opening for receiving the fork, a pin or post mounted for vertical movement at the rear end of the plate and having a cross head provided with lugs for engaging the notches of the plate to prevent lateral movement of the said plate, a spring normally pressing the pin or post upward, said pin or post having an annular groove, a latch lever pivoted at one end within the casing and engaging intermediate its ends with the groove to hold the pin in depressed position, said lever having an upstanding lug and the casing having an opening through which the lug extends, a combination lock having a rotatable element mounted above the plate and having the pin for its axis, the rotatable element of the said lock having means for engaging the lug of the latch lever to release the said latch lever from the post when the said element is rotated in the proper direction.

2. The combination with a steering fork of a bicycle having oppositely arranged longitudinally extending grooves, of a locking plate having an opening for receiving the fork and having locking tongues for engaging the grooves, said plate having at its free end spaced notches, a casing connected with the bicycle above the plate and having an opening for receiving the steering fork, a pin

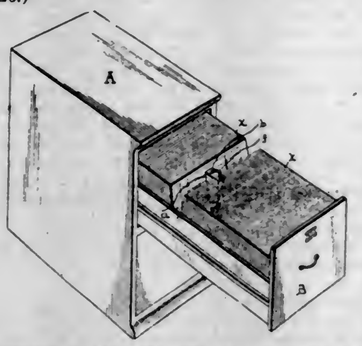
or post mounted for vertical movement transversely of the plate and having lugs for engaging the notches of the plate to prevent lateral movement thereof, a spring normally pressing the pin or post upward, said pin or post having an annular groove, a latch lever pivoted within the casing and engaging the groove to hold the post in depressed position, a combination lock mounted on the casing and having a rotatable element rotating on the pin for an axis and having means for engaging the latch lever to release the same from the post when the said movable element is rotated in the proper direction, and means acting normally to move the lever toward the post.

3. The combination with the steering fork of a bicycle having oppositely arranged longitudinally extending grooves, of a locking plate having an opening for receiving the fork and having locking tongues for engaging the grooves, said plate having at its free end spaced notches, a casing connected with the bicycle above the plate and having an opening for receiving the steering fork, a pin or post mounted for vertical movement transversely of the plate and having lugs for engaging the notches of the plate to prevent lateral movement thereof, a spring normally pressing the pin or post upward, normally active latch mechanism for holding the post in depressed position, and in engagement with the plate, a combination lock on the casing and having a rotatable element provided with means for engaging and releasing the latch mechanism when the said element is rotated in the proper direction.

4. The combination with the steering fork of a bicycle, of a plate rigidly connected therewith and extending rearwardly therefrom, a combination lock mounted on the bicycle and having a rotatable element, a pin upon which the said element rotates, the said pin being movable vertically with respect to the said element and having means for engaging and holding the plate from angular movement when the said pin is in lowered position, latch mechanism for holding the pin in lowered position, said rotatable element having means for releasing the latch mechanism when the said element is rotated in the proper direction, and a spring normally pressing the pin upwardly.

5. The combination with the steering fork of a bicycle, of a plate rigidly connected therewith and extending rearwardly therefrom, a combination lock mounted on the bicycle and having a rotatable element, a pin upon which the said element rotates, said pin being movable vertically with respect to the said element and having means for engaging and holding the plate from angular movement when the said pin is in lowered position, and latch mechanism for holding the pin in lowered position, said rotatable element having means for releasing the latch mechanism when the said element is rotated in the proper direction.

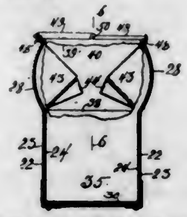
1,192,719. MARKER. SPENCER A. WELLS, San Angelo, Tex. Filed Sept. 2, 1914. Serial No. 859,844. (Cl. 129—26.)



1. A marker of the class described including a pyramidal-shaped member in combination with a curved handle.

2. A marker adapted to be placed in a space between portions of correspondence, comprising a wedge-shaped member held base upward, and a handle secured to the base of said member.

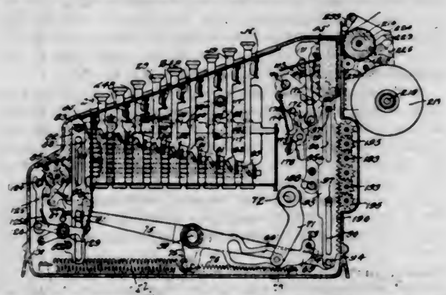
1,192,720. TRAVELING-BAG. HARRY WEINGARTEN, New York, N. Y. Filed Feb. 20, 1915. Serial No. 9,486. (Cl. 190—53.)



1. In a traveling bag of the character described the combination of a body portion, a stiffening layer for the lower portion of each end wall of said body portion, the upper portion of each end wall being in part flexible, a pair of stiffening layers covering in part the flexible parts of each end wall, the flexible portions of the end walls forming folds practically vertical and extending downwardly from the top of the bag and perpendicular to the said end walls and a third fold in each end wall below the other folds and inclining to said end walls, the disposition of said folds obtaining the maximum volume within the bag when the latter is in a closed position.

2. In a traveling bag of the character described the combination of a body portion, a stiffening layer for the lower portion of each end wall of said body portion, the upper portion of each end wall being in part flexible, a pair of sector shaped stiffening layers covering in part the flexible parts of each end wall, and triangular shaped stiffening layers secured to said flexible part of each end wall, one adjacent and below each sector shaped stiffening layers, the said triangular shaped layers forcing folds to be formed inclined to said end walls and the other layers forming folds perpendicular to the end walls when the bag is in a closed position.

1,192,721. ADDING AND LISTING MACHINE. NELSON WHITE, Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind., a Corporation of Indiana. Filed Mar. 20, 1913. Serial No. 755,817. (Cl. 235—60.)



1. In an adding machine, mechanism for accumulating items and totalizing the same, amount keys, indexing mechanism controlling differential action of said accumulating mechanism, and operable by the amount keys, and a single locking member operable by the amount keys to release the accumulating mechanism and independently movable to lock said amount keys from operation.

2. In a calculating machine, adding racks, amount keys for controlling differential movements of said racks, locking bars normally locking said adding racks from movement and operable by the amount keys to release the racks, and means for causing an abnormal movement of said locking bars to throw the same into locking coöperation with the amount keys, whereupon the latter will be prevented from actuation.

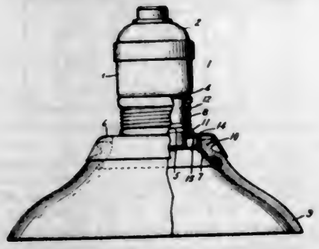
3. In an adding machine, the combination of mechanism for accumulating items and obtaining the total thereof, comprising adding racks, amount keys for controlling differential movements of said racks, locking bars normally locking said adding racks from movement and operable by the amount keys to release the racks, and a total key included in the accumulating mechanism and adapted to operate the locking bars independently of the operation of the latter by the amount keys, so as to cause said locking bars to lockingly coöperate with the amount keys for preventing actuation of the latter during the operation of taking a total.

4. In an adding machine, the combination of mechanism for accumulating items and obtaining the total thereof, comprising adding racks, amount keys for controlling differential movements of said racks, locking bars normally locking said adding racks from movement and operable by the amount keys to release the racks, the accumulating mechanism comprising a total key, and means intermediate said total key and the locking bars to impart to the latter movement indepedent of their movement by the amount keys to thereby cause said bars to lock the amount keys from actuation.

5. In an adding machine, accumulating mechanism comprising adding racks and wheels, amount keys, indexing stops operable by the amount keys to control differential movement of the racks, locking bars normally coöperating with the adding racks, means intermediate said bars and keys for shifting the bars to release the adding racks when an amount key is depressed, and means for imparting additional movement to the locking bars to engage the same directly with the keys and thereby prevent depression of the latter.

[Claims 6 to 32 not printed in the Gazette.]

1,192,722. SHADE-MOUNTING. GILBERT WRIGHT, Schenectady, New York, assignor to General Electric Company, a Corporation of New York. Filed May 5, 1915. Serial No. 25,910. (Cl. 240—115.)



1. A shade-holder comprising a shade-engaging member with an upwardly extending internally screw threaded neck and another shade-engaging member having a neck externally screw-threaded so that it may screw into said first-mentioned member for the purpose of securing a shade in the holder, and internally screw-threaded so that it may screw on a socket.

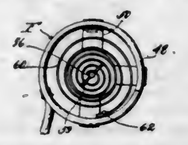
2. A shade-holder comprising a shade-engaging member adapted to overlie a shade neck and itself having an upwardly extending internally screw-threaded neck, and another shade-engaging member adapted to fit within the shade neck and itself having an upwardly extending neck helically corrugated so as both to screw into said first-mentioned member for the purpose of securing the shade in the holder and to screw on a socket.

3. A shade-holder for a socket with an externally screw-threaded lower portion and an enlarged upper portion, said shade-holder comprising a shade-engaging member adapted to overlie a shade neck and having an internally screw-threaded portion, and another shade-engaging member adapted to fit within the shade neck and having a portion externally screw-threaded so that it may screw into said first-mentioned member for the purpose of securing a shade in the holder, and internally screw-threaded so that it may screw upon a socket, the screw-threaded portion of one of said members being in the form of an upwardly extending neck adapted to inclose the lower portion of the socket and abut against its enlarged upper portion.

4. A shade-holder for a socket with an externally screw-threaded lower portion and an enlarged upper portion, said shade-holder comprising a shade-engaging member adapted to overlie a shade neck and itself having an upwardly extending internally screw-threaded neck, and another shade-engaging member adapted to fit within the shade neck and having an upwardly extending neck helically corrugated so as both to screw into the neck of said first-mentioned member for the purpose of securing the shade in the holder and to screw on the lower portion of the socket, the neck of said first-mentioned member being adapted to inclose the lower portion of the socket and abut against its enlarged upper portion.

5. A shade-holder for a socket with an externally screw-threaded lower portion and an enlarged upper portion, said shade-holder being internally screw-threaded so as to screw on said lower portion of the socket and comprising a member having a shade-engaging portion and an upwardly extending neck adapted to inclose said lower portion of said socket and abut against said enlarged upper portion.

1,192,723. MAGAZINE-CHARGER FOR FIREARMS. CHESTER D. ZUMWALT, Center, Mo. Filed Apr. 14, 1916. Serial No. 91,172. (Cl. 42—19.)



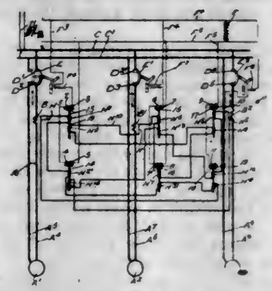
A magazine charger comprising a coiled tubular member having a continuous slot on the inner side thereof, a frame attached to the coiled tubular member, a shaft rotachably mounted on the frame, a coiled spring encircling the shaft and having one end secured thereto, a foot on the other end of the coil spring projecting through said slot, a feeding spring within the tubular member, plungers connected to the advance and rear ends of the feeding spring, the plunger connected to the rear end of the feeding spring having a recess therein in which the foot is engaged, and means for locking the shaft against rotation in one direction during winding of the coil spring.

1,192,724. SELECTIVE CUT-OUT FOR ALTERNATING-CURRENT CIRCUITS. PAUL ACKERMAN, Toronto, Ontario, Canada, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Oct. 17, 1912. Serial No. 726,202. (Cl. 175—294.)

1. Means for opening a defective feeder of an alternating current supply system upon reversal of energy flow, comprising a plurality of series transformers, in different feeders, each having its primary winding in series with its feeder, a pair of relays and a circuit-breaker for each feeder, each relay having differential coils one of which is supplied by the secondary of the transformer of the feeder which it governs, and the other by different transformers of the other feeders, and a tripping circuit including both of the relay contacts and trip coil of the circuit-breaker, whereby upon a fault in any feeder its circuit will be opened.

2. In a system of distribution comprising transmission lines in parallel and means in each line for deriving a current from said line, means for opening a defective line

comprising an automatic circuit breaker and tripping mechanism for said circuit breaker comprising two pairs of differential coils, one coil of each pair being energized by current derived from the defective line, and the other coil of each pair being energized by current derived from another transmission line.



3. In a system of distribution for alternating currents, means for selectively opening any defective circuit of a group, comprising two relays for each circuit having independently movable armatures, a circuit-breaker for each circuit, means coöperating with said relay armatures to cause conjoint action of said armatures to trip the circuit breaker, a pair of differential coils for each relay armature, and a series transformer in each circuit of the group supplying current to one coil of each of its own relays and to one coil only of each pair corresponding to the other circuits of the group.

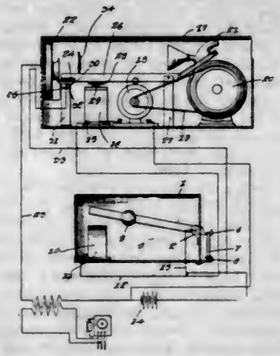
4. In a system of distribution for alternating currents, means for selectively opening any defective circuit of a group, comprising a circuit-breaker, two differential relays for each circuit, two contacts in series controlled by the relay armatures, a source of trip current adapted to operate any trip coil when both contacts are closed, and a series transformer in each circuit supplying a coil of each of the relays controlling the circuit in which it is interposed and a coil of a relay of another circuit.

5. In a reverse current operated cut out, the combination with a series of feed wires leading from a suitable current supply, of a circuit breaker located in one feed wire, a suitably energized circuit breaker operating means and a circuit leading therethrough, a pair of open switches having contacts located in the circuit breaker operating circuit in series with the circuit breaker operating means, a current transformer comprising a primary coil located in one feed wire and a secondary coil, a pair of electro-magnetic operating means for each switch closure one means of each pair being energized from the secondary transformer coil of one feed wire, the other means of one pair being energized from the second feed wire of the series and the other means of the other pair being energized from the third feed wire of the series whereby one means of each pair normally neutralizes the other means to hold the switches open and whereby each pair of means coöperate together to simultaneously close the switches upon the current being reversed in one means of each pair by the reversal of the current in the first feed wire thereby closing circuit breaker operating circuit and opening current breaker, and independently close the switch closures by the reversal of the current in the other means of either pair by the reversal of the current in the second or third feed wires whereby the circuit breaker operating means is kept open and the circuit breaker closed, as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

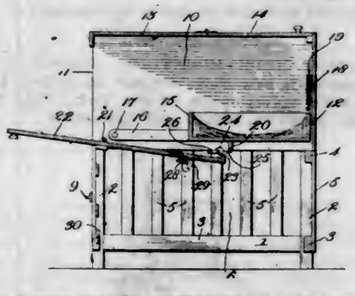
1,192,725. FIRE-ALARM. WINNIE A. ALCOTT, Pueblo, Colo. Filed June 15, 1914. Serial No. 845,236. (Cl. 179—5.)

In combination, a power source, a sound reproducing device, a motor controlling the operation of the sound reproducing device, a thermostatic circuit closer for the motor, electromagnets in circuit with the motor and the thermostatic circuit closer, a normally open circuit closer, one pole of the last named circuit closer being connected to the power source, a transmitter connected between the



last named circuit closer and the power source, whereby upon the energization of the electromagnets, the last named circuit closer will close the circuit through the transmitter simultaneously upon the operation of the sound reproducing means.

1,192,726. TRAP-NEST. OLIVER B. ANDREWS, Chattanooga, Tenn. Filed May 6, 1916. Serial No. 95,934. (Cl. 119—49.)



1. In a trap nest the combination of a framework; a trap door pivoted above its center of gravity to said framework, adapted to occupy substantially horizontal and vertical positions, and when in its horizontal position adapted to partially divide said trap nest into an upper and lower compartment; a nest proper pivotally supported near the bottom of said upper compartment; a catch on the inside lower end of said door adapted to hold said door in its open or horizontal position; means on said nest adapted to contact with said catch to release said door and permit it to automatically assume its vertical position; and a catch on the outside lower portion of said door adapted to hold said door in its vertical position, substantially as described.

2. In a trap nest the combination of a framework; a trap door pivoted to said frame work said door being adapted to occupy a substantially horizontal or open position whereupon it partially divides said trap nest into an upper and a lower compartment and said door also adapted to occupy a substantially closed or vertical position whereupon it closes said compartments; a hen nest pivotally located in said upper compartment; sheet material surrounding said hen nest on three sides of said upper compartment; open, strip material surrounding said lower compartment on three sides thereof; a catch on said door adapted to hold it in its horizontal or open position; means associated with said hen nest for releasing said catch and permitting said door to close; and means on said door for holding it in its closed position, substantially as described.

3. In a trap nest the combination of a framework; a trap door of sheet material pivoted to said framework, said door being adapted to occupy a substantially horizontal or open position whereupon it partially divides said trap nest into an upper and a lower compartment, and said door also being adapted to occupy a substantially closed or vertical position whereupon it closes said compartments; a hen nest pivotally located in said upper compartment; a spring for normally holding said hen nest in its raised position; sheet material surrounding said hen nest on three sides of said upper compartment; open strip material surrounding said lower compartment on three sides thereof; a gate for opening and closing said lower compartment; a catch on said door adapted to hold it in its horizontal or open position; means associated with said hen nest for releasing said door and permitting it to close; and means on said door for holding it in its closed position inside said gate, substantially as described.

1,192,727. CHANGE-MAKING AND COMPUTING MACHINE. ROBERT L. BAILEY, Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind., a Corporation of Indiana. Filed Nov. 1, 1912. Serial No. 729,093. (Cl. 133—2.)

1. In a money handling machine, the combination of minuend selector means comprising main selectors, manipulative devices for actuating the same, subtrahend selector means comprising separate sets of selectors, and means whereby, on operation of certain of the minuend selectors, certain of the subtrahend selectors will be rendered inoperative, and money ejecting means controlled by the selectors.

2. In a money handling machine, the combination of minuend selector means comprising main selectors, subtrahend selector means comprising primary and secondary selectors, manipulative devices for actuating the minuend selector means, separate manipulative devices for actuating the subtrahend selector means, and means whereby on operation of certain of the minuend selectors, operative primary selectors will be rendered inoperative, and inoperative secondary selectors will be rendered operative.

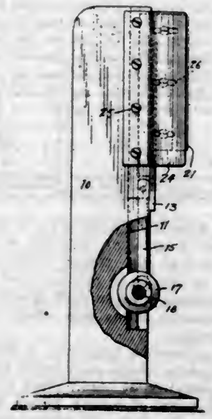
3. In a money handling machine, the combination of change receptacles, selectors, change delivery means, means for moving one of the selectors to render the change delivery means operative, and means for causing additional movement of said selector in the direction of its original movement, whereby to render said delivery means inoperative.

4. In a money handling machine, the combination of change delivery means, main selector mechanism comprising selectors, auxiliary selector mechanism comprising primary and secondary selectors, one of which is operative and the other normally inoperative, separate manipulative means for actuating the main and auxiliary selector mechanisms, and means for reversing the positions of the primary and secondary selectors when the manipulative means of the main selector mechanism is actuated.

5. In a money handling machine, the combination of change delivery means, a plurality of selectors horizontally slidable and coacting with the delivery means to render the latter operative, one of said selectors being normally elevated and the other normally inoperative in a lower plane than that first mentioned, and means for reversing the positions of the elevated and lowered selectors to vary the action of the change delivery means.

[Claims 6 to 20 not printed in the Gazette.]

1,192,728. DEFLESHING-MACHINE. ALBERT BAJOHR, Brooklyn, N. Y. Filed Apr. 22, 1916. Serial No. 92,890. (Cl. 149—17.)



1. A machine for defleshing furs and the like, comprising a standard, a knife supported at the head thereof, means carried by the lower portion of the standard for imparting to the knife a back and forth movement, and guards arranged on opposite sides of the knife beyond which the edge of the knife slightly projects.

2. A machine for defleshing furs and the like, comprising a standard, a crank shaft mounted in the lower portion thereof, an upwardly extending connecting rod the lower end of which engages said crank shaft, a knife operatively connected to the upper end of said rod and receiving a back and forth motion therefrom in combination with guards on opposite sides of said knife and beyond which the edge of the latter slightly projects.

3. A machine for defleshing furs and the like, comprising a standard having a vertical channel in one face, a slide block working in said channel, a knife carried by said slide block, guards extending from opposite sides of the standard and embracing said knife, the edge of which projects slightly beyond the guards, a crank shaft supported on the standard and an operative connection between said crank shaft and slide block for vertically reciprocating the latter.

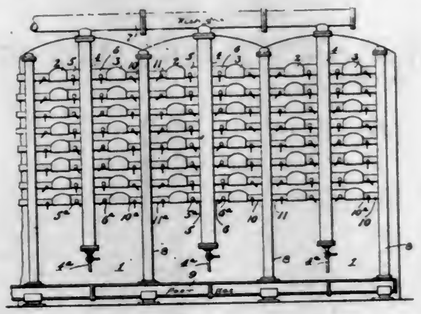
4. A machine for defleshing furs and the like, comprising a standard channeled on one face, a slide block working in said channel, guide plates overlying the margins of said channel and confining said slide block therein, a knife carried by the slide block, a shaft supported on the standard, an eccentric on the shaft and a link connection between the slide block and eccentric for the purpose described.

5. A machine for defleshing furs and the like, comprising a standard having an undercut vertical channel in one face, a slide block working in said channel and having an outwardly projecting split fin, a defleshing knife clamped in said fin, guards on opposite sides of the knife

and beyond which the edge of the latter slightly projects, a crank shaft supported on the standard and an operative connection between said crank shaft and slide block for vertically reciprocating the latter.

[Claims 6 and 7 not printed in the Gazette.]

1,192,729. GAS-GENERATOR. DANA D. BARNUM, Worcester, Mass., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 20, 1913. Serial No. 807,904. (Cl. 48—126.)



1. In coal gas generating apparatus, a bench, a group of retorts located therein at different elevations, two vertical offtake pipes at the exterior of the bench and extending from top to bottom of the group of retorts, separate valved connections between each retort and each offtake pipe, and separate mains into which the respective offtake pipes discharge.

2. In coal gas generating apparatus, a plurality of vertical rows of horizontal retorts each retort having a mouth piece offtake, a plurality of stand pipes each positioned between adjacent rows of mouth pieces with adjacent stand pipes connected to different mains, the mouth piece offtakes of a vertical row being operatively connected to the stand pipes of two mains, and a valve for and adapted to control each connection independently.

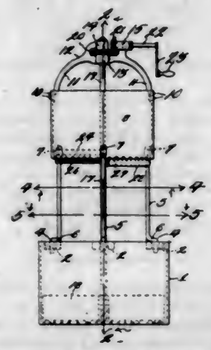
3. In coal gas generating apparatus, a plurality of vertical rows of horizontal retorts, each retort having a mouth piece offtake, a stand pipe for each pair of rows, said stand pipes being located between the mouth pieces of the rows forming the pair of rows and forming a series of stand pipes connected to a main common to the several stand pipes, and an additional series of stand pipes connected to a different main, said latter stand pipes being located between the pairs of rows, each mouth piece offtake of a vertical row being operatively connected to stand pipes of both series, and a valve for and adapted to control each connection independently.

4. In coal gas generating apparatus, a plurality of vertical rows of horizontal retorts, each retort having a mouth piece off-take, a stand pipe for each pair of rows, said stand pipes being located between the mouth pieces of the rows forming the pair of rows and forming a series of stand pipes connected to a main common to the several stand pipes, and an additional series of stand pipes connected to a different main, said latter stand pipes being located between the pairs of rows, each mouth piece offtake of a vertical row being operatively connected to stand pipes of both series, and a valve for and adapted to control each connection independently, the stand pipes and connections of one series being decreased in cross sectional area compared with that of the other series.

5. In coal gas generating apparatus, a plurality of vertical rows of horizontal retorts, a plurality of stand pipes with each stand pipe positioned in a plane extending between adjacent rows of retorts and adapted to be operatively connected to each of the retorts of said rows, said stand pipes forming two series having connection with independent mains, and a valve for and adapted to control each connection between a retort and a stand pipe independently, whereby the gas from the several retorts may be selectively delivered to different receptacles at will.

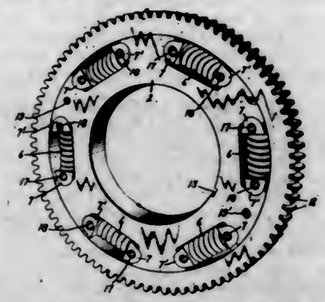
[Claim 6 not printed in the Gazette.]

1,192,730. COOKING UTENSIL. ROBERT H. BARR, Carrolls, Wash. Filed Dec. 3, 1915. Serial No. 64,900. (Cl. 53—1.)



In a cooking utensil for cooking mush and the like, the combination of a pair of receptacles, one disposed concentrically spaced apart above the other, supporting rods secured to the sides of the upper receptacle and having shouldered lower portions, the lower receptacle having bearings to receive said shouldered lower portions, the upper receptacle having perforations in its bottom, a vertical shaft mounted in bearings of the upper receptacle and extending axially therethrough and having an agitator at its lower extremity movable adjacent the bottom of the lower receptacle, means for imparting motion to said shaft, an agitator arm on said shaft and adapted to move with the shaft so as to sweep adjacent the upper surface of the perforated bottom to agitate the meal causing it to sieve through the perforations, the bottom of the upper receptacle having guides, and a slide mounted in the guides for closing the perforations.

1,192,731. RESILIENT WHEEL. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 6, 1915. Serial No. 723. (Cl. 74—29.)



1. A resilient wheel comprising two parts having cooperating flanges, the flanges on one part being provided with annular grooves, the flanges on the other part fitting in said annular grooves, a plurality of tangentially disposed helical springs and spring seats for said springs, said springs and seats being interposed between said flanges for opposing relative motion between said parts, said flanges on both of said parts being provided with means engaging said spring seats for holding said springs against lateral displacement.

2. A resilient wheel comprising two parts having cooperating flanges, the flanges on one part being provided with annular grooves, the flanges on the other part fitting in said annular grooves, a plurality of tangentially disposed helical springs and spring seats for said springs, said springs and seats being interposed between said flanges for opposing relative motion between said parts, said flanges on one of said parts and said spring seats being provided with coöperating tongues and grooves for holding said springs against lateral displacement.

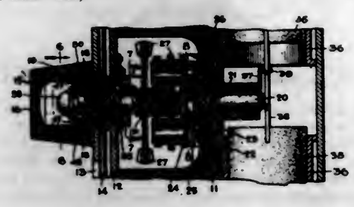
3. A resilient wheel comprising two parts having cooperating flanges, the flanges on one part being provided with annular grooves, the flanges on the other part fitting in said annular grooves, a plurality of tangentially disposed helical springs and spring seats for said springs, said springs and seats being interposed between said flanges for opposing relative motion between said parts, said flanges on both of said parts and said spring seats being provided with coöperating tongues and grooves for holding said springs against lateral displacement.

4. A resilient wheel comprising two parts having cooperating flanges, the flanges on one part being provided with annular grooves, the flanges on the other part being of such width that they will enter between the first mentioned flanges from either side, said parts being relatively rotatable so that said last mentioned flanges enter the annular grooves in said first mentioned flanges and register therewith, a plurality of tangentially disposed helical springs and spring seats for said springs, said springs and seats being interposed between said flanges for opposing relative motion between said parts, said flanges on one of said parts being provided with means engaging said spring seats for holding said springs against lateral displacement.

5. A resilient wheel comprising two parts having cooperating flanges, the flanges on one part being provided with annular grooves, the flanges on the other part being of such width that they will enter between the first mentioned flanges from either side, said parts being relatively rotatable so that said last mentioned flanges enter the annular grooves in said first mentioned flanges and register therewith, a plurality of tangentially disposed helical springs and spring seats for said springs, said springs and seats being interposed between said flanges for opposing relative motion between said parts, said flanges on both of said parts being provided with means engaging said spring seats for holding said springs against lateral displacement.

[Claims 6 and 7 not printed in the Gazette.]

1,192,732. SWITCH. JOHN T. BEECHLYN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 4, 1915. Serial No. 65,117. (Cl. 161—25.)



1. A switch device comprising a switch mechanism having an actuating member, means opposing a gradually yielding resistance to movement of said member to actuate said switch mechanism, an additional actuating member, and means controlled by said latter actuating member for exerting and imposing upon said first-mentioned actuating member force sufficient to gradually overcome the aforesaid resistance and move said first-mentioned member to actuate said switch mechanism.

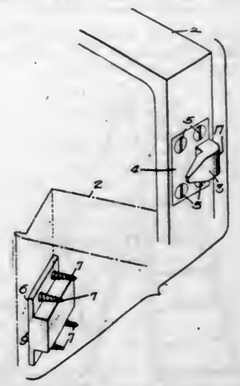
2. A switch device comprising a switch mechanism having an actuating member, means opposing a gradually yielding resistance to movement of said member to cause opening of the switch, but unresisting to movement of said member to cause closing thereof, an additional actuating member and means controlled thereby for exerting on said first-mentioned actuating member force sufficient to gradually overcome the aforesaid resistance and move said first-mentioned member, and means for maintaining said latter means in action when once rendered capable of causing ultimate opening of the switch.

3. A switch device comprising a switch mechanism having an actuating member, means opposing a gradually yielding resistance to movement of said member to actuate said switch mechanism, an additional actuating member and a spring connection therefrom to said first-mentioned actuating member adapted when stressed gradually to overcome the aforesaid resistance and move said first-mentioned actuating member, and means for preventing reverse movement of said additional actuating member by said spring connection.

4. A switch device comprising a snap switch mechanism having a rotary actuating member, means opposing a gradually yielding resistance to movement of said member to actuate said switch mechanism, an additional rotary actuating member and a spring connection therefrom to said first-mentioned actuating member adapted when stressed gradually to overcome the aforesaid resistance and rotate said first-mentioned actuating member, and ratchet mechanism for preventing reverse movement of said additional actuating member by said spring connection when the latter has been stressed sufficiently to cause ultimate operation of said switch mechanism.

5. A switch device comprising a snap switch mechanism having a rotary actuating member, an operating spring, and a release device, movement resisting means associated with said actuating member and including a dash-pot device operatively connected thereto by a lost motion connection so as to oppose movement thereof to cause opening of the switch, but not movement thereof to cause closing of the switch, an additional rotary actuating member and a spring connection therefrom to said first-mentioned member adapted when stressed to overcome the dash-pot resistance and rotate said first-mentioned actuating member so as to stress the aforesaid actuating spring, and ratchet mechanism for preventing reverse movement of said additional actuating member by said spring connection when the latter has been stressed sufficiently to cause ultimate operation of said release device.

1,192,733. AUTOMOBILE-DOOR-HOLDING DEVICE. CHARLES B. BENNETT, Philadelphia, Pa. Filed July 15, 1915. Serial No. 40,099. (Cl. 70—42.)



1. The combination of coacting members one of said members having a strike and the other a substantially right-angled projection which includes an inclined portion and a continuing base portion which extends substantially parallel with the face of the strike when said members are alined, said strike having an internal cavity and having a

notch in its face at the inner edge thereof, said inclined portion of said projection adapted to enter the cavity of the strike and the base portion of said projection adapted to occupy the notch in said strike when said members are in closed abutting relation.

2. The combination with the side body and door of an automobile or other vehicle, of a lug or projection carried by one of said members having an inclined portion merging into a straight portion at the base thereof, a strike carried by the other member, said lug or projection being adapted to engage and be retained by the strike, the latter having walls for holding said lug or projection against vertical and longitudinal movement, and a guard for said hook movable to inoperative position by said strike.

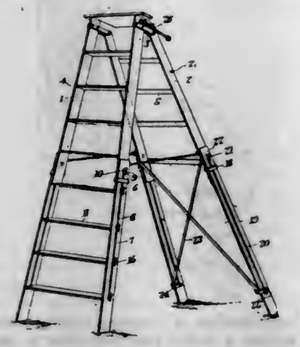
3. The combination with the side body and door of an automobile or other vehicle, of a right-angled projection on one of said parts and a strike on the other part, said right-angled projection including an inclined portion and a base portion which extends substantially parallel with the face of the strike when the body and door are in abutting relation, said strike having an internal cavity and having a notch in its face at the inner edge thereof, said inclined portion adapted to enter the cavity of the strike and the base portion of the projection adapted to occupy the notch in said strike, when the door and body are in closed abutting relation.

4. The combination with an automobile or similar vehicle, of a door hinged to the body of the same and closing an opening in said body, a strike carried by said door, a plate carried by the body in line with the strike, a hook or lug carried by said body plate, and a guard for said hook carried by the body plate and movable out of the way by the engagement of the strike when the door is closed.

5. The combination with an automobile or similar vehicle, of a door hinged to the body of the same and closing an opening in said body, said parts having meeting edges, a strike carried by one of said meeting edges having an internal cavity which extends parallel with the face of the strike and the inner edge of said strike being notched substantially in line with the cavity, a plate carried by the other meeting edge in line with the strike, a hook or lug carried by said plate, said hook adapted to enter the cavity of the strike and the base of the hook adapted to enter the notch in the edge of said strike whereby vertical movement of the door in either direction and longitudinal movement of the door with respect to the body are prevented, and a spring catch mounted adjacent one of said meeting edges and coöperating with said hook or lug.

[Claim 6 not printed in the Gazette.]

1,192,734. FOLDABLE STEP AND WALL LADDER. JOHN BENNETT, Hempstead, N. Y. Filed June 23, 1915. Serial No. 35,858. (Cl. 228—19.)



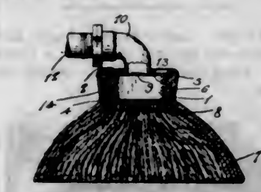
A ladder comprising step and prop sections pivotally connected together, guides fixedly mounted at the free end portions of the sides of said sections, studs fixedly mounted at the free end portions of the sides of said sections at points between the said guides and the point of pivotal connection between the said sections, a step extension section having its sides slidably received in the guides upon the step section, the sides of the said step extension section having longitudinally disposed slots which receive the studs upon the step section, steps movably mounted between the sides of the step extension section and having securing devices which pass through the slots in the sides of the said step extension section, said securing devices being embedded in the steps above the lower surfaces thereof, a prop extension section having sides slidably received in the guides upon the prop section, the sides of the prop extension section having longitudinally disposed slots which receive the studs upon the said prop section.

1,192,735. FLUID-FUEL BURNER. GEORGE W. BERRIAN, Lake Charles, La. Filed Sept. 21, 1914. Serial No. 862,802. (Cl. 158—64.)



The combination with an inclosure, of a fuel burner disposed therein and comprising a horizontal base plate so arranged in the inclosure as to prevent passage of air about the edges of the plate, an air mixing casing upstanding from the plate and providing an opening therethrough, the material of the base plate being depressed below its horizontal plane in a relatively restricted area adjacent to the casing to form a starting fuel pan, said casing having diametrically opposite apertures at its lowermost portion adjacent to the surface of the plate, and a fuel supply pipe extending laterally through the apertures of the casing over the starting pan and having a discharge opening adapted in operation to direct the discharge through the casing, the supply pipe snugly fitting in said casing apertures and constituting a closure therefor whereby to prevent passage of air through said openings.

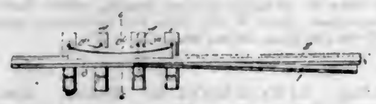
1,192,736. AUTOMOBILE-WASHER. NATHANIEL G. BERRIDGE, Boise, Idaho. Filed Mar. 25, 1916. Serial No. 86,649. (Cl. 15—51.)



A washing device of the class described including a hollow nozzle composed of front and rear heads and a connecting wall, the heads being extended beyond the connecting wall to form spaced flanges and an intervening groove, said front wall being provided with jet apertures, a pipe connection extending from the rear wall of the nozzle and having means for connecting it to a water supply and a mop cloth member secured in the groove of the nozzle and extending in advance of the same so as to be supplied with water from the jet apertures.

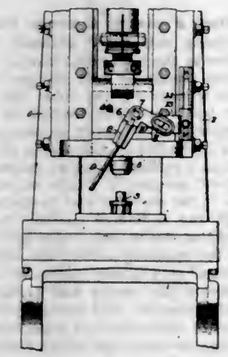
1,192,737. RAILWAY-SWITCH. RICHARD S. BETTS and PERRY H. HAMILTON, Memphis, Tenn. Filed Dec. 7, 1914. Serial No. 875,831. (Cl. 104—12.)

The combination with a switch point and running rail arranged alongside each other, of a guard and protector for the switch point, the same consisting of a block having a top flange which extends alongside of and above the the top of the running rail and thus affords direct lateral support for the latter, and bolts passing through said block and the running rail and securing the two rigidly together, whereby the guard is adapted to deflect train



wheels laterally in passing the switch and at the same time serves as a lateral brace for the running rail, as described.

1,192,738. SAFETY DEVICE FOR PRESSES. GEORGE E. BILLEB, Benwood, W. Va., assignor to Wheeling Stamping Company, Wheeling, W. Va., a Corporation of West Virginia. Filed June 11, 1913. Serial No. 773,023. (Cl. 164—107.)



1. The combination with a power-operated press having a movable press-head, of a bell crank pivoted to the front of said head to swing transversely across the front of said head in a direction substantially parallel to the front face thereof, and having a depending guard arm and a connection between the bell crank and a fixed member of the press; substantially as described.

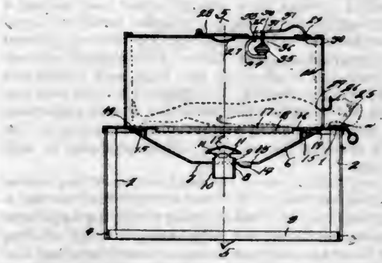
2. The combination with a power-operated press having a movable press-head, of a bell crank pivoted to the front of said head to swing transversely across the front of said head in a direction substantially parallel to the front face thereof and having a depending guard arm, said bell crank having its other arm engaged with a fixed member of the press; substantially as described.

1,192,739. CONCRETE RAILROAD CROSS-TIE. ROBERT R. BLAIR, Alamogordo, N. Mex. Filed May 28, 1915. Serial No. 30,981. (Cl. 238—3.)



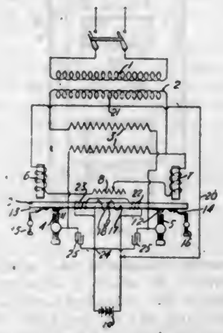
A concrete tie rectangular in cross section having a series of longitudinally extending reinforcing bars embedded centrally therein and spaced apart, a second series of longitudinally extending reinforcing rods arranged in spaced relation to the top and bottom of the tie, and located between the first named bars, said rods extending from end to end of said tie, each of said rods and bars provided with downturned ends for anchoring said rods and bars within the body of the tie, and vertical bolts inserted up through said tie, one end projecting beyond one face thereof, their opposite ends embedded in the under surface of said tie preventing rotation of the same, and the bottom of said tie having transverse corrugations thereon, the convolutions of which are arranged in the horizontal plane preventing movement of the said tie upon a road bed.

1,192,740. SANITARY CALORIC-BATH APPARATUS. LARRY G. BONDURANT, Hannibal, Mo. Filed Jan. 7, 1916. Serial No. 70,820. (Cl. 4—13.)



In a caloric bath apparatus, the combination of a base frame having a top sheet provided with a conical depression and an arched cabinet hood to arch over the body of a person and being hinged to the top sheet and having an opening in one end to receive the neck of the body, of a slab resting upon the top sheet directly over said depression and provided with a plurality of elongated openings, said depression having a flat portion near the termination of the conical part thereof, said flat portion having a circular opening and provided with a flange rising upwardly and surrounding the opening, a conical deflector rising from and being integral with said flange and spaced thereabove, to deflect the heat against the upper surface of said depression of the top sheet, where the heat radiates toward and against the body, said flat portion of the depression having a small depression provided with an outlet, for carrying off the exudations, the ends of the first depression having shouldered parts to support the slab, and means to support the head of the body.

1,192,741. RECTIFIER. QUINCY A. BRACKETT, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 3, 1914. Serial No. 829,194. (Cl. 175—365.)



1. In a rectifying system, the combination with a source of alternating current, of a direct-current load having a back electromotive force, and self-starting rectifying apparatus therebetween operated by the interaction of an alternating current winding connected to said source with two direct-current windings, one of which is connected in series with said load and the other of which is connected in shunt to said load.

2. In a rectifying system, the combination with a source of alternating current, of a direct-current load having a back electromotive force, and self-starting rectifying apparatus therebetween which is started by interaction between an alternating-current winding connected to said source and a direct-current winding connected in shunt to said load and in which, during subsequent operation, the action of said shunt winding is supplemented by a direct-current winding connected in series with said load.

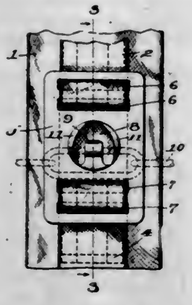
3. In a rectifying system, the combination with a source of alternating current, of a direct-current load having a back electromotive force, and self-starting rectifying apparatus therebetween embodying an alternating-current winding connected to said source and a direct-current winding connected in shunt to said load, said source and its winding being electrically independent of said load and its winding in the inoperative condition of said apparatus, and said apparatus being started into operation by the interaction between the magnetic fluxes produced by said two windings.

4. In a rectifying system, the combination with a source of alternating current, of a direct current load having a back electromotive force self-starting rectifying apparatus therebetween embodying an alternating-current winding connected to said source and a direct-current winding connected in shunt to said load, said source and its windings being electrically independent of said load and its winding in the inoperative condition of said apparatus, said apparatus being started into operation by the interaction between the magnetic fluxes produced by said two windings, and a supplemental direct-current winding in said apparatus connected in series with said load, whereby during operation, said apparatus is driven by the interaction between the flux of said alternating-current winding and the flux of said two direct-current windings.

5. The combination with a mechanical rectifier, of a load connected thereto having a variable back-electromotive force, said rectifier embodying means for automatically making and breaking the circuit for each alternating-current wave at substantially the point where the rectifier and load voltages are equal.

[Claims 6 to 11 not printed in the Gazette.]

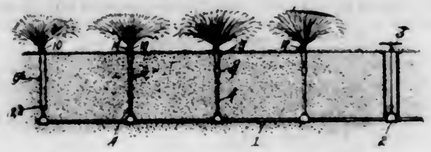
1,192,742. TRACE-CARRIER. ARCHIBALD A. BREAST, Columbus, Miss. Filed Nov. 9, 1915. Serial No. 60,557. (Cl. 54—55.)



1. A trace carrier comprising two bands of different widths, the narrower of which is superimposed and secured at intervals to the wider band, and a buckle wider than the narrow band and of less width than the wide band, slidably secured upon the narrower band and held thereupon frictionally, said buckle having an upwardly and inwardly turned hook between the points of frictional engagement with the narrower band and provided with diagonally disposed out-turned guards or flanges which extend into a plane outside of that in which the free end of the hook terminates.

2. A back band buckle comprising a sheet-metal plate having a pair of transverse slots at each end and struck-up at the center, and having an approximately U-shaped slot formed therein, the edges of which are curved outwardly from one side of the buckle, and the center fashioned into an inwardly-turned tongue, which intersects the outermost plane of the edges and terminates approximately in the plane of the plate.

1,192,743. LAWN-SPRINKLING MEANS. JOHN A. BROOKS, Toledo, Ohio. Filed Jan. 14, 1916. Serial No. 72,073. (Cl. 137—66.)



1. In combination, a casing, a nozzle longitudinally movable in said casing, said nozzle normally standing in one position relative to the casing and movable to a different position relative thereto by fluid pressure at its inner end, and a closure member for the outer end of the casing, said member being pivotally carried by the nozzle and having its opening and closing movements with respect to the casing controlled by movements of said nozzle.

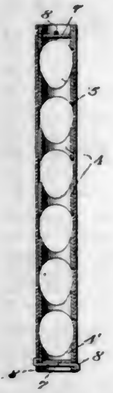
2. In combination, a casing having an internal shoulder forming a restricted opening, a nozzle mounted in said casing at one side of the shoulder and having a stem part projecting through the restricted opening and provided at the opposite side of the shoulder with an enlargement for coacting with the shoulder to limit the outward movements of the nozzle, said nozzle normally standing in closed position within the casing and movable without the casing by fluid pressure, and means carried by the nozzle for movements therewith and transversely thereof and operable to close the outer end of the casing when the nozzle is in normal position.

3. In combination, a casing having communication at its inner end with a source of fluid pressure supply, a fluid discharge nozzle mounted for limited longitudinal movements in said casing and adapted to be moved outward from normal position within the casing when fluid under pressure is turned into the casing back of the nozzle, and a closure member for the outer end of the casing pivotally carried by said nozzle and movable into inoperative position at one side of the nozzle when the nozzle is moved outward, and into casing closing position when the nozzle is moved inward.

4. In combination, a water supply pipe in communication with a source of water under pressure, a valve for closing a portion of said pipe to the source of supply, a plurality of fountain units connected to the portion of said pipe which is separated from the water source by said valve, one of said units having a drainage passage which is normally open to the other units, and means carrying a spray head and disposed within the unit having said drainage passage, said means being automatically operable to place the spray head in operative position and to close the communication between said drainage passage and said other units when water under pressure is admitted to the portion of the pipe containing said units.

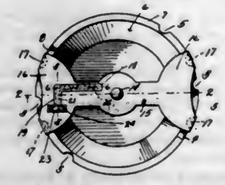
5. In combination, a valve-controlled fluid supply pipe, a plurality of fountain units rising from said pipe, and each comprising a casing having a restricted drainage passage, a nozzle mounted for vertical movements in said casing and having a stem part projected through said drainage passage and provided below the passage with an enlargement which coacts with an end of the passage wall to limit the outward movements of the nozzle with respect to the casing when water pressure is exerted outward against the nozzle and also serving to close said passage when the nozzle is in raised operative position, and one of said casings having a drainage opening to the soil disposed above its drainage passage, said drainage opening being in communication with the casings of the other fountain units through said pipe and a portion of the unit in which the drainage opening is disposed.

1,192,744. EGG-CASE FILLER. JOHN SANFORD BROUGH, Reeds, Mo., assignor to Frank Melugin, Reeds, Mo. Filed Feb. 10, 1915. Serial No. 7,376. (Cl. 229—15.)



An egg receptacle comprising a comparatively long tube, short tubes slidably arranged within the long tube and contacting therewith, said short tubes comprising nests spaced one away from the other to permit of the reception of the points of an egg in one of the ends of one of said short tubes and the reception of the butt of the egg in the adjacent short tube, the said short tubes being of a length sufficient to retain the point of the egg received in one end out of contact with the butt of the egg received in the other end of each of the tubes, disk members upon the end short tubes, and transverse members passing through the long tube and contacting with the disks for holding the disks of said short tubes and the short tube in the long tube.

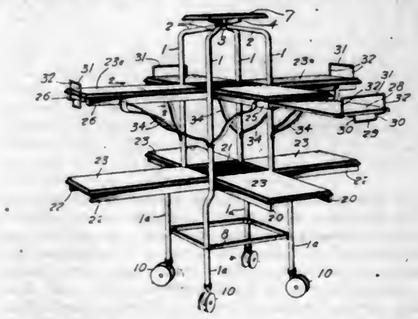
1,192,745. MILK-CAN CLOSURE. ALVA L. BROWN, McKinley, Oreg. Filed Feb. 2, 1916. Serial No. 75,761. (Cl. 31—80.)



1. The combination with a can, of a cover therefor, a strip supported transversely of the cover, a locking plate pivotally connected to the strip and having a resilient arm associated therewith adapted to slidably engage the strip when the locking plate is rotated, as and for the purpose set forth.

2. The combination with a can having a neck, of a flange carried by the neck and having notches formed therein, a cover removably mounted in the neck and having a strip fixed transversely thereof, a locking plate pivotally connected to the strip and having heads formed upon its ends, ears carried by the heads for passage through said notches, an arm associated with the locking plate and yieldably and slidably engaged with the strip, a card associated with the strip and adapted to be engaged by said arm when moved in one direction to mutilate or remove the card, as and for the purpose set forth.

1,192,746. DESK. CHARLES H. BROWN, Oklahoma, Okla. Filed May 25, 1915. Serial No. 30,272. (Cl. 45—6.)



1. A desk embodying a support comprising parallel connected legs, a plurality of series of pairs of bars connected with the support, the bars of each series having their upper surfaces in the same plane, and the members of each pair extending in parallel relation from one side of the support, a table secured to the bars of each pair of each series, the bars of the upper series being channel bars and having their channels inwardly, an extension plate mounted to slide in the channels between each pair of bars, each plate having a depending handle and a handle extending above the adjacent table, said last-named handle having a portion parallel with the upper surface of the table and extending transversely thereof.

2. A desk embodying a support comprising parallel connected legs, a plurality of series of pairs of bars connected with the support, the bars of each series having their upper surfaces in the same plane, and the members of each pair extending in parallel relation from one side of the support, a table secured to the bars of each pair of each series, the bars of the upper series being channel bars and having their channels inwardly, and an extension plate mounted to slide in the channels between each pair of bars.

3. A desk consisting of a support composed of spaced connected legs arranged at angular intervals of 90° about a common center, a pair of approximately parallel channel bars extending laterally outward from each side of the support and connected with the legs, the channels of each pair of bars being inward, a table secured to the top of each pair of bars, and an extension mounted to slide in the channels of each pair of bars, each plate having a depending handle, and a handle extending above the adjacent table and provided with a portion parallel with the table and extending transversely thereof.

4. A desk consisting of a support composed of spaced connected legs arranged at angular intervals of 90° about a common center, a pair of approximately parallel channel bars extending laterally outward from each side of the support and connected with the legs, the channels of each pair of bars being inward, a table secured to the top of each pair of bars, and an extension mounted to slide in the channels of each pair of bars.

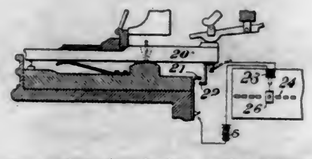
5. A desk comprising a support embodying transversely connected legs, bars extending outwardly from the legs of the support, tables carried by said bars, and plates slidably mounted upon the bars and mounted beneath the tables.

[Claims 6 and 7 not printed in the Gazette.]

1,192,747. PROCESS AND APPARATUS FOR MAKING PERFORATED BANDS. ALFRED BRUNN, Berlin, Germany. Filed Apr. 6, 1915. Serial No. 19,600. (Cl. 234—1.)

1. A process for reproducing perforated bands which consists in exposing a restricted area of a moving transparent film to an impression producing agent whereby opaque marks are formed thereon, transferring the images

to a sensitized metallic plate to form a positive, and finally etching the metallic plate to cause perforations corresponding in size and number to the marks on the original film.



2. A process for reproducing perforated surfaces for use in Jacquard looms which consists in exposing restricted portions of a transparent strip to a spray of color whereby marks are formed on the strip of the desired size, transferring the opaque images thus formed to an emulsified metallic film in a photographic manner, and subsequently etching the metallic film to produce perforations therethrough corresponding in number and size to the originally formed images.

3. An apparatus for recording images to be used, in the manufacture of perforated bands which consists in a reciprocating slide provided with a perforation, a solenoid for reciprocating the slide, and a circuit closer.

4. An apparatus for recording images to be used in the manufacture of jacquard pattern cards which consists in an opaque screen provided with relatively long and short slots, slides adapted to cover the slots, a pantograph for reciprocating the slides whereby the slots are uncovered in various degrees, and independently operable slides for covering the relatively short slots.

1,192,748. ENVELOP-OPENER. FRANK E. BUNDY, New York, N. Y. Filed June 5, 1914. Serial No. 843,253. (Cl. 120—35.)



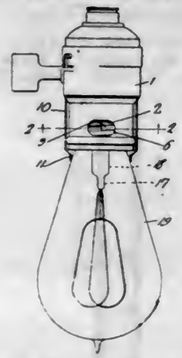
An envelop opener comprising a spatulate body having at one end a pointed extremity with dull convexly curved edges, one edge of the body merging with one edge of the extremity at a tangent, and a straight cutting edge extending along the body and communicating at one end with the other side edge of the said extremity at an angle, the said curvature being unbroken from the end of the cutting edge to the point of the extremity, the median longitudinal dimension of the body being disposed at an obtuse angle to the median longitudinal dimension of the pointed extremity thereof.

1,192,749. AUTOMATIC ELECTRIC-LAMP LOCK. DELONA L. CALAHAN, Fairfax, Wash., assignor of one-third to Robert D. Moore and one-third to Robert R. Roberts, Fairfax, Wash. Filed Dec. 8, 1915. Serial No. 65,744. (Cl. 173—356.)

1. In a lamp socket, a shell, a socket member therein having a plug engaging catch, said shell having an opening exposing said catch, whereby the catch can be released, and means held in place by the bulb of a lamp for covering said opening and concealing said catch.

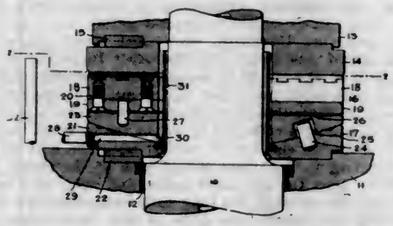
2. In a lamp socket, a shell, a socket member therein having a catch for engaging the plug of a lamp to prevent the unscrewing thereof, said shell having an opening exposing said catch whereby it can be released, and a cuff upon the shell covering said opening to conceal the catch and held in place by the bulb of the lamp.

3. In a lamp socket, a shell, a threaded socket member therein having an aperture, a spring catch extending through an arc of over 180° and embracing said member and lying within the groove thereof, the socket member having an aperture and one end of said catch having an inwardly projecting spur projecting through said aperture to engage a lamp plug for preventing the unscrewing thereof, said shell having an opening exposing that end of the catch having said spur, and a cuff adapted to be



slipped upon the shell to cover said opening and to be held in place by the bulb of the lamp.

1,192,750. BEARING. FREDERICK W. CALDWELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 9, 1915. Serial No. 38,982. (Cl. 64—25.)



1. A thrust bearing comprising relatively rotating annular bearing members in contact with one another, and receiving the end thrust of the shaft one from the other, one of said bearing members being thin and flexible, and annularly arranged pivotal supporting means associated with said latter bearing member and permitting local tilting thereof in radial planes.

2. A thrust bearing comprising a bearing member rotating with the shaft, a stationary bearing member receiving the end thrust of the shaft on said rotating member, one of said bearing members comprising a plurality of annularly arranged flexibly united bearing segments, and annularly arranged supporting means associated with said latter bearing member and permitting said segments to tilt in radial planes to accommodate irregularity of the bearing members.

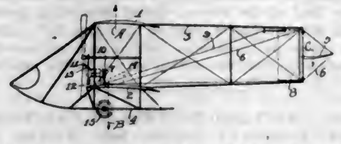
3. A thrust bearing comprising a bearing member rotating with the shaft, a stationary annular bearing member receiving the end thrust of the shaft on said rotating member and itself comprising a plurality of flexibly united bearing segments, and relatively narrow annular supporting means for said annular bearing member so arranged as to permit said segments to tilt in radial planes.

4. A thrust bearing comprising a bearing member rotating with the shaft, a stationary annular bearing member receiving the end thrust of the shaft on said rotating member, one of said bearing members comprising a plurality of annularly arranged flexibly united rigid bearing segments, a support associated with said latter bearing member, and a relatively narrow flat ring interposed between said annular bearing member and said support so as to permit said segments to tilt in radial planes.

5. A thrust bearing comprising a bearing member rotating with the shaft, a stationary annular bearing member receiving the end thrust of the shaft on said rotating member and itself comprising a flexible ring and a plurality of bearing segments attached to said ring, and annularly arranged supporting means for said annular bearing member permitting said segments to tilt in radial planes.

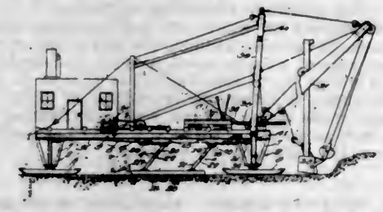
[Claim 6 not printed in the Gazette.]

1,192,751. AEROPLANE. ROBERT P. CAMPBELL, Jr., Waterloo, Iowa. Filed May 10, 1913. Serial No. 766,684. (Cl. 244—29.)



An aeroplane comprising, in combination with vertically-spaced main planes, a frame-work rigidly connected to both to extend rearwardly therefrom medially, a vertically arranged rudder mounted in the rear part of said framework to swing laterally to either side, means for swinging said rudder, a horizontally arranged upwardly longitudinally troughed plane mounted transversely on said framework to the rear of said vertical rudder, and pivoted at its forward edge to rock vertically, and means for rocking said troughed plane vertically, the latter being located and adapted to balance the other planes about the center of pressure of the aeroplane.

1,192,752. PROPELLING MEANS FOR DREDGING-MACHINES. LEWIS L. CHAPMAN, ARTHUR D. CHAPMAN, and CARL C. CHAPMAN, Celina, Ohio. Filed Jan. 6, 1916. Serial No. 70,688. (Cl. 21—124.)



1. In combination, a frame, trucks supporting the same, a carriage member movable longitudinally along said frame, a leg member pivoted at its upper end to the carriage member and capable without detachment of being inclined downwardly toward either the front or the rear end of the frame, an earth engaging foot member to which the lower end of the leg member is pivoted, and means for moving the carriage longitudinally along the frame at will.

2. In combination, a frame, trucks supporting the same, a carriage member movable longitudinally along said frame, an inclined leg member pivoted to and depending from said carriage member, said leg member having between its ends a joint for allowing it to be moved to reverse its direction of inclination, an earth engaging foot to which the lower end of the leg member is pivoted, and means for moving the carriage member longitudinally of the frame at will.

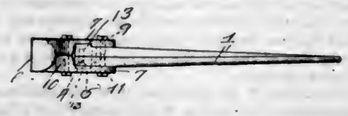
3. In combination, a frame, trucks supporting the same, a carriage member movable longitudinally along said frame, an inclined leg member pivoted to and depending from said carriage member, said leg member being formed of upper and lower sections pivoted together to allow it to be so moved as to reverse its direction of inclination, means for normally imparting rigidity to the pivotal connection between the two leg sections, an earth engaging foot member to which the lower end of the leg member is pivoted, and means for moving the carriage member longitudinally along the frame at will.

4. In combination, a frame having a pair of parallel longitudinal bars channeled longitudinally on their inner sides, a longitudinally disposed beam between the aforesaid bars, rollers mounted in the channels of said bars and connected by transverse axles carrying the aforesaid beam, front and rear inclined leg members pivoted to and depending from the front and rear ends of said beam, a longitudinally elongated earth engaging foot member to whose front and rear ends the lower ends of the front and rear leg members are pivoted, and means for moving the aforesaid beam longitudinally at will.

5. In combination, a frame including a pair of parallel longitudinal tracks, rollers mounted on said tracks, transverse axles connecting said rollers, transversely elongated channel-shaped bearings receiving said axles therein, forwardly and rearwardly extending feet formed integrally with the centers of said bearings, a longitudinally disposed beam secured to said feet, front and rear inclined leg members pivoted to and depending from the opposite ends of said beam, an elongated earth engaging foot member to whose front and rear ends the lower ends of the leg members are pivoted, and means for moving the aforesaid beam longitudinally at will.

[Claim 6 not printed in the Gazette.]

1,192,753. TONGS. SILAS W. CLEMENTS, Rexburg, Idaho. Filed Feb. 8, 1915. Serial No. 6,836. (Cl. 81—19S.)



1. The combination with a pair of pivotally connected handles, of a jaw for each handle, each jaw having a flattened shank portion, a bolt passing through the flattened portion of each shank and engaging with the adjacent handle, a pivotal connection between the two jaws and a lug on each handle projecting laterally from the opposite edges thereof and inwardly from their ends and adapted to maintain the jaw thereof in parallelism therewith when closed.

2. The combination with a pair of pivotally connected handles, the said handles being flattened adjacent to their pivotal connection, a lug extending outwardly from one of the opposite lateral edges of each of said flattened portions and inwardly from the ends thereof, a jaw for each handle, each jaw having a flattened shank portion, a bolt passing through the flattened portion of each shank and engaging with the adjacent handle, and a pivotal connection between the two jaws.

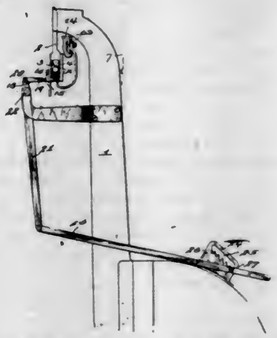
1,192,754. FONT-DISTINGUISHER FOR TYPOGRAPHICAL MACHINES. JAMES A. CROMBIE, Brooklyn, and THOMAS S. HOMANS, Hempstead, assignors to The Intertype Corporation, New York, N. Y. Filed Jan. 6, 1914. Serial No. 810,673. (Cl. 199—7.)

1. In a machine of the linotype class, in combination with the distributer box through which the lines of matrices are passed prior to distribution, of means at the entrance end of the distributer box to prevent wrong font matrices from passing into said box.

2. In a machine of the linotype class, the combination of the distributer box having a channel or raceway through which the matrices are pushed, said channel being open at the lower side, a font distinguisher located at the entrance of said box to prevent the entrance of wrong font matrices and extending part way across the open side of the box, and a matrix pusher having a supporting arm adapted to pass between the distinguisher and the opposite side of the channel.

3. In a machine of the linotype class, the combination with a distributer box having a passageway for a line of matrices, and means for pushing a line of matrices through

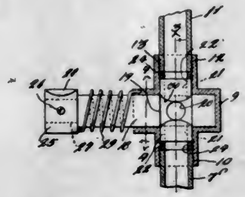
said box, of a font distinguisher located at the entrance of said box to prevent wrong font matrices passing into the box and permitting movement of the line-pushing means past the same.



4. In a machine of the linotype class, the combination with a distributer box having a passageway for a line of matrices, said passageway being open at the bottom of the box, a pusher for feeding a line of matrices through said passageway, said pusher having an actuating arm extending upwardly through the open bottom of the box, and a font distinguisher located at the entrance of the box and extending partially across said passageway from one side of the box and providing a space between it and the opposite side of the box for the passage of the actuating arm of the pusher.

5. In a machine of the linotype class, the combination with a distributer box having a passageway for a line of matrices, a pusher for feeding a line of matrices through said box, and a font distinguisher adjustable to different positions from one side to the center of the said passageway, and an actuating arm for the pusher movable past said font distinguisher in a space between the latter and the opposite side of said passageway.

1,192,755. CONTROLLING-VALVE FOR A DRINKING-FOUNTAIN. CHARLES TODD DANIEL, Owensboro, Ky. Filed Feb. 21, 1916. Serial No. 79,634. (Cl. 137—7.)



1. In a water distributing system, a controlling valve comprising a casing having oppositely arranged passages, a cylindrical valve member provided with a transverse opening to abnormally register with said passages and having an annular recess adjoining the opening, diametrically opposite valve seat members extending into the annular recess, a lever on the valve, and spring means on the valve connecting between the casing and the lever, to hold the opening normally out of register with the opposite passages.

2. In a water distributing system, a controlling valve comprising a casing having oppositely arranged passages, a cylindrical-valve member provided with a transverse opening to abnormally register with said passages and having an annular recess adjoining the opening, diametrically opposite valve seat members extending into the annular recess, a lever on the valve, and spring means on the valve connecting between the casing and the lever, to hold the opening normally out of register with the opposite passages, and means for adjusting the valve seat members into the annular recess to compensate for the wear upon the contacting surfaces.

3. In a water distributing system for a controlling valve comprising a casing having diametrically opposite extensions, a cylindrical valve in said casing provided with an annular recess and a transverse opening adjoining the recess, said recess constituting a seat, valve seat members in the diametrically opposite extensions contacting diametrically with the seat of the recess acting to hold the valve member in the casing against axial movement, nipples in said extensions for adjusting the valve seat members toward the seat of the recess, spring tensioning means for the valve member, and a lever on the valve for rocking the same to throw its transverse opening in registration with the passages against the action of the spring means.

1,192,756. PAINT AND PROCESS OF MAKING SAME. GEORGE LLEWELLYN DAVIES and WALTER EDWIN WINDSOR-RICHARDS, London, England. Filed Feb. 6, 1913. Serial No. 746,682. (Cl. 134—52.)

1. As a new article of manufacture, a paint base, said base being isolated from tar by first acidulating the heated tar, adding oil to the tar, drawing off the lighter oils thus separated, and distilling said oils, the residue left after said distillation being the previously mentioned paint base.

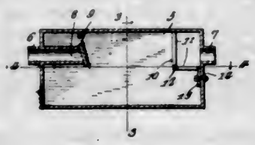
2. A process for the manufacture of a paint base or the like which consists in acidulating tar, adding oil to the tar, drawing off the lighter oils thus separated, distilling said oils and utilizing the residuum.

3. A process for the manufacture of a paint base or the like, which consists in acidulating tar, adding oil to the tar, drawing off the lighter oils thus separated, distilling the oils to form a soluble residuum, adding pigments to the same, distilling the dark brown oil thus formed, whereby a soluble brown residuum is obtained.

4. A process for the manufacture of a paint base or the like, which consists in acidulating tar, adding oil to the tar, drawing off the lighter oils thus separated, adding turpentine to the same, distilling the dark brown oil thus formed, whereby a soluble brown residuum is obtained.

5. A process for the manufacture of paint or the like, which consists in acidulating tar, adding oil to the tar, drawing off the lighter oils thus separated, distilling the said oils to secure a soluble residuum, adding pigments to the same and a gloss to said compound.

1,192,757. PUMP-SCREEN. FRED DAVIS, Wilkes-Barre, Pa. Filed May 29, 1915. Serial No. 31,279. (Cl. 103—64.)

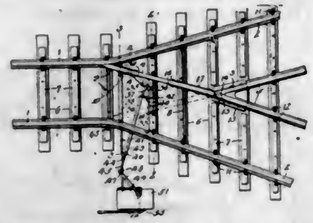


1. A pump screen including a box adapted to be interposed upon the pump line, an inlet and outlet for said box adapted to communicate with respective portions of said pump line, a check valve normally closing said inlet by gravity, and a screen member permitting fluid communication only between said box and said outlet, said member including a central rib, horizontal and vertical grate bars extending to respective portions of said box from said rib, and a base plate for supporting said screen member.

2. A pump screen including a box adapted to be interposed upon the pump line, an inlet and outlet for said box adapted to communicate with respective portions of said pump line, a check valve normally closing said inlet by gravity, a screen member permitting fluid communication only between said box and said outlet, said member including a central rib, horizontal and vertical grate bars extending to respective portions of said box from said rib, a base plate for supporting said screen member, an elongated clean out opening formed in the side of said box, and a plate removably secured thereover.

3. In a pump screen, a screen member therefor comprising a right-angled grating formed of a central rib having a plurality of parallel integral grate bars projecting from one side of said rib and a like plurality of grate bars extending from said rib at right angles to the first-mentioned bars, said second bars being integrally formed at their outer ends with a plate parallel to the first bars and having an opening therethrough for securing the screening member in place.

1,192,758. RAILWAY-SWITCH. RAY W. DAVIS, Brownsville, Pa., assignor of one-half to Walter B. Chalfant, Brownsville, Pa. Filed Aug. 22, 1914. Serial No. 858,040. (Cl. 104—12.)



1. A switch including two spaced rails and angular rails connected therewith, a frog between the angular rails, rails connected with the frog and arranged in alinement with the angular rails, a switch point connected with the frog, means for operating the switch point to bring the same against either of the main rails, spring means for normally sustaining the switch point intermediate of the rails, means for swinging the point, and means for locking the point when thrown in either direction.

2. In a railway switch, a switch point arranged between two rails, spring means for normally retaining the point longitudinal and intermediate of the rails, and means for throwing the switch point to engage with either of said rails.

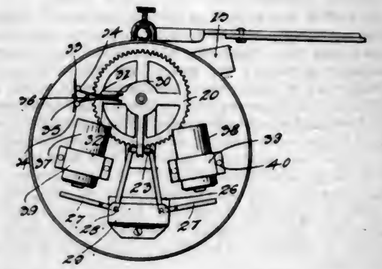
3. In combination with two rails, of a frog between the rails, a switch point extending from the frog, spring bars upon the opposite faces of the frog and switch point, means for connecting the bars to the point and frog to permit of a limited longitudinal movement of the bars, and means for throwing the point to bring the same in contact with either of the rails.

4. In a railway switch, the combination with two rails, of a switch point arranged normally central between the rails, spring means for sustaining the switch point in such position, means for throwing the point into contact with either of the rails, a rotatable bar associated with the throwing means, said bar having oppositely disposed spaced contacting members adapted to engage with the switch point to retain the said point in contact with the rail against which it has been thrown.

5. In a railway switch, ties, rails upon the ties, a switch point between two of said rails, means for throwing the switch point, bearing plates upon the ties, stop brackets upon the bearing plates between the rails and adapted to be contacted by the switch point when said switch point is thrown toward either of the openings, and brackets upon the ends of the plates and engaging the outer faces of the outer rails.

1,192,759. VEHICLE DIRECTION-INDICATOR. GEORGE A. DENNINGER, Theresa, Wis. Filed Nov. 23, 1914. Serial No. 873,542. (Cl. 40—52.)

1. A direction indicator comprising a casing having an opening therein, a base secured within the upper end of the casing, a vertical shaft journaled in said base and in the bottom of the casing, oppositely extending supporting arms secured to said shaft and twisted intermediate their ends, a semi-cylindrical drum consisting of transparent material secured to the arms, an arm secured to the shaft and to the supporting arms, a weight secured to the free end of said arm to counterbalance the drum, direction indication carried by the drum, means for oscillating the drum to bring certain direction indications in registration with said opening, and means for illuminating the drum.



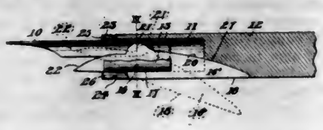
2. A direction indicator comprising a casing having an opening therein, a base secured within the upper end of the casing, a vertical shaft journaled in said base and in the bottom of the casing, a semi-cylindrical drum carried by said shaft, means for counterbalancing said drum, strips secured to said drum to support translucent material on which direction indications are printed, wires secured to the drum to reinforce said translucent material, means for oscillating said drum to bring certain direction indications in registration with said opening, and means for illuminating said drum.

3. A direction indicator comprising a casing having an opening therein, a base secured within the casing, a shaft journaled in the bottom of the casing and in said base, a drum carried by said shaft and provided with direction indications thereon, a spur gear secured to the shaft and above said base, a gear wheel rotatably mounted on the base and meshing with said spur gear, electrical means for oscillating the gear wheel to move the drum to register said direction indications with said opening, means for normally holding said gear wheel at a predetermined position, and means for illuminating the drum.

4. A direction indicator comprising a casing having an opening therein, a base secured within the casing, a shaft journaled in the casing and in the said base, a drum carried by said shaft provided with direction indications thereon, a spur gear secured to the shaft, a gear wheel rotatably mounted on the base and meshing with said spur gear, an angular bracket secured to said gear wheel, oppositely extended links pivoted to said bracket and apertured, pins received by said apertures, bell crank arms secured to said pins, a second bracket secured to the base and pivotally supporting said bell crank arms, magnets secured to the base, means for alternatively energizing the magnets to attract one or the other bell crank arm, and means for normally holding the gear wheel at a predetermined position.

5. A direction indicator comprising a casing having an opening therein, a base secured within the casing, a shaft journaled in said casing and in the base, a drum provided with direction indications thereon carried by said shaft, a spur gear secured to the shaft, a gear wheel rotatably mounted on said base and meshing with said spur gear, means for oscillating the gear wheel to bring certain direction indications in registration with the opening, a lug formed on said gear wheel, a pair of pins secured to the base, spring arms coiled around said pins, and their corresponding ends adapted to bear on said lug, one on each side thereof, the other ends extending in opposite directions from said coils and each bearing upon the coils of the other, a pin secured to the base and extending between said spring arms to prevent them from drawing the gear wheel into an inoperative position.

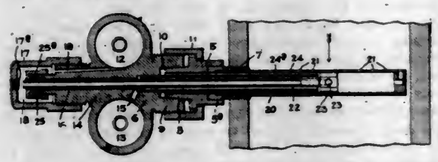
1,192,760. PENHOLDER. VALENTINO DE VICARI, Chicago, Ill. Filed Apr. 27, 1916. Serial No. 93,920. (Cl. 120—101.)



1. A holder for a writing pen comprising a holding member having an axial open ended bore at one end thereof and a side slot communicating with the said bore and extending inwardly at one side of the holder forming a receiving seat, a split sleeve positioned within the said chamber having inturned parallel flanges, a segmental lever pivoted to the said sleeve shiftably arranged between the said flanges and through the said slot and having the inner curved end positioned upon the said seat when the lever is in its closed arrangement, the said lever being further provided with an engaging cam for the said pen and with a forwardly projecting pointed releasing arm whereby the pen is released from the holder when the inner end of the lever is positioned outwardly of the said slot and seat.

2. A holder for a writing pen comprising a holding member having an axial open ended bore at one end thereof and a side slot communicating with the said bore and extending inwardly at one side of the holder forming a receiving seat, a split sleeve positioned within the said chamber having inturned parallel flanges, a segmental lever pivoted to the said sleeve shiftably arranged between the said flanges and through the said slot and having the inner curved end positioned upon the said seat when the lever is in its closed arrangement, the said lever being further provided with an engaging cam for the said pen and with a forwardly projecting pointed releasing arm whereby the pen is released from the holder when the inner end of the lever is positioned outwardly of the said slot and seat, and a securing ferrule upon the forward end of the said holder overlying the adjacent end of the said sleeve, the said lever having a notch in its outer side at a point adjacent the said ferrule.

1,192,761. NOZZLE-PLUG. AUSTIN R. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 1, 1914. Serial No. 835,692. (Cl. 73—167.)



1. In a nozzle plug, the combination of a base provided with an angular portion having reservoirs formed therein and passages communicating with them adjacent their upper ends, and means containing leading and trailing orifices carried by said base and communicating with said reservoirs through the passages, said angular portion being provided with openings which communicate with the reservoirs to receive pipe connections for connecting the nozzle plug to a manometer.

2. In a nozzle plug, the combination of a base provided with an angular depending portion having two reservoirs formed therein, and tubes having leading and trailing orifices therein carried by the base and communicating with the two reservoirs at the upper end thereof, and at the same level, said depending portion having openings therein which communicate with the reservoirs to receive pipe connections for connecting the nozzle plug to a manometer.

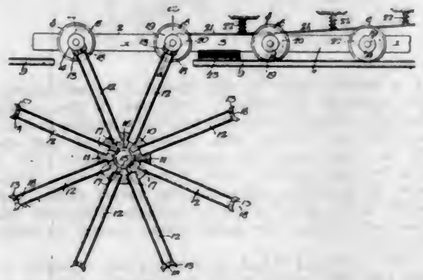
3. A nozzle plug having its base formed in two sections, and leading and trailing tubes carried by one of said sections, the other of said sections having reservoirs formed therein with which said tubes communicate, said tubes communicating with said reservoirs at the upper portions thereof, said last named section being further provided with openings to receive pipe connections for connecting the nozzle plug to a manometer.

4. In a nozzle plug, the combination of a base formed in two sections, means for fastening the sections together, said means permitting the sections to be turned relatively to each other, means containing leading and trailing orifices carried by one of said sections, reservoirs formed in the other of said sections, and means connecting the said leading and trailing orifices to the reservoirs.

5. In a nozzle plug, the combination of a base section having a tapered socket, a second base section having a projecting tapered nipple which fits into said socket, reservoirs formed in one of said sections, and leading and trailing tubes carried by the other of said sections, which tubes communicate with the reservoirs.

[Claims 6 to 16 not printed in the Gazette.]

1,192,762. DEVICE FOR LUBRICATING CHAINS. JAMES M. DODGE, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed May 13, 1915. Serial No. 27,811. (Cl. 184—15.)



1. The combination of a chain having lubricating openings at intervals; a rotating lubricator arranged to engage the chain at the openings; a rigid bearing for the lubricator, the said lubricator being arranged to move with the chain during a portion of its travel and to allow lubricant to pass from the lubricator into the openings in the chain.

2. The combination of a chain having lubricating openings at intervals; a rigid support; a rotating lubricator mounted on the support and having a series of seats and having passages in the seats, said seats being arranged to engage the chain at the openings so that the passages will communicate with the openings in the chain to allow lubricant to enter said openings from the lubricator, the chain being deflected during the time the lubricant is applied.

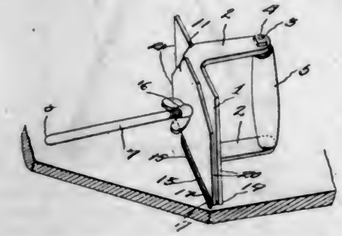
3. The combination of a chain having a series of wheels thereon, each wheel having a lubricating hole therein; a rotating lubricator having curved seats arranged to fit the wheels and having a passage alining with the holes in the wheels so that as the chain moves forward it will carry the lubricator with it and during this movement the lubricant will flow from the lubricator into the hole in each wheel.

4. The combination in means for lubricating wheels of chains, of a track; a chain having wheels arranged to travel on the track, each wheel having a lubricating opening and a lug; a flexible plate arranged close to the track so that, when the wheel reaches the plate, the lug on the wheel will engage the plate and will prevent the wheel turning and will bring the hole in the proper position; and a lubricator having a seat arranged to engage the wheel and having a passage therein alining with the opening to allow lubricant to enter the wheel.

5. The combination in means for lubricating wheels of chains, of a rail, a portion of which is interrupted; a rotating lubricator arranged to travel in the interrupted portion of the rail; a chain having wheels arranged to travel on the rail, each wheel having a lubricating opening, the lubricator having a seat to receive the wheel so that it is carried over the interrupted portion of the rail, the seat having an opening therein alining with the hole in the wheel so that lubricant will pass from the lubricator into the wheel.

[Claim 6 not printed in the Gazette.]

1,192,763. FLOOR-SCRAPING TOOL. JOHN DONNELLY, Branford, Conn. Filed Oct. 20, 1915. Serial No. 56,922. (Cl. 145—47.)



1. In a floor scraping tool, a body plate, a handle normal to the rear face of said plate and a rod extending from the opposite face of the plate and normal thereto and having an end for engagement with the floor, a scraping blade, a clamping plate on said rod, said rod having means acting against the clamping plate to hold the blade between the clamping and body plates.

2. In a scraping tool, a body plate, a handle comprising a pair of bars normal to the rear and the upper and lower edges of said plate, and a hand grip connecting the rear terminals of said bars and extending at right angles to the cutting edge of the scraping tool, the opposite face of said body plate having a rod normal thereto, the extremity of which is rounded to engage the surface to be scraped, a scraper blade, a clamping plate on said rod, and means on the rod acting against the clamping plate to hold the blade between the clamping and body plates.

3. In a floor scraping tool, a flat scraping blade provided upon its front face with a plurality of transverse cuts or notches in parallelism one above the other from the lower cutting edge of said blade, thereby forming sections each having a cutting edge, each of said sections when dulled readily detachable successively, thereby making a new edge available.

1,192,764. SPRING-TIRE. THEODORE P. DORN, Cleveland, Ohio. Filed Apr. 16, 1915. Serial No. 21,828. (Cl. 152—8.)



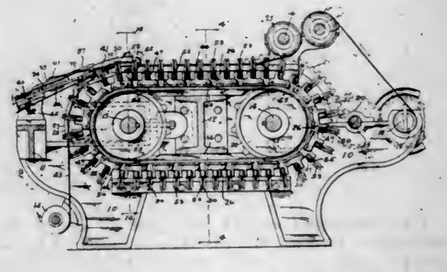
A tire comprising a hollow tubular core bent in circular form, a casing inclosing said core and conforming to the shape thereof, said casing having a flat rim engaging face, a coil spring bent in circular form with the convolutions thereof arranged spirally about the core and embedded in the casing in spaced relation with the core and the outer peripheral surface of the casing, and a flat metal band secured to the coils of said spring and embedded in the casing centrally of the rim engaging face.

1,192,765. COATING COMPOSITION. MAURICE MALAN DURKEE, Savannah, Ga. Filed Dec. 7, 1915. Serial No. 65,528. (Cl. 134—16.)

1. A coating composition for rendering materials impervious to fatty materials, comprising a colloidal substance dissolved in water; dextrose; and hexamethylenetetramin, in substantially the proportions described.

2. A coating composition for rendering materials impervious to fatty materials, comprising the following substances in substantially the proportions stated, to wit: glue 17.0%, dextrose 13.0%, hexamethylenetetramin, 0.4%, and water 69.6%.

1,192,766. MACHINE FOR MAKING WIRE FABRIC. JOHN W. DWIGGINS, Marion, Ind., assignor to The Parrish-Alford Fence & Machine Company, Knightstown, Ind., a Corporation. Filed Dec. 8, 1915. Serial No. 65,743. (Cl. 140—6.)



1. A machine for making wire fabric including movable means for forming said fabric, and means for causing said fabric-forming means to travel in a straight line along with the movement of the fabric while it is forming the fabric.

2. A machine for making wire fabric including wire twisting mechanism, and means for causing such mechanism to travel in a straight line along with the movement of the fabric during the twisting operation.

3. A machine for making wire fabric including a series of twisters that will receive and unite wires into a fabric, and means for causing said twisters to travel horizontally along with the movement of the fabric during the twisting operation.

4. A machine for making wire fabric including twisters, and endless means on which said twisters are mounted movable longitudinally of the machine and in the same plane while the fabric is being formed.

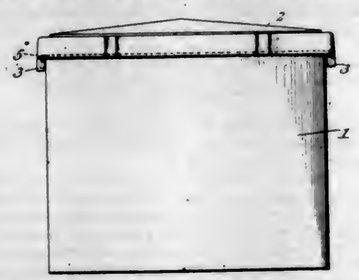
5. A machine for making wire fabric including twisters for forming the fabric, endless means for carrying said twisters which travels for some distance in a straight line, and means for operating the twisters while they are traveling in a straight line.

[Claims 6 to 33 not printed in the Gazette.]

1,192,767. LOCK-COVER FOR TANKS. GEORGE G. DYER, Trenton, N. J. Filed Feb. 18, 1916. Serial No. 79,136. (Cl. 220—124.)

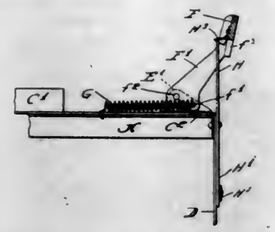
In a locking device for tank covers, the combination with a tank provided at its upper edges with lugs 5, of a sliding cover provided with a dove-tailed slot adapted to

engage said lug 5, and having an extension 7 adapted to normally engage a lug 6 and hold the cover against acci-



dental lateral displacement, substantially as shown and described.

1,192,768. BEDDING-CLAMP AND FOOT-REST FOR FOLDING-BED STRUCTURE. DARRELL FRANK DYKE, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed June 1, 1915. Serial No. 31,388. (Cl. 5—16.)

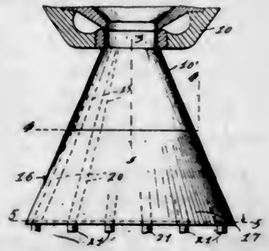


1. In combination with the outermost bed section of a sectional bed bottom, a bedding clamp and foot-rest hinged to said section for swinging between clamping and foot-rest position; means for stopping the upward and outward swinging movement of said clamp at foot-rest position; a spring operating to complete the throw of the clamp to said position, said clamp and foot-rest comprising a cross-bar and open below the cross-bar; a latch pivoted on the outer bar of said outermost section, weighted for holding it positioned on its pivot with its engaging end extending at the inner side of said cross-bar at the upstanding position of said foot-rest, and adapted to swing at a plane parallel to the vertical longitudinal plane of said cross-bar to clear the lower edge of the latter, the cross-bar having its lower edge notched, and a trip plate hinged on its inner side for closing said notch, the latter being positioned for the passage of the upper end of the latch therethrough in the outward swinging movement of the clamping member, and the trip plate being adapted to be lifted by said latch in passing through the notch and to drop in behind it at the stopped position of the clamping member.

2. In a folding bed structure, an outermost folding section having its outer end rail and its side rails of angle iron, in combination with corner fittings which connect said side rails, said fittings comprising each a horizontal web lodged upon the upper sides of the horizontal web of the bed section rails and riveted thereto, each of said fittings having an upstanding lug; a bedding clamp and foot-rest having at its ends lever arms fulcrumed on said lugs respectively at the forward or inner corner of the fulcrumed end of said arms and at elevated points on said lugs, the outer corners of said lever arms being adapted to swing down past the fulcrums of the same and to stop upon the horizontal web of said corner fitting at the upstanding position of the foot-rest.

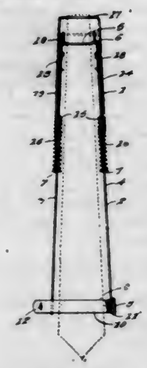
3. In a folding bed structure, the outermost folding section having its outer end rail and its side rails of angle-iron, corner fittings which connect said rails comprising a horizontal web, said rails having their horizontal webs mitered and meeting at their lodgment on the horizontal web of the corner fitting, and their vertical flanges cut away for a distance back from the meeting mitered ends, said fittings having each an upstanding lug; a bedding clamp fulcrumed on said lugs.

1,192,769. ATTACHMENT FOR POWDER-MACHINES. JAMES A. EARLEY, Wilmington, Del. Filed Sept. 21, 1915. Serial No. 51,853. (Cl. 18—12.)



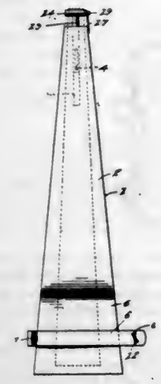
An attachment for a powder machine comprising a truncated cone-shaped casing detachably secured to the discharge portion of the machine, a second casing secured below the bottom of the first casing, the top of the second casing being circular in plan while the bottom is rectangular in plan, a plurality of powder passage pipes extending through both of the said casings in downwardly and outwardly inclined directions, nozzles carried by the lower ends of the pipes, and a heat conductor extending through the casings.

1,192,770. TIE-STRETCHER. HENRY P. EASTMAN, Livingston Manor, N. Y. Filed Nov. 7, 1914. Serial No. 870,859. (Cl. 223—19.)



A tie stretcher comprising lower and upper substantially U-shaped frames, said lower frame comprising side bars, a clamp connected to the lower ends of said bars, their upper ends being curved to form loops, a cross bar connected to the terminals of said loops, hooks positioned in said loops of the side bars, washers positioned surrounding said side bars and intermediate their ends thereof, springs positioned on said washers, and surrounding said side bars, said second frame comprising side bars, said side bars being looped intermediate their ends to slidably receive the side bars of the first named frame, the ends of said last named side bars surrounding the first named side bars and engaging the upper ends of said springs, a cross bar connecting the upper terminals of the last named side bars, said last named cross bar adapted to receive the central portion of a tie thereover, the ends of said tie being adapted to be engaged under the clamps at the lower end of the first named side bars, said hooks arranged to engage the last named cross bar for holding the said second frame inwardly against the tension of said springs.

1,192,771. TIE-STRETCHER. HENRY P. EASTMAN, Livingston Manor, N. Y. Filed Nov. 7, 1914. Serial No. 870,860. (Cl. 223—19.)



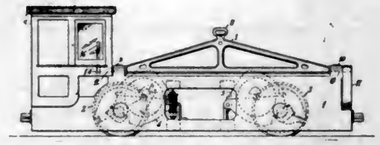
1. A necktie stretcher comprising an elongated tapering base, the wide end of said base being provided with inclined beveled faces, a clamp arranged around the inclined faces to hold the ends of the necktie thereto, the upper reduced end of said base provided with an axial bore, springs seated in said bore, a plunger fitted in said bore and resting upon said spring, a cross arm connected to the outer end of said plunger, means connected to the upper end of the base and engaging the plunger to hold the same in against the tension of said spring, said cross arm adapted to receive the central portion of a tie thereover, and when released, the same will be stretched.

2. A necktie stretcher including a base, said base tapering toward one end, said reduced end provided with an axial bore, the opposite enlarged end of said base being beveled to present inclined faces, a clamp around said inclined faces of the large end, a spring seated in said axial bore, a plunger in said bore, its lower end engaging the upper end of the said spring, its free end extending outwardly beyond the edges of said bore, a cross arm on the outer end of said plunger, said arm adapted to receive the central portion of a tie and the ends of said tie secured under the clamp at the wide end of the base, and means secured to the reduced end of the base engaging the cross arm for holding the same inward against the tension of the spring to permit the tie to be placed over the cross arm, and means for limiting the outward movement of said plunger.

1,192,772. SHIFTING-LOCOMOTIVE. GEORGE M. EATON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 4, 1911. Serial No. 652,745. (Cl. 213—19.)

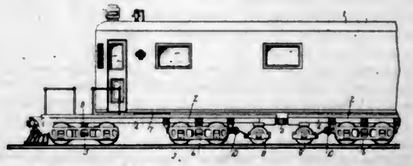
1. A shifting locomotive comprising a body and an elevated cab located at one end thereof, a rotatively adjustable rigid frame disposed above said body and in front of said cab and normally adapted to lie within the lateral dimensions of the body and to be rotated outwardly to engage vehicles on adjacent parallel tracks, and means controllable within the cab for adjusting the position of the frame.

2. In a shifting locomotive the combination with a body, a cab located at one end thereof, a plurality of rigid frame structures disposed longitudinally within the lateral dimensions of said body ahead of the cab and rotatably mounted at the ends thereof, of counter weights disposed at the end of said body removed from said cab and severally attached to said structures for normally maintaining the same in a substantially vertical plane, and a mechanism within the cab for moving said structures to a horizontal position.



3. In a shifting locomotive, the combination with a body having side portions, a cab located at one end of said body, and a rigid working member disposed ahead of the cab and rotatably mounted directly above and in the longitudinal horizontal plane of one of the body side portions, of means located within the cab for effecting rotative movements of said working member.

1,192,773. ELECTRIC LOCOMOTIVE. GEORGE M. EATON, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 7, 1914. Serial No. 810,769. (Cl. 105—259.)



1. In a locomotive, the combination with a cab, of a plurality of running gears pivotally associated therewith, each comprising a frame structure, an end truck pivotally associated therewith, another truck having a rigid connection thereto and a guiding truck disposed adjacent to said rigidly associated truck and pivotally associated therewith.

2. In a locomotive, the combination with a single cab, of a plurality of articulated running gears pivotally associated therewith and each embodying a rigid central truck, a pivotal end truck, and a pivotal guiding truck disposed substantially in the middle of the locomotive.

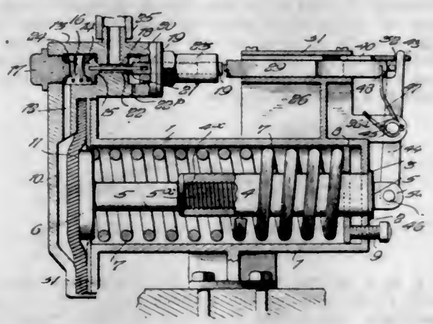
3. In a locomotive, the combination with a cab, of a plurality of articulated running gears pivotally associated with said cab and each comprising a pivotal end truck and a rigidly mounted middle truck disposed on the opposite side of the pivotal connection between said cab and said running gear, and a radial guiding truck pivotally associated with said rigid truck and located substantially in the middle of the locomotive.

4. In a locomotive, the combination with a cab, of a plurality of running gears associated therewith and each comprising pivotal end trucks and a rigid truck intermediate said end trucks, said cab being associated with each running gear between one of the end trucks and the intermediate truck.

5. In a locomotive, the combination with a cab, of a plurality of running gears associated therewith and each comprising a pivotal end truck, a radial end truck and an intermediate rigid truck, said cab being associated with each running gear between the pivotal truck and the rigid truck.

[Claims 6 and 7 not printed in the Gazette.]

1,192,774. AUTOMATIC VALVE-OPERATING MECHANISM. CHARLES GEORGE EIDSON and THOMAS DAVIS, Baltimore, Md., assignors, by mesne assignments, to The Eidson Air Products Company, Baltimore, Md., a Corporation of Maryland. Filed June 25, 1915. Serial No. 36,294. (Cl. 230—24.)



1. An automatic valve operating mechanism comprising, a plunger, a movable member having operative engagement with the valve, means associated with said plunger for placing the said movable member under spring tension, means for locking said movable member during the initial movement of the plunger, and means actuated by a further movement of the plunger to retract the locking means.

2. An automatic valve operating mechanism comprising, a plunger, a slidable member adapted to be brought into operative engagement with the valve, means for placing the slidable member under spring tension during the initial movement of the plunger, means for preventing the movement of the slidable member during said initial movement, means for retracting the locking means to permit movement of said slidable member, means for locking said slidable member at the end of its forward movement, and means for retracting the slidable member on the release of the locking means.

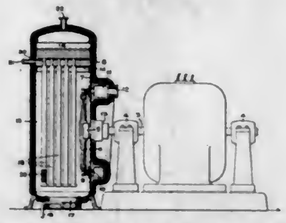
3. The combination with a valve, of automatic means for operating the same, said means comprising a plunger, a slidable member arranged to engage the valve stem, connections between said plunger and said valve for operating the latter, means associated with the slidable member for preventing movement of said slidable member until the plunger has moved through a portion of its stroke, and means also operating to prevent a reverse movement of the slidable member until the plunger has virtually completed its reverse stroke.

4. An automatic valve operating mechanism comprising a pressure chamber, a diaphragm disposed therein, a plunger arranged to be engaged by said diaphragm, a spring on the opposite side of said plunger from the diaphragm, a slidable member arranged to engage the valve for operating the same, a lever actuated by said plunger and arranged to engage said slidable member, means for locking said slidable member during the initial movement of the plunger in one direction, means for locking the slidable member during the initial movement of the plunger in the opposite direction, and common means for releasing both of said locking means at a predetermined point in the movement of said plunger.

5. An automatic valve operating mechanism comprising a pressure chamber, a diaphragm disposed therein, a plunger arranged to be engaged by said diaphragm, a spring on the opposite side of said plunger from the diaphragm, a slidable member arranged to engage the valve for operating the same, a lever actuated by said plunger and arranged to engage said slidable member, means for locking said slidable member during the initial movement of the plunger in one direction, means for locking the slidable member during the initial movement of the plunger in the opposite direction, and common means for releasing both of said locking means at a predetermined point in the movement of said plunger, said last-named means comprising an independently movable cam plate arranged to engage said locking means successively, said cam plate being operatively connected with the lever which operates said slidable member.

[Claims 6 to 9 not printed in the Gazette.]

1,192,775. COMBINED TURBINE AND VAPOR GENERATOR. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 26, 1913, Serial No. 803,179. Renewed Nov. 30, 1915. Serial No. 64,386. (Cl. 60—4.)



1. In an apparatus of the character described, the combination of a casing that is divided into two principal chambers between which there is a free exchange of heat, one of said chambers containing a liquid of high boiling point and its vapor, and the other a liquid of lower boiling point and its vapor, a turbine rotor mounted in the first named chamber and exhausting into it, means for discharging vapor derived from a fluid having a high boiling point to the rotor, a conduit for draining off the liquid due to condensation of said exhaust, a conduit for supplying a liquid of lower boiling point to the other part of said casing, and a conduit leading therefrom for carrying off the vapor of the last named liquid.

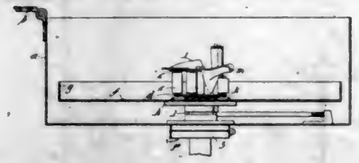
2. In an apparatus of the character described, the combination of a casing that is divided into two principal chambers between which there is a free exchange of heat, one of said chambers containing a liquid of high boiling point and its vapor, and the other a liquid of lower boiling point and its vapor, a shaft that extends into the casing, a bearing for the shaft located outside of the casing, a turbine rotor mounted on one end of the shaft and within the first named chamber and exhausting into it, means for discharging the vapor of a fluid having a high boiling point against the buckets on the rotor, a conduit for draining off the liquid due to condensation of said exhaust, a conduit for supplying a liquid of lower boiling point to the other chamber of said casing, and a conduit leading therefrom for carrying off the vapor of said liquid.

3. In an apparatus of the character described, the combination of a casing, a turbine rotor located therein and driven by the vapor of a liquid having a relatively high boiling point, tubes located in the casing and containing a liquid having a lower boiling point than the first, said tubes acting to condense the vapor discharged against them by the wheel and to vaporize the liquid contained in them, means for draining off the liquid of higher boiling point as it is condensed, a conduit for feeding the liquid to the tubes, and a conduit for carrying off the vapor generated by said tubes.

4. In an apparatus of the character described, the combination of a casing, a partition therein for dividing it into two principal chambers, tubes supported by the partition and extending into one of the chambers, a turbine rotor mounted in one of the chambers in the casing and discharging its exhaust against the outer surfaces of the tubes, means for discharging a vapor derived from a fluid having a high boiling point against the buckets on the rotor, a conduit for carrying off the liquid condensed by the tubes, a conduit for supplying water to the other chamber and to the interior of the tubes, and a conduit for conveying steam from the last named chamber.

5. In an apparatus of the character described, the combination of a casing that is divided into two principal chambers, the walls of one of said chambers acting as a boiler, a turbine rotor mounted in the other chamber and discharging its exhaust directly against said walls, means for supplying a vapor to the rotor which condenses at a temperature above that of boiling water, a conduit for draining off the liquid condensed by said walls, a conduit for supplying a liquid to the other chamber which is vaporized by the exhaust from the rotor, and a conduit located in a part of the last named chamber and above the level of the liquid therein for carrying off vapor.

1,192,776. APPARATUS OR DEVICE FOR WINDING AND PAYING OUT FILMS, TAPES, AND THE LIKE. JOHN EVANS, HERBERT GEORGE HOWITT, and WYNDHAM JAMES PRICHARD, Glamorgan, Wales. Filed May 16, 1914. Serial No. 839,068. (Cl. 88—18.7.)



1. Apparatus for paying out films, tapes or the like comprising in combination, a revoluble support, centrally-arranged guide-rolls rotating about fixed axes to guide the inner convolution of the film clear of the outer convolutions as it is unwound from the inner convolution, and an inner annular flange on the revoluble member which surrounds the guide-rolls, which extends within the inner convolution of the roll of film and which is of such a diameter that its outer periphery extends beyond the central guide-rolls considered in a direction away from the center of rotation.

2. Apparatus for paying out films, tapes or the like comprising in combination, a revoluble disk-like support, centrally-arranged guide-rolls rotating about fixed axes to guide the inner convolution of the film clear of the outer convolutions as it is unwound from the inner convolution, an inner annular flange on the revoluble member which surrounds the guide-rolls, which extends within the inner convolution of the roll of film and which is of such a diameter that its outer periphery extends beyond the central guide-rolls considered in a direction away from the center of rotation, and an outer flange at the outer periphery of the revoluble guide-member.

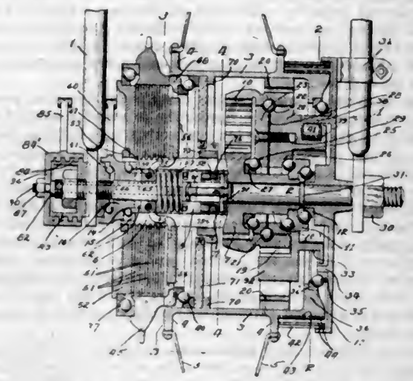
3. Apparatus for paying out films, tapes or the like comprising in combination, a revoluble disk-like support, centrally-arranged guide-rolls rotating about fixed axes to guide the inner convolution of the film clear of the outer convolutions as it is unwound from the inner convolution, an inner annular flange on the revoluble member which surrounds the guide-rolls, which extends within the inner convolution of the roll of film and which is of such a diameter that its outer periphery extends beyond the central guide-rolls considered in a direction away from the center of rotation, and a brake adapted to act upon the revoluble member to prevent said member overrunning the film.

4. Apparatus for paying out films, tapes or the like comprising in combination, a revoluble disk-like support, centrally-arranged guide-rolls rotating about fixed axes to guide the inner convolution of the film clear of the outer convolutions as it is unwound from the inner convolution, an inner annular flange on the revoluble member which surrounds the guide-rolls, which extends within the inner convolution of the roll of film and which is of such a diameter that its outer periphery extends beyond the central guide-rolls considered in a direction away from the center of rotation, an outer flange at the outer periphery of the revoluble guide-member, and a brake adapted to act upon the revoluble member to prevent said member overrunning the film.

5. Apparatus for paying out films, tapes and the like and comprising in combination an outer box or receptacle movably mounted on the machine in connection with which the apparatus is to be employed, an inner revoluble member adapted to support the film or the like, vertically-disposed guide-rolls rotatable about fixed axes and disposed centrally of the revoluble member, other guides for guiding the inner convolution above the outer turns of the film or the like within the box, and a brake adapted to act upon the revoluble member when required.

[Claims 6 to 9 not printed in the Gazette.]

1,192,777. VARIABLE-SPEED GEARING. MAYTON M. FISHER, Oakland, Cal. Filed Apr. 29, 1914. Serial No. 835,191. (Cl. 74—35.)



1. A power transmission mechanism of the character described comprising a stationary axle, a sleeve revoluble about said axle, a driving sprocket revoluble about said sleeve, a spoke hub revolubly mounted about said axle, an internally toothed gear attached to said hub, an eccentric disk revolubly mounted about said axle, rigidly connected internally and externally toothed gears revolubly mounted on said eccentric disk, a toothed gear formed on said sleeve adapted to mesh with said internally toothed gear, said integrally connected externally toothed gear meshing with said internally toothed gear attached to said hub, means for connecting said sprocket in driving relation to said sleeve, other means for connecting said sleeve in driving relation to said hub, and ratchet means for holding said eccentric stationary when said first-mentioned connecting means only is in engagement.

2. A power transmission mechanism of the character described comprising a stationary axle, supporting means for said axle, a sprocket revoluble about said axle, a sleeve revoluble on said axle, a disk clutch connecting said sprocket and said sleeve, means to actuate said clutch, a spoke hub revoluble on said axle, a jaw clutch adapted to connect said sleeve and said hub, a toothed spur gear on said sleeve, an eccentrically mounted internally toothed gear meshing with said spur gear, a second spur gear concentric with said internally toothed gear and rigidly mounted with respect thereto, an internally toothed gear concentric with said hub and rigidly attached thereto, said last mentioned gear meshing with said second spur gear, an eccentric disk revolubly mounted about said sleeve, said first mentioned internally toothed gear and said second mentioned spur gear revolubly mounted on the periphery of said eccentric disk, and ratchet means to prevent the forward rotation of said eccentric disk when said disk clutch only is in engagement with said sleeve.

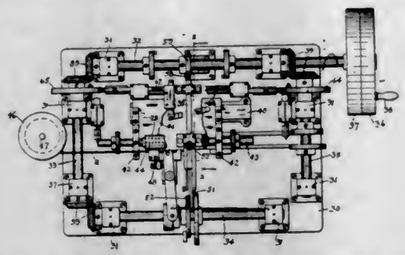
3. A power transmission mechanism of the character described comprising a stationary axle, a supporting structure for said axle, a spoke hub revolubly mounted about said axle, a sprocket revoluble about said axle, a sleeve

revoluble on said axle, a multiple disk clutch adapted to transmit the power from the said sprocket to said sleeve, means to actuate said clutch, an internally toothed clutch member slidably mounted on said sleeve, arms on said clutch member extending through slots in said sleeve to the interior thereof, means connected to said arms for moving said clutch member axially along said sleeve, a coacting clutch disk attached to the spoke hub, a toothed gear formed intermediate the ends of the sleeve, an annulus carrying an internally toothed gear and an externally toothed gear, said first mentioned gear meshing with said internally toothed gear, an internally toothed gear attached to the inside of said hub, said last mentioned gear meshing with the externally toothed gear on said annulus, an eccentric disk revolubly mounted on said sleeve, said annulus revolubly mounted on said eccentric disk said disk having a raceway formed on the side thereof, an end plate for said hub held stationary on said axle and having an inclined recess adjacent the top of said raceway, a roller in said inclined recess to prevent rotation of said disk in one direction and allow movement in the other direction.

4. A variable speed gearing comprising a driving member, a driven member, a fixed axle, a sleeve revoluble on said axle, clutch means for connecting said driving member to said sleeve and other clutch means for connecting said sleeve to said driven member, a toothed gear formed on said sleeve, an eccentric disk revolubly mounted on said sleeve, rigidly connected planetary internally and externally toothed gears revolubly mounted on said disk, an internally toothed gear attached to said driven member and ratchet means for holding said disk stationary with respect to said axle when said driving member is connected to said sleeve by said clutch means and when the driven member is actuated through said rigidly connected planetary gears.

5. A variable speed gearing, comprising a driving member, a driven member, a fixed axle, a sleeve revoluble on said axle, clutch means for connecting said driving member to said sleeve and other clutch means for connecting said sleeve to said driven member, a toothed gear formed on said sleeve, an internally toothed gear formed in said driving member, an eccentric disk revolubly mounted on said sleeve, planetary gears revolubly mounted on said disk and connecting the gear on said sleeve with the gear in said driven member and ratchet means for holding said disk stationary when driving said driven member through said first-mentioned connecting means and said planetary gears.

1,192,778. LINK-MESH MACHINE. EMIL F. HANSEN, Providence, R. I. Filed June 2, 1914. Serial No. 842,504. (Cl. 140—3.)

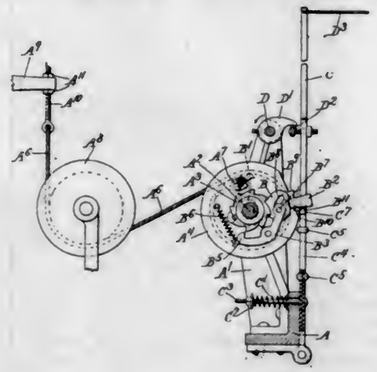


1. In a machine of the character described, link forming means, a cam for moving said forming means to bend the wire into a link, said moving cam being provided with means for causing the closing former to strike a blow at the last end of its inward stroke to set the link ends permanently in closed position.

2. In a machine of the character described, link forming means, a cam for moving said forming means to bend the wire into a link, said moving cam being provided with a protuberance for causing the closing former to strike a blow at the last end of its inward stroke to set the link ends permanently in closed position.

3. In a machine of the character described, link forming means, a cam for moving said forming means to bend the wire into a link, said moving cam being provided with means for causing the closing former to strike a blow at the last end of its inward stroke to set the link ends permanently in closed position, and adjustable means whereby the force of the blow may be regulated.

1,192,779. STOP MECHANISM. ANDREW P. HAWN, Laporte, Ind., assignor, by direct and mesne assignments, to John Wolf, Laporte, Ind. Original application filed Sept. 23, 1912, Serial No. 721,746. Divided and this application filed Feb. 27, 1913. Serial No. 750,946. (Cl. 74—46.)



1. The combination with a shaft, and ratchet wheel rigidly mounted thereon, a disk mounted for rotation thereabout, a ratchet lever pivoted on the disk for engagement with the ratchet wheel, a cam lever pivoted on the disk and means for rocking it to operate the ratchet lever.

2. The combination with a shaft and ratchet wheel rigidly mounted thereon, a disk mounted for rotation thereabout, a ratchet lever pivoted on the disk for engagement with the ratchet wheel, a cam lever pivoted on the disk and means responsive to the rotation of the disk for rocking it to operate the ratchet lever.

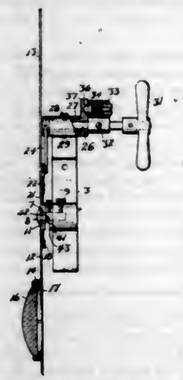
3. The combination with a shaft and ratchet wheel rigidly mounted thereon, a disk mounted for rotation thereabout, a ratchet lever pivoted on the disk for engagement with the ratchet wheel, a cam lever pivoted on the disk and means for rocking it to operate the ratchet lever, said means comprising a yielding stop and a finger projecting from the cam lever into the path of said stop.

4. The combination with a shaft and ratchet wheel rigidly mounted thereon, a disk mounted for rotation thereabout, a ratchet lever pivoted on the disk for engagement with the ratchet wheel, a cam lever pivoted on the disk and means responsive to the rotation of the disk for rocking it to operate the ratchet lever, said means comprising a yielding stop and a finger projecting from the cam lever into the path of said stop.

5. The combination with a shaft and ratchet wheel rigidly mounted thereon, a disk mounted for rotation thereabout, a ratchet lever pivoted on the disk for engagement with the ratchet wheel, a cam lever pivoted on the disk and means for rocking it to operate the ratchet lever, said means comprising a yielding stop and a finger projecting from the cam lever into the path of said stop, a lever upon which said stop is mounted said disk being notched, a stop on said lever adapted to yieldingly engage the notches on the disk.

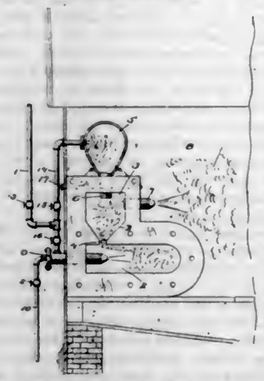
[Claims 6 to 11 not printed in the Gazette.]

1,192,780. DIRECTION-INDICATING DEVICE FOR VEHICLES. EDWARD H. HEBERN, Oakland, Cal. Filed Mar. 16, 1915. Serial No. 14,763. (Cl. 116—31.)



In a direction indicating device, brackets extending outwardly from the sides of a portion of the vehicle, arms rotatably secured on the outer ends of said brackets and having rearwardly extending pins, blocks between said arms and brackets having surfaces adapted to engage said pins and limit the swinging movement of the arms, said arms being formed at one end into arrow heads, and at the other end into lens holders, colored lenses held by said holders, on the inner side of the vertical lines through the pivots, a bearing carried by one of said brackets, a sleeve within said bearing, a shaft within said sleeve, an arm extending from one end of said shaft, resilient tying devices, adjustable as to length, connecting the outer end of said arm with the first-named arms below the pivots of the latter, an exteusion from said sleeve having recesses in its rear surface, a latch holder carried by said shaft, a spring-actuated latch carried by said holder and adapted to enter any one of said recesses, a handle carried by said shaft, and lamps carried by said brackets into registry with which said lenses can be swung.

1,192,781. GAS GENERATOR AND BURNER. HENRY B. HEMPHILL, Eldorado, Ill. Filed Jan. 27, 1915. Serial No. 4,662. (Cl. 158—56.)



1. A device of the class specified comprising a retort having communicating generating and mixing chambers, an injector extending into the generating chamber, a superposed steam super-heater communicating with the mixing chamber of the retort, valve equipped oil and steam supply pipes communicating with the injector and a steam supply pipe for the steam super-heater.

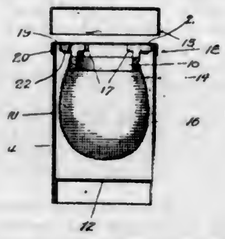
2. A device of the class specified comprising a retort having communicating generating and mixing chambers, an injector extending into the generating chamber, a superposed steam super-heater communicating with the mixing chamber of the retort, valve equipped oil and steam supply pipes communicating with the injector and a steam supply pipe for the steam super-heater, and a discharge nozzle extending through the forward wall of the mixing chamber of the retort into the combustion chamber of the furnace.

3. In a gas generator and burner for steam boiler furnaces, a retort or generator comprising lower and upper communicating generating and mixing chambers, respectively, a steam super-heater mounted on top of the retort and communicating with the mixing chamber thereof, and an injector extending into the generating chamber of the retort, oil and steam supply pipes for the injector, a steam pipe leading to the steam super-heater, and a discharge nozzle extending through the forward wall of the mixing chamber into the combustion chamber of the furnace.

4. In a gas generator and burner for steam boiler furnaces, a retort arranged in the combustion chamber of the furnace and comprising an elongated generating chamber with a curved or concaved forward wall and an upper mixing chamber communicating with the generating chamber, a steam super-heater arranged on top of the retort and communicating with the mixing chamber thereof, an injector extending through the rear wall of the retort into the generating chamber thereof, oil and steam supply pipes communicating with the injector, a steam pipe leading to the steam super-heater, valves for controlling the supply of oil and steam and a discharge nozzle extending through the forward wall of the mixing chamber of the retort into the combustion chamber of the furnace.

5. In a gas generator and burner for steam boiler furnaces, a retort arranged in the combustion chamber of the furnace and comprising an elongated generating chamber with a curved or concaved forward wall and an upper mixing chamber communicating with the generating chamber, a steam super-heater arranged on top of the retort and communicating with the mixing chamber thereof, an injector extending through the rear wall of the retort into the generating chamber thereof, oil and steam supply pipes communicating with the injector, a steam pipe leading to the steam super-heater, valves for controlling the supply of oil and steam and a discharge nozzle extending through the forward wall of the mixing chamber of the retort into the combustion chamber of the furnace, the lower half of the mixing chamber being formed with inwardly inclined or converging walls, leaving a relatively narrow or restricted passage between the mixing chamber and generating chamber of the retort.

1,192,782. INCANDESCENT MANTLE. ABRAHAM HERSKOVITZ, Chicago, Ill., assignor to Peerless Light Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 26, 1915. Serial No. 63,363. (Cl. 67—98.)



1. An incandescent mantle, comprising a gas mantle, a ring for suspending said gas mantle, and a ring-like support therefor, permanently secured to said ring and adapted to temporarily support the gas mantle and its ring in a carton; said support having a supporting member capable of resting on the edge of an open end of the carton

and having an element engaging the side of the carton wall for preventing sidewise movement of the mantle while in the carton.

2. An incandescent mantle, comprising a gas mantle, a ring for suspending said gas mantle, and an annular supporting member permanently secured to said ring, said supporting member being adapted to support the gas mantle and its ring in a carton, and having an annular, downturned flange arranged to bear against the side wall of the carton for preventing lateral play therein.

3. An incandescent mantle, comprising a gas mantle, a ring for suspending the same, a flanged annular supporting member, arranged to rest upon the open end of a carton containing the mantle, said supporting member having ring gripping tongues formed integral therewith for securing said supporting member to said ring.

4. Means for temporarily supporting incandescent gas mantles in cartons, comprising a ring portion having a downturned flange, and radial arms formed with lug engaging tongues for securing said ring portion to the mantle.

5. Means for temporarily supporting incandescent gas mantles in cartons, comprising a ring portion having a downturned annular flange, and radial lug engaging tongues for securing the ring portion to the mantle.

[Claims 6 and 7 not printed in the Gazette.]

1,192,783. ADHESIVE COMPOSITION. MONS R. ISAACS, Philadelphia, Pa. Filed July 6, 1914. Serial No. 849,248. (Cl. 87—17.)

1. A composition of matter containing casein, an alkaline earth hydroxid, and a terpene liquid.

2. A composition of matter containing casein, lime, and a terpene liquid.

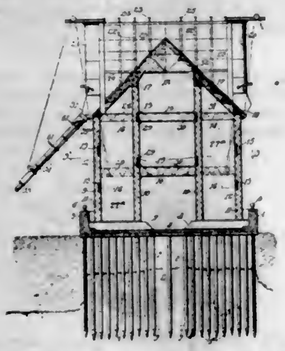
3. A composition of matter containing casein, lime, and spirits of turpentine.

4. A composition of matter for an adhesive, glue, or sizing, containing a proteid, an alkaline earth hydroxid, a terpene liquid, and sodium fluorid.

5. A composition of matter for an adhesive, glue, or sizing, containing a proteid, an alkaline earth hydroxid, a terpene liquid, sodium fluorid, and Portland cement.

[Claims 6 to 11 not printed in the Gazette.]

1,192,784. DOCK STRUCTURE. JOHN F. JACKSON, Milwaukee, Wis., assignor to Wisconsin Bridge & Iron Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 20, 1911. Serial No. 622,246. (Cl. 72—6.)



1. In a dock, a superstructure including a structural steel frame filled and incased with concrete, a series of pocket floors of inverted V shaped cross section carried by the frame, and steel and concrete pocket walls supported by the frame.

2. In a dock structure, a steel and concrete pocket structure having slanting floors of an inverted V shaped cross section and bays for the pockets having sheet steel fronts.

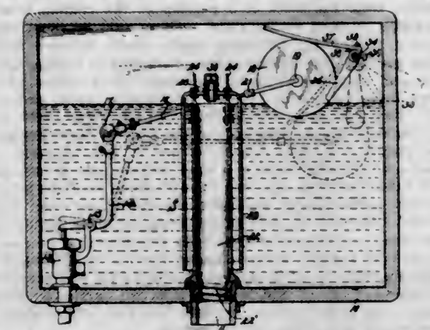
3. In a dock structure, a superstructure including a series of structural steel columns reinforced both longitudinally and transversely, a slanting pocket floor connecting the longitudinally adjacent columns, diaphragm walls between the pockets and curved steel bays for the pockets.

4. A dock structure including a series of structural steel and concrete columns, structural steel and concrete struts reinforcing the same, steel and concrete pocket floors of an inverted V shaped cross section bridging the space between said columns, and steel and concrete walls for said pockets.

5. A dock structure including a series of structural steel and concrete columns, a concrete web between the same, structural steel and concrete struts reinforcing the columns, a steel and concrete pocket floor carried by the columns, steel and concrete diaphragm walls for the pockets, and steel bays for the pockets.

[Claims 6 to 12 not printed in the Gazette.]

1,192,785. FLUSH-TANK SIPHON. JACOB S. KATZIN, Newark, N. J., assignor of one-fourth to Jacob S. Katzin, one-fourth to Harry Colton, one-fourth to Leo Samel, and one-fourth to Morris Scharff, Newark, N. J. Filed May 6, 1916. Serial No. 95,850. (Cl. 4—5.)



1. The combination with a low down float tank having permanent spud connection with the outlet and a vertically adjustable float to control the admission of water into the tank, of a siphon comprising a fixed valveless down leg secured into said spud and having at its upper end a plurality of vertically extending parallel threaded standards, said siphon also including a straight tubular up leg having a plurality of holes in its otherwise closed upper end through which said standards project, pairs of nuts to lock the up leg at a predetermined elevation above the bottom of the tank according to the desired outflow capacity, said up leg being formed of transparent material so that the water level with respect to the top of the down leg may be determined directly by inspection, and pivoted means acting downwardly upon the float to displace the water in the tank and open the inlet valve to cause the overflow of water into the down leg and start the siphonic action.

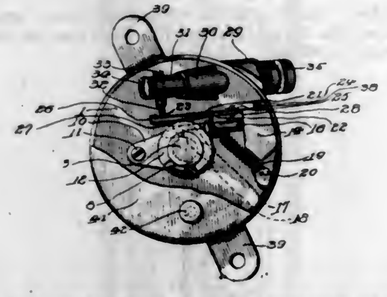
2. The combination with a flush tank and a valveless siphon to discharge the water therefrom, of a ball cock mechanism to refill the tank, said ball cock mechanism including a lever having a yoke-shaped arm adjustably connected thereto and a cylindrical float journaled in the free end of the yoke-shaped arm on a horizontal transverse axis, said yoke-shaped arm extending along both sides of the siphon, and lever mechanism acting with rolling friction upon the float to cause the depression of the same to initiate the siphonic action.

3. In a flush tank of the character set forth, the combination of a valveless siphon, an inlet valve, a lever connected to the inlet valve and including an arm extending along the siphon, a float pivoted for free rotation in the free end of the arm on a horizontal axis, a rock shaft journaled in the tank parallel to said axis, a handle

to rotate the rock shaft, and an arm connected to the rock shaft and bearing upon the float whereby when the rock shaft is rotated the float will be depressed to displace a certain amount of water and open the inlet valve to start the siphonic action.

4. In a flush tank mechanism, the combination with a tank and fixed outlet connections therewith including a spud; of a siphon including a valveless straight vertical down leg having a coarse thread at its lower end fitted into said spud, a straight tubular up leg of transparent material surrounding the upper end of the down leg, a plurality of standards extending between the two legs whereby the up leg is adjustably supported upon the down leg, the otherwise closed upper end of the up leg being provided with an opening, and a needle valve device fitted in said opening, said needle valve device comprising a nipple having an exterior thread from one end to the other and terminating in a central needle, and a cap having a hole in alinement with said needle threaded upon the upper end of the nipple; means to control the inlet of water so as to provide a normal water level close to the plane of the upper end of the down leg, said last mentioned means including a pivoted float; and means acting downwardly upon said float to cause the immediate overflow of the water into the down leg to start the siphonic action.

1,192,786. ELECTRIC CONTACT DEVICE. ARTHUR ATWATER KENT, Philadelphia, Pa. Filed Dec. 10, 1909, Serial No. 532,388. Renewed Oct. 22, 1915. Serial No. 57,379. (Cl. 123—166.)



1. In a contact device, a circular supporting plate or disk, a journal concentric thereto, an operating shaft mounted in said journal, a stationary and a movable contact point, means operated by said shaft to intermittently close and open a circuit through said contact points, means to support said stationary contact point, said insulated means extending obliquely to the axis of said shaft through said disk, the outer end of said means extending beyond the edge of said plate, and a binding post at said outer end and projecting beyond the edge of said disk.

2. In a contact device, the combination of a disk-like plate, an operating shaft concentric thereto, a ratchet carried by the end of said shaft, said shaft being provided with a circular groove adjacent said plate, a second plate fixed to said first mentioned plate and engaging said groove in said shaft to rotatably lock said shaft from longitudinal movement, and a contact actuating member operated by said ratchet.

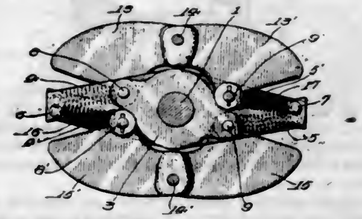
3. In a contact device, a combination of a supporting plate or disk, a journal concentric therewith and provided with a slot, an operating shaft rotatably mounted in said journal, said shaft being provided with a circular groove, a plate fixed to said disk and extending into said slot and engaging said shaft to rotatably lock said shaft from longitudinal movement, and means, operated by said shaft, to intermittently make and break a circuit.

4. In a contact device, a combination of a supporting plate or disk, an operating shaft concentric therewith, and a ratchet not greater than the size of said shaft carried by said shaft and adjacent the end of the same, a lifter operated by said ratchet, a movable contact member operated by said lifter, means to lock said shaft from longitudinal movement, a stationary contact point and insulated means extending obliquely to the axis of said shaft through said disk or plate and beyond the periphery of said disk, said ratchet locking device, lifter, movable contact point, and stationary contact member, and one end of stationary contact support, all being mounted upon one side and within the periphery of said plate, and a cup-shaped cover inclosing said parts and seated adjacent the periphery of said disk.

5. In a contact device, a movable contact member, comprising a flat spring, means to fixedly support said spring at one end, a stationary contact point adjacent the free end of said spring, a relatively inflexible member supported by and secured at one end to one side of said spring at a point near the point of support of said spring, said inflexible member being provided at its free end with an overhanging portion forming a stop against which said spring normally presses in a direction toward said stationary contact, and means to vibrate said inflexible member to bring said contact member alternately into and out of engagement with said stationary contact point.

[Claims 6 to 18 not printed in the Gazette.]

1,192,787. AUTOMATIC SPARK-ADVANCING MECHANISM. ARTHUR ATWATER KENT, Philadelphia, Pa. Filed Feb. 21, 1911. Serial No. 609,859. (Cl. 123—117.)



1. In an automatic spark advancing mechanism, a rotatable shaft, a pair of complemental members on said shaft one fixed and the other loose with respect to said shaft, a pair of diametrically oppositely disposed weights pivoted on each member, the free ends of the adjacent weights on opposite members being pivoted together, and springs for normally holding said weights in their inmost positions, each spring being attached to a weight and to a fixed point in the complemental member.

2. In an automatic spark advancing mechanism, a rotatable shaft, a pair of complemental members on said shaft one loose and the other fixed with respect to said shaft, a pair of oppositely disposed weights pivoted on each of said members, the free ends of said weights on opposite members being pivoted together, and yielding means for normally holding said weights in their positions nearest to the axis of said shaft.

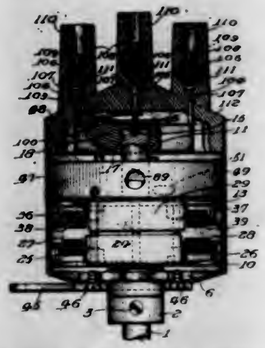
3. In an automatic spark advancing mechanism, a rotatable shaft, a pair of complemental members on said shaft, one of the said members being fixed and the other loose with respect to said shaft, a pair of oppositely disposed weights pivoted on each of said members, with the free ends of adjacent weights on opposite members pivoted together, and yielding means for normally holding said complemental members in a fixed position relative to each other when the shaft is not rotated and to act in opposition to the centrifugal force exerted by said weights when said shaft is rotated.

4. In an automatic spark advancing mechanism, a rotatable shaft, a pair of complemental members on said shaft, one loose and the other fixed with respect to said shaft, means carried by said members to cause the said member which is loose with respect to said shaft to change its angular position on said shaft with respect to said member which is fixed upon said shaft, in substantially direct proportion to variations in the rotative speed of said shaft.

5. In an automatic spark advancing mechanism, a rotatable shaft, a pair of complemental members on said shaft one fixed and the other loose with respect to said shaft, a weight pivoted on each of said members, the free and adjacent ends of said weights being pivoted together and a spring normally holding said weights in their inmost positions, said spring being attached to a weight and to said member to which said weight is not pivoted.

[Claims 6 to 40 not printed in the Gazette.]

1,192,788. ELECTRIC IGNITING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. ARTHUR ATWATER KENT, Philadelphia, Pa. Filed July 5, 1912. Serial No. 707,725. (Cl. 123—117.)



1. In an igniting mechanism, the combination with a casing, of a contact device, a distributer, and a governor for controlling the operation of said contact device, all mounted within said casing, and yieldingly supported with respect to the same.

2. In an igniting mechanism the combination with a casing, of a contact device, a distributer, and a governor for controlling the operation of said contact device and said distributer, all mounted within said casing and yieldingly supported with respect thereto.

3. In an igniting mechanism the combination with a casing, of a contact device, a distributer, and a governor for controlling the operation of said contact device, all mounted within said casing, and yieldingly supported with respect thereto, said casing being manually rotatable with respect to said governor.

4. In an igniting mechanism the combination with a casing, of a contact device, a distributer, and a governor for controlling the operation of said contact device, all mounted within said casing, and means to yieldingly support said contact device with respect to said casing.

5. In an igniting mechanism a combination with a casing, of a contact device, a distributer, and a governor for controlling the operation of said contact device, all mounted within said casing, said governor being yieldingly mounted with respect to said casing.

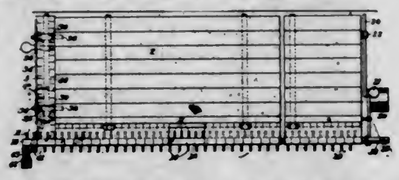
[Claims 6 to 58 not printed in the Gazette.]

1,192,789. GLASS-CUTTING TABLE. GEORGE W. KLAGES, Pittsburgh, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed July 1, 1914. Serial No. 848,368. (Cl. 33—32.)

1. A glass-cutting table having two sets of gage devices arranged in accordance with different systems, movable members carrying said devices, and shifting means for said members for displacing the devices of one set and bringing those of the other set into operative position, substantially as described.

2. A glass-cutting table, having a rotatable member provided with two sets of gage pins, and means for holding said member in each of its operative positions, substantially as described.

3. In a glass-cutting table, a member having two sets of gage pins for the cutting rule, one set of said pins being arranged in accordance with one system and the other set in accordance with another system, and shifting means for said member to bring either set of pins into operative position, substantially as described.

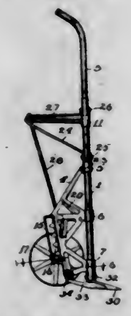


4. In a glass-cutting table, a member having two sets of gage pins for the cutting rule, one set of said pins being arranged in accordance with one system and the other set in accordance with another system, and shifting means for said member to bring either set of pins into operative position to the exclusion of the other, together with scales marked in accordance with the settings of the pins of respective sets, substantially as described.

5. A glass-cutting table having two members, each provided with two sets of gage devices, means for actuating said members to bring either set of gage devices into operative position, and means for holding said members in their adjusted positions, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,192,790. HAND-TRUCK CONSTRUCTION. FRANK ELLSWORTH KNAPP, Chicago, Ill. Filed Sept. 24, 1914. Serial No. 863,266. (Cl. 21—65.)



1. In a device of the class described tubular sill members, handles inserted therein, T-elements engaged on said sill members, cross pieces engaged in said T-elements, a truss bracket integral with certain of said T-elements extending longitudinally of the sill members, and interfitting means for reinforcing the same.

2. In a device of the class described tubular side sills, handles inserted in the rear ends thereof, a toe member extending across at the front end of said sills, integral rods on said toe member extending within said tubular side sills, truss brackets, one for each of said side sills, tubular T-elements integral therewith through which said side sill members are engaged, tubular cross piece members extending between said sill members with their ends inserted in said T-elements, and bolts extending through certain of said T-elements and sill members and said respective handle and toe members to hold all of said parts rigidly connected.

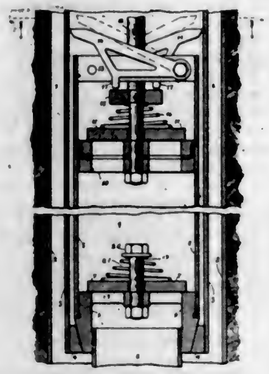
3. In a hand truck of the class described tubular side sill members, handles inserted therein at the ends thereof, a toe member, projections thereon inserted into the other ends of said side sill members, truss brackets, one disposed beneath each of said side sill members, lugs integrally formed thereon adapted to engage said toe member to reinforce the same, a plurality of tubular T-elements integral with each of said truss brackets through which said side sill members extend, wheels journaled on said truss brackets, and supporting legs connected at the rear of said truck to the sill members thereof.

4. In a truck of the class described a frame comprising side sill members, T-elements through which said side sill members extend, tubular cross pieces, the ends thereof inserted and secured in said T-elements, handles inserted into said side sill members at the rear end of the truck, a toe at the forward end of said truck, integral rod extensions on said toe inserted into said sill members, a truss bracket integral with certain of said T-elements and disposed beneath each of said tubular side sill members, legs connected to said side sill members at the rear of the truck, and interfitting brace members connected between said legs and said truss brackets.

5. In a truck of the class described tubular side sill members, tubular cross pieces connected thereto, truss brackets rigidly connected to each of said tubular side sills, wheels journaled on said brackets, legs at the rear of the truck, and interfitting compression and tension brace members between said truss brackets and said legs.

[Claims 6 and 7 not printed in the Gazette.]

1,192,791. REMOVABLE DEEP-WELL-PUMP CYLINDER. FERDINAND W. KROGH, San Francisco, Cal. Filed Oct. 10, 1912. Serial No. 724,946. (Cl. 103—53.)



1. In combination with the casing of a deep well pump, a pump cylinder located therein provided with a block secured across the top thereof, dogs having pointed ends pivoted to said block adapted to impinge the inner surface of said casing and hold said cylinder in position therein.

2. In combination with the casing of a deep well pump, a pump cylinder located therein having a block secured across the top thereof, holding device pivoted to said block adapted to engage said casing and hold said cylinder in position therein, and means to release said holding device.

3. In combination with the casing of a deep well pump, a pump cylinder provided with a block secured across the top thereof, dogs pivoted to said block having pointed ends adapted to engage said pump casing and hold said pump cylinder in position therein, ears on said dogs and a pump rod having means engaging said ears for releasing said dogs and thereby permitting the withdrawal of said cylinder.

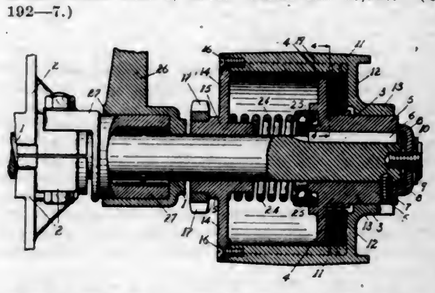
4. In a device of the character described, comprising a well casing, a pump casing in said well casing, a seat located at the bottom of said pump casing, a valve block adapted to rest on said seat, a pump cylinder fixed to said valve block, a block having threaded means engaging diametrically the top of said pump cylinder, dogs having pointed ends pivoted to the sides of said threaded block engaging said pump casing and a pump rod projecting centrally through said threaded block carrying means for releasing said dogs from engagement with said pump casing.

1,192,792. EAR-TAG. FRANK X. LENK, Salt Lake City, Utah. Filed Apr. 15, 1916. Serial No. 91,483. (Cl. 40—3.)



A device of the class described consisting of a single piece of sheet metal bent to form two opposed side portions one of which has a triangular opening cut therein, a channel shaped cutting and securing blade formed on and bent at right angles to the other side portion, and provided with shoulders in line with the inner face of said side portion to receive the pressure of the securing tongs in applying and securing the tag on the ear of the animal.

1,192,793. CLUTCH. HENRY MANTHEY, Lansing, Mich., assignor to The "New Way" Motor Company, Lansing, Mich. Filed Feb. 8, 1916. Serial No. 76,917. (Cl. 192—7.)



1. In a clutch, the combination of a shaft bearing, a driving shaft extended beyond the bearing, a driving clutch member disposed at the outer end of said shaft and keyed thereto, said driving clutch member having a flange portion at its inner end and a hub-like portion at its outer end constituting a bearing, a drum-like driven clutch member embracing said driving clutch member and provided with inner and outer heads having bearing hubs mounted on said shaft and driving clutch member, respectively, for rotative and axial movement, coacting driving and driven friction disks interposed between said driving member flange and driven member outer head and connected to said members, a coiled spring disposed with its inner end on the inner bearing hub of said driven member for actuating said clutch members to engaging position, a thrust bearing interposed between the outer end of said spring and said driving clutch member, a lever support mounted at the inner end of said driven clutch member, a lever mounted for rotative adjustment on said support and having a cam slot therein, said support being provided with a pin engaging said slot, so that when said lever is rocked to one position it shifts said driven clutch member longitudinally releasing the clutch, and a sprocket mounted on the inner bearing hub of said driven member.

2. In a clutch, the combination of a shaft bearing, a driving shaft extended beyond the bearing, a driving clutch member disposed at the outer end of said shaft and keyed thereto, said driving clutch member having a flange portion at its inner end and a hub-like portion at its outer end constituting a bearing, a drum-like driven clutch member embracing said driving clutch member and provided with inner and outer heads having bearing hubs mounted on said shaft and driving clutch member, respectively, for rotative and axial movement, coacting driving and driven friction disks interposed between said driving member flange and driven member outer head and connected to said members, a coiled spring disposed with its inner end on the inner bearing hub of said driven member for actuating said clutch members to engaging

position, a thrust bearing interposed between the outer end of said spring and said driving clutch member, and a shifting lever mounted between said shaft bearing and said driven clutch member.

3. In a clutch, the combination of a shaft bearing, a driving shaft extended beyond the bearing, a driving clutch member disposed at the outer end of said shaft and keyed thereto, said driving clutch member having a flange portion at its inner end and a hub-like portion at its outer end constituting a bearing, a drum-like driven clutch member embracing said driving clutch member and provided with inner and outer heads having bearing hubs mounted on said shaft and driving clutch member, respectively, for rotative and axial movement, coacting driving and driven friction disks interposed between said driving member flange and driven member outer head and connected to said members, a coiled spring disposed between the inner end of said driven clutch member and the inner head of said driving clutch member for actuating said clutch members to engaging position, a lever support mounted at the inner end of said driven clutch member, and a clutch disengaging lever mounted on said support.

4. In a clutch, the combination of a shaft bearing, a driving shaft extended beyond the bearing, a driving clutch member disposed at the outer end of said shaft and keyed thereto, said driving clutch member having a flange portion at its inner end and a hub-like portion at its outer end constituting a bearing, a drum-like driven clutch member embracing said driving clutch member and provided with inner and outer heads having bearing hubs mounted on said shaft and driving clutch member, respectively, for rotative and axial movement, coacting driving and driven friction disks interposed between said driving member flange and driven member outer head and connected to said members, a coiled spring disposed between the inner end of said driven clutch member and the inner head of said driving clutch member for actuating said clutch members to engaging position, and means for shifting said driven clutch member for releasing said clutch.

5. In a clutch, the combination of a shaft bearing, a driving shaft extended beyond the bearing, a driving clutch member disposed at the outer end of said shaft and keyed thereto, a drum-like driven clutch member embracing said driving clutch member and provided with inner and outer bearing hubs mounted for rotative and axial movement, coacting driving and driven friction disks connected to said driving member and driven member, respectively, a coiled spring disposed between the inner end of said driven clutch member and said driving clutch member for actuating said clutch members to engaging position, a lever support mounted at the inner end of said driven clutch member, and a clutch disengaging lever mounted on said support.

1,192,794. PROCESS OF TREATING TEXTILE MATERIALS AND ARTICLE PRODUCED THEREBY. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Original application filed Jan. 19, 1912, Serial No. 672,261. Divided and this application filed May 13, 1915. Serial No. 27,760. (Cl. 91—68.)

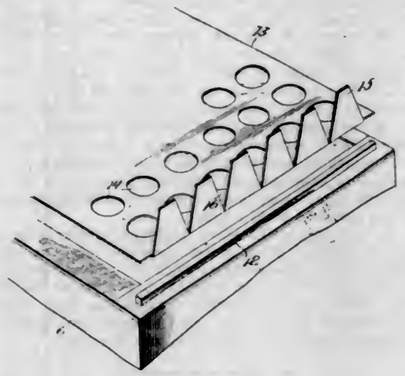
1. The process of treating textile material which consists in disposing fibers in substantially parallel relation, and exhausting and treating them with a strengthening or binding medium.

2. The process of treating textile material which consists in carding or combing the material into substantially parallel lines as to its fiber, and exhausting and binding the fibers together by means of a strengthening or binding medium.

3. An article embodying fiber extending in parallel relation, and a strengthening or binding medium in close contact with the ducts of and between and holding the fibers together.

4. An article embodying fibers in groups, wherein the fibers of each group lie parallel with each other, and a strengthening or binding medium in close contact with the ducts of and holding the fibers together.

1,192,795. EGG-CANDLER. IVAN J. RHINE, Pierson, Iowa. Filed July 3, 1915. Serial No. 38,000. (Cl. 99—6.)

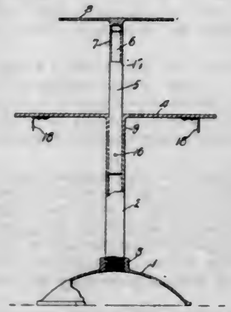


1. In an egg tester, a candler, a tray for transferring the fillers from a crate, together with the eggs therein to the candler and for placing the fillers and eggs into a crate, said tray being formed with a plurality of openings coinciding with the cells of the fillers and having a plurality of projections along one edge to engage between the projecting ends of the filler strips.

2. In an egg tester, a candler, a tray for transferring the fillers from a crate, together with the eggs therein to the candler and for placing the fillers and eggs into a crate, said tray being formed with a plurality of openings coinciding with the cells of the fillers and having a plurality of projections along one edge to engage with an edge of the filler, said projections having their adjacent edges outwardly flared to form guides to properly position the tray when placing the same in the crate.

3. In means for testing eggs, a sheet metal tray provided with a plurality of openings coinciding with the cells of a filler and having an edge portion bent substantially at a right angle and having V-shaped spaces formed therein to provide projections for engaging an edge of the filler intermediate the projecting ends of the filler strips.

1,192,796. TABLE FOR SUPPLYING AN INK FILM FOR MAKING FINGER-PRINTS. PATRICK RYAN, New York, N. Y. Filed Sept. 8, 1915. Serial No. 49,521. (Cl. 101—71.)



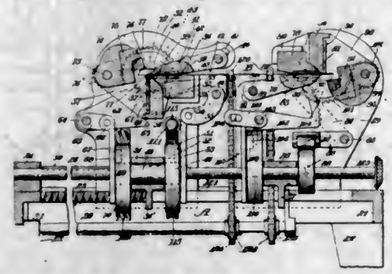
1. In a device of the class described, the combination with a standard, of an ink-distributing table supported loosely on the upper end of the standard, and an ink-applying table supported revolubly on said standard parallel to the first table.

2. In a device of the class described, the combination with a standard, a rod supported therein and having a shoulder, an ink-distributing table having a socket engaging said rod and resting on the shoulder, and an ink-applying table having a sleeve-like central socket revolubly carried by said rod and resting on the upper end of the standard, the latter table being parallel to the first and being arranged so that a film of ink may be spread thereon by means taking the ink from the top table.

3. In a device of the class described, the combination with a standard, of a table mounted thereon for permitting the ink to be applied thereto for transference to the fingers, said table having peripheral notches and alternate projections.

4. The combination with supporting means, of a revoluble table for applying ink to the fingers of the hand in the making of finger prints, said table having peripheral notches and alternate projections to permit the inking fingers of a hand having one or more stiff or crippled fingers.

1,192,797. SHEET-METAL-EDGING MACHINE. EDWARD W. SALMON, Jr., Baltimore, Md., assignor of one-half to Christian H. Nelson, Baltimore, Md. Filed Sept. 30, 1912, Serial No. 723,255. Renewed Oct. 11, 1915. Serial No. 55,343. (Cl. 153—17.)



1. A machine of the character described including in combination, a frame, means supported on the frame to hold the sheet material, means for bending the sheet material across one end thereof to form a hook, and means for cutting the material entirely across the bent end in gaged relation to the bend of the hook and during the bending operation.

2. A machine of the character described, including in combination, a frame, means supported on the frame to hold the sheet material, means for bending the sheet material across one end thereof to form a hook, and means for cutting the material entirely across the bent end in gaged relation to the bend of the hook and prior to the complete formation of the hook.

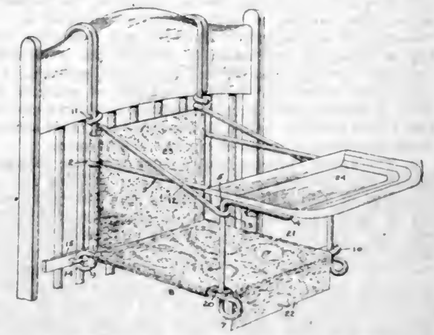
3. A machine of the character described, including in combination, a frame, means supported on the frame to hold the sheet material, means for bending the sheet material across each end thereof to form a hook at each end of the material, and means for cutting the material entirely across its ends in gaged relation to the bends of the hooks and during the bending operation.

4. A machine of the character described comprising means for clamping sheet material to hold the same firmly, and means for bending the sheet material across one end thereof and simultaneously cutting the material entirely across the bent end in gaged relation to the bend of the hook.

5. A machine of the character described including in combination a frame, pairs of uprights mounted on the frame, a drive shaft journaled on the frame, a fixed clamping member mounted in each pair of uprights, a movable clamping member mounted in each pair of uprights for operation with the fixed clamping members, each movable clamping member having an inclined face, means operable between each pair of uprights to bend the sheet material against the inclined faces of the movable clamping members, and means operable under the influence of the aforesaid bending means and adapted to coöperate with the latter to shear the ends of the sheet during the bending of the ends of the sheet into engagement with the flat faces of the movable clamping members.

[Claims 6 to 31 not printed in the Gazette.]

1,192,798. CHILD'S SEAT. ALLEN E. SCOTT, San Francisco, Cal. Filed Oct. 6, 1913. Serial No. 793,634. (Cl. 155—26.)

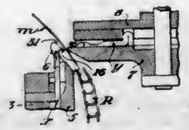


1. In a frame for a child's seat formed of a single piece of wire, an arm portion extending forward from the back to the front, there turned down to form the front standard, thence back to form the seat rail, thence upward to form the back standard, bent into a hook at the upper end of said standard and returned on itself and continued forward and downward and connected to the front standard thereby forming a brace.

2. In a seat frame for a child's seat formed of a single piece of wire, an arm portion extending forward from the back to the front, there returned on itself to form a table supporting portion and turned down to form the front standard, thence back to form the seat rail, thence upward to form the back standard, bent into a hook at the upper end of said standard and returned down on itself and therefrom outwardly to engage the front standard.

3. In a seat frame for a child's seat formed of a single piece of wire, an arm portion attached to a back standard and extending forward therefrom to the front, there returned on itself to form a projecting double arm portion for supporting and holding a table, and turned down to form the front standard, thence looping back to form the seat rail and a support for a front holding bar, thence looping upward to form the back standard and a support for a back holding bar and bent into a hook at the upper end of said standard.

1,192,799. METHOD OF KNITTING RIBBED-FABRIC SECTIONS. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Original application filed Dec. 21, 1911, Serial No. 667,224. Divided and this application filed July 23, 1914. Serial No. 852,606. (Cl. 66—4.)



1. The art of knitting sections of ribbed fabric comprising first forming on a suitable series of instruments free of previous fabric a plain fabric with then knitting in continuation thereof an extent of ribbed fabric and then casting off the completed section, whereby said end-finish is free from parts of previous fabrics and said section terminates in a free raveling course.

2. The art of knitting sections of ribbed fabric for use in articles to be completed by another knitting operation comprising first forming upon suitable series of instruments free of previous fabric a turned welt constituting a fast end-finish, then knitting an extent of fabric in continuation thereof, and then casting off of said instruments the terminal course of the completed section whereby said section ends in a course of loops free to be raveled back to a course to be engaged by fabric begun thereat.

3. The art of knitting fabrics comprising the following steps: first forming a welt, thereafter knitting in continuation of said welt ribbed fabric, and thereafter casting off from the instrument or instruments of manufacture the last knit course, and thereafter repeating said operations whereby to form a plurality of separate sections of ribbed fabric each comprising a welt at one end and a free raveling course at the other end, said sections being connected by a run or runs of unknit yarn.

4. The art of knitting fabrics comprising the following steps: first forming a welt, thereafter knitting in continuation of said welt ribbed fabric, and thereafter casting off from the instrument or instruments of manufacture the last knit course whereby a section of ribbed fabric comprising a welt at one end and a free raveling course at the other end is formed, and thereafter knitting an article having an initial course engaged with a course of said section between its ends and raveling the fabric between said last knit course and said intermediate course.

5. The art of knitting fabric comprising first knitting a fast end finish, then knitting ribbed fabric, and then casting off of the instrument or instruments of manufacture the last knit or terminal course, whereby a section of ribbed fabric characterized by a fast end-finish at one end and a free raveling course at the other end is formed, and thereafter knitting fabric in continuation of a course intermediate of said ribbed section, said last-mentioned operation including raveling that portion of said ribbed section between said terminal course and said intermediate course.

[Claims 6 and 7 not printed in the Gazette.]

1,192,800. KNIT STOCKING OR SOCK. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Sept. 2, 1914. Serial No. 859,755. (Cl. 66—4.)



1. A seamless stocking comprising a foot portion and toe-pocket adapted to be closed by a sewed seam and having an intergral welt at the edges adapted to be sewed together by said seam.

2. A seamless stocking having a fast beginning edge at the top thereof, and comprising a foot portion having a toe-pocket ending in an integral welt.

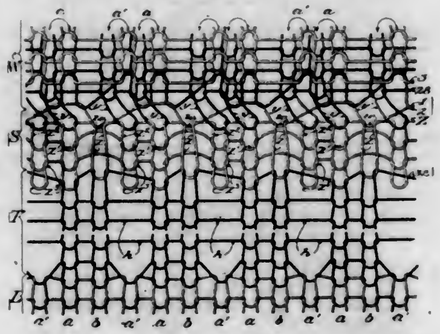
3. A stocking of knit fabric having a foot portion provided with a toe seam consisting of a line of sewing stitches uniting parts of an integral welt formed in the fabric of the foot portion.

4. A circular seamless stocking having seamless heel and toe pockets, and a toe seam comprising a welt surrounding the tube of fabric folded into abutting relation and united by sewing stitches.

5. As an article of manufacture, a stocking having an integral outturned welt at the top of the leg thereof and an integral outturned welt at the end of the toe portion thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,192,801. WELTED KNIT FABRIC AND ART OF KNITTING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Oct. 22, 1914. Serial No. 868,110. (Cl. 66—4.)



1. In a knit fabric, an integral top and welt each of fabric containing mis-stitched lines, and each having the same number of needle wales, some only of the needle wales of the welt being in line with the mis-stitched lines of the top, and other wales being continuous through both fabrics.

2. A knit fabric having a welt comprising adjacent needle wales separated by wales of un-knit yarn, certain needle wales of the welt continuing into adjacent fabric of the same texture, certain wales of said adjacent fabric comprising loops engaging the initial course of the welt.

3. A knit fabric having a welt comprising adjacent needle wales separated by wales of un-knit yarn, certain needle wales of the welt continuing into adjacent fabric, other wales of the welt terminating in cast-off loops, certain wales of said adjacent fabric comprising loops engaging a selvage course of the welt.

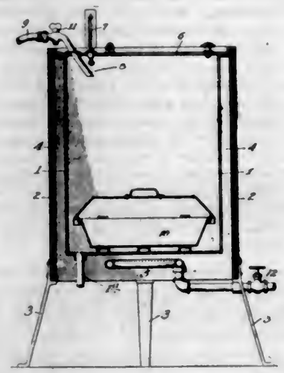
4. A knit fabric having a welt comprising adjacent needle wales separated by wales of un-knit yarn, certain needle wales of the welt continuing into adjacent fabric, other wales of the welt terminating in cast-off loops, said adjacent fabric comprising a structure for locking the cast-off loops from raveling and including loops engaging the initial course of the welt.

5. A knit article having an integral welt in which there are wales of knit loops continuing into the adjacent part of the article; some of said wales being standing wales continuous with solid knit adjacent fabric and some being wales terminating in dropped stitches, said adjacent fabric having a wale initiated by a withheld loop engaging an initial course of the welt.

[Claims 6 to 9 not printed in the Gazette.]

1,192,802. ART OF COOKING. CHARLES B. TRESCOTT, Chicago, Ill., assignor, by mesne assignments, to Automatic Oven Company, Chicago, Ill., a Corporation of Illinois. Filed May 7, 1915. Serial No. 26,530. (Cl. 99—11.)

1. In the art of low-temperature cooking, the process which consists in heating the air in an oven, in which the cooking is carried on, to and maintaining it at a temperature below 212° F., spraying into the heated atmosphere water in sufficient quantity to saturate the hot air, and maintaining a continuous supply of the sprayed water throughout the cooking operation.



2. In the art of low-temperature cooking, the process which consists in heating the air in an oven, in which the cooking is carried on, to and maintaining it at a temperature below 212° F., spraying into the top portion of the oven water to drop through the ascending hot air therein and in sufficient quantity to saturate said air, and maintaining a continuous supply of the sprayed water throughout the cooking operation.

3. In the art of low-temperature cooking, the process which consists in introducing into an oven the matter to be cooked in a loosely-covered container, heating the air in the oven to and maintaining it at a temperature below 212° F., spraying into the top portion of the oven water to drop through the heated atmosphere therein and in sufficient quantity to saturate said air, and maintaining a continuous supply of the sprayed water throughout the cooking operation.

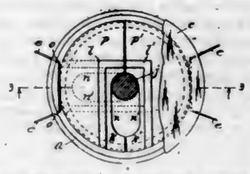
1,192,803. ELECTRICALLY-ILLUMINATED DISPLAY DEVICE. JAMES E. TUCKER and AUBREY B. LEECH, Los Angeles, Cal. Filed Feb. 23, 1915. Serial No. 9,792. (Cl. 40—130.)



1. In an electrical display device, the combination with a back-ground formed to define the outline of a picture, of a plurality of lights distributed thereover, relatively opaque plates spaced from the back-ground and arranged to conceal a portion only of said lights thereby forming silhouettes to produce pictorial effects, and supporting means for said plates.

2. In an electrical display device, the combination with a back-ground formed to define the outline of a picture, of outstanding pins mounted on said back-ground, a plurality of lights distributed over said back-ground, relatively opaque plates spaced from the back-ground and arranged to conceal a portion only of said lights thereby forming silhouettes to produce pictorial effects, and sleeves secured to said plates and slidingly engaged with said pins.

1,192,804. CONCRETE-INSERT. WILLIAM A. VON WOLFFRADT, Cleveland, Ohio, assignor of one-half to Ford Donley, Cleveland, Ohio. Filed Oct. 13, 1913. Serial No. 794,812. (Cl. 72—105.)



1. An insert for plastic hardening material comprising an annular shell having a larger diameter at one end than at the other, a cover for the larger end of said shell, and means supportable within said shell whereby an anchor-bolt may be secured to and adjusted in parallel axial alinement to positions in more than one line across the smaller end of said shell.

2. An insert for plastic hardening material comprising a hollow flaring shell covered at its larger end, a circular aperture at the smaller end of said shell, and means insertible through said aperture whereby an anchor-bolt may engage said shell and be adjusted in parallel axial alinement to any position within the limits of said aperture.

3. An insert for plastic hardening material comprising an annular conical shell provided with a cover for its larger end, and a pair of semi-circular plates supportable upon and within the smaller end of said shell and adapted to receive and hold an anchor-bolt therebetween.

4. An insert for plastic hardening material comprising an annular conical shell provided with a cover for its larger end and having an internal flange at its smaller end, and a pair of semi-circular anchor-plates rotatably adjustable and supportable within the smaller end of said shell against said flange and adapted to receive and hold a bolt between them.

5. An insert for plastic hardening material comprising an annular conical shell internally flanged at its smaller end, a cover for the larger end of said shell, a pair of semi-circular plates rotatable in said shell against its flange and opposable to each other at their diametrical edges, and a radial slot formed in the opposable edges of said plates adapted to receive and hold an anchor-bolt.

[Claims 6 to 12 not printed in the Gazette.]

1,192,805. CARDING-MACHINE. FRITZ VÖSTER and MAX JUNGBAUER, Augsburg, Germany, assignors, by mesne assignments, to Anglo-American Textile Machinery Company, Abington, Mass., a Corporation of Massachusetts. Filed Dec. 27, 1909. Serial No. 535,093. (Cl. 19—15.)



1. In a carding machine the combination with a carding surface of a fixed tube and a rotatable tube arranged parallel to the carding surface and one within the other, the said tubes being provided with slots angularly arranged with respect to each other so that as the rotatable tube turns relatively small portions of the slots coincide to form an opening that gradually moves longitudinally of the tubes, a vacuum pump, a collecting box between the suction tubes and the pump, and pipes connecting the suction pipes and the collecting box and the collecting box and the pump.

2. In a carding machine the combination with a carding surface of a fixed tube and a rotatable tube arranged par-

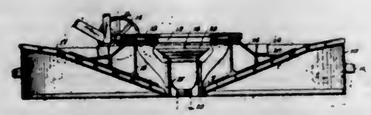
allel to the carding surface and one within the other the fixed tube being provided with a longitudinal slot and the rotatable tube with a spiral slot so that as the rotatable tube turns the slots will coincide to form an opening that gradually moves longitudinally of the tubes across the carding surface; a vacuum pump, a collecting box, and pipes connecting the suction tubes and the collecting box and the collecting box and the pump.

3. In a carding machine the combination with a carding surface of a fixed inner tube arranged parallel to the carding surface and having a longitudinal slot therein, a rotatable outer tube mounted on the inner tube and having a spiral slot so that as it turns upon the inner tube its spiral slot will coincide with the longitudinal slot in the said inner tube to form an opening that gradually moves longitudinally of the tubes across the carding surface, a vacuum pump, a collecting box, and pipes connecting the suction tubes to the collecting box and the collecting box to the pump.

4. In a carding engine, the combination with a carding surface, of a vacuum pump, a collecting box, a pipe connecting the pump and the collecting box, a cleaning member connected with said suction box and provided with an elongated suction opening parallel with the carding surface, and means for connecting a relatively small portion of said opening with the atmosphere, and including means for automatically varying the location of the connected portion of said opening throughout the length of the latter.

5. In a carding engine, the combination with a carding surface, of a vacuum pump, a collecting box, a pipe connecting the pump and the collecting box, a cleaning member comprising a pipe provided with a longitudinal slot parallel with the carding surface, and a rotatable member mounted on said pipe and provided with means for connecting a relatively small portion of said slot with the atmosphere and constructed to automatically vary the position of the connected portion with respect to the ends of said slot, and means for connecting said pipe with said suction box.

1,192,806. ORE-CLASSIFIER. WILLIAM HENRY WEIGAND, Trojan, S. D. Filed June 19, 1914. Serial No. 846,080. (Cl. 83—87.)



1. In a classifier, a concave vessel having a raised central outlet, a nozzle in said outlet, a plurality of annular, upwardly-expanding frustocone-shaped members removably associated with each other and with said nozzle and forming therewith a funnel, the level and size of which funnel in the vessel may be varied by means of said removable frustocone-shaped members, and a stirring mechanism associated with the vessel and adapted to direct the mass within the vessel from the central outlet toward the periphery of the vessel.

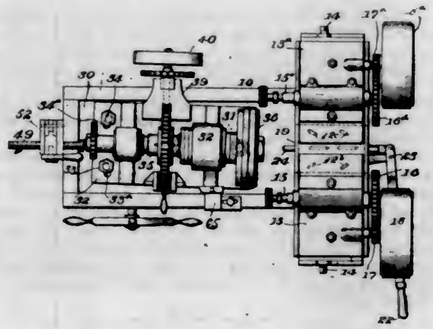
2. In an ore classifier, a concave vessel having a raised, central tubular member forming a central outlet of the vessel, a table associated with the tubular member, means for rotating the table, brackets from said rotating means, arms associated with said brackets and extending parallelly to the surface of the vessel, blades on said arms adapted to scrape the surface of the vessel and direct the mass therein toward the periphery of the vessel, and an annular distributer for said vessel carried by said brackets.

3. In an ore classifier, a concave vessel in the shape of an inverted cone, said vessel having a central outlet, interengaging, upwardly-expanding frustoconical sections associated with the outlet for varying its level and diameter within the vessel, a stirring mechanism associated with the vessel, means on the stirring mechanism to scrape the surface of the vessel and direct the mass in the vessel toward the raised periphery of the same, and an annular feed for said vessel carried by the stirring mechanism, said vessel having a peripheral outlet.

4. In a classifier, a concave vessel in the shape of an inverted cone having a flat cone portion adjacent the periphery thereof, said vessel having a central outlet, a plurality of upwardly-expanding, frustoconical members removably associated with each other and with said central outlet whereby the level and the diameter of the central outlet may be varied, a stirring mechanism associated with the vessel, blades carried by the stirring mechanism for scraping the surface of the vessel and direct the mass in the vessel over the central part thereof toward the raised periphery of the vessel, and an annular feed for said vessel carried by the stirring mechanism.

5. In an ore classifier, a concave vessel having a central and a peripheral outlet, frustoconical sections increasing in size upwardly engaging the central outlet, whereby the size and level of the central outlet may be varied, a stirring mechanism in said vessel, and an annular distributer adjacent the central outlet.

1,192,807. MILLING-MACHINE. FRANK W. WHITE, Meadville, Pa., assignor to The Wm. H. Page Boiler Company, a Corporation of Connecticut. Filed Sept. 8, 1911. Serial No. 648,255. (Cl. 10—154.)



1. In combination, a cutter head, a plurality of tool-carrying spindles mounted thereon in parallel relation with one another, a carriage movable in longitudinal alinement with the spindles, a swiveled member mounted upon the carriage, a workholder carried by the swiveled member, means to rotate the workholder, and to advance the carriage toward the cutter head simultaneously with the rotation of the workholder.

2. In combination, parallel spindles adapted to carry tools, mounts for and means to rotate the spindles, a rotary workholder adapted to be positioned in angular relation to the spindles, a mount for and means to rotate the workholder, and means simultaneously operable with the rotation of the workholder to move the workholder and its mount bodily toward the spindles, whereby the work may be fed to the tools at an angle.

3. In combination, a bed, two tool-holding spindles and one work-holding spindle, all three spindles being located substantially in the same horizontal plane above the bed, independent mounts for the spindles, the said tool-holding spindles being mounted parallel with the center line of the bed, the work-holding spindle being mounted in off-set relation to the tool-holding spindles and having a swiveled mount with a vertical axis passing through the center line of the bed, means to move the swiveled mount longitudinally along the bed, and means simultaneously operable to rotate the work-holding spindle.

4. A plurality of milling arbors mounted parallel with one another, means to rotate the arbors, a carriage movable in a plane parallel to and in longitudinal alinement with the arbors, a swiveled head fitted to said carriage, a spindle and chuck mounted in the head, and means to rotate the spindle and chuck.

5. A plurality of milling arbors mounted parallel with one another, means to rotate the arbors, a carriage movable in a plane parallel to and in longitudinal alinement with the arbors, a swiveled head fitted to said carriage, a spindle and chuck mounted in the head, and means to rotate the spindle and the chuck simultaneously with the translatory movement of the carriage.

[Claims 6 to 12 not printed in the Gazette.]

1,192,808. WEED-BURNER FOR ROADWAYS. EUGENE E. ALLEN, Los Angeles, Cal. Filed Feb. 9, 1912. Serial No. 676,602. (Cl. 126—271.2.)



1. Weed burning apparatus for roadways, comprising a vehicle body, means at one side thereof for burning fuel, and a fixed wind shield depending beneath the vehicle body inwardly of the side thereof and ranging longitudinally thereof.

2. Weed burning apparatus for roadways, comprising a vehicle body, a deflector projecting laterally of the vehicle body, means for burning fuel adjacent to the deflector and the roadway, a shield extending over the under surface of the vehicle body, and a shield depending from the vehicle body and ranging longitudinally thereof and between the sides thereof.

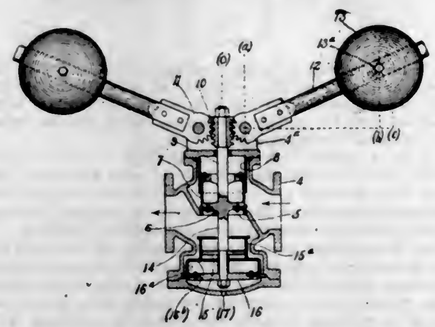
3. Weed burning apparatus for roadways, comprising a vehicle body, a fuel burner projecting therefrom and ranging longitudinally thereof, and means for axially adjusting the burner.

4. Weed burning apparatus for roadways, comprising a vehicle body, a fuel burner projecting therefrom and ranging longitudinally thereof, and means for axially adjusting the burner; said burner being provided with a branch burner arranged laterally thereof.

5. In weed burning apparatus, means for burning fuel adjacent to the roadway comprising convergent burners whereby jets of burning fuel may be directed in common to a definite area of the roadway.

[Claim 6 not printed in the Gazette.]

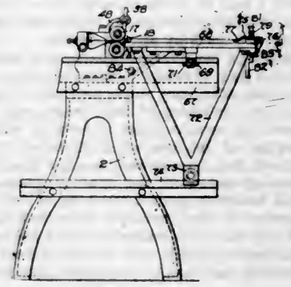
1,192,809. PRESSURE-REGULATING VALVE. EDWARD V. ANDERSON, Monessen, Pa., assignor of one-half to Charles E. Golden, Crafton, Pa. Filed May 5, 1915, Serial No. 26,071. Renewed June 14, 1916. Serial No. 103,693. (Cl. 50—17.)



1. A valve comprising a casing, a perforated diaphragm with a valve seat, main valve having a steam extending upward and downward therefrom, a dash-pot chamber in the casing of the same size and containing the valve, dash-pot chamber on the lower end of the valve stem and a second piston operating in a cylindrical portion of said casing and subjected to low pressure, a gear and weighted lever connected to the upper end of the stem and adapted to exert constant upward pressure on the valve stem, and to increase said pressure as the valve moves to open position.

2. A regulating valve comprising a casing having a perforated diaphragm with a valve seat, a main valve in the form of a hollow cylinder, a chamber in the casing fitting said cylinder to form a dash-pot, a second and larger cylinder also on the valve stem, and a chamber in the casing forming the closed space therewith and subjected to low pressure in the line, means to normally exert a lifting force on the valve balanced against the downward force on said latter dash-pot piston, and a device to increase the upward effort on the valve when it attempts to rise off its seat, substantially as described.

1,192,810. LEATHER-BEVELING MACHINE. WILLIAM B. ARNOLD, North Abington, and THOMAS MARTIN, Dorchester, Mass.; said Martin assignor to said Arnold. Filed Oct. 21, 1909. Serial No. 523,742. (Cl. 69—13.)



1. Leather beveling mechanism including in combination a pair of feed rolls having work-contacting peripheries, a knife positioned at one side of a plane containing the axes of said rolls with its forward edge in a plane transverse to said plane and oblique to said axes, said edge being located between and throughout its major portion in close proximity to the work-contacting peripheries of said rolls, and means positioned at the other side of said plane and arranged to engage both faces of a leather strip between said rolls in such manner as to present said strip to the action of said knife.

2. Leather beveling mechanism including feed rolls, a beveling knife between the rolls at one side of a plane containing their axes, and pressers between the rolls and at the other side of said plane and arranged to engage opposite faces of a leather strip to position the leading edge thereof as fed by said rolls to the knife, said pressers during the periods of non-use being in yielding contact with each other.

3. Leather beveling mechanism comprising in combination a beveling knife, feed rolls, a presser between said rolls, an angularly adjustable support for said presser, and means permitting adjustment of said presser transversely of said support.

4. Leather beveling mechanism comprising feed rolls, a beveling knife inclined to the axes of said rolls, a yielding pivoted presser arranged to engage one face of a leather strip as presented by said rolls to said knife to guide the leading edge of the leather strip to said rolls and a co-acting presser to engage the opposite face of the strip.

5. Leather beveling mechanism comprising in combination a beveling knife, feed rolls, an upper normally unyielding presser and a lower yielding presser to engage opposite faces of a leather strip and position the leading edge thereof as fed by said rolls to said knife.

[Claims 6 to 29 not printed in the Gazette.]

1,192,811. HOROLOGICAL INSTRUMENT. HELGE A. BORRESEN, Marquette, Mich., assignor to MAX W. Zabel, trustee, Chicago, Ill. Filed Nov. 25, 1910. Serial No. 594,168. (Cl. 58—126.)



1. Apparatus of the character described comprising a watch or clock dial, two hands coöperating therewith, and annular means extending between said hands and coöperating with the dial, said last mentioned means forming a means whereby one of said hands is prevented from falling on top of and engaging the other hand.

2. Apparatus of the class described comprising a watch or clock dial, a pair of hands mounted above said dial and coöperating therewith, and means extending between said hands to prevent touching of said hands.

3. Apparatus of the class described comprising a watch or clock dial, a pair of hands mounted above said dial and coöperating therewith, and means extending between said hands to prevent touching of said hands, said means being interposed between said dial and one of said hands.

4. Apparatus of the character described including a watch or clock dial, two hands mounted above said dial and coöperating therewith, and annular means extending between said hands to prevent touching of said hands.

5. Apparatus of the character described including a watch or clock dial, two hands mounted above said dial and coöperating therewith, and circumferential means extending between said hands to prevent touching of said hands.

[Claims 6 and 7 not printed in the Gazette.]

1,192,812. ESCAPEMENT FOR WATCHES. CHARLES E. DE LONG, Dallas, Tex., assignor to De Long Escapement Co., Inc., a Corporation of New York. Filed May 20, 1915. Serial No. 29,271. (Cl. 58—122.)



1. In a watch escapement, a lever, an arbor and means for eccentrically connecting said lever with said arbor.

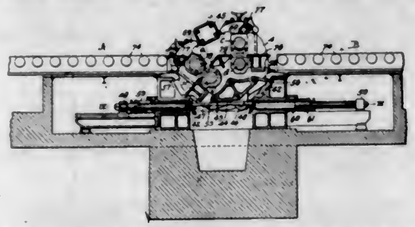
2. In a watch escapement, a lever, and an eccentric arbor carrying said lever.

3. In a watch escapement, a lever, an eccentric arbor and a means for eccentrically connecting said lever with said eccentric arbor.

4. In a watch escapement, a lever, an eccentric collar frictionally engaging said lever and an arbor driven through and frictionally engaging said collar.

5. In a watch escapement, a lever, an eccentric collar frictionally engaging said lever, and an eccentric arbor driven through and frictionally engaging said collar.

1,192,813. ROLLING-MILL. JOSEPH E. FAWELL, Pittsburgh, Pa. Filed Jan. 30, 1915, Serial No. 5,315. Renewed May 29, 1916. Serial No. 100,704. (Cl. 80—33.)

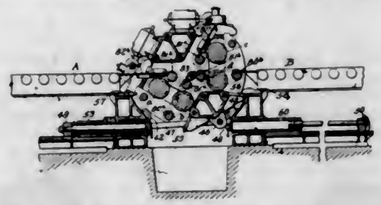


1. In a rolling mill, the combination of housings having their lower ends formed on arcs of circles, suitably spaced rollers forming supports for said housings, fluid pressure motors having their rams or pinions connected to said housings and stops for limiting the movements of the housings, and two pairs of reducing rolls carried by said housings and adapted to be brought to working position alternately.

2. In a rolling mill, the combination of rotatably mounted housings, two sets of rolls carried by said housings, said sets of rolls being rotatable in opposite directions respectively, means for rotating said housings, and strippers for the lower rolls of each pair.

3. In a rolling mill the combination of rotatably supported housings, two sets of rolls arranged in the housings in such angular relation one to the other that when one set of rolls is in working position the upper roll of the other set will be tangential or approximately tangential to a plane passing between the rolls of the working pair, said sets of rolls being rotatable in opposite directions, respectively, means for shifting said housings to bring the respective sets or pairs of rolls to working position and strippers arranged in the rear of all the rolls.

1,192,814. ROLLING-MILL. JOSEPH E. FAWELL, Pittsburgh, Pa. Filed Jan. 30, 1915, Serial No. 5,316. Renewed May 29, 1916. Serial No. 100,705. (Cl. 80—33.)



1. In a rolling mill, the combination of two sets of rolls, means for shifting said sets of rolls alternately to and from working position, and means intermediate said sets of rolls for moving the article being reduced from the rolls in working position.

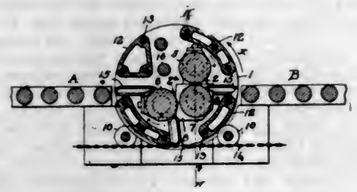
2. In a rolling mill, the combination of two sets of rolls, means for shifting said sets of rolls alternately to and from working position, and means for carrying the article being reduced from the rolls in working position over the rolls in inoperative or non-working position.

3. In a rolling mill, the combination of two sets of rolls, means for rotating said sets of rolls in opposite directions, respectively, and reversible means intermediate the sets of rolls for carrying the article from the set of rolls in working position, and means for shifting said sets of rolls alternately to and from working position.

4. In a rolling mill, the combination of two main feed tables, spaced a suitable distance apart, a feed table intermediate the main tables, the several tables being provided with reversible feed rollers, two sets of rolls, means for rotating said sets of rolls in opposite directions, respectively, and means for shifting said sets of rolls alternately, one set between a main table and the intermediate table and the other set between the intermediate and the other main table.

5. In a rolling mill, the combination of two sets of rolls, the axes of one set being in a plane at an angle to a plane coincident with the axes of the other set, means for shifting said sets of rolls alternately to working position, two sets of pinions having universall driving connections with the respective rolls, the members of each set of pinions having their axes in a plane approximately coincident with a plane passing through the axes of the rolls driven by the pinions when said rolls are in working position.

1,192,815. ROLLING-MILL. JOSEPH EDWARD FAWELL, Pittsburgh, Pa. Filed Mar. 18, 1915, Serial No. 15,395. Renewed May 29, 1916. Serial No. 100,703. (Cl. 80—1.)



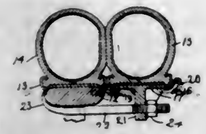
1. In a rolling mill the combination of three rolls, means for rotating two of the rolls in one direction and the third roll in the opposite direction, and means for shifting said rolls around a common center.

2. In a rolling mill the combination of three rolls, two of said rolls being on opposite sides of a common line of feed, and means for shifting the other roll through an arc of a circle across such common line of feed.

3. In a rolling mill the combination of a rotatable housing, three rolls mounted in said housings with their axes substantially parallel with the axis of rotation of the housings, two of the rolls being arranged in reducing relation to the third roll but with different points thereof.

4. In a rolling mill the combination of rotatable housings, three rolls mounted in said housings, two of the rolls being adapted to coöperate with the third, a plane coinciding with the axes of two of the rolls being at an angle to a plane coinciding with the axis of the third roll and one of the other two.

1,192,816. SUPPLEMENTAL-TIRE HOLDER. WILLIAM A. FREDERICK, Boston, Mass., assignor to Twin-Rim Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 15, 1915. Serial No. 14,544. (Cl. 152—23.)



A supplemental rim and tire adapted to be connected to either one of a plurality of sizes of vehicle-supporting wheels, said supplemental rim having a plurality of plates rigidly secured to it in spaced relationship, each of said plates having its opposite edges bent and provided with lips having beveled outer faces projecting beyond the sides of the rim to form a series of spaced lips at each side of the rim to engage the internal or concave surface of the rim of a supporting wheel, the series of lips at one side forming arcs of a larger circle than those at the other side, and means for clamping the supplemental rim closely to the side of the rim of the supporting wheel with no intervening spaces between said rims.

1,192,817. BALE-TIE BUCKLE. ROBERT L. HORSLEY, Memphis, Tenn., assignor to Compress Buckle Company, Fort Worth, Tex., a Corporation of Texas. Filed July 17, 1915. Serial No. 40,349. (Cl. 24—26.)

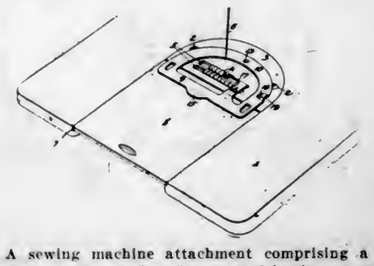


1. A bale tie buckle constructed of a single piece of steel wire having an open end and a closed end forming the band engaging members and side bars extending from said closed end to the open end and said open end being formed by bending the terminals of said wire at acute angles to the side bars so that said terminals will be inclined toward the closed end and terminating in close proximity to each other.

2. A bale tie buckle constructed of a single piece of steel wire having a closed end and an open end and side bars leading from said closed end to said open end and said open end being formed by bending said wire at acute angles to said side bars and said bent portions terminating in close proximity to each other to form frictional points to engage the bale tie intermediate the edges thereof.

3. A bale tie buckle constructed of a single piece of steel wire and comprising an open end and a closed end forming the band engaging members and side bars extending from said closed end and converging toward said open end for clamping the sides of the band and having the terminals thereof bent at angles thereto to form said open end with frictional contact points to engage the band intermediate the edges thereof when strain comes upon the band.

1,192,818. ATTACHMENT-HOLDER FOR SEWING-MACHINES. JOHN D. KABLE, Newark, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 23, 1914. Serial No. 868,226. (Cl. 112—35.)



1. A sewing machine attachment comprising a plate carrying a work-engaging element and having at one side of said element a depending straight steadying stud or projection and at the opposite side thereof a depending fastening hook extending in a direction away from said work-engaging element, a portion of said plate extending beyond the throat of said hook and in the same direction for coöperation with the latter in clamping the attachment in place.

2. A sewing machine attachment comprising a plate carrying a work-engaging element and having at one side thereof a depending steadying stud and at the other side thereof opposed clamping elements adapted to engage opposite faces of the usual slide-plate and including yielding hooks arranged remotely from each other and in a line and similarly directed transversely of said line and away from said work-engaging element and said steadying stud.

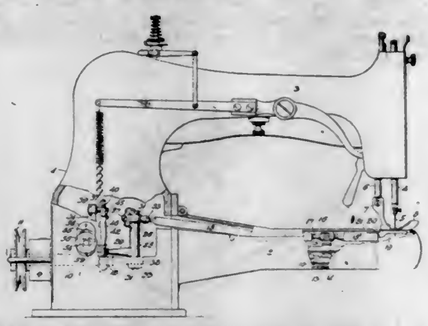
3. A sewing machine attachment comprising a plate carrying a work-engaging element and having at one side of said element a depending straight steadying stud or projection and at the opposite side thereof a depending fastening hook extending in a direction away from said work-engaging element, said plate being provided with a rounded tongue extending downwardly and beyond the throat of said hook in the same direction for coöperation with the latter in clamping the attachment in place.

4. In combination with a sewing machine throat-plate formed with a needle-hole and with an aperture remote therefrom, an attachment comprising a holding plate partially overlying said throat-plate and provided with a work-engaging element and with fastening hooks adjacent and extending away from the same and disposed within the contour of and offset from the lower face of said plate, said holding plate being provided with a steadying projection entering and wholly confined within the area of the aperture of said throat-plate, and a slide-plate also partially overlaid by said holding plate and whose edge is adapted to enter said hook and grip the shank thereof against the adjacent edge of the throat-plate.

5. In combination with a sewing machine throat-plate formed with a needle-hole and with an aperture remote therefrom, an attachment comprising a holding plate partially overlying said throat-plate and provided with a work-engaging element and with fastening hooks adjacent and extending away from said element and offset from the lower face of said plate, said holding plate being provided at one side remote from said hooks with a steadying projection entering the aperture of said throat-plate and at the opposite side of said hooks with a downwardly rounded tongue, and a slide-plate also partially overlaid by the holding plate and engaged by said tongue and whose edge is adapted to enter said hook and grip the shank thereof against the adjacent edge of the throat-plate.

[Claim 6 not printed in the Gazette.]

1,192,819. FEEDING MECHANISM FOR SEWING-MACHINES. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 2, 1912. Serial No. 734,446. (Cl. 112—8.)



1. In a sewing machine, the combination with a shaft, and a feed-actuating member thereon, of a feed-bar substantially parallel with said shaft, a pivotal support for said feed-bar, a plural-armed rocker having an arm connected to and affording another support for said feed-bar, a connecting rod embracing and deriving endwise movements from said actuating member, a rock-bar connected at opposite ends to said connecting rod and to another arm of said rocker and movable transversely of the feed-bar, and a fulcrum for said rock-bar disposed intermediate the ends of the same and adjustable endwise thereof.

2. In a sewing machine, the combination with the frame comprising a hollow standard, a tubular work-supporting arm extending laterally therefrom and an overhanging arm extending from said standard above the work-supporting arm, a rotary shaft extending across said standard and lengthwise of the work-supporting arm, and stitch-forming mechanism comprising an element sustained by said overhanging arm, of a feed-bar arranged within and longitudinally of said work-supporting arm, means disposed within said standard for operatively connecting the feed-bar with said shaft for imparting positive endwise feed and return movements to the feed-bar, means also disposed within the standard and connected with the first-named means for varying the extent of said feeding movements, and means for imparting to the feed-bar rising and falling movements.

3. In a sewing machine, the combination with the frame comprising a hollow standard and a tubular work-supporting arm attached thereto, and a rotary shaft extending across said standard, of a feed-bar arranged within and longitudinally of said arm, means disposed within said standard for operatively connecting the feed-bar with said shaft for imparting endwise feeding movements to the feed-bar, normally stationary means also disposed within the standard and connected with the first-named means for varying the extent of said feeding movements, and means operating independently of the endwise movements of the feed-bar for imparting to the feed-bar rising and falling movements.

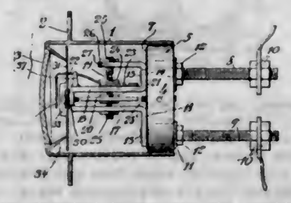
4. In a sewing machine, the combination with the frame comprising a hollow standard and a tubular work-supporting arm extending laterally therefrom, a rotary shaft extending across said standard, and an actuating member mounted upon said shaft within the standard, of a feed-bar arranged within and longitudinally of said arm, a plural-armed rocker having an arm connected with said feed-bar, a rod operatively connected with said actuating member, a rock-bar pivotally connected with said rod and with said rocker, and a fulcrum for said rock-bar disposed within said standard and adjustable longitudinally of the same.

5. In a sewing machine, the combination with the frame comprising a hollow standard and a tubular work-supporting arm attached thereto, a shaft extending across said standard and an actuating member mounted on said shaft within the standard, of a feed-bar arranged within and longitudinally of said arm, a rocker connected with said feed-bar and adapted to impart endwise movements thereto, a rod operatively connected with said actuating member, a rock-bar pivotally connected with said rod and with said rocker, a fulcrum for said rock-bar disposed within the standard and having adjusting means exterior thereto, and feed-bar lifting means connected with said shaft independently of said actuating member.

[Claims 6 and 7 not printed in the Gazette.]

1,192,820. [WITHDRAWN.]

1,192,821. ELECTRICAL INSTRUMENT. FRANK W. ROLLER, East Orange, N. J., assignor to Roller-Smith Company, a Corporation of New York. Filed Nov. 23, 1914. Serial No. 873,671. (Cl. 171—95.)



1. In an electrical instrument, the combination of a base, current carrying means projecting therefrom, a movable element supported and actuated by said current carrying means, an indicating plate carried by said current carrying means, the axis of said movable element being parallel to said plate, and a casing supported by said base.

2. In an electrical instrument, the combination of U-shaped current carrying means, a movable element within the sides of said means and normally extending parallel with said sides, and an indicating disk carried by said current carrying means and having the central portion of said disk located opposite the middle point of said U-shaped current carrying means.

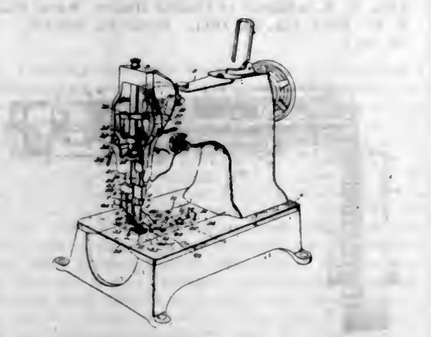
3. In an electrical instrument, the combination of a base, a current carrying element having oppositely located portions parallel to each other extending outwardly from said base, a movable element having its axis perpendicular to said portions, and an indicating plate supported by said current carrying element opposite to said base.

4. In an electrical instrument, the combination of a base, a current carrying element having oppositely located portions parallel to each other extending outwardly from said base, a movable element having its axis perpendicular to said portions and centrally located with relation to said portions, an indicating plate carried by an outer portion of said current carrying element, and a casing supported by said base.

5. In an electrical instrument, the combination of a base, a current carrying element of sheet metal having a supporting portion parallel to and supported on said base, an outwardly extending portion and an inwardly extending portion, a movable element located between said portions and having its axis parallel to said base, and an indicating element supported by said current carrying element opposite to said base.

[Claims 6 to 22 not printed in the Gazette.]

1,192,822. SEWING-MACHINE. ALBERT RONTKE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 22, 1911. Serial No. 667,329. (Cl. 112—16.)



1. In a sewing machine, the combination with fabric feeding and stitch-forming mechanism, including a cloth-presser carrying-bar, of edge-guides for guiding superposed plies of fabric to the action of said mechanisms, a fulling blade carried and actuated by said cloth-presser-carrying bar for fulling one or more of said plies as they are being fed to the stitch-forming mechanism, and means under the control of the operator for placing said fulling blade into and out of effective action during the stitching operation.

2. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a needle and needle-carrying bar, of edge-guides for guiding superposed plies of fabric to the action of said mechanisms, a fulling blade having fulling movements in directions corresponding to the stitch-forming movement of the needle for fulling one or more of said plies as they are being fed to the stitch-forming mechanism, and means under the control of the operator, including an adjustable plate, for placing said fulling blade into and out of effective action during the stitching operation.

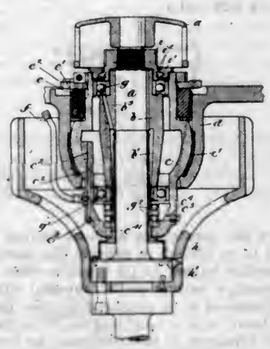
3. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a cloth-presser carrying bar provided with a cloth-presser, of edge-guides for guiding superposed plies of fabric to the action of said mechanisms, a fulling blade located at one side only of the line of seam formation for fulling one or more of said plies as they are being fed to the stitch-forming mechanism, and means under the control of the operator, including an adjustable plate, for placing said fulling blade into and out of effective action during the stitching operation.

4. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a cloth-presser-carrying bar provided with a cloth-presser, of edge-guides for guiding superposed plies of fabric to the action of said mechanisms, a fulling blade located at one side only of said cloth-presser for fulling one or more of said plies as they are being fed to the stitch-forming mechanism, and means under the control of the operator for placing said fulling blade into and out of effective action during the stitching operation.

5. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a cloth-presser-carrying bar, of edge-guides including a rocking edge-guide for guiding superposed plies of fabric to the action of said mechanisms, a fulling blade carried and actuated by said cloth-presser-carrying bar for fulling one or more of said plies as they are being fed to the stitch-forming mechanism, and means under the control of the operator for placing said fulling blade into and out of effective action during the stitching operation.

[Claims 6 and 7 not printed in the Gazette.]

1,192,823. BEARING FOR CENTRIFUGAL MACHINES. COMFORT A. ADAMS, Cambridge, Mass., assignor to American Tool & Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 26, 1911. Serial No. 604,770. (Cl. 64—48.)



1. In a centrifugal machine the combination of a socketed hanger, a non-rotating oscillatory suspension head seated therein, a solid rotary basket shaft, an elongated bearing sleeve secured to said shaft, a rotary thrust-bearing sustaining the lower end of said sleeve, upper and lower anti-friction lateral bearings interposed respectively between the upper and lower ends of said sleeve and the surrounding opposed portion of the inner wall of said bearing head, the said lateral bearings being disposed above the level of the thrust bearing and on opposite sides of the center of oscillation, and means for keeping immersed in oil the lower bearing and for supplying oil to the upper bearing, substantially as described.

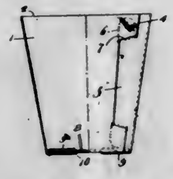
2. In a centrifugal machine the combination of the hollow oscillatory suspension head containing an anti-friction thrust bearing, a solid basket-carrying shaft, a surrounding sleeve secured thereto, a sustaining thrust-bearing beneath said sleeve, an oil retaining quill carried

by said head and extended upward between the shaft and lower end of the sleeve to form an oil well within the suspension head, lateral anti-friction bearings arranged above and below the upper end of said quill the said sleeve being formed with a centrifugally acting oil duct for supplying oil to the upper lateral bearing, substantially as described.

3. In a centrifugal machine the combination of the oscillatory suspension head forming a hollow oil reservoir formed with an overhanging shoulder to limit the upward flow of oil, a rotary basket shaft supported on a thrust bearing contained therein, upper and lower lateral bearings by which the oscillation of the shaft is imparted to the head without lost motion, a quill secured in the head and extending upward around the shaft inside of the lower bearings, said head being provided with an oblique upward and outwardly extending duct for leading the oil by centrifugal force from the exterior of said quill to said upper bearing, substantially as described.

4. The combination of the hollow oscillatory suspension head, a rotary basket shaft, an elongated hollow sleeve whose upper portion fits snugly the inclosed portion of the shaft and whose lower portion is of larger diameter to form a clearance space around the shaft, an anti-friction thrust bearing interposed between the lower end of the sleeve and bottom of said head, a quill secured in the lower end of said head and extending upward between the lower end of the sleeve and the shaft, upper and lower lateral bearings interposed between the upper and lower ends of the sleeve and the surrounding wall of the bearing head, an oil duct leading from the space between the quill and the sleeve to the upper lateral bearing, the interior of said head being formed with an annular shoulder to prevent the upward flow of oil on its interior face above the level of said quill, substantially as described.

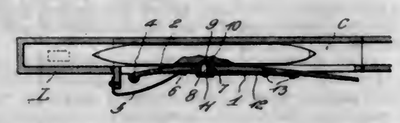
1,192,824. PAPER RECEPTACLE. GEORGE J. BOHLMAN, Medford, Mass. Filed May 15, 1916. Serial No. 97,510. (Cl. 229—21.)



1. A paper pot comprising a blank having a body-portion adapted to be formed to provide the bowl of the pot, said body-portion having at its opposite ends integral interlocking-means, a bottom section integral with the body-portion and adapted to be arranged to close the bottom of the formed bowl, and a long locking strip integral with the body and arranged to pass through the bottom-section and to be reflexed upon the top of said section to support the same in bottom-forming position, the bottom-section and locking-strip being arranged on the bottom edge of the body-portion at spaced points.

2. A paper receptacle comprising a blank having a body-portion adapted to be formed to provide the bowl of the receptacle, integral means for interlocking the meeting edges of the formed bowl, a plurality of bottom sections integral with one edge of the body-portion and adapted to be arranged in superimposed relation to form a double bottom for the bowl, the bottom sections being secured to the edge of the body-portion at points having diametrically opposed relation in the formed article, and locking strips integral with the edge of the body portion and adapted to each interlock with both bottom sections to support the completed bottom, the respective locking strips being secured to the same edge of the body portion as the bottom sections, at spaced points therefrom, and at relatively diametrically-opposed points in the formed article.

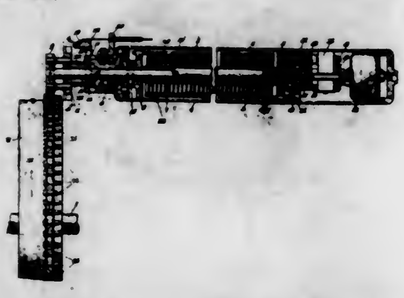
1,192,825. LOOM SHUTTLE-BINDER. ODILON CHARETTE, Fitchburg, Mass. Filed Sept. 13, 1915. Serial No. 50,491. (Cl. 139—29.)



1. In a loom shuttle binder having an opening therethrough, a detent disposed in said opening and having a hemispherical active end projecting beyond the inner face of said binder, the opposite end of said detent being flat, longitudinally extending parallel ribs disposed on the opposite sides of said opening, and a flat leaf spring secured by one end to the flat face of the detent and disposed between said parallel ribs, its opposite end being secured to the binder adjacent its free end.

2. In combination with a shifting shuttle box, of a shuttle having a hemispherical seat in one side, the edges of said seat being rounded, a shuttle binder having a circular opening therethrough, a cylindrical detent slidable through said opening and having a hemispherical active end projecting beyond the inner face of said binder, the opposite end of the detent being flat, a flat leaf spring secured by one end to the flat face of the detent, its opposite end being secured to the binder adjacent its free end, longitudinally extending parallel ribs disposed on the opposite sides of said opening and receiving said spring therebetween, said detent moving into and out of said seat when the shuttle is actuated by the picker stick, and a spring for holding said binder in contact with said shuttle.

1,192,826. ENGINE-STARTER. CLYDE J. COLEMAN, New York, N. Y., assignor to Conrad Hubert, White Plains, N. Y. Filed Aug. 24, 1911. Serial No. 645,800. (Cl. 74—41.)



1. A gear mechanism comprising two coöperative rotary members, one axially bodily movable to and from its complementary member, and a flexible member having gear teeth formed therein mounted on the periphery of one of said members and attached thereto and arranged to mesh with gear teeth on the complementary member.

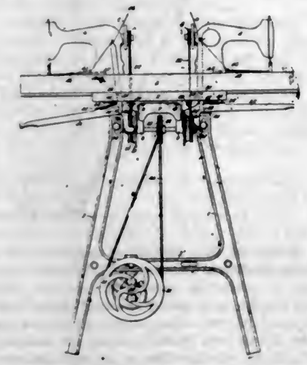
2. A gear mechanism comprising two coöperative rotary members, one axially bodily movable to and from its complementary member, and a flexible member mounted on the periphery of one of said members and attached thereto and having gear teeth projecting from one edge thereof and arranged to mesh with gear teeth on the complementary member.

3. A gear mechanism comprising two coöperative rotary members, one axially bodily movable to and from its complementary member, and a flexible member mounted on the periphery of one of said members and attached thereto and having substantially round gear teeth projecting from one edge thereof and arranged to mesh with gear teeth on the complementary member.

4. A gear mechanism comprising two coöperative rotary members, one axially bodily movable to and from its complementary member and a chain member mounted on the the periphery of one member and attached thereto and having studs projecting from one edge thereof arranged to mesh with gear teeth on the complementary member.

5. A gear mechanism comprising two coöperative rotary members, one axially bodily movable to and from its complementary member and a chain member mounted on the periphery of one member and attached thereto and having substantially round studs projecting from one edge thereof arranged to mesh with gear teeth on the complementary member.

1,192,827. DRIVING DEVICE FOR SEWING-MACHINES. HERBERT CORRALL, Parkview, Helensburgh, Scotland, assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 19, 1912. Serial No. 726,757. (Cl. 112—29.)



1. A driving device for sewing machines comprising a driving and an idler pulley mounted for independent rotation upon a common axis and having conical faces inclined in the same direction relative to said axis and of substantially equal diameter at their adjacent edges, a belt adapted to connect said pulleys with a machine to be driven, a shipper for shifting the belt from one to the other of said pulleys, a lever carrying said shipper and constructed and adapted to assume and remain in one extreme position for holding the belt upon the idler pulley, and a latch-lever for detaining the shipper-lever in its other extreme position and formed with an aperture to receive a cord leading to the stitching mechanism, said lever being adapted to be shifted by imperfections in the cord to release said shipper-lever for permitting the belt to be automatically shifted upon the idler pulley.

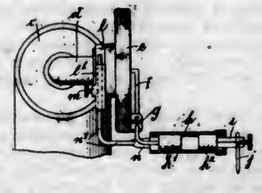
2. A driving device for sewing machines comprising a continuously running driving pulley and an adjacent normally stationary idler pulley mounted for independent rotation upon a common axis and having conical faces inclined in the same direction relative to said axis and of substantially equal diameter at their adjacent edges, a belt adapted to connect said pulleys with a machine to be driven, a shipper for shifting the belt from one to the other of said pulleys, a self-acting lever provided with a detent shoulder and carrying said shipper which it normally maintains in position to hold the belt upon the idler pulley, and a pivotally mounted latch-lever having one arm adapted to engage said shoulder of the shipper-lever when in position to hold the belt upon the driving pulley and another arm provided with an aperture through which passes a cord leading to the stitching mechanism and by abnormal variations in thickness of which the latch-lever may be shifted for disengagement from the shipper-lever to cause the automatic shifting of the belt upon the idler pulley.

3. A driving device for sewing machines comprising a driving and an idler pulley mounted for independent rotation upon a common axis and having conical faces inclined in the same direction relative to said axis, the faces of said pulleys being of substantially the same diameter at their adjacent edges and that of the driving pulley being the smaller of the two relative to the opposite edges, a belt adapted to connect said pulleys with a machine to be driven, a shipper for shifting the belt from one to the other of said pulleys, a self-acting lever provided with a detent shoulder and carrying said shipper which it normally maintains in position to hold the belt upon the idler pulley, and a pivotally mounted latch-lever having one arm adapted to engage said shoulder of the shipper-lever when in position to hold the belt upon the driving pulley and another arm provided with an aperture through which passes a cord leading to the stitching mechanism and by abnormal variations in thickness of which the latch-lever may be shifted for disengagement from the shipper-lever to cause the automatic shifting of the belt upon the idler pulley.

4. A driving device for sewing machines comprising a continuously running driving pulley and an adjacent normally stationary idler pulley, a driven pulley, a belt adapted to connect the driven pulley with the driving and idler pulleys, a shipper-lever adapted to automatically shift the belt from one to the other of said pulleys, a latch-lever directly engaging the shipper lever to hold the same in position to detain the belt upon one of said pulleys and adapted to engage a cord leading to the stitching-mechanism so that imperfections in the cord will impart a releasing movement to the said latch-lever, and means for insuring the reëngagement of the latch-lever with the shipper-lever when the latter is manually actuated.

5. A driving device for sewing machines comprising a hanger having a bearing boss, a driving shaft journaled in said hanger, a loose pulley journaled upon said bearing boss, a driving pulley fixed upon said shaft and having one edge of its face of substantially the same diameter as the adjacent edge of the loose pulley, a belt adapted to connect said pulleys with a machine to be driven, a self-acting belt shipper adapted to hold the belt normally upon the loose pulley, and a latch-lever for detaining said shipper against movement into normal position, said lever being adapted to receive a cord leading to the stitching mechanism and to be tripped by imperfections in said cord.

1,192,828. DEVICE FOR REPRODUCING SOUND. WILLIAM H. CRAWFORD, Providence, R. I., assignor of one-half to Oliver Fletcher Best, Providence, R. I. Filed Apr. 29, 1915. Serial No. 24,625. (Cl. 274—35.)



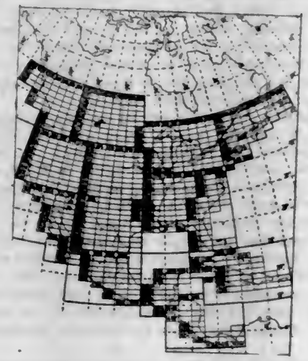
1. In a talking machine and the like, a device for reproducing sound having means for transmitting the original vibrations comprising a cylinder, two pistons in the cylinder leaving a space between them wherein air is confined, a rod on one piston connecting with the sound box, a support on the other piston, and a stylus in the said support.

2. In a talking machine and the like, a device for reproducing sound having means for transmitting the original vibrations comprising a cylinder, two pistons in the cylinder wherein an elastic fluid is confined, a rod on one piston, a diaphragm on which the said rod acts, a support on the second piston, and a stylus therein.

3. In a talking machine and the like, a device for reproducing sound having means for transmitting the original

vibrations comprising a cylinder, two pistons in the cylinder leaving a space between them wherein an elastic fluid is confined, a fulcrumed rod on one piston, a diaphragm on which the rod acts, a stylus support on the second piston a stylus therein and means for supporting the cylinder.

1,192,829. MEANS FOR PRESENTING GEOGRAPHICAL AND STATISTICAL INFORMATION. GEORGE W. R. HARRIMAN, Malden, Mass. Filed Apr. 17, 1912. Serial No. 691,433. (Cl. 35—6.)



1. A map or chart representing a portion of the earth's surface including a plurality of political units or areas and being subdivided into quadrangular unit areas, and identifying symbols associated with said unit areas, said symbols being all different from one another and being independent of political designations and bounds.

2. A map or chart representing so much of the earth's surface as includes a plurality of political divisions or areas, and bearing intersecting lines dividing such representation into quadrangular unit areas, and symbols associated with the several unit areas; said symbols being different from one another, whereby to distinguish and identify the unit areas with which they are respectively associated, and being independent of political designations and each comprising a character and a coefficient.

3. A map or chart containing the representation of a portion of the earth's surface which includes a plurality of political areas or divisions, and being subdivided into quadrangular unit areas, said unit areas being grouped in major divisions or regions, and identifying symbols, independent of political designations, associated with said unit areas; said symbols being all different from one another and each comprising a character and a coefficient, the coefficients of all the unit areas in one major division being the same.

4. A map or chart containing the representation of a portion of the earth's surface which includes a plurality of political areas or divisions, and being subdivided into quadrangular unit areas, said unit areas being grouped in major divisions or regions, and identifying symbols, independent of political designations, associated with said unit areas; said symbols being independent of political designations and each comprising a character and a coefficient, the coefficient of all the unit area symbols in any one major division being the same, and the symbols being otherwise different, and the coefficients of the unit area symbols in different major divisions being different.

5. A map representing a portion of the earth's surface which includes a plurality of political divisions, intersecting lines subdividing said portion into quadrangular unit areas, regional boundaries surrounding different groups of said unit areas, and identifying numerals applied to the several unit areas; each numeral comprising several digits, the first digit being the same in the numerals applied to all the unit areas of any one group and being different in those applied to unit areas of different groups, while the numerals of the unit areas in the same group are otherwise different.

[Claims 6 to 24 not printed in the Gazette.]

1,192,830. SUCTION-CLEANER. JAMES B. KIRBY, Cleveland, Ohio. Original application filed Dec. 7, 1914, Serial No. 876,642. Divided and this application filed June 21, 1915. Serial No. 35,225. (Cl. 83—47.)



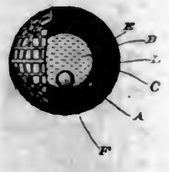
1. In a device of the character described, a portable casing having electrically operated mechanism therein and also having an operating handle, an electric switch carried by said handle at a point removed from said casing, an electric conduit connecting said switch and the mechanism in the casing and running along the handle, a flexible cord or cable constituting a second electric conduit extending from said handle and connected through said switch, and a pair of spaced coil-holding clips carried by said handle between said switch and casing.

2. In a suction cleaner, the combination with a portable casing having a pump chamber and a discharge neck, an operating handle secured to said casing, and a dust bag having one end secured to said neck and the other end to said handle, the pumping mechanism being electrically operated, of an electric switch carried by said handle at a point above said dust bag, a flexible cord or cable constituting an electric conduit extending from said cleaner, means carried by the handle between said switch and casing adapted to have a portion of said electric conduit coiled thereon, and a second electric conduit passing along said handle from said switch to said casing.

3. In a suction cleaner, the combination with a portable casing having a pump chamber and a discharge neck, an operating handle secured to said casing, and a dust bag having one end secured to said neck and the other end to said handle, the pumping mechanism being electrically operated, of an electric switch carried by said handle at a point above said dust bag, a flexible cord or cable constituting an electric conduit connected to said switch and diverging from said handle substantially at said switch, a pair of spaced coil holding members carried by said handle between said switch and casing, and a second electric conduit passing along said handle from said switch to said casing.

4. In a device of the character described, a portable casing having electrically operated mechanism therein and also having an operating handle, an electric switch carried by said handle at a point removed from said casing, an electric conduit connecting said switch and the mechanism in the casing and running along the handle, a flexible cord or cable constituting a second electric conduit connected to said switch, and means carried by said handle between said switch and casing adapted to have a portion of the second electric conduit coiled thereon.

1,192,831. PLAYING-BALL. WILLIAM R. KNIGHT, Belleville, N. J., assignor to St. Mungo Manufacturing Company of America, Newark, N. J., a Corporation of New Jersey. Filed Sept. 18, 1915. Serial No. 51,339. (Cl. 46—4.)



1. A playing-ball comprising in combination a rubber bag or container filled with liquid and containing therein a metal ball, windings in the form of a rubber tape surrounding said bag, windings in the form of a rubber thread surrounding the windings of tape, and a wear-resisting casing on the exterior of said windings.

2. A playing-ball comprising in combination a container having therein a liquid and a ball free to move in said liquid, windings of rubber surrounding said container, and a wear-resisting casing surrounding said windings.

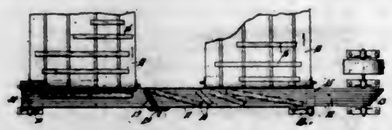
3. A playing-ball comprising in combination a container having therein liquid and a ball having a specific gravity which is greater than that of the liquid, windings surrounding said container, and a wear-resisting casing surrounding said windings.

4. A playing-ball comprising in combination a container of rubber having a layer of fabric for protecting the rubber and having in the container a liquid and a ball of specific gravity greater than the liquid, which ball is free to move in said liquid; windings of rubber surrounding said container, and a wear resisting casing surrounding said windings.

5. A playing-ball having in combination a bag comprising a layer of rubber and a layer of fabric, liquid filling said bag, a member or members in said liquid which member or members have a specific gravity greater than the liquid, rubber windings about said bag, and a wear-resisting casing constituting the outer portion of the playing-ball.

[Claims 6 to 10 not printed in the Gazette.]

1,192,832. CONVEYER. WILLIS S. SHERMAN, Milwaukee, Wis. Filed July 11, 1910, Serial No. 571,498. Renewed Jan. 7, 1916. Serial No. 70,887. (Cl. 193—4.)



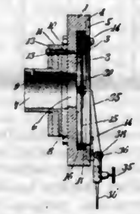
1. A conveyer, comprising a pair of belts side by side in the same plane, side walls positioned along the outer edges of the belts and extending above the plane thereof, one belt moving faster than the other for causing material carried by the conveyer to be moved to a position oblique to the line of travel of the conveyer and into contact with both side walls thereof.

2. A conveyer, comprising a suitably driven stepped pulley, a series of belts traveling around the successive steps of said pulley and thereby given different speeds of travel in the same direction, and idle pulleys for supporting the belts in approximately the same plane.

3. A conveyer, comprising a number of belts positioned side by side in the same plane, stationary side walls alongside of each of the outer belts and extending above the plane of the belts, said belts moving at different speeds, the belt speed being progressively faster from one side of the conveyer to the other for causing material carried thereby to be moved to a position oblique to the line of travel of the conveyer and into contact with both side walls of the conveyer.

4. In a conveyer, a traveling belt for conducting strips of material placed longitudinally thereon, and a swinging deflector suspended above the belt at an angle thereto to engage the front end of each strip and deflect it toward one side of the belt whereby the strips are given an oblique position on the belt.

1,192,833. SOUND-BOX. JOHN A. STEURER, New York, N. Y. Filed Nov. 18, 1915. Serial No. 62,126. (Cl. 181—32.)

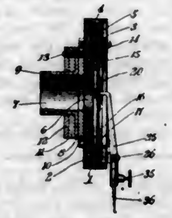


1. In a sound reproducing apparatus, the combination with a diaphragm of a concentric clarifying disk of a phenolic condensation product having embodied therein strata of fibrous material, parallel with the diaphragm, the said disk being adhesively secured to the diaphragm throughout their adjacent surfaces.

2. In a sound reproducing apparatus, the combination with a diaphragm of a concentric clarifying disk composed of bakelite having embodied therein strata of fibrous material parallel with the diaphragm, said disk being cemented to the diaphragm throughout their adjacent surfaces.

3. In a sound reproducing apparatus, the combination with a diaphragm of a concentric clarifying disk composed of bakelite dilecto cemented to the diaphragm throughout their adjacent surfaces.

1,192,834. SOUND-REPRODUCING BOX. JOHN A. STEURER, New York, N. Y. Original application filed Nov. 18, 1915, Serial No. 62,126. Divided and this application filed June 2, 1916. Serial No. 101,252. (Cl. 274—35.)



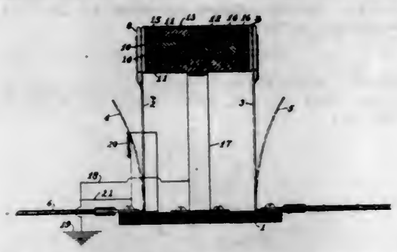
1. In a sound reproducing apparatus, a diaphragm supporting box formed of a phennolic condensation product having fibrous material embedded therein.

2. In a sound reproducing apparatus, a diaphragm supporting box formed of a phenolic condensation product and fibrous material in stratified relation, and having the strata thereof extending substantially parallel with the diaphragm.

3. In a sound reproducing apparatus, a diaphragm supporting box composed of bakelite having fibrous material embodied therein.

4. In a sound reproducing apparatus, a diaphragm supporting box composed of bakelite dilecto having the fibrous material thereof disposed in planes substantially parallel to the diaphragm.

1,192,835. ELECTRIC-LINE-APPARATUS PROTECTOR. PETER K. HIGGINS, Waco, Tex., assignor to Frederick R. Parker, Chicago, Ill. Original application filed Oct. 22, 1903, Serial No. 178,140. Renewed July 22, 1913, Serial No. 780,571. Divided and this application filed Dec. 15, 1913. Serial No. 806,826. (Cl. 175—275.)



1. A protector for electrical circuits, comprising a resistance core, metallic ends secured to the said core by fusible substance, springs connected with the said metallic ends and having tension therein tending to pull the metallic ends away from the core, a dielectric substance around the said core, a tube of conducting material surrounding the said dielectric substance, an insulating substance between the ends of the said tube and the said metallic ends, and means for connecting the said tube to ground.

2. A heat-cartridge having a carbonaceous resistance heater incased within a conductor, and thermally-releasable retaining means under control of the heater, the said conductor being insulated from the body of the heater by a thin layer of insulation.

3. A heat-cartridge having a carbonaceous resistance heater incased within a conductor, and thermally-releasable retaining means under control of the heater, the said conductor being slightly separated from the body of the heater between the ends thereof.

4. A heat-cartridge having a heating element of carbonaceous resistance material, thermally-releasable retaining means under control of the heating element, a thin layer of insulating material around the heating element, and a non-inflammable casing of conducting material around the said insulating material, the said heating element, in sulating material and casing being closely associated with each other.

5. A new construction in an electrical protector, comprising a resistance heater having thermally-releasable retaining means under control thereof, an envelop of conducting material surrounding the heater and separated from the body of same between the ends thereof, a metallic end plate covering the end of the protector and electrically connected with the heater, and insulating material insulating the said end plate from the said envelop of conducting material.

[Claims 6 to 24 not printed in the Gazette.]

1,192,836. SOUND-BOX FOR TALKING-MACHINES. ALVA D. JONES, Philadelphia, Pa. Original application filed Nov. 23, 1914, Serial No. 873,500. Divided and this application filed Jan. 29, 1916. Serial No. 74,981. (Cl. 274—35.)

1. In a sound box, a hard rubber body, a metallic ring operatively connected with it, a diaphragm resiliently mounted within and surrounded by said metallic ring, and a stylus bar operatively connected with the diaphragm and pivotally carried by the sound box.

2. In a sound box, a hard rubber body, an annular metallic member operatively connected with it and provided with an inwardly directed lip, a diaphragm resiliently mounted between said lip and said body, and a stylus bar operatively connected with said diaphragm and pivotally carried by the sound box.

3. In a sound box, a hard rubber body, an annular metallic member operatively connected with it, a diaphragm positioned between said rubber body and said member, a gasket between said diaphragm and member, a gasket between said diaphragm and said rubber body, and a stylus bar operatively connected with said diaphragm and pivotally carried by the sound box.



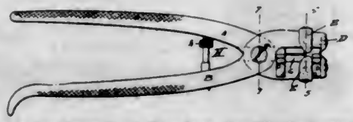
4. In a sound box, a hard rubber back, a metallic annular member carried thereby, lugs projecting from said member, a diaphragm resiliently mounted between the rubber back and member, a stylus bar having its inner end secured to said diaphragm, a pivot pin mounted in the outer portion of said bar, and adjustable bearings mounted in said lugs and engaging and supporting said pivot pin.

5. In a sound box, a hard rubber back, a metallic rearwardly extending flanged neck carried by said back, a forwardly projecting inwardly turned annular metallic member or lip secured to and also carried by said hard rubber back, lugs integral with said metallic lip member and projecting therefrom, a pair of annular gaskets retained between said lip and said hard rubber back, a diaphragm retained between said gaskets, a stylus bar having its inner end secured to said diaphragm, and pivotal connections common to the outer portion of said stylus bar and said integral lugs.

[Claim 6 not printed in the Gazette.]

REISSUES.

14,169. COMBINATION SPLITTING AND STRIPPING PLIERS. SOLOMON E. AARON, Boston, Mass., assignor to S. E. Aaron Company, Boston, Mass., a Corporation. Filed May 12, 1916. Serial No. 97,177. Original No. 1,096,983, dated May 19, 1914, Serial No. 718,638. (Cl. 81—9.5.)



1. In an implement of the class described, crossed and pivoted handles having jaws, two supporting guides secured to one side of one jaw, and a pair of coacting blades secured respectively to the opposite jaws intermediate of the supporting guides.

2. In an implement of the class described, pivoted jaws, spaced supporting guides secured to one side of the jaws, and cutters secured to the opposite sides of the jaws intermediate of the supporting guides.

3. In an implement of the class described, pivoted jaws, supporting guides secured to one side of one of the jaws in spaced relation, a splitting blade secured to the same jaw and disposed between the guides, and a second splitting blade secured to the other jaw in alinement with the first.

4. In a tool of the class described, two members crossing and pivoted to each other and continued into jaws, supporting guides spaced from each other and projecting to one side of one jaw, a pair of blades carried respectively by the jaws and offset to one side of the same and adapted to coact with each other at a point between said guides when the jaws are moved toward each other, and means out of alinement with said guides and edges for limiting such movement.

5. In a tool of the class described, two members crossing and pivoted to each other and continued into jaws, and a pair of splitter blades whose shanks are respectively secured to the outer edges of said jaws and whose bodies are bent toward each other alongside of and offset from one side of such jaws with their active edges in alinement and adapted to coact when the jaws are moved toward each other, and means carried by and offset from the other side of said members, out of alinement with said active edges for limiting said movement.

6. In a tool of the class described, the combination with two members crossing and pivoted to each other where they cross, forming handles at one side of the pivot and jaws at the other; of three independent pairs of blades carried by said jaws with the active edges of the blades of each pair respectively in alinement with each other and coacting on a line out of alinement with the other blades, and an adjustable stop carried by the handles beyond said pivot and out of alinement with all said cutting edges for limiting the movement of the jaws toward each other.

7. In a tool of the class described, two jaws, means for moving them toward each other, and adjustable stop mechanism for limiting such movement; combined with a pair of cutter blades, a pair of stripper blades, and a pair of splitter blades, all carried by said jaws and the splitters having their edges coacting at a point between the other pairs and offset beyond one side face of the jaws.

8. In a tool of the class described, the combination with two members pivoted to each other and continued into jaws; of a pair of stripper blades across the extremities of the jaws, a pair of longitudinal cutter blades near the pivot and secured to one side face of the jaws, and a pair of splitter blades between the other pairs with their edges coacting on a longitudinal line offset beyond the opposite side face of the jaws.

9. In a tool of the class described, the combination with two members crossing and pivoted to each other and continued into jaws; of a pair of stripper blades secured to the ends of the jaws and inclined toward the pivot with their edges coacting on a line transverse to the tool, and a pair of splitter blades between the strippers and pivot with their edges coacting on a line longitudinal of the tool and offset beyond one side face of the jaws.

10. A tool of the class described comprising members crossing each other and continued into jaws, a pivotal connection between the members at their point of crossing, the tool having a longitudinal opening through such point, a pair of stripper blades respectively carried by the jaws and having registering notches in their active edges, and additional coacting blades carried by said jaws with their active edges out of alinement with said opening.

11. A tool of the class described comprising members crossing each other and continued into jaws, a pivotal connection between the members at their point of crossing, the tool having a longitudinal opening through such point, and a pair of stripper blades whereof each is fixed to one jaw and has a notch and the notches register to form an opening to partly encircle the wire from which the insulation is to be removed.

12. A tool of the class described comprising a pair of members crossing each other and continued into jaws, a pivot connecting said members at the point of crossing, the tool having a longitudinal opening through such point, and stripper blades carried by said jaws and having their active edges provided with registering notches spaced on opposite sides of a line projected through the axis of said opening.

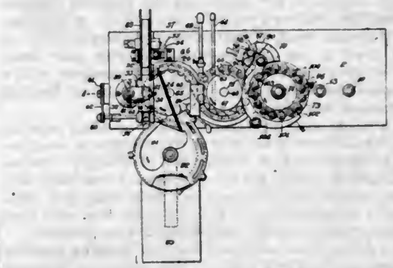
13. In an implement of the class described, two members crossing each other and continued into jaws, one member being divided at the point of crossing into arms embracing the other and the last-named having an opening through its crossing point extending longitudinally of the pliers, pivot pins through said arms of one member and engaging the other, and stripper blades carried by the jaws with their active edges adapted to meet on a line projected through the axis of said opening, said edges having registering notches at opposite sides of said line.

14. In an implement of the class described, cross members constituting handles and jaws, one member being divided at the point of crossing and embracing the other and the latter being provided with an opening extending in parallelism with the length of the implement; and an adjusting stop carried by the handles out of alinement with the said opening.

15. A pair of pliers of the class described comprising members crossing each other and continued into jaws, a pivot connecting said members at the point of crossing, the pliers having a longitudinal opening through such point, blades carried by said jaws, and adjustable stop mechanism carried by said members out of the path of a line projected through the axis of said opening.

16. A pair of pliers comprising two members crossing each other and continued into jaws, one member being divided at the point of crossing into arms embracing the other and the last named having an opening through its crossing point extending longitudinally of the pliers, pivot pins through said arms of one member and engaging the other, stripper blades secured to the ends of said jaws with their edges adapted to meet on a line projected through the axis of said opening, and adjustable stop mechanism carried by said members out of the path of said line.

14,170. MACHINE FOR ASSEMBLING BOTTLE-CLOSURES. SAMUEL C. BOND, Hollyoak, Del., assignor to Bond Bottle Sealing Company, Wilmington, Del., a Corporation of Delaware. Filed Aug. 12, 1913. Serial No. 784,451. Original No. 1,063,324, dated June 3, 1913, Serial No. 683,258. (Cl. 113—80.)



1. In a machine of the character described, in combination, a means for bringing into register at an assembling point the metal cap, a sealing gasket and a cementing medium interposed between said cap and gasket, means operative at said assembling point for inserting the gasket into and for pressing it against said cap, and means for moving the assembled closure while under pressure from said inserting means away from said assembling point.

2. In a machine of the character described, in combination, a rotating support carrying caps, means for bringing sealing gaskets into register with successive caps carried by said support, a series of plungers serving the double purpose of inserting gaskets into said caps and of maintaining a pressure upon said gaskets until a cementing medium interposed between them and said caps is set, means for depressing and holding said plungers under pressure, and means for elevating said plungers after their work has been performed.

3. In a machine of the character set forth, in combination, a rotating support carrying caps containing a cementing medium, means for registering a sealing gasket with each cap as they are successively brought to one point, a series of circularly disposed plungers adapted to be successively brought into register with gaskets carried by said gasket registering means, a means for carrying said plungers, means for rotatively carrying said plunger car-

rying means, means for depressing and for holding some of said plungers under pressure in contact with gaskets in said caps, and means for elevating said plungers after their work has been performed.

4. In a machine for assembling a bottle closure which comprises a cap, a gasket, and a fusible cementing material between said cap and gasket, in combination a means for cutting and a means for placing in the cap a disk of fusible cementing material while the cap is being continuously moved in a carrier, a second continuously moving carrier into which the cap carrying the fusible material is transferred from the first carrier, means for effecting said transfer, means for heating said cap and fusing the cementing material therein while in said second carrier, a third continuously moving carrier to which said heated cap is transferred from said second carrier, means for effecting said transfer, a means for carrying a gasket to said cap while in said third carrier, and a plunger for pressing and holding said gasket in said cap until said cementing material is set.

5. In a machine for assembling a bottle closure, comprising a cap, a gasket, and fusible cementing material interposed between said cap and gasket, in combination, a continuously rotating pocketed wheel for carrying a cap containing the cementing material, a peripherally notched disk above and rotating with said cap carrying wheel, the notches in said disk registering with the pockets in said wheel, a peripherally notched and radially slotted gasket feeding disk, a race in which said gasket feeding disk turns, longitudinally movable fingers carried by the slots in said gasket feeding disk, a cam for directing the movements of said fingers, plungers rotating with said cap carrying wheel adapted to drive a gasket out between the notches in said notched disks to a cap and to press upon said gasket until the cementing material is set, and a means for carrying and a means for operating said plungers.

6. In a mechanism for assembling and pressing together the several members of a bottle or like closure, in combination, a traveling head, a multiplicity of plungers, carried by said head, a cap carrier traveling with said head, means for elevating and depressing said plungers, and a means operating in connection with said head for limiting the downward movement of said plungers.

7. In a mechanism for assembling and pressing together the several members of a bottle or like closure, in combination, a rotating head, a multiplicity of plungers concentrically carried by said head, a cap carrier traveling with said head means for elevating and depressing said plungers, and a means operating in connection with said head for limiting the downward movement of said plungers.

8. In a mechanism for assembling and pressing together the several members of a bottle or like closure, in combination, a rotating head, a multiplicity of plungers concentrically carried by said head, a cap carrier traveling with said head, springs for depressing said plungers, a cam-ring for lifting, holding and releasing said plungers, and a means operating in connection with said head for limiting the fall of said plungers.

9. In combination, a continuously rotating cap carrying wheel, means for feeding to said wheel the metal cap of a bottle closure containing a cementing material, a means for bringing a gasket over and into register with said cap, a plunger, rotating with said cap carrying wheel, for driving said gasket into said cap and for holding it under pressure until the cementing material is set, means for lifting and means for depressing said plunger, and a means carried by said plunger and operating in connection with said head for limiting its downward movement.

10. In combination, a continuously rotating cap carrying wheel, a head rotating with said wheel, movable plungers carrying collars carried concentrically by said head, springs for depressing said plungers, a cam-ring for engaging said collars and lifting said plungers, and a stop for preventing said plungers from engaging said cap carrying wheel.

11. In a machine of the character described, in combination, a constantly rotating cap carrying wheel and a means for punching a disk from a strip of fusible material and for simultaneously placing said disk in a cap carried by said wheel.

12. In a machine of the character described, in combination, a punch, a constantly moving cap carrying means adapted to bring successive caps of substantially the same diameter as said punch into register with it, and a means, operating in connection with said punch, for carrying a disk cut by said punch into a cap carried by said carrying means.

13. In a machine of the character set forth, in combination, a punch, a cam actuated means for lifting and a spring for depressing said punch, a cap carrying means for bringing caps successively into register with said punch, a gag for rendering said punch inoperative, and means operated by contact with a cap while in said cap carrying means for holding said gag in an inoperative position.

14. In a machine of the character set forth, in combination, a reciprocating punch, a cam actuated means for elevating and a spring for depressing said punch, a cap carrying means for bringing caps successively into register with said punch, and a means actuated by engagement with a cap while in said cap carrying means for permitting said spring to operatively actuate said punch.

15. In a machine of the character set forth, in combination, a punch, an arm, a rod secured to said arm, means for lifting and a spring for lowering said rod and punch, a cap carrying means for bringing caps successively into register with said punch, a gag for arresting the downward movement of said punch, and means operated by a cap carried by said cap carrying means for keeping said gag in an inoperative position.

16. In a machine of the character set forth, in combination, a punch, means for reciprocating said punch, a cap carrying means for bringing caps successively into register with said punch, a stop or gag, an arm carrying said stop or gag, a shaft carrying said arm, bearings for said shaft, a finger carried by said shaft adapted to be engaged by a cap carried by said cap carrying means to keep said stop or gag in an inoperative position, and a spring adapted to move said stop or gag into position to arrest the operative movement of said punch when said finger is out of engagement with a cap.

17. In a machine of the character set forth, in combination, means for inserting a cementing material in a cap, means for heating and fusing said material while in said cap, means for registering a sealing gasket with said cap, means for forcing said gasket into contact with said fused cementing material, means for maintaining said contact until said cementing material is set, and continuously moving carrying means for bringing the cap in succession to all of said means.

18. In a cap assembling machine, a movable support, means for heating and feeding heated tins periodically to said support, means for supporting sealing disks above the heated tins on said support, means for feeding sealing disks to the said disk-supporting means in position above the heated tins on said support, means movable with said support for driving the disks thus supported into said tins and means for retracting said driving means.

19. In a cap assembling machine, a rotatable turret having a table for supporting tins and means for supporting corks, a series of vertically movable plungers above said table, means for heating and feeding heated tins to said table beneath said plungers, means for feeding corks into position above the heated tins on the table and means for operating said plungers to drive the corks thus supported into said tins.

20. In a cap assembling machine, means for heating and feeding tins, means for supporting corks above but out of contact with the heated tins, spring pressed plungers above the cork supporting means and disposed in line with the corks supported thereby and means for retracting and releasing the spring pressed plungers whereby to cause said plungers to drive the supported corks into the heated tins.

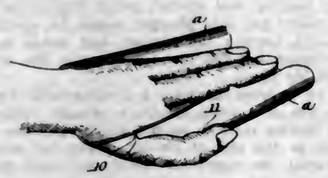
21. In a cap assembling machine, the combination with means for feeding the tins, of means for heating the tins advanced by said feeding means, an assembling device independent of the heating means and arranged to receive the heated tins after the heating thereof has been discontinued and means for positioning the corks above the tins taken by the assembling device, said assembling device having means for forcing the corks into the tins and holding the corks therein under pressure.

22. In a cap assembling machine, the combination of means for feeding the tins, means for heating the tins advanced by said feeding means, an assembling device including a table separate and independent from the heating means arranged to receive and support the tins after the heating thereof has been discontinued and plungers disposed above the table, means for positioning the corks above the tins supported on the table, and means operating the plungers to drive said corks into the tins and hold them under pressure therein.

23. In a cap assembling machine, means for heating the tins, an assembling device separate from said heating means, including a supporting table and punches supported above the same, means for feeding the tins after being heated onto the assembling table, means for feeding corks to the tins and means operating the punches to unite the corks with the tins.

24. In a cap assembling machine, a movable assembling table, means for feeding the tins onto said table, movable means for supporting corks above such tins, assembling punches above and movable with the table and means operating said punches to drive the corks thus supported into the tins and hold them under pressure until united with such tins.

14,171. WASHMITT. LAURA M. HICKS, Bloomington, Ind. Filed Jan. 6, 1916. Serial No. 70,674. Original No. 1,132,475, dated Mar. 16, 1915, Serial No. 868,194. Reissue No. 13,977, dated Sept. 14, 1915, Serial No. 39,013. (Cl. 68—8.)



1. A wash mitt of the character described formed of a sheet of rigid material having a transversely corrugated surface with its edges rolled back to form finger receiving sockets and with a thumb engaging formation, substantially as set forth.

2. A wash mitt of the character described consisting of a single metal plate having a corrugated surface and formed with integral finger receiving sockets on its edges and with a thumb engaging formation, and with a thumb hold consisting of a projecting lip adjacent to said thumb engaging formation adapted to form a bearing for the ball of the thumb to enable the wearer to hold said mitt in place during use, substantially as set forth.

3. A wash mitt of the character described comprising a metal plate having a corrugated rubbing surface and finger receiving sockets formed by rolling back its side edges at its outer end and formed with a thumb receiving formation with a slit in one side extending to the outside of the device, whereby said formation may be adjusted to the hand of the wearer and secured to the base of the thumb, substantially as set forth.

4. A wash mitt of the character described formed of a sheet of metal with its edges rolled back to receive the outside fingers of the hand and formed with a transversely corrugated surface, one edge having a thumb engaging formation and a projection adjacent thereto on which the ball of the thumb may bear, substantially as set forth.

5. A wash mitt of the character described formed of a sheet of rigid material with its edges turned back to receive the outside edges of the hand, the surface of said wash mitt being corrugated to form a "rubbing" surface, and means on one edge of said wash mitt for engagement with the thumb for retaining said wash mitt in position on the hand when in use, substantially as set forth.

6. A wash mitt of the character described consisting of a sheet of rigid material with its edges formed to receive the outside edges of the hand, the surface of said mitt being corrugated to form a rubbing surface and the hand engaging formations being adapted to retain said mitt on the hand while in use, substantially as set forth.

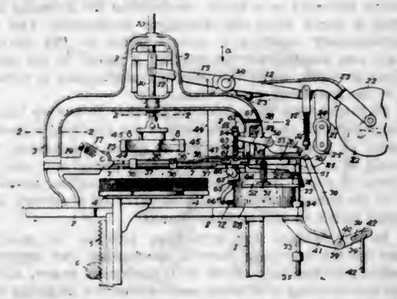
7. A wash mitt consisting of a sheet of rigid material having a corrugated rubbing surface and adapted to fit over the palm of the hand and to extend approximately the length of the hand, from the wrist to the ends of the fingers, and clamping means extending back of the hand to hold the mitt thereon, substantially as set forth.

8. A wash mitt of the character described consisting of a sheet of rigid material having an appropriate rubbing surface approximately co-extensive with the hand and provided with bent-up stiffening and hand-engaging means formed in piece therewith, substantially as set forth.

9. A wash mitt of the character described formed in main of a single plate or rigid material with a corrugated rubbing surface and having edge formations adapted to stiffen the plate, engage the outside edges of the hand and retain the mitt thereon while in use, substantially as set forth.

10. A wash mitt consisting of a sheet of rigid material with a rubbing surface formed by transverse corrugations therein and having stiffening formations extending longitudinally of the plate adjacent to the ends of said corrugations, and means for holding the mitt by the hand, substantially as set forth.

14,172. ENVELOP-MACHINE. FRANK L. MCNEILL, Worcester, Mass., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed July 26, 1915. Serial No. 42,079. Original No. 1,091,229, dated Mar. 24, 1914. Serial No. 532,026. (Cl. 93—61.)



1. An organized automatic machine for manufacturing envelops having an opening therethrough and a transparent covering for said opening inside of the envelop, comprising means for applying adhesive material to a transparent patch, adjoining the edge thereof, means for carrying said patch, having adhesive material thereon, to an envelop blank having an opening therethrough, and means for pressing said patch on to said envelop blank to cover said opening, said last mentioned means operating substantially simultaneously with the gumming of the flaps of the envelop, and the raising of the envelop blank to be carried to the creasing and folding box, to be creased and folded.

2. An organized automatic machine for manufacturing envelops having an opening therethrough and a transparent covering for said opening inside of the envelop, comprising means for applying adhesive material to a strip of transparent paper, the conformation of said adhesive material corresponding substantially to the shape or conformation of the opening in the envelop, means for severing said strip, after the adhesive material has been applied thereto, means for carrying said severed piece,

having the adhesive material thereon, to an envelop blank having an opening therethrough, and means for pressing said piece on the envelop blank to cover said opening, said last mentioned means operating substantially simultaneously with the gumming of the flaps of the envelop blank, and the raising of the envolop blank to be carried to the creasing and folding box, to be creased and folded.

3. In mechanism for attaching patches to envelop blanks having openings therein, gumming mechanism for applying gum in a narrow line or margin to the strip from which the patches are cut, comprising a gum receptacle, a gumming die adapted to be moved into said receptacle to receive the gum on its engaging edge, and to be raised out of said receptacle to apply the gum in a narrow line or margin to said strip, said gumming die being pivotally mounted to have a rocking or pivotal movement, in addition to, and independent of its raising and lowering movement.

4. In mechinsm for attaching patches to envelop blanks having openings therein, gumming mechanism for applying gum in a narrow line or margin to the strip from which the patches are cut, comprising a gum receptacle, a gumming die adapted to be moved into said receptacle, to receive the gum on its engaging edge, and to be raised out of said receptacle to apply the gum in a narrow line or margin onto said strip, said gumming die being pivotally mounted to have a rocking or pivotal movement, and stops for limiting the pivotal movement of said die.

5. In mechanism for attaching patches to envelop blanks having openings therein, mechanism for applying adhesive material in a narrow line or margin to a patch, mechanism for gripping and moving said patch from the gumming mechanism, and for simultaneously carrying a second patch with the adhesive material thereon to an envelop blank, having an opening therein, and mechanism for applying to an envelop blank said patch, to cover said opening.

6. In mechanism for attaching patches to envelop blanks having openings therein, mechanism for applying adhesive material to a patch, mechanism for gripping and moving a patch from the gumming mechanism, and for simultaneously carrying a second patch to the envelop blanks, and mechanism for holding a patch in its intermediate position, while the gripping mechanism is returning to the gumming mechanism.

7. In mechanism for attaching patches to envlop blanks having openings therein, mechanism for applying adhesive material to a strip of transparent paper, mechanism for severing said strip, mechanism for gripping and moving the strip of paper from the gumming mechanism, preparatory to its being severed, and also carrying a severed and gummed patch to the envelop blanks.

8. In mechanism for attaching patches to envelop blanks having openings therein, mechanism for applying adhesive material to a strip of transparent paper, mechanism for severing said strip, mechanism for gripping and moving the strip of paper from the gumming mechanism, preparatory to its being severed, and also carrying a severed and gummed patch to the envelop blanks, and mechanism for holding the severed patch in its intermediate position, while the gripping mechanism is returning to the gumming mechanism.

9. In mechanism for attaching patches to envelop blanks having openings therein, mechanism for gumming a patch, mechanism for gripping the gummed patch, mechanism for carrying the gummed patch from the gumming mechanism, and mechanism for simultaneously carrying a second gummed patch to an envelop blank having an opening therein.

10. In mechanism for attaching patches to envelop blanks having openings therein, mechanism for gumming a strip of transparent paper, mechanism for gripping said strip, mechanism for drawing it from the gumming mechanism, mechanism for cutting said strip, and mechanism for carrying the gummed patch cut from said strip to an envelop blank having an opening therein.

11. In an envelop machine, a feeding table for supporting a pile of envelop blanks having openings therein, a reciprocating die for applying gum to the uppermost blank and raising it by adhesion from the pile of blanks, a vertically reciprocating plunger in registration with the openings in the blanks, means for applying gum to a transparent patch to cover the opening in the blank, means for moving the gummed patch beneath said plunger, and means for imparting an upward movement to said feeding table as the blanks are successively raised therefrom by the gumming die.

12. In an envelop machine, a feeding table for supporting a pile of envelop blanks having openings therein, gumming dies for applying adhesive material to the flaps of the uppermost blank in the pile, a vertically reciprocating plunger in registration with the opening in the blanks, means for moving a transparent patch provided with adhesive material beneath said plunger, and means for imparting an upward movement to said feeding table.

13. In an envelop machine, a feeding table for supporting a pile of blanks having openings therein, a vertically reciprocating die for applying adhesive material to the flap of the uppermost blank, a plunger in registration with the openings in the blank, as they are held on said feeding table, and having its under surface substantially in the plane of the gummed under surface of said gumming die, means for imparting a vertically reciprocating movement to said plunger, means for applying adhesive material to a transparent patch, means for moving the patch beneath said plunger, and means for imparting an upward movement to said feeding table as the blanks are successively removed therefrom.

14. In an envelop machine, means for supporting a blank having an opening therein, a plunger in registration with the opening in the blank, a coil of transparent paper, means for drawing a continuous strip from said coil, means for applying adhesive material to said strip, means for severing a piece from said strip to form a patch with said adhesive thereon to cover the opening in the blank, means for holding said severed patch intermediate said gumming means and said plunger, means for moving the severed patch beneath the plunger, and means for vertically reciprocating the plunger to press the gummed patch upon the blank.

15. In an envelop machine, a feeding table for supporting a pile of envelop blanks, a plunger coöperating with said feeding table to press a patch upon the uppermost blank in the pile of blanks, means for moving a patch between the uppermost blank and said plunger, means for imparting a vertically reciprocating movement to said plunger, and means for raising the uppermost blank vertically from the pile of blanks.

16. In an envelop machine, a feeding table for supporting a pile of envelop blanks having openings therein in an extended position, a plunger coöperating with said feeding table as a pressing member, means for feeding a patch to said plunger in registration with the opening in the blank, means for imparting a vertically reciprocating motion to said plunger, and means for raising the topmost blank vertically from the pile of blanks.

17. In an envelop machine, a feeding table for supporting a pile of envelop blanks, having openings therein, a vertically reciprocating plunger coöperating with said feeding table to press a patch upon the uppermost blank in the pile of blanks, means for moving said feeding table upwardly to maintain the uppermost blank in substantially the same plane, means for supporting a coil of transparent paper, means for removing a continuous strip from said coil, means for severing a patch from said strip, means for moving said patch beneath said plunger.

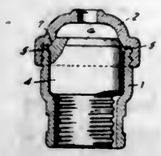
18. The combination with a support for an envelop blank having an opening therein and a reciprocating gumming die for applying gum to the blank while held on said support and for subsequently raising the blank from its support by its adhesion to said die, of means for holding a patch above and in registration with the opening in the blank, while held on said support, means for lowering said patch to carry it into contact with the blank, and means for applying gum between the opposing surfaces of the patch and blank to secure the adhesion of the patch to the blank.

19. The combination with supporting means for a blank having an opening therein, a flap gumming die for applying gum to the flap of the blank while held on said supporting means, means for supporting a patch above and in registration with the opening in the blank, and means coöperating with the blank supporting means for applying pressure to the patch and blank while the flap gumming die is in contact with the blank.

20. In an envelop machine, supporting means for an envelop blank having an opening therein, means for supporting a patch above and in registration with the opening in the blank, means for lowering the patch, said lowering means coöperating with the blank supporting means to apply pressure to the patch and blank, means for raising the blank supporting means, and means for raising the patched blank vertically from its support.

[Claims 6 to 20 not printed in the Gazette.]

14,173. WATERPROOF CAP AND SHELL FOR INCANDESCENT ELECTRIC LAMPS. CLARENCE A. VETTER, Pittsburgh, Pa. Filed Feb. 7, 1916. Serial No. 76,798. Original No. 1,127,326, dated Feb. 2, 1915, Serial No. 782,373. (Cl. 173—362.)



1. The combination of a weatherproof shell externally threaded and having oppositely disposed inwardly opening notches, a porcelain or other core having lugs or off-sets which engage said notches to prevent twisting of the core and having a beveled crown extending beyond the rim of the shell, and a weatherproof cap having a depending wall or skirt with threads which engage the threaded part of the shell and having a beveled shoulder which takes a binding fit on the beveled crown of the core.

2. The combination of a weatherproof shell, a cap having a threaded connection therewith, and an insulating core or body within said shell, said shell having a sectional recess in the end of its inner wall surface opening toward said cap, said core or body having an outwardly extending coöperating projection entering said recess, and said cap having a portion overlying and closing the open end of said recess and thereby confining said projection therein.

3. The combination of a weatherproof shell, a cap having a threaded connection therewith, and an insulating core or body within said shell, said shell at one point in its periphery having a sectional recess in the end of its inner wall surface, said core or body having an outwardly extending coöperating projection, said projection and recess being engageable and disengageable only by a relative endwise movement of said shell and core, and said cap having a portion overlying and closing the open end of said recess and thereby confining said projection therein.

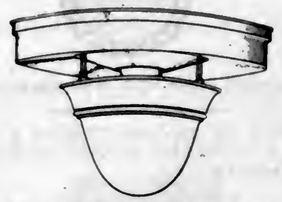
4. The combination of a weatherproof shell externally threaded at one end, a cap having an internally threaded skirt screwing on said shell, and an insulating core or body within said shell, said shell having a sectional recess in the end of its inner wall surface, said core or body having an outwardly extending coöperating projection entering said recess, and said cap having a portion overlying and closing the open end of said recess and thereby confining said projection therein.

5. The combination of a weatherproof shell externally threaded at one end, a cap having an internally threaded skirt screwing on said shell, and an insulating core or body within said shell, said shell at one point in its periphery having a sectional recess in the end of its inner wall surface opening toward said cap, said core or body having an outwardly extending core or projection, said projection and recess being engageable by a relative endwise movement of said shell and core, and said cap having a portion overlying and closing the open end of said recess and thereby confining said projection therein.

6. The combination of a weatherproof shell externally threaded at one end, a cap having a threaded skirt screwing on said shell, and an insulating core or body within said shell, said shell having a sectional recess in the end of its inner wall surface opening toward said cap, said core or body having an outwardly extending coöperating projection entering said recess and a portion extending beyond the end of said shell, and said cap having a portion overlying and closing the open end of said recess and also engaging the outwardly extending portion of said core or body, whereby to clamp said core in said shell and prevent turning movement of the core therein.

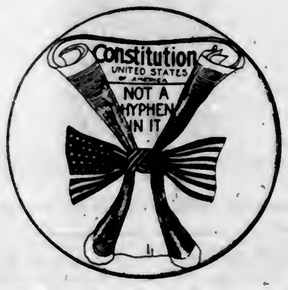
DESIGNS.

49,412. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed June 2, 1916. Serial No. 101,414. Term of patent 14 years.



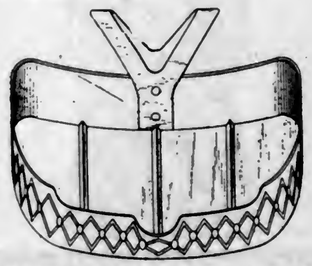
The design for a lighting fixture, as shown.

49,413. BADGE OR BUTTON. JOSEPH W. ALLAN, New York, N. Y. Filed Apr. 21, 1916. Serial No. 92,794. Term of patent 3½ years.



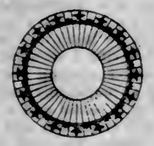
The ornamental design for a button or badge as shown.

49,414. SOAP-DISH. ANNIE A. R. ANDERSON, Minneapolis, Minn. Filed Feb. 11, 1916. Serial No. 77,812. Term of patent 3½ years.



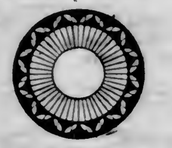
The ornamental design for a soap-dish, as shown.

49,415. CANDY-CUP. SALVATORE BAGNULO, East Boston, Mass. Filed Apr. 6, 1916. Serial No. 89,490. Term of patent 3½ years.



The ornamental design for a candy cup as shown.

49,416. CANDY-CUP. SALVATORE BAGNULO, East Boston, Mass. Filed Apr. 6, 1916. Serial No. 89,491. Term of patent 3½ years.



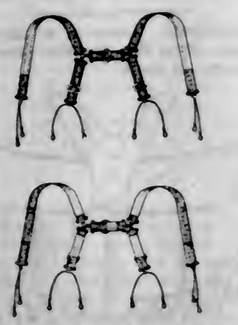
The ornamental design for a candy cup as shown.

49,417. HAIR PIN OR COMB. WILLIAM S. BECHTOLD, Newark, N. J. Filed Mar. 20, 1916. Serial No. 85,526. Term of patent 3½ years.



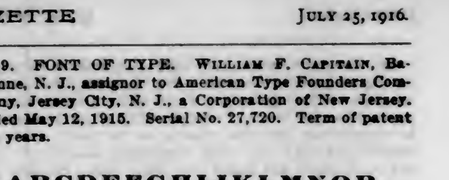
The ornamental design for a hair pin or comb, as shown.

49,418. SUSPENDERS. CLARENCE L. CAMP, Spokane, Wash. Filed May 10, 1916. Serial No. 96,736. Term of patent 14 years.



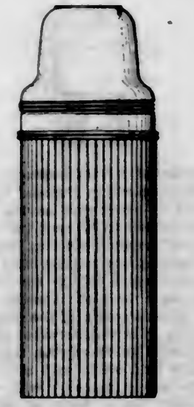
The ornamental design for suspenders, substantially as shown.

49,419. FONT OF TYPE. WILLIAM F. CAPITAIN, Bayonne, N. J., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 12, 1915. Serial No. 27,720. Term of patent 14 years.



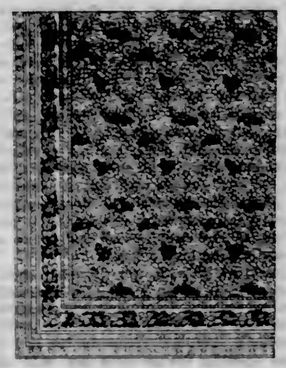
The ornamental design for a font of type shown in the accompanying drawing.

49,420. VACUUM-BOTTLE CASE. GEORGE E. CURTISS, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed May 27, 1916. Serial No. 100,403. Term of patent 14 years.



The ornamental design for a vacuum bottle case, as shown.

49,421. RUG. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,153. Term of patent 3½ years.



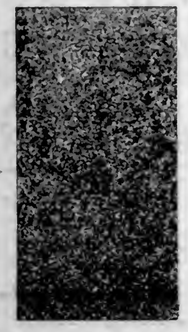
The ornamental design for a rug, substantially as shown.

49,422. RUG. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,154. Term of patent 3½ years.



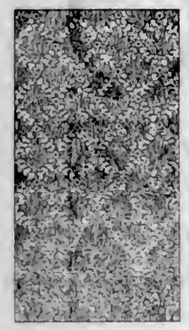
The ornamental design for a rug, substantially as shown.

49,423. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,155. Term of patent 3½ years.



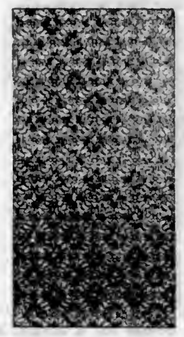
The ornamental design for a carpet, substantially as shown.

49,424. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,156. Term of patent 3½ years.



The ornamental design for a carpet, substantially as shown.

49,425. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,157. Term of patent 3½ years.



The ornamental design for a carpet, substantially as shown.

49,426. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,158. Term of patent 3½ years.



The ornamental design for a carpet, substantially as shown.

49,427. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,159. Term of patent 3½ years.



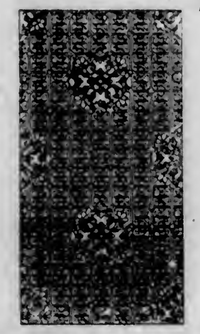
The ornamental design for a carpet, substantially as shown.

49,428. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,160. Term of patent 3½ years.



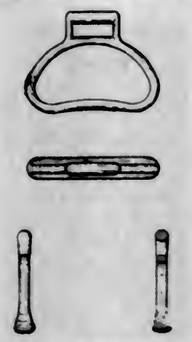
The ornamental design for a carpet, substantially as shown.

49,429. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,161. Term of patent 3½ years.



The ornamental design for a carpet, substantially as shown.

49,430. HANDHOLD FOR CAR-STRAPS. HENRY CUSHING HASKINS, Glen Ridge, N. J. Filed Feb. 4, 1916. Serial No. 76,219. Term of patent 7 years.



The ornamental design for a hand-hold for car straps as shown.

49,431. SPORT-COMB. CROFTON C. HOLDEN and EDMUND P. HADLEY, Leominster, Mass. Filed June 19, 1916. Serial No. 104,621. Term of patent 3½ years.



The ornamental design for a sport comb as shown.

49,432. RING. GEORGE A. HOLLIER, Sioux Falls, S. D. Filed June 1, 1916. Serial No. 101,186. Term of patent 3½ years.



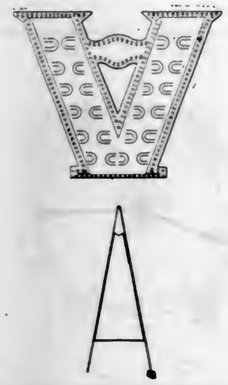
The ornamental design for a ring, as shown.

49,433. RUBBER TIRE. CHARLES E. JENKINS, Chicago, Ill. Filed Apr. 25, 1916. Serial No. 93,552. Term of patent 14 years.



The ornamental design for a rubber tire as shown.

49,434. DISPLAY-STAND. ADALBERT JOSEPHSON, New York, N. Y. Filed May 27, 1916. Serial No. 100,404. Term of patent 7 years.



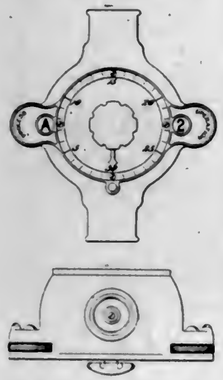
The ornamental design for a display stand, as shown.

49,435. DUST-CAP FOR VALVES. HENRY P. KRAFT, Ridgewood, N. J. Filed May 2, 1914. Serial No. 836,030. Term of patent 14 years.



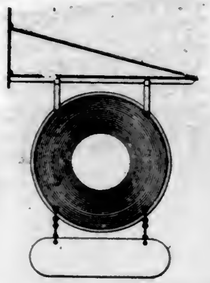
The ornamental design for a dust cap for valves, substantially as shown.

49,436. ELECTRIC TIME-SWITCH AND INDICATOR. LEWIS A. MAPEL, St. Louis, Mo., assignor to Mechanical Development Company of Missouri, St. Louis, Mo., a Corporation of Missouri. Filed May 15, 1916. Serial No. 97,750. Term of patent 14 years.



The design for an electric time switch and indicator, as shown.

49,437. DISPLAY-SIGN. WALTER L. MARSHALL, Philadelphia, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed May 29, 1915. Serial No. 31,298. Term of patent 14 years.



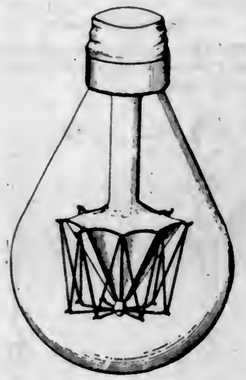
The ornamental design for a display sign, as shown.

49,438. PLATE OR SIMILAR ARTICLE. HANS NAGEL, Brooklyn, N. Y., assignor to Palm, Fechteler & Co., New York, N. Y., a Corporation of New York. Filed June 6, 1916. Serial No. 102,098. Term of patent 3½ years.



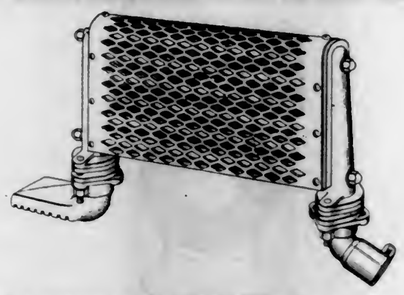
The ornamental design for a plate or similar article as shown.

49,439. ELECTRIC LAMP. JESSE A. NELSON, Ellsworth, Iowa. Filed Apr. 11, 1916. Serial No. 90,510. Term of patent 7 years.



The ornamental design for an electric lamp, as shown.

49,440. HEATER FOR SELF-PROPELLED VEHICLES. CLYDE S. PELTON, Cleveland Heights, Ohio. Filed Jan. 24, 1916. Serial No. 74,053. Term of patent 14 years.



The ornamental design for a heater for self propelled vehicles as shown.

49,441. ORNAMENTAL HEAD. GRACE M. QUACKENBUSH, New York, N. Y. Filed Feb. 8, 1916. Serial No. 77,016. Term of patent 7 years.



The ornamental design for an ornamental head, as shown and described.

49,442. ORNAMENTAL HEAD. GRACE M. QUACKENBUSH, New York, N. Y. Filed Feb. 8, 1916. Serial No. 77,017. Term of patent 7 years.



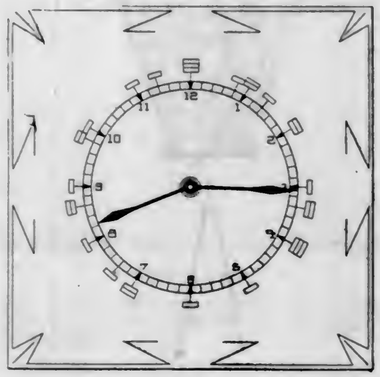
The ornamental design for an ornamental head, as shown and described.

49,443. STATUETTE. JESSIE MCCUTCHEON RALEIGH, Chicago, Ill. Filed Feb. 21, 1916. Serial No. 79,784. Term of patent 14 years.



The ornamental design for a statuette, as shown.

49,444. INDICATOR. GEORGE W. RAWLINGS and GEORGE M. LANAM, Dayton, Wash. Filed Apr. 28, 1916. Serial No. 94,265. Term of patent 14 years.

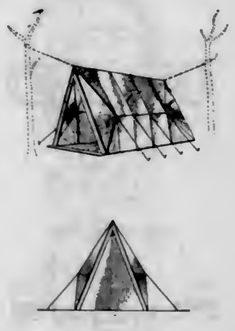


The ornamental design for an indicator, as shown.

49,445. CLASP DEVICE. JACOB RITTER, New York, N. Y. Filed Jan. 10, 1916. Serial No. 71,351. Term of patent 3½ years.

The ornamental design for a clasp device, as shown.

49,446. TENT. POWHATAN ROBINSON, New York, N. Y., assignor to New York Sporting Goods Company, New York, N. Y., a Corporation of New York. Filed Mar. 1, 1916. Serial No. 81,559. Term of patent 7 years.



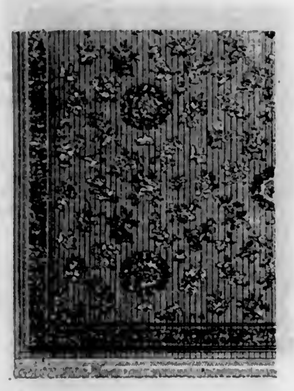
The ornamental design for a tent as shown.

49,447. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,131. Term of patent 3½ years.



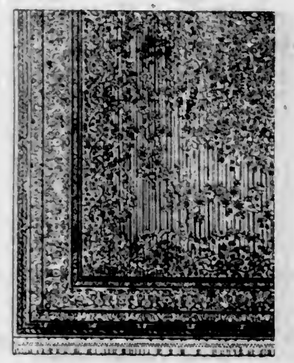
The ornamental design for a rug, substantially as shown.

49,448. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,132. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,449. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,133. Term of patent 3½ years.



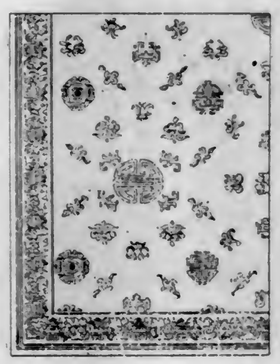
The ornamental design for a rug, substantially as shown.

49,450. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,134. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,451. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,135. Term of patent 3½ years.



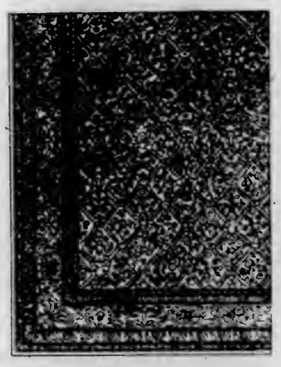
The ornamental design for a rug, substantially as shown.

49,452. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,136. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,453. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,137. Term of patent 3½ years.



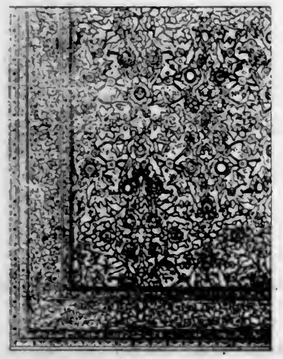
The ornamental design for a rug, substantially as shown.

49,454. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,138. Term of patent 3½ years.



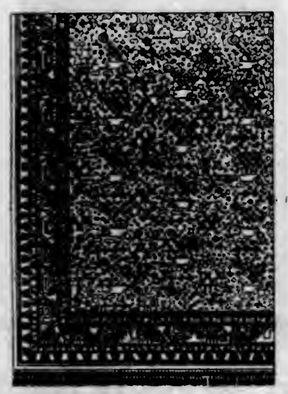
The ornamental design for a rug, substantially as shown.

49,455. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,139. Term of patent 3½ years.



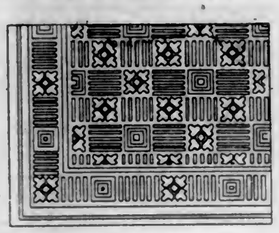
The ornamental design for a rug, substantially as shown.

49,456. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,140. Term of patent 3½ years.



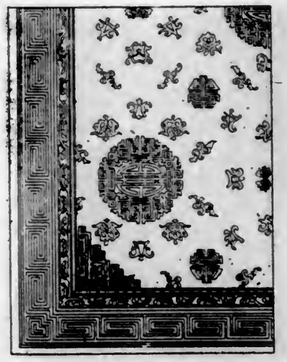
The ornamental design for a rug, substantially as shown.

49,457. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,141. Term of patent 3½ years.



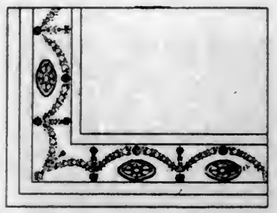
The ornamental design for a rug, substantially as shown.

49,458. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,142. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,459. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,143. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,460. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,144. Term of patent 3½ years.



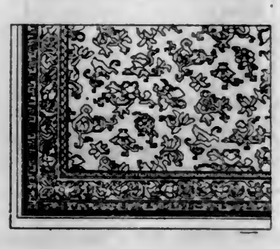
The ornamental design for a rug, substantially as shown.

49,461. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,145. Term of patent 3½ years.



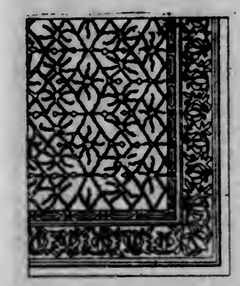
The ornamental design for a rug, substantially as shown.

49,462. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,146. Term of patent 3½ years.



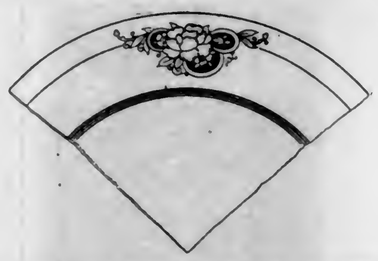
The ornamental design for a rug, substantially as shown.

49,463. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,147. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,464. ARTICLE OF MANUFACTURE. CHARLES L. SEBRING, Sebring, Ohio, assignor to The Sebring Pottery Company, Sebring, Ohio. Filed May 29, 1916. Serial No. 100,695. Term of patent 3½ years.



The ornamental design for an article of manufacture as shown.

49,465. RUG. JOHN SPRING, East Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,148. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,466. RUG. JOHN SPRING, East Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,149. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

49,467. RUG. JOHN SPRING, East Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,150. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,468. RUG. JOHN SPRING, East Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,151. Term of patent 3½ years.



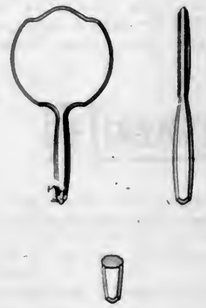
The ornamental design for a rug, substantially as shown.

49,469. RUG. JOHN SPRING, East Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company, a Corporation of Massachusetts. Filed June 7, 1916. Serial No. 102,152. Term of patent 3½ years.



The ornamental design for a rug, substantially as shown.

49,470. MIRROR, BRUSH, OR SIMILAR ARTICLE. HERBERT J. STRAKER, North Attleboro, Mass., assignor to Webster Company, North Attleboro, Mass., a Corporation of Rhode Island. Filed Apr. 15, 1916. Serial No. 91,495. Term of patent 7 years.



The ornamental design for a mirror, brush or similar article, as shown.

TRADE-MARKS

PUBLISHED JULY 25, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 36,984. (CLASS 37. PAPER AND STATIONERY.) DISTRICT OF COLUMBIA PAPER MFG. CO., Alexandria, Va., and Washington, D. C. Filed Aug. 27, 1908.



Particular description of goods.—Blotting-Paper, Cover-Paper, Book-Paper, and Bond-Paper.
Claims use since about the 24th day of June, 1908.

Ser. No. 60,194. (CLASS 37. PAPER AND STATIONERY.) THE REYNOLDS & REYNOLDS COMPANY, Dayton, Ohio. Filed Dec. 12, 1911.



The trade-mark in which the words "White House Lawn" are printed in yellow or gold.
Particular description of goods.—Writing-Tablets and Blank Books.
Claims use since the year 1890.

Ser. No. 70,473. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) OLD FILE CUTLERY COMPANY, Havana, Ill. Filed May 17, 1913.

OLD FILE

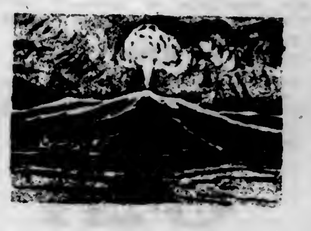
Particular description of goods.—Cutlery.
Claims use since Jan. 1, 1906.

Ser. No. 71,224. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN TYPE FOUNDERS COMPANY, Jersey City, N. J. Filed June 21, 1913.

THE INKNIFE

Consisting of the words "The Inknife" divided by a vertical line, with a horizontal line extending in one direction at one end of the vertical line and another horizontal line extending in the opposite direction at the other end of the vertical line.
Particular description of goods.—Knives for Printers' Use.
Claims use since April, 1913.

Ser. No. 73,293. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) A. R. MOSLER & Co., New York, N. Y. Filed Oct. 9, 1913.



Particular description of goods.—Spark-Plugs.
Claims use since July 15, 1909.

Ser. No. 79,203. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) L. GIVAUDAN, Vernier, near Geneva, Switzerland. Filed June 18, 1914.

Argulan

Particular description of goods.—Mercury Preparations, Such as Mercury Sulf-Amino-Pyrazolone, for the Treatment of Venereal Diseases and for the Preparation of Salves and Ointments for External Application.
Claims use since Sept. 25, 1912.

Ser. No. 83,998. (CLASS 27. HOROLOGICAL INSTRUMENTS.) EISENSTADT MANUFACTURING COMPANY, St. Louis, Mo. Filed Jan. 21, 1915.

TRANSIT

Particular description of goods.—Watches, Clocks, Watch-Movements, Watchcases, Clock-Movements, and Clock-Cases.
Claims use since Jan. 1, 1915.

Ser. No. 84,198. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. X. KUCHLER & SON, Brooklyn, N. Y. Filed Jan. 29, 1915.



Stag

F.X.K.

Particular description of goods.—Candles.
Claims use since September, 1895.

Ser. No. 84,281. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES C. DAVIS, Chicago, Ill. Filed Feb. 3, 1915.

Tender-All

"Tender-All."
Particular description of goods.—A Disintegrating Preparation to be Used in Connection with the Cooking of Meats and Vegetables.
Claims use since Jan. 26, 1915.

Ser. No. 84,882. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE FULTON CO., Knoxville, Tenn. Filed Mar. 2, 1915.

SYLPHON

Particular description of goods.—A Hollow Expansible and Contractible Corrugated Tubular Metal Device.
Claims use since 1908.

Ser. No. 85,587. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) W. H. PALING AND CO. LIMITED, Sydney, New South Wales, Australia. Filed Mar. 31, 1915. Under ten-year proviso.

Belling

Particular description of goods.—Pianos.
Claims use since the year 1890.

Ser. No. 86,340. (CLASS 46. FOODS AND INGREDIENTS OF FOOD.) LAFAYETTE COLTRIN, Long Beach, Cal. Filed May 3, 1915.

Pride of California

Particular description of goods.—A Breakfast Cereal.
Claims use since Apr. 21, 1915.

Ser. No. 86,793. (CLASS 38. PRINTS AND PUBLICATIONS.) AMERICAN AUTOMOBILE ASSOCIATION, New York, N. Y. Filed May 21, 1915.



Particular description of goods.—Maps, Printed Touring and Route Information, and other Printed Publications Issued Monthly.
Claims use since April, 1909.

Ser. No. 87,416. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

104

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,417. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

105

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,418. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

115

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,419. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

116

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,420. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

117

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,421. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

118

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,422. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

119

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,423. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

120

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,424. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

121

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,425. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

122

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,426. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

124

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,427. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

125

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,461. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 21, 1915.

102

Particular description of goods.—Sensitive Photographic Film.
Claims use since May, 1905.

Ser. No. 87,729. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE S. S. BROWN CO., New York, N. Y. Filed July 3, 1915.

INDIAN HEAD BRAND

No claim being made to the exclusive use of the word "Brand."
Particular description of goods.—Cream-Cheese.
Claims use since the year 1897.

Ser. No. 88,247. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM B. FINK, New York, N. Y. Filed July 28, 1915.

AWUN-DER-BAR

Particular description of goods.—Rye Bread.
Claims use since about Mar. 1, 1915.

Ser. No. 89,351. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS R. HINTON, Springfield, Mo. Filed Sept. 21, 1915.

SPEED-O TABLETS TRADE MARK

No claim being made to the words "Trade-Mark, Cold and Grippe Tablets."
Particular description of goods.—Cold and Grippe Tablets.
Claims use since the 1st day of March, 1914.

Ser. No. 90,298. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE WESTERN STATES CUTLERY AND MANUFACTURING COMPANY, Boulder, Colo. Filed Nov. 1, 1915.

WTESTED S SHARP CTEMPER C

No claim being made to the words "Tested Temper" and "Sharp" apart from the mark shown in the drawing.
Particular description of goods.—Pocket-Knives, Razors, Butcher-Knives, Paring-Knives, Shears, and Scissors.
Claims use for one year last past.

Ser. No. 90,445. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH BURNETT CO., Boston, Mass. Filed Nov. 6, 1915.

Particular description of goods.—Extracts of Vanilla, Lemon, Orange, Almond, Celery, Raspberry, Strawberry, Cherry, Pineapple, Cinnamon, Clove, Nutmeg, Anise, Rose, Peach, Nectarine, Onion, Pistachio, Violet, Cochineal, Peppermint, Wintergreen, Spearmint, Jamaica Ginger for Use in Food.
Claims use since the year 1894.

Ser. No. 90,527. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE RAYMOND HADLEY CORPORATION, New York, N. Y. Filed Nov. 8, 1915. Under ten-year proviso.

ORLANDO

Particular description of goods.—Wheat-Flour.
Claims use since September, 1894.

Ser. No. 91,072. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TOBIAS JOHNSEN, North Bay, Ontario, Canada. Filed Dec. 1, 1915.

SINKEL SALVE

The word "Salve" being hereby disclaimed.
Particular description of goods.—A Salve for Cancers or other Sores.
Claims use since the 26th of October, 1915.

Ser. No. 91,670. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y. Filed Dec. 21, 1915.

STYLEFIT

Particular description of goods.—Paper Garment-Patterns.
Claims use since Aug. 23, 1915.

Ser. No. 91,715. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHAIN BELT CO., Milwaukee, Wis. Filed Dec. 23, 1915.

REX

Particular description of goods.—Concrete-Mixing Machines and Set-Collars.
Claims use since Oct. 1, 1914.

Ser. No. 91,845. (CLASS 39. CLOTHING.) ARISTON HAT MFG. CO., Peekskill, N. Y. Filed Dec. 31, 1915.

PETER RABBIT

Particular description of goods.—Hats.
Claims use since Dec. 6, 1915.

Ser. No. 91,914. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAN HARTMAN, Chicago, Ill. Filed Jan. 4, 1916.

TWARDOWSKI

Particular description of goods.—A Palliative for Neuralgia, Sore Throat, Rheumatism, Sore Lungs, Tonsilitis, Headache, Earache, and Sprains.
Claims use since Dec. 1, 1915.

Ser. No. 91,982. (CLASS 39. CLOTHING.) M. WILE & Co., Buffalo, N. Y. Filed Jan. 6, 1916.

CLUB CLOTHES

The trade-mark consists of a tricolored pennant bearing the words "Club Clothes." No claim is made to the word "Clothes" apart from the mark shown in the drawing, the colors of said pennant being blue, yellow, and red, reading from the wide or staff end thereof to the point.
Particular description of goods.—Men's, Youths', Boys', and Children's Cloth Outer Suits, Parts Thereof, and Overcoats.
Claims use since July 1, 1915.

Ser. No. 92,047. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM F. PRITTS, Denver, Colo. Filed Jan. 10, 1916.

BRAN BREAD

No claim being made to the words "Bran Bread" apart from the mark shown in the drawing.
Particular description of goods.—Bread, Cake, Pastry, and Bran Bread.
Claims use since Nov. 20, 1915.

Ser. No. 92,594. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LORINCZ SIMON, Los Angeles, Cal. Filed Feb. 3, 1916.



Being the portrait of this applicant.

Particular description of goods.—A Palliative for Neuralgia, Rheumatism, Tonsilitis, Sore Lungs, Earache, and Sore Throat.

Claims use since about Jan. 1, 1916.

Ser. No. 93,029. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES SIMPSON COMPANY, Paterson, N. J. Filed Feb. 21, 1916.

Laundercrepe
ALL SILK WASHABLE

No claim being made herein to the words "Simpson Silks," "All Silk Washable," and "James Simpson Co. Founded 1882," and the word "Laundercrepe" separately and apart from the mark shown in the drawing.

Particular description of goods.—Wash-Silk.

Claims use since September, 1915.

Ser. No. 93,095. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CENTRAL OIL & GAS STOVE COMPANY, Gardner, Mass. Filed Feb. 25, 1916. Under ten-year proviso.

FLORENCE

Particular description of goods.—Oil Cooking and Heating Stoves, Oil-Lamp Stoves, Ovens, Gas Cooking and Heating Stoves, and Water-Heaters.

Claims use since 1874.

Ser. No. 93,128. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MAYER BROTHERS COMPANY, Mankato, Minn. Filed Feb. 26, 1916.

LITTLE GIANT

Particular description of goods.—Tractors.

Claims use since Oct. 1, 1912.

Ser. No. 93,204. (CLASS 39. CLOTHING.) THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio. Filed Mar. 1, 1916.

NEW ERA

The mark comprises the words "New Era" inclosed in an annular frame or band.

Particular description of goods.—Rubber Heels for Shoes.

Claims use since December, 1915.

Ser. No. 93,425. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANTONIO VIANNA, Schenectady, N. Y. Filed Mar. 9, 1916.



Being a cut or picture of a burro standing, showing side with head slightly perspective, also a small growth of herbage on the ground and at the horizon-line at the right and directly under the head and neck of such animal.

Particular description of goods.—Coffee.

Claims use since about the 15th day of January, 1916.

Ser. No. 94,161. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) COPPER CLAD STEEL CO., Pittsburgh and Rankin, Pa. Filed Apr. 5, 1916.

ARISTOS
"COPPERWELD"

The word "Copperweld" being disclaimed except in connection with the other features of the mark.

Particular description of goods.—Welded Copper and Steel Products—Namely, Metal in Sheet, Rod, Strap, Ribbon, Hoop, Band, and Wire Form.

Claims use since Feb. 17, 1916.

Ser. No. 94,169. (CLASS 39. CLOTHING.) A. B. KIRSCHBAUM COMPANY, Philadelphia, Pa. Filed Apr. 5, 1916.

TORRITEX

Particular description of goods.—Men's and Young Men's or Youths' Suits, Comprising Coats, Trousers, and Vests.

Claims use since about September, 1915.

Ser. No. 94,190. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE CLEVELAND TOOL & SUPPLY COMPANY, Cleveland, Ohio. Filed Apr. 6, 1916.

THE CLEVELAND TOOL & SUPPLY
C T&S
COMPANY

Particular description of goods.—Balata, Canvas, Leather, and Rubber Belting; Sheet, Square, and Round Rubber Packing; Combination Flax and Rubber Packing and Tubular Gasket-Packing; Cotton Hose, Cotton Rubber-Lined Hose, Linen Hose, and Rubber Hose.

Claims use since Mar. 1, 1908.

Ser. No. 94,206. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILLER-ELMER MANUFACTURING CO. LTD., New Orleans, La. Filed Apr. 6, 1916.

SIPS

Particular description of goods.—Candy.

Claims use since Dec. 1, 1914.

Ser. No. 94,434. (CLASS 17. TOBACCO PRODUCTS.) SHIELDS & SON, Albany, N. Y. Filed Apr. 14, 1916.

BLUE LINE

Comprising the words "Blue Line."

Particular description of goods.—Smoking-Tobacco.

Claims use since January, 1876.

Ser. No. 94,476. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALFRED E. MILLARD, Cincinnati, Ohio. Filed Apr. 17, 1916.

MORE MM MILES

The applicant disclaims the use of the words "More Miles" as used in any other form than that presented in the drawing accompanying this application.

Particular description of goods.—A Gasolene-Invigorator.

Claims use since Mar. 25, 1916.

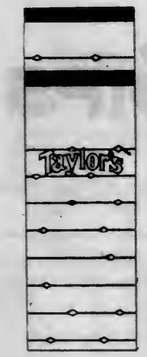
Ser. No. 94,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAZEROS CONSTANTINOU, Lakewood, N. J. Filed Apr. 18, 1916.

OLYMPUS

Particular description of goods.—Cheese.

Claims use since Apr. 4, 1916.

Ser. No. 94,556. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TAYLOR PROVISION COMPANY, Trenton, N. J. Filed Apr. 19, 1916.



The two top bands and the lines being printed in red, no claim being made to the outline of the bag shown in the drawing.

Particular description of goods.—Pork Roll.

Claims use since Saturday, Mar. 11, 1916.

Ser. No. 94,663. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) S. BIRKENSTEIN & SONS, Chicago, Ill. Filed Apr. 24, 1916.

WIZARD

Particular description of goods.—Metals, Ingot Metals, Sheet Metals, and Castings of Copper, Bronze, and Brass, and Babbitt Metals.

Claims use since January, 1912.

Ser. No. 94,689. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES SIMPSON COMPANY, Paterson, N. J. Filed Apr. 24, 1916.



No claim being made herein to the words "James Simpson Co., Simpson Silks, Founded 1882, Crepe, All Silk, Washable" apart from the mark shown in the drawing.

Particular description of goods.—Wash-Silk.

Claims use since Apr. 14, 1916.

Ser. No. 94,702. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Apr. 25, 1916.

HYDROGLIO

Particular description of goods.—Emulsifying-Lubricant for Hydraulic Governors.

Claims use since Apr. 1, 1916.

Ser. No. 94,747. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE H. & R. MANUFACTURING CO., Chattanooga, Tenn. Filed Apr. 27, 1916.

SAL-O-VITAE

Particular description of goods.—A Powder Used as a Medicinal Remedy and Tonic for the Ailments of Horses, Live Stock, and Poultry. It is a Worm-Destroyer, Distemper and Colic Remedy, and a Tonic for All Ailments Affecting the Digestion and Assimilation of Horses, Cattle, Hogs, Sheep, and Poultry.

Claims use since Oct. 1, 1913.

Ser. No. 94,812. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BILWOL MANUFACTURING COMPANY, New York, N. Y. Filed May 1, 1916.

BILOL

Particular description of goods.—A Mixture of Pure Mineral and Vegetable Oils Used in the Treatment of Intestinal Stasis and Chronic Constipation.

Claims use since Feb. 1, 1916.

Ser. No. 94,819. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DIETZ BAKING CO., Holyoke, Mass. Filed May 1, 1916.


DAN-DEE

Particular description of goods.—Cake, Doughnuts, and Bread.

Claims use since Sept. 29, 1915.

Ser. No. 94,824. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM R. FOUNTAIN, Taunton, Mass. Filed May 1, 1916.

Camfo

Particular description of goods.—A Liquid Cream for After Shaving, Sunburn, Windburn, Cuts, Burns, Bruised, Chapped Skin, Cracked Lips, Pimples, Chafing, Insect Stings or Bites, Itching, Chilblains, Piles, Prickly Heat, and Stuffed Head from Cold or Catarrh.

Claims use since Mar. 1, 1916.

Ser. No. 94,832. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SIMON S. SELIG, Jr., Atlanta, Ga. Filed May 1, 1916.



The words "Quality," "Hygienic," "Sanitary," "Perfection," and "Atlanta" being disclaimed.

Particular description of goods.—Sanitary Floor-Oil.

Claims use since Jan. 22, 1915.

Ser. No. 94,867. (CLASS 2. RECEPTACLES.) GEORGE BORGFELDT & Co., New York, N. Y. Filed May 3, 1916.



Particular description of goods.—Packing-Boxes for Merchandise, Such as Toys, Favors, Confectioners' Articles, Perfumery and other Toilet Preparations, Jewelry, Notions, and Fancy Goods, Cutlery, Watches, Manicure Articles, Tobacco and Tobacco Articles, Flowers, and Dress Goods.

Claims use since Apr. 20, 1916.

Ser. No. 94,901. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHARMACEUTICAL PRODUCTS CO., Brooklyn, N. Y. Filed May 4, 1916.



The term "Tubetti Antiblenorragic" being disclaimed.

Particular description of goods.—Medicinal Capsules.

Claims use since Aug. 19, 1915.

Ser. No. 94,947. (CLASS 38. PRINTS AND PUBLICATIONS.) FORE RIVER SHIPBUILDING CORPORATION, Quincy, Mass. Filed May 6, 1916.



Particular description of goods.—Magazines Published Quarterly.

Claims use since Feb. 1, 1916.

Ser. No. 94,959. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MICHAEL MCNAMARA VARNISH WORKS, Detroit, Mich. Filed May 6, 1916.

MACOLITE

Particular description of goods.—Ready-Mixed Paint.

Claims use since July 1, 1915.

Ser. No. 95,030. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM CRUCER CUSHMAN, New York, N. Y., assignor to C. J. Van Houten & Zoon, New York, N. Y., a Firm. Filed May 10, 1916.

RONALAC

Particular description of goods.—A Drink Composed of Cocoa, Milk, and Sugar.

Claims use since Mar. 31, 1916.

Ser. No. 95,087. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LILLIAN E. SCOFIELD, New York, N. Y. Filed May 11, 1916.

TINEX

Particular description of goods.—A Tinting-Powder for Fabrics.
Claims use since May, 1915.

Ser. No. 95,097. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARNATION MILK PRODUCTS COMPANY, Portland, Me., and Seattle, Wash. Filed May 12, 1916.

CARNATION

Particular description of goods.—Bottle-Cream, (Pasteurized and Unpasteurized,) and Bottle Whole-Milk, (Pasteurized and Unpasteurised.)
Claims use since Jan. 12, 1916.

Ser. No. 95,125. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GRAVITY CARBURETOR COMPANY, Cleveland, Ohio. Filed May 15, 1916.

SPRAMOR

Particular description of goods.—Carbureters.
Claims use since about Apr. 25, 1916.

Ser. No. 95,131. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIEDEL & COMPANY, New York, N. Y. Filed May 13, 1916.



Particular description of goods.—Proprietary Medicines as Used in the Treatment of Infections and Nervous Diseases.
Claims use since Feb. 1, 1916.

Ser. No. 95,147. (CLASS 39. CLOTHING.) MEXICAN-AMERICAN HAT COMPANY, St. Louis, Mo. Filed May 15, 1916.



The trade-mark comprises a personalized representation of a rayed sun wearing a hat and associated with the words "Sunshade Hats." No claim is made to the exclusive use of the picture of a hat as such or to the use of the words "Sunshade Hats" apart from the features of the mark shown.
Particular description of goods.—Hats.
Claims use since May 1, 1916.

Ser. No. 95,156. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed May 15, 1916.

BROADAN WALL

Particular description of goods.—A Newspaper-Section.
Claims use since 1914.

Ser. No. 95,157. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed May 15, 1916.

CHOLLY KNICKERBOCKER

Particular description of goods.—A Newspaper-Section.
Claims use since 1906.

Ser. No. 95,161. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHEAT MEAL CO., Lemars, Iowa. Filed May 15, 1916.



Particular description of goods.—A Cereal Food Prepared from Wheat.
Claims use since Feb. 15, 1916.

Ser. No. 95,201. (CLASS 38. PRINTS AND PUBLICATIONS.) EVENING HERALD PUBLISHING COMPANY, Los Angeles, Cal. Filed May 17, 1916.

EVENING HERALD

The said applicant, EVENING HERALD PUBLISHING COMPANY, hereby disclaims the ownership of the words "An Independent Newspaper" apart from its mark.
Particular description of goods.—A Daily Newspaper.
Claims use since on or about Aug. 1, 1914.

Ser. No. 95,207. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MICHAEL MCNAMARA VARNISH WORKS, Detroit, Mich. Filed May 17, 1916.

MAC WHITE

No claim being made for the word "White" apart from the mark shown in the drawing.
Particular description of goods.—Ready-Mixed Paint.
Claims use since July 1, 1915.

Ser. No. 95,240. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) REVERE RUBBER COMPANY, Providence, R. I., and Chelsea, Mass. Filed May 18, 1916.

GRANITE

Particular description of goods.—Machinery Packing Known as Piston-Packing, Containing Fibrous Material and Rubber, and Sheet-Packing Consisting of Rubber and Fibrous Material.
Claims use since May, 1896.

Ser. No. 95,245. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL CO., New York, N. Y. Filed May 18, 1916.



Particular description of goods.—Kerosene Lubricating-Oil, Automobile-Engine Oil, Cylinder-Oil, Fuel-Oil, Gas-Oil Used in Lubricating Marine Engines and the Like, Spindle-Oil, Neutral Oil, (a High-Grade Lubricating-Oil,) Paraffin-Oil, Road-Oil, Red Oil, White Oil, Benzin, Gasolene, Refined Wax, Lubricating-Grease, Asphalt-Oil Used in Building Roads and also for Packing Purposes Where Gears are Inclosed to Prevent Friction.
Claims use since Apr. 14, 1916.

Ser. No. 95,255. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADOS CHEMICAL CORPORATION, New York, N. Y. Filed May 19, 1916.

ADOS

Particular description of goods.—A Remedy for Cold in the Head, Sick Headache, Acid Stomach, Indigestion, and Rheumatic and Gouty Conditions.
Claims use since Feb. 10, 1916.

Ser. No. 95,265. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GRAY MOTOR CO., Highland Park, Mich. Filed May 19, 1916.

AIRGO

Particular description of goods.—Mechanical Starters for Internal-Combustion Engines.
Claims use since the 15th day of January, 1916.

Ser. No. 95,271. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) LACO-PHILIPS COMPANY, New York, N. Y. Filed May 19, 1916.



The trade-mark is printed in blue. No claim is made to the numbers "115" and "40," nor the words "Volts" and "Watts," apart from the mark shown in the drawing.
Particular description of goods.—Incandescent Electric Lamps.
Claims use since about Apr. 1, 1912.

Ser. No. 95,279. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WINFIELD SCOTT TAYLOR, Trenton, N. J. Filed May 19, 1916.

MUSTARDO

Particular description of goods.—An Ointment Composed of Oil and Mustard for the Treatment of Rheumatism, Lame Back, Sore Muscles, Stiff Joints, Chilblains, Cold Feet, Headache, Pneumonia, Coughs and Colds, and Pains in the Chest.
Claims use since Apr. 8, 1915.

Ser. No. 95,286. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN LA FRANCE FIRE ENGINE CO., INC., Elmira, N. Y. Filed May 20, 1916.

TETRIDE

Particular description of goods.—Chemical Fire-Extinguishers.
Claims use since May 11, 1916.

Ser. No. 95,297. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DES MOINES REFINING CO., Des Moines, Iowa. Filed May 20, 1916.

"REFINITE"

Particular description of goods.—A Chemical Preparation in the Form of a Natural Mineral Whose Composition is That of a Hydrated Silicate of Aluminum Containing a Small Amount of Impurities, Treated to Increase its Natural Ability for Softening Water.
Claims use since Feb. 1, 1915.

Ser. No. 95,314. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RALPH M. TOWNSEND, Philadelphia, Pa. Filed May 20, 1916.

RIDOVIT.

Particular description of goods.—Pharmaceutical Capsules for the Relief of Indigestion.
Claims use since Mar. 27, 1916.

Ser. No. 95,334. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. S. HOROVITZ CHEM. CO. INC., New York, N. Y. Filed May 22, 1916.

PEDORIN

Particular description of goods.—Preparations for the Treatment of Foot-and-Mouth Diseases of Animals.
Claims use since Apr. 15, 1916.

Ser. No. 95,354. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VOSKAMP BROTHERS COMPANY, Pittsburgh, Pa. Filed May 22, 1916.

BUSTER BROWN

Particular description of goods.—Coffee and Tea.
Claims use since Mar. 4, 1916.

Ser. No. 95,379. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) UNITED GAMES CO. INC., Boston, Mass. Filed May 23, 1916.

WORLD'S SERIES

Particular description of goods.—A Base-Ball Game.
Claims use since on or about April, 1915.

Ser. No. 95,380. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) V. VIVAUDOU, INC., New York, N. Y. Filed May 23, 1916.

Beauty Charm

Particular description of goods.—Perfumes, Toilet Waters, Toilet Creams, Talcum Powders, Face-Powders, Lotions, Nail Preparations, Sachet-Powders, Tooth-Pastes, Tooth-Powders, Rouges, and Hair-Tonics.
Claims use since Apr. 20, 1916.

Ser. No. 95,381. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) V. VIVAUDOU, INC., New York, N. Y. Filed May 23, 1916.

GLACIOL

Particular description of goods.—Perfumes, Toilet Waters, Toilet Creams, Talcum Powders, Face-Powders, Lotions, Nail Preparations, Sachet-Powders, Tooth-Pastes, Tooth-Powders, Rouges, and Hair-Tonics.
Claims use since May 12, 1916.

Ser. No. 95,382. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) V. VIVAUDOU, INC., New York, N. Y. Filed May 23, 1916.

Waltz Dream

Particular description of goods.—Perfumes, Toilet Waters, Toilet Creams, Talcum Powders, Face-Powders, Lotions, Nail Preparations, Sachet-Powders, Tooth-Pastes, Tooth-Powders, Rouges, and Hair-Tonics.
Claims use since Dec. 15, 1915.

Ser. No. 95,383. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) V. VIVAUDOU, INC., New York, N. Y. Filed May 23, 1916.

NAOMI

Particular description of goods.—Perfumes, Toilet Waters, Toilet Creams, Talcum Powders, Face-Powders, Lotions, Nail Preparations, Sachet-Powders, Tooth-Pastes, Tooth-Powders, Rouges, and Hair-Tonics.
Claims use since May 5, 1916.

Ser. No. 95,408. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) TUTHILL SPRING CO., Chicago, Ill. Filed May 24, 1916.

TITANIC

Particular description of goods.—Flat Leaf-Springs.
Claims use since May 30, 1912.

Ser. No. 95,419. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE HARTMAN CO., Chicago, Ill. Filed May 25, 1916.

MAJESTIC

Particular description of goods.—Incubators and Brooders.
Claims use since Apr. 1, 1916.

Ser. No. 95,421. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERTHOLD M. ISAACS, Nacogdoches, Tex. Filed May 25, 1916.

Furnad

Particular description of goods.—A Liquid Remedy for Dandruff.
Claims use since the 14th day of April, 1916.

Ser. No. 95,427. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed May 25, 1916.

TITANENE

Particular description of goods.—Mordants for the Dyeing of Leather and Textile Fabrics.
Claims use since on or about Apr. 1, 1916.

Ser. No. 95,429. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SZEL IMPORT AND EXPORT CO., INC., New York, N. Y. Filed May 25, 1916.

ICHTHYTAR

Particular description of goods.—An Ointment.
Claims use since May 16, 1916.

Ser. No. 95,433. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WATERLOO GASOLINE ENGINE COMPANY, Waterloo, Iowa. Filed May 25, 1916.

WATERLOO BOY

Particular description of goods.—Tractors.
Claims use since on or about Aug. 1, 1913.

Ser. No. 95,456. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHERING & GLATZ, New York, N. Y. Filed May 26, 1916.

IOCAMFEN

Particular description of goods.—An External Iodin Preparation in Liquid and Ointment Form.
Claims use since Dec. 1, 1915.

Ser. No. 95,466. (CLASS 17. TOBACCO PRODUCTS.) RAYMOND E. H. BREITWIESER, Buffalo, N. Y. Filed May 27, 1916.



No claim being made to the representation of the goods apart from the mark shown in the drawing.
Particular description of goods.—Cigarettes.
Claims use since Feb. 1, 1916.

Ser. No. 95,467. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. S. CHURCH, Hemet, Cal. Filed May 27, 1916.



Particular description of goods.—A Remedy for Asthma, Coughs and Colds, Rheumatism, Sprains, Bruises, and Burns.
Claims use since Apr. 10, 1916.

Ser. No. 95,479. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. M. PITKIN & Co., Newark, N. Y. Filed May 27, 1916.

MAPOLA

Particular description of goods.—A Preparation for Imparting a Maple-Like Flavor to Syrup, Cakes, Icings, Ice-Creams and for Adding a New Flavor to Soups, &c., and for General Use as a Food-Flavor.
Claims use since Nov. 1, 1915.

Ser. No. 95,522. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES DAVIS HOFFAR, Louisville, Ky. Filed May 29, 1916.

Kan-Da-Lax

Particular description of goods.—A Laxative Compound Usually in the Form of Tablets.
Claims use since Feb. 10, 1916.

Ser. No. 95,526. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. H. LEE COMPANY, Omaha, Nebr. Filed May 29, 1916.

EGG-O-LATUM

Particular description of goods.—A Preservative Coating for Eggs.
Claims use since Jan. 1, 1916.

Ser. No. 95,531. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE NIKOLOW, New York, N. Y. Filed May 29, 1916.



Particular description of goods.—Remedy for Rheumatism.
Claims use since May 1, 1912.

Ser. No. 95,533. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE REMILLER CO., New York, N. Y. Filed May 29, 1916.

LÉONE

Particular description of goods.—Perfume, Toilet Water, and Face, Sachet, and Talcum Powders.
Claims use since May 17, 1916.

Ser. No. 95,539. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) VIRGINIA BEVERAGE CORPORATION, Roanoke, Va. Filed May 29, 1916.

KING-COLA

Particular description of goods.—A Non-Alcoholic Soft Drink and Syrups for the Manufacture of the Same.
Claims use since January, 1915.

Ser. No. 95,543. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. DAVIS, New York, N. Y. Filed May 31, 1916.

CHUMS

Comprising the word "Chums."
Particular description of goods.—A Laxative.
Claims use since May 23, 1916.

Ser. No. 95,576. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORMALS MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany. Filed June 1, 1916.

DERMATOL

Particular description of goods.—Basic Gallate of Bismuth, a Substitute for Iodoform, Used Either Pure as a Powder or Used in Admixture with other Substances in the Form of Pastes, Salves, Pencils, Soaps, Gauze, or Any other Preparation in Which Iodoform or Substitutes Therefor can be Advantageously Used.
Claims use since June 1, 1891.

Ser. No. 95,577. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL F. FERRIERE, New York, N. Y. Filed June 1, 1916.



Particular description of goods.—Perfumes, Toilet Waters, Face-Powder, Sachet-Powders, and Talcum Powders.
Claims use since January, 1915.

Ser. No. 95,614. (CLASS 11. INKS AND INKING MATERIALS.) FRED A. PUTNAM, Boston, Mass. Filed June 3, 1916.

WIZARD

Particular description of goods.—Ink Compounds.
Claims use since December, 1912.

Ser. No. 95,635. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JULIE C. WILCOX, El Paso, Tex. Filed June 5, 1916.

Grafine

Particular description of goods.—A Face-Lotion.
Claims use since May 1, 1916.

Ser. No. 95,640. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed June 6, 1916.

MISTOKLEEN

Particular description of goods.—A Polish for Automobiles and Furniture.
Claims use since May 1, 1916.

Ser. No. 95,644. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE FAULTLESS RUBBER CO., Ashland, Ohio. Filed June 6, 1916.

40

Particular description of goods.—Hot-Water Bottles.
Claims use since November, 1908.

Ser. No. 95,650. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATHAN PLOTKIN, Baltimore, Md. Filed June 6, 1916.

RA-BAR-BÆ

Particular description of goods.—A Liniment for the Treatment of Pains, Sprains, Bruises, Swellings, and Sore Throat.
Claims use since May 1, 1916.

Ser. No. 95,651. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) RUBBER INSULATED METALS CORP., Richmond, Va., and Plainfield, N. J. Filed June 6, 1916.

RIMCO

Particular description of goods.—Electrically-Insulated Pliers, Crowbars, Screw-Drivers, Wrenches, Hammers, Chisels, Files, Reamers, Drills, Taps, Dies, Spike-Pullers, and Rail-Benders.
Claims use since the 18th day of March, 1916.

Ser. No. 95,667. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) AMERICAN STEEL FOUNDRIES, Chicago, Ill. Filed June 7, 1916.

ATLAS

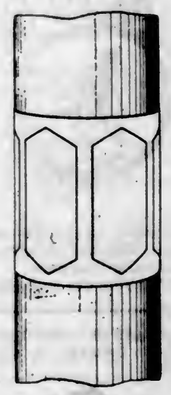
The trade-mark consisting of the word "Atlas."
Particular description of goods.—Brake-Beam Safety-Guards for Car-Trucks.
Claims use since Jan. 1, 1916.

Ser. No. 95,693. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BUSINESS OF ORATOR F. WOODWARD, DECEASED, Le Roy, N. Y. Filed June 8, 1916.



Particular description of goods.—Corn-Plasters.
Claims use since Mar. 1, 1916.

Ser. No. 95,720. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PINTSCH COMPRESSING COMPANY, New York, N. Y. Filed June 8, 1916.



The trade-mark is shown applied to a portion of a cylinder, and no claim is made to the cylinder as a part of the mark.
Particular description of goods.—Oxygen Gas.
Claims use since Apr. 1, 1916.

Ser. No. 95,745. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHASE & CO., Jacksonville, Fla. Filed June 9, 1916.

MAGNET

Particular description of goods.—Fresh Fruits and Vegetables.
Claims use since June 1, 1915.

Ser. No. 95,750. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KAMPF-MUELLER RHEUMATIC REMEDY CO., Louisville, Ky. Filed June 9, 1916.

K R R

The letters "K. R. R." being shown in blue.
Particular description of goods.—A Remedy for Rheumatism.
Claims use since May 25, 1916.

Ser. No. 95,753. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES I. LOTTS, Lexington, Va. Filed June 9, 1916.

Particular description of goods.—An Ointment for Treatment of Tetter, Eczema, Frost-Bite, Burns, Falling Hair, and Skin and Scalp Eruptions.
Claims use since the 10th day of April, 1916.

Ser. No. 95,761. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) CHARLES T. SCHOEN, Media, Pa. Filed June 9, 1916.

Particular description of goods.—Music-Rolls for Player-Pianos and Like Musical Instruments.
Claims use since on or about May 1, 1916.

Ser. No. 95,789. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE MEYER, Philadelphia, Pa. Filed June 10, 1916.

Therapogen

Particular description of goods.—Antiseptics, Deodorizers, Disinfectants, Wound-Powders, Germicides, and Vermicides.
Claims use since Nov. 13, 1913.

Ser. No. 95,819. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE H. G. CHEMICAL PRODUCTS COMPANY, Cleveland, Ohio. Filed June 12, 1916.

auto Vim THE GASOLINE RECTIFIER

No claim is made as to the words "The Gasoline Rectifier."
Particular description of goods.—Cleaning Compositions and Compositions for Rectifying Internal-Combustion-Engine Fuel.
Claims use since Mar. 23, 1916.

Ser. No. 95,820. (CLASS 39. CLOTHING.) ROBERT REIS & CO., New York, N. Y. Filed June 12, 1916. Under ten-year proviso.

REIS

Particular description of goods.—Wearing-Apparel and Furnishings for Men, Women, and Children, as Follows: Underwear—to wit, Shirts, Drawers, and Union Suits Made of Knitted, Netted, Woven, or Textile Fabrics—Bathing-Suits, Sweaters, Cardigan Jackets, Sport-Coats, Mackinaws, Gloves, Collars, and Outer Shirts.
Claims use since 1888.

Ser. No. 95,827. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OHIO SALT COMPANY, Wadsworth, Ohio. Filed June 12, 1916.

Particular description of goods.—Salt.
Claims use since July 15, 1899.

Ser. No. 95,828. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OHIO SALT COMPANY, Wadsworth, Ohio. Filed June 12, 1916.

CHIPPEWA SALT

The word "Salt" as shown not being claimed.
Particular description of goods.—Salt.
Claims use since July 15, 1899.

Ser. No. 95,829. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OHIO SALT COMPANY, Wadsworth, Ohio. Filed June 12, 1916.

INDIAN

Particular description of goods.—Salt.
Claims use since early October, 1899.

Ser. No. 95,833. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK WILLIAM THURNAU, Chicago, Ill. Filed June 12, 1916.

SODIATE

Particular description of goods.—A Remedy for Catarrh, Hay-Fever, and Disturbances of the Mucous Membranes of the Nose and Throat.
Claims use since the 5th day of June, 1916.

Ser. No. 95,868. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INTERNATIONAL LABORATORIES, INC., Binghamton, N. Y. Filed June 14, 1916.

PARMINT

Particular description of goods.—Medicinal Preparations for Treatment of Coughs, Colds, and Catarrhal Troubles.
Claims use since March, 1910.

Ser. No. 95,869. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEKAS & DRIVAS, New York, N. Y. Filed June 14, 1916.

ARISTOGRATIC

Particular description of goods.—Olive-Oil.
Claims use since about May 12, 1916.

Ser. No. 95,872. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LUYTIES BROTHERS, New York, N. Y. Filed June 14, 1916.

DE LUXE

No claim being made to the words "De Luxe" apart from the mark as shown.
Particular description of goods.—Cordials.
Claims use since June 1, 1916.

Ser. No. 95,875. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEONARD G. PAGE, St. Joseph, Mo. Filed June 14, 1916.

LOYALTY

Particular description of goods.—Coffee, Tea, Spices, and Flavoring Extracts for Foods.
Claims use since May 18, 1916.

Ser. No. 95,876. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PRAIRIE CHEMICAL CO., Minneapolis, Minn. Filed June 14, 1916.

Rodo

Particular description of goods.—A Rodent-Poison.
Claims use since Feb. 1, 1915.

Ser. No. 95,894. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHESTER KENT & COMPANY, Boston, Mass. Filed June 15, 1916.

Saxol

Particular description of goods.—A Skin-Healing Salve.
Claims use since Dec. 9, 1913.

Ser. No. 95,898. (CLASS 39. CLOTHING.) PORTER BROTHERS & CO., New York, N. Y. Filed June 15, 1916.

CALEXO

Particular description of goods.—Hosiery.
Claims use since May 1, 1916.

Ser. No. 95,899. (CLASS 39. CLOTHING.) PORTER BROTHERS & CO., New York, N. Y. Filed June 15, 1916.

"Preparedness"

Particular description of goods.—Hosiery.
Claims use since May 1, 1916.

Ser. No. 95,905. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SYME, EAGLE & CO., Chicago, Ill. Filed June 15, 1916.

Submarine

Particular description of goods.—Canned Salmon.
Claims use since June 2, 1916.

Ser. No. 95,914. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE DE GOLYER VARNISH WORKS, Troy, N. Y. Filed June 16, 1916.



Particular description of goods.—Varnish.
Claims use since Nov. 1, 1915.

Ser. No. 95,933. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FOLEY BROS. & QUINLAN, INCORPORATED, St. Paul, Minn. Filed June 17, 1916.



Particular description of goods.—Soda, Baking-Powder, Cream-Tartar, Table-Salt, Ammonia, and Bluing.
Claims use since on or about Sept. 1, 1893.

Ser. No. 95,934. (CLASS 39. CLOTHING.) FRIEND & MARKS, Milwaukee, Wis. Filed June 17, 1916.

347

Particular description of goods.—Men's, Youths', and Boys' Suits, Trousers, and Overcoats.
Claims use since Sept. 1, 1910.

Ser. No. 95,935. (CLASS 39. CLOTHING.) FRIEND & MARKS, Milwaukee, Wis. Filed June 17, 1916.

357

Particular description of goods.—Men's, Youths', and Boys' Suits, Trousers, and Overcoats.
Claims use since Aug. 25, 1915.

Ser. No. 95,949. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) O-SO-EZY PRODUCTS COMPANY, Detroit, Mich. Filed June 17, 1916.

O-SO-EZY

Particular description of goods.—Furniture-Polish.
Claims use since Aug. 5, 1914.

Ser. No. 95,972. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MICHAEL MCNAMARA VARNISH WORKS, Detroit, Mich. Filed June 19, 1916.

MAC-INTERIOR

No claim being made to the word "Interior" apart from the mark shown in the drawing.
Particular description of goods.—Varnish.
Claims use since July 1, 1913.

Ser. No. 95,978. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. PASTENE & CO. INC., Boston, Mass. Filed June 19, 1916.

SPLENDOR

Particular description of goods.—Macaroni.
Claims use since January, 1915.

Ser. No. 95,998. (CLASS 39. CLOTHING.) GOODALL WORSTED CO., Sanford, Me., and New York, N. Y. Filed June 20, 1916.



Particular description of goods.—Men's, Women's, and Children's Outer Wearing-Apparel, Consisting of Coats, Pants, Trousers, and Skirts, Made Out of Mohair Goods, Woolen, and Goods of Combination of Cotton, Wool, Mohair, Alpaca, Camel-Hair, Silk, and Artificial Silk, Manufactured by Us.
Claims use since May 1, 1916.

Ser. No. 96,001. (CLASS 39. CLOTHING.) GOODALL WORSTED CO., Sanford, Me., and New York, N. Y. Filed June 20, 1916.



Particular description of goods.—Men's, Women's, and Children's Outer Wearing-Apparel, Consisting of Coats, Pants, Trousers, and Skirts, Made Out of Mohair Goods, Woolen, and Goods of Combination of Cotton, Wool, Mohair, Alpaca, Camel-Hair, Silk, and Artificial Silk, Manufactured by Us.
Claims use since May 1, 1916.

Ser. No. 96,004. (CLASS 39. CLOTHING.) HASTINGS WOOL BOOT COMPANY, Hastings, Mich. Filed June 20, 1916.

Z-RO-KING

Particular description of goods.—Felt Boots.
Claims use since May 26, 1916.

Ser. No. 96,006. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAVE-MCCORD MERCANTILE CO., St. Joseph, Mo. Filed June 20, 1916.

ROBIDOUX HOTEL



Particular description of goods.—Coffee.
Claims use since Jan. 1, 1913.

Ser. No. 96,020. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. MARVIN COMPANY, Urbana, Ohio. Filed June 21, 1916.

Gold Bar

Particular description of goods.—Mince-Meat.
Claims use since the 10th of October, 1914.

Ser. No. 96,051. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE DEBEVOISE COMPANY, New York, N. Y. Filed June 22, 1916.

DEREKA

Particular description of goods.—Paints, Particularly for Coating Metal.
Claims use since about May 1, 1916.

Ser. No. 96,071. (CLASS 39. CLOTHING.) ETHEL B. WELLS, New York, N. Y. Filed June 22, 1916.

LADY TEAZLE

Comprising the words "Lady Teazle."
Particular description of goods.—Dresses.
Claims use since July, 1914.

Ser. No. 96,107. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CHR. A. HANSEN, New York, N. Y. Filed June 24, 1916.

ATALARI

Particular description of goods.—Cold-Water Paint in Powder Form.
Claims use since June 1, 1916.

Ser. No. 96,168. (CLASS 39. CLOTHING.) SUTHERLAND PEDIGO FARWELL SHOE CO., St. Louis, Mo. Filed June 26, 1916.



Particular description of goods.—Shoes Made of Leather and Combinations of Leather, Cloth, Fiber, and Rubber.
Claims use since Oct. 1, 1914.

Ser. No. 96,191. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BEAR LITHIA SPRINGS CO., New York, N. Y. Filed June 28, 1916.

BLISCO

Particular description of goods.—Bottled Mineral Water and Soft Drinks.
Claims use since about Jan. 1, 1907.

Ser. No. 96,203. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GRANITE STATE SPRING WATER CO., Haverhill, Mass., and Atkinson Depot, N. H. Filed June 28, 1916.

Hi-Brow

Particular description of goods.—Carbonated Spring-Water.
Claims use since May 11, 1916.

Ser. No. 96,274. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LEISY BREWING CO., Peoria, Ill. Filed July 1, 1916.

TEMP

Particular description of goods.—A Non-Alcoholic Carbonated Beverage Sold as a Soft Drink.
Claims use since June 17, 1908.

[Vol. 228. No. 4.]

TRADE-MARK REGISTRATIONS GRANTED

JULY 25, 1916.

111,517. PREPARED STOCK FOOD. ATLANTIC EXPORT COMPANY, New York, N. Y.
Filed December 27, 1915. Serial No. 91,755. PUBLISHED MAY 9, 1916.

111,518. STAMPED ART EMBROIDERIES. EDWIN POWELL BOND, New York, N. Y.
Filed March 14, 1916. Serial No. 93,520. PUBLISHED MAY 2, 1916.

111,519. MUSICAL-INSTRUMENT STRINGS, VIOLINS, GUITARS, MANDOLINS, AND PARTS THEREOF. AARON BURDWISE, Baltimore, Md.
Filed September 4, 1915. Serial No. 89,018. PUBLISHED MAY 2, 1916.

111,520. MUSICAL-INSTRUMENT STRINGS, ACCORDIONS, AND DRUMS. AARON BURDWISE, Baltimore, Md.
Filed September 4, 1915. Serial No. 89,019. PUBLISHED MAY 2, 1916.

111,521. REMEDY FOR CATARRH AND ALL BRONCHIAL TROUBLES. ELMER E. CALLEN, Oswego, Kans.
Filed March 7, 1916. Serial No. 93,358. PUBLISHED MAY 9, 1916.

111,522. CIGARS. A. CENTENO & Co., New York, N. Y.
Filed March 2, 1916. Serial No. 93,223. PUBLISHED MAY 2, 1916.

111,523. CERTAIN PRINTS AND PUBLICATIONS. C. T. DEARING PRINTING COMPANY, Louisville, Ky.
Filed October 18, 1915. Serial No. 89,912. PUBLISHED APRIL 18, 1916.

111,524. LADIES' AND MEN'S SILK, LISLE, AND COTTON HOSIERY. GUSTAVE M. GRISSMANN, Philadelphia, Pa.
Filed February 14, 1916. Serial No. 92,832. PUBLISHED MAY 9, 1916.

111,525. CANNED VEGETABLES. LANGE CANNING CO., INC., Eau Claire, Wis.
Filed December 21, 1915. Serial No. 91,653. PUBLISHED MAY 2, 1916.

111,526. METAL FIRE-ESCAPE. ELIAS LEMONS, Scranton, Pa.
Filed July 16, 1915. Serial No. 87,974. PUBLISHED MAY 9, 1916.

111,527. PLOWS AND PLOWSHARES. S. A. LOOSE & SON, Hamburg, Pa.
Filed March 14, 1916. Serial No. 93,536. PUBLISHED MAY 9, 1916.

111,528. TOY BALLOONS. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed March 20, 1916. Serial No. 93,715. PUBLISHED MAY 9, 1916.

111,529. TOY BALLOONS. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed March 20, 1916. Serial No. 93,716. PUBLISHED MAY 9, 1916.

111,530. PREPARED FOOD FOR INFANTS. JAMES S. ROBINSON, Memphis, Tenn.
Filed April 22, 1910. Serial No. 49,251. PUBLISHED MAY 2, 1916.

111,531. GARTERS. A. STEIN & COMPANY, Chicago, Ill.
Filed March 6, 1916. Serial No. 93,347. PUBLISHED APRIL 11, 1916.

111,532. CERTAIN NAMED LADIES' NECKWEAR. WALDES & COMPANY, Prague-Wrschowitz, Austria-Hungary.
Filed October 9, 1914. Serial No. 81,779. PUBLISHED MAY 9, 1916.

111,533. CLOCKS AND WATCHES. WESTERN CLOCK CO., Peru, Ill.
Filed March 17, 1916. Serial No. 93,615. PUBLISHED APRIL 25, 1916.

111,534. FLAVORING EXTRACTS, TEA, COFFEE, AND COCOA. THE WILLIAMS & CARLETON COMPANY, Hartford, Conn.
Filed October 12, 1915. Serial No. 89,828. PUBLISHED MAY 2, 1916.

111,535. DENTAL GRINDING-WHEELS. WILLIAM BRODY & Co., New York, N. Y.
Filed March 11, 1916. Serial No. 93,448. PUBLISHED MAY 9, 1916.

111,536. MEDICINAL PREPARATION IN TABLET FORM, THE SAME SERVING AS A TONIC, LAXATIVE, AND ALTERATIVE. FRANK W. DIEMER, Springfield, Mo.
Filed March 10, 1916. Serial No. 93,428. PUBLISHED MAY 9, 1916.

111,537. CERTAIN NAMED FOODS. ALBERT EHLERS, Brooklyn, N. Y.
Filed February 29, 1916. Serial No. 93,170. PUBLISHED MAY 9, 1916.

111,538. HAIR-RESTORER. NICOLAS D. FARAKOS, New York, N. Y.
Filed March 24, 1916. Serial No. 93,837. PUBLISHED MAY 9, 1916.

111,539. SMOKING AND CHEWING TOBACCO, CIGARS, STOGIES, AND TOBIES. FISHER TOBACCO COMPANY, Lewistown borough, Pa.
Filed February 20, 1915. Serial No. 84,654. PUBLISHED NOVEMBER 23, 1915.

111,540. GOLF-BALL. JAMES FLOYD, Savannah, Ga.
Filed March 20, 1916. Serial No. 93,697. PUBLISHED MAY 9, 1916.

111,541. GAS-IRONS. NEW YORK PRESSING IRON CO., New York, N. Y.
Filed February 4, 1916. Serial No. 92,625. PUBLISHED MAY 9, 1916.

111,542. FLUID FOR SEALING PUNCTURES IN PNEUMATIC TIRES. DAVID SABEL, New York, N. Y.
Filed December 10, 1915. Serial No. 91,387. PUBLISHED MAY 9, 1916.

111,543. GLOVES. WIMELBACHER & RICE, New York, N. Y.
Filed June 29, 1914. Serial No. 79,442. PUBLISHED MAY 2, 1916.

111,544. DIE-CAST MACHINE PARTS. ACME DIE-CASTING CORPORATION, Brooklyn, N. Y.
Filed October 22, 1915. Serial No. 90,011. PUBLISHED MAY 9, 1916.

111,545. PIANO-PLAYERS AND PARTS THEREOF AND PERFORATED MUSIC-SHEETS. THE AMPHION PIANO PLAYER COMPANY, Syracuse, N. Y.
Filed February 17, 1916. Serial No. 92,910. PUBLISHED MAY 9, 1916.

111,546. LEATHERS AND SKINS. ANCIENS ETABTS. A. COMBE & FILS & CIE., Paris, France.
Filed December 1, 1913. Serial No. 74,278. PUBLISHED MAY 9, 1916.

111,547. GELATIN. ANDERSON MFG. CO., Flint, Mich.
Filed March 30, 1916. Serial No. 93,981. PUBLISHED MAY 9, 1916.

111,548. COLORED COTTON PIECE GOODS. WM. ANDERSON & CO., New York, N. Y.
Filed November 6, 1912. Serial No. 66,727. PUBLISHED MAY 2, 1916.

111,549. CERTAIN NAMED ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES. THE ARROW ELECTRIC COMPANY, Hartford, Conn.
Filed March 31, 1916. Serial No. 94,005. PUBLISHED MAY 9, 1916.

111,550. PEANUTS. THE BAIN PEANUT CO., INC., Wakefield, Va.
Filed March 24, 1916. Serial No. 93,826. PUBLISHED MAY 9, 1916.

111,551. WALL-BOARD AND BUILDING-PAPER. THE BEAVER COMPANY, Buffalo, N. Y.
Filed February 11, 1916. Serial No. 92,770. PUBLISHED MAY 2, 1916.

111,552. BRICKS MADE OF CLAY. BEAVER CLAY MANUFACTURING COMPANY, New Galilee, Pa.
Filed April 7, 1915. Serial No. 85,742. PUBLISHED MAY 11, 1915.

111,553. EGGS. P. BERRY & SONS INCORPORATED, Hartford, Conn.
Filed April 5, 1916. Serial No. 94,159. PUBLISHED MAY 9, 1916.

111,554. WIRE, METAL IN ROD AND BAR FORMS, METAL SHEETS. H. BOKER & CO. INC., New York, N. Y.
Filed January 15, 1916. Serial No. 92,152. PUBLISHED MAY 9, 1916.

111,555. WIRE, METAL IN ROD AND BAR FORMS, METAL SHEETS. H. BOKER & CO. INC., New York, N. Y.
Filed January 15, 1916. Serial No. 92,153. PUBLISHED MAY 9, 1916.

111,556. METAL IN ROD, BAR, AND SHEET FORMS AND METAL BLANKS. H. BOKER CO. INC., New York, N. Y.
Filed April 10, 1916. Serial No. 94,276. PUBLISHED MAY 9, 1916.

111,557. METAL IN ROD, BAR, AND SHEET FORMS AND METAL BLANKS. H. BOKER CO. INC., New York, N. Y.
Filed April 10, 1916. Serial No. 94,277. PUBLISHED MAY 9, 1916.

111,558. OPTICAL LENSES. BUFFALO LENS MFG. CO., Buffalo, N. Y.
Filed February 24, 1916. Serial No. 93,059. PUBLISHED MAY 9, 1916.

111,559. COMPOSITION FOR SPRAYING TREES, PLANTS, VINES, AND SHRUBS. BUFFALO SPECIALTY CO., Buffalo, N. Y.
Filed March 22, 1916. Serial No. 93,756. PUBLISHED MAY 9, 1916.

111,560. RICE. THE BURKENROAD-GOLDSMITH CO., L'TD, New Orleans, La.
Filed April 8, 1916. Serial No. 94,244. PUBLISHED MAY 9, 1916.

111,561. COATS, MACKINAWS, DRESS, NEGLIGÉE, AND WORK SHIRTS, AND OVERALLS. CARTER & CHURCHILL CO., Lebanon, N. H.
Filed March 27, 1916. Serial No. 93,896. PUBLISHED MAY 16, 1916.

111,562. CANNED, BOTTLED, AND PRESERVED FRUITS. THE CLEVELAND FRUIT JUICE COMPANY, Cleveland, Ohio.
Filed November 29, 1915. Serial No. 90,998. PUBLISHED FEBRUARY 22, 1916.

111,563. PAPER-LINED TEXTILE FABRICS—NAMELY, PAPER-LINED COTTON AND BURLAP. THE CLEVELAND-AKRON BAG CO., Cleveland, Ohio.
Filed February 28, 1916. Serial No. 93,137. PUBLISHED MAY 16, 1916.

111,564. TOILET SOAP, LAUNDRY SOAP, WASHING-POWDER, SCOURING-SOAP. ABRAHAM COHEN, Cambridge, Mass.
Filed March 11, 1915. Serial No. 85,078. PUBLISHED MARCH 14, 1916.

111,565. DRESS AND NEGLIGÉE SHIRTS. COLUMBIA SHIRT COMPANY, New York, N. Y.
Filed March 29, 1916. Serial No. 93,950. PUBLISHED MAY 16, 1916.

111,566. GLASS. CORNING GLASS WORKS, Corning, N. Y.
Filed July 10, 1915. Serial No. 87,862. PUBLISHED MAY 9, 1916.

111,567. STEREOSCOPES. THE CORTE-SCOPE COMPANY, Cleveland, Ohio.
Filed February 7, 1916. Serial No. 92,680. PUBLISHED MAY 2, 1916.

111,568. COMPOSITIONS CONSISTING OF CERTAIN NAMED METALS. CROWN SMELTING COMPANY, Chester, Pa.
Filed March 6, 1915. Serial No. 84,977. PUBLISHED APRIL 13, 1915.

111,569. COFFEE. CRUMP & FIELD, Ashland, Ky.
Filed March 28, 1916. Serial No. 93,928. PUBLISHED MAY 9, 1916.

111,570. CANNED FRUITS, CANNED VEGETABLES, CANNED CLAMS, SALMON, COFFEE. DANIELS, CORNELL CO., Worcester, Mass.
Filed April 27, 1914. Serial No. 77,771. PUBLISHED NOVEMBER 30, 1915.

111,571. VARNISH-DRESSING. GUS DATTILO, Louisville, Ky.
Filed February 15, 1916. Serial No. 92,855. PUBLISHED MAY 9, 1916.

111,572. ARTICLES OF GLASSWARE HAVING SILVER DECORATIONS. DEIDRICK GLASS CO., Monaca, Pa.
Filed February 5, 1916. Serial No. 92,605. PUBLISHED MAY 9, 1916.

111,573. CERTAIN NAMED FOODS. DRAKE & COMPANY, Easton, Pa.
Filed March 29, 1916. Serial No. 93,952. PUBLISHED MAY 9, 1916.

111,574. TANK CHEMICAL EXTINGUISHERS. THE FIREX EXTINGUISHER COMPANY, Akron, Ohio.
Filed March 30, 1916. Serial No. 93,991. PUBLISHED MAY 9, 1916.

111,575. MINERALS, MINERAL SAMPLES, CRUDE AND PREPARED ORES, AND MINERAL SUBSTANCES. FOOTE MINERAL CO., Philadelphia, Pa.
Filed March 15, 1916. Serial No. 93,549. PUBLISHED MAY 9, 1916.

111,576. VISES. FULTON MACHINE & VISE CO., Lowville, N. Y.
Filed March 20, 1916. Serial No. 93,698. PUBLISHED MAY 9, 1916.

111,577. CHEWING-GUM CONTAINING A REMEDY FOR THE TOBACCO AND SNUFF HABIT. GUM-BO COMPANY, Asheville, N. C.
Filed September 8, 1915. Serial No. 89,097. PUBLISHED MAY 16, 1916.

111,578. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed March 29, 1916. Serial No. 93,958. PUBLISHED MAY 9, 1916.

111,579. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed March 29, 1916. Serial No. 93,959. PUBLISHED MAY 9, 1916.

111,580. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed March 29, 1916. Serial No. 93,962. PUBLISHED MAY 9, 1916.

111,581. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed April 8, 1916. Serial No. 94,255. PUBLISHED MAY 9, 1916.

111,582. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed April 8, 1916. Serial No. 94,256. PUBLISHED MAY 9, 1916.

111,583. SOLUBLE TALLOW FOR MIXING WITH SIZING FOR COTTON YARNS. E. F. HOUGHTON & COMPANY, Philadelphia, Pa.
Filed January 28, 1916. Serial No. 92,469. PUBLISHED MAY 9, 1916.

111,584. UNPLATED BASE-ALLOY FLAT-WARE CONSISTING OF SPOONS AND FORKS. INTERNATIONAL SILVER COMPANY, Jersey City, N. J., and Meriden and Bridgeport, Conn.
Filed December 23, 1915. Serial No. 91,724. PUBLISHED MAY 9, 1916.

111,585. CORN. MRS. MARTHA REBMANN KELLY, Corpus Christi, Tex.
Filed February 1, 1916. Serial No. 92,571. PUBLISHED MAY 9, 1916.

111,586. LIQUID TO MIX WITH GASOLENE TO REDUCE CARBON DEPOSITS IN GASOLENE-ENGINES. CARL A. KNAPP, Maywood, Ill.
Filed February 25, 1916. Serial No. 93,102. PUBLISHED APRIL 25, 1916.

111,587. ANTISEPTIC DOUCHE. LINCOLN & NEWMAN, San Francisco, Cal.
Filed February 28, 1916. Serial No. 93,144. PUBLISHED MAY 2, 1916.

111,588. MARKING-INK. DR. RAYMOND A. LINDLEY, Brady, Tex.
Filed March 18, 1916. Serial No. 93,687. PUBLISHED MAY 16, 1916.

111,589. PASTE PAINT GROUND IN JAPAN ESPECIALLY ADAPTED FOR COACH AND AUTOMOBILE PAINTING. JOHN W. MASURY & SON, New York, N. Y.
Filed March 20, 1916. Serial No. 93,719. PUBLISHED MAY 9, 1916.

111,590. POLISH FOR PAINTED AND VARNISHED SURFACES. MCDOWELL AND GORTON, Omaha, Nebr.
Filed October 2, 1915. Serial No. 89,606. PUBLISHED MAY 9, 1916.

111,591. SILK PIECE GOODS. MCLANE SILK COMPANY, Turners Falls, Mass.
Filed February 15, 1915. Serial No. 84,534. PUBLISHED MAY 16, 1916.

111,592. CIGARS. THE MENDELSOHN COMPANY, INC., Cleveland, Ohio.
Filed February 12, 1916. Serial No. 92,814. PUBLISHED MAY 9, 1916.

111,593. TEA. E. B. MILLAR & COMPANY, Chicago, Ill.
Filed November 2, 1915. Serial No. 90,349. PUBLISHED MAY 9, 1916.

111,594. BEARING METAL OF WHITE-METAL BABBITTING COMPOSITION USED IN BABBITTING MACHINERY-BEARINGS. MORSE DRY DOCK AND REPAIR COMPANY, Brooklyn, N. Y.
Filed March 27, 1916. Serial No. 93,912. PUBLISHED MAY 16, 1916.

111,595. COFFEE. MUTUAL COFFEE CO., Montgomery, Ala.
Filed March 22, 1916. Serial No. 93,771. PUBLISHED MAY 9, 1916.

111,596. MIXED STOCK FEED SUITABLE FOR HORSES, STOCK, CATTLE, AND POULTRY. NOWAK MILLING CORPORATION, Buffalo, N. Y.
Filed September 7, 1915. Serial No. 89,070. PUBLISHED NOVEMBER 9, 1915.

111,597. TABLE CLOTHS, NAPKINS, AND SCARFS. S. ONTRA & BRO., New York, N. Y.
Filed January 6, 1916. Serial No. 91,977. PUBLISHED MAY 16, 1916.

111,598. VEILINGS, NETTINGS, AND CHIFFONS. OPPENHEIM & STERN, New York, N. Y.
Filed March 18, 1916. Serial No. 93,661. PUBLISHED MAY 16, 1916.

111,599. MOVING-PICTURE FILMS. PARAGON FILMS, INC., West Fort Lee, N. J.
Filed April 14, 1916. Serial No. 94,431. PUBLISHED MAY 9, 1916.

111,600. EYE-WATER. EMMETT O. PETRO, Hayden, Ariz.
Filed February 28, 1916. Serial No. 93,153. PUBLISHED MAY 2, 1916.

111,601. CHOCOLATES. POWELL'S, New York, N. Y.
Filed November 20, 1915. Serial No. 90,801. PUBLISHED JANUARY 4, 1916.

111,602. FERTILIZER. READING BONE FERTILIZER CO., Reading, Pa.
Filed March 10, 1916. Serial No. 93,438. PUBLISHED MAY 9, 1916.

111,603. LIMES, FRESH FRUITS, CITRUS FRUITS, AND FRESH VEGETABLES. JIM M. REILLY COMPANY, Dallas, Tex.
Filed March 21, 1916. Serial No. 93,747. PUBLISHED MAY 9, 1916.

111,604. DRAWERS, SHIRTS, AND PAJAMA-SUITS MADE OF TEXTILE MATERIAL. NICHOLAS RIPPENBEIN, New York, N. Y.
Filed March 24, 1916. Serial No. 93,856. PUBLISHED MAY 16, 1916.

111,605. LADIES' HATS. JOSEPH L. ROSENBERG, New York, N. Y.
Filed March 17, 1916. Serial No. 93,611. PUBLISHED MAY 16, 1916.

111,606. CERTAIN NAMED HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS. THE "S-C" REGULATOR COMPANY, Fostoria, Ohio.
Filed December 11, 1915. Serial No. 91,405. PUBLISHED MAY 9, 1916.

111,607. TOILET-PAPER. SAUQUOIT TOILET PAPER CO. INC., New Hartford, N. Y.
Filed March 18, 1916. Serial No. 93,676. PUBLISHED MAY 9, 1916.

111,608. TOILET-PAPER. SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y.
Filed March 23, 1916. Serial No. 93,807. PUBLISHED MAY 9, 1916.

111,609. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS IN VARIOUS FORMS FOR TREATING CERTAIN NAMED DISEASES. EMIL SCHELLER & CO., A. G., Zurich, Switzerland.
Filed November 24, 1914. Serial No. 82,890. PUBLISHED MAY 9, 1916.

111,610. FRESH APPLES, PEARS, PEACHES, CHERRIES, AND PLUMS. H. J. SHINN & CO., Spokane, Wash.
Filed December 11, 1915. Serial No. 91,406. PUBLISHED MAY 9, 1916.

111,611. NEWSPAPER-SECTION. STAR COMPANY, New York, N. Y.
Filed February 19, 1916. Serial No. 92,980. PUBLISHED MAY 9, 1916.

111,612. MOTOR-TRUCKS. STERLING MOTOR TRUCK CO., Milwaukee and West Allis, Wis.
Filed March 9, 1916. Serial No. 93,418. PUBLISHED MAY 9, 1916.

111,613. PHONOGRAPHS. THE THOMAS MANUFACTURING COMPANY, Dayton, Ohio.
Filed March 4, 1916. Serial No. 93,322. PUBLISHED MAY 9, 1916.

111,614. OILS USED FOR LUBRICATING PURPOSES. ALFRED S. TINDELL, New Brunswick, N. J.
Filed February 17, 1916. Serial No. 92,928. PUBLISHED MAY 9, 1916.

111,615. GIRDLES AND SHIRT-WAIST BELTS. TREO COMPANY, INC., New York, N. Y.
Filed February 26, 1916. Serial No. 93,132. PUBLISHED MAY 9, 1916.

111,616. CRATES OF CANTALOUPS AND SWEET POTATOES. TURLOCK MERCHANTS & GROWERS INCORPORATED, Turlock, Cal.
Filed November 2, 1915. Serial No. 90,372. PUBLISHED MAY 2, 1916.

111,617. PURE COLORS IN OIL. VALENTINE & COMPANY, New York, N. Y.
Filed March 18, 1916. Serial No. 93,682. PUBLISHED MAY 9, 1916.

111,618. JAPAN COLORS FOR COACHES, CARRIAGES, AND CARS. VALENTINE & COMPANY, New York, N. Y.
Filed March 18, 1916. Serial No. 93,683. PUBLISHED MAY 9, 1916.

111,619. STEEL FLEXIBLE MATS. THE WAYNE MANUFACTURING COMPANY, Newark, N. J.
Filed February 21, 1916. Serial No. 93,036. PUBLISHED MAY 9, 1916.

111,620. CERTAIN NAMED ROOFING MATERIALS. THE WESTERN ELATERITE ROOFING COMPANY, Denver, Colo.
Filed September 17, 1915. Serial No. 89,277. PUBLISHED MAY 9, 1916.

111,621. PIANOS. WEYDIG-HENKELMAN PIANO MFG. CO., Weehawken, N. J., and New York, N. Y.
Filed March 9, 1916. Serial No. 93,422. PUBLISHED MAY 9, 1916.

111,622. CERTAIN NAMED FOODS. WORDEN GROCER COMPANY, Grand Rapids, Mich.
Filed February 10, 1914. Serial No. 75,837. PUBLISHED MAY 19, 1914.

111,623. REINFORCED-CONCRETE AND ASPHALT FLOORS, PAVEMENTS, SIDEWALKS, WALLS, AND STAIRS. LESLIE L. WRIGHT, Brooklyn, N. Y.
Filed April 6, 1916. Serial No. 94,216. PUBLISHED MAY 9, 1916.

111,624. PIANO-STOOLS, PIANO-CHAIRS, DUET AND PLAYER BENCHES. NEW YORK PIANO STOOL & MANUFACTURING CO., East Stroudsburg borough, Pa.
Filed February 17, 1916. Serial No. 92,922. PUBLISHED MAY 9, 1916.

111,625. BLEND COFFEE, POULTRY, CANNED FRUITS, AND CANNED VEGETABLES. E. S. ALPAUGH & COMPANY, New York, N. Y.
Filed March 27, 1916. Serial No. 93,883. PUBLISHED MAY 9, 1916.

111,626. CANDY. PAUL F. BEICH CO., Bloomington, Ill.
Filed March 27, 1916. Serial No. 93,887. PUBLISHED MAY 9, 1916.

111,627. CORNMEAL. W. B. BRIGHAM & SON, Augusta, Ga.
Filed March 27, 1916. Serial No. 93,886. PUBLISHED MAY 9, 1916.

111,628. WHEAT-FLOUR. JOSE LUIS CISNEROS, New York, N. Y.
Filed March 27, 1916. Serial No. 93,894. PUBLISHED MAY 9, 1916.

111,629. WHEAT-FLOUR. JOSE LUIS CISNEROS, New York, N. Y.
Filed March 27, 1916. Serial No. 93,895. PUBLISHED MAY 9, 1916.

111,630. CANNED FRUITS AND CANNED VEGETABLES. COHOCTON CANNING CO., Cohocton, N. Y.
Filed April 11, 1916. Serial No. 94,309. PUBLISHED MAY 16, 1916.

111,631. CERTAIN NAMED FOODS. S. L. CRAWFORD & SONS, Hoquiam, Wash.
Filed March 27, 1916. Serial No. 93,893. PUBLISHED MAY 9, 1916.

111,632. MEN'S AND BOYS' SHIRTS AND WOMEN'S SHIRT-WAISTS. ARTHUR L. DRYFOOS, New York, N. Y.
Filed March 28, 1916. Serial No. 93,933. PUBLISHED MAY 16, 1916.

111,633. ELECTRIC FANS, FAN-MOTORS, AND FAN-FRAMES. THE EMERSON ELECTRIC MANUFACTURING COMPANY, St. Louis, Mo.
Filed March 18, 1916. Serial No. 93,642. PUBLISHED MAY 9, 1916.

111,634. ELECTRIC LAMPS. GENERAL ELECTRIC COMPANY, Schenectady, N. Y.
Filed June 30, 1915. Serial No. 87,669. PUBLISHED MAY 2, 1916.

111,635. CHOCOLATE CANDIES. GURLEY CANDY COMPANY, Minneapolis, Minn.
Filed March 27, 1916. Serial No. 93,903. PUBLISHED MAY 9, 1916.

111,636. CANNED SALMON. P. E. HARRIS & CO., Seattle, Wash.
Filed March 27, 1916. Serial No. 93,906. PUBLISHED MAY 9, 1916.

111,637. ELECTRIC CIGAR CUTTERS AND LIGHTERS. THE HAVALITE CORPORATION, New York, N. Y.
Filed November 24, 1915. Serial No. 90,903. PUBLISHED MAY 9, 1916.

111,638. ELECTRIC MOTORS, ELECTRIC GENERATORS, AND ELECTRIC-MOTOR GENERATORS. THE HERTNER ELECTRIC AND MANUFACTURING COMPANY, Cleveland, Ohio.
Filed April 3, 1916. Serial No. 94,071. PUBLISHED MAY 16, 1916.

111,639. ORANGES AND GRAPE-FRUIT. IRWINDALE CITRUS ASSN., Irwindale, Cal.
Filed April 11, 1916. Serial No. 94,330. PUBLISHED MAY 16, 1916.

111,640. MACHINERY FOR CRUSHING AND PULVERIZING ORES, MINERALS, OYSTER-SHELLS, AND OTHER HARD OR REFRACTORY MATERIALS. K-B PULVERIZER COMPANY, INC., New York, N. Y.
Filed March 14, 1916. Serial No. 93,533. PUBLISHED MAY 9, 1916.

111,641. CANDIES. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed October 20, 1914. Serial No. 82,022. PUBLISHED NOVEMBER 23, 1915.

111,642. CITRUS FRUITS. JOHNSTON FRUIT CO., Santa Barbara, Cal.
Filed April 5, 1916. Serial No. 94,168. PUBLISHED MAY 16, 1916.

111,643. METAL-POLISH. HENRY S. LAUTER, Pittsburgh, Pa.
Filed February 15, 1916. Serial No. 92,874. PUBLISHED MAY 9, 1916.

111,644. CHOCOLATES AND CONFECTIONS. LEVINE BROTHERS, INC., Brooklyn and New York, N. Y.
Filed March 27, 1916. Serial No. 93,911. PUBLISHED MAY 9, 1916.

111,645. LEATHER, RUBBER, AND CANVAS BOOTS AND SHOES. LUND-MAULDIN COMPANY, St. Louis, Mo.
Filed March 17, 1916. Serial No. 93,604. PUBLISHED MAY 16, 1916.

111,646. MACARONI PASTE PRODUCTS. F. A. MARTOCCIO MACARONI CO., Minneapolis, Minn.
Filed March 29, 1916. Serial No. 93,971. PUBLISHED MAY 9, 1916.

111,647. CERTAIN NAMED FOODS. JOS. MIDDLEBY, JR., INC., Boston, Mass.
Filed March 27, 1916. Serial No. 93,914. PUBLISHED MAY 9, 1916.

111,648. HOG-CHOLERA PREVENTIVE. CHARLES A. MILLS DAN MILLS, Valley Crossing, Ohio.
Filed March 10, 1916. Serial No. 93,435. PUBLISHED MAY 9, 1916.

111,649. KNIT WOOL BOOTS AND FELT BOOTS. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed December 13, 1915. Serial No. 91,441. PUBLISHED MAY 16, 1916.

111,650. OLIVES, OLIVE-BUTTER, AND SALAD-DRESSING. THE POMPEIAN COMPANY, INCORPORATED, Baltimore, Md.
Filed March 23, 1916. Serial No. 93,806. PUBLISHED MAY 9, 1916.

111,651. KEROSENE-OIL. THE RED C OIL MANUFACTURING CO., Baltimore, Md.
Filed March 22, 1916. Serial No. 93,776. PUBLISHED MAY 16, 1916.

111,652. LIGHTNING-RODS. THE TOLEDO CABLE COMPANY, Toledo, Ohio.
Filed February 11, 1916. Serial No. 92,792. PUBLISHED MAY 9, 1916.

111,653. OIL USED FOR LUBRICATING AND RUST-PREVENTING PURPOSES. JOHN TSAK, Bayside, N. Y.
Filed April 10, 1916. Serial No. 94,305. PUBLISHED MAY 16, 1916.

111,654. NEWSPAPER-SUPPLEMENT ISSUED EVERY WEEK. THE TRIBUNE COMPANY, Chicago, Ill.
Filed January 12, 1916. Serial No. 92,092. PUBLISHED MAY 9, 1916.

111,655. SHEET-MUSIC. WATERSON-BERLIN & SNYDER CO., New York, N. Y.
Filed February 21, 1916. Serial No. 93,035. PUBLISHED MAY 9, 1916.

111,656. TEA. WEDDLE TEA COMPANY, INC., New York, N. Y.
Filed March 27, 1916. Serial No. 93,923. PUBLISHED MAY 9, 1916.

111,657. CEREAL FOOD. WHEAT-O-CORN CO., Minneapolis, Minn.
Filed April 7, 1916. Serial No. 94,239. PUBLISHED MAY 9, 1916.

111,658. FERTILIZERS. THE ROBERT A. WOOLDRIDGE CO., Baltimore, Md.
Filed March 18, 1916. Serial No. 93,686. PUBLISHED MAY 9, 1916.

111,659. WALL-PAPER-DISPLAY BOOKS. ROBERT N. BEARD, Omaha, Nebr.
Filed February 19, 1916. Serial No. 92,968. PUBLISHED MAY 9, 1916.

111,660. CUTLERY—VIZ., BUTCHER-KNIVES AND POCKET-KNIVES. CATTARAUGUS CUTLERY CO., Little Valley, N. Y.
Filed January 22, 1916. Serial No. 92,327. PUBLISHED MAY 16, 1916.

111,661. CONCENTRATED FRUIT-JUICE FOR MAKING JELLY. IDA C. DILWORTH, Newark, N. J.
Filed March 18, 1916. Serial No. 93,640. PUBLISHED MAY 16, 1916.

111,662. TEA. ALBERT EHLERS, New York, N. Y.
Filed April 6, 1916. Serial No. 94,191. PUBLISHED MAY 16, 1916.

111,663. TEA. ALBERT EHLERS, New York, N. Y.
Filed April 6, 1916. Serial No. 94,192. PUBLISHED MAY 16, 1916.

111,664. CIGARS, CIGARETTES, AND SMOKING OR CHEWING TOBACCO. SOLOMON H. FURGATCH, New York, N. Y.
Filed March 21, 1916. Serial No. 93,737. PUBLISHED MAY 16, 1916.

111,665. ROOFING MATERIALS OF ASPHALT, SATURATED AND COATED, SLATE, MICA, AND STONE COVERED FELT AND PAPER. HARTMAN FURNITURE & CARPET CO., Chicago, Ill.
Filed March 8, 1915. Serial No. 85,011. PUBLISHED MAY 16, 1916.

111,666. KITCHEN-CABINETS. HASTINGS CABINET COMPANY, Hastings, Mich.
Filed April 19, 1915. Serial No. 86,035. PUBLISHED FEBRUARY 15, 1916.

111,667. ELECTRIC CIGAR CUTTERS AND LIGHTERS. THE HAVALITE CORPORATION, New York, N. Y.
Filed November 24, 1915. Serial No. 90,902. PUBLISHED MAY 16, 1916.

111,668. UNION SUITS MADE OF TEXTILE MATERIAL. HECHT & CAMPE INC., New York, N. Y.
Filed March 13, 1916. Serial No. 93,499. PUBLISHED MAY 16, 1916.

111,669. EXPLOSIVE SHELLS. HUDSON METAL PRODUCTS COMPANY, New York, N. Y.
Filed February 15, 1916. Serial No. 92,868. PUBLISHED MAY 16, 1916.

111,670. AUTOMOBILES. SIEGFRIED LESCHZINER, Newark, N. J.
Filed November 6, 1915. Serial No. 90,475. PUBLISHED MAY 16, 1916.

111,671. SYRUP, A PRODUCT OF PURE CANE-SUGAR. THE NULOMOLINE COMPANY, New York, N. Y.
Filed April 1, 1916. Serial No. 94,042. PUBLISHED MAY 16, 1916.

111,672. CHILDREN'S PLAY-TABLES, PLAY-CHAIRS, PLAY-DESKS, AND KINDERGARTEN MATERIAL. RAINY DAY TABLE CO., Newark, N. J.
Filed July 24, 1915. Serial No. 88,172. PUBLISHED MAY 16, 1916.

111,673. COTTON THREADS, MERCERIZED AND UNMERCERIZED, FOR HAND AND MACHINE USES. RICHARDSON SILK CO., Chicago, Ill.
Filed February 17, 1916. Serial No. 92,926. PUBLISHED MAY 9, 1916.

111,674. CEMENT FILLING FOR TEETH. RICHTER & HOFFMANN THE HARVARD DENTAL MANUFACTURING CO. G. M. B. H., Berlin, Germany, assignors to Richter & Hoffmann Harvard Gesellschaft mit Beschränkter Haftung, Berlin, Germany, a Corporation of Germany.
Filed July 8, 1909. Serial No. 43,421. PUBLISHED NOVEMBER 24, 1914.

111,675. TALKING-MACHINES, PHONOGRAPHS, GRAMOPHONES, TALKING-MACHINE TONE-ARMS, SOUND-BOXES, AND AMPLIFIERS. CHARLES F. RUBSAM, New York, N. Y., assignor to Otto Heineman Phonograph Supply Co., Inc., a Corporation of New York.
Filed December 20, 1915. Serial No. 91,623. PUBLISHED MARCH 7, 1916.

111,676. FOOD FOR INFANTS AND INVALIDS. SMITH KLINE & FRENCH CO., Philadelphia, Pa.
Filed April 8, 1916. Serial No. 94,268. PUBLISHED MAY 16, 1916.

111,677. FOODS HAVING YEAST OR ANALOGOUS MATERIAL AS THEIR MAIN INGREDIENT. RUDOLPH A. WITTEMANN, Buffalo, N. Y.
Filed February 23, 1916. Serial No. 93,057. PUBLISHED MAY 2, 1916.

TRADE-MARK REGISTRATIONS CANCELED.

98,359. PLANT FOOD. WILLIAM BRUESER, Kansas City, Mo.
Registered July 14, 1914. Canceled June 10, 1916.

103,639. CERTAIN NAMED FOODS. ARKANSAS GROCER CO., Blytheville, Ark.
Registered April 13, 1915. Canceled July 5, 1916.

LABELS

REGISTERED JULY 25, 1916.

19,474.—*Title:* "LA SORRENTINA." (For Macaroni.) F. D. ALEXANDRO & Co., Hazleton, Pa. Filed May 8, 1916.

19,475.—*Title:* "HERBATONE." (For a Medicinal Preparation.) ENGLISH HOME HERB CO., Fall River, Mass. Filed March 1, 1916.

19,476.—*Title:* "GOLDEN GRAIN BREAKFAST FOOD." (For Breakfast Food.) GOLDEN GRAIN CEREAL COMPANY, INC., Nashville, Tenn. Filed May 25, 1916.

19,477.—*Title:* "CHEVROLET CLOTHING CO. MAKERS OF CHEVROLET OVERCOATS." (For Men's Overcoats.) MORRIS GOLLAND, New York, N. Y. Filed June 6, 1916.

19,478.—*Title:* "CHEVROLET CLOTHING CO. MAKERS OF CHEVROLET SUITS." (For Men's Suits.) MORRIS GOLLAND, New York, N. Y. Filed June 6, 1916.

19,479.—*Title:* "LONGFELLOW." (For Cigars.) GEORGE G. KOEHLER, Cairo, Ill. Filed June 7, 1916.

19,480.—*Title:* "ELCO." (For Bottled Goods.) EDGAR B. LEBENSBERGER, Chicago, Ill. Filed April 29, 1916.

19,481.—*Title:* "POPULAR BRAND." (For Salad-Oil.) W. B. MARAN, San Francisco, Cal. Filed June 10, 1916.

19,482.—*Title:* "BINGO." (For Bottled Goods.) NORTHERN BREWING COMPANY, Superior, Wis. Filed July 5, 1916.

19,483.—*Title:* "BOWE." (For Men's Shirts.) JOHN F. QUINN, Philadelphia, Pa. Filed June 20, 1916.

19,484.—*Title:* "UNIVERSAL FEATHER & DOWN CO." (For Feathers, Downs, and Bedding.) ABRAHAM ISAAC SCHAFIRSTEIN, New York, N. Y. Filed June 8, 1916.

19,485.—*Title:* "CAMP FIRE COCOA CORNSTARCH." (For Corn-Starch.) WARNER M. VAN NORDEN, New York, N. Y. Filed June 29, 1916.

PRINTS

REGISTERED JULY 25, 1916.

4,412.—*Title:* "PRINCE ALBERT IS SUCH A REAL SMOKE." (For Smoking-Tobacco.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed June 19, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

FLEMING v. GARDNER.

Decided October 6, 1915.

ACCESS TO PENDING APPLICATION—INTERFERING PARTIES—COMPANION CASES.

Where access to a companion case of the one involved in interference was asked on the ground that the case involved purported to cover an improvement on the device shown in the companion case, while the preliminary statement alleged conception of the improvement prior to the filing of the companion case, *Held* that the showing was insufficient and the petition denied.

ON PETITION.

MASSAGING-MACHINE.

Mr. Charles C. Linthicum for Fleming.

Mr. Glenn S. Noble for Gardner.

NEWTON, *First Assistant Commissioner:*

This is a petition by Gardner for access to the application of Fleming, No. 829,824, filed April 6, 1914.

This request is based on the following statement in Fleming's application involved in this interference:

My invention relates to massaging machines and has particular reference to an improvement on the device disclosed and claimed in my co-pending application Serial No. 829,824, filed April 6, 1914.

Fleming opposes access to his earlier case on the ground that his application involved in this interference does not rely upon the prior application for a fuller disclosure or to carry back his dates in any respect, and orally asserted at the hearing that the application did not disclose the subject-matter of the interference.

At the hearing Gardner stated that Fleming's preliminary statement in this interference took his date of conception back of his prior application, and, inasmuch as the application involved in this interference stated that the interfering invention was an improvement over the prior invention, that if the preliminary statement were true an anomalous state of facts has been presented which might have an important bearing on what was set forth in the preliminary statement.

Since the prior application is a part of the Office records and can be inspected at any time by its tribunals, Gardner may present this argument for what it is worth without seeing Fleming's prior application. An inspection of the application by the Office may clear up the situation, but it must be held that no sufficient reason has been given by Gardner for thus exposing the prior application in view of the opposition by Fleming, and the petition is denied without prejudice to its renewal in case further developments shall show better reasons for granting the petition.

EX PARTE BRYANT.

Decided May 12, 1916.

DRAWINGS—STIPPLING.

The use of stippling in a design drawing permitted when appropriate and well executed.

ON PETITION.

DESIGN FOR EXTERNAL-LIMIT GAGE.

Mr. George W. Ramsey for the applicant.

EWING, *Commissioner:*

This is a petition that the objection to the drawing because of the stippling used therein be withdrawn.

In *ex parte* Lloyd (112 O. G., 251) and *ex parte* Kohler (116 O. G., 596) requirements for the elimination of stippling on the drawing were sustained.

The present application is for a design, and stippling has been used to indicate the body of the article in dead black as contrasting with polished projections.

It has been the practice of the Office recently to permit the use of stippling in certain illustrations where it seemed particularly appropriate, as is evidenced by a number of copies of design patents accompanying the petition, and in answering the petition the Chief Draftsman states:

There is no doubt that stippling will come out as sharp and clear as line work. All of the exhibits submitted are photolithographic work and are fine specimens.

Under present conditions there seems to be no objection to the use of stippling in appropriate cases if it is well executed. The decisions above cited are overruled to the extent indicated.

The petition is granted.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

BRAUN *v.* WAHL.

Decided May 22, 1916.

INTERFERENCE—PRIORITY—DILIGENCE.

Evidence reviewed and *Held* to prove such diligence by the appellee in reducing the invention to practice, at the time the appellant entered the field and thereafter, as to entitle the former to prevail.

Mr. John M. Coit for the appellant.

Mr. F. M. Phelps and *Mr. P. C. Dyrenforth* for the appellee.

ROBB, *J.*:

Appeal from a decision of the Commissioner of Patents in an interference proceeding awarding priority of invention to the senior party, Wahl.

The counts sufficiently explain the invention and read as follows:

1. As an improvement in the art of brewing fermented malt beverages, involving the preparation of a malt-mash, drawing off the wort and boiling the same with hops, cooling and fermenting, the step which consists in adding to the matter under treatment an extract of malt in the form of a liquor acidulated with lactic acid propagated therein.

2. As an improvement in the art of brewing fermented malt beverages, involving the preparation of a malt-mash, drawing off the wort and boiling the same with hops, cooling and fermenting, the step which consists in adding to the mash an extract of malt in the form of a liquor acidulated with lactic acid propagated therein.

Braun relies for conception and constructive reduction to practice upon an application filed by him in Austria on April 8, 1911. The Examiner of Interferences and the Board of Examiners-in-Chief agreed that Wahl had established a date of conception of the invention "during the year 1909," but both tribunals ruled that the evidence failed to show diligence on his part at the time of Braun's entry into the field, namely, April 8, 1911. The Commissioner, after a careful review of the evidence, agreed with the lower tribunals that Wahl was the first to conceive, and further ruled that Wahl's evidence showed diligence just prior to the filing of Braun's foreign application, and that Wahl's efforts within a period of two or three weeks resulted in reduction to practice. He therefore awarded priority to Wahl.

Since all the tribunals agreed on the first question, and as the evidence clearly sustains their findings, we shall confine our discussion to the second.

Max Stahl, superintendent of the Keeley Brewing Company and highly skilled in the art, testified that in the month of March, 1911, Doctor Wahl had spoken to him about his new process, involving the use of lactic acid in the brewing of beer; that about a week later Professor Nilson, in the interests of Wahl, called on him and explained the process, with a view to having it tried. While this process, according to the witness, "was against all former teachings," he finally consented to try it and immediately commenced preparations to that end. The witness stated:

I told him I would be willing to do it and would let him know when I had made all preparations for introducing this process. Maybe it was more than a week, but I am sure it was not two weeks until I had all the preparations made and notified Professor Nilson by 'phone, and he brought a half a gallon of lactic-acid culture, and I started the first mash in his presence.

The witness further stated that he had all the apparatus completed and ready for the installation of the process on April 17, 1911. This date he was enabled to fix by referring to his memorandum-book. He further testified that after his reluctance to adopt the process had been overcome by assurances from Doctor Wahl and Professor Nilson, it—

took some time to lay out the plans, to put up the tubs, and after the tubs were finished, to get the steam connections;

that it was about three weeks after the first interview in March before these preparations were complete and about two weeks after he had consented to adopt the process. Later the witness produced a receipted bill, dated April 13, 1911—

for two one-half inch barrels A. B. angle valves No. 9 and one-half brass A. D. globe valve No. 1,

and stated that these were ordered for the steam-line for the propagating-tank, which was used in carrying out the process. Witness stated that this bill—

strengthens my statement that the time of three weeks elapsing between the talk I had with Professor Nilson and Dr. Wahl and the propagating of the first liquid, as estimated by me, was a very short estimate.

Witness continued:

I want to be sure that I am right and I don't want to overestimate myself, so I put it at three weeks.

In our view the testimony of the above witness, which we have carefully read and partially reviewed, clearly shows activity on the part of Wahl prior to April 8, 1911, resulting, as found by the Commissioner, in reduction to practice. The decision, therefore, is affirmed.

Affirmed.

Court of Appeals of the District of Columbia.

MURPHY *v.* COOPER.

Decided May 22, 1916.

INTERFERENCE — PRIORITY — INTERPRETATION OF COUNTS.

Without intending to modify the general rule that claims should be given the broadest interpretation which they will support, *Held* that where there is a clear difference in the structures, making the claims wholly without point when applied to one, the claims should be given a reasonable interpretation, consistent with the specification in which they originated, to the end that the real inventor may prevail.

Mr. O. R. Barnett, Mr. P. H. Truman, and *Mr. John M. Coit* for the appellant.

Mr. F. R. Cornwall, Mr. C. S. Butler, Mr. L. S. Bacon, and *Mr. J. H. Milans* for the appellee.

ROBB, *J.*:

This is an appeal from a decision of the Patent Office in an interference proceeding, in which priority of invention was awarded to the party Cooper.

The counts of the issue read as follows:

1. A car end composed of a plurality of sections of corrugated sheet metal, two of which sections are duplicates, and a third intermediate section forming a connection between the duplicate sections, the lower edge of which intermediate section is formed so as to conform to the upper edge of the lower section.

2. A car end composed of a plurality of horizontally disposed panels or sections of sheet metal, each of which is provided with a stiffening rib or corrugation, two of which sections are duplicates, and a third section arranged between and connecting the duplicate sections, the upper and lower edges of which intermediate section is formed so as to conform to the corresponding edges of the upper and lower sections.

These claims originated in the Cooper application and were copied by Murphy. They relate to a car end. In his specification Cooper says that his object is to make this car end of sections—

two of which are duplicates, thus making it possible to utilize comparatively small sections of sheet metal in the formation of the completed end wall or plate and to reduce to a minimum the waste of material utilized in the construction of the car ends.

Later he says:

The car end is composed of three sections, 1, 2 and 3, the lower or base section 1 and the upper or top section 2 being alike in size and construction, and for this reason, these two main sections can be formed with the same die or press. • • • The upper edge of each of the main sections is anticlinal, that is, it slopes gradually upward from the sides to the center, and thus when the end wall or plate is completed, the upper edge conforms to the shape of the car roof.

It is obvious that in this construction only two dies are necessary for the formation of all the parts for a complete car end. As two of the sections are duplicates in shape, they may be used interchangeably, and it is necessary to keep a supply of only two kinds of sections on hand.

The novel features of the Cooper invention clearly were not in Murphy's mind when he filed his application, nor were they disclosed either in his specification or drawings. In his specification he says:

The sheet metal car end of my present invention consists of a number of sheets or bands of metal extending from side to side of the car, attached to each other and to the side-walls, roof structure and end frame of the car, and provided with hollow reinforcing ribs as will be hereinafter more particularly described. • • • The fact that the bands or sheets are comparatively narrow, as I make them by preference, reduces the cost of manufacture and also the cost of repair in the event that one of the bands becomes injured and has to be replaced.

He shows a car end composed of seven sections, reinforced by ribs or corrugations, the top and bottom sections being different in shape and conformation, while the intermediate sections are alike. It thus will be seen that it would be impossible for Murphy to construct a car end by the use of only two kinds of sections. Such was not his idea at all, and in order to permit him to make these claims it would be necessary to disregard their natural and obvious meaning.

We have no inclination to modify the rule that a claim should be given the broadest interpretation which it reasonably will support, and that limitations will not be read into it to meet the exigencies of a particular situation. (*Miel* v. *Young*, 29 App. D. C., 481; *Geltz & Hosack* v. *Crozier*, 32 App. D. C., 324; *Western Electric Co.* v. *Martin*, 39 App. D. C., 147; *Leonard* v. *Horton*, 40 App. D. C., 22.) But where, as here, the difference in the inventions clearly appears, the claims should be given a reasonable interpretation, consistent with the specification in which they originated, to the end that the real inventor may be given the award of priority.

The decision is affirmed.

Affirmed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Kennedy patent, No. 1,054,423, for method of laying cork tiles, *Held* void for lack of invention. *David E. Kennedy, Inc.*, v. *Beaver Tile & Specialty Co.*, 232 Fed. Rep., 477.

(U. S. C. C. A.) The Weyand reissue patent, No. 12,744, (original No. 810,240,) for an electric-motor controller-regulator, claim 29 *Held* valid and infringed. *American Automotoneer Co.* v. *Porter*, 232 Fed. Rep., 456.

(U. S. C. C. A.) The Wertheim reissue patent, No. 13,886, (original No. 1,074,074,) for bag-lock, *Held* void for lack of invention. *Wertheim* v. *Lefkowitz*, 232 Fed. Rep., 474.

Adverse Decisions in Interference.

PATENT NO. 1,167,608.

On June 19, 1916, a decision was rendered that Paul Winsor and Cyrus Corliss were not the first inventors of the subject-matter covered by claims 1 and 2 of their Patent No. 1,167,608, subject, "Electric coupling for cars," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 13, 1916.

Weiss & Segal, their heirs or legal representatives, take notice:

The Patent Office on July 5, 1916, instituted an interference between the application of Charles Kaufman & Bros., of No. 230 Market street, Chicago, Ill., for registration of a trade-mark and trade-mark registered October 3, 1905, No. 46,733, to Weiss & Segal, of No. 8 Washington Place, New York, N. Y. The notice sent by registered mail to Weiss & Segal has not yet been returned; but a verified showing filed by Charles Kaufman & Bros. constitutes a *prima facie* showing that Weiss & Segal are no longer in business.

In view of the above, Weiss & Segal, their heirs or assigns, are hereby notified that unless they shall enter an appearance herein within thirty days from the first publication of this order a judgment will be entered permitting Charles Kaufman & Bros. to register notwithstanding the registration of Weiss & Segal.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1916.

Weber-Browne Supply Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Willie Dackermann, 109 West One Hundred and Second street, New York, N. Y., and Weber-Browne Supply Co., 703 Odd Fellows' Building and 3740 Delmar avenue, St. Louis, Mo., for registration of trade-marks, and a letter sent to said Weber-Browne Supply Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Weber-Browne Supply Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JULY, 1916.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*) and of the United States District Court by the letter ᵇ.]

TABLE OF CASES.

	Page.
ᵇ Barrett Company and Schutte, The, *v.* Ewing, Commissioner of Patents	761
* Becker *v.* Bird	407
* Braun *v.* Wahl	1458
Bryant. *Ex parte*	1457
* Carlin *v.* Crumpton	1093
Fleming *v.* Gardner	1457
* Gammeter *v.* Neidich and O'Kane *et al.*	408
Gilmore, Jr., and Clark. *Ex parte*	1093
* Murphy *v.* Cooper	1458

SUBJECT-MATTER INDEX.

	Page.
Access to pending application, companion case of one involved in interference, insufficiency of showing, Fleming *v.* Gardner	1457
* Concurrent decisions of the tribunals of the Patent Office, appellant from must show clear error, Becker *v.* Bird	407
ᵇ Construction of specifications and patents, patents not to be construed as something different from what the language indicates, The Barrett Company and Schutte *v.* Ewing, Commissioner of Patents	761
Date of filing application, informal papers, *ex parte* Gilmore, Jr., and Clark	1093
Drawings, stippling permitted in design drawings, *ex parte* Bryant	1457
* Interference, reasonable interpretation should be given claims that the real inventor may prevail, Murphy *v.* Cooper	1458
ᵇ Patentability, substitution of one material for another not invention, The Barrett Company and Schutte *v.* Ewing, Commissioner of Patents	761
* Priority of invention, award in accordance with evidence, Braun *v.* Wahl	1458
* Gammeter *v.* Neidich and O'Kane *et al.*	408
ᵇ References, patent not to be construed as different from what is described because it purports to be an improvement on prior device, The Barrett Company and Schutte *v.* Ewing, Commissioner of Patents	761
* Right to make claim, device not practically operative, Carlin *v.* Crumpton	1093

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JULY, 1916.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*) and of the United States District Court by the letter b.]

ACCESS TO PENDING APPLICATIONS.

INTERFERING PARTIES—COMPANION CASES.

Where access to a companion case of the one involved in interference was asked on the ground that the case involved purported to cover an improvement on the device shown in the companion case, while the preliminary statement alleged conception of the improvement prior to the filing of the companion case, *Held* that the showing was insufficient and the petition denied. [Fleming v. Gardner, 1457.

ANTICIPATION.

See Access to Pending Applications; Construction of Specifications and Patents.

APPLICATIONS.

FILING DATE—INFORMAL PAPERS.

Where the specification filed October 4 was returned because unsigned and a carbon copy thereof filed October 5 was returned because not in permanent ink and the original duly signed was received on October 22, *Held* that, in the absence of special reasons to the contrary, the case was properly given the filing date of October 22. [*Ex parte* Gilmore, Jr., and Clark, 1003.

COMPANION APPLICATIONS.

See Access to Pending Applications.

CONCEPTION OF INVENTION.

See Access to Pending Applications.

CONSTRUCTION OF CLAIMS.

See Interference.

CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

PATENTABILITY—ANTICIPATING PATENT.

A patent which clearly describes a construction cannot be construed to be something different from what its language indicates, and therefore not a reference, because it purports to be an "improvement" on a prior patented device which may be a different construction.

[b The Barrett Company and Schutte v. Ewing, Commissioner of Patents, 761.

DATE OF FILING APPLICATIONS.

See Applications.

DECISIONS OF THE PATENT OFFICE TRIBUNALS.

INTERFERENCE—CONCURRENT DECISIONS.

When the three tribunals of the Patent Office have reached the same conclusion on the question presented. the appellant, in order to prevail, must show clear error. [*Becker v. Bird, 407.

DESIGNS.

See Drawings.

DILIGENCE.

See Priority of Invention, 2.

DISCLOSURE OF INVENTION.

See Right to Make Claim.

DRAWINGS.

STIPPLING.

The use of stippling in a design drawing permitted when appropriate and well executed. [*Ex parte* Bryant, 1457.

EVIDENCE.

See Priority of Invention.

FIRST AND ORIGINAL INVENTOR.

See Interference.

INFORMAL APPLICATIONS.

See Applications.

INKS REQUIRED FOR PREPARATION OF APPLICATIONS.

See Applications.

INOPERATIVE DEVICES.

See Right to Make Claim.

INTERFERENCE.

See Access to Pending Applications; Construction of Specifications and Patents; Decisions of the Patent Office Tribunals; Priority of Invention; Right to Make Claim.

PRIORITY—INTERPRETATION OF COUNTS.

Without intending to modify the general rule that claims should be given the broadest interpretation which they will support, *Held* that where there is a clear difference in the structures, making the claims wholly without point when applied to one, the claims should be given a reasonable interpretation, consistent with the specification in which they originated, to the end that the real inventor may prevail. [*Murphy v. Cooper, 1458.

INVENTION.

SUBSTITUTION OF MATERIAL.

The substitution of one kind of cement for another in the making of a concrete roadway-base not a matter of invention.

[b The Barrett Company and Schutte v. Ewing, Commissioner of Patents, 761.

PRELIMINARY STATEMENT.

See Access to Pending Applications.

PRIOR PATENTS.

See Construction of Specifications and Patents.

PRIORITY OF INVENTION.

See Access to Pending Applications; Interference.

1. AWARD.
Evidence *Held* to justify the award of priority made by the Office in each of the interferences.
[*Gammeter *v.* Neidich and O'Kane *et al.*, 408.

2. SAME—DILIGENCE.
Evidence reviewed and *Held* to prove such diligence by the appellee in reducing the invention to practice, at the time the appellant entered the field and thereafter, as to entitle the former to prevail. [*Braun *v.* Wahl, 1458.

REDUCTION TO PRACTICE.

See Priority of Invention, 2.

REFERENCES.

See Construction of Specifications and Patents.

RIGHT TO MAKE CLAIM.

INTERFERENCE—DEVICE NOT PRACTICALLY OPERATIVE.
Where the calculating-machine of one of the parties will fail under certain circumstances to give the correct result unless the critical circumstances are noticed by the operator and corrections made according to a more or less complicated set of rules not referred to in the disclosure of the application, *Held* that the device does not have the practical utility and operativeness necessary to support the claims of the issue.
[*Carlin *v.* Crumpton, 1093.

SPECIFICATIONS.

See Applications; Specifications.

STIPPLING.

See Drawings.

SUBSTITUTION OF MATERIAL.

See Invention.

SUFFICIENCY OF SHOWING.

See Access to Pending Applications; Decisions of the Patent Office Tribunals.

UTILITY.

See Right to Make Claim.

O

BANGOR PUBLIC
OCT 2 1916
LIBRARY

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF JULY, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

A. Schilling & Company. (See Volkmann, William G., assignor.)
A. Stein & Company. (See Kuehn, Charles P., assignor.)
A. Stein & Company. (See Liebenstein and Emsheimer, assignors.)
A. J. Lindemann & Hoverson Co. (See Lindemann, Albert J. and W. C., assignors.)
A. R. Mosler & Co. (See Mosler, Arthur R., assignor.)
Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Oil-cup. No. 1,189,221; July 4; Gaz. vol. 228; p. 3.
Aalborg, Christian, and T. S. Pukerud, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,189,392; July 4; Gaz. vol. 228; p. 66.
Aanerud, Louis, assignor to F. H. Moble & Company, Chicago, Ill. Clutch for gripping pins or rods. No. 1,190,362; July 11; Gaz. vol. 228; p. 449.
Aaron, Solomon E., assignor to S. E. Aaron Company, Boston, Mass. Combination splitting and stripping pliers. (Reissue.) No. 14,169; July 25; Gaz. vol. 228; p. 1414.
Aasen, Ole T., Starbuck, Minn. Thill-coupling. No. 1,192,148; July 25; Gaz. vol. 228; p. 1174.
Abbott, George H., assignor to A. D. Edwards, Elgin, Ill. Seat-hinge. No. 1,189,770; July 4; Gaz. vol. 228; p. 198.
Abbott Laboratories, The. (See Mayo, Nelson S., assignor.)
Abbott, Robert J., Washington, D. C. Hose-coupling. No. 1,190,068; July 4; Gaz. vol. 228; p. 298.
Abderhalden, Emil, Halle-on-the-Saale, Germany. Serum mixture. No. 1,191,551; July 18; Gaz. vol. 228; p. 911.
Abernethy, John S., Newton, N. C. Bulletin-board. No. 1,190,069; July 4; Gaz. vol. 228; p. 298.
Abraham, George W., Weston, Ontario, Canada. Firearm. No. 1,190,070; July 4; Gaz. vol. 228; p. 298.
Abramsen, Petter B., Knoxville, Pa. Method of and apparatus for cold-rolling metal. No. 1,190,698; July 11; Gaz. vol. 228; p. 570.
Aceves, Julius G., New York, N. Y. Speed-controller. No. 1,190,839; July 11; Gaz. vol. 228; p. 619.
Acheson, James F., Proton Station, Ontario, Canada. Building construction. No. 1,192,027; July 25; Gaz. vol. 228; p. 1133.
Ackerman, Paul, Toronto, Ontario, Canada, assignor, by mesne assignments, to General Electric Company. Selective cut-out for alternating-current circuits. No. 1,192,724; July 25; Gaz. vol. 228; p. 1375.
Ackroyd, John H., Hartford, Conn. Gas-burner. No. 1,192,365; July 25; Gaz. vol. 228; p. 1252.
Acme Register Company. (See Williams, Frederick, assignor.)
Adair, Montague, New York, N. Y. Phonograph-stop. No. 1,189,222; July 4; Gaz. vol. 228; p. 8.
Adair, Montague, New York, N. Y. Phonograph-stop. No. 1,189,418; July 4; Gaz. vol. 228; p. 76.
Adam, Harry C., St. Louis, Mo. Lighting-fixture. No. 1,189,520; July 4; Gaz. vol. 228; p. 114.
Adams, Comfort A., Cambridge, assignor to Americal Tool & Machine Company, Boston, Mass. Bearing for centrifugal machines. No. 1,192,823; July 25; Gaz. vol. 228; p. 1409.
Adams, Waldo P., Syracuse, N. Y. Apparatus for projecting radiant energy. No. 1,190,071; July 4; Gaz. vol. 228; p. 299.
Adams, Worley. (See Manley, Imlah A., assignor.)
Adder Machine Company, The. (See Reirdon, Joseph F., assignor.)
Adolph, Frank, Jr. (See Burns and Adolph.)
Adsit, William H., assignor to J. F. Thomas, Batavia, N. Y. Time-controlled mechanism for operating lights. No. 1,189,651; July 4; Gaz. vol. 228; p. 158.
Advance-Rumely Company. (See Cahall, William H., assignor.)
Advance-Rumely Company. (See Mohr, Albert F., assignor.)
Aeuer, Ernst, Berlin, Germany, assignor to General Electric Company. Making tungsten filaments. No. 1,191,552; July 18; Gaz. vol. 228; p. 911.
Agner, Chester M., Sacramento, Cal. Transmitting means for wireless telegraphy. No. 1,190,973; July 11; Gaz. vol. 228; p. 668.
Agness, Walter P., Cincinnati, Ohio. Metal connection for beam and girder molds. No. 1,191,139; July 18; Gaz. vol. 228; p. 767.
Agnew, Donald E., assignor of one-half to H. F. Sullivan, Portland, Oreg. Detachable-rim clamp. No. 1,191,101; July 11; Gaz. vol. 228; p. 710.
Abrena, William H., Canandaigua, N. Y. Sleet-scraper for trolley-wires. No. 1,191,140; July 18; Gaz. vol. 228; p. 767.
Aichele, Albert, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Starting of alternating-current motors. No. 1,192,489; July 25; Gaz. vol. 228; p. 1294.
Aiken, Edward L., Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Process and apparatus for molding. No. 1,190,072; July 4; Gaz. vol. 228; p. 299.
Air Turbine Company of America. (See Clade, Robert, assignor.)
Ajax Forge Company. (See Bradley, Frank B., assignor.)
Aktiebolaget Bofors-Gullspang. (See Olsson, Emil, assignor.)
Aktiebolaget Mjölkningsmaskinen Manus. (See Jonsson, Gustaf E., assignor.)
Aktiengesellschaft Brown Boveri & Cie. (See Aichele, Albert, assignor.)
Albert, Herman L., Jud, N. D. Steering mechanism for tractors. No. 1,191,267; July 18; Gaz. vol. 228; p. 812.
Albrecht, Benjamin K., Rowayton, Conn. Apparatus for injecting brine into meat. No. 1,192,596; July 25; Gaz. vol. 228; p. 1333.
Albrecht, Carl A., Galion, Ohio. Burial-vault. No. 1,189,646; July 4; Gaz. vol. 228; p. 156.
Albrecht, Lewis, New York, N. Y. Vehicle-wheel. No. 1,189,223; July 4; Gaz. vol. 228; p. 3.
Alcock, Randa J. (See Thompson and Goetz, assignors.)
Alcott, Winnie A., Pueblo, Colo. Fire-alarm. No. 1,192,725; July 25; Gaz. vol. 228; p. 1376.
Alder, Harry L., and H. E. Gilfert, Stockton, Cal. Anti-friction-hub. No. 1,190,258; July 11; Gaz. vol. 228; p. 413.
Aldrich, Carl G., Somerville, Mass. Holder for eyeglasses. No. 1,191,646; July 18; Gaz. vol. 228; p. 943.
Alexander, John W., and T. W. Epling, Roanoke, Va. Railway-tie covering. No. 1,189,652; July 4; Gaz. vol. 228; p. 158.
Alexy, Paul. (See Klett, Christian F., assignor.)
Alldis, Frederick L. (See Groehn and Alldis.)
Allen, Charles C., Kansas City, Mo. Making piston packing-rings. No. 1,190,500; July 11; Gaz. vol. 228; p. 497.
Allen, Eugene E., Los Angeles, Cal. Weed-burner for roadways. No. 1,192,808; July 25; Gaz. vol. 228; p. 1405.
Allen, Henry A., Chicago, Ill. Underdrain filtration system. No. 1,189,521; July 4; Gaz. vol. 228; p. 114.
Allen, Herbert A., Willow Creek, Mont. Throttle control. No. 1,192,258; July 25; Gaz. vol. 228; p. 1215.
Allen, Roy M., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telegraph-key. No. 1,190,259; July 11; Gaz. vol. 228; p. 413.
Allen, Verner B., Clinton, Ind. Device for cleaning burner-tips. No. 1,192,597; July 25; Gaz. vol. 228; p. 1333.
Alley, Frederick L., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Last. No. 1,192,257; July 25; Gaz. vol. 228; p. 1215.
Allis-Chalmers Manufacturing Company. (See Borchard, Robert W., assignor.)
Allis-Chalmers Manufacturing Company. (See Capen, Thomas W., assignor.)
Allis-Chalmers Manufacturing Company. (See Hanford, Lemuel D., assignor.)
Allis-Chalmers Manufacturing Company. (See Spitzer, Purves E., assignor.)
Allison, Oswald W., Seattle, Wash. Car-brake. No. 1,190,073; July 4; Gaz. vol. 228; p. 299.

Allsteadt, John E., Hastings, Nebr. Metallic storage-bin. No. 1,191,141; July 18; Gaz. vol. 228; p. 767.
Almasy, Alexander, and J. Bacha, Chrome, N. J. Beerstrainer. No. 1,190,841; July 11; Gaz. vol. 228; p. 620.
Almy, Charles, Jr., assignor to American Vulcanized Fibre Company, Wilmington, Del. Furing hard or vulcanized fiber. No. 1,191,142; July 18; Gaz. vol. 228; p. 768.
Alquist, Karl, Schenectady, N. Y., assignor to General Electric Company. Marine turbine. No. 1,190,074; July 4; Gaz. vol. 228; p. 300.
Altshul, Henry, Hartford, Conn. Locking means for incandescent lamps. No. 1,191,934; July 18; Gaz. vol. 228; p. 1048.
Ambrose, Alfred J., North Yakima, Wash. Wire-applying tool. No. 1,190,075; July 4; Gaz. vol. 228; p. 300.
Ambruster, Cornelius, Roslyn, Pa. Electrical control apparatus. No. 1,189,771; July 4; Gaz. vol. 228; p. 198.
American Bank Note Company. (See Eaton, William S., assignor.)
American Brake Shoe & Foundry Company. (See Jones, Harry, assignor.)
American Can Company. (See Thornburgh, Ivan D., assignor.)
American Cement Machine Co. (See Mandt, Obert G., assignor.)
American Clay Machinery Company. (See Martin, James P., assignor.)
American District Telegraph Company. (See Hopkins and Hoge, assignors.)
American Electrical Heater Company. (See Kuhn and Shallor, assignors.)
American Fire Alarm Company. (See Clive, Albert A., assignor.)
American Fire Alarm Company. (See McDonough, Joseph J., assignor.)
American Flooring Company. (See Nienstaedt, Max, assignor.)
American Forging & Socket Co. (See Stoler, Warren W., assignor.)
American Foundry & Mfg. Co. (See Sanders, Barney H., assignor.)
American Graphophone Company. (See Emerson, Victor H., assignor.)
American Hardware Corporation, The. (See Teich, Ernest L., assignor.)
American La France Fire Engine Co. (See McCaslin, Harry M., assignor.)
American Laundry Machinery Company. (See Cooper, Daniel M., assignor.)
American Lithographic Company. (See Corkett, Frederick T., assignor.)
American Optical Company. (See Day, George H., assignor.)
American Optical Company. (See Hill, Harry W., assignor.)
American Optical Company. (See Mathewson, Henry B., assignor.)
American Optical Company. (See Maynard, Albert E., assignor.)
American Photo Player Company. (See Van Valkenburg, Burt R., assignor.)
American Postage Meter Co. (See Woodward, Irving C., assignor.)
American Pressweld Radiator Corporation. (See Safford, Clarence E., assignor.)
American Pure Food Process Company, The. (See Schmitt, Edward D., assignor.)
American Rolling Mill Company, The. (See Freeze, Johnathan R., assignor.)
American Rolling Mill Company, The. (See Tesmer, William, assignor.)
American Rotary Motor Company. (See Mears, Williams N., assignor.)
American Safety Device Company. (See Bertodo, John, assignor.)
American Steam Gauge & Valve Manufacturing Company. (See Manning, Coleman J., assignor.)
American Steel Foundries. (See Chiles, George S., assignor.)
American Steel Foundries. (See Kinne, Edmund P., assignor.)
American Steel Foundries. (See Scott, George E., assignor.)
American Stove Company. (See Possons, Minard A., assignor.)
American Tool & Machine Company. (See Adams, Comfort A., assignor.)
American Vulcanized Fibre Company. (See Almy, Charles, Jr., assignor.)
American Warp-Drawing Machine Company. (See Hathaway, Edgar F., assignor.)
American Warp Drawing Machine Company. (See Lea, Charles, assignor.)
American Zinc Lead & Smelting Company. (See Kimball, Henry S., assignor.)
Ames, Butler, Lowell, Mass. Starting device for internal-combustion engines. No. 1,192,366; July 25; Gaz. vol. 228; p. 1253.
Ames, Butler, Lowell, Mass. Razor. No. 1,192,367; July 25; Gaz. vol. 228; p. 1253.
Ames Steel Lath Company. (See Curtis, Lewis E., assignor.)
Amiot, Henri, Rheims, France. Self-propelled plow. No. 1,191,143; July 18; Gaz. vol. 228; p. 768.
Amirant, Benjamin, Chicago, Ill. Press. No. 1,190,501; July 11; Gaz. vol. 228; p. 497.
Ammann, Ulrich, Langenthal, Switzerland. Apparatus for drying and mixing material. No. 1,189,772; July 4; Gaz. vol. 228; p. 199.
Amodeo-Salvator, Emmanuel, Brooklyn, N. Y. Vehicle-wheel. No. 1,191,866; July 18; Gaz. vol. 228; p. 1022.
Anable, Frederick S., Boston, Mass., assignor to National Binding Machine Company, New York, N. Y. Strip-serving device. No. 1,191,056; July 11; Gaz. vol. 228; p. 695.
Andacht, Reinhard, Milwaukee, Wis. Spatter-brush. No. 1,191,120; July 11; Gaz. vol. 228; p. 717.
Anderson, Arvid R., Columbus, Ohio. Automatic circuit-breaker. No. 1,192,368; July 25; Gaz. vol. 228; p. 1253.
Anderson-Barngrover Mfg. Co. (See Anderson and Thompson, assignors.)
Anderson Button Attaching Machine Company. (See Poole, Lora E., assignor.)
Anderson, Carl J. (See Schureman and Anderson.)
Anderson, Carl O., assignor to The Champion Blower & Forge Company, Lancaster, Pa. Oiling device for vertical shafts. No. 1,189,898; July 4; Gaz. vol. 228; p. 243.
Anderson, Charles J., assignor to W. J. Lawson, Philadelphia, Pa. Mailing-box. No. 1,191,057; July 11; Gaz. vol. 228; p. 696.
Anderson, Charlie G., Sikeston, Mo. Lock-nut. No. 1,191,754; July 18; Gaz. vol. 228; p. 984.
Anderson, Edward V., Monessen, assignor of one-half to C. E. Golden, Crafton, Pa. Automatic valve. No. 1,189,334; July 4; Gaz. vol. 228; p. 44.
Anderson, Edward V., Monessen, assignor of one-half to C. E. Golden, Crafton, Pa. Automatic fire-service valve. No. 1,189,335; July 4; Gaz. vol. 228; p. 45.
Anderson, Edward V., Monessen, assignor of one-half to C. E. Golden, Crafton, Pa. Pressure-regulating valve. No. 1,192,809; July 25; Gaz. vol. 228; p. 1405.
Anderson, Everett G. (See Shreves and Anderson.)
Anderson, Finis L., and J. W. Horne, Fullerton, Nebr. Rail-joint. No. 1,190,076; July 4; Gaz. vol. 228; p. 301.
Anderson, Harry T., Butler, Pa., assignor to Harry Vissering & Company, Chicago, Ill. Uncoupling device for couplings. No. 1,189,773; July 4; Gaz. vol. 228; p. 199.
Anderson, James, Jr., Omaha, Nebr. Anchoring-pivot for mechanical toys. No. 1,189,647; July 4; Gaz. vol. 228; p. 156.
Anderson, John N., Lincoln, N. H. Watermarking appliance. No. 1,192,259; July 25; Gaz. vol. 228; p. 1216.
Anderson, Ole W., Boyd, Minn. Door-spring. No. 1,190,840; July 11; Gaz. vol. 228; p. 620.
Anderson, Oliver P., Nashville, Tenn. Type-bar. No. 1,189,522; July 4; Gaz. vol. 228; p. 115.
Anderson, Peter W., and J. T. Kennelly, Rawlins, Wyo. Tire-armor. No. 1,192,149; July 25; Gaz. vol. 228; p. 1174.
Anderson, Robert, Racine, Wis. Support. No. 1,190,502; July 11; Gaz. vol. 228; p. 497.
Anderson, Victor H., Mount Vernon, Me. Rotary engine-valve. No. 1,190,363; July 11; Gaz. vol. 228; p. 449.
Anderson, Walter, Fairmont, Okla. Vacuum cleaning device. No. 1,189,648; July 4; Gaz. vol. 228; p. 157.
Anderson, William C., and A. R. Thompson, assignors to Anderson-Barngrover Mfg. Co., San Jose, Cal. Weighing-machine. No. 1,190,304; July 11; Gaz. vol. 228; p. 450.
Andrew, George W. (See Testrup, Rigby, and Andrew.)
Andrews, Aaron K., Burnham, Pa. Chuck. No. 1,191,755; July 18; Gaz. vol. 228; p. 984.
Andrews, Alexander J., Portland, Oreg. Barber's paper and check. No. 1,189,899; July 4; Gaz. vol. 228; p. 243.
Andrews, Lyman, deceased, Dundee, Ill.; M. Andrews, executor. Grass-catcher. No. 1,191,935; July 25; Gaz. vol. 228; p. 1099.
Andrews, Minnie, executor. (See Andrews, Lyman.)
Andrews, Oliver B., Chattanooga, Tenn. Trap-nest. No. 1,192,726; July 25; Gaz. vol. 228; p. 1376.
Angelo, Charles D., and L. A. Pearson, Diorite, Mich. Faucet. No. 1,190,077; July 4; Gaz. vol. 228; p. 301.
Anger, John E., Preston, England. Door-hanger. No. 1,190,078; July 4; Gaz. vol. 228; p. 301.
Anglada, Joseph A., New York, N. Y., assignor to Milwaukee Locomotive Manufacturing Company, Milwaukee, Wis. Safety starting device for gas-engines. No. 1,192,489; July 25; Gaz. vol. 228; p. 1295.
Anglo-American Textile Machinery Company. (See Vöster and Jungbauer, assignors.)
Angus, Arthur R., Spit Road Mosman, New South Wales, Australia. Railway safe-running device. No. 1,189,224; July 4; Gaz. vol. 228; p. 4.
Angus, Arthur R., Spit Road Mosman, New South Wales, Australia. Railway safe-running device. No. 1,189,225; July 4; Gaz. vol. 228; p. 5.
Angus, Arthur R., Spit Road Mosman, New South Wales, Australia. Railway safe-running device. No. 1,189,226; July 4; Gaz. vol. 228; p. 5.
Angus, Arthur R., Sydney, New South Wales, Australia. Device for preventing collisions between railway-trains. No. 1,190,617; July 11; Gaz. vol. 228; p. 539.
Angus, Arthur R., Spit Road Mosman, New South Wales, Australia. Railway safe-running device. No. 1,191,881; July 18; Gaz. vol. 228; p. 854.

Anhaltzer, Henry, Pittsburgh, Pa. Generating formaldehyde gas. No. 1,191,647; July 18; Gaz. vol. 228; p. 944.
Anson, Warren J., Los Angeles, Cal. Means for promoting vegetation. No. 1,190,699; July 11; Gaz. vol. 228; p. 571.
Appel, Morris A., Philadelphia, Pa. Cushion. No. 1,190,618; July 11; Gaz. vol. 228; p. 539.
Apple Electric Company, The. (See Apple, Vincent G., assignor.)
Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Switch. No. 1,189,900; July 4; Gaz. vol. 228; p. 243.
Apple, William M., San Antonio, Tex. Parcel-carrier guard for bicycles. No. 1,189,649; July 4; Gaz. vol. 228; p. 157.
Appleton, Ernest G., assignor to Chicago Fuse Manufacturing Company, Chicago, Ill. Connector. No. 1,192,150; July 25; Gaz. vol. 228; p. 1175.
Appleton, Joseph H., Attleboro, Mass. Box. No. 1,190,700; July 11; Gaz. vol. 228; p. 571.
Applin, Eby R., Waupun, Wis. Stocking drying and shaping apparatus. No. 1,192,151; July 25; Gaz. vol. 228; p. 1175.
Ardery, Sarah J. (See Hoover and Ardery.)
Arey, Fred C., Oak Park, assignor to Northwestern Expanded Metal Company, Chicago, Ill. Apparatus for feeding metal sheets or strips. No. 1,190,974; July 11; Gaz. vol. 228; p. 668.
Armbruster, Charles E. H., Denver, Colo. Reflectoscope. No. 1,190,619; July 11; Gaz. vol. 228; p. 540.
Armenti, Dan, Cleveland, Ohio. Coal-drilling machine. No. 1,189,901; July 4; Gaz. vol. 228; p. 244.
Arms, Edward W., Troy, N. Y. Surveying instrument. No. 1,191,936; July 25; Gaz. vol. 228; p. 1099.
Armstrong, Bert, Seaton, Ill. Hog-disinfectant sprinkler. No. 1,189,523; July 4; Gaz. vol. 228; p. 115.
Armstrong, Charles C., Marysville, Ohio. Lock or fastening device for hinged box members. No. 1,189,902; July 4; Gaz. vol. 228; p. 244.
Armstrong, Howard, Lestershire, N. Y. Machine for manufacture of composition boards. No. 1,189,650; July 4; Gaz. vol. 228; p. 157.
Armstrong, Robert L., Los Angeles, Cal. Driving mechanism. No. 1,189,336; July 4; Gaz. vol. 228; p. 45.
Arndt, Franklin E., assignor to The Gallon Iron Works & Manufacturing Company, Gallon, Ohio. Road-machine. No. 1,190,365; July 11; Gaz. vol. 228; p. 450.
Arnold, George A., Boston, assignor of two-thirds to S. A. Campbell, Waltham, Mass. Automobile-horn. No. 1,192,598; July 25; Gaz. vol. 228; p. 1333.
Arnold, Howard L. (See Miller, Joseph W., assignor.)
Arnold, William B., North Abington, and T. Martin, Dorchester, Mass.; said Martin assignor to said Arnold. Leather-beveling machine. No. 1,192,810; July 25; Gaz. vol. 228; p. 1405.
Arp, Sherman H. (See Holmes and Arp.)
Arrouquier, Frederick E., Worcester, Mass. Resilient tire. No. 1,189,903; July 4; Gaz. vol. 228; p. 244.
Arthur, Theodore, and L. M. Morris, Montgomery, W. Va. Vehicle-wheel boxing. No. 1,190,079; July 4; Gaz. vol. 228; p. 301.
Arzberger, Hans, Milwaukee, Wis. Skylight supporting and adjusting apparatus. No. 1,192,028; July 25; Gaz. vol. 228; p. 1133.
Asakawa, Natsugoro, and D. Okamoto, Seattle, Wash. Spinning-top. No. 1,191,121; July 11; Gaz. vol. 228; p. 717.
Ash, Charles K. (See Himmer, Vitalis, Jr., assignor.)
Ashbaugh, Zina R. (See Rogers, Homer D., assignor.)
Ashbaugh, Zina R., Kansas City, Mo. Convertible mold. No. 1,189,337; July 4; Gaz. vol. 228; p. 46.
Ashby, Arthur G., Carrollton, Wash. Choker-hook. No. 1,192,260; July 25; Gaz. vol. 228; p. 1216.
Ashley, Frank M., New York, N. Y. Fountain-pen. No. 1,192,029; July 25; Gaz. vol. 228; p. 1133.
Ashley, Frank M., New York, N. Y. Attachment for violins. No. 1,192,030; July 25; Gaz. vol. 228; p. 1134.
Ashley, Robin D., Oakland, Cal. Automatic circuit-controller. No. 1,190,366; July 11; Gaz. vol. 228; p. 450.
Asiatic Petroleum Company, The. (See Averay-Jones, Herbert, assignor.)
Askew, Charles B., Chicago, Ill. Internal-combustion engine. No. 1,189,338; July 4; Gaz. vol. 228; p. 46.
Astrom, Carl P., East Orange, N. J., assignor to M. H. Treadwell Company. Dumping-car. No. 1,191,268; July 18; Gaz. vol. 228; p. 813.
Atkins, Earl F. (See Atkins, Frank K. and E. F.)
Atkins, Frank K. and E. F., New York, N. Y. Centrifugal-pressure filter. No. 1,190,842; July 11; Gaz. vol. 228; p. 620.
Atkinson, Charles M., Chicago, Ill. Package-tie. No. 1,192,152; July 25; Gaz. vol. 228; p. 1175.
Auerbach, Max, Berlin, Germany. Automatic shuttle-changing mechanism for looms. No. 1,192,261; July 25; Gaz. vol. 228; p. 1217.
Aurora Automatic Machinery Company. (See Levedahl, Axel, assignor.)
Austin, Frederick C. (See Bunnell, Morton G., assignor.)
Austin, Herbert, Bromsgrove, England. Manufacture of explosive shells. No. 1,191,490; July 18; Gaz. vol. 228; p. 890.
Austin, Walter M. (See Mahoney and Austin.)
Auto-Ped Company of America. (See Gibson, Arthur H. C., assignor.)
Auto Pneumatic Action Company, The. (See Danquard, Thomas, assignor.)
Automatic Electric Company. (See Erickson, John, assignor.)
Automatic Electric Company. (See Hulit, John A., assignor.)
Automatic Electric Company. (See Keith, Alexander E., assignor.)
Automatic Electric Company. (See Martin, Talbot G., assignor.)
Automatic Electric Company. (See Obergfell, Herbert F., assignor.)
Automatic Enunciator Company. (See Comer, John J., assignor.)
Automatic Oven Company. (See Trescott, Charles B., assignor.)
Automatic Package Scale Company, The. (See Zanone, Richard J., assignor.)
Automatic Registering Machine Corporation. (See Lausterer, William J., assignor.)
Automatic Safety Device Company, The. (See Bayless, Frank, assignor.)
Automatic Stove Co., The. (See Phillips, Ross M. G., assignor.) (Reissue.)
Autosales Gum & Chocolate Company. (See Grover and Barber, assignors.)
Averay-Jones, Herbert, Fownhope, assignor of one-half to The Asiatic Petroleum Company, Limited, London, England. Filling-machine. No. 1,191,382; July 18; Gaz. vol. 228; p. 854.
Avram, Mois H., New York, N. Y., assignor to Standard Silica Brick Machinery Company, Wilmington, Del. Kiln. No. 1,189,904; July 4; Gaz. vol. 228; p. 245.
Ayars, Charles H., assignor to Ayars Machine Company, Salem, N. J. Feeding mechanism for can-filling machines. No. 1,190,234; July 4; Gaz. vol. 228; p. 357.
Ayars, Charles H., assignor to Ayars Machine Company, Salem, N. J. Can-feeding mechanism. No. 1,190,235; July 4; Gaz. vol. 228; p. 357.
Ayars, Charles H., assignor to Ayars Machine Company, Salem, N. J. Can-delivering machine. No. 1,190,236; July 4; Gaz. vol. 228; p. 358.
Ayars Machine Company. (See Ayars, Charles H., assignor.)
Ayer, James I., assignor to Simplex Electric Heating Company, Cambridge, Mass. Flexible electric heater. No. 1,192,153; July 25; Gaz. vol. 228; p. 1175.
Ayling, Henry S., assignor of one-half to A. J. Wilmot, Danville, Ill. Smoke-consumer. No. 1,190,843; July 11; Gaz. vol. 228; p. 621.
Aylsworth, Jonas W., East Orange, assignor to Condensite Company of America, Bloomfield, N. J. Expanded graphite. No. 1,191,383; July 18; Gaz. vol. 228; p. 855.
B. F. Avery & Sons. (See Ray, Charles T., assignor.)
B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)
B. F. Sturtevant Company. (See Bergstrom, Carl O., assignor.)
B. L. Schmidt Company. (See Schmidt, Bernhard L., assignor.)
Baal, Charles A., Sherrills Mount, Iowa. Sidehill-plow. No. 1,189,524; July 4; Gaz. vol. 228; p. 115.
Babcock, Garrison, assignor to Telechronometer Company, Rochester, N. Y. Telephone system. No. 1,189,526; July 4; Gaz. vol. 228; p. 116.
Bach, William, Atlantic City, assignor to The R. C. Maxwell Co., Trenton, N. J. Controlling means for electric signs. No. 1,189,419; July 4; Gaz. vol. 228; p. 77.
Bacha, Joseph. (See Almasy and Bacha.)
Bache, Leigh S., assignor to The Graphite Lubricating Company, Boundbrook, N. J. Journal-box. No. 1,189,905; July 4; Gaz. vol. 228; p. 245.
Bachmann, Albert W., Laporte, Ind. Water-heater. No. 1,190,975; July 11; Gaz. vol. 228; p. 669.
Back, Maude F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-car draft-rigging. No. 1,192,154; July 25; Gaz. vol. 228; p. 1176.
Bacon, Albert E., Germantown, Pa., assignor to Haines, Jones & Cadbury, Incorporated. Mixing-valve. No. 1,190,620; July 11; Gaz. vol. 228; p. 540.
Bacon, Albert E., Germantown, Pa., assignor to Haines, Jones & Cadbury Incorporated. Valve for plumbers' furnaces. No. 1,191,384; July 18; Gaz. vol. 228; p. 855.
Bacon, Charles A., Chicago, Ill. Folding umbrella. No. 1,190,844; July 11; Gaz. vol. 228; p. 621.
Bader, Gustav A., *et al.* (See Van Tassel, John R., assignor.)
Badische Anilin & Soda Fabrik. (See Holt, Henry S. A., assignor.)
Badische Anilin & Soda Fabrik. (See Labhardt, Hans, assignor.)
Badische Anilin & Soda Fabrik. (See Schmidt, Otto, assignor.)
Baekeland, Leo H., Yonkers, and A. H. Peter, New York, N. Y. Process for organic synthesis. No. 1,190,845; July 11; Gaz. vol. 228; p. 622.
Bagg, Samuel F., Troy, N. Y. Shipping-crate. No. 1,190,367; July 11; Gaz. vol. 228; p. 451.
Bailey, Ervin G., Newton Highlands, Mass., assignor to Bailey Meter Company. Integrator. No. 1,190,701; July 11; Gaz. vol. 228; p. 571.

Bailey, Ervin G., Newton Highlands, Mass., assignor to Bailey Meter Company. Pressure-gage. No. 1,192,599; July 25; Gaz. vol. 228; p. 1333.

Bailey, George D., and F. E. Rice, Detroit, Mich., assignors to Gearless Differential Co. Built-up releasable clutch mechanism. No. 1,189,774; July 4; Gaz. vol. 228; p. 199.

Bailey, George D., and F. E. Rice, Detroit, Mich., assignors to Gearless Differential Co. Clutch-differential. No. 1,189,775; July 4; Gaz. vol. 228; p. 200.

Bailey Meter Company. (See Bailey, Ervin G., assignor.)

Bailey, Percy T., Middletown, R. I. Fence-post. No. 1,190,080; July 4; Gaz. vol. 228; p. 302.

Bailey, Robert L., Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind. Change-making and computing machine. No. 1,192,727; July 25; Gaz. vol. 228; p. 1377.

Bailey, Theodore A., Live Oak, Fla. Track-laying machine. No. 1,189,526; July 4; Gaz. vol. 228; p. 116.

Bailey, William, Birmingham, England. Building element. No. 1,190,081; July 4; Gaz. vol. 228; p. 302.

Bain, Benjamin F., Pittsburgh, Pa. Mechanical toy. No. 1,192,031; July 25; Gaz. vol. 228; p. 1134.

Bainbridge, George K., San Francisco, Cal. Cutting and rolling machine for plastic materials. No. 1,192,156; July 25; Gaz. vol. 228; p. 1176.

Baird, James D., Red Oak, Iowa. Coupling apparatus for hay-racks and hay-loaders. No. 1,191,385; July 18; Gaz. vol. 228; p. 855.

Baird, John W., Chicago, Ill. Spark-plug. No. 1,190,846; July 11; Gaz. vol. 228; p. 622.

Bajohr, Albert, Brooklyn, N. Y. Defleshing-machine. No. 1,192,728; July 25; Gaz. vol. 228; p. 1377.

Baker, Arthur D., assignor to South Bend Chilled Plow Co., South Bend, Ind. Clamp for jointer-standards. No. 1,192,155; July 25; Gaz. vol. 228; p. 1176.

Baker, Charles J., Pueblo, Colo. Railway-ballast-spreading device. No. 1,191,756; July 18; Gaz. vol. 228; p. 984.

Baker, Eugene L., Taunton, Mass. Oven-thermometer. No. 1,190,082; July 4; Gaz. vol. 228; p. 302.

Baker, John E., Raleigh, N. C., assignor to Clinton Cam Company, Clinton, S. C. Loom-cam. No. 1,189,776; July 4; Gaz. vol. 228; p. 200.

Baker, Lewis R., Baltimore, Md. Boat. No. 1,189,227; July 4; Gaz. vol. 228; p. 6.

Baker, Thomas T., Westminster, London, England. Salt for use in baths. No. 1,189,653; July 4; Gaz. vol. 228; p. 158.

Baker, William H. (See Lewis and Baker.)

Bakke, Carl A., Bison, S. D. Safety-crank for automobiles. No. 1,189,339; July 4; Gaz. vol. 228; p. 46.

Bakken, Andrew H., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,189,228; July 4; Gaz. vol. 228; p. 6.

Baldauf, Arthur J., Chicago, Ill. Display device. No. 1,191,144; July 18; Gaz. vol. 228; p. 768.

Baldwin, Frederic E., New York, N. Y., assignor to Palmer Motion Picture Company. Kinetoscope. No. 1,191,145; July 18; Gaz. vol. 228; p. 769.

Baldwin, Henry S., Lynn, Mass., assignor to General Electric Company. Adjustable mounting for automobile starting-motors and generators. No. 1,191,553; July 18; Gaz. vol. 228; p. 912.

Baldwin Locomotive Works, The. (See Gaskill, Charles H., assignor.)

Ball, Herman F. (See Muhlfeld and Ball.)

Ballairs, John W., Mishawaka, Ind. Velocipede. No. 1,190,089; July 4; Gaz. vol. 228; p. 304.

Ballard, Wiley P., Birmingham, Ala. Curtain drier and stretcher. (Reissue.) No. 14,164; July 11; Gaz. vol. 228; p. 723.

Balser, Benjamin, Des Moines, Iowa. Arm-chair with adjustable sliding seat and back. No. 1,191,269; July 18; Gaz. vol. 228; p. 813.

Baltimore Oil Engine Company. (See Wygodsky, Leon, assignor.)

Bangs, Charles R., New York, N. Y. Igniting device for explosive-engines. No. 1,189,906; July 4; Gaz. vol. 228; p. 245.

Banks, Daniel B., Baltimore, Md. Drying. No. 1,190,702; July 11; Gaz. vol. 228; p. 571.

Banschbach, Henry W. (See McGrath and Banschbach.)

Barber-Colman Company. (See Colman, Howard D., assignor.)

Barber-Colman Company. (See Peterson, Burt A., assignor.)

Barber, Earl E. (See Grover and Barber.)

Barber, Franklin L., and C. S. Walton, assignors to Standard Car Truck Company, Chicago, Ill. Side bearing for cars. No. 1,192,032; July 25; Gaz. vol. 228; p. 1134.

Barber, Howard M., Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y. Cutting and folding machine. No. 1,192,262; July 25; Gaz. vol. 228; p. 1217.

Barber, John C., assignor to Standard Car Truck Company, Chicago, Ill. Car-truck. No. 1,190,703; July 11; Gaz. vol. 228; p. 572.

Bardwell, Chester L., assignor of one-half to C. H. Frazel, Los Angeles, Cal. Engine and car starter. No. 1,189,420; July 4; Gaz. vol. 228; p. 77.

Barker, Paul K., Greer, S. C. Machine for straightening spindles. No. 1,189,907; July 4; Gaz. vol. 228; p. 246.

Barnard, Dudley J., East Ham, England. Grab. No. 1,192,490; July 25; Gaz. vol. 228; p. 1295.

Barnes, Ned E. Willis, Tex. Railway-rail brace. No. 1,190,083; July 4; Gaz. vol. 228; p. 303.

Barnes, William C. (See Fisher and Barnes.)

Barnett, Otto R. (See Scott, John M., assignor.)

Barnhart, William B., Adelaide, Pa. Toy puzzle. No. 1,189,527; July 4; Gaz. vol. 228; p. 117.

Barnum, Dana D., Worcester, Mass., assignor to Ritter-Conley Manufacturing Company, Pittsburgh, Pa. Gas-generator. No. 1,192,729; July 25; Gaz. vol. 228; p. 1378.

Barr, Frederic, deceased, Woodhaven; The Equitable Trust Company of New York, executor, New York, N. Y. Shade-holding socket. No. 1,191,058; July 11; Gaz. vol. 228; p. 690.

Barr, Robert H., Carrolls, Wash. Cooking utensil. No. 1,192,730; July 25; Gaz. vol. 228; p. 1378.

Barraja-Frauenfelder, Joseph, assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn. Submarine boat. No. 1,190,210; July 4; Gaz. vol. 228; p. 348.

Barraja-Frauenfelder, Joseph, assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn. Motive power for submarine boats. No. 1,190,211; July 4; Gaz. vol. 228; p. 348.

Barratt, William T., assignor of one-third to A. J. Cooper and two-thirds to E. C. Stoddard, Bennington, Vt. Feed mechanism for circular-knitting machines. No. 1,191,648; July 18; Gaz. vol. 228; p. 944.

Barratt, William T., assignor of one-third to A. J. Cooper and two-thirds to E. C. Stoddard, Bennington, Vt. Sinker-wheel mechanism. No. 1,191,937; July 25; Gaz. vol. 228; p. 1099.

Barrère, Robert B., Penn Grove, Cal. Adjustable line-support. No. 1,190,212; July 4; Gaz. vol. 228; p. 349.

Barrickman, Sylvester A. (See Goss and Barrickman.)

Barrow, Bernard, Barrows Store, Va. Pneumatic tire. No. 1,189,654; July 4; Gaz. vol. 228; p. 158.

Barrus, George H., Brookline, Mass. Drainage system. No. 1,192,369; July 25; Gaz. vol. 228; p. 1253.

Barry-Wehmiller Machinery Company. (See Dawson, Joseph W., assignor.)

Barstow, George E., assignor to Thomson Electric Welding Company, Lynn, Mass. Break-switch. No. 1,190,621; July 11; Gaz. vol. 228; p. 549.

Barthels, Arthur, San Francisco, Cal. Conduit-box rosette for electric wiring. No. 1,191,649; July 18; Gaz. vol. 228; p. 944.

Bartholomay, Edward, and G. A. Loeb, Jr., Rochester, N. Y. Header for gas-meters. No. 1,191,270; July 18; Gaz. vol. 228; p. 813.

Bartholomew, William, assignor to Troy Laundry Machinery Company, Ltd., Chicago, Ill. Drying apparatus. No. 1,189,777; July 4; Gaz. vol. 228; p. 201.

Bartlett, Oscar L., Mound City, Ill. Hamper. No. 1,190,847; July 11; Gaz. vol. 228; p. 623.

Bartlett, William. (See Kurth, William C. J., assignor.)

Bartley, Charles W., Erie, Ill. Wire-stretcher. No. 1,190,976; July 11; Gaz. vol. 228; p. 669.

Barton, Louis E., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Titaniferous products and producing the same. No. 1,189,229; July 4; Gaz. vol. 228; p. 6.

Barton, Rensselaer W., Philadelphia, Pa. Variable-speed driving mechanism. No. 1,190,704; July 11; Gaz. vol. 228; p. 572.

Bartow, Orville D., Philadelphia, Pa. Portable concrete-mold. No. 1,190,977; July 11; Gaz. vol. 228; p. 669.

Barwell, Harry T. (See Nail and Barwell.)

Bashor, William H., Steamboat Springs, Colo. Turbine. No. 1,190,622; July 11; Gaz. vol. 228; p. 541.

Bassett, George B., Buffalo, N. Y. Water-meter. No. 1,190,705; July 11; Gaz. vol. 228; p. 572.

Batchelder, Asa F., Schenectady, N. Y., assignor to General Electric Company. Locomotive or car. No. 1,189,840; July 4; Gaz. vol. 228; p. 47.

Batchelder, Asa F., Schenectady, N. Y., assignor to General Electric Company. Electric locomotive. No. 1,189,841; July 4; Gaz. vol. 228; p. 47.

Batchelder, Asa F., Schenectady, N. Y., assignor to General Electric Company. Resilient wheel. No. 1,192,731; July 25; Gaz. vol. 228; p. 1378.

Batdorf, Charles S., Brooklyn, N. Y. Machine for banding bills and the like. No. 1,190,848; July 11; Gaz. vol. 228; p. 623.

Bate, Ira D., West Jefferson, Ohio. Axle. No. 1,190,706; July 11; Gaz. vol. 228; p. 573.

Bates, Arthur. (See Gouldbourn, Bates, and Jerram.)

Bates, Arthur. (See Hall and Bates.)

Bates, Edmund C., Alliance, Ohio. Lifting-jack. No. 1,189,778; July 4; Gaz. vol. 228; p. 201.

Bates, Theodocia, Sasakwa, Okla. Baby rompers or creepers. No. 1,190,084; July 4; Gaz. vol. 228; p. 303.

Battle, Albert E., Aldgate, London, England. Apparatus for use in and in connection with electrolytic processes. No. 1,191,386; July 18; Gaz. vol. 228; p. 856.

Bauer, Hans F., Cedar Rapids, Iowa. Viscosity-testing apparatus. No. 1,190,085; July 4; Gaz. vol. 228; p. 303.

Baughn, Charles O., Lyons, Ind. Nut-lock. No. 1,189,908; July 4; Gaz. vol. 228; p. 246.

Baumgaertner, Friedrich W., assignor to W. T. White, trustee, Cleveland, Ohio. Vacuum feed device for internal-combustion engines. No. 1,192,370; July 25; Gaz. vol. 228; p. 1254.

Baumgart, Otto C., Atascadero, Cal. Vacuum chalk-eraser cleaner. No. 1,191,387; July 18; Gaz. vol. 228; p. 856.

Baumgarten, Adolf, assignor of one-third to H. L. Kitselman and one-third to W. H. Schaufelberger, Muncie, Ind. Adjustable reflector. No. 1,191,650; July 18; Gaz. vol. 228; p. 945.

Baur, Hugo J., assignor to J. M. Johnson, Chicago, Ill. Total-registering means for coin-receiving prepayment devices. No. 1,190,868; July 11; Gaz. vol. 228; p. 451.

Bauroth, Leonhard, Toledo, Ohio, assignor to C. H. Wacher, Chicago, Ill. Gasket. No. 1,191,651; July 18; Gaz. vol. 228; p. 945.

Bausch Machine Tool Company. (See Weaver, Robert B., assignor.)

Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Pulsator for pulsatory tools. No. 1,191,757; July 18; Gaz. vol. 228; p. 985.

Bayless, Frank, Springfield, Ohio, assignor to The Automatic Safety Device Company. Automatic switch-operating device. No. 1,192,263; July 25; Gaz. vol. 228; p. 1218.

Bayne, George G., and A. W. Knutson, Quincy, Ill.; said Knutson assignor to said Bayne. Means for locking demountable tire-rims. No. 1,189,421; July 4; Gaz. vol. 228; p. 78.

Bazzoni, Lewis J., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Assorting and delivering mechanism. No. 1,191,938; July 25; Gaz. vol. 228; p. 1100.

Bazzoni, Lewis J., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Punching-machine. No. 1,191,939; July 25; Gaz. vol. 228; p. 1100.

Beach, George W. (See Von Culin and Beach.)

Beachum, Alberta E., Polkton, assignor of one-half to R. L. Steele, Rockingham, N. C. Telephone-circuit. No. 1,190,086; July 4; Gaz. vol. 228; p. 304.

Beakes, Howard S., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Circuit-breaker. No. 1,191,146; July 18; Gaz. vol. 228; p. 769.

Beardon, Thomas M., assignor of one-half to F. Gibbs, Godley, Tex. Sliding-door mechanism. No. 1,192,033; July 25; Gaz. vol. 228; p. 1135.

Beattie, Walter J., Cohoes, N. Y. Fold-collar. No. 1,191,491; July 18; Gaz. vol. 228; p. 891.

Beaver Company, The. (See Thickens, John H., assignor.)

Beaverstock, Elisha F., Holyoke, Mass. Weft binding and severing device for looms. No. 1,191,652; July 18; Gaz. vol. 228; p. 945.

Beaverstock, Elisha F., Holyoke, Mass. Weft binding and severing device for looms. No. 1,191,653; July 18; Gaz. vol. 228; p. 945.

Becker, Edmund, Washington, D. C. Concrete-form. No. 1,191,492; July 18; Gaz. vol. 228; p. 891.

Becker, John, Hyde Park, Mass. Gearing. No. 1,192,491; July 25; Gaz. vol. 228; p. 1295.

Becker, Joseph, Washington, D. C. Match-safe. No. 1,190,213; July 4; Gaz. vol. 228; p. 349.

Becker, Joseph, Washington, D. C. Automatic-focusing camera. No. 1,190,214; July 4; Gaz. vol. 228; p. 350.

Becker, Joseph, Washington, D. C. Linkage. No. 1,190,215; July 4; Gaz. vol. 228; p. 350.

Becker, Joseph, Washington, D. C. Focusing-camera. No. 1,190,623; July 11; Gaz. vol. 228; p. 541.

Becker, Walter A., North Chattanooga, assignor of one-half to S. R. Dow, Chattanooga, Tenn. Combination feed-hopper and poultry-food carton. No. 1,189,779; July 4; Gaz. vol. 228; p. 201.

Beckett, George H., Mission City, British Columbia, Canada. Means for raising water. No. 1,192,371; July 25; Gaz. vol. 228; p. 1255.

Beckman, Herman C., and G. E. Dyck, assignors to National Synthetic Products Co., Chicago, Ill. Making artificial cream. No. 1,190,369; July 11; Gaz. vol. 228; p. 451.

Beckman, Herman C., and G. E. Dyck, assignors to National Synthetic Products Co., Chicago, Ill. Making a liquid food. No. 1,191,388; July 18; Gaz. vol. 228; p. 856.

Beebe, Norman H., Anthony, Kans., and H. E. Smith, assignors to Modern Broom Machinery Company, Davenport, Iowa. Broom-clamp. No. 1,191,758; July 18; Gaz. vol. 228; p. 985.

Beechlyn, John T., Lynn, Mass., assignor to General Electric Company. Switch. No. 1,192,732; July 25; Gaz. vol. 228; p. 1379.

Beers, Burton B. (See Labadie, Beers, and Stark.)

Behr, Henry, New York, N. Y. Collapsible or folding stand for bassinets. No. 1,189,230; July 4; Gaz. vol. 228; p. 7.

Bell, John P., King county, Wash. Gate. No. 1,191,389; July 18; Gaz. vol. 228; p. 856.

Beindorf, William C., Litchfield, Ill. Combined tap and reamer. No. 1,190,707; July 11; Gaz. vol. 228; p. 573.

Beindorff and Company. (See Beindorff, Cornelius J., assignor.)

Beindorff, Cornelius J., assignor to Beindorff and Company, The Hague, Netherlands. Heat-insulating compounds and producing same. No. 1,189,780; July 4; Gaz. vol. 228; p. 202.

Beistle, Martin L., Shippensburg, Pa. Imitation snow. No. 1,192,372; July 25; Gaz. vol. 228; p. 1255.

Beldam, George W., Ealing, England. Engine or machine packing and making the same. No. 1,190,087; July 4; Gaz. vol. 228; p. 304.

Belden, Simeon, Jr., Birmingham, Ala. Corner-fastening for display-racks. No. 1,190,088; July 4; Gaz. vol. 228; p. 304.

Bell, Francis G. (See Brinkmann and Bell.)

Bell, Joseph D., San Francisco, Cal. Wall or closet bed. No. 1,189,342; July 4; Gaz. vol. 228; p. 48.

Bemis, Thomas, Sr., Indianapolis, Ind. Unicycle. No. 1,189,909; July 4; Gaz. vol. 228; p. 246.

Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)

Benjamin, George R. (See Yorke and Benjamin.)

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Reflector-shade. No. 1,189,231; July 4; Gaz. vol. 228; p. 7.

Benjamin, Reuben B., assignor to Benjamin-Sellar Manufacturing Company, Chicago, Ill. Fishing-reel. No. 1,189,232; July 4; Gaz. vol. 228; p. 7.

Benjamin-Sellar Manufacturing Company. (See Benjamin, Reuben B., assignor.)

Bennett, Charles A., Galt, Cal. Electric flash-lamp. No. 1,190,090; July 4; Gaz. vol. 228; p. 305.

Bennett, Charles B., Philadelphia, Pa. Automobile-door-holding device. No. 1,192,733; July 25; Gaz. vol. 228; p. 1379.

Bennett, Edwin B., Peermont, N. J. Non-refillable bottle. No. 1,190,708; July 11; Gaz. vol. 228; p. 573.

Bennett, Erastus S. (See Bennett, Robert B., assignor.)

Bennett, Hunter M. (See McGilvray, Harry J., assignor.)

Bennett, John, Hempstead, N. Y. Foldable step and wall ladder. No. 1,192,734; July 25; Gaz. vol. 228; p. 1380.

Bennett, J. J. (See Morrow, James M., assignor.)

Bennett, Leroy M., Moosup, Conn. Roller-setting device. No. 1,189,528; July 4; Gaz. vol. 228; p. 117.

Bennett, Paul H., Paris, Tex. Check-book. No. 1,190,503; July 11; Gaz. vol. 228; p. 498.

Bennett, Robert B., assignor to E. S. Bennett, New York, N. Y. Thrust-bearing. No. 1,192,373; July 25; Gaz. vol. 228; p. 1255.

Bennis, Karl V., Los Alamitos, Cal. Vehicle-bumper. No. 1,189,343; July 4; Gaz. vol. 228; p. 48.

Benson, Arthur J., Malden, Mass. Non-refillable bottle. No. 1,192,374; July 25; Gaz. vol. 228; p. 1256.

Benson, Lars P., Minneapolis, Minn. Ironing-board attachment. No. 1,189,529; July 4; Gaz. vol. 228; p. 117.

Benzinger, Albert. (See Hart and Benzinger.)

Berend, Ludwig, Amöneburg-on-the-Rhine, Germany. Making condensation products from phenols and formaldehyde. No. 1,191,390; July 18; Gaz. vol. 228; p. 857.

Berger, Arthur. (See Remy and Berger.)

Berger, William F., Harlan, Iowa. Load-dumper. No. 1,191,391; July 18; Gaz. vol. 228; p. 857.

Bergsten, John, Taft, Cal. Casing-head packer. No. 1,192,157; July 25; Gaz. vol. 228; p. 1176.

Bergstrom, Carl O., assignor to B. F. Sturtevant Company, Boston, Mass. Balancing-ring. No. 1,191,393; July 18; Gaz. vol. 228; p. 858.

Berlin, Harry, New York, N. Y. Trimming. No. 1,190,091; July 4; Gaz. vol. 228; p. 305.

Berliner, Emile, Washington, D. C. Propeller for flying-machines. No. 1,190,092; July 4; Gaz. vol. 228; p. 305.

Bernard, Paul D., New York, N. Y. Leather or sweat-band for straw hats. No. 1,192,375; July 25; Gaz. vol. 228; p. 1256.

Bernstein, Alex, Chicago, Ill. Shirt. No. 1,190,504; July 11; Gaz. vol. 228; p. 498.

Berres, John J., Boyd, Wis. Stone-gatherer. No. 1,191,554; July 18; Gaz. vol. 228; p. 912.

Berretta, Joseph, Buntyn, Tenn. Sanitary meat-case. No. 1,190,260; July 11; Gaz. vol. 228; p. 418.

Berrian, George W., Lake Charles, La. Fluid-fuel burner. No. 1,192,735; July 25; Gaz. vol. 228; p. 1380.

Berridge, Nathaniel G., Boise, Idaho. Automobile-washer. No. 1,192,736; July 25; Gaz. vol. 228; p. 1380.

Berriman, Edward C., Chicago, Ill. Treating turf. No. 1,190,849; July 11; Gaz. vol. 228; p. 624.

Berry, Herbert H., London, and W. J. Markham, Birmingham, England. Electric switch. No. 1,189,530; July 4; Gaz. vol. 228; p. 117.

Berry, James F., Jr., assignor to Honolulu Iron Works Company, Honolulu, Hawaii. Intermediate conveyer. No. 1,191,059; July 11; Gaz. vol. 228; p. 696.

Berthelote, Joseph T., Havre, Mont. Cooperating countergate. No. 1,192,600; July 25; Gaz. vol. 228; p. 1334.

Bertodo, John, New York, N. Y., assignor to American Safety Device Company. Scaffold-machine. No. 1,190,709; July 11; Gaz. vol. 228; p. 574.

Best, Oliver F. (See Crawford, William H., assignor.)

Best, William N., New York, assignor of one-fourth to C. Wupper, Brooklyn, N. Y. Safety-signal for vehicles. No. 1,192,264; July 25; Gaz. vol. 228; p. 1218.

Bethel, Robert R., Concordia, Kans. Pedal-controlled throw-off lever for printing-presses. No. 1,190,710; July 11; Gaz. vol. 228; p. 574.

Bethlehem Steel Company. (See Struble and Lukens, assignors.)
Betts, Richard S., and P. H. Hamilton, Memphis, Tenn. Railway-switch. No. 1,192,737; July 25; Gaz. vol. 228; p. 1380.
Betzer, Elisha R., Medina, Ohio. Coring instrument. No. 1,190,711; July 11; Gaz. vol. 228; p. 575.
Bevin Brothers Manufacturing Company, The. (See Purple, Mayo S., assignor.)
Beyland, Sidney A., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio. Signaling device. No. 1,189,781; July 4; Gaz. vol. 228; p. 202.
Bhisey, Shanker A., London, England. Mold of type-casting machines. No. 1,191,867; July 18; Gaz. vol. 228; p. 1022.
Bianchi, Joseph M., Chicago, Ill. Oil-burner. No. 1,190,850; July 11; Gaz. vol. 228; p. 624.
Bickford, Hezekiah, and C. L. Olmstead, Great Falls, Mont. Power attachment for automobiles. No. 1,191,654; July 18; Gaz. vol. 228; p. 946.
Biel, William. (See Dirian and Biel.)
Bierwirth, George F. C., Kansas City, Mo. Easel display-box. No. 1,189,531; July 4; Gaz. vol. 228; p. 118.
Bihn, George F., and A. Jones, Philadelphia, Pa. Apparatus for elevating liquids. No. 1,191,493; July 18; Gaz. vol. 228; p. 891.
Billeb, George E., Benwood, assignor to Wheeling Stamping Company, Wheeling, W. Va. Safety device for presses. No. 1,192,738; July 25; Gaz. vol. 228; p. 1381.
Billings, Frank. (See Greenleaf, Robert P., assignor.)
Billings, John W., Union, Iowa. Descriptive film attachment and synchronizing mechanism. No. 1,190,370; July 11; Gaz. vol. 228; p. 452.
Bingham, Floyd F., San Jose, Cal. Drive mechanism. No. 1,192,376; July 25; Gaz. vol. 228; p. 1256.
Binks, Cornelius A., Matawan, N. J. Apparatus for lowering and hoisting life-boats. No. 1,192,158; July 25; Gaz. vol. 228; p. 1177.
Bird, Dave R., Pineland, Tex. Safety-trap. No. 1,192,265; July 25; Gaz. vol. 228; p. 1218.
Birot, Jean P. J., Bayonne, France. Safety device for locks. No. 1,190,851; July 11; Gaz. vol. 228; p. 624.
Bischoff, Florence H., New York, N. Y. Paring apparatus. No. 1,189,782; July 4; Gaz. vol. 228; p. 202.
Bishop, George E., Cleveland, Ohio. Fastener. No. 1,190,852; July 11; Gaz. vol. 228; p. 625.
Bishop, William P., Edna, assignor of one-half to Blackaller Brothers, Pearsall, Tex. Prod-pole. No. 1,189,532; July 4; Gaz. vol. 228; p. 118.
Bittencourtt, Manuel G., New Orleans, La. Nut-lock. No. 1,190,624; July 11; Gaz. vol. 228; p. 542.
Bittner, John E., Wheeling, W. Va. Square. No. 1,189,655; July 4; Gaz. vol. 228; p. 159.
Bixler, Frank. (See Stanchfield and Bixler.)
Bixler, Henry. (See Stanchfield and Bixler.)
Bjering, Hans C., Gjövik, assignor to K. Halmrast, Söndre Land, Norway. Means for removing grass from mower-knives. No. 1,191,147; July 18; Gaz. vol. 228; p. 770.
Black, John R., Toulon, Ill. Agricultural implement. No. 1,189,783; July 4; Gaz. vol. 228; p. 203.
Blackaller Brothers. (See Bishop, William P., assignor.)
Blackmore, William, assignor to The National Malleable Castings Company, Cleveland, Ohio. Friction draft-rigging. No. 1,192,266; July 25; Gaz. vol. 228; p. 1218.
Blagrave, Bertha F., Seattle, Wash. Needle-sharpening attachment for sewing-machines. No. 1,191,555; July 18; Gaz. vol. 228; p. 913.
Blaine, Joseph R. (See Stevens and Blaine.)
Blair, Robert R., Alamogordo, N. Mex. Concrete railway cross-tie. No. 1,192,739; July 25; Gaz. vol. 228; p. 1381.
Blake, Philip W., Cumberland, Md. Tooth-brush. No. 1,191,556; July 18; Gaz. vol. 228; p. 913.
Blakely, Edward B., Muskegon, Mich., assignor to Sears, Roebuck and Company, Chicago, Ill. Boat-motor. No. 1,192,377; July 25; Gaz. vol. 228; p. 1257.
Blanchard, Harry G., New York, N. Y., and F. Duesler, Cleveland, Ohio, assignors to The Mechanical Rubber Company. Making vulcanized-rubber articles. No. 1,190,261; July 11; Gaz. vol. 228; p. 414.
Blauvelt, Warren S., Grosse Ile, and W. T. Harms, Detroit, Mich., assignors, by mesne assignments, to Semet-Solvay Company, Solvay, N. Y. Separating slate from coke. No. 1,192,159; July 25; Gaz. vol. 228; p. 1178.
Blazucki, Thaddeus S. (See Gutowski and Blazucki.)
Bleyer & Co., Alfred. (See Chalkin, Piny F., assignor.)
Blichfeldt, Sören H., Southall, England, assignor to Flakes A./S., Copenhagen, Denmark. Production of emulsions. No. 1,192,492; July 25; Gaz. vol. 228; p. 1296.
Bliss, Howard R. (See Bliss, Louis D., assignor.)
Bliss, Louis D., North Takoma, Md., assignor of one-half to H. R. Bliss, New York, N. Y. Temperature-measuring device for surgical instruments. No. 1,190,978; July 11; Gaz. vol. 228; p. 669.
Bliss, William L., assignor, by mesne assignments, to The U. S. Light & Heat Corporation, Niagara Falls, N. Y. Terminal box. No. 1,191,060; July 11; Gaz. vol. 228; p. 697.
Block, Alexander E., St. Louis, Mo. Combined heel and arch support. No. 1,191,635; July 18; Gaz. vol. 228; p. 946.
Block, Max E., *et al.* (See Earl, William M., assignor.)
Blodgett, Frederick C., *et al.* (See Wood, Jasper W., assignor.)
Blomberg, Johannes, Täby, Sweden. Core for use in the construction of hollow concrete walls. No. 1,192,493; July 25; Gaz. vol. 228; p. 1296.
Blood, William H., Jr., Wellesley, Mass. Ground terminal connection for electric conductors. No. 1,191,940; July 25; Gaz. vol. 228; p. 1101.
Bloxham, Edwin B., and W. Owen, London, England, assignors to themselves and William Green & Company (Ecclesfield) Limited. Military or camp kitchen. No. 1,190,216; July 4; Gaz. vol. 228; p. 351.
Boardman, Harold E., Medford, Mass. Prepared roofing. No. 1,190,505; July 11; Gaz. vol. 228; p. 498.
Bodenhorn, Albert K., Punxsutawney, Pa. Trap-nest. No. 1,190,093; July 4; Gaz. vol. 228; p. 305.
Bodmer, Christian, assignor to The Stanley Rule & Level Company, New Britain, Conn. Sighting attachment for levels. No. 1,189,422; July 4; Gaz. vol. 228; p. 78.
Boggs, Samuel L., Pittsburgh, Pa. Reducing flue-dust and other metal fines. No. 1,190,712; July 11; Gaz. vol. 228; p. 575.
Bohle, Fritz. (See Patterson, William, assignor.)
Bohle, William, Correctionville, Iowa. Nut-lock. No. 1,189,656; July 4; Gaz. vol. 228; p. 159.
Bohlman, George J., Medford, Mass. Paper receptacle. No. 1,192,824; July 25; Gaz. vol. 228; p. 1410.
Boice, William T., Foley, Minn. Corn-husking device. No. 1,192,160; July 25; Gaz. vol. 228; p. 1178.
Bolleau, James W., Chicago, Ill. Crusher. No. 1,191,494; July 18; Gaz. vol. 228; p. 892.
Bolsmenue, David E., and N. J. Wagner, assignors to International Roofing Manufacturing Company, Chicago, Ill. Asphalt-roofing-making machine. No. 1,192,601; July 25; Gaz. vol. 228; p. 1334.
Bokop, Henry D., Defiance, Ohio. Receptacle. No. 1,190,713; July 11; Gaz. vol. 228; p. 575.
Bolger, Robert S. (See Markert and Bolger.)
Boltz, Robert J. (See Marx and Boltz.)
Bolus, Glenn H., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-wire hanger. No. 1,189,784; July 4; Gaz. vol. 228; p. 203.
Bond Bottle Sealing Company. (See Bond, Samuel C., assignor.) (Reissue.)
Bond, Charles H., Philadelphia, Pa. Spark-plug. No. 1,192,602; July 25; Gaz. vol. 228; p. 1334.
Bond, Samuel C., Hollyoak, assignor to Bond Bottle Sealing Company, Wilmington, Del. Machine for assembling bottle-closures. (Reissue.) No. 14,170; July 25; Gaz. vol. 228; p. 1415.
Bond, Ulysses G., assignor of one-half to J. M. O'Brian, Muscatine, Iowa. Armed vise. No. 1,192,267; July 25; Gaz. vol. 228; p. 1219.
Bondurant, Larry G., Hannibal, Mo. Sanitary caloric-bath apparatus. No. 1,192,740; July 25; Gaz. vol. 228; p. 1381.
Books, John D. (See Roussey, Paul, assignor.)
Borchard, Robert W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Brush-holder. No. 1,192,268; July 25; Gaz. vol. 228; p. 1219.
Bordner, Charles S., Circleville, Kans. Shock-absorber. No. 1,191,656; July 18; Gaz. vol. 228; p. 947.
Borland, Deloss, Charleston, Miss. Knob-spindle fastener. No. 1,192,269; July 25; Gaz. vol. 228; p. 1219.
Born, Joseph E., Weyauwega, Wis. Strainer. No. 1,190,094; July 4; Gaz. vol. 228; p. 306.
Borresen, Helge A., Marquette, Mich. Horological instrument. No. 1,190,853; July 11; Gaz. vol. 228; p. 625.
Borresen, Helge A., Marquette, Mich., assignor to M. W. Zabel, trustee, Chicago, Ill. Horological instrument. No. 1,192,811; July 25; Gaz. vol. 228; p. 1406.
Borsari & Co. (See Janssen and Borsari, assignors.)
Borsari, Heinrich. (See Janssen and Borsari.)
Bosch Magneto Company. (See Wild, Julius E., assignor.)
Boss Tool Mfg. Co. (See Helms, Arthur J., assignor.)
Bottome, Turner D., Indianapolis, Ind. Method of and apparatus for carbureting. No. 1,190,714; July 11; Gaz. vol. 228; p. 575.
Bottome, Turner D., Indianapolis, Ind. Carbureter. No. 1,190,715; July 11; Gaz. vol. 228; p. 576.
Boubnoff, Boris, Petrograd, Russia. Production of pictures in natural colors by photomechanical means. No. 1,190,095; July 4; Gaz. vol. 228; p. 306.
Bouchery, August, New York, assignor, by mesne assignments, to Waterbury-Wallace Company, Inc., New York, N. Y. Portable electric-lamp stand. No. 1,189,533; July 4; Gaz. vol. 228; p. 118.
Boulton, Frederick W., Bootle, near Liverpool, England. Life-boat. No. 1,190,371; July 11; Gaz. vol. 228; p. 452.
Bow, James A., P. Thill, Great Falls, Mont., and A. E. Wheeler, London, England. Furnace construction. No. 1,191,271; July 18; Gaz. vol. 228; p. 813.
Bow, James A., P. Thill, Great Falls, Mont., and A. E. Wheeler, London, England. Grate mechanism. No. 1,191,272; July 18; Gaz. vol. 228; p. 814.
Bowditch, Archibald H. (See Kelsey, Frank N., assignor.)
Bowers, Harry L., Bay City, Mich. Motor-boat. No. 1,192,378; July 25; Gaz. vol. 228; p. 1257.
Bowers, Oliver O., Cape Girardeau, Mo. Motor-plow. No. 1,192,603; July 25; Gaz. vol. 228; p. 1335.

Bowman, Mark D. (See Montgomery and Bowman.)
Bowman, Oscar. (See Hampton, Harry D., assignor.)
Bowman, Samuel B., Blackwell, Okla., assignor to The Hazel Atlas Glass Co., Wheeling, W. Va. Means for distributing molten glass. No. 1,191,868; July 18; Gaz. vol. 228; p. 1022.
Bowman, Samuel F., Kansas City, Mo. Filter. No. 1,190,979; July 11; Gaz. vol. 228; p. 670.
Bowmann, Louis T., Chicago, Ill. Flexible metallic diaphragm. No. 1,190,716; July 11; Gaz. vol. 228; p. 576.
Bowser, Allen A., Fort Wayne, Ind. Coal-chute door. No. 1,192,161; July 25; Gaz. vol. 228; p. 1178.
Boyd, John M., Fond du Lac, Wis. Sling-pulley. No. 1,190,347; July 11; Gaz. vol. 228; p. 443.
Boyd, Walter A., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telegraph-key. No. 1,190,025; July 11; Gaz. vol. 228; p. 542.
Boyd, Walter A., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telegraph-key. No. 1,192,270; July 25; Gaz. vol. 228; p. 1220.
Boyers, Lettitia C., Cynthiana, Ky. Hair-curler. No. 1,190,980; July 11; Gaz. vol. 228; p. 670.
Braaten, Ole H., Halliday, N. D. Grain-spout door. No. 1,191,148; July 18; Gaz. vol. 228; p. 770.
Brackett, Frank A., assignor of one-half to F. L. Emerson, Binghamton, N. Y. Cementing-machine. No. 1,192,379; July 25; Gaz. vol. 228; p. 1258.
Brackett, Frank A., assignor of one-half to F. L. Emerson, Binghamton, N. Y. Cementing-machine. No. 1,192,380; July 25; Gaz. vol. 228; p. 1258.
Brackett, Quincy A., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rectifier. No. 1,192,741; July 25; Gaz. vol. 228; p. 1381.
Braddock, Edward I., Winchester, Mass., assignor to Lamb & Nash Company, Kittery, Me. Metal hoop. No. 1,190,506; July 11; Gaz. vol. 228; p. 498.
Bradley, Frank B., Chicago, Ill., assignor to Ajax Forge Company. Insulated switch-rod. No. 1,191,149; July 18; Gaz. vol. 228; p. 770.
Bradley, Katherine, Chicago, Ill. Educational appliance. No. 1,189,233; July 4; Gaz. vol. 228; p. 8.
Bradley, Lynde, Milwaukee, Wis. Automatic resistance-controller. No. 1,191,273; July 18; Gaz. vol. 228; p. 814.
Brady, Frederick, Middletown, Del. Drawer-rack. No. 1,191,657; July 18; Gaz. vol. 228; p. 947.
Braine, Bancroft G., assignor to The Rail Joint Company, New York, N. Y. Rail-joint. No. 1,191,557; July 18; Gaz. vol. 228; p. 913.
Bramer, August T., Monett, Mo. Silo. No. 1,190,507; July 11; Gaz. vol. 228; p. 498.
Brand, Lamont O. (See Gowder and Brand.)
Bray, Andrew, Jackson, Mich. Cutting-machine. No. 1,190,096; July 4; Gaz. vol. 228; p. 306.
Brayton, James T., deceased, Chicago, Ill.; L. Brayton, executrix. Protective mask for workmen. No. 1,191,274; July 18; Gaz. vol. 228; p. 815.
Brayton, Libbie, executrix. (See Brayton, James T.)
Breast, Archibald A., Columbus, Miss. Trace-carrier. No. 1,192,742; July 25; Gaz. vol. 228; p. 1382.
Brehl, Joseph C., Columbus, Ohio. Garment-pocket. No. 1,191,275; July 18; Gaz. vol. 228; p. 815.
Brennan, William R., Hawthorn, near Melbourne, Victoria, Australia. Latch. No. 1,192,271; July 25; Gaz. vol. 228; p. 1220.
Bresler, Fred E., Bay City, Mich. Coat-protector. No. 1,189,534; July 4; Gaz. vol. 228; p. 119.
Bresson, Frank C., Apple Creek, Ohio. Balance-wheel. No. 1,192,381; July 25; Gaz. vol. 228; p. 1259.
Brest, Alfred F., Williamsport, Pa. Car-body. No. 1,189,535; July 4; Gaz. vol. 228; p. 119.
Brews, Douglas, Cleveland, Ohio. Blow-out device for boiler-flues. No. 1,192,162; July 25; Gaz. vol. 228; p. 1179.
Brewster, Francis G., and H. L. Irons, Bridgeton, N. J. Wagon-tongue support and slip-tongue. No. 1,189,910; July 4; Gaz. vol. 228; p. 247.
Brewster, Fred R., Ogunquit, Me. Bag or package tie. No. 1,191,392; July 18; Gaz. vol. 228; p. 857.
Brewster, Percy D., East Orange, N. J. Color photography. No. 1,191,941; July 25; Gaz. vol. 228; p. 1101.
Bridges, Lyman A., Burlingame, Cal. Protected ticket-package. No. 1,190,626; July 11; Gaz. vol. 228; p. 543.
Bried, Julien A., Oakland, Cal. Clutch. No. 1,192,382; July 25; Gaz. vol. 228; p. 1259.
Briggs, Henry L., Salem, Oreg. Tool-driving attachment for automobiles. No. 1,190,854; July 11; Gaz. vol. 228; p. 625.
Brinkman, Carl. (See Singelmann and Brinkman.)
Brinkmann, Frederick, Hanover, Germany, and F. G. Bell, London, England. Attendant's signaling system. No. 1,189,657; July 4; Gaz. vol. 228; p. 159.
Brinton, William F., Washington, Iowa. Distance power excavating-machine. No. 1,191,942; July 25; Gaz. vol. 228; p. 1101.
Briot, Albert, Paris, France. Mechanism for preventing successive changes in automatic looms. No. 1,190,855; July 11; Gaz. vol. 228; p. 626.
Brisacher, Hugo, assignor of one-half to F. P. Dodge, New York, N. Y. Clamp or connector. No. 1,192,034; July 25; Gaz. vol. 228; p. 1135.
Brisacher, Hugo, assignor of one-half to F. P. Dodge, New York, N. Y. Electric switch. No. 1,192,035; July 25; Gaz. vol. 228; p. 1135.
Briscoe Manufacturing Co. (See Groehn and Alldis, assignors.)
Brooks, Benjamin T., H. Essex, and D. F. Smith, assignors to Gulf Refining Company, Pittsburgh, Pa. Process of and apparatus for chlorinating. No. 1,191,916; July 18; Gaz. vol. 228; p. 1041.
Brooks, John A., Toledo, Ohio. Lawn-sprinkling means. No. 1,192,743; July 25; Gaz. vol. 228; p. 1382.
Brooks, John T., assignor of one-half to J. B. F. Newton, Corpus Christi, Tex. Insect-destroyer. No. 1,190,097; July 4; Gaz. vol. 228; p. 307.
Brooks, William L., Sharon, Pa. Lock-nut. No. 1,190,098; July 4; Gaz. vol. 228; p. 307.
Brophy, James H. (See Kammers and Brophy.)
Brough, John S., assignor to F. Melugin, Reeds, Mo. Egg-case filler. No. 1,192,744; July 25; Gaz. vol. 228; p. 1383.
Brown, Alexander J. (See Harrison and Brown.)
Brown, Alexander T., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y. Valve mechanism for internal-combustion engines. No. 1,191,150; July 18; Gaz. vol. 228; p. 770.
Brown, Alva L., McKinley, Oreg. Milk-can closure. No. 1,192,745; July 25; Gaz. vol. 228; p. 1383.
Brown & Bailey Company. (See Woodruff, William W., assignor.)
Brown, Benjamin W., Roselle Park, N. J. Machine for chopping chicle-gum. No. 1,190,372; July 11; Gaz. vol. 228; p. 453.
Brown, Charles H., Oklahoma, Okla. Desk. No. 1,192,746; July 25; Gaz. vol. 228; p. 1383.
Brown, David L., New York, N. Y. Valve-spring retainer. No. 1,191,658; July 18; Gaz. vol. 228; p. 947.
Brown, Frank M., Bayonne, N. J. Base-ball game. No. 1,190,099; July 4; Gaz. vol. 228; p. 307.
Brown, Fred A., and A. F. Wagner, New York, N. Y. Automatic gear-shifting device. No. 1,190,100; July 4; Gaz. vol. 228; p. 308.
Brown, Harold W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric measuring instrument. No. 1,189,284; July 4; Gaz. vol. 228; p. 8.
Brown, Harry E., Salem, Oreg. Animal-trap. No. 1,190,508; July 11; Gaz. vol. 228; p. 499.
Brown, Howard C., and G. Williams, Akron, Ohio, assignors of one-third to E. McSweeney. Pneumatic-tire core. No. 1,192,272; July 25; Gaz. vol. 228; p. 1220.
Brown Instrument Company, The. (See Brown, Richard P., assignor.)
Brown, James, San Francisco, Cal. Foot-corrector. No. 1,191,122; July 11; Gaz. vol. 228; p. 717.
Brown, Jo. B. (See Clay, Francis W. H., assignor.)
Brown, John C. (See Knapp, John D. C., assignor.)
Brown, John R., assignor to The Ohio Brass Company, Mansfield, Ohio. Bond. No. 1,189,235; July 4; Gaz. vol. 228; p. 8.
Brown, John W., Lakewood, assignor to National Carbon Co., Cleveland, Ohio. Electric furnace. No. 1,190,856; July 11; Gaz. vol. 228; p. 626.
Brown, Joseph E., and J. N. Curlee, Argenta, Ark.; said Curlee assignor of one-half of the entire right to H. Rosberry, Memphis, Tenn. Baby-cart. No. 1,191,394; July 18; Gaz. vol. 228; p. 858.
Brown-Lipe Gear Company, The. (See Brown, Alexander T., assignor.)
Brown, Rhinehardt H. (See Gates, Benjiman L., assignor.)
Brown, Rhinehardt H., Chicago, Ill. Child's collapsible vehicle. No. 1,190,373; July 11; Gaz. vol. 228; p. 453.
Brown, Richard P., assignor to The Brown Instrument Company, Philadelphia, Pa. Method of and apparatus for determining transformation-points. No. 1,189,785; July 4; Gaz. vol. 228; p. 203.
Brown, Robert V., Pullman, Ill., assignor to The Sherwin-Williams Company, Cleveland, Ohio. Making paints. No. 1,192,163; July 25; Gaz. vol. 228; p. 1179.
Brown, Theophilus, Moline, assignor to Marseilles Company, East Moline, Ill. Manure-spreader. No. 1,189,658; July 4; Gaz. vol. 228; p. 160.
Brown, Thomas R., Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electric train-wire coupling. No. 1,190,509; July 11; Gaz. vol. 228; p. 499.
Brownfield, Christ A. (See Cashman and Brownfield.)
Brownson, Earl L., Rochester, N. Y. Camera. No. 1,190,717; July 11; Gaz. vol. 228; p. 577.
Brubaker, William A., and F. F. Brucker, Akron, Ohio. Bead-forming machine. No. 1,192,383; July 25; Gaz. vol. 228; p. 1200.
Bruce, James W., Summerfield, Ohio. Wheel. No. 1,190,101; July 4; Gaz. vol. 228; p. 308.
Bruce, William M., Jr., assignor to The United Telegraph & Cable Company, Springfield, Ohio. Duplex telegraph system. No. 1,189,236; July 4; Gaz. vol. 228; p. 9.
Brucker, Ferdinand F. (See Brubaker and Brucker.)
Brumwell, Robert J., Eugene, Oreg. Check holder and register. No. 1,189,659; July 4; Gaz. vol. 228; p. 160.
Brunn, Alfred, Berlin, Germany. Process and apparatus for making perforated bands. No. 1,192,747; July 25; Gaz. vol. 228; p. 1383.

Brunner, Franz, Stockerau, near Vienna, Austria-Hungary. Belt-shifter. No. 1,192,494; July 25; Gaz. vol. 228; p. 1296.

Brunsell, Charles J., and J. Johnson, Minneapolis, Minn. Scraper-sharpener. No. 1,190,718; July 11; Gaz. vol. 228; p. 577.

Brunswick-Balke-Collender Company, The. (See Hedenskoog, Ernest, assignor.)

Brush, Abbott P., Greenwich, Conn. Expansion-bolt. No. 1,191,151; July 18; Gaz. vol. 228; p. 771.

Brya, Stanislaw M., Minneapolis, Minn. Garment-presser. No. 1,192,384; July 25; Gaz. vol. 228; p. 1260.

Bryant, Clarence R., assignor to National Advertising Company, Memphis, Tenn. Packing-ring. No. 1,191,276; July 18; Gaz. vol. 228; p. 816.

Bryant Electric Company, The. (See Thomas, George B., assignor.)

Bryant, Robert W., and A. E. Moore, Pueblo, Colo. Apparatus for raising sunken vessels. No. 1,191,558; July 18; Gaz. vol. 228; p. 913.

Bryce, James W. (See Goss and Bryce.)

Bryce, James W., Brooklyn, assignor to International Time Recording Company of New York, Endicott, N. Y. Time-recorder. No. 1,190,217; July 4; Gaz. vol. 228; p. 351.

Buck, Paul, London, England. Apparatus for producing ice in molds. No. 1,191,559; July 18; Gaz. vol. 228; p. 914.

Buff, Louis F., Jamaica Plain, Mass. Solar attachment for transits. No. 1,190,719; July 11; Gaz. vol. 228; p. 577.

Buffalo Forge Company. (See Wendt, Henry W., assignor.)

Buffalo Metal Goods Company. (See Candee, Bertram C., assignor.)

Buhler, Henry W., and C. J. Emerson, assignors of seven-eighths to G. D. Haskell, Boston, Mass. Process of making coke. No. 1,191,943; July 25; Gaz. vol. 228; p. 1102.

Bullard, Albert M., New York, N. Y., assignor, by mesne assignments, to Western Electric Company. Automatic trunk-selector. No. 1,191,152; July 18; Gaz. vol. 228; p. 771.

Bullard, Ernest S., and V. H. Leiner, Wheeling, W. Va. Internal-combustion engine. No. 1,189,660; July 4; Gaz. vol. 228; p. 160.

Bulot, Charles. (See Kronquest and Bulot.)

Bundy, Frank E., New York, N. Y. Envelop-opener. No. 1,192,748; July 25; Gaz. vol. 228; p. 1384.

Bunker, James S., Chester, Pa. Shoe-rack. No. 1,192,164; July 25; Gaz. vol. 228; p. 1179.

Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Link belt. No. 1,191,395; July 18; Gaz. vol. 228; p. 858.

Buol, Johann C., *et al.* (See Steiger, Eugen, assignor.)

Buras, Norbert, and F. Adolph, Jr., Boothville, La. Fire-extinguisher. No. 1,191,560; July 18; Gaz. vol. 228; p. 914.

Burchill, Richard D., assignor of fifty one-hundredths to W. A. Varnedoe, Tampa, Fla. Aerial bicycle-track. No. 1,189,423; July 4; Gaz. vol. 228; p. 79.

Burgher, Herman W., Fort Kennedy, Pa. Heat-insulating cover. No. 1,190,857; July 11; Gaz. vol. 228; p. 626.

Burguieres, Denis P. J. (See Corne and Burguieres.)

Burke, Thomas, Richmond, Ind. Driller. No. 1,189,237; July 4; Gaz. vol. 228; p. 9.

Burkhartzmeyer, Jacob J., Faribault, Minn. Vending apparatus. No. 1,190,981; July 11; Gaz. vol. 228; p. 670.

Burks, William E., Pittsburgh, Pa. Accounting file or register. No. 1,189,661; July 4; Gaz. vol. 228; p. 161.

Burleson, John F. (See Copeman, Lloyd G., assignor.)

Burns, Howard E., St. Louis, Mo. Railway-crossing. No. 1,191,561; July 18; Gaz. vol. 228; p. 914.

Burns, James F., Philadelphia, Pa. Electric switch. No. 1,191,924; July 18; Gaz. vol. 228; p. 1044.

Burns, John E., Flushing, N. Y. Dental casting-machine. No. 1,191,659; July 18; Gaz. vol. 228; p. 948.

Burns, William J., assignor to The Peerless Vulcanite Company, Bridgeport, Conn. Forming articles from plastic material. No. 1,190,510; July 11; Gaz. vol. 228; p. 500.

Burpee, Frank W., and E. T. Hoskins, Bellingham, Wash.; said Hoskins assignor to said Burpee. Receptacle-forming machine. No. 1,192,273; July 25; Gaz. vol. 228; p. 1220.

Burrill, Frank H., Concord Junction, Mass., assignor to The Burrill Tire Tool Co. Tire-tool. No. 1,189,424; July 4; Gaz. vol. 228; p. 79.

Burrill Tire Tool Co., The. (See Burrill, Frank H., assignor.)

Burris, Albert G., Sloatsburg, N. Y. Clothes-line supporting and operating mechanism. No. 1,189,911; July 4; Gaz. vol. 228; p. 247.

Burry, Vincent J., Coraopolis, assignor of one-half to L. H. Turner, Pittsburgh, Pa. Vehicle-body bearing. No. 1,191,153; July 18; Gaz. vol. 228; p. 772.

Burt Machine Company. (See Leister, William H., assignor.)

Burtis, William H., Decorah, and M. S. Howard, Waukon, Iowa. Automatic fire-extinguisher. No. 1,189,536; July 4; Gaz. vol. 228; p. 119.

Burton, Charles H., Washington, D. C., assignor to United States Pneumatic Company, New York, N. Y. Conveyer. No. 1,192,604; July 25; Gaz. vol. 228; p. 1335.

Buscher, Edna E., New Harmony, Ind. Filter. No. 1,190,511; July 11; Gaz. vol. 228; p. 500.

Bush, C. Abbott. (See Gomes, Joseph P., assignor.)

Busse, William G., Brooklyn, N. Y. Bed attachment. No. 1,192,385; July 25; Gaz. vol. 228; p. 1260.

Bussey, Charles C., New York, N. Y., assignor to Coal By-Products Company. Extracting volatiles from coals, shales, lignites, and similar materials and refining the same. No. 1,191,869; July 18; Gaz. vol. 228; p. 1023.

Bussey, Charles C., New York, N. Y., assignor to Coal By-Products Company. Apparatus for extracting volatiles from coals, shales, lignites, and similar materials and refining the same. No. 1,191,870; July 18; Gaz. vol. 228; p. 1023.

Buster, Edward E., Portland, Oreg. Silo-door support. No. 1,190,720; July 11; Gaz. vol. 228; p. 578.

Butcher, Wilfred H., Burwell, Nebr. Vent for well-pumps. No. 1,190,102; July 4; Gaz. vol. 228; p. 309.

Butler, Frank, Oxnard, Cal. Lifting device. No. 1,191,660; July 18; Gaz. vol. 228; p. 948.

Butler, Frank D., Burlington, Iowa. Slide-valve. No. 1,189,537; July 4; Gaz. vol. 228; p. 120.

Butterworth, Frank W., and G. Holmes, assignors to Western Brick Company, Danville, Ill. Brickmaking-machine. No. 1,191,925; July 18; Gaz. vol. 228; p. 1044.

Buttolph, Edwin K. (See Hoffman, Frank, assignor.)

Byrne, John R., Schenectady, N. Y., assignor to General Electric Company. Switch. No. 1,190,103; July 4; Gaz. vol. 228; p. 309.

Byrnes, Clarence P., Sewickley, Pa. Thermostatic control device for explosive-engines. No. 1,189,786; July 4; Gaz. vol. 228; p. 204.

C. Mattison Machine Works. (See Mattison, Carl L., assignor.)

C. Mattison Machine Works. (See Overstedt, Ernest A., assignor.)

C. & C. Electric & Manufacturing Company. (See Callahan, William L., assignor.)

C. A. Libbey Company. (See Rasmussen, Robert F., assignor.)

C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)

C. S. M. Company. (See Smith, Arthur D., assignor.)

Cabbell, Leonard. (See Tarbet and Cabbell.)

Cabirange Manufacturing Company. (See Holloway, Louis R., assignor.)

Cabot, Sewall, Brookline, Mass. Electric conversion. No. 1,191,759; July 18; Gaz. vol. 228; p. 985.

Caddy, Sydney C., Willesden, England. Tent and picketing peg and the like. No. 1,189,787; July 4; Gaz. vol. 228; p. 204.

Cadman, Addi B., assignor to Warner Manufacturing Company, Beloit, Wis. Automobile-trailer. No. 1,190,237; July 4; Gaz. vol. 228; p. 358.

Cadman, Addi B., assignor to Warner Manufacturing Company, Beloit, Wis. End-gate lock. No. 1,190,238; July 4; Gaz. vol. 228; p. 359.

Cadwell, Irving W., Denver, Colo. Laundry-extractor. No. 1,191,661; July 18; Gaz. vol. 228; p. 948.

Cagle, Byron E. and M. L., Mountainair, N. Mex. Pumping-machine. No. 1,190,218; July 4; Gaz. vol. 228; p. 351.

Cagle, Matthew L. (See Cagle, Byron E. and M. L.)

Cahall, William H., Racine, Wis., assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind. Traction-engine. No. 1,189,425; July 4; Gaz. vol. 228; p. 79.

Calahan, Delona L., assignor of one-third to R. D. Moore and one-third to R. R. Roberts, Fairfax, Wash. Automatic electric-lamp lock. No. 1,192,749; July 25; Gaz. vol. 228; p. 1384.

Caldwell, Frederick W., Schenectady, N. Y., assignor to General Electric Company. Bearing. No. 1,192,750; July 25; Gaz. vol. 228; p. 1384.

Caldwell, Henry C., Buffalo, N. Y., assignor to J. W. Daniels, trustee, Philadelphia, Pa. Steam-generator. No. 1,189,426; July 4; Gaz. vol. 228; p. 80.

Caldwell, Henry C., Buffalo, N. Y., assignor to J. W. Daniels, trustee, Philadelphia, Pa. Generating steam. No. 1,189,427; July 4; Gaz. vol. 228; p. 80.

California Macvan Company. (See Vandercook, Albert E., assignor.)

Callahan, William L., Garwood, N. J., assignor to C. & C. Electric & Manufacturing Company. Welding-hood. No. 1,191,562; July 18; Gaz. vol. 228; p. 914.

Callaway, Eugene. (See Dean and Callaway.)

Calton, Charles H., Bringhurst, Ind. Transposable valve. No. 1,191,396; July 18; Gaz. vol. 228; p. 859.

Calvert, John, Mount Clemens, Mich. Safety-zone protector. No. 1,189,344; July 4; Gaz. vol. 228; p. 49.

Calvet, Rafael, Barcelona, Spain. Manufacture of primary explosives. No. 1,189,238; July 4; Gaz. vol. 228; p. 9.

Cameron, Donald M., Lowell, Mass. Acid-resisting strainer for smelters. No. 1,190,512; July 11; Gaz. vol. 228; p. 500.

Cameron, Fred C., assignor to Union Metal Products Company, Chicago, Ill. Bracket for car-doors. No. 1,191,503; July 18; Gaz. vol. 228; p. 915.

Cameron, William, assignor to Torris Wold & Company, Chicago, Ill. Sealing cans. No. 1,192,605; July 25; Gaz. vol. 228; p. 1335.

Campbell, Albert, Anaconda, Mont. Oil and acid feeder. No. 1,190,721; July 11; Gaz. vol. 228; p. 578.

Campbell, Charles E., Lynn, Mass. X-ray tube. No. 1,190,104; July 4; Gaz. vol. 228; p. 310.

Campbell, Harry E., New York, N. Y. Metal window frame and sashes. No. 1,189,912; July 4; Gaz. vol. 228; p. 247.

Campbell, Harry E., New York, N. Y. Spring suspension device for window-sashes. No. 1,191,662; July 18; Gaz. vol. 228; p. 948.

Campbell, Robert P., Jr., Waterloo, Iowa. Aeroplane. No. 1,192,751; July 25; Gaz. vol. 228; p. 1385.

Campbell, Solomon A. (See Arnold, George A., assignor.)

Campbell, Wilson L., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Telephone trunking and supervisory system. No. 1,191,917; July 18; Gaz. vol. 228; p. 1041.

Campus, Cesare, New York, N. Y. Match-stand. No. 1,189,913; July 4; Gaz. vol. 228; p. 248.

Canadian Explosives Limited. (See Page, Walter, assignor.)

Canda, Ferdinand E., New York, N. Y. Ball-rolling machine. No. 1,189,662; July 4; Gaz. vol. 228; p. 161.

Candee, Bertram C., assignor of one-half to Buffalo Metal Goods Company, Buffalo, N. Y. Oiling-tool. No. 1,191,663; July 18; Gaz. vol. 228; p. 949.

Canfield, John M., North Glenside, Pa. Apparatus for making beverages. No. 1,191,760; July 18; Gaz. vol. 228; p. 986.

Canfield, Lewis T., Chicago, Ill., assignor to Union Draft Gear Co. Draft-arm for railway-cars. No. 1,190,858; July 11; Gaz. vol. 228; p. 627.

Cannock, Francis B. (See Porter, Edwin S., assignor.)

Capdevila, Frank, New York, N. Y. Controlling device for aircraft and the like. No. 1,190,374; July 11; Gaz. vol. 228; p. 454.

Capen, Thomas W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Rock and ore breaker. No. 1,191,564; July 18; Gaz. vol. 228; p. 915.

Caplinger, James L. (See Harbourt, Wilson W., assignor.)

Car-Wheel Lock Company. (See Gray, Thomas L., assignor.)

Caracristi, Virginius Z., Bronxville, N. Y. Apparatus for feeding pulverized fuel. No. 1,192,386; July 25; Gaz. vol. 228; p. 1261.

Carbone, Tito L., Charlottenburg, Germany. Resilient tire. No. 1,189,788; July 4; Gaz. vol. 228; p. 205.

Carbone, Tito L., Charlottenburg, Germany. Resilient tire. No. 1,189,789; July 4; Gaz. vol. 228; p. 205.

Carbone, Tito L., Charlottenburg, Germany. Resilient tire. No. 1,192,036; July 25; Gaz. vol. 228; p. 1136.

Carborundum Company, The. (See Tone, Frank J., assignor.)

Cardarelli, Emilio, Boston, Mass. Fire-ladder truck. No. 1,192,387; July 25; Gaz. vol. 228; p. 1261.

Carley, Leonard R., Waterbury, Conn. Button. No. 1,191,944; July 25; Gaz. vol. 228; p. 1102.

Carlson, August Richardson, Ill. Corn-loader. No. 1,190,105; July 4; Gaz. vol. 228; p. 310.

Carlson, Charles A., Everett, N. J. Plow. No. 1,192,388; July 25; Gaz. vol. 228; p. 1261.

Carlson, Frederick E., assignor to Landers, Frary & Clark, New Britain, Conn. Bottle-stopper. No. 1,191,277; July 18; Gaz. vol. 228; p. 816.

Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Screw-threading die. No. 1,190,375; July 11; Gaz. vol. 228; p. 454.

Carlson, John F., Attica, Ind. Resilient tire. No. 1,192,495; July 25; Gaz. vol. 228; p. 1297.

Carlson, John F., Attica, Ind. Resilient tire. No. 1,192,496; July 25; Gaz. vol. 228; p. 1297.

Carlson, Otto, Bergland, Mich. Dust-pan. No. 1,191,945; July 25; Gaz. vol. 228; p. 1102.

Carlson-Wenstrom Manufacturing Company, The. (See Lundgren, Jacob, assignor.)

Carnahan, Robert H. (See Mumford, Joseph F., assignor.)

Carnegie, Alfred Q. (See Parsons, Carnegie, and Cook.)

Carney, Frank D., and R. V. McKay, Steelton, Pa. Cover for sintering-pans. No. 1,190,513; July 11; Gaz. vol. 228; p. 500.

Carney, Frederick J., Erie, Pa. Lubricating-pump. No. 1,192,274; July 25; Gaz. vol. 228; p. 1221.

Carpenter, Campbell C., Buffalo, assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Electrode for storage batteries. No. 1,190,982; July 11; Gaz. vol. 228; p. 671.

Carr, Elenor R. (See O'Brien, Glen, assignor.)

Carrick, Martin H., San Francisco, Cal. Fireproof building construction. No. 1,191,871; July 18; Gaz. vol. 228; p. 1024.

Carroll, Charles, Chicago, Ill. Couch. No. 1,191,664; July 18; Gaz. vol. 228; p. 949.

Carroll, Edward C., Vancouver, British Columbia, Canada. Toy. No. 1,190,106; July 4; Gaz. vol. 228; p. 310.

Carroll, Fred M., assignor to The National Cash Register Company, Dayton, Ohio. Sales-slip-perforating cash-register. No. 1,191,154; July 18; Gaz. vol. 228; p. 772.

Carroll, George, New Salem, Ill. Adjustable window-screen. No. 1,189,790; July 4; Gaz. vol. 228; p. 206.

Carroll, John B., Chicago, Ill. Film-unwinding apparatus. No. 1,190,262; July 11; Gaz. vol. 228; p. 414.

Carroll, John W., Cincinnati, Ohio. Firearm. No. 1,190,107; July 4; Gaz. vol. 228; p. 310.

Carson, Hugh J., Fairfax, Minn. Portable elevator. No. 1,189,663; July 4; Gaz. vol. 228; p. 162.

Carter, William C., St. Louis, Mo. Diaphragm-pump. No. 1,191,061; July 11; Gaz. vol. 228; p. 697.

Cartledge, Wright R., Baltimore, Md., assignor to Chesterman and Streeter, Inc., Philadelphia, Pa. Abdominal belt. No. 1,190,722; July 11; Gaz. vol. 228; p. 578.

Cartwright, Ophelia M., New York, N. Y. Hemmer. No. 1,190,627; July 11; Gaz. vol. 228; p. 543.

Carty, Alton B., Washington, D. C. Ink-fountain. (Reissue.) No. 14,165; July 18; Gaz. vol. 228; p. 1049.

Cash, Arthur W., Decatur, Ill. Pressure reducing and regulating valve. No. 1,190,514; July 11; Gaz. vol. 228; p. 501.

Cashman, Denis F., and C. A. Brownfield, Zanesville, Ohio. Attachment for aeroplanes. No. 1,190,248; July 4; Gaz. vol. 228; p. 362.

Cashner, Roy C., Kansas City, Mo. Porch-swing. No. 1,189,538; July 4; Gaz. vol. 228; p. 120.

Caskey, Fred A. (See Clain, Albert O., assignor.)

Cassing, Frederick J. (See Roepe and Cassing.)

Castle, James B., Honolulu, Hawaii. Crate. No. 1,189,539; July 4; Gaz. vol. 228; p. 120.

Cater, William H., Chicago, Ill. Means for protecting drilling-ropes against wear. No. 1,189,428; July 4; Gaz. vol. 228; p. 80.

Causey, Stephen C., Schenectady, N. Y. Animal-trap. No. 1,190,859; July 11; Gaz. vol. 228; p. 627.

Cave, Henry, Springfield, Mass. Torch apparatus. No. 1,191,397; July 18; Gaz. vol. 228; p. 859.

Cayer, Joseph L., assignor to Cayer Signal Company, Chicago, Ill. Automobile signaling apparatus. No. 1,191,278; July 18; Gaz. vol. 228; p. 816.

Cayer Signal Company. (See Cayer, Joseph L., assignor.)

Caylor, Harry D., Indianapolis, Ind. Paper-bottle closure. No. 1,190,723; July 11; Gaz. vol. 228; p. 579.

Cazin, Otto K., Newark, N. J. Gyroscopic steering device. No. 1,189,239; July 4; Gaz. vol. 228; p. 9.

Central Railway Signal Company. (See Dutcher, Frank, assignor.)

Chabot, Ambrose B., Seattle, Wash. Hoe. No. 1,190,108; July 4; Gaz. vol 228; p. 311.

Chadeloid Chemical Company. (See Ellis, Carleton, assignor.)

Chadwick, Abbie, South Gardner, Mass. Shoestring-retainer. No. 1,190,724; July 11; Gaz. vol. 228; p. 579.

Chadwick, Lee S., East Cleveland, assignor to The Cleveland Foundry Company, Cleveland, Ohio. Lamp. No. 1,190,219; July 4; Gaz. vol. 228; p. 351.

Chaffee, Emory L., Somerville, Mass., assignor to F. Cutting, Tuxedo Park, N. Y. Apparatus for and method of exciting electric oscillations. No. 1,189,791; July 4; Gaz. vol. 228; p. 206.

Chaikin, Piny F., Coney Island, assignor to A. Bleyer & Co., New York, N. Y. Machine for making paper dishes, &c. No. 1,191,665; July 18; Gaz. vol. 228; p. 950.

Chain Belt Company. (See Reynolds, Benjamin S., assignor.)

Chalfant, Walter B. (See Davis, Ray W., assignor.)

Chamberlain, Minor E., Lebanon, Mo. Metallic lath. No. 1,190,725; July 11; Gaz. vol. 228; p. 579.

Chambers, Harry B., Fairbanks, Ind. Adjustable washer. No. 1,191,565; July 18; Gaz. vol. 228; p. 916.

Champion Blower & Forge Company, The. (See Anderson, Carl O., assignor.)

Champion Ignition Company. (See Schmidt, Albert, assignor.)

Champion Register Company. (See Marbach, Frank G., assignor.)

Chandler, Daniel L., Ayer, and J. H. Trayne, Groton, Mass., assignors to Chantray Mfg. Co. Lighting device. No. 1,191,946; July 25; Gaz. vol. 228; p. 1103.

Chandler, Edwin N., Braintree, Mass. Electrically-heated implement. No. 1,192,389; July 25; Gaz. vol. 228; p. 1262.

Chandler and Price Company, The. (See Reichart, William H., assignor.)

Chanler, John T., *et al.* (See Nichols, Watt M., assignor.)

Channell Chemical Company. (See Dupuy, Charles F. J., assignor.)

Chantray Mfg. Co. (See Chandler and Trayne, assignors.)

Chapman, Arthur D. (See Chapman, Lewis L., A. D., and C. C.)

Chapman, Carl C. (See Chapman, Lewis L., A. D., and C. C.)

Chapman, Charles E., Dallas, Tex. Projecting apparatus. No. 1,191,761; July 18; Gaz. vol. 228; p. 986.

Chapman, Frank W., Minnesota Lake, Minn. Educational toy. No. 1,191,398; July 18; Gaz. vol. 228; p. 859.

Chapman, Joseph and R. P., Bryn Mawr, Pa. Curtain-holder. No. 1,191,666; July 18; Gaz. vol. 228; p. 950.

Chapman, Lewis L., A. D., and C. C., Celina, Ohio. Propelling means for dredging-machines. No. 1,192,752; July 25; Gaz. vol. 228; p. 1385.

Chapman, Ruth P. (See Chapman, Joseph and R. P.)

Chappell, Arthur E., Chicago, Ill. Surfacing-roll. No. 1,191,399; July 18; Gaz. vol. 228; p. 860.

Charette, Odilon, Fitchburg, Mass. Loom shuttle-binder. No. 1,192,825; July 25; Gaz. vol. 228; p. 1410.
Charles H. Feldstein Company. (See Taylor, George, assignor.)
Charpentier, Joseph O., Concord, N. H. Indicator attachment for fire-bucket supports. No. 1,191,667; July 18; Gaz. vol. 228; p. 950.
Chateauneuf, Frank, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,190,726; July 11; Gaz. vol. 228; p. 579.
Cheek, Asa S., Charlotte, N. C. Connecting means for driving and driven shafts of a spring-motor and churn. No. 1,190,109; July 4; Gaz. vol. 228; p. 311.
Chemische Fabrik Griesheim-Elektron. (See Hickmann, Wilhelm, assignor.)
Chenier, Thomas. (See Girard, Clairmont, and Chenier.)
Chesterman and Streeter. (See Cartledge, Wright R., assignor.)
Chicago Fuse Manufacturing Company. (See Appleton, Ernest G., assignor.)
Chicago Railway Equipment Company. (See Schultze, Theodore C., assignor.)
Chicago Railway Equipment Company. (See Williams, Charles H., assignor.)
Chicago Railway Signal and Supply Company. (See Vogel, Eugene W., assignor.)
Chicago Utilities Manufacturing Company. (See Spery, Charles F., assignor.)
Chiles, George S., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Draft-yoke. No. 1,192,497; July 25; Gaz. vol. 228; p. 1297.
Chimera, Joseph S., Buffalo, N. Y. Radiator construction. No. 1,189,540; July 4; Gaz. vol. 228; p. 121.
Chione, Fred J., La Salle, Ill. Safety appliance for aeroplanes. No. 1,190,376; July 11; Gaz. vol. 228; p. 454.
Choralcelo Company. (See Severy and Sinclair, assignors.)
Chrisman, Horace, Edgewood Park, assignor to Pittsburgh Meter Company, East Pittsburgh, Pa. Device for supporting fluid-control apparatus. No. 1,189,914; July 4; Gaz. vol. 228; p. 248.
Christensen, Emil, Portland, Oreg. Bottle shelf and locker. No. 1,190,732; July 11; Gaz. vol. 228; p. 581.
Christie, Elza J., Marion, Iowa. Unicycle. No. 1,191,566; July 18; Gaz. vol. 228; p. 916.
Christie, John E., Salt Lake City, Utah. Circuit-closing combination alarm-lock. No. 1,190,727; July 11; Gaz. vol. 228; p. 580.
Church, Benjamin I., Traverse City, Mich. Road-drag. No. 1,191,155; July 18; Gaz. vol. 228; p. 772.
Church, Edmund S., assignor to The National Cash Register Company, Dayton, Ohio. Computing and registering scale. No. 1,190,377; July 11; Gaz. vol. 228; p. 455.
Ciglia, Ernest F., and L. F. Pelletier, New York, N. Y. Suction-intensifying carbureter. No. 1,191,156; July 18; Gaz. vol. 228; p. 773.
Cilley, Earl O., Conklin, and I. J. Cilley, Grand Rapids, Mich. Burglar-guard. No. 1,191,400; July 18; Gaz. vol. 228; p. 860.
Cilley, Ithiel J. (See Cilley, Earl O. and I. J.)
Citizens Savings & Trust Company, The, executor. (See Glauber, Joseph H.)
Clade, Robert, Newark, assignor to Air Turbine Company of America, Jersey City, N. J. Windmill. No. 1,190,628; July 11; Gaz. vol. 228; p. 543.
Clade, Robert, Newark, assignor to Air Turbine Company of America, Jersey City, N. J. Windmill. No. 1,190,629; July 11; Gaz. vol. 228; p. 544.
Clade, Robert, Newark, assignor to Air Turbine Company of America, Jersey City, N. J. Governing mechanism for windmills. No. 1,190,630; July 11; Gaz. vol. 228; p. 544.
Claflin, Charles A., Medford, Mass. Device for delivering gaseous fluid under pressure. No. 1,190,860; July 11; Gaz. vol. 228; p. 627.
Clain, Albert O., Cincinnati, assignor to F. A. Caskey, Marietta, Ohio. Pawl-and-ratchet mechanism for reels. No. 1,190,631; July 11; Gaz. vol. 228; p. 545.
Clair, Oscar J., Camden, N. J., assignor to Victor Talking Machine Company. Tone-arm for talking-machines and the like. No. 1,190,728; July 11; Gaz. vol. 228; p. 580.
Clairmont, John. (See Girard, Clairmont, and Chenier.)
Clark, Arthur E., Villard, Minn. Trace-buckle for harness. No. 1,191,279; July 18; Gaz. vol. 228; p. 816.
Clark, C. A. (See Tompkins, Webster A., assignor.)
Clark, Charles F. (See Clark and De Coste, assignors.)
Clark, Charles F., and A. De Coste, assignors to C. F. Clark, Chicago, Ill. Apparatus for making puttees. No. 1,189,345; July 4; Gaz. vol. 228; p. 49.
Clark, Edward H., Winnipeg, Manitoba, Canada. Combined pen and blotter. No. 1,190,983; July 11; Gaz. vol. 228; p. 671.
Clark, Edward S., Boston, Mass. Valve-operating device for fluid-conduits. No. 1,191,047; July 25; Gaz. vol. 228; p. 1103.
Clark Electric and Manufacturing Company. (See Hatch, Edwin G., assignor.)
Clark, George S., Wetumpka, Ala. Table. No. 1,190,984; July 11; Gaz. vol. 228; p. 671.
Clark, George W., Chicago, Ill. Combined coal and gas range. No. 1,191,668; July 18; Gaz. vol. 228; p. 951.
Clark, Harry A., Des Moines, Iowa. Necktie. No. 1,190,515; July 11; Gaz. vol. 228; p. 502.
Clark, John P., Hendon, England. Aircraft plane or wing. No. 1,190,378; July 11; Gaz. vol. 228; p. 455.
Clark, John S., Canning Town, England. Safety-guard for motor-vehicles. No. 1,189,346; July 4; Gaz. vol. 228; p. 40.
Clark, Logan, Fort Collins, Colo. Eraser-cleaner. No. 1,190,516; July 11; Gaz. vol. 228; p. 502.
Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Motor and exhaust appliance for piano-players. No. 1,190,379; July 11; Gaz. vol. 228; p. 455.
Clark, Perley C., Montrose, Colo. Vehicle-top. No. 1,191,669; July 18; Gaz. vol. 228; p. 951.
Clark, Thomas J., L. H. Dyke, Oakland, and G. Edwards, Berkeley, assignors, by mesne assignments, to T. J. Clark, Oakland, and F. W. Simpson, Berkeley, Cal., trustees. Starting device for internal-combustion engines. No. 1,191,062; July 11; Gaz. vol. 228; p. 697.
Clark, William A. (See Kincaid and Clark.)
Clarke, Edgar W. (See Slick and Clarke.)
Clarke, John Q., Crawfordsville, Ind. Tire-protecting automobile-body. No. 1,191,401; July 18; Gaz. vol. 228; p. 860.
Clarke, Thomas H., Camden, N. J. Gage for cutting-bits. No. 1,190,110; July 4; Gaz. vol. 228; p. 311.
Clarkson, Thomas, Galleywood, assignor to National Steam Car Company, Limited, Chelmsford, England. Apparatus for the control of steam-generators. No. 1,189,429; July 4; Gaz. vol. 228; p. 81.
Claude, Georges, Boulogne-sur-Seine, France. Neon-tube. No. 1,189,664; July 4; Gaz. vol. 228; p. 162.
Claude, Georges, Boulogne-sur-Seine, France. Separating neon from gases with which it is mixed. No. 1,191,495; July 18; Gaz. vol. 228; p. 892.
Claus, John G., Plattsmouth, Nebr. Automatic extension car-step. No. 1,190,861; July 11; Gaz. vol. 228; p. 627.
Clausen, Carl, Bisbee, Ariz. Mine-car wheel. No. 1,190,111; July 4; Gaz. vol. 228; p. 311.
Clausen, Henry P., Mt. Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Call-distributing system. No. 1,192,165; July 25; Gaz. vol. 228; p. 1179.
Clawson, Chester Y., Salt Lake City, Utah. Arrester for sound-producing apparatus. No. 1,190,112; July 4; Gaz. vol. 228; p. 312.
Clawson, Selden I., Salt Lake City, Utah. Ore-classifying machine. No. 1,191,280; July 18; Gaz. vol. 228; p. 817.
Clawson, Seldon L., Salt Lake City, Utah. Volatilizing metals. No. 1,192,037; July 25; Gaz. vol. 228; p. 1136.
Clay, Francis W. H., Edgewood Park, assignor to J. B. Brown, Pittsburgh, Pa. Sled. No. 1,191,281; July 18; Gaz. vol. 228; p. 817.
Clay, Francis W. H., Edgewood Park, assignor to J. B. Brown, Pittsburgh, Pa. Bottle-closure. No. 1,191,567; July 18; Gaz. vol. 228; p. 916.
Clay, Francis W. H., Edgewood Park, assignor to J. B. Brown, Pittsburgh, Pa. Method and apparatus for grading sand. No. 1,191,568; July 18; Gaz. vol. 228; p. 916.
Clayburgh, Herbert E. (See Rosenshine, Morris W., assignor.)
Clear, Justice H., and F. C. Richville, Clarkston, Wash. Child's boot. No. 1,189,665; July 4; Gaz. vol. 228; p. 162.
Clemens, Chester E., Cleveland, Ohio. Lever-locking device. No. 1,190,517; July 11; Gaz. vol. 228; p. 502.
Clement, George H. (See Nelson, James T., assignor.)
Clements, Silas W., Rexburg, Idaho. Tongs. No. 1,192,753; July 25; Gaz. vol. 228; p. 1385.
Cleveland-Akron Bag Company, The. (See Scherf, Theodore, assignor.)
Cleveland-Akron Bag Company, The. (See Karberg, Charles F., assignor.)
Cleveland, Clyde W., Louisiana, Mo. Dust-cap for valves. No. 1,192,038; July 25; Gaz. vol. 228; p. 1136.
Cleveland Foundry Company, The. (See Chadwick, Lee S., assignor.)
Cleveland Folding Machine Company, The. (See Hitchcock, Reuben, assignor.)
Cleveland Folding Machine Company, The. (See Olsen, Andrew, assignor.)
Clinton Cam Company. (See Baker, John E., assignor.)
Clive, Albert A., assignor to American Fire Alarm Company, Los Angeles, Cal. Independent fire-alarm. No. 1,189,915; July 4; Gaz. vol. 228; p. 248.
Clive, Albert A., assignor to American Fire Alarm Company, Los Angeles, Cal. Cartridge fire-alarm. No. 1,189,916; July 4; Gaz. vol. 228; p. 248.
Cloud, Francis M., New Palestine, Ind. Rat-trap. No. 1,192,275; July 25; Gaz. vol. 228; p. 1221.
Clough, Roger M., Tolland, Conn. Angle-iron cutter. No. 1,191,282; July 18; Gaz. vol. 228; p. 817.
Cloyd, Oliver H., Peoria, Ill. Hog-greaser. No. 1,190,220; July 4; Gaz. vol. 228; p. 352.
Cluett, Peabody & Co. (See Hurd, Hubbard F., assignor.)
Coal By-Products Company. (See Bussey, Charles C., assignor.)
Coates, Charles B., Chicago, Ill. Power-hammer. No. 1,191,948; July 25; Gaz. vol. 228; p. 1103.
Coatsworth, William K. (See Hall, William G., assignor.)
Cobb, Elmer M., South Portland, Me. Riveting-machine. No. 1,189,917; July 4; Gaz. vol. 228; p. 249.
Cobb, George W. (See Wegner, Fred, assignor.)
Cochran, James F., Jonesboro, Tenn. Wire-stretcher. No. 1,191,063; July 11; Gaz. vol. 228; p. 698.
Cocks, George H., Ashland, Ky. Cradle-supporting attachment for beds. No. 1,190,380; July 11; Gaz. vol. 228; p. 456.

Coesir, James H., Joplin, Mo. Machine for wrapping pneumatic tires. No. 1,189,666; July 4; Gaz. vol. 228; p. 163.
Cogan, Robert B., Swissvale, Pa. Dispensing-receptacle. No. 1,189,347; July 4; Gaz. vol. 228; p. 50.
Cohen, Henry, New York, N. Y. Ironing-board attachment. No. 1,190,113; July 4; Gaz. vol. 228; p. 312.
Cohn, Tobias, New York, N. Y. Hand-bag. No. 1,189,918; July 4; Gaz. vol. 228; p. 249.
Colby, Daniel W., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for setting eyelets or similar fasteners. No. 1,191,926; July 18; Gaz. vol. 228; p. 1045.
Colby, Daniel W., deceased; D. L. Smith, executor, Needham, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Assorting and delivering mechanism. No. 1,191,927; July 18; Gaz. vol. 228; p. 1045.
Coldwell, William H., Newburgh, N. Y. Driving mechanism for motor-vehicles. No. 1,189,792; July 4; Gaz. vol. 228; p. 207.
Cole, Amos G. (See Fry, Cole, and Foster.)
Cole, Francis J., and F. F. Scoville, Schenectady, N. Y. Locomotive trailing truck. No. 1,189,793; July 4; Gaz. vol. 228; p. 207.
Coleman, Clyde J., New York, assignor to C. Hubert, White Plains, N. Y. Engine-starter. No. 1,192,826; July 25; Gaz. vol. 228; p. 1410.
Collette, Austin B., Everett, Mass. Support for fire-pails and the like. No. 1,190,632; July 11; Gaz. vol. 228; p. 545.
Colley, Clayton D., Narrows, Va. Removable lining for friction-bands. No. 1,189,541; July 4; Gaz. vol. 228; p. 121.
Collins, Charles W., Seattle, Wash. Clothes-drying machine. No. 1,191,123; July 11; Gaz. vol. 228; p. 718.
Collins, Horace B., Oklahoma, Okla. Box, crate, and like construction. No. 1,189,542; July 4; Gaz. vol. 228; p. 122.
Collis Company, The. (See Collis, George, assignor.)
Collis, George, assignor to The Collis Company, Dubuque, Iowa. Shelf for refrigerators and the like. No. 1,189,919; July 4; Gaz. vol. 228; p. 250.
Colman, Howard D., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill. Winder. No. 1,191,102; July 11; Gaz. vol. 228; p. 711.
Colonial Trust Company, The, trustee. (See Kasley and Knape, assignors.)
Colonial Trust Company, The, trustee. (See Snyder, John E., assignor.)
Colton, Harry, *et al.* (See Katzin, Jacob S., assignor.)
Colvin, John B., Dundee, Miss. Nut-lock. No. 1,190,114; July 4; Gaz. vol. 228; p. 312.
Combs, George W., Leavenworth, Kans. Gyratory structure. No. 1,192,498; July 25; Gaz. vol. 228; p. 1297.
Combs, George W., Leavenworth, Kans. Gyratory structure. No. 1,192,499; July 25; Gaz. vol. 228; p. 1298.
Combs, George W., Leavenworth, Kans. Gyratory structure. No. 1,192,500; July 25; Gaz. vol. 228; p. 1298.
Combs, George W., Leavenworth, Kans. Gyratory structure. No. 1,192,501; July 25; Gaz. vol. 228; p. 1299.
Combs, George W., Leavenworth, Kans. Gyratory structure. No. 1,192,502; July 25; Gaz. vol. 228; p. 1299.
Comeau, Telesphore, Lawrence, Mass. Spring-tire. No. 1,190,263; July 11; Gaz. vol. 228; p. 415.
Comer, John J., assignor to Automatic Enunciator Company, Chicago, Ill. Differential-microphone repeater. No. 1,192,166; July 25; Gaz. vol. 228; p. 1180.
Commonwealth Engineering Company. (See Greene, Chester W., assignor.)
Compagnie Générale des Etablissements Pathé Frères, Phonographe et Cinématographe. (See Landry, Louis, assignor.)
Compress Buckle Company. (See Horsley, Robert L., assignor.)
Compressed Metal Co. (See Kitchen, Frederick T., assignor.)
Compton, Orville W., Independence, Kans. Speed-limiting device for motor-driven vehicles. No. 1,190,115; July 4; Gaz. vol. 228; p. 312.
Conant, John W., Montoya, N. Mex. Device for fastening objects to vehicles. No. 1,191,762; July 18; Gaz. vol. 228; p. 986.
Concrete Appliances Company. (See Johnson, Nathan C., assignor.)
Condé, Frederic, Oswego, N. Y. Garment. No. 1,191,064; July 11; Gaz. vol. 228; p. 698.
Conde, James B., and C. S. Moscony, Philadelphia, Pa. Cuff-button lock. No. 1,191,763; July 18; Gaz. vol. 228; p. 987.
Condé, Max, assignor, by mesne assignments, to H. Korber, New York, N. Y. Game apparatus. No. 1,192,167; July 25; Gaz. vol. 228; p. 1180.
Condensite Company of America. (See Aylsworth, Jonas W., assignor.)
Congoleum Company, The. (See Prifold, George, assignor.)
Congram, John, assignor to A. Peterson, Seattle, Wash. Mop. No. 1,191,872; July 18; Gaz. vol. 228; p. 1024.
Connersville Blower Company, The. (See Wilkin, John T., assignor.)
Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical system. No. 1,191,158; July 18; Gaz. vol. 228; p. 774.
Consolidated Car-Heating Company. (See McElroy, James F., assignor.)
Consolidated Car-Heating Company. (See Nuckols, Claude C., assignor.)
Consolidated Dental Manufacturing Company. (See Goslee, Hart J., assignor.)
Continental Can Company. (See Kronquest and Bulot, assignors.)
Continental Can Company. (See Taliaferro, Robinson, and Coyle, assignors.)
Continental Grinder Company. (See Scholer and Newton, assignors.)
Converse, Atherton D., Winchendon, Mass. Toy construction-block. No. 1,192,039; July 25; Gaz. vol. 228; p. 1137.
Conwell, Walter L., Montclair, N. J., assignor to Transportation Utilities Company, New York, N. Y. Car-floor. No. 1,191,283; July 18; Gaz. vol. 228; p. 818.
Cook, August D. (See Willers, George E., assignor.)
Cook, Burton H., Brooklyn, N. Y. Percolator. No. 1,190,381; July 11; Gaz. vol. 228; p. 456.
Cook, Carl L., San Francisco, and J. R. Price, Oakland, Cal. Separation of asphaltic compounds from gangue. No. 1,190,633; July 11; Gaz. vol. 228; p. 546.
Cook, Edward W., Gallon, Ohio. Steering mechanism for tractors. No. 1,190,264; July 11; Gaz. vol. 228; p. 415.
Cook, Guy M., Rochester, Nev. Horse-collar. No. 1,190,116; July 4; Gaz. vol. 228; p. 313.
Cook, John W., assignor of one-third to J. L. Megathlin, Miami, Fla. Tire for vehicles. No. 1,191,918; July 18; Gaz. vol. 228; p. 1042.
Cook, Milton H. (See O'Connor, Michael F., assignor.)
Cook, Stanley S. (See Parsons, Carnegie, and Cook.)
Cook, Willard J., Moline, Ill., assignor to Moline Plow Company. Manure-spreader. No. 1,191,670; July 18; Gaz. vol. 228; p. 952.
Cook, William E., Northfork, W. Va. Receptacle for holding gauze or the like. No. 1,192,168; July 25; Gaz. vol. 228; p. 1181.
Cook, William L., Portland, Oreg. Closure-fastener. No. 1,190,729; July 11; Gaz. vol. 228; p. 581.
Cooke, Charles S., New York, N. Y. Paper-clip. No. 1,190,265; July 11; Gaz. vol. 228; p. 415.
Cooke, Raymond D. (See Hershman and Cooke.)
Cooley, John M., Fayetteville, Ark. Fly-trap. No. 1,190,117; July 4; Gaz. vol. 228; p. 313.
Coop, Charles E., Oklahoma, Okla. Lock for automobiles. No. 1,190,518; July 11; Gaz. vol. 228; p. 503.
Coop, William L. (See Hild, Maize, and Coop.)
Cooper, Alexander J., *et al.* (See Barratt, William T., assignor.)
Cooper, Daniel M., Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio. Apparatus for handling material in centrifugal machines. No. 1,189,920; July 4; Gaz. vol. 228; p. 250.
Cooper, William F., Norwalk, Ohio. Grand-piano action. No. 1,190,862; July 11; Gaz. vol. 228; p. 628.
Copeman, Lloyd G., Flint, assignor of one-half to J. F. Burleson, Grand Rapids, Mich. Collapsible grease-capsule. No. 1,190,382; July 11; Gaz. vol. 228; p. 457.
Copithorn, Walter E., Natick, Mass. Wheel-rim. No. 1,190,118; July 4; Gaz. vol. 228; p. 313.
Copithorn, Walter E., Natick, Mass. Demountable vehicle-rim. No. 1,191,065; July 11; Gaz. vol. 228; p. 699.
Copley, Almon W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical relay. No. 1,189,240; July 4; Gaz. vol. 228; p. 10.
Corbin, Ralph W., Bainbridge, N. Y. Tail-holder for cattle. No. 1,192,390; July 25; Gaz. vol. 228; p. 1262.
Corbit, Wardner N., Farragut, Iowa. End-gate for wagons. No. 1,191,569; July 18; Gaz. vol. 228; p. 917.
Corcoran, John L., assignor, by mesne assignments, to The Corcoran-Victor Company, Cincinnati, Ohio. Electric lamp. No. 1,190,730; July 11; Gaz. vol. 228; p. 581.
Corcoran-Victor Company, The. (See Corcoran, John L., assignor.)
Corkett, Frederick T., Ashtead, England, assignor to American Lithographic Company, New York, N. Y. Apparatus for intaglio printing. No. 1,191,949; July 25; Gaz. vol. 228; p. 1104.
Corne, Charles L., and D. P. J. Burguieres, Louisa, La. Settling-tank. No. 1,190,863; July 11; Gaz. vol. 228; p. 628.
Cornelis, Willem, Utrecht, Netherlands. Log and stream indicator. No. 1,191,764; July 18; Gaz. vol. 228; p. 987.
Cornelius, Louis A., Grand Rapids, Mich. Plumber's link. No. 1,192,606; July 25; Gaz. vol. 228; p. 1336.
Cornine, Marshall, Mount Vernon, N. Y. Meter. No. 1,191,157; July 18; Gaz. vol. 228; p. 773.
Corning Glass Works. (See Taylor, William C., assignor.)
Coronet Phosphate Company. (See Memminger, Christopher G., assignor.)
Corrall, Herbert, Parkview, Helensburgh, Scotland, assignor to The Singer Manufacturing Company. Driving device for sewing-machines. No. 1,192,827; July 25; Gaz. vol. 228; p. 1411.
Cory, Loretto, Shelbyville, Ind. Bat. No. 1,189,921; July 4; Gaz. vol. 228; p. 250.
Costello, George J., Philadelphia, Pa. Drill-press attachment. No. 1,189,667; July 4; Gaz. vol. 228; p. 163.
Costello, Walter J., Washington, D. C. Meter. No. 1,189,348; July 4; Gaz. vol. 228; p. 50.

Cotton, John W., assignor of one-half to T. J. Tatom, Mahl, Tex. Fish and rat trap. No. 1,191,124; July 11; Gaz. vol. 228; p. 718.

Couchman, Herbert A., Burton-upon-Trent, England. Means for cleansing the interior of barrels, jars, and like vessels. No. 1,191,671; July 18; Gaz. vol. 228; p. 952.

Coulston, Harry, assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Device for holding stockings to forms. No. 1,190,119; July 4; Gaz. vol. 228; p. 314.

Court, Edward, assignor of one-half to G. J. Meyer, Milwaukee, Wis. Spindle-head brush-holder. No. 1,190,383; July 11; Gaz. vol. 228; p. 457.

Court, Edward, assignor of one-half to G. J. Meyer, Milwaukee, Wis. Cap-scrubbing element for crown-corking machines. No. 1,190,384; July 11; Gaz. vol. 228; p. 457.

Courtney, Robert R., Fort Wadsworth, N. Y. Safety appliance for display-windows. No. 1,192,040; July 25; Gaz. vol. 228; p. 1137.

Courtney, William C. (See Schultz, Emil H., assignor.)

Covington, George W., Kansas City, Kans. Horseshoe. No. 1,189,543; July 4; Gaz. vol. 228; p. 122.

Cowan, Herbert W., *et al.*, trustees. (See Hennessy, Daniel E., assignor.)

Cowden, Albert D., Waterford, Cal. Manifold express way-bill. No. 1,189,544; July 4; Gaz. vol. 228; p. 122.

Cowden, Fred F., New Bedford, Mass. Attachment for looms. No. 1,191,570; July 18; Gaz. vol. 228; p. 917.

Cox, George D. (See Gutberlet, Charles, assignor.)

Cox, Lawrence N. (See Gladish, William J., Sr., assignor.)

Coyle, John. (See Tallaferro, Robinson, and Coyle.)

Crabtree, Frank M. and W. H., Dorrance, Kans. Insect-trap. No. 1,192,391; July 25; Gaz. vol. 228; p. 1262.

Crabtree, William H. (See Crabtree, Frank M. and W. H.)

Craig, Edward, assignor to Saranac Machine Co., St. Joseph, Mich. Climax-basket machine. No. 1,192,041; July 25; Gaz. vol. 228; p. 1138.

Craig, Edward, assignor to Saranac Machine Co., St. Joseph, Mich. Multiple-head stapler-machine. No. 1,192,392; July 25; Gaz. vol. 228; p. 1262.

Craig, James T. (See Selerup, Theodor M. E., assignor.)

Craig, Joseph M. (See Price and Craig.)

Cramer, Angie S., Covington, Ky. Camera. No. 1,191,066; July 11; Gaz. vol. 228; p. 699.

Crampton, Eugene R., Petaluma, Cal. Street or station indicator for vehicles. No. 1,190,864; July 11; Gaz. vol. 228; p. 629.

Crane, William H., Philadelphia, Pa. Safety pocket-razor. No. 1,192,503; July 25; Gaz. vol. 228; p. 1299.

Craven, James F., Crafton, Pa. Well-drill jar. No. 1,189,241; July 4; Gaz. vol. 228; p. 10.

Craven, Samuel. (See Jasper and Craven.)

Craven, Samuel, assignor of one-half to J. Jasper, Ossining, N. Y. Puzzle. No. 1,190,865; July 11; Gaz. vol. 228; p. 629.

Crawford, Francis E., Canon City, Colo. Lock. No. 1,190,985; July 11; Gaz. vol. 228; p. 671.

Crawford, Harvey F., Brockton, Mass. Tire-valve attachment. No. 1,190,866; July 11; Gaz. vol. 228; p. 630.

Crawford, Neil D., Elizabeth, N. J., assignor to The Mechanical Rubber Company, Hollow rubber article and producing same. No. 1,190,731; July 11; Gaz. vol. 228; p. 581.

Crawford, William H., assignor of one-half to O. F. Best, Providence, R. I. Device for reproducing sound. No. 1,192,828; July 25; Gaz. vol. 228; p. 1411.

Creager, Finis W., and O. L. Wilson, Cecilia, Ky. Sliding-door fastener. No. 1,190,519; July 11; Gaz. vol. 228; p. 503.

Creamery Package Manufacturing Company, The. (See Penn, William E., assignor.)

Crecelius, Lawrence P., Cleveland, Ohio. Current-converting apparatus. No. 1,192,393; July 25; Gaz. vol. 228; p. 1263.

Creighton, Elmer E. F., Schenectady, N. Y., assignor to General Electric Company. Electrical winding. No. 1,190,120; July 4; Gaz. vol. 228; p. 314.

Creighton, Elmer E. F., Schenectady, N. Y., assignor to General Electric Company. Protective device. No. 1,191,571; July 18; Gaz. vol. 228; p. 918.

Crescent Paper Butter Dish Co. (See Pitkowsky, Israel, assignor.)

Cressey, Peter A., Moss Beach, and W. Jones, Los Angeles, Cal. Automatic tool. No. 1,191,873; July 18; Gaz. vol. 228; p. 1025.

Creswell, John H., Jr., Perote, Ala. Turner attachment. No. 1,190,385; July 11; Gaz. vol. 228; p. 457.

Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,189,794; July 4; Gaz. vol. 228; p. 207.

Crex Carpet Company. (See Miller, Stanley G., assignor.)

Critchett, James C., El Paso, Tex. Sight for firearms. No. 1,190,121; July 4; Gaz. vol. 228; p. 314.

Croasdale, John P., Berwyn, assignor to Pioneer Suspender Company, Philadelphia, Pa. Garter. No. 1,192,276; July 25; Gaz. vol. 228; p. 1221.

Crocker, William D., Buhl, Ala. Live-roller lumber-conveyer. No. 1,191,403; July 18; Gaz. vol. 228; p. 861.

Crombie, James A., Brooklyn, and T. S. Homans, Hempstead, assignors to The Intertype Corporation, New York, N. Y. Font-distinguisher for typographical machines. No. 1,192,754; July 25; Gaz. vol. 228; p. 1385.

Crompton, Randolph, Chatham, Mass. Weft-replenishing mechanism. No. 1,190,733; July 11; Gaz. vol. 228; p. 582.

Cronk, William, Montour Falls, N. Y. Rake. No. 1,190,734; July 11; Gaz. vol. 228; p. 582.

Crooker, Edwin R., Los Angeles, Cal. Bath-mat. No. 1,190,266; July 11; Gaz. vol. 228; p. 416.

Crosby, Harry C., New York, N. Y. Fountain-pen. No. 1,190,867; July 11; Gaz. vol. 228; p. 630.

Crosby, May T., Kansas City, Mo. Pie-pan. No. 1,191,672; July 18; Gaz. vol. 228; p. 952.

Cross, Frank L., Detroit, Mich. Pressure-regulator for gas systems. No. 1,189,349; July 4; Gaz. vol. 228; p. 51.

Cross, Hartsell H., and S. McDaniels, Hendricks, W. Va. Glove. No. 1,192,042; July 25; Gaz. vol. 228; p. 1138.

Crossland, William B., Newport, Ark. Electric switch. No. 1,191,284; July 18; Gaz. vol. 228; p. 818.

Crossley, Theodore, Riverside, Cal. Automatic safety-deposit box. No. 1,190,634; July 11; Gaz. vol. 228; p. 546.

Crouse-Hinds Company. (See Greaves, Edwin E., assignor.)

Crucible Steel Company of America. (See Shonnard, Harold W., assignor.)

Crum, Hollis B., assignor to R. C. Penfield, Chicago, Ill. Brick-lifter. No. 1,192,504; July 25; Gaz. vol. 228; p. 1299.

Crumbaugh, George P., assignor of one-half to E. W. Grove, St. Louis, Mo. Plaster-board with reinforce-ribs. No. 1,191,765; July 18; Gaz. vol. 228; p. 987.

Crystal Stone-Yeast Company. (See Moss, Charles R., assignor.)

Culver, Fred A., Detroit, Mich., and J. C. Stearns, Worcester, Mass. Adjustable lamp-support. No. 1,189,350; July 4; Gaz. vol. 228; p. 51.

Cummer, Arthur J., assignor of one-third to C. Matz and one-third to M. Matz, Dubuque, Iowa. Spiral harrow. No. 1,191,404; July 18; Gaz. vol. 228; p. 861.

Cunningham, Charles P., Louisville, Ky. Extension-table. No. 1,191,159; July 18; Gaz. vol. 228; p. 774.

Cunningham, John A., South Bethlehem, Pa. Match-lighter. No. 1,192,043; July 25; Gaz. vol. 228; p. 1138.

Cuntz, Hermann F., Hartford, Conn. Flying-machine. No. 1,192,607; July 25; Gaz. vol. 228; p. 1336.

Curlee, Jasper N. (See Brown and Curlee.)

Currier, Curtis S., Pontiac, Mich. Train signaling and controlling system. No. 1,190,520; July 11; Gaz. vol. 228; p. 503.

Curry, Alexander D., Hawkinsville, Ga. Tie-protector. No. 1,191,496; July 18; Gaz. vol. 228; p. 893.

Curtis, Lewis E., Kenilworth, Ill., assignor to Ames Steel Lath Company, St. Louis, Mo. Manufacturing expanded metal. No. 1,191,766; July 18; Gaz. vol. 228; p. 987.

Curtis, Lewis E., Kenilworth, Ill., assignor to Ames Steel Lath Company, St. Louis, Mo. Manufacturing expanded metal. No. 1,191,767; July 18; Gaz. vol. 228; p. 988.

Curtis, Lewis E., Kenilworth, Ill., assignor to Ames Steel Lath Company, St. Louis, Mo. Making expanded metal. No. 1,191,768; July 18; Gaz. vol. 228; p. 988.

Curts, Ephraim A., and J. C. Nida, Anderson, Mo. Body-support. No. 1,191,769; July 18; Gaz. vol. 228; p. 988.

Cushing, Edward O., Waverly, Mass. Baton-metronome. No. 1,191,285; July 18; Gaz. vol. 228; p. 819.

Custer, Charles T., Pasco, Wash. Water-motor. No. 1,191,950; July 25; Gaz. vol. 228; p. 1104.

Cutler-Hammer Mfg. Co., The. (See Henderson, Clark T., assignor.)

Cutler-Hammer M'f'g Co., The. (See Klein, Charles J., assignor.)

Cutler-Hammer Mfg. Co., The. (See Schureman and Anderson, assignors.)

Cutler-Hammer Mfg. Co., The. (See Wiegand, Henry J., assignor.)

Cutting, Fulton. (See Chaffee, Emory L., assignor.)

D & W Fuse Co. (See Downes and Faxon, assignors.)

Dähne, Gustav, New York, N. Y. Roller smoothing-iron. No. 1,190,521; July 11; Gaz. vol. 228; p. 504.

Daimler Motoren-Gesellschaft. (See Daimler, Paul, assignor.)

Daimler, Paul, Untertürkheim, assignor to Daimler Motoren-Gesellschaft, Untertürkheim, near Stuttgart, Germany. Gearing. No. 1,192,277; July 25; Gaz. vol. 228; p. 1222.

Daly, John J., Reading, Pa. Water-gage for boilers. No. 1,189,922; July 4; Gaz. vol. 228; p. 250.

Damaron, Roy W., Jackson, Mich. Tire-tool. No. 1,189,923; July 4; Gaz. vol. 228; p. 251.

Damascus Brake Beam Co., The. (See Schroeder, Frederick J., assignor.)

Dane Manufacturing Company. (See De Lukacsevics, Charles, assignor.)

Daniel, Charles T., Owensboro, Ky. Controlling-valve for a drinking-fountain. No. 1,192,755; July 25; Gaz. vol. 228; p. 1386.

Daniels, J. W., trustee. (See Caldwell, Henry C., assignor.)

Danquard, Thomas, New York, N. Y., assignor to The Auto Pneumatic Action Company. Pedal mechanism for grand player-pianos. No. 1,192,505; July 25; Gaz. vol. 228; p. 1300.

Dansby, Thomas M., Pine Bluff, Ark. Slicing-machine. No. 1,189,545; July 4; Gaz. vol. 228; p. 123.

Dantsizen, Christian, Scotia, N. Y., assignor to General Electric Company. Electrolytic cell and electrolyzing metal. No. 1,190,122; July 4; Gaz. vol. 228; p. 315

Daubenspeck, Peter E., Butler, Pa. Combination fire-escape and costumer. No. 1,191,405; July 18; Gaz. vol. 228; p. 861.

Daubert, Banks O., Norfolk, Nebr. Vapor vacuum heating system. No. 1,192,278; July 25; Gaz. vol. 228; p. 1222.

Daugherty, Alvin A., Los Angeles, Cal. Sack. No. 1,190,221; July 4; Gaz. vol. 228; p. 352.

Daugherty, Daniel P., Worden, Oreg., assignor of one-third to H. L. Veit and one-third to R. O. Vincent. Poison-distributer. No. 1,190,272; July 11; Gaz. vol. 228; p. 417.

Daugherty, Floyd B., Venice, Fla. Bottle-filling apparatus. No. 1,191,406; July 18; Gaz. vol. 228; p. 862.

Dauphinee, Henry H., Providence, R. I. Cover for vent-pipes or the like. No. 1,191,497; July 18; Gaz. vol. 228; p. 893.

Davenport, Elmer E., Chicago, Ill., assignor of one-half to M. R. Davenport, Baraboo, Wis. Rail-holding means. No. 1,189,668; July 4; Gaz. vol. 228; p. 163.

Davenport, John, Brighton, Mass. Utilizing the waste products of garnet-works. No. 1,192,394; July 25; Gaz. vol. 228; p. 1263.

Davenport, Merwin R. (See Davenport, Elmer E., assignor.)

David Weil's Sons Lithographic Company. (See Porter, William A. V., assignor.)

Davidson, Donald W., *et al.* (See Reimers, Dycke H., assignor.)

Davidson, Louis, New York, N. Y. Movable railway-platform. No. 1,189,669; July 4; Gaz. vol. 228; p. 164.

Davidson, Raleigh L., Portland, Oreg. Lawn-mower sharpener. No. 1,191,160; July 18; Gaz. vol. 228; p. 774.

Davidson, Samuel C., Belfast, Ireland. Apparatus for coagulating rubber latex. No. 1,189,351; July 4; Gaz. vol. 228; p. 51.

Davies, David P., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Steering device for tractors. No. 1,190,735; July 11; Gaz. vol. 228; p. 582.

Davies, George L., and W. E. Windsor-Richards, London, England. Paint and making same. No. 1,192,756; July 25; Gaz. vol. 228; p. 1386.

Davis, Anthony E., assignor of one-half to F. J. Geiger, Philadelphia, Pa. Curb-guard and anchoring and positioning device therefor. No. 1,192,506; July 25; Gaz. vol. 228; p. 1300.

Davis, Charles T., Brooklyn, N. Y. Surgical package and indicating sterilization thereof. No. 1,191,572; July 18; Gaz. vol. 228; p. 918.

Davis, Fred, Wilkes-Barre, Pa. Pump-screen. No. 1,192,757; July 25; Gaz. vol. 228; p. 1386.

Davis, Gabriel L., Visalia, Cal. Extension car-step. No. 1,191,770; July 18; Gaz. vol. 228; p. 989.

Davis, James C., Hinsdale, Ill. Casting apparatus and process. No. 1,192,044; July 25; Gaz. vol. 228; p. 1139.

Davis, Maynard L. (See Terry, Miles A., assignor.)

Davis, Oscar C., Brockton, Mass. Shoe and full-length outer sole therefor. No. 1,191,498; July 18; Gaz. vol. 228; p. 893.

Davis, Oscar C., Brockton, Mass. Making turned shoes. No. 1,191,499; July 18; Gaz. vol. 228; p. 893.

Davis, Oscar C., Brockton, Mass. Shoe and outer-sole therefor. No. 1,191,500; July 18; Gaz. vol. 228; p. 893.

Davis, Ray W., assignor of one-half to W. B. Chalfant, Brownsville, Pa. Railway-switch. No. 1,192,758; July 25; Gaz. vol. 228; p. 1387.

Davis, Sallie L., Los Angeles, Cal. Adjustable steel outside window-bed. No. 1,190,222; July 4; Gaz. vol. 228; p. 353.

Davis, Thomas. (See Eidson and Davis.)

Davis, Urlah, Park Ridge, Ill. Humidifier. No. 1,190,223; July 4; Gaz. vol. 228; p. 353.

Davis, William H., Muncie, Ind. Lampblack-machine. No. 1,191,673; July 18; Gaz. vol. 228; p. 953.

Dawson, Joseph W., St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, Runway. No. 1,191,407; July 18; Gaz. vol. 228; p. 862.

Dawson, Joseph W., St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, Bottle-washing machine. No. 1,191,573; July 18; Gaz. vol. 228; p. 918.

Dawson, Joseph W., assignor to Barry-Wehmiller Machinery Company, St. Louis, Mo. Bottle-feeding device. No. 1,191,574; July 18; Gaz. vol. 228; p. 919.

Dawson, Samuel M., and M. Smith, Kansas City, Mo. Roof-flashing. No. 1,192,279; July 25; Gaz. vol. 228; p. 1222.

Day, George H., assignor to American Optical Company, Southbridge, Mass. Eye-protector. No. 1,190,123; July 4; Gaz. vol. 228; p. 315.

Day, George H., assignor to American Optical Company, Southbridge, Mass. Lens-edging machine. No. 1,191,874; July 18; Gaz. vol. 228; p. 1025.

Day, Harry R. (See Upson and Day.)

Day, Thomas J., and W. A. Urich, Boston, Mass. Musical instrument. No. 1,191,161; July 18; Gaz. vol. 228; p. 775.

Dayton Engineering Laboratories Co., The. (See Kettering, Charles F., assignor.)

De Bileux, Frank W., Chicago, Ill. Safety-purse. No. 1,189,924; July 4; Gaz. vol. 228; p. 251.

De Camp, Charles E., *et al.* (See De Camp, James W., assignor.)

De Camp, James W., Blackwell, Okla., assignor of one-fourth to J. P. Miller, McAllen, Tex., and one-fourth to C. E. DeCamp, Blackwell, Okla. Casket. No. 1,192,169; July 25; Gaz. vol. 228; p. 1181.

De Coste, Albert. (See Clark and De Coste.)

De Cotis, Frank, New York, N. Y. Wrench. No. 1,192,280; July 25; Gaz. vol. 228; p. 1222.

De Forest, Lee, assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y. Quench-spark discharger. No. 1,190,869; July 11; Gaz. vol. 228; p. 631.

De Forest Radio Telephone and Telegraph Company. (See De Forest, Lee, assignor.)

De Haven, John F., East Liverpool, Ohio. Curtain-bracket. No. 1,192,281; July 25; Gaz. vol. 228; p. 1223.

De Laval Separator Company, The. (See Hall, Selden H., assignor.)

De Laye, Hiram R., Birmingham, Ala. Folding crate. No. 1,191,067; July 11; Gaz. vol. 228; p. 699.

De Long, Charles E., Dallas, Tex., assignor to De Long Escapement Co., Inc. Escapement for watches. No. 1,192,812; July 25; Gaz. vol. 228; p. 1406.

De Long Escapement Co. (See De Long, Charles E., assignor.)

De Lukacsevics, Charles, assignor to Dane Manufacturing Company, Newark, N. J. Carbureter, No. 1,190,125; July 4; Gaz. vol. 228; p. 316.

De Lukacsevics, Charles, and C. J. Terrill, West Nutley, N. J.; said Terrill assignor to said De Lukacsevics. Carbureter. No. 1,190,124; July 4; Gaz. vol. 228; p. 315.

De Mattia, Constant, Detroit, Mich. Massaging-tool. No. 1,192,282; July 25; Gaz. vol. 228; p. 1223.

De Ramus, William G., Montgomery, Ala. Cotton-gin. No. 1,190,986; July 11; Gaz. vol. 228; p. 672.

De Simoney, Pasquale, Youngstown, Ohio. Blast-furnace. No. 1,192,395; July 25; Gaz. vol. 228; p. 1264.

De Vaux, Frank, San Jose, assignor of one-third to W. H. Sliger, Stockton, Cal. Friction drive attachment for bicycles. No. 1,191,287; July 18; Gaz. vol. 228; p. 820.

De Vicari, Valentino, Chicago, Ill. Penholder. No. 1,192,760; July 25; Gaz. vol. 228; p. 1388.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,191,068; July 11; Gaz. vol. 228; p. 699.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,192,608; July 25; Gaz. vol. 228; p. 1336.

De Voist, Peter L., Duluth, Minn. Overalls. No. 1,191,288; July 18; Gaz. vol. 228; p. 820.

Dean, George C., Bronxville, N. Y., assignor to Lovell-McConnell Manufacturing Company, Newark, N. J. Mechanical horn. No. 1,189,795; July 4; Gaz. vol. 228; p. 208.

Dean, Joel E., Jr., and E. Callaway, assignors of one-third to J. B. Miller, Baconton, Ga. Planter. No. 1,191,875; July 18; Gaz. vol. 228; p. 1025.

Dean, William W., Chicago, Ill., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio. Signaling device. No. 1,189,796; July 4; Gaz. vol. 228; p. 208.

Deats, William, Yonkers, N. Y. Coil-making machine. No. 1,190,868; July 11; Gaz. vol. 228; p. 630.

Dechamps, Heinrich, Charlottenburg, Germany, assignor to General Electric Company, Pipe-joint. No. 1,191,575; July 18; Gaz. vol. 228; p. 919.

Decker & Cohn, Alfred. (See Peine, Adolphus G., assignor.)

Deere & Company.—(See Kiel, John, assignor.)

Dees, Mark A., St. Louis, Mo. Flying-machine. No. 1,191,501; July 18; Gaz. vol. 228; p. 894.

Defiance Manufacturing Company. (See Marx and Boltz, assignors.)

Delacour, Edouard L., Paris, France. Transmission mechanism. No. 1,191,771; July 18; Gaz. vol. 228; p. 989.

Delaney, Thomas A., assignor to Hills, McCanna Company, Chicago, Ill. Safety-feed for lubricators. No. 1,189,242; July 4; Gaz. vol. 228; p. 10.

Delano, Charles M. G., Augusta, Me. Resilient wheel. No. 1,192,045; July 25; Gaz. vol. 228; p. 1139.

Delany, Patrick B., South Orange, N. J. Sound-reproducing machine. No. 1,190,249; July 4; Gaz. vol. 228; p. 363.

Delany, Patrick B., South Orange, N. J. Talking-machine. No. 1,190,635; July 11; Gaz. vol. 228; p. 547.

Delany, Patrick B., South Orange, N. J. Talking-machine recorder and reproducer. No. 1,190,636; July 11; Gaz. vol. 228; p. 547.

Delany, Patrick B., South Orange, N. J. Construction of talking-machines. No. 1,191,674; July 18; Gaz. vol. 228; p. 953.

Delany, Patrick B., South Orange, N. J. Phonograph or talking-machine. No. 1,191,675; July 18; Gaz. vol. 228; p. 953.

Deming Company, The. (See Garber, Jesse B., assignor.)

Demmitt, Charles K., Owings Mills, assignor to J. L. Sunderland, Baltimore, Md. Rail-joint. No. 1,190,126; July 4; Gaz. vol. 228; p. 316.

Dempsey, H. Clay, *et al.* (See Hartley, Albert J., assignor.)

Denninger, George A., Theresa, Wis. Vehicle direction-indicator. No. 1,192,759; July 25; Gaz. vol. 228; p. 1387.

Denny, Columbus F., Durham, N. C. Pawl-and-ratchet mechanism. No. 1,192,283; July 25; Gaz. vol. 228; p. 1223.

Dentists' Supply Company, The. (See Whiteley, George H., Jr., assignor.)

Depollier, Charles L., New York, N. Y. Wrist-watch. No. 1,191,951; July 25; Gaz. vol. 228; p. 1104.

Deppé, William P., Bay Shore, N. Y. Heater and mixer for internal-combustion engines. No. 1,189,797; July 4; Gaz. vol. 228; p. 208.

Deppen, Isaac M., Scranton, Pa. Necktie-support. No. 1,192,507; July 25; Gaz. vol. 228; p. 1301.

Derryberry, Garrison W., Spiro, Okla. Light attachment for guns. No. 1,189,670; July 4; Gaz. vol. 228; p. 164.

Desgeorge, Raoul. (See Lebrell and Desgeorge.)

Destructor Company, The. (See Primrose, John, assignor.)

Detroit Demountable Rim Co. (See Harbridge, Chester C., assignor.)

Detroit Pressed Steel Company. (See Putnam, Alden L., assignor.)

Detwiler, Forest V., Chicago, Ill. Electric cooking apparatus. No. 1,191,286; July 18; Gaz. vol. 228; p. 819.

Devenny, Charles F., Philadelphia, Pa. Holder for nursing-bottles. No. 1,192,170; July 25; Gaz. vol. 228; p. 1182.

Devereux, Warren V., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill. Fusible link. No. 1,192,396; July 25; Gaz. vol. 228; p. 1264.

Dew, James W. H., London, England. Manufacturing solid rubber or like tires and treads of pneumatic tires. No. 1,191,876; July 18; Gaz. vol. 228; p. 1026.

Dexter, Irven H., Pearl River, assignor to I. H. Dexter Co., Inc., New York, N. Y. Flexible coupling. No. 1,190,870; July 11; Gaz. vol. 228; p. 631.

Dexter, Talbot C., Pearl River, assignor to I. H. Dexter Company, Inc., New York, N. Y. Flexible coupling. No. 1,189,925; July 4; Gaz. vol. 228; p. 251.

Di Maggio, Philip, Albany, N. Y. Stay-bolt. No. 1,191,676; July 18; Gaz. vol. 228; p. 954.

Diack, Alexander S., Detroit, Mich. Engine-starter. No. 1,190,522; July 11; Gaz. vol. 228; p. 504.

Diagraph Company. (See Reed, Edwin A., assignor.)

Diamond Crystal Salt Company. (See Well, Charles L., assignor.)

Diamond Match Company, The. (See Wey, William G., assignor.)

Dickerson, John H., Hazelton, Pa. Hospital-bed. No. 1,191,772; July 18; Gaz. vol. 228; p. 990.

Dickerson, Malcolm, Newark, N. J., assignor to E. M. Kinsey, New York, N. Y. Air-conditioner. No. 1,190,386; July 11; Gaz. vol. 228; p. 457.

Dickey, Arthur Y., Seattle, Wash. Air-gun. No. 1,191,877; July 18; Gaz. vol. 228; p. 1026.

Dierig, Conrad A., Lawrence, Mass. Necktie-holder. No. 1,191,576; July 18; Gaz. vol. 228; p. 920.

Dieter, William, New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Diving-gear for torpedoes. No. 1,190,871; July 11; Gaz. vol. 228; p. 631.

Dietz, Wilhelm, Leutzsch, near Leipzig, assignor to Körtling & Mathiesen Aktiengesellschaft, Leutzsch, near Leipzig, Germany. Arc-lamp. No. 1,191,289; July 18; Gaz. vol. 228; p. 820.

Dildine, Forest E., Columbus, Ohio. Fishing apparatus. No. 1,190,872; July 11; Gaz. vol. 228; p. 631.

Dillon, Frank H., and M. L. Henderson, Rock Island, Ill., assignors of one-third to Ely & Bush, Davenport, Iowa. Steam-boiler furnace and an apparatus for feeding air to furnaces. No. 1,191,931; July 18; Gaz. vol. 228; p. 1047.

Dillon, Herbert S., and M. C. Gass, San Francisco, Cal. Power-transmitting mechanism. No. 1,191,290; July 18; Gaz. vol. 228; p. 820.

Dillon, Joseph J., Wilmette, Ill. Flue cleaner or brush. No. 1,189,798; July 4; Gaz. vol. 228; p. 209.

Dinger, Paul, assignor of one-half to A. L. Lawrence, Cleveland, Ohio. Telegraphic sending-machine. No. 1,189,546; July 4; Gaz. vol. 228; p. 123.

Dinkuhn, William F., Tarentum, Pa. Face-shield. No. 1,191,773; July 18; Gaz. vol. 228; p. 990.

Diou, Julian, Newark, N. J. Truck. No. 1,189,430; July 4; Gaz. vol. 228; p. 81.

Dirian, Adolph, and W. Biel, Chicago, Ill. Apparatus for charging liquor with gas. No. 1,191,952; July 25; Gaz. vol. 228; p. 1105.

Disdier, Enrique, Malaga, Spain. Drying apparatus. No. 1,190,127; July 4; Gaz. vol. 228; p. 317.

Disney, Orie O., Richland, Kans. Gear and clutch control. No. 1,192,284; July 25; Gaz. vol. 228; p. 1224.

Ditchfield, Frank, Montreal, Quebec, Canada. Dump-car. No. 1,189,352; July 4; Gaz. vol. 228; p. 52.

Ditchfield, Frank, Montreal, Quebec, Canada. Dump-car-operating mechanism. No. 1,189,353; July 4; Gaz. vol. 228; p. 52.

Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Controlling system. No. 1,192,171; July 25; Gaz. vol. 228; p. 1182.

Dixon, Ezra, Bristol, R. I. Top-roll saddle. No. 1,189,800; July 4; Gaz. vol. 228; p. 210.

Dixon, Henry. (See Thatcher and Dixon.)

Dixon, Henry, Toronto, Ontario, Canada. Shock-absorber. No. 1,189,354; July 4; Gaz. vol. 228; p. 52.

Dixon, Joseph O. (See Mummert and Dixon.)

Dixon, Laurens P., New York, N. Y. Spark-plug. No. 1,191,162; July 18; Gaz. vol. 228; p. 775.

Doble, Abner, Brookline, Mass. Thermostatic fuel-valve. No. 1,191,408; July 18; Gaz. vol. 228; p. 863.

Dodd, Malcolm B., Arnprior, Ontario, Canada. Reclining or invalid's chair. No. 1,190,523; July 11; Gaz. vol. 228; p. 505.

Dodds, Arthur W., Chester, England. Tie presser and stretcher. No. 1,190,269; July 11; Gaz. vol. 228; p. 417.

Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Nozzle-plug. No. 1,192,761; July 25; Gaz. vol. 228; p. 1388.

Dodge Brothers. (See Dodge, John F. and H. E., assignors.)

Dodge, F. P. (See Brisacher, Hugo, assignor.)

Dodge, Henry P., Toledo, Ohio. Specific-gravity-measuring means. No. 1,189,431; July 4; Gaz. vol. 228; p. 81.

Dodge, Horace E. (See Dodge, John F. and H. E.)

Dodge, Howard A., Los Angeles, Cal. Control-releasing device. No. 1,191,878; July 18; Gaz. vol. 228; p. 1026.

Dodge, J. B. (See Frazer, William D., assignor.)

Dodge, James M., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Device for lubricating chains. No. 1,192,762; July 25; Gaz. vol. 228; p. 1388.

Dodge, John F., Detroit, and H. E. Dodge, Grosse Pointe, assignors to Dodge Brothers, Detroit, Mich. Motor-support. No. 1,190,270; July 11; Gaz. vol. 228; p. 417.

Doherty, William F., Jr., Bisbee, Ariz. Submarine boat. No. 1,192,172; July 25; Gaz. vol. 228; p. 1182.

Doldt, John E., Portland, Me., assignor to National Metal Seal Corporation, Boston, Mass. Closure for containing vessels. No. 1,192,173; July 25; Gaz. vol. 228; p. 1183.

Domschelt, Friderich E., Bridgeport, Conn. Turbine-engine. No. 1,190,637; July 11; Gaz. vol. 228; p. 548.

Donahue, William H. (See Peterson and Donahue.)

Donley, Ford. (See Von Wolffradt, William A., assignor.)

Donnelly, John, Brandford, Conn. Floor-scraping tool. No. 1,192,763; July 25; Gaz. vol. 228; p. 1389.

Doody, Frederick C., St. Onge, S. D. Hay-stacker. No. 1,190,271; July 11; Gaz. vol. 228; p. 417.

Dorn, Theodore P., Cleveland, Ohio. Spring-tire. No. 1,192,764; July 25; Gaz. vol. 228; p. 1389.

Dorris, William F., Rochester, N. Y. Traveling-bag. No. 1,191,677; July 18; Gaz. vol. 228; p. 954.

Dorsett, William N. (See Smith, James A., assignor.)

Douglas, Harry A., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich. Terminal connector. No. 1,190,524; July 11; Gaz. vol. 228; p. 505.

Douglas, Harry A., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich. Terminal connector. No. 1,190,525; July 11; Gaz. vol. 228; p. 505.

Douglas & Rudd Manufacturing Company. (See Douglas, Harry A., assignor.)

Douglass, Richard W., White Plains, assignor to Ingersoll-Rand Company, New York, N. Y. Regulator for compressors. No. 1,191,774; July 18; Gaz. vol. 228; p. 990.

Dow, S. Russell. (See Becker, Walter A., assignor.)

Dowling, Moses C., Kenney, Ill. Saw-set. No. 1,192,285; July 25; Gaz. vol. 228; p. 1225.

Downes, Louis W., and A. W. Faxon, said Faxon assignor to D & W Fuse Co., Providence, R. I. Oil-switch and fuse. No. 1,192,397; July 25; Gaz. vol. 228; p. 1264.

Dowson, Charles, St. John's Wood, London, England. Shutter for cinematograph apparatus. No. 1,191,069; July 11; Gaz. vol. 228; p. 700.

Doyle, James S. (See Hedley and Doyle.)

Doyle, Luke W., Port Chester, N. Y. Mug-holder. No. 1,190,128; July 4; Gaz. vol. 228; p. 317.

Drake, Herbert L. (See Shaw, Drake, and Shaw.)

Drake, William H., Asheville, assignor, by mesne assignments, to J. S. Mardis, Buncombe county, N. C. Adjustable shade and curtain bracket. No. 1,189,671; July 4; Gaz. vol. 228; p. 164.

Draper, Charles H., assignor to The Draper Manufacturing Company, Cleveland, Ohio. Metallic receptacle. No. 1,189,432; July 4; Gaz. vol. 228; p. 82.

Draper Company. (See Rhoades, Alonzo E., assignor.)

Draper Manufacturing Company, The. (See Draper, Charles H., assignor.)

Drayer, Ulysses S., Altoona, Pa. Railway-brake apparatus. No. 1,191,953; July 25; Gaz. vol. 228; p. 1105.

Drefahl, Louis C., assignor to The Grasselli Chemical Company, Cleveland, Ohio. Metal pickle and pickling. No. 1,191,291; July 18; Gaz. vol. 228; p. 821.

Drenshtein, Ephraim, New York, N. Y. Construction for body-supports. No. 1,189,672; July 4; Gaz. vol. 228; p. 165.

Drewell, Heinrich, Charlottenburg, Germany. Perforating-machine. No. 1,190,736; July 11; Gaz. vol. 228; p. 583.

Driver-Harris Wire Company. (See Henderson, John C., assignor.)

Drouard, Léon D. and P. A., Rouen, France. Apparatus for the separation of the sand and water raised in dredging gravel. No. 1,190,224; July 4; Gaz. vol. 228; p. 353.

Drouard, Paul A. (See Drouard, Léon D. and P. A.)

Du Bois, Reginald S., East Orange, N. J. Carbureter-heater. No. 1,190,129; July 4; Gaz. vol. 228; p. 317.

Du Bois, Rhesa G., East Orange, N. J. Priming-cup for gas-engines. No. 1,191,775; July 18; Gaz. vol. 228; p. 991.

Dubois, Winfield, Detroit, Mich. Boat-davit gear. No. 1,191,163; July 18; Gaz. vol. 228; p. 775.

Dudley, William J., Wilmington, Ohio. Poultry-feeder, No. 1,189,547; July 4; Gaz. vol. 228; p. 123.

Duesler, Frank. (See Blanchard and Duesler.)

Duffecy, Michael J. (See Streng, Andrew, assignor.)

Duffy, Charles H., North Laurel, Md. Spark-plug. No. 1,190,130; July 4; Gaz. vol. 228; p. 318.

Duke, Samuel C. (See Noark and Duke.)

Duncan, John M. (See Hawkins and Duncan.)

Dungan, James G., Los Angeles, Cal. Handle-fastening wedge. No. 1,190,239; July 4; Gaz. vol. 228; p. 359.

Dunham Company, The. (See Dunham, Ray E., assignor.)

Dunham, Miles H., Sheffield, Mass. Gearing. No. 1,190,131; July 4; Gaz. vol. 228; p. 318.

Dunham, Ray E., assignor to The Dunham Company, Berea, Ohio. Land-roller. No. 1,190,132; July 4; Gaz. vol. 228; p. 319.

Dunlop, James, Braamfontein, Transvaal, South Africa. Holder for toilet-paper. No. 1,192,398; July 25; Gaz. vol. 228; p. 1265.

Dunn, David W., Ashland, Ky. Mechanical toy. No. 1,189,432; July 4; Gaz. vol. 228; p. 82.

Dunn, Irwin L. (See Watts and Dunn.)

Dunn, Irwin L., Long Beach, Cal., assignor to Petroleum Patents Company, Chicago, Ill. Producing hydrocarbon from hydrocarbon-bearing earth-strata. No. 1,190,267; July 11; Gaz. vol. 228; p. 416.

Dunn, Irwin L., Marietta, Ohio, assignor to Petroleum Patents Company, Chicago, Ill. Increasing the production of oil-wells. No. 1,190,268; July 11; Gaz. vol. 228; p. 416.

Dunning, William E., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Holder for writing or manifolding pads. No. 1,192,399; July 25; Gaz. vol. 228; p. 1265.

Dunning, William T., Ridley Park, Pa. Air-heating device for stoves. No. 1,190,873; July 11; Gaz. vol. 228; p. 632.

Dupuy, Charles F. J., New York, N. Y., assignor to Channell Chemical Company, Chicago, Ill. Dust-mop. No. 1,192,047; July 25; Gaz. vol. 228; p. 1140.

Duquesnoy, Louis, Hiawatha, Utah. Valve-spring lifter. No. 1,192,286; July 25; Gaz. vol. 228; p. 1225.

Duratex Company, The. (See Stoddard, William O., Jr., assignor.)

Durbin Automatic Train Pipe Connector Company. (See Durbin, Votaw S., assignor.)

Durbin, Votaw S., St. Louis, Mo. Automatic train-pipe coupling. No. 1,189,801; July 4; Gaz. vol. 228; p. 210.

Durbin, Votaw S., assignor to Durbin Automatic Train Pipe Connector Company, St. Louis, Mo. Electrical contact device for train-couplings. No. 1,190,526; July 11; Gaz. vol. 228; p. 506.

Durfee, Elbert F., Roselle Park, N. J. Resilient or cushion tire. No. 1,190,874; July 11; Gaz. vol. 228; p. 633.

Durkee, Maurice M., Savannah, Ga. Coating composition. No. 1,192,765; July 25; Gaz. vol. 228; p. 1389.

Durossette, Clyde. (See Hendrix and Durossette.)

Durville, Pierre H. G., Paris, France. Apparatus for and process of casting ingots of metals and alloys. No. 1,189,548; July 4; Gaz. vol. 228; p. 123.

Dussell, Ernest P. (See Lowman, William, assignor.)

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,190,987; July 11; Gaz. vol. 228; p. 672.

Dvorak, Jarsley, Melvin, Ia. Cleaning-rod. No. 1,192,174; July 25; Gaz. vol. 228; p. 1183.

Dwiggins, John W., Marion, assignor to The Parrish-Alford Fence & Machine Company, Knightstown, Ind. Machine for making wire fabric. No. 1,192,766; July 25; Gaz. vol. 228; p. 1389.

Dyck, George E. (See Beckman and Dyck.)

Dyer, George G., Trenton, N. J. Lock-cover for tanks. No. 1,192,767; July 25; Gaz. vol. 228; p. 1389.

Dyer, Harry W., East Orange, N. J. Calculating device. No. 1,191,678; July 18; Gaz. vol. 228; p. 954.

Dyke, Darrell F., assignor to The Seng Company, Chicago, Ill. Bedding-clamp and foot-rest for folding-bed structures. No. 1,192,768; July 25; Gaz. vol. 228; p. 1390.

Dyke, Louis H. (See Clark, Dyke, and Edwards.)

Dyson, Alfred H., Montclair, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selector-switch. No. 1,192,175; July 25; Gaz. vol. 228; p. 1184.

Dziegielewski, Clemens, Detroit, Mich. Door-latching device. No. 1,191,679; July 18; Gaz. vol. 228; p. 955.

E. F. Houghton & Company. (See Morgan, William W., Jr., assignor.)

E. G. Staude Manufacturing Co. (See Staude, Edwin G., assignor.)

E. W. Bliss Company. (See Dieter, William, assignor.)

Eald, Clayton T., Portland, Oreg. Safety bunk and stake for logging-cars. No. 1,189,434; July 4; Gaz. vol. 228; p. 83.

Eakins, Joseph, New York, N. Y. Necktie attachment. No. 1,190,875; July 11; Gaz. vol. 228; p. 633.

Earl, William M., Greensboro, N. C., assignor of one-fourth to T. H. Sikes and one-fourth to M. E. Block, Greensboro, N. C. Sectional grate. No. 1,191,292; July 18; Gaz. vol. 228; p. 821.

Earley, James A., Wilmington, Del. Attachment for powder-machines. No. 1,192,769; July 25; Gaz. vol. 228; p. 1390.

Eastman, Henry P., Livingston Manor, N. Y. Tie-stretcher. No. 1,192,770; July 25; Gaz. vol. 228; p. 1390.

Eastman, Henry P., Livingston Manor, N. Y. Tie-stretcher. No. 1,192,771; July 25; Gaz. vol. 228; p. 1391.

Eastman Kodak Company. (See Gray, Harry L., assignor.)

Eastman Kodak Company. (See Potter, Frank W., assignor.)

Eastman Kodak Company. (See Robertson, John A., assignor.)

Easton, William S., Seattle, Wash. Rotary pump. No. 1,192,287; July 25; Gaz. vol. 228; p. 1225.

Eaton, George M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Shifting-locomotive. No. 1,192,772; July 25; Gaz. vol. 228; p. 1391.

Eaton, George M., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric locomotive. No. 1,192,773; July 25; Gaz. vol. 228; p. 1391.

Eaton, John W., Portland, Oreg. Spiral hat-fastener. No. 1,190,273; July 11; Gaz. vol. 228; p. 418.

Eaton, William S., Sag Harbor, N. Y., assignor to American Bank Note Company. Making transfer-rolls for producing undersurface or intaglio printing-plates. No. 1,190,737; July 11; Gaz. vol. 228; p. 583.

Eccleston, Charles W., and W. B. McPherson, Los Angeles, Cal. Rock-pulverizer. No. 1,190,876; July 11; Gaz. vol. 228; p. 633.

Eckberg, Rudolph A., Des Moines, Iowa. Demountable rim. No. 1,191,577; July 18; Gaz. vol. 228; p. 920.

Eckert, William F., assignor to Frigid Fluid Company, Chicago, Ill. Coupling. No. 1,189,802; July 4; Gaz. vol. 228; p. 210.

Eddy, George B., Chicago, Ill. Automatic vent-valve for heating systems. No. 1,190,877; July 11; Gaz. vol. 228; p. 634.

Edgar, Louis C., Swissvale, and A. Suter, Beaver, Pa. Furnace-valve-operating mechanism. No. 1,192,176; July 25; Gaz. vol. 228; p. 1184.

Edgecomb, Henry R. (See Moore and Edgecomb.)

Edison Storage Battery Company. (See Kammerhoff, Heinrich H. M., assignor.)

Edison, Thomas A., Llewellyn Park, West Orange, N. J. Electrical system for automobiles. No. 1,192,400; July 25; Gaz. vol. 228; p. 1265.

Edison, Thomas A., Llewellyn Park, assignor to New Jersey Patent Company, West Orange, N. J. Means for recording sounds. No. 1,190,133; July 4; Gaz. vol. 228; p. 319.

Edlund, John L., Claresholm, Alberta, Canada. Window fly-screen. No. 1,190,738; July 11; Gaz. vol. 228; p. 584.

Edmands, Walter S., Boston, Mass. Electrical connection. No. 1,189,435; July 4; Gaz. vol. 228; p. 83.

Edmunds & Jones. (See Godley, Charles E., assignor.)

Edward C. Budd Manufacturing Company. (See Ledwinka, Joseph, assignor.)

Edwards, Alfred D. (See Abbott, George H., assignor.)

Edwards, Arthur L., Lewistown, Mont. Sawing-machine. No. 1,190,739; July 11; Gaz. vol. 228; p. 584.

Edwards, George. (See Clark, Dyke, and Edwards.)

Edwards, John B., New York, N. Y. Cloth-cutter. No. 1,191,164; July 18; Gaz. vol. 228; p. 776.

Edwards, Oliver M., Syracuse, N. Y. Sash-holding device for windows. No. 1,191,103; July 11; Gaz. vol. 228; p. 711.

Egan, Michael, New York, N. Y. Foam-removing device. No. 1,191,409; July 18; Gaz. vol. 228; p. 863.

Eggart, Karl, assignor to A. Saurer, Arbon, Switzerland. Shedding mechanism for ribbon-looms. No. 1,189,243; July 4; Gaz. vol. 228; p. 11.

Eggers, John L. (See Pelter, Charles, assignor.)

Ehinger, Fred C., Palmyra, Mich. Handle for tools or the like. No. 1,192,177; July 25; Gaz. vol. 228; p. 1184.

Eidson Air Products Company, The. (See Eidson and Davis, assignors.)

Eidson, Charles G., and T. Davis, assignors, by mesne assignments, to The Eidson Air Products Company, Baltimore, Md. Automatic valve-operating mechanism. No. 1,192,774; July 25; Gaz. vol. 228; p. 1392.

Eisenhardt, William J., Baltimore, Md. Cone-dispenser. No. 1,191,165; July 18; Gaz. vol. 228; p. 776.

Eklund, Walfrid S. (See Payne and Eklund.)

Elam, William E., Washington, D. C. Shoe-blacking device. No. 1,191,879; July 18; Gaz. vol. 228; p. 1027.

Elder, Thomas W., Fort Wayne, Ind., assignor to Van Arnam Mfg. Co. Shaper-head. No. 1,189,436; July 4; Gaz. vol. 228; p. 83.

Electrolytic Products Co. (See Feldkamp, Frederick A., assignor.)

Elgin American Manufacturing Company. (See Hathaway, Thomas F., assignor.)

Elkins, John E., Junet, assignor of one-half to J. E. Simmons, Pine Bluff, Ark. Fruit-picker. No. 1,191,954; July 25; Gaz. vol. 228; p. 1105.

Ellert, Charles O., New York, N. Y. Concrete-wall mold. No. 1,190,740; July 11; Gaz. vol. 228; p. 584.

Ellett, Frederick S., Elmira, N. Y. Driving-wheel hub for motor-cycles. No. 1,189,355; July 4; Gaz. vol. 228; p. 53.

Elliot, Chauncey A. (See Elliot, William E. and C. A.)

Elliot, William E., Jordan, and C. A. Elliot, Syracuse, N. Y. Daylight tank-developer for roll-films. No. 1,191,166; July 18; Gaz. vol. 228; p. 777.
Elliott, Burton A., Kingston, Mich. Supplemental spring. No. 1,190,527; July 11; Gaz. vol. 228; p. 506.
Elliott Company. (See Fuller, William D., assignor.)
Elliott Company. (See Hauer, Elmer E., assignor.)
Elliott, Crawford, Old Trafford, Manchester, England, assignor to The Elliott Visible Book and General Typewriters Limited, Glasgow, Scotland. Type-writing machine. No. 1,192,401; July 25; Gaz. vol. 228; p. 1266.
Elliott, Elias L., New York, N. Y., assignor, by mesne assignments, to Macbeth-Evans Glass Company, Pittsburgh, Pa. Glass batch or mixture. No. 1,192,048; July 25; Gaz. vol. 228; p. 1140.
Elliott Visible Book and General Typewriters Limited, The. (See Elliott, Crawford, assignor.)
Ellis, Carleton, Montclair, N. J. Treating concrete. No. 1,189,551; July 4; Gaz. vol. 228; p. 124.
Ellis, Carleton, Montclair, N. J., assignor to Ellis-Foster Company. Binding and coating composition. No. 1,189,549; July 4; Gaz. vol. 228; p. 124.
Ellis, Carleton, Montclair, N. J., assignor to Ellis-Foster Company. Coating composition. No. 1,189,550; July 4; Gaz. vol. 228; p. 124.
Ellis, Carleton, Montclair, N. J., assignor to Ellis-Foster Company. Organic chemical process. No. 1,191,880; July 18; Gaz. vol. 228; p. 1027.
Ellis, Carleton, White Plains, assignor to Chadeloid Chemical Company, New York, N. Y. Paint or varnish remover. No. 1,189,803; July 4; Gaz. vol. 228; p. 211.
Ellis, Carleton, White Plains, assignor to Chadeloid Chemical Company, New York, N. Y. Paint or varnish remover. No. 1,189,804; July 4; Gaz. vol. 228; p. 211.
Ellis, Emory E., Orange, Mass. Boring-bar holder. No. 1,189,926; July 4; Gaz. vol. 228; p. 252.
Ellis-Foster Company. (See Ellis, Carleton, assignor.)
Ellis-Foster Company. (See Rabinovitz, Louis, assignor.)
Ellison, Arthur, Twig, Minn. Automatic nut-lock. No. 1,191,955; July 25; Gaz. vol. 228; p. 1106.
Elvin, Albert G., Somerville, N. J. Fire-door apparatus. No. 1,190,528; July 11; Gaz. vol. 228; p. 507.
Elvin, Albert G., Somerville, N. J. Furnace-door device. No. 1,190,529; July 11; Gaz. vol. 228; p. 507.
Elvin, Albert G., Somerville, N. J. Mechanical stoker. No. 1,190,741; July 11; Gaz. vol. 228; p. 584.
Ely & Bush. (See Dillon and Henderson, assignors.)
Emanuel, Philip A., Aiken, S. C. Operating electric batteries. No. 1,190,878; July 11; Gaz. vol. 228; p. 634.
Emanuel, Philip A., Aiken, S. C. Regenerating electric batteries. No. 1,190,879; July 11; Gaz. vol. 228; p. 635.
Emanuel, Philip A., Aiken, S. C. Electric cell. No. 1,190,880; July 11; Gaz. vol. 228; p. 635.
Emanuel, Philip A., Aiken, S. C. Electric battery. No. 1,191,070; July 11; Gaz. vol. 228; p. 700.
Embree, De Witt. (See Taylor, Jesse E., assignor.)
Embrey, Laurence, Fenton, Stoke-upon-Trent, England. Apparatus for working dough. No. 1,190,134; July 4; Gaz. vol. 228; p. 319.
Emerson, Charles J. (See Buhler and Emerson.)
Emerson, Fred L. (See Brackett, Frank A., assignor.)
Emerson, Victor H., New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn. Musical instrument. No. 1,192,402; July 25; Gaz. vol. 228; p. 1266.
Emery, Elijah J., Pottsville, Pa. Garment. No. 1,192,288; July 25; Gaz. vol. 228; p. 1225.
Emery, Gilbert. (See McNabb and Emery.)
Emery, Robert, Mount Oliver, Pa. Brickmaking machinery. No. 1,190,742; July 11; Gaz. vol. 228; p. 585.
Emme, Charles A., Washington, D. C. Sash-lock. No. 1,191,502; July 18; Gaz. vol. 228; p. 894.
Emmet, William L. R., Schenectady, N. Y., assignor to General Electric Company. Combined turbine and vapor generator. No. 1,192,775; July 25; Gaz. vol. 228; p. 1392.
Empire Ticket Company. (See Farrow, Fred, assignor.)
Emsheimer, Leo H. (See Liebenstein and Emsheimer.)
Engel, August, assignor to Milwaukee Brass Manufacturing Company, Milwaukee, Wis. Valve. No. 1,190,530; July 11; Gaz. vol. 228; p. 507.
Engel, Frank, Buffalo, assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Machine for forming storage-battery plates. No. 1,190,988; July 11; Gaz. vol. 228; p. 672.
Engel, Frank, Buffalo, assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Storage-battery plate and forming the same. No. 1,190,989; July 11; Gaz. vol. 228; p. 673.
Engel, Frank, Buffalo, assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Machine for forming storage-battery plates. No. 1,190,990; July 11; Gaz. vol. 228; p. 674.
Engel, Frank, Buffalo, assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Machine for forming storage-battery plates. No. 1,190,991; July 11; Gaz. vol. 228; p. 674.
Engels, Andrew L., and J. Walker, Bisbee, Ariz. Rock-drill. No. 1,190,387; July 11; Gaz. vol. 228; p. 458.
Engels, George M. (See Frank, Daniel W. L., assignor.)
Engler, William B., Detroit, Mich. Friction-drive for motor-vehicles. No. 1,189,673; July 4; Gaz. vol. 228; p. 165.
English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Sound-box. No. 1,192,289; July 25; Gaz. vol. 228; p. 1226.
Englund, Olof, Chicago, Ill. Massage-brush. No. 1,191,578; July 18; Gaz. vol. 228; p. 920.
Engman, Evald J., assignor to The Will & Baumer Co., Syracuse, N. Y. Machine for finishing candles. No. 1,189,674; July 4; Gaz. vol. 228; p. 165.
Engstrom, Ernst F., Omaha, Nebr. Extension crutch or cane. No. 1,192,290; July 25; Gaz. vol. 228; p. 1226.
Ensor, Charles A., Wellington, England. Bottle-washing machine. No. 1,191,776; July 18; Gaz. vol. 228; p. 991.
Entz Motor Patents Corporation. (See Hanauer, Darwin, assignor.)
Epling, Taylor W. (See Alexander and Epling.)
Eppenstein, Otto, assignor to Firm of C. Zeiss, Jena, Germany. Horizontal telemeter. No. 1,191,579; July 18; Gaz. vol. 228; p. 920.
Eppler, Andrew, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Welt-sewing machine. No. 1,189,437; July 4; Gaz. vol. 228; p. 84.
Equitable Trust Company of New York, executor. (See Barr, Frederic.)
Erath, William F., Rosebank, N. Y. Hot-air bath. No. 1,190,388; July 11; Gaz. vol. 228; p. 458.
Ericksen, Leif, assignor to S. M. Harrington, Brooklyn, N. Y. Coin-controlled apparatus. No. 1,190,881; July 11; Gaz. vol. 228; p. 636.
Erickson, Daniel E., Vancouver, British Columbia, Canada. Means for launching a ship's boat. No. 1,191,410; July 18; Gaz. vol. 228; p. 863.
Erickson, John, assignor to Automatic Electric Company, Chicago, Ill. Relay. No. 1,191,167; July 18; Gaz. vol. 228; p. 777.
Erickson, John A., Fairview, Utah. Plow-mounting mechanism. No. 1,189,927; July 4; Gaz. vol. 228; p. 252.
Erickson, Ole, Elma, Wash. Saw-swage. No. 1,191,411; July 18; Gaz. vol. 228; p. 864.
Erickson, Oscar E., and H. Olson, Chicago, Ill. Collapsible baby-carriage. No. 1,189,244; July 4; Gaz. vol. 228; p. 11.
Erickson, Philip M., Brooklyn, N. Y. Motion-picture theater. No. 1,189,799; July 4; Gaz. vol. 228; p. 209.
Ericsson, Henry, Chicago, Ill. Form for concrete floors and the like. No. 1,191,881; July 18; Gaz. vol. 228; p. 1027.
Ernst, Fritz. (See Stickdorn, Robert, assignor.)
Erwin, Horace M., Fort Payne, Ala. Fire-escape. No. 1,190,389; July 11; Gaz. vol. 228; p. 459.
Esch, Henry Jr., Manitowoc, Wis. Marker for skirts. No. 1,191,168; July 18; Gaz. vol. 228; p. 777.
Espitallier, John A., Chicago, Ill. Gearing. No. 1,192,403; July 25; Gaz. vol. 228; p. 1266.
Essex, Harry. (See Brooks, Essex, and Smith.)
Eta-Ventilatoren-Gesellschaft m. b. H. (See Rosenthal, Moritz, assignor.)
Evans, David J., Sharon, Pa. Four-way valve. No. 1,190,992; July 11; Gaz. vol. 228; p. 674.
Evans, Henry R., New York, N. Y. Soap-dispensing machine. No. 1,191,071; July 11; Gaz. vol. 228; p. 701.
Evans, Howard S., and W. F. M. Hawe, assignors to Macbeth-Evans Glass Company, Pittsburgh, Pa. Lamp-globe attachment. No. 1,192,049; July 25; Gaz. vol. 228; p. 1140.
Evans, John, H. G. Howitt, and W. J. Prichard, Glamorgan, Wales. Apparatus or device for winding and paying out films, tapes, and the like. No. 1,192,776; July 25; Gaz. vol. 228; p. 1393.
Evansville Stove Works. (See Witman, Robert M., assignor.)
Everett, Andrew J., Lakeport, Cal. Gravity gate-latch. No. 1,190,531; July 11; Gaz. vol. 228; p. 508.
Evinrude Motor Company. (See Meyer, Christopher J., assignor.)
Ewart, James B., North Andover, assignor to Steel Specialties Company, Waltham, Mass. Shaft or spindle and means for securing body-confining abutments thereto. No. 1,192,404; July 25; Gaz. vol. 228; p. 1266.
Ewen, Malcolm F., Chicago, Ill., assignor to Larsen Ice Machine Company (Inc.), Wilmington, Del. Refrigerating apparatus. No. 1,190,225; July 4; Gaz. vol. 228; p. 354.
Excelsior Steel Furnace Company. (See Scherer, Albert G., assignor.)
Eyermann, Peter, Witkowitz, Austria-Hungary. Electric furnace. No. 1,189,356; July 4; Gaz. vol. 228; p. 53.
F. I. A. T. (See Fornaca, Guido, assignor.)
F. H. Mobile & Company. (See Aanerud, Louis, assignor.)
Fábián, Gisella, Washington, Pa. Curtain-pole. No. 1,192,405; July 25; Gaz. vol. 228; p. 1267.
Faccioli, Giuseppe, Pittsfield, Mass., assignor to General Electric Company. Means for preventing corona losses. No. 1,190,135; July 4; Gaz. vol. 228; p. 320.
Fageol, Roilie B., Philadelphia, Pa. Manufacture of filled and bent tubing. No. 1,189,675; July 4; Gaz. vol. 228; p. 165.
Fageol, Rollie B., Oakland, Cal. Amusement device for bathers. No. 1,190,743; July 11; Gaz. vol. 228; p. 585.
Fair, George A., Los Angeles, Cal. Combined door or window and ventilating structure. No. 1,192,406; July 25; Gaz. vol. 228; p. 1267.

Fairbanks, Alfred J., San Francisco, Cal. Advertising apparatus. No. 1,189,676; July 4; Gaz. vol. 228; p. 166.
Fairbanks, Charles E., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass. Quantity-stop for dispensing-pumps. No. 1,191,882; July 18; Gaz. vol. 228; p. 1028.
Falconer, Roswell G., Litchfield, Ohio. Tire-protector No. 1,192,291; July 25; Gaz. vol. 228; p. 1226.
Fanget, Michel, Lyon, France. Semi-automatic wood-lathe. No. 1,190,532; July 11; Gaz. vol. 228; p. 508.
Farbwerke vorm. Meister Lucius & Brüning. (See Reuter and Streitwolf, assignors.)
Farlese, John, New York, N. Y. Rack attachment for doors. No. 1,189,677; July 4; Gaz. vol. 228; p. 166.
Farnsworth, Frederick C., Brooklyn, N. Y., assignor to Farnsworth Manufacturing Company. Apparatus for handling and delivering water. No. 1,192,292; July 25; Gaz. vol. 228; p. 1227.
Farnsworth Manufacturing Company. (See Farnsworth, Frederick C., assignor.)
Farr, Herman G., Springfield, Mass. Automobile fire apparatus. No. 1,191,293; July 18; Gaz. vol. 228; p. 822.
Farrand Company, The. (See Jones, Vern L., assignor.)
Farrel Foundry & Machine Company. (See Hale, Bernard O., assignor.)
Farrow, Fred, assignor to Empire Ticket Company, Boston, Mass. Check or ticket punch. No. 1,191,680; July 18; Gaz. vol. 228; p. 955.
Faulk, Daniel F., assignor of one-half to W. C. Griffith, Holt, Fla. Valve-coupling. No. 1,190,136; July 4; Gaz. vol. 228; p. 320.
Fawell, Joseph E., Pittsburgh, Pa. Rolling-mill. No. 1,192,813; July 25; Gaz. vol. 228; p. 1406.
Fawell, Joseph E., Pittsburgh, Pa. Rolling-mill. No. 1,192,814; July 25; Gaz. vol. 228; p. 1406.
Fawell, Joseph E., Pittsburgh, Pa. Rolling-mill. No. 1,192,815; July 25; Gaz. vol. 228; p. 1407.
Faxon, Alfred W. (See Downes and Faxon.)
Fay, Alpheus, Louisville, Ky. Apparatus for operating upon composite substances. No. 1,191,883; July 18; Gaz. vol. 228; p. 1028.
Fay, Thomas J., Brooklyn, N. Y., assignor to The Goby Engine Company. Internal-combustion engine. No. 1,189,928; July 4; Gaz. vol. 228; p. 252.
Fear, Harley D. (See Mercer, William H., assignor.)
Fear, Thomas G., Birmingham, Ala. Safety-signal for balanced hoists. No. 1,192,609; July 25; Gaz. vol. 228; p. 1337.
Feeler, James W., Buhl, Idaho. Clover-huller. No. 1,190,137; July 4; Gaz. vol. 228; p. 320.
Feeley, Frank G., Chicago, Ill., assignor to M. D. Knowlton Company, Rochester, N. Y. Machine for making box-blanks. No. 1,192,407; July 25; Gaz. vol. 228; p. 1268.
Feeny, Edmund J., assignor to The Feeny Manufacturing Company, Muncie, Ind. Pump. No. 1,192,508; July 25; Gaz. vol. 228; p. 1301.
Feeny, Edmund J., assignor to Feeny Manufacturing Company, Muncie, Ind. Pneumatic-cleaner pumping mechanism. No. 1,192,509; July 25; Gaz. vol. 228; p. 1301.
Feeny Manufacturing Company, The. (See Feeny, Edmund J., assignor.)
Fehr, Diedrich I., Haskett, Manitoba, Canada. Lubricating device. No. 1,190,533; July 11; Gaz. vol. 228; p. 508.
Feldkamp, Frederick A., Newark, N. J., assignor to Electrolytic Products Co. Hollow structure for radiators, condensers, and the like. No. 1,191,681; July 18; Gaz. vol. 228; p. 956.
Felicetti, John B. (See Sylvester and Felicetti.)
Fellman, Edward J. Milwaukee, Wis. Fastener for outer sashes and the like. No. 1,189,245; July 4; Gaz. vol. 228; p. 11.
Fellows, Edwin R., assignor to The Fellows Gear Shaper Company, Springfield, Vt. Apparatus for generating and cutting irregular gears. No. 1,190,390; July 11; Gaz. vol. 228; p. 459.
Fellows, Edward R., assignor to The Fellows Gear Shaper Company, Springfield, Vt. Means for generating and cutting irregular gears. No. 1,190,391; July 11; Gaz. vol. 228; p. 459.
Fellows Gear Shaper Company, The. (See Fellows, Edwin R., assignor.)
Fenton, Frank, Akron, Ohio. Inner tube for pneumatic tires. No. 1,190,744; July 11; Gaz. vol. 228; p. 585.
Ferguson, Arthur. (See Hughes, Ferguson, and Lowe.)
Ferguson, Arthur S., assignor of one-half to S. L. McIntire, Springfield, Mo. Toy moving-picture machine. No. 1,192,610; July 25; Gaz. vol. 228; p. 1337.
Ferguson, Donald M., assignor to General Motors Company, Detroit, Mich. Vehicle-wheel. No. 1,190,274; July 11; Gaz. vol. 228; p. 418.
Ferguson, William C., Champaign, Ill. Building-block. No. 1,190,226; July 4; Gaz. vol. 228; p. 354.
Ferrell, Charles E., Oklahoma, Okla. Vegetable-binder. No. 1,190,392; July 11; Gaz. vol. 228; p. 460.
Ferris, Henry W., Lyndon, Kans. Vegetable-cutter. No. 1,190,275; July 11; Gaz. vol. 228; p. 418.
Fesler, Joel B., New York, N. Y. Brush. No. 1,190,227; July 4; Gaz. vol. 228; p. 354.
Fesler, Joel B., New York, N. Y. Fastening device. No. 1,190,745; July 11; Gaz. vol. 228; p. 586.
Fesler, Joel B., New York, N. Y. Fastening device. No. 1,190,882; July 11; Gaz. vol. 228; p. 636.
Fesler, Joel B., assignor to Fesler Sales Company, New York, N. Y. Fountain-brush. No. 1,190,228; July 4; Gaz. vol. 228; p. 355.
Fesler Sales Company. (See Fesler, Joel B., assignor.)
Fessenden, Reginald A., Brookline, Mass. Utilizing pulverulent matter as fuel. No. 1,191,072; July 11; Gaz. vol. 228; p. 701.
Field, William A., Chicago, Ill. Lifting-jack. No. 1,192,611; July 25; Gaz. vol. 228; p. 1338.
Fields, Moses M., Palestine, Tex. Hay-press. No. 1,190,393; July 11; Gaz. vol. 228; p. 460.
Fihn, Albert H., Faribault, Minn. Sleigh attachment. No. 1,189,678; July 4; Gaz. vol. 228; p. 166.
Finch, Maurice S., assignor to Specialty Shoe Machinery Company, St. Joseph, Mo. Adjustable anvil for shoe-nailing machines. No. 1,191,682; July 18; Gaz. vol. 228; p. 956.
Finch, Stanley W., Washington, D. C. Building-block. No. 191,884; July 18; Gaz. vol. 228; p. 1029.
Finley, Hulon K., Aspermont, Tex. Surgical instrument. No. 1,191,683; July 18; Gaz. vol. 228; p. 957.
Finley, Jennie E., administratrix. (See Finley, Samuel.)
Finley, Sam E., Atlanta, Ga. Treating roadways. No. 1,192,178; July 25; Gaz. vol. 228; p. 1185.
Finley, Samuel, deceased, Geneseo, N. Y.; J. E. Finley administratrix. Concrete-mixer. No. 1,192,179; July 25; Gaz. vol. 228; p. 1185.
First Trust and Savings Bank, trustee. (See Campbell, Wilson L., assignor.)
Fischer, Emil, Berlin, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Phenylpropiolic acid compounds containing arsenic. No. 1,191,580; July 18; Gaz. vol. 228; p. 921.
Fischer, Maximilian H. (See Fischer, Robert, assignor.)
Fischer, Robert, Brooklyn, assignor to M. H. Fischer, New York, N. Y. Clutch for scarf-pins. No. 1,192,612; July 25; Gaz. vol. 228; p. 1338.
Fischmann, Max, Toronto, Ontario, Canada. Cushion. No. 1,192,510; July 25; Gaz. vol. 228; p. 1302.
Fisher, Carl, New York, N. Y. Combined safety-pin and clasp. No. 1,192,613; July 25; Gaz. vol. 228; p. 1338.
Fisher, Dudley T., Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Locomotive with haulage-cable mechanism. No. 1,190,394; July 11; Gaz. vol. 228; p. 460.
Fisher, Henry H., and W. C. Barnes, Evansville, Ind. Trolley-replacer. No. 1,190,534; July 11; Gaz. vol. 228; p. 509.
Fisher, Mayton M., Oakland, Cal. Variable-speed gearing. No. 1,192,777; July 25; Gaz. vol. 228; p. 1393.
Fishering, Fred E., Eureka, Cal. Cutting mechanism for display-racks. No. 1,191,777; July 18; Gaz. vol. 228; p. 992.
Fiske, Jonathan P. B., Newton, Mass. Slotted brick. No. 1,189,438; July 4; Gaz. vol. 228; p. 84.
Fithian, Frank L., Haddonfield, N. J. Fountain attachment for pens. No. 1,192,511; July 25; Gaz. vol. 228; p. 1302.
Fitz, George W., Peconic, N. Y. Shadow-pupillometer. No. 1,192,512; July 25; Gaz. vol. 228; p. 1302.
Flakes, A./S. (See Blichfeldt, Sören H., assignor.)
Flanagan, Matthew J., West Hoboken, N. J. Needle-spray and towel-rack. No. 1,191,778; July 18; Gaz. vol. 228; p. 992.
Fleagle, Arthur N., Baltimore, Md. Bottle-capping tool. No. 1,190,138; July 4; Gaz. vol. 228; p. 321.
Fleischmann, Raoul. (See Schiff, Sigmund, assignor.)
Fleming, John C., Boston, Mass. Storage automatic rarefier. No. 1,192,614; July 25; Gaz. vol. 228; p. 1338.
Fleming, Samuel H., assignor to National Carbon Company, Cleveland, Ohio. Electric furnace. No. 1,192,050; July 25; Gaz. vol. 228; p. 1140.
Fleming, Warren E., Manhattan, Kans. Label-moistener. No. 1,190,535; July 11; Gaz. vol. 228; p. 509.
Fletcher, Frederick H., *et al.*, committee. (See Ruggles, George W., assignor.)
Fletcher, Henry O., Boston, Mass. Shock-absorber. No. 1,189,439; July 4; Gaz. vol. 228; p. 84.
Fliegenschmidt, Tillmann P., and L. V. Prinzler, Indianapolis, Ind. Cooling-coil protector. No. 1,190,746; July 11; Gaz. vol. 228; p. 586.
Flintkote Manufacturing Company. (See Gardner, Perry G., assignor.)
Flitsch, Roland, Miner, N. D. Bottle-opener. No. 1,190,883; July 11; Gaz. vol. 228; p. 636.
Flodine, Carl H., Chicago, Ill. Window-cleaning and sprinkling device. No. 1,190,747; July 11; Gaz. vol. 228; p. 586.
Flood, Wilbur D., Martins Ferry, Ohio. Cup-dispensing apparatus. No. 1,190,276; July 11; Gaz. vol. 228; p. 419.
Flory, Edgar L., and B. M. Osbun, Chicago, Ill. Air-moistening device. No. 1,190,395; July 11; Gaz. vol. 228; p. 461.
Flower, Don Z., Minneapolis, Minn. Valve mechanism for internal-combustion engines. No. 1,191,169; July 18; Gaz. vol. 228; p. 778.
Flynn, Ira B., Pittsburg, Kans. Gage-cock. No. 1,190,277; July 11; Gaz. vol. 228; p. 419.
Fogal, John, E. W., Quincy, Ill. Valve-operating mechanism for motors. No. 1,192,293; July 25; Gaz. vol. 228; p. 1227.
Foote, John B., Chicago, Ill. Speed-reducing mechanism. No. 1,190,278; July 11; Gaz. vol. 228; p. 419.
Forbes, Edward E. (See Looman, Milo D., assignor.)

Ford, Edwin H., Wabash, Ind. Meter attachment for meter-box mounting. No. 1,191,503; July 18; Gaz. vol. 228; p. 894.
Ford, Eugene A., Uxbridge, Mass. Power-transmitter. No. 1,190,139; July 4; Gaz. vol. 228; p. 321.
Ford, M. J. (See Wilsie, Harry, assignor.)
Forged Steel Valve Co. (See Hunter, Rudolph M., assignor.)
Forged Steel Wheel Company. (See Hansen, John M., assignor.)
Forkner, Charles E., Marshalltown, Iowa. Alfalfa-tillage machine. No. 1,189,554; July 4; Gaz. vol. 228; p. 124.
Fornaca, Guido, Turin, Italy, assignor to F. I. A. T. Combustion-engine. No. 1,190,252; July 4; Gaz. vol. 228; p. 364.
Fornaca, Guido, Turin, Italy, assignor to F. I. A. T. Combustion-engine. No. 1,190,253; July 4; Gaz. vol. 228; p. 365.
Fornaca, Guido, Turin, Italy, assignor to F. I. A. T. Inclosed combustion-engine. No. 1,190,254; July 4; Gaz. vol. 228; p. 365.
Fornaca, Guido, Turin, Italy, assignor to F. I. A. T. Combustion-engine. No. 1,190,255; July 4; Gaz. vol. 228; p. 366.
Forsyth, George H., Chicago, Ill., assignor, by mesne assignments, to Waugh Draft Gear Company. Draft-rigging. No. 1,192,513; July 25; Gaz. vol. 228; p. 1303.
Forsyth, William D. (See Sheldon, Harry E., assignor.)
Fortune, John R., Detroit, Mich. Automatic stoker. No. 1,192,180; July 25; Gaz. vol. 228; p. 1186.
Fosdick, Frank C., Chicago, Ill. Drifting apparatus for locomotives. No. 1,189,246; July 4; Gaz. vol. 228; p. 12.
Foster, Walter E. (See Fry, Cole, and Foster.)
Foster, William M. C., assignor to Mead Cycle Co., Chicago, Ill. Bicycle. No. 1,189,929; July 4; Gaz. vol. 228; p. 253.
Fountain, Claude R., Athens Ga. Combined stove and fireless cooker. No. 1,190,993; July 11; Gaz. vol. 228; p. 675.
Fountain, Cyrille F., and W. A. Langford, Park City, Utah. Rotary valve for internal-combustion engines. No. 1,191,684; July 18; Gaz. vol. 228; p. 957.
Fouts, George B., Alliance, Ohio. Trolley-wheel guard. No. 1,192,051; July 25; Gaz. vol. 228; p. 1141.
Fouts, George B., Alliance, Ohio. Trolley-switch. No. 1,192,052; July 25; Gaz. vol. 228; p. 1141.
Fouts, George B., Alliance, Ohio. Device for removing snow and ice from trolley-wires. No. 1,192,053; July 25; Gaz. vol. 228; p. 1141.
Fox Accessories Co. (See Fox, John H., assignor.)
Fox, Daniel S., Chester, Conn. Tool-holder. No. 1,189,930; July 4; Gaz. vol. 228; p. 253.
Fox, John H., New York, assignor, by mesne assignments, to Fox Accessories Co., Inc., Brooklyn, N. Y. Gasolene-gage. No. 1,189,440; July 4; Gaz. vol. 228; p. 85.
Fraizer, Frank L., Troy, Ohio. Transmission-gearing for automobiles. No. 1,191,956; July 25; Gaz. vol. 228; p. 1106.
Frame, Abraham L., Reading, Pa. Vacuum-cleaner nozzle. No. 1,192,408; July 25; Gaz. vol. 228; p. 1268.
Frame, Abraham L., Reading, Pa. Vacuum-cleaner nozzle. No. 1,192,409; July 25; Gaz. vol. 228; p. 1269.
Frame, Robert E., Michigan City, Ind., assignor to F. X. Mudd, Chicago, Ill. Poultry-car. No. 1,191,294; July 18; Gaz. vol. 228; p. 822.
Francis, Eugene S., New York, N. Y. Trunk. No. 1,191,581; July 18; Gaz. vol. 228; p. 921.
Francis, William J., Pittsburgh, Pa. Stropper. No. 1,189,555; July 4; Gaz. vol. 228; p. 125.
Francis, Willie F., Dott, W. Va. Moistener. No. 1,190,279; July 11; Gaz. vol. 228; p. 420.
Frank, Daniel W. L., assignor, by mesne assignments, to G. M. Engels, Chicago, Ill. Plumb or level. No. 1,190,229; July 4; Gaz. vol. 228; p. 355.
Frank, John J., Pittsfield, Mass., assignor to General Electric Company. Protective device. No. 1,190,140; July 4; Gaz. vol. 228; p. 321.
Frank Prox Company. (See Prox, Herman C., assignor.)
Frankenstein, William B. (See Glende and Frankenstein.)
Fraser, Alexander S., Cairo, Ill. Traction-wheel. No. 1,190,536; July 11; Gaz. vol. 228; p. 510.
Frazel, Charles H. (See Bardwell, Chester L., assignor.)
Frazer, William D., Dain, assignor of one-fourth to J. B. Dodge, Richwood, W. Va. Heating-stove. No. 1,190,396; July 11; Gaz. vol. 228; p. 461.
Frazier, George W., Oakland, Cal. Radiator. No. 1,189,357; July 4; Gaz. vol. 228; p. 54.
Frederick, William A., assignor to Twin-Rim Company, Boston, Mass. Supplemental-tire holder. No. 1,192,816; July 25; Gaz. vol. 228; p. 1407.
Free, John, Sr., East Pittsburgh, Pa. Mixer. No. 1,191,170; July 18; Gaz. vol. 228; p. 778.
Free Stump Remover Manufacturing Company. (See Ratliff, Albert T., assignor.)
Freeble, Thomas M., Rochester, C. Schuster, Pittsburgh, Pa. Porch-swing. No. 1,192,046; July 25; Gaz. vol. 228; p. 1139.
Freeman, Charles D., Lockport, N. Y. Phonograph-record cabinet. No. 1,190,748; July 11; Gaz. vol. 228; p. 587.
Freeman, John W., Oklahoma, Okla. Airship. No. 1,190,397; July 11; Gaz. vol. 228; p. 462.
Freeman, Ladbrook H., Cleveland, Ohio. Cuff and neck-band press. No. 1,190,280; July 11; Gaz. vol. 228; p. 420.
Freeze, Johnathan R., Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Fence-post. No. 1,190,749; July 11; Gaz. vol. 228; p. 587.
French, Michael, Mammoth, Cal. Door-lock. No. 1,191,779; July 18; Gaz. vol. 228; p. 992.
French, Morgan C., Craig, Colo. Plow-coiter. No. 1,191,685; July 18; Gaz. vol. 228; p. 958.
Frey, John E., Pittsburgh, Pa. Fire-escape. No. 1,192,615; July 25; Gaz. vol. 228; p. 1339.
Frick Company. (See Oderman, Eric H., assignor.)
Frick, William C., Deal Beach, N. J. Apparatus for welding tubing. No. 1,192,410; July 25; Gaz. vol. 228; p. 1269.
Fried. Krupp Aktiengesellschaft. (See Knoch, Oscar, assignor.)
Fried. Krupp Aktiengesellschaft. (See Schön, Ludwig, assignor.)
Friesner, Jesse L., Lima, Ohio. Loading apparatus. No. 1,190,141; July 4; Gaz. vol. 228; p. 322.
Frigid Fluid Company. (See Eckert, William F., assignor.)
Frohne, Albert, Chicago, Ill. Resistance-box and the like. No. 1,189,931; July 4; Gaz. vol. 228; p. 253.
Fromm, John F., Rochester, N. Y. Motor-vehicle. No. 1,191,295; July 18; Gaz. vol. 228; p. 823.
Fry, Lawford H., Yeagertown, A. G. Cole and W. H. Foster, Lewistown, Pa. Spring shearing and nibbing machine. No. 1,192,616; July 25; Gaz. vol. 228; p. 1339.
Fry, Leslie, Des Moines, Iowa. Safety-wheel. No. 1,190,537; July 11; Gaz. vol. 228; p. 510.
Fry, Louis. (See Kross, Samuel, assignor.)
Frye, Rufus H. (See Stanton and Frye.)
Fuel Economizer Company, The (See Kennedy, Walter J., assignor.)
Fuhrman, Herman C., assignor to The Tokheim Mfg. Co., Cedar Rapids, Iowa. Operating mechanism for meters. No. 1,191,171; July 18; Gaz. vol. 228; p. 778.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,191,172; July 18; Gaz. vol. 228; p. 779.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Calendar. No. 1,192,054; July 25; Gaz. vol. 228; p. 1142.
Fuller, William D., Springfield, Ohio, assignor, by mesne assignments, to Elliott Company, Pittsburgh, Pa. Tube-cleaner. No. 1,189,556; July 4; Gaz. vol. 228; p. 125.
Fulton Company, The. (See Fulton, Weston M., assignor.)
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Radiator-casing. No. 1,192,411; July 25; Gaz. vol. 228; p. 1269.
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Manufacture of flexible corrugated walls. No. 1,192,412; July 25; Gaz. vol. 228; p. 1270.
Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Grinding-machine. No. 1,189,247; July 4; Gaz. vol. 228; p. 12.
Furey, Peter P., Newark, N. J. Clothes-line holder. No. 1,189,679; July 4; Gaz. vol. 228; p. 166.
Furman, George B., East Orange, N. J. Apparatus for treating food stuffs and the like. No. 1,190,638; July 11; Gaz. vol. 228; p. 548.
Fusaro, Telemaco A. J., Cincinnati, Ohio. Shoe-last. No. 1,191,686; July 18; Gaz. vol. 228; p. 958.
Futcher, John A. (See McClain and Futcher.)
G. & W. Electric Specialty Co. (See Williams, Paul F., assignor.)
Gaebler, Max H. (See Schultz, Emil W., assignor.)
Gage, Charles M., deceased; J. Gage, administratrix, Portland, Oreg. Guard for sawing-machines. No. 1,191,412; July 18; Gaz. vol. 228; p. 864.
Gage, Julia, administratrix. (See Gage, Charles M.)
Gagnon, Philias A., Bathurst, New Brunswick, Canada. Automatic air-hose coupling. No. 1,190,639; July 11; Gaz. vol. 228; p. 548.
Galbraith, Ambrose G., Parry Sound, Ontario, Canada. Clothes-drier. No. 1,191,173; July 18; Gaz. vol. 228; p. 779.
Gale, Ernest L., Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Safety device. No. 1,190,884; July 11; Gaz. vol. 228; p. 637.
Gallon Iron Works & Manufacturing Company, The. (See Arndt, Franklin E., assignor.)
Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Vulcanizer. No. 1,191,296; July 18; Gaz. vol. 228; p. 823.
Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Bead-rolling device for pneumatic tires. No. 1,192,181; July 25; Gaz. vol. 228; p. 1186.
Gantz, John S., Sapulpa, Okla. Tank. No. 1,192,294; July 25; Gaz. vol. 228; p. 1227.
Garber, Jesse B., assignor to The Deming Company, Salem, Ohio. Pump. No. 1,189,932; July 4; Gaz. vol. 228; p. 254.
Gardner, Alice M., executrix. (See Gardner, Frederick N. and F. E.)
Gardner, Frederic E. (See Gardner, Frederick N. and F. E.)
Gardner, Frederick N., deceased, and F. E., assignors of one-third to L. W. Thompson, Beloit, Wis.; A. M. Gardner, executrix. Grinding-machine. No. 1,189,557; July 4; Gaz. vol. 228; p. 125.
Gardner, Jefferson M., New London, Conn. Airship. No. 1,189,680; July 4; Gaz. vol. 228; p. 167.

Gardner, Perry G., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Machine for punching roof material. No. 1,191,297; July 18; Gaz. vol. 228; p. 823.
Garey, George G., Indianapolis, Ind. Range. No. 1,192,295; July 25; Gaz. vol. 228; p. 1228.
Garfield, James R., trustee. (See Webster, Harry G., assignor.)
Garfinkel, Ettey. (See Garfinkel, Himan, assignor.)
Garfinkel, Himan, New York, assignor to E. Garfinkel, Brooklyn, N. Y. Bed-spring. No. 1,190,142; July 4; Gaz. vol. 228; p. 322.
Garford Manufacturing Company, The. (See Beyland, Sidney A., assignor.)
Garford Manufacturing Company, The. (See Dean, William W., assignor.)
Garford Manufacturing Company, The. (See Slough, Frank M., assignor.)
Garrett, Charles B., assignor to The Globe Automatic Sprinkler Company, Cincinnati, Ohio. Dry-pipe valve. No. 1,189,805; July 4; Gaz. vol. 228; p. 211.
Garrett, William H., Centralia, Mo. Combined rail and tie brace. No. 1,189,933; July 4; Gaz. vol. 228; p. 254.
Garrity, William F., and A. Jarvis, Bayonne, N. J. Purifying oil. No. 1,190,538; July 11; Gaz. vol. 228; p. 510.
Garver, Otto, and M. Grider, assignors of one-third to C. W. Schmehl, St. Marys, Ohio. Oil-well pump. No. 1,190,281; July 11; Gaz. vol. 228; p. 421.
Gaskill, Charles H., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Swing-truck. No. 1,190,143; July 4; Gaz. vol. 228; p. 323.
Gasper, Michael J., Hazleton, Pa. Coal-jig. No. 1,192,296; July 25; Gaz. vol. 228; p. 1228.
Gass, Charles A., Red Rock, Ariz. Pumping-jack. No. 1,191,780; July 18; Gaz. vol. 228; p. 993.
Gass, Myer C. (See Dillon and Gass.)
Gatchell, Leslie W., Newberg, Oreg. Billing-card. No. 1,191,582; July 18; Gaz. vol. 228; p. 921.
Gates, Benjiman L., assignor to R. H. Brown, Chicago, Ill. Baby-cart. No. 1,190,398; July 11; Gaz. vol. 228; p. 462.
Gates, Benjiman L., assignor to R. H. Brown, Chicago, Ill. Child's collapsible vehicle. No. 1,190,399; July 11; Gaz. vol. 228; p. 462.
Gates, Isaac N., Jacksonville, assignor of one-half to D. R. Sheen, Peoria, Ill. Mechanism for use in building concrete structures. No. 1,190,240; July 4; Gaz. vol. 228; p. 359.
Gathmann, Emil, Baltimore, Md. Sink-head for molds. No. 1,192,617; July 25; Gaz. vol. 228; p. 1340.
Gaulke, William H. (See Sorgel and Gaulke.)
Gaunt, Charles F., Montreal, Quebec, Canada. Button-fastener. No. 1,192,413; July 25; Gaz. vol. 228; p. 1270.
Gaunt, Walter F., Birmingham, England. Means for fixing buttons to belt-clasps and to certain other articles. No. 1,192,414; July 25; Gaz. vol. 228; p. 1270.
Gauthier, Aime, Willow City, N. D. Horseshoe. No. 1,191,413; July 18; Gaz. vol. 228; p. 864.
Gavard, George F., assignor of one-half to L. E. Steele, Denver, Colo. Hydrocarbon-burner. No. 1,192,297; July 25; Gaz. vol. 228; p. 1229.
Gearless Differential Co. (See Bailey and Rice, assignors.)
Geartts, Mae H., Marinette, Wis. Attachment for flour-sifters. No. 1,190,282; July 11; Gaz. vol. 228; p. 421.
Gedeon, Joseph J., assignor to T. Kundtz, Lakewood, Ohio. Cabinet for sewing-machines, type-writers, &c. No. 1,192,055; July 25; Gaz. vol. 228; p. 1142.
Gehman, Charles A., Philadelphia, Pa., assignor to Gehman Pump Company, Phoenix, Ariz. Measuring-pump. No. 1,191,298; July 18; Gaz. vol. 228; p. 824.
Gehman Pump Company. (See Gehman, Charles A., assignor.)
Gehnrich, Hermann, Brooklyn, N. Y. Combination window and screen. No. 1,190,885; July 11; Gaz. vol. 228; p. 637.
Geiger, Frederick J. (See Davis, Anthony E., assignor.)
General Chemical Company. (See Stout, Harry H., assignor.)
General Electric Company. (See Ackerman, Paul, assignor.)
General Electric Company. (See Aeuer, Ernst, assignor.)
General Electric Company. (See Alquist, Karl, assignor.)
General Electric Company. (See Baldwin, Henry S., assignor.)
General Electric Company. (See Batchelder, Asa F., assignor.)
General Electric Company. (See Beechlyn, John T., assignor.)
General Electric Company. (See Byrne, John R., assignor.)
General Electric Company. (See Caldwell, Frederick W., assignor.)
General Electric Company. (See Creighton, Elmer E. F., assignor.)
General Electric Company. (See Dantsizen, Christian, assignor.)
General Electric Company. (See Dechamps, Heinrich, assignor.)
General Electric Company. (See Dodge, Austin R., assignor.)
General Electric Company. (See Emmet, William L. R., assignor.)
General Electric Company. (See Faccioli, Giuseppe, assignor.)
General Electric Company. (See Frank, John J., assignor.)
General Electric Company. (See Green, Harold V., assignor.)
General Electric Company. (See Hall, Chester I., assignor.)
General Electric Company. (See Halvorson, Cromwell A. B., Jr., assignor.)
General Electric Company. (See Hayden, Joseph L. R., assignor.)
General Electric Company. (See Hewlett, Edward M., assignor.)
General Electric Company. (See Hill, George H., assignor.)
General Electric Company. (See Kraus, Ernest, assignor.)
General Electric Company. (See Lang, Johan G. V., assignor.)
General Electric Company. (See Latour, Marius C. A., assignor.)
General Electric Company. (See Orange, John A., assignor.)
General Electric Company. (See Osnos, Mendel, assignor.)
General Electric Company. (See Pentz, Albert D., assignor.)
General Electric Company. (See Potter, William B., assignor.)
General Electric Company. (See Read, Robert H., assignor.)
General Electric Company. (See Reist, Henry H., assignor.)
General Electric Company. (See Reist and Maxwell, assignors.)
General Electric Company. (See Ruete, William T., assignor.)
General Electric Company. (See Sargent, Howard R., assignor.)
General Electric Company. (See Stevens, George E., assignor.)
General Electric Company. (See Stöbe, Otto, assignor.)
General Electric Company. (See Stock, Henry W., assignor.)
General Electric Company. (See Taylor, John B., assignor.)
General Electric Company. (See Thomson, Elihu, assignor.)
General Electric Company. (See Treitel and Sulzberger, assignors.)
General Electric Company. (See Weintraub, Ezechiel, assignor.)
General Electric Company. (See Wiard, John B., assignor.)
General Electric Company. (See Wildhagen, Oswald, assignor.)
General Electric Company. (See Wolff, Georg, assignor.)
General Electric Company. (See Wood, James J., assignor.)
General Electric Company. (See Wright, Gilbert, assignor.)
General Electric Company. (See Young and Watson, assignors.)
General Fire Extinguisher Company. (See Loepsinger, Albert J., assignor.)
General Motors Company. (See Ferguson, Donald M., assignor.)
General Optical Company. (See Meyrowitz, Emil B., assignor.)
George H. Frothingham Company. (See Prescott, Arthur T., assignor.)
George, John F., Camden, N. J. Machine for making pens. No. 1,189,681; July 4; Gaz. vol. 228; p. 167.
George, William C., assignor of one-half to D. B. D. Smeltzer, Iola, Kans. Burner. No. 1,189,558; July 4; Gaz. vol. 228; p. 126.
Georgenson, Clarence H. (See Georgenson, Peter J. and C. H.)
Georgenson, Peter J. and C. H., Tustin, Wis. Primer for explosion-engines. No. 1,190,539; July 11; Gaz. vol. 228; p. 511.
Geraci, Angelo, Annapolis, Md. Chair attachment. No. 1,189,934; July 4; Gaz. vol. 228; p. 254.
Geraghty, John P., Jersey City, N. J. Fender for automobiles. No. 1,191,957; July 25; Gaz. vol. 228; p. 1107.
Gerber, Emanuel, Kansas City, Mo. Shoe-cleaner. No. 1,189,559; July 4; Gaz. vol. 228; p. 126.
Gergely, Albert, Milwaukee, assignor of one-half to A. J. Wilsman, Two Rivers, Wis. Station-indicator. No. 1,189,441; July 4; Gaz. vol. 228; p. 85.
Gerlach, George W., Cumberland, Iowa. Safety block-signal. No. 1,191,414; July 18; Gaz. vol. 228; p. 865.
Gerstenzang, Abraham, New York, N. Y. Toilet article. No. 1,192,182; July 25; Gaz. vol. 228; p. 1186.
Gerstenzang, Abraham, New York, N. Y. Tooth-brush. No. 1,192,298; July 25; Gaz. vol. 228; p. 1229.
Getteiman, Frederick, Milwaukee, Wis. Carbureter. No. 1,190,540; July 11; Gaz. vol. 228; p. 511.
Gheen, John W., Philadelphia, Pa. Bottle-holder. No. 1,189,442; July 4; Gaz. vol. 228; p. 85.
Gibbons, Mary A., Des Moines, Iowa. Pneumatic tire. No. 1,190,144; July 4; Gaz. vol. 228; p. 323.
Gibbs, Frank. (See Beardon, Thomas M., assignor.)
Gibson, Arthur H. C., New York, N. Y., assignor to Auto-Ped Company of America. Self-propelled vehicle. No. 1,192,514; July 25; Gaz. vol. 228; p. 1303.

Gibson, Arthur H. C., New York, N. Y., assignor to Auto-Ped Company of America. Self-propelled vehicle. No. 1,192,515; July 25; Gaz. vol. 228; p. 1304.

Gibson, George H., Montclair, N. J. Heating system. No. 1,189,806; July 4; Gaz. vol. 228; p. 211.

Gibson, George H., Montclair, N. J. Differential-pressure-balancing mechanism. No. 1,191,415; July 18; Gaz. vol. 228; p. 865.

Gibson, George H., Montclair, N. J. Measuring apparatus. No. 1,191,416; July 18; Gaz. vol. 228; p. 865.

Gibson, Marion E., Portland, Oreg. Sterilizing-cabinet. No. 1,190,541; July 11; Gaz. vol. 228; p. 511.

Gibson, Marshall D., Webster Groves, and M. L. Oglesby, assignors to said Gibson and W. H. McCormick, St. Louis, Mo. Wrapping-machine. No. 1,190,283; July 11; Gaz. vol. 228; p. 421.

Giele, Walter S., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Weir-plate. No. 1,190,400; July 11; Gaz. vol. 228; p. 463.

Gieselman, Henry, Syracuse, N. Y. Hay-loader. No. 1,192,056; July 25; Gaz. vol. 228; p. 1142.

Gift, Benjamin F., Dunkirk, Ind. Automatic centrifugal glassware-making machinery. No. 1,190,145; July 4; Gaz. vol. 228; p. 323.

Gilbert & Barker Manufacturing Company. (See Fairbanks, Charles E., assignor.)

Gilbert, Robert H., Ontonagon, Mich. Life-raft. No. 1,191,417; July 18; Gaz. vol. 228; p. 866.

Giles, Georges, Fribourg, Switzerland, , Electrolytic condenser or electrolytic valve. No. 1,190,886; July 11; Gaz. vol. 228; p. 637.

Giles, Isaac F., Trenton, N. J. Device for measuring dry materials. No. 1,189,248; July 4; Gaz. vol. 228; p. 13.

Gilfert, Henry E. (See Alder and Gilfert.)

Gill, Albert S., *et al.*, committee. (See Ruggles, George W., assignor.)

Gillespie, Samuel G., Charleston, W. Va. Anti-door-slamming device. No. 1,191,583; July 18; Gaz. vol. 228; p. 921.

Gillett, Fred L., Montclair, N. J. Mechanic's trestle. No. 1,191,687; July 18; Gaz. vol. 228; p. 958.

Gillies, Robert A., Raymond, Alberta, Canada. Automobile-tank. No. 1,191,958; July 25; Gaz. vol. 228; p. 1107.

Gilligan, John D., Rhinelander, Wis. Piston for explosive-engines. No. 1,191,174; July 18; Gaz. vol. 228; p. 779.

Gilman, Myron A., Westfield, Mass. Folding lunch-box. No. 1,191,638; July 18; Gaz. vol. 228; p. 958.

Gingras, Octave, Laurierville, Quebec, Canada. Shock-absorber. No. 1,189,682; July 4; Gaz. vol. 228; p. 167.

Gingras, Octave, Laurierville, Quebec, Canada. Flexible tire-rim. No. 1,190,887; July 11; Gaz. vol. 228; p. 637.

Girard, Joseph, J. Clairmont, and T. Chenier, Tupper Lake, N. Y. Runner attachment for automobiles. No. 1,190,284; July 11; Gaz. vol. 228; p. 422.

Girardelli, Riccardo, Rome, Italy. Motor with rotating field for repeating angular movements at a distance overcoming great resistance. No. 1,192,618; July 25; Gaz. vol. 228; p. 1340.

Giseke, John J., Chicago, Ill. Collapsible crate. No. 1,192,415; July 25; Gaz. vol. 228; p. 1270.

Gisholt Machine Company. (See Miller, William L., assignor.)

Gist, Felta B., Brownfield, Tex. Safety pipe-grip. No. 1,190,146; July 4; Gaz. vol. 228; p. 324.

Glade, George H. (See Jenkins, Harry E., assignor.)

Gladish, William J., Sr., assignor of one-half to L. N. Cox, Chattanooga, Tenn. Automatic train control. No. 1,192,183; July 25; Gaz. vol. 228; p. 1187.

Glascock, Jasper E., assignor of one-half to G. E. Lacy, Greenfield, Ind. Pool-ball rack and score board. No. 1,192,184; July 25; Gaz. vol. 228; p. 1187.

Glass, Perley R., Brookline, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gang-fastener-setting machine. No. 1,191,885; July 18; Gaz. vol. 228; p. 1029.

Glassford, George W., Sr., Cleveland, Ohio. Dust-arrester. No. 1,189,807; July 4; Gaz. vol. 228; p. 212.

Glastre, Alfred P. (See Jones and Glastre.)

Glau, Albert J., San Ardo, Cal. Dismountable rim. No. 1,191,402; July 18; Gaz. vol. 228; p. 861.

Glauber, Joseph H., deceased, Cleveland, Ohio; The Citizens Savings & Trust Company, executor. Coupling for basins, &c. No. 1,191,886; July 18; Gaz. vol. 228; p. 1029.

Glauber, Joseph H., deceased, Cleveland, Ohio; The Citizens Savings & Trust Company, executor. Packing member for service-clamps. No. 1,191,887; July 18; Gaz. vol. 228; p. 1030.

Glauber, Joseph H., deceased, Cleveland, Ohio; The Citizens Savings & Trust Company, executor. Water-distributing device. No. 1,191,888; July 18; Gaz. vol. 228; p. 1030.

Gleason, Dora P., Cincinnati, Ohio. Device for waving hair. No. 1,191,889; July 18; Gaz. vol. 228; p. 1030.

Gleason, Edward D., assignor to R. H. King, Brooklyn, N. Y. Sterling silver. No. 1,191,890; July 18; Gaz. vol. 228; p. 1030.

Glende, Theodore A., and W. B. Frankenstein, assignors to Pritchard Stamping Company, Rochester, N. Y. Tubular lantern. No. 1,189,240; July 4; Gaz. vol. 228; p. 13.

Globe Automatic Sprinkler Company, The. (See Garrett, Charles B., assignor.)

Gloede, Richard F., Evanston, Ill. Jardinière. No. 1,190,147; July 4; Gaz. vol. 228; p. 324.

Gobie, Jules, Valentigney, France. Digging-machine. No. 1,189,935; July 4; Gaz. vol. 228; p. 255.

Goby Engine Company, The. (See Fay, Thomas J., assignor.)

Goddard, Robert H., Worcester, Mass. Rocket apparatus. No. 1,191,299; July 18; Gaz. vol. 228; p. 824.

Godley, Charles E., Detroit, Mich., assignor, by mesne assignments, to Edmunds & Jones Corporation, New York, N. Y. Plug. No. 1,190,750; July 11; Gaz. vol. 228; p. 587.

Goebel, Frank A., Port Arthur, Ontario, Canada. Drain-rack. No. 1,192,299; July 25; Gaz. vol. 228; p. 1229.

Goetz, Emil S. (See Thompson and Goetz.)

Goewey, Charles T., South Bend, Ind. Parcel-post case. No. 1,190,148; July 4; Gaz. vol. 228; p. 324.

Goldberg, Simon Y., Minneapolis, Minn. Shirt. No. 1,191,584; July 18; Gaz. vol. 228; p. 921.

Golde, Traugott, Gera, Germany. Top for conveyances. No. 1,190,751; July 11; Gaz. vol. 228; p. 588.

Golden, Charles E. (See Anderson, Edward V., assignor.)

Golder, Fred R., Chicago, Ill. Aerial propeller. No. 1,190,149; July 4; Gaz. vol. 228; p. 325.

Golding, John F., Washington, D. C. Door-check. No. 1,191,891; July 18; Gaz. vol. 228; p. 1030.

Goldman, Bronislaw, Charlottenburg, Germany. Apparatus for stirring, agitating, or mixing liquids. No. 1,191,585; July 18; Gaz. vol. 228; p. 922.

Goldman, Jay M., St. Louis, Mo. Automatic electrolytic cell. No. 1,191,300; July 18; Gaz. vol. 228; p. 825.

Goldschmidt Thermit Company. (See Stöhr, Franz, assignor.)

Goldsmith, Byron B., New York, N. Y. Making rubber bands. No. 1,189,936; July 4; Gaz. vol. 228; p. 255.

Goldsmith, Byron B., New York, N. Y. Eraser. No. 1,189,937; July 4; Gaz. vol. 228; p. 255.

Goldsmith, Byron B., New York, N. Y. Making rubber bands. No. 1,189,938; July 4; Gaz. vol. 228; p. 255.

Goldsmith, Byron B., New York, N. Y. Carbon-paper and making same. No. 1,189,939; July 4; Gaz. vol. 228; p. 256.

Goldsmith, Byron B., New York, N. Y. Making wooden tubes. No. 1,191,689; July 18; Gaz. vol. 228; p. 959.

Gomes, Joseph P., New York, assignor of one-half to C. A. Bush, Brooklyn, N. Y. Artificial tooth. No. 1,191,586; July 18; Gaz. vol. 228; p. 922.

Gondos, Georg, Zurich, Switzerland. Rotary drill. No. 1,189,560; July 4; Gaz. vol. 228; p. 126.

Good, Albert. (See Kreitzer and Good.)

Good Inventions Co. (See Good, John, assignor.)

Good, John, New York, N. Y. Labyrinth-valve. No. 1,189,940; July 4; Gaz. vol. 228; p. 256.

Good, John, Brooklyn, N. Y. Filer-spindle. No. 1,191,960; July 25; Gaz. vol. 228; p. 1108.

Good, John, assignor to Good Inventions Co., Brooklyn, N. Y. Hackle-chain apparatus. No. 1,191,959; July 25; Gaz. vol. 228; p. 1108.

Goodbody, Edward M., Brooklyn, assignor to The Intertype Corporation, New York, N. Y. Linotype-machine. No. 1,192,620; July 25; Gaz. vol. 228; p. 1341.

Goodfriend, Felix. (See Kurowski and Martini, assignors.)

Gooding, Charles S. (See Hammond, Taft, and Gooding.)

Goodyear Rubber Company. (See Payne, Fred E., assignor.)

Gordon, David D., Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio. Switching mechanism. No. 1,190,888; July 11; Gaz. vol. 228; p. 638.

Gorst, Joseph, Northwich, England. Key-holding device for keyboard musical instruments. No. 1,190,994; July 11; Gaz. vol. 228; p. 675.

Goslee, Hart J., Chicago, Ill., assignor to Consolidated Dental Manufacturing Company, New York, N. Y. Crown-pin for dental work. No. 1,189,808; July 4; Gaz. vol. 228; p. 212.

Gosmeyer, Frank J., Clearwater, Minn. Potato-planter. No. 1,189,358; July 4; Gaz. vol. 228; p. 54.

Goss, Edgar S., and S. A. Barrickman, Franklin, Pa. Plunger and valve for artesian or water and oil wells. No. 1,192,619; July 25; Gaz. vol. 228; p. 1341.

Goss, Harry T., Rutherford, and J. W. Bryce, Bloomfield, N. J., assignors to International Time Recording Company of New York, Endicott, N. Y. Adding-machine. No. 1,190,752; July 11; Gaz. vol. 228; p. 588.

Gottlieb, Jacob. (See Kuntze, Fredrick H. L., assignor.)

Gottlieb, William, Port Jervis, N. Y. Metallic tie. No. 1,192,300; July 25; Gaz. vol. 228; p. 1230.

Gould Coupler Company. (See Richards, Willard F., assignor.)

Gould Storage Battery Company. (See Hubbard, Albert S., assignor.)

Gouldbourn, Joseph, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Variable-speed mechanism. No. 1,190,285; July 11; Gaz. vol. 228; p. 422.

Gouldbourn, Joseph, A. Bates, and A. E. Jerram, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Upper-molding machine. No. 1,190,753; July 11; Gaz. vol. 228; p. 588.

Gowder, Arthur, and L. O. Brand, Riverside, Cal. Clutch-pedal-regulating device. No. 1,190,995; July 11; Gaz. vol. 228; p. 675.

Grabe, Leo G., St. George, N. Y. Attachment for wash-boilers and the like. No. 1,189,809; July 4; Gaz. vol. 228; p. 212.

Grady, Thomas, Rochester, N. Y. Filter. No. 1,189,810; July 4; Gaz. vol. 228; p. 213.

Graham, Andrew W., Buffalo, N. Y., assignor of one-half to E. M. Treat, Pittsburgh, Pa. Ventilation of sepulchral memorials. No. 1,192,621; July 25; Gaz. vol. 228; p. 1341.

Graham Bottle Machine Company. (See Graham and Miller, assignors.)

Graham & Company, Alfred. (See Rickets, William J., assignor.)

Graham, George H., Upper Montclair, N. J., assignor to Universal Stamping Machine Company, New York, N. Y. Inking mechanism. No. 1,190,640; July 11; Gaz. vol. 228; p. 549.

Graham, Joseph B., and F. R. Miller, Loogootee, Ind., assignors to Graham Bottle Machine Company. Means for producing bottles. No. 1,189,811; July 4; Gaz. vol. 228; p. 213.

Grandbois, Francois D., Stockton, Cal. Brake for motor-vehicles. No. 1,190,542; July 11; Gaz. vol. 228; p. 511.

Granel, Camille, Bouscat par Lesperon, Landes, France. Production of resinous materials. No. 1,190,889; July 11; Gaz. vol. 228; p. 639.

Graphite Lubricating Company, The. (See Bache, Leigh S., assignor.)

Grasselli Chemical Company, The. (See Drefahl, Louis C., assignor.)

Grasselli Chemical Company, The. (See Wood, Charles D., assignor.)

Grath, Walter P. St. Louis, Mo. Brick-machine. No. 1,192,057; July 25; Gaz. vol. 228; p. 1142.

Gravel, Amable, Portland, Oreg. Bucking-wedge. No. 1,192,185; July 25; Gaz. vol. 228; p. 1188.

Graves, Edgar A., Rochester, N. Y. Holder for sharpening gravers and other tools. No. 1,192,416; July 25; Gaz. vol. 228; p. 1271.

Gray, Harry L., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic camera or holder. No. 1,192,058; July 25; Gaz. vol. 228; p. 1143.

Gray, Max, New York, N. Y. Fire-escape. No. 1,191,504; July 18; Gaz. vol. 228; p. 895.

Gray, Niel, Jr. (See Wadhams, Darius T., assignor.)

Gray, Thomas L., Seattle, assignor to Car-Wheel Lock Company, King county, Wash. Wheel-locking device. No. 1,191,587; July 18; Gaz. vol. 228; p. 922.

Greaves, Edwin E., assignor to Crouse-Hinds Company, Syracuse, N. Y. Connection for electric conduits. No. 1,190,641; July 11; Gaz. vol. 228; p. 549.

Greaves, William A., Cincinnati, Ohio. Engine-lathe. No. 1,191,505; July 18; Gaz. vol. 228; p. 895.

Green, Harold V., Chicago, Ill., assignor to General Electric Company. Speed control of D. C. motors. No. 1,190,150; July 4; Gaz. vol. 228; p. 325.

Green, Warren T., assignor to Mengel Box Company, Louisville, Ky. Machine for grooving boxes. No. 1,190,151; July 4; Gaz. vol. 228; p. 325.

Greene, Chester W., East Lynn, assignor to Commonwealth Engineering Company, Inc., Lynn, Mass. Film-developing box. No. 1,189,359; July 4; Gaz. vol. 228; p. 54.

Greene, John T., assignor to The National Electric Specialty Company, Toledo, Ohio. Vacuum lightning-arrester. No. 1,190,190; July 18; Gaz. vol. 228; p. 959.

Greene, Samuel W., East Greenwich, R. I. Respirator. No. 1,192,186; July 25; Gaz. vol. 228; p. 1188.

Greenfield Paper Bottle Company. (See Johnson and Schiff, assignors.)

Greenleaf, Robert P., Hudson, assignor to F. Billings, Cleveland, Ohio. Digging and conveying apparatus. No. 1,189,443; July 4; Gaz. vol. 228; p. 86.

Greenwald, Mole, New York, N. Y. Display-form. No. 1,191,691; July 18; Gaz. vol. 228; p. 959.

Greer, James, Kearney, N. J. Igniter for inflammable liquids. No. 1,189,683; July 4; Gaz. vol. 228; p. 168.

Gregory, Ernest S., Anaconda, Mont. Ball-mill. No. 1,190,401; July 11; Gaz. vol. 228; p. 463.

Greiff, Christian E. P., and C. F. Schreiber, assignors of one-third to C. J. Klein, Chicago, Ill. Automobile safety-lock. No. 1,192,516; July 25; Gaz. vol. 228; p. 1304.

Grider, Marion. (See Garver and Grider.)

Grier, Frank L. (See Grier, Garrett L. and F. L.)

Grier, Garrett L. and F. L., Milford, Del. Matching tooth-cement. No. 1,191,692; July 18; Gaz. vol. 228; p. 960.

Griffin, Frank A., Hornell, N. Y. Safety hand-hole cover for steam-boilers and air and oil reservoirs. No. 1,192,417; July 25; Gaz. vol. 228; p. 1271.

Griffith, Roy, Melrose, Mass. Detachable auxiliary cover for booklets. No. 1,191,961; July 25; Gaz. vol. 228; p. 1108.

Griffith, William C. (See Faulk, Daniel F., assignor.)

Grininger, George W., assignor of one-half to C. R. Lose, Cuyahoga Falls, Ohio. Pliers. No. 1,189,561; July 4; Gaz. vol. 228; p. 127.

Grimm, Israel M., Peoria, Ill. Sash-fastener. No. 1,190,230; July 4; Gaz. vol. 228; p. 355.

Groehn, Otto J., and F. L. Alldis, assignors to Briscoe Manufacturing Co., Detroit, Mich. Radiator-bracket. No. 1,189,562; July 4; Gaz. vol. 228; p. 127.

Groom, Wesley G., Storm Lake, Iowa. Corer. No. 1,191,588; July 18; Gaz. vol. 228; p. 922.

Grootten, Maximilian N., Petrograd, Russia. Door. No. 1,189,250; July 4; Gaz. vol. 228; p. 13.

Gross, Louis F., Scranton, Pa. Dental-disk holder. No. 1,190,152; July 4; Gaz. vol. 228; p. 326.

Grosz, Adam H., assignor of one-half to B. W. Seidel, New Orleans, La. Wheel structure. No. 1,191,175; July 18; Gaz. vol. 228; p. 780.

Grothey, Ivern W., York, Pa., assignor to Scott & Williams, Incorporated, Camden, N. J. Automatic stop mechanism for knitting-machines. No. 1,189,684; July 4; Gaz. vol. 228; p. 168.

Grove, Edwin W. (See Crumbaugh, George P., assignor.)

Grover, Albert D., New York, N. Y., and E. E. Barber, Malden, Mass., assignors to Autosales Gum & Chocolate Company, New York, N. Y. Washer-catching device for coin-controlled vending-machines. No. 1,192,301; July 25; Gaz. vol. 228; p. 1230.

Grover, Fred W. (See Parker and Grover.)

Grover, Perry M., Ernfold, Saskatchewan, Canada. Centrifugal machine. No. 1,189,812; July 4; Gaz. vol. 228; p. 213.

Grundy, Frank, Jersey City, N. J. Removable top for vehicles. No. 1,190,153; July 4; Gaz. vol. 228; p. 326.

Grymes, Raymond E. (See Stokes and Grymes.)

Guelich, Charles E., Kingston, Pa., assignor to Guelich Paving Process Company, Huron, S. D. Asphalt drying, heating, and mixing plant. No. 1,190,642; July 11; Gaz. vol. 228; p. 550.

Guelich Paving Process Company. (See Guelich, Charles E., assignor.)

Guerini, Annibale A., Middleboro, Mass. Fireproof building. No. 1,189,360; July 4; Gaz. vol. 228; p. 55.

Guett, Monroe, assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Switch. No. 1,189,685; July 4; Gaz. vol. 228; p. 169.

Gugeler, Oscar W., Burlington, Iowa. Whip-socket. No. 1,191,962; July 25; Gaz. vol. 228; p. 1109.

Guignard, Edwin M. F., Peking, China. Camera and attachments therefor. No. 1,190,996; July 11; Gaz. vol. 228; p. 676.

Gulf Refining Company. (See Brooks, Essex, and Smith, assignors.)

Gunther, William E., Omaha, Nebr. Electric-light casing. No. 1,192,187; July 25; Gaz. vol. 228; p. 1188.

Gustafson, Gustaf A., Harvey, assignor of one-half to O. E. Oleson, Chicago, Ill. Device for automatically maintaining the water in boilers at a certain level. No. 1,191,903; July 25; Gaz. vol. 228; p. 1109.

Gutberlet, Charles, Philadelphia, Pa., assignor of one-half to G. D. Cox. Deinking-machine for plate-wipers. No. 1,191,506; July 18; Gaz. vol. 228; p. 895.

Gütermann, Rudolf, Perosa Argentina, Italy. Combing-machine. No. 1,190,997; July 11; Gaz. vol. 228; p. 676.

Guthat, Albert W., Chicago, Ill. Trestle. No. 1,191,301; July 18; Gaz. vol. 228; p. 825.

Guthrie, Edward. (See Leslie, Alexander C., assignor.)

Gutowski, Anthony, and T. S. Blazucki, Detroit, Mich. Combined milk and mail box. No. 1,191,589; July 18; Gaz. vol. 228; p. 922.

H. & B. American Machine Company. (See Repass, George E., assignor.)

H. & S. Pump Company, The. (See Holdaway, William S., assignor.)

H. C. Hart Manufacturing Company, The. (See Keyes, Nelson B., assignor.)

H. D. Merritt Company. (See Morse, Lewis, assignor.)

H. D. Smith & Company, The. (See Thomson, William S., assignor.)

H. K. Mulford Company. (See Reichel and Werner, assignors.)

H. L. Hurst Manufacturing Company, The. (See Werstler, Roy N., assignor.)

Haas, John W. C., Newburgh, N. Y. Rail tie and fastener. No. 1,190,154; July 4; Gaz. vol. 228; p. 326.

Haase, Wilbert W., Forest Park, Ill. Self-sealing vault or receptacle. No. 1,191,964; July 25; Gaz. vol. 228; p. 1110.

Haassler, Frank C., Brooklyn, N. Y. Fire indicating and extinguishing system. No. 1,189,686; July 4; Gaz. vol. 228; p. 169.

Hachmann, Frederick, St. Louis, Mo., assignor to Hachmann Specialty Company. Container. No. 1,190,754; July 11; Gaz. vol. 228; p. 589.

Hachmann Specialty Company. (See Hachmann, Frederick, assignor.)

Hagel, Joseph E., Zabriskie, Cal. Calendar-watch. No. 1,190,155; July 4; Gaz. vol. 228; p. 327.

Hager, Henry F., assignor to Henry Schomer Company, Chicago, Ill. Metal fabric. No. 1,191,693; July 18; Gaz. vol. 228; p. 960.

Haggin, Louis T., *et al.*, executors. (See Kendall, Edward D., assignor.)

Haggin, Margaret V., *et al.*, executors. (See Kendall, Edward D., assignor.)

Hahn, John, Los Angeles, Cal. Method of propulsion for vessels and screw-propeller for effecting the same. No. 1,190,755; July 11; Gaz. vol. 228; p. 589.

Hahnemann, Walter, Kiel, Germany. Submarine telegraphy or telephony. No. 1,190,156; July 4; Gaz. vol. 228; p. 327.

Haines, Jones & Cadbury. (See Bacon, Albert E., assignor.)

Haire, Robert E., Paris, Ontario, Canada. Making wall-coating compounds. No. 1,190,756; July 11; Gaz. vol. 228; p. 590.

Halahan, William H. B., Rye, N. Y. Twin connection for fire-hydrants. No. 1,192,622; July 25; Gaz. vol. 228; p. 1342.

Halcomb, Lee O., Indianapolis, Ind. Corn-harvester. No. 1,190,231; July 4; Gaz. vol. 228; p. 356.

Hale, Bernard O., assignor to Farrel Foundry & Machine Company, Ansonia, Conn. Rubber-mixing mill. No. 1,189,444; July 4; Gaz. vol. 228; p. 86.

Hale and Kilburn Company. (See Kilburn, John E., assignor.)

Hale and Kilburn Company. (See Marsh, Richard B., assignor.)

Hale & Kilburn Company. (See Wallace, John G., assignor.)

Halfmann, Whilldin D., Philadelphia, Pa. Hat-conforming means. No. 1,190,998; July 11; Gaz. vol. 228; p. 676.

Hall, Chester I., Fort Wayne, Ind., assignor to General Electric Company. Electrical instrument. No. 1,190,157; July 4; Gaz. vol. 228; p. 327.

Hall, Horatio S., Home Valley, Wash. Fluid-vending machine. No. 1,190,543; July 11; Gaz. vol. 228; p. 511.

Hall, Josephine A., San Diego, Cal. Attachment for telephone-mouthpieces. No. 1,191,507; July 18; Gaz. vol. 228; p. 896.

Hall, Selden H., Poughkeepsie, assignor to The De Laval Separator Company, New York, N. Y. Back-pressure regulator for centrifugalizing-machines. No. 1,189,687; July 4; Gaz. vol. 228; p. 169.

Hall, Thomas P., and A. Bates, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Cementing-machine. No. 1,191,590; July 18; Gaz. vol. 228; p. 923.

Hall, William G., assignor of one-half to W. K. Coatsworth, California, Pa. Polish and making same. No. 1,189,445; July 4; Gaz. vol. 228; p. 87.

Hall, William P., Cedar Falls, N. C. Vending-machine. No. 1,190,158; July 4; Gaz. vol. 228; p. 328.

Hallauer, Carl H., Los Angeles, Cal. Valve mechanism for gas-engines. No. 1,190,232; July 4; Gaz. vol. 228; p. 356.

Hallberg, Carl J., Galesburg, Ill. Extensible door opening and jamb gage. No. 1,192,418; July 25; Gaz. vol. 228; p. 1271.

Hallett, Charles R., Denver, Colo. Crochet-book. No. 1,192,623; July 25; Gaz. vol. 228; p. 1342.

Halmrast, Kristian. (See Bjering, Hans C., assignor.)

Halsey, Edward S., Lynn, Mass., assignor to Halsey Manufacturing Co., Wilmington, Del. Individual-office-heat-regulating system. No. 1,191,694; July 18; Gaz. vol. 228; p. 960.

Halsey Manufacturing Co. (See Halsey, Edward S., assignor.)

Halvorson, Cromwell A. B., Jr., Lynn, Mass., assignor to General Electric Company. Arc-lamp. No. 1,190,159; July 4; Gaz. vol. 228; p. 328.

Hamann, Henry J., South Chicago, Ill. Film-winding apparatus. No. 1,192,517; July 25; Gaz. vol. 228; p. 1304.

Hamann, William, Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for marking shoe-uppers. No. 1,191,965; July 25; Gaz. vol. 288; p. 1110.

Hamilton, Harry W., Indianapolis, Ind. Fuel-feed system. No. 1,190,757; July 11; Gaz. vol. 228; p. 590.

Hamilton, Perry H. (See Betts and Hamilton.)

Hamilton, William L., Cleveland, Ohio. Spigot. No. 1,190,402; July 11; Gaz. vol. 228; p. 463.

Hammalian, Paul M. (See Smith, John J. C., assignor.)

Hammond, George F., Cleveland, Ohio. Device for pressing clothes. No. 1,192,518; July 25; Gaz. vol. 228; p. 1305.

Hammond, George F., Cleveland, Ohio. Device for pressing clothes. No. 1,192,519; July 25; Gaz. vol. 228; p. 1305.

Hammond, Philip H., U. S. Navy. Sextant. No. 1,191,073; July 11; Gaz. vol. 228; p. 701.

Hammond, Robert A., Sandwich, S. E. Taft, South Framingham, and C. S. Gooding, Brookline, Mass.; said Taft and Gooding assignors to said Hammond. Loom. No. 1,192,302; July 25; Gaz. vol. 228; p. 1230.

Hammond, William P., Passaic, N. J., assignor to Individual Drinking Cup Company, New York, N. Y. Dispensing device. No. 1,191,995; July 25; Gaz. vol. 228; p. 1121.

Hampton, Harry D., assignor of one-sixth to O. Bowman, Fresno, Cal. Rotary drill. No. 1,192,419; July 25; Gaz. vol. 228; p. 1271.

Hanauer, Darwin, Kingston, N. Y., assignor to Entz Motor Patents Corporation. Folding top for vehicles. No. 1,190,890; July 11; Gaz. vol. 228; p. 639.

Hancock, Henry, Baraboo, Wis. Device for holding railway-rails. No. 1,192,624; July 25; Gaz. vol. 228; p. 1342.

Hand, Frank S., Newark, N. J. Sheet-receiving cabinet. No. 1,190,758; July 11; Gaz. vol. 228; p. 590.

Hänel, Paul, assignor to L. B. Lehmann, Dresden, Germany. Beating apparatus, especially for the manufacture of chocolate. No. 1,189,941; July 4; Gaz. vol. 228; p. 256.

Hanford, Lemuel D., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Set-works gripping device. No. 1,189,563; July 4; Gaz. vol. 228; p. 127.

Hanger, Wade H., Wilkinsburg, assignor of one-fourth to F. C. Reed, Easton, Pa. Envelop sealing and stamping machine. No. 1,192,625; July 25; Gaz. vol. 228; p. 1342.

Hanks, Frederick W., Cleveland, Ohio. Closure for water-meters and the like. No. 1,192,188; July 25; Gaz. vol. 228; p. 1189.

Hanks, Frederick W., Cleveland, Ohio. Water-meter. No. 1,192,189; July 25; Gaz. vol. 228; p. 1189.

Hansen, Emil F., Providence, R. I. Link-mesh machine. No. 1,192,778; July 25; Gaz. vol. 228; p. 1394.

Hansen-Ellehammer, Jacob C., Copenhagen, Denmark. Fuel-supply apparatus for explosion-motors. No. 1,189,688; July 4; Gaz. vol. 228; p. 170.

Hansen, John M., assignor to Forged Steel Wheel Company, Pittsburgh, Pa. Hydraulic press. No. 1,191,302; July 18; Gaz. vol. 228; p. 825.

Hansen, John M., assignor to Forged Steel Wheel Company, Pittsburgh, Pa. Apparatus for the manufacture of spoked wheels. No. 1,191,591; July 18; Gaz. vol. 228; p. 923.

Hansen, Victor E., Brooklyn, assignor to International Cigar Machinery Company, New York, N. Y. Bunch-forming device for cigar-machines. No. 1,191,592; July 18; Gaz. vol. 228; p. 924.

Hansen, Victor E., Brooklyn, assignor to International Cigar Machinery Company, New York, N. Y. Cigar-filler-forming mechanism. No. 1,191,593; July 18; Gaz. vol. 228; p. 924.

Hanson, Hans P. (See Miner, Raymond C., assignor.)

Hanson, Isaac R., Oconee, and J. A. Hanson, Vernon, Ill. Rail-joint. No. 1,190,403; July 11; Gaz. vol. 228; p. 464.

Hanson, Jacob A. (See Hanson, Isaac R. and J. A.)

Harber, Joseph L., *et al.* (See Nichols, Watt M., assignor.)

Harber, William S., Sheldon, Tex. Tie-cutter. No. 1,191,176; July 18; Gaz. vol. 228; p. 780.

Harbourt, Wilson W., assignor of one-half to J. L. Caplinger, Pewee Valley, Ky. Game apparatus. No. 1,190,891; July 11; Gaz. vol. 228; p. 639.

Harbridge, Chester C., assignor to Detroit Demountable Rim Co., Detroit, Mich. Demountable rim. No. 1,189,446; July 4; Gaz. vol. 228; p. 87.

Hardebeck, Leo C., Elk Park, Mont. Shoe-fastener. No. 1,191,781; July 18; Gaz. vol. 228; p. 993.

Harden, Gilbert A., New York, N. Y. Mechanism for actuating the reversing mechanism of locomotives. No. 1,189,251; July 4; Gaz. vol. 228; p. 14.

Hardesty, Frank M., assignor of one-third to E. W. Lawyer and one-third to C. E. Lowry, Cambridge, Ohio. Clutch-release for motor-vehicles. No. 1,191,074; July 11; Gaz. vol. 228; p. 702.

Hardey, Virgil S., Chicago, Ill. Electric metering system. No. 1,191,177; July 18; Gaz. vol. 228; p. 780.

Hardin, Jacques J., Bellingham, Wash. Heating-stove. No. 1,192,190; July 25; Gaz. vol. 228; p. 1190.

Harding, Kirk L., Buchanan, Saskatchewan, Canada. Corset. No. 1,192,626; July 25; Gaz. vol. 228; p. 1343.

Harding, Simon J., Harrisburg, Pa. Washing-machine. No. 1,190,404; July 11; Gaz. vol. 228; p. 464.

Hardy, Edward, Canton, Mo. Seesaw. No. 1,189,942; July 4; Gaz. vol. 228; p. 256.

Hardy, George T., *et al.* (See Hooper, Frank B., assignor.)

Harlan, Earle, Fresno, Cal. Insulator. No. 1,190,286; July 11; Gaz. vol. 228; p. 423.

Harmon, Stanford. (See Robinson, Frank A., assignor.)

Harms, William T. (See Blauvelt and Harms.)

Harper Engineering Company *et al.* (See Harper, William, Jr., assignor.)

Harper, Frederick, Chicago, Ill. Mold for garbage-receptacles. No. 1,190,256; July 4; Gaz. vol. 228; p. 366.

Harper, William, Jr., New Bloomfield, Pa., assignor, by mesne assignments, of three-tenths to Harper Engineering Company and seven-tenths to T. A. Nevins, East Orange, N. J. Internal-combustion engine. No. 1,189,564; July 4; Gaz. vol. 228; p. 128.

Harriman, George V., New York, N. Y. Transmission for automobiles. No. 1,191,892; July 18; Gaz. vol. 228; p. 1031.

Harriman, George V., New York, N. Y. Clutch. No. 1,191,893; July 18; Gaz. vol. 228; p. 1031.

Harriman, George W. R., Malden, Mass. Means for presenting geographical and statistical information. No. 1,192,829; July 25; Gaz. vol. 228; p. 1412.

Harrington, James B., Dorchester, Mass., assignor to The Waverly Heating and Supply Company. Sheet-metal joint. No. 1,190,759; July 11; Gaz. vol. 228; p. 590.

Harrington, Sydney M. (See Ericksen, Leif, assignor.)

Harris, Archibald, Chicago, Ill. Trap. No. 1,190,643; July 11; Gaz. vol. 228; p. 550.

Harris Automatic Press Company, The. (See Harrold, Charles W., assignor.)

Harris, Frank P., Cranford, N. J. Fire-extinguishing compound. No. 1,190,160; July 4; Gaz. vol. 228; p. 328.

Harris, Frank P., Cranford, N. J. Fire-extinguishing compound. No. 1,190,161; July 4; Gaz. vol. 228; p. 329.

Harris, Joseph, Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-car draft-rigging. No. 1,192,059; July 25; Gaz. vol. 228; p. 1143.

Harris, Joseph, Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging. No. 1,192,191; July 25; Gaz. vol. 228; p. 1190.

Harris, Leonard B., Haddon Heights, N. J., assignor to Harris Patents Company, New York, N. Y. Internal-combustion engine. No. 1,192,520; July 25; Gaz. vol. 228; p. 1305.

Harris Patents Company. (See Harris, Leonard B., assignor.)

Harris, Richard G., Knoxville, Tenn. Field-tent. No. 1,190,999; July 11; Gaz. vol. 228; p. 677.

Harris, Scott A., Pawhuska, Okla. Breast-strap. No. 1,191,418; July 18; Gaz. vol. 228; p. 866.

Harris, William R., assignor to P. J. Shouvlin, Springfield, Ohio. Speed-regulating device. No. 1,192,192; July 25; Gaz. vol. 228; p. 1190.

Harrison, Burt S., Brooklyn, N. Y. Drier. No. 1,191,075; July 11; Gaz. vol. 228; p. 702.

Harrison, Elmer L. (See Teachout and Harrison.)

Harrison, Francis H., and A. J. Brown, Calcutta, British India, assignors of one-fourth to A. H. Wallis, Caterham, Surrey, and one-fourth to F. L. Wallis, Sanderstead, Surrey, England. Projectile for firearms. No. 1,191,178; July 18; Gaz. vol. 228; p. 781.

Harrison, Mary L., Rochester, N. Y. Ironing-board attachment. No. 1,191,782; July 18; Gaz. vol. 228; p. 993.

Harrison, Morris, New York, N. Y. Emergency leak-stopper. No. 1,191,000; July 11; Gaz. vol. 228; p. 677.

Harrison, Owen L., Coleta, Ill. Bag-closure. No. 1,190,544; July 11; Gaz. vol. 228; p. 512.

Harrison, Reuben O., Doran, Minn. Playing-cards. No. 1,191,419; July 18; Gaz. vol. 228; p. 866.

Harrison Safety Boiler Works. (See Giele, Walter S., assignor.)

Harrold, Charles W., Warren, assignor to The Harris Automatic Press Company, Niles, Ohio. Bag-feeder. No. 1,191,966; July 25; Gaz. vol. 228; p. 1110.

Harroun, Ray W., Indianapolis, Ind. Internal-combustion engine. No. 1,191,420; July 18; Gaz. vol. 228; p. 867.

Harry Vissering & Company. (See Anderson, Harry T., assignor.)

Harsh, Paul R., Toledo, Ohio. Keyhole-illuminating apparatus. No. 1,191,783; July 18; Gaz. vol. 228; p. 994.

Hart, Andrew B. (See Horan and Hart.)

Hart, Frederick A., Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,189,446; July 4; Gaz. vol. 228; p. 87.

Hart, Frederick A., Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,189,689; July 4; Gaz. vol. 228; p. 170.

Hart, Frederick A., Newark, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,190,171; July 4; Gaz. vol. 228; p. 332.

Hart, Frederick A., Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,190,233; July 4; Gaz. vol. 228; p. 356.

Hart, Frederick A., Jersey City, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,190,287; July 11; Gaz. vol. 228; p. 423.

Hart & Hegeman Manufacturing Company, The. (See Guett, Monroe, assignor.)

Hart, Herbert H., Evanston, Ill. Metal car-roof. No. 1,189,252; July 4; Gaz. vol. 228; p. 15.

Hart, James A., assignor to The Hobart M. Cable Company, Laporte, Ind. Machine for shaping ribs on piano sounding-boards. No. 1,189,253; July 4; Gaz. vol. 228; p. 15.

Hart, John E., and A. Benzinger, Columbus, Ohio. Spring-tire. No. 1,191,894; July 18; Gaz. vol. 228; p. 1032.

Hart, Mack K., Uniontown, Pa. Rail-joint. No. 1,191,784; July 18; Gaz. vol. 228; p. 994.

Hart, Ray E., Battle Creek, Mich. Register. No. 1,192,193; July 25; Gaz. vol. 228; p. 1191.

Hartcorn, Albert E. (See Werner, Lester A., assignor.)

Harter, Charles, St. Louis, and R. Wark, Maplewood, Mo. Slack-adjuster for car-brakes. No. 1,192,420; July 25; Gaz. vol. 228; p. 1272.

Hartford, Edward V., New York, N. Y. Antivibration device for vehicles. No. 1,189,943; July 4; Gaz. vol. 228; p. 257.

Hartford, Edward V., Deal, N. J. Combined electrical starter and transmission mechanism. No. 1,192,421; July 25; Gaz. vol. 228; p. 1272.

Hartley, Albert J., assignor of one-fourth to P. J. Millikin, one-fourth to H. C. Dempsey, one-fourth to F. J. Temple, and one-fourth to M. H. Hurd, Decatur, Ill. Mechanical movement. No. 1,191,695; July 18; Gaz. vol. 228; p. 961.

Hartnett, James W., Portland, Oreg. Necktie-holder. No. 1,191,895; July 18; Gaz. vol. 228; p. 1032.

Hartpence, Charles C., assignor to Lummus Cotton Gin Company, Columbus, Ga. Cotton-seed plug. No. 1,191,001; July 11; Gaz. vol. 228; p. 677.

Hartsaw, David W., Bristow, Okla. Lightning-conductor. No. 1,189,565; July 4; Gaz. vol. 228; p. 128.

Hartt, William M., Great Falls, Mont. Feeding device. No. 1,190,892; July 11; Gaz. vol. 228; p. 640.

Hartung, William J., Rochester, N. Y. Barometer. No. 1,191,508; July 18; Gaz. vol. 228; p. 896.

Haskell, Estelle V. (See Vaughan and Haskell.)

Haskell, George D. (See Buhler and Emerson, assignors.)

Hassam Paving Company. (See Hassam and Parker, assignors.)

Hassam, Walter E., Worcester, and H. Parker, Lancaster, Mass., assignors to Hassam Paving Company. Making pavement. No. 1,191,303; July 18; Gaz. vol. 228; p. 825.

Hasselgren, Carl P., Duluth, Minn. Collapsible fly-trap. No. 1,191,179; July 18; Gaz. vol. 228; p. 781.

Hassell, William W. (See Smith, William A., assignor.)

Hastings, Benjamin J., Taunton, Mass. Submarine salvage apparatus. No. 1,191,509; July 18; Gaz. vol. 228; p. 896.

Hastings, Donald T., Detroit, Mich., assignor, by mesne assignments, to Hupp Motor Car Corporation, Richmond, Va. Foot-rest for vehicles. No. 1,189,944; July 4; Gaz. vol. 228; p. 257.

Hatch, Edwin G., assignor to Clark Electric and Manufacturing Company, New York, N. Y. Insulator-clamp. No. 1,190,763; July 11; Gaz. vol. 228; p. 592.

Hathaway, Edgar F., assignor to American Warp-Drawing Machine Company, Boston, Mass. Mechanism for controlling or releasing and feeding independent, detached heddles. No. 1,190,760; July 11; Gaz. vol. 228; p. 591.

Hathaway, Edgar F., assignor to American Warp-Drawing Machine Company, Boston, Mass. Shifting mechanism for power-driven machines and means for simultaneously applying a brake. No. 1,190,761; July 11; Gaz. vol. 228; p. 591.

Hathaway, Edgar F., and C. D. Lanning, Dorchester, Mass. Mechanism for operating upon metallic heddles or the like. No. 1,190,762; July 11; Gaz. vol. 228; p. 591.

Hathaway, Harlow H., Phoenix, Ariz. Self-loading attachment for auto-trucks. No. 1,190,545; July 11; Gaz. vol. 228; p. 512.

Hathaway, Thomas F., assignor to Elgin American Manufacturing Company, Elgin, Ill. Cigarette-case. No. 1,189,813; July 4; Gaz. vol. 228; p. 214.

Hathhorn, Robert A., Houston Heights, Tex. Elevator. No. 1,191,421; July 18; Gaz. vol. 228; p. 867.

Hatlee, David H., Mechanicsville, N. Y. Speed-reducer. No. 1,192,627; July 25; Gaz. vol. 228; p. 1343.

Hattenberger, Charles M., Kettle River, Minn. Battery-box. No. 1,190,405; July 11; Gaz. vol. 228; p. 464.

Hattery, Joseph S., Waterloo, Iowa. Pneumatic pump. No. 1,190,546; July 11; Gaz. vol. 228; p. 513.

Hauer, Elmer E., Springfield, Ohio, assignor to Elliott Company, Pittsburgh, Pa. Strainer. No. 1,189,566; July 4; Gaz. vol. 228; p. 129.

Hauss, David J., Aurora, Ind. Music-player. No. 1,192,194; July 25; Gaz. vol. 228; p. 1191.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'f'g Co. Riveting-machine. No. 1,189,361; July 4; Gaz. vol. 228; p. 55.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'f'g Co. Mechanism for feeding rivets and the like. No. 1,191,180; July 18; Gaz. vol. 228; p. 781.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'f'g Co. Rivet-setting machine. No. 1,192,628; July 25; Gaz. vol. 228; p. 1343.

Haverly, Jerome, Los Angeles, Cal. Mercury-separator. No. 1,190,406; July 11; Gaz. vol. 228; p. 465.

Hawe, William F. M. (See Evans and Hawe.)

Hawkins, Edgar M., assignor to M. D. Knowlton Company, Rochester, N. Y. Carton-blank-forming machine. No. 1,189,945; July 4; Gaz. vol. 228; p. 257.

Hawkins, William W., and J. M. Duncan, Philadelphia, Pa. Fusible link. No. 1,191,919; July 18; Gaz. vol. 228; p. 1042.

Hawley, Amos H., assignor to International Money Machine Company, Terre Haute, Ind. Platen-feed mechanism. No. 1,192,629; July 25; Gaz. vol. 228; p. 1344.

Hawley, Eugene W., Philadelphia, Pa. Retaining device for garment-supporters. No. 1,192,521; July 25; Gaz. vol. 228; p. 1306.

Hawley, Frank M. (See Nedoma, Charles L., assignor.)

Hawn, Andrew P., assignor to J. Wolf, Laporte, Ind. Stop mechanism. No. 1,192,779; July 25; Gaz. vol. 228; p. 1394.

Hayden, Joseph L. R., Schenectady, N. Y., assignor to General Electric Company. Producing a flaming or luminous arc. No. 1,190,162; July 4; Gaz. vol. 228; p. 329.

Hayes Pump & Planter Company. (See Hayes, Ralph W. E., assignor.)

Hayes, Ralph W. E., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill. Double-acting valve for force-pumps. No. 1,189,814; July 4; Gaz. vol. 228; p. 214.

Hazel Atlas Glass Co., The. (See Bowman, Samuel B., assignor.)

Hazen, Earl A. (See Hazen, Lysle L., assignor.)

Hazen, Lysle L., assignor of one-half to E. A. Hazen, Beaver Falls, Pa. Speed-changing device. No. 1,190,764; July 11; Gaz. vol. 228; p. 592.

Hazleton, George H., Detroit, Mich. Driving and reversing clutch. No. 1,191,594; July 18; Gaz. vol. 228; p. 924.

Hazlett, W. F. (See Hochstein, Alfred P., assignor.)

Head, Robert, assignor to S. Lautenbach, New York, N. Y. Container for match-packages. No. 1,190,288; July 11; Gaz. vol. 228; p. 424.

Heaslet, James G., Detroit, Mich., assignor to The Studebaker Corporation. Vehicle-body. No. 1,192,303; July 25; Gaz. vol. 228; p. 1231.

Heaton, Lilly C., Pendleton, England. Envelop or bag for holding garments. No. 1,192,422; July 25; Gaz. vol. 228; p. 1273.
Hebern, Edward H., Oakland, Cal. Direction-indicating device for vehicles. No. 1,192,780; July 25; Gaz. vol. 228; p. 1395.
Hebert, Joseph, Orange, Tex. Hen-nest. No. 1,192,196; July 25; Gaz. vol. 228; p. 1192.
Hecke, John. Red Bud, Ill. Intestine-cleaner. No. 1,190,547; July 11; Gaz. vol. 228; p. 513.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Automatic pin-setting machine. No. 1,190,644; July 11; Gaz. vol. 228; p. 551.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Automatic pin-setting machine. No. 1,190,645; July 11; Gaz. vol. 228; p. 551.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Automatic pin-setting machine. No. 1,190,646; July 11; Gaz. vol. 228; p. 551.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Electromagnet. No. 1,190,647; July 11; Gaz. vol. 228; p. 552.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Automatic pin-setting machine. No. 1,190,648; July 11; Gaz. vol. 228; p. 552.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Automatic pin-setting machine. No. 1,190,649; July 11; Gaz. vol. 228; p. 553.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Automatic pin-setting machine. No. 1,190,650; July 11; Gaz. vol. 228; p. 553.
Hedenskoog, Ernest, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Machine for setting pins on bowling-alleys. No. 1,190,651; July 11; Gaz. vol. 228; p. 553.
Hedley, Frank, Yonkers, and J. S. Doyle, Mount Vernon, N. Y. Auxiliary control device for car-doors. No. 1,191,968; July 25; Gaz. vol. 228; p. 1111.
Hedman, Nils O., Leadville, Colo. Jack. No. 1,190,163; July 4; Gaz. vol. 228; p. 329.
Hedrick, William R., and A. C. Throckmorton, Rapidan, Va. Rail-joint chair. No. 1,192,304; July 25; Gaz. vol. 228; p. 1231.
Heffley, John, Sr., assignor to W. H. Heffley, Duncannon, Pa. Package-tie. No. 1,189,946; July 4; Gaz. vol. 228; p. 257.
Heffley, William H. (See Heffley, John, Sr., assignor.)
Heil, Christian P., Avon, S. D. Egg-testing device. No. 1,192,305; July 25; Gaz. vol. 228; p. 1231
Heilbrun, Ludwig I., Sagamore, Pa. Egg-candling device. No. 1,191,076; July 11; Gaz. vol. 228; p. 702.
Heilrath, Christian, Sacramento, Cal. Adjustable light-shade for vehicle-lamps. No. 1,191,422; July 18; Gaz. vol. 228; p. 868.
Helm, Joseph J., Kansas City, Mo. Vehicle-wheel. No. 1,189,567; July 4; Gaz. vol. 228; p. 129.
Helndrich, Frances, New York, N. Y. Corset. No. 1,191,785; July 18; Gaz. vol. 228; p. 994.
Helnselman, Noah F., Pike, W. Va. Railway-tie. No. 1,190,164; July 4; Gaz. vol. 228; p. 329.
Helser, Lucien, New York, N. Y. Steam-cooker. No. 1,192,306; July 25; Gaz. vol. 228; p. 1232.
Helbronner, André, Paris, France, assignor, by mesne assignments, to The R. U. V. Company, Inc. Apparatus for sterilizing water by means of ultra-violet rays. No. 1,191,304; July 18; Gaz. vol. 228; p. 826.
Heller, Moses, New York, N. Y. Tobacco-pipe. No. 1,189,690; July 4; Gaz. vol. 228; p. 171.
Helmbold, Paul, Colmar, and J. Weinbrenner, Thann, Germany. Differential feed mechanism for spinning or combing machines. No. 1,190,407; July 11; Gaz. vol. 228; p. 465.
Helms, Arthur J., Portland, Oreg., assignor to Boss Tool Mfg. Co. Miter-tool. No. 1,191,896; July 18; Gaz. vol. 228; p. 1032.
Hemenway, Ora E. (See Hemenway, William A. and O. E.)
Hemenway, William A. and O. E., Cottage Grove, Oreg. Fly-catcher. No. 1,190,165; July 4; Gaz. vol. 228; p. 330.
Hemphill, Henry B., Eldorado, Ill. Gas generator and burner. No. 1,192,781; July 25; Gaz. vol. 228; p. 1395.
Hempy, John H., New Hampshire, Ohio. Stump-burner. No. 1,189,568; July 4; Gaz. vol. 228; p. 129.
Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Controller for electric motors. No. 1,189,947; July 4; Gaz. vol. 228; p. 258.
Henderson, John, Cadillac, Mich. Stove. No. 1,189,691; July 4; Gaz. vol. 228; p. 171.
Henderson, John C., Washington, D. C., assignor to Driver-Harris Wire Company, Harrison, N. J. Article subjected to high external temperatures. No. 1,190,652; July 11; Gaz. vol. 228; p. 554.
Henderson, John H., Oakland, Cal. Road-roller. No. 1,190,257; July 4; Gaz. vol. 228; p. 360.
Henderson, Louis S., Blair, S. C. Crib attachment for beds. No. 1,191,696; July 18; Gaz. vol. 228; p. 961.
Henderson, Marcus L. (See Dillon and Henderson.)
Henderson, William H., Omaha, Nebr. Automobile-tire tread. No. 1,189,569; July 4; Gaz. vol. 228; p. 130.
Hendrickson, Fred K., Worcester, Mass., assignor to Reed-Prentice Company. Multiple-tool turning-lathe. No. 1,191,305; July 18; Gaz. vol. 228; p. 826.
Hendrickson, Robert O., Portland, Oreg., assignor, by mesne assignments, to Wallis Tractor Company, Racine, Wis. Gearing. No. 1,192,195; July 25; Gaz. vol. 228; p. 1192.
Hendrix, Joseph B., and C. Durossette, Walsenburg, Colo. Grease-gun. No. 1,190,241; July 4; Gaz. vol. 228; p. 360.
Henn, Edwin C. (See Smith, Oscar A., assignor.)
Hennessy, Daniel E., Holyoke, Mass., assignor, by mesne assignments, to H. W. Cowan, J. L. Wyckoff, and E. N. White, trustees. Valve device for hydraulic jacks. No. 1,189,815; July 4; Gaz. vol. 228; p. 215.
Henneuse, Clarence A., Marysville, Cal., assignor to The Yuba Construction Company. Tractor. No. 1,192,423; July 25; Gaz. vol. 228; p. 1273.
Hennig, Charles, South Prairie, Wash. Tie and rail-fastener. No. 1,191,181; July 18; Gaz. vol. 228; p. 782.
Hennig, Gustav K., assignor to Ludwig Hupfeld Aktiengesellschaft, Bohlitz-Ehrenberg, near Leipzig, Germany. Pneumatically-operated piano. No. 1,190,893; July 11; Gaz. vol. 228; p. 640.
Henriksen, Levi, Hampton, Nebr. Wrench. No. 1,191,967; July 25; Gaz. vol. 228; p. 1111.
Henroz, Arthur, Brussels, Belgium. Apparatus for making tiles. No. 1,192,630; July 25; Gaz. vol. 228; p. 1344.
Henry Schomer Company. (See Hager, Henry F., assignor.)
Henry, William W., Wollaston, assignor to S. H. Couch Company, Inc., Atlantic, Mass. Telephone-receiver. No. 1,190,548; July 11; Gaz. vol. 228; p. 513.
Hermanson, Oscar, New York, N. Y. Airship. No. 1,191,077; July 11; Gaz. vol. 228; p. 703.
Herring, William W., Shawnee, Okla. Agricultural machinery. No. 1,190,166; July 4; Gaz. vol. 228; p. 330.
Herrmann, E. F. (See Hood, Harry H., assignor.)
Hersh, Charles S., and C. J. O'Connor, Philadelphia, Pa. Non-refillable bottle. No. 1,190,408; July 11; Gaz. vol. 228; p. 465.
Hershberger, John H., Wilkes-Barre, Pa. Horseshoe. No. 1,191,002; July 11; Gaz. vol. 228; p. 678.
Hershman, Paul R., Chicago, Ill. Producing aluminate from alunite. No. 1,191,104; July 11; Gaz. vol. 228; p. 711.
Hershman, Paul R., Chicago, Ill. Producing aluminate from alunite. No. 1,191,105; July 11; Gaz. vol. 228; p. 711.
Hershman, Paul R., Chicago, Ill. Making aluminates from raw alunite. No. 1,191,106; July 11; Gaz. vol. 228; p. 711.
Hershman, Paul R., and R. D. Cooke, Chicago, Ill., assignors to Mineral Products Corporation, New York, N. Y. Production of aluminates from alunite. No. 1,189,254; July 4; Gaz. vol. 228; p. 15.
Herskovitz, Abraham, assignor to Peerless Light Company, Chicago, Ill. Incandescent mantles. No. 1,192,782; July 25; Gaz. vol. 228; p. 1395.
Herz, Alfred, Chicago, Ill. Electric water-heater. No. 1,190,289; July 11; Gaz. vol. 228; p. 424.
Herzog, Ernest, Atchison, Kans. Fence structure. No. 1,192,060; July 25; Gaz. vol. 228; p. 1144.
Hester, Henry B., New Haven, Ind. Litter-carrier. No. 1,192,307; July 25; Gaz. vol. 228; p. 1232.
Heule, Everett J. (See Hurd and Heule.)
Hevey, Herman, Biddeford, Me. Device for applying travelers on the rings of spinning-frames. No. 1,189,448; July 4; Gaz. vol. 228; p. 88.
Hewlett, Edward M., Schenectady, N. Y., assignor to General Electric Company. Machine for forming porcelain ware. No. 1,191,595; July 18; Gaz. vol. 228; p. 925.
Heylman, Edward M., assignor to Rock Island Plow Company, Rock Island, Ill. Engine gang-plow. No. 1,192,197; July 25; Gaz. vol. 228; p. 1193.
Heymann, William, Washington, D. C. Dictograph apparatus. No. 1,191,182; July 18; Gaz. vol. 228; p. 782.
Heywood Brothers and Wakefield Company. (See Watkins, Edward G., assignor.)
Hibbard, Ralph W., Burns, Oreg. Camp-stove. No. 1,189,255; July 4; Gaz. vol. 228; p. 16.
Hick, Harry J., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,190,894; July 11; Gaz. vol. 228; p. 640.
Hick, Harry J., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,190,895; July 11; Gaz. vol. 228; p. 641.
Hick, Harry J., assignor to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,190,896; July 11; Gaz. vol. 228; p. 641.
Hick, Harry J., assignor to The McCaskey Register Company, Incorporated, Alliance, Ohio. Wire-colling machine. No. 1,192,631; July 25; Gaz. vol. 228; p. 1344.
Hickey, Joseph. (See Williams and Hickey.)
Hickman, Patrick H., Irvington, N. J. Shoe-last. No. 1,191,183; July 18; Gaz. vol. 228; p. 782.
Hickman, Wilhelm, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Regenerating the waste products of galvanic batteries. No. 1,192,061; July 25; Gaz. vol. 228; p. 1144.
Hicks, Edwin P., Greenwood, Ark. Toy gun. No. 1,192,308; July 25; Gaz. vol. 228; p. 1232.

Hicks, Laura M., Bloomington, Ind. Washmitt. (Reissue.) No. 14,171; July 25; Gaz. vol. 228; p. 1417.
Higgins, Peter K., Waco, Tex., assignor to F. R. Parker, Chicago, Ill. Electric-line-apparatus protector. No. 1,192,835; July 25; Gaz. vol. 228; p. 1414.
Highfield, Arthur W. (See Hurd and Heule, assignors.)
Highley, Omar M., Converse, Ind. Type-writer. No. 1,189,449; July 4; Gaz. vol. 228; p. 88.
Hild, Frederic W., F. P. Maize, and W. L. Coop, Portland, Oreg. Combined door hanging and operating means. No. 1,191,897; July 18; Gaz. vol. 228; p. 1033.
Hill, Daniel B., Grayville, Ill. Acetylene-gas generator. No. 1,191,786; July 18; Gaz. vol. 228; p. 994.
Hill, Frank A., Rock Island, Ill. Engine. No. 1,190,290; July 11; Gaz. vol. 228; p. 424.
Hill, George H., Schenectady, N. Y., assignor to General Electric Company. Automatic control for flash-boilers. No. 1,190,167; July 4; Gaz. vol. 228; p. 330.
Hill, Harry W., assignor to American Optical Company, Southbridge, Mass. Forming bifocal lenses. No. 1,190,242; July 4; Gaz. vol. 228; p. 360.
Hill, William B., New York, N. Y., assignor of one-fourth to A. Sherwood, Bayonne, N. J. Detachable horseshoe-calk. No. 1,190,897; July 11; Gaz. vol. 228; p. 642.
Hill, William H. (See Young, Samuel L., assignor.)
Hilliker, Charles T. (See Quarmby, George, assignor.)
Hills, McCanna Company. (See Delaney, Thomas A., assignor.)
Hilton, Charles F., Jonesboro, Tenn. Rocker-fastener. No. 1,192,632; July 25; Gaz. vol. 228; p. 1345.
Himmel, Solomon. (See Hormes, William T., assignor.)
Himmer, Vitalis, Jr., Bayonne, N. J., assignor to C. K. Ash, Brooklyn, N. Y. Printing device. No. 1,191,697; July 18; Gaz. vol. 228; p. 962.
Hinckley, Arthur T., Niagara Falls, N. Y., assignor to National Carbon Company, Cleveland, Ohio. Making carbon articles. No. 1,192,062; July 25; Gaz. vol. 228; p. 1144.
Hindman, David C., assignor of one-third to P. A. Schultz, Rushville, Ill. Wrench. No. 1,191,596; July 18; Gaz. vol. 228; p. 925.
Hinkley, Paul, Los Angeles, Cal. Motor-car lock. No. 1,192,809; July 25; Gaz. vol. 228; p. 1233.
Hinton, Albert R., Greensboro, N. C. Mechanism for automatically applying bags to filling-machines. No. 1,190,898; July 11; Gaz. vol. 228; p. 642.
Hipple, George I., Chicago, Ill. Tire-pump. No. 1,191,510; July 18; Gaz. vol. 228; p. 897.
Hires, Owen M., Waycross, Ga. Glue-kettle. No. 1,189,816; July 4; Gaz. vol. 228; p. 215.
Hirsching, Henry, Oakland, Cal. Recovering values from ores. No. 1,190,549; July 11; Gaz. vol. 228; p. 514.
Hitchcock, Reuben, assignor to The Cleveland Folding Machine Company, Cleveland, Ohio. Sheet-delivery mechanism. No. 1,191,787; July 18; Gaz. vol. 228; p. 995.
Hix, Alfred G. O., Los Angeles, Cal. Shade-pull. No. 1,192,198; July 25; Gaz. vol. 228; p. 1193.
Hlubuček, Theodor, Cedar Rapids, Iowa. Garment-steaming form. No. 1,191,969; July 25; Gaz. vol. 228; p. 1111.
Hlubuček, Theodor, Cedar Rapids, Iowa. Garment-arm-steaming device. No. 1,191,970; July 25; Gaz. vol. 228; p. 1112.
Hobart M. Cable Company, The. (See Hart, James A., assignor.)
Hobart Manufacturing Company, The. (See Johnston, Herbert L., assignor.)
Hoberg, Frank H., Green Bay, Wis. Winding-roller. No. 1,192,063; July 25; Gaz. vol. 228; p. 1145.
Hochstein, Alfred P., assignor of one-fourth to W. F. Hazlett, Pittsburgh, Pa. Automatic train-stop. No. 1,191,511; July 18; Gaz. vol. 228; p. 897.
Hochstetter, Frederick W., New York, assignor to P. M. Pierson, Scarboro-on-the-Hudson, N. Y. Restoring blemished moving-picture films. No. 1,192,424; July 25; Gaz. vol. 228; p. 1273.
Hockenberry, Ernest F., Slippery Rock, Pa. Lock-nut. No. 1,190,409; July 11; Gaz. vol. 228; p. 465.
Hodde, Jacob H., assignor to Sangamo Electric Company, Springfield, Ill. Method of and apparatus for varying the speed of electric meters on reversal of current-flow. No. 1,190,291; July 11; Gaz. vol. 228; p. 425.
Hodges, Edward A., *et al.* (See Raymond, Edward B., assignor.)
Hoehn, John C. C., Chicago, Ill. Hydrogenating unsaturated fatty material. No. 1,189,817; July 4; Gaz. vol. 228; p. 216.
Hoel, Ola. Rennebu, Norway. Box for containing exposed and unexposed photograph-plates. No. 1,191,597; July 18; Gaz. vol. 228; p. 925.
Hoey, John J., Providence, R. I. Cloth-clamp for tentering-machines. No. 1,191,512; July 18; Gaz. vol. 228; p. 898.
Hofer, William L., Manhattan, Kans. Musical game. No. 1,189,450; July 4; Gaz. vol. 228; p. 88.
Hoff, John W., Chicago, Ill. Ash-sifter. No. 1,190,899; July 11; Gaz. vol. 228; p. 643.
Hoffman, Frank, assignor of one-half to E. K. Buttolph, Dunkirk, N. Y. Brake-gear. No. 1,191,107; July 11; Gaz. vol. 228; p. 712.
Hoffman, Henry D., Pittsburgh, Pa., assignor to International Money Machine Company, Terre Haute, Ind. Attachment for paying-machines or the like. No. 1,192,633; July 25; Gaz. vol. 228; p. 1345.
Hoffman, John, Medina, N. Y. Kitchen-fork. No. 1,189,692; July 4; Gaz. vol. 228; p. 172.
Hoffman, Rudolph, Kankakee, assignor to Sears, Roebuck and Company, Chicago, Ill. Safety starting device. No. 1,190,900; July 11; Gaz. vol. 228; p. 643.
Hoffman, Rudolph, Chicago Heights, assignor to Sears, Roebuck and Company, Chicago, Ill. Blue-flame oil-burner. No. 1,192,199; July 25; Gaz. vol. 228; p. 1198.
Hoffmann, Philip M. (See Rank and Hoffmann.)
Hofmann, Walter H., Richmond Hill, assignor to Richey, Browne & Donald, Inc., Maspeth, N. Y. Sand-handling appliance. No. 1,189,948; July 4; Gaz. vol. 228; p. 258.
Hofstrand, Oskar, Brooklyn, N. Y. Clothes-line adjuster and winder. No. 1,191,598; July 18; Gaz. vol. 228; p. 926.
Hoge, Joseph F. D. (See Hopkins and Hoge.)
Holcomb, James L., Indianapolis, Ind. Corn-popping machine. No. 1,192,634; July 25; Gaz. vol. 228; p. 1346.
Holdaway, William S., Provo, Utah, assignor to The H. & S. Pump Company. Pump. No. 1,191,423; July 18; Gaz. vol. 228; p. 868.
Holden, William P. (See Zigler and Holden.)
Hollenbeck, Charles A., Elmhurst, and A. C. Horn, New York, N. Y. Waterproof varnish composition and making same. No. 1,190,765; July 11; Gaz. vol. 228; p. 593.
Hollenbeck, Peter, Kildare, Okla. Change-speed gearing. No. 1,190,901; July 11; Gaz. vol. 228; p. 643.
Hollinger, Harvey T., Concordia, Kans. Drawing-board support. No. 1,191,424; July 18; Gaz. vol. 228; p. 868.
Hollis Automatic Traction Jack Company. (See Hollis, Otis A., assignor.)
Hollis, Otis A., assignor, by mesne assignments, to Hollis Automatic Traction Jack Company, Pittsburgh, Pa. Automobile vehicle. No. 1,189,256; July 4; Gaz. vol. 228; p. 16.
Holloway, Louis R., Victoria, Tex., assignor to Cabirange Manufacturing Company, Belleville, Ill. Stove and range. No. 1,189,818; July 4; Gaz. vol. 228; p. 216.
Holloway, Louis R., Victoria, Tex., assignor to Cabirange Manufacturing Company, Belleville, Ill. Stove-damper. No. 1,189,819; July 4; Gaz. vol. 228; p. 216.
Holly, Forrest C., Memphis, Tenn. Pulverizer and distributer for proportioning and feeding granulated material. No. 1,190,168; July 4; Gaz. vol. 228; p. 331.
Holmes, Grant. (See Butterworth and Holmes.)
Holmes, Norman V., and S. H. Arp, assignors to Sears, Roebuck and Company, Chicago, Ill. Sprinkler-head closer. No. 1,189,820; July 4; Gaz. vol. 228; p. 216.
Holmes, Stanley H., New Britain, Conn. Adjustable desk or table combination. No. 1,189,949; July 4; Gaz. vol. 228; p. 258.
Holsten, Theodor E., and W. Lundin, Watertown, S. D. Car-brake. No. 1,190,410; July 11; Gaz. vol. 228; p. 466.
Holt, Benjamin M. (See Piepgras and Holt.)
Holt, George W., assignor to J. Price, Poplar Bluff, Mo. Mechanical fly-catcher. No. 1,189,570; July 4; Gaz. vol. 228; p. 130.
Holt, Henry S. A., assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Caoutchouc-like substances and making them. No. 1,192,310; July 25; Gaz. vol. 228; p. 1233.
Holt, Thomas W., Staleybridge, England. Yarn-cleaning device. No. 1,190,169; July 4; Gaz. vol. 228; p. 331.
Holt, William F., Redlands, Cal. Vehicle-wheel. No. 1,192,311; July 25; Gaz. vol. 228; p. 1233.
Holtzer-Cabot Electric Company, The. (See Kennedy, Carlton L., assignor.)
Homans, Thomas S. (See Cromble and Homans.)
Homans, Thomas S., Hempstead, assignor to The Intertype Corporation, New York, N. Y. Line-composing and type-casting machine. No. 1,192,635; July 25; Gaz. vol. 228; p. 1346.
Honolulu Iron Works Company. (See Berry, James F., Jr., assignor.)
Hood, Harry H., Chicago, Ill., assignor to E. F. Herrmann. Can-body-seam-welding machine. No. 1,190,902; July 11; Gaz. vol. 228; p. 644.
Hooper, Frank B., assignor of forty one-hundedths to G. T. Hardy, Newport News, Va., fifteen one-hundredths to M. G. Isdale, London, England, and five one-hundredths to B. G. Schaffer, Newport News, Va. Feed-trough. No. 1,191,184; July 18; Gaz. vol. 228; p. 782.
Hoops, Herman W. (See Schippell, Carl F., assignor.)
Hoover, Orville L. M., Abilene, Tex., and S. J. Ardery, Woodward, Okla. Post-hole auger. No. 1,191,698; July 18; Gaz. vol. 228; p. 962.
Hoover, Thomas A., Fresno, Cal. Bumper for vehicles. No. 1,191,306; July 18; Gaz. vol. 228; p. 826.
Hopkins, Arthur T., Cleveland, Ohio, assignor to The Mechanical Rubber Company. Making hose. No. 1,190,292; July 11; Gaz. vol. 228; p. 425.
Hopkins, Harvey L., assignor of one-half to J. H. McElroy, individually, and one-half to J. H. McElroy, trustee, Chicago, Ill. Cutting apparatus. No. 1,190,411; July 11; Gaz. vol. 228; p. 466.
Hopkins, Richard M., and J. F. D. Hoge, New York, N. Y., assignors to American District Telegraph Company, Jersey City, N. J. Burglar or detection system. No. 1,192,312; July 25; Gaz. vol. 228; p. 1233.
Hopper, Henry S., Detroit, Mich. Vehicle drive-gear. No. 1,191,699; July 18; Gaz. vol. 228; p. 962.

Hopson, John S., Asheville, N. C. Automobile-wheel-holding device. No. 1,191,599; July 18; Gaz. vol. 228; p. 926.

Horan, John H., and A. B. Hart, Grayling, Mich. Paddle attachment for vehicle-wheels. No. 1,189,821; July 4; Gaz. vol. 228; p. 217.

Hormes, William T., Govans, assignor to S. Himmel, Baltimore, Md. Sectional cabinet. No. 1,190,170; July 4; Gaz. vol. 228; p. 332.

Horn, Aaron C. (See Hollenbeck and Horn.)

Horn, Arthur P., Fort Thomas, Ky. Water-shoe. No. 1,191,788; July 18; Gaz. vol. 228; p. 995.

Horne, Joseph W. (See Anderson and Horne.)

Horner, Jacob W. (See Swoyer and Horner.)

Hornschuch, Otto F., Seattle, Wash. Combined table and cabinet. No. 1,191,307; July 18; Gaz. vol. 228; p. 827.

Horsley, Robert L., Memphis, Tenn., assignor to Compress Buckle Company, Fort Worth, Tex. Bale-tie buckle. No. 1,192,817; July 25; Gaz. vol. 228; p. 1407.

Horton, Bryson D., Detroit, Mich. Electrical switch. No. 1,190,903; July 11; Gaz. vol. 228; p. 644.

Horton, John O. (See Jackson and Horton.)

Horton, John R., Crosett, Ark. Cattle-guard. No. 1,191,971; July 25; Gaz. vol. 228; p. 1112.

Hosch, Walter E., St. Louis, Mo. Traction-wheel. No. 1,191,898; July 18; Gaz. vol. 228; p. 1033.

Hoskins, Eugene T. (See Burpee and Hoskins.)

Hossfeld, Albert, Lewiston, Minn. Manure-loader. No. 1,190,550; July 11; Gaz. vol. 228; p. 514.

Hough, Arthur, Dragon, Quebec, Canada. Condenser. No. 1,191,898; July 18; Gaz. vol. 228; p. 1034.

House, Henry A., Bridgeport, Conn. Manufacturing paper receptacles or drinking vessels or cups. No. 1,189,822; July 4; Gaz. vol. 228; p. 217.

Houseman, Harold E., assignor to Standard Machine Company, Philadelphia, Pa. Stop-motion for circular-knitting machines. No. 1,191,513; July 18; Gaz. vol. 228; p. 898.

Howard, Bloomfield H., Aspinwall, and E. J. Turner, Pittsburgh, Pa. Ingot mold and feeder. No. 1,192,425; July 25; Gaz. vol. 228; p. 1273.

Howard, Monroe S. (See Burtis and Howard.)

Howard, Monroe S., Waukon, Iowa. Automatic expression control for player-pianos. No. 1,190,172; July 4; Gaz. vol. 228; p. 332.

Howard, Norman W., Bath, Me. Cutter. No. 1,192,200; July 25; Gaz. vol. 228; p. 1193.

Howe, Charles A., Pittsburgh, Pa. Tip for billiard-cues. No. 1,191,308; July 18; Gaz. vol. 228; p. 827.

Howe, Lueman A., West Terre Haute, Ind. Nut-lock. No. 1,192,636; July 25; Gaz. vol. 228; p. 1346.

Howell, John E., Sacramento, Cal. Lawn-hose holder. No. 1,192,313; July 25; Gaz. vol. 228; p. 1234.

Howes, Wright E., assignor of one-fourth to J. P. Waters, San Francisco, Cal. Auxiliary air-valve. No. 1,191,700; July 18; Gaz. vol. 228; p. 963.

Howitt, Herbert G. (See Evans, Howitt and Prichard.)

Howlett, Peyton L., Brownwood, Tex. Bathing-machine. No. 1,192,314; July 25; Gaz. vol. 228; p. 1234.

Hubbard, Albert S., assignor to Gould Storage Battery Company, New York, N. Y. Insulating-support. No. 1,190,766; July 11; Gaz. vol. 228; p. 593.

Huber, John A., Jr., Bentley, N. D. Whipping apparatus. No. 1,191,789; July 18; Gaz. vol. 228; p. 995.

Hubert, Conrad. (See Coleman, Clyde J., assignor.)

Huddle, Hershel J., Jersey City, assignor of one-half to H. Koch, Secaucus, N. J. Adjustable table. No. 1,191,425; July 18; Gaz. vol. 228; p. 868.

Huddleston, Frank, Radisson, Wis. Wall-paper-hanging apparatus. No. 1,192,637; July 25; Gaz. vol. 228; p. 1346.

Hudson, Annie, administratrix. (See Hudson, Frederick F.)

Hudson, Frederick F., deceased; A. Hudson, administratrix, assignor to Recording Safety Device Company, Memphis, Tenn. Automatic train stopping and recording device. No. 1,190,173; July 4; Gaz. vol. 228; p. 333.

Hudson, James W., Seattle, Wash. Egg-beater. No. 1,192,426; July 25; Gaz. vol. 228; p. 1273.

Hudson, Marion F., Poplar Bluff, Mo. Refrigerator. No. 1,191,309; July 18; Gaz. vol. 228; p. 827.

Hudson, Walter G., New York, N. Y., assignor to Radio Telephone & Telegraph Company. Electrode for devices for varying electrical resistance. No. 1,190,412; July 11; Gaz. vol. 228; p. 466.

Huff, Bert M., La Fayette, Ind. Dirigible headlight. No. 1,190,413; July 11; Gaz. vol. 228; p. 467.

Huggins, Merion J., New York, N. Y. Speed-changing transmission for automobiles. No. 1,192,427; July 25; Gaz. vol. 228; p. 1274.

Hughes, Charles F., Vancouver, British Columbia, Canada. Automatic firearm. No. 1,190,653; July 11; Gaz. vol. 228; p. 554.

Hughes, Davydd C. G., Chicago, Ill. Electrically-heated utensil. No. 1,191,426; July 18; Gaz. vol. 226; p. 869.

Hughes, Easter M., Seattle, Wash. Collapsible stove. No. 1,192,315; July 25; Gaz. vol. 228; p. 1234.

Hughes, Edward, Forestville, and I. Schofield, Avon, Conn. Nut-lock. No. 1,190,414; July 11; Gaz. vol. 228; p. 467.

Hughes, George J., Bedford, Iowa. Skirt-marker. No. 1,190,551; July 11; Gaz. vol. 228; p. 514.

Hughes, Howard, A. Ferguson, and H. L. Lowe, Clinton, Ind. Switch-throw. No. 1,189,571; July 4; Gaz. vol. 228; p. 131.

Hughes, James W., Narberth, Pa., assignor to Hughes-Lippincott Company, Camden, N. J. Record-holder. No. 1,191,003; July 11; Gaz. vol. 228; p. 678.

Hughes-Lippincott Company. (See Hughes, James W., assignor.)

Huguley, Carl M., Dallas, Tex. Mop-ferrule. No. 1,190,415; July 11; Gaz. vol. 228; p. 467.

Hulbert, Edwin F., assignor to National Paper Can Company, South Norwalk, Conn. Expanding die or tool. No. 1,189,823; July 4; Gaz. vol. 228; p. 217.

Hulit, John A., assignor to Automatic Electric Company, Chicago, Ill. Selective signaling system. No. 1,192,064; July 25; Gaz. vol. 228; p. 1145.

Hull, Fletcher C., Toledo, Ohio. Umbrella. No. 1,192,638; July 25; Gaz. vol. 228; p. 1347.

Hull, Frederick B., Lyons, Kans. Plowing device. No. 1,191,185; July 18; Gaz. vol. 228; p. 783.

Hulme, George, McDonald, Pa. Elevator safety device. No. 1,190,293; July 11; Gaz. vol. 228; p. 425.

Humason, Granville A., Shreveport, La. Drill-bit. No. 1,191,310; July 18; Gaz. vol. 228; p. 828.

Hummel, Charles M. (See Margetts and Hummel.)

Hunholz, John F., Wamego, Kans. Bow-gun. No. 1,192,639; July 25; Gaz. vol. 228; p. 1347.

Hunsberger, Neville, Alden, assignor to S. Sternberger, Philadelphia, Pa. Safety-pin. No. 1,192,522; July 25; Gaz. vol. 228; p. 1306.

Hunt, Duane G. (See Williams, Harry S., assignor.)

Hunter, Lloyd T., Revere, Mass. Fire-escape. No. 1,191,790; July 18; Gaz. vol. 228; p. 996.

Hunter, Rudolph M., Philadelphia, Pa., assignor to Forged Steel Valve Co., Inc. Valve. No. 1,189,950; July 4; Gaz. vol. 228; p. 259.

Hupp Motor Car Corporation. (See Hastings, Donald T., assignor.)

Hurd, Frank H., Wabasha, Minn., and E. J. Heule; said Heule assignor to A. W. Highfield, Superior, Wis. Chair-seat. No. 1,189,951; July 4; Gaz. vol. 228; p. 259.

Hurd, Hubbard F., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y. Soft fold-collar. No. 1,189,693; July 4; Gaz. vol. 228; p. 171.

Hurd, Max H., *et al.* (See Hartley, Albert J., assignor.)

Husband, David S., Oakville, Ontario, Canada. Window-ventilator. No. 1,191,125; July 11; Gaz. vol. 228; p. 718.

Huse, Charles W., Gary, Ind. Supplemental air-feeding means for furnaces, boilers, or stoves. No. 1,192,428; July 25; Gaz. vol. 228; p. 1274.

Hushaw, Jacob L., Sodus, Mich. Fly-trap. No. 1,191,972; July 25; Gaz. vol. 228; p. 1112.

Hutchins, Frank E., *et al.* (See Rosentreter, Albert J., assignor.)

Hutchinson, William S., Oyster Bay, N. Y. Drum-brake. No. 1,192,523; July 25; Gaz. vol. 228; p. 1307.

Hutchinson, William S., Oyster Bay, N. Y. Brake-operating mechanism. No. 1,192,524; July 25; Gaz. vol. 228; p. 1307.

Hutchinson, William S., Oyster Bay, N. Y. Brake. No. 1,192,316; July 25; Gaz. vol. 228; p. 1235.

Hutchison, Miller R., West Orange, N. J., assignor to Lovell-McConnell Manufacturing Company. Diaphragm-horn. No. 1,189,952; July 4; Gaz. vol. 228; p. 260.

Hutton, Raymond M., Philadelphia, Pa. Armored-cable coupling. No. 1,191,078; July 11; Gaz. vol. 228; p. 703.

Hyatt, Frank S., Brooklyn, N. Y. Top for containers. No. 1,189,451; July 4; Gaz. vol. 228; p. 89.

Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)

Hydro-Kinetic Transmission Co., The. (See Rich, Charles C., assignor.)

Hyne, Ray, Evansville, Wis. Shock-absorber. No. 1,189,953; July 4; Gaz. vol. 228; p. 260.

I. H. Dexter Co. (See Dexter, Irven H., assignor.)

I. H. Dexter Company. (See Dexter, Talbot C., assignor.)

Ide, Harry L., Springfield, Ill. Animal-operated liquid-distributer. No. 1,191,791; July 18; Gaz. vol. 228; p. 996.

Ilg, Robert A., Chicago, Ill. Shutter mechanism. No. 1,189,572; July 4; Gaz. vol. 228; p. 131.

Illingworth, William R., Bondurant, Iowa. Fan guide and tension device. No. 1,192,317; July 25; Gaz. vol. 228; p. 1235.

Improved Stay Company. (See Pollock, Adolph E., assignor.)

Improved Stay Company. (See Siegel, Harold L., assignor.)

Inco, Francis S., Los Angeles, Cal. Sanitary cot. No. 1,192,318; July 25; Gaz. vol. 228; p. 1235.

Individual Drinking Cup Company. (See Hammond, William P., assignor.)

Individual Drinking Cup Company. (See Luellen, Lawrence W., assignor.)

Ingersoll-Rand Company. (See Bayles, Lewis C., assignor.)

Ingersoll-Rand Company. (See Douglass, Richard W., assignor.)

Ingraham, Elmer C., Fort Morgan, Colo. Ruling-pen. No. 1,189,824; July 4; Gaz. vol. 228; p. 218.

International Barrel Company. (See Robinson, Edward W., assignor.)

International Cigar Machinery Company. (See Hansen, Victor E., assignor.)

International Cigar Machinery Company. (See Marsh and Lindblad, assignors.)

International Electric Tool Co. (See Sorgel and Gaulke, assignors.)

International Money Machine Company. (See Bailey, Robert L., assignor.)

International Money Machine Company. (See Hawley, Amos H., assignor.)

International Money Machine Company. (See Hoffman, Henry D., assignor.)

International Money Machine Company. (See White, Nelson, assignor.)

International Motor Company. (See Masury, Alfred F., assignor.)

International Motor Company. (See Mueller, Frank, assignor.)

International Pyrotan Company. (See Merry, Ernest W., assignor.)

International Roofing Manufacturing Company. (See Bolsmenue and Wagner, assignors.)

International Signal Company, The. (See Webb, Jean F., Jr., assignor.)

International Time Recording Company of New York. (See Bryce, James W., assignor.)

International Time Recording Company of New York. (See Goss and Bryce, assignors.)

Intertype Corporation, The. (See Cromble and Homans, assignors.)

Intertype Corporation, The. (See Goodbody, Edward M., assignor.)

Intertype Corporation, The. (See Homans, Thomas S., assignor.)

Ireland, George E. (See Mitten, McAllister, and Ireland.)

Iron Crib and Bin Company. (See Overholt, John D., assignor.)

Irons, Howard L. (See Brewster and Irons.)

Isaacs, Mone R., Philadelphia, Pa. Adhesive composition. No. 1,192,783; July 25; Gaz. vol. 228; p. 1396.

Isdale, Malcolm G., *et al.* (See Hooper, Frank B., assignor.)

Isebrands, Henry, George, Iowa. Fence-post. No. 1,192,319; July 25; Gaz. vol. 228; p. 1236.

Ives, Charles C., Minneapolis, and E. C. Ives, Jr., assignors of one-third to E. C. Ives, Sr., St. Paul, Minn. Lock for knockdown paper boxes. No. 1,189,452; July 4; Gaz. vol. 228; p. 89.

Ives, Eben C., Jr. (See Ives, Charles C. and E. C., Jr.)

J. A. Fay & Egan Company. (See Solem, Peter A., assignor.)

J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)

J. G. Brill Company, The. (See Trabbold, Henry, assignor.)

J. H. White Manufacturing Company. (See White, Edwin L., assignor.)

J. I. Case Plow Works. (See Michael and Mohr, assignors.)

J. I. Case Threshing Machine Company. (See Davies, David P., assignor.)

J. M. Dent & Sons Limited. (See McLean, Melville J., assignor.)

J. R. Montgomery Company, The. (See Montgomery, John R. and G. M., assignors.)

Jackson, Andrew O., Corvallis, Oreg. Power-feed oil-dropper. No. 1,192,320; July 25; Gaz. vol. 228; p. 1236.

Jackson, Arthur C., and F. Soley, assignors to Miller Lock Co., Philadelphia, Pa. Padlock. No. 1,191,004; July 11; Gaz. vol. 228; p. 678.

Jackson, George B., Chicago, Ill. Internal-combustion engine. No. 1,191,311; July 18; Gaz. vol. 228; p. 828.

Jackson, Henry W., Cynwyd, and J. O. Horton, Montrose, assignors to National Metal Edge Box Company, Philadelphia, Pa. Safety-stop for box-staying machines. No. 1,192,201; July 25; Gaz. vol. 228; p. 1194.

Jackson, James E., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Insole. No. 1,190,904; July 11; Gaz. vol. 228; p. 645.

Jackson, James E., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making insoles. No. 1,191,133; July 11; Gaz. vol. 228; p. 721.

Jackson, John F., assignor to Wisconsin Bridge & Iron Company, Milwaukee, Wis. Dock structure. No. 1,192,784; July 25; Gaz. vol. 228; p. 1396.

Jackson, Ray P., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Insulator. No. 1,191,186; July 18; Gaz. vol. 228; p. 783.

Jackson, Silas H., Cleveland, Ohio. Cable-grip. No. 1,192,065; July 25; Gaz. vol. 228; p. 1145.

Jacobs, Alonzo, Oklahoma, Okla. Vending-machine. No. 1,189,954; July 4; Gaz. vol. 228; p. 260.

Jacobs, Arthur E., Cleveland, Ohio. Cash-register. No. 1,190,416; July 11; Gaz. vol. 228; p. 467.

Jacobs, Charles C. (See Rood, Charles W., assignor.)

Jacobs, Morris, Brooklyn, N. Y. Locking means for screw-threaded parts. No. 1,191,427; July 18; Gaz. vol. 228; p. 869.

Jacobs, Sallie G., Bala, Pa. Chute. No. 1,190,417; July 11; Gaz. vol. 228; p. 468.

Jacoby, John, Los Angeles, Cal. Massaging apparatus. No. 1,191,701; July 18; Gaz. vol. 228; p. 963.

Jaffe, Edward I., assignor to O. K. Button Moulds M'f'g Co., New York, N. Y. Shaping and cutting die. No. 1,192,066; July 25; Gaz. vol. 228; p. 1146.

Jalbert, Joseph, Sr., Naughton, Ontario, Canada. Locking-seal. No. 1,190,552; July 11; Gaz. vol. 228; p. 515.

James, Charles H., Spokane, Wash. Manifolding device. No. 1,189,955; July 4; Gaz. vol. 228; p. 261.

James, Daniel R., Morriston, Wales. Apparatus for the manufacture of tin, terne, and the like plates. No. 1,189,573; July 4; Gaz. vol. 228; p. 131.

James, Joseph, Vancouver, British Columbia, Canada. Reinforcing means for building-blocks. No. 1,191,428; July 18; Gaz. vol. 228; p. 870.

Jameton, Leon, St. Louis, Mo. System for forming polygonal helical coils. No. 1,191,514; July 18; Gaz. vol. 228; p. 898.

Janssen, Hendrik J. J., Rotterdam, Netherlands, and H. Borsari, assignors to Borsari & Co., Zollikon-Zurich, Switzerland. Receptacle. No. 1,189,694; July 4; Gaz. vol. 228; p. 172.

Jansson, Johan E., Hampstead, England. Hook-and-eye fastening. No. 1,192,321; July 25; Gaz. vol. 228; p. 1236.

Januszczak, Bronislaw, Point St. Charles, Montreal, Quebec, Canada. Gripping-tool. No. 1,191,702; July 18; Gaz. vol. 228; p. 964.

Jardine, James L., Penicuik, Scotland. Production of an acid magnesium sulfite solution. No. 1,192,640; July 25; Gaz. vol. 228; p. 1347.

Jarvis, Arthur. (See Garrity and Jarvis.)

Jasper, John. (See Craven, Samuel, assignor.)

Jasper, John, and S. Craven, Ossining, N. Y. Moistener. No. 1,190,905; July 11; Gaz. vol. 228; p. 645.

Jebsen, Johann N., *et al.* (See Steiger, Eugen, assignor.)

Jeffrey Manufacturing Company, The. (See Fisher, Dudley T., assignor.)

Jeffries, Ewing I., New Salem, Pa. Steering-gear anti-rattler. No. 1,191,792; July 18; Gaz. vol. 228; p. 996.

Jeffries, John H., Inglewood, Cal. Combination switch-lock. No. 1,189,956; July 4; Gaz. vol. 228; p. 261.

Jenkins, George H., Oak Park, Ill. Binding for books and effectuating the same. No. 1,189,825; July 4; Gaz. vol. 228; p. 218.

Jenkins, George H., Oak Park, Ill. Book and binding device therefor. No. 1,189,826; July 4; Gaz. vol. 228; p. 218.

Jenkins, Harry E., assignor of one-half to G. H. Glade, Joplin, Mo. Hoisting mechanism. No. 1,192,322; July 25; Gaz. vol. 228; p. 1237.

Jenkins, William A., and P. J. Lincoln, Birmingham, Ala. Safety trolley-harp. No. 1,191,005; July 11; Gaz. vol. 228; p. 679.

Jenner, Ernst G., Chicago, Ill. Attachment for rendering power-presses non-repeating. No. 1,192,525; July 25; Gaz. vol. 228; p. 1307.

Jensen, Alexander V., Devils Slide, Utah. Tie-plate. No. 1,190,906; July 11; Gaz. vol. 228; p. 645.

Jensen, Lawrence H., St. Charles, Ill. Spark-plug and sparking circuit. No. 1,191,429; July 18; Gaz. vol. 228; p. 870.

Jensen, Nels, assignor of one-half to N. C. Nelsen, Bellevue, Wash. Adjustable clothes-rack. No. 1,191,312; July 18; Gaz. vol. 228; p. 829.

Jerram, Arthur E. (See Gouldbourn, Bates, and Jerram.)

Jewell, John M., New York, N. Y. Detachable pot-handle. No. 1,189,957; July 4; Gaz. vol. 228; p. 261.

Joekmus, Charles H., Ansonia, Conn. Detonating-fuse spring. No. 1,189,574; July 4; Gaz. vol. 228; p. 132.

Jockmus, Charles H., Ansonia, Conn. Forged blank for fuse-bodies. No. 1,189,958; July 4; Gaz. vol. 228; p. 262.

Joerden, Harry J., Los Angeles, assignor of one-fifth to L. S. Wren, Hawthorne, Cal. Engine-starter. No. 1,190,174; July 4; Gaz. vol. 228; p. 334.

Joern, Chris T., Seward, Nebr. Display-stand. No. 1,189,862; July 4; Gaz. vol. 228; p. 56.

Johannsmeyer, Fredrick, Milwaukee, assignor to C. C. Thomas, Madison, Wis. Electric-resistance thermometer. No. 1,191,703; July 18; Gaz. vol. 228; p. 964.

John C. Moninger Company. (See Tyler, Roy D., assignor.)

Johns, Charles W., Jerseyville, Ill. Smoke-consumer. No. 1,189,959; July 4; Gaz. vol. 228; p. 262.

Johnson, Charles E., Muskegon, Mich. Automatic ring-handling machine. No. 1,190,553; July 11; Gaz. vol. 228; p. 515.

Johnson, Chester F., Detroit, Mich. Circulating system for internal-combustion engines. (Reissue.) No. 14,160; July 4; Gaz. vol. 228; p. 367.

Johnson, Edward H., New York, N. Y., and C. Schiff, Montclair, N. J., assignors to Greenfield Paper Bottle Company, New York, N. Y. Machine for making paper bottles. No. 1,192,202; July 25; Gaz. vol. 228; p. 1194.

Johnson, George A., assignor to W. H. Miner, Chicago, Ill. Draft-yoke for railway-car draft-rigging. No. 1,192,203; July 25; Gaz. vol. 228; p. 1195.

Johnson, George A., assignor to W. H. Miner, Chicago, Ill. Draft-rigging. No. 1,192,204; July 25; Gaz. vol. 228; p. 1195.

Johnson, George G., Muskogee, Okla. Vehicle-wheel. No. 1,192,526; July 25; Gaz. vol. 228; p. 1308.

Johnson, Gilbert H., Jr., New York, N. Y. Adjustable spot-light. No. 1,192,527; July 25; Gaz. vol. 228; p. 1308.
Johnson, Hobart S., Madison, Wis. Vehicle signaling device. No. 1,191,973; July 25; Gaz. vol. 228; p. 1113.
Johnson, Jay M. (See Baur, Hugo J., assignor.)
Johnson, John. (See Brunsell and Johnson.)
Johnson, John, Dupont, Ind. Railway-switch frog. No. 1,191,314; July 18; Gaz. vol. 228; p. 829.
Johnson, John B., Laurel, S. D. Insulating-bushing. No. 1,189,960; July 4; Gaz. vol. 228; p. 262.
Johnson, Louis, Orland, Cal. Skiving-machine. No. 1,191,974; July 25; Gaz. vol. 228; p. 1113.
Johnson, Nathan C., Englewood, N. J., assignor to Concrete Appliances Company, Inc., New York, N. Y. Apparatus for grading and quantitatively determining comminuted materials. No. 1,189,961; July 4; Gaz. vol. 228; p. 262.
Johnson, Oliver W., Cleveland, Ohio. Cultivator. No. 1,191,430; July 18; Gaz. vol. 228; p. 870.
Johnson, Oliver W., and W. A. Reade, Cleveland, Ohio; said Johnson assignor to said Reade. Typograph-machine. No. 1,192,205; July 25; Gaz. vol. 228; p. 1195.
Johnson, Oscar, Chicago, Ill. Air-brake apparatus. No. 1,191,187; July 18; Gaz. vol. 228; p. 783.
Johnson, Oscar P., Nashua, N. H. Moistening shoe-uppers. No. 1,191,315; July 18; Gaz. vol. 228; p. 830.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Firearm. No. 1,191,515; July 18; Gaz. vol. 228; p. 899.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Front sight for military shoulder-arms. No. 1,191,704; July 18; Gaz. vol. 228; p. 964.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Military shoulder-arm. No. 1,192,528; July 25; Gaz. vol. 228; p. 1309.
Johnston, Edward D., Tacoma, Wash. Color attachment for printing-presses. No. 1,189,453; July 4; Gaz. vol. 228; p. 89.
Johnston, Herbert L., assignor to The Hobart Manufacturing Company, Troy, Ohio. Coupling device. No. 1,191,313; July 18; Gaz. vol. 228; p. 829.
Johnston, James S., Utica, N. Y. Sewing-machine attachment. No. 1,191,079; July 11; Gaz. vol. 228; p. 703.
Johnston, James S., Utica, N. Y. Drying and winding machine. No. 1,191,080; July 11; Gaz. vol. 228; p. 703.
Johnston, James S., Utica, N. Y. Demountable rim. No. 1,191,081; July 11; Gaz. vol. 228; p. 704.
Johnston, James S., Utica, N. Y. Fabric-cutter. No. 1,191,082; July 11; Gaz. vol. 228; p. 704.
Johnston, Sedgwick M., Liberty, S. C. Plow-shovel. No. 1,191,793; July 18; Gaz. vol. 228; p. 996.
Jolak, Michel, New York, N. Y. Hat-pin for ladies' hats. No. 1,189,695; July 4; Gaz. vol. 228; p. 172.
Joller, Xavier J., Chicago, Ill. Cigar-holder. No. 1,189,962; July 4; Gaz. vol. 228; p. 263.
Joly, Cezaire, Salem, Mass. Rail-joint. No. 1,190,907; July 11; Gaz. vol. 228; p. 646.
Jones, Albert. (See Bihn and Jones.)
Jones, Allan H., Newark, and A. P. Glastre, Irvington, N. J.; said Glastre assignor to said Jones. Sawing and filing machine. No. 1,191,705; July 18; Gaz. vol. 228; p. 965.
Jones, Alva D., Philadelphia, Pa. Sound-box for talking-machines. No. 1,192,836; July 25; Gaz. vol. 228; p. 1414.
Jones, Charles W., Arlington, Mass. Yielding unit. No. 1,189,963; July 4; Gaz. vol. 228; p. 263.
Jones, Elizabeth C., (now by marriage E. C. McCaslin,) Altus, Okla. Moistener. No. 1,191,134; July 11; Gaz. vol. 228; p. 721.
Jones, Eugene B., Grand Rapids, Mich. Drop-leg for extension-tables. No. 1,189,454; July 4; Gaz. vol. 228; p. 90.
Jones, Harry, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Manhole frame and cover. No. 1,191,431; July 18; Gaz. vol. 228; p. 870.
Jones, Harry, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Manhole frame and cover. No. 1,191,432; July 18; Gaz. vol. 228; p. 871.
Jones, John M., Nashville, Tenn. Spoke-clip. No. 1,192,429; July 25; Gaz. vol. 228; p. 1274.
Jones, Lewis E., Bonneau, S. C. Cultivator. No. 1,191,006; July 11; Gaz. vol. 228; p. 679.
Jones, Robert, Florence, Oreg. Boat-davit. No. 1,191,794; July 18; Gaz. vol. 228; p. 997.
Jones, Vern L., assignor to The Farrand Company, Detroit, Mich. Pneumatic adjusting mechanism for musical instruments. No. 1,190,767; July 11; Gaz. vol. 228; p. 593.
Jones, William. (See Cressey and Jones.)
Joneson, John H., Chicago, Ill. Door-latch. No. 1,191,600; July 18; Gaz. vol. 228; p. 926.
Jonsson, Gustaf E., Hallmstad, assignor to Aktiebolaget Mjölkningsmaskinen Manus, Norrköping, Sweden. Milking-machine. No. 1,190,294; July 11; Gaz. vol. 228; p. 425.
Jordan, James M., Churchville, Va. Electric grain-heater. No. 1,189,575; July 4; Gaz. vol. 228; p. 132.
Joseph, Orville E., Chicago, Ill. Road-indicator. No. 1,191,316; July 18; Gaz. vol. 228; p. 830.
Joslin, George H., Terre Haute, Ind. Self-starting die-machine. No. 1,190,768; July 11; Gaz. vol. 228; p. 594.
Judson Governor Company. (See Osborne, John L., assignor.)
Judson L. Thomson M'f'g. Co. (See Havener, Arthur R., assignor.)
Jugle, Clyde B., Jamestown, N. Y. Automobile-fender. No. 1,192,041; July 25; Gaz. vol. 228; p. 1348.
Julien, Bartholomew, Omaha, Nebr., assignor to Transportation Utilities Company, New York, N. Y. Journal-box cooler. No. 1,191,188; July 18; Gaz. vol. 228; p. 784.
Jungbauer, Max. (See Vöster and Jungbauer.)
Jurist, Benjamin, New York, N. Y., assignor to B. H. Pendry, trustee. Apparatus for treating liquids. No. 1,190,769; July 11; Gaz. vol. 228; p. 594.
Kaback, Benjamin L., and S. Shelly, assignors to National Metal Edge Box Company, Philadelphia, Pa. Safety stop for box-staying and similar machines. No. 1,192,206; July 25; Gaz. vol. 228; p. 1196.
Kadow, August, assignor to The Westlake Machine Company, Toledo, Ohio. Machine for making glass cylinders. No. 1,191,317; July 18; Gaz. vol. 228; p. 830.
Kafader, James O., Fort Bidwell, Cal. Cotter-pin. No. 1,190,908; July 11; Gaz. vol. 228; p. 646.
Kahn, Julius, Youngstown, Ohio. Structural joint. No. 1,192,207; July 25; Gaz. vol. 228; p. 1196.
Kahn, Julius, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich. Building construction. No. 1,192,208; July 25; Gaz. vol. 228; p. 1197.
Kahn, Julius, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich. Building construction. No. 1,192,209; July 25; Gaz. vol. 228; p. 1197.
Kaiser, Peter, assignor of sixty-five one-hundredths to C. D. Root, Crown Point, Ind. Incubator. No. 1,190,418; July 11; Gaz. vol. 228; p. 468.
Kaiser, Peter, assignor of sixty-five one-hundredths to C. D. Root, Crown Point, Ind. Incubator. No. 1,190,419; July 11; Gaz. vol. 228; p. 469.
Kaiser, Peter, assignor of sixty-five one-hundredths to C. D. Root, Crown Point, Ind. Heat-controlling mechanism for incubators, &c. No. 1,190,420; July 11; Gaz. vol. 228; p. 469.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Relay. No. 1,192,323; July 25; Gaz. vol. 228; p. 1237.
Kalbfus, Oliver A., Baltimore, Md. Street-car brake and fender. No. 1,189,964; July 4; Gaz. vol. 228; p. 263.
Kalcy, Ernest C., Pittsburgh, Pa. Self-elevating device. No. 1,190,421; July 11; Gaz. vol. 228; p. 470.
Kaltz, William J., Windsor, Ontario, Canada, assignor to Kelsey Wheel Company, Detroit, Mich. Assembling spoked wheels. No. 1,189,827; July 4; Gaz. vol. 228; p. 219.
Kaltz, William J., Windsor, Ontario, Canada, assignor to Kelsey Wheel Company, Detroit, Mich. Machine for assembling spoked wheels. No. 1,189,828; July 4; Gaz. vol. 228; p. 219.
Kammerhoff, Heinrich H. M., Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Gas filtering or separating valve. No. 1,190,654; July 11; Gaz. vol. 228; p. 554.
Kammers, John V., and J. H. Brophy, Lamont, Wash. Automatic wagon-brake. No. 1,190,422; July 11; Gaz. vol. 228; p. 470.
Kamrath, Emil L., Milwaukee, Wis. Collapsible camp-stool. No. 1,190,423; July 11; Gaz. vol. 228; p. 471.
Kaplan, Frank R. S. (See Kimelman, William, assignor.)
Karberg, Charles F., assignor to The Cleveland-Akron Bag Company, Cleveland, Ohio. Awning-operating mechanism. No. 1,190,909; July 11; Gaz. vol. 228; p. 646.
Kardos, Zoltán, New York, N. Y. Alarm-clock. No. 1,190,770; July 11; Gaz. vol. 228; p. 594.
Karle, John D., Newark, N. J., assignor to The Singer Manufacturing Company. Attachment-holder for sewing-machines. No. 1,192,818; July 25; Gaz. vol. 228; p. 1407.
Karolle, John, Flint, Mich. Ball and lid holder. No. 1,189,363; July 4; Gaz. vol. 228; p. 56.
Karplus, Hans, Berlin, Germany. Producing colloidal solutions in organic substances not miscible with water. No. 1,189,696; July 4; Gaz. vol. 228; p. 172.
Kasley, Alexander T., Swissvale, and C. N. F. Knape, assignors, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Motor control. No. 1,189,697; July 4; Gaz. vol. 228; p. 173.
Kassel, Arthur A., Uniontown, Mo. Necktie-press and collar-box. No. 1,191,007; July 11; Gaz. vol. 228; p. 679.
Kastmann, Richard, New York, N. Y., assignor to The Keuffel & Esser Company, Hoboken, N. J. Measuring-tape. No. 1,189,257; July 4; Gaz. vol. 228; p. 16.
Katzin, Jacob S., *et al.* (See Katzin, Jacob S., assignor.)
Katzin, Jacob S., assignor of one-fourth to J. S. Katzin, one-fourth to H. Colton, one-fourth to L. Samel, and one-fourth to M. Scharff, Newark, N. J. Flush-tank siphon. No. 1,192,785; July 25; Gaz. vol. 228; p. 1396.
Kavanagh, Edward F., Cleveland, Ohio. Coin-bank. No. 1,189,258; July 4; Gaz. vol. 228; p. 16.
Kayser, Edward G., Chicago, Ill. Bottle-stopper fastener. No. 1,192,067; July 25; Gaz. vol. 228; p. 1146.

Keating, Alphonso S., Corry, Pa. Railway safety-signal system. No. 1,192,210; July 25; Gaz. vol. 228; p. 1198.
Keating, Clarence P., Marshfield, Oreg. Brush. No. 1,189,698; July 4; Gaz. vol. 228; p. 173.
Keenan, John F., Seattle, Wash. Pipe-turner. No. 1,191,126; July 11; Gaz. vol. 228; p. 719.
Keener Burner Company, The. (See Keener, Samuel E., assignor.)
Keener, Samuel E., deceased; W. E. Keener, administrator, assignor to The Keener Burner Company, Clay Center, Kans. Vapor-burner. No. 1,191,795; July 18; Gaz. vol. 228; p. 997.
Keener, William E., administrator. (See Keener, Samuel E.)
Keeran, Frank D., Red Bluff, Cal. Differential for automobiles. No. 1,191,433; July 18; Gaz. vol. 228; p. 871.
Kehoe, Thomas J., Toledo, Ohio. Radiator. No. 1,190,424; July 11; Gaz. vol. 228; p. 471.
Keil, Rudolf, New York, N. Y. Nipple-protector. No. 1,191,516; July 18; Gaz. vol. 228; p. 899.
Keiper, Henry B., Lancaster, Pa. Valve. No. 1,189,259; July 4; Gaz. vol. 228; p. 17.
Keith, Alexander E., Hinsdale, assignor to Automatic Electric Company, Chicago, Ill. Automatic telephone-switch. No. 1,189,364; July 4; Gaz. vol. 228; p. 56.
Keith, Alexander E., Hinsdale, and M. Setter, Chicago, Ill. Shock or vibration absorbing apparatus for vibrating bodies or vehicles. No. 1,189,829; July 4; Gaz. vol. 228; p. 219.
Keith, Ben F., assignor of one-third to T. S. Lovette, Belton, Tex. Automatic gas-lighter. No. 1,190,295; July 11; Gaz. vol. 228; p. 426.
Keith, George, assignor of one-half to J. Keith, London, England. Gas-lamp. No. 1,192,430; July 25; Gaz. vol. 228; p. 1275.
Keith, James. (See Keith, George, assignor.)
Keith, Thomas M., Brooklyn, N. Y. Platform conveyer. No. 1,191,434; July 18; Gaz. vol. 228; p. 871.
Kekuewa, Samuel M., Lahaina, Hawaii. Spout. No. 1,192,068; July 25; Gaz. vol. 228; p. 1146.
Keller, Anton, West New York, N. J. Piano-violin. No. 1,190,655; July 11; Gaz. vol. 228; p. 555.
Keller, Charles A., Paris, France. Electric melting of metals. No. 1,191,435; July 18; Gaz. vol. 228; p. 872.
Keller, Ferdinand. (See Rhodes, Byron F., assignor.)
Kelley, James, Jr., Winsted, Conn. Pin-holder. No. 1,189,965; July 4; Gaz. vol. 228; p. 264.
Kellogg, Henry M., assignor of one-half to F. Le Pan, Devon, Conn. Hog-slaughtering appliance. No. 1,189,966; July 4; Gaz. vol. 228; p. 264.
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard & Supply Company. (See Land, Edmund, assignor.)
Kellogg Switchboard and Supply Company. (See Utter, Richard I., assignor.)
Kelly Company, The. (See Kelly, William H., assignor.)
Kelly Company, The. (See Kelly, William W., assignor.)
Kelly Company, The. (See Laganke, Charles F., assignor.)
Kelly, Henry D., Kansas City, Mo. Hot-milk-serving urn. No. 1,189,576; July 4; Gaz. vol. 228; p. 133.
Kelly, Henry D., Kansas City, Mo. Coffee-urn. No. 1,189,577; July 4; Gaz. vol. 228; p. 133.
Kelly, Henry D., Kansas City, Mo. Measuring-faucet for urns. No. 1,189,578; July 4; Gaz. vol. 228; p. 133.
Kelly, Henry D., Kansas City, Mo. Chocolate-urn. No. 1,189,579; July 4; Gaz. vol. 228; p. 133.
Kelly, William H., assignor to The Kelly Company, Cleveland, Ohio. Feeding mechanism for nut-blanching machines. No. 1,190,554; July 11; Gaz. vol. 228; p. 515.
Kelly, William H., assignor to The Kelly-Co., Cleveland, Ohio. Nut-blanching machine. No. 1,190,555; July 11; Gaz. vol. 228; p. 516.
Kelly, William W., assignor to The Kelly Company, Cleveland, Ohio. Nut-blanching machine. No. 1,190,556; July 11; Gaz vol. 228; p. 516.
Kelsey, Frank N., assignor to A. H. Bowditch, New Haven, Conn. Automatic tire-alarm. No. 1,191,318; July 18; Gaz. vol. 228; p. 831.
Kelsey Wheel Company. (See Kaltz, William J., assignor.)
Kelsonik, Stephen, Conemaugh, Pa. Fly-trap. No. 1,191,517; July 18; Gaz. vol. 228; p. 899.
Kendall, Edward D., Elizabeth, N. J., assignor of one-third to estate of W. A. Megrath, Brooklyn, N. Y., one-third to L. T. Haggin, Closter, N. J., M. V. Haggin, A. McCulloh, New York, N. Y., and H. E. Moller, Montclair, N. J., executors. Extracting light liquefiable hydrocarbons from natural gas. No. 1,192,529; July 25; Gaz. vol. 228; p. 1309.
Kendall, William F., Tenafly, N. J., assignor to Sears-Cross Company, New York, N. Y. Indicator drive connection. No. 1,191,900; July 18; Gaz. vol. 228; p. 1034.
Kennedy, Carleton L., South Braintree, assignor to The Holtzer-Cabot Electric Company, Brookline, Mass. Engine-starter. No. 1,189,260; July 4; Gaz. vol. 228; p. 17.
Kennedy, Charles E., Lakeville, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Rand-turning machine. No. 1,190,296; July 11; Gaz. vol. 228; p. 426.
Kennedy, James E., Washington, D. C. Gas-heated stove. No. 1,189,699; July 4; Gaz. vol. 228; p. 173.
Kennedy, Robert R., West Wheeling, Ohio. Sugar-dispensing device. No. 1,191,486; July 18; Gaz. vol. 228; p. 872.
Kennedy, Walter J., and G. Yelle, Indian Orchard, Mass. Curtain. No. 1,189,967; July 4; Gaz. vol. 228; p. 265.
Kennedy, Walter J., assignor to The Fuel Economizer Company, Cleveland, Ohio. Automatic valve. No. 1,190,656; July 11; Gaz. vol. 228; p. 555.
Kennelly, Joseph T. (See Anderson and Kennelly.)
Kenoyer, Edmund L., Selma, Cal. Broom. No. 1,191,975; July 25; Gaz. vol. 228; p. 1114.
Kent, Arthur A., Philadelphia, Pa. Electric contact device. No. 1,192,786; July 25; Gaz. vol. 228; p. 1397.
Kent, Arthur A., Philadelphia, Pa. Automatic spark-advancing mechanism. No. 1,192,787; July 25; Gaz. vol. 228; p. 1397.
Kent, Arthur A., Philadelphia, Pa. Electric igniting mechanism for internal-combustion engines. No. 1,192,788; July 25; Gaz. vol. 228; p. 1398.
Kenyon, James W., Muskegon, Mich., assignor to The Shaw-Walker Company. Drawer-slide. No. 1,189,580; July 4; Gaz. vol. 228; p. 134.
Keough, Zachariah, Shelby, Ohio. Cooling means for automobile-engines. No. 1,190,771; July 11; Gaz. vol. 228; p. 595.
Kephart, Onida, Osceola Mills, Pa. Poultry-feeding device. No. 1,192,069; July 25; Gaz. vol. 228; p. 1146.
Keppel, Jesse E., St. Louis, Mo. Signal device. No. 1,189,455; July 4; Gaz. vol. 228; p. 90.
Kerkhof, Cornelus, Hackensack, N. J. Ship's dining-table. No. 1,192,070; July 25; Gaz. vol. 228; p. 1147.
Kerlin, William L., New York, N. Y., assignor, by mesne assignments, to Willite Road Construction Company of America. Machine and process for mixing road material. No. 1,189,700; July 4; Gaz. vol. 228; p. 174.
Kern, Walter C., assignor to The Wm. G. Hesse & Son Mfg. Co., Incorporated, Leavenworth, Kans. Ambulance-body. No. 1,192,211; July 25; Gaz. vol. 228; p. 1198.
Kesler, Elias, Oklahoma, Okla. Animal-trap. No. 1,191,706; July 18; Gaz. vol. 228; p. 965.
Kessler, Louis, Chicago, Ill. Gasolene-storage tank. No. 1,189,968; July 4; Gaz. vol. 228; p. 265.
Kestel, Henry C., assignor of one-half to W. H. Minier, Toledo, Ohio. Grease-cup. No. 1,191,189; July 18; Gaz. vol. 228; p. 784.
Kestner Evaporator Company. (See Kestner, Paul, assignor.)
Kestner, Paul, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa. Evaporator. No. 1,191,108; July 11; Gaz. vol. 228; p. 712.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Ignition system. No. 1,190,175; July 4; Gaz. vol. 228; p. 335.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Electric machine. No. 1,191,083; July 11; Gaz. vol. 228; p. 704.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Current-interrupter. No. 1,191,976; July 25; Gaz. vol. 228; p. 1114.
Keuffel & Esser Company, The. (See Kastmann, Richard, assignor.)
Keyes, Nelson B., assignor to The H. C. Hart Manufacturing Company, Unionville, Conn. Making handled implements. No. 1,189,701; July 4; Gaz. vol. 228; p. 174.
Kicklighter, Charles H., Atlanta, Ga. Method of and apparatus for electric welding of metallic plates. No. 1,189,581; July 4; Gaz. vol. 228; p. 134.
Kicklighter, Charles H., Atlanta, Ga. Electric welding. No. 1,189,582; July 4; Gaz. vol. 228; p. 134.
Kicklighter, Charles H., Atlanta, Ga. Electric riveting. No. 1,189,583; July 4; Gaz. vol. 228; p. 134.
Kicklighter, Charles H., Atlanta, Ga. Apparatus for and method of electric fastening of metals. No. 1,189,584; July 4; Gaz. vol. 228; p. 135.
Kiel, John, assignor to Deere & Company, Moline, Ill. Wheel-plow. No. 1,189,365; July 4; Gaz. vol. 228; p. 57.
Kieling, Wilhelm, Frankfort-on-the-Main, Germany. Internal-combustion engine with rotating cylinders. No. 1,191,437; July 18; Gaz. vol. 228; p. 872.
Kilburn, John E., assignor to Hale and Kilburn Company, Philadelphia, Pa. Car-seat construction. No. 1,191,488; July 18; Gaz. vol. 228; p. 873.
Kimball, Gordon, Ouray, Colo. Window-fastener. No. 1,189,969; July 4; Gaz. vol. 228; p. 265.
Kimball, Henry S., St. Louis, Mo., assignor to American Zinc Lead & Smelting Company, Boston, Mass. Metallurgy. No. 1,189,830; July 4; Gaz. vol. 228; p. 220.
Kimberlin, Winfield M., San Pedro, Cal. Air control for hydrocarbon-burners. No. 1,189,366; July 4; Gaz. vol. 228; p. 57.
Kimelman, William, assignor of one-half to F. R. S. Kaplan, McKeesport, Pa. Device for stamping envelops. No. 1,189,831; July 4; Gaz. vol. 228; p. 220.
Kimmel, Joel, New York, N. Y. Sewing-machine attachment. No. 1,191,707; July 18; Gaz. vol. 228; p. 965.
Kincaid, William, and W. A. Clark, Glen Ferris, W. Va. Heating and baking stove. No. 1,189,261; July 4; Gaz. vol. 228; p. 18.
King, De Witt C., Los Angeles, Cal. Plunger-pump. No. 1,190,772; July 11; Gaz. vol. 228; p. 595.
King, Franklyn L., Seattle, Wash. Rotary spice-cabinet. No. 1,189,456; July 4; Gaz. vol. 228; p. 90.

King, Richard H. (See Gleason, Edward D., assignor.)
Kingsbury, Elmer J., Juneau, Alaska. Illuminated sign or electrograph. No. 1,190,176; July 4; Gaz. vol. 228; p. 335.
Kingsford, Russell T., Plainfield, N. J. Internal-combustion motor. (Reissue.) No. 14,163; July 4; Gaz. vol. 228; p. 372.
Kingston, Frank L., Cleveland, Ohio. Carbureter-receptacle and mechanism for making same. No. 1,191,190; July 18; Gaz. vol. 228; p. 784.
Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Centering device for engine-couplings. No. 1,192,431; July 25; Gaz. vol. 228; p. 1275.
Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Bottom-operating coupling. No. 1,192,432; July 25; Gaz. vol. 228; p. 1275.
Kinniburgh, David, Chicago, Ill. Lighting system for electrically-propelled vehicles. No. 1,190,297; July 11; Gaz. vol. 228; p. 426.
Kinsey, E. Marshall. (See Dickerson, Malcolm, assignor.)
Kirby, Arthur, Unionville, Mo. Reversing-valve. No. 1,191,084; July 11; Gaz. vol. 228; p. 705.
Kirby Equipment Company. (See Woodman, George A., assignor.)
Kirby, James B. (See Roever, August E., assignor.)
Kirby, James B., Cleveland, Ohio. Suction-cleaner. No. 1,192,830; July 25; Gaz. vol. 228; p. 1412.
Kirby, Thomas S. (See Peterson and Kirby.)
Kirk, Frank S., Enid, Okla. Speed-indicator. No. 1,190,298; July 11; Gaz. vol. 228; p. 427.
Kirk, Louis H., assignor to Peg Lock Block Company Inc., New York, N. Y. Toy. No. 1,192,530; July 25; Gaz. vol. 228; p. 1309.
Kirkley, Hiram D., Paragould, Ark. Pneumatic mechanism for operating an extensible car-step. No. 1,192,642; July 25; Gaz. vol. 228; p. 1348.
Kirkpatrick, Otey R., Fort Worth, Tex. Trolley-pole. No. 1,191,796; July 18; Gaz. vol. 228; p. 997.
Kirsch, Louis, Nicktown, Pa. Kraut-cutter. No. 1,189,702; July 4; Gaz. vol. 228; p. 174.
Kitchen, Frederick T., West New Brighton, assignor to Compressed Metal Co., New York, N. Y. Magnet-actuated device. No. 1,192,531; July 25; Gaz. vol. 228; p. 1309.
Kitchen, George, Jr., St. Ignace, Mich. Cylinder testing and priming device. No. 1,192,643; July 25; Gaz. vol. 228; p. 1349.
Kitchin, Frederick H., Glasgow, Scotland. Cooling means for internal-combustion engines. No. 1,191,191; July 18; Gaz. vol. 228; p. 785.
Kite, John A., Las Animas, Colo. Beet-harvester. No. 1,192,644; July 25; Gaz. vol. 228; p. 1349.
Kitselman, Harry L., *et al.* (See Baumgarten, Adolf, assignor.)
Klages, George W., assignor to Window Glass Machine Company, Pittsburgh, Pa. Glass-cutting table. No. 1,192,789; July 25; Gaz. vol. 228; p. 1398.
Klahn, Emil, Weehawken, N. J. Gyroscope. No. 1,192,532; July 25; Gaz. vol. 228; p. 1310.
Kleber, Samuel L., Pittsburgh, Pa. Trunk-fastener. No. 1,190,557; July 11; Gaz. vol. 228; p. 517.
Kleeman, Edward and E. A., Canton, S. D. Dough-raiser. No. 1,192,071; July 25; Gaz. vol. 228; p. 1147.
Kleeman, Epple A. (See Kleeman, Edward and E. A.)
Klein, Carl J. (See Greiff and Schreiber, assignors.)
Klein, Charles J., assignor to The Cutler-Hammer M'f'g Co., Milwaukee, Wis. Receptacle-closure. No. 1,191,192; July 18; Gaz. vol. 228; p. 785.
Klein, Max, and H. N. Porter, Denver, Colo. Combined spark-plug and vaporizer. No. 1,191,193; July 18; Gaz. vol. 228; p. 785.
Klett, Christian F., Parkesburg, assignor of one-half to P. Alexy, Philadelphia, Pa. Snap-button. No. 1,192,072; July 25; Gaz. vol. 228; p. 1147.
Kline, Ephraim G., Millerstown, Pa. Wheel construction. No. 1,192,073; July 25; Gaz. vol. 228; p. 1148.
Kline, Max, New York, N. Y. Bath-spray support. No. 1,189,970; July 4; Gaz. vol. 228; p. 265.
Kline, Walter, Green township, Summit county, assignor to F. A. Wilcox, Akron, Ohio. Plural-walled can. No. 1,191,319; July 18; Gaz. vol. 228; p. 831.
Klotz, Robert, New York, N. Y. Ventilating system. No. 1,189,971; July 4; Gaz. vol. 228; p. 266.
Klugel, Oscar G., Indianapolis, Ind. Adjustable rifle-sight. No. 1,191,708; July 18; Gaz. vol. 228; p. 966.
Knape, Charles N. F. (See Kasley and Knape.)
Knapp, Frank E., Chicago, Ill. Hand-truck construction. No. 1,192,790; July 25; Gaz. vol. 228; p. 1398.
Knapp, John D. C., Minneapolis, assignor to J. C. Brown, Duluth, Minn. Fastener for sash-cords. No. 1,190,177; July 4; Gaz. vol. 228; p. 336.
Knight American Patents Company. (See Tillotson, Harry C., assignor.)
Knight, Samuel G., Randall, Minn. Coin-recorder. No. 1,189,972; July 4; Gaz. vol. 228; p. 266.
Knight, William R., Belleville, assignor to St. Mungo Manufacturing Company of America, Newark, N. J. Playing-ball. No. 1,192,831; July 25; Gaz. vol. 228; p. 1413.
Knoblock, George A., South Bend, Ind. Power-lift for plows. No. 1,192,074; July 25; Gaz. vol. 228; p. 1148.
Knoch, Oscar, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Pressure-relieving trunnion-bearing for guns. No. 1,190,299; July 11; Gaz. vol. 228; p. 427.
Knorpp, Philip J., Jr., New York, N. Y. Lantern. No. 1,190,910; July 11; Gaz. vol. 228; p. 647.
Knothe, Emeline. (See Knothe, Emil M., assignor.)
Knothe, Emil M., assignor to E. Knothe, Seattle, Wash. Car-fender. No. 1,189,832; July 4; Gaz. vol. 228; p. 220.
Knowlton, Ephraim H. B., Milwaukee, Wis. Tool-holder. No. 1,191,797; July 18; Gaz. vol. 228; p. 998.
Knox, George F., assignor to Knox Patents Company, Louisville, Ky. Sealing-disk. No. 1,191,194; July 18; Gaz. vol. 228; p. 785.
Knox, Harry A., Chicopee Falls, Mass. Universal joint. No. 1,190,425; July 11; Gaz. vol. 228; p. 472.
Knox, Luther L., Avalon, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Hollow sheet-metal furnace-door structure. No. 1,191,518; July 18; Gaz. vol. 228; p. 899.
Knox, Luther L., Avalon, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Water-cooled furnace-door frame. No. 1,191,519; July 18; Gaz. vol. 228; p. 900.
Knox Patents Company. (See Knox, George F., assignor.)
Knox Pressed & Welded Steel Company. (See Knox, Luther L., assignor.)
Knudtson, Arthur C., New England, N. D. Dispensing apparatus. No. 1,190,558; July 11; Gaz. vol. 228; p. 517.
Knutson, Alfred W. (See Bayne and Knutson.)
Kobler, Victor, Rorschach, assignor to A. Saurer, Arbon, Switzerland. Embroidering-machine. No. 1,190,911; July 11; Gaz. vol. 228; p. 647.
Koch, Henry. (See Huddle, Herschel J., assignor.)
Koch, Rudolph W., Milwaukee, Wis. Window-lock. No. 1,192,533; July 25; Gaz. vol. 228; p. 1310.
Koechner, Joseph P., Tipton, Mo. Automobile-jack. No. 1,191,520; July 18; Gaz. vol. 228; p. 900.
Koelkebeck, Carl W. A., Pittsburgh, assignor to The National Roll & Foundry Company, Avonmore, Pa. Barmill. No. 1,191,920; July 18; Gaz. vol. 228; p. 1042.
Koen, Willard R., Flat River, Mo. Electric cartridge-fuse. No. 1,190,773; July 11; Gaz. vol. 228; p. 596.
Koerting, Ernst, Pegli, Italy, assignor to Schutte & Koerting Co., Philadelphia, Pa. Atomizing liquids. No. 1,192,645; July 25; Gaz. vol. 228; p. 1349.
Koester, Charles, *et al.* (See Lanier, Lewis H., assignor.)
Koetschet, Joseph, and M. Theumann, Lyon, assignors to Société Chemique des Usines du Rhône (auct. Gilliard, P. Monnet et Cartier), Paris, France. Preparation of new cellulose esters. No. 1,191,439; July 18; Gaz. vol. 228; p. 873.
Kohler, John B., Chicago, Ill., assignor to The Kohler-Liebich Company, Wilmington, Del. Percussion musical instrument. No. 1,192,324; July 25; Gaz. vol. 228; p. 1238.
Kohler-Liebich Company, The. (See Kohler, John B., assignor.)
Kokomo Electric Co. (See Wiley, Porter A., assignor.)
Kolby, James A., L. P. Larsen, and C. P. Neilsen, assignors to Kolby Wheel Company, Ephraim, Utah. Resilient wheel. No. 1,191,901; July 18; Gaz. vol. 228; p. 1035.
Kolby Wheel Company. (See Kolby, Larsen, and Neilsen, assignors.)
Koller, Max, Winterthur, Switzerland. Apparatus for compressing plastic material. No. 1,190,912; July 11; Gaz. vol. 228; p. 647.
Kollock, George L., and R. P. Martin, assignors to Universal Hammer Company, Seattle, Wash. Hammer. No. 1,190,657; July 11; Gaz. vol. 228; p. 556.
Kopel, Frank, Centerville, Iowa. Fender for power-propelled vehicles. No. 1,189,833; July 4; Gaz. vol. 228; p. 221.
Korber, Hermann. (See Condé, Max, assignor.)
Körting & Mathiesen Aktiengesellschaft. (See Dietz, Wilhelm, assignor.)
Koss, Richard. (See Meyer and Koss.)
Kotz, Adam. (See Motte and Kotz.)
Kowalsky, John, Minneota, Minn. Crank for bench-drills. No. 1,190,559; July 11; Gaz. vol. 228; p. 517.
Kraft, Henry P. (See Schweinert and Kraft.)
Kramer, Hans von, Erdington, Birmingham, England. Inductive telephone installation. No. 1,189,317; July 4; Gaz. vol. 228; p. 39.
Krantz, Edward, assignor to United Vacuum Sweeper Company, Chicago, Ill. Bearing. No. 1,189,262; July 4; Gaz. vol. 228; p. 18.
Kraus Engine Company. (See Kraus, Otto, assignor.)
Kraus, Ernest, Lynn, Mass., assignor to General Electric Company. Electrical cut-out. No. 1,189,973; July 4; Gaz. vol. 228; p. 266.
Kraus, Otto, assignor to Kraus Engine Company, New York, N. Y. Apparatus for the production and utilization of working fluids. No. 1,191,195; July 18; Gaz. vol. 228; p. 785.
Krause, Romanus, assignor of one-half to J. G. Tooly, Belhaven, N. C. Automobile-lifting apparatus. No. 1,190,913; July 11; Gaz. vol. 228; p. 648.
Krauth, Albert, Hamilton, Ohio. Manifolding device. No. 1,189,263; July 4; Gaz. vol. 228; p. 19.

Kreitzer, Adolph, and A. Good, Wheeling, W. Va. Headlight-steering mechanism. No. 1,190,774; July 11; Gaz. vol. 228; p. 596.
Kress, Henry G., Manitowoc, Wis. Gas-engine. No. 1,189,834; July 4; Gaz. vol. 228; p. 221.
Krichbaum, Louis E., Youngstown, Ohio. Resilient tire. No. 1,190,914; July 11; Gaz. vol. 228; p. 648.
Krieger, Gustave, Brooklyn, N. Y. Ankle-brace. No. 1,192,433; July 25; Gaz. vol. 228; p. 1276.
Kriegsheim, Heinrich, assignor to The Permutit Company, New York, N. Y. Purification of water. No. 1,192,075; July 25; Gaz. vol. 228; p. 1148.
Krogh, Ferdinand W., San Francisco, Cal. Removable deep-well-pump cylinder. No. 1,192,791; July 25; Gaz. vol. 228; p. 1399.
Krohn, Irwin M., and M. J. Sullivan, Cincinnati, Ohio. Covering heels. No. 1,190,775; July 11; Gaz. vol. 228; p. 596.
Kromer, Emanuel, Spokane, Wash. Insecticide-gun. No. 1,190,426; July 11; Gaz. vol. 228; p. 472.
Kromer, George J., Jr., South Kaukauna, Wis. Cap. No. 1,190,427; July 11; Gaz. vol. 228; p. 472.
Kronquest, Alfred L., and C. Bulot, Chicago, Ill., assignors, by mesne assignments, to Continental Can Company, Inc. Soldering-machine. No. 1,192,646; July 25; Gaz. vol. 228; p. 1349.
Kross, Samuel, Memphis, Tenn., assignor of seventy-five one-thousandths to L. Fry, Natchez, Miss. Rug and manufacture. No. 1,191,847; July 18; Gaz. vol. 228; p. 1015.
Kruck, Ervin J. and W. A., New York, N. Y. Tracker for musical instruments and the like. No. 1,192,076; July 25; Gaz. vol. 228; p. 1148.
Kruck, Walter A. (See Kruck, Ervin J. and W. A.)
Kruse, Käthe, Charlottenburg, Germany. Dummy model for reproducing all movements of the human or animal body. No. 1,189,585; July 4; Gaz. vol. 228; p. 135.
Kubel, Stephen J., Washington, D. C. Paper-feed gage. No. 1,189,264; July 4; Gaz. vol. 228; p. 19.
Kuehn, Charles P., assignor to A. Stein & Company, Chicago, Ill. Hose-supporter. No. 1,191,320; July 18; Gaz. vol. 228; p. 832.
Kuhn, Frank. (See Shallor, Frank E., assignor.)
Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electric-oven heating unit. No. 1,191,196; July 18; Gaz. vol. 228; p. 786.
Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electric stove. No. 1,191,197; July 18; Gaz. vol. 228; p. 786.
Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Oven. No. 1,191,198; July 18; Gaz. vol. 228; p. 787.
Kuhn, Harry A., Pittsburgh, Pa. Mining-machine. No. 1,190,300; July 11; Gaz. vol. 228; p. 427.
Kuhn, Louis J., Latrobe, Pa. Invalid's bed. No. 1,192,647; July 25; Gaz. vol. 228; p. 1350.
Kull, John A., Jr., Chicago, Ill. Extension-shoe. No. 1,190,915; July 11; Gaz. vol. 228; p. 648.
Kundtz, Theodor. (See Gedeon, Joseph J., assignor.)
Kunert, William H., Minneapolis, Minn. Film-mending device. No. 1,191,321; July 18; Gaz. vol. 228; p. 832.
Kuntze, Fredrick H. L., assignor to J. Gottlieb, Brooklyn, N. Y. Resilient wheel. No. 1,191,977; July 25; Gaz. vol. 228; p. 1114.
Kurkjian, Haigazn H., Paterson, N. J. Means for measuring ribbons and the like. No. 1,190,916; July 11; Gaz. vol. 228; p. 649.
Kurowski, Alfred G. F., and O. A. Martini, assignors to F. Goodfriend, New York, N. Y. Time-controlled camera-shutter operator. No. 1,190,301; July 11; Gaz. vol. 228; p. 427.
Kurowski, Alfred G. F., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,190,658; July 11; Gaz. vol. 228; p. 556.
Kürsteiner, Ernst, Christiania, Norway. Lock. No. 1,192,434; July 25; Gaz. vol. 228; p. 1276.
Kurth, Adolph H., Milwaukee, Wis. Anchor-winch for small craft. No. 1,192,077; July 25; Gaz. vol. 228; p. 1149.
Kurth, William C. J., assignor of one-half to W. Bartlett, Edgemont, S. D. Fastener for storm-sash. No. 1,192,325; July 25; Gaz. vol. 228; p. 1238.
Kydland, Abraham, Telstad, Mont. Horse-detacher. No. 1,192,212; July 25; Gaz. vol. 228; p. 1199.
L. Moore Dry Kiln Co. (See Williams, Charles J., Jr., assignor.)
L-M-S. Motor Co. (See Mueller and Schuler, assignors.)
L. S. Starrett Company, The. (See Meldrum, Alexander, assignor.)
La Francis, Albert J., Chicago, Ill. Wool-pelt-scrubbing machine. No. 1,191,521; July 18; Gaz. vol. 228; p. 901.
La Jeunesse, Jean B. A., Alameda, Cal. Fountain-syringe. No. 1,189,586; July 4; Gaz. vol. 228; p. 135.
La Porte, Norbert M., Baltimore, Md. Exhaust-regulator. No. 1,189,704; July 4; Gaz. vol. 228; p. 175.
La Porte, Norbert M., Baltimore, Md., assignor to The Motor Cooling Systems Company. Cooling system. No. 1,190,777; July 11; Gaz. vol. 228; p. 597.
Laakkonen, Ephraim, Monessen, Pa. Carpenter's square. No. 1,191,008; July 11; Gaz. vol. 228; p. 680.
Labadie, Harry H., B. B. Beers, and W. O. Stark, Chicago, Ill., assignors of one-half to said Labadie and one-half to the estate of W. Schweitzer, deceased. Luncheon-table for automobiles. No. 1,189,835; July 4; Gaz. vol. 228; p. 221.
Labarre, Richard, assignor to Standard Loose Leaf Company, Inc., New Orleans, La. Temporary binder. No. 1,191,798; July 18; Gaz. vol. 228; p. 998.
Laberge, Charles, Westbrook, Me. Attachment for gas-ranges. No. 1,192,078; July 25; Gaz. vol. 228; p. 1149.
Labhardt, Hans, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing alkali metals. No. 1,191,799; July 18; Gaz. vol. 228; p. 998.
Labofish, Charles S., Washington, D. C. Brush-machine. No. 1,190,302; July 11; Gaz. vol. 228; p. 428.
Lackland, Thomas C., Norfolk, Va. Toy gun. No. 1,189,974; July 4; Gaz. vol. 228; p. 266.
Lacy, Burritt S., Sewaren, N. J. Manufacturing methyl chlorid and methylene chlorid. No. 1,190,659; July 11; Gaz. vol. 228; p. 556.
Lacy, George E. (See Glascock, Jasper E., assignor.)
Ladoff, Isador, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrode. No. 1,189,265; July 4; Gaz. vol. 228; p. 19.
Laessig, Hermann, Berlin, Germany. Non-alcoholic concentrated beverage and its manufacture. No. 1,191,440; July 18; Gaz. vol. 228; p. 874.
Laferriere, Joseph E., assignor to Spray Engineering Company, Boston, Mass. Metal-casting machine. No. 1,191,085; July 11; Gaz. vol. 228; p. 705.
Laganke, Charles F., assignor to The Kelly Company, Cleveland, Ohio. Peanut-skinning device. No. 1,190,560; July 11; Gaz. vol. 228; p. 518.
Lake, James, Jr., New York, N. Y. Hat-machine. No. 1,191,709; July 18; Gaz. vol. 228; p. 966.
Lake Torpedo Boat Company of Maine, The. (See Barraja-Frauenfelder, Joseph, assignor.)
Lamb, Amherst G., deceased; E. A. Lamb, Torrington, Conn, administratrix. Carbureter. No. 1,191,522; July 18; Gaz. vol. 228; p. 901.
Lamb, Amherst G., deceased; E. A. Lamb, administratrix, Torrington, Conn. Carbureter. No. 1,192,213; July 25; Gaz. vol. 228; p. 1200.
Lamb, Ella A., administratrix. (See Lamb, Amherst G.)
Lamb, George, New York, N. Y. Flush-valve. No. 1,190,917; July 11; Gaz. vol. 228; p. 649.
Lamb, James L., Woodburn, Iowa. Plow. No. 1,189,587; July 4; Gaz. vol. 228; p. 136.
Lamb, Joseph F., assignor to Landers, Frary & Clark, New Britain, Conn. Electrical heater. No. 1,191,601; July 18; Gaz. vol. 228; p. 926.
Lamb & Nash Company. (See Braddock, Edward I., assignor.)
Lamme, Benjamin G., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Alternating-current motor. No. 1,189,703; July 4; Gaz. vol. 228; p. 175.
Lampert, Jacob, Rapid City, S. D. Ore-concentrator. No. 1,192,534; July 25; Gaz. vol. 228; p. 1311.
Lampert, Jacob, Rapid City, S. D. Swinging ore-mill. No. 1,192,535; July 25; Gaz. vol. 228; p. 1311.
Lampert, Joseph J., Seattle, Wash. Gas-saving device. No. 1,192,435; July 25; Gaz. vol. 228; p. 1276.
Lamson Company. (See Lawrence, Millard B., assignor.)
Land, Edmund, Grand Rapids, Mich., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Telephone system. No. 1,189,836; July 4; Gaz. vol. 228; p. 222.
Landaiche, Joseph T., Remy, La. Tire-protector. No. 1,192,648; July 25; Gaz. vol. 228; p. 1350.
Lander, Thomas E., assignor of one-half to J. R. Smith, Kansas City, Mo. Adjustable eccentric. No. 1,189,588; July 4; Gaz. vol. 228; p. 136.
Landers, Frary & Clark. (See Carlson, Frederick E., assignor.)
Landers, Frary & Clark. (See Lamb, Joseph F., assignor.)
Landers, Frary & Clark. (See Simpson, Willibert, assignor.)
Landis, Harry H., Telford, Pa. Horseshoe. No. 1,191,322; July 18; Gaz. vol. 228; p. 832.
Landry, Louis, assignor to Compagnie Générale des Etablissements Pathé Frères, Phonographe et Cinématographe, Paris, France. Staggered dispersing device for color projection. No. 1,189,266; July 4; Gaz. vol. 228; p. 19.
Lane Brothers Company. (See Lane, George, assignor.)
Lane, George, assignor to Lane Brothers Company, Poughkeepsie, N. Y. Lifting-jack. No. 1,192,326; July 25; Gaz. vol. 228; p. 1238.
Lang, Johan G. V., New York, N. Y., assignor to General Electric Company. Device to prevent skidding. No. 1,191,602; July 18; Gaz. vol. 228; p. 927.
Lang, Michael, Los Angeles, Cal. Cabinet. No. 1,191,710; July 18; Gaz. vol. 228; p. 966.
Langford, George J. L., Ingersoll, Ontario, Canada. Counterbalance for window-sashes. No. 1,190,428; July 11; Gaz. vol. 228; p. 473.
Langford, William A. (See Fountain and Langford.)
Langton, Morgan J., Oswego, N. Y. Bean-clipper. No. 1,190,303; July 11; Gaz. vol. 228; p. 428.
Lanier, James S., Chambers county, Ala. Quill-cleaner art. No. 1,190,918; July 11; Gaz. vol. 228; p. 650.

Lanier, James S., Chambers county, Ala. Quill-cleaner. No. 1,190,919; July 11; Gaz. vol. 228; p. 650.

Lanier, Lewis H., Newport, Ky., assignor of one-third to T. J. Leen and one-third to C. Koester, Cincinnati, Ohio. Base-ball-throwing machine. No. 1,190,776; July 11; Gaz. vol. 228; p. 596.

Lanning, Charles D. (See Hathaway and Lanning.)

Lanphier, Robert C., assignor to Sangamo Electric Company, Springfield, Ill. Ampere-hour meter. No. 1,190,304; July 11; Gaz. vol. 228; p. 429.

Lansing, James A., assignor to Scranton Stove Works, Scranton, Pa. Combined gas and coal range. No. 1,191,086; July 11; Gaz. vol. 228; p. 705.

Laramie, Mitchell, Willimantic, Conn. Snap-hook. No. 1,191,009; July 11; Gaz. vol. 228; p. 680.

Larsen, Holger E., Janesville, Wis. Safety-cover for laundry-extractors. No. 1,192,327; July 25; Gaz. vol. 228; p. 1239.

Larsen Ice Machine Company. (See Ewen, Malcolm F., assignor.)

Larsen Ice Machine Company. (See McCurdy, Arthur L. S., assignor.)

Larsen, Louis P. (See Kolby, Larsen, and Nellsen.)

Latham Machinery Company. (See Weber, Henry, assignor.)

Latour, Marius C. A., Paris, France, assignor to General Electric Company. Alternating-current motor. No. 1,192,649; July 25; Gaz. vol. 228; p. 1350.

Latshaw, Joseph W., assignor to National Tube Company, Pittsburgh, Pa. Apparatus for finishing pipes. No. 1,192,536; July 25; Gaz. vol. 228; p. 1311.

Lauderbaugh, Elmer L., Jasper, Mo. Trap. No. 1,191,010; July 11; Gaz. vol. 228; p. 680.

Laughon, Eugene A., Roanoke, Va. Train-control system. No. 1,191,087; July 11; Gaz. vol. 228; p. 705.

Laurenti, Cesare, Turin, assignor to Società Fiat-San Giorgio, Spezia, Italy. Submarine vessel. No. 1,192,537; July 25; Gaz. vol. 228; p. 1312.

Lausterer, William J., Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation. Key-justifying and zero-setting mechanism for voting-machines. No. 1,189,837; July 4; Gaz. vol. 228; p. 222.

Lausterer, William J., Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation. Locking mechanism for voting-machines. No. 1,189,838; July 4; Gaz. vol. 228; p. 223.

Lausterer, William J., Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation. Support for interlocking channels for voting-machines. No. 1,189,839; July 4; Gaz. vol. 228; p. 223.

Lausterer, William J., Jamestown, N. Y., assignor, by mesne assignments, to Automatic Registering Machine Corporation. Indorsed-candidate lockout for voting-machines. No. 1,189,840; July 4; Gaz. vol. 228; p. 224.

Lautenbach, Samuel. (See Mead, Robert, assignor.)

Lavigne, Joseph P., Detroit, Mich. Collapsible tap. No. 1,190,561; July 11; Gaz. vol. 228; p. 518.

Lawrence, Albert L. (See Dinger, Paul, assignor.)

Lawrence, Lily, Vancouver, British Columbia, Canada. Nursing-brassière. No. 1,189,589; July 4; Gaz. vol. 228; p. 136.

Lawrence, Millard B., Philadelphia, Pa., assignor to Lamson Company, Boston, Mass. Carrier for cable-carrier-despatch systems. No. 1,192,436; July 25; Gaz. vol. 228; p. 1277.

Lawson, John, Central Falls, R. I. Circular-knitting machine. No. 1,192,328; July 25; Gaz. vol. 228; p. 1239.

Lawson, John, Central Falls, R. I. Circular-knitting machine. No. 1,192,329; July 25; Gaz. vol. 228; p. 1240.

Lawson, William J. (See Anderson, Charles J., assignor.)

Lawton, Daniel H., Chicago, Ill. Arch-support. No. 1,192,214; July 25; Gaz. vol. 228; p. 1200.

Lawyer, Elza W., *et al.* (See Hardesty, Frank M., assignor.)

Layman, Alfred C., Wilmington, Del. Leather-staking machine. No. 1,189,975; July 4; Gaz. vol. 228; p. 267.

Layman, Hebron B., New York, N. Y. Internal-combustion engine. No. 1,189,267; July 4; Gaz. vol. 228; p. 20.

Le Pan, Frederick. (See Kellogg, Henry M., assignor.)

Le Pierre, Auguste M., Korbel, Cal. Wrench. No. 1,190,562; July 11; Gaz. vol. 228; p. 519.

Lea, Charles, Boston, Mass., assignor to American Warp Drawing Machine Company. Tubing-machine. No. 1,191,109; July 11; Gaz. vol. 228; p. 712.

Leach, Ellen, Dillon, Mont. Lap-robe. No. 1,191,441; July 18; Gaz. vol. 228; p. 874.

Leadbetter, Noble W., assignor of one-third to J. Nygaard, Bickleton, Wash. Rail-joint. No. 1,191,800; July 18; Gaz. vol. 228; p. 999.

Leary, Dennis F., Chelsea, Mass. Muffler. No. 1,191,902; July 18; Gaz. vol. 228; p. 1035.

Lebrell, Francois, Villeurbanne, Rhône, and R. Desgeorge, Lyon, France. Preparation of plastic casein. No. 1,189,841; July 4; Gaz. vol. 228; p. 224.

Leddell, William A., Morenci, Ariz. Slag launder-lining. No. 1,189,842; July 4; Gaz. vol. 228; p. 224.

Ledwinka, Joseph, assignor to Edward C. Budd Manufacturing Company, Philadelphia, Pa. Coal-wagon body. No. 1,190,429; July 11; Gaz. vol. 228; p. 473.

Lee, Nixon, assignor to Sears-Cross Company, Brooklyn, N. Y. Speedometer. No. 1,189,843; July 4; Gaz. vol. 228; p. 224.

Leech, Aubrey B. (See Tucker and Leech.)

Leen, Thomas J., *et al.* (See Lanier, Lewis H., assignor.)

Leeper, Frank, Los Angeles, Cal. Window-shade adjuster. No. 1,190,778; July 11; Gaz. vol. 228; p. 597.

Lehman, George, Chicago, Ill. Sofa-bed. No. 1,191,323; July 18; Gaz. vol. 228; p. 832.

Lehmann, Feodor, and J. Stocker, Berlin, Germany. Manufacturing plastic substances from the derivatives of cellulose. No. 1,191,801; July 18; Gaz. vol. 228; p. 999.

Lehmann, Louis B. (See Hänel, Paul, assignor.)

Leichter, Milton M., Brooklyn, N. Y. Buckle-support. No. 1,190,305; July 11; Gaz. vol. 228; p. 429.

Leiner, Victor H. (See Bullard and Leiner.)

Leinweber, Adolf, Munich, Germany. Casting-machine. No. 1,189,976; July 4; Gaz. vol. 228; p. 267.

Leister, William H., Westminster, assignor, by mesne assignments, to Burt Machine Company, Baltimore, Md. Labeling-machine. No. 1,189,844; July 4; Gaz. vol. 228; p. 225.

Leitner, Frank, Roebling, N. J. Attachable swimmer's device. No. 1,192,650; July 25; Gaz. vol. 228; p. 1350.

Lelevier, Gustave G., Douglas, Ariz. Biplane. No. 1,190,178; July 4; Gaz. vol. 228; p. 336.

Lenard, Ferdinand, Chicago, Ill. Foot-rest for chairs. No. 1,189,705; July 4; Gaz. vol. 228; p. 175.

Lenders, Adolph W. H., Cedar Rapids, Iowa. Apparatus for making modified starches. No. 1,191,324; July 18; Gaz. vol. 228; p. 833.

Lenk, Frank X., Salt Lake City, Utah. Ear-tag. No. 1,192,792; July 25; Gaz. vol. 228; p. 1309.

Lents, William A., Hardin, Ky. Spring-hub. No. 1,192,079; July 25; Gaz. vol. 228; p. 1149.

Lenz, Peter C., Brooklyn, N. Y. Window-stop. No. 1,190,430; July 11; Gaz. vol. 228; p. 473.

Leonard, Michael J., Scranton, Pa. Shingling-gage. No. 1,192,651; July 25; Gaz. vol. 228; p. 1351.

Leonhart, Rudolph, San Anselmo, Cal. Ore-concentrator. No. 1,190,306; July 11; Gaz. vol. 228; p. 429.

Leoni, Alphonse M., Brooklyn, N. Y. Screen. No. 1,190,921; July 11; Gaz. vol. 228; p. 651.

Leoni, Alphonse M., Brooklyn, and A. F. Schreiner, Long Island City, N. Y., assignors to said Leoni. Sewage-screening apparatus. No. 1,190,920; July 11; Gaz. vol. 228; p. 650.

Leppart, John H., Rome, N. Y. Mop-holder. No. 1,192,330; July 25; Gaz. vol. 228; p. 1240.

Leslie, Alexander C., assignor of one-half to E. Guthrie, Hallettsville, Tex. Stovepipe-support. No. 1,191,802; July 18; Gaz. vol. 228; p. 999.

Leslie, John F., Madison, Wis. Sheet-metal tank. No. 1,192,538; July 25; Gaz. vol. 228; p. 1312.

Lev, Mark, Jr., Los Angeles, Cal. Trolley. No. 1,190,922; July 11; Gaz. vol. 228; p. 651.

Lévecque, Anatole, Paris, France. Machine for making show-cards or tickets. No. 1,191,803; July 18; Gaz. vol. 228; p. 999.

Levedahl, Axel, assignor to Aurora Automatic Machinery Company, Aurora, Ill. Clamping device. No. 1,189,268; July 4; Gaz. vol. 228; p. 20.

Leveque, Bernard T., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Thread-cutting machine. No. 1,190,307; July 11; Gaz. vol. 228; p. 430.

Levi, Benjamin, New York, N. Y. Washing and drying machine. No. 1,189,367; July 4; Gaz. vol. 228; p. 58.

Levy, Howard S. and L. F., Philadelphia, Pa. Etching-machine. No. 1,189,457; July 4; Gaz. vol. 228; p. 91.

Levy, Lionel F. (See Levy, Howard S. and L. F.)

Levy, Reginald M., New York, N. Y. Incandescent-lamp socket. No. 1,190,308; July 11; Gaz. vol. 228; p. 430.

Lewis, Walter, San Francisco, Cal. Feeding and winding mechanism. No. 1,191,903; July 18; Gaz. vol. 228; p. 1035.

Lewis, Elmer G., Coffeyville, Kans. Wrist-strap. No. 1,189,977; July 4; Gaz. vol. 228; p. 268.

Lewis, Frederick H., and W. H. Baker, assignors to Lewis Spring and Axle Company, Jackson, Mich. Machine for forming and tempering vehicle-springs or other elements. No. 1,190,309; July 11; Gaz. vol. 228; p. 430.

Lewis, John G., St. Louis, Mo. Seam for sewed articles. No. 1,192,539; July 25; Gaz. vol. 228; p. 1312.

Lewis, Lewis C., assignor to L. Lewis, Columbus, Ohio. Water-motor. No. 1,191,011; July 11; Gaz. vol. 228; p. 680.

Lewis, Llewellyn. (See Lewis, Lewis C., assignor.)

Lewis, Lloyd V., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Apparatus for the control of fluid-pressure brakes. No. 1,192,331; July 25; Gaz. vol. 228; p. 1241.

Lewis Spring and Axle Company. (See Lewis and Baker, assignors.)

Libert, Arthur, Green Bay, Wis. Feed-roller for lumber-working machines. No. 1,192,540; July 25; Gaz. vol. 228; p. 1313.

Lidholm, Johan H., London, England. Rotary tube-furnace for producing continuously calcium cyanamid. No. 1,191,804; July 18; Gaz. vol. 228; p. 1000.

Liebenstein, Max J., and L. H. Emsheimer, assignors to A. Stein & Company, Chicago, Ill. Clothing-protector. No. 1,191,200; July 18; Gaz. vol. 228; p. 787.

Liesemeyer, Henry F. W., Owensville, Mo. Wrench. No. 1,191,325; July 18; Gaz. vol. 228; p. 833.

Light, David M., and W. H. V. Rosing, Springfield, Mo. Steam-boiler fire-box. No. 1,191,201; July 18; Gaz. vol. 228; p. 788.

Lincoln, Purd J. (See Jenkins and Lincoln.)

Lindblad, Charles. (See Marsh and Lindblad.)

Lindemann, Albert J. and W. C. Lindemann, assignors to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Cooking-stove. No. 1,191,978; July 25; Gaz. vol. 228; p. 1114.

Lindemann, Walter C. (See Lindemann, Albert J. and W. C.)

Lindenfield, William H., Lexington, Tenn. Grease-cup. No. 1,192,652; July 25; Gaz. vol. 228; p. 1351.

Lindquist, David L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Controlling mechanism for induction-motors. No. 1,190,923; July 11; Gaz. vol. 228; p. 651.

Lindquist, David L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current-motor control. No. 1,190,924; July 11; Gaz. vol. 228; p. 652.

Lindquist, David L., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Safety brake apparatus. No. 1,190,925; July 11; Gaz. vol. 228; p. 652.

Lindsay, Leroy J., Seymour, Iowa. Door-closer. No. 1,190,563; July 11; Gaz. vol. 228; p. 519.

Lindsay, William D., Milwaukee, Wis. Self-feeding device for threshing-machines. No. 1,190,564; July 11; Gaz. vol. 228; p. 519.

Lingo, William T., Philadelphia, Pa. Lathe-chuck. No. 1,192,437; July 25; Gaz. vol. 228; p. 1277.

Link-Belt Company. (See Dodge, James M., assignor.)

Link-Belt Company. (See Oakes, Frank J., assignor.)

Link Belt Company. (See Shannon, Nicholas, assignor.)

Link, Vincent, Detroit, Mich. Automobile transmission mechanism. No. 1,189,368; July 4; Gaz. vol. 228; p. 58.

Linke, Theodore, New York, N. Y. Self-cleaning liquid-filter. No. 1,192,541; July 25; Gaz. vol. 228; p. 1313.

Linkletter, Robert, and G. W. Muttart, Jersey City, N. J., assignors of one-third to said Linkletter, one-third to said Muttart, and one-third to A. C. Muttart, New York, N. Y. Machine for making stucco-boards. No. 1,190,431; July 11; Gaz. vol. 228; p. 474.

Linstrom, Alfred E., Castlewood, S. D. Catch and lock for doors. No. 1,191,711; July 18; Gaz. vol. 228; p. 967.

Liollos, Stephanos, Charleston, Mo. Tire. No. 1,189,845; July 4; Gaz. vol. 228; p. 225.

Lipman, Carl E. L. (See Steensland, James O., assignor.)

Lipsius, George A., Marengo, Iowa. Seed-catcher. No. 1,191,442; July 18; Gaz. vol. 228; p. 874.

Lisotto, Ermenegildo. (See Russo, Paolo, assignor.)

Lister, John T., Cleveland, Ohio. Tire-forming apparatus. No. 1,190,432; July 11; Gaz. vol. 228; p. 474.

Lister, John T., Cleveland, Ohio. Tire-forming apparatus. No. 1,190,433; July 11; Gaz. vol. 228; p. 475.

Litle, Thomas J., Jr., Woodbury, N. J., assignor to The Taux-Wel Talking Machine Co. Toy phonograph. No. 1,191,202; July 18; Gaz. vol. 228; p. 788.

Livingston, Edward L., West Orange, N. J. Bath-mat. No. 1,190,179; July 4; Gaz. vol. 228; p. 337.

Loach, William, assignor to The Pedlar People Limited, Oshawa, Ontario, Canada. Making metal fabric. No. 1,189,309; July 4; Gaz. vol. 228; p. 58.

Lockhart, George, New York, N. Y. Elevator-lock. No. 1,191,443; July 18; Gaz. vol. 228; p. 874.

Lockhart, George, New York, N. Y. Door closing and locking device. No. 1,192,215; July 25; Gaz. vol. 228; p. 1201.

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Making an anti-friction-roll. No. 1,189,840; July 4; Gaz. vol. 228; p. 226.

Loeb, George A., Jr. (See Bartholomay and Loeb.)

Loepsinger, Albert J., Providence, R. I., assignor to General Fire Extinguisher Company, New York, N. Y. Pressure-gage. No. 1,189,706; July 4; Gaz. vol. 228; p. 176.

Loewenstein, Max, New York, N. Y. Tea-strainer. No. 1,192,332; July 25; Gaz. vol. 228; p. 1241.

Lofgren, John, Chicago, Ill. Locomotive-wiring fitting. No. 1,189,847; July 4; Gaz. vol. 228; p. 226.

Lofquist, Hjalmar, Stockholm, Sweden. Machine for washing plates, knives, forks, and the like. No. 1,189,707; July 4; Gaz. vol. 228; p. 176.

Logan, Edward M., and C. E. McNaughton, Sonyea, N. Y. Turn-table and power-transmission mechanism for motor-vehicles. No. 1,189,708; July 4; Gaz. vol. 228; p. 177.

Logan, Edward M., and C. E. McNaughton, Sonyea, N. Y. Power-transmission mechanism for motor-vehicles. No. 1,189,709; July 4; Gaz. vol. 228; p. 177.

Lohmann Company, The. (See Maddy and Schubert, assignors.)

Long, Adam A., Rochester, N. Y. Buffer. No. 1,190,310; July 11; Gaz. vol. 228; p. 431.

Long, Guy C., Timber Lake, S. D. Feeding mechanism for threshing-machines. No. 1,189,710; July 4; Gaz. vol. 228; p. 177.

Long, John D., Butte, Mont. Mechanical base-ball pitcher. No. 1,190,565; July 11; Gaz. vol. 228; p. 520.

Long, J. L. (See Reed, Robert H., assignor.)

Longnecker, Charles, Springfield, Mass., assignor to Quigley Furnace and Foundry Company. Apparatus for feeding finely-divided fuel. No. 1,191,203; July 18; Gaz. vol. 228; p. 789.

Looman, Milo D., assignor of one-half to E. E. Forbes, Orcutt, Cal. Conveying oil. No. 1,192,438; July 25; Gaz. vol. 228; p. 1277.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,189,590; July 4; Gaz. vol. 228; p. 137.

Loose, Robert D., Fort Worth, Tex. Spark-plug for internal-combustion engines. No. 1,191,603; July 18; Gaz. vol. 228; p. 927.

Lorimer, George W., Piqua, assignor to The National Cash Register Company, Dayton Ohio. Registering, recording, and computing system. No. 1,189,269; July 4; Gaz. vol. 228; p. 21.

Lose, Charles R. (See Grininger, George W., assignor.)

Lotozky, Alexis, Kharkoff, Russia. Apparatus for mechanically separating materials. No. 1,190,926; July 11; Gaz. vol. 228; p. 652.

Lott, Abraham G., Washington, D. C. Golf-practising device. No. 1,191,444; July 18; Gaz. vol. 228; p. 875.

Louden, William, Fairfield, Iowa. Manger for animal-pens. No. 1,192,080; July 25; Gaz. vol. 228; p. 1150.

Louden, William, Fairfield, Iowa. Structural coupling. No. 1,192,216; July 25; Gaz. vol. 228; p. 1201.

Loughran, Alexius M., New York, N. Y. Apparatus for molding. No. 1,190,434; July 11; Gaz. vol. 228; p. 475.

Loux, William F., assignor to William H. Horn & Brother Incorporated, Philadelphia, Pa. Truss. No. 1,191,805; July 18; Gaz. vol. 228; p. 1000.

Lovell-McConnell Manufacturing Company. (See Dean, George C., assignor.)

Lovell-McConnell Manufacturing Company. (See Hutchison, Miller R., assignor.)

Lovette, Thomas S. (See Keith, Ben F., assignor.)

Low, Frank S., New York, N. Y. Making gasolene. No. 1,192,653; July 25; Gaz. vol. 228; p. 1351.

Lowden, Andrew S., Concord, Mass. Hinge. No. 1,190,435; July 11; Gaz. vol. 228; p. 475.

Lowe, Harry L. (See Hughes, Ferguson, and Lowe.)

Lowman, William, Silver Creek, assignor of one-half to E. P. Dussell, Columbus, Nebr. Gas-igniting system. No. 1,189,370; July 4; Gaz. vol. 228; p. 59.

Lowry, Charles E., *et al.* (See Hardesty, Frank M., assignor.)

Lowy, Morris, New York, N. Y. Armor for vessels, forts, and the like. No. 1,191,445; July 18; Gaz. vol. 228; p. 875.

Loxley, Samuel E. (See Loxley, Walter M. and S. E.)

Loxley, Walter M. and S. E., Dayton, Ohio. Combined wagon and velocipede. No. 1,192,081; July 25; Gaz. vol. 228; p. 1150.

Loyer, Joseph C. and O. M., Detroit, Mich. Composition shingle. No. 1,191,932; July 18; Gaz. vol. 228; p. 1047.

Loyer, Oliver M. (See Loyer, Joseph C. and O. M.)

Ludwig Hupfeld Aktiengesellschaft. (See Hennig, Gustav K., assignor.)

Luellen, Lawrence W., Mountain Lakes, N. J., assignor to Individual Drinking Cup Company, New York, N. Y. Catamenial bandage. No. 1,192,439; July 25; Gaz. vol. 228; p. 1278.

Luick, Bert F., Pomona, assignor to A. W. Risher, Spadra, Cal. Wire-reel. No. 1,191,904; July 18; Gaz. vol. 228; p. 1036.

Lukens, William L. (See Struble and Lukens.)

Lummus Cotton Gin Company. (See Hartpence, Charles C., assignor.)

Lummus, Walter E., Lynn, Mass. Apparatus for separating vaporized volatile liquids from gaseous mixtures. No. 1,189,711; July 4; Gaz. vol. 228; p. 178.

Lund, John A. (See Rudolf and Lund.)

Lundell, Alben E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,189,458; July 4; Gaz. vol. 228; p. 91.

Lundgren, Jacob, assignor of one-half to The Carlson-Wenstrom Manufacturing Company, Incorporated, Philadelphia, Pa. Braiding-machine. No. 1,189,591; July 4; Gaz. vol. 228; p. 137.

Lundin, Emil O., Cambridge, Mass. Electrical pole and pole-base. No. 1,189,459; July 4; Gaz. vol. 228; p. 91.

Lundin, William. (See Holsten and Lundin.)

Lush, William A., Scranton, Pa. Faller attachment for spinner-frames. No. 1,191,712; July 18; Gaz. vol. 228; p. 967.

Lussier, Alphonse L., Springfield, Mass. Shoe attachment. No. 1,192,542; July 25; Gaz. vol. 228; p. 1313.

Luther, John A., Schenectady, N. Y. Paper cutting and shaping machine. No. 1,192,440; July 25; Gaz. vol. 228; p. 1278.

Lutz, Harry J., Wheeling, W. Va. Illuminating device. No. 1,189,592; July 4; Gaz. vol. 228; p. 138.

Lydecker, John G., New York, N. Y. Rotary perch. No. 1,192,441; July 25; Gaz. vol. 228; p. 1278.

Lynch, John B., Cook county, Ill., assignor to Q & C Company, New York, N. Y. Vestibule-diaphragm. No. 1,189,460; July 4; Gaz. vol. 228; p. 92.

Lynn, John, New York, N. Y. Spraying or atomizing device. No. 1,189,593; July 4; Gaz. vol. 228; p. 138.

Lyon, Charles D., University City, Mo. Window-washer. No. 1,189,978; July 4; Gaz. vol. 228; p. 268.

Lyon, Wallace C., Hyattsville, Md. Skylight construction. No. 1,192,654; July 25; Gaz. vol. 228; p. 1352.

Lyons, Edgar S., Toronto, Ontario, Canada, assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Wire-coiling machine. No. 1,192,655; July 25; Gaz. vol. 228; p. 1352.

Lyons, Herbert H., Montreal, Quebec, Canada. Display-fixture. No. 1,189,371; July 4; Gaz. vol. 228; p. 59.
Lyons, John T., Pawtucket, R. I. Union undergarment. No. 1,189,270; July 4; Gaz. vol. 228; p. 21.
M. D. Knowlton Company. (See Fceley, Frank G., assignor.)
M. D. Knowlton Company. (See Hawkins, Edgar M., assignor.)
M. H. Treadwell Company. (See Astrom, Carl P., assignor.)
M. S. Wright Co. (See Wright, Morris S., assignor.)
MacDermott, Thomas, Portsmouth, England. Releasing-gear for ships' boats. No. 1,191,447; July 18; Gaz. vol. 228; p. 876.
MacDonald, Cathrine, *et al.* (See MacDonald, Joseph D., assignor.)
MacDonald, Frank C., administrator. (See MacDonald, Joseph D.)
MacDonald, Frank C., *et al.* (See MacDonald, Frank C., assignor.)
MacDonald, Harry J., Chicago, Ill. Feeding mechanism for button-attaching machines. No. 1,191,807; July 18; Gaz. vol. 228; p. 1001.
MacDonald, Howard G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,189,274; July 4; Gaz. vol. 228; p. 22.
MacDonald, Joseph D., deceased, Butte, Mont.; F. C. MacDonald, administrator, assignor of one-half to C. MacDonald and one-half to F. C. MacDonald, San Francisco, Cal. Drill-operating mechanism. No. 1,192,657; July 25; Gaz. vol. 228; p. 1353.
MacGlashan, John S., assignor of one-half to G. B. Maggini, Cincinnati, Ohio. Means for holding and suspending balls of thread, &c. No. 1,189,275; July 4; Gaz. vol. 228; p. 23.
Macbeth-Evans Glass Company. (See Elliott, Elias L., assignor.)
Macbeth-Evans Glass Company. (See Evans and Hawe, assignors.)
Mackay, Robert M. (See Paulson, John C., assignor.)
Mackey, Franklin O., Tucson, Ariz. Tool for slotting a well-casing. No. 1,189,984; July 4; Gaz. vol. 228; p. 270.
Mackie, John H., Watervliet, N. Y. Lubricating oil or grease. No. 1,191,328; July 18; Gaz. vol. 228; p. 834.
Macklind, William R., assignor to G. A. Martin, trustee, Cleveland, Ohio. Drying mechanism. No. 1,191,921; July 18; Gaz. vol. 228; p. 1043.
Macklind, William R., assignor to G. A. Martin, trustee, Cleveland, Ohio. Vapor-removing apparatus for drying mechanism. No. 1,192,024; July 25; Gaz. vol. 228; p. 1151.
Maddox, Albert D., McKenzie, Tenn. Railway stock-guard. No. 1,191,014; July 11; Gaz. vol. 228; p. 682.
Maddy, James H., New York, N. Y., and B. H. Schubert, Weehawken, N. J., assignors to The Lohmann Company, New York, N. Y. Flux for coating metal baths. No. 1,189,373; July 4; Gaz. vol. 228; p. 60.
Madison, Alfred L., assignor to Willcox and Gibbs Sewing Machine Company, New York, N. Y. Guard for sewing-machine take-ups. No. 1,191,015; July 11; Gaz. vol. 228; p. 682.
Maggard, Elisha E., Morehead, Ky. Lamp-house for projecting apparatus. No. 1,192,658; July 25; Gaz. vol. 228; p. 1353.
Maggini, George B. (See MacGlashan, John S., assignor.)
Maher, David F., Watsonville, Cal. Hand-grip pad for steering-wheels and the like. No. 1,190,781; July 11; Gaz. vol. 228; p. 598.
Maher, Elphége. (See Robert, Simon, assignor.)
Mahoney, Joseph N., Wilkinsburg, and W. M. Austin, Swissvale, Pa., assignors to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,189,276; July 4; Gaz. vol. 228; p. 23.
Main, George, and J. M. Stansell, Centralia, Ill. Detachable roller-screen. No. 1,189,850; July 4; Gaz. vol. 228; p. 227.
Maitre, Alcide H., and V. H. G. Martin, Rouen, France. Contact-breaker device for electromagnetic vibrating members. No. 1,190,244; July 4; Gaz. vol. 228; p. 361.
Maize, Frank P. (See Hild, Maize, and Coop.)
Malarkey, Patrick F., assignor of one-half to E. E. Straub, Mount Carmel, Pa. Feed-chute. No. 1,191,524; July 18; Gaz. vol. 228; p. 902.
Malcom, Robert. (See Rextrew, Frank H., assignor.)
Malcom, Robert, Chicago, Ill. Eye-protector. No. 1,190,567; July 11; Gaz. vol. 228; p. 521.
Mallett, Raymond A., and C. McClung, Sacramento, Cal. Humidifier and disinfector. No. 1,189,600; July 4; Gaz. vol. 228; p. 140.
Mallin, Solomon, Pittsburgh, Pa. Stem winding and setting device for watches. No. 1,189,713; July 4; Gaz. vol. 228; p. 179.
Mallory, George W., Blenheim, Ontario, Canada. Door-check. No. 1,190,313; July 11; Gaz. vol. 228; p. 432.
Malloy, James E., Montpelier, Vt. Double mixing-spoon. No. 1,192,659; July 25; Gaz. vol. 228; p. 1354.
Manassa, Jerome, New York, N. Y. Awning-support. No. 1,190,437; July 11; Gaz. vol. 228; p. 476.
Mandel, Louis, Chicago, Ill. Convertible motion-picture machine. No. 1,191,329; July 18; Gaz. vol. 228; p. 834.
Mandt, Obert G., assignor to American Cement Machine Co., Inc., Keokuk, Iowa. Concrete-mixing machine. No. 1,190,927; July 11; Gaz. vol. 228; p. 653.
Manley, Imlah A., Canon, assignor to W. Adams, Royston, Ga. Plow. No. 1,190,438; July 11; Gaz. vol. 228; p. 476.
Manning, Coleman J., Medford, assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass. Double-spring gage. No. 1,192,443; July 25; Gaz. vol. 228; p. 1279.
Manthey, Henry, assignor to The "New Way" Motor Company, Lansing, Mich. Clutch. No. 1,192,793; July 25; Gaz. vol. 228; p. 1399.
Marbach, Frank G., assignor to Champion Register Company, Cleveland, Ohio. Bill leaf and spring. No. 1,190,568; July 11; Gaz. vol. 228; p. 521.
Marchfeld, Sandor A., New York, N. Y. Lock. No. 1,190,439; July 11; Gaz. vol. 228; p. 476.
Marchins, Christ, Portland, Oreg. Hair-cutting device. No. 1,192,085; July 25; Gaz. vol. 228; p. 1152.
Marcroft, Jesse, Providence, R. I. Automatic train-stopping device. No. 1,192,086; July 25; Gaz. vol. 228; p. 1152.
Marcroft, Jesse, Cranston, R. I. Automatic train-stopping device. No. 1,192,087; July 25; Gaz. vol. 228; p. 1152.
Marcucci, Marius A., New York, N. Y. Insect-beater. No. 1,190,440; July 11; Gaz. vol. 228; p. 477.
Marcuse, Moses M., assignor to West Disinfecting Company, New York, N. Y. Commode. No. 1,189,714; July 4; Gaz. vol. 228; p. 179.
Mardis, J. S. (See Drake, William H., assignor.)
Margetts, Philip G., and C. M. Hummell, Chicago, Ill. Lubricating-cup. No. 1,191,208; July 18; Gaz. vol. 228; p. 790.
Margrave, Henry B., Harriman, Tenn. Meat-cutter. No. 1,191,016; July 11; Gaz. vol. 228; p. 683.
Maring, Howard T. (See Myers and Maring.)
Marker, Hans E. A., East Orange, N. J. Device for holding and feeding paper. No. 1,190,661; July 11; Gaz. vol. 228; p. 557.
Markert, John P., and R. S. Bolger, New York, N. Y.; said Bolger assignor to said Markert. Box-covering machine. No. 1,190,928; July 11; Gaz. vol. 228; p. 653.
Markham, William J. (See Berry and Markham.)
Marles, Henry, Manor Park, England. Steering-gear for mechanically-propelled vehicles. No. 1,189,985; July 4; Gaz. vol. 228; p. 271.
Marley, Samuel S., Wilmington, Del. Game. No. 1,191,330; July 18; Gaz. vol. 228; p. 835.
Marquis, Alexander G., assignor of one-fourth to G. W. Rogers and one-fourth to A. B. Rogers, Rochester, N. Y. Sound-regulator. No. 1,191,808; July 18; Gaz. vol. 228; p. 1001.
Marsden, Mark W., Philadelphia, Pa. Cotton-gin. No. 1,192,660; July 25; Gaz. vol. 228; p. 1354.
Marsden, Mark W., Philadelphia, Pa. Shot retarding and obturating element. No. 1,192,661; July 25; Gaz. vol. 228; p. 1354.
Marsden, Mark W., Philadelphia, Pa. Obturating material. No. 1,192,662; July 25; Gaz. vol. 228; p. 1354.
Marseilles Company. (See Brown, Theophilus, assignor.)
Marsh, Harry S., and C. Lindblad, Brooklyn, assignors to International Cigar Machinery Company, New York, N. Y. Cigar-bunch shaper. No. 1,191,199; July 18; Gaz. vol. 228; p. 787.
Marsh, Richard B., assignor to Hale and Kilburn Company, Philadelphia, Pa. Back-supporting standard for car-seats. No. 1,190,441; July 11; Gaz. vol. 228; p. 477.
Marshall, Holmes, Plainfield, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Computing-machine. No. 1,190,184; July 4; Gaz. vol. 228; p. 338.
Marshall, James T., Haughton, La. Rail-joint. No. 1,189,851; July 4; Gaz. vol. 228; p. 227.
Marshall, Thomas L., Decatur, Ala. Cooling apparatus. No. 1,191,017; July 11; Gaz. vol. 228; p. 683.
Marshall, W. Hal. (See Wilson, Fred A., assignor.)
Martens, Richard C., London, England. Apparatus for coding messages. No. 1,189,277; July 4; Gaz. vol. 228; p. 24.
Martin, Christian H., Akron, Ohio. Adjustable bench. No. 1,189,601; July 4; Gaz. vol. 228; p. 141.
Martin, Ferdinand C., Newberry, S. C. Roach-trap. No. 1,192,334; July 25; Gaz. vol. 228; p. 1242.
Martin, Frederick S., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Induction-motor winding. No. 1,191,209; July 18; Gaz. vol. 228; p. 790.
Martin, George A., trustee. (See Macklind, William R., assignor.)
Martin, Haakon A., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,189,278; July 4; Gaz. vol. 228; p. 24.
Martin, James P., Lancaster, Pa., assignor to American Clay Machinery Company, Bucyrus, Ohio. Soft-mud-brick machine. No. 1,192,444; July 25; Gaz. vol. 228; p. 1279.
Martin, Loyal M., *et al.* (See Raymond, Edward B., assignor.)
Martin, Patrick F., *et al.* (See McDonald, Martin, assignor.)
Martin, Perry S., Broadway, Va. Temperature-regulating device for heaters. No. 1,192,335; July 25; Gaz. vol. 228; p. 1242.

Martin, Robert P. (See Kollock and Martin.)
Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Automatic telephone system. No. 1,190,185; July 4; Gaz. vol. 228; p. 339.
Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Telephone intercommunicating and supervisory system. No. 1,191,210; July 18; Gaz. vol. 228; p. 791.
Martin, Thomas. (See Arnold and Martin.)
Martin, Victor H. G. (See Maitre and Martin.)
Martin, Walter H., Beloit, Wis. Legend device for cameras. No. 1,190,442; July 11; Gaz. vol. 338; p. 477.
Martinez, Norberto, Cotulla, Tex. Weight-motor. No. 1,191,018; July 11; Gaz. vol. 228; p. 683.
Martinez, Norberto, Cotulla, Tex. Transmission mechanism. No. 1,191,019; July 11; Gaz. vol. 228; p. 683.
Martini, Otto A. (See Kurowski and Martini.)
Martz, Silas E., Plymouth, Pa. Antiskidding device. No. 1,190,814; July 11; Gaz. vol. 228; p. 433.
Maruca, Anthony, Anita, Pa. Monoplane. No. 1,191,448; July 18; Gaz. vol. 228; p. 876.
Marx, Henry C., Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass. Chord-strings of a zither. No. 1,190,782; July 11; Gaz. vol. 228; p. 599.
Marx, Henry C., Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass. Keyed zither. No. 1,190,783; July 11; Gaz. vol. 228; p. 599.
Marx, Henry C., Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass. Tone-softening attachment for zithers. No. 1,190,784; July 11; Gaz. vol. 228; p. 599.
Marx, Henry C., Palmer, Kans., assignor to The Phonoharp Company, East Boston, Mass. Bridge-wire for stringed instruments. No. 1,190,929; July 11; Gaz. vol. 228; p. 654.
Marx, Richard, and R. J. Boltz; said Marx assignor to Defiance Manufacturing Company, Philadelphia, Pa. Leaf-stemming machine. No. 1,191,020; July 11; Gaz. vol. 228; p. 684.
Masek, William T., David City, Nebr. Automatic stock-feeding apparatus. No. 1,192,663; July 25; Gaz. vol. 228; p. 1355.
Mashek, Frank, Chicago, Ill. Pool-table pocket. No. 1,190,186; July 4; Gaz. vol. 228; p. 339.
Mason, Arthur J., Chicago, Ill. Apparatus for curing freshly-cut crops. No. 1,191,980; July 25; Gaz. vol. 228; p. 1115.
Mason, Charles T., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Ignition-dynamo. No. 1,189,374; July 4; Gaz. vol. 228; p. 60.
Mason, Charles T., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Ignition-dynamo. No. 1,190,785; July 11; Gaz. vol. 228; p. 600.
Masten, Philo W., Los Angeles, Cal. Walking-beam attachment. No. 1,190,930; July 11; Gaz. vol. 228; p. 654.
Masure, Morris L. (See Miller, Henry, assignor.)
Masury, Alfred F., assignor to International Motor Company, New York, N. Y. Radiator for automobiles. No. 1,192,218; July 25; Gaz. vol. 228; p. 1202.
Mathews, Fred, assignor to C. C. Murphy, Chicago, Ill. Freight-car. No. 1,189,464; July 4; Gaz. vol. 228; p. 94.
Mathewson, Henry B., San Francisco, Cal., assignor to American Optical Company, Southbridge, Mass. Scale-forming apparatus. No. 1,191,714; July 18; Gaz. vol. 228; p. 968.
Mathy, Maurice, Flémalle Grande, Belgium. Fixing device for glass vessels to be ground. No. 1,192,544; July 25; Gaz. vol. 228; p. 1314.
Matney, James, assignor of one-half to E. Roberts, Livingston, Mont. Plow. No. 1,192,664; July 25; Gaz. vol. 228; p. 1355.
Matteucci, Raffaele, Turin, Italy. Gearing. No. 1,190,662; July 11; Gaz. vol. 228; p. 557.
Mattison, Carl L., assignor to C. Mattison Machine Works, Beloit, Wis. Belt-sanding machine. No. 1,189,715; July 4; Gaz. vol. 228; p. 180.
Mattison, Carl L., assignor to C. Mattison Machine Works, Beloit, Wis. Surfacing-machine. No. 1,191,981; July 25; Gaz. vol. 228; p. 1115.
Matz, Charles, *et al.* (See Cuminer, Arthur J., assignor.)
Matzke, Julius, Indianapolis, Ind. Steam wall-paper remover. No. 1,189,716; July 4; Gaz. vol. 228; p. 180.
Maxwell, Howard. (See Reist and Maxwell.)
Maxwell, James H., Seattle, Wash. Pontoon for knock-down rafts. No. 1,190,569; July 11; Gaz. vol. 228; p. 521.
Maxwell, James H., Seattle, Wash. Mount for outboard motors. No. 1,190,663; July 11; Gaz. vol. 228; p. 558.
Maynard, Albert E., assignor to American Optical Company, Southbridge, Mass. Lens-holder. No. 1,191,905; July 18; Gaz. vol. 228; p. 1036.
Maynard, William C., Miami, Fla. Terminal connector. No. 1,190,931; July 11; Gaz. vol. 228; p. 654.
Mayo, Nelson S., assignor to The Abbott Laboratories, Chicago, Ill. Container for hypodermic solutions. No. 1,189,465; July 4; Gaz. vol. 228; p. 94.
Mazer, Joseph, McAlester, Okla. Winding-indicator. No. 1,191,525; July 18; Gaz. vol. 228; p. 902.
McAllister, James B., St. Johnsville, N. Y. Dental pliers. No. 1,190,180; July 4; Gaz. vol. 228; p. 337.
McAllister, John E. (See Mitten, McAllister, and Ireland.)
McArthur, Lachlan W., Montreal West, assignor to himself and P. S. McKergow, Westmount, Quebec, Canada. Brick-drier car. No. 1,192,082; July 25; Gaz. vol. 228; p. 1151.
McBridge, Arthur E., Utica, N. Y. Cover for humidors. No. 1,190,311; July 11; Gaz. vol. 228; p. 431.
McCabe, Frank B., Lewiston, Pa. Rock-crusher. No. 1,189,594; July 4; Gaz. vol. 228; p. 138.
McCanless, Charles E., Bartlesville, Okla. Desk. No. 1,192,442; July 25; Gaz. vol. 228; p. 1279.
McCarthy, John J., and C. Mertz, Lawler, Iowa. Folding car-step. No. 1,189,595; July 4; Gaz. vol. 228; p. 139.
McCaskey Register Company, The. (See Dunning, William E., assignor.)
McCaskey Register Company, The. (See Hick, Harry J., assignor.)
McCaskey Register Company, The. (See Lyons, Edgar S., assignor.)
McCaslin, Harry M., assignor to American La France Fire Engine Co., Inc., Elmira, N. Y. Fire-extinguisher. No. 1,189,271; July 4; Gaz. vol. 228; p. 21.
McClain, Frank P., and J. A. Futcher, Rillton, Pa. Mine-shaft gate. No. 1,191,806; July 18; Gaz. vol. 228; p. 1000.
McClintock, William M., St. Paul, Minn. Lightning-arrester. No. 1,189,272; July 4; Gaz. vol. 228; p. 22.
McClung, Charles. (See Mallett and McClung.)
McClure, John, Glenside, Pa. Inking apparatus for printing-presses. No. 1,190,779; July 11; Gaz. vol. 228; p. 597.
McColl, Henry P., Melbourne, Victoria, Australia. Door lock and contact for electric elevators. No. 1,192,217; July 25; Gaz. vol. 228; p. 1201.
McCord, Alvin C., and I. A. Randel, assignors to McCord and Company, Chicago, Ill. Journal-box cellar. No. 1,189,712; July 4; Gaz. vol. 228; p. 178.
McCord and Company. (See McCord and Randel, assignors.)
McCormick, Frank L., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Mechanism for controlling automatic musical instruments. No. 1,191,205; July 18; Gaz. vol. 228; p. 789.
McCormick, Hugh M., Chicago, Ill., assignor to Uplift Corset Company, Phoenix, Ariz. Abdomen-supporting corset. No. 1,190,250; July 4; Gaz. vol. 228; p. 363.
McCormick, William H. (See Gibson and Oglesby, assignors.)
McCoy, Charles B. (See Roepke, William J., assignor.)
McCoy, Elijah, assignor of fifty-two one-hundredths to F. H. Warren, Detroit, Mich. Lubricator. No. 1,192,083; July 25; Gaz. vol. 228; p. 1151.
McCreery, King. (See Snyder and McCreery.)
McCulloh, Allan, *et al.*, executors. (See Kendall, Edward D., assignor.)
McCurdy, Arthur L. S., Chicago, Ill., assignor to Larsen Ice Machine Company (Inc.), Wilmington, Del. Manufacturing creams, custards, and the like. No. 1,190,181; July 4; Gaz. vol. 228; p. 337.
McCurdy, Oscar S., Wilkinsburg, Pa. Shaving-brush. No. 1,191,604; July 18; Gaz. vol. 228; p. 928.
McDaniels, Samuel. (See Cross and McDaniels.)
McDonald, Martin, Washington, D. C., assignor of one-fourth to P. F. Martin, Baltimore, Md., and five twenty-fourths to E. D. Talty, Washington, D. C. Door-knob. No. 1,191,206; July 18; Gaz. vol. 228; p. 789.
McDonough, Joseph J., Rochester, assignor to American Fire Alarm Company, Pittsburgh, Pa. Hair-cutting device. No. 1,190,182; July 4; Gaz. vol. 228; p. 338.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Electric heater. No. 1,190,780; July 11; Gaz. vol. 228; p. 598.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Partition junction-box. No. 1,191,327; July 18; Gaz. vol. 228; p. 834.
McElroy, James F., deceased, Albany, N. Y.; S. H. McElroy, executrix, assignor to Consolidated Car-Heating Company. Electric switch. No. 1,191,326; July 18; Gaz. vol. 228; p. 833.
McElroy, John H., trustee. (See Hopkins, Harvey L., assignor.)
McElroy, Robert L., New York, N. Y. Lock-pin. No. 1,192,333; July 25; Gaz. vol. 228; p. 1241.
McElroy, Susie H., executrix. (See McElroy, James F.)
McEwen, Archie H., Tupper Lake, N. Y. Combined screen and storm door. No. 1,191,012; July 11; Gaz. vol. 228; p. 681.
McEwen, Willard M., Chicago, Ill. Oscillating fan. No. 1,189,273; July 4; Gaz. vol. 228; p. 22.
McFadden, William, Davis, W. Va. Telephone and telegraph pole. No. 1,189,596; July 4; Gaz. vol. 228; p. 139.
McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for working uppers over lasts. No. 1,189,979; July 4; Gaz. vol. 228; p. 268.
McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Working uppers over lasts. No. 1,189,980; July 4; Gaz. vol. 228; p. 269.
McGill, John F., Vallejo, Cal. Shell. No. 1,191,713; July 18; Gaz. vol. 228; p. 967.

McGilvray, Harry J., assignor of one-half to H. M. Bennett, Weston, W. Va. Device for removing accumulated liquid from gas-mains. No. 1,191,013; July 11; Gaz. vol. 228; p. 681.
McGinley, Arthur E. (See Munger and McGinley.)
McGrady, James P., assignor to Worcester Electric & Mfg. Co., Worcester, Mass. Meter panel-board. No. 1,189,848; July 4; Gaz. vol. 228; p. 226.
McGrath, Joseph, Manteno, Ill. Mail-transferring apparatus. No. 1,192,656; July 25; Gaz. vol. 228; p. 1353.
McGrath, Joseph, and H. W. Banschbach, Brooklyn, N. Y. Garbage-pail. No. 1,190,436; July 11; Gaz. vol. 228; p. 476.
McGregor, Alexander G., Globe, Ariz. Vehicle-top. No. 1,191,446; July 18; Gaz. vol. 228; p. 875.
McIntire, Stephen L. (See Ferguson, Arthur S., assignor.)
McKay, Augusta P., assignor to McKay Disc Plow Co., Rome, Ga. Draft appliance. No. 1,189,981; July 4; Gaz. vol. 228; p. 269.
McKay, Augusta P., assignor to McKay Disc Plow Co., Rome, Ga. Disk plow. No. 1,189,982; July 4; Gaz. vol. 228; p. 270.
McKay Disc Plow Co. (See McKay, Augusta P., assignor.)
McKay, George F., Derry, N. H., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,190,312; July 11; Gaz. vol. 228; p. 432.
McKay, Richard V. (See Carney and McKay.)
McKeen Motor Car Company. (See McKeen, William R., Jr., assignor.)
McKeen, William R., Jr., assignor to McKeen Motor Car Company, Omaha, Nebr. Truck construction. No. 1,191,979; July 25; Gaz. vol. 228; p. 1115.
McKenna, Charles H., Providence, R. I. Portable sand and gravel drier. No. 1,189,597; July 4; Gaz. vol. 228; p. 140.
McKenna, James, assignor to Welsbach Light Company, Gloucester City, N. J. Cluster-burner for incandescent lamps. No. 1,190,660; July 11; Gaz. vol. 228; p. 557.
McKenney, Franklin S., Detroit, Mich. Forming metallic fasteners. No. 1,189,849; July 4; Gaz. vol. 228; p. 227.
McKergow, Percival S. (See McArthur, Lachlam W., assignor.)
McLain, John E. (See Yeakley, Melvin A., assignor.)
McLaughlin, Dennis W., Berkeley, Cal. Traction-wheel. No. 1,190,183; July 4; Gaz. vol. 228; p. 338.
McLean, Melville J., Toronto, Ontario, Canada, assignor to J. M. Dent & Sons Limited, London, England. Picture-puzzle. No. 1,189,598; July 4; Gaz. vol. 228; p. 140.
McLeod, Daniel C., Cedar Rapids, Iowa. Framing-tool. No. 1,189,983; July 4; Gaz. vol. 228; p. 270.
McLeod, Kenneth K., St. Paul, Minn. Suction milking-machine. No. 1,190,566; July 11; Gaz. vol. 228; p. 520.
McLeskey, William H., Nashville, Tenn. Combined curtain and shade holder. No. 1,191,207; July 18; Gaz. vol. 228; p. 790.
McMahan, Hugh J., Monessen, Pa. Speed-governor for electric motors. No. 1,190,243; July 4; Gaz. vol. 228; p. 360.
McMeekin, William, Galva, Ill. Guide-chain. No. 1,189,599; July 4; Gaz. vol. 228; p. 140.
McNabb, John A., and G. Emery, assignors of one-third to G. Tinegate, Collingwood, Ontario, Canada. Coupling means for life-boats. No. 1,192,543; July 25; Gaz. vol. 228; p. 1313.
McNaughton, Clarence E. (See Logan and McNaughton.)
McNeal, Charles A., Newark, Ohio. Interchangeable-letter sign. No. 1,189,461; July 4; Gaz. vol. 228; p. 92.
McNeill, Frank L., Worcester, assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass. Envelop-machine. (Reissue.) No. 14,172; July 25; Gaz. vol. 228; p. 1417.
McNutt, William H., New York, assignor to C. E. Owen, Franklin, N. Y. Garage-can. No. 1,189,462; July 4; Gaz. vol. 228; p. 93.
McNutt, William H., New York, assignor to C. E. Owen, Franklin, N. Y. Dispensing-can. No. 1,189,463; July 4; Gaz. vol. 228; p. 93.
McPherson, Donald H., Le Roy, N. Y. Tool for removing tires. No. 1,191,523; July 18; Gaz. vol. 228; p. 901.
McPherson, William B. (See Eccleston and McPherson.)
McSweeney, Edward. (See Brown and Williams, assignors.)
McWilliams, George B., Olney, Ill. Mending-form for wearing-apparel. No. 1,189,372; July 4; Gaz. vol. 228; p. 59.
Mead Cycle Co. (See Foster, William M. C., assignor.)
Meadows, Jackson C., Gainsborough, England. Valve mechanism for internal-combustion engines. No. 1,191,449, July 18; Gaz. vol. 228; p. 876.
Meaker, Guy L., Joliet, Ill. Coating wire with metal. No. 1,191,526; July 18; Gaz. vol. 228; p. 902.
Mears, William N., Brookline, assignor to American Rotary Motor Company, Boston, Mass. Rotary power-transformer. No. 1,192,065; July 25; Gaz. vol. 228; p. 1355.
Mechanical Rubber Company, The. (See Blanchard and Duesler, assignors.)
Mechanical Rubber Company, The. (See Crawford, Neil D., assignor.)
Mechanical Rubber Company, The. (See Hopkins, Arthur T., assignor.)
Medart, Philip S., St. Louis, Mo. Playground-slide. No. 1,192,445; July 25; Gaz. vol. 228; p. 1279.
Meeker, Claude R., Chicago, Ill. Cooking utensil. No. 1,192,088; July 25; Gaz. vol. 228; p. 1153.
Megathlin, J. L. (See Cook, John W., assignor.)
Megrath, estate of William A., *et al.*, executors. (See Kendall, Edward D., assignor.)
Meilink, Charles F., Toledo, Ohio. Safe. No. 1,191,331; July 18; Gaz. vol. 228; p. 835.
Meissner, George R., Albia, assignor of one-half to L. R. West, Osceola, Iowa. Spark-intensifier for spark-plugs. No. 1,190,570; July 11; Gaz. vol. 228; p. 522.
Mekeel, Charles H., Jr., St. Louis, Mo. Table-bed for sewing-machines. No. 1,189,466; July 4; Gaz. vol. 228; p. 94.
Meldrum, Alexander, Syracuse, N. Y., assignor to The L. S. Starrett Company, Athol, Mass. Gage. No. 1,192,089; July 25; Gaz. vol. 228; p. 1153.
Meleady, James T., Newark, N. J. Outlet-box. No. 1,190,664; July 11; Gaz. vol. 228; p. 558.
Melin, Andy J., Wallace, Idaho. Combined comb and tooth-brush. No. 1,189,852; July 4; Gaz. vol. 228; p. 228.
Melugin, Frank. (See Brough, John S., assignor.)
Melville Clark Piano Company. (See Clark, Melville, assignor.)
Memminger, Christopher G., Lakeland, Fla., assignor to Coronet Phosphate Company, New York, N. Y. Treating phosphates. No. 1,192,545; July 25; Gaz. vol. 228; p. 1314.
Mengel Box Company. (See Green, Warren T., assignor.)
Menold, Norris M., Espyville, Pa. Double-ratchet wrench. No. 1,191,021; July 11; Gaz. vol. 228; p. 684.
Mercer, William H., assignor of one-half to H. D. Fear, Portland, Oreg. Bath-tub. No. 1,191,088; July 11; Gaz. vol. 228; p. 706.
Merriman, Robert M., Akron, Ohio. Automobile-tire. No. 1,192,090; July 25; Gaz. vol. 228; p. 1154.
Merritt, George H., Tacoma, Wash. Tool-head fastener. No. 1,190,786; July 11; Gaz. vol. 228; p. 600.
Merry, Ernest W., Sheffield, assignor to International Pyrotan Company, Limited, London, England. Tanning of hides and skins. No. 1,191,527; July 18; Gaz. vol. 228; p. 903.
Merry, Frederick C., Kansas City, Mo. Spectacle or eye-glass mounting. No. 1,189,986; July 4; Gaz. vol. 228; p. 271.
Metz, Augustus R., *et al.* (See Peoples, William B., assignor.)
Mertz, Carl. (See McCarthy and Mertz.)
Mertz, Matt J., West Bend, Iowa. Game apparatus. No. 1,191,605; July 18; Gaz. vol. 228; p. 928.
Merz, Albert R. (See Ross and Merz.)
Mesinger-Whitney Electric Company. (See Whitney, Perrin B., assignor.)
Meszaros, Frank, New York, N. Y. Toothpick-vending machine. No. 1,191,715; July 18; Gaz. vol. 228; p. 968.
Metallic Sash-Operator Company Corporation. (See Quernheim and Neuhoff, assignors.)
Meushaw, Merrill, Baltimore, Md. Motion-picture camera. No. 1,192,666; July 25; Gaz. vol. 228; p. 1355.
Meyer, Christopher J., assignor to Evinrude Motor Company, Milwaukee, Wis. Steering and reversing tiller. No. 1,191,211; July 18; Gaz. vol. 228; p. 791.
Meyer, Emil J. P., Chicago, Ill. Car construction. No. 1,189,717; July 4; Gaz. vol. 228; p. 180.
Meyer, Georg, Berlin-Charlottenburg, and R. Koss, Münster, Westphalia, assignors to Siemens-Schuckert Werke G. m. b. H., Berlin, Germany. Towing system for ships. No. 1,191,332; July 18; Gaz. vol. 228; p. 835.
Meyer, George J. (See Court, Edward, assignor.)
Meyrowitz, Emil B., New York, N. Y., assignor to General Optical Company, Inc., Screwless mounting. No. 1,190,932; July 11; Gaz. vol. 228; p. 654.
Michael, Clement W., and C. E. Mohr, assignors to J. I. Case Plow Works, Racine, Wis. Cotton-seed planter. No. 1,189,718; July 4; Gaz. vol. 228; p. 181.
Michaelis, Gustavus, Albany, N. Y. Purifying ethyl ether. No. 1,189,602; July 4; Gaz. vol. 228; p. 141.
Michelin, Eugene, Jacksonville, Fla. Automobile. No. 1,191,809; July 18; Gaz. vol. 228; p. 1002.
Michener, Charles E., Charlerol, Pa. Saw. No. 1,189,603; July 4; Gaz. vol. 228; p. 141.
Midgley, Albert H., assignor of one-half to C. A. Vandervell, Acton Vale, England. Lamp-signaling arrangement. No. 1,191,528; July 18; Gaz. vol. 228; p. 903.
Midgley, Thomas, Worthington, Ohio, assignor to Morgan & Wright, Detroit, Mich. Flap-trimming machine. No. 1,190,315; July 11; Gaz. vol. 226; p. 433.
Midgley, Thomas, Jr., Worthington, assignor to The National Cash Register Company, Dayton, Ohio. Differential mechanism. No. 1,189,279; July 4; Gaz. vol. 228; p. 24.
Midgley, Thomas, Jr., Worthington, assignor to The National Cash Register Company, Dayton, Ohio. Differential mechanism for accounting-machines. No. 1,190,443; July 11; Gaz. vol. 228; p. 478.
Miehle Printing Press & Manufacturing Company, The. (See Stevens and Blaine, assignors.)
Miehle Printing Press & Manufacturing Company. (See Stevens, Burt D., assignor.)

Mielke, Albert G., Howard Lake, Minn. Lifting-jack. No. 1,192,667; July 25; Gaz. vol. 228; p. 1356.
Mikle, Clinton O., Portland, Oreg. Automatic sash-stop. No. 1,190,571; July 11; Gaz. vol. 228; p. 522.
Milano, Pasquale, New York, N. Y. Cuff-link. No. 1,191,716; July 18; Gaz. vol. 228; p. 969.
Miles, Edward C., Oakland, Cal. Fountain tooth-brush. No. 1,192,668; July 25; Gaz. vol. 228; p. 1356.
Miley, Anna, Los Angeles, Cal. Spiral thumb-tack. No. 1,189,604; July 4; Gaz. vol. 228; p. 142.
Miller, Anthony, Ridott, Ill. Foot-rest for radiators. No. 1,190,572; July 11; Gaz. vol. 228; p. 522.
Miller & Brother, M. (See Peters and Simmons, assignors.)
Miller, Carl A., Los Angeles, Cal. Vehicle-spring. No. 1,189,375; July 4; Gaz. vol. 228; p. 60.
Miller, Charles F., Washington, D. C. Apparatus for mixing and feeding steam and air to fire-boxes. No. 1,189,376; July 4; Gaz. vol. 228; p. 61.
Miller, Edward M., Salisbury, N. C. Basket. No. 1,192,091; July 25; Gaz. vol. 228; p. 1154.
Miller, Frank E., New York, N. Y. Voice and sound recording machine. No. 1,190,787; July 11; Gaz. vol. 228; p. 600.
Miller, Frank R. (See Graham and Miller.)
Miller, George W., Sharpsburg, Pa. Snow shovel and scraper. No. 1,191,810; July 18; Gaz. vol. 228; p. 1002.
Miller, Henry, assignor of one-half to M. L. Masure, Chicago, Ill. Nursery-chair. No. 1,189,377; July 4; Gaz. vol. 228; p. 61.
Miller, James, Stratford, and W. Miller, Bridgeport, Conn. Measuring-tool and drill-jig. No. 1,191,900; July 18; Gaz. vol. 228; p. 1036.
Miller, James M., Washington, D. C. Loss-preventing device for jewelry. No. 1,189,467; July 4; Gaz. vol. 228; p. 95.
Miller, J. B. (See Dean and Callaway, assignors.)
Miller, John H., Meyersdale, Pa. Horseshoe. No. 1,191,811; July 18; Gaz. vol. 228; p. 1002.
Miller, John P., *et al.* (See De Camp, James W., assignor.)
Miller, Joseph M., Chicago, Ill. Fire-extinguisher. No. 1,190,316; July 11; Gaz. vol. 228; p. 433.
Miller, Joseph W., assignor of one-half to H. L. Arnold, Susquehanna township, Pa. Door-operating mechanism. No. 1,191,606; July 18; Gaz. vol. 228; p. 928.
Miller, Julius J., St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Kittery, Me. Adjustable box-blank machine. No. 1,191,110; July 11; Gaz. vol. 228; p. 713.
Miller, Julius J., St. Joseph, Mich., assignor, by mesne assignments, to Wirebounds Patents Company, Kittery, Me. Wire-bound crate or box blank machine. No. 1,191,111; July 11; Gaz. vol. 228; p. 713.
Miller Lock Co. (See Jackson and Soley, assignors.)
Miller Pasteurizing Machine Company, The. (See Pfouts, Leroy S., assignor.)
Miller, Reuben M., Dayton, Ohio, assignor, by mesne assignments, to N. D. Rutherford. Milking-machine. No. 1,189,468; July 4; Gaz. vol. 228; p. 95.
Miller, Stanley G., assignor to Crex Carpet Company, St. Paul, Minn. Grass carpet. No. 1,191,212; July 18; Gaz. vol. 228; p. 791.
Miller, Thomas S., South Orange, N. J. Excavating cable-way apparatus. No. 1,189,605; July 4; Gaz. vol. 228; p. 142.
Miller, Thomas W., Waukon, Iowa. Hot-air stove. No. 1,190,665; July 11; Gaz. vol. 228; p. 558.
Miller, Walter E., Goshen, Ind. Shaft-coupling. No. 1,190,666; July 11; Gaz. vol. 228; p. 559.
Miller, William. (See Miller, James and W.)
Miller, William, Oklahoma, Okla. Ship. No. 1,190,933; July 11; Gaz. vol. 228; p. 655.
Miller, William L., assignor to Gisholt Machine Company, Madison, Wis. Safety-crank for shafts. No. 1,189,606; July 4; Gaz. vol. 228; p. 142.
Millikin, Porter J., *et al.* (See Hartley, Albert J., assignor.)
Mills, Edward L., Los Angeles, Cal. Spreader valve and pipe for oil distribution. No. 1,191,607; July 18; Gaz. vol. 228; p. 929.
Mills, Francis A., Lynn, Mass. Combustion-engine-starting device. No. 1,191,529; July 18; Gaz. vol. 228; p. 903.
Mills, Herbert S., assignor to Mills Novelty Company, Chicago, Ill. Coin-controlled mechanism. No. 1,190,934; July 11; Gaz. vol. 228; p. 655.
Mills Novelty Company. (See Mills, Herbert S., assignor.)
Milwaukee Brass Manufacturing Company. (See Engel, August, assignor.)
Milwaukee Locomotive Manufacturing Company. (See Angiada, Joseph A., assignor.)
Miner, Raymond C., assignor of one-half to H. P. Hanson, Faith, S. D. Combination-tool. No. 1,191,608; July 18; Gaz. vol. 228; p. 929.
Miner, William H. (See Back, Maude F., assignor.)
Miner, William H. (See Harris, Joseph, assignor.)
Miner, William H. (See Johnson, George A., assignor.)
Miner, William H. (See O'Connor, John F., assignor.)
Mineral Products Corporation. (See Hershman and Cooke, assignors.)
Minier, William H. (See Kestel, Henry C., assignor.)
Minor, Frank W., Richmond, Va. Bag-closing device. No. 1,190,935; July 11; Gaz. vol. 228; p. 655.
Mishler, Michael N., Walter, Okla. Paper holding and cutting attachment. No. 1,190,444; July 11; Gaz. vol. 228; p. 478.
Mitchell, Daniel J., Albuquerque, N. Mex. Winding-indicator for clocks and the like. No. 1,189,607; July 4; Gaz. vol. 228; p. 142.
Mitchell, Jacob, Sixteen, Mont. Lock nut and bolt. No. 1,190,445; July 11; Gaz. vol. 228; p. 479.
Mitchell, James A., Magnolia, Ark. Wire-stretcher. No. 1,190,788; July 11; Gaz. vol. 228; p. 601.
Mitten, Philip J., Oakwood Village, J. E. McAllister, and G. E. Ireland, Dayton, Ohio, assignors to The Recording Register and Fare Box Company, New Haven, Conn. Fare-box. No. 1,190,936; July 11; Gaz. vol. 228; p. 656.
Miyasaki, Yuske, McKees Rocks, Pa. Truck-bolster. No. 1,189,608; July 4; Gaz. vol. 228; p. 143.
Modern Broom Machinery Company. (See Beebe and Smith, assignors.)
Modler, Johann H., Schweinfurt-on-the-Main, Germany. Oil-retainer for bearings. No. 1,189,853; July 4; Gaz. vol. 228; p. 228.
Mohler, Sardis E., Fremont, Ohio. Stretcher. No. 1,189,854; July 4; Gaz. vol. 228; p. 228.
Mohr, Albert F., assignor, by mesne assignments, to Advance-Rumely Company, Laporte, Ind. Steering-gear for motor-vehicles. No. 1,189,378; July 4; Gaz. vol. 228; p. 61.
Mohr, Charles E. (See Michael and Mohr.)
Moline Plow Company. (See Cook, Willard J., assignor.)
Moller, H. Esk., *et al.*, executors. (See Kendall, Edward D., assignor.)
Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,191,089; July 11; Gaz. vol. 228; p. 706.
Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,192,819; July 25; Gaz. vol. 228; p. 1408.
Money, Herman D., Ocean Springs, Miss. Combined rake and hoe. No. 1,189,987; July 4; Gaz. vol. 228; p. 271.
Monroe, Henry, Sabetha, Kans. Automatic railway-gate. No. 1,192,669; July 25; Gaz. vol. 228; p. 1356.
Montgomery, George M. (See Montgomery, John R. and G. M.)
Montgomery, George W., and M. D. Bowman, Springboro, Pa. Traction-engine. No. 1,191,333; July 18; Gaz. vol. 228; p. 836.
Montgomery, John R. and G. M., assignors to The J. R. Montgomery Company, Windsor Locks, Conn. Smoothing material. No. 1,192,219; July 25; Gaz. vol. 228; p. 1202.
Montgomery, Julian E., Wheeling, W. Va. Rolling-mill coupling. No. 1,189,609; July 4; Gaz. vol. 228; p. 143.
Moody, Ira V., Elwood, Ind. Shelf-bracket. No. 1,189,988; July 4; Gaz. vol. 228; p. 271.
Moody, Lewis N., Plover, Iowa, assignor of one-half to A. M. Tower, Barton, Vt. Cover for evaporating-pans. No. 1,191,982; July 25; Gaz. vol. 228; p. 1116.
Moore, Alfred E. (See Bryant and Moore.)
Moore, Edward A., Chicago, Ill., assignor to R. F. Simmons, Company, Chain. No. 1,190,446; July 11; Gaz. vol. 228; p. 479.
Moore, John B., Latrobe, Pa. Tempering or hardening steel. No. 1,190,937; July 11; Gaz. vol. 228; p. 656.
Moore, John B., Latrobe, Pa. Tool. No. 1,191,717; July 18; Gaz. vol. 228; p. 969.
Moore, Joseph H., Sr., Sewickley, Pa. Instructive musical puzzle. No. 1,191,135; July 11; Gaz. vol. 228; p. 721.
Moore, Lawrence R., San Rafael, Cal. Attachment for overshoes. No. 1,189,989; July 4; Gaz. vol. 228; p. 272.
Moore, Marshal R., Monmouth, Ill. Wire-tension device. No. 1,191,450; July 18; Gaz. vol. 228; p. 877.
Moore, Ralph W. E., and H. R. Edgecomb, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Hardness-testing apparatus and method. No. 1,192,670; July 25; Gaz. vol. 228; p. 1357.
Moore, Robert D., *et al.* (See Calahan, Delona L., assignor.)
Morand, Leo J. (See Sattler and Morand.)
Morawski, Adolf, Springfield, Mass. Calendar. No. 1,190,789; July 11; Gaz. vol. 228; p. 601.
Morey, Harry J., Syracuse, N. Y. Electric-lamp-socket casing. No. 1,191,812; July 18; Gaz. vol. 228; p. 1003.
Morgan, William W. Jr., assignor to E. F. Houghton & Company, Philadelphia, Pa. Steam-trap. No. 1,191,022; July 11; Gaz. vol. 228; p. 684.
Morgan & Wright. (See Midgley, Thomas, assignor.)
Morgan & Wright. (See Neal, De Courcy, assignor.)
Morrill, William C., New York, N. Y. Closure for containers. No. 1,189,280; July 4; Gaz. vol. 228; p. 25.
Morris, Albert H., New York, N. Y. Aeroplane. No. 1,189,610; July 4; Gaz. vol. 228; p. 143.
Morris, Cornelius S., Rock Island, Ill. Recording apparatus for scales. No. 1,191,718; July 18; Gaz. vol. 228; p. 969.
Morris, Frank L., assignor of one-half to W. D. Peterson, Salt Lake City, Utah. Railway-tie. No. 1,189,719; July 4; Gaz. vol. 228; p. 181.
Morris, Lee M. (See Arthur and Morris.)
Morrow, James M., assignor of one-half to J. J. Bennett, Stephenville, Tex. Apparatus for destroying insects. No. 1,189,720; July 4; Gaz. vol. 228; p. 181.

Morse, Lewis, assignor to H. D. Merritt Company, North Attleboro, Mass. Gem-setting. No. 1,192,092; July 25; Gaz. vol. 228; p. 1154.
Morse, Willis S., Philadelphia, Pa. Guide-roll for webs. No. 1,189,611; July 4; Gaz. vol. 228; p. 144.
Morterud, Einar, Jelöen, Norway. Removing scale from heating apparatus for pulp-digesters. No. 1,191,451; July 18; Gaz. vol. 228; p. 877.
Moscony, Charles S. (See Conde and Moscony.)
Moser, Fred J., Kane, Pa. Well-packer. No. 1,190,790; July 11; Gaz. vol. 228; p. 601.
Mosier, Arthur R., New York, assignor to A. R. Mosier & Co., Yonkers, N. Y. Spark-plug. No. 1,190,938; July 11; Gaz. vol. 228; p. 657.
Moss, Charles R., assignor to Crystal Stone-Yeast Company, Richmond, Va. Scrubbing device. No. 1,192,093; July 25; Gaz. vol. 228; p. 1155.
Motor Cooling Systems Company, The. (See La Porte, Norbert M., assignor.)
Mott, William P., Chicago, Ill. Sand-blast. No. 1,191,719; July 18; Gaz. vol. 228; p. 970.
Motte, James N., and A. Kotz, Beaumont, Tex. Rice-harvester. No. 1,190,939; July 11; Gaz. vol. 228; p. 657.
Mouis, Jean-Joseph, Châlon-sur-Saône, France. Cinematographic apparatus. No. 1,192,094; July 25; Gaz. vol. 228; p. 1155.
Moulton, Lealle B., Dairy, Oreg. Convertible touring-car. No. 1,189,990; July 4; Gaz. vol. 228; p. 272.
Mudd, Frank X. (See Frame, Robert E., assignor.)
Mueller, Frank, Allentown, Pa., assignor to International Motor Company, Wilmington, Del. Dumping mechanism for motor-trucks. No. 1,191,983; July 25; Gaz. vol. 228; p. 1116.
Mueller, Paul H., and L. H. Schuler, Brooklyn, assignors to L-M-S. Motor Co., Esopus, N. Y. Internal-combustion engine. No. 1,189,281; July 4; Gaz. vol. 228; p. 25.
Mueller, Samuel, Jersey City, N. J. Machine for folding noodles. No. 1,192,336; July 25; Gaz. vol. 228; p. 1242.
Mugler, Peter, Sison, Cal. Multiple-bolt door-lock. No. 1,189,991; July 4; Gaz. vol. 228; p. 272.
Muhlfeld, John E., Scarsdale, and H. F. Ball, New York, N. Y. Car-truck. No. 1,190,791; July 11; Gaz. vol. 228; p. 602.
Muhlfeld, John E., Scarsdale, and H. F. Ball, New York, N. Y. Wheeled support for railway-vehicles. No. 1,191,136; July 11; Gaz. vol. 228; p. 722.
Müller, Henry, Philadelphia, Pa. Fraud-detector. No. 1,192,095; July 25; Gaz. vol. 228; p. 1155.
Mullin, Winfield S., Hyndman, Pa. Safety automobile-clutch. No. 1,192,671; July 25; Gaz. vol. 228; p. 1357.
Mumford, Joseph F., assignor to R. H. Carnahan, Philadelphia, Pa. Vending-machine. No. 1,189,469; July 4; Gaz. vol. 228; p. 95.
Mummert, Ervin S., and J. O. Dixon, Hanover, Pa. Facing-tool. No. 1,191,813; July 18; Gaz. vol. 228; p. 1003.
Munger, Robert W., and A. E. McGinley, Tacoma, Wash. Hot-point pen. No. 1,190,447; July 11; Gaz. vol. 228; p. 479.
Munroe, Daniel A., Wilkinsburg, Pa., assignor to Pittsburg Meter Company. Current-meter. No. 1,190,251; July 4; Gaz. vol. 228; p. 364.
Murdock, Harold R., Naugatuck, Conn., assignor to Rubber Regenerating Company. Reclaiming rubber. No. 1,189,282; July 4; Gaz. vol. 228; p. 26.
Murdock, Harold R., Naugatuck, Conn., assignor to Rubber Regenerating Company. Reclaiming rubber-waste. No. 1,189,721; July 4; Gaz. vol. 228; p. 181.
Murphy, Albert C., New York, N. Y. Dumping-car. No. 1,189,283; July 4; Gaz. vol. 228; p. 26.
Murphy, Albert C., New York, N. Y., assignor to P. H. Murphy Company, Parnassus, Pa. Metal car-roof. No. 1,191,213; July 18; Gaz. vol. 228; p. 792.
Murphy, Albert C., New York, N. Y., assignor to P. H. Murphy Company, Parnassus, Pa. Metal car-roof. No. 1,191,214; July 18; Gaz. vol. 228; p. 792.
Murphy, Clinton C. (See Mathews, Fred, assignor.)
Murphy, Daniel F., Prince Rupert, British Columbia, Canada. Submarine propulsion. No. 1,192,540; July 25; Gaz. vol. 228; p. 1314.
Murphy, John P., Charleston, S. C. Air-compressor. No. 1,189,722; July 4; Gaz. vol. 228; p. 182.
Murphy, John S., New York, N. Y. Form-clamp. No. 1,190,940; July 11; Gaz. vol. 228; p. 657.
Murphy, Thomas J., *et al.* (See Wood, Jasper W., assignor.)
Murrah, Louie T., Dallas, Tex. Leaf-gathering and lawn-treating implement. No. 1,191,814; July 18; Gaz. vol. 228; p. 1003.
Murray, Isabella, Lonerock, Iowa. Undergarment. No. 1,190,448; July 11; Gaz. vol. 228; p. 479.
Murray, Thomas E. (See Stein, Irving M., assignor.)
Murray, Thomas E., New York, N. Y. Localizing the bur at electrical butt or edge welded joints. No. 1,189,856; July 4; Gaz. vol. 228; p. 229.
Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,192,548; July 25; Gaz. vol. 228; p. 1315.
Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,192,549; July 25; Gaz. vol. 228; p. 1315.
Murray, Thomas E., Jr., Brooklyn, assignor to T. E. Murray, New York, N. Y. Meter-testing device. No. 1,189,855; July 4; Gaz. vol. 228; p. 229.
Murray, Thomas E., Jr., Brooklyn, assignor to T. E. Murray, New York, N. Y. Meter-testing cut-out. No. 1,192,547; July 25; Gaz. vol. 228; p. 1314.
Muttart, Alder C. (See Linkletter and Muttart, assignors.)
Muttart, George W. (See Linkletter and Muttart.)
Myer, Morris A., New York, N. Y. Adjustable shoe-button. No. 1,192,672; July 25; Gaz. vol. 228; p. 1357.
Myers and Brothers, F. E. (See Myers, Philip A., assignor.)
Myers, Charles O., and H. T. Maring, Gettysburg, Pa. Puncture-proof automobile-tire supporter. No. 1,189,857; July 4; Gaz. vol. 228; p. 229.
Myers, Hubert A., Toledo, Ohio. Sound-box for phonographs. No. 1,192,337; July 25; Gaz. vol. 228; p. 1242.
Myers, Lawrence A., Porterville, Cal. Lubricating-bearing for centrifugal pumps. No. 1,191,452; July 18; Gaz. vol. 228; p. 877.
Myers, Philip A., assignor to F. E. Myers and Brothers, Ashland, Ohio. Hanger for barn-doors and other structures. No. 1,191,334; July 18; Gaz. vol. 228; p. 836.
Myers, Philip A., assignor to F. E. Myers and Brothers, Ashland, Ohio. Pump. No. 1,191,453; July 18; Gaz. vol. 228; p. 878.
Myhre, Chris O., Esmond, N. D. Steam-boiler. No. 1,191,090; July 11; Gaz. vol. 228; p. 706.
Nace, Frank, Trenton, N. J. Antislipping or antiskidding device for wheeled vehicles. No. 1,192,673; July 25; Gaz. vol. 228; p. 1358.
Nail, Harry C., and H. T. Barwell, Brooklyn, N. Y. Traction device for motor-vehicles. No. 1,189,723; July 4; Gaz. vol. 228; p. 182.
Nairne, James D., Alhambra, assignor to Universal Beet Harvester Co., Los Angeles, Cal. Beet-topper. No. 1,189,858; July 4; Gaz. vol. 228; p. 229.
Narobe, Frank, New York, N. Y. Flying-machine. No. 1,189,612; July 4; Gaz. vol. 228; p. 144.
Nash, Charles J., assignor to Universal Draft Gear Attachment Co., Chicago, Ill. Draft-rigging for cars. No. 1,192,096; July 25; Gaz. vol. 228; p. 1156.
Nash, Nathan E., Toronto, Ontario, Canada. Heat-regulating apparatus. No. 1,189,613; July 4; Gaz. vol. 228; p. 144.
Nasmith, John W., Heaton Mersey, England. Stapling machine. No. 1,192,446; July 25; Gaz. vol. 228; p. 1280.
Nathan Manufacturing Company, The. (See Wood, Robert, assignor.)
National Advertising Company. (See Bryant, Clarence R., assignor.)
National Binding Machine Company. (See Anable, Frederick S., assignor.)
National Brush Washing Machine Company. (See Trinks, Willibald, assignor.)
National Can Company. (See Nevelson, Julius, assignor.)
National Carbon Co. (See Brown, John W., assignor.)
National Carbon Company. (See Fleming, Samuel H., assignor.)
National Carbon Company. (See Hinckley, Arthur T., assignor.)
National Cash Register Company, The. (See Carroll, Fred M., assignor.)
National Cash Register Company, The. (See Church, Edmund S., assignor.)
National Cash Register Company, The. (See Lorimer, George W., assignor.)
National Cash Register Company, The. (See Martin, Haakon A., assignor.)
National Cash Register Company, The. (See Midgley, Thomas, Jr., assignor.)
National Cash Register Company, The. (See Von Pein, Edward J., assignor.)
National Chemical Company. (See Tyler, Charles A., assignor.)
National Electric Specialty Company, The. (See Greene, John T., assignor.)
National Graphite Lubricator Company, The. (See Watres, Lewis S., assignor.)
National Malleable Castings Company, The. (See Blackmore, William, assignor.)
National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)
National Metal Edge Box Company. (See Jackson and Horton, assignors.)
National Metal Edge Box Company. (See Kaback and Shelly, assignors.)
National Metal Seal Corporation. (See Doldt, John E., assignor.)
National Metal Seal Corporation. (See Stone, William F., assignor.)
National Paper Can Company. (See Hulbert, Edwin F., assignor.)
National Roll & Foundry Company, The. (See Koelkebeck, Carl W. A., assignor.)
National Safety Appliance Company, The. (See Sedgwick, Hiram G., assignor.)
National Steam Car Company. (See Clarkson, Thomas, assignor.)
National Synthetic Products Co. (See Beckman and Dyck, assignors.)
National Tube Company. (See Latshaw, Joseph W., assignor.)

Naudet, Leon, Chelles, France. Process and apparatus for the evaporation of sugar-juice. No. 1,190,317; July 11; Gaz. vol. 228; p. 434.
Naughton, James C., Rochester, N. Y. Key-ring support. No. 1,191,215; July 18; Gaz. vol. 228; p. 793.
Naylor, James P., Dulwich, London, England. Apparatus for displaying advertisements, signaling, and the like. No. 1,191,023; July 11; Gaz. vol. 228; p. 685.
Neal, De Courcy, Detroit, Mich., assignor to Morgan & Wright. Apparatus for and process of cutting and reeling tire fabric. No. 1,189,724; July 4; Gaz. vol. 228; p. 182.
Nedoma, Charles L., assignor of one-half to F. M. Hawley, Detroit, Mich. Carbureter. No. 1,190,573; July 11; Gaz. vol. 228; p. 522.
Neeb, Casimir F., S. E. ¼ section 22, township 139, Billings county, N. D. Dirigible-headlight support. No. 1,191,720; July 18; Gaz. vol. 228; p. 970.
Needham, Joseph, Passaic, N. J. Gas-mixer. No. 1,192,550; July 25; Gaz. vol. 228; p. 1316.
Needham, Joseph H., Bristow, Iowa. Extension try-square. No. 1,190,941; July 11; Gaz. vol. 228; p. 658.
Nell, James, assignor of one-half to J. F. Russell, Washington, D. C. Horseshoe. No. 1,191,984; July 25; Gaz. vol. 228; p. 1117.
Nellsen, Christian P. (See Kolby, Larsen, and Nellsen.)
Nelius, Arnold, New Hyde Park, N. Y. Collapsible crate. No. 1,189,614; July 4; Gaz. vol. 228; p. 145.
Nelsen, N. C. (See Jensen, Nels, assignor.)
Nelson, Albert H., and G. C. Peterson, White Lake, S. D. Weeder attachment for cultivators. No. 1,189,615; July 4; Gaz. vol. 228; p. 145.
Nelson, Arthur F., Bayfield, Wis. Hoe. No. 1,192,097; July 25; Gaz. vol. 228; p. 1156.
Nelson, Axel, Newark, N. J. Nut-lock. No. 1,190,318; July 11; Gaz. vol. 228; p. 434.
Nelson, Carl, Brockton, Mass. Window-lock. No. 1,191,815; July 18; Gaz. vol. 228; p. 1003.
Nelson, Christian H. (See Salmon, Edward W., Jr., assignor.)
Nelson, Emil A., Ronville, Mich. Motor-vehicle. No. 1,189,284; July 4; Gaz. vol. 228; p. 26.
Nelson, James T., assignor of one-half to G. H. Clement, Belton, S. C. Fire-alarm. No. 1,191,024; July 11; Gaz. vol. 228; p. 685.
Nelson, Lewen R., Peoria, Ill. Sprinkling device. No. 1,192,551; July 25; Gaz. vol. 228; p. 1316.
Nelson, Nels G., Rockford, Ill. Toy shooter. No. 1,191,580; July 18; Gaz. vol. 228; p. 904.
Nelson, Swan A., Tunnelhill, Pa. Antispreading means for rails. No. 1,190,792; July 11; Gaz. vol. 228; p. 602.
Nelson, Swan A., Tunnelhill, Pa. Rail-fastener. No. 1,191,025; July 11; Gaz. vol. 228; p. 685.
Nelson, Walter, New York, N. Y. Trap. No. 1,192,098; July 25; Gaz. vol. 228; p. 1156.
Nembach, George E., Cincinnati, Ohio. Safety gas cut-off. No. 1,191,335; July 18; Gaz. vol. 228; p. 836.
Nérat, René H., New York, N. Y. Non-refillable bottle. No. 1,191,026; July 11; Gaz. vol. 228; p. 686.
Nerger, Frederick, Chicago, Ill. Rubber heel. No. 1,189,859; July 4; Gaz. vol. 228; p. 230.
Nessa, Nicholas N., Badger, Iowa. Animal-trap. No. 1,191,027; July 11; Gaz. vol. 228; p. 686.
Nettleton, George R., assignor to The W. & E. T. Fitch Co., New Haven, Conn. Buckle. No. 1,192,552; July 25; Gaz. vol. 228; p. 1316.
Neubert, Walter P., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signal-semaphore. No. 1,191,454; July 18; Gaz. vol. 228; p. 879.
Neuhoff, Hector, Jr. (See Quernheim and Neuhoff.)
Neumann, Richard, *et al.* (See Steinschneider, Leo, assignor.)
Nevelson, Julius, Somerville, assignor to National Can Company, Boston, Mass. Closure for containing vessels. No. 1,189,860; July 4; Gaz. vol. 228; p. 230.
Nevins, Thomas A., *et al.* (See Harper, William, Jr., assignor.)
New Home Sewing Machine Company, The. (See Ruckstuhl, Walter, assignor.)
New Jersey Patent Company. (See Aiken, Edward L., assignor.)
New Jersey Patent Company. (See Edison, Thomas A., assignor.)
New York Coil Company. (See Rhoades, Lewis T., assignor.)
New York Couch Bed Company. (See Sisbower and Pittoni, assignors.)
"New Way" Motor Company, The. (See Manthey, Henry, assignor.)
Newton, Frank W. (See Scholer and Newton.)
Newton, J. B. F. (See Brooks, John T., assignor.)
Neyer, Josef, Zurich, Switzerland. Flushing apparatus for closets. No. 1,189,379; July 4; Gaz. vol. 228; p. 62.
Nicholas, James P., Stuttgart, Ark. Centrifugal pumping apparatus. No. 1,191,337; July 18; Gaz. vol. 228; p. 837.
Nicholas Power Company. (See Power, Nicholas, assignor.)
Nichols, Robert F., Oakland, Cal. Storm-strip for casement-windows. No. 1,191,091; July 11; Gaz. vol. 228; p. 706.
Nichols, Watt M., Mambrino, assignor of one-third to J. T. Chanler, Granbury, and one-third to J. L. Harber, Neri, Tex. Railway-rail joint. No. 1,192,553; July 25; Gaz. vol. 228; p. 1317.
Nicholson, John, Houston, Tex. Hydrocarbon-burner. No. 1,189,992; July 4; Gaz. vol. 228; p. 273.
Nickle, Frank H., Midland, Mich. Furnace-setting for concentration-pots. No. 1,191,338; July 18; Gaz. vol. 228; p. 838.
Nida, John C. (See Curts and Nida.)
Nielsen, Andrew, Brigham, Utah. Internal armor for pneumatic tires. No. 1,192,554; July 25; Gaz. vol. 228; p. 1317.
Nielsen, Julian J., Chicago, Ill. Switchboard for electric circuits. No. 1,192,447; July 25; Gaz. vol. 228; p. 1280.
Niemann & Company. (See Niemann, Frederick A., assignor.)
Niemann, Frederick A., assignor to Niemann & Company, Chicago, Ill. Attachment for change-making machines. No. 1,192,555; July 25; Gaz. vol. 228; p. 1317.
Nienstaedt, Max, Palisade, N. J., assignor to American Flooring Company, Inc., New York, N. Y. Floor-covering composition. No. 1,190,942; July 11; Gaz. vol. 228; p. 658.
Nilson, Johan L., Chicago, Ill. Tire-pump. No. 1,191,531; July 18; Gaz. vol. 228; p. 904.
Nivling, Walter A., Arlington, Mass. Sizing-tank regulator. No. 1,191,216; July 18; Gaz. vol. 228; p. 793.
Noark, Henry, and S. C. Duke, Waller, Tex. Vending-machine. No. 1,192,338; July 25; Gaz. vol. 228; p. 1243.
Noble, Boughton T., Plantsville, Conn. Punch-holder for heading and upsetting machines. No. 1,191,721; July 18; Gaz. vol. 228; p. 971.
Noecker, Ferd, Sanborn, N. D. Attachment for disk harrows. No. 1,191,985; July 25; Gaz. vol. 228; p. 1117.
Nogar, August, Reading, Pa. Envelop-opener. No. 1,191,816; July 18; Gaz. vol. 228; p. 1004.
Nolan, Sarah G., Washington, D. C. Shoe-fastener. No. 1,189,993; July 4; Gaz. vol. 228; p. 273.
Nordin, Sven H., Tacoma, Wash. Fire-brick and making same. No. 1,192,099; July 25; Gaz. vol. 228; p. 1156.
North & Judd Manufacturing Company, The. (See Trook, George W., assignor.)
Northrop, John B., Fort Smith, Ark. Preserving-jar. No. 1,191,028; July 11; Gaz. vol. 228; p. 687.
Northrup, Edwin F., Princeton borough, N. J. Method of and apparatus for producing high temperatures. No. 1,189,725; July 4; Gaz. vol. 228; p. 183.
Northup, Angevine, Greenport, N. Y. Gear-body. No. 1,191,907; July 18; Gaz. vol. 228; p. 1037.
Northwestern Expanded Metal Company. (See Arey, Fred C., assignor.)
Norton, Charles H., assignor to Norton Grinding Company, Worcester, Mass. Thrust-bearing. No. 1,189,861; July 4; Gaz. vol. 228; p. 230.
Norton, Charles H., assignor to Norton Grinding Company, Worcester, Mass. Oiling device for grinding-machines. No. 1,191,986; July 25; Gaz. vol. 228; p. 1117.
Norton, Charles H., assignor to Norton Grinding Company, Worcester, Mass. Reversing mechanism. No. 1,191,987; July 25; Gaz. vol. 228; p. 1118.
Norton, Eugene E., Bridgeport, Conn., assignor to J. A. Whitman, New York, N. Y. Synchronizing apparatus. No. 1,190,943; July 11; Gaz. vol. 228; p. 658.
Norton Grinding Company. (See Norton, Charles H., assignor.)
Norwood, James P., Gary, Ind. Bread wrapping, labeling, and sealing machine. No. 1,191,029; July 11; Gaz. vol. 228; p. 687.
Nottingham, Orla W., Shonkin, Mont. Feed-mill. No. 1,190,793; July 11; Gaz. vol. 228; p. 602.
Notz, Henry J., and G. A. Reeve, Middletown, Ohio. Expansible chuck. No. 1,191,092; July 11; Gaz. vol. 228; p. 707.
Noye, Joseph V. M., Lowell, Mass. Revolver-holster. No. 1,191,339; July 18; Gaz. vol. 228; p. 838.
Noyes, Mayhew E., Cleveland, Ohio, assignor to The Ohio Gear Grinding Company. Gear-grinding machine. No. 1,191,093; July 11; Gaz. vol. 228; p. 707.
Nuckols, Claude C., assignor to Consolidated Car-Heating Company, Albany, N. Y. Thermostatic switch. No. 1,191,336; July 18; Gaz. vol. 228; p. 837.
Nugent, Harvey C., Winslow, Wash. Valve for internal-combustion engines. No. 1,192,339; July 25; Gaz. vol. 228; p. 1243.
Nyberg, Carl S., Hasselbacken, Mellösa, Sweden. Balanced pulley. No. 1,189,726; July 4; Gaz. vol. 228; p. 183.
Nygaard, Jens. (See Leadbetter, Noble W., assignor.)
O. Z. O. Jewelry Manufacturing Company, The. (See Obsboum, Thomas M., assignor.)
O. K. Button Moulds M'f'g Co. (See Jaffe, Edward I., assignor.)
O'Brian, John M. (See Bond, Ulysses G., assignor.)
O'Brien, Glen, Manhattan, Kans., assignor of one-half to E. R. Carr, Chicago, Ill. Air cooled and dehumidifier. No. 1,189,470; July 4; Gaz. vol. 228; p. 96.
O'Brien, John T., and W. G. Sargent, Grand Rapids, Mich. Sprinkler system. No. 1,191,340; July 18; Gaz. vol. 228; p. 839.
O'Connor, Christopher J. (See Hersh and O'Connor.)
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Spring draft-gear. No. 1,192,100; July 25; Gaz. vol. 228; p. 1157.

O'Connor, John F., assignor to W. H. Miner, Chicago, Ill. Yoke for railway draft-rigging. No. 1,192,220; July 25; Gaz. vol. 228; p. 1202.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Keyless yoke. No. 1,192,221; July 25; Gaz. vol. 228; p. 1202.
O'Connor, Michael F., assignor of one-half to M. H. Cook, San Francisco, Cal. Belt-jack. No. 1,191,722; July 18; Gaz. vol. 228; p. 971.
O'Donnell, John B., Sheldon, Iowa. Farm-tractor. No. 1,191,817; July 18; Gaz. vol. 228; p. 1004.
O'Gorman, John S., Portland, Oreg. Rim for automobile-tires. No. 1,192,222; July 25; Gaz. vol. 228; p. 1203.
O'Leary, John, assignor of three-eighths to E. Penrose, Cohoes, N. Y. Automobile-fender. No. 1,191,818; July 18; Gaz. vol. 228; p. 1005.
O'Riordan, John E., Sugar Land, Tex. Bale-tie. No. 1,190,667; July 11; Gaz. vol. 228; p. 559.
Oakes, Frank J., Indianapolis, Ind., assignor to Link-Belt Company, Chicago, Ill. Drive-chain. No. 1,192,674; July 25; Gaz. vol. 228; p. 1358.
Oakley, John, Springfield, Mass. Deep-hole drill. No. 1,189,727; July 4; Gaz. vol. 228; p. 183.
Obergfell, Herbert F., assignor to Automatic Electric Company, Chicago, Ill. Ringing-current interrupter. No. 1,189,862; July 4; Gaz. vol. 228; p. 230.
Obermeyer, Edward C., Nessen City, Mich. Gas device. No. 1,189,994; July 4; Gaz. vol. 228; p. 273.
Obsboum, Thomas M., assignor to The O. Z. O. Jewelry Manufacturing Company, Chicago, Ill. Cuff-link. No. 1,192,101; July 25; Gaz. vol. 228; p. 1157.
Ochterbeck, John D., Clayton, Mo. Crushing-machine. No. 1,189,471; July 4; Gaz. vol. 228; p. 96.
Oderman, Eric H., assignor to Frick Company, Waynesboro, Pa. Oil-splash shield for engine-crank casings. No. 1,191,217; July 18; Gaz. vol. 228; p. 793.
Oechsle, Theodore F., *et al.* (See Renton, Henry N., assignor.)
Ogden, Ashley G., Baltimore, Md. Printing device. No. 1,192,675; July 25; Gaz. vol. 228; p. 1358.
Oglesby, Milton L. (See Gibson and Oglesby.)
Ohio Brass Company, The. (See Bolus, Glenn H., assignor.)
Ohio Brass Company, The. (See Brown, John R., assignor.)
Ohio Gear Grinding Company, The. (See Noyes, Mayhew E., assignor.)
Ohlsson, Johan A., Stockholm, Sweden. Combined churn and milk-separator. No. 1,192,676; July 25; Gaz. vol. 228; p. 1359.
Ok Reversing Gas Engine Company. (See Whaley, William B. S., assignor.)
Okamoto, Daitake. (See Asakawa and Okamoto.)
Oldendorf, Walter G., Etna, Pa. Folding cradle. No. 1,189,863; July 4; Gaz. vol. 228; p. 231.
Oldham, Henry V., Jonesboro, Ark. Stovepipe stay or clamp. No. 1,191,988; July 25; Gaz. vol. 228; p. 1118.
Oleson, Olaf E. (See Gustafson, Gustaf A., assignor.)
Oliver Chilled Plow Works. (See Springer, William N., assignor.)
Olmstead, Charles L. (See Bickford and Olmstead.)
Olsen, Andrew, assignor to The Cleveland Folding Machine Company, Cleveland, Ohio. Folding-machine. No. 1,191,819; July 18; Gaz. vol. 228; p. 1005.
Olsen, Ole, Ferguson, Iowa. Freight-car door. No. 1,192,340; July 25; Gaz. vol. 228; p. 1243.
Olson, Frank, Wausa, Nebr. Attachment for chairs. No. 1,189,995; July 4; Gaz. vol. 228; p. 274.
Olson, Hjalmar. (See Erickson and Olson.)
Olson, Nels A., Waterbury, Conn. Line-clamp. No. 1,190,449; July 11; Gaz. vol. 228; p. 479.
Olsson, Axel H., and H. B. M. Pleijel, Stockholm, Sweden. Telephone-repeater. No. 1,189,728; July 4; Gaz. vol. 228; p. 183.
Olsson, Emil, assignor to Aktiebolaget Bofors-Gullspang, Bofors, Sweden. Ordnance-mount turning on a central pivot. No. 1,190,187; July 4; Gaz. vol. 228; p. 339.
Opelika Pneumatic Tube Company. (See Spratling, Roper C., assignor.)
Oppenheimer, Eugene, St. Louis, Mo. Sign for advertising purposes and the like. No. 1,190,574; July 11; Gaz. vol. 228; p. 523.
Opperud, Joseph, Madison, S. D. Rubber heel. No. 1,189,472; July 4; Gaz. vol. 228; p. 97.
Orange, John A., Schenectady, N. Y., assignor to General Electric Company. Incandescent electric lamp. No. 1,189,996; July 4; Gaz. vol. 228; p. 274.
Orewiler, Benjamin F., Chicago, Ill. Tape-affixing attachment for garment-clasps. No. 1,190,575; July 11; Gaz. vol. 228; p. 523.
Orewiler, Benjamin F., Chicago, Ill. Apparel-buckle. No. 1,191,341; July 18; Gaz. vol. 228; p. 839.
Orewiler, Benjamin F., Chicago, Ill. Attachment for connecting tape-sections. No. 1,191,723; July 18; Gaz. vol. 228; p. 972.
Organ, Thomas O., Philadelphia, Pa. Grease-cup. No. 1,190,188; July 4; Gaz. vol. 228; p. 340.
Orlando, Pascal, Buffalo, N. Y. Boat. No. 1,190,944; July 11; Gaz. vol. 228; p. 659.
Orr, Chester A., Cleveland, Ohio. Hot-blast-stove appliance. No. 1,192,102; July 25; Gaz. vol. 228; p. 1157.
Osborne, John L., assignor to Judson Governor Company, Rochester, N. Y. Pump-controlling device. No. 1,190,945; July 11; Gaz. vol. 228; p. 659.
Osborne, John L., assignor to Judson Governor Company, Rochester, N. Y. Governor. No. 1,190,946; July 11; Gaz. vol. 228; p. 659.
Osbun, Benjamin M. (See Flory and Osbun.)
Osnos, Mendel, Berlin, Germany, assignor to General Electric Company. Motor. No. 1,189,997; July 4; Gaz. vol. 228; p. 274.
Otis Company. (See Rood, William B., assignor.)
Otis Elevator Company. (See Gale, Ernest L., Sr., assignor.)
Otis Elevator Company. (See Lindquist, David L., assignor.)
Otis Elevator Company. (See Strang, Walter C., assignor.)
Otten, Edward, Brooklyn, N. Y. Apparatus for sterilizing or cooling liquids. No. 1,190,450; July 11; Gaz. vol. 228; p. 480.
Ottinger, Leon, New York, N. Y. Latch. No. 1,192,448; July 25; Gaz. vol. 228; p. 1281.
Ottinger, Leon, New York, N. Y. Lock or latch. No. 1,192,449; July 25; Gaz. vol. 228; p. 1281.
Otto, George H., Hermann, Mo. Shoe-inker. No. 1,190,947; July 11; Gaz. vol. 228; p. 660.
Overholt, John D., assignor to Iron Crib and Bin Company, Wooster, Ohio. Crib and bin structure. No. 1,189,729; July 4; Gaz. vol. 228; p. 184.
Overman, Max C., New York, N. Y. Tire. No. 1,189,730; July 4; Gaz. vol. 228; p. 184.
Overstedt, Ernest A., assignor to C. Mattison Machine Works, Beloit, Wis. Apparatus for marking knife-blanks. No. 1,191,989; July 25; Gaz. vol. 228; p. 1118.
Owen, Carrie E. (See McNutt, William H., assignor.)
Owen, Oscar L., assignor to The Whitin Machine Works, Whitinsville, Mass. Spooling-machine. No. 1,189,285; July 4; Gaz. vol. 228; p. 27.
Owen, William. (See Bloxham and Owen.)
Owens, Percy R., New York, N. Y. Measuring and regulating the flow of liquids. No. 1,191,724; July 18; Gaz. vol. 228; p. 972.
P. H. Murphy Company. (See Murphy, Albert C., assignor.)
Packard, Ira L., Frankfort, Kans. Gearing. No. 1,189,473; July 4; Gaz. vol. 228; p. 97.
Packard Motor Car Company. (See Loomis, Allen, assignor.)
Packard Motor Car Company. (See Tibbetts, Milton, assignor.)
Packard Motor Car Company. (See White, Ernest M., assignor.)
Packwood, George H., Sr., Tampa, Fla. Type-writer attachment. No. 1,192,556; July 25; Gaz. vol. 228; p. 1318.
Page, John W., Adrian, Mich. Mobile armored shield. No. 1,189,474; July 4; Gaz. vol. 228; p. 97.
Page, Walter, assignor to Canadian Explosives Limited, Montreal, Quebec, Canada. Machine for assembling propellent explosive-containers and their projectiles. No. 1,190,576; July 11; Gaz. vol. 228; p. 524.
Pagliarul, Joseph, assignor to J. E. Smyth, Chicago, Ill. Wire-stitching-machine table. No. 1,189,475; July 4; Gaz. vol. 228; p. 98.
Pál, Fekecs, assignor of forty one-hundredths to G. Smajda, East St. Louis, Ill. Rail-fastening device or clamp. No. 1,190,577; July 11; Gaz. vol. 228; p. 524.
Palmer, Alphonso T., Cicero, Ill. Rail-joint. No. 1,192,103; July 25; Gaz. vol. 228; p. 1158.
Palmer Motion Picture Company. (See Baldwin, Frederic E., assignor.)
Pannier Bros. Stamp Company. (See Pannier, William J., Jr., assignor.)
Pannier, William J., Jr., assignor to Pannier Bros. Stamp Company, Pittsburgh, Pa. Stamp. No. 1,191,820; July 18; Gaz. vol. 228; p. 1005.
Pantazi, Dimitrios, New York, N. Y. Bottle-stopper-sealing machine. No. 1,190,668; July 11; Gaz. vol. 228; p. 559.
Pape, Herman G., assignor to R. A. Schoenberg, New York, N. Y. Mechanical movement. No. 1,190,451; July 11; Gaz. vol. 228; p. 480.
Paris, Joseph D. (See Wood, Walter H., assignor.)
Park, Frederick W., Oxford, Mich. Lubricator for vehicle-wheels. No. 1,192,104; July 25; Gaz. vol. 228; p. 1158.
Parker, Frederick R. (See Higgins, Peter K., assignor.)
Parker, George B., and F. W. Grover, Wenatchee, Wash. Wire-screen rack. No. 1,189,380; July 4; Gaz. vol. 228; p. 62.
Parker, Harold. (See Hassam and Parker.)
Parker, Joseph T., Washington, D. C. Armored aeroplane. No. 1,189,616; July 4; Gaz. vol. 228; p. 145.
Parker Supply Company. (See Sessler and Rosenberg, assignors.)
Parks, Frederick R., Fulton, N. Y. Automatic poultry-feeder. No. 1,192,677; July 25; Gaz. vol. 228; p. 1359.
Parmeter, George W., Sheridan, Wyo. Cinch-ring. No. 1,190,794; July 11; Gaz. vol. 228; p. 602.
Parmeter, Royce. (See Parmeter, Thomas L., assignor.)
Parmeter, Thomas L., assignor to R. Parmeter, Westport, S. D. Stropping device. No. 1,191,455; July 18; Gaz. vol. 228; p. 879.
Paroubek, Anton J., Beacon, N. Y. Seal for packing-cases. No. 1,189,617; July 4; Gaz. vol. 228; p. 146.
Parrish-Alford Fence & Machine Company, The. (See Dwiggins, John W., assignor.)

Parsons, Charles A., and A. Q. Carnegie, Newcastle-upon-Tyne, and S. S. Cook, Wallsend, England, said Carnegie and Cook assignors to said Parsons. Gear-cutting machine. No. 1,192,450; July 25; Gaz. vol. 228; p. 1281.
Paterson, William H., Des Moines, Iowa. Rail-joint. No. 1,191,030; July 11; Gaz. vol. 228; p. 687.
Patten, John, Baltimore, Md. Ammunition. No. 1,192,678; July 25; Gaz. vol. 228; p. 1359.
Patterson, Duncan W., Philadelphia, Pa. Boiler-alarm. No. 1,190,452; July 11; Gaz. vol. 228; p. 480.
Patterson, William, assignor of one-third to F. Bohle, Correctionville, Iowa. Latch. No. 1,192,105; July 25; Gaz. vol. 228; p. 1159.
Paulsen, Nils, New York, N. Y. Drafting instrument. No. 1,191,725; July 18; Gaz. vol. 228; p. 972.
Paulson, John C., Winthrop, assignor of one-half to R. M. Mackay, Dorchester, Mass. Device for locating and raising sunken vessels. No. 1,189,864; July 4; Gaz. vol. 228; p. 231.
Paulson, Swen, Heber, Utah. Milking-hobble. No. 1,189,865; July 4; Gaz. vol. 228; p. 232.
Payne, Allan, Courtenay, British Columbia, Canada. Log-rolling device. No. 1,191,609; July 18; Gaz. vol. 228; p. 930.
Payne, Fred E., assignor to Goodyear Rubber Company, Middletown, Conn. Making rubber footwear. No. 1,189,866; July 4; Gaz. vol. 228; p. 232.
Payne, Odlie L., Mount Vernon, N. Y. Collar-supporter. No. 1,191,218; July 18; Gaz. vol. 228; p. 794.
Payne, William E., and W. S. Eklund, Donner, La. Automatic fire-escape. No. 1,189,381; July 4; Gaz. vol. 228; p. 62.
Pearson, Lawrence A. (See Angelo and Pearson.)
Pearson, Otto, Mount Jewett, Pa. Runner and side-rail connector for flexible sleds. No. 1,192,223; July 25; Gaz. vol. 228; p. 1203.
Pearson, Peter J., Staveley, Alberta, Canada. Projectile. No. 1,190,578; July 11; Gaz. vol. 228; p. 525.
Pearson, Robert B., Galveston, Tex. Self-oiling handsaw. No. 1,191,821; July 18; Gaz. vol. 228; p. 1006.
Pearson, William R., Sheridan, Oreg. Drafting instrument. No. 1,191,990; July 25; Gaz. vol. 228; p. 1119.
Pearsons, George T., New York, N. Y. Fire-extinguisher. No. 1,191,991; July 25; Gaz. vol. 228; p. 1119.
Pease, Lewis E., Somerville, Mass. Towel-rack. No. 1,190,453; July 11; Gaz. vol. 228; p. 481.
Pease, Lydia A., Jamesport, Mo. Self-cleaning rake. No. 1,191,610; July 18; Gaz. vol. 228; p. 930.
Peck, Horace S., Rochester, N. Y., assignor, by mesne assignments, to The Sanoma Corporation. Aerial dart. No. 1,189,382; July 4; Gaz. vol. 228; p. 62.
Peck, Ralph, Vicksburg, Miss. Seed-harvesting attachment for mowing-machines. No. 1,190,454; July 11; Gaz. vol. 228; p. 481.
Pedersen, Laurits, Chicago, Ill. Shoe-brushing apparatus. No. 1,192,679; July 25; Gaz. vol. 228; p. 1360.
Pedlar People Limited, The. (See Loach, William, assignor.)
Peerless Light Company. (See Herskovitz, Abraham, assignor.)
Peerless Vulcanite Company. (See Burns, William J., assignor.)
Peg Lock Block Company, Inc. (See Kirk, Louis H., assignor.)
Pegg, John H., Wabash, Ind. Vault. No. 1,190,579; July 11; Gaz. vol. 228; p. 525.
Peine, Adolphus G., assignor to A. Decker & Cohn, Chicago, Ill. Waistband. No. 1,192,341; July 25; Gaz. vol. 228; p. 1244.
Peine, Grace L. (See Reid, Huldrick B., assignor.)
Pelletier, Louis F. (See Cigila and Pelletier.)
Pelter, Charles, assignor of one-half to J. L. Eggers, Walla Walla, Wash. Hose-clamp. No. 1,191,219; July 18; Gaz. vol. 228; p. 794.
Pelton, Charles E., Milwaukee, Wis. Coupling or shaft cover. No. 1,192,342; July 25; Gaz. vol. 228; p. 1244.
Pembroke, Winfield P., Rochester, N. Y. Carbureter. No. 1,192,106; July 25; Gaz. vol. 228; p. 1159.
Pendleton, Frank E., Montclair, N. J. Gage for steam-traps and other purposes. No. 1,191,342; July 18; Gaz. vol. 228; p. 840.
Pendry, Bryer H., trustee. (See Jurist, Benjamin, assignor.)
Penfield, Raymond C. (See Crum, Hollis B., assignor.)
Penn, Hugh R., *et al.* (See Peoples, William B., assignor.)
Penn, Joseph R., Duncanville, Tex. Cotton-chopper. No. 1,191,456; July 18; Gaz. vol. 228; p. 879.
Penn, William E., Lake Mills, Wis. assignor to The Creamery Package Manufacturing Company, Chicago, Ill. Cheese-press. No. 1,192,343; July 25; Gaz. vol. 228; p. 1244.
Pennsylvania Salt Manufacturing Company. (See Smith, Walton S., assignor.)
Penrod, Sabina, Yucahill, Nebr. Crochet-ring. No. 1,191,457; July 18; Gaz. vol. 228; p. 880.
Penrose, Edward. (See O'Leary, John, assignor.)
Penschuck, William R., St. Paul, Minn. Engine. No. 1,191,343; July 18; Gaz. vol. 228; p. 840.
Pentz, Albert D., Lynn, Mass., assignor to General Electric Company. Shoeing permanent magnets. No. 1,192,680; July 25; Gaz. vol. 228; p. 1360.
Peoples, William B., assignor of one-fourth to A. R. Metz and one-fourth to H. R. Penn, Elberton, Wash. Nut-lock. No. 1,192,107; July 25; Gaz. vol. 228; p. 1159.
Perkett, Louis F., Traverse City, Mich. Incubator. No. 1,190,795; July 11; Gaz. vol. 228; p. 603.
Perkins, Herman, Montague, Mass. Nail-holding tool. No. 1,189,998; July 4; Gaz. vol. 228; p. 275.
Permutit Company, The. (See Kriegsheim, Heinrich, assignor.)
Peter, Arnold H. (See Baekeland and Peter.)
Peter, Frank, Chicago, Ill. Splitting-machine. No. 1,189,999; July 4; Gaz. vol. 228; p. 275.
Peters, John J., Fords, N. J. Digging-machine. No. 1,191,992; July 25; Gaz. vol. 228; p. 1120.
Peters, John S., Scottdale, and L. A. Simmons, Everson, assignors to M. Miller & Brother, Scottdale, Pa. Button-setting machine. No. 1,192,681; July 25; Gaz. vol. 228; p. 1360.
Peters, Nellie V. (See Peters, Robert D., assignor.)
Peters, Robert D., assignor of fifteen-sixteenths to N. V. Peters, Knox, Ind. Fish-hook. No. 1,191,031; July 11; Gaz. vol. 228; p. 688.
Petersen, John, Orange, N. J. Manually-operated screw-propeller. No. 1,189,618; July 4; Gaz. vol. 228; p. 146.
Petersen, William A., assignor of one-half to J. Williams, Excelsior Springs, Mo. Railway-car pipe-coupling mechanism. No. 1,190,580; July 11; Gaz. vol. 228; p. 529.
Peterson, Adolph. (See Congram, John, assignor.)
Peterson, Albert, Chicago, Ill., and W. H. Donahue, Whiting, Ind.; said Donahue assignor to said Peterson. Wrench. No. 1,191,822; July 18; Gaz. vol. 228; p. 1006.
Peterson, Albert W., New York, N. Y. Adjustable needle-guard for finger protection. No. 1,191,726; July 18; Gaz. vol. 228; p. 973.
Peterson, Andrew P., Dwight, Ill. Drilling-machine. No. 1,191,993; July 25; Gaz. vol. 228; p. 1120.
Peterson Burt A., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill. Warp-drawing machine. No. 1,190,245; July 4; Gaz. vol. 228; p. 801.
Peterson, Burt A., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill. Warp-drawing machine. No. 1,191,112; July 11; Gaz. vol. 228; p. 714.
Peterson, Christen J., Chicago, Ill. Mat. No. 1,190,948; July 11; Gaz. vol. 228; p. 660.
Peterson, Edwin A., Brattleboro, Vt., assignor of one-half to E. V. Peterson, St. Paul, Minn. Head-covering. No. 1,192,108; July 25; Gaz. vol. 228; p. 1159.
Peterson, Elmer V. (See Peterson, Edwin A., assignor.)
Peterson, Frank, Spokane, Wash. Grease-cup. No. 1,189,619; July 4; Gaz. vol. 228; p. 146.
Peterson, Frederick, New Rochelle, N. Y. Non-refillable bottle. No. 1,191,727; July 18; Gaz. vol. 228; p. 973.
Peterson, George C. (See Nelson and Peterson.)
Peterson, Gustaf E., Hartford, Conn. Automatic back-rest. No. 1,191,220; July 18; Gaz. vol. 228; p. 794.
Peterson, John F., and T. S. Kirby, Madison, Ala. Harvester's bag. No. 1,192,344; July 25; Gaz. vol. 228; p. 1245.
Peterson, Wilford D. (See Morris, Frank L., assignor.)
Petrak, Frank, Quincy, Wash. Traction-wheel of the portable-track type. No. 1,191,908; July 18; Gaz. vol. 228; p. 1037.
Petroleum Patents Company. (See Dunn, Irwin L., assignor.)
Petterson, Ernst, Astoria, N. Y. Alarm for refrigerator-pans. No. 1,191,221; July 18; Gaz. vol. 228; p. 795.
Pewther, Judson C., El Paso, Tex. Support. No. 1,189,476; July 4; Gaz. vol. 228; p. 98.
Peytoureau, Abel, Tunis, Tunis. Internal-combustion engine. No. 1,189,477; July 4; Gaz. vol. 228; p. 99.
Pfander, Charles R., Hill City, S. D. Repeating pump-gun camera. No. 1,190,000; July 4; Gaz. vol. 228; p. 275.
Pfau, Andrew, Topeka, Kans. Ironing-board table. No. 1,191,532; July 18; Gaz. vol. 228; p. 904.
Pfeffer, Ernst E., Milwaukee, Wis., and F. Pfeffer, Chicago, Ill. Leg and socket construction. No. 1,192,557; July 25; Gaz. vol. 228; p. 1318.
Pfeffer, Frank. (See Pfeffer, Ernst E. and F.)
Pfefferkorn, Willy, Zug, Switzerland. Device for severing the hides and skins from the killed animals. No. 1,192,451; July 25; Gaz. vol. 228; p. 1282.
Pfeiffer, Adam, Gnadenhutten, Ohio. Calk-machine. No. 1,190,001; July 4; Gaz. vol. 228; p. 275.
Pfeninger, Albert, Utica, N. Y. Tongs or carrier for vessels of the cuspidor type. No. 1,190,581; July 11; Gaz. vol. 228; p. 526.
Pfouts, Leroy S., assignor to The Miller Pasteurizing Machine Company, Canton, Ohio. Pasteurizer. No. 1,189,478; July 4; Gaz. vol. 228; p. 99.
Pfouts, Leroy S., assignor to The Miller Pasteurizing Machine Company, Canton, Ohio. Pasteurizer. No. 1,189,479; July 4; Gaz. vol. 228; p. 100.
Pfouts, Leroy S., assignor to The Miller Pasteurizing Machine Company, Canton, Ohio. Filling mechanism. No. 1,189,620; July 4; Gaz. vol. 228; p. 147.
Pfouts, Leroy S., assignor to The Miller Pasteurizing Machine Company, Canton, Ohio. Freezer apparatus. No. 1,191,222; July 18; Gaz. vol. 228; p. 795.
Philadelphia Storage Battery Company. (See Skinner, James M., assignor.)
Philadelphia Textile Machinery Company, The. (See Coulston, Harry, assignor.)
Philbin, Matthew J., Olyphant, Pa. Note-record-card set. No. 1,189,286; July 4; Gaz. vol. 228; p. 27.
Philippe, Raoul, Paris, France. Mechanical movement. No. 1,190,949; July 11; Gaz. vol. 228; p. 661.

Phillips, Charles M., Hurlock, Md. Trap. No. 1,191,909; July 18; Gaz. vol. 228; p. 1037.
Phillips, Loren R., Fruita, Colo. Fire-kindler. No. 1,191,458; July 18; Gaz. vol. 228; p. 880.
Phillips, Ross M. G., West Haven, Conn., assignor to The Automatic Stove Co., Minneapolis, Minn. Cooking apparatus. (Reissue.) No. 14,161; July 4; Gaz. vol. 228; p. 368.
Phonoharp Company, The. (See Marx, Henry C., assignor.)
Picuri, Joseph, Jersey City, N. J. Building-column. No. 1,190,002; July 4; Gaz. vol. 228; p. 276.
Piepgras, Herman J., and B. M. Holt, Caldwell, Idaho. Seed-separator. No. 1,190,950; July 11; Gaz. vol. 228; p. 661.
Pier, Albert L., Louisburg, Wis. Rail-anchor and tie-spacer. No. 1,192,109; July 25; Gaz. vol. 228; p. 1160.
Pierce, Simeon F., St. Paul, Minn. Gas-burner. No. 1,189,731; July 4; Gaz. vol. 228; p. 184.
Pierre, John J., Freeport, N. Y. Coin-controlled collar-vending machine. No. 1,191,032; July 11; Gaz. vol. 228; p. 688.
Pierson, Anna M., Newark, N. J. Strainer. No. 1,191,994 July 25; Gaz. vol. 228; p. 1120.
Pierson, Paul M. (See Hochstetter, Frederick W., assignor.)
Pilkington, George B., assignor to Waterbury Button Company, Waterbury, Conn. Electric switch. No. 1,190,189; July 4; Gaz. vol. 228; p. 340.
Pilkington, Thomas, Wilkinsburg, Pa. Cutting-tool. No. 1,192,110; July 25; Gaz. vol. 228; p. 1160.
Pinkava, Albert. (See Wilson and Pinkava.)
Pioneer Suspender Company. (See Croasdale, John P., assignor.)
Pitkowsky, Israel, New York, N. Y., assignor to Crescent Paper Butter Dish Co., Inc. Machine for making paper receptacles. No. 1,190,669; July 11; Gaz. vol. 228; p. 560.
Pitner, Joseph A., Minot, N. D. Plow. No. 1,191,459; July 18; Gaz. vol. 228; p. 880.
Pitter, Walter C., Woolwich, England. Construction of propellers. No. 1,192,111; July 25; Gaz. vol. 228; p. 1160.
Pittoni, Louis E. (See Sisbower and Pittoni.)
Pittsburg Meter Company. (See Munroe, Daniel A., assignor.)
Pittsburgh Meter Company. (See Chrisman, Horace, assignor.)
Pittsburgh Transformer Company. (See Terhorst, George W., assignor.)
Plaszkiewicz, Julian, Albany, N. Y. Clothes-boiler. No. 1,192,452; July 25; Gaz. vol. 228; p. 1282.
Pleijel, Henning B. M. (See Olsson and Pleijel.)
Plice, Thomas V., assignor to W. V. B. Topping, Ashland, Ohio. Door structure. No. 1,191,223; July 18; Gaz. vol. 228; p. 795.
Plummer, Harold H., Berkeley, Cal. Cutter-head. No. 1,191,728; July 18; Gaz. vol. 228; p. 974.
Pöhl, Gustav, Gossnitz, Germany. Traction-wheel. No. 1,192,345; July 25; Gaz. vol. 228; p. 1245.
Pollard, Effingham L., deceased; M. M. Pollard, administratrix, Dobbs Ferry, N. Y. Track-gage. No. 1,190,796; July 11; Gaz. vol. 228; p. 603.
Pollard, Marion M., administratrix. (See Pollard, Effingham L.)
Pollock, Adolph E., New York, N. Y., assignor to Improved Stay Company. Corset-fastener. No. 1,191,910; July 18; Gaz. vol. 228; p. 1038.
Pomper, Isak, New York, N. Y. Shopping-bag. No. 1,189,480; July 4; Gaz. vol. 228; p. 100.
Pool, Charlie L., Birmingham, Ala. Boiler stay-bolt. No. 1,191,729; July 18; Gaz. vol. 228; p. 974.
Poole, Arthur F., Chicago, Ill., assignor to Wahl Adding Machine Co., Wilmington, Del. Calculating-machine. No. 1,191,928; July 18; Gaz. vol. 228; p. 1045.
Poole, Lora E., assignor to Anderson Button Attaching Machine Company, Anderson, Ind. Button-attaching machine. No. 1,192,682; July 25; Gaz. vol. 228; p. 1361.
Porges, Philipp, *et al.* (See Steinschneider, Leo, assignor.)
Porter, Edwin S., assignor of one-half to F. B. Cannock, New York, N. Y. Kinetoscope-casing. No. 1,190,582; July 11; Gaz. vol. 228; p. 526.
Porter, Hugh N. (See Klein and Porter.)
Porter, John H. Jackson, Mich. Holder for fishing-poles. No. 1,192,112; July 25; Gaz. vol. 228; p. 1161.
Porter, William A. V., New York, assignor to David Weil's Sons Lithographic Company, Brooklyn, N. Y. Collapsible carton. No. 1,191,533; July 18; Gaz. vol. 228; p. 905.
Pospesel, Andrew, Oswego, N. Y. Relief-valve. No. 1,192,113; July 25; Gaz. vol. 228; p. 1161.
Possons, Minard A., Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Proportional gas and air mixer. No. 1,191,823; July 18; Gaz. vol. 228; p. 1006.
Post, Charles E., and P. G. Wagner, Los Angeles, Cal. Non-glaring headlight. No. 1,189,621; July 4; Gaz. vol. 228; p. 147.
Potter, Frank W., Springfield, Mass., assignor to Eastman Kodak Company, Rochester, N. Y. Photoprint-drier. No. 1,189,383; July 4; Gaz. vol. 228; p. 63.
Potter, Sarah B., Washington, D. C. Catamenial appliance. No. 1,192,683; July 25; Gaz. vol. 228; p. 1361.
Potter, William B., Schenectady, N. Y., assignor to General Electric Company. System for preventing electrolysis. No. 1,191,611; July 18; Gaz. vol. 228; p. 930.
Potterf, Albert A., Kansas City, Mo. Hydrocarbon-burner. No. 1,189,732; July 4; Gaz. vol. 228; p. 184.
Powell, Francis V., assignor to The Sefton Manufacturing Company, Anderson, Ind. Knockdown paper box. No. 1,190,797; July 11; Gaz. vol. 228; p. 603.
Power, Nicholas, Brooklyn, assignor to Nicholas Power Company, New York, N. Y. Safety device for motion-picture-projecting machines. No. 1,191,224; July 18; Gaz. vol. 228; p. 796.
Powers, Alexander M., New York, N. Y. Dust-guard for bearings. No. 1,191,137; July 11; Gaz. vol. 228; p. 722.
Powers, Jennie. (See Roggenbuck, Bernard M., assignor.)
Powers, Mae E., Chicago, Ill. Attachment for washboards. No. 1,190,455; July 11; Gaz. vol. 228; p. 481.
Prahar, Robert L., Massapequa, N. Y. Bag-jaw fastener. No. 1,189,733; July 4; Gaz. vol. 228; p. 185.
Prasky, James W., Pittsburgh, Pa. Device for testing the efficiency of a spark-plug. No. 1,192,453; July 25; Gaz. vol. 228; p. 1282.
Pratt, Albert B., Lyndon, Vt. Firearm. No. 1,191,460; July 18; Gaz. vol. 228; p. 880.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,190,319; July 11; Gaz. vol. 228; p. 434.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-sole. No. 1,190,320; July 11; Gaz. vol. 228; p. 435.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Making stitch-down shoes. No. 1,191,534; July 18; Gaz. vol. 228; p. 905.
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,191,535; July 18; Gaz. vol. 228; p. 905.
Prescott, Arthur T., East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y. Two-lift door. No. 1,191,929; July 18; Gaz. vol. 228; p. 1046.
Price, John R. (See Cook and Price.)
Price, Judson. (See Holt, George W., assignor.)
Price, Judson, Poplar Bluff, Mo. Fly-trap. No. 1,189,481; July 4; Gaz. vol. 228; p. 100.
Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Treating textile materials and article produced thereby. No. 1,192,794; July 25; Gaz. vol. 228; p. 1400.
Price, William J., and J. M. Craig, Poteau, Okla.; said Craig assignor to said Price. Switch-operating mechanism. No. 1,189,867; July 4; Gaz. vol. 228; p. 252.
Prichard, Wyndham J. (See Evans, Howitt, and Prichard.)
Pridgen, Wiley H., Creek, N. C. Bale-tie. No. 1,190,456; July 11; Gaz. vol. 228; p. 481.
Pridgen, Wiley H., Creek, N. C. Machine for harvesting clover-seeds. No. 1,190,457; July 11; Gaz. vol. 228; p. 482.
Pridmore, Edward A., La Grange, Ill. Molding-machine. No. 1,190,951; July 11; Gaz. vol. 228; p. 661.
Prifold, George, Linwood, assignor to The Congoleum Company, Philadelphia, Pa. Printing rugs. No. 1,191,824; July 18; Gaz. vol. 228; p. 1006.
Prifold, George, Linwood, assignor to The Congoleum Company, Philadelphia, Pa. Printing rugs. No. 1,191,825; July 18; Gaz. vol. 228; p. 1007.
Primrose, John, New York, N. Y. Locomotive-superheater. No. 1,189,287; July 4; Gaz. vol. 228; p. 27.
Primrose, John, New York, N. Y., assignor to The Destructor Company. Destructor-furnace. No. 1,190,458; July 11; Gaz. vol. 228; p. 482.
Prinzler, Louis V. (See Fliegenschmidt and Prinzler.)
Pritchard Stamping Company. (See Glende and Frankenstein, assignors.)
Proctor, Charles M., assignor to Security Trust Company, receiver, Detroit, Mich. Carbon-contact holder. No. 1,190,190; July 4; Gaz. vol. 228; p. 341.
Prosser, Joseph G., Chicago, Ill. Method and apparatus for obtaining work from vapor. (Reissue.) No. 14,168; July 18; Gaz. vol. 228; p. 1051.
Provencal, Ralph J., St. Johnsbury, Vt. Envelop. No. 1,192,558; July 25; Gaz. vol. 228; p. 1319.
Prox, Herman C., assignor to Frank Prox Company, Terre Haute, Ind. Boiler. No. 1,189,734; July 4; Gaz. vol. 228; p. 185.
Pukerud, Thomas S. (See Aalborg and Pukerud.)
Pullman Couch Company. (See Svebilius, Henry M., assignor.)
Purple, Mayo S., assignor to The Bevin Brothers Manufacturing Company, East Hampton, Conn. Signaling-horn. No. 1,191,461; July 18; Gaz. vol. 228; p. 880.
Pusey, William B., Boise, Idaho. Aeroplane. No. 1,190,321; July 11; Gaz. vol. 228; p. 435.
Putnam, Alden L., assignor to Detroit Pressed Steel Company, Detroit, Mich. Vehicle-frame. No. 1,192,114; July 25; Gaz. vol. 228; p. 1161.
Putnam, Emma P. (See Putnam, Salmon W., 3d, assignor.)

Putnam, Salmon W., 3d, assignor to E. P. Putnam, Fitchburg, Mass. Work-driving dog. No. 1,191,113; July 11; Gaz. vol. 228; p. 714.
Putts, Benjamin S., Erie, Pa. Electric-switch mechanism. No. 1,192,346; July 25; Gaz. vol. 228; p. 1245.
Pyle, William T., assignor to Safety Folding Ladder Company, Pekin, Ill. Step-ladder. No. 1,191,922; July 18; Gaz. vol. 228; p. 1048.
Q & C Company. (See Lynch, John B., assignor.)
Quackenbush, Charles H. (See Shannon, John, assignor.) (Reissue.)
Quade, Frank H., Jr., Fresno, Cal. Inking mechanism. No. 1,192,454; July 25; Gaz. vol. 228; p. 1282.
Quade, Frank H., Jr., Fresno, Cal. Ink-fountain. No. 1,192,455; July 25; Gaz. vol. 228; p. 1283.
Quarmby, George, Saugus, assignor of one-half to C. T. Hilliker, Lynn, Mass. Machine for cutting block-soles. No. 1,191,344; July 18; Gaz. vol. 228; p. 841.
Queen, Thomas H., New Virginia, Iowa. Animal-rack. No. 1,191,345; July 18; Gaz. vol. 228; p. 841.
Quernheim, Oliver H., and H. Neuhoff, Jr., assignors to Metallic Sash Operator Company Corporation, St. Louis, Mo. Window-sash operator. No. 1,191,923; July 18; Gaz. vol. 228; p. 1043.
Quigley Furnace and Foundry Company. (See Longenecker, Charles, assignor.)
Quigley Furnace and Foundry Co. (See Quigley, Wirt S., assignor.)
Quigley, William D., Melrose, Mass. Hub or bushing. No. 1,191,730; July 18; Gaz. vol. 228; p. 974.
Quigley, Wirt S., New York, N. Y., assignor to Quigley Furnace and Foundry Co. Pulverized-fuel burner. No. 1,191,225; July 18; Gaz. vol. 228; p. 796.
Quigley, Wirt S., New York, N. Y., assignor to Quigley Furnace and Foundry Co. Adjustable air-blast apparatus. No. 1,191,226; July 18; Gaz. vol. 228; p. 796.
Quinn, Thomas F., Brockton, Mass. Game apparatus. No. 1,190,003; July 4; Gaz. vol. 228; p. 276.
Quintin, John C., Lamanda Park, assignor of one-half to K. T. Quintin, Pasadena, Cal. Dental injector and extractor. No. 1,189,735; July 4; Gaz. vol. 228; p. 185.
Quintin, Kate T. (See Quintin, John C., assignor.)
Quirk, Philip, Cobalt, Ontario, Canada. Apparatus for measuring and winding linoleum and the like. No. 1,189,482; July 4; Gaz. vol. 228; p. 101.
Quist, Frank J., Worcester, Mass. Pneumatic carpet-sweeper. No. 1,190,798; July 11; Gaz. vol. 228; p. 603.
R. U. V. Company, The. (See Helbronner, André, assignor.)
R. U. V. Company, The. (See Recklinghausen, Max von, assignor.)
R. Wallace & Sons Mfg. Co. (See Wilkes, Samuel G., assignor.)
R. C. Maxwell Co., The. (See Bach, William, assignor.)
R. F. Simmons Company. (See Moore, Edward A., assignor.)
Rabenalt, Gustav H., Buffalo, N. Y. Core for use in making electric storage-battery plates. No. 1,192,224; July 25; Gaz. vol. 228; p. 1203.
Rabinovitz, Louis, Montclair, N. J., assignor to Ellis-Foster Company. Making pure chlorbenzol. No. 1,189,736; July 4; Gaz. vol. 228; p. 186.
Radiguer, Charles, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France. Controlling device for transmission-gears. No. 1,191,612; July 18; Gaz. vol. 228; p. 931.
Radio Telephone & Telegraph Company. (See Hudson, Walter G., assignor.)
Raff, Derwood B., Thomas, Okla. Watch-balance. No. 1,197,462; July 18; Gaz. vol. 228; p. 881.
Raffel, Tobias E., New York, N. Y. Corrugated-paper-board machine. No. 1,189,787; July 4; Gaz. vol. 228; p. 186.
Raikes, Merrill C., Philippi, W. Va. Wrench. No. 1,190,004; July 4; Gaz. vol. 228; p. 276.
Rail Joint Company, The. (See Braine, Bancroft G., assignor.)
Ralph, Joseph E., Newark, N. J. Filing device for disk records. No. 1,190,005; July 4; Gaz. vol. 228; p. 276.
Ramsay, Erskine, Birmingham, Ala. Means for sampling and checking miners' coal. No. 1,191,227; July 18; Gaz. vol. 228; p. 797.
Ramsay, William A., Honolulu, Hawaii. Apparatus for macerating sugar-cane. No. 1,191,826; July 18; Gaz. vol. 228; p. 1007.
Rand, Dora, Kirkland, Ill. Ironing-board attachment. No. 1,192,225; July 25; Gaz. vol. 228; p. 1204.
Randall, Lewis L., Ottumwa, Iowa. Churn. No. 1,190,191; July 4; Gaz. vol. 228; p. 341.
Randel, Ivar A. (See McCord and Randel.)
Randolph, Le Moine F., Chicago, Ill. Illuminated sign. No. 1,190,459; July 11; Gaz. vol. 228; p. 483.
Rank, George W., and P. M. Hoffmann, Indianapolis, Ind. Safety device for power squaring-shears and similar machines. No. 1,190,670; July 11; Gaz. vol. 228; p. 560.
Rankin, Ernest L., East Sheen, England. Braiding-machine. No. 1,189,483; July 4; Gaz. vol. 228; p. 101.
Ransberger, Harry L., Lapaz, Ind. Dump-car. No. 1,191,463; July 18; Gaz. vol. 228; p. 881.
Ransom, Newell H., Fort Wayne, Ind. Bow rest and clamping device. No. 1,191,613; July 18; Gaz. vol. 228; p. 931.
Ransome, Ernest L., Plainfield, N. J. Concrete-pipe mold. No. 1,191,731; July 18; Gaz. vol. 228; p. 975.
Rappleye, Arthur, and C. V. Slaght, Interlaken, N. Y. Dust-pan hanger. No. 1,192,684; July 25; Gaz. vol. 228; p. 1362.
Rasmussen, Hans, Chicago, Ill. Securing device for concrete-forms. No. 1,192,115; July 25; Gaz. vol. 228; p. 1162.
Rasmussen, Robert F., assignor to C. A. Libbey Company, Oshkosh, Wis. Stanchion. No. 1,191,228; July 18; Gaz. vol. 228; p. 797.
Ratcliff, William A., Bellingham, Wash. Indicating-lock. No. 1,191,732; July 18; Gaz. vol. 228; p. 975.
Ratcliffe, Charles E., Paducah, Ky. Nut-lock. No. 1,189,622; July 4; Gaz. vol. 228; p. 147.
Rathbun, George J., Toledo, Ohio. Internal-combustion engine. No. 1,192,456; July 25; Gaz. vol. 228; p. 1283.
Ratliff, Albert T., Hattiesburg, assignor to Free Stump Remover Manufacturing Company, Laurel, Miss. Process of and apparatus for reducing stumps. No. 1,190,006; July 4; Gaz. vol. 228; p. 277.
Rawak, George, New York, N. Y. Lining for hats. No. 1,191,996; July 25; Gaz. vol. 228; p. 1121.
Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky. Cultivator. No. 1,191,114; July 11; Gaz. vol. 228; p. 714.
Ray, Herbert C., Spokane, Wash. Mirror hinge and clamp. No. 1,192,116; July 25; Gaz. vol. 228; p. 1162.
Rayder, Joseph A., Philadelphia, Pa. Curtain or shade fixture. No. 1,190,007; July 4; Gaz. vol. 228; p. 277.
Raymond Concrete Pile Company. (See Upton and Day, assignors.)
Raymond, Edward B., assignor of one-third to L. M. Martin and one-third to E. A. Hodges, Newkirk, Okla. Rotary explosion-engine. No. 1,189,484; July 4; Gaz. vol. 228; p. 102.
Raymond, Warren E., Chicago, Ill. Spool-holder. No. 1,191,733; July 18; Gaz. vol. 228; p. 975.
Read, Robert H., Washington, D. C., assignor to General Electric Company. Resistance-wire for electric heaters. No. 1,192,457; July 25; Gaz. vol. 228; p. 1284.
Reade, William A. (See Johnson and Reade.)
Reagan, Dominick A., Altoona, Pa. Fire-box for locomotive or stationary boilers. No. 1,190,952; July 11; Gaz. vol. 228; p. 662.
Reagen, George M., assignor of one-half to F. A. Schwartz, Coshocton, Ohio. Amusement device. No. 1,192,226; July 25; Gaz. vol. 228; p. 1204.
Reardon, Robert E., Ottawa, Ontario, Canada. Sink-strainer. No. 1,190,322; July 11; Gaz. vol. 228; p. 435.
Reavis, Albert S., Washington, D. C. Tool-handle and attaching means therefor. No. 1,192,458; July 25; Gaz. vol. 228; p. 1284.
Rechnitzer, Alexander, Vienna, Austria-Hungary. Setting and adjusting mechanism for calculating-machines. No. 1,189,288; July 4; Gaz. vol. 228; p. 28.
Recklinghausen, Max von, Paris, France, assignor to The R. U. V. Company, New York, N. Y. Apparatus for the sterilization of liquids by ultra-violet rays. No. 1,190,609; July 11; Gaz. vol. 228; p. 535.
Record, George J., Conneaut, Ohio. Dispensing device, including a pouring-lip No. 1,191,464; July 18; Gaz. vol. 228; p. 882.
Recording Register and Fare Box Company, The. (See Mitten, McAllister, and Ireland, assignors.)
Recording Safety Device Company. (See Hudson, Frederick F., assignor.)
Reece Button Hole Machine Company, The. (See Reece, Franklin A., assignor.)
Reece, Franklin A., Manchester, assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-stitching machine. No. 1,190,583; July 11; Gaz. vol. 228; p. 526.
Reece Shoe Machinery Company, The. (See Schoenky, August R., assignor.)
Reed, Edwin A., assignor to Diagraph Company, St. Louis, Mo. Dough-molding machine. No. 1,189,868; July 4; Gaz. vol. 228; p. 233.
Reed, Forrest C. (See Hanger, Wade H., assignor.)
Reed-Prentice Company. (See Hendrickson, Fred K., assignor.)
Reed, Robert H., assignor of one-half to J. L. Long, New Wilson, Okla. Safety apparatus for oil-wells. No. 1,191,229; July 18; Gaz. vol. 228; p. 798.
Reed, Wilber E., assignor to Western Tablet Company, St. Joseph, Mo. Loose-leaf binder. No. 1,192,117; July 25; Gaz. vol. 228; p. 1162.
Reese, Edwin M., Yorba Linda, Cal. Road-grader. No. 1,191,465; July 18; Gaz. vol. 228; p. 882.
Reese, George C., Darby, Pa. Internal-combustion engine. No. 1,191,827; July 18; Gaz. vol. 228; p. 1007.
Reese, Henry O., Atlantic City, N. J. Combined heater and cooking utensil. No. 1,190,584; July 11; Gaz. vol. 228; p. 527.
Reeve, George A. (See Notz and Reeve.)
Reeves, Mattison G., Fullerton, Nebr. Brush-handle. No. 1,191,828; July 18; Gaz. vol. 228; p. 1008.
Reeves, Samuel V., Haddonfield, N. J. Hot-water stove. No. 1,190,460; July 11; Gaz. vol. 228; p. 483.
Reich, Carl J., Mount Vernon, assignor to F. A. Scheffer, New York, N. Y. Clothes-line crane. No. 1,191,466; July 18; Gaz. vol. 228; p. 882.

Reichart, William M., assignor to The Chandler and Price Company, Cleveland, Ohio. Safety device for platen-presses. No. 1,192,118; July 25; Gaz. vol. 228; p. 1163.

Reichel, Hugo, Chicago, Ill. Cutting or slitting machine. No. 1,190,192; July 4; Gaz. vol. 228; p. 341.

Reichel, John, Philadelphia, and H. Werner, Glen Olden, assignors to H. K. Mulford Company, Philadelphia, Pa. Process of filtering hog-cholera antitoxin with the aid of chemicals and a composition of matter related to the process. No. 1,192,559; July 25; Gaz. vol. 228; p. 1319.

Reichel, John, Philadelphia, and H. Werner, Glen Olden, assignors to H. K. Mulford Company, Philadelphia, Pa. Producing a sterile hog-cholera antitoxin. No. 1,192,560; July 25; Gaz. vol. 228; p. 1319.

Reichert, John, Racine, Wis. Neck-yoke connector and the like for harness. No. 1,192,119; July 25; Gaz. vol. 228; p. 1163.

Reid, Huldrick B., Washington, D. C., assignor of one-half to G. L. Peine. Smoke-pipe air-check. No. 1,189,623; July 4; Gaz. vol. 228; p. 148.

Reifsnider, James C., Seattle, Wash. Automobile-tire. No. 1,189,485; July 4; Gaz. vol. 228; p. 102.

Reimers, Dycke H., assignor of one-third to D. W. Davidson and one-third to M. Weber, Chicago, Ill. Water-cooling system for hydrocarbon-engines and the like. No. 1,191,614; July 18; Gaz. vol. 228; p. 931.

Reirdon, Joseph F., Kingston, assignor to The Adder Machine Company, Wilkes-Barre, Pa. Calculating-machine. No. 1,189,289; July 4; Gaz. vol. 228; p. 38.

Reis, Julius M., New York, N. Y. Embroidery. No. 1,189,384; July 4; Gaz. vol. 228; p. 63.

Reiser, Daniel, Cleveland, Ohio. Signature-gatherer. No. 1,192,561; July 25; Gaz. vol. 228; p. 1319.

Reist, Henry G., and H. Maxwell, Schenectady, N. Y., assignors to General Electric Company. Induction-motor. No. 1,190,009; July 4; Gaz. vol. 228; p. 278.

Reist, Henry H., Schenectady, N. Y., assignor to General Electric Company. Bearing. No. 1,190,008; July 4; Gaz. vol. 228; p. 277.

Remington Typewriter Company. (See Smith, Arthur W., assignor.)

Remy, Benjamin P. (See Remy and Berger.)

Remy Brothers Company. (See Remy and Berger, assignors.)

Remy, Frank I., B. P. Remy, and A. Berger, assignors to Remy Brothers Company, Anderson, Ind. Liquid-gage. No. 1,189,869; July 4; Gaz. vol. 228; p. 233.

Rendano, Emil, Brooklyn, N. Y. Drill gear-and-ratchet mechanism. No. 1,192,227; July 25; Gaz. vol. 228; p. 1204.

René, Dominick H., Birmingham, Ala. Controlling apparatus. No. 1,190,799; July 11; Gaz. vol. 228; p. 662.

Renshaw, Clarence, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,189,290; July 4; Gaz. vol. 228; p. 29.

Renshaw, Raemer R., Ames, Iowa. Making fodder. No. 1,190,953; July 11; Gaz. vol. 228; p. 662.

Renton, Henry N., assignor of one-third to W. Roper and one-third to T. F. Oechsle, Philadelphia, Pa. Power-operating device for window-sashes. No. 1,190,671; July 11; Gaz. vol. 228; p. 561.

Renton, Henry N., assignor of one-half to W. Roper, Philadelphia, Pa. Locking device and push-out stay for steel sashes. No. 1,190,672; July 11; Gaz. vol. 228; p. 561.

Repass, George E., Knoxville, Tenn., assignor to H. & B. American Machine Company, Pawtucket, R. I. Cotton-distributing apparatus. No. 1,190,800; July 11; Gaz. vol. 228; p. 605.

Repp, Clinton B., New York, N. Y. Phonograph. No. 1,190,673; July 11; Gaz. vol. 228; p. 562.

Rese, John H., Washington, D. C. Mail-receptacle. No. 1,190,193; July 4; Gaz. vol. 228; p. 342.

Reubold, Adam, New York, N. Y. Cooking hams. No. 1,190,010; July 4; Gaz. vol. 228; p. 278.

Reuter, Baptist and K. Streitwolf, assignors to Farbwerke vorm. Meister Lucius & Bruning, Hochst-on-the-Main, Germany. Mixtures of alkali salts of 4.4¹-dihoxy-3.3¹-diamino-arsenobenzene and making same. No. 1,191,997; July 25; Gaz. vol. 228; p. 1121.

Rextrew, Frank H., Hammond, Ind., assignor to R. Malcom, Chicago, Ill. Eye-protector. No. 1,190,674; July 11; Gaz. vol. 228; p. 562.

Reynolds, Alleyne, London, England. Reversible regenerative furnace. No. 1,191,033; July 11; Gaz. vol. 228; p. 688.

Reynolds, Benjamin S., assignor to Chain Belt Company, Milwaukee, Wis. Water-screening apparatus. No. 1,191,115; July 11; Gaz. vol. 228; p. 715.

Rheinberg, Ernest. (See Rheinberg, Julius and E.)

Rheinberg, Julius and E., London, England. Color photography and color-printing. No. 1,191,084; July 11; Gaz. vol. 228; p. 689.

Rhine, Ivan J., Pierson, Iowa. Egg-candler. No. 1,192,795; July 25; Gaz. vol. 228; p. 1400.

Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Filling-replenishing mechanism for looms. No. 1,191,784; July 18; Gaz. vol. 228; p. 976.

Rhoades, Lewis T., Mont Clare, Pa., assignor to New York Coil Company, Inc., New York, N. Y. Circuit making and breaking device. No. 1,189,870; July 4; Gaz. vol. 228; p. 233.

Rhodes, Abraham, Corydon, Ind. Grocer's bin. No. 1,192,228; July 25; Gaz. vol. 228; p. 1205.

Rhodes, Alonzo E., Hillcrest, Del. Slot and slug. No. 1,189,385; July 4; Gaz. vol. 228; p. 64.

Rhodes, Byron F., assignor of fifty-one one-hundredths to F. Keller, Philadelphia, Pa. Sewing-machine. No. 1,191,094; July 11; Gaz. vol. 228; p. 708.

Rhodes, James W., Memphis, Tenn. Oil-cake trimmer. No. 1,190,011; July 4; Gaz. vol. 228; p. 278.

Rice, Frank E. (See Bailey and Rice.)

Rich, Charles C., Mount Vernon, N. Y. Hydraulic clutch. No. 1,191,231; July 18; Gaz. vol. 228; p. 798.

Rich, Charles C., assignor to The Hydro-Kinetic Transmission Co., Mount Vernon, N. Y. Variable eccentric mechanism. No. 1,191,230; July 18; Gaz. vol. 228; p. 798.

Richard, Philip, West Fitchberg, Mass. Revolving suction-roll. No. 1,191,735; July 18; Gaz. vol. 228; p. 977.

Richards, Francis H., Hartford, Conn. Sewing-machine. No. 1,191,232; July 18; Gaz. vol. 228; p. 799.

Richards, Francis H., Hartford, Conn. Sewing-machine. No. 1,191,233; July 18; Gaz. vol. 228; p. 799.

Richards, Francis H., Hartford, Conn. Adjustable looper for sewing-machines. No. 1,191,234; July 18; Gaz. vol. 228; p. 800.

Richards, Francis J., Brooklyn, N. Y. Combined burner and heater. No. 1,190,461; July 11; Gaz. vol. 228; p. 483.

Richards, George M., Erie, Pa. Load-controlling device. No. 1,191,467; July 18; Gaz. vol. 228; p. 883.

Richards-Wilcox Manufacturing Company. (See Devereux, Warren V., assignor.)

Richards, Willard F., Depew, assignor to Gould Coupler Company, New York, N. Y. Centering and supporting device for car-couplings. No. 1,189,386; July 4; Gaz. vol. 228; p. 64.

Richards, Willard F., Depew, assignor to Gould Coupler Company, New York, N. Y. Anticreep device. No. 1,189,387; July 4; Gaz. vol. 228; p. 64.

Richardson, Henry, Chicago, Ill. Wire fabric. No. 1,189,291; July 4; Gaz. vol. 228; p. 30.

Richardson, Owen W., Princeton, N. J. Device for the rectification of alternating electric currents. No. 1,189,738; July 4; Gaz. vol. 228; p. 186.

Richey, Browne & Donald. (See Hofmann, Walter H., assignor.)

Richter, Ernst, Cincinnati, Ohio. Fluid-pressure generator. No. 1,191,235; July 18; Gaz. vol. 228; p. 800.

Richville, Frances C. (See Clear and Richville.)

Rickard, George L., West Fairview, Pa. Music-sheet turner. No. 1,190,462; July 11; Gaz. vol. 228; p. 484.

Rickets, William J., assignor to A. Graham & Company and W. J. Rickets, Brockley, London, England. Electrical signaling system. No. 1,192,685; July 25; Gaz. vol. 228; p. 1362.

Ridd, Ambrose, Farrell, Pa. Bluing sheets and plates. No. 1,192,347; July 25; Gaz. vol. 228; p. 1246.

Rieger, John G., Pittsburgh, Pa. Treating device for typewriter ribbons. No. 1,192,686; July 25; Gaz. vol. 228; p. 1362.

Rigby, John H., Glass, Tenn. Rack. No. 1,191,468; July 18; Gaz. vol. 228; p. 883.

Rigby, Thomas. (See Testrup, Rigby, and Andrew.)

Rigo, Michael, Monaca, Pa. Flue-cleaner. No. 1,191,236; July 18; Gaz. vol. 228; p. 801.

Riley, Lynn G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,189,292; July 4; Gaz. vol. 228; p. 30.

Riordan, Patrick D., New York, N. Y. Clothes-drier. No. 1,191,998; July 25; Gaz. vol. 228; p. 1121.

Risher, Arthur W. (See Luick, Bert F., assignor.)

Ritchie, James, New York, N. Y. Rake. No. 1,191,911; July 18; Gaz. vol. 228; p. 1039.

Riter-Conley Manufacturing Company. (See Barnum, Dana D., assignor.)

Ritter, Konrad R., Leipzig-Schönefeld, Germany. Machine for winding armatures for dynamo-electric machines. No. 1,190,801; July 11; Gaz. vol. 228; p. 605.

Rixen, Carl J., Aeröskobing, Denmark. Device for the prevention of air-losses in liquid-containers under air-pressure. No. 1,191,469; July 18; Gaz. vol. 228; p. 883.

Robbins, Percy A., Timmins, Ontario, Canada. Amalgamator. No. 1,190,012; July 4; Gaz. vol. 228; p. 279.

Roberson, Thomas E., Sheridan, Wyo. Applicator. No. 1,191,736; July 18; Gaz. vol. 228; p. 977.

Robert, Simon, assignor to E. Maher, Montreal, Quebec, Canada. Means for transmitting power. No. 1,190,323; July 11; Gaz. vol. 228; p. 435.

Roberts, Elijah J., Bothell, Wash. Spring-hinge. No. 1,191,470; July 18; Gaz. vol. 228; p. 884.

Roberts, Elwood. (See Matney, James, assignor.)

Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,192,459; July 25; Gaz. vol. 228; p. 1285.

Roberts, Park D. (See Roberts, Webster M. and P. D.)

Roberts, Richard, Forest City, Pa. Damper-operating mechanism. No. 1,190,585; July 11; Gaz. vol. 228; p. 527.

Roberts, Robert R., *et al.* (See Calahan, Delona L., assignor.)

Roberts, Webster M., and P. D., St. Joseph, Mo. Table-forwarding mechanism. No. 1,189,871; July 4; Gaz. vol. 228; p. 234

Robertson, Charles E., Shale, Cal. Spigot. No. 1,190,586; July 11; Gaz. vol. 228; p. 528.

Robertson, John A., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-plate holder. No. 1,190,954; July 11; Gaz. vol. 228; p. 662.

Robinson, Charles G., assignor to H. E. Sheldon, Pittsburgh, Pa. Apparatus for making ingot-molds. No. 1,191,471; July 18; Gaz. vol. 228; p. 884.

Robinson, Charles G., assignor to H. E. Sheldon, Pittsburgh, Pa. Making ingot-molds. No. 1,191,472; July 18; Gaz. vol. 228; p. 884.

Robinson, Charles G., assignor to H. E. Sheldon, Pittsburgh, Pa. Manufacture of molds. No. 1,191,473; July 18; Gaz. vol. 228; p. 885.

Robinson, Charles G., assignor to H. E. Sheldon, Pittsburgh, Pa. Mold for casting steel articles. No. 1,191,474; July 18; Gaz. vol. 228; p. 885.

Robinson, Daniel P. (See Taliaferro, Robinson and Coyle.)

Robinson, Edward W., assignor to International Barrel Company, Savannah, Ga. Hoop-forming machine. No. 1,192,562; July 25; Gaz. vol. 228; p. 1320.

Robinson, Frank A., Auburn, N. Y., assignor to S. Harmon, Chicago, Ill. Steering-gear. No. 1,191,095; July 11; Gaz. vol. 228; p. 708.

Robinson, William W., Kansas City, Mo. Pump. No. 1,189,293; July 4; Gaz. vol. 228; p. 31.

Rock Island Plow Company. (See Heylman, Edward M., assignor.)

Rock Island Plow Company. (See Tedell, John, assignor.)

Rockwood Sprinkler Company of Massachusetts. (See Carlson, Hjalmar G., assignor.)

Roda, Carl O., Paradise, Kans. Gate-fastener. No. 1,190,587; July 11; Gaz. vol. 228; p. 528.

Roderick Lean Manufacturing Company. (See Warne, Frederick C., assignor.)

Rodgers, Walter S., Deming, N. Mex. Roof-square. No. 1,190,013; July 4; Gaz. vol. 228; p. 279.

Rodrigues, Manuel R., New York, N. Y. Filing-cabinet. No. 1,192,563; July 25; Gaz. vol. 228; p. 1321.

Roebuck, Alvah C., Woodstock, Ill. Type-writer ribbon-feed. No. 1,189,486; July 4; Gaz. vol. 228; p. 102.

Roepe, Walter G., and F. J. Cassing, Concordia, Mo. Nut-lock. No. 1,191,096; July 11; Gaz. vol. 228; p. 708.

Roepke, William J., assignor to C. B. McCoy, Los Angeles, Cal. Wheel structure. No. 1,192,348; July 25; Gaz. vol. 228; p. 1246.

Roessler, Carl, Hamburg, Germany. Manufacturing leather substances. No. 1,192,460; July 25; Gaz. vol. 228; p. 1285.

Roever, August E., Brooklyn, N. Y., assignor to J. B. Kirby, Cleveland, Ohio. Vacuum-cleaner nozzle. No. 1,191,999; July 25; Gaz. vol. 228; p. 1122.

Rogers, Alpha C. (See Wilkes, William H., assignor.)

Rogers, Anita B., *et al.* (See Marquis, Alexander G., assignor.)

Rogers, Clarence T., New York, N. Y. Door check and spring. No. 1,190,324; July 11; Gaz. vol. 228; p. 436.

Rogers, Edward E., New York, N. Y. Safety attachment for hand-bags. No. 1,192,564; July 25; Gaz. vol. 228; p. 1321.

Rogers, George W., *et al.* (See Marquis, Alexander G., assignor.)

Rogers, Homer D., assignor of one-half to Z. R. Ashbaugh, Kansas City, Mo. Stave. No. 1,189,388; July 4; Gaz. vol. 228; p. 65.

Rogers, John R., Brooklyn, N. Y. Internal-combustion engine. No. 1,189,872; July 4; Gaz. vol. 228; p. 284.

Rogers, Warren E., Trenton, Mich. Relay. No. 1,190,588; July 11; Gaz. vol. 228; p. 528.

Roggenbuck, Bernard M., assignor of one-half to J. Powers, Norfolk, Va. Air-compressor pump. No. 1,190,463; July 11; Gaz. vol. 228; p. 484.

Rohrbacher, Edward J., assignor to Romort Manufacturing Company, Seattle, Wash. Automatic hose-coupling. No. 1,189,624; July 4; Gaz. vol. 228; p. 148.

Roisum, Hans O., Morrisonville, Wis. Extension bobsleigh. No. 1,192,461; July 25; Gaz. vol. 228; p. 1285.

Rolfe, Charles A., Redlands, Cal. Golf-club. No. 1,190,589; July 11; Gaz. vol. 228; p. 528.

Roller, Frank W., East Orange, N. J., assignor to Roller-Smith Company. Electrical instrument. No. 1,192,821; July 25; Gaz. vol. 228; p. 1408.

Roller-Smith Company. (See Roller, Frank W., assignor.)

Rolli, John, Enid, Okla. Excavating-machine. No. 1,189,739; July 4; Gaz. vol. 228; p. 187.

Romberg, Paul, Liepzig, Germany. Barrel-cleansing machine. No. 1,190,464; July 11; Gaz. vol. 228; p. 484.

Romberger, Floyd T., Elizabethville, Pa. Internal-combustion engine. No. 1,189,625; July 4; Gaz. vol. 228; p. 149.

Romort Manufacturing Company. (See Rohrbacher, Edward J., assignor.)

Rontke, Albert, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,192,822; July 25; Gaz. vol. 228; p. 1409.

Rood, Charles W., Britt, Iowa, assignor of one-half to C. C. Jacobs, Amboy, Ill. Means for supporting and moving excavating-machines. No. 1,191,035; July 11; Gaz. vol. 228; p. 689.

Rood, William B., assignor to Otis Company, Ware, Mass. Undergarment. No. 1,190,590; July 11; Gaz. vol. 228; p. 529.

Rooney, Edwin A., Fairhaven, assignor to The Whitin Machine Works, Whitinsville, Mass. Coiler-front for cards. No. 1,189,740; July 4; Gaz. vol. 228; p. 187.

Rooney, Elwin H., assignor to Whitin Machine Works, Whitinsville, Mass. Cotton-wadding apparatus. No. 1,189,873; July 4; Gaz. vol. 228; p. 234.

Root, Clayton D. (See Kaiser, Peter, assignor.)

Root, Ralph R., Nottingham, Ohio. Incubator. No. 1,192,565; July 25; Gaz. vol. 228; p. 1322.

Roper, William, *et al.* (See Renton, Henry N., assignor.)

Rorabeck, Claude, Dayton, Ohio. Gas-engine. No. 1,190,591; July 11; Gaz. vol. 228; p. 529.

Rorabeck, Claude, Dayton, Ohio. Manifold for gas-engines. No. 1,190,592; July 11; Gaz. vol. 228; p. 529.

Rosberry, Hattie. (See Brown and Curlee, assignors.)

Rose, George F., New York, N. Y. Type-writer. No. 1,189,626; July 4; Gaz. vol. 228; p. 149.

Rose, George F., New York, N. Y. Ribbon mechanism for type-writers. No. 1,189,627; July 4; Gaz. vol. 228; p. 149.

Rose, Isaac, West Elizabeth, and H. A. Speiser, Newark, N. J. Knife. No. 1,190,675; July 11; Gaz. vol. 228; p. 562.

Rose, Sydney A. M., London, England. Recording-target. No. 1,189,628; July 4; Gaz. vol. 228; p. 150.

Rosenberg, Heyman. (See Sessler and Rosenberg.)

Rosenblatt, Abraham M., New York, N. Y. Disruptible envelop. No. 1,191,475; July 18; Gaz. vol. 228; p. 885.

Rosendall, Nels, Vienna, S. D. Tool-holder. No. 1,192,349; July 25; Gaz. vol. 228; p. 1247.

Rosenfeld, Sidney, Cleveland, Ohio. Combined bung and faucet. No. 1,190,802; July 11; Gaz. vol. 228; p. 605.

Rosenfeld, Sidney, Cleveland, Ohio. Uniting bushings to metal bodies. No. 1,190,803; July 11; Gaz. vol. 228; p. 605.

Rosenshine, Morris W., assignor of one-half to H. E. Clayburgh, San Francisco, Cal. Door-key-securing device. No. 1,191,127; July 11; Gaz. vol. 228; p. 719.

Rosenshine, Morris W., assignor of one-half to H. E. Clayburgh, San Francisco, Cal. Door-key-securing device. No. 1,191,128; July 11; Gaz. vol. 228; p. 719.

Rosenthal, Harry and I., New York, N. Y. Dispensing-can. No. 1,190,325; July 11; Gaz. vol. 228; p. 436.

Rosenthal, Isador. (See Rosenthal, Harry and I.)

Rosenthal, Moritz, assignor to Eta-Ventilatoren-Gesellschaft m. b. H., Vienna, Austria-Hungary. Suction apparatus. No. 1,191,237; July 18; Gaz. vol. 228; p. 802.

Rosentreter, Albert J., Boonton, assignor to E. Zabriskie, Maplewood, N. J., and F. E. Hutchins, New York, N. Y. Door check and closer. No. 1,192,000; July 25; Gaz. vol. 228; p. 1122.

Rosing, William H. V. (See Light and Rosing.)

Ross, David E., asignor to Ross Gear and Tool Company, La Fayette, Ind. Steering-gear. No. 1,192,462; July 25; Gaz. vol. 228; p. 1285.

Ross Gear and Tool Company. (See Ross, David E., assignor.)

Ross, Labron B. (See White and Ross.)

Ross, Peter M., Granton, Wis. Drinking-cup for cattle-watering systems. No. 1,191,829; July 18; Gaz. vol. 228; p. 1008.

Ross, William H., and A. R. Merz, Washington, D. C. Preparing concentrated fertilizer. (Dedicated to the public.) No. 1,191,615; July 18; Gaz. vol. 228; p. 932.

Roth, Anthony, Sr., New Brunswick, N. J. Supplemental horseshoe. No. 1,191,616; July 18; Gaz. vol. 228; p. 932.

Roth, Anthony, Jr., New Brunswick, N. J. Screen. No. 1,190,676; July 11; Gaz. vol. 228; p. 563.

Roth, Charles, New Philadelphia, Pa. Gasket and washer cutter. No. 1,189,487; July 4; Gaz. vol. 227; p. 103.

Rousseau, Elbert V. D., Boundbrook, N. J. Shaving-lather producer. No. 1,191,737; July 18; Gaz. vol. 228; p. 977.

Roussey, Paul, assignor of one-half to J. D. Books, Brooklyn, N. Y. Automobile-indicator. No. 1,191,830; July 18; Gaz. vol. 228; p. 1008.

Rowe, Alvin V., Galesburg, Ill. Gate-hinge. No. 1,192,120; July 25; Gaz. vol. 228; p. 1163.

Royal Typewriter Company. (See Schwartz, Albert A., assignor.)

Royer, David W., and J. W. Von Nieda, Ephrata, Pa. Bananaette-machine. No. 1,191,831; July 18; Gaz. vol. 228; p. 1008.

Rubber Regenerating Company. (See Murdock, Harold R., assignor.)

Rubber Regenerating Company. (See Price, Raymond B., assignor.)

Ruckstuhl, Walter, assignor to The New Home Sewing Machine Company, Orange, Mass. Bobbin-case latch for sewing-machines. No. 1,191,346; July 18; Gaz. vol. 228; p. 841.

Rudolf, Philipp, and J. A. Lund, Batavia, Ill., assignors to Splitdorf Electrical Company, Newark, N. J. Magneto-driving connection. No. 1,191,476; July 18; Gaz. vol. 228; p. 886.

Rudolph Wurlitzer Manufacturing Company, The. (See McCormick, Frank L., assignor.)

Rueckert, Ernest F., Providence, R. I. Souvenir cigar-piercer. No. 1,190,326; July 11; Gaz. vol. 228; p. 437.

Ruel, John J., Melbourne, Victoria, Australia. Means of suspension for motor-cars and other motor-driven vehicles. No. 1,189,629; July 4; Gaz. vol. 228; p. 150.

Ruete, William T., New York, N. Y., assignor to General Electric Company. Clamp. No. 1,191,617; July 18; Gaz. vol. 228; p. 933.
Ruggiero, Pasquale, Philadelphia, Pa. Ice-creeper. No. 1,190,677; July 11; Gaz. vol. 228; p. 563.
Ruggles, George W., Baltimore, Md., assignor, by mesne assignments, to A. S. Gill, N. Webster, and F. H. Fletcher, committee. Packing-can. No. 1,189,294; July 4; Gaz. vol. 228; p. 31.
Rumke, George H., Denver, Colo. Amusement device. No. 1,191,477; July 18; Gaz. vol. 228; p. 886.
Rundlöf, Erik A., Stocksund, Sweden. Controlling device for fluid-pumps in internal-combustion engines. No. 1,189,741; July 4; Gaz. vol. 228; p. 187.
Runyon, Stanley T., San Francisco, Cal. Signaling device. No. 1,191,478; July 18; Gaz. vol. 228; p. 886.
Rupert, Edward A., Aberdeen, Wash. Lock. No. 1,191,347; July 18; Gaz. vol. 228; p. 842.
Russ, John D. (See Varner, John J., assignor.)
Russell, Arthur L., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making boots and shoes. No. 1,191,832; July 18; Gaz. vol. 228; p. 1009.
Russell, Arthur L., Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Apparatus for the manufacture of boots and shoes. No. 1,191,833; July 18; Gaz. vol. 228; p. 1009.
Russell, Arthur L., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Apparatus for use in the manufacture of boots and shoes. No. 1,191,834; July 18; Gaz. vol. 228; p. 1010.
Russell, Charles C., Chicago, Ill. Motor-governor. No. 1,190,593; July 11; Gaz. vol. 228; p. 530.
Russell, George H., Florence, Ala. Ventilator. No. 1,189,488; July 4; Gaz. vol. 228; p. 103.
Russell, James H., Manistee, Mich. Receptacle for delivering goods. No. 1,190,327; July 11; Gaz. vol. 228; p. 437.
Russell, John F. (See Neil, James, assignor.)
Russell, Joseph F., Chicago, Ill. Rail-fastening device. No. 1,189,489; July 4; Gaz. vol. 228; p. 103.
Russo, Paolo, assignor of one-half to E. Lisotto, Pittsburgh, Pa. Non-refillable bottle. No. 1,190,465; July 11; Gaz. vol. 228; p. 485.
Rutherford, N. D. (See Miller, Reuben M., assignor.)
Ryan, Ethel M., Hawkinsville, Ga. Combined grate-fender and ash-pan. No. 1,189,389; July 4; Gaz. vol. 228; p. 65.
Ryan, Patrick, New York, N. Y. Table for supplying an ink film for making finger-prints. No. 1,192,796; July 25; Gaz. vol. 228; p. 1400.
Ryan, William J., Sapulpa, Okla. Fishing apparatus. No. 1,192,001; July 25; Gaz. vol. 228; p. 1122.
Ryder, William V., Northampton, Mass. Block-signal system. No. 1,192,566; July 25; Gaz. vol. 228; p. 1322.
S. E. Aaron Company. (See Aaron, Solomon E., assignor.) (Reissue.)
S. H. Couch Company. (See Henry, William W., assignor.)
Sacerdoti, Cesare, assignor to Societa Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Adjusting device for reversible screw-propellers. No. 1,190,328; July 11; Gaz. vol. 228; p. 437.
Safety Block Signal Company, The. (See Williams, Frank C., assignor.)
Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)
Safety Electric Rim Company. (See Scheibert, Rudolph H., assignor.)
Safety Folding Ladder Company. (See Pyle, William T., assignor.)
Saffold, Ray P., San Francisco, Cal. Subcaliber attachment for firearms. No. 1,191,618; July 18; Gaz. vol. 228; p. 933.
Safford, Clarence E., assignor to American Pressweld Radiator Corporation, Detroit, Mich. Radiator. No. 1,190,955; July 11; Gaz. vol. 228; p. 663.
Sager, Ira E., Victor, Colo. Fly-trap for screen-doors. No. 1,192,229; July 25; Gaz. vol. 228; p. 1205.
Salmon, Edward W., Jr., assignor of one-half to C. H. Nelson, Baltimore, Md. Means for uniting sheets or plates. No. 1,191,835; July 18; Gaz. vol. 228; p. 1010.
Salmon, Edward W., Jr., assignor of one-half to C. H. Nelson, Baltimore, Md. Sheet-metal-edging machine. No. 1,192,797; July 25; Gaz. vol. 228; p. 1401.
Saltzman, Joseph, Chicago, Ill. Pressing-iron support. No. 1,191,536; July 18; Gaz. vol. 228; p. 906.
Sambuc, George, Plaza, N. D. End-gate lock. No. 1,189,295; July 4; Gaz. vol. 228; p. 31.
Samel, Leo, *et al.* (See Katzin, Jacob S., assignor.)
Sampson, Robert V., Denver, Colo. Shoe-fastening device. No. 1,190,014; July 4; Gaz. vol. 228; p. 279.
Samuel J. Shimer & Sons. (See Shimer, Elmer S., assignor.)
Sanborn, Arthur P., and R. C. Wilson, Ossining, N. Y. Train-stopping mechanism. No. 1,190,015; July 4; Gaz. vol. 228; p. 280.
Sanburn, Willis H., Springfield, assignor to Strathmore Paper Company, Mittineague, Mass. Manufacture of paper. No. 1,191,912; July 18; Gaz. vol. 228; p. 1039.
Sanders, Barney H., assignor to American Foundry & Mfg. Co., St. Louis, Mo. Floor-drain. No. 1,189,742; July 4; Gaz. vol. 228; p. 187.
Sanders, Estella, assignor of one-third to I. Scherer, New York, N. Y. Telephone attachment. No. 1,189,490; July 4; Gaz. vol. 228; p. 104.
Sanders, Joseph, Washington, D. C. Manufacturing sound-record tablets. No. 1,192,567; July 25; Gaz. vol. 228; p. 1322.
Sangamo Electric Company. (See Hodde, Jacob H., assignor.)
Sangamo Electric Company. (See Lanphier, Robert C., assignor.)
Sanoma Corporation, The. (See Peck, Horace S., assignor.)
Saranac Machine Co. (See Craig, Edward, assignor.)
Sargent, Howard R., Schenectady, N. Y., assignor to General Electric Company. Electric cut-out. No. 1,191,619; July 18; Gaz. vol. 228; p. 933.
Sargent, Howard R., Schenectady, N. Y., assignor to General Electric Company. Inclosed fuse. No. 1,192,687; July 25; Gaz. vol. 228; p. 1363.
Sargent, John B., Statesboro, Ga. Vehicle-hub-locking device. No. 1,192,688; July 25; Gaz. vol. 228; p. 1363.
Sargent, Wellington G. (See O'Brien and Sargent.)
Sargent, William H., Lynn, Mass. Machine for opening and softening counters of shoes. No. 1,192,463; July 25; Gaz. vol. 228; p. 1286.
Sarosiek, Stanislaw, Nutley, N. J. Life-preserving jacket. No. 1,191,836; July 18; Gaz. vol. 228; p. 1011.
Sarter, John C., Chicago, Ill. Emptying-faucet for milk and the like cans. No. 1,192,464; July 25; Gaz. vol. 228; p. 1286.
Sather, Ingebrigt, Madison, Minn. Slicing-machine. No. 1,192,350; July 25; Gaz. vol. 228; p. 1247.
Sattler, Rudolph, Cincinnati, Ohio, and L. J. Morand, Covington, Ky. Inking apparatus. No. 1,191,837; July 18; Gaz. vol. 228; p. 1011.
Saurer, Firm of Adolph. (See Kobler, Victor, assignor.)
Saurer, Firm of Adolph. (See Eggart, Karl, assignor.)
Sawyer, Albert H., Campton, N. H. Fly-paper holder. No. 1,189,491; July 4; Gaz. vol. 228; p. 104.
Sayer, Robert C., Redland, England. Sluice, valve, tap, and the like. No. 1,192,689; July 25; Gaz. vol. 228; p. 1363.
Scaife, Arthur J., assignor to The White Company, Cleveland, Ohio. Air-pump attachment for automobiles. No. 1,190,804; July 11; Gaz. vol. 228; p. 606.
Scarpa, Anthony P. M., Derby, Conn. Loop-fastener for garters. No. 1,190,016; July 4; Gaz. vol. 228; p. 280.
Schaake, William, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Insulator-supporting structure. No. 1,192,690; July 25; Gaz. vol. 228; p. 1364.
Schaffer, Benjamin G., *et al.* (See Hooper, Frank B., assignor.)
Schagrin, Harry, South Bethlehem, Pa. Making silicospiegel. No. 1,190,678; July 11; Gaz. vol. 228; p. 563.
Schagrin, Harry, South Bethlehem, Pa. Producing ferromanganese alloys. No. 1,190,679; July 11; Gaz. vol. 228; p. 564.
Schall, Albert M., Brooklyn, N. Y. Gumming-machine. No. 1,191,537; July 18; Gaz. vol. 228; p. 906.
Schanman, Joseph, Pittsburgh, Pa. Rail-building. No. 1,189,492; July 4; Gaz. vol. 228; p. 104.
Schanman, Joseph, Pittsburgh, Pa. Collection-receptacle. No. 1,189,493; July 4; Gaz. vol. 228; p. 105.
Schappell, Louis H., Schuylkill Haven, Pa. Rolling-pin. No. 1,192,230; July 25; Gaz. vol. 228; p. 1205.
Schariff, Morris, *et al.* (See Katzin, Jacob S., assignor.)
Scharmann, Hermann H., Dunreith, Ind. Adjustable land-roller for drills. No. 1,191,838; July 18; Gaz. vol. 228; p. 1012.
Schaufelberger, William H., *et al.* (See Baumgarten, Adolf, assignor.)
Scheel, George L., Chicago, Ill. Hair-drying device. No. 1,190,017; July 4; Gaz. vol. 228; p. 280.
Scheffer, Frederick A. (See Reich, Carl J., assignor.)
Scheibe, Harold M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Variable-speed motor. No. 1,189,296; July 4; Gaz. vol. 228; p. 31.
Scheibert, Rudolph H., Cincinnati, assignor to The Safety Electric Rim Company, Middletown, Ohio. Steering-wheel. (Reissue.) No. 14,166; July 18; Gaz. vol. 228; p. 1049.
Scheinpflug, Wilhelm G., New York, N. Y. Piano-stringing. No. 1,191,738; July 18; Gaz. vol. 228; p. 977.
Scherer, Albert G., assignor to Excelsior Steel Furnace Company, Chicago, Ill. Boot for hot-air stacks. No. 1,192,121; July 25; Gaz. vol. 228; p. 1164.
Scherer, Isidore. (See Sanders, Estella, assignor.)
Scherf, Theodore, assignor to The Cleveland-Akron Bag Company, Cleveland, Ohio. Machine for making reinforced paper. No. 1,192,568; July 25; Gaz. vol. 228; p. 1322.
Scheuer, Carrie. (See Scheuer, Maurice, assignor.)
Scheuer, Maurice, assignor to C. Scheuer, New York, N. Y. Elastic leather and making same. No. 1,192,691; July 25; Gaz. vol. 228; p. 1364.
Schickel, Norbert H., Stamford, Conn. Mounting for vehicle-wheels. No. 1,189,874; July 4; Gaz. vol. 228; p. 235.
Schietzel, Erich, Arma, Kans. Electric shot-firing device. No. 1,191,620; July 18; Gaz. vol. 228; p. 934.
Schiff, Sigmund, assignor of one-half to R. Fleischmann, New York, N. Y. Package-wrapping machine. No. 1,192,351; July 25; Gaz. vol. 228; p. 1247.

Schifferle, Charles, assignor to The Yuba Construction Company, San Francisco, Cal. Apparatus for separating materials of different specific gravities. No. 1,190,466; July 11; Gaz. vol. 228; p. 485.
Schiff, Charles. (See Johnson and Schiff.)
Schiller, Carl, Winnipeg, Manitoba, Canada. Attachment to baby-carriages. No. 1,192,002; July 25; Gaz. vol. 228; p. 1123.
Schilling, Rudolf, Schöenberg, Germany. Apparatus for clarifying waste waters. No. 1,192,569; July 25; Gaz. vol. 228; p. 1323.
Schimmel, Arthur, Evansville, Ind. Furnace. No. 1,191,036; July 11; Gaz. vol. 228; p. 689.
Schippell, Carl F., assignor to H. W. Hoops, New York, N. Y. Marker. No. 1,191,116; July 11; Gaz. vol. 228; p. 715.
Schleicher, Edward G., Stamford, Conn. Motor-vehicle. No. 1,190,194; July 4; Gaz. vol. 228; p. 342.
Schmehl, C. W. (See Garver and Grider, assignors.)
Schmid, Gustav A., Peoria, Ill. Cover-attaching means. No. 1,191,479; July 18; Gaz. vol. 228; p. 886.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,192,003; July 25; Gaz. vol. 228; p. 1123.
Schmidt, Bernhard L., assignor to B. L. Schmidt Company, Davenport, Iowa. Ice-crusher. No. 1,190,329; July 11; Gaz. vol. 228; p. 438.
Schmidt, Bernhard L., assignor to B. L. Schmidt Company, Davenport, Iowa. Ice-chipping machine. No. 1,190,330; July 11; Gaz. vol. 228; p. 438.
Schmidt, Charles G., St. Jacob, Ill. Hose-nozzle. No. 1,191,621; July 18; Gaz. vol. 228; p. 934.
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Friction draft-rigging. No. 1,192,570; July 25; Gaz. vol. 228; p. 1323.
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Friction draft-rigging. No. 1,192,571; July 25; Gaz. vol. 228; p. 1324.
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Friction draft-rigging. No. 1,192,572; July 25; Gaz. vol. 228; p. 1324.
Schmidt, Frederick M., assignor to Self Winding Clock Company, Brooklyn, N. Y. Self-winding clock. No. 1,189,630; July 4; Gaz. vol. 228; p. 151.
Schmidt, Ferdinand L., New York, N. Y., assignor to United States Envelope Company, Springfield, Mass. Envelop-machine. No. 1,191,348; July 18; Gaz. vol. 228; p. 842.
Schmidt, Max, Cincinnati, Ohio. Operating-table. No. 1,190,195; July 4; Gaz. vol. 228; p. 342.
Schmidt, Otto, assignor to Badische Anilin & Soda Fabric, Ludwigshafen-on-the-Rhine, Germany. Tanning. No. 1,191,480; July 18; Gaz. vol. 228; p. 887.
Schmidt, William F. (See White, John L., assignor.)
Schmitt, Edward D., assignor, by mesne assignments, to The American Pure Food Process Company, Baltimore, Md. Preserving food products. No. 1,191,839; July 18; Gaz. vol. 228; p. 1012.
Schmitt, Mathias J., Emporia, Kans. Automobile-wheel. No. 1,191,037; July 11; Gaz. vol. 228; p. 690.
Schnasa, Charles F., Evanston, Ill. Lawn-sprinkler. No. 1,190,594; July 11; Gaz. vol. 228; p. 530.
Schneider, Casper V. (See Van Alstyne, John A., assignor.)
Schneider, Christian, Sheffield, England. Attachment to boiler and other furnaces. No. 1,190,331; July 11; Gaz. vol. 228; p. 438.
Schneider, Eberhard, New York, N. Y. Adjustable duplex view-finder. No. 1,189,494; July 4; Gaz. vol. 228; p. 105.
Schneider, Elizabeth C., executrix. (See Schneider, Eugene W.)
Schneider, Eugene W., deceased, New York, N. Y.; E. C. Schneider, executrix. Apparatus for aiding the hearing. No. 1,192,122; July 25; Gaz. vol. 228; p. 1164.
Schneider, Eugene W., deceased, New York, N. Y.; E. C. Schneider, executrix. Sound-concentrator for devices for aiding the hearing. No. 1,192,123; July 25; Gaz. vol. 228; p. 1165.
Schneider, George H. L., Clinton, Mo. Spinning-top. No. 1,192,465; July 25; Gaz. vol. 228; p. 1287.
Schneider, Reinhold, Sharon, Pa. Hydrocarbon-burner. No. 1,192,573; July 25; Gaz. vol. 228; p. 1324.
Schnelle, Ernest E., Rochester, N. Y. Clamp. No. 1,190,467; July 11; Gaz. vol. 228; p. 486.
Schoell, Reinhold, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Rim-latch. No. 1,191,538; July 18; Gaz. vol. 228; p. 907.
Schoell, Reinhold, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Double-throw latch-bolt. No. 1,191,539; July 18; Gaz. vol. 228; p. 907.
Schoenberg, Ralph A. (See Pape, Herman G., assignor.)
Schoenberger, Michael F., Los Angeles, Cal. Journal-box evener. No. 1,189,495; July 4; Gaz. vol. 228; p. 105.
Schoenky, August R., Somerville, assignor to The Reece Shoe Machinery Company, Boston, Mass. Sewing-machine. No. 1,192,004; July 25; Gaz. vol. 228; p. 1123.
Schoenthaler, George R., Chicago, Ill. Combined support and tie for concrete-reinforcing bars. No. 1,189,297; July 4; Gaz. vol. 228; p. 32.
Schofield, George L., Kansas City, Mo. Rotary valve for explosive-engines. No. 1,190,595; July 11; Gaz. vol. 228; p. 530.
Schofield, Irving. (See Hughes and Schofield.)
Scholer, Charles H., and F. W. Newton, assignors to Continental Grinder Company, Minneapolis, Minn. Cylinder-grinding attachment for engine-lathes. No. 1,191,913; July 18; Gaz. vol. 228; p. 1039.
School Manufacturing Company, The. (See Sykes, Charles J., assignor.)
Schön, Ludwig, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Rubr, Germany. Arrangement for excitation of continuous-current generators. No. 1,190,680; July 11; Gaz. vol. 228; p. 564.
Schorling, George F., Fresno, Cal. Cooking stove and range. No. 1,190,468; July 11; Gaz. vol. 228; p. 486.
Schrage, Emil F., Palatine, Ill. Mail-bag-delivering device. No. 1,189,875; July 4; Gaz. vol. 228; p. 235.
Schrage, Emil F., Palatine, Ill. Mail-bag catcher. No. 1,189,876; July 4; Gaz. vol. 228; p. 235.
Schramm, Adolph F., Columbus, Ohio. Vehicle-seat. No. 1,192,692; July 25; Gaz. vol. 228; p. 1364.
Schreiber, Charles F. (See Greiff and Schreiber.)
Schreiner, Albert F. (See Leoni and Schreiner.)
Schreiter, Edward R., Jr., Detroit, Mich. Automobile-lock. No. 1,190,469; July 11; Gaz. vol. 228; p. 486.
Schroeder, Frederick J., assignor, by mesne assignments, to The Damascus Brake Beam Co., Cleveland, Ohio. Third-point suspension-hanger. No. 1,190,470; July 11; Gaz. vol. 228; p. 487.
Schroeder, Frederick J., assignor, by mesne assignments, to The Damascus Brake Beam Co., Cleveland, Ohio. Forged brake-beam fulcrum. No. 1,192,466; July 25; Gaz. vol. 228; p. 1287.
Schroeder, Paul C., assignor to Sears, Roebuck and Company, Chicago, Ill. Trunk. No. 1,189,390; July 4; Gaz. vol. 228; p. 65.
Schroeder, Paul C., assignor to Sears, Roebuck and Company, Chicago, Ill. Wardrobe-trunk. No. 1,189,496; July 4; Gaz. vol. 228; p. 106.
Schubert, Bruno H. (See Maddy and Schubert.)
Schubert, Frederick, Sellersville, Pa. Pressure-gage. No. 1,192,574; July 25; Gaz. vol. 228; p. 1325.
Schueller, William, Maspeth, N. Y. Fish-hook. No. 1,189,631; July 4; Gaz. vol. 228; p. 151.
Schuette, Henry H., Napoleon, Ohio. Threshing-machine. No. 1,190,471; July 11; Gaz. vol. 228; p. 487.
Schuler, Ludwig H. (See Mueller and Schuler.)
Schultz, Emil H., assignor of one-half to W. C. Courtney, Everett, Wash. Liquid-level indicator. No. 1,192,693; July 25; Gaz. vol. 228; p. 1365.
Schultz, Emil W., assignor of one-fourth to M. H. Gaebler, Watertown, Wis. Extension-table. No. 1,189,298; July 4; Gaz. vol. 228; p. 32.
Schultz, Peter A. (See Hindman, David C., assignor.)
Schultze, Theodore C., Grand Rapids, Mich., assignor to Chicago Railway Equipment Company, Chicago, Ill. Casting metal. No. 1,189,391; July 4; Gaz. vol. 228; p. 66.
Schulze, Charles H., St. Louis, Mo. Closure for evaporated-milk cans. No. 1,190,472; July 11; Gaz. vol. 228; p. 488.
Schureman, Jacob L., and C. J. Anderson, Chicago, Ill., assignors, by mesne assignments, to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electrical starting device. No. 1,190,018; July 4; Gaz. vol. 228; p. 281.
Schurman, Ernest F., New York, N. Y. Universal joint. No. 1,191,739; July 18; Gaz. vol. 228; p. 977.
Schuster, Carl. (See Freeble and Schuster.)
Schutte & Koerting Co. (See Koerting, Ernst, assignor.)
Schwantes, Julius A., assignor to Willow Grass Rug Company, Green Bay, Wis. Grass-twine machine. No. 1,189,877; July 4; Gaz. vol. 228; p. 236.
Schwartz, Albert A., assignor to Royal Typewriter Company, Inc., New York, N. Y. Fractional-spacing device for type-writing machines. No. 1,189,743; July 4; Gaz. vol. 228; p. 188.
Schwartz, Albert L., Philadelphia, Pa. Cigar and cigarette ash catcher and holder. No. 1,189,878; July 4; Gaz. vol. 228; p. 236.
Schwartz, Fred A. (See Reagen, George M., assignor.)
Schwartzman, Abraham, St. Louis, Mo. Jewelry. No. 1,189,497; July 4; Gaz. vol. 228; p. 106.
Schwarze, Paul, Astoria, assignor to Wessell, Nickel & Gross, New York, N. Y. Mechanical musical instrument. No. 1,191,540; July 18; Gaz. vol. 228; p. 907.
Schweinert, Maximilian C., West Hoboken, N. J., and H. P. Kraft, New York, N. Y. Receptacle. No. 1,190,196; July 4; Gaz. vol. 228; p. 343.
Schweitzer, Estate of William. (See Labadie, Beers, and Stark, assignors.)
Schwinn, Ignaz, Chicago, Ill. Cycle-stand. No. 1,190,956; July 11; Gaz. vol. 228; p. 663.
Scott, Allen C., Omaha, Nebr. Portable partition for freight-cars. No. 1,192,231; July 25; Gaz. vol. 228; p. 1206.
Scott, Allen E., San Francisco, Cal. Child's seat. No. 1,192,798; July 25; Gaz. vol. 228; p. 1401.
Scott, Calvin J., Hartsville, S. C. Running-gear for vehicles. No. 1,190,473; July 11; Gaz. vol. 228; p. 488.
Scott, George E., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Duplex ladle. No. 1,192,467; July 25; Gaz. vol. 228; p. 1287.

Scott, Henry L., Providence, R. I. Stretch-measuring device for testing-machines. No. 1,190,596; July 11; Gaz. vol. 228; p. 531.
Scott, Henry L., Providence, R. I. Testing-machine. No. 1,190,597; July 11; Gaz. vol. 228; p. 531.
Scott, John D., Detroit, Mich. Apparatus for treating coals and other hydrocarbonaceous substances. No. 1,190,957; July 11; Gaz. vol. 228; p. 663.
Scott, John M., Racine, Wis., assignor to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 1,189,299; July 4; Gaz. vol. 228; p. 33.
Scott, Josiah, Toledo, Ohio. Wind-shield wiper. No. 1,191,340; July 18; Gaz. vol. 228; p. 842.
Scott, Robert P., Columbus, Ohio. Pea and bean huller. No. 1,192,124; July 25; Gaz. vol. 228; p. 1165.
Scott, Robert W., Boston, Mass. Knit fabric and knitting the same. No. 1,189,744; July 4; Gaz. vol. 228; p. 188.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Philadelphia, Pa. Knitting-machine. No. 1,191,740; July 18; Gaz. vol. 228; p. 978.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Knitting ribbed-fabric sections. No. 1,192,799; July 25; Gaz. vol. 228; p. 1401.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Knit stocking or sock. No. 1,192,800; July 25; Gaz. vol. 228; p. 1402.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Welted knit fabric and knitting the same. No. 1,192,801; July 25; Gaz. vol. 228; p. 1402.
Scott, William H., Norwich, England. Regulator for use in charging accumulator-cells for motor-car lighting and starting and for similar purposes. No. 1,191,129; July 11; Gaz. vol. 228; p. 719.
Scott & Williams. (See Grothey, Ivern W., assignor.)
Scott & Williams. (See Scott, Robert W., assignor.)
Scott & Williams. (See Swinglehurst, Harry, assignor.)
Scott & Williams. (See Trudel, Henry L., assignor.)
Scovill Manufacturing Company. (See Stanley, Frederick E., assignor.)
Scoville, Eugene M., Waipahu, Hawaii. Valve. No. 1,191,481; July 18; Gaz. vol. 228; p. 887.
Scoville, Frank E. (See Cole and Scoville.)
Scranton Stove Works. (See Lansing, James A., assignor.)
Scull, John L., Philadelphia, Pa. Gasolene-strainer. No. 1,191,741; July 18; Gaz. vol. 228; p. 978.
Seaberg, John L., Coal Center, Pa. Nut-lock. No. 1,192,232; July 25; Gaz. vol. 228; p. 1206.
Seale, Elbert E., Houston, Tex. Device for heating and applying coating material. No. 1,190,019; July 4; Gaz. vol. 228; p. 281.
Sears-Cross Company. (See Kendall, William F., assignor.)
Sears-Cross Company. (See Lee, Nixon, assignor.)
Sears, Roebuck and Company. (See Blakely, Edward B., assignor.)
Sears, Roebuck and Company. (See Hoffman, Rudolph, assignor.)
Sears, Roebuck and Company. (See Holmes and Arp, assignors.)
Sears, Roebuck and Company. (See Schroeder, Paul C., assignor.)
Security Trust Company, receiver. (See Proctor, Charles M., assignor.)
Sedgwick, Hiram G., Mill Valley, Cal., assignor to The National Safety Appliance Company. Train-control apparatus. No. 1,189,745; July 4; Gaz. vol. 228; p. 189.
Sefton Manufacturing Company, The. (See Powell, Francis V., assignor.)
Selberling, James H., Jonesboro, Ind. Pneumatic tire and making the same. No. 1,190,474; July 11; Gaz. vol. 228; p. 488.
Seidel, Bennett W. (See Grosz, Adam H., assignor.)
Seidel, John, Seattle, Wash. Needle-threading apparatus. No. 1,191,038; July 11; Gaz. vol. 228; p. 691.
Selerup, Theodor M. B., Denver, Colo., assignor of one-half to J. T. Craig, Bellefourche, S. D. Beet-harvester. No. 1,190,598; July 11; Gaz. vol. 228; p. 532.
Seitz, John C., Butte, Mont. Antiskid-tire-chain adjuster. No. 1,189,632; July 4; Gaz. vol. 228; p. 151.
Selander, John S., New York, N. Y. Drill-case. No. 1,192,575; July 25; Gaz. vol. 228; p. 1325.
Selaw Products Company. (See Wales, Nathaniel B., assignor.)
Selden, Arthur R., Rochester, N. Y. Flow-controller for sewers. No. 1,190,958; July 11; Gaz. vol. 228; p. 664.
Self Winding Clock Company. (See Schmidt, Frederick M., assignor.)
Semet-Solvay Company. (See Blauvelt and Harms, assignors.)
Semet-Solvay Company. (See Sibley, Samuel D., assignor.)
Semet-Solvay Company. (See White, James H., assignor.)
Semple, John B., Sewickley, Pa. Projectile. No. 1,191,742; July 18; Gaz. vol. 228; p. 979.
Seng Company, The. (See Dyke, Darrell F., assignor.)
Sesler, Julia A., Christiansburg, Va. Food-holding appliance for cooking utensils. No. 1,189,498; July 4; Gaz. vol. 228; p. 106.
Sessler, Marcel K., and H. Rosenberg, assignors to Parker Supply Company, New York, N. Y. Railway-spike. No. 1,192,125; July 25; Gaz. vol. 228; p. 1165.
Setter, Michael. (See Keith and Setter.)
Severns, Otis W., Chicago, Ill. Ironing-wax pad. No. 1,189,499; July 4; Gaz. vol. 228; p. 107.
Severy Manufacturing Company. (See Severy, Melvin L., assignor.)
Severy, Melvin L., Arlington Heights, Mass. Electric sound-producer. No. 1,190,332; July 11; Gaz. vol. 228; p. 488.
Severy, Melvin L., Arlington Heights, assignor to Severy Manufacturing Company, Boston, Mass. Power-transmission mechanism. No. 1,192,283; July 25; Gaz. vol. 228; p. 1206.
Severy, Melvin L., Arlington Heights, Mass., and G. B. Sinclair, Georgetown, Me., assignors to Choralcelo Company, Boston, Mass. Coupler for electric musical instruments. No. 1,191,482; July 18; Gaz. vol. 228; p. 887.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Looper mechanism for sewing-machines. No. 1,190,959; July 11; Gaz. vol. 228; p. 664.
Seymour, Herbert B., deceased, Denver, Colo.; M. E. Seymour, administratrix. Bench-vise. No. 1,191,130; July 11; Gaz. vol. 228; p. 720.
Seymour, Mattie E., administratrix. (See Seymour, Herbert B.)
Shaffer, Cleve T., San Francisco, Cal. Dust-guard for valve-stems. No. 1,191,840; July 18; Gaz. vol. 228; p. 1012.
Shaffer, John F., Morgantown, W. Va. Checkrein-controller. No. 1,190,599; July 11; Gaz. vol. 228; p. 532.
Shaffer, Paul C., New York, N. Y. Shade-roller holder. No. 1,192,576; July 25; Gaz. vol. 228; p. 1326.
Shallor, Frank E. (See Kuhn and Shallor.)
Shallor, Frank E., assignor to F. Kuhn, Detroit, Mich. Electrical heating unit. No. 1,191,238; July 18; Gaz. vol. 228; p. 802.
Shamberg, Gustave H., New York, N. Y. Golf-bag. No. 1,189,879; July 4; Gaz. vol. 228; p. 236.
Shannon, John, Stonington, assignor to C. H. Quackenbush, Stamford, Conn. Valve cutting and reseating mechanism. (Reissue.) No. 14,162; July 4; Gaz. vol. 228; p. 371.
Shannon, Nicholas, Panama, assignor to Link Belt Company, Chicago, Ill. Washing coal and separating refuse therefrom. No. 1,190,960; July 11; Gaz. vol. 228; p. 664.
Sharpsteen, John N. (See Weston and Sharpsteen.)
Shaw, Archibald, Randwick, near Sydney, New South Wales, Australia. Wireless-telegraph transmitter. No. 1,192,126; July 25; Gaz. vol. 228; p. 1166.
Shaw, Frederick M. (See Shaw, Drake, and Shaw.)
Shaw, John C. M., Hillsboro, Tex. Swing. No. 1,189,393; July 4; Gaz. vol. 228; p. 66.
Shaw, Percy W., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making a stitch. No. 1,189,394; July 4; Gaz. vol. 228; p. 67.
Shaw, Robert N., Savannah, Ohio. Automobile power mechanism. No. 1,191,350; July 18; Gaz. vol. 228; p. 843.
Shaw-Walker Company, The. (See Kenyon, James W., assignor.)
Shaw, William S., Boyne City, H. L. Drake, Wells, and F. M. Shaw, Escanaba, Mich. Bark-peeling machine. No. 1,189,395; July 4; Gaz. vol. 228; p. 67.
Sheen, Daniel R. (See Gates, Isaac N., assignor.)
Sheldon, Harry E. (See Robinson, Charles G., assignor.)
Sheldon, Harry E., Pittsburgh, Pa., assignor of one-half to W. D. Forsyth, Youngstown, Ohio. Railway-tie. No. 1,191,351; July 18; Gaz. vol. 228; p. 843.
Shelly, Samuel. (See Kaback and Shelly.)
Shelp, Henry W., Chicago, Ill. Machine for removing threads from fabric. No. 1,191,239; July 18; Gaz. vol. 228; p. 802.
Shepherd, Ernest H., Philadelphia, Pa. Music-leaf turner. No. 1,189,880; July 4; Gaz. vol. 228; p. 237.
Sheridan, George W., Winthrop, Mass. Exercising device. No. 1,189,396; July 4; Gaz. vol. 228; p. 67.
Sherman, Willis S., Milwaukee, Wis. Conveyer. No. 1,192,832; July 25; Gaz. vol. 228; p. 1413.
Sherwin-Williams Company, The. (See Brown, Robert V., assignor.)
Sherwood, Asa. (See Hill, William B., assignor.)
Sherwood, Bert, Jordan, N. Y. Adjustable offset for railway switches and signaling apparatus. No. 1,191,039; July 11; Gaz. vol. 228; p. 691.
Sherwood, George F., Jacksonville, Fla. Fan-wheel. No. 1,191,040; July 11; Gaz. vol. 228; p. 691.
Shimer, Elmer S., assignor to Samuel J. Shimer & Sons, Milton, Pa. Rotary cutter-head. No. 1,190,197; July 4; Gaz. vol. 228; p. 343.
Shimer, Elmer S., assignor to Samuel J. Shimer & Sons, Milton, Pa. Cutter-head. No. 1,192,694; July 25; Gaz. vol. 228; p. 1305.
Shock, William A., Detroit, Mich. Brick-machine. No. 1,190,475; July 11; Gaz. vol. 228; p. 489.
Shonnard, Harold W., Upper Montclair, N. J., assignor to Crucible Steel Company of America, Pittsburgh, Pa. Electric-motor gyroscope. No. 1,192,468; July 25; Gaz. vol. 228; p. 1288.
Shostrom, John, Tacoma, Wash. Scraper. No. 1,192,127; July 25; Gaz. vol. 228; p. 1166.
Shouvlin, P. J. (See Harris, William R., assignor.)
Shreves, Benjamin F., and E. G. Anderson, Des Moines, Iowa. Displaying-frame. No. 1,190,600; July 11; Gaz. vol. 228; p. 532.

Shue, Edward F., New York, N. Y. Motion-picture-film cleaner. No. 1,189,633; July 4; Gaz. vol. 228; p. 152.
Sibley, Samuel D., Detroit, Mich., assignor, by mesne assignments, to Semet-Solvay Company, Solvay, N. Y. Guiding device for conveyer-belts. No. 1,192,128; July 25; Gaz. vol. 228; p. 1166.
Sickman, Davy V., Denver, Colo. Hydraulic cartridge with independently-operating pistons. No. 1,191,138; July 11; Gaz. vol. 228; p. 728.
Sieber, Gottwalt, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Embroidering-machine. No. 1,190,021; July 4; Gaz. vol. 228; p. 281.
Sieber, Gottwalt, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Embroidering-machine. No. 1,190,022; July 4; Gaz. vol. 228; p. 282.
Sieber, Gottwald, assignor to Vogtländische Maschinen-fabrik, Plauen, Germany. Motion-transmitting device. No. 1,191,131; July 11; Gaz. vol. 228; p. 720.
Siegel, Harold L., New York, N. Y., assignor to Improved Stay Company. Fastener for corsets and analogous articles. No. 1,191,841; July 18; Gaz. vol. 228; p. 1012.
Siemens-Schuckert Werke G. m. b. H. (See Meyer and Koss, assignors.)
Sikes, Thomas H., *et al.* (See Earl, William M., assignor.)
Sills, Laura E., St. Paul, Minn. Lamp-shade. No. 1,189,746; July 4; Gaz. vol. 228; p. 189.
Simmen, Paul J., Indianapolis, Ind. System for controlling moving vehicles. No. 1,192,234; July 25; Gaz. vol. 228; p. 1207.
Simmen, Paul J., Buffalo, N. Y. Automatic railway block system. No. 1,192,235; July 25; Gaz. vol. 228; p. 1207.
Simmons, Bert R., Kansas City, Kans. Valve-spring holder. No. 1,191,240; July 18; Gaz. vol. 228; p. 802.
Simmons, James E. (See Elkins, John E., assignor.)
Simmons, Lloyd A. (See Peters and Simmons.)
Simmons, Ralph C., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-breasting machine. No. 1,191,622; July 18; Gaz. vol. 228; p. 934.
Simon, Joseph A., Memphis, Tenn. Lumber-clamp. No. 1,189,397; July 4; Gaz. vol. 228; p. 68.
Simon, Maurice, St. Louis, Mo. Electric water-heater. No. 1,191,743; July 18; Gaz. vol. 228; p. 979.
Simons, Walter B., Buffalo, N. Y. Pack-saddle. No. 1,190,023; July 4; Gaz. vol. 228; p. 282.
Simplex Electric Heating Company. (See Ayer, James I., assignor.)
Simplex Shoe Machinery Company. (Se Wheeler, John L., assignor.)
Simpson, Albert L., San Diego, Cal. Sterilizer. No 1,191,623; July 18; Gaz. vol. 228; p. 935.
Simpson, Frank W., trustee. (See Clark, Dyke, and Edwards, assignors.)
Simpson, Frederick G., Seattle, Wash. Wireless telegraphy. No. 1,189,881; July 4; Gaz. vol. 228; p. 237.
Simpson, John T., Newark, N. J. Concrete structure. No. 1,189,398; July 4; Gaz. vol. 228; p. 68.
Simpson, Willibert, Ottawa, Ontario, Canada, assignor to Landers, Frary & Clark, New Britain, Conn. Case for vacuum-receptacles. No. 1,191,117; July 11; Gaz. vol. 228; p. 715.
Simpson, Willibert, Ottawa, Ontario, Canada, assignor to Landers, Frary & Clark, New Britain, Conn. Case for vacuum-receptacles. No. 1,191,118; July 11; Gaz. vol. 228; p. 716.
Sinclair, George B. (See Severy and Sinclair.)
Singelmann, Max, and C. Brinkmann, Chicago, Ill. Gas-burner for stoves. No. 1,192,120; July 25; Gaz. vol. 228; p. 1167.
Singer Manufacturing Company, The. (See Corrall, Herbert, assignor.)
Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)
Singer Manufacturing Company, The. (See Karle, John D., assignor.)
Singer Manufacturing Company, The. (See Molyneux, George E., assignor.)
Singer Manufacturing Company, The. (See Rontke, Albert, assignor.)
Sisbower, George F., East Orange, N. J., and L. E. Pittoni, assignors to New York Couch Bed Company, New York, N. Y. Wire mattress. No. 1,192,130; July 25; Gaz. vol. 228; p. 1167.
Sitzman, Charles E., Taft, Cal. Apparatus for plugging wells. No. 1,190,024; July 4; Gaz. vol. 228; p. 282.
Sjostrom, Peter, Maplewood, assignor to Victor Shoe Machinery Company, Boston, Mass. Manual driving mechanism for sewing-machines. No. 1,190,198; July 4; Gaz. vol. 228; p. 343.
Sjostrom, Peter, Maplewood, assignor to Victor Shoe Machinery Company, Boston, Mass. Presser-foot mechanism for sewing-machines. No. 1,190,199; July 4; Gaz. vol. 228; p. 344.
Sjostrom, Peter, Maplewood, assignor to Victor Shoe Machinery Company, Boston, Mass. Thread-bender for sewing-machines. No. 1,190,200; July 4; Gaz. vol. 228; p. 344.
Sjostrom, Peter, Maplewood, assignor to Victor Shoe Machinery Company, Boston, Mass. Work-feeding mechanism for sewing-machines. No. 1,190,201; July 4; Gaz. vol. 228; p. 345.
Sjostrom, Peter, Maplewood, assignor to Victor Shoe Machinery Co., Lynn, Mass. Needle-guide for sewing-machines. No. 1,190,202; July 4; Gaz. vol. 228; p. 345.
Skaggs, George E., St. Louis, Mo. Motor. No. 1,189,399; July 4; Gaz. vol. 228; p. 69.
Skinner, Ernest M., Boston, Mass. Automatic musical instrument. No. 1,192,005; July 25; Gaz. vol. 228; p. 1124.
Skinner, James M., assignor to Philadelphia Storage Battery Company, Philadelphia, Pa. Battery-separator. No. 1,190,025; July 4; Gaz. vol. 228; p. 283.
Slaght, Charles V. (See Rappleye and Slaght.)
Slattery, John H., Green Bay, Wis. Nut-lock. No. 1,190,333; July 11; Gaz. vol. 228; p. 439.
Slick, Edwin E., and E. W. Clarke, Westmont borough, Pa. Blast-furnace discharge-arrester. No. 1,191,541; July 18; Gaz. vol. 228; p. 908.
Sliger, William H. (See De Vaux, Frank, assignor.)
Slough, Frank M., assignor to The Garford Manufacturing Company, Elyria, Ohio. Electric system. No. 1,192,006; July 25; Gaz. vol. 228; p. 1124.
Slough, Frank M., assignor to The Garford Manufacturing Company, Elyria, Ohio. Telephone system. No. 1,192,007; July 25; Gaz. vol. 228; p. 1125.
Slyfield, Charles, Chaseville, Fla. Farm-gate. No. 1,190,026; July 4; Gaz. vol. 228; p. 283.
Small, David, Moscow, Iowa. Automobile-wheel. No. 1,190,027; July 4; Gaz. vol. 228; p. 283.
Smajda, George. (See Pál, Fekecs, assignor.)
Small, Lloyd E., Reynolds, Ind. Automatic road-guide. No. 1,192,131; July 25; Gaz. vol. 228; p. 1167.
Smeltzer, Daniel B. D. (See George, William C., assignor.)
Smith, Arthur D., assignor to C. S. M. Company, Inc., New York, N. Y. Clothes-drying rack. No. 1,191,241; July 18; Gaz. vol. 228; p. 802.
Smith, Arthur W., New York, assignor to Remington Typewriter Company, Illion, N. Y. Type-writing machine. No. 1,192,577; July 25; Gaz. vol. 228; p. 1326.
Smith, Charles, Houghton, Mich. Lever. No. 1,192,695; July 25; Gaz. vol. 228; p. 1365.
Smith, Charles E., Oak Lawn, R. I. Machine for applying metallic leaf to book-covers or the like. No. 1,190,961; July 11; Gaz. vol. 228; p. 665.
Smith, Daniel L., executor. (See Colby, Daniel W.)
Smith, Dillon F. (See Brooks, Essex, and Smith.)
Smith, George O., Anaheim, Cal. Camera-casing. No. 1,192,696; July 25; Gaz. vol. 228; p. 1365.
Smith, Harry E. (See Beebe and Smith.)
Smith, Harry F., Lexington, Ohio. Determining the total available heat of gaseous fuel. No. 1,189,300; July 4; Gaz. vol. 228; p. 33.
Smith, Henry, Listowel, Ontario, Canada. Hog-feeder. No. 1,190,028; July 4; Gaz. vol. 228; p. 284.
Smith, Henry J., Florence, Colo. Drill attachment for drilling-machines. No. 1,191,542; July 18; Gaz. vol. 228; p. 908.
Smith, Jabez M., Malvern, Ark. Rail-joint and fastening. No. 1,192,008; July 25; Gaz. vol. 228; p. 1125.
Smith, James A., assignor of one-half to W. N. Dorsett, Washington, D. C. Combined arch and shoe-straightener. No. 1,191,543; July 18; Gaz. vol. 228; p. 909.
Smith, Jesse A. B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,191,352; July 18; Gaz. vol. 228; p. 843.
Smith, John J. C., Passaic, assignor to P. M. Hammalian, Hackensack, N. J. Composition and mold for stereotypes. No. 1,191,353; July 18; Gaz. vol. 228; p. 844.
Smith, J. Roy. (See Lander, Thomas E., assignor.)
Smith, Lawrence A., Port Gibson, Miss. Bite-finder. No. 1,192,697; July 25; Gaz. vol. 228; p. 1366.
Smith, Louis R., Colorado Springs, assignor to The Universal Indexing Company, Denver, Colo. Book-edge printing machine. No. 1,189,747; July 4; Gaz. vol. 228; p. 189.
Smith, Melvin. (See Dawson and Smith.)
Smith, Oscar A., assignor of one-half to E. C. Henn, Cleveland, Ohio. Valve-stem cap. No. 1,192,352; July 25; Gaz. vol. 228; p. 1248.
Smith, Percy O., Freeport, N. Y. Hedge and grass cutter. No. 1,190,476; July 11; Gaz. vol. 228; p. 489.
Smith, Ralph L., Gloucester, Mass. Rake-cleaner. No. 1,190,962; July 11; Gaz. vol. 228; p. 665.
Smith, Robert H., San Francisco, Cal. Handle for pneumatic tools. No. 1,191,354; July 18; Gaz. vol. 228; p. 844.
Smith, Russell M., Kansas City, Mo. Reversing-gearing. No. 1,189,500; July 4; Gaz. vol. 228; p. 107.
Smith, Samuel B., Cleveland, Ohio. Stove. No. 1,189,301; July 4; Gaz. vol. 228; p. 33.
Smith, Walter R., Forrest City, Ark. Clod crusher and pulverizer. No. 1,190,601; July 11; Gaz. vol. 228; p. 533.
Smith, Walton S., Grosse Ile, Mich., assignor to Pennsylvania Salt Manufacturing Company, Philadelphia, Pa. Replenishing electrolytic cells. No. 1,191,356; July 18; Gaz. vol. 228; p. 845.
Smith, William A., Denver, assignor of one-half to W. W. Hassell, Colorado Springs, Colo. Rock-drill. No. 1,191,842; July 18; Gaz. vol. 228; p. 1013.
Smith, William R., Centralia, Ill. Agricultural machine. No. 1,189,501; July 4; Gaz. vol. 228; p. 107.
Smith, William T., Bellefontaine, Ohio. Rail-joint. No. 1,192,698; July 25; Gaz. vol. 228; p. 1367.

Smith, William W., Hawthorne, Cal. Electric regulator for incubators. No. 1,189,400; July 4; Gaz. vol. 228; p. 69.
Smithson, Carl Alva, Okla. Beet pulling and topping machine. No. 1,191,355; July 18; Gaz. vol. 228; p. 844.
Smyth, Ezra, Portland, Oreg. Derailer. No. 1,190,029; July 4; Gaz. vol. 228; p. 284.
Smyth, Joseph E. (See Pagliarul, Joseph, assignor.)
Snackenberg, John C., New York, N. Y. Automatic portable fire-extinguisher. No. 1,190,963; July 11; Gaz. vol. 228; p. 665.
Snider, Gilbert H., Pulaski, Va. Valve-gear for locomotive or other engines. No. 1,191,843; July 18; Gaz. vol. 228; p. 1013.
Snow, Royle B., Juddhaven, Ontario, Canada. Eyeglass-case. No. 1,190,030; July 4; Gaz. vol. 228; p. 284.
Snyder, Balfour, and K. McCreery, Columbus, Ohio. Tray. No. 1,190,964; July 11; Gaz. vol. 228; p. 666.
Snyder, John E., Swissvale, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Automatic stop-governor. No. 1,189,634; July 4; Gaz. vol. 228; p. 152.
Snyder, Parke T., Chicago, Ill. Cartridge-projectile. No. 1,191,357; July 18; Gaz. vol. 228; p. 845.
Societa Anonima Italiana Gio. Ansaldo & C. (See Sacerdoti, Cesare, assignor.)
Società Fiat-San Giorgio. (See Laurenti, Cesare, assignor.)
Societe Anonyme Des Etablissements Delaunay-Belleville, The. (See Radiguer, Charles, assignor.)
Société Chemique des Usines du Rhône (auct. Gilliard, P. Monnet et Cartier). (See Koetschet and Theumann, assignors.)
Soisson, Eugene F. (See Soisson, Louis H., assignor.)
Soisson, Louis H., Scottdale, assignor of one-half to E. F. Soisson, Latrobe, Pa. Hedge-trimmer. No. 1,192,699; July 25; Gaz. vol. 228; p. 1367.
Solem, Peter A., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Planing machinery. No. 1,190,805; July 11; Gaz. vol. 228; p. 606.
Soley, Frank. (See Jackson and Soley.)
Somerville, William E., Coal City, Ill. Flying-machine. No. 1,189,302; July 4; Gaz. vol. 228; p. 34.
Sommer, John J., North Attleboro, Mass. Manufacture of bracelets and other articles of jewelry. No. 1,189,882; July 4; Gaz. vol. 228; p. 237.
Sonnenberg, Henry G., Chicago, Ill. Removable tympan-holder for printing-presses. No. 1,192,578; July 25; Gaz. vol. 228; p. 1326.
Sorge, Adolph, Jr., St. Joseph, Mich. Box. No. 1,190,203; July 4; Gaz. vol. 228; p. 345.
Sorgel, William R., and W. H. Caulke, assignors to International Electric Tool Co., Milwaukee, Wis. Translating device. No. 1,191,844; July 18; Gaz. vol. 228; p. 1014.
Sorkin, Sarah, New York, N. Y. Brassière. No. 1,190,602; July 11; Gaz. vol. 228; p. 533.
Soulis, Harold A., assignor of one-half to W. T. Soulis, Brooklyn, N. Y. Universal coupling. No. 1,191,242; July 18; Gaz. vol. 228; p. 803.
Soulis, Wilbur T. (See Soulis, Harold A., assignor.)
South Bend Chilled Plow Co. (See Baker, Arthur D., assignor.)
Southard, George L., assignor to The United States Gypsum Company, Chicago, Ill. Centrifugal dividing mechanism. No. 1,189,748; July 4; Gaz. vol. 228; p. 190.
Spalding, David, Lonerock, Oreg. Attachment for a pair of pliers. No. 1,190,031; July 4; Gaz. vol. 228; p. 285.
Spalding, James F., Kansas City, Mo. Fire-escape ladder. No. 1,190,334; July 11; Gaz. vol. 228; p. 439.
Sparr, Benjamin F., New York, N. Y. Roller-bearing. No. 1,190,965; July 11; Gaz. vol. 228; p. 666.
Spaulding, Elijah F., Brooklyn, assignor to A. Ward, New York, N. Y. Coin-controlled vending-machine. No. 1,189,303; July 4; Gaz. vol. 228; p. 34.
Spaulding, Solomon E., Milton, Wash. Electrical appliance. No. 1,191,358; July 18; Gaz. vol. 228; p. 845.
Specialty Shoe Machinery Company. (See Finch, Maurice S., assignor.)
Speirs, James, London, England. Carbureter. No. 1,191,097; July 11; Gaz. vol. 228; p. 709.
Speiser, Harry A. (See Rose and Speiser.)
Spelling, Thomas C., New York, N. Y. Necktie-fastener. No. 1,192,236; July 25; Gaz. vol. 228; p. 1208.
Spelling, Thomas C., New York, N. Y. Combination band-holder, button-holder, and necktie-holder. No. 1,192,237; July 25; Gaz. vol. 228; p. 1208.
Spencer, Charles H., Baltimore, Md. Player-pneumatic. No. 1,192,009; July 25; Gaz. vol. 228; p. 1125.
Spencer, George F., Thompson, Pa. Furnace. No. 1,192,010; July 25; Gaz. vol. 228; p. 1126.
Spencer, T. H., *et al.* (See Stacy, Grover C., assignor.)
Spencer, William, Philadelphia, Pa. Heating attachment for stoves. No. 1,190,335; July 11; Gaz. vol. 228; p. 439.
Sperling, Louis. (See Van Osdell, William J., assignor.)
Spery, Charles F., Chicago, Ill., assignor to Chicago Utilities Manufacturing Company. Radiator. No. 1,191,359; July 18; Gaz. vol. 228; p. 846.
Spiegel, Alexander S., Chicago, Ill. Roofing-machine. No. 1,192,132; July 25; Gaz. vol. 228; p. 1168.
Spiess, Georg, Leipzig, Germany. Releasing device for the combing-wheels in sheet-feeders. No. 1,192,011; July 25; Gaz. vol. 228; p. 1126.
Spitzer, Purves E., West Allis, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Pressure-equalizer for valves. No. 1,190,681; July 11; Gaz. vol. 228; p. 564.
Splitdorf Electrical Company. (See Mason, Charles T., assignor.)
Splitdorf Electrical Company. (See Rudolf and Lund, assignors.)
Splitdorf Electrical Company. (See Van Deventer, Harry R., assignor.)
Sprague, Clifford, St. Louis, Mo. Hacksaw-frame. No. 1,190,477; July 11; Gaz. vol. 228; p. 489.
Sprague, Frank N., Sedgwick, Colo. Shackle for the springs of automobiles and other vehicles. No. 1,190,966; July 11; Gaz. vol. 228; p. 666.
Spratling, Roper C., Opelika, Ala., assignor to Opelika Pneumatic Tube Company. Inner tube for pneumatic tires. No. 1,192,238; July 25; Gaz. vol. 228; p. 1208.
Spray Engineering Company. (See Laferriere, Joseph E., assignor.)
Springer, William N., assignor to Oliver Chilled Plow Works, South Bend, Ind. Engine gang-plow. No. 1,192,700; July 25; Gaz. vol. 228; p. 1367.
Spurlock, John W., Folkston, Ga. Wood-distilling apparatus. No. 1,190,478; July 11; Gaz. vol. 228; p. 490.
Squires, John, Detroit, Mich. Hood-retainer for motor-vehicles. No. 1,190,603; July 11; Gaz. vol. 228; p. 534.
St. James, Robert T., Great Barrington, Mass. Means for detecting imperfections in motion-picture films. No. 1,190,204; July 4; Gaz. vol. 228; p. 346.
St. Mungo Manufacturing Company of America. (See Knight, William R., assignor.)
Stacy, Grover C., assignor of one-third to T. H. Spencer and one-seventh to J. G. Tidwell, Birmingham, Ala. Cotton-cleaner. No. 1,192,469; July 25; Gaz. vol. 228; p. 1288.
Stacy, James N., New York, N. Y. Calendar. No. 1,190,967; July 11; Gaz. vol. 228; p. 666.
Stafford, William J., Quincy, Ill. Stove. No. 1,192,701; July 25; Gaz. vol. 228; p. 1368.
Staggers, William F., Jr., Mannington, W. Va. Swab-valve. No. 1,191,845; July 18; Gaz. vol. 228; p. 1014.
Stahl, Sidney S., Connellsville, Pa. Automatic electric switch. No. 1,190,032; July 4; Gaz. vol. 228; p. 285.
Stahle, John A., Dorchester, assignor to Stahle Mechanical Tire Company, Ltd., Boston, Mass. Lubricating system for connected movable parts. No. 1,192,012; July 25; Gaz. vol. 228; p. 1127.
Stahle Mechanical Tire Company. (See Stahle, John A., assignor.)
Stanchfield, Walter, and F. and H. Bixler, Bruce Lake, Ind. Adjustable gate. No. 1,191,846; July 18; Gaz. vol. 228; p. 1014.
Standard Car Truck Company. (See Barber, John C., assignor.)
Standard Car Truck Company. (See Barber and Walton, assignors.)
Standard Loose Leaf Company. (See Labarre, Richard, assignor.)
Standard Machine Company. (See Houseman, Harold E., assignor.)
Standard Optical Company *et al.* (See Van Tassel, John R., assignor.)
Standard Silica Brick Machinery Company. (See Avram, Mois H., assignor.)
Stanley, Charles W. (See Stanley, George W. and C. W.)
Stanley, Frederick E., assignor to Scovill Manufacturing Company, Waterbury, Conn. Feed mechanism for riveting machines. No. 1,192,239; July 25; Gaz. vol. 228; p. 1208.
Stanley, George W. and C. W., Bluecreek, Wash. Wrench. No. 1,190,336; July 11; Gaz. vol. 228; p. 440.
Stanley Rule & Level Company, The. (See Bodmer, Christian, assignor.)
Stanley, Walter L., Norfolk, Va. Seal-lock. No. 1,189,304; July 4; Gaz. vol. 228; p. 35.
Stanley, Walter L., Norfolk, Va. Seal-fastener for car-doors. No. 1,189,305; July 4; Gaz. vol. 228; p. 35.
Stansell, Jesse M. (See Main and Stansell.)
Stanton, George W., and R. H. Frye, Athens, Tenn. Portable lamp. No. 1,191,744; July 18; Gaz. vol. 228; p. 979.
Starcovic, Steve, Sedro Woolley, Wash. Fastener for shoes and the like. No. 1,190,033; July 4; Gaz. vol. 228; p. 285.
Starcovic, Steve, Sedro Woolley, Wash. Extensible fire-ladder. No. 1,190,034; July 4; Gaz. vol. 228; p. 286.
Starin, Frank, Springfield, Mass. Cage for ball-bearings. No. 1,190,035; July 4; Gaz. vol. 228; p. 286.
Starin, Frank, Springfield, Mass. Ball-bearing. No. 1,192,470; July 25; Gaz. vol. 228; p. 1288.
Stark, William O. (See Labadie, Beers, and Stark.)
Stary, Emil P., Cedar Rapids, Iowa. Automatic flushing-tank. No. 1,190,604; July 11; Gaz. vol. 228; p. 534.
Staser, Virgil A., Clearwater, Fla. Automobile. No. 1,192,240; July 25; Gaz. vol. 228; p. 1209.
Staude, Edwin G., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn. Variable-speed transmission. No. 1,192,579; July 25; Gaz. vol. 228; p. 1326.
Staude, Edwin G., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn. Variable-speed transmission. No. 1,192,580; July 25; Gaz. vol. 228; p. 1327.
Staufft, Daniel B., Uniontown, Pa. Door-handling device. No. 1,190,036; July 4; Gaz. vol. 228; p. 286.

Stearns, Jason C. (See Culver and Stearns.)
Stecher, Frank A., assignor to Stecher Lithographic Company, Rochester, N. Y. Curing-machine. No. 1,190,337; July 11; Gaz. vol. 228; p. 440.
Stecher Lithographic Company. (See Stecher, Frank A., assignor.)
Steel Specialties Company. (See Ewart, James B., assignor.)
Steele, Charles B., New York, N. Y. Motor-vehicle. No. 1,191,132; July 11; Gaz. vol. 228; p. 720.
Steele, Lon E. (See Gavard, George F., assignor.)
Steele, Robert L. (See Beachum, Alberta E., assignor.)
Steensland, James O., Blanchardville, assignor to C. E. L. Lipman, Beloit, Wis. Automatic draining device for radiators and the like. No. 1,189,306; July 4; Gaz. vol. 228; p. 35.
Stehlin, Charles F., New Rochelle, N. Y. Bag-filling machine. No. 1,191,243; July 18; Gaz. vol. 228; p. 803.
Steiger, Eugen, assignor to J. N. Jebsen, Zurich, and J. C. Buol, Davos, Switzerland. Pneumatic speed and distance indicator. No. 1,192,702; July 25; Gaz. vol. 228; p. 1368.
Stein, Irving M., Long Branch, N. J., assignor to T. E. Murray, New York, N. Y. Apparatus for limiting the traction of an electromagnet. No. 1,189,883; July 4; Gaz. vol. 228; p. 238.
Stein, Israel. (See Watson, George C., assignor.)
Steinschneider, Leo, Brünn, assignor of one-third to P. Porges, Vienna, and one-third to R. Neumann, Brünn, Austria-Hungary. Apparatus for distilling petroleum, tar, or other substances under vacuum. No. 1,192,581; July 25; Gaz. vol. 228; p. 1327.
Stephenson, James R., Dayton, Ohio. Transmission or change-speed device. No. 1,189,401; July 4; Gaz. vol. 228; p. 70.
Stepp, William H., Winkelman, Ariz. Music-turner. No. 1,192,703; July 25; Gaz. vol. 228; p. 1369.
Sternberger, Samuel. (See Hunsberger, Neville, assignor.)
Steurer, John A., New York, N. Y. Sound-box. No. 1,192,833; July 25; Gaz. vol. 228; p. 1413.
Steurer, John A., New York, N. Y. Sound-reproducing box. No. 1,192,834; July 25; Gaz. vol. 228; p. 1413.
Stevens, Burt D., and J. R. Blaine, assignors to The Miehle Printing Press & Manufacturing Company, Chicago, Ill. Printing-press tripping device. No. 1,192,133; July 25; Gaz. vol. 228; p. 1168.
Stevens, Burt D., Riverside, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Air-cushion control for printing-presses. No. 1,192,353; July 25; Gaz. vol. 228; p. 1248.
Stevens, Burt D., Evanston, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Air-cushion control. No. 1,192,354; July 25; Gaz. vol. 228; p. 1249.
Stevens, George E., Lynn, Mass., assignor to General Electric Company. Adjustable mounting for automobile starting-motors and generators. No. 1,191,624; July 18; Gaz. vol. 228; p. 935.
Stevens, George E., Lynn, Mass., assignor to General Electric Company. Controlling mechanism for automobiles. No. 1,191,625; July 18; Gaz. vol. 228; p. 935.
Stevens, George E., Lynn, Mass., assignor to General Electric Company. Starting and lighting set for automobiles. No. 1,191,626; July 18; Gaz. vol. 228; p. 936.
Stevens, Ralph P., Palo Alto, Cal. Tank-filler. No. 1,192,134; July 25; Gaz. vol. 228; p. 1169.
Stevens, Sylvester G., Duluth, Minn. Soil-cultivating tool. No. 1,190,338; July 11; Gaz. vol. 228; p. 440.
Stevens, Thomas E., Glens Falls, N. Y. Tool-sharpening stake for anvils. No. 1,191,041; July 11; Gaz. vol. 228; p. 691.
Stewart, Idalia J., Portland, Oreg. Waist and skirt supporter and fastener. No. 1,190,479; July 11; Gaz. vol. 228; p. 490.
Stewart, James H., York, Pa. Crypt. No. 1,191,244; July 18; Gaz. vol. 228; p. 804.
Stewart, John, Logan, Utah. Diffusion apparatus. No. 1,189,502; July 4; Gaz. vol. 228; p. 108.
Stewart, John, Salt Lake City, Utah. Diffusion process. No. 1,189,503; July 4; Gaz. vol. 228; p. 108.
Stewart, Thadeous H., Riverside, Okla. Roller-bearing bed for threshing-chains. No. 1,192,471; July 25; Gaz. vol. 228; p. 1289.
Stewart, William C., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 1,189,402; July 4; Gaz. vol. 228; p. 70.
Stich, Joseph P. (See Ware, Luther L., assignor.)
Stickdorn, Robert, Gartenstadt Meererbusch, near Osterath, Germany, assignor to F. Ernst, Zürich, Switzerland. Flushing device for water-closets. No. 1,189,504; July 4; Gaz. vol. 228; p. 109.
Stiles, Edward M., Mount Pleasant, Iowa, assignor to U. S. Slicing Machine Company, Chicago, Ill. Attachment for meat-slicing machines. No. 1,192,013; July 25; Gaz. vol. 228; p. 1127.
Stiles, Edward M., Mount Pleasant, Iowa, assignor to U. S. Slicing Machine Company, Chicago, Ill. Attachment for meat-slicing machines. No. 1,192,014; July 25; Gaz. vol. 228; p. 1128.
Stöbe, Otto, Berlin, Germany, assignor to General Electric Company. Speed control for textile-machines. No. 1,192,704; July 25; Gaz. vol. 228; p. 1369.
Stock, Henry W., Erie, Pa., assignor to General Electric Company. Separator. No. 1,190,037; July 4; Gaz. vol. 228; p. 287.
Stocker, Johannes. (See Lehmann and Stocker.)
Stockfleth, John, San Francisco, Cal. Protecting-shield for plants. No. 1,190,605; July 11; Gaz. vol. 228; p. 534.
Stockton, Lincoln C., Denver, Colo. Tooth-brush. No. 1,189,505; July 4; Gaz. vol. 228; p. 109.
Stockton, Robert J., Welsh, La. Suction-pipe. No. 1,191,360; July 18; Gaz. vol. 228; p. 846.
Stoddard, Elizabeth C., *et al.* (See Barratt, William T., assignor.)
Stoddard, William O., Jr., Madison, assignor, by mesne assignments, to The Duratex Company, Newark, N. J. Material adapted for use in the manufacture of an imitation leather. No. 1,190,806; July 11; Gaz. vol. 228; p. 607.
Stoddard, William O., Jr., Madison, assignor, by mesne assignments, to The Duratex Company, Newark, N. J. Material adapted for use in the manufacture of an imitation leather and making the same. No. 1,190,807; July 11; Gaz. vol. 228; p. 607.
Stodder, Frank W., Somerville, Mass. Self-adjusting propeller. No. 1,189,749; July 4; Gaz. vol. 228; p. 190.
Stoffel, John P., Los Angeles, Cal. Cleaner and dust-collector. No. 1,192,015; July 25; Gaz. vol. 228; p. 1128.
Stöhr, Franz, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Thermit Company, New York, N. Y. Apparatus for forming parallel faces on the ends of adjacent elements, such as railway-rails. No. 1,191,361; July 18; Gaz. vol. 228; p. 846.
Stolber, Herbert A., New York, N. Y. Operating mechanism for phonographs. No. 1,190,808; July 11; Gaz. vol. 228; p. 607.
Stokes, Edward H., and R. E. Grymes, New Brunswick, N. J. Recording jumping-rope. No. 1,189,307; July 4; Gaz. vol. 228; p. 36.
Stoler, Warren W., assignor to American Forging & Socket Co., Detroit, Mich. Tube-forming machine. No. 1,191,362; July 18; Gaz. vol. 228; p. 847.
Stolzer, Charles, Philadelphia, Pa. Swinging-table-leg hinge. No. 1,190,339; July 11; Gaz. vol. 228; p. 441.
Stone, William F., Portland, Me., assignor to National Metal Seal Corporation. Closure for containing vessels. No. 1,192,135; July 25; Gaz. vol. 228; p. 1169.
Stone, William F., Woodfords, Me., assignor to National Metal Seal Corporation, Deering Junction, Me. Wrench. No. 1,192,136; July 25; Gaz. vol. 228; p. 1169.
Stone, William J., Horton, Kans. Chalk-holder attachment for billiard tables, &c. No. 1,190,809; July 11; Gaz. vol. 228; p. 608.
Storey, Imle E., Los Angeles, Cal. Thermostat. No. 1,190,205; July 4; Gaz. vol. 228; p. 346.
Storm, Edwin R., New York, N. Y. Fireproof door. No. 1,190,206; July 4; Gaz. vol. 228; p. 346.
Story, Samuel S., Pawling, N. Y. Cooler. No. 1,190,968; July 11; Gaz. vol. 228; p. 667.
Stout, Harry H., assignor to General Chemical Company, New York, N. Y. Rabble-arm. No. 1,191,848; July 18; Gaz. vol. 228; p. 1015.
Stover Manufacturing Company. (See Woods, Fred M., assignor.)
Straight, Halver R., Adel, Iowa. Building-block. No. 1,191,363; July 18; Gaz. vol. 228; p. 847.
Straight, Halver R., Adel, Iowa. Building-block for door-jambs. No. 1,191,364; July 18; Gaz. vol. 228; p. 848.
Strang, Walter C., Yonkers, assignor to Otis Elevator Company, New York, N. Y. Controlling apparatus for elevators. No. 1,190,969; July 11; Gaz. vol. 228; p. 667.
Strathmore Paper Company. (See Sanburn, Willis H., assignor.)
Stratinsky, Joseph, Chicago, Ill. Portable scaffold. No. 1,189,584; July 4; Gaz. vol. 228; p. 238.
Straub, Elmer E. (See Malarkey, Patrick F., assignor.)
Strauss, Joseph B., Chicago, Ill. Car-stopping device. No. 1,189,750; July 4; Gaz. vol. 228; p. 191.
Strauss, Joseph B., Chicago, Ill. Operating mechanism for windows. No. 1,190,682; July 11; Gaz. vol. 228; p. 565.
Strehlow, Oscar E., Evanston, Ill. Runway for excavating-machines. No. 1,191,365; July 18; Gaz. vol. 228; p. 848.
Streichert, Emil K. F., Detroit, Mich. Radiator. No. 1,189,506; July 4; Gaz. vol. 228; p. 109.
Streichert, Emil K. F., Detroit, Mich. Radiator. No. 1,189,507; July 4; Gaz. vol. 228; p. 109.
Streiff, Andreas, Teifs, Austria-Hungary. Machine for cleaning textile fibers, in particular cotton fibers. No. 1,192,355; July 25; Gaz. vol. 228; p. 1249.
Streitwolf, Karl. (See Reuter and Streitwolf.)
Streng, Andrew, assignor of one-half to M. J. Duffecy, Indianapolis, Ind. Time-switch. No. 1,191,745; July 18; Gaz. vol. 228; p. 980.
Stroud, Clarence E., Bladen, Nebr. Harrow. No. 1,190,683; July 11; Gaz. vol. 228; p. 565.
Struble, George W., and W. L. Lukens, Bethlehem, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Percussion-fuse for projectiles. No. 1,189,403; July 4; Gaz. vol. 228; p. 71.
Struble, Max G., Girard, Kans. Headlamp control. No. 1,190,684; July 11; Gaz. vol. 228; p. 565.

Stuart, Francis L., Baltimore, Md. Loading apparatus. No. 1,192,016; July 25; Gaz. vol. 228; p. 1128.
Stuart, George J., Bellevue, Pa. Compound regulating-valve. No. 1,192,472; July 25; Gaz. vol. 228; p. 1289.
Studebaker Corporation, The. (See Heaslet, James G., assignor.)
Stuebing, William, Jr., and L. J. Van Guelpen, Cincinnati, Ohio. Machine for inking or coloring the edges of leather or other materials. No. 1,190,246; July 4; Gaz. vol. 228; p. 362.
Stulp, Fred J., Muskegon, Mich. Clamp for hose and the like. No. 1,189,404; July 4; Gaz. vol. 228; p. 71.
Styll, Harry H. (See Wells and Styll.)
Subers, Lawrence A., Cleveland, Ohio. Machine for constructing a laminated cohesive interwound band. No. 1,189,751; July 4; Gaz. vol. 228; p. 191.
Subers, Lawrence A., East Cleveland, Ohio. Automatic device for coating and covering fibrous elements with a fluid and solid adhesive. No. 1,192,017; July 25; Gaz. vol. 228; p. 1129.
Sullivan, Herbert F. (See Agnew, Donald E., assignor.)
Sullivan, James J., Brooklyn, N. Y. Spool-holder. No. 1,189,635; July 4; Gaz. vol. 228; p. 152.
Sullivan, Michael F., Chicago, Ill. Stereoscopic projection apparatus. No. 1,189,308; July 4; Gaz. vol. 228; p. 36.
Sullivan, Michael J. (See Krohn and Sullivan.)
Sulzberger, Karl. (See Treitel and Sulzberger.)
Sulzberger, Nathan, New York, N. Y. Catalyzer and making same and for effecting catalytic reactions therewith. (Reissue.) No. 14,167; July 18; Gaz. vol. 228; p. 1050.
Summers, Edgar W., Pittsburgh, Pa. Truck side frame and journal-box. No. 1,189,636; July 4; Gaz. vol. 228; p. 152.
Summers, Edgar W., Pittsburgh, Pa. Railway-car truck. No. 1,189,637; July 4; Gaz. vol. 228; p. 153.
Summers, Edgar W., Pittsburgh, Pa. Car-truck side frame and journal-box. No. 1,190,480; July 11; Gaz. vol. 228; p. 490.
Sunday, William H., Rochester, N. Y. Safety device for punching-presses. No. 1,191,042; July 11; Gaz. vol. 228; p. 691.
Sunderland, James L. (See Demmitt, Charles K., assignor.)
Sundin, John P., Salem, Oreg. Clothes-drainer. No. 1,190,606; July 11; Gaz. vol. 228; p. 534.
Superior Type Company. (See Willard, Maurice L., assignor.)
Suter, Adolf. (See Edgar and Suter.)
Sutter, Charles, Pittsburgh, Pa. Attachment for mail-bag catchers. No. 1,192,241; July 25; Gaz. vol. 228; p. 1209.
Suttie, Charles, Auckland, New Zealand. Apparatus for employment in treating flax and the like fibers. No. 1,191,245; July 18; Gaz. vol. 228; p. 804.
Sutton, John C. M., Bellevue, Nebr. Mail-bag lock. No. 1,191,043; July 11; Gaz. vol. 228; p. 692.
Svehillus, Henry M., assignor to Pullman Couch Company, Chicago, Ill. Convertible furniture. No. 1,192,137; July 25; Gaz. vol. 228; p. 1169.
Swanson, Carl A., Chicago, Ill. Cable-splicing tool. No. 1,192,356; July 25; Gaz. vol. 228; p. 1249.
Swift, Ernest H., Hartford, Conn. Package-roll of metallic leaf. No. 1,190,340; July 11; Gaz. vol. 228; p. 441.
Swift, Robert B., Jr., Cincinnati, Ohio. One-piece pajamas. No. 1,190,810; July 11; Gaz. vol. 228; p. 608.
Swinglehurst, Harry, Laconia, N. H., assignor to Scott & Williams, Incorporated, Camden, N. J. Switch-cam mechanism for circular-knitting machines. No. 1,192,473; July 25; Gaz. vol. 228; p. 1289.
Swoyer, William H., and J. W. Horner, Linfield, Pa. Safety brake clutch and lock. No. 1,190,811; July 11; Gaz. vol. 228; p. 608.
Sykes, Charles J., assignor to The Scholl Manufacturing Company, Chicago, Ill. Arch-fitting machine. No. 1,190,812; July 11; Gaz. vol. 228; p. 608.
Sylvester, Etta M., Somerville, Mass. Gage attachment for scissors. No. 1,189,405; July 4; Gaz. vol. 228; p. 71.
Sylvester, Samuel, Lisbon Falls, Me. Traction device for motor-vehicles. No. 1,190,038; July 4; Gaz. vol. 228; p. 287.
Sylvester, Thomas J., and J. B. Felicetti, Philadelphia, Pa. Target. No. 1,191,849; July 18; Gaz. vol. 228; p. 1015.
Symington, Thomas H., Rochester, N. Y. Underframe-reinforce. No. 1,192,582; July 25; Gaz. vol. 228; p. 1328.
Synthetic Patents Co. (See Fischer, Emil, assignor.)
Szemere, Frederick E., New York, N. Y. Combination-garment. No. 1,192,583; July 25; Gaz. vol. 228; p. 1328.
Taft, Edward E., Fort Dodge, Iowa. Gage for chisels. No. 1,192,242; July 25; Gaz. vol. 228; p. 1210.
Taft, Sydney E. (See Hammond, Taft, and Gooding.)
Takamine, Jokichi, New York, N. Y. Making diastatic product. No. 1,191,584; July 25; Gaz. vol. 228; p. 1328.
Taliaferro, John C., D. P. Robinson, and J. Coyle, Baltimore, Md., assignors to Continental Can Company, Inc., Syracuse, N. Y. Counter for can-covers. No. 1,192,705; July 25; Gaz. vol. 228; p. 1369.
Tallmadge, De Witt E., South Norwalk, Conn. Internal-combustion engine. No. 1,191,366; July 18; Gaz. vol. 228; p. 848.
Talty, Edward D., *et al.* (See McDonald, Martin, assignor.)
Tandy, Charles, Wellington, New Zealand. Amusement apparatus. No. 1,191,367; July 18; Gaz. vol. 228; p. 849.
Tangeman, Cornelius H., New York, N. Y. Combustion-engine. No. 1,191,368; July 18; Gaz. vol. 228; p. 849.
Tannaka, Naho, New York, N. Y. Telephone-transmitter. No. 1,190,813; July 11; Gaz. vol. 228; p. 609.
Tarbet, Sigel H., and L. Cabbell, Topeka, Kans. Safety bottle-holder. No. 1,190,607; July 11; Gaz. vol. 228; p. 535.
Tate, Edward H., Malden, assignor to Tate Manufacturing Company, Inc., Boston, Mass. Mop. No. 1,191,098; July 11; Gaz. vol. 228; p. 709.
Tate Manufacturing Company. (See Tate, Edward H., assignor.)
Tatom, Thomas J. (See Cotton, John W., assignor.)
Tatum, Charles A., Middletown, N. J., assignor to Whitall Tatum Company, New York, N. Y. Clamp for flexible tubes. No. 1,190,039; July 4; Gaz. vol. 228; p. 287.
Taux-Wel Talking Machine Co., The. (See Litle, Thomas J., Jr., assignor.)
Taylor, George, assignor to Charles H. Feldstein Company, Inc., Philadelphia, Pa. Haircloth-weaving loom. No. 1,192,018; July 25; Gaz. vol. 228; p. 1129.
Taylor, George H., Richmond, Va. Seal. No. 1,192,243; July 25; Gaz. vol. 228; p. 1210.
Taylor, Harold B., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rerolling device for graphic meters. No. 1,189,309; July 4; Gaz. vol. 228; p. 36.
Taylor, Jesse E., assignor to D. Embree, Kansas City, Mo. Vending-machine. No. 1,192,019; July 25; Gaz. vol. 228; p. 1130.
Taylor, John B., Schenectady, N. Y., assignor to General Electric Company. System for the prevention of electrolysis. No. 1,191,627; July 18; Gaz. vol. 228; p. 936.
Taylor, William C., assignor to Corning Glass Works, Corning, N. Y. Glass. No. 1,192,474; July 25; Gaz. vol. 228; p. 1290.
Taylor, William W., Kansas City, Mo. Hydraulic ram. No. 1,192,475; July 25; Gaz. vol. 228; p. 1290.
Tazewell, Harry C., Wilmington, Del. Insulating composition and producing it. No. 1,190,814; July 11; Gaz. vol. 228; p. 609.
Tazewell, Harry C., Wilmington, Del. Plastic composition and making it. No. 1,190,815; July 11; Gaz. vol. 228; p. 610.
Teachout, Elmer C., and E. L. Harrison, Flint, Mich. Permutation switch-lock. No. 1,190,685; July 11; Gaz. vol. 228; p. 566.
Tedell, John, Moline, assignor to Rock Island Plow Company, Rock Island, Ill. Corn-planter. No. 1,192,138; July 25; Gaz. vol. 228; p. 1170.
Teeters, Jefferson D., Newton, Nebr. Gate. No. 1,190,040; July 4; Gaz. vol. 228; p. 287.
Teich, Ernest L., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,190,686; July 11; Gaz. vol. 228; p. 566.
Telechronometer Company. (See Babcock, Garrison, assignor.)
Temple, Frank J., *et al.* (See Hartley, Albert J., assignor.)
Terhorst, George W., Pittsburgh, Pa., assignor to Pittsburgh Transformer Company. Electrical transformer. No. 1,190,481; July 11; Gaz. vol. 228; p. 490.
Terrill, Clair J. (See De Lukacsevics and Terrill.)
Terry, Miles A., assignor of one-half to M. L. Davis, Middleport, Ohio. Gas-valve. No. 1,191,930; July 18; Gaz. vol. 228; p. 1046.
Terry, Theodore D., Jamesport, N. Y. Attachment for cultivators. No. 1,191,850; July 18; Gaz. vol. 228; p. 1016.
Tesmer, William, Middletown, Ohio, assignor to The American Rolling Mill Company, Newark, N. J. Shear-gage. No. 1,189,310; July 4; Gaz. vol. 228; p. 37.
Testrup, Nils, London, England, T. Rigby, and G. W. Andrew, Dumfries, Scotland, assignors to Wetcarbonizing Limited, London, England. Gasification of sewage-sludge. No. 1,189,638; July 4; Gaz. vol. 228; p. 153.
Thatcher, Walter R., Oskaloosa, Iowa, and H. Dixon, Dayton, Ohio. Inhaler. No. 1,192,357; July 25; Gaz. vol. 228; p. 1250.
Thayer & Chandler. (See Thayer, Henry J., assignor.)
Thayer, Henry J., assignor to Thayer & Chandler, Chicago, Ill. Paint-package. No. 1,191,851; July 18; Gaz. vol. 228; p. 1016.
Theumann, Max. (See Koetschet and Theumann.)
Thickens, John H., assignor to The Beaver Company, Buffalo, N. Y. Waterproofed wall-board. No. 1,191,099; July 11; Gaz. vol. 228; p. 709.
Thill, Peter. (See Bow, Thill, and Wheeler.)
Thomas, Carl C. (See Johannsmeyer, Frederick, assignor.)
Thomas, Carl C., Baltimore, Md. Fluid-distributing device. No. 1,191,483; July 18; Gaz. vol. 228; p. 888.
Thomas, Charles L., Wilkes-Barre, Pa. Adjustable shade-bracket. No. 1,191,852; July 18; Gaz. vol. 228; p. 1016.
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-switch indicator. No. 1,190,041; July 4; Gaz. vol. 228; p. 288.
Thomas, John F. (See Adsit, William H., assignor.)
Thompson, Albert R. (See Anderson and Thompson.)

Thompson, Alonzo C., Mount Union, Pa. Folding crate. No. 1,190,042; July 4; Gaz. vol. 228; p. 288.
Thompson, Edward H., Toronto, Ontario, Canada. Economizer soot-cleaner. No. 1,189,752; July 4; Gaz. vol. 228; p. 191.
Thompson, Edward M., Beloit, Wis. Electrical winding device for clock-movements. No. 1,191,914; July 18; Gaz. vol. 228; p. 1040.
Thompson, James H., South Melbourne, and E. S. Goetz, West Melbourne, assignors to R. J. Alcock, Melbourne, Australia. Means for locking cans. No. 1,190,043; July 4; Gaz. vol. 228; p. 288.
Thompson, Louis W. (See Gardner, Frederick N. and F. E., assignors.)
Thompson, Ora, Earl Park, Ind. Threshing-machine. No. 1,191,853; July 18; Gaz. vol. 228; p. 1017.
Thompson, Thomas A., Butte, Mont. Antiskidding device. No. 1,190,816; July 11; Gaz. vol. 228; p. 610.
Thompson, William S., Toledo, Ohio. Shock-absorber. No. 1,192,358; July 25; Gaz. vol. 228; p. 1250.
Thomson Electric Welding Company. (See Barstow, George E., assignor.)
Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Measurement of small pressures. No. 1,190,044; July 4; Gaz. vol. 228; p. 289.
Thomson, Elihu, Lynn, Mass., assignor to General Electric Company. X-ray tube. No. 1,192,706; July 25; Gaz. vol. 228; p. 1370.
Thomson, Paul F., Indianapolis, Ind. Diamond-holder. No. 1,191,746; July 18; Gaz. vol. 228; p. 980.
Thomson, Robert W., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Finishing-roll and cover therefor. No. 1,189,311; July 4; Gaz. vol. 228; p. 37.
Thomson, William S., assignor to The H. D. Smith & Company, Plantsville, Conn. End-cutting pliers. No. 1,192,021; July 25; Gaz. vol. 228; p. 1130.
Thornburgh, Ivan D., Oakland, assignor to American Can Company, San Francisco, Cal. Machine for re-forming can-bodies. No. 1,190,341; July 11; Gaz. vol. 228; p. 441.
Thorndike, Rothchild F., Chelsea, Mass. Cigarette-box. No. 1,192,707; July 25; Gaz. vol. 228; p. 1370.
Thornhill, William H. T., Philadelphia, Pa. Apparatus for forging bucket-wheels. No. 1,190,817; July 11; Gaz. vol. 228; p. 610.
Thornhill, William H. T., Philadelphia, Pa. Forging bucket-wheels. No. 1,190,818; July 11; Gaz. vol. 228; p. 611.
Thorschmidt, Ernest C., New York, N. Y. Liquid measuring and dispensing device. No. 1,191,484; July 18; Gaz. vol. 228; p. 888.
Throckmorton, Aris C. (See Hedrick and Throckmorton.)
Thue, Frithjof, Christiania, Norway. Instrument for making parallel channels for tooth-root pins. No. 1,189,753; July 4; Gaz. vol. 228; p. 192.
Tibbals, Walter H., Syracuse, N. Y. Fire-escape. No. 1,190,482; July 11; Gaz. vol. 228; p. 491.
Tibbals, Walter H., Syracuse, N. Y. Fire-escape. No. 1,190,483; July 11; Gaz. vol. 228; p. 491.
Tibbels, William G., Toledo, Ohio. Engine. No. 1,189,312; July 4; Gaz. vol. 228; p. 37.
Tibbetts, Milton, assignor to Packard Motor Car Company, Detroit, Mich. Differential gearing for motor-vehicles. No. 1,190,687; July 11; Gaz. vol. 228; p. 566.
Tibbits, Armand A., South Omaha, Nebr. Music-leaf turner. No. 1,190,045; July 4; Gaz. vol. 228; p. 289.
Tidwell, J. G., *et al.* (See Stacy, Grover C., assignor.)
Tillotson, Eva L., London, England. Sewing-machine attachment for producing tubes or covering cores. No. 1,191,204; July 18; Gaz. vol. 228; p. 789.
Tillotson, Harry C., assignor to Knight American Patents Company, Chicago, Ill. Internal-combustion engine. No. 1,191,246; July 18; Gaz. vol. 228; p. 804.
Timm, Friedrich C. W., Hamburg, Germany. Treating metalliferous materials for roasting, reducing, sintering, and like purposes. No. 1,189,313; July 4; Gaz. vol. 228; p. 38.
Tinegate, George. (See McNabb and Emery, assignors.)
Tippett, James C., Oil City, La. Working-barrel valve. No. 1,191,247; July 18; Gaz. vol. 228; p. 805.
Tirrill, Allen A., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical regulator. No. 1,192,708; July 25; Gaz. vol. 228; p. 1370.
Titanium Alloy Manufacturing Company, The. (See Barton, Louis E., assignor.)
Tjader, Richard, New York, N. Y. Automatic davit. No. 1,190,046; July 4; Gaz. vol. 228; p. 290.
Tokheim Mfg. Co., The. (See Fuhrman, Herman C., assignor.)
Tompkins, Webster A., Portland, Oreg., assignor to C. A. Clark, Vancouver, Wash. Ice-cream-cone-baking machine. No. 1,191,485; July 18; Gaz. vol. 228; p. 889.
Tone, Frank J., assignor to The Carborundum Company, Niagara Falls, N. Y. Crystalline fused alumina and the manufacture thereof. No. 1,192,709; July 25; Gaz. vol. 2284 p. 1371.
Tooker, Harry L., Taft, and H. R., Santa Monica, Cal. Pen or pencil clip or holder. No. 1,189,639; July 4; Gaz. vol. 228; p. 154.
Tooker, Hugh R. (See Tooker, Harry L. and H. R.)
Tooker, John M., New York, N. Y. Internal-combustion motor. No. 1,190,819; July 11; Gaz. vol. 228; p. 611.
Tooly, John G. (See Krause, Romanus, assignor.)
Topham, Laurence E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,189,406; July 4; Gaz. vol. 228; p. 72.
Topham, Laurence E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lock-stitch sewing-machine. No. 1,190,688; July 11; Gaz. vol. 228; p. 567.
Topham, Laurence E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-sewing machine. No. 1,191,747; July 18; Gaz. vol. 228; p. 980.
Topkis, Louis, Wilmington, Del. Undergarment. No. 1,191,369; July 18; Gaz. vol. 228; p. 850.
Topping, W. V. B. (See Plice, Thomas V., assignor.
Toroif, Jonas, Taft, Cal. Mounting for sliding doors. No. 1,191,370; July 18; Gaz. vol. 228; p. 850.
Torris Wold & Company. (See Cameron, William, assignor.)
Tower, Amos M. (See Moody, Lewis N., assignor.)
Tozer, Charles W., London, England. Retort. No. 1,191,854; July 18; Gaz. vol. 228; p. 1017.
Trabbold, Henry, assignor to The J. G. Brill Company, Philadelphia, Pa. Double control mechanism for doors. No. 1,192,476; July 25; Gaz. vol. 228; p. 1290.
Trachte, Arthur F. (See Trachte, George A. and A. F.)
Trachte, George A. and A. F., Madison, Wis. Corrugating-machine. No. 1,189,885; July 4; Gaz. vol. 228; p. 238.
Trainer, James L., Weymouth, Mass. Window-awning. No. 1,191,371; July 18; Gaz. vol. 228; p. 850.
Transportation Utilities Company. (See Conwell, Walter L., assignor.)
Transportation Utilities Company. (See Julien, Bartholomew, assignor.)
Travelstead, Albert, Marion, Ill. Mail-box. No. 1,190,047; July 4; Gaz. vol. 228; p. 290.
Trayne, John H. (See Chandler and Trayne.)
Treat, Ellis M. (See Graham, Andrew W., assignor.)
Tregoning, Charles, New York, N. Y. Electric display device. No. 1,192,585; July 25; Gaz. vol. 228; p. 1329.
Treitel, Heinrich, Charlottenburg, and K. Sulzberger, Berlin, Germany, assignors to General Electric Company. Dynamo-electric machine. No. 1,190,048; July 4; Gaz. vol. 228; p. 290.
Trenaman, John V., New York, N. Y. Extensible bracket. No. 1,189,754; July 4; Gaz. vol. 228; p. 192.
Trescott, Charles B., assignor, by mesne assignments, to Automatic Oven Company, Chicago, Ill. Cooking. No. 1,192,802; July 25; Gaz. vol. 228; p. 1402.
Trinks, Willibald, assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa. Roll-stripping mechanism. No. 1,189,640; July 4; Gaz. vol. 228; p. 154.
Trinks, Willibald, assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa. Roll construction. No. 1,190,689; July 11; Gaz. vol. 228; p. 567.
Trinks, Willibald, assignor, by mesne assignments, to National Brush Washing Machine Company, Pittsburgh, Pa. Foot-valve and strainer mechanism. No. 1,191,628; July 18; Gaz. vol. 228; p. 937.
Trist, Arthur R., London, England. Automatic liquid-feeding apparatus for use with steam-boilers and like purposes. No. 1,191,372; July 18; Gaz. vol. 228; p. 850.
Trook, George W., assignor to The North & Judd Manufacturing Company, New Britain, Conn. Name-tag clip. No. 1,189,886; July 4; Gaz. vol. 228; p. 239.
Trottier, Donat B., Lebanon, N. H. Indicator. No. 1,189,407; July 4; Gaz. vol. 228; p. 72.
Trow, Waldo D., Kalispell, Mont. Railway-tie. No. 1,191,044; July 11; Gaz. vol. 228; p. 692.
Troxell, Rew, San Francisco, Cal. Exposure attachment for cameras. No. 1,192,710; July 25; Gaz. vol. 228; p. 1371.
Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)
Trudel, Henry L., Ipswich, Mass., assignor, by mesne assignments, to Scott & Williams, Incorporated, Camden, N. J. Thread cutter and holder for circular-knitting machines. No. 1,191,100; July 11; Gaz. vol. 228; p. 710.
Trussed Concrete Steel Company. (See Kahn, Julius, assignor.)
Tschudy, William, Lynn, Mass. Controlling the efficiency of mercury rectifiers. No. 1,189,887; July 4; Gaz. vol. 228; p. 239.
Tsumura, George N., Mountain View, Cal. Electrically-operative calendar device. No. 1,190,820; July 11; Gaz. vol. 228; p. 612.
Tucker, Grover C., Heiberger, assignor to Tucker Implement Company, Inc., Greensboro, Ala. Insect-destroyer. No. 1,189,508; July 4; Gaz. vol. 228; p. 110.
Tucker Implement Company. (See Tucker, Grover C., assignor.)
Tucker, James E., and A. B. Leech, Los Angeles, Cal. Electrically-illuminated display device. No. 1,192,803; July 25; Gaz. vol. 228; p. 1403.
Tucker, Raleigh W., Bandon, Oreg. Artificial arm. No. 1,192,244; July 25; Gaz. vol. 228; p. 1210.
Tudor, Daniel, Philadelphia, Pa. Combined match and cigarette box. No. 1,190,484; July 11; Gaz. vol. 228; p. 491.
Turner, Ernest J. (See Howard and Turner.)
Turner, George S., Gowanda, N. Y. Hair-duster. No. 1,192,711; July 25; Gaz. vol. 228; p. 1371.

Turner, Harry R., Philadelphia, Pa. Cooling apparatus. No. 1,192,245; July 25; Gaz. vol. 228; p. 1211.
Turner, John, Dorchester, Mass. Cloth for billiard-tables. No. 1,189,408; July 4; Gaz. vol. 228; p. 73.
Turner, Loren H. (See Burry, Vincent J., assignor.)
Turner, Mathias E., Cleveland, Ohio. Electric meter. No. 1,190,485; July 11; Gaz. vol. 228; p. 491.
Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake. No. 1,190,342; July 11; Gaz. vol. 228; p. 442.
Tuszka, Paul, Stevens Point, Wis. Folding crank-handle. No. 1,191,855; July 18; Gaz. vol. 228; p. 1017.
Tweed, Frederick H., Chicago, Ill. Air-valve. No. 1,192,020; July 25; Gaz. vol. 228; p. 1130.
Twin-Rim Company. (See Frederick, William A., assignor.)
Tyler, Charles A., Auburn, assignor to National Chemical Company, Syracuse, N. Y. Apparatus for treating starch. No. 1,190,690; July 11; Gaz. vol. 228; p. 567.
Tyler, Edward B., Pittsburgh, Pa. Expansion-joint. No. 1,191,486; July 18; Gaz. vol. 228; p. 889.
Tyler, Roy D., assignor to John C. Moninger Company, Chicago, Ill. Expansible lifting-arm. No. 1,190,486; July 11; Gaz. vol. 228; p. 492.
Tyrrell, Claude U., Chicago, Ill. Monoplane flying toy. No. 1,190,343; July 11; Gaz. vol. 228; p. 442.
U. S. Light & Heat Corporation. (See Bliss, William L., assignor.)
U. S. Light & Heat Corporation. (See Carpenter, Campbell C., assignor.)
U. S. Light & Heat Corporation. (See Engel, Frank, assignor.)
U. S. Slicing Machine Company. (See Stiles, Edward M., assignor.)
Uhlemann, Richard H., Chicago, Ill. Lens-mount. No. 1,191,373; July 18; Gaz. vol. 228; p. 851.
Ullensaker, Helmer, Hatton, N. D. Strain-absorber for sprocket-wheels. No. 1,190,049; July 4; Gaz. vol. 228; p. 291.
Ulrich, George H., Farlin, Iowa. Clothes-drainer. No. 1,192,246; July 25; Gaz. vol. 228; p. 1211.
Underhill, Charles R., New Haven, Conn., assignor to Underhill Telegraph Insulator Company, Jersey City, N. J. Relay. No. 1,189,314; July 4; Gaz. vol. 228; p. 38.
Underhill Telegraph Insulator Company. (See Underhill, Charles R., assignor.)
Underwood Computing Machine Company. (See Hart, Frederick A., assignor.)
Underwood Computing Machine Company. (See Marsball, Holmes, assignor.)
Underwood Computing Machine Company. (See Wright, Walter, assignor.)
Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)
Underwood Typewriter Company. (See McKay, George F., assignor.)
Underwood Typewriter Company. (See Roberts, Lyman R., assignor.)
Underwood Typewriter Company. (See Smith, Jesse A. B., assignor.)
Underwood Typewriter Company. (See White, Howard L., assignor.)
Underwood, Walter H., New York, N. Y. Fastening device. No. 1,190,344; July 11; Gaz. vol. 228; p. 442.
Underwood, Weeden B., assignor to Wilmot Castle Company, Rochester, N. Y. Electrically-heated vessel. No. 1,192,477; July 25; Gaz. vol. 228; p. 1291.
Union Draft Gear Co. (See Canfield, Lewis T., assignor.)
Union Metal Products Company. (See Cameron, Fred C., assignor.)
Union Special Machine Company. (See Seymour, Dudley S., assignor.)
Union Switch & Signal Company, The. (See Beakes, Howard S., assignor.)
Union Switch & Signal Company, The. (See Lewis, Lloyd V., assignor.)
Union Switch & Signal Company, The. (See Neubert, Walter P., assignor.)
United Shoe Machinery Company. (See Alley, Frederick L., assignor.)
United Shoe Machinery Company. (See Bazzoni, Lewis J., assignor.)
United Shoe Machinery Company. (See Chateauneuf,, Frank, assignor.)
United Shoe Machinery Company. (See Colby, Daniel W., assignor.)
United Shoe Machinery Company. (See Eppler, Andrew, assignor.)
United Shoe Machinery Company. (See Furber, Frederick M., assignor.)
United Shoe Machinery Company. (See Glass, Perley R., assignor.)
United Shoe Machinery Company. (See Gouldbourn, Bates, and Jerram, assignors.)
United Shoe Machinery Company. (See Gouldbourn, Joseph, assignor.)
United Shoe Machinery Company. (See Hall and Bates, assignors.)
United Shoe Machinery Company. (See Hamann, William, assignor.)
United Shoe Machinery Company. (See Jackson, James E., assignor.)
United Shoe Machinery Company. (See Kennedy, Charles E., assignor.)
United Shoe Machinery Company. (See Leveque, Bernard T., assignor.)
United Shoe Machinery Company. (See McFeely, Ronald F., assignor.)
United Shoe Machinery Company. (See Prenzel, Adam H., assignor.)
United Shoe Machinery Company. (See Russell, Arthur L., assignor.)
United Shoe Machinery Company. (See Shaw, Percy W., assignor.)
United Shoe Machinery Company. (See Simmons, Ralph C., assignor.)
United Shoe Machinery Company. (See Stewart, William C., assignor.)
United Shoe Machinery Company. (See Thomson, Robert W., assignor.)
United Shoe Machinery Company. (See Topham, Laurence E., assignor.)
United States Envelope Company. (See McNeill, Frank L., assignor.) (Reissue.)
United States Envelope Company. (See Schmidt, Ferdinand L., assignor.)
United States Gypsum Company, The. (See Southard, George L., assignor.)
United States Pneumatic Company. (See Burton, Charles H., assignor.)
United Telegraph & Cable Company, The. (See Bruce, William M., Jr., assignor.)
United Vacuum Sweeper Company. (See Krantz, Edward.)
Universal Beet Harvester Co. (See Nairne, James D., assignor.)
Universal Draft Gear Attachment Co. (See Nash, Charles J., assignor.)
Universal Hammer Company. (See Kollock and Martin, assignors.)
Universal Indexing Company, The. (See Smith, Louis R., assignor.)
Universal Stamping Machine Company. (See Graham, George H., assignor.)
Uplift Corset Company. (See McCormick, Hugh M., assignor.)
Upright, Warren A., Los Angeles, Cal. Shower-bath apparatus. No. 1,191,248; July 18; Gaz. vol. 228; p. 805.
Upson, Maxwell M., Englewood, N. J., and H. R. Day, Brooklyn, assignors to Raymond Concrete Pile Company, New York, N. Y. Core for forming concrete piles. No. 1,192,247; July 25; Gaz. vol. 228; p. 1211.
Urban, Martin, Fall River, Mass. Fire-kindler. No. 1,189,509; July 4; Gaz. vol. 228; p. 110.
Urich, William A. (See Day and Urich.)
Utter, Richard L., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Buzzer. No. 1,190,608; July 11; Gaz. vol. 228; p. 535.
Van Alstyn, Albert T., New York, N. Y. Clip-tag for price-marking silk goods. No. 1,190,821; July 11; Gaz. vol. 228; p. 612.
Van Alstyne, John A., assignor of one-half to C. V. Schneider, Sacramento, Cal. Automatic motor-protecting switch. No. 1,189,409; July 4; Gaz. vol. 228; p. 73.
Van Arnam Mfg. Co. (See Elder, Thomas W., assignor.)
Van Deventer, Harry R., Sumter, S. C. Portable electric light. No. 1,189,755; July 4; Gaz. vol. 228; p. 192.
Van Deventer, Harry R., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Tripping mechanism for igniters. No. 1,190,823; July 11; Gaz. vol. 228; p. 613.
Van Deventer, Harry R., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Interrupter for ignition-dynamos. No. 1,191,856; July 18; Gaz. vol. 228; p. 1018.
Van Diense, Paulus J. A., Greenville, Mich. Hollow blast-grate. No. 1,189,888; July 4; Gaz. vol. 228; p. 239.
Van Diggelen, Johannes C. M., Amsterdam, Netherlands. Production of textile material. No. 1,189,756; July 4; Gaz. vol. 228; p. 198.
Van Every, Lewis E., Hampton, Iowa. Gate. No. 1,189,410; July 4; Gaz. vol. 228; p. 73.
Van Geem, John, Erie, Pa. Measuring-faucet. No. 1,189,510; July 4; Gaz. vol. 228; p. 110.
Van Guelpen, Louis J. (See Stuebing and Van Guelpen.)
Van Houten, Henry A., Bellingham, Wash. Per-diem car-record account cabinet and cards. No. 1,191,857; July 18; Gaz. vol. 228; p. 1018.
Van Kesteren, Albert S. J., Vlissingen, Netherlands. Telephone transmission system wherein reinforcing-repeaters are employed. No. 1,189,411; July 4; Gaz. vol. 228; p. 74.
Van Keuren, Sylvanus S., Aberdeen, S. D. Aerial torpedo. No. 1,191,374; July 18; Gaz. vol. 228; p. 851.
Van Keuren, Sylvanus S., Aberdeen, S. D. Torpedo-dropping mechanism for airships. No. 1,191,375; July 18; Gaz. vol. 228; p. 851.
Van Meter, Solomon L., Jr., Lexington, Ky. Aviatory life-buoy. No. 1,192,479; July 25; Gaz. vol. 228; p. 1291.
Van Meter, Solomon L., Jr., Lexington, Ky. Aeronautical safety device. No. 1,192,480; July 25; Gaz. vol. 228; p. 1292.
Van Ness, Henry E., Elmira, N. Y. Locking-hub for bicycles. No. 1,189,315; July 4; Gaz. vol. 228; p. 38.
Van Osdell, William J., assignor of one-half to L. Sperling, Chicago, Ill. Self-winding clock. No. 1,191,249; July 18; Gaz. vol. 228; p. 805.

Van Tassel, John R., assignor of one-half to Standard Optical Company, Geneva, and one-half to G. A. Bader, Rochester, N. Y. Eyeglass-mounting. No. 1,192,712; July 25; Gaz. vol. 228; p. 1372.
Van Tassel, John R., assignor of one-half to Standard Optical Company, Geneva, and one-half to G. A. Bader, Rochester, N. Y. Eyeglass-mounting. No. 1,192,713; July 25; Gaz. vol. 228; p. 1372.
Van Tassel, John R., assignor of one-half to Standard Optical Company, Geneva, and one-half to G. A. Bader, Rochester, N. Y. Eyeglass-mounting. No. 1,192,714; July 25; Gaz. vol. 228; p. 1372.
Van Valkenburg, Burt R., Oakland, assignor to American Photo Player Company, Berkeley, Cal. Puff-retaining ring. No. 1,191,748; July 18; Gaz. vol. 228; p. 981.
Van Valkenburg, Harry J., Rochester, N. Y. Photo-engraving. No. 1,190,487; July 11; Gaz. vol. 228; p. 492.
Vandercook, Albert E., Alameda, Cal., assignor to California Macvan Company. Amalgamator. No. 1,192,478; July 25; Gaz. vol. 228; p. 1291.
Vandervell, Charles A. (See Midgley, Albert H., assignor.)
Vandevelde, Alexandre, Brussels, Belgium. Means for loading and unloading merchandise. No. 1,190,822; July 11; Gaz. vol. 228; p. 612.
Varnedoe, William A. (See Burchill, Richard D., assignor.)
Varner, John J., assignor of one-half to J. D. Russ, Spencer, W. Va. Releasable wire-rope socket for oil-wells. No. 1,190,345; July 11; Gaz. vol. 228; p. 443.
Vaughan, Henry E. (See Vaughan and Haskell, assignors.)
Vaughan, Sarah F., and E. V. Haskell; said Sarah F. Vaughan assignor to H. E. Vaughan, Worcester, Mass. Mop or duster. No. 1,190,346; July 11; Gaz. vol. 228; p. 443.
Vaughn, Rufus B., La Grange, Mo. Changeable-speed gearing for harvester-binders. No. 1,189,641; July 4; Gaz. vol. 228; p. 155.
Vawter, Charles E., Blacksburg, Va. Pneumatic tire. No. 1,189,511; July 4; Gaz. vol. 228; p. 111.
Vebelunas, Adam A., Munhall, Pa. Structural form. No. 1,190,824; July 11; Gaz. vol. 228; p. 613.
Velt, H. L., *et al.* (See Daugherty, Daniel P., assignor.)
Velmure, Fred J., Medford, Mass. Machine for dressing the edge portions of metal-ware articles. No. 1,192,715; July 25; Gaz. vol. 228; p. 1372.
Verba, Frank J., Colorado Springs, Colo. Laryngoscope. No. 1,190,050; July 4; Gaz. vol. 228; p. 291.
Vermillion, Francis M., Shattuck, Okla. Combination harrow and cultivator. No. 1,190,825; July 11; Gaz. vol. 228; p. 614.
Verral, Arthur E., Toronto, Ontario, Canada. Game apparatus. No. 1,190,488; July 11; Gaz. vol. 228; p. 493.
Verwer, Harry, Pacific Grove, Cal. Sanding and polishing apparatus. No. 1,191,045; July 11; Gaz. vol. 228; p. 692.
Vetter, Clarence A., Pittsburgh, Pa. Waterproof cap and shell for incandescent electric lamps. (Reissue.) No. 14,173; July 25; Gaz. vol. 228; p. 1419.
Vich, James F., Jackson, Minn. Furniture-caster. No. 1,190,826; July 11; Gaz. vol. 228; p. 615.
Vickers, Theodore W., Forsyth, Mont. Electric train-stop system. No. 1,191,749; July 18; Gaz. vol. 228; p. 981.
Vickery, Frederick W., assignor to Vickery's Patents Limited, London, England. Transporter, truck, and the like. No. 1,192,716; July 25; Gaz. vol. 228; p. 1373.
Vickery's Patents Limited. (See Vickery, Frederick W., assignor.)
Victor Shoe Machinery Company. (See Sjostrom, Peter, assignor.)
Victor Talking Machine Company. (See Clair, Oscar J., assignor.)
Victor Talking Machine Company. (See English, John C., assignor.)
Vincent, Ralph O., *et al.* (See Daugherty, Daniel P., assignor.)
Vogel, Eugene W., Oak Park, assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill. Circuit-controlling instrument. No. 1,189,316; July 4; Gaz. vol. 228; p. 39.
Vogell, James M. (See Word, John B., assignor.)
Vogtländische Maschinenfabrik. (See Sieber, Gottwald, assignor.)
Volkmann, William G., Oakland, assignor to A. Schilling & Company San Francisco, Cal. Packaging and preserving tea. No. 1,190,691; July 11; Gaz. vol. 228; p. 568.
Von Culin, Clayton, New York, N. Y., and G. W. Beach, Saybrook, Conn. Dirigible headlight. No. 1,189,512; July 4; Gaz. vol. 228; p. 111.
Von Nieda, John W. (See Royer and Von Nieda.)
Von Pein, Edward J., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,190,489; July 11; Gaz. vol. 228; p. 493.
Von Wolffradt, William A., assignor of one-half to F. Donley, Cleveland, Ohio. Concrete-insert. No. 1,192,804; July 25; Gaz. vol. 228; p. 1403.
Vöster, Fritz, and M. Jungbauer, Augsburg, Germany, assignors, by mesne assignments, to Anglo-American Textile Machinery Company, Abington, Mass. Carding-machine. No. 1,192,805; July 25; Gaz. vol. 228; p. 1403.
W. & E. T. Fitch Co., The. (See Nettleton, George R., assignor.)
Wacher, Charles H. (See Bauroth, Leonhard, assignor.)
Wadhams, Darius T., assignor to N. Gray, Jr., Oswego, N. Y. Paper-cutting machine. No. 1,191,750; July 18; Gaz. vol. 228; p. 982.
Wagner, Albert F. (See Brown and Wagner.)
Wagner, Ernest G., Lewiston, Idaho. Valve construction. No. 1,191,046; July 11; Gaz. vol. 228; p. 693.
Wagner, Herbert A., Short Hills, N. J. Railway signaling system. No. 1,190,247; July 4; Gaz. vol. 228; p. 362.
Wagner, Nicholas J. (See Boismenue and Wagner.)
Wagner, Paul G. (See Post and Wagner.)
Wahl Adding Machine Co. (See Poole, Arthur F., assignor.)
Wahl, Arnold S. (See Wahl, Robert and A. S.)
Wahl, Richard W., Chicago, Ill. Bread-improver and making the same. No. 1,190,827; July 11; Gaz. vol. 228; p. 615.
Wahl, Robert and A. S., Chicago, Ill. Preparing foods for cooking. No. 1,191,047; July 11; Gaz. vol. 228; p. 693.
Waidlich, Walter, Detroit, Mich. Foot-rest for radiators. No. 1,191,048; July 11; Gaz. vol. 228; p. 693.
Waite, Harry C., assignor to Waite Tractor Company, Chicago, Ill. Tractor. No. 1,191,858; July 18; Gaz. vol. 228; p. 1019.
Waite Tractor Company. (See Waite, Harry C., assignor.)
Waick, Hugh H., Chambersburg, Pa. Locomotive-crosshead guide. No. 1,189,318; July 4; Gaz. vol. 228; p. 39.
Walden, Thomas F., Shawnee, Okla. Nut-lock. No. 1,192,717; July 25; Gaz. vol. 228; p. 1373.
Waldron, Nelson B., Lewiston, Me. Centrifugal pump. No. 1,189,889; July 4; Gaz. vol. 228; p. 240.
Wales, Nathaniel B., Boston, Mass., assignor, by mesne assignments, to Selnw Products Company, Saginaw, Mich. Sealing means for engine-valves. No. 1,189,757; July 4; Gaz. vol. 228; p. 193.
Walker, Charles L., London, England. Fluid-pressure apparatus. No. 1,189,319; July 4; Gaz. vol. 228; p. 40.
Walker, Henry B., Lancaster, Ohio. Swivel-socket for oil-wells. No. 1,191,250; July 18; Gaz. vol. 228; p. 806.
Walker, Joseph. (See Engels and Walker.)
Walker, Merit B., Blum, Tex. Well-drill. No. 1,189,513; July 4; Gaz. vol. 228; p. 112.
Walkup, Liberty, Rockford, Ill. Air-brush. No. 1,191,751; July 18; Gaz. vol. 228; p. 982.
Wallace, John G., assignor to Hale & Kilburn Company, Philadelphia, Pa. Welding. No. 1,190,610; July 11; Gaz. vol. 228; p. 536.
Wallace, Leonard W., Richmond, Va. Ladder structure. No. 1,189,514; July 4; Gaz. vol. 228; p. 112.
Wallace, Percy. (See Wallace, Theodore and P.)
Wallace, Theodore and P., Petersham, near Sydney, New South Wales, Australia. Hamper folding go-cart. No. 1,189,515; July 4; Gaz. vol. 228; p. 112.
Wallenstein, Joseph S., New York, N. Y. Wrist-lock for bag-handles or the like. No. 1,192,022; July 25; Gaz. vol. 228; p. 1131.
Waller, Robert H., Nashville, Tenn. Picture-projecting apparatus. No. 1,189,758; July 4; Gaz. vol. 228; p. 193.
Wallis, Arthur H., *et al.* (See Harrison and Brown, assignors.)
Wallis, Frederick L., *et al.* (See Harrison and Brown, assignors.)
Wallis Tractor Company. (See Hendrickson, Robert O., assignor.)
Walsh, Edward J. (See Walsh, Patrick A. and E. J.)
Walsh, John V., Haverhill, Mass. Finishing hat-bodies. No. 1,189,320; July 4; Gaz. vol. 228; p. 40.
Walsh, Patrick A. and E. J., Round Rock, Tex. Apparatus for burning lime. No. 1,191,752; July 18; Gaz. vol. 228; p. 983.
Walter, William L., Pueblo, Colo. Electrotherapeutic apparatus. No. 1,190,490; July 11; Gaz. vol. 228; p. 493.
Walton, Charles S. (See Barber and Walton.)
Walz, Jacob L., Baltimore, Md. Line-spacing attachment for type-writers. No. 1,189,642; July 4; Gaz. vol. 228; p. 155.
Wanee, George M., Oakland, Cal. Tall construction for flying-machines. No. 1,192,248; July 25; Gaz. vol. 228; p. 1212.
Wang, Thorvald, Brooklyn, N. Y. Device for holding cheese and other foods. No. 1,189,759; July 4; Gaz. vol. 228; p. 194.
Ward, Artemas. (See Spaulding, Elijah F., assignor.)
Ward, Theodore G., Pattonsburg, Mo. Collapsible umbrella-frame. No. 1,192,249; July 25; Gaz. vol. 228; p. 1212.
Wardwell, Frank A., Methuen, Mass. Loom picker-winding machine. No. 1,189,412; July 4; Gaz. vol. 228; p. 74.
Ware, Luther L., assignor of one-third to J. P. Stich, Terre Haute, Ind. Railway-crossing. No. 1,191,119; July 11; Gaz. vol. 228; p. 716.
Waring, Arthur B., New York, N. Y. Projectile. No. 1,192,586; July 25; Gaz. vol. 228; p. 1320.
Wark, Robert. (See Harter and Wark.)
Warne, Frederick C., assignor to Roderick Lean Mfg. Company, Mansfield, Ohio. Disk harrow. No. 1,189,890; July 4; Gaz. vol. 228; p. 240.
Warne, Frederick C., assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio. Disk harrow. No. 1,192,023; July 25; Gaz. vol. 228; p. 1131.

Warner, Frank, London, England. Figured velvet fabric. No. 1,191,487; July 18; Gaz. vol. 228; p. 889.
Warner, Lewis K., Lexington, Nebr. Tank. No. 1,191,629; July 18; Gaz. vol. 228; p. 937.
Warner Manufacturing Company. (See Cadman, Addi B., assignor.)
Warren Clock Company. (See Warren, Henry E., assignor.)
Warren, Francis H. (See McCoy, Elijah, assignor.)
Warren, Henry E., Ashland, Mass., assignor to Warren Clock Company, Portland, Me. Escapement mechanism. No. 1,191,850; July 18; Gaz. vol. 228; p. 1019.
Warren, Peter R., Boston, Mass. Temporary cover for candy-boxes and the like. No. 1,192,359; July 25; Gaz. vol. 228; p. 1250.
Washburn, Edwin C., Englewood, N. J. Casting apparatus. No. 1,192,024; July 25; Gaz. vol. 228; p. 1131.
Waterbury Button Company. (See Pilkington, George B., assignor.)
Waterbury-Wallace Company. (See Bouchery, August, assignor.)
Waterman, Clare M., Chicago, Ill. Blue-print-drying machine. No. 1,190,692; July 11; Gaz. vol. 228; p. 568.
Waters, John P. (See Howes, Wright E., assignor.)
Watkins, Edward G., Gardner, Mass. Locking device for elevators. No. 1,191,251; July 18; Gaz. vol. 228; p. 806.
Watkins, Edward G., assignor to Heywood Brothers and Wakefield Company, Gardner, Mass. Combined school desk and chair. No. 1,189,321; July 4; Gaz. vol. 228; p. 40.
Watres, Lewis S., assignor to The National Graphite Lubricator Company, Scranton, Pa. Means for arresting leaks in steam-superheaters. No. 1,189,643; July 4; Gaz. vol. 228; p. 155.
Watson, Alexander H. S. (See Young and Watson.)
Watson, George C., assignor of one-half to I. Stein, New York, N. Y. Convertible vehicle. No. 1,191,252; July 18; Gaz. vol. 228; p. 807.
Watson, Robert Y., Taft, Cal. Trip-valve for oil-well pumps. No. 1,192,587; July 25; Gaz. vol. 228; p. 1329.
Watts, Elmer A., Springfield, and I. L. Dunn, Marietta, Ohio. Coupling. No. 1,190,491; July 11; Gaz. vol. 228; p. 493.
Watts, John, Kansas City, Mo. Charge-forming device for internal-combustion engines. No. 1,191,488; July 18; Gaz. vol. 228; p. 890.
Waugh Draft Gear Company. (See Forsyth, George H., assignor.)
Waugh, James M., Chicago, Ill. Resilient wheel. No. 1,192,139; July 25; Gaz. vol. 228; p. 1170.
Waverly Heating and Supply Company, The. (See Harrington, James B., assignor.)
Way, Alben W. (See Way, John H. and A. W.)
Way, John H. and A. W., St. Davids, Pa.; said John H. Way assignor to said A. W. Way. Transportation and display package for package-sterilized articles. No. 1,189,322; July 4; Gaz. vol. 228; p. 40.
Way, Joseph, Jr., Philadelphia, Pa. Receptacle and bag. No. 1,190,492; July 11; Gaz. vol. 228; p. 494.
Weaver, Robert B., Detroit, Mich., assignor to Bausch Machine Tool Company, Springfield, Mass. Drilling-machine. No. 1,191,915; July 18; Gaz. vol. 228; p. 1040.
Webb, Jean F., Jr., assignor to The International Signal Company, New York, N. Y. Path-clearing apparatus. No. 1,190,611; July 11; Gaz. vol. 228; p. 536.
Weber, Henry, assignor to Latham Machinery Company, Chicago, Ill. Feeding mechanism. No. 1,192,481; July 25; Gaz. vol. 228; p. 1292.
Weber, Johan C. W., Philadelphia, Pa. Valve. No. 1,191,376; July 18; Gaz. vol. 228; p. 852.
Weber, Mathias, *et al.* (See Reimers, Dycke H., assignor.)
Webster, Harry G., Chicago, Ill., assignor, by mesne assignments, to J. R. Garfield, trustee, Cleveland, Ohio. Electrical relay. No. 1,189,891; July 4; Gaz. vol. 228; p. 240.
Webster, Noah, *et al.*, committee. (See Ruggles, George W., assignor.)
Weed, Howard W., Stamford, Conn. Back-rest for seats. No. 1,190,828; July 11; Gaz. vol. 228; p. 615.
Weeks, John E., Three Rivers, Mich. Steam-superheater. No. 1,190,493; July 11; Gaz. vol. 228; p. 494.
Wegener, Frank C., Des Moines, Iowa. Toy pistol. No. 1,190,494; July 11; Gaz. vol. 228; p. 494.
Wegner, Fred, Fairport, N. Y., assignor to G. W. Cobb, Montclair, N. J. Bean-snipper. No. 1,189,323; July 4; Gaz. vol. 228; p. 41.
Wegner, Frederick A., Silver Creek, N. Y. Dust-collector. No. 1,190,051; July 4; Gaz. vol. 228; p. 292.
Wegner, Frederick A., Buffalo, N. Y. Grain-drier. No. 1,191,753; July 18; Gaz. vol. 228; p. 983.
Wehner, George A., Savannah, Ga. Bicycle-lock. No. 1,192,718; July 25; Gaz. vol. 228; p. 1373.
Weigand, William H., Trojan, S. D. Ore-classifier. No. 1,192,806; July 25; Gaz. vol. 228; p. 1404.
Well, Charles L., assignor to Diamond Crystal Salt Company, St. Clair, Mich. Box. No. 1,190,612; July 11; Gaz. vol. 228; p. 537.
Weinbrenner, Julius. (See Helmbohl and Weinbrenner.)
Weingart, Johan A., New York, N. Y. Stenographer's practice device. No. 1,192,025; July 25; Gaz. vol. 228; p. 1132.
Weingarten, Harry, New York, N. Y. Traveling-bag. No. 1,192,720; July 25; Gaz. vol. 228; p. 1374.
Weinstein, Louis, New York, N. Y. Vending-machine. No. 1,191,377; July 18; Gaz. vol. 228; p. 852.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Composition of glass. No. 1,191,630; July 18; Gaz. vol. 228; p. 937.
Weiskopf, William, St. Paul, Minn. Electrically-operated sash-holder. No. 1,189,760; July 4; Gaz. vol. 228; p. 194.
Welander, Wilhelm R., Minneapolis, Minn. Cutting device. No. 1,190,052; July 4; Gaz. vol. 228; p. 292.
Wells, Arthur E., Toronto, Ontario, Canada. Adjustable electric-lamp support. No. 1,189,413; July 4; Gaz. vol. 228; p. 74.
Wells, Arthur E., Toronto, Ontario, Canada. Stair construction. No. 1,189,414; July 4; Gaz. vol. 228; p. 75.
Wells, Joel C., and H. H. Styll, Southbridge, Mass. Eyeglasses. No. 1,191,631; July 18; Gaz. vol. 228; p. 937.
Wells, Spencer A., San Angelo, Tex. Marker. No. 1,192,719; July 25; Gaz. vol. 228; p. 1374.
Welsbach Light Company. (See McKenna, James, assignor.)
Wendell, Carl A., Joliet, Ill. Drier. No. 1,190,829; July 11; Gaz. vol. 228; p. 615.
Wendell, Fred C., deceased; T. S. Wendell, administratrix, New York, N. Y. Ironing-machine. No. 1,189,892; July 4; Gaz. vol. 228; p. 241.
Wendell, Theresa S., administratrix. (See Wendell, Fred C.)
Wendt, Henry W., assignor to Buffalo Forge Company, Buffalo, N. Y. Forge. No. 1,190,693; July 11; Gaz. vol. 228; p. 568.
Wentworth, John F., Quincy, Mass. Internal-combustion engine. No. 1,190,830; July 11; Gaz. vol. 228; p. 616.
Wentworth, Winslow L., Brockton, Mass. Sole-planing machine. No. 1,190,495; July 11; Gaz. vol. 228; p. 495.
Werner, Frederick C., Watertown, Wis. Appliance for treating goiter. No. 1,190,831; July 11; Gaz. vol. 228; p. 616.
Werner, Henry. (See Reichel and Werner.)
Werner, Lester A., Atlantic Highlands, N. J., assignor of one-half to A. E. Hartcorn, New York, N. Y. Internal-combustion engine. No. 1,189,324; July 4; Gaz. vol. 228; p. 41.
Werstler, Roy N., Hartville, assignor of one-half to The H. L. Hurst Manufacturing Company, Canton, Ohio. Transplanting-machine. No. 1,192,140; July 25; Gaz. vol. 228; p. 1171.
Wertz, Peter, Pittsburgh, Pa. Air-brake system. No. 1,192,482; July 25; Gaz. vol. 228; p. 1292.
Wescott, William, Watertown, N. Y. Alarm for paper-making machines. No. 1,190,053; July 4; Gaz. vol. 228; p. 292.
Wesley, Howard R., Detroit, Mich. Sanitary revolving bath-brush. No. 1,191,860; July 18; Gaz. vol. 228; p. 1020.
Wessell, Nickel & Gross. (See Schwarze, Paul, assignor.)
West Disinfecting Company. (See Marcuse, Moses M., assignor.)
West, John H., Carthage, Mo. Silo. No. 1,189,325; July 4; Gaz. vol. 228; p. 41.
West, L. R. (See Meissner, George R., assignor.)
Westberg, William E., Willmar, Minn. Filing-case. No. 1,190,348; July 11; Gaz. vol. 228; p. 444.
Western Brick Company. (See Butterworth and Holmes, assignors.)
Western Electric Company. (See Allen, Roy M., assignor.)
Western Electric Company. (See Boyd, Walter A., assignor.)
Western Electric Company. (See Bullard, Albert M., assignor.)
Western Electric Company. (See Clausen, Henry P., assignor.)
Western Electric Company. (See Dixon, Amos F., assignor.)
Western Electric Company. (See Dyson, Alfred H., assignor.)
Western Electric Company. (See Lundell, Alben E., assignor.)
Western Electric Company. (See Wright, Joseph L., assignor.)
Western Tablet Company. (See Reed, Wilbur E., assignor.)
Western Union Telegraph Company, The. (See Yorke and Benjamin, assignors.)
Westinghouse Air Brake Company. (See Brown, Thomas R., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Electric and Manufacturing Company. (See Aalborg, Christian, assignor.)
Westinghouse Electric and Manufacturing Company. (See Aalborg and Pukerud, assignors.)
Westinghouse Electric and Manufacturing Company. (See Bakken, Andrew H., assignor.)
Westinghouse Electric and Manufacturing Company. (See Brackett, Quincy A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Brown, Harold W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)
Westinghouse Electric and Manufacturing Company. (See Copley, Almon W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Eaton, George M., assignor.)

Westinghouse Electric and Manufacturing Company. (See Jackson, Ray P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Ladoff, Isador, assignor.)
Westinghouse Electric and Manufacturing Company. (See Lamme, Benjamine G., assignor.)
Westinghouse Electric and Manufacturing Company. (See MacDonald, Howard G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Mahoney and Austin, assignors.)
Westinghouse Electric and Manufacturing Company. (See Martin, Frederick S., assignor.)
Westinghouse Electric and Manufacturing Company. (See Moore and Edgecomb, assignors.)
Westinghouse Electric and Manufacturing Company. (See Renshaw, Clarence, assignor.)
Westinghouse Electric and Manufacturing Company. (See Riley, Lynn G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Schaake, William, assignor.)
Westinghouse Electric and Manufacturing Company. (See Scheibe, Harold M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Taylor, Harold B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Tirrill, Allen A., assignor.)
Westlake Machine Company, The. (See Kadow, August, assignor.)
Weston, Paul F., Scranton, and J. N. Sharpsteen, Honesdale, Pa. Package-tie. No. 1,191,049; July 11; Gaz. vol. 228; p. 693.
Wetcarbonizing Limited. (See Testrup, Rigby, and Andrew, assignors.)
Wey, William G., Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Composition for imparting flaming and non-glowing properties to match-splints. No. 1,191,544; July 18; Gaz. vol. 228; p. 909.
Wey, William G., Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Treated match-splints and producing the same. No. 1,191,545; July 18; Gaz. vol. 228; p. 909.
Weyant, Harry S., Yonkers, N. Y. Packing-machine. No. 1,192,250; July 25; Gaz. vol. 228; p. 1212.
Whaley, William B. S., assignor to Ok Reversing Gas Engine Company, Tulsa, Okla. Internal-combustion engine. No. 1,191,253; July 18; Gaz. vol. 228; p. 807.
Whatley, Riley V., Decatur, Tex. Roll-film attachment for plate-cameras. No. 1,191,632; July 18; Gaz. vol. 228; p. 938.
Wheatley, Arthur, Philadelphia, Pa. Milk-bottle bracket and lock. No. 1,191,546; July 18; Gaz. vol. 228; p. 910.
Wheeler, Albert H., Worcester, Mass. Mathematical model. No. 1,192,483; July 25; Gaz. vol. 228; p. 1293.
Wheeler, Archer E. (See Bow, Thill, and Wheeler.)
Wheeler, John L., assignor to Simplex Shoe Machinery Company, St. Louis, Mo. Presser-foot mechanism. No. 1,189,893; July 4; Gaz. vol. 228; p. 241.
Wheeler, Warren F., Stoneham, Mass. Gutter snow-plow. No. 1,190,832; July 11; Gaz. vol. 228; p. 617.
Wheeling Corrugating Company. (See Williams, Maurice W., assignor.)
Wheeling Stamping Company. (See Billeb, George E., assignor.)
Whinery, Samuel, East Orange, N. J. Street cleaning or washing machine. No. 1,191,480; July 18; Gaz. vol. 228; p. 890.
Whitaker, David W., Oak Ridge, N. C. Rake. No. 1,191,378; July 18; Gaz. vol. 228; p. 853.
Whitall Tatum Company. (See Tatum, Charles A., assignor.)
White, Ambrose H., Brooklyn, N. Y. Drying-cylinder. No. 1,189,761; July 4; Gaz. vol. 228; p. 195.
White Company, The. (See Scaife, Arthur J., assignor.)
White, Edward N., *et al.*, trustees. (See Hennessy, Daniel E., assignor.)
White, Edwin L., New York, assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Resilient attachment for shade-holders. No. 1,191,633; July 18; Gaz. vol. 228; p. 938.
White, Ernest M., Globe, Ariz., assignor to Packard Motor Car Company, Detroit, Mich. Valve mechanism. No. 1,189,894; July 4; Gaz. vol. 228; p. 242.
White, Frank W., Meadville, Pa., assignor to The Wm. H. Page Boiler Company. Milling-machine. No. 1,192,807; July 25; Gaz. vol. 228; p. 1404.
White, Howard L., assignor to Underwood Typewriter Company, New York, N. Y. Centrifugal speed-regulator. No. 1,191,254; July 18; Gaz. vol. 228; p. 807.
White, Isidor, Chicago, Ill. Radiator. No. 1,189,762; July 4; Gaz. vol. 228; p. 195.
White, James H., Holt, Ala., assignor, by mesne assignments, to Semet-Solvay Company, Solvay, N. Y. Gate for sludge-boxes. No. 1,192,141; July 25; Gaz. vol. 228; p. 1171.
White, John A., Oxford, Ohio. Mop-pail. No. 1,192,142; July 25; Gaz. vol. 228; p. 1171.
White, John F., and L. B. Ross, Chicago, Ill.; said Ross assignor to said White. Machine for coating fabrics. No. 1,192,143; July 25; Gaz. vol. 228; p. 1172.
White, John L., assignor of one-half to W. F. Schmidt, New York, N. Y. Shade and curtain fixture. No. 1,189,763; July 4; Gaz. vol. 228; p. 195.
White, Nelson, Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind. Adding and listing machine. No. 1,192,721; July 25; Gaz. vol. 228; p. 1374.
White, Richard P., Chicago, Ill. Jar. No. 1,191,634; July 18; Gaz. vol. 228; p. 938.
White, William, London, England. Gas-heater. No. 1,191,050; July 11; Gaz. vol. 228; p. 694.
White, Windsor T., trustee. (See Baumgaertner, Friedrich W., assignor.)
Whitehead, Aura E., Chicago, Ill. Music-sheet-driving mechanism. No. 1,192,144; July 25; Gaz. vol. 228; p. 1172.
Whitehead, Walter J., Hackensack, N. J. Flush-tank. No. 1,192,588; July 25; Gaz. vol. 228; p. 1330.
Whitelaw, James, St. Louis, Mo. Sewing-machine stitch-forming mechanism. No. 1,190,833; July 11; Gaz. vol. 228; p. 617.
Whitelaw, James, St. Louis, Mo. Stop mechanism for sewing-machines. No. 1,191,635; July 18; Gaz. vol. 228; p. 938.
Whiteley, Charles, Newark, N. J. Ornamental article of manufacture, as hat-pin, button, brooch, and the like. No. 1,191,636; July 18; Gaz. vol. 228; p. 939.
Whiteley, George H., Jr., York, Pa., assignor to The Dentists' Supply Company. Mold for making artificial teeth. No. 1,191,637; July 18; Gaz. vol. 228; p. 939.
Whitin Machine Works, The. (See Owen, Oscar L., assignor.)
Whitin Machine Works, The. (See Rooney, Edwin A., assignor.)
Whitin Machine Works. (See Rooney, Elwin H., assignor.)
Whitman, Henry L., St. Louis, Mo. Relief-valve for internal-combustion engines. No. 1,189,764; July 4; Gaz. vol. 228; p. 195.
Whitman, James A. (See Norton, Eugene E., assignor.)
Whitmarsh, William W., Boston, Mass. Combination-lock. No. 1,191,638; July 18; Gaz. vol. 228; p. 940.
Whitney, Charles W., Chicago, Ill. Placing casing in wells. No. 1,189,516; July 4; Gaz. vol. 228; p. 113.
Whitney, Edward H., Superior, Wis. Portable truss. No. 1,190,834; July 11; Gaz. vol. 228; p. 617.
Whitney, Herbert C., Redlands, Cal. Crude-oil burner. No. 1,192,589; July 25; Gaz. vol. 228; p. 1330.
Whitney, Perrin B., assignor to Mesinger-Whitney Electric Company, Inc., New York, N. Y. Centrifugal speed-regulator for dynamos. No. 1,190,496; July 11; Gaz. vol. 228; p. 495.
Whitney, Vincent J., Seattle, Wash. Flange-oiler for car-wheels. No. 1,191,861; July 18; Gaz. vol. 228; p. 1020.
Wiard, John B., Lynn, Mass., assignor to General Electric Company. Induction-motor. No. 1,190,054; July 4; Gaz. vol. 228; p. 292.
Wichmann, Frank J., Belmont, Wis. Bag-tying device. No. 1,191,051; July 11; Gaz. vol. 228; p. 694.
Wick, Oscar, East Grand Forks, Minn. Nursery tree-digger. No. 1,190,055; July 4; Gaz. vol. 228; p. 293.
Wickey, Andrew, East Chicago, Ind. Baling-press. No. 1,189,765; July 4; Gaz. vol. 228; p. 196.
Wiedeman, Henry C., Detroit, Mich. Tank construction. No. 1,191,547; July 18; Gaz. vol. 228; p. 910.
Wiegand, Henry J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Field-rheostat. No. 1,192,360; July 25; Gaz. vol. 228; p. 1250.
Wiegmann, Henry J., Quincy, Ill. Slide for molding-flasks. No. 1,190,056; July 4; Gaz. vol. 228; p. 293.
Wieland, Frederick A., Chicago, Ill. Register and signal mechanism for vehicles. No. 1,190,694; July 11; Gaz. vol. 228; p. 569.
Wijnberg, Abraham, Amsterdam, Netherlands. Regenerating decolorizing-carbon. No. 1,189,896; July 4; Gaz. vol. 228; p. 242.
Wilcox, F. A. (See Kline, Walter, assignor.)
Wilcox, Sarah M., Fairmount, Ill. Spool-holder. No. 1,189,415; July 4; Gaz. vol. 228; p. 75.
Wild, Julius E., Plainfield, N. J., assignor to Bosch Magneto Company, New York, N. Y. Gear-ring for fly-wheels. No. 1,192,590; July 25; Gaz. vol. 228; p. 1331.
Wild, Thomas, Lowell, Mass. Hammer-lock. No. 1,190,970; July 11; Gaz. vol. 228; p. 667.
Wilde, John A., Indianapolis, Ind. Milk-bottle holder. No. 1,190,695; July 11; Gaz. vol. 228; p. 569.
Wildhagen, Oswald, Charlottenburg, Germany, assignor to General Electric Company. Feed-water regulator. No. 1,191,639; July 18; Gaz. vol. 228; p. 940.
Wildt, Edward A., Scranton, Pa. Regulator for dampers and the like. No. 1,189,644; July 4; Gaz. vol. 228; p. 156.
Wiley, Porter A., assignor to Kokomo Electric Co., Kokomo, Ind. Impulse-starter. No. 1,189,326; July 4; Gaz. vol. 228; p. 42.
Wilkes, Samuel G., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn. Child's spoon, fork, or similar article. No. 1,189,897; July 4; Gaz. vol. 228; p. 242.
Wilkes, William H., assignor of one-half to A. C. Rogers, Speigner, Ala. Root-removing plow. No. 1,191,265; July 18; Gaz. vol. 228; p. 808.
Wilkin, John T., Connersville, assignor to The Connersville Blower Company, Indianapolis, Ind. Impeller pump or blower and driver therefor. No. 1,189,766; July 4; Gaz. vol. 228; p. 196.
Wilkins, Charles L., Peoria, Ill. Automatic cut-off and pressure-regulator. No. 1,191,640; July 18; Gaz. vol. 228; p. 941.

Will & Baumer Co., The. (See Engman, Evald J., assignor.)

Willard, Maurice L., Chicago, Ill., assignor to Superior Type Company. Type-holder for stamps. No. 1,190,497; July 11; Gaz. vol. 228; p. 495.

Willard Storage Battery Company, The. (See Willard, Theodore A., assignor.)

Willard, Theodore A., assignor to The Willard Storage Battery Company, Cleveland, Ohio. Connector for storage batteries. No. 1,191,548; July 18; Gaz. vol. 228; p. 910.

Willcox and Gibbs Sewing Machine Company. (See Madison, Alfred L., assignor.)

Willers, George E., assignor to A. D. Cook, Lawrenceburg, Ind. Cam device for pumps. No. 1,191,256; July 18; Gaz. vol. 228; p. 808.

Willetts, Harry H., Tetreaultville, Quebec, Canada. Electric-lamp socket. No. 1,191,641; July 18; Gaz. vol. 228; p. 942.

William Green & Company (Ecclesfield) Limited. (See Bloxham and Owen, assignors.)

William H. Horn & Brother. (See Loux, William F., assignor.)

Williams, Charles H., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake head and hanger connection. No. 1,189,327; July 4; Gaz. vol. 228; p. 42.

Williams, Charles J., Jr., assignor to L. Moore Dry Kiln Co., Jacksonville, Fla. Rail-clamp. No. 1,190,835; July 11; Gaz. vol. 228; p. 618.

Williams, Charles J., Jr., assignor to L. Moore Dry Kiln Co., Jacksonville, Fla. Hanger. No. 1,190,971; July 11; Gaz. vol. 228; p. 667.

Williams, Clifton, Milwaukee, Wis. Sanding apparatus for motor-driven vehicles. No. 1,191,257; July 18; Gaz. vol. 228; p. 808.

Williams, Ernest, New York, N. Y. Soot and scale ejector. No. 1,189,328; July 4; Gaz. vol. 228; p. 43.

Williams, Frank C., Philadelphia, Pa. Mechanism for stopping marine vessels. No. 1,190,614; July 11; Gaz. vol. 228; p. 537.

Williams, Frank C., Philadelphia, Pa., assignor to The Safety Block Signal Company. Automatic electric block-signaling apparatus for railways. No. 1,190,613; July 11; Gaz. vol. 228; p. 537.

Williams, Frederick, assignor to Acme Register Company, Somerville, Mass. Bell-sounding mechanism. No. 1,190,207; July 4; Gaz. vol. 228; p. 347.

Williams, George. (See Brown and Williams.)

Williams, George A., assignor to The Williams Sealing Corporation, Waterbury, Conn. Bottle-capping machine. No. 1,191,258; July 18; Gaz. vol. 228; p. 809.

Williams, Harry S., Ithaca, N. Y., assignor to D. G. Hunt, Salt Lake City, Utah. Diffusion-lens for electric signs and the like. No. 1,190,498; July 11; Gaz. vol. 228; p. 496.

Williams, Henry L. (See Windell, Frank D., assignor.)

Williams, Herman R., Mannington, W. Va. Pumping device for oil-wells. No. 1,192,145; July 25; Gaz. vol. 228; p. 1173.

Williams, Jesse. (See Petersen, William A., assignor.)

Williams, Lloyd A., Burlington, Kans. Shocking-machine. No. 1,190,349; July 11; Gaz. vol. 228; p. 444.

Williams, Louis N. D., Ogontz, Pa. Stitch transferring and uniting device. No. 1,191,642; July 18; Gaz. vol. 228; p. 942.

Williams, Maurice W., Wheeling, W. Va., assignor to Wheeling Corrugating Company. Joint for flumes. No. 1,190,350; July 11; Gaz. vol. 228; p. 445.

Williams, Paul F., assignor to G. & W. Electric Specialty Co., Chicago, Ill. Combination pothead and series cut-out. No. 1,190,836; July 11; Gaz. vol. 228; p. 618.

Williams Sealing Corporation, The. (See Williams, George A., assignor.)

Williams, William E., Chicago, Ill. Making welds with pieces of coated metal and product thereof. No. 1,190,208; July 4; Gaz. vol. 228; p. 347.

Williams, William E., Chicago, Ill. Railway-car-truck center-bearing. No. 1,191,862; July 18; Gaz. vol. 228; p. 1020.

Williams, William E., Chicago, Ill. Means for stiffening sheets of metal and other material. No. 1,191,863; July 18; Gaz. vol. 228; p. 1021.

Williams, William T., and J. Hickey, Detroit, Mich. Horseshoe. No. 1,192,146; July 25; Gaz. vol. 228; p. 1174.

Williamson, Lee, Cache, Okla. Shock-absorbing shaft-coupling. No. 1,189,517; July 4; Gaz. vol. 228; p. 113.

Willis, Harry P., Waterford, N. Y., assignor to Willite Road Construction Company of America. Plastic composition. No. 1,190,615; July 11; Gaz. vol. 228; p. 539.

Willite Road Construction Company of America. (See Kerlin, William L., assignor.)

Willite Road Construction Company of America. (See Willis, Harry P., assignor.)

Willow Grass Rug Company. (See Schwantes, Julius A., assignor.)

Wilmot, Arthur J. (See Ayling, Henry S., assignor.)

Wilmot Castle Company. (See Underwood, Weeden B., assignor.)

Wilsie, Harry, Brooklyn, assignor of one-half to M. J. Ford, New York, N. Y. Machine for lock-joining tubes. No. 1,190,351; July 11; Gaz. vol. 228; p. 445.

Wilsman, Arthur J. (See Gergely, Albert, assignor.)

Wilson, Andrew, and A. Pinkava, Springfield, N. J. Lawn and garden sprinkler. No. 1,191,643; July 18; Gaz. vol. 228; p. 942.

Wilson, Fred A., assignor of one-half to W. H. Marshall, Adrian, Mich. Lantern. No. 1,192,591; July 25; Gaz. vol. 228; p. 1331.

Wilson, Guy A., Salt Lake City, Utah. Toilet-seat. No. 1,189,767; July 4; Gaz. vol. 228; p. 197.

Wilson, Howard M., Pittsburgh, Pa. Magnetic tube-sawing machine. No. 1,191,249; July 18; Gaz. vol. 228; p. 911.

Wilson, Joseph P., Ogdensburg, N. Y. Holder and dash-fastener. No. 1,192,251; July 25; Gaz. vol. 228; p. 1213.

Wilson, Ora L. (See Creager and Wilson.)

Wilson, Roy C. (See Sanborn and Wilson.)

Wilson, Samuel, Chicago, Ill. Overhead-trolley system. No. 1,189,895; July 4; Gaz. vol. 228; p. 242.

Wilson, Stephen G., Philadelphia, Pa. Removable handle device for a whisk broom or brush. No. 1,192,484; July 25; Gaz. vol. 228; p. 1293.

Wilt, Jacob H., Toledo, Ohio. Rope-socket for well-tools. No. 1,192,252; July 25; Gaz. vol. 228; p. 1213.

Wilzin, Arthur, St. Ouen, France. Means for shaping spoon-bowls and the like. No. 1,190,696; July 11; Gaz. vol. 228; p. 569.

Winagle, Daniel E., Gorham, N. Y. Shoe-protector. No. 1,189,329; July 4; Gaz. vol. 228; p. 43.

Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)

Windell, Frank D., Philadelphia, assignor of one-half to H. L. Williams, Pittsburgh, Pa. Apparatus for thermo-humidity control. No. 1,190,697; July 11; Gaz. vol. 228; p. 570.

Window Glass Machine Company. (See Klages, George W., assignor.)

Windsor-Richards, Walter E. (See Davies and Windsor-Richards.)

Winks, John O., San Francisco, Cal. Automatic firearm. No. 1,190,352; July 11; Gaz. vol. 228; p. 446.

Winston, William E., Pacific Grove, Cal. Submarine panoramic exhibition apparatus. No. 1,191,259; July 18; Gaz. vol. 228; p. 810.

Winter, Christian, Oskaloosa, Iowa. Gate. No. 1,192,592; July 25; Gaz. vol. 228; p. 1331.

Wirebounds Patents Company. (See Miller, Julius J., assignor.)

Wisconsin Bridge & Iron Company. (See Jackson, John F., assignor.)

Wistrom, Bernard, Stromsburg, Nebr. Weather and dust proofing device. No. 1,192,361; July 25; Gaz. vol. 228; p. 1251.

Withycombe, Robert M., Sydney, New South Wales, Australia. Attachment for tooth-brushes and the like. No. 1,190,057; July 4; Gaz. vol. 228; p. 293.

Witman, Robert M., assignor to Evansville Stove Works, Evansville, Ind. Oven for combination coal and gas ranges. No. 1,191,379; July 18; Gaz. vol. 228; p. 853.

Witsell, John W., Charleston, S. C. Adding-machine. No. 1,190,058; July 4; Gaz. vol. 228; p. 294.

Wittich, William F., Erie, Pa. Tunneling-machine. No. 1,191,864; July 18; Gaz. vol. 228; p. 1021.

Wm. G. Hesse & Son Mfg. Co., The. (See Kern, Walter C., assignor.)

Wm. H. Page Boiler Company, The. (See White, Frank W., assignor.)

Wolf, Henry C., Catawissa, Pa. Tree-trimmer. No. 1,190,059; July 4; Gaz. vol. 228; p. 294.

Wolf, John. (See Hawn, Andrew P., assignor.)

Wolfe, Howard, Plymouth, Ind. Automobile-stand. No. 1,190,837; July 11; Gaz. vol. 228; p. 619.

Wolff, Georg, Hermsdorf, near Berlin, Germany, assignor to General Electric Company. Electric switch. No. 1,190,060; July 4; Gaz. vol. 228; p. 295.

Wolff, Oscar M., Chicago, Ill. Refrigerator-counter bracket. No. 1,192,593; July 25; Gaz. vol. 228; p. 1332.

Wolken, Herman E., Leigh, Nebr. Bowling-ball cleaner. No. 1,191,360; July 18; Gaz. vol. 228; p. 810.

Wood, Charles D., Lakewood, assignor to The Grasselli Chemical Company, Cleveland, Ohio. Making corrugated board. No. 1,189,518; July 4; Gaz. vol. 228; p. 113.

Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Convertible folding-machine for inserts and onserts. No. 1,191,261; July 18; Gaz. vol. 228; p. 810.

Wood, James, Noblesville, Ind. Machine for forming heel-calks on horseshoes. No. 1,191,644; July 18; Gaz. vol. 228; p. 943.

Wood, James J., Fort Wayne, Ind., assignor to General Electric Company. Thermostat. No. 1,190,061; July 4; Gaz. vol. 228; p. 295.

Wood, Jasper W., assignor of forty-five one-hundredths to T. J. Murphy and ten one-hundredths to F. C. Blodgett, Needles, Cal. Cylinder-drive engine. No. 1,190,888; July 11; Gaz. vol. 228; p. 619.

Wood Newspaper Machinery Corporation. (See Wood, Henry A. W., assignor.)

Wood, Orson A., Blissfield, Mich. Demountable-rim tool. No. 1,192,147; July 25; Gaz. vol. 228; p. 1174.

Wood, Robert, Brooklyn, assignor to The Nathan Manufacturing Company, New York, N. Y. Lubricator. No. 1,192,253; July 25; Gaz. vol. 228; p. 1214.

Wood, Rosebert A., Pennington Gap, Va. Rat-trap. No 1,191,550; July 18; Gaz. vol. 228; p. 911.

Wood, Walter H., assignor of one-half to J. D. Paris, Forest, Idaho. Handsaw-set. No. 1,190,972; July 11; Gaz. vol. 228; p. 668.

Woodbridge, Joseph L., Philadelphia, Pa. System of electrical distribution. No. 1,189,768; July 4; Gaz. vol. 228; p. 197.

Wooding, Benjamin F., Denver, Colo. Electrical block-signaling apparatus for railways. No. 1,191,262; July 18; Gaz. vol. 228; p. 810.

Woodman, George A., assignor to Kirby Equipment Company, Chicago, Ill. Journal-box lid. No. 1,191,263; July 18; Gaz. vol. 228; p. 811.

Woodruff, Leonidas D., Newport, Ky. Fluid-pressure coupling. No. 1,190,062; July 4; Gaz. vol. 228; p. 296.

Woodruff, William W., Ardmore, assignor to Brown & Bailey Company, Philadelphia, Pa. Collapsible fabric-holder. No. 1,192,594; July 25; Gaz. vol. 228; p. 1332.

Woods, Clinton E., Bridgeport, Conn. Speed-governor. No. 1,192,026; July 25; Gaz. vol. 228; p. 1132.

Woods, Leads, Stewart, Ala. Air-coupling. No. 1,190,063; July 4; Gaz. vol. 228; p. 296.

Woods, Fred M., assignor to Stover Manufacturing Company, Freeport, Ill. Comminuting device. No. 1,190,499; July 11; Gaz. vol. 228; p. 496.

Woodward, Irving C., Chicago, Ill., assignor to American Postage Meter Co. Stop mechanism. No. 1,190,616; July 11; Gaz. vol. 228; p. 538.

Woody, Cortez L., Judyville, Ind. Attachment for traces. No. 1,190,064; July 4; Gaz. vol. 228; p. 297.

Woolery, Lawrence E., Glendale, Ariz. Cow-tail holder and hobble. No. 1,189,330; July 4; Gaz. vol. 228; p. 43.

Worcester Electric & Mfg. Co. (See McGrady, James P., assignor.)

Word, John B., Latrobe, assignor of two-thirds to J. M. Vogell, Sacramento, Cal. Lawn-mower. No. 1,189,519; July 4; Gaz. vol. 228; p. 113.

Workman, Frances W., Los Angeles, Cal. Undergarment. No. 1,191,865; July 18; Gaz. vol. 228; p. 1021.

Workman, Frank H., Cleveland, Ohio. Automatic train-stop. No. 1,192,254; July 25; Gaz. vol. 228; p. 1214.

Worth, William E., San Francisco, Cal. Lettering-pen. No. 1,189,331; July 4; Gaz. vol. 228; p. 43.

Wray, Leonard E., Minneapolis, Minn. Flexible grain-spout. No. 1,192,485; July 25; Gaz. vol. 228; p. 1293.

Wren, Lamont S. (See Joerden, Harry J., assignor.)

Wride, John F., Sodus, N. Y. Can-labeling machine. No. 1,191,264; July 18; Gaz. vol. 228; p. 811.

Wright, George W., Azuza, Cal. Device for wiring beehive-frames. No. 1,191,052; July 11; Gaz. vol. 228; p. 694.

Wright, Gilbert, Schenectady, N. Y., assignor to General Electric Company. Shade-mounting. No. 1,192,722; July 25; Gaz. vol. 228; p. 1375.

Wright, Joseph L., Cleveland, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,191,265; July 18; Gaz. vol. 228; p. 812.

Wright, Morris S., assignor to M. S. Wright Co., Worcester, Mass. Vent-cap. No. 1,190,353; July 11; Gaz. vol. 228; p. 446.

Wright, Walter, assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,192,255; July 25; Gaz. vol. 228; p. 1214.

Wupper, Cecilia. (See Best, William N., assignor.)

Wyble, Lloyd E., Kansas City, Mo. Safety attachment for moving-picture machines. No. 1,190,354; July 11; Gaz. vol. 228; p. 446.

Wyckoff, J. Lewis, *et al.*, trustees. (See Hennessy, Daniel E., assignor.)

Wygodsky, Leon, New York, N. Y., assignor, by mesne assignments, to Baltimore Oil Engine Company, Baltimore, Md. Pump. No. 1,191,645; July 18; Gaz. vol. 228; p. 943.

Yale & Towne Manufacturing Company, The. (See Schoell, Reinhold, assignor.)

Yaryan, Homer T., Toledo, Ohio. Concentrating metallic ores by flotation. No. 1,191,053; July 11; Gaz. vol. 228; p. 694.

Yeakley, Melvin A., assignor to J. E. McLain, Canton, Ohio. Trolley-stand. No. 1,191,054; July 11; Gaz. vol. 228; p. 695.

Yeakley, Melvin A., assignor to J. E. McLain, Canton, Ohio. Trolley-stand. No. 1,191,055; July 11; Gaz. vol. 228; p. 695.

Yelle, George. (See Kennedy and Yelle.)

York, Victor, Los Angeles, Cal. Swivel. No. 1,190,209; July 4; Gaz. vol. 228; p. 348.

Yorke, George M., New York, N. Y., and G. R. Benjamin, Jersey City, N. J., assignors to The Western Union Telegraph Company, New York, N. Y. Means for synchronizing rotary devices. No. 1,191,933; July 18; Gaz. vol. 228; p. 1047.

Yorke, Horace M., Lewiston, Me. Garment-hook. No. 1,190,355; July 11; Gaz. vol. 228; p. 446.

Yost, Claude H., Greenwich, Conn. Gun-carriage. No. 1,190,356; July 11; Gaz. vol. 228; p. 447.

Yost Electric Manufacturing Company, The. (See Gordon, David D., assignor.)

Yost, Ray, Tyrone, N. Y. Pneumatic-tire sleeve or patch. No. 1,190,065; July 4; Gaz. vol. 228; p. 297.

Yost, Winfield H., Montreal, Quebec, Canada. Car side construction. No. 1,190,357; July 11; Gaz. vol. 228; p. 447.

Young, Arthur P., Kenilworth, and A. H. S. Watson, Coventry, England, assignors to General Electric Company. Electromagnetic relay. No. 1,190,066; July 4; Gaz. vol. 228; p. 297.

Young, Chester, Livermore, Cal. Disk harrow. No. 1,189,332; July 4; Gaz. vol. 228; p. 44.

Young, Jesse S., Chicago, Ill. Power-transmission belting. No. 1,192,362; July 25; Gaz. vol. 228; p. 1251.

Young, Leonard A., Highland Park, Mich. Seat-back spring. No. 1,192,363; July 25; Gaz. vol. 228; p. 1251.

Young, Maria J., Barnesville, Minn. Combined quilting-frame and curtain-stretcher. No. 1,192,486; July 25; Gaz. vol. 228; p. 1294.

Young, Samuel L., assignor of one-half to W. H. Hill, New Castle, Pa. Bill-file. No. 1,190,358; July 11; Gaz. vol. 228; p. 447.

Younglove, Sidney E., Monroe, Mich. Draw-string for bath-mitts. No. 1,189,333; July 4; Gaz. vol. 228; p. 44.

Youngren, Oscar A., Sheridan, Wyo. Spring-seat. No. 1,189,769; July 4; Gaz. vol. 228; p. 197.

Youngs, Edward L., Detroit, Mich. Ventilator. No. 1,192,595; July 25; Gaz. vol. 228; p. 1332.

Ysskin, Herman, Newark, N. J. Folding table. No. 1,189,645; July 4; Gaz. vol. 228; p. 156.

Yuba Construction Company, The. (See Henneuse, Clarence A., assignor.)

Yuba Construction Company, The. (See Schifferle, Charles, assignor.)

Zabel, Max W., trustee. (See Borresen, Helge A., assignor.)

Zabriskie, Edgar, *et al.* (See Rosentreter, Albert J., assignor.)

Zanone, Richard J., New Albany, Ind., assignor to The Automatic Package Scale Company, Louisville, Ky. Automatic scale. No. 1,189,416; July 4; Gaz. vol. 228; p. 75.

Zeigler, Frank P., Renovo, Pa. Range-boiler. No. 1,192,256; July 25; Gaz. vol. 228; p. 1215.

Zeiss, Firm of Carl. (See Eppenstein, Otto, assignor.)

Zenge, Harry H. and W. J. C., Canton, Mo. Pickle-grading machine. No. 1,190,067; July 4; Gaz. vol. 228; p. 297.

Zenge, William J. C. (See Zenge, Harry H. and W. J. C.)

Ziegler, Albert H., Kiester, Minn. Fumigator No. 1,191,266; July 18; Gaz. vol. 228; p. 812.

Zigler, Charles J., and W. P. Holden, Chicago, Ill. Electric switch. No. 1,190,359; July 11; Gaz. vol. 228; p. 448.

Zimmerman, Charles P., Dayton, Ohio. Scale-beam box. No. 1,189,417; July 4; Gaz. vol. 228; p. 76.

Zipilinsky, Henry E., Lancaster, Pa. Nut-lock. No. 1,190,360; July 11; Gaz. vol. 228; p. 448.

Zok, Clemens, Muskegon, Mich. Feeding device. No. 1,192,487; July 25; Gaz. vol. 228; p. 1294.

Zucker, Samuel, New York, N. Y. Combination fan and bag. No. 1,192,364; July 25; Gaz. vol. 228; p. 1252.

Zumwalt, Chester D., Center, Mo. Armored automobile. No. 1,191,380; July 18; Gaz. vol. 228; p. 853.

Zumwalt, Chester D., Center, Mo. Magazine-charger for firearms. No. 1,192,723; July 25; Gaz. vol. 228; p. 1375.

Zwiebel, Amel L., Valley, Nebr. Truck for handling cement blocks. No. 1,190,361; July 11; Gaz. vol. 228; p. 448.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. Stein & Company. (See Liebenstein, Max J., assignor.)
Adam, Harry C., St. Louis, Mo. Lighting-fixture. No. 49,412; July 25; Gaz. vol. 228; p. 1419.
Allan, Joseph W., New York, N. Y. Badge or button. No. 49,413; July 25; Gaz. vol. 228; p. 1419.
Allan, Roger S., Louisville, Ky. Bottle. No. 49,379; July 18; Gaz. vol. 228; p. 1061.
American Tire and Rubber Company, The. (See Wilson, Wesley E., assignor.)
American Type Founders Company. (See Capitain, William F., assignor.)
Anderson, Annie A. R., Minneapolis, Minn. Soap-dish. No. 49,414; July 25; Gaz. vol. 228; p. 1419.
Anguilli, Luigi, New York, N. Y. Electric lamp. No. 49,380; July 18; Gaz. vol. 228; p. 1061.
Asbury, Harry E., and E. E. Punzelt, assignors to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa. Casing of a coffee-mill. No. 49,324; July 11; Gaz. vol. 228; p. 723.
Backstrom, Charles A., Crafton, Pa., assignor to Pittsburg Water Heater Company. Water-heater shell. No. 49,381; July 18; Gaz. vol. 228; p. 1062.
Bagnulo, Salvatore, East Boston, Mass. Candy-cup. Nos. 49,415–16; July 25; Gaz. vol. 228; p. 1420.
Bartlett, Edward E., New York, N. Y., assignor to Mergenthaler Linotype Company. Font of type. No. 49,382; July 18; Gaz. vol. 228; p. 1062.
Basheller, Frank M., Jenkintown, Pa. Printer's cabinet. No. 49,294; July 4; Gaz. vol. 228; p. 374.
Bechtold, William S., Newark, N. J. Hair pin or comb. No. 49,417; July 25; Gaz. vol. 228; p. 1420.
Becker, Caspar, Willow Grove avenue, Montgomery county, assignor to Becker, Smith & Page, Philadelphia, Pa. Wall-paper. No. 49,383; July 18; Gaz. vol. 228; p. 1062.
Becker, Smith & Page. (See Becker, Caspar, assignor.)
Bennett, Arthur J., Cambridge, Ohio. Combined centerpiece and flower-holder. No. 49,384; July 18; Gaz. vol. 228; p. 1062.
Benson, Leonard R. (See Shultz, Otto H., assignor.)
Bigelow Hartford Carpet Company. (See Elliot, William A., assignor.)
Bigelow Hartford Carpet Company. (See Sauer, Emil G., assignor.)
Bigelow Hartford Carpet Company. (See Spring, John, assignor.)
Bikle, Horace W., Pittsburgh, Pa. Badge, button, pin, or insignia. No. 49,325; July 11; Gaz. vol. 228; p. 723.
Bowman, Samuel, Lancaster, Pa. Bread and cake knife. No. 49,295; July 4; Gaz. vol. 228; p. 374.
Brady, James H., Louisville, Ky. Can-opener. No. 49,326; July 11; Gaz. vol. 228; p. 724.
Brass Manufacturing Company. (See Engel, August, assignor.)
Braunwarth, Otto, New York, N. Y. Tire-tread. No. 49,296; July 4; Gaz. vol. 228; p. 374.
Brunswick-Balke-Collender Company. (See Hine, Cicero, assignor.)
Buehner, William F. A., Newark, N. J., assignor, by mesne assignments, to R. H. Lindley. Engine-cylinder. No. 49,327; July 11; Gaz. vol. 228; p. 724.
Camp, Clarence L., Spokane, Wash. Suspenders. No. 49,418; July 25; Gaz. vol. 228; p. 1420.
Capitain, William F., Bayonne, assignor to American Type Founders Company, Jersey City, N. J. Font of type. No. 49,419; July 25; Gaz. vol. 228; p. 1420.
Conde, Frederic, Oswego, N. Y. Garment-collaret. No. 49,411; July 18; Gaz. vol. 228; p. 1067.
Crex Carpet Company. (See Waldo, Algermont H., assignor.)
Curtiss, George E., New Britain, Conn., assignor to Landers, Frary & Clark, New York, N. Y. Vacuum-bottle case. No. 49,420; July 25; Gaz. vol. 228; p. 1420.
De Santis, Quadrio, Trenton, N. J. Display-rack. No. 49,328; July 11; Gaz. vol. 228; p. 724.
Dickover, Cecil C., New York, N. Y. Emblem, brooch, button, fob, or similar article. No. 49,329; July 11; Gaz. vol. 228; p. 724.
Ebeling, Phillip, assignor to Fostoria Glass Company, Moundsville, W. Va. Glass dish or similar article. No. 49,330; July 11; Gaz. vol. 228; p. 724.
Elkins, David H., Amesbury, Mass. Automobile-lamp. No. 49,298; July 4; Gaz. vol. 228; p. 375.
Elliot, William A., Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company. Rug. Nos. 49,421–2; July 25; Gaz. vol. 228; pp. 1420–1.
Elliot, William A., Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company. Carpet. Nos. 49,423–9; July 25; Gaz. vol. 228; pp. 1421–2.
Engel, August, assignor to Milwaukee Brass Manufacturing Company, Milwaukee, Wis. Faucet. No. 49,332; July 11; Gaz. vol. 228; p. 725.
Enterprise Manufacturing Company, The. (See Asbury and Punzelt, assignors.)
Esenberg, Theodore C., Kansas City, Mo. Signal-lamp for vehicles. No. 49,299; July 4; Gaz. vol. 228; p. 375.
Evans, Howard S., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Lamp-shade. No. 49,331; July 11; Gaz. vol. 228; p. 724.
Feldman, Abraham G., assignor to The Glass Novelty Co., Chicago, Ill. Stool or taboret. No. 49,385; July 18; Gaz. vol. 228; p. 1062.
Fischer, Edward J., Cincinnati, Ohio. Talking-machine cabinet. No. 49,300; July 4; Gaz. vol. 228; p. 375.
Fostoria Glass Company. (See Ebeling, Phillip, assignor.)
Fried, Henry, Brooklyn, N. Y. Toy. No. 49,301; July 4; Gaz. vol. 228; p. 375.
Friedley-Voshardt Co. (See Mohrmann, Paul, assignor.)
German-American Button Company. (See Monaghan, John S., assignor.)
Giles, Harvey, Brooklyn, assignor to A. Ward, New York, N. Y. Coin-operated-vending-machine casing. No. 49,333; July 11; Gaz. vol. 228; p. 725.
Glass Novelty Co., The. (See Feldman, Abraham G., assignor.)
Gosztylla, Frank, Detroit, Mich. Pocket-knife. No. 49,334; July 11; Gaz. vol. 228; p. 725.
Graham, Andrew W., assignor to Memorials Art Company, Incorporated, Buffalo, N. Y. Sepulchral memorial. Nos. 49,335–51; July 11; Gaz. vol. 228; pp. 725–7.
Grodkowsky, Charles, Baltimore, Md. Curtain-pediment. No. 49,352; July 11; Gaz. vol. 228; p. 727.
Guth, Edwin F., assignor to Luminous Unit Company, St. Louis, Mo. Lighting-fixture. No. 49,302; July 4; Gaz. vol. 228; p. 375.
Guth, Edwin F., assignor to Luminous Unit Co., St. Louis, Mo. Reflector for lighting-fixtures. No. 49,386; July 18; Gaz. vol. 228; p. 1063.
Gyurina, Julius, West Chester, Pa. Cigar and ash tray. No. 49,303; July 4; Gaz. vol. 228; p. 375.
Hadley, Edmund P. (See Holden and Hadley.)
Hall, Alfred, Boston, Mass. Game-board. No. 49,304; July 4; Gaz. vol. 228; p. 376.
Haskins, Henry C., Glen Ridge, N. J. Handhold for car-straps. No. 49,430; July 25; Gaz. vol. 228; p. 1422.
Heller, Samuel, New York, N. Y. Precious, semiprecious, or synthetic stone or an imitation thereof. No. 49,305; July 4; Gaz. vol. 228; p. 376.
Hem, Halvor O., Toledo, Ohio, assignor to Toledo Scale Company, Jersey City, N. J. Scale-casing. No. 49,306; July 4; Gaz. vol. 228; p. 376.
Hickson, Edwin J., Butler, Pa. Bed-mount. No. 49,307; July 4; Gaz. vol. 228; p. 376.
Hine, Cicero, assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Game-table. No. 49,387; July 18; Gaz. vol. 228; p. 1063.
Hobbs Wall Paper Company, The. (See Korzinek, John, assignor.)
Hoffman, Rudolph, Kankakee, assignor to Sears, Roebuck and Company, Chicago, Ill. Range. No. 49,353; July 11; Gaz. vol. 228; p. 728.
Hogue, Charles F., Cunningham, Kans. Gate. No. 49,388; July 18; Gaz. vol. 228; p. 1063.
Holden, Crofton C., and E. P. Hadley, Leominster, Mass. Sport-comb. No. 49,431; July 25; Gaz. vol. 228; p. 1422.
Hollier, George A., Sioux Falls, S. D. Ring. No. 49,432; July 25; Gaz. vol. 228; p. 1422.
Hornby, Frank, Liverpool, England. Girder-strip. No. 49,308; July 4; Gaz. vol. 228; p. 376.
Howell, Hamilton T., Woodside, N. Y. Artificial-light fixture. No. 49,309; July 4; Gaz. vol. 228; p. 376.
Ilich, Herbert H., New York, N. Y. Glare-screen. No. 49,354; July 11; Gaz. vol. 228; p. 728.
Jenkins, Charles E., Chicago, Ill. Rubber tire. No. 49,433; July 25; Gaz. vol. 228; p. 1422.
Johanson, Anton W., Chicago, Ill. Handle of a spoon or similar article. No. 49,355; July 11; Gaz. vol. 228; p. 728.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Arm for electric brackets and chandeliers. No. 49,310; July 4; Gaz. vol. 228; p. 377.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Oval arm for chandeliers and brackets. No. 49,389; July 18; Gaz. vol. 228; p. 1063.
Josephson, Adalbert, New York, N. Y. Display-stand. No. 49,434; July 25; Gaz. vol. 228; p. 1423.
Kaupmann, Frederick, New York, N. Y. Spoon, fork, or similar article. No. 49,311; July 4; Gaz. vol. 228; p. 377.
Korzinek, John, Passaic, N. J., assignor to The Hobbs Wall Paper Company. Design to be applied to wall-paper. No. 49,356; July 11; Gaz. vol. 228; p. 728.

Korzinek, John, Passaic, N. J., assignor to The Hobbs Wall Paper Company. Floral border to be applied to wall-paper. No. 49,409; July 18; Gaz. vol. 228; p. 1067.
Kraft, Henry P., Ridgewood, N. J. Dust-cap for valves. No. 49,435; July 25; Gaz. vol. 228; p. 1423.
Kuczabowski, Zygmunt, St. Paul, Minn. Watch-holder. No. 49,357; July 11; Gaz. vol. 228; p. 729.
La Chapelle, Duval, Nyack, N. Y. Hull of a gliding boat. No. 49,358; July 11; Gaz. vol. 228; p. 729.
Lanam, George M. (See Rawlings and Lanam.)
Landers, Frary & Clark. (See Curtiss, George E., assignor.)
Lee, William M., assignor of one-half to L. H. Peery, Ogden, Utah. Rope-clamp. No. 49,312; July 4; Gaz. vol. 228; p. 377.
Levy, Ellie A., Fort Worth, Tex. Badge. No. 49,390; July 18; Gaz. vol. 228; p. 1063.
Liebenstein, Max J., assignor to A. Stein & Company, Chicago, Ill. Garter. No. 49,391; July 18; Gaz. vol. 228; p. 1063.
Lindley, Reuben H. (See Buehner, William F. A., assignor.)
Lloyd, Thomas, Boston, Mass. Holy-water font. No. 49,392; July 18; Gaz. vol. 228; p. 1064.
Luminous Unit Company. (See Guth, Edwin F., assignor.)
Macbeth-Evans Glass Company. (See Evans, Howard S., assignor.)
Mapel, Lewis A., assignor to Mechanical Development Company of Missouri, St. Louis, Mo. Electric time-switch and indicator. No. 49,436; July 25; Gaz. vol. 228; p. 1423.
Marker, Willis, Atlanta, Ga. Monument. No. 49,359; July 11; Gaz. vol. 228; p. 729.
Marshall, Walter L., Philadelphia, Pa., assignor to Victor Talking Machine Company. Display-sign. No. 49,437; July 25; Gaz. vol. 228; p. 1423.
McNeil, Charles A., New York, N. Y. Emblem. No. 49,360; July 11; Gaz. vol. 228; p. 729.
Mechanical Development Company of Missouri. (See Mapel, Lewis A., assignor.)
Memorials Art Company. (See Graham, Andrew W., assignor.)
Mergenthaler Linotype Company. (See Bartlett, Edward E., assignor.)
Metal Arts & Crafts Co. (See Jones, Charles E., assignor.)
Minuto, Renato, assignor to Universal Metal Spinning & Stamping Company, New York, N. Y. Shower-pan for lighting-fixtures. Nos. 49,361–2; July 11; Gaz. vol. 228; p. 730.
Moe Levin & Company. (See Westerlind, Aksel, assignor.)
Mohrmann, Paul, assignor to Friedley-Voshardt Co., Chicago, Ill. Two-light shower-plate. No. 49,363; July 11; Gaz. vol. 228; p. 730.
Monaghan, John S., assignor to German-American Button Company, Rochester, N. Y. Button. No. 49,313; July 4; Gaz. vol. 228; p. 377.
Monaghan, John S., assignor to German-American Button Company, Rochester, N. Y. Button. No. 49,364; July 11; Gaz. vol. 228; p. 730.
Moore, Thomas, Davenport, Iowa. Egg-candler. Nos. 49,393–4; July 18; Gaz. vol. 228; p. 1064.
Morgan, Jacque L., Kansas City, Mo. Scooter. No. 49,395; July 18; Gaz. vol. 228; p. 1064.
Müller, Henry N., Pittsburgh, Pa. Strain-insulator. No. 49,365; July 11; Gaz. vol. 228; p. 730.
Nagel, Hans, Brooklyn, assignor to Palm, Fechteler & Co., New York, N. Y. Plate or similar article. No. 49,438; July 25; Gaz. vol. 228; p. 1423.
Nelson Jesse A., Ellsworth, Iowa. Electric lamp. No. 49,439; July 25; Gaz. vol. 228; p. 1423.
New York Sporting Goods Company. (See Robinson, Powhatan, assignor.)
Nitsche, Louis, Johnsonburg, Pa. Stand or pedestal. No. 49,314; July 4; Gaz. vol. 228; p. 377.
Nones, Joseph A., New York, N. Y. Display-stand. No. 49,366; July 11; Gaz. vol. 228; p. 731.
O'Connor, Alfred, Northport, N. Y. Peace-flag. No. 49,367; July 11; Gaz. vol. 228; p. 731.
Oliver, Doctor F., Oakland, Cal. Automobile-body. No. 49,396; July 18; Gaz. vol. 228; p. 1064.
Osterbauer, Edwin J., Rockford, Ill. Combination kitchen article. No. 49,368; July 11; Gaz. vol. 228; p. 731.
Palm, Fechteler & Co. (See Nagel, Hans, assignor.)
Peery, Louis H. (See Lee, William M., assignor.)
Pelton, Clyde S., Cleveland Heights, Ohio. Heater for self-propelled vehicles. No. 49,440; July 25; Gaz. vol. 228; p. 1424.
Pichel, Herman, assignor to Samstag & Hilder Bros., New York, N. Y. Hair ornament. Nos. 49,397–9; July 18; Gaz. vol. 228; pp. 1064–5.
Pittsburg Water Heater Company. (See Backstrom, Charles A., assignor.)
Punzelt, Edward E. (See Asbury and Punzelt.)
Quackenbush, Grace M., New York, N. Y. Ornamental head. Nos. 49,441–2; July 25; Gaz. vol. 228; p. 1424.
R. Wallace & Sons Mfg. Co. (See Wilkes, Samuel G., assignor.)
Raleigh, Jessie M., Chicago, Ill. Statuette. No. 49,443; July 25; Gaz. vol. 228; p. 1424.
Rawlings, George W., and G. M. Lanam, Dayton, Wash. Indicator. No. 49,315; July 4; Gaz. vol. 228; p. 378.
Rawlings, George W., and G. M. Lanam, Dayton, Wash. Indicator. No. 49,444; July 25; Gaz. vol. 228; p. 1424.
Ritter, Jacob, New York, N. Y. Clasp device. No. 49,445; July 25; Gaz. vol. 228; p. 1424.
Robinson, Powhatan, assignor to New York Sporting Goods Company, New York, N. Y. Tent. No. 49,446; July 25; Gaz. vol. 228; p. 1424.
Ryland, Cally T. (See Wise and Ryland.)
Samstag & Hilder Bros. (See Pichel, Herman, assignor.)
Samuels, Malmon, Seattle, Wash. Surgical instrument. No. 49,316; July 4; Gaz. vol. 228; p. 378.
Sargent & Company. (See Sargent, Henry B., assignor.)
Sargent, Henry B., assignor to Sargent & Company, New Haven, Conn. Operating-bar for emergency-exit locks. No. 49,410; July 18; Gaz. vol. 228; p. 1067.
Sauer, Emil G., Richmond Hill, N. Y., assignor to Bigelow Hartford Carpet Company. Rug. Nos. 49,447–63; July 25; Gaz. vol. 228; pp. 1425–8.
Saxton, Minnie A., Washington, D. C. Doll. No. 49,400; July 18; Gaz. vol. 228; p. 1065.
Schwahn, Rudolph A., Eau Claire, Wis. Hip-drop trace-carrier. No. 49,369; July 11; Gaz. vol. 228; p. 731.
Scripps-Booth Company. (See Stout, William B., assignor.)
Sears, Roebuck and Company. (See Hoffman, Rudolph, assignor.)
Sebring, Charles L., assignor to The Sebring Pottery Company, Sebring, Ohio. Article of manufacture. No. 49,464; July 25; Gaz. vol. 228; p. 1428.
Sebring Pottery Company, The. (See Sebring, Charles L., assignor.)
Shultz, Otto H., assignor of one-fourth to L. R. Benson, Windsor, Ontario, Canada. Apparel-hook. No. 49,317; July 4; Gaz. vol. 228; p. 378.
Signal Motor Truck Company. (See Squires, John, assignor.)
Silverman, Joseph, Chicago, Ill. Wire chair-back. No. 49,401; July 18; Gaz. vol. 228; p. 1065.
Simms, Charles F., Attleboro, Mass. Spoon, fork, or similar article. No. 49,318; July 4; Gaz. vol. 228; p. 378.
Simms, Charles F., assignor to The Watson Company, Attleboro, Mass. Spoon, fork, or similar article. Nos. 49,370–1; July 11; Gaz. vol. 228; pp. 731–2.
Snow, Robert F., Elba, Ala. Lamp. No. 49,297; July 4; Gaz. vol. 228; p. 374.
Snow, Wilmer S., Chicago, Ill. Lighting-fixture. No. 49,372; July 11; Gaz. vol. 228; p. 732.
Sonberg, Bennett, New York, N. Y. Fern-dish hanger. No. 49,402; July 18; Gaz. vol. 228; p. 1065.
Speaker, Charles E., Louisville, Ky. Combined seat and telephone-stand. No. 49,319; July 4; Gaz. vol. 228; p. 378.
Spring, John, East Yonkers, N. Y., assignor to Bigelow Hartford Carpet Company. Rug. Nos. 49,465–9; July 25; Gaz. vol. 228; pp. 1428–9.
Squires, John, assignor to Signal Motor Truck Company, Detroit, Mich. Radiator-fender. No. 49,373; July 11; Gaz. vol. 228; p. 732.
Stokes, Robert J., assignor to Thermoid Rubber Company, Trenton, N. J. Vehicle-tire. Nos. 49,403–4; July 18; Gaz. vol. 228; p. 1066.
Stout, William B., assignor to Scripps-Booth Company, Detroit, Mich. Automobile-body. No. 49,374; July 11; Gaz. vol. 228; p. 732.
Straker, Herbert J., assignor to Webster Company, North Attleboro, Mass. Mirror, brush, or similar article. No. 49,470; July 25; Gaz. vol. 228; p. 1429.
Taylor, Thomas, Hanley, England. Egg-boiler. No. 49,405; July 18; Gaz. vol. 228; p. 1066.
Thermoid Rubber Company. (See Stokes, Robert J., assignor.)
Toledo Scale Company. (See Hem, Halvor O., assignor.)
Universal Metal Spinning & Stamping Company. (See Minuto, Renato, assignor.)
Van Nostrand, Alonzo G., Boston, Mass. Faucet and post for the same. No. 49,320; July 4; Gaz. vol. 228; p. 379.
Victor Talking Machine Company. (See Marshall, Walter L., assignor.)
Vivaudou, Victor, New York, N. Y. Bottle. No. 49,406; July 18; Gaz. vol. 228; p. 1066.
Waldo, Algermont H., St. Paul, Minn., assignor to Crex Carpet Company, New York, N. Y. Textile fabric. No. 49,375; July 11; Gaz. vol. 228; p. 733.
Ward, Artemas. (See Gilles, Harvey, assignor.)
Watson Company, The. (See Simms, Charles F., assignor.)
Webster Company. (See Straker, Herbert J., assignor.)
Weeks, Frank A., Plainfield, N. J. Inkstand. No. 49,376; July 11; Gaz. vol. 228; p. 733.
Westerlind, Aksel, assignor to Moe Levin & Company, Chicago, Ill. Plate or similar article. No. 49,377; July 11; Gaz. vol. 228; p. 733.
Wilkes, Samuel G., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn. Spoon, fork, or similar article. Nos. 49,321–3; July 4; Gaz. vol. 228; p. 379.
Wilson, Wesley E., assignor to The American Tire and Rubber Company, Akron, Ohio. Elastic vehicle-tire. No. 49,407; July 18; Gaz. vol. 228; p. 1066.
Wise, Caroline C., and C. T. Ryland, Richmond, Va. Clock-case. No. 49,408; July 18; Gaz. vol. 228; p. 1067.
Yakeley, Le Roy, Syracuse, N. Y. Artificial bait. No. 49,378; July 11; Gaz. vol. 228; p. 733.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Bourjois & Co., Inc., New York, N. Y. Toilet and sachet powders, toilet water, rouge, &c. No. 111,176; July 4; Gaz. vol. 228; p. 399.
A. Bourjois & Co., Inc., New York, N. Y. Face-powder. No. 111,177; July 4; Gaz. vol. 228; p. 399.
A. Stein & Company, Chicago, Ill. Garters. No. 111,531; July 25; Gaz. vol. 228; p. 1451.
A. M. Ramer Co., Winona, Minn. Candy. No. 111,383; July 11; Gaz. vol. 228; p. 756.
Acme Die-Casting Corporation, Brooklyn, N. Y. Die-cast machine parts. No. 111,544; July 25; Gaz. vol. 228; p. 1451.
Advance Malt Products Company, Chicago, Ill. Malt laundry powder for laundry use. No. 111,436; July 18; Gaz. vol. 228; p. 1087.
Advance Malt Products Company, Chicago, Ill. Powdered cereal preparation for bakery use to improve the quality of bread. No. 111,437; July 18; Gaz. vol. 228; p. 1087.
Advance Malt Products Company, Chicago, Ill. Pure malt-flour. No. 111,438; July 18; Gaz. vol. 228; p. 1087.
Ajello, Michele, Brooklyn, N. Y. Canned olive-oil. No. 111,439; July 18; Gaz. vol. 228; p. 1087.
Aktiebolaget Ramlösa Hälsobrunn, Hälsingborg, Malmö, and Brunnby, Sweden. Mineral waters. No. 111,440; July 18; Gaz. vol. 228; p. 1087.
Alaska-Pacific Fisheries, Portland, Oreg. Canned salmon. No. 111,152; July 4; Gaz. vol. 228; p. 399.
Alfocorn Milling Company, East St. Louis, Ill. Poultry feed. No. 111,153; July 4; Gaz. vol. 228; p. 399.
Allen & Hanburys, Limited, London, England. Medicated tonic nerve food. No. 111,154; July 4; Gaz. vol. 228; p. 399.
American Agricultural Chemical Co., The, New York, N. Y. Fertilizers. No. 111,334; July 11; Gaz. vol. 228; p. 755.
American District Steam Company, North Tonawanda, N. Y. Certain named heating, lighting, and ventilating apparatus. No. 111,155; July 4; Gaz. vol. 228; p. 399.
American Pad & Paper Company, Holyoke, Mass. Certain named stationery. No. 111,156; July 4; Gaz. vol. 228; p. 399.
American Peanut Corporation, Norfolk, Va. Peanuts. Nos. 111,157–8; July 4; Gaz. vol. 228; p. 399.
American Vulcanized Fibre Co., Wilmington, Del. Vulcanized fiber. No. 111,159; July 4; Gaz. vol. 228; p. 399.
American Vulcanized Fibre Co., Wilmington Del. Waste-baskets. No. 111,160; July 4; Gaz. vol. 228; p. 399.
Ames, Louis A., New York, N. Y. Talking-machines. No. 111,161; July 4; Gaz. vol. 228; p. 399.
Amphion Piano Player Company, The, Syracuse, N. Y. Piano-players and parts thereof, perforated music-sheets. No. 111,545; July 25; Gaz. vol. 228; p. 1451.
Anciens Etabts. A. Combe & Fils & Cie., Paris, France. Leathers and skins. No. 111,546; July 25; Gaz. vol. 228; p. 1452.
Anderson & Co., Wm., New York, N. Y. Colored cotton piece goods. No. 111,548; July 25; Gaz. vol. 228; p. 1452.
Anderson Mfg. Co., Flint, Mich. Gelatin. No. 111,547; July 25; Gaz. vol. 228; p. 1452.
Anderson, Richard L., Autun, S. C. Soldering fluid, paste, and stick. No. 111,335; July 11; Gaz. vol. 228; p. 755.
Andrew Kueba Company, Sioux Falls, S. D. Certain named foods. No. 111,368; July 11; Gaz. vol. 228; p. 756.
Araguel, Charlotte, New Orleans, La. Remedy for rheumatism, croup, coughs, and colds. No. 111,336; July 11; Gaz. vol. 228; p. 755.
Arlington Chemical Co., The, Yonkers, N. Y. Nutrient compound. No. 111,394; July 11; Gaz. vol. 228; p. 756.
Arnold, John H., Lumberton, N. C. Liquid medicine for pellagra and blood diseases. No. 111,441; July 18; Gaz. vol. 228; p. 1087.
Arrow Electric Company, The, Hartford, Conn. Certain named electrical apparatus, machines, and supplies. No. 111,549; July 25; Gaz. vol. 228; p. 1452.
Arthur & Co., D. F., Blackfoot, Idaho. Liquid used externally for the treatment of skin diseases. No. 111,494; July 18; Gaz. vol. 228; p. 1088.
Atlantic Export Company, New York, N. Y. Prepared stock food. No. 111,517; July 25; Gaz. vol. 228; p. 1451.
Austin, Bryant & Carter, Los Angeles, Cal. Lubricating, illuminating, and fuel oils and greases. No. 111,163; July 4; Gaz. vol. 228; p. 399.
Auto Patent Equipment Company, Cincinnati, Ohio. Tops, covers, and curtains for automobiles, buggies, &c. No. 111,442; July 18; Gaz. vol. 228; p. 1087.
Axt, Otto, New York, N. Y. Bathing-suits. No. 111,164; July 4; Gaz. vol. 228; p. 399.
B. J. Johnson Soap Company, Milwaukee, Wis. Face and greaseless creams, powders, and shampoo preparations. No. 111,460; July 18; Gaz. vol. 228; p. 1087.
Bain Peanut Co., Inc., The, Wakefield, Va. Peanuts. No. 111,165; July 4; Gaz. vol. 228; p. 399.
Bain Peanut Co., Inc., The, Wakefield, Va. Peanuts. No. 111,550; July 25; Gaz. vol. 228; p. 1452.
Balderine Company, Fort Worth, Tex. Preparation for scalp treatment. No. 111,337; July 11; Gaz. vol. 228; p. 755.
Barnet Leather Co., New York, N. Y. Tanned finished calf-leather. Nos. 111,338–42; July 11; Gaz. vol. 228; p. 755.
Bason, Geo. F., Brooklyn, N. Y. Bricks for paving, boiler and tank linings, and construction purposes. No. 111,395; July 11; Gaz. vol. 228; p. 756.
Bateman, H. H., Missoula, Mont. Hair-tonic and shampoo preparation. Nos. 111,167–8; July 4; Gaz. vol. 228; p. 399.
Battlefield Granite Corporation, Fredericksburg, Va. Granite in the rough. No. 111,169; July 4; Gaz. vol. 228; p. 399.
Baxter, Alice E., Dobbs Ferry, N. Y. Remedy for certain named diseases and ailments. No. 111,443; July 18; Gaz. vol. 228; p. 1087.
Bayer Company, Inc., The, New York, N. Y. Tonic and reconstructive. No. 111,444; July 18; Gaz. vol. 228; p. 1087.
Beacon Adjustment Company, Springfield, Mass. Stamps or stickers. No. 111,170; July 4; Gaz. vol. 228; p. 399.
Beard, Robert N., Omaha, Nebr. Wall-paper-display books. No. 111,659; July 25; Gaz. vol. 228; p. 1455.
Beaver Clay Manufacturing Company, New Galilee, Pa. Bricks made of clay. No. 111,552; July 25; Gaz. vol. 228; p. 1452.
Beaver Company, The, Buffalo, N. Y. Wall-board and building-paper. No. 111,551; July 25; Gaz. vol. 228; p. 1452.
Beckmann, August F., New York, N. Y. Certain named foods. No. 111,396; July 11; Gaz. vol. 228; p. 756.
Belt, Fred R., Chicago, Ill. Razors. No. 111,171; July 4; Gaz. vol. 228; p. 399.
Berifein, Joel E., New York, N. Y. Hair-tonic. No. 111,397; July 11; Gaz. vol. 228; p. 757.
Best & Co., New York, N. Y. Certain named furniture. Nos. 111,172–3; July 4; Gaz. vol. 228; p. 399.
Bond, Edwin P., New York, N. Y. Stamped art embroideries. No. 111,518; July 25; Gaz. vol. 228; p. 1451.
Boston Metal Ceiling and Manufacturing Company, Boston, Mass. Certain named sheet-metal work for buildings. No. 111,174; July 4; Gaz. vol. 228; p. 399.
Boston Rubber Shoe Company, Malden and Boston, Mass. Boots and shoes. No. 111,175; July 4; Gaz. vol. 228; p. 399.
Bour Company, The, Toledo, Ohio. Blended coffee. No. 111,343; July 11; Gaz. vol. 228; p. 755.
Brandenstein & Co., M. J., San Francisco, Cal. Coffee. No. 111,179; July 4; Gaz. vol. 228; p. 399.
Brandenstein & Co., M. J., San Francisco, Cal. Rice. No. 111,446; July 18; Gaz. vol. 228; p. 1087.
Brigham & Son, W. B., Augusta, Ga. Cornmeal. No. 111,627; July 25; Gaz. vol. 228; p. 1454.
British-American Liniment Co., Glens Falls, N. Y. Remedy for rheumatism, sprains, burns, &c. No. 111,180; July 4; Gaz. vol. 228; p. 399.
Brownell Auto Co. Inc., Birmingham, Ala. Automobile inner tubes, blow-out patches, tire-covers, &c. No. 111,181; July 4; Gaz. vol. 228; p. 399.
Bruce, David E., Oklahoma, Okla. Preparation for the treatment of asthma. No. 111,344; July 11; Gaz. vol. 228; p. 755.
Buckeye Steel Castings Company, The, Columbus, Ohio. Certain named vehicles, not including engines. No. 111,447; July 18; Gaz. vol. 228; p. 1087.
Buffalo Lens Mfg. Co., Buffalo, N. Y. Optical lenses. No. 111,558; July 25; Gaz. vol. 228; p. 1452.
Buffalo Sled Company, The, North Tonawanda, N. Y. Hand-wagons. No. 111,448; July 18; Gaz. vol. 228; p. 1087.
Buffalo Specialty Co., Buffalo, N. Y. Composition for spraying trees, plants, vines, and shrubs. No. 111,559; July 25; Gaz. vol. 228; p. 1452.
Burdwise, Aaron, Baltimore, Md. Musical-instrument strings, violins, guitars, mandolins, and parts thereof. No. 111,519; July 25; Gaz. vol. 228; p. 1451.
Burdwise, Aaron, Baltimore, Md. Musical-instrument strings, accordions, and drums. No. 111,520; July 25; Gaz. vol. 228; p. 1451.

Burgess, Willard N., Colorado Springs, assignor to The Crescent Mill & Elevator Co., Denver, Colo. Wheat-flour. No. 111,449; July 18; Gaz. vol. 228; p. 1087.
Burke Golf Company, The, Newark, Ohio. Golf-club heads. No. 111,450; July 18; Gaz. vol. 228; p. 1087.
Burkenroad-Goldsmith Co., L'td, The, New Orleans, La. Rice. No. 111,560; July 25; Gaz. vol. 228; p. 1452.
Burlingame, James R., Long Beach, Cal. Cereal breakfast food of wheat, corn, and rye. No. 111,345; July 11; Gaz. vol. 228; p. 755.
C. L. Centilivre Brewing Co., Fort Wayne, Ind. Beer. No. 111,346; July 11; Gaz. vol. 228; p. 755.
C. L. Cotton Perfume & Extract Co., Earlville, N. Y. Dermatological lotion. No. 111,352; July 11; Gaz. vol. 228; p. 755.
C. T. Dearing Printing Company, Louisville, Ky. Certain prints and publications. No. 111,523; July 25; Gaz. vol. 228; p. 1451.
Caldwell Co-operative Creamery Co., Caldwell, Idaho. Butter. No. 111,182; July 4; Gaz. vol. 228; p. 400.
California Associated Raisin Co., Fresno, Cal. Dried peaches, figs, prunes, apples, &c. No. 111,183; July 4; Gaz. vol. 228; p. 400.
California Vegetable Union, Los Angeles, Cal. Fresh-packed asparagus in boxes and bunches. No. 111,184; July 4; Gaz. vol. 228; p. 400.
Callen, Elmer E., Oswego, Kans. Remedy for catarrh and all bronchial troubles. No. 111,521; July 25; Gaz. vol. 228; p. 1451.
Camp, A. P., College Park, Ga. Plastic soap for machinists, printers, &c., and for general use. No. 111,398; July 11; Gaz. vol. 228; p. 757.
Campbell, E. C., Boston, Mass. Flavoring extracts and essential oils for foods, cocoanut, chocolate, &c. No. 111,185; July 4; Gaz. vol. 228; p. 400.
Capanhat Co., Inc., The, New York, N. Y. Ladies', men's, and children's caps and hats. No. 111,186; July 4; Gaz. vol. 228; p. 400.
Carter & Churchill Co., Lebanon, N. H. Coats, mackinaws, shirts, overalls. No. 111,561; July 25; Gaz. vol. 228; p. 1452.
Cattaraugus Cutlery Co., Little Valley, N. Y. Butcher and pocket knives. No. 111,660; July 25; Gaz. vol. 228; p. 1455.
Centeno & Co., A., New York, N. Y. Cigars. No. 111,522; July 25; Gaz. vol. 228; p. 1451.
Chamberlain, W. A., St. Louis, Mo. Dental preparation. No. 111,187; July 4; Gaz. vol. 228; p. 400.
Chatfield & Woods Company, The, Cincinnati, Ohio. Paper bags. No. 111,347; July 11; Gaz. vol. 228; p. 755.
Cherry-Cheer Company, Inc., The, Sidney, Ohio. Candy. No. 111,348; July 11; Gaz. vol. 228; p. 755.
Chesebrough Manufacturing Co., (Consolidated,) New York, N. Y. Pomade. Nos. 111,399–401; July 11; Gaz. vol. 228; p. 757.
Chicago Butcher's Packing Co., Chicago, Ill. Lard, hams, and bacon. No. 111,349; July 11; Gaz. vol. 228; p. 755.
Cisneros, Jose L., New York, N. Y. Wheat-flour. Nos. 111,628–9; July 25; Gaz. vol. 228; p. 1454.
Citizens Brewing Corporation, Albany, N. Y. Beer. No. 111,188; July 4; Gaz. vol. 228; p. 400.
Claro Milling Co., Waseca and Lakeville, Minn. Wheat-flour. No. 111,402; July 11; Gaz. vol. 228; p. 757.
Cleveland-Akron Bag Co., The, Cleveland, Ohio. Paper-lined cotton and burlap. No. 111,563; July 25; Gaz. vol. 228; p. 1452.
Cleveland Builders Supply Co., The, Cleveland, Ohio. Caen-stone, Portland, &c., cements, plaster Paris, stucco, lime. No. 111,350; July 11; Gaz. vol. 228; p. 755.
Cleveland Fruit Juice Company, The, Cleveland, Ohio. Canned, bottled, and preserved fruits. No. 111,562; July 25; Gaz. vol. 228; p. 1452.
Cleveland Tool & Supply Company, The, Cleveland, Ohio. Certain named cutlery, machinery, and tools, and parts thereof. No. 111,189; July 4; Gaz. vol. 228; p. 400.
Cohen, Abraham, Cambridge, Mass. Toilet, laundry, and scouring soaps, washing-powder, potash. No. 111,564; July 25; Gaz. vol. 228; p. 1452.
Cohocton Canning Co., Cohocton, N. Y. Canned fruits and vegetables. No. 111,630; July 25; Gaz. vol. 228; p. 1454.
Colby, Frederick W., Boston, Mass. Telephone-indexes. No. 111,351; July 11; Gaz. vol. 228; p. 755.
Colgate & Co., Jersey City, N. J., and New York, N. Y. Soda for washing and scouring. No. 111,190; July 4; Gaz. vol. 228; p. 400.
Columbia Shirt Company, New York, N. Y. Dress and negligée shirts. No. 111,353; July 11; Gaz. vol. 228; p. 755.
Columbia Shirt Company, New York, N. Y. Dress and negligée shirts. No. 111,565; July 25; Gaz. vol. 228; p. 1452.
Cone, Frederick H., New York, N. Y. Window and plate glass and glassware. No. 111,191; July 4; Gaz. vol. 228; p. 400.
Corning Glass Works, Corning, N. Y. Glass. No. 111,192; July 4; Gaz. vol. 228; p. 400.
Corning Glass Works, Corning, N. Y. Glass. No. 111,566; July 25; Gaz. vol. 228; p. 1452.
Corrugated Paper Products Co., New York, N. Y. Corrugated-paper boxes and mailing-wrappers. No. 111,193; July 4; Gaz. vol. 228; p. 400.
Corte-Scope Company, The, Cleveland, Ohio. Stereoscopes. No. 111,567; July 25; Gaz. vol. 228; p. 1452.
Costenbader, Clayton E., Palmerton, Pa. Ointment. No. 111,451; July 18; Gaz. vol. 228; p. 1087.
Crandall, William H., San Francisco, Cal. Liquid and paste stove-polishes. No. 111,195; July 4; Gaz. vol. 228; p. 400.
Crawford & Sons, S. L., Hoquiam, Wash. Certain named foods. No. 111,631; July 25; Gaz. vol. 228; p. 1454.
Crescent Feather Company, San Francisco, Cal. Mattresses. No. 111,354; July 11; Gaz. vol. 228; p. 755.
Crescent Mill & Elevator Co., The. (See Burgess, Willard N., assignor.)
Crisman, William C., Colfax, Iowa. Laxative mineral water. No. 111,452; July 18; Gaz. vol. 228; p. 1087.
Cross, Jay L., assignor to Sparkade Company, Cleveland, Ohio. Non-alcoholic carbonated beverages. No. 111,196; July 4; Gaz. vol. 228; p. 400.
Crown Smelting Company, Chester, Pa. Compositions consisting of certain named metals. No. 111,568; July 25; Gaz. vol. 228; p. 1452.
Crump & Field, Ashland, Ky. Coffee. No. 111,569; July 25; Gaz. vol. 228; p. 1452.
Dae Health Laboratories, Detroit, Mich. Tonic for certain named affections. No. 111,403; July 11; Gaz. vol. 228; p. 757.
Dae Health Laboratories, Detroit, Mich. Remedy for constipation and biliousness. No. 111,404; July 11; Gaz. vol. 228; p. 757.
Dae Health Laboratories, Detroit, Mich. Tonic for certain named affections. No. 111,405; July 11; Gaz. vol. 228; p. 757.
Daniels, Cornell Co., Worcester, Mass. Canned fruits, vegetables, and clams, salmon, coffee. No. 111,570; July 25; Gaz. vol. 228; p. 1452.
Dattilo, Gus, Louisville, Ky. Varnish-dressing. No. 111,571; July 25; Gaz. vol. 228; p. 1452.
De Jarnette Refining Company, Montgomery, Ala. Shortening composed of cotton-seed oil and cotton-seed-oil stearin. No. 111,197; July 4; Gaz. vol. 228; p. 400.
Decker, William M., Buffalo, N. Y. Talcum powder. No. 111,453; July 18; Gaz. vol. 228; p. 1087.
Deldrick Glass Co., Monaca, Pa. Articles of glassware having silver decorations. No. 111,572; July 25; Gaz. vol. 228; p. 1452.
Dewar Manufacturing Company, Brooklyn, N. Y. Portable acetylene-lamps. No. 111,454; July 18; Gaz. vol. 228; p. 1087.
Diemer, Frank W., Springfield, Mo. Medicinal preparation serving as a tonic, laxative, and alterative. No. 111,536; July 25; Gaz. vol. 228; p. 1451.
Dilworth, Ida C., Newark, N. J. Concentrated fruit juice for making jelly. No. 111,661; July 25; Gaz. vol. 228; p. 1455.
Dinou Bros., Chicago, Ill. Boxed candy, confections, conserves, chocolate-coated and sugar candies. No. 111,356; July 11; Gaz. vol. 228; p. 755.
Dixie Cotton Felt Mattress Company, Chicago, Ill. Mattresses, bed box-springs, pillows. No. 111,406; July 11; Gaz. vol. 228; p. 757.
Dixie Peanut Co. Inc., Petersburg, Va. Peanuts. Nos. 111,198–9; July 4; Gaz. vol. 228; p. 400.
Doubleday, Page & Company, Garden City, N. Y. Literary works of Mrs. Gene Stratton-Porter. No. 111,200; July 4; Gaz. vol. 228; p. 400.
Doubleday, Page & Company, Garden City, N. Y. Motion-picture films. No. 111,201; July 4; Gaz. vol. 228; p. 400.
Douglas, Rebecca C., Helena, Ark. Hair-grower, brilliantine, skin-cream, &c. No. 111,407; July 11; Gaz. vol. 228; p. 757.
Drake & Company, Easton, Pa. Certain named foods. No. 111,573; July 25; Gaz. vol. 228; p. 1452.
Dryfoos, Arthur L., New York, N. Y. Men's and boys' shirts and women's shirt-waists. No. 111,632; July 25; Gaz. vol. 228; p. 1454.
Dunham, Carrigan & Hayden Co., San Francisco, Cal. Fish lines, hooks, and leaders. No. 111,495; July 13; Gaz. vol. 228; p. 1088.
E. B. Millar & Company, Chicago, Ill. Tea. No. 111,593; July 25; Gaz. vol. 228; p. 1453.
E. E. Gray Co., Boston, Mass. Coffee. No. 111,221; July 4; Gaz. vol. 228; p. 401.
E. F. Houghton & Company, Philadelphia, Pa. Soluble tallow for mixing with sizing for cotton yarns. No. 111,583; July 25; Gaz. vol. 228; p. 1453.
E. S. Alpaugh & Company, New York, N. Y. Blend coffee, poultry, canned fruits and vegetables. No. 111,625; July 25; Gaz. vol. 228; p. 1454.
Eastern Manufacturing Company, Bangor, Me. Writing-paper and envelops. No. 111,202; July 4; Gaz. vol. 228; p. 400.
Eastman Kodak Co., Rochester, N. Y. Cameras and tripods. No. 111,203; July 4; Gaz. vol. 228; p. 400.
Ehlers, Albert, Brooklyn, N. Y. Certain named foods. No. 111,537; July 25; Gaz. vol. 228; p. 1451.
Ehlers, Albert, New York, N. Y. Tea. Nos. 111,662–3; July 25; Gaz. vol. 228; p. 1455.
Elite Garment Company of Syracuse, N. Y. Inc., Syracuse, N. Y. Children's dresses. No. 111,204; July 4; Gaz. vol. 228; p. 400.
Emerson Electric Manufacturing Company, The, St. Louis, Mo. Electric fans, fan motors and frames. No. 111,633; July 25; Gaz. vol. 228; p. 1454.
Emil Scheller & Co., A. G., Zurich, Switzerland. Chemicals, medicines, and pharmaceutical preparations. No. 111,609; July 25; Gaz. vol. 228; p. 1453.

Empire Talking Machine Company, The, Chicago, Ill. Talking-machines, talking-machine cabinets, records, needles, &c. No. 111,357; July 11; Gaz. vol. 228; p. 755.
Essex County Brewing Co., Newark, N. J. Lager-beer. No. 111,408; July 11; Gaz. vol. 228; p. 757.
F. Raidt Milling Co., Louisville, Ky. Cornmeal, chicken feed, horse and cow feed. No. 111,478; July 18; Gaz. vol. 228; p. 1088.
F. A. Martoccio Macaroni Co., Minneapolis, Minn. Macaroni paste products. No. 111,646; July 25; Gaz. vol. 228; p. 1454.
F. O. Stone Baking Company, The, Cincinnati, Ohio, and Atlanta, Ga. Cakes. No. 111,307; July 4; Gaz. vol. 228; p. 403.
Farakos, Nicolas D., New York, N. Y. Hair-restorer. No. 111,538; July 25; Gaz. vol. 228; p. 1451.
Fernandez, Manuel L., Habana, Cuba. Cigars. No. 111,205; July 4; Gaz. vol. 228; p. 400.
Ferrel, Robert S., Fort Worth, Tex. Vegetable remedy for kidney, bladder, and stomach troubles, &c. No. 111,358; July 11; Gaz. vol. 228; p. 755.
Firex Extinguisher Company, The, Akron, Ohio. Tank chemical extinguishers. No. 111,574; July 25; Gaz. vol. 228; p. 1452.
Fisher Tobacco Company, Lewistown borough, Pa. Tobacco, cigars, stogies, and tobies. No. 111,539; July 25; Gaz. vol. 228; p. 1451.
Flexible Steel Lacing Company, Chicago, Ill. Belt couplings or fasteners known as steel belt-lacing. No. 111,455; July 18; Gaz. vol. 228; p. 1087.
Flexo Cuff Link Manufacturing Co., Sheboygan, Wis. Cuff-links. No. 111,208; July 4; Gaz. vol. 228; p. 400.
Flood & Conklin Co., Newark, N. J. Preparation for priming, surfacing, and enameling used in finishing vehicles. No. 111,359; July 11; Gaz. vol. 228; p. 755.
Florida Soft Phosphate & Lime Co., Ocala, Fla. Fertilizers. No. 111,207; July 4; Gaz. vol. 228; p. 400.
Floyd, James, Savannah, Ga. Golf-ball. No. 111,540; July 25; Gaz. vol. 228; p. 1451.
Fonseca, Francisco E., New York, N. Y. Humidors for cigars or tobacco. No. 111,209; July 4; Gaz. vol. 228; p. 400.
Foote & Jenks, Jackson, Mich. Perfumes, toilet waters, powders, nail-polish, cold-cream. No. 111,210; July 4; Gaz. vol. 228; p. 400.
Foote Mineral Co., Philadelphia, Pa. Minerals, mineral samples, ores, &c. No. 111,575; July 25; Gaz. vol. 228; p. 1452.
Fox Pneumatic Shock-Absorber Co., Philadelphia, Pa. Shock-absorbers for vehicles. No. 111,211; July 4; Gaz. vol. 228; p. 400.
Fredrickson, Ida, Milton, Mass. Salves and ointments. No. 111,213; July 4; Gaz. vol. 228; p. 400.
French China Company, The, Sebring, Ohio. Ceramic tableware. No. 111,214; July 4; Gaz. vol. 228; p. 401.
Fulton Machine & Vise Co., Lowville, N. Y. Vises. No. 111,576; July 25; Gaz. vol. 228; p. 1452.
Furgatch, Solomon H., New York, N. Y. Cigars, cigarettes, smoking or chewing tobacco. No. 111,664; July 25; Gaz. vol. 228; p. 1455.
Galambos, Marj, Chicago, Ill. Remedy for neuralgia and rheumatism and blood-purifier. No. 111,493; July 18; Gaz. vol. 228; p. 1088.
Galusha Stove Company, Rochester, N. Y. Heating and cooking stoves and ranges and hot-air furnaces. No. 111,215; July 4; Gaz. vol. 228; p. 401.
Garfield & Proctor Coal Company, Boston, Mass. Coal. No. 111,216; July 4; Gaz. vol. 228; p. 401.
Gaul, Derr & Shearer Company, Philadelphia, Pa. Tire-tape, rubber and adhesive patches. No. 111,217; July 4; Gaz. vol. 228; p. 401.
General Electric Company, Schenectady, N. Y. Electric incandescent lamps. No. 111,218; July 4; Gaz. vol. 228; p. 401.
General Electric Company, Schenectady, N. Y. Electric lamps. No. 111,634; July 25; Gaz. vol. 228; p. 1454.
George Sell Baking & Confectionery Company, The, Denver, Colo. Bread, biscuits, rolls, &c. No. 111,296; July 4; Gaz. vol. 228; p. 403.
German Journal Corporation, New York, N. Y. Periodically-published newspaper-section. No. 111,219; July 4; Gaz. vol. 228; p. 401.
Goetjen & Workman, San Francisco, Cal. Canned tamales. No. 111,360; July 11; Gaz. vol. 228; p. 755.
Golden Pheasant, The, San Francisco, Cal. Candies. No. 111,220; July 4; Gaz. vol. 228; p. 401.
Gomez y Hermano, Diego, Seville, Spain. Olives. No. 111,355; July 11; Gaz. vol. 228; p. 755.
Goshikwaisha Sanrlusha, Okazaki-machi, Japan. Raw silk. No. 111,292; July 4; Gaz. vol. 228; p. 403.
Gottschalk, Felix, New York, N. Y. Stethoscopes and ear-tubes, transmitter-casings, &c. No. 111,497; July 18; Gaz. vol. 228; p. 1088.
Green & Green, Houston, Tex. Soft drink. No. 111,222; July 4; Gaz. vol. 228; p. 401.
Grissmann, Gustave M., Philadelphia, Pa. Ladies' and men's silk, lisle, and cotton hosiery. No. 111,524; July 25; Gaz. vol. 228; p. 1451.
Guardian Frigerator Company. (See Mellowes, Alfred W., assignor.)
Gum-Bo Company, Asheville, N. C. Chewing-gum containing a remedy for the tobacco and snuff habit. No. 111,577; July 25; Gaz. vol. 228; p. 1452.
Gurley Candy Company, Minneapolis, Minn. Chocolate candies. No. 111,635; July 25; Gaz. vol. 228; p. 1454.
Gwaltney-Bunkley Peanut Co., Smithfield, Va. Peanuts. No. 111,223; July 4; Gaz. vol. 228; p. 401.
Gwaltney-Bunkley Peanut Co., Smithfield, Va. Peanuts. No. 111,498; July 18; Gaz. vol. 228; p. 1088.
H. Boker & Co. Inc., New York, N. Y. Wire, metal in rod form, metal sheets. Nos. 111,554–5; July 25; Gaz. vol. 228; p. 1452.
H. Boker & Co. Inc., New York, N. Y. Metal in rod, bar, and sheet forms, and metal blanks. Nos. 111,556–7; July 25; Gaz. vol. 228; p. 1452.
Haas Brothers, San Francisco, Cal. Certain named foods. No. 111,456; July 18; Gaz. vol. 228; p. 1087.
Haché & Hermanos, Nacif P., New York, N. Y. Malt extracts. No. 111,428; July 11; Gaz. vol. 228; p. 757.
Haché & Hermanos, Nacif P., New York, N. Y. Beer. No. 111,507; July 18; Gaz. vol. 228; p. 1089.
Hachmeister-Lind Chemical Co., Pittsburgh, Pa. Launderer's scouring and cleaning agent. No. 111,224; July 4; Gaz. vol. 228; p. 401.
Hammel, Riglander & Co., New York, N. Y. Watch-springs. No. 111,225; July 4; Gaz. vol. 228; p. 401.
Harrison Manufacturing Company, Inc., Lockport, N. Y. Automobile-radiators. No. 111,361; July 11; Gaz. vol. 228; p. 755.
Hart Schaffner & Marx, Chicago, Ill. Coats, vests, trousers, overcoats, rain-coats. Nos. 111,226–7; July 4; Gaz. vol. 228; p. 401.
Hartman Furniture & Carpet Co., Chicago, Ill. Roofing materials of asphalt, slate, mica, and stone-covered felt and paper. No. 111,665; July 25; Gaz. vol. 228; p. 1455.
Hastings Cabinet Co., Hastings, Mich. Kitchen-cabinets. No. 111,666; July 25; Gaz. vol. 228; p. 1455.
Havalite Corporation, The, New York, N. Y. Electric cigar cutters and lighters. No. 111,637; July 25; Gaz. vol. 228; p. 1454.
Havalite Corporation, The, New York, N. Y. Electric cigar cutters and lighters. No. 111,667; July 25; Gaz. vol. 228; p. 1455.
Hazel-Atlas Glass Company, Wheeling, W. Va. Glass dishes and tableware. No. 111,228; July 4; Gaz. vol. 228; p. 401.
Hecht & Campe, Inc., New York, N. Y. Union suits made of textile material. No. 111,668; July 25; Gaz. vol. 228; p. 1455.
Hell Packing Company, St. Louis, Mo. Hams, bacon, and lard. No. 111,457; July 18; Gaz. vol. 228; p. 1087.
Heissler Storage Battery Company, Chicago, Ill. Storage batteries. No. 111,362; July 11; Gaz. vol. 228; p. 755.
Heller & Co., B., Chicago, Ill. Ice-cream powder. No. 111,229; July 4; Gaz. vol. 228; p 401.
Hertner Electric and Manufacturing Company, The, Cleveland, Ohio. Electric motors, generators, and motor-generators. No. 111,638; July 25; Gaz. vol. 228; p. 1454.
Herzog, Albert, New York, N. Y. Certain named textile shoe fabrics. No. 111,363; July 11; Gaz. vol. 228; p. 756.
Holman Soap Co., Chicago, Ill. Certain named pharmaceutical preparations for toilet use. No. 111,231; July 4; Gaz. vol. 228; p. 401.
Hopkins & Son, Ferd. T., New York, N. Y. Velvet sponges. No. 111,232; July 4; Gaz. vol. 228; p. 401.
Horn & Hardart Baking Company, Philadelphia, Pa. Certain named foods. No. 111,233; July 4; Gaz. vol. 228; p. 401.
Howland Dry Goods Company, The, Bridgeport, Conn. Sheets and pillow-cases. No. 111,234; July 4; Gaz. vol. 228; p. 401.
Howland Dry Goods Company, The, Bridgeport, Conn. Tea, coffee, chocolate, spices, &c. No. 111,235; July 4; Gaz. vol. 228; p. 401.
Hudson Metal Products Company, New York, N. Y. Explosive shells. No. 111,669; July 25; Gaz. vol. 228; p. 1455.
Huffman, Hayes, St. Louis, Mo. Dandruff remedy. No. 111,411; July 11; Gaz. vol. 228; p. 757.
Huse Packing Company, Oroville, Cal. Ripe olives. No. 111,412; July 11; Gaz. vol. 228; p. 757.
Ideal Coated Paper Co., Brookfield, Mass. Gummed paper in sheets for use in the manufacture of labels. No. 111,499; July 18; Gaz. vol. 228; p. 1089.
Ideal Coated Paper Co., Brookfield, Mass. Gummed paper tape. No. 111,500; July 18; Gaz. vol. 228; p. 1089.
Implement Trade Journal Company, Kansas City, Mo. Weekly periodical. No. 111,364; July 11; Gaz. vol. 228; p. 756.
Ingersoll-Rand Company, Jersey City, N. J., and New York, N. Y. Fluid-operated hammer-drills. No. 111,236; July 4; Gaz. vol. 228; p. 401.
Innovation Electric Company, Inc., New York, N. Y. Suction-cleaners and attachments therefor. No. 111,237; July 4; Gaz. vol. 228; p. 401.
International Silver Company, Jersey City, N. J., and Meriden and Bridgeport, Conn. Unplated base-alloy spoons and forks. No. 111,584; July 25; Gaz. vol. 228; p. 1453.
Intravenous Products Company, The, Denver, Colo. Preparation to be used as an antiseptic and germicide locally, hypodermically, and intramuscularly. No. 111,238; July 4; Gaz. vol. 228; p. 401.
Ireland Bros., Inc., New York, N. Y. Certain named linen goods in the piece. No. 111,239; July 4; Gaz. vol. 228; p. 401.

Irwindale Citrus Assn., Irwindale, Cal. Oranges and grape-fruit. No. 111,639; July 25; Gaz. vol. 228; p. 1454.

J. K. Armsby Co., The, San Francisco, Cal. Canned fruits. No. 111,162; July 4; Gaz. vol. 228; p. 399.

J. M. Kelly Co., Lexington, Ky. Coffee. No. 111,365; July 11; Gaz. vol. 228; p. 756.

J. M. Kelly Co., Lexington, Ky. Blended coffee. No. 111,366; July 11; Gaz. vol. 228; p. 756.

Jacobstein, Hyman, Rochester, N. Y. Cigars and cigarettes. No. 111,240; July 4; Gaz. vol. 228; p. 401.

Jefford, George W., St. Louis, Mo. Enameled household utensils. No. 111,501; July 18; Gaz. vol. 228; p. 1089.

Jim M. Reilly Company, Dallas, Tex. Limes, fresh fruits and vegetables, citrus fruits. No. 111,603; July 25; Gaz. vol. 228; p. 1453.

Jobst Bethard Co., Peoria, Ill. Certain named foods. No. 111,445; July 18; Gaz. vol. 228; p. 1087.

John Boyle & Company Incorporated, New York, N. Y. Certain named waterproofed textiles. No. 111,178; July 4; Gaz. vol. 228; p. 399.

John Eichler Brewing Co., The, New York, N. Y. Beer. No. 111,496; July 18; Gaz. vol. 228; p. 1088.

John F. Jelke Company, Chicago, Ill. Oleomargarin. No. 111,458; July 18; Gaz. vol. 228; p. 1087.

John F. Jelke Company, Chicago, Ill. Lard. No. 111,459; July 18; Gaz. vol. 228; p. 1087.

John Hoberg Co., The, Green Bay, Wis. Toilet-paper. No. 111,230; July 4; Gaz. vol. 228; p. 401.

John Hoberg Co., The, Green Bay, Wis. Toilet-paper. No. 111,409; July 11; Gaz. vol. 228; p. 757.

John Hoberg Co., Green Bay, Wis. Toilet-paper. Nos. 111,578–82; July 25; Gaz. vol. 228; pp. 1452–3.

John W. Masury & Son, New York, N. Y. Paste paint ground in japan for coach and automobile painting. Nos. 111,257–8; July 4; Gaz. vol. 228; p. 402.

John W. Masury & Son, New York, N. Y. Paste paint ground in japan for coach and automobile painting. No. 111,589; July 25; Gaz. vol. 228; p. 1453.

Johnson, Oscar B., Boise, Idaho. Engraving compound. No. 111,502; July 18; Gaz. vol. 228; p. 1089.

Johnston Fruit Co., Santa Barbara, Cal. Citrus fruits. No. 111,642; July 25; Gaz. vol. 228; p. 1454.

Jones Lumber Company, R. T., The, North Tonawanda, N. Y. White-pine bevel siding, moldings, casing, base, and flooring. No. 111,241; July 4; Gaz. vol. 228; p. 401.

Jones Shark-Skin Grip Company, San Francisco, Cal. Specially-designed nose-guards for nose-glasses. No. 111,413; July 11; Gaz. vol. 228; p. 757.

Jos. Middleby, Jr., Inc., Boston, Mass. Grape jelly, canned pitted cherries, flavoring extracts, &c. No. 111,375; July 11; Gaz. vol. 228; p. 756.

Jos. Middleby, Jr., Inc., Boston, Mass. Certain named foods. No. 111,647; July 25; Gaz. vol. 228; p. 1454.

Joseph, Lew, New York, N. Y. Hair, cloth, hat, and nail brushes. No. 111,414; July 11; Gaz. vol. 228; p. 757.

Justi & Son, H. D., Philadelphia, Pa. Artificial teeth. No. 111,415; July 11; Gaz. vol. 228; p. 757.

K-B Pulverizer Company, Inc., New York, N. Y. Machinery for crushing and pulverizing ores, minerals, oyster-shells, &c. No. 111,640; July 25; Gaz. vol. 228; p. 1454.

Kalina, Fred, Pittsburgh, Pa. Stomach-bitters. No. 111,242; July 4; Gaz. vol. 228; p. 401.

Kaufmann Bros. & Bondy, New York, N. Y. Smokers' pipes. No. 111,461; July 18; Gaz. vol. 228; p. 1087.

Keepwarm Klip Company, Roanoke, Va. Fasteners for bed-covers. No. 111,416; July 11; Gaz. vol. 228; p. 757.

Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Tobacco, snuff, cigars, cigarettes. No. 111,462; July 18; Gaz. vol. 228; p. 1087.

Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Candies. No. 111,641; July 25; Gaz. vol. 228; p. 1454.

Kelly, Mrs. Martha R., Corpus Christi, Tex. Corn. No. 111,585; July 25; Gaz. vol. 228; p. 1453.

Kemp, Edward F., Somerville, Mass. Peanut-brittle glacé mixture, glacé peanuts. No. 111,367; July 11; Gaz. vol. 228; p. 756.

Kessinger, Harry T., Joplin, Mo. Remedy for bowel and stomach diseases. No. 111,243; July 4; Gaz. vol. 228; p. 401.

Kissimmee Citrus Growers' Association, Kissimmee, Fla. Oranges and grape-fruit. Nos. 111,244–5; July 4; Gaz. vol. 228; p. 401.

Klaas, Max, New York, N. Y. Felt coverings and protectors for manicure instruments. No. 111,463; July 18; Gaz. vol. 228; p. 1087.

Knapp, Carl A., Maywood, Ill. Liquid to mix with gasolene to reduce carbon deposits in gasolene-engines. No. 111,586; July 25; Gaz. vol. 228; p. 1453.

Kohn, Simon N., Cleveland, Ohio. Medicated salt for live stock. No. 111,246; July 4; Gaz. vol. 228; p. 401.

Kokomo Rubber Co., Kokomo, Ind. Rubber pneumatic tires. No. 111,247; July 4; Gaz. vol. 228; p. 402.

Komacki, Klemens J., Chicago, Ill. Polish for all metals. No. 111,248; July 4; Gaz. vol. 228; p. 402.

Kops, Charles J., Great Falls, Mont. Pianos. No. 111,249; July 4; Gaz. vol. 228; p. 402.

Korn, Harold, New York, N. Y. Bath-salt and water-softener. No. 111,464; July 18; Gaz. vol. 228; p. 1087.

Kovacs, Kolomon, Duquesne, Pa. Remedy for colic and disorders consequent upon teething in infants. No. 111,417; July 11; Gaz. vol. 228; p. 757.

L. Frank & Son Co., Milwaukee, Wis. Canned prepared meats. No. 111,212; July 4; Gaz. vol. 228; p. 400.

L. C. H. Dental M'f'g Co., New Castle, Pa. Dental wash. No. 111,369; July 11; Gaz. vol. 228; p. 756.

Lakeland Phosphate Co., Lakeland, Fla. Phosphates. No. 111,418; July 11; Gaz. vol. 228; p. 757.

Lange Canning Co., Inc., Eau Claire, Wis. Canned vegetables. No. 111,525; July 25; Gaz. vol. 228; p. 1451.

Lanman & Kemp, New York, N. Y. Insecticide preparation for washing live stock and poultry. No. 111,370; July 11; Gaz. vol. 228; p. 756.

Larrowe Milling Co., The, Cohocton, N. Y., and Detroit, Mich. Poultry and stock feeds. No. 111,250; July 4; Gaz. vol. 228; p. 402.

Lauber, Carl F., Philadelphia, Pa. Whisky. No. 111,465; July 18; Gaz. vol. 228; p. 1087.

Lauderbach-Barber Company, Philipsburg, Pa. Certain named foods. No. 111,503; July 18; Gaz. vol. 228; p. 1089.

Lauter, Henry S., Pittsburgh, Pa. Metal-polish. No. 111,643; July 25; Gaz. vol. 228; p. 1454.

Le Blanc, Amanda, Juneau, Alaska. Face-cream. No. 111,251; July 4; Gaz. vol. 228; p. 402.

Lemons, Elias, Scranton, Pa. Metal fire-escape. No. 111,526; July 25; Gaz. vol. 228; p. 1451.

Leschziner, Siegfried, Newark, N. J. Automobiles. No. 111,670; July 25; Gaz. vol. 228; p. 1455.

Lesher Whitman & Co., Inc., New York, N. Y. Cotton-warp fabrics with wool, mohair, or alpaca fillings. No. 111,327; July 4; Gaz. vol. 228; p. 404.

Lessard, Marie, Manchester, N. H. Cough-syrup. No. 111,252; July 4; Gaz. vol. 228; p. 402.

Levine Brothers, Inc., Brooklyn and New York, N. Y. Chocolates and confections. No. 111,644; July 25; Gaz. vol. 228; p. 1454.

Lichterman, Lewis H., Chicago, Ill. Panama and straw hat bleach. No. 111,253; July 4; Gaz. vol. 228; p. 402.

Lincoln & Newman, San Francisco, Cal. Antiseptic douche. No. 111,587; July 25; Gaz. vol. 228; p. 1453.

Lindley, Dr. Raymond A., Brady, Tex. Marking-ink. No. 111,588; July 28; Gaz. vol. 228; p. 1453.

Lippitt, Thomas P., Charles Town, W. Va., and San Juan, Porto Rico. Raw, dried, and evaporated fruits, canned vegetables. No. 111,371; July 11; Gaz. vol. 228; p. 756.

Loft, George W., assignor to Loft, Incorporated, New York, N. Y. Candies. No. 111,419; July 11; Gaz. vol. 228; p. 757.

Loft, Incorporated. (See Loft, George W., assignor.)

Long Acre Cold Cream Co., New York, N. Y. Cold-cream. No. 111,420; July 11; Gaz. vol. 228; p. 757.

Loose & Son, S. A., Hamburg, Pa. Plows and plowshares. No. 111,527; July 25; Gaz. vol. 228; p. 1451.

Lund-Mauldin Company, St. Louis, Mo. Leather, rubber, and canvas boots and shoes. No. 111,645; July 25; Gaz. vol. 228; p. 1454.

Lundin Company, Inc., The, New York, N. Y. Material for insulating against heat, sound, electricity, and vibration. No. 111,466; July 18; Gaz. vol. 228; p. 1088.

Lyster Chemical Co., New York, N. Y. Deodorants and disinfectants. No. 111,421; July 11; Gaz. vol. 228; p. 757.

Malt-Diastase Co., New York, N. Y. Liquid malt preparations having diastasic properties. No. 111,254; July 4; Gaz. vol. 228; p. 402.

Mansfield Milling Co., The, Mansfield, Ohio. Wheat-flour. No. 111,255; July 4; Gaz. vol. 228; p. 402.

Marshall Field & Company, Chicago, Ill. Oil-mops. No. 111,206; July 4; Gaz. vol. 228; p. 400.

Martha Jones Pure Food Co., The, Nashville, Tenn. Cereal breakfast food. No. 111,467; July 18; Gaz. vol. 228; p. 1088.

Martin, Charles E., Jonesboro, Ark. Remedy for rheumatism. No. 111,256; July 4; Gaz. vol. 228; p. 402.

McDowell and Gorton, Omaha, Nebr. Polish for painted and varnished surfaces. No. 111,590; July 25; Gaz. vol. 228; p. 1453.

McLane Silk Company, Turners Falls, Mass. Silk piece goods. No. 111,591; July 25; Gaz. vol. 228; p. 1453.

Mellowes, Alfred W., Fort Wayne, Ind., assignor to The Guardian Frigerator Company, Detroit, Mich. Refrigerators and refrigerating apparatus. No. 111,468; July 18; Gaz. vol. 228; p. 1088.

Melville Clark Piano Company, Chicago, Ill. Combination piano and phonograph. No. 111,372; July 11; Gaz. vol. 228; p. 756.

Mendelsohn Company, Inc., The, Cleveland, Ohio. Cigars. No. 111,592; July 25; Gaz. vol. 228; p. 1453.

Merchants Stamp Co., Cleveland, Ohio. Trading-stamps. No. 111,373; July 11; Gaz. vol. 228; p. 756.

Merrell-Soule Company, Syracuse, N. Y. Certain named foods. No. 111,469; July 18; Gaz. vol. 228; p. 1088.

Merrill Knitting Co., Merrill, Wis. Sweaters, hoods, hockey-caps, mufflers, &c. No. 111,374; July 11; Gaz. vol. 228; p. 756.

Michigan Salt Works, Marine City, Mich. Salt. No. 111,259; July 4; Gaz. vol. 228; p. 402.

Miller Rubber Company, The, Akron, Ohio. Toy balloons. Nos. 111,528–9; July 25; Gaz. vol. 228; p. 1451.

Miller, Samuel B., Miller, S. D. Composition for treating hog-cholera. No. 111,260; July 4; Gaz. vol. 228; p. 402.

Mills Dan Mills, Charles A., Valley Crossing, Ohio. Hog-cholera preventive. No. 111,648; July 25; Gaz. vol. 228; p. 1454.

Milwaukee Lace Paper Company, Milwaukee, Wis. Certain named paper and stationery. No. 111,470; July 18; Gaz. vol. 228; p. 1088.

Milwaukee Malting Company, Milwaukee, Wis. Malt in sacks or cases. No. 111,261; July 4; Gaz. vol. 228; p. 402.

Mishawaka Woolen Manufacturing Company, Mishawaka, Ind. Knit wool boots and felt boots. No. 111,649; July 25; Gaz. vol. 228; p. 1455.

Mitchell, James E., Utica, N. Y. Writing tablets and papers, papeteries, wrapping-paper, &c. No. 111,262; July 4; Gaz. vol. 228; p. 402.

Mitchell, William M., Louisville, Ky. Remover compound for carbon-scale. No. 111,471; July 18; Gaz. vol. 228; p. 1088.

Moriarty, M. J., Norwood, Ohio. Playing-cards and games. No. 111,472; July 18; Gaz. vol. 228; p. 1088.

Morse Dry Dock & Repair Company, Brooklyn, N. Y. Bearing metal of white-metal babbitting composition used in babbitting machinery-bearings. No. 111,594; July 25; Gaz. vol. 228; p. 1453.

Murray, John G., Jr., Edisto Island, S. C. Poultry-salve. No. 111,473; July 18; Gaz. vol. 228; p. 1088.

Mutual Coffee Co., Montgomery, Ala. Coffee. No. 111,595; July 25; Gaz. vol. 228; p. 1453.

Mysto Mfg. Co., The, now by change of name A. C. Gilbert Company, New Haven, Conn. Building toys. No. 111,422; July 11; Gaz. vol. 228; p. 757.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. No. 111,424; July 11; Gaz. vol. 228; p. 757.

National Lime and Stone Company, The, Carey, Ohio. Hydrated lime. No. 111,263; July 4; Gaz. vol. 228; p. 402.

Neptune Packing and Rubber Co., New York, N. Y. Asbestos, rubber, and composition packing. No. 111,425; July 11; Gaz. vol. 228; p. 757.

New York Piano Stool & Manufacturing Co., East Stroudsburg borough, Pa. Piano stools and chairs, duet and player benches. No. 111,624; July 25; Gaz. vol. 228; p. 1454.

New York Pressing Iron Co., New York, N. Y. Gas-irons. No. 111,541; July 25; Gaz. vol. 228; p. 1451.

Newman, Julius C., Cleveland, Ohio. Cigars. No. 111,474; July 18; Gaz. vol. 228; p. 1088.

Nowak Milling Corporation, Buffalo, N. Y. Mixed stock feed. No. 111,596; July 25; Gaz. vol. 228; p. 1453.

Norfolk Storage Co., Norfolk, Va. Peanuts. No. 111,264; July 4; Gaz. vol. 228; p. 402.

Norfolk Storage Co., Norfolk, Va. Peanuts. No. 111,426; July 11; Gaz. vol. 228; p. 757.

North Alaska Salmon Co., San Francisco, Cal. Canned salmon. No. 111,376; July 11; Gaz. vol. 228; p. 756.

Nubrite Manufacturing Co., St. Louis, Mo. Polish for automobiles, furniture, pianos, &c. No. 111,265; July 4; Gaz. vol. 228; p. 402.

Nuiomoline Company, The, New York, N. Y. Syrup, a product of pure cane-sugar. Nos. 111,671–2; July 25; Gaz. vol. 228; p. 1455.

Olivia Canning Preserving & Manufacturing Co., Olivia, Minn. Canned corn and sauer-kraut. No. 111,266; July 4; Gaz. vol. 228; p. 402.

Ontra & Bro., S., New York, N. Y. Table cloths, napkins, and scarfs. No. 111,597; July 25; Gaz. vol. 228; p. 1453.

Oppenheim & Stern, New York, N. Y. Veilings, nettings, and chiffons. No. 111,598; July 25; Gaz. vol. 228; p. 1453.

Otto Heineman Phonograph Supply Co. (See Rubsam, Charles F., assignor.)

P. Berry & Sons, Incorporated, Hartford, Conn. Eggs. No. 111,553; July 25; Gaz. vol. 228; p. 1452.

P. E. Harris & Co., Seattle, Wash. Canned salmon. No. 111,636; July 25; Gaz. vol. 228; p. 1454.

Packard Motor Car Company, Detroit, Mich. Moving-picture films. No. 111,377; July 11; Gaz. vol. 228; p. 756.

Palmetto Products Company, Inc., New York, N. Y., assignor to Palmetto Products Company, Inc., Jacksonville, Fla. Carpets, matting, burlap, and baggings made from palmetto-palm-leaf fibers. Nos. 111,267–8; July 4; Gaz. vol. 228; p. 402.

Pantages, Louis C., Havre, Mont. Hair-tonic. No. 111,378; July 11; Gaz. vol. 228; p. 756.

Paper Vessels Company, The, Baltimore, Md. Certain named containers and parts thereof. No. 111,269; July 4; Gaz. vol. 228; p. 402.

Paragon Films, Inc., West Fort Lee, N. J. Moving-picture films. No. 111,599; July 25; Gaz. vol. 228; p. 1453.

Parsons, Edward W., Binghamton, N. Y. Piano-salesman's guides. No. 111,270; July 4; Gaz. vol. 228; p. 402.

Paul F. Beich Co., Bloomington, Ill. Candy. No. 111,626; July 25; Gaz. vol. 228; p. 1454.

Peerless Co., Buffalo, N. Y. Polish and cleanser for silver, gold, glass, &c. No. 111,475; July 18; Gaz. vol. 228; p. 1088.

Peoria Ink Company, Peoria, Ill. Writing-ink. No. 111,379; July 11; Gaz. vol. 228; p. 756.

Pepsi-Cola Co., The, Newbern, N. C. Flavoring-syrup for soda-water. No. 111,508; July 18; Gaz. vol. 228; p. 1089.

Perkins, Elmer E., Chicago, Ill. Drying kilns, rooms, and apparatus. No. 111,380; July 11; Gaz. vol. 228; p. 756.

Petro, Emmett O., Hayden, Ariz. Eye-water. No. 111,600; July 25; Gaz. vol. 228; p. 1453.

Petroleum Products Co. of California, San Francisco, Cal. Lubricating oils and greases. No. 111,271; July 4; Gaz. vol. 228; p. 402.

Pheasant Fruit Juice Company, Salem, Oreg. Loganberry fruit juice and syrup. No. 111,272; July 4; Gaz. vol. 228; p. 402.

Phenix Cheese Co., New York, N. Y. Cheese. No. 111,427; July 11; Gaz. vol. 228; p. 757.

Philadelphia Quartz Company, Philadelphia, Pa. Sodium silicate. No. 111,509; July 18; Gaz. vol. 228; p. 1089.

Phillipson Decorating Co., New York, N. Y. Lamp-shades consisting of a frame and a covering of textile material, paper, or analogous material. No. 111,273; July 4; Gaz. vol. 228; p. 402.

Pompeian Company, Incorporated, The, Baltimore, Md. Olives, olive-butter, salad-dressing. No. 111,650; July 25; Gaz. vol. 228; p. 1455.

Pontiac Exterminating Company, Pontiac, Mich. Non-poisonous fly-destroyer. No. 111,428; July 11; Gaz. vol. 228; p. 757.

Powell's, New York, N. Y. Chocolates. No. 111,601; July 25; Gaz. vol. 228; p. 1453.

Press Publishing Co., The, San Francisco, Cal. Periodical publication, monthly. No. 111,381; July 11; Gaz. vol. 228; p. 756.

Price's Patent Candle Company, Limited, London, Battersea, and Cheshire, England. Night and nursery candle-lamps. No. 111,476; July 18; Gaz. vol. 228; p. 1088.

Priess, Louis A., Minneapolis, Minn. Talking-machines or phonographs. No. 111,477; July 18; Gaz. vol. 228; p. 1088.

Prince Cigar Mfg. Co., Trenton, N. J. Cigars. No. 111,274; July 4; Gaz. vol. 228; p. 402.

Puffer-Hubbard Manufacturing Company, Minneapolis, Minn. Wheelbarrows. No. 111,382; July 11; Gaz. vol. 228; p. 756.

Puyallup & Sumner Fruit Growers Assn., The, Puyallup, Wash. Certain named foods. No. 111,275; July 4; Gaz. vol. 228; p. 402.

R. D. Cortina Company, New York, N. Y. Disk records for instructions in languages. No. 111,194; July 4; Gaz. vol. 228; p. 400.

R. W. Walker Lumber Company, The, Salisbury, N. C. Lumber. No. 111,491; July 18; Gaz. vol. 228; p. 1088.

Rainy Day Table Co., Newark, N. J. Children's play tables, chairs, desks, kindergarten material. No. 111,672; July 25; Gaz. vol. 228; p. 1455.

Randolph, William O., Los Angeles, Cal. Oranges, lemons, fresh apples, and vegetables. No. 111,276; July 4; Gaz. vol. 228; p. 402.

Rea-Patterson Milling Company, The, Coffeyville, Kans. Self-rising wheat-flour. Nos. 111,278–9; July 4; Gaz. vol. 228; p. 403.

Reading Bone Fertilizer Co., Reading, Pa. Fertilizer. No. 111,602; July 25; Gaz. vol. 228; p. 1453.

Reams & Waterman, Winter Garden, Fla. Certain named fresh fruits and vegetables. No. 111,277; July 4; Gaz. vol. 228; p. 402.

Reck, Amzi G., Columbus, Ohio. Buns or biscuits. No. 111,280; July 4; Gaz. vol. 228; p. 403.

Reckitts (U. S. A.) Ltd., New York, N. Y., and New Brunswick, N. J. Blue. No. 111,281; July 4; Gaz. vol. 228; p. 403.

Red C Oil Manufacturing Co., The, Baltimore, Md. Kerosene-oil. No. 111,651; July 25; Gaz. vol. 228; p. 1455.

Redtop Electric Company, Inc., New York, N. Y. Electric stoves and toasters. No. 111,282; July 4; Gaz. vol. 228; p. 403.

Reely-Trooly Co., Boston, Mass. Cut-out dolls. No. 111,510; July 18; Gaz. vol. 228; p. 1089.

Reinschild Chemical Co., The, New York, N. Y. Surgical and medical bandages and cushions. No. 111,283; July 4; Gaz. vol. 228; p. 403.

Rhodes, Francis J., Malton, England. Dentifrices. No. 111,479; July 18; Gaz. vol. 228; p. 1088.

Richard Hudnut, New York, N. Y. Face-powder. No. 111,410; July 11; Gaz. vol. 228; p. 757.

Richardson Silk Co., New York, N. Y., and Chicago, Ill. Textile threads. No. 111,284; July 4; Gaz. vol. 228; p. 403.

Richardson Silk Co., Chicago, Ill. Cotton threads, mercerized and unmercerized, for hand and machine uses. No. 111,673; July 25; Gaz. vol. 228; p. 1455.

Richter & Hoffmann, assignor to Richter & Hoffmann Harvard Gesellschaft mit beschränkter Haftung, Berlin, Germany. Cement filling for teeth. No. 111,674; July 25; Gaz. vol. 228; p. 1455.

Richter & Hoffmann Harvard Gesellschaft mit beschränkter Haftung. (See Richter & Hoffmann, assignors.)

Rippenbein, Nicholas, New York, N. Y. Drawers, shirts, and pajama-suits of textile material. No. 111,604; July 25; Gaz. vol. 228; p. 1453.

Robert A. Wooldridge Co., Baltimore, Md. Fertilizers. No. 111,658; July 25; Gaz. vol. 228; p. 1455.

Robin, Jacob I., New York, N. Y. Incandescent gas-mantles and incandescent gas-mantles with attached holders and burners therefor. No. 111,285; July 4; Gaz. vol. 228; p. 403.

Robinson, James S., Memphis, Tenn. Prepared food for infants. No. 111,530; July 25; Gaz. vol. 228; p. 1451.

Rodriguez, Carlos A., New York, N. Y. Garters. No. 111,286; July 4; Gaz. vol. 228; p. 403.
Rogers & Thompson, Inc., New York, N. Y. Silk piece goods. No. 111,287; July 4; Gaz. vol. 228; p. 403.
Rohm, Walter F., Chicago, Ill. Periodical publications. No. 111,384; July 11; Gaz. vol. 228; p. 756.
Rosenberg, Henry, New York, N. Y. Receptacles for phonograph-disks, sheet-music, letters, &c. No. 111,288; July 4; Gaz. vol. 228; p. 403.
Rosenberg, Joseph L., New York, N. Y. Ladies' hats. No. 111,605; July 25; Gaz. vol. 228; p. 1453.
Rubin, Schumann Company, New York, N. Y. Brushes, brooms, and dusters manufactured from bristle. No. 111,289; July 4; Gaz. vol. 228; p. 403.
Rubsam, Charles F., New York, N. Y., assignor to Otto Heineman Phonograph Supply Co. Talking-machines, phonographs, gramophones, &c. No. 111,675; July 25; Gaz. vol. 228; p. 1455.
Ryan, Anna J., New York, N. Y. Certain named toilet preparations. No. 111,290; July 4; Gaz. vol. 228; p. 403.
"S-C" Regulator Company, Fostoria, Ohio. Certain named heating, lighting, and ventilating apparatus. No. 111,606; July 25; Gaz. vol. 228; p. 1453.
Sabel, David, New York, N. Y. Fluid for sealing punctures in pneumatic tires. No. 111,542; July 25; Gaz. vol. 228; p. 1451.
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y. Toilet-paper. No. 111,293; July 4; Gaz. vol. 228; p. 403.
Sauquoit Toilet Paper Co. Inc., New Hartford, N. Y. Toilet-paper. Nos. 111,607–8; July 25; Gaz. vol. 228; p. 1453.
Sausaman, John L., Claypool, Ind. Hog-cholera and blood and bowel remedy and tonic for horses and cattle. No. 111,429; July 11; Gaz. vol. 228; p. 757.
Schmid, Gebrüder, Basel, Switzerland. Certain named raw or partly-prepared materials. No. 111,480; July 18; Gaz. vol. 228; p. 1088.
Schmitt & Brady, Union Hill, N. J. Salve. No. 111,430; July 11; Gaz. vol. 228; p. 757.
Sears, Roebuck and Co., Chicago, Ill. Steam-heat generators. No. 111,294; July 4; Gaz. vol. 228; p. 403.
Sears, Roebuck and Co., Chicago, Ill. Bicycles. No. 111,511; July 18; Gaz. vol. 228; p. 1089.
Sedgley, Reginald F., Philadelphia, Pa. Wrenches. No. 111,295; July 4; Gaz. vol. 228; p. 403.
Senna Sisters, The, St. Louis, Mo. Laxative preparation. No. 111,481; July 18; Gaz. vol. 228; p. 1088.
Sharfstein & Cohn, New York, N. Y. Fur muffs and scarfs. No. 111,297; July 4; Gaz. vol. 228; p. 403.
Shaw & Co., Alex D., New York, N. Y. Port and other wines. No. 111,512; July 18; Gaz. vol. 228; p. 1089.
Shinn & Co., H. J., Spokane, Wash. Fresh apples, pears, peaches, cherries, plums. No. 111,610; July 25; Gaz. vol. 228; p. 1453.
Shipp, Clarence C., Indianapolis, Ind. Oxyacetylene-torches. No. 111,298; July 4; Gaz. vol. 228; p. 403.
Shuptrine Co., Savannah, Ga. Remedy for ringworm, itch, and parasitic skin diseases. No. 111,299; July 4; Gaz. vol. 228; p. 403.
Shurnuff Manufacturing Company, St. Louis, Mo. Grease-retainers for automobile-axles. No. 111,385; July 11; Gaz. vol. 228; p. 756.
Signal Motor Truck Company, Detroit, Mich. Motor-trucks. No. 111,482; July 18; Gaz. vol. 228; p. 1088.
Smith, Kline & French Co., Philadelphia, Pa. Food for infants and invalids. No. 111,676; July 25; Gaz. vol. 228; p. 1455.
Societe des Anciens Etablissements A. Combe et Fils et Cie., Paris, France. Leathers and skins. No. 111,301; July 4; Gaz. vol. 228; p. 403.
Sparkade Company, The. (See Cross, Jay L., assignor.)
St. Anthony Milling & Elevator Company, The, St. Anthony, Idaho, and Denver, Colo. Wheat-flour. No. 111,291; July 4; Gaz. vol. 228; p. 403.
Star Company, New York, N. Y. Newspaper-section. No. 111,611; July 25; Gaz. vol. 228; p. 1453.
Stark Bro's Nurseries & Orchards Co., Louisiana, Mo. Fruit-trees. No. 111,302; July 4; Gaz. vol. 228; p. 403.
Steele-Wedeles Company, Chicago, Ill. Fruit syrups for making certain named soft drinks. No. 111,303; July 4; Gaz. vol. 228; p. 403.
Steinwender-Stoffregen Coffee Co., St. Louis, Mo. Roasted coffee. No. 111,387; July 11; Gaz. vol. 228; p. 756.
Stelwagon Manufacturing Company, Philadelphia, Pa. Sheathing and roofing felts, building-papers, roofing-pitch. No. 111,304; July 4; Gaz. vol. 228; p. 403.
Sterling Motor Truck Co., Milwaukee and West Allis, Wis. Motor-trucks. No. 111,612; July 25; Gaz. vol. 228; p. 1453.
Sternberg, Fred, New York, N. Y. Cotton yarns. No. 111,306; July 4; Gaz. vol. 228; p. 403.
Sternberg, Kurt R., Springfield, Mass. Insulating material. No. 111,305; July 4; Gaz. vol. 228; p. 403.
Stott, Jennie L., Nashua, N. H. Medicine for epilepsy. No. 111,483; July 18; Gaz. vol. 228; p. 1088.
Superba Phonograph Co., Chicago, Ill. Phonographs. No. 111,388; July 11; Gaz. vol. 228; p. 756.
Surbrug, Firm of J. W., New York, N. Y. Smoking-tobacco, cigars, and cigarettes. No. 111,431; July 11; Gaz. vol. 228; p. 757.
Swain, Arthur W., New York, N. Y. Continuing series of educational books. No. 111,484; July 18; Gaz. vol. 228; p. 1088.
Taggart Baking Company, Indianapolis, Ind. Crackers. No. 111,308; July 4; Gaz. vol. 228; p. 403.
Taggart Baking Company, Indianapolis, Ind. Bread. No. 111,309; July 4; Gaz. vol. 228; p. 403.
Tarrant Company, The, New York, N. Y. Remedy for dyspepsia, indigestion, and other stomach troubles. No. 111,432; July 11; Gaz. vol. 228; p. 758.
Techno Chemical Corporation, New York, N. Y. Preservative compound for stone, cement, and wood. No. 111,433; July 11; Gaz. vol. 228; p. 758.
Tetlow Co., Henry, Philadelphia, Pa. Perfume, talcum toilet powder, rouge, cold-creams. No. 111,485; July 18; Gaz. vol. 228; p. 1088.
Thomas Manufacturing Company, The, Dayton, Ohio. Phonographs. No. 111,613; July 25; Gaz. vol. 228; p. 1453.
Thomas, Mildred, Poughkeepsie, N. Y. Ointment for the treatment of neuralgia, rheumatism, and sciatica. No. 111,486; July 18; Gaz. vol. 228; p. 1088.
Thompson, Corbin, Washington, D. C. Milk, cream, and buttermilk. No. 111,310; July 4; Gaz. vol. 228; p. 403.
Threefoot Bros. & Co., Meridian, Miss. Self-rising flour. No. 111,487; July 18; Gaz. vol. 228; p. 1088.
Tillinghast, Albert W., Philadelphia, Pa. Miniature golf-courses, a game. No. 111,311; July 4; Gaz. vol. 228; p. 403.
Tindall, Kolbe & McDowell Co., Milwaukee, Wis. Coffee. Nos. 111,312–13; July 4; Gaz. vol. 228; p. 404.
Tindell, Alfred S., New Brunswick, N. J. Oils for lubricating purposes. No. 111,614; July 25; Gaz. vol. 228; p. 1453.
Toledo Cable Company, The, Toledo, Ohio. Lightning-rods. No. 111,652; July 25; Gaz. vol. 228; p. 1455.
Toner, John F., Denver, Colo. Butter, eggs, cheese, and canned vegetables. No. 111,488; July 18; Gaz. vol. 228; p. 1088.
Tower Remedy Co., Paterson, N. J. Medicinal preparation for asthma, &c. No. 111,389; July 11; Gaz. vol. 228; p. 756.
Treo Company, Inc., New York, N. Y. Girdles and shirt-waist belts. No. 111,615; July 25; Gaz. vol. 228; p. 1454.
Tribune Company, The, Chicago, Ill. Newspaper-supplement issued weekly. No. 111,654; July 25; Gaz. vol. 228; p. 1455.
Tropical Pharmacal Company, New York, N. Y. Eye-tablets. No. 111,434; July 11; Gaz. vol. 228; p. 758.
Truck Attachment Company, Seattle, Wash. Motor-trucks. No. 111,390; July 11; Gaz. vol. 228; p. 756.
Tsak, John, Bayside, N. Y. Oil for lubricating and rust-preventing purposes. No. 111,653; July 25; Gaz. vol. 228; p. 1455.
Turlock Merchants & Growers, Incorporated, Turlock, Cal. Crates of cantaloups and sweet potatoes. No. 111,616; July 25; Gaz. vol. 228; p. 1454.
Twitchell-Champlin Company, The, Portland, Me., and Boston, Mass. Certain named foods. No. 111,391; July 11; Gaz. vol. 228; p. 756.
Union Fish Co., San Francisco, Cal. Dried fish, and particularly codfish. No. 111,513; July 18; Gaz. vol. 228; p. 1089.
United Mills Flour Company, The, New York, N. Y. Wheat-flour. No. 111,314; July 4; Gaz. vol. 228; p. 404.
United States Whip Co., Westfield, Mass. Liquid polish for vehicle-bodies. No. 111,315; July 4; Gaz. vol. 228; p. 404.
Universal Film Manufacturing Company, New York, N. Y. Moving-picture films. No. 111,316; July 4; Gaz. vol. 228; p. 404.
V. Vivaudou, Inc., New York, N. Y. Perfumes, toilet powders, pastes, lotions, and creams, rouge, &c. Nos. 111,514–15; July 18; Gaz. vol. 228; p. 1089.
Vacuum Specialty Company, Meriden, Conn. Vacuum bottles, carafes, jugs, &c. No. 111,435; July 11; Gaz. vol. 228; p. 758.
Vail Milling Company, Vail, Iowa. Wheat-flour. No. 111,317; July 4; Gaz. vol. 228; p. 404.
Valentine & Company, New York, N. Y. Pure colors in oil. No. 111,617; July 25; Gaz. vol. 228; p. 1454.
Valentine & Company, New York, N. Y. Japan colors for coaches, carriages, and cars. No. 111,618; July 25; Gaz. vol. 228; p. 1454.
Valk & Bro., S. J., New York, N. Y. Mustard. No. 111,318; July 4; Gaz. vol. 228; p. 404.
Van Tilburg Oil Company, The, Minneapolis, Minn. Shingle-stains and ready-mixed paints. No. 111,489; July 18; Gaz. vol. 228; p. 1088.
Voss, Otto G., Cleveland, Ohio. Toy pistols. No. 111,490; July 18; Gaz. vol. 228; p. 1088.
W. E. Smith Manufacturing Company, The, Cleveland, Ohio. Roofing and boiler-setting cements. No. 111,386; July 11; Gaz. vol. 228; p. 756.
W. H. McElwain Company, Boston, Mass. Boots and shoes of leather and leather and fabric. No. 111,504; July 18; Gaz. vol. 228; p. 1089.
Waldes & Company, Prague-Wrschowitz, Austria-Hungary. Certain named ladies' neckwear. No. 111,532; July 25; Gaz. vol. 228; p. 1451.
Wall Paper Manufacturers Limited, The, London, England. Translucent material for decorating window-glass. No. 111,319; July 4; Gaz. vol. 228; p. 404.
Warner Fence Co., The, Ottawa, Kans. Internal-combustion engines. No. 111,392; July 11; Gaz. vol. 228; p. 756.

Warren Featherbone Company, The, Three Oaks, Mich. Skirt or dress stiffening. No. 111,320; July 4; Gaz. vol. 228; p. 404.
Waterson-Berlin & Snyder Co., New York, N. Y. Sheet-music. No. 111,655; July 25; Gaz. vol. 228; p. 1455.
Wayne Manufacturing Company, The, Newark, N. J. Steel flexible mats. No. 111,619; July 25; Gaz. vol. 228; p. 1454.
Weddle Tea Company, Inc., New York, N. Y. Tea. No. 111,656; July 25; Gaz. vol. 228; p. 1455.
Wells-Lamont Mfg. Co., Minneapolis, Minn. Gloves and mittens. No. 111,393; July 11; Gaz. vol. 228; p. 756.
West Grove Rose & Floral Co., Westgrove, Pa. Flowers and plants. No. 111,321; July 4; Gaz. vol. 228; p. 404.
West Michigan Flooring Company, Manistee, Mich. Hardwood flooring. No. 111,322; July 4; Gaz. vol. 228; p 404.
Western Clock Co., Peru, Ill. Clocks and watches. No. 111,538; July 25; Gaz. vol. 228; p. 1451.
Western Elaterite Roofing Company, Denver, Colo. Certain named roofing materials. No. 111,620; July 25; Gaz. vol. 228; p. 1454.
Western Soil Bacteria Co., San Francisco, Cal. Nitrogen-fixing or soil bacteria. No. 111,323; July 4; Gaz. vol. 228; p. 404.
Westfield Manufacturing Company, Westfield, Mass. Bicycles and motor-cycles. No. 111,324; July 4; Gaz. vol. 228; p. 404.
Weydig-Henkelman Piano Mfg. Co., Weehawken, N. J., and New York, N. Y. Pianos. No. 111,621; July 25; Gaz. vol. 228; p. 1454.
Wheat-O-Corn Co., Minneapolis, Minn. Cereal food. No. 111,657; July 25; Gaz. vol. 228; p. 1455.
White Enamel Refrigerator Company, St. Paul, Minn. Kitchen and serving tables. No. 111,326; July 4; Gaz. vol. 228; p. 404.
White, Henry C., Portland, Oreg. Medicinal tonic. No. 111,325; July 4; Gaz. vol. 228; p. 404.
White, Henry C., Portland, Oreg. Cocktails. No. 111,516; July 18; Gaz. vol. 228; p. 1089.
Wilbert's Myrtle Grove Planting & Manufacturing Co., Plaquemine, La. Sugars. No. 111,328; July 4; Gaz. vol. 228; p. 404.
William Brody & Co., New York, N. Y. Dental grinding-wheels. No. 111,535; July 25; Gaz. vol. 228; p. 1451.
William L. Barrell Co., New York, N. Y. Waterproof duck or khaki. No. 111,166; July 4; Gaz. vol. 228; p. 399.
William S. Merrell Chemical Company, Cincinnati, Ohio. Extract of plant drugs employed in the treatment of cancer. No. 111,505; July 18; Gaz. vol. 228; p. 1089.
William S. Merrell Chemical Company, Cincinnati, Ohio. Extract of drugs employed for the treatment of acute, subacute, and chronic tuberculosis. No. 111,506; July 18; Gaz. vol. 228; p. 1089.
Williams & Carleton Company, The, Hartford, Conn. Flavoring extracts, tea, coffee, and cocoa. No. 111,534; July 25; Gaz. vol. 228; p. 1451.
Williams, John E., Chicago, Ill. Detergent fluid for cleaning carpets, cloths, &c. No. 111,329; July 4; Gaz. vol. 228; p. 404.
Williams, John E., Chicago, Ill. Cleaning pastes and soaps. No. 111,330; July 4; Gaz. vol. 228; p. 404.
Wilson, Orin B., Los Angeles, Cal. Digestive tablets. No. 111,331; July 4; Gaz. vol. 228; p. 404.
Wimelbacher & Rice, New York, N. Y. Gloves. No. 111,543; July 25; Gaz. vol. 228; p. 1451.
Wittemann, Rudolph A., Buffalo, N. Y. Foods having yeast or analogous material as their main ingredient. No. 111,677; July 25; Gaz. vol. 228; p. 1455.
Wittmann, Joseph, New York, N. Y. Textile rugs. No. 111,332; July 4; Gaz. vol. 228; p. 404.
Wm. Simpson, Sons & Co., Philadelphia, Pa. Certain named dress goods in the piece. No. 111,300; July 4; Gaz. vol. 228; p. 403.
Worden Grocer Company, Grand Rapids, Mich. Certain named foods. No. 111,622; July 25; Gaz. vol. 228; p. 1454.
Wright, Leslie L., Brooklyn, N. Y. Reinforced-concrete and asphalt floors, pavements, walls, &c. No. 111,623; July 25; Gaz. vol. 228; p. 1454.
York-Bradford Co., San Francisco, Cal. Paper boxes. No. 111,492; July 18; Gaz. vol. 228; p. 1088.
Younglove Grocery Co., Tacoma, Wash. Certain named foods. No. 111,333; July 4; Gaz. vol. 228; p. 404.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. G. Spalding & Bros., New York, N. Y. "A. G. Spalding & Bros. Red Honor Golf Ball." (For Golf-Balls.) No. 19,431; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Bob Golf Ball." (For Golf-Balls.) No. 19,432; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Baby Dimple Golf Ball." (For Golf-Balls.) No. 19,433; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Witch Golf Ball." (For Golf-Balls.) No. 19,434; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Wizard Golf Ball." (For Golf-Balls.) No. 19,435; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Bullet Honor Golf Ball." (For Golf-Balls.) No. 19,436; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Orange Domino Golf Ball." (For Golf-Balls.) No. 19,437; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Red Honor Golf Ball." (For Golf-Balls.) No. 19,438; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Black Domino Golf Ball." (For Golf-Balls.) No. 19,439; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Glory Dimple Golf Ball." (For Golf-Balls.) No. 19,440; July 11; Gaz. vol. 228; p. 759.

A. G. Spalding & Bros., New York, N. Y. "Spalding Golf Balls For The Professional The Expert And The Beginner." (For Golf-Balls.) No. 19,468; July 18; Gaz. vol. 228; p. 1091.

Alexandro & Co., F. D., Hazleton, Pa. "La Sorrentina." (For Macaroni.) No. 19,474; July 25; Gaz. vol. 228; p. 1456.

American Wringer Company, The, Woonsocket, R. I., and New York, N. Y. "To The Dealer A Few Selling Points." (For Clothes-Wringers.) No. 19,441; July 18; Gaz. vol. 228; p. 1091.

American Wringer Company, The, Woonsocket, R. I., and New York, N. Y. "Gummi-Walzen." (For Clothes-Wringers.) No. 19,442; July 18; Gaz. vol. 228; p. 1091.

American Wringer Company, The, Woonsocket, R. I., and New York, N. Y. "To The Dealer! A Few Selling Points." (For Clothes-Wringers.) Nos. 19,443–50; July 18; Gaz. vol. 228; p. 1091.

Binghamton Slag Roofing Co., Inc., Binghamton, N. Y. "'Euclid' Tarred Roofing Felt." (For Felt Material.) No. 19,411; July 4; Gaz. vol. 228; p. 405.

Bowl-Ene Manufacturing Company, Canton, Ohio. "Bowl-Ene." (For a Disinfectant and Deodorizer.) No. 19,412; July 4; Gaz. vol. 228; p. 405.

California Central Creameries, San Francisco, Cal. "Golden State." (For Butter.) No. 19,413; July 4; Gaz. vol. 228; p. 405.

California Central Creameries, San Francisco, Cal. "Golden State—Golden Glow." (For Butter.) No. 19,414; July 4; Gaz. vol. 228; p. 405.

Canceglia, Emilio A., New York, N. Y. "Giotto." (For Cigars.) No. 19,451; July 18; Gaz. vol. 228; p. 1091.

Columbia Coffee Mills, Ltd., New Orleans, La. "Best-O." (For Corn-Syrup and Cane Products.) No. 19,453; July 18; Gaz. vol. 228; p. 1091.

Columbia Tea Co., Inc., Port Chester, N. Y. "Yonah Coffee." (For Coffee.) No. 19,452; July 18; Gaz. vol. 228; p. 1091.

English Home Herb Co., Fall River, Mass. "Herbatone." (For a Medicinal Preparation.) No. 19,475; July 25; Gaz. vol. 228; p. 1456.

F. Ad. Richter & Co., New York, N. Y. "Capitol Construction Blocks." (For Construction-Blocks of Stone.) No. 19,464; July 18; Gaz. vol. 228; p. 1091.

F. Ad. Richter & Co., New York, N. Y. "Meteor." (For Meteor Marbles.) No. 19,465; July 18; Gaz. vol. 228; p. 1091.

Formusa, Vincent, Chicago, Ill. "Pietro & Vincenzo Formusa." (For Olive-Oil.) No. 19,454; July 18; Gaz. vol. 228; p. 1091.

General Baking Company, New York, N. Y. "Welkum Bread." (For Bread.) No. 19,428; July 4; Gaz. vol. 228; p. 405.

Golden Grain Cereal Company, Inc., Nashville, Tenn. "Golden Grain Breakfast Food." (For Breakfast Food.) No. 19,476; July 25; Gaz. vol. 228; p. 1456.

Golland, Morris, New York, N. Y. "Chevrolet Clothing Co. Makers Of Chevrolet Overcoats." (For Men's Overcoats.) No. 19,477; July 25; Gaz. vol. 228; p. 1456.

Golland, Morris, New York, N. Y. "Chevrolet Clothing Co. Makers Of Chevrolet Suits." (For Men's Suits.) No. 19,478; July 25; Gaz. vol. 228; p. 1456.

Gordon's Dry Gin Company, Ltd., The, New York, N. Y. "Gordon & Co's." (For Scotch Whisky.) No. 19,455; July 18; Gaz. vol. 228; p. 1091.

Grain Products Company, St. Louis, Mo. "Bran-eata Biscuits." (For a Food in Biscuit Form.) No. 19,415; July 4; Gaz. vol. 228; p. 405.

Harrison, Herbert P., Newport, R. I. "Harrison's." (For Harrison's Honeysuckle Cream.) No. 19,456; July 18; Gaz. vol. 228; p. 1091.

Homo Cigar M'f'g Co., East Chicago, Ind. "Homo." (For Cigars.) No. 19,457; July 18; Gaz. vol. 228; p. 1091.

Howe Baumann Balloon Co., Newark, N. J. "'Harmless' Inflatable Toys." (For Inflatable Toys.) No. 19,416; July 4; Gaz. vol. 228; p. 405.

Howe Baumann Balloon Co., Newark, N. J. "Inflatable Toys." (For Inflatable Toys.) No. 19,417; July 4; Gaz. vol. 228; p. 405.

J. L. Kraft & Bros. Co., Chicago, Ill. "Normand Brand." (For Cheese.) No. 19,458; July 18; Gaz. vol. 228; p. 1091.

J. P. Smith Shoe Co., Chicago, Ill. "Chicagoan Shoes." (For Shoes.) No. 19,422; July 4; Gaz. vol. 228; p. 405.

Koehler, George G., Cairo, Ill. "Longfellow." (For Cigars.) No. 19,479; July 25; Gaz. vol. 228; p. 1456.

Kosach, Terez, Chicago, Ill. "Sovolo Ointment." (For Ointment.) No. 19,429; July 11; Gaz. vol. 228; p. 759.

Lebensberger, Edgar B., Chicago, Ill. "Elco." (For Bottled Goods.) No. 19,480; July 25; Gaz. vol. 228; p. 1456.

Loetscher-Ryan Manufacturing Company, Dubuque, Iowa. "Penguin." (For Refrigerating Apparatus.) No. 19,430; July 11; Gaz. vol. 228; p. 759.

Marchese, Vincenzo, New York, N. Y. "Castrellina." (For Castrellina Water.) No. 19,459; July 18; Gaz. vol. 228; p. 1091.

Martin & Sons, C. J., Austin, Tex. "Martin's Sanitary Floor Sweep." (For Sweeping Composition.) No. 19,460; July 18; Gaz. vol. 228; p. 1091.

Minnehaha Candy Co., The, Sioux Falls, S. D. "Minnehaha Maid." (For Candies.) No. 19,461; July 18; Gaz. vol. 228; p. 1091.

Moran, W. B., San Francisco, Cal. "Popular Brand." (For Salad-Oil.) No. 19,481; July 25; Gaz. vol. 228; p. 1456.

Northern Brewing Company, Superior, Wis. "Bingo." (For Bottled Goods.) No. 19,482; July 25; Gaz. vol. 228; p. 1456.

Nubian Paint & Varnish Company, Chicago, Ill. "Old Dutch." (For Varnish.) No. 19,418; July 4; Gaz. vol. 228; p. 405.

Palazzolo, Joseph, New York, N. Y. "Divinia." (For a Hair-Wash.) No. 19,462; July 18; Gaz. vol. 228; p. 1091.

Pinkus, Jacob L., & Frederick, New York, N. Y. "Javelpi Frères & Cie." (For Cigarettes.) No. 19,419; July 4; Gaz. vol. 228; p. 405.

Quinn, John F., Philadelphia, Pa. "Bowe." (For Men's Shirts.) No. 19,483; July 25; Gaz. vol. 228; p. 1456.

Radin, Isador, New York, N. Y. "Radio Brand Unexcelled I. R. Cotton-Fabrics, Trade Mark." (For Cotton Fabrics.) No. 19,463; July 18; Gaz. vol. 228; p. 1091.

Schafirstein, Abraham I., New York, N. Y. "Universal Feather & Down Co." (For Feathers, Downs, and Bedding.) No. 19,484; July 25; Gaz. vol. 228; p. 1456.

Sewell & Co., Bert, Kansas City, Mo. "Distress—Relief." (For Catarrhal Jelly.) No. 19,466; July 18; Gaz. vol. 228; p. 1091.

Shepard's Chemical Company, East Wilmington township, New Hanover county, N. C. "Shepard's House Fly and Insect Killer." (For a Fly and Insect Killer.) No. 19,420; July 4; Gaz. vol. 228; p. 405.

Smith, James D., Poteet, Tex. "Smith's Orange Sparkle That Sparkles." (For a Beverage.) No. 19,421; July 4; Gaz. vol. 228; p. 401.

Southern Aseptic Laboratories, Columbia, S. C. "'Salco' Absorbent Cotton." (For Absorbent Cotton.) No. 19,467; July 18; Gaz. vol. 228; p. 1091.

Spangler, Joseph E., Minneapolis, Minn. "Spangler's Famous Nut Bread." (For Bread.) No. 19,423; July 4; Gaz. vol. 228; p. 405.

Stevens, Ralph P., Stanford, Cal. "Buttons 1915 Design." (For Buttons.) No. 19,424; July 4; Gaz. vol. 228; p. 405.

Stuber & Kuck Co., Peoria, Ill. "Uncle Sam's Best." (For Metal Oil-Cans, Dairy-Pails, Strainer-Pails, and Washboilers.) No. 19,469; July 18; Gaz. vol. 228; p. 1091.

Tackaberry Cigar Co., De Smet, S. D. "Patriarch." (For Cigars.) No. 19,425; July 4; Gaz. vol. 228; p. 405.

Van Norden, Warner M., New York, N. Y. "Camp Fire Tea." (For Tea.) No. 19,471; July 18; Gaz. vol. 228; p. 1091.

Van Norden, Warner M., New York, N. Y. "Camp Fire Cocoa Cornstarch." (For Corn-Starch.) No. 19,485; July 25; Gaz. vol. 228; p. 1456.

Vital Remedies Company, Houston, Tex. "Vitalitas." (For a Remedy.) No. 19,470; July 18; Gaz. vol. 228; p. 1091.

Weiss & Co., Theo., New Orleans, La. "Little Cowboy." (For Overalls and Coats.) No. 19,472; July 18; Gaz. vol. 228; p. 1091.

Weiss & Co., Theo., New Orleans, La. "The Little Engineer." (For Overalls and Coats.) No. 19,473; July 18; Gaz. vol. 228; p. 1091.

Western Grocer Company, Marshalltown, Iowa. "Dairy Maid." (For Canned Hominy.) No. 19,426; July 4; Gaz. vol. 228; p. 405.

Wright Cake Company, Brooklyn, N. Y. "Wright's Cake Specialties." (For Cakes.) No. 19,427; July 4; Gaz. vol. 228; p. 405.

PRINTS.

Alden T. Cleveland Mfg. Co., Boston, Mass. "The Little Brown Jug With The Big Black Shine." (For Shoe-Polish.) No. 4,399; July 18; Gaz. vol. 228; p. 1092.

Cream of Wheat Co., Minneapolis, Minn. "To market, to market, To buy us a treat—Home again, home again—Got Cream of Wheat." (For Wheat Breakfast Food.) No. 4,383; July 11; Gaz. vol. 228; p. 759.

Cream of Wheat Co., Minneapolis, Minn. "Good for Nothing Except to Eat." (For Wheat Breakfast Food.) No. 4,400; July 18; Gaz. vol. 228; p. 1092.

Davis, Roger T., San Antonio, Tex. "This is All You Have to Do." (For Kleenit.) No. 4,384; July 11; Gaz. vol. 228; p. 759.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Do You know a little house-mother." (For Kellogg's Toasted Corn Flakes.) No. 4,377; July 4; Gaz. vol. 228; p. 405.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "There is a Youngster in Almost Every Home Who Demands Kellogg's Toasted Corn Flakes." (For Corn Flakes.) No. 4,401; July 18; Gaz. vol. 228; p. 1092.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "She 'Adores Crispy Things and Crackly Things.'" (For Corn Flakes.) No. 4,402; July 18; Gaz. vol. 228; p. 1092.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Baby Knows the Difference at Once." (For Corn Flakes.) No. 4,403; July 18; Gaz. vol. 228; p. 1092.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Even Baby Can Tell the Difference." (For Corn Flakes.) No. 4,404; July 18; Gaz. vol. 228; p. 1092.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "He Wants the Original Toasted Corn Flakes." (For Corn Flakes.) No. 4,405; July 18; Gaz. vol. 228; p. 1092.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "The Crispness and Flavor of Kellogg's are There." (For Corn Flakes.) No. 4,406; July 18; Gaz. vol. 228; p. 1092.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "He's a Live Wire." (For Corn Flakes.) No. 4,407; July 18; Gaz. vol. 228; p. 1092.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Kellogg's." (For Kellogg's Toasted Corn Flakes.) No. 4,408; July 18; Gaz. vol. 228; p. 1092.

Kindy, Hubert G., Milwaukee, Wis. "One In 17." (For a Puzzle.) No. 4,378; July 4; Gaz. vol. 228; p. 405.

Moschel's Sons, Jacob, Inc., Buffalo, N. Y. "Lilac Brand Bacon." (For Bacon.) No. 4,409; July 18; Gaz. vol. 228; p. 1092.

Moxie Co., The, Boston, Mass. "Drink Moxie." (For Moxie.) Nos. 4,379–80; July 4; Gaz. vol. 228; p. 405.

Moxie Company, The, Boston, Mass. "Drink Moxie." (For Moxie.) No. 4,410; July 18; Gaz. vol. 228; p. 1092.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Bang-open your system to some real smoke joy!" (For Smoking-Tobacco.) No. 4,385; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "There's a punch of joy in every puff of Prince Albert Tobacco!" (For Smoking-Tobacco.) No. 4,386; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Prince Albert Tobacco is so good you feel like you could just eat the smoke!" (For Smoking-Tobacco.) No. 4,387; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Tobacco that puts the hush on that hankering!" (For Smoking-Tobacco.) No. 4,388; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "You'll start an old-pal-party." (For Smoking-Tobacco.) No. 4,389; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "The song of the old jimmy pipe." (For Smoking-Tobacco.) No. 4,390; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Beats the band how quick Prince Albert rings true to you!" (For Smoking-Tobacco.) No. 4,391; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Caught P. A. pipe-joy on the first puff!" (For Smoking-Tobacco.) No. 4,392; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Prince Albert puts the whole smoke world at ease!" (For Smoking-Tobacco.) No. 4,393; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Prince Albert—the national joy smoke—makes pipe-peace and makin's-peace reign." (For Smoking-Tobacco.) No. 4,394; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Well, smoke it yourself if you want that all-fired-joy-feeling!" (For Smoking-Tobacco.) No. 4,395; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Sound the cymbals for two kinds of independence joy!" (For Smoking-Tobacco.) No. 4,396; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Prince Albert—the national joy smoke—has brought back to the firing line thousands of friendly old jimmy pipes." (For Smoking-Tobacco.) No. 4,397; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Loosen up a bit on this say-so:" (For Smoking-Tobacco.) No. 4,398; July 11; Gaz. vol. 228; p. 759.

R. J. Reynolds Tobacco Company, Winston-Salem, N. C. "Prince Albert is such a real smoke." (For Smoking-Tobacco.) No. 4,412; July 25; Gaz. vol. 228; p. 1456.

U. S. Woolen Mills Company, Baltimore, Md. "Let Us Tailor Your Clothes." (For Clothing.) No. 4,382; July 4; Gaz. vol. 228; p. 405.

Ward Baking Co., New York, N. Y. "Every Loaf is shaped and Panned Without the touch of Human Hand." (For Ward's Tip-Top Bread.) No. 4,381; July 4; Gaz. vol. 228; p. 405.

Ward Baking Company, New York, N. Y. "Dollar Box of Baked Goods." (For Bread and Cakes.) No. 4,411; July 18; Gaz. vol. 228; p. 1092.

DISCLAIMER.

Russell, Frank E., Alameda, Cal.; disclaimer filed by patentee. Throttle-lever mechanism. No. 1,166,787; disclaimer filed July 6, 1916; Gaz. vol. 228; p. 411.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF JULY, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

Abdominal belt. W. R. Cartledge. No. 1,190,722; July 11; Gaz. vol. 228; p. 578.

Accounting-machines, Differential mechanism for. T. Midgley, Jr. No. 1,190,443; July 11; Gaz. vol. 228; p. 478.

Acid magnesium-sulfite solution, Production of an. J. L. Jardine. No. 1,192,640; July 25; Gaz. vol. 228; p. 1347.

Adding and listing machine. N. White. No. 1,192,721; July 25; Gaz. vol. 228; p. 1374.

Adding-machine. H. T. Goss and J. W. Bryce. No. 1,190,752; July 11; Gaz. vol. 228; p. 588.

Adding machine. J. W. Witsell. No. 1,190,058; July 4; Gaz. vol. 228; p. 294.

Adhesive composition. M. R. Isaacs. No. 1,192,783; July 25; Gaz. vol. 228; p. 1396.

Adjustable bench. C. H. Martin. No. 1,189,601; July 4; Gaz. vol. 228; p. 141.

Adjustable gate. W. Stanchfield and F. and H. Bixler. No. 1,191,846; July 18; Gaz. vol. 228; p. 1014.

Adjustable table. H. J. Huddle. No. 1,191,425; July 18; Gaz. vol. 228; p. 868.

Adjustable washer. H. B. Chambers. No. 1,191,565; July 18; Gaz. vol. 228; p. 916.

Advertising apparatus. A. J. Fairbanks. No. 1,189,676; July 4; Gaz. vol. 228; p. 166.

Aerial bicycle-track. R. D. Burchill. No. 1,189,423; July 4; Gaz. vol. 228; p. 79.

Aerial dart. H. S. Peck. No. 1,189,382; July 4; Gaz. vol. 228; p. 62.

Aerial propeller. F. R. Golder. No. 1,190,149; July 4; Gaz. vol. 228; p. 325.

Aeronautical safety device. S. L. Van Meter, Jr. No. 1,192,480; July 25; Gaz. vol. 228; p. 1292.

Aeroplane. R. P. Campbell, Jr. No. 1,192,751; July 25; Gaz. vol. 228; p. 1385.

Aeroplane. A. H. Morris. No. 1,189,610; July 4; Gaz. vol. 228; p. 143.

Aeroplane. W. B. Pusey. No. 1,190,321; July 11; Gaz. vol. 228; p. 435.

Aeroplane, Armored. J. T. Parker. No. 1,189,616; July 4; Gaz. vol. 228; p. 145.

Aeroplane attachment. D. F. Cashman and C. A. Brownfield. No. 1,190,248; July 4; Gaz. vol. 228; p. 362.

Aeroplane safety appliance. F. J. Chione. No. 1,190,376; July 11; Gaz. vol. 228; p. 454.

Agricultural implement. J. R. Black. No. 1,189,783; July 4; Gaz. vol. 228; p. 203.

Agricultural machine. W. R. Smith. No. 1,189,501; July 4; Gaz. vol. 228; p. 107.

Agricultural machinery. W. W. Herring. No. 1,190,166; July 4; Gaz. vol. 228; p. 330.

Air-blast apparatus, Adjustable. W. S. Quigley. No. 1,191,226; July 18; Gaz. vol. 228; p. 796.

Air-brake apparatus. O. Johnson. No. 1,191,187; July 18; Gaz. vol. 228; p. 783.

Air-brake system. P. Wertz. No. 1,192,482; July 25; Gaz. vol. 228; p. 1292.

Air-compressor. J. P. Murphy. No. 1,189,722; July 4; Gaz. vol. 228; p. 182.

Air-conditioner. M. Dickerson. No. 1,190,386; July 11; Gaz. vol. 228; p. 457.

Air cooler and dehumidifier. G. O'Brien. No. 1,189,470; July 4; Gaz. vol. 228; p. 96.

Air-coupling. F. Woods. No. 1,190,063; July 4; Gaz. vol. 228; p. 296.

Air-cushion control. B. D. Stevens. No. 1,192,354; July 25; Gaz. vol. 228; p. 1249.

Air-moistening device. E. L. Flory and B. M. Osbun. No. 1,190,395; July 11; Gaz. vol. 228; p. 461.

Aircraft and the like, Controlling device for. F. Capdevila. No. 1,190,374; July 11; Gaz. vol. 228; p. 454.

Aircraft plane or wing. J. P. Clark. No. 1,190,378; July 11; Gaz. vol. 228; p. 455.

Airship. J. W. Freeman. No. 1,190,397; July 11; Gaz. vol. 228; p. 462.

Airship. J. M. Gardner. No. 1,189,680; July 4; Gaz. vol. 228; p. 167.

Airship. O. Hermanson. No. 1,191,077; July 11; Gaz. vol. 228; p. 703.

Airships, Torpedo-dropping mechanism for. S. S. Van Keuren. No. 1,191,375; July 18; Gaz. vol. 228; p. 851.

Alarm: *See*—
Boiler-alarm.
Fire-alarm.
Refrigerator-pan alarm.
Tire-alarm.

Alarm-lock, Circuit-closing combination. J. E. Christie. No. 1,190,727; July 11; Gaz. vol. 228; p. 580.

Alfalfa-tillage machine. C. E. Forkner. No. 1,189,554; July 4; Gaz. vol. 228; p. 124.

Alkali salts of 4,4'-dioxy-3,3'-diamino-arsenobenzene and making same, Mixtures of. B. Reuter and K. Streitwolf. No. 1,191,997; July 25; Gaz. vol. 228; p. 1121.

Alloys, Producing ferromanganese. H. Schagrin. No. 1,190,679; July 11; Gaz. vol. 228; p. 564.

Alumina and manufacture thereof, Crystalline fused. F. J. Tone. No. 1,192,709; July 25; Gaz. vol. 228; p. 1371.

Aluminate from alunite, Producing. P. R. Hershman. No. 1,191,104; July 11; Gaz. vol. 228; p. 711.

Aluminate from alunite, Producing. P. R. Hershman. No. 1,191,105; July 11; Gaz. vol. 228; p. 711.

Aluminates from alunite, Production of. P. R. Hershman and R. D. Cooke. No. 1,189,254; July 4; Gaz. vol. 228; p. 15.

Aluminates from raw alunite, Making. P. R. Hershman. No. 1,191,106; July 11; Gaz. vol. 228; p. 711.

Amalgamator. P. A. Robbins. No. 1,190,012; July 4; Gaz. vol. 228; p. 279.

Amalgamator. A. E. Vandercook. No. 1,192,478; July 25; Gaz. vol. 228; p. 1291.

Ambulance-body. W. C. Kern. No. 1,192,211; July 25; Gaz. vol. 228; p. 1198.

Ammunition. J. Patten. No. 1,192,678; July 25; Gaz. vol. 228; p. 1359.

Ampere-hour meter. R. C. Lanphier. No. 1,190,304; July 11; Gaz. vol. 228; p. 429.

Amusement apparatus. C. Tandy. No. 1,191,367; July 18; Gaz. vol. 228; p. 849.

Amusement device. G. M. Reagen. No. 1,192,226; July 25; Gaz. vol. 228; p. 1204.

Amusement device. G. H. Rumke. No. 1,191,477; July 18; Gaz. vol. 228; p. 886.

Amusement device for bathers. R. B. Fageol. No. 1,190,743; July 11; Gaz. vol. 228; p. 585.

Anchor-winch for small craft. A. H. Kurth. No. 1,192,077; July 25; Gaz. vol. 228; p. 1149.

Angle-iron cutter. R. M. Clough. No. 1,191,282; July 18; Gaz. vol. 228; p. 817.

Animal-rack. T. H. Queen. No. 1,191,345; July 18; Gaz. vol. 228; p. 841.

Animal-trap. H. E. Brown. No. 1,190,508; July 11; Gaz. vol. 228; p. 499.

Animal-trap. S. C. Causey. No. 1,190,859; July 11; Gaz. vol. 228; p. 627.

Animal-trap. E. Kesler. No. 1,191,706; July 18; Gaz. vol. 228; p. 965.

Animal-trap. N. N. Nessa. No. 1,191,027; July 11; Gaz. vol. 228; p. 686.

Ankle-brace. G. Krieger. No. 1,192,433; July 25; Gaz. vol. 228; p. 1276.

Anticreep device. W. F. Richards. No. 1,189,387; July 4; Gaz. vol. 228; p. 64.

Anti-door-slamming device. S. G. Gillespie. No. 1,191,583; July 18; Gaz. vol. 228; p. 921.

Antiskidding device. S. E. Martz. No. 1,190,314; July 11; Gaz. vol. 228; p. 433.

Antiskidding device. T. A. Thompson. No. 1,190,816; July 11; Gaz. vol. 228; p. 610.

Antislipping or antiskidding device for wheeled vehicles. F. Nace. No. 1,192,673; July 25; Gaz. vol. 228; p. 1358.

Anvils, Tool-sharpening stake for. T. E. Stevens. No. 1,191,041; July 11; Gaz. vol. 228; p. 691.

Apparel, Mending-form for wearing. G. B. McWilliams. No. 1,189,372; July 4; Gaz. vol. 228; p. 59.

Applicator. T. E. Roberson. No. 1,191,786; July 18; Gaz. vol. 228; p. 977.

Arc, Producing a flaming and luminous. J. L. R. Hayden. No. 1,190,162; July 4; Gaz. vol. 228; p. 329.

Arch and shoe-straightener, Combined. J. A. Smith. No. 1,191,543; July 18; Gaz. vol. 228; p. 909.

Arch-fitting machine. C. J. Sykes. No. 1,190,612; July 11; Gaz. vol. 228; p. 608.

Arch-support. D. H. Lawton. No. 1,192,214; July 25; Gaz. vol. 228; p. 1200.

Arm, Artificial. R. W. Tucker. No. 1,192,244; July 25; Gaz. vol. 228; p. 1210.
Arm-chair with adjustable sliding seat and back. B. Balser. No. 1,191,269; July 18; Gaz. vol. 228; p. 813.
Armatures for dynamo-electric machines, Machine for winding. K. R. Ritter. No. 1,190,801; July 11; Gaz. vol. 228; p. 605.
Armor for vessels, forts, and the like. M. Lowy. No. 1,191,445; July 18; Gaz. vol. 228; p. 875.
Asphalt drying, heating, and mixing plant. C. E. Guelich. No. 1,190,642; July 11; Gaz. vol. 228; p. 550.
Asphaltic compounds from gangue, Separation of. C. L. Cook and J. R. Price. No. 1,190,633; July 11; Gaz. vol. 228; p. 546.
Assorting and delivering mechanism. L. J. Bazzoni. No. 1,191,938; July 25; Gaz. vol. 228; p. 1100.
Assorting and delivering mechanism. D. W. Colby. No. 1,191,927; July 18; Gaz. vol. 228; p. 1045.
Atomizing liquid. E. Koerting. No. 1,192,645; July 25; Gaz. vol. 228; p. 1349.
Auger, Post-hole. O. L. M. Hoover and S. J. Ardery. No. 1,191,698; July 18; Gaz. vol. 228; p. 962.
Automobile. E. Michelin. No. 1,191,809; July 18; Gaz. vol. 228; p. 1002.
Automobile. V. E. Staser. No. 1,192,240; July 25; Gaz. vol. 228; p. 1209.
Automobile, Armored. C. D. Zumwalt. No. 1,191,880; July 18; Gaz. vol. 228; p. 853.
Automobile-body, Tire-protecting. J. Q. Clarke. No. 1,191,401; July 18; Gaz. vol. 228; p. 860.
Automobile-controlling mechanism. G. E. Stevens. No. 1,191,625; July 18; Gaz. vol. 228; p. 935.
Automobile-door-holding device. C. B. Bennett. No. 1,192,733; July 25; Gaz. vol. 228; p. 1379.
Automobile-fender. J. P. Geraghty. No. 1,191,957; July 25; Gaz. vol. 228; p. 1107.
Automobile-fender. C. B. Jugle. No. 1,192,641; July 25; Gaz. vol. 228; p. 1348.
Automobile-fender. J. O'Leary. No. 1,191,818; July 18; Gaz. vol. 228; p. 1005.
Automobile-indicator. P. Roussey. No. 1,191,830; July 18; Gaz. vol. 228; p. 1008.
Automobile-jack. J. P. Koechner. No. 1,191,520; July 18; Gaz. vol. 228; p. 900.
Automobile-lifting apparatus. R. Krause. No. 1,190,913; July 11; Gaz. vol. 228; p. 648.
Automobile-lock. C. E. Coop. No. 1,190,518; July 11; Gaz. vol. 228; p. 503.
Automobile-lock. E. R. Schreiter, Jr. No. 1,190,469; July 11; Gaz. vol. 228; p. 486.
Automobile power mechanism. R. N. Shaw. No. 1,191,350; July 18; Gaz. vol. 228; p. 843.
Automobile-radiator. A. F. Masury. No. 1,192,218; July 25; Gaz. vol. 228; p. 1202.
Automobile safety-crank. C. A. Bakke. No. 1,189,339; July 4; Gaz. vol. 228; p. 46.
Automobile safety-lock. C. E. P. Greiff and C. F. Schreiber. No. 1,192,516; July 25; Gaz. vol. 228; p. 1304.
Automobile-stand. H. Wolfe. No. 1,190,837; July 11; Gaz. vol. 228; p. 619.
Automobile starting-motors and generators, Adjustable mounting for. H. S. Baldwin. No. 1,191,553; July 18; Gaz. vol. 228; p. 912.
Automobile starting-motors and generators, Adjustable mounting for. G. E. Stevens. No. 1,191,624; July 18; Gaz. vol. 228; p. 935.
Automobile-tank. R. A. Gillies. No. 1,191,958; July 25; Gaz. vol. 228; p. 1107.
Automobile-trailer. A. B. Cadman. No. 1,190,237; July 4; Gaz. vol. 228; p. 358.
Automobile transmission mechanism. V. Link. No. 1,189,368; July 4; Gaz. vol. 228; p. 58.
Automobile-washer. N. G. Berridge. No. 1,192,736; July 25; Gaz. vol. 228; p. 1380.
Automobile-wheel. M. J. Schmitt. No. 1,191,037; July 11; Gaz. vol. 228; p. 690.
Automobile-wheel. D. Small. No. 1,190,027; July 4; Gaz. vol. 228; p. 282.
Automobile-wheel-holding device. J. S. Hopson. No. 1,191,599; July 18; Gaz. vol. 228; p. 926.
Automobiles, Air-pump attachment for. A. J. Scaife. No. 1,190,804; July 11; Gaz. vol. 228; p. 606.
Automobiles, Differential for. F. D. Keeran. No. 1,191,433; July 18; Gaz. vol. 228; p. 871.
Automobiles, Electrical system for. T. A. Edison. No. 1,192,400; July 25; Gaz. vol. 228; p. 1265.
Automobiles, Luncheon-table for. H. H. Labadie, B. B. Beers, and W. O. Stark. No. 1,189,835; July 4; Gaz. vol. 228; p. 221.
Automobiles, Power attachment for. H. Bickford and C. L. Olmstead. No. 1,191,654; July 18; Gaz. vol. 228; p. 946.
Automobiles, Runner attachment for. J. Girard, J. Clairmont, and T. Chenier. No. 1,190,284; July 11; Gaz. vol. 228; p. 422.
Automobiles, Speed-changing transmission for. M. J. Huggins. No. 1,192,427; July 25; Gaz. vol. 228; p. 1274.
Automobiles, Starting and lighting set for. G. E. Stevens. No. 1,191,626; July 18; Gaz. vol. 228; p. 936.
Automobiles, Tool-driving attachment for. H. L. Briggs. No. 1,190,854; July 11; Gaz. vol. 228; p. 625.
Automobiles, Transmission for. G. V. Harriman. No. 1,191,892; July 18; Gaz. vol. 228; p. 1031.
Automobiles, Transmission-gearing for. F. L. Fraizer. No. 1,191,956; July 25; Gaz. vol. 228; p. 1106.
Awning-operating mechanism. C. F. Karberg. No. 1,190,909; July 11; Gaz. vol. 228; p. 646.
Awning-support. J. Manassa. No. 1,190,437; July 11; Gaz. vol. 228; p. 476.
Awning, Window-. G. L. Trainer. No. 1,191,371; July 18; Gaz. vol. 228; p. 850.
Axle. I. D. Bate. No. 1,190,706; July 11; Gaz. vol. 228; p. 573.
Back-pressure regulator for centrifugalizing-machines. S. H. Hall. No. 1,189,687; July 4; Gaz. vol. 228; p. 169.
Back-rest, Automatic. G. E. Peterson. No. 1,191,220; July 18; Gaz. vol. 228; p. 794.
Bag: *See*—
Golf-bag. Shopping-bag.
Hand-bag. Traveling-bag.
Harvester's bag.
Bag-closing device. F. W. Minor. No. 1,190,935; July 11; Gaz. vol. 228; p. 655.
Bag-closure. O. L. Harrison. No. 1,190,544; July 11; Gaz. vol. 228; p. 512.
Bag-fastener. F. A. Fuller. No. 1,191,172; July 18; Gaz. vol. 228; p. 779.
Bag-feeder. C. W. Harrold. No. 1,191,966; July 25; Gaz. vol. 228; p. 1110.
Bag-filling machine. C. F. Stehlin. No. 1,191,243; July 18; Gaz. vol. 228; p. 803.
Bag-jaw fastener. R. L. Prahar. No. 1,189,733; July 4; Gaz. vol. 228; p. 185.
Bag or package tie. F. R. Brewster. No. 1,191,392; July 18; Gaz. vol. 228; p. 857.
Bag-tying device. F. J. Wichmann. No. 1,191,051; July 11; Gaz. vol. 228; p. 694.
Bags, Safety attachment for hand-. E. E. Rogers. No. 1,192,564; July 25; Gaz. vol. 228; p. 1321.
Bags to filling-machines, Mechanism for automatically applying. A. R. Hinton. No. 1,190,898; July 11; Gaz. vol. 228; p. 642.
Ball and lid holder. J. Karolle. No. 1,189,363; July 4; Gaz. vol. 228; p. 56.
Balance-wheel. F. C. Bresson. No. 1,192,381; July 25; Gaz. vol. 228; p. 1259.
Balancing-ring. C. O. Bergstrom. No. 1,191,393; July 18; Gaz. vol. 228; p. 858.
Bale-tie. J. E. O'Riordan. No. 1,190,667; July 11; Gaz. vol. 228; p. 559.
Bale-tie. W. H. Pridgen. No. 1,190,456; July 11; Gaz. vol. 228; p. 481.
Baling-press. A. Wickey. No. 1,189,765; July 4; Gaz. vol. 228; p. 196.
Ball: *See*—
Playing-ball.
Ball cleaner, Bowling-. H. E. Wolken. No. 1,191,260; July 18; Gaz. vol. 228; p. 810.
Ball-mill. E. S. Gregory. No. 1,190,401; July 11; Gaz. vol. 228; p. 463.
Ball pitcher, Mechanical base-. J. D. Long. No. 1,190,565; July 11; Gaz. vol. 228; p. 520.
Ball rack and score-board, Pool-. J. E. Glascock. No. 1,192,184; July 25; Gaz. vol. 228; p. 1187.
Ball-rolling machine. F. E. Canda. No. 1,189,662; July 4; Gaz. vol. 228; p. 161.
Ball-throwing machine, Base-. L. H. Lanier. No. 1,190,776; July 11; Gaz. vol. 228; p. 596.
Balls of thread, &c., Means for holding and suspending. J. MacGlashan. No. 1,189,275; July 4; Gaz. vol. 228; p. 23.
Bananaette-machine. D. W. Royer and J. W. Von Nieda. No. 1,191,831; July 18; Gaz. vol. 228; p. 1008.
Band-holder, button-holder, and necktie-holder, Combination. T. C. Spelling. No. 1,192,237; July 25; Gaz. vol. 228; p. 1208.
Band, Machine for constructing a laminated cohesive interwound. L. A. Subers. No. 1,189,751; July 4; Gaz. vol. 228; p. 191.
Banding bills and the like, Machine for. C. S. Batdorf. No. 1,190,848; July 11; Gaz. vol. 228; p. 623.
Bank, Coin-. E. F. Kavanagh. No. 1,189,258; July 4; Gaz. vol. 228; p. 16.
Bar: *See*—
Type-bar.
Bar-mill. C. W. A. Koelkebeck. No. 1,191,920; July 18; Gaz. vol. 228; p. 1042.
Bark-peeling machine. W. S. Shaw, H. L. Drake, and F. M. Shaw. No. 1,189,395; July 4; Gaz. vol. 228; p. 67.
Barometer. W. J. Hartung. No. 1,191,508; July 18; Gaz. vol. 228; p. 896.
Barrel-cleansing machine. P. Romberg. No. 1,190,464; July 11; Gaz. vol. 228; p. 484.
Barrels, jars, and the like, Means for cleansing. H. A. Couchman. No. 1,191,671; July 18; Gaz. vol. 228; p. 952.
Basins, &c., Coupling for. J. H. Glauber. No. 1,191,886; July 18; Gaz. vol. 228; p. 1029.
Basket. E. M. Miller. No. 1,192,091; July 25; Gaz. vol. 228; p. 1154.
Basket machine, Climax-. E. Craig. No. 1,192,041; July 25; Gaz. vol. 228; p. 1138.
Bassinets, Collapsible or folding stand for. H. Behr. No. 1,189,230; July 4; Gaz. vol. 228; p. 7.
Bat. L. Cory. No. 1,189,921; July 4; Gaz. vol. 228; p. 250.

Bath: *See*—
Hot-air bath.
Bath apparatus, Sanitary caloric. L. G. Bondurant. No. 1,192,740; July 25; Gaz. vol. 228; p. 1381.
Bath apparatus, Shower-. W. A. Upright. No. 1,191,248; July 18; Gaz. vol. 228; p. 805.
Bath-mat. E. R. Crooker. No. 1,190,266; July 11; Gaz. vol. 228; p. 416.
Bath-mat. E. L. Livingston. No. 1,190,179; July 4; Gaz. vol. 228; p. 337.
Bath-mitts, Draw-string for. S. E. Younglove. No. 1,189,333; July 4; Gaz. vol. 228; p. 44.
Bath-spray support. M. Kline. No. 1,189,970; July 4; Gaz. vol. 228; p. 265.
Bath-tub. W. H. Mercer. No. 1,191,088; July 11; Gaz. vol. 228; p. 706.
Bathing-machine. P. L. Howlett. No. 1,192,314; July 25; Gaz. vol. 228; p. 1234.
Baton-metronome. E. O. Cushing. No. 1,191,285; July 18; Gaz. vol. 228; p. 819.
Batteries, Connector for storage. T. A. Willard. No. 1,191,548; July 18; Gaz. vol. 228; p. 910.
Batteries, Operating electric. P. A. Emanuel. No. 1,190,878; July 11; Gaz. vol. 228; p. 634.
Batteries, Regenerating electric. P. A. Emanuel. No. 1,190,879; July 11; Gaz. vol. 228; p. 635.
Batteries, Regenerating the waste products of galvanic. W. Hickmann. No. 1,192,061; July 25; Gaz. vol. 228; p. 1144.
Battery: *See*—
Electric battery.
Battery-box. C. M. Hattenberger. No. 1,190,405; July 11; Gaz. vol. 228; p. 464.
Battery plate and forming the same, Storage-. F. Engel. No. 1,190,989; July 11; Gaz. vol. 228; p. 673.
Battery-plates, Core for use in making electric storage-. G. H. Rabenalt. No. 1,192,224; July 25; Gaz. vol. 228; p. 1203.
Battery plates, Machine for forming storage-. F. Engel. No. 1,190,988; July 11; Gaz. vol. 228; p. 672.
Battery plates, Machine for forming storage-. F. Engel. No. 1,190,990; July 11; Gaz. vol. 228; p. 674.
Battery plates, Machine for forming storage-. F. Engel. No. 1,190,991; July 11; Gaz. vol. 228; p. 674.
Battery-separator. J. M. Skinner. No. 1,190,025; July 4; Gaz. vol. 228; p. 283.
Bead-forming machine. W. A. Brubaker and F. F. Brucker. No. 1,192,383; July 25; Gaz. vol. 228; p. 1260.
Beam and girder molds, Metal connection for. W. P. Agness. No. 1,191,139; July 18; Gaz. vol. 228; p. 767.
Bean-clipper. M. J. Langton. No. 1,190,303; July 11; Gaz. vol. 228; p. 428.
Bean-snipper. F. Wegner. No. 1,189,323; July 4; Gaz. vol. 228; p. 41.
Bearing. F. W. Caldwell. No. 1,192,750; July 25; Gaz. vol. 228; p. 1384.
Bearing. E. Krantz. No. 1,189,262; July 4; Gaz. vol. 228; p. 18.
Bearing. H. H. Reist. No. 1,190,008; July 4; Gaz. vol. 228; p. 277.
Bearing, Ball-. F. Starin. No. 1,192,470; July 25; Gaz. vol. 228; p. 1288.
Bearing, Roller-. B. F. Sparr. No. 1,190,965; July 11; Gaz. vol. 228; p. 666.
Bearing, Thrust-. R. B. Bennett. No. 1,192,373; July 25; Gaz. vol. 228; p. 1255.
Bearing, Thrust-. C. H. Norton. No. 1,189,861; July 4; Gaz. vol. 228; p. 230.
Bearing, Vehicle-body. V. J. Burry. No. 1,191,153; July 18; Gaz. vol. 228; p. 772.
Bearings, Cage for ball-. F. Starin. No. 1,190,035; July 4; Gaz. vol. 228; p. 286.
Bearings, Dust-guard for. A. M. Powers. No. 1,191,137; July 11; Gaz. vol. 228; p. 722.
Bearings, Oil-retainer for. J. H. Modler. No. 1,189,853; July 4; Gaz. vol. 228; p. 228.
Bed, Adjustable steel outside window-. S. L. Davis. No. 1,190,222; July 4; Gaz. vol. 228; p. 353.
Bed attachment. W. G. Busse. No. 1,192,385; July 25; Gaz. vol. 228; p. 1260.
Bed, Hospital-. J. H. Dickerson. No. 1,191,772; July 18; Gaz. vol. 228; p. 990.
Bed, Invalid's. L. J. Kuhn. No. 1,192,647; July 25; Gaz. vol. 228; p. 1350.
Bed, Sofa-. G. Lehman. No. 1,191,323; July 18; Gaz. vol. 228; p. 832.
Bed-spring. H. Garfinkel. No. 1,190,142; July 4; Gaz. vol. 228; p. 322.
Bed structures, Bedding-clamp and foot-rest for folding-. D. F. Dyke. No. 1,192,768; July 25; Gaz. vol. 228; p. 1390.
Beds, Cradle-supporting attachment for. G. H. Cocks. No. 1,190,380; July 11; Gaz. vol. 228; p. 456.
Beds, Crib attachment for. L. S. Henderson. No. 1,191,696; July 18; Gaz. vol. 228; p. 961.
Bed, Wall or closet. J. D. Bell. No. 1,189,342; July 4; Gaz. vol. 228; p. 48.
Beehive-frames, Device for wiring. G. W. Wright. No. 1,191,052; July 11; Gaz. vol. 228; p. 694.
Beer-strainer. A. Almasy and J. Bacha. No. 1,190,841; July 11; Gaz. vol. 228; p. 620.
Beet pulling and topping machine. C. Smithson. No. 1,191,355; July 18; Gaz. vol. 228; p. 844.
Beet-topper. J. D. Nairne. No. 1,189,858; July 4; Gaz. vol. 228; p. 229.
Bell-sounding mechanism. F. Williams. No. 1,190,207; July 4; Gaz. vol. 228; p. 347.
Belt-jack. M. F. O'Connor. No. 1,191,722; July 18; Gaz. vol. 228; p. 971.
Belt, Link. M. G. Bunnell. No. 1,191,895; July 18; Gaz. vol. 228; p. 858.
Belt sanding-machine. C. L. Mattison. No. 1,189,715; July 4; Gaz. vol. 228; p. 180.
Belt-shifter. F. Brunner. No. 1,192,494; July 25; Gaz. vol. 228; p. 1296.
Belting, Power-transmission. J. S. Young. No. 1,192,362; July 25; Gaz. vol. 228; p. 1251.
Bench: *See*—
Adjustable bench.
Beverage and its manufacture, Non-alcoholic concentrated. H. Laessig. No. 1,191,440; July 18; Gaz. vol. 228; p. 874.
Beverage-making apparatus. J. M. Canfield. No. 1,191,760; July 18; Gaz. vol. 228; p. 986.
Bicycle. W. M. C. Foster. No. 1,189,929; July 4; Gaz. vol. 228; p. 253.
Bicycle-lock. G. A. Wehner. No. 1,192,718; July 25; Gaz. vol. 228; p. 1373.
Bicycles, Friction drive attachment for. F. De Vaux. No. 1,191,287; July 18; Gaz. vol. 228; p. 820.
Bicycles, Locking-hub for. H. E. Van Ness. No. 1,189,315; July 4; Gaz. vol. 228; p. 38.
Bicycles, Parcel-carrier guard for. W. M. Apple. No. 1,189,649; July 4; Gaz. vol. 228; p. 157.
Bill leaf and spring. F. G. Marbach. No. 1,190,568; July 11; Gaz. vol. 228; p. 521.
Billard-cue tip. C. A. Howe. No. 1,191,308; July 18; Gaz. vol. 228; p. 827.
Billard-table cloth. J. Turner. No. 1,189,408; July 4; Gaz. vol. 228; p. 73.
Billard-tables, &c., Chalk-holder attachment for. W. J. Stone. No. 1,190,809; July 11; Gaz. vol. 228; p. 608.
Bin: *See*—
Grocer's bin. Storage-bin.
Binder, Loose-leaf. W. E. Reed. No. 1,192,117; July 25; Gaz. vol. 228; p. 1162.
Binder, Temporary. R. Labarre. No. 1,191,798; July 18; Gaz. vol. 228; p. 998.
Binding and coating composition. C. Ellis. No. 1,189,549; July 4; Gaz. vol. 228; p. 124.
Biplane. G. G. Lelevier. No. 1,190,178; July 4; Gaz. vol. 228; p. 336.
Bit: *See*—
Drill-bit.
Bite-finder. L. A. Smith. No. 1,192,697; July 25; Gaz. vol. 228; p. 1366.
Blacking device, Shoe-. W. E. Elam. No. 1,191,879; July 18; Gaz. vol. 228; p. 1027.
Blast-furnace. P. De Simoney. No. 1,192,395; July 25; Gaz. vol. 228; p. 1264.
Block: *See*—
Building-block. Toy construction-block.
Block-signal, Safety. G. W. Gerlach. No. 1,191,414; July 18; Gaz. vol. 228; p. 865.
Block-signal system. W. V. Ryder. No. 1,192,566; July 25; Gaz. vol. 228; p. 1322.
Blue-print-drying machine. C. M. Waterman. No. 1,190,692; July 11; Gaz. vol. 228; p. 568.
Bluing sheets and plates. A. Ridd. No. 1,192,347; July 25; Gaz. vol. 228; p. 1246.
Board: *See*—
Bulletin-board. Plaster-board.
Meter panel-board. Wall-board.
Board, Making corrugated. C. D. Wood. No. 1,189,518; July 4; Gaz. vol. 228; p. 113.
Boards, Machine for manufacture of composition. H. Armstrong. No. 1,189,650; July 4; Gaz. vol. 228; p. 157.
Boat. L. R. Baker. No. 1,189,227; July 4; Gaz. vol. 228; p. 6.
Boat. P. Orlando. No. 1,190,944; July 11; Gaz. vol. 228; p. 659.
Boat-coupling means, Life-. J. A. McNabb and G. Emery. No. 1,192,543; July 25; Gaz. vol. 228; p. 1313.
Boat, Life-. F. W. Boulton. No. 1,190,371; July 11; Gaz. vol. 228; p. 452.
Boat lowering and hoisting apparatus, Life-. C. A. Binks. No. 1,192,158; July 25; Gaz. vol. 228; p. 1177.
Boat-motor. E. B. Blakely. No. 1,192,377; July 25; Gaz. vol. 228; p. 1257.
Boat, Motor-. H. L. Bowers. No. 1,192,378; July 25; Gaz. vol. 228; p. 1257.
Boat, Submarine. J. Barraja-Frauenfelder. No. 1,190,211; July 4; Gaz. vol. 228; p. 348.
Boat, Submarine. W. F. Doherty, Jr. No. 1,192,172; July 25; Gaz. vol. 228; p. 1182.
Boats, Means for launching a ship's. D. E. Erickson. No. 1,191,410; July 18; Gaz. vol. 228; p. 863.
Boats, Motive power for submarine. J. Barraja-Frauenfelder. No. 1,190,211; July 4; Gaz. vol. 228; p. 348.
Boats, Releasing-gear for ships'. T. MacDermott. No. 1,191,447; July 18; Gaz. vol. 228; p. 876.
Body-support. E. A. Curts and J. C. Nida. No. 1,191,769; July 18; Gaz. vol. 228; p. 988.
Body-supports, Construction for. E. Drenshtein. No. 1,189,672; July 4; Gaz. vol. 228; p. 165.
Boiler: *See*—
Clothes-boiler. Steam-boiler.
Range-boiler.

Boiler. H. C. Prox. No. 1,189,734; July 4; Gaz. vol. 228; p. 185.
Boiler-alarm. D. W. Patterson. No. 1,190,452; July 11; Gaz. vol. 228; p. 480.
Boiler fire-box, Locomotive or stationary. D. A. Reagan. No. 1,190,952; July 11; Gaz. vol. 228; p. 662.
Boiler fire-box, Steam-. D. M. Light and W. H. V. Rosing. No. 1,191,201; July 18; Gaz. vol. 228; p. 788.
Boiler-flues, Blow-out device for. D. Brews. No. 1,192,162; July 25; Gaz. vol. 228; p. 1179.
Boiler furnace and an apparatus for feeding air to furnaces, Steam-. F. H. Dillon and M. L. Henderson. No. 1,191,931; July 18; Gaz. vol. 228; p. 1047.
Boiler stay-bolt. C. L. Pool. No. 1,191,729; July 18; Gaz. vol. 228; p. 974.
Boiler water-gage. J. J. Daly. No. 1,189,922; July 4; Gaz. vol. 228; p. 250.
Boilers and air and oil reservoirs, Safety hand-hole cover for steam-. F. A. Griffin. No. 1,192,417; July 25; Gaz. vol. 228; p. 1271.
Boilers and like purposes, Automatic liquid-feeding apparatus for use with steam-. A. R. Trist. No. 1,191,372; July 18; Gaz. vol. 228; p. 850.
Boilers at a certain level. Device for automatically maintaining the water in. G. A. Gustafson. No. 1,191,963; July 25; Gaz. vol. 228; p. 1109.
Boilers, Automatic control for flash-. G. H. Hill. No. 1,190,167; July 4; Gaz. vol. 228; p. 330.
Bolt: *See*—
Boiler stay-bolt. Latch-bolt.
Expansion-bolt. Stay-bolt.
Bond. J. R. Brown. No. 1,189,235; July 4; Gaz. vol. 228; p. 8.
Book and binding device therefor. G. H. Jenkins. No. 1,189,826; July 4; Gaz. vol. 228; p. 218.
Book, Check-. P. H. Bennett. No. 1,190,503; July 11; Gaz. vol. 228; p. 498.
Book-covers or the like, Machine for applying metallic leaf to. C. E. Smith. No. 1,190,961; July 11; Gaz. vol. 228; p. 665.
Books and effectuating the same, Binding for. G. H. Jenkins. No. 1,189,825; July 4; Gaz. vol. 228; p. 218.
Booklets, Detachable auxiliary cover for. R. Grimth. No. 1,191,961; July 25; Gaz. vol. 228; p. 1108.
Boot, Child's. J. H. Clear and F. C. Richville. No. 1,189,665; July 4; Gaz. vol. 228; p. 162.
Boots and shoes, Apparatus for the manufacture of. A. L. Russell. No. 1,191,833; July 18; Gaz. vol. 228; p. 1009.
Boots and shoes, Apparatus for use in the manufacture of. A. L. Russell. No. 1,191,834; July 18; Gaz. vol. 228; p. 1010.
Boots and shoes, Making. A. L. Russell. No. 1,191,832; July 18; Gaz. vol. 228; p. 1009.
Boring-bar holder. E. E. Ellis. No. 1,189,926; July 4; Gaz. vol. 228; p. 252.
Bottle bracket and lock, Milk-. A. Wheatley. No. 1,191,546; July 18; Gaz. vol. 228; p. 910.
Bottle-capping machine. G. A. Williams. No. 1,191,258; July 18; Gaz. vol. 228; p. 809.
Bottle-capping tool. A. N. Fleagle. No. 1,190,138; July 4; Gaz. vol. 228; p. 321.
Bottle-closure. F. W. H. Clay. No. 1,191,567; July 18; Gaz vol. 228; p. 916.
Bottle closure, Paper-. H. D. Caylor. No. 1,190,723; July 11; Gaz. vol. 228; p. 579.
Bottle-closures, Machine for assembling. S. C. Bond. (Reissue.) No. 14,170; July 25; Gaz. vol. 228; p. 1415.
Bottle-feeding device. J. W. Dawson. No. 1,191,574; July 18; Gaz. vol. 228; p. 919.
Bottle-filling apparatus. F. B. Daugherty. No. 1,191,406; July 18; Gaz. vol. 228; p. 862.
Bottle-holder. J. W. Gheen. No. 1,189,442; July 4; Gaz. vol. 228; p. 85.
Bottle holder, Milk-. J. A. Wilde. No. 1,190,695; July 11; Gaz. vol. 228; p. 569.
Bottle holder, Nursing-. C. F. Devenny. No. 1,192,170; July 25; Gaz. vol. 228; p. 1182.
Bottle-holder, Safety. S. H. Tarbet and L. Cabbell. No. 1,190,607; July 11; Gaz. vol. 228; p. 535.
Bottle, Non-refillable. E. B. Bennett. No. 1,190,708; July 11; Gaz. vol. 228; p. 573.
Bottle, Non-refillable. A. J. Benson. No. 1,192,374; July 25; Gaz. vol. 228; p. 1256.
Bottle, Non-refillable. C. S. Hersh and C. J. O'Connor. No. 1,190,408; July 11; Gaz. vol. 228; p. 465.
Bottle, Non-refillable. R. H. Nérat. No. 1,191,026; July 11; Gaz. vol. 228; p. 686.
Bottle, Non-refillable. F. Peterson. No. 1,191,727; July 18; Gaz. vol. 228; p. 973.
Bottle, Non-refillable. P. Russo. No. 1,190,465; July 11; Gaz. vol. 228; p. 485.
Bottle-opener. R. Flitsch. No. 1,190,883; July 11; Gaz. vol. 228; p. 636.
Bottle-producing means. J. B. Graham and F. R. Miller. No. 1,189,811; July 4; Gaz. vol. 228; p. 213.
Bottle shelf and locker. E. Christensen. No. 1,190,732; July 11; Gaz. vol. 228; p. 581.
Bottle-stopper. F. E. Carlson. No. 1,191,277; July 18; Gaz. vol. 228; p. 816.
Bottle-stopper fastener. E. G. Kayser. No. 1,192,067; July 25; Gaz. vol. 228; p. 1146.
Bottle-washing machine. J. W. Dawson. No. 1,191,573; July 18; Gaz. vol. 228; p. 918.
Bottle-washing machine. C. A. Ensor. No. 1,191,776; July 18; Gaz. vol. 228; p. 991.
Bottom-operating coupling. E. P. Kinne. No. 1,192,432; July 25; Gaz. vol. 228; p. 1275.
Bow rest and clamping device. N. H. Ransom. No. 1,191,613; July 18; Gaz. vol. 228; p. 931.
Box: *See*—
Battery-box. Milk and mail box.
Boiler fire-box. Outlet-box.
Cigarette-box. Paper box.
Display-box. Phonograph sound-box.
Fare-box. Resistance-box.
Film-developing box. Safety-deposit box.
Journal-box. Scale-beam box.
Junction-box. Sound-box.
Lunch-box. Sound-reproducing box.
Mail-box. Talking-machine sound-box.
Mailing-box. Terminal box.
Match and cigarette box.
Box. J. H. Appleton. No. 1,190,700; July 11; Gaz. vol. 228; p. 571.
Box. A. Sorge, Jr. No. 1,190,203; July 4; Gaz. vol. 228; p. 345.
Box. C. L. Well. No. 1,190,612; July 11; Gaz. vol. 228; p. 537.
Box-blank machine, Adjustable. J. J. Miller. No. 1,191,110; July 11; Gaz. vol. 228; p. 713.
Box-blank-making machine. F. G. Feeley. No. 1,192,407; July 25; Gaz. vol. 228; p. 1268.
Box-covering machine. J. P. Markert and R. S. Bolges. No. 1,190,928; July 11; Gaz. vol. 228; p. 653.
Box, crate, and like construction. H. B. Collins. No. 1,189,542; July 4; Gaz. vol. 228; p. 122.
Box-grooving machine. W. T. Green. No. 1,190,151; July 4; Gaz. vol. 228; p. 325.
Box-member lock or fastening device, Hinged-. C. C. Armstrong. No. 1,189,902; July 4; Gaz. vol. 228; p. 244.
Box-staying and similar machines, Safety-stop for. B. L. Kaback and S. Shelly. No. 1,192,206; July 25; Gaz. vol. 228; p. 1196.
Box-staying machines, Safety-stop for. H. W. Jackson and J. O. Horton. No. 1,192,201; July 25; Gaz. vol. 228; p. 1194.
Brace: *See*—
Ankle-brace. Railway-rail brace.
Rail and tie brace.
Bracelets and other articles of jewelry, Manufacture of. J. J. Sommer. No. 1,189,882; July 4; Gaz. vol. 228; p. 237.
Bracket: *See*—
Bottle-bracket. Refrigerator-counter bracket.
Car-door bracket. Shade-bracket.
Curtain-bracket. Shade and curtain bracket.
Extensible bracket. Shelf-bracket.
Radiator-bracket.
Braiding-machine. J. Lundgren. No. 1,189,591; July 4; Gaz. vol. 228; p. 137.
Braiding-machine. E. L. Rankin. No. 1,189,483; July 4; Gaz. vol. 228; p. 101.
Brake: *See*—
Car-brake. Vehicle-brake.
Drum-brake. Wagon-brake.
Fluid-pressure brake.
Brake. W. S. Hutchinson. No. 1,192,316; July 25; Gaz. vol. 228; p. 1235.
Brake apparatus, Safety. D. L. Lindquist. No. 1,190,925; July 11; Gaz. vol. 228; p. 652.
Brake-beam fulcrum, Forged. F. J. Schroeder. No. 1,192,466; July 25; Gaz. vol. 228; p. 1287.
Brake clutch and lock, Safety. W. H. Swoyer and J. W. Horner. No. 1,190,811; July 11; Gaz. vol. 228; p. 608.
Brake-gear. F. Hoffman. No. 1,191,107; July 11; Gaz. vol. 228; p. 712.
Brake head and hanger connection. C. H. Williams. No. 1,189,327; July 4; Gaz. vol. 228; p. 42.
Brake-operating mechanism. W. S. Hutchinson. No. 1,192,524; July 25; Gaz. vol. 228; p. 1307.
Brake slack-adjuster, Car-. C. Harter and R. Wark. No. 1,192,420; July 25; Gaz. vol. 228; p. 1272.
Brakes, Apparatus for the control of fluid-pressure. L. V. Lewis. No. 1,192,331; July 25; Gaz. vol. 228; p. 1241.
Brassière. S. Sorkin. No. 1,190,602; July 11; Gaz. vol. 228; p. 533.
Brassière, Nursing-. L. Lawrence. No. 1,189,589; July 4; Gaz. vol. 228; p. 136.
Bread-improver and making the same. R. W. Wahl. No. 1,190,827; July 11; Gaz. vol. 228; p. 615.
Bread wrapping, labeling, and sealing machine. J. P. Norwood. No. 1,191,029; July 11; Gaz. vol. 228; p. 687.
Breakswitch. G. E. Barstow. No. 1,190,621; July 11; Gaz. vol. 228; p. 541.
Breast-strap. S. A. Harris. No. 1,191,418; July 18; Gaz. vol. 228; p. 866.
Brick-drier car. L. W. McArthur. No. 1,192,082; July 25; Gaz. vol. 228; p. 1151.
Brick-lifter. H. B. Crum. No. 1,192,504; July 25; Gaz. vol. 228; p. 1299.
Brick-machine. W. P. Grath. No. 1,192,057; July 25; Gaz. vol. 228; p. 1142.
Brick-machine. W. A. Shock. No. 1,190,475; July 11; Gaz. vol. 228; p. 489.

Brick machine, Soft-mud-. J. P. Martin. No. 1,192,444; July 25; Gaz. vol. 228; p. 1279.
Brick-making machine. F. W. Butterworth and G. Holmes. No. 1,191,925; July 18; Gaz. vol. 228; p. 1044.
Brick-making machinery. R. Emery. No. 1,190,742; July 11; Gaz. vol. 228; p. 585.
Brick, Slotted. J. P. B. Fiske. No. 1,189,438; July 4; Gaz. vol. 228; p. 84.
Brine into meat, Apparatus for injecting. B. K. Albrecht. No. 1,192,596; July 25; Gaz. vol. 228; p. 1333.
Broom. E. L. Kenoyer. No. 1,191,975; July 25; Gaz. vol. 228; p. 1114.
Broom-clamp. N. H. Beebe and H. E. Smith. No. 1,191,758; July 18; Gaz. vol. 228; p. 985.
Broom or brush, Removable handle device for a whisk. S. G. Wilson. No. 1,192,484; July 25; Gaz. vol. 228; p. 1293.
Brush. J. B. Fesler. No. 1,190,227; July 4; Gaz. vol. 228; p. 354.
Brush. C. P. Keating. No. 1,189,698; July 4; Gaz. vol. 228; p. 173.
Brush, Air-. L. Walkup. No. 1,191,751; July 18; Gaz. vol. 228; p. 982.
Brush, Fountain-. J. B. Fesler. No. 1,190,228; July 4; Gaz. vol. 228; p. 355.
Brush, Fountain tooth-. E. C. Miles. No. 1,192,668; July 25; Gaz. vol. 228; p. 1356.
Brush-handle. M. G. Reeves. No. 1,191,828; July 18; Gaz. vol. 228; p. 1008.
Brush-holder. R. W. Borchard. No. 1,192,268; July 25; Gaz. vol. 228; p. 1219.
Brush-holder, Spindle-head. E. Court. No. 1,190,383; July 11; Gaz. vol. 228; p. 457.
Brush-machine. C. S. Labonish. No. 1,190,302; July 11; Gaz. vol. 228; p. 428.
Brush, Massage-. O. Englund. No. 1,191,578; July 18; Gaz. vol. 228; p. 920.
Brush, Sanitary revolving bath-. H. R. Wesley. No. 1,191,860; July 13; Gaz. vol. 228; p. 1020.
Brush, Shaving-. O. S. McCurdy. No. 1,191,604; July 18; Gaz. vol. 228; p. 928.
Brush, Spatter-. R. Andacht. No. 1,191,120; July 11; Gaz. vol. 228; p. 717.
Brush, Tooth-. F. W. Blake. No. 1,191,556; July 18; Gaz. vol. 228; p. 913.
Brush, Tooth-. A. Gerstenzang. No. 1,192,298; July 25; Gaz. vol. 228; p. 1229.
Brush, Tooth-. L. C. Stockton. No. 1,189,505; July 4; Gaz. vol. 228; p. 109.
Brushes and the like, Attachment for tooth-. R. M. Withycombe. No. 1,190,057; July 4; Gaz. vol. 228; p. 293.
Buckle. G. R. Nettleton. No. 1,192,552; July 25; Gaz. vol. 228; p. 1316.
Buckle, Apparel-. B. F. Orewiler. No. 1,191,341; July 18; Gaz. vol. 228; p. 839.
Buckle, Bale-tie. R. L. Horsley. No. 1,192,817; July 25; Gaz. vol. 228; p. 1407.
Buckle for harness, Trace-. A. E. Clark. No. 1,191,279; July 18; Gaz. vol. 228; p. 816.
Buckle-support. M. M. Leichter. No. 1,190,305; July 11; Gaz. vol. 228; p. 429.
Buffer. A. A. Long. No. 1,190,310; July 11; Gaz. vol. 228; p. 431.
Building-block. W. C. Ferguson. No. 1,190,226; July 4; Gaz. vol. 228; p. 354.
Building-block. S. W. Finch. No. 1,191,884; July 18; Gaz. vol. 228; p. 1029.
Building-block. H. R. Straight. No. 1,191,363; July 18; Gaz. vol. 228; p. 847.
Building-block for door-jambs. H. R. Straight. No. 1,191,364; July 18; Gaz. vol. 228; p. 848.
Building-blocks, Reinforcing means for. J. James. No. 1,191,428; July 18; Gaz. vol. 228; p. 870.
Building-column. J. Picuri. No. 1,190,002; July 4; Gaz. vol. 228; p. 276.
Building construction. J. F. Acheson. No. 1,192,027; July 25; Gaz. vol. 228; p. 1133.
Building construction. J. Kahn. No. 1,192,208; July 25; Gaz. vol. 228; p. 1197.
Building construction. J. Kahn. No. 1,192,209; July 25; Gaz. vol. 228; p. 1197.
Building element. W. Bailey. No. 1,190,081; July 4; Gaz. vol. 228; p. 302.
Bulletin-board. J. S. Abernethy. No. 1,190,069; July 4; Gaz. vol. 228; p. 298.
Bung and faucet, Combined. S. Rosenfeld. No. 1,190,802; July 11; Gaz. vol. 228; p. 605.
Burglar-guard. E. O. and I. J. Cilley. No. 1,191,400; July 18; Gaz. vol. 228; p. 860.
Burglar or detection system. R. M. Hopkins and J. F. D. Hoge. No. 1,192,312; July 25; Gaz. vol. 223; p. 1233.
Burner: *See*—
Gas-burner. Pulverized-fuel burner.
Hydrocarbon-burner. Stump-burner.
Liquid-fuel burner. Vapor-burner.
Oil-burner. Wood-burner.
Burner. W. C. George. No. 1,189,558; July 4; Gaz. vol. 228; p. 126.
Burner and heater, Combined. F. J. Richards. No. 1,190,461; July 11; Gaz. vol. 228; p. 483.
Burner-tip-cleaning device. V. B. Allen. No. 1,192,597; July 25; Gaz. vol. 228; p. 1323.
Bushings to metal bodies, Uniting. S. Rosenfeld. No. 1,190,803; July 11; Gaz. vol. 228; p. 605.
Button. L. R. Carley. No. 1,191,944; July 25; Gaz. vol. 228; p. 1102.
Button, Adjustable shoe-. M. A. Myer. No. 1,192,672; July 25; Gaz. vol. 228; p. 1357.
Button-attaching machine. L. E. Poole. No. 1,192,682; July 25; Gaz. vol. 228; p. 1361.
Button-attaching machines, Feeding mechanism for. H. J. MacDonald. No. 1,191,807; July 18; Gaz. vol. 228; p. 1001.
Button-fastener. C. F. Gaunt. No. 1,192,413; July 25; Gaz. vol. 228; p. 1270.
Button lock, Cuff-. J. B. Conde and C. S. Moscony. No. 1,191,763; July 18; Gaz. vol. 228; p. 987.
Button-setting machine. J. S. Peters and L. A. Simmons. No. 1,192,681; July 25; Gaz. vol. 228; p. 1360.
Button, Snap-. C. F. Klett. No. 1,192,072; July 25; Gaz. vol. 228; p. 1147.
Buttons to belt-clasps and to certain other articles, Means for fixing. W. F. Gaunt. No. 1,192,414; July 25; Gaz. vol. 228; p. 1270.
Buzzer. R. I. Utter. No. 1,190,608; July 11; Gaz. vol. 228; p. 535.
Cabinet. M. Lang. No. 1,191,710; July 18; Gaz. vol. 228; p. 966.
Cabinet and cards, Per-diem car-record account. H. A. Van Houten. No. 1,191,857; July 18; Gaz. vol. 228; p. 1018.
Cabinet, Rotary spice-. F. L. King. No. 1,189,456; July 4; Gaz. vol. 228; p. 90.
Cabinet, Sectional. W. T. Hormes. No. 1,190,170; July 4; Gaz. vol. 228; p. 332.
Cabinet, Sheet-receiving. F. S. Hand. No. 1,190,758; July 11; Gaz. vol. 228; p. 590.
Cabinet, Sterilizing-. M. E. Gibson. No. 1,190,541; July 11; Gaz. vol. 228; p. 511.
Cable-carrier-despatch systems, Carrier for. M. B. Lawrence. No. 1,192,436; July 25; Gaz. vol. 228; p. 1277.
Cable coupling, Armored-. R. M. Hutton. No. 1,191,078; July 11; Gaz. vol. 228; p. 703.
Cable-grip. V. H. Jackson. No. 1,192,065; July 25; Gaz. vol. 228; p. 1145.
Cable-splicing tool. C. A. Swanson. No. 1,192,356; July 25; Gaz. vol. 228; p. 1249.
Calculating device. H. W. Dyer. No. 1,191,678; July 18; Gaz. vol. 228; p. 954.
Calculating-machine. A. F. Poole. No. 1,191,928; July 18; Gaz. vol. 228; p. 1045.
Calculating-machine. J. F. Reirdon. No. 1,189,289; July 4; Gaz. vol. 228; p. 28.
Calculating-machines, Setting and adjusting mechanism for. A. Rechnitzer. No. 1,189,288; July 4; Gaz. vol. 228; p. 28.
Calendar. F. A. Fuller. No. 1,192,054; July 25; Gaz. vol. 228; p. 1142.
Calendar. A. Morawski. No. 1,190,789; July 11; Gaz. vol. 228; p. 601.
Calendar. J. N. Stacy. No. 1,190,907; July 11; Gaz. vol. 228; p. 666.
Calendar device, Electrically-operative. G. N. Tsumura. No. 1,190,820; July 11; Gaz. vol. 228; p. 612.
Calk-machine. A. Pfeiffer. No. 1,190,001; July 4; Gaz. vol. 228; p. 275.
Call-distributing system. H. P. Clausen. No. 1,192,165; July 25; Gaz. vol. 228; p. 1179.
Camera. E. L. Brownson. No. 1,190,717; July 11; Gaz. vol. 228; p. 577.
Camera. A. S. Cramer. No. 1,191,066; July 11; Gaz. vol. 228; p. 699.
Camera and attachment therefor. E. M. F. Guignard. No. 1,190,996; July 11; Gaz. vol. 228; p. 676.
Camera, Automatic-focusing. J. Becker. No. 1,190,214; July 4; Gaz. vol. 228; p. 350.
Camera-casing. G. O. Smith. No. 1,192,096; July 25; Gaz. vol. 228; p. 1365.
Camera exposure attachment. R. Troxell. No. 1,192,710; July 25; Gaz. vol. 228; p. 1371.
Camera, Focusing-. J. Becker. No. 1,190,623; July 11; Gaz. vol. 228; p. 541.
Camera, Motion-picture. M. Meushaw. No. 1,192,666; July 25; Gaz. vol. 228; p. 1355.
Camera or holder, Photographic. H. L. Gray. No. 1,192,058; July 25; Gaz. vol. 228; p. 1143.
Camera, Repeating pump-gun. C. R. Pfander. No. 1,190,000; July 4; Gaz. vol. 228; p. 275.
Camera-shutter operator, Time-controlled. A. G. F. Kurowski and O. A. Martini. No. 1,190,301; July 11; Gaz. vol. 228; p. 427.
Cameras, Legend device for. W. H. Martin. No. 1,190,442; July 11; Gaz. vol. 228; p. 477.
Cameras, Roll-film attachment for plate-. R. V. Whatley. No. 1,191,632; July 18; Gaz. vol. 228; p. 938.
Camp-stool, Collapsible. E. L. Kamrath. No. 1,190,423; July 11; Gaz. vol. 228; p. 471.
Can: *See*—
Dispensing-can. Packing-can.
Garbage-can. Plural-walled can.
Can-body-re-forming machine. I. D. Thornburgh. No. 1,190,341; July 11; Gaz. vol. 228; p. 441.
Can-body-seam-welding machine. H. H. Hood. No. 1,190,902; July 11; Gaz. vol. 228; p. 644.
Can closure, Evaporated-milk-. C. H. Schulze. No. 1,190,472; July 11; Gaz. vol. 228; p. 488.
Can closure, Milk-. A. L. Brown. No. 1,192,745; July 25; Gaz. vol. 228; p. 1383.

Can-cover counter. J. C. Tallaferro, D. P. Robinson, and J. Coyle. No. 1,192,705; July 25; Gaz. vol. 228; p. 1369.
Can-delivering machine. C. H. Ayars. No. 1,190,236; July 4; Gaz. vol. 228; p. 358.
Can-feeding mechanism. C. H. Ayars. No. 1,190,235; July 4; Gaz. vol. 228; p. 357.
Can-filling machines, Feeding mechanism for. C. H. Ayars. No. 1,190,234; July 4; Gaz. vol. 228; p. 357.
Can-locking means. J. H. Thompson and E. S. Goetz. No. 1,190,043; July 4; Gaz. vol. 228; p. 288.
Candle-finishing machine. E. J. Engman. No. 1,189,674; July 4; Gaz. vol. 228; p. 165.
Candy-boxes and the like, Temporary cover for. P. R. Warren. No. 1,192,359; July 25; Gaz. vol. 228; p. 1250.
Cane, Apparatus for macerating sugar-. W. A. Ramsay. No. 1,191,826; July 18; Gaz. vol. 228; p. 1007.
Caoutchouc-like substances and making them. H. S. A. Holt. No. 1,192,310; July 25; Gaz. vol. 228; p. 1233.
Cap. G. J. Kromer, Jr. No. 1,190,427; July 11; Gaz. vol. 228; p. 472.
Car-body. A. F. Brest. No. 1,189,535; July 4; Gaz. vol. 228; p. 119.
Car-brake. O. W. Allison. No. 1,190,073; July 4; Gaz. vol. 228; p. 299.
Car-brake. T. E. Holsten and W. Lundin. No. 1,190,410; July 11; Gaz. vol. 228; p. 466.
Car brake and fender, Street-. O. A. Kalbfus. No. 1,189,964; July 4; Gaz. vol. 228; p. 263.
Car construction. E. J. P. Meyer. No. 1,189,717; July 4; Gaz. vol. 228; p. 180.
Car, Convertible touring-. L. B. Moulton. No. 1,189,990; July 4; Gaz. vol. 228; p. 272.
Car-couplings, Centering and supporting device for. W. F. Richards. No. 1,189,386; July 4; Gaz. vol. 228; p. 64.
Car-door bracket. F. C. Cameron. No. 1,191,563; July 18; Gaz. vol. 228; p. 915.
Car door, Freight-. O. Olsen. No. 1,192,340; July 25; Gaz. vol. 228; p. 1243.
Car-doors, Auxiliary control device for. F. Hedley and J. S. Doyle. No. 1,191,968; July 25; Gaz. vol. 228; p. 1111.
Car draft-arm, Railway-. L. T. Canfield. No. 1,190,858; July 11; Gaz. vol. 228; p. 627.
Car, Dump-. F. Ditchfield. No. 1,189,352; July 4; Gaz. vol. 228; p. 52.
Car, Dump-. H. L. Ransberger. No. 1,191,463; July 18; Gaz. vol. 228; p. 881.
Car, Dumping-. C. P. Astrom. No. 1,191,268; July 18; Gaz. vol. 228; p. 813.
Car, Dumping-. A. C. Murphy. No. 1,189,283; July 4; Gaz. vol. 228; p. 26.
Car-fender. E. M. Knothe. No. 1,189,832; July 4; Gaz. vol. 228; p. 220.
Car-floor. W. L. Conwell. No. 1,191,283; July 18; Gaz. vol. 228; p. 818.
Car, Freight-. F. Mathews. No. 1,189,464; July 4; Gaz. vol. 228; p. 94.
Car lighting and starting and for similar purposes, Regulator for use in charging accumulator-cells for motor-. W. H. Scott. No. 1,191,129; July 11; Gaz. vol. 228; p. 719.
Car lock, Motor-. P. Hinkley. No. 1,192,309; July 25; Gaz. vol. 228; p. 1233.
Car-operating mechanism, Dump-. F. Ditchfield. No. 1,189,353; July 4; Gaz. vol. 228; p. 52.
Car, Poultry-. R. E. Frame. No. 1,191,294; July 18; Gaz. vol. 228; p. 822.
Car-roof, Metal. H. H. Hart. No. 1,189,252; July 4; Gaz. vol. 228; p. 15.
Car-roof, Metal. A. C. Murphy. No. 1,191,213; July 18; Gaz. vol. 228; p. 792.
Car-roof, Metal. A. C. Murphy. No. 1,191,214; July 18; Gaz. vol. 228; p. 792.
Car-seat construction. J. E. Kilburn. No. 1,191,438; July 18; Gaz. vol. 228; p. 873.
Car-seats, Back-supporting standard for. R. B. Marsh. No. 1,190,441; July 11; Gaz. vol. 228; p. 477.
Car side bearing. F. L. Barber and C. S. Walton. No. 1,192,032; July 25; Gaz. vol. 228; p. 1134.
Car side construction. W. H. Yost. No. 1,190,357; July 11; Gaz. vol. 228; p. 447.
Car-step, Automatic extension. J. G. Claus. No. 1,190,861; July 11; Gaz. vol. 228; p. 627.
Car-step, Pneumatic mechanism for operating an extensible. H. D. Kirkley. No. 1,192,642; July 25; Gaz. vol. 228; p. 1348.
Car-step, Extension. G. L. Davis. No. 1,191,770; July 18; Gaz. vol. 228; p. 989.
Car-step, Folding. J. J. McCarthy and C. Mertz. No. 1,189,595; July 4; Gaz. vol. 229; p. 139.
Car-stopping device. J. B. Strauss. No. 1,189,750; July 4; Gaz. vol. 228; p. 191.
Car wheel, Mine-. C. Clausen. No. 1,190,111; July 4; Gaz. vol. 228; p. 311.
Cars and other motor-driven vehicles, Means of suspension for motor-. J. J. Ruel. No. 1,189,629; July 4; Gaz. vol. 228; p. 150.
Cars, Portable partition for freight-. A. C. Scott. No. 1,192,231; July 25; Gaz. vol. 228; p. 1206.
Carbon articles, Making. A. T. Hinckley. No. 1,192,062; July 25; Gaz. vol. 228; p. 1144.
Carbon-contact holder. C. M. Proctor. No. 1,190,190; July 4; Gaz. vol. 228; p. 341.
Carbon, Regenerating decolorizing-. A. Wijnberg. No. 1,189,896; July 4; Gaz. vol. 228; p. 242.
Carburetor. T. D. Bottome. No. 1,190,715; July 11; Gaz. vol. 228; p. 576.
Carburetor. C. De Lukacsevics and C. J. Terrill. No. 1,190,124; July 4; Gaz. vol. 228; p. 315.
Carburetor. C. De Lukacsevics. No. 1,190,125; July 4; Gaz. vol. 228; p. 316.
Carburetor. F. Gettelman. No. 1,190,540; July 11; Gaz. vol. 228; p. 511.
Carburetor. A. G. Lamb. No. 1,191,522; July 18; Gaz. vol. 228; p. 901.
Carburetor. A. G. Lamb. No. 1,192,213; July 25; Gaz. vol. 228; p. 1200.
Carburetor. C. L. Nedoma. No. 1,190,573; July 11; Gaz. vol. 228; p. 522.
Carburetor. W. P. Pembroke. No. 1,192,106; July 25; Gaz. vol. 228; p. 1159.
Carburetor. J. Speirs. No. 1,191,097; July 11; Gaz. vol. 228; p. 709.
Carbureter-heater. R. S. Du Bois. No. 1,190,129; July 4; Gaz. vol. 228; p. 317.
Carbureter-receptacle and mechanism for making same. F. L. Kingston. No. 1,191,190; July 18; Gaz. vol. 228; p. 784.
Carbureter, Suction-intensifying. E. F. Ciglia and L. F. Pelletier. No. 1,191,156; July 18; Gaz. vol. 228; p. 773.
Carbureting method and apparatus. T. D. Bottome. No. 1,190,714; July 11; Gaz. vol. 228; p. 575.
Card, Billing-. L. W. Gatchell. No. 1,191,582; July 18; Gaz. vol. 228; p. 921.
Cards, Coller-front for. E. A. Rooney. No. 1,189,740; July 4; Gaz. vol. 228; p. 187.
Cards or tickets, Machine for making show-. A. Lévecque. No. 1,191,803; July 18; Gaz. vol. 228; p. 999.
Cards, Playing-. R. O. Harrison. No. 1,191,419; July 18; Gaz. vol. 228; p. 866.
Carding-machine. F. Föster and M. Jungbauer. No. 1,192,805; July 25; Gaz. vol. 228; p. 1403.
Carpet, Grass. S. G. Miller. No. 1,191,212; July 18; Gaz. vol. 228; p. 791.
Carpet-sweeper, Pneumatic. F. J. Quist. No. 1,190,798; July 11; Gaz. vol. 228; p. 603.
Carriage attachment, Baby-. C. Schiller. No. 1,192,002; July 25; Gaz. vol. 228; p. 1123.
Carriage, Collapsible baby-. O. E. Erickson and H. Olson. No. 1,189,244; July 4; Gaz. vol. 228; p. 11.
Carrier: *See*—
Litter-carrier. Trace-carrier.
Cart, Baby-. J. E. Brown and J. N. Curlee. No. 1,191,394; July 18; Gaz. vol. 228; p. 858.
Cart, Baby-. B. L. Gates. No. 1,190,398; July 11; Gaz. vol. 228; p. 462.
Carton-blank-forming machine. E. M. Hawkins. No. 1,189,945; July 4; Gaz. vol. 228; p. 257.
Carton, Collapsible. W. A. V. Porter. No. 1,191,533; July 18; Gaz. vol. 228; p. 905.
Cartridge-projectile. P. T. Snyder. No. 1,191,357; July 18; Gaz. vol. 228; p. 845.
Cartridge with independently-operating pistons, Hydraulic. D. V. Sickman. No. 1,191,138; July 11; Gaz. vol. 228; p. 723.
Case: *See*—
Cigarette-case. Meat-case.
Drill-case. Parcel-post case.
Eyeglass-case. Vacuum-receptacle case.
Filing-case.
Casein, Preparation of plastic. F. Lebrell and R. Desgeorge. No. 1,189,841; July 4; Gaz. vol. 228; p. 224.
Cash-register. A. E. Jacobs. No. 1,190,416; July 11; Gaz. vol. 228; p. 467.
Cash-register. H. A. Martin. No. 1,189,278; July 4; Gaz. vol. 228; p. 24.
Cash-register. E. J. Von Pein. No. 1,190,489; July 11; Gaz. vol. 228; p. 493.
Cash-register, Sales-slip-perforating. F. M. Carroll. No. 1,191,154; July 18; Gaz. vol. 228; p. 772.
Casket. J. W. De Camp. No. 1,192,169; July 25; Gaz. vol. 228; p. 1181.
Caster, Furniture-. J. F. Vich. No. 1,190,826; July 11; Gaz. vol. 228; p. 615.
Casting apparatus. E. C. Washburn. No. 1,192,024; July 25; Gaz. vol. 228; p. 1131.
Casting apparatus and process. J. C. Davis. No. 1,192,044; July 25; Gaz. vol. 228; p. 1139.
Casting ingots of metals and alloys, Apparatus for and process of. P. H. G. Durville. No. 1,189,548; July 4; Gaz. vol. 228; p. 123.
Casting-machine. A. Leinweber. No. 1,189,976; July 4; Gaz. vol. 228; p. 267.
Casting machine, Metal-. J. E. Laferriere. No. 1,191,085; July 11; Gaz. vol. 228; p. 705.
Casting metal. T. C. Schultze. No. 1,189,391; July 4; Gaz. vol. 228; p. 66.
Casting steel articles, Mold for. C. G. Robinson. No. 1,191,471; July 18; Gaz. vol. 228; p. 885.
Catalyzer and making same for effecting catalytic reactions therewith. N. Sulzberger. (Reissue.) No. 14,167; July 18; Gaz. vol. 228; p. 1050.
Catamenial appliance. S. B. Potter. No. 1,192,683; July 25; Gaz. vol. 228; p. 1361.
Catamenial bandage. L. W. Luellen. No. 1,192,439; July 25; Gaz. vol. 228; p. 1278.

Cattle-guard. J. R. Horton. No. 1,191,971; July 25; Gaz. vol. 228; p. 1112.
Cellulose esters, Preparation of new. J. Koetschet and M. Theumann. No. 1,191,439; July 18; Gaz. vol. 228; p. 873.
Cementing-machine. F. A. Brackett. No. 1,192,379; July 25; Gaz. vol. 228; p. 1258.
Cementing-machine. F. A. Brackett. No. 1,192,380; July 25; Gaz. vol. 228; p. 1258.
Cementing-machine. T. P. Hall and A. Bates. No. 1,191,590; July 18; Gaz. vol. 228; p. 923.
Centrifugal dividing mechanism. G. L. Southard. No. 1,189,748; July 4; Gaz. vol. 228; p. 190.
Centrifugal machine. P. M. Grover. No. 1,189,812; July 4; Gaz. vol. 228; p. 213.
Centrifugal machines, Apparatus for handling material in. D. M. Cooper. No. 1,189,920; July 4; Gaz. vol. 228; p. 250.
Centrifugal machines, Bearing for. C. A. Adams. No. 1,192,823; July 25; Gaz. vol. 228; p. 1409.
Chain. E. A. Moore. No. 1,190,446; July 11; Gaz. vol. 228; p. 479.
Chain apparatus, Hackle-. J. Good. No. 1,191,959; July 25; Gaz. vol. 228; p. 1108.
Chain, Drive-. F. J. Oakes. No. 1,192,674; July 25; Gaz. vol. 228; p. 1358.
Chain, Guide-. W. McMeikin. No. 1,189,599; July 4; Gaz. vol. 228; p. 140.
Chair: *See*—
Arm-chair. Rail-joint chair.
Nursery-chair. Reclining or invalid's chair.
Chair attachment. A. Geraci. No. 1,189,934; July 4; Gaz. vol. 228; p. 254.
Chair attachment. F. Olson. No. 1,189,995; July 4; Gaz. vol. 228; p. 274.
Chair foot-rest. F. Lenard. No. 1,189,705; July 4; Gaz. vol. 228; p. 175.
Chair-seat. F. H. Hurd and E. J. Heule. No. 1,189,951; July 4; Gaz. vol. 228; p. 259.
Change-making and computing machine. R. L. Bailey. No. 1,192,727; July 25; Gaz. vol. 228; p. 1377.
Change-making machines, Attachment for. F. A. Niemann. No. 1,192,555; July 25; Gaz. vol. 228; p. 1317.
Check holder and register. R. J. Brumwell. No. 1,189,659; July 4; Gaz. vol. 228; p. 160.
Checkrein-controller. J. F. Shaffer. No. 1,190,599; July 11; Gaz. vol. 228; p. 532.
Cheese and other foods, Device for holding. T. Wang. No. 1,189,759; July 4; Gaz. vol. 228; p. 194.
Cheese-press. W. E. Penn. No. 1,192,348; July 25; Gaz. vol. 228; p. 1244.
Child's seat. A. E. Scott. No. 1,192,798; July 25; Gaz. vol. 228; p. 1401.
Chisel-gage. E. E. Taft. No. 1,192,242; July 25; Gaz. vol. 228; p. 1210.
Chlorbenzol, Making pure. L. Rabinovitz. No. 1,189,736; July 4; Gaz. vol. 228; p. 186.
Chlorinating process and apparatus. B. T. Brooks, H. Essex, and D. F. Smith. No. 1,191,916; July 18; Gaz. vol. 228; p. 1041.
Chocolate, Beating apparatus, especially for the manufacture of. P. Hänel. No. 1,189,941; July 4; Gaz. vol. 228; p. 256.
Choker-hook. A. G. Ashby. No. 1,192,260; July 25; Gaz. vol. 228; p. 1216.
Chopper: *See*—
Cotton-chopper.
Chuck. A. K. Andrews. No. 1,191,755; July 18; Gaz. vol. 228; p. 984.
Chuck, Expansible. H. J. Notz and G. A. Reeve. No. 1,191,092; July 11; Gaz. vol. 228; p. 707.
Chuck, Lathe-. W. T. Lingo. No. 1,192,437; July 25; Gaz. vol. 228; p. 1277.
Churn. L. L. Randall. No. 1,190,191; July 4; Gaz. vol. 228; p. 341.
Churn and milk-separator, Combined. J. A. Ohlsson. No. 1,192,676; July 25; Gaz. vol. 228; p. 1359.
Chute. S. G. Jacobs. No. 1,190,417; July 11; Gaz. vol. 228; p. 468.
Chute, Feed-. P. F. Malarkey. No. 1,191,524; July 18; Gaz. vol. 228; p. 902.
Cigar and cigarette ash catcher and holder. A. L. Schwartz. No. 1,189,878; July 4; Gaz. vol. 228; p. 236.
Cigar-bunch shaper. H. S. Marsh and C. Lindblad. No. 1,191,199; July 18; Gaz. vol. 228; p. 787.
Cigar-filler-forming mechanism. V. E. Hansen. No. 1,191,593; July 18; Gaz. vol. 228; p. 924.
Cigar-holder. X. J. Joller. No. 1,189,962; July 4; Gaz. vol. 228; p. 263.
Cigar-machines, Bunch-forming device for. V. E. Hansen. No. 1,191,592; July 18; Gaz. vol. 228; p. 924.
Cigar-piercer, Souvenir. E. F. Rueckert. No. 1,190,326; July 11; Gaz. vol. 228; p. 437.
Cigarette-box. R. F. Thorndike. No. 1,192,707; July 25; Gaz. vol. 228; p. 1370.
Cigarette-case. T. F. Hathaway. No. 1,189,813; July 4; Gaz. vol. 228; p. 214.
Cinch-ring. G. W. Parmeter. No. 1,190,794; July 11; Gaz. vol. 228; p. 602.
Cinematograph apparatus, Shutter for. C. Dowson. No. 1,191,069; July 11; Gaz. vol. 228; p. 700.
Cinematographic apparatus. J. J. Mouls. No. 1,192,094; July 25; Gaz. vol. 228; p. 1155.
Circuit-breaker. H. S. Beakes. No. 1,191,146; July 18; Gaz. vol. 228; p. 769.
Circuit-breaker, Automatic. A. R. Anderson. No. 1,192,368; July 25; Gaz. vol. 228; p. 1253.
Circuit-controller, Automatic. R. D. Ashley. No. 1,190,366; July 11; Gaz. vol. 228; p. 450.
Circuit-controlling instrument. E. W. Vogel. No. 1,189,316; July 4; Gaz. vol. 228; p. 39.
Circuit-interrupter. C. Aalborg and T. S. Pukerud. No. 1,189,392; July 4; Gaz. vol. 228; p. 66.
Circuit-interrupter. H. G. MacDonald. No. 1,189,274; July 4; Gaz. vol. 228; p. 22.
Circuit-interrupter. J. N. Mahoney and W. M. Austin. No. 1,189,276; July 4; Gaz. vol. 228; p. 23.
Circuit making and breaking device. L. T. Rhoades. No. 1,189,870; July 4; Gaz. vol. 228; p. 233.
Circuits, Selective cut-out for alternating-current. P. Ackerman. No. 1,192,724; July 25; Gaz. vol. 228; p. 1375.
Clamp: *See*—
Broom-clamp. Jointer-standard clamp.
Form-clamp. Line-clamp.
Hose-clamp. Lumber-clamp.
Hose and the like clamp. Rail-clamp.
Insulator-clamp. Rim-clamp.
Tube-clamp.
Clamp. W. T. Ruete. No. 1,191,617; July 18; Gaz. vol. 228; p. 933.
Clamp. E. E. Schnelle. No. 1,190,467; July 11; Gaz. vol. 228; p. 486.
Clamp or connector. H. Brisacher. No. 1,192,084; July 25; Gaz. vol. 228; p. 1135.
Clamps, Packing member for service-. J. H. Glauber. No. 1,191,887; July 18; Gaz. vol. 228; p. 1030.
Clamping device. A. Levedahl. No. 1,189,268; July 4; Gaz. vol. 228; p. 20.
Cleaner: *See*—
Ball-cleaner. Quill-cleaner.
Cotton-cleaner. Rake-cleaner.
Eraser-cleaner. Shoe-cleaner.
Flue-cleaner. Soot-cleaner.
Intestine-cleaner. Suction-cleaner.
Picture-film cleaner. Tube-cleaner.
Cleaner and dust-collector. J. P. Stoffel. No. 1,192,015; July 25; Gaz. vol. 228; p. 1128.
Cleaning-rod. J. Dvorak. No. 1,192,174; July 25; Gaz. vol. 228; p. 1183.
Clip: *See*—
Hame-tug clip. Pen or pencil clip.
Paper-clip. Spoke-clip.
Clock, Alarm-. Z. Kardos. No. 1,190,770; July 11; Gaz. vol. 228; p. 594.
Clock-movements, Electrical winding device for. E. M. Thompson. No. 1,191,914; July 18; Gaz. vol. 228; p. 1040.
Clock, Self-winding. F. M. Schmidt. No. 1,189,630; July 4; Gaz. vol. 228; p. 151.
Clock, Self-winding. W. J. Van Osdell. No. 1,191,249; July 18; Gaz. vol. 228; p. 805.
Clocks and the like, Winding-indicator for. D. J. Mitchell. No. 1,189,607; July 4; Gaz. vol. 228; p. 142.
Clod crusher and pulverizer. W. R. Smith. No. 1,190,601; July 11; Gaz. vol. 228; p. 533.
Closure-fastener. W. L. Cook. No. 1,190,729; July 11; Gaz. vol. 228; p. 581.
Cloth-cutter. J. B. Edwards. No. 1,191,164; July 18; Gaz. vol. 228; p. 776.
Clothes-boiler. J. Plaszkiewicz. No. 1,192,452; July 25; Gaz. vol. 228; p. 1282.
Clothes-drainer. J. P. Sundin. No. 1,190,606; July 11; Gaz. vol. 228; p. 534.
Clothes-drainer. G. H. Ulrich. No. 1,192,246; July 25; Gaz. vol. 228; p. 1211.
Clothes-drier. A. G. Galbraith. No. 1,191,173; July 18; Gaz. vol. 228; p. 779.
Clothes-drier. P. D. Riordan. No. 1,191,998; July 25; Gaz. vol. 228; p. 1121.
Clothes-drying machine. C. W. Collins. No. 1,191,128; July 11; Gaz. vol. 228; p. 718.
Clothes-drying rack. A. D. Smith. No. 1,191,241; July 18; Gaz. vol. 228; p. 802.
Clothes-line adjuster and winder. O. Hofstrand. No. 1,191,598; July 18; Gaz. vol. 228; p. 926.
Clothes-line crane. C. J. Reich. No. 1,191,466; July 18; Gaz. vol. 228; p. 882.
Clothes-line holder. P. P. Furey. No. 1,189,679; July 4; Gaz. vol. 228; p. 166.
Clothes-line supporting and operating mechanism. A. G. Burris. No. 1,189,911; July 4; Gaz. vol. 228; p. 247.
Clothes-pressing device. G. F. Hammond. No. 1,192,518; July 25; Gaz. vol. 228; p. 1305.
Clothes-pressing device. G. F. Hammond. No. 1,192,519; July 25; Gaz. vol. 228; p. 1305.
Clothes-rack, Adjustable. N. Jensen. No. 1,191,312; July 18; Gaz. vol. 228; p. 829.
Clothing-protector. M. J. Liebenstein and L. H. Emsheimer. No. 1,191,200; July 18; Gaz. vol. 228; p. 787.
Clover-huller. J. W. Feeler. No. 1,190,137; July 4; Gaz. vol. 228; p. 320.
Clutch. J. A. Bried. No. 1,192,382; July 25; Gaz. vol. 228; p. 1259.
Clutch. G. V. Harriman. No. 1,191,893; July 18; Gaz. vol. 228; p. 1031.
Clutch. H. Manthey. No. 1,192,793; July 25; Gaz. vol. 228; p. 1399.

Clutch-differential. G. D. Bailey and F. E. Rice. No. 1,189,775; July 4; Gaz. vol. 228; p. 200.
Clutch, Driving and reversing. G. H. Hazelton. No. 1,191,594; July 18; Gaz. vol. 228; p. 924.
Clutch for gripping pins or rods. L. Aanerud. No. 1,190,362; July 11; Gaz. vol. 228; p. 449.
Clutch, Hydraulic. C. C. Rich. No. 1,191,231; July 18; Gaz. vol. 228; p. 798.
Clutch mechanism, Built-up releasable. G. D. Bailey and F. E. Rice. No. 1,189,774; July 4; Gaz. vol. 228; p. 199.
Clutch-pedal-regulating device. A. Gowder and L. O. Brand. No. 1,190,995; July 11; Gaz. vol. 228; p. 675.
Clutch, Safety automobile-. W. S. Mullin. No. 1,192,671; July 25; Gaz. vol. 228; p. 1357.
Coal and separating refuse therefrom, Washing. N. Shannon. No. 1,190,960; July 11; Gaz. vol. 228; p. 664.
Coal-drilling machine. D. Armenti. No. 1,189,901; July 4; Gaz. vol. 228; p. 244.
Coal-jig. M. J. Gasper. No. 1,192,296; July 25; Gaz. vol. 228; p. 1228.
Coal, Means for sampling and checking miners'. E. Ramsay. No. 1,191,227; July 18; Gaz. vol. 228; p. 797.
Coals and other hydrocarbonaceous substances, Apparatus for treating. J. D. Scott. No. 1,190,957; July 11; Gaz. vol. 228; p. 663.
Coat-protector. F. E. Bresler. No. 1,189,534; July 4; Gaz. vol. 228; p. 119.
Coating and covering fibrous elements with a fluid and solid adhesive, Automatic device for. L. A. Subers. No. 1,192,017; July 25; Gaz. vol. 228; p. 1129.
Coating composition. M. M. Durkee. No. 1,192,765; July 25; Gaz. vol. 228; p. 1389.
Coating composition. C. Ellis. No. 1,189,550; July 4; Gaz. vol. 228; p. 124.
Coating fabrics, Machine for. J. F. White and L. B. Ross. No. 1,192,143; July 25; Gaz. vol. 228; p. 1172.
Coating material, Device for heating and applying. E. E. Seale. No. 1,190,019; July 4; Gaz. vol. 228; p. 281.
Coating wire with metal. G. L. Meaker. No. 1,191,526; July 18; Gaz. vol. 228; p. 902.
Cock, Gage-. I. B. Flynn. No. 1,190,277; July 11; Gaz. vol. 228; p. 419.
Coding messages, Apparatus for. R. C. Martens. No. 1,189,277; July 4; Gaz. vol. 228; p. 24.
Coil-making machine. W. Deats. No. 1,190,868; July 11; Gaz. vol. 228; p. 630.
Coin-controlled apparatus. L. Ericksen. No. 1,190,881; July 11; Gaz. vol. 228; p. 636.
Coin-controlled mechanism. H. S. Mills. No. 1,190,934; July 11; Gaz. vol. 228; p. 655.
Coin-receiving prepayment devices, Total-registering means for. H. J. Baur. No. 1,190,368; July 11; Gaz. vol. 228; p. 451.
Coin-recorder. S. G. Knight. No. 1,189,972; July 4; Gaz. vol. 228; p. 266.
Coke, Making. H. W. Buhler and C. J. Emerson. No. 1,191,943; July 25; Gaz. vol. 228; p. 1102.
Collar, Horse-. G. M. Cook. No. 1,190,116; July 4; Gaz. vol. 228; p. 313.
Collar, Fold-. W. J. Beattie. No. 1,191,491; July 18; Gaz. vol. 228; p. 891.
Collar, Soft fold-. H. F. Hurd. No. 1,189,693; July 4; Gaz. vol. 228; p. 171.
Collar-supporter. O. L. Payne. No. 1,191,218; July 18; Gaz. vol. 228; p. 794.
Colloidal solutions in organic substances not miscible with water, Producing. H. Karplus. No. 1,189,696; July 4; Gaz. vol. 228; p. 172.
Color projection, Staggered dispersing device for. L. Landry. No. 1,189,266; July 4; Gaz. vol. 228; p. 19.
Colter, Plow-. M. C. French. No. 1,191,685; July 18; Gaz. vol. 228; p. 958.
Comb and tooth-brush, Combined. A. J. Melin. No. 1,189,852; July 4; Gaz. vol. 228; p. 228.
Combing-machine. R. Güttermann. No. 1,190,997; July 11; Gaz. vol. 228; p. 676.
Combination-lock. W. W. Whitmarsh. No. 1,191,638; July 18; Gaz. vol. 228; p. 940.
Combustion-engine. G. Fornaca. No. 1,190,252; July 4; Gaz. vol. 228; p. 364.
Combustion-engine. G. Fornaca. No. 1,190,253; July 4; Gaz. vol. 228; p. 365.
Combustion-engine. G. Fornaca. No. 1,190,255; July 4; Gaz. vol. 228; p. 366.
Combustion-engine. C. H. Tangeman. No. 1,191,368; July 18; Gaz. vol. 228; p. 849.
Combustion-engine, Inclosed. G. Fornaca. No. 1,190,254; July 4; Gaz. vol. 228; p. 365.
Comminuted materials, Apparatus for grading and quantitatively determining. N. C. Johnson. No. 1,189,961; July 4; Gaz. vol. 228; p. 262.
Comminuting device. F. M. Woods. No. 1,190,499; July 11; Gaz. vol. 228; p. 496.
Commode. M. M. Marcuse. No. 1,189,714; July 4; Gaz. vol. 228; p. 179.
Composing and type-casting machine, Line-. T. S. Homans. No. 1,192,635; July 25; Gaz. vol. 228; p. 1346.
Composite substances, Apparatus for operating upon. A. Fay. No. 1,191,883; July 18; Gaz. vol. 228; p. 1028.
Compressor-regulator. R. W. Douglass. No. 1,191,774; July 18; Gaz. vol. 228; p. 990.
Computing-machine. H. Marshall. No. 1,190,184; July 4; Gaz. vol. 228; p. 338.
Concrete floors and the like, Form for. H. Ericsson. No. 1,191,881; July 18; Gaz. vol. 228; p. 1027.
Concrete-form. E. Becker. No. 1,191,492; July 18; Gaz. vol. 228; p. 891.
Concrete forms, Securing device for. H. Rasmussen. No. 1,192,115; July 25; Gaz. vol. 228; p. 1162.
Concrete-insert. W. A. von Wolffradt. No. 1,192,804; July 25; Gaz. vol. 228; p. 1403.
Concrete-mixer. S. Finley. No. 1,192,179; July 25; Gaz. vol. 228; p. 1185.
Concrete-mixing machine. O. G. Mandt. No. 1,190,927; July 11; Gaz. vol. 228; p. 653.
Concrete-mold, Portable. O. D. Bartow. No. 1,190,977; July 11; Gaz. vol. 228; p. 669.
Concrete piles, Core for forming. M. M. Upson and H. R. Day. No. 1,192,247; July 25; Gaz. vol. 228; p. 1211.
Concrete-pipe mold. E. L. Ransome. No. 1,191,731; July 18; Gaz. vol. 228; p. 975.
Concrete-reinforcing bars, Combined support and tie for. G. R. Schoenthaler. No. 1,189,297; July 4; Gaz. vol. 228; p. 32.
Concrete structure. J. T. Simpson. No. 1,189,398; July 4; Gaz. vol. 228; p. 68.
Concrete structures, Mechanism for use in building. I. N. Gates. No. 1,190,240; July 4; Gaz. vol. 228; p. 359.
Concrete, Treating. C. Ellis. No. 1,189,551; July 4; Gaz. vol. 228; p. 124.
Concrete-wall mold. C. O. Ellert. No. 1,190,740; July 11; Gaz. vol. 228; p. 584.
Concrete walls, Core for use in the construction of hollow. J. Blomberg. No. 1,192,493; July 25; Gaz. vol. 228; p. 1296.
Condenser. A. Hough. No. 1,191,899; July 18; Gaz. vol. 228; p. 1034.
Condenser or electrolytic valve, Electrolytic. G. Giles. No. 1,190,886; July 11; Gaz. vol. 228; p. 637.
Cone-dispenser. W. J. Eisenhardt. No. 1,191,165; July 18; Gaz. vol. 228; p. 776.
Connector. E. G. Appleton. No. 1,192,150; July 25; Gaz. vol. 228; p. 1175.
Container. F. Hachmann. No. 1,190,754; July 11; Gaz. vol. 228; p. 589.
Container-closure. W. C. Morrill. No. 1,189,280; July 4; Gaz. vol. 228; p. 25.
Container-top. F. S. Hyatt. No. 1,189,451; July 4; Gaz. vol. 228; p. 89.
Containing-vessel closure. J. E. Doidt. No. 1,192,173; July 25; Gaz. vol. 228; p. 1183.
Containing-vessel closure. W. F. Stone. No. 1,192,135; July 25; Gaz. vol. 228; p. 1169.
Containing-vessel closure. J. Nevelson. No. 1,189,860; July 4; Gaz. vol. 228; p. 230.
Control-releasing device. H. A. Dodge. No. 1,191,878; July 18; Gaz. vol. 228; p. 1026.
Control system. C. Renshaw. No. 1,189,290; July 4; Gaz. vol. 228; p. 29.
Control system. L. G. Riley. No. 1,189,292; July 4; Gaz. vol. 228; p. 30.
Controlling apparatus. D. H. Rene. No. 1,190,799; July 11; Gaz. vol. 228; p. 604.
Controlling system. A. F. Dixon. No. 1,192,171; July 25; Gaz. vol. 228; p. 1182.
Convertible mold. Z. R. Ashbaugh. No. 1,189,337; July 4; Gaz. vol. 228; p. 46.
Conveyance-top. T. Golde. No. 1,190,751; July 11; Gaz. vol. 228; p. 588.
Conveyer. C. H. Burton. No. 1,192,604; July 25; Gaz. vol. 228; p. 1335.
Conveyer. W. S. Sherman. No. 1,192,832; July 25; Gaz. vol. 228; p. 1413.
Conveyer-belts, Guiding device for. S. D. Sibley. No. 1,192,128; July 25; Gaz. vol. 228; p. 1166.
Conveyer, Intermediate. J. F. Berry, Jr. No. 1,191,059; July 11; Gaz. vol. 228; p. 696.
Conveyer, Platform-. T. M. Keith. No. 1,191,434; July 18; Gaz. vol. 228; p. 871.
Cooker, Steam-. L. Heiser. No. 1,192,306; July 25; Gaz. vol. 228; p. 1232.
Cooking. C. B. Trescott. No. 1,192,802; July 25; Gaz. vol. 228; p. 1402.
Cooking apparatus. R. M. G. Phillips. (Reissue.) No. 14,161; July 4; Gaz. vol. 228; p. 368.
Cooking apparatus, Electric. F. V. Detwiler. No. 1,191,286; July 18; Gaz. vol. 228; p. 819.
Cooking hams. A. Reubold. No. 1,190,010; July 4; Gaz. vol. 228; p. 278.
Cooking, Preparing foods for. R. and A. S. Wohl. No. 1,191,047; July 11; Gaz. vol. 228; p. 693.
Cooking utensil. R. H. Marr. No. 1,192,730; July 25; Gaz. vol. 228; p. 1378.
Cooking utensil. C. R. Meeker. No. 1,192,088; July 25; Gaz. vol. 228; p. 1153.
Cooking utensils, Food-molding appliance for. J. A. Sesler. No. 1,189,498; July 4; Gaz. vol. 228; p. 106.
Cooler: *See*—
Air-cooler.
Journal-box cooler.
Cooler. S. S. Story. No. 1,190,968; July 11; Gaz. vol. 228; p. 667.
Cooling apparatus. T. L. Marshall. No. 1,191,017; July 11; Gaz. vol. 228; p. 683.
Cooling apparatus. H. R. Turner. No. 1,192,245; July 25; Gaz. vol. 228; p. 1211.
Cooling-coil protector. T. P. Fliegenschmidt and L. V. Prinzler. No. 1,190,746; July 11; Gaz. vol. 228; p. 586.

Cooling system. N. M. La Porte. No. 1,190,777; July 11; Gaz. vol. 228; p. 597.
Corer. W. G. Groom. No. 1,191,588; July 18; Gaz. vol. 228; p. 922.
Coring instrument. E. R. Betzer. No. 1,190,711; July 11; Gaz. vol. 228; p. 575.
Corking machines, Cap-scrubbing element for crown-. E. Court. No. 1,190,384; July 11; Gaz. vol. 228; p. 457.
Corn-husking device. W. T. Boice. No. 1,192,160; July 25; Gaz. vol. 228; p. 1178.
Corn-loader. A. Carlson. No. 1,190,105; July 4; Gaz. vol. 228; p. 310.
Corn-popping machine. J. I. Holcomb. No. 1,192,634; July 25; Gaz. vol. 228; p. 1346.
Corona losses, Means for preventing. G. Faccioli. No. 1,190,135; July 4; Gaz. vol. 228; p. 320.
Corrugating-machine. G. A. and A. F. Trachte. No. 1,189,885; July 4; Gaz. vol. 228; p. 238.
Corset. K. L. Harding. No. 1,192,626; July 25; Gaz. vol. 228; p. 1343.
Corset. F. Heindrich. No. 1,191,785; July 18; Gaz. vol. 228; p. 994.
Corset, Abdomen-supporting. H. M. McCormick. No. 1,190,250; July 4; Gaz. vol. 228; p. 363.
Corset-fastener. A. E. Pollock. No. 1,191,910; July 18; Gaz. vol. 228; p. 1038.
Corsets and analogous articles, Fastener for. H. L. Siegel. No. 1,191,841; July 18; Gaz. vol. 228; p. 1012.
Cot, Sanitary. F. S. Inco. No. 1,192,318; July 25; Gaz. vol. 228; p. 1235.
Cotter-pin. J. O. Kafader. No. 1,190,908; July 11; Gaz. vol. 228; p. 646.
Cotton-chopper. J. R. Penn. No. 1,191,456; July 18; Gaz. vol. 228; p. 879.
Cotton-cleaner. G. C. Stacy. No. 1,192,469; July 25; Gaz. vol. 228; p. 1288.
Cotton-distributing apparatus. G. E. Repass. No. 1,190,800; July 11; Gaz. vol. 228; p. 605.
Cotton-gin. W. G. De Ramus. No. 1,190,986; July 11; Gaz. vol. 228; p. 672.
Cotton-gin. M. W. Marsden. No. 1,192,660; July 25; Gaz. vol. 228; p. 1354.
Cotton-seed plug. C. C. Hartpence. No. 1,191,001; July 11; Gaz. vol. 228; p. 677.
Cotton-wadding apparatus. E. H. Rooney. No. 1,189,873; July 4; Gaz. vol. 228; p. 234.
Couch. C. Carroll. No. 1,191,664; July 18; Gaz. vol. 228; p. 949.
Counter-gate, Coöperating. J. T. Berthelote. No. 1,192,600; July 25; Gaz. vol. 228; p. 1334.
Coupling: *See*—
Air-coupling.
Cable-coupling.
Electric train-wire coupling.
Flexible coupling.
Fluid-pressure coupling.
Hose-coupling.
Pipe-coupling.
Roller-mill coupling.
Shaft-coupling.
Structural coupling.
Thill-coupling.
Universal coupling.
Valve-coupling.
Coupling. W. F. Eckert. No. 1,189,802; July 4; Gaz. vol. 228; p. 210.
Coupling. E. A. Watts and I. L. Dunn. No. 1,190,491; July 11; Gaz. vol. 228; p. 493.
Coupling device. H. L. Johnston. No. 1,191,313; July 18; Gaz. vol. 228; p. 829.
Coupling or shaft cover. C. E. Pelton. No. 1,192,342; July 25; Gaz. vol. 228; p. 1244.
Coupling-uncoupling device. H. T. Anderson. No. 1,189,773; July 4; Gaz. vol. 228; p. 199.
Cover-attaching means. G. A. Schmid. No. 1,191,479; July 18; Gaz. vol. 228; p. 886.
Cow-tail holder and hobble. L. E. Woolery. No. 1,189,330; July 4; Gaz. vol. 228; p. 43.
Cradle, Folding. W. G. Oldendorf. No. 1,189,863; July 4; Gaz. vol. 228; p. 231.
Crank for shafts, Safety-. W. L. Miller. No. 1,189,006; July 4; Gaz. vol. 228; p. 142.
Crank-handle, Folding. P. Tuszka. No. 1,191,855; July 18; Gaz. vol. 228; p. 1017.
Crate. J. B. Castle. No. 1,189,539; July 4; Gaz. vol. 228; p. 120.
Crate, Collapsible. J. J. Gieske. No. 1,192,415; July 25; Gaz. vol. 228; p. 1270.
Crate, Collapsible. A. Nellus. No. 1,189,614; July 4; Gaz. vol. 228; p. 145.
Crate, Folding. H. R. De Laye. No. 1,191,067; July 11; Gaz. vol. 228; p. 699.
Crate, Folding. A. C. Thompson. No. 1,190,042; July 4; Gaz. vol. 228; p. 288.
Crate or box blank machine, Wire-bound. J. J. Miller. No. 1,191,111; July 11; Gaz. vol. 228; p. 713.
Crate, Shipping-. S. F. Bagg. No. 1,190,367; July 11; Gaz. vol. 228; p. 451.
Cream, Making artificial. H. C. Beckman and G. E. Dyck. No. 1,190,369; July 11; Gaz. vol. 228; p. 451.
Creams, custards, and the like, Manufacturing. A. L. S. McCurdy. No. 1,190,181; July 4; Gaz. vol. 228; p. 337.
Crib and bin structure. J. D. Overholt. No. 1,189,729; July 4; Gaz. vol. 228; p. 184.
Crochet-hook. C. R. Hallett. No. 1,192,623; July 25; Gaz. vol. 228; p. 1342.
Crochet-ring. S. Penrod. No. 1,191,457; July 18; Gaz. vol. 228; p. 880.
Crusher: *See*—
Clod-crusher.
Ice-crusher.
Rock-crusher.
Crusher. J. W. Bolleau. No. 1,191,494; July 18; Gaz. vol. 228; p. 892.
Crushing-machine. J. D. Ochterbeck. No. 1,189,471; July 4; Gaz. vol. 228; p. 96.
Crutch or cane, Extension. E. F. Engstrom. No. 1,192,290; July 25; Gaz. vol. 228; p. 1226.
Crypt. J. H. Steuart. No. 1,191,244; July 18; Gaz. vol. 228; p. 804.
Cuff and neckband press. L. H. Freeman. No. 1,190,280; July 11; Gaz. vol. 228; p. 420.
Cuff-link. P. Milano. No. 1,191,716; July 18; Gaz. vol. 228; p. 969.
Cuff-link. T. M. Obsboum. No. 1,192,101; July 25; Gaz. vol. 228; p. 1157.
Cultivating tool, Soil-. S. G. Stevens. No. 1,190,838; July 11; Gaz. vol. 228; p. 440.
Cultivator. O. W. Johnson. No. 1,191,430; July 18; Gaz. vol. 228; p. 870.
Cultivator. L. E. Jones. No. 1,191,006; July 11; Gaz. vol. 228; p. 679.
Cultivator. C. T. Ray. No. 1,191,114; July 11; Gaz. vol. 228; p. 714.
Cultivator attachment. T. D. Terry. No. 1,191,850; July 18; Gaz. vol. 228; p. 1016.
Cultivator weeder attachment. A. H. Nelson and G. C. Peterson. No. 1,189,615; July 4; Gaz. vol. 228; p. 145.
Cup: *See*—
Engine priming-cup.
Grease-cup.
Lubricating-cup.
Oil-cup.
Cup-dispensing apparatus. W. D. Flood. No. 1,190,976; July 11; Gaz. vol. 228; p. 419.
Curb-guard and anchoring and positioning device therefor. A. E. Davis. No. 1,192,506; July 25; Gaz. vol. 228; p. 1300.
Curing freshly-cut crops, Apparatus for. A. J. Mason. No. 1,191,980; July 25; Gaz. vol. 228; p. 1115.
Curing-machine. F. A. Stecher. No. 1,190,337; July 11; Gaz. vol. 228; p. 440.
Current-converting apparatus. L. P. Crecelius. No. 1,192,393; July 25; Gaz. vol. 228; p. 1263.
Current generators, Arrangement for excitation of continuous-. L. Schön. No. 1,190,680; July 11; Gaz. vol. 228; p. 564.
Current-interrupter. C. F. Kettering. No. 1,191,976; July 25; Gaz. vol. 228; p. 1114.
Current interrupter, Ringing-. H. F. Obergfell. No. 1,189,862; July 4; Gaz. vol. 228; p. 230.
Current-meter. D. A. Munroe. No. 1,190,251; July 4; Gaz. vol. 228; p. 364.
Current motor, Alternating-. B. G. Lamme. No. 1,189,703; July 4; Gaz. vol. 228; p. 175.
Current motor, Alternating-. M. C. A. Latour. No. 1,192,649; July 25; Gaz. vol. 228; p. 1350.
Curtain. W. J. Kennedy and G. Yelle. No. 1,189,967; July 4; Gaz. vol. 228; p. 265.
Curtain and shade holder, Combined. W. H. McLeskey. No. 1,191,207; July 18; Gaz. vol. 228; p. 790.
Curtain-bracket. J. F. De Haven. No. 1,192,281; July 25; Gaz. vol. 228; p. 1228.
Curtain drier and stretcher. W. P. Ballard. (Reissue.) No. 14,164; July 11; Gaz. vol. 228; p. 723.
Curtain-holder. J. and R. P. Chapman. No. 1,191,666; July 18; Gaz. vol. 228; p. 950.
Curtain or shade fixture. J. A. Rayder. No. 1,190,007; July 4; Gaz. vol. 228; p. 277.
Curtain-pole. G. Fäbián. No. 1,192,405; July 25; Gaz. vol. 228; p. 1267.
Cushion. M. A. Appel. No. 1,190,618; July 11; Gaz. vol. 228; p. 539.
Cushion. M. Fischmann. No. 1,192,510; July 25; Gaz. vol. 228; p. 1302.
Cut-off and pressure-regulator, Automatic. C. L. Wilkins. No. 1,191,640; July 18; Gaz. vol. 228; p. 941.
Cutter: *See*—
Angle-iron cutter.
Cloth-cutter.
Fabric-cutter.
Hedge and grass cutter.
Kraut-cutter.
Meat-cutter.
Tile-cutter.
Vegetable-cutter.
Cutter. N. W. Howard. No. 1,192,200; July 25; Gaz. vol. 228; p. 1193.
Cutter-head. H. H. Plummer. No. 1,191,728; July 18; Gaz. vol. 228; p. 974.
Cutter-head. E. S. Shimer. No. 1,192,694; July 25; Gaz. vol. 228; p. 1365.
Cutter-head, Rotary. E. S. Shimer. No. 1,190,197; July 4; Gaz. vol. 228; p. 343.
Cutting and folding machine. H. M. Barber. No. 1,192,262; July 25; Gaz. vol. 228; p. 1217.
Cutting apparatus. H. L. Hopkins. No. 1,190,411; July 11; Gaz. vol. 228; p. 466.
Cutting device. W. R. Welander. No. 1,190,052; July 4; Gaz. vol. 228; p. 292.
Cutting-machine. A. Bray. No. 1,190,096; July 4; Gaz. vol. 228; p. 306.
Cutting or slitting machine. H. Reichel. No. 1,190,192; July 4; Gaz. vol. 228; p. 341.
Cutting-tool. T. Pilkington. No. 1,192,110; July 25; Gaz. vol. 228; p. 1160.
Cycle-stand. I. Schwinn. No. 1,190,956; July 11; Gaz. vol. 228; p. 663.

Cycles, Driving-wheel hub for motor-. F. S. Ellett. No. 1,189,355; July 4; Gaz. vol. 228; p. 53.
Cylinder-drive engine. J. W. Wood. No. 1,190,838; July 11; Gaz. vol. 228; p. 619.
Cylinder testing and priming device. G. Kitchen, Jr. No. 1,192,643; July 25; Gaz. vol. 228; p. 1349.
Damper-operating mechanism. R. Roberts. No. 1,190,585; July 11; Gaz. vol. 228; p. 527.
Damper, Stove-. L. R. Holloway. No. 1,189,819; July 4; Gaz. vol. 228; p. 216.
Dampers and the like, Regulator for. E. A. Wildt. No. 1,189,644; July 4; Gaz. vol. 228; p. 156.
Davit, Automatic. R. Tjader. No. 1,190,046; July 4; Gaz. vol. 228; p. 290.
Davit, Boat-. R. Jones. No. 1,191,794; July 18; Gaz. vol. 228; p. 997.
Davit gear, Boat-. W. Dubois. No. 1,191,163; July 18; Gaz. vol. 228; p. 775.
Deep-hole drill. J. Oakley. No. 1,189,727; July 4; Gaz. vol. 228; p. 183.
Defleshing-machine. A. Bajohr. No. 1,192,728; July 25; Gaz. vol. 228; p. 1377.
Deinking-machine for plate-wipers. C. Gutberlet. No. 1,191,500; July 18; Gaz. vol. 228; p. 895.
Dental casting-machine. J. E. Burns. No. 1,191,659; July 18; Gaz. vol. 228; p. 948.
Dental-disk holder. L. F. Gross. No. 1,190,152; July 4; Gaz. vol. 228; p. 326.
Dental injector and extractor. J. C. Quintin. No. 1,189,735; July 4; Gaz. vol. 228; p. 185.
Dental pliers. J. B. McAllister. No. 1,190,180; July 4; Gaz. vol. 228; p. 337.
Dental-work crown-pin. H. J. Goslee. No. 1,189,808; July 4; Gaz. vol. 228; p. 212.
Derailer. E. Smyth. No. 1,190,029; July 4; Gaz. vol. 228; p. 284.
Desk. C. H. Brown. No. 1,192,740; July 25; Gaz. vol. 228; p. 1383.
Desk. C. E. McCanless. No. 1,192,442; July 25; Gaz. vol. 228; p. 1279.
Desk and chair, Combined school. E. G. Watkins. No. 1,189,321; July 4; Gaz. vol. 228; p. 40.
Desk or table combination, Adjustable. S. H. Holmes. No. 1,189,949; July 4; Gaz. vol. 228; p. 258.
Destructor-furnace. J. Primrose. No. 1,190,458; July 11; Gaz. vol. 228; p. 482.
Diamond-holder. P. F. Thomson. No. 1,191,746; July 18; Gaz. vol. 228; p. 980.
Diaphragm, Flexible metallic. L. T. Bowmann. No. 1,190,716; July 11; Gaz. vol. 228; p. 576.
Diastatic product, Making. J. Takamine. No. 1,192,584; July 25; Gaz. vol. 228; p. 1328.
Dictograph apparatus. W. Heymann. No. 1,191,182; July 18; Gaz. vol. 228; p. 782.
Die: *See*—
Expanding die.
Die-machine, Self-starting. G. H. Joslin. No. 1,190,768; July 11; Gaz. vol. 228; p. 594.
Differential mechanism. T. Midgley, Jr. No. 1,189,279; July 4; Gaz. vol. 228; p. 24.
Diffusion apparatus. J. Stewart. No. 1,189,502; July 4; Gaz. vol. 228; p. 108.
Diffusion process. J. Stewart. No. 1,189,503; July 4; Gaz. vol. 228; p. 108.
Digger: *See*—
Tree-digger.
Digging and conveying apparatus. R. P. Greenleaf. No. 1,189,443; July 4; Gaz. vol. 228; p. 86.
Digging-machine. J. Gobiet. No. 1,189,935; July 4; Gaz. vol. 228; p. 255.
Digging-machine. J. J. Peters. No. 1,191,992; July 25; Gaz. vol. 228; p. 1120.
Dining-table, Ship's. C. Kerkhof. No. 1,192,070; July 25; Gaz. vol. 228; p. 1147.
Disinfectant sprinkler, Hog-. B. Armstrong. No. 1,189,523; July 4; Gaz. vol. 228; p. 115.
Disk records, Filing device for. J. E. Ralph. No. 1,190,005; July 4; Gaz. vol. 228; p. 276.
Dispensing apparatus. A. C. Knudtson. No. 1,190,558; July 11; Gaz. vol. 228; p. 517.
Dispensing-can. W. H. McNutt. No. 1,189,463; July 4; Gaz. vol. 228; p. 93.
Dispensing-can. H. and I. Rosenthal. No. 1,190,325; July 11; Gaz. vol. 228; p. 436.
Dispensing device. W. P. Hammond. No. 1,191,995; July 25; Gaz. vol. 228; p. 1121.
Dispensing device, including a pouring-lip. G. J. Record. No. 1,191,464; July 18; Gaz. vol. 228; p. 882.
Dispensing-receptacle. R. B. Cogan. No. 1,189,347; July 4; Gaz. vol. 228; p. 50.
Display-box, Easel. G. F. C. Bierwirth. No. 1,189,531; July 4; Gaz. vol. 228; p. 118.
Display device. A. J. Baldauf. No. 1,191,144; July 18; Gaz. vol. 228; p. 768.
Display device, Electrically-illuminated. J. E. Tucker and A. B. Leech. No. 1,192,803; July 25; Gaz. vol. 228; p. 1403.
Display-fixture. H. H. Lyons. No. 1,189,371; July 4; Gaz. vol. 228; p. 59.
Display-form. M. Greenwald. No. 1,191,091; July 18; Gaz. vol. 228; p. 959.
Display-rack corner-fastening. S. Belden, Jr. No. 1,190,088; July 4; Gaz. vol. 228; p. 304.
Display-racks, Cutting mechanism for. F. E. Fishering. No. 1,191,777; July 18; Gaz. vol. 228; p. 992.
Display-stand. C. T. Joern. No. 1,189,362; July 4; Gaz. vol. 228; p. 56.
Displaying advertisements, signaling, &c., Apparatus for. J. P. Naylor. No. 1,191,023; July 11; Gaz. vol. 228; p. 685.
Displaying-frame. B. F. Shreves and E. G. Anderson. No. 1,190,600; July 11; Gaz. vol. 228; p. 532.
Distilling apparatus, Wood-. J. W. Spurlock. No. 1,190,478; July 11; Gaz. vol. 228; p. 490.
Distilling petroleum, tar, or other substances under vacuum, Apparatus for. L. Steinschneider. No. 1,192,581; July 25; Gaz. vol. 228; p. 1327.
Dock structure. J. F. Jackson. No. 1,192,784; July 25; Gaz. vol. 228; p. 1396.
Door. M. N. Grootten. No. 1,189,250; July 4; Gaz. vol. 228; p. 13.
Door catch and lock. A. E. Linstrom. No. 1,191,711; July 18; Gaz. vol. 228; p. 967.
Door-check. J. F. Golding. No. 1,191,891; July 18; Gaz. vol. 228; p. 1030.
Door-check. G. W. Mallory. No. 1,190,313; July 11; Gaz. vol. 228; p. 432.
Door check and closer. A. J. Rosentreter. No. 1,192,000; July 25; Gaz. vol. 228; p. 1122.
Door check and spring. C. T. Rogers. No. 1,190,324; July 11; Gaz. vol. 228; p. 436.
Door-closer. L. J. Lindsay. No. 1,190,563; July 11; Gaz. vol. 228; p. 519.
Door closing and locking device. G. Lockbart. No. 1,192,215; July 25; Gaz. vol. 228; p. 1201.
Door, Coal-chute. A. A. Bowser. No. 1,192,161; July 25; Gaz. vol. 228; p. 1178.
Door, Combined screen and storm. A. H. McEwen. No. 1,191,012; July 11; Gaz. vol. 228; p. 681.
Door fastener, Sliding-. F. W. Creager and O. L. Wilson. No. 1,190,519; July 11; Gaz. vol. 228; p. 503.
Door-handling device. D. B. Stauft. No. 1,190,036; July 4; Gaz. vol. 228; p. 286.
Door-hanger. J. E. Anger. No. 1,190,078; July 4; Gaz. vol. 228; p. 301.
Door hanging and operating means, Combined. F. W. Hild, F. P. Maize, and W. L. Coop. No. 1,191,897; July 18; Gaz. vol. 228; p. 1033.
Door-lock. M. French. No. 1,191,779; July 18; Gaz. vol. 228; p. 992.
Door-lock and contact for electric elevators. H. P. McColl. No. 1,192,217; July 25; Gaz. vol. 228; p. 1201.
Door-lock, Multiple-bolt. P. Mugler. No. 1,189,991; July 4; Gaz. vol. 228; p. 272.
Door mechanism, Sliding-. T. M. Beardon. No. 1,192,083; July 25; Gaz. vol. 228; p. 1135.
Door opening and jamb gage, Extensible. C. J. Hallberg. No. 1,192,418; July 25; Gaz. vol. 228; p. 1271.
Door-operating mechanism. J. W. Miller. No. 1,191,606; July 18; Gaz. vol. 228; p. 928.
Door or window and ventilating structure, Combined. G. A. Fair. No. 1,192,400; July 25; Gaz. vol. 228; p. 1267.
Door-spring. O. W. Anderson. No. 1,190,840; July 11; Gaz. vol. 228; p. 620.
Door structure. T. V. Plice. No. 1,191,223; July 18; Gaz. vol. 228; p. 795.
Door, Two-lift. A. T. Prescott. No. 1,191,929; July 18; Gaz. vol. 228; p. 1046.
Doors and other structures, Hanger for barn-. P. A. Myers. No. 1,191,334; July 18; Gaz. vol. 228; p. 836.
Doors, Double control mechanism for. H. Trabbold. No. 1,192,476; July 25; Gaz. vol. 228; p. 1290.
Doors, Mounting for sliding. J. Torolf. No. 1,191,370; July 18; Gaz. vol. 228; p. 850.
Doors, Rack attachment for. J. Farlese. No. 1,189,677; July 4; Gaz. vol. 228; p. 166.
Double-spring gage. C. J. Manning. No. 1,192,443; July 25; Gaz. vol. 228; p. 1279.
Dough-molding machine. E. A. Reed. No. 1,189,868; July 4; Gaz. vol. 228; p. 233.
Dough-raiser. E. and E. A. Kleeman. No. 1,192,071; July 25; Gaz. vol. 228; p. 1147.
Dough-working apparatus. L. Embrey. No. 1,190,134; July 4; Gaz. vol. 228; p. 319.
Draft appliance. A. P. McKay. No. 1,189,981; July 4; Gaz. vol. 228; p. 269.
Draft-gear, Spring. J. F. O'Connor. No. 1,192,100; July 25; Gaz. vol. 228; p. 1157.
Draft-rigging. G. H. Forsyth. No. 1,192,513; July 25; Gaz. vol. 228; p. 1303.
Draft-rigging. J. Harris. No. 1,192,191; July 25; Gaz. vol. 228; p. 1190.
Draft-rigging. G. A. Johnson. No. 1,192,204; July 25; Gaz. vol. 228; p. 1195.
Draft-rigging, Car. C. J. Nash. No. 1,192,096; July 25; Gaz. vol. 228; p. 1156.
Draft-rigging, Draft-yoke for railway-car. G. A. Johnson. No. 1,192,203; July 25; Gaz. vol. 228; p. 1195.
Draft-rigging, Friction. W. Blackmore. No. 1,192,266; July 25; Gaz. vol. 228; p. 1218.
Draft-rigging, Friction-. E. H. Schmidt. No. 1,192,570; July 25; Gaz. vol. 228; p. 1323.
Draft-rigging, Friction. E. H. Schmidt. No. 1,192,571; July 25; Gaz. vol. 228; p. 1324.
Draft-rigging, Friction. E. H. Schmidt. No. 1,192,572; July 25; Gaz. vol. 228; p. 1324.
Draft-rigging, Railway-car. M. F. Back. No. 1,192,154; July 25; Gaz. vol. 228; p. 1176.

Draft-rigging, Railway-car. J. Harris. No. 1,192,059; July 25; Gaz. vol. 228; p. 1143.
Draft-rigging, Yoke for railway. J. F. O'Connor. No. 1,192,220; July 25; Gaz. vol. 228; p. 1202.
Drafting instrument. N. Paulsen. No. 1,191,725; July 18; Gaz. vol. 228; p. 972.
Drafting instrument. W. R. Pearson. No. 1,191,990; July 25; Gaz. vol. 228; p. 1119.
Drag, Road-. B. I. Church. No. 1,191,155; July 18; Gaz. vol. 228; p. 772.
Drain-rack. F. A. Goebel. No. 1,192,299; July 25; Gaz. vol. 228; p. 1229.
Drainage system. G. H. Barrus. No. 1,192,369; July 25; Gaz. vol. 228; p. 1253.
Drawer-rack. F. Brady. No. 1,191,657; July 18; Gaz. vol. 228; p. 947.
Drawer-slide. J. W. Kenyon. No. 1,189,580; July 4; Gaz. vol. 228; p. 134.
Drawing-board support. H. T. Hollinger. No. 1,191,424; July 18; Gaz. vol. 228; p. 868.
Dredging gravel, Apparatus for the separation of the sand and water raised in. L. D. and P. A. Drouard. No. 1,190,224; July 4; Gaz. vol. 228; p. 353.
Dredging-machines, Propelling means for. L. L., A. D., and C. C. Chapman. No. 1,192,752; July 25; Gaz. vol. 228; p. 1385.
Drier: *See*—
Clothes-drier.
Curtain-drier.
Grain-drier.
Photoprint-drier.
Sand and gravel drier.
Drier. B. S. Harrison. No. 1,191,075; July 11; Gaz. vol. 228; p. 702.
Drier. C. A. Wendell. No. 1,190,829; July 11; Gaz. vol. 228; p. 615.
Drying. D. B. Banks. No. 1,190,702; July 11; Gaz vol. 228; p. 571.
Drying and mixing material, Apparatus for. U. Ammann. No. 1,189,772; July 4; Gaz. vol. 228; p. 199.
Drying and winding machine. J. S. Johnston. No. 1,191,080; July 11; Gaz. vol. 228; p. 703.
Drying apparatus. W. Bartholomew. No. 1,189,777; July 4; Gaz. vol. 228; p. 201.
Drying apparatus. E. Disdier. No. 1,190,127; July 4; Gaz. vol. 228; p. 317.
Drying-cylinder. A. H. White. No. 1,189,761; July 4; Gaz. vol. 228; p. 195.
Drying mechanism. W. R. Macklind. No. 1,191,921; July 18; Gaz. vol. 228; p. 1043.
Drying mechanism, Vapor-removing apparatus for. W. R. Macklind. No. 1,192,084; July 25; Gaz. vol. 228; p. 1151.
Drill: *See*—
Deep-hole drill.
Rock-drill.
Rotary drill.
Well-drill.
Drill attachment for drilling-machines. H. J. Smith. No. 1,191,542; July 18; Gaz. vol. 228; p. 908.
Drill-bit. G. A. Humason. No. 1,191,310; July 18; Gaz. vol. 228; p. 828.
Drill-case. J. S. Selander. No. 1,192,575; July 25; Gaz. vol. 228; p. 1325.
Drill gear-and-ratchet mechanism. E. Rendano. No. 1,192,227; July 25; Gaz. vol. 228; p. 1204.
Drill-operating mechanism. J. D. MacDonald. No. 1,192,657; July 25; Gaz. vol. 228; p. 1353.
Drill-press attachment. G. J. Costello. No. 1,189,667; July 4; Gaz. vol. 228; p. 163.
Drills, Adjustable land-roller for. H. H. Scharmann. No. 1,192,838; July 18; Gaz. vol. 228; p. 1012.
Drills, Crank for bench-. J. Kowalsky. No. 1,190,559; July 11; Gaz. vol. 228; p. 517.
Driller. T. Burke. No. 1,189,237; July 4; Gaz. vol. 228; p. 9.
Drilling-machine. A. P. Peterson. No. 1,191,993; July 25; Gaz. vol. 228; p. 1120.
Drilling-machine. R. B. Weaver. No. 1,191,915; July 18; Gaz. vol. 228; p. 1040.
Drilling-ropes against wear, Means for protecting. W. H. Cater. No. 1,189,428; July 4; Gaz. vol. 228; p. 80.
Drive mechanism. F. F. Bingham. No. 1,192,376; July 25; Gaz. vol. 228; p. 1256.
Driving mechanism. R. L. Armstrong. No. 1,189,336; July 4; Gaz. vol. 228; p. 45.
Driving mechanism, Variable-speed. R. W. Barton. No. 1,190,704; July 11; Gaz. vol. 228; p. 572.
Dropper: *See*—
Oil-dropper.
Drum-brake. W. S. Hutchinson. No. 1,192,523; July 25; Gaz. vol. 228; p. 1307.
Dust-arrester. G. W. Glassford, Sr. No. 1,189,807; July 4; Gaz. vol. 228; p. 212.
Dust-collector. F. A. Wegner. No. 1,190,051; July 4; Gaz. vol. 228; p. 292.
Dust-pan. O. Carlson. No. 1,191,945; July 25; Gaz. vol. 228; p. 1102.
Dust-pan hanger. A. Rappleye and C. V. Slaght. No. 1,192,684; July 25; Gaz. vol. 228; p. 1362.
Duster, Hair-. G. S. Turner. No. 1,192,711; July 25; Gaz. vol. 228; p. 1371.
Dynamo, Ignition-. C. T. Mason. No. 1,189,374; July 4; Gaz. vol. 228; p. 60.
Dynamo, Ignition-. C. T. Mason. No. 1,190,785; July 11; Gaz. vol. 228; p. 600.
Dynamos, Centrifugal speed-regulator for. P. B. Whitney. No. 1,190,496; July 11; Gaz. vol. 228; p. 495.
Dynamos, Interrupter for ignition-. H. R. Van Deventer. No. 1,191,856; July 18; Gaz. vol. 228; p. 1018.
Eccentric, Adjustable. T. E. Lander. No. 1,189,588; July 4; Gaz. vol. 228; p. 136.
Eccentric mechanism, Variable. C. C. Rich. No. 1,191,230; July 18; Gaz. vol. 228; p. 798.
Educational appliance. K. Bradley. No. 1,189,233; July 4; Gaz. vol. 228; p. 8.
Egg-beater. J. W. Hudson. No. 1,192,426; July 25; Gaz. vol. 228; p. 1273.
Egg-candler. I. J. Rhine. No. 1,192,795; July 25; Gaz. vol. 228; p. 1400.
Egg-candling device. L. I. Hellbrun. No. 1,191,070; July 11; Gaz. vol. 228; p. 702.
Egg-case filler. J. S. Brough. No. 1,192,744; July 25; Gaz. vol. 228; p. 1383.
Egg-testing device. C. P. Hell. No. 1,192,305; July 25; Gaz. vol. 228; p. 1231.
Electric battery. P. A. Emanuel. No. 1,191,070; July 11; Gaz. vol. 228; p. 700.
Electric cell. P. A. Emanuel. No. 1,190,880; July 11; Gaz. vol. 228; p. 635.
Electric circuits, Switchboard for. J. J. Nielsen. No. 1,192,447; July 25; Gaz. vol. 228; p. 1280.
Electric conductors, Ground-terminal connection for. W. H. Blood, Jr. No. 1,191,940; July 25; Gaz. vol. 228; p. 1101.
Electric-conduit connection. E. E. Greaves. No. 1,190,641; July 11; Gaz. vol. 228; p. 549.
Electric contact device. A. A. Kent. No. 1,192,786; July 25; Gaz. vol. 228; p. 1397.
Electric conversion. S. Cabot. No. 1,191,759; July 18; Gaz. vol. 228; p. 985.
Electric currents, Device for the rectification of alternating. O. W. Richardson. No. 1,189,738; July 4; Gaz. vol. 228; p. 186.
Electric cut-out. H. R. Sargent. No. 1,191,619; July 18; Gaz. vol. 228; p. 933.
Electric display device. C. Tregoning. No. 1,192,585; July 25; Gaz. vol. 228; p. 1329.
Electric furnace. J. W. Brown. No. 1,190,856; July 11; Gaz. vol. 228; p. 626.
Electric furnace. P. Eyermann. No. 1,189,356; July 4; Gaz. vol. 228; p. 53.
Electric furnace. S. H. Fleming. No. 1,192,050; July 25; Gaz. vol. 228; p. 1140.
Electric heater. J. F. McElroy. No. 1,190,780; July 11; Gaz. vol. 228; p. 598.
Electric heater, Flexible. J. I. Ayer. No. 1,192,153; July 25; Gaz. vol. 228; p. 1175.
Electric heaters, Resistance wire for. R. H. Read. No. 1,192,457; July 25; Gaz. vol. 228; p. 1284.
Electric-light casing. W. E. Gunther. No. 1,192,187; July 25; Gaz. vol. 228; p. 1188.
Electric light, Portable. H. R. Van Deventer. No. 1,189,755; July 4; Gaz. vol. 228; p. 192.
Electric-line-apparatus protector. P. K. Higgins. No. 1,192,835; July 25; Gaz. vol. 228; p. 1414.
Electric machine. C. F. Kettering. No. 1,191,083; July 11; Gaz. vol. 228; p. 704.
Electric machine, Dynamo-. H. Treitel and K. Sulzberger. No. 1,190,048; July 4; Gaz. vol. 228; p. 290.
Electric meter. M. E. Turner. No. 1,190,485; July 11; Gaz. vol. 228; p. 491.
Electric meters on reversal of current-flow, Method of and apparatus for varying the speed of. J. H. Hodde. No. 1,190,291; July 11; Gaz. vol. 228; p. 425.
Electric oscillations, Apparatus for and method of exciting. E. L. Chaffee. No. 1,189,791; July 4; Gaz. vol. 228; p. 206.
Electric regulation. J. L. Creveling. No. 1,189,794; July 4; Gaz. vol. 228; p. 207.
Electric switch. H. H. Berry and W. J. Markham. No. 1,189,580; July 4; Gaz. vol. 228; p. 117.
Electric switch. H. Brisacher. No. 1,192,035; July 25; Gaz. vol. 228; p. 1135.
Electric switch. J. F. Burns. No. 1,191,924; July 18; Gaz. vol. 228; p. 1044.
Electric switch. W. B. Crossland. No. 1,191,284; July 18; Gaz. vol. 228; p. 818.
Electric switch. J. F. McElroy. No. 1,191,326; July 18; Gaz. vol. 228; p. 833.
Electric switch. G. B. Pilkington. No. 1,190,189; July 4; Gaz. vol. 228; p. 340.
Electric switch. G. Wolff. No. 1,190,060; July 4; Gaz. vol. 228; p. 295.
Electric switch. C. J. Zigler and W. P. Holden. No. 1,190,359; July 11; Gaz. vol. 228; p. 448.
Electric switch, Automatic. S. S. Stahl. No. 1,190,032; July 4; Gaz. vol. 228; p. 285.
Electric system. F. M. Slough. No. 1,192,006; July 25; Gaz. vol. 228; p. 1124.
Electric train-wire coupling. T. R. Brown. No. 1,190,509; July 11; Gaz. vol. 228; p. 499.
Electric wiring, Conduit-box rosette for. A. Barthels. No. 1,191,649; July 18; Gaz. vol. 228; p. 944.
Electrical appliance. S. E. Spaulding. No. 1,191,858; July 18; Gaz. vol. 228; p. 845.
Electrical connection. W. S. Edmands. No. 1,189,435; July 4; Gaz. vol. 228; p. 83.
Electrical control apparatus. C. Ambruster. No. 1,189,771; July 4; Gaz. vol. 228; p. 198.
Electrical cut-out. E. Kraus. No. 1,189,978; July 4; Gaz. vol. 228; p. 266.

Electrical distribution system. J. L. Woodbridge. No. 1,189,768; July 4; Gaz. vol. 228; p. 197.
Electrical heater. J. F. Lamb. No. 1,191,601; July 18; Gaz. vol. 228; p. 926.
Electrical instrument. C. I. Hall. No. 1,190,157; July 4; Gaz. vol. 228; p. 327.
Electrical instrument. F. W. Roller. No. 1,192,821; July 25; Gaz. vol. 228; p. 1408.
Electrical pole and pole-base. E. O. Lundin. No. 1,189,459; July 4; Gaz. vol. 228; p. 91.
Electrical protective device. A. H. Bakken. No. 1,189,228; July 4; Gaz. vol. 228; p. 6.
Electrical regulator. A. A. Tirrill. No. 1,192,708; July 25; Gaz. vol. 228; p. 1370.
Electrical switch. B. D. Horton. No. 1,190,903; July 11; Gaz. vol. 228; p. 644.
Electrical system. F. Conrad. No. 1,191,158; July 18; Gaz. vol. 228; p. 774.
Electrical transformer. G. W. Terhorst. No. 1,190,481; July 11; Gaz. vol. 228; p. 490.
Electrically-heated implement. E. N. Chandler. No. 1,192,389; July 25; Gaz. vol. 228; p. 1262.
Electrically-heated utensil. D. C. G. Hughes. No. 1,191,426; July 18; Gaz. vol. 228; p. 869.
Electrically-heated vessel. W. B. Underwood. No. 1,192,477; July 25; Gaz. vol. 228; p. 1291.
Electrode. I. Ladoff. No. 1,189,265; July 4; Gaz. vol. 228; p. 19.
Electrode for devices for varying electrical resistance. W. G. Hudson. No. 1,190,412; July 11; Gaz. vol. 228; p. 466.
Electrode for storage batteries. C. C. Carpenter. No. 1,190,982; July 11; Gaz. vol. 228; p. 671.
Electrolysis, System for preventing. W. B. Potter. No. 1,191,611; July 18; Gaz. vol. 228; p. 930.
Electrolysis, System for the prevention of. J. B. Taylor. No. 1,191,627; July 18; Gaz. vol. 228; p. 936.
Electrolytic cell and electrolyzing metal. C. Dantsizen. No. 1,190,122; July 4; Gaz. vol. 228; p. 315.
Electrolytic cell, Automatic. J. M. Goldman. No. 1,191,300; July 18; Gaz. vol. 228; p. 825.
Electrolytic cells, Replenishing. W. S. Smith. No. 1,191,356; July 18; Gaz. vol. 228; p. 845.
Electrolytic processes, Apparatus for use in and in connection with. A. E. Battle. No. 1,191,386; July 18; Gaz. vol. 228; p. 856.
Electromagnet. E. Hedenskoog. No. 1,190,647; July 11; Gaz. vol. 228; p. 552.
Electromagnet, Apparatus for limiting the traction of an. I. M. Stein. No. 1,189,883; July 4; Gaz. vol. 228; p. 238.
Electromagnetic vibrating members, Contact-breaker device for. A. H. Maitre and V. H. G. Martin. No. 1,190,244; July 4; Gaz. vol. 228; p. 361.
Electrotherapeutic apparatus. W. L. Walter. No. 1,190,490; July 11; Gaz. vol. 228; p. 493.
Elevator: *See*—
Portable elevator.
Elevator. R. A. Hathhorn. No. 1,191,421; July 18; Gaz. vol. 228; p. 867.
Elevator-controlling apparatus. W. C. Strang. No. 1,190,969; July 11; Gaz. vol. 228; p. 667.
Elevator-lock. G. Lockhart. No. 1,191,443; July 18; Gaz. vol. 228; p. 874.
Elevator-locking device. E. G. Watkins. No. 1,191,251; July 18; Gaz. vol. 228; p. 806.
Elevator-safety device. G. Hulme. No. 1,190,293; July 11; Gaz. vol. 228; p. 425.
Embroidering-machine. V. Kobler. No. 1,190,911; July 11; Gaz. vol. 228; p. 647.
Embroidering-machine. G. Sieber. No. 1,190,021; July 4; Gaz. vol. 228; p. 281.
Embroidering-machine. G. Sieber. No. 1,190,022; July 4; Gaz. vol. 228; p. 282.
Embroidery. J. M. Reis. No. 1,189,384; July 4; Gaz. vol. 228; p. 63.
Emulsions, Production of. S. H. Blichfeldt. No. 1,192,492; July 25; Gaz. vol. 228; p. 1296.
End-gate lock. A. B. Cadman. No. 1,190,238; July 4; Gaz. vol. 228; p. 359.
End-gate lock. G. Sambuc. No. 1,189,295; July 4; Gaz. vol. 228; p. 31.
End-gate, Wagon. W. N. Corbit. No. 1,191,569; July 18; Gaz. vol. 228; p. 917.
Engine: *See*—
Combustion-engine.
Cylinder-drive engine.
Gas-engine.
Internal-combustion engine.
Rotary explosion-engine.
Traction-engine.
Turbine-engine.
Engine. F. A. Hill. No. 1,190,290; July 11; Gaz. vol. 228; p. 424.
Engine. W. R. Penschuck. No. 1,191,343; July 18; Gaz. vol. 228; p. 840.
Engine. W. G. Tibbels. No. 1,189,312; July 4; Gaz. vol. 228; p. 37.
Engine and car starter. C. L. Bardwell. No. 1,189,420; July 4; Gaz. vol. 228; p. 77.
Engine-cooling means. F. H. Kitchin. No. 1,191,191; July 18; Gaz. vol. 228; p. 785.
Engine-cooling means, Automobile-. Z. Keough. No. 1,190,771; July 11; Gaz. vol. 228; p. 595.
Engine-couplings, Centering device for. E. P. Kinne. No. 1,192,431; July 25; Gaz. vol. 228; p. 1275.
Engine-crank casings, Oil-splash shield for. E. H. Oderman. No. 1,191,217; July 18; Gaz. vol. 228; p. 793.
Engine igniting device, Explosive-. C. R. Bangs. No. 1,189,906; July 4; Gaz. vol. 228; p. 245.
Engine-lathe. W. A. Greaves. No. 1,191,505; July 18; Gaz. vol. 228; p. 895.
Engine primer, Explosion-. P. J. and C. H. Georgenson. No. 1,190,539; July 11; Gaz. vol. 228; p. 511.
Engine priming-cup, Gas-. R. G. Du Bois. No. 1,191,775; July 18; Gaz. vol. 228; p. 991.
Engine safety starting device, Gas-. J. A. Anglada. No. 1,192,489; July 25; Gaz. vol. 228; p. 1295.
Engine-starter. C. J. Coleman. No. 1,192,826; July 25; Gaz. vol. 228; p. 1410.
Engine-starter. A. S. Diack. No. 1,190,522; July 11; Gaz. vol. 228; p. 504.
Engine-starter. H. J. Joerden. No. 1,190,174; July 4; Gaz. vol. 228; p. 334.
Engine-starter. C. L. Kennedy. No. 1,189,260; July 4; Gaz. vol. 228; p. 17.
Engine-starting device, Combustion-. F. A. Mills. No. 1,191,529; July 18; Gaz. vol. 228; p. 903.
Engine-starting device, Internal-combustion. B. Ames. No. 1,192,366; July 25; Gaz. vol. 228; p. 1253.
Engine-starting device, Internal-combustion-. T. J. Clark, L. H. Dyke, and G. Edwards. No. 1,191,062; July 11; Gaz. vol. 228; p. 697.
Engines and the like, Water-cooling system for hydrocarbon-. D. H. Reimers. No. 1,191,614; July 18; Gaz. vol. 228; p. 931.
Engines, Charge-forming device for internal-combustion. J. Watts. No. 1,191,488; July 18; Gaz. vol. 228; p. 890.
Engines, Circulating system for internal-combustion. C. F. Johnson. (Reissue.) No. 14,160; July 4; Gaz. vol. 228; p. 867.
Engines, Electric igniting mechanism for internal-combustion. A. A. Kent. No. 1,192,788; July 25; Gaz. vol. 228; p. 1398.
Engines, Heater and mixer for internal-combustion. W. P. Deppé. No. 1,189,797; July 4; Gaz. vol. 228; p. 208.
Engines, Manifold for gas-. C. Rorabeck. No. 1,190,592; July 11; Gaz. vol. 228; p. 529.
Engines, Thermostatic device for explosive-. C. P. Byrnes. No. 1,189,786; July 4; Gaz. vol. 228; p. 204.
Engines, Vacuum feed device for internal-combustion. F. W. Baumgaertner. No. 1,192,370; July 25; Gaz. vol. 228; p. 1254.
Envelop. R. J. Provencal. No. 1,192,558; July 25; Gaz. vol. 228; p. 1319.
Envelop, Disruptible. A. M. Rosenblatt. No. 1,191,475; July 18; Gaz. vol. 228; p. 885.
Envelop-machine. F. L. McNeill. (Reissue.) No. 14,172; July 25; Gaz. vol. 228; p. 1417.
Envelop-machine. F. L. Schmidt. No. 1,191,348; July 18; Gaz. vol. 228; p. 842.
Envelop-opener. F. E. Bundy. No. 1,192,748; July 25; Gaz. vol. 228; p. 1384.
Envelop-opener. A. Nogar. No. 1,191,816; July 18; Gaz. vol. 228; p. 1004.
Envelop or bag for holding garments. L. C. Heaton. No. 1,192,422; July 25; Gaz. vol. 228; p. 1273.
Eraser. B. B. Goldsmith. No. 1,189,937; July 4; Gaz. vol. 228; p. 255.
Eraser-cleaner. L. Clark. No. 1,190,516; July 11; Gaz. vol. 228; p. 502.
Eraser cleaner, Vacuum chalk-. O. C. Baumgart. No. 1,191,387; July 18; Gaz. vol. 228; p. 856.
Escapement mechanism. H. E. Warren. No. 1,191,859; July 18; Gaz. vol. 228; p. 1019.
Etching-machine. H. S. and L. F. Levy. No. 1,189,457; July 4; Gaz. vol. 228; p. 91.
Ether, Purifying ethyl. G. Michaelis. No. 1,189,602; July 4; Gaz. vol. 228; p. 141.
Evaporator. P. Kestner. No. 1,191,108; July 11; Gaz. vol. 228; p. 712.
Excavating cableway apparatus. T. S. Miller. No. 1,189,605; July 4; Gaz. vol. 228; p. 142.
Excavating-machine. J. Roill. No. 1,189,739; July 4; Gaz. vol. 228; p. 187.
Excavating-machine, Distance power. W. F. Brinton. No. 1,191,942; July 25; Gaz. vol. 228; p. 1101.
Excavating-machines, Means for supporting and moving. C. W. Rood. No. 1,191,035; July 11; Gaz. vol. 228; p. 689.
Excavating-machines, Runway for. O. E. Strehlow. No. 1,191,365; July 18; Gaz. vol. 228; p. 848.
Exercising device. G. W. Sheridan. No. 1,189,396; July 4; Gaz. vol. 228; p. 67.
Exhaust-regulator. N. M. La Porte. No. 1,189,704; July 4; Gaz. vol. 228; p. 175.
Expanding die or tool. E. F. Hulbert. No. 1,189,823; July 4; Gaz. vol. 228; p. 217.
Expansion-bolt. A. P. Brush. No. 1,191,151; July 18; Gaz. vol. 228; p. 771.
Expansion-joint. E. B. Tyler. No. 1,191,486; July 18; Gaz. vol. 228; p. 889.
Explosive-containers and their projectiles, Machine for assembling propellent. W. Page. No. 1,190,576; July 11; Gaz. vol. 228; p. 524.
Explosives, Manufacture of primary. R. Calvet. No. 1,189,238; July 4; Gaz. vol. 228; p. 9.
Extensible bracket. J. V. Trenaman. No. 1,189,754; July 4; Gaz. vol. 228; p. 192.
Extension-table. C. P. Cunningham. No. 1,191,159; July 18; Gaz. vol. 228; p. 774.

Extension-table. E. W. Schultz. No. 1,189,298; July 4; Gaz. vol. 228; p. 32.
Extractor: *See*—
Laundry-extractor.
Eye-protector. G. H. Day. No. 1,190,123; July 4; Gaz. vol. 228; p. 315.
Eye-protector. R. Malcom. No. 1,190,567; July 11; Gaz. vol. 228; p. 521.
Eye-protector. F. H. Rextrew. No. 1,190,674; July 11; Gaz. vol. 228; p. 562.
Eyeglass-case. R. B. Snow. No. 1,190,030; July 4; Gaz. vol. 228; p. 284.
Eyeglass-mounting. J. R. Van Tassel. No. 1,192,712; July 25; Gaz. vol. 228; p. 1372.
Eyeglass-mounting. J. R. Van Tassel. No. 1,192,713; July 25; Gaz. vol. 228; p. 1372.
Eyeglass-mounting. J. R. Van Tassel. No. 1,192,714; July 25; Gaz. vol. 228; p. 1372.
Eyeglasses. J. C. Wells and H. H. Styll. No. 1,191,631; July 18; Gaz. vol. 228; p. 937.
Eyeglasses, Holder for. C. G. Aldrich. No. 1,191,646; July 18; Gaz. vol. 228; p. 943.
Eyelets or similar fasteners, Machine for setting. D. W. Colby. No. 1,191,926; July 18; Gaz. vol. 228; p. 1045.
Fabric: *See*—
Knit fabric.
Metal fabric.
Velvet fabric.
Wire fabric.
Fabric-cutter. J. S. Johnston. No. 1,191,082; July 11; Gaz. vol. 228; p. 704.
Fabric-holder, Collapsible. W. W. Woodruff. No. 1,192,594; July 25; Gaz. vol. 228; p. 1332.
Face-shield. W. F. Dinkuhn. No. 1,191,773; July 18; Gaz. vol. 228; p. 990.
Facing-tool. E. S. Mummert and J. O. Dixon. No. 1,191,813; July 18; Gaz. vol. 228; p. 1002.
Fan and bag, Combination. S. Zucker. No. 1,192,364; July 25; Gaz. vol. 228; p. 1252.
Fan-guide and tension device. W. R. Illingworth. No. 1,192,317; July 25; Gaz. vol. 228; p. 1235.
Fan, Oscillating. W. M. McEwen. No. 1,189,273; July 4; Gaz. vol. 228; p. 22.
Fan-wheel. G. F. Sherwood. No. 1,191,040; July 11; Gaz. vol. 228; p. 691.
Farc-box. P. J. Mitten, J. E. McAllister, and G. E. Ireland. No. 1,190,936; July 11; Gaz. vol. 228; p. 656.
Farm-gate. C. Slyfield. No. 1,190,026; July 4; Gaz. vol. 228; p. 283.
Fastener. G. E. Bishop. No. 1,190,852; July 11; Gaz. vol. 228; p. 625.
Fastener-setting machine, Gang. P. R. Glass. No. 1,191,885; July 18; Gaz. vol. 228; p. 1029.
Fasteners, Forming metallic. F. S. McKenney. No. 1,189,849; July 4; Gaz. vol. 228; p. 227.
Fastening device. J. B. Fesler. No. 1,190,745; July 11; Gaz. vol. 228; p. 586.
Fastening device. J. B. Fesler. No. 1,190,882; July 11; Gaz. vol. 228; p. 636.
Fastening device. W. H. Underwood. No. 1,190,344; July 11; Gaz. vol. 228; p. 442.
Fatty material, Hydrogenating unsaturated. J. C. C. Hoehn. No. 1,189,817; July 4; Gaz. vol. 228; p. 216.
Faucet. C. D. Angelo and L. A. Pearson. No. 1,190,077; July 4; Gaz. vol. 228; p. 301.
Faucet for milk and like cans, Emptying-. J. C. Sarter. No. 1,192,464; July 25; Gaz. vol. 228; p. 1286.
Faucet for urns, Measuring-. H. D. Kelly. No. 1,189,598; July 4; Gaz. vol. 228; p. 133.
Faucet, Measuring-. J. Van Geem. No. 1,189,510; July 4; Gaz. vol. 228; p. 110.
Feed-hopper and poultry-food carton, Combination. W. A. Becker. No. 1,189,779; July 4; Gaz. vol. 228; p. 201.
Feed-mill. O. W. Nottingham. No. 1,190,793; July 11; Gaz. vol. 228; p. 602.
Feed-trough. F. B. Hooper. No. 1,191,184; July 18; Gaz. vol. 228; p. 782.
Feed-water regulator. O. Wildhagen. No. 1,191,639; July 18; Gaz. vol. 228; p. 940.
Feeder, Automatic poultry-. F. R. Parks. No. 1,192,677; July 25; Gaz. vol. 228; p. 1359.
Feeder, Hog-. H. Smith. No. 1,190,028; July 4; Gaz. vol. 228; p. 284.
Feeder, Oil and acid. A. Campbell. No. 1,190,721; July 11; Gaz. vol. 228; p. 576.
Feeder, Poultry-. W. J. Dudley. No. 1,189,547; July 4; Gaz. vol. 228; p. 123.
Feeding and winding machine. W. Lewin. No. 1,191,903; July 18; Gaz. vol. 228; p. 1035.
Feeding apparatus, Automatic stock-. W. T. Masek. No. 1,192,663; July 25; Gaz. vol. 228; p. 1355.
Feeding device. W. M. Hartt. No. 1,190,892; July 11; Gaz. vol. 228; p. 640.
Feeding device. C. Zok. No. 1,192,487; July 25; Gaz. vol. 228; p. 1294.
Feeding device, Poultry-. O. Kephart. No. 1,192,069; July 25; Gaz. vol. 228; p. 1146.
Feeding mechanism. H. Weber. No. 1,192,481; July 25; Gaz. vol. 228; p. 1292.
Fence-post. P. T. Bailey. No. 1,190,080; July 4; Gaz. vol. 228; p. 302.
Fence-post. J. R. Freeze. No. 1,190,749; July 11; Gaz. vol. 228; p. 587.
Fence-post. H. Isebrands. No. 1,192,319; July 25; Gaz. vol. 228; p. 1236.
Fence structure. E. Herzog. No. 1,192,060; July 25; Gaz. vol. 228; p. 1144.
Fender: *See*—
Automobile-fender.
Car-fender.
Grate-fender.
Vehicle-fender.
Ferrule, Mop-. C. M. Huguley. No. 1,190,415; July 11; Gaz. vol. 228; p. 467.
Fertilizer, Preparing concentrated. W. H. Ross and A. R. Merz. No. 1,191,615; July 18; Gaz. vol. 228; p. 932.
Fiber, Puring hard or vulcanized. C. Almy, Jr. No. 1,191,142; July 18; Gaz. vol. 228; p. 768.
Fibers, in particular cotton fibers, Machine for cleaning textile. A. Streiff. No. 1,192,355; July 25; Gaz. vol. 228; p. 1249.
Filaments, Making tungsten. E. Aeuer. No. 1,191,552; July 18; Gaz. vol. 228; p. 911.
File, Bill-. S. L. Young. No. 1,190,358; July 11; Gaz. vol. 228; p. 447.
File or register, Accounting. W. E. Burks. No. 1,189,661; July 4; Gaz. vol. 228; p. 161.
Filing appliance. H. J. Hick. No. 1,190,894; July 11; Gaz. vol. 228; p. 640.
Filing appliance. H. J. Hick. No. 1,190,895; July 11; Gaz. vol. 228; p. 641.
Filing appliance. H. J. Hick. No. 1,190,896; July 11; Gaz. vol. 228; p. 641.
Filing-cabinet. M. R. Rodrigues. No. 1,192,563; July 25; Gaz. vol. 228; p. 1321.
Filing-case. W. E. Westberg. No. 1,190,348; July 11; Gaz. vol. 228; p. 444.
Filling-machine. H. Averay-Jones. No. 1,191,382; July 18; Gaz. vol. 228; p. 854.
Filling mechanism. L. S. Pfouts. No. 1,189,620; July 4; Gaz. vol. 228; p. 147.
Film attachment and synchronizing mechanism, Descriptive-. J. W. Billings. No. 1,190,370; July 11; Gaz. vol. 228; p. 452.
Film-developing box. C. W. Greene. No. 1,189,359; July 4; Gaz. vol. 228; p. 54.
Film-mending device. W. H. Kunert. No. 1,191,321; July 18; Gaz. vol. 228; p. 832.
Film-unwinding device. J. B. Carroll. No. 1,190,262; July 11; Gaz. vol. 228; p. 414.
Film-winding apparatus. H. J. Hamann. No. 1,192,517; July 25; Gaz. vol. 228; p. 1304.
Films, Daylight tank-developer for roll-. W. E. and C. A. Elliot. No. 1,191,166; July 18; Gaz. vol. 228; p. 777.
Filter. S. F. Bowman. No. 1,190,979; July 11; Gaz. vol. 228; p. 670.
Filter. E. E. Buscher. No. 1,190,511; July 11; Gaz. vol. 228; p. 500.
Filter. T. Grady. No. 1,189,810; July 4; Gaz. vol. 228; p. 213.
Filter, Centrifugal pressure-. F. K. and E. F. Atkins. No. 1,190,842; July 11; Gaz. vol. 228; p. 620.
Filter, Self-cleaning liquid-. T. Linke. No. 1,192,541; July 25; Gaz. vol. 228; p. 1313.
Filtering hog-cholera antitoxin with the aid of chemicals and a composition of matter related to the process, Process of. J. Reichel and H. Werner. No. 1,192,559; July 25; Gaz. vol. 228; p. 1319.
Filtration system, Underdrain. H. A. Allen. No. 1,189,521; July 4; Gaz. vol. 228; p. 114.
Finishing-roll and cover therefor. R. W. Thomson. No. 1,189,311; July 4; Gaz. vol. 228; p. 37.
Fire-alarm. W. A. Alcott. No. 1,192,725; July 25; Gaz. vol. 228; p. 1376.
Fire-alarm. J. T. Nelson. No. 1,191,024; July 11; Gaz. vol. 228; p. 685.
Fire-alarm, Cartridge. A. A. Clive. No. 1,189,916; July 4; Gaz. vol. 228; p. 248.
Fire-alarm, Independent. A. A. Clive. No. 1,189,915; July 4; Gaz. vol. 228; p. 248.
Fire apparatus, Automobile. H. G. Farr. No. 1,191,293; July 18; Gaz. vol. 228; p. 822.
Fire-boxes, Apparatus for mixing and feeding steam and air to. C. F. Miller. No. 1,189,376; July 4; Gaz. vol. 228; p. 61.
Fire-brick and making same. S. H. Nordin. No. 1,192,099; July 25; Gaz. vol. 228; p. 1156.
Fire-bucket supports, Indicator attachment for. J. O. Charpentier. No. 1,191,667; July 18; Gaz. vol. 228; p. 950.
Fire-door apparatus. A. G. Elvin. No. 1,190,528; July 11; Gaz. vol. 228; p. 507.
Fire-escape. H. M. Erwin. No. 1,190,389; July 11; Gaz. vol. 228; p. 459.
Fire-escape. J. E. Frey. No. 1,192,615; July 25; Gaz. vol. 228; p. 1339.
Fire-escape. M. Gray. No. 1,191,504; July 18; Gaz. vol. 228; p. 895.
Fire-escape. L. T. Hunter. No. 1,191,790; July 18; Gaz. vol. 228; p. 996.
Fire-escape. W. H. Tibbals. No. 1,190,482; July 11; Gaz. vol. 228; p. 491.
Fire-escape. W. H. Tibbals. No. 1,190,483; July 11; Gaz. vol. 228; p. 491.
Fire-escape and costumer, Combination. P. E. Daubenspeck. No. 1,191,405; July 18; Gaz. vol. 228; p. 861.
Fire-escape, Automatic. W. E. Payne and W. S. Eklund. No. 1,189,381; July 4; Gaz. vol. 228; p. 62.
Fire-escape ladder. J. F. Spalding. No. 1,190,334; July 11; Gaz. vol. 228; p. 439.

Fire-extinguisher. N. Buras and F. Adolph, Jr. No. 1,191,560; July 18; Gaz. vol. 228; p. 914.
Fire-extinguisher. H. M. McCaslin. No. 1,189,271; July 4; Gaz. vol. 228; p. 21.
Fire-extinguisher. J. M. Miller. No. 1,190,316; July 11; Gaz. vol. 228; p. 433.
Fire-extinguisher. G. T. Pearsons. No. 1,191,991; July 25; Gaz. vol. 228; p. 1119.
Fire-extinguisher, Automatic. W. H. Burtis and M. S. Howard. No. 1,189,536; July 4; Gaz. vol. 228; p. 119.
Fire-extinguisher, Automatic portable. J. C. Snackenberg. No. 1,190,963; July 11; Gaz. vol. 228; p. 665.
Fire-extinguishing compound. F. P. Harris. No. 1,190,160; July 4; Gaz. vol. 228; p. 328.
Fire-extinguishing compound. F. P. Harris. No. 1,190,161; July 4; Gaz. vol. 228; p. 329.
Fire-hydrants, Twin connection for. W. H. B. Halahan. No. 1,192,622; July 25; Gaz. vol. 228; p. 1342.
Fire indicating and extinguishing system. F. C. Haassler. No. 1,189,686; July 4; Gaz. vol. 228; p. 169.
Fire-kindler. L. R. Phillips. No. 1,191,458; July 18; Gaz. vol. 228; p. 880.
Fire-kindler. M. Urban. No. 1,189,509; July 4; Gaz. vol. 228; p. 110.
Fire-pails and the like, Support for. A. B. Collette. No. 1,190,632; July 11; Gaz. vol. 228; p. 545.
Firearm. G. W. Abraham. No. 1,190,070; July 4; Gaz. vol. 228; p. 298.
Firearm. J. W. Carroll. No. 1,190,107; July 4; Gaz. vol. 228; p. 310.
Firearm. T. C. Johnson. No. 1,191,515; July 18; Gaz. vol. 228; p. 899.
Firearm. A. B. Pratt. No. 1,191,460; July 18; Gaz. vol. 228; p. 880.
Firearm, Automatic. C. F. Hughes. No. 1,190,653; July 11; Gaz. vol. 228; p. 554.
Firearm, Automatic. J. O. Winks. No. 1,190,352; July 11; Gaz. vol. 228; p. 446.
Firearm-sight. J. C. Critchett. No. 1,190,121; July 4; Gaz. vol. 228; p. 314.
Firearms, Magazine-charger for. C. D. Zumwalt. No. 1,192,723; July 25; Gaz. vol. 228; p. 1375.
Firearms, Subcaliber attachment for. R. P. Saffold. No. 1,191,618; July 18; Gaz. vol. 228; p. 933.
Fireproof building. A. A. Guerini. No. 1,189,360; July 4; Gaz. vol. 228; p. 55.
Fireproof building construction. M. H. Carrick. No. 1,191,871; July 18; Gaz. vol. 228; p. 1024.
Fireproof floor. E. R. Storm. No. 1,190,206; July 4; Gaz. vol. 228; p. 346.
Fish and rat trap. J. W. Cotton. No. 1,191,124; July 11; Gaz. vol. 228; p. 718.
Fish-hook. R. D. Peters. No. 1,191,031; July 11; Gaz. vol. 228; p. 688.
Fish-hook. W. Schueller. No. 1,189,631; July 4; Gaz. vol. 228; p. 151.
Fishing apparatus. F. E. Dildine. No. 1,190,872; July 11; Gaz. vol. 228; p. 631.
Fishing apparatus. W. J. Ryan. No. 1,192,001; July 25; Gaz. vol. 228; p. 1122.
Fishing-pole holder. J. H. Porter. No. 1,192,112; July 25; Gaz. vol. 228; p. 1161.
Fishing-reel. R. B. Benjamin. No. 1,189,232; July 4; Gaz. vol. 228; p. 7.
Flap-trimming machine. T. Midgley. No. 1,190,315; July 11; Gaz. vol. 228; p. 433.
Flasks, Slide for molding-. H. J. Wiegmann. No. 1,190,056; July 4; Gaz. vol. 228; p. 293.
Flax and the like fibers, Apparatus for employment in treating. C. Suttle. No. 1,191,245; July 18; Gaz. vol. 228; p. 804.
Flexible coupling. T. C. Dexter. No. 1,189,925; July 4; Gaz. vol. 228; p. 251.
Flexible coupling. I. H. Dexter. No. 1,190,870; July 11; Gaz. vol. 228; p. 631.
Flier-spindle. J. Good. No. 1,191,960; July 25; Gaz. vol. 228; p. 1108.
Floor-covering composition. M. Nienstaedt. No. 1,190,942; July 11; Gaz. vol. 228; p. 658.
Floor-drain. B. H. Sanders. No. 1,189,742; July 4; Gaz. vol. 228; p. 187.
Floor-scraping tool. J. Donnelly. No. 1,192,763; July 25; Gaz. vol. 228; p. 1389.
Flue-cleaner. M. Rigo. No. 1,191,236; July 18; Gaz. vol. 228; p. 801.
Flue cleaner or brush. J. J. Dillon. No. 1,189,798; July 4; Gaz. vol. 228; p. 209.
Flue-dust and other metal fines, Reducing. S. L. Boggs. No. 1,190,712; July 11; Gaz. vol. 228; p. 575.
Fluid-control apparatus, Device for supporting. H. Chrisman. No. 1,189,914; July 4; Gaz. vol. 228; p. 248.
Fluid-distributing device. C. C. Thomas. No. 1,191,483; July 18; Gaz. vol. 228; p. 888.
Fluid-fuel burner. G. W. Berrian. No. 1,192,735; July 25; Gaz. vol. 228; p. 1380.
Fluid-pressure apparatus. C. L. Walker. No. 1,189,319; July 4; Gaz. vol. 228; p. 40.
Fluid-pressure brake. W. V. Turner. No. 1,190,342; July 11; Gaz. vol. 228; p. 442.
Fluid-pressure coupling. L. D. Woodruff. No. 1,190,062; July 4; Gaz. vol. 228; p. 296.
Fluid-pressure generator. E. Richter. No. 1,191,235; July 18; Gaz. vol. 228; p. 800.
Fluids, Apparatus for the production and utilization of working. O. Kraus. No. 1,191,195; July 18; Gaz. vol. 228; p. 785.
Flume-joint. M. W. Williams. No. 1,190,350; July 11; Gaz. vol. 228; p. 445.
Flush-tank. W. J. Whitehead. No. 1,192,588; July 25; Gaz. vol. 228; p. 1330.
Flushing apparatus for closets. J. Neyer. No. 1,189,379; July 4; Gaz. vol. 228; p. 62.
Flushing device for water-closets. R. Stickdorn. No. 1,189,504; July 4; Gaz. vol. 228; p. 109.
Flushing-tank, Automatic. E. P. Stary. No. 1,190,604; July 11; Gaz. vol. 228; p. 534.
Fly-catcher. W. A. and O. E. Hemenway. No. 1,190,165; July 4; Gaz. vol. 228; p. 330.
Fly-catcher, Mechanical. G. W. Holt. No. 1,189,570; July 4; Gaz. vol. 228; p. 130.
Fly-paper holder. A. H. Sawyer. No. 1,189,491; July 4; Gaz. vol. 228; p. 104.
Fly-trap. J. M. Cooley. No. 1,190,117; July 4; Gaz. vol. 228; p. 313.
Fly-trap. J. L. Husbaw. No. 1,191,972; July 25; Gaz. vol. 228; p. 1112.
Fly-trap. S. Keltonik. No. 1,191,517; July 18; Gaz. vol. 228; p. 899.
Fly-trap. J. Price. No. 1,189,481; July 4; Gaz. vol. 228; p. 100.
Fly-trap, Collapsible. C. P. Hasselgren. No. 1,191,179; July 18; Gaz. vol. 228; p. 781.
Fly-trap for screen-doors. I. E. Sager. No. 1,192,229; July 25; Gaz. vol. 228; p. 1205.
Fly-wheels, Gearing for. J. E. Wild. No. 1,192,590; July 25; Gaz. vol 228; p. 1331.
Flying-machine. M. A. Dees. No. 1,191,501; July 18; Gaz. vol. 228; p. 894.
Flying-machine. H. F. Guntz. No. 1,192,607; July 25; Gaz. vol. 228; p. 1336.
Flying-machine. F. Narobe. No. 1,189,612; July 4; Gaz. vol. 228; p. 144.
Flying-machine. W. E. Somerville. No. 1,189,302; July 4; Gaz. vol. 228; p. 34.
Flying-machine propeller. E. Berliner. No. 1,190,092; July 4; Gaz. vol. 228; p. 305.
Flying-machine-tail construction. G. M. Wance. No. 1,192,248; July 25; Gaz. vol. 228; p. 1212.
Foam-removing device. M. Egan. No. 1,191,409; July 18; Gaz. vol. 228; p. 863.
Fodder, Making. R. R. Renshaw. No. 1,190,953; July 11; Gaz. vol. 228; p. 662.
Folding-machine. A. Olsen. No. 1,191,819; July 18; Gaz. vol. 228; p. 1005.
Folding-machine for inserts and onserts, Convertible. H. A. W. Wood. No. 1,191,261; July 18; Gaz. vol. 228; p. 810.
Folding table. H. Yaskin. No. 1,189,645; July 4; Gaz. vol. 228; p. 156.
Food, Making a liquid. H. C. Beckman and G. E. Dyck. No. 1,191,388; July 18; Gaz. vol. 228; p. 856.
Food products, Preserving. E. D. Schmitt. No. 1,191,839; July 18; Gaz. vol. 228; p. 1012.
Foodstuffs and the like, Apparatus for treating. G. B. Furman. No. 1,190,638; July 11; Gaz. vol. 228; p. 548.
Foot-corrector. J. Brown. No. 1,191,122; July 11; Gaz. vol. 228; p. 717.
Footwear, Making rubber. F. E. Payne. No. 1,189,866; July 4; Gaz. vol. 228; p. 232.
Forge. H. W. Wendt. No. 1,190,693; July 11; Gaz. vol. 228; p. 568.
Forging bucket-wheels. W. H. T. Thornhill. No. 1,190,818; July 11; Gaz. vol. 228; p. 611.
Forging bucket-wheels, Apparatus for. W. H. T. Thornhill. No. 1,190,817; July 11; Gaz. vol. 228; p. 610.
Fork: *See*—
Kitchen-fork.
Form-clamp. J. S. Murphy. No. 1,190,940; July 11; Gaz. vol. 228; p. 657.
Form, Garment-steaming. T. Hlubuček. No. 1,191,969; July 25; Gaz. vol. 228; p. 1111.
Form, Structural. A. A. Vebelunas. No. 1,190,824; July 11; Gaz. vol. 228; p. 613.
Fountain: *See*—
Ink-fountain.
Frame: *See*—

Displaying-frame.	Truck side frame.
Furnace-door frame.	Umbrella-frame.
Hacksaw-frame.	Vehicle-frame.
Manhole-frame.	Window-frame.
Quilting-frame.	

Framing-tool. D. C. McLeod. No. 1,189,983; July 4; Gaz. vol. 228; p. 270.
Fraud-detector. H. Müller. No. 1,192,095; July 25; Gaz. vol. 228; p. 1155.
Freezer apparatus. L. S. Pfouts. No. 1,191,222; July 18; Gaz. vol. 228; p. 795.
Friction-bands, Removable lining for. C. D. Colley. No. 1,189,541; July 4; Gaz. vol. 228; p. 121.
Front sight for military shoulder-arms. T. C. Johnson. No. 1,191,704; July 18; Gaz. vol. 228; p. 964.
Fruit-picker. J. E. Elkins. No. 1,191,954; July 25; Gaz. vol. 228; p. 1105.
Fuel, Apparatus for feeding finely-divided. C. Longenecker. No. 1,191,203; July 18; Gaz. vol. 228; p. 789.
Fuel-feed system. H. W. Hamilton. No. 1,190,757; July 11; Gaz. vol. 228; p. 590.

Fuel-feeding apparatus, Pulverized-. V. Z. Caracristi. No. 1,192,386; July 25; Gaz. vol. 228; p. 1261.
Fumigator. A. H. Ziegler. No. 1,191,266; July 18; Gaz. vol. 228; p. 812.
Furnace: *See*—

Blast-furnace.	Electric furnace.
Boiler-furnace.	Regenerative furnace.
Destructor-furnace.	

Furnace. A. Schimmel. No. 1,191,036; July 11; Gaz. vol. 228; p. 689.
Furnace. G. F. Spencer. No. 1,192,010; July 25; Gaz. vol. 228; p. 1126.
Furnace construction. J. A. Bow, P. Thill, and A. E. Wheeler. No. 1,191,271; July 18; Gaz. vol. 228; p. 813.
Furnace discharge-arrester, Blast-. E. E. Slick and E. W. Clarke. No. 1,191,541; July 18; Gaz. vol. 228; p. 908.
Furnace-door device. A. G. Elvin. No. 1,190,529; July 11; Gaz. vol. 228; p. 507.
Furnace-door frame, Water-cooled. L. L. Knox. No. 1,191,519; July 18; Gaz. vol. 228; p. 900.
Furnace-door structure, Hollow sheet-metal. L. L. Knox. No. 1,191,518; July 18; Gaz. vol. 228; p. 899.
Furnace-setting for concentration-pots. F. H. Nickle. No. 1,191,338; July 18; Gaz. vol. 228; p. 838.
Furnaces, Attachment to boiler and other. C. Schneider. No. 1,190,331; July 11; Gaz. vol. 228; p. 438.
Furnaces, boilers, or stoves, Supplemental air-feeding means for. C. W. Huse. No. 1,192,428; July 25; Gaz. vol. 228; p. 1274.
Furnaces, Valve for plumbers'. A. E. Bacon. No. 1,191,384; July 18; Gaz. vol. 228; p. 855.
Furniture, Convertible. H. M. Svebilius. No. 1,192,137; July 25; Gaz. vol. 228; p. 1169.
Fuse-bodies, Forged blank for. C. H. Jockmus. No. 1,189,958; July 4; Gaz. vol. 228; p. 262.
Fuse, Electric cartridge-. W. R. Koen. No. 1,190,773; July 11; Gaz. vol. 228; p. 596.
Fuse for projectiles, Percussion-. G. W. Struble and W. L. Lukens. No. 1,189,403; July 4; Gaz. vol. 228; p. 71.
Fuse, Inclosed. H. R. Sargent. No. 1,192,687; July 25; Gaz. vol. 228; p. 1363.
Fuse spring, Detonating-. C. H. Jockmus. No. 1,189,574; July 4; Gaz. vol. 228; p. 132.
Gage: *See*—

Boiler water-gage.	Paper-feed gage.
Chisel-gage.	Pressure-gage.
Double-spring gage.	Shear-gage.
Gasolene-gage.	Shingling-gage.
Liquid-gage.	Track-gage.

Gage. A. Meldrum. No. 1,192,089; July 25; Gaz. vol. 228; p. 1153.
Gage for cutting-bits. T. H. Clarke. No. 1,190,110; July 4; Gaz. vol. 228; p. 311.
Game. S. S. Marley. No. 1,191,330; July 18; Gaz. vol. 228; p. 835.
Game apparatus. M. Condé. No. 1,192,167; July 25; Gaz. vol. 228; p. 1180.
Game apparatus. W. W. Harbourt. No. 1,190,891; July 11; Gaz. vol. 228; p. 639.
Game apparatus. M. J. Mertz. No. 1,191,605; July 18; Gaz. vol. 228; p. 928.
Game apparatus. T. F. Quinn. No. 1,190,003; July 4; Gaz. vol. 228; p. 276.
Game apparatus. A. E. Verral. No. 1,190,488; July 11; Gaz. vol. 228; p. 493.
Game, Base-ball. F. M. Brown. No. 1,190,099; July 4; Gaz. vol. 228; p. 307.
Game, Musical. W. L. Hofer. No. 1,189,450; July 4; Gaz. vol. 228; p. 88.
Garage-can. W. H. McNutt. No. 1,189,462; July 4; Gaz. vol. 228; p. 93.
Garbage-receptacle mold. F. Harper. No. 1,190,256; July 4; Gaz. vol. 228; p. 366.
Garment. F. Condé. No. 1,191,064; July 11; Gaz. vol. 228; p. 698.
Garment. E. J. Emery. No. 1,192,288; July 25; Gaz. vol. 228; p. 1225.
Garment-arm-steaming device. T. Hlubuček. No. 1,191,970; July 25; Gaz. vol. 228; p. 1112.
Garment-clasps, Tape-affixing attachment for. B. F. Oreweiler. No. 1,190,575; July 11; Gaz. vol. 228; p. 523.
Garment, Combination-. F. E. Szemere. No. 1,192,583; July 25; Gaz. vol. 228; p. 1328.
Garment-hook. H. M. Yorke. No. 1,190,355; July 11; Gaz. vol. 228; p. 446.
Garment-presser. S. M. Brya. No. 1,192,384; July 25; Gaz. vol. 228; p. 1260.
Garment-supporter retaining device. E. W. Hawley. No. 1,192,521; July 25; Gaz. vol. 228; p. 1306.
Garnet-works, Utilizing the waste products of. J. Davenport. No. 1,192,394; July 25; Gaz. vol. 228; p. 1263.
Garter. J. P. Croasdale. No. 1,192,276; July 25; Gaz. vol. 228; p. 1221.
Garters, Loop-fastener for. A. P. M. Scarpa. No. 1,190,016; July 4; Gaz. vol. 228; p. 280.
Gas and air mixer, Proportional. M. A. Possons. No. 1,191,823; July 18; Gaz. vol. 228; p. 1006.
Gas-burner. J. H. Ackroyd. No. 1,192,365; July 25; Gaz. vol. 228; p. 1252.
Gas-burner. S. F. Pierce. No. 1,189,731; July 4; Gaz. vol. 228; p. 184.
Gas-burner for stoves. M. Singelmann and C. Brinkmann. No. 1,192,129; July 25; Gaz. vol. 228; p. 1167.
Gas cut-off, Safety. G. E. Nembach. No. 1,191,335; July 18; Gaz. vol. 228; p. 836.
Gas device. E. C. Obermeyer. No. 1,189,994; July 4; Gaz. vol. 228; p. 273.
Gas-engine. H. G. Kress. No. 1,189,834; July 4; Gaz. vol. 228; p. 221.
Gas-engine. C. Rorabeck. No. 1,190,591; July 11; Gaz. vol. 228; p. 529.
Gas, Extracting light liquefiable hydrocarbons from natural. E. D. Kendall. No. 1,192,529; July 25; Gaz. vol. 228; p. 1309.
Gas filtering or separating valve. H. H. M. Kammerhoff. No. 1,190,654; July 11; Gaz. vol. 228; p. 554.
Gas, Generating formaldehyde. H. Anhaltzer. No. 1,191,647; July 18; Gaz. vol. 228; p. 944.
Gas-generator. D. D. Barnum. No. 1,192,729; July 25; Gaz. vol. 228; p. 1378.
Gas generator, Acetylene-. D. B. Hill. No. 1,191,786; July 18; Gaz. vol. 228; p. 994.
Gas generator and burner. H. B. Hemphill. No. 1,192,781; July 25; Gaz. vol. 228; p. 1395.
Gas-heater. W. White. No. 1,191,050; July 11; Gaz. vol. 228; p. 694.
Gas-igniting system. W. Lowman. No. 1,189,370; July 4; Gaz. vol. 228; p. 59.
Gas-lighter, Automatic. B. F. Keith. No. 1,190,295; July 11; Gaz. vol. 228; p. 426.
Gas-mains, Device for removing accumulated liquid from. H. J. McGilvray. No. 1,191,013; July 11; Gaz. vol. 228; p. 681.
Gas-meter beader. E. Bartholomay and G. A. Loeb, Jr. No. 1,191,270; July 18; Gaz. vol. 228; p. 813.
Gas-mixer. J. Needham. No. 1,192,550; July 25; Gaz. vol. 228; p. 1316.
Gas-saving device. J. J. Lampert. No. 1,192,435; July 25; Gaz. vol. 228; p. 1276.
Gas systems, Pressure-regulator for. F. L. Cross. No. 1,189,349; July 4; Gaz. vol. 228; p. 51.
Gaseous fluid under pressure, Device for delivering. C. A. Claflin. No. 1,190,860; July 11; Gaz. vol. 228; p. 627.
Gaseous fuel, Determining the total available heat of. H. F. Smith. No. 1,189,300; July 4; Gaz. vol. 228; p. 33.
Gasket. L. Bauroth. No. 1,191,651; July 18; Gaz. vol. 228; p. 945.
Gasket and washer cutter. C. Roth. No. 1,189,487; July 4; Gaz. vol. 228; p. 103.
Gasolene-gage. J. H. Fox. No. 1,189,440; July 4; Gaz. vol. 228; p. 85.
Gasolene, Making. F. S. Low. No. 1,192,653; July 25; Gaz. vol. 228; p. 1351.
Gasolene-storage tank. L. Kessler. No. 1,189,968; July 4; Gaz. vol. 228; p. 265.
Gate: *See*—

Adjustable gate.	Mine-shaft gate.
Counter-gate.	Railway-gate.
End-gate.	Sludge-box gate.
Farm-gate.	

Gate. J. P. Bell. No. 1,191,389; July 18; Gaz. vol. 228; p. 856.
Gate. J. D. Teeters. No. 1,190,040; July 4; Gaz. vol. 228; p. 287.
Gate. L. E. Van Every. No. 1,189,410; July 4; Gaz. vol. 228; p. 73.
Gate. C. Winter. No. 1,192,592; July 25; Gaz. vol. 228; p. 1331.
Gate-fastener. C. O. Roda. No. 1,190,587; July 11; Gaz. vol. 228; p. 528.
Gear and clutch control. O. O. Disney. No. 1,192,284; July 25; Gaz. vol. 228; p. 1224.
Gear-body. A. Northup. No. 1,191,907; July 18; Gaz. vol. 228; p. 1037.
Gear-cutting machine. C. A. Parsons, A. Q. Carnegie, and S. S. Cook. No. 1,192,450; July 25; Gaz. vol. 228; p. 1281.
Gear-grinding machine. M. E. Noyes. No. 1,191,093; July 11; Gaz. vol. 228; p. 707.
Gear-shifting device, Automatic. F. A. Brown and A. F. Wagner. No. 1,190,100; July 4; Gaz. vol. 228; p. 308.
Gear, Vehicle drive-. H. S. Hopper. No. 1,191,699; July 18; Gaz. vol. 228; p. 962.
Gears, Apparatus for generating and cutting irregular. E. R. Fellows. No. 1,190,890; July 11; Gaz. vol. 228; p. 459.
Gears, Controlling device for transmission-. C. Radiguer. No. 1,191,612; July 18; Gaz. vol. 228; p. 931.
Gears, Means for generating and cutting irregular. E. R. Fellows. No. 1,190,891; July 11; Gaz. vol. 228; p. 459.
Gearing. J. Becker. No. 1,192,491; July 25; Gaz. vol. 228; p. 1295.
Gearing. P. Daimler. No. 1,192,277; July 25; Gaz. vol. 228; p. 1222.
Gearing. M. H. Dunham. No. 1,190,131; July 4; Gaz. vol. 228; p. 318.
Gearing. J. A. Espitallier. No. 1,192,403; July 25; Gaz. vol. 228; p. 1266.
Gearing. R. O. Hendrickson. No. 1,192,195; July 25. Gaz. vol. 228; p. 1192.
Gearing. R. Mattenucci. No. 1,190,662; July 11; Gaz. vol. 228; p. 557.
Gearing. I. L. Packard. No. 1,189,473; July 4; Gaz. vol. 228; p. 97.
Gearing, Change-speed. P. Hollenbeck. No. 1,190,901; July 11; Gaz. vol. 228; p. 643.
Gearing for motor-vehicles, Differential. M. Tibbetts. No. 1,190,687; July 11; Gaz. vol. 228; p. 566.

Gearing, Reversing-. R. M. Smith. No. 1,189,500; July 4; Gaz. vol. 228; p. 107.
Gearing, Variable-speed. M. M. Fisher. No. 1,192,777; July 25; Gaz. vol. 228; p. 1393.
Gem-setting. L. Morse. No. 1,192,092; July 25; Gaz. vol. 228; p. 1154.
Generator: *See*—
Fluid-pressure generator. Steam-generator.
Gas-generator. Vapor-generator.
Geographical and statistical information, Means for presenting. G. W. R. Harriman. No. 1,192,829; July 25; Gaz. vol. 228; p. 1412.
Glass. W. C. Taylor. No. 1,192,474; July 25; Gaz. vol. 228; p. 1290.
Glass batch or mixture. E. L. Elliott. No. 1,192,048; July 25; Gaz. vol. 228; p. 1140.
Glass, Composition of. E. Weintraub. No. 1,191,630; July 18; Gaz. vol. 228; p. 937.
Glass-cutting table. G. W. Klages. No. 1,192,789; July 25; Gaz. vol. 228; p. 1398.
Glass cylinders, Machine for making. A. Kadow. No. 1,191,317; July 18; Gaz. vol. 228; p. 830.
Glass, Means for distributing molten. S. B. Bowman. No. 1,191,868; July 18; Gaz. vol. 228; p. 1022.
Glass vessels to be ground, Fixing device for. M. Mathy. No. 1,192,544; July 25; Gaz. vol. 228; p. 1314.
Glassware-making machinery, Automatic centrifugal. B. F. Gift. No. 1,190,145; July 4; Gaz. vol. 228; p. 323.
Glove. H. H. Cross and S. McDaniel. No. 1,192,042; July 25; Gaz. vol. 228; p. 1138.
Go-cart, Hamper-folding. T. and P. Wallace. No. 1,189,515; July 4; Gaz. vol. 228; p. 112.
Goiter, Appliance for treating. F. C. Werner. No. 1,190,831; July 11; Gaz. vol. 228; p. 616.
Golf-bag. G. H. Shamberg. No. 1,189,879; July 4; Gaz. vol. 228; p. 236.
Golf-club. C. A. Rolfe. No. 1,190,589; July 11; Gaz. vol. 228; p. 528.
Golf-practising device. A. G. Lott. No. 1,191,444; July 18; Gaz. vol. 228; p. 875.
Governor. J. L. Osborne. No. 1,190,946; July 11; Gaz. vol. 228; p. 659.
Governor, Automatic stop-. J. E. Snyder. No. 1,189,634; July 4; Gaz. vol. 228; p. 152.
Grab. D. J. Barnard. No. 1,192,490; July 25; Gaz. vol. 228; p. 1295.
Grader, Road-. E. M. Reese. No. 1,191,465; July 18; Gaz. vol. 228; p. 882.
Grain-drier. F. A. Wegner. No. 1,191,753; July 18; Gaz. vol. 228; p. 983.
Grain-beater, Electric. J. M. Jordan. No. 1,189,575; July 4; Gaz. vol. 228; p. 132.
Grain-spout door. O. H. Braaten. No. 1,191,148; July 18; Gaz. vol. 228; p. 770.
Grain-spout, Flexible. L. E. Wray. No. 1,192,485; July 25; Gaz. vol. 228; p. 1293.
Graphite, Expanded. J. W. Aylsworth. No. 1,191,383; July 18; Gaz. vol. 228; p. 855.
Grass-catcher. L. Andrews. No. 1,191,935; July 25; Gaz. vol. 228; p. 1099.
Grate-fender and ash-pan, Combined. E. M. Ryan. No. 1,189,389; July 4; Gaz. vol. 228; p. 65.
Grate, Hollow blast-. P. J. A. Van Deinse. No. 1,189,888; July 4; Gaz. vol. 228; p. 239.
Grate mechanism. J. A. Bow, P. Thill, and A. E. Wheeler. No. 1,191,272; July 18; Gaz. vol. 228; p. 814.
Grate, Sectional. W. M. Earl. No. 1,191,292; July 18; Gaz. vol. 228; p. 821.
Grease-capsule, Collapsible. L. G. Copeman. No. 1,190,382; July 11; Gaz. vol. 228; p. 457.
Grease-cup. H. C. Kestel. No. 1,191,189; July 18; Gaz. vol. 228; p. 784.
Grease-cup. W. H. Lindenfield. No. 1,192,652; July 25; Gaz. vol. 228; p. 1351.
Grease-cup. T. O. Organ. No. 1,190,188; July 4; Gaz. vol. 228; p. 340.
Grease-cup. F. Peterson. No. 1,189,619; July 4; Gaz. vol. 228; p. 146.
Greaser, Hog-. O. H. Cloyd. No. 1,190,220; July 4; Gaz. vol. 228; p. 352.
Grinding-machine. F. M. Furber. No. 1,189,247; July 4; Gaz. vol. 228; p. 12.
Grinding-machine. F. N. and F. E. Gardner. No. 1,189,557; July 4; Gaz. vol. 228; p. 125.
Gripping-tool. B. Januszczak. No. 1,191,702; July 18; Gaz. vol. 228; p. 964.
Grocer's bin. A. Rhodes. No. 1,192,228; July 25; Gaz. vol. 228; p. 1205.
Gum, Machine for chopping chicle-. B. W. Brown. No. 1,190,372; July 11; Gaz. vol. 228; p. 453.
Gumming-machine. A. M. Schall. No. 1,191,537; July 18; Gaz. vol. 228; p. 906.
Gun, Air-. A. V. Dickey. No. 1,191,877; July 18; Gaz. vol. 228; p. 1026.
Gun, Bow-. J. F. Hunholz. No. 1,192,639; July 25; Gaz. vol. 228; p. 1347.
Gun-carriage. C. H. Yost. No. 1,190,356; July 11; Gaz. vol. 228; p. 447.
Gun, Grease-. J. B. Hendrix and C. Durossette. No. 1,190,241; July 4; Gaz. vol. 228; p. 360.
Guns, Light attachment for. G. W. Derryberry. No. 1,189,670; July 4; Gaz. vol. 228; p. 164.
Guns, Pressure-relieving trunnion-bearing for. O. Knoch. No. 1,190,299; July 11; Gaz. vol. 228; p. 427.
Gyratory structure. G. W. Combs. No. 1,192,498; July 25; Gaz. vol. 228; p. 1297.
Gyratory structure. G. W. Combs. No. 1,192,499; July 25; Gaz. vol. 228; p. 1298.
Gyratory structure. G. W. Combs. No. 1,192,500; July 25; Gaz. vol. 228; p. 1298.
Gyratory structure. G. W. Combs. No. 1,192,501; July 25; Gaz. vol. 228; p. 1299.
Gyratory structure. G. W. Combs. No. 1,192,502; July 25; Gaz. vol. 228; p. 1299.
Gyroscope. E. Klahn. No. 1,192,532; July 25; Gaz. vol. 228; p. 1310.
Gyroscope, Electric-motor. H. W. Shonnard. No. 1,192,468; July 25; Gaz. vol. 228; p. 1288.
Hacksaw-frame. C. Sprague. No. 1,190,477; July 11; Gaz. vol. 228; p. 489.
Hair-curler. L. C. Boyers. No. 1,190,980; July 11; Gaz. vol. 228; p. 670.
Hair-cutting device. C. Marchins. No. 1,192,085; July 25; Gaz. vol. 228; p. 1152.
Hair-cutting device. J. J. McDonough. No. 1,190,182; July 4; Gaz. vol. 228; p. 338.
Hair-drying device. G. L. Scheel. No. 1,190,017; July 4; Gaz. vol. 228; p. 280.
Hair-waving device. D. P. Gleason. No. 1,191,889; July 18; Gaz. vol. 228; p. 1030.
Hame-tug clip. G. W. Trook. No. 1,189,886; July 4; Gaz. vol. 228; p. 239.
Hammer. G. L. Kollock and R. P. Martin. No. 1,190,657; July 11; Gaz. vol. 228; p. 556.
Hammer-lock. T. Wild. No. 1,190,970; July 11; Gaz. vol. 228; p. 667.
Hammer, Power-. C. B. Coates. No. 1,191,948; July 25; Gaz. vol. 228; p. 1103.
Hamper. O. L. Bartlett. No. 1,190,847; July 11; Gaz. vol. 228; p. 623.
Hand-bag. T. Cohn. No. 1,189,918; July 4; Gaz. vol. 228; p. 249.
Handle: *See*—
Brush-handle. Tool-handle.
Crank-handle. Tool or the like handle.
Pot-handle.
Handle-fastening wedge. J. G. Dungan. No. 1,190,239; July 4; Gaz. vol. 228; p. 359.
Handsaw, Self-oiling. R. B. Pearson. No. 1,191,821; July 18; Gaz. vol. 228; p. 1006.
Handsaw-set. W. H. Wood. No. 1,190,972; July 11; Gaz. vol. 228; p. 668.
Hanger: *See*—
Door-hanger. Trolley-wire hanger.
Dust-pan hanger.
Third-point suspension-hanger.
Hanger. C. J. Williams, Jr. No. 1,190,971; July 11; Gaz. vol. 228; p. 667.
Hardness-testing apparatus and method. R. W. E. Moore and H. R. Edgecomb. No. 1,192,670; July 25; Gaz. vol. 228; p. 1357.
Harrow. C. E. Stroud. No. 1,190,683; July 11; Gaz. vol. 228; p. 565.
Harrow and cultivator, Combination. F. M. Vermilion. No. 1,190,825; July 11; Gaz. vol. 228; p. 614.
Harrow attachment, Disk-. F. Noecker. No. 1,191,985; July 25; Gaz. vol. 228; p. 1117.
Harrow, Disk. F. C. Warne. No. 1,189,890; July 4; Gaz. vol. 228; p. 240.
Harrow, Disk. F. C. Warne. No. 1,192,023; July 25; Gaz. vol. 228; p. 1131.
Harrow, Disk. C. Young. No. 1,189,332; July 4; Gaz. vol. 228; p. 44.
Harrow, Spiral. A. J. Cummer. No. 1,191,404; July 18; Gaz. vol. 228; p. 861.
Harvester, Beet-. J. A. Kite. No. 1,192,644; July 25; Gaz. vol. 228; p. 1349.
Harvester, Beet-. T. M. E. Selerup. No. 1,190,598; July 11; Gaz. vol. 228; p. 532.
Harvester-binders, Changeable-speed gearing for. R. B. Vaughn. No. 1,189,641; July 4; Gaz. vol. 228; p. 155.
Harvester, Corn-. L. O. Halcomb. No. 1,190,231; July 4; Gaz. vol. 228; p. 356.
Harvester, Rice-. J. N. Motte and A. Kotz. No. 1,190,939; July 11; Gaz. vol. 228; p. 657.
Harvester's bag. J. F. Peterson and T. S. Kirby. No. 1,192,344; July 25; Gaz. vol. 228; p. 1245.
Harvesting machine, Clover-seed-. W. H. Pridgen. No. 1,190,457; July 11; Gaz. vol. 228; p. 482.
Hat-bodies, Finishing. J. V. Walsh. No. 1,189,320; July 4; Gaz. vol. 228; p. 40.
Hat-comforming means. W. D. Halfmann. No. 1,190,998; July 11; Gaz. vol. 228; p. 676.
Hat-fastener, Spiral. J. W. Eaton. No. 1,190,273; July 11; Gaz. vol. 228; p. 418.
Hat-lining. G. Rawak. No. 1,191,996; July 25; Gaz. vol. 228; p. 1121.
Hat-machine. J. Lake, Jr. No. 1,191,709; July 18; Gaz. vol. 228; p. 966.
Hat-pin for ladies' hats. M. Jolak. No. 1,189,695; July 4; Gaz. vol. 228; p. 172.
Hat-pins, buttons, brooches, and the like, Manufacture of. C. Whiteley. No. 1,191,636; July 18; Gaz. vol. 228; p. 939.
Hats, Leather or sweat band for straw. P. D. Bernard. No. 1,192,375; July 25; Gaz. vol. 228; p. 1256.
Hay-loader. H. Gieselman. No. 1,192,056; July 25; Gaz. vol. 228; p. 1142.

Hay-press. M. M. Fields. No. 1,190,393; July 11; Gaz. vol. 228; p. 460.
Hay-racks and hay-loaders, Coupling apparatus for. J. D. Baird. No. 1,191,385; July 18; Gaz. vol. 228; p. 855.
Head-covering. E. A. Peterson. No. 1,192,108; July 25; Gaz. vol. 228; p. 1159.
Headlamp control. M. G. Struble. No. 1,190,684; July 11; Gaz. vol. 228; p. 565.
Headlight, Dirigible. B. M. Huff. No. 1,190,413; July 11; Gaz. vol. 228; p. 467.
Headlight, Dirigible. C. Von Culin and G. W. Beach. No. 1,189,512; July 4; Gaz. vol. 228; p. 111.
Headlight, Non-glaring. C. E. Post and P. G. Wagner. No. 1,189,621; July 4; Gaz. vol. 228; p. 147.
Headlight support, Dirigible-. C. F. Neeb. No. 1,191,720; July 18; Gaz. vol. 228; p. 970.
Headlight-steering mechanism. A. Kreitzer and A. Good. No. 1,190,774; July 11; Gaz. vol. 228; p. 596.
Hearing, Apparatus for aiding the. E. W. Schneider. No. 1,192,122; July 25; Gaz. vol. 228; p. 1164.
Hearing, Sound-concentrator for devices for aiding the. E. W. Schneider. No. 1,192,123; July 25; Gaz. vol. 228; p. 1165.
Heat-insulating compounds and producing same. C. J. Beindorff. No. 1,189,780; July 4; Gaz. vol. 228; p. 202.
Heat-insulating cover. H. W. Burgher. No. 1,190,857; July 11; Gaz. vol. 228; p. 626.
Heat-regulating apparatus. N. E. Nash. No. 1,189,613; July 4; Gaz. vol. 228; p. 144.
Heat-regulating system, Individual-office-. E. S. Halsey. No. 1,191,694; July 18; Gaz. vol. 228; p. 960.
Heater: *See*—
Carbureter-heater. Gas-heater.
Electric heater. Grain-heater.
Electrical heater. Water-heater.
Heater and cooking utensil, Combined. H. O. Reese. No. 1,190,584; July 11; Gaz. vol. 228; p. 527.
Heaters, Temperature-regulating device for. P. S. Martin. No. 1,192,335; July 25; Gaz. vol. 228; p. 1242.
Heating system. G. H. Gibson. No. 1,189,806; July 4; Gaz. vol. 228; p. 211.
Heating system, Vapor vacuum. B. O. Daubert. No. 1,192,278; July 25; Gaz. vol. 228; p. 1222.
Heating systems, Automatic valve for. G. B. Eddy. No. 1,190,877; July 11; Gaz. vol. 228; p. 634.
Heating unit, Electrical. F. E. Shallor. No. 1,191,238; July 18; Gaz. vol. 228; p. 802.
Heddles, Mechanism for controlling or releasing and feeding independent, detached. E. F. Hathaway. No. 1,190,760; July 11; Gaz. vol. 228; p. 591.
Heddles or the like, Mechanism for operating upon metallic. E. F. Hathaway and C. D. Lanning. No. 1,190,762; July 11; Gaz. vol. 228; p. 591.
Hedge and grass cutter. P. O. Smith. No. 1,190,476; July 11; Gaz. vol. 228; p. 489.
Hedge-trimmer. L. H. Soisson. No. 1,192,699; July 25; Gaz. vol. 228; p. 1367.
Heel and arch support, Combined. A. E. Block. No. 1,191,655; July 18; Gaz. vol. 228; p. 946.
Heel-breasting machine. R. C. Simmons. No. 1,191,622; July 18; Gaz. vol. 228; p. 934.
Heel, Rubber. F. Nerger. No. 1,189,859; July 4; Gaz. vol. 228; p. 230.
Heel, Rubber. J. Opperud. No. 1,189,472; July 4; Gaz. vol. 228; p. 97.
Heels, Covering. I. M. Krohn and M. J. Sullivan. No. 1,190,775; July 11; Gaz. vol. 228; p. 596.
Hemmer. O. M. Cartwright. No. 1,190,627; July 11; Gaz. vol. 228; p. 543.
Hides and skins from the killed animals, Device for severing the. W. Pfefferkorn. No. 1,192,451; July 25; Gaz. vol. 228; p. 1282.
Hinge. A. S. Lowden. No. 1,190,435; July 11; Gaz. vol. 228; p. 475.
Hinge and clamp, Mirror. H. C. Ray. No. 1,192,116; July 25; Gaz. vol. 228; p. 1102.
Hinge, Gate-. A. V. Rowe. No. 1,192,120; July 25; Gaz. vol. 228; p. 1163.
Hinge, Seat-. G. H. Abbott. No. 1,189,770; July 4; Gaz. vol. 228; p. 198.
Hinge, Spring-. E. J. Roberts. No. 1,191,470; July 18; Gaz. vol. 228; p. 884.
Hinge, Swinging-table-leg. C. Stolzer. No. 1,190,339; July 11; Gaz. vol. 228; p. 441.
Hoe. A. B. Chabot. No. 1,190,108; July 4; Gaz. vol. 228; p. 311.
Hoe. A. F. Nelson. No. 1,192,097; July 25; Gaz. vol. 228; p. 1156.
Hog-cholera antitoxin, Producing a sterile. J. Reichel and H. Werner. No. 1,192,560; July 25; Gaz. vol. 228; p. 1319.
Hoisting mechanism. H. E. Jenkins. No. 1,192,322; July 25; Gaz. vol. 228; p. 1237.
Holder and dash-fastener. J. P. Wilson. No. 1,192,251; July 25; Gaz. vol. 228; p. 1213.
Hook: *See*—
Choker-hook. Garment-hook.
Crochet-hook. Snap-hook.
Fish-hook.
Hook-and-eye fastening. J. E. Jansson. No. 1,192,321; July 25; Gaz. vol. 228; p. 1236.
Hoop: *See*—
Metal hoop.
Hoop-forming machine. E. W. Robinson. No. 1,192,562; July 25; Gaz. vol. 228; p. 1320.
Horn, Automobile-. G. A. Arnold. No. 1,192,508; July 25; Gaz. vol. 228; p. 1333.
Horn, Diaphragm-. M. R. Hutchison. No. 1,189,952; July 4; Gaz. vol. 228; p. 260.
Horn, Mechanical. G. C. Dean. No. 1,189,795; July 4; Gaz. vol. 228; p. 208.
Horn, Signaling-. M. S. Purple. No. 1,191,461; July 18; Gaz. vol. 228; p. 880.
Horological instrument. H. A. Borresen. No. 1,190,853; July 11; Gaz. vol. 228; p. 625.
Horological instrument. H. A. Borresen. No. 1,192,811; July 25; Gaz. vol. 228; p. 1406.
Horse-detacher. A. Kydland. No. 1,192,212; July 25; Gaz. vol. 228; p. 1199.
Horseshoe. G. W. Covington. No. 1,189,543; July 4; Gaz. vol. 228; p. 122.
Horseshoe. A. Gauthier. No. 1,191,413; July 18; Gaz. vol. 228; p. 864.
Horseshoe. J. H. Hershberger. No. 1,191,002; July 11; Gaz. vol. 228; p. 678.
Horseshoe. H. H. Landis. No. 1,191,322; July 18; Gaz. vol. 228; p. 832.
Horseshoe. J. H. Miller. No. 1,191,811; July 18; Gaz. vol. 228; p. 1002.
Horseshoe. J. Nell. No. 1,191,984; July 25; Gaz. vol. 228; p. 1117.
Horseshoe. W. T. Williams and J. Hickey. No. 1,192,146; July 25; Gaz. vol. 228; p. 1174.
Horseshoe-calk, Detachable. W. B. Hill. No. 1,190,897; July 11; Gaz. vol. 228; p. 642.
Horseshoe, Supplemental. A. Roth, Sr. No. 1,191,616; July 18; Gaz. vol. 228; p. 932.
Horseshoes, Machine for forming heel-calks on. J. Wood. No. 1,191,644; July 18; Gaz. vol. 228; p. 943.
Hose and the like clamp. F. J. Stulp. No. 1,189,404; July 4; Gaz. vol. 228; p. 71.
Hose-clamp. C. Pelter. No. 1,191,219; July 18; Gaz. vol. 228; p. 794.
Hose-coupling. R. J. Abbott. No. 1,190,068; July 4; Gaz. vol. 228; p. 298.
Hose-coupling, Automatic. E. J. Rohrbacher. No. 1,189,624; July 4; Gaz. vol. 228; p. 148.
Hose coupling, Automatic air-. P. A. Gagnon. No. 1,190,639; July 11; Gaz. vol. 228; p. 548.
Hose holder, Lawn-. J. E. Howell. No. 1,192,313; July 25; Gaz. vol. 228; p. 1234.
Hose, Making. A. T. Hopkins. No. 1,190,292; July 11; Gaz. vol. 228; p. 425.
Hose-supporter. C. P. Kuehn. No. 1,191,320; July 18; Gaz. vol. 228; p. 832.
Hot-air bath. W. F. Erath. No. 1,190,388; July 11; Gaz. vol. 228; p. 458.
Hot-air stacks, Boot for. A. G. Scherer. No. 1,192,121; July 25; Gaz. vol. 228; p. 1164.
House: *See*—
Lamp-house.
Hub, Antifriction-. H. L. Alder and H. E. Gilfert. No. 1,190,258; July 11; Gaz. vol. 228; p. 413.
Hub-locking device, Vehicle-. J. B. Sargent. No. 1,192,688; July 25; Gaz. vol. 228; p. 1199.
Hub or bushing. W. D. Quigley. No. 1,191,730; July 18; Gaz. vol. 228; p. 974.
Hub, Spring-. W. A. Lents. No. 1,192,079; July 25; Gaz. vol. 228; p. 1149.
Huller: *See*—
Clover-huller. Pea and bean huller.
Humidifier. U. Davis. No. 1,190,223; July 4; Gaz. vol. 228; p. 353.
Humidifier and disinfector. R. A. Mallett and C. McClung. No. 1,189,600; July 4; Gaz. vol. 228; p. 140.
Humidor-cover. A. E. McBride. No. 1,190,311; July 11; Gaz. vol. 228; p. 431.
Hydraulic press. J. M. Hansen. No. 1,191,302; July 18; Gaz. vol. 228; p. 825.
Hydrocarbon-burner. G. F. Gavard. No. 1,192,297; July 25; Gaz. vol. 228; p. 1229.
Hydrocarbon-burner. J. Nicholson. No. 1,189,992; July 4; Gaz. vol. 228; p. 273.
Hydrocarbon-burner. A. A. Patterf. No. 1,189,732; July 4; Gaz. vol. 228; p. 184.
Hydrocarbon-burner. R. Schneider. No. 1,192,573; July 25; Gaz. vol. 228; p. 1324.
Hydrocarbon-burners, Air control for. W. M. Kimberlin. No. 1,189,366; July 4; Gaz. vol. 228; p. 57.
Hydrocarbon from hydrocarbon-bearing earth-strata, Producing. I. L. Dunn. No. 1,190,267; July 11; Gaz. vol. 228; p. 416.
Hypodermic-solution container. N. S. Mayo. No. 1,189,465; July 4; Gaz. vol. 228; p. 94.
Ice-chipping machine. B. L. Schmidt. No. 1,190,330; July 11; Gaz. vol. 228; p. 438.
Ice-cream-cone-baking machine. W. A. Tompkins. No. 1,191,485; July 18; Gaz. vol. 228; p. 889.
Ice-creeper. P. Ruggiero. No. 1,190,677; July 11; Gaz. vol. 228; p. 563.
Ice-crusher. B. L. Schmidt. No. 1,190,329; July 11; Gaz. vol. 228; p. 438.
Ice in molds, Apparatus for producing. P. Buck. No. 1,191,559; July 18; Gaz. vol. 228; p. 914.
Igniters, Tripping mechanism for. H. R. Van Deventer. No. 1,190,823; July 11; Gaz. vol. 228; p. 613.
Ignition system. C. F. Kettering. No. 1,190,175; July 4; Gaz. vol. 228; p. 335.

Illuminating device. H. J. Lutz. No. 1,189,592; July 4; Gaz. vol. 228; p. 138.
Implements, Making handled. N. B. Keyes. No. 1,189,701; July 4; Gaz. vol. 228; p. 174.
Incandescent mantle. A. Herskovitz. No. 1,192,782; July 25; Gaz. vol. 228; p. 1395.
Incubator. P. Kaiser. No. 1,190,418; July 11; Gaz. vol. 228; p. 468.
Incubator. P. Kaiser. No. 1,190,419; July 11; Gaz. vol. 228; p. 469.
Incubator. L. F. Perkett. No. 1,190,795; July 11; Gaz. vol. 228; p. 603.
Incubator. R. R. Root. No. 1,192,565; July 25; Gaz. vol. 228; p. 1321.
Incubators, Electric regulator for. W. W. Smith. No. 1,189,400; July 4; Gaz. vol. 228; p. 69.
Incubators, &c., Heat-controlling mechanism for. P. Kaiser. No. 1,190,420; July 11; Gaz. vol. 228; p. 469.
Indicating-lock. W. A. Ratcliff. No. 1,191,732; July 18; Gaz. vol. 228; p. 975.
Indicator: *See*—
Automobile-indicator.
Liquid-level indicator.
Log and stream indicator.
Road-indicator.
Speed-indicator.
Speed and distance indicator.
Station-indicator.
Street or station indicator.
Switch-indicator.
Vehicle direction-indicator.
Winding-indicator.
Indicator. D. B. Trottier. No. 1,189,407; July 4; Gaz. vol. 228; p. 72.
Indicator drive connection. W. F. Kendall. No. 1,191,900; July 18; Gaz. vol. 228; p. 1034.
Induction-motor. H. G. Reist and H. Maxwell. No. 1,190,009; July 4; Gaz. vol. 228; p. 278.
Induction-motor. J. B. Weard. No. 1,190,054; July 4; Gaz. vol. 228; p. 292.
Ingot mold and feeder. B. H. Howard and E. J. Turner. No. 1,192,425; July 25; Gaz. vol. 228; p. 1273.
Ingot-molds, Apparatus for making. C. G. Robinson. No. 1,191,471; July 18; Gaz. vol. 228; p. 884.
Ingot-molds, Making. C. G. Robinson. No. 1,191,472; July 18; Gaz. vol. 228; p. 884.
Inhaler. W. R. Thatcher and H. Dixon. No. 1,192,357; July 25; Gaz. vol. 228; p. 1250.
Ink film for making finger-prints, Table for supplying an. P. Ryan. No. 1,192,796; July 25; Gaz. vol. 228; p. 1400.
Ink-fountain. A. B. Carty. (Reissue.) No. 14,165; July 18; Gaz. vol. 228; p. 1049.
Ink-fountain. F. H. Quade, Jr. No. 1,192,455; July 25; Gaz. vol. 228; p. 1283.
Inking apparatus. R. Sattler and L. J. Morand. No. 1,191,837; July 18; Gaz. vol. 228; p. 1011.
Inking mechanism. G. H. Graham. No. 1,190,640; July 11; Gaz. vol. 228; p. 549.
Inking mechanism. F. H. Quade, Jr. No. 1,192,454; July 25; Gaz. vol. 228; p. 1282.
Inking or coloring the edges of leather or other material, Machine for. W. Stuebing, Jr., and L. J. Van Guelpen. No. 1,190,246; July 4; Gaz. vol. 228; p. 362.
Insect-beater. M. A. Marcucci. No. 1,190,440; July 11; Gaz. vol. 228; p. 477.
Insect-destroyer. J. T. Brooks. No. 1,190,097; July 4; Gaz. vol. 228; p. 307.
Insect-destroyer. G. C. Tucker. No. 1,189,508; July 4; Gaz. vol. 228; p. 110.
Insect-destroying apparatus. J. M. Morrow. No. 1,189,720; July 4; Gaz. vol. 228; p. 181.
Insect-trap. F. M. and W. H. Crabtree. No. 1,192,391; July 25; Gaz. vol. 228; p. 1262.
Insecticide-gun. E. Kromer. No. 1,190,426; July 11; Gaz. vol. 228; p. 472.
Insole. J. E. Jackson. No. 1,190,904; July 11; Gaz. vol. 228; p. 645.
Insoles, Making. J. E. Jackson. No. 1,191,138; July 11; Gaz. vol. 228; p. 721.
Insulating-bushing. J. B. Johnson. No. 1,189,960; July 4; Gaz. vol. 228; p. 262.
Insulating composition and producing it. H. C. Tazewell. No. 1,190,814; July 11; Gaz. vol. 228; p. 609.
Insulating-support. A. S. Hubbard. No. 1,190,766; July 11; Gaz. vol. 228; p. 593.
Insulator. E. Harlan. No. 1,190,286; July 11; Gaz. vol. 228; p. 423.
Insulator. R. P. Jackson. No. 1,191,186; July 18; Gaz. vol. 228; p. 783.
Insulator-clamp. E. G. Hatch. No. 1,190,763; July 11; Gaz. vol. 228; p. 592.
Insulator-supporting structure. W. Schaake. No. 1,192,690; July 25; Gaz. vol. 228; p. 1364.
Integrator. E. G. Bailey. No. 1,190,701; July 11; Gaz. vol. 228; p. 571.
Internal-combustion engine. C. B. Askew. No. 1,189,338; July 4; Gaz. vol. 228; p. 46.
Internal-combustion engine. E. S. Bullard and V. H. Leiner. No. 1,189,660; July 4; Gaz. vol. 228; p. 160.
Internal-combustion engine. T. J. Fay. No. 1,189,928; July 4; Gaz. vol. 228; p. 252.
Internal-combustion engine. W. Harper, Jr. No. 1,189,564; July 4; Gaz. vol. 228; p. 128.
Internal-combustion engine. L. B. Harris. No. 1,192,520; July 25; Gaz. vol. 228; p. 1305.
Internal-combustion engine. R. W. Harroun. No. 1,191,420; July 18; Gaz. vol. 228; p. 867.
Internal-combustion engine. G. B. Jackson. No. 1,191,311; July 18; Gaz. vol. 228; p. 828.
Internal-combustion engine. H. B. Layman. No. 1,189,267; July 4; Gaz. vol. 228; p. 20.
Internal-combustion engine. P. H. Mueller and L. H. Schuler. No. 1,189,281; July 4; Gaz. vol. 228; p. 25.
Internal-combustion engine. A. Peytoureau. No. 1,189,477; July 4; Gaz. vol. 228; p. 90.
Internal-combustion engine. G. J. Rathbun. No. 1,192,456; July 25; Gaz. vol. 228; p. 1283.
Internal-combustion engine. G. C. Reese. No. 1,191,827; July 18; Gaz. vol. 228; p. 1007.
Internal-combustion engine. J. R. Rogers. No. 1,189,872; July 4; Gaz. vol. 228; p. 234.
Internal-combustion engine. F. T. Romberger. No. 1,189,625; July 4; Gaz. vol. 228; p. 149.
Internal-combustion engine. D. E. Tallmadge. No. 1,191,366; July 18; Gaz. vol. 228; p. 848.
Internal-combustion engine. H. C. Tillotson. No. 1,191,246; July 18; Gaz. vol. 228; p. 804.
Internal-combustion engine. J. F. Wentworth. No. 1,190,830; July 11; Gaz. vol. 228; p. 616.
Internal-combustion engine. L. A. Werner. No. 1,189,324; July 4; Gaz. vol. 228; p. 41.
Internal-combustion engine. W. B. S. Whaley. No. 1,191,253; July 18; Gaz. vol. 228; p. 807.
Internal-combustion engine with rotating cylinders. W. Kleling. No. 1,191,437; July 18; Gaz. vol. 228; p. 872.
Internal-combustion motor. R. T. Kingsford. (Reissue.) No. 14,163; July 4; Gaz. vol. 228; p. 372.
Internal-combustion motor. J. N. Tooker. No. 1,190,819; July 11; Gaz. vol. 228; p. 611.
Intestine-cleaner. J. Hecke. No. 1,190,547; July 11; Gaz. vol. 228; p. 513.
Iron: *See*—
Smoothing-iron.
Ironing-board attachment. L. P. Benson. No. 1,189,529; July 4; Gaz. vol. 228; p. 117.
Ironing-board attachment. H. Cohen. No. 1,190,113; July 4; Gaz. vol. 228; p. 312.
Ironing-board attachment. M. L. Harrison. No. 1,191,782; July 18; Gaz. vol. 228; p. 993.
Ironing-board attachment. D. Rand. No. 1,192,225; July 25; Gaz. vol. 228; p. 1204.
Ironing-board table. A. Pfau. No. 1,191,532; July 18; Gaz. vol. 228; p. 904.
Ironing-machine. F. C. Wendell. No. 1,189,892; July 4; Gaz. vol. 228; p. 241.
Ironing-wax pad. O. W. Severns. No. 1,189,499; July 4; Gaz. vol. 228; p. 107.
Jack: *See*—
Automobile-jack.
Belt-jack.
Lifting-jack.
Pumping-jack.
Jack. N. O. Hedman. No. 1,190,163; July 4; Gaz. vol. 228; p. 329.
Jar: *See*—
Preserving-jar.
Well-drill jar.
Jar. R. P. White. No. 1,191,634; July 18; Gaz. vol. 228; p. 938.
Jardinière. R. F. Gloede. No. 1,190,147; July 4; Gaz. vol. 228; p. 324.
Jewelry. A. Schwartzman. No. 1,189,497; July 4; Gaz. vol. 228; p. 106.
Jewelry-loss-preventing device. J. M. Miller. No. 1,189,467; July 4; Gaz. vol. 228; p. 95.
Joint: *See*—
Expansion-joint.
Flume-joint.
Pipe-joint.
Rail-joint.
Railway-rail joint.
Sheet-metal joint.
Structural joint.
Universal joint.
Joints, Localizing the bur at electrical butt or edge welded. T. E. Murray. No. 1,189,856; July 4; Gaz. vol. 228; p. 229.
Jointer-standard clamp. A. D. Baker. No. 1,192,155; July 25; Gaz. vol. 228; p. 1176.
Journal-box. L. S. Bache. No. 1,189,905; July 4; Gaz. vol. 228; p. 245.
Journal-box cellar. A. C. McCord and I. A. Randel. No. 189,712; July 4; Gaz. vol. 228; p. 178.
Journal-box cooler. B. Jullen. No. 1,191,188; July 18; Gaz. vol. 228; p. 784.
Journal-box evener. M. F. Schoenberger. No. 1,189,495; July 4; Gaz. vol. 228; p. 105.
Journal-box lid. G. A. Woodman. No. 1,191,263; July 18; Gaz. vol. 228; p. 811.
Jumping-rope, Recording. E. H. Stokes and R. E. Grymes. No. 1,189,307; July 4; Gaz. vol. 228; p. 36.
Junction-box, Partition. J. F. McElroy. No. 1,191,827; July 18; Gaz. vol. 228; p. 834.
Kettle, Glue-. O. M. Hires. No. 1,189,816; July 4; Gaz. vol. 228; p. 215.
Key: *See*—
Telegraph-key.
Key-ring support. J. C. Naughton. No. 1,191,215; July 18; Gaz. vol. 228; p. 793.
Key-securing device, Door-. M. W. Rosenshine. No. 1,191,127; July 11; Gaz. vol. 228; p. 719.
Key-securing device, Door-. M. W. Rosenshine. No. 1,191,128; July 11; Gaz. vol. 228; p. 719.
Keyhole-illuminating apparatus. P. R. Harsh. No. 1,191,783; July 18; Gaz. vol. 228; p. 994.
Kiln. M. H. Avram. No. 1,189,904; July 4; Gaz. vol. 228; p. 245.
Kinetoscope. F. E. Baldwin. No. 1,191,145; July 18; Gaz. vol. 228; p. 769.

Kinetoscope-casing. E. S. Porter. No. 1,190,582; July 11; Gaz. vol. 228; p. 526.
Kitchen-fork. J. Hoffman. No. 1,189,692; July 4; Gaz. vol. 228; p. 171.
Kitchen, Military or camp. E. B. Bloxham and W. Owen. No. 1,190,216; July 4; Gaz. vol. 228; p. 351.
Knife. I. Rose and H. A. Speiser. No. 1,190,675; July 11; Gaz. vol. 228; p. 562.
Knife-blank-marking apparatus. E. A. Overstedt. No. 1,191,989; July 25; Gaz. vol. 228; p. 1118.
Knit fabric and knitting the same. R. W. Scott. No. 1,189,744; July 4; Gaz. vol. 228; p. 188.
Knit fabric and knitting the same, Welted. R. W. Scott. No. 1,192,801; July 25; Gaz. vol. 228; p. 1402.
Knit stocking or sock. R. W. Scott. No. 1,192,800; July 25; Gaz. vol. 228; p. 1402.
Knitting-machine. R. W. Scott. No. 1,191,740; July 18; Gaz. vol. 228; p. 978.
Knitting machine, Circular-. J. Lawson. No. 1,192,328; July 25; Gaz. vol. 228; p. 1239.
Knitting machine, Circular-. J. Lawson. No. 1,192,329; July 25; Gaz. vol. 228; p. 1240.
Knitting-machines, Automatic stop mechanism for. I. W. Grothey. No. 1,189,684; July 4; Gaz. vol. 228; p. 168.
Knitting machines, Feed mechanism for circular-. W. T. Barratt. No. 1,191,648; July 18; Gaz. vol. 228; p. 944.
Knitting machines, Stop-motion for circular-. H. E. Houseman. No. 1,191,513; July 18; Gaz. vol. 228; p. 898.
Knitting machines, Switch-cam mechanism for circular-. H. Swinglehurst. No. 1,192,473; July 25; Gaz. vol. 228; p. 1289.
Knitting machines, Thread cutter and holder for circular-. H. L. Trudel. No. 1,191,100; July 11; Gaz. vol. 228; p. 710.
Knitting ribbed fabric sections. R. W. Scott. No. 1,192,799; July 25; Gaz. vol. 228; p. 1401.
Knob, Door-. M. McDonald. No. 1,191,206; July 18; Gaz. vol. 228; p. 789.
Knob-spindle fastener. D. Borland. No. 1,192,269; July 25; Gaz. vol. 228; p. 1219.
Kraut-cutter. L. Kirsch. No 1,189,702; July 4; Gaz. vol. 228; p. 174.
Label-moistener. W. E. Fleming. No. 1,190,535; July 11; Gaz. vol. 228; p. 509.
Labeling-machine. W. H. Leister. No. 1,189,844; July 4; Gaz. vol. 228; p. 225.
Labeling machine, Can-. J. F. Wride. No. 1,191,264; July 18; Gaz. vol. 228; p. 811.
Ladder, Extensible fire-. S. Starcovic. No. 1,190,034; July 4; Gaz. vol. 228; p. 286.
Ladder, Foldable step and wall. J. Bennett. No. 1,192,734; July 25; Gaz. vol. 228; p. 1380.
Ladder, Step-. W. T. Pyle. No. 1,191,922; July 18; Gaz. vol. 228; p. 1043.
Ladder structure. L. W. Wallace. No. 1,189,514; July 4; Gaz. vol. 228; p. 112.
Ladle, Duplex. G. E. Scott. No. 1,192,467; July 25; Gaz. vol. 228; p. 1287.
Lamp. L. S. Chadwick. No. 1,190,219; July 4; Gaz. vol. 228; p. 351.
Lamp, Arc-. W. Dietz. No. 1,191,289; July 18; Gaz. vol. 228; p. 820.
Lamp, Arc-. C. A. B. Halvorson, Jr. No. 1,190,159; July 4; Gaz. vol. 228; p. 328.
Lamp, Electric. J. L. Corcoran. No. 1,190,730; July 11; Gaz. vol. 228; p. 581.
Lamp, Electric flash-. C. A. Bennett. No. 1,190,090; July 4; Gaz. vol. 228; p. 305.
Lamp, Gas-. G. Keith. No. 1,192,430; July 25; Gaz. vol. 228; p. 1275.
Lamp-globe attachment. H. S. Evans and W. F. M. Hawe. No. 1,192,049; July 25; Gaz. vol. 228; p. 1140.
Lamp-house for projecting apparatus. E. E. Maggard. No. 1,192,658; July 25; Gaz. vol. 228; p. 1353.
Lamp, Incandescent electric. J. A. Orange. No. 1,189,996; July 4; Gaz. vol. 228; p. 274.
Lamp lock, Automatic electric-. D. L. Calahan. No. 1,192,749; July 25; Gaz. vol. 228; p. 1384.
Lamp, Portable. G. W. Stanton and R. H. Frye. No. 1,191,744; July 18; Gaz. vol. 228; p. 979.
Lamp-shade. L. E. Sills. No. 1,189,746; July 4; Gaz. vol. 228; p. 189.
Lamp-socket casing, Electric-. H. J. Morey. No. 1,191,872; July 18; Gaz. vol. 228; p. 1003.
Lamp socket, Electric-. H. H. Willetts. No. 1,191,641; July 18; Gaz. vol. 228; p. 942.
Lamp socket, Incandescent-. R. M. Levy. No. 1,190,308; July 11; Gaz. vol. 228; p. 430.
Lamp stand, Portable electric-. A. Bouchery. No. 1,189,553; July 4; Gaz. vol. 228; p. 118.
Lamp-support. F. A. Culver and J. C. Stearns. No. 1,189,350; July 4; Gaz. vol. 228; p. 51.
Lamp support, Adjustable electric-. A. E. Wells. No. 1,189,413; July 4; Gaz. vol. 228; p. 74.
Lamps, Adjustable light-shade for vehicle-. C. Hellrath. No. 1,191,422; July 18; Gaz. vol. 228; p. 868.
Lamps, Cluster-burner for incandescent. J. McKenna. No. 1,190,660; July 11; Gaz. vol. 228; p. 557.
Lamps, Locking means for incandescent. H. Altshul. No. 1,191,934; July 18; Gaz. vol. 228; p. 1048.
Lamps, Waterproof cap and shell for incandescent electric. C. A. Vetter. (Reissue.) No. 14,173; July 25; Gaz. vol. 228; p. 1419.
Lampblack-machine. W. H. Davis. No. 1,191,673; July 18; Gaz. vol. 228; p. 953.
Land-roller. R. E. Dunham. No. 1,190,132; July 4; Gaz. vol. 228; p. 319.
Lantern. P. J. Knorpp, Jr. No. 1,190,010; July 11; Gaz. vol. 228; p. 647.
Lantern. F. A. Wilson. No. 1,192,591; July 25; Gaz. vol. 228; p. 1331.
Lantern, Tubular. T. A. Glende and W. B. Frankenstein. No. 1,189,249; July 4; Gaz. vol. 228; p. 13.
Lap-robe. E. Leach. No. 1,191,441; July 18; Gaz. vol. 228; p. 874.
Laryngoscope. F. J. Verba. No. 1,190,050; July 4; Gaz. vol. 228; p. 291.
Last. F. L. Alley. No. 1,192,257; July 25; Gaz. vol. 228; p. 1215.
Last, Shoe-. T. A. J. Fusaro. No. 1,191,686; July 18; Gaz. vol. 228; p. 958.
Last, Shoe-. P. H. Hickman. No. 1,191,183; July 18; Gaz. vol. 228; p. 782.
Lasts, Machine for working uppers over. R. F. McFeely. No. 1,189,979; July 4; Gaz. vol. 228; p. 268.
Lasts, Working uppers over. R. F. McFeely. No. 1,189,980; July 4; Gaz. vol. 228; p. 269.
Latch. W. R. Brennan. No. 1,192,271; July 25; Gaz. vol. 228; p. 1220.
Latch. L. Ottinger. No. 1,192,448; July 25; Gaz. vol. 228; p. 1281.
Latch. W. Patterson. No. 1,192,105; July 25; Gaz. vol. 228; p. 1159.
Latch-bolt, Double-throw. R. Schoell. No. 1,191,539; July 18; Gaz. vol. 228; p. 907.
Latch, Door-. J. H. Joneson. No. 1,191,600; July 18; Gaz. vol. 228; p. 926.
Latch, Gravity gate-. A. J. Everett. No. 1,190,531; July 11; Gaz. vol. 228; p. 508.
Latch, Rim-. R. Schoell. No. 1,191,538; July 18; Gaz. vol. 228; p. 907.
Latching device, Door-. C. Dziegielewski. No. 1,191,679; July 18; Gaz. vol. 228; p. 955.
Lath, Metallic. M. E. Chamberlain. No. 1,190,725; July 11; Gaz. vol. 228; p. 579.
Lathe, Multiple-tool turning-. F. K. Hendrickson. No. 1,191,305; July 18; Gaz. vol. 228; p. 826.
Lathe, Semi-automatic wood-. M. Fanget. No. 1,190,532; July 11; Gaz. vol. 228; p. 508.
Lathes, Cylinder-grinding attachment for engine-. C. H. Scholer and F. W. Newton. No. 1,191,913; July 18; Gaz. vol. 228; p. 1039.
Laundry-extractor. I. W. Cadwell. No. 1,191,661; July 18; Gaz. vol. 228; p. 948.
Laundry-extractors, Safety-cover for. H. E. Larsen. No. 1,192,327; July 25; Gaz. vol. 228; p. 1230.
Lawn and garden sprinkler. A. Wilson and A. Pinkava. No. 1,191,643; July 18; Gaz. vol. 228; p. 942.
Lawn-sprinkler. C. F. Schnasa. No. 1,190,594; July 11; Gaz. vol. 228; p. 530.
Lawn-sprinkling means. J. A. Brooks. No. 1,192,743; July 25; Gaz. vol. 228; p. 1382.
Leaf-gathering and lawn-treating implement. L. T. Murrah. No. 1,191,814; July 18; Gaz. vol. 228; p. 1003.
Leaf-stemming machine. R. Marx and R. J. Boltz. No. 1,191,020; July 11; Gaz. vol. 228; p. 684.
Leak-stopper, Emergency. M. Harrison. No. 1,191,000; July 11; Gaz. vol. 228; p. 677.
Leather and making same, Elastic. M. Scheuer. No. 1,192,691; July 25; Gaz. vol. 228; p. 1364.
Leather and making the same, Material adapted for use in the manufacture of an imitation. W. O. Stoddard, Jr. No. 1,190,807; July 11; Gaz. vol. 228; p. 607.
Leather-beveling machine. W. B. Arnold and T. Martin. No. 1,192,810; July 25; Gaz. vol. 228; p. 1405.
Leather, Material adapted for use in the manufacture of an imitation. W. O. Stoddard, Jr. No. 1,190,806; July 11; Gaz. vol. 228; p. 607.
Leather-staking machine. A. C. Layman. No. 1,189,975; July 4; Gaz. vol. 228; p. 267.
Leather substances, Manufacturing. C. Roessler. No. 1,192,460; July 25; Gaz. vol. 228; p. 1285.
Leg and socket construction. E. E. and F. Pfeffer. No. 1,192,557; July 25; Gaz. vol. 228; p. 1318.
Lens-edging machine. G. H. Day. No. 1,191,874; July 18; Gaz. vol. 228; p. 1025.
Lens for electric signs and the like, Diffusion-. H. S. Williams. No. 1,190,498; July 11; Gaz. vol. 228; p. 496.
Lens-holder. A. E. Maynard. No. 1,191,905; July 18; Gaz. vol. 228; p. 1036.
Lens-mount. R. H. Uhlemann. No. 1,191,373; July 18; Gaz. vol. 228; p. 851.
Lenses, Forming bifocal. H. W. Hill. No. 1,190,242; July 4; Gaz. vol. 228; p. 360.
Level-sighting attachment. C. Bodmer. No. 1,189,422; July 4; Gaz. vol. 228; p. 78.
Lever. C. Smith. No. 1,192,695; July 25; Gaz. vol. 228; p. 1365.
Lever-locking device. C. E. Clemens. No. 1,190,517; July 11; Gaz. vol. 228; p. 502.
Life-buoy, Aviatory. S. L. Van Meter, Jr. No. 1,192,479; July 25; Gaz. vol. 228; p. 1291.

Life-preserving jacket. S. Sarosick. No. 1,191,836; July 18; Gaz. vol. 228; p. 1011.
Life-raft. R. H. Gilbert. No. 1,191,417; July 18; Gaz. vol. 228; p. 866.
Lifter: *See*—
Brick-lifter. Valve-spring lifter.
Lifting-arm, Expansible. R. D. Tyler. No. 1,190,486; July 11; Gaz. vol. 228; p. 492.
Lifting device. F. Butler. No. 1,191,660; July 18; Gaz. vol. 228; p. 948.
Lifting-jack. E. C. Bates. No. 1,189,778; July 4; Gaz. vol. 228; p. 201.
Lifting-jack. W. A. Field. No. 1,192,611; July 25; Gaz. vol. 228; p. 1338.
Lifting-jack. G. Lane. No. 1,192,326; July 25; Gaz. vol. 228; p. 1238.
Lifting-jack. A. G. Mielke. No. 1,192,667; July 25; Gaz. vol. 228; p. 1356.
Light: *See*—
Electric light. Spot-light.
Lights, Time-controlled mechanism for operating. W. H. Adsit. No. 1,189,651; July 4; Gaz. vol. 228; p. 158.
Lighting device. D. L. Chandler and J. H. Trayne. No. 1,191,946; July 25; Gaz. vol. 228; p. 1103.
Lighting-fixture. H. C. Adam. No. 1,189,520; July 4; Gaz. vol. 228; p. 114.
Lightning-arrester. W. M. McClintock. No. 1,189,272; July 4; Gaz. vol. 228; p. 22.
Lightning-arrester, Vacuum. J. T. Greene. No. 1,191,690; July 18; Gaz. vol. 228; p. 959.
Lightning-conductor. D. W. Hartsaw. No. 1,189,565; July 4; Gaz. vol. 228; p. 128.
Lime-burning apparatus. P. A. and E. J. Walsh. No. 1,191,752; July 18; Gaz. vol. 228; p. 983.
Line-clamp. N. A. Olson. No. 1,190,449; July 11; Gaz. vol. 228; p. 479.
Line-support, Adjustable. R. B. Barrère. No. 1,190,212; July 4; Gaz. vol. 228; p. 349.
Link, Fusible. W. V. Devereux. No. 1,192,396; July 25; Gaz. vol. 228; p. 1264.
Link, Fusible. W. W. Hawkins and J. M. Duncan. No. 1,191,919; July 18; Gaz. vol. 228; p. 1042.
Link-mesh machine. E. F. Hansen. No. 1,192,778; July 25; Gaz. vol. 228; p. 1394.
Linkage. J. Becker. No. 1,190,215; July 4; Gaz. vol. 228; p. 350.
Linotype-machine. E. M. Goodbody. No. 1,192,620; July 25; Gaz. vol. 228; p. 1341.
Liquid-containers under air-pressure, Device for the prevention of air-losses in. C. J. Rixen. No. 1,191,469; July 18; Gaz. vol. 228; p. 883.
Liquid-distributer, Animal-operated. H. L. Ide. No. 1,191,791; July 18; Gaz. vol. 228; p. 996.
Liquid-elevating apparatus. G. F. Bihn and A. Jones. No. 1,191,493; July 18; Gaz. vol. 228; p. 891.
Liquid-gage. F. I. and B. P. Remy and A. Berger. No. 1,189,869; July 4; Gaz. vol. 228; p. 233.
Liquid-level indicator. E. H. Schultz. No. 1,192,693; July 25; Gaz. vol. 228; p. 1365.
Liquid stirring, agitating, or mixing apparatus. B. Goldman. No. 1,191,585; July 18; Gaz. vol. 228; p. 922.
Liquid-treating apparatus. B. Jurist. No. 1,190,769; July 11; Gaz. vol. 228; p. 594.
Liquids from gaseous mixtures, Apparatus for separating vaporized volatile. W. E. Luminus. No. 1,189,711; July 4; Gaz. vol. 228; p. 178.
Liquids, Igniter for inflammable. J. Greer. No. 1,189,683; July 4; Gaz. vol. 228; p. 168.
Liquor with gas, Apparatus for charging. A. Dirian and W. Biel. No. 1,191,952; July 25; Gaz. vol. 228; p. 1105.
Litter-carrier. H. B. Hester. No. 1,192,307; July 25; Gaz. vol. 228; p. 1232.
Load-controlling device. G. M. Richards. No. 1,191,467; July 18; Gaz. vol. 228; p. 883.
Load-dumper. W. F. Berger. No. 1,191,391; July 18; Gaz. vol. 228; p. 857.
Loading and unloading merchandise, Means for. A. Vandevelde. No. 1,190,822; July 11; Gaz. vol. 228; p. 612.
Loading apparatus. J. L. Friesner. No. 1,190,141; July 4; Gaz. vol. 228; p. 322.
Loading apparatus. F. L. Stuart. No. 1,192,010; July 25; Gaz. vol. 228; p. 1128.
Lock: *See*—
Alarm-lock. Indicating-lock.
Automobile-lock. Lamp-lock.
Automobile safety-lock. Mail-bag lock.
Bicycle-lock. Nut-lock.
Box-member lock. Padlock.
Car-lock. Paper-box lock.
Combination-lock. Sash-lock.
Door-lock. Seal-lock.
Elevator-lock. Switch-lock.
End-gate lock. Window-lock.
Hammer-lock. Wrist-lock.
Lock. F. E. Crawford. No. 1,190,985; July 11; Gaz. vol. 228; p. 671.
Lock. E. Kirsteiner. No. 1,192,434; July 25; Gaz. vol. 228; p. 1276.
Lock. S. A. Marchfeld. No. 1,190,439; July 11; Gaz. vol. 228; p. 476.
Lock. E. A. Rupert. No. 1,191,347; July 18; Gaz. vol. 228; p. 842.
Lock. E. L. Teich. No. 1,190,686; July 11; Gaz. vol. 228; p. 566.
Lock or latch. L. Ottinger. No. 1,192,449; July 25; Gaz. vol. 228; p. 1281.
Lock-pin. R. L. McElroy. No. 1,192,333; July 25; Gaz. vol. 228; p. 1241.
Lock safety device. J. P. J. Birot. No. 1,190,851; July 11; Gaz. vol. 228; p. 624.
Locomotive-cross-head guide. H. H. Walck. No. 1,189,318; July 4; Gaz. vol. 228; p. 39.
Locomotive, Electric. A. F. Batchelder. No. 1,189,341; July 4; Gaz. vol. 228; p. 47.
Locomotive, Electric. G. M. Eaton. No. 1,192,773; July 25; Gaz. vol. 228; p. 1391.
Locomotive or car. A. F. Batchelder. No. 1,189,340; July 4; Gaz. vol. 228; p. 47.
Locomotive, Shifting-. G. M. Eaton. No. 1,192,772; July 25; Gaz. vol. 228; p. 1391.
Locomotive with haulage-cable mechanism. D. T. Fisher. No. 1,190,394; July 11; Gaz. vol. 228; p. 460.
Locomotive-wiring fitting. J. Lofgren. No. 1,189,847; July 4; Gaz. vol. 228; p. 226.
Locomotives, Drifting apparatus for. F. C. Fosdick. No. 1,189,246; July 4; Gaz. vol. 228; p. 12.
Locomotives, Mechanism for actuating the reversing mechanism of. G. A. Harden. No. 1,189,251; July 4; Gaz. vol. 228; p. 14.
Log and stream indicator. W. Cornelis. No. 1,191,764; July 18; Gaz. vol. 228; p. 987.
Log-rolling device. A. Payne. No. 1,191,609; July 18; Gaz. vol. 228; p. 930.
Logging-cars, Safety bunk and stake for. C. T. Enid. No. 1,189,434; July 4; Gaz. vol. 228; p. 83.
Loom. R. A. Hammond, S. E. Taft, and C. S. Gooding. No. 1,192,302; July 25; Gaz. vol. 228; p. 1230.
Loom attachment. F. F. Cowden. No. 1,191,570; July 18; Gaz. vol. 228; p. 917.
Loom-cam. J. E. Baker. No. 1,189,776; July 4; Gaz. vol. 228; p. 200.
Loom, Haircloth-weaving. G. Taylor. No. 1,192,018; July 25; Gaz. vol. 228; p. 1129.
Loom picker-winding machine. F. A. Wardwell. No. 1,189,412; July 4; Gaz. vol. 228; p. 74.
Loom shedding mechanism, Ribbon-. K. Eggart. No. 1,189,243; July 4; Gaz. vol. 228; p. 11.
Loom-shuttle binder. O. Charette. No. 1,192,825; July 25; Gaz. vol. 228; p. 1410.
Looms, Automatic shuttle-changing mechanism for. M. Auerbach. No. 1,192,261; July 25; Gaz. vol. 228; p. 1217.
Looms, Filling-replenishing mechanism for. A. E. Rhoades. No. 1,191,734; July 18; Gaz. vol. 228; p. 976.
Looms, Mechanism for preventing successive changes in automatic. A. Briot. No. 1,190,855; July 11; Gaz. vol. 228; p. 626.
Looms, Weft binding and severing device for. E. F. Beaverstock. No. 1,191,652; July 18; Gaz. vol. 228; p. 945.
Looms, Weft binding and severing device for. E. F. Beaverstock. No. 1,191,653; July 18; Gaz. vol. 228; p. 945.
Lubricating chains, Device for. J. M. Dodge. No. 1,192,762; July 25; Gaz. vol. 228; p. 1388.
Lubricating-cup. P. G. Margetts and C. M. Hummell. No. 1,191,208; July 18; Gaz. vol. 228; p. 790.
Lubricating device. D. I. Fehr. No. 1,190,533; July 11; Gaz. vol. 228; p. 508.
Lubricating system for connected movable parts. J. A. Stahle. No. 1,192,012; July 25; Gaz. vol. 228; p. 1127.
Lubricator: *See*—
Wheel-lubricator.
Lubricator. E. McCoy. No. 1,192,083; July 25; Gaz. vol. 228; p. 1151.
Lubricator. R. Wood. No. 1,192,253; July 25; Gaz. vol. 228; p. 1214.
Lubricators, Safety-feed for. T. A. Delaney. No. 1,189,242; July 4; Gaz. vol. 228; p. 10.
Lumber-clamp. J. A. Simon. No. 1,189,397; July 4; Gaz. vol. 228; p. 68.
Lumber-conveyer, Live-roller. W. L. Crocker. No. 1,191,403; July 18; Gaz. vol. 228; p. 861.
Lumber-working machines, Feed-roller for. A. Libert. No. 1,192,540; July 25; Gaz. vol. 228; p. 1313.
Lunch-box, Folding. M. A. Gilman. No. 1,191,688; July 18; Gaz. vol. 228; p. 958.
Magnet-actuated device. F. T. Kitchen. No. 1,192,531; July 25; Gaz. vol. 228; p. 1309.
Magnets, Shoeing permanent. A. D. Pentz. No. 1,192,680; July 25; Gaz. vol. 228; p. 1360.
Magneto-driving connection. P. Rudolf and J. A. Lund. No. 1,191,476; July 18; Gaz. vol. 228; p. 886.
Mail-bag catcher. E. F. Schrage. No. 1,189,876; July 4; Gaz. vol. 228; p. 235.
Mail-bag catchers, Attachment for. C. Sutter. No. 1,192,241; July 25; Gaz. vol. 228; p. 1209.
Mail-bag-delivering device. E. F. Schrage. No. 1,189,875; July 4; Gaz. vol. 228; p. 235.
Mail-bag lock. J. C. M. Sutton. No. 1,191,043; July 11; Gaz. vol. 228; p. 692.
Mail-box. A. Travelstead. No. 1,190,047; July 4; Gaz. vol. 228; p. 290.
Mail-receptacle. J. H. Rese. No. 1,190,193; July 4; Gaz. vol. 228; p. 342.
Mail-transferring apparatus. J. McGrath. No. 1,192,656; July 25; Gaz. vol. 228; p. 1353.

Mailing-box. C. J. Anderson. No. 1,191,057; July 11; Gaz. vol. 228; p. 696.
Manhole frame and cover. H. Jones. No. 1,191,431; July 18; Gaz. vol. 228; p. 870.
Manhole frame and cover. H. Jones. No. 1,191,432; July 18; Gaz. vol. 228; p. 871.
Manifolding device. C. H. James. No. 1,189,955; July 4; Gaz. vol. 228; p. 261.
Manifolding device. A. Krauth. No. 1,189,263; July 4; Gaz. vol. 228; p. 19.
Manure-loader. A. Hossfeld. No. 1,190,550; July 11; Gaz. vol. 228; p. 514.
Manure-spreader. T. Brown. No. 1,189,658; July 4; Gaz. vol. 228; p. 160.
Manure-spreader. W. J. Cook. No. 1,191,670; July 18; Gaz. vol. 228; p. 952.
Marker. C. F. Schippell. No. 1,191,116; July 11; Gaz. vol. 228; p. 715.
Marker. S. A. Wells. No. 1,192,719; July 25; Gaz. vol. 228; p. 1374.
Mask for workmen, Protective. J. T. Brayton. No. 1,191,274; July 18; Gaz. vol. 228; p. 815.
Massaging apparatus. J. Jacoby. No. 1,191,701; July 18; Gaz. vol. 228; p. 903.
Massaging-tool. C. De Mattia. No. 1,192,282; July 25; Gaz. vol. 228; p. 1223.
Mat: *See*—
Bath-mat.
Mat. C. J. Peterson. No. 1,190,948; July 11; Gaz. vol. 228; p. 660.
Match and cigarette box, Combined. D. Tudor. No. 1,190,484; July 11; Gaz. vol. 228; p. 491.
Match-lighter. J. A. Cunningham. No. 1,192,043; July 25; Gaz. vol. 228; p. 1138.
Match-package container. R. Head. No. 1,190,288; July 11; Gaz. vol. 228; p. 424.
Match-safe. J. Becker. No. 1,190,213; July 4; Gaz. vol. 228; p. 349.
Match-splint and producing the same, Treated. W. G. Wey. No. 1,191,545; July 18; Gaz. vol. 228; p. 909.
Match-splints, Composition for imparting flaming and non-glowing properties to. W. G. Wey. No. 1,191,544; July 18; Gaz. vol. 228; p. 909.
Match-stand. C. Campus. No. 1,189,913; July 4; Gaz. vol. 228; p. 248.
Mathematical model. A. H. Wheeler. No. 1,192,483; July 25; Gaz. vol. 228; p. 1293.
Mattress, Wire. G. F. Sisbower and L. E. Pittoni. No. 1,192,130; July 25; Gaz. vol. 228; p. 1167.
Measurement of small pressures. E. Thomson. No. 1,190,044; July 4; Gaz. vol. 228; p. 289.
Measuring and dispensing device, Liquid. E. C. Florschmidt. No. 1,191,484; July 18; Gaz. vol. 228; p. 888.
Measuring and regulating the flow of liquids. P. R. Owens. No. 1,191,724; July 18; Gaz. vol. 228; p. 972.
Measuring and winding linoleum and the like, Apparatus for. P. Quirk. No. 1,189,482; July 4; Gaz. vol. 228; p. 101.
Measuring apparatus. G. H. Gibson. No. 1,191,416; July 18; Gaz. vol. 228; p. 865.
Measuring device for testing-machines, Stretch-. H. L. Scott. No. 1,190,596; July 11; Gaz. vol. 228; p. 531.
Measuring dry materials, Device for. I. F. Giles. No. 1,189,248; July 4; Gaz. vol. 228; p. 13.
Measuring instrument, Electric. H. W. Brown. No. 1,189,234; July 4; Gaz. vol. 228; p. 8.
Measuring means, Specific-gravity-. H. P. Dodge. No. 1,189,431; July 4; Gaz. vol. 228; p. 81.
Measuring ribbons and the like, Means for. H. H. Kurkjian. No. 1,190,916; July 11; Gaz. vol. 228; p. 649.
Measuring-tape. R. Kastmann. No. 1,189,257; July 4; Gaz. vol. 228; p. 16.
Measuring-tool and drill-jig. J. and W. Miller. No. 1,191,906; July 18; Gaz. vol. 228; p. 1036.
Meat-case, Sanitary. J. Berretta. No. 1,190,260; July 11; Gaz. vol. 228; p. 413.
Meat-cutter. H. B. Margrave. No. 1,191,016; July 11; Gaz. vol. 228; p. 683.
Mechanical movement. A. J. Hartley. No. 1,191,695; July 18; Gaz. vol. 228; p. 961.
Mechanical movement. H. G. Pape. No. 1,190,451; July 11; Gaz. vol. 228; p. 480.
Mechanical movement. R. Philippe. No. 1,190,949; July 11; Gaz. vol. 228; p. 661.
Mercury rectifiers, Controlling the efficiency of. W. Tschudy. No. 1,189,887; July 4; Gaz. vol. 228; p. 230.
Mercury-separator. J. Haverly. No. 1,190,406; July 11; Gaz. vol. 228; p. 465.
Metal and other material, Means for stiffening sheets of. W. E. Williams. No. 1,191,863; July 18; Gaz. vol. 228; p. 1021.
Metal baths, Flux for coating. J. H. Maddy and B. H. Schubert. No. 1,189,373; July 4; Gaz. vol. 228; p. 60.
Metal fabric. H. F. Hager. No. 1,191,693; July 18; Gaz. vol. 228; p. 960.
Metal fabric, Making. W. Loach. No. 1,189,369; July 4; Gaz. vol. 228; p. 58.
Metal hoop. E. I. Braddock. No. 1,190,506; July 11; Gaz. vol. 228; p. 498.
Metal, Making expanded. L. E. Curtis. No. 1,191,768; July 18; Gaz. vol. 228; p. 988.
Metal, Manufacturing expanded. L. E. Curtis. No. 1,191,766; July 18; Gaz. vol. 228; p. 987.
Metal, Manufacturing expanded. L. E. Curtis. No. 1,191,767; July 18; Gaz. vol. 228; p. 988.
Metal, Method of and apparatus for cold-rolling. P. B. Abramsen. No. 1,190,698; July 11; Gaz. vol. 228; p. 570.
Metal pickle and pickling. L. C. Drefahl. No. 1,191,291; July 18; Gaz. vol. 228; p. 821.
Metal sheets or strips, Apparatus for feeding. F. C. Arey. No. 1,190,974; July 11; Gaz. vol. 228; p. 668.
Metal, Volatilizing. S. I. Clawson. No. 1,192,037; July 25; Gaz. vol. 228; p. 1136.
Metal-ware articles, Machine for dressing the edge portions of. F. J. Velmure. No. 1,192,715; July 25; Gaz. vol. 228; p. 1372.
Metals, Apparatus for and method of electric fastening of. C. H. Kicklighter. No. 1,189,584; July 4; Gaz. vol. 228; p. 135.
Metals, Electric melting of. C. A. Keller. No. 1,191,435; July 18; Gaz. vol. 228; p. 872.
Metals, Producing alkali. H. Labhardt. No. 1,191,799; July 18; Gaz. vol. 228; p. 998.
Metallic leaf, Package-roll of. E. H. Swift. No. 1,190,340; July 11; Gaz. vol. 228; p. 441.
Metallic tie. W. Gottlieb. No. 1,192,300; July 25; Gaz. vol. 228; p. 1230.
Metalliferous materials for roasting, reducing, sintering, and like purposes, Treating. F. C. W. Timm. No. 1,189,313; July 4; Gaz. vol. 228; p. 88.
Metallurgy. H. S. Kimball. No. 1,189,830; July 4; Gaz. vol. 228; p. 220.
Meter: *See*—
Ampere-hour meter. Electric meter.
Current-meter. Water-meter.
Meter. M. Cornine. No. 1,191,157; July 18; Gaz. vol. 228; p. 773.
Meter. W. J. Costello. No. 1,189,348; July 4; Gaz. vol. 228; p. 50.
Meter-box mounting, Meter attachment for. E. H. Ford. No. 1,191,503; July 18; Gaz. vol. 228; p. 894.
Meter-operating mechanism. H. C. Fuhrman. No. 1,191,171; July 18; Gaz. vol. 228; p. 778.
Meter panel-board. J. P. McGrady. No. 1,189,848; July 4; Gaz. vol. 228; p. 226.
Meter-testing cutout. T. E. Murray, Jr. No. 1,192,547; July 25; Gaz. vol. 228; p. 1814.
Meter-testing device. T. E. Murray, Jr. No. 1,189,855; July 4; Gaz. vol. 228; p. 229.
Meters, Rerolling device for graphic. H. B. Taylor. No. 1,189,309; July 4; Gaz. vol. 228; p. 36.
Metering system, Electric. V. S. Hardey. No. 1,191,177; July 18; Gaz. vol. 228; p. 780.
Methyl chlorid and methylene chlorid. B. S. Lacy. No. 1,190,659; July 11; Gaz. vol. 228; p. 556.
Microphone repeater, Differential-. J. J. Comer. No. 1,192,166; July 25; Gaz. vol. 228; p. 1180.
Military shoulder-arm. T. C. Johnson. No. 1,192,528; July 25; Gaz. vol. 228; p. 1309.
Milk and mail box, Combined. A. Gutowski and T. S. Blazucki. No. 1,191,589; July 18; Gaz. vol. 228; p. 922.
Milking-hobble. S. Paulson. No. 1,189,865; July 4; Gaz. vol. 228; p. 232.
Milking-machine. G. E. Jonsson. No. 1,190,294; July 11; Gaz. vol. 228; p. 425.
Milking-machine. R. M. Miller. No. 1,189,468; July 4; Gaz. vol. 228; p. 95.
Milking machine, Suction. K. K. McLeod. No. 1,190,566; July 11; Gaz. vol. 228; p. 520.
Mill: *See*—
Ball-mill. Rolling-mill.
Bar-mill. Rubber-mixing mill.
Feed-mill. Windmill.
Ore-mill.
Milling-machine. F. W. White. No. 1,192,807; July 25; Gaz. vol. 228; p. 1404.
Mine-shaft gate. F. P. McClain and J. A. Futcher. No. 1,191,806; July 18; Gaz. vol. 228; p. 1000.
Mining-machine. H. A. Kuhn. No. 1,190,300; July 11; Gaz. vol. 228; p. 427.
Miter-tool. A. J. Helms. No. 1,191,896; July 18; Gaz. vol. 228; p. 1032.
Mixer: *See*—
Concrete-mixer. Gas-mixer.
Gas and air mixer.
Mixer. J. Free, Sr. No. 1,191,170; July 18; Gaz. vol. 228; p. 778.
Model for reproducing all movements of the human or animal body, Dummy. K. Kruse. No. 1,189,585; July 4; Gaz. vol. 228; p. 135.
Moistener. W. F. Francis. No. 1,190,279; July 11; Gaz. vol. 228; p. 420.
Moistener. J. Jasper and S. Craven. No. 1,190,905; July 11; Gaz. vol. 228; p. 645.
Moistener. E. C. Jones, (now by marriage E. C. McCaslin.) No. 1,191,134; July 11; Gaz. vol. 228; p. 721.
Mold: *See*—
Concrete-mold. Garbage-receptacle mold.
Concrete-wall mold. Ingot-mold.
Convertible mold.
Molds, Manufacture of. C. G. Robinson. No. 1,191,473; July 18; Gaz. vol. 228; p. 885.
Molds, Sink-head for. E. Gathmann. No. 1,192,617; July 25; Gaz. vol. 228; p. 1340.
Molding apparatus. A. M. Loughran. No. 1,190,434; July 11; Gaz. vol. 228; p. 475.
Molding-machine. E. A. Pridmore. No. 1,190,951; July 11; Gaz. vol. 228; p. 661.

Life-preserving jacket. S. Sarosick. No. 1,191,836; July 18; Gaz. vol. 228; p. 1011.
Life-raft. R. H. Gilbert. No. 1,191,417; July 18; Gaz. vol. 228; p. 866.
Lifter: *See*—
Brick-lifter. Valve-spring lifter.
Lifting-arm, Expansible. R. D. Tyler. No. 1,190,486; July 11; Gaz. vol. 228; p. 492.
Lifting device. F. Butler. No. 1,191,660; July 18; Gaz. vol. 228; p. 948.
Lifting-jack. E. C. Bates. No. 1,189,778; July 4; Gaz. vol. 228; p. 201.
Lifting-jack. W. A. Field. No. 1,192,611; July 25; Gaz. vol. 228; p. 1338.
Lifting-jack. G. Lane. No. 1,192,326; July 25; Gaz. vol. 228; p. 1238.
Lifting-jack. A. G. Mielke. No. 1,192,667; July 25; Gaz. vol. 228; p. 1356.
Light: *See*—
Electric light. Spot-light.
Lights, Time-controlled mechanism for operating. W. H. Adsit. No. 1,189,651; July 4; Gaz. vol. 228; p. 158.
Lighting device. D. L. Chandler and J. H. Trayne. No. 1,191,946; July 25; Gaz. vol. 228; p. 1103.
Lighting-fixture. H. C. Adam. No. 1,189,520; July 4; Gaz. vol. 228; p. 114.
Lightning-arrester. W. M. McClintock. No. 1,189,272; July 4; Gaz. vol. 228; p. 22.
Lightning-arrester, Vacuum. J. T. Greene. No. 1,191,690; July 18; Gaz. vol. 228; p. 959.
Lightning-conductor. D. W. Hartsaw. No. 1,189,565; July 4; Gaz. vol. 228; p. 128.
Lime-burning apparatus. P. A. and E. J. Walsh. No. 1,191,752; July 18; Gaz. vol. 228; p. 983.
Line-clamp. N. A. Olson. No. 1,190,449; July 11; Gaz. vol. 228; p. 479.
Line-support, Adjustable. R. B. Barrère. No. 1,190,212; July 4; Gaz. vol. 228; p. 349.
Link, Fusible. W. V. Devereux. No. 1,192,396; July 25; Gaz. vol. 228; p. 1264.
Link, Fusible. W. W. Hawkins and J. M. Duncan. No. 1,191,919; July 18; Gaz. vol. 228; p. 1042.
Link-mesh machine. E. F. Hansen. No. 1,192,778; July 25; Gaz. vol. 228; p. 1394.
Linkage. J. Becker. No. 1,190,215; July 4; Gaz. vol. 228; p. 350.
Linotype-machine. E. M. Goodbody. No. 1,192,620; July 25; Gaz. vol. 228; p. 1341.
Liquid-containers under air-pressure, Device for the prevention of air-losses in. C. J. Rixen. No. 1,191,469; July 18; Gaz. vol. 228; p. 883.
Liquid-distributer, Animal-operated. H. L. Ide. No. 1,191,791; July 18; Gaz. vol. 228; p. 996.
Liquid-elevating apparatus. G. F. Bihn and A. Jones. No. 1,191,493; July 18; Gaz. vol. 228; p. 891.
Liquid-gage. F. I. and B. P. Remy and A. Berger. No. 1,189,869; July 4; Gaz. vol. 228; p. 233.
Liquid-level indicator. E. H. Schultz. No. 1,192,693; July 25; Gaz. vol. 228; p. 1365.
Liquid stirring, agitating, or mixing apparatus. B. Goldman. No. 1,191,585; July 18; Gaz. vol. 228; p. 922.
Liquid-treating apparatus. B. Jurist. No. 1,190,769; July 11; Gaz. vol. 228; p. 594.
Liquids from gaseous mixtures, Apparatus for separating vaporized volatile. W. E. Lummus. No. 1,189,711; July 4; Gaz. vol. 228; p. 178.
Liquids, Igniter for inflammable. J. Greer. No. 1,189,683; July 4; Gaz. vol. 228; p. 168.
Liquor with gas, Apparatus for charging. A. Dirlan and W. Biel. No. 1,191,952; July 25; Gaz. vol. 228; p. 1105.
Litter-carrier. H. B. Hester. No. 1,192,307; July 25; Gaz. vol. 228; p. 1232.
Load-controlling device. G. M. Richards. No. 1,191,467; July 18; Gaz. vol. 228; p. 883.
Load-dumper. W. F. Berger. No. 1,191,391; July 18; Gaz. vol. 228; p. 857.
Loading and unloading merchandise, Means for. A. Vandevelde. No. 1,190,822; July 11; Gaz. vol. 228; p. 612.
Loading apparatus. J. L. Friesner. No. 1,190,141; July 4; Gaz. vol. 228; p. 322.
Loading apparatus. F. L. Stuart. No. 1,192,016; July 25; Gaz. vol. 228; p. 1128.
Lock: *See*—
Alarm-lock. Indicating-lock.
Automobile-lock. Lamp-lock.
Automobile safety-lock. Mail-bag lock.
Bicycle-lock. Nut-lock.
Box-member lock. Padlock.
Car-lock. Paper-box lock.
Combination-lock. Sash-lock.
Door-lock. Seal-lock.
Elevator-lock. Switch-lock.
End-gate lock. Window-lock.
Hammer-lock. Wrist-lock.
Lock. F. E. Crawford. No. 1,190,985; July 11; Gaz. vol. 228; p. 671.
Lock. E. Kürsteiner. No. 1,192,434; July 25; Gaz. vol. 228; p. 1276.
Lock. S. A. Marchfeld. No. 1,190,439; July 11; Gaz. vol. 228; p. 476.
Lock. E. A. Rupert. No. 1,191,347; July 18; Gaz. vol. 228; p. 842.
Lock. E. L. Teich. No. 1,190,686; July 11; Gaz. vol. 228; p. 566.
Lock or latch. L. Ottinger. No. 1,192,449; July 25; Gaz. vol. 228; p. 1281.
Lock-pin. R. L. McElroy. No. 1,192,333; July 25; Gaz. vol. 228; p. 1241.
Lock safety device. J. P. J. Birot. No. 1,190,851; July 11; Gaz. vol. 228; p. 624.
Locomotive-cross-head guide. H. H. Walck. No. 1,189,318; July 4; Gaz. vol. 228; p. 39.
Locomotive, Electric. A. F. Batchelder. No. 1,189,341; July 4; Gaz. vol. 228; p. 47.
Locomotive, Electric. G. M. Eaton. No. 1,192,773; July 25; Gaz. vol. 228; p. 1391.
Locomotive or car. A. F. Batchelder. No. 1,189,340; July 4; Gaz. vol. 228; p. 47.
Locomotive, Shifting. G. M. Eaton. No. 1,192,772; July 25; Gaz. vol. 228; p. 1391.
Locomotive with haulage-cable mechanism. D. T. Fisher. No. 1,190,394; July 11; Gaz. vol. 228; p. 460.
Locomotive-wiring fitting. J. Lofgren. No. 1,189,847; July 4; Gaz. vol. 228; p. 226.
Locomotives, Drifting apparatus for. F. C. Fosdick. No. 1,189,246; July 4; Gaz. vol. 228; p. 12.
Locomotives, Mechanism for actuating the reversing mechanism of. G. A. Harden. No. 1,189,251; July 4; Gaz. vol. 228; p. 14.
Log and stream indicator. W. Cornelis. No. 1,191,764; July 18; Gaz. vol. 228; p. 987.
Log-rolling device. A. Payne. No. 1,191,609; July 18; Gaz. vol. 228; p. 930.
Logging-cars, Safety bunk and stake for. C. T. Enid. No. 1,189,434; July 4; Gaz. vol. 228; p. 83.
Loom. R. A. Hammond, S. E. Taft, and C. S. Gooding. No. 1,192,302; July 25; Gaz. vol. 228; p. 1230.
Loom attachment. F. F. Cowden. No. 1,191,570; July 18; Gaz. vol. 228; p. 917.
Loom-cam. J. E. Baker. No. 1,189,776; July 4; Gaz. vol. 228; p. 200.
Loom, Haircloth-weaving. G. Taylor. No. 1,192,018; July 25; Gaz. vol. 228; p. 1129.
Loom picker-winding machine. F. A. Wardwell. No. 1,189,412; July 4; Gaz. vol. 228; p. 74.
Loom shedding mechanism, Ribbon-. K. Eggart. No. 1,189,243; July 4; Gaz. vol. 228; p. 11.
Loom-shuttle binder. O. Charette. No. 1,192,825; July 25; Gaz. vol. 228; p. 1410.
Looms, Automatic shuttle-changing mechanism for. M. Auerbach. No. 1,192,261; July 25; Gaz. vol. 228; p. 1217.
Looms, Filling-replenishing mechanism for. A. E. Rhoades. No. 1,191,734; July 18; Gaz. vol. 228; p. 976.
Looms, Mechanism for preventing successive changes in automatic. A. Briot. No. 1,190,855; July 11; Gaz. vol. 228; p. 626.
Looms, Weft binding and severing device for. E. F. Beaverstock. No. 1,191,652; July 18; Gaz. vol. 228; p. 945.
Looms, Weft binding and severing device for. E. F. Beaverstock. No. 1,191,653; July 18; Gaz. vol. 228; p. 945.
Lubricating chains, Device for. J. M. Dodge. No. 1,192,762; July 25; Gaz. vol. 228; p. 1388.
Lubricating-cup. P. G. Margetts and C. M. Hummell. No. 1,191,208; July 18; Gaz. vol. 228; p. 790.
Lubricating device. D. I. Fehr. No. 1,190,533; July 11; Gaz. vol. 228; p. 508.
Lubricating system for connected movable parts. J. A. Stahle. No. 1,192,012; July 25; Gaz. vol. 228; p. 1127.
Lubricator: *See*—
Wheel-lubricator.
Lubricator. E. McCoy. No. 1,192,083; July 25; Gaz. vol. 228; p. 1151.
Lubricator. R. Wood. No. 1,192,253; July 25; Gaz. vol. 228; p. 1214.
Lubricators, Safety-feed for. T. A. Delaney. No. 1,189,242; July 4; Gaz. vol. 228; p. 10.
Lumber-clamp. J. A. Simon. No. 1,189,397; July 4; Gaz. vol. 228; p. 68.
Lumber-conveyer, Live-roller. W. L. Crocker. No. 1,191,403; July 18; Gaz. vol. 228; p. 861.
Lumber-working machines, Feed-roller for. A. Libert. No. 1,192,540; July 25; Gaz. vol. 228; p. 1313.
Lunch-box, Folding. M. A. Gilman. No. 1,191,688; July 18; Gaz. vol. 228; p. 958.
Magnet-actuated device. F. T. Kitchen. No. 1,192,531; July 25; Gaz. vol. 228; p. 1309.
Magnets, Shoeing permanent. A. D. Pentz. No. 1,192,680; July 25; Gaz. vol. 228; p. 1360.
Magneto-driving connection. P. Rudolf and J. A. Lund. No. 1,191,476; July 18; Gaz. vol. 228; p. 886.
Mail-bag catcher. E. F. Schrage. No. 1,189,876; July 4; Gaz. vol. 228; p. 235.
Mail-bag catchers, Attachment for. C. Sutter. No. 1,192,241; July 25; Gaz. vol. 228; p. 1209.
Mail-bag-delivering device. E. F. Schrage. No. 1,189,875; July 4; Gaz. vol. 228; p. 235.
Mail-bag lock. J. C. M. Sutton. No. 1,191,043; July 11; Gaz. vol. 228; p. 692.
Mail-box. A. Travelstead. No. 1,190,047; July 4; Gaz. vol. 228; p. 290.
Mail-receptacle. J. H. Rese. No. 1,190,193; July 4; Gaz. vol. 228; p. 342.
Mail-transferring apparatus. J. McGrath. No. 1,192,656; July 25; Gaz. vol. 228; p. 1353.

Mailing-box. C. J. Anderson. No. 1,191,057; July 11; Gaz. vol. 228; p. 696.
Manhole frame and cover. H. Jones. No. 1,191,431; July 18; Gaz. vol. 228; p. 870.
Manhole frame and cover. H. Jones. No. 1,191,432; July 18; Gaz. vol. 228; p. 871.
Manifolding device. C. H. James. No. 1,189,955; July 4; Gaz. vol. 228; p. 261.
Manifolding device. A. Krauth. No. 1,189,263; July 4; Gaz. vol. 228; p. 19.
Manure-loader. A. Hossfeld. No. 1,190,550; July 11; Gaz. vol. 228; p. 514.
Manure-spreader. T. Brown. No. 1,189,658; July 4; Gaz. vol. 228; p. 160.
Manure-spreader. W. J. Cook. No. 1,191,670; July 18; Gaz. vol. 228; p. 952.
Marker. C. F. Schippell. No. 1,191,116; July 11; Gaz. vol. 228; p. 715.
Marker. S. A. Wells. No. 1,192,719; July 25; Gaz. vol. 228; p. 1374.
Mask for workmen, Protective. J. T. Brayton. No. 1,191,274; July 18; Gaz. vol. 228; p. 815.
Massaging apparatus. J. Jacoby. No. 1,191,701; July 18; Gaz. vol. 228; p. 963.
Massaging-tool. C. De Mattia. No. 1,192,282; July 25; Gaz. vol. 228; p. 1223.
Mat: *See*—
Bath-mat.
Mat. C. J. Peterson. No. 1,190,948; July 11; Gaz. vol. 228; p. 660.
Match and cigarette box, Combined. D. Tudor. No. 1,190,484; July 11; Gaz. vol. 228; p. 491.
Match-lighter. J. A. Cunningham. No. 1,192,043; July 25; Gaz. vol. 228; p. 1138.
Match-package container. R. Head. No. 1,190,288; July 11; Gaz. vol. 228; p. 424.
Match-safe. J. Becker. No. 1,190,213; July 4; Gaz. vol. 228; p. 349.
Match-splint and producing the same, Treated. W. G. Wey. No. 1,191,545; July 18; Gaz. vol. 228; p. 909.
Match-splints, Composition for imparting flaming and non-glowing properties to. W. G. Wey. No. 1,191,544; July 18; Gaz. vol. 228; p. 909.
Match-stand. C. Campus. No. 1,189,913; July 4; Gaz. vol. 228; p. 248.
Mathematical model. A. H. Wheeler. No. 1,192,483; July 25; Gaz. vol. 228; p. 1293.
Mattress, Wire. G. F. Sisbower and L. E. Pittoni. No. 1,192,130; July 25; Gaz. vol. 228; p. 1167.
Measurement of small pressures. E. Thomson. No. 1,190,044; July 4; Gaz. vol. 228; p. 289.
Measuring and dispensing device, Liquid. E. C. Florschmidt. No. 1,191,484; July 18; Gaz. vol. 228; p. 888.
Measuring and regulating the flow of liquids. P. R. Owens. No. 1,191,724; July 18; Gaz. vol. 228; p. 972.
Measuring and winding linoleum and the like, Apparatus for. P. Quirk. No. 1,189,482; July 4; Gaz. vol. 228; p. 101.
Measuring apparatus. G. H. Gibson. No. 1,191,416; July 18; Gaz. vol. 228; p. 865.
Measuring device for testing-machines, Stretch-. H. L. Scott. No. 1,190,596; July 11; Gaz. vol. 228; p. 531.
Measuring dry materials, Device for. I. F. Giles. No. 1,189,248; July 4; Gaz. vol. 228; p. 13.
Measuring instrument, Electric. H. W. Brown. No. 1,189,234; July 4; Gaz. vol. 228; p. 8.
Measuring means, Specific-gravity-. H. P. Dodge. No. 1,189,431; July 4; Gaz. vol. 228; p. 81.
Measuring ribbons and the like, Means for. H. H. Kurkjian. No. 1,190,916; July 11; Gaz. vol. 228; p. 649.
Measuring-tape. R. Kastmann. No. 1,189,257; July 4; Gaz. vol. 228; p. 16.
Measuring-tool and drill-jig. J. and W. Miller. No. 1,191,906; July 18; Gaz. vol. 228; p. 1036.
Meat-case, Sanitary. J. Berretta. No. 1,190,260; July 11; Gaz. vol. 228; p. 413.
Meat-cutter. H. B. Margrave. No. 1,191,016; July 11; Gaz. vol. 228; p. 683.
Mechanical movement. A. J. Hartley. No. 1,191,695; July 18; Gaz. vol. 228; p. 961.
Mechanical movement. H. G. Pape. No. 1,190,451; July 11; Gaz. vol. 228; p. 480.
Mechanical movement. R. Philippe. No. 1,190,949; July 11; Gaz. vol. 228; p. 661.
Mercury rectifiers, Controlling the efficiency of. W. Tschudy. No. 1,189,887; July 4; Gaz. vol. 228; p. 239.
Mercury-separator. J. Haverly. No. 1,190,406; July 11; Gaz. vol. 228; p. 465.
Metal and other material, Means for stiffening sheets of. W. E. Williams. No. 1,191,863; July 18; Gaz. vol. 228; p. 1021.
Metal baths, Flux for coating. J. H. Maddy and B. H. Schubert. No. 1,189,373; July 4; Gaz. vol. 228; p. 60.
Metal fabric, H. F. Hager. No. 1,191,693; July 18; Gaz. vol. 228; p. 960.
Metal fabric, Making. W. Loach. No. 1,189,369; July 4; Gaz. vol. 228; p. 58.
Metal hoop. E. I. Braddock. No. 1,190,506; July 11; Gaz. vol. 228; p. 498.
Metal, Making expanded. L. E. Curtis. No. 1,191,768; July 18; Gaz. vol. 228; p. 988.
Metal, Manufacturing expanded. L. E. Curtis. No. 1,191,766; July 18; Gaz. vol. 228; p. 987.
Metal, Manufacturing expanded. L. E. Curtis. No. 1,191,767; July 18; Gaz. vol. 228; p. 988.
Metal, Method of and apparatus for cold-rolling. P. B. Abramsen. No. 1,190,698; July 11; Gaz. vol. 228; p. 570.
Metal pickle and pickling. L. C. Drefahl. No. 1,191,291; July 18; Gaz. vol. 228; p. 821.
Metal sheets or strips, Apparatus for feeding. F. C. Arey. No. 1,190,974; July 11; Gaz. vol. 228; p. 668.
Metal, Volatilizing. S. I. Clawson. No. 1,192,037; July 25; Gaz. vol. 228; p. 1136.
Metal-ware articles, Machine for dressing the edge portions of. F. J. Velmure. No. 1,192,715; July 25; Gaz. vol. 228; p. 1372.
Metals, Apparatus for and method of electric fastening of. C. H. Kicklighter. No. 1,189,584; July 4; Gaz. vol. 228; p. 135.
Metals, Electric melting of. C. A. Keller. No. 1,191,435; July 18; Gaz. vol. 228; p. 872.
Metals, Producing alkali. H. Labhardt. No. 1,191,799; July 18; Gaz. vol. 228; p. 998.
Metallic leaf, Package-roll of. E. H. Swift. No. 1,190,340; July 11; Gaz. vol. 228; p. 441.
Metallic tie. W. Gottlieb. No. 1,192,300; July 25; Gaz. vol. 228; p. 1230.
Metalliferous materials for roasting, reducing, sintering, and like purposes, Treating. F. C. W. Timm. No. 1,189,313; July 4; Gaz. vol. 228; p. 38.
Metallurgy. H. S. Kimball. No. 1,189,830; July 4; Gaz. vol. 228; p. 220.
Meter: *See*—
Ampere-hour meter. Electric meter.
Current-meter. Water-meter.
Meter. M. Cornine. No. 1,191,157; July 18; Gaz. vol. 228; p. 773.
Meter. W. J. Costello. No. 1,189,348; July 4; Gaz. vol. 228; p. 50.
Meter-box-mounting, Meter attachment for. E. H. Ford. No. 1,191,503; July 18; Gaz. vol. 228; p. 894.
Meter-operating mechanism. H. C. Fuhrman. No. 1,191,171; July 18; Gaz. vol. 228; p. 778.
Meter panel-board. J. P. McGrady. No. 1,189,848; July 4; Gaz. vol. 228; p. 220.
Meter-testing cutout. T. E. Murray, Jr. No. 1,192,547; July 25; Gaz. vol. 228; p. 1314.
Meter-testing device. T. E. Murray, Jr. No. 1,189,855; July 4; Gaz. vol. 228; p. 229.
Meters, Rerolling device for graphic. H. B. Taylor. No. 1,189,309; July 4; Gaz. vol. 228; p. 36.
Metering system, Electric. V. S. Hardey. No. 1,191,177; July 18; Gaz. vol. 228; p. 780.
Methyl chlorid and methylene chlorid. B. S. Lacy. No. 1,190,659; July 11; Gaz. vol. 228; p. 556.
Microphone repeater, Differential-. J. J. Comer. No. 1,192,166; July 25; Gaz. vol. 228; p. 1180.
Military shoulder-arm. T. C. Johnson. No. 1,192,528; July 25; Gaz. vol. 228; p. 1309.
Milk and mail box, Combined. A. Gutowski and T. S. Blazucki. No. 1,191,589; July 18; Gaz. vol. 228; p. 922.
Milking-hobble. S. Paulson. No. 1,189,865; July 4; Gaz. vol. 228; p. 232.
Milking-machine. G. E. Jonsson. No. 1,190,294; July 11; Gaz. vol. 228; p. 425.
Milking-machine. R. M. Miller. No. 1,189,468; July 4; Gaz. vol. 228; p. 95.
Milking machine, Suction. K. K. McLeod. No. 1,190,566; July 11; Gaz. vol. 228; p. 520.
Mill: *See*—
Ball-mill. Rolling-mill.
Bar-mill. Rubber-mixing mill.
Feed-mill. Windmill.
Ore-mill.
Milling-machine. F. W. White. No 1,192,807; July 25; Gaz. vol. 228; p. 1404.
Mine-shaft gate. F. P. McClain and J. A. Futcher. No. 1,191,806; July 18; Gaz. vol. 228; p. 1000.
Mining-machine. H. A. Kuhn. No. 1,190,300; July 11; Gaz. vol. 228; p. 427.
Miter-tool. A. J. Helms. No. 1,191,896; July 18; Gaz. vol. 228; p. 1032.
Mixer: *See*—
Concrete-mixer. Gas-mixer.
Gas and air mixer.
Mixer. J. Free, Sr. No. 1,191,170; July 18; Gaz. vol. 228; p. 778.
Model for reproducing all movements of the human or animal body, Dummy. K. Kruse. No. 1,189,585; July 4; Gaz. vol. 228; p. 135.
Moistener. W. F. Francis. No. 1,190,279; July 11; Gaz. vol. 228; p. 420.
Moistener. J. Jasper and S. Craven. No. 1,190,905; July 11; Gaz. vol. 228; p. 645.
Moistener. E. C. Jones, (now by marriage E. C. McCaslin.) No. 1,191,134; July 11; Gaz. vol. 228; p. 721.
Mold: *See*—
Concrete-mold. Garbage-receptacle mold.
Concrete-wall mold. Ingot-mold.
Convertible mold.
Molds, Manufacture of. C. G. Robinson. No. 1,191,473; July 18; Gaz. vol. 228; p. 885.
Molds, Sink-head for. E. Gathmann. No. 1,192,617; July 25; Gaz. vol. 228; p. 1340.
Molding apparatus. A. M. Loughran. No. 1,190,434; July 11; Gaz. vol. 228; p. 475.
Molding-machine. E. A. Pridmore. No. 1,190,951; July 11; Gaz. vol. 228; p. 661.

Molding process and apparatus. E. L. Aiken. No. 1,190,072; July 4; Gaz. vol. 228; p. 299.
Monoplane. A. Maruca. No. 1,191,448; July 18; Gaz. vol. 228; p. 876.
Mop. J. Congram. No. 1,191,872; July 18; Gaz. vol. 228; p. 1024.
Mop. E. H. Tate. No. 1,191,098; July 11; Gaz. vol. 228; p. 709.
Mop, Dust-. C. F. J. Dupuy. No. 1,192,047; July 25; Gaz. vol. 228; p. 1140.
Mop-holder. J. H. Leppart. No. 1,192,330; July 25; Gaz vol. 228; p. 1240.
Mop or duster. S. F. Vaughan and E. V. Haskell. No. 1,190,346; July 11; Gaz. vol. 228; p. 443.
Motion-transmitting device. G. Sieber. No. 1,191,131; July 11; Gaz. vol. 228; p. 720.
Motor; *See*—
Boat-motor.
Current-motor.
Induction-motor.
Internal-combustion motor.
Variable-speed motor.
Water-motor.
Weight-motor.
Motor. M. Osnos. No. 1,189,997; July 4; Gaz. vol. 228; p. 274.
Motor. G. E. Skaggs. No. 1,189,399; July 4; Gaz. vol. 228; p. 60.
Motor and churn, Connecting means for driving and driven shafts of a spring-. A. S. Cheek. No. 1,190,109; July 4; Gaz. vol. 228; p. 311.
Motor control. A. T. Kasley and C. N. F. Knape. No. 1,189,697; July 4; Gaz. vol. 228; p. 173.
Motor control, Alternating-current-. D. L. Lindquist. No. 1,190,924; July 11; Gaz. vol. 228; p. 652.
Motor controller, Electric-. C. T. Henderson. No. 1,189,947; July 4; Gaz. vol. 228; p. 258.
Motor-controlling mechanism, Induction-. D. L. Lindquist. No. 1,190,923; July 11; Gaz. vol. 228; p. 651.
Motor-governor. C. C. Russell. No. 1,190,593; July 11; Gaz. vol. 228; p. 530.
Motor-protecting switch, Automatic. J. A. Van Alstyne. No. 1,189,409; July 4; Gaz. vol. 228; p. 73.
Motor-support. J. F. and H. E. Dodge. No. 1,190,270; July 11; Gaz. vol. 228; p. 417.
Motor with rotating field for repeating angular movements at a distance overcoming great resistance. R. Girardelli. No. 1,192,618; July 25; Gaz. vol. 228; p. 1340.
Motors, Fuel-supply apparatus for explosion-. J. C. Hansen-Ellehammer. No. 1,189,688; July 4; Gaz. vol. 228; p. 170.
Motors, Mount for outboard. J. H. Maxwell. No. 1,190,663; July 11; Gaz. vol. 228; p. 558.
Motors, Speed control of D. C. H. V. Green. No. 1,190,150; July 4; Gaz. vol. 228; p. 325.
Motors, Speed-governor for electric. H. J. McMahan. No. 1,190,243; July 4; Gaz. vol. 228; p. 360.
Motors, Starting of alternating-current. A. Aichele. No. 1,192,488; July 25; Gaz. vol. 228; p. 1294.
Mounting, Screwless. E. B. Meyrowitz. No. 1,190,932; July 11; Gaz. vol. 228; p. 654.
Mower-knives, Means for removing grass from. H. C. Bjering. No. 1,191,147; July 18; Gaz. vol. 228; p. 770.
Mower, Lawn-. J. B. Word. No. 1,189,519; July 4; Gaz. vol. 228; p. 113.
Mowing-machines, Seed-harvesting attachment for. R. Peck. No. 1,190,454; July 11; Gaz. vol. 228; p. 481.
Muffler. D. F. Leary. No. 1,191,902; July 18; Gaz. vol. 228; p. 1035.
Mug-holder. L. W. Doyle. No. 1,190,128; July 4; Gaz. vol. 228; p. 317.
Music-leaf turner. E. H. Shepherd. No. 1,189,880; July 4; Gaz. vol. 228; p. 237.
Music-leaf turner. A. A. Tibbits. No. 1,190,045; July 4; Gaz. vol. 228; p. 289.
Music-player. D. J. Hauss. No. 1,192,194; July 25; Gaz. vol. 228; p. 1191.
Music-sheet-driving mechanism. A. E. Whitehead. No. 1,192,144; July 25; Gaz. vol. 228; p. 1172.
Music-sheet turner. G. L. Rickard. No. 1,190,462; July 11; Gaz. vol. 228; p. 484.
Music-turner. W. H. Stepp. No. 1,192,703; July 25; Gaz. vol. 228; p. 1369.
Musical instrument. T. J. Day and W. A. Urich. No. 1,191,161; July 18; Gaz. vol. 228; p. 775.
Musical instrument. V. H. Emerson. No. 1,192,402; July 25; Gaz. vol. 228; p. 1266.
Musical instrument, Automatic. E. M. Skinner. No. 1,192,005; July 25; Gaz. vol. 228; p. 1124.
Musical instrument, Mechanical. P. Schwarze. No. 1,191,540; July 18; Gaz. vol. 228; p. 907.
Musical instrument, Percussion. J. B. Kohler. No. 1,192,324; July 25; Gaz. vol. 228; p. 1238.
Musical instruments and the like, Tracker for. E. J. and W. A. Kruck. No. 1,192,076; July 25; Gaz. vol. 228; p. 1148.
Musical instruments, Coupler for electric. M. L. Severy and G. B. Sinclair. No. 1,191,482; July 18; Gaz. vol. 228; p. 887.
Musical instruments, Key-holding device for keyboard. J. Gorst. No. 1,190,994; July 11; Gaz. vol. 228; p. 675.
Musical instruments, Mechanism for controlling automatic. F. L. McCormick. No. 1,191,205; July 18; Gaz. vol. 228; p. 789.
Musical instruments, Pneumatic adjusting mechanism for. V. L. Jones. No. 1,190,767; July 11; Gaz. vol. 228; p. 593.
Nail-holding tool. H. Perkins. No. 1,189,998; July 4; Gaz. vol. 228; p. 275.
Necktie. H. A. Clark. No. 1,190,515; July 11; Gaz. vol. 228; p. 502.
Necktie attachment. J. Eakins. No. 1,190,875; July 11; Gaz. vol. 228; p. 633.
Necktie-fastener. T. C. Spelling. No. 1,192,236; July 25; Gaz. vol. 228; p. 1208.
Necktie-holder. C. A. Dierig. No. 1,191,576; July 18; Gaz. vol. 228; p. 920.
Necktie-holder. J. W. Hartnett. No. 1,191,895; July 18; Gaz. vol. 228; p. 1032.
Necktie-press and collar-box. A. A. Kassel. No. 1,191,007; July 11; Gaz. vol. 228; p. 679.
Necktie-support. I. M. Deppen. No. 1,192,507; July 25; Gaz. vol. 228; p. 1301.
Needle-guard for finger protection, Adjustable. A. W. Peterson. No. 1,191,726; July 18; Gaz. vol. 228; p. 973.
Needle-threading apparatus. J. Seidel. No. 1,191,038; July 11; Gaz. vol. 228; p. 691.
Neon from gases with which it is mixed, Separating. G. Claude. No. 1,191,495; July 18; Gaz. vol. 228; p. 892.
Neon-tube. G. Claude. No. 1,189,664; July 4; Gaz. vol. 228; p. 162.
Nest, Hen-. J. Hebert. No. 1,192,196; July 25; Gaz. vol. 228; p. 1192.
Nest, Trap-. O. B. Andrews. No. 1,192,726; July 25; Gaz. vol. 228; p. 1376.
Nest, Trap-. A. K. Bodenhorn. No. 1,190,093; July 4; Gaz. vol. 228; p. 305.
Nipple-protector. R. Keil. No. 1,191,516; July 18; Gaz. vol. 228; p. 899.
Noodle-folding machine. S. Mueller. No. 1,192,336; July 25; Gaz. vol. 228; p. 1242.
Nozzle, Hose-. C. G. Schmidt. No. 1,191,621; July 18; Gaz. vol. 228; p. 934.
Nozzle-plug. A. R. Dodge. No. 1,192,761; July 25; Gaz. vol. 228; p. 1388.
Nozzle, Vacuum-cleaner. A. L. Frame. No. 1,192,408; July 25; Gaz. vol. 228; p. 1268.
Nozzle, Vacuum-cleaner. A. L. Frame. No. 1,192,409; July 25; Gaz. vol. 228; p. 1269.
Nozzle, Vacuum-cleaner. A. E. Roever. No. 1,191,999; July 25; Gaz. vol. 228; p. 1122.
Nursery-chair. H. Miller. No. 1,189,377; July 4; Gaz. vol. 228; p. 61.
Nut and bolt. Lock. J. Mitchell. No. 1,190,445; July 11; Gaz. vol. 228; p. 479.
Nut-blanching machines, Feeding mechanism for. W. H. Kelly. No. 1,190,554; July 11; Gaz. vol. 228; p. 515.
Nut-blanching machine. W. H. Kelly. No. 1,190,555; July 11; Gaz. vol. 228; p. 516.
Nut-blanching machine. W. W. Kelly. No. 1,190,556; July 11; Gaz. vol. 228; p. 516.
Nut, Lock-. C. G. Anderson. No. 1,191,754; July 18; Gaz. vol. 228; p. 984.
Nut, Lock-. W. L. Brooks. No. 1,190,098; July 4; Gaz. vol. 228; p. 307.
Nut, Lock-. E. F. Hockenberry. No. 1,190,409; July 11; Gaz. vol. 228; p. 465.
Nut-lock. C. O. Baughn. No. 1,189,908; July 4; Gaz. vol. 228; p. 246.
Nut-lock. M. G. Bittencourtt. No. 1,190,624; July 11; Gaz. vol. 228; p. 542.
Nut-lock. W. Bohle. No. 1,189,656; July 4; Gaz. vol. 228; p. 159.
Nut-lock. J. B. Colvin. No. 1,190,114; July 4; Gaz. vol. 228; p. 312.
Nut-lock. L. A. Howe. No. 1,192,636; July 25; Gaz. vol. 228; p. 1346.
Nut-lock. E. Hughes and I. Schofield. No. 1,190,414; July 11; Gaz. vol. 228; p. 467.
Nut-lock. A. Nelson. No. 1,190,318; July 11; Gaz. vol. 228; p. 434.
Nut-lock. W. B. Peoples. No. 1,192,107; July 25; Gaz. vol. 228; p. 1159.
Nut-lock. C. E. Ratcliffe. No. 1,189,622; July 4; Gaz. vol. 228; p. 147.
Nut-lock. W. G. Roepe and F. J. Cassing. No. 1,191,096; July 11; Gaz. vol. 228; p. 708.
Nut-lock. J. L. Seaberg. No. 1,192,232; July 25; Gaz. vol. 228; p. 1206.
Nut-lock. J. H. Slattery. No. 1,190,333; July 11; Gaz. vol. 228; p. 439.
Nut-lock. H. E. Ziplinsky. No. 1,190,360; July 11; Gaz. vol. 228; p. 448.
Nut-lock. T. F. Walden. No. 1,192,717; July 25; Gaz. vol. 228; p. 1373.
Nut-lock, Automatic. A. Ellison. No. 1,191,955; July 25; Gaz. vol. 228; p. 1106.
Obturating material. M. W. Marsden. No. 1,192,662; July 25; Gaz. vol. 228; p. 1354.
Oil-burner. J. M. Bianchi. No. 1,190,850; July 11; Gaz. vol. 228; p. 624.
Oil-burner, Blue-flame. R. Hoffman. No. 1,192,199; July 25; Gaz. vol. 228; p. 1193.
Oil burner, Crude-. H. C. Whitney. No. 1,192,589; July 25; Gaz. vol. 228; p. 1330.
Oil-cake trimmer. J. W. Rhodes. No. 1,190,011; July 4; Gaz. vol. 228; p. 278.
Oil, Conveying. M. D. Looman. No. 1,192,438; July 25; Gaz. vol. 228; p. 1277.
Oil-cup. C. Aalborg. No. 1,189,221; July 4; Gaz. vol. 228; p. 3.

Oil-dropper, Power-feed. A. O. Jackson. No. 1,192,320; July 25; Gaz. vol. 228; p. 1236.
Oil or grease, Lubricating. J. H. Mackie. No. 1,191,328; July 18; Gaz. vol. 228; p. 834.
Oil, Purifying. W. F. Garrity and A. Jarvis. No. 1,190,538; July 11; Gaz. vol. 228; p. 510.
Oil-switch and fuse. L. W. Downes and A. W. Faxon. No. 1,192,397; July 25; Gaz. vol. 228; p. 1264.
Oiler for car-wheels, Flange-. V. J. Whitney. No. 1,191,861; July 18; Gaz. vol. 228; p. 1020.
Oiling device for grinding-machines. C. H. Norton. No. 1,191,986; July 25; Gaz. vol. 228; p. 1117.
Oiling device for vertical shafts. C. O. Anderson. No. 1,189,898; July 4; Gaz. vol. 228; p. 243.
Oiling-tool. B. C. Candee. No. 1,191,663; July 18; Gaz. vol. 228; p. 949.
Operating-table. M. Schmidt. No. 1,190,195; July 4; Gaz. vol. 228; p. 342.
Ordnance-mount turning on a central pivot. E. Olsson. No. 1,190,187; July 4; Gaz. vol. 228; p. 339.
Ore-classifier. W. H. Welgand. No. 1,192,806; July 25; Gaz. vol. 228; p. 1404.
Ore-classifying machine. S. I. Clawson. No. 1,191,280; July 18; Gaz. vol. 228; p. 817.
Ore-concentrator. J. Lampert. No. 1,192,534; July 25; Gaz. vol. 228; p. 1311.
Ore-concentrator. R. Leonhart. No. 1,190,306; July 11; Gaz. vol. 228; p. 429.
Ore-mill, Swinging. J. Lampert. No. 1,192,535; July 25; Gaz. vol. 228; p. 1311.
Ores by flotation, Concentrating metallic. H. T. Yaryan. No. 1,191,053; July 11; Gaz. vol. 228; p. 694.
Ores, Recovering values from. H. Hirsching. No. 1,190,549; July 11; Gaz. vol. 228; p. 514.
Organic chemical process. C. Ellis. No. 1,191,880; July 18; Gaz. vol. 228; p. 1027.
Organic synthesis, Process for. L. H. Baekeland and A. H. Peter. No. 1,190,845; July 11; Gaz. vol. 228; p. 622.
Outlet-box. J. T. Meleady. No. 1,190,664; July 11; Gaz. vol. 228; p. 558.
Oven. F. Kuhn and F. E. Shallor. No. 1,191,198; July 18; Gaz. vol. 228; p. 787.
Oven heating unit, Electric-. F. Kuhn and F. E. Shallor. No. 1,191,196; July 18; Gaz. vol. 228; p. 786.
Overalls. P. L. De Voist. No. 1,191,288; July 18; Gaz. vol. 228; p. 820.
Overshoe attachment. L. R. Moore. No. 1,189,989; July 4; Gaz. vol. 228; p. 272.
Package for package-sterilized articles, Transportation and display. J. H. and A. W. Way. No. 1,189,322; July 4; Gaz. vol. 228; p. 40.
Package-tie. C. M. Atkinson. No. 1,192,152; July 25; Gaz. vol. 228; p. 1175.
Package-tie. J. Hemey, Sr. No. 1,189,946; July 4; Gaz. vol. 228; p. 257.
Package-tie. P. F. Weston and J. N. Sharpsteen. No. 1,191,049; July 11; Gaz. vol. 228; p. 693.
Packer, Casing-head. J. Bergsten. No. 1,192,157; July 25; Gaz. vol. 228; p. 1176.
Packing and making the same, Engine or machine. G. W. Beldan. No. 1,190,087; July 4; Gaz. vol. 228; p. 304.
Packing-can. G. W. Ruggles. No. 1,189,294; July 4; Gaz. vol. 228; p. 31.
Packing-machine. H. S. Weyant. No. 1,192,250; July 25; Gaz. vol. 228; p. 1212.
Packing-ring. C. R. Bryant. No. 1,191,276; July 18; Gaz. vol. 228; p. 816.
Packing-rings, Making piston. C. C. Allen. No. 1,190,500; July 11; Gaz. vol. 228; p. 497.
Pad; *See*—
Ironing-wax pad.
Pad holder, Writing or manifolding. W. E. Dunning. No. 1,192,399; July 25; Gaz. vol. 228; p. 1265.
Padlock. A. C. Jackson and F. Soley. No. 1,191,004; July 11; Gaz. vol. 228; p. 678.
Pail, Garbage-. J. McGrath and H. W. Banschbach. No. 1,190,436; July 11; Gaz. vol. 228; p. 476.
Pail, Mop-. J. A. White. No. 1,192,142; July 25; Gaz. vol. 228; p. 1171.
Paint and making same. G. L. Davies and W. E. Windsor-Richards. No. 1,192,756; July 25; Gaz. vol. 228; p. 1386.
Paint or varnish remover. C. Ellis. No. 1,189,803; July 4; Gaz. vol. 228; p. 211.
Paint or varnish remover. C. Ellis. No. 1,189,804; July 4; Gaz. vol. 228; p. 211.
Paint-package. H. J. Thayer. No. 1,191,851; July 18; Gaz. vol. 228; p. 1016.
Paints, Making. R. V. Brown. No. 1,192,163; July 25; Gaz. vol. 228; p. 1179.
Pajamas, One-piece. R. B. Swift, Jr. No. 1,190,810; July 11; Gaz. vol. 228; p. 608.
Pan; *See*—
Dust-pan.
Pie-pan.
Pan cover, Evaporating-. L. N. Moody. No. 1,191,982; July 25; Gaz. vol. 228; p. 1116.
Paper and check, Barber's. A. J. Andrews. No. 1,189,899; July 4; Gaz. vol. 228; p. 243.
Paper and making same, Carbon-. B. B. Goldsmith. No. 1,189,939; July 4; Gaz. vol. 228; p. 256.
Paper-board machine, Corrugated-. T. E. Raffel. No. 1,189,737; July 4; Gaz. vol. 228; p. 186.
Paper-bottle-making machine. E. H. Johnson and C. Schiff. No. 1,192,202; July 25; Gaz. vol. 228; p. 1194.
Paper box, Knockdown. F. V. Powell. No. 1,190,797; July 11; Gaz. vol. 228; p. 603.
Paper-box lock, Knockdown-. C. C. and E. C. Ives, Jr. No. 1,189,452; July 4; Gaz. vol. 228; p. 89.
Paper-clip. C. S. Cooke. No. 1,190,265; July 11; Gaz. vol. 228; p. 415.
Paper cutting and shaping machine. J. A. Luther. No. 1,192,440; July 25; Gaz. vol. 228; p. 1278.
Paper-cutting machine. D. T. Wadhams. No. 1,191,750; July 18; Gaz. vol. 228; p. 982.
Paper dishes, &c., Machine for making. P. F. Chaikin. No. 1,191,665; July 18; Gaz. vol. 228; p. 950.
Paper-feed gage. S. J. Kubel. No. 1,189,264; July 4; Gaz. vol. 228; p. 19.
Paper-hanging apparatus, Wall-. F. Huddleston. No. 1,192,637; July 25; Gaz. vol. 228; p. 1346.
Paper holder, Toilet-. J. Dunlop. No. 1,192,398; July 25; Gaz. vol. 228; p. 1265.
Paper holding and cutting attachment. M. N. Mishler. No. 1,190,444; July 11; Gaz. vol. 228; p. 478.
Paper holding and feeding device. H. E. A. Marker. No. 1,190,661; July 11; Gaz. vol. 228; p. 557.
Paper, Machine for making reinforced. T. Scherf. No. 1,192,568; July 25; Gaz. vol. 228; p. 1322.
Paper-making machines, Alarm for. W. Wescott. No. 1,190,053; July 4; Gaz. vol. 228; p. 292.
Paper, Manufacture of. W. H. Sanburn. No. 1,191,912; July 18; Gaz. vol. 228; p. 1039.
Paper receptacle. G. J. Bohlman. No. 1,192,824; July 25; Gaz. vol. 228; p. 1410.
Paper-receptacle-making machine. I. Pitkowsky. No. 1,190,669; July 11; Gaz. vol. 228; p. 560.
Paper receptacles or drinking vessels or cups, Manufacturing. H. A. House. No. 1,189,822; July 4; Gaz. vol. 228; p. 217.
Paper remover, Steam wall-. J. Matzke. No. 1,189,716; July 4; Gaz. vol. 228; p. 180.
Parcel-post case. C. T. Goeway. No. 1,190,148; July 4; Gaz. vol. 228; p. 324.
Paring apparatus. F. H. Bischoff. No. 1,189,782; July 4; Gaz. vol. 228; p. 202.
Pasteurizer. L. S. Ffouts. No. 1,189,478; July 4; Gaz. vol. 228; p. 99.
Pasteurizer. L. S. Ffouts. No. 1,189,479; July 4; Gaz. vol. 228; p. 100.
Path-clearing apparatus. J. F. Webb, Jr. No. 1,190,611; July 11; Gaz. vol. 228; p. 536.
Pavement, Making. W. E. Hassam and H. Parker. No. 1,191,303; July 18; Gaz. vol. 228; p. 825.
Pawl and ratchet mechanism. C. F. Denny. No. 1,192,283; July 25; Gaz. vol. 228; p. 1223.
Paying-machines or the like, Attachment for. H. D. Hoffman. No. 1,192,633; July 25; Gaz. vol. 228; p. 1345.
Pea and bean huller. R. P. Scott. No. 1,192,124; July 25; Gaz. vol. 228; p. 1165.
Peanut-skinning device. C. F. Laganke. No. 1,190,560; July 11; Gaz. vol. 228; p. 518.
Pen and blotter, Combined. E. H. Clark. No. 1,190,983; July 11; Gaz. vol. 228; p. 671.
Pen, Fountain-. F. M. Ashley. No. 1,192,029; July 25; Gaz. vol. 228; p. 1133.
Pen, Fountain-. H. C. Crosby. No. 1,190,867; July 11; Gaz. vol. 228; p. 630.
Pen, Hot-point. R. W. Munger and A. E. McGinley. No. 1,190,447; July 11; Gaz. vol. 228; p. 479.
Pen, Lettering-. W. E. Worth. No. 1,189,331; July 4; Gaz. vol. 228; p. 43.
Pen-making machine. J. F. George. No. 1,189,681; July 4; Gaz. vol. 228; p. 167.
Pen or pencil clip or holder. H. L. and H. R. Tooker, No. 1,189,639; July 4; Gaz. vol. 228; p. 154.
Pen, Ruling-. E. C. Ingraham. No. 1,189,824; July 4; Gaz. vol. 228; p. 218.
Pens, Fountain attachment for. F. L. Fithian. No, 1,192,511; July 25; Gaz. vol. 228; p. 1302.
Pens, Manger for animal-. W. Louden. No. 1,192,080; July 25; Gaz. vol. 228; p. 1150.
Penholder. V. De Vicari. No. 1,192,760; July 25; Gaz. vol. 228; p. 1388.
Perch, Rotary. J. G. Lydecker. No. 1,192,441; July 25; Gaz. vol. 228; p. 1278.
Percolator. B. H. Cook. No. 1,190,381; July 11; Gaz. vol. 228; p. 456.
Perforated bands, Process and apparatus for making. A. Brunn. No. 1,192,747; July 25; Gaz. vol. 228; p. 1383.
Perforating-machine. H. Drewell. No. 1,190,736; July 11; Gaz. vol. 228; p. 583.
Phenols and formaldehyde, Making condensation products from. L. Berend. No. 1,191,390; July 18; Gaz. vol. 228; p. 857.
Phenylpropiolic acid compounds containing arsenic. E. Fischer. No. 1,191,580; July 18; Gaz. vol. 228; p. 921.
Phonograph. C. B. Repp. No. 1,190,673; July 11; Gaz. vol. 228; p. 562.
Phonograph-operating mechanism. H. A. Stolber. No. 1,190,808; July 11; Gaz. vol. 228; p. 607.
Phonograph or talking-machine. P. B. Delany. No. 1,191,675; July 18; Gaz. vol. 228; p. 953.
Phonograph-record cabinet. C. D. Freeman. No. 1,190,748; July 11; Gaz. vol. 228; p. 587.
Phonograph sound-box. H. A. Myers. No. 1,192,337; July 25; Gaz. vol. 228; p. 1242.

Phonograph-stop. M. Adair. No. 1,189,222; July 4; Gaz. vol. 228; p. 3.
Phonograph-stop. M. Adair. No. 1,189,418; July 4; Gaz. vol. 228; p. 76.
Phosphates, Treating. C. G. Memminger. No. 1,192,545; July 25; Gaz. vol. 228; p. 1314.
Photo-engraving. H. J. Van Valkenburg. No. 1,190,487; July 11; Gaz. vol. 228; p. 492.
Photographic-plate holder. J. A. Robertson. No. 1,190,954; July 11; Gaz. vol. 228; p. 662.
Photograph-plates, Box for containing exposed and unexposed. O. Hoel. No. 1,191,597; July 18; Gaz. vol. 228; p. 925.
Photography and color-printing, Color. J. and E. Rheinberg. No. 1,191,034; July 11; Gaz. vol. 228; p. 689.
Photography, Color. P. D. Brewster. No. 1,191,941; July 25; Gaz. vol. 228; p. 1101.
Photoprint-drier. F. W. Potter. No. 1,189,383; July 4; Gaz. vol. 228; p. 63.
Piano action, Grand-. W. F. Cooper. No. 1,190,862; July 11; Gaz. vol. 228; p. 628.
Piano-players, Motor and exhaust appliance for. M. Clark. No. 1,190,379; July 11; Gaz. vol. 228; p. 455.
Piano, Pneumatically-operated. G. K. Hennig. No. 1,190,893; July 11; Gaz. vol. 228; p. 640.
Piano sounding-boards, Machine for shaping ribs on. J. A. Hart. No. 1,189,253; July 4; Gaz. vol. 228; p. 15.
Piano-stringing. W. G. Scheinpflug. No. 1,191,738; July 18; Gaz. vol. 228; p. 977.
Piano-violin. A. Keller. No. 1,190,655; July 11; Gaz. vol. 228; p. 555.
Pianos, Automatic expression control for player-. M. S. Howard. No. 1,190,172; July 4; Gaz. vol. 228; p. 332.
Pianos, Pedal mechanism for grand player-. T. Danquard. No. 1,192,505; July 25; Gaz. vol. 228; p. 1300.
Picker: *See*—
Fruit-picker.
Pickle-grading machine. H. H. and W. J. C. Zenge. No. 1,190,067; July 4; Gaz. vol. 228; p. 297.
Picture-film cleaner, Motion-. E. F. Shue. No. 1,189,633; July 4; Gaz. vol. 228; p. 152.
Picture films, Means for detecting imperfections in motion-. R. T. St. James. No. 1,190,204; July 4; Gaz. vol. 228; p. 346.
Picture films, Restoring blemished moving-. F. W. Hochstetter. No. 1,192,424; July 25; Gaz. vol. 228; p. 1273.
Picture machine, Convertible motion-. L. Mandel. No. 1,191,329; July 18; Gaz. vol. 228; p. 834.
Picture machines, Safety attachment for moving-. L. E. Wyble. No. 1,190,354; July 11; Gaz. vol. 228; p. 446.
Picture-projecting apparatus. R. H. Waller. No. 1,189,758; July 4; Gaz. vol. 228; p. 193.
Picture-projecting machines, Safety device for motion-. N. Power. No. 1,191,224; July 18; Gaz. vol. 228; p. 796.
Picture-puzzle. M. J. McLean. No. 1,189,598; July 4; Gaz. vol. 228; p. 140.
Picture theater, Motion-. P. M. Erickson. No. 1,189,799; July 4; Gaz. vol. 228; p. 209.
Pictures in natural colors by photomechanical means, Production of. B. Boubnoff. No. 1,190,095; July 4; Gaz. vol. 228; p. 306.
Pie-pan. M. T. Crosby. No. 1,191,672; July 18; Gaz. vol. 228; p. 952.
Pin: *See*—
Cotter-pin.
Dental-work crown-pin.
Hat-pin.
Lock-pin.
Rolling-pin.
Safety-pin.
Pin-holder. J. Kelley, Jr. No. 1,189,965; July 4; Gaz. vol. 228; p. 264.
Pin-setting machine, Automatic. E. Hedenskoog. No. 1,190,644; July 11; Gaz. vol. 228; p. 551.
Pin-setting machine, Automatic. E. Hedenskoog. No. 1,190,645; July 11; Gaz. vol. 228; p. 551.
Pin-setting machine, Automatic. E. Hedenskoog. No. 1,190,646; July 11; Gaz. vol. 228; p. 551.
Pin-setting machine, Automatic. E. Hedenskoog. No. 1,190,648; July 11; Gaz. vol. 228; p. 552.
Pin-setting machine, Automatic. E. Hedenskoog. No. 1,190,649; July 11; Gaz. vol. 228; p. 553.
Pin-setting machine, Automatic. E. Hedenskoog. No. 1,190,650; July 11; Gaz. vol. 228; p. 553.
Pins on bowling-alleys, Machine for setting. E. Hedenskoog. No. 1,190,651; July 11; Gaz. vol. 228; p. 553.
Pipe: *See*—
Suction-pipe.
Tobacco-pipe.
Pipe air-check, Smoke-. H. B. Reid. No. 1,189,623; July 4; Gaz. vol. 228; p. 148.
Pipe coupling, Automatic train-. V. S. Durbin. No. 1,189,801; July 4; Gaz. vol. 228; p. 210.
Pipe-coupling mechanism, Railway-car. W. A. Petersen. No. 1,190,580; July 11; Gaz. vol. 228; p. 525.
Pipe-finishing apparatus. J. W. Latshaw. No. 1,192,536; July 25; Gaz. vol. 228; p. 1311.
Pipe-grip, Safety. F. B. Gist. No. 1,190,146; July 4; Gaz. vol. 228; p. 324.
Pipe-joint. H. Dechamps. No. 1,191,575; July 18; Gaz. vol. 228; p. 919.
Pipe-turner. J. F. Keenan. No. 1,191,126; July 11; Gaz. vol. 228; p. 719.
Pipes or the like, Cover for vent-. H. H. Dauphinée. No. 1,191,497; July 18; Gaz. vol. 228; p. 893.
Piston for explosive-engines. J. D. Gilligan. No. 1,191,174; July 18; Gaz. vol. 228; p. 779.
Planing machinery. P. A. Solem. No. 1,190,805; July 11; Gaz. vol. 228; p. 606.
Plant-protecting shield. J. Stockfleth. No. 1,190,605; July 11; Gaz. vol. 228; p. 534.
Planter. J. E. Dean, Jr., and E. Callaway. No. 1,191,875; July 18; Gaz. vol. 228; p. 1025.
Planter, Corn-. J. Tedell. No. 1,192,138; July 25; Gaz. vol. 228; p. 1170.
Planter, Cotton-seed. C. W. Michael and C. E. Mohr. No. 1,189,718; July 4; Gaz. vol. 228; p. 181.
Planter, Potato-. F. J. Gosmeyer. No. 1,189,358; July 4; Gaz. vol. 228; p. 54.
Plaster-board with reinforce-ribs. G. P. Crumbaugh. No. 1,191,765; July 18; Gaz. vol. 228; p. 987.
Plastic composition. H. P. Willis. No. 1,190,615; July 11; Gaz. vol. 228; p. 538.
Plastic composition and making it. H. C. Tazewell. No. 1,190,815; July 11; Gaz. vol. 228; p. 610.
Plastic material, Apparatus for compressing. M. Koller. No. 1,190,912; July 11; Gaz. vol. 228; p. 647.
Plastic material, Forming articles from. W. J. Burns. No. 1,190,510; July 11; Gaz. vol. 228; p. 500.
Plastic materials, Cutting and rolling machine for. G. K. Bainbridge. No. 1,192,156; July 25; Gaz. vol. 228; p. 1176.
Plastic substances from the derivatives of cellulose, Manufacturing. F. Lehmann and J. Stocker. No. 1,191,801; July 18; Gaz. vol. 228; p. 999.
Platen-feed mechanism. A. H. Hawley. No. 1,192,629; July 25; Gaz. vol. 228; p. 1344.
Platen-presses, Safety device for. W. M. Reichart. No. 1,192,118; July 25; Gaz. vol. 228; p. 1163.
Player-pneumatic. C. H. Spencer. No. 1,192,009; July 25; Gaz. vol. 228; p. 1125.
Playing-ball. W. R. Knight. No. 1,192,831; July 25; Gaz. vol. 228; p. 1413.
Pliers. G. W. Grininger. No. 1,189,561; July 4; Gaz. vol. 228; p. 127.
Pliers, Attachment for a pair of. D. Spalding. No. 1,190,031; July 4; Gaz. vol. 228; p. 285.
Pliers, Combination splitting and stripping. S. E. Aaron. (Reissue.) No. 14,169; July 25; Gaz. vol. 228; p. 1414.
Pliers, End-cutting. W. S. Thomson. No. 1,192,021; July 25; Gaz. vol. 228; p. 1130.
Plow. C. A. Carlson. No. 1,192,388; July 25; Gaz. vol. 228; p. 1261.
Plow. J. L. Lamb. No. 1,189,587; July 4; Gaz. vol. 228; p. 136.
Plow. I. A. Manley. No. 1,190,438; July 11; Gaz. vol. 228; p. 476.
Plow. J. Matney. No. 1,192,664; July 25; Gaz. vol. 228; p. 1355.
Plow. J. A. Pitner. No. 1,191,459; July 18; Gaz. vol. 228; p. 880.
Plow, Disk. A. P. McKay. No. 1,189,982; July 4; Gaz. vol. 228; p. 270.
Plow, Engine gang-. E. M. Heylman. No. 1,192,197; July 25; Gaz. vol. 228; p. 1193.
Plow, Engine gang-. W. N. Springer. No. 1,192,700; July 25; Gaz. vol. 228; p. 1307.
Plow, Motor-. O. O. Bowers. No. 1,192,603; July 25; Gaz. vol. 228; p. 1335.
Plow-mounting mechanism. J. A. Erickson. No. 1,189,927; July 4; Gaz. vol. 228; p. 252.
Plow, Root-removing. W. H. Wilkes. No. 1,191,255; July 18; Gaz. vol. 228; p. 808.
Plow, Self-propelled. H. Amiot. No. 1,191,143; July 18; Gaz. vol. 228; p. 768.
Plow-shovel. S. M. Johnston. No. 1,191,793; July 18; Gaz. vol. 228; p. 996.
Plow, Sidehill-. C. A. Baal. No. 1,189,524; July 4; Gaz. vol. 228; p. 115.
Plow, Wheel-. J. Kiel. No. 1,189,365; July 4; Gaz. vol. 228; p. 57.
Plows, Power-lift for. G. A. Knoblock. No. 1,192,074; July 25; Gaz. vol. 228; p. 1148.
Plowing device. F. B. Hull. No. 1,191,185; July 18; Gaz. vol. 228; p. 783.
Plug. C. E. Godley. No. 1,190,750; July 11; Gaz. vol. 228; p. 587.
Plumb or level. D. W. L. Frank. No. 1,190,229; July 4; Gaz. vol. 228; p. 355.
Plumber's link. L. A. Cornelius. No. 1,192,606; July 25; Gaz. vol. 228; p. 1336.
Plural-walled can. W. Kline. No. 1,191,319; July 18; Gaz. vol. 228; p. 831.
Pocket, Garment-. J. C. Brehl. No. 1,191,275; July 18; Gaz. vol. 228; p. 815.
Poison-distributer. D. P. Daugherty. No. 1,190,272; July 11; Gaz. vol. 228; p. 417.
Polish and making same. W. G. Hall. No. 1,189,445; July 4; Gaz. vol. 228; p. 87.
Polygonal helical coils, System for forming. L. Jameton. No. 1,191,514; July 18; Gaz. vol. 228; p. 898.
Pontoon for knockdown rafts. J. H. Maxwell. No. 1,190,569; July 11; Gaz. vol. 228; p. 521.
Pool-table pocket. F. Mashek. No. 1,190,186; July 4; Gaz. vol. 228; p. 339.
Porcelain ware, Machine for forming. E. M. Hewlett. No. 1,191,595; July 18; Gaz. vol. 228; p. 925.
Portable elevator. H. J. Carson. No. 1,189,663; July 4; Gaz. vol. 228; p. 162.
Post: *See*—
Fence-post.

Pot-handle, Detachable. J. M. Jewell. No. 1,189,957; July 4; Gaz. vol. 228; p. 261.
Pothead and series cut-out, Combination. P. F. Williams. No. 1,190,836; July 11; Gaz. vol. 228; p. 618.
Powder-machine attachment. J. A. Earley. No. 1,192,769; July 25; Gaz. vol. 228; p. 1390.
Power-driven machines and means for simultaneously applying a brake, Shifting mechanism for. E. F. Hathaway. No. 1,190,761; July 11; Gaz. vol. 228; p. 591.
Power-presses non-repeating, Attachment for rendering. E. G. Jenner. No. 1,192,525; July 25; Gaz. vol. 228; p. 1307.
Power-transmission mechanism. M. L. Severy. No. 1,192,233; July 25; Gaz. vol. 228; p. 1206.
Power-transmission mechanism, Motor-vehicle. E. M. Logan and C. E. McNaughton. No. 1,189,709; July 4; Gaz. vol. 228; p. 177.
Power-transmitter. E. A. Ford. No. 1,190,139; July 4; Gaz. vol. 228; p. 321.
Power-transmitting means. S. Robert. No. 1,190,323; July 11; Gaz. vol. 228; p. 435.
Power-transmitting mechanism. H. S. Dillon and M. C. Gass. No. 1,191,290; July 18; Gaz. vol. 228; p. 820.
Preserving-jar. J. B. Northrop. No. 1,191,028; July 11; Gaz. vol. 228; p. 687.
Press: *See*—
Baling-press.
Cheese-press.
Cuff and neckband press.
Hay-press.
Hydraulic press.
Necktie-press.
Press. B. Amirant. No. 1,190,501; July 11; Gaz. vol. 228; p. 497.
Presses, Safety device for. G. E. Billeb. No. 1,192,738; July 25; Gaz. vol. 228; p. 1381.
Presser-foot mechanism. J. L. Wheeler. No. 1,189,893; July 4; Gaz. vol. 228; p. 241.
Pressing-iron support. J. Saltzman. No. 1,191,536; July 18; Gaz. vol. 228; p. 906.
Pressure-balancing mechanism, Differential-. G. H. Gibson. No. 1,191,415; July 18; Gaz. vol. 228; p. 865.
Pressure-gage. E. G. Bailey. No. 1,192,599; July 25; Gaz. vol. 228; p. 1333.
Pressure-gage. A. J. Loepsinger. No. 1,189,706; July 4; Gaz. vol. 228; p. 176.
Pressure-gage. F. Schubert. No. 1,192,574; July 25; Gaz. vol. 228; p. 1325.
Printing apparatus, Intaglio-. F. T. Corkett. No. 1,191,949; July 25; Gaz. vol. 228; p. 1104.
Printing device. V. Himmer, Jr. No. 1,191,697; July 18; Gaz. vol. 228; p. 962.
Printing device. A. G. Ogden. No. 1,192,675; July 25; Gaz. vol. 228; p. 1358.
Printing machine, Book-edge-. L. R. Smith. No. 1,189,747; July 4; Gaz. vol. 228; p. 189.
Printing-plates, Making transfer-rolls for producing undersurface or intaglio. W. S. Eaton. No. 1,190,737; July 11; Gaz. vol. 228; p. 583.
Printing-press inking apparatus. J. McClure. No. 1,190,779; July 11; Gaz. vol. 228; p. 597.
Printing-press tripping device. B. D. Stevens and J. R. Blaine. No. 1,192,133; July 25; Gaz. vol. 228; p. 1168.
Printing-presses, Air-cushion control for. B. D. Stevens. No. 1,192,353; July 25; Gaz. vol. 228; p. 1248.
Printing-presses, Color attachment for. E. D. Johnston. No. 1,189,453; July 4; Gaz. vol. 228; p. 89.
Printing-presses, Pedal-controlled throw-off lever for. R. R. Bethel. No. 1,190,710; July 11; Gaz. vol. 228; p. 574.
Printing-presses, Removable tympan-holder for. H. G. Sonnenberg. No. 1,192,578; July 25; Gaz. vol. 228; p. 1326.
Printing rugs. G. Prifold. No. 1,191,824; July 18; Gaz. vol. 228; p. 1006.
Printing rugs. G. Prifold. No. 1,191,825; July 18; Gaz. vol. 228; p. 1007.
Prod-pole. W. P. Bishop. No. 1,189,532; July 4; Gaz. vol. 228; p. 118.
Projectile. P. J. Pearson. No. 1,190,578; July 11; Gaz. vol. 228; p. 525.
Projectile. J. B. Semple. No. 1,191,742; July 18; Gaz. vol. 228; p. 979.
Projectile. A. B. Waring. No. 1,192,586; July 25; Gaz. vol. 228; p. 1329.
Projectile for firearms. F. H. Harrison and A. J. Brown. No. 1,191,178; July 18; Gaz. vol. 228; p. 781.
Projecting apparatus. C. E. Chapman. No. 1,191,761; July 18; Gaz. vol. 228; p. 986.
Propeller, Manually-operated screw-. J. Petersen. No. 1,189,618; July 4; Gaz. vol. 228; p. 146.
Propeller, Self-adjusting. F. W. Stoddard. No. 1,189,749; July 4; Gaz. vol. 228; p. 190.
Propellers, Adjusting device for reversible screw-. C. Sacerdoti. No. 1,190,328; July 11; Gaz. vol. 228; p. 437.
Propellers, Construction of. W. C. Pitter. No. 1,192,111; July 25; Gaz. vol. 228; p. 1160.
Propulsion for vessels and screw-propeller for effecting the same, Method of. J. Hahn. No. 1,190,755; July 11; Gaz. vol. 228; p. 589.
Propulsion, Submarine. D. F. Murphy. No. 1,192,546; July 25; Gaz. vol. 228; p. 1314.
Protective device. E. E. F. Creighton. No. 1,191,571; July 18; Gaz. vol. 228; p. 918.
Protective device. J. J. Frank. No. 1,190,140; July 4; Gaz. vol. 228; p. 321.
Puff-retaining ring. B. R. Van Valkenburg. No. 1,191,748; July 18; Gaz. vol. 228; p. 981.
Pulley, Balanced. C. S. Nyberg. No. 1,189,726; July 4; Gaz. vol. 228; p. 183.
Pulley, Sling-. J. M. Boyd. No. 1,190,347; July 11; Gaz. vol. 228; p. 443.
Pulp-digesters, Removing scale from heating apparatus for. E. Morterud. No. 1,191,451; July 18; Gaz. vol. 228; p. 877.
Pulsator for pulsatory tools. L. C. Bayles. No. 1,191,757; July 18; Gaz. vol. 228; p. 985.
Pulverized-fuel burner. W. S. Quigley. No. 1,191,225; July 18; Gaz. vol. 228; p. 796.
Pulverizer and distributer for proportioning and feeding granulated material. F. C. Holly. No. 1,190,168; July 4; Gaz. vol. 228; p. 331.
Pulverizer, Rock-. C. W. Eccleston and W. B. McPherson. No. 1,190,876; July 11; Gaz. vol. 228; p. 633.
Pulverulent matter as fuel, Utilizing. R. A. Fessenden. No. 1,191,072; July 11; Gaz. vol. 228; p. 701.
Pump. E. J. Feeny. No. 1,192,508; July 25; Gaz. vol. 228; p. 1301.
Pump. J. B. Garber. No. 1,189,932; July 4; Gaz. vol. 228; p. 254.
Pump. W. S. Holdaway. No. 1,191,423; July 18; Gaz. vol. 228; p. 868.
Pump. P. A. Myers. No. 1,191,453; July 18; Gaz. vol. 228; p. 878.
Pump. W. W. Robinson. No. 1,189,293; July 4; Gaz. vol. 228; p. 31.
Pump. L. Wygodsky. No. 1,191,645; July 18; Gaz. vol. 228; p. 943.
Pump, Air-compressor. B. M. Roggenbuck. No. 1,190,463; July 11; Gaz. vol. 228; p. 484.
Pump, Centrifugal. N. B. Waldron. No. 1,189,889; July 4; Gaz. vol. 228; p. 240.
Pump-controlling device. J. L. Osborne. No. 1,190,945; July 11; Gaz. vol. 228; p. 659.
Pump cylinder, Removable deep-well-. F. W. Krogh. No. 1,192,791; July 25; Gaz. vol. 228; p. 1399.
Pump, Diaphragm-. W. C. Carter. No. 1,191,061; July 11; Gaz. vol. 228; p. 697.
Pump, Lubricating-. F. J. Carney. No. 1,192,274; July 25; Gaz. vol. 228; p. 1221.
Pump, Measuring-. C. A. Gehman. No. 1,191,298; July 18; Gaz. vol. 228; p. 824.
Pump, Oil-well. O. Garver and M. Grider. No. 1,190,281; July 11; Gaz. vol. 228; p. 421.
Pump or blower and driver therefor, Impeller. J. T. Wilkin. No. 1,189,766; July 4; Gaz. vol. 228; p. 196.
Pump, Plunger-. D. C. King. No. 1,190,772; July 11; Gaz. vol. 228; p. 595.
Pump, Pneumatic. J. S. Hattery. No. 1,190,546; July 11; Gaz. vol. 228; p. 513.
Pump, Rotary. W. S. Easton. No. 1,192,287; July 25; Gaz. vol. 228; p. 1225.
Pump-screen. F. Davis. No. 1,192,757; July 25; Gaz. vol. 228; p. 1386.
Pump, Tire-. G. I. Hipple. No. 1,191,510; July 18; Gaz. vol. 228; p. 897.
Pump, Tire-. J. L. Nilson. No. 1,191,531; July 18; Gaz. vol. 228; p. 904.
Pumps, Cam device for. G. E. Wilders. No. 1,191,256; July 18; Gaz. vol. 228; p. 808.
Pumps, Double-acting valve for force-. R. W. E. Hayes. No. 1,189,814; July 4; Gaz. vol. 228; p. 214.
Pumps in internal-combustion engines, Controlling device for fluid-. E. A. Rundlöf. No. 1,189,741; July 4; Gaz. vol. 228; p. 187.
Pumps, Lubricating-bearing for centrifugal. L. A. Myers. No. 1,191,452; July 18; Gaz. vol. 228; p. 877.
Pumps, Quantity-stop for dispensing-. C. E. Fairbanks. No. 1,191,882; July 18; Gaz. vol. 228; p. 1028.
Pumps, Trip-valve for oil-well. R. Y. Watson. No. 1,192,587; July 25; Gaz. vol. 228; p. 1329.
Pumps, Vent for well-. W. H. Butcher. No. 1,190,102; July 4; Gaz. vol. 228; p. 309.
Pumping apparatus, Centrifugal. J. P. Nicholas. No. 1,191,337; July 18; Gaz. vol. 228; p. 837.
Pumping device for oil-wells. H. R. Williams. No. 1,192,145; July 25; Gaz. vol. 228; p. 1173.
Pumping-jack. C. A. Gass. No. 1,191,780; July 18; Gaz. vol. 228; p. 993.
Pumping-machine. B. E. and M. L. Cagle. No. 1,190,218; July 4; Gaz. vol. 228; p. 351.
Pumping mechanism, Pneumatic-cleaner. E. J. Feeny. No. 1,192,509; July 25; Gaz. vol. 228; p. 1301.
Punch, Check or ticket. F. Farrow. No. 1,191,680; July 18; Gaz. vol. 228; p. 955.
Punch-holder for heading and upsetting machines. B. T. Noble. No. 1,191,721; July 18; Gaz. vol. 228; p. 971.
Punching-machine. L. J. Bazzoni. No. 1,191,939; July 25; Gaz. vol. 228; p. 1100.
Punching-press safety device. W. H. Sunday. No. 1,191,042; July 11; Gaz. vol. 228; p. 691.
Purse, Safety-. F. W. De Bleux. No. 1,189,924; July 4; Gaz. vol. 228; p. 251.
Puttees, Apparatus for making. C. F. Clark and A. De Coste. No. 1,189,345; July 4; Gaz. vol. 228; p. 49.
Puzzle. S. Craven. No. 1,190,865; July 11; Gaz. vol. 228; p. 629.
Puzzle, Instructive musical. J. H. Moore, Sr. No. 1,191,135; July 11; Gaz. vol. 228; p. 721.
Quench-spark discharger. L. De Forest. No. 1,190,869; July 11; Gaz. vol. 228; p. 631.

Quill-cleaner. J. S. Lanier. No. 1,190,919; July 11; Gaz. vol. 228; p. 650.
Quill-cleaner art. J. S. Lanier. No. 1,190,918; July 11; Gaz. vol. 228; p. 650.
Quilting-frame and curtain-stretcher, Combined. M. J. Young. No. 1,192,486; July 25; Gaz. vol. 228; p. 1294.
Rabble-arm. H. H. Stout. No. 1,191,848; July 18; Gaz. vol. 228; p. 1015.
Rack: *See*—
Animal-rack. Drawer-rack.
Ball-rack. Screen-rack.
Clothes-rack. Shoe-rack.
Clothes-drying rack. Spray and towel-rack.
Drain-rack. Towel-rack.
Rack. J. H. Rigby. No. 1,191,468; July 18; Gaz. vol. 228; p. 883.
Radiant energy, Apparatus for projecting. W. P. Adams. No. 1,190,071; July 4; Gaz. vol. 228; p. 299.
Radiator. G. W. Frazier. No. 1,189,357; July 4; Gaz. vol. 228; p. 54.
Radiator. T. J. Kehoe. No. 1,190,424; July 11; Gaz. vol. 228; p. 471.
Radiator. C. E. Safford. No. 1,190,955; July 11; Gaz. vol. 228; p. 663.
Radiator. C. F. Spery. No. 1,191,359; July 18; Gaz. vol. 228; p. 846.
Radiator. E. K. F. Streichert. No. 1,189,506; July 4; Gaz. vol. 228; p. 109.
Radiator. E. K. F. Streichert. No. 1,189,507; July 4; Gaz. vol. 228; p. 109.
Radiator. I. White. No. 1,189,762; July 4; Gaz. vol. 228; p. 195.
Radiator-bracket. O. J. Groehn and F. L. Alldis. No. 1,189,562; July 4; Gaz. vol. 228; p. 127.
Radiator-casing. W. M. Fulton. No. 1,192,411; July 25; Gaz. vol. 228; p. 1269.
Radiator construction. J. S. Chimera. No. 1,189,540; July 4; Gaz. vol. 228; p. 121.
Radiator foot-rest. A. Miller. No. 1,190,572; July 11; Gaz. vol. 228; p. 522.
Radiator foot-rest. W. Waldlich. No. 1,191,048; July 11; Gaz. vol. 228; p. 693.
Radiators and the like, Automatic draining device for. J. O. Steensland. No. 1,189,306; July 4; Gaz. vol. 228; p. 35.
Radiators, condensers, and the like, Hollow structure for. F. A. Feldkamp. No. 1,191,681; July 18; Gaz. vol. 228; p. 956.
Rail-anchor. J. M. Scott. No. 1,189,299; July 4; Gaz. vol. 228; p. 33.
Rail-anchor and tie-spacer. A. L. Pier. No. 1,192,109; July 25; Gaz. vol. 228; p. 1160.
Rail and tie brace, Combined. W. H. Garrett. No. 1,189,933; July 4; Gaz. vol. 228; p. 254.
Rail antispreading means. S. A. Nelson. No. 1,190,792; July 11; Gaz. vol. 228; p. 602.
Rail building. J. Schanman. No. 1,189,492; July 4; Gaz. vol. 228; p. 104.
Rail-clamp. C. J. Williams, Jr. No. 1,190,835; July 11; Gaz. vol. 228; p. 685.
Rail-fastener. S. A. Nelson. No. 1,191,025; July 11; Gaz. vol. 228; p. 685.
Rail-fastening device. J. F. Russell. No. 1,189,489; July 4; Gaz. vol. 228; p. 103.
Rail-fastening device or clamp. F. Pál. No. 1,190,577; July 11; Gaz. vol. 228; p. 524.
Rail-holding means. E. E. Davenport. No. 1,189,668; July 4; Gaz. vol. 228; p. 163.
Rail-joint. F. L. Anderson and J. W. Horne. No. 1,190,076; July 4; Gaz. vol. 228; p. 301.
Rail-joint. B. G. Braine. No. 1,191,557; July 18; Gaz. vol. 228; p. 913.
Rail-joint. C. K. Demmitt. No. 1,190,126; July 4; Gaz. vol. 228; p. 316.
Rail-joint. I. R. and J. A. Hanson. No. 1,190,403; July 11; Gaz. vol. 228; p. 464.
Rail-joint. M. K. Hart. No. 1,191,784; July 18; Gaz. vol. 228; p. 994.
Rail-joint. C. Joly. No. 1,190,907; July 11; Gaz. vol. 228; p. 646.
Rail-joint. N. W. Leadbetter. No. 1,191,800; July 18; Gaz. vol. 228; p. 999.
Rail-joint. J. T. Marshall. No. 1,189,851; July 4; Gaz. vol. 228; p. 227.
Rail-joint. A. T. Palmer. No. 1,192,103; July 25; Gaz. vol. 228; p. 1158.
Rail-joint. W. H. Paterson. No. 1,191,030; July 11; Gaz. vol. 228; p. 687.
Rail-joint. W. T. Smith. No. 1,192,698; July 25; Gaz. vol. 228; p. 1367.
Rail joint and fastening. J. M. Smith. No. 1,192,008; July 25; Gaz. vol. 228; p. 1125.
Rail-joint chair. W. R. Hedrick and A. C. Throckmorton. No. 1,192,304; July 25; Gaz. vol. 228; p. 1231.
Rail tie and fastener. J. W. C. Haas. No. 1,190,154; July 4; Gaz. vol. 228; p. 326.
Railway-ballast-spreading device. C. J. Baker. No. 1,191,756; July 18; Gaz. vol. 228; p. 984.
Railway block-signaling apparatus, Electrical. B. F. Wooding. No. 1,191,262; July 18; Gaz. vol. 228; p. 810.
Railway block system, Automatic. P. J. Simmen. No. 1,192,235; July 25; Gaz. vol. 228; p. 1207.
Railway-brake apparatus. U. S. Drayer. No. 1,191,953; July 25; Gaz. vol. 228; p. 1105.
Railway cross-tie, Concrete. R. R. Blair. No. 1,192,739; July 25; Gaz. vol. 228; p. 1381.
Railway-crossing. H. E. Burns. No. 1,191,561; July 18; Gaz. vol. 228; p. 914.
Railway-crossing. L. L. Ware. No. 1,191,119; July 11; Gaz. vol. 228; p. 716.
Railway-gate, Automatic. H. Monroe. No. 1,192,669; July 25; Gaz. vol. 228; p. 1356.
Railway-platform, Movable. L. Davidson. No. 1,189,669; July 4; Gaz. vol. 228; p. 164.
Railway-rail brace. N. E. Barnes. No. 1,190,083; July 4; Gaz. vol. 228; p. 303.
Railway-rail joint. W. M. Nichols. No. 1,192,553; July 25; Gaz. vol. 228; p. 1317.
Railway-rails, Apparatus for forming parallel faces on the ends of adjacent elements, such as. F. Stöhr. No. 1,191,361; July 18; Gaz. vol. 228; p. 846.
Railway-rails, Device for holding. H. Hancock. No. 1,192,624; July 25; Gaz. vol. 228; p. 1342.
Railway safe-running device. A. R. Angus. No. 1,189,224; July 4; Gaz. vol. 228; p. 4.
Railway safe-running device. A. R. Angus. No. 1,189,225; July 4; Gaz. vol. 228; p. 5.
Railway safe-running device. A. R. Angus. No. 1,189,226; July 4; Gaz. vol. 228; p. 5.
Railway safe-running device. A. R. Angus. No. 1,191,381; July 18; Gaz. vol. 228; p. 854.
Railway safety-signal system. A. S. Keating. No. 1,192,210; July 25; Gaz. vol. 228; p. 1198.
Railway signaling system. H. A. Wagner. No. 1,190,247; July 4; Gaz. vol. 228; p. 302.
Railway-spike. M. K. Sessler and H. Rosenberg. No. 1,192,125; July 25; Gaz. vol. 228; p. 1165.
Railway stock-guard. A. D. Maddox. No. 1,191,014; July 11; Gaz. vol. 228; p. 682.
Railway-switch. R. S. Betts and P. H. Hamilton. No. 1,192,737; July 25; Gaz. vol. 228; p. 1380.
Railway-switch. R. W. Davis. No. 1,192,758; July 25; Gaz. vol. 228; p. 1387.
Railway-switch frog. J. Johnson. No. 1,191,314; July 18; Gaz. vol. 228; p. 829.
Railway switches and signaling apparatus, Adjustable offset for. B. Sherwood. No. 1,191,039; July 11; Gaz. vol. 228; p. 691.
Railway-tie. N. F. Heinselman. No. 1,190,164; July 4; Gaz. vol. 228; p. 329.
Railway-tie. F. L. Morris. No. 1,189,719; July 4; Gaz. vol. 228; p. 181.
Railway-tie. H. E. Sheldon. No. 1,191,351; July 18; Gaz. vol. 228; p. 843.
Railway-tie. W. D. Trow. No. 1,191,044; July 11; Gaz. vol. 228; p. 692.
Railway-tie covering. J. W. Alexander and T. W. Epling. No. 1,189,652; July 4; Gaz. vol. 228; p. 158.
Railway-trains, Device for preventing collisions between. A. R. Angus. No. 1,190,617; July 11; Gaz. vol. 228; p. 539.
Railway-vehicles, Wheeled support for. J. E. Muhlfeld and H. F. Ball. No. 1,191,136; July 11; Gaz. vol. 228; p. 722.
Railways, Automatic electric block-signaling apparatus for. F. C. Williams. No. 1,190,613; July 11; Gaz. vol. 228; p. 537.
Rake: *See*—
Self-cleaning rake.
Rake. W. Cronk. No. 1,190,734; July 11; Gaz. vol. 228; p. 582.
Rake. J. Ritchie. No. 1,191,911; July 18; Gaz. vol. 228; p. 1039.
Rake. D. W. Whitaker. No. 1,191,378; July 18; Gaz. vol. 228; p. 853.
Rake and hoe, Combined. H. D. Money. No. 1,189,987; July 4; Gaz. vol. 228; p. 271.
Rake-cleaner. R. L. Smith. No. 1,190,962; July 11; Gaz. vol. 228; p. 665.
Ram, Hydraulic. W. W. Taylor. No. 1,192,475; July 25; Gaz. vol. 228; p. 1290.
Rand-turning machine. C. E. Kennedy. No. 1,190,296; July 11; Gaz. vol. 228; p. 426.
Range. G. G. Garey. No. 1,192,295; July 25; Gaz. vol. 228; p. 1228.
Range attachment, Gas-. C. Laberge. No. 1,192,078; July 25; Gaz. vol. 228; p. 1149.
Range-boiler. F. P. Zeigler. No. 1,192,256; July 25; Gaz. vol. 228; p. 1215.
Range, Combined coal and gas. G. W. Clark. No. 1,191,668; July 18; Gaz. vol. 228; p. 951.
Range, Combined gas and coal. J. A. Lansing. No. 1,191,086; July 11; Gaz. vol. 228; p. 705.
Ranges, Oven for combination coal and gas. R. M. Witman. No. 1,191,379; July 18; Gaz. vol. 228; p. 853.
Rat-trap. F. M. Cloud. No. 1,192,275; July 25; Gaz. vol. 228; p. 1221.
Rat-trap. R. A. Wood. No. 1,191,550; July 18; Gaz. vol. 228; p. 911.
Ratchet wrench, Double-. N. M. Menold. No. 1,191,021; July 11; Gaz. vol. 228; p. 684.
Razor. B. Ames. No. 1,192,367; July 25; Gaz. vol. 228; p. 1253.
Razor, Safety pocket-. W. H. Crane. No. 1,192,503; July 25; Gaz. vol. 228; p. 1299.
Receptacle. H. D. Bokop. No. 1,190,713; July 11; Gaz. vol. 228; p. 575.
Receptacle. H. J. J. Janssen and H. Borsari. No. 1,189,694; July 4; Gaz. vol. 228; p. 172.

Receptacle. M. C. Schweinert and H. P. Kraft. No. 1,190,196; July 4; Gaz. vol. 228; p. 343.
Receptacle and bag. J. Way, Jr. No. 1,190,492; July 11; Gaz. vol. 228; p. 494.
Receptacle-closure. C. J. Klein. No. 1,191,192; July 18; Gaz. vol. 228; p. 785.
Receptacle, Collection-. J. Schanman. No. 1,189,493; July 4; Gaz. vol. 228; p. 105.
Receptacle for delivering goods. J. H. Russell. No. 1,190,327; July 11; Gaz. vol. 228; p. 437.
Receptacle for holding gauze or the like. W. E. Cook. No. 1,192,168; July 25; Gaz. vol. 228; p. 1181.
Receptacle-forming machine. F. W. Burpee and E. T. Hoskins. No. 1,192,273; July 25; Gaz. vol. 228; p. 1220.
Receptacle, Metallic. C. H. Draper. No. 1,189,432; July 4; Gaz. vol. 228; p. 82.
Reclining or invalid's chair. M. B. Dodd. No. 1,190,523; July 11; Gaz. vol. 228; p. 505.
Record-card set, Note-. M. J. Philbin. No. 1,189,286; July 4; Gaz. vol. 228; p. 27.
Record-holder. J. W. Hughes. No. 1,191,003; July 11; Gaz. vol. 228; p. 678.
Recorder: *See*—
Coin-recorder. Time-recorder.
Rectifier. Q. A. Brackett. No. 1,192,741; July 25; Gaz. vol. 228; p. 1381.
Reel: *See*—
Fishing-reel. Wire-reel.
Reels, Pawl-and-ratchet mechanism for. A. O. Clain. No. 1,190,631; July 11; Gaz. vol. 228; p. 545.
Reflector, Adjustable. A. Baumgarten. No. 1,191,650; July 18; Gaz. vol. 228; p. 945.
Reflector-shade. R. B. Benjamin. No. 1,189,281; July 4; Gaz. vol. 228; p. 7.
Reflectoscope. C. E. H. Armbruster. No. 1,190,619; July 11; Gaz. vol. 228; p. 540.
Refrigerating apparatus. M. F. Ewen. No. 1,190,225; July 4; Gaz. vol. 228; p. 354.
Refrigerator. M. F. Hudson. No. 1,191,809; July 18; Gaz. vol. 228; p. 827.
Refrigerator-counter bracket. O. M. Wolff. No. 1,192,593; July 25; Gaz. vol. 228; p. 1332.
Refrigerator-pan alarm. E. Petterson. No. 1,191,221; July 18; Gaz. vol. 228; p. 795.
Regenerative furnace, Reversible. A. Reynolds. No. 1,191,033; July 11; Gaz. vol. 228; p. 688.
Register: *See*—
Cash-register.
Register. R. E. Hart. No. 1,192,193; July 25; Gaz. vol. 228; p. 1191.
Registering, recording, and computing system. G. W. Lorimer. No. 1,189,269; July 4; Gaz. vol. 228; p. 21.
Regulator: *See*—
Back-pressure regulator. Feed-water regulator.
Compressor-regulator. Sound-regulator.
Electrical regulator. Speed-regulator.
Exhaust-regulator. Tank-regulator.
Relay. J. Erickson. No. 1,191,167; July 18; Gaz. vol. 228; p. 777.
Relay. W. Kaisling. No. 1,192,323; July 25; Gaz. vol. 228; p. 1237.
Relay. W. E. Rogers. No. 1,190,588; July 11; Gaz. vol. 228; p. 528.
Relay. C. R. Underhill. No. 1,189,314; July 4; Gaz. vol. 228; p. 38.
Relay, Electrical. A. W. Copley. No. 1,189,240; July 4; Gaz. vol. 228; p. 10.
Relay, Electrical. H. G. Webster. No. 1,189,891; July 4; Gaz. vol. 228; p. 240.
Relay, Electromagnetic. A. P. Young and A. H. S. Watson. No. 1,190,066; July 4; Gaz. vol. 228; p. 297.
Resilient wheel. A. F. Batchelder. No. 1,192,731; July 25; Gaz. vol. 228; p. 1378.
Resilient wheel. C. M. G. Delano. No. 1,192,045; July 25; Gaz. vol. 228; p. 1139.
Resilient wheel. J. A. Kolby, L. P. Larsen, and C. P. Nelisen. No. 1,191,901; July 18; Gaz. vol. 228; p. 1035.
Resilient wheel. F. H. L. Kuntze. No. 1,191,977; July 25; Gaz. vol. 228; p. 1114.
Resilient wheel. J. M. Waugh. No. 1,192,139; July 25; Gaz. vol. 228; p. 1170.
Resinous materials, Production of. C. Granel. No. 1,190,889; July 11; Gaz. vol. 228; p. 639.
Resistance-box and the like. A. Frohne. No. 1,189,931; July 4; Gaz. vol. 228; p. 253.
Resistance-controller, Automatic. L. Bradley. No. 1,191,273; July 18; Gaz. vol. 228; p. 814.
Respirator. S. W. Greene. No. 1,192,186; July 25; Gaz. vol. 228; p. 1188.
Retort. C. W. Tozer. No. 1,191,854; July 18; Gaz. vol. 228; p. 1017.
Reversing mechanism. C. H. Norton. No. 1,191,987; July 25; Gaz. vol. 228; p. 1118.
Revolver-holster. J. V. M. Noye. No. 1,191,339; July 18; Gaz. vol. 228; p. 838.
Rheostat, Field-. H. J. Wiegand. No. 1,192,360; July 25; Gaz. vol. 228; p. 1250.
Rifle-sight, Adjustable. O. G. Klugel. No. 1,191,708; July 18; Gaz. vol. 228; p. 966.
Rim clamp, Detachable-. D. E. Agnew. No. 1,191,101; July 11; Gaz. vol. 228; p. 710.
Rim, Demountable. R. A. Eckberg. No. 1,191,577; July 18; Gaz. vol. 228; p. 920.
Rim, Demountable. C. C. Harbridge. No. 1,189,446; July 4; Gaz. vol. 228; p. 87.
Rim, Demountable. J. S. Johnston. No. 1,191,081; July 11; Gaz. vol. 228; p. 704.
Rim, Dismountable. A. J. Glau. No. 1,191,402; July 18; Gaz. vol. 228; p. 861.
Ring: *See*—
Balancing-ring. Packing-ring.
Cinch-ring. Puff-retaining ring.
Crochet-ring.
Ring-handling machine. C. E. Johnson. No. 1,190,553; July 11; Gaz. vol. 228; p. 515.
Rivet-setting machine. A. R. Havener. No. 1,192,628; July 25; Gaz. vol. 228; p. 1343.
Rivets and the like, Mechanism for feeding. A. R. Havener. No. 1,191,180; July 18; Gaz. vol. 228; p. 781.
Riveting, Electric. C. H. Kicklighter. No. 1,189,583; July 4; Gaz. vol. 228; p. 134.
Riveting-machine. E. M. Cobb. No. 1,189,917; July 4; Gaz. vol. 228; p. 249.
Riveting-machine. A. R. Havener. No. 1,189,361; July 4; Gaz. vol. 228; p. 55.
Riveting-machines, Feed mechanism for. F. E. Stanley. No. 1,192,239; July 25; Gaz. vol. 228; p. 1208.
Roach-trap. F. C. Martin. No. 1,192,334; July 25; Gaz. vol. 228; p. 1242.
Road-guide, Automatic. L. E. Small. No. 1,192,131; July 25; Gaz. vol. 228; p. 1167.
Road-indicator. O. E. Joseph. No. 1,191,316; July 18; Gaz. vol. 228; p. 830.
Road-machine. F. E. Arndt. No. 1,190,365; July 11; Gaz. vol. 228; p. 450.
Road material, Machine and process for mixing. W. L. Kerlin. No. 1,189,700; July 4; Gaz. vol. 228; p. 174.
Road-roller. J. H. Henderson. No. 1,190,257; July 4; Gaz. vol. 228; p. 306.
Roadways, Treating. S. E. Finley. No. 1,192,178; July 25; Gaz. vol. 228; p. 1185.
Rock and ore breaker. T. W. Capen. No. 1,191,564; July 18; Gaz. vol. 228; p. 915.
Rock-crusher. F. B. McCabe. No. 1,189,594; July 4; Gaz. vol. 228; p. 138.
Rock-drill. A. L. Engels and J. Walker. No. 1,190,387; July 11; Gaz. vol. 228; p. 458.
Rock-drill. W. A. Smith. No. 1,191,842; July 18; Gaz. vol. 228; p. 1013.
Rocker-fastener. C. F. Hilton. No. 1,192,632; July 25; Gaz. vol. 228; p. 1345.
Rocket apparatus. R. H. Goddard. No. 1,191,299; July 18; Gaz. vol. 228; p. 824.
Rod: *See*—
Cleaning-rod. Switch-rod.
Roll construction. W. Trinks. No. 1,190,689; July 11; Gaz. vol. 228; p. 567.
Roll, Making an antifriction-. C. S. Lockwood. No. 1,189,846; July 4; Gaz. vol. 228; p. 226.
Roll-stripping mechanism. W. Trinks. No. 1,189,640; July 4; Gaz. vol. 228; p. 154.
Roll, Surfacing-. A. E. Chappell. No. 1,191,399; July 18; Gaz. vol. 228; p. 860.
Roller: *See*—
Land-roller. Winding-roller.
Road-roller.
Roller-screen, Detachable. G. Main and J. M. Stansell. No. 1,189,850; July 4; Gaz. vol. 228; p. 227.
Roller-setting device. L. M. Bennett. No. 1,189,528; July 4; Gaz. vol. 228; p. 117.
Rolling-mill. J. E. Fawell. No. 1,192,813; July 25; Gaz. vol. 228; p. 1406.
Rolling-mill. J. E. Fawell. No. 1,192,814; July 25; Gaz. vol. 228; p. 1406.
Rolling-mill. J. E. Fawell. No. 1,192,815; July 25; Gaz. vol. 228; p. 1407.
Rolling-mill coupling. J. E. Montgomery. No. 1,189,609; July 4; Gaz. vol. 228; p. 143.
Rolling-pin. L. H. Schappell. No. 1,192,230; July 25; Gaz. vol. 228; p. 1205.
Rompers or creepers, Baby. T. Bates. No. 1,190,084; July 4; Gaz. vol. 228; p. 303.
Roof-flashing. S. M. Dawson and M. Smith. No. 1,192,279; July 25; Gaz. vol. 228; p. 1222.
Roof material, Machine for punching. P. G. Gardner. No. 1,191,297; July 18; Gaz. vol. 228; p. 823.
Roof-square. W. S. Rodgers. No. 1,190,013; July 4; Gaz. vol. 228; p. 279.
Roofing-machine. A. S. Spiegel. No. 1,192,132; July 25; Gaz. vol. 228; p. 1168.
Roofing-making machine, Asphalt-. D. E. Boismenue and N. J. Wagner. No. 1,192,601; July 25; Gaz. vol. 228; p. 1334.
Roofing, Prepared. H. E. Boardman. No. 1,190,505; July 11; Gaz. vol. 228; p. 498.
Rotary drill. G. Gondos. No. 1,189,560; July 4; Gaz. vol. 228; p. 126.
Rotary drill. H. D. Hampton. No. 1,192,419; July 25; Gaz. vol. 228; p. 1271.
Rotary explosion-engine. E. B. Raymond. No. 1,189,484; July 4; Gaz. vol. 228; p. 102.
Rotary tube-furnace for producing continuously calcium cyanamid. J. H. Lidholm. No. 1,191,804; July 18; Gaz. vol. 228; p. 1000.
Rubber article and producing same, Hollow. N. D. Crawford. No. 1,190,731; July 11; Gaz. vol. 228; p. 581.

Quill-cleaner. J. S. Lanier. No. 1,190,919; July 11; Gaz. vol. 228; p. 650.
Quill-cleaner art. J. S. Lanier. No. 1,190,918; July 11; Gaz. vol. 228; p. 650.
Quilting-frame and curtain-stretcher, Combined. M. J. Young. No. 1,192,486; July 25; Gaz. vol. 228; p. 1294.
Rabble-arm. H. H. Stout. No. 1,191,848; July 18; Gaz. vol. 228; p. 1015.
Rack: *See*—
Animal-rack. Drawer-rack.
Ball-rack. Screen-rack.
Clothes-rack. Shoe-rack.
Clothes-drying rack. Spray and towel-rack.
Drain-rack. Towel-rack.
Rack. J. H. Rigby. No. 1,191,468; July 18; Gaz. vol. 228; p. 883.
Radiant energy, Apparatus for projecting. W. P. Adams. No. 1,190,071; July 4; Gaz. vol. 228; p. 299.
Radiator. G. W. Frazier. No. 1,189,357; July 4; Gaz. vol. 228; p. 54.
Radiator. T. J. Kehoe. No. 1,190,424; July 11; Gaz. vol. 228; p. 471.
Radiator. C. E. Safford. No. 1,190,955; July 11; Gaz. vol. 228; p. 663.
Radiator. C. F. Spery. No. 1,191,359; July 18; Gaz. vol. 228; p. 846.
Radiator. E. K. F. Streichert. No. 1,189,506; July 4; Gaz. vol. 228; p. 109.
Radiator. E. K. F. Streichert. No. 1,189,507; July 4; Gaz. vol. 228; p. 109.
Radiator. I. White. No. 1,189,762; July 4; Gaz. vol. 228; p. 195.
Radiator-bracket. O. J. Groehn and F. L. Alldis. No. 1,189,562; July 4; Gaz. vol. 228; p. 127.
Radiator-casing. W. M. Fulton. No. 1,192,411; July 25; Gaz. vol. 228; p. 1269.
Radiator construction. J. S. Chimera. No. 1,189,540; July 4; Gaz. vol. 228; p. 121.
Radiator foot-rest. A. Miller. No. 1,190,572; July 11; Gaz. vol. 228; p. 522.
Radiator foot-rest. W. Waidlich. No. 1,191,048; July 11; Gaz. vol. 228; p. 693.
Radiators and the like, Automatic draining device for. J. O. Steensland. No. 1,189,306; July 4; Gaz. vol. 228; p. 35.
Radiators, condensers, and the like, Hollow structure for. F. A. Feldkamp. No. 1,191,681; July 18; Gaz. vol. 228; p. 956.
Rail-anchor. J. M. Scott. No. 1,189,299; July 4; Gaz. vol. 228; p. 33.
Rail-anchor and tie-spacer. A. L. Pier. No. 1,192,109; July 25; Gaz. vol. 228; p. 1160.
Rail and tie brace, Combined. W. H. Garrett. No. 1,189,933; July 4; Gaz. vol. 228; p. 254.
Rail antispreading means. S. A. Nelson. No. 1,190,792; July 11; Gaz. vol. 228; p. 602.
Rail building. J. Schanman. No. 1,189,492; July 4; Gaz. vol. 228; p. 104.
Rail-clamp. C. J. Williams, Jr. No. 1,190,835; July 11; Gaz. vol. 228; p. 685.
Rail-fastener. S. A. Nelson. No. 1,191,025; July 11; Gaz. vol. 228; p. 685.
Rail-fastening device. J. F. Russell. No. 1,189,489; July 4; Gaz. vol. 228; p. 103.
Rail-fastening device or clamp. F. Pál. No. 1,190,577; July 11; Gaz. vol. 228; p. 524.
Rail-holding means. E. E. Davenport. No. 1,189,668; July 4; Gaz. vol. 228; p. 163.
Rail-joint. F. L. Anderson and J. W. Horne. No. 1,190,076; July 4; Gaz. vol. 228; p. 801.
Rail-joint. B. G. Braine. No. 1,191,557; July 18; Gaz. vol. 228; p. 913.
Rail-joint. C. K. Demmitt. No. 1,190,126; July 4; Gaz. vol. 228; p. 816.
Rail-joint. I. R. and J. A. Hanson. No. 1,190,403; July 11; Gaz. vol. 228; p. 464.
Rail-joint. M. K. Hart. No. 1,191,784; July 18; Gaz. vol. 228; p. 994.
Rail-joint. C. Joly. No. 1,190,907; July 11; Gaz. vol. 228; p. 646.
Rail-joint. N. W. Leadbetter. No. 1,191,800; July 18; Gaz. vol. 228; p. 999.
Rail-joint. J. T. Marshall. No. 1,189,851; July 4; Gaz. vol. 228; p. 227.
Rail-joint. A. T. Palmer. No. 1,192,103; July 25; Gaz. vol. 228; p. 1158.
Rail-joint. W. H. Paterson. No. 1,191,030; July 11; Gaz. vol. 228; p. 687.
Rail-joint. W. T. Smith. No. 1,192,698; July 25; Gaz. vol. 228; p. 1367.
Rail joint and fastening. J. M. Smith. No. 1,192,008; July 25; Gaz. vol. 228; p. 1125.
Rail-joint chair. W. R. Hedrick and A. C. Throckmorton. No. 1,192,304; July 25; Gaz. vol. 228; p. 1231.
Rail tie and fastener. J. W. C. Haas. No. 1,190,154; July 4; Gaz. vol. 228; p. 326.
Railway-ballast-spreading device. C. J. Baker. No. 1,191,756; July 18; Gaz. vol. 228; p. 984.
Railway block-signaling apparatus, Electrical. B. F. Wooding. No. 1,191,262; July 18; Gaz. vol. 228; p. 810.
Railway block system, Automatic. P. J. Simmen. No. 1,192,235; July 25; Gaz. vol. 228; p. 1207.
Railway-brake apparatus. U. S. Drayer. No. 1,191,953; July 25; Gaz. vol. 228; p. 1105.
Railway cross-tie, Concrete. R. R. Blair. No. 1,192,789; July 25; Gaz. vol. 228; p. 1331.
Railway-crossing. H. E. Burns. No. 1,191,561; July 18; Gaz. vol. 228; p. 914.
Railway-crossing. L. L. Ware. No. 1,191,119; July 11; Gaz. vol. 228; p. 716.
Railway-gate, Automatic. H. Monroe. No. 1,192,669; July 25; Gaz. vol. 228; p. 1356.
Railway-platform, Movable. L. Davidson. No. 1,189,669; July 4; Gaz. vol. 228; p. 164.
Railway-rail brace. N. E. Barnes. No. 1,190,083; July 4; Gaz. vol. 228; p. 303.
Railway-rail joint. W. M. Nichols. No. 1,192,553; July 25; Gaz. vol. 228; p. 1317.
Railway-rails, Apparatus for forming parallel faces on the ends of adjacent elements, such as. F. Stöhr. No. 1,191,361; July 18; Gaz. vol. 228; p. 846.
Railway-rails, Device for holding. H. Hancock. No. 1,192,624; July 25; Gaz. vol. 228; p. 1342.
Railway safe-running device. A. R. Angus. No. 1,189,224; July 4; Gaz. vol. 228; p. 4.
Railway safe-running device. A. R. Angus. No. 1,189,225; July 4; Gaz. vol. 228; p. 5.
Railway safe-running device. A. R. Angus. No. 1,189,226; July 4; Gaz. vol. 228; p. 5.
Railway safe-running device. A. R. Angus. No. 1,191,281; July 18; Gaz. vol. 228; p. 854.
Railway safety-signal system. A. S. Keating. No. 1,192,210; July 25; Gaz. vol. 228; p. 1198.
Railway signaling system. H. A. Wagner. No. 1,190,247; July 4; Gaz. vol. 228; p. 362.
Railway-spike. M. K. Sessler and H. Rosenberg. No. 1,192,125; July 25; Gaz. vol. 228; p. 1165.
Railway stock-guard. A. D. Maddox. No. 1,191,014; July 11; Gaz. vol. 228; p. 682.
Railway-switch. R. S. Betts and P. H. Hamilton. No. 1,192,737; July 25; Gaz. vol. 228; p. 1380.
Railway-switch. R. W. Davis. No. 1,192,758; July 25; Gaz. vol. 228; p. 1387.
Railway-switch frog. J. Johnson. No. 1,191,314; July 18; Gaz. vol. 228; p. 829.
Railway switches and signaling apparatus, Adjustable offset for. B. Sherwood. No. 1,191,039; July 11; Gaz. vol. 228; p. 691.
Railway-tie. N. F. Heinselman. No. 1,190,164; July 4; Gaz. vol. 228; p. 329.
Railway-tie. F. L. Morris. No. 1,189,719; July 4; Gaz. vol. 228; p. 181.
Railway-tie. H. E. Sheldon. No. 1,191,351; July 18; Gaz. vol. 228; p. 843.
Railway-tie. W. D. Trow. No. 1,191,044; July 11; Gaz. vol. 228; p. 692.
Railway-tie covering. J. W. Alexander and T. W. Epling. No. 1,189,652; July 4; Gaz. vol. 228; p. 158.
Railway-trains, Device for preventing collisions between. A. R. Angus. No. 1,190,617; July 11; Gaz. vol. 228; p. 539.
Railway-vehicles, Wheeled support for. J. E. Muhlfeld and H. F. Ball. No. 1,191,136; July 11; Gaz. vol. 228; p. 722.
Railways, Automatic electric block-signaling apparatus for. F. C. Williams. No. 1,190,613; July 11; Gaz. vol. 228; p. 587.
Rake: *See*—
Self-cleaning rake.
Rake. W. Cronk. No. 1,190,734; July 11; Gaz. vol. 228; p. 582.
Rake. J. Ritchie. No. 1,191,911; July 18; Gaz. vol. 228; p. 1039.
Rake. D. W. Whitaker. No. 1,191,378; July 18; Gaz. vol. 228; p. 853.
Rake and hoe, Combined. H. D. Money. No. 1,189,987; July 4; Gaz. vol. 228; p. 271.
Rake-cleaner. R. L. Smith. No. 1,190,962; July 11; Gaz. vol. 228; p. 665.
Ram, Hydraulic. W. W. Taylor. No. 1,192,475; July 25; Gaz. vol. 228; p. 1290.
Rand-turning machine. C. E. Kennedy. No. 1,190,296; July 11; Gaz. vol. 228; p. 426.
Range. G. G. Garey. No. 1,192,295; July 25; Gaz. vol. 228; p. 1228.
Range attachment, Gas. C. Laberge. No. 1,192,078; July 25; Gaz. vol. 228; p. 1149.
Range-boiler. F. P. Zeigler. No. 1,192,256; July 25; Gaz. vol. 228; p. 1215.
Range, Combined coal and gas. G. W. Clark. No. 1,191,668; July 18; Gaz. vol. 228; p. 951.
Range, Combined gas and coal. J. A. Lansing. No. 1,191,086; July 11; Gaz. vol. 228; p. 705.
Ranges, Oven for combination coal and gas. R. M. Witman. No. 1,191,379; July 18; Gaz. vol. 228; p. 853.
Rat-trap. F. M. Cloud. No. 1,192,275; July 25; Gaz. vol. 228; p. 1221.
Rat-trap. R. A. Wood. No. 1,191,550; July 18; Gaz. vol. 228; p. 911.
Ratchet wrench, Double. N. M. Menold. No. 1,191,021; July 11; Gaz. vol. 228; p. 684.
Razor, B. Ames. No. 1,192,367; July 25; Gaz. vol. 228; p. 1253.
Razor, Safety pocket. W. H. Crane. No. 1,192,503; July 25; Gaz. vol. 228; p. 1299.
Receptacle. H. D. Bokop. No. 1,190,718; July 11; Gaz. vol. 228; p. 575.
Receptacle. H. J. J. Janssen and H. Borsari. No. 1,189,694; July 4; Gaz. vol. 228; p. 172.

Receptacle. M. C. Schweinert and H. P. Kraft. No. 1,190,196; July 4; Gaz. vol. 228; p. 343.
Receptacle and bag. J. Way, Jr. No. 1,190,492; July 11; Gaz. vol. 228; p. 494.
Receptacle-closure. C. J. Klein. No. 1,191,192; July 18; Gaz. vol. 228; p. 785.
Receptacle, Collection. J. Schanman. No. 1,189,493; July 4; Gaz. vol. 228; p. 105.
Receptacle for delivering goods. J. H. Russell. No. 1,190,327; July 11; Gaz. vol. 228; p. 437.
Receptacle for holding gauze or the like. W. E. Cook. No. 1,192,168; July 25; Gaz. vol. 228; p. 1181.
Receptacle-forming machine. F. W. Burpee and E. T. Hoskins. No. 1,192,273; July 25; Gaz. vol. 228; p. 1220.
Receptacle, Metallic. C. H. Draper. No. 1,189,432; July 4; Gaz. vol. 228; p. 82.
Reclining or invalid's chair. M. B. Dodd. No. 1,190,528; July 11; Gaz. vol. 228; p. 505.
Record-card set, Note. M. J. Philbin. No. 1,189,286; July 4; Gaz. vol. 228; p. 27.
Record-holder. J. W. Hughes. No. 1,191,003; July 11; Gaz. vol. 228; p. 678.
Recorder: *See*—
Coin-recorder. Time-recorder.
Rectifier. Q. A. Brackett. No. 1,192,741; July 25; Gaz. vol. 228; p. 1381.
Reel: *See*—
Fishing-reel. Wire-reel.
Reels, Pawl-and-ratchet mechanism for. A. O. Clain. No. 1,190,631; July 11; Gaz. vol. 228; p. 545.
Reflector, Adjustable. A. Baumgarten. No. 1,191,650; July 18; Gaz. vol. 228; p. 945.
Reflector-shade. R. B. Benjamin. No. 1,189,231; July 4; Gaz. vol. 228; p. 7.
Reflectoscope. C. E. H. Armbruster. No. 1,190,619; July 11; Gaz. vol. 228; p. 540.
Refrigerating apparatus. M. F. Ewen. No. 1,190,225; July 4; Gaz. vol. 228; p. 354.
Refrigerator. M. F. Hudson. No. 1,191,309; July 18; Gaz. vol. 228; p. 827.
Refrigerator-counter bracket. O. M. Wolff. No. 1,192,593; July 25; Gaz. vol. 228; p. 1332.
Refrigerator-pan alarm. E. Petterson. No. 1,191,221; July 18; Gaz. vol. 228; p. 795.
Regenerative furnace, Reversible. A. Reynolds. No. 1,191,033; July 11; Gaz. vol. 228; p. 688.
Register: *See*—
Cash-register.
Register. R. E. Hart. No. 1,192,193; July 25; Gaz. vol. 228; p. 1191.
Registering, recording, and computing system. G. W. Lorimer. No. 1,189,269; July 4; Gaz. vol. 228; p. 21.
Regulator: *See*—
Back-pressure regulator. Feed-water regulator.
Compressor-regulator. Sound-regulator.
Electrical regulator. Speed-regulator.
Exhaust-regulator. Tank-regulator.
Relay. J. Erickson. No. 1,191,167; July 18; Gaz. vol. 228; p. 777.
Relay. W. Kaisling. No. 1,192,323; July 25; Gaz. vol. 228; p. 1237.
Relay. W. E. Rogers. No. 1,190,588; July 11; Gaz. vol. 228; p. 528.
Relay. C. R. Underhill. No. 1,189,314; July 4; Gaz. vol. 228; p. 38.
Relay, Electrical. A. W. Copley. No. 1,189,240; July 4; Gaz. vol. 228; p. 10.
Relay, Electrical. H. G. Webster. No. 1,189,891; July 4; Gaz. vol. 228; p. 240.
Relay, Electromagnetic. A. P. Young and A. H. S. Watson. No. 1,190,006; July 4; Gaz. vol. 228; p. 297.
Resilient wheel. A. F. Batchelder. No. 1,192,731; July 25; Gaz. vol. 228; p. 1378.
Resilient wheel. C. M. G. Delano. No. 1,192,045; July 25; Gaz. vol. 228; p. 1139.
Resilient wheel. J. A. Kolby, L. P. Larsen, and C. P. Neilsen. No. 1,191,901; July 18; Gaz. vol. 228; p. 1035.
Resilient wheel. F. H. L. Kuntze. No. 1,191,977; July 25; Gaz. vol. 228; p. 1114.
Resilient wheel. J. M. Waugh. No. 1,192,139; July 25; Gaz. vol. 228; p. 1170.
Resinous materials, Production of. C. Granel. No. 1,190,889; July 11; Gaz. vol. 228; p. 639.
Resistance-box and the like. A. Frohne. No. 1,189,931; July 4; Gaz. vol. 228; p. 253.
Resistance-controller. Automatic. L. Bradley. No. 1,191,273; July 18; Gaz. vol. 228; p. 814.
Respirator. S. W. Greene. No. 1,192,186; July 25; Gaz. vol. 228; p. 1188.
Retort. C. W. Tozer. No. 1,191,854; July 18; Gaz. vol. 228; p. 1017.
Reversing mechanism. C. H. Norton. No. 1,191,987; July 25; Gaz. vol. 228; p. 1118.
Revolver-holster. J. V. M. Noye. No. 1,191,339; July 18; Gaz. vol. 228; p. 838.
Rheostat, Field. H. J. Wiegand. No. 1,192,860; July 25; Gaz. vol. 228; p. 1250.
Rifle-sight, Adjustable. O. G. Klugel. No. 1,191,708; July 18; Gaz. vol. 228; p. 966.
Rim clamp, Detachable. D. E. Agnew. No. 1,191,101; July 11; Gaz. vol. 228; p. 710.
Rim, Demountable. R. A. Eckberg. No. 1,191,577; July 18; Gaz. vol. 228; p. 920.
Rim, Demountable. C. C. Harbridge. No. 1,189,446; July 4; Gaz. vol. 228; p. 87.
Rim, Demountable. J. S. Johnston. No. 1,191,081; July 11; Gaz. vol. 228; p. 704.
Rim, Dismountable. A. J. Glau. No. 1,191,402; July 18; Gaz. vol. 228; p. 861.
Ring: *See*—
Balancing-ring. Packing-ring.
Cinch-ring. Puff-retaining ring.
Crochet-ring.
Ring-handling machine. C. E. Johnson. No. 1,190,553; July 11; Gaz. vol. 228; p. 515.
Rivet-setting machine. A. R. Havener. No. 1,192,628; July 25; Gaz. vol. 228; p. 1343.
Rivets and the like, Mechanism for feeding. A. R. Havener. No. 1,191,180; July 18; Gaz. vol. 228; p. 781.
Riveting, Electric. C. H. Kicklighter. No. 1,189,583; July 4; Gaz. vol. 228; p. 134.
Riveting-machine. E. M. Cobb. No. 1,189,917; July 4; Gaz. vol. 228; p. 249.
Riveting-machine. A. R. Havener. No. 1,189,361; July 4; Gaz. vol. 228; p. 55.
Riveting-machines, Feed mechanism for. F. E. Stanley. No. 1,192,239; July 25; Gaz. vol. 228; p. 1208.
Roach-trap. F. C. Martin. No. 1,192,334; July 25; Gaz. vol. 228; p. 1242.
Road-guide, Automatic. L. E. Small. No. 1,192,131; July 25; Gaz. vol. 228; p. 1167.
Road-indicator. O. E. Joseph. No. 1,191,316; July 18; Gaz. vol. 228; p. 830.
Road-machine. F. E. Arndt. No. 1,190,365; July 11; Gaz. vol. 228; p. 450.
Road-material, Machine and process for mixing. W. L. Kerlin. No. 1,189,700; July 4; Gaz. vol. 228; p. 174.
Road-roller. J. H. Henderson. No. 1,190,257; July 4; Gaz. vol. 228; p. 366.
Roadways, Treating. S. E. Finley. No. 1,192,178; July 25; Gaz. vol. 228; p. 1185.
Rock and ore breaker. T. W. Capen. No. 1,191,504; July 18; Gaz. vol. 228; p. 915.
Rock-crusher. F. B. McCabe. No. 1,189,594; July 4; Gaz. vol. 228; p. 138.
Rock-drill. A. L. Engels and J. Walker. No. 1,190,387; July 11; Gaz. vol. 228; p. 458.
Rock-drill. W. A. Smith. No. 1,191,842; July 18; Gaz. vol. 228; p. 1013.
Rocker-fastener. C. F. Hilton. No. 1,192,632; July 25; Gaz. vol. 228; p. 1345.
Rocket apparatus. R. H. Goddard. No. 1,191,299; July 18; Gaz. vol. 228; p. 824.
Rod: *See*—
Cleaning-rod. Switch-rod.
Roll construction. W. Trinks. No. 1,190,689; July 11; Gaz. vol. 228; p. 567.
Roll, Making an antifriction. C. S. Lockwood. No. 1,189,846; July 4; Gaz. vol. 228; p. 226.
Roll-stripping mechanism. W. Trinks. No. 1,189,640; July 4; Gaz. vol. 228; p. 154.
Roll, Surfacing. A. E. Chappell. No. 1,191,399; July 18; Gaz. vol. 228; p. 860.
Roller: *See*—
Land-roller. Winding-roller.
Road-roller.
Roller-screen, Detachable. G. Main and J. M. Stansell. No. 1,189,850; July 4; Gaz. vol. 228; p. 227.
Roller-setting device. L. M. Bennett. No. 1,189,528; July 4; Gaz. vol. 228; p. 117.
Rolling-mill. J. E. Fawell. No. 1,192,813; July 25; Gaz. vol. 228; p. 1406.
Rolling-mill. J. E. Fawell. No. 1,192,814; July 25; Gaz. vol. 228; p. 1406.
Rolling-mill. J. E. Fawell. No. 1,192,815; July 25; Gaz. vol. 228; p. 1407.
Rolling-mill coupling. J. E. Montgomery. No. 1,189,609; July 4; Gaz. vol. 228; p. 143.
Rolling-pin. L. H. Schappell. No. 1,192,230; July 25; Gaz. vol. 228; p. 1205.
Rompers or creepers, Baby. T. Bates. No. 1,190,084; July 4; Gaz. vol. 228; p. 303.
Roof-flashing. S. M. Dawson and M. Smith. No. 1,192,279; July 25; Gaz. vol. 228; p. 1222.
Roof material, Machine for punching. P. G. Gardner. No. 1,191,297; July 18; Gaz. vol. 228; p. 823.
Roof-square. W. S. Rodgers. No. 1,190,018; July 4; Gaz. vol. 228; p. 279.
Roofing-machine. A. S. Spiegel. No. 1,192,132; July 25; Gaz. vol. 228; p. 1168.
Roofing-making machine, Asphalt. D. E. Boismenue and N. J. Wagner. No. 1,192,601; July 25; Gaz. vol. 228; p. 1334.
Roofing, Prepared. H. E. Boardman. No. 1,190,505; July 11; Gaz. vol. 228; p. 498.
Rotary drill. G. Gondos. No. 1,189,560; July 4; Gaz. vol. 228; p. 126.
Rotary drill. H. D. Hampton. No. 1,192,419; July 25; Gaz. vol. 228; p. 1271.
Rotary explosion-engine. E. B. Raymond. No. 1,189,484; July 4; Gaz. vol. 228; p. 102.
Rotary tube-furnace for producing continuously calcium cyanamid. J. H. Lidholm. No. 1,191,804; July 18; Gaz. vol. 228; p. 1000.
Rubber article and producing same, Hollow. N. D. Crawford. No. 1,190,731; July 11; Gaz. vol. 228; p. 581.

Rubber articles, Making vulcanized-. H. G. Blanchard and F. Duesler. No. 1,190,261; July 11; Gaz. vol. 228; p. 414.
Rubber bands, Making. B. B. Goldsmith. No. 1,189,936; July 4; Gaz. vol. 228; p. 255.
Rubber bands, Making. B. B. Goldsmith. No. 1,189,938; July 4; Gaz. vol. 228; p. 255.
Rubber latex, Apparatus for coagulating. S. C. Davidson. No. 1,189,351; July 4; Gaz. vol. 228; p. 51.
Rubber-mixing mill. B. O. Hale. No. 1,189,444; July 4; Gaz. vol. 228; p. 86.
Rubber, Reclaiming. H. R. Murdock. No. 1,189,182; July 4; Gaz. vol. 228; p. 26.
Rubber-waste, Reclaiming. H. R. Murdock. No. 1,189,721; July 4; Gaz. vol. 228; p. 181.
Rug and manufacture of same. S. Kross. No. 1,191,847; July 18; Gaz. vol. 228; p. 1015.
Runway. J. W. Dawson. No. 1,191,407; July 18; Gaz. vol. 228; p. 862.
Sack. A. A. Daugherty. No. 1,190,221; July 4; Gaz. vol. 228; p. 352.
Saddle, Pack-. W. B. Simons. No. 1,190,023; July 4; Gaz. vol. 228; p. 282.
Saddle, Top-roll. E. Dixon. No. 1,189,800; July 4; Gaz. vol. 228; p. 210.
Safe. C. F. Meilink. No. 1,191,331; July 18; Gaz. vol. 228; p. 835.
Safety-deposit box, Automatic. T. Crossley. No. 1,190,634; July 11; Gaz. vol. 228; p. 546.
Safety device. E. L. Gale, Sr. No. 1,190,884; July 11; Gaz. vol. 228; p. 637.
Safety-pin. N. Hunsberger. No. 1,192,522; July 25; Gaz. vol. 228; p. 1306.
Safety-pin and clasp, Combined. C. Fisher. No. 1,192,613; July 25; Gaz. vol. 228; p. 1338.
Safety-signal for balanced hoists. T. G. Fear. No. 1,192,609; July 25; Gaz. vol. 228; p. 1337.
Safety-trap. D. R. Bird. No. 1,192,265; July 25; Gaz. vol. 228; p. 1218.
Safety-wheel. L. Fry. No. 1,190,537; July 11; Gaz. vol. 228; p. 510.
Safety-zone protector. J. Calvert. No. 1,189,344; July 4; Gaz. vol. 228; p. 49.
Salt for use in baths. T. T. Baker. No. 1,189,653; July 4; Gaz. vol. 228; p. 158.
Sand and gravel drier, Portable. C. H. McKenna. No. 1,189,597; July 4; Gaz. vol. 228; p. 140.
Sand-blast. W. P. Mott. No. 1,191,719; July 18; Gaz. vol. 228; p. 970.
Sand-grading method and apparatus. F. W. H. Clay. No. 1,191,568; July 18; Gaz. vol. 228; p. 916.
Sand-handling appliance. W. H. Hofmann. No. 1,189,948; July 4; Gaz. vol. 228; p. 258.
Sanding and polishing apparatus. H. Verwer. No. 1,191,045; July 11; Gaz. vol. 228; p. 692.
Sash-cord fastener. J. D. C. Knapp. No. 1,190,177; July 4; Gaz. vol. 228; p. 336.
Sash-fastener. I. M. Grimm. No. 1,190,230; July 4; Gaz. vol. 228; p. 355.
Sash fastener, Storm-. W. C. J. Kurth. No. 1,192,325; July 25; Gaz. vol. 228; p. 1238.
Sash-holder, Electrically-operated. W. Weiskopf. No. 1,189,760; July 4; Gaz. vol. 228; p. 194.
Sash-holding device, Window-. O. M. Edwards. No. 1,191,103; July 11; Gaz. vol. 228; p. 711.
Sash-lock. C. A. Emme. No. 1,191,502; July 18; Gaz. vol. 228; p. 894.
Sash operator, Window-. O. H. Quernheim and H. Neuhoff, Jr. No. 1,191,923; July 18; Gaz. vol. 228; p. 1043.
Sash-stop, Automatic. C. O. Mikle. No. 1,190,571; July 11; Gaz. vol. 228; p. 522.
Sashes and the like, Fastener for outer. E. J. Fellman. No. 1,189,245; July 4; Gaz. vol. 228; p. 11.
Sashes, Counterbalance for window-. G. J. L. Langford. No. 1,190,428; July 11; Gaz. vol. 228; p. 473.
Sashes, Locking device and push-out stay for steel. H. N. Renton. No. 1,190,672; July 11; Gaz. vol. 228; p. 561.
Sashes, Power-operating device for window-. H. N. Renton. No. 1,190,671; July 11; Gaz. vol. 228; p. 561.
Sashes, Spring suspension device for window-. H. E. Campbell. No. 1,191,662; July 18; Gaz. vol. 228; p. 948.
Saw. C. E. Michener. No. 1,189,603; July 4; Gaz. vol. 228; p. 141.
Saw-set. M. C. Dowling. No. 1,192,285; July 25; Gaz. vol. 228; p. 1225.
Saw-swage. O. Erickson. No. 1,191,411; July 18; Gaz. vol. 228; p. 864.
Sawing and filing machine. A. H. Jones and A. P. Glastre. No. 1,191,705; July 18; Gaz. vol. 228; p. 965.
Sawing-machine. A. L. Edwards. No. 1,190,739; July 11; Gaz. vol. 228; p. 584.
Sawing-machine guard. C. M. Gage. No. 1,191,412; July 18; Gaz. vol. 228; p. 864.
Sawing machine, Magnetic tube-. H. M. Wilson. No. 1,191,549; July 18; Gaz. vol. 228; p. 911.
Scaffold-machine. J. Bertodo. No. 1,190,709; July 11; Gaz. vol. 228; p. 574.
Scaffold, Portable. J. Stratinsky. No. 1,189,884; July 4; Gaz. vol. 228; p. 238.
Scale, Automatic. R. J. Zanone. No. 1,189,416; July 4; Gaz. vol. 228; p. 75.
Scale-beam box. C. P. Zimmerman. No. 1,189,417; July 4; Gaz. vol. 228; p. 76.
Scale, Computing and registering. E. S. Church. No. 1,190,377; July 11; Gaz. vol. 228; p. 455.
Scale-forming apparatus. H. B. Mathewson. No. 1,191,714; July 18; Gaz. vol. 228; p. 968.
Scales, Recording apparatus for. C. S. Morris. No. 1,191,718; July 18; Gaz. vol. 228; p. 969.
Scarf-pin clutch. R. Fischer. No. 1,192,612; July 25; Gaz. vol. 228; p. 1338.
Scissors, Gage attachment for. E. M. Sylvester. No. 1,189,405; July 4; Gaz. vol. 228; p. 71.
Scraper. J. Shostrom. No. 1,192,127; July 25; Gaz. vol. 228; p. 1166.
Screen: *See*—
Pump-screen. Window-screen.
Roller-screen. Window fly-screen.
Screen. A. M. Leoni. No. 1,190,921; July 11; Gaz. vol. 228; p. 651.
Screen. A. Roth, Jr. No. 1,190,676; July 11; Gaz. vol. 228; p. 563.
Screen rack, Wire-. G. B. Parker and F. W. Grover. No. 1,189,380; July 4; Gaz. vol. 228; p. 62.
Screw-threaded parts, Locking means for. M. Jacobs. No. 1,191,427; July 18; Gaz. vol. 228; p. 869.
Screw-threading die. H. G. Carlson. No. 1,190,375; July 11; Gaz. vol. 228; p. 454.
Scrubbing device. C. R. Moss. No. 1,192,093; July 25; Gaz. vol. 228; p. 1155.
Seal. G. H. Taylor. No. 1,192,243; July 25; Gaz. vol. 228; p. 1210.
Seal-fastener for car-doors. W. L. Stanley. No. 1,189,305; July 4; Gaz. vol. 228; p. 35.
Seal for packing-cases. A. J. Paroubek. No. 1,189,617; July 4; Gaz. vol. 228; p. 146.
Seal-lock. W. L. Stanley. No. 1,189,304; July 4; Gaz. vol. 228; p. 35.
Seal, Locking-. J. Jalbert, Sr. No. 1,190,552; July 11; Gaz. vol. 228; p. 515.
Sealing and stamping machine, Envelop. W. H. Hanger. No. 1,192,625; July 25; Gaz. vol. 228; p. 1342.
Sealing cans. W. Cameron. No. 1,192,605; July 25; Gaz. vol. 228; p. 1335.
Sealing-disk. G. F. Knox. No. 1,191,194; July 18; Gaz. vol. 228; p. 785.
Sealing machine, Bottle-stopper-. D. Pantazi. No. 1,190,668; July 11; Gaz. vol. 228; p. 569.
Seat: *See*—
Chair-seat. Spring-seat.
Child's seat. Vehicle-seat.
Seat back-rest. H. W. Weed. No. 1,190,828; July 11; Gaz. vol. 228; p. 615.
Seat-back spring. L. A. Young. No. 1,192,363; July 25; Gaz. vol. 228; p. 1251.
Seed-catcher. G. A. Lipsius. No. 1,191,442; July 18; Gaz. vol. 228; p. 874.
Seed-separator. H. J. Piepgras and B. M. Holt. No. 1,190,950; July 11; Gaz. vol. 228; p. 661.
Seesaw. E. Hardy. No. 1,189,942; July 4; Gaz. vol. 228; p. 256.
Selector-switch. A. H. Dyson. No. 1,192,175; July 25; Gaz. vol. 228; p. 1184.
Self-cleaning rake. L. A. Pease. No. 1,191,610; July 18; Gaz. vol. 228; p. 930.
Self-elevating device. E. C. Kalcy. No. 1,190,421; July 11; Gaz. vol. 228; p. 470.
Semaphore, Signal-. W. P. Neubert. No. 1,191,454; July 18; Gaz. vol. 228; p. 879.
Separating materials mechanically, Apparatus for. A. Latozky. No. 1,190,926; July 11; Gaz. vol. 228; p. 652.
Separating materials of different specific gravity, Apparatus for. C. Schifferle. No. 1,190,466; July 11; Gaz. vol. 228; p. 485.
Separator: *See*—
Battery-separator. Seed-separator.
Mercury-separator.
Separator. H. W. Stock. No. 1,190,037; July 4; Gaz. vol. 228; p. 287.
Sepulchral memorials, Ventilation of. A. W. Graham. No. 1,192,621; July 25; Gaz. vol. 228; p. 1341.
Serum mixture. E. Abderhalden. No. 1,191,551; July 18; Gaz. vol. 228; p. 911.
Set-works gripping device. L. D. Hanford. No. 1,189,563; July 4; Gaz. vol. 228; p. 127.
Settling-tank. C. L. Corne and D. P. J. Burgueres. No. 1,190,863; July 11; Gaz. vol. 228; p. 628.
Sewage-screening apparatus. A. M. Leoni and A. F. Schreiner. No. 1,190,920; July 11; Gaz. vol. 228; p. 650.
Sewage-sludge, Gasification of. N. Testrup, T. Rigby, and G. W. Andrew. No. 1,189,638; July 4; Gaz. vol. 228; p. 153.
Sewed articles, Seam for. J. G. Lewis. No. 1,192,539; July 25; Gaz. vol. 228; p. 1312.
Sewers, Flow-controller for. A. R. Selden. No. 1,190,958; July 11; Gaz. vol. 228; p. 664.
Sewing-machine. F. Chateauneuf. No. 1,190,726; July 11; Gaz. vol. 228; p. 579.
Sewing-machine. B. F. Rhodes. No. 1,191,094; July 11; Gaz. vol. 228; p. 708.
Sewing-machine. F. H. Richards. No. 1,191,232; July 18; Gaz. vol. 228; p. 799.
Sewing-machine. F. H. Richards. No. 1,191,233; July 18; Gaz. vol. 228; p. 799.

Sewing-machine. A. Rontke. No. 1,192,822; July 25; Gaz. vol. 228; p. 1409.
Sewing-machine. A. R. Schoenky. No. 1,192,004; July 25; Gaz. vol. 228; p. 1123.
Sewing-machine. L. E. Topham. No. 1,189,406; July 4; Gaz. vol. 228; p. 72.
Sewing-machine attachment. J. S. Johnston. No. 1,191,079; July 11; Gaz. vol. 228; p. 703.
Sewing-machine attachment. J. Kimmel. No. 1,191,707; July 18; Gaz. vol. 228; p. 965.
Sewing-machine attachment for producing tubes or covering cores. E. L. Tillotson. No. 1,191,204; July 18; Gaz. vol. 228; p. 789.
Sewing-machine attachment-holder. J. D. Karle. No. 1,192,818; July 25; Gaz. vol. 228; p. 1407.
Sewing-machine driving device. H. Corrall. No. 1,192,827; July 25; Gaz. vol. 228; p. 1411.
Sewing-machine feeding mechanism. A. H. De Voe. No. 1,191,068; July 11; Gaz. vol. 228; p. 699.
Sewing-machine feeding mechanism. A. H. De Voe. No. 1,192,608; July 25; Gaz. vol. 228; p. 1336.
Sewing-machine feeding mechanism. G. E. Molyneux. No. 1,192,819; July 25; Gaz. vol. 228; p. 1408.
Sewing-machine feeding mechanism. G. E. Molyneux. No. 1,191,089; July 11; Gaz. vol. 228; p. 706.
Sewing-machine, Lock-stitch. L. E. Topham. No. 1,190,688; July 11; Gaz. vol. 228; p. 567.
Sewing-machine looper, Adjustable. F. H. Richards. No. 1,191,234; July 18; Gaz. vol. 228; p. 800.
Sewing-machine looper mechanism. D. S. Seymour. No. 1,190,959; July 11; Gaz. vol. 228; p. 664.
Sewing-machine needle-guide. P. Sjostrom. No. 1,190,202; July 4; Gaz. vol. 228; p. 345.
Sewing-machine needle-sharpening attachment. B. F. Blagrave. No. 1,191,555; July 18; Gaz. vol. 228; p. 913.
Sewing-machine presser-foot mechanism. P. Sjostrom. No. 1,190,199; July 4; Gaz. vol. 228; p. 344.
Sewing machine, Shoe-. L. E. Topham. No. 1,191,747; July 18; Gaz. vol. 228; p. 980.
Sewing-machine stitch-forming mechanism. J. Whitelaw. No. 1,190,833; July 11; Gaz. vol. 228; p. 617.
Sewing-machine stop mechanism. J. Whitelaw. No. 1,191,635; July 18; Gaz. vol. 228; p. 938.
Sewing-machine take-up guard. A. L. Madison. No. 1,191,015; July 11; Gaz. vol. 228; p. 682.
Sewing-machine thread-bender. P. Sjostrom. No. 1,190,200; July 4; Gaz. vol. 228; p. 344.
Sewing machine, Welt-. A. Eppler. No. 1,189,437; July 4; Gaz. vol. 228; p. 84.
Sewing-machine work-feeding mechanism. P. Sjostrom. No. 1,190,201; July 4; Gaz. vol. 228; p. 345.
Sewing-machines, Bobbin-case latch for. W. Ruckstuhl. No. 1,191,346; July 18; Gaz. vol. 228; p. 841.
Sewing-machines, Manual driving mechanism for. P. Sjostrom. No. 1,190,198; July 4; Gaz. vol. 228; p. 343.
Sewing-machines, Table-bed for. C. H. Mekeel, Jr. No. 1,189,466; July 4; Gaz. vol. 228; p. 94.
Sewing-machines, typewriters, &c., Cabinet for. J. J. Gedeon. No. 1,192,055; July 25; Gaz. vol. 228; p. 1142.
Sextant. P. H. Hammond. No. 1,191,073; July 11; Gaz. vol. 228; p. 701.
Shade adjuster, Window-. F. Leeper. No. 1,190,778; July 11; Gaz. vol. 228; p. 597.
Shade and curtain bracket, Adjustable. W. H. Drake. No. 1,189,671; July 4; Gaz. vol. 228; p. 164.
Shade and curtain fixture. J. L. White. No. 1,189,763; July 4; Gaz. vol. 228; p. 195.
Shade-bracket, Adjustable. C. I. Thomas. No. 1,191,852; July 18; Gaz. vol. 228; p. 1016.
Shade-holders, Resilient attachment for. E. L. White. No. 1,191,633; July 18; Gaz. vol. 228; p. 938.
Shade-holding socket. F. Barr. No. 1,191,058; July 11; Gaz. vol. 228; p. 696.
Shade-mounting. G. Wright. No. 1,192,722; July 25; Gaz. vol. 228; p. 1375.
Shade-pull. A. G. O. Hix. No. 1,192,198; July 25; Gaz. vol. 228; p. 1193.
Shade-roller holder. P. C. Shaffer. No. 1,192,576; July 25; Gaz. vol. 228; p. 1326.
Shadow-pupillometer. G. W. Fitz. No. 1,192,512; July 25; Gaz. vol. 228; p. 1302.
Shaft-coupling. W. E. Miller. No. 1,190,666; July 11; Gaz. vol. 228; p. 559.
Shaft-coupling, Shock-absorbing. L. Williamson. No. 1,189,517; July 4; Gaz. vol. 228; p. 113.
Shaft or spindle and means for securing body-conforming abutments thereto. J. B. Ewart. No. 1,192,404; July 25; Gaz. vol. 228; p. 1266.
Shaper-head. T. W. Elder. No. 1,189,436; July 4; Gaz. vol. 228; p. 83.
Shaping and cutting die. E. I. Jaffe. No. 1,192,066; July 25; Gaz. vol. 228; p. 1146.
Sharpener, Lawn-mower. R. L. Davidson. No. 1,191,160; July 18; Gaz. vol. 228; p. 774.
Sharpener, Scraper-. C. J. Brunsell and J. Johnson. No. 1,190,718; July 11; Gaz. vol. 228; p. 577.
Sharpening gravers or other tools, Holder for. E. A. Graves. No. 1,192,416; July 25; Gaz. vol. 228; p. 1271.
Shaving-lather producer. E. V. D. Rousseau. No. 1,191,737; July 18; Gaz. vol. 228; p. 977.
Shear-gage. W. Tesmer. No. 1,189,810; July 4; Gaz. vol. 228; p. 37.
Shears and similar machines, Safety device for power squaring-. G. W. Rank and P. M. Hoffmann. No. 1,190,670; July 11; Gaz. vol. 228; p. 560.
Shearing and nibbing machine, Spring. L. H. Fry, A. G. Cole, and W. H. Foster. No. 1,192,616; July 25; Gaz. vol. 228; p. 1339.
Sheet-delivery mechanism. R. Hitchcock. No. 1,191,787; July 18; Gaz. vol. 228; p. 995.
Sheet-feeders, Releasing device for the combing-wheels in. G. Spless. No. 1,192,011; July 25; Gaz. vol. 228; p. 1126.
Sheet-metal-edging machine. E. W. Salmon, Jr. No. 1,192,797; July 25; Gaz. vol. 228; p. 1401.
Sheet-metal joint. J. B. Harrington. No. 1,190,759; July 11; Gaz. vol. 228; p. 590.
Sheet-metal tank. J. F. Leslie. No. 1,192,538; July 25; Gaz. vol. 228; p. 1312.
Sheets or plates, Means for uniting. E. W. Salmon, Jr. No. 1,191,835; July 18; Gaz. vol. 228; p. 1010.
Shelf-bracket. I. V. Moody. No. 1,189,988; July 4; Gaz. vol. 228; p. 271.
Shelf for refrigerators and the like. G. Collis. No. 1,189,019; July 4; Gaz. vol. 228; p. 250.
Shell. J. F. McGill. No. 1,191,713; July 18; Gaz. vol. 228; p. 967.
Shells, Manufacture of explosive. H. Austin. No. 1,191,490; July 18; Gaz. vol. 228; p. 890.
Shield, Mobile armored. J. W. Page. No. 1,189,474; July 4; Gaz. vol. 228; p. 97.
Shingle, Composition. J. C. and O. M. Loyer. No. 1,191,932; July 18; Gaz. vol. 228; p. 1047.
Shingling-gage. M. J. Leonard. No. 1,192,651; July 25; Gaz. vol. 228; p. 1351.
Ship. W. Miller. No. 1,190,933; July 11; Gaz. vol. 228; p. 655.
Ships, Towing system for. G. Meyer and R. Koss. No. 1,191,332; July 18; Gaz. vol. 228; p. 835.
Shirt. A. Bernstein. No. 1,190,504; July 11; Gaz. vol. 228; p. 498.
Shirt. S. Y. Goldberg. No. 1,191,584; July 18; Gaz. vol. 228; p. 921.
Shock-absorber. C. S. Bordner. No. 1,191,656; July 18; Gaz. vol. 228; p. 947.
Shock-absorber. H. Dixon. No. 1,189,354; July 4; Gaz. vol. 228; p. 52.
Shock-absorber. H. O. Fletcher. No. 1,189,439; July 4; Gaz. vol. 228; p. 84.
Shock-absorber. O. Gingras. No. 1,189,682; July 4; Gaz. vol. 228; p. 167.
Shock-absorber. R. Hyne. No. 1,189,953; July 4; Gaz. vol. 228; p. 260.
Shock-absorber. W. S. Thompson. No. 1,192,358; July 25; Gaz. vol. 228; p. 1250.
Shock or vibration absorbing apparatus for vibrating bodies or vehicles. A. E. Keith and M. Setter. No. 1,189,829; July 4; Gaz. vol. 228; p. 219.
Shocking-machine. L. A. Williams. No. 1,190,849; July 11; Gaz. vol. 228; p. 444.
Shoe. A. H. Prenzel. No. 1,190,319; July 11; Gaz. vol. 228; p. 434.
Shoe. A. H. Prenzel. No. 1,191,535; July 18; Gaz. vol. 228; p. 905.
Shoe and full-length outer-sole therefor. O. C. Davis. No. 1,191,498; July 18; Gaz. vol. 228; p. 893.
Shoe and outer-sole therefor. O. C. Davis. No. 1,191,500; July 18; Gaz. vol. 228; p. 893.
Shoe attachment. A. L. Lussier. No. 1,192,542; July 25; Gaz. vol. 228; p. 1313.
Shoe-brushing machine. L. Pedersen. No. 1,192,679; July 25; Gaz. vol. 228; p. 1360.
Shoe-cleaner. E. Gerber. No. 1,189,559; July 4; Gaz. vol. 228; p. 126.
Shoe-counters, Machine for opening and softening. W. H. Sargent. No. 1,192,463; July 25; Gaz. vol. 228; p. 1286.
Shoe, Extension-. J. A. Kull, Jr. No. 1,190,915; July 11; Gaz. vol. 228; p. 648.
Shoe-fastener. L. C. Hardebeck. No. 1,191,781; July 18; Gaz. vol. 228; p. 993.
Shoe-fastener. S. G. Nolan. No. 1,189,993; July 4; Gaz. vol. 228; p. 273.
Shoe-fastening device. R. V. Sampson. No. 1,190,014; July 4; Gaz. vol. 228; p. 279.
Shoe-inker. G. H. Otto. No. 1,190,947; July 11; Gaz. vol. 228; p. 660.
Shoe-nailing machines, Adjustable anvil for. M. S. Finch. No. 1,191,682; July 18; Gaz. vol. 228; p. 956.
Shoe-protector. D. E. Winagle. No. 1,189,329; July 4; Gaz. vol. 228; p. 43.
Shoe-rack. J. S. Bunker. No. 1,192,104; July 25; Gaz. vol. 228; p. 1179.
Shoestring-retainer. A. Chadwick. No. 1,190,724; July 11; Gaz. vol. 228; p. 579.
Shoe-upper-marking machine. W. Hamann. No. 1,191,965; July 25; Gaz. vol. 228; p. 1110.
Shoe-uppers, Moistening. O. P. Johnson. No. 1,191,315; July 18; Gaz. vol. 228; p. 830.
Shoe, Water-. A. P. Horn. No. 1,191,788; July 18; Gaz. vol. 228; p. 995.
Shoes and the like, Fastener for. S. Starcovic. No. 1,190,033; July 4; Gaz. vol. 228; p. 285.
Shoes, Making stitch-down. A. H. Prenzel. No. 1,191,534; July 18; Gaz. vol. 228; p. 905.
Shoes, Making turned. O. C. Davis. No. 1,191,499; July 18; Gaz. vol. 228; p. 893.

Shopping-bag. I. Pomper. No. 1,189,480; July 4; Gaz. vol. 228; p. 100.
Shot-firing device, Electric. E. Schietzel. No. 1,191,620; July 18; Gaz. vol. 228; p. 934.
Shot retarding and obturating element. M. W. Marsden. No. 1,192,661; July 25; Gaz. vol. 228; p. 1354.
Shovel: *See*—
Snow-shovel.
Shutter mechanism. R. A. Ilg. No. 1,189,572; July 4; Gaz. vol. 228; p. 131.
Sifter, Ash-. J. W. Hoff. No. 1,190,899; July 11; Gaz. vol. 228; p. 643.
Sifters, Attachment for flour-. M. H. Geartts. No. 1,190,282; July 11; Gaz. vol. 228; p. 421.
Sign-controlling means, Electric-. W. Bach. No. 1,189,419; July 4; Gaz. vol. 228; p. 77.
Sign for advertising purposes and the like. E. Oppenheimer. No. 1,190,574; July 11; Gaz. vol. 228; p. 523.
Sign, Illuminated. L. F. Randolph. No. 1,190,459; July 11; Gaz. vol. 228; p. 483.
Sign, Interchangeable-letter. C. A. McNeal. No. 1,189,461; July 4; Gaz. vol. 228; p. 92.
Sign or electrograph, Illuminated. E. J. Kingsbury. No. 1,190,176; July 4; Gaz. vol. 228; p. 835.
Signal: *See*—
Block-signal. Vehicle safety-signal.
Safety-signal.
Signal device. J. E. Keppel. No. 1,189,455; July 4; Gaz. vol. 228; p. 90.
Signal device, Vehicle. H. S. Johnson. No. 1,191,973; July 25; Gaz. vol. 228; p. 1119.
Signaling apparatus, Automobile. J. L. Cayer. No. 1,191,278; July 18; Gaz. vol. 228; p. 816.
Signaling arrangement, Lamp-. A. H. Midgley. No. 1,191,528; July 18; Gaz. vol. 228; p. 903.
Signaling device. S. A. Beyland. No. 1,189,781; July 4; Gaz. vol. 228; p. 202.
Signaling device. W. W. Dean. No. 1,180,796; July 4; Gaz. vol. 228; p. 208.
Signaling device. S. T. Runyon. No. 1,191,478; July 18; Gaz. vol. 228; p. 886.
Signaling system, Attendant's. F. Brinkmann and F. G. Bell. No. 1,189,657; July 4; Gaz. vol. 228; p. 159.
Signaling system, Electrical. W. J. Rickets. No. 1,192,685; July 25; Gaz. vol. 228; p. 1362.
Signaling system; Selective. J. A. Hiltt. No. 1,192,064; July 25; Gaz. vol. 228; p. 1145.
Signature-gatherer. D. Reiser. No. 1,192,561; July 25; Gaz. vol. 228; p. 1319.
Silico-spiegel, Making. H. Schagrin. No. 1,190,678; July 11; Gaz. vol. 228; p. 563.
Silo. A. T. Bramer. No. 1,190,507; July 11; Gaz. vol. 228; p. 498.
Silo. J. H. West. No. 1,189,325; July 4; Gaz. vol. 228; p. 41.
Silo-door support. E. E. Buster. No. 1,190,720; July 11; Gaz. vol. 228; p. 578.
Silver, Sterling. E. D. Gleason. No. 1,191,890; July 18; Gaz. vol. 228; p. 1030.
Sinker-wheel mechanism. W. T. Barratt. No. 1,191,937; July 25; Gaz. vol. 228; p. 1099.
Sintering-pan cover. F. D. Carney and R. V. McKay. No. 1,190,513; July 11; Gaz. vol. 228; p. 500.
Siphon, Flush-tank. J. S. Katain. No. 1,192,785; July 25; Gaz. vol. 228; p. 1396.
Skidding. Device to prevent. J. G. V. Lang. No. 1,191,602; July 18; Gaz. vol. 228; p. 927.
Skirt-marker. H. Esch, Jr. No. 1,191,168; July 18; Gaz. vol. 228; p. 777.
Skirt-marker. G. J. Hughes. No. 1,190,551; July 11; Gaz. vol. 228; p. 514.
Skiving-machine. L. Johnson. No. 1,191,974; July 25; Gaz. vol. 228; p. 1113.
Skylight construction. W. C. Lyon. No. 1,192,654; July 25; Gaz. vol. 228; p. 1352.
Skylight supporting and adjusting apparatus. H. Arzberger. No. 1,192,026; July 25; Gaz. vol. 228; p. 1133.
Slag launder-lining. W. A. Leddell. No. 1,189,842; July 4; Gaz. vol. 228; p. 224.
Slate from coke, Separating. W. S. Blauvelt and W. T. Harms. No. 1,192,159; July 25; Gaz. vol. 228; p. 1178.
Slaughtering apparatus, Hog-. H. M. Kellogg. No. 1,189,966; July 4; Gaz. vol. 228; p. 264.
Sled. F. W. H. Clay. No. 1,191,281; July 18; Gaz. vol. 228; p. 817.
Sleds, Runner and side rail connector for flexible. O. Pearson. No. 1,192,223; July 25; Gaz. vol. 228; p. 1203.
Sleigh attachment. A. H. Fihn. No. 1,189,678; July 4; Gaz. vol. 228; p. 166.
Sleigh, Extension bob-. H. O. Reisum. No. 1,192,461; July 25; Gaz. vol. 228; p. 1286.
Slicing-machine. T. M. Dansby. No. 1,189,545; July 4; Gaz. vol. 228; p. 123.
Slicing-machine. I. Sather. No. 1,192,350; July 25; Gaz. vol. 228; p. 1247.
Slicing-machine attachment, Meat-. E. M. Stiles. No. 1,192,013; July 25; Gaz. vol. 228; p. 1127.
Slicing-machine attachment, Meat-. E. M. Stiles. No. 1,192,014; July 25; Gaz. vol. 228; p. 1128.
Slide, Playground-. P. S. Medart. No. 1,192,445; July 25; Gaz. vol. 228; p. 1279.
Slot and slug. A. E. Rhodes. No. 1,189,385; July 4; Gaz. vol. 228; p. 64.
Sludge-box gate. J. H. White. No. 1,192,141; July 25; Gaz. vol. 228; p. 1171.
Sluice, valve, tap, and the like. R. C. Sayer. No. 1,192,689; July 25; Gaz. vol. 228; p. 1363.
Smelters, Acid-resisting strainer for. D. M. Cameron. No. 1,190,512; July 11; Gaz. vol. 228; p. 500.
Smoke-consumer. H. S. Ayling. No. 1,190,843; July 11; Gaz. vol. 228; p. 621.
Smoke-consumer. C. W. Johns. No. 1,189,959; July 4; Gaz. vol. 228; p. 202.
Smoothing-iron, Roller. G. Dähne. No. 1,190,521; July 11; Gaz. vol. 228; p. 504.
Smoothing material. J. R. and G. M. Montgomery. No. 1,192,319; July 25; Gaz. vol. 228; p. 1202.
Snap-hook. M. Laramie. No. 1,191,009; July 11; Gaz. vol. 228; p. 680.
Snow and ice from trolley-wires, Device for removing. G. B. Foots. No. 1,192,053; July 25; Gaz. vol. 228; p. 1141.
Snow, Imitation. M. L. Beistle. No. 1,192,372; July 25; Gaz. vol. 228; p. 1255.
Snow-plow, Gutter. W. F. Wheeler. No. 1,190,832; July 11; Gaz. vol. 228; p. 617.
Snow shovel and scraper. G. W. Miller. No. 1,191,810; July 18; Gaz. vol. 228; p. 1002.
Soap-dispensing machine. H. R. Evans. No. 1,191,071; July 11; Gaz. vol. 228; p. 701.
Soldering-machine. A. L. Kronquest and C. Bulot. No. 1,192,646; July 25; Gaz. vol. 228; p. 1349.
Sole-planing machine. W. I. Wentworth. No. 1,190,495; July 11; Gaz. vol. 228; p. 495.
Sole-pressing machine. W. C. Stewart. No. 1,189,402; July 4; Gaz. vol. 228; p. 70.
Sole, Shoe-. A. H. Prenzel. No. 1,190,320; July 11; Gaz. vol. 228; p. 435.
Soles, Machine for cutting block-. G. Quarmby. No. 1,191,344; July 18; Gaz. vol. 228; p. 841.
Soot and scale ejector. E. Williams. No. 1,189,328; July 4; Gaz. vol. 228; p. 43.
Soot-cleaner, Economizer. E. H. Thompson. No. 1,189,752; July 4; Gaz. vol. 228; p. 191.
Sound-box. J. C. English. No. 1,192,289; July 25; Gaz. vol. 228; p. 1226.
Sound-box. J. A. Steurer. No. 1,192,833; July 25; Gaz. vol. 228; p. 1413.
Sound-producer, Electric. M. L. Severy. No. 1,190,382; July 11; Gaz. vol. 228; p. 438.
Sound-producing apparatus, Arrester for. C. Y. Clawson. No. 1,190,112; July 4; Gaz. vol. 228; p. 812.
Sound-record tablets, Manufacturing. J. Sanders. No. 1,192,567; July 25; Gaz. vol. 228; p. 1322.
Sound-recording means. T. A. Edison. No. 1,190,133; July 4; Gaz. vol. 228; p. 319.
Sound-regulator. A. G. Marquis. No. 1,191,808; July 18; Gaz. vol. 228; p. 1001.
Sound-reproducing box. J. A. Steurer. No. 1,192,834; July 25; Gaz. vol. 228; p. 1413.
Sound-reproducing device. W. H. Crawford. No. 1,192,828; July 25; Gaz. vol. 228; p. 1411.
Sound-reproducing machine. P. B. Delany. No. 1,190,249; July 4; Gaz. vol. 228; p. 363.
Spark-advancing mechanism, Automatic. A. A. Kent. No. 1,192,787; July 25; Gaz. vol. 228; p. 1397.
Spark-plug. J. W. Baird. No. 1,190,846; July 11; Gaz. vol. 228; p. 622.
Spark-plug. C. H. Bond. No. 1,192,002; July 25; Gaz. vol. 228; p. 1334.
Spark-plug. L. P. Dixon. No. 1,191,102; July 18; Gaz. vol. 228; p. 775.
Spark-plug. C. H. Duffy. No. 1,190,130; July 4; Gaz. vol. 228; p. 318.
Spark-plug. A. R. Mosler. No. 1,190,938; July 11; Gaz. vol. 228; p. 657.
Spark-plug. A. Schmidt. No. 1,192,003; July 25; Gaz. vol. 228; p. 1123.
Spark-plug and sparking circuit. L. H. Jensen. No. 1,191,429; July 18; Gaz. vol. 228; p. 870.
Spark-plug and vaporizer, Combined. M. Klein and H. N. Porter. No. 1,191,193; July 18; Gaz. vol. 228; p. 785.
Spark-plug, Device for testing the efficiency of a. J. W. Prasky. No. 1,192,453; July 25; Gaz. vol. 228; p. 1282.
Spark-plug for internal-combustion engines. R. D. Loose. No. 1,191,603; July 18; Gaz. vol. 228; p. 927.
Spark-plugs, Spark-intensifier for. G. R. Meissner. No. 1,190,670; July 11; Gaz. vol. 228; p. 522.
Spectacle or eyeglass mounting. F. C. Merry. No. 1,189,986; July 4; Gaz. vol. 228; p. 271.
Speed and distance indicator, Pneumatic. E. Steiger. No. 1,192,702; July 25; Gaz. vol. 228; p. 1368.
Speed-changing device. L. L. Hazen. No. 1,190,764; July 11; Gaz. vol. 228; p. 592.
Speed-controller. J. G. Aceves. No. 1,190,839; July 11; Gaz. vol. 228; p. 619.
Speed-governor. C. E. Woods. No. 1,192,026; July 25; Gaz. vol. 228; p. 1132.
Speed-indicator. F. S. Kirk. No. 1,190,298; July 11; Gaz. vol. 228; p. 427.
Speed mechanism, Variable-. J. Gouldbourn. No. 1,190,285; July 11; Gaz. vol. 228; p. 422.
Speed-reducer. D. H. Hatlee. No. 1,192,627; July 25; Gaz. vol. 228; p. 1343.
Speed-reducing device. J. B. Foote. No. 1,190,278; July 11; Gaz. vol. 228; p. 419.

Speed-regulating device. W. R. Harris. No. 1,192,192; July 25; Gaz. vol. 228; p. 1190.
Speed-regulator, Centrifugal. H. L. White. No. 1,191,254; July 18; Gaz. vol. 228; p. 807.
Speed transmission, Variable-. E. G. Staude. No. 1,192,579; July 25; Gaz. vol. 228; p. 1326.
Speed transmission, Variable-. E. G. Staude. No. 1,192,580; July 25; Gaz. vol. 228; p. 1327.
Speedometer. N. Lee. No. 1,189,843; July 4; Gaz. vol. 228; p. 224.
Spigot. W. L. Hamilton. No. 1,190,402; July 11; Gaz. vol. 228; p. 463.
Spigot. C. E. Robertson. No. 1,190,586; July 11; Gaz. vol. 228; p. 528.
Spindle: *See*—
Flier-spindle.
Spindle-straightening machine. P. K. Barker. No. 1,189,907; July 4; Gaz. vol. 228; p. 246.
Spinning-frames, Device for applying travelers on the rings of. H. Hevey. No. 1,189,448; July 4; Gaz. vol. 228; p. 88.
Spinner-frames, Faller attachment for. W. A. Lush. No. 1,191,712; July 18; Gaz. vol. 228; p. 967.
Spinning or combing machines, Differential feed mechanism for. P. Helmbold and J. Weinbrenner. No. 1,190,407; July 11; Gaz. vol. 228; p. 465.
Splitting-machine. F. Peter. No. 1,189,999; July 4; Gaz. vol. 228; p. 275.
Spoke-clip. J. M. Jones. No. 1,192,429; July 25; Gaz. vol. 228; p. 1274.
Spool-holder. W. E. Raymond. No. 1,191,733; July 18; Gaz. vol. 228; p. 975.
Spool-holder. J. J. Sullivan. No. 1,189,635; July 4; Gaz. vol. 228; p. 152.
Spool-holder. S. M. Wilcox. No. 1,189,415; July 4; Gaz. vol. 228; p. 75.
Spooling-machine. O. L. Owen. No. 1,189,285; July 4; Gaz. vol. 228; p. 27.
Spoon-bowls and the like, Means for shaping. A. Wilzin. No. 1,190,696; July 11; Gaz. vol. 228; p. 509.
Spoon, Double mixing-. J. E. Malloy. No. 1,192,659; July 25; Gaz. vol. 228; p. 1354.
Spoon, fork, or similar article, Child's. S. G. Wilkes. No. 1,189,807; July 4; Gaz. vol. 228; p. 242.
Spot-light, Adjustable. G. H. Johnson, Jr. No. 1,192,527; July 25; Gaz. vol. 228; p. 1308.
Spout. S. M. Kekuewa. No. 1,192,068; July 25; Gaz. vol. 228; p. 1146.
Spray and towel-rack, Needle-. M. J. Flanagan. No. 1,191,778; July 18; Gaz. vol. 228; p. 992.
Spraying or atomizing device. J. Lynn. No. 1,189,593; July 4; Gaz. vol. 228; p. 138.
Spring: *See*—
Bed-spring. Seat-back spring.
Door-spring. Supplemental spring.
Fuse-spring. Vehicle-spring.
Spring-seat. O. A. Youngren. No. 1,189,769; July 4; Gaz. vol. 228; p. 197.
Springs of automobiles and other vehicles, Shackle for the. F. N. Sprague. No. 1,190,960; July 11; Gaz. vol. 228; p. 666.
Sprinkler: *See*—
Disinfectant-sprinkler. Lawn and garden sprinkler.
Lawn-sprinkler.
Sprinkler-head closer. N. V. Holmes and S. H. Arp. No. 1,189,820; July 4; Gaz. vol. 228; p. 216.
Sprinkler system. J. T. O'Brien and W. G. Sargent. No. 1,191,340; July 18; Gaz. vol. 228; p. 839.
Sprinkling device. L. R. Nelson. No. 1,192,551; July 25; Gaz. vol. 228; p. 1316.
Square. J. E. Bittner. No. 1,189,655; July 4; Gaz. vol. 228; p. 159.
Square, Carpenter's. E. Laakkonen. No. 1,191,008; July 11; Gaz. vol. 228; p. 680.
Square, Extension try-. J. H. Needham. No. 1,190,941; July 11; Gaz. vol. 228; p. 658.
Stacker, Hay-. F. C. Doody. No. 1,190,271; July 11; Gaz. vol. 228; p. 417.
Stair construction. A. E. Wells. No. 1,189,414; July 4; Gaz. vol. 228; p. 75.
Stamp. W. J. Pannier, Jr. No. 1,191,820; July 18; Gaz. vol. 228; p. 1005.
Stamping device, Envelop-. W. Kimelman. No. 1,189,831; July 4; Gaz. vol. 228; p. 220.
Stanchion. R. F. Rasmussen. No. 1,191,228; July 18; Gaz. vol. 228; p. 797.
Stand: *See*—
Automobile-stand. Lamp-stand.
Cycle-stand. Match-stand.
Display-stand. Trolley-stand.
Stapler-machine, Multiplehead. E. Craig. No. 1,192,392; July 25; Gaz. vol. 228; p. 1262.
Stapling-machine. J. W. Nasmith. No. 1,192,446; July 25; Gaz. vol. 228; p. 1280.
Starch-treating apparatus. C. A. Tyler. No. 1,190,690; July 11; Gaz. vol. 228; p. 567.
Starches, Apparatus for making modified. A. W. H. Lenders. No. 1,191,324; July 18; Gaz. vol. 228; p. 833.
Starter and transmission mechanism, Combined electrical. E. V. Hartford. No. 1,192,421; July 25; Gaz. vol. 228; p. 1272.
Starter, Impulse-. P. A. Wiley. No. 1,189,826; July 4; Gaz. vol. 228; p. 42.
Starting device, Electrical. J. L. Schureman and C. J. Anderson. No. 1,190,018; July 4; Gaz. vol. 228; p. 281.
Starting device, Safety. R. Hoffman. No. 1,190,900; July 11; Gaz. vol. 228; p. 643.
Station-indicator. A. Gergely. No. 1,189,441; July 4; Gaz. vol. 228; p. 85.
Stave. H. D. Rogers. No. 1,189,388; July 4; Gaz. vol. 228; p. 05.
Stay-bolt. P. Di Maggio. No. 1,191,676; July 18; Gaz. vol. 228; p. 954.
Steam-boiler. C. O. Myhre. No. 1,191,090; July 11; Gaz. vol. 228; p. 706.
Steam, Generating. H. C. Caldwell. No. 1,189,427; July 4; Gaz. vol. 228; p. 80.
Steam-generator. H. C. Caldwell. No. 1,189,426; July 4; Gaz. vol. 228; p. 80.
Steam-generators, Apparatus for the control of. T. Clarkson. No. 1,189,429; July 4; Gaz. vol. 228; p. 81.
Steam-trap. W. W. Morgan, Jr. No. 1,191,022; July 11; Gaz. vol. 228; p. 684.
Steam-traps and other purposes, Gage for. F. E. Pendleton. No. 1,191,342; July 18; Gaz. vol. 228; p. 840.
Steel, Tempering or hardening. J. B. Moore. No. 1,190,937; July 11; Gaz. vol. 228; p. 656.
Steering device, Gyroscopic. O. K. Cazin. No. 1,189,239; July 4; Gaz. vol. 228; p. 9.
Steering-gear. F. A. Robinson. No. 1,191,095; July 11; Gaz. vol. 228; p. 708.
Steering-gear. D. E. Ross. No. 1,192,462; July 25; Gaz. vol. 228; p. 1285.
Steering-gear antirattler. E. I. Jeffries. No. 1,191,792; July 18; Gaz. vol. 228; p. 996.
Steering-wheel. R. H. Scheibert. (Reissue.) No. 14,166; July 18; Gaz. vol. 228; p. 1049.
Steering-wheels and the like, Hand-grip pad for. D. F. Maher. No. 1,190,781; July 11; Gaz. vol. 228; p. 598.
Stenographer's practice device. J. A. Weingart. No. 1,192,025; July 25; Gaz. vol. 228; p. 1132.
Stereoscopic projection apparatus. M. F. Sullivan. No. 1,189,308; July 4; Gaz. vol. 228; p. 36.
Stereotypes, Composition and mold for. J. J. C. Smith. No. 1,191,353; July 18; Gaz. vol. 228; p. 844.
Sterilization of liquids by ultra-violet rays, Apparatus for the. M. von Recklinghausen. No. 1,190,609; July 11; Gaz. vol. 228; p. 535.
Sterilizer. A. L. Simpson. No. 1,191,623; July 18; Gaz. vol. 228; p. 935.
Sterilizing or cooling apparatus, Liquid. E. Otten. No. 1,190,450; July 11; Gaz. vol. 228; p. 480.
Sterilizing water by means of ultra-violet rays, Apparatus for. A. Helbronner. No. 1,191,304; July 18; Gaz. vol. 228; p. 826.
Stitch, Making a. P. W. Shaw. No. 1,189,394; July 4; Gaz. vol. 228; p. 67.
Stitch transferring and uniting device. L. N. D. Williams. No. 1,191,642; July 18; Gaz. vol. 228; p. 942.
Stitching machine, Buttonhole-. F. A. Reece. No. 1,190,583; July 11; Gaz. vol. 228; p. 526.
Stitching-machine table, Wire. J. Pagliarul. No. 1,189,475; July 4; Gaz. vol. 228; p. 98.
Stocking drying and shaping apparatus. E. R. Applin. No. 1,192,151; July 25; Gaz. vol. 228; p. 1175.
Stockings to forms, Device for holding. H. Coulston. No. 1,190,119; July 4; Gaz. vol. 228; p. 314.
Stoker, Automatic. J. R. Fortune. No. 1,192,180; July 25; Gaz. vol. 228; p. 1186.
Stoker, Mechanical. A. G. Elvin. No. 1,190,741; July 11; Gaz. vol. 228; p. 584.
Stone-gatherer. J. J. Berres. No. 1,191,554; July 18; Gaz. vol. 228; p. 912.
Stop mechanism. A. P. Hawn. No. 1,192,779; July 25; Gaz. vol. 228; p. 1394.
Stop mechanism. I. C. Woodward. No. 1,190,616; July 11; Gaz. vol. 228; p. 588.
Stopper: *See*—
Bottle-stopper. Leak-stopper.
Storage automatic rarefier. J. C. Fleming. No. 1,192,614; July 25; Gaz. vol. 228; p. 1338.
Storage-bin, Metallic. J. E. Allsteadt. No. 1,191,141; July 18; Gaz. vol. 228; p. 767.
Stove. J. Henderson. No. 1,189,691; July 4; Gaz. vol. 228; p. 171.
Stove. S. B. Smith. No. 1,189,301; July 4; Gaz. vol. 228; p. 83.
Stove. W. J. Stafford. No. 1,192,701; July 25; Gaz. vol. 228; p. 1368.
Stove and fireless cooker, Combined. C. R. Fountain. No. 1,190,993; July 11; Gaz. vol. 228; p. 675.
Stove and range. L. R. Holloway. No. 1,189,818; July 4; Gaz. vol. 228; p. 216.
Stove and range, Cooking. G. F. Schorling. No. 1,190,468; July 11; Gaz. vol. 228; p. 486.
Stove appliance, Hot-blast-. C. A. Orr. No. 1,192,102; July 25; Gaz. vol. 228; p. 1157.
Stove, Camp-. R. W. Hibbard. No. 1,189,255; July 4; Gaz. vol. 228; p. 16.
Stove, Collapsible. E. M. Hughes. No. 1,192,815; July 25; Gaz. vol. 228; p. 1234.
Stove, Cooking-. A. J. and W. C. Lindemann. No. 1,191,978; July 25; Gaz. vol. 228; p. 1114.
Stove, Electric. F. Kuhn and F. C. Shallor. No. 1,191,197; July 18; Gaz. vol. 228; p. 786.
Stove, Gas-heated. J. E. Kennedy. No. 1,189,699; July 4; Gaz. vol. 228; p. 173.

Stove, Heating-. W. D. Frazer. No. 1,190,396; July 11; Gaz. vol. 228; p. 461.
Stove, Heating-. J. J. Hardin. No. 1,192,190; July 25; Gaz. vol. 228; p. 1190.
Stove, Heating and baking. W. Kincaid and W. A. Clark. No. 1,189,261; July 4; Gaz. vol. 228; p. 18.
Stove, Hot-air. T. W. Miller. No. 1,190,665; July 11; Gaz. vol. 228; p. 558.
Stove, Hot-water. S. V. Reeves. No. 1,190,460; July 11; Gaz. vol. 228; p. 483.
Stoves, Air-heating device for. W. T. Dunning. No. 1,190,873; July 11; Gaz. vol. 228; p. 632.
Stoves, Heating attachment for. W. Spencer. No. 1,190,335; July 11; Gaz. vol. 228; p. 439.
Stovepipe stay or clamp. H. V. Oldham. No. 1,191,988; July 25; Gaz. vol. 228; p. 1118.
Stovepipe-support. A. C. Leslie. No. 1,191,802; July 18; Gaz. vol. 228; p. 909.
Strainer. J. E. Born. No. 1,190,094; July 4; Gaz. vol. 228; p. 306.
Strainer. E. E. Hauer. No. 1,189,566; July 4; Gaz. vol. 228; p. 129.
Strainer. A. M. Pierson. No. 1,191,994; July 25; Gaz. vol. 228; p. 1120.
Strainer, Gasolene-. J. L. Scull. No. 1,191,741; July 18; Gaz. vol. 228; p. 978.
Strainer, Sink-. R. E. Reardon. No. 1,190,322; July 11; Gaz. vol. 228; p. 435.
Strainer, Tea-. M. Loewenstein. No. 1,192,332; July 25; Gaz. vol. 228; p. 1241.
Strap: *See*—
Breast-strap. Wrist-strap.
Street cleaning or washing machine. S. Whinery. No. 1,191,489; July 18; Gaz. vol. 228; p. 890.
Street or station indicator for vehicles. E. R. Crampton. No. 1,190,864; July 11; Gaz. vol. 228; p. 629.
Stretcher. S. E. Mohler. No. 1,189,854; July 4; Gaz. vol. 228; p. 228.
Stringed instruments, Bridge-wire for. H. C. Marx. No. 1,190,929; July 11; Gaz. vol. 228; p. 654.
Strip-serving device. F. S. Anable. No. 1,191,056; July 11; Gaz. vol. 228; p. 695.
Stropper. W. J. Francis. No. 1,189,555; July 4; Gaz. vol. 228; p. 125.
Stropping device. T. L. Parmeter. No. 1,191,455; July 18; Gaz. vol. 228; p. 879.
Structural coupling. W. Louden. No. 1,192,216; July 25; Gaz. vol. 228; p. 1201.
Structural joint. J. Kahn. No. 1,192,207; July 25; Gaz. vol. 228; p. 1196.
Stucco-boards, Machine for making. R. Linkletter and G. W. Muttart. No. 1,190,431; July 11; Gaz. vol. 228; p. 474.
Stump-burner. J. H. Hempy. No. 1,189,568; July 4; Gaz. vol. 228; p. 129.
Stump-reducing process and apparatus. A. T. Ratliff. No. 1,190,006; July 4; Gaz. vol. 228; p. 277.
Submarine panoramic exhibition apparatus. W. E. Winston. No. 1,191,259; July 18; Gaz. vol. 228; p. 810.
Submarine-salvage apparatus. B. J. Hastings. No. 1,191,509; July 18; Gaz. vol. 228; p. 896.
Suction apparatus. M. Rosenthal. No. 1,191,237; July 18; Gaz. vol. 228; p. 801.
Suction-cleaner. J. B. Kirby. No. 1,192,830; July 25; Gaz. vol. 228; p. 1412.
Suction-pipe. R. J. Stockton. No. 1,191,360; July 18; Gaz. vol. 228; p. 846.
Suction-roll, Revolving. P. Richard. No. 1,191,735; July 18; Gaz. vol. 228; p. 977.
Sugar-dispensing device. R. R. Kennedy. No. 1,191,436; July 18; Gaz. vol. 228; p. 872.
Sugar-juice, Process and apparatus for the evaporation of. L. Naudet. No. 1,190,317; July 11; Gaz. vol. 228; p. 434.
Superheater, Locomotive-. J. Primrose. No. 1,189,287; July 4; Gaz. vol. 228; p. 27.
Superheater, Steam-. J. E. Weeks. No. 1,190,493; July 11; Gaz. vol. 228; p. 494.
Superheaters, Means for arresting leaks in steam-. L. S. Watres. No. 1,189,643; July 4; Gaz. vol. 228; p. 155.
Supplemental spring. B. A. Elliott. No. 1,190,527; July 11; Gaz. vol. 228; p. 506.
Support. R. Anderson. No. 1,190,502; July 11; Gaz. vol. 228; p. 497.
Support. J. C. Pewther. No. 1,189,476; July 4; Gaz. vol. 228; p. 98.
Surfacing-machine. C. L. Mattison. No. 1,191,981; July 25; Gaz. vol. 228; p. 1115.
Surgical instrument. H. K. Finley. No. 1,191,683; July 18; Gaz. vol. 228; p. 957.
Surgical instruments, Temperature-measuring device for. L. D. Bliss. No. 1,190,978; July 11; Gaz. vol. 228; p. 669.
Surgical package and indicating sterilization thereof. C. T. Bailey. No. 1,191,572; July 18; Gaz. vol. 228; p. 918.
Surveying instrument. E. W. Arms. No. 1,191,936; July 25; Gaz. vol. 228; p. 1099.
Swimmer's device, Attachable. F. Leitner. No. 1,192,650; July 25; Gaz. vol. 228; p. 1350.
Swing. J. C. M. Shaw. No. 1,189,393; July 4; Gaz. vol. 228; p. 66.
Swing, Porch-. R. C. Cashner. No. 1,189,538; July 4; Gaz. vol. 228; p. 120.
Swing, Porch-. T. M. Freeble and C. Schuster. No. 1,192,046; July 25; Gaz. vol. 228; p. 1139.
Switch: *See*—
Breakswitch. Selector-switch.
Electric switch. Telephone-switch.
Electrical switch. Thermostatic switch.
Oil-switch. Time-switch.
Railway-switch. Trolley-switch.
Switch. V. G. Apple. No. 1,189,900; July 4; Gaz. vol. 228; p. 243.
Switch. J. T. Beechlyn. No. 1,192,732; July 25; Gaz. vol. 228; p. 1379.
Switch. J. R. Byrne. No. 1,190,103; July 4; Gaz. vol. 228; p. 309.
Switch. M. Guett. No. 1,189,685; July 4; Gaz. vol. 228; p. 169.
Switch indicator, Electric-. G. B. Thomas. No. 1,190,041; July 4; Gaz. vol. 228; p. 288.
Switch-lock, Combination. J. H. Jeffries. No. 1,189,956; July 4; Gaz. vol. 228; p. 261.
Switch-lock, Permutation. E. C. Teachout and E. L. Harrison. No. 1,190,685; July 11; Gaz. vol. 228; p. 566.
Switch mechanism, Electric-. B. S. Putts. No. 1,192,346; July 25; Gaz. vol. 228; p. 1245.
Switch-operating device, Automatic. F. Bayless. No. 1,192,263; July 25; Gaz. vol. 228; p. 1218.
Switch-operating mechanism. W. J. Price and J. M. Craig. No. 1,189,867; July 4; Gaz. vol. 228; p. 232.
Switch-rod, Insulated. F. B. Bradley. No. 1,191,149; July 18; Gaz. vol. 228; p. 770.
Switch-throw. H. Hughes, A. Ferguson, and H. L. Lowe. No. 1,189,571; July 4; Gaz. vol. 228; p. 131.
Switching mechanism. D. D. Gordon. No. 1,190,888; July 11; Gaz. vol. 228; p. 638.
Swivel. V. York. No. 1,190,209; July 4; Gaz. vol. 228; p. 348.
Synchronizing apparatus. E. E. Norton. No. 1,190,943; July 11; Gaz. vol. 228; p. 658.
Synchronizing rotary devices, Means for. G. M. Yorke and G. R. Benjamin. No. 1,191,933; July 18; Gaz. vol. 228; p. 1047.
Syringe, Fountain-. J. B. A. La Jeunesse. No. 1,189,586; July 4; Gaz. vol. 228; p. 135.
Table: *See*—
Adjustable table. Glass-cutting table.
Dining-table. Ironing-board table.
Extension-table. Operating-table.
Folding table. Stitching-machine table.
Table. G. S. Clark. No. 1,190,984; July 11; Gaz. vol. 228; p. 671.
Table and cabinet, Combined. O. F. Hornschuch. No. 1,191,307; July 18; Gaz. vol. 228; p. 827.
Table-forwarding mechanism. W. M. and P. D. Roberts. No. 1,189,871; July 4; Gaz. vol. 228; p. 234.
Tables, Drop-leg for extension-. E. B. Jones. No. 1,189,454; July 4; Gaz. vol. 228; p. 90.
Tack, Spiral thumb-. A. Miley. No. 1,189,604; July 4; Gaz. vol. 228; p. 142.
Tag, Ear-. F. X. Lenk. No. 1,192,792; July 25; Gaz. vol. 228; p. 1399.
Tag for price-marking silk goods, Clip-. A. T. Van Alstyn. No. 1,190,821; July 11; Gaz. vol. 228; p. 612.
Tail-holder for cattle. R. W. Corbin. No. 1,192,390; July 25; Gaz. vol. 228; p. 1262.
Talking-machine. P. B. Delany. No. 1,190,635; July 11; Gaz. vol. 228; p. 547.
Talking-machine recorder and reproducer. P. B. Delany. No. 1,190,636; July 11; Gaz. vol. 228; p. 547.
Talking-machine, Sound-box. A. D. Jones. No. 1,192,836; July 25; Gaz. vol. 228; p. 1414.
Talking-machines and the like, Tone-arm for. O. J. Clair. No. 1,190,728; July 11; Gaz. vol. 228; p. 580.
Talking-machines, Construction of. P. B. Delany. No. 1,191,674; July 18; Gaz. vol. 228; p. 953.
Tank: *See*—
Automobile-tank. Gasolene-storage tank.
Flush-tank. Settling-tank.
Flushing-tank. Sheet-metal tank.
Tank. J. S. Gantz. No. 1,192,294; July 25; Gaz. vol. 228; p. 1227.
Tank. L. K. Warner. No. 1,191,629; July 18; Gaz. vol. 228; p. 937.
Tank construction. H. C. Wiedeman. No. 1,191,547; July 18; Gaz. vol. 228; p. 910.
Tank-filler. R. P. Stevens. No. 1,192,134; July 25; Gaz. vol. 228; p. 1169.
Tank-lock cover. G. G. Dyer. No. 1,192,767; July 25; Gaz. vol. 228; p. 1389.
Tank regulator, Sizing-. W. A. Niviing. No. 1,191,216; July 18; Gaz. vol. 228; p. 793.
Tanning. O. Schmidt. No. 1,191,480; July 18; Gaz. vol. 228; p. 887.
Tanning of hides and skins. E. W. Merry. No. 1,191,527; July 18; Gaz. vol. 228; p. 903.
Tap and reamer, Combined. W. C. Beindorf. No. 1,190,707; July 11; Gaz. vol. 228; p. 573.
Tap, Collapsible. J. P. Lavigne. No. 1,190,561; July 11; Gaz. vol. 228; p. 518.
Tape-sections, Attachment for connecting. B. F. Orewiler. No. 1,191,723; July 18; Gaz. vol. 228; p. 972.
Target. T. J. Sylvester and J. B. Felicetti. No. 1,191,849; July 18; Gaz. vol. 228; p. 1015.

Target, Recording-. S. A. M. Rose. No. 1,189,628; July 4; Gaz. vol. 228; p. 150.
Tea, Packaging and preserving. W. G. Volkmann. No. 1,190,691; July 11; Gaz. vol. 228; p. 568.
Teeth, Mold for making artificial. G. H. Whiteley, Jr. No. 1,191,637; July 18; Gaz. vol. 228; p. 939.
Telegraph-key. R. M. Allen. No. 1,190,259; July 11; Gaz. vol. 228; p. 413.
Telegraph-key. W. A. Boyd. No. 1,190,625; July 11; Gaz. vol. 228; p. 542.
Telegraph-key. W. A. Boyd. No. 1,192,270; July 25; Gaz. vol. 228; p. 1220.
Telegraph system, Duplex. W. M. Bruce, Jr. No. 1,189,236; July 4; Gaz. vol. 228; p. 9.
Telegraph transmitter, Wireless-. A. Shaw. No. 1,192,126; July 25; Gaz. vol. 228; p. 1166.
Telegraphic sending-machine. P. Dinger. No. 1,189,546; July 4; Gaz. vol. 228; p. 123.
Telegraphy or telephony, Submarine. W. Hahnemann. No. 1,190,156; July 4; Gaz. vol. 228; p. 327.
Telegraphy, Transmitting means for wireless. C. M. Agner. No. 1,190,973; July 11; Gaz. vol. 228; p. 668.
Telegraphy, Wireless. F. G. Simpson. No. 1,189,881; July 4; Gaz. vol. 228; p. 237.
Telemeter, Horizontal. O. Eppenstein. No. 1,191,579; July 18; Gaz. vol. 228; p. 920.
Telephone and telegraph pole. W. McFadden. No. 1,189,596; July 4; Gaz. vol. 228; p. 139.
Telephone attachment. E. Sanders. No. 1,189,490; July 4; Gaz. vol. 228; p. 104.
Telephone-circuit. A. E. Beachum. No. 1,190,086; July 4; Gaz. vol. 228; p. 304.
Telephone-exchange system. A. E. Lundell. No. 1,189,458; July 4; Gaz. vol. 228; p. 91.
Telephone-exchange system. J. L. Wright. No. 1,191,265; July 18; Gaz. vol. 228; p. 812.
Telephone installation, Inductive. H. von Kramer. No. 1,189,317; July 4; Gaz. vol. 228; p. 39.
Telephone intercommunicating and supervisory system. T. C. Martin. No. 1,191,210; July 18; Gaz. vol. 228; p. 791.
Telephone-mouthpiece attachment. J. A. Hall. No. 1,191,507; July 18; Gaz. vol. 228; p. 896.
Telephone-receiver. W. W. Henry. No. 1,190,548; July 11; Gaz. vol. 228; p. 513.
Telephone-repeater. A. H. Olsson and H. B. M. Pleijel. No. 1,189,728; July 4; Gaz. vol. 228; p. 183.
Telephone-switch, Automatic. A. E. Keith. No. 1,189,364; July 4; Gaz. vol. 228; p. 56.
Telephone system. G. Babcock. No. 1,189,525; July 4; Gaz. vol. 228; p. 116.
Telephone system. E. Land. No. 1,189,836; July 4; Gaz. vol. 228; p. 222.
Telephone system. F. M. Slough. No. 1,192,007; July 25; Gaz. vol. 228; p. 1125.
Telephone system, Automatic. T. G. Martin. No. 1,190,185; July 4; Gaz. vol. 228; p. 339.
Telephone-transmission system wherein reinforcing-repeaters are employed. A. S. J. Van Kesteren. No. 1,189,411; July 4; Gaz. vol. 228; p. 74.
Telephone-transmitter. N. Tannaka. No. 1,190,813; July 11; Gaz. vol. 228; p. 609.
Telephone trunking and supervisory system. W. L. Campbell. No. 1,191,017; July 18; Gaz. vol. 228; p. 1041.
Temperatures, Articles subjected to high external. J. C. Henderson. No. 1,190,652; July 11; Gaz. vol. 228; p. 554.
Temperatures, Method of and apparatus for producing high. E. F. Northrup. No. 1,189,725; July 4; Gaz. vol. 228; p. 188.
Tent and picketing peg and the like. S. C. Caddy. No. 1,189,787; July 4; Gaz. vol. 228; p. 204.
Tent, Field-. R. G. Harris. No. 1,190,999; July 11; Gaz. vol. 228; p. 677.
Tentering-machines, Cloth-clamp for. J. J. Hoey. No. 1,191,512; July 18; Gaz. vol. 228; p. 898.
Terminal box. W. L. Bliss. No. 1,191,060; July 11; Gaz. vol. 228; p. 697.
Terminal connector. H. A. Douglas. No. 1,190,524; July 11; Gaz. vol. 228; p. 505.
Terminal connector. H. A. Douglas. No. 1,190,525; July 11; Gaz. vol. 228; p. 505.
Terminal connector. W. C. Maynard. No. 1,190,931; July 11; Gaz. vol. 228; p. 654.
Testing-machine. H. L. Scott. No. 1,190,597; July 11; Gaz. vol. 228; p. 531.
Textile-machines, Speed control for. O. Stöbe. No. 1,192,704; July 25; Gaz. vol. 228; p. 1369.
Textile material, Production of. J. C. M. Van Diggelen. No. 1,189,756; July 4; Gaz. vol. 228; p. 193.
Textile materials and articles produced thereby, Treating. R. B. Price. No. 1,192,794; July 25; Gaz. vol. 228; p. 1400.
Thermo-humidity control, Apparatus for. F. D. Windell. No. 1,190,697; July 11; Gaz. vol. 228; p. 570.
Thermometer, Electric-resistance. F. Johannsmeyer. No. 1,191,703; July 18; Gaz. vol. 228; p. 964.
Thermometer, Oven-. E. L. Baker. No. 1,190,082; July 4; Gaz. vol. 228; p. 302.
Thermostat. I. E. Storey. No. 1,190,205; July 4; Gaz. vol. 228; p. 340.
Thermostat. J. J. Wood. No. 1,190,061; July 4; Gaz. vol. 228; p. 295.
Thermostatic switch. C. C. Nuckols. No. 1,191,336; July 18; Gaz. vol. 228; p. 837.
Thill-coupling. O. T. Aasen. No. 1,192,148; July 25; Gaz. vol. 228; p. 1174.
Third-point suspension-hanger. F. J. Schroeder. No. 1,190,470; July 11; Gaz. vol. 228; p. 487.
Thread-cutting machine. B. T. Leveque. No. 1,190,307; July 11; Gaz. vol. 228; p. 430.
Threads from fabric, Machine for removing. H. W. Shelp. No. 1,191,239; July 18; Gaz. vol. 228; p. 802.
Threshing-chains, Roller-bearing bed for. T. H. Stewart. No. 1,192,471; July 25; Gaz. vol. 228; p. 1289.
Threshing-machine. H. H. Schuette. No. 1,190,471; July 11; Gaz. vol. 228; p. 487.
Threshing-machine. O. Thompson. No. 1,191,853; July 18; Gaz. vol. 228; p. 1017.
Threshing-machine feeding mechanism. G. C. Long. No. 1,189,710; July 4; Gaz. vol. 228; p. 177.
Threshing-machine self-feeding device. W. D. Lindsay. No. 1,190,564; July 11; Gaz. vol. 228; p. 519.
Throttle control. H. A. Allen. No. 1,192,258; July 25; Gaz. vol. 228; p. 1215.
Ticket-package, Protected. L. A. Bridges. No. 1,190,626; July 11; Gaz. vol. 228; p. 543.
Tie: *See*—
Bag or package tie. Package-tie.
Bale-tie. Railway-tie.
Metallic tie.
Tie and rail-fastener. C. Hennig. No. 1,191,181; July 18; Gaz. vol. 228; p. 782.
Tie-cutter. W. S. Harbor. No. 1,191,176; July 18; Gaz. vol. 228; p. 780.
Tie-plate. A. V. Jensen. No. 1,190,906; July 11; Gaz. vol. 228; p. 645.
Tie presser and stretcher. A. W. Dodds. No. 1,190,269; July 11; Gaz. vol. 228; p. 417.
Tie-protector. A. D. Curry. No. 1,191,496; July 18; Gaz. vol. 228; p. 893.
Tie-stretcher. H. P. Eastman. No. 1,192,770; July 25; Gaz. vol. 228; p. 1390.
Tie-stretcher. H. P. Eastman. No. 1,192,771; July 25; Gaz. vol. 228; p. 1391.
Tile-making apparatus. A. Henroz. No. 1,192,630; July 25; Gaz. vol. 228; p. 1344.
Tiller, Steering and reversing. C. J. Meyer. No. 1,191,211; July 18; Gaz. vol. 228; p. 791.
Time-recorder. J. W. Bryce. No. 1,190,217; July 4; Gaz. vol. 228; p. 351.
Time-switch. A. Streng. No. 1,191,745; July 18; Gaz. vol. 228; p. 980.
Tin, terne, and the like plates, Apparatus for the manufacture of. D. R. James. No. 1,189,573; July 4; Gaz. vol. 228; p. 131.
Tire. S. Liolios. No. 1,189,845; July 4; Gaz. vol. 228; p. 225.
Tire. M. C. Overman. No. 1,189,730; July 4; Gaz. vol. 228; p. 184.
Tire-alarm, Automatic. F. H. Kelsey. No. 1,191,318; July 18; Gaz. vol. 228; p. 831.
Tire and making the same, Pneumatic. J. H. Seiberling. No. 1,190,474; July 11; Gaz. vol. 228; p. 488.
Tire-armor. P. W. Anderson and J. T. Kennelly. No. 1,192,149; July 25; Gaz. vol. 228; p. 1174.
Tire, Automobile-. R. M. Merriman. No. 1,192,090; July 25; Gaz. vol. 228; p. 1154.
Tire, Automobile-. J. C. Reifsnider. No. 1,189,485; July 4; Gaz. vol. 228; p. 102.
Tire-chain adjuster, Antiskid-. J. C. Seitz. No. 1,189,632; July 4; Gaz. vol. 228; p. 151.
Tire core, Pneumatic-. H. C. Brown and G. Williams. No. 1,192,272; July 25; Gaz. vol. 228; p. 1220.
Tire fabric, Apparatus for and process of cutting and reeling. D. Neal. No. 1,189,724; July 4; Gaz. vol. 228; p. 182.
Tire-forming apparatus. J. T. Lister. No. 1,190,432; July 11; Gaz. vol. 228; p. 474.
Tire-forming apparatus. J. T. Lister. No. 1,190,433; July 11; Gaz. vol. 228; p. 475.
Tire-holder, Supplemental. W. A. Frederick. No. 1,192,816; July 25; Gaz. vol. 228; p. 1407.
Tire inner tube, Pneumatic-. R. C. Spratling. No. 1,192,238; July 25; Gaz. vol. 228; p. 1208.
Tire, Pneumatic. B. Barrow. No. 1,189,654; July 4; Gaz. vol. 228; p. 158.
Tire, Pneumatic. M. A. Gibbons. No. 1,190,144; July 4; Gaz. vol. 228; p. 323.
Tire, Pneumatic. C. E. Vawter. No. 1,189,511; July 4; Gaz. vol. 228; p. 111.
Tire-protector. R. G. Falconer. No. 1,192,291; July 25; Gaz. vol. 228; p. 1226.
Tire-protector. J. T. Landaiche. No. 1,192,648; July 25; Gaz. vol. 228; p. 1350.
Tire-removing tool. D. H. McPherson. No. 1,191,523; July 18; Gaz. vol. 228; p. 901.
Tire, Resilient. F. E. Arrouquier. No. 1,189,903; July 4; Gaz. vol. 228; p. 244.
Tire, Resilient. T. L. Carbone. No. 1,189,788; July 4; Gaz. vol. 228; p. 205.
Tire, Resilient. T. L. Carbone. No. 1,189,789; July 4; Gaz. vol. 228; p. 205.
Tire, Resilient. T. L. Carbone. No. 1,192,036; July 25; Gaz. vol. 228; p. 1136.
Tire, Resilient. J. F. Carlson. No. 1,192,495; July 25; Gaz. vol. 228; p. 1297.
Tire, Resilient. J. F. Carlson. No. 1,192,496; July 25; Gaz. vol. 228; p. 1297.

Tire, Resilient. L. E. Krichbaum. No. 1,190,914; July 11; Gaz. vol. 228; p. 648.
Tire, Resilient or cushion. E. F. Durfee. No. 1,190,874; July 11; Gaz. vol. 228; p. 633.
Tire rim, Automobile-. J. S. O'Gorman. No. 1,192,222; July 25; Gaz. vol. 228; p. 1203.
Tire-rim, Flexible. O. Gingras. No. 1,190,887; July 11; Gaz. vol. 228; p. 637.
Tire-rims, Means for locking demountable. G. G. Bayne and A. W. Knutson. No. 1,189,421; July 4; Gaz. vol. 228; p. 78.
Tire sleeve or patch, Pneumatic-. R. Yost. No. 1,190,065; July 4; Gaz. vol. 228; p. 297.
Tire, Spring-. T. Comeau. No. 1,190,263; July 11; Gaz. vol. 228; p. 415.
Tire, Spring-. T. P. Dorn. No. 1,192,764; July 25; Gaz. vol. 228; p. 1389.
Tire, Spring-. J. E. Hart and A. Benzinger. No. 1,191,804; July 18; Gaz. vol. 228; p. 1032.
Tire supporters, Puncture-proof automobile-. C. O. Myers and H. T. Maring. No. 1,189,857; July 4; Gaz. vol. 228; p. 229.
Tire-tool. F. H. Burrill. No. 1,189,424; July 4; Gaz. vol. 228; p. 79.
Tire-tool. R. W. Damaron. No. 1,189,923; July 4; Gaz. vol. 228; p. 251.
Tire tread, Automobile-. W. H. Henderson. No. 1,189,569; July 4; Gaz. vol. 228; p. 130.
Tire-valve attachment. H. F. Crawford. No. 1,190,866; July 11; Gaz. vol. 228; p. 630.
Tire, Vehicle-. J. W. Cook. No. 1,191,918; July 18; Gaz. vol. 228; p. 1042.
Tires and treads of pneumatic tires, Manufacturing solid rubber or like. J. W. H. Dew. No. 1,191,876; July 18; Gaz. vol. 228; p. 1026.
Tires, Bead-rolling device for pneumatic. J. R. Gammeter. No. 1,192,181; July 25; Gaz. vol. 228; p. 1186.
Tires, Inner tube for pneumatic. F. Fenton. No. 1,190,744; July 11; Gaz. vol. 228; p. 585.
Tires, Internal armor for pneumatic. A. Nielsen. No. 1,192,554; July 25; Gaz. vol. 228; p. 1317.
Tires, Machine for wrapping pneumatic. J. H. Coesir. No. 1,189,666; July 4; Gaz. vol. 228; p. 163.
Titaniferous products and producing the same. L. E. Barton. No. 1,189,229; July 4; Gaz. vol. 228; p. 6.
Tobacco-pipe. M. Heller. No. 1,189,690; July 4; Gaz. vol. 228; p. 171.
Toilet article. A. Gerstenzang. No. 1,192,182; July 25; Gaz. vol. 228; p. 1186.
Toilet set. G. A. Wilson. No. 1,189,767; July 4; Gaz. vol. 228; p. 197.
Tongs. S. W. Clements. No. 1,192,753; July 25; Gaz. vol. 228; p. 1385.
Tongs or carrier for vessels of the cuspidor type. A. Pfeninger. No. 1,190,581; July 11; Gaz. vol. 228; p. 526.
Tongue support and slip-tongue, Wagon-. F. G. Brewster and H. L. Irons. No. 1,189,910; July 4; Gaz. vol. 228; p. 247.
Tool. J. B. Moore. No. 1,191,717; July 18; Gaz. vol. 228; p. 969.
Tool, Automatic. P. A. Cressey and W. Jones. No. 1,191,873; July 18; Gaz. vol. 228; p. 1025.
Tool, Combination-. R. C. Miner. No. 1,191,608; July 18; Gaz. vol. 228; p. 929.
Tool, Demountable-rim. O. A. Wood. No. 1,192,147; July 25; Gaz. vol. 228; p. 1174.
Tool-handle and attaching means therefor. A. S. Reavis. No. 1,192,458; July 25; Gaz. vol. 228; p. 1284.
Tool handle, Pneumatic-. R. H. Smith. No. 1,191,354; July 18; Gaz. vol. 228; p. 844.
Tool-head fastener. G. H. Merritt. No. 1,190,786; July 11; Gaz. vol. 228; p. 600.
Tool-holder. D. S. Fox. No. 1,189,930; July 4; Gaz. vol. 228; p. 253.
Tool-holder. E. H. B. Knowlton. No. 1,191,797; July 18; Gaz. vol. 228; p. 998.
Tool-holder. N. Rosendall. No. 1,192,349; July 25; Gaz. vol. 228; p. 1247.
Tool or the like handle. F. C. Ehinger. No. 1,192,177; July 25; Gaz. vol. 228; p. 1184.
Tooth, Artificial. J. P. Gomes. No. 1,191,586; July 18; Gaz. vol. 228; p. 922.
Tooth-cement, Matching. G. L. and F. L. Grier. No. 1,191,892; July 18; Gaz. vol. 228; p. 960.
Tooth-root pins, Instrument for making parallel channels for. F. Thue. No. 1,189,753; July 4; Gaz. vol. 228; p. 192.
Top, Spinning-. M. Asakawa and D. Okamoto. No. 1,191,121; July 11; Gaz. vol. 228; p. 717.
Top, Spinning-. G. H. L. Schneider. No. 1,192,465; July 25; Gaz. vol. 228; p. 1287.
Torch apparatus. H. Cave. No. 1,191,397; July 18; Gaz. vol. 228; p. 859.
Torpedo, Aerial. S. S. Van Keuren. No. 1,191,874; July 18; Gaz. vol. 228; p. 851.
Torpedo, Railway signal-. F. Dutcher. No. 1,190,987; July 11; Gaz. vol. 228; p. 672.
Torpedoes, Driving-gear for. W. Dieter. No. 1,190,871; July 11; Gaz. vol. 228; p. 631.
Towel-rack. L. E. Pease. No. 1,190,453; July 11; Gaz. vol. 228; p. 481.
Toy. E. C. Carroll. No. 1,190,106; July 4; Gaz. vol. 228; p. 310.
Toy. L. H. Kirk. No. 1,192,530; July 25; Gaz. vol. 228; p. 1309.
Toy construction-block. A. D. Converse. No. 1,192,039; July 25; Gaz. vol. 228; p. 1187.
Toy, Educational. F. W. Chapman. No. 1,191,398; July 18; Gaz. vol. 228; p. 859.
Toy gun. E. P. Hicks. No. 1,192,308; July 25; Gaz. vol. 228; p. 1232.
Toy gun. T. C. Lackland. No. 1,189,974; July 4; Gaz. vol. 228; p. 266.
Toy, Mechanical. B. F. Bain. No. 1,192,081; July 25; Gaz. vol. 228; p. 1134.
Toy, Mechanical. D. W. Dunn. No. 1,189,433; July 4; Gaz. vol. 228; p. 82.
Toy, Monoplane flying. C. U. Tyrrell. No. 1,190,343; July 11; Gaz. vol. 228; p. 442.
Toy moving-picture machine. A. S. Ferguson. No. 1,192,610; July 25; Gaz. vol. 228; p. 1337.
Toy phonograph. T. J. Little, Jr. No. 1,191,202; July 18; Gaz. vol. 228; p. 788.
Toy pistol. F. C. Wegener. No. 1,190,494; July 11; Gaz. vol. 228; p. 494.
Toy puzzle. W. B. Barnhart. No. 1,189,527; July 4; Gaz. vol. 228; p. 117.
Toy shooter. N. G. Nelson. No. 1,191,530; July 18; Gaz. vol. 228; p. 904.
Toys, Anchoring-pivot for mechanical. J. Anderson, Jr. No. 1,189,647; July 4; Gaz. vol. 228; p. 156.
Trace-carrier. A. A. Breast. No. 1,192,742; July 25; Gaz. vol. 228; p. 1382.
Traces, Attachment for. C. L. Woody. No. 1,190,064; July 4; Gaz. vol. 228; p. 297.
Track-gage. E. L. Pollard. No. 1,190,796; July 11; Gaz. vol. 228; p. 603.
Track-laying machine. T. A. Bailey. No. 1,189,526; July 4; Gaz. vol. 228; p. 116.
Traction-engine. W. H. Cahall. No. 1,189,425; July 4; Gaz. vol. 228; p. 79.
Traction-engine. G. W. Montgomery and M. D. Bowman. No. 1,191,833; July 18; Gaz. vol. 228; p. 836.
Traction-wheel. A. S. Fraser. No. 1,190,536; July 11; Gaz. vol. 228; p. 510.
Traction-wheel. W. E. Hosch. No. 1,191,898; July 18; Gaz. vol. 228; p. 1033.
Traction-wheel. D. W. McLaughlin. No. 1,190,183; July 4; Gaz. vol. 228; p. 338.
Traction-wheel. G. Pöhl. No. 1,192,845; July 25; Gaz. vol. 228; p. 1245.
Traction-wheel of the portable-track type. F. Petrak. No. 1,191,908; July 18; Gaz. vol. 228; p. 1037.
Tractor. C. A. Henneuse. No. 1,192,423; July 25; Gaz. vol. 228; p. 1273.
Tractor. H. C. Waite. No. 1,191,858; July 18; Gaz. vol. 228; p. 1019.
Tractor, Farm-. J. B. O'Donnell. No. 1,191,817; July 18; Gaz. vol. 228; p. 1004.
Tractor-steering device. D. P. Davies. No. 1,190,735; July 11; Gaz. vol. 228; p. 582.
Tractor-steering mechanism. H. L. Albert. No. 1,191,267; July 18; Gaz. vol. 228; p. 812.
Tractor-steering mechanism. E. W. Cook. No. 1,190,264; July 11; Gaz. vol. 228; p. 415.
Train control, Automatic. W. J. Gladish, Sr. No. 1,192,183; July 25; Gaz. vol. 228; p. 1187.
Train-control apparatus. H. G. Sedgwick. No. 1,189,745; July 4; Gaz. vol. 228; p. 189.
Train-control system. E. A. Laughon. No. 1,191,087; July 11; Gaz. vol. 228; p. 706.
Train-couplings, Electrical contact device for. V. S. Durbin. No. 1,190,526; July 11; Gaz. vol. 228; p. 506.
Train signaling and controlling system. C. S. Currier. No. 1,190,520; July 11; Gaz. vol. 228; p. 503.
Train-stop, Automatic. A. P. Hochstein. No. 1,191,511; July 18; Gaz. vol. 228; p. 897.
Train-stop, Automatic. F. H. Workman. No. 1,192,254; July 25; Gaz. vol. 228; p. 1214.
Train-stop system, Electric. T. W. Vickers. No. 1,191,749; July 18; Gaz. vol. 228; p. 981.
Train-stopping and recording device, Automatic. F. F. Hudson. No. 1,190,173; July 4; Gaz. vol. 228; p. 333.
Train-stopping device, Automatic. J. Marcroft. No. 1,192,086; July 25; Gaz. vol. 228; p. 1152.
Train-stopping device, Automatic. J. Marcroft. No. 1,192,087; July 25; Gaz. vol. 228; p. 1152.
Train-stopping mechanism. A. P. Sanborn and R. C. Wilson. No. 1,190,015; July 4; Gaz. vol. 228; p. 280.
Transformation-points, Method of and apparatus for determining. R. P. Brown. No. 1,189,785; July 4; Gaz. vol. 228; p. 203.
Transformer, Rotary power-. W. N. Mears. No. 1,192,665; July 25; Gaz. vol. 228; p. 1355.
Transits, Solar attachment for. L. F. Buff. No. 1,190,719; July 11; Gaz. vol. 228; p. 577.
Translating device. W. R. Sorgel and W. H. Gaulke. No. 1,191,844; July 18; Gaz. vol. 228; p. 1014.
Transmission mechanism. E. L. Delacour. No. 1,191,771; July 18; Gaz. vol. 228; p. 989.
Transmission mechanism. N. Martinez. No. 1,191,019; July 11; Gaz. vol. 228; p. 633.
Transmission or change-speed device. J. R. Stephenson. No. 1,189,401; July 4; Gaz. vol. 228; p. 70.
Transplanting-machine. R. N. Werstler. No. 1,192,140; July 25; Gaz. vol. 228; p. 1171.

Transporter-truck and the like. F. W. Vickery. No. 1,192,716; July 25; Gaz. vol. 228; p. 1373.
Trap: *See*—
Animal-trap. Rat-trap.
Fish and rat trap. Roach-trap.
Fly-trap. Safety-trap.
Insect-trap. Steam-trap.
Trap. A. Harris. No. 1,190,643; July 11; Gaz. vol. 228; p. 550.
Trap. E. I. Lauderhaugh. No. 1,191,010; July 11; Gaz. vol. 228; p. 680.
Trap. W. Nelson. No. 1,192,098; July 25; Gaz. vol. 228; p. 1156.
Trap. C. M. Phillips. No. 1,191,909; July 18; Gaz. vol. 228; p. 1037.
Traveling-bag. W. F. Dorris. No. 1,191,677; July 18; Gaz. vol. 228; p. 954.
Traveling-bag. H. Weingarten. No. 1,192,720; July 25; Gaz. vol. 228; p. 1374.
Tray. B. Snyder and K. McCreery. No. 1,190,964; July 11; Gaz. vol. 228; p. 666.
Tree-digger, Nursery. O. Wick. No. 1,190,055; July 4; Gaz. vol. 228; p. 293.
Tree-trimmer. H. C. Wolf. No. 1,190,059; July 4; Gaz. vol. 228; p. 294.
Trestle. A. W. Guthat. No. 1,191,301; July 18; Gaz. vol. 228; p. 825.
Trestle, Mechanic's. F. L. Gillett. No. 1,191,687; July 18; Gaz. vol. 228; p. 958.
Trimmer: *See*—
Hedge-trimmer. Tree-trimmer.
Oil-cake trimmer.
Trimming. H. Berlin. No. 1,190,091; July 4; Gaz. vol. 228; p. 305.
Trolley. M. Lev, Jr. No. 1,190,922; July 11; Gaz. vol. 228; p. 651.
Trolley-harp, Safety. W. A. Jenkins and P. J. Lincoln. No. 1,191,005; July 11; Gaz. vol. 228; p. 679.
Trolley-pole. O. R. Kirkpatrick. No. 1,191,796; July 18; Gaz. vol. 228; p. 997.
Trolley-replacer. H. H. Fisher and W. C. Barnes. No. 1,190,534; July 11; Gaz. vol. 228; p. 509.
Trolley-stand. M. A. Yeakley. No. 1,191,054; July 11; Gaz. vol. 228; p. 695.
Trolley-stand. M. A. Yeakley. No. 1,191,055; July 11; Gaz. vol. 228; p. 695.
Trolley-switch. G. B. Fouts. No. 1,192,052; July 25; Gaz. vol. 228; p. 1141.
Trolley system, Overhead-. S. Wilson. No. 1,189,895; July 4; Gaz. vol. 228; p. 242.
Trolley-wheel guard. G. B. Fouts. No. 1,192,051; July 25; Gaz. vol. 228; p. 1141.
Trolley-wire hanger. G. H. Bolus. No. 1,189,784; July 4; Gaz. vol. 228; p. 203.
Trolley-wires, Sleet-scraper for. W. H. Ahrens. No. 1,191,140; July 18; Gaz. vol. 228; p. 767.
Trough: *See*—
Feed-trough.
Truck. J. Diou. No. 1,189,430; July 4; Gaz. vol. 228; p. 81.
Truck-bolster. Y. Miyasaki. No. 1,189,608; July 4; Gaz. vol. 228; p. 143.
Truck, Car-. J. C. Barber. No. 1,190,703; July 11; Gaz. vol. 228; p. 572.
Truck, Car-. J. E. Muhlfeld and H. F. Ball. No. 1,190,791; July 11; Gaz. vol. 228; p. 602.
Truck center-bearing, Railway-car-. W. E. Williams. No. 1,191,862; July 18; Gaz. vol. 228; p. 1020.
Truck construction. W. R. McKeen, Jr. No. 1,191,979; July 25; Gaz. vol. 228; p. 1115.
Truck construction, Hand-. F. E. Knapp. No. 1,192,790; July 25; Gaz. vol. 228; p. 1398.
Truck-dumping mechanism, Motor-. F. Mueller. No. 1,191,983; July 25; Gaz. vol. 228; p. 1116.
Truck, Fire-ladder. E. Cardarelli. No. 1,192,387; July 25; Gaz. vol. 228; p. 1261.
Truck for handling cement blocks. A. L. Zwiebel. No. 1,190,361; July 11; Gaz. vol. 228; p. 448.
Truck, Locomotive trailing. F. J. Cole and F. F. Scoville. No. 1,189,793; July 4; Gaz. vol. 228; p. 207.
Truck, Railway-car. E. W. Summers. No. 1,189,637; July 4; Gaz. vol. 228; p. 153.
Truck side frame and journal-box. E. W. Summers. No. 1,189,636; July 4; Gaz. vol. 228; p. 152.
Truck side frame and journal-box, Car-. E. W. Summers. No. 1,190,480; July 11; Gaz. vol. 228; p. 490.
Truck, Swing-. C. H. Gaskill. No. 1,190,143; July 4; Gaz. vol. 228; p. 323.
Trucks, Self-loading attachment for auto-. H. H. Hathaway. No. 1,190,545; July 11; Gaz. vol. 228; p. 512.
Trunk. E. S. Francis. No. 1,191,581; July 18; Gaz. vol. 228; p. 921.
Trunk. P. C. Schroeder. No. 1,189,390; July 4; Gaz. vol. 228; p. 65.
Trunk-fastener. S. L. Kleber. No. 1,190,557; July 11; Gaz. vol. 228; p. 517.
Trunk-selector, Automatic. A. M. Bullard. No. 1,191,152; July 18; Gaz. vol. 228; p. 771.
Trunk, Wardrobe-. P. C. Schroeder. No. 1,189,496; July 4; Gaz. vol. 228; p. 106.
Truss. W. F. Loux. No. 1,191,805; July 18; Gaz. vol. 228; p. 1000.
Truss, Portable. E. H. Whitney. No. 1,190,834; July 11; Gaz. vol. 228; p. 617.
Tub: *See*—
Bath-tub.
Tube: *See*—
Neon-tube. X-ray tube.
Tire inner tube.
Tube clamp, Flexible-. C. A. Tatum. No. 1,190,089; July 4; Gaz. vol. 228; p. 287.
Tube-cleaner. W. D. Fuller. No. 1,189,556; July 4; Gaz. vol. 228; p. 125.
Tube-forming machine. W. W. Stoler. No. 1,191,362; July 18; Gaz. vol. 228; p. 847.
Tubes, Machine for lock-joining. H. Wilsie. No. 1,190,351; July 11; Gaz. vol. 228; p. 445.
Tubes, Making wooden. B. B. Goldsmith. No. 1,191,680; July 18; Gaz. vol. 228; p. 959.
Tubing, Apparatus for welding. W. C. Frick. No. 1,192,410; July 25; Gaz. vol. 228; p. 1269.
Tubing-machine. C. Lea. No. 1,191,109; July 11; Gaz. vol. 228; p. 712.
Tubing, Manufacture of filled and bent. R. B. Fageol. No. 1,189,675; July 4; Gaz. vol. 228; p. 165.
Tunneling-machine. W. F. Wittich. No. 1,191,864; July 18; Gaz. vol. 228; p. 1021.
Turbine. W. H. Bashor. No. 1,190,622; July 11; Gaz. vol. 228; p. 541.
Turbine and vapor-generator, Combined. W. L. R. Emmet. No. 1,192,775; July 25; Gaz. vol. 228; p. 1392.
Turbine-engine. F. E. Domschelt. No. 1,190,637; July 11; Gaz. vol. 228; p. 548.
Turbine, Marine. K. Alquist. No. 1,190,074; July 4; Gaz. vol. 228; p. 300.
Turf, Treating. E. C. Berriman. No. 1,190,849; July 11; Gaz. vol. 228; p. 624.
Turner attachment. J. H. Creswell, Jr. No. 1,190,385; July 11; Gaz. vol. 228; p. 457.
Twine machine, Grass-. J. A. Schwantes. No. 1,189,877; July 4; Gaz. vol. 228; p. 236.
Type-bar. O. P. Anderson. No. 1,189,522; July 4; Gaz. vol. 228; p. 115.
Type-casting-machine mold. S. A. Bhisey. No. 1,191,867; July 18; Gaz. vol. 228; p. 1022.
Type-holder for stamps. M. L. Willard. No. 1,190,497; July 11; Gaz. vol. 228; p. 495.
Type-writer. O. M. Highley. No. 1,189,449; July 4; Gaz. vol. 228; p. 88.
Type-writer. G. F. Rose. No. 1,189,626; July 4; Gaz. vol. 228; p. 149.
Type-writer attachment. G. H. Packwood, Sr. No. 1,192,556; July 25; Gaz. vol. 228; p. 1318.
Type-writer line-spacing attachment. J. L. Walz. No. 1,189,642; July 4; Gaz. vol. 228; p. 155.
Type-writer ribbon-feed. A. C. Roebuck. No. 1,189,486; July 4; Gaz. vol. 228; p. 102.
Type-writer ribbon mechanism. G. F. Rose. No. 1,189,627; July 4; Gaz. vol. 228; p. 149.
Type-writer ribbons, Treating device for. J. G. Rieger. No. 1,192,686; July 25; Gaz. vol. 228; p. 1362.
Type-writing and computing machine. F. A. Hart. No. 1,190,233; July 4; Gaz. vol. 228; p. 356.
Type-writing and computing machine, Combined. F. A. Hart. No. 1,189,447; July 4; Gaz. vol. 228; p. 87.
Type-writing and computing machine, Combined. F. A. Hart. No. 1,189,689; July 4; Gaz. vol. 228; p. 170.
Type-writing and computing machine, Combined. F. A. Hart. No. 1,190,171; July 4; Gaz. vol. 228; p. 322.
Type-writing and computing machine, Combined. F. A. Hart. No. 1,190,287; July 11; Gaz. vol. 228; p. 423.
Type-writing and computing machine, Combined. W. Wright. No. 1,192,255; July 25; Gaz. vol. 228; p. 1214.
Type-writing machine. C. Elliott. No. 1,192,401; July 25; Gaz. vol. 228; p. 1206.
Type-writing machine. A. G. F. Kurowski. No. 1,190,658; July 11; Gaz. vol. 228; p. 556.
Type-writing machine. G. F. McKay. No. 1,190,812; July 11; Gaz. vol. 228; p. 432.
Type-writing machine. L. R. Roberts. No. 1,192,459; July 25; Gaz. vol. 228; p. 1285.
Type-writing machine. A. W. Smith. No. 1,192,577; July 25; Gaz. vol. 228; p. 1326.
Type-writing machine. J. A. B. Smith. No. 1,191,352; July 18; Gaz. vol. 228; p. 843.
Type-writing machines, Fractional-spacing device for. A. A. Schwartz. No. 1,189,743; July 4; Gaz. vol. 228; p. 188.
Typograph-machine. O. W. Johnson and W. A. Reade. No. 1,192,205; July 25; Gaz. vol. 228; p. 1195.
Typographical machines, Font-distinguisher for. J. A. Cromble and T. S. Homans. No. 1,192,764; July 25; Gaz. vol. 228; p. 1385.
Umbrella. F. C. Hull. No. 1,192,638; July 25; Gaz. vol. 228; p. 1347.
Umbrella, Folding. C. A. Bacon. No. 1,190,844; July 11; Gaz. vol. 228; p. 621.
Umbrella-frame, Collapsible. T. G. Ward. No. 1,192,249; July 25; Gaz. vol. 228; p. 1212.
Underframe-reinforce. T. H. Symington. No. 1,192,582; July 25; Gaz. vol. 228; p. 1328.
Undergarment. I. Murray. No. 1,190,448; July 11; Gaz. vol. 228; p. 479.
Undergarment. W. B. Rood. No. 1,190,590; July 11; Gaz. vol. 228; p. 529.
Undergarment. L. Topkis. No. 1,191,369; July 18; Gaz. vol. 228; p. 850.

Undergarment. F. W. Workman. No. 1,191,865; July 18; Gaz. vol. 228; p. 1021.
Undergarment, Union. J. T. Lyons. No. 1,189,270; July 4; Gaz. vol. 228; p. 21.
Unicycle. T. Bemis, Sr. No. 1,189,909; July 4; Gaz. vol. 228; p. 246.
Unicycle. E. J. Christie. No. 1,191,566; July 18; Gaz. vol. 228; p. 916.
Universal coupling. H. A. Soulis. No. 1,191,242; July 18; Gaz. vol. 228; p. 803.
Universal joint. H. A. Knox. No. 1,190,425; July 11; Gaz. vol. 228; p. 472.
Universal joint. E. F. Schurman. No. 1,191,739; July 18; Gaz. vol. 228; p. 977.
Upper-molding machine. J. Gouldbourn, A. Bates, and A. E. Jerram. No. 1,190,753; July 11; Gaz. vol. 228; p. 588.
Urn, Chocolate-. H. D. Kelly. No. 1,189,579; July 4; Gaz. vol. 228; p. 133.
Urn, Coffee-. H. D. Kelly. No. 1,189,577; July 4; Gaz. vol. 228; p. 133.
Urn, Hot-milk-serving. H. D. Kelly. No. 1,189,576; July 4; Gaz. vol. 228; p. 133.
Vacuum cleaning device. W. Anderson. No. 1,189,648; July 4; Gaz. vol. 228; p. 157.
Vacuum-receptacle case. W. Simpson. No. 1,191,117; July 11; Gaz. vol. 228; p. 716.
Vacuum-receptacle case. W. Simpson. No. 1,191,118; July 11; Gaz. vol. 228; p. 716.
Valve. A. Engel. No. 1,190,530; July 11; Gaz. vol. 228; p. 507.
Valve. R. M. Hunter. No. 1,189,950; July 4; Gaz. vol. 228; p. 259.
Valve. H. B. Kelper. No. 1,189,259; July 4; Gaz. vol. 228; p. 17.
Valve. E. M. Scoville. No. 1,191,481; July 18; Gaz. vol. 228; p. 887.
Valve. J. C. W. Weber. No. 1,191,376; July 18; Gaz. vol. 228; p. 852.
Valve, Air-. F. H. Tweed. No. 1,192,020; July 25; Gaz. vol. 228; p. 1130.
Valve and pipe for oil distribution, Spreader. E. L. Mills. No. 1,191,607; July 18; Gaz. vol. 228; p. 929.
Valve and strainer mechanism, Foot-. W. Trinks. No. 1,191,628; July 18; Gaz. vol. 228; p. 937.
Valve, Automatic. E. V. Anderson. No. 1,189,334; July 4; Gaz. vol. 228; p. 44.
Valve, Automatic. W. J. Kennedy. No. 1,190,656; July 11; Gaz. vol. 228; p. 555.
Valve, Automatic fire-service. E. V. Anderson. No. 1,189,335; July 4; Gaz. vol. 228; p. 45.
Valve, Auxiliary air-. W. E. Howes. No. 1,191,700; July 18; Gaz. vol. 228; p. 963.
Valve, Compound regulating-. G. J. Stuart. No. 1,192,472; July 25; Gaz. vol. 228; p. 1289.
Valve construction. E. G. Wagner. No. 1,191,046; July 11; Gaz. vol. 228; p. 693.
Valve-coupling. D. F. Faulk. No. 1,190,136; July 4; Gaz. vol. 228; p. 320.
Valve cutting and reseating mechanism. J. Shannon. (Reissue.) No. 14,162; July 4; Gaz. vol. 228; p. 371.
Valve device for hydraulic jacks. D. E. Hennessy. No. 1,189,815; July 4; Gaz. vol. 228; p. 215.
Valve, Dry-pipe. C. B. Garrett. No. 1,189,805; July 4; Gaz. vol. 228; p. 211.
Valve, Flush-. G. Lamb. No. 1,190,917; July 11; Gaz. vol. 228; p. 649.
Valve for a drinking-fountain, Controlling-. C. T. Daniel. No. 1,192,755; July 25; Gaz. vol. 228; p. 1386.
Valve for explosive-engines, Rotary. G. L. Schofield. No. 1,190,595; July 11; Gaz. vol. 228; p. 530.
Valve for internal-combustion engines. H. C. Nugent. No. 1,192,339; July 25; Gaz. vol. 228; p. 1243.
Valve for internal-combustion engines. H. L. Whitman. No. 1,189,764; July 4; Gaz. vol. 228; p. 195.
Valve for internal-combustion engines, Rotary. C. F. Fountain and W. A. Langford. No. 1,191,684; July 18; Gaz. vol. 228; p. 957.
Valve, Four-way. D. J. Evans. No. 1,190,992; July 11; Gaz. vol. 228; p. 674.
Valve, Gas-. M. A. Terry. No. 1,191,930; July 18; Gaz. vol. 228; p. 1046.
Valve-gear for locomotive or other engines. G. H. Snider. No. 1,191,843; July 18; Gaz. vol. 228; p. 1013.
Valve, Labyrinth-. J. Good. No. 1,189,940; July 4; Gaz. vol. 228; p. 256.
Valve mechanism. E. M. White. No. 1,189,894; July 4; Gaz. vol. 228; p. 242.
Valve mechanism for gas-engines. C. H. Hallauer. No. 1,190,232; July 4; Gaz. vol. 228; p. 356.
Valve mechanism for internal-combustion engines. A. T. Brown. No. 1,191,150; July 18; Gaz. vol. 228; p. 770.
Valve mechanism for internal-combustion engines. D. Z. Flower. No. 1,191,169; July 18; Gaz. vol. 228; p. 778.
Valve mechanism for internal-combustion engines. J. C. Meadows. No. 1,191,449; July 18; Gaz. vol. 228; p. 876.
Valve, Mixing-. A. E. Bacon. No. 1,190,620; July 11; Gaz. vol. 228; p. 540.
Valve-operating device for fluid-conduits. E. S. Clark. No. 1,191,947; July 25; Gaz. vol. 228; p. 1103.
Valve-operating mechanism, Automatic. C. G. Eidson and T. Davis. No. 1,192,774; July 25; Gaz. vol. 228; p. 1392.
Valve-operating mechanism for motors. J. E. W. Fogal. No. 1,192,293; July 25; Gaz. vol. 228; p. 1227.
Valve-operating mechanism, Furnace-. L. C. Edgar. No. 1,192,176; July 25; Gaz. vol. 228; p. 1184.
Valve, Pressure reducing and regulating. A. W. Cash. No. 1,190,514; July 11; Gaz. vol. 228; p. 501.
Valve, Pressure-regulating. E. V. Anderson. No. 1,192,809; July 25; Gaz. vol. 228; p. 1405.
Valve, Relief-. A. Pospesel. No. 1,192,113; July 25; Gaz. vol. 228; p. 1161.
Valve, Reversing-. A. Kirby. No. 1,191,084; July 11; Gaz. vol. 228; p. 705.
Valve, Rotary engine-. V. H. Anderson. No. 1,190,363; July 11; Gaz. vol. 228; p. 449.
Valve, Slide-. F. D. Butler. No. 1,189,537; July 4; Gaz. vol. 228; p. 120.
Valve-spring holder. B. R. Simmons. No. 1,191,240; July 18; Gaz. vol. 228; p. 802.
Valve-spring lifter. L. Duquesnoy. No. 1,192,286; July 25; Gaz. vol. 228; p. 1225.
Valve-spring retainer. D. L. Brown. No. 1,191,658; July 18; Gaz. vol. 228; p. 947.
Valve-stem cap. O. A. Smith. No. 1,192,352; July 25; Gaz. vol. 228; p. 1248.
Valve-stems, Dust-guard for. C. T. Shaffer. No. 1,191,840; July 18; Gaz. vol. 228; p. 1012.
Valve, Swab-. W. F. Staggers, Jr. No. 1,191,845; July 18; Gaz. vol. 228; p. 1014.
Valve, Thermostatic fuel-. A. Doble. No. 1,191,408; July 18; Gaz. vol. 228; p. 863.
Valve, Transposable. C. H. Calton. No. 1,191,396; July 18; Gaz. vol. 228; p. 859.
Valve, Working-barrel. J. C. Tippett. No. 1,191,247; July 18; Gaz. vol. 228; p. 805.
Valves, Dust-cap for. C. W. Cleveland. No. 1,192,038; July 25; Gaz. vol. 228; p. 1136.
Valves, Pressure-equalizer for. P. E. Spitzer. No. 1,190,681; July 11; Gaz. vol. 228; p. 564.
Valves, Sealing means for engine-. N. B. Wales. No. 1,189,757; July 4; Gaz. vol. 228; p. 193.
Vapor-burner. S. E. Keener. No. 1,191,795; July 18; Gaz. vol. 228; p. 997.
Vapor, Method and apparatus for obtaining work from. J. G. Prosser. (Reissue.) No. 14,168; July 18; Gaz. vol. 228; p. 1051.
Variable-speed motor. H. M. Scheibe. No. 1,189,296; July 4; Gaz. vol. 228; p. 31.
Varnish composition and making same, Waterproof. C. A. Hollenbeck and A. C. Horn. No. 1,190,765; July 11; Gaz. vol. 228; p. 593.
Vault. J. H. Pegg. No. 1,190,579; July 11; Gaz. vol. 228; p. 525.
Vault, Burial-. C. A. Albrecht. No. 1,189,646; July 4; Gaz. vol. 228; p. 156.
Vault or receptacle, Self-sealing. W. W. Haase. No. 1,191,964; July 25; Gaz. vol. 228; p. 1110.
Vegetable-binder. C. E. Ferrell. No. 1,190,392; July 11; Gaz. vol. 228; p. 460.
Vegetable-cutter. H. W. Ferris. No. 1,190,275; July 11; Gaz. vol. 228; p. 418.
Vegetation, Means for promoting. W. J. Anson. No. 1,190,699; July 11; Gaz. vol. 228; p. 571.
Vehicle, Automobile. O. A. Hollis. No. 1,189,256; July 4; Gaz. vol. 228; p. 16.
Vehicle-body. J. G. Heaslet. No. 1,192,303; July 25; Gaz. vol. 228; p. 1231.
Vehicle brake, Motor-. F. D. Grandbois. No. 1,190,542; July 11; Gaz. vol. 228; p. 511.
Vehicle-bumper. K. V. Bennis. No. 1,189,343; July 4; Gaz. vol. 228; p. 48.
Vehicle-bumper. T. A. Hoover. No. 1,191,306; July 18; Gaz. vol. 228; p. 826.
Vehicle, Child's collapsible. R. H. Brown. No. 1,190,373; July 11; Gaz. vol. 228; p. 453.
Vehicle, Child's collapsible. B. L. Gates. No. 1,190,399; July 11; Gaz. vol. 228; p. 462.
Vehicle, Convertible. G. C. Watson. No. 1,191,252; July 18; Gaz. vol. 228; p. 807.
Vehicle direction-indicating device. E. H. Hebern. No. 1,192,780; July 25; Gaz. vol. 228; p. 1395.
Vehicle direction-indicator. G. A. Denninger. No. 1,192,759; July 25; Gaz. vol. 228; p. 1387.
Vehicle driving mechanism, Motor-. W. H. Coldwell. No. 1,189,792; July 4; Gaz. vol. 228; p. 207.
Vehicle fender, Power-propelled-. F. Kopel. No. 1,189,883; July 4; Gaz. vol. 228; p. 221.
Vehicle folding top. D. Hanauer. No. 1,190,890; July 11; Gaz. vol. 228; p. 639.
Vehicle foot-rest. D. T. Hastings. No. 1,189,944; July 4; Gaz. vol. 228; p. 257.
Vehicle-frame. A. L. Putnam. No. 1,192,114; July 25; Gaz. vol. 228; p. 1161.
Vehicle lighting system, Electrically-propelled-. D. Kinniburgh. No. 1,190,297; July 11; Gaz. vol. 228; p. 426.
Vehicle, Motor-. J. F. Fromm. No. 1,191,295; July 18; Gaz. vol. 228; p. 823.
Vehicle, Motor-. A. Loomis. No. 1,189,590; July 4; Gaz. vol. 228; p. 137.
Vehicle, Motor-. E. A. Nelson. No. 1,189,284; July 4; Gaz. vol. 228; p. 26.
Vehicle, Motor-. E. G. Schleicher. No. 1,190,194; July 4; Gaz. vol. 228; p. 342.
Vehicle, Motor-. C. B. Steele. No. 1,191,132; July 11; Gaz. vol. 228; p. 720.

Vehicle-rim, Demountable. W. E. Copithorn. No. 1,191,065; July 11; Gaz. vol. 228; p. 699.
Vehicle running-gear. C. J. Scott. No. 1,190,473; July 11; Gaz. vol. 228; p. 488.
Vehicle safety-guard, Motor-. J. S. Clark. No. 1,189,346; July 4; Gaz. vol. 228; p. 49.
Vehicle safety-signal. W. N. Best. No. 1,192,264; July 25; Gaz. vol. 228; p. 1218.
Vehicle-seat. A. F. Schramm. No. 1,192,692; July 25; Gaz. vol. 228; p. 1364.
Vehicle, Self-propelled. A. H. C. Gibson. No. 1,192,514; July 25; Gaz. vol. 228; p. 1303.
Vehicle, Self-propelled. A. H. C. Gibson. No. 1,192,515; July 25; Gaz. vol. 228; p. 1304.
Vehicle-spring. C. A. Miller. No. 1,189,375; July 4; Gaz. vol. 228; p. 60.
Vehicle-springs or other elements, Machine for forming and tempering. F. H. Lewis and W. C. Baker. No. 1,190,309; July 11; Gaz. vol. 228; p. 430.
Vehicle steering-gear, Mechanically-propelled-. H. Marles. No. 1,189,985; July 4; Gaz. vol. 228; p. 271.
Vehicle steering-gear, Motor-. A. F. Mohr. No. 1,189,378; July 4; Gaz. vol. 228; p. 61.
Vehicle-top. P. O. Clark. No. 1,191,669; July 18; Gaz. vol. 228; p. 951.
Vehicle-top. A. G. McGregor. No. 1,191,446; July 18; Gaz. vol. 228; p. 875.
Vehicle-top, Removable. F. Grundy. No. 1,190,153; July 4; Gaz. vol. 228; p. 326.
Vehicle traction device, Motor-. H. C. Nail and H. T. Barwell. No. 1,189,723; July 4; Gaz. vol. 228; p. 182.
Vehicle traction device, Motor-. S. Sylvester. No. 1,190,038; July 4; Gaz. vol. 228; p. 287.
Vehicle turn-table and power-transmission mechanism, Motor-. E. M. Logan and C. E. McNaughton. No. 1,189,708; July 4; Gaz. vol. 228; p. 177.
Vehicle-wheel. L. Albrecht. No. 1,189,223; July 4; Gaz. vol. 228; p. 3.
Vehicle-wheel. E. Amodeo-Salvator. No. 1,191,866; July 18; Gaz. vol. 228; p. 1022.
Vehicle-wheel. D. M. Ferguson. No. 1,190,274; July 11; Gaz. vol. 228; p. 418.
Vehicle-wheel. J. J. Helm. No. 1,189,567; July 4; Gaz. vol. 228; p. 129.
Vehicle-wheel. W. F. Holt. No. 1,192,311; July 25; Gaz. vol. 228; p. 1233.
Vehicle-wheel. G. G. Johnson. No. 1,192,526; July 25; Gaz. vol. 228; p. 1308.
Vehicle-wheel, Metal. T. E. Murray. No. 1,192,548; July 25; Gaz. vol. 228; p. 1315.
Vehicle-wheel, Metal. T. E. Murray. No. 1,192,549; July 25; Gaz. vol. 228; p. 1315.
Vehicles, Antivibration device for. E. V. Hartford. No. 1,189,943; July 4; Gaz. vol. 228; p. 257.
Vehicles, Clutch-release for motor-. F. M. Hardesty. No. 1,191,074; July 11; Gaz. vol. 228; p. 702.
Vehicles, Device for fastening objects to. J. W. Conant. No. 1,191,762; July 18; Gaz. vol. 228; p. 986.
Vehicles, Friction-drive for motor-. W. B. Engler. No. 1,189,673; July 4; Gaz. vol. 228; p. 165.
Vehicles, Hood-retainer for motor-. J. Squires. No. 1,190,603; July 11; Gaz. vol. 228; p. 534.
Vehicles, Register and signal mechanism for. F. A. Wieland. No. 1,190,694; July 11; Gaz. vol. 228; p. 569.
Vehicles, Sanding apparatus for motor-driven. C. Williams. No. 1,191,257; July 18; Gaz. vol. 228; p. 808.
Vehicles, Speed-limiting device for motor-driven. O. W. Compton. No. 1,190,115; July 4; Gaz. vol. 228; p. 312.
Vehicles, System for controlling moving. P. J. Simmen. No. 1,192,234; July 25; Gaz. vol. 228; p. 1207.
Velocipede. J. W. Bellairs. No. 1,190,089; July 4; Gaz. vol. 228; p. 304.
Velvet fabric, Figured. F. Warner. No. 1,191,487; July 18; Gaz. vol. 228; p. 889.
Vending apparatus. J. J. Burkhartzmeyer. No. 1,190,981; July 11; Gaz. vol. 228; p. 670.
Vending-machine. W. P. Hall. No. 1,190,158; July 4; Gaz. vol. 228; p. 328.
Vending-machine. A. Jacobs. No. 1,189,954; July 4; Gaz. vol. 228; p. 260.
Vending-machine. J. F. Mumford. No. 1,189,469; July 4; Gaz. vol. 228; p. 95.
Vending-machine. H. Noark and S. C. Duke. No. 1,192,338; July 25; Gaz. vol. 228; p. 1243.
Vending-machine. J. E. Taylor. No. 1,192,019; July 25; Gaz. vol. 228; p. 1130.
Vending-machine. L. Weinstein. No. 1,191,377; July 18; Gaz. vol. 228; p. 852.
Vending-machine, Coin-controlled. E. F. Spaulding. No. 1,189,303; July 4; Gaz. vol. 228; p. 34.
Vending machine, Coin-controlled collar-. J. J. Pierre. No. 1,191,032; July 11; Gaz. vol. 228; p. 688.
Vending machine, Fluid-. H. S. Hall. No. 1,190,543; July 11; Gaz. vol. 228; p. 511.
Vending machine, Toothpick-. F. Meszaros. No. 1,191,715; July 18; Gaz. vol. 228; p. 968.
Vending-machines, Washer-catching device for coin-controlled. A. D. Grover and E. E. Barber. No. 1,192,301; July 25; Gaz. vol. 228; p. 1230.
Vent-cap. M. S. Wright. No. 1,190,353; July 11; Gaz. vol. 228; p. 446.
Ventilating system. R. Klotz. No. 1,189,971; July 4; Gaz. vol. 228; p. 266.
Ventilator: *See*— Window-ventilator.
Ventilator. G. H. Russell. No. 1,189,488; July 4; Gaz. vol. 228; p. 103.
Ventilator. E. L. Youngs. No. 1,192,595; July 25; Gaz. vol. 228; p. 1332.
Vessel-stopping mechanism, Marine-. F. C. Williams. No. 1,190,614; July 11; Gaz. vol. 228; p. 537.
Vessel, Submarine. C. Laurenti. No. 1,192,537; July 25; Gaz. vol. 228; p. 1312.
Vessels, Apparatus for raising sunken. R. W. Bryant and A. E. Moore. No. 1,191,558; July 18; Gaz. vol. 228; p. 913.
Vessels, Device for locating and raising sunken. J. C. Paulson. No. 1,189,864; July 4; Gaz. vol. 228; p. 231.
Vestibule-diaphragm. J. B. Lynch. No. 1,189,460; July 4; Gaz. vol. 228; p. 92.
View-finder, Adjustable duplex. E. Schneider. No. 1,189,494; July 4; Gaz. vol. 228; p. 105.
Violin attachment. F. M. Ashley. No. 1,192,030; July 25; Gaz. vol. 228; p. 1134.
Viscosity-testing apparatus. H. F. Bauer. No. 1,190,085; July 4; Gaz. vol. 228; p. 303.
Vise, Armed. U. G. Bond. No. 1,192,267; July 25; Gaz. vol. 228; p. 1219.
Vise, Bench-. H. B. Seymour. No. 1,191,130; July 11; Gaz. vol. 228; p. 720.
Voice and sound recording machine. F. E. Miller. No. 1,190,787; July 11; Gaz. vol. 228; p. 600.
Volatiles from coals, shales, lignites, and similar materials and for refining the same, Apparatus for extracting. C. C. Bussey. No. 1,191,870; July 18; Gaz. vol. 228; p. 1023.
Volatiles from coals, shales, lignites, and similar materials and refining the same, Extracting. C. C. Bussey. No. 1,191,869; July 18; Gaz. vol. 228; p. 1023.
Voting-machine-locking mechanism. W. J. Lausterer. No. 1,189,838; July 4; Gaz. vol. 228; p. 223.
Voting-machines, Indorsed-candidate lockout for. W. J. Lausterer. No. 1,189,840; July 4; Gaz. vol. 228; p. 224.
Voting-machines, Key-justifying and zero-setting mechanism for. W. J. Lausterer. No. 1,189,837; July 4; Gaz. vol. 228; p. 222.
Voting-machines, Support for interlocking channels for W. J. Lausterer. No. 1,189,839; July 4; Gaz. vol. 228; p. 223.
Vulcanizer. J. R. Gammeter. No. 1,191,296; July 18; Gaz. vol. 228; p. 823.
Wagon and velocipede, Combined. W. M. and S. E. Loxley. No. 1,192,081; July 25; Gaz. vol. 228; p. 1150.
Wagon body, Coal-. J. Ledwinka. No. 1,190,429; July 11; Gaz. vol. 228; p. 473.
Wagon-brake, Automatic. J. V. Kammers and J. H. Brophy. No. 1,190,422; July 11; Gaz. vol. 228; p. 470.
Waist and skirt supporter and fastener. L. J. Stewart. No. 1,190,479; July 11; Gaz. vol. 228; p. 490.
Waistband. A. G. Peine. No. 1,192,341; July 25; Gaz. vol. 228; p. 1244.
Walking-beam attachment. P. W. Masten. No. 1,190,930; July 11; Gaz. vol. 228; p. 654.
Wall-board, Waterproofed. J. H. Thickens. No. 1,191,099; July 11; Gaz. vol. 228; p. 709.
Wall-coating compounds, Making. R. E. Haire. No. 1,190,756; July 11; Gaz. vol. 228; p. 590.
Walls, Manufacture of flexible corrugated. W. M. Fulton. No. 1,192,412; July 25; Gaz. vol. 228; p. 1270.
Warp-drawing machine. B. A. Peterson. No. 1,190,245; July 4; Gaz. vol. 228; p. 361.
Warp-drawing machine. B. A. Peterson. No. 1,191,112; July 11; Gaz. vol. 228; p. 714.
Washboard attachment. M. E. Powers. No. 1,190,455; July 11; Gaz. vol. 228; p. 481.
Washboilers and the like, Attachment for. L. G. Grabe. No. 1,189,809; July 4; Gaz. vol. 228; p. 212.
Washer: *See*— Adjustable washer. Window-washer. Automobile-washer.
Washing and drying machine. B. Levi. No. 1,189,867; July 4; Gaz. vol. 228; p. 58.
Washing-machine. S. J. Harding. No. 1,190,404; July 11; Gaz. vol. 228; p. 464.
Washing plates, knives, forks, and the like, Machine for. H. Lofquist. No. 1,189,707; July 4; Gaz. vol. 228; p. 176.
Washmitt. L. M. Hicks. (Reissue.) No. 14,171; July 25; Gaz. vol. 228; p. 1417.
Watch-balance. D. B. Raff. No. 1,191,462; July 18; Gaz. vol. 228; p. 881.
Watch, Calendar-. J. E. Hagel. No. 1,190,155; July 4; Gaz. vol. 228; p. 327.
Watch-escapement. C. E. De Long. No. 1,192,812; July 25; Gaz. vol. 228; p. 1406.
Watch stem winding and setting device. S. Mallin. No. 1,189,713; July 4; Gaz. vol. 228; p. 179.
Watch, wrist-. C. L. Depollier. No. 1,191,951; July 25; Gaz. vol. 228; p. 1104.
Water-distributing device. J. H. Glauber. No. 1,191,888; July 18; Gaz. vol. 228; p. 1030.
Water handling and delivering apparatus. F. C. Farnsworth. No. 1,192,292; July 25; Gaz. vol. 228; p. 1227.
Water-heater. A. W. Bachmann. No. 1,190,976; July 11; Gaz. vol. 228; p. 669.
Water-heater, Electric. A. Herz. No. 1,190,289; July 11; Gaz. vol. 228; p. 424.

Water-heater, Electric. M. Simon. No. 1,191,743; July 18; Gaz. vol. 228; p. 979.
Water-marking appliance. J. N. Anderson. No. 1,192,259; July 25; Gaz. vol. 228; p. 1216.
Water-meter. G. B. Bassett. No. 1,190,705; July 11; Gaz. vol. 228; p. 572.
Water-meter. F. W. Hanks. No. 1,192,189; July 25; Gaz. vol. 228; p. 1189.
Water-meters and the like, Closure for. F. W. Hanks. No. 1,192,188; July 25; Gaz. vol. 228; p. 1189.
Water-motor. C. T. Custer. No. 1,191,950; July 25; Gaz. vol. 228; p. 1104.
Water-motor. L. C. Lewis. No. 1,191,011; July 11; Gaz. vol. 228; p. 680.
Water, Purification of. H. Kriegsheim. No. 1,192,075; July 25; Gaz. vol. 228; p. 1143.
Water-raising means. G. H. Beckett. No. 1,192,871; July 25; Gaz. vol. 228; p. 1255.
Water-screening apparatus. B. S. Reynolds. No. 1,191,115; July 11; Gaz. vol. 228; p. 715.
Waters, Apparatus for clarifying waste. R. Schilling. No. 1,192,569; July 25; Gaz. vol. 228; p. 1323.
Watering systems, Drinking-cup for cattle-. P. M. Ross. No. 1,191,829; July 18; Gaz. vol. 228; p. 1008.
Way-bill, Manifold express. A. D. Cowden. No. 1,189,544; July 4; Gaz. vol. 228; p. 122.
Weather and dust proofing device. B. Wistrom. No. 1,192,361; July 25; Gaz. vol. 228; p. 1251.
Webs, Guide-roll for. W. S. Morse. No. 1,189,611; July 4; Gaz. vol. 228; p. 144.
Wedge, Bucking-. A. Gravel. No. 1,192,185; July 25; Gaz. vol. 228; p. 1188.
Weed-burner for roadways. E. E. Allen. No. 1,192,808; July 25; Gaz. vol. 228; p. 1405.
Weft-replenishing mechanism. R. Crompton. No. 1,190,733; July 11; Gaz. vol. 228; p. 582.
Weighing-machine. W. C. Anderson and A. R. Thompson. No. 1,190,364; July 11; Gaz. vol. 228; p. 450.
Weight-motor. N. Martinez. No. 1,191,018; July 11; Gaz. vol. 228; p. 683.
Weir-plate. W. S. Giele. No. 1,190,400; July 11; Gaz. vol. 228; p. 463.
Welding. J. G. Wallace. No. 1,190,610; July 11; Gaz. vol. 228; p. 536.
Welding, Electric. C. H. Kicklighter. No. 1,189,582; July 4; Gaz. vol. 228; p. 134.
Welding-hood. W. L. Callahan. No. 1,191,562; July 18; Gaz. vol. 228; p. 914.
Welding of metallic plates, Method of and apparatus for electric. C. H. Kicklighter. No. 1,189,581; July 4; Gaz. vol. 228; p. 134.
Welds with pieces of coated metal and product thereof, Making. W. E. Williams. No. 1,190,208; July 4; Gaz. vol. 228; p. 347.
Well-casing, Tool for slotting a. F. O. Mackey. No. 1,189,984; July 4; Gaz. vol. 228; p. 270.
Well-drill. M. B. Walker. No. 1,189,513; July 4; Gaz. vol. 228; p. 112.
Well-drill jar. J. F. Craven. No. 1,189,241; July 4; Gaz. vol. 228; p. 10.
Well-packer. F. J. Moser. No. 1,190,790; July 11; Gaz. vol. 228; p. 601.
Well-plugging apparatus. C. E. Sitzman. No. 1,190,024; July 4; Gaz. vol. 228; p. 282.
Well-tools, Rope-socket for. J. H. Wilt. No. 1,192,252; July 25; Gaz. vol. 228; p. 1213.
Wells, Increasing the production of oil-. I. L. Dunn. No. 1,190,268; July 11; Gaz. vol. 228; p. 416.
Wells, Placing casing in. C. W. Whitney. No. 1,189,516; July 4; Gaz. vol. 228; p. 113.
Wells, Plunger and valve for Artesian or water and oil. E. S. Goss and S. A. Barrickman. No. 1,192,619; July 25; Gaz. vol. 228; p. 1341.
Wells, Releasable wire-rope socket for oil-. J. J. Varner. No. 1,190,345; July 11; Gaz. vol. 228; p. 443.
Wells, Safety appliance for oil-. R. H. Reed. No. 1,191,229; July 18; Gaz. vol. 228; p. 798.
Wells, Swivel-socket for oil-. H. B. Walker. No. 1,191,250; July 18; Gaz. vol. 228; p. 806.
Wheel: *See*—
Automobile-wheel.
Balance-wheel.
Car-wheel.
Fan-wheel.
Resilient wheel.
Safety-wheel.
Steering-wheel.
Traction-wheel.
Vehicle-wheel.
Wheel. J. W. Bruce. No. 1,190,101; July 4; Gaz. vol. 228; p. 308.
Wheel boxing, Vehicle-. T. Arthur and L. M. Morris. No. 1,190,079; July 4; Gaz. vol. 228; p. 301.
Wheel construction. E. G. Kline. No. 1,192,073; July 25; Gaz. vol. 228; p. 1148.
Wheel-locking device. T. L. Gray. No. 1,191,587; July 18; Gaz. vol. 228; p. 922.
Wheel lubricator, Vehicle-. F. W. Park. No. 1,192,104; July 25; Gaz. vol. 228; p. 1158.
Wheel mounting, Vehicle-. N. H. Schickel. No. 1,189,874; July 4; Gaz. vol. 228; p. 235.
Wheel-rim. W. E. Copithorn. No. 1,190,118; July 4; Gaz. vol. 228; p. 313.
Wheel structure. A. H. Grosz. No. 1,191,175; July 18; Gaz. vol. 228; p. 780.
Wheel structure. W. J. Roepke. No. 1,192,348; July 25; Gaz. vol. 228; p. 1246.
Wheels, Apparatus for the manufacture of spoked. J. M. Hansen. No. 1,191,591; July 18; Gaz. vol. 228; p. 923.
Wheels, Assembling spoked. W. J. Kaltz. No. 1,189,827; July 4; Gaz. vol. 228; p. 219.
Wheels, Machine for assembling spoked. W. J. Kaltz. No. 1,189,828; July 4; Gaz. vol. 228; p. 219.
Wheels, Paddle attachment for vehicle-. J. H. Horan and A. B. Hart. No. 1,189,821; July 4; Gaz. vol. 228; p. 217.
Wheels, Strain-absorber for sprocket-. H. Ullensaker. No. 1,190,049; July 4; Gaz. vol. 228; p. 291.
Whip-socket. O. W. Gugeler. No. 1,191,962; July 25; Gaz. vol. 228; p. 1109.
Whipping apparatus. J. A. Huber, Jr. No. 1,191,789; July 18; Gaz. vol. 228; p. 995.
Wind-shield wiper. J. Scott. No. 1,191,349; July 18; Gaz. vol. 228; p. 842.
Winder. H. D. Colman. No. 1,191,102; July 11; Gaz. vol. 228; p. 711.
Winding and paying out films, tapes, and the like, Apparatus or device for. J. Evans, H. G. Howitt, and W. J. Prichard. No. 1,192,776; July 25; Gaz. vol. 228; p. 1392.
Winding, Electrical. E. E. F. Creighton. No. 1,190,120; July 4; Gaz. vol. 228; p. 314.
Winding-indicator. J. Mazer. No. 1,191,525; July 18; Gaz. vol. 228; p. 902.
Winding, Induction-motor. F. S. Martin. No. 1,191,209; July 18; Gaz. vol. 228; p. 790.
Winding-roller. F. H. Hoberg. No. 1,192,063; July 25; Gaz. vol. 228; p. 1145.
Windmill. R. Clade. No. 1,190,628; July 11; Gaz. vol. 228; p. 543.
Windmill. R. Clade. No. 1,190,629; July 11; Gaz. vol. 228; p. 544.
Windmill-governing mechanism. R. Clade. No. 1,190,630; July 11; Gaz. vol. 228; p. 544.
Window and screen, Combination. H. Gehnrich. No. 1,190,885; July 11; Gaz. vol. 228; p. 637.
Window-cleaning and sprinkling device. C. H. Flodine. No. 1,190,747; July 11; Gaz. vol. 228; p. 586.
Window-fastener. G. Kimball. No. 1,189,969; July 4; Gaz. vol. 228; p. 265.
Window fly-screen. J. L. Edlund. No. 1,190,738; July 11; Gaz. vol. 228; p. 584.
Window frame and sashes, Metal. H. E. Campbell. No. 1,189,912; July 4; Gaz. vol. 228; p. 247.
Window-lock. R. W. Koch. No. 1,192,533; July 25; Gaz. vol. 228; p. 1310.
Window-lock. C. Nelson. No. 1,191,815; July 18; Gaz. vol. 228; p. 1003.
Window-operating mechanism. J. B. Strauss. No. 1,190,682; July 11; Gaz. vol. 228; p. 565.
Window-screen, Adjustable. G. Carroll. No. 1,189,790; July 4; Gaz. vol. 228; p. 206.
Window-stop. P. C. Lenz. No. 1,190,430; July 11; Gaz. vol. 228; p. 473.
Window-ventilator. D. S. Husband. No. 1,191,125; July 11; Gaz. vol. 228; p. 718.
Window-washer. C. D. Lyon. No. 1,190,978; July 4; Gaz. vol. 228; p. 268.
Windows, Safety appliance for display-. R. R. Courtney. No. 1,192,040; July 25; Gaz. vol. 228; p. 1137.
Windows, Storm-strip for casement-. R. F. Nichols. No. 1,191,091; July 11; Gaz. vol. 228; p. 706.
Wire-applying tool. A. J. Ambrose. No. 1,190,075; July 4; Gaz. vol. 228; p. 300.
Wire-coiling machine. H. J. Hick. No. 1,192,631; July 25; Gaz. vol. 228; p. 1344.
Wire-coiling machine. E. S. Lyons. No. 1,192,655; July 25; Gaz. vol. 228; p. 1352.
Wire fabric. H. Richardson. No. 1,189,291; July 4; Gaz. vol. 228; p. 80.
Wire-fabric-making machine. J. W. Dwiggins. No. 1,192,706; July 25; Gaz. vol. 228; p. 1389.
Wire-reel. B. F. Luick. No. 1,191,904; July 18; Gaz. vol. 228; p. 1036.
Wire-stretcher. C. W. Bartley. No. 1,190,976; July 11; Gaz. vol. 228; p. 669.
Wire-stretcher. J. F. Cochran. No. 1,191,063; July 11; Gaz. vol. 228; p. 698.
Wire-stretcher. J. A. Mitchell. No. 1,190,788; July 11; Gaz. vol. 228; p. 601.
Wire-tension device. M. R. Moore. No. 1,191,450; July 18; Gaz. vol. 228; p. 877.
Wool-pelt-scrubbing machine. A. J. La Francis. No. 1,191,521; July 18; Gaz. vol. 228; p. 901.
Work-driving dog. S. W. Putnam, 3d. No. 1,191,113; July 11; Gaz. vol. 228; p. 714.
Wrapping-machine. M. D. Gibson and M. L. Oglesby. No. 1,190,283; July 11; Gaz. vol. 228; p. 421.
Wrapping machine, Package-. E. Schiff. No. 1,192,351; July 25; Gaz. vol. 228; p. 1247.
Wrench: *See*—
Ratchet-wrench.
Wrench. F. De Cotis. No. 1,192,280; July 25; Gaz. vol. 228; p. 1222.
Wrench. L. Henriksen. No. 1,191,967; July 25; Gaz. vol. 228; p. 111.
Wrench. D. C. Hindman. No. 1,191,596; July 18; Gaz. vol. 228; p. 925.
Wrench. A. M. Le Pierre. No. 1,190,562; July 11; Gaz. vol. 228; p. 519.
Wrench. H. F. W. Liesemeyer. No. 1,191,325; July 18; Gaz. vol. 228; p. 833.
Wrench. A. Peterson and W. H. Donahue. No. 1,191,822; July 18; Gaz. vol. 228; p. 1006.

Wrench. M. C. Raikes. No. 1,190,004; July 4; Gaz. vol. 228; p. 276.
Wrench. G. W. and C. W. Stanley. No. 1,190,836; July 11; Gaz. vol. 228; p. 440.
Wrench. W. F. Stone. No. 1,192,136; July 25; Gaz. vol. 228; p. 1169.
Wrist-lock for bag-handles and the like. J. S. Wallenstein. No. 1,192,022; July 25; Gaz. vol. 228; p. 1131.
Wrist-strap. E. G. Lewis. No. 1,189,977; July 4; Gaz. vol. 228; p. 268.
X-ray tube. C. E. Campbell. No. 1,190,104; July 4; Gaz. vol. 228; p. 310.
X-ray tube. E. Thomson. No. 1,192,706; July 25; Gaz. vol. 228; p. 1370.
Yarn-cleaning device. T. W. Holt. No. 1,190,169; July 4; Gaz. vol. 228; p. 331.
Yielding unit. C. W. Jones. No. 1,189,963; July 4; Gaz. vol. 228; p. 263.
Yoke connector and the like for harness, Neck-. J. Kelchert. No. 1,192,119; July 25; Gaz. vol. 228; p. 1163.
Yoke, Draft-. G. S. Chiles. No. 1,192,497; July 25; Gaz. vol. 228; p. 1297.
Yoke, Keyless. J. F. O'Connor. No. 1,192,221; July 25; Gaz. vol. 228; p. 1202.
Zither, Chord-strings of a. H. C. Marx. No. 1,190,782; July 11; Gaz. vol. 228; p. 599.
Zither, Keyed. H. C. Marx. No. 1,190,783; July 11; Gaz. vol. 228; p. 599.
Zithers, Tone-softening attachment for. H. C. Marx. No. 1,190,784; July 11; Gaz. vol. 228; p. 599.

ALPHABETICAL LIST OF DESIGNS.

Article of manufacture. C. L. Sebring. No. 49,464; July 25; Gaz. vol. 228; p. 1428.
Automobile-body. D. F. Oliver. No. 49,396; July 18; Gaz. vol. 228; p. 1064.
Automobile-body. W. B. Stout. No. 49,374; July 11; Gaz. vol. 228; p. 732.
Badge. E. A. Levy. No. 49,390; July 18; Gaz. vol. 228; p. 1063.
Badge, button, pin, or insignia. H. W. Bikle. No. 49,325; July 11; Gaz. vol. 228; p. 723.
Badge or button. J. W. Allan. No. 49,413; July 25; Gaz. vol. 228; p. 1419.
Bait, Artificial. L. Yakeley. No. 49,378; July 11; Gaz. vol. 228; p. 733.
Bed-mount. E. J. Hickson. No. 49,307; July 4; Gaz. vol. 228; p. 376.
Boat, Hull of a gliding. D. La Chapelle. No. 49,358; July 11; Gaz. vol. 228; p. 729.
Bottle. R. S. Allan. No. 49,379; July 18; Gaz. vol. 228; p. 1061.
Bottle. V. Vivaudou. No. 49,406; July 18; Gaz. vol. 228; p. 1066.
Bottle case, Vacuum-. G. E. Curtiss. No. 49,420; July 25; Gaz. vol. 228; p. 1420.
Button. J. S. Monaghan. No. 49,313; July 4; Gaz. vol. 228; p. 377.
Button. J. S. Monaghan. No. 49,364; July 11; Gaz. vol. 228; p. 730.
Can-opener. J. H. Brady. No. 49,326; July 11; Gaz. vol. 228; p. 724.
Candy-cup. S. Bagnulo. Nos. 49,415–16; July 25; Gaz. vol. 228; p. 1420.
Car-straps, Handhold for. H. O. Haskins. No. 49,430; July 25; Gaz. vol. 228; p. 1422.
Carpet. W. A. Elliot. Nos. 49,423–9; July 25; Gaz. vol. 228; pp. 1421–2.
Centerpiece and flower-holder, Combined. A. J. Bennett. No. 49,384; July 18; Gaz. vol. 228; p. 1062.
Chair-back, Wire. J. Silverman. No. 49,401; July 18; Gaz. vol. 228; p. 1065.
Chandeliers and brackets, Oval arm for. C. E. Jones. No. 49,389; July 18; Gaz. vol. 228; p. 1063.
Cigar and ash tray. J. Gyurina. No. 49,303; July 4; Gaz. vol. 228; p. 375.
Clasp device. J. Ritter. No. 49,445; July 25; Gaz. vol. 228; p. 1424.
Clock-case. C. C. Wise and C. T. Ryland. No. 49,408; July 18; Gaz. vol. 228; p. 1067.
Coffee-mill casing. H. E. Asbury and E. E. Punzelt. No. 49,324; July 11; Gaz. vol. 228; p. 723.
Collaret, Garment-. F. Condé. No. 49,411; July 18; Gaz. vol. 228; p. 1067.
Comb, Sport-. C. C. Holden and E. P. Hadley. No. 49,431; July 25; Gaz. vol. 228; p. 1422.
Curtain-pediment. C. Grodkowsky. No. 49,352; July 11; Gaz. vol. 228; p. 727.
Display-stand. A. Josephson. No. 49,434; July 25; Gaz. vol. 228; p. 1423.
Display-stand. J. A. Nones. No. 49,366; July 11; Gaz. vol. 228; p. 731.
Display-rack. O. De Santis. No. 49,328; July 11; Gaz. vol. 228; p. 724.
Doll. M. A. Saxton. No. 49,400; July 18; Gaz. vol. 228; p. 1065.
Egg-boiler. T. Taylor. No. 49,405; July 18; Gaz. vol. 228; p. 1066.
Egg-candler. T. Moore. Nos. 49,393–4; July 18; Gaz. vol. 228; p. 1064.
Electric brackets and chandeliers, Arm for. C. E. Jones. No. 49,310; July 4; Gaz. vol. 228; p. 377.
Electric time-switch and indicator. L. A. Mapel. No. 49,436; July 25; Gaz. vol. 228; p. 1423.
Emblem. C. A. McNeil. No. 49,360; July 11; Gaz. vol. 228; p. 729.
Emblem, brooch, button, fob, or similar article. C. C. Dickover. No. 49,329; July 11; Gaz. vol. 228; p. 724.
Engine-cylinder. W. F. A. Buchner. No. 49,327; July 11; Gaz. vol. 228; p. 724.
Fabric, Textile. A. H. Waldo. No. 49,375; July 11; Gaz. vol. 228; p. 733.
Faucet. A. Engel. No. 49,332; July 11; Gaz. vol. 228; p. 725.
Faucet and post for the same. A. G. Van Nostrand. No. 49,320; July 4; Gaz. vol. 228; p. 379.
Fern-dish hanger. B. Sonberg. No. 49,402; July 18; Gaz. vol. 228; p. 1065.
Flag, Peace-. A. O'Connor. No. 49,367. July 11; Gaz. vol. 228; p. 731.
Font, Holy-water. T. Lloyd. No. 49,392; July 18; Gaz. vol. 228; p. 1064.
Game-board. A. Hall. No. 49,304; July 4; Gaz. vol. 228; p. 376.
Game-table. C. Hine. No. 49,387; July 18; Gaz. vol. 228; p. 1063.
Garter. M. J. Liebenstein. No. 49,391; July 18; Gaz. vol. 228; p. 1063.
Gate. C. F. Hogue. No. 49,388; July 18; Gaz. vol. 228; p. 1063.
Girder-strip. F. Hornby. No. 49,308; July 4; Gaz. vol. 228; p. 376.
Glare-screen. H. L. Illich. No. 49,354; July 11; Gaz. vol. 228; p. 728.
Glass dish or similar article. P. Ebeling. No. 49,330; July 11; Gaz. vol. 228; p. 724.
Hair ornament. H. Pichel. Nos. 49,397–9; July 18; Gaz. vol. 228; pp. 1064–5.
Hair pin or comb. W. S. Bechtold. No. 49,417; July 25; Gaz. vol. 228; p. 1420.
Hook, Apparel-. O. H. Shultz. No. 49,317; July 4; Gaz. vol. 228; p. 378.
Indicator. G. W. Rawlings and G. M. Lanam. No. 49,315; July 4; Gaz. vol. 228; p. 378.
Indicator. G. W. Rawlings and G. M. Lanam. No. 49,444; July 25; Gaz. vol. 228; p. 1424.
Inkstand. F. A. Weeks. No. 49,376; July 11; Gaz. vol. 228; p. 733.
Insulator, Strain-. H. N. Müller. No. 49,365; July 11; Gaz. vol. 228; p. 730.
Kitchen article, Combination. E. J. Osterbauer. No. 49,368; July 11; Gaz. vol. 228; p. 731.
Knife, Bread and cake. S. Brown. No. 49,295; July 4; Gaz. vol. 228; p. 374.
Knife, Pocket-. F. Gosztylla. No. 49,334; July 11; Gaz. vol. 228; p. 725.
Lamp. R. F. Snow. No. 49,297; July 4; Gaz. vol. 228; p. 374.
Lamp, Automobile-. D. H. Elkins. No. 49,298; July 4; Gaz. vol. 228; p. 375.
Lamp, Electric. L. Angiulli. No. 49,380; July 18; Gaz. vol. 228; p. 1061.
Lamp, Electric. J. A. Nelson. No. 49,439; July 25; Gaz. vol. 228; p. 1423.
Lamp for vehicles, Signal-. T. C. Esenberg. No. 49,299; July 4; Gaz. vol. 228; p. 375.
Lamp-shade. H. S. Evens. No. 49,331; July 11; Gaz. vol. 228; p. 724.
Light fixture, Artificial-. H. T. Howell. No. 49,309; July 4; Gaz. vol. 228; p. 376.
Lighting-fixture. H. C. Adam. No. 49,412; July 25; Gaz. vol. 228; p. 1419.
Lighting-fixture. E. F. Guth. No. 49,302; July 4; Gaz. vol. 228; p. 375.
Lighting-fixture. W. S. Snow. No. 49,372; July 11; Gaz. vol. 228; p. 732.
Lighting-fixture reflector. E. F. Guth. No. 49,386; July 18; Gaz. vol. 228; p. 1063.
Lighting-fixtures, Shower-pan for. R. Minuto. Nos. 49,361–2; July 11; Gaz. vol. 228; p. 730.
Locks, Operating-bar for emergency-exit. H. B. Sargent. No. 49,410; July 18; Gaz. vol. 228; p. 1067.
Mirror, brush, or similar article. H. J. Straker. No. 49,470; July 25; Gaz. vol. 228; p. 1429.
Monument. W. Marker. No. 49,359; July 11; Gaz. vol. 228; p. 729.
Ornamental head. G. M. Quackenbush. Nos. 49,441–2; July 25; Gaz. vol. 228; p. 1424.
Plate or similar article. H. Nagel. No. 49,438; July 25; Gaz. vol. 228; p. 1423.
Plate or similar article. A. Westerlind. No. 49,377; July 11; Gaz. vol. 228; p. 733.
Precious, semiprecious or synthetic stone, or an imitation thereof. S. Heller. No. 49,305; July 4; Gaz. vol. 228; p. 376.
Printer's cabinet. F. M. Basheller. No. 49,294; July 4; Gaz. vol. 228; p. 374.
Radiator-fender. J. Squires. No. 49,373; July 11; Gaz. vol. 228; p. 732.
Range. R. Hoffman. No. 49,353; July 11; Gaz. vol. 228; p. 728.
Ring. G. A. Hollier. No. 49,432; July 25; Gaz. vol. 228; p. 1422.
Rope-clamp. W. M. Lee. No. 49,312; July 4; Gaz. vol. 228; p. 377.
Rug. W. A. Elliot. Nos. 49,421–2; July 25; Gaz. vol. 228; pp. 1420–21.
Rug. E. G. Sauer. Nos. 49,447–63; July 25; Gaz. vol. 228; pp. 1425–8.
Rug. J. Spring. Nos. 49,465–9; July 25; Gaz. vol. 228; pp. 1428–9.
Scale-casing. H. O. Hem. No. 49,306; July 4; Gaz. vol. 228; p. 376.
Scooter. J. L. Morgan. No. 49,395; July 18; Gaz. vol. 228; p. 1064.

Seat and telephone-stand, Combined. C. E. Speaker. No. 49,319; July 4; Gaz. vol. 228; p. 378.
Sepulchral memorial. A. W. Graham. Nos. 49,335–51; July 11; Gaz. vol. 228; pp. 725–7.
Sign, Display-. W. L. Marshall. No. 49,437; July 25; Gaz. vol. 228; p. 1423.
Soap-dish. A. A. R. Anderson. No. 49,414; July 25; Gaz. vol. 228; p. 1419.
Spoon, fork, or similar article. F. Kaupmann. No. 49,311; July 4; Gaz. vol. 228; p. 377.
Spoon, fork, or similar article. C. F. Simms. No. 49,318; July 4; Gaz. vol. 228; p. 378.
Spoon, fork, or similar article. C. F. Simms. Nos. 49,870–1; July 11; Gaz. vol. 228; pp. 731–2.
Spoon, fork, or similar article. S. G. Wilkes. Nos. 49,321–3; July 4; Gaz. vol. 228; p. 379.
Spoon, fork, or similar article, Handle of a. A. W. Johanson. No. 49,355; July 11; Gaz. vol. 228; p. 728.
Stand or pedestal. L. Nitsche. No. 49,314; July 4; Gaz. vol. 228; p. 377.
Statuette. J. M. Raleigh. No. 49,443; July 25; Gaz. vol. 228; p. 1424.
Stool or taboret. A. G. Feldman. No. 49,385; July 18; Gaz. vol. 228; p. 1062.
Surgical instrument. M. Samuels. No. 49,316; July 4; Gaz. vol. 228; p. 378.
Suspenders. C. L. Camp. No. 49,418; July 25; Gaz. vol. 228; p. 1420.
Talking-machine cabinet. E. J. Fischer. No. 49,300; July 4; Gaz. vol. 228; p. 375.
Tent. P. Robinson. No. 49,446; July 25; Gaz. vol. 228; p. 1424.
Tire, Elastic vehicle-. W. E. Wilson. No. 49,407; July 18; Gaz. vol. 228; p. 1066.
Tire, Rubber. C. E. Jenkins. No. 49,433; July 25; Gaz. vol. 228; p. 1422.
Tire-tread. O. Braunwarth. No. 49,296; July 4; Gaz. vol. 228; p. 374.
Tire, Vehicle-. R. J. Stokes. Nos. 49,403–4; July 18; Gaz. vol. 228; p. 1066.
Toy. H. Fried. No. 49,301; July 4; Gaz. vol. 228; p. 375.
Trace-carrier, Hip drop. R. A. Schwahn. No. 49,369; July 11; Gaz. vol. 228; p. 731.
Two-light shower-plate. P. Mohrmann. No. 49,363; July 11; Gaz. vol. 228; p. 730.
Type, Font of. E. E. Bartlett. No. 49,382; July 18; Gaz. vol. 228; p. 1062.
Type, Font of. W. F. Capitain. No. 49,419; July 25; Gaz. vol. 228; p. 1420.
Valves, Dust-cap for. H. P. Kraft. No. 49,435; July 25; Gaz. vol. 228; p. 1423.
Vehicle heater, Self-propelled-. C. S. Pelton. No. 49,440; July 25; Gaz. vol. 228; p. 1424.
Vending-machine casing, Coin-operated. H. Giles. No. 49,333; July 11; Gaz. vol. 228; p. 725.
Wall-paper. C. Becker. No. 49,383; July 18; Gaz. vol. 228; p. 1062.
Wall-paper, Design to be applied to. J. Karzinek. No. 49,356; July 11; Gaz. vol. 228; p. 728.
Wall-paper, Floral border to be applied to. J. Korzinek. No. 49,409; July 18; Gaz. vol. 228; p. 1067.
Watch-holder. Z. Kuczabowski. No. 49,357; July 11; Gaz. vol. 228; p. 729.
Water-heater shell. C. A. Brekstrom. No. 49,381; July 18; Gaz. vol. 228; p. 1062.

ALPHABETICAL LIST OF TRADE-MARKS.

Apples, pears, peaches, cherries, plums, Fresh. H. J. Shinn & Co. No. 111,610; July 25; Gaz. vol. 228; p. 1453.
Asparagus, Fresh-packed. California Vegetable Union. No. 111,184; July 4; Gaz. vol. 228; p. 400.
Automobile, buggy, &c., tops, covers, and curtains. Auto Patent Equipment Company. No. 111,442; July 18; Gaz. vol. 228; p. 1087.
Automobile, furniture, &c., polish. Nubrite Manufacturing Co. No. 111,265; July 4; Gaz. vol. 228; p. 402.
Automobile inner tubes, blow-out patches, rubber hose, &c. Brownell Auto Co. No. 111,181; July 4; Gaz. vol. 228; p. 399.
Automobile-radiators. Harrison Manufacturing Company. No. 111,301; July 11; Gaz. vol. 228; p. 755.
Automobiles. S. Leschziner. No. 111,670; July 25; Gaz. vol. 228; p. 1455.
Axle grease-retainer, Automobile-. Shurnuff Manufacturing Company. No. 111,385; July 11; Gaz. vol. 228; p. 756.
Bacteria or soil-bacteria, Nitrogen-fixing. Western Soil Bacteria Co. No. 111,323; July 4; Gaz. vol. 228; p. 404.
Ball, Golf-. J. Floyd. No. 111,540; July 25; Gaz. vol. 228; p. 1451.
Bandages and cushions, Surgical and medical. The Reinschild Chemical Co. No. 111,283; July 4; Gaz. vol. 228; p. 403.
Baskets, Waste-. American Vulcanized Fibre Co. No. 111,160; July 4; Gaz. vol. 228; p. 399.
Bathing-suits. O. Axt. No. 111,164; July 4; Gaz. vol. 228; p. 399.
Batteries, Storage. Heissler Storage Battery Company. No. 111,362; July 11; Gaz. vol. 228; p. 755.
Bearing metal used in babbitting machinery-bearings. Morse Dry Dock & Repair Company. No. 111,594; July 25; Gaz. vol. 228; p. 1453.
Bed-cover fasteners. Keepwarm Klip Company. No. 111,416; July 11; Gaz. vol. 228; p. 757.
Beer. C. L. Centlivre Brewing Co. No. 111,346; July 11; Gaz. vol. 228; p. 755.
Beer. Citizens Brewing Corporation. No. 111,188; July 4; Gaz. vol. 228; p. 400.
Beer. N. P. Hachè & Hermanos. No. 111,507; July 18; Gaz. vol. 228; p. 1089.
Beer. The John Eichler Brewing Co. No. 111,496; July 18; Gaz. vol. 228; p. 1088.
Beer, Lager-. Essex County Brewing Co. No. 111,408; July 11; Gaz. vol. 228; p. 757.
Belt couplings or fasteners known as steel belt-lacing. Flexible Steel Lacing Company. No. 111,455; July 18; Gaz. vol. 228; p. 1087.
Beverage used only as a soft drink, Non-alcoholic non-intoxicating. Green & Green. No. 111,222; July 4; Gaz. vol. 228; p. 401.
Beverages, Carbonated non-alcoholic. J. L. Cross. No. 111,196; July 4; Gaz. vol. 228; p. 400.
Bicycles. Sears, Roebuck and Co. No. 111,511; July 18; Gaz. vol. 228; p. 1089.
Bicycles and motor-cycles. Westfield Manufacturing Company. No. 111,324; July 4; Gaz. vol. 228; p. 404.
Biscuit. National Biscuit Company. No. 111,424; July 11; Gaz. vol. 228; p. 757.
Bitters, Stomach-. F. Kalina. No. 111,242; July 4; Gaz. vol. 228; p. 401.
Blue. Reckitts (U. S. A.) No. 111,281; July 4; Gaz. vol. 228; p. 403.
Books, Continuing series of educational. A. W. Swain. No. 111,484; July 18; Gaz. vol. 228; p. 1088.
Boots and shoes. Boston Rubber Shoe Company. No. 111,176; July 4; Gaz. vol. 228; p. 399.
Boots and shoes. W. H. McElwain Company. No. 111,504; July 18; Gaz. vol. 228; p. 1089.
Boots and shoes, Leather, rubber, and canvas. Lund-Mauldin Company. No. 111,645; July 25; Gaz. vol. 228; p. 1454.
Bread. Taggart Baking Company. No. 111,309; July 4; Gaz. vol. 228; p. 403.
Bread, biscuits, rolls, &c. The George Sell Baking & Confectionery Company. No. 111,296; July 4; Gaz. vol. 228; p. 403.
Bricks. G. F. Bason. No. 111,395; July 11; Gaz. vol. 228; p. 756.
Bricks, Clay. Beaver Clay Manufacturing Company. No. 111,552; July 25; Gaz. vol. 228; p. 1452.
Brushes, brooms, and dusters manufactured from bristle. Rubin, Schumann Company. No. 111,289; July 4; Gaz. vol. 228; p. 403.
Brushes, Hair, cloth, hat, and nail. L. Joseph. No. 111,414; July 11; Gaz. vol. 228; p. 757.
Buildings, Sheet-metal work for. Boston Metal Ceiling and Manufacturing Company. No. 111,174; July 4; Gaz. vol. 228; p. 399.
Buns or biscuits. A. G. Reck. No. 111,280; July 4; Gaz. vol. 228; p. 403.
Butter. Caldwell Co-operative Creamery Co. No. 111,182; July 4; Gaz. vol. 228; p. 400.
Butter, eggs, cheese, canned vegetables. J. F. Toner. No. 111,488; July 18; Gaz. vol. 228; p. 1088.
Cabinets, Kitchen-. Hastings Cabinet Co. No. 111,666; July 25; Gaz. vol. 228; p. 1455.
Cakes. The F. O. Stone Baking Company. No. 111,307; July 4; Gaz. vol. 228; p. 403.
Cameras and tripods. Eastman Kodak Co. No. 111,203; July 4; Gaz. vol. 228; p. 400.
Candies, Chocolate. Gurley Candy Company. No. 111,635; July 25; Gaz. vol. 228; p. 1454.
Candies. The Golden Pheasant. No. 111,220; July 4; Gaz. vol. 228; p. 401.
Candies. Kellogg Toasted Corn Flake Company. No. 111,641; July 25; Gaz. vol. 228; p. 1454.
Candies. G. W. Loft. No. 111,419; July 11; Gaz. vol. 228; p. 757.
Candy. The Cherry-Cheer Company. No. 111,348; July 11; Gaz. vol. 228; p. 755.
Candy. Paul F. Beich Co. No. 111,626; July 25; Gaz. vol. 228; p. 1454.
Candy. A. M. Ramer Co. No. 111,383; July 11; Gaz. vol. 228; p. 756.
Candy, confections, conserves, &c., Boxed. Dinou Bros. No. 111,356; July 11; Gaz. vol. 228; p. 755.
Canned, bottled, and preserved fruits and candy. The Cleveland Fruit Juice Company. No. 111,562; July 25; Gaz. vol. 228; p. 1452.
Canned corn and sauer-kraut. Olivia Canning Preserving & Manufacturing Co. No. 111,266; July 4; Gaz. vol. 228; p. 402.
Canned fruits. The J. K. Armsby Co. No. 111,162; July 4; Gaz. vol. 228; p. 399.
Canned fruits and vegetables. Cohocton Canning Co. No. 111,630; July 25; Gaz. vol. 228; p. 1454.
Canned fruits, vegetables, and clams, salmon, coffee. Daniels, Cornell Co. No. 111,570; July 25; Gaz. vol. 228; p. 1452.
Canned olive-oil. M. Ajello. No. 111,437; July 18; Gaz. vol. 228; p. 1087.
Canned prepared meats. L. Frank & Son Co. No. 111,212; July 4; Gaz. vol. 228; p. 400.
Canned salmon. Alaska-Pacific Fisheries. No. 111,152; July 4; Gaz. vol. 228; p. 399.
Canned salmon. P. E. Harris & Co. No. 111,636; July 25; Gaz. vol. 228; p. 1454.
Canned salmon. North Alaska Salmon Co. No. 111,376; July 11; Gaz. vol. 228; p. 756.
Canned tamales. Goetjen & Workman. No. 111,360; July 11; Gaz. vol. 228; p. 755.
Canned vegetables. Lange Canning Co. No. 111,525; July 25; Gaz. vol. 228; p. 1451.
Caps and hats. The Capanhat Co. No. 111,186; July 4; Gaz. vol. 228; p. 400.
Carbon-scale remover compound. W. M. Mitchell. No. 111,471; July 18; Gaz. vol. 228; p. 1088.
Cards and games, Playing-. M. J. Moriarty. No. 111,472; July 18; Gaz. vol. 228; p. 1088.
Carpets, mattings, &c., made from palmetto-palm-leaf fibers. Palmetto Products Company. Nos. 111,267–8; July 4; Gaz. vol. 228; p. 402.
Cements, plaster Paris, stucco, lime. The Cleveland Builders Supply Co. No. 111,350; July 11; Gaz. vol. 228; p. 755.
Cements, Roofing and boiler-setting. The W. E. Smith Manufacturing Company. No. 111,386; July 11; Gaz. vol. 228; p. 756.
Cereal preparation for bakery use, Powdered. Advance Malt Products Company. No. 111,437; July 18; Gaz. vol. 228; p. 1087.
Cheese. Phœnix Cheese Co. No. 111,427; July 11; Gaz. vol. 228; p. 757.
Chemicals, medicines, and pharmaceutical preparations. Emil Scheller & Co., A. G. No. 111,609; July 25; Gaz. vol. 228; p. 1453.
Chocolates. Powell's. No. 111,601; July 25; Gaz. vol. 228; p. 1453.
Chocolates and confections. Levine Brothers. No. 111,644; July 25; Gaz. vol. 228; p. 1454.
Cigar cutters and lighters, Electric. The Havalite Corporation. No. 111,637; July 25; Gaz. vol. 228; p. 1454.
Cigar cutters and lighters, Electric. The Havalite Corporation. No. 111,667; July 25; Gaz. vol. 228; p. 1455.
Cigars. A. Centeno & Co. No. 111,522; July 25; Gaz. vol. 228; p. 1457.
Cigars. M. L. Fernandez. No. 111,205; July 4; Gaz. vol. 228; p. 400.
Cigars. The Mendelsohn Company. No. 111,592; July 25; Gaz. vol. 228; p. 1453.

Cigars. J. C. Newman. No. 111,474; July 18; Gaz. vol. 228; p. 1088.
Cigars. Prince Cigar Mfg. Co. No. 111,274; July 4; Gaz. vol. 228; p. 402.
Cigars and cigarettes. H. Jacobstein. No. 111,240; July 4; Gaz. vol. 228; p. 401.
Cigars, cigarettes, smoking or chewing tobacco. S. H. Furgatch. No. 111,664; July 25; Gaz. vol. 228; p. 1455.
Cleaners and attachments therefor, Suction-. Innovation Electric Company. No. 111,237; July 4; Gaz. vol. 228; p. 401.
Cleaning carpets, cloths, &c., Detergent fluid for. J. E. Williams. No. 111,329; July 4; Gaz. vol. 228; p. 404.
Cleaning pastes and soaps. J. E. Williams. No. 111,330; July 4; Gaz. vol. 228; p. 404.
Clocks and watches. Western Clock Co. No. 111,533; July 25; Gaz. vol. 228; p. 1451.
Coal. Garfield & Proctor Coal Company. No. 111,216; July 4; Gaz. vol. 228; p. 401.
Coats, mackinaws, shirts, overalls. Carter & Churchill Co. No. 111,561; July 25; Gaz. vol. 228; p. 1452.
Coats, vests, trousers, overcoats, and rain-coats. Hart Schaffner & Marx. Nos. 111,226–7; July 4; Gaz. vol. 228; p. 401.
Cocktails. H. C. White. No. 111,516; July 18; Gaz. vol. 228; p. 1089.
Coffee. M. J. Brandenstein & Co. No. 111,179; July 4; Gaz. vol. 228; p. 399.
Coffee. Crump & Field. No. 111,569; July 25; Gaz. vol. 228; p. 1452.
Coffee. E. E. Gray Co. No. 111,221; July 4; Gaz. vol. 223; p. 401.
Coffee. J. M. Kelly Co. No. 111,365; July 11; Gaz. vol. 228; p. 756.
Coffee. Mutual Coffee Co. No. 111,595; July 25; Gaz. vol. 228; p. 1455.
Coffee. Tindall, Kolbe & McDowell Co. Nos. 111,312–13; July 4; Gaz. vol. 228; p. 404.
Coffee, Blended. The Bour Company. No. 111,343; July 11; Gaz. vol. 228; p. 755.
Coffee, Blended. J. M. Kelly Co. No. 111,366; July 11; Gaz. vol. 228; p. 756.
Coffee, poultry, canned fruits and vegetables, Blend. E. S. Alpaugh & Company. No. 111,625; July 25; Gaz. vol. 228; p. 1454.
Coffee, Roasted. Steinwender-Stoffregen Coffee Co. No. 111,387; July 11; Gaz. vol. 228; p. 756.
Colors for coaches, carriages, and cars, Japan. Valentine & Company. No. 111,618; July 25; Gaz. vol. 228; p. 1454.
Colors in oil, Pure. Valentine & Company. No. 111,617; July 25; Gaz. vol. 228; p. 1454.
Containers and parts thereof, Certain named. The Paper Vessels Company. No. 111,269; July 4; Gaz. vol. 228; p. 402.
Corn. Mrs. M. R. Kelly. No. 111,585; July 25; Gaz. vol. 228; p. 1453.
Cornmeal. W. B. Brigham & Son. No. 111,627; July 25; Gaz. vol. 228; p. 1454.
Cornmeal, chicken feed, horse and cow feed. F. Raidt Milling Co. No. 111,478; July 18; Gaz. vol. 228; p. 1088.
Cotton piece goods, Colored. W. Anderson & Co. No. 111,548; July 25; Gaz. vol. 228; p. 1452.
Cotton-warp fabrics with wool, mohair, or alpaca fillings. Lesher Whitman & Co. No. 111,327; July 4; Gaz. vol. 228; p. 404.
Cough-syrup. M. Lessard. No. 111,252; July 4; Gaz. vol. 228; p. 402.
Crackers. Taggart Baking Company. No. 111,308; July 4; Gaz. vol. 228; p. 403.
Crates of cantaloups and sweet potatoes. Turlock Merchants & Growers Incorporated. No. 111,616; July 25; Gaz. vol. 228; p. 1454.
Cream, Cold-. Long Acre Cold Cream Co. No. 111,420; July 11; Gaz. vol. 228; p. 757.
Cream, Face-. A. Leblanc. No. 111,251; July 4; Gaz. vol. 228; p. 402.
Cream, skin cream and balm, freckle-lotion, &c., Massage-. A. J. Ryan. No. 111,290; July 4; Gaz. vol. 228; p. 403.
Creams, powders, and shampoo preparations, Face and greaseless. B. J. Johnson Soap Company. No. 111,460; July 18; Gaz. vol. 228; p. 1087.
Cuff-links. Flexo Cuff Link Manufacturing Co. No. 111,208; July 4; Gaz. vol. 228; p. 400.
Cutlery, machinery, and tools, and parts thereof, Certain named. Cleveland Tool & Supply Company. No. 111,189; July 4; Gaz. vol. 228; p. 400.
Dental grinding-wheels. William Brody & Co. No. 111,535; July 25; Gaz. vol. 228; p. 1451.
Dental, medical, and surgical appliances, Certain named. F. Gottschalk. No. 111,497; July 18; Gaz. vol. 228; p. 1088.
Dental preparation. W. A. Chamberlain. No. 111,187; July 4; Gaz. vol. 228; p. 400.
Dental wash. L. C. H. Dental Mfg. Co. No. 111,369; July 11; Gaz. vol. 228; p. 756.
Dentifrices. F. J. Rhodes. No. 111,479; July 18; Gaz. vol. 228; p. 1088.
Deodorants and disinfectants. Lyster Chemical Co. No. 111,421; July 11; Gaz. vol. 228; p. 757.
Die-cast machine parts. Acme Die-Casting Corporation. No. 111,544; July 25; Gaz. vol. 228; p. 1451.
Dolls, Cut-out. Reely-Trooly Co. No. 111,510; July 18; Gaz. vol. 228; p. 1089.
Douche, Antiseptic. Lincoln & Newman. No. 111,587; July 25; Gaz. vol. 228; p. 1453.
Drawers, shirts, pajama-suits, Textile. N. Rippenbein. No. 111,604; July 25; Gaz. vol. 228; p. 1453.
Dress goods in the piece, Certain named. Wm. Simpson, Sons & Co. No. 111,300; July 4; Gaz. vol. 228; p. 403.
Dresses, Children's. Elite Garment Company of Syracuse, N. Y. No. 111,204; July 4; Gaz. vol. 228; p. 400.
Drills, Fluid-operated hammer-. Ingersoll-Rand Company. No. 111,236; July 4; Gaz. vol. 228; p. 401.
Drugs employed for the treatment of tuberculosis, Extract of. The William S. Merrell Chemical Company. No. 111,506; July 18; Gaz. vol. 228; p. 1089.
Drugs employed in the treatment of cancer, Extract of plant. The William S. Merrell Chemical Company. No. 111,505; July 18; Gaz. vol. 228; p. 1087.
Duck or khaki, Waterproof. William L. Barrell Co. No. 111,166; July 4; Gaz. vol. 228; p. 399.
Eggs. P. Berry & Sons. No. 111,553; July 25; Gaz. vol. 228; p. 1452.
Electric switches, sockets, receptacles for lamps, &c. The Arrow Electric Company. No. 111,549; July 25; Gaz. vol. 228; p. 1452.
Embroideries, Stamped art. E. P. Bond. No. 111,518; July 25; Gaz. vol. 228; p. 1451.
Enameled ware. G. W. Jeffords. No. 111,501; July 18; Gaz. vol. 228; p. 1089.
Engines, Internal-combustion. The Warner Fence Co. No. 111,392; July 11; Gaz. vol. 228; p. 756.
Engraving compound. O. B. Johnson. No. 111,502; July 18; Gaz. vol. 228; p. 1089.
Extinguishers, Tank chemical. The Firex Extinguisher Company. No. 111,574; July 25; Gaz. vol. 228; p. 1452.
Eye-tablets. Tropical Pharmacal Company. No. 111,434; July 11; Gaz. vol. 228; p. 758.
Eye-water. E. O. Petro. No. 111,600; July 25; Gaz. vol. 223; p. 1453.
Fans, fan-motors and frames, Electric. The Emerson Electric Manufacturing Company. No. 111,633; July 25; Gaz. vol. 228; p. 1454.
Feed for horses, stock, cattle, and poultry, Mixed. Nowak Milling Company. No. 111,596; July 25; Gaz. vol. 228; p. 1453.
Feed, Poultry. Alfocorn Milling Company. No. 111,153; July 4; Gaz. vol. 228; p. 399.
Feed, Poultry and stock. The Larrowe Milling Co. No. 111,250; July 4; Gaz. vol. 228; p. 402.
Felts, building-papers, roofing-pitch, Sheathing and roofing. Stelwagon Manufacturing Company. No. 111,304; July 4; Gaz. vol. 228; p. 403.
Fertilizer. Reading Bone Fertilizer Co. No. 111,602; July 25; Gaz. vol. 228; p. 1453.
Fertilizers. The American Agricultural Chemical Co. No. 111,334; July 11; Gaz. vol. 228; p. 755.
Fertilizers. Florida Soft Phosphate & Lime Co. No. 111,207; July 4; Gaz. vol. 228; p. 400.
Fertilizers. The Robert A. Wooldridge Co. No. 111,658; July 25; Gaz. vol. 228; p. 1455.
Fiber, Vulcanized. American Vulcanized Fibre Co. No. 111,159; July 4; Gaz. vol. 228; p. 399.
Fire-escape, Metal. E. Lemons. No. 111,526; July 25; Gaz. vol. 228; p. 1451.
Fish and particularly codfish, Dried. Union Fish Co. No. 111,513; July 18; Gaz. vol. 228; p. 1089.
Fish lines, hooks, and leaders. Dunham, Carrigan & Hayden Co. No. 111,495; July 18; Gaz. vol. 228; p. 1088.
Flavoring extracts, cocoanut, chocolate, spices, &c. E. C. Campbell. No. 111,185; July 4; Gaz. vol. 228; p. 400.
Flavoring extracts, tea, coffee, and cocoa. The Williams & Carleton Company. No. 111,534; July 25; Gaz. vol. 228; p. 1451.
Flooring, Hardwood. West Michigan Flooring Company. No. 111,322; July 4; Gaz. vol. 228; p. 404.
Floors, pavements, &c., Reinforced-concrete and asphalt. L. L. Wright. No. 111,623; July 25; Gaz. vol. 228; p. 1454.
Flour, Pure malt-. Advance Malt Products Company. No. 111,438; July 18; Gaz. vol. 228; p. 1087.
Flour, Self-rising wheat-. The Rea-Patterson Milling Company. Nos. 111,278–0; July 4; Gaz. vol. 228; p. 403.
Flour, Self-rising. Threefoot Bros. & Co. No. 111,487; July 18; Gaz. vol. 228; p. 1088.
Flour, Wheat-. W. N. Burgess. No. 111,449; July 18; Gaz. vol. 228; p. 1087.
Flour, Wheat-. J. L. Cisneros. Nos. 111,628–9; July 25; Gaz. vol. 228; p. 1454.
Flour, Wheat-. Claro Milling Co. No. 111,402; July 11; Gaz. vol. 228; p. 757.
Flour, Wheat-. The Mansfield Milling Co. No. 111,255; July 4; Gaz. vol. 228; p. 402.
Flour, Wheat-. The St. Anthony Milling & Elevator Company. No. 111,291; July 4; Gaz. vol. 228; p. 403.
Flour, Wheat-. The United Mills Flour Company. No. 111,314; July 4; Gaz. vol. 228; p. 404.
Flour, Wheat-. Vail Milling Company. No. 111,317; July 4; Gaz. vol. 228; p. 404.
Flowers and plants. West Grove Rose & Floral Co. No. 111,321; July 4; Gaz. vol. 228; p. 404.
Fly-destroyer, Non-poisonous. Pontiac Exterminating Company. No. 111,428; July 11; Gaz. vol. 228; p. 757.
Food, Cereal. Wheat-O-Corn Co. No. 111,657; July 25; Gaz. vol. 228; p. 1455.

Food, Cereal breakfast. J. R. Burlingame. No. 111,345; July 11; Gaz. vol. 228; p. 755.
Food, Cereal breakfast. Martha Jones Pure Food Co. No. 111,467; July 18; Gaz. vol. 228; p. 1088.
Food, Infant's. J. S. Robinson. No. 111,530; July 25; Gaz. vol. 228; p. 1451.
Food, Infants' and invalids'. Smith Kline & French Co. No. 111,676; July 25; Gaz. vol. 228; p. 1455.
Food, Prepared stock. Atlantic Export Company. No. 111,517; July 25; Gaz. vol. 228; p. 1451.
Foods, Certain named. Andrew Kuehn Company. No. 111,368; July 11; Gaz. vol. 228; p. 756.
Foods, Certain named. A. F. Beckmann. No. 111,396; July 11; Gaz. vol. 228; p. 756.
Foods, Certain named. S. L. Crawford & Sons. No. 111,631; July 25; Gaz. vol. 228; p. 1454.
Foods, Certain named. Drake & Company. No. 111,573; July 25; Gaz. vol. 228; p. 1452.
Foods, Certain named. A. Ehlers. No. 111,537; July 25; Gaz. vol. 228; p. 1451.
Foods, Certain named. Haas Brothers. No. 111,456; July 18; Gaz. vol. 228; p. 1087.
Foods, Certain named. Horn & Hardart Baking Company. No. 111,233; July 4; Gaz. vol. 228; p. 401.
Foods, Certain named. Jobst Bethard Co. No. 111,445; July 18; Gaz. vol. 228; p. 1087.
Foods, Certain named. Lauderbach-Barber Company. No. 111,503; July 18; Gaz. vol. 228; p. 1089.
Foods, Certain named. Jos. Middleby, Jr. No. 111,647; July 25; Gaz. vol. 228; p. 1454.
Foods, Certain named. Merrell-Soule Company. No. 111,469; July 18; Gaz. vol. 228; p. 1088.
Foods, Certain named. The Puyallup & Sumner Fruit Growers Association. No. 111,275; July 4; Gaz. vol. 228; p. 402.
Foods, Certain named. The Twitchell-Champlin Company. No. 111,391; July 11; Gaz. vol. 228; p. 756.
Foods, Certain named. Worden Grocer Company. No. 111,622; July 25; Gaz. vol. 228; p. 1454.
Foods, Certain named. Younglove Grocery Co. No. 111,333; July 4; Gaz. vol. 228; p. 404.
Foods having yeast or analogous material as their main ingredient. R. A. Wittemann. No. 111,677; July 25; Gaz. vol. 228; p. 1455.
Fruit, Citrus. Kissimmee Citrus Growers' Association. Nos. 111,244–5; July 4; Gaz. vol. 228; p. 401.
Fruit-juice for making jelly, Concentrated. I. C. Dilworth. No. 111,661; July 25; Gaz. vol. 228; p. 1455.
Fruit-juice, Loganberry. Pheasant Fruit Juice Company. No. 111,272; July 4; Gaz. vol. 228; p. 402.
Fruits and vegetables, Fresh. Reams & Waterman. No. 111,277; July 4; Gaz. vol. 228; p. 402.
Fruits, canned vegetables, Raw, dried, and evaporated. T. P. Lippitt. No. 111,371; July 11; Gaz. vol. 228; p. 756.
Fruits, Citrus. Johnston Fruit Co. No. 111,642; July 25; Gaz. vol. 228; p. 1454.
Fur muffs and scarfs. Sharfstein & Cohn. No. 111,297; July 4; Gaz. vol. 228; p. 403.
Furniture, Certain named. Best & Co. Nos. 111,172–3; July 4; Gaz. vol. 228; p. 399.
Garters. C. A. Rodriguez. No. 111,286; July 4; Gaz. vol. 228; p. 403.
Garters. A. Stein & Company. No. 111,531; July 25; Gaz. vol. 228; p. 1451.
Gas-mantles, Incandescent. J. I. Robin. No. 111,285; July 4; Gaz. vol. 228; p. 403.
Gasolene, Liquid to mix with to reduce carbon deposits in gasolene-engines. C. A. Knapp. No. 111,586; July 25; Gaz. vol. 228; p. 1453.
Gelatin. Anderson Mfg. Co. No. 111,547; July 25; Gaz. vol. 228; p. 1452.
Girdles and shirt-waist belts. Treo Company. No. 111,615; July 25; Gaz. vol. 228; p. 1454.
Glass. Corning Glass Works. No. 111,192; July 4; Gaz. vol. 228; p. 400.
Glass. Corning Glass Works. No. 111,506; July 25; Gaz. vol. 228; p. 1452.
Glass dishes and tableware. Hazel-Atlas Glass Company. No. 111,228; July 4; Gaz. vol. 228; p. 401.
Glass, Translucent material for decorating window-. The Wall Paper Manufacturers. No. 111,319; July 4; Gaz. vol. 228; p. 404.
Glasses, Nose-guards for nose-. Jones Shark-Skin Grip Company. No. 111,413; July 11; Gaz. vol. 228; p. 757.
Glassware having silver decorations. Deldrick Glass Co. No. 111,572; July 25; Gaz. vol. 228; p. 1452.
Gloves. Wimelbacher & Rice. No. 111,543; July 25; Gaz. vol. 228; p. 1451.
Gloves and mittens. Wells-Lamont Mfg. Co. No. 111,393; July 11; Gaz. vol. 228; p. 756.
Golf-club heads. The Burke Golf Company. No. 111,450; July 18; Gaz. vol. 228; p. 1087.
Golf-courses, a game, Miniature. A. W. Tillinghast. No. 111,311; July 4; Gaz. vol. 228; p. 403.
Granite in the rough. Battlefield Granite Corporation. No. 111,169; July 4; Gaz. vol. 228; p. 399.
Gum containing a remedy for the tobacco and snuff habit, Chewing. Gum-Bo Company. No. 111,577; July 25; Gaz. vol. 228; p. 1452.
Hair-grower, brilliantine, skin-cream, &c. R. C. Douglas. No. 111,407; July 11; Gaz. vol. 228; p. 757.
Hair-restorer. N. D. Farakos. No. 111,538; July 25; Gaz. vol. 228; p. 1451.
Hair-tonic. J. E. Berlfein. No. 111,397; July 11; Gaz. vol. 228; p. 757.
Hair-tonic. L. C. Pantages. No. 111,378; July 11; Gaz. vol. 228; p. 756.
Hair-tonic and shampoo preparation. H. H. Bateman. Nos. 111,167–8; July 4; Gaz. vol. 228; p. 399.
Hams, bacon, and lard. Hell Packing Company. No. 111,457; July 18; Gaz. vol. 228; p. 1087.
Hat bleach, Panama and straw. L. H. Lichterman. No. 111,253; July 4; Gaz. vol. 228; p. 402.
Hats, Ladies'. J. L. Rosenberg. No. 111,605; July 25; Gaz. vol. 228; p. 1453.
Heat generators, Steam-. Sears, Roebuck and Co. No. 111,294; July 4; Gaz. vol. 228; p. 403.
Heating, lighting, and ventilating apparatus, Certain named. American District Steam Company. No. 111,155; July 4; Gaz. vol. 228; p. 399.
Heating, lighting, and ventilating apparatus, Certain named. The "S-C" Regulator Company. No. 111,606; July 25; Gaz. vol. 228; p. 1453.
Hog-cholera and blood and bowel remedy and tonic for horses and cattle. J. L. Sausaman. No. 111,429; July 11; Gaz. vol. 228; p. 757.
Hog-cholera, Composition for treating. S. B. Miller. No. 111,260; July 4; Gaz. vol. 228; p. 402.
Hog-cholera preventive. C. A. Mills Dan Mills. No. 111,648; July 25; Gaz. vol. 228; p. 1454.
Hosiery, Ladies' and men's. G. M. Grissmann. No. 111,524; July 25; Gaz. vol. 228; p. 1451.
Humidors for cigars or tobacco. F. E. Fonseca. No. 111,209; July 4; Gaz. vol. 228; p. 400.
Ice-cream powder. B. Heller & Co. No. 111,229; July 4; Gaz. vol. 228; p. 401.
Ink, Marking-. Dr. Raymond A. Lindley. No. 111,588; July 25; Gaz. vol. 228; p. 1453.
Ink, Writing-. Peoria Ink Company. No. 111,379; July 11; Gaz. vol. 228; p. 756.
Insecticide preparation for washing live stock and poultry. Lanman & Kemp. No. 111,870; July 11; Gaz. vol. 228; p. 756.
Insulating material. The Lundin Company. No. 111,466; July 18; Gaz. vol. 228; p. 1088.
Insulating material. K. R. Sternberg. No. 111,305; July 4; Gaz. vol. 228; p. 403.
Irons, Gas-. New York Pressing Iron Co. No. 111,541; July 25; Gaz. vol. 228; p. 1451.
Jelly, canned pitted cherries, &c., Grape. Jos. Middleby, Jr., Inc. No. 111,375; July 11; Gaz. vol. 228; p. 756.
Kilns, rooms, and apparatus, Drying. E. E. Perkins. No. 111,380; July 11; Gaz. vol. 228; p. 756.
Knit wool and felt boots. Mishawaka Woolen Manufacturing Company. No. 111,649; July 25; Gaz. vol. 228; p. 1455.
Knives, Butcher and pocket. Cattaraugus Cutlery Co. No. 111,660; July 25; Gaz. vol. 228; p. 1455.
Lamp-shades. Phillipson Decorating Co. No. 111,273; July 4; Gaz. vol. 228; p. 402.
Lamps, Electric. General Electric Company. No. 111,634; July 25; Gaz. vol. 228; p. 1454.
Lamps, Electric incandescent. General Electric Company. No. 111,218; July 4; Gaz. vol. 228; p. 401.
Lamps, Night and nursery candle-. Price's Patent Candle Company. No. 111,470; July 18; Gaz. vol. 228; p. 1088.
Lamps, Portable acetylene-. Dewar Manufacturing Company. No. 111,454; July 18; Gaz. vol. 228; p. 1087.
Lard. John F. Jelke Company. No. 111,459; July 18; Gaz. vol. 228; p. 1087.
Lard, hams, and bacon. Chicago Butcher's Packing Co. No. 111,349; July 11; Gaz. vol. 228; p. 755.
Laxative preparation. The Senna Sisters. No. 111,481; July 18; Gaz. vol. 228; p. 1088.
Leather, Tanned finished calf-. Barnet Leather Co. Nos. 111,338–42; July 11; Gaz. vol. 228; p. 755.
Leathers and skins. Anciens Etabts. A. Combe & Fils & Cie. No. 111,546; July 25; Gaz. vol. 228; p. 1452.
Leathers and skins. Societe des Anciens Etablissements A. Combe et Fils et Cie. No. 111,301; July 4; Gaz. vol. 228; p. 403.
Lenses, Optical. Buffalo Lens Mfg. Co. No. 111,558; July 25; Gaz. vol. 228; p. 1452.
Lightning-rods. The Toledo Cable Company. No. 111,652; July 25; Gaz. vol. 228; p. 1455.
Lime, Hydrated. The National Lime and Stone Company. No. 111,263; July 4; Gaz. vol. 228; p. 402.
Limes, fresh fruits and vegetables, citrus fruits. Jim M. Reilly Company. No. 111,608; July 25; Gaz. vol. 228; p. 1453.
Linen goods in the piece. Ireland Bros. No. 111,239; July 4; Gaz. vol. 228; p. 401.
Literary works of Mrs. Gene Stratton-Porter. Doubleday, Page & Company. No. 111,200; July 4; Gaz. vol. 228; p. 400.
Lotion, Dermatological. The C. L. Cotton Perfume & Extract Co. No. 111,352; July 11; Gaz. vol. 228; p. 755.
Lumber. The R. W. Walker Lumber Company. No. 111,491; July 18; Gaz. vol. 228; p. 1088.
Macaroni paste products. F. A. Martoccio Macaroni Co. No. 111,646; July 25; Gaz. vol. 228; p. 1454.
Malt extracts. N. P. Haché & Hermanos. No. 111,423; July 11; Gaz. vol. 228; p. 757.
Malt in sacks or cases. Milwaukee Malting Company. No. 111,261; July 4; Gaz. vol. 228; p. 402.

Malt powder for laundry use. Advance Malt Products Company. No. 111,436; July 18; Gaz. vol. 228; p. 1087.
Malt preparations having diastasic properties, Liquid. Malt-Diastase Co. No. 111,264; July 4; Gaz. vol. 228; p. 402.
Manicure-instrument coverings and protectors, Felt. M. Klaas. No. 111,463; July 18; Gaz. vol. 228; p. 1087.
Mats, Steel flexible. The Wayne Manufacturing Company. No. 111,619; July 25; Gaz. vol. 228; p. 1454.
Mattresses. Crescent Feather Company. No. 111,354; July 11; Gaz. vol. 228; p. 755.
Mattresses, bed box-springs, pillows. Dixie Cotton Felt Mattress Company. No. 111,406; July 11; Gaz. vol. 228; p. 757.
Medicinal preparation for asthma, &c. Tower Remedy Co. No. 111,389; July 11; Gaz. vol. 228; p. 756.
Medicine for epilepsy. J. L. Stott. No. 111,483; July 18; Gaz. vol. 228; p. 1088.
Medicine for pellagra and blood diseases. J. H. Arnold. No. 111,441; July 18; Gaz. vol. 228; p. 1087.
Metal in rod, bar, and sheet forms and metal blanks. H. Baker & Co. Nos. 111,556–7; July 25; Gaz. vol. 228; p. 1452.
Metal-polish. K. J. Komacki. No. 111,248; July 4; Gaz. vol. 228; p. 402.
Metal-polish. H. S. Lauter. No. 111,643; July 25; Gaz. vol. 228; p. 1454.
Metals, Compositions consisting of certain named. Crown Smelting Company. No. 111,568; July 25; Gaz. vol. 228; p. 1452.
Milk, cream, and buttermilk. C. Thompson. No. 111,310; July 4; Gaz. vol. 228; p. 403.
Minerals, mineral samples, ores, and mineral substances. Foote Mineral Co. No. 111,575; July 25; Gaz. vol. 228; p. 1452.
Mops, Oil-. Marshall Field & Company. No. 111,206; July 4; Gaz. vol. 228; p. 400.
Motors, generators, and motor-generators, Electric. The Hertner Electric and Manufacturing Company. No. 111,638; July 25; Gaz. vol. 228; p. 1454.
Music, Sheet-. Waterson-Berlin & Snyder Co. No. 111,655; July 25; Gaz. vol. 228; p. 1455.
Musical-instrument strings, accordions, and drums. A. Burdwise. No. 111,519; July 25; Gaz. vol. 228; p. 1451.
Musical-instrument strings, violins, guitars, &c. A. Burdwise. No. 111,520; July 25; Gaz. vol. 228; p. 1451.
Mustard. S. J. Valk & Bro. No. 111,318; July 4; Gaz. vol. 228; p. 404.
Neckwear, Ladies'. Waldes & Company. No. 111,532; July 25; Gaz. vol. 228; p. 1451.
Newspaper-section. German Journal Corporation. No. 111,219; July 4; Gaz. vol. 228; p. 401.
Newspaper-section. Star Company. No. 111,611; July 25; Gaz. vol. 228; p. 1453.
Newspaper supplement, Weekly. The Tribune Company. No. 111,664; July 25; Gaz. vol. 228; p. 1455.
Nutrient compound. The Arlington Chemical Co. No. 111,394; July 11; Gaz. vol. 228; p. 756.
Oil, Kerosene. The Red C Oil Manufacturing Co. No. 111,651; July 25; Gaz. vol. 228; p. 1455.
Oil, Lubricating and rust-preventing. J. Tsak. No. 111,653; July 25; Gaz. vol. 228; p. 1455.
Oils and greases. Austin, Bryant & Carter. No. 111,163; July 4; Gaz. vol. 228; p. 399.
Oils and greases, Lubricating. Petroleum Products Co. of California. No. 111,271; July 4; Gaz. vol. 228; p. 402.
Oils, Lubricating-. A. S. Tindell. No. 111,614; July 25; Gaz. vol. 228; p. 1453.
Ointment. C. E. Costenbader. No. 111,451; July 18; Gaz. vol. 228; p. 1087.
Ointment for neuralgia, rheumatism, and sciatica. M. Thomas. No. 111,486; July 18; Gaz. vol. 228; p. 1088.
Oleomargarin. John F. Jelke Company. No. 111,458; July 18; Gaz. vol. 228; p. 1087.
Olives. D. Gomez y Hermano. No. 111,355; July 11; Gaz. vol. 228; p. 755.
Olives, olive-butter, salad-dressing. The Pompeian Company. No. 111,650; July 25; Gaz. vol. 228; p. 1455.
Olives, Ripe. Huse Packing Company. No. 111,412; July 11; Gaz. vol. 228; p. 757.
Oranges and grape-fruit. Irwindale Citrus Assn. No. 111,639; July 25; Gaz. vol. 228; p. 1454.
Oranges, lemons, fresh apples and vegetables. W. O. Randolph. No. 111,276; July 4; Gaz. vol. 228; p. 402.
Ore, mineral, &c., crushing and pulverizing machinery. K-B Pulverizer Company. No. 111,640; July 25; Gaz. vol. 228; p. 1454.
Packing, Asbestos, rubber, and composition. Neptune Packing and Rubber Co. No. 111,425; July 11; Gaz. vol. 228; p. 757.
Paint for coach and automobile painting, Paste. John W. Masury & Son. Nos. 111,257–8; July 4; Gaz. vol. 228; p. 402.
Paint for coach and automobile painting, Paste. John W. Masury & Son. No. 111,589; July 25; Gaz. vol. 228; p. 1453.
Painted and varnished surfaces, Polish for. McDowell and Gorton. No. 111,590; July 25; Gaz. vol. 228; p. 1453.
Paper and envelops, Writing-. Eastern Manufacturing Company. No. 111,202; July 4; Gaz. vol. 228; p. 400.
Paper and stationery, Certain named. Milwaukee Lace Paper Company. No. 111,470; July 18; Gaz. vol. 228; p. 1088.
Paper bags. The Chatfield & Woods Company. No. 111,347; July 11; Gaz. vol. 228; p. 755.
Paper boxes. York-Bradford Co. No. 111,492; July 18; Gaz. vol. 228; p. 1088.
Paper boxes and mailing-wrappers, Corrugated-. Corrugated Paper Products Co. No. 111,193; July 4; Gaz. vol. 228; p. 400.
Paper-display books, Wall-. R. N. Beard. No. 111,659; July 25; Gaz. vol. 228; p. 1455.
Paper in sheets, Gummed. Ideal Coated Paper Co. No. 111,499; July 18; Gaz. vol. 228; p. 1089.
Paper-lined cotton and burlap. The Cleveland-Akron Bag Co. No. 111,563; July 25; Gaz. vol. 228; p. 1452.
Paper tape, Gummed. Ideal Coated Paper Co. No. 111,500; July 18; Gaz. vol. 228; p. 1089.
Paper, Toilet-. The John Hoberg Co. No. 111,230; July 4; Gaz. vol. 228; p. 401.
Paper, Toilet-. The John Hoberg Co. No. 111,409; July 11; Gaz. vol. 228; p. 757.
Paper, Toilet-. The John Hoberg Co. Nos. 111,578–82; July 25; Gaz. vol. 228; pp. 1452–3.
Paper, Toilet-. Sauquoit Toilet Paper Co. No. 111,293; July 4; Gaz. vol. 228; p. 403.
Paper, Toilet-. Sauquoit Toilet Paper Co. Nos. 111,607–8; July 25; Gaz. vol. 228; p. 1453.
Peaches, figs, prunes, apples, &c., Dried. California Associated Raisin Co. No. 111,183; July 4; Gaz. vol. 228; p. 400.
Peanut-brittle glacé mixture and glacé peanuts. E. F. Kemp. No. 111,367; July 11; Gaz. vol. 228; p. 756.
Peanuts. American Peanut Corporation. Nos. 111,157–8; July 4; Gaz. vol. 228; p. 399.
Peanuts. The Bain Peanut Co. No. 111,165; July 4; Gaz. vol. 228; p. 399.
Peanuts. The Bain Peanut Co. No. 111,550; July 25; Gaz. vol. 228; p. 1452.
Peanuts. Dixie Peanut Co. Nos. 111,198–9; July 4; Gaz. vol. 228; p. 400.
Peanuts. Gwaltney-Bunkley Peanut Co. No. 111,223; July 4; Gaz. vol. 228; p. 401.
Peanuts. Gwaltney-Bunkley Peanut Co. No. 111,498; July 18; Gaz. vol. 228; p. 1088.
Peanuts. Norfolk Storage Co. No. 111,264; July 4; Gaz. vol. 228; p. 402.
Peanuts. Norfolk Storage Co. No. 111,426; July 11; Gaz. vol. 228; p. 757.
Perfume, talcum toilet powder, rouge, cold-creams. H. Tetlow Co. No. 111,485; July 18; Gaz. vol. 228; p. 1088.
Perfumes, toilet powders, pastes, lotions, and creams, &c. V. Vivaudou, Inc. Nos. 111,514–15; July 18; Gaz. vol. 228; p. 1089.
Perfumes, toilet waters, talcum powder, &c. Foote & Jenks. No. 111,210; July 4; Gaz. vol. 228; p. 400.
Periodical, Weekly. Implement Trade Journal Company. No. 111,364; July 11; Gaz. vol. 228; p. 756.
Pharmaceutical preparations for toilet use, Certain named. Holman Soap Co. No. 111,231; July 4; Gaz. vol. 228; p. 401.
Phonograph-disk, sheet-music, letter, &c., receptacles. H. Rosenberg. No. 111,288; July 4; Gaz. vol. 228; p. 403.
Phonographs. Superba Phonograph Co. No. 111,388; July 11; Gaz. vol. 228; p. 756.
Phonographs. The Thomas Manufacturing Company. No. 111,613; July 25; Gaz. vol. 228; p. 1453.
Phosphates. Lakeland Phosphate Co. No. 111,418; July 11; Gaz. vol. 228; p. 757.
Piano and phonograph, Combination. Melville Clark Piano Company. No. 111,372; July 11; Gaz. vol. 228; p. 756.
Piano-players and parts thereof, perforated music-sheets. The Amphion Piano Player Company. No. 111,545; July 25; Gaz. vol. 228; p. 1451.
Piano-salesman's guides. E. W. Parsons. No. 111,270; July 4; Gaz. vol. 228; p. 402.
Piano stools and chairs, duet and player benches. New York Piano Stool & Manufacturing Co. No. 111,624; July 25; Gaz. vol. 228; p. 1454.
Pianos. C. J. Kops. No. 111,249; July 4; Gaz. vol. 228; p. 402.
Pianos. Weydig-Henkelman Piano Mfg. Co. No. 111,621; July 25; Gaz. vol. 228; p. 1454.
Picture films, Motion-. Doubleday Page & Company. No. 111,201; July 4; Gaz. vol. 228; p. 400.
Picture films, Moving-. Packard Motor Car Company. No. 111,377; July 11; Gaz. vol. 228; p. 756.
Picture films, Moving-. Paragon Films. No. 111,599; July 25; Gaz. vol. 228; p. 1453.
Picture films, Moving-. Universal Film Manufacturing Co. No. 111,316; July 4; Gaz. vol. 228; p. 404.
Pipes, Smokers'. Kaufmann Bros. & Bondy. No. 111,461; July 18; Gaz. vol. 228; p. 1087.
Plows and plowshares. S. A. Loose & Son. No. 111,527; July 25; Gaz. vol. 228; p. 1451.
Pomade, Chesebrough Manufacturing Co. Nos. 111,399–401; July 11; Gaz. vol. 228; p. 757.
Powder, Face-. A. Bourjois & Co. No. 111,177; July 4; Gaz. vol. 228; p. 399.
Powder, Face-. Richard Hudnut. No. 111,410; July 11; Gaz. vol. 228; p. 757.
Powder, Talcum. W. M. Decker. No. 111,453; July 18; Gaz. vol. 228; p. 1087.

Powders, toilet water, rouge, &c. A. Bourjois & Co. No. 111,176; July 4; Gaz. vol. 228; p. 399.
Preparation for the treatment of asthma. D. E. Bruce. No. 111,344; July 11; Gaz. vol. 228; p. 755.
Preparation to be used as an antiseptic and germicide locally, &c. Intravenous Products Company. No. 111,238; July 4; Gaz. vol. 228; p. 401.
Preservative compound for stone, cement, and wood. Techno Chemical Corporation. No. 111,433; July 11; Gaz. vol. 228; p. 758.
Priming, surfacing, and enameling preparation used in finishing vehicles. Flood and Conklin Co. No. 111,359; July 11; Gaz. vol. 228; p. 755.
Prints and publications, Certain. C. T. Dearing Printing Company. No. 111,523; July 25; Gaz. vol. 228; p. 1451.
Publication, Monthly periodical. The Press Publishing Co. No. 111,381; July 11; Gaz. vol. 228; p. 756.
Publications, Periodical. W. F. Rohm. No. 111,384; July 11; Gaz. vol. 228; p. 756.
Razors. F. R. Belt. No. 111,171; July 4; Gaz. vol. 228; p. 399.
Records for instruction in languages, Disk. R. D. Cortina Company. No. 111,194; July 4; Gaz. vol. 228; p. 400.
Refrigerators and refrigerating apparatus. A. W. Mellowes. No. 111,468; July 18; Gaz. vol. 228; p. 1088.
Remedy, Dandruff. H. Huffman. No. 111,411; July 11; Gaz. vol. 228; p. 757.
Remedy for bowel and stomach diseases. H. T. Kessinger. No. 111,243; July 4; Gaz. vol. 228; p. 401.
Remedy for catarrh and all bronchial troubles. E. E. Callen. No. 111,521; July 25; Gaz. vol. 228; p. 1451.
Remedy for certain named diseases and ailments. A. E. Baxter. No. 111,443; July 18; Gaz. vol. 228; p. 1087.
Remedy for colic and disorders consequent upon teething in infants. K. Kovacs. No. 111,417; July 11; Gaz. vol. 228; p. 757.
Remedy for constipation and biliousness. Dae Health Laboratories. No. 111,404; July 11; Gaz. vol. 228; p. 757.
Remedy for dyspepsia, indigestion, &c. The Tarrant Company. No. 111,432; July 11; Gaz. vol. 228; p. 758.
Remedy for kidney, bladder and stomach troubles, &c. R. S. Ferrel. No. 111,358; July 11; Gaz. vol. 228; p. 755.
Remedy for neuralgia and rheumatism and blood-purifier. M. Galambos. No. 111,493; July 18; Gaz. vol. 228; p. 1088.
Remedy for rheumatism. C. E. Martin. No. 111,256; July 4; Gaz. vol. 228; p. 402.
Remedy for rheumatism, croup, &c. C. Araguel. No. 111,336; July 11; Gaz. vol. 228; p. 755.
Remedy for rheumatism, sprains, burns, &c. British-American Liniment Co. No. 111,180; July 4; Gaz. vol. 228; p. 399.
Remedy for ringworm, itch, &c. Shuptrine Co. No. 111,299; July 4; Gaz. vol. 228; p. 403.
Rice. M. J. Brandenstein & Co. No. 111,446; July 18; Gaz. vol. 228; p. 1087.
Rice. The Burkenroad-Goldsmith Co. No. 111,560; July 25; Gaz. vol. 228; p. 1452.
Roofing materials. The Western Elaterite Roofing Company. No. 111,620; July 25; Gaz. vol. 228; p. 1454.
Roofing materials of asphalt, slate, mica, &c. Hartman Furniture & Carpet Co. No. 111,665; July 25; Gaz. vol. 228; p. 1455.
Rugs, Textile. J. Wittmann. No. 111,332; July 4; Gaz. vol. 228; p. 404.
Salt. Michigan Salt Works. No. 111,259; July 4; Gaz. vol. 228; p. 402.
Salt and water-softener, Bath-. H. Korn. No. 111,464; July 18; Gaz. vol. 228; p. 1087.
Salt for live stock, Medicated. S. N. Kohn. No. 111,246; July 4; Gaz. vol. 228; p. 401.
Salve. Schmitt & Brady. No. 111,430; July 11; Gaz. vol. 228; p. 757.
Salve, Poultry-. J. G. Murray, Jr. No. 111,473; July 18; Gaz. vol. 228; p. 1088.
Salves and ointments. I. Fredrickson. No. 111,213; July 4; Gaz. vol. 228; p. 400.
Scalp-treatment preparation. Balderine Company. No. 111,337; July 11; Gaz. vol. 228; p. 755.
Sheets and pillow-cases. The Howland Dry Goods Company. No. 111,234; July 4; Gaz. vol. 228; p. 401.
Shells, Explosive. Hudson Metal Products Company. No. 111,669; July 25; Gaz. vol. 228; p. 1455.
Shirts. Columbia Shirt Company. No. 111,565; July 25; Gaz. vol. 228; p. 1452.
Shirts and women's shirt-waists, Men's and boys'. A. L. Dryfoos. No. 111,632; July 25; Gaz. vol. 228; p. 1454.
Shirts, Dress and negligée. Columbia Shirt Company. No. 111,353; July 11; Gaz. vol. 228; p. 755.
Shock-absorbers, Vehicle. Fox Pneumatic Shock-Absorber Co. No. 111,211; July 4; Gaz. vol. 228; p. 400.
Shoe fabrics, Textile. A. Herzog. No. 111,363; July 11; Gaz. vol. 228; p. 756.
Shortening, Cotton-seed-oil. De Jarnette Refining Company. No. 111,197; July 4; Gaz. vol. 228; p. 400.
Siding, moldings, casing, base, and flooring, White-pine bevel. The R. T. Jones Lumber Company. No. 111,241; July 4; Gaz. vol. 228; p. 401.
Silk piece goods. McLane Silk Company. No. 111,591; July 25; Gaz. vol. 228; p. 1453.
Silk piece goods. Rogers & Thompson. No. 111,287; July 4; Gaz. vol. 228; p. 403.
Silk, Raw. Goshikwaisha Sanriusha. No. 111,292; July 4; Gaz. vol. 228; p. 403.
Silkworm chrysalids and silk-wastes containing same. Schmid Gebrüder. No. 111,480; July 18; Gaz. vol. 228; p. 1088.
Silver, gold, &c., polish and cleanser. Peerless Co. No. 111,475; July 18; Gaz. vol. 228; p. 1088.
Skin diseases, Liquid for. D. F. Arthur & Co. No. 111,494; July 18; Gaz. vol. 228; p. 1088.
Skirt or dress stiffening. The Warren Featherbone Company. No. 111,320; July 4; Gaz. vol. 228; p. 404.
Soap, Plastic. A. P. Camp. No. 111,898; July 11; Gaz. vol. 228; p. 757.
Soaps, washing-powder, potash, Toilet, laundry, scouring. A. Cohen. No. 111,564; July 25; Gaz. vol. 228; p. 1452.
Soda for washing and scouring. Colgate & Co. No. 111,190; July 4; Gaz. vol. 228; p. 400.
Sodium silicate. Philadelphia Quartz Company. No. 111,509; July 18; Gaz. vol. 228; p. 1089.
Soldering fluid, paste, and stick. R. L. Anderson. No. 111,335; July 11; Gaz. vol. 228; p. 755.
Souring and cleaning agent, Launderer's. Hachmeister-Lind Chemical Co. No. 111,224; July 4; Gaz. vol. 228; p. 401.
Sponges, Velvet. F. T. Hopkins & Son. No. 111,232; July 4; Gaz. vol. 228; p. 401.
Spoons and forks, Unplated base-alloy. International Silver Company. No. 111,584; July 25; Gaz. vol. 228; p. 1453.
Spraying composition for trees, plants, vines, and shrubs. Buffalo Specialty Co. No. 111,559; July 25; Gaz. vol. 228; p. 1452.
Stains and ready-mixed paints, Shingle-. The Van Tilburg Oil Company. No. 111,489; July 18; Gaz. vol. 228; p. 1088.
Stamps or stickers, Beacon Adjustment Company. No. 111,170; July 4; Gaz. vol. 228; p. 399.
Stamps, Trading-. Merchants Stamp Co. No. 111,373; July 11; Gaz. vol. 228; p. 756.
Stationery, Certain named. American Pad & Paper Company. No. 111,156; July 4; Gaz. vol. 228; p. 399.
Stereoscope. The Corte-Scope Company. No. 111,567; July 25; Gaz. vol. 228; p. 1452.
Stove-polish, Liquid and paste. W. H. Crandall. No. 111,195; July 4; Gaz. vol. 228; p. 400.
Stoves and ranges and hot-air furnaces. Galusha Stove Company. No. 111,215; July 4; Gaz. vol. 228; p. 401.
Stoves and toasters, Electric. Redtop Electric Company. No. 111,282; July 4; Gaz. vol. 228; p. 403.
Sugars. Wilbert's Myrtle Grove Planting & Manufacturing Co. No. 111,328; July 4; Gaz. vol. 228; p. 404.
Sweaters, hoods, hockey-caps, &c. Merrill Knitting Co. No. 111,374; July 11; Gaz. vol. 228; p. 756.
Syrup, a product of pure cane-sugar. The Nulomoline Company. No. 111,671; July 25; Gaz. vol. 228; p. 1455.
Syrup for soda-water, Flavoring-. The Pepsi-Cola Co. No. 111,508; July 18; Gaz. vol. 228; p. 1089.
Syrups for making soft drinks, &c., Fruit. Steele-Wedeles Company. No. 111,303; July 4; Gaz. vol. 228; p. 403.
Table cloths, napkins, and scarfs. S. Ontra & Bro. No. 111,597; July 25; Gaz. vol. 228; p. 1453.
Tables, chairs, desks, kindergarten material, Children's play. Rainy Day Table Co. No. 111,672; July 25; Gaz. vol. 228; p. 1455.
Tables, Kitchen and serving. White Enamel Refrigerator Company. No. 111,326; July 4; Gaz. vol. 228; p. 404.
Tablets and papers, papeteries, &c., Writing. J. E. Mitchell. No. 111,262; July 4; Gaz. vol. 228; p. 402.
Tablets, Digestive. O. B. Wilson. No. 111,331; July 4; Gaz. vol. 228; p. 404.
Tableware, Ceramic. French China Company. No. 111,214; July 4; Gaz. vol. 228; p. 401.
Talking-machines. L. A. Ames. No. 111,161; July 4; Gaz. vol. 228; p. 399.
Talking-machines, talking-machine cabinets, records, &c. The Empire Talking Machine Company. No. 111,357; July 11; Gaz. vol. 228; p. 755.
Talking-machines or phonographs. L. A. Priess. No. 111,477; July 18; Gaz. vol. 228; p. 1088.
Talking-machines, phonographs, gramophones, &c. C. F. Ruhsam. No. 111,675; July 25; Gaz. vol. 228; p. 1455.
Tallow for mixing with sizing for cotton yarns, Soluble. E. F. Houghton & Company. No. 111,583; July 25; Gaz. vol. 228; p. 1453.
Tea. A. Ehlers. Nos. 111,662–3; July 25; Gaz. vol. 228; p. 1455.
Tea. E. B. Millar & Company. No. 111,593; July 25; Gaz. vol. 228; p. 1453.
Tea. Weddle Tea Company. No. 111,656; July 25; Gaz. vol. 228; p. 1455.
Tea, coffee, chocolate, spices, &c. The Howland Dry Goods Company. No. 111,235; July 4; Gaz. vol. 228; p. 401.
Teeth, Artificial. H. D. Justi & Son. No. 111,415; July 11; Gaz. vol. 228; p. 757.
Teeth, Cement filling for. Richter & Hoffman The Harvard Dental Manufacturing Co. G. M. B. H. No. 111,674; July 25; Gaz. vol. 228; p. 1455.
Telephone-indexes. F. W. Colby. No. 111,351; July 11; Gaz. vol. 228; p. 755.

Threads, Cotton. Richardson Silk Co. No. 111,673; July 25; Gaz. vol. 228; p. 1455.
Threads, Textile. Richardson Silk Co. No. 111,284; July 4; Gaz. vol. 228; p. 403.
Tire-tape, rubber and adhesive patches. Gaul, Derr & Shearer Company. No. 111,217; July 4; Gaz. vol. 228; p. 401.
Tires, Fluid for sealing punctures in pneumatic. D. Sabel. No. 111,542; July 25; Gaz. vol. 228; p. 1451.
Tires, Pneumatic rubber. Kokomo Rubber Co. No. 111,247; July 4; Gaz. vol. 228; p. 402.
Tobacco, cigars, and cigarettes, Smoking-. J. W. Surbrug. No. 111,431; July 11; Gaz. vol. 228; p. 757.
Tobacco, cigars, stogies, and tobies. Fisher Tobacco Company. No. 111,539; July 25; Gaz. vol. 228; p. 1451.
Tobacco, snuff, cigars, cigarettes. Kellogg Toasted Corn Flake Company. No. 111,462; July 18; Gaz. vol. 228; p. 1087.
Tonic and reconstructive. The Bayer Company. No. 111,444; July 18; Gaz. vol. 228; p. 1087.
Tonic for certain named affections. Dae Health Laboratories. No. 111,403; July 11; Gaz. vol. 228; p. 757.
Tonic for certain named affections. Dae Health Laboratories. No. 111,405; July 11; Gaz. vol. 228; p. 757.
Tonic, laxative, and alterative preparation. F. W. Diemer. No. 111,536; July 25; Gaz. vol. 228; p. 1451.
Tonic, Medicinal. H. C. White. No. 111,325; July 4; Gaz. vol. 228; p. 404.
Tonic nerve food, Medicated. Allen & Hanburys. No. 111,154; July 4; Gaz. vol. 228; p. 399.
Torches, Oxyacetylene-. C. C. Shipp. No. 111,298; July 4; Gaz. vol. 228; p. 403.
Toy balloons. The Miller Rubber Company. Nos. 111,528–9; July 25; Gaz. vol. 228; p. 1451.
Toy pistols. O. G. Voss. No. 111,490; July 18; Gaz. vol. 228; p. 1088.
Toys, Building. The Mysto Mfg. Co. No. 111,422; July 11; Gaz. vol. 228; p. 757.
Trees, Fruit-. Stark Bro's Nurseries & Orchards Co. No. 111,302; July 4; Gaz. vol. 228; p. 403.
Trucks, Motor-. Signal Motor Truck Company. No. 111,482; July 18; Gaz. vol. 228; p. 1088.
Trucks, Motor-. Sterling Motor Truck Co. No. 111,612; July 25; Gaz. vol. 228; p. 1453.
Trucks, Motor-. Truck Attachment Company. No. 111,390; July 11; Gaz. vol. 228; p. 756.
Union suits, Textile. Hecht & Campe. No. 111,668; July 25; Gaz. vol. 228; p. 1455.
Vacuum vessels. Vacuum Specialty Company. No. 111,435; July 11; Gaz. vol. 228; p. 758.
Varnish-dressing. G. Dattilo. No. 111,571; July 25; Gaz. vol. 228; p. 1452.
Vehicle-body polish, Liquid. United States Whip Co. No. 111,315; July 4; Gaz. vol. 228; p. 404.
Vehicles, not including engines, Certain named. The Buckeye Steel Castings Company. No. 111,447; July 18; Gaz. vol. 228; p. 1087.
Veilings, nettings, and chiffons. Oppenheim & Stern. No. 111,598; July 25; Gaz. vol. 228; p. 1453.
Vises. Fulton Machine & Vise Co. No. 111,576; July 25; Gaz. vol. 228; p. 1452.
Wagons, Hand-. The Buffalo Sled Company. No. 111,448; July 18; Gaz. vol. 228; p. 1087.
Wall-board and building-paper. The Beaver Company. No. 111,551; July 25; Gaz. vol. 228; p. 1452.
Watch-springs. Hammel, Riglander & Co. No. 111,225; July 4; Gaz. vol. 228; p. 401.
Water, Laxative mineral. W. C. Crisman. No. 111,452; July 18; Gaz. vol. 228; p. 1087.
Waters, Mineral. Aktiebolaget Ramlösa Hälsöbrunn. No. 111,440; July 18; Gaz. vol. 228; p. 1087.
Waterproofed textiles. John Boyle & Company. No. 111,178; July 4; Gaz. vol. 228; p. 399.
Wheelbarrows. Puffer-Hubbard Manufacturing Company. No. 111,382; July 11; Gaz. vol. 228; p. 756.
Whisky. C. F. Lauber. No. 111,455; July 18; Gaz. vol. 228; p. 1087.
Window and plate glass, glassware. F. H. Cone. No. 111,191; July 4; Gaz. vol. 228; p. 400.
Wines, Port and other. A. D. Shaw & Co. No. 111,512; July 18; Gaz. vol. 228; p. 1089.
Wire, metal in rod and bar forms, metal sheets. H. Boker & Co. Nos. 111,554–5; July 25; Gaz. vol. 228; p. 1452.
Wrenches. R. F. Sedgley. No. 111,295; July 4; Gaz vol. 228; p. 403.
Yarns, Cotton. F. Sternberg. No. 111,306; July 4; Gaz. vol. 228; p. 403.

ALPHABETICAL LIST OF LABELS.

"A. G. Spalding & Bros. Red Honor Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,431; July 11; Gaz. vol. 228; p. 759.
"Best-O." (For Corn-Syrup and Cane Products.) Columbia Coffee Mills. No. 19,453; July 18; Gaz. vol. 228; p. 1091.
"Bingo." (For Bottled Goods.) Northern Brewing Company. No. 19,482; July 25; Gaz. vol. 228; p. 1456.
"Bowe." (For Men's Shirts.) J. F. Quinn. No. 19,483; July 25; Gaz. vol. 228; p. 1456.
"Bowl-Ene." (For a Disinfectant and Deodorizer.) Bowl-Ene Mfg. Company. No. 19,412; July 4; Gaz. vol. 228; p. 405.
"Bran-eata Biscuits." (For a Food in Biscuit Form.) Grain Products Company. No. 19,415; July 4; Gaz. vol. 228; p. 405.
"Buttons 1915 Design." (For Buttons.) R. P. Stevens. No. 19,424; July 4; Gaz. vol. 228; p. 405.
"Camp Fire Cocoa Cornstarch." (For Corn-Starch.) W. M. Van Norden. No. 19,485; July 25; Gaz. vol. 228; p. 1456.
"Camp Fire Tea." (For Tea.) W. M. Van Norden. No. 19,471; July 18; Gaz. vol. 228; p. 1091.
"Capitol Construction Blocks." (For Construction-Blocks of Stone.) F. Ad. Richter & Co. No. 19,464; July 18; Gaz. vol. 228; p. 1091.
"Castrellina." (For Castrellina Water.) V. Marchese. No. 19,459; July 18; Gaz. vol. 228; p. 1091.
"Chevrolet Clothing Co. Makers Of Chevrolet Overcoats." (For Men's Overcoats.) M. Golland. No. 19,477; July 25; Gaz. vol. 228; p. 1456.
"Chevrolet Clothing Co. Makers Of Chevrolet Suits." (For Men's Suits.) M. Golland. No. 19,478; July 25; Gaz. vol. 228; p. 1456.
"Cucagoan Shoes." (For Shoes.) J. P. Smith Shoe Co. No. 19,422; July 4; Gaz. vol. 228; p. 405.
"Dairy Maid." (For Canned Hominy.) Western Grocer Company. No. 19,426; July 4; Gaz. vol. 228; p. 405.
"Distress—Relief." (For Catarrhal Jelly.) B. Sewell & Co. No. 19,466; July 18; Gaz. vol. 228; p. 1091.
"Divinia." (For a Hair-Wash.) J. Piazzolo. No. 19,462; July 18; Gaz. vol. 228; p. 1091.
"Elco." (For Bottled Goods.) E. B. Lebensberger. No. 19,480; July 25; Gaz. vol. 228; p. 1456.
"'Euclid' Tarred Roofing Felt." (For Felt Material.) Binghamton Slag Roofing Co. No. 19,411; July 4; Gaz. vol. 228; p. 405.
"Glotto." (For Cigars.) E. A. Cauceglia. No. 19,451; July 18; Gaz. vol. 228; p. 1091.
"Golden Grain Breakfast Food." (For Breakfast Food.) Golden Grain Cereal Company. No. 19,476; July 25; Gaz. vol. 228; p. 1456.
"Golden State." (For Butter.) California Central Creameries. No. 19,413; July 4; Gaz. vol. 228; p. 405.
"Golden State—Golden Glow." (For Butter.) California Central Creameries. No. 19,414; July 4; Gaz. vol. 228; p. 405.
"Gordon & Co's." (For Scotch Whisky.) The Gordon's Dry Gin Company. No. 19,455; July 18; Gaz. vol. 228; p. 1091.
"Gummi-Walzen." (For Clothes-Wringers.) The American Wringer Company. No. 19,442; July 18; Gaz. vol. 228; p. 1091.
"Harmless Inflatable Toys." (For Inflatable Toys.) Howe Baumann Balloon Co. No. 19,416; July 4; Gaz. vol. 228; p. 405.
"Harrison's." (For Harrison's Honeysuckle Cream.) H. P. Harrison. No. 19,456; July 18; Gaz. vol. 228; p. 1091.
"Herbatone." (For a Medicinal Preparation.) English Home Herb Co. No. 19,475; July 25; Gaz. vol. 228; p. 1456.
"Homo." (For Cigars.) Homo Cigar M'f'g Co. No. 19,457; July 18; Gaz. vol. 228; p. 1091.
"Inflatable Toys." (For Inflatable Toys.) Howe Baumann Balloon Co. No. 19,417; July 4; Gaz. vol. 228; p. 405.
"Jayelpi Frères & Cie." (For Cigarettes.) J. L. & F. Pinkus. No. 19,419; July 4; Gaz. vol. 228; p. 405.
"La Sorrentina." (For Macaroni.) F. D. Alexander & Co. No. 19,474; July 25; Gaz. vol. 228; p. 1456.
"Little Cowboy." (For Overalls and Coats.) T. Weiss & Co. No. 19,472; July 18; Gaz. vol. 228; p. 1091.
"Longfellow." (For Cigars.) G. G. Koehler. No. 19,479; July 25; Gaz. vol. 228; p. 1456.
"Martin's Sanitary Floor Sweep." (For Sweeping Composition.) C. J. Martin & Sons. No. 19,460; July 18; Gaz. vol. 228; p. 1091.
"Meteor." (For Meteor Marbles.) F. Ad. Richter & Co. No. 19,465; July 18; Gaz. vol. 228; p. 1091.
"Minnehaha Maid." (For Candies.) The Minnehaha Candy Co. No. 19,461; July 18; Gaz. vol. 228; p. 1091.
"Norman Brand." (For Cheese.) J. L. Kraft & Bros. Co. No. 19,458; July 18; Gaz. vol. 228; p. 1091.
"Old Dutch." (For Varnish.) Nubian Paint & Varnish Company. No. 19,418; July 4; Gaz. vol. 228; p. 405.
"Patriarch." (For Cigars.) Tackaberry Cigar Co. No. 19,425; July 4; Gaz. vol. 228; p. 405.
"Penguin." (For Refrigerating Apparatus.) Loetscher-Ryan Manufacturing Company. No. 19,430; July 11; Gaz. vol. 228; p. 759.
"Pietro & Vincenzo Formusa." (For Olive-Oil.) V. Formusa. No. 19,454; July 18; Gaz. vol. 228; p. 1091.
"Popular Brand." (For Salad-Oil.) W. B. Moran. No. 19,481; July 25; Gaz. vol. 228; p. 1456.
"Radio Brand Unexcelled I R Cotton-Fabrics, Trade Mark." (For Cotton Fabrics.) I. Radin. No. 19,463; July 18; Gaz. vol. 228; p. 1091.
"'Salco' Absorbent Cotton." (For Absorbent Cotton.) Southern Aseptic Laboratories. No. 19,467; July 18; Gaz. vol. 228; p. 1091.
"Shepard's House Fly and Insect Killer." (For a Fly and Insect Killer.) Shepard's Chemical Company. No. 19,420; July 4; Gaz. vol. 228; p. 405.
"Smith's Orange Sparkle That Sparkles." (For a Beverage.) J. D. Smith. No. 19,421; July 4; Gaz. vol. 228; p. 405.
"Sovolo Ointment." (For Ointment.) T. Kosach. No. 19,429; July 11; Gaz. vol. 228; p. 759.
"Spalding Baby Dimple Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,433; July 11; Gaz. vol. 228; p. 759.
"Spalding Black Domino Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,439; July 11; Gaz. vol. 228; p. 759.
"Spalding Bob Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,432; July 11; Gaz. vol. 228; p. 759.
"Spalding Bullet Honor Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,436; July 11; Gaz. vol. 228; p. 759.
"Spalding Glory Dimple Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,440; July 11; Gaz. vol 228; p. 759.
"Spalding Golf Balls For The Professional The Expert And The Beginner." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,468; July 18; Gaz. vol. 228; p. 1091.
"Spalding Orange Domino Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,437; July 11; Gaz. vol. 228; p. 759.
"Spalding Red Honor Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,438; July 11; Gaz. vol. 228; p. 759.
"Spalding Witch Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,434; July 11; Gaz. vol. 228; p. 759.
"Spalding Wizard Golf Ball." (For Golf-Balls.) A. G. Spalding & Bros. No. 19,435; July 11; Gaz. vol. 228; p. 759.
"Spangler's Famous Nut Bread." (For Bread.) J. E. Spangler. No. 19,428; July 4; Gaz. vol. 228; p. 405.
"The Little Engineer." (For Overalls and Coats.) T. Weiss & Co. No. 19,473; July 18; Gaz. vol. 228; p. 1091.
"To The Dealer A Few Selling Points." (For Clothes-Wringers.) The American Wringer Company. No. 19,441; July 18; Gaz. vol. 228; p. 1091.
"To The Dealer! A Few Selling Points." (For Clothes-Wringers.) The American Wringer Company. Nos. 19,443–50; July 18; Gaz. vol. 228; p. 1091.
"Uncle Sam's Best." (For Metal Oil-Cans, Dairy-Pails, Strainer-Pails, and Washboilers.) Stuber & Kuck Co. No. 19,469; July 18; Gaz. vol. 228; p. 1091.
"Universal Feather & Down Co." (For Feathers, Downs, and Bedding.) A. I. Schafirstein. No. 19,484; July 25; Gaz. vol. 228; p. 1456.
"Vitalitas." (For a Remedy.) Vital Remedies Company. No. 19,470; July 18; Gaz. vol. 228; p. 1091.
"Welkum Bread." (For Bread.) General Baking Company. No. 19,428; July 4; Gaz. vol. 228; p. 405.
"Wright's Cake Specialties." (For Cake.) Wright Cake Company. No. 19,427; July 4; Gaz. vol. 228; p. 405.
"Yonah Coffee." (For Coffee.) Columbia Tea Co. No. 19,452; July 18; Gaz. vol. 228; p. 1091.

PRINTS.

"Baby Knows the Difference at Once. (For Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,403; July 18; Gaz. vol. 228; p. 1092.

"Bang-open your system to some real smoke joy!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,385; July 11; Gaz. vol. 228; p. 759.

"Beats the band how quick Prince Albert rings true to you!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,391; July 11; Gaz. vol. 228; p. 759.

"Caught P. A. pipe-joy on the first puff!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,392; July 11; Gaz. vol. 228; p. 759.

"Do You know a little house-mother." (For Kellogg's Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,377; July 4; Gaz. vol. 228; p. 405.

"Dollar Box of Baked Goods." (For Bread and Crackers.) Ward Baking Company. No. 4,411; July 18; Gaz. vol. 228; p. 1092.

"Drink Moxie." (For Moxie.) The Moxie Co. Nos. 4,379–80; July 4; Gaz. vol. 228; p. 405.

"Drink Moxie." (For Moxie.) The Moxie Company. No. 4,410; July 18; Gaz. vol. 228; p. 1092.

"Even Baby Can Tell the Difference." (For Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,404; July 18; Gaz. vol. 228; p. 1092.

"Every Loaf is shaped and Panned Without the touch of Human Hand." (For Ward's Tip-Top Bread.) Ward Baking Co. No. 4,381; July 4; Gaz. vol. 228; p. 405.

"Good for Nothing Except to Eat." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,400; July 18; Gaz. vol. 228; p. 1092.

"He Wants the Original Toasted Corn Flakes." (For Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,405; July 18; Gaz. vol. 228; p. 1092.

"He's a Live Wire." (For Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,407; July 18; Gaz. vol. 228; p. 1092.

"Kellogg's." (For Kellogg's Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,408; July 18; Gaz. vol. 228; p. 1092.

"Let Us Tailor Your Clothes." (For Clothing.) U. S. Woolen Mills Company. No. 4,382; July 4; Gaz. vol. 228; p. 405.

"Lilac Brand Bacon." (For Bacon.) J. Moschel's Sons. No. 4,409; July 18; Gaz. vol. 228; p. 1092.

"Loosen up a bit on this say-so:" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,398; July 11; Gaz. vol. 228; p. 759.

"One In 17." (For a Puzzle.) H. G. Kindy. No. 4,378; July 4; Gaz. vol. 228; p. 405.

"Prince Albert is such a real smoke." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,412; July 25; Gaz. vol. 228; p. 1456.

"Prince Albert puts the whole smoke world at ease!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,393; July 11; Gaz. vol. 228; p. 759.

"Prince Albert—the national joy smoke—has brought back to the firing line thousands of friendly old jimmy pipes." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,397; July 11; Gaz. vol. 228; p. 759.

"Prince Albert—the natural joy smoke—makes pipe-peace and makin's-peace reign." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,394; July 11; Gaz. vol. 228; p. 759.

"Prince Albert Tobacco is so good you feel like you could just eat the smoke!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,387; July 11; Gaz. vol. 228; p. 759.

"She 'Adores Crispy Things and Crackly Things.'" (For Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,402; July 18; Gaz. vol. 228; p. 1092.

"Sound the cymbals for two kinds of independence joy!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,396; July 11; Gaz. vol. 228; p. 759.

"The Crispness and Flavor of Kellogg's Are There." (For Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,406; July 18; Gaz. vol. 228; p. 1092.

"The Little Brown Jug With The Big Black Shine." (For Shoe-Polish.) Alden T. Cleveland Mfg. Co. No. 4,399; July 18; Gaz. vol. 228; p. 1092.

"The song of the old jimmy pipe." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,390; July 11; Gaz. vol. 228; p. 759.

"There is a Youngster in Almost Every Home Who Demands Kellogg's Toasted Corn Flakes." (For Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,401; July 18; Gaz. vol. 228; p. 1092.

"There's a punch of joy in every puff of Prince Albert tobacco!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,386; July 11; Gaz. vol. 228; p. 759.

"This is All You Have to Do." (For Kleenit.) R. T. Davis. No. 4,384; July 11; Gaz. vol. 228; p. 759.

"To market, to market, To buy us a treat—Home again, home again—Got Cream of Wheat." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,383; July 11; Gaz. vol. 228; p. 759.

"Tobacco that puts the hush on that hankering!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,388; July 11; Gaz. vol. 228; p. 759.

"Well, smoke it yourself if you want that all-fired-joy-feelling!" (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,395; July 11; Gaz. vol. 228; p. 759.

"You'll start an old-pal-party." (For Smoking-Tobacco.) R. J. Reynolds Tobacco Company. No. 4,389; July 11; Gaz. vol. 228; p. 759.

DISCLAIMER.

Lever mechanism, Throttle-. F. E. Russell. No. 1,166,787; date of patent Jan. 4, 1916; disclaimer filed July 6, 1916; Gaz. vol. 228; p. 411.

CLASSIFICATION OF PATENTS

JULY, 1916.

NOTE.—First number—class, second number—subclass, third number—patent number.

1— 7: 1,189,475
1,192,481
11: 1,192,041
1,192,392
1,192,446
14: 1,191,111
15: 1,191,110
41: 1,191,682
47: 1,189,998
2— 9: 1,192,042
11: 1,190,875
32: 1,192,375
41: 1,190,504
1,191,064
1,191,584
67: 1,189,693
1,191,401
73: 1,189,672
1,190,250
1,191,785
1,192,626
80: 1,191,441
84: 1,190,515
91: 1,191,218
93: 1,191,769
98: 1,189,589
1,190,602
106: 1,190,427
1,192,108
113: 1,191,996
114: 1,190,998
117: 1,191,502
131: 1,190,084
136: 1,190,479
140: 1,191,288
142: 1,192,341
144: 1,189,270
1,190,448
1,190,590
1,190,810
1,191,369
1,192,288
1,192,583
145: 1,191,865
147: 1,189,384
149: 1,190,123
1,190,567
1,190,674
1,191,773
154: 1,191,275
157: 1,190,091
158: 1,190,722
3— 5: 1,190,915
12: 1,192,244
4— 2: 1,191,701
1,192,314
5: 1,189,504
1,190,917
1,192,588
1,192,785
13: 1,190,388
1,192,740
18: 1,189,767
1,190,310
26: 1,191,248
1,191,778
27: 1,190,179
1,190,266
1,191,098
32: 1,189,714
35: 1,190,322
5— 9: 1,190,142
1,190,222
12: 1,191,772
1,192,647
13: 1,192,510
14: 1,189,476
16: 1,192,766
18: 1,189,863
39: 1,191,693
1,192,130
47: 1,192,318
48: 1,191,323
50: 1,192,137
54: 1,189,342
55: 1,190,088
58: 1,189,230
59: 1,190,380
1,191,606
1,192,385

9— 2: 1,190,569
3: 1,190,371
11: 1,191,417
17: 1,190,743
20: 1,191,836
21: 1,191,788
1,192,650
22: 1,190,046
1,191,163
1,191,410
1,191,794
1,192,158
23: 1,191,447
1,192,543
10— 12: 1,191,721
28: 1,189,849
95: 1,190,375
105: 1,190,768
140: 1,190,707
143: 1,190,561
154: 1,192,807
11— 4: 1,191,961
11: 1,190,503
1,192,399
16: 1,189,825
19: 1,189,286
1,189,544
23: 1,189,955
12— 4: 1,189,979
33: 1,189,402
47: 1,191,622
67.1: 1,190,296
97: 1,190,753
130: 1,192,463
135: 1,192,257
136: 1,191,183
139: 1,191,686
141: 1,191,833
1,191,834
142: 1,189,866
1,191,499
1,191,534
1,191,832
145: 1,189,980
1,191,315
146: 1,191,133
147: 1,190,775
13— 7: 1,190,986
9: 1,192,660
18: 1,191,245
19: 1,192,466
15— 2: 1,189,559
1,192,679
7: 1,190,302
8: 1,189,633
1,192,424
12: 1,192,142
13: 1,190,346
1,191,098
1,191,872
1,192,047
14: 1,191,489
19: 1,191,758
1,191,975
22: 1,192,484
25: 1,190,516
1,191,387
30: 1,189,668
38: 1,190,227
39: 1,191,556
1,192,298
46: 1,190,947
1,191,879
48: 1,191,578
1,192,711
50: 1,190,228
1,191,604
1,191,828
51: 1,191,860
1,192,093
1,192,736
52: 1,189,505
1,192,668
56: 1,190,415
1,192,330
59: 1,189,978
1,190,747
1,191,349
60: 1,190,798
1,191,999

15— 60: 1,192,408
1,192,409
63: 1,190,948
16— 7: 1,191,334
9: 1,190,563
16: 1,190,177
18: 1,190,571
1,191,103
1,192,325
19: 1,189,760
1,191,815
22: 1,189,245
1,190,672
25: 1,191,470
28: 1,190,486
1,190,671
1,191,923
1,192,533
46: 1,190,313
49: 1,192,120
73: 1,190,826
77: 1,191,583
82: 1,191,891
88: 1,190,324
1,192,000
80: 1,191,563
91: 1,190,078
96: 1,190,840
106: 1,192,161
107: 1,190,435
116: 1,190,425
1,190,682
119: 1,189,909
1,190,230
1,191,502
121: 1,190,587
142: 1,190,430
1,192,116
148: 1,191,662
156: 1,191,370
170: 1,192,458
17— 12: 1,190,547
13: 1,192,451
24: 1,189,759
1,191,016
1,192,013
1,192,014
30: 1,189,966
18— 2: 1,189,351
1,189,444
5: 1,192,383
5.3: 1,190,072
12: 1,189,674
1,192,769
17: 1,191,296
19: 1,191,565
1,192,440
45: 1,192,272
48.4: 1,190,510
1,192,567
50: 1,189,936
1,189,938
52: 1,189,282
56: 1,190,731
19— 5: 1,189,740
6: 1,190,997
1,191,959
10: 1,189,873
15: 1,190,918
1,190,919
1,192,805
19: 1,192,355
25: 1,191,712
32: 1,189,528
33: 1,189,800
20— 1.4: 1,190,720
1.12: 1,189,799
16: 1,189,250
1,191,929
20: 1,191,223
31: 1,192,340
65: 1,191,991
69: 1,192,361
81.6: 1,190,709
83: 1,191,301
1,191,687
87: 1,189,884
21— 5: 1,190,706
7: 1,191,401
1,192,303

21— 8: 1,190,542
1,190,811
1,192,671
9: 1,190,422
12: 1,191,394
1,192,002
15: 1,189,944
20: 1,191,983
21: 1,189,295
1,190,238
1,191,569
30: 1,192,688
31: 1,192,526
36: 1,189,910
43: 1,189,990
47: 1,189,678
1,190,284
48: 1,192,533
57: 1,192,148
61: 1,191,613
62: 1,190,153
1,190,751
1,190,890
1,191,446
1,191,669
65: 1,192,790
69: 1,190,537
1,192,548
1,192,549
75: 1,189,981
1,191,385
1,192,212
80: 1,192,211
83: 1,189,244
1,189,515
1,190,373
1,190,398
1,190,399
86: 1,190,429
90: 1,189,256
1,189,284
1,189,378
1,189,562
1,189,709
1,189,723
1,190,194
1,190,270
1,190,274
1,190,854
1,191,132
1,191,287
1,191,293
1,191,295
1,191,350
1,191,566
1,191,809
1,191,947
1,192,218
1,192,240
1,192,376
1,192,514
1,192,515
94: 1,191,281
1,192,223
96: 1,191,252
105: 1,189,439
1,189,829
1,189,943
1,189,953
114: 1,189,425
1,190,166
1,191,333
1,191,654
1,191,817
1,191,858
1,192,423
119: 1,189,968
122: 1,192,082
124: 1,191,035
1,192,752
130: 1,191,962
137: 1,190,237
140: 1,190,473
150: 1,190,038
1,191,906
154: 1,192,311
174: 1,191,267
176: 1,192,429
182: 1,192,114
183: 1,191,599

21— 202: 1,190,264
207: 1,190,183
209: 1,190,101
1,192,345
210: 1,190,536
212: 1,190,314
216: 1,191,898
22— 2: 1,189,976
8: 1,191,887
22: 1,189,464
33: 1,190,951
69: 1,191,659
79: 1,189,548
1,192,044
85: 1,192,467
105: 1,190,056
113: 1,191,474
127: 1,191,471
147: 1,192,024
1,192,425
1,192,617
190: 1,189,391
200: 1,191,473
203: 1,190,009
213: 1,191,472
23— 3: 1,191,585
5: 1,190,160
1,190,161
13: 1,189,229
1,189,254
1,191,104
1,191,105
1,191,106
1,191,804
1,192,640
24: 1,189,602
1,189,736
1,190,659
1,191,439
1,191,580
1,191,880
1,191,916
28: R. 14,167
1,192,310
3: 1,190,446
1,191,215
1,192,349
1,189,639
1,192,152
1,189,946
1,190,049
1,190,667
1,190,817
1,190,456
30.5: 1,191,392
49: 1,192,507
56: 1,191,805
1,192,236
1,192,237
57: 1,191,576
66: 1,190,265
71.3: 1,191,598
73: 1,190,057
85: 1,192,613
90.5: 1,189,467
1,191,763
95: 1,191,944
97: 1,189,993
1,191,716
102: 1,192,101
105: 1,192,672
106: 1,192,413
119: 1,190,724
123: 1,192,055
124: 1,189,679
1,190,449
1,190,467
155: 1,190,362
1,192,612
156: 1,192,522
170: 1,192,552
180: 1,191,279
191: 1,191,341
205: 1,190,033
1,191,781
154: 1,191,841
1,191,910
207: 1,190,344
1,190,745
1,190,882

24— 218: 1,192,414
220: 1,192,072
221: 1,190,852
225: 1,190,014
228: 1,192,321
232: 1,192,606
235: 1,192,542
237: 1,191,009
241: 1,192,260
245: 1,190,016
1,190,575
249: 1,190,146
261: 1,192,684
265: 1,191,723
266: 1,189,333
25— 1: 1,190,431
1,190,912
1,191,925
32: 1,191,721
40: 1,191,126
41: 1,190,475
66: 1,192,630
98: 1,192,057
101: 1,190,742
104: 1,192,444
121: 1,189,337
130: 1,190,256
131: 1,190,240
1,190,740
1,190,940
1,190,977
1,191,492
1,192,115
1,192,493
131.5: 1,191,139
1,191,881
26— 8: 1,191,512
9: 1,190,307
16: 1,190,119
1,191,080
18: 1,180,611
27— 7: 1,180,646
14: 1,192,169
28— 4: 1,189,483
1,189,591
14: 1,191,109
20: 1,190,161
21: 1,189,757
1,189,877
29— 1.2: 1,190,576
2: 1,190,598
1,190,990
1,190,991
23: 1,192,536
70: 1,191,549
74: 1,191,705
84: 1,189,448
87.1: 1,191,240
1,191,658
1,192,286
96: 1,192,110
99: 1,189,930
111: 1,191,755
128: 1,191,092
148: 1,189,675
1,189,958
1,190,803
1,192,680
159: 1,190,818
180: 1,192,210
181: 1,189,882
187: 1,190,759
30— 1: 1,192,085
3: 1,191,608
5: 1,189,692
9: 1,190,675
1,192,200
11: 1,190,059
12: 1,190,182
1,192,367
1,192,503
17: 1,192,021
22: 1,192,630
24: 1,190,052
31— 7: 1,192,676
66: 1,191,883
80: 1,192,745
97: 1,190,294
98: 1,189,468
1,190,566

| | | |

213— 64: 1,192,266
1,192,513
1,192,570
1,192,571
1,192,572
214— 1: 1,189,430
1,191,227
4: 1,190,822
10: 1,189,948
12: 1,191,391
13: 1,189,606
215— 1: 1,190,607
3: 1,191,117
1,191,118
8: 1,189,465
9: 1,191,567
10: 1,191,194
12: 1,190,708
23: 1,189,280
40: 1,192,067
51: 1,191,277
69: 1,191,727
1,192,374
85: 1,192,173
88: 1,191,028
99: 1,191,634
103: 1,190,408
1,190,465
1,191,026
116: 1,192,170
216— 3: 1,192,625
6: 1,192,637
44: 1,191,264
48: 1,189,844
217— 4: 1,189,325
1,190,507
12: 1,189,542
14: 1,191,067
18: 1,190,327
28: 1,190,367
43: 1,189,539
44: 1,190,847
46: 1,190,042
47: 1,189,614
58: 1,191,479
91: 1,190,506
218— 0.5: 1,191,885
2: 1,189,361
1,189,917
1,192,628
7: 1,192,239
8: 1,192,681
1,192,682
12: 1,191,807
15: 1,191,926
15.1: 1,191,927
1,191,938
21: 1,191,180
219— 2: 1,189,583
4: 1,189,581
1,189,584
6: 1,190,902
10: 1,189,582
1,189,856
1,190,308
1,190,610
19: 1,190,978
1,191,197
20: 1,190,780
21: 1,189,735
1,192,389
31: 1,190,447
35: 1,190,795
1,191,286
36: 1,189,725
37: 1,191,601
38: 1,190,289
39: 1,190,167
1,191,743
43: 1,191,426
44: 1,192,477
46: 1,192,153
48: 1,192,360
51: 1,191,273
57: 1,191,284
63: 1,190,140
1,191,195
1,191,238
1,191,703
1,192,457
220— 1: 1,189,432
14: 1,190,196
17: 1,191,688
22: 1,189,363
56: 1,190,436
220— 59: 1,189,294
1,190,043
62: 1,192,135
67: 1,190,472
80: 1,189,860
92: 1,189,462
120: 1,192,134
121: 1,189,764
1,191,229
124: 1,190,541
1,192,188
1,192,417
1,192,767
125: 1,191,547
1,191,629
1,192,538
132: 1,192,415
136: 1,189,493
138: 1,191,319
140: 1,192,294
221— 2: 1,189,347
11: 1,190,612
22: 1,192,068
23: 1,192,464
24: 1,190,802
1,191,464
61: 1,189,451
62: 1,190,754
1,192,228
64: 1,190,326
77: 1,189,932
78: 1,190,241
94: 1,191,737
99: 1,190,558
101: 1,189,510
102: 1,191,663
103: 1,189,248
1,191,298
1,191,882
104: 1,189,578
114: 1,191,436
222— 3: 1,191,752
223— 14: 1,189,372
17: 1,191,969
1,191,970
1,192,151
19: 1,190,269
1,192,770
1,192,771
30: 1,189,320
31: 1,191,709
36: 1,191,038
224— 2: 1,191,339
4: 1,191,951
1,192,251
26: 1,189,924
28: 1,192,022
29: 1,191,782
36: 1,189,649
45: 1,189,579
47: 1,189,480
1,189,918
225— 2: 1,190,586
8: 1,191,409
21: 1,189,579
226— 9: 1,189,748
18: 1,191,382
24: 1,191,406
227— 9: 1,191,405
17: 1,190,034
22: 1,191,504
29: 1,190,389
32: 1,192,615
228— 4: 1,189,514
6: 1,190,334
16: 1,191,922
19: 1,192,734
28: 1,192,387
229— 6: 1,190,700
12: 1,190,723
15: 1,192,744
16: 1,191,533
17: 1,189,779
21: 1,192,824
31: 1,189,482
35: 1,190,797
44: 1,192,359
46: 1,191,057
54: 1,190,492
63: 1,191,051
82: 1,192,558
86: 1,191,475
230— 1: 1,189,273
11: 1,191,237
24: 1,190,945
230— 24: 1,191,467
1,191,774
1,192,774
27: 1,190,804
1,191,510
1,191,531
1,191,645
1,192,509
30: 1,189,766
32: 1,189,376
1,191,757
33: 1,192,364
34: 1,190,463
1,192,508
38: 1,190,860
231— 2: 1,191,789
232— 6: 1,189,258
12: 1,190,985
22: 1,190,193
41: 1,190,634
1,191,589
42: 1,189,442
1,190,732
1,191,546
45: 1,190,047
233— 20: 1,190,466
28: 1,191,568
234— 1: 1,192,747
5.5: 1,189,234
8: 1,190,796
33.5: 1,190,217
235— 2: 1,189,269
3: 1,190,489
1,191,154
9: 1,189,278
1,190,413
21: 1,190,416
22: 1,191,878
23: 1,189,279
1,192,095
32: 1,190,368
1,190,936
51: 1,189,840
54: 1,189,837
1,189,839
58: 1,190,752
59: 1,190,287
1,191,928
60: 1,189,289
1,189,447
1,189,689
1,190,171
1,190,184
1,192,721
62: 1,190,233
75: 1,189,288
80: 1,190,068
91: 1,190,494
1,190,701
96: 1,191,900
117: 1,192,193
139: 1,192,255
142: 1,191,678
236— 4: 1,189,400
6: 1,189,301
1,191,694
1,192,411
8: 1,189,613
1,189,644
9: 1,191,022
1,192,113
10: 1,190,877
16: 1,191,919
1,192,396
237— 3: 1,192,335
4: 1,190,418
1,190,419
1,190,420
14: 1,189,691
58: 1,189,906
68: 1,192,278
238— 2: 1,189,489
1,190,535
1,190,906
1,192,624
3: 1,191,044
1,192,739
4: 1,189,299
1,189,668
1,190,154
1,190,577
1,191,025
1,191,181
1,192,109
5: 1,189,652
238— 5: 1,189,719
1,189,933
1,190,083
1,190,164
1,190,792
1,191,351
1,191,496
1,192,300
239— 6: 1,189,851
1,190,126
1,190,403
1,190,907
1,191,557
1,191,784
1,192,008
1,192,304
1,192,698
8: 1,190,070
9: 1,192,103
10: 1,191,030
11: 1,191,800
1,192,553
240— 2: 1,189,592
1,189,670
1,191,073
1,192,187
8.5: 1,189,755
1,190,090
1,190,730
1,191,744
9: 1,192,585
15: 1,191,526
16: 1,190,910
32: 1,189,249
1,192,591
41: 1,189,621
1,190,071
44: 1,191,650
45.6: 1,191,422
48.4: 1,189,746
57: 1,189,350
61: 1,189,512
1,190,684
1,192,527
62: 1,190,413
1,190,774
1,191,720
78: 1,189,520
81: 1,189,533
84: 1,189,459
93: 1,190,496
103: 1,189,231
111: 1,191,633
114: 1,192,049
115: 1,191,058
1,192,722
241— 6: 1,191,320
1,192,276
242— 1: 1,189,412
7: 1,189,666
18: 1,189,285
55: 1,189,309
1,191,903
57: 1,190,204
68: 1,192,063
84.5: 1,189,232
98: 1,191,646
106: 1,189,275
114: 1,191,904
117: 1,192,322
134: 1,189,415
1,191,733
136: 1,189,635
243— 19: 1,192,604
244— 1: 1,191,375
3: 1,191,077
12: 1,190,343
14: 1,189,610
1,190,178
15: 1,190,397
19: 1,189,680
1,191,501
20: 1,189,612
21: 1,190,376
1,192,479
1,192,480
25: 1,190,149
29: 1,190,248
1,189,302
1,190,374
1,191,448
1,192,248
1,192,607
1,192,751
31: 1,190,321
244— 31: 1,190,378
245— 5: 1,189,291
246— 15: 1,191,454
20: 1,190,987
25: 1,189,225
1,189,226
26: 1,192,210
27: 1,191,067
1,191,262
1,192,235
31: 1,189,224
1,191,414
35: 1,189,316
36: 1,190,247
1,192,566
58: 1,189,745
1,190,015
1,190,173
1,190,613
1,190,617
1,191,381
1,192,086
1,192,087
1,192,234
59: 1,189,455
1,190,520
1,190,611
1,191,511
1,191,749
1,192,183
1,192,254
61: 1,191,968
247— 1: 1,190,641
1,190,664
1,191,078
1,192,150
5: 1,189,847
13: 1,189,848
1,191,060
1,191,327
248— 1: 1,189,754
8: 1,190,502
10: 1,189,413
18: 1,189,985
1,192,633
20: 1,190,695
24: 1,190,355
29: 1,189,970
1,192,313
30: 1,191,270
36: 1,190,971
1,192,593
37: 1,192,112
250— 4: 1,190,156
21: 1,189,881
27: 1,189,738
1,190,412
35: 1,190,104
1,192,706
36: 1,190,490
37: 1,189,791
38: 1,190,869
1,192,126
252— 1,189,696
1,192,372
253— 113: 1,190,251
117: 1,190,622
194: 1,191,040
254— 3: 1,192,667
6: 1,192,716
7: 1,190,361
66: 1,191,063
1,192,356
67: 1,190,976
71: 1,189,788
88: 1,190,163
88: 1,189,632
89: 1,190,837
1,190,913
1,191,520
108: 1,192,611
104: 1,192,185
111: 1,189,778
1,192,326
139: 1,190,834
144: 1,190,212
151: 1,191,790
152: 1,189,381
156: 1,190,483
157: 1,190,482
166: 1,190,394
1,190,545
186: 1,192,077
190: 1,189,911
255— 19: 1,191,993
255— 21: 1,189,739
1,191,992
25: 1,190,209
26: 1,191,250
27: 1,189,241
1,192,252
33: 1,189,428
43: 1,192,657
46: 1,189,901
1,191,542
51: 1,190,387
66: 1,191,698
71: 1,191,310
75: 1,189,560
1,192,419
76: 1,189,513
256— 1: 1,189,344
16: 1,191,971
39: 1,192,060
52: 1,192,319
54: 1,190,749
257— 1: 1,191,451
61: 1,191,191
119: 1,191,848
125: 1,189,357
130: 1,189,506
1,189,507
1,189,540
1,189,762
1,190,424
1,191,359
1,191,681
134: 1,190,955
185: 1,190,450
188: 1,190,968
199: 1,191,899
202: 1,189,470
250: 1,192,245
258— 14: 1,189,876
18: 1,189,875
1,192,656
22: 1,192,241
260— 80: 1,190,191
129: 1,192,426
261— 4: 1,192,292
263— 46: 1,191,271
264— 3: 1,190,946
1,192,192
14: 1,189,607
1,192,702
17: 1,189,634
20: 1,189,843
266— 6: 1,190,309
21: 1,190,513
26: 1,191,541
1,192,395
39: 1,191,268
267— 8: 1,189,375
15: 1,189,963
17: 1,190,527
19: 1,189,652
1,192,358
31: 1,189,629
34: 1,189,590
37: 1,190,966
43: 1,189,354
268— 2: 1,192,040
3: 1,192,600
7: 1,191,897
1,192,476
9: 1,191,606
269— 5: 1,192,669
9: 1,191,014
274— 2: 1,191,806
1,192,402
16: 1,191,202
17: 1,191,182
23: 1,190,728
24: 1,192,289
1,192,337
35: 1,190,249
1,190,787
1,190,635
1,190,636
1,191,674
1,191,675
1,192,828
1,192,834
1,192,836

OFFICIAL GAZETTE

1/15.17

BANGOR PUBLIC
DEC 1 1916
LIBRARY

UNITED STATES PATENT OFFICE.

VOLUME CCXXIX.

AUGUST,

1916.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1916.

ERRATA.

1,192,889, page 21, first claim, line 3, commencing with the article "the" strike out all to and including the word "them" and the following comma, line 5; same claim, line 6, after the word "located" insert the words and comma *the horizontal area of the chamber being greater than that of the trough to afford passages for the vapor between them,*.

1,193,014, page 64, fifth claim, line 5, for the word "tip" read *lip*.

1,193,619, page 321, third claim, line 10, strike out the word "normally;" same claim, line 11, before the word "maintain" insert the word *normally*.

1,193,640, page 329, after claim 4, insert the following as claim 5:

5. Foot-controlled accelerating means for internal combustion engines embodying in combination with the engine and carbureter, a rock shaft, a bearing for said shaft fastened directly to the body of the engine, a foot lever extending from said rock shaft, a lever forming an element of the carbureter, a link interposed between and having operative connection to the lower end of the arm and to said lever, a link rod controlled at one end by a hand throttle lever and slotted at its other end, and connections between the slotted end of said link rod and the carbureter lever permitting movement of the said lever in one direction without affecting the hand control, substantially as described.

1,193,694, page 348, second claim, lines 3–4, for the word "extensious" read *extension*.

1,193,697, page 350, fourth claim, line 4, before the word "to" insert the phrase *and antifriction bearings yieldingly carried by said shell and engaging said ring*.

1,194,084, page 485, fourth claim, line 2, after the word "comprising" insert the article *a;* same claim, line 6, before the word "said" insert the words and comma *them into engagement with said ratchet wheels, means for throwing*.

1,194,201, page 525, fourth claim, line 3, before the period insert the words *and hardening the resulting substance*.

1,194,358, page 623, third claim, line 8, strike out the comma and words ", said means being in the form of" and insert the words and comma *and entering said drain pipe,*.

1,194,476, page 667, in heading, title of invention, for "Fastening for Sling-Side Cribs" read *Fastening for Sliding-Side Cribs*.

1,195,209, page 956, second claim, line 1, after the word "head" insert a comma.

1,195,334, page 1004, in heading, assignment, for "The Industrial Instrument Company, Foxboro, Mass., a corporation of Connecticut," read *The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts*.

1,195,956, page 1259, fourth claim, line 12, after the word "chamber" insert the words *bisected by the valves;* same claim, line 14, after the word "chamber" strike out all to the end of the line.

111,796, (trade-mark,) page 605, in heading, title of trade-mark, strike out the word *Embossed*.

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, August 1, 8, 15, 22, 29	3, 275, 619, 943, 1259
TRADE-MARKS PUBLISHED AND REGISTERED, August 1, 8, 15, 22, 29	243, 583, 915, 1233, 1547
LABELS AND PRINTS REGISTERED, August 1, 8, 15, 22, 29	267, 611, 937, 1254, 1571
DECISIONS OF THE COMMISSIONER OF PATENTS, August 1, 8, 15, 22, 29	269, 613, 939, 1255, 1573
INDEX TO THE DECISIONS OF THE COMMISSIONER OF PATENTS	1577
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	i

ANNOUNCEMENTS.

	Page.
ADVERSE DECISIONS IN INTERFERENCE—	
Craft and Dixon, No. 1,081,368	940
Finberg, No. 1,171,030	941
Gibson, No. 1,082,318	1275
Green, No. 1,074,789	941
Jensen, No. 883,959	615
McQuarie and Craft, No. 949,836	940
Parmly, No. 1,143,223	941
Quigley, No. 1,128,043	615
Sammons, No. 1,072,875	1575
Thorner, No. 886,739	1575
AMENDMENT TO AMENDMENTS—	
Rule 74	273
APPLICATIONS—	
Condition of pending	2, 274, 618, 942, 1258
BRIEFS IN APPEALED CASES	617, 941
CLASSIFICATION OF INVENTIONS—	
Changes in—*Order 2275*	273
Order 2276	1575
Order 2277	1575
DISCLAIMERS—	
Jonas, Frederick Wm., and Christopher Steele Spofford	271
Mellen, Glenville	271
Mills, George W., Jr	270
Toch, Maximillian	273
DRAWINGS—	
Instructions as to preparing, Rules 38 and 53	1
FOREIGN APPLICATIONS—	
"Act of August 17th" to extend time for filing applications and final fees	1257
FOREIGN PATENT LAWS—	
Finland	614
INTERFERENCE NOTICES—	
Ainslie, Allen	271, 615, 940
Bentley & Olmstead Company	940, 1256, 1575
Hitchcock & Co., W. G	271, 615, 940
Palmer, Henry Newell	271, 615, 940
Plate & Clark Co	271, 615, 940
Recknagel & Co	1256, 1575
Springfield Rubber Tire Co	1575
Weiss & Segal	271
OFFICIAL GAZETTE—	
Decision leaflets, price of	1
Subscription price of	617
PATENTS—	
Close of issue, Rule 207	1257
List of adjudicated	270, 614
TRADE-MARKS, NOTICE OF CANCELATION—	
Rand, Allen S., and George Bell	271, 615, 940
Standard Starter & Specialty Company, The	1575
UNITED STATES PATENT LAWS—	
Amendment of	270

Patents Nos. 1.192,837 to 1,193,494.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

Vol. 229—No. 1. TUESDAY, AUGUST 1, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 1, 1916	1
DRAWINGS	1
NOTICE	1
APPLICATIONS UNDER EXAMINATION	2
PATENTS GRANTED	3
REISSUES	237
DESIGNS	240
TRADE-MARKS—REGISTRATION APPLIED FOR	243
TRADE-MARK REGISTRATIONS GRANTED	263
LABELS AND PRINTS	267
COMMISSIONER'S DECISIONS—	
Ex parte Kidder	269
ADJUDICATED PATENTS	270
AMENDMENT TO PATENT LAW	270
DISCLAIMERS	270
NOTICE OF CANCELATION	271
INTERFERENCE NOTICES	271

ISSUE OF AUGUST 1, 1916.

Patents	658—No.	1,192,837 to No. 1,193,494, inclusive.
Designs	11—No.	49,471 to No. 49,481, inclusive.
Trade-Marks	103—No.	111,678 to No. 111,780, inclusive.
Labels	3—No.	19,486 to No. 19,488, inclusive.
Prints	3—No.	4,413 to No. 4,415, inclusive.
Reissues	5—No.	14,174 to No. 14,178, inclusive.
Total	783	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	North Carolina	2	2
Arizona	1	.....	North Dakota	4	.....
Arkansas	2	.....	Ohio	42	4
California	39	8	Oklahoma	7	.....
Colorado	9	1	Oregon	6	.....
Connecticut	18	3	Pennsylvania	52	4
Delaware	.....	.....	Rhode Island	5	.....
Florida	2	1	South Carolina	3	.....
Georgia	5	1	South Dakota	1	.....
Idaho	2	.....	Tennessee	4	.....
Illinois	86	12	Texas	13	1
Indiana	18	1	Utah	.....	.....
Iowa	10	1	Vermont	2	.....
Kansas	10	.....	Virginia	1	1
Kentucky	3	.....	Washington	10	.....
Louisiana	1	1	West Virginia	10	.....
Maine	2	.....	Wisconsin	16	3
Maryland	5	3	Wyoming	.....	.....
Massachusetts	39	4			
Michigan	13	.....	Alaska, District of	.....	.....
Minnesota	12	.....	Canal Zone	1	.....
Mississippi	2	.....	District of Columbia	5	.....
Missouri	16	2	Hawaii Territory	.....	.....
Montana	2	1	Philippine Islands	.....	.....
Nebraska	4	.....	Porto Rico	.....	1
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	3	.....	U. S. Navy	.....	.....
New Jersey	23	3			
New Mexico	2	1	Total to residents of the United States.	617	107
New York	101	48			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	.....	.....
Belgium	1	.....	New South Wales	1	.....
Brazil	1	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	13	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
England	13	.....	Spain	.....	.....
Finland	.....	.....	Sweden	.....	1
France	7	1	Switzerland	2	.....
Germany	5	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	3	.....
India	.....	.....	Wales	1	.....
Ireland	.....	.....			
Italy	2	.....	Total to residents of foreign countries	52	2
Japan	2	.....			
Mexico	.....	.....			

Drawings.

RULE 38.

38. When there are drawings, the description will refer to the different views by figures and to the different parts by letters or numerals, (preferably the latter.)

RULE 52—EXTRACT.

(g) The different views should be consecutively numbered. Letters and figures of reference must be carefully formed. They should, if possible, measure at least one-eighth of an inch in height, so that they may bear reduction to one twenty-fourth of an inch; and they may be much larger when there is sufficient room. They must be so placed in the close and complex parts of drawings as not to interfere with a thorough comprehension of the same, and therefore should rarely cross or mingle with the lines. When necessarily grouped around a certain part, they should be placed at a little distance, where there is available space, and connected by short broken lines with the parts to which they refer. They must never appear upon shaded surfaces, and when it is difficult to avoid this, a blank space must be left in the shading where the letter occurs, so that it shall appear perfectly distinct and separate from the work. If the same part of an invention appear in more than one view of the drawing it must always be represented by the same character, and the same character must never be used to designate different parts.

It is suggested that numerals or letters be used without exponents.

Notice.

Decision leaflets of the OFFICIAL GAZETTE are sold as a separate publication—

Single numbers ..... 5 cents
Subscription per year $2.00

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business July 29, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	June 10	June 19	326
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Mar. 1	May 13	676
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	July 14	July 12	110
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	May 31	July 17	215
167	5. Bookbinding; Harvesters; Jewelry; Music	Apr. 20	May 20	258
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 13	July 10	312
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Mar. 2	May 23	538
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 3	June 17	1297
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Feb. 23	June 5	470
235	10. Carriages and Wagons; Spring Devices	Mar. 1	June 23	733
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 17	July 11	128
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Feb. 10	June 16	552
329	13. Ammunition and Explosive Charge Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 21	June 17	452
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 1	June 2	238
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 29	June 23	277
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Jan. 24	May 26	541
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making	Mar. 21	June 19	254
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 10	July 10	112
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces	June 1	June 17	172
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	July 13	July 10	143
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Apr. 25	June 19	327
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 29	June 5	389
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Feb. 5	Apr. 3	487
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Jan. 10	May 19	440
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers.	June 23	June 22	177
106	26. Electricity, Generation; Motive Power	Jan. 20	May 16	568
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	June 26	July 1	208
65	28. Internal-Combustion Engines	Apr. 13	June 7	499
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Apr. 10	July 1	300
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	May 17	July 15	248
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	June 14	452
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 4	July 6	662
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 23	June 9	386
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Jan. 26	Mar. 1	362
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Mar. 21	July 18	460
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Mar. 23	June 12	783
107	37. Electric Lamps; Electricity, Conduits; Electricity, General Applications	Feb. 2	Jan. 23	705
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	June 7	June 12	226
321	39. Water Distribution	Feb. 23	June 14	376
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 17	June 22	733
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Apr. 7	June 28	384
244	42. Electricity-Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Nov. 23	Apr. 3	668
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 21	June 10	127

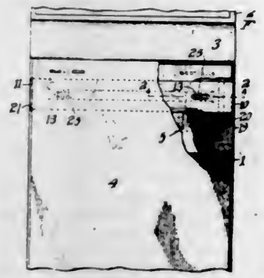
Oldest new case, Nov. 23; oldest amended, Jan. 23.
Total number of applications awaiting action..... 17,768

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-marks	June 23	July 14	678
	Designs	June 21	June 28	245
	Labels and Prints	July 20	July 20	44

PATENTS

GRANTED AUGUST 1, 1916.

1,192,837. CLIP FOR SALES-BOOKS. CHARLES P. L. ABELL, Ardmore, Pa., assignor of one-half to William T. Abell, Ardmore, Pa. Filed Oct. 30, 1913. Serial No. 798,170. (Cl. 11—11.)



1. A resilient front piece and a back piece connected therewith at one end, the other end of the front piece being reversely turned to engage with the back piece and to slide thereon in combination with a sales book cover and means attaching the back piece to said cover.

2. A sales book cover in combination with a clip comprising a resilient front strip, a back strip connected therewith at one end and channeled throughout a portion of its length and means for attaching the back strip to the cover.

3. A sales book and a cover in combination with a clip comprising a front strip, flat throughout the greater part of its length forwardly projected in proximity to its ends and reversely turned at one end, a back strip connected with the front strip at one end, stiffened throughout a portion of its length and slidable at its opposite end between the reversely turned end of the front strip and the front strip and means for securing the clip to the cover.

4. A sales book cover, a clip secured thereto and comprising a back strip stiffened throughout a portion of its length and apertured within the stiffened portion, providing a recess for fastening means about the apertures and a resilient front strip connected with the back strip at one end, tending to lie at an angle with the back strip throughout its length and reversely turned at the opposite end to embrace the end of the back strip and retain the front strip generally parallel therewith.

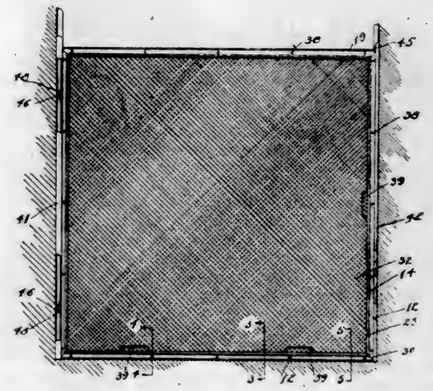
5. A sales book cover, a clip secured thereto and comprising a stiffened back member and a resilient front member connected therewith at one end and means connected with the opposite end to engage and slide with respect to the back member.

[Claims 6 to 9 not printed in the Gazette.]

1,192,838. METAL-FRAME SCREEN. SEBASTIAN ABEL, Norwood, Ohio. Filed Jan. 26, 1916. Serial No. 74,336. (Cl. 156—14.)

1. In combination, a metal-frame screen the frame-stretches whereof are respectively built up with a pair of sheet-metal strips each formed up with a receiving clamp at one side thereof and an entering tongue at the other side thereof, one of said entering tongues received in one of said receiving clamps adjacent to each edge of said respective stretches, and with the screen-cloth clamped between one of said mating tongues and clamps.

2. In combination, a metal-frame screen the frame-stretches whereof are respectively built up with a pair of sheet-metal strips each formed up with a receiving clamp at one side thereof and an entering tongue at the other side thereof, one of said entering tongues received in one of said receiving clamps adjacent to each edge of said respective stretches, and a pair of screen-cloths, one of said screen-cloths having its edges clamped between each of said mating tongues and clamps, and the edges of said screen-cloths passing said respective tongues in reverse directions.



3. In combination, a metal-frame screen the frame-stretches whereof are respectively built up with a pair of sheet-metal strips which are cross-sectionally duplicates one of the other, each formed up with a receiving clamp at one side thereof and an entering tongue at the other side thereof, and one of said entering tongues received in one of said receiving clamps adjacent to each edge of said respective stretches, and arranged whereby screen-cloth may be received and clamped between either of said mating tongues and clamps.

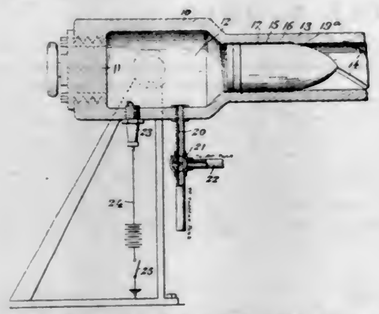
4. In combination, a metal-frame screen the frame-stretches whereof are respectively built up with a pair of sheet-metal strips each formed with a receiving clamp at one side thereof and an entering tongue at the other side thereof, one of said entering tongues received in one of said receiving clamps adjacent to each edge of said respective stretches, said tongues and clamps being bent from the body of said stretches with opposing walls, and screen-cloth received about said tongues and clamped between said opposing walls.

5. In combination, a metal-frame screen the frame-stretches whereof are respectively built up with a pair of mating sheet-metal strips each formed with a side wall, an end wall at one edge of said side wall, a receiving clamp opposite said side wall having opposing walls spaced from said end wall by a bead formed between said end wall and receiving clamp, an entering tongue having opposing walls at the other edge of said side wall, the outer end of said last-named opposing walls having a flange extending therefrom, one of said entering tongues received in one of said receiving clamps adjacent to each edge of said respective stretches, and screen-cloth the edges

whereof are received and clamped between the opposing walls of one of said tongues and clamps and between one of said beads and lips of said respective stretches.

[Claims 6 to 9 not printed in the Gazette.]

1,192,839. GASOLENE-GUN. ALONZO O. ARMOUR, Dalton, Ga. Filed Mar. 11, 1916. Serial No. 83,586. (Cl. 89—7.)



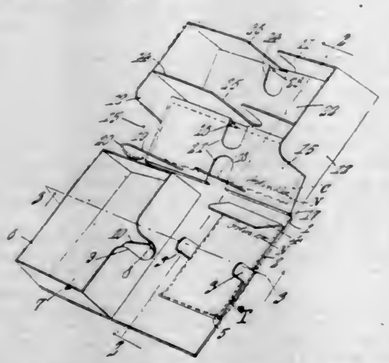
1. In a gun of the character described, a combustion chamber having a barrel leading therefrom, the inner end portion of the barrel being provided with a cutout forming an annular seat, a packing placed in said seat, and a securing strip for said packing countersunk therein.

2. A gun of the character described including a combustion chamber having a barrel leading therefrom, and a packing countersunk in the wall of the inner end portion of said barrel and releasably held in place.

3. A gun of the character described including a combustion chamber having a barrel leading therefrom, a releasable breech for the combustion chamber, a packing embedded in the barrel for forming a tight closure around a projectile positioned therein to provide an air-tight combustion chamber when the projectile is in place, means for feeding a combustible fluid into said combustion chamber, and means for igniting the fluid in the combustion chamber.

4. A gun of the character described including a combustion chamber having a barrel leading therefrom and a packing in the wall of the inner end portion of said barrel for forming a tight closure around a projectile positioned therein.

1,192,840. CHECK AND DEPOSIT-TICKET TRAY. OLAF BAKER, Miami, Okla. Filed Oct. 9, 1915. Serial No. 54,620. (Cl. 211—37.)



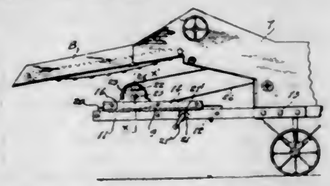
1. In a device of the character described, a base having a receptacle thereon, and a bottom plate within the receptacle for supporting a stack of slips and having a down-turned flange at one edge, adjacent and spaced from the respective side wall of the receptacle to provide a narrow pocket for holding some of the slips when set on edge, the base forming the bottom of said pocket, said flange being of less height than said wall and being adapted to support the slips adjacent said wall.

2. In a device of the character described, a base having a receptacle thereon and an inclined bottom plate for said receptacle having a downturned flange at its upper edge secured upon the base and spaced from the respective wall of the receptacle, said bottom plate having a recess in its upper edge extending into said flange, and said wall of the receptacle having an upwardly opening recess complementing the aforesaid recess.

3. In a device of the character described, a base, an inclined bottom plate for supporting a stack of checks whose upper and lower edges are provided with downturned flanges secured upon the base, and standards adjacent the lower edge of said plate against which slips upon said plate rest, said plate being provided at its upper and lower edges with companion recesses extending into said flanges, the lower recess being between the standards.

4. In a device of the character described, a base having a rectangular receptacle thereon whose ends are extended to provide the ends of a second receptacle, one of the side walls of the first mentioned receptacle forming a partition between the two receptacles, and the other side wall of the first mentioned receptacle forming a back wall, said partition and back wall having upwardly opening recesses, inclined bottom plates for said receptacles having their upper edges provided with downturned flanges secured upon the base adjacent the back wall and partition, respectively, said bottom plates having recesses at their upper edges extending into said flanges, and standards at the lower edge of the bottom plate of the first mentioned receptacle.

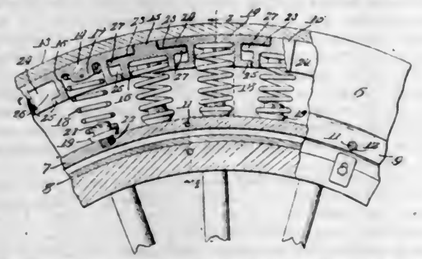
1,192,841. DRIVING ATTACHMENT TO SEPARATING-MACHINES. CHARLES HENRY BARKER, Regina, Saskatchewan, Canada. Filed May 4, 1914. Serial No. 836,228. (Cl. 64—52.)



The combination with a pair of parallel connected supporting beams, of a pair of superimposed connected side beams mounted on the supporting beams and provided on their inner sides with longitudinally disposed channels and having their outer sides overhanging the outer sides of the supporting beams, a pair of longitudinally disposed angle bars permanently secured to the inner sides of the supporting beams and entering the channels of the superimposed beams and connecting the said latter beams slidably to the former beams, racks permanently secured to the undersides of the overhanging portions of the superimposed beams, a rotatably mounted cross shaft carried by the supporting beams, a crank attached to the shaft, pinions secured to the cross shaft and engaging with the racks, a pair of opposing bearings secured to the superimposed beams and a driving cross shaft rotatably mounted in said bearings and having the ends thereof protruding through the bearings and one end cored out to provide an open center square in cross section.

1,192,842. RESILIENT TIRE. CECIL N. BENTLEY, Freeport, Ill. Filed July 26, 1915. Serial No. 41,997. (Cl. 152—8.)

1. The combination with a flexible tire casing, of a plurality of shoes disposed within the said casing in substantially abutting relation, means yieldingly urging the shoes outwardly into engagement with the inner wall of the tire casing, each alternate shoe having protruding opposite end portions spaced inwardly from the tire casing, and each of the remaining shoes having at its opposite ends a pair of radially spaced end portions between which the protruding end portions of adjoining sections are disposed and movable radially, whereby the shoes are held in coöperative relation and are themselves determinative of the range of radial movement of the adjoining shoes.



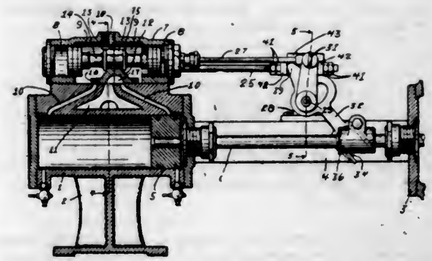
2. The combination with a flexible tire casing, of a plurality of shoes disposed within the casing in substantially abutting relation and constituting a continuous shoe adapted to bear against the inner wall of the casing, each alternate shoe being shaped at its ends to provide radially spaced, opposed abutments, each of the remaining shoes having end portions disposed between said abutments and movable radially therebetween, springs constantly urging each shoe outwardly whereby said alternate shoes will be held against the inner wall of the casing and the remaining shoes will be limited in their outward movement by the outer abutments of the alternate shoes and whereby also any of said remaining shoes may be moved inwardly a distance limited by the inner abutments of its adjoining shoes.

3. The combination with a flexible tire casing, of a plurality of shoes disposed within the said casing in substantially abutting relation and shaped on their outer faces to conform to the inner wall of the casing, the alternate shoes being formed on the outer side of their end portions with arcuate depressions and the remaining shoes having arcuate ends extending into the said depressions, springs constantly urging the shoes outwardly whereby the shoes having the projecting ends will be held in engagement with the tire casing and the said alternate shoes will be held in engagement with said projecting arcuate ends, the shoes having the projecting ends being provided with longitudinally projecting end portions spaced inwardly radially from their said arcuate ends and the said alternate shoes having end portions disposed between said inner and outer ends and being of less radial dimension than the radial distance between said inner and outer ends so that the said alternate shoes are movable in a radial direction relatively to the remaining shoes a distance limited by said inner and outer ends.

4. The combination with a flexible tire casing, of a plurality of shoes disposed within the casing in substantially abutting relation and shaped on their outer faces to conform to the inner wall of the casing, the ends of each alternate shoe being formed with arcuate recesses conforming generally to the general contour of the casing and the ends of each of the remaining shoes being formed with arcuate extensions projecting into the adjoining recesses and being of sufficiently smaller radial dimension than the radial dimension between the opposed faces of said arcuate recesses as to be capable of free radial movement between said opposed faces, said coöperating extensions and recesses serving also to hold the shoes against displacement when they are moved relatively by the action of the tire casing passing over irregular surfaces.

1,192,843. VALVE-GEAR. JOHN C. BIRD, Battle Creek, Mich., assignor to Union Steam Pump Company, Battle Creek, Mich. Filed May 1, 1915. Serial No. 25,153. (Cl. 121—8.)

1. In a valve gear, the combination of a main cylinder, a main piston provided with a piston rod, a valve casing and a valve piston cylinder connected to said main cylinder and provided with an inlet and an exhaust, a valve piston provided with a piston rod, a main valve controlling the inlet and exhaust of said main cylinder actuated by said valve piston, an auxiliary valve casing connected to said valve piston cylinder and provided with an inlet and an exhaust, an auxiliary valve controlling the inlet and exhaust of said valve piston cylinder, said auxiliary valve being provided with a valve stem, a pivotally supported oscillating member connected to said valve piston rod, an auxiliary valve actuating lever pivotally mounted on said oscillating member eccentrically of its pivot, operating connections for said main piston rod and lever, and tappet blocks on said auxiliary valve stem with which said lever coacts whereby the auxiliary valve is given an initial movement by the main piston and a further movement by said valve piston.



2. In a valve gear, the combination of a main cylinder, a main piston provided with a piston rod, a valve casing and a valve piston cylinder connected to said main cylinder and provided with an inlet and an exhaust, a valve piston provided with a piston rod, a main valve controlling the inlet and exhaust of said main cylinder actuated by said valve piston, an auxiliary valve casing connected to said valve piston cylinder and provided with an inlet and an exhaust, an auxiliary valve controlling the inlet and exhaust of said valve piston cylinder, said auxiliary valve being provided with a valve stem, a pivotally supported oscillating member connected to said valve piston rod, an auxiliary valve actuating lever pivotally mounted on said oscillating member eccentrically of its pivot, operating connections for said main piston rod and lever whereby the auxiliary valve is given an initial movement by the main piston and a further movement by said valve piston.

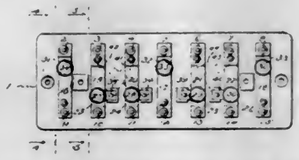
3. In a valve gear, the combination of a main cylinder, a main piston provided with a piston rod, a valve piston cylinder, a valve piston provided with a piston rod, a main cylinder valve controlled by said valve piston, an auxiliary valve for controlling said valve piston, said auxiliary valve being provided with a valve stem, a supporting bracket, a member pivotally mounted on said bracket for oscillating movement, said member being connected to said valve piston rod to be actuated thereby, an auxiliary valve actuating lever pivotally mounted on said member eccentrically of its pivot, operating connections for said main piston rod and lever, and tappet blocks on said auxiliary valve stem coacting with said lever, said bracket being provided with a slide bearing for said blocks, said lever being provided with a curved bearing support for said tappet blocks.

4. In a valve gear, the combination of a main cylinder, a main piston provided with a piston rod, a valve piston cylinder, a main cylinder valve piston provided with a piston rod, an auxiliary valve for controlling said valve piston, said auxiliary valve being provided with a valve stem, a supporting bracket, a member pivotally mounted on said bracket for oscillating movement, said member being connected to said valve piston rod to be actuated thereby, an auxiliary valve actuating lever pivotally mounted on said member eccentrically of its pivot, operating connections for said main piston rod and lever, and tappet blocks or said auxiliary valve stem coacting with said lever.

5. In a valve gear, the combination of a main cylinder, a main piston, a main cylinder valve, a valve piston cylinder, a valve piston for controlling said main cylinder valve, an auxiliary valve for controlling said valve piston, a supporting bracket, a member pivotally mounted on said bracket for oscillating movement, said member being connected to said valve piston to be actuated thereby, an auxiliary valve actuating lever mounted on said member eccentrically of its pivot, operating connections for said main piston rod and lever, and tappet blocks on said auxiliary valve stem coacting with said lever, said bracket being provided with a slide bearing for said tappet blocks, said lever being provided with a curved bearing support for said tappet blocks.

[Claims 6 to 11 not printed in the Gazette.]

1,192,844. METER-TESTING BLOCK. HENRY J. BLAKESLEE, Hartford, Conn. Filed Oct. 29, 1915. Serial No. 58,540. (Cl. 175—183.)



1. A meter testing block having a base, binding posts along one side for the attachment of line terminals, binding posts along the other side for the attachment of meter leads, conductors connecting the respective binding posts, at least one of said conductors being of spring metal, a binding screw engaging and holding the spring conductor so that the conducting path is normally closed through it, and a cross conductor with one end connected with a line terminal post and with its other end normally out of engagement with said spring conductor but adapted to be engaged by said spring conductor when its binding screw is turned so that the conductor springs up and opens the normal circuit, and thereby automatically closing the line circuit when the meter circuit is opened.

2. A meter testing block having binding posts along one side for the attachment of line terminals, binding posts along the other side for the attachment of meter leads, rigid conductors permanently connecting the binding posts for the potential circuit, spring conductors normally connecting the binding posts for the current circuit, binding screws engaging the spring conductors and holding them in closed position, and cross conductors at one end connected with the binding posts to which the spring conductors are connected, and at the other end arranged to be engaged by the spring conductors when the binding screws are turned so as to release the spring conductors and allow them to spring up and open the normal circuit.

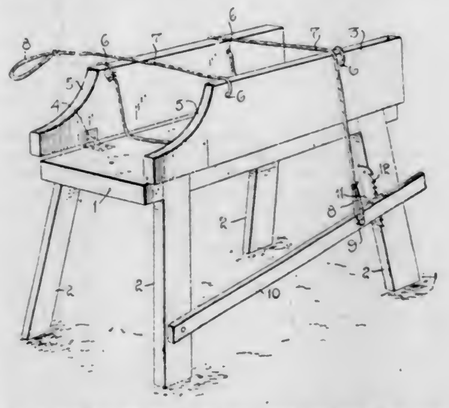
3. A meter testing block having binding posts along one side for the attachment of line terminals, binding posts along the other side for the attachment of meter leads, rigid conductors permanently connecting the binding posts for the potential circuit, binding screws for the attachment of testing instrument potential leads with the rigid conductors, spring conductors normally connecting the binding posts for the current circuit, binding screws for the attachment of testing instrument current leads, connected with the spring conductors, said last mentioned binding screws, when turned down, engaging the spring conductors and holding them with the current circuit closed, and when turned up, allowing the spring conductors to spring up and open the current circuit, and cross conductors with one end connected with the binding posts to which the spring conductors are connected and with their other ends adapted to be engaged by the spring conductors when the binding screws allow the spring conductors to spring up.

4. A meter testing block having binding posts along one side for the attachment of line terminals, binding posts along the other side for the attachment of meter leads, conductors permanently connecting the binding posts for the potential circuit, spring conductors normally connecting the binding posts for the current circuit, binding screws engaging the spring conductors and holding them in closed position, and a cross conductor with one end connected with a binding post to which a spring conductor is connected and with its other end adapted to be engaged by the other spring conductor when its binding screw is turned so that it may spring up, said binding screws being capable of complete disengagement from the spring conductors, and testing instrument lead terminals of such thickness that they can be connected by said binding screws without possibility of the binding screws coming in contact with the spring conductors when the leads are attached.

5. A meter testing block having binding posts along one side for the attachment of line terminals, binding posts along the other side for the attachment of meter leads, conductors permanently connecting the binding posts for the potential circuit, spring conductors connecting the binding posts for the current circuit, and binding screws, when turned in, engaging the spring conductors and holding them in closed position, and when turned out and disengaged from the spring conductors, releasing them so that they will spring out and open the current circuit.

[Claims 6 to 8 not printed in the Gazette.]

1,192,845. RESTRAINING DEVICE. FRED BOWER, Craig, Colo. Filed Apr. 24, 1916. Serial No. 93,226. (Cl. 119—103.)



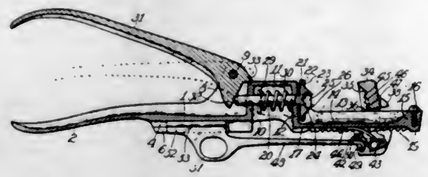
1. A restraining device of the character described comprising a table, sides pivotally engaged with the table and adapted to swing upwardly, adjacent ends of the sides having their upper portions cut away, a flexible member connected to each of the sides and at opposite ends thereof, each of said members terminating in a loop, and a lever pivotally engaged with the table and with which one of the loops is adapted to be detachably engaged.

2. A restraining device of the character described comprising a table, sides pivotally engaged with the table and adapted to swing upwardly, adjacent ends of the sides having their upper portions cut away, a flexible member connected to each of the sides and at opposite ends thereof, each of said members terminating in a loop, and a lever pivotally engaged with the table and with which one of the loops is adapted to be detachably engaged, each of the flexible members being loosely directed through the second side.

3. A restraining device of the character described comprising a table, sides pivotally engaged with the table and adapted to swing upwardly, adjacent ends of the sides having their upper portions cut away, a flexible member connected to each of the sides and at opposite ends thereof, each of said members terminating in a loop, and a lever pivotally engaged with the table and with which one of the loops is adapted to be detachably engaged, the lever being arranged at the side of the table with which coacts the side having secured thereto the flexible member adapted for detachable engagement with the lever.

4. A restraining device of the character described comprising a table, sides pivotally engaged with the table and adapted to swing upwardly, a flexible member connected to each of the sides and at opposite ends thereof, each of said members terminating in a loop, the opposite ends of the sides being provided with openings, the flexible member secured to one side being threaded through the opening of the second side, said flexible members being of such a length as to be returned and disposed over the side to which it is directly connected, and a lever pivotally engaged with the table and with which one of the loops is adapted to be engaged.

1,192,846. NUTCRACKER. CHARLES T. BOYER, Indianapolis, Ind. Filed Feb. 18, 1915. Serial No. 9,039. (Cl. 146—3.)



1. A nut-cracker having an abutment to support a nut, and a head movable toward or from the abutment, the front of the head being provided with an annular hollow punch having a conical exterior and also a rim extending about the base of the exterior of the punch.

2. A nut-cracker including a guide, an abutment adjustably mounted on the guide to support the nut, and a ram movably mounted on one end of the guide to be projected toward the abutment, the front of the ram being constructed for puncturing and subsequently expanding the shell of the nut.

3. A nut-cracker including a main part having a guide bar, an abutment on the bar having on one face thereof a conical projection, the end of the projection having a central recess forming an annular cutting edge, the edge having a plurality of projecting teeth thereon, and a head mounted on the main part and movable toward the cutting edge and the teeth.

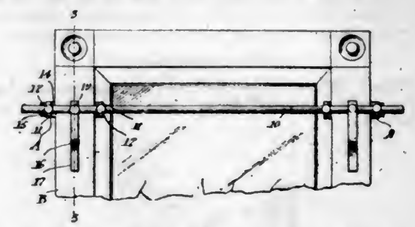
4. A nut-cracker including a main part having a guide bar, an abutment adjustable on the bar and tiltable to be clutched to the bar, a ram mounted on the main part and projectable toward the abutment above the guide bar, and a connecting rod extending under the main part and movably guided thereby, the rod being connected to the abutment below the guide bar for controlling the abutment and provided with a finger-hole for operation of the rod.

5. A nut-cracker including a main part having a longitudinal channel adjacent to one end portion thereof, the opposite end portion of the part being constructed to constitute a handle, a ram movably guided on the main part and projectable above and longitudinally of the channel, a lever pivotally connected to the main part adjacent the ram for projecting the ram, and an abutment adjustable on the channeled portion of the main part opposite the front of the ram and provided with means for securing it to the channeled portion of the main part.

[Claims 6 and 7 not printed in the Gazette.

1,192,847. SHADE-BRACKET. RUFUS D. BRADDY, Anaconda, Mont. Filed Feb. 18, 1916. Serial No. 79,190. (Cl. 156—24.)

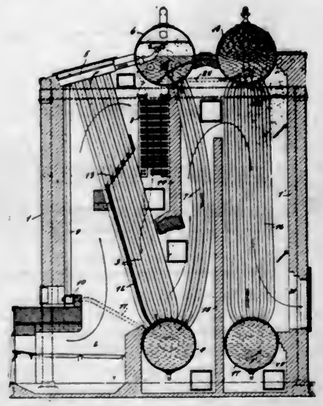
1. A combination curtain pole brace and shade bracket comprising a member freely pivoted upon the pole and mounted for longitudinal adjustment thereon, and means for holding the member fixed relatively to the pole.



2. A combined curtain and window shade hanger comprising a curtain pole, a clamp comprising pairs of members mounted upon the pole and adapted to clamp on the window casing, means connecting said members and operable to adjust the latter into clamping relation, means for holding said members fixed relatively to the pole, a curtain shade bracket freely pivoted upon the pole and adapted to bear against the window casing, and means for holding said bracket fixed in its adjusted position.

3. A combined curtain and window shade hanger comprising a curtain pole, companion relatively movable clamping members mounted upon the pole for longitudinal adjustment and adapted to be clamped on the window casing, means for holding said members in gripping relation, a curtain shade bracket pivotally associated with the pole and fitted between said members for adjustment therewith longitudinally of said pole, said bracket being adapted to bear against said window casing immediately beneath said clamps, and means for holding said bracket fixed relatively to said pole.

1,192,848. STEAM-GENERATOR. KARL W. BRANCZIK, London, England, assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Apr. 9, 1913. Serial No. 759,831. (Cl. 122—265.)

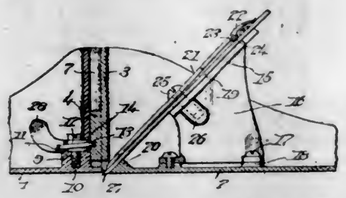


1. A water tube boiler comprising a bank of tubes inclined upwardly toward the front of the setting, a mud drum into which the lower ends of said tubes are expanded, headers into which the upper ends of said tubes are expanded, a steam and water drum connected to said headers, a baffle extending upwardly from the mud drum in front of some of said tubes, a bank of downcomer tubes connecting said drums, and a baffle extending downwardly from the steam and water drum between the first-mentioned tubes and the downcomer tubes.

2. A water tube boiler comprising a bank of tubes inclined upwardly toward the front of the setting, a drum into which the lower ends of said tubes are expanded, headers into which the upper ends of said tubes are ex-

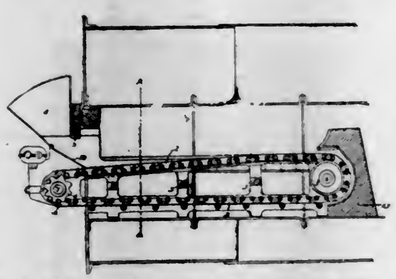
panded, a steam and water drum connected to said headers, a bank of downcomer tubes connecting said drums, a baffle wall extending downwardly from the steam and water drum between the two banks of tubes, and a baffle wall extending upwardly at the rear of the downcomer tubes.

1,192,849. BENCH-PLANE. JOHN F. BRIDGES, Alameda, Cal. Filed June 15, 1914. Serial No. 845,206. (Cl. 145—5.)



In a bench plane; a stock section having a front wall extending at a substantially right angle to the planing surface thereof, and a frog mounted in spaced relation to said wall supporting the planing knife; in combination with a second stock section having a wall extending upwardly at right angles to the planing face thereof, and in spaced relation to the rear edge, means carried by said walls whereby said sections may be held in interlocking engagement, said second section providing a throat above the planing edge of said knife, and means to adjust said sections relatively, whereby the throat will be enlarged or constricted consistent with the variations of the depths of cut of the planing knife.

1,192,850. CHAIN-GRATE STOKER. FRANK GUYVER BRITTON, Yokohama, Japan, assignor to Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Dec. 16, 1914. Serial No. 877,482. (Cl. 110—44.)



1. In a furnace, in combination, two side grates, each grate extending laterally from one of two spaced substantially vertical walls disposed centrally of the furnace, and an endless traveling chain-gate intermediate said vertical walls, the forward portion of the upper run of said endless grate being inclined upwardly in the direction of travel from below the top of said vertical walls.

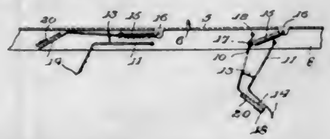
2. In a furnace, in combination, side grates disposed centrally of the furnace and an endless traveling chain grate arranged between said side grates, the forward portion of the upper run of said endless grate being inclined upwardly in the direction of travel, the front end of said upper run being located below the level of the top of said side grates, and the rear end of said upper run being approximately at the level of the top of said side grates.

3. In a furnace, in combination, spaced side grates disposed centrally of the furnace, supports on the outer and inner sides of said side grates, the inner supports being substantially vertical walls, an endless traveling chain grate arranged intermediate said vertical walls, and having its upper run inclined upwardly in the direction of travel from below the top of said vertical walls and thereby adapted to carry upward a charge of fuel supported laterally by said vertical walls, to a point above the latter, whereby the fuel is caused to fall onto said side grates.

4. In a furnace, in combination, an endless traveling chain grate, the forward portion of the upper run of which is inclined upwardly in the direction of travel, rocking supports on either side of said chain grate, and fire bars disposed at an inclination to the horizontal and resting on said supports.

5. In a furnace, in combination, side grates, an endless traveling chain grate arranged between said side grates, and a tapering bridge member arranged adjacent to the rear end of the furnace and serving to spread the ashes toward said side grates.

1,192,851. SUPPORTING-RACK. JACOB I. BROBBY, Shenandoah, Iowa. Filed July 24, 1915. Serial No. 41,794. (Cl. 24—252.)



1. In a device of the character described, in combination, a channel-shaped rack bar provided with downwardly projecting flanges having holes on their sides and a gripping device mounted therein comprising a pair of members and a spring associated with one of said members for moving the grippers into operative or into released position.

2. In a device of the character described, in combination, a channel-shaped rack bar provided with flanges having holes on their inner sides, and a gripping device mounted therein comprising a pair of members and a spring associated with one of said members for moving the grippers into operative or released position, said spring being connected with the rack bar and the gripper to move the gripper from one side to the other of a dead center position when moving from released to operative position.

3. In a device of the character described, in combination, a channel-shaped rack bar and a series of grippers mounted therein, each gripper comprising a pair of members pivotally mounted in said rack bar, means connecting said members for holding the same in relatively close position and a spring connected with one of said members for moving the grippers from released to operative position.

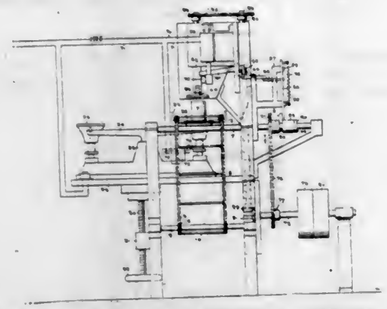
4. In a device of the character described, in combination a rack bar, and a series of grippers mounted therein, each gripper comprising a pair of members pivotally mounted in said rack bar, slidable means connecting said members for holding the same in relatively close position, a spring connected with one of said members, one of said grippers being provided with a flanged lower extremity adapted to hold an identifying card.

5. In a device of the character described, in combination, a single piece of metal bent into channel-form provided with lugs at regular intervals, a series of grippers mounted in said channel bar and a spring connected with one of said lugs and at its opposite end with one of said grippers at a point distant from its support and adapted to swing past a dead center position as the gripper is moved to and from operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,192,852. MEANS FOR AUTOMATICALLY FILLING CONTAINERS. LUKE J. BRUTON, Racine, Wis. Filed Nov. 9, 1915. Serial No. 60,532. (Cl. 73—181.)

1. In a means for automatically filling containers, the combination with a tank having a discharge opening, of a slide movably mounted below said tank and having an opening therein adapted to be moved into or out of registration with the opening in the tank, electrically operated means for moving said slide to dispose the opening of the slide out of registration with the opening in the tank, a pitman, an integral depending finger at one end of the pitman, said slide having an elongated slot through which said finger extends, means to slidably support said pitman, means to move said pitman in one direction whereby the opening in the slide will be moved into registration with the opening in the tank, and additional means to return said pitman to its initial position.



2. A means for automatically filling containers, comprising the combination of a tank having a discharge opening and a pair of tilting scales below said discharge opening, of an endless carrier having iron bars adapted to engage and remove a filled container from the scale and dispose the next succeeding container below the opening of the tank, means controlled by the downward movement of the scale to apply power to said carrier, and automatically operated means for opening and closing the discharge opening of the tank.

3. A means for automatically filling containers, comprising the combination with a tank having a discharge opening and tilting scales below said tank, of an endless carrier having cross bars, a power receiving shaft cooperating with said carrier, a clutch mechanism coöperating with said shaft, and means controlled by the movement of said scales to engage or disengage the clutch mechanism and driving means for said shaft.

4. A means for automatically filling containers, comprising the combination with a tank, having a discharge opening and a pair of scales below said opening, of an adjustable support for said scales, an endless carrier traveling above said scale, and means to apply power to said carrier whereby containers will be moved consecutively on to the scales to be filled from said tank.

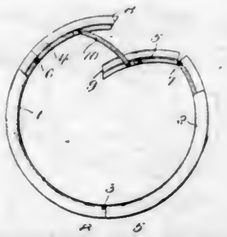
5. A means for automatically filling containers, comprising the combination with a tank having a discharge opening therein, and means to dispose containers consecutively below said opening, of a slide below said tank having an opening therethrough, automatically operated means at one end of the slide to move the opening of the slide into registration with the opening of the tank, and electrically operated means at the opposite end of the slide for moving the opening therein out of registration with the opening in the tank.

[Claims 6 to 8 not printed in the Gazette.]

1,192,853. TIRE-RIM. PERCY W. BURFORD, East Rochester, N. Y. Filed July 26, 1915. Serial No. 41,998. (Cl. 152—21.)

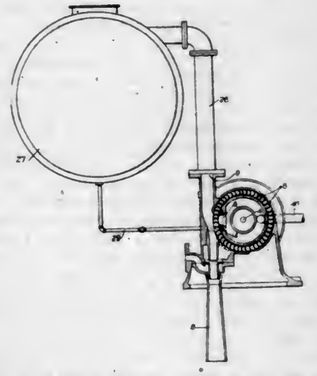
1. A rim comprising a pair of arcuate sections, hingedly connected together, a pair of locking sections adapted to circumferentially aline with the first mentioned sections, hinges connecting the locking sections to the first mentioned sections, and a link connecting the locking sections, said locking sections having mating beveled ends.

2. A rim comprising a pair of arcuate sections hingedly connected together, a pair of locking sections adapted to circumferentially aline with the first mentioned section and each having a longitudinally extending slot between its sides at one end, mating beveled faces on the slotted ends of the locking sections, and an arcuate link adapted



to normally lie within said slots and having its respective terminals pivotally connected with the locking sections between the ends thereof and below the beveled faces on said sections.

1,192,854. WET AIR-PUMP. OTTO C. BUSS, Havre, France, assignor to Société Anonyme pour l'Exploitation des Procédés Westinghouse-Leblanc, Paris, France. Filed Aug. 7, 1909. Serial No. 511,817. (Cl. 230—14.)

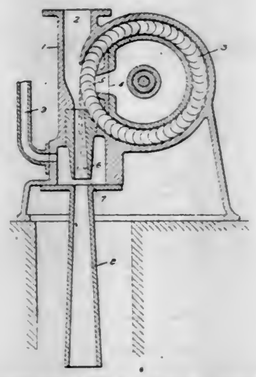


1. In combination with a condenser, a combining tube communicating therewith, a diffuser communicating with said tube, a bladed impeller for discharging ejecting liquid through said tube and said diffuser, a distributer for delivering ejecting liquid to said impeller and a distributer for delivering the water of condensation from said condenser to the blades of said impeller whereby it is discharged from said condenser.

2. In combination with a condenser, a combining tube communicating therewith, a diffuser communicating with said combining tube, a bladed impeller for discharging ejecting liquid through said tube and said diffuser, a distributer for delivering ejecting liquid to said impeller, a supplemental distributer communicating with said condenser for delivering the water of condensation therefrom to the blades of said impeller, and a combining tube for receiving the water of condensation discharged from the impeller.

3. In combination with a condenser, a combining tube communicating therewith, a bladed impeller for discharging ejecting liquid through said combining tube, a distributer for delivering ejecting liquid to the blades of said impeller, a supplemental distributer communicating with said condenser for delivering water of condensation therefrom to the blades of said impeller and a combining tube and diffuser for receiving the water of condensation discharged from said impeller.

1,192,855. ROTARY AIR-COMPRESSOR. OTTO C. BUSS, Havre, France, assignor to Société Anonyme pour l'Exploitation des Procédés Westinghouse-Leblanc, Paris, France. Filed Apr. 15, 1910. Serial No. 555,718. (Cl. 230—14.)

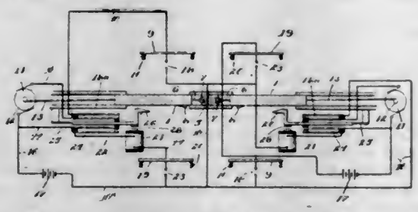


1. In combination with a chamber provided with an inlet for fluid and an outlet, rotary means arranged so as to project liquid into said chamber between the inlet and outlet thereof and one or more fluid inlets between the entrance point of said liquid and said fluid outlet.

2. An apparatus of the character described, comprising an admission chamber, having a fluid admission port and a discharge port, a combining chamber communicating with the discharge port and provided with at least one auxiliary fluid admission port, a divergent discharge nozzle communicating with said combining chamber and means for projecting an interrupted stream of liquid at a high velocity into said admission chamber and through said combining chamber and said discharge nozzle, said means comprising a partial ejection rotatable impeller.

3. An apparatus of the character described, comprising an admission chamber having a fluid inlet, a discharge nozzle communicating with said chamber, a combining chamber communicating with said nozzle and provided with separate admission ports, convergent tubes extending across and dividing said combining chamber into separate sections each of which communicates with one of said ports, and a liquid impeller located between the inlet of said admission chamber and said nozzle for discharging liquid through said nozzle, said combining tube, and said diffuser.

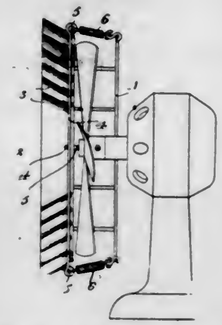
1,192,856. ELECTRICALLY-OPERATED DOOR. IRA L. CAIN, San Angelo, Tex. Filed May 5, 1915. Serial No. 26,122. (Cl. 268—8.)



1. An electric circuit including a source of electricity, a motor, contacts, and a normally open circuit closer; a second circuit including said source of electricity contacts, an electromagnet, and a second normally open circuit closer; a door arranged for operation by the motor and having a tappet, and a switch arm operable by the tappet to open the first named contacts when the door reaches open position and to engage the tappet and thereby lock the door in such position, and to also close said second named contacts, and having an armature for attraction by the electromagnet, to release the switch from the tappet and permit the door to close.

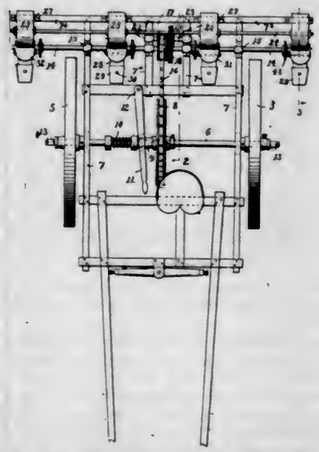
2. An electric circuit including a source of electricity, a motor, contacts, and a normally open circuit closer; a second circuit including said source of electricity, contacts, an electromagnet, a door opened by the motor and having a tappet, means to close the door when the motor is out of operation, and a switch arm operable by the tappet, to open the first named contacts when the door reaches open position, and to engage the tappet and thereby lock the door in such position, and to also close said second contacts, and having an armature for attraction by the electro-magnet to release the switch from the tappet, and permit the door to close.

1,192,857. AIR-DISTRIBUTER. STAFFORD CALDWELL, Live Oak, Fla., and CHARLES J. WILLIAMS, Atlanta, Ga. Filed Jan. 12, 1915. Serial No. 1,866. (Cl. 230—1.)



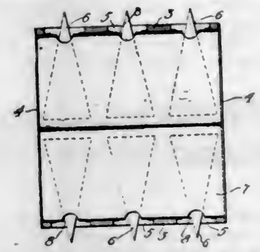
In combination with a fan having a cage, of an air diffuser, mounting bars rigidly secured to one side of said diffuser, and traction springs connecting said bars with the rear of said cage, said bars being greater in length than the diameter of the cage whereby the line of tension will be toward the axis of the cage for the purpose described.

1,192,858. MACHINE FOR BLOWING POWDERED POISON ON PLANTS. PATRICK CALLAHAN, Stratford, Conn. Filed July 9, 1915. Serial No. 38,895. (Cl. 43—14.)



In a poison distributer, the combination with a wheeled frame, of a series of alined casings mounted on said frame, a single fan shaft extending through each of the casings, a fan located in each of the casings and upon said shaft, a poison container having a discharge outlet in the casing, a feed shaft extending through the casings and across the outlets and having pockets therein to feed the poison from the outlet, a spring to normally hold the outlet of the container off from the shaft, and a screw for adjusting the outlet toward the shaft and against the action of the spring.

1,192,859. EXHIBITING AND VENDING CASE. FRANK A. CANFIELD, Chicago, Ill. Filed Aug. 12, 1915. Serial No. 45,081. (Cl. 206—46.)



1. In a device of the class described, a package composed of a plurality of thin articles, and inclosing means for said articles comprising a long strip bent zigzag upon itself in a plurality of folds, between which the articles are interposed with portions projecting through the bends of the folds and from which the articles are withdrawn by being pulled through the bends of the folds.

2. In a device of the class described, a package composed of a plurality of thin articles, and inclosing means for said articles comprising a long strip bent zig-zag upon itself in a plurality of folds, between which the articles are interposed, and openings at the bent ends through which portions of the articles project.

3. In a device of the class described, a package composed of a plurality of thin articles, and inclosing means for said articles comprising a long strip bent zig-zag upon itself in a plurality of folds; said folds being cemented together to form pockets in which the articles are inclosed with portions protruding through the bends of the folds.

4. In a device of the class described, a package composed of a plurality of thin tapering articles and inclosing means for said articles comprising a long strip bent zigzag upon itself in a plurality of folds, said folds being cemented together in pairs to form pockets in which the articles are inclosed and each pocket having an opening through which a narrow end portion of the article inclosed therein projects.

5. In a device of the class described, a package composed of a plurality of thin articles, and inclosing means for said articles comprising a long strip bent zig-zag upon itself in a plurality of folds; said folds being cemented to each other on their side edges in pairs to form pockets in which the articles are inclosed; said pockets having sides of double thickness and end bends of single thickness which are adapted to be torn as the articles are withdrawn.

[Claims 6 to 9 not printed in the Gazette.]

1,192,860. COUPLING FOR GAS-HOSE. JOHN J. CAREY, Brooklyn, N. Y. Filed Mar. 27, 1916. Serial No. 86,849. (Cl. 137—30.)

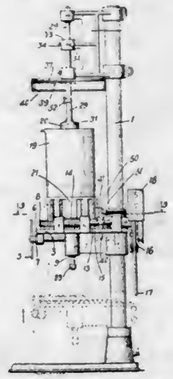
1. A coupling comprising a flexible sleeve, a gas hose projecting into one end thereof, an annular valve disk fitted against the inner end of the hose, a coacting valve located within the hose and having a stem that projects through the disk into the sleeve, and a spiral spring mounted on the stem within the sleeve, said spring being adapted to be directly engaged by the end of a gas-receiving nipple projected into the other end of the sleeve.

2. A coupling comprising a flexible sleeve, a gas hose projecting into one end thereof, an annular valve disk fitted against the inner end of the hose and having a cupped seat, a coacting ball valve located within the hose



and having a stem that projects through the disk into the sleeve, and a spiral spring mounted on the stem within the sleeve, said spring being adapted to be directly engaged by the end of a gas-receiving nipple projected into the other end of the sleeve.

1,192,861. APPARATUS FOR ASCERTAINING THE PROPERTIES OF FLUIDS. HENRY CARMICHAEL, Malden, Mass., and WILLIAM M. GROSVENOR, Ridgewood, N. J., assignors, by direct and mesne assignments, to Perkins Glue Company, a Corporation of Pennsylvania. Filed July 11, 1914. Serial No. 850,328. (Cl. 73—51.)



1. In an apparatus for ascertaining properties of fluids or the like, the combination of a rotatable cylindrical container for the fluid, a cylindrical body adapted to be suspended in the fluid in the container, said cylindrical body being deeply recessed from its top face, a wire suspension secured at its upper end to a suitable support, means for securing the suspension at its lower end to the said cylindrical body near the bottom of said recess, and means for measuring the effect produced on the said cylindrical body by the rotation of the liquid in the container.

2. In an apparatus for ascertaining properties of fluids or the like, the combination of a rotatable cylindrical container for the fluid, a cylindrical body adapted to be suspended in the fluid in the container, said cylindrical body being deeply recessed from its top face, a wire suspension for said body secured at its upper end to a suitable support and at its lower end near the bottom of said recess, a hollow rod secured to said body near the bottom of said recess and extending up and about said wire suspension nearly to the top thereof, and means carried by said rod for measuring the effect produced on the said cylindrical body by the rotation of the liquid in the container.

3. In an apparatus for ascertaining properties of fluids or the like, the combination of a rotatable container for the fluid, a body adapted to be suspended in the fluid in the container, said body being deeply recessed from its top face, a wire suspension for said body secured at its upper end to a suitable support and at its lower end near the bottom of said recess, and means for measuring the effect produced on the said body by the rotation of the liquid in the container.

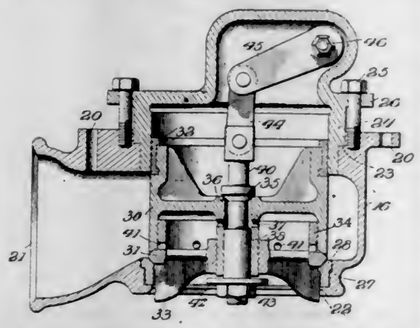
4. In an apparatus for ascertaining properties of fluids or the like, the combination of a rotatable container for

the fluid, a body adapted to be suspended in the fluid in the container, said body being deeply recessed from its top face, a wire suspension for said body secured at its upper end to a suitable support and at its lower end near the bottom of said recess, means secured to said body and loosely engaging said wire suspension to keep the body in proper upright position, and means for measuring the effect produced on the said body by the rotation of the liquid in the container.

5. In an apparatus for ascertaining properties of fluids or the like, the combination of a rotatable container for the fluid, a body adapted to be suspended in the fluid in the container, said body being deeply recessed from its top face, a wire suspension for said body secured at its upper end to a suitable support and at its lower end near the bottom of said recess, a hollow rod also secured to said body near the bottom of said recess and extending up and about said wire suspension nearly to the top thereof, and means carried by said rod for measuring the effect produced on the said body by the rotation of the liquid in the container.

[Claims 6 to 17 not printed in the Gazette.]

1,192,862. THROTTLE-VALVE. JOHN S. CHAMBERS, New York, N. Y., assignor to Chambers Valve Company, a Corporation of New York. Filed Oct. 5, 1915. Serial No. 54,222. (Cl. 137—4.)



1. The combination with a boiler having its shell provided with an opening, of a throttle box within the boiler secured in the opening, a dry pipe leading from the steam space of the boiler to the throttle box, a steam pipe leading from the throttle box, a housing outside the boiler, means to secure the housing to the box, and throttle valve mechanism carried by the housing.

2. The combination with a boiler having its shell provided with an opening, of a throttle box secured to the inner side of the shell and surrounding the opening, a dry pipe leading from the steam space of the boiler to the throttle box, a steam pipe leading from the throttle box, a housing, means located exteriorly of the shell to secure the housing to the box and throttle valve mechanism carried by the housing.

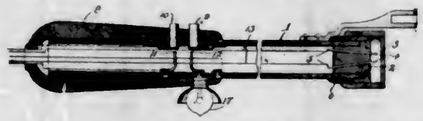
3. The combination with a boiler having a shell provided with an opening, a throttle box within the boiler secured in the opening, a dry pipe leading from the steam space of the boiler to the throttle box, a steam pipe leading from the throttle box, a housing extending exteriorly of the shell adapted to close the throttle box, removable means located exteriorly of the shell to secure the housing to the box, and throttle valve mechanism carried by the housing.

4. The combination with a boiler having a shell provided with an opening, a throttle box within the boiler secured in the opening, a dry pipe leading from the steam space of the boiler to the throttle box, a steam pipe leading from the throttle box, a valve seat carried by the box, a housing, means to secure the housing to the box, a valve carried by the housing and adapted to coöperate with the seat to close the throttle, and means mounted on the housing for operating said valve.

5. The combination with a boiler having a shell provided with an opening, a throttle box within the boiler secured in the opening, a dry pipe leading from the steam space of the boiler to the throttle box, a steam pipe leading from the throttle box, a housing outside the shell comprising a portion adapted to extend through the shell and seat in the box, means located exteriorly of the shell for securing the housing in position and throttle valve mechanism carried by the housing.

[Claims 6 to 10 not printed in the Gazette.]

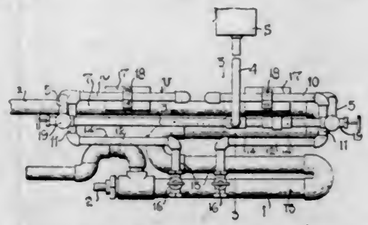
1,192,863. ELECTRIC GAS-LIGHTER. WILLIAM G. CHAPMAN, Huntington, W. Va., assignor of one-half to Thomas J. Feugate, Huntington, W. Va. Filed Apr. 8, 1916. Serial No. 89,880. (Cl. 175—91.)



1. An electric gas lighter comprising a tube, a handle mounted on the tube, a plug mounted at one end of the tube, a pair of electrodes supported in spaced relation in said plug, and means for passing a spark across the electrodes, said means including a push button having the slidable member mounted in both the handle and tube.

2. An electric gas lighter comprising a tube, a handle mounted on the tube, a plug mounted at one end of the tube, a pair of electrodes supported in spaced relation in said plug, means for passing a spark across the electrodes, said means including a push button having the slidable member mounted in both the handle and tube, and a ring mounted on one end of the tube and clamping said plug within the tube.

1,192,864. OIL-BURNER. JOSEPH T. CHEATHAM, Hayti, Mo. Filed Apr. 20, 1916. Serial No. 92,508. (Cl. 158—8.)



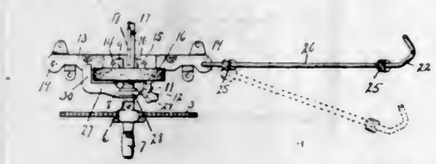
1. In combination with a water-back, a hydrocarbon burner supported by the water-back and including a feed-pipe, a plurality of heating units in communication with the feed pipe, a blow-off valve interposed in each of the units, and means for controlling the communication between each of the units and the feed pipe.

2. In combination with a water-back, a hydrocarbon burner supported by the water-back and including a feed pipe, a plurality of heating units in communication with the feed pipe, means for controlling the communication between each of the units and the feed pipe, a blow-off valve interposed in each of the units, and means carried by each of the units for deflecting the flame thereof in a direction toward the water-back.

3. In combination with a water-back, a hydrocarbon burner supported by the water-back and including a feed pipe, a plurality of heating units in communication with the feed pipe, means for controlling the communication between each of the units and the feed pipe, each of said units comprising pipe sections in vertical alinement, the lowermost of said sections being provided with burners.

a blow-off valve interposed in said last named section at a point beyond the burner, and a deflector plate carried by the upper pipe section and adjustable thereon.

1,192,865. GRINDER. WALTER W. CHENEY, Manlius, N. Y., assignor to S. Cheney & Son, Manlius, N. Y., a Corporation of New York. Filed Nov. 1, 1915. Serial No. 59,040. (Cl. 51—8.)



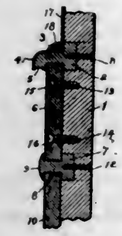
1. In a grinder, a grinding wheel, means for rotating the same, a platform, a longitudinally adjustable supplemental knife bar support mounted on said platform and inclined upwardly at an angle to said platform, and means for holding said support in any desired position of adjustment.

2. In a grinder, a grinding wheel, means for rotating the same, a pivoted knife support adjacent the grinding wheel, and a supplemental knife bar rest having a knife receiving portion, and means for varying the distance between the knife bar rest and the receiving portion of said supplemental knife bar support.

3. In a grinder, a grinding wheel, a platform, a knife support pivotally mounted on the platform, and a longitudinally adjustable supplemental knife rest mounted upon one end of said platform.

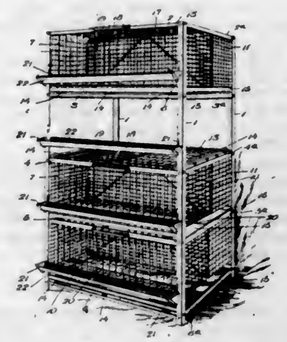
4. In a grinder, a grinding wheel, a platform, a knife support pivotally mounted on the platform, a longitudinally adjustable supplemental knife rest mounted upon one end of said platform and inclined at an angle to the plane of said platform.

1,192,866. VEHICLE JOINT AND PANEL CONSTRUCTION. JOHN W. CLEMENTS, Richmond, Ind. Filed Mar. 13, 1916. Serial No. 83,709. (Cl. 21—7.)



A vehicle joint and panel construction comprising in combination, a vertical post; a drip-rail comprising a head, a stem, and a projecting flange, the latter being turned down at right-angles to the stem and with the head turned up at right-angles to the stem, with the head located on the opposite end of the stem from that of the flange, the said drip-rail being located at right-angles to and halved into connection with said post, there being an inverted segmental channel formed along in the lower face of said flange; a panel having its upper edge fitted in the groove formed between the lower portion of the head, the flange, and the lower portion of the stem; means for securing the panel to the post; a sub-sill comprising a head, a stem, and a cap-flange extending up and down, the lower edge of said panel being located in the groove formed by the upper portion of the head of the sub-sill, the stem, and the upper portion of the flange thereof, the sub-sill also being at right-angles to and halved into connection with said post; a transparency having its lower edge resting on the first mentioned stem and its back in contact with the post and the upper portion of the first mentioned head, and means for securing the transparency in said position, all substantially as set forth and for the purposes specified.

1,192,867. CHICKEN-FEEDING COOP. GEORGE COLLIS, Clinton, Iowa; Florence May Collis, executrix of said George Collis, deceased, assignor to The Collis Company, Clinton, Iowa, a Corporation of Iowa. Filed Nov. 1, 1913. Serial No. 798,750. (Cl. 119—17.)



1. A coop comprising a plurality of corner members; side and end cross-pieces connecting said members; a cage-structure including a frame having side and end sections and having a woven fabric secured to the frame to constitute top, bottom and end sections of the cage; said frame being secured at its ends to the end cross-pieces; and depending supporting-members connecting the sides of the frame and the side cross-pieces and also forming side sections of the cage-structure.

2. A coop comprising a plurality of corner-members; a series of side and end cross-pieces arranged in spaced relation and connecting said corner-members; a plurality of cage-structures in spaced vertical relation, each including a frame having side and end portions, and a net-structure secured thereto to form top, bottom and end sections of the cage; said frames being secured at their ends to the end cross-pieces of each series; and depending members connecting the sides of the frames of each cage with the side cross-pieces of each series to constitute supporting members and side sections of the cages.

3. A coop comprising a plurality of corner-members; a series of side and end cross-pieces arranged in spaced relation and connecting said corner-members; a plurality of cage-structures in spaced vertical relation, each including a frame having side and end portions, and a net-structure secured thereto to form top, bottom and end sections of the cage; said frames being secured at their ends to the end cross-pieces of each series; and depending members connecting the sides of the frames of each cage with the side cross-pieces of each series to constitute supporting members and side sections of the cages; transverse supporting members connecting the side cross-pieces; and a tray-structure disposed on said supports.

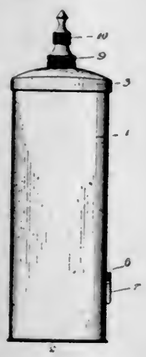
4. A coop comprising a plurality of corner-members; a series of side and end cross-pieces arranged in spaced relation and connecting said corner-members; a plurality of cage-structures in spaced vertical relation, each including a frame having side and end portions, and a net-structure secured thereto to form top, bottom and end sections of the cage; said frames being secured at their ends to the end cross-pieces of each series; depending members connecting the sides of the frames of each cage with the side cross-pieces of each series to constitute supporting members and side sections of the cages; a bracing-instru-

mentality disposed between the top and bottom of each cage-structure; and a woven fabric secured to said bracing-instrumentality and said sections to form a partition dividing the cages into compartments.

5. A coop comprising a plurality of angulated corner-members; a series of angulated side and end cross-pieces connected together and to said corner-members to form a framework, said side and end cross-pieces being mounted in spaced vertical relation on the corner-pieces, one above another; a plurality of cage-structures disposed in spaced relation and one above another, between the corner-pieces, each cage-structure including a frame having side and end portions and a woven fabric connected thereto to constitute top, bottom and end sections of the cage; the end-portions of the frame being secured to the end cross-pieces of each series; a plurality of depending members connecting the sides of each frame with the side cross-pieces of each series to constitute supporting and side sections of the cages; transverse supports connecting the side-pieces of each series; trays disposed on said supports underneath the cages; a trough for each cage secured in juxtaposition thereto; a bracing frame disposed between the top and bottom sections of each cage; a web secured to said frame and said sections to divide the cage into compartments; a combined bracing-member and roost disposed in each compartment and secured to some of said sections; and doors disposed on the side cross-pieces and communicating with the compartments in the cages.

[Claim 6 not printed in the Gazette.]

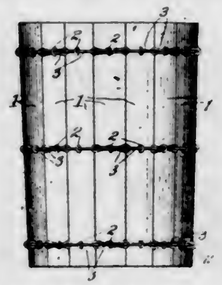
1,192,868. DISPENSING-PACKAGE. MARCUS E. COVINGTON, San Francisco, Cal. Filed Apr. 14, 1914, Serial No. 831,725. Renewed June 20, 1916. Serial No. 104,806. (Cl. 221—60.)



The combination with a case having a removable top formed with the opening centrally therethrough, of a collapsible tube mounted in the case and having a screw threaded nozzle thereon extending through the opening in the top, said tube seated against the inner face of the top, means operable externally of the case for rolling up the tube to expel the contents thereof, an external nozzle having its bore at its inner end enlarged and screw threaded to receive the nozzle on the tube, said external nozzle seated upon the outer face of the top and having its end screw threaded externally and a cap turned on the outer end of said last mentioned nozzle.

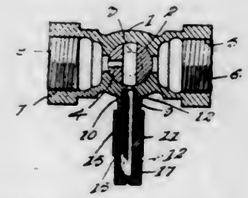
1,192,869. BARREL. VINCENT CROCE, New York, N. Y. Filed Dec. 6, 1913. Serial No. 805,096. (Cl. 217—44.)

In a knockdown barrel, a body formed of staves, chains connected with the staves, a link looped through one end of each chain and provided with a split end whereby said links may be connected with the remaining ends of the chains, means for connecting said links with one of the staves in the barrel body, and shoulders formed in the



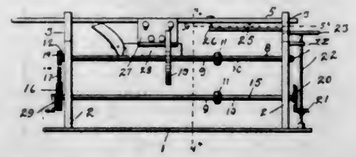
side walls of said links and adapted to contact with the above mentioned means.

1,192,870. DRAIN-PLUG AND RELIEF-VALVE. AUGUST E. DAUM, Orange, N. J. Filed Mar. 19, 1915. Serial No. 15,489. (Cl. 137—7.)



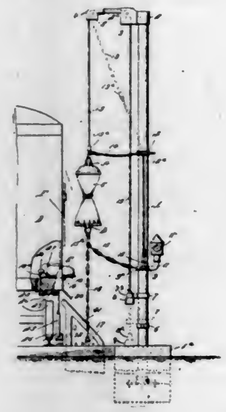
A drain plug or relief valve comprising a tubular portion adapted to be fitted to the waste outlet of a stop cock, said tubular portion being double-ended and reversible and provided with a central bore and laterally communicating outlet ducts, said tubular portion having oppositely disposed flaring sockets surrounding the threaded connection, and a plug fitted to one end of said tubular member, said plug having a tapering end adapted to fit in one of said sockets and to bear against a gasket therein, while the opposite end is fitted to a tapering boss adapted to bear against the gasket in the tapering socket at that end of the tubular member.

1,192,871. RAZOR-SHARPENER. HOWARD A. DAVID and WILLIAM J. ANDERSEN, East Moline, Ill. Filed Feb. 6, 1914. Serial No. 816,961. (Cl. 51—16.)



A razor grinding machine comprising a base, plates supported in spaced relation thereon, spaced boxes yieldably and slidably associated with the plates, horizontal shafts having their ends journaled in the boxes, abrasive disks fixed to the shafts, said plates having extensions on their upper edges and provided with guides, a bar having its ends slidably engaged in the guides, a vertical shaft adjacent one of the plates, a horizontally disposed disk fixed to the upper end thereof, a link having its outer end eccentrically connected to the disk, a projection carried by the inner end of the link and pivotally engaged with the bar, a razor blade clamp carried by the bar, means for simultaneously rotating the horizontal shafts and the vertical shaft whereby the abrading disks are rotated and the link reciprocated to reciprocate the bar and thus the clamp to move the razor blade backwardly and forwardly and between the disks.

1,192,872. DEVICE FOR DELIVERING ARTICLES TO AND RECEIVING ARTICLES FROM MOVING TRAINS. WILLIAM S. DAVIDSON, Birmingham, Ala. Filed May 17, 1910. Serial No. 561,907. (Cl. 258—6.)



1. The combination, in a device provided with flexible means for delivering articles to a receiver on a moving train; a flexible member carried by sheaves, the delivering end of the said flexible member being provided with a snap-hook and the snap-hook being provided with a forked spring, which is adapted to engage a ring on an article delivered, substantially as described.

2. The combination, in a device provided with flexible means for delivering articles to a receiver on a moving train; a flexible member carried by sheaves, the delivering end of the flexible member being provided with a snap-hook, the snap-hook being provided with a forked spring, the forked spring being adapted to engage a ring on an article delivered, and means for engaging the non-delivering end of the flexible member, substantially as described.

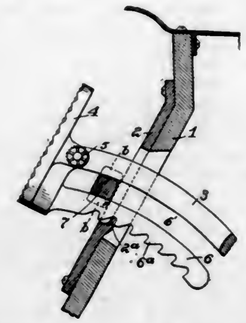
3. The combination, in a device provided with flexible means for delivering articles to a receiver on a moving train; a flexible member carried by sheaves, the delivering end of the flexible member being provided with a snap-hook, the snap-hook being provided with a forked spring, the forked spring being adapted to engage a ring on an article delivered, and the non-delivering end of the flexible member being provided with a weight, substantially as described.

4. The combination, in a device provided with flexible means for delivering articles provided with rings to a receiver on a moving train; a flexible member carried by sheaves, the non-delivering end of the flexible member being provided with a weight, means for engaging the said weight, the delivering end of the flexible member being provided with a snap-hook, the snap-hook being provided with a forked spring and the forked spring being adapted to engage a ring on an article delivered, substantially as described.

5. The combination, in a device provided with flexible means for delivering articles to a receiver on a moving train; a flexible member carried by sheaves, the delivering end of the flexible member being provided with a flexible guy, a snap-hook and the snap-hook being provided with a forked spring, all for the purposes set forth and described.

[Claims 6 to 20 not printed in the Gazette.]

1,192,873. LOCKING DEVICE FOR MOTOR-VEHICLES. HARRY E. DAVIS, Hyattsville, Md. Filed May 15, 1916. Serial No. 97,645. (Cl. 74—81.)

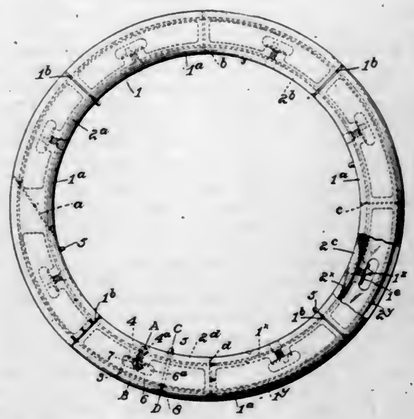


1. In combination a brake lever, a foot piece pivoted thereto, a ratchet bar rigidly carried by said foot piece and extending substantially parallel with said brake lever, a fixed dog with which said ratchet bar engages, and a locking bar insertible between said brake lever and ratchet bar to hold said ratchet bar in engagement with said dog.

2. In combination a brake lever, a foot piece pivoted thereto, a ratchet bar rigidly carried by said foot piece and extending substantially parallel with said brake lever, a fixed dog with which said ratchet bar engages, and a wedge shaped locking bar insertible between said brake lever and ratchet bar to hold said ratchet bar in engagement with said dog.

3. In combination a brake lever, a foot piece pivoted thereto, a ratchet bar rigidly carried by said foot piece and extending substantially parallel with said brake lever, a fixed dog with which said ratchet bar engages, and a wedge shaped locking bar insertible between said brake lever and ratchet bar to hold said ratchet bar in engagement with said dog, a forked member slidably carried by said wedge shaped locking bar, a screw bolt for moving said forked member on said locking bar, a shiftable key piece for keying said bolt to said forked member, and a lock for holding said key piece in keying position.

1,192,874. SEPARABLE CORE. WALTER R. DENMAN, Akron, Ohio. Filed Mar. 20, 1916. Serial No. 85,470. (Cl. 18—45.)



1. A separable core comprising a central and two side rings, each of said rings composed of a plurality of sec-

tions, with the sections of the intermediate ring breaking joints with those of the side rings and means carried by the central ring for clamping the side rings and central rings together.

2. A separable core comprising intermediate and side rings divided into sections, with the sections of the intermediate rings breaking joints with those of the side rings, said intermediate and side rings having inclined engaging faces and means carried by the intermediate ring for holding said inclined engaging faces in engaging relation.

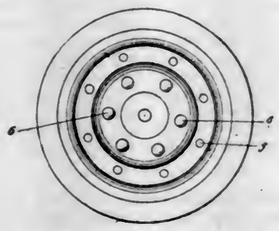
3. A separable core comprising intermediate and side sectional rings having interengaging flanges, clamping means carried by the sections of the intermediate ring adapted to be moved into and out of locking engagement with the side rings and means carried by the sections of the intermediate ring for operating said clamping means.

4. A separable core comprising intermediate and side sectional rings having interengaging flanges, rotatable clamping bars mounted in recesses in the sections of the inner ring and adapted to be swung into and out of locking position with relation to the sections of the side rings and means operable from the inner faces of the sections of the intermediate ring for swinging said clamping bars.

5. A separable core comprising intermediate and side sectional rings, clamping bars movably mounted in recesses in the intermediate ring and having their ends adapted to be projected into recesses in the side rings and means operable from the inner periphery of the core, moving said clamping bars into and out of the recesses of the side rings.

[Claims 6 to 10 not printed in the Gazette.]

1,192,875. MECHANISM FOR CONSTRUCTING A WHEEL. BRADFORD H. DIVINE, Utica, N. Y., assignor to Divine Brothers Company, Utica, N. Y., a Corporation of New York. Filed May 20, 1912. Serial No. 698,399. (Cl. 21—69.)



1. As a new article of manufacture, a truck wheel or the like, consisting essentially of a ring composed of transversely arranged layers of woven fabric compressed together circumferentially into a hard compact mass and having grooves cut in its opposite side faces, in combination with a permanent binder for said ring permanently holding the same circumferentially contracted and in tire forming shape and condition, said binder consisting of a pair of opposing wheel-body forming and hub-supporting members internally supporting said ring at its inner surface and having flanges fitting said grooves, said ring being held compressed between and by said permanent members, means permanently locking said members together and to said ring, and a hub carried by said members, substantially as described.

2. As a new article of manufacture, a truck wheel or the like, consisting essentially of a ring composed of transversely-arranged layers of woven fabric circumferentially and radially compressed into a compact mass, in combination with a permanent binder maintaining said mass in its compressed contracted condition to form a permanent tire, said permanent binder consisting of wheel-body-forming and hub-supporting members, and means for rigidly locking said members in permanent position, substantially as described.

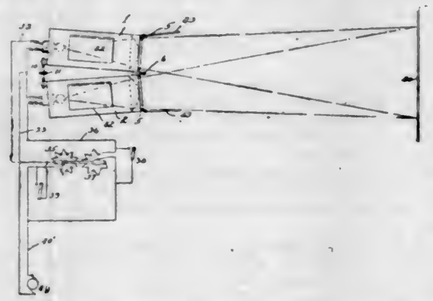
3. A truck wheel consisting essentially of a ring having a cylindrical inner surface and annular grooves in its ends and composed of transversely-arranged layers of woven fabric circumferentially and radially compressed into a compact mass, in combination with a permanent binder maintaining said mass in its compressed condition to form a permanent tire, said permanent binder forming a cylindrical rim fitting said cylindrical surface of the tire throughout its length and flanges fitting said grooves, said binder composed of a pair of similar rigid side disks, a hub extending through said disks and formed with an exterior annular flange between said disk, and means rigidly fastening said disks to said flange to form a permanent wheel body and hub, substantially as described.

4. A truck wheel consisting essentially of a ring composed of transversely-arranged fibrous material layers compressed together circumferentially into a hard compact mass and having a cylindrical inner surface, flat parallel end surfaces, and cylindrical grooves in its ends concentric with said surface; in combination with a permanent binder for said ring holding the same contracted in tire forming shape and condition and forming a cylindrical rim on which said cylindrical surface of the tire is supported throughout its full length, and annular radial walls fitting said end surfaces, and cylindrical flanges in said grooves; said permanent binder being formed by the permanent body and hub of the wheel composed of a hub provided with a circumferential flange, a pair of side disks arranged on said hub, and means fixing said disks to and against said flange, substantially as described.

5. A truck wheel consisting essentially of a ring composed of fibrous material compressed into a hard compact mass to form a permanent tire, in combination with a permanent binder holding said mass in its compacted permanent tire form and condition, said mass having cylindrical grooves in its ends and a cylindrical inner surface, said permanent binder forming cylindrical flanges fitted in said grooves and a cylindrical rim fitting and extending throughout the full length of said inner surface, said permanent binder forming the permanent body and hub of the wheel and being composed of a hub having a circumferential flange and opposite side disks between which said flange is located and to which it is riveted.

[Claims 6 and 7 not printed in the Gazette.]

1,192,876. SPOT-LIGHT. ROBERT W. EBELING, Oakland, Cal. Filed Jan. 22, 1916. Serial No. 73,583. (Cl. 240—3.)



1. A spot light apparatus comprising a pair of projectors pivotally connected to each other adjacent their forward ends, and each having a light source and concentrating lens, means for varying the angle between said projectors, and means for automatically varying the focal distance between the light source and lens inversely to the angle between the projectors.

2. A spot light apparatus comprising a pair of projectors arranged at an angle to each other, means for varying the angle between said projectors, and simultaneously varying the focal length of said projectors.

3. A spot light apparatus comprising a pair of projectors arranged at an angle to each other, and each provided with a source of light and concentrating lens, means for varying the angle between said projectors and simultaneously varying the distance between the sources of light, and the concentrating lens.

4. A spot light apparatus comprising a pair of projectors mounted at an angle to each other, a source of light in each of said projectors, a source of electric current, electrical conductors from said source of current to said source of light, variable resistance in the conductors to each light source adapted to increase the current in one circuit and simultaneously decrease the current in the other circuit.

5. A spot light apparatus, comprising a pair of projectors, an electric lamp and lens mounted in each of said projectors, a base, a forwardly extending arm on said base, a pin in said arm, hinge members attached to the forward adjacent corners of said projectors, said hinge members being pivotally mounted on said pin, a lamp support slidably mounted in each of said projectors, pins extending from said supports through the casing of said projectors, links extending from said pins to an adjusting block, means for adjusting the angle between said projectors, and screw means for moving said adjusting block.

1,192,877. SCRAPER. JOHN R. EHLINGER, St. Paul, Minn. Filed Apr. 15, 1916. Serial No. 91,335. (Cl. 145—47.)



1. In a device for scraping windows and the like the combination with a recessed handle, of a blade holder formed from a single sheet of material, said blade holder comprising substantially parallel, side walls adapted to grip therebetween a scraping blade, one of said walls being slit to form a tang adapted to fit in said recessed handle, the other of said walls having a tongue extending across one end of the holder and inwardly contiguous to and parallel with the first mentioned wall.

2. In a device of the character described a blade holder and handle therefor, said blade holder comprising substantially parallel spaced side walls adapted to receive therebetween a scraping blade, a tang cut from one of said side walls and a tongue formed on the other of said walls adapted to limit the longitudinal movement of the scraping blade and to prevent the spreading of said walls.

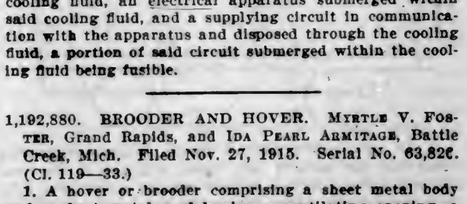
3. In a device of the kind described a blade holder and handle therefor, said blade holder comprising substantially parallel walls adapted to grip therebetween a scraping blade, an integral tang cut from one of said walls and means formed on the other of said walls for limiting the longitudinal movement of the blade and adapted to prevent spreading of the walls.

1,192,878. KNOTTER. MOSES EWING, Chester, Pa. Filed Jan. 19, 1916. Serial No. 73,008. (Cl. 28—33.)

1. A knotter of the character described, comprising a hollow member, and a moistened wick in said member, said member having openings therein exposing the wick, substantially as described.

2. A knotter of the character described, comprising a hollow hook, reducing in diameter to a relatively small free end, said hook having slots in its sides adjacent its free end, and a moistening wick in said hook exposed at the slots, substantially as described.

3. A knotter of the character described, comprising a hollow hook, reducing in diameter to a relatively small free end, said hook having slots in its sides adjacent its free end, a moistening wick in said hook exposed at the slots, and a tank containing liquid communicating with the hook and into which said wick projects, substantially as described.

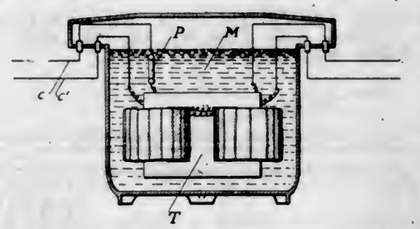


4. In a knotter of the character described, the combination with a strap adapted to be positioned around the body of the user, a tank secured to the strap, a hollow hook communicating with the tank and having slots in its sides adjacent its free end, and a wick in said hook exposed at the slots and projecting into the tank, substantially as described.

5. In a knotter of the character described, the combination with a strap adapted to be positioned around the body of the user, a tank secured to the strap, a hollow hook communicating with the tank and having slots in its sides adjacent its free end, a wick in said hook exposed at the slots and projecting into the tank, and a second hook supported by the strap at a point removed from the first-mentioned hook, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,192,879. THERMO CUT-OUT. DENT FERRELL, Carterville, Ill. Filed July 29, 1915. Serial No. 42,630. (Cl. 175—273.)



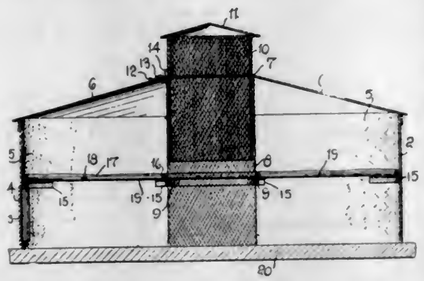
In combination with an inclosed chamber containing a cooling fluid, an electrical apparatus submerged within said cooling fluid, and a supplying circuit in communication with the apparatus and disposed through the cooling fluid, a portion of said circuit submerged within the cooling fluid being fusible.

1,192,880. BROODER AND HOVER. MYRTLE V. FOSTER, Grand Rapids, and IDA PEARL ARMITAGE, Battle Creek, Mich. Filed Nov. 27, 1915. Serial No. 63,826. (Cl. 119—33.)

1. A hover or brooder comprising a sheet metal body and a sheet metal roof having a ventilating opening, a fixed screen extending downward from the ventilating opening and approximately annular in form, a cylindrical screen disposed within the annular screen and having an imperforate upper end, said last-named screen being vertically adjustable within the first named screen.

2. A hover and brooder of the character described including a body having a roof, the roof being formed with a ventilating opening, a tubular screen extending downward from the ventilating opening to the bottom of the body, a ventilation regulating screen disposed within and fitting the first named screen and vertically adjustable

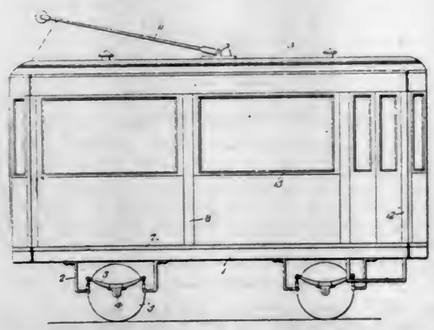
therein, an imperforate cap closing the upper end of the regulating screen, and means for holding the regulating screen in any vertically adjusted position.



3. A hover and brooder of the character described including a body having a roof, the roof being formed with a ventilating opening, a cylindrical screen extending downward from the ventilating opening to the bottom of the body, a ventilation regulating screen disposed within and fitting the first named screen and vertically adjustable therein, an imperforate cap closing the upper end of the regulating screen, and means for holding the regulating screen in any vertically adjusted position, said means including a sliding catch mounted upon the roof of the body and having a terminal end adapted to engage in the meshes of the screen.

4. In a hover and brooder, a body having a flange on the inside face of the side wall, a centrally disposed ventilating screen having a flange disposed upon its outer face and confronting the first named flange, and split resilient rings seated on said flanges, one of said rings being resiliently contractible and the other resiliently expansible whereby to support a hover cloth upon said flanges.

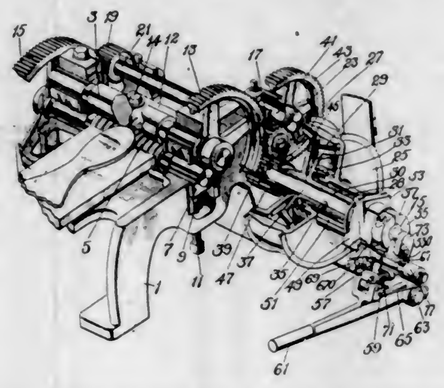
1,192,881. CAR CONSTRUCTION. WALLACE W. FULLER, Charleston, S. C. Filed Nov. 19, 1915. Serial No. 62,358. (Cl. 105—205.)



1. In car construction, a frame, hangers depending from the side bars of said frame adjacent to the ends thereof, springs carried by said hangers, axles carried by said springs and extending across the frame, wheels on said axles, motors for rotating said axles, a floor on said frame, standards uprising from the respective side and end bars of said frame, the standards on each side bar being so arranged as to provide a central standard and end standards, the standards at the relatively opposite ends of the side bars being arranged close together to form entrance and exit openings, a roof on the upper ends of said standards, and a partition detachably connected with opposite standards and arranged across the car body to divide the same into compartments.

2. In car construction, a frame, hangers depending from the side bars of said frame adjacent to the ends thereof, springs carried by said hangers, axles carried by said springs and extending across the frame, wheels on said axles, motors for rotating said axles, a floor on said frame, standards uprising from the respective side and end bars of said frame, the standards on each side bar being so arranged as to provide a central standard and end standards, the standards at the relatively opposite ends of the side bars being arranged close together to form entrance and exit openings, a roof on the upper ends of said standards, seats arranged along the sides and ends of the car, and a rail above said seats.

1,192,882. SPLITTING-MACHINE. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 15, 1912. Serial No. 731,553. (Cl. 69—13.)



1. A leather splitting machine, having, in combination, a splitting knife, a table in front of said knife, means for gripping the stock and forcing it against the knife, and automatic means for reversing the direction and increasing the speed of movement of said gripping means to eject the split stock upon said table.

2. A leather splitting machine having, in combination, a splitting knife, a plurality of feeding and ejecting rolls, means for rotating said rolls at comparatively slow speed in a direction to cause the stock to be fed to the knife, and automatic means for reversing the direction of rotation and increasing the speed to cause the stock to be ejected rapidly from the machine.

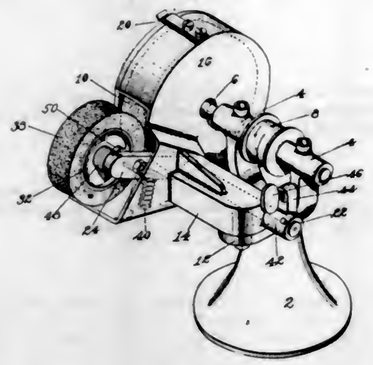
3. A leather splitting machine having, in combination, a splitting knife, a plurality of feeding and ejecting rolls, means for rotating said rolls at comparatively slow speed in a direction to cause the stock to be fed to the knife, and automatic means for simultaneously reversing the direction of rotation and increasing the speed to cause the stock to be ejected rapidly from the machine.

4. A leather splitting machine having, in combination, a splitting knife, a plurality of feeding and ejecting rolls, a clutch member, gearing between said rolls and clutch member constructed and arranged to impart slow rotation to said rolls in a direction to force the stock against the knife, a second clutch member, gearing between said rolls and the second clutch member constructed and arranged to impart rotation to said rolls in the reverse direction, a driving pulley, and automatic means for disconnecting said pulley from said first clutch member and for connecting it with said second clutch member.

5. A leather splitting machine having, in combination, a splitting knife, a plurality of feeding and ejecting rolls, a clutch member, gearing between said rolls and clutch member, constructed and arranged to impart slow rotation to said rolls in a direction to force the stock against the knife, a second clutch member, gearing between said rolls and the second clutch member constructed and arranged to impart rotation to said rolls in the reverse direction, a driving pulley, and automatic means for shifting said pulley from engagement with said first clutch member into engagement with said second clutch member.

[Claim 6 not printed in the Gazette.]

1,192,883. GRINDING-MACHINE. FREDERICK M. FURBER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 9, 1913. Serial No. 788,816. (Cl. 51—5.)



1. A machine for resurfacing circular rolls having, in combination, a grinding member, a roll support arranged to present the roll for rotation with its peripheral surface in contact with said member, said support being movable in directions to carry the roll toward or from said member and constructed to maintain the plane of rotation of the roll constant during such movement, manual means whereby the roll may be rotated upon the support to shape all portions of its peripheral surface uniformly through contact with said member, and an adjustable stop arranged to determine a limit of movement of the support in the direction to carry the roll toward the grinding member irrespective of the rotation of the roll.

2. A machine for resurfacing circular rolls having, in combination, a grinding wheel, a roll support mounted for swinging movement about an axis substantially parallel to the axis of the wheel and having a spindle projecting across the plane of the wheel in parallel relation to the wheel axis and arranged to receive the roll thereon for rotation in the plane of the wheel, resilient means for swinging the support in the direction to carry the roll toward the wheel, and an adjustable stop arranged to limit the movement of the support in said direction.

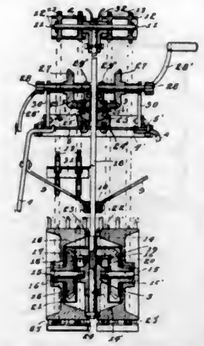
3. A machine for resurfacing circular rolls having, in combination, a grinding wheel formed with a peripheral surface convex in transverse contour, a support for a roll to be resurfaced arranged to present the roll for rotation in a plane substantially parallel to the plane of the wheel and with its peripheral surface in contact with the periphery of the wheel, said support being mounted for swinging movement to carry the roll toward or from the wheel and constructed to position the roll for rotation in the same plane in all positions of the support, and means whereby the roll may be rotated upon the support to shape all portions of its peripheral surface uniformly concave in transverse contour through contact with said convex periphery of the wheel.

4. A machine of the class described having, in combination, a grinding member, a work support having provision for rotary movement of the work while in contact with said member, and means for preventing rotation of the work in one direction.

5. A machine of the class described having, in combination, a grinding member, a work support having provision for rotary movement of the work while in contact with said member, the grinding member and support being relatively movable to effect the grinding operation, and means for preventing rotation of the work through contact of the grinding member therewith.

[Claims 6 to 12 not printed in the Gazette.]

1,192,884. POST-HOLE DIGGER. CARRINGTON W. GARRETT, Washington, D. C. Filed July 17, 1914. Serial No. 851,502. (Cl. 255—21.)



1. In a post-hole digger, the combination of upright rods and upper and lower blocks fixed thereto, a retaining frame having vertically disposed sleeves surrounding and guiding said rods, a shaft journaled in the blocks, a drum rotatably carried by the lower block, a drum rotatably carried by the upper block, an endless conveyer belt operatively extended about the drums, excavating means projecting from the lower drum, means for rotating the shaft, means for transmitting movement from the shaft to the lower drum; and conveying means carried by the belt.

2. In a post-hole digger, the combination of a vertically shiftable sustaining frame, a retaining frame guiding the sustaining frame in its movement, a squared shaft journaled in the sustaining frame and shiftable longitudinally therewith, a bearing member sustained by the retaining frame and having an aperture through which the shaft is adapted to move, said bearing having recesses laterally of the shaft, roller bearings in said recesses contacting with the faces of the shaft and confined against longitudinal movement relative to the bearing member, means for revolving the bearing member, and excavating means driven by the shaft.

3. In a post-hole digger, a vertically movable sustaining frame, means guiding the frame in its movement, a shaft journaled in the frame, means for rotating the shaft, a pair of drums disposed on opposite sides of the shaft, gearing actuated by the shaft for driving the drums, and rollers carried by the shaft and engaging the inner ends of the drums for steadying movement thereof.

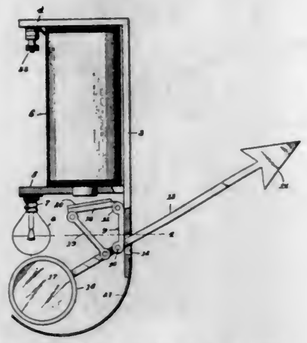
4. In a post-hole digger, excavating rollers internally hollow and having their interior walls flaring to provide inclines down which dirt is adapted to move to be discharged from within the rollers, and driving means for the rollers within the hollow portions thereof.

5. In a post-hole digger, the combination of guiding rods, means for guiding the rods, a block fixed to the rods, shafts fixed to the block, a gear wheel journaled on each shaft, an actuating shaft journaled in the block, a gear wheel actuated by said last-named shaft and meshing with the first-named gear wheels, and drums fixed to the first-named gear wheels and substantially inclosing all of the gear wheels.

1,192,885. DIRECTION-INDICATING APPARATUS FOR MOTOR-VEHICLES. WILLIAM J. GARVEY, Buffalo, N. Y. Filed Nov. 15, 1915. Serial No. 61,633. (Cl. 177—329.)

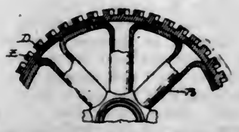
1. An indicating device of the class described comprising a vertical support having a slot formed therein adja-

cent to the lower end thereof, a magnet mounted upon one side of said support, a bar secured to said support adjacent to said slot, a signal arm projecting through said slot and pivoted to said bar, a link having one end pivoted to said bar, a connecting rod connecting the other end of said link to said signal arm, an armature on said link disposed within the influence of the pole of said magnet whereby the signal arm may be swung to signaling position upon the energization of the magnet, and shelves secured to said support and holding said magnet in position.



2. An indicating device of the class described comprising a vertical support having a slot formed therein adjacent to the lower end thereof, a magnet mounted upon one side of said support, a bar secured to said support adjacent to said slot, a signal arm projecting through said slot and pivoted to said bar, a link having one end pivoted to said bar, a connecting rod connecting the other end of said link to said signal arm, an armature on said link disposed within the influence of the pole of said magnet whereby the signal arm may be swung to signaling position upon the energization of the magnet, a cross arm secured to said signal arm, annuli on the outer ends of said cross arm, lenses carried by said annuli respectively, and a lamp disposed at the limit of the path of movement of said signal arm under the action of said magnet whereby said lenses will be brought into line with said lamp in the movement of the signal arm.

1,192,886. VEHICLE-WHEEL. MASON B. GIBERSON, Detroit, Mich., assignor to Thomas H. Simpson, Detroit, Mich. Filed Sept. 23, 1915. Serial No. 52,290. (Cl. 21—69.)



1. A wheel, comprising a hub portion, hollow spoke portions and rim portion, formed integral of cast metal, and an annular tread portion formed of a rolled wrought metal bar having cross ribs or serations formed therein, said tread portion being shrunk upon said rim.

2. A vehicle wheel, comprising a hub portion, hollow spoke portions and rim portion, formed integral of cast metal, and a reinforcing annular tread portion formed of wrought metal having cross ribs or serrations rolled therein, said tread being shrunk upon said rim.

1,192,887. CONTACT FOR INTERNAL-COMBUSTION-ENGINE IGNITERS. JOHN E. GILSON, Port Washington, Wis., assignor to Gilson Manufacturing Company, Port Washington, Wis. Filed Mar. 30, 1914. Serial No. 828,333. (Cl. 123—157.)

In a structure of the class described the combination of a swinging contact arm and a fixed contact arm, said arms being provided with bores adapted to aline, cylindrical contact plugs of uniform diameter throughout slidable in the bores, said plugs having each of the ends thereof



adapted for abutting engagement with an end of the other plug whereby said plugs are reversible and clamping means engaging said plugs to hold them in the bores.

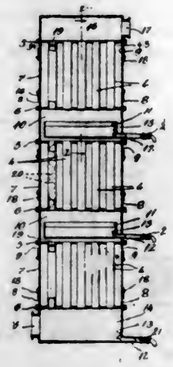
1,192,888. WEAPON. JOSEPH GONSIOR, WILLIAM FRANK, and CHRISTIAN SCHNEIDER, Medina, N. D. Filed May 27, 1916. Serial No. 100,303. (Cl. 42—53.)



1. A weapon comprising a handle member, a forwardly projecting support carried thereby, a rib longitudinally carried by the said support and having a keeper perforation therethrough, rearwardly sloping oppositely positioned abutment lugs carried by the said rib in engagement with the said support and adjacent the forward free edge of the rib, a blade having a base provided with an inwardly-extending slot inclosingly positioned over the said rib and being provided with opposite longitudinal notches adapted for the reception of the said lugs when the device is assembled, and a resilient latch upon the said base having an engaging end in normal locking reception within the said perforation.

2. A firearm comprising a revolver having a barrel, a mounting rib longitudinally carried by the lower side of the said barrel provided with a keeper perforation, a handle for the said revolver rearwardly-extending in substantially longitudinal alinement with the said rib, a finger guard at the lower side of the said handle, a blade having an attaching base provided with an inwardly-extending slot adapted for reception over the said rib with the free forward end of the rib in abutting engagement with the inner end of the said slot, a resilient latch carried by the said base in locking engagement with the said keeper when the blade is secured to the said rib, and oppositely positioned coöperating notches upon the said base and triangular lugs upon the said rib, the said blade being in axial longitudinal alinement with the said handle when operatively positioned upon the revolver.

1,192,889. APPARATUS FOR USE IN CONNECTION WITH THE DISTILLATION OF PETROLEUM AND PRODUCTS THEREFROM. JOHN L. GRAY, Webster Groves, Mo. Filed Dec. 30, 1914. Serial No. 879,619. (Cl. 196—3.)



1. The combination with a vertical air cooled tubular condenser of a condensate receiving trough located beneath the horizontal area of the chamber being greater than that of the trough to afford passages for the vapor between them, the tubes, a chamber in which the trough is located, a discharge spout extending from the trough and through a wall of the chamber, and a baffle plate above the tubes against which the vapor passing upwardly through the tubes impinges and the condensate formed on the baffle plate falls through the tubes into the trough.

2. The combination with a vertical air cooled tubular condenser of a condensate receiving trough located beneath the tubes, a chamber in which the trough is located, a discharge spout extending from the trough and through a wall of the chamber, a baffle plate above the tubes against which the vapor passing upwardly through the tubes impinges and the condensate formed on the baffle plate falls through the tubes, and a trap seal, the lower edge of which is on a level with the center of the spout.

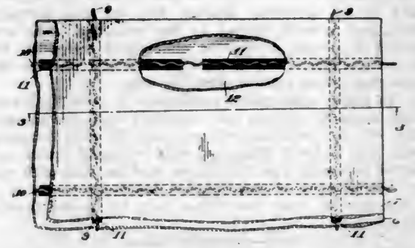
3. In a fractional distilling apparatus a series of air cooled condensing units vertically arranged, each unit comprising a series of vertical tubes, a chamber beneath the tubes into which the vapor from the preceding unit passes, a condensate receiving trough located in and independent of the chamber and into which the condensate from the series of tubes falls, the arrangement being such that the vapor impinges against the bottom of the trough and flows under and around the sides of the trough in its passage to the said series of tubes.

4. An air condenser comprising a series of vertical tubes, a chamber beneath the tubes, and a condensate receiving trough having its bottom inclined in two directions toward the center located in the chamber and separated therefrom and into which the condensate from the tubes falls, openings in the bottom of the chamber beneath the trough through which the vapor passes and impinges against the bottom of the trough and passes upwardly around it to the condensing tubes, and a discharge spout extending from the lowest part of the trough through a wall of the chamber.

5. An air condenser comprising a series of vertical tubes, a chamber beneath the tubes, a condensate receiving trough having an inclined bottom and located in the chamber and into which the condensate from the tubes falls, a discharge spout at the lowest part of the trough extending from the trough through a wall of the chamber, a trap seal the lowest part of the edge of which is on a level with the center of the spout and a valve in the discharge spout.

[Claim 6 not printed in the Gazette.]

1,192,890. SHEET MATERIAL. EDMUND A. GULICK, Los Angeles, Cal. Filed July 1, 1915. Serial No. 37,514. (Cl. 154—53.)



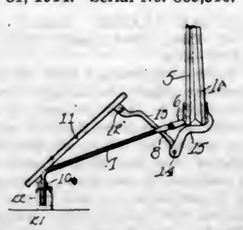
1. As an article of manufacture, a sheet material comprising a pair of flexible layers, a series of crossed semi-rigid reinforcing members interposed between said layers and affixed thereto, and a cementitious substance embedding the reinforcing members dividing the material into air insulated sections.

2. As an article of manufacture, a sheet material comprising a pair of flexible layers, a series of crossed corrugated pliable reinforcing members interposed between said layers and arranged with their corrugations extending on the plane of the layers, and means for fastening the reinforcing members in place serving to affix the flexible layers together and to form air insulated spaces extending between the reinforcing members.

3. As an article of manufacture, a sheet material comprising a pair of flexible layers, a series of intersecting corrugated pliable reinforcing members interposed between said layers and arranged with their corrugations extending on the plane of the layers, and a pliable cementitious substance joining the layers along the corrugated reinforcing members forming the sheet into hermetically sealed compartments.

4. As an article of manufacture, a sheet material comprising a pair of layers of flexible translucent and non-absorbing material, a series of intersecting pliable corrugated reinforcing members interposed between said layers and arranged with their corrugations extending on the plane of the layers, and a pliable cementitious substance joining the layers along the corrugated reinforcing members forming the sheet with hermetically sealed sections.

1,192,891. PLAYER-PIANO PEDAL. CHRISTIAN GULBRANSEN, Chicago, Ill., assignor to Gulbransen-Dickinson Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1914. Serial No. 869,510. (Cl. 84—169.)



1. In pedal mechanism, a swinging frame, pedals mounted upon said frame, and means carried by the frame and adapted when in one position to lie under the frame with the frame resting thereon and when in the other position to allow the frame to swing farther about its axis.

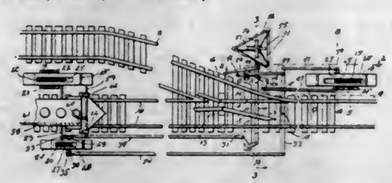
2. In player piano pedal mechanism, a swinging frame, pedals mounted thereon and connected with the movable board of an operating bellows, and a block carried by the swinging frame and adapted to occupy two operative positions, one under the end of the swinging frame with

the frame resting thereon and another in which the swinging frame may swing farther about its axis.

3. In player piano pedal mechanism, a swinging frame, pedals mounted thereon and connected with the movable board of an operating bellows, feet on said swinging frame, and a block carried by the swinging frame and adapted to occupy a position under said feet with the feet resting thereon and another position wherein the frame may swing farther about its axis.

4. In player piano pedal mechanism, a swinging frame, pedals mounted thereon and connected with the movable board of an operating bellows, feet on said swinging frame, and a block hinged to said swinging frame and adapted to occupy a position under said feet and with said feet resting upon it and another position wherein it is swung back so that the frame may be swung farther about its axis.

1,192,892. AUTOMATIC RAILWAY-SWITCH. FOSTER L. HARMON, Niota, Tenn. Filed June 16, 1914. Serial No. 845,472. (Cl. 104—23.)



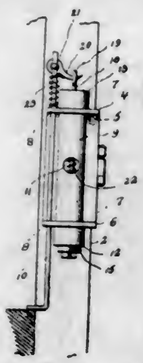
1. In an automatic railway switch, a main line and a branch, a switch, train actuated tappets arranged at suitable distances from the ends of the switch for operating the switch, a manual means for operating the switch including a releasable holding means connected with the tappet, said holding means being capable of movement manually to impart an initial movement to the tappet.

2. In an automobile railway switch, a main line and a branch, a transversely movable member between the main line and the branch, switch points mounted between the main line and the branch and movably connected with the transversely movable member, a rotatable train actuated tappet mounted at one side of the main line and including gears and cranks, means for holding the one of said cranks on dead center, said means being capable of automatic release by the train actuated means, but incapable of manual release from the train actuated means, and manual means for operating the switch capable of movement only when the locking means is directly actuated manually.

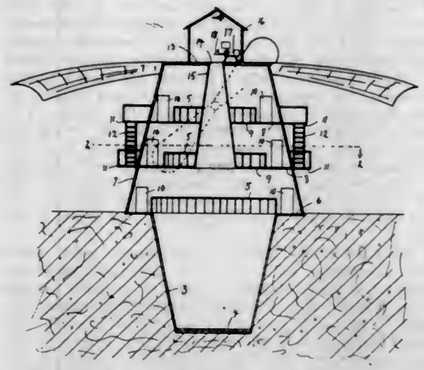
1,192,893. BURGLAR-ALARM. MORRIS L. HARVEY, New Straitsville, Ohio. Filed June 5, 1915. Serial No. 32,351. (Cl. 116—42.)

1. A burglar alarm comprising a pair of hinged members, means to prevent relative movement of the members at predetermined times, a sleeve detachably mounted in one of said members, end members threaded onto the ends of said sleeve for preventing movement thereof, a cap receiving plug secured into one of said end members, a plunger slidably mounted in the sleeve, a spring for forcing the plunger in one direction and trigger mechanism for initially putting the spring under tension and for subsequently allowing the spring to exert its tension upon said plunger.

2. A burglar alarm comprising a pair of hinged members, means to prevent relative movement of the members at predetermined times, a sleeve detachably mounted in one of said members, end members threaded onto the ends of said sleeve for preventing movement thereof, a cap receiving plug secured into one of said end members, a plunger slidably mounted in the sleeve, a spring for forcing the plunger in one direction and trigger mechanism for initially putting the spring under tension and for subsequently allowing the spring to exert its tension upon said plunger, said mechanism including a rod slidably mounted in one of said members, a trigger coöperating with the plunger, and a spring acting in opposition to the plunger spring.



1,192,894. APPARATUS FOR THE REALISTIC REPRODUCTION OF AERIAL MOTION-PICTURES. WARD B. HAUSMAN, Philadelphia, Pa. Filed Mar. 27, 1914. Serial No. 827,594. (Cl. 46—70.)

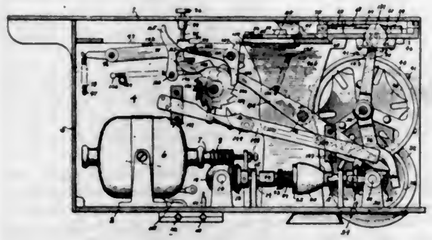


1. An apparatus for the realistic reproduction of aerial motion pictures comprising a building having an operator's floor for dividing the building into an operator's room and an auditorium, said operator's floor having a hole therein through which are projected rays of light from a reproducing camera, a light shield depending from the operator's floor and surrounding the hole therein, the walls of said light shield diverging toward its lower end and spaced from the walls of the building, spectators' floors situated one above the other, each extending beyond the preceding one below, a well situated beneath the lowermost spectator's floor and having its walls converging toward its lower end and a screen for projecting pictures thereon, situated at the bottom of the well.

2. In an apparatus for realistic reproduction of aerial motion pictures comprising inclosing walls, a horizontal screen on which pictures are to be projected from a reproducing camera, and an auditorium situated above the screen comprising a number of balconies each of which extends beyond the preceding one below.

3. In an apparatus for realistic reproduction of aerial motion pictures comprising inclosing walls, a horizontal screen on which pictures are to be projected from a reproducing camera, an auditorium situated above the screen comprising a number of balconies each of which extends beyond the preceding one below, and a light shield situated between the screen and the reproducing camera.

1,192,895. TICKET-VENDING MACHINE. ANSIL W. HILLS, Detroit, Mich., assignor to Caille Brothers Company, Detroit, Mich., a Corporation of Michigan. Filed July 29, 1915. Serial No. 42,494. (Cl. 211—33.)



1. In a ticket machine, the combination of a motor and a shaft driven thereby, means for controlling the number of revolutions of said shaft, a tape-feeding mechanism actuated by said shaft, a tape-shearing mechanism also actuated by said shaft, and means to support the sections of tape severed by said mechanism and consisting of a pair of jaws set at an angle to each other.

2. In a ticket machine, the combination of a motor and a shaft driven thereby, means for controlling the number of revolutions of said shaft, tape-feeding and shearing mechanisms actuated by said shaft, said shearing mechanism comprising a bar and a reciprocating member having a pointed end, and means to support the sections of tape severed by said mechanism and consisting of a pair of corrugated jaws set at an angle to each other between which the point of said shear may enter.

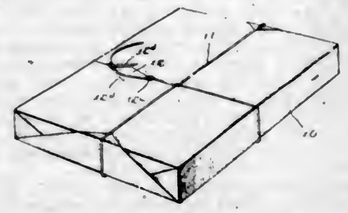
3. In a ticket machine, the combination of a motor and a shaft driven thereby, a series of keys for controlling the number of revolutions of said shaft, tape-feeding and shearing mechanism actuated by said shaft at each revolution, said shearing mechanism comprising a bar and a reciprocating plate having a pointed cutting end, and means to support the severed sections of the tape consisting of a pair of corrugated jaws set at an angle to each other between which the cutting point of said shear may enter.

4. In a ticket machine, the combination of a motor and a shaft driven thereby, a series of keys for controlling the number of revolutions of said shaft, a tape-feeding wheel having a series of radial pins adapted to enter holes in the tape, a curved plate to hold the tape against the wheel, a Geneva movement between the shaft and wheel, a plate above the wheel provided with a slot through which the tape is fed by the wheel, a shear bar adjacent the slot, a shear plate slidable above the plate, means whereby the shear plate is reciprocated at each revolution of the shaft, and a pair of jaws adjacent said slot and at an acute angle thereto to receive the severed sections of the tape.

5. In a ticket machine, the combination of a motor and a shaft driven thereby, a series of keys for controlling the number of revolutions of said shaft, a tape feeding wheel having a series of radial pins adapted to enter holes in the tape, a curved plate to hold the tape against the wheel, a Geneva movement between the shaft and wheel, a plate above the wheel provided with a slot through which the tape is fed by the wheel the length of a ticket at each revolution of said shaft, a shear bar adjacent the slot, a shear plate slidable above the plate, and means whereby the shear plate is reciprocated at each revolution of the shaft.

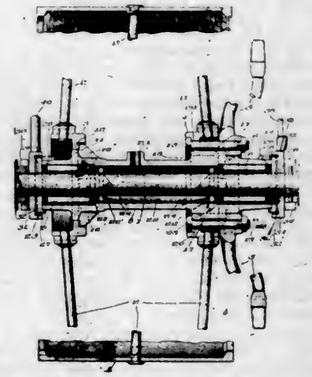
[Claims 6 to 20 not printed in the Gazette.]

1,192,896. STRING-FASTENER. FRANK B. HINE, El Paso, Tex. Filed Sept. 2, 1914. Serial No. 859,835. (Cl. 24—131.)



A string fastener comprising a strip of material having a portion between its ends bent to provide a substantially diamond-shaped loop having two of its sides in contact with the remaining portions of the strip of material which overhangs said sides between the ends of the loop and co-acts with the remaining sides of the loop to guide a string into position to be passed between the sides of the loop in contact with the last mentioned portions of the strip of material.

1,192,897. TRACTION-WHEEL. LUD HOLLAND-LETZ, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Apr. 1, 1912. Serial No. 687,902. (Cl. 21—207.)



1. In a traction wheel, a hub ring, a sleeve having portions thereof movable longitudinally through openings in said ring, means whereby upon subsequent rotary and longitudinal movement of said elements the same are locked against rotary movement and longitudinal movement in one direction, and a power transmitting wheel secured against said portions of the sleeve.

2. In a traction wheel, a rim, a plurality of hub rings spaced apart axially, spokes connecting said rings and said rim, a bearing sleeve longitudinally movable through said rings, means for interlocking said rings and sleeve upon a rotary and longitudinal movement of one of said elements relative to the other, a power transmitting wheel, and means rigidly connecting the same to one of said rings and said sleeve.

3. In a traction wheel, a plurality of hub rings, a wheel rim, spokes connecting said rings and rim, a sleeve having a plurality of raised portions longitudinally movable through their coöperating rings, means coöperating with said portions for interlocking said sleeve and rings upon a rotary movement of one of said elements with respect to the other, a power transmitting wheel carried on said sleeve, and a plurality of axially extending bolts rigidly

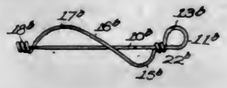
connecting one of said rings and said wheel and clamping the latter on one side of one of the raised portions on said sleeve.

4. In a traction wheel, a plurality of spaced hub rings, a wheel rim, spokes connecting said rings and rim, a bearing sleeve longitudinally movable through said rings and having wing members receivable in axially disposed openings therein, means on said ring members interlocking said sleeve and ring members upon a rotary and longitudinal movement of one of the same relative to the other, a power transmitting wheel carried on said sleeve adjacent certain wing members thereon, and a single means rigidly connecting said hub rings and said power wheel and clamping the same to said sleeve.

5. In a traction wheel, a hub ring, a wheel rim connected thereto, a sleeve longitudinally movable through said ring, means for interlocking said sleeve and ring upon relative movement of one of said elements, bearing members carried in said sleeve, a sprocket wheel rigidly connected to said sleeve and hub ring, a shaft protruding through said sleeve and journaled in said bearing members, and means whereby upon removal of said sprocket and relative movement between said rings and sleeve the same may be separated longitudinally.

[Claims 6 to 8 not printed in the Gazette.]

1,192,898. SAFETY-PIN. EDWARD D. HOUSTON, Worcester, Mass. Filed Feb. 6, 1915. Serial No. 6,594. (Cl. 24—161.)



1. As an article of manufacture, a safety pin comprising a pin member, a back crossing the pin member at a point between its ends and yieldingly connected therewith, and a retainer for the pin point on the end of said back which the pin is adapted to enter lengthwise, a portion of said back constituting a guard within reach of the pin point for guiding the pin point into the retainer and preventing the pin point passing far to one side thereof.

2. As an article of manufacture, a safety pin comprising a pin member having at the butt thereof an integral continuous plane bend of wire arranged transverse thereof but in the plane of the pin member by which the pin member can be operated, the end of said bend crossing the pin at a short distance from its end to give it rigidity and extending beyond the pin on the other side and then back again to the first side.

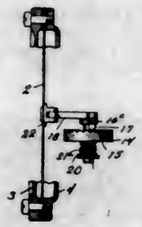
3. As an article of manufacture, a safety pin having a pin member provided at the butt thereof with a transverse bend crossing the pin to render it rigid by which the pin member can be directly manipulated, and having a body extending across the pin member again to the same side and provided at the end with a catch or guard for the point of the pin member.

4. As an article of manufacture, a safety pin comprising a pin member having at the butt thereof an integral continuous plane bend of wire arranged to cross the pin member but in the plane of the pin member by which the pin member can be operated, said bend having a continuation thereof constituting the body of the pin and extending across the pin member a second time and having at its opposite end an integral coil constituting a catch or guard for receiving the point of the pin member.

5. An an article of manufacture, a safety pin comprising a pin member provided at the butt end thereof with a single flat transverse coil with which the base of the pin member is fixedly connected, the pin crossing this coil in contact therewith whereby this coil constitutes means for operating the pin member, said coil having an extension passing over the pin member to a point on the other side which lies substantially in the same plane as the plane of said coil and provided with means on the end for retaining the point of the pin member.

[Claims 6 to 10 not printed in the Gazette.]

1,192,899. DIAPHRAGM-HORN. MILLER REESE HUTCHISON, West Orange, N. J., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed May 11, 1911. Serial No. 626,492. (Cl. 116—1.)



1. In an alarm or signaling device, a diaphragm, and mechanical means for actuating the same comprising a rotary driving member and an oscillatory driven member, said members possessing interengaging cam teeth and recesses, the driven member being connected with the diaphragm, and means for holding said members coupled frictionally and yieldingly together, whereby the members are successively gripped together so that the driven member is dragged by the driving member, and uncoupled by the increasing tension of the diaphragm to permit the members to cam apart against the action of said holding means so that the driven member may slip back under the action of the diaphragm.

2. In an alarm or signaling device, a diaphragm, and mechanical means for actuating the same comprising a rotary driving member and an oscillatory driven member, said members possessing interengaging cam teeth and recesses, a link connecting the driven member with the diaphragm, and means for holding said members coupled frictionally and yieldingly together so that the driven member is dragged by the driving member, and uncoupled by the increasing tension of the diaphragm to permit the members to cam apart against the action of said holding means so that the driven member may slip back under the action of the diaphragm.

3. In an alarm or signaling device, a diaphragm, and mechanical means for actuating the same, comprising toothed grip and slip members, means for driving one of the members, and means whereby the movement of the other member with the driving member causes the diaphragm to vibrate and produce sound.

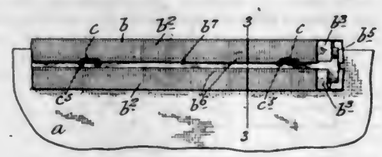
4. A diaphragm alarm or signal having actuating means comprising coöperating grip and slip members possessed of coupling projections and recesses, means for driving one of said members, and tensional means for opposing the movement of the other member while coupled with the driving member and producing separation thereof and retrograde movement of the driven member.

5. In an alarm or signal, a diaphragm and actuating means comprising coöperating grip and slip members possessed of coupling projections and recesses, one of said members being the driving member and the driven member associated with the diaphragm so as to be yieldingly restrained thereby so as to execute to and fro, coupled and uncoupled, movements, under the actuation of the driving member.

[Claims 6 to 12 not printed in the Gazette.]

1,192,900. COLLARET. CARL ILIGAN, Corona, N. Y. Filed July 15, 1915. Serial No. 39,945. (Cl. 2—66.)

A reversible collaret or facing of the class described composed of two similar side strips folded centrally and longitudinally, and a central reinforcing and connecting strip placed between the folds of the side strips, the folded edge portions of the side strips being folded inwardly and stitched longitudinally to the central reinforcing and connecting strip, and said folded edge portions of the side strips forming narrow central longitudinal spaces exposing the central reinforcing and connecting strip on both sides of the collaret.



1,192,901. LIQUID-ATOMIZER. DAVID J. IRISH, New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Dec. 17, 1913. Serial No. 807,196. (Cl. 137—80.)

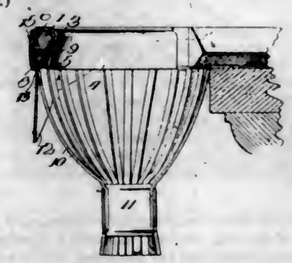


1. An atomizing tip for liquid fuel burners having a jet or discharge orifice through which a stream of oil is continuously forced, said orifice opening into a chamber closed to the atmosphere except at its mouth, the outer edge of the wall of said chamber being so positioned that the wall of the cone of atomized oil will just clear said nozzle to form an annular pocket for air between the walls of the chamber and the cone of atomized oil; substantially as described.

2. A separable atomizing tip for liquid fuel burners having a discharge orifice through which a stream of the fuel is forced and atomized so as to form a jet which diverges directly upon leaving the orifice, said orifice opening into a chamber closed to the atmosphere except at its mouth, the outer edge of the wall of said chamber being so positioned that it will come nearer the outside of the diverging jet than some other parts of the wall of said chamber, thereby forming a pocket for air between the wall of the chamber and the diverging jet of atomized fuel.

3. A separable atomizing tip for liquid fuel burners having a discharge orifice through which a stream of the fuel is forced and atomized so as to form a jet which diverges directly on leaving the orifice, said orifice being in the base of a chamber, the sectional area of said chamber between the discharge orifice and the mouth being greater than the sectional area of the mouth.

1,192,902. POCKET FOR POOL-TABLES. GUSTAV A. JAEGER, Morrison, Ill., assignor of three-fifths to Hattie Jaeger and two-fifths to Elizabeth Jaeger, Morrison, Ill. Filed Nov. 8, 1915. Serial No. 60,330. (Cl. 46—12.)



1. In a pocket for pool tables, the combination of a pocket iron having a body portion and a rim depending below the outer edge of said body portion, a band concentric with the inner side of said depending rim, studs bridging the space between the band and the rim, pocket straps hung on said studs, a shield also hung on said studs, and means for securing the band to the rim.

2. In a pocket for pool tables, the combination of a pocket iron having a body portion and a rim depending from the outer edge of said body portion, a band disposed concentric with the inner side of said rim, spaced studs on said band, a shield hung on said studs and having a plurality of slots disposed below the studs, pocket straps having their upper ends inserted through said slots and engaging over said studs, and means for securing the band to said rim whereby to support the shield and pocket straps.

3. In a pocket for pool tables, the combination of a pocket iron having a body portion and a rim depending from the outer edge of said body portion, a band disposed below the body portion of the iron concentric with the said rim, studs bridging the space between the said rim and the band, a shield hung upon said studs and having slots disposed below the respective studs, pocket straps inserted upwardly through the said slots, and fastening screws inserted through the said rim and the shield to engage the band and thereby clamp the band to the rim.

1,192,903. METHOD OF TREATING FIBROUS MATERIALS. EUGENE D. JEFFERSON, Boston, Mass. Filed Jan. 13, 1915. Serial No. 1,959. (Cl. 92—13.)

1. The method of treating fibrous materials which comprises, placing the materials in a closed pressure tight vessel containing an alkaline liquor, removing air or oxidizing gases from the vessel and successively and repeatedly immersing the materials in and withdrawing them from the liquor while maintaining the different parts of the materials in approximately the same relative position.

2. The method of treating fibrous materials which comprises, placing the materials in a closed vessel containing an alkaline liquor, boiling the liquor to generate steam, and successively and repeatedly immersing all of the materials in and withdrawing them from the liquor during the boil while maintaining the different parts of the materials in approximately the same relative position.

3. The method of treating fibrous materials which comprises, placing the materials in a closed vessel containing an alkaline liquor, boiling the liquor to generate steam, and successively and repeatedly immersing all of the materials in and withdrawing them from the liquor during the boil while maintaining the different parts of the materials approximately in the same relative position and the concentration of the liquor approximately constant.

4. The method of treating fibrous materials which comprises, subjecting the materials to the successive and repeated actions of a boiling lime liquor and steam generated from the liquor in a closed vessel from which the air has been expelled by the steam, and completing the treatment after the expulsion of air without the admission of external substances into the vessel.

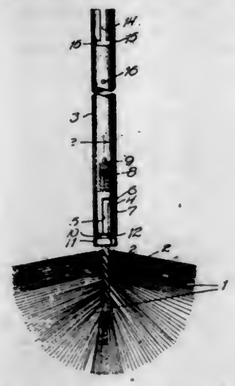
5. The method of treating fibrous materials which comprises, placing the materials in a closed vessel with an alkaline liquor, boiling the liquor by externally applied heat to expel the air from the vessel and fill it with steam under pressure, and successively and repeatedly immersing the materials in and withdrawing them from the boiling liquor to alternately subject them to the action of the liquor and the steam generated from the liquor while maintaining the different parts of the materials in the same relative position.

[Claims 6 to 22 not printed in the Gazette.]

1,192,904. BRUSH FOR BOTTLE-WASHING MACHINES. JOHN M. JUNG, Chicago, Ill., assignor of one-third to John L. Buehl and one-third to Nicholas O. Kenniker, Chicago, Ill. Filed Nov. 20, 1913. Serial No. 802,093. (Cl. 141—7.)

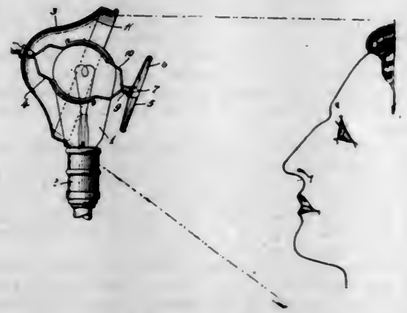
A device of the kind described, comprising a tubular spindle, slotted lengthwise at one end for a portion of its

length, and slotted circumferentially at the inner end of said lengthwise slots, and slightly slotted at the closed end of said second mentioned slots toward the said end of the spindle, a brush provided with a twisted wire shank formed with the ends of the wires projecting on opposite sides thereof, and of a length to engage the spindle in said last mentioned slots from the interior of the spindle,



a bushing detachably arranged on said shank, comprising a tubular member slotted throughout a portion of its length, said bushing of a size to closely fit the interior of said spindle, a spring positioned within the spindle, and arranged to bear against said bushing, and means carried by the spindle for engaging the other end of said spring.

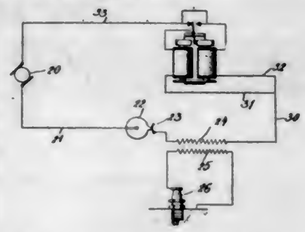
1,192,905. COMBINED MIRROR AND REFLECTOR. ELIOT KEEN, Brooklyn, N. Y., assignor to The Aladdin Lamp Corporation, New York, N. Y., a Corporation of Delaware. Filed Oct. 2, 1915. Serial No. 53,698. (Cl. 240—4.)



In combination, a lamp bulb, a circular concave reflector at the back of the bulb, and a smaller circular mirror in front of the bulb said mirror having spring arms frictionally engaged with said bulb so that the mirror may have its axis brought into coincidence with that of the reflector and may also be attached to or detached from the bulb at will.

1,192,906. CURRENT-INTERRUPTER. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed July 14, 1910. Serial No. 571,892. (Cl. 123—165.)

1. A current interrupter, comprising a source of alternating current, a main circuit therefor and means controlled by said current for making and breaking the main circuit synchronously with the successive changes in the direction of flow of the current.



2. A current interrupter, comprising a source of alternating current, and means controlled by said current for breaking the circuit synchronously with the successive changes of direction of flow and automatically reëstablishing the alternating current circuit after each break and prior to the succeeding break.

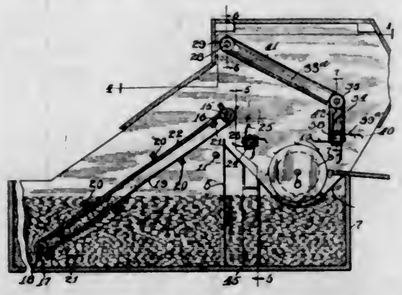
3. A current interrupter, comprising a source of alternating current; a make-and-break device in circuit therewith; and an electro-magnet also in circuit therewith and coöperating with said make-and-break device to make and break the circuit synchronously with the alternations of said current.

4. A current interrupter comprising a source of alternating current; a make and break device in circuit therewith, having two positions of adjustment in which said circuit is made, and in the intermediate position of which said circuit is broken; an electromagnet also in circuit with said make and break device, and acting upon the latter, to make and break the circuit, synchronously with the alternations of said current by shifting said device from one position of adjustment to the other; said electromagnetic device including an auxiliary coil, shunted around said make and break device and also around the main coil of the electromagnet.

5. A current interrupter, comprising a main source of alternating current; a vibratory switch lever in circuit therewith; two contact points located on opposite sides of said switch lever and each connected in series in said circuit; and an electro-magnetic coil in series with said circuit for vibrating the switch lever between its two contact points.

[Claims 6 to 13 not printed in the Gazette.]

1,192,907. HOG-SCRAPING MACHINE. JOHN W. KOHLHEPP, Chicago, Ill., assignor to The Allbright-Nell Company, a Corporation of Illinois. Filed Jan. 24, 1913. Serial No. 743,938. (Cl. 17—11.)



1. A device of the class described embracing a scalding tank, a hog dehairing machine supported thereon, scraping mechanism therein for the carcasses, and a submerged collecting receptacle within the tank for receiving the hair and other refuse and discharging the same.

2. A device of the class described embracing a scalding tank, a hog scraping machine mounted thereon to receive the carcasses directly therefrom, mechanism associated with said machine for dashing the water from the tank over the carcasses while scraping the same, and a receptacle submerged in the tank for collecting the hair and refuse as removed from the carcasses and acting to prevent the distribution thereof through the water of the tank.

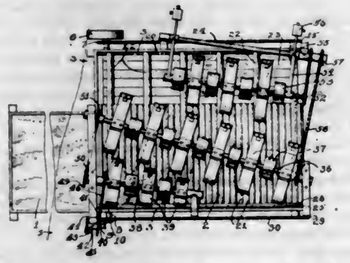
3. A machine of the class described embracing a scalding tank, a rotative scraping drum thereon, means delivering the carcasses upon the drum, scraping means acting to retain the carcasses temporarily upon the drum and coacting therewith to rotate the carcasses, and means collecting the refuse from the carcasses as removed by the scrapers and retaining the same from distribution through the water of the tank, the scraping drum acting to move said refuse into said collecting means.

4. A device of the class described embracing coacting scraping elements, a scalding tank above which the same are supported, and a tight receptacle in said tank to which said elements act automatically in discharging the refuse scraped from the carcasses, said receptacle having a normally open lateral discharge port, through which the refuse is discharged from the machine.

5. In a device of the class described, a tank, conveying mechanism therein, said mechanism inclined upwardly toward its discharge end, a plurality of scraping mechanisms, one of which is partially submerged and disposed below the discharge end of said conveying mechanism, a perforated floor beneath said partially submerged scraping mechanism adapted to catch the hair scraped from a carcass and permitting water to drain therethrough, and a receptacle adapted to receive the hair and refuse scraped from the carcass from said perforated floor.

[Claims 6 to 19 not printed in the Gazette.]

1,192,908. DEHAIRING-MACHINE. JOHN W. KOHLHEPP, Chicago, Ill., assignor to The Allbright-Nell Company, a Corporation of Illinois. Filed Sept. 24, 1913. Serial No. 791,475. (Cl. 17—11.)



1. The combination with a scalding tank, of a conveyer acting in alinement therewith, a rotative shaft journaled above the same, flexible beaters thereon acting to beat the carcasses supported on said conveyer, and means grappling the carcass and retarding the same from movement with the conveyer.

2. The combination with a scalding tank and conveying means to receive the carcasses therefrom in substantially horizontal position, of a beater shaft arranged above the same to strike downwardly thereon, and swiveled means retarding the movement of the carcasses on the conveyer but permitting rotation of the carcasses thereon.

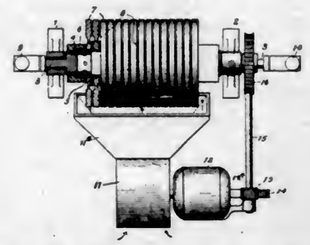
3. In a device of the class described a conveyer, beater shafts journaled adjacent thereto to operate on a carcass carried on said conveyer, and mechanism moving at a slower rate of speed than said conveyer and positively connected to said carcasses to retard the same from movement but permitting the carcasses to rotate on the conveyer while operated upon by said beaters.

4. The combination with a scalding tank and an inclined endless bed conveyer adjacent thereto acting to receive the carcasses therefrom, means for driving said conveyer, and means for retarding the carcasses thereon, of a beater shaft journaled obliquely to the line of travel of said conveyer and beaters thereon for striking the carcasses on said conveyer.

5. The combination with a scalding tank and an inclined extension thereof opening thereinto at its lower end, of dehairing mechanism supported in said tank extension and embracing an inclined conveyer, a rotative beater shaft obliquely disposed above the same and parallel the plane thereof, and flexible beaters on said shafts acting to strike the scalded carcasses movable on the conveyer.

[Claims 6 to 24 not printed in the Gazette.]

1,192,909. SPARK-GAP. FRED H. KROGER, Brooklyn, N. Y., assignor to Samuel M. Kintner and Halsey M. Barrett, receivers for The National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Aug. 31, 1914. Serial No. 859,432. (Cl. 250—38.)

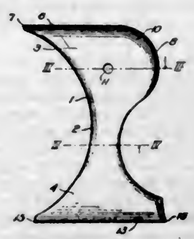


1. A spark gap, comprising a series of insulated disk electrodes in parallel planes and arranged to rotate on a common axis, and a stationary dielectric near the peripheries of said disks and having longitudinally extending portions opposite the gaps therebetween to cause the sparks to substantially remain stationary as the disks revolve.

2. A spark gap, comprising a series of parallel disks insulated from each other and mounted on a shaft, means for rotating said shaft, a blower, and a nozzle connected thereto to distribute air between and around said disks, said nozzle being made of insulating material and mounted near the edge of the disks and serving as a dielectric to cause the spark to travel over the surfaces of the disks as the disks revolve.

3. In wireless telegraphy apparatus, a quenched spark gap, comprising a rotating insulated shaft, a series of flat-faced disks insulated from each other on said shaft, a device to continually cool said disks, and a continuous dielectric opposite the edges of said disks to govern the position of the sparks on the disks as they revolve.

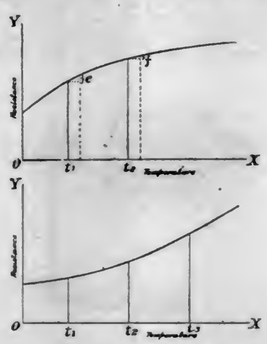
1,192,910. UTENSIL-SCRAPER. ISABELLE LAWRENCE, Kansas City, Kans. Filed June 7, 1915. Serial No. 32,735. (Cl. 65—12.)



The combination in a utensil scraper of a central neck and enlarged heads, one head 3 being stiff and having a flange along its end and semicircularly around one corner forming a cup, and a point at the opposite corner, the projecting edge of the flange being beveled, the head 3

having an aperture for the purpose set forth; the second head 4 being pliable and having an edge parallel with the end of the first head 3, the edge being beveled oppositely to the flange of the first head 3, one corner of the second head 4 being beveled continuously with the edge and the other corner being dished and having a point, substantially as and for the purpose set forth.

1,192,911. COMPOSITE RESISTANCE. MORRIS E. LEEDS, Philadelphia, Pa., assignor to Leeds & Northrup Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 8, 1916. Serial No. 89,858. (Cl. 219—63.)



1. A composite resistance having a temperature coefficient which is substantially constant, comprising components having similar but differently varying temperature co-efficients.

2. A composite resistance having a positive temperature co-efficient which is substantially constant, comprising components having positive temperature co-efficients which vary differently.

3. A composite resistance having a temperature coefficient which is substantially constant, comprising components whose resistances vary with temperature as expressed respectively by equations (1) and (2) herein, and present in proportions expressed by the ratio of the coefficients B and b of said equations.

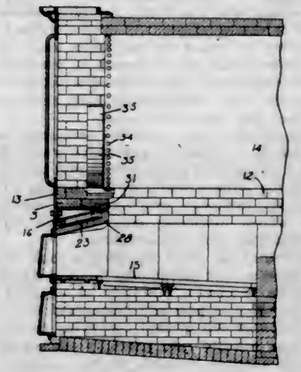
4. A composite resistance comprising platinum and nickel in such proportions that it exhibits a temperature co-efficient which is substantially constant through a predetermined temperature range.

5. A composite resistance comprising component resistances exhibiting respectively progressively smaller and greater increases in resistances with increases in temperature and in such proportions that they jointly exhibit a resistance increase directly proportional to temperature increase.

1,192,912. FURNACE-DOOR-ARCH CONSTRUCTION. WILLIAM LEMB, Brooklyn, N. Y. Filed Apr. 24, 1916. Serial No. 93,221. (Cl. 110—181.)

1. Furnace door arch construction, comprising a boiler front, a series of arch sections each composed of a body plate having a front depending wall, and also side flanges that engage in adjacent sections, means securing said flanges together, means securing said depending wall to said boiler front, the sections having inwardly extending opposed ledges on the lower portion adapted to support hangers, a series of hangers each comprising a pair of bars connected at the middle portions by a web, the hangers having the upper bars removably suspended on said section ledges, and a set of blocks having T shaped slots in their upper faces by which they engage the lower bars of the hangers to be suspended beneath the sections in juxtaposition.

2. An arch section for furnace door arch construction, comprising a body plate having a front depending wall apertured for attachment to the boiler front, a ledge extending inwardly from the depending wall, an inwardly projecting ledge depending from the rear of the body, the body plate having upwardly extending flanges at each side portion adapted for engagement in adjacent arch sections and perforated for securement together of the sections, said ledges and flanges being offset to interlock in adjacent sections.



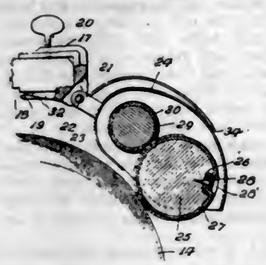
3. Furnace door arch construction, comprising a boiler front, a series of arch sections each composed of a body plate having a front depending wall, and also side flanges that engage in adjacent sections, means securing said flanges together, means securing said depending wall to said boiler front, the sections having inwardly extending opposed ledges on the lower portion adapted to support hangers, the front ledge being lower from the body plate than the rear ledge with the ledge extending in a plane inclined to the body plate, a series of hangers each comprising a pair of bars connected at the middle portions by a web, the hangers having the upper bars removably suspended on said section ledges in inclined positions and a set of blocks having T shaped slots in their upper faces by which they engage the lower bars of the hangers to be suspended beneath the sections in juxtaposition in an inclined position.

4. Furnace door arch construction, comprising a boiler front, a series of arch sections each composed of a body plate having a front depending wall, means securing said depending walls to said boiler front, the sections having inwardly extending opposed ledges on the lower portion adapted to support hangers, a series of hangers removably suspended on said section ledges, a set of blocks having slots in their upper faces by which they engage the lower bars of the hangers to be suspended beneath the sections in juxtaposition, and a set of blocks placed on top of the sections and having a rear depending portion engaging said depending blocks, whereby the sections are inclosed by two said sets of blocks.

5. Furnace door arch construction, comprising a boiler front, a series of arch sections each composed of a body plate having a front depending wall, and also side flanges that engage in adjacent sections, means securing said flanges together, means securing said depending wall to said boiler front, the sections having inwardly extending opposed ledges on the lower portion adapted to support hangers, a series of hangers each comprising a pair of bars connected at the middle portions by a web, the hangers having the upper bars removably suspended on said section ledges, a set of blocks having T shaped slots in their upper faces by which they engage the lower bars of the hangers to be suspended beneath the sections in juxtaposition, and a set of blocks placed on top of the sections and having a rear depending portion engaging said depending blocks, whereby the sections are inclosed by two said sets of blocks.

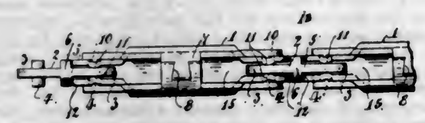
[Claim 6 not printed in the Gazette.]

1,192,913. WRAPPING-PAPER-ROLL-PRINTING MACHINE. ELIAS LIPINER, New York, N. Y., assignor to Henry G. Polson, New York, N. Y. Filed Jan. 4, 1916. Serial No. 70,815. (Cl. 101—126.)



A device of the character described comprising a clamp having an arm provided with a longitudinal slot, a casing pivoted to the clamp and carrying printing and inking mechanisms, and a spring having its intermediate portion coiled about the pivot of the clamp, one end formed into a pressure member to bear upon the casing, and its other end formed into a loop to have a sliding engagement with the slot, whereby to equalize the pressure exerted on the casing throughout the limit of its swing.

1,192,914. FLEXIBLE SHAFT. GEORGE F. LONG, Elmhurst, N. Y., assignor to Gottfried Piel, New York, N. Y. Filed May 19, 1914. Serial No. 839,501. (Cl. 64—30.)



1. As an article of manufacture, an element adapted to form part of a flexible shaft, said element comprising a one-piece channel member, a portion of the longitudinal edges having interlocking means for forming a portion of the channel member into a tubular part, an end of said member having oppositely disposed walls and each of said walls having a socket stamped therein, said sockets together forming a bearing spaced from the adjacent end of the member and adapted to receive a coacting element of the shaft, said channel member providing an opening thereto between its tubular part and said end walls, said opening leading to said bearing whereby the bearing engaging portion of the coacting element may be inserted through said opening and then moved longitudinally of the element onto said bearing.

2. As an article of manufacture, an element of a flexible shaft, comprising a one-piece sheet metal tubular member, with certain portions continuous to form a closed tubular portion intermediate the length of the element, a bearing being formed in said member adjacent one end and opening into the interior thereof, said member having an opening, in the side thereof between the closed tubular portion and the bearing, leading to said bearing.

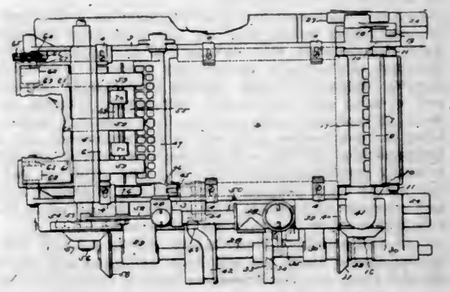
3. As an article of manufacture, a sheet metal channel member adapted to form a link of a pivoted chain, said channel member having opposite walls pressed outward to form lateral channels facing each other and having longitudinal grooves communicating with said channels to form L-shaped depressions in said walls, the ends of the grooves opposite the channels forming bearings adapted to constitute part of the pivotal connections with the next adjacent element of the chain.

4. In a device of the class described, a shell member opposite ends of which have parallel walls with socketed bearings in said walls fixed relative to each other and adapted to form part of a pivotal connection with the next adjacent element of the device, the portion of the shell intermediate the walls being tubular thereby to prevent relative movement between said parallel walls when said walls are subjected to a twisting strain, said bearings having openings in the side thereof leading to said tubular portion of the shell.

5. In a device of the class described, a sheet metal channel member with the longitudinal edges having extensions intermediate their ends, said extensions projecting toward each other and formed into a dove-tail joint constituting an interlocking means for permanently securing said extensions together, each end of said member having means stamped therein for demountably pivoting the member to the next adjacent member of the device without breaking the dove-tail joint.

[Claims 6 and 7 not printed in the Gazette.]

1,192,915. SHEET-SEPARATING MACHINE. WILLIAM A. LORENZ, Hartford, Conn. Filed Dec. 5, 1914. Serial No. 875,557. (Cl. 101—41.)



1. In a machine for separating and feeding sheets from a pile, the combination of means for bending the rear edge of a sheet and thus separating that edge from the pile and drawing that sheet by said bent edge rearwardly, and means for bending the front edge of said sheet and thus separating that edge from the pile and pulling the sheet by said bent front edge forwardly.

2. In a machine for separating and feeding sheets from a pile, the combination of pneumatic means for seizing a sheet near the rear edge and drawing the sheet rearwardly, means for bending the front edge of the sheet out of the normal plane of the sheet, and means for engaging the bent front edge of said sheet and pulling the sheet thereby forwardly.

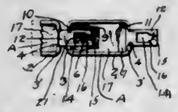
3. In a machine for separating and feeding sheets from a pile the combination of means for deflecting one edge of the first sheet from the second sheet of the pile and drawing that sheet by said deflected edge in one direction, means for deflecting the opposite edge of the second sheet from the next sheet of the pile and means for pulling that sheet by said deflected edge in the opposite direction.

4. In a machine for separating and feeding sheets from a pile the combination of means for deflecting the front edge of the first sheet from the second sheet of the pile and drawing that sheet by said deflected edge forwardly, means for deflecting the rear edge of the second sheet from the next sheet of the pile and means for pulling that sheet by said deflected edge rearwardly.

5. In a machine for separating and feeding sheets from a pile the combination of means for first deflecting the rear edge of the lowest sheet of the pile from the sheet above and then drawing that sheet by said deflected edge backwardly, and means for deflecting the front edge of the lowest sheet of the pile from the sheet above and pulling that sheet by said deflected edge forwardly.

[Claims 6 to 22 not printed in the Gazette.]

1,192,916. LINK FOR BRACELETS OR THE LIKE. HERMANN H. LOTT, St. Louis, Mo. Filed May 24, 1915. Serial No. 30,022. (Cl. 24—230.)



1. A new article of manufacture including a link-member comprising rigid spaced apart top and back walls and side walls therebetween, said link-member having an opening thereinto at its end, and an attaching-member adapted to snugly slidably fit separably through said opening and within said link-member between the walls thereof, the said opening into said link-member being adapted to accommodate only said attaching-member, one of said members being provided transversely with an aperture and the other of said members being provided with a spring free at one end to project into said aperture and releasably engage with a wall thereof when the attaching-member is within the link-member.

2. A new article of manufacture including a link-member comprising spaced apart top and back walls and side walls therebetween, said link-member having an opening thereinto at its end, a transversely apertured attaching-member adapted to snugly slidably fit separably through said opening and within said link-member between the walls thereof, the said opening into said link-member being to accommodate only said attaching-member, and a spring-member within said link-member having an end normally projecting outwardly away from said top wall, said spring being adapted at its said end to project into said aperture and engage with a wall thereof when the attaching-member is within the link-member.

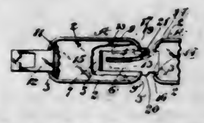
3. A new article of manufacture including a link comprising spaced apart top and back walls and side walls therebetween, said link having an opening thereinto at its end, a transversely apertured attaching-member adapted to snugly slidably fit through said opening and within said link, the said opening into said link-member being adapted to accommodate only said attaching-member, and a spring fixed at one end within the link and adapted to yieldingly project at its free end into the aperture of, and releasably engage with, said attaching-member when the same is within the link to detachably fasten the same to the link, said link being provided in its back wall with an aperture adapted to receive independent means for depressing said spring out of engagement with said attaching-member to permit separation of the attaching-member and link.

4. A new article of manufacture including a link comprising spaced apart top and back walls and side and end walls therebetween, and a cut-away plate providing an approximately U-shaped guide-frame fixed flatwise within the link intermediate said top and back walls, an end wall of the link being cut away to provide an opening into said guide-frame, an apertured attaching member adapted to snugly slidably fit separably through said opening and within said frame, the said opening into said link-member being adapted to accommodate only said attaching-member, and a spring fixed at one end within said link and adapted to yieldingly project at its free end into the aperture of, and releasably engage with, said attaching-member when the same is within said guide-frame to separably fasten said attaching-member to said link, said spring at its free end being disposed outwardly away from said top wall and toward said back wall and said link being provided with an aperture in its back wall adapted to receive independent means for depressing said spring out of engagement with said attaching-member to permit separation of the attaching-member and link.

5. A new article of manufacture including a link comprising a body-member providing top, side, and end walls, a back wall fixed to said side and end walls and spaced from said top wall, and a cut-away plate providing a guide-frame fitting flatwise within said body-member intermediate said top and back walls, an end wall of said body-member being cut away to provide an opening into said guide-frame, an apertured attaching-member adapted to slidably fit snugly within said frame, and a spring fixed at one end within said body-member and adapted to yieldingly project at its free end into the aperture of, and releasably engage with, said attaching-member when the same is within said frame to detachably fasten said attaching-member and link together, the link being provided with an aperture in its said back wall adapted to receive independent means for depressing said spring out of engagement with said attaching-member to permit separation of the attaching-member and link, the aperture in said attaching-member having a continuation such as to permit, on depression of said spring, limited outward movement of the attaching-member relatively to the link while said independent means remains in spring-depressing position.

[Claims 6 to 8 not printed in the Gazette.]

1,192,917. LINK FOR BRACELETS OR THE LIKE. HERMANN H. LOTT, St. Louis, Mo. Original application filed May 24, 1915, Serial No. 30,022. Divided and this application filed Dec. 17, 1915. Serial No. 67,416. (Cl. 24—230.)



1. In a jewelry article, a link comprising spaced apart top and back walls and side and end walls therebetween, one of said end walls being cut away to provide an opening into the link and the link being provided interiorly adjacent said opening with a laterally projecting lug, and a fastening-member adapted to normally fit snugly through said opening and within the link, said member being cut away inwardly from one side edge and then forwardly to integrally provide a spring-portion sidewise yieldable in the plane of said member, said spring-portion being recessed at one side edge to releasably engage with said lug when said member is within the link.

2. In a jewelry article, a link comprising spaced apart top and back walls and side and end walls therebetween, one of said end walls being cut away to provide an opening into the link and the link being provided interiorly adjacent said opening with a laterally projecting lug, and a fastening-member adapted to normally fit snugly through said opening and within the link, said member being cut away on a gradual curve inwardly from one side edge and then forwardly longitudinally of the member to integrally provide a spring-portion sidewise yieldable in the plane of said member, said spring-portion being recessed at one side edge to releasably engage with said lug when said member is within the link.

3. In a jewelry article, a link comprising spaced part top and back walls and side and end walls therebetween, one of said end walls being cut away to provide an opening into the link and the link being provided interiorly adjacent said opening with a laterally projecting lug, and a fastening-member adapted to normally fit snugly through said opening and within the link, said member being cut away on a gradual curve inwardly from one side edge and then forwardly longitudinally of the member to integrally provide a spring-portion sidewise yieldable in the plane of said member, said spring-portion being recessed at one side edge to releasably engage with said lug when said member is within the link, said member being provided at the free end of its said spring-portion and upon its side opposite thereto with a pair of oppositely disposed laterally projecting enlargements adapted to engage upon the end wall of the link at opposite sides of said opening when said member is within the link and said spring-portion thereof in engagement with said lug.

1,192,918. JEWELRY. HERMANN H. LOTT, St. Louis, Mo. Filed Dec. 17, 1915. Serial No. 67,417. (Cl. 59—80.)



1. In a jewelry article, a pair of links, each of said links including spaced apart top and back walls and side walls therebetween and each of said links having an opening thereinto at its end, and means for detachably fastening said links together, said means including a connecting-member having portions adapted to removably fit within each of said respective links.

2. In a jewelry article, a pair of links, each of said links including spaced apart top and back walls and side walls therebetween and each of said links having an opening thereinto at its end, and means for detachably fastening said links together, said means including a connecting-member having portions adapted to removably fit within each of said respective links, each of said links being adapted for releasable engagement with said portions of the connecting-member.

3. In a jewelry article, a pair of links, each of said links including spaced apart top and back walls and side walls therebetween and each of said links having an opening thereinto at its end, and means for detachably fastening said links together, said means including a connecting member having apertured portions adapted to removably fit within each of said respective links, and springs carried by said links adapted to project into the apertures of, and releasably engage with, said portions of the connecting-member when the same are within the links.

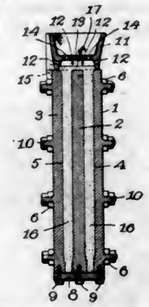
4. In a jewelry article, a pair of approximately rectangular links, each of said links including spaced apart top and back walls and side walls therebetween and each of said links having an opening thereinto at its end, and means for detachably fastening said links together, said means including a connecting-member having apertured approximately rectangular portions adapted to removably fit within each of said respective links, and depressible springs carried by said links adapted to project into the apertures of, and releasably engage with, said portions of the connecting-member when the same are within the links, each of said links being provided with an aperture in its back wall to receive independent means adapted to engage with said springs to depress the same out of engagement with said portions of the connecting-member to permit withdrawal of the same from the links.

5. In a jewelry article, a pair of links, each of said links including a body-portion comprising top, side, and end-walls, a back wall fixed to said side and end walls and spaced from said top-wall, and a guide-frame within the body-portion intermediate said top and back walls, an end-wall of the body-portion being cut away to provide an opening into said guide-frame, and means for detachably fastening said links together, said means including a connecting member having apertured portions adapted to removably fit within the respective guide-frames of said links, and depressible springs within each of said links adapted to project into the apertures of, and releasably engage with, the portions of said connecting-member when the same are within said guide-frames, each of said links being provided with an aperture in its back wall to receive independent means to engage with said springs to depress the same out of engagement with said portions of the connecting-member to permit withdrawal of the same from the links.

[Claims 6 to 16 not printed in the Gazette.]

1,192,919. INGOT-MOLD. CHARLES W. LUMMIS, Worcester, Mass. Filed Sept. 9, 1913. Serial No. 788,882. (Cl. 22—142.)

1. The combination, with an ingot mold providing a plurality of ingot cavities, of a metal delivering member common to all of said cavities, said member providing a depending wall inclosing a space with which all of said cavities are in direct communication whereby a shrink head common to all of the ingots is formed during the pouring operation.



2. The combination, with an ingot mold providing a plurality of ingot cavities, of a removable metal delivering member common to all of said cavities, said member inclosing a space with which all of said cavities are in direct communication whereby the overflow from said cavities is confined, to provide a hold for pulling the ingots from the cavities.

3. The combination with an ingot mold providing a plurality of ingot cavities, of means for confining the overflow of metal from said cavities, said means being removable, to permit the simultaneous withdrawal of said ingots by the hold provided by said overflow.

4. An ingot mold having a pair of ingot cavities, and a strainer having side walls to surround the openings of the cavities to obstruct the flow of molten metal from the cavities, the strainer having also a perforated shelf above the partition between the cavities, and one of the side walls of the strainer being perforated above the lowest point of the top edge of the partition to allow excess metal to escape.

5. The combination, with an ingot mold providing a pair of ingot cavities separated by a partition, of a removable metal delivering member common to both cavities, said member having a perforated shelf spaced above the partition, and having a flange depending from said shelf and inclosing a space into which both of said cavities open.

[Claims 6 to 11 not printed in the Gazette.]

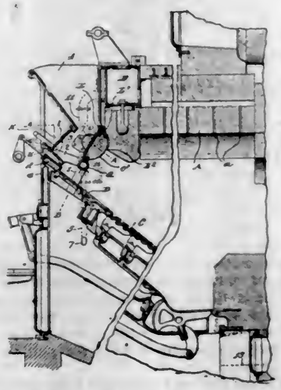
1,192,920. FURNACE. WILLIAM MCCLAVE, Scranton, Pa., assignor to McClave-Brooks Company, Scranton, Pa., a Corporation of Pennsylvania. Filed Dec. 19, 1914. Serial No. 878,171. (Cl. 110—109.)

1. In a furnace of the class described, the combination of a hopper, an inclined grate, a dead-plate lying in a substantially coincident plane, an upper dead-plate provided with fuel openings therethrough located in the path of the fuel supply, a pusher between said dead-plates, means for reciprocating said pusher, a fuel chute between the hopper and upper dead-plate, a swinging door hinged to said hopper forming one wall of the chute and a furnace door forming the other wall of said chute, the furnace door directing the flow of fuel to the openings in the upper dead-plate.

2. In a furnace of the class described, the combination with a hopper, an inclined grate, a dead-plate lying in the same plane as the grate, a chute connecting said hopper with the dead-plate, an upper dead-plate comprising a flat inclined portion at its outer side, a series of ribs extending inwardly therefrom across said chute and terminating in a transverse inner edge, a pusher lying between the dead-plates, and means for reciprocating said pusher.

3. In a furnace of the class described, the combination with a hopper, an inclined grate, a dead-plate lying substantially in the same plane as the grate, a chute between

the hopper and dead-plate, whose side walls are formed by an outer hinged door and an inner furnace door, an upper dead-plate consisting of a flat inclined surface at the outer side and a series of ribs extending inwardly across the chute, said dead-plate being provided at its inner edge with a hollow air conduit, a pusher lying between said dead-plates, and means for reciprocating said pusher.

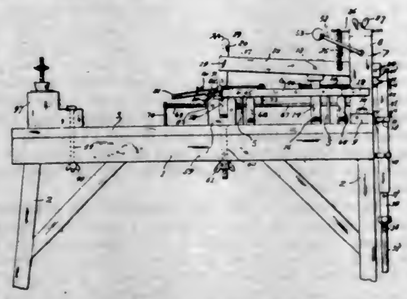


4. In a furnace of the class described, a feeding device comprising a hopper, a dead-plate lying substantially in the same plane as the grate, an upper dead plate provided with a plurality of openings for the passage of fuel, an air conduit integral with and forming the inner edge of said dead-plate, a downwardly extending air pipe connected to said air conduit extending into the fire-box, a pusher mounted between the dead plates and means for reciprocating same, and an inclined grate adapted to receive the advanced fuel.

5. In a furnace of the class described, a feeding device comprising a hopper, a lower dead plate lying in inclined position thereto, an upper dead plate provided with a plurality of openings for the passage of fuel, an air conduit forming the inner edge of said dead plate and an air supply pipe connected therewith, passing through said lower dead plate into the fire box, a pusher mounted between the dead plates and means for reciprocating same, an inclined grate adapted to receive the advanced fuel.

[Claims 6 to 10 not printed in the Gazette.]

1,192,921. SAW-SET MACHINE AND THE LIKE. GEORGE W. MILLER, Pittsburgh, Pa. Filed Feb. 17, 1915. Serial No. 8,859. (Cl. 76—62.)



1. A saw set machine comprising a spring controlled pivoted hammer arm, a shaft, a saw-feed mechanism including a rock arm, a cam carried by the shaft for operating the hammer arm when the shaft is actuating said hammer arm, an eccentric secured to the shaft and simultaneously rocking said arm to operate the saw feed mechanism when the shaft is actuated, and a hammer connected to the hammer arm.

2. A saw set machine comprising a pair of uprights, a support therefor, a hammer arm, supporting means for the hammer arm having the latter pivoted thereto, a hammer connected to the hammer arm, adjustable resilient elements connected with the uprights and hammer arm, and a manually operated shaft journaled in said uprights and provided with a cam associated with said elements to cause the actuation of the hammer arm when the shaft is operated.

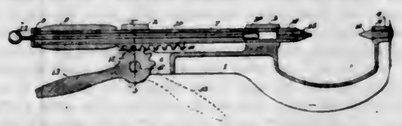
3. A saw set machine comprising a hammer element, operating means therefor, said means including an eccentric, a saw feed mechanism having a rocking block, and a pivoted rock arm engaging said block for operating said mechanism and actuated by said eccentric to shift said block.

4. A saw set machine comprising a hammer element, operating means therefor, said means including an eccentric, a saw feed mechanism having a rocking block, and a pivoted rock arm engaging said block for operating said mechanism and actuated by said eccentric to shift said block, said rocking arm having an inverted V-shaped slot in its lower end, and said block provided with a V-shaped portion engaging in said slot.

5. A saw set machine comprising a saw feed mechanism including saw shifting elements, a pin engaging therein for operating said elements when the pin is actuated, a spring controlled combined supporting and actuating means for the pin, a block carried by said means and having a V-shaped portion, a rocking arm overlapping said V-shaped portion and adapted to shift the block to operate said means when said arm is rocked, and means for rocking the arm.

[Claims 6 to 9 not printed in the Gazette.]

1,192,922. TOOL FOR SEPARATING AND OILING SPRINGS. WILLIAM F. MANNING, Detroit, Mich. Filed Apr. 2, 1915. Serial No. 18,663. (Cl. 81—3.)

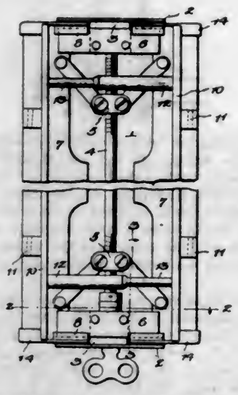


1. A tool comprising a frame having a pair of slide-bearings, one of which is arched and the other formed with a tubular opening, an elongated member slidable in said bearings, a rack longitudinally mounted upon said member extending through the arched member and engaging the same to prevent rotation of said elongated member, a pinion enaging said rack mounted upon said frame, means for rocking said pinion to actuate sliding motion of the elongated member, and a pair of coöperating jaws respectively carried by the sliding member and by the frame, one of said jaws being tapered.

2. A tool comprising a frame, having a slide bearing, a non-rotatable sliding member received by said bearing, a rack mounted upon the sliding member, a mutilated pinion normally engaging said rack and rotatable to a position clearing the same, means for rocking said pinion to actuate the sliding member, and a pair of coöperating jaws respectively carried by said sliding member and by the frame, one of said jaws being tapered.

3. A tool for separating and oiling the leaves of springs, comprising a frame, a tubular member slidably mounted upon said frame, forming a reservoir for lubricant, means for manually actuating the sliding member, a pair of co-operating jaws, respectively carried by the frame and by one end of said tubular member, the other end thereof being capped, one of said jaws being tapered and having a passage communicating with said tubular member, a plunger-head reciprocatory within the tubular member, and a rod rigidly connected with said plunger-head and projecting through the capped end of the tubular member.

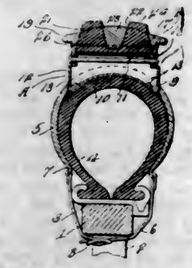
1,192,923. LOOSE-LEAF BINDER. JOHN C. MERWIN, Holyoke, Mass., assignor to National Blank Book Company, Holyoke, Mass., a Voluntary Trust Association of Copartnership, having as trustees J. W. Towne, F. B. Towne, E. S. Towne, J. M. Towne, and F. W. Wilson. Filed July 31, 1915. Serial No. 42,987. (Cl. 129—13.)



1. In a loose-leaf binder, a back plate having angular ends, bearing blocks secured to the plate adjacent the ends thereof, flat bridge pieces secured to the blocks in spaced relation to the ends of the black plate, side clamping members having their ends turned over to form lips slidably engaging with the respective bridge pieces and operating between the latter and the adjacent ends of the back plate, each clamping member being provided with a pocket to receive the bridge pieces during closing movement, and operating mechanism journaled in the bearing blocks and connected to the clamping members.

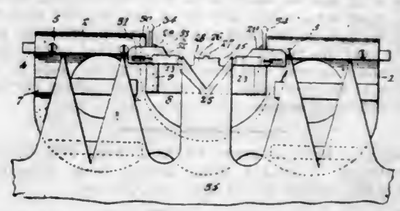
2. In a loose leaf binder, in combination, a back plate having upturned ends, bearing blocks with bridge plates secured near said ends, and movable side clamping members having inturned flanges movably engaging with the outer edge of said bridge plates.

1,192,924. AUTOMOBILE-TIRE PROTECTOR. RAY S. MILLER, Red Sulphur Springs, W. Va. Filed Apr. 10, 1914. Serial No. 831,021. (Cl. 152—16.)



A protector for pneumatic tires comprising an endless circular metal casing conforming generally to the shape of the tread surface and side walls of a tire and formed with rectangular openings in the tread wall thereof, and rectangular saddles seated in said openings and each being of hollow construction and formed of sheet metal, comprising a base plate, a main body extended to form the side and end walls of the saddle, the inner edges of said walls being bent inwardly to provide flanges by which the body is secured to the base plate, said base plate being of greater dimensions than the saddle-receiving opening in the protector casing, the side walls of the saddle body being inwardly offset to form rabbets, oppositely located tread-holding flanges seated in said rabbets, fasteners inserted through the saddle body and said flanges, and outwardly extending stop flanges on said tread-holding flanges adapted to contact with the protector casing to limit the inward movement of the saddle.

1,192,925. SAW-GAGE. ELMER E. MOHNEY, Fresno, Cal. Filed Jan. 17, 1916. Serial No. 72,587. (Cl. 76—46.)



1. In a device of the class described, a frame having its inner face provided with longitudinal ribs, its top extending inwardly over its inner face and channeled longitudinally, a strip of hardened material arranged in the channel and removably secured therein, the frame from its upper edge being centrally notched, a notched face plate partially filling the notch and secured to the frame, a gage arranged for slidable movement on the inner face of the face plate, means for sliding the gage upon the said plate and determining the elevation of the gage with respect to the said plate, said gage having its upper edge centrally notched and the corners of the side walls provided by the notch beveled, a rectangular member providing a block formed centrally in the notch and having its upper face centrally provided with a rectangular lug, the upper portion of which being in a line with the upper edge of the gage and the upper face of the block to the opposite sides of the lug being beveled inwardly.

2. In a device of the class described, the combination with a frame which is centrally notched, of a notched face plate partially filling the notch and secured upon the frame, said plate having sides provided with guides, a gage member arranged in the guides, means upon the plate co-acting with the gage for moving the gage within the guides, means for locking the said sliding means, said gage having its upper face notched to provide parallel side walls which have their corners beveled, a block centrally formed in the notched portion of the gage and having a central lug arranged in a line with the top of the gage, the face of the block to the opposite sides of the lug being beveled inwardly.

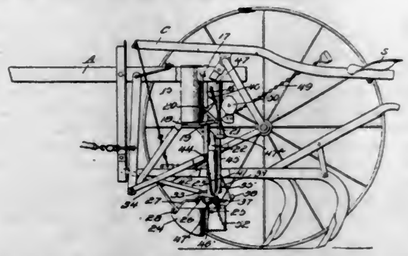
3. In a device of the class described, a frame comprising a plate having a central notch, guide members arranged to the opposite vertical walls of the notch, a gage having its ends arranged in the said guides, means for moving the gage in the guides and means for locking the gage upon the frame; said gage having its upper edge centrally notched, the side walls thus provided having their upper corners beveled, a block arranged centrally of the notch and having a central lug which is arranged on a level with the top of the gage, the top of the block being beveled from its ends inwardly to the lug, and sliding members upon the top of the gage to the opposite sides of the notch.

4. In a device of the class described, a frame having a central notch, a face plate partially securing the notch, said face plate being partially open from its upper edge and having guide members thereon, spaced block members upon the plate and the upper block member having its lower face recessed, a gage member having its ends received in the guides and having a lug passing through the open face of the plate between the blocks, a screw member revoluble upon the lower block and received in a threaded opening in the lug, and the said lug being of a width to be received in the depression in the upper lug, and means for locking the screw against rotation.

5. In a device of the class described, a substantially rectangular frame having a central notch upon its upper edge,

a notched face plate partially closing the notch of the frame, said plate having L-shaped guides received in the notch of the frame, a substantially rectangular gage member having its ends received in guides and having an inturned shelf at its upper edge, the said upper edge of the gage and the central portion of the shelf being notched to provide parallel straight walls which have their corners beveled, the gage at the notch being centrally formed with an upstanding block having its upper edge provided with a lug and the upper walls of the block being beveled from their sides to the said lug, a slide member upon the opposite ends of the shelf and arranged to be moved partially over the notch, means upon the face of the plate and co-acting with the gage for sliding the gage in the guides of the face plate, and means for locking the said first mentioned means.

1,192,926. REPLANTING ATTACHMENT FOR CULTIVATORS. GUSTAV A. MOHR, Remsen, Iowa. Filed Feb. 9, 1916. Serial No. 77,232. (Cl. 111—6.)

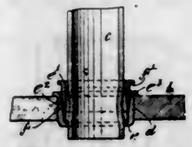


1. In a replanting device, a support, a hopper mounted thereon and having a downwardly extending seed duct, an outer tube telescoping on the duct and having front and rear slots, an eye bolt extending from the duct through the front slot of the outer tube, a bracket secured on the duct and extending through the rear slot of the outer tube, a spring actuated foot valve obstructing the lower end of the outer tube and having a lever, a rod pivotally connected with the valve lever and guided through the bracket, said rod having a stop member adjustably mounted thereon, means including springs for supporting the outer tube in a relatively raised position with respect to the seed duct, and means for depressing the outer tube against the tension of the springs.

2. In a replacing device, a support, a hopper mounted thereon and having a downwardly extending seed duct, an outer tube telescoping on the duct and having front and rear slots, an eye bolt extending from the duct through the front slot of the outer tube, a bracket secured on the duct and extending through the rear slot of the outer tube, a spring actuated foot valve obstructing the lower end of the outer tube and having a lever, a rod pivotally connected with the valve lever and guided through the bracket, said rod having a stop member adjustably mounted thereon, means including springs for supporting the outer tube in a relatively raised position with respect to the seed duct, and means for depressing the outer tube against the tension of the springs; in combination with a shoe constituting a furrow opener, pivot members connecting the shoe with the outer tube near the lower end of the latter, and means for adjustably connecting the front end of the shoe with the outer tube to support the shoe at various pivotal adjustments.

1,192,927. TUBE-JOINT FOR BOILERS, &c. CHARLES D. MOSHER, New York, N. Y., assignor, by mesne assignments, to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Dec. 23, 1911. Serial No. 667,483. (Cl. 137—135.)

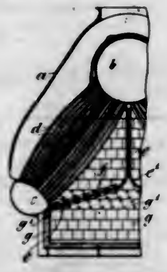
1. The combination with a tube sheet having a circular hole, of a tube having its end seated within the hole, a U-shaped thimble within the hole and of sufficiently rigid material to cause distortion of the tube, and a sleeve clamping wedge system adapted to be driven between the walls of the thimble and distort inwardly the inner wall of the thimble and the tube wall; substantially as described.



2. The combination with a tube sheet having a circular hole, of a tube having its end seated within the hole, a U-shaped thimble within the hole and of sufficiently rigid material to cause distortion of the tube, and a sleeve clamping wedge system adapted to be driven between the walls of the thimble and distort inwardly the inner wall of the thimble and the tube wall, the wedge engaging portion of the inner wall being curved; substantially as described.

3. The method of securing tube ends within tube sheets, consisting in assembling within the tube sheet hole a tube having a U-shaped thimble surrounding it within said hole, the thimble being of sufficiently rigid material to cause distortion of the tube end, and driving a sleeve locking wedge into the thimble and distorting its inner wall and the adjacent tube walls inwardly against the resistance of the walls of the tube sheet hole; substantially as described.

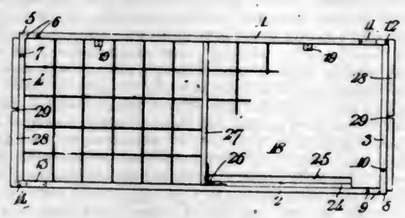
1,192,928. STEAM-BOILER. CHARLES D. MOSHER, New York, N. Y., assignor, by mesne assignments, to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Jan. 31, 1912. Serial No. 674,627. (Cl. 110—98.)



In a water tube boiler of the inclined bank type, a combustion chamber having refractory side walls and provided with a perforated refractory screen arranged below and at an angle to the bank of tubes and through which the gases rise before reaching the tubes, said screen forming a secondary combustion chamber of general triangular form between it and the bank of tubes, and water tubes supporting said refractory screen and connected at their ends to upper and lower water spaces of the boiler, the refractory side walls of the setting having air inlet openings in proximity to the refractory screen to aid the secondary combustion; substantially as described.

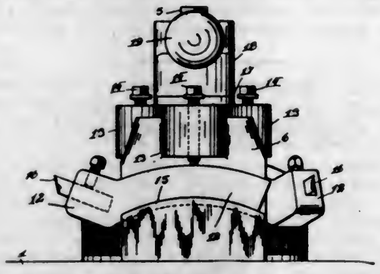
1,192,929. FOLDING EGG-CASE. GEORGE D. MUSSER, Cincinnati, Ohio, assignor of twenty-two and one-half one-hundredths to Albert A. Siebler, ten one-hundredths to Eugene Adler, and twenty-two and one-half one-hundredths to Kate Horwitz. Filed Sept. 16, 1915. Serial No. 51,047. (Cl. 217—14.)

1. A folding crate comprising a pair of spaced side members, end members pivotally connected to the ends of the side members, a partition hinged to one of the side members, a bottom equal in width to the space between the side members, and pivotally secured to the opposite side member, and provided with a slot equal in length to the length of the partition to permit of its clearing the partition when in its folded position, and members carried by the lower edges of the side members and extending throughout their length to support the bottom when in its extended position.



2. A folding crate comprising a pair of spaced side members, end members pivoted to the ends of the side members, right angular members rigidly secured to the side members and pivotally connected to the end members, a partition pivotally connected to one of the side members, and a bottom pivotally connected to the opposite side member, and provided with a cut out portion intermediate its ends to permit of its clearing the partition when the same is folded against its respective side member and to permit of the bottom folding against the side member to which it is pivotally connected.

1,192,930. TURRET TOOL-POST. EDWARD C. NICHOLS, Geneva, N. Y. Filed Mar. 10, 1915. Serial No. 13,728. (Cl. 29—48.)



1. The combination of a guide having a slot of inverted T-shape in cross section, a support mounted on said guide, a stud mounted in the support having one end entering said slot and bearing on the bottom thereof, and a nut within said slot threaded on said stud and having an outer face to bear outwardly against an overhanging wall of the slot and adapted to firmly hold the stud and support at any adjusted position along the length of said slot.

2. The combination of a guide having a slot of inverted T-shape in cross section, a support mounted on said guide, a stud mounted in the support having one end entering said slot and bearing on the bottom thereof, and a nut within said slot threaded on said stud and having an outer face to bear outwardly against an overhanging wall of the slot and adapted to firmly hold the stud and support at any adjusted position along the length of said slot, said stud having a many-sided end adapted for engagement of a tool.

3. The combination of a carriage having a stud mounted thereon, means to fasten said stud in a plurality of positions on said carriage, said stud serving as a post, and a tool holder mounted on said carriage to rotate around said post.

4. The combination of a carriage having a slot therein, a stud mounted in said slot, means for fastening said stud at any point along said slot, said stud serving as a post, and a tool holder mounted on said carriage to rotate around said post.

5. The combination of a carriage having a slot therein, a stud mounted in said slot, means for fastening said stud at any point along said slot, a clamping device threaded on said post, said clamping device being capable of clamping an object between itself and the carriage.

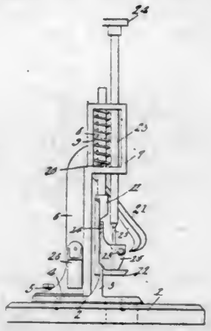
[Claims 6 to 8 not printed in the Gazette.]

1,192,931. STOVE-BOARD. HARRY W. PFEIL, Chicago, Ill. Filed Nov. 29, 1915. Serial No. 63,938. (Cl. 126—278.)



A board of the class described, comprising an intermediate layer of fairly thick soft wood, two thin layers of harder wood between which the intermediate layer is interposed, said intermediate layer having its grain at an angle to the grain of the thin layers, and a heavy covering of fire-proof composition upon the exposed top and edge surfaces of the board.

1,192,932. NAIL-DRIVING MACHINE. LEE E. RAINBOLT, Bedford, Ind. Filed Dec. 8, 1914. Serial No. 876,110. (Cl. 1—1.)



1. A nail driving machine, including a support, a spring actuated reciprocatory member having a presser foot and a resilient nail grip and guide and mounted in the support, manually controlled means for operating the same in opposition to the spring to hold the presser foot elevated, and a reciprocatory driving means mounted in the supported and disposed to have one end coöperate with the nail grip and guide.

2. A nail driving machine including a spring pressed presser foot having a slot extending thereinto, opposed nail gripping elements supported above and movable with the presser foot, and means movably mounted above the nail gripping elements for driving a nail longitudinally between said elements and into an object held under the presser foot, said slot permitting the nail to be moved laterally from the presser foot.

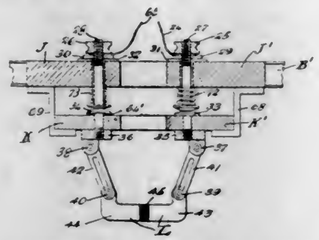
3. A nail driving machine including a spring pressed presser foot having a slot extending thereinto, opposed nail gripping elements supported above and movable with the presser foot, means movably mounted above the nail gripping elements for driving a nail longitudinally between said elements and into an object held under the presser foot, said slot permitting the nail to be moved laterally from the presser foot, and guides adjustably mounted at the sides of the presser foot and constituting abutments for the nail receiving object under the presser foot.

4. A nail driving machine, including a support, a spring actuated reciprocatory member mounted therein, a presser foot carried upon the lower end thereof, a sectional nail grip and guide carried by the reciprocatory member, means for resiliently holding such sections together in nail gripping and guiding relation, a reciprocatory driving member mounted in the support and having its lower end disposed for movement between the sections of the guide for driving the nail therein and for actuating the members to release the nail, and manually controlled means for operating the reciprocatory member in opposition to its spring to maintain the same in upward position.

5. A nail driving machine, including a support, a spring actuated reciprocatory member mounted therein, a presser foot carried upon the lower end thereof, manually controlled means for operating the reciprocatory member in opposition to the spring to hold the presser foot elevated, a sectional nail gripping guide mounted upon and carried by the reciprocatory member, the same being provided with a nail receptacle the lower end of which is open and disposed adjacent to the presser foot, said presser foot being provided with a slot to receive the nail from the grip and guide, a rod mounted through the sections of the guide, two springs connected upon the rod for holding the sections of the guide in gripping relation, and a reciprocatory driving member mounted in the support and having one end for coöperation with the nail gripping guide to drive the nail while gripped and for releasing the sections of the guide therefrom.

[Claims 6 to 8 not printed in the Gazette.]

1,192,933. RAILWAY SIGNAL SYSTEM. ADAM WILLIAM REINHARDT, Bethel, Ohio. Filed Aug. 21, 1915. Serial No. 46,597. (Cl. 246—25.)



1. In a railway signal system, a shoe having a forward and backward portion and any suitable electrical insulating means between them and any suitable electrically insulated means adapted to bind said portions firmly together.

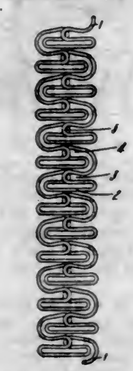
2. In a railway signal system and in combination, the running gear of a railway car; stringers connecting one set of trucks with the other thereof; a cross-beam frame work having bolts passing therethrough attached to said stringers; two-pole contact shoes attached by any suitable means to the bolts of said frame work; and contact rails.

3. In a railway signal system and in combination; the running gear of a railway car; stringers connecting one set of trucks with the other thereof; a cross-beam frame work having two rows of spring actuated bolts passing loosely therethrough attached to said stringers; another cross-beam frame work having two rows of bolts passing therethrough detachably attached to said stringers and positioned underneath said first-mentioned frame work, said row of bolts on the front side of said first-mentioned frame work alining and contacting with said row of bolts on the front side of said last-mentioned frame work, said row of bolts on the rear side of said last-named frame work being connected by a universal metal strip and said row of bolts on the rear side of said first-mentioned frame work resting on said universal strip; two pole contact shoes attached by any suitable means to said bolts of said last-mentioned frame work; and contact rails.

4. In a railway signal system and in combination; a railway car; stringers connecting the trucks thereof; an electrical battery; an electrical bell; wire connecting said bell to said battery; an indicator having bolts passing therethrough, a metal strip running therealong and keys overlying said strip and adapted to move laterally thereon; an annunciator having bolts passing therethrough, said bolts alining and contacting with said bolts passing through said indicator; a cross-beam frame work having spring actuated bolts passing loosely therethrough attached to said stringers; a wire connecting said bell with said strip running along said indicator; wires connecting said bolts passing through said annunciator with the front row of bolts passing through said frame work; a wire connecting said bell with one of said rear row of bolts passing through said frame work; another cross-beam frame work having two rows of bolts passing therethrough detachably attached to said stringers and positioned underneath said first-mentioned frame work, said row of bolts on the front side of said first-mentioned frame work alining and contacting with said row of bolts on the front side of said last-named frame work, said row of bolts on the rear side of said last-named frame work being connected by a universal metal strip and said row of bolts on the rear side of said first-mentioned frame work resting on said universal strip; two-pole connecting shoes attached by any suitable means to said bolts of said last-mentioned frame work; and contact rails.

5. In a railway signal system, a double series of any suitable number of contact rails positioned between the ordinary rails of a railway track, one series beginning near one of said ordinary rails and running in one direction obliquely along and across the space between said ordinary rails to any suitable point along said track, and the other series beginning near the other ordinary rail and near the terminus of said first mentioned series and running therefrom in the opposite direction obliquely along and across said space between said ordinary rails to a point near the beginning of said first mentioned series, said series crossing each other near the middle point of the distance covered along said track by said double series.

1,192,934. GARMENT-STAY. WILLIAM J. ROCHE, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,251. (Cl. 2—76.)



1. A garment stay, comprising wire bent back and forth to form a series of edge loops and connecting crossing portions, part of the edge loops being reëntrant and part returned toward the center line of the stay.

2. A garment stay, comprising wire bent back and forth to form a series of edge loops and connecting crossing portions, the loops along the edges of the stay being alternately reëntrant and returned toward the center line of the stay.

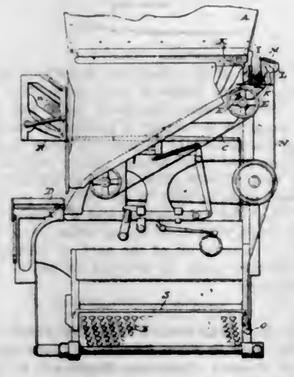
3. A garment stay, comprising wire bent back and forth to form a series of edge loops and connecting crossing portions, part of the edge loops being reëntrant and part returned toward the center line of the stay, said loops being arranged in pairs with the reëntrant and returned loops opposing each other on opposite edges of the stay.

4. A garment stay, comprising wire bent back and forth to form a series of loops and connecting crossing portions, part of the edge loops being reëntrant and part returned toward the center line of the stay, said loops being arranged in pairs with the reëntrant and returned loops opposing each other on opposite sides of the middle line of the stay, opposing loops overlapping each other along the middle line of the stay.

5. A garment stay, comprising wire bent back and forth to form a series of reëntrant and returned loops lying on opposite sides of the middle line of the stay and connected by crossing portions of the wire, the loops on opposite sides of the middle line of the stay overlapping each other along the middle line thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,192,935. TYPOGRAPHICAL MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 5, 1913. Serial No. 746,264. (Cl. 199—7.)



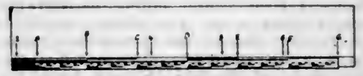
1. In a typographical machine, the combination of a magazine for the type or matrices, an assembling belt onto which they are delivered from the magazine, an additional magazine located at the upper end of the belt and having a single compartment wherein the spaces are arranged face to face in a vertical column with their lower ends facing toward the assembler belt and situated in the vertical plane thereof, and the said magazine being formed with a discharge opening standing opposite the lowermost space therein at the side adjacent the assembler belt so as to permit said space to pass in its own plane from the magazine compartment onto the conveyer belt and in the direction of movement of the latter, and means for discharging the lowermost spaces from the magazine in the required order.

2. In a typographical machine, the combination of a magazine for the type or matrices, an assembling belt onto which they are delivered from the magazine, an additional magazine located at the upper end of the belt and having a single compartment wherein the spaces are arranged face to face in a vertical column with their lower ends facing toward the assembler belt and situated in the vertical plane thereof, and the said magazine being formed with a discharge opening standing opposite the lowermost space therein at the side adjacent the assembler belt so as to permit the said space to pass in its own plane from the magazine compartment onto the conveyer belt and in the direction of movement of the latter, and means for discharging the lowermost spaces from the magazine in the required order, said means comprising a horizontally disposed ejector to engage the spaces, and a finger key arranged within the field of action of the keyboard mechanism and operatively connected to the ejector.

3. In a typographical machine, the combination of a magazine for the type or matrices, an assembling belt onto which they are delivered from the magazine, an additional magazine located at the upper end of the belt and having a single compartment wherein the spaces are arranged face to face in a vertical column with their lower ends facing toward the assembler belt and situated in the vertical plane thereof, and the said magazine being formed with a discharge opening standing opposite the lowermost space therein at the side adjacent the assembler belt so as to permit said space to pass in its own plane from the magazine compartment onto the conveyer belt and in the direction of movement of the latter, and means for detachably connecting the magazine to the framework of the machine so as to permit its ready removal or replacement at will.

4. In a typographical machine, the combination of a magazine for the type or matrices, an assembling belt onto which they are delivered from the magazine, an additional magazine located at the upper end of the belt and having a single compartment wherein the spaces are arranged face to face in a vertical column with their lower ends facing toward the assembler belt and situated in the vertical plane thereof, and the said magazine being formed with a discharge opening standing opposite the lowermost space therein at the side adjacent the assembler belt so as to permit said space to pass in its own plane from the magazine compartment onto the conveyer belt and in the direction of movement of the latter, and means for discharging the lowermost spaces from the magazine in the required order, said means comprising the horizontally disposed ejecting plate K, the vertical pivoted lever L for operating the plate, the spring M connected to the lever L for holding the plate K normally in its retracted position, and the finger key O connected by the link N to the lever L for moving the latter in opposition to the spring M to effect the ejecting action of the plate K.

1,192,936. DISTRIBUTION OF TYPOGRAPHICAL PIECES IN DISTRIBUTING APPARATUS. KARL RÖGER, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 18, 1915. Serial No. 2,949. (Cl. 199—7.)



1. In a typographical machine comprising circulating pieces formed with V-shaped recesses, the combination of V-shaped distributer bar along which the pieces are adapted to travel, pairs of permuted ridges on the said bar, and two sets of pairs of distributing teeth located in the said recesses of the circulating pieces and adapted to engage and coöperate with the said ridges for the purpose of separating the pieces according to group and character respectively.

2. In a typographical machine comprising circulating pieces formed with V-shaped recesses, the combination of V-shaped distributer bar along which the pieces are adapted to travel, two sets of pairs of permuted ridges on the said bar adapted to separate the pieces according to group and character respectively, and pairs of distributing teeth in the said recesses of the circulating pieces and respectively adapted to engage and coöperate with the said ridges.

3. In a typographical machine comprising circulating pieces formed with V-shaped recesses, the combination of V-shaped distributer bar along which the pieces are adapted to travel, pairs of permuted ridges on the said bar adapted to separate the pieces according to group, pairs of teeth in the said recesses of the circulating pieces and adapted to engage with the said ridges and of which at least one pair will so engage during the separation according to group, pairs of permuted ridges on the said bar adapted to separate the pieces according to character, pairs of teeth in the said recesses adapted to engage with

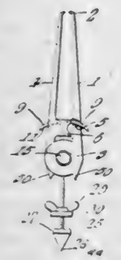
the last mentioned ridges and of which at least one pair will so engage during the whole of the travel of the piece along the bar.

4. In an apparatus for distributing typographical pieces, the combination with a V-shaped distributer bar along which the pieces are adapted to travel, of two sets of pairs of permuted ridges formed on opposite sides of the bar and adapted respectively to separate the pieces according to group and character.

5. The combination with a V-shaped distributer, of a typographical piece to coöperate therewith, and formed with a V-shaped recess and with two sets of pairs of distributing teeth located in said recess, one set constituting a group combination and the other a character combination.

[Claims 6 to 12 not printed in the Gazette.]

1,192,937. TIRE-REPAIR TOOL. LLOYD V. ROOD, Marietta, Ohio. Filed Jan. 20, 1916. Serial No. 73,201. (Cl. 152—27.)



1. In a device of the class described, a pair of plug-cutting levers; a pivot element connecting the levers; a stem carried by the pivot element; and a tube cutter mounted on the stem, the pivot element being rotatable in the levers to permit the stem to be disposed in parallel relation to the levers and to permit the stem to extend from the pivot element in the same direction as the levers.

2. In a tool of the class described, a pair of plug cutting levers; a pivot element uniting the levers; a stem mounted to swing on the pivot element, parallel to the axis of the pivot element, the pivot element being rotatable in the levers; and a hole cutter carried by the stem.

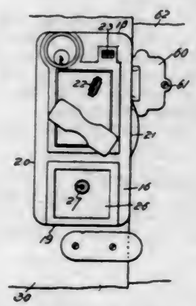
3. In a device of the class described, a stem; a combined opener and abutment threaded in one direction onto one end of the stem, and including a cutter; a handle; a nut threaded in an opposite direction onto the stem, and adapted to coöperate with the cutter; a pin journaled in the handle; and a second pin carried by the first specified pin and disposed at right angles to the axis of the first specified pin, the other end of the stem being mounted to swing on the second pin.

1,192,938. COIN-CONTROLLED LOCKING MECHANISM. FRANK J. ROWSE, Pawtucket, R. I. Original application filed June 12, 1911, Serial No. 632,716. Divided and application filed Aug. 21, 1912, Serial No. 716,195. Divided and this application filed May 2, 1914. Serial No. 836,003. (Cl. 70—16.)

1. In a device of the character described, a closure member, a plate fixed thereto, a casing, a plate slidable with relation to the first-named plate and adapted to engage a portion of said casing to secure the latter to the closure, a disk and means carrying the same, and means carried by said slidable plate and bearing upon said disk.

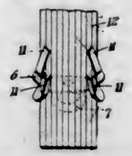
2. In a device of the character described, a closure member, a plate fixed thereto, a casing, a plate slidable with relation to the first-named plate and adapted to engage a portion of said casing to secure the latter to the closure, a disk and means carrying the same, means carried by said slidable plate and bearing upon said disk, and a key-controlled door for said casing.

3. In a device of the character described, a closure member, a plate fixed thereto, a casing, a plate slidable with relation to the first-named plate and adapted to engage a portion of said casing to secure the latter to the closure, a disk and means carrying the same, means carried by said slidable plate and bearing upon said disk, a key-controlled door for said casing, and a removable member operable through said door which, when removed, permits the disk to be moved out of the path of said pin.



4. In a device of the character described, the combination with a closure member, of a plate fixed thereto, a casing, a slidable plate mounted upon the first-named plate and adapted to engage a portion of said casing to secure said casing to said closure, an inner handle, a disk mounted upon said inner handle within said casing, a pin carried by said slidable plate and bearing upon said disk, whereby said plate is held in an elevated position, a key controlled door for said casing and a removable member operable through said door which, when removed permits the disk to be moved out of the path of said pin and permits the slidable plate to descend to unlock the casing from the closure.

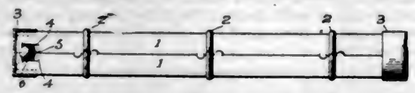
1,192,939. METHOD OF THREADING SLOTTED PLATES. ROE ELWOOD RUSSEY, Philadelphia, Pa., assignor to Pioneer Suspender Company, a Corporation of Pennsylvania. Filed Oct. 29, 1914. Serial No. 869,177. (Cl. 24—245.)



The method of threading slotted plates which consists in severing the portions forming the outer margins of the slots about midway and bending up said severed portions into angular position with respect to the plane of the plate, inserting between said bent-up portions a flexible band, returning said bent-up portions to the plane of the plate and then folding a part of the band around one of said marginal portions and securing the folded part to the adjacent band extension near the outer margin of the plate.

1,192,940. LOOSE-LEAF BINDER. JOHN SCHADE, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass., a Voluntary Trust Association of Copartnership, having as trustees J. W. Towne, F. B. Towne, E. S. Towne, J. M. Towne, and F. W. Wilson. Filed Sept. 16, 1915. Serial No. 50,925. (Cl. 129—24.)

1. In a loose leaf binder, prong carrying members pivotally related at their inner edges and having recesses formed within their inner edges near the ends which recesses form closed pockets in the assembled structure, supports for said members consisting of end caps having spring bottom portions extending beneath said members the latter capable of rocking movements within said supports, and means confined within said pockets and supported and impelled by said bottom portions so as to always tend to ride over or beneath said members at their meeting edges along the outer edge walls of said pockets.



2. In a loose leaf binder, prong carrying members pivotally related at their inner edges which latter are recessed immediately inside the ends of the members to form closed pockets, supports for said members consisting of end caps having bottom portions extending beneath said pockets, and spring impelled means supported at the inner ends of said bottom portions and always tending to ride over or beneath said members at their meeting edges along the outer edge walls of said pockets.

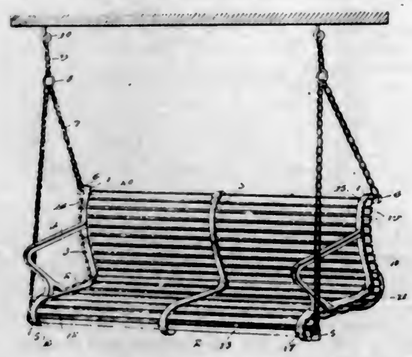
3. In a loose leaf binder, prong carrying members pivotally related at their inner edges which latter are recessed immediately inside the ends of the members to form closed pockets, means on which said members are rockingly supported, a movable element loosely contained within said pockets, and a spring device back of said element and always causing the latter to tend to ride over or beneath said members at their meeting edges along the outer edge walls of said pockets.

4. In a loose leaf binder, a pair of prong carrying plates recessed at their inner edges to form pockets, means for supporting said plates in pivotal relation, locking devices contained within said pockets, said means having integral resilient portions coacting with said devices to hold the binder prongs in opened or closed positions.

5. In a loose leaf binder, a pair of prong carrying plates recessed at their inner edges to form pockets, means for supporting said plates in pivotal relation, loosely mounted locking elements contained within said pockets, and resilient portions integral with said means and coacting with said elements to hold the binder prongs in an open or closed position.

[Claim 6 not printed in the Gazette.]

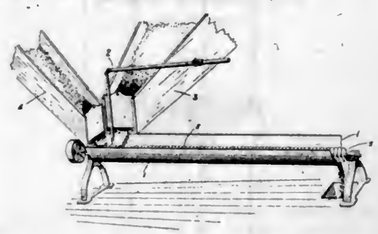
1,192,941. SWING. WILLIAM H. SCHMID, Wabash, Ind. Filed Oct. 21, 1914. Serial No. 867,817. (Cl. 155—35.)



1. In a porch swing, brackets including each a seat portion and a back portion, said brackets having lateral spaced openings and having bosses centrally of the openings, said bosses being provided with central depressions, slots passing through the openings and dowel pins engaging the slats for retaining the same within the openings and the hangers in spaced relation with each other.

2. A porch swing or the like including two end hangers, and a central bracket, the hangers and bracket being provided with alining transverse openings, slats passing through the openings, dowel pins passing through openings in the slats, certain of said dowel pins contacting with the outer faces of the hangers, certain of said dowel pins also contacting with the inner faces of the hangers and certain dowel pins contacting with both the inner and outer faces of the bracket.

1,192,942. FUEL MADE FROM ANTHRACITE-COAL REFUSE AND PROCESS OF MAKING SAME. ANDREW SCHMIDT, Philadelphia, Pa. Filed Sept. 2, 1909. Serial No. 515,746. (Cl. 44—1.)



1. An improved fuel agglomerate of anthracite coal waste and a calcareous binder set from an excess of water, characterized by the presence of lampblack and by the porous combustion promoting structure of the binder resulting from the action upon the binder as it sets of air included in the lampblack and liberated therefrom while held in suspension by the conjoint action of the coal-waste, excess of water and calcareous binder.

2. An improved agglomerate of anthracite coal waste and a calcareous binder set from an excess of water, characterized by the presence of air bearing dust and by the porous combustion promoting structure of the binder resulting from the action upon the binder as it sets of air included in the air bearing dust and liberated therefrom while held in suspension by the conjoint action of the coal waste, excess of water and calcareous binder.

3. The process of imparting porosity to the calcareous binder of an anthracite coal waste agglomerate, which consists in introducing air throughout the calcareous binder as it sets by incorporating lampblack and its included air into the mixture with an excess of water and allowing the mixture to hold the lampblack in suspension during the setting operation.

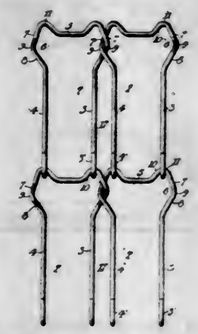
4. The process of imparting porosity to the calcareous binder of an anthracite coal-waste agglomerate, which consists in introducing air throughout the calcareous binder as it sets by incorporating air bearing dust and its included air into the mixture with an excess of water and allowing the mixture to hold the air-bearing dust in suspension during the setting operation.

1,192,943. WIRE FABRIC. JACUB SCHWARTZMAN, Brooklyn, N. Y. Original application filed July 18, 1913, Serial No. 779,677. Divided and this application filed Sept. 25, 1914. Serial No. 863,479. (Cl. 245—5.)

1. A wire fabric for bed springs comprising a multiplicity of wire units arranged in rows, each unit consisting of a link having two side members and a connecting end member having a loop or eye portion at the juncture of each such side and end member, each eye portion terminating in a triangular formed portion having an offset adjacent to the apex thereof thereby to permit one link to be interwoven with a companion link, said links, when interwoven, having the straight portions thereof spaced materially apart to give increased bearing surface to the mattress.

2. A wire fabric for bed springs comprising a multiplicity of wire units arranged in rows, each unit consisting of a link having two side members and a connecting end

member having a loop or eye portion at the juncture of each such side and end member, each eye portion terminating in a triangular formed portion having an offset adjacent to the apex thereof thereby to permit one link to be interwoven with a companion link, said links, when interwoven, having the straight portions thereof spaced materially apart to give increased bearing surface to the mattress, and each of said links having a hook at the end of its straight portion in alinement with such straight portion.



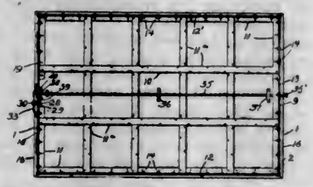
3. A wire fabric for bed springs comprising a multiplicity of wire units arranged in rows, each unit consisting of a link having two side members and a connecting end member having a loop or eye portion at the juncture of each such side and end member, each eye portion terminating in a triangular formed portion having an offset adjacent to the apex thereof thereby to permit one link to be interwoven with a companion link, said links, when interwoven, having the straight portions thereof spaced materially apart to give increased bearing surface to the mattress, and each of said links having a hook at the end of its straight portion in alinement with such straight portion, said hook being formed prior to the assembling of the links.

4. A wire fabric for bed springs comprising a multiplicity of wire units arranged in rows, each unit consisting of a link having two side members and an end member, the side members terminating adjacent to the end member in a triangular portion having an offset, and the side members of adjacent links being spaced materially apart to give an increased bearing surface.

5. A wire fabric for bed springs comprising a multiplicity of wire units arranged in rows, each unit consisting of a link having two side members and an end member, the side members terminating adjacent to the end member in a triangular portion having an offset, and the side members of adjacent links being spaced materially apart to give an increased bearing surface and extending in parallelism with one another.

[Claims 6 to 19 not printed in the Gazette.]

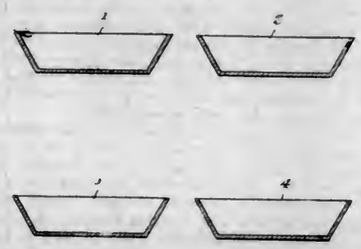
1,192,944. WAGON-BODY. WILLIAM T. SHAVER, Des Moines, Iowa. Filed May 11, 1914. Serial No. 837,788. Renewed Jan. 3, 1916. Serial No. 70,080. (Cl. 21—7.)



1. The combination with a closed vehicle body having doors at the rear thereof, of a locking device for said doors, means for operating said locking device from the front of the vehicle adjacent to the driver's seat, a separate locking device for said doors, and means for operating said locking device from the rear of the vehicle, substantially as described.

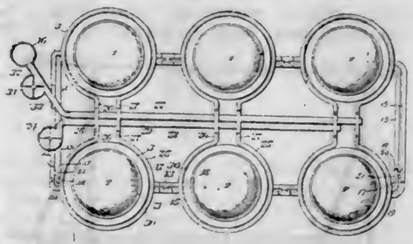
2. The combination with a closed vehicle body having doors at the rear thereof, of a double-acting bolt for locking the doors having means for operating same from the rear, and a double-acting hook for locking said doors independently of said double-acting bolt having means for operating same from the front of the vehicle, substantially as described.

1,192,945. PROCESS OF SEPARATING METALS. ALBERT H. SHERWOOD, Oroville, Cal. Filed Sept. 24, 1913. Serial No. 791,646. (Cl. 75—18.)



The herein described process of separating associated metals, such as gold, mercury, copper, lead, silver, and metals of the platinum group, which consists in subjecting the material to the action of a nitric acid solution until all action ceases, whereby the mercury, copper, lead and silver are separated from the mass and taken up into the solution, leaving the gold and metals of the platinum group remaining in the mass, then washing off the solution and subjecting the remaining mass to amalgamation with mercury in the presence of a solution of cobalt nitrate for the separation and amalgamation of the gold, then subjecting the gold amalgam to the action of a nitric acid solution for the separation therefrom of the mercury, and then washing off the solution.

1,192,946. KILN. JUAN N. SILVA, Pueblo, Colo. Filed Aug. 28, 1915. Serial No. 47,838. (Cl. 25—135.)



1. The combination of a plurality of kilns, a main air feed tunnel common to all of the kilns, a main exhaust tunnel common to all of the kilns, a combined feed and exhaust manifold encircling each of the kilns and communicating at one end with the main air feed tunnel and at the other end with the main exhaust tunnel, and means for cutting off communication between said manifold and the air feed tunnel and also between said manifold and the exhaust tunnel.

2. The combination of a plurality of kilns, a main air feed tunnel common to all of the kilns, a main exhaust tunnel common to all of the kilns, a combined air feed and exhaust manifold encircling each of the kilns and communicating at one end with the main air feed tunnel and at the other end with the main exhaust tunnel, means for cutting off communication between said manifold and the air feed tunnel and also between said manifold and the exhaust tunnel, and a kiln connecting flue for transferring the products of combustion from one kiln to an adjoining kiln.

3. The combination of a plurality of kilns, a main air feed tunnel common to all of the kilns, a main exhaust tunnel common to all of the kilns, a combined air feed and exhaust manifold encircling each of the kilns and communicating at one end with the main air feed tunnel and at the other end with the main exhaust tunnel, means for cutting off communication between said manifold and the air feed tunnel and also between said manifold and the exhaust tunnel, and a kiln connecting flue for transferring the products of combustion from one kiln to an adjoining kiln, said connecting flue being provided with dampers for the purpose specified.

4. The combination of a plurality of kilns, a main air feed tunnel common to all of the kilns, a main exhaust tunnel common to all of the kilns, a combined air feed and exhaust manifold encircling each of the kilns and communicating at one end with the main air feed tunnel and at the other end with the main exhaust tunnel, means for cutting off communication between said manifold and the air feed tunnel and also between said manifold and the exhaust tunnel, bag walls arranged interiorly of the kiln, and pipes extending from said bag walls to the manifold flue.

5. The combination of a plurality of kilns, a main air feed tunnel common to all of the kilns, a main exhaust tunnel common to all of the kilns, a combined air feed and exhaust manifold encircling each of the kilns and communicating at one end with the main air feed tunnel and at the other end with the main exhaust tunnel, means for cutting off communication between said manifold and the air feed tunnel and also between said manifold and the exhaust tunnel, furnaces arranged in a circular series in the kiln wall, grates in said furnaces, an air distributing chamber in each grate, and pipes leading from the manifold flue to said air chambers.

[Claims 6 and 7 not printed in the Gazette.]

1,192,947. SNAP-FASTENER SOCKET. ERNEST D. SIMONS, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 24, 1915. Serial No. 23,601. (Cl. 24—216.)

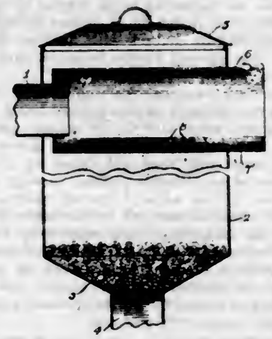


1. A snap fastener socket, having a hollow portion for receiving the complemental stud or head member, and a laterally projecting flange, the hollow portion and flange slitted radially to render the socket resilient, and a loose-fitting rim-piece encircling the hollow portion near its top portion and extending thence solidly to the flange and overlying said flange and inclosing the rim of the flange, whereby the undue yielding of both the hollow portion and the flange of the socket and their deformation are prevented and an enlarged surface for gripping the article on which the socket is set is provided.

2. A snap fastener socket, having a hollow portion for receiving the complemental stud or head member, and a laterally projecting flange, the hollow portion and flange slitted radially to render the socket resilient, and a loose-fitting rim-piece encircling the hollow portion and extending thence continuously over the top of the flange, about its rim and underneath the flange and enough larger than these parts to permit a limited resilient action of the flange.

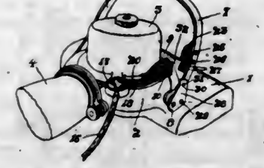
1,192,948. COMBINED LIQUID CONVEYER AND FILTER. WILLIAM F. SMITH, Springfield, Ohio. Filed Nov. 17, 1915. Serial No. 62,030. (Cl. 137—9.)

1. In a combined conveyer and filter, a tank having an outlet at the bottom thereof and filtering material above said outlet, an inlet pipe extending into one wall of the tank near the upper portion thereof, and a transversely extending open-ended tube rotatably mounted in said tank and communicating with said pipe, said tube being extended through the opposite wall of said tank and being provided with perforations on one side thereof.



2. A combination conveyer and filter comprising a tank provided with an outlet at the bottom thereof, a pipe projecting through one wall of the tank near the top thereof, a tube rotatably mounted upon the projecting end of said pipe, and extending through the opposite wall of said tank and adapted to be removed readily from the pipe and tank, said tube being open at the projecting end and having perforations in a longitudinal portion thereof.

1,192,949. SUCTION-SWEEPER. JAMES M. SPANGLER, Canton, Ohio, assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio, a Corporation of Ohio. Filed Sept. 3, 1914. Serial No. 859,949. (Cl. 172—179.)



1. In a suction sweeper, the combination of a motor casing and a fan casing, a motor, a handle pivoted upon said fan casing, contact plates carried upon said motor casing, an electrical circuit, one wire of said circuit passing through said motor and connected to one of said contact plates, the other wire of said circuit connected to the other of said contact plates and means upon said pivoted handle for completing said circuit, and means for normally holding said pivoted handle in the inoperative position.

2. In a suction sweeper, the combination of a casing, a motor pivoted upon said casing, a bracket carried upon said casing, contact plates carried by said bracket, said contact plates insulated from said bracket and from each other, an electrical circuit, one wire of said circuit passing through said motor and connected to one of said contact plates, the other wire of said circuit connected to the other of said contact plates, an insulated block carried by said handle and a bifurcated switch blade carried by said insulated block and adapted to contact with both of said contact plates when said handle is moved into the operative position.

3. In a suc[illegible] sweeper, the combination of a motor casing and a [illegible] casing, a handle pivoted to the fan

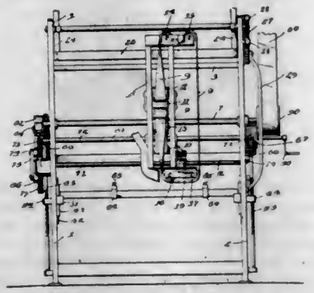
casing, a bracket carried upon said motor casing, contact plates carried by said bracket, said contact plates insulated from said bracket and from each other, an electrical circuit, one wire of said circuit passing through said motor and connected to one of said contact plates, the other wire of said circuit connected to the other of said contact plates, an insulating block carried by said pivoted handle, a bifurcated switch blade carried by said insulated block and adapted to contact with both of said contact plates when said pivoted handle is moved into the operative position.

4. In a suction sweeper, the combination of a motor casing and a fan casing, a handle pivoted to the fan casing, a bracket carried upon said motor casing, contact plates carried by said bracket, said contact plates insulated from said bracket and from each other, an electrical circuit, one wire of said circuit passing through said motor and connected to one of said contact plates, the other wire of said circuit connected to the other of said contact plates, an insulating block carried by said pivoted handle, a bifurcated switch blade carried by said insulated block and adapted to contact with both of said contact plates when said pivoted handle is moved into the operative position, and means for normally holding said pivoted handle in the inoperative position.

5. In a suction sweeper, the combination of a fan casing and a motor casing, a motor located within said motor casing, a handle pivoted upon said fan casing, a bracket carried by said motor casing, a segmental insulating block provided with a vertical slot, an electrical circuit, one wire of said circuit passing through said motor and connected to one of said contact plates and the other wire of said circuit connected to the other of said contact plates, a switch blade carried upon said pivoted handle and insulated therefrom and adapted to contact with said contact plates when the pivoted handle is moved into the operative position and means for normally holding said handle in inoperative position.

[Claims 6 and 7 not printed in the Gazette.]

1,192,950. WOOD-POLISHING MACHINE. WALTER J. SUMNER, Minneapolis, Minn. Filed Nov. 17, 1914. Serial No. 872,631. (Cl. 51—13.)



1. In a wood polishing machine, a machine frame, a work supporting table, a carriage movable in a plane parallel to said table, a polishing element mounted on said carriage, means for feeding said carriage back and forth comprising a flexible cable, and cable driving means.

2. In a wood polishing machine, a machine frame, a work supporting table, a carriage movable in a plane parallel to said table, a polishing element mounted on said carriage, means for feeding said carriage back and forth, a manually operable lever fulcrumed on the machine, and connections between said lever and the polishing element for elevating and depressing the latter.

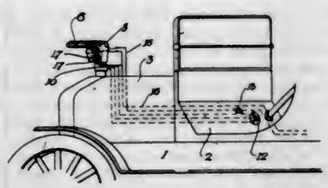
3. In a wood polishing machine, a machine frame, a work supporting table, a carriage movable in a plane parallel to said table, a polishing element mounted on said carriage, means for feeding said carriage back and forth, a manually operable lever fulcrumed on the machine, and connections including rack and pinion mechanism between said lever and the polishing element for elevating and depressing the latter.

4. In a wood polishing machine, a machine frame, a work supporting table, a carriage movable in a plane parallel to said table, a polishing element mounted on said carriage, means for feeding said carriage back and forth comprising an endless cable attached to the carriage, a cable actuating drum, and means for automatically revolving said drum alternately in opposite directions.

5. In a wood polishing machine, a machine frame, a work supporting table, a carriage movable in a plane parallel to said table, a polishing element mounted on said carriage, means for feeding said carriage back and forth comprising an endless cable attached to the carriage, a cable actuating drum, means for automatically revolving said drum alternately in opposite directions including a rotary shaft, an oscillatory sector geared to the cable drum, and a connecting rod between said sector and a crank wheel on said rotary shaft.

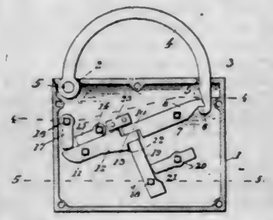
[Claims 6 to 10 not printed in the Gazette.]

1,192,951. AUTOMOBILE SIGNALING APPARATUS. CLARENCE R. TAGGART, Chattanooga, Tenn. Filed Feb. 9, 1915. Serial No. 7,170. (Cl. 177—337.)



An automobile signaling apparatus, comprising a signaling member capable of motion in a horizontal plane, an electrofilament positioned within said signaling member, electromagnets positioned substantially to the rear and two sides of said member, and an electromagnet, secured to said signaling member and capable of movement therewith, positioned substantially between the first mentioned magnets, and means for actuating the various units, comprising a battery, a primary circuit extending therefrom, means interposed in said primary circuit for subdividing it into a number of secondary circuits, said means being also capable of controlling said secondary circuits, each of said magnets being provided with one of said secondary circuits, filament in said signaling member being directly in circuit with the primary circuit, and means, independent of said first mentioned means, for controlling this latter circuit.

1,192,952. PADLOCK. BOWIE TAYLOR, Warwick, Okla. Filed Mar. 18, 1916. Serial No. 85,141. (Cl. 70—105.)

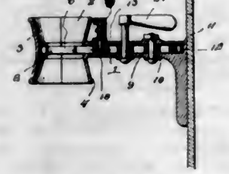


1. A pad lock comprising a casing, a shackle pivoted to the casing at one end and having the other end movable into and out of the casing, coacting bars pivoted within the casing, one of said bars being formed with a hook to engage the last-named end of said shackle to lock the shackle in closed position, a bar in said casing acting upon the other of the first-named bars to hold the shackle engaging bar in engagement with the shackle, and blocks coöperating with each other to maintain the last-named bar in locking position.

2. A pad lock comprising a casing, a shackle pivoted to the casing at one end and having the other end movable into and out of the casing, coacting bars pivoted within the casing, one of said bars being formed with a hook to engage the last-named end of said shackle to lock the shackle in closed position, a bar in said casing acting upon the other of the first-named bars to hold the shackle engaging bar in engagement with the shackle, blocks coöperating with each other to maintain the last-named bar in locking position, and lugs pivoted within the casing and coöperating with the second-named bar to hold the first-named bars in locking engagement with each other.

3. A pad lock comprising a casing, a shackle pivoted to the casing at one end and having the other end movable into and out of the casing, coacting bars pivoted within the casing, one of said bars being formed with a hook to engage the last-named end of said shackle to lock the shackle in closed position, a bar in said casing acting upon the other of the first-named bars to hold the shackle engaging bar in engagement with the shackle, blocks coöperating with each other to maintain the last-named bar in locking position, lugs pivoted within the casing and coöperating with the second-named bar to hold the first-named bars in locking engagement with each other, pins carrying said bars, said block and said lugs, fingers on said pins, and dials secured to said casing and over which said fingers may be movable to indicate the positions of the various elements in the casing.

1,192,953. ELEVATOR-LOCK. GEORGE W. TAYLOR, Warsaw, N. Y. Filed Sept. 25, 1915. Serial No. 52,651. (Cl. 187—33.)

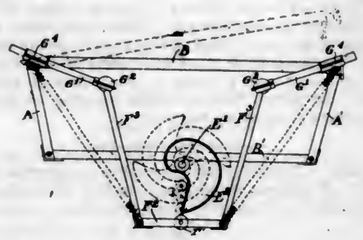


1. An elevator lock, a casing secured to the elevator, a pair of jaws pivotally mounted therein and provided with arcuate portions for gripping the control rope of the elevator, a shaft provided with laterally extending fingers for moving the jaws away from the control rope, a spring for forcing the jaws toward the control rope, and a sliding bolt adapted to engage portions of said jaws for locking them against movement when in a locking position.

2. An elevator lock comprising a casing secured to the elevator, a pair of jaws pivotally mounted therein and provided with arcuate portions for gripping the control rope of the elevator, a shaft provided with laterally extending fingers for moving the jaws away from the control rope, a spring for forcing the jaws toward the control rope, a tubular casing upstanding from said first casing and provided with a shoulder and a spring pressed bolt slidably mounted within said tubular casing and formed with a projection adapted to engage under said shoulder for holding said jaws in a locked position.

1,192,954. FLYING-MACHINE. WILLIAM P. THOMPSON, Liverpool, England. Filed Nov. 29, 1907. Serial No. 404,321. (Cl. 244—17.)

1. The combination in a flying machine of an upper framework, a plurality of narrow transverse aeroplanes fixed thereto extending out at right angles to the axis on each side, and at least three times their own width apart from each other, propelling mechanism for driving the upper structure through the air, a sub-structure, means for suspending the latter flexibly from the upper structure, distance pieces between the two structures, and means for altering the angle of suspension in any direction, whereby the inclination of the aeroplanes is simultaneously altered in reference to the substructure.



2. In a flying machine, the combination of a superstructure formed of two normally substantially parallel girders hinged together at the bottom with disconnectible means for holding them together at the top, a plurality of long narrow transverse aeroplanes projecting across them, and attached thereto, and hinged at the longitudinal center line of the machine, whereby when the two girders are disconnected at the top and brought nearly together, the aeroplanes stand up substantially vertical like the wings of a butterfly when it has alighted.

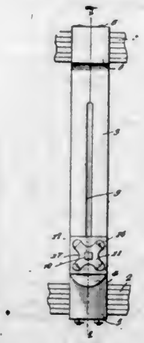
3. In a flying machine, the combination of two girders hinged at the bottom and braced together by removable means at the top, a series of long narrow aeroplanes on each side fixed rigidly to the respective girder and spaced widely apart, whereby by turning each girder on its axis, its respective aeroplanes can be moved from a more or less horizontal to a more or less vertical position.

4. In a flying machine, the combination of two girders hinged together at the bottom and braced together at the top, a series of pairs of long narrow aeroplanes spaced widely apart and crossing these girders at right angles and attached to each of them, wings pivoted on the girders at intervals between the aeroplane and means for flapping these wings for the purpose of driving the flying machine forward in the direction of the joint axes of the girders.

5. In a flying machine, a longitudinal framework consisting of two girders hinged at the bottom, and adjustable distance pieces at the top, a series of aeroplanes fixed thereto, a propeller, a main shaft with driving gear in the girder, and a car suspended from the aeroplanes and girder.

[Claims 6 to 14 not printed in the Gazette.]

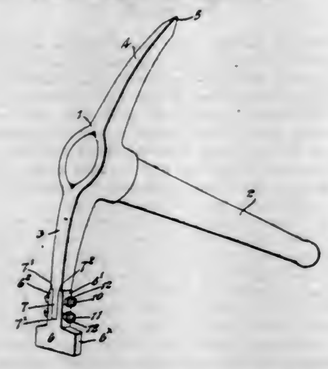
1,192,955. SHOCK-ABSORBER. WILLIAM J. THUL, Melrose, Minn. Filed Dec. 26, 1914. Serial No. 879,203. (Cl. 21—105.)



In a shock absorber, the combination with a full elliptical spring, of a pair of substantially U-shaped brackets the arms of which are arranged in spaced parallel relation with each other, means for removably clamping the arms of each bracket to the upper and lower parts of the

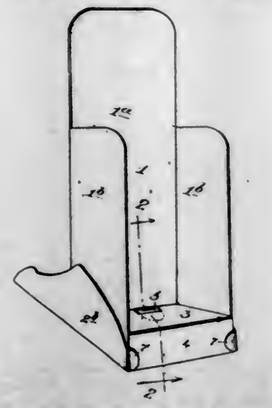
spring, an elongated longitudinal slotted plate integral with one of the brackets and offset at its point of juncture therewith so as to lie laterally of the plane of the spring, a short plate integral with the intermediate portion of the other bracket and extending toward the long plate and in spaced parallel relation therewith, a bolt mounted in the short plate and arranged through the slot in the elongated plate, a metallic plate mounted on the bolt, friction means mounted by the bolt and arranged between the plates, resilient means mounted on the bolt, and adjusting means on the bolt.

1,192,956. TAMPING-PICK. ARNOLD HETHERINGTON TOLD, Winnipeg, Manitoba, Canada. Filed Jan. 12, 1915. Serial No. 1,895. (Cl. 104—173.)



The combination with a pick having one end thereof provided with an extending tongue and having shoulders formed at the base of the tongue and the extending end of the tongue tapered, of a tamping head provided with a pair of equal spaced extending arms designed to receive between them the tongue and having their extremities butting against the shoulders and the body of the head between the arms engaging with the tapered end of the tongue and releasable bolts passing through the arms and tongue and fastening the head releasably to the tongue, as and for the purpose specified.

1,192,957. DISPLAY-STAND. FRANK S. TOWNSEND, Passaic, N. J., assignor to Passaic Metal Ware Company, Passaic, N. J., a Corporation of New Jersey. Filed Apr. 22, 1915. Serial No. 22,987. (Cl. 211—24.)



A display stand comprising an upper member having a rear wall and sides projecting forwardly therefrom and having a bottom wall, said walls and sides providing a receptacle for exposing articles therein, the lower edges of the sides being inclined with respect to the rear and bottom walls, the bottom wall having a front portion projecting downwardly, said bottom wall having a loop struck out downwardly from the rear portion thereof, and a base member having upturned side walls adapted to receive the main member therebetween, the bottom of said base member having a tongue struck up therefrom adapted to coact with said loop, one of said side walls of said base member having a flexible lug adapted to be bent to extend in front of said front portion of the first named member after the parts have been assembled to retain said tongue and loop in coactive relation, said lug preventing tilting of the upper member out of the base member.

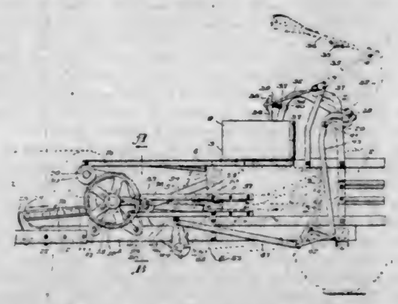
1,192,958. BLASTING-ROD. WOODSON C. TUCKER, Benham, Ky., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 13, 1914. Serial No. 850,625. (Cl. 102—11.)



1. A blasting rod comprising the combination of an expansible shell having a cylindrical opening therethrough changing at intervals into cone-shaped openings with hyperbolically formed sides, a threaded actuator extending through said openings, and wedge expansion members within said cone-shaped openings coöperating with said sides and mounted on and actuated by said actuator for expanding said shell.

2. A blasting rod comprising the combination of an expansible shell having a cylindrical opening therethrough changing at intervals into cone-shaped openings, an actuator extending through said openings, and wedge expansion members within said cone-shaped openings actuated by said actuator for expanding said shell.

1,192,959. HAY-PRESS. THOMAS E. TURNER, Springfield, Ohio, assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Mar. 28, 1914. Serial No. 827,827. (Cl. 100—5.)



1. In a baling press, the press chamber, a presser head, means for actuating said presser head in opposite directions including a rack having its rear end pivotally connected with said presser head, rotatable pinions operative to reciprocate said rack in an orbital path, and fixed cam tracks operative to lift the free end of the rack as it approaches the front end of the machine.

2. In a baling press, a press chamber, a presser head, means for actuating said presser head in opposite directions including a rack having its rear end pivotally connected with said presser head, rotatable pinions operative to reciprocate said rack in an orbital path, and cam tracks inclining upward and forward and engaging with said racks as it approaches the front end of the machine.

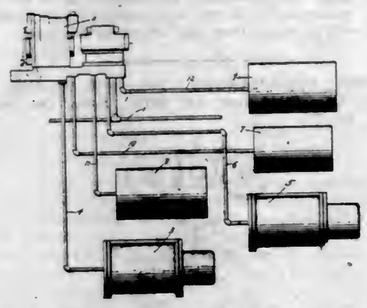
3. In a baling press, a press chamber, a presser head, means for actuating said presser head in opposite directions including a rack having its rear end pivotally connected with said presser head, rotatable pinions operative to reciprocate said rack in an orbital path and transversely alined guiding tracks engaging with opposite sides of the free end of said rack and operative to lift the same as it approaches the front end of the machine.

4. In a hay press, a frame having a chamber therein, a plunger and feeding mechanism movable into said chamber, transversely spaced depending supports beneath said frame, a shaft carried by said supports, double arm crank members pivoted on the opposite ends of said shaft and each having bearings on opposite sides of one of said supports, and link connections between certain of the arms thereof and said plunger and certain others and said feeding mechanism.

5. In a hay press, a press chamber, a bale chamber, a presser head, means for moving it in opposite directions, and means for retaining said head in operative position, said means including guide rails secured to opposite sides of the machine, and bars having their rear ends secured to said head upon opposite sides thereof, and their opposite ends engaging with said guide rails.

[Claims 6 to 19 not printed in the Gazette.]

1,192,960. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 29, 1913. Serial No. 781,731. (Cl. 188—15.)



1. In a fluid pressure brake, the combination with a train pipe, of a valve device subject to variations in train pipe pressure and having a normal release position and two other positions, movement between which effects the graduated release of the brakes and means for defining the graduated release position.

2. In a fluid pressure brake, the combination with a train pipe, of a valve device subject to variations in train pipe pressure for controlling the release of the brakes and having a normal release position and a position for graduating the release of the brakes and means for preventing movement of said valve device from the graduated release position to the normal release position.

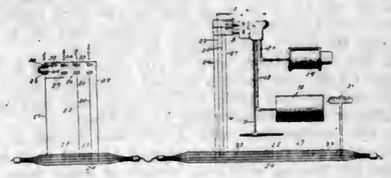
3. In a fluid pressure brake, the combination with a train pipe, of a valve device subject to variations in train pipe pressure for controlling the release of the brakes and having a normal release position and a position for graduating the release of the brakes and means operating upon an application of the brakes for defining the graduated release position.

4. In a fluid pressure brake, the combination with a train pipe, of a main valve controlling the release of the brakes in one position, an auxiliary valve for controlling the release of the brakes in another position, a piston subject to variations in train pipe pressure for operating said valves, and means operating upon a reduction in train pipe pressure for defining the release position in which the release is controlled by the auxiliary valve.

5. In a fluid pressure brake, the combination with a train pipe, of a main valve movable from one release position for effecting the closure of the brake cylinder exhaust, an auxiliary valve movable from another position for effecting the closure of the brake cylinder exhaust, and a piston subject to variations in train pipe pressure for operating said valves, and a stop device for temporarily preventing movement of the parts from the second release position to the first.

[Claims 6 to 22 not printed in the Gazette.]

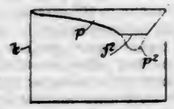
1,192,961. FLUID-PRESSURE BRAKE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Aug. 15, 1913. Serial No. 784,875. (Cl. 188—4.)



1. A brake valve device for fluid pressure brakes provided with contacts for electrically controlling the brake cylinder exhaust and having a running position in which the brake pipe is charged through the usual feed valve and the brake cylinder exhaust is open, said brake valve being movable directly from the running position to a position on either side in which the brake cylinder exhaust is electrically closed, fluid being supplied to the brake pipe directly from the main reservoir in one position and through the feed valve in the other position.

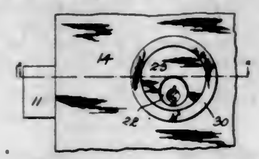
2. In a fluid pressure brake, the combination with a train pipe, of a valve device operated by an increase in train pipe pressure for releasing the brakes, electrically controlled means for also controlling the release of the brakes, and a brake valve device having a full release position for supplying fluid to the train pipe directly from the main reservoir and in which the operation of said electrically controlled means is effected to prevent the release of the brakes, a running position for supplying fluid to the train pipe from the feed valve device and in which the operation of said electrically controlled means is effected to permit the release of the brakes, and a third position in which fluid is supplied to the train pipe and the operation of said electrically controlled means is effected to prevent the release of the brakes, said positions being arranged in immediate sequence.

1,192,962. ENVELOP. LOUIS VECCHIO, New York, N. Y. Filed Apr. 8, 1916. Serial No. 89,741. (Cl. 229—84.)



An envelop the front of which is provided in the stamp corner portion thereof with a slot, and the back of said envelop being provided with a sealing flap which is folded forwardly and provided with a tongue which is passed through said slot, the front of the envelop being also provided at the opening thereinto with an inwardly folded flap, and the envelop being sealed by placing the stamp over said slot and securing it to the sealed flap and to the body of the envelop.

1,192,963. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 28, 1915. Serial No. 53,096. (Cl. 70—46.)

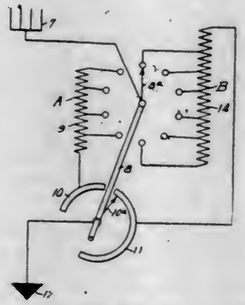


1. The combination with a rim lock case having a separate back plate, of a pin tumbler lock, a guide pin for said pin tumbler lock secured to the back plate, an adjusting screw for said pin tumbler lock having threaded engagement therewith, said screw provided with a head accessible at the front or inner face of the back plate, and means for centering said pin tumbler lock in a bore through the door; substantially as described.

2. The combination with a rim case having a back plate, of a pin tumbler lock secured to the back plate, and means on the back plate for centering said lock in its opening or bore; substantially as described.

3. The combination with a rim case having a back plate, of a pin tumbler lock carried by said back plate, means for moving said lock toward or away from said back plate, and projections on the back plate for centering said lock in its bore; substantially as described.

1,192,964. OSCILLATING-CURRENT TRANSFORMER. ROY A. WEAGANT, Brooklyn, N. Y., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed Mar. 15, 1912. Serial No. 684,033. (Cl. 171—119.)



1. A transformer, comprising a secondary coil and a revolubly mounted two part primary coil mounted eccentrically inside the secondary, and means for isolating either part of the primary coil when desired.

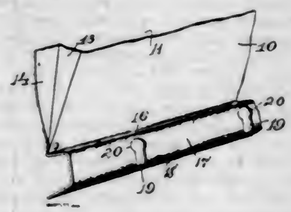
2. A transformer, comprising angularly adjustable primary coils, a secondary having a winding made of different forms of wire in different parts of the coil more effective respectively according to adjustment in the primary.

3. An adjustable transformer primary composed of two separate coils each having adjustment tops and means to isolate one of said coils while using any part of the other.

4. A transformer switching mechanism, comprising a two coil primary, two series of contacts connected to leads upon said primary coils, a shaft carrying said coils, and a rigidly mounted switch on the same shaft independently connecting the two coils of the primary in the circuit.

5. A transformer, comprising several primary coils mounted to revolve eccentrically inside a surrounding secondary, said primary mounting being attached to switches adapted to cut out one of the primary coils in a certain position with respect to the secondary and the secondary having flat wire in the part most effective in such positions.

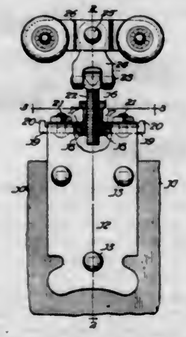
1,192,965. HANGER OR RACK. FRANK WHITE, Glen Ridge, N. J. Filed Mar. 4, 1911. Serial No. 612,358. (Cl. 211—17.)



1. A hanger for holding devices with headed shanks, said hangers comprising a sheet of metal formed into a bead having a front which extends downwardly and outwardly and a bottom which extends downwardly and inwardly, the front and bottom having a key-hole slot vertically arranged therein with its large end uppermost, the front and bottom being joined so as to form a sharp angle intermediate of the ends of the slot, the distance from the angle to the enlargement of the slot being greater than the length of the shank from the article to the head.

2. A hanger for holding devices with headed shanks, said hanger comprising a sheet of metal formed into a bead with a front and bottom meeting at a sharp angle, and a key-hole slot extending from said angle part way into the front and part way into the bottom, the slot having its large end uppermost, the distance from the angle to the enlargement of the slot being greater than the length of the shank from the article to the head.

1,192,966. DOOR-HANGER. DONALD E. WILLARD, Danville, Ill. Filed Apr. 19, 1916. Serial No. 92,119. (Cl. 16—7.)



1. In a door hanger, the combination of a pair of door-engaging plates having overlapping flanged ends, a supporting bar underlying said flanged ends, an adjusting nut which engages and supports said bar with freedom of rotative movement, another portion of said nut being engaged by said flanges and clamping means between said bar and said flanges whereby the parts may be held in adjusted position and said nut may be locked against rotative movement, substantially as described.

2. In a door hanger, the combination of door-engaging plates having inturned flanges, a bar underlying said flanges, a nut rotatably supporting said bar, a trolley, a threaded stem depending from said trolley and engaging said nut and means permitting lateral movement of said plates relative to said bar and nut, said means when in clamping relation serving to hold said nut against rotation, substantially as described.

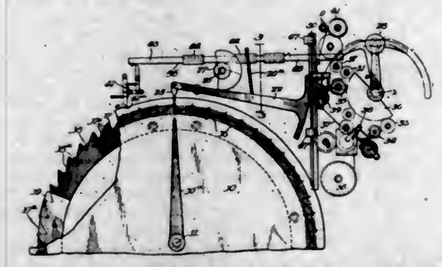
3. In a door hanger, the combination of door-engaging plates having angularly bent upper ends which overlap each other, a trolley, a swinging threaded stem projecting from said trolley, a vertical adjusting nut engaging said stem, a bar rotatably secured to said nut and adapted to underlie the angularly bent portions of said plates, and means for clamping said bar, said plates and said nut in rigid position, substantially as described.

4. In a door hanger, the combination of door-engaging plates, a trolley having a pendant threaded stem, a flanged nut engaging said stem, a bar supported on the flange of said nut, and means for rigidly securing together said bar, said plate and said nut, substantially as described.

5. In a door hanger, the combination of a door-engaging plate having a lateral flange, a trolley having a depending threaded portion, a nut engaging said threaded portion, said nut having an annular flange, a bar held by said nut through engagement with said annular flange, said bar underlying said lateral flange, and means for permitting lateral adjustment of said plate relative to said bar and for clamping said plate, bar and nut in rigid position, substantially as described.

[Claim 6 not printed in the Gazette.]

1,192,967. AUTOMATIC SCALE-REGISTER. JOHN WILLNERS, Chicago Heights, Ill., assignor of one-half to Charles Fahlstrom, Chicago Heights, Ill. Filed Aug. 2, 1915. Serial No. 43,113. (Cl. 234—1.)



1. In a device of the class described, the combination of a recording mechanism, a rotatable shaft, a series of serrated disks secured to said shaft, one disk being serrated to indicate units, one to indicate tens, one to indicate hundreds and a corresponding series of suitably-mounted pivoted arms each having a finger secured to one end thereof and adapted to bear against one of said serrated disks, the other ends of said arms being adapted to engage said recording mechanism, substantially as described.

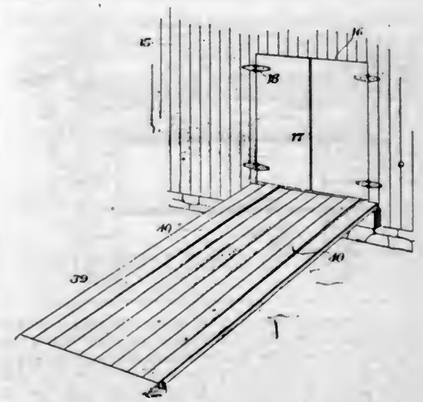
2. In a device of the class described, the combination of a recording mechanism, a rotatable shaft, a plurality of disks positively connected to said shaft and to each other and adapted for rotation in unison therewith, said disks having notches of different sizes on their peripheries, a corresponding series of pivoted arms having fingers secured to one end of each arm and adapted to bear against said disks, the other ends of said arms being adapted to engage said recording mechanism and to transfer thereto the amounts registered by said disks, substantially as described.

3. In a device of the class described, the combination of a rotatable shaft and a recording mechanism, a plurality of disks positively connected to said shaft and mounted for rotation in unison, said disks being provided with a plurality of notches, one disk having a number of notches ten times greater than the adjacent disk, the notches on each disk being divided into series of ten, the notches from one to ten being successively deeper than the preceding notch, a series of pivoted arms and fingers secured to one end of each arm and adapted to bear against said disks, the other end of said arms being adapted to engage said recording mechanism and to transfer thereto the amounts registered by said disks, and a manually-operable gear segment for controlling the movement of said arms, substantially as described.

4. In a device of the class described, the combination of a rotatable shaft and a recording mechanism, a plurality of disks directly connected to said shaft and mounted for rotation in unison, said disks being provided with a plurality of notches, one disk having a number of notches ten times greater than the adjacent disk, the notches on each disk being divided into series of ten, the notches from one to ten being successively deeper than the preceding notch, a series of pivoted arms having fingers secured to one end of each arm and adapted to bear against said disks after said disks have reached a position of rest, the other ends of said arms being adapted to engage said recording mechanism to set up the amounts corresponding to the depth of the disk indicated by the fingers on said arms, substantially as described.

5. In a device of the character described, the combination of a rotatable shaft, a recording mechanism, a plurality of serrated disks and a dial mounted on said shaft for unitary rotation, a plurality of pivoted arms having fingers adapted to coöperate with said disks and serving to actuate said recording mechanism, means for maintaining said fingers out of contact with said serrated disks, means for locking said dial and said disks against movement, and means for manually releasing said dial and disks and permitting said fingers to contact said serrated disks, substantially as described.

1,192,968. DOOR-OPERATOR. GEORGE R. WIMBERLY, Mountain Park, Okla. Filed Mar. 16, 1915. Serial No. 14,850. (Cl. 268—9.)

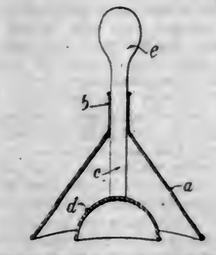


In combination with a door mounted for swinging movement and a platform movably mounted and disposed under the door, an operating mechanism comprising a member mounted for rocking movement adjacent the hinged edge of the door and having angularly disposed ends one of which is slidably connected with the door, a spring exerting tension on the other end of said rocking member to normally hold the door in a closed position, means operatively connecting the last mentioned end portion of the member mounted for rocking movement with the said platform, a latch bolt mounted for engagement with the door when the same is in a closed position, and operating means connected with the latch bolt and the last mentioned end portion of the said rocking members.

1,192,969. MASSAGE APPLIANCE. EDITH WINTON-CHARTERIS, London, England. Filed June 8, 1915 Serial No. 32,892. (Cl. 128—16.)

1. In a massage appliance the combination with an outer cup, of a rod or piston mounted to slide axially in said cup, a flexible cup mounted on said rod or piston and adapted to lie and operate within the outer cup, and

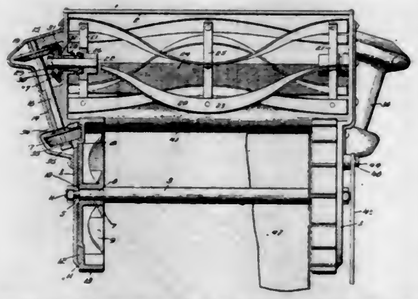
means for imparting a pumping action to the inner cup to make it function as a suction cup.



2. In a massage appliance the combination with an outer cup having a soft or flexible edge or rim, a rod or piston adapted to slide axially in relation to said cup, of an inner flexible cup carried by said rod or piston, and means for imparting a pumping motion to said inner cup.

3. A massage appliance comprising a cup having a soft beaded edge, a rod or piston mounted to slide in a guide carried by said cup, a flexible cup having a beaded edge said cup being mounted on the end of said rod or piston within the inflexible cup, and a knob or handle carried by said rod or piston exterior to the outer cup.

1,192,970. LAWN-MOWER. FRED YANK, Seattle, Wash. Filed Oct. 11, 1912. Serial No. 725,224. (Cl. 56—19.)

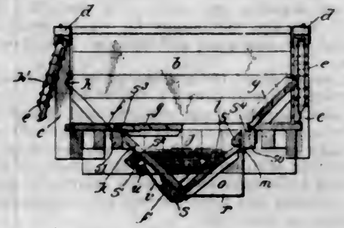


The combination with a lawn mower having a rotary cutter, of spaced ground wheels each provided with a rim and having on its outer face circumferentially arranged teeth in spaced relation with the rim on the wheel, side members arranged exteriorly of the outer faces of the ground wheels and covering said teeth, means for operating the rotary cutter including shafts carried by the side members and provided with spring pressed gears mounted to slide and mesh with the circumferentially arranged teeth upon the ground wheels, and inwardly extending annular flanges on the side members contacting with the outer faces of the rims on the ground wheels, said flanges being flared toward the rims and serving as deflectors to prevent obstructions passing between the inner edges of the flanges and the outer faces on the ground wheels and clogging the teeth on the ground wheels and gears.

1,192,971. CAR. WINFIELD HANCOCK YOST, Montreal, Quebec, Canada, assignor to Roger Ballast Car Company, a Corporation of Maine. Filed Apr. 23, 1909. Serial No. 491,861. (Cl. 105—185.)

1. In a hopper bottom car, the combination with the body thereof, a hopper formed therein provided with a downwardly opening door, of a pair of rigid members fixed to the car body adjacent to the ends of said door, said rigid members constituting walls extending between the limits of travel of said door, substantially as described.

2. In a hopper bottom car, the combination with the body thereof having a hopper formed therein, said hopper being provided with a downwardly opening door, of a pair of rigid members fixed to the body of said car and supporting the end walls of said hopper, such members forming walls extending between the limits of travel of said door at the ends thereof.



3. In a hopper bottom car, the combination with the body thereof having a hopper therein, said hopper being provided with inclined end walls, a fixed side wall, and a movable side wall constituting a door for said hopper, and rigid members supporting said end walls and located at the ends of said side walls, each of said rigid members constituting a wall extending from said fixed side wall to the limit of opening movement of said movable wall.

4. In a hopper bottom car, the combination with the body thereof having a hopper therein, said hopper being provided with inclined end walls, a fixed side wall, and a movable side wall constituting a door for said hopper, rigid members supporting said end walls and located at the ends of said side walls, each of said rigid members constituting a wall extending from said fixed side wall to the limit of opening movement of said movable wall, and means to secure said rigid members to said car frame.

5. In a hopper bottom car, the combination with the body thereof having a hopper therein, said hopper being provided with inclined end walls, a fixed side wall, and a movable side wall constituting a door for said hopper, rigid members supporting said end walls and located at the ends of said side walls, each of said rigid members constituting a wall extending from said fixed side wall to the limit of opening movement of said movable wall, and a pair of straps, each of said straps being fastened to the under-side of one of said rigid members and having its ends secured to the frame of said car.

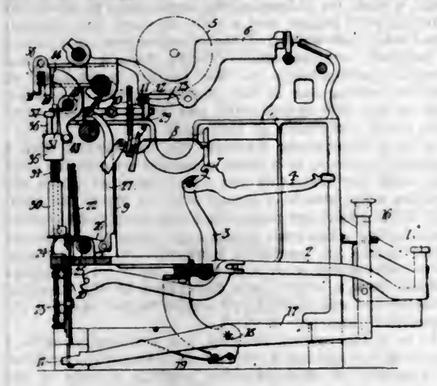
[Claims 6 to 12 not printed in the Gazette.]

1,192,972. TYPE-WRITING MACHINE. FRANK A. YOUNG, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 17, 1912. Serial No. 697,846. (Cl. 197—113.)

1. The combination with a carriage, and means to drive the carriage, of a series of character keys, means for feeding a printing ribbon along at the actuation of said keys, and for concomitantly feeding said ribbon and said carriage while said keys are inactive, a type bar having a normal position of rest away from the printing point, and mechanism to automatically vibrate the type bar between said position of rest and the printing point by power from said carriage driving means, and thereby cause a row of characters to be printed during said feeding of the ribbon and carriage.

2. The combination with a carriage, of motive means for driving said carriage, mechanism for feeding a printing ribbon, driving connections between said feeding mechanism and said motive means, a type, and gearing between the motive means and the type for vibrating the type.

3. The combination with a carriage and a motor to drive the carriage, of a tabulating mechanism for controlling forward movements of said carriage, means actuated by said tabulating mechanism to shift a printing ribbon, a type bar, and a gear train between the motor and the type bar to vibrate the type bar by power from the motor during the said movements of the carriage.

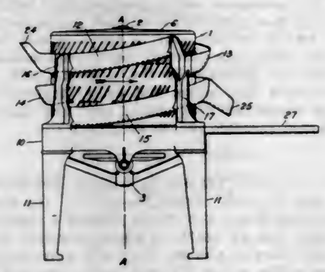


4. The combination with a carriage, of a tabulating mechanism for controlling the tabulating movements of the carriage, a type bar, a reciprocating driver for vibrating the type bar, a motor to drive the carriage, power-transmitting mechanism between the motor and said reciprocating driver to operate the latter and vibrate the type bar for effecting a continuous printing during the travel of the carriage, and means actuated by the tabulating mechanism to interpose a printing ribbon into the path of movement of the type on said type bar.

5. The combination with a carriage, of a tabulating mechanism for controlling forward movements of said carriage, a vibratory type-bar for effecting a continuous printing during the movement of said carriage, means actuated by said tabulating mechanism for interposing a printing ribbon into the path of movement of the type on said type-bar, and means for preventing the shifting of said ribbon at the actuation of said tabulating mechanism, so that said mechanism can be used without actuating said ribbon.

[Claims 6 to 39 not printed in the Gazette.]

1,192,973. MACHINE FOR MOLDING AND BALLING DOUGH AND THE LIKE. DANIEL K. ALLISON, Cincinnati, Ohio, assignor to The J. H. Day Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 27, 1914. Serial No. 853,269. (Cl. 107—9.)



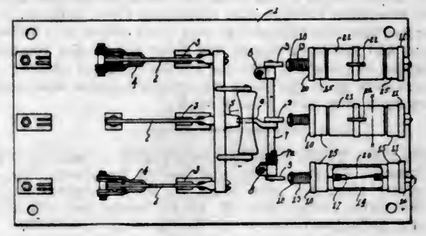
1. In a machine for molding and balling dough, a revolving cylinder and a plurality of inclined troughs adjacent to the said cylinder arranged in upper and lower sections, the troughs of the upper section being in substantially the same horizontal plane, and the troughs of the lower section being likewise in the same horizontal plane, and the intake end of each successive trough being arranged beneath the discharge end of the preceding trough.

2. In a machine for molding and balling dough, a revolving cylinder, a plurality of inclined troughs arranged in succession around said cylinder, forming a path in one direction in which the dough is rolled, molded and balled; the discharge end of each trough being located above the intake end of its succeeding trough and a rib construction arranged in the discharge end of each trough for the purpose of retarding the lower part of the dough ball and compelling it to turn over while falling into the intake end of the succeeding trough.

3. In a machine for molding and balling dough a revolving cylinder, a plurality of inclined troughs arranged in succession about said cylinder, the discharge end of each trough being above the intake end of the succeeding trough and also arranged so that the dough mass is propelled in the same general direction in its circuit through the machine, and ribbed means interposed between the troughs for the purpose of retarding the dough mass in a manner to compel it to turn over in falling from trough to trough.

4. In a machine for molding and balling dough, a revolving cylinder, a plurality of inclined troughs adjacent to said cylinder and arranged in succession about the same in a manner to provide a continuous path in the same general direction in which the dough mass is rolled and balled; a ribbed construction interposed between the said troughs for the purpose of retarding the progress of the dough mass and thereby causing it to turn over in falling, and an enlargement of the intake ends of the said troughs for the purpose of receiving the expanded dough mass in its turned position.

1,192,974. AUTOMATIC FUSE CUT-OUT. CLIFFORD S. ANDERSON, Ripon, Cal. Filed June 29, 1915. Serial No. 37,028. (Cl. 175—273.)



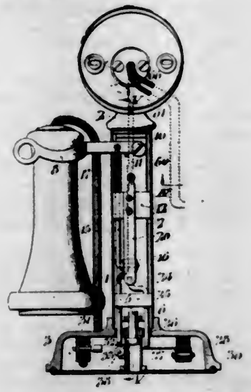
1. A device of the character described comprising the combination with a switch biased to open position, a catch on the switch, a spring pressed shaft, a detent on said shaft engageable with said catch, a plurality of dogs on said shaft rigid with respect to said detent, a fuse adjacent each dog, and means arranged on each fuse whereby when the fuse is "blown" such means will engage the adjacent dog to move said shaft and release the detent from said catch, as described.

2. A device of the character described comprising a fuse consisting of a fixed pin and a spring pressed pin, a fuse wire connected between said pins to normally hold the spring pressed pin in tensional position, a switch biased to open position, a member normally engaging the switch, a dog rigid on said engaging member and turnably mounted adjacent the spring pressed pin whereby when the fuse is "blown" such pin will engage said dog to release said engaging member from the switch, as described.

1,192,975. TELEPHONE SET. CHARLES SAUNDERS BAKER, Philadelphia, Pa. Filed Sept. 6, 1912. Serial No. 718,844. (Cl. 179—147.)

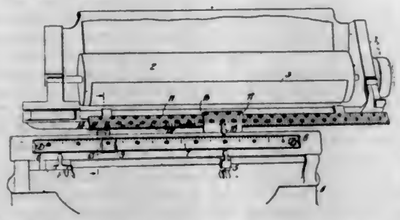
1. A telephone set comprising a base, a neck piece, a hollow stem disposed between the base and the neck piece, an insulating plate mounted in said hollow stem and connecting said neck piece to said base, a receiver hook pivoted on said plate, a resilient contact member supported by said plate, a fixed contact member supported by

said plate, a rod connected to said receiver hook and movable longitudinally in said hollow stem, said rod being supported by said plate, a roller carried by said rod and adapted to coöperate with said resilient contact member to alternately make and break the contact between said members upon movement of said hook.



2. A telephone set comprising a base, a neck piece, a hollow stem disposed between the base and the neck piece, an insulating plate mounted in said hollow stem and connecting said neck piece to said base, a receiver hook pivoted on said plate, a resilient contact member supported by said plate, a fixed contact member supported by said plate, an insulating block secured to said plate and having an opening therethrough, a rod connected with the receiver hook and extending through said insulating block, said rod being movable longitudinally in said block and in said hollow stem, and means carried by the lower end of said rod and adapted to coöperate with the resilient contact member to alternately make and break the contact between said members upon movement of said hook.

1,192,976. TYPE-WRITING MACHINE. BENJAMIN F. BARKER, El Paso, Tex., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 5, 1913. Serial No. 752,019. (Cl. 197—194.)



1. In a typewriting machine, the combination with a scale on the frame, a carriage, and a pointer on said carriage for indicating the printing point, said scale comprising graduations numbered from "1" to the limit of the carriage travel, of a scale on the carriage numbered in the same direction, but with graduations numbered with half the values of those on said frame scale, an auxiliary scale on the carriage having its zero located at the graduation thereon numbered the same as the middle division of the frame scale, said auxiliary scale graduated from said point like the frame scale, and a pointer slidable to cooperate with said frame scale and said auxiliary scale.

2. In a typewriting machine, the combination with a scale on the carriage, of a scale on the frame of the machine, a pointer for indicating on one scale the letter space at which the printing point stands, and a pointer slidable with relation to the other scale to coöperate therewith in denoting thereon an arbitrary writing line center.

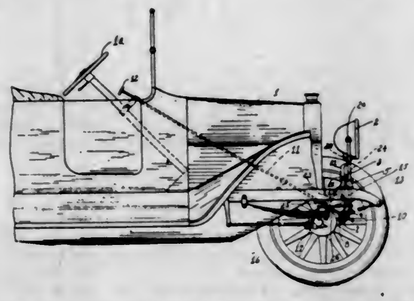
3. In a typewriting machine, the combination of a carriage, a scale for indicating the letter-space at which the printing point stands, and a scale on which the alternate letter-spaces are numbered, the second-named scale having a marginal notation which extends, from a letter-space thereon corresponding to the central letter-space of the full writing line of the machine, in the same direction as the first-named scale, and which is consecutive with every letter-space on that scale.

4. In a typewriting machine, the combination with a traveling carriage, of a scale, a pointer coöperating with said scale for indicating the letter space at which the printing point stands, a second scale on which the alternate letter spaces are numbered consecutively, said second scale having a marginal notation by which the successive letter spaces are numbered consecutively, and an indicator coöperating with said second scale for indicating thereon both a letter space designated by the marginal notation and successive letter spaces in the travel of the typewriter carriage.

5. In a typewriting machine, the combination with a traveling carriage and a scale on the frame of the machine, of a pointer on said traveling carriage, a scale on the traveling carriage, and an indicator slidable on the frame of the machine to indicate a letter space on said carriage scale, said carriage scale having auxiliary notation associated therewith.

[Claims 6 to 23 not printed in the Gazette.]

1,192,977. VEHICLE-HEADLIGHT. JOHN EIKN BATCHELDER, Jackson, Cal. Filed Jan. 17, 1916. Serial No. 72,471. (Cl. 240—62.)

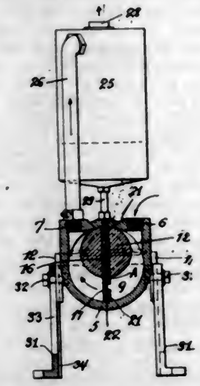


Dirigible motor vehicle lamps comprising turnable supports, a beveled gear on one support, another beveled gear mounted independently of the support and meshing with the first named beveled gear, a turnable rod having a square end projecting through the second named gear, lamps pivotally mounted in the supports, rods flexibly connected with said lamps and linked together, and a bell crank connected with one of said last named rods and with said turnable rod, as described.

1,192,978. PUMP. TRUMAN S. BELYEA, Brooklyn, N. Y. Filed Apr. 15, 1915. Serial No. 21,578. (Cl. 230—30.)

1. The combination of a casing forming a chamber having an inlet and an outlet, a piston mounted to rotate within said chamber and provided with a transverse slot of uniform width, a pair of piston blades arranged to slide in parallel in said slot, each of said blades being of a greater length than the slot and means for operating the said piston.

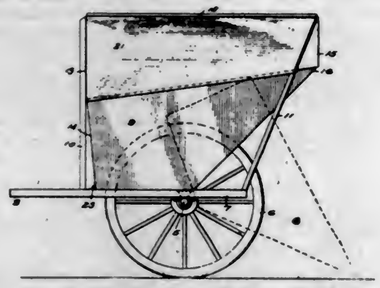
2. The combination of a casing forming a chamber having an inlet and an outlet, a cylindrical piston mounted to rotate within said chamber and provided with a diametrically disposed transverse slot, a pair of piston blades of relatively light material arranged to slide in said slot and provided with weighted ends adapted to contact with the inner wall of said chamber, said blades being longer than the diameter of the said piston and means for rotating the latter.



3. The combination with a pump casing or frame, rectangular foot pads arranged on opposite sides of said frame, a pair of supporting feet adapted to be placed in several angularly different predetermined positions with respect to said foot pads and having guiding flanges adapted to coöperate with the sides of said foot pads in the several said positions and means for adjustably securing the said feet to the said foot pads.

4. The combination of a bearing member, rectangular foot pads arranged on opposite sides of said bearing member, a pair of supporting feet adapted to be placed in several angularly different predetermined positions with respect to said foot pads and having guiding flanges adapted to coöperate with the sides of said foot pads in the several said positions, means for adjustably securing the said feet to the said foot pads, a cylindrical casing secured to the said bearing member at the one end thereof, a piston in said casing having an integral shaft journaled in the said bearing member and projecting from the latter for driving the said piston.

1,192,979. DUMP-CART. HERBERT G. BLANKFORT, New York, N. Y., assignor of one-half to Lesser Wolf, New York, N. Y. Filed June 8, 1915. Serial No. 32,885. (Cl. 21—20.)



1. In a dump cart, a frame, a cart body rotatably mounted on the frame, with its top extending rearwardly and upwardly when the cart body is in normal position, the bottom of the cart body at the rear of its pivot extending upwardly and rearwardly, and a cover for the cart body secured relatively to the frame and normally inclosing the top of the cart body.

2. In a dump cart, a frame, a cart body rotatably mounted on the frame and with its top from front to rear extending upwardly when the cart body is in normal position, and a cover for the cart body normally inclosing the top of the cart and secured to the frame for remaining in position relatively thereto when the cart body is rotated.

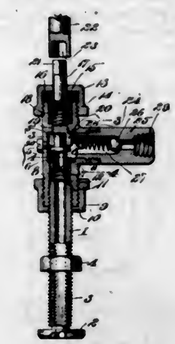
3. In a dump cart, a frame, a cart body rotatably mounted on the frame, and a cover for the cart body extending upwardly from the top of the front and the rear of the cart body and secured to the frame for remaining in position relatively thereto when the cart body is rotated.

4. In a dump cart, a frame, a cart body rotatably mounted on the frame with its top extending rearwardly and upwardly when the cart body is in normal position, a cover for the cart body mounted on the frame, the cover having forward and rearward vertical portions which extend upwardly from the forward and rear ends of the cart body when the latter is in normal position, the upper portions of the said forward and rearward vertical portions of the cover being connected by a horizontal portion of the cover, and sides for the cover disposed at the outer sides of the cart body.

5. In a dump cart, an axle, wheels mounted on the axle, a cart body pivoted to the axle normally disposed with its top extending rearwardly and upwardly, a cover for the cart body, means for supporting the cover above the cart body, the cover having forward and rearward vertical portions which extend upwardly from the forward and rear ends of the cart body when the latter is in normal position, the upper portions of said forward and rearward vertical portions of the cover being connected by a horizontal portion of the cover, and sides for the cover disposed at the outer sides of the dump cart body.

[Claim 6 not printed in the Gazette.]

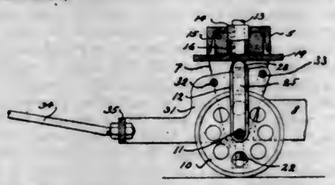
1,192,980. VALVE. PETER J. BODE, St. Louis, Mo. Filed May 12, 1915. Serial No. 27,618. (Cl. 137—28.)



1. In a device of the class described the combination of a cut-off valve comprising a tubular member having an internally threaded seat and an element tubular for a portion of its length threaded into said seat, an annular flange for engagement with the end of said internally threaded tubular element said externally threaded element having a port in its tubular portion with an element arranged to be detachably secured to the element having the internally threaded seat and having a duct therein in communication with the end of said internally threaded seat, a check valve in said duct, and means comprising a threaded stem carried by said detachable element for the operation of said threaded element having a port.

2. In combination with a valve stem and means for securing the valve stem to a container for a fluid under pressure and having at its free end an internally threaded seat, a ported valve threaded to said stem, a check valve, means for detachably securing the check valve to said valve stem, a threaded element carried by said check valve for the operation of said ported valve, and means for operating said threaded element.

1,192,981. TRUCK. WILLIAM EDWARD BOEHCK, Jersey City, N. J., assignor to New York Revolving Portable Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 2, 1914. Serial No. 859,818. (Cl. 21—118.)



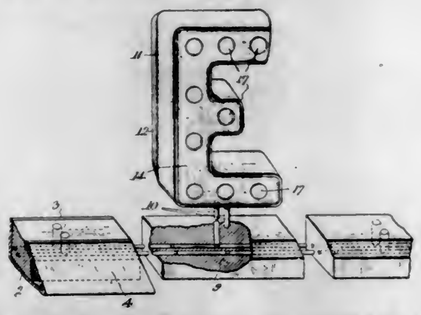
1. The combination of a wheel, a truck vertically movable relatively to the same, a lifter operable to raise the truck from the wheel, a member to actuate said lifter, and means on opposite sides of said member serving to control the lifter and limit its motion.

2. The combination of a truck, a wheel thereunder, a lever operable to raise the truck from the wheel, an actuating member for said lever, and devices on said member acting alternately to move and arrest said lever.

3. The combination of a wheel, a truck vertically movable thereupon, a member connected with the wheel axle, and a loosely mounted element controlled by said member to raise the truck from the wheel.

4. The combination of a wheel, a truck vertically movable with relation to the same, an interposed member, a lifter operable to raise the truck from the wheel, and a retainer with said member engageable by said lifter.

1,192,982. SIGN CONSTRUCTION. FREDERICK A. BRISTOL and PAUL J. SCHARRINGHAUSEN, Des Plaines, Ill., assignors to Bristol Manufacturing Company, Chicago, Ill., a Corporation of Delaware. Filed Oct. 12, 1914. Serial No. 866,344. (Cl. 40—130.)



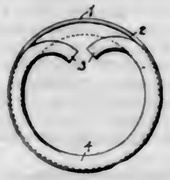
1. In a device of the class described in combination, a metallic trough like frame having a contour conforming to a predetermined letter of the alphabet, a porcelain filler substantially filling said frame, a plurality of lamp sockets carried by said porcelain filler and constructed with the outer end thereof substantially flush with the outer face of said porcelain filling, a transparent cover of the outline of said predetermined letter of the alphabet, said transparent cover being substantially semicircular in cross section, said transparent cover also having its walls spaced at the edges to substantially correspond to the width between the edges of said trough like frame to enable the said transparent cover to set upon said frame with its edges within the edges of said frame, and a supporting base for the letter.

2. In a device of the class described in combination, a metallic frame of trough like cross section having a contour corresponding to a letter of the alphabet, a filler of non-conducting material substantially filling said trough like frame, said filling material being provided with a plane surface on the front thereof substantially flush with the plane determined by the front edges of said trough like frame, a plurality of electric lamp sockets mounted within said insulating filler, a transparent covering of a substantially semicircular cross section extending from edge to edge of said trough like portions of said frame, said transparent covering being spaced from said facing a sufficient distance to accommodate electric lights mounted within said sockets, and a base for supporting said frame.

3. In an electric sign in combination, an individual letter outline provided with electric lamps, terminal members connected with said lamps and projecting from said letter, a base member having sockets therein constructed to receive the terminal members and detachably support said letter, a plurality of electrical conductors within said base, each conductor passing through one of said socket members, and coupling devices formed on each end of said electrical conductors, whereby a plurality of bases may be detachably coupled together to form continuous common conductors for supplying electricity to a plurality of letters.

4. An electric sign comprising a base composed of a plurality of members, means forming a part of an electric circuit for connecting said members together, a plurality of individual letter outlines provided with electric lamps, terminal members projecting from each of said letter outlines, and means carried by each of the base members for detachably receiving said terminals, said letters and said bases each being relatively and individually interchangeable.

1,192,983. PROCESS FOR MAKING RINGS. JOHN BRUDERER, Jr., Detroit, Mich., assignor to The Traub Manufacturing Company, Detroit, Mich., a Partnership consisting of Robert C. J. Traub and William H. Traub. Filed Jan. 28, 1916. Serial No. 74,757. (Cl. 29—8.)



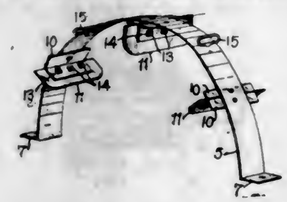
1. The process of forming annular bodies from superimposed metal bars of different melting points which consists in bending the metal of higher melting point into a ring and fusing its ends to produce a continuous homogeneous body while the ends of the metal of lower melting point are a sufficient distance away to be unaffected, and then uniting the ends of the metal of lower melting point while in engagement with the metal of higher melting point.

2. The process of forming a ring from bars of gold and platinum which consists of bending the two bars until the ends of the platinum bar engage and then fusing said ends to unite them while out of contact with the bar of gold, and then integrally uniting the ends of the bar of gold.

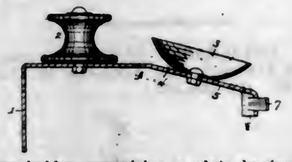
1,192,984. CLEANING DEVICE FOR MARINE-BOILER FURNACES. JOHN K. BAUFF, Baltimore, Md. Filed Nov. 10, 1915. Serial No. 60,765. (Cl. 83—64.)

1. A device of the character described comprising a pair of metal bars adapted to be arranged in embracing relation upon a boiler furnace and detachably connected together at their extremities, equidistantly spaced scraping blades of a length greater than the width of said bars adapted to extend longitudinally of the furnace wall, means for detachably securing the blades upon the inner faces of said bars, and operating means fixed to each of said bars.

2. A device of the character described including a pair of metal bars adapted to be arranged in embracing relation upon a boiler furnace, said bars having their extremities outwardly extended and provided with openings, connecting bolts adapted for engagement through said openings, spaced pairs of angle plates fixed upon the inner face of each of the bars and having free inwardly extending flanges, said plates being of greater length than the width of said bars, scraper blades adapted to be arranged between the inwardly extending flanges of the angle plates, a series of bolts to detachably connect the blades to said flanges, and operating means fixed upon each of said bars.



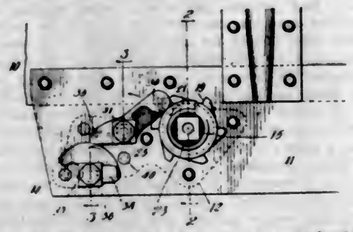
1,192,985. CLOTHES-LINE HOLDER. JOHN BUTLER, Steubenville, Ohio, assignor of one-half to Frank A. Butte, Steubenville, Ohio. Filed June 16, 1915. Serial No. 34,380. (Cl. 24—127.)



1. A line holder comprising a plate having a portion designed for attachment to a post or other support, a cup-like disk mounted on said plate and providing an annular tapered line-wedging space thereabout, and a pulley whereon the line may be drawn taut prior to insertion in said space, said pulley being mounted on said plate intermediate said disk and the support.

2. A line holder comprising a plate having an angularly disposed portion designed for attachment to a post or other support, a cup-like disk mounted on said plate to form an annular tapered space about which a line may be wedgingly received, a pulley mounted on said plate intermediate said disk and the support, a lip formed at the front end of said plate, and a resilient tongue struck up from said lip and adapted to receive a line therebehind.

1,192,986. OPERATING MECHANISM FOR CAR-DOORS. ARGYLE CAMPBELL, Chicago, Ill., assignor to Enterprise Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 11, 1916. Serial No. 77,620. (Cl. 74—16.)



1. In mechanism of the character described, the combination with an operating shaft having a locking member on the end thereof, of means coöperating with said locking member to lock the shaft in position, said means including a pawl pivoted about an axis parallel with the axis of said shaft and coöperable with said locking member, and a dog engageable with said pawl and also pivoted about an axis parallel with the axis of said shaft, said shaft, pawl and dog being each provided with an integral squared portion of the same size, said shaft, pawl and dog being all rotated in the same direction to release the operating shaft.

2. In mechanism of the character described, the combination with a shaft having a ratchet wheel thereon, of a pivoted pawl coöperating with said ratchet wheel, and a lock coöperating with said pawl, said pawl and lock each having formed integrally therewith similar members each adapted to detachably receive the same operating tool, said shaft, pawl and lock being all rotated in the same direction when the shaft is being released or moved to locked position.

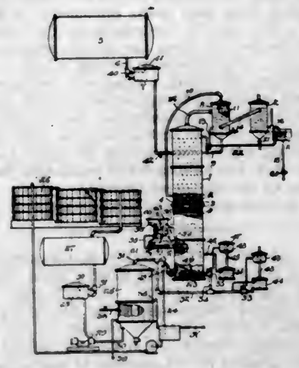
3. In mechanism of the character described, the combination with a casting having a bearing and two cored hubs, of a shaft rotatably mounted in said bearing, shouldered pins mounted in said cored hubs and rigidly attached to said casting, a pawl pivotally mounted on one of said pins, and a lock pivotally mounted on the other of said pins.

4. In mechanism of the character described, the combination with an operating shaft having a ratchet wheel fixedly associated therewith and a member relatively rotatably associated with said ratchet wheel, said member having a squared operating end, of a pawl coöperating with said ratchet wheel and having a squared operating section, and a dog coöperable with said pawl and having also a squared operating section, said member, pawl and dog being all rotated in the same direction to effect the unwinding movement of the shaft.

5. In a mechanism of the character described, the combination with a casting adapted to be secured to a portion of a car, said casting being provided with a bearing for a shaft, of a pawl adapted to coöperate with said shaft, a dog adapted to coöperate with said pawl and means for pivotally attaching said pawl and dog to said casting.

[Claim 6 not printed in the Gazette.]

1,192,987. METHOD AND APPARATUS FOR OBTAINING WOOD-ALCOHOL AND CALCIUM ACETATE FROM ACETATE LIQUOR. CHARLES LINCOLN CAMPBELL, Boston, Mass., assignor to E. B. Badger & Sons Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 3, 1912. Serial No. 669,159. (Cl. 203—6.)



1. The method of producing wood alcohol and concentrated calcium acetate which consists in continuously delivering liquor derived from distillation of wood, from which liquor tar has been removed and to which lime sufficient to neutralize the contained acetate has been added, to a distilling apparatus, continuously removing vapors of alcohol from one part of such apparatus, continuously removing the liquor freed of alcohol from another part of the apparatus, heating and concentrating such liquor

and returning the vapors produced by such heating of the liquor to the distilling apparatus to furnish the heat required for distillation.

2. The method of producing wood alcohol and concentrated calcium acetate which consists in continuously delivering liquor derived from distillation of wood, from which liquor tar has been removed and to which lime sufficient to neutralize the contained acetate has been added, to a distilling apparatus, continuously removing vapors of alcohol from one part of such apparatus, continuously removing the liquor freed of alcohol from another part of the apparatus, allowing the liquor to stand for the purpose of allowing impurities to settle, then heating and concentrating the liquor, and continuously returning the vapors thereby delivered from the liquor to the distilling apparatus so as to furnish heat for distillation.

3. The method of producing wood alcohol and concentrated calcium acetate which consists in continuously delivering liquor derived from distillation of wood, from which liquor tar has been removed and to which lime sufficient to neutralize the contained acetate has been added, to a distilling apparatus, continuously removing vapors of alcohol from one part of such apparatus, continuously removing the liquor freed of alcohol from another part of the apparatus, heating and concentrating such liquor, continuously returning the vapors produced by such heating to the distilling apparatus to furnish heat for distillation, and continuously withdrawing the concentrated calcium acetate solution.

4. A method for the purpose described, comprising the steps of continuously distilling liquor resulting from distillation of wood, after removal of tar and neutralization with lime, with continuous removal of vapors of alcohol and retention of residual calcium acetate solution, supplying regulated continuous flow of crude liquor to the body of liquor in course of distillation, heating a body of calcium acetate solution, continuously supplying such solution from the residual products of distillation to said body and continuously removing concentrated solution from the body, and applying the heated vapors expelled from the solution undergoing concentration to the liquor being distilled, and regulating the quantity and pressure of the vapors so delivered in accordance with the temperature and pressure of the liquor being distilled.

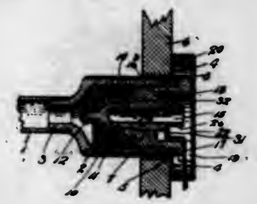
5. A method of treating so-called acetate liquor to obtain wood alcohol having a determined strength and concentrated calcium acetate solution, which consists in supplying such liquor at a regulated constant rate, to a body of the liquor undergoing distillation, removing vapors of distillation from such body, condensing such vapors, returning a part of the condensate to the liquor being distilled, removing oils from the liquor continuously during distillation, simultaneously heating a body of calcium acetate solution, delivering a regulated continuous quantity of dilute calcium acetate solution from the body being distilled to that being concentrated, continuously delivering concentrated calcium acetate solution from the latter body, delivering heated vapors from the latter body to the first-named body, and automatically regulating the amount and pressure of the vapors so delivered.

[Claims 6 to 16 not printed in the Gazette.]

1,192,988. GAS-FIXTURE. GLENN R. CHAMBERLAIN and ALBERT G. SCHROEDER, Grand Rapids, Mich. Filed Mar. 25, 1915. Serial No. 17,002. (Cl. 137—30.)

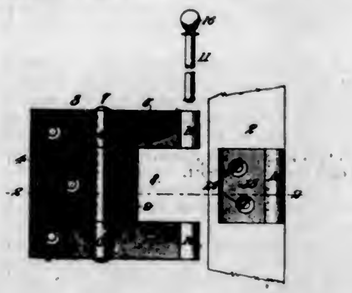
1. A gas fixture comprising a plug having an opening therethrough, a rotary member located in the opening, associated locking elements on the plug and rotary member, respectively, adapted in one position of said rotary member to lock it against rotation, and a coupling detachably connected to the rotary member engaging against the locking element carried thereby and forcing it to inoperative position, substantially as described.

2. A gas fixture comprising a plug having an opening therethrough, a rotary member located in the opening, a pin projecting from the plug toward the rotary member, and a spring attached to the rotary member and movable therewith riding adjacent its end against the pin as the member is rotated, whereby on rotation of the member to one position the end of the spring passes by the pin and prevents the return of the rotary member, substantially as described.



3. In a gas fixture, a housing, a plug having a longitudinal opening detachably connected with and inserted in the housing, means to connect the housing with a gas pipe, a member rotatively mounted in the opening in the plug, means to prevent the flow of gas from the pipe through the member in one position thereof, means comprising associated locking elements carried by the plug and member respectively for locking the member against rotation with the flow of gas stopped through said member, a conduit tube, and means for attaching said tube to the rotary member and simultaneously unlocking it for rotation.

1,192,989. DETACHABLE HINGE. WALTER C. CLIFFORD, San Francisco, Cal. Filed Jan. 19, 1916. Serial No. 72,938. (Cl. 16—107.)

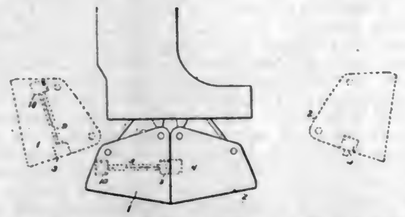


1. A detachable hinge comprising a pair of hingedly connected leaf sections, one of said leaves having a pocket formed therein to receive a removable leaf and the other leaf being adapted to be secured to a support, means for securing the removable leaf to a member to be supported, and means for securing the removable leaf in the pocket of the first named leaf.

2. A detachable hinge comprising a pair of hingedly connected leaf sections, one of said leaves having its central portion cut away as described to form an inner beveled edge and pocket for the reception of a removable leaf section, a beveled edge on one side of the removable leaf adapted to interlock with the first named beveled edge, a hinge on the opposite side of the removable leaf, a pair of alined hinge members on the first named leaf with which the removable leaf hinge is adapted to register, and a pintle adapted to be inserted through the said alined hinge members to secure the removable leaf, or adapted to be removed to release the removable leaf.

3. The combination with a hinge having one leaf cut out to form a pocket therein, of a removable leaf insertible in said pocket and adapted to assume a position where the top and bottom surfaces of the leaves lie parallel and means for securing the insertible leaf against removal, said means comprising a removable pintle adapted to be inserted through one end of the cut out leaf and the insertible leaf.

1,192,990. APPARATUS FOR SAMPLING ORES. FREDRICK O. COLLAR, Ashtabula, and HERBERT E. WETHERBEE, Cleveland, Ohio, assignors of one-half to Benedict Crowell and Charles B. Murray, doing business under the firm-name of Crowell & Murray, Cleveland, Ohio. Filed Oct. 30, 1915. Serial No. 58,936. (Cl. 83—15.)



1. In an apparatus for sampling ore, the combination of a bucket composed of a plurality of jaws, a container carried by one jaw and a plunger carried by another jaw and adapted to force ore into the container each time the jaws of the bucket are closed.

2. In an apparatus for sampling ore, the combination of a bucket composed of two jaws, a container detachably carried by one jaw and plunger carried by the other jaw and adapted to force ore into the container each time the bucket is filled.

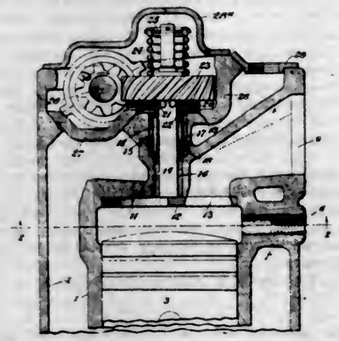
3. In an apparatus for sampling ore, the combination of a bucket having two jaws, a die secured to one jaw, a plunger secured to the other jaw and adapted to enter the die each time the bucket is filled, and a container connected with the die so as to receive the ore forced into the latter by the plunger.

4. In an apparatus for sampling ore, the combination of a bucket having two jaws, a die secured to one jaw, a plunger secured to the other jaw and a container removably secured to the die and forming a continuation thereof.

5. In an apparatus for sampling ore, the combination of a bucket having two jaws, a die secured to one jaw, a plunger secured to the other jaw and adapted to enter the die each time the bucket is filled, and a tubular container supported at one end by the die and detachably secured at its other end to a support.

[Claims 6 to 9 not printed in the Gazette.]

1,192,991. INTERNAL-COMBUSTION ENGINE. COVIL COPELAND, Hiawatha, Kans. Filed July 26, 1915. Serial No. 41,882. (Cl. 123—80.)



1. An internal combustion engine comprising a cylinder having a tubular extension formed integral with the head thereof, inlet and exhaust passages entering the cylinder, a piston operatively mounted in said cylinder, and a crank shaft driven by the piston, in combination with a disk valve located within the cylinder and adapted to seat against the inner wall of the head thereof, a stem integrally united with said valve and extending through said tubular extension, roller bearings mounted in said tubular extension contacting with said stem and adapted to maintain the stem in axial alinement, a spiral gear connected to said stem adapted to move longitudinally thereof, an expansion spring adapted to actuate said stem outwardly and thereby hold said disk valve to its seat, and driving mechanism entrained with said spiral gear and actuated by the crank shaft of the engine whereby said disk valve is operated, substantially as specified.

2. An internal combustion engine comprising a cylinder having inlet and exhaust passages at one end thereof, a piston operative within the cylinder and a crank shaft driven by the piston, in combination with a disk valve within the cylinder seated against the end thereof for controlling the inlet and exhaust passages, an extension on the head of the cylinder, a stem rigid with the valve and extending through said extension, a bushing in said extension constituting a journal for said stem, roller bearings mounted in said extension outwardly from the bushing and adapted to maintain the stem in proper position, a spiral gear slidable longitudinally on the stem, a spring encircling and actuating the stem outwardly and the spiral gear inwardly and arranged to retain the valve against the end of the cylinder, a shaft journaled in bearings supported by the engine casing, a spiral gear on said shaft meshing with the gear on the valve stem, and a chamber inclosing said gears and adapted to contain a lubricant therefor.

3. An internal combustion engine comprising a cylinder provided with inlet and exhaust passages through one end thereof, a piston arranged to operate within the cylinder, a crank shaft driven by the piston, a disk valve within the cylinder seated against one end thereof for controlling the inlet and exhaust passages, an extension from the end of the cylinder, a bushing in said extension, a stem rigid with the valve journaled in said bushing, roller bearings for said stem mounted in said extension outwardly from said bushing, a spiral gear mounted on said stem, antifriction elements between said gear and the end of the extension, a spring mounted above the gear and actuating the stem outwardly to hold the valve against the end of the cylinder and actuating the gear inwardly, a shaft journaled in bearings supported by the engine casing, a spiral gear on said shaft meshing with the gear on the stem, a crank shaft driven by the piston, connections for driving the other shaft from the crank shaft, and a lubricant chamber inclosing said gears and said spring.

4. An internal combustion engine comprising a cylinder, a piston operatively mounted in said cylinder, inlet and exhaust passages for said cylinder, in combination with a disk valve mounted within the cylinder and adapted to seat against the head of the cylinder, a rigid bushing mounted in the head of the cylinder, a stem attached to said valve and mounted in said bushing, roller bearings for maintaining said stem in axial alinement mounted above said bushing, resilient means for actuating said stem outwardly and thereby holding said valve on its seat, means for driving said stem, and a case for inclosing said driving mechanism, substantially as specified.

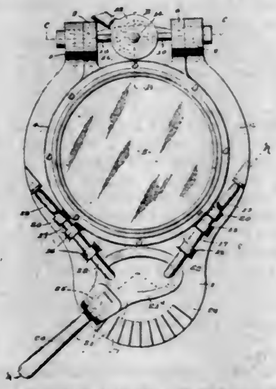
1,192,992. AIR-PORT. ARTHUR J. COUGHTRY, Quincy, Mass. Filed Nov. 15, 1913. Serial No. 801,302. (Cl. 83—15.)

1. An air port comprising a sill, a light frame hinged to the sill, and means for clamping the light frame toward the sill comprising a plurality of clamping elements movable relatively to each other, and an operating member common to the clamping elements to operate the same simultaneously, substantially as and for the purpose described.

2. An air port comprising a sill, a light frame hinged to the sill, and means for clamping the light frame toward the sill comprising a pair of clamping elements, and an operating member common to both clamping elements to operate the same simultaneously, said operating element being movable about a shifting axis and being disconnected from the sill, substantially as and for the purpose specified.

3. An air port comprising a sill, a light frame hinged to the sill, and means for clamping the frame toward the

sill including members carried by the sill and coacting with the frame, said members comprising sliding bolts converging toward each other, and an operating member common to both the sliding bolts and coacting with the contiguous ends of the same, substantially as and for the purpose set forth.

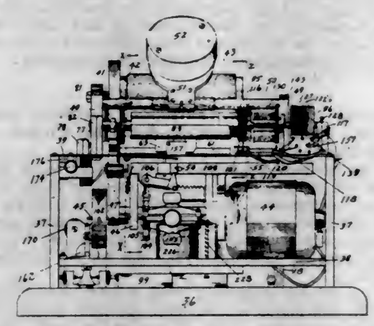


4. An air port comprising a sill, a light frame hinged to the sill, and means for clamping the frame toward the sill including members carried by the sill and coacting with the frame, said members comprising sliding bolts converging toward each other, and an operating member common to both the sliding bolts and including a double cam coacting with the converging ends of the bolts and slidably engaging the same, substantially as and for the purpose described.

5. An air port comprising a sill and a light frame hinged to the sill, and means for clamping the frame toward the sill including members comprising sliding bolts carried by the sill and having means coacting with the frame, the bolts converging toward each other, and a clamping lever having sliding connections with the converging ends of both bolts and fulcruming at the points of its sliding engagement with the bolts and movable about a shifting axis located between its fulcrum points, substantially as and for the purpose specified.

[Claims 6 to 18 not printed in the Gazette.]

1,192,993. AUTOMATIC TELEPHONE AND RESPONDING APPARATUS. EDWARD J. CRESSEY, Wichita, Kans. Filed Mar. 11, 1915. Serial No. 13,746. (Cl. 179—6.)



1. A combined telephone and phonographic sound transmitting apparatus comprising a telephone, a telephone circuit, a phonograph and a phonographic record, a telephonic transmitter and reproducer wired to the telephone circuit, said reproducer having a reproducing pin in contact with said record, a motor and means operated by the closing of the signal circuit in the telephone circuit for starting the motor, said motor operating means for imparting movement to the phonograph, and to cause said reproducing pin to travel a plurality of times over a predetermined portion of said record whereby a plurality of like phonographic responses are transmitted through the telephone talking circuit from the phonographic reproducer during the operation of said motor.

2. A combined telephone and phonographic sound transmitting apparatus comprising a telephone, a telephone circuit, a phonograph and a phonographic record, a telephonic transmitter and reproducer wired to the telephone circuit, said reproducer having a reproducing pin in contact with said record, a motor and means operated by the closing of the signal circuit in the telephone circuit for starting the motor, said motor operating means for imparting movement to the phonograph and to cause said reproducing pin to travel a plurality of times over a predetermined portion of said record whereby a plurality of like phonographic responses are transmitted through the telephone talking circuit from the phonographic reproducer during the operation of said motor, and means for stopping said motor.

3. In a combined phonograph instrument and telephone, a signal circuit and a contact, a circuit closer and an electromagnet in said signal circuit, an independent circuit, an electromagnet, a latch attached to an armature on said electromagnet in said independent circuit, revolving contact means driven by motor mechanism for closing said independent circuit, a motor and a motor circuit, said motor actuating the phonograph, said motor circuit being closed by the closing of the signal circuit, and means whereby said armature is held closed by said latch on the armature of the electromagnet in the independent circuit, the closing of said independent circuit by said revolving contact means energizing said magnet to release the latch and trip the motor circuit.

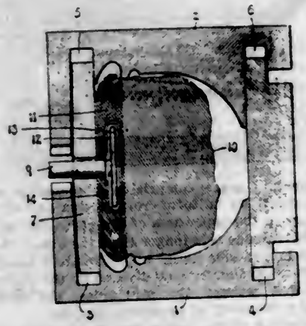
4. A combined telephone and phonographic sound transmitting apparatus comprising a telephone, a telephone circuit, a phonograph and a phonographic record, a telephonic transmitter wired to the telephone circuit, said transmitter having a reproducing pin in contact with said record, an electric motor and a motor circuit and means operated by the closing of the signal circuit in the telephone circuit for closing the motor circuit, said motor operating means for imparting movement to the phonograph, and means whereby a plurality of like phonographic responses are transmitted through the telephone talking circuit from the phonographic transmitter during the closure of said motor circuit.

5. A combined telephone and phonographic sound transmitting apparatus comprising a telephone, a telephone circuit, a phonograph and phonographic record, a telephone transmitter wired to the telephone circuit, said transmitter having a reproducing pin in contact with said record, an independent electric circuit and revoluble contact means in said circuit, an electric motor and a motor circuit and means operated by the closing of the signal circuit in the telephone circuit for closing the motor circuit, said motor operating means for imparting movement to the phonograph and for operating the revoluble contact means to close the independent circuit, and means whereby a plurality of like phonographic responses are transmitted through the telephone talking circuit from the phonographic transmitter during the closure of said motor circuit, the closure of said independent circuit by means of the revolving contact operating to trip said motor circuit.

[Claims 6 to 28 not printed in the Gazette.]

1,192,994. ART OF AND MOLD FOR MAKING RUBBER TIRES. MARK A. DEES, St. Louis, Mo., assignor to American Tire Company, St. Louis, Mo., a Corporation. Filed Dec. 23, 1912. Serial No. 738,211. (Cl. 154—12.)

1. The herein described improvement in the art of making tires, which consists in roughly forming an annulus of raw rubber around a suitable annular foundation, placing a deflated annular tube within an envelop having overlapping portions capable of movement on each other when the tube is being inflated, confining said annular tube and envelop within said structure, between said annulus of raw rubber and said foundation to permit the circulation of fluid under pressure in an annular course throughout the circle of the uncured tire structure, introducing fluid under pressure into the tube to give the desired shape to the tire structure, and finally curing the raw rubber.



2. The herein described improvement in the art of making tires, which consists in roughly forming an annulus of raw rubber around a suitable foundation, confining within said structure, between said annulus of raw rubber and said foundation a deflated expansible tube inclosed in an envelop having overlapping portions adapted to move toward the opposite sides of the tire structure when the tube is being inflated, introducing fluid under pressure into said expansible tube to give the desired shape to the tire structure, and finally curing said raw rubber.

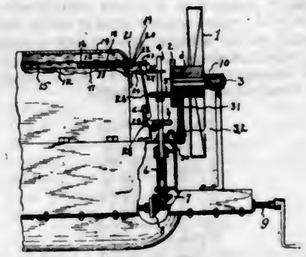
3. The herein described improvement in the art of making tires, which consists in roughly forming an annulus of raw rubber around a suitable annular foundation, confining within said structure, between said annulus of raw rubber and said foundation a deflated expansible tube inclosed in a fabric envelop having overlapping marginal portions located between said tube and the outer circle of the raw tire, the overlapping portions of said envelop being free to move toward the opposite sides of the tire structure when the tube is being inflated, introducing fluid under pressure into said expansible tube to give the desired shape to the tire structure, and finally curing the raw rubber.

4. The herein described improvement in the art of making tires, which consists in forming an annular inner foundation of layers of fabric, roughly laying an annulus of raw rubber around said structure, between said annulus of raw rubber and said foundation, confining a flattened annular tube within said foundation, placing all of said elements in a suitable mold, introducing fluid under pressure into said flattened annular tube to expand the latter, to give the desired shape to the tire structure, and finally curing said raw rubber.

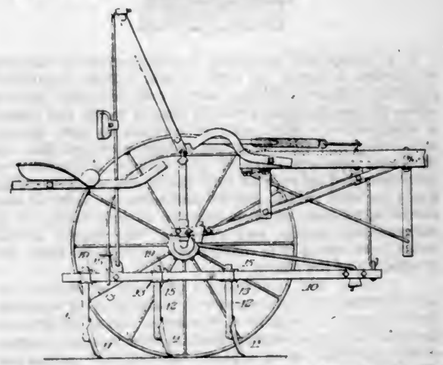
5. A mold of the character described comprising a pair of opposing mold sections each having annular grooves in its opposing face adjacent the inner and outer margins of the mold section, and head rings fitting in the opposing grooves of the sections spanning the gaps between the sections, the said head rings having sliding engagement with faces of the mold sections parallel with the side faces of the rings, the said mold being provided with four tire receiving walls, two of which are formed by the opposing mold sections, the other two tire receiving walls being formed by said head rings.

1,192,995. SPEED-REGULATOR FOR AUTOMOBILE-FANS. CHARLES J. DE LAY, Omaha, Nebr. Filed Jan. 6, 1915. Serial No. 809. (Cl. 123—178.)

In combination with the engine shaft and water jacket of the engine, a fan arranged for rotation and provided axially with a disk, a shaft disposed at right angles to the axis of the fan and provided with a second disk normally in engagement with the first named disk, a sleeve rotatable by the engine shaft and splined on the vertical shaft, a rock lever in engagement with the vertical shaft for moving the second disk radially of the first named disk by its swinging movements, a tubular receptacle in the water jacket, a piston within the receptacle, an expansive element in the receptacle for moving the piston in an opposite direction, and a second rock lever movable by the piston for causing swinging movements of the first named rock lever.



1,192,996. CLAMPING DEVICE. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed Apr. 6, 1914. Serial No. 829,845. (Cl. 97—11.)



1. A clamping device for a cultivating member capable of permitting a two-fold adjustment thereof, having a beveled outer corner, a bolt having a wedge shaped portion lying adjacent to said beveled corner, with its oblique side turned outwardly, for adjustably locking the parts in fixed position on a support.

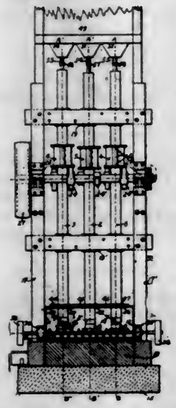
2. A clamping device for a cultivator member capable of permitting a two-fold movement thereof having a beveled outer corner and a beveled inner wall, and means associated with said clamping device for locking said member in adjusted position and adapted to coact with said beveled inner wall.

3. In a cultivator, a beam, a shovel shank, a clamp surrounding said beam and shank and capable of permitting a two-fold movement of said shank, said clamp being provided with a beveled outer corner, and a wedge-shaped bolt interposed between said beam and clamp adjacent to the beveled outer corner thereof for locking said shank in adjusted position.

1,192,997. STAMP-MILL. HENRY L. DOHERTY, New York, N. Y. Filed Jan. 17, 1911. Serial No. 603,084. (Cl. 83—57.)

1. A stamp mill comprising in combination, a plurality of stamps, a tappet on each of said stamps, means for simultaneously applying balanced, substantially vertical

lifting stresses and balanced turning stresses at diametrically opposite points of said tappets to lift and impart a comparatively high speed of rotation to said stamps, said lifting and turning means comprising in combination two directly geared coöperating cam shafts, a plurality of cams mounted on each of said cam shafts, and staggered relative to each other, a pair of said cams, one cam on each of said shafts, being adapted upon rotation of said shafts to simultaneously engage and disengage the tappet of the stamp with which it is coöperating on opposite sides longitudinally of the shafts.



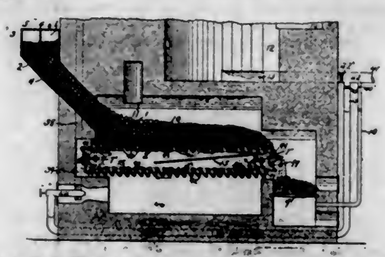
2. A stamp mill including in combination a plurality of stamps, a tappet on each of said stamps, means for applying balanced lifting stress and balanced turning stress at opposite points to said tappets to lift and impart a comparatively high speed of rotation to said stamps, said lifting and turning means including coöperating cam shafts on opposite sides of said stamps, a plurality of cams mounted on each of said shafts and staggered relatively on said shafts, one of said cams on each of said shafts being adapted upon rotation of said shafts to simultaneously engage and disengage the tappet of the stamp with which it is coöperating on opposite sides longitudinally of the shafts.

3. A stamp mill comprising a plurality of stamps, balanced lifting and turning means comprising in combination a tappet on each of said stamps, and a set of cams arranged to engage each of said tappets, two longitudinal shafts, each located on opposite sides of said stamps and each carrying a cam of each set for each tappet, whereby the cams of each set will simultaneously strike the tappet at points outside the longitudinal center thereof, and means for simultaneously revolving the shafts.

1,192,998. APPARATUS FOR BURNING CARBONACEOUS MATERIAL. HENRY L. DOHERTY, New York, N. Y. Filed Jan. 17, 1911. Serial No. 603,086. (Cl. 110—40.)

1. A traveling grate comprising a plurality of grate-bars having an inverted trough-shape on the upper run of the grate, the said grate bars each having one side longer than the other and having a plurality of apertures in the said longer side for the passage of air therethrough, and means for joining the short side of each grate-bar to the long side of an adjacent bar to form an endless train, the junctures between said grate-bars being substantially ash-tight.

2. A traveling grate comprising a plurality of grate-bars of substantially uniform cross-section and having an inverted trough-shape on the upper run of the grate, the said bars each having one side longer than the other and having a plurality of apertures in the said longer side for the passage of air therethrough, said apertures being inclined downward from the interior of said grate-bars, and means for joining the short side of each grate-bar to the long side of an adjacent grate-bar to form an endless train.



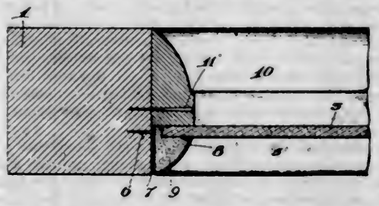
3. A traveling grate comprising a plurality of grate-bars of substantially uniform cross-section and of inverted trough shape on the upper arm of the grate, the said grate-bars each having one side longer than the other, the length of the said longer side being approximately equal to the length of the said shorter side divided by the cosine of the angle included between the said sides, the said longer side having a plurality of apertures therein.

4. A traveling grate comprising a plurality of grate-bars of substantially uniform cross-section and having an inverted trough-shape on the upper run of the grate, the said grate-bars each having one side longer than the other, the length of the said longer side being approximately equal to the length of the said shorter side divided by the cosine of the angle included between the said sides and having a plurality of apertures, and means for joining the short side of each grate-bar to the long side of an adjacent grate bar to form an endless train.

5. A traveling grate comprising a plurality of grate-bars having an inverted trough-shape when on the upper run of the grate, the said grate bars each having one side longer than the other, the length of the said longer side being approximately equal to the length of the said shorter side divided by the cosine of the angle included between the said sides and having a plurality of inclined apertures for the passage of air therethrough, said apertures leading from the interior of said grate-bars in a direction away from the vertex of said angle, and means for joining the short side of each grate-bar to the long side of an adjacent grate-bar to form an endless train.

[Claims 6 to 25 not printed in the Gazette.]

1,192,999. SASH. DANIEL J. DUNBAR, Philadelphia, Pa. Filed Dec. 21, 1915. Serial No. 67,974. (Cl. 20—56.4.)

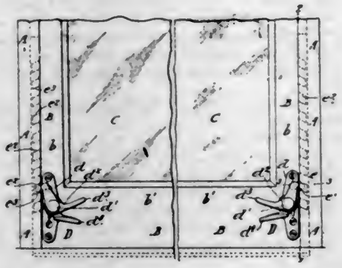


1. The combination with a main sash frame, of a glazing frame secured in the sash frame, said glazing frame comprising metal strips bent forming two leaves, one leaf of each strip relatively flat and coincident with a surface of the main sash frame and secured to said surface, the other leaf curved and shorter than the first-mentioned leaf, plastic material in the glazing frame, and a pane positioned against the edge of the curved leaves of the frame strips and embedded in the plastic material, substantially as described.

2. The combination with a main sash frame, of a glazing frame secured in the sash frame, said glazing frame comprising metal strips bent forming two leaves, one leaf of each strip relatively flat and coincident with a surface of the main sash frame and secured to said surface, the other leaf curved and shorter than the first-mentioned leaf, plastic material in the glazing frame, and a pane positioned against the edge of the curved leaves of the frame strips and embedded in the plastic material, said plastic material located between the edge of the pane and the first-mentioned leaves of the strips, substantially as described.

3. The combination with a main sash frame, of a glazing frame secured in the sash frame, said glazing frame comprising metal strips bent forming two leaves, one leaf of each strip relatively flat and coincident with a surface of the main sash frame and secured to said surface, the other leaf curved and shorter than the first-mentioned leaf, plastic material in the glazing frame, and a pane positioned against the edge of the curved leaves of the frame strips and embedded in the plastic material, and detachable glazing strips secured in the frame and holding the pane against the glazing frame, substantially as described.

1,193,000. SASH-HOLDING DEVICE. OLIVER M. EDWARDS, Syracuse, N. Y. Filed Sept. 21, 1909. Serial No. 518,830. (Cl. 16—18.)



1. The combination of a window frame, a sash movable in the frame, the frame being provided with holding means provided with sockets inclining relatively to the direction of movement of the sash; the walls of the sockets being formed with beveled faces, a lever mounted on the front face of the sash and having a head which is beveled and engages the beveled faces of the walls of the sockets, the beveled faces of the lever and the walls of the sockets being so relatively arranged that the sash is tightened in the frame and in its adjusted position in the frame during the movement of the head of the lever into the socket, and the pivot and the head of the lever being so arranged that the head moves in an arc extending away from the engaged beveled face of the corresponding socket during the initial movement of the lever out of the socket, substantially as and for the purpose described.

2. In a car window and in combination, a window sash and a window frame having in one vertical edge a recess provided with a vertical wall disposed at an acute angle to the plane of the face of the sash, and a top wall disposed at an angle to a horizontal plane, and a retaining device carried by the sash having a beveled face for engaging said vertical wall of the recess, and another face for engaging said top wall, substantially as and for the purpose described.

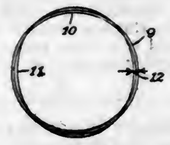
3. In a car window and in combination, a window sash and a window frame having at one vertical edge a recess provided with a vertical wall disposed at an acute angle to the plane of the face of the sash, and an undercut top wall, and a pivotally mounted retaining device carried by the sash having a beveled face for engaging said vertical wall of the recess, and another face for engaging said top wall, substantially as and for the purpose set forth.

4. In a car window and in combination, a window sash and a window frame having at one vertical edge a recess provided with a vertical wall disposed at an acute angle to the plane of the face of the sash, and a top wall disposed at an angle to a horizontal plane, and a retaining device pivotally mounted on the sash, and provided with a projecting portion, or nose, having a beveled surface for engaging said vertical wall of the recess and another surface for engaging said top wall, substantially as and for the purpose described.

5. In a car window and in combination, a window sash and a window frame, a strip secured at one edge of said frame, said strip being provided with a plurality of recesses, each having a vertical wall disposed at an acute angle to the plane of the face of the sash, and a top wall disposed at an angle to a horizontal plane, and a retaining device carried by the sash and having a beveled face for engaging said vertical walls of the recesses, and another surface for engaging said top walls, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,193,001. METHOD OF AND APPARATUS FOR ROLLING ROUNDS. VICTOR E. EDWARDS, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 23, 1914. Serial No. 873,463. (Cl. 80—36.)



1. A method of rolling "rounds", including the producing of an approximate "round" of slightly larger section than the required "round", rolling said approximate "round" to an ellipse whose minor axis is slightly less than the diameter of the required "round", and reducing said ellipse to the required "round".

2. A method of rolling "rounds", including the producing by a continuous rolling operation of an approximate "round" of slightly greater section than the required "round", continuously rolling said approximate "round" to an ellipse whose minor axis is slightly less than the diameter of the required "round" and producing from said ellipse by a continuous rolling operation a "round" of the required diameter.

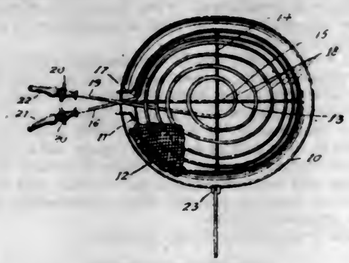
3. A method of rolling "rounds" of an accurate section, including the continuous feeding of an approximate "round" of a section slightly greater than the section required to a rolling mill pass adapted to change said approximate "round" to an ellipse whose minor axis is slightly less than the required diameter, and passing said ellipse continuously between rolls adapted to change said ellipse to a "round" of the required diameter.

4. A method of rolling metal bars to accurate circular section, including the production by a continuous rolling operation of an approximate "round" of slightly greater section than the final section desired, continuously rolling said approximate "round" to form an approximate ellipse having a minor axis slightly less than the required diameter, providing for a free overfeed loop of the metal between the above mentioned rolling operations, and continuously reducing said approximate ellipse to a "round" of the required diameter.

5. A three stand continuous mill for rolling "rounds", comprising a first stand to produce an approximate "round" slightly larger than the desired section, a second stand to reduce said approximate "round" to an approximate ellipse, and a third stand to reduce said approximate ellipse to the finished "round", the last two stands of rolls having their axes at right angles to each other and being in such juxtaposition as to prevent the approximate ellipse from turning down while between said stands and the first and second stands being separated to permit a free overfeed loop between them.

[Claims 6 and 7 not printed in the Gazette.]

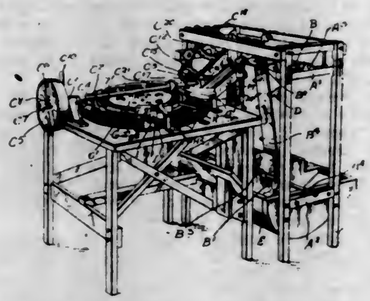
1,193,002. INHALER. JOHN E. ENGSTAD, Minneapolis, Minn. Filed Jan. 25, 1915. Serial No. 4,127. (Cl. 128—13.)



1. An inhaler comprising a base ring and means for securing a cloth mask thereto, and a frame for positioning said mask consisting of a series of coils of a tube, said tube being provided with connections for supplying a hot circulating medium as hot water so that the temperature within the inhaler is raised and heat for evaporating the anesthetic is applied directly to the mask.

2. An inhaler comprising a base ring, a coiled tube attached to said base ring and forming a mask frame, the convolutions of said tube being spaced from each other, and a cloth mask covering said tube and secured to said base.

1,193,003. UPPER-CUT APPLE-SLICING MACHINE. FRANK BERNARD FOLEY, Ingersoll, Ontario, Canada. Filed Apr. 3, 1914. Serial No. 829,266. (Cl. 146—11.)

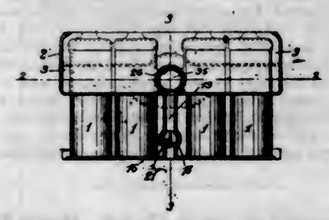


1. In an upper cut apple slicing machine, the combination with the table, of a circular rotary sweep arm supporting member supported above the table and having grooves extending across the periphery thereof, and a series of sweep arm rings supported by the table and superimposed one upon the other and having inwardly extending radial lugs fitting into the cross grooves of the rotary member.

2. In an upper cut apple slicing machine, the combination with the table, of a circular rotary sweep arm supporting member supported above the table and having grooves extending across the periphery therof, a series of sweep arm rings having inwardly extending radial lugs fitting into the grooves, and a bolt extending through the lugs to connect the rings together.

3. In an upper cut apple slicing machine, the combination with the table, a rotary member carried thereby and the sweep arms carried by the rotary member, of a substantially V-shaped horizontally set bracket having stepped arms, slicing knives secured at their outer ends upon the steps of the lower arm and supported at their free end by extending between the sweep arms, slicing knives secured at their outer ends upon the steps of the upper arm and extending over the sweep arms above the level thereof, a bracket supported by the table outside of the sweep arms and extending over the sweep arms, and a slotted member carried by the inner end of the bracket into the slots of which the inner free ends of the upper knives extend.

1,193,004. COMBUSTION-ENGINE. GUIDO FORNACA, Turin, Italy, assignor to F. I. A. T., a Corporation of New York. Filed Jan. 5, 1911. Serial No. 600,855. (Cl. 123—59.)



1. The combination with a multiple cylinder casting, of a mixing passage between two of said cylinders having its walls integral therewith, a fuel nozzle disposed within the outer walls of said casting and adjacent one end of said mixing passage, an auxiliary mixing chamber within said casting between said cylinders, and passages from said mixing chamber communicating with the interiors of said cylinders and within the outer walls of said casting.

2. The combination with a multiple cylinder casting, of a mixing passage between two of said cylinders having its walls integral with the casting, a fuel nozzle disposed adjacent one end of said mixing passage, an auxiliary mixing chamber at the end of said passage and between said cylinders, passages from said chamber communicating with the interiors of said cylinders and within the outer walls of said casting, a throttle valve in said mixing passage, and a water jacket surrounding said cylinders and said passages.

3. The combination in a multiple cylinder block casting of inlet passages to the cylinders formed in said casting, a common mixing chamber between two of said cylinders, a passage leading through said casting from the outside to said mixing chamber, a fuel nozzle in said passage, and means for supplying liquid fuel to said nozzle.

4. A multiple cylinder engine casting having an enlarged charge mixing chamber between two of the cylinders, inlet passages to the cylinders from said chamber, a vertical passage formed in the space between said cylinders and connected to said chamber, a fuel nozzle and air inlet at the lower end of said passage, and a throttle valve in said mixing chamber.

5. A multiple cylinder engine casting having an enlarged charge mixing chamber between two of the cylinders, inlet passages to the cylinders from said chamber, a vertical passage formed in the space between said cylinders and connected to said chamber, a fuel nozzle and air inlet at the lower end of said passage, a cylindrical throttle valve in said mixing chamber, and an auxiliary air inlet through said mixing chamber and throttle.

[Claims 6 to 14 not printed in the Gazette.]

1,193,005. PIPE-CLEANER. WILLIAM A. FRANK, Hackensack, N. J., assignor to National Water Main Cleaning Company, New York, N. Y., a Corporation of Maine. Filed Jan. 13, 1915. Serial No. 1,924. (Cl. 137—70.)

1. A pipe cleaning machine, embodying therein a shaft having a guide head, a series of scraper heads, and means for supporting said scraper heads from the guide head free of said shaft.

2. A pipe cleaning machine, embodying therein a shaft having a guide head, a series of scraper heads, and flexible means for supporting said scraper heads free of said shaft.

3. A pipe cleaning machine, comprising a shaft provided with a guide head, means carried by said guide head for guiding the device and rotating same in its passage through a pipe, scraper heads, and means secured to said guide head and by which said scraper heads are supported free of the shaft.

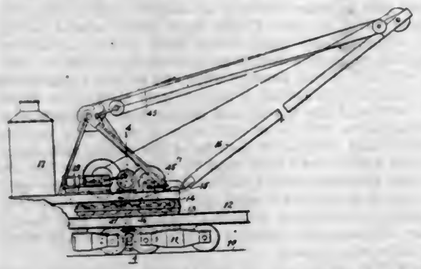


4. A pipe cleaning machine, comprising a shaft, a series of scraper heads having apertured walls through which said shaft extends, and means attached to said guide head for supporting said scraper heads independently of the shaft.

5. A pipe cleaning machine, comprising a shaft, a guide head thereon, a series of revoluble guides carried by said guide head, a series of scraper heads through which said shaft passes, and means connected to said guide head and to said scraper heads for supporting the latter independently of said shaft.

[Claims 6 to 19 not printed in the Gazette.]

1,193,006. BRAKE MECHANISM FOR LOCOMOTIVE-CRANES AND THE LIKE. ANTHONY FRONEK, Cleveland, Ohio, assignor to The McMyler Interstate Company, Bedford, Ohio, a Corporation of Ohio. Filed June 8, 1914. Serial No. 843,604. (Cl. 188—24.)



1. In a machine of the character described, a frame or body having wheels adapted to travel along a track, a turntable mounted on said frame or body for movement about a vertical axis, driving mechanism for propelling the machine along the track, a brake, including a brake member adapted to coöperate with a part of the driving mechanism and supported independently of the turntable, and means for operating the brake comprising a brake operating member supported by the turntable and mechanically connected to said first named brake member.

2. In a machine of the character described, a frame or body having track wheels adapted to travel along a track, a turntable mounted on said frame or body, mechanism for propelling the machine including a source of power carried by the turntable, a brake comprising a brake member adapted to coöperate with a part of the propelling mechanism and supported independently of the turntable, means for operating the brake, comprising a brake controlling member carried by the turntable and mechanically connected to said brake member.

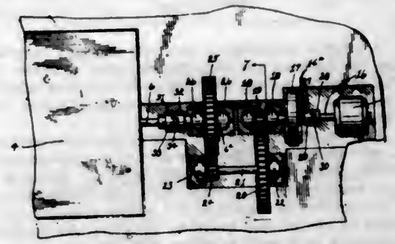
3. In a machine of the character described, a frame or body having wheels adapted to travel along a track, a turntable mounted on said frame or body for movement about a vertical axis, motive means mounted on said turntable for propelling the car, driving mechanism including a vertical shaft for connecting said motive means with track wheels of the machine, and a brake arranged concentrically with respect to said shaft and including a brake member supported independently of the turntable, and mechanism for operating the brake.

4. In a machine of the character described, a frame or body having track wheels, a turntable mounted on said frame or body for movement about a vertical axis, propelling mechanism for said machine mounted on the turntable, and a vertical driving shaft for transmitting power to the track wheels, a brake arranged adjacent to the turntable and comprising a rotary part concentric with respect to said shaft, and a band adapted to engage said part and supported independently of the turntable, and mechanism for operating the brake.

5. In a machine of the character described, a frame or body having track wheels, a turntable supported by said frame or body for movement about a vertical axis, power mechanism on the turntable for propelling the machine along a track, a shaft connected to said power mechanism and to the track wheels, a sleeve surrounding the shaft and supported by said frame or body, a brake for the machine comprising a part rotatable with said shaft and a brake band supported by said sleeve and means controllable from the turntable for shifting said brake band.

[Claims 6 to 8 not printed in the Gazette.]

1,193,007. MOLDING-MACHINE. JOHN W. FULLER, Columbus, Ohio, assignor to United States Cast Iron Pipe & Foundry Company, Burlington, N. J., a Corporation of New Jersey. Filed Mar. 8, 1916. Serial No. 82,907. (Cl. 22—45.)



1. A molding machine comprising a base structure, an anvil operatively mounted for vertical movement, a motor, and driving means connected with said motor for elevating said anvil and then letting it drop, said means including a lost motion drive connection.

2. A molding machine comprising a base structure, an anvil operatively mounted for vertical movement, a motor, and driving means connected with said motor for elevating said anvil and then letting it drop, said driving means being arranged so that at least a portion may be rotated at a greater rotative speed under the influence of the falling anvil than would be produced by said motor.

3. A molding machine comprising a base structure, an anvil operatively mounted for vertical movement, a motor, and driving means operatively connected between said anvil and said motor for elevating said anvil and then letting it drop, said driving means including a clutch whose parts are connected to have a play sufficient to allow the anvil a free fall.

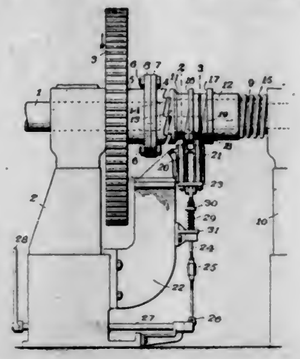
4. A molding machine comprising a base structure, an anvil operatively mounted for vertical movement, a motor, driving gearing between said motor and said anvil, elevating means for said anvil between said anvil and said gearing, and a lost motion drive connection between said elevating means and said gearings having a play sufficient to allow said anvil a free fall.

5. A molding machine comprising a base structure, an anvil operatively mounted for vertical movement, a motor, driving gearing between said motor and said anvil, elevating means for said anvil between said anvil and said gearing, a lost motion drive connection between said elevating means and said gearing having a play sufficient to allow said anvil a free fall, and a lost motion drive connection between said motor and said gearing having a play sufficient to allow the motor to gather speed before said

gearing is set in motion, said first named lost motion drive connection also allowing the motor and gearing to attain proper speed before the anvil is elevated.

[Claims 6 to 12 not printed in the Gazette.]

1,193,008. CLUTCH. LEON LESLIE FULLER, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 19, 1913. Serial No. 790,637. (Cl. 192—9.)



1. A clutch including a pair of engaging members, means for pressing the engaging members together, and means, operated by the rotation of one of said members for removing the pressure of said pressing means from the engaging means.

2. The combination, with a pair of rotatable members, of a pair of engaging members carried by said rotatable members, means for pressing said engaging members together, whereby the rotation of one of said rotatable members is imparted to the other, and means, operated by the rotation of one of said rotatable members, for removing the pressure from said engaging members.

3. A clutch including a pair of engaging members, means for pressing the engaging members together, means operated by the rotation of one of said members for removing the pressure of said means from the engaging members, and means for thereafter disengaging the engaging members.

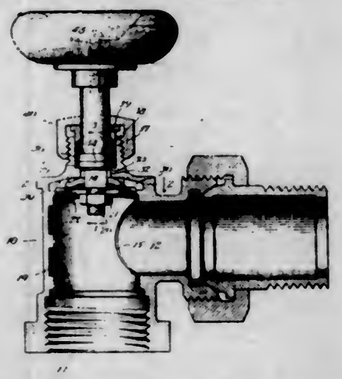
4. A clutch including a pair of engaging members, means for pressing the engaging members together, and means for removing the pressure of said means from the engaging members, by the rotation of one of said members, and for thereafter disengaging the engaging members.

5. In combination with a driving shaft and a driven shaft, a clutch including an engaging member fixed to one of said shafts, a second engaging member slidable longitudinally of the other of said shafts, means for pressing the slidable engaging member into engagement with the fixed engaging member, and means, operated by the rotation of one of said engaging members, for removing the pressure of said pressing means from the slidable engaging member.

[Claims 6 to 8 not printed in the Gazette.]

1,193,009. VALVE MECHANISM. HENRY GIBBS, Chicago, Ill., assignor to W. D. Allen Manufacturing Company, Chicago, Ill., a Corporation. Filed Apr. 25, 1913. Serial No. 763,668. (Cl. 137—7.)

1. Valve mechanism of the character described, comprising a casing formed with channels arranged at an angle to each other for the passage of fluid through the casing, the interior of the casing having a truly cylindrical chamber, an inverted cup-shaped valve formed from a single piece of thin sheet metal having a truly cylindrical body to engage and snugly fit within said casing, one side of said valve being formed with an opening to register with a channel of the casing and the top of said valve being formed with a hole, a valve stem passing through the hole in the top of the valve, a plate arranged at the top of said valve and within the upper part of the valve casing and being interlocked with said valve stem and said valve, means for preventing the downward pressure of said valve stem upon the top of said valve, and means for limiting the rotation of said valve stem.

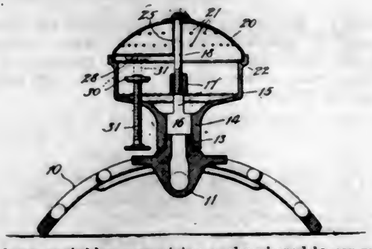


2. Valve mechanism of the character described comprising a casing formed with channels for the passage of liquid, said casing having a cylindrical chamber with which said passages connect, an inverted, cylindrical, cup-shaped valve formed of thin sheet metal located within and fitting snugly against the wall of said cylindrical chamber, said valve having an opening in its side to register with one of said passage ways and having a perforated top, said casing having a wide bottom opening to admit the valve and the top of said casing having a contracted opening above the top of said valve, a valve stem passing through said contracted opening of the casing and engaging the perforated top of said valve, and means for preventing the downward pressure of said valve stem upon the top of said valve comprising an annular part secured to said valve stem of greater diameter than and located above the contracted opening of the casing through which the valve stem passes.

3. Valve mechanism of the character described comprising a chambered casing provided with channels for the passage of fluid, an inverted cup-shaped valve arranged within said casing, said valve being open at its bottom and being provided with an opening in one side, the top of said valve being provided with a plurality of holes, a valve stem passing through one of the holes in the top of said valve, means within the valve for engaging the lower end of said valve stem to secure it to the valve, and a stop plate arranged between the top of said valve and the top of the chamber of said casing, said stop plate having a projection passing through one of the holes in said valve and having a laterally projecting arm, the interior of the upper part of said casing being provided with shoulders to be engaged by the arm of said stop plate.

4. Valve mechanism of the character described comprising a casing having channels for the passage of liquid therethrough and having a cylindrical chamber within the top of which are provided shoulders, an inverted cup-shaped valve within the chamber of the casing, said valve having an open bottom and having an opening in one side, the top of said valve being formed with a central polygonal opening and with openings at the side thereof, a stop plate interposed between the top of said valve and the top of the chamber of the valve casing, said stop plate being provided with a polygonal opening and with downwardly extending projections to pass through the openings in the top of the valve and with a laterally extending arm to engage the shoulders within the top of the valve casing, and a valve stem passing through the top of the valve casing and having a polygonal portion passing through said stop plate and through the central hole in the top of the valve, and means within the valve for securing the valve to the valve stem.

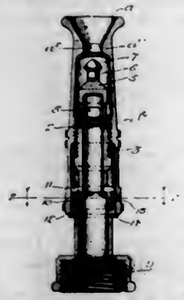
1,193,010. LAWN-SPRINKLER. HENRY GIBBS, Chicago, Ill., assignor to W. D. Allen Manufacturing Company, Chicago, Ill., a Corporation. Filed June 16, 1914. Serial No. 845,341. (Cl. 137—83.)



1. A lawn sprinkler comprising a chambered lower member open at its top and an upper separable member having in its upper wall numerous discharge holes and provided with a supplemental chamber extending beneath and communicating with a number of said holes, said supplemental chamber being provided with an admission port for the passage of water to the supplemental chamber, means for connecting said upper member to said lower member, and a valve for closing said admission port of the supplemental chamber, said valve having a stem passing through said lower member.

2. A lawn sprinkler comprising a chambered head formed of a lower member and an upper convex member detachably connected to said lower member, said convex upper member being provided with numerous perforations for the discharge of water over a substantially circular area, a diaphragm extending diametrically across and downward from the inner side of said upper convex member, a plate extending from said diaphragm to the outer portion of said member and forming therewith a supplemental chamber communicating with a plurality of said discharge perforations, said plate being provided with a port communicating with the main chamber of the sprinkler head, a valve within the main chamber of said sprinkler head for opening and closing said port and a screw-threaded stem for said valve passing through a threaded hole provided in said lower member, substantially as described.

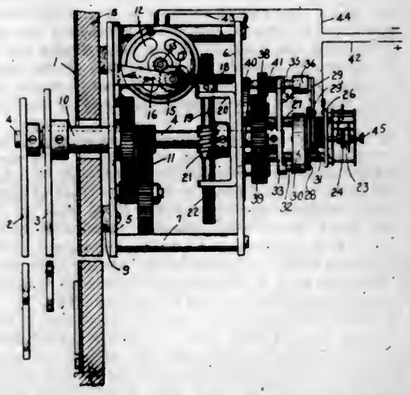
1,193,011. HOSE-NOZZLE. HENRY GIBBS, Chicago, Ill., assignor to W. D. Allen Manufacturing Company, Chicago, Ill., a Corporation. Filed May 24, 1915. Serial No. 30,224. (Cl. 137—82.)



1. A hose nozzle, comprising a hollow spindle having an integral enlarged coupling at its inner end and a valve at its outer end, a hollow body portion mounted on said stem to shift longitudinally thereof and having a cylindrical bore at its inner end and a discharge opening at its outer end with which said valve coöperates, said spindle having, at a distance from its inner end, annular spaced flanges fitting within the cylindrical bore of said body portion, and said body portion having an integral inturned flange at its extreme inner end serving to connect said body portion and said spindle while permitting the relative longitudinal movement thereof, and a packing placed between said annular flanges and engaging the face of the cylindrical bore of said body portion, substantially as described.

2. A two-piece hose nozzle of the character described comprising an outer body having interior screw threads at a distance from its inner end and an enlarged cylindrical bore at its inner end, an inner hollow spindle having an exteriorly threaded portion at a distance from its inner end for engaging the interior screw threads of said body, said spindle having an integral, enlarged coupling at its inner end and being provided between said coupling and its screw threaded portion with integral, annular, spaced flanges of a diameter at least equal to said exteriorly threaded portion and fitting within the enlarged cylindrical bore of said body, and a packing placed between said annular flanges, said body having an integral, inturned flange at its extreme inner end arranged to engage the lower flange of said spindle and limit the relative movement of said body and said spindle, substantially as described.

1,193,012. MOTOR-DRIVEN CLOCK. GEORGE A. GOODSON, New York, N. Y. Filed Aug. 27, 1913. Serial No. 786,834. (Cl. 58—4.)



1. In a clock mechanism, the combination of a rotating shaft, an arm carried thereby, an arbor in alinement with said shaft, a driving spring for said arbor connected with said arm, a contact member carried by said arm, a second contact member carried by said arbor and means for rotating said first-named contact member with respect to its supporting arm when that arm turns with its shaft.

2. In a clock mechanism, the combination of a rotating shaft, an arm carried thereby, a contact member mounted to turn in said arm, a pinion for rotating said contact member in said arm, a stationary rack engaging with said pinion, and means for periodically bringing a second contact member into engagement with said first-named contact member to establish electrical connection therewith.

3. In a clock mechanism, the combination of a rotating shaft, an arm carried thereby, an electrical contact element mounted to rotate in said arm, gearing for rotating said element and cam mechanism for shifting said element axially in said arm when said arm turns with said shaft.

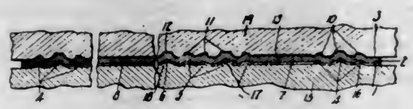
4. In a clock mechanism, the combination of a rotating shaft, an arm carried thereby, a shaft mounted to turn in said arm, a cylindrical contact element mounted on one end of said shaft, a pinion mounted on said shaft, a stationary rack engaging with said pinion to rotate said contact element and a cam engaging the end of said contact

supporting shaft to shift the contact element axially while it rotates.

5. The combination of time indicating mechanism, a rotary electro-motive device positively and permanently geared to drive the same, a time measuring device, a contact element moving with said time indicating mechanism, a second contact element turning in accordance with the measurement of time at said time measuring device, said contact elements being connected to establish the flow of current in said electro-motive device whenever the time indicating mechanism begins to lag behind the progressive movement of the time measuring device and means for progressively changing the wearing face of one of said contact elements.

[Claims 6 to 14 not printed in the Gazette.]

1,193,013. PROTECTIVE ELEMENT. FRANK HALL GRANT, St. Clair Heights, Mich. Filed Feb. 10, 1915. Serial No. 7,428. (Cl. 154—47.)



1. A composite protective element comprising a base plate consisting of a thin sheet of relatively hard metal of strength sufficient to withstand the stresses to which the element is to be subjected, a thin filler sheet of viscous material, and a very thin cover sheet of soft ductile metal, the cover sheet and the base plate being cemented throughout to the filler sheet and the cover sheet having the details of the design formed thereon, portions of the design on the cover sheet being located at different perpendicular distances from the corresponding portions of the base plate.

2. A composite protective element comprising a base plate consisting of a thin sheet of relatively hard metal of strength sufficient to withstand the stresses to which the element is to be subjected, a thin filler sheet of sticky bituminous material, and a very thin cover sheet of copper, the metal sheets being cemented throughout to the filler sheet and the cover sheet having the details of the design formed thereon, portions of the design on the cover sheet being located at different perpendicular distances from the corresponding portions of the base plate.

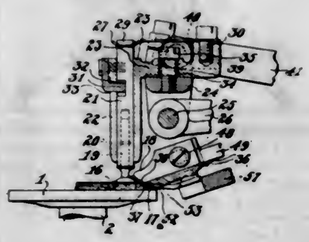
3. A composite protective element comprising a base plate consisting of a thin sheet of relatively hard metal of strength sufficient to withstand the stresses to which the element is to be subjected, a thin filler sheet of viscous material, and a very thin cover sheet of soft ductile metal, the metal sheets being cemented throughout to the filler sheet and the cover sheet having the details of the design formed thereon, portions of the design on the cover sheet being located at different perpendicular distances from the corresponding portions of the base plate, a portion of the base plate being raised from the general plane of the plate to correspond roughly to a pronounced portion of the design on the cover sheet.

4. A composite protective element comprising a base plate consisting of a thin sheet of relatively hard metal of strength sufficient to withstand the stresses to which the element is to be subjected, a thin filler sheet of sticky bituminous material, and a very thin cover sheet of copper, the metal sheets being cemented throughout to the filler sheet and the cover sheet having the details of the design formed thereon, portions of the design on the cover sheet being located at different perpendicular distances from the corresponding portions of the base plate, a portion of the base plate being raised from the general plane of the plate to correspond roughly to a pronounced portion of the design on the cover sheet.

5. A composite protective element comprising a base plate consisting of a thin sheet of relatively hard metal of strength sufficient to withstand the stresses to which the element is to be subjected, a thin filler sheet of viscous material, and a very thin cover sheet of soft ductile metal, the metal sheets being cemented throughout to the filler sheet by the material of the latter and the cover sheet having the details of the design formed thereon, portions of the design on the cover sheet being located at different perpendicular distances from the corresponding portions of the base plate.

[Claim 6 not printed in the Gazette.]

1,193,014. MACHINE FOR OPERATING ON INSOLES. JOHN B. HADAWAY, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 16, 1912. Serial No. 737,020. (Cl. 12—20.)



1. A machine for applying reinforcing fabric to insoles, having, in combination, a work support, a feed disk arranged to engage the marginal portion of the insole, a tool having a pressure surface comprising a thin curvilinear edge arranged to engage the vertex of the inside angle at the base of the lip, and means for vibrating said tool to pound and thus secure the fabric at this point, substantially as described.

2. A machine for applying reinforcing fabric to insoles, having, in combination, a work support, a feed disk arranged to engage the marginal portion of the insole, a vibratory tool arranged to engage and pound the vertex of the inside angle at the base of the lip, and a hammer for pounding the outside surface of the lip, substantially as described.

3. A machine for applying reinforcing fabric to insoles, having, in combination means for supporting and feeding the insole, and means for pounding both sides of the lip, as the insole is fed forward, substantially as described.

4. A machine for applying reinforcing fabric to insoles, having, in combination, tools at opposite sides of the lip, and means for vibrating the tools toward and from the lip to pound the opposite sides of the lip, substantially as described.

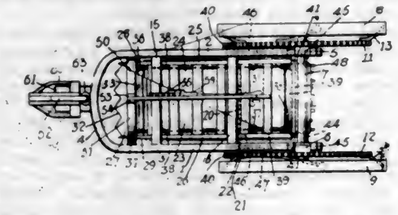
5. A machine for applying reinforcing fabric to insoles, having, in combination, tools at opposite sides of the lip for engaging the lip and coöperating to bend the lip inward, and means for reversely vibrating the tools toward and from the tip to pound the opposite sides of the lip simultaneously, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

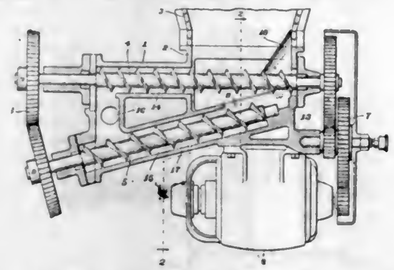
1,193,015. WEED-DESTROYING MACHINE. AUGUST HEMME, Dublin, Ontario, Canada. Filed Dec. 12, 1914. Serial No. 876,859. (Cl. 55—1.)

1. In a weed destroying machine, the combination with the main carriage, of an inclined scoop pivotally supported in a horizontal position by the main carriage and having inclined sides, and a serrated cutting device secured to the forward horizontal edge of the scoop and to the inclined forward edge of the side boards.

2. In a weed destroying machine, the combination with the main carriage, of an inclined scoop pivotally supported in a horizontal position by the main carriage and having inclined sides, a serrated cutting device secured to the forward horizontal edge of the scoop and to the inclined forward edges of the side boards, and a suitably driven endless conveyer traveling over the bottom of the scoop between the rear of the cutting portion and the rear end of the scoop.



1,193,016. ANTICLOGGING DEVICE FOR PULVERIZED-FUEL CONTROLLERS. ALBERT D. HEYL, New York, N. Y., assignor to Quigley Furnace and Foundry Company, a Corporation of Massachusetts. Filed Jan. 23, 1915. Serial No. 4,032. (Cl. 110—104.)

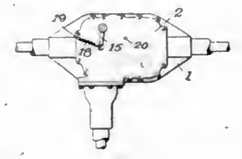


1. In an apparatus for feeding finely divided material the combination with a magazine having a forwardly and downwardly inclined bottom, a conduit extending horizontally from its front end, a feed screw conveyer extending across the magazine and out through said conduit, a second conduit extending from the front end of said magazine parallel to said bottom, terminating in a channel of U-shaped cross section in said bottom at the rear of the magazine, and a return screw conveyer in said inclined conduit and channel, of an inverted U-shaped shield adapted to be bolted to the inclined bottom of the magazine in contact with the rear wall thereof over the U-shaped channel and the ends of both conveyer screws.

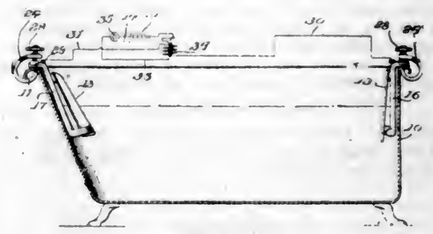
2. In an apparatus for feeding finely divided material the combination with a magazine having a forwardly and downwardly inclined bottom, a conduit extending horizontally from its front end, a feed screw conveyer extending across the magazine and out through said conduit, a second conduit extending from the front end of said magazine parallel to said bottom, terminating in a channel of U-shaped cross section in said bottom at the rear of the magazine, and a return screw conveyer in said second conduit and U-shaped channel, of an inverted U-shaped shield adapted to be bolted to the inclined bottom of the magazine in contact with the rear wall thereof over the U-shaped channel and the ends of both conveyer screws, said shield having its upper surface inclined in the same direction as the bottom of the magazine.

1,193,017. LOCKING DEVICE FOR DIFFERENTIAL MECHANISM. ARTHUR O. HIGINBOTHAM, Worcester, Mass., assignor to Charles B. Foster and Company, a Copartnership consisting of Charles B. Foster, Arthur O. Higinbotham, and Jerome R. George, Worcester, Mass. Filed Aug. 5, 1914. Serial No. 855,285. (Cl. 74—34.)

The combination with the differential gearing of a motor vehicle, of a casing therefor, means for locking said gearing, an operating member for said locking means on the exterior of said casing, and a spring attached at one end to said operating member and adapted to be attached at its other end to one or the other of a pair of fixed points on said casing whereby the movement of said locking means into operative or inoperative position is effected by the force of said spring when the condition of the gearing is favorable to such movement.



1,193,018. ELECTRIC BATH. MENTOR HOWARD, Fort Worth, Tex. Filed Feb. 25, 1915. Serial No. 10,536. (Cl. 174—87.)



1. An electric bath apparatus including electrodes in circuit with each other, each electrode having a plurality of discharge or receiving points, and shields for the electrodes provided with openings in alinement with the points.

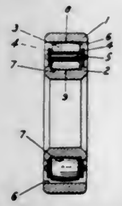
2. An electric bath apparatus including electrodes in circuit with each other, each electrode having a plurality of discharge or receiving points, shields for the electrodes provided with openings in alinement with the points, and supporting brackets for the electrodes.

3. An electric bath apparatus including a shield provided with an upwardly curved extension to engage over the edge of a tub, the lower portion of the shield being rearwardly and upwardly bent in spaced relation to the body and the shield being formed above its lower end with a series of openings, a contact plate secured between the spaced portions of the shield and insulated from the shield, means for supplying current to the plate, and a plurality of contact points carried by the plate and disposed one at the rear of each opening of the shield.

4. An electric bath apparatus including a shield provided with a curved extension to engage over the edge of a tub, the lower portion of the shield being formed with a series of openings, a contact plate carried by and insulated from the shield, and a plurality of contact points carried by the plate and disposed one at the rear of each opening of the shield.

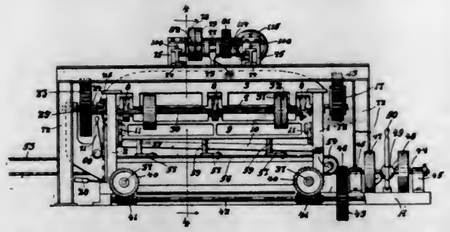
5. An electric bath apparatus including a shield provided at its upper end with a hooked terminal to engage over the edge of a tub, the lower portion of the shield being rearwardly and upwardly bent and the body of the shield being formed above its lower end with a series of openings, a contact plate positioned between the body of the shield and its upbent lower end, strips of insulating material positioned between the faces of the plate and the shield and its extension, fastening means passed through the plate and shield, and a plurality of contact points carried by the plate and disposed one in alinement with each opening of the shield.

1,193,019. ANTIFRICTION-BEARING. FREDERICK G. HUGHES, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Aug. 31, 1914. Serial No. 859,281. (Cl. 64—62.)



An antifriction bearing comprising opposed race-members and a single series of load-supporting rollers interposed therebetween, each of said rollers being substantially barrel-shaped and engaging the opposite race-members at points in a line transverse the axis of rotation of the bearing, one of said race-members having a race-groove surface tangential to said rollers transversely and extending toward the engaged rollers at each side of the points of tangency therewith, and the other of said race-members having a straight race surface transverse the bearing, said bearing being free from obstruction to relative sliding and swinging between said straight-surfaced race-member and the rollers to avoid cramping and facilitate assembly; substantially as described.

1,193,020. SHEET-METAL SHEAR. WILLIAM W. IRWIN, Canton, Ohio. Filed Sept. 7, 1915. Serial No. 49,309. (Cl. 164—52.)



1. A machine of the character described, comprising two parallel frames, a crank shaft journaled in each of said frames, a shear blade being mounted for vertical reciprocation in each of said frames, pitman rods connecting said shear blades to said crank shafts, said shear blades being parallel and means for operating said crank shafts in unison.

2. A machine of the character described, comprising a bed plate adapted to receive a pack of sheets, a pair of parallel shear blades adapted to be reciprocated in unison to trim two opposite edges of the pack simultaneously, a plunger adapted to clamp the pack firmly upon the bed plate when the shear blades are operated and means for adjusting said plunger horizontally between said shear blades.

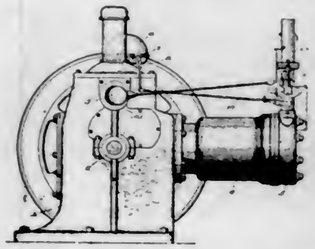
3. A machine of the character described, comprising a fixed frame and a movable frame, means for adjusting said movable frame with relation to said fixed frame, a shear blade carried within said fixed frame, a second shear blade carried in said movable frame, said shear blades being parallel and adapted to be reciprocated in unison, a plunger adapted to clamp the pack firmly upon the bed plates when the shear blades are operated, and means for adjusting said plunger horizontally between said shear blades.

4. A machine of the character described, comprising a pair of parallel shear blades adapted to be reciprocated in unison, means for adjusting one of said shear blades toward or away from the other shear blade, a bed plate adapted to receive a pack of sheets to be sheared, an evener adapted to locate the pack upon said bed plate and a plunger adapted to firmly clamp the pack upon said bed plate when said shear blades are operated.

5. A device of the character described, comprising a fixed frame, a bed plate carried upon said fixed frame, a shear blade adapted for vertical reciprocation within said fixed frame, a movable frame, a bed plate carried by said movable frame, a shear blade mounted for vertical reciprocation within said movable frame, means for reciprocating both of said shear blades in unison, stationary bearings located upon said machine, shafts located through said bearings, said shafts being provided with screw threaded extremities which engage screw threaded apertures in the movable frame and means for rotating said screw threaded shafts in unison.

[Claims 6 to 14 not printed in the Gazette.]

1,193,021. FUEL-FEED MECHANISM FOR INTERNAL-COMBUSTION ENGINES. EDWARD A. JOHNSTON, Chicago, Ill., assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Apr. 18, 1912, Serial No. 691,736. Renewed Apr. 7, 1913. Serial No. 759,574. (Cl. 123—100.)



1. A fuel feed mechanism for internal combustion engines having, in combination, a vertically arranged mixing chamber communicating with the atmosphere and with an engine cylinder, a rocking mixture throttling valve including a valve stem journaled in the walls of said mixing chamber, an arm secured to said stem and operative connections between said arm and the engine governor mechanism, a fuel feed pump carried by said mixing chamber and communicating with a source of liquid fuel supply and said chamber, said pump including a reciprocating piston, a piston lifting rod having one end connected with said piston, a primary swinging lever engaging with the opposite end of said rod in a lifting manner, said rod being yieldingly held in engagement with said lever by means of a spring mechanism, a secondary swinging lever adapted to engage with said primary lever in a manner to lift said rod, a spring operative to swing said secondary lever in a direction to lift said primary lever, means connected with a moving part of the engine and operative to positively move said secondary lever in an opposite direction, and a cam carried by said valve stem and operative to limit a swinging movement of said primary lever in one direction.

2. A fuel feed mechanism for internal combustion engines having, in combination, a mixing chamber communicating with the atmosphere and with an engine cylinder, a rocking mixture throttling valve including a valve stem journaled in the walls of said mixing chamber, an arm secured to said stem and operatively connected with the engine governor mechanism, a fuel feed pump carried by said mixing chamber and communicating therewith and with a source of liquid fuel supply, said pump including a reciprocating piston, means for imparting motion to said piston, said means including primary and secondary levers pivoted coaxially upon said mixing chamber, said secondary lever engaging with said primary lever in a manner to lift the latter, a piston lifting rod having one end stepped upon said primary lever and the opposite end thereof connected with said piston, a tension spring having one end connected with said rod and the opposite end thereof with said secondary lever, a tension spring having one end conected with a fixed part of the mechanism and the opposite end thereof with said secondary lever and operative to lift said lever, a bell crank lever pivotally mounted upon a fixed part of the mechanism and operatively connected with a moving part of the engine, said latter lever engaging with said secondary lever in a manner to depress the same, and a cam carried by said valve stem and operative to limit a swinging movement of said primary lever in one direction.

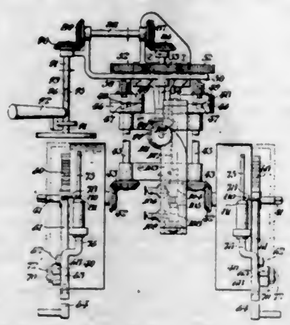
3. A fuel feed mechanism for internal combustion engines having, in combination, a mixing chamber communicating with the atmosphere and with an engine cylinder, a rocking mixture throttling valve including a valve stem journaled in the walls of said mixing chamber, an arm secured to said stem and operatively connected with the engine governor mechanism, a fuel feed pump communicating with a source of liquid fuel supply and with said mixing chamber, said pump including a reciprocating piston, means for imparting a variable length of stroke to said piston, said means including a cam carried by the stem of said rocking mixture throttling valve, a lever having one end pivotally connected with a fixed part of the mechanism, a bell crank lever journaled upon a fixed part of the mechanism and operatively connected with the engine governor mechanism and having one arm thereof in engagement with the opposite end of said first mentioned lever and operative to impart motion thereto in one direction only, and a spring mechanism operative to move said lever in an opposite direction, means for regulating the degree of angular movement of said lever, a third lever carried by said first mentioned lever and operatively connected with said pump piston, the degree of angular movement of said third lever being controlled by said cam.

4. In a internal combustion engine, the combination of a governor, a pump, a throttling valve, and single means for controlling said throttling valve and the length of stroke of said pump by said governor.

5. In an internal combustion engine, the combination of a governor, a pump, a throttling valve, and means for simultaneously controlling said throttling valve and the length of stroke of said pump by said governor.

[Claims 6 to 9 not printed in the Gazette.]

1,193,022. AUTOMATIC TRAIN-STOP MECHANISM. ROBERT J. KAUCH, Philadelphia, Pa. Filed Apr. 19, 1913. Serial No. 762,372. (Cl. 246—59.)



1. The combination with a motor vehicle having controlling means; of a spring motor, carried by said vehicle, operatively connected with said controlling means, and having a shaft; a detent device for said motor, including a ratchet wheel on said shaft and a pivoted pawl detent engaged therewith; releasing mechanism for said detent including a tappet lever connected therewith by a knuckle joint whereby said tapper lever may be moved idly in one direction without operating said detent but operates the latter when moved in the opposite direction; another tappet lever connected with said detent and having a knuckle joint arranged to operate in a direction opposite to the direction of operation of the first named knuckle joint; a spring pressed plunger arranged to hold said detent in inoperative position when released; and a trigger arranged to engage said spring pressed plunger in retracted, inoperative position; said trigger being arranged to be released by said detent when the latter is released; whereby said detent may be released by one or the other of said tappets in accordance with the direction of travel of said vehicle with respect to an obstacle adapted to encounter them.

2. The combination with a motor vehicle having controlling means; of a spring motor, carried by said vehicle, operatively connected with said controlling means, and having a shaft; a detent device for said motor, including a ratchet wheel on said shaft and a pivoted pawl detent engaged therewith; releasing mechanism for said detent including a tappet lever connected therewith by a knuckle joint whereby said tappet lever may be moved idly in one direction without operating said detent but operates the latter when moved in the opposite direction; another tappet lever connected with said detent and having a knuckle joint arranged to operate in a direction opposite to the direction of operation of the first named knuckle joint; a spring pressed plunger arranged to hold said detent in inoperative position when released; and a trigger arranged to engage said spring pressed plunger in retracted, inoperative position; said trigger being arranged to be released by said detent when the latter is released; whereby said detent may be released by one or the other of said tappets in accordance with the direction of travel of said vehicle with respect to an obstacle adapted to encounter them.

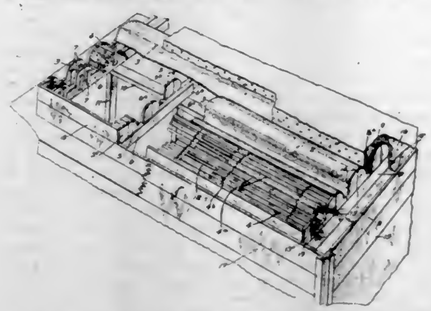
3. The combination with a motor vehicle having controlling means; of a spring motor, carried by said vehicle, operatively connected with said controlling means, and having a shaft; a detent device for said motor, including a ratchet wheel on said shaft and a pivoted pawl detent engaged therewith; releasing mechanism for said detent including a tappet lever connected therewith by a knuckle joint whereby said tappet lever may be moved idly in one direction without operating said detent but operates the latter when moved in the opposite direction; and another tappet lever connected with said detent and having a knuckle joint arranged to operate in a direction opposite to the direction of operation of the first named knuckle joint; whereby said detent may be released by one or the other of said tappets in accordance with the direction of travel of said vehicle with respect to an obstacle adapted to encounter them.

4. The combination with a motor vehicle having controlling means; of a spring motor, carried by said vehicle, operatively connected with said controlling means, and having a shaft; a detent device for said motor; releasing mechanism for said detent including a tappet lever connected therewith by a knuckle joint whereby said tappet lever may be moved idly in one direction without operating said detent but operates the latter when moved in the opposite direction; another tappet lever connected with said detent and having a knuckle joint arranged to operate in a direction opposite to the direction of operation of the first named knuckle joint; and a spring pressed plunger arranged to hold said detent in inoperative position when released; whereby said detent may be released

by one or the other of said tappets in accordance with the direction of travel of said vehicle with respect to an obstacle adapted to encounter them.

[Claims 6 to 9 not printed in the Gazette.]

1,193,023. FORM WORK FOR CONCRETE CONSTRUCTION. EDWARD O. KEATOR, Cincinnati, Ohio. Filed Mar. 6, 1916. Serial No. 82,344. (Cl. 25—131.5.)



1. In a temporary form work for concrete joist and floor slab construction the combination of a series of extensible stringers extending from side to side of the structure to be formed, forms mounted on the stringers in spaced relation to one another and adjustable to form floor slabs of varying widths and joists of varying thickness, flexible mats supported by the forms, and flexible sheets covering the mats and adapted to receive concrete.

2. In combination in a temporary form work for concrete joist and floor slab construction a series of forms, means for supporting the forms in spaced relation to one another to form floor slabs and joists between them, said forms being adjustable to form floor slabs of varying width and joists of varying width, flexible mats covering the forms and extending into the spaces between the forms, and sheets covering the mats adapted to be covered with concrete.

3. A temporary form work for concrete joist and floor slab construction comprising a series of forms, means for supporting the forms in spaced relation to one another, said forms consisting of adjustable members adapted to be collapsed or extended with relation to one another to increase or decrease the width of the space between adjacent forms and to increase or decrease the width of the forms, a series of flexible mats supported by the forms, and a series of flexible sheets covering the mats adapted to receive concrete thereon, the adjustability of the forms increasing and decreasing the width of the floor slabs and the thickness of the joists formed thereby.

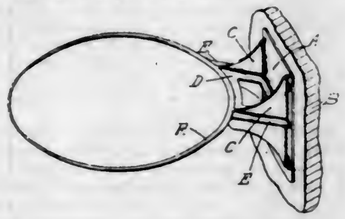
4. In a temporary form work for concrete joist and floor slab construction the combination of a series of forms spaced apart, a series of mats supported by the forms and occupying the spaces between them, sheets covering the mats and end forms abutting the ends of the mats and adapted to close the openings left by the ends of the mats at the points they cover the first mentioned forms.

5. In combination in a temporary form work for concrete joist and floor slab construction, a series of flexible mats, forms supporting the mats at intervals to form elevations and depressions therein, sheets covering the mats and contacting the elevated and depressed portions thereof, and end forms abutting the ends of the mats at the elevated portions thereof to close the openings formed thereby.

[Claim 6 not printed in the Gazette.]

1,193,024. BASKET-BALL GOAL. JOSEPH P. KENNEDY, Chicago, Ill. Filed May 19, 1916. Serial No. 98,590. (Cl. 46—59.)

1. A basket ball goal comprising a ring and means for attaching the same to a wall or other structure, the ring being relatively thin at the point remote from the place of attachment and gradually increasing in thickness toward such place of attachment.



2. A basket ball goal comprising a cast malleable iron ring and means for attaching the same to a wall or other structure, the ring being relatively thin at the point remote from the place of attachment and gradually increasing in thickness toward such place of attachment.

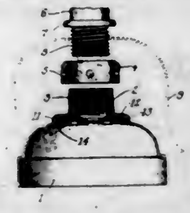
3. A basket ball goal consisting of a casting in the form of a ring and an attaching bracket integral with the ring, the ring having its greatest thickness at the place where it joins the bracket and gradually diminishing in thickness toward the point diametrically opposite thereto.

4. A basket ball goal consisting of a casting in the form of a ring substantially circular in cross section, and an attaching bracket integral with the ring, the ring having its greatest thickness at the place where it joins the bracket and gradually diminishing in thickness toward the point diametrically opposite thereto.

5. A basket ball goal comprising an attaching plate formed with webs projecting from one side thereof and a ring integral with said webs, the thickness of which is greatest at the place adjacent the webs and gradually diminishing toward a point diametrically opposite thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,193,025. ATTACHING DEVICE FOR LAMP-SOCKETS, &c. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 24, 1913, Serial No. 750,259. Renewed Dec. 24, 1915. Serial No. 68,580. (Cl. 173—362.)



1. A lamp socket cap having a circumferentially continuous threaded bushing for attachment to a cylindrical threaded support and means acting upon said bushing during its attachment to said support to tighten the former upon the latter.

2. A lamp socket cap having a circumferentially continuous threaded bushing for attachment to a threaded support and means acting to compress said bushing as it is threaded onto said support.

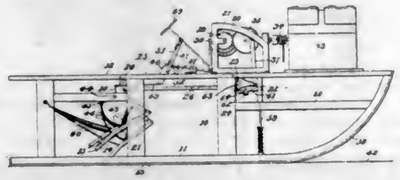
3. A lamp socket cap having a circumferentially continuous bushing for attachment to a support and a member engaging said bushing to compress the same upon its attachment to said support, the active face of one of said engaging elements being tapered.

4. A lamp socket cap having a threaded bushing to thread onto a support and means acting during the attachment of said bushing to indent and thereby tighten the same upon said support.

5. A casing cap having a threaded bushing to thread upon a support and a member acting upon attachment of said bushing to said support to effect contraction of a part of said bushing independently of the remainder thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,193,026. MOTOR-SLED. NYKOLA KOLOMYJCZUK, Iroquois Falls, Ontario, Canada. Filed Feb. 21, 1916. Serial No. 79,629. (Cl. 21—47.)



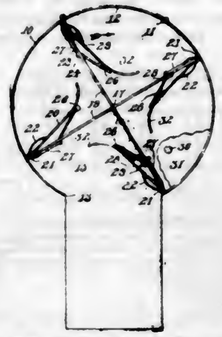
1. Sled propelling means comprising in combination with a sled having a top and runners, a rear driving head and a forward head shiftably mounted beneath the said top, links pivotally connecting the upper and lower ends of the said heads, an arm rigidly carried depending from the said driving head, a propelling leg pivotally suspending from the free end of the said arm, a ground engaging calk upon the free end of the said leg, a depressing direction-imparting spring attached to the said leg, a return spring for the said leg attached between the said leg and arm and oscillation-imparting means operatively connected to the said forward head.

2. Sled propelling means comprising in combination with a sled having a top and runners, a rear driving head and a forward head shiftably mounted beneath the said top, links pivotally connecting the upper and lower ends of the said heads, an arm rigidly carried depending from the said driving head, a propelling leg pivotally suspending from the free end of the said arm, a ground engaging calk upon the free end of the said leg, a depressing direction-imparting spring attached to the said leg, a return spring for the said leg attached between the said leg and arm, a gear frame mounted upon the said top above the said forward head, a stringer transversely carried by the said frame, a pair of companion gears journaled upon opposite sides of the said stringer, a pitman separately pivoted to the said gears and having its lower end operatively attached to the said forward head, a transmission shaft journaled in the said frame, a driving gear upon the said shaft, in constant mesh with the said companion gears, a transmission gear upon the said shaft, and driving means for the said transmission gear.

3. Sled propelling means comprising in combination with a sled having a top and runners, a rear driving head and a forward head shiftably mounted beneath the said top, links pivotally connecting the upper and lower ends of the said heads, an arm rigidly carried depending from the said driving head, a propelling leg pivotally suspending from the free end of the said arm, a ground engaging calk upon the free end of the said leg, a depressing direction-imparting spring attached to the said leg, a return spring for the said leg attached between the said leg and arm, a gear frame mounted upon the said top above the said forward head, a stringer transversely carried by the said frame, a pair of companion gears journaled upon opposite sides of the said stringer, a pitman separately pivoted to the said gears and having its power end operatively attached to the said forward head, a transmission shaft journaled in the said frame, a driving gear upon the said shaft, in constant mesh with the said companion gears, a transmission gear upon the said shaft, lever operated elevating means for the said leg, and a motor carried by the said top operatively connected to the said transmission gear.

4. A device of the class described comprising a sled having runners and a top, a gear frame upon the said top, stringers arranged transversely of the said frame, a transmission shaft journaled in the said frame, driving gears carried by the said shaft, propelling means for the said shaft, a pair of gears journaled at opposite sides of each of said stringers and provided for each of said driving gears in constant mesh therewith, oscillating forward heads positioned beneath said top, H-shaped pitmen connecting said heads and said pairs of gears, the said pitmen being arranged in staggered relations, driving heads, pivotal link connections between the top and bottom of the said driving and forward heads and spring controlled ground engaging propellers operatively attached to the said driving heads.

1,193,027. MILK-BOTTLE DISPENSER. PETRO KORUD, Cleveland, Ohio. Filed Dec. 17, 1915. Serial No. 67,388. (Cl. 232—41.)



1. A device of the class described, comprising a casing having oppositely-arranged article inlet and outlet openings in the sides thereof, a receiving shelf adjacent said outlet opening, an article transferring rotor including radial plates within the said casing, and automatically actuating article dispensing wings carried by the said rotor plates.

2. A device of the class described, comprising a cylindrical casing having inlet and outlet openings in the opposite sides thereof, a radially projecting shelf carried by the bottom of the said casing adjacent the said outlet opening thereof, a rotor including radial plates centrally trunnioned within the said casing, and automatically actuating article dispensing wings carried by the said rotor plates.

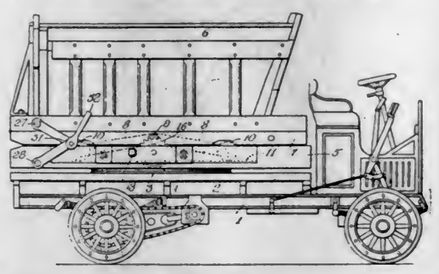
3. A device of the class described, comprising a cylindrical casing having inlet and outlet openings in the opposite sides thereof, a radially projecting shelf carried by the bottom of the said casing adjacent the said outlet opening thereof, a rotor centrally trunnioned within the said casing and having radially projecting plates extending adjacent the side wall of the casing, curved dispensing wings hinged to the outer edges of the said plates, and operating and return stop means for the said wings.

4. A device of the class described, comprising a cylindrical casing having inlet and outlet openings in the opposite sides thereof, a radially projecting shelf carried by the bottom of the said casing adjacent the said outlet opening thereof, a rotor centrally trunnioned within the said casing and having radially projecting plates extending adjacent the side wall of the casing, dispensing wings spring-hinged to the outer edges of the said plates and having curved article engaging free end portions, operating members for the said wings, and a stop post for the said operating members.

5. A device of the class described, comprising a cylindrical casing having inlet and outlet openings in the opposite sides thereof, a radially projecting shelf carried by the bottom of the said casing adjacent the said outlet opening thereof, a rotor centrally trunnioned within the said casing and having radially projecting plates extending adjacent the side wall of the casing, dispensing wings spring-hinged to the outer edges of the said plates and having curved article engaging free end portions, the up-

per edges of the said wings and plates being provided with alining notches, a Z-shaped operating member journaled to each of the said plates at the side thereof opposite to the adjacent dispensing wing, the said operating member having its upper arm positioned transversely of the said plate notch and the said member extending through the carrying plate and having its lower arm positioned upon the same side and in constant contact with the adjacent dispensing wing, and a fixed post depending from the top of the said casing and positioned within the path of movement of the said wing and plate notches and the said upper arm of the operating member during movement of the said rotor.

1,193,028. AUTOMOBILE COAL-TRUCK. GEORGE W. LALLY, Boston, Mass., assignor to Lally Commercial Body Company, a Corporation of Massachusetts. Filed Feb. 28, 1911. Serial No. 611,455. (Cl. 21—86.)



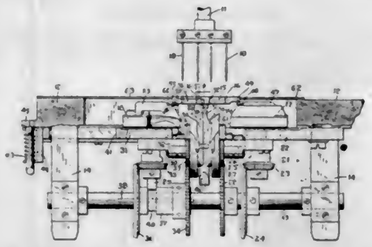
1. An apparatus of the kind described, comprising a body having a framework on a vehicle platform and normally arranged to rest over said framework for a substantial portion of its length, and means for lifting the body vertically free from said framework, consisting of a double lazy-tongs device flatwise and horizontally disposed and housed in said framework, and links connected to said lazy-tongs and extending up to a common pivotal connection with the body at an approximately central point thereof, said lazytongs being each operated by a rotatable horizontally arranged shaft positioned transversely of the vehicle.

2. An apparatus of the kind described, comprising a body having a framework mounted to turn on a vehicle platform, said body being normally arranged to have a bearing rest for substantially its entire length on said framework, and means for lifting the body vertically from said framework, said means consisting of a double lazy tongs device flatwise and horizontally disposed and housed in said framework and links connected to each of said lazy tongs and extending up to a common engagement with the body at an approximately central point thereof, said lazy tongs being operable by a transversely rotatable shaft.

3. An apparatus of the kind described, comprising a body having a framework on a vehicle platform and arranged to normally have a bearing rest over a substantial portion of its length on said framework, and means for lifting the body vertically from said framework consisting in a flatwise horizontally disposed double lazy tongs device housed in said framework, each lazy tongs being connected to parallel bars movable from and toward each other guided on said framework and links pivoted to said bars and extending up to a common pivotal engagement with the body at an approximately central portion thereof, both said lazy-tongs being operable by the rotation of the same shaft.

1,193,029. QUADRUPLE-NEEDLE SEWING-MACHINE. AXEL R. LARSON, Bridgeport, Conn. Filed Dec. 8, 1915. Serial No. 65,681. (Cl. 112—15.)

1. In a machine of the character described, in combination, four alined needles, two hooks rotating in the horizontal plane, two hooks rotating in the vertical plane and lying between the horizontal hooks and a siding bearing block by which one horizontal and one vertical hook are carried.



2. In combination, a horizontally rotating hook of the character described, a vertically rotating hook contiguous thereto, a second vertically rotating hook contiguous to the first, a horizontally rotating hook contiguous to the second vertically rotating hook and opposite to the first horizontally rotating hook, and means for moving the last mentioned horizontally and vertically rotating hooks out of operative position, to permit access to both vertically rotating hooks.

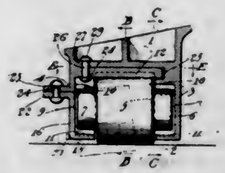
3. In a machine of the character described, in combination, two vertical and two horizontal hook-carrying shafts, bevel pinions on the vertical shafts, pinions on the horizontal shafts, a driving shaft, bevel gears thereon engaging the bevel pinions, gears thereon engaging the pinions, a sliding bearing block by which one vertical and one horizontal shaft are carried, and a longitudnally movable sleeve, splined on the driving shaft, by which one gear and one bevel gear are carried, said sleeve having a circumferential groove which is engaged by the corresponding vertical shaft, for the purpose specified.

4. In a machine of the character described, in combination, two horizontal and two vertical hook-carrying shafts, a driving shaft and co-acting driving elements on said shafts, a sliding bearing block in which one horizontal and one vertical shaft are journaled, two of the driving elements on the driving shaft being splined thereto and moving longitudinally with the bearing block, and means for retaining said block and the parts carried thereby in operative position.

5. In a machine of the character described, in combination, four needles, two hooks rotating in the horizontal plane and two hooks rotating in the vertical plane and lying between said first mentioned hooks.

[Claims 6 to 8 not printed in the Gazette.]

1,193,030. SIDE BEARING. ELMYR A. LAUGHLIN, Oregon, Ill. Filed Jan. 7, 1916. Serial No. 70,730. (Cl. 64—64.)



1. A side bearing, comprising a trunnioned roller, a housing having an opening through which said roller protrudes, and runways formed in said housing for the trunnions of said roller, one of said runways having a removable section adapted to permit said roller to be shifted axially out of said other runway and then be withdrawn through said opening.

2. A side bearing, comprising a trunnioned roller, a housing having an opening through which said roller protrudes, and runways formed in said housing for the trunnions of said roller, one of said runways having a removable section adapted to permit said roller to be shifted axially out of said other runway and then be withdrawn through said opening and the other said runway being formed integrally with said housing.

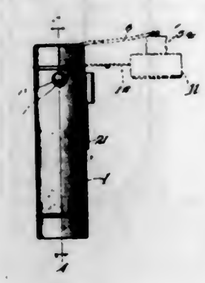
3. A side bearing, comprising a roller having trunnions, a housing for said roller having runways for said trunnions and having an opening through which said roller protrudes, said opening being shaped to permit said roller to be shifted axially out of engagement with one of said runways and then be withdrawn through said opening, and removable means for preventing such shifting of said roller.

4. A side bearing, comprising a roller having trunnions, a housing comprising side walls spaced apart and having inwardly directed flanges serving as runways for said trunnions, one of said side walls being cut away to permit said roller to be shifted axially and radially out of said housing, and a flanged wall section for closing said opening to confine said roller in the housing.

5. A side bearing, comprising a housing having walls spaced apart to form a roller runway between them, a roller mounted to travel in said runway and having trunnions, said walls having guide-ways for said trunnions, and a section removable from one of said walls so as to allow said roller to be shifted axially to project the adjacent trunnion through the opening formed by the removal of said section and withdraw the opposite trunnions from its guide-way, allowing said roller to be moved radially out of said housing.

[Claims 6 to 20 not printed in the Gazette.]

1,193,031. PORTABLE FLASH-LAMP. HARRY E. LEININGER, Chicago, Ill. Filed July 8, 1914. Serial No. 849,626. (Cl. 240—8.5.)



1. A lamp comprising a container, a cover therefor, an electric bulb mounted in the cover, and a hinged connection between the cover and the body of the container, said hinged connection comprising a pair of leaves pivoted together, one of said leaves being pivoted to the cover and the other of said leaves being pivoted to the container.

2. A lamp comprising a container, a cover therefor, an electric bulb mounted in the cover, and a hinged connection between the cover and the body of the container, said hinged connection comprising a pair of leaves pivoted together, one of said leaves being pivoted to the cover and the other of said leaves being pivoted to the container, there being a clamping device secured upon said container adapted to retain a book or paper upon which the rays of light from said bulb are adapted to fall.

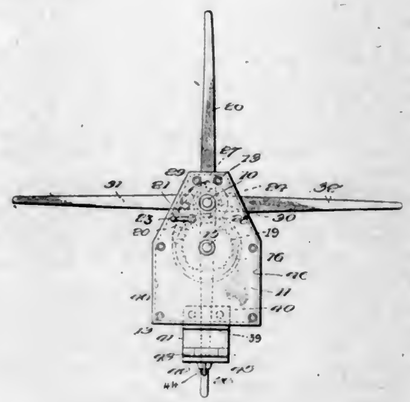
3. A lamp comprising a container one end of which is open, a cover adapted to close said end, and an extensible means connected to said cover and to said container, said extensible means being adapted to hold said cover spaced apart from said container, said cover when so spaced apart from said container being at an angle of approximately 180 degrees to the position assumed thereby when the same is in normal position, said cover when in such normal position being adapted to close the open end of the container.

4. A device of the character described comprising a container one end of which is open, a cover adapted to close said end, a lamp supported by said cover, and an extensible means connected to said cover and to said container, said extensible means being adapted to hold said cover spaced apart from said container, said cover when so spaced apart from said container being at an angle of approximately 180 degrees to the position assumed thereby when the same is in normal position, said cover when in such normal position being adapted to close the open end of the container.

5. A device of the character described comprising a container, one end of which is open, a cover adapted to close said end, an extensible means connecting said cover to said container, said extensible means being adapted to hold said cover spaced apart from said container, said cover when so spaced apart from said container being at an angle of approximately 180 degrees to the normal position of the cover, said cover when in such normal position being in juxtaposition to the open end of the container and closing the same, and a clamping device secured upon said container adapted to retain a book or paper upon which the rays of light from the lamp are adapted to fall, said lamp being supported by said cover.

[Claims 6 to 10 not printed in the Gazette.]

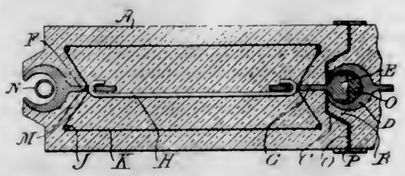
1,193,032. DRYING-REEL. THEODORE LINSTER, Neillsville, Wis. Filed Mar. 6, 1915. Serial No. 12,651. (Cl. 242—104.)



1. In a device of the class described, an operating member, means for rotating said operating member, an inner bearing plate carried by said operating member and partaking of its motion, a plurality of pins rigidly connected to said inner bearing plate and extending therefrom, an outer bearing plate slidable on said operating member and rotative therewith and having sockets to receive the outer ends of said pins, reel arms supported by said pins, and means for holding said outer bearing plate upon said operating member and pins and against said arms.

2. In a device of the class described, an operating member, means for rotating said operating member, an inner bearing plate carried by said operating member and partaking of its motion, a plurality of pins arranged in pairs and rigidly connected to said inner bearing plate and extending therefrom, an outer bearing plate slidable on said operating member and rotative therewith and having sockets to receive the outer ends of said pins, a reel arm engaging one pair of said pins intermediate its ends, a reel arm mounted to swing upon each of the other pins, and means for holding said outer bearing plate upon said operating member and pins and against said arms.

1,193,033. STEEL-CONCRETE SHEET-PILING. FREDERICK T. LLEWELLYN, Montclair, N. J., assignor to Carnegie Steel Company, Hoboken, N. J., a Corporation of New Jersey. Filed July 30, 1910. Serial No. 574,602. (Cl. 72—76.5.)



1. A composite sheet pile comprising a concrete monolith with exposed concrete faces and having longitudinally extending tongues and grooves on opposite faces thereof, metal interlocking members embedded in the tongued and grooved faces of the concrete, and ties embedded in the concrete connecting the interlocking members at separated intervals in the length thereof, said interlocking members having means whereby to hold adjoining piles in interlocking engagement.

2. A composite sheet pile comprising a concrete monolith with exposed concrete faces and having the web portions of metal interlocking members embedded in opposite faces of the concrete, and metal ties embedded in the concrete securing said interlocking members together at separated intervals in the length thereof, said interlocking members having means whereby to secure the adjoining edges of adjacent piles in interlocking engagement.

3. A composite interlocking sheet pile formed of a concrete monolith having exposed concrete faces with longitudinally extending recesses in opposite faces thereof, and having metal interlocking members located in said recesses with metal ties embedded in the concrete and said interlocking members having means whereby the adjoining edges of adjacent piles are secured in interlocking engagement.

4. A piling element comprising a pile composed of concrete and having embedded in it at each of two of its respective sides, separate metallic members each constructed to interlock with adjacent piling elements; said pile having a tie embedded in it between said two members and connecting them together.

5. A piling element comprising a pile composed of concrete and having a metallic interlocking member embedded in the concrete of the pile to extend only within the pile, the pile being formed with a passage adjacent the interlocking member to permit engagement of the latter with an adjacent piling element.

[Claims 6 to 16 not printed in the Gazette.]

1,193,034. DENTAL FASTENING FOR REMOVABLE BRIDGES AND BRIDGE-PLATES. CHARLES W. LOKEY, Birmingham, Ala. Filed Oct. 22, 1914. Serial No. 868,034. Renewed Dec. 29, 1915. Serial No. 69,264. (Cl. 32—12.)



1. In a dental fastening, in combination, a keeper formed with an outwardly facing groove extending up each of its opposite side faces, and an anchor of bent metal adapted to be sprung over and clasp the said side faces of the keeper and fit snugly into said grooves.

2. In a dental fastening, a keeper formed of an elongated body of hard metal having in its opposite side faces longitudinal grooves which shape the body into front and back walls connected by a longitudinal and relatively narrow central web.

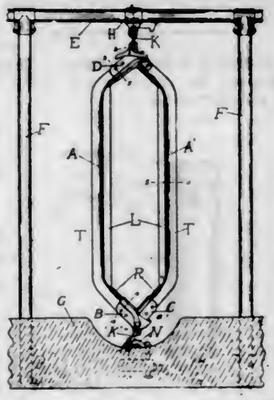
3. In a dental fastening, a keeper formed of an elongated body of hard metal having in its faces longitudinal grooves which shape the body into front and back walls connected by a longitudinal and relatively narrow central web, said web being cut away below the top edges of said walls to form a groove across the top of the keeper.

4. A dental fastening for detachably securing a bridge or bridge plate to a permanent abutment tooth comprising in combination a keeper having longitudinal outwardly facing grooves on its side faces shaped to receive a wire forming an anchor, and an anchor formed of bent wire having closely spaced members adapted to be adjusted toward and from each and to yieldingly engage in the longitudinal grooves of the keeper for endwise removal therefrom.

5. In a dental fastening for removable bridges and bridge plates, in combination, a keeper formed of an elongated hard metal bar having grooves extending lengthwise of its opposite narrow side faces, said grooves being disposed closer to the rear than to the front face of the keeper and being curved in cross-sectional contour, and an anchor having means for attachment to the bridge or bridge plate and having wire arms which join overhead and are adapted to be sprung over the grooved side faces of the keeper and to fit snugly into said grooves and to engage the top thereof, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,193,035. CATTLE-STANCHION. WILLIAM LOUDEN, Fairfield, Iowa. Filed July 30, 1913. Serial No. 781,988. (Cl. 119—149.)

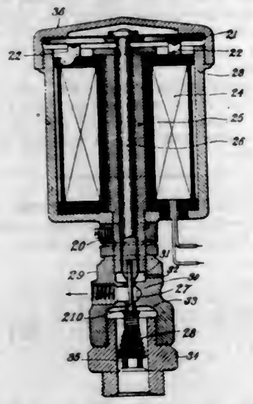


1. In cattle stanchions comprising a pair of spaced apart bars having hinging means on one end and latching means on the other, an inwardly disposed centrally located rib extending lengthwise on the inner face of each bar, a lining member having a central groove adapted to fit over the rib applied to the inner face of each bar, and means to hold the lining members in contact with the bars.

2. In cattle stanchions comprising a pair of spaced apart bars having hinging means on one end and latching means on the other, said bars being T shaped in cross and the heads of the T's being on the inner sides of the bars, an inwardly disposed centrally located rib extending lengthwise on the head of each bar, a lining member having a central groove adapted to fit over the rib applied to the inner face of each bar, and means to hold the lining members in contact with the bars.

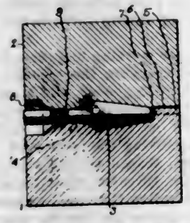
1,193,036. ELECTROMAGNETIC VALVE. JAMES F. MCELROY, Albany, N. Y.; Susie Hale McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Feb. 27, 1912. Serial No. 680,228. (Cl. 137—4.)

In an electro-magnetic valve the combination with a casing provided with inlet, outlet and exhaust ports, a valve for the admission port, an electromagnet, an armature operated thereby, a rod connected with the armature and provided with a valve for controlling the exhaust port, a loose connection between the two valves whereby movement of the exhaust valve to close the exhaust port will open the admission valve, a spring supporting the



admission valve and normally causing the same to close the admission port, and spaced apart leaf springs resting upon the upper end of said magnet and attached to the underside of said armature, said leaf springs being positioned to evenly support said armature and the rod attached thereto.

1,193,037. DIES FOR MAKING SHANKS OF BORING-TOOLS. ELMER T. MCPHERSON, Wilmington, Ohio, assignor to The Irwin Auger Bit Company, Wilmington, Ohio, a Corporation of Ohio. Filed Dec. 23, 1915. Serial No. 68,307. (Cl. 76—95.)



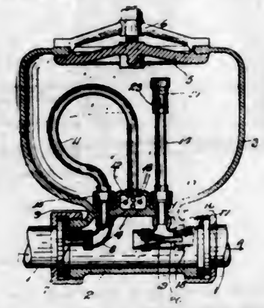
1. In a device for forging the shank of boring tools a lower die and an upper die, said dies having roughing out recesses to form a shank and a portion of the round of said bit, one of said dies having a stop arranged at one end of said recess and extending into the plane of the other die, forming a solid stop against which the shank abuts in forming and one of said dies having a rib to notch the round adjacent the shank.

2. In a device for forging shanks of boring tools, a lower die and an upper die, said dies having roughing out recesses to form the shank and a portion of the round of said tool, and one of said dies having a device to notch the round adjacent to the shank.

3. In a device for forging shanks of boring tools, a lower die and an upper die, said dies having roughing out recesses to form the shank and a portion of the round of said tool, and a semi-annular rib located in the round-forming recess of one of said dies.

1,193,038. AUTOMATIC LOCOMOTIVE-BOILER-COMPOUND FEEDER. HORACE MANN, Muskegon, Mich. Filed Mar. 25, 1915. Serial No. 16,994. (Cl. 210—19.)

1. In combination, a chamber adapted to contain a boiler compound, a sleeve below said chamber with a partition between the chamber and sleeve, a perforated box in the lower part of the chamber, a curved conduit tube leading into the box at one end, passing through the partition and at its other end turned substantially parallel to the sleeve, a second conduit tube in the chamber passing through the partition, an adjusting device at the upper end of said tube, a tubular connection to the lower end thereof lying substantially parallel to the sleeve, and a funnel member inserted in and filling one end of the said connection, the reduced end of said member extending past the lower end of the conduit tube.



2. In combination, a sleeve adapted to be interposed in the feed pipe to a locomotive boiler, a chamber adapted to contain boiler compound connected with the sleeve, a perforated box in the chamber, means leading from the box to the sleeve whereby water passing through the sleeve is partially deflected and carried to the box, a conduit tube to carry said water back to the sleeve, a tubular connection at the lower end thereof lying substantially parallel to the sleeve, and a funnel member in said connection having its large end open to receive a part of the water flowing through the sleeve, and its reduced end extended past the lower end of said conduit tube.

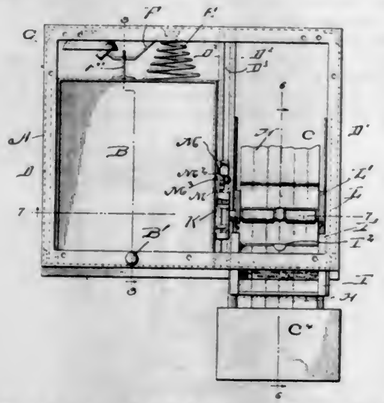
3. In combination, a chamber adapted to contain boiler compound, a sleeve formed integrally with the chamber adapted to be interposed in the feed pipe to a locomotive boiler, a perforated box in the chamber normally covered by the boiler compound in the chamber, means to force a portion of the water passing through the feed pipe into the box and through the perforations thereof to thereby agitate and dissolve a portion of the boiler compound in the chamber, and means to carry the said water and compound in solution back into the sleeve, said means comprising a pipe extending from the chamber into the sleeve and a device secured at the lower end of said pipe positioned lengthwise of the sleeve through which a portion of the water in the feed pipe passes to create a suction to draw the boiler compound in solution from the chamber.

4. In combination, a chamber adapted to contain a boiler compound, a sleeve below the chamber with a partition between the chamber and sleeve, said sleeve adapted to be interposed in the feed pipe to a locomotive boiler, a perforated box in the lower part of the chamber, a conduit in the chamber leading at one end into the box and at the other end through the partition, an extension to said conduit in the sleeve turned parallel to the sleeve and open in the direction from which the water flows in the feed pipe, a second conduit in the chamber through which the contents of the chamber may escape to the sleeve, the lower end of said conduit passing through the partition, and means to create a suction at the lower end of said conduit within the sleeve, substantially as described.

1,193,039. CASH DRAWER AND RECORDER. FRANK GEORGE MARBACH, Cleveland, Ohio, assignor to Champion Register Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 25, 1914. Serial No. 858,528. (Cl. 235—5.)

1. In an account register, the combination with a frame, of a bell connected thereto, a spring striker and a

cushioning spring connected to said frame, a cash drawer slidable on said frame, and a bifurcated spring clip carried by the drawer and adapted to receive said striker as set forth.



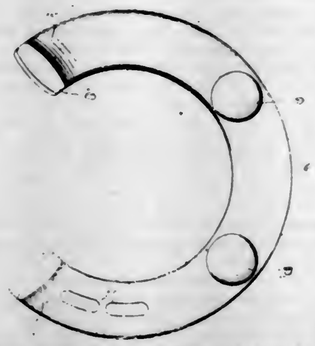
2. In a device of the kind described, the combination with a recorder sheet-frame and table, of a pair of feed rolls, one of said rolls having spaced milled portions, the other roll having a reduced central portion, a spring pressed frame having a pressing finger bearing upon said reduced roll, and means for moving the milled roll.

3. The combination with a frame, of a cash drawer slidable therein, a movable pin positioned in the frame, and a spring actuated bolt carried by the drawer, and normally engaging said frame said bolt being disengaged by said pin together with means for projecting said drawer when said bolt is disengaged by said movable pin.

4. In a device of the kind described, the combination with a recorder drawer and table, of a frame pivoted to said drawer a glass panel arranged in said frame and a spring rod for holding said panel in place.

5. In a device of the kind described, the combination with a frame of a cash drawer and recorder slidable therein, means for moving a record sheet said means including a star wheel, having a lateral extension K' and a dog pivoted to the cash drawer and having a nose M' and cut away parts M^2 all arranged substantially as set forth.

1,193,040. QUOIT. WILLIAM J. MARTIN, Cleveland, Ohio. Filed May 1, 1916. Serial No. 94,812. (Cl. 46—65.)

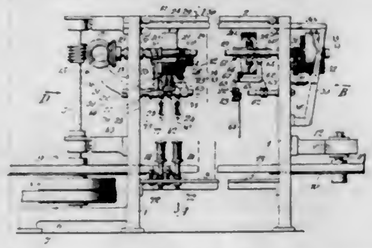


1. A quoit comprising a circular ring with an opening at one side, the ends of the rings adjacent said opening having projecting calks, said calks having a curved inner side merging gradually into the plane of the ring, and the part of the ring opposite said opening having a pair of conical calks spaced apart, the latter calks being lighter than the former, to balance the quoit.

2. A quoit comprising a circular ring with an opening at one side, and two pairs of calks symmetrically arranged, one pair at the ends of the ring adjacent said opening and the other pair at the side of the ring opposite to said opening, the latter pair being lighter than the former pair, to balance the quoit by compensating for the weight lost by said opening.

3. A quoit comprising a circular ring with an opening at one side thereof, the ends of the ring adjacent said opening being weighted to an extent sufficient to compensate for the weight lost by said opening, whereby the ring is balanced.

1,193,041. DOUBLING AND TWISTING MACHINE. CELESTINO MAZZUCCHELLI, Como, Italy. Filed June 15, 1914. Serial No. 845,126. (Cl. 28—34.)



1. In a machine for working fine threads, two bobbins carrying the threads to be worked, a rotating thread conveying pulley, means to guide the bobbin threads around half the circumference of said pulley, a take up bobbin frictionally driven by the latter at the same peripheral speed of the pulley, a guide arranged to double the threads before they pass onto the pulley, and a movable guide for the doubled thread between the pulley and take-up bobbin.

2. In a machine for working fine threads, a main driving shaft, two bobbins carrying the threads to be worked, a take-up bobbin, a pulley over which the threads pass around half its circumference and rotating by friction the take-up bobbin at an absolute uniform peripheral speed, means transmitting the motion of the main driving shaft to said pulley, thread tensioners, controlling means acted upon by the threads, thread-guides arranged to double the threads before they pass around the pulley and fixed and movable guides for the threads after they pass the pulley, which after running off the pulley are wound upon the take-up bobbin.

3. In a machine for carrying out the hereinbefore described methods, a machine-frame arranged to superimpose several machines, a main driving shaft, two rows of bobbins carrying the threads to be worked, means transmitting the motion of the main driving shaft to the bobbins, adjusting means for controlling the velocity of said bobbins, take-up bobbins, pivotally mounted arms carrying the latter, pulleys acting as conveying means for the threads passing around half of their circumference and rotating by friction the take-up bobbins at an absolute uniform peripheral speed, means transmitting the motion of the main driving shaft to said pulleys including a friction-clutch, thread tensioners, thread-guides effecting a doubling of the threads before they pass around the pulleys, and fixed and movable guides for the threads, which after running off the pulleys are wound upon the take-up bobbins.

4. In a machine for carrying out the hereinbefore described methods, a machine-frame arranged to superimpose several machines, a main driving shaft, two rows of bobbins carrying the threads to be worked, means transmitting the motion of the main driving shaft to the bobbins, adjusting means for controlling the velocity of said bobbins, take-up bobbins, pivotally mounted arms carrying the latter, pulleys acting as conveying means for the threads passing around half of their circumference and rotating by friction the take-up bobbins at an absolute uniform peripheral speed, means transmitting the motion of the main driving shaft to said pulleys including a friction-clutch, thread-tensioners, thread-guides for doubling the threads before they pass around the pulleys, fixed and movable guides for the thread, which after running off the pulleys are wound upon the take-up bobbins, and means for stopping one of said pulleys as soon as the thread passing over this pulley breaks.

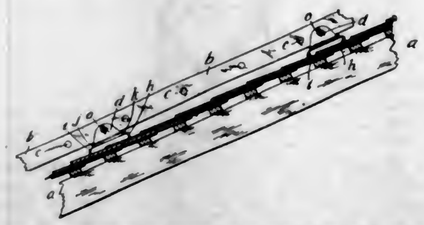
5. In a machine for carrying out the hereinbefore described methods, a machine-frame arranged to superimpose several machines, a main driving shaft, two rows of bobbins carrying the threads to be worked, means transmitting the motion of the main driving shaft to the bobbins, adjusting means for controlling the velocity of said bobbins, take-up bobbins, pivotally mounted arms carrying the latter, pulleys acting as conveying means for the threads passing around half of their circumference and rotating by friction the take-up bobbins at an absolute uniform peripheral speed, means transmitting the motion of the main driving shaft to said pulleys including a friction-clutch, thread-tensioners, thread-guides for doubling of the threads before they pass around the pulleys, fixed and movable guides for the threads, which after running off the pulleys are wound upon the take-up bobbins, means for stopping one of said pulleys as soon as the thread passing over the pulley breaks, and means for stopping one of said pulleys as soon as the bobbin driven by said pulley is full.

1,193,042. MACHINE FOR STRETCHING HIDES AND SKINS. DANIEL MERCIER, Annonay, France. Filed Sept. 11, 1913. Serial No. 789,222. (Cl. 149—15.)



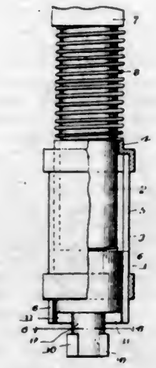
In a machine for stretching hides and skins. the combination of a shaft, a cylindrical stretching drum carried eccentrically by said shaft, means for varying the eccentricity of the drum on the shaft, and blades secured on the periphery of the drum, said blades comprising widely spaced stretching blades, with a dull edge, and closely adjacent scraping blades with a sharp edge, substantially as described and for the purpose set forth.

1,193,043. ANTICREEPING DEVICE. ARTHUR L. MERRIN, Portland, Oreg. Filed Aug. 18, 1915. Serial No. 46,211. (Cl. 228—5.)



In an anti-slipping device, the combination of a channel frame, means for clamping a member between the channel sides, claw-like projections on the under side of said frame, and upwardly projecting members at the ends of the channel.

1,193,044. ROD OR PIPE COUPLING. ALBINUS H. MINNICH, South Bend, Ind. Filed Aug. 8, 1914. Serial No. 855,729. (Cl. 255—30.)



1. A coupling comprising a male member and a female member, the male member having locking abutments and limiting abutments, the female member being formed with a shoulder beneath which the locking abutments are adapted to seat and with spaced shoulders against which the limiting abutments are adapted to seat, ribs carried on the respective members and adapted to aline when the limiting abutments of the male member engage the shoulders of the female member, and a single locking means engaging the alined ribs on the members to prevent independent relative rotation thereof.

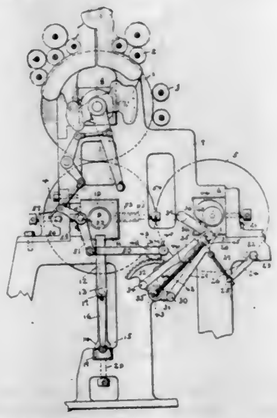
2. A coupling comprising a male member and a female member, the male member having locking abutments and limiting abutments, the female member being formed with a shoulder beneath which the locking abutments are adapted to seat and with spaced shoulders against which the limiting abutments are adapted to seat, ribs carried on the respective members and adapted to aline when the limiting abutments of the male member engage the shoulders of the female member, and a single locking means engaging the alined ribs on the members to prevent independent relative rotation thereof, the female member being formed with positioning shoulders adapted to be engaged by the limiting abutments when the locking abutments of the male member are positioned for disconnection from the female member.

3. A coupling including a male member, a spring pressed sleeve encircling the male member and a wing stem carried by the male member, a female member having an opening corresponding in size and shape to the winged stem, the female member below the outer edge of the opening being undercut to provide locking shoulders to receive the wings upon relative rotation of the members subsequent to connection, means carried by the female member to interlock with the sleeve subsequent to the relative rotary movement of the members, limiting abutments carried by the female member and coöperating stops carried by the male member, whereby relative rotation of the respective members in either direction is limited to dispose the parts in locked or unlocked positions.

1,193,045. TRIPPING MECHANISM FOR OFFSET-MACHINES. IRVING F. NILES, Plainfield, N. J., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Dec. 30, 1912. Serial No. 739,224. (Cl. 101—100.)

1. In a printing machine, the combination with a printing couple including a form member and stationary im-

pression member, of a transfer member, a shaft therefor, a pair of floating journal boxes in which the shaft is mounted, means for operating the boxes to bring the transfer cylinder into printing relation with the form member, and means for thereafter operating the boxes for bringing the transfer member into printing relation with the impression member, the three members then continuing in printing relation.



2. In a printing machine, the combination with a form cylinder and an impression cylinder, of a transfer cylinder mounted in vertical alinement with the form cylinder and in horizontal alinement with the impression cylinder, and means for moving the transfer cylinder in straight lines into printing relation with the form cylinder and then into printing relation with the impression cylinder, the cylinders then continuing in printing relation.

3. In a printing machine, the combination with a form cylinder and a stationary impression cylinder, of a transfer cylinder mounted in vertical alinement with the form cylinder, and means for giving a straight line vertical movement to the transfer cylinder to bring it into and out of printing relation with the form cylinder while permitting it to be in printing relation with the impression cylinder.

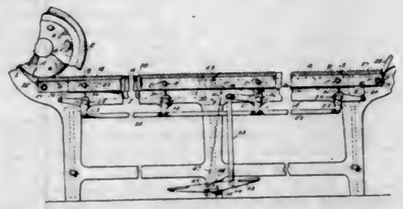
4. In a printing machine, the combination with stationary form and impression cylinders, of a transfer cylinder, a shaft therefor, floating journal boxes in which the shaft is supported, means for giving the boxes a sliding movement to bring the transfer cylinder into printing relation with the form cylinder, and means operated by the material fed for automatically giving the transfer cylinder a second sliding movement to bring it in printing relation with the impression cylinder.

5. In a printing machine, the combination with stationary form and impression cylinders, of a transfer cylinder mounted in substantially vertical alinement with the form cylinder, a shaft for the transfer cylinder, a pair of floating journal boxes in which the shaft is mounted, a rock shaft, toggles between the rock shaft and the boxes, by making and breaking which the boxes are given a vertical sliding movement, and means for operating the rock shaft.

[Claims 6 to 12 not printed in the Gazette.]

1,193,046. TRANSFER-PRESS. IRVING F. NILES, Plainfield, N. J., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Dec. 4, 1913. Serial No. 804,593. (Cl. 101—99.)

1. In a transfer press, the combination with a transfer cylinder, of a plate supporting bed and a work supporting bed over which the cylinder travels successively, means for causing the cylinder and beds to be moved out of contact with each other when the cylinder is traveling in one direction, and work holding devices operatively connected with said means for holding the work in position on the work supporting bed while the cylinder is operating on the work and releasing the work during the action of the cylinder.



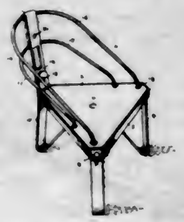
2. In a transfer press, the combination with a transfer cylinder, of a plate supporting bed and a work supporting bed over which the cylinder travels successively, means for causing the cylinder and beds to be moved out of contact with each other when the cylinder is traveling in one direction, and means brought into operative position by the cylinder for holding the work on the work supporting bed while the cylinder is operating on the work.

3. In a transfer press, the combination with a transfer cylinder, of a plate supporting bed and a work supporting bed over which the cylinder travels successively, means for causing the cylinder and beds to be moved out of contact with each other when the cylinder is traveling in one direction, means for holding the work in position on the work supporting bed while the cylinder is operating on the work, and means operated by the cylinder for causing the holding means to seize and release the work.

4. In a transfer press, the combination with a transfer cylinder, of a plate supporting bed and a work supporting bed over which the cylinder travels successively, means for causing the cylinder and beds to be moved out of contact with each other when the cylinder is traveling in one direction, grippers for holding the work in position on the work supporting bed while the cylinder is operating on the work, and means operated by the cylinder for causing the grippers to seize and release the work.

5. In a transfer press, the combination with a transfer cylinder, of a plate supporting bed and a work supporting bed over which the cylinder travels successively, means for causing the cylinder and beds to be moved out of contact with each other when the cylinder is traveling in one direction, grippers for holding the work in position on the work supporting bed, a rock shaft for operating the grippers, fingers at each end of the machine with which the cylinder contacts, and connections between the fingers and the rock shaft for rocking the latter to cause the grippers to seize and release the work.

1,193,047. CHAIR. JOEL R. OHNSTAD, Montfort, Wis. Filed Nov. 27, 1915. Serial No. 63,819. (Cl. 155—3.)

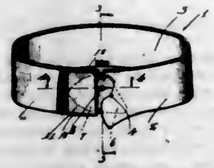


1. A chair construction comprising a substantially triangular seat portion having its corners slit to form tongues, the edges of said seat portion being bent downwardly to form reinforcing flanges, legs formed by bending strips of metal substantially V-shaped, the upper ends of said legs having angularly extending feet thereon and

bolts extending through said legs and seat to secure the legs to the seat, certain of said bolts also extending through the overlapping tongues at the corners of the seat.

2. A chair construction comprising a seat portion, a pair of legs at the forward edge of the seat, and a single leg at the rear edge thereof, means to attach the legs to the seat, said rear legs having a back extension, loops formed by bending over portions of the back section, side arms extending through said loops, and means to attach the forward ends of the side arms to the seat portion adjacent its forward edge.

7,193,048. COLLAR. SUGIMATSU OKAMURO, Los Angeles, Cal. Filed Sept. 20, 1915. Serial No. 51,579. (Cl. 2—71.)

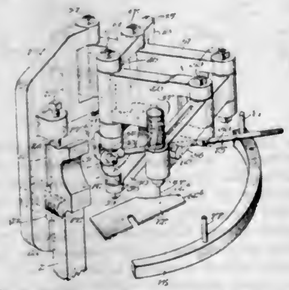


1. A turn-down collar having a tongue-receiving pocket on the inner fold between the inner and outer folds and provided with registering necktie-receiving recesses in the ends of its outer fold, said recesses forming an opening with which the open end of the pocket registers.

2. A turn-down collar comprising inner and outer folds and having tongues extending from the ends of the inner folds, and a tongue-receiving pocket located upon the inner fold between the inner and outer folds and opening at a point beyond the portion of one end edge of the outer fold.

3. A turn-down collar comprising inner and outer folds, tongues on the ends of the inner fold having buttonholes therein, and a pocket in the inner fold to receive one of the tongues, said outer fold having registering tie-receiving recesses in its end edges, said pocket communicating with one of the recesses and said buttonholes registering with the recesses.

1,193,049. MACHINE FOR FORMING GRINDING-POINTS. CARL G. OLSON, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a Corporation of Illinois. Filed Jan. 15, 1916. Serial No. 72,304. (Cl. 125—6.)



1. In a machine of the class described, the combination of a main supporting frame, a rotatable work-holder supported therein, a tool holder, a quadrilateral link-work consisting of bars pivoted together and articulating upon parallel axes, one of said bars being pivoted to the main supporting frame, another of said bars carrying said tool holder and another of said bars forming a tracer bar; and a templet for guiding said tracer bar, said tool-holder being rotatable relatively to its supporting bar about an axis parallel to the axes of the pivots which connect the parts of the link-work.

2. A machine for forming grinding points and the like, consisting of a main supporting frame, a work-holder rotatable about a horizontal axis, a quadrilateral link-work supported upon said frame and rotatable about a vertical axis, said link work consisting of bars articulating about vertical axes, one of said bars being extended and forming a tracer bar, a tracing pin carried at the extremity of said tracer bar and arranged in vertical position, a stationary templet having a horizontal working edge for guiding said tracer pin, and a tool holder carried by said link-work and being rotatable with respect to said link work, said holder being rotatable about a vertical axis.

3. A machine for forming grinding points and the like, consisting of a main frame, a work-holder journaled in said frame and rotatable about a horizontal axis, a quadrilateral link-work consisting of four bars pivotally connected together upon vertical axes, the first of said bars extending beyond the link-work and being pivotally connected at its extended end to the main frame and swingable in a horizontal plane, the second of said bars also extending beyond the link-work and constituting a tracer bar, a templet for guiding said tracer bar, and a tool holder supported at the junction of the third and fourth bars of the link-work, said tool holder being rotatable about an axis coincident with the axis of articulation at the junction of said third and fourth bars.

4. A machine for forming grinding points and the like comprising a main supporting frame, a rotatable work-holder journaled in said frame, a linkwork pivotally supported on said main frame and rotatable about a vertical axis, and a tool holder carried by said link-work, said tool holder being rotatable relatively to said linkwork and permitting adjustment of the tool relatively to the tool holder in a direction at right angles to the axis of rotation of the tool holder relatively to the linkwork.

5. A machine for forming grinding points and the like, said machine having a main frame, a rotatable work holder journaled in said frame, a linkwork supported by said main frame, a tool holder supported by said linkwork, said tool holder being rotatable relatively to the linkwork, about a vertical axis, and means for adjusting said work holder in a horizontal direction.

[Claims 6 to 14 not printed in the Gazette.]

1,193,050. ADJUSTING-BUCKLE. BENJAMIN F. ORE-WILER, Chicago, Ill. Filed May 3, 1915. Serial No. 25,589. (Cl. 24—191.)



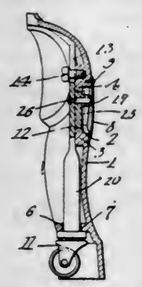
1. In a buckle, the combination of a back portion provided with an upper slot, a webbing secured at one end to said back and passing through said slot from the front to the rear of said back to produce a crimp therein, a lever hinged to the upper part of the back, said lever being provided with a webbing engaging member at the upper end thereof, said member lying when the buckle is closed in diagonal disposition to the webbing and at the crimped portion thereof, and said engaging member when the buckle is closed reaching approximately to the position initially assumed by that part of the webbing which it engages, and a spring catch connection between the back and lever to provide means for holding the same in closed position, substantially as described.

2. A buckle, comprising a back portion and a lever portion hinged together, said back being provided with upper and lower slots, a webbing-retaining member on the rear of the back between said slots, the webbing passing down and across the back of the retaining member, thence back upon itself to form a loop, thence through the lower slot to the front of the back, thence through the upper slot to the rear of the back, whereby a crimp is placed in

the webbing and a fabric covering for the back produced, said lever embodying a webbing-engaging member, said engaging member when the buckle is closed lying in diagonal disposition to the webbing at a point where the webbing passes through the upper slot, and said engaging member when the buckle is closed reaching approximately to the position initially assumed by that part of the webbing which it engages, and a spring catch connection between the back and lever to provide means for holding the same in closed position, substantially as described.

3. A buckle, comprising a back portion and a lever portion hinged together, said back being provided with upper and lower slots, a webbing-retaining member on the rear of the back between said slots, the webbing passing down and across the back of the retaining member, thence back upon itself to form a loop, thence through the lower slot to the front of the back, thence through the upper slot to the rear of the back, whereby a crimp is placed in the webbing and a fabric covering for the back produced, said lever embodying a webbing-engaging member, said engaging member when the buckle is closed lying in diagonal disposition to the webbing at a point where the webbing passes through the upper slot, and said engaging member when the buckle is closed reaching approximately to the position initially assumed by that part of the webbing which it engages, a spring catch connection between the back and lever to provide means for holding the same in closed position, and a finger piece on the lever adjacent the spring catch connection, substantially as described.

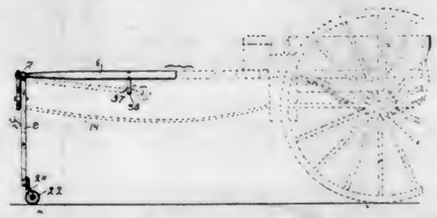
1,193,051. CASTER DEVICE FOR STOVE-LEGS. CHARLES G. OVERMYER, Hartford City, Ind. Filed Oct. 27, 1915. Serial No. 58,240. (Cl. 16—165.)



In a device of the character described, the combination with a leg having an opening, a rear lug at the upper end of said opening, a rear lug at one side of said opening, and a rear web below said opening, of a removable closure in front of said opening, a vertical spindle slidable through said web and having its upper terminal bearing slidably against the first mentioned lug, the spindle having a caster at its lower end and a vertical slot in its upper terminal, a securing element extending through said slot and engaged with the first mentioned lug to hold the spindle thereagainst, an eccentric between said spindle and opening, a pivot connecting said eccentric and spindle, the eccentric having a forwardly projecting boss around the pivot and adapted for the engagement of a wrench inserted through said opening, the first mentioned lug being seatable on said eccentric, and the eccentric being adapted to bear against the second mentioned lug when the eccentric is swung upwardly and slightly past dead center.

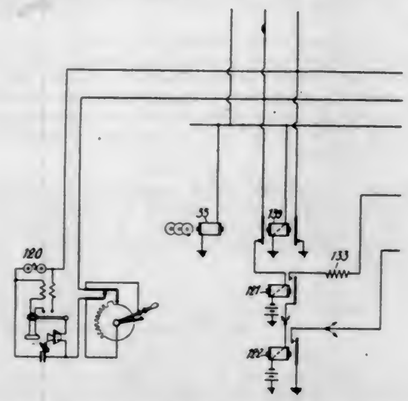
1,193,052. TONGUE-SUPPORT. PETER PIRSCH, Kenosha, Wis. Filed Mar. 20, 1916. Serial No. 85,240. (Cl. 21—205.)

1. The combination, with a tongue, of a hand hold supporting bracket secured to the end thereof and provided with an intermediate web portion, a tongue supporting leg comprising metal strips pivotally secured to said bracket and secured together at their lower ends, a caster mounted in the lower end of the leg, a U-shaped metal strap having inwardly beveled ends secured to said leg for automatically locking it to the web of said bracket when in upright position to support the tongue, and a hooked bracket carried by the tongue for securing the leg in inoperative position.



2. The combination, with a tongue, of a hand hold supporting bracket secured to the end thereof and provided with an intermediate web portion, a tongue supporting leg swingingly pivotally secured to said bracket, a U-shaped metal strap carried by said leg for automatically locking it to the web of said bracket when in upright position to support the tongue, and means carried by the tongue for securing the leg in inoperative position.

1,193,053. MACHINE TELEPHONE SYSTEM. LIPA POLINKOWSKY, Brussels, Belgium, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 5, 1914. Serial No. 822,590. (Cl. 179—9.)



1. In a telephone exchange system, automatically operating switches over which a connection is extended from a calling line to a called line, a sequence switch having a plurality of contacts for controlling one of said automatically operating switches, said sequence switch being movable in one direction only, means responsive to the initiation of severing of said connections for restoring said sequence switch, a meter associated with the calling line, and a meter operating circuit closed only under the control of contacts of said sequence switch if the initiation of restoration of said sequence switch takes place when the sequence switch is in a given position.

2. Telephone exchange system comprising automatically operating switches over which a call may be extended from a calling to a called line, two sequence switches associated with the circuit as extended, a plurality of contacts for said sequence switches, means for starting said sequence switches in motion upon the initiation of restoration, a meter associated with the calling line, an operating circuit for said meter controlled by the contacts of said sequence switches one of such sequence switches being adapted to close at one of its contacts such meter operating circuit when moved upon the initiation of restoration, and the other of such sequence switches being adapted to open at one of its contacts the meter operating circuit when moved upon the initiation of restoration.

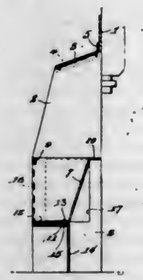
3. In a telephone exchange system, automatically operating switches over which a connection is extended from a calling line to a called line, two sequence switches movable only in one direction for controlling said automatically operating switches, means controlled by the called line for moving one of said switches into a definite position, a meter associated with the calling line, a meter operating circuit controlled only by contacts of said sequence switches, means for restoring said sequence switches upon the severing of said connection, and means for closing said circuit only if one of said sequence switches is restored from a definite position.

4. Telephone exchange system comprising automatically operating switches whereby the circuit of a calling line may be extended to a called line, a meter associated with the calling line, a sequence switch by which the circuit of said meter is extended to a second sequence switch associated with the circuit of the calling line as extended, means for moving said second sequence switch to a position more or less advanced responsive to the condition of the called line, a relay for initiating disconnection starting both of said sequence switches in motion in such disconnecting operation, such first sequence switch in such movement opening such meter operating circuit, said second sequence switch in such motion closing such meter operating circuit before the opening of said circuit by said first sequence switch only if such second sequence switch is in an advanced position when initiating disconnection.

5. In a telephone exchange system, a plurality of lines, automatically operating switches for establishing a connection between a calling and a called line, a sequence switch associated with each of said switches, said sequence switches being movable in one direction only, means controlled by the called line for moving one of said sequence switches to a definite position, and means for closing said operating circuit only under the control of contacts of said sequence switches if one of said sequence switches has been moved to said definite position.

[Claims 6 to 10 not printed in the Gazette.]

1,193,054. FIREPLACE. EBENEZER POMEROY, Idthonia, Ga. Filed Apr. 5, 1913. Serial No. 759,121. (Cl. 126—120.)

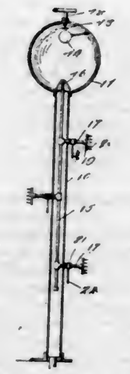


1. A sectional fire-place including a supporting structure, side walls secured thereto, an inclined top connecting the said side walls, a flanged support member arranged between said side walls at the base thereof, a flanged fire-box mounted upon said support member, the flanges of said support and said box being shaped to conform one with the other, a fender carried by said fire-box, and a flange projecting rearwardly from said fire-box, said flange being disposed for engagement with the rear wall of a room, as and for the purpose set forth.

2. A sectional fire-place including a supporting structure, side walls secured thereto, the said walls having openings formed therein, a top piece connecting the said side walls, a support member arranged between the said side walls at the base thereof, an inwardly directed flange formed at the top of the said support, a fire-box mounted upon the said support, an inwardly directed flange formed at the base of the said fire-box and disposed for engagement with the said support flange, a grate arranged within the said fire-box and supported by the said flanges, a fender carried by the said fire-box, and a flange projecting rearwardly from the said fire-box at the top thereof, said flange being disposed for engagement with the rear wall of a room, as and for the purpose set forth.

3. A sectional fire-place including a supporting structure, side walls secured thereto, the said walls having openings formed therein at a point intermediate the ends thereof, an inclined top connecting said side walls, the said top having end flanges and a longitudinally extending flange formed integrally therewith, the said end flanges being disposed for engagement with the said side walls, the said longitudinal flange being disposed for engagement with the said supporting structure, a substantially rectangular support member arranged between the said side walls at the base thereof, an integrally formed inwardly directed flange projecting from the top of the said support member, a fire-box, the base of which is provided with an integrally formed inwardly directed flange shaped to conform with the said support flange, the rear wall of the said fire-box being disposed upon an incline, an integrally formed flange at the top of the said fire-box, the said flange being disposed for engagement with the wall of the room, the said rear wall of the fire-box and the said support member being disposed in spaced relation to the said supporting structure, the openings in the sides of the fire-place having communication with the space behind the said fire-box and the said support, a grate member arranged within the said fire-box and supported by the flange of the fire box, a fender carried by the said fire-box, and tongues formed integrally with the said fire-box and disposed to overlap the said fender to provide a securing means therefor, as and for the purpose set forth.

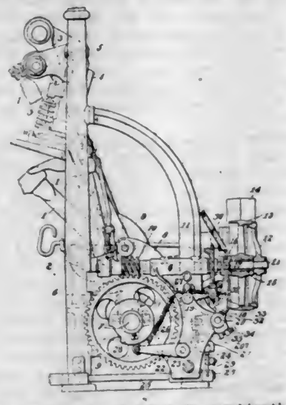
1,193,055. DRINKING-FOUNTAIN. GEORGE R. PRATT, Ventura, Cal. Filed Jan. 25, 1915. Serial No. 4,354. (Cl. 137—109.)



A drinking fountain comprising a supply pipe, a globe connected to the upper end of the pipe, a second pipe mounted in said pipe, and having its upper end extended into the globe for receiving water therefrom, the second pipe having its lower end closed for trapping the water

therein, branch pipes extending through the first pipe and having their inner ends connected to the second pipe, and nozzles on the other ends of the branch pipe.

1,193,056. STOPPING DEVICE. EDWIN N. PREBLE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 30, 1912. Serial No. 728,585. (Cl. 74—46.)



1. A stop mechanism, having, in combination, a shaft, driving mechanism for the shaft, means acting normally to maintain the driving mechanism in driving connection with the shaft until the shaft has executed a predetermined rotary movement after the driving mechanism has been connected therewith, and then to permit the driving mechanism to be disconnected from the shaft and mechanism actuated by the power by which the shaft is driven when thrown into action to disconnect the driving mechanism from the shaft at any point in the rotation of the shaft.

2. A stop mechanism, having, in combination, a shaft, driving mechanism for the shaft, devices for arresting the rotation of the shaft, and means constructed and arranged to be actuated at once by the power by which the shaft is driven when thrown into action to disconnect the driving mechanism from the shaft and engage the arresting devices to stop the shaft at any point in the rotation of the shaft.

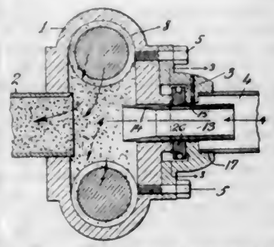
3. A stop mechanism, having, in combination, a shaft, driving mechanism for the shaft, means acting normally to maintain the driving mechanism in driving connection with the shaft until the shaft has executed a predetermined rotary movement after the driving mechanism has been connected therewith, and then to permit the driving mechanism to be disconnected from the shaft and power operated mechanism under the control of the operator for throwing the driving mechanism out of driving connection with the shaft at any point in the rotation of the shaft.

4. A stop mechanism, having, in combination, a shaft, a driving clutch member, a driven clutch member, means acting normally to maintain the clutch members in engagement until the shaft has executed a predetermined rotary movement after the clutch members are engaged, and then to permit the clutch members to be disengaged and power operated mechanism under the control of the operator for disengaging the clutch members and stopping the shaft at any point in the rotation of the shaft.

5. A stop mechanism, having, in combination, a shaft, driving mechanism for the shaft, a brake, and mechanism under the control of the operator and operated by the power by which the shaft is driven for throwing the driving mechanism out of driving connection with the shaft and engaging the brake to stop the shaft at any point in the rotation of the shaft.

[Claims 6 to 14 not printed in the Gazette.]

1,193,057. APPARATUS FOR FEEDING REGULATED QUANTITIES OF FINELY-DIVIDED MATERIAL. WIRT S. QUIGLEY, New York, N. Y., assignor to Quigley Furnace and Foundry Co., a Corporation of Massachusetts. Filed June 12, 1914. Serial No. 844,832. (Cl. 110—104.)



1. In an apparatus for feeding regulated quantities of finely divided material, the combination of a vertically arranged conduit, means for feeding an excess supply of the finely divided material to the upper end of said conduit so that said material may drop through the conduit, an air inlet pipe passing through one side wall of the fuel conduit having a longitudinally adjustable nozzle, an oppositely disposed outlet pipe passing through the other wall, and means independent of the air pipes for removing any material which drops below the level of said air pipes.

2. In an apparatus for feeding regulated quantities of finely divided material, the combination of a vertically arranged conduit, means for feeding an excess supply of the finely divided material to the upper end of said conduit so that said material may drop through the conduit, an air inlet pipe passing through one side wall of the fuel conduit having a longitudinally adjustable nozzle, an oppositely disposed outlet pipe passing through the other wall, the mouth of the outlet pipe being of larger diameter than the nozzle of the inlet pipe, and means independent of the air pipes for removing any material which drops below the level of said air pipes.

3. In an apparatus for feeding regulated quantities of finely divided material, the combination of a vertically arranged conduit, means for dropping a continuous stream of finely divided material through said conduit, an air inlet pipe projecting through one side wall of the conduit, an outlet pipe projecting through the opposite wall of the conduit, means for varying the distance between the ends of said pipes, and apparatus independent of the air pipes for removing any finely divided material which may fall below the level of the air pipes, said means for varying the distance between the ends of the two pipes comprising an externally threaded section on the above mentioned adjustable nozzle, a nut mounted thereon, devices for holding the nut in a position adjacent to the conduit wall, and a mounting for the nozzle which prevents its rotation but permits endwise sliding thereof.

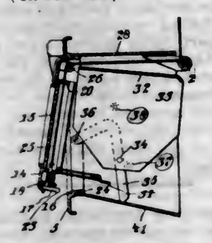
4. In an apparatus for feeding regulated quantities of finely divided material, the combination of a vertically arranged conduit, means for dropping a continuous stream of finely divided material through said conduit, an air inlet pipe projecting through one side wall of the conduit, an outlet pipe projecting through the opposite wall of the conduit, means for varying the distance between the ends of said pipe, and apparatus independent of the air pipes for removing any finely divided material which may fall below the level of the air pipes, said means for varying the distance between the ends of the two pipes comprising an externally threaded section on the above mentioned adjustable nozzle, a nut mounted thereon, a housing adapted to be clamped to the exterior of the conduit wall over and around the nut and nozzle but open at the sides to permit access to the nut, and a mounting for the nozzle which prevents its rotation but permits endwise sliding thereof.

5. In an apparatus for feeding regulated quantities of finely divided material, the combination of a vertically

arranged conduit, means for dropping a continuous stream of finely divided material through said conduit, an air inlet pipe projecting through one side wall of the conduit, an outlet pipe projecting through the opposite wall of the conduit, means for varying the distance between the ends of said pipes, and apparatus independent of the air pipes for removing any finely divided material which may fall below the level of the air pipes, said means for varying the distance between the ends of the two pipes comprising an externally threaded section on the above mentioned adjustable nozzle, a nut mounted thereon, and a housing, adapted to be clamped to the exterior of the conduit wall over and around the nut and nozzle but open at the sides to permit access to the nut, the nozzle having a longitudinally extending groove in its external surface, and the housing being provided with a set screw engaging said groove.

[Claims 6 and 7 not printed in the Gazette.]

1,193,058. CHUTE FOR GLAZED WINDOWS. JOHN E. RABER, Canton, Ohio. Filed Sept. 25, 1915. Serial No. 52,578. (Cl. 193—33.)



1. In a device of the class described, a window casing, a pair of L-shaped bars, one arm of each of said L-shaped bars being pivotally connected at its extremity to said casing, a hopper pivotally mounted upon the other arms of said L-shaped bars and studs located upon said hopper and arranged to contact with said L-shaped bars for the purpose of limiting the movement of said hopper with relation to said bars.

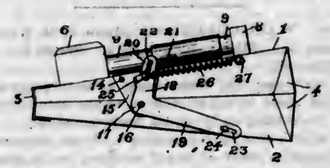
2. In a device of the class described, a window casing, a pair of L-shaped bars, the shorter arm of each of said bars being pivotally connected at its extremity to the casing, a hopper pivotally mounted upon the longer arm of each bar intermediate the extremities thereof, and studs located upon said hopper and arranged to contact with said L-shaped bars for the purpose of limiting the movement of said hopper with relation to said bars.

3. In a device of the class described, a window casing, a pair of L-shaped bars pivotally connected to the casing, a hopper pivotally mounted upon said L-shaped bars and studs located upon said hopper and arranged to contact with said L-shaped bars for the purpose of limiting the movement of said hopper with relation to said bars.

4. In a device of the class described, a window casing, a pair of L-shaped bars, the shorter arm of each bar being pivotally connected at the extremity to the casing, a hopper pivotally mounted in inverted position near its lower extremity to the longer arm of each bar, a stud upon said hopper adapted to contact with the longer arm of each bar when the hopper is in the closed position and a second stud upon said hopper adapted to engage the shorter arm of each bar as the hopper is moved into the opened position.

5. In a device of the class described, a window casing, a pair of L-shaped bars pivotally connected to the casing, a hopper pivotally mounted upon said L-shaped bars, and studs located upon said hopper and arranged to contact with said L-shaped bars for the purpose of limiting the movement of said hopper with relation to said bars, the free extremities of said L-shaped bars being arranged to engage the lower wall of the window casing when the hopper is in the closed position and to engage the upper wall of said casing when the hopper is in the opened position.

1,193,059. SOUND EMITTING AND CONTROLLING MEANS FOR TOYS. MICHAEL RABINOWITZ, Newark, N. J. Filed Sept. 7, 1915. Serial No. 49,268. (Cl. 46—46.)



1. A sound-emitting and controlling means comprising a bellows, a reed-pipe or the like connected with and cooperating therewith, and a sound-controlling element mounted upon said reed-pipe and telescoping therewith so as to be slidably disposed with relation to said bellows and said reed-pipe or the like.

2. A sound-emitting and controlling means comprising a bellows, a reed-pipe or the like connected with and cooperating therewith, and a sound-controlling element mounted upon said reed-pipe and telescoping therewith so as to be slidably disposed with relation to said bellows and said reed-pipe or the like, said reed-pipe being provided with a vent-opening, and the said slidable sound-controlling element being provided with a plurality of openings, adapted to be brought into intermittent registration with the opening in said reed-pipe or the like.

3. A sound-emitting and controlling means comprising a bellows, a reed-pipe or the like connected with and cooperating therewith, a sound-controlling element mounted upon said reed-pipe and telescoping therewith so as to be slidably disposed with relation to said bellows and said reed-pipe or the like, said reed-pipe being provided with a vent-opening, and the said slidable sound-controlling element being provided with a plurality of openings, and means connected with the bellows and the said sound-controlling element for sliding said element and bringing the same into intermittent registration with the opening in said reed-pipe or the like.

4. A sound-emitting and controlling means comprising a bellows, a reed-pipe or the like connected with and cooperating therewith, a sound-controlling element mounted upon said reed-pipe and telescoping therewith so as to be slidably disposed with relation to said bellows and said reed-pipe or the like, said reed-pipe being provided with a vent-opening, and the said slidable sound-controlling element being provided with a plurality of openings, said bellows comprising a pair of compressible bellows-members, a bracket attached to one of said bellows-members, a bell-crank pivoted upon said bracket, one of the arms of said bell-crank being operatively connected with the other bellows member, and the other arm of said bell-crank being operatively connected with the sliding sound-controlling element for sliding said element and bringing the same into intermittent registration with the opening in said reed-pipe or the like.

5. A sound-emitting and controlling means comprising a bellows, a reed-pipe or the like connected with and cooperating therewith, a sound-controlling element mounted upon said reed-pipe and telescoping therewith so as to be slidably disposed with relation to said bellows and said reed-pipe or the like, said reed-pipe being provided with a vent-opening, and the said slidable sound-controlling element being provided with a plurality of openings, said bellows comprising a pair of compressible bellows-members, a bracket attached to one of said bellows-members, a bell-crank pivoted upon said bracket, one of the arms of said bell-crank being operatively connected with the other bellows-member, and the other arm of said bell-crank being

operatively connected with the sliding sound-controlling element for sliding said element and bringing the same into intermittent registration with the opening in said reed-pipe or the like, a hook-shaped element connected with said last-mentioned arm of the bell-crank, and a spring attached at one end to said hook-shaped element and at the other end to said first-mentioned bellows-member.

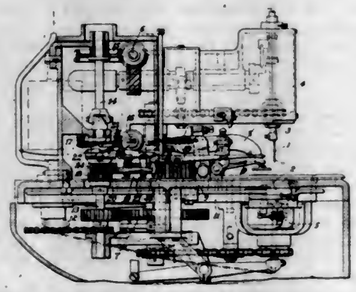
[Claims 6 to 10 not printed in the Gazette.]

1,193,060. WALL-COVERING. HANS J. M. RASMUSSEN, Chicago, Ill. Filed Aug. 28, 1914. Serial No. 859,135. (Cl. 154—47.)

1. A wall covering comprising a loosely-woven fabric and a thin sheet of paper secured to one side thereof with a paste containing an oil and a soapy substance.

2. A wall covering comprising a front member in the form of a thin sheet of paper adapted to be ornamented by printing or painting, a backing in the form of a loosely-woven fabric, and means for securing the backing to the paper consisting of a cement which will absorb moisture from the usual paper hanger's paste applied to the fabric backing.

1,193,061. DRIVING AND STOPPING MECHANISM. EUGENE J. RAY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 19, 1914. Serial No. 862,490. (Cl. 74—46.)



1. Driving and stopping mechanism for button hole sewing and other machines, having in combination, a cam carrying actuating and controlling gear, a second gear, driving mechanism for rotating the controlling gear independently of the second gear, driving mechanism for rotating the second gear and controlling gear simultaneously, means controlled by the controlling gear for throwing said driving mechanisms into and out of operation acting to throw one mechanism out of operation as the other is thrown in, and connections between the controlling gear and the second gear for locking the second gear against displacement while its driving mechanism is thrown out.

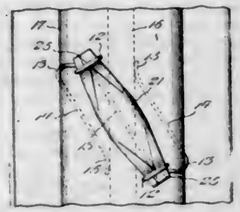
2. Driving and stopping mechanism for button hole sewing and other machines, having in combination, actuating and controlling mechanism, a second actuating mechanism, driving mechanism for driving the actuating and controlling mechanism independently of the second actuating mechanism, driving mechanism for driving the second actuating mechanism and the actuating and controlling mechanism simultaneously, means controlled by the controlling mechanism for throwing said driving mechanisms into and out of operation acting to throw one mechanism out of operation as the other is thrown in, and connections between the controlling mechanism and the second actuating mechanism for locking the second actuating mechanism against displacement while its driving mechanism is thrown out.

3. Driving and stopping mechanism for button hole sewing and other machines, having in combination, an actuating gear provided with a blank space extending over a portion of its periphery, a pinion engaging the gear during a portion of its rotation and registering with the blank space during another portion of the rotation, a locking segment carried by said pinion, a locking plate carried by said gear arranged to engage the locking segment and lock the pinion against rotation while the pinion registers with the blank space, a second pinion meshing with said gear, independent driving means for each pinion, and means for throwing said driving means into and out of operation acting to throw one driving means out of operation as the other driving means is thrown into operation.

4. Driving and stopping mechanism for button hole sewing and other machines, having in combination, an actuating gear, driving mechanism therefor comprising a clutch, a two part clutch shifting lever, a spring acting on one part when disconnected from the second part to throw in the clutch, a cam acting on the second part when the parts are connected to throw out the clutch, a latch arranged to connect the parts when the second part is released by the cam, and a trip for the latch.

5. Driving and stopping mechanism for button hole sewing and other machines, having in combination, an actuating gear, driving mechanism therefor comprising a clutch, a two part clutch shifting lever, a spring acting on one part when disconnected from the second part to throw in the clutch, a cam acting on the second part when the parts are connected to throw out the clutch, a latch trip, and a latch arranged to move out of engagement with the trip when the clutch is thrown in and to connect the parts of the lever when the second part is released by the cam.

1,193,062. CLIP FOR HOLDING RAILROAD SIGNAL-TORPEDOES. HARRY M. REGNIER, Decatur, Ill. Filed Aug. 3, 1912. Serial No. 713,144. (Cl. 24—81.)

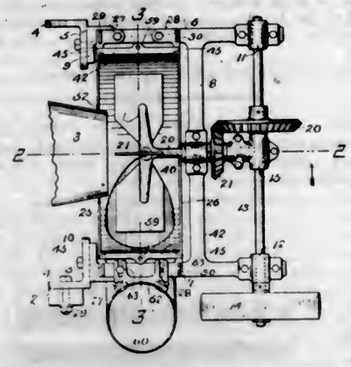


A clip of the character described comprising a spring member made of a single length of spring wire including a base stem having at each end an oblong loop said loops extending in parallel spaced relation and arranged to lie on top of a rail from each of which is continued a crooked rail head engaging arm, each arm ending in a curved extremity adapted to lie against the web of a rail, as and in the manner set forth.

1,193,063. CONVEYER ATTACHMENT FOR FEED-CUTTING MACHINES. HIESTER H. REINHART and IRVIN REINHART, Virginville, and CLEMENT G. MOYER, Molltown, Pa. Filed May 18, 1915. Serial No. 28,816. (Cl. 230—11.)

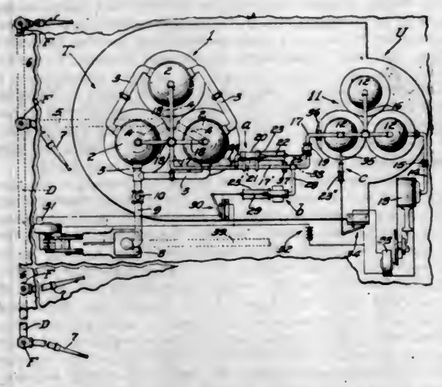
1. In a conveyer attachment for feed cutting machines, a supporting frame, a fan-and-driving mechanism therefor journaled in the frame, and a drum inclosing said fan, said drum being made up of top and bottom sections each comprising spaced front and rear half-disks having interlocking tongues, notches in the metting-faces of each half-disk, a band-portion peripherally held between said half-disks, locking strips secured to the ends of each band-portion and engaged in said notches, and a conveyer pipe extension of the bottom band-portion.

2. In a conveyer attachment for feed cutting machines, a supporting frame, a fan-and-driving mechanism therefor journaled in the frame, and a drum inclosing said fan, said drum being made up of top and bottom sections each comprising spaced front and rear half-disks having interlocking tongues, notches in the meeting-faces of each half-disk, a band portion peripherally held between said half-disks, locking strips secured to the ends of each band-portion and engaged in said notches, locking means engaging the superimposed locking strips, and a conveyer-pipe extension of the bottom-band portion.



3. In a conveyer attachment for feed cutting machines, a supporting frame, a fan-and-driving mechanism therefor journaled in the frame, and a drum inclosing said fan, said drum being made up of spaced front and rear disks and a circumferential band portion peripherally held between said disks, and a conveyer-pipe extension of said band-portion, bolting lugs on said disks to secure them to the frame, and a conveyer-pipe support adjustably secured to the frame.

1,193,064. FIRE-EXTINGUISHING SYSTEM AND APPARATUS. ALTA LEMAN REYNOLDS, Long Beach, Cal. Filed Oct. 22, 1912. Serial No. 727,243. (Cl. 103—79.)



1. A fire extinguishing system comprising a water container; means to supply water thereto under pressure; means to discharge water from the container under a predetermined pressure; an air receiver; means to supply air to the air receiver under pressure exceeding said predetermined pressure; means to conduct air from the air receiver to the water container; mechanism to cut off and control the flow of air through said conducting means; means connected with and operated by the pressure in the water container to automatically open the cut-off mechanism when the pressure in the water container falls below the predetermined pressure and to close the cut-off when the pressure in the water container exceeds said predetermined pressure; means operated by the pressure in the water container to start the water supplying means into operation when the water pressure in the container falls below the predetermined pressure, and means operated by the pressure in the air container to start the air compressing means when the pressure in the air container falls below its maximum and contime to operate until the required air pressure is reached even after the air-supplying means has been cut off.

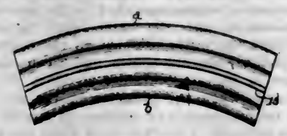
2. In an automatic fire extinguishing apparatus comprising a water-containing tank supplied with air pressure; an air-contain tank supplied with air under a pressure exceeding the air pressure in said water-containing tank, regulating means between the water-containing tank and the air-containing tank whereby air pressure from the latter may be conveyed to the former, the combination of an electrically-operated air compressor for maintaining the required pressure in said air-containing tank, switch connections for controlling said electrically-operated compressor, and automatic means for making and breaking said switch connections for starting and stopping the air compressor according to the needs and demands of pressure conditions in said tanks.

3. In a system of the character described having a water-containing tank, an air- containing tank, a pump to supply water to said water-containing tank and to refill it whenever water is being withdrawn therefrom, an air compressor for compressing the air in said air-containing tank, regulating means between said water-containing tank and air-containing tank for supplying air pressure to said water-containing tank from said air-containing tank and thereby maintain the required pressure in said water-containing tank, the pressure in said air-containing tank exceeding the pressure being conveyed to the water-containing tank, means for simultaneously operating said pump and air compressor to replenish water to said water-containing tank and air to said air-containing tank, respectively, and means to operate said air compressor even after said pump has come to rest to continue to supply air under pressure to said air-containing tank until the required pressure is obtained in said air-containing tank.

4. An automatic fire extinguishing apparatus comprising one or more water containing tanks supplied with air pressure, one or more air-containing tanks supplied with air under pressure; and regulating means between the water-containing tanks and the air-containing tanks whereby pressure may be conveyed from the latter to the former; automatic means for replenishing said air-containing tanks whenever air is drawn from it to said water-containing tank; said means comprising electrically-operated air compressors, switches, means sensitive to the pressure of said air-containing tanks adapted to throw said switches into contact to operate the air compressors whenever the air pressure in said air-containing tanks falls and to throw said switches out of contact when the air pressure has been restored.

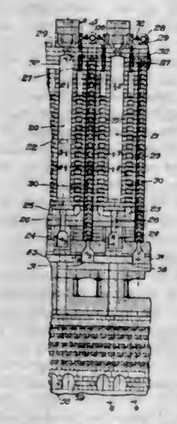
5. In an automatic fire extinguishing apparatus comprising a water-containing tank supplied with air pressure, an air-containing tank supplied with air under a pressure exceeding the air pressure in said water-containing tank, regulating means between the water-containing tank and the air-containing tank whereby air pressure from the latter may be conveyed to the former and to maintain the required pressure in the latter whenever water is being withdrawn from said latter, the combination of an electrically-operated pump for re-filling the water-containing tank whenever water is being drawn therefrom, an electrically-operated compressor for supplying air to the air-containing tank to restore the pressure therein whenever it is being reduced to restore pressure in said water-containing tank, switch connections for controlling said electrically-operated pump and compressor, and automatic means for making and breaking said switch connections for starting and stopping the compressor and pump according to the needs and demands of pressure conditions in said tanks.

1,193,065. SHEET-METAL EXPANSIBLE ELBOW. DAVID A. RITCHIE, Cambridge, Mass. Filed June 28, 1915. Serial No. 36,857. (Cl. 126—310.)



A sheet metal pipe elbow composed of two members consisting of normally flat blanks of substantially the same width and having parallel straight sides, said members being curved longitudinally and transversely and provided with longitudinally extended corrugations and with flanges of substantially equal length on opposite sides of each member, the coöperating side flanges of said members being interlocked and forming seams at the sides of the longitudinally corrugated elbow so as to leave the outer and inner longitudinally corrugated surfaces of said elbow smooth and seamless.

1,193,066. RECUPERATIVE COKE-OVEN. ARTHUR ROBERTS, Evanston, Ill. Filed Dec. 4, 1914, Serial No. 875,503. Renewed May 8, 1916. Serial No. 96,250. (Cl. 202—9.)



1. A bench of coking retorts each provided on each side with heating means, and means to supply the same with gas and air in suitable quantities for combustion, in combination with recuperators between the adjacent walls of adjacent retorts, such recuperators being constructed as independent elements, capable of being removed without disturbance of the retorts and the heating means thereof.

2. A bench of coking retorts having heating means in their side walls, and means for supplying the heating means with gas and air in suitable quantities for combustion, in combination with recuperators between the adjacent walls of adjacent retorts, such recuperators being constructed as independent elements, capable of being removed without disturbance of the retorts and the heating means thereof.

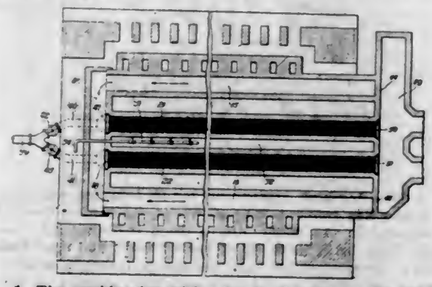
3. A bench of coking retorts having heating means in their side walls, and means for supplying the heating means with gas and air in suitable quantities for combustion, in combination with recuperators between the adjacent walls of adjacent retorts, such recuperators being constructed as independent self-contained elements, capable of expansion and adjustment independent of the retorts and the heating means thereof.

4. A bench of coking retorts having heating means in their side walls, and means for supplying the heating means with gas and air in suitable quantities for combustion, in combination with recuperators between the adjacent walls of adjacent retorts, such recuperators being constructed as independent elements having their side walls air-tight, and capable of being removed without disturbance of the retorts and the heating means thereof.

5. A bench of coking retorts having heating means in their side walls, and means for supplying the heating means with gas and air in suitable quantities for combustion, in combination with recuperators between the adjacent walls of adjacent retorts, such recuperators being constructed as independent elements having air passages on their interior portions and having their side walls airtight, and capable of being removed without disturbance of the retorts and the heating means thereof, and connections for the delivery of air from said passages to said heating means.

[Claims 6 to 15 not printed in the Gazette.]

1,193,067. REGENERATIVE COKE-OVEN. ARTHUR ROBERTS, Evanston, Ill. Filed Feb. 23, 1915, Serial No. 10,041. Renewed May 8, 1916. Serial No. 96,251. (Cl. 202—9.)



1. The combination with a bench of ovens, an air supply inlet, and a spent gas outlet, of a pair of regenerators extending lengthwise beneath the bench of ovens, tunnels running lengthwise beneath the sides of the bench, downcomers from the heating walls of each oven to said tunnels, an air supply passage running lengthwise beneath the central portion of the bench of ovens, connections from said passage to the burners of each heating wall, a connection from the upper portion of each regenerator to the air supply passage, a valve in each of said connections, means for simultaneously closing the valves from one regenerator to the air supply passage and opening the valve from the other regenerator to the said passage, a connection from the tunnels to one end of each regenerator, a damper between each regenerator and the said connection, a connection from the other end of each regenerator to the spent gas outlet, a passageway beneath each regenerator, a connection from the air supply inlet to each of said passageways, and a valve in each of said connections.

2. The combination with a bench of ovens, an air supply inlet, and a spent gas outlet, of a pair of regenerators extending lengthwise beneath the central portion of the bench of ovens, tunnels running lengthwise beneath the sides of the bench, downcomers from the heating walls of each oven to said tunnels, an air supply passage running lengthwise beneath the central portion of the bench of ovens and above the regenerators, connections from said passage to the burners of each heating wall, a connection from the upper portion of each regenerator to the air supply passage, a valve in each of said connections, means for simultaneously closing the valves from one regenerator to the air supply passage and opening the valves from the other regenerator to the said passage, a connection from the tunnels to one end of each regenerator, a damper between each regenerator and the said connection, a connection from the other end of each regenerator to the spent gas outlet, a passageway beneath each regenerator, a connection from the air supply inlet to each of said passageways, and a valve in each of said connections.

3. The combination with a bench of ovens, an air supply inlet, and a spent gas outlet, of a pair of regenerators extending lengthwise beneath the bench of ovens, tunnels

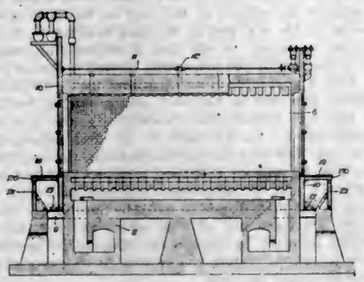
extending lengthwise beneath the sides of the bench, downcomers from the heating walls of each oven to said tunnels, an air supply passage running lengthwise of the bench between the ovens and the regenerators, connections from said passage to the burners of each heating wall, a connection from the upper portion of each regenerator to the air supply passage, a valve in each of said last mentioned connections, means for simultaneously closing the valve from one regenerator to the air supply passage and opening the valve from the other regenerator to said passage, a connection from the tunnels to one end of each regenerator, a damper between each regenerator and the said connection, a connection from the other end of each regenerator to the spent gas outlet, a passageway beneath each regenerator, connections from the air supply inlet to each of said passageways, and a valve in each of said connections.

4. The combination with a bench of ovens, an air supply inlet, and a spent gas outlet, of a pair of regenerators beneath the central portion of the bench of ovens; tunnels running lengthwise beneath the sides of the bench, downcomers from the heating walls of each oven to said tunnels, an air supply passage beneath the ovens, connections from said passage to the burners of each heating wall, connections from the upper portion of each regenerator to the air supply passage, a valve in each of said connections, a connection from the tunnels to one end of each regenerator, a damper between each regenerator and the said connection, a connection from the other end of each regenerator to the spent gas outlet, a passageway beneath each regenerator, a connection from the air supply inlet to each of said passageways, and a valve in each of said connections.

5. The combination with a bench of ovens, an air supply inlet, and a spent gas outlet, of a pair of regenerators beneath the bench of ovens, an air supply passage beneath the ovens and above the regenerators, connections from said passage to the burners of each heating wall, a connection from the upper portion of each regenerator to the air supply passage, a valve in each of said connections, connections from the heating walls of the ovens to one end of each regenerator, a damper in each of said connections, a connection from the other end of each regenerator to the spent gas outlet, a passageway beneath each regenerator, connections from the air supply inlet to each of said passageways, and a valve in each of said connections.

[Claims 6 to 16 not printed in the Gazette.]

1,193,068. EXPANSION CONTROL FOR COKE-OVENS. ARTHUR ROBERTS, Evanston, Ill. Continuation of application Serial No. 10,042, filed Feb. 23, 1915. This application filed Aug. 5, 1915. Serial No. 43,751. (Cl. 202—9.)



1. The combination with a plurality of coke ovens, each oven having heating walls and the heating walls of each oven being independent of the adjacent heating walls of the adjacent ovens, whereby the heating walls of each oven are free to expand and contract independently of the heating walls of the adjacent ovens, of a strut in engagement with each end of each heating wall, means for limiting the distance between the upper ends of the struts for each heating wall and for compressing said ends against the wall, and means for limiting the distance between the lower ends of the said struts and for compressing said ends against the wall.

2. The combination with a plurality of coke ovens, each oven having heating walls and the heating walls of each oven being independent of the adjacent heating walls of the adjacent ovens, whereby the heating walls of each oven are free to expand and contract independently of the heating walls of the adjacent ovens, of a strut in engagement with each end of each heating wall, and means for limiting the distance between the struts of each heating wall and for compressing said struts against the ends of the wall.

3. The combination with a plurality of coke ovens, each oven having heating walls and the heating walls of each oven being independent of the adjacent heating walls of the adjacent ovens, whereby the heating walls of each oven are free to expand and contract independently of the heating walls of the adjacent ovens, of means of maintaining each heating wall under a desired amount of compression independently of the other heating walls.

4. The combination with a plurality of coke ovens, each oven having heating walls and the heating walls of each oven being independent of the adjacent heating walls of the adjacent ovens, whereby the heating walls of each oven are free to expand and contract independently of the heating walls of the adjacent ovens, of means for maintaining the upper portion of each heating wall under a desired amount of compression independently of the other heating walls, and means for maintaining the lower portion of each heating wall under a desired amount of compression independently of the other heating walls.

5. In a bench of coke ovens having heating walls the combination with a suitable foundation, of a stress member in said foundation beneath each heating wall and supporting the same, the heating walls of each oven being independent of the adjacent heating walls of the adjacent ovens, whereby the heating walls of each oven are free to expand and contract independently of the heating walls of the adjacent ovens, a strut adjacent to each end of each heating wall, each strut having its lower end adjacent to the corresponding stress member, and an adjustable connection between the lower end of each strut and the corresponding stress member of suitable construction to permit the said lower end to move lengthwise of the stress member, and means for maintaining the upper ends of the struts of each heating wall in firm engagement with such heating wall.

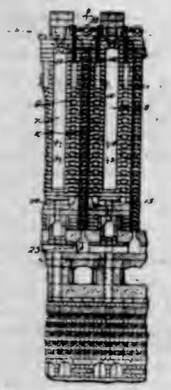
[Claims 6 to 14 not printed in the Gazette.]

1,193,069. RECUPERATOR-WALL. ARTHUR ROBERTS, Evanston, Ill. Original application filed Dec. 4, 1914, Serial No. 875,503. Divided and this application filed Jan. 3, 1916. Serial No. 69,995. (Cl. 158—7.6.)

1. A recuperator wall comprising a plurality of blocks laid up in courses, the blocks of each course breaking joints with the blocks of the adjacent courses, each block being centrally recessed in its side faces and in its bottom face to thereby provide a meshwork of interconnected horizontally and vertically extending passages on the interior of the wall, a channel extending along one edge of the wall and in communication with said meshwork of passages at that edge, and a plurality of burner connections adjacent to the other edge of the wall and in communication with said meshwork of passages at that edge.

2. A recuperator wall comprising a plurality of blocks laid up in courses, the blocks of each course breaking joints with the blocks of the adjacent courses, and each block being recessed on one vertical face and one horizontal face to provide a meshwork of interconnected horizontally and vertically extending passages, a channel extending along one edge of the wall and in communication with said meshwork at that edge, and a plurality of burner connections adjacent to another edge of the wall, said burner connections communicating with said meshwork adjacent to said edge.

3. A recuperator wall comprising a plurality of blocks, each block having one vertical face and one horizontal face recessed, and the blocks being laid up in such a manner as to present a meshwork of interconnected passages, a channel extending along one edge of the wall and in communication with said meshwork at that edge, and a plurality of burner connections adjacent to another edge of the wall and in communication with said meshwork adjacent to said edge.



4. A recuperator wall comprising a plurality of blocks, said blocks being recessed on two adjacent faces to provide a meshwork of interconnected passages on the interior of the wall, a channel extending along one edge of the wall and in communication with said meshwork, and a plurality of burner connections adjacent to another edge of the wall and in communication with said meshwork.

1,193,070. ARTIFICIAL FUEL. JOHN T. ROBERTS, Washington, D. C. Filed Feb. 28, 1916. Serial No. 80,864. (Cl. 44—1.)



In an artificial fuel, a briquet comprising a substantially rectangular porous body and having the pores thereof filled with a gaseous oil, an impervious coating for the body to retain the oil and gases therefrom in the pores of the body, and a substantially rectangular reinforcing member of ignitible material centrally and longitudinally embedded within said body and having its ends and edges terminating only a short distance from the ends and edges of the body, whereby to effect in preventing the breaking of the briquet and the coating thereon when subjected to pressure from any direction.

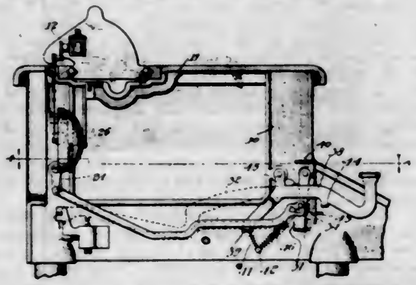
1,193,071. ANTIFRICTION-BEARING. HUGH M. ROCKWELL, Bristol, Conn., assignor, by mesne assignments, to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 12, 1910. Serial No. 548,899. (Cl. 64—36.)

A double-row antifriction bearing comprising a race-member, two rows of antifriction members seated thereon and held against lateral displacement with respect thereto, and a second race-member having its surface opposite said first race-member defining an arc which extends over both said rows of antifriction members and is eccentric to the axis of rotation of the bearing, whereby said arcuate surface prevents tilting of said race-members with respect to each other and affords race tracks which are



parallel and concentric with each other; substantially as described.

1,193,072. TYPE-WRITER. ALVAH C. ROEBUCK and ADOLPH J. PRUSZYNSKI, Woodstock, Ill. Filed Jan. 2, 1914. Serial No. 809,853. (Cl. 197—110.)



1. In line lock and release mechanism, the combination with a movable line-lock actuator, of a lever having a pin adapted to be engaged by the actuator at a predetermined point, a link connected at one end to the lever with a slot at the other end, a bell crank with a pin in one arm adapted to engage in the slot of the link, a spring connected to the pin and to the link tending to draw the bell crank upwardly in the slot, a second link connected to the other arm of the bell crank, a line-lock ball controlled thereby, and a spring connected to the last named link adapted to be overcome by the tension of the other spring.

2. In line lock and release mechanism, the combination with a movable line-lock actuator, of a lever having a pin adapted to be engaged by the actuator at a predetermined point, a link connected at one end to the lever with a slot at the other end, a bell crank with a pin in one arm adapted to engage in the slot of the link, a spring connected to the pin and to the link tending to draw the bell crank upwardly in the slot, a second link connected to the other end of the bell crank having a slot at its forward end, a pivotally connected line lock ball having a pin freely movable in the slot, and a spring tending to draw the last named link downwardly and rearwardly and overcome by the pressure of the first named spring.

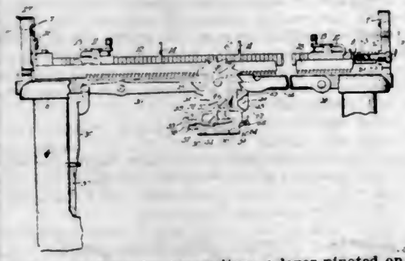
3. In line lock and release mechanism, the combination with a link having an L-shaped slot at the forward end, of a pivoted and spring-pressed line-lock ball with a pin movable in the slot, means to actuate the link to move the ball, and a release key pivoted above the link having a projection adapted to engage the link on its under side to raise it and to permit the movement of the pin in the slot for releasing the ball.

4. In line lock and release mechanism, the combination with a slotted link, of means for moving the link longitudinally, a pivoted line-lock ball having a pin movable in the slot, means tending to draw the ball out of line-locking position, and a release key adapted to engage the link to move the slotted end of the link transversely with a projection for limiting the releasing movement of the line-lock ball.

5. In line lock and release mechanism, the combination with a link having a slot at its forward end, of means for moving the link longitudinally, a pivoted line-lock member with a pin projecting through the slot of the link, means tending to draw the line-lock member rearwardly, and a line-lock release lever having a projection adapted to engage below the link and another projection adapted to engage the rear of the line-lock member to limit the rearward movement thereof in the slot of the link.

[Claims 6 to 8 not printed in the Gazette.]

1,193,073. TYPE-WRITER. ALVAH C. ROEBUCK, Woodstock, Ill. Filed Jan. 28, 1914. Serial No. 814,850. (Cl. 197—176.)



1. In a tabulator for typewriters, a lever pivoted on one side of the typewriter, and an arm pivoted on the other side thereof having a tabulator stop proper disposed between the pivots of the arm and the said lever and the arm being loosely connected with the adjacent end of the lever.

2. In a typewriter machine, a tabulator comprising a lever pivoted at one side thereof, an arm pivoted at the opposite side and extending toward the lever, and a yielding connection between the arm and the lever whereby the upward movement of the inner end of the lever tends to move the said arm resiliently upward.

3. In a typewriter, tabulator mechanism comprising a lever, a pivoted arm having a tabulator stop proper disposed between the pivots of the arm and said lever, a member pivoted adjacent the pivot of the arm and loosely connected at its free end to the adjacent end of the lever, and a resilient connection between the said member and the arm which carries the tabulator stop proper.

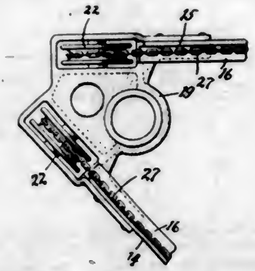
4. In a typewriter, tabulator mechanism comprising a lever pivotally mounted at one side thereof, an arm carrying a tabulator stop proper pivotally mounted at the other side with the stop proper disposed between the pivot points of the arm and lever, a member pivotally mounted on the same side as the said arm, a pin and slot connection between the member and one end of the lever, and a spring between the arm and member whereby the arm is raised resiliently when the member is raised.

5. In a typewriter, tabulator mechanism comprising a lever mounted at one side of the machine, an arm mounted at the other side thereof carrying a tabulator stop proper and formed with a lateral projection, a member pivotally mounted at the same side of the machine as the arm adapted to rest on the lateral projection of the arm and having a depending portion extending below the lateral projection, a loose connection between the free end of the member and the lever, and a spring disposed between the projection of said member and the lateral projection of said arm tending to press them yieldingly apart thereby holding the member yieldingly against the lateral projection of the arm.

[Claims 9 to 23 not printed in the Gazette.]

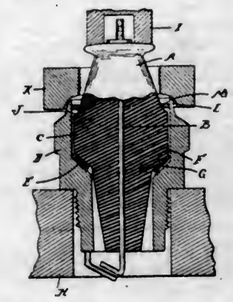
1,193,074. ATTACHMENT FOR DERRICKS OF THE WHEELBARROW TYPE. MICHAEL J. SASGEN, Chicago, Ill., assignor to Sasgen Derrick Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 14, 1913. Serial No. 761,007. (Cl. 212—47.)

1. An attachment for derricks of the wheelbarrow type, comprising a member having a central portion adapted to be revolubly secured to the upper end of a mast, companion arm-like members arranged one to each side of the central portion of said member and extending outward in divergent relation to one another, and adapted to receive the inner ends of booms, and companion sheave mountings, one lying adjacent to each of said arms, substantially as described.



2. An attachment for derricks of the wheelbarrow type, comprising a member having a central portion adapted to be revolubly secured to the upper end of a mast, companion arm-like members arranged on each side of the central portion of said member and extending outward in divergent relation to one another, and adapted to receive the inner ends of booms, said member being formed with companion openings, one lying to the rear of each of said arms and extending parallel to the arm with which it is associated, and a sheave mounting adjacent each of said openings, substantially as described.

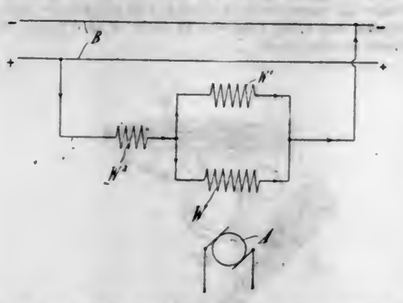
1,193,075. SPARK-PLUG AND METHOD OF FORMING THE SAME. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Feb. 1, 1915. Serial No. 5,886. (Cl. 123—169.)



1. The method of forming spark plugs, comprising the seating of the insulator in a casing or bushing upon a compressible, resilient gasket, applying an initial pressure against the insulator to compress said gasket, heating the metal of the casing to substantial plasticity, and fashioning the same while heated to substantial plasticity to bear against said insulator and to maintain the pressure upon said gasket.

2. The method of forming spark plugs, comprising the seating of the insulator in a casing upon a compressible resilient gasket, compressing the gasket between the insulator and the casing, heating the metal of the casing while the gasket is under compression until the metal of the casing becomes substantially plastic, and fashioning the same while in that condition to bear against the insulator and to maintain the pressure upon the gasket.

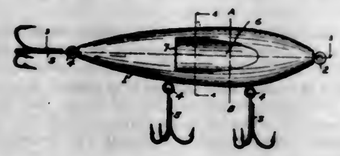
1,193,076. ELECTRICAL CONNECTION. LUDWIG SCHÖN, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Feb. 20, 1912. Serial No. 678,894. (Cl. 171—229.)



1. In a dynamo machine having a field winding excited from a source of constant voltage, electric connections for eliminating the influence of the heating of the field winding by the flowing electricity; said connections comprising a circuit branch containing said field winding and a first auxiliary resistance connected in parallel therewith and two conductors connecting said circuit branch with said source of voltage, one of said conductors containing a second auxiliary resistance through which the undivided current runs, the magnitudes and the temperature-coefficients of said auxiliary resistances, being so chosen, that any alteration of the value of said resistances due to the heating of the field winding by the flowing electricity causes the current supplied to said first auxiliary resistance to alter approximately at the same rate as the current of said second auxiliary resistance, while the current supplied to said field winding remains approximately constant.

2. In a dynamo machine having a field winding excited from a source of constant voltage, electric connections for eliminating the influence of the heating of the field winding by the flowing electricity; said connections comprising a circuit branch containing said field winding, and a first auxiliary resistance connected in parallel therewith, and two conductors connecting said circuit branch with said source of voltage, one of said conductors containing a second auxiliary resistance through which the undivided current runs, the magnitudes and the temperature-coefficients of said auxiliary resistances and their ration of cooling, being so chosen, that any alteration of the value of said resistances due to the heating of the field winding by the flowing electricity causes the current supplied to said first auxiliary resistance to alter approximately at the same rate as the current of said second auxiliary resistance, while the current supplied to said field winding remains approximately constant.

1,193,077. FISH BAIT OR LURE. JOHN RAY SCHOONMAKER, Kalamazoo, Mich. Filed Nov. 15, 1915. Serial No. 61,539. (Cl. 43—30.)



1. A fish bait or lure, comprising a body oval in cross section and tapered toward both ends, the greatest diameter of the body being in front of its longitudinal center, said body having longitudinal side grooves of substantial cross section and length increasing in depth toward the rear and terminating in abrupt shoulders, the front and rear ends of one groove being to the rear of the front and rear ends respectively of the other, the front end of one groove being near the front end of the body and the front end of the other being near the greatest body diameter, a hook and hook attaching means, and a line attaching means at the front end of said body.

2. A fish bait or lure, comprising a body oval in cross section and tapered toward both ends, the greatest diameter of the body being in front of its longitudinal center, said body having longitudinal side grooves of substantial cross section and length, the front and rear ends of one groove being to the rear of the front and rear ends respectively of the other, the front end of one groove being near the front end of the body and the front end of the other being near the greatest body diameter, a hook and hook attaching means, and a line attaching means at the front end of said body.

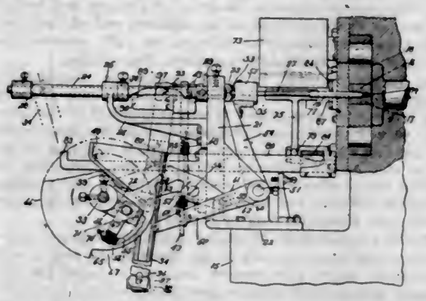
3. A fish bait or lure comprising a body tapered toward both ends and having oppositely disposed longitudinal grooves of substantial cross section and length increasing in depth toward the rear, the front and rear ends of one groove being at the rear of the front and rear ends respectively of the other, and a line attaching means at the front end of said body.

4. A fish bait or lure, comprising a body tapered toward both ends and having oppositely disposed longitudinal grooves of substantial cross section and length, the front and rear ends of one groove being at the rear of the front and rear ends respectively of the other, and a line attaching means at the front end of said body.

5. A fish bait or lure, comprising a body tapered toward both ends and having oppositely disposed longitudinal grooves of substantial cross section and length, the front end of one groove being near the front end of the body and the front end of the other being near the point of greatest body diameter, a hook and hook attaching means, and a line attaching means at the front end of said body.

[Claims 6 to 8 not printed in the Gazette.]

1,193,078. AUTOMATIC FEEDING DEVICE FOR SWAGING-MACHINES. EPHRIAM J. SCOTT, Providence, R. I., assignor to Dexter B. Potter, Providence, R. I. Filed Dec. 2, 1914, Serial No. 875,173. Renewed Dec. 6, 1915. Serial No. 65,369. (Cl. 78—14.)



1. An improved feeding mechanism for swaging machines comprising a feeding mandrel, means for advancing said mandrel to engage and move a blank into position to be operated upon, and means movable independent of the movement of said mandrel for advancing the work into position to be finished.

2. An improved feeding mechanism for swaging machines comprising a feeding mandrel, means for advancing said mandrel to engage and move a blank into position to be operated upon, means movable independent of the movement of said mandrel for advancing the work into position to be finished, and yieldable means in said independently movable means arranged to compensate for the varying lengths of the different blanks.

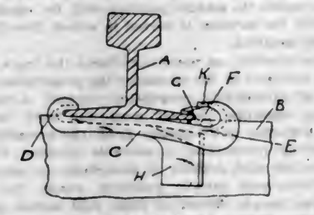
3. An improved feeding mechanism for swaging machines comprising a feeding mandrel, means for positioning a tubular blank in the path of said mandrel, means for causing said mandrel to advance a predetermined distance into the blank, means for preventing an advance of the blank while the said mandrel is entering thereinto and means for releasing the blank to permit it to be carried to operative position.

4. In a feeding mechanism, a container for tubular blanks, a feeding mandrel, means for transferring a blank from said container into the path of said mandrel, means for advancing the mandrel into the tubular blank and carrying the blank forward to be operated upon and means for limiting the outward movement of the blank to permit the mandrel to be withdrawn therefrom after being operated upon.

5. An improved feeding mechanism for swaging machines comprising a feeding mandrel, means for feeding tubular blanks into the path of movement of said mandrel, means for causing said mandrel to enter the tube and advance the same to operating position, means for swaging a portion of the tube in a tapering form onto the mandrel, and means for locking the mandrel against a backward movement while the tube is being operated upon.

[Claims 6 to 28 not printed in the Gazette.]

1,193,079. RAIL-ANCHOR. JOHN M. SCOTT, Racine, Wis., assignor to Otto R. Barnett, Chicago, Ill. Filed Dec. 31, 1912. Serial No. 739,441. (Cl. 238—4.)



A rail anchor comprising a bar adapted to extend under the rail base provided at one end with a jaw adapted to engage one of the base flanges of the rail and at the other end with a larger jaw disposed obliquely with respect to the rail, a key adapted to be driven into said last-named jaw formed on its inner edge with a tapered slot in which the adjacent edge of the base flange is received; said key being formed on its upper surface with a transverse groove and the edge of said inclosing jaw having a smooth flange extending across and adapted to be off-set into said groove.

1,193,080. RAILWAY-TIE AND BRACE. JAMES G. SMITH, Litchfield, Ill. Filed Apr. 22, 1915. Serial No. 23,166. (Cl. 238—3.)

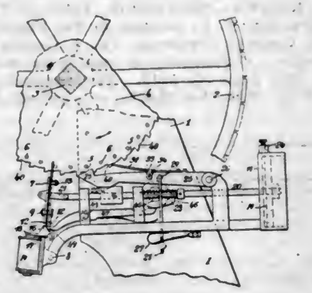


1. A railway rail support comprising a tie having rail brace portions adapted to bear against the outer faces of the rails and with recesses for cushion members, said recesses each having a depression forming a socket, and a cushion member engaging each of said recesses and adapted to support the rails and each having a lug engaging in one of the sockets.

2. A railway rail support comprising a tie having rail brace portions adapted to bear against the outer faces of the rails and with recesses for cushion members, said recesses each having a depression forming a socket, a cushion member engaging each of said recesses and adapted to support the rails and each having a lug engaging in one of the sockets, and spreader devices adapted to engage the inner faces of the rails at each side of the tie and independent thereof.

3. A railway rail support comprising a tie of concrete material having integral rail brace portions adapted to bear against the outer faces of the rails and with recesses for cushion members, said recesses each having a depression forming a socket, a cushion member engaging each of said recesses and adapted to support the rails and each having a lug engaging in one of the sockets, and spreader devices adapted to engage the inner faces of the rails at each side of the tie and independent thereof.

1,193,081. LATCH MECHANISM FOR BULLETIN-PRINTING MACHINES. KARL A. A. STAAHLGREN, New York, N. Y., assignor to National Electric Bulletin Corporation, a Corporation of New York. Filed Nov. 20, 1915. Serial No. 62,585. (Cl. 178—35.)



1. In telegraph printers the combination with a large type wheel, an index wheel operated in unison therewith, said index wheel being provided with notches in its periphery, a latch device coöperating with said index wheel, a first pawl in said latch device, a back stop pawl yieldingly mounted on said first named pawl, and means for operating both of said pawls into engagement with the notches aforesaid.

2. In telegraph printers the combination with a large type wheel, an index wheel operated in unison therewith, said index wheel being provided with two sets of notches in the periphery, a latch device coöperating with said index wheel, two relatively movable pawls in said latch device mounted to move together and means for operating said pawls to cause one of them to engage a notch in the one set of notches and to cause the other of said pawls to engage a notch in the other set of notches.

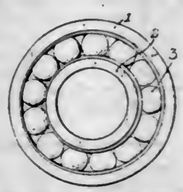
3. In telegraph printers the combination with a large type wheel, an index wheel operated in unison therewith, said index wheel being provided with relatively large notches in its periphery and relatively smaller notches cut into said larger notches, a pivoted rigid pawl, a back stop pawl mounted on said rigid pawl to move with respect thereto and means for operating a rigid pawl into engagement with one of the larger notches and simultaneously therewith moving the back stop pawl into engagement with one of the smaller notches.

1,193,082. RADIAL BALL-BEARING. CHARLES F. SULTEMEYER, Norwich, Conn., assignor to Globe Ball Bearing Co., Brooklyn, N. Y., a Corporation of New York. Filed May 11, 1914. Serial No. 837,811. (Cl. 64—59.)

1. In a radial ball bearing, a ring having a raceway with a confining wall reduced radially and eccentrically sufficient to admit a ball by temporary change in the dimension of the ring, said reduction being cylindrical and reduced axially to limit the mass of the eccentric portion produced by the reduction first named.

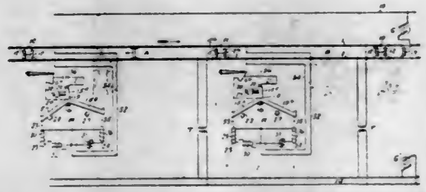
2. A radial ball bearing comprising two rings having raceways with continuous confining walls; one of said walls being reduced eccentrically and radially to provide a low point at which to admit the ball by temporary

change in the dimension of the ring; said wall being likewise reduced axially and concentrically with the ring to



reduce the impairment of the equilibrium of the ring, both of said reductions being cylindrical.

1,193,083. RAILWAY SIGNALING. PERCY H. THOMAS, Upper Montclair, N. J., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 774,810, filed June 20, 1913. This application filed Mar. 6, 1916. Serial No. 82,327. (Cl. 246—36.)



1. In combination, an electric railway the track rails of which are included in the circuit of the propulsion current, a source of alternating propulsion current, a source of alternating signaling current connected with the track rails and differing from the propulsion current in frequency; a relay comprising a movable member, two windings connected with the track rails and adapted to exert torque in opposite directions on said member, means associated with said windings for causing the torques to vary at different rates with variations of frequency, means for exerting on said member a third torque independent of frequency for balancing the difference between the two first-mentioned torques at the frequency of the signaling current; a signal, a controlling circuit for said signal, and means controlled by said movable member for closing said circuit when the torques on the member are balanced but not when the torques are unbalanced in either direction.

2. In combination, an electric railway the track rails of which are included in the circuit of the propulsion current, a source of alternating propulsion current, a source of alternating signaling current connected with the track rails and differing in frequency from the propulsion current; a relay comprising a movable member having a middle position and capable of movement in opposite directions from said middle position, means for biasing said member in one direction from said middle position, two windings connected in multiple across the track rails and adapted to exert torque on the said member in opposite directions, means included in circuit with said windings for causing the currents therein to vary at different rates with changes in frequency, the circuits of the windings and their lever arms being so proportioned that at the frequency of the signaling current the difference between the torques produced by the said windings is equal to and opposite to the torque produced by the biasing means, whereby at the signaling current frequency the member occupies its middle position and whereby at any other frequency the member is moved in one direction or the other from the middle position; a railway signal; a controlling circuit for said signal, and means operated by said movable member for closing said circuit when the member occupies its middle position and for opening said circuit when the member is moved in either direction from said middle position.

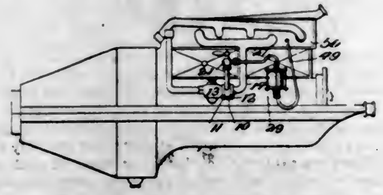
3. In combination, an electric railway the track rails of which are included in the circuit of the propulsion current, a source of alternating propulsion current, a source of alternating signaling current connected with the track rails and differing in frequency from the propulsion current; a relay comprising a movable member having a middle position and capable of movement in opposite directions from said middle position, means for biasing said member in one direction from said middle position, two windings connected in multiple across the track rails and adapted to produce torque on the said member in opposite directions, the lever arms of the torques produced by said windings being such that when the forces exerted by the two windings are equal the difference between the torques produced by the windings is equal to and opposite to the torque produced by the biasing means, means included in the circuits of said windings for causing the currents therein to vary at different rates with changes in frequency, the circuits being so proportioned that at the signaling current frequency the forces exerted by the two windings are equal, whereby at the signaling current frequency the member occupies its middle position and whereby at any other frequency the member is moved in one direction or the other from the middle position; a railway signal; a controlling circuit for said signal, and means operated by said movable member for closing said circuit when the member occupies its middle position and for opening said circuit when the member is moved in either direction from said middle position.

4. In combination, an electric railway the track rails of which are included in the circuit of the propulsion current, a source of alternating propulsion current, a source of alternating signaling current connected with the track rails and differing in frequency from the propulsion current; a relay comprising a movable member having a middle position and capable of movement in opposite directions from said middle position, means for biasing said member in one direction from said middle position, two windings having equal numbers of turns connected in multiple across the track rails and adapted to produce torque on the said member in opposite directions, the lever arms of the torques produced by said windings being such that when the forces exerted by the windings are equal the difference between the torques produced by the windings is equal to and opposite to the torque of the biasing means, means included in the circuits of the windings for causing the currents in the windings to be equal at the signaling frequency and unequal at all other frequencies, whereby at the signaling current frequency the member occupies its middle position and whereby at any other frequency the member is moved in one direction or the other from the middle position; a railway signal; a controlling circuit for said signal, and means operated by said movable member for closing said circuit when the member occupies its middle position and for opening said circuit when the member is moved in either direction from said middle position.

5. In combination, an electric railway the track rails of which are included in the circuit of the propulsion current, a source of alternating propulsion current, a source of alternating signaling current differing in frequency from the propulsion current; a relay comprising a movable member having a middle position and capable of oscillation in both directions from said middle position, means for biasing said member in one direction from said middle position, said member having two lever arms forming an angle of less than one hundred eighty degrees, two magnetic cores acting respectively on said lever arms, two windings connected in multiple across the track rails and acting respectively on said lever arms, means included in circuit with said windings for causing the currents therein to vary at different rates with changes in frequency the circuits of the windings and the said lever arms being so proportioned that at the frequency of the signaling current the difference between the torques produced on the movable member by the said cores is equal and opposite to the torque produced by the said biasing means, whereby at the signaling current frequency the member occupies its middle position and whereby at any other frequency the member is moved in one direction or the other from the middle position; a railway signal; a controlling circuit for said signal, and means operated by said movable member for closing said circuit when the member occupies its middle position and for opening said circuit when the member is moved in either direction from said middle position.

[Claims 6 to 21 not printed in the Gazette.]

1,193,084. MOISTURE-SUPPLYING ATTACHMENT FOR INTERNAL-COMBUSTION ENGINES. WILLIAM M. THOMAS, Albuquerque, N. Mex., assignor of three-tenths to A. W. Goodrich and four-tenths to C. M. Barber, Albuquerque, N. Mex. Filed June 29, 1915. Serial No. 37,054. (Cl. 123—25.)



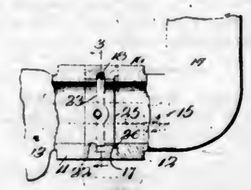
1. The combination with an internal combustion engine having a water jacket, an intake manifold and a carbureter adapted to supply fuel to the intake manifold, of a vaporization cup, means for supply water from the water jacket to the vaporization cup, means for limiting the amount of water in the cup, a mixer adapted to be inserted between the manifold and carbureter, and means for supplying moisture from the vaporization cup to the mixer, said mixer including a body having a fuel passage and an annular chamber surrounding the passage, a ring fitting in the passage and forming a wall for the chamber, and tubes communicating with the chamber through the ring and formed with perforations for the passage of moisture from the tubes to the manifold.

2. The combination with an internal combustion engine having a water jacket, an intake manifold and a carbureter adapted to supply fuel to the intake manifold, of a vaporization cup, means for supplying water from the water jacket to the vaporization cup, means for limiting the amount of water in the cup, a mixer adapted to be inserted between the manifold and carbureter, and means for supplying moisture from the vaporization cup to the mixer, said mixer including a body having a fuel passage and an annular chamber surrounding the passage, a ring fitting in the passage and forming a wall for the chamber, tubes communicating with the chamber through the ring and formed with perforations for the passage of moisture from the tubes to the manifold, and a mixing screen interposed between the tubes and manifold.

3. A device of the character described including a vaporization cup provided at its lower end with an inlet port and at its upper end with an outlet port, means for connecting the inlet port with the water jacket of an engine, a float valve controlling the level of water admitted through the inlet port, a mixer adapted to be inserted between a carbureter and intake manifold, and means establishing communication between the outlet port of the cup and the mixer.

4. A device of the character described including a vaporization cup provided at its lower end with an inlet port and at its upper end with an outlet port, means for connecting the inlet port with the water jacket of an engine, a float valve controlling the level of water admitted through the inlet port, a mixer adapted to be inserted between a carbureter and intake manifold, and means establishing communication between the outlet port of the cup and the mixer, said means including a manually operable valve.

1,193,085. MIXING DEVICE. WILLIAM M. THOMAS, Albuquerque, N. Mex. Original application filed June 29, 1915, Serial No. 37,054. Divided and this application filed Dec. 14, 1915. Serial No. 66,759. (Cl. 48—180.)



1. A moisture supplying device and mixer adapted to be inserted between a carbureter and intake manifold and including a body having a fuel passage and an annular chamber surrounding the passage, a ring fitting in the passage and forming a wall for the chamber, perforated tubes extending across the ring and communicating at their ends with the chamber, and a mixing screen mounted in the outlet end of the fuel passage, the body being formed with an inlet opening communicating with the chamber.

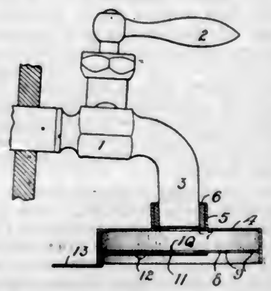
2. A moisture supplying device and mixer adapted to be inserted between a carbureter and intake manifold and including a body having a fuel passage and an annular chamber surrounding the passage, perforated tubes extending across the passage and communicating at their ends with the chamber, and means providing for passage of moisture to the chamber.

3. A moisture supplying device and mixer adapted to be inserted between a carbureter and intake manifold and including a body formed with a fuel passage, a screen extending across the outlet end of the passage, perforated tubes extending across the passage between the inlet end thereof and the screen, and means for supplying moisture to the tubes.

4. A moisture supplying device and mixer adapted to be inserted between a carbureter and intake manifold and including a body having a fuel passage and an annular chamber surrounding the passage, a tube extending across the passage and communicating at its ends with the chamber, said tube having perforations formed in that side directed toward the outlet end of the passage, and means for supplying moisture to the chamber.

5. A moisture supplying device and mixer adapted for application to a carbureter and including a body having a fuel passage and a chamber surrounding the passage; a perforated tube extending across the passage and communicating at its ends with the chamber, and means providing for passage of moisture to the chamber.

1,193,086. FAUCET SPRAY ATTACHMENT. MAX THOMSEN, Chicago, Ill. Filed Mar. 19, 1914. Serial No. 825,788. (Cl. 137—83.)



The combination with a faucet, of a spraying device releasably attached thereon embracing an apertured spray partition therein, an enlarged aperture therethrough in

alinement with the spout of the faucet to permit an uninterrupted stream from the faucet to pass therethrough, and a resilient bar closure pivotally mounted on the under surface of said partition and extending beyond the outer edge of said device to close said enlarged aperture and frictionally engaging the partition to hold said bar closure in any position of adjustment.

1,193,087. PAPER BOX AND BLANK THEREFOR. ROTHCHILD F. THORNDIKE, Chelsea, Mass. Filed Apr. 6, 1916. Serial No. 89,431. (Cl. 229—34.)



1. A paper box member comprising a central portion and four walls all of which are of double thickness, two of the walls being provided with pockets, the inner sections of the other two walls having extensions forming tongues, said tongues extending into the pockets in planes at a right angle to the walls which carry said tongues, the inner sections of the walls which are provided with pockets being permanently secured to the outer sections of said walls to prevent accidental disengagement of the tongues from the pockets.

2. A paper box member comprising a central portion and four walls all of which are of double thickness, two of the walls being provided with pockets, the inner sections of the other two walls having extensions forming tongues, said tongues extending into the pockets in planes at a right angle to the walls which carry said tongues, the inner sections of the walls which are provided with pockets being permanently secured to the outer sections of said walls to prevent accidental disengagement of the tongues from the pockets, said tongues being transversely greased to facilitate their insertion into the pockets.

3. A paper box member comprising a central portion having two side walls each of double thickness with a folded upper edge, the inner section being permanently secured along its lower portion to the outer section and said inner section having oblique end edges, and two end walls each of double thickness with a folded upper edge, the inner section having extensions forming tongues which enter the pockets of the side walls behind said oblique edges in planes at a right angle to the said end walls.

4. A paper box member comprising a central portion having two side walls each of double thickness with a folded upper edge, the inner section being permanently secured along its lower portion to the outer section and said inner section having oblique end edges, and two end walls each of double thickness with a folded upper edge, the inner section having extensions forming tongues which enter the pockets of the side walls behind said oblique edges in planes at a right angle to the said end walls, said extensions being transversely creased to facilitate their insertion into said pockets.

5. A box blank comprising a central portion, two side portions of double thickness with folded outer edges, the inner section being permanently secured to the outer portion at a point remote from said folded edge, and two end portions each comprising two foldable sections, the outer sections having extensions forming tongues adapted to be bent at right angles to said end sections, means being provided to enable said tongues to be slipped into the pockets formed between the sections of the side portions.

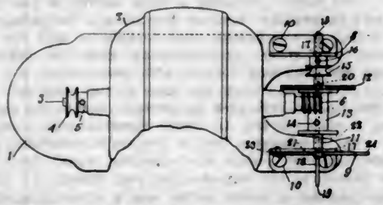
[Claims 6 to 8 not printed in the Gazette.]

1,193,088. DEMOUNTABLE RIM. HENRY J. TRAEES, Edwardsville, Ill. Filed Mar. 17, 1914, Serial No. 825,389. Renewed Apr. 29, 1916. Serial No. 94,509. (Cl. 152—21.)



In combination with a felly band having on its periphery spaced annular shoulders of different inclinations, the outermost shoulder having openings therethrough and which openings are chamfered at their inner ends, a rim having on its inner perimeter spaced annular shoulders inclined to correspond with the shoulders of the felly band, projections on said rim for insertion through said openings and to engage said chamfered inner ends thereof and means to prevent relative rotation of the rim and felly band.

1,193,089. TRANSMISSION MECHANISM. FRANCIS A. WAGNER and FOREST H. HARTZELL, Dayton, Ohio, assignors to The American Mechanical Toy Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 20, 1916. Serial No. 85,260. (Cl. 74—36.)



1. The combination, with a motor comprising a base and a worm, of a frame mounted upon said base below said worm, a worm wheel rotatably journaled in said frame and adapted to mesh with said worm, said worm wheel being capable of axial movement, a device for shifting said worm wheel into and out of mesh with said worm, and a device to lock said shifting device in either position.

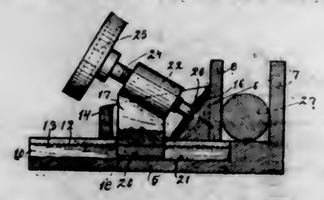
2. The combination, with a power driven worm, of a pair of spaced frame members, a rotatably and axially movable shaft journaled in said frame members, a worm wheel fixed to said shaft and adapted to mesh with said worm, a slide movably mounted on said frame member and provided with a fork loosely engaging said worm wheel, whereby said wheel may be moved into and out of mesh with said worm, said slide being provided with spaced notches, and means adapted to engage the notches to hold the wheel either in or out of mesh with said worm.

3. The combination, with a gear, of a pair of spaced frame members, a shaft journaled in said frame members, a second gear mounted upon said shaft, a member slidably mounted within said frame members and having a portion in engagement with said second gear, whereby the latter may be shifted into and out of mesh with said first-mentioned gear, said member being provided with spaced-apart notches adjacent one of the frame members, and a detent pivoted to the frame member adjacent the notches and adapted to engage the same to hold the second gear either in mesh or out of mesh with the first-mentioned gear.

4. The combination, with a motor comprising a base and a motor shaft provided with a gear, of a frame comprising spaced apart vertical members mounted on said base, a rotatably and axially movable gear journaled in said frame members and adapted to engage and disengage said first-mentioned gear, power transmitting devices connected to said last-mentioned gear, and means mounted on said spaced apart frame members for moving said last-mentioned gear to cause it to engage and disengage said first-mentioned gear.

5. The combination, with a source of power, of a pair of spaced apart frame members, a rotatably and axially movable shaft journaled in said frame members, a gear and power transmitting devices mounted on said shaft and connected to the source of power, and a slide mounted on said members at one side of said shaft and connected to the latter for shifting the gear to connect it to and disconnect it from the source of power.

1,193,090. VISE. HALLOCK WARDMAN, Racine, Wis., assignor to J. Moores Jones, Racine, Wis. Filed Dec. 27, 1915. Serial No. 68,646. (Cl. 81—30.)



1. In a vise, the combination of a fixed member comprising a clamping jaw and a base, a movable member comprising a clamping jaw and a base slidably mounted upon the base of the fixed member and angularly adjustable with respect thereto and provided with a slot having an inclined face at one end thereof, and locking means for securing said movable jaw in different positions of angular adjustment adjustably secured to the base and having wedging engagement with said inclined face.

2. In a vise, the combination with a fixed member comprising a clamping jaw and a base, a movable member comprising a clamping jaw and a base slidably mounted upon the base of the fixed member and angularly adjustable with respect thereto and provided with a slot having a concavely curved inclined face at one end thereof, and locking means for securing said movable jaw in different positions of angular adjustment adjustably secured to the base and having wedging engagement with said inclined face.

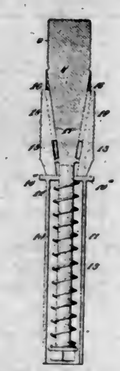
3. In a vise, the combination of a fixed member having a clamping jaw and a supporting base, a movable jaw member slidably mounted upon the top of said supporting base for movement toward or away from said fixed clamping jaw and at an angle with respect thereto and provided with a concavely curved inclined bearing surface, a rotatable screw shaft having a spherically convex end for wedging engagement with said bearing surface, and a locking member adjustably secured to the supporting base and having an inclined threaded bearing for said shaft.

4. In a vise, the combination of a fixed member having a clamping jaw and a supporting base, a movable jaw member slidably mounted upon the top of said supporting base for movement toward or away from said fixed clamping jaw and at an angle with respect thereto and provided with a concavely curved inclined bearing surface, a rotatable screw shaft having a spherically convex end for wedging engagement with said bearing surface, and a locking member having a wedging engagement with said base and provided with an inclined threaded bearing for said shaft.

5. In a vise, the combination, with a fixed member comprising a clamping jaw and a base, a movable member comprising a clamping jaw and a base slidably mounted upon the base of the fixed member for movement toward or away from said fixed member and at an angle with respect thereto and provided with a concavely curved inclined bearing surface, and locking means adjustably secured to the base and having wedging engagement with said inclined face.

[Claims 6 and 7 not printed in the Gazette.]

1,193,091. TUBING-CATCHER. ROBERT Y. WATSON, Taft, Cal. Filed Apr. 10, 1915. Serial No. 20,477. (Cl. 103—65.)



1. A tubing catcher comprising a head, a gripping member carried by the head for projection therefrom and a resiliently mounted tubular member open at its lower end and substantially closed at its upper end, said tubular member serving as a means for projecting the gripping member and being constantly unrestrained for operation by the resistance of a liquid when the tubing catcher is accidentally dropped therein.

2. A tubing catcher comprising a head, a pair of gripping members slidably mounted on the head, a tube slidably mounted with relation to the head and free of the gripping members, a flange on the upper end of the tube forming a support for the gripping members, and a resilient support for the tube, freely supporting the same in normal position, said tube being always free for sliding relative to the head.

3. A tubing catcher comprising a head, said head having an inclined groove formed on each side, a gripping member slidably mounted in each groove, a freely movable tube slidably mounted with relation to the head, a flange on the upper end of the tube forming a support for the gripping members and an abutment for the liquid to act upon when the same is dropped and a resilient support freely mounting the tube when the latter is in normal position.

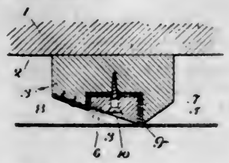
4. A tubing catcher comprising a head, said head having an inclined groove formed on each side, a gripping member slidably mounted in each groove, a downwardly extending solid rod on the lower end of the head, a tube slidably mounted on the rod, a flange on the upper end of the tube forming a direct support or seat for the gripping members, and a spring on the rod forming a support for the tube.

5. A tubing catcher comprising a head, a gripping member carried by the head for projection therefrom, and means movable relative to the gripping member and head and operable solely by the resistance of a liquid in dropping therein for projecting the gripping member from the head.

1,193,092. FURRING-STRIP. JERVIS BENNETT WEBB, Mount Vernon, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Oct. 24, 1914. Serial No. 868,513. (Cl. 20—4.)

1. In coverings for walls and ceilings, means securing two widths of covering to the wall or ceiling along the

line of their adjoining edges, the said means being concealed by the covering and having contact relation with the meeting edges only thereof in the rear of the outer surface of the covering.



2. In coverings for walls and ceilings, a plurality of widths of covering arranged with their adjoining edges overlapping, and means uniting and securing the several widths of covering to the wall or ceiling along the lines of their overlapping edges, the said means being concealed by the covering.

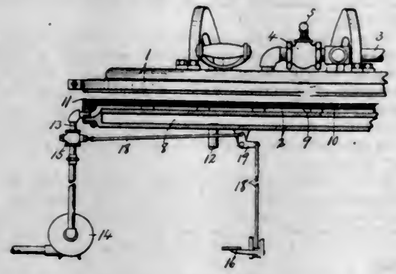
3. In coverings for walls and ceilings, two widths of covering material arranged with their adjoining edges overlapping, and a two-part fastening means adapted to unite and secure the widths of covering to the wall or ceiling along the line of the overlapping edges, one member of the fastening means having the said overlapping edges secured to it and the other member being concealed within a fold of the covering.

4. In coverings for walls and ceilings, two widths of covering material arranged with their adjoining edges overlapping, and tongue and grooved members adapted to unite and secure the widths of covering to the wall or ceiling along the line of their overlapping edges, the grooved member having the said overlapping edges fastened to it and both widths of material extending under the tongue member in the groove thereof.

5. In coverings for walls and ceilings, two widths of covering material arranged with their adjoining edges overlapping, and tongue and grooved members adapted to unite and secure the widths of covering to the wall or ceiling along the line of their overlapping edges, the grooved member having the said overlapping edges fastened to it and both widths of material extending under the tongue member in the groove thereof, the said members being concealed by the covering and shaped to clear that portion thereof lying in a plane parallel with the wall or ceiling.

[Claims 6 to 11 not printed in the Gazette.]

1,193,093. GARMENT-PRESSING MACHINE. BENJAMIN WEINBERGER, St. Louis, Mo., assignor to United States Hoffman Company, Syracuse, N. Y., a Corporation. Filed June 1, 1915. Serial No. 31,497. (Cl. 68—9.)



1. In a clothes pressing machine, coöperative pressing elements, means for introducing steam between said elements from an external source, and means for withdrawing such steam by suction from between said elements.

2. In a clothes pressing machine, coöperative pressing elements having pads covering their meeting faces, means for introducing steam between said pads, and means for withdrawing by suction the steam from between such pads.

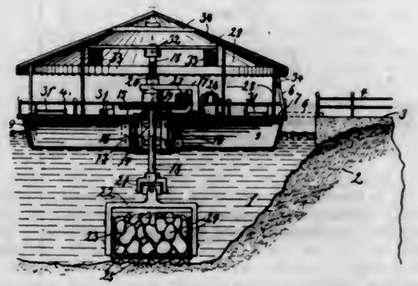
3. In a machine for pressing and shaping garments in combination with coöperative pressing elements, means for applying steam to the garments while under pressure and means for withdrawing the steam from the garment by suction.

4. In a machine for pressing garments, the combination of coöperative pressing elements, one of which is provided with an apertured press plate and a steam chamber communicating with the apertures, means for supplying steam to said chamber and a suction device connected to said chamber for withdrawing the steam therefrom.

5. In a garment pressing machine, the combination of coöperative pressing elements, means for distributing steam across and upon the garment, and a suction device for withdrawing steam from said garment.

[Claims 6 and 7 not printed in the Gazette.]

1,193,094. FLOATING MERRY-GO-ROUND. ADOLPH WENDT, St. Paul, Minn. Filed Mar. 8, 1916. Serial No. 82,996. (Cl. 46—27.)



1. An amusement apparatus comprising a circular hollow float with seats upon it, a vertical shaft journaled centrally through the float and having at its lower end means for anchoring it to the bottom of the water, a gear wheel slidably keyed on the shaft, means for retaining said wheel always at the same height relative to the float, a pinion meshing with said gear, and means carried on the float for rotating said pinion.

2. An amusement apparatus comprising a circular hollow float with seats upon it, a vertical shaft journaled centrally through the float and having at its lower end means for anchoring it to the bottom of the water, a gear wheel slidably keyed on the shaft, means for retaining said wheel always at the same height relative to the float, a pinion meshing with said gear, and means carried on the float for rotating said pinion, means fixed on the vertical shaft some distance above the float for the support of things not desired to rotate with the float.

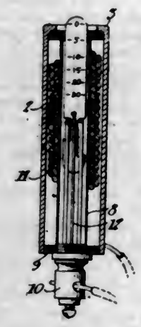
3. An amusement apparatus comprising a circular hollow float with seats upon it, a vertical shaft journaled centrally through the float and having at its lower end means for anchoring it to the bottom of the water, a gear wheel slidably keyed on the shaft, means for retaining said wheel always at the same height relative to the float, a pinion meshing with said gear, and means carried on the float for rotating said pinion, said shaft and anchoring means being connected together by a universal joint.

4. An amusement apparatus comprising a circular hollow float with seats upon it, a vertical shaft journaled centrally through the float and having at its lower end means for anchoring it to the bottom of the water, a gear wheel slidably keyed on the shaft, means for retaining said wheel always at the same height relative to the float, a pinion meshing with said gear and means carried on the float for rotating said pinion, said float being made in radial sections detachably secured together.

5. An amusement apparatus comprising a circular hollow float with seats upon it, a vertical shaft journaled centrally through the float and having at its lower end means for anchoring it to the bottom of the water, a gear wheel slidably keyed on the shaft, means for retaining said wheel always at the same height relative to the float, a pinion meshing with said gear, and means carried on the float for rotating said pinion, said float being made up of hollow radial sections secured together and a deck made in radial sections, and detachably secured upon the float.

[Claims 6 to 8 not printed in the Gazette.]

1,193,095. ELECTRICAL MEASURING INSTRUMENT. HUBBARD C. WEST, Mount Vernon, N. Y., assignor of one-fourth to David M. Benford and one-half to Sarah B. Benford, Mount Vernon, N. Y. Filed Sept. 4, 1914. Serial No. 860,144. (Cl. 171—95.)



1. An electrical measuring instrument comprising a supporting member, guiding means carried thereby, a movable graduated scale located in said guiding means and adapted to be projected beyond the same, and means including a magnetic core for effecting the movement of said scale on the application of energy to the instrument, said scale acted upon by gravity only in one direction and by the magnetic core only in the opposite direction.

2. An electrical measuring instrument comprising a supporting member, guiding means carried thereby, a nonmagnetic movable graduated scale located in said guiding means and adapted to be projected beyond the same, and means including a magnetic core for effecting the movement of said scale on the application of energy to the instrument, said scale acted upon by gravity only in one direction and by the magnetic core only in the opposite direction, whereby the use of a floating or liquid supported or glass inclosed instrument is avoided.

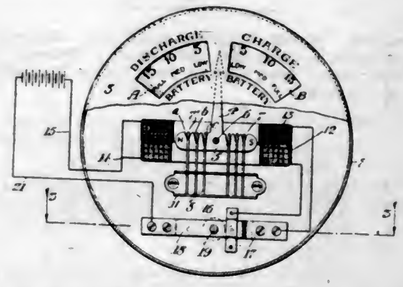
3. An electrical measuring instrument comprising a supporting member, guiding means carried thereby, a sliding graduated scale located in said guiding means and adapted to be projected beyond the same, and means including a magnetic core for effecting the movement of said scale on the application of energy to the instrument, said scale acted upon by gravity only in one direction and by the magnetic core only in the opposite direction.

4. An electrical measuring instrument comprising a supporting member, guiding means carried thereby, a movable graduated scale located in said guiding means and adapted to be projected beyond the same, means including a magnetic core for effecting the movement of said scale on the application of energy to the instrument, and one or more weights coöperating with said scale to retard the movement thereof, said scale acted upon by gravity only in one direction and by the magnetic core only in the opposite direction.

5. An electrical measuring instrument comprising a supporting member, guiding means carried thereby, a nonmagnetic movable graduated scale carried by said guiding means and adapted to be projected beyond the same, a solenoid magnetizable means adapted to be energized thereby and connected with said scale, said scale acted upon by gravity only in one direction and by the magnetizable means only in the opposite direction.

[Claims 6 to 27 not printed in the Gazette.]

1,193,096. ELECTRICAL MEASURING INSTRUMENT. HUBBARD C. WEST, Mount Vernon, N. Y., assignor of one-fourth to David M. Benford and one-half to Sarah B. Benford, Mount Vernon, N. Y. Filed Sept. 13, 1915. Serial No. 50,285. (Cl. 171—95.)



1. In an electrical measuring instrument, the combination of means for indicating the charging or discharging of a battery and for indicating the condition of the battery and including a swinging member and a plurality of weights normally free from the swinging member and adapted to be successively picked up by said swinging member.

2. An electrical measuring instrument comprising a supporting member, a magnetic member pivotally mounted thereon, a pair of coils encircling said magnetic member and adapted to be connected in separate circuits to a source of electrical energy, means coöperating with said magnetic member for indicating the charging or discharging of the source of energy and for indicating the condition of said source, means for throwing one of said coils in circuit while cutting out the other, and gravity actuated means for retarding the pivotal movement of said magnetic member and comprising a plurality of members normally free from the magnetic member and adapted to be successively picked up by said magnetic member.

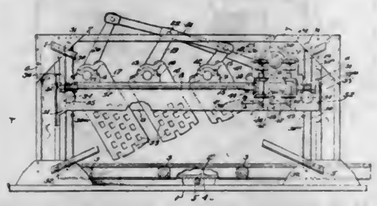
3. An electrical measuring instrument comprising a supporting member, a magnetic member pivotally mounted thereon, a pair of coils encircling said magnetic member and adapted to be connected in separate circuits to a source of electrical energy, means coöperating with said magnetic member for indicating the charging or discharging of the source of energy and for indicating the condition of said source, means for throwing one of said coils in circuit while cutting out the other, and gravity actuated means coöperating with said magnetic member for retarding the pivotal movement of said magnetic member and comprising a plurality of members normally free from the magnetic member and adapted to be successively picked up by said magnetic member.

4. An electrical measuring instrument comprising a supporting member, a magnetic member pivotally mounted thereon, a pair of coils encircling said magnetic member and adapted to be connected in separate circuits to a source of electrical energy, means coöperating with said magnetic member for indicating the charging or discharging of the source of energy and for indicating the condition of said source, a switch for throwing one of said coils in circuit while cutting out the other, and gravity actuated means for retarding the pivotal movement of said magnetic member and comprising a plurality of members normally free from the magnetic member and adapted to be successively picked up by said magnetic member.

5. An electrical measuring instrument comprising a supporting member, a magnetic member pivotally mounted thereon, a pair of coils encircling said magnetic member and adapted to be connected in separate circuits to a source of electrical energy, means coöperating with said magnetic member for indicating the charging or discharging of the source of energy and for indicating the condition of said source, means for throwing one of said coils in circuit while cutting out the other, and two series of weights disposed at opposite sides of the pivotal center of said magnetic member, the weights of each series adapted to be successively operative for retarding the pivotal movement of said member.

[Claims 6 to 31 not printed in the Gazette.]

1,193,097. STONE-CUTTING MACHINE. BERNARD A. WESTERLING, Hopkinton, and AUGUST P. HEDBERG, Milford, Mass. Filed Mar. 10, 1911. Serial No. 613,585. (Cl. 125—18.)



1. In a stone cutting machine, opposite uprights, a tool support extending from one upright to the other and braced thereby, said tool support having a tilting movement to varying angles with relation to the work and having its opposite ends curved to coöperate with the uprights to maintain continuous engagement with the respective uprights irrespective of the angle to which the support is tilted.

2. In a stone cutting machine, opposite uprights, a tool support extending from one upright to the other and braced thereby, said tool support having provision for a tilting movement to varying angles with relation to the work and having its opposite ends curved and provided with oppositely projecting extensions of said curved ends to maintain continuous engagement with the respective uprights irrespective of the angle to which the support is tilted.

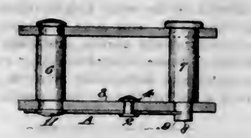
3. A stone cutting machine comprising fixed, spaced apart uprights, a work support, a tool support extending in the same general direction as said work support and mounted on said uprights, a series of operatively movable tools mounted in edgewise alinement on said tool support of progressively greater length from front to rear of the machine so as to present an extended diagonal cutting line to the work, and means for relatively adjusting said tool support and said work support to bring a line drawn through the operative portions of the several tools to different angles relative to the work support.

4. A stone cutting machine comprising a work support, a tool support mounted for tilting adjustment thereover, a series of operatively movable tools of progressively increasing length from front to rear of the machine so as to present an extended diagonal cutting line to the work mounted on said tool support and means for adjusting both ends of said tool support simultaneously or one end only at will, relative to said work support.

5. A stone cutting machine comprising a work support, a tool support tiltably mounted thereover, a series of oscillatory tools of progressively increasing length from front to rear so as to present an extended diagonal cutting line to the work mounted in edgewise alinement on said tool support, and means for adjusting the respective ends of said tool support individually to different heights above said work support for the purpose stated.

[Claims 6 to 11 not printed in the Gazette.]

1,193,098. CHAIN-DRIVE COUPLING. NELSON A. WHEELER, Stockton, Cal., assignor to The Holt Manufacturing Company, Stockton, Cal., a Corporation of California. Filed July 19, 1915. Serial No. 40,558. (Cl. 74—49.)



1. A drive chain coupling comprising spaced side plates, a pin fixedly connecting the plates and projecting outwardly from one plate, a removable pin connecting the plates and projecting from the specified plate, the projecting end of the removable pin being slotted, and a flexible plate pivoted directly to the specified side plate having the extremity of one end engageable in the slotted end of the removable pin and its opposite end apertured to receive the projecting end of the fixed pin.

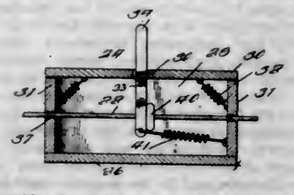
2. A drive chain coupling comprising spaced side plates, a pin fixedly connecting the plates and projecting outwardly from one plate, a removable pin connecting the plates and provided with a flattened end projecting through the specified side plate, said projecting flattened end being slotted, and a flexible locking plate pivoted to the specified side plate for swinging to either side of the projecting pins said locking plate engaging in the slot of the removable pin and interlocking with the projecting end of the fixed pin.

3. A drive chain coupling comprising spaced side plates, a pin fixedly connecting the plates and projecting outwardly from one plate, a removable pin connecting the plates and having a projecting end slotted, and a flexible locking plate having its end passable through the slot of the removable pin and pivoted to the specified side plate for swinging to either side thereof.

4. A drive chain coupling comprising a pair of side plates one of which has a flat-sided opening, a pin removably carried by the other plate and formed with a flat-sided end portion passing through the opening of the first side plate, said projecting end being slotted in its flat side, a locking plate pivoted to swing to either side of the projecting end and passable through the slot of the latter, and a second pin fixedly connecting the side plates.

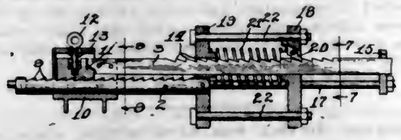
5. A drive chain coupling comprising a pair of side plates one of which has a flat-sided opening, a pin removably carried by the other plate and formed with a flat-sided end portion passing through the opening of the first side plate, said projecting end being slotted, a second pin connecting the plates and providing a rounded head projecting from the first plate, and a locking plate pivoted to the first plate between the projecting ends of the pins, said locking plate having one end engageable in the slot of the first pin and the opposite end apertured to pass over the head of the second pin and embrace the latter.

1,193,099. RAILWAY-SIGNAL. STEPHEN B. WHITEHEAD and GEORGE A. CASTLE, Inwood, Iowa. Filed May 1, 1912. Serial No. 694,493. (Cl. 246—48.)



The combination with a signaling device arranged adjacent a trackway, of a casing having a normally closed cover slidably associated therewith, a cable running through the casing, and connected at one end to the signaling device, an operating arm pivoted to the casing and extended through the cover, means carried by the cable operable by the arm to move the cable in one direction when said arm is rocked in another direction, means yieldably holding the arm in engagement with the cable operating means, coil springs connected at each end of the casing and to the cover, said springs serving to positively return the cover to its closed position, after being moved by the rocking of the arm and to absorb the shock incident thereto, and means connecting the other end of the cable and trackway to prevent slack in the cable.

1,193,100. AUTOMATIC SLACK-ADJUSTER FOR BRAKE-GEARS. OLIVER P. WILHELM, Michigan City, Ind., assignor of twenty-five one-hundredths to Sanford S. Wilhelm and seventeen and one-half one-hundredths to Lane Wilhelm, Michigan City, Ind., and twenty-five one-hundredths to Ben Loewenthal, Chicago, Ill. Filed June 19, 1914. Serial No. 846,049. (Cl. 188—50.)



1. In a device of the class described a plurality of push bars, ratchet teeth formed thereon, yieldable connections between said push bars, a carriage slidable on one of said push bars and ratchet mechanism within said carriage for locking said push bars in various extended positions to automatically take up slack in a brake gear.

2. In an automatic adjusting mechanism for brake gears a plurality of push bars adjustably connected with one another, and a yieldable spring controlled connection between said push rods.

3. In a device of the class described slidably connected parallel push rods, a block secured on one of said push rods and slidable on the other thereof, another block slidable on said latter push rod, a pawl mounted in said latter block adapted to engage in recesses in said latter push bar to lock said block and bar together, a compression spring mounted between said respective blocks, and ratchet mechanism mounted on the latter of said push bars and slidably engaging the other thereof and adapted to lock said push bars one to another.

4. In a device of the class described a pair of push rods, ratchet mechanism mounted on one thereof to lock the same to the other push rod, and other ratchet mechanisms slidably mounted upon said first mentioned push rod and yieldably connected to the latter push rod, and also acting to lock said push rods one to another.

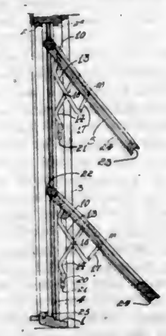
5. In a device of the class described a plurality of push rods, ratchet teeth on each thereof directed in opposite directions, and a ratchet mechanism secured to the end of each of said push rods, adapted to lock said push bars one to another to automatically take up slack in a brake gear after a lengthening movement between said respective push bars.

[Claims 6 to 11 not printed in the Gazette.]

1,193,101. REVERSIBLE WINDOW. HARRISON D. WILSON, Chicago, Ill. Filed July 20, 1914. Serial No. 852,126. (Cl. 20—42.)

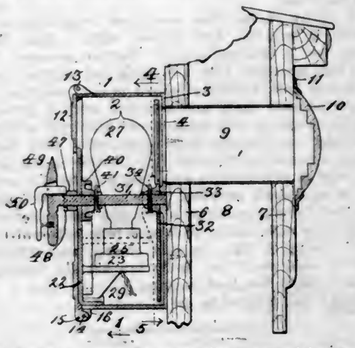
1. In a device of the class described, the combination with a window frame, and a rotatable sash mounted therein and having sliding connections with said frame at one end, of a lazy tongs having one arm pivoted to and the other arm slidably connected with said frame out of alinement with the sliding connection of the sash therewith, and links connecting said lazy tongs with said sash.

2. In a device of the class described, the combination with a window frame, and a sash mounted therein and having pivotal and sliding engagement therewith, of toggle levers pivotally and slidably connected to the window frame out of alinement with the sliding connection of said sash therewith and pivoted at a common pivot point on said sash, said levers acting to project the sash outwardly



and permitting complete inversion of the sash and supporting the sash in all adjustments.

1,193,102. SIGNAL-LAMP FOR STREET-CARS AND TRAINS. CALVIN A. WINEBRENNER, Akron, Ohio. Filed Apr. 24, 1916. Serial No. 93,255. (Cl. 240—23.)



1. A device of the class described comprising a casing provided in one end wall thereof with an opening, a shaft mounted in said casing, a disk mounted on said shaft provided with a plurality of openings equipped with translucent material adapted to be brought into successive registration with the opening in said casing when said shaft is rotated, a lamp bracket in said casing, a cover for the opposite side of said casing, said cover provided with a slot adapted to be covered by said lamp bracket when cover is in its closed position, a collar on said bracket provided at one end with a plurality of notches and a catch on said shaft adapted to interengage with said notches for locking said shaft against rotation.

2. A device of the class described comprising a casing provided in one end wall with a light opening, and a bearing, a lamp bracket in said opening provided with a bearing, a shaft mounted in said bearings, a disk mounted on said shaft and provided with a plurality of openings equipped with translucent material arranged to be brought selectively into registration with the light opening, a lamp mounted on said bracket, a hub mounted on said bracket surrounding said shaft and provided with a plurality of notches, an operating handle on the said shaft, a catch on said handle adapted to engage in the notches in said hub for locking said shaft against movement, a cover for the rear face of said casing provided with a slot to permit the passage therethrough of the handle on said shaft.

3. A device of the class described comprising a casing provided in one end wall thereof with a light diffusing opening and a bearing, a lamp bracket mounted in said

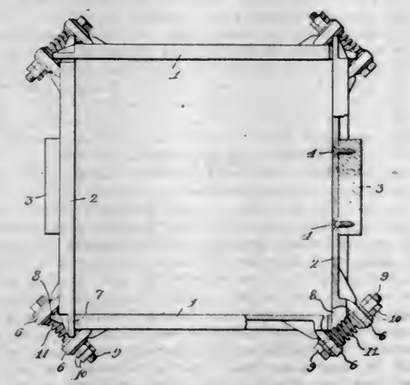
casing and provided with bearing and further provided with a peep hole, a shaft mounted in said bearings, a disk mounted on said shaft and provided with a plurality of openings equipped with translucent material arranged to be brought successively into registration with the light opening, a cover for the rear face of said casing provided with a slot in registration with the peep hole opening in said bracket, a polygonal plate on said shaft and provided with openings corresponding in number to the openings in the disks and adapted to be brought successively into registration with the peep hole in said bracket and the slot in said cover, a light in said casing and means for locking said shaft in a predetermined position.

4. A device of the class described comprising a casing provided in one end wall thereof with a light diffusing opening and a bearing, a lamp bracket mounted in said casing and provided with a bearing and further provided with a peep hole, a shaft mounted in said bearings, a disk mounted on said shaft and provided with a plurality of openings equipped with translucent material arranged to be brought successively into registration with the light opening, a cover for the rear face of said casing provided with a slot in registration with said peep holes, a polygonal plate on said shaft and provided with openings corresponding in number to the openings in the disk and adapted to be brought successively into registration with said peep hole and the slot in said cover, a light in said casing, an oscillating arm adapted to engage the faces of said polygonal plate for holding said shaft in a predetermined position.

5. A device of the class described comprising a casing provided in one end wall thereof with a light diffusing opening and a bearing, a lamp bracket mounted in said casing and provided with a bearing and further provided with a peep hole, a shaft mounted in said bearings, a disk mounted on said shaft and provided with a plurality of openings equipped with translucent material arranged to be brought successively into registration with the light opening, a cover for the rear face of said casing provided with a slot in registration with said peep hole, a polygonal plate on said shaft provided with openings corresponding in number to the openings in the disk and adapted to be brought into registration with said peep hole and the slot in said casing, a light in said casing, and interlocking means on said shaft and lamp bracket for locking said shaft in a predetermined position.

[Claim 6 not printed in the Gazette.]

1,193,103. SAND-MOLD JACKET. CHARLES O. WOOD, Chambersburg, Pa. Filed Feb. 4, 1914. Serial No 816,506. (Cl. 22—112.)



1. A sand mold jacket comprising a plurality of sides and means connecting two or more sides together to permit without adjustment, and automatically, the alteration of the relative inclination of the sides, the size or shape, or both size and shape of the space inclosed by said sides, and additional means for limiting the movement of the sides relatively to one another.

2. In a sand mold jacket, the combination with sides, of a connection between two adjacent sides at one or more corners, permitting relative movement in more than one plane, and lugs for limiting the swing of the sides on the longitudinal axes.

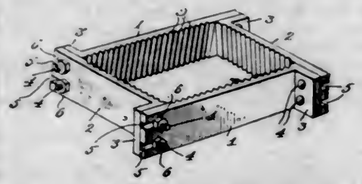
3. In a sand mold jacket, the combination with sides, of a connection between two adjacent sides at one or more corners permitting relative movement in more than one plane, and means for limiting one of said movements to a greater extent than limited by said connection.

4. In a sand mold jacket, the combination with sides, of a connection between two adjacent sides at one or more corners, permitting universal movement of the sides, and means to close the space at said corners.

5. In a sand mold jacket, the combination with sides, of a connection between two adjacent sides at one or more corners permitting universal movement of the sides with respect to one another, and means to close the space between adjacent sides at said corner, said means coöperating with the sides to limit their swing about longitudinal axes.

[Claims 6 to 28 not printed in the Gazette.]

1,193,104. DEVICE FOR SAND MOLDS. CHARLES O. WOOD, Chambersburg, Pa. Filed Apr. 1, 1914. Serial No. 828,771. (Cl. 22—112.)



1. In a sand mold device, a side made in a single piece and having serrations formed therein only on its sand mold contacting face integral with said side and arranged to permit the drawing of said device from the sand.

2. A sand mold device whose sides have their sand mold contacting faces provided with integral, longitudinal ribs arranged step-wise.

3. A sand mold device, one or more of whose sides has serrations only on the sand mold contacting side, said serrations being integral with the side, the sides having adjusting means to rigidly connect them together, said adjusting means permitting the adjustment of one side with respect to the other.

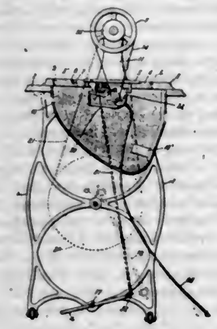
4. A sand mold device having metal sides whose inner sand mold contacting faces are roughened longitudinally of the faces and arranged to permit the device to be drawn from a sand mold without destroying the impressions made by said roughened faces.

5. In a sand mold device having a side having its sand mold contacting face provided with a series of substantially longitudinal ribs arranged step-wise.

[Claims 6 to 8 not printed in the Gazette.]

1,193,105. MOTOR-DRIVE. JAMES J. WOOD, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed Dec. 17, 1914, Serial No. 877,680. Renewed Jan. 12, 1916. Serial No. 71,804. (Cl. 172—179.)

1. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake drum on the motor spindle, a brake lever, a switch for the motor supply circuit, a floating lever connected at one end to said switch and at the other end through tension means with the brake lever, intermediate tension means connected to said lever so as to oppose the brake lever tension means, and an actuating connection for the switch lever adapted to oppose the last mentioned tension means so that when pressure is exerted upon it the switch will first close and thereafter the strain on the tension device of the brake lever will be progressively decreased.



2. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake drum on the motor spindle, a brake lever pivoted at one side thereof, a switch for the motor supply circuit, a floating lever connected at one end to said switch and at the other end through tension means with the brake lever, intermediate tension means connected to said lever so as to oppose the brake lever tension means, and an actuating connection for the switch lever adapted to oppose the last mentioned tension means so that when pressure is exerted upon it the switch will first close and thereafter the strain on the tension device of the brake lever will be progressively decreased.

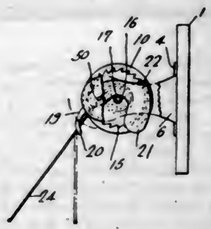
3. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake drum on the motor spindle, a brake lever pivoted at one side thereof extending across to the other side and carrying a brake shoe bearing on the drum, a switch for the motor supply circuit, a lever connected at one end to said switch and at the other end through tension means with the brake lever, intermediate tension means connected to said lever so as to oppose the brake lever tension means, and an actuating connection for the switch lever adapted to oppose the last mentioned tension means, so that when pressure is exerted upon it the switch will first close and thereafter the strain on the tension device of the brake lever will be progressively decreased.

4. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake drum on the motor spindle, a brake shoe bearing thereon, a transverse lever pivoted at one end and carrying said shoe intermediate of its ends, a switch for the motor circuit, an actuating lever for said switch, a relatively strong tension member extending from said lever to a fixed anchorage, and normally exerting strong tension on the lever to keep the switch open, a relatively weaker tension member connected between the ends of the switch lever and the brake lever and normally maintaining the brake shoe in engagement with the drum under braking pressure, and a pull device connected to the switch lever between the tension devices and the switch, the parts being so arranged and connected that a direct pull upon said pull device will first act against the relatively strong spring to move the switch lever and thereby throw over the switch into closed position, and a continuation of said pull will then move the switch lever upon the switch as a pivot against the tension of the relatively strong spring member, to relax the tension of the relatively weaker tension member and thereby decrease the pressure of the brake shoe upon the braking drum.

5. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake drum on the motor spindle, a brake shoe bearing thereon, a lever pivoted at one end to the motor structure and carrying said brake shoe, a make and break switch mounted on the motor field structure opposite the brake mounting, a lever having a slotted connection with said switch so as to allow lost motion, and a pair of tension springs of unequal strength, the weaker spring connecting the outer or free ends of the said levers, and the stronger spring connecting a point near the outer end of the switch lever to a fixed abutment, and a pull device connected to the switch lever at a point between said stronger spring and the switch, whereby a normal distribution of forces will maintain the switch lever in totally retarded position with its slotted end holding the switch open, and its other end maintaining maximum tension on the brake lever spring, but pressure exerted on the pull device will first move the slotted end of the switch lever to close the switch and then will turn said lever upon the switch pivot against the tension of the stronger spring to relax the tension on the brake lever spring.

[Claims 6 and 7 not printed in the Gazette.]

1,193,106. SHADE-ROLLER. ROBERT N. WOOD, Iuka, Miss. Filed Apr. 28, 1916. Serial No. 94,169. (Cl. 156—35.)



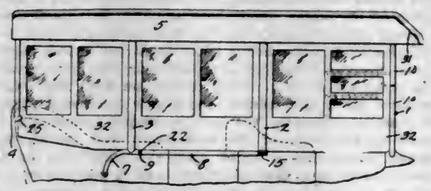
In a device of the class described, a roller; a shade wound on the roller; a washer abutting against one end of the roller; a drum coacting with the washer and including an extension provided with a ratchet wheel of less diameter than the washer; a bracket in which the extension is journaled; a lever fulcrumed intermediate its ends on the bracket and provided at one end with a lateral eye extended across the edge of the washer, the lever being equipped at its other end with a weight, and being supplied intermediate its ends with a pawl adapted to coact with the ratchet wheel; and a flexible element wound around the drum and extended through the eye; the eye being adapted to engage the periphery of the washer, under the tension of the flexible element, to act as a brake for the roller and to prevent the eye from engaging the ratchet wheel, the weight constituting a means for swinging the pawl into engagement with the ratchet wheel and constituting a means for swinging the eye away from the periphery of the washer.

1,193,107. AUTOMOBILE-TOP. JAMES MINOR WORKMAN, Greenville, S. C. Filed May 12, 1915. Serial No. 27,642. (Cl. 21—62.)

1. In a vehicle top, a guide rail, a tubular member having its inner end slidably engaging the rail, a bow slidably upon said tubular member, and a spring pressed latch within said tubular member and engageable with the rail to hold the bow in place.

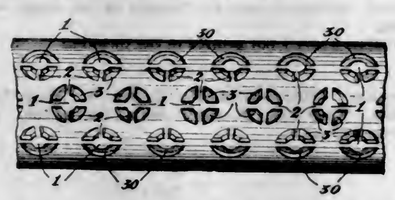
2. The combination with a vehicle body, a rear bow, links connecting the limbs of the rear bow and body whereby the rear bow may be moved downwardly with the link and whereby the rear bow may be moved upwardly with the links, bows adapted to be supported by the rear

bow when the rear bow is swung downwardly, and means carried by said links for engaging the rear bow when the



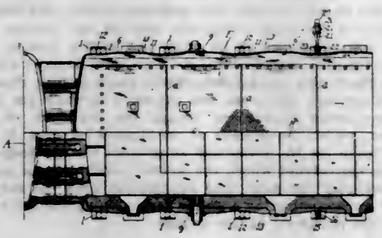
rear bow is raised and for engaging one of the other bows when said bows are supported upon the rear bow.

1,193,108. RUBBER TIRE. ARCHIBALD K. ALLEN and CLARENCE A. ALLEN, Seattle, Wash. Filed Jan. 28, 1916. Serial No. 74,894. (Cl. 152—14.)



A rubber tire having recesses arranged in groups extending in a row along the central line of the thread, each group consisting of four arcuate recesses having a common center and forming a central plug and four buttress webs extending from the plug to the outer wall, and a row of groups of arcuate recesses at each side the central row, each group consisting of two like arcuate recesses forming the half of the group which is next the central row and a single arcuate recess forming the outer half of the group, said recesses of each group also having a common center.

1,193,109. FURNACE-BINDING. JAMES A. BOW and PETER THILL, Great Falls, Mont., and ARCHER E. WHEELER, London, England. Filed Dec. 17, 1914. Serial No. 877,707. (Cl. 263—46.)



1. In combination with a furnace having an arched roof and supporting walls therefor, a series of buckstays distributed at intervals around the walls and terminating at the top of the walls, a fixed support, and flexible means carried by said support for maintaining the upper portions of the buckstays in permanent engagement with said walls.

2. In combination with a furnace having an arched roof and supporting walls therefor subjected to an outward thrust, a series of buckstays disposed at intervals along the walls, the latter convexing outwardly between the buckstays, tension bands interposed between the buckstays and furnace walls and engaging the walls along the skew-back, the horizontal curve of the convexed portions of the walls between the buckstays and of the engaging bands conforming to the longitudinal stress to which the walls and bands are subjected.

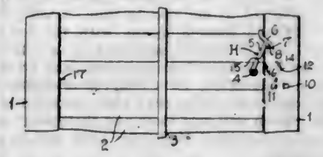
3. In combination with a furnace having an arched roof and supporting walls therefor subjected to an outward thrust, a binding for the walls provided with a series of buckstays distributed along the walls and spaced apart, a skew-back beam or member interposed between consecutive buckstays, a series of upright reinforcing members disposed along the walls between the buckstays, and secured at the top to the skew-back beam, and means independent of the furnace walls for rigidly holding the lower ends of said reinforcing members in a fixed position.

4. In combination with a furnace having an arched roof and supporting walls therefor, a binding enveloping the walls, and a continuous tension band independent of the binding disposed opposite the line of the skew-back and operating to reinforce the thrust at the skew-back.

5. In combination with a furnace having a roof and substantially parallel supporting walls therefor subjected to a lateral outward thrust, the walls having a series of outwardly curved sections, and buckstays disposed along the walls in the depressions between said curved sections.

[Claims 6 to 16 not printed in the Gazette.]

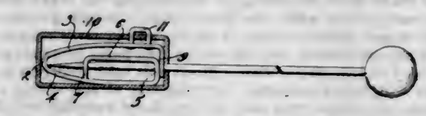
1,193,110. FASTENING MEANS FOR THE SLATS OF SHUTTERS. PETER BRAUN, St. James, N. Y., assignor of one-half to Robert Haberstock, Brooklyn, N. Y. Filed Mar. 2, 1916. Serial No. 81,707. (Cl. 16—1.)



1. In combination with a shutter comprising a frame and a plurality of pivoted slats mounted for rocking movement in unison, a locking member pivotally engaged with one of the slats and having its outer end provided with a cross head, means carried by the frame engageable with the cross head of the pivoted member for holding the slats in locked position, and additional means disposed below the first named means with which the intermediate portion of the locking member coacts for holding the slats in a plurality of other positions.

2. In combination with a shutter comprising a frame and a plurality of pivoted slats adapted to rock in unison, a locking member carried by one of the slats, the outer end of said locking member being provided with a cross head, and a bracket carried by the frame and provided with an outstanding flange, the under face of the bracket at a point above the flange being provided with a recess to receive an end portion of the cross head when the slats are in closed position, the flange being provided with recesses to receive the locking member when the slats are in open or partly open positions.

1,193,111. HAT-PIN GUARD. ANTHON BREIDENBACH, Holmes, N. D. Filed Jan. 7, 1916. Serial No. 70,858. (Cl. 24—155.)

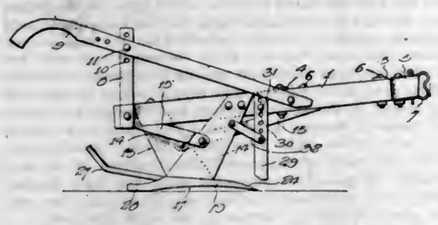


1. A hat pin point protector comprising a housing having an opening in one end, a resilient member bent upon itself within said housing, one end being turned back and provided with parallel perforated portions opposite the opening of said casing, the opposite end of said resilient member being bent at an angle and provided with a slot adapted to be brought to position between said bent-back end and the apertured end of said casing to receive a pointed member and clamp the end of the same within said casing, and a releasing member carried by said resilient member and projecting through the side of said casing.

2. A hat pin point protector comprising a casing having a small aperture in one end, a resilient member bent upon itself within said casing, one end of said resilient member being turned back and provided with parallel spaced portions, said parallel spaced portions having small openings in alinement with the opening in the end of said casing, the remaining end of said resilient member being positioned between one of said parallel portions of the first-mentioned end and the adjacent apertured end of said casing, the second mentioned end of said resilient member being provided with an elongated slot adapted to register with the apertures of the first-mentioned end and the aperture of said casing to permit the entrance of a pointed member in said apertures, an end wall of said slot coöperating with the walls of said apertures to clamp the end of said pointed member in said casing, and means for releasing said pointed member.

3. An article of manufacture comprising a rectangular casing, a spring metal strip positioned in said casing and bent upon itself to form a central loop portion, the ends of said strip being curved in opposite directions, one end being extended and bent back upon itself to form a longitudinal portion, and right-angled portions provided with registering apertures, the remaining end of said strip having its free extremity bent at an angle and extended parallel with the apertured portions of the first-mentioned end, said extremity having an elongated slot adapted to register with said apertures, said casing having an opening in one end registering with said apertures, said extremity being adapted to cover said opening when in normal position, and means carried by the second-mentioned end of said strip and projecting through said casing to move said second-mentioned end toward said first-mentioned end.

1,193,112. PEANUT-DIGGER. JAMES H. BRODIE, Henderson, N. C. Filed Nov. 15, 1915. Serial No. 61,618. (Cl. 55—54.)



1. In a device of the class described, a frame, a U-shaped member carried thereby, a share secured thereto and formed of a slightly down-curved plate having longitudinal ribs on its bottom to prevent lateral shifting, the forward portion of the plate being inclined upwardly and rearwardly to the edge of the horizontal portion of said member, said plate also having an opening formed in the rear portion thereof, the portion of the plate on each side of said opening providing runners.

2. In a device of the class described, a frame, a U-shaped member carried thereby, the upright portions of said member having their edges beveled rearwardly and inwardly, a share secured to the horizontal portion of said member and projecting forwardly, and upright guards depending from the beam forwardly of the share and adapted to force the vegetation in the path of said U-shaped member.

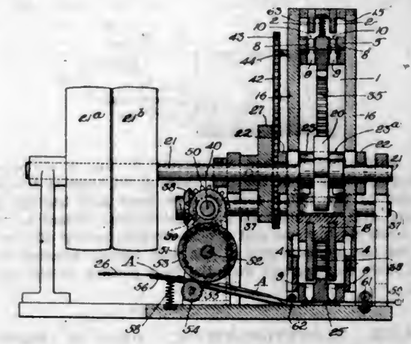
3. In a device of the class described, a frame, a U-shaped member carried thereby, the upright portions of said member having their edges beveled rearwardly and inwardly, a share secured to the horizontal portion of said member and projecting forwardly, and adjustable upright guards depending from the beam forwardly of the share and adapted to force the vegetation in the path of said U-shaped member.

4. In a device of the class described, a pair of rearwardly diverging beams, handles rising therefrom, a U-shaped member secured to the rear end portions of the beams, a draft beam disposed between the forward ends of the first mentioned beams and secured thereto, and a share secured to the horizontal portion of said member, the forwardly projecting portion thereof diverging upwardly and rearwardly to the edge of said horizontal portion.

5. In a device of the class described, a frame, a U-shaped support carried thereby, a share having longitudinal ribs on its bottom to prevent lateral shifting, said share being secured to the under side of the horizontal portion of said U-shaped member and projecting forwardly to provide a plow point, the rear part of said share beneath said horizontal portion having an opening formed therein, and rearwardly extending screen fingers secured to the under side of said horizontal portion, their ends being disposed in said opening to prevent their catching any vegetation which is being dug.

[Claims 6 and 7 not printed in the Gazette.]

1,193,113. MACHINE FOR FORMING AND AFFIXING FASTENING DEVICES. CARLTON W. BROWN, Groton, Conn. Filed May 19, 1915. Serial No. 29,235. (Cl. 1—12.)



1. In a machine for forming fastening devices, the combination with a reciprocating cutting punch and stationary die; of a pocket positioned to receive the blank cut by the said punch and die, said pocket having shoulders to engage projecting parts of the blank; means for advancing said pocket; and a punch arranged at an angle to the punch first named, said punch approximately fitting the part of the pocket within the shoulders and arranged to be forced therein beyond the shoulders to bend the said projecting parts of the blank.

2. In a machine for forming fastening devices, the combination with a reciprocating cutting punch and stationary die; of a pocket positioned to receive the blank cut by the said punch and die, said pocket having shoulders to engage projecting parts of the blank; a punch arranged at an angle to the cutting punch and approximately fitting the part of the pocket within the shoulders and arranged to be forced therein beyond the shoulders to bend the said projecting parts of the blank; and means for ejecting the blank from the pocket.

3. In a machine for forming fastening devices, the combination with a reciprocating cutting punch and stationary die; of a pocket positioned to receive the blank cut by the said punch and die, said pocket having shoulders to engage projecting parts of the blank; a punch arranged at an angle to the punch first named and approximately fitting the part of the pocket within the shoulders and arranged to be forced therein beyond the shoulders to bend the said projecting parts of the blank; an ejecting

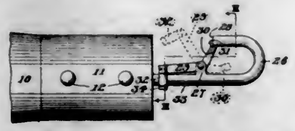
punch arranged to enter the pocket from the bottom and eject the blank therefrom; and a reciprocating operating member common to said cutting punch and said ejecting punch.

4. In a machine for forming fastening devices, the combination with a reciprocating male die; of a stationary female die; means for feeding a strip of metal between said dies; a pocket arranged to receive the blank cut by the die; means for moving said pocket from the position in which it has received said blank; and a reciprocating shaping punch adapted to act on said blank in the pocket after it has been moved, said shaping punch being arranged at an angle to said cutting punch.

5. In a machine for forming fastening devices, the combination with a reciprocating cutting punch; of a stationary female die; means for feeding a strip of metal between said cutting punch and die; a rotary carrier having its periphery adjacent to said die and being provided with pockets opening through said periphery, each pocket having shoulders below the periphery of the carier; a reciprocating shaping punch to enter said pocket from one end and to pass beyond said shoulders; and a reciprocating ejecting punch to enter said pocket from the other end and eject the blank.

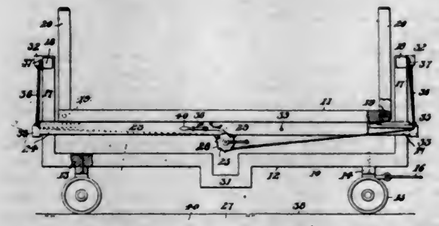
[Claims 6 to 20 not printed in the Gazette.]

1,193,114. SAFETY WHIFFLETREE-HOOK. HUGH D. BROWN, Ithaca, N. Y. Filed Feb. 5, 1916. Serial No. 76,447. (Cl. 21—79.)



A whiffle-tree member comprising a cap, a U-shaped hook projecting from the end thereof, an angular tongue pivoted to the inner side of said hook and having its shorter arm provided with a semi-circular socket at its free hook closing end and a semi-circular spring clip carried by the opposite end of the said tongue adapted for detachable engagement with the base portion of the said hook.

1,193,115. ELEVATING-TRUCK. HUGH D. BROWN, Ithaca, N. Y. Filed Feb. 5, 1916. Serial No. 76,448. (Cl. 254—4.)



1. An elevating baggage truck comprising a channel iron frame having parallel side bars provided with oppositely arranged central depressions, integral upright posts at the opposite ends of the said bars, crossbeams connecting the upper ends of the said posts, supporting wheels beneath the said frame, a platform shiftably arranged above the said bars and between the said posts, upright corner stakes carried by the said platform, anti-friction rollers journaled in the opposite ends of the said platform between each pair of said stakes, and arranged adjacent the said end posts, opposite stringers longitudinally arranged beneath the said platform and positioned outwardly of the said rollers, the opposite ends of the said stringers projecting beyond the said frame posts, an operating shaft journaled transversely beneath the said stringers in alinement with the said depressed portions of the bars, flexible hoisting means operatively connected to the said shaft and posts and means for revolving the said shaft.

2. An elevating baggage truck comprising a channel iron frame having parallel side bars provided with oppositely arranged central depressions, integral upright posts at the opposite ends of the said bars, cross beams connecting the upper ends of the said posts, supporting wheel beneath the said frame, a platform shiftably arranged above the said bars and between the said posts, upright corner stakes carried by the said platform, anti-friction rollers journaled in the opposite ends of the said platform between each pair of said stakes and arranged adjacent the said end posts, opposite stringers longitudinally arranged beneath the said platform and positioned outwardly of the said rollers, the opposite ends of the said stringers projecting beyond the said frame posts, an operating shaft journaled transversely beneath the stringers in alinement with the said depressed portions of the bars, double drums upon the said shaft, pulleys upon the free ends of the said stringers, partially covered pulleys upon the said beams, flexible ronnectors having their corresponding ends anchored to the said beams and passing over the said stringer pulleys and beam pulleys, and thence wound around the said drums in the same direction and having their inner ends secured thereto, and operating means for the said shaft.

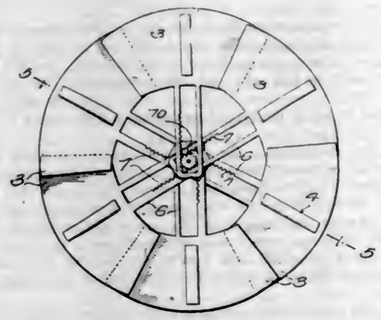
3. An elevating baggage truck comprising a channel iron frame having parallel side bars provided with oppositely arranged central depressions, integral upright posts at the opposite ends of the said bars, crossbeams connecting the upper ends of the said posts, supporting wheels beneath the said frame, a platform shiftably arranged above the said bars and between the said posts, upright corner stakes carried by the said platform, anti-friction rollers journaled in the opposite ends of the said platform between each pair of said stakes and arranged adjacent the said end posts, opposite stringers longitudinally arranged beneath the said platform and positioned outwardly of the said rollers the opposite ends of the said stringers projecting beyond the said frame posts, an operating shaft journaled transversely beneath the stringers in alinement with the said depressed portions of the bars, double drums upon the said shaft, pulleys upon the free ends of the said stringers, partially covered pulleys upon the said beams, flexible connectors having their corresponding ends anchored to the said beams and passing over the said stringer pulleys, and beam pulleys, and thence wound around the said drums in the same direction and having their inner ends secured thereto, a ratchet wheel upon each end of said shaft, a removable turn crank for the opposite ends of the said shaft, spring-pressed pawls carried by the said stringers in normal engagement with the said ratchet wheels, and automatic release retaining stops for the said pawls swingingly carried by the said stringers.

1,193,116. EXPANSIBLE VESSEL-COVER. ADOLPHUS J. BRUSSEAU, Plymouth, N. H., assignor of one-half to William A. Kimball, Plymouth, N. H. Filed July 15, 1915. Serial No. 40,089. (Cl. 53—8.)

1. An expansible and contractible cover for vessels comprising superposed inner and outer members spaced slightly apart, a plurality of radially movable frusto-sector shaped sections mounted between said members, and means operable through one of said members for expanding and contracting said sections.

2. An expansible and contractible cover for vessels comprising two outwardly convexed members, a shaft revolubly mounted in said members and connecting them, a pinion mounted on said shaft, and a plurality of radially movable frusto-sector shaped sections mounted between said plates and having rack bars extending from their inner edges and engaged with said pinion whereby on the turning of said shaft said sections may be retracted or projected, the adjacent sections lapping at all times.

3. An expansible and contractible cover for vessels comprising a housing composed of two outwardly convexed members arranged in superposed relation, a shaft revolubly mounted in said members and connecting them, a pinion mounted on said shaft between said members, a handle connected with one end of said shaft outside said outer member, and a plurality of radially movable frusto-sector shaped sections mounted to slide between said members and having rack bars extending from their inner edges and engaged with said pinion, said bars being offset laterally from their respective sections to adapt them to be arranged in superposed relation without affecting the position of the sections, said sections having their adjacent side edges lapping at all times, and coöperating guiding means carried by said sections and one of said housing members for controlling the extent of movement of said sections in opposite directions.



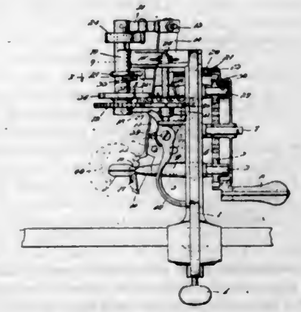
4. A device of the class described comprising a housing having a circumferential opening, a plurality of radially movable sections mounted to operate in said opening, said sections having their adjacent edges arranged in contacting relation at all times, means for projecting and retracting said sections disposed within said housing, and an actuator for said projecting and retracting means.

5. An expansible and contractible cover for vessels including a plurality of radially movable sections each having a loop-shaped member extending inwardly, said members having rack teeth on one of the inner walls thereof and being arranged in superposed relation, a pinion extending through said superposed loop-shaped members, the distance between the sides of said members being substantially equal to the diameter of said pinion, whereby the teeth of the loops are held in operative engagement with said pinion, and the sections guided in their movements, and means for actuating said pinion to project and retract said sections.

1,193,117. APPLE-PEELING MACHINE. ROBERT BUCHI, Chicago, Ill. Filed Nov. 9, 1914. Serial No. 871,058. (Cl. 146—8.)

1. In an apple peeling machine, the combination of a frame; an apple holder rotatably mounted in said frame; an oscillatory shaft mounted in said frame; an arm connected with said shaft for movement therewith but adapted for oscillation in a radial plane relative thereto; a knife carried by said arm adapted for engagement with an apple mounted on said holder; means for yieldingly pressing said knife toward said holder during rocking of said shaft in one direction; a cam on said shaft; an actuating arm disposed radially relative to said shaft having one end loosely engaging therewith for relative longitudinal movement and having its other end connected with said knife arm whereby, when said actuating arm is moved longitudinally outwardly, said knife arm will be rocked outwardly; and means on said actuating arm adapted for engagement with said cam to move said actuating arm outwardly and hold the same in outward position during return rocking of said shaft, substantially as described.

2. In an apple peeling machine, the combination of a frame; an apple holder rotatably mounted in said frame; an oscillatory shaft mounted in said frame; an arm connected with said shaft for movement therewith but adapted for oscillation in a radial plane relative thereto; a knife carried by said arm adapted for engagement with an apple mounted on said holder; means for yieldingly pressing said knife toward said holder during rocking of said shaft in one direction; means for moving said arm outwardly and holding the same in outwardly rocked position during return rocking of said shaft, said last mentioned means comprising a cam mounted for free oscillatory movement on said shaft; an actuating arm disposed radially relative to said shaft having one end loosely engaging therewith for free relative longitudinal movement and having its other end connected with said knife arm whereby, when said actuating arm is moved longitudinally outwardly, said knife arm will be rocked outwardly; a lug on said actuating arm adapted for coöperation with said cam and adapted, when said shaft is oscillated in one direction, to push said cam freely along with the same; a stop for engagement with said cam as said shaft approaches the terminal of said movement, to arrest said cam so as to permit said lug riding up on the crest provided at the periphery of said cam to move said actuating arm outwardly, said lug remaining in engagement with said cam crest during return oscillation of said shaft; and a stop for engagement with said cam upon return oscillation of said shaft, to arrest movement of said cam in this direction in order to permit of said lug moving from engagement with said cam crest, substantially as described.

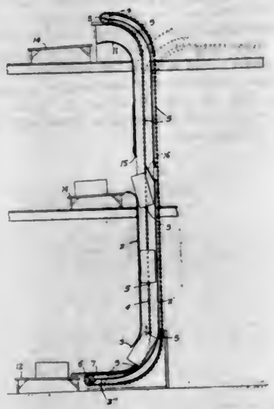


3. In an apple peeling machine, the combination of a frame; an apple holder rotatably mounted in said frame; an oscillatory shaft mounted in said frame; an arm connected with said shaft for movement therewith but adapted for oscillation in a radial plane relative thereto; a knife carried by said arm adapted for engagement with an apple mounted on said holder; means for yieldingly pressing said knife toward said holder during rocking of said shaft in one direction; means for moving said arm outwardly and holding the same in outwardly rocked position during return rocking of said shaft, said last mentioned means comprising a cam mounted for free oscillatory movement on said shaft; an actuating arm disposed radially relative to said shaft having one end loosely engaging therewith for free relative longitudinal movement and having its other end connected with said knife arm whereby, when said actuating arm is moved longitudinally outwardly, said knife arm will be rocked outwardly; a lug on said actuating arm adapted for coöperation with said cam and adapted, when said shaft is oscillated in one direction, to push said cam freely along with the same; a stop for engagement with said cam as said shaft approaches the terminal of said movement, to arrest said cam so as to permit said lug riding up on the crest provided at the periphery of said cam to move said

actuating arm outwardly, said lug remaining in engagement with said cam crest during return oscillation of said shaft; a stop for engagement with said cam upon return oscillation of said shaft, to arrest movement of said cam in this direction in order to permit of said lug moving from engagement with said cam crest; manually operable means for positively oscillating said shaft; and resilient means for imparting return oscillation to said shaft, substantially as described.

4. In an apple peeling machine, an apple holder and means for rotating the same in combination with an oscillatory member, a bearing for said member, an arm pivotally connected at one end to said member, a knife on the free end of said arm, a rod pivotally connected to said bearing and provided with a stop, a spring interposed between said stop and said arm whereby said knife is held in yielding engagement with the apple on said holder and means for oscillating said member, substantially as described.

1,193,118. ELEVATOR. HERMAN J. BUCK, Ellwood City, Pa., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa., a Corporation of Pennsylvania. Filed Oct. 23, 1914. Serial No. 868,158. (C. 193—8.)



1. The combination, with an upright casing, of an endless carrier arranged in said casing, means for operating said carrier, means for feeding packages to said carrier at the lower portion of said casing, a discharge opening in the wall of said casing below the upper end thereof, a door for said opening, and a deflector connected with said door and arranged to be moved into or out of the path of the moving package by a movement of the door, substantially as described.

2. The combination, with an upright casing arranged to extend above one or more floors of the building, of an endless carrier arranged in said casing, means supporting the upper and lower ends of said carrier, means for feeding packages to the lower portion of said carrier, a discharge opening in the wall of said carrier above one of said floors, and a deflector connected with said door and arranged to be moved into and out of the path of the moving article, by the movement of said door.

3. The combination, with an upright casing arranged to extend above one or more floors of a building, and provided with an open upper end and with a discharge opening in its wall below its upper end, of a door arranged to close the wall opening, a deflector connected with said door and arranged to be moved into the path of the moving article as the door is opened and to be moved out of said path as the door is closed, means supporting the upper and lower ends of said carrier, and means for feeding packages to the lower portion of said carrier, substantially as described.

1,193,119. DOUBLE-TRACK SWITCH FOR GRAVITY-CARRIERS. HERMAN J. BUCK, Ellwood City, Pa., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa., a Corporation of Pennsylvania. Filed Oct. 23, 1914. Serial No. 868,160. (Cl. 193—1.)

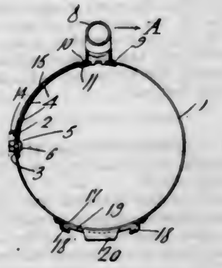


1. The combination, in a gravity carrier system, with oppositely arranged fixed double carrier sections, a pair of parallel intermediate and independently pivoted sections, each having one end connecting with one of the fixed carrier sections, and the other end movable and capable of being moved into alinement with either of the other fixed sections.

2. The combination, in a gravity carrier system, with oppositely arranged fixed double carrier sections, of a pair of parallel intermediate and independently pivoted sections, each having one end connecting with one of the fixed carrier sections, and the other end movable and capable of being moved into alinement with either of the other fixed sections, and means for locking said intermediate sections in any position to which they may be moved.

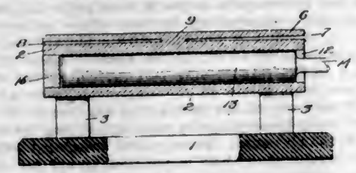
3. The combination, in a gravity carrier system, with oppositely arranged fixed double carrier sections, of a pair of parallel intermediate and independently pivoted sections, each having one end connecting with one of the fixed carrier sections, and the other end movable and capable of being moved into alinement with either of the other fixed sections, wheels supporting the free ends of the intermediate sections, and means for locking said free ends of said intermediate sections in any desired positions, substantially as described.

1,193,120. FURNACE. WILLIAM H. CAVER, Blue Mountain, Miss. Filed May 17, 1916. Serial No. 98,104. (Cl. 126—345.)



In a device of the class described, a drum having relatively movable ends provided with openings; securing devices mounted in the openings, the openings in one end of the drum being duplicated to permit an adjustment in the diameter of the drum; a stack journaled for rotation in the drum and provided with an extension whereby the stack may be rotated; and a flexible connection between the rotatable stack and that end of the drum which is remote from the portion of the drum wherein the stack is journaled.

1,193,121. ELECTRIC KNIFE-HEATER. EDWIN N. CHANDLER, Braintree, Mass. Filed July 29, 1914. Serial No. 853,793. (Cl. 219—22.)



1. A knife heater, comprising a metallic stand with a cored recess therein longitudinally of said stand to receive a removable heating unit, a top portion united with said stand and spaced therefrom, adapted to receive a plurality of knife blades between said top and stand.

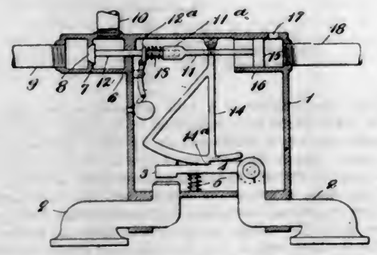
2. A knife heater, compsiring a metallic stand with a core recess therein longitudinally of said stand to receive a removable heating unit, an overhanging top portion united with said stand, and spaced therefrom, adapted to receive a plurality of knife blades between said top and stand.

3. A knife heater, comprising a metallic stand with a cored recess therein longitudinally of said stand to receive a removable heating unit, an overhanging top portion united with said stand and spaced therefrom, to provide a tapering slot adapted to receive knife blades of different thicknesses therein.

4. A knife heater, comprising a metallic stand with a cored recess therein longitudinally of said stand to receive a removable heating unit, an overhanging top portion united with said stand at approximately the transverse center portion thereof and spaced therefrom either side of said center portion, adapted to receive a plurality of knife blades between said top and stand.

5. A knife heater, comprising a metallic stand with a cored recess therein longitudinally of said stand to receive a removable heating unit, an overhanging top portion united with said stand at approximately the transverse center portion thereof and spaced therefrom either side of said center portion to form tapering slots adapted to receive knives of different thicknesses, in combination with a guide to receive the supply wires for heating coil and retain said coil in said recess.

1,193,122. AUTOMATIC TRAIN-STOPPING DEVICE. GEORGE H. CLARK, Paris, Me. Filed Jan. 5, 1914. Serial No. 810,298. (Cl. 246—59.)



1. The combination with the brake system of a railroad train, of means carried by said train adapted normally to hold said brake system inactive, comprising an armature having a movable member, a spring for holding said movable member in normal position, a valve adapted normally to close the train line pipe, a seat and a stem for said valve, a rod having a socketed head in which said valve stem is slidably mounted, a spring normally held under compression surrounding said stem, a pivoted latch, a connection between said latch and said rod, said latch adapted normally to engage said movable member of said armature to lock said valve on its seat, a magnetic field adjacent to the track adapted when said armature enters said field to actuate said movable member to release said latch and unlock said valve, whereby said train line pipe is opened to apply the brakes.

2. The combination with the brake system of a railroad train, of means carried by said train adapted normally to hold said brake system inactive, comprising an armature having a movable member, a spring for holding said movable member in normal position, a valve adapted normally to close the train line pipe, a seat and a stem for said valve, a rod having a socketed head in which said valve stem is slidably mounted, a spring normally held under compression surrounding said stem, a pivoted latch, a connection between said latch and said rod, said latch adapted normally to engage said movable member of said armature to lock said valve on its seat, a magnetic field adjacent to the track adapted when said armature enters said field to actuate said movable member to release said latch and unlock said valve, whereby said train line pipe is opened to apply the brakes, and means carried by the train adapted to reset said brake-system-holding means in normal position.

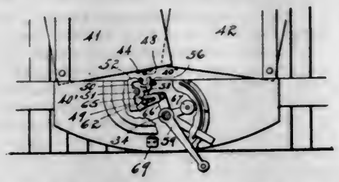
3. The combination with the brake system of a railroad train, of means carried by said train adapted normally to hold said brake system inactive, comprising an armature having a movable member, a valve normally closing the train line pipe, a latch connected with said valve and engaging said movable member of said armature to lock said valve in closed position, a magnetic field adjacent to the track adapted to actuate said movable member of said armature when it enters said field to unlock said valve, open said train line pipe and apply the brakes, and manually controlled means carried by said train adapted to reset said brake-system-holding means in normal position, comprising a cylinder with which the reservoir pipe connects, a port and a plunger in said cylinder, a connection between said plunger and said normally closed train line pipe valve and said latch, and means adapted to permit the air to enter said cylinder through said reservoir pipe whereby said plunger is moved, returning said valve to its seat and locking it thereon.

4. The combination with the brake system of a railroad train, of means carried by said train adapted normally to hold said brake system inactive, comprising an armature having a movable member, a valve normally closing the train line pipe, a latch connected with said valve and engaging said movable member of said armature to lock said valve in closed position, a magnetic field adjacent to the track adapted to actuate said movable member of said armature when it enters said field to unlock said valve, open said train line pipe and apply the brakes, and manually controlled means carried by said train adapted to reset said brake system holding means in normal position, comprising a cylinder with which the reservoir pipe connects, a port and a plunger in said cylinder, a connection between said plunger and said normally closed train line pipe valve and said latch, means comprising a control valve and means to operate the same, adapted to permit the air to enter said cylinder through said reservoir pipe to move said plunger, whereby said valve is returned to its seat and locked in normal position by said latch.

5. The combination with a brake system of a railroad train, of means comprising an armature carried by said train adapted normally to hold said brake system inactive, and a magnetic field located adjacent to the track adapted to actuate said armature when it enters said magnetic field to open the train line pipe, a normally seated valve located in said pipe and having ports of sufficient size to permit a service application of the brakes when said train line pipe is opened, and means to lift and hold said valve off its seat to permit an emergency application of said brakes, comprising a movable reverse lever having a projection, a pivoted lever lying in the path of movement of said reverse lever and adapted to be lifted and held by said projection, and a valve stem connecting said pivoted lever and said valve.

[Claim 6 not printed in the Gazette.]

1,193,123. LOCK. JAMES HARVEY COONS, Bushnell, Ill., assignor of one-half to Harry J. Drake, Bushnell, Ill. Original application filed Apr. 12, 1915, Serial No. 20,822. Divided and this application filed Oct. 29, 1915. Serial No. 58,684. (Cl. 70—23.)



1. A trip-plate having a bifurcated upper end, an E-shaped locking plate pivoted at its midlength and one of its arms providing a locking extension adapted to cross said end, a link having a slot, a pin mounted in the other arm of said locking plate and engaging said slot, said trip plate also pivoted to said pin, and means for moving all of said elements simultaneously.

2. A trip-plate having a bifurcated upper end, a plate having a locking extension adapted to cross it, a pin connecting said elements, a link for moving said pin and thereby said elements simultaneously, and means for moving the link.

3. A trip-plate having a bifurcated end, a plate having a locking extension adapted to cross it, a pin pivotally connecting said elements, a link having a slot in which said pin seats, and a lever for moving said pin.

4. The combination with a car-seal engageable element, of a trip-plate having a bifurcated end, a plate having a locking extension adapted to cross it, a pin pivotally connecting said elements, a link having a slot in which said pin seats, and a lever for moving said pin, said lever having an extension adapted for association with said car-seal engageable element.

5. A trip-plate having a bifurcated end, a plate having a locking extension adapted to cross it, a pin pivotally connecting said elements, a link having a slot in which said pin seats, a lever for moving said pin, and a weight on said lever.

1,193,124. COAL-CONVEYING MECHANISM. ALBERT L. COPLEY, Glenalum, W. Va. Filed Sept. 16, 1913. Serial No. 790,114. (Cl. 193—8.)



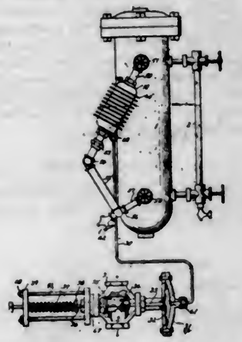
1. In a conveying mechanism, a car, a frame carried by the car, rails associated with the frame, another frame slidably mounted on the rails, means for guiding and retaining the sliding frame on the rails, a support carried by the sliding frame, a motor mounted on the sliding frame and disposed within the support, a conveyer mounted upon the support, means associated with the conveyer and motor for operating the conveyer, a bracket mounted on the stationary frame, and a screw rod mounted in the bracket and associated with the sliding frame for adjusting the sliding frame longitudinally of the stationary frame.

2. In a conveying mechanism, a car, a frame carried by the car, rails associated with the frame, another frame slidably mounted on the rails, securing elements mounted adjacent the opposite sides and on the bottom of the frame for association with the rails for guiding the frame during movement for preventing accidental displacement of the frame, means for adjustably connecting the rails and sliding frame laterally of the stationary frame, a conveyer associated with the sliding frame, and means for adjusting the sliding frame longitudinally of the stationary frame.

3. In a conveying mechanism, a car, a stationary frame on the car, transversely disposed cross pieces on the stationary frame, transversely disposed plates on the cross pieces one of which is provided with a plurality of openings, rails mounted on the plates, another frame slidably mounted on the rails, a king bolt carried by one of the transverse cross pieces on the stationary frame and associated with one of the openings in the transverse plate for adjustably connecting the rails and sliding frame laterally of the stationary frame, means associated with the bolt for retaining the bolt in position, means for adjusting the sliding frame longitudinally of the stationary frame, and a conveyer associated with the sliding frame.

4. In a conveying mechanism, a car, a stationary frame on the car, transversely disposed cross pieces on the stationary frame, transversely disposed connected plates one of which is provided with a plurality of openings, rails mounted on the plates, another frame slidably mounted on the rails, securing elements connected to the bottom of the frame adjacent the respective sides and arranged in engagement with the rails for guiding and retaining the sliding frame while the frame is being slid, a king bolt carried by one of the transverse cross pieces on the stationary frame and associated with one of the openings in the plate for adjustably connecting the rails and sliding frame laterally of the stationary frame, a nut associated with the bolt for retaining the bolt in position, brackets carried by the stationary and sliding frames, and a screw rod associated with the brackets for adjusting the sliding frame longitudinally of the car.

1,193,125. FEED-WATER REGULATOR. NOIBERTO G. COPLEY, Fostoria, Ohio, assignor to The "S-C" Regulator Company, Fostoria, Ohio, a Corporation of Ohio. Filed July 16, 1913. Serial No. 779,377. (Cl. 236—14.)



1. The combination of a tube adapted to be held at varying inclinations and connected at its upper end with the steam space of a boiler and at its lower end with the water space, means whereby the angle at which said tube stands may be varied, a casing surrounding the tube between its ends, a valve for controlling the feed water, means for operating the valve, and conduit for conveying pressure from the casing to the valve operating means.

2. The combination of a device comprising two conduits one surrounding the other, means for holding said device at varying inclinations, means connecting one of the conduits at one end with the steam space and at the other end with the water space of a boiler, a pressure device for controlling the feed of water to the boiler, and a pressure transmitting medium within the other conduit acting on said pressure device.

3. The combination of a tube pivotally connected at one end and adjustably connected at the other end to a boiler, whereby the angle at which said tube stands may be varied, one end of said tube being connected with the steam space and the other with the water space of said boiler, a casing surrounding the tube uncommunicatingly and adapted to contain fluid, and means whereby a change in pressure of the fluid due to a change in temperature in the tube may operate to regulate the supply of feed water to the boiler.

4. A feed water regulator comprising a valve, a pressure actuated mechanism for controlling the valve, a tube pivotally connected at one end and adjustably connected at the other end to a boiler, whereby the inclination of the tube may be varied, a casing surrounding the tube intermediate its ends, being located substantially at the water line of the boiler, one end of said tube being connected to the steam space and the other end to the water space of the boiler, and a connection whereby a change of pressure within the casing may be transmitted to the pressure actuated mechanism.

5. In a feedwater regulator, the combination with a valve and a pressure actuated mechanism for operating the valve, of an adjustable theremo-dynamic regulator comprising a tube having one end pivotally mounted on a boiler and having its other end adjustably mounted, whereby the tube may be oscillated about its pivoted end, one of said connections to the boiler being in communication with the steam space and the other with the water space, said tube having a pair of heads near its respective ends, a drum connecting one head with the other and providing an annular space about the tube, and a connection whereby a change in pressure in said annular space may be transmitted to the pressure actuated mechanism, thereby operating the valve.

1,193,126. AUTOMOBILE-LIFTING JACK. EDWARD M. CUMINGS, Flint, Mich., assignor to Cumings Brothers, Flint, Mich., a Corporation of Michigan. Filed Dec. 4, 1915. Serial No. 65,078. (Cl. 254—97.)

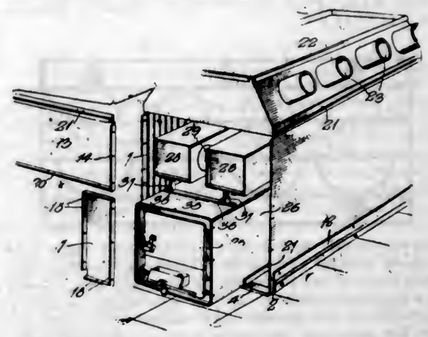


The combination with the operating mechanism of a lifting jack including an actuating worm screw having a shank, of an extensible operating handle comprising a plurality of telescoping tubular sections and a handle bar section, angular in cross area, there being sockets in the shank and sections, and a spring tongue on each section having a locking stud to engage a socket to hold the handle extended.

1,193,127. HOT-AIR FURNACE. SAMUEL DANIELS, Hardwick, Vt. Filed Jan. 20, 1916. Serial No. 73,221. (Cl. 126—104.)

1. A furnace comprising an elongated rectangular shell having a fresh air inlet and a hot air outlet, the rear end of said shell being formed with an opening near the upper end thereof, an elongated rectangular fire box disposed in the lower portion of said shell and spaced from the sides and rear end thereof, a removable front wall for the shell whereby the fire box may be removed, a pair of horizontally spaced horizontally alined parallel drums disposed in the upper portion of the shell, said drums being in communication, supports secured to said drums and resting on the top of the fire box, a smoke inlet in the bottom of one drum, a smoke outlet pipe leading horizontally from the rear end of the other drum and slidably received in the aforesaid opening in the shell, and a smoke outlet from the fire box telescopically and detachably engaged with the aforesaid inlet.

2. A furnace comprising an elongated rectangular shell having a fresh air inlet and a hot air outlet, an elongated rectangular fire box disposed in the lower portion of said shell and spaced from the sides and rear end thereof, a removable front wall for the shell whereby the fire box may be removed, a pair of horizontally spaced horizontal elongated parallel drums disposed in the upper portion of the shell and communicating one with the other, supports secured to said drums and resting on the top of the fire box, fixed stops on the latter coöperating with said supports to retain the drum in operative position, a smoke inlet in the bottom of one drum, a smoke outlet from the other drum, and a smoke inlet from the fire box telescopically and detachably engaged with the first named smoke inlet.



3. A furnace comprising an elongated rectangular shell having a fresh air inlet and a hot air outlet, an elongated rectangular fire box disposed in the lower portion of said shell and spaced from the sides and rear end thereof, a removable front wall for the shell whereby the fire box may be removed, a pair of horizontally spaced horizontally elongated parallel drums disposed in the upper portion of the shell, said drums communicating one with the other, a smoke inlet in the bottom of one drum, a smoke outlet from the top of the fire box telescopically and detachably engaged with said inlet, a smoke outlet from the other drum, a transverse bar resting on said top of the fire box beneath one end of the drums and having its ends bent upwardly and secured to said drums to form supports therefor and at the same time to brace said drums in respect to each other, and fixed stops rising from said top of the fire box and abutting said upwardly bent ends of the bar to retain the drums in operative position.

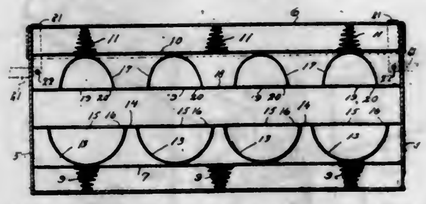
4. A furnace comprising an elongated rectangular shell having a fresh air inlet and a hot air outlet, an elongated rectangular fire box disposed in the lower portion of said shell and spaced from the sides and rear end thereof, a removable front wall for the shell whereby the fire box may be removed, a pair of horizontally spaced horizontally elongated parallel drums disposed in the upper portion of the shell, said drums communicating one with the other, a smoke inlet in the bottom of one drum, a smoke outlet from the top of the fire box telescopically and detachably engaged with said inlet, a smoke outlet from the other drum, a transverse bar resting on said top of the fire box beneath one end of the drums and having its ends bent upwardly and secured to said drums to form supports therefor and at the same time to brace said drums in respect to each other, a second horizontal bar resting on said top of the fire box beneath the other end of said drums and having its ends bent upwardly and secured to one drum, one of said ends being extended laterally and secured to the other drum to further brace the two drums in respect to each other, and fixed stops rising from the top of the fire box and abutting the upwardly bent ends of one of said bars to retain the two drums in operative position.

5. A furnace comprising a shell having a fresh air inlet and a hot air outlet, a horizontally disposed rectangular

frame to which the lower end of said shell is secured, a pair of parallel L-iron bars secured at their front and rear ends to the front and rear bars of said frame between the ends of said last named bars, the upright flanges of said L-iron bars being disposed on and rising from the remote edges of the horizontal flanges thereof, an air heater having a lower end of rectangular formation resting slidably on said horizontal flanges and received slidably between said upright flanges of the L-iron bars, and a removable front end for the shell whereby the heater may be withdrawn therefrom.

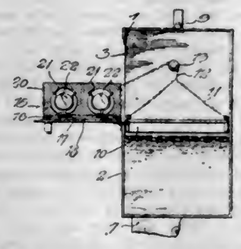
[Claim 6 not printed in the Gazette.]

1,193,128. EGG-CARRIER. CHARLES F. DOLL, Aberdeen, Wash. Filed Aug. 17, 1914. Serial No. 857,148. (Cl. 217—28.)



An egg carrier comprising a pair of rubber plates held in spaced parallel relation and having perforations, the perforations of one plate being larger than those of the other plate and positioned each in axial alinement with a perforation of the opposite plate, whereby they will embrace the point and butt portions of an egg respectively, a rubber cup disposed over each perforation of each plate at the opposite side thereof from the other plate, and means for yieldingly sustaining the rubber cups.

1,193,129. STERILIZER. TRAVIS G. DOROUGH, Royston, Ga. Filed July 1, 1915. Serial No. 37,559. (Cl. 167—3.)

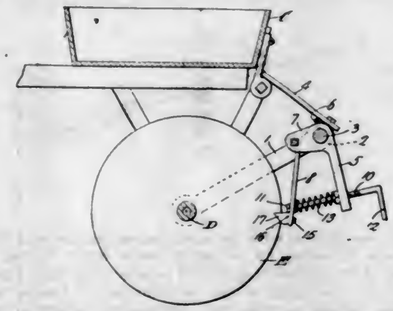


1. A sterilizing apparatus of the class described comprising an upright rectangular casing adapted to contain a sterilizing medium, the front upright side of said casing, near its upper end, having formed therein a horizontally elongated door opening, a door for said opening hinged at its lower edge to the front of the casing and adapted to swing forwardly to a horizontal position, a horizontally disposed rack in the casing, the upper face of the aforesaid door being disposed in the same horizontal plane with the upper face of said rack when said door is opened, and a tray resting slidably on said rack, whereby it may be moved forwardly therefrom onto the aforesaid door when the latter stands in its open horizontal position, said tray being adapted to contain the articles to be sterilized.

2. A sterilizing apparatus of the class described comprising an upright rectanguler casing having in its upright front side a horizontally elongated door opening disposed near the upper edge of said side, the lower portion of said casing being adapted to contain a disinfecting liquid, a door for the aforesaid opening hinged at its lower edge to the front side of the casing and adapted to swing forwardly to a horizontal position, a horizontal rack mounted for vertical movement in the casing and normally received in the lower portion thereof, operating means connecting the door and the rack for moving the latter vertically to position its upper side in the same plane with the upper side of the door when the latter is swung to its open horizontal position, and a tray resting slidably on said rack and adapted to be moved forwardly therefrom onto the open door, said tray being adapted for the retention of the articles to be sterilized.

3. In a sterilizing apparatus, a casing adapted to contain a sterilizing medium, and a tray in said casing, said tray consisting of a rectangular frame disposed in a horizontal plane, a plurality of parallel longitudinal bars secured at their ends to the end bars of said frame, a plurality of transverse bars crossing said longitudinal bars and secured at their ends to the side bars of the frame, a foraminous tray bottom resting on the frame and the longitudinal and transverse bars, a continuous foraminous side wall rising from the edge of said bottom, a plurality of U-shaped spring clips disposed transversely of the tray and positioned in contact with the bottom directly above the crossing points of the longitudinal and transverse bars, said clips being adapted to embrace the body portions of tumblers to be sterilized, upright fasteners passing through said clips, through the longitudinal and transverse bars at the crossing points thereof, and through the intervening bottom, additional clips secured to the longitudinal bars at points spaced from the U clips, said additional clips opening toward the latter and being adapted to receive the edge of the tumblers gripped thereby.

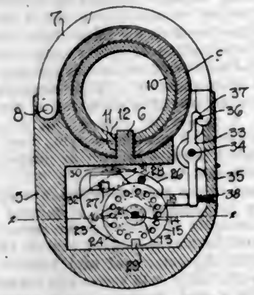
1,193,130. DISK-SHARPENER. JOHN F. DREES, New Vienna, Iowa. Filed Aug. 7, 1915. Serial No. 44,211. (Cl. 97—77.)



The combination with a structure including a ground engaging disk, of an guide rod extending back of and transversely of the disk, an arm adjustable angularly upon and longitudinally of the rod, a finger extending from said arm and toward the disk, a plate hingedly connected to the finger and interposed between the disk and the arm, a disk engaging blade adjustably connected to the plate, yielding means interposed between the arm and plate for pressing the blade against the disk, and adjustable means for limiting the movement of the plate in one direction relative to the arm.

1,193,131. COMBINATION-PADLOCK. JOSEPH I. ESOLA, San Pedro, Cal. Filed May 13, 1916. Serial No. 97,370. (Cl. 70—112.)

1. A combination padlock including a casing, a shackle pivotally connected at one of its ends to said casing, a spring-pressed locking dog mounted in the casing to cooperatively engage the shackle, a shiftable releasing element for engagement with said dog, a rotatably mounted shaft, a plurality of spaced tumbler disks loosely mounted upon the shaft and each having a notch in its periphery, means arranged between said disks to transmit rotation successively from one disk to the other, means fixed upon the shaft to rotate one of the disks, and relatively movable means operatively connected to said releasing element adapted to engage in the notches of the loosely mounted disks when the same are alined, whereby said element is shifted upon a further rotation of the shaft to release the locking dog.

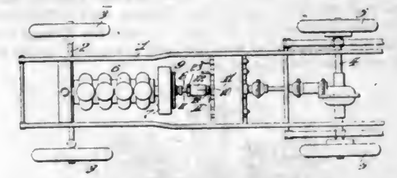


2. A combination lock including a casing, a locking dog mounted in said casing, a shiftable releasing element for engagement with the locking dog, a rotatably mounted shaft, a plate loosely engaged upon said shaft and operatively connected to said shiftable element, a plurality of spaced tumbler disks loosely mounted upon the shaft and each having a notch in its periphery, means adjustable upon the shaft between said disks to transmit rotation successively from one disk to the other, an additional disk rotatable with said shaft and also provided with a notch in its periphery, a spring-pressed element carried by said loosely mounted plate to engage in the notches of said disks when the same are alined, whereby rotation is transmitted to said plate upon a further rotation of the shaft and said shiftable element is actuated to release the locking dog.

3. A combination padlock including a casing, a shackle pivotally connected at one of its ends to said casing and a locking dog pivoted intermediate of its ends within the casing, a spring acting against one end of said dog to cooperatively engage the upper end thereof with said shackle, a shiftable releasing element for engagement with the latter end of the dog, a rotatably mounted shaft and a plate loosely engaged upon said shaft and operatively connected to said shiftable element, a disk fixed upon said shaft, a spring pressed pawl mounted upon the plate and adapted for locking engagement with said disk, a vertically disposed rod carried by said pawl, a plurality of spaced tumbler disks loosely mounted upon the shaft and each having a notch in its periphery, means adjustable upon the shaft between said disks to transmit rotation successively from one disk to the other, an additional disk rotatable with said shaft and also provided with a V-shaped notch in its edge to receive said rod, the notches in the loosely mounted disks also receiving said rod when said notches are alined to transmit rotation to said plate upon a further rotation of the shaft and shift said element to release the locking dog, one of the inclined edges of the notch in the fixed disk on the shaft forcing said rod out of the notches upon a reverse rotation of the shaft.

1,193,132. MOTOR-DRIVEN VEHICLE. CHARLES F. FELTZ, St. Louis, Mo., assignor of one-third to William E. Anderson and one-third to Stonay L. Langdale, St. Louis, Mo. Filed Jan. 5, 1914. Serial No. 810,373. (Cl. 21—90.)

1. In a motor vehicle, driving mechanism comprising a motor, transmission gearing, a drive shaft operable by said motor, a driven shaft for operating said transmission gearing, said drive shaft being alined with said driven shaft, and a clutch device including a clutch member secured to one of said shafts and overlapping the other shaft, said clutch device being adapted to lock said drive shaft to said driven shaft when said motor is transmitting power to said transmission gearing, said driven shaft being free to turn at a higher rate of speed than the drive shaft when the clutch device is in its operative condition and said clutch device being free to uncouple said shafts automatically when said driven shaft is turned at a higher rate of speed than the speed of said drive shaft.



2. In a motor vehicle, driving mechanism comprising traction wheels, a transmission device for transmitting power to said traction wheels, a motor, and means for transmitting power from said motor to said transmission device, said means including a drive shaft operable by said motor, a driven shaft for transmitting power from said drive shaft to said transmission device, and a clutch device adapted to unite said shafts when they are turning at the same speed, said driven shaft being free to turn at a higher rate of speed than the drive shaft when the clutch device is in its operative condition and said clutch device being free to uncouple said shafts automatically when said driven shaft turns at a higher rate of speed than said drive shaft, thereby permitting said traction wheels, transmission device and driven shaft to turn independently of said motor and drive shaft.

3. In a motor vehicle, driving mechanism comprising a motor, a transmission device, alined shafts extending from and located between said motor and transmission device, and a clutch device adapted to unite said shafts when they are turning at the same speed, the driven elements of said clutch device being free to turn at a greater speed than the drive elements when the clutch device is in its operative condition, thereby allowing the driven shaft to turn at a greater speed than the other shaft.

4. In a motor vehicle, driving mechanism comprising a motor, a transmission device adapted to be operated by said motor, a drive shaft leading from said motor, a driven shaft extending from said transmission device and alined with said drive shaft, and a clutch device adapted to rigidly connect said shafts when they are turning at the same speed, the driven elements of said clutch device being free to turn at a greater speed than the drive elements when the clutch device is in its operative condition, thereby allowing the driven shaft to be released automatically when one of said shafts turns at a higher rate of speed than the other shaft.

1,193,133. AUTOMOBILE STEERING-GEAR. CHARLES L. FLORA, Toledo, Ohio, assignor of one-half to Fred N. Laubenthal, Toledo, Ohio. Filed Mar. 25, 1916. Serial No. 86,675. (Cl. 74—79.)

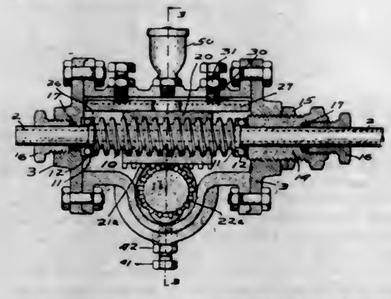
1. In a steering gear, a casing, a screw, a block threaded on the screw, a housing for containing the block and forming a bearing for the block, means for adjusting the housing in the casing to vary the pressure of the housing on the block, and means connecting the block with the steering mechanism of the conveyance.

2. In a steering gear, a casing, a screw, the block threaded on the screw, a housing for containing the block and forming a bearing for three sides of the block, means for adjusting the housing in the casing to vary the pressure of the housing on the block, and means connecting the block with a steering mechanism of the conveyance.

3. In a steering gear, the combination of a screw, a block threaded on the screw, a rack located on the block, a spur gear operated by the rack, spindles for supporting the spur gear, roller bearing blocks surrounding the spin-

dles and for supporting the spindles, and adjustable pillows for supporting the roller bearing blocks and the spur gear and adjusting the spur gear relative to the rack.

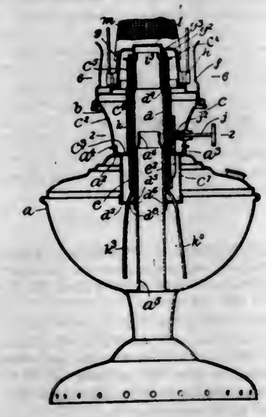
4. In a steering gear, the combination of a screw, a block threaded on the screw, a rack located in the block, a spur gear operated by the rack, spindles for supporting the spur gear, a casing for inclosing the screw, the block and the spur gear, caps for supporting the spindles and secured to the casing on opposite sides thereof, the caps having inwardly extending flanges, and roller bearings located intermediate the spindles and the flanges for supporting the spindles and the spur gear, and means for adjusting the position of the caps.



5. In a steering gear, the combination of a screw, a block threaded on the screw, a rack located on the block, a spur gear operated by the rack, spindles for supporting the spur gear, a casing for inclosing the screw, the block and the spur gear, caps for supporting the spindle, bolts for securing the caps on opposite sides of the casing, and means for adjusting the position of the caps.

[Claims 6 and 7 not printed in the Gazette.]

1,193,134. CENTRAL-DRAFT OR ARGAND LAMP OF THE INCANDESCENT TYPE. THEODORE H. FRENCH, New York, N. Y. Filed May 19, 1916. Serial No. 98,566. (Cl. 67—38.)



1. A lamp of the class described, comprising a reservoir having a central tube which passes upwardly therethrough and through the top thereof, and a detachable burner comprising a central basket-shaped and perforated body portion having a downwardly directed tubular member and an upwardly directed tubular sleeve, an inner tube detachably connected with the bottom of said tubular member and extending upwardly to the top of said tubular sleeve and forming in connection therewith a wick chamber, a wick carrying sleeve movable in said tubular sleeve, a detachable chimney gallery and holder, a detachable burner cone mounted on said chimney gallery and holder, a detachable mantle carrying band mounted on said burner cone, and a mantle support or supports detachably connected with said band.

2. A lamp of the class described provided with a detachable burner comprising a central basket-shaped and perforated body portion provided at its bottom with an upwardly directed tubular sleeve and a downwardly directed tubular member, an inner tube detachably connected with the bottom of said tubular member and extending to the top of said sleeve and forming in connection therewith a wick chamber, a wick carrying sleeve vertically movable in said tubular sleeve, a detachable chimney gallery, a detachable burner cone mounted on said gallery, a detachable mantle carrying band mounted on said cone, and a mantle support or supports detachably connected with said band.

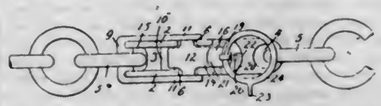
3. In a lamp of the class described, a detachable burner comprising a basket-shaped and perforated body portion having an upwardly directed tubular sleeve and a downwardly directed tubular member, a central tube detachably connected with the bottom of said tubular member and extending to the top of said sleeve and forming in connection therewith a wick chamber, and a vertically movable wick carrying sleeve mounted in said chamber and through which the wick passes.

4. In a lamp of the class described, a reservoir provided with a central air tube which passes upwardly therethrough, and a detachable burner comprising a basket-shaped body portion having an upwardly directed tubular sleeve, and a downwardly directed tubular member, a tube detachably connected with the bottom of said tubular member and in which the central air tube of the reservoir fits and which extends upwardly to the top of said tubular sleeve and forms in connection therewith a wick chamber, an air distributer placed in the top of said tube, a detachable chimney gallery, a detachable burner cone, and a detachable mantle support or supports mounted on said burner cone.

5. In a lamp of the class described, a detachable burner comprising a basket-shaped and perforated body portion having an upwardly directed tubular sleeve and a downwardly directed tubular member, a central tube connected with the bottom of said tubular member and extending to the top of said sleeve and forming in connection therewith a wick chamber, and a vertically movable wick carrying tube mounted in said chamber and through which the wick passes.

[Claim 6 not printed in the Gazette.]

1,193,135. EMERGENCY-COUPLING. ANTON GERSTNER and FRANK PEHAM, St. Paul, Minn. Filed Nov. 10, 1914. Serial No. 871,315. (Cl. 24—201.)



1. An emergency coupling comprising two separable links normally lying interlocked in the same plane and hand operable means carried by one of the links for lifting the interlocking end of the other link out of said plane.

2. An emergency coupling comprising two separable links normally held interlocked in the same plane, and pivotally working means carried by one of the links for lifting the locking end of the other link out of said plane.

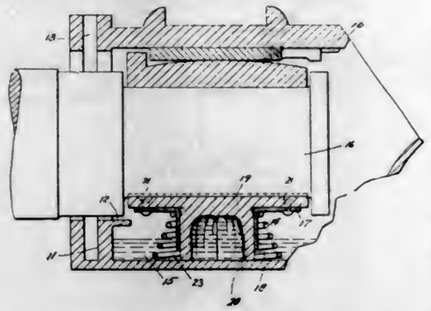
3. An emergency coupling comprising two separable links normally held interlocked in the same plane, a hand operable movable element carried by one of the links and engageable with the other link whereby to lift the locking end thereof out of said plane, and means for preventing said movable element from being accidentally moved in use.

4. An emergency coupling comprising a supporting link having a transverse cross pin, a removable link seating interlockingly in the supporting link and lying in the plane thereof, and a lever pivotally supported in the locking end of the removable link and fulcrumed upon said cross pin, whereby the turning of said lever will lift the locking end of the removable link out of the plane of the supporting link.

5. An emergency coupling comprising a supporting link, a removable link seating interlockingly in the supporting link and lying in the plane thereof, and a lever pivotally supported in the locking end of the removable link and fulcrumed upon the supporting link, whereby the turning of said lever will lift the locking end of the removable link out of the plane of the supporting link.

[Claims 6 to 11 not printed in the Gazette.]

1,193,136. LUBRICATOR FOR JOURNALS. GEORGE F. GODLEY, Philadelphia, Pa. Filed Apr. 8, 1915. Serial No. 19,929. (Cl. 64—35.)



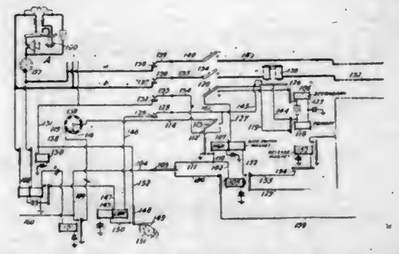
1. A lubricator of the class described embracing an apertured plate provided with a depending sleeve, nonapertured absorbent material fitted to said plate and integrally extended down within said sleeve to conform to the shape thereof and provide an oil well, means for securing the said material to said plate and means operative for yieldingly supporting said plate.

2. A lubricator of the class described embracing an apertured plate provided with a depending sleeve, nonapertured absorbent material, the marginal edges of which are loosened and the lower section folded to form a sleeve which is extended down into the first mentioned sleeve to conform to the shape thereof and provided an oil well, means for securing the outer edges of said top section to the plate, and means operative for yieldingly supporting said plate.

3. In combination a journal box constructed to contain oil in the bottom thereof, a journal, an apertured plate conforming to the shape of the journal provided with a depending sleeve, absorbent material fitted to said plate so as to extend marginally beyond the plate, absorbent material within the sleeve, rivets for securing the absorbent material adjacent the plate corners and means operative between the bottom of the said box and plate for yieldingly maintaining said plate in contact with the journal.

1,193,137. CALL-REGISTERING SYSTEM FOR AUTOMATIC TELEPHONE SYSTEMS. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 24, 1915. Serial No. 23,565. (Cl. 179—9.)

1. In a telephone exchange system, the combination with telephone lines, automatic finder switches wherein said lines terminate in multiple contacts, multiple test contacts for said lines in said finders, of meters connected with said test contacts and each provided with an operating winding of low resistance, a high resistance test circuit associated with each of said finders, an operating circuit for said meter magnets associated with each of said finders, and means operated upon the response of the called party for closing said operating circuit to actuate the calling line meter.



2. In a telephone exchange system, the combination with telephone lines, automatic finder switches wherein said lines terminate in multiple contacts, multiple test contacts for said lines in said finders, of meters connected with said test contacts and each provided with an operating winding of low resistance, a test circuit associated with each of said finders including a test relay of relatively high resistance, an operating circuit for said meter magnets associated with each of said finders, and means operated upon the response of the called party for closing said operating circuit to actuate the calling line meter.

3. In a telephone exchange system, the combination with telephone lines, means for interconnecting the same including automatic finder switches wherein said lines terminate in multiple contacts, multiple test terminals for said lines in said finders, of meters for said lines connected to said test terminals and provided with a double wound magnet having an operating winding of low resistance and a locking winding, a high resistance test circuit for each of said finders, an operating circuit for said meter magnets associated with each of said finders, and means actuated upon the response of the called party for closing said operating circuit to actuate the calling line meter, whereupon said meter magnet locks itself up by means of its locking winding.

4. In a telephone exchange system, the combination with telephone lines, means for interconnecting the same including automatic finder switches wherein said lines terminate in multiple contacts, multiple test terminals for said lines in said finders, of meters for said lines connected to said test terminals and provided with an operating magnet of low resistance, a test circuit for each of said finders including a test relay of relatively high resistance, an operating circuit for said meter magnets associated with each of said finders and a polarized relay operated upon the response of the called party for closing said operating circuit to actuate the calling line meter.

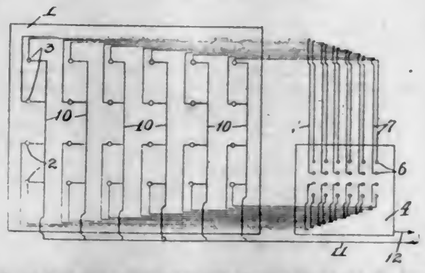
5. In a telephone exchange system, the combination with telephone lines, means for interconnecting the same including automatic finder switches wherein said lines terminate in multiple contacts, multiple test terminals for said lines in said finders, of meters for said lines connected to said test terminals and provided with an operating magnet of low resistance, a test circuit for each of said finders including said meter magnet and a test relay of relatively high resistance, and an operating circuit for said meter magnets associated with each of said finders.

[Claim 6 not printed in the Gazette.]

1,193,138. ELECTRICAL DISPLAY MEANS. LE ROY A. HANSON, Chicago, Ill., assignor of one-third to Frank Adsit and one-third to Ruthven E. E. Hanson, Chicago, Ill. Filed Sept. 27, 1913. Serial No. 792,090. (Cl. 177—350.)

1. In a device of the class described, a display board, colored lamps upon said display board, master boards one for each color of lamp connected to said display board, an endless belt mechanism, and interchangeable members re-

leasably secured thereon and adapted to be moved over said master boards to cause a successive illumination of certain of the lamps on the display board with an apparent movement of colored characters thereacross.



2. In a device of the class described, a plurality of lamps arranged in groups, each group affording a single point upon a display board, a plurality of master boards connected to said display board, one master board for certain of the lamps in each of said groups, alterable means effecting a successive illumination of the corresponding lamps on the display board, and resilient means associated with said master boards adapted to impel said alterable means toward said contact members to insure contact.

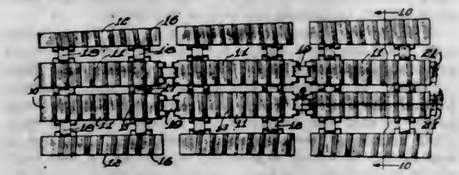
3. In a device of the class described, a display board, colored lamps thereon, a plurality of master boards connected with said display board, one for each color of lamp, and means movable thereover adapted to cause illumination of certain of said lamps to produce apparently movable characters upon said display board.

4. In a device of the class described, a display board, different colored lamps thereon, a plurality of master boards connected with said display board, one for each color of lamp, means movable thereover, and means coacting therewith adapted to cause illumination of certain of said lamps to produce colored characters upon said display board.

5. In a device of the class described a plurality of lamps arranged in groups, each group affording a single point upon a display board, and a plurality of permanently located master boards connected to said display board, one of said master boards for one of the lamps in each of said groups, and alterable means for causing illumination of said lamps from said master boards.

[Claims 6 and 7 not printed in the Gazette.]

1,193,139. TRACTION DEVICE FOR VEHICLE-WHEELS. JAMES H. HARDEN, Chicago, Ill. Filed July 14, 1915. Serial No. 39,775. (Cl. 104—45.)



1. In a traction device of the class described, means adapted to be secured upon the wheel periphery, and flexible mechanism for coaction therewith adapted to be laid in the path of the wheel to insure tractive effect between the wheel and said means.

2. In a device of the class described, the combination with a wheel, of means attachable thereon, and a metallic link mechanism corrugated to coact with said means and adapted to be laid in the path of the wheel to insure tractive engagement between said means and said mechanism for said wheel.

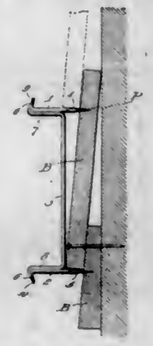
3. In a device of the class described, means adapted to be secured upon a wheel, abutments thereon, and flexible link mechanism having abutments thereon adapted to receive said wheels tracking thereover to afford tractive effect on the wheel, said flexible link mechanism adapted to be folded into small compass.

4. A track member of the class described, comprising a series of metallic links connected together and adapted to be laid in the path of the vehicle wheel, said links adapted to be folded into small compass.

5. A track member of the class described, comprising a series of corrugated metallic links connected together and adapted to be laid in the path of the vehicle wheel, said links adapted to be folded into small compass.

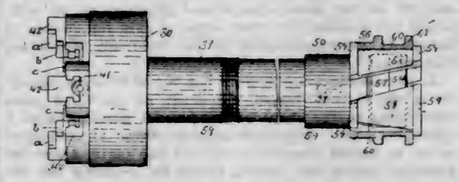
[Claim 6 not printed in the Gazette.]

1,193,140. SIDING-GAGE. CHARLES HARMON, Louisville, Ky. Filed Feb. 21, 1916. Serial No. 79,686. (Cl. 33—187.)



A siding gage composed of a single metal bar folded on itself to form parallel arms with a cross bar connecting them intermediately of the ends of said arms, one end of said arms being sharpened to form spurs and their other ends bent laterally outward to form board supporting fingers, the arms beyond one side of said cross bar being doubled to form strengthened board supporting means.

1,193,141. CHUCK. JAMES HARTNESS, Springfield, Vt. Filed Apr. 7, 1915. Serial No. 19,722. (Cl. 29—124.)



1. A chuck comprising a recessed body, a plurality of jaws mounted in the recesses in said body to rock on axes parallel to the axis of said body, and a member concentric with the body and axially immovable relatively thereto, and having cam members thereon for operatively engaging said jaws to rock them.

2. A chuck comprising a recessed body, a plurality of rockers mounted in the recesses of the body to rock on axes parallel to the axis of said body, jaws on the ends of said rockers having work-engaging faces located in front of said body, and means for actuating the rockers including an annular cam directly engaging said rockers and held against axial movement relatively to said body, said annular member being arranged concentrically within said body, and means for moving said cam about its axis.

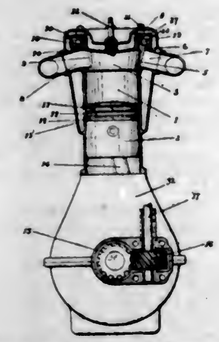
3. A chuck comprising a body, a plurality of jaws mounted on said body to rock on axes parallel to the axis of said body, and a cam arranged concentrically with said body and held against axial movement relatively thereto, said cam and jaws having coöperative engaging portions, in consequence of which the rotation of said cam imparts a rocking movement to said jaws.

4. A chuck comprising a body, jaws mounted on said body to rock on axes parallel with the axis of said body, said jaws having cam faces, a cam concentric with said body and arranged to engage said faces, means for holding said cam against axial movement relatively to said body and said jaws, and means for effecting a relative rotative movement of said cam and said body.

5. A chuck comprising a body having sockets radially removed from the axis thereof, rocking jaws journaled in said sockets and having work-engaging portions projected beyond the front face of said body, and means within the body for operatively engaging said jaws to rock them, including an axially immovable sleeve and external members thereon for operating said jaws.

[Claims 6 to 19 not printed in the Gazette.]

1,193,142. VALVE FOR INTERNAL-COMBUSTION ENGINES. RALPH H. HEBERLING, Oshkosh, Wis. Filed Apr. 9, 1914. Serial No. 830,759. (Cl. 123—190.)



1. In a valve mechanism for internal combustion engines, the combination with a cylinder and a piston working therein, of a tapering valve seat provided with inlet and exhaust passages, and a tapering rotary valve, consisting of a ring or annulus, open from top to bottom, fitting said seat and having diametrically opposite inlet and exhaust ports.

2. In a valve mechanism for internal combustion engines, the combination with a cylinder and a piston working therein, of a tapering valve seat located at one end of said cylinder and provided with inlet and exhaust passages, and a tapering rotary valve, consisting of a ring or annulus open from top to bottom, fitting said seat and having diametrically opposite inlet and exhaust ports.

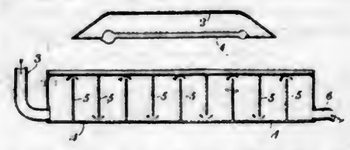
3. In a valve mechanism for internal combustion engines, the combination with a cylinder and a piston working therein, of a tapering valve seat provided with inlet and exhaust passages, a tapering rotary valve, consisting of a ring or annulus, open from top to bottom, fitting within said seat and having inlet and exhaust ports, and means for yieldingly pressing said valve to its tapering seat.

4. In a valve mechanism for internal combustion engines, the combination with a cylinder and a piston working therein, of a tapering valve seat provided with inlet and exhaust passages, a tapering rotary valve, consisting of a ring or annulus, open from top to bottom, fitting said seat and having diametrically opposite inlet and exhaust ports, and means for yieldingly pressing said valve to its tapering seat.

5. A balanced rotary valve, for internal combustion engines, consisting of a tapering ring or annulus open from top to bottom and provided at its sides with diametrically opposite inlet and exhaust ports of equal area.

[Claims 6 to 11 not printed in the Gazette.]

1,193,143. APPARATUS FOR STERILIZING LIQUIDS BY MEANS OF ULTRA-VIOLET RAYS. VICTOR HENRI, Paris, and ANDRÉ HELBRONNER and MAX VON RECKLINGHAUSEN, Suresnes, France, assignors to The R. U. V. Company, Inc., a Corporation of New York. Original application filed June 7, 1910, Serial No. 565,611. Divided and this application filed Feb. 12, 1914. Serial No. 818,209. (Cl. 210—1.)

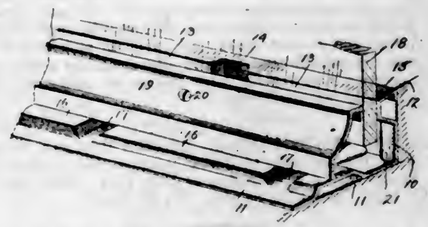


1. In apparatus for sterilizing liquids, the combination with a source of ultra-violet rays, of a channel or conduit through which the liquid may flow, said conduit being formed to present a restricted tortuous path for the liquid closely passing and repassing and directly exposed to the rays from said source, and means for agitating the liquid in its passage through the channel.

2. In apparatus for sterilizing liquids, the combination with a source of ultra-violet rays, of a channel or conduit through which the liquid may flow, said conduit being located in close proximity to the source and exposed to the direct action of the rays from the same, baffle plates placed in the conduit to form a restricted tortuous path for the liquid closely passing and repassing said source whereby the entire body of liquid will be caused to flow repeatedly in a thin film through the field of such rays.

3. In apparatus for sterilizing liquids, the combination with a single source of ultra-violet rays, of a trough placed in the vicinity of the same and exposed to the direct action of the rays from the source, baffle plates supported in the trough to form a series of compartments and a tortuous path for the entire body of liquid closely passing and repassing through the field of said rays, a plurality of said compartments being simultaneously illuminated by the rays.

1,193,144. STORE-FRONT CONSTRUCTION. GEORGE C. HESTER, Chicago, Ill. Filed Feb. 4, 1914. Serial No. 816,580. (Cl. 189—78.)



1. A sash for store front construction, comprising a glass-engaging clamping member of sheet metal having integral ribs or projections on the side toward the glass, said member having an upper offset glass-engaging portion from which said ribs extend downward.

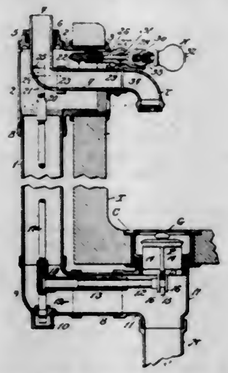
2. A sash for store front construction comprising a sheet metal member having a vertical part at one side of the glass and a horizontal part beneath the glass, the horizontal part having upwardly extending integral ribs or projections that reach to the corner formed by the vertical and horizontal parts.

3. A sash for store front construction comprising a sheet metal member having a vertical part at one side of the glass, and a horizontal part beneath the glass, the horizontal part having upwardly extending ribs or projections, and the vertical part having outwardly extending ribs or projections, the ribs or projections in both cases

reaching to the corner formed by the vertical and horizontal parts.

4. A sash for store front construction comprising a sheet metal member having a vertical part at one side of the glass with separated glass-engaging projections the spaces between the latter forming water passages and having a horizontal part beneath the glass with separated projections, the spaces between the projections forming water passages, and said horizontal part also having stiffening ribs which extend part way from the vertical part to the separated projections on the horizontal part.

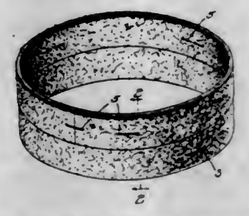
1,193,145. BATH-TUB FIXTURE OR APPLIANCE. WINFIELD E. HINSDALE, New York, N. Y. Filed Sept. 13, 1911. Serial No. 649,123. (Cl. 4—24.)



1. A bath tub fixture embracing interconnected outlet and overflow tubes, a waste-plug seated in the bottom of the tub, and an outlet or opening therefor located directly above the trap; in combination with interconnected means located in the overflow tube for operating the plug, said means at its lower end being located directly beneath the plug and adapted to move one side of the same so that free access to the trap may be had, substantially as described.

2. A bath tub fixture embracing a valve or plug seated in the bottom of the tub and in vertical alinement with the trap; a plurality of operating rods for said valve all located in the overflow tube, two of said rods being telescopic and located below the valve or plug and detachable therefrom, and a third rod vertically disposed and connected at its top with means for operating it, substantially as described.

1,193,146. LIGHTING-RING. RUDOLPH HOFFMAN, Kankakee, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Mar. 23, 1916. Serial No. 86,086. (Cl. 67—69.)



1. A lighting ring for wickless oil burners comprising a body in ring form consisting of a plurality of concentric layers of sheet material, and a strip of asbestos in sheet form folded over the upper edge of said layers and secured to the body and covering the upper edge and the upper portion of the inner and outer sides of the body.

2. A lighting ring for wickless oil burners comprising a body in ring form consisting of a plurality of concentric layers of asbestos in sheet form, a strip of asbestos in sheet form folded over the upper edge of the body and covering the upper edge and the upper portion of the inner and outer sides of the body, and devices for securing said strip to the body, said devices being located wholly below the upper edge of the body.

1,193,147. WRENCH. SVEN N. HOLM, Dorchester, Mass. Filed Oct. 1, 1913. Serial No. 792,699. (Cl. 81—78.)



1. In a wrench, a pair of relatively movable levers, a connection fixed to one of said levers and having a sliding engagement with the coöperating lever, and means adjustable along one of said levers and pivotally connected with the other lever by the same fastening which fixes the connection to said lever and effectively disposed to control the position of said connection relative to said levers whereby to hold the adjustment of said levers.

2. In a wrench, a pair of relatively movable levers, a connection held to one of said levers and having a sliding engagement with the coöperating lever permitting adjustment of said levers by relative sliding movement thereof, and a member pivoted to one of said levers and slidable on the coöperating lever and having engagement with the free end of said connection to control the effective positioning of said connection and thereby hold the adjustment of said levers.

3. In a wrench, a pair of levers having gripping jaws, a connection between said levers permitting relative adjustment of said jaws toward and from each other and a member pivotally connected to one of said levers by the same fastening which fixes said connection to said lever and slidably engaging the other lever, said member having engagement with the free end of said connection to control the effective positioning of said connection and thereby hold the adjustment of said levers, and said member adjustable toward and from said connection to permit the effective positioning of said connection to be varied.

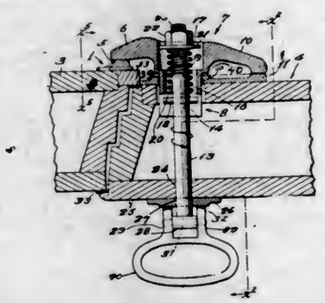
4. In a wrench a pair of levers having gripping jaws and one lever having a slot, a connection held to the other lever and working in the slot of said slotted lever, whereby said levers may be adjusted by simple sliding movement of one relative to the other, and a member pivotally connected with one of the levers and slidably engaging the other of said levers and effectively disposed to control the position of the connection in said slot whereby to hold the adjustment of the levers.

5. In a wrench a pair of levers having gripping jaws and one lever having a slot, a connection held to the other lever and working in the slot of said slotted lever, whereby said levers may be adjusted by simple sliding movement of one relative to the other, and a member pivotally connected with one of the levers and slidably engaging the other of said levers and effectively disposed to control the position of the connection in said slot whereby to hold the adjustment of the levers, and means on said connection for limiting the motions of said members.

[Claims 6 to 9 not printed in the Gazette.]

1,193,148. MEANS FOR CLOSING REFRIGERATORS. ANTON N. HORNUNG, Los Angeles, Cal. Filed Oct. 20, 1915. Serial No. 57,013. (Cl. 70—49.)

1. The combination with a jamb, of a strike on one side of the jamb; a closure body to engage the other side of the jamb; a rotatable reciprocal latch on one side of the closure body to engage the strike; operating means on the other side of the closure body, means connected to the operating means and to the latch to rotate and reciprocate the same to cause the latch to act on the strike and to draw the closure body against the jamb; a spring to yieldingly force the latch against the strike.



2. The combination with a jamb, of a strike on one side of the jamb; a closure body to engage the other side of the jamb; a rotatable reciprocal latch on one side of the closure body to engage the strike; operating means on the other side of the closure body, means connected to the operating means and to the latch to rotate and reciprocate the latch to cause the latch to act on the strike and to draw the closure body against the jamb; a spring to yieldingly force the latch against the strike; and means to adjust the tension of the spring.

3. A jamb; a closure body to engage one side of the jamb; a journal bearing on the closure body; a latch having a hollow journal reciprocally and rotatively mounted in the bearing; a stem extending through the closure body and the latch; means carried by the stem to rotate the latch; resilient means operated by the stem to move the latch toward the closure body; a strike on the jamb to receive the latch, and means for reciprocating and rotating the stem.

4. The combination with a latch and a mounting therefor, of a stem connected to reciprocate and rotate the latch, a cam to engage the mounting and reciprocate the stem, and means to operate the cam to actuate the stem, said cam having a flat face to engage the mounting and a bulge at the end of said flat face to hold the parts in adjusted position.

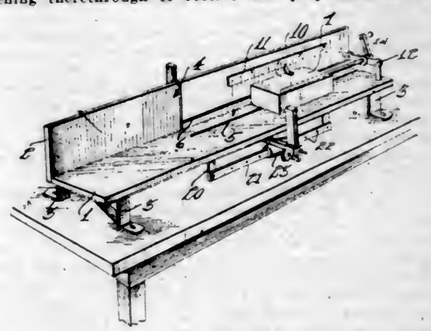
5. The combination with a closure; of a plate having a journal bearing and fastened to one side of the body; a latch having a hub journaled in said journal bearing and provided with a slot; and a spring seat and stem extending through the closure body and the latch and reciprocating in said latch and provided with a pin engaging said slot; a spring seated on said seat; means on the inner end of the stem to act upon the spring and a handle pivoted to the stem outside the closure; and a cam operated by the hande to actuate the stem.

[Claims 6 and 7 not printed in the Gazette.]

1,193,149. MITER-BOX. SPENCER S. HULS, Oakhill, Kans. Filed Oct. 28, 1914. Serial No. 869,074. (Cl. 143—89.)

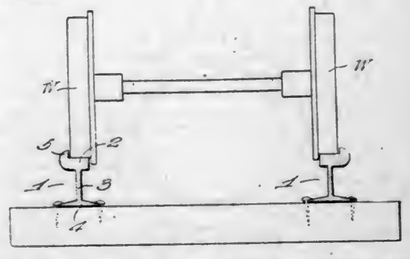
1. A miter box comprising a support, a bar pivotally connected to the support, a saw guide secured to one end of the bar, a second saw guide slidably mounted on the opposite end of the bar, a lateral extension secured to the second guide and sliding on the bar, a finger depending from the extension, a perforated bar carried by the support, a block having an opening extending longitudinally thereof adjustably mounted on the bar, an extension on the side of the block having an opening to receive the finger, and means for securing the block in adjusted position.

2. A miter box comprising a base, a bar pivotally secured to the base, a saw guide secured on one end of the bar, a second saw guide slidable on the opposite end, said slidable saw guide being provided with a projection, a perforated bar carried by the base, a block having an opening therethrough to receive said projection, and a



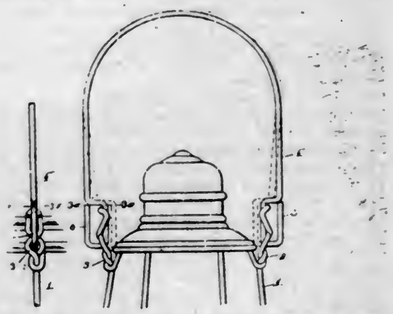
catch carried by the block to engage the perforations in the bar.

1,193,150. RAIL. SAMUEL HUMPHREY, Indiana Harbor, Ind. Filed May 15, 1916. Serial No. 97,636. (Cl. 239—14.)



The combination with a T-rail provided with the usual head having a substantially flat outer side, of a flange having a flat portion on one of its sides arranged in abutting relation to the flat side of the head of said rail, said flange projecting upwardly and having its upper edge disposed in a plane above the upper edge of said head, and clamping elements extending through said flange and head of said rail for removably attaching the same to the latter.

1,193,151. BAIL-HOLDER FOR LANTERNS. ALBERT W. JACOBS, Rochester, N. Y. Filed Aug. 30, 1915. Serial No. 48,140. (Cl. 240—52.)



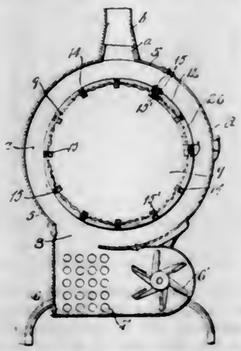
1. In a lantern the combination of a bail ear, a seat mounted above said bail ear, a bail mounted to pass through said bail ear and having a sliding engagement therewith and into said seat, said bail being resilient

and capable of being pressed inwardly to move said bail out of engagement with said seat and to permit said bail to swing in said bail ears.

2. In a lantern the combination of a bail-ear, said bail ear having the shape of a figure 8 an dhaving two openings therein and being bent out of a single piece of wire, the upper portion of said bail ear being curved inwardly near the top and then outwardly at the top forming a vertically extending seat on the inner side thereof, a bail passing through the lower opening of said bail ear and up into said seat, said bail being held thereby in an upright position.

3. In a lantern the combination of a bail, a rectangular loop on the end of said bail, a bail ear on said lantern, said bail ear being bent to the shape of a figure 8 and having two openings therein, the lower end of said rectangular loop being mounted to swing and slide horizontally in the lower opening of said bail ear, the upper opening of said bail ear being bent to form a longitudinal seat thereon, the inner side of said rectangular loop being adapted to engage with and lock itself in said seat on said bail ear.

1,193,152. GLOVE DRYING AND DEODORIZING APPARATUS. JOHN J. JENKINS, Los Angeles, Cal. Filed Jan. 23, 1913. Serial No. 743,730. (Cl. 34—5.)



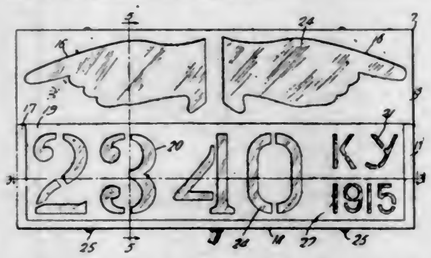
1. A drying tumbler, comprising a pair of metallic heads, with journals thereon, a wooden disk secured to the inner surface of each head, a plurality of notches in the perimeter of each disk, a plurality of longitudinal wooden ribs, each having a groove from end to end, in its outer edge, adapted to rest in the notches of the respective disks, and a rod within the groove of each rib and secured by nuts to the metal heads.

2. A drying tumbler, comprising a pair of metallic heads, each with an integral journal, a wooden disk secured to the inner surface of each head, removable longitudinal wooden ribs adapted to be secured to said heads and disks, and a net work of rope between said ribs and wooden disks to constitute a grid for holding fabrics within said tumbler.

3. A drying tumbler, comprising a pair of metallic heads, with journals thereon, a wooden disk removably attached to the inner surface of each head, said disks having notches at regular intervals, a plurality of wooden ribs longitudinally disposed and resting in the notches of the disks, each rib having a groove in its outer surface, a tie bolt in each rib groove, passing through the metallic heads, and a grid formed of cords or ropes which are detachably secured to said ribs and disks.

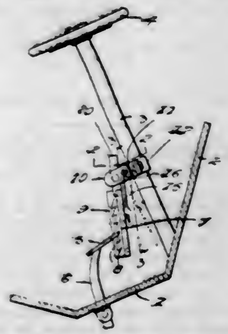
4. A glove-drying apparatus comprising a shell; a non-metallic perforated tumbler inside of said shell, there being an inlet into the shell and an outlet from the shell and an open passage leading around one side of the tumbler from the inlet to the outlet; means to supply heated air to the inlet; means to rotate the tumbler; and means to discharge the heated air from the outlet away from the apparatus.

1,193,153. ILLUMINATED LICENSE-NUMBER. HORACE B. KINCAID, Louisville, Ky. Filed July 23, 1915. Serial No. 41,555. (Cl. 40—133.)



In a vehicle signal, a casing comprising a front and a back telescoped into the front; an opaque plate constituting a part of the front and closing the upper portion of the front, the opaque plate having openings shaped to form indicators which point laterally in opposite directions; side guides and a bottom stop on the front below the opaque plate; a second plate removably mounted in the guides and engaged by the bottom stop, the second plate being perforated to disclose license data, the guides outstanding in front of the opaque plate whereby the latter will act as a directing element for the second plate during the insertion of the opaque plate into the guides; a longitudinal partition in the back and lying between the indicators on the one hand and the license data on the other hand; a transverse partition in the back and extended between the top of the back and the longitudinal partition, the transverse partition lying between the indicators; a translucent plate located to the rear of the opaque plate and the second plate and held in position by the partitions; lower lamps secured to the ends of the back and located below the longitudinal partition; upper lamps projecting in opposite directions from the transverse partition and located above the longitudinal partition; and means for connecting the front and the back of the casing, to hold the same against relative movement; the second plate being removable while the front and the back of the casing are connected, and the back and the front being separable to permit a removal of the translucent plate and to give access to all of the lamps.

1,193,154. ATTACHMENT FOR MOTOR-VEHICLES. JOSEPH KIRCHHOFF, The Dalles, Oreg. Filed Nov. 12, 1915. Serial No. 61,128. (Cl. 74—81.)



1. The combination with a motor vehicle provided with a low speed pedal normally held out of operative position and a steering column, of a notched bar secured to the steering column and adapted to engage and hold the low speed pedal in operative position and spring means to hold the notched bar in and out of operative position with relation to the pedal.

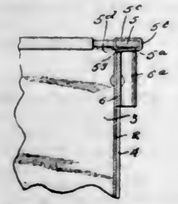
2. In a device of the class described, a bar, a plurality of teeth on the under side of the bar, the bar being pivoted to the steering column on a motor vehicle, the teeth being adapted to engage the low speed pedal of said motor vehicle to hold the same in operative position and a spring carried by the device for holding the notched bar in both operative and inoperative position.

3. In combination with a motor vehicle having a low speed pedal normally held out of operative position and a steering column, of a bracket secured to said steering column, a notched bar secured to the bracket and adapted when in its lowermost position to engage the pedal and hold the same in operative position and when in its uppermost position to hold said pedal out of operative position and means to hold said latch bar in either its uppermost or lowermost position.

4. The combination with a motor vehicle having a low speed pedal normally held out of operative position and a steering column, of a bracket secured to said steering column, a notched bar pivotally secured to said bracket, said notched bar being adapted when in its lowermost position to engage the low speed pedal and hold the same in operative position and when in its uppermost position to disengage said pedal, a spring secured to the bracket, said spring having a notch, said spring normally tending to force the notched bar downwardly and a knob on the notch bar adapted to engage the latch on said spring when the bar is swung upwardly to hold the bar in inoperative position.

5. The combination with a motor vehicle having a low speed pedal normally held out of operative position and a steering column, of a bracket composed of a plurality of sections, bolts for securing said sections to the steering column, parallel ears formed on one of said sections, a notched bar pivotally secured between said ears and adapted when in its lowermost position to engage and hold the low speed pedal in operative position and when in uppermost position to disengage said pedal, a spring secured to one of the ears, said spring having a notch, said spring normally tending to force the notched bar downwardly, and a knob on the rear wall of said notched bar adapted to engage the notch formed on said spring when the bar is swung upwardly to hold the bar in inoperative position.

1,193,155. SHEET-METAL BOX. GOTTLIEB KLENK, Defiance, Ohio, assignor to The Defiance Pressed Steel Co., Defiance, Ohio, a Corporation of Ohio. Original application filed Apr. 10, 1911, Serial No. 620,068. Divided and this application filed Jan. 24, 1913. Serial No. 743,972. (Cl. 220—111.)

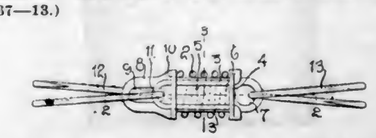


1. A sheet metal box of the class described having end sections and side sections secured together at the vertical corners of the box by crimps or bends, each side section and each end section having a flat bead with a bottom horizontal part 5^a, a top horizontal part 5^c, a flat reinforcing band 5 inclosed within the said flat bead, and reinforcing bars 6 rigidly secured to the side wall sections of the box, and having the crimps or offsets 6^a under the flat bead and band 5, substantially as set forth.

2. A sheet metal receptacle having a peripheral projecting ledge at its top, said ledge comprising a reinforcing element having a flat under face with a sheet metal vertical wall of the receptacle leading to and surrounding said element, said wall having a sharp bend beneath said flat face, and a strip secured to the wall and having an edge extending into the bend to retain the latter against distortion, said strip being crimped or bulged intermediate its ends to form an abutment beneath the ledge.

3. A sheet metal receptacle having a peripheral projecting ledge at its top, said ledge comprising a reinforcing element having a flat under face with a sheet metal vertical wall of the receptacle leading to and surrounding said element, said wall having a sharp bend beneath said flat face, and a strip secured to the wall and having an edge extending into the bend to retain the latter against distortion, said strip being crimped or bulged intermediate its ends to form a pillar or abutment extending laterally of the direction of length of the strip, said pillar or abutment being located entirely beneath the ledge.

1,193,156. SPRING-SHACKLE. PETER KOPCZYK, Arcadia, Pa. Filed Sept. 4, 1915. Serial No. 49,037. (Cl. 267—13.)

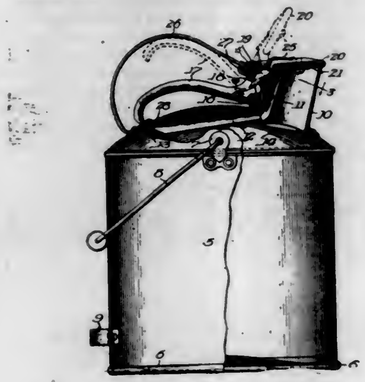


1. A spring shackle of the character described comprising draft members having sliding engagement with each other, a spring resisting relative longitudinal movement of the draft members, one of the draft members having an elongated opening and the other having an opening overlying the elongated opening, the last-named draft member being held by the spring with its opening overlapping the rear end of the elongated loop, a draft connection engaged with one end of the first-named draft member, and a draft connection engaging and extending through the opening of the second member and passing through the elongated opening of the first-named member whereby one of the draft members will have movement relative to the other draft member to compress the spring to a predetermined degree, the draft so applied being then transmitted directly to the other member.

2. A spring shackle of the character described, comprising a coiled spring, a draft member having a shank extending through the spring and an abutment bearing against one end of the spring, the shank beyond said abutment being formed with an elongated opening, a draft member having sliding engagement with the shank and having an abutment engaging against the opposite end of the spring, said draft member extending through the first-named abutment and having an opening registering with the elongated opening in the first named draft member, a draft connection engaging that end of the first named member opposite the abutment, and a draft connection engaging that end of the second named member which projects through the abutment on the first named member and also engaging through the elongated opening of said first named member.

3. A spring shackle of the character described, comprising a coiled spring, a draft member having a head, an abutment extending at right angles thereto and bearing against one end of the spring and a shank extending through the spring, the head being formed with a longitudinally elongated opening, the end of the shank being formed with an opening, a draft connection engaging with the last named end of the shank, a draft member comprising an annular abutment surrounding the shank and bearing against the other end of the spring and U-shaped members attached to the abutment extending through the spring and through the abutment on the first-named draft member, the ends of said U-shaped members overlapping the elongated opening in the head of the first named member, and a draft connection passed through the closed ends of the second named member and through the elongated opening of the head, the length of the spring when uncompressed being greater than the length of said elongated opening whereby when the spring is partly compressed strain should be applied directly to the said draft bar.

1,193,157. OIL-CAN. NORMAN R. KRAUSE and ROBERT ANDERSON, Racine, Wis., assignors to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Aug. 27, 1915. Serial No. 47,705. (Cl. 221—16.)

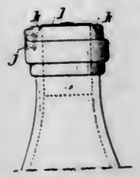


1. An oil can having a body, a spout connected thereto increasing in size toward its lower end said spout having a channel extending through its wall, a vent tube in said body communicating with said channel and increasing in size toward its free end, ears mounted upon said spout, a cover for said spout mounted in said ears and having an extension, and a lever also mounted in said ears and having a shoulder whereby when said lever is raised said shoulder contacts with said extension to raise said cover.

2. An oil can having a body, a channeled spout connected thereto, a screen in the lower end of said spout, a vent tube connected to said spout channel and having its free end screened, ears mounted upon said spout, a cover for said spout mounted in said ears, a lever mounted in said ears and adapted when raised to contact with said cover and raise the same from said spout, a spring mounted in said ears and contacting with said cover to return the same to closed position, and a shield over said lever to prevent accidental opening of said cover.

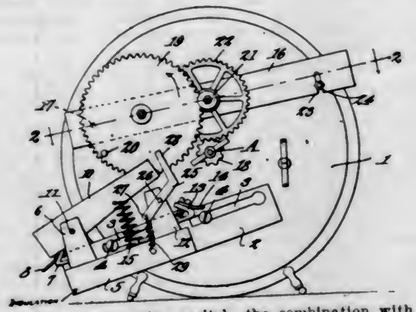
3. An oil can having a body, a channeled spout connected thereto having a screen in its lower end, a vent tube communicating with said spout channel and having its free end screened, ears mounted upon said spout, a cover for said spout mounted in said ears, a lever also mounted in said ears and disconnected from said cover and adapted to contact therewith to raise and maintain the same in unlocked position, a shield over said lever to prevent accidental opening of said cover, and a spring mounted in said ears and normally contacting with said cover to return and maintain the same in closed position.

1,193,158. SEAL. JOSEPH LAGUIONIE, Sevran, France. Filed Mar. 24, 1914. Serial No. 826,916. (Cl. 215—27.)



In a seal of the character described, in combination with a bottle having a cavity and holes in its neck, a stopper, a wire passing through said holes and crossing over the stopper and adapted to be knotted in said cavity, and a cap placed into the cavity, substantially as described and for the purpose set forth.

1,193,159. ELECTRIC TIME-SWITCH. JOHN H. LAMB, Washington, Ind. Filed Oct. 11, 1915. Serial No. 55,271. (Cl. 161—27.)



1. In an electric time switch, the combination with a clock, of a longitudinally adjustable supporting member carried thereby, a switch blade pivoted to said member, a contact carried by said member with which the blade is engageable, and a wheel carried by the clock and connected to one arbor thereof, said wheel having an outstanding pin engageable with the free terminal of said blade.

2. In an electric time switch, the combination with a clock, of a block of insulation carried thereby, a standard carried by said block, a contact carried by said block, a switch blade pivoted to the standard and engageable with said contact, a member pivoted to the clock, a wheel carried by said member and having an outstanding pin engageable with the free terminal of said blade, and means for connecting said wheel to one arbor of the clock when said member is swung properly.

3. In an electric time switch, the combination with a clock, of a block of insulation carried thereby, a contact carried by said block, a switch blade pivotally connected with said block and engageable with said contact, means for disengaging the blade from said contact, a strip pivoted to the clock, a gear wheel carried by said strip and having a pin engageable with the free terminal of the said blade to swing it into engagement with said contact, a gear wheel carried by one arbor of the clock, and a gear wheel carried by said strip and connected to the first mentioned gear wheel and adapted to mesh with the second mentioned gear wheel when the strip is swung properly.

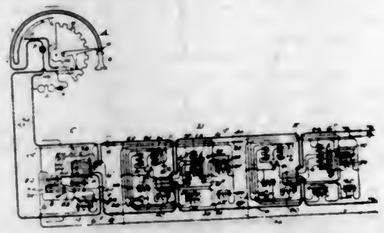
4. In an electric time switch, a contact, a pivotally mounted switch blade engageable therewith, a wheel having an outstanding pin engageable with said blade to move it into engagement with said contact, and means operated by said pin after it leaves said blade to forcibly move said blade away from the contact.

5. In an electric time switch, a contact, a pivotally mounted switch blade engageable therewith, a rotary wheel having an outstanding pin to engage the blade for swinging it into engagement with the contact, and a pivotally mounted lever having a portion with which said pin is engageable after it leaves said blade so as to swing the lever, the lever also having a portion engageable with the blade whereby when the lever is swung by said pin it disengages said blade from said contact.

[Claim 6 not printed in the Gazette.]

1,193,160. AUTOMATIC TELEPHONE TRUNKING SYSTEM. WILLIS E. LAMB, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 1, 1911. Serial No. 647,146. (Cl. 179—18.)

1. In a telephone system, a subscriber's line, trunk lines, a trunking switch for said subscriber's line for selecting an idle trunk, the wipers of said switch normally engaging one of said trunk lines, a line relay normally connected with said line, a cut-off relay, means controlled by said cut-off relay for cutting off said line relay from the line when said subscriber's line is either calling or being called, means controlled by said cut-off relay for connecting said line with one of said trunks when said line is calling, and means including an automatic switch for extending a connection to the called line.



2. In a telephone system, a subscriber's line, a non-numerical trunking switch therefor, trunk lines for talking purposes, said switch including line wipers always in electrical engagement with one of said trunk lines, a relay in said switch, a cut-off relay, means controlled by said cut-off relay for opening the circuit of said first-mentioned relay when said line is calling or being called, and means controlled by said cut-off relay for connecting said line wipers with said subscriber's line.

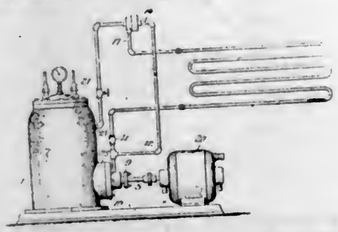
3. In a telephone system, a subscriber's line, a non-numerical trunking switch therefor, trunk lines for talking purposes, said switch including line wipers always in electrical engagement with one of said trunk lines, a line relay in said switch normally connected with the subscriber's line, a cut-off relay, means controlled by said cut-off relay for cutting off said line relay when said line is calling or being called, and means controlled by said cut-off relay for connecting said line wipers with said subscriber's line.

4. In a telephone system, a non-numerical trunking switch, trunk lines for talking purposes leading therefrom, said switch including line wipers always in electrical engagement with one of said trunk lines, a slow acting line relay for controlling the operation of said switch, a cut-off relay, means controlled by said cut-off relay for opening the circuit of said line relay, and means controlled by said line relay for controlling the extent of operation of said cut-off relay.

5. In a telephone system, a non-numerical trunking switch, trunk lines for talking purposes leading therefrom, a line relay controlling the operation of said switch, a cut-off relay for controlling the circuit of said line relay, and means controlled by said line relay for mechanically controlling the extent of operation of said cut-off relay.

[Claims 6 to 31 not printed in the Gazette.]

1,193,161. REFRIGERATING APPARATUS. GEORGE I. LEONARD, Los Angeles, Cal., assignor to Leonard Rotary Pump Corporation, Los Angeles, Cal., a Corporation of California. Filed Apr. 16, 1914. Serial No. 832,367. (Cl. 62—115.)

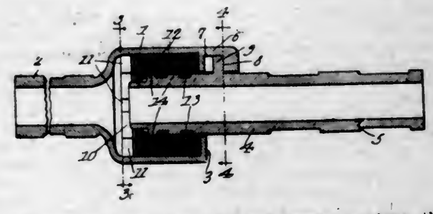


1. In a refrigerating apparatus employing an expansible fluid refrigerant, the combination of a tank having a pressure-outlet and a side-opening provided with an outer flange forming a pump-seat, a rotary motor-driven pump having a flange on the outer end of its case and seating in said tank-flange to extend said case horizontally into the tank with the case-flange abutting against and secured to the tank-flange face, said pump having an outlet within the tank and an intake, and a circulating system for the refrigerant connecting said pressure-outlet with the pump-intake.

2. In a refrigerating apparatus employing an expansible fluid refrigerant, the combination of an tank having a pressure-outlet and a side-opening provided with an outer flange forming a pump-seat, a rotary motor-driven pump, having a flange on the outer end of its case and seating in said tank-flange to extend said case horizontally into the tank with the case-flange abutting against and secured to the tank-flange face, said pump having an outlet within the tank and an intake, a head secured to the inner end of the pump-case and forming bearings for shafts of the rotary-pump members, and a circulating system for the refrigerant connecting said pressure-outlet with the pump-intake.

3. In a refrigerating apparatus employing an expansible fluid refrigerant and a sealing liquid, the combination of a tank for containing said refrigerant and liquid and having a pressure-outlet, a rotary motor-driven pump in the tank and having its outlet therein and an intake, a pressure-line leading from said pressure-outlet, a valve-seat at the discharge-end of said line containing a minute orifice, a casing containing a chamber connected with said discharge-end, a diaphragm in said casing dividing it into chambers and carrying a needle-valve for controlling said orifice, a suction-line leading to the pump-intake from the chamber at one side of the diaphragm and containing a check-valve, and a branch suction-line connecting said suction-line between the check-valve and the pump with the chamber at the opposite side of the diaphragm.

1,193,162. HOSE AND PIPE COUPLING. FITZ JAMES LEWIS, Corozal, Canal Zone. Filed Aug. 4, 1914. Serial No. 855,018. (Cl. 137—28.)

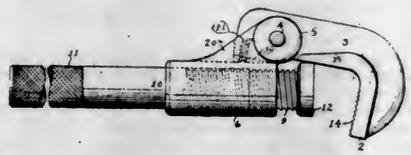


A coupling comprising male and female members, the female member having an inturned annular flange surrounding its mouth, a second inner annular flange between its ends provided with openings extending to the periphery of said member, and an arcuate lip projecting from said first mentioned flange, a compressible gasket fitted snugly within the female member between said flanges, the male member being insertible loosely through the first mentioned flange to fit tightly within said gasket, said lip having an inner slot extending from one end thereof along said flange, said flange forming one wall of said slot, the male member having an outstanding lug between its ends arranged to strike said flange at any point thereof spaced from said lip when the female and male members are assembled, so that said lug can slide along said flange to be directed thereby into said slot, and that portion of the male member which fits within the gasket having annular grooves into which the gasket is adapted to bulge.

1,193,163. WRENCH. JOHN R. LONG, Akron, Ohio. Filed Sept. 20, 1915. Serial No. 51,594. (Cl. 81—108.)

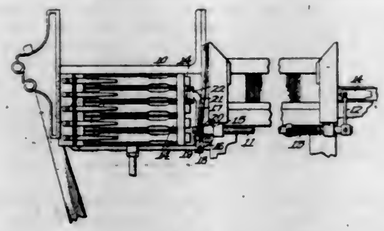
A pipe wrench comprising a handle having its outer end screw threaded and a flat faced jaw removably fixed

therein, in combination with an internally threaded sleeve in which said end is engaged having a pair of ears on its back and a straight flat surface between said ears, an outer jaw having a flat engaging face and a shank pivoted



between said ears provided with a straight flat bottom adapted to rest on the corresponding surface between said ears, the said opposed flat surfaces being behind said pivot, whereby when the jaws are brought into action they are kept parallel.

1,193,164. SMASH-PREVENTER. WILLIAM LONZO, Fitchburg, Mass., assignor of one-half to Joseph A. Smith, Worcester, Mass. Filed Sept. 28, 1915. Serial No. 53,128. (Cl. 139—51.)



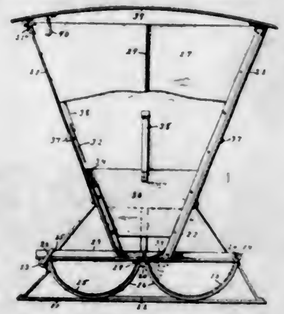
1. In a smash preventer for a loom, the combination with a single protection rod, and a finger binder fixed on one end thereof, of a finger pivoted freely on the other end of the rod and adapted to engage the shuttle binder on that end, and means for transmitting a forward swinging motion of said free finger to the rod and the other finger.

2. In a smash preventer for a loom, the combination with a protection rod extending substantially the length of the loom and a finger binder fixed to one end thereof, of a finger pivoted freely on the other end of the rod and adapted to engage the shuttle binder on that end, means whereby a forward motion of the free finger will turn the rod, and yielding means independent of the rod for normally but yieldingly forcing the said free finger back against the shuttle binder independently of said rod and of the first named finger binder.

3. In a smash preventer for a loom, the combination with a protection rod, and a spring for turning it in one direction, of a finger pivoted freely on the rod and adapted to engage the shuttle binder, means whereby the said finger will turn the rod in one direction but not in the other and yielding means indepedent of the rod for normally but yieldingly forcing the said free finger back against the shuttle binder independently of said rod and spring.

4. In a loom, the combination with a movable shuttle box having shuttle binders, of a protection rod, a hub fixed thereto and having an arm projecting therefrom substantially parallel with the rod, a finger freely pivoted on the rod and having a projection adapted to engage said arm, yielding means for normally pressing forward said projection and forcing the finger back into contact with a shuttle binder, said finger having means on the end for engaging between two shuttle binders to prevent their rise or fall when the operating shuttle is not in position therein.

1,193,165. FEEDING-TROUGH. WILLIAM A. MCCOLLOUGH, Webster City, Iowa. Filed Sept. 20, 1915. Serial No. 51,626. (Cl. 119—52.)

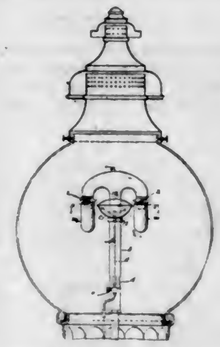


1. In a feeding trough, a feed-containing member comprising a hopper and a skeleton frame below and communicating with said hopper, and shields slidingly mounted on the side walls of said hopper and adapted to extend down within said skeleton frame, some of said shields being curved inwardly at their lower margins.

2. A feeding trough, comprising a base formed with hinge members on each side, a hopper hinged to the hinge members on one side thereof, a trough formed with hinge members on one side, frame members extending laterally from the hopper and adapted to rest on the margin of said trough, and hinge pins extending loosely through the hinge members of the said trough and the hinge members on the adjacent side of the base, said hinge pins being extended and bent to form hooks adapted to engage the ends of said frame members.

3. A device of the class described, comprising a base member formed with hinge members on each side, a lower member formed with hinge members on one side, hinge members extending loosely through the hinge members of the said lower member and the hinge members on the adjacent side of the base member, and a superstructure hinged to the hinge members on the opposite side of the base member and adapted to rest on said lower member, the said hinge pins of said lower member being extended and bent to form hooks adapted to engage the adjacent side of said superstructure.

1,193,166. MEANS FOR LIGHTING GAS-LAMPS. CHARLES F. MCDONOUGH, Cleveland, Ohio. Filed Oct. 8, 1914. Serial No. 865,614. (Cl. 67—16.)

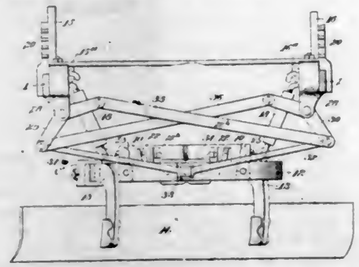


1. The construction substantially as described comprising a pair of main burners, in combination with pilot lights between said burners, a bowl containing said lights in the bottom thereof and provided with a flat back portion and curved front and sides, and said sides having lead channels for the pilot flame at the rear and top thereof adjacent to the said main burners.

2. In a gas lamp, a pair of main burners, in combination with a pilot light between said burners and a bowl inclosing said light at bottom and side and open across its top and provided with channels on its inside serving to direct the flame from the said light to the said burners.

3. In a gas lamp, a burner head of substantially T shape having burners at its side terminals, in combination with a pilot light adapted to maintain an igniting flame opposite said burners and a bowl about the bottom and side of said light having a flat back and round side wall serving as a shield to protect the said light against untoward drafts and adapted to direct the flame upward toward said burners.

1,193,167. ROAD-SCRAPER. HERMAN-MARTIN, Leonia, N. J., assignor to Julian Scholl Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 2, 1915. Serial No. 18,758. (Cl. 37—49.)



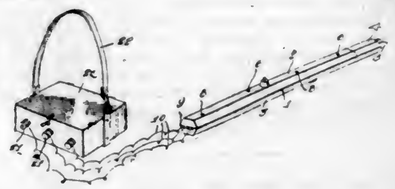
1. In a road scraper, the combination with a wheel-supported frame, a drag-bar hinged at its forward end to the frame, a scraper-blade connected to the drag-bar and means for raising and lowering the drag bar, of means for preventing lateral motion of the drag bar and blade without interfering with the vertical movements of said parts comprising two members, pivoted to the opposite sides of the frame and adapted to rock in vertical planes transversely of the frame, one of said members being centrally pivoted, links connecting the drag-bar with said members at corresponding sides of the pivotal points of the latter, and a link connecting said members at opposite sides of their pivotal points.

2. In a road scraper, the combination with a wheel-supported frame, a drag bar hinged at its forward end to the frame, a scraper-blade connected to the drag bar and means for raising and lowering the drag bar, of means for preventing lateral motion of the drag bar and blade without interfering with the vertical movements of said parts comprising two centrally pivoted levers connected to the opposite sides of the frame and adapted to rock in vertical planes transversely of the frame, links connecting the drag bar with corresponding arms of the levers, and a link connecting opposite arms of the levers.

3. In a road scraper, the combination with a wheel-supported frame, a drag bar hinged at its forward end to the frame, a scraper-blade connected to the drag bar and means for raising and lowering the drag bar, of means for preventing lateral motion of the drag-bar and blade without interfering with the vertical movements of said parts comprising two centrally pivoted levers connected to the opposite sides of the frame and adapted to rock in vertical planes transversely of the frame, links connecting the drag-bar with corresponding arms of the levers, and a pair of links cross-connecting opposite arms of the levers.

1,193,168. ELECTRIC PROD-POLE. RUDOLPH E. MARTIN, Mason, Tex. Filed Oct. 5, 1915. Serial No. 54,246. (Cl. 175—265.)

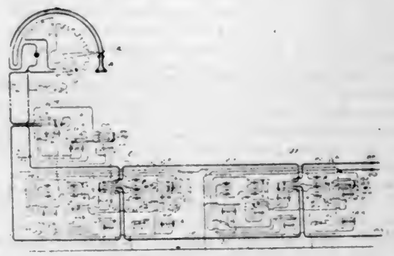
1. A prod pole, including a rod formed from a pair of detachable sections, a head formed on one end of one of the sections carrying exposed circuit terminals, said head providing for stop means whereby the remaining section may be held thereupon, and means for connecting said sections.



2. A prod pole, comprising a pair of detachably connected sections, one of said sections carrying a head thereon, said head providing for stop means for the remaining section, circuit terminals associated with the head, means for connecting said sections, and a primary and secondary circuit, the former embracing a circuit closer and the latter the said circuit terminals.

3. A prod pole, including a rod formed to provide a pair of detachable sections, one of said sections having a plurality of grooves in one face thereof, a head on one of said sections, a plurality of circuit terminals carried by said head, connecting means associated with said circuit terminals, conductors disposed in said grooves and a circuit closer associated with one of said sections.

1,193,169. MEASURED-SERVICE TELEPHONE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 24, 1913. Serial No. 797,100. (Cl. 179—9.)



1. In a telephone system, a plurality of subscribers' lines, means including automatic switches for establishing connection between two of said lines, a meter for the calling line, means for supplying current of normal strength to operate said switches and to supply talking current to said lines, and means controlled by lowering the strength of said current for operating said meter.

2. In a telephone system, a plurality of subscribers' lines, means including automatic switches for establishing connection between two of said lines, a meter for the calling line, means for supplying current for operating said switches, and means for reducing the strength of said current and then returning the same to normal for controlling the operation of said meter.

3. In a telephone system, a plurality of subscribers' lines, means for establishing connection between two of said lines, a meter for the calling line, means for supplying current for operating purposes, means for reducing said current when said connection is established and means for returning the same to normal upon the response of the called subscriber, and means controlled by the reduction and by the increase for operating said meter.

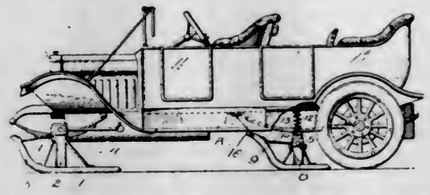
4. In a telephone system, a plurality of subscribers' lines, means including automatic switches for establishing connection between two of said lines, a meter for the call-

ing line, means for supplying current for operating purposes, means for reducing said current when said connection is established and for returning the same to normal upon the response of the called subscriber, and means controlled thereby for operating said meter.

5. In a telephone system, a subscriber's line, a meter provided with an operating magnet assocated with said line, a relay controlling the circuit of said operating magnet, and means controlled by the said relay first energizing and then deënergizing and again energizing for initially closing the circuit of said operating magnet.

[Claims 6 to 30 not printed in the Gazette.]

1,193,170. AUTOMOBILE SLEIGH. PAUL MASON, Parker, Idaho. Filed Feb. 21, 1916. Serial No. 79,664. (Cl. 21—47.)



1. In combination with an automobile, of runners mounted on the front axle, of an auxiliary axle arranged in the front of and adjacent the rear axle, said auxiliary axle carrying runners, a leaf spring connected to the rear axle and to the body of the automobile, and means connecting said leaf spring with said auxiliary axle.

2. In combination with an automobile, of a runner mounted on each end of the front axle, an auxiliary axle arranged in front of and adjacent the rear axle, a leaf spring connected to the rear axle and to the body of the automobile, a coil spring mounted between the automobile body and said leaf spring, and runners mounted on the auxiliary axle.

3. In combination with an automobile, having front and rear axles, said rear axle being disconnected from the automobile body, runners mounted upon the front axle, runners disposed forwardly of said rear axle, and resilient means connecting said runners with said automobile body and with said rear axle.

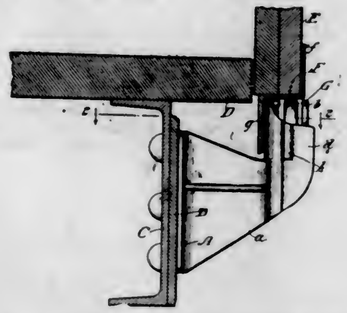
4. In combination with an automobile body, having its rear springs removed, of a pair of runners mounted on the front axle, leaf springs connecting the automobile body with the rear axle, an auxiliary axle mounted in front of the rear axle and in the center of the said leaf spring, runners mounted upon said auxiliary axle, and an expansion spring arranged vertically between said auxiliary axle and the automobile body.

5. In combination with an automobile body having front and rear axles, said rear axle being disconnected from the automobile body, runners mounted on the front axle, an auxiliary axle mounted in front of said rear axle, said rear axle having downwardly extending arms at each of its ends, said arms being turned outwardly at right angles to provide spindles, runners mounted upon the spindles and disposed forwardly of the rear wheels of the automobile, and resilient means connected to said axle and interposed between said auxiliary axle and the automobile body.

1,193,171. BRACKET FOR CAR-DOORS. FRED MATHEWS, Chicago, Ill., assignor to Clinton C. Murphy, Chicago, Ill. Filed Apr. 17, 1916. Serial No. 91,604. (Cl. 16—89.)

1. A car, a bracket comprising a supporting-plate attached thereto and a suitable member projecting therefrom, a box supported on the outer end of said member and projecting above the same, and a wheel journaled within said box, in combination with a sliding door and a metal shoe secured to the lower edge of said door having a downwardly projecting flange that is adapted to engage the rear surface of the wall of said box nearest the side of the car.

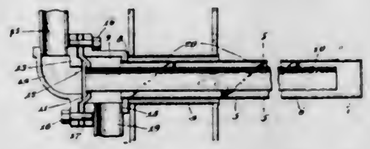
2. A car, a bracket attached thereto comprising a supporting-plate, a suitable member projecting therefrom, a box supported on the outer end of said member the rear surface of the wall of which adjacent said car is curved and projects above said member, and a wheel journaled in said box, in combination with a sliding door and a shoe secured to the lower edge of the same having a downwardly projecting flange that is adapted to engage the rear curved surface of said box.



3. A car, a bracket comprising a supporting-plate attached thereto, a suitable member projecting therefrom, a box comprising an outer and an inner longitudinally disposed wall the side of which latter nearest the side of the car is curved and projects above said member, and a wheel the axis of which is journaled in said walls and the uppermost segment of the periphery of which projects above the upper edges of the same, in combination with a sliding door and a Z-bar the web of which is secured to the lower edge of said door and the lower flange of which projects downward and is adapted to engage the curved surface of the rear wall of said box.

4. A car, a bracket comprising a supporting-plate attached thereto and a suitable member projecting therefrom, a box supported on the outer end of said member and projecting above the same and having the ends thereof provided with buffers, and a wheel journaled within said box, in combination with a sliding door and a metal shoe secured to the lower edge of said door having a downwardly projecting flange that is adapted to engage the rear surface of the wall of said box nearest the side of the car.

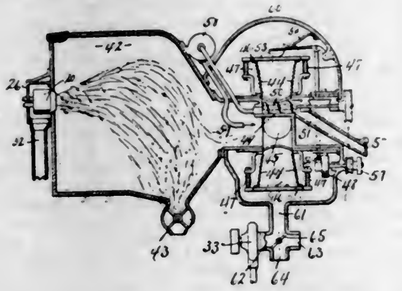
1,193,172. BOILER. EDWARD C. MEIER, Phoenixville, Pa. Filed Mar. 29, 1915. Serial No. 17,767. (Cl. 122—462.)



1. The combination with a boiler having water legs, and a series of stay tubes in the water legs, of a heater comprising a series of boxes located outside of the water leg, said boxes having holes in their inner walls and being open at their outer ends, detachable plates secured to said boxes and covering the open end thereof, said plates having holes therein, tubes secured within the holes of said inner walls and projecting through the stay tubes in the water legs, tubes smaller than the first-mentioned tubes located inside of the first-mentioned tubes and secured within the holes of said plates, end plates each having a passage communicating with the ends of said small tubes, pipes connecting said passages of certain of said boxes, and other pipes communicating with the interior of certain of the boxes, substantially as described.

2. The combination with a boiler having water legs, and a series of stay tubes in the water legs, of a heater comprising a series of boxes located outside of the waterleg, said boxes having holes in their inner walls and being open at their outer ends, detachable plates secured to said boxes and covering the open end thereof, said plates having holes therein, tubes secured within the holes of said inner walls and projecting through the stay tubes in the water legs, tubes smaller than the first-mentioned tubes located inside of the first-mentioned tubes and secured within the holes of said plates, end plates each having a passage communicating with the ends of said small tubes, pipes connecting said passages of certain of said boxes, and other pipes communicating with the interior of certain of the boxes, said end plates and boxes having flanges thereon between which the first-mentioned plates are located, and bolts projecting through the flanges and partitions securing said parts together, substantially as described.

1,193,173. PROCESS FOR OBTAINING THE SOLIDS FROM LIQUIDS. IRVING S. MERRELL and OLIVER E. MERRELL, Syracuse, N. Y., assignors to Merrell-Soule Company, Syracuse, N. Y., a Corporation of New York. Original application filed Apr. 4, 1910, Serial No. 553,444. Divided and this application filed Jan. 18, 1916. Serial No. 72,694. (Cl. 99—5.)



1. The process of producing desiccated milk powder which comprises removing a portion of the water contents of the milk by evaporation, atomizing the condensed milk in a chamber, and surrounding the atomized condensed milk with an envelop of forcibly projected air.

2. The process of producing desiccated milk powder which comprises removing a portion of the water contents of the milk by evaporation, atomizing the condensed milk in a chamber, subjecting the atomized condensed milk to the action of moisture absorbing air, and holding the atomized condensed milk in suspension in said air a sufficient period to practically completely vaporize the remaining liquid constituents thereof.

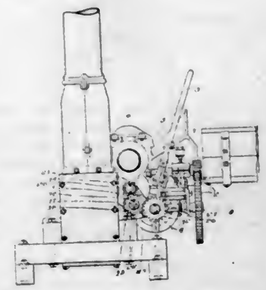
3. The process of producing desiccated milk powder which comprises removing a portion of the water contents of the milk by evaporation, atomizing the condensed milk in a chamber, and surrounding the atomized milk with a drying agent moving in substantially the same general direction as the atomized liquid.

4. The process of producing desiccated milk powder which comprises removing a portion of the water contents of the milk by evaporation, atomizing the condensed milk in a chamber, and surrounding the atomized liquid with an envelop of forcibly projected air introduced under pressure and moving in the same general direction as the finely divided liquid.

5. The process of producing desiccated milk powder which comprises removing a portion of the water contents of the milk by evaporation, atomizing the condensed milk in a chamber, subjecting the atomized condensed milk to the action of moisture absorbing air, holding the atomized condensed milk in suspension in said air a sufficient period to practically completely vaporize the remaining liquid constituents thereof, and separating the dry powder from the air by discharging the air separately from the powder.

[Claims 6 and 7 not printed in the Gazette.]

1,193,174. SPEED-CHANGING MECHANISM. GEORGE M. MERWIN, Berwyn, and EDWARD S. CHARLES, Chicago, Ill., assignors to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 10, 1915. Serial No. 39,137. (Cl. 74—58.)



1. In a speed changing mechanism, a plurality of shafts, an intermediate support, a train of driving members carried on said shafts and support, and means whereby certain of said driving members may be interchanged and maintained in driving relation with respect to a certain one of their number.

2. In a speed changing mechanism, a frame, a plurality of shafts journaled thereon, an adjustable member pivoted on said frame, and driving connections carried on said shafts and at one side of the pivot of said adjustable member interchangeable in a plurality of driving relations by rotating said adjustable member about its pivot.

3. In a speed changing mechanism, a frame, a plurality of shafts journaled thereon, an adjustable coöperating support pivoted on said frame and having a laterally extending stud disposed at one side of its axis, and gears carried on said shafts and stud interchangeable in a plurality of meshing relations as said coöperating support is moved about its pivot.

4. In a speed changing mechanism, a pair of shafts, an intermediate support, a train of meshing gears carried on said shafts and support, and means whereby certain of said gears may be interchanged and maintained in train relation with respect to a certain one of their number when said last mentioned gear is carried on either of said shafts or said support.

5. In combination, a frame, a plurality of shafts journaled thereon, an adjustable member carried on said frame and disposed between said shafts, meshing driving gears carried on said shafts and adjustable member, means whereby said gears may be interchanged on said shafts and adjustable member without disturbing their train relation, and a shear pin connection between one of said shafts and the gear carried thereon.

[Claims 6 to 11 not printed in the Gazette.]

1,193,175. MOTION-PICTURE FILM. LEE MILLER, Chicago, Ill. Original application filed Mar. 31, 1914, Serial No. 828,595. Divided and this application filed Sept. 17, 1914. Serial No. 862,214. (Cl. 88—19.5.)

1. A motion picture film having successive spaced portions provided with successive pictures, and with the spaces between the pictures occupied by descriptive mat-

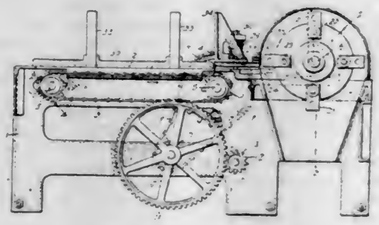
ter located on the film to progress at reading speed across the screen upon which the pictures are projected in a direction contrary to the order of reading of such descriptive matter.



2. A motion picture film having successive pictures thereon in spaced relation one to the other in the direction of the length of the film with the intervening spaces provided with descriptive matter progressively displaced crosswise of the film with respect to the direction of travel of the film to cause such reading matter when produced upon a screen to have an apparent slow movement in opposition to the normal movement of the human eye in reading.

3. A motion picture film having successive pictures thereon and descriptive matter accompanying the pictures and including changing wording having an apparent movement crosswise of the film in intelligibly connected sequence forming a running description or commentary on the pictures displayed with the words changing in sequence at such speed as to be readily read.

1,193,176. MACHINE FOR BREAKING COTTON-SEED CAKE. JAMES W. MOORE, East Point, Ga., assignor to Atlanta Utility Works, East Point, Ga., a Corporation of Georgia. Filed Feb. 12, 1915. Serial No. 7,733. (Cl. 83—11.)



1. A machine for treating cotton seed cake, preliminary to grinding or pulverizing it, comprising in combination a substantially horizontal support adapted to receive a series of superposed cakes, a rotor arranged beyond one end of said support and including a plurality of series of peripherally projecting hammers, a removable plate or anvil arranged between the cake support and rotor, means for successively feeding the bottom cake of the stack on the support across the anvil into the path of the hammers, and means for holding the body of the cake being broken in close contact with the anvil.

2. A machine for treating cotton seed cake, preliminary to grinding or pulverizing it, comprising in combination a main frame providing a substantially horizontal support adapted to receive a series of superposed cakes, a supplemental frame mounted on and bodily detachable from the main frame beyond one end of the support for the stack or pile of cakes, a rotor mounted in bearings carried by the supplemental frame and including a plurality of series of peripherally projecting hammers, a casing extending over the rotor and having an inlet positioned to receive the lowest cake in the stack when moved from its support toward the rotor, and means for successively feeding the bottom cake of the stack on the support through said inlet.

1,193,177. PULLEY. JOHN HENRY MORGAN, Harrogate, England. Filed Dec. 2, 1910. Serial No. 595,257. (Cl. 64—18.)



1. A pulley comprising a hub, spokes of cruciform cross-section independent of said hub, each of said spokes being formed of two plates of sheet metal with central ribs fastened together, a curved strip of like cross-section connecting the outer ends of adjacent plates of each two adjacent spokes, the inner ends of said adjacent spoke plates being turned toward each other, and binding means independent of said hub for said spokes to press said turned ends against the hub and hold them frictionally in position.

2. A pulley comprising a hub, spokes of cruciform cross-section independent of said hub, each of said spokes being formed of two plates of sheet metal with central ribs fastened together, the inner end of one plate of each spoke being turned toward a plate of the next adjacent spoke, said turned ends contacting, binding means independent of said hub, means for said spokes to press said turned ends against the hub and hold them frictionally in position against the outer face of said hub, and an integral curved segment extending between each of the outer ends of said adjacent plates of adjacent spokes, which segments collectively form a rim for the pulley.

3. A pulley comprising a hub, spokes of cruciform cross-section independent of said hub, each of said spokes being formed of two plates of sheet metal with central ribs fastened together, the inner end of one plate of each spoke being turned toward a plate of the next adjacent spoke, said turned ends contacting, binding means independent of said hub for applying pressure to said turned ends to hold them frictionally against the outer face of the hub, a curved segment extending between each of the outer ends of adjacent plates of adjacent spokes, which segments collectively form a rim for the pulley, and an outer encircling rim surrounding said curved segments and firmly connected thereto.

4. A pulley comprising a hub having a plurality of flat peripheral faces, spokes of cruciform cross-section each formed of two plates of sheet metal with central ribs fastened together in a radial plane transverse to the plane of the pulley, the inner ends of said connected spoke plates being turned in opposite directions to bear against the outer flat faces of the hub, and a shroud through which said spokes project surrounding said hub and the turned ends of the spoke plates to press said ends against the hub and hold them immovably in position.

5. A pulley comprising a hub formed with a plurality of flat peripheral faces, a shroud surrounding said hub, spokes formed each of two plates of sheet metal connected together in radial planes and projecting through said shroud, the inner ends of the plates of each spoke being bent in opposite directions to contact like ends of adjacent spoke plates on each side and held immovably in frictional engagement with the flat hub faces by said shroud, integral curved segments extending between the outer ends of the facing spoke plates of adjacent spokes to form collectively a rim, and a supplemental rim surrounding said segments and rigidly secured thereto, said rim assisting the shroud to hold the spokes in place.

[Claims 6 to 15 not printed in the Gazette.]

1,193,178. CELLULOSIC COMPOSITIONS. HARRY S. MORK, Brookline, and GUSTAVUS J. ESSELEN, Jr., Swampscott, Mass., assignors to Chemical Products Company, Boston, Mass., a Corporation of Maine. Filed Apr. 29, 1916. Serial No. 94,494. (Cl. 106—40.)

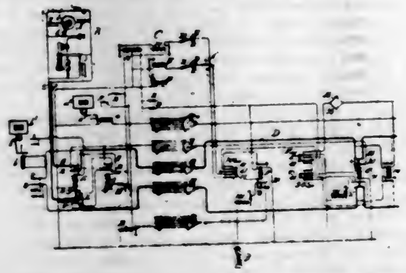
1. A composition of matter containing a cellulose compound, triphenyl phosphate and phenyl salicylate.

2. A composition of matter containing a cellulose ester, triphenyl phosphate and phenyl salicylate.

3. A composition of matter containing cellulose acetate, triphenyl phosphate and phenyl salicylate.

4. A composition of matter suitable for use as a modifier for cellulose compounds, and containing triphenyl phosphate and phenyl salicylate.

1,193,179. TELEPHONE-CALL REGISTER AND SYSTEM. GEORGE E. MUELLER, Aurora, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Nov. 19, 1906. Serial No. 344,114. (Cl. 179—9.)



1. A telephone exchange system comprising telephone lines, selective switches automatically operated to select the calling lines, a call register individual to a telephone line and mechanism for recording thereon against said line the number of calls originating thereover to which responses are secured.

2. A telephone system comprising telephone lines, selective switches automatically operated to select the calling lines, call register mechanism individual to a telephone line, means for recording on said mechanism the number of conversations for which said line is used and for distinguishing the number of times said line is so used as a calling line.

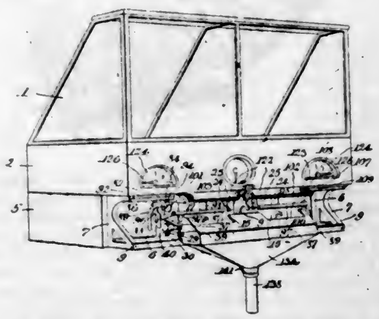
3. A telephone system including a calling line and a called line switched to connection, automatic switches included in said connection, a central source of current having its opposite poles connected to the two limbs of said calling line, means operated by the response of the called subscriber to reverse the connections of said source to the calling line, and a call register individual to said calling line operated responsive thereto to register a call.

4. A telephone system including telephone lines, selective switches automatically operated to select the calling line, a call register individual to said line, an electromagnet therefor, contact wipers for said selective switches, means for causing a flow of current over a contact wiper to operate said electromagnet, and mechanism controlled by said electromagnet to record a call on said register.

5. A telephone system including telephone lines, selective switches automatically operated to select the calling line, a call register individual to said line, an electromagnet therefor, contact wipers for said selective switches, means for causing a flow of current over a contact wiper to operate said electromagnet, mechanism controlled by said electromagnet to record a call on said register, and means for preventing the recording thereof unless a response is secured.

[Claims 6 to 46 not printed in the Gazette.]

1,193,180. DISPENSING APPARATUS. WILLIAM PATTON, Cincinnati, Ohio, assignor of one-third to Albert G. Beck, Cincinnati, Ohio, and one-third to Charles Weber, Cincinnati, Ohio. Filed Jan. 22, 1915. Serial No. 3,800. (Cl. 221—111.)



1. In dispensing apparatus, a normally empty measuring compartment comprising a bottom and an end substantially horizontally adjustable over said bottom in said compartment while said compartment is empty, to create and define an empty measuring space in said compartment, and means for admitting, under the action of gravity, a commodity to the empty measuring space thus created and defined.

2. In dispensing apparatus, a normally empty measuring compartment comprising a bottom and an end horizontally adjustable over said bottom in said compartment while the compartment is empty, to create and define an empty measuring space in said compartment, and substantially horizontally operated inlet and cut-off means for admitting, under the action of gravity, a commodity to the empty measuring space thus created and defined.

3. In dispensing apparatus, a normally empty measuring compartment comprising a bottom and an end substantially horizontally adjustable over said bottom in said compartment while said compartment is empty, to create and define an empty measuring space in said compartment, means for admitting, under the action of gravity, a commodity to the empty measuring space thus created and defined, and means distinct from said adjustable end for discharging the commodity from said measuring space under the action of gravity.

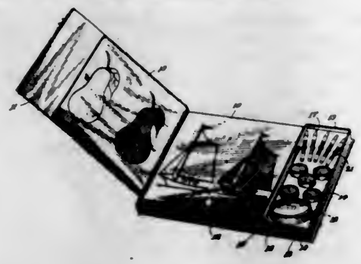
4. In dispensing apparatus, a normally empty measuring compartment comprising a bottom and an end rectilinearly adjustable over said bottom in said compartment while said compartment is empty, to create and define an empty measuring space in said compartment, and inlet and cut-off means for admitting a commodity to the empty measuring space thus created and defined, said inlet and cut-off means being operated substantially parallel to the line of adjustment of said end.

5. In dispensing apparatus, a normally empty measuring compartment comprising a bottom and an end rectilinearly adjustable over said bottom in said compartment while said compartment is empty, to create and define an empty measuring space in said compartment, and inlet and cut-off means for admitting a commodity to the empty measuring space thus created and defined, said inlet and cut-off means being operated substantially parallel to the line of adjustment of said end, and means

operating in a plane substantially at right angles to the line of adjustment of said end for discharging the commodity from said measuring space.

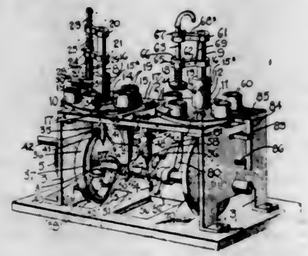
[Claims 6 to 49 not printed in the Gazette.]

1,193,181. PAINTING OUTFIT. JOSEPH R. PECK, New York, N. Y., assignor to The Platt and Peck Co., New York, N. Y., a Corporation of New York. Filed Dec. 2, 1913. Serial No. 804,171. (Cl. 41—4.)



As a new article of manufacture, a child's painting outfit comprising a bound book having leaves upon which pictures are to be painted, the front and back lids of the book extending beyond the side of the leaves, an open-topped receptacle or box fastened to the back lid on the inside of the same and alongside of the said leaves, whereby the receptacle will be covered when the upper lid is closed and will be exposed when said lid is opened, the height of the walls of the receptacle being substantially the same as the thickness of the book of leaves, a platform in the receptacle below the top thereof and comprising a flat sheet of material having its side edges bent down and secured to the inner surface of the side walls of the receptacle, and shallow color-pans mounted on the platform below the top of the receptacle.

1,193,182. GLASS-FORMING MACHINE. FRANK ROBERT PERRY, Weston, W. Va., and ERNEST S. RICHARDSON, Anderson, Ind. Filed Feb. 18, 1915. Serial No. 9,087. (Cl. 49—9.)



1. In a glass forming machine, a reciprocating rod, arms vertically and angularly adjustable on the rod, a glass forming plunger slidably mounted in said arms for vertical movement and disposed parallel to the reciprocating rod, a spring urging the said plunger downward and engaging one of said arms, and an adjustable stop limiting the downward movement of the plunger, said stop being engaged by the spring and normally bearing against one of said arms.

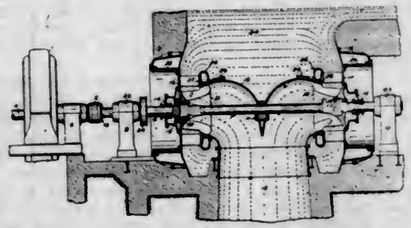
2. In a glass forming machine, a table, a tubular member fixedly mounted upon the table and extending upward therefrom, said member being longitudinally split, a mold carrier rotatable around the tubular member and with relation thereto, a vertically movable rod disposed through the tubular member, means engaging the lower end of the rod for reciprocating it, angularly and vertically adjustable arms mounted upon said rod and spaced from each other, a plunger mounted on said arms for vertical movement independent of the arms, a spring urging the plunger downward, a stop limiting the downward movement of the plunger, and a mold closing cap mounted upon the lower end of the plunger for free vertical movement, springs resisting the upward movement of the cap relative to the plunger, and a radially projecting member mounted upon the reciprocating rod and extending into the slot of the tubular member.

3. In a glass forming machine, a table, a hub mounted upon the table, a rotatable mold carrier mounted upon the table and rotating around said hub, a plurality of molds on the carrier, a fixed stud upon the hub extending upward therefrom, a pair of shears mounted upon said stud and extending over the path of movement of the molds, said shears having extensions projecting rearward beyond the pivot of the shears, a vertically reciprocatable shear actuating rod vertically oscillatable through the table and the hub and having a wedge-shaped head at its upper end adapted to be inserted between the rear ends of the shear blades to cause the closing of the shears, said rod and head being normally depressed below the shears, a spring urging the shear blades to a divergent position, and means for rotating the mold carrier to bring a mold beneath the blades, then actuating said rod to cause the closing of the blades, and then again moving the carrier to bring another mold beneath the blades.

4. In a glass forming mechanism, a rotatable mold carrier having ratchet teeth, a slide having movement tangential with the slide, a pawl carried by the carrier for engagement with the ratchet teeth, a member projecting from the slide, a driving shaft, a cam mounted upon the driving shaft and wiping against said member to cause a movement of the slide in one direction, a telescoping link pivoted to said slide at one end, and pivotally supported at its other end and having a tail projecting beyond the pivotal support, and a cam mounted upon the shaft and engaging said tail to thereby cause a positive retraction of the slide.

5. In a glass forming mechanism, a rotatable mold carrier having ratchet teeth, a slide having movement tangentially to the carrier, a pawl carried by the slide for engagement with the ratchet teeth, means for intermittently shifting the slide in a direction to cause the pawls to engage with the teeth, and a telescopic link operatively pivoted to said slide at one end and pivotally supported at its other end and having a tail projecting beyond the pivotal support, and means intermittently engaging said tail to thereby cause a positive retraction of the slide in a direction opposite to the direction first-named.

1,193,183. HYDRAULIC TURBINE. ARNOLD PFAU, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Sept. 13, 1915. Serial No. 50,915. (Cl. 253—104.)



1. In combination, an energy absorber, a plurality of prime movers connected to said absorber and located on the same side thereof, and means for permitting removal of any of said prime movers without disturbing others.

2. In combination, an electric machine, a plurality of rotary elements connected to said machine and located on the same side thereof, and means for permitting removal of any of said rotary elements without disturbing others.

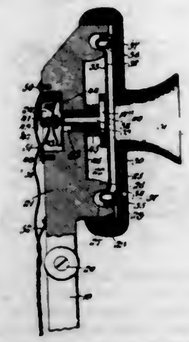
3. In combination, an energy translating device, a plurality of hydraulic machines connected to said device and located on the same side thereof, and means for permitting removal of any of said machines without disturbing others.

4. In combination, an electric generator, a plurality of Francis turbines connected to said generator and located on the same side thereof, and means for permitting removal of any one of said turbines without disturbing others.

5. In combination, an energy translating device, a hydraulic machine connected thereto, a second hydraulic machine intermediate said device, and said first hydraulic machine, and means for permitting removal of said second hydraulic machine without disturbing said device or said first hydraulic machine.

[Claims 6 to 10 not printed in the Gazette.]

1,193,184. TELEPHONE-TRANSMITTER. ANDREW PLECHER, Las Animas, Colo. Continuation of application Serial No. 633,461, filed June 16, 1911. This application filed Apr. 19, 1912. Serial No. 691,892. (Cl. 179—106.)



1. A telephone transmitter provided with two electrodes in face to face relation and radially expanded, one of the electrodes being in the form of a non-conductive membrane of flexible material covered on one face with a conductive film substantially coextensive with and firmly united to the membrane for vibration therewith under the action of sound waves, and the other electrode being of a radial extent to cause the other two electrodes to serve as condenser plates of appreciable capacity, said electrodes being spaced apart by a distance less than the travel of one of them from rest under the impact of sound waves.

2. A telephone transmitter provided with electrodes movable into and out of contact under the action of sound waves, one of said electrodes being in the form of a membrane covered by a conductive film and the other electrode being shaped to provide numerous points for contact with a film, said contact points being in fixed relation one to the other.

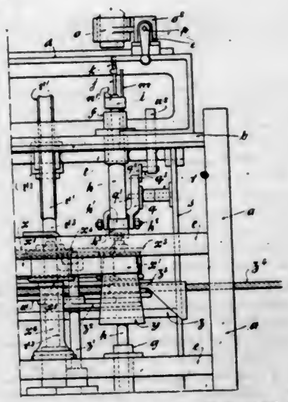
3. A telephone transmitter provided with electrodes, one of which is in the form of a conductive film and the other of which is laterally extended and formed with numerous points presented toward the film for contact therewith, one of said electrodes being responsive to sound waves to vibrate under the action thereof and having a range of movement sufficient in one direction to cause contact between the film and more or less of the numerous contact points of the other electrode with varying pressure depending upon the sound waves acting thereon, and also having a range of movement in the other direction sufficient to entirely disengage the electrodes.

4. In a telephone transmitter, a disk-shaped conducting member and another member carrying a conducting film in close proximity to said conducting member, said members having their facing areas sufficiently extensive to establish an electrostatic relation between them, one of said members being related to the other to vibrate under the direct action of sound waves into and out of contact with the other and to contact during its vibration toward the other to varying extents therewith.

5. In a telephone transmitter, a conducting film and a disk-shaped conducting member in close proximity thereto, said members having the areas of their facing portions sufficiently extensive to establish an electrostatic relation between them, the conducting film having a resilient backing, and one of said members being related to the other to vibrate under the action of sound waves into and out of contact with the other and to contact during its vibration toward the other to varying extents therewith.

[Claims 6 to 26 not printed in the Gazette.]

1,193,185. MACHINE FOR INTERNALLY SHAPING TELEGRAPH-INSULATORS AND THE LIKE. WILLIAM PODMORE, Porthill, Stoke-upon-Trent, England, assignor of one-half to Henry Lewis Doulton, London, England. Filed Feb. 11, 1916. Serial No. 77,665. (Cl. 25—3.)



1. Machines for internally shaping telegraph insulators and the like comprising, in combination, holders for holding clay blanks, rotary tools, means for reciprocating said tools and means for rotating the same at constantly varying speeds, substantially as described.

2. A machine for internally shaping telegraph insulators and the like, comprising, means to hold the clay blank, a rising and falling tool holder and tools, the cutting speed of which is constantly and automatically reduced as the boring proceeds, a conical pulley movable endwise and an endless belt (with tensioning means) for varying the speed of cutting, the said cone pulley being moved endwise simultaneously with the rise and fall of the tool holder, substantially as described.

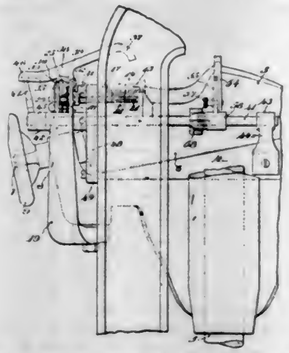
3. A machine for internally shaping telegraph insulators and the like comprising, in combination, one or more clay blank holders, one or more rising and falling tool-carrying shafts, a cutter and a conical pulley, smaller end uppermost on such shaft, or on each of such shafts, a driving pulley on a further shaft, an endless belt encircling the driving pulley and the conical pulley or pulleys, together with means for tensioning the belt, as the tool carrying shaft rises and falls, substantially as described.

4. Machines for internally shaping telegraph insulators and the like, comprising, in combination, blank holders, vertically rising and falling rotary tools and tool-carrying shafts, having a constantly varying speed of rotation as they rise and fall, cams and levers, and means whereby said cams are slowly rotated to operate the levers, and, through them, raise and lower the shafts, substantially as described.

5. In a machine for internally shaping telegraph insulators and the like, the combination with a blank holder or holders and one or more vertically rising and falling rotary tools and tool-carrying shafts, having a constantly varying speed of rotation as they rise and fall, of a cam or cams and a lever or levers, one end of each lever engaging with the periphery of a cam through an adjustable extension and stud and the other end with the pins of a loose collar on one of the shafts, and means whereby said cams are slowly rotated to operate the levers and through them, raise and lower the shafts, substantially as herein set forth.

[Claim 6 not printed in the Gazette.]

1,193,186. SOLE-PRESSING MACHINE. EDWIN N. PREBLE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 31, 1911. Serial No. 630,294. (Cl. 12—21.)



1. A sole pressing machine, having, in combination, complemental sole molding forms, means for relatively moving said forms to produce pressure and clearance, a sole gripping device mounted beyond the forms and bodily immovable with relation to one of the forms to grip the sole after it has been located with relation to the forms, and means controlled by the relative pressure producing movement of said forms to actuate said device to grasp the sole as the forms are brought together and hold it in position until the sole is engaged between the forms.

2. A sole pressing machine, having, in combination, complemental sole molding forms, means for relatively moving said forms to produce pressure and clearance, a sole gripping device mounted beyond the forms and bodily immovable with relation to one of the forms to grip the sole after it has been located with relation to the forms and hold it in position as the forms are brought together until the sole is engaged between the forms, and means controlled by the relative clearance producing movement of said forms to actuate said device to release the sole.

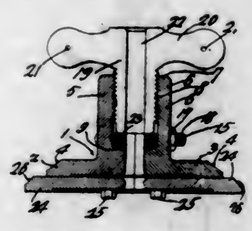
3. A sole pressing machine, having, in combination, complemental sole molding forms, means for relatively moving said forms to produce pressure and clearance, a sole gripping device mounted beyond the forms and bodily immovable with relation to one of the forms to grip the sole after it has been located with relation to the forms, and means controlled by the relative pressure and clearance producing movements of said forms to actuate the gripping device to grasp the sole and hold it in position as the forms are brought together until the sole is engaged between the forms and to release the sole as the forms are moved relatively to positions of clearance.

4. A sole pressing machine having, in combination, complemental sole molding forms, means for relatively moving said forms to produce pressure and clearance, a sole gripping device bodily immovable with relation to one of the forms to grip the sole after it has been located with relation to the forms and hold it in position as the forms are brought together until the sole is engaged between the forms, a side gage associated with one of said forms and arranged to move toward and from the acting face thereof, and means controlled by the relative pressure producing movement of said forms to actuate the gripping device to grasp the sole and to move the side gage beyond the edge of the forms.

5. A sole pressing machine having, in combination, complemental sole molding forms, means for relatively moving said forms to produce pressure and clearance, a gripping device bodily immovable with relation to one of the forms to grip the sole after it has been located with relation to the form and hold it in position as the forms are brought together until the sole is engaged between the forms and a side gage associated with one of said forms, and means controlled by the relative clearance producing movement of said forms to actuate the gripping device to release the sole and to move the side gage into engagement with the acting face of said last mentioned form.

[Claims 6 to 14 not printed in the Gazette.]

1,193,187. OIL-SAVER AND SAND-LINE CAP. WESLIE M. ROADES, Okmulgee, Okla., assignor to United Iron Works Company, Okmulgee, Okla. Filed Apr. 10, 1914, Serial No. 831,039. Renewed June 5, 1916. Serial No. 101,871. (Cl. 137—115.)



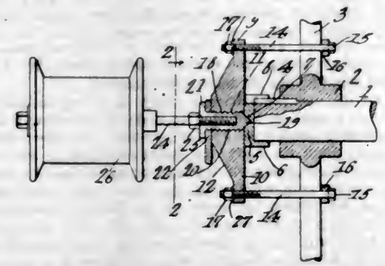
1. A device of the class described, comprising a base and an upstanding socket, the base and the socket being divided to form laterally separable parts; a latch permanently pivoted to one of said parts and mounted to swing transversely of the socket into and out of engagement with the other of said parts; a two part foot plate of greater diameter than the base; and means for removably securing the parts of the foot plate to the under faces of the respective parts of the base, the latch constituting means for holding the parts of the base and the parts of the foot plate, respectively, in transverse alinement.

2. A device of the class described, comprising a base, a socket upstanding from the base, and a foot plate applied to the under surface of the base, the foot plate being of greater diameter than the base, and the foot plate and the base being of substantially the same configuration to permit the base and the foot plate to conform to well casings of different sizes; the socket, the base and the foot plate being divided to form laterally separable parts; means for detachably securing the parts of the foot plate to the respective parts of the base; and means for holding all of said parts together against lateral displacement.

1,193,188. MEASURING-LINE-REEL CLAMP. WESLIE M. ROADES, Okmulgee, Okla., assignor to United Iron Works Company, Okmulgee, Okla. Filed Apr. 10, 1914, Serial No. 831,040. Renewed June 5, 1916. Serial No. 101,872. (Cl. 242—95.)

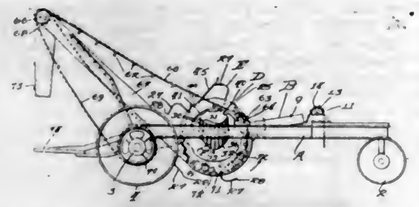
1. In a device of the class described, a cap having a centering element, the cap being provided with shaft engaging means for maintaining the centering element in the axis of rotation of the cap when the cap is in shaft-engaged position; a wheel-engaging yoke; a member adjustable in the yoke and coöperating with the centering element; and a reel for which the yoke constitutes a support.

2. In a device of the class described, a wheel-engaging yoke; a tubular centering element threaded in the yoke and having a turning head; a reel; a shaft supporting the



reel and threaded into the centering element; a lock nut on the centering element and engaging the yoke; and a lock nut on the shaft and engaging the centering element.

1,193,189. POTATO-PICKER. JOHN J. RICHTER, Thief River Falls, Minn. Filed May 7, 1915. Serial No. 26,672. (Cl. 55—17.)



1. A machine of the class described comprising, in combination, a vehicle, an open ended cylinder provided with rake teeth revolubly journaled on said vehicle, a trough disposed within said cylinder and designed to deposit objects delivered thereinto by said rake teeth through an end of said cylinder, and means coöperating with said rake teeth to prevent the entrance of vines and foul growth into said trough.

2. A machine of the class set forth, comprising, in combination, a vehicle, a cylinder in the form of a skeleton frame journaled to revolve about its axis on said vehicle and having an open side, an open end and a plurality of rakes projecting from its periphery adapted to gather potatoes off of the ground and deposit them within said cylinder, means associated with said cylinder for stripping vines and foul growth off of said rakes before the potatoes pass from the rakes into the cylinder, a trough arranged within said cylinder to receive the potatoes from said rakes and slide them out of the cylinder, a carrier arranged to receive the potatoes from said trough and transfer them to a point distanced from the cylinder and means for revolving said cylinder.

3. A machine of the class described comprising, in combination, a vehicle, an open ended cylinder provided with rake teeth revolubly journaled on said vehicle, a trough having a filling opening disposed for vibratory motion within said cylinder and designed to deposit objects delivered thereinto by said rake teeth through an end of said cylinder, and guard members secured adjacent the filling opening of said trough for preventing the entrance of vines and foul growth into the trough.

4. A machine of the class described comprising, in combination, a vehicle, an open ended cylinder provided with rake teeth revolubly journaled on said vehicle, a trough disposed within said cylinder and designed to deposit objects delivered thereinto by said rake teeth through an end of said cylinder, said trough having a filling opening provided with means to prevent the entrance of vines and foul growth into the trough, and means coöperating with said rake teeth to deposit such vines and foul growth at a point remote from the filling opening of said trough.

5. A machine of the class set forth, comprising, in combination, a vehicle having a main frame and an auxiliary frame movably mounted on said main frame to rise and lower, a cylinder journaled upon said auxiliary frame, said cylinder being of open work construction, a shaker trough disposed longitudinally within said cylinder and inclining downwardly and out of the cylinder, a plurality of rakes carried by said cylinder, adapted as the cylinder revolves to gather the potatoes off of the ground and lift and deposit them into said shaker trough, means for stripping vines and foul growth from said rakes before the potatoes slide into said trough, means for revolving said cylinder and operating said strippers and means for raising and lowering said auxiliary frame to move the rakes into and out of position to gather the potatoes on the ground.

[Claim 6 not printed in the Gazette.]

1,193,190. CONCENTRATOR. CLINTON B. RIPLEY, Joplin, Mo. Filed Nov. 10, 1915. Serial No. 60,702. (Cl. 259—91.)



1. In a concentrator, a longitudinally reciprocatory table-deck, stationary bearing sockets arranged near the ends of the table-deck, bearing studs connected with the ends of the table-deck and mounted to reciprocate within the bearing sockets, yielding means connected with the table-deck and serving to wholly support the same and hold the bearing studs up in slidable contact with the bearing sockets, and means to reciprocate the table-deck.

2. In a concentrator, a longitudinally reciprocatory table-deck, stationary bearing sockets arranged near the ends of the table-deck, bearing studs attached to the ends of the table-deck, and mounted to reciprocate within the bearing sockets, coil springs arranged beneath the table-deck and connected therewith and serving to wholly support the same, and means to reciprocate the table-deck.

3. In a concentrator, a longitudinally reciprocatory table-deck, stationary bearing sockets arranged near the ends of the table-deck and having the bottom of their recesses open, bearing studs attached to the ends of the table-deck and mounted to reciprocate within the recesses of the bearing sockets, coil springs arranged beneath the table-deck and serving to wholly support it, means to adjust the tension of the coil springs, and means to reciprocate the table-deck.

4. In a concentrator, a reciprocatory table-deck, coil springs arranged beneath the table-deck in a longitudinal row adjacent its longitudinal axis for wholly supporting the table-deck, means to limit the upward movement of the table-deck by the coil springs including bearing studs mounted to turn and reciprocate within stationary bearing sockets, means to laterally tilt the table-deck, and means to reciprocate the table-deck.

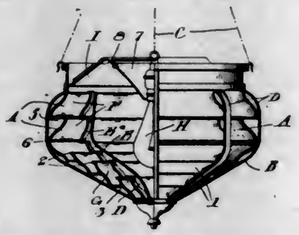
5. In a concentrator, a reciprocatory table-deck, coil springs arranged beneath the table-deck for supporting it, means to limit the upward movement of the table-deck by the coil springs, and means to adjust the tension of each coil spring, including a cap connected therewith and embodying a plurality of cap members having their engaging faces beveled, said cap members being adapted to be turned with relation to each other.

[Claim 6 not printed in the Gazette.]

1,193,191. LAMP-SHADE. HANS K. RITTER, Niagara Falls, Ontario, Canada. Filed Oct. 29, 1915. Serial No. 58,605. (Cl. 240—92.)

1. A lamp shade of the class described comprising a frame, a distributer consisting of a plurality of annular

strips having radial flanges on the upper edge, gripping means carried by the frame adapted to embrace the said flanges and a reflector carried by the frame.



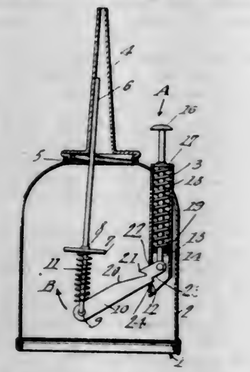
2. A lamp shade of the class described comprising a frame, a plurality of hoop gripping members mounted on the frame, a distributer consisting of a plurality of concentrically arranged annular sections having radial flanges on their upper edge engaged by the said gripping members, and a reflector carried by the frame.

3. A lamp shade of the class described comprising a frame, a plurality of hoop gripping members of substantially U-shape in cross section mounted on the frame, a distributer consisting of a plurality of concentrically arranged annular strips having radial flanges on their upper edges engaged by the said gripping members, and a reflector carried by the frame.

4. A lamp shade of the class described comprising a frame, concentric annular strips having radial flanges and gripping means for securing said flanges to said frame.

5. A lamp shade of the class described comprising a frame, concentric annular strips having radial flanges, and gripping means for securing said flanges to said frame comprising U-shaped fingers.

1,193,192. OIL-CAN. ELIAS B. ROSE, Bozeman, Mont. Filed June 12, 1915. Serial No. 33,739. (Cl. 221—57.)

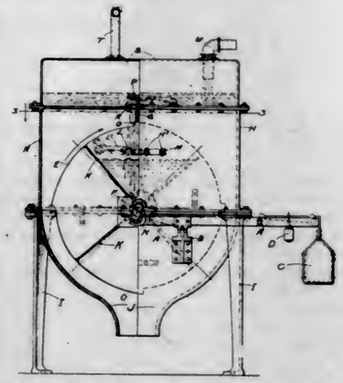


1. An oil can comprising a body; a spout carried by the body; a plunger mounted to slide in the spout; means for advancing the plunger from the outside of the body; a closure slidable on the plunger and coacting with the spout when the plunger is advanced by said means; resilient means coöperating with the closure to hold the same in coacting relation to the spout; and an abutment on the plunger and engaging the closure to limit the movement of the closure toward the spout when the plunger is retracted and when the can is inclined.

2. An oil can comprising a body; a spout carried by the body; a plunger mounted to slide in the spout; a lever pivotally connected to the plunger, the lever being fulcrumed on the body and being mounted to move as an entity transversely of its length; an actuating member pivotally connected with the lever and constituting a means for tilting the lever on its fulcrum, thereby to advance the plunger, the lever and the body being provided with interlocking elements which coact to hold the plunger in advanced position when the lever moves transversely; and a spring operatively connected with the actuating member and constituting at different times a means for retracting the plunger and a means for holding the interlocking elements interengaged.

3. An oil can comprising a body; a spout carried by the body; a plunger mounted to slide in the spout; a lever pivotally connected to the plunger, the lever being fulcrumed upon the body and being mounted to move as an entity transversely of its length; an actuating member pivotally connected with the lever and constituting a means for tilting the lever on its fulcrum thereby to advance the plunger, the lever and the body being provided with interlocking elements which coact to hold the plunger in advanced position when the lever moves transversely; a spring operatively connected with the actuating member and constituting at different times a means for retracting the plunger and a means for holding the interlocking elements interengaged; and a closure yieldably supported on the plunger and coacting with the spout when the lever moves transversely.

1,193,193. AUTOMATIC WEIGHING DEVICE. EDWARD H. RUNDLE, Longmont, Colo., assignor of one-sixth to Albert M. Gregg, Longmont, Colo., and one-sixth to Claude C. Coffin, Fort Collins, Colo. Filed June 8, 1912. Serial No. 702,506. (Cl. 253—16.)



1. In a weighing device the combination of a weighing scales having a rotary hopper carried by the beam of said scales, feeding means to feed material to said hopper, with cams arranged on said hopper to open said feeding means by the rotation of said hopper when said hopper is lifted by said scale beam and allow said feeding means to close gradually with the downward movement of said hopper, substantially as described.

2. In a weighing device a scales having a scale beam, a rotary hopper mounted on said beam, cams on the periphery of said hopper, a valve arranged above said hopper for admitting liquid to said hopper from a suitable supply, valve rods attached to said valve and extending downward and adapted to ride upon said cams and open said valve when said hopper rotates and is lifted by said scale beam and allow said valve to gradually close as said hopper moves downward with the rocking of the scale beam, substantially as described.

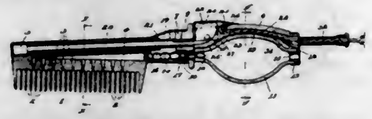
3. In a weighing device a weighing scales having a rotary hopper carried by the beam of said scales, means to stop rotation of said hopper when it is lifted by the scale beam and allow rotation of said hopper when the hopper is moved downward, a valve arranged above said hopper for controlling the feed of material thereto, valve rods attached to said valve and extending downward therefrom, cams on the rim of said hopper arranged to engage said valve rods and open said valve by the rotation of said hopper and hold said valve open when the rotation of said hopper is stopped until allowed to nearly close by the downward movement of said hopper, substantially as described.

4. The combination in a weighing device of a weighing scales having a rotary compartment-wheel hopper carried by the beam of said scales and inside a casing, lugs on one head of said wheel, a lug on said casing adapted to engage with a lug on said wheel and prevent rotation of the wheel when the same is lifted and adapted to disengage from the lug on the wheel and allow the wheel to rotate when the same is moved downward, cams on said wheel corresponding with each compartment of said wheel and with each lug on the head of said wheel, a tank above said wheel having a valve above the upper-most compartment of said wheel when the lug on said casing is engaged with a lug on said wheel, valve rods attached to said valve and adapted to extend downward and ride upon said cams when the wheel is rotated and to rest near the ends of a pair of said cams and hold said valve open when said lugs are engaged and to drop off said cams and allow said valve to close when said lugs disengage and said wheel starts rotating, substantially as described.

5. In a weighing device the combination of a weighing scales having a scale beam, a rotary compartment-wheel hopper mounted on said scale beam and supported in a casing, lugs on one head of said wheel, a lug on the casing adapted to engage with the lugs upon the wheel when the wheel is lifted, said wheel having cams on the periphery of its heads, a tank supported above said casing having a valve in its floor, valve rods attached to the under side of said valve and adapted to extend through the valve hole in the floor of the tank and ride upon said cams, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,193,194. HAIR-DRYING DEVICE. GEORGE L. SCHEEL, Chicago, Ill. Filed Sept. 25, 1915. Serial No. 52,676. (Cl. 34—26.)



1. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; an electrically operated heating element mounted in said back; a handle connected with said comb; and a switch for controlling the circuit of said heating element mounted in said handle, substantially as described.

2. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; an electrically operated heating element mounted in said back; a handle connected with said comb at one end, there being a recess in said end of said back in which the adjacent end of said handle is fitted; and a switch for controlling the circuit of said heating element mounted in said handle, substantially as described.

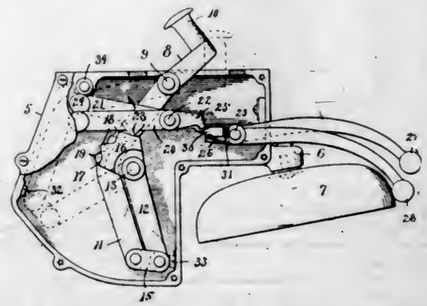
3. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; a heating element mounted in said back; a handle connected with said comb at one end; a compressible bulb for forcing air through said passages; and means on said handle engaging with said bulb at opposite sides thereof for detachably holding the same in operative position, substantially as described.

4. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; a heating element mounted in said back; a handle connected with said comb at one end; a compressible bulb arranged at the under side of said handle, said handle being shaped to conform with the contour of the adjacent side of said bulb; and means on said handle engaging with said bulb at opposite sides thereof for detachably holding the same in operative position, substantially as described.

5. In a device of the class described, the combination of a comb comprising a back; teeth projecting from said back, there being a longitudinally extending air passage formed in said back having branch passages opening in the direction of said teeth; a heating element mounted in said back; a handle connected with said comb at one end; a compressible bulb arranged at the under side of said handle, said handle being shaped to conform with the contour of the adjacent side of said bulb; and nipples on said handle detachably engaging with openings provided in opposite sides of said bulb for detachably holding the latter in operative position, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,193,195. BELL. BENJAMIN G. SHALET, Bridgeport, Conn. Filed Apr. 29, 1915. Serial No. 24,636. (Cl. 116—33.)



1. In a bell of the class described, the combination of a casing, a bell carried thereby, a bell crank lever pivotally mounted to the casing having a short arm projected from the casing and a long arm hung within the casing, a segment lever pivotally hung within the casing and including a long arm and a short arm having two segments formed on its outer end, means connecting the long arms of the two levers whereby the second lever may be operated by the first lever, a pair of trip levers pivoted within the casing and each including a short arm, a weighted long arm and a lug upon each of the long arms to engage the segments, a pair of hammer levers also pivoted to the casing and each including a long arm to strike the bell and a short arm to be engaged by the trip levers.

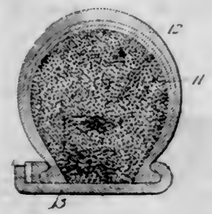
2. In a bell of the class described, the combination of a casing, a bell carried thereby, a bell crank lever pivotally mounted in the casing having a short arm projected from the casing and a long arm hung within the casing, a segment lever pivotally hung within the casing and including a long arm and a short arm having a segment formed on its outer end, means connecting the long ends of the two levers whereby the second lever may be operated by the first lever, a trip lever pivoted within the casing and including a short arm and a weighted long arm and a lug upon the long arm to engage the segment, and a hammer lever also pivoted to the casing and including a long arm to

strike the bell and a short arm to be engaged by the short arm of the trip lever.

3. In a bell of the class described, the combination of a casing, a bell carried thereby, a bell crank lever pivotally mounted to the casing, a segment lever pivotedly hung within the casing, means for connecting the two levers whereby the second lever may be operated by the first lever, a pair of trip levers pivoted within the casing and resting upon the segment, a pair of hammer levers also pivoted to the casing and each including a long arm to strike the bell and a short arm to be engaged by the corresponding trip lever.

4. In a bell of the class described, the combination of a casing, a bell carried thereby, an operting lever pivotedly mounted in the casing and having a short arm projected from the casing and a long arm hung within the casing, a segment lever pivotally hung within the casing, means for connecting the two levers whereby the second lever may be operated by the first lever, a trip lever pivoted within the casing and including a short arm and a weighted long arm and a lug upon the long arm to engage the segment, and a hammer lever also pivoted to the casing and including a long arm to strike the bell and a short arm to be engaged by the short arm of the trip lever.

1,193,196. TIRE-FILLER. EDWARD L. SHERBONDY, Los Angeles, Cal., assignor to Aero-Cushion Tire Company, San Jose, Cal., a Corporation of Nevada. Filed Dec. 4, 1915. Serial No. 65,133. (Cl. 106—8.)



A composition of matter comprising raw rubber thirty-four pounds, infusorial earth fourteen pounds, rosin oil one pint, flour of sulfur four pounds, air slaked lime four ounces, carbonate of ammonia two pounds, baking soda one pound.

1,193,197. METHOD OF EXTRACTING GOLD. ALBERT W. SMITH, Cleveland, Ohio. Filed Aug. 15, 1911. Serial No. 644,161. (Cl. 75—185.)

1. In a method of extracting precious metals from their ores, the steps which consist in treating the ore with a solution of cyanid and an oxy-halogen compound, and maintaining such solution alkaline throughout the reaction.

2. In a method of extracting precious metals from their ores, the steps which consist in treating the ore with a solution of cyanid and an oxy-bromin compound, and maintaining such solution alkaline throughout the reaction.

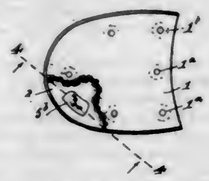
3. In a method of extracting precious metals from their ores, the steps which consist in treating the ore with a solution of cyanid and a bromate, and maintaining such solution alkaline throughout the reaction.

4. In a method of extracting precious metals from their ores, the steps which consist in treating the ore with a solution of cyanid and a bromate, and adding lime to such solution in amount sufficient to maintain the same distinctly alkaline throughout the reaction.

5. The method of extracting precious metals from their ores, which consists in finely grinding the ore with a solution of cyanid and an oxy-halogen compound; maintaining such solution alkaline throughout the reaction; and then agitating the mixture with air.

[Claims 6 to 8 not printed in the Gazette.]

1,193,198. RESILIENT HEEL. JULIUS SOLOMON, Oberlin, Ohio. Filed Apr. 17, 1916. Serial No. 91,522. (Cl. 36—35.)



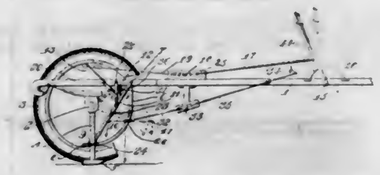
1. A resilient reel having concentric tread and recessed portions, said tread and recessed portions having a wear receiving metallic insert extending therebetween arranged to limit the movements of said tread portion.

2. A resilient heel having similarly shaped tread and chambered portions on opposite sides and located near one edge thereof, said tread portion being provided with a relatively hard reinforcing tread insert adapted to receive and limit the initial tread movement of said tread portion.

3. A resilient heel having an elastic projecting tread and a superposed similarly shaped air chamber, and a reinforcing metallic tread insert in said elastic tread adapted to contact with the heel and thereby limit the movements of the elastic tread.

4. A resilient heel having concentric similarly shaped tread and chamber portions located near one edge thereof, said tread portion being provided with a metallic tread insert adapted to reinforce and limit the movement of the latter.

1,193,199. EMERGENCY-BRAKE. CLYDE STANTON, Ono, Cal. Filed June 11, 1915. Serial No. 33,539. (Cl. 21—8.)

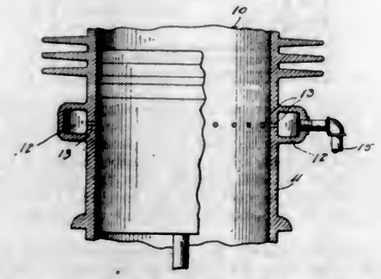


1. An emergency brake including the combination with a motor vehicle, of an arm oscillatably mounted upon the rear axle, a brake shoe on said arm, a guide for the arm depending from the vehicle frame, releasable retaining means on the guide for retaining the arm in raised position to maintain the shoe out of engagement with the road bed, means for releasing said retaining means, a lever pivoted to the frame, a link forming a connection between said lever and the arm, and means for rotating the lever to thereby return the arm to original position.

2. An emergency brake, including the combination with a motor vehicle of an arm oscillatably mounted upon the rear axle, a brake shoe on the arm, an arcuate guide for said arm depending from the frame, releasable retaining means upon the guide engaging the arm to retain the brake shoe out of engagement with the road bed, means for releasing said retaining means to permit the brake arm and shoe to move into operable position, a lever fulcrumed upon the frame, a link connecting said lever with the arm, a second lever fulcrumed upon the frame and having a slotted portion, a pin on the first lever engaging in said slotted portion, a third lever fulcrumed upon the frame and having a slotted portion, a pin on the second lever engaging in the slotted portion on the third lever, and means for moving the third lever to cause movement of the other two levers and thereby raise the arm to original position.

3. An emergency brake including in combination with a motor vehicle, an arm oscillatably mounted upon the rear axle, a brake shoe on the arm, a guide for the arm, a pin slidably mounted within the guide and having a beveled end, a spring for urging the beveled end of the pin beyond the plane of the guide whereby to engage and retain the arm in a raised position to maintain the brake shoe out of engagement with the road bed, a head on said pin, a rod having fingers bent out of the plane of the rod and adapted to engage the head and opposite sides of the pin, means for pulling the rod whereby the pin is retracted and the arm released to permit the brake shoe to engage the road bed, and means for returning the arm to original position.

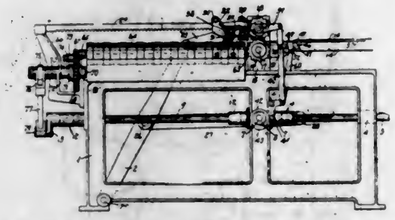
1,193,200. OILING SYSTEM FOR GASOLENE-ENGINES. ANDREW STRAND, St. Paul, Minn., assignor to Joerns Motor Manufacturing Co., St. Paul, Minn. Filed Aug. 26, 1914. Serial No. 858,693. (Cl. 74—86.)



1. The combination with an internal combustion engine having a plurality of oppositely inclined radial openings in the cylinder wall, of means for feeding oil to said cylinder through said openings under pressure.

2. The combination with an internal combustion engine, having a plurality of alternately and oppositely inclined radial openings disposed in staggered relation to each other and formed in the cylinder wall, of means for feeding oil to said cylinder through said openings under pressure.

1,193,201. COMBINED SLITTING AND COLLECTING MACHINE. WILLIAM STUEBING, Sr., Cincinnati, Ohio. Filed May 28, 1915. Serial No. 31,077. (Cl. 164—61.)



1. In a machine of the character described, means for supporting the sheet to be cut, means for cutting the same into strips, means for engaging said sheet at various points along its width before the cutting mechanism operates, said engaging means also supporting and engaging the strips as the cutting mechanism is operating to deliver the same upon a separate delivery mechanism, said delivering mechanism, when the sheet is cut, delivering and collecting the cut sheets consecutively onto a pile.

2. In a machine of the character described, means for cutting a sheet into strips, means for supporting and automatically feeding the sheet to the cutting means, means for engaging said sheet at various points along its width before the cutting mechanism operates, said engaging means also supporting and engaging the strips as the cutting mechanism is operating to deliver the same upon a delivery mechanism, said delivering mechanism, when the sheet is cut, delivering and collecting the cut sheets consecutively onto a pile of strips.

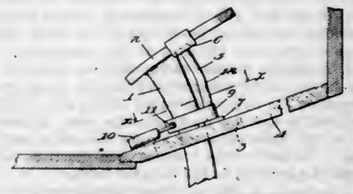
3. In a machine of the character described, slitting mechanism for cutting cards into strips, means for feeding the sheet to the slitters, mechanism for gripping the sheet before the slitters commence operating, means for holding the strips in alinement during the operation of the slitting, means for releasing the hold on the strips when they have passed through the slitters and means for automatically collecting and delivering the strips consecutively onto a pile.

4. In a machine of the character described, means for slitting sheets into strips, reciprocating means for gripping said sheet before it is cut, said means also gripping the strips and pulling them through the slitters while the slitters are operating and delivering them upon means for automatically collecting and assembling said cut strips consecutively and placing them onto a pile.

5. In a machine of the character described, means for slitting sheets into strips, means for gripping said sheet before it is cut, said means also gripping the strips and pulling them through the slitters while the slitters are operating, and delivering them upon means for automatically collecting, assembling and delivering the cut strips consecutively and placing them onto a pile, the latter means being in the same horizontal line with the slitters but operating laterally in delivering the strips.

[Claim 6 not printed in the Gazette.]

1,193,202. LOCK FOR VEHICLE-CONTROL PEDALS. OSCAR A. SWANSON, Chicago, Ill. Filed Aug. 2, 1915. Serial No. 43,266. (Cl. 70—90.)



1. The combination in a lock for a depressible vehicle controlling pedal comprising a stem and a head at the upper end of said stem, of a member adapted for insertion between said pedal and the floor of the vehicle; a recess at the upper end of said member for the reception of the head of said pedal whereby relative shifting is prevented; and means engaging with the lower portion of said member and the stem of said pedal for locking said member in operative relation with said pedal, substantially as described.

2. The combination in a lock for a depressible vehicle controlling pedal, said pedal comprising a stem and a head at the upper end of said stem, of a member adapted for insertion between said pedal and the floor of the vehicle; enlargements at the upper and lower ends of said member for engagement respectively with the head of the pedal and the vehicle floor; a recess in said upper end of said member for reception of said pedal head whereby said end of said member is locked against relative lateral movement; and means embracing the lower portion of said member and the stem of said pedal for locking said member in operative relation thereto, substantially as described.

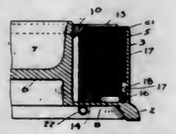
3. The combination in a lock for a depressible vehicle controlling pedal comprising a stem and a head at the upper end of said stem, of a member adapted for insertion between said pedal and the floor of the vehicle; means adapted to embrace said member and the stem on said pedal for locking said member in operative relation with said pedal; and the central portion of said member being bowed outwardly to constitute an offset in said member for preventing shifting of said embracing means relative thereto, substantially as described.

4. The combination in a lock for a depressible vehicle controlling pedal comprising a stem and a head at the

upper end of said stem, of a member adapted for insertion between said pedal and the floor of the vehicle; means adapted to embrace said member and the stem of said pedal for locking said member in operative relation with said pedal; and a slot in said member adapted for engagement with said embracing means for preventing shifting of the latter relative to said member, substantially as described.

5. The combination in a lock for a depressible vehicle controlling pedal comprising a stem and a head at the upper end of said stem, of a member adapted for insertion between said pedal head and the floor of the vehicle; enlargements at the upper and lower ends of said member for engagement respectively with the pedal and the vehicle floor, said enlargements at the sides thereof adjacent said pedal being notched for engagement with said stem; and means for locking said members in operative relation with said pedal, substantially as described.

1,193,203. MAGAZINE-HOLDER FOR ABRASIVE DISKS. SAMUEL W. TALIAFERRO, San Francisco, Cal. Filed Sept. 18, 1915. Serial No. 51,435. (Cl. 206—16.)



1. A magazine holder comprising a holder proper having in its periphery cylindrical magazine chambers open on the outer side and a detachable casing surrounding said holder and formed on its inner side with cylindrical recesses of the same diameter as the chambers.

2. A magazine holder comprising an annular holder proper having in its periphery cylindrical magazine chambers open on the outer side and a casing surrounding said holder and formed on its inner side with cylindrical recesses of the same diameter as the chambers, said casing having a raised central cup-shaped portion extending through the opening in the annular holder.

3. A magazine holder for disks having vertical cylindrical recesses open at the outer side, a coiled spring in each recess, the top of the holder having recesses of slightly less diameter than those of the cylindrical recesses respectively, and a detachable casing surrounding the holder and extending opposite to said recesses only to a height less than that of the top of the holder by substantially the thickness of a single disk.

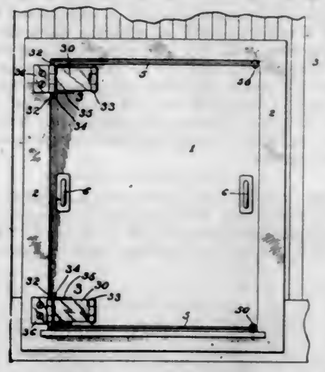
4. A magazine holder for disks having vertical cylindrical recesses open at the outer side, a coiled spring in each recess, the top of the holder having recesses of slightly less diameter than those of the cylindrical recesses respectively, and a detachable casing surrounding the holder formed in its inner side with recesses and extending opposite to said recesses only to a height less than that of the holder by substantially the thickness of a single disk.

5. An annular magazine holder for disks having vertical cylindrical recesses, a coiled spring removably secured in each recess, the top of the holder having recesses of slightly less diameter than those of the cylindrical recesses respectively, and a casing surrounding said holder and having a central cup-shaped raised portion extending in the opening in said holder.

[Claim 6 not printed in the Gazette.]

1,193,204. HINGE FOR SILO-DOORS. CHARLES S. TAYLOR, Mount Vernon, Wash., assignor to Frederick W. Cram and J. W. Johnson, Mount Vernon, Wash. Filed Apr. 17, 1915. Serial No. 21,946. (Cl. 16—106.)

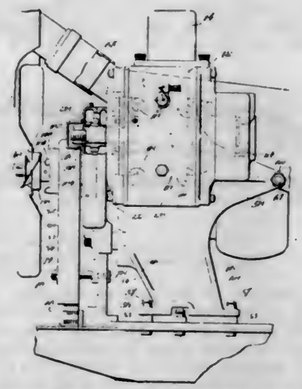
1. A hinge support for silo doors comprising two members hinged to each other at one end, and at their other end respectively to a door jamb and to the corresponding door edge, and a third member having hinged connection with the same edge of the door and with a distant fixed point located toward the opposite side of the door opening.



2. A hinge support for silo doors comprising two hinged leaves pivoted to each other and respectively upon the door jamb and upon the door face adjacent the corresponding edge of the door, and a third member having a hinged connection of one end common with the hinged connection of the other member with the door and a fixed pivot support for its opposite end adjacent the opposite door jamb.

3. A hinged support for silo doors comprising a bar pivoted to the door jamb adjacent one edge of the door and extending across the door opening, the door being pivoted to swing upon the other or free end of said bar and a support for the same side of the door permitting a limited movement of this side of the door inward away from the casing.

1,193,205. ELECTRIC STARTING AND LIGHTING SYSTEM. CARL TICHENOR, Boston, Mass., assignor to Gray & Davis, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Feb. 23, 1915. Serial No. 9,943. (Cl. 123—195.)



1. An automobile electric starting and lighting apparatus, having, in combination, a motor generator starting unit adapted to be placed as one piece on the motor casing of an automobile motor, comprising a bracket having means for attachment to the motor casing, and a motor generator and fan having driving connections with each other and the engine crank shaft all supported by and mounted upon said bracket.

2. An automobile electric starting and lighting apparatus having, in combination, a motor generator starting unit adapted to be placed as one piece on the motor casing of a Ford motor, comprising a bracket having a plurality of connecting means for attachment with said casing, a motor generator, a fan shaft, driving connections between the motor generator and the fan shaft, a housing for the driving connections forming a support for the fan shaft, and driving connections between the fan shaft and the engine crank shaft, all supported by and mounted upon said bracket.

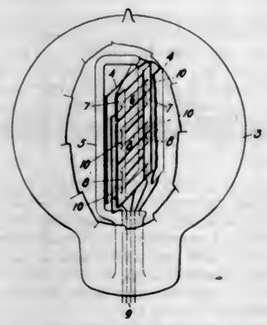
3. An automobile electric starting and lighting apparatus, having, in combination, a bracket adapted to be mounted in fixed position on the automobile engine casing, an electric motor generator mounted on said bracket, a motor generator casing, a housing arcuately adjustably mounted on said motor generator casing and bracket, a fan shaft mounted in said housing, driving means in said housing connecting the motor generator and the fan shaft, and a belt connecting the automobile engine crank shaft and the fan shaft which may be tightened by an arcuate adjustment of the housing.

4. An automobile electric starting and lighting apparatus having, in combination, a bracket, a motor generator, a fan shaft, driving means connecting the motor and fan shaft, a casing therefor supporting the fan shaft, and driving means connecting the fan shaft and engine crank shaft, and a shroud therefor attached to the driving means, all supported by and mounted on said bracket.

5. An assembly bracket for a motor generator unit of an automobile electric starting and lighting system, having, in combination a body for supporting the motor generator, a crank casing flange for attachment to the automobile crank casing, a water inlet flange for attachment to the water inlet flange of the automobile casing, a water outlet flange for attachment to the casing at the water outlet of the automobile, and a tie brace connected with said body for attachment to the timer gear casing of the automobile.

[Claims 6 to 14 not printed in the Gazette.]

1,193,206. THERMIONIC AMPLIFIER AND RECTIFIER. HENDRIK JOHANNES VAN DER BIJL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 1, 1915. Serial No. 48,525. (Cl. 250—27.)



1. In a thermionic amplifier of the audion type, a grid; mica strips supported thereby and a filament supported by said strips and insulated from the grid.

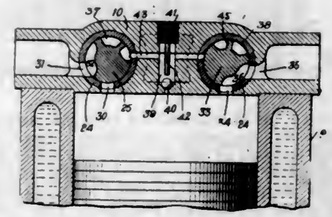
2. In a thermionic amplifier of the audion type, a grid; insulating material supported thereby and a filament threaded through said insulating material, whereby the filament is supported by and brought into close proximity to said grid but insulated therefrom.

3. In a thermionic amplifier of the audion type, a grid; insulating material threaded into said grid and a filament threaded through said insulating material, whereby the filament is supported by and brought into close proximity to said grid but is insulated therefrom.

4. In a thermionic amplifier of the audion type, a grid; mica strips threaded into said grid and a filament threaded through said mica strips, whereby the filament is supported by and brought into close proximity to said grid but is insulated therefrom.

5. In a thermionic amplifier of the audion type, the combination of a grid; a double electrode facing each side of the grid; mica strips threaded into grid and a filament threaded through said mica strips in such a manner that an equal amount of filament surface is exposed to each plate surface.

1,193,207. VALVE-GEAR FOR ENGINES. HORACE RUSS VAN VLECK, Montclair, N. J. Filed Oct. 30, 1914. Serial No. 869,354. (Cl. 121—27.)



1. An engine having a cylinder, a piston therein, a shaft to which the piston is connected, a valve, means actuated by the shaft for turning the valve on an axis, a passage leading from the cylinder to the valve whereby the pressure developed in the cylinder is applied to the valve and a check device for maintaining the pressure to which the valve is thus subjected throughout changes in the pressure within the engine cylinder; substantially as set forth.

2. An engine having a cylinder, a piston therein, a shaft to which the piston is connected, a valve, means actuated by the shaft for turning the valve on an axis and automatic means depending upon the pressure within the cylinder for subjecting the valve to pressure which is continuous over a prescribed area of the valve and in a direction transverse to the axis about which the valve is turned, substantially as set forth.

3. An engine having a cylinder, a piston therein, a shaft to which the piston is connected, a valve, means actuated by the shaft for turning the valve on an axis, means for causing the pressure within the cylinder to be exerted upon the valve to hold the latter upon its seat and means for maintaining the pressure so produced, substantially as set forth.

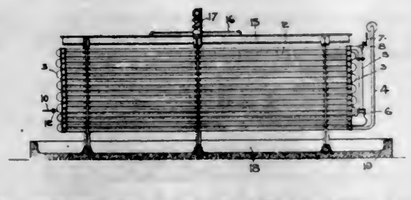
4. An engine having a cylinder, a piston therein, a shaft to which the piston is connected, a valve, means actuated by the shaft for turning the valve on an axis, a passage leading from the interior of the cylinder to the valve for subjecting the valve to cylinder pressure to press it upon its seat and a check-valve in said passage for maintaining the pressure upon the valve, substantially as set forth.

5. An engine having a cylinder, a piston therein, a shaft to which the piston is connected, a valve, means actuated by the shaft for turning the valve on an axis, a port controlled by the valve, a pressure chamber on the side of the valve opposite said port, a passage leading from the cylinder to said chamber and an automatic check-valve in said passage, substantially as set forth.

1,193,208. AMMONIA-CONDENSER. CARL W. VOLLMANN, Montreal, Quebec, Canada. Filed Oct. 4, 1915. Serial No. 54,074. (Cl. 257—40.)

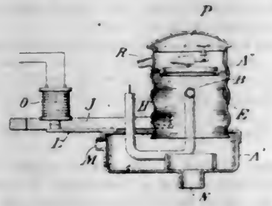
1. A mixer for the purpose set forth comprising a casing having its upper portion divided by a transverse partition and one side of the partition converging upwardly and terminating in a nozzle and the portion at the other side of the partition having a liquid inlet port; and means whereby ammonia gas is supplied to the bottom of the converged portion of the nozzle.

2. A mixer for the purpose set forth comprising a casing having its upper portion divided by a transverse partition and one side of the partition converging upwardly and terminating in a nozzle and the portion at the other side of the partition having a liquid inlet port; and means whereby ammonia gas is supplied to the bottom of the converged portion of the nozzle, said means being constructed and arranged to comminute the gas discharged therefrom.



3. A mixer for the purpose set forth comprising a casing having its upper portion divided by a transverse partition and one side of the partition converging upwardly and terminating in a nozzle and the portion at the other side of the partition having a liquid inlet port and below the said liquid inlet, a gas inlet port; and a pipe supporting at one end a bushing closing the last-mentioned port and having its inner end closed and extending to the inner end of the casing and having a number of small holes in the upper side thereof beneath the nozzle and a drainage hole in its bottom, the said pipe having an open communication adapted to be coupled to the gas supply.

1,193,209. APPARATUS FOR STERILIZATION OF FLUIDS BY ULTRA-VIOLET RAYS. MAX VON RECKLINGHAUSEN, New York, N. Y., assignor to The R. U. V. Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 14, 1914. Serial No. 824,655. (Cl. 210—1.)



1. An apparatus for sterilizing fluids by exposure to ultra-violet rays, comprising in combination, a source of ultra-violet rays, a pivoted receptacle with corrugated walls containing such source, means for causing a fluid to trickle down over the corrugations in the zone of the rays, and means comprising an electro-magnet in the circuit of the source of the rays for holding the receptacle in operative position when the lamp is energized, and to automatically release the receptacle when the circuit is cut off.

2. An apparatus for sterilizing fluid by exposure to ultra-violet rays, comprising, in combination, a source of ultra-violet rays which requires to be tilted for starting it in operation, a pivoted receptacle containing said source, means for passing a fluid through the receptacle in the zone of the rays, and an electro-magnet in the circuit of the source of the rays, for holding, while energized by the current, the receptacle in operative position and for automatically releasing the same when the current is interrupted.

3. An apparatus for sterilizing fluids by exposure to ultra-violet rays, comprising in combination a source of ultra-violet rays, a pivoted receptacle with corrugated walls containing the said source, means for causing a fluid to trickle down over the corrugations in the zone of the rays, and an electromagnet in the circuit of the source of the rays, for holding the receptacle in position.

4. An apparatus for sterilizing fluids by exposure to ultra-violet rays, comprising in combination a source of ultra-violet rays, a pivoted receptacle with corrugated walls containing the said source, means for causing a fluid to trickle down over the corrugations in the zone of such rays, and an overflow-outlet in the base of the receptacle which discharges the contents of the same when the receptacle is tilted.

5. An apparatus for sterilizing fluids by exposure to ultra-violet rays, comprising in combination a pivoted receptacle through which the fluid is adapted to flow, provided with an inlet and an outlet for said fluid, a trap at the bottom of the receptacle for containing a quantity of the fluid while the receptacle is in operative position, and a source of ultra-violet rays located in said receptacle, consisting of a mercury vapor lamp, a portion of which is submerged in the fluid contained in the trap, the trap being also provided with an outlet for discharging the fluid therefrom when the receptacle is turned to inoperative position.

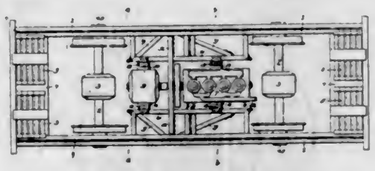
[Claims 6 and 7 not printed in the Gazette.]

1,193,210. MANUFACTURE OF CARBON BISULFID. ALBERT WALTER, Ardsley, N. Y. Filed Sept. 23, 1913, Serial No. 791,302. Renewed Jan. 6, 1916. Serial No. 70,702. (Cl. 23—10.)

1. The process of generating carbon bisulfid from hydrosulfuric acid (hydrogen sulfid) which consists in passing the latter through or over highly heated carbon.

2. The process of generating carbon bisulfid from hydrogen sulfid, evolved in a retort which is containing highly heated carbon and fed with sulfur, consisting in passing the hydrogen sulfid through a retort which contains highly heated carbon.

1,193,211. RAILWAY-CAR. GUY WEBSTER, York, Pa., assignor to Barber Car Company, York, Pa., a Corporation of Pennsylvania. Filed Nov. 1, 1911. Serial No. 657,911. (Cl. 105—222.)



1. A railway car in which are combined a wheeled truck, a body mounted thereon, electric motor mechanism for driving the car, a dynamo for supplying current to said motor mechanism, an internal combustion engine for driving said dynamo, and supporting means for said engine and dynamo mounted upon the truck through the medium of springs so as to provide an elastic support for the engine and dynamo.

2. A railway car in which are combined a wheeled truck, a body mounted thereon, electric motor mechanism for driving the car, a dynamo for supplying current to said motor mechanism, and an internal combustion engine for driving said dynamo, the truck having opposite side frames with inwardly projecting truss members between which the engine and dynamo are supported so as to be removable downwardly.

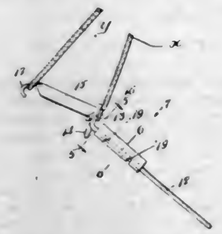
3. A railway car in which are combined a wheeled truck, a body mounted thereon, electric motor mechanism for driving the car, a dynamo for supplying current to said motor mechanism, and an internal combustion engine for driving said dynamo, the truck having opposite side frames with inwardly projecting truss members between which the engine and dynamo are supported so as to be removable downwardly, said truss members having a connecting member disposed between the engine and dynamo and above the shaft which connects the same.

4. A railway car in which are combined a wheeled truck, a body mounted thereon, electric motor mechanism for driving the car, a dynamo for supplying current to said motor mechanism, and an internal combustion engine for driving said dynamo, the truck having opposite side frames with inwardly projecting truss members between which the engine and dynamo are supported so as to be removable downwardly, said truss members having connecting members disposed between the engine and dynamo and above and below the shaft which connects the same.

5. A railway car in which are combined a wheeled truck, a body mounted thereon, electric motor mechanism for driving the car, a dynamo for supplying current to said motor mechanism, an internal combustion engine for driving said dynamo, said engine and dynamo being located centrally between opposite inwardly projecting truss frames at the sides of the truck, each of said frames comprising longitudinal, transverse and diagonal members, and the frames being connected by a transverse member so located as to represent the resultant of the strains upon the truss frames.

[Claims 6 to 13 not printed in the Gazette.]

1,193,212. TENT-STAKE. HENRY O. WELLMAN, Everett, Mass., assignor to Wellman Specialty Company, Everett, Mass., a Corporation of Massachusetts. Filed Aug. 9, 1915. Serial No. 44,382. (Cl. 135—15.)



1. A two-pronged stake having a head portion offset from the plane of the prongs, the middle portion of the head extending back to a point substantially in line with the tops of and between the tops of the prongs in substantially the same plane as the rest of the head, whereby the said backwardly extending portion may hold the loop of a guy or support an extension for another guy.

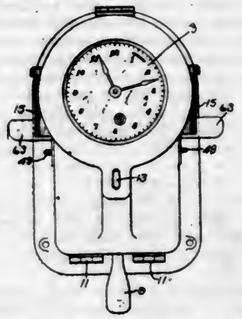
2. The combination with a two-pronged stake having a head formed with an off-set portion, of an extension for a second guy rope, said extension having a loop-shaped base to removably fit said off-set portion.

1,193,213. TIME-STAMP AND THE LIKE. JOHN C. WILSON, Boston, Mass., assignor to The Automatic Time Stamp Company, Boston, Mass., a Corporation of Maine. Filed Mar. 8, 1912. Serial No. 682,485. (Cl. 101—161.)

1. In a device of the class described, the combination of a casing, and record sheet receiving means comprising opposed plates having registering apertures to permit recording on said sheet, and guides projecting beyond said plates to support said sheet in different positions relatively to said apertures.

2. In a device of the class described, the combination of a casing, and record sheet receiving means therefor comprising opposed spaced plates having registering apertures permitting recording on said sheet, and a guide secured between said plates and extending beyond said casing to provide an extended support for said sheet.

3. In a device of the class described the combination of a casing; record making means contained within said casing; and record sheet receiving means comprising an elongated support on and projecting beyond said casing and opposed plates secured to said support and having registering apertures for exposing said sheet to the action of said record making means, said support being sufficiently long to support said sheet with different portions opposite said apertures.

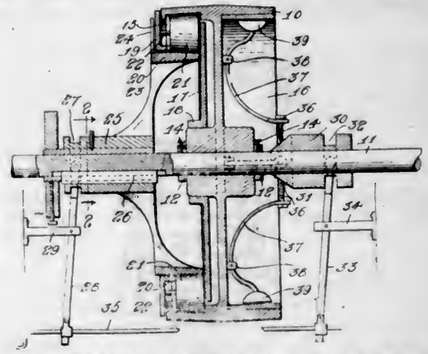


4. In a device of the class described, the combination of a casing, a die and platen; and record sheet receiving means therefor having grooved guides projecting beyond the exterior of the casing to provide an extended support for a record sheet when adjusted to present different portions between said die and platen.

5. In a device of the class described, the combination of a casing, a die and platen; and record sheet receiving means therefor comprising opposed plates and guides projecting from said plates beyond the exterior of the casing, one of said plates having an extended sheet guiding lip deflected from the plane thereof for facilitating introduction of a record sheet between said plates.

[Claims 6 to 15 not printed in the Gazette.]

1,193,214. PULLEY AND ACTUATING MECHANISM. WILLIAM L. YATES, Hutchinson, Kans. Filed Oct. 18, 1915. Serial No. 56,467. (Cl. 74—26.)



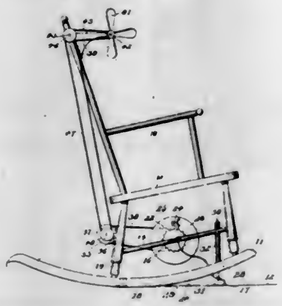
1. A rotatable shaft, a pulley wheel rotatably mounted upon said shaft and held against longitudinal movement upon said shaft, a sleeve slidably mounted upon said shaft to one side of said pulley wheel and rotating with the shaft, a rim carried by said sleeve, a cam block slidably mounted upon said shaft upon the opposite side of said pulley wheel and turning with said shaft, arms pivotally connected with said pulley wheel and having their inner ends positioned for engagement with said cam block and having their outer ends positioned to engage the rim of the pulley wheel when the block is moved to an operative position, a disk loosely mounted upon the hub of said pulley wheel, rollers carried by said disk and engaging the rim of said pulley wheel, means for holding said disk stationary, and means for shifting said sleeve and block to bring the rim of said sleeve into engagement with said rollers when said block is out of an operative

position and to bring said block into an operative position when said sleeve is in an inoperative position.

2. A rotatable shaft, a pulley wheel rotatably mounted upon said shaft, said pulley wheel including a hub and rim, a disk loosely mounted upon the hub of said pulley wheel, a trough carried by said disk and provided with openings in the bottom thereof, rollers rotatably mounted in said trough and extending through the openings in the bottom of the trough, said rollers engaging the rim of said pulley wheel, arms carried by said pulley wheel on the opposite side thereof from said disk, a sleeve slidably mounted upon said shaft upon one side of said pulley wheel and provided with a rim for engaging said rollers when said sleeve is in an operative position, a cam block slidably mounted upon said shaft on the opposite side of the pulley wheel from the sleeve for engaging said arm when in an operative position and means for shifting said sleeve and block upon said shaft to move one into an operative position and the other to an inoperative position.

3. A rotatable shaft, a pulley wheel rotatably mounted upon said shaft, a cam block slidably mounted upon said shaft to one side of said pulley wheel and provided with a tapered inner end portion, a gripping arm pivotally connected with said pulley wheel and engaged by the tapered inner end portion of the clutch when the clutch is moved to an operative position, a stationary support positioned upon the opposite side of said pulley wheel and having its edge portion provided with a trough, rollers rotatably mounted in said trough and extending through openings formed in the bottom of the trough to engage said pulley wheel, a sleeve slidably mounted upon said shaft and including a rim, and means for moving said sleeve and block into and out of an operative position, the rim of the sleeve when moved to an operative position being inclosed by said trough and engaging said rollers to rotate the same and drive the pulley in an opposite direction to the rotation of said shaft.

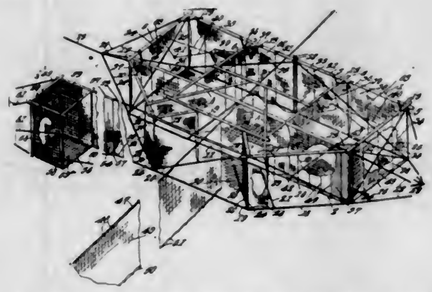
1,193,215. CHAIR-OPERATED FAN. ANTONI ZUBRYD, Castle Shannon, Pa. Filed Jan. 6, 1916. Serial No. 70,608. (Cl. 230—7.)



1. A device of the class described comprising a rocking chair having a curved floor-engaging rocker provided with a longitudinal bottom groove terminating in a transverse slot positioned through the forward portion of the said rocker, a power shaft journaled beneath the bottom of the said chair, a crank carried by the said shaft, a resilient operating lever extending through the said slot and having one straight arm positioned within the said groove and the other arm having its free end journaled to the said crank, a fan revolubly carried by the said chair, and pawl and ratchet connections between the said shaft and fan.

2. A device of the class described comprising a rocking chair having a curved floor-engaging rocker provided with a longitudinal bottom groove terminating in a transverse slot positioned through the forward portion of the said rocker, a power shaft journaled beneath the bottom of the said chair, a crank carried by the said shaft, a resilient operating lever extending through the said slot and having one straight arm positioned within the said groove and the other arm having its free end journaled to the said crank, a fan revolubly carried by the said chair, pawl and ratchet connections between the said shaft and fan, consisting of a ratchet wheel secured to said shaft, a fly wheel journaled upon the said shaft, a pivoted pawl mounted upon the said fly wheel in normal contact with the said ratchet wheel, and operative connections between the said fly wheel and fan.

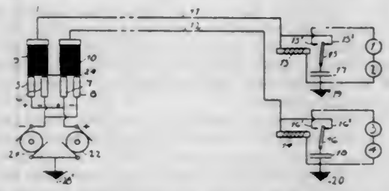
1,193,216. FLOATING FISH-TRAP. BENJAMIN F. ARMSTRONG, Westport, Wash. Filed Mar. 1, 1916. Serial No. 81,455. (Cl. 43—20.)



1. A floating fish trap embodying a buoyant frame, a lower metallic frame, webs connecting said frames and providing end captivity chambers, an entrance chamber between the captivity chambers, a V-shaped leader having its smaller end open and projecting within the entrance chamber, certain webs providing partitions between the entrance and captivity chambers, said partition webs having leaders to enable the fish to pass from the entrance chamber into the captivity chambers, and other webs providing a closure for the entrance chamber opposite the first mentioned leader and adapted to be separated to let the fish escape from the entrance chamber.

2. A floating fish trap embodying an upper buoyant frame, a lower metallic frame, webs connecting the frames and providing an entrance leader and fish trapping means, an inshore lead extending from the mouth, and a down stream lead extending from the mouth and provided at its end with a three sided pocket including an upper buoyant frame, a lower metallic frame, and webs connecting them.

1,193,217. PRINTING-TELEGRAPH SYSTEM. CHARLES G. ASHLEY, Chicago, Ill., assignor to General Engineering and Construction Company, Limited, Toronto, Canada, a Corporation of Ontario, Canada. Filed July 8, 1912, Serial No. 708,165. Renewed Jan. 3, 1916. Serial No. 70,076. (Cl. 118—30.)



1. In a printing telegraph system, a plurality of electromagnets, a plurality of printing type actuated by said electromagnets, condensive means for receiving and momentarily storing current impulses and further means for discharging said stored impulses through said electromagnets to selectively operate said printing type.

2. In a printing telegraph system, a plurality of solenoids, a plurality of printing type actuated by said solenoids, condensive means for receiving and momentarily storing current impulses and further means for discharging said stored impulses through said solenoids to selectively operate said printing type.

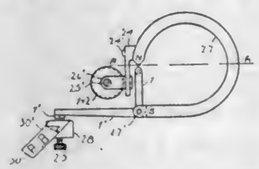
3. In a printing telegraph system, a transmission line, means for energizing said line with current impulses in predetermined code, condensive means for receiving and storing the energy of said impulses, a plurality of solenoids, a plurality of printing types actuated by said solenoids, means for discharging the energy of said stored impulses through said solenoids, to selectively operate said printing type.

4. In a printing telegraph system a transmission line, a relay associated with each conductor of said line, a condenser associated with each of said relays, a pair of solenoids associated with each of said condensers, a printing type actuated by each of said solenoids, means for charging said condensers by current impulses of variant polarity and thereafter actuating said relay to discharge said condensers through said solenoids to actuate said printing types.

5. In a printing telegraph system, a transmission conductor, a transmitter for impressing upon said conductor an electrical current, a receiving printing device, and condensive means for changing the energy received from said transmission conductor into a current of greater instantaneous value and a shorter time duration.

[Claims 6 to 11 not printed in the Gazette.]

1,193,218. PRINTING-TELEGRAPH RECEIVER. CHARLES G. ASHLEY, Chicago, Ill., assignor to General Engineering and Construction Company, Limited, Toronto, Canada, a Corporation of Ontario, Canada. Filed July 8, 1912, Serial No. 708,166. Renewed Jan. 3, 1916. Serial No. 70,077. (Cl. 178—30.)



1. In printing telegraph receiver, a plurality of printing lens; a receiving surface therefor; magnetic means for restraining said pens from contact with said receiving surface and electromagnetic means associated with groups of said pens for selectively propelling any pen of said group of pens to strike said receiving surface.

2. In a printing telegraph receiver, a plurality of pivoted type bearing members; a polarizing field common to all of said members; and electromagnetic means common to pairs of said members and adapted to produce adjacent to any selected member of a pair of said members a magnetic field at an angle to said polarizing field to cause said member to assume an operative position.

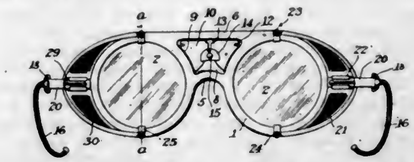
3. In a printing telegraph receiver, a plurality of rotatably mounted pen members, a polarizing field adapted to maintain all of said pen members normally in a predetermined position and electromagnetic means for creating another magnetic field adjacent to any selected pen member to cause said pen member to rotate to assume an operative position determined by the resultant magnetic field of the two component fields.

4. In a printing telegraph receiver, a plurality of printing pens, a receiving surface, a magnetic field common to all of said pens and adapted to restrain said pens from contact with said receiving surface and electromagnetic means associated with pairs of said pens for creating adjacent to either pen of a pair of said pens another magnetic field to produce a resultant field with said common field to cause said pen to strike said receiving surface.

5. In a printing telegraph receiver, a plurality of printing pens, a receiving surface therefor, a magnetic field common to all of said pens and adapted to restrain said pens from contact with said receiving surface and electromagnets associated with said pens for creating adjacent to any selected one of said pens another magnetic field to produce a resultant field with said common field to cause said pen to strike said receiving surface.

[Claims 6 to 16 not printed in the Gazette.]

1,193,219. EYEGLASSES. GUSTAV A. BADER, Rochester, N. Y. Filed Mar. 27, 1916. Serial No. 87,067. (Cl. 2—149.)



1. Eyeglasses comprising a main frame having a lens seat, an overhanging flange partially surrounding said seat, and a movable locking device for holding a lens on the seat beneath said overhanging flange.

2. Eyeglasses comprising a main frame having two lens seats, overhanging flanges partially surrounding the seats, and a bridging portion between the seats; and two movable locking devices mounted on the bridging portion to secure lenses to the seats beneath the overhanging flanges.

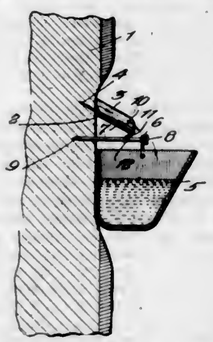
3. Eyeglasses comprising a main frame formed from sheet material and provided with a pair of lens seats, flanges partially surrounding the seats, and a bridging portion having a portion pressed therefrom to provide a depression, and movable locking devices arranged in said pocket and projecting through walls thereof to engage lenses to hold them to the seats.

4. Eyeglasses comprising lens seats, a bridging portion arranged between the seats and provided with a depression, and lens locking devices mounted in the pocket and projecting through walls thereof to engage lenses on the seats.

5. Eyeglasses comprising lens seats, a bridging portion having a depression formed with walls conforming to the lens seats, said walls being provided with slots, and lens locking devices arranged in the depression and fulcrumed on the walls of the slots to engage lenses on the lens seats.

[Claims 6 to 26 not printed in the Gazette.]

1,193,220. SUPPORT FOR TURPENTINE STRIPS OR TROUGHS. FESTUS S. BAILEY, Quitman, Ga. Filed Nov. 13, 1915. Serial No. 61,272. (Cl. 248—22.)

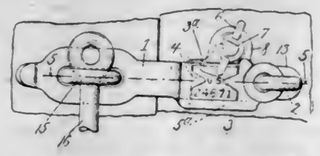


1. A support for turpentine cups and spiles or strips, comprising a spike having at one end a head and having at the other end a point, the point being adapted to be

driven into the wood of the tree with the spike in horizontal position, said spike having an angular arm, the arm consisting of two portions extending at an acute angle, one of the said portions having a bearing sleeve through which the spike body extends, the portion remote from the spike body being adapted to engage above the free end of the spile or strip and in the same with the said free end resting upon that portion adjacent to the spike, the said last-named portion extending at an acute angle with respect to the spike body and toward the head.

2. A support for turpentine cups and spiles or strips, comprising a spike having at one end a head and having at the other end a point, the point being adapted to be driven into the wood of the tree with the spike in horizontal position, said spike having an angular arm, the arm consisting of two portions extending at an acute angle, one of the said portions having a rigid connection with the spike body, the portion remote from the spike body being adapted to engage above the free end of the spile or strip and in the same with the said free end resting upon that portion adjacent to the spike, the said last-named portion extending at an acute angle with respect to the spike body and toward the head.

1,193,221. HASP SEAL-LOCK. MELVIN H. VAN H. BATTENBERG, Chicago, Ill., assignor of two-thirds to Lawrence C. Weyand, Chicago, Ill., and one-third to Battenberg Car Seal and Equipment Co., a Corporation of Illinois. Filed Oct. 27, 1911. Serial No. 657,014. (Cl. 70—23.)



1. A lock comprising a laterally movable hasp adapted to be movably connected at one end to a fixed part, said hasp provided between its ends with a seal receiving recess adapted to receive a frangible seal and open at one of its borders so that the seal may be received therein when the hasp is in its unlocked position, said hasp adapted to be moved laterally into and out of its locking position, the seal moving laterally with the hasp, and a seal mutilating part separate from the hasp and adapted to be moved so as to project over the seal when the hasp is in its locking position, whereby when the hasp is moved from its locking position to its unlocking position the seal mutilating part engages the seal and mutilates it.

2. A lock comprising a hasp made of a single piece of material and having a seal receiving recess, a seal mutilating part located at one side of said hasp separate from said hasp, and adapted when the parts are in their operative position to mutilate the seal when the hasp is moved; the portion of the hasp back of said seal being cut away so that said mutilating part may pass therethrough after the seal has been mutilated.

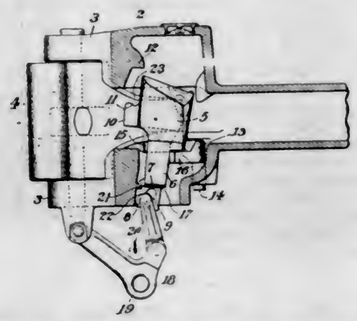
3. A lock comprising a hasp provided with a seal receiving space for receiving a frangible seal, a seal mutilating part separate from the hasp and associated therewith, said seal mutilating part adapted to be rotated in one direction, and means for preventing the rotation thereof in the other direction; and means separate from said seal for preventing the rotation of said seal mutilating part in said one direction while in its mutilating position.

4. A lock comprising a hasp, recessed to receive a frangible seal, a seal mutilating part associated with said hasp and free to rotate in one direction but locked against rotation in the other direction, said hasp obstructing the free rotation of the seal mutilating part when the parts are in their operative position.

5. A lock comprising a casing adapted to be fastened in position, a device within said casing adapted to be rotated in one direction and locked against rotation in the other direction, a seal mutilating part outside of the casing connected with said device and a hasp recessed to receive a frangible seal associated with said mutilating part; and means separate from said seal mutilating part for holding said hasp in operative relation to said seal mutilating part.

[Claims 6 and 7 not printed in the Gazette.]

1,193,222. CAR-COUPLING. ARTHUR J. BAZELEY, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed July 20, 1911, Serial No. 639,589. Divided and this application filed May 25, 1915. Serial No. 30,307. (Cl. 213—14.)



1. In a car coupler, a lock having a depending leg, the said lock having a fulcrum bearing on the coupler-head, a lock-lifting lever pivoted to the under side of the coupler-head to swing rearwardly and upwardly, and a link forming a pivotal connection between the lever and the leg of the lock, the said link being connected to the lever and to the leg of the lock to lift the lock vertically and move the leg of the lock rearwardly before the lock fulcrums on the coupler-head, the leg of the lock being adapted to be forced rearwardly for lock-setting and knuckle-throwing by the combined action of the lever and link and the fulcruming engagement of the lock on the coupler-head.

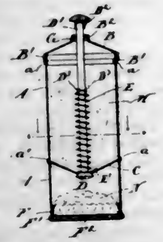
2. In a car coupler, a lock comprising a head and a depending leg, a lock-lifting lever pivoted to the under side of the coupler head, a shoulder on the under side of the coupler head, overlying the end of the lifter when the lock is in locking position, and an inclined slot in the leg of the lock, coöperating with a pin on the lifter, so as to permit an initial rearward and upward movement of the lifter before it actuates the lock.

3. In a car coupler, a lock having a depending leg, a lever pivoted to the under side of the coupler-head to swing rearwardly and upwardly, and a link pivoted to the lever and to the leg of the lock, the said link, upon actuation of said lever, being adapted to swing rearwardly relative to said lever and thereby lift the lock vertically and move its leg rearwardly for lock-setting and knuckle-throwing.

4. In a car coupler, a lock having a depending leg and having on its forward portion a fulcrum bearing adapted, when the lock is lifted, to be brought into fulcruming engagement with the coupler-head, and actuating mechanism secured to the under side of the coupler-head, pivoted to the leg of the lock to the rear of a vertical line passing through the fulcrum-bearing on the lock, said actuating mechanism being adapted to lift the lock by its leg into engagement with the head to fulcrum thereon, said lock, on further actuation by said mechanism, being adapted to be swung rearwardly by said mechanism and fulcrum into positive engagement with a knuckle-throwing member.

5. In a car coupler, a lock having a downwardly-extending leg and having also a fulcrum-bearing on its forward portion, a lifting mechanism for said lock comprising a lever pivoted to the coupler-head forward of the lock-leg and said fulcrum, and a link pivotally connected to said lever and engaging the lock-leg, said link, in its initial lock-lifting positions, being adapted to lift the lock perpendicularly and at the same time to move rearwardly, the forward portion of said lock fulcruming on the coupler-head, whereby when the lock is lifted and its leg is tilted rearwardly by said link, the said fulcrum swings the leg of the lock positively to the rear, in engagement with a knuckle-throwing member.

1,193,223. TOILET-POWDER CONTAINER. JOHN W. BECKMANN, New York, N. Y., assignor of one-half to J. Walter Rembe, Peekskill, N. Y. Filed Oct. 5, 1915. Serial No. 54,141. (Cl. 132—28.)



1. In a device of the character described, a body having a top, a removable bottom portion for said body, a false bottom retained within the body between the bottom and top, a spring-actuated valve rod movable through an opening in the top, and a valve carried by the lower end of the valve rod and disposed between the bottom of the body and the false bottom and adapted to seat against the latter.

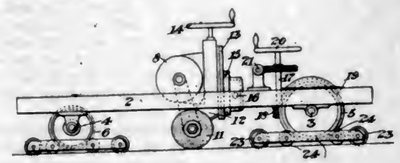
2. In a device of the character described, a body having a top, a removable bottom portion for said body, a false bottom retained within the body between the bottom and top, a spring-actuated valve rod movable through an opening in the top, a valve carried by the lower end of the valve rod and disposed between the bottom of the body and the false bottom and adapted to seat against the latter, and means on the valve rod exteriorly of the top to engage the latter and limit the opening movement of the valve.

3. A device of the character described comprising a body, a conical cover therefor, a removable bottom therefor, a conical diaphragm within the body between the bottom and top and having an opening with valve seat, a valve adapted to said seat from the under side of the diaphragm, a valve rod carrying said valve and guided in the cover and a spring around said rod within the body having one end secured to the rod and the other bearing against said diaphragm.

4. A device of the character described comprising a body, a removable bottom therefor, a top therefor, a removable conical diaphragm within the body having an opening and valve seat, a valve fitted to said seat from the under side of the diaphragm, a valve rod carrying the valve and movable through the top and a spring around said valve rod within the body with one end secured to said rod and the inner end having its lower convolution terminating in an outwardly extending arm engaging the diaphragm and preventing the entrance of the spring into the valve opening.

1,193,224. GRINDING-MACHINE. JULIUS BEGTRUP, Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed Mar. 27, 1913. Serial No. 757,100. (Cl. 51—12.)

1. In a grinding machine, the combination with grinding means, of an extended support embodying a series of more than two differentially spaced points of support lying in a common plane.



2. In a grinding machine, the combination with grinding means, of an extended support embodying a point of support at one side of the grinding point and a series of more than two differentially spaced points of support at the opposite side of said grinding point and in the plane of said first point of support.

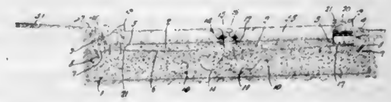
3. In a grinding machine, the combination with grinding means, of an extended support embodying two series of rollers with their contact points in a common plane, one series at one side and the other at the other side of the grinding point, the rollers of each series being more than two in number and differentially spaced.

4. In a grinding machine, the combination with grinding means, of a wheeled main truck for supporting said grinding means for operation, and auxiliary supporting means constructed to receive and support said main truck and embodying a series of more than two differentially spaced points of support for the grinding machine lying in a common plane.

5. In a grinding machine, the combination with grinding means, of a wheeled main truck for supporting said grinding means for operation, and auxiliary supporting means constructed to receive and support said main truck and embodying a series of more than two differentially spaced rollers having their points of contact with the surface to be ground in a common plane and on some of which rollers the wheels of said main truck rest.

[Claims 6 and 7 not printed in the Gazette.]

1,193,225. ROAD OR HIGHWAY. JOHN STOCKTON BLANKINSHIP, Lynchburg, Va. Filed Dec. 14, 1915. Serial No. 66,808. (Cl. 104—178.)



1. In a device of the class described, a tie provided at one end with an upstanding lug; a traffic rail supported on the tie and abutting against the inner face of the lug; and a drainage rail supported on top of the lug and coacting with the traffic rail, the drainage rail having a longitudinal groove.

2. In a device of the class described, a cross tie having an upstanding lug; a traffic rail supported on the cross tie and abutting against the inner face of the lug; a drainage rail supported on top of the lug and coacting with the traffic rail, the drainage rail having a longitudinal groove; a catch basin; and a conduit leading from the catch basin to the groove of the drainage rail.

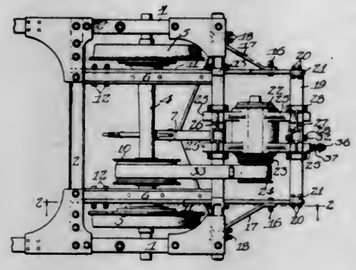
3. In a device of the class described, a supporting structure; traffic rails carried thereby; drainage rails mounted on the supporting structure and coacting with the traffic rails; internal latch mechanisms coacting with the ends of the traffic rails and the ends of the drainage rails respectively; and means for operating the latch mechanisms from the exterior of the traffic rails and the drainage rails.

4. In a device of the class described, a cross tie provided with upstanding lugs at its ends, and equipped in its upper edge with notches located adjacent the lugs; a

reinforcing element in the tie, the intermediate portion of the reinforcing element being extended upwardly into flush relation with the upper edge of the tie, and the ends of the reinforcing element defining the bases of the grooves; traffic rails located in the grooves and abutting against the inner faces of the lugs and supported on the ends of the reinforcing element; and a guide rail located between the traffic rails and supported on the intermediate portion of the reinforcing element.

5. In a device of the class described, a traffic rail including a body, the lower edge of which is upwardly arched; a top strip coacting with the upwardly arched lower edge of the rail; a bottom strip extended between the ends of the top strip; a strut interposed between the intermediate portion of the top and bottom strips; a reinforcing strip embedded in the rail and coacting with the bottom strip; and latch casings connected with the ends of the reinforcing strip.

1,193,226. DYNAMO-SUPPORT. WILLIAM L. BLISS, Brooklyn, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Dec. 26, 1908. Serial No. 469,417. (Cl. 105—238.)



1. The combination with a belt driven dynamo, of supporting means therefor, guides secured to said supporting means, said guides and said dynamo having coöperating parts permitting free bodily movement of said dynamo with respect to said guides in a direction at right angles to the armature shaft of said dynamo, but said parts preventing movement of said dynamo in other directions, and a tension device opposing the movement of said dynamo with respect to said guides.

2. The combination with a dynamo, of supporting means therefor, guides on said supporting means and means on the generator coöperating with said guides for preventing movement of said dynamo, except in a direction at right angles to its armature shaft, said guides being adjustable on said supporting means in a direction substantially parallel to said armature shaft.

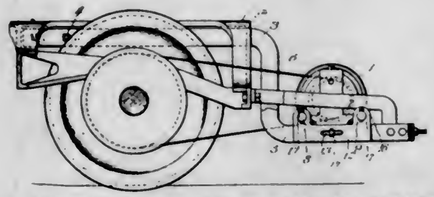
3. The combination with a pair of substantially parallel supporting members, of a generator supported thereby, and means for securing said generator to said bars, said means permitting movement of said generator in a direction at right angles to its armature shaft and to said bars.

4. The combination with a pair of substantially parallel supporting bars, of a belt-driven dynamo supported thereby, means on said bars for securing said dynamo thereto, said means also being adjustable to permit proper alinementof the belt pulleys and permitting movement of said generator in a direction at right angles to its armature shaft.

5. The combination with a pair of substantially parallel supporting bars, of a dynamo supported thereon and having its armature shaft arranged parallel to said bars, means for securing said dynamo to said bars, said means permitting said dynamo to be moved in a direction at right angles to the armature shaft.

[Claims 6 to 41 not printed in the Gazette.]

1,193,227. GENERATOR SUSPENSION. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Oct. 23, 1912. Serial No. 727,316. (Cl. 105—238.)



1. A generator suspension comprising a pair of parallel suspension bars each having portions thereof in different horizontal planes, a plurality of cross-bars adjustably mounted on said suspension bars and extending from one to the other thereof and a generator carried by said cross-bars, said generator being rigidly but adjustably mounted with respect to said suspension bars.

2. A generator suspension comprising suspension bars having portions thereof in different horizontal planes, a plurality of generators supporting members carried by said bars and a generator carried by said supporting members, said generator being rigidly but adjustably mounted with respect to said suspension bars.

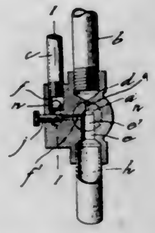
3. A generator suspension comprising suspension bars having vertically extending portions and elongated horizontal extensions thereon, a pair of rods adjustably supported on said extensions and a generator carried by said rods, said generator being rigidly but adjustably mounted with respect to said suspension bars.

4. A generator suspension comprising parallel suspension bars and supports carried by each of said bars and adjustable with respect thereto, said supports being adapted to support a generator above said bars.

5. A generator suspension comprising parallel suspension bars, saddles straddling said bars and adjustably secured thereto, and a pair of parallel rods having their ends protruding through openings in each of said saddles.

[Claims 6 to 9 not printed in the Gazette.]

1,193,228. HIGH-PRESSURE GAS-LIGHTING SYSTEM. LINDSAY FILLAN BOYD, Hawksburn, Victoria, Australia. Filed Mar. 9, 1915. Serial No. 13,151. (Cl. 67—90.)

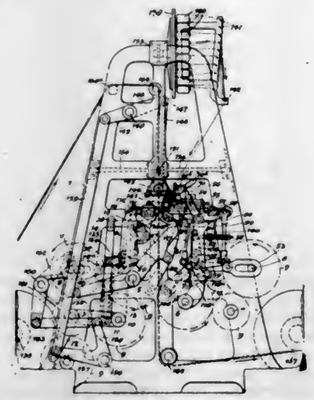


1. In high pressure gas-lighting systems a gas supply pipe and a compressed air supply pipe leading to separate passages in the body of a three-way cock, a junction between the inner ends of said passages, a screw for adjusting the size of the opening from the passage leading to the gas supply pipe, a third passage in the body of the three-way cock leading from the junction of the first mentioned passages, and a pipe leading from the last mentioned passage to a burner, substantially as described.

2. In high pressure gas-lighting systems a body of a three-way cock having separate passages formed therein for the admission of compressed air and gas, a third passage in the body, a three-way cock having passages arranged to correspond to the passages in the body, a screw to control the flow of gas from its respective passage, and a valve to prevent back pressure in the gas passage, substantially as described.

3. In high pressure gas-lighting systems a body of a three-way cock having separate passages formed therein for the admission of compressed air and gas, a third passage in the body, a three-way cock having passages arranged to correspond to the passages in the body, a screw to control the flow of gas from its respective passage, a valve to prevent back pressure in the gas passage, and a by-pass leading from the gas passage to a point adjacent to the incandescent mantle of a burner, substantially as described.

1,193,229. MACHINE FOR MANUFACTURING KNOTTED CARPETS. FERNAND BOYER, Paris, France. Filed Sept. 30, 1914. Serial No. 864,221. (Cl. 139—66.)



1. In a machine for manufacturing carpets a mechanism for tying knots in the pile threads consisting of a series of open hooks and guide bars therefor there being one hook for each pair of warps, located in front of the same, and a series of similar hooks and guide bars therefor located behind the warps, both series of hooks being adapted to work together to form clamps with their respective guide bars when crossing the pile threads and when tightening the newly formed knots, means for imparting a swinging movement to said hooks, and means coacting with the hooks behind the warps for drawing in and for crossing the ends of the pile threads.

2. In a machine for manufacturing carpets the combination with a frame, warp and carpet beams and means for moving the warps in a vertical position through a portion of the machine, of pile thread guides, means for gripping each pile thread, means for cutting the pile threads into predetermined lengths, means for forming the knots, comprising a series of open hooks and guide bars therefor there being one hook for a pair of warps, located in front of the same and a series of similar hooks and guide bars therefor located behind the warps, both series of hooks being adapted to work together and to form clamps with their respective guide bars when crossing the pile threads and when tightening the newly formed knots, means imparting to the hooks a swinging movement, and means coacting with the hooks behind the warps for drawing in and for crossing the ends of pile threads.

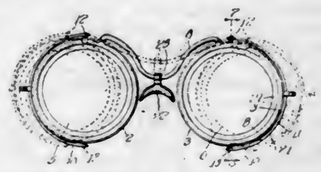
3. In a machine for manufacturing carpets, the combination with a frame, warp and carpet beams, and means for moving the warps in a vertical position through a portion of the machine, of pile thread guides, means for actuating the same, means for cutting the pile threads into predetermined lengths, means for gripping each pile thread, a series of down-turned hooks, means for actuating the same so that each pair of hooks passes between a pair of warps, engages the ends of the pile thread and draws the same between the said warps, a series of up-turned hooks, means for actuating the same so that each up-turned hook is caused to pass between a pair of warps to engage the ends of a pile thread and draw them back between the said warps to tie the pile thread about the pair of warps, and means for placing the pile threads in proper positions to be engaged by said hooks.

4. In a machine for manufacturing carpets, the combination with a frame, warp and carpet beams, and means for moving the warps in a vertical position through a portion of the machine, of pile thread guides, means for actuating the same, means for cutting the pile threads into predetermined lengths, means for gripping each pile thread, a series of down-turned hooks, guide bars for the same, means for actuating the said down-turned hooks and guide bars therefor independently of one another, so that the said hooks are moved out of the guide bars and passed between pairs of warps to engage the ends of a pile thread and draw the same between the said pairs of warps, the said hooks upon being so withdrawn clamping the ends of the pile threads between themselves and the guide-bars therefor, a series of up-turned hooks, guide bars therefor, and means for actuating the said upturned hooks and their guide bars so that each up-turned hook is passed between the members of a pair of warps to engage the ends of a pile thread, which, upon being released, are then withdrawn by the said up-turned hook between the pair of warps to tie the pile thread about the same.

5. In a machine for manufacturing carpets, the combination with a frame, warp and carpet beams, and means for moving the warps in a vertical position through a portion of the machine, of pile thread guides, means for actuating the same, means for gripping each pile thread, means for cutting the pile threads into predetermined lengths, a series of down-turned hooks, a guide bar for each of the same, means for actuating the said down-turned hooks to project the same from its guide bar between a pair of warps to engage the ends of a pile thread which upon being released is withdrawn and the ends thereof passed between pairs of warps and gripped between the said hook and its said guide bar with the loop in the pile thread surrounding the said warps, a series of up-turned hooks, a guide bar for each of the same, means for actuating each up-turned hook to cause the same to pass between a pair of warps, means then operative for moving the said down-turned hook and the guide bar associated therewith first in one direction and then in the other to first lay one end of the pile thread into the upturned hook and then the other end of the pile thread in the upturned hook, thereby crossing the ends of the pile thread as the same are threaded in the up-turned hook, and means for withdrawing the said up-turned hook into its guide bar and thereby pulling the crossed ends of the pile thread between the warps to tie the pile thread about the same.

[Claims 6 to 16 not printed in the Gazette.]

1,193,230. MECHANIC'S EYE-PROTECTOR. HERMAN J. BRENNECKE, Chicago, Ill., assignor of one-half to Robert Malcolm, Chicago, Ill. Filed Mar. 18, 1915. Serial No. 15,218. (Cl. 2—149.)



1. The combination with an eye-protector, of a frame having receptacles therein, a pair of lens frames, means for instantaneously interlocking said lens frames with and releasing them from said frame, a bridge adjustable to vary the spacing apart of the lens frames and the lenses therein, a nose-piece, and support for same which is ad-

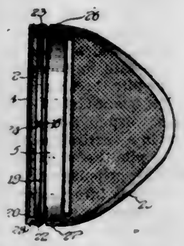
justable to vary the level of the lenses relative to said nose-piece.

2. The combination with the lens supporting bands or frames of an eye protector, of removable fiber lining for the edges of said bands or frames.

3. The combination with the lens frames of a pair of eye-protectors, of a ring of cork or fibrous material lining the inner periphery of said frame, said ring being removably mounted in said frame.

4. The combination with a pair of eye-protectors, said eye-protectors comprising a frame consisting of lens receptacles connected by a bridge, lenses and fibrous lining, of means for adjustably varying the distance between said lenses, means for supporting the fibrous lining by friction hold only, a nose-piece mounted on said bridge, and means for varying the distance of said nose-piece from said bridge.

1,193,231. VARIABLE EYE-PROTECTOR. HERMAN J. BRENNECKE, Chicago, Ill., assignor of one-half to Robert Malcolm, Chicago, Ill. Filed Mar. 29, 1915. Serial No. 17,723. (Cl. 88—41.)

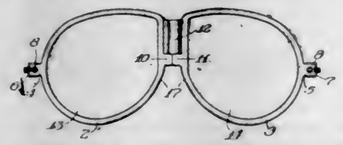


1. The combination with the bridge-connected frames of a pair of eye-protectors, of lens-supporting frames, each of the latter consisting of a sheet metal ring formed with a stop flange engaging one side of the lens and having a groove and a ring in said groove which engages the opposite side of the lens, each of said bridge-connected frames having a channel therein and each of said lens-supporting frames having a bead thereon which is removably snapped into and held in said channel.

2. The combination with a pair of eye-protectors and bridge connected frames therefor having channels therein, of lens-frames having beads thereon to engage said channels removably, the lenses for said lens frames, and means on said lens frames removably supporting said lenses in said lens-frames.

3. The combination with a pair of eye-protectors and bridge-connected frames therefor, of lenses, separate frames for said lenses, means supporting the lenses removably in said separate frames, and means on said lens frames supporting said separate frames removably in said bridge-connected frames.

1,193,232. FLEXIBLY-CONNECTED LENSES. HERMAN J. BRENNECKE, Chicago, Ill., assignor of one-half to Robert Malcolm, Chicago, Ill. Filed Aug. 6, 1915. Serial No. 43,934. (Cl. 88—41.)

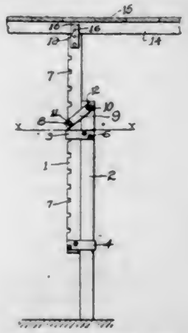


1. A pair of lenses constructed and arranged to jointly form a nose piece, and a flexible connection for said lenses which closes the space therebetween above said nose-piece.

2. The combination of a pair of lenses having contacting portions which form a nose-piece and are angularly movable with said lenses, and a connection for said lenses which closes the space therebetween and permits angular movement.

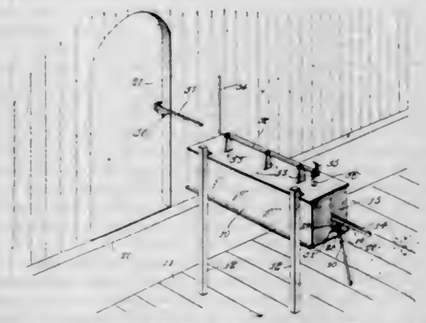
3. A pair of lenses having exterior boundary lines which together form a nose-piece and a panel opening above said nose-piece, and a panel inserted in said opening, said panel forming a flexible connection for the lenses, and said flexible panel and the upper part of the nose-piece forming a connecting bridge between said lenses and connecting said lenses.

1,193,233. ADJUSTABLE SHORE. GEORGE BROWN, Chicago, Ill. Filed July 23, 1915. Serial No. 41,521. (Cl. 72—79.)



An adjustable shore comprising the combination of uprights, one of the uprights being provided with a number of cut out portions along one of its side faces, and having at one end thereof a band, said band adapted to embrace the opposite upright, the opposite end of the notched upright having upwardly projecting members arranged on opposite sides thereof, the opposite upright member having a metallic band secured thereto, said band adapted to embrace the notched upright, a connecting link comprising side members, bolts for connecting the side members and sleeves loosely supported on the bolts, whereby the same will revolve relatively thereto, the upper end of one of said uprights having an opening to receive one of said sleeves, the opposite sleeve adapted to engage within the notched portions of the opposed upright.

1,193,234. MAIL-HANDLING APPARATUS. IRA D. CAREY, Light Street, Pa. Filed Oct. 20, 1915. Serial No. 56,953. (Cl. 258—7.)

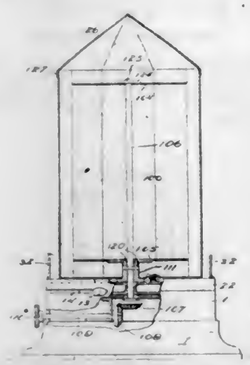


1. A mail handling apparatus comprising a housing having one end open, a partition in said housing, the partition and the closed end of the housing being provided with openings, a plunger slidable through said housing and passing through the openings of said partition and the closed end of the housing, the outer end portion of said plunger being provided with teeth, a head in said housing connected with the inner end of said plunger, a collar carried by said plunger and engaging said partition when said plunger is moved inwardly the full extent, resilient means positioned between said partition and said head, strips extending through said housing above and below said plunger, a latch slidably carried by said strips and provided with an opening through which said plunger passes, means yieldably holding said latch in a position to engage the teeth of said plunger, means for moving said latch to a position to release said plunger, and means for moving said plunger outwardly, the plunger when moved outwardly being releasably held in a set position by said latch.

2. A mail handling apparatus comprising a housing open at one end, a plunger slidably mounted in said housing and provided with teeth, means yieldably holding said plunger in a normal position, strips extending across said housing above and below said plunger, a latch slidably carried by said strips for vertical movement and engaging the teeth of said plunger when in a normal position, means yieldably holding said latch in a normal position with its upper end extending through an opening formed in the top of said housing, a rocker shaft rotatably mounted above said housing and having one end portion provided with an arm for moving the rocker shaft, a cam carried by said rocker shaft and engaging the upper end of said latch for moving the latch to an inoperative position when the shaft is rotated in one direction, and means for moving said plunger out of its normal position.

3. A mail handling apparatus comprising a housing open at one end, a plunger slidably mounted in said housing and provided with teeth, means yieldably holding said plunger in a normal position, a latch slidably mounted in said housing and engaging the teeth of said plunger when in an operative position, means yieldably holding said latch in an operative position with the upper end portion thereof extending through the top of said housing, a rocker shaft rotatably mounted above said housing, a cam carried by said rocker shaft and engaging said latch, and means for rotating said rocker shaft.

1,193,235. COIN-CONTROLLED VENDING-MACHINE. JAMES N. CHILSON and LOWTHER BROWN PUGH, Fairmont, W. Va. Filed Aug. 17, 1915. Serial No. 45,952. (Cl. 194—63.)



1. In a check controlled apparatus, the combination with a circular hollow base containing a chamber whose top constitutes a fixed bed plate having an upstanding peripheral bead provided with a coin inlet and a slot in rear of the same, the bed plate having an ejector hole immediately forward of said inlet and a coin drop forward of the hole, a boss rising from the center of this plate, a top plate disposed above said bed plate and having a peripheral rim engaging said bead, and a hub depending from the center of this plate; of a movable carrier pivotally mounted between said boss and hub and having a peripheral rim provided with a notch, a handle on the carrier movable within said slot, the carrier having a channel in its lower face communicating with its notch, a depending lug at the rear side of said channel for advancing a check as the carrier is swung forward, means for preventing its full forward movement when a washer is inserted, and means for ejecting said washer on the return movement of the carrier.

2. In a check controlled apparatus, the combination with a circular hollow base containing a chamber whose top constitutes a fixed bed plate having an upstanding-peripheral bead provided with a coin inlet and a slot in rear of the same, the bed plate having a groove inside said bead and an ejector hole immediately forward of said inlet and a coin drop forward of the hole, a top plate disposed above said bed plate and having a peripheral rim with a flange engaging said bead, and means for rigidly connecting said plates; of a movable carrier pivotally mounted between said plates and having a peripheral rim traveling in said groove and provided with a notch, a handle movable within said slot and secured to the carrier at a point to strike the rear end of the slot when said notch registers with the coin inlet, the carrier having a channel in its lower face communicating with its notch, a depending lug at the rear side of said channel for advancing a check as the carrier is swung forward, means for preventing a full forward movement of the carrier when a washer is inserted, and means for ejecting said washer on the return movement of the carrier.

3. In a check controlled apparatus, the combination with a hollow base whose top constitutes a bed plate having a curved band around its front side provided with an ejector hole, the shell of the base having a coin inlet just in rear of said hole and the band having an arcuate groove constituting a track, and a top plate overlying said bed plate; of a movable carrier pivotally mounted between the plates and having a channel adapted to aline with said inlet, a depending lug on the carrier at the rear side of said channel movable in said track for advancing a check as the carrier is swung, means for preventing its full forward movement when a washer is inserted, and means for dropping said washer through the ejector hole on the return movement of the carrier.

4. In a check controlled apparatus, the combination with a circular hollow base containing a chamber whose top constitutes a fixed bed plate having an upstanding peripheral bead provided with a coin inlet at the front of the base, the bed having a thickened band inside said inlet and provided in its upper face with an arcuate groove constituting a track, and the band having an ejector hole just forward of said inlet and a coin drop forward of the hole; of a swinging carrier pivotally mounted over the plate and having a channel in its lower face adapted to aline with said inlet when the carrier stands at normal position, a depending lug at the rear side of said channel moving in said track for advancing a check as the carrier is swung, means for preventing its full forward movement when a washer is inserted, and upright walls oblique to radial lines and at angles to each other, one at the rear side of said hole and the other at the forward side of said channel for forcing the washer into said ejector hole on the return movement of the carrier.

5. In a check controlled apparatus, the combination with a circular hollow base whose top constitutes a fixed bed plate having an upstanding peripheral bead provided with a coin inlet, the bed having a band inside said inlet provided in its upper face with a depressed seat forward of the inlet and having an upright wall at its rear side oblique to a radius of the bed plate, said band having an ejector hole opposite the seat and a coin drop forward of the hole; of a carrier pivotally mounted over the plate and having a channel in its lower face adapted to aline with the inlet when said carrier stands at normal position, the front side of said channel having an upright wall oblique to the radius of the carrier and at an angle to said other wall, means at the rear side of said channel for ad-

vancing a check as the carrier is swung, means for swinging the carrier, and means for preventing its full forward movement when a washer is inserted.

[Claims 6 to 10 not printed in the Gazette.]

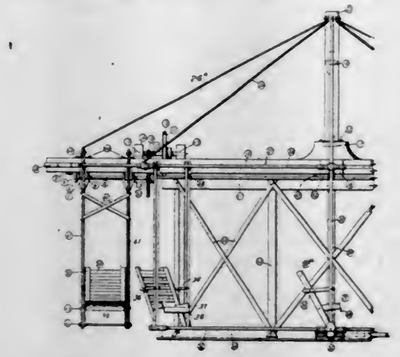
1,193,236. AUTOMOBILE ATTACHMENT. SAMUEL CHINN, Los Angeles, Cal. Filed Mar. 1, 1916. Serial No. 81,427. (Cl. 137—115.)



1. An automobile attachment for disposition within the rear axle housing tube and differential casing comprising a sleeve fitted within the tube and surrounding the axle, one end of the sleeve having an enlarged portion for the reception of the axle roller bearings, and an absorbent sleeve disposed within the said sleeve and intimately surrounding the axle.

2. A lubricant retainer for automobile axles consisting of a casing extending toward the side from the differential gearing of an automobile and closing in on the axle at its free end, and an absorbent packing material disposed within the casing and surrounding the axle.

1,193,237. POWER-TRANSMITTING MECHANISM FOR USE IN CONNECTION WITH SWINGING SEATS. EMERY E. CLARK, Oskaloosa, Kans. Filed Sept. 20, 1915. Serial No. 51,732. (Cl. 46—27.)



1. A power transmitting mechanism comprising a swinging member having opposed parallel bars, a support therefor, a transmitting shaft disposed between the upper ends of the bars, and means operated by the swinging of the bars for rotating the transmitting shaft.

2. The combination with a swinging member having parallel swinging bars, of a power transmitting mechanism comprising a shaft arranged between the bars, a ratchet wheel on the shaft, pawls for engaging the ratchet wheel and independent connections between the pawls and the swinging bars.

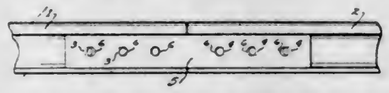
3. A power transmitting mechanism comprising opposed swinging bars, a transmitting shaft, in combination with a ratchet mechanism for driving the shaft comprising a plurality of pawls, a ratchet wheel on the shaft with which the pawls engage, and connections between each of the bars and the pawls for rotating the shaft upon a swinging movement of the bars.

4. In a swinging structure, the combination with parallel supporting bars, of a power transmitting mechanism comprising a shaft interposed between the upper ends of the bars, a ratchet on the shaft, pawls for engaging the ratchets and independent link connections between the pawls and the bars for continuously rotating the shaft upon a swinging movement of the bars.

5. The combination with a swing comprising parallel bars and a seat member, of a power transmitting mechanism comprising an operating shaft located between the bars, pawls for operating the shafts, connections between the pawls and the bars, and a driving member operated by the shaft.

[Claims 6 to 21 not printed in the Gazette.]

1,193,238. METHOD OF SPLICING RAILS. EDWARD J. COOK, Rochester, N. Y., assignor of one-half to Donald P. Falconer, Rochester, N. Y. Filed Apr. 16, 1915. Serial No. 21,730. (Cl. 29—84.)



1. The method of joining metal track rails, consisting in placing the ends of the rails together and securely fastening the same and placing an initial longitudinal compression in the ends of said rails.

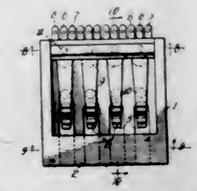
2. The method of joining rails consisting in applying to the rails a connecting element expanded beyond its normal condition and applying fastening means while said conecting element is in its expanded condition and then permitting said connecting element to contract for the purpose specified.

3. The method of joining rails consisting in placing an initial longitudinal compression in the ends of the rails by applying thereto a connecting element fastened to said rails while said element is in an expanded condition and then permitting said connecting element to contract.

4. The method of connecting rails consisting in the placing of an initial longitudinal compression in the rail ends by fastening to same an expanded connecting element, and allowing same thereafter to assume its normal condition, substantially as specified.

5. The method of connecting rails consisting in providing the ends of the rails with openings, applying to the ends of adjacent rails a bar also formed with openings such that when the bar is in a heated state the openings therein will register with the openings in the rails, inserting fastening means through the openings in the bar and rail ends while the bar is in its heated state, and then permitting said bar to cool and contract.

1,193,239. ELECTRIC SWITCH. FRANK B. COOK, Chicago, Ill., assignor to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 15, 1915. Serial No. 2,422. (Cl. 179—97.)



1. A spring jack structure including a mounting strip of insulation having a plurality of plug receiving openings at its forward portion and provided with openings therethrough located along the mounting strip; contact springs supported by the mounting strip; and a fastening strip of insulation for holding the springs and mounting strip together, said fastening strip having integral continuations thereof which pass through the aforesaid openings in the mounting strip to secure the assembly of said strips.

2. A spring jack structure including a mounting strip of insulation having a plurality of plug receiving openings at its forward portion and provided with openings therethrough located along the mounting strip; contact springs supported by the mounting strip upon each side thereof; and a fastening strip of insulation upon each side of the mounting strip for holding the springs and mounting strip together, said fastening strips having continuations each integral with both fastening strips and which pass through the aforesaid openings in the mounting strip to secure the assembly of said strips.

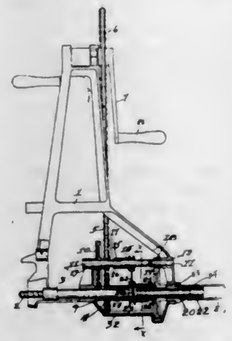
3. A spring jack structure including a mounting strip of insulation having a plurality of plug receiving openings at its forward portion and provided with openings therethrough located along the mounting strip; contact springs supported by the mounting strip; and a fastening strip of insulation for holding the springs and mounting strip together, said fastening strip having integral continuations thereof which pass through the aforesaid openings in the mounting strip to secure the assembly of said strips, the contact springs having openings in alinement with the aforesaid openings in the mounting strip through which the aforesaid continuations also pass.

4. A spring jack structure including a mounting strip of insulation having a plurality of plug receiving openings at its forward portion and provided with openings therethrough located along the mounting strip; contact springs supported by the mounting strip upon each side thereof; and a fastening strip of insulation upon each side of the mounting strip for holding the springs and mounting strip together, said fastening strips having continuations each integral with both fastening strips and which pass through the aforesaid openings in the mounting strip to secure the assembly of said strips, the contact springs having openings in alinement with the aforesaid openings in the mounting strip through which the aforesaid continuations also pass.

5. A spring jack structure including a mounting strip of insulation having a plurality of plug receiving openings at its forward portion and provided with openings therethrough located along the mounting strip; contact springs supported by the mounting strip; and a fastening strip of insulation for holding the springs and mounting strip together, said fastening strip having integral continuations thereof which pass through the aforesaid openings in the mounting strip to secure the assembly of said strips, the mounting strip being angularly channeled longitudinally thereof where the aforesaid openings therein are provided also to receive the material of the fastening strip.

[Claims 6 to 8 not printed in the Gazette.]

1,193,240. PORTABLE RAIL-DRILL. CHARLES J. COULTER, Hammond, Ind. Filed Sept. 2, 1913. Serial No. 787,610. (Cl. 77—8.)



1. The combination in a portable drill, of a drill chuck, an externally threaded sleeve slidably and non-rotatably mounted on the shank of said chuck, driving means, a gear threaded on said sleeve, connections between said driving means and said gear, connections between said driving means and said chuck, means whereby connections between the driving means and gear may be broken without affecting the connections between the driving means and the chuck.

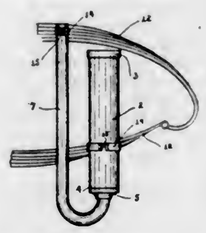
2. The combination with a portable drill, of a drill chuck having a shank, a sleeve splined on said shank, said sleeve having screw threads, a pinion secured to said sleeve, a gear in mesh with said pinion, a shaft on which said gear is loosely mounted, bearings for said shaft, a pinion rigidly secured on the other end of said shaft, a gear mounted on the feed screw, a shifting collar splined on said shaft having teeth thereon which engage recesses in the gear, a collar splined on said sleeve having teeth which engage recesses in the gear on the feed screw, means to shift said collars to cause the said teeth to engage either the loosely mounted gear or the threaded gear, said means being adapted to permit the operator to place said collars in a neutral position, and means to rotate the sleeve.

3. The combination in a portable drill, of a drill chuck, a sleeve carried by the shank of said chuck, said sleeve having a feed screw formed thereon, a sleeve splined on said shank, a pinion fixedly secured to said splined sleeve, a gear in mesh with said pinion, a shaft on which said gear is loosely mounted, a casing for inclosing the operative mechanism, bearings formed in said casing in which said shaft is mounted, and means adapted to be manually operated to cause the chuck to advance.

4. The combination in a portable drill, of a drill chuck, a sleeve carried by the shank of said chuck, said sleeve having a feed screw formed thereon, a cylinder casing inclosing the end of said feed screw and having a key mounted therein which engages a key-way cut in said feed screw, a sleeve splined on said shank in advance of the feed screw, a ball thrust bearing intermediate the ends of the feed screw and a shoulder formed on the shank, a pinion fixedly secured to the splined sleeve, a gear in mesh with said pinion, a shaft on which said gear is loosely mounted, a casing which incloses the feeding mechanism, bearings formed in said casing in which said shaft is mounted, a pinion fixedly secured to the other end of said shaft, a gear mounted on the feed screw, a sprocket wheel mounted on said splined sleeve, and manually operated means to rotate said sprocket and sleeve.

5. The combination in a portable drill, of a drill chuck, a sleeve splined on the shank on which is cut a feed screw, a shell which incloses the said feed screw, a key secured to the inner end of said shell, a keyway in said feed screw in which said key slides, a sleeve splined on said shank, means to rotate said sleeve, a train of gears adapted to advance or retract said feed screw, and means to render said train of gears inoperative without interfering with the rotation of the splined sleeve.

1,193,241. SHOCK-ABSORBER. FREDERICK COWIE, Athal, Ontario, Canada. Filed Sept. 20, 1915. Serial No. 51,718. (Cl. 21—105.)



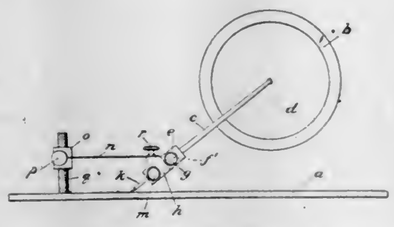
1. A shock-absorber, comprising a cylinder and a U-shaped plunger, said cylinder having a cap attached to one

end, said cap having two openings, one of said openings being provided with a one-way valve, the other end of said cylinder being threaded on its outside and being adapted to have a cap screwed thereon, said cap having an opening through which one end of the said U-shaped plunger works, said end of plunger being threaded and adapted to have a round nut screwed thereon, a leather washer on said nut, said leather washer having its outer edge turned up, a washer and a nut holding the leather washer on said round nut, the other end of said plunger being attached to upper section of any spring, said cylinder being secured to the lower section of said spring.

2. A shock-absorber, comprising a cylinder and a U-shaped plunger, said plunger having one end working in said cylinder, said end of plunger being threaded and adapted to receive a round nut, a leather washer, a metal washer and a nut, all securely tightened together, said leather washer having its edge turned up, said plunger having its other end attached to the upper section of any spring, said cylinder being attached to the lower section of said spring, said cylinder being provided at its upper end with a cap, said cap having holes therein, one of said holes having a one-way valve therein.

3. In combination with a spring including upper and lower members, a cylinder secured to the lower member, a U-shaped plunger having one end attached to the upper member, a piston attached to the other end of the plunger and operating in said cylinder, said cylinder provided with two apertures, a check valve closing one of the apertures, whereby upon movement of the spring members toward each other air will be drawn into the cylinder through the check valve, and upon movement of the spring members away from each other the air will be forced from the cylinder through the unobstructed aperture.

1,193,242. PHONOGRAPH. PATRICK B. DELANY, Nantucket, Mass. Filed Sept. 12, 1912. Serial No. 719,909. (Cl. 274—1.)



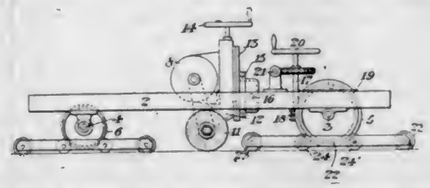
1. An attachment for applying graphite or other appropriate solid lubricant to a record, comprising a head adapted to be held by the usual reproducer needle holder and having means for receiving and holding a needle adapted to run in the grooves of the record in combination with a spring supported holder connected to said head adapted to carry a block or rod of solid lubricant in contact with the record.

2. In a talking machine, the combination of a finished revolving record, a reproducing needle, and means controlled by said machine for distribution of a lubricant on the record in the path of the needle whereby said needle will rub the lubricant into intimate contact with the record lines or grooves as the latter traverses the record.

3. In a talking machine, the combination with the reproducing arm, a needle holder carried thereby, a piece of solid lubricant, and means for yieldingly supporting it on the needle holder.

4. In a talking machine the combination with the reproducer arm, of a spring pivotally connected therewith to move about a vertical axis, means for holding the spring in its adjusted position, and a lubricant holder carried by said spring and which presses the lubricant against the record.

1,193,243. GRINDING-MACHINE. JOHN H. DEPPELER, Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed Mar. 27, 1913. Serial No. 757,095. (Cl. 51—12.)



1. In a grinding machine, the combination with grinding means, of a wheeled main truck for supporting said grinding means for operation, auxiliary supporting means constructed to receive and support said main truck by engagement with the wheels thereof and having a relatively long contact surface for supporting the grinding machine, and means carried by said main truck for imparting traveling movement to said auxiliary supporting means.

2. In a grinding machine, the combination with grinding means, of a wheeled main truck for supporting said grinding means for operation, and auxiliary supporting means constructed to receive and support said main truck and having hollers spaced a considerable distance apart with their contact points in alinement and located at opposite sides of the grinding point.

3. In a grinding machine, the combination with grinding means, of a wheeled main truck for supporting said grinding means for operation, and auxiliary supporting means constructed to receive and support said main truck and having rollers spaced a considerable distance apart with their contact points in alinement and on some of which rollers the wheels of said main truck rest.

4. In a grinding machine, the combination with grinding means, of a wheeled main truck for supporting said grinding means for operation, an auxiliary roller truck constructed to receive and support said main truck and the rollers of which are spaced a considerable distance apart and have alined contact points, and means carried by said main truck for imparting traveling movement to said roller-truck.

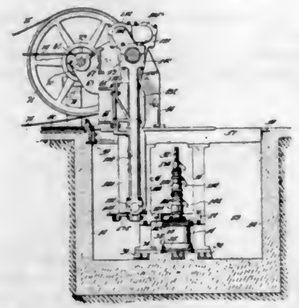
5. In a rail-grinder, the combination with grinding means, of a wheeled main truck movable along a rail and supporting said grinding means for operation, means for positively driving one of the wheels of said truck, and auxiliary supporting means constructed to receive and support said main truck and having rollers with alined contact points adapted to travel on said rail and one of which rollers is adapted to be brought into operative relation with and driven by said driven wheel of the main truck.

[Claims 6 and 7 not printed in the Gazette.]

1,193,244. TRIPLEX PUMP. FRED A. DEW, Pomona, Cal. Filed May 15, 1915. Serial No. 28,480. (Cl. 103—82.)

1. In a deep well pump having a water column and a pit formed about the upper end thereof the combination of a base squared with the axis of the water column and located at the bottom of the pit, an upper frame surrounding the mouth of the pit and adapted to support the pump head, a series of columns resting on said base and supporting said frame, and a concrete member forming the wall and floor of the pit, said concrete member being cast about said base, said columns, and frame after said base, said columns, and said frame have been erected in their proper positions.

2. In a deep well pump having a series of concentric pump rods the combination of crossheads having a U-shaped opening therein and hook castings secured to each pump rod and secured to the under side of one of said crossheads, the U-shaped openings in each of said crossheads being of sufficient size to allow hook castings that are normally located above the crosshead to pass freely through the U-shaped openings in the crossheads while the crossheads are in their normal position.



3. In a deep well pump having a series of concentric pump rods the combination of crossheads having a U-shaped opening therein and hook castings secured to each pump rod and secured to the under side of one of said crossheads, the U-shaped openings in each of said crossheads being of sufficient size to allow hook castings that are normally located above the crosshead to pass freely through the U-shaped openings in the crossheads while the crossheads are in their normal position, each of said hook castings having a hook formed thereon, said hook pointing away from the crosshead to which the hook casting is secured.

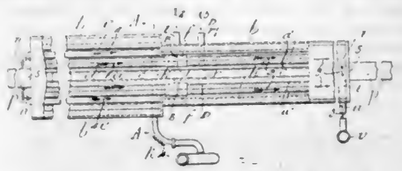
4. In a deep well pump the combination of a pump head slidably mounted above a pit, crossheads, crosshead guides in which said crossheads slide, said guides being secured to and moving with said head, a water column, buckets in said water column, a series of concentric pump rods each secured to one of said buckets, and means for securing said pump rods to said crossheads so that said pump rods can be disconnected from said crossheads and lowered into a position where they can be supported from said water column without moving the pump head, the crossheads, or the crosshead guides from their operating position.

5. In a deep well pump the combination of a pump head slidably mounted above a pit, crossheads, crosshead guides in which said crossheads slide, said guides being secured to and moving with said head, a water column, buckets in said water column, a series of concentric pump rods each secured to one of said buckets, and means for securing said pump rods to said crossheads so that said pump rods can be disconnected from said crossheads and lowered into a position where they can be supported from said water column without moving the pump head, the crossheads, or the crosshead guides from their operating position, said crossheads having openings therein which normally encircle the pump rods and which are so located that the pump head, the crosshead guides, and the crossheads can be slid as a unit across the mouth of the pit to give access to the pump rods when said pump rods have been disconnected.

1,193,245. OVEN. CONRAD DRESSLER, Marlow, England. Filed Feb. 17, 1914. Serial No. 819,286. (Cl. 263—9.)

1. An oven comprising a heating chamber, a cooling chamber forming a continuation thereof, a combustion chamber supported in the heating chamber so that gaseous fluid can circulate around it and out of communication with the heating and cooling chambers, a cooling conduit supported in the cooling chamber and connected to the combustion chamber and means for introducing fuel in a fluid condition to the combustion chamber.

2. In an oven comprising a heating chamber and a cooling chamber forming a continuation thereof, a combustion chamber and a cooling conduit arranged respectively in said heating and cooling chambers and in alinement with each other and a junction piece connecting said chamber and conduit together.



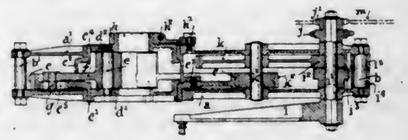
3. In an oven comprising a heating chamber and a cooling chamber through which goods can pass successively, a combustion chamber located in but out of communication with said heating chamber, and a cooling conduit arranged in said cooling chamber and through which cooling fluid can pass and having its outlet end in communication with said combustion chamber.

4. In an oven, a combustion chamber, a cooling conduit in alinement therewith and a junction piece connecting said combustion chamber and conduits and having an inlet for fuel in a fluid condition, to be consumed in the combustion chamber.

5. An oven comprising a heating zone and a cooling zone, a combustion chamber supported at one side of the heating zone, above the floor and at a distance from the adjacent side of the oven and having its interior out of communication with the interior of the oven, an air conduit also out of communication with the interior of the oven but in communication with the interior of the combustion chamber and extending freely through the cooling zone at one side thereof and means for supplying combustible gas to the air that has passed through the air conduit.

[Claims 6 to 15 not printed in the Gazette.]

1,193,246. DETACHABLE JACK FOR ROTATING SHAFTS. JAMES DRONSFIELD, Oldham, England. Filed May 26, 1915. Serial No. 30,561. (Cl. 74—7.)



1. A detachable "jack" for rotating a shaft, comprising a frame, a spur gear train mounted thereon, a handle whereby to drive said train, and a friction clutch adapted to automatically grip said shaft when the said gear train is set in motion.

2. A detachable "jack" for driving a shaft, comprising a frame, a spur gear train mounted thereon, a handle to operate said train, a collar having an internal diameter greater than the diameter of the driven shaft within and concentric with the last spur wheel of the train, arms pivoted on said collar, the outer ends of said arms provided with studs adapted to engage radial slots in the said last spur wheel of the train, whereby rotation of the spur wheel with respect to the collar rotates said arms about said pivots, causing their inner ends to engage the driven shaft.

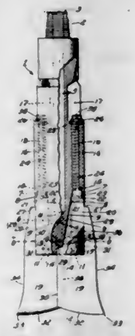
3. An attachable and detachable "jack" for temporary driving of a shaft on card mounting machines and the like comprising front and rear supports, means to interconnect said front and rear supports, a spur gear train mounted upon and between said supports, a hand actuated handle to operate said train, and pivoted clamping devices carried by said supports and actuated by said gear train to grip the shaft when revolved in one direction and to release the shaft when the motion of the gear train is reversed.

4. An attachable and detachable "jack" comprising a rear support and a front support, a driving shaft mounted on said supports, means for manually operating said shaft, a driven gear, a train of gearing connecting the driving shaft with the driven gear, a driven shaft, pivoted clamping devices operated by the driven gear to grip the driven shaft in one direction of rotation of said driven gear, and other driving means operatively connected to the driving shaft.

5. An attachable and detachable driving "jack" adapted to fit and drive shafts of various diameters and to automatically adapt itself thereto comprising front and rear supports, a driven gear wheel between said supports, a hand driven shaft journaled in said supports, a train of gear wheels connecting said hand driven shaft with said driven gear wheel, clamping arms actuated by the driven gear wheel to grip the shaft to be driven, fulcrum plates upon which said clamping arms are pivoted, a ratchet wheel on the hand driven shaft, a pawl therefor, and other driving means operatively connected with the hand driven shaft, as described.

[Claims 6 to 9 not printed in the Gazette.]

1,193,247. HYDRAULIC ROTARY WELL-BORING TOOL. WILLIAM LINCOLN DUNN, Oxnard, Cal., assignor to The Dunn Manufacturing Company, Oxnard, Cal., a Corporation of California. Filed Mar. 17, 1913. Serial No. 755,020. (Cl. 255—75.)



1. A rotary boring tool comprising a body having two substantially separate longitudinal slots, overlapping cutter blades reciprocably mounted in and projecting from said slots, and means to hold the cutter blades outward when the blades are moved in one direction, said blades being provided with runner faces extending substantially parallel to the axis of the body when the blades are folded.

2. A rotary boring tool comprising a body having two substantially separate longitudinal slots with adjacent sides formed substantially in a single plane, and cutter blades projecting from said slots, each blade having a shoulder to engage the body and provided downwardly from said shoulder with a runner face diverging downwardly from the longitudinal axis of the blade.

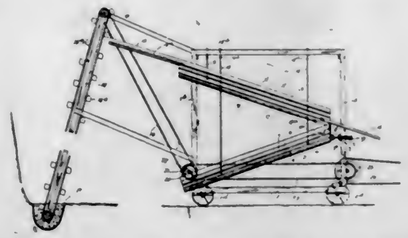
3. A rotary boring tool comprising a body having two substantially separate longitudinal slots with adjacent sides formed substantially in the mid-plane of said body, and overlapping cutter blades projecting from said slots to form runner faces along their outer edges adapted to project beyond the periphery of the body when the blades are out of commission.

4. A rotary boring tool comprising a body having longitudinal slots one on each side of the axis of the body with adjacent sides formed substantially in the mid-plane of said body, and cutter blades projecting from said slots and overlapping one another, each of said blades having a shoulder on each edge thereof to seat against said body.

5. A rotary boring tool comprising a body having two longitudinal slots, a shoulder in the lower end of each slot, and a cutter blade reciprocably mounted in each slot and provided with a shoulder to engage said slot shoulder when the cutter blade is moved in the slot.

[Claims 6 to 17 not printed in the Gazette.]

1,193,248. PLACER-MACHINE. HERMAN FESENFELD, San Diego, Cal., assignor of one-fourth to K. L. Kidd, one-fourth to C. T. Davenport, and one-fourth to A. B. Bowman, San Diego, Cal. Filed May 27, 1915. Serial No. 30,761. (Cl. 83—88.)



1. In a placer machine, the combination of a forwardly inclined separating screen and correspondingly inclined riffle table, a lower reversely inclined screen and correspondingly inclined riffle table adapted to receive the fines passing through the upper screen and over the upper riffle table and means for applying to the whole a shake adapted to project material forwardly in the direction of inclination of the upper screen and table and against the inclination of the lower screen and table.

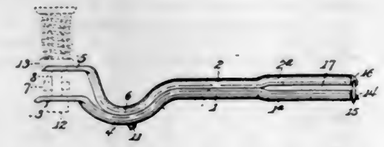
2. In a placer machine, the combination of a plurality of different mesh forwardly inclined separating screens and correspondingly inclined riffle table, a plurality of different mesh reversely inclined screens, and correspondingly inclined riffle table adapted to receive the fines passing through the upper screens and over the upper riffle table, and means for applying to the whole a shock adapted to project material forwardly in the direction of inclination of the upper screens and table and against the inclination of the lower screens and table.

3. In a placer machine, the combination of a forwardly inclined rack provided with a plurality of different mesh separating screens, and with a plurality of riffles and a lower reversely inclined rack provided with a plurality of different mesh screens and a plurality of riffles, said lower screens and riffles adapted to receive the fines passing through the upper rack, screens and riffles, and means for applying to the whole a shock adapted to project material forwardly in the direction of inclination of the upper rack and against the inclination of the lower rack.

4. In a placer machine, the combination of a forwardly inclined rack provided with a plurality of different mesh separating screens, and with a plurality of riffles and a lower reversely inclined rack provided with a plurality of different mesh screens, a plurality of riffles and a carpet, said lower screens, riffles and carpet adapted to receive the fines passing through the upper rack, screens and riffles, and means for applying to the whole a shock adapted to project material forwardly in the direction of the inclination of the upper rack and against the inclination of the lower rack.

5. In a placer machine, the combination of a forwardly inclined rack provided with a plurality of different mesh separating screens, and with a plurality of riffles and a lower reversely inclined rack provided with a plurality of different mesh screens, a plurality of riffles and a carpet, said lower screens, riffles and carpet adapted to receive the fines passing through the upper rack, screens and riffles and means for applying to the whole a shock adapted to project material forwardly in the direction of inclination of the upper rack and against the inclination of the lower rack, and combined means for washing, mixing and conveying placer ground to the upper portion of said forwardly inclined rack.

1,193,249. VALVE-LIFTER. FREDERICK C. FOLMAR, Elm Grove, W. Va. Filed Mar. 17, 1916. Serial No. 84,786. (Cl. 29—87.1.)



1. A tool of the character described, comprising two superposed members having a sliding connection, each of said members consisting of a head, a handle, and an intermediate downwardly bowed portion, the front end of the bowed portion of the upper member being curved more abruptly and prolonged to a greater extent than the corresponding portion of the lower member so that, when said members are closed one upon the other with the bowed portions thereof interfitting, the head of the upper member will be elevated above the head of the lower member.

2. A tool of the character described, comprising two superposed members having faces designed to coincide throughout the major part of their length when the members occupy normal positions, each of said members consisting of a bifurcated head, a handle, and an intervening downwardly bowed portion, the curvature of the bowed portion of the upper member being more abrupt than that of the lower member and the head of said upper member being disposed at a relatively higher level than that of the lower member when the bowed portions assume interfitting relation, and means connecting said members and permitting relative longitudinal sliding movement thereof.

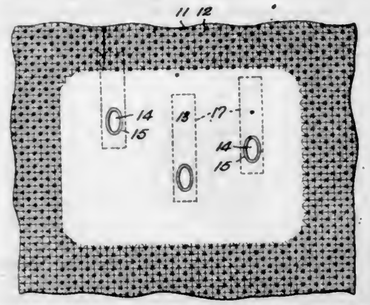
3. A tool of the character described, comprising two superposed members having faces designed to coincide throughout the major part of their length when the members occupy normal positions, each of said members consisting of a bifurcated head, a handle, and an intervening downwardly bowed portion, the curvature of the bowed portion of the upper member being more abrupt than that of the lower member and the head of said upper member being disposed at a relatively higher level than that of the lower member when the bowed portions assume interfitting relation, said lower member having a longitudinal slot in the rear part of the bowed portion thereof, and a stud carried by the upper member movably received in said slot.

4. A tool of the character described, comprising two superposed members having faces designed to coincide throughout the major part of their length when the members occupy normal positions, each of said members consisting of a head, a handle, and an intervening downwardly bowed portion, the curvature of the bowed portion of the upper member being more abrupt than that of the lower member and the head of said upper member being disposed at a relatively higher level than that of the lower member when the bowed portions assume interfitting relation, said lower member having a longitudinal slot in the rear part of the bowed portion thereof, and a downwardly projected stud fixed in the bowed portion of the upper member and movably received within said slot, said stud having a head for preventing disengagement of said members.

5. A tool of the character described, comprising two superposed members having a connection which permits relative longitudinal sliding movement, each member consisting of a head, a handle and an intermediate downwardly bowed portion, the head of the upper member being disposed at a relatively higher level with respect to the handle than that of the lower member when the bowed portions assume interfitting relation, the upper member being adapted for assuming a position wherein the front part of its head seats upon the rear part of the head of the lower member and a substantially middle part of the bowed portion of the upper member rests upon the rear part of the bowed portion of the lower member, and said upper member tending to automatically advance on said lower member under the resultant forces acting upon its head and its handle portion.

[Claims 6 to 8 not printed in the Gazette.]

1,193,250. AUTOMOBILE FLOOR-MAT. GEORGE F. FOSS, Montreal, Quebec, Canada. Filed July 26, 1915. Serial No. 42,105. (Cl. 21—90.)

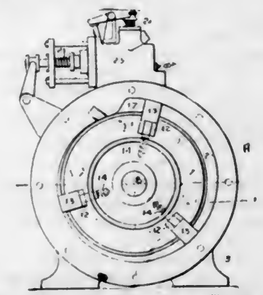


1. In an automobile floor mat, a body of substantially inelastic material, a highly elastic insert apertured for the passage of pedals, and reinforcement for said insert around the apertures.

2. In an automobile floor mat, a body of substantially inelastic material, an insert of highly elastic material apertured for the passage of pedals, and reinforcement for said insert around the edges of said apertures arranged to maintain a close connection with the pedals.

3. In a device of the character described, an apertured sheet of highly elastic material, the apertures thereof being positioned for the passage of movable members, and the body of the sheet being arranged to cover the path of said movable members, and means for reinforcing the sheet around apertures and for holding the sheet securely to the movable members.

1,193,251. ROTARY ENGINE. JOHN R. FOXGORD and JONATHAN WARNER, San Francisco, Cal.; said Foxgord assignor to said Warner. Filed Aug. 12, 1913. Serial No. 784,343. (Cl. 123—16.)

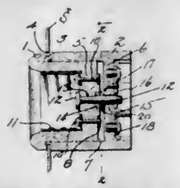


1. In a gas engine, a frame provided with a starting device comprising compression, valve and firing mechanism, a hand operated lever pivoted on said frame, a second lever also pivoted to said frame, said levers having a connecting link secured thereon; blocks secured to said link, longitudinally movable arms connected to said valve and compression mechanism, and pawls on said arms for engaging said blocks.

2. In a gas engine a stationary frame having a cylindrical chamber closed at the ends and provided with an eccentric inner curved face and an exhaust port, a centrally mounted rotor having spring actuated pistons en-

gaging said eccentric inner curved face, and provided with lateral actuated cheeks engaging the inner surfaces of said ends, springs located in said pistons for actuating said cheeks, a compression cylinder having a piston, adapted to control an intake port to said cylindrical chamber, and means connected to the main shaft to operate said piston.

1,193,252. SELF-LOCKING SIGN-RECEPTACLE. EDGAR H. FREEMAN, Trenton, N. J., assignor to E. H. Freeman Electric Company, Trenton, N. J., a Corporation of New Jersey. Filed Apr. 8, 1914. Serial No. 830,450. (Cl. 173—339.)



1. A sign receptacle comprising a pair of telescoping cup members respectively carrying the plug contacts and the wire terminal plates, an adjustable screw connection between said members, and an intermediate pawl and ratchet device rendered effective by a relative rotation of the two members and forming a part of the electrical circuit.

2. A self-locking sign receptacle comprising a pair of telescoping members carrying the plug contacts and the wire terminal plates, a pivotal connection between the two members, and a pawl and ratchet connection between the two members, said pawl and ratchet connection being included in the electrical circuit.

3. A sign receptacle including a pair of telescoping cup members, an adjustable pivoting screw connection between said members, and a ratchet contact connection electrically connecting and housed between the two members.

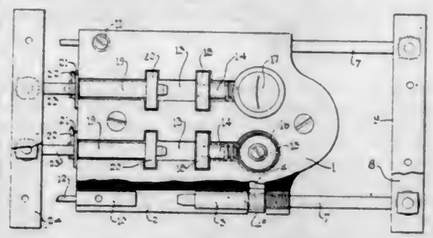
4. A sign receptacle including a pair of telescoping cup members respectively carrying the plug contacts and the wire terminal plates, one of the plug contacts constituting an adjustable connection between the two members, a ratchet contact ring fitted to one of the cup members when electrically connected with one of the plug contacts, and spring contact pawls carried by the other cup member and having a ratchet locking engagement with the ring, said pawls being electrically connected with one of the wire terminal plates.

5. A sign receptacle including a pair of adjustably connected cup members which respectively carry the plug contacts and the wire terminal plates, and a self-locking device preventing relative rotation of the two members and forming a part of the electrical circuit.

[Claim 6 not printed in the Gazette.]

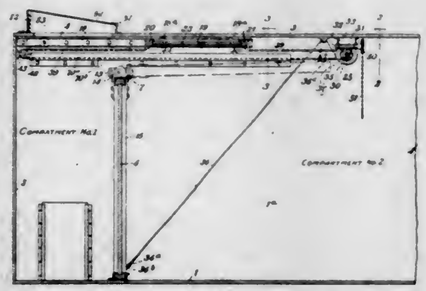
1,193,253. SWITCH-BLOCK AND CASING. ALBERT ISIDORE FROMAGER and JOSEPH FERDINAND SIX, Montreal, Quebec, Canada. Filed May 14, 1915. Serial No. 28,197. (Cl. 175—292.)

In a device of the character described; a closed casing provided with an opening through its top and slots communicating therewith, near one end, and a slot near the other end, and a transverse partition at its approximate center; a block of insulating material mounted therein and insulated therefrom, said block being provided with grooves and fuse plug sockets in its upper face and grooves in its sides; threaded collars secured in the upper ends of the said plug sockets; sleeves secured in the inner ends of the grooves in the upper face of the said block and electrically connected to the said threaded collar; tubes secured in the outer end of the said grooves in alinement with the said sleeves and adapted to be connected to the opposite sides of an electric circuit; conducting rods slidably operative therein to make contact with the sleeves in the inner ends of the grooves; a beam of insulating material connecting the said rods at their outer ends; a slidably operative plate secured thereto and adapted to be operated from without the casing; a tube mounted in one end of each of the said side grooves of the block and adapted to be connected to one side of an electric circuit; sleeves mounted near the other end of the said grooves in alinement with the said tubes;



copper strips connected to the said sleeves at their outer ends; contact screws secured through the inner ends thereof and having their heads centrally located in the bottoms of the said fuse plug sockets; conducting rods slidably operative through said sleeves to make contact with said tubes; a beam of insulating material secured to the outer ends of said rods; and a plate slidably operative within the casing and secured to the said beam, the said plate being adapted to be operated from without the said casing.

1,193,254. COMPARTMENT RAILWAY-CAR. FREDERICK H. GIBBS, New York, N. Y. Filed Nov. 25, 1914. Serial No. 873,993. (Cl. 105—15.)



1. In a railway car body, a swinging bulkhead adapted to divide said body into a plurality of compartments, a closure adapted to register with an opening leading to one of such compartments, and operating means adapted to synchronize movement of said bulkhead and closure.

2. In a railway car body, a swinging bulkhead, a closure adapted to register with an opening in the roof of said car body, and synchronically operated means adapted to lift said bulkhead and to actuate said closure.

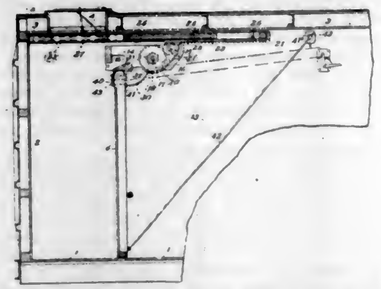
3. In a railway car body, a swinging bulkhead, a closure synchronically operable therewith, and a motor adapted for individual operation of said bulkhead or said closure.

4. In a railway car body, a swinging bulkhead, a synchronically slidable closure, and means adapted to operate either one of them without causing movement of the other.

5. In a railway car body, a bulkhead adapted to divide said car body into a plurality of compartments, a closure for an opening in one of said compartments, and worm-driven means adapted to actuate either said bulkhead or said closure independently of the other.

[Claims 6 to 20 not printed in the Gazette.]

1,193,255. RAILWAY-CAR. FREDERICK H. GIBBS, New York, N. Y. Filed Dec. 10, 1915. Serial No. 66,114. (Cl. 105—15.)



1. In a car having a roof with an opening therein, a bulkhead adapted to swing from a vertical position toward the roof of said car, and a separately formed slidable closure for said opening adapted to be operated to close said opening by movement of said bulkhead toward said roof.

2. In a car, a plurality of compartments, a roof for said car having therein an opening leading from the exterior to one compartment, a swinging bulkhead adapted to separate said compartments, a separately formed slidable closure for said opening, a trackway on which said closure may travel, and means connecting the bulkhead and closure and adapted to slide the closure to close said opening when the bulkhead is swung to a horizontal position.

3. In a car, a plurality of compartments, a roof having an opening leading from the exterior to one compartment, a bulkhead adapted to move from a vertical position to a relatively horizontal position to merge said compartments, and a separately formed closure for said opening operated by and during movement of the bulkhead to close said opening.

4. In a car, a plurality of compartments, an opening leading from the exterior to one compartment, a bulkhead adapted to separate said compartment from another compartment and adapted to move from a vertical position to a relatively horizontal position, a separately formed ventilating closure for said opening, and means connecting the bulkhead and closure adapted to automatically cause said closure to register with said opening when the bulkhead is swung to an elevated position.

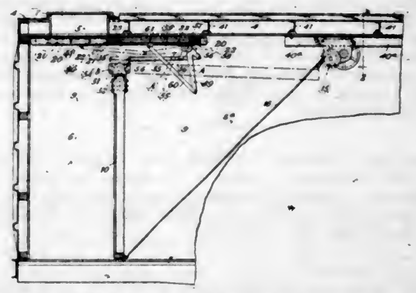
5. In a car, a floor, end wall, side walls, and a roof having an opening therethrough, in combination with a movable partition or bulkhead adapted to form therewith an end compartment, said bulkhead being adapted to occupy a vertical position and a relatively horizontal position, a separately formed closure for said roof opening, and intermediate means connecting said bulkhead and closure whereby the closure is automatically actuated during swinging movement of the bulkhead.

[Claims 6 to 30 not printed in the Gazette.]

1,193,256. COMPARTMENT RAILWAY-CAR. FREDERICK H. GIBBS, New York, N. Y. Filed Jan. 8, 1916. Serial No. 71,048. (Cl. 105—15.)

1. In a railway car, a roof having an opening therein, a compartment accessible through said opening, a bulkhead adapted to occupy a vertical position and adapted to swing upwardly toward said roof, and means for swinging said bulkhead toward said roof, in combination with a link pivotally connected with said bulkhead and a closure for said opening connected with said link and adapted to register with said opening when the bulkhead swings upwardly toward said roof.

2. In a railway car, a roof having an opening therein, a compartment accessible through said opening, a bulkhead adapted to occupy a position extending transversely of said car and adapted to swing upwardly toward said roof, a cable connected with said bulkhead and means for winding said cable for swinging said bulkhead toward said roof, in combination with a link pivotally connected with said bulkhead and a closure for said opening pivotally connected with said link and adapted to register with said opening when the bulkhead swings upwardly toward said roof.



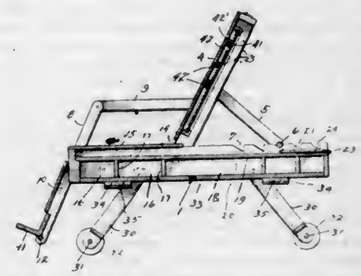
3. In a railway car, a roof having an opening therein, a compartment accessible through said opening, a bulkhead adapted to occupy a vertical position to divide said car into a plurality of compartments and adapted to swing upwardly toward said roof, to thereby merge said compartments, in combination with a closure for said opening, a link having an offset portion intermediate the bulkhead and said closure the link being actuated by the bulkhead and adapted to automatically cause the closure to register with said opening when the bulkhead is lifted.

4. In a car, a combination comprising a roof with an opening therein, a pivoted bulkhead adapted to separate the interior of the car into a plurality of compartments, a separate closure for said opening, and means comprising a link connected with and operable by said bulkhead adapted to cause said closure to automatically register with said roof opening when the bulkhead is lifted to a position near said roof, said link having an offset portion adapted to clear the pivot of the bulkhead.

5. In a railway car, a roof having an opening therein, a compartment accessible through said opening, a bulkhead extending transversely of said car thereby dividing the car into a plurality of compartments and adapted to swing upwardly toward said roof, in combination with a pivoted closure for said opening and means comprising a link pivotally connected with and connecting said closure and the bulkhead and being adapted to be actuated by said bulkhead to cause said closure to register with said opening.

[Claims 6 to 11 not printed in the Gazette.]

1,193,257. CONVERTIBLE CHAIR. FRANK A. GOELZ, Keyport, N. J. Filed Jan. 18, 1916. Serial No. 72,786. (Cl. 155—8.)

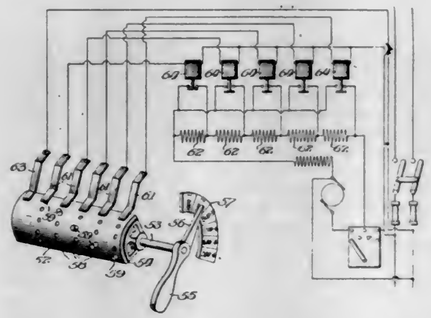


1. A chair of the class described, comprising a body, legs pivotally connected to the sides of the body, bars slidably engaged with the bottom of the body for engaging the legs to hold the same in their operative positions, and pivoted

latch bars carried by the bottom for engaging the bars, as and for the purpose set forth.

2. A chair of the class described, comprising a body, guides mounted on the bottom of the body, bars slidably engaged in the guides, spaced bars having their ends engaged with the ends of said bars, latch bars pivotally connected to the body and between the second named bars and adapted to have their ends engage therewith for holding the first named bars in their extended positions, legs pivotally connected to the sides of the body and adapted to engage the extended ends of the bars, whereby said legs are held in inclined positions to hold the body in an elevated position.

1,193,258. SPEED CONTROL FOR TURRET-LATHES AND THE LIKE. HARRY B. L. GORMAN, Madison, Wis., assignor to Gisholt Machine Company, Madison, Wis., a Corporation of Wisconsin. Filed May 20, 1915. Serial No. 29,343. (Cl. 172—179.)



1. In a system of speed control for turret lathes and the like, the combination of a driving motor having a shunt-field-winding, a plurality of resistance sections in series with said field-winding, each section having a value corresponding to a predetermined motor armature speed, and means whereby any desired number of said sections may be simultaneously cut out of said field circuit to thereby reduce the armature rotation to a predetermined desired speed.

2. In a system of speed control for turret lathes and the like, the combination of a driving motor having a shunt-field-winding, a plurality of resistance sections in series with said field-winding, each section having a value corresponding to a predetermined motor armature speed, and means including a movable member provided with a plurality of adjustable contact points corresponding in number with said resistance sections, for simultaneously cutting out of the field circuit any desired number of said resistance sections to produce a desired motor speed.

3. In a system of speed control for turret lathes and the like, the combination of a driving motor having a shunt-field-winding, a plurality of resistance sections in series with said field-winding, each section having a value corresponding to a predetermined motor armature speed, and means for selectively or consecutively cutting out of the field circuit any desired number of said resistance sections, said means comprising a plurality of contact members connected with the field circuit adjacent to the respective resistance sections, a movable member connected with the field circuit at one side of said group of sections and a plurality of adjustable contact devices carried by said movable member, each adapted to be brought into contact with its corresponding contact member to cut out the corresponding resistance section or sections.

4. In a system of speed control for turret lathes and the like, the combination of a driving motor having a shunt-field-winding, a plurality of resistance sections in series with said field-winding, each section having a value corresponding to a predetermined motor armature speed, and means for reducing the motor armature speed by cutting out either selectively or consecutively a required number of said resistance sections, said means including a cylindrical member provided on its periphery with a series of adjustable contact devices, a corresponding series of contact members electrically connected with the field circuit in parallel with corresponding resistance sections, a common return from said cylindrical member to said field circuit, and means for moving said cylindrical member to bring any desired adjustable contact device into contact with its corresponding contact member, thereby cutting out the requisite resistance sections.

5. In a system of speed control for turret lathes and the like, the combination of a driving motor having a shunt-field-winding, a plurality of resistance sections in series with said field-winding, each section having a value corresponding to a predetermined motor armature speed, and means including a series of adjustable contact members and mechanism for selectively establishing contact with said members for cutting out from the shunt field circuit a predetermined number of said resistance sections.

[Claims 6 and 7 not printed in the Gazette.]

1,193,259. MOP-HOLDER. ANSEL R. HENDERS, Memphis, Tenn. Filed Jan. 8, 1916. Serial No. 71,014. (Cl. 15—56.)



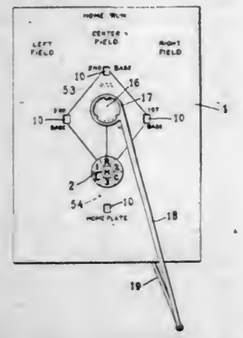
1. A mop holder including a frame having a horizontal frame bar provided with a keyhole slot, a rod having means on one end to receive and hold a mop cloth, and means mounted upon said frame bar to lock the other end of the rod in said keyhole slot.

2. A mop holder including a circular longitudinally tapering head band, a frame fixed to said head band provided with a handle receiving socket, one of the frame bars having a keyhole slot therein, a rod provided upon one end with means to receive a mop, and a movable locking element mounted upon said frame bar to detachably lock the other end of the rod in said keyhole slot and hold the mop cloth within said head band.

3. A mop holder including a circular head band, a frame fixed to said head band and having a handle receiving socket, said frame including a horizontal bar provided with a keyhole slot, a rod having means on one end to receive the mop and a spherical terminal on its other end adapted to be passed through the circular end of the keyhole, and a locking disk eccentrically pivoted on said bar to engage the shank of the rod and lock the same in the narrower end of the keyhole slot.

1,193,260. SHOOTING-GALLERY. AUGUSTUS M. HENRY, New York, N. Y. Filed Sept. 19, 1910. Serial No. 582,609. (Cl. 46—59.)

1. In an apparatus of the class described, in combination, a supporting member bearing characteristic indicia suggestive of a contest; resiliently-mounted supporting means arranged on said supporting member; target-means carried by said supporting means; means adapted to indicate movements and positions of a projectile factor in such contest and particularly adapted to delineate movements and positions with relation to the location of said target-means; and signaling means adapted to be actuated by the striking of said target-means during certain of such delineations to indicate the significance of any such striking.



2. In an apparatus of the class described, in combination, a supporting member bearing characteristic indicia suggestive of a contest; normally resilient supporting means arranged on said supporting member; target-means carried by said supporting means; means adapted to indicate movements and positions of a projectile factor in such contest and particularly adapted to delineate movements and positions of said factor with relation to the location of said target-means; and means normally adapted to restrain the resiliency of said supporting means but adapted to cease such restraint during certain of such delineations.

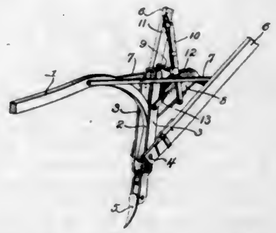
3. In an apparatus of the class described, in combination, a supporting member bearing characteristic indicia suggestive of a contest; normally resilient supporting means arranged on said supporting member; target-means carried by said supporting means; means adapted to indicate movements and positions of a projectile factor in such contest and particularly adapted to delineate movements and positions of said factor with relation to the location of said target-means; means normally adapted to restrain the resiliency of said supporting means; and means adapted upon the striking of said target-means during certain of such delineations to cease such restraint and to allow said target-means to become indicatory of the significance of such striking.

4. In a shooting gallery, in combination, a supporting member bearing characteristic indicia suggestive of a contest; target-means arranged on said supporting member; means adapted to indicate movements and positions of a projectile factor in such contest and particularly adapted to delineate movements and positions of said factor with relation to the location of said target-means; and an apparatus comprising a means adapted to normally prevent said target-means from registering the striking thereagainst of a bullet, and a device adapted to co-act with said indicating means whereby during certain of such delineations said target-means are rendered capable of registering the striking thereagainst of a bullet.

5. In a shooting gallery, in combination, a supporting member bearing characteristic indicia suggestive of a contest; target-means arranged on said supporting member; means adapted to indicate movements and positions of a projectile factor in such contest and particularly adapted to delineate movements and positions of said factor with relation to the location of said target-means; and an apparatus comprising a spring-pressed means adapted to normally prevent said target-means from registering the striking thereagainst of a bullet, and an electrical device adapted to co-act with said indicating means whereby during certain of such delineations said target means are rendered capable of registering the striking thereagainst of a bullet.

[Claims 6 to 19 not printed in the Gazette.]

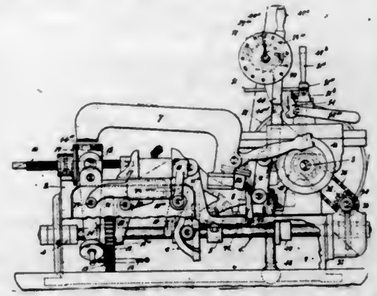
1,193,261. PLOW. JOHN E. HENRY, Hardeeville, S. C. Filed Oct. 29, 1915. Serial No. 58,593. (Cl. 97—26.)



1. In a plow, the combination with a beam, of a standard frame embracing and pivoted to the rear end of the beam having extensions below said beam end for the attachment of a plow share, having handles secured to said frame and beam, a support secured to said beam and handles, an operating lever pivoted to said support and a connecting link from a point adjacent the lever pivot to a point remote from the frame pivot.

2. In a plow, the combination with a beam having a downwardly curved rear portion, of a standard frame embracing said curved portion and pivoted to the rear end of the beam with the sides of the frame brought together below the beam end, handles secured at the lower end of the frame and beam by the pivot of the frame, said handles having a cross-brace and a substantially horizontal support secured to the rear curved portion of the beam and handle cross-brace, an operating lever pivoted to the support, and a link connecting the lever adjacent its pivot point to the frame at a point remote from the frame pivot.

1,193,262. AUTOMATIC HACK-SAWING MACHINE. EDWARD GEISLER HERBERT and CHARLES FLETCHER, Levenshulme, England. Filed July 24, 1914. Serial No. 852,812. (Cl. 29—73.)



1. A hack sawing machine comprising, cutting means, an actuating means for said cutting means for automatically making successive cuts, and means for stopping the machine automatically after a single cut of said cutting means.

2. A hack sawing machine comprising, cutting means, actuating means for said cutting means for automatically making successive cuts, and means for automatically stopping the machine after a predetermined number of successive cuts.

3. A hack sawing machine comprising, cutting means, automatic means for operating said means to produce successive cuts, and controlling means for the cutting means to control the cutting operations automatically after a predetermined number of cutting operations.

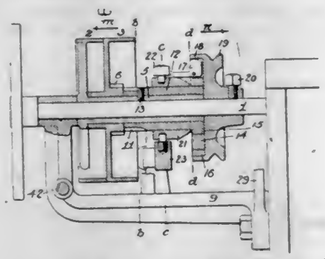
4. In a hack sawing machine, and in control mechanism for causing the machine to stop after a single cut, or after a predetermined number of successive cuts, the combination with the machine table of a fixed bracket, a stud

carried by said bracket, a combined dial and boss wheel axially supported upon the said stud, the boss having ratchet teeth on its periphery except at one part which is left blank, and the dial having a lug on its rear face next the boss and indicator marking on its front face, a pointer alongside the front face of the dial fixed to the said stud, a lever axially supported upon the same stud alongside the boss, a pawl carried by said lever and designed to engage the teeth of the boss, and when the lever is oscillated to rotate the boss tooth by tooth except when opposite the blank, a bearing bracket for the saw frame guides, a lever pivotally supported upon the said bracket, and having lateral projections one of which is arranged to act upon the said pawl-carrying lever each time the saw-frame guide bracket oscillates, another of which is arranged to act upon the lug on the rear face of the dial when such lug has reached a predetermined position and thereby oscillate the lever about its own axis, another of which is arranged to act upon the repeat mechanism of the machine when the lever is not affected by the lug on the dial, while another projection is arranged to strike a part of the machine-starting and stopping mechanism when the lever is oscillated by the lug, substantially as herein set forth.

5. A back sawing machine, comprising, a cutting means, means for automatically operating said cutting means to make successive cuts, a controlling mechanism for the cutting means for causing the latter to stop after a single cut or after a predetermined number of successive cuts, a pivoted operating lever, and projections formed on said lever and adapted to engage said controlling means to operate the latter.

[Claims 6 to 12 not printed in the Gazette.]

1,193,263. SPEED-CHANGING AND STOPPING MECHANISM FOR KNITTING-MACHINES. JOHN J. HIGGINBOTTOM, Philadelphia, Pa. Filed May 15, 1914. Serial No. 838,669. (Cl. 74—21.)

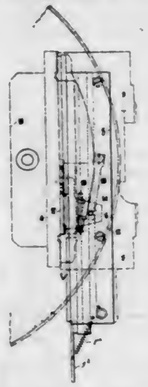


The combination of the driving shaft of a knitting machine, a driving disk secured thereto, a belt pulley having an elongated hub turning loosely on said shaft, another belt pulley turning loosely on said hub, a sleeve secured to said hub, gearing for driving said sleeve from said second belt pulley at a rate of speed different from that of the first pulley, a friction clutch interposed between said sleeve and the driving disk, means for shifting the driving belt from one of said pulleys to the other, and means independent thereof for rendering said friction clutch operative or inoperative.

1,193,264. TYPOGRAPHICAL CASTING - MACHINE. CHARLES HOLLIWELL, Broadheath, and MATTHEW HENRY WHITTAKER, Manchester, England, assignors to Linotype and Machinery Limited, London, England. Filed Dec. 1, 1914. Serial No. 874,960. (Cl. 199—13.)

1. In or for a typographical casting machine, a slug trimming knife having a plurality of independently usable trimming edges located in different planes so as to act upon different slugs of unlike dimensions.

2. In or for a typographical casting machine, a slug trimming knife having a plurality of independently usable trimming edges located in different parallel planes so as to act upon different slugs of unlike dimensions.



3. In or for a typographical casting machine, a slug trimming knife having a plurality of independently usable trimming edges located in different planes and adapted to trim the body portions of different slugs of unlike dimensions.

4. A slug trimming knife for typographical casting machines comprising a plurality of independently usable sections arranged end to end and adjustable to different relative positions, and means for maintaining the sections in their different adjusted positions.

5. A movable slug trimming knife for typographical casting machines comprising a plurality of independently usable sections arranged end to end, one of said sections being carried by another and adjustable to different operative positions with respect thereto.

[Claims 6 to 19 not printed in the Gazette.]

1,193,265. MARKER FOR INDEX-CARDS. CHARLES A. HONECKER, Chicago, Ill., assignor to Automatic Utilities Co., a Corporation of Illinois. Filed Sept. 13, 1911. Serial No. 649,199. (Cl. 24—259.)

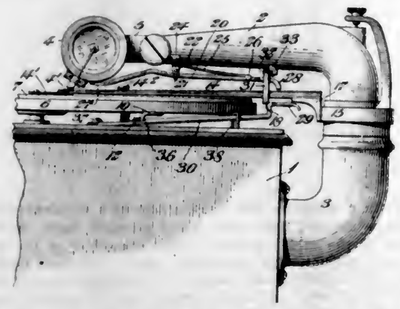


1. A metal clip for loose leaf cards comprising a narrow portion, and a relatively wide portion, a card engaging tongue, a central card engaging tongue stamped from the relatively wide portion, one of the tongues being longer than the other tongue, the longer tongue extending toward the shorter tongue, the outer edges of the tongues being beveled to provide guiding surfaces.

2. A metal clip for loose leaf cards comprising a narrow portion, and a relatively wide portion, a tongue stamped from the relatively wide portion, the lower outer edge of the relatively wide portion being beveled, and the lower outer edge of the tongue being beveled, said tongue being inclined toward the body to provide gripping fingers.

1,193,266. AUTOMATIC STOP MECHANISM FOR TALKING-MACHINES. STANLEY R. HOWARD, Philadelphia, Pa. Filed Mar. 2, 1916. Serial No. 81,676. (Cl. 74—46.)

1. A machine of the class recited, which comprises in combination;—a rotatable record table adapted to carry a record;—a device for stopping and starting said table;—a stopping and starting lever for operating said device;—a swinging tone arm;—a spring-controlled lifting lever pivoted to said tone arm, the outer end of which extends beneath the sound box when in place for playing, and the inner end of which extends toward the swinging axis of the tone arm;—an index arm above the table and record which has a swinging movement above the record upon an axis coincident with that of the tone arm;—a notched trigger carried by the tone arm adapted to engage the inner end of the lifting lever when said inner end is lifted;—and a resilient auxiliary lever fixed at its inner end, provided with a shoulder adapted to engage the stopping and starting lever, and at its outer end provided with a stop surface which lies beneath the inner end of the lifting lever.

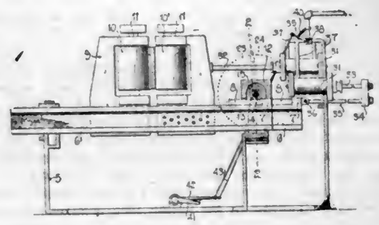


2. A machine of the class recited, which comprises in combination:—a rotatable record table adapted to carry a record;—a device for stopping and starting said table;—a stopping and starting lever for operating said device;—a swinging tone arm;—a spring-controlled lifting lever pivoted to said tone arm, the outer end of which extends beneath the rim of the sound box when in place for playing, and the inner end of which extends toward the swinging axis of the tone-arm;—an index arm above the table and record which has a swinging movement above the record upon an axis coincident with that of the tone arm;—a notched trigger carried by and depending from the tone arm, adapted to engage and hold up the inner end of the lifting lever when the outer end of said lever is depressed to cause such engagement, and which in the swing of the tone arm will encounter the index arm so as to be tripped by it and so effect the release from engagement of the lifting lever;—and a resilient auxiliary lever fixed at its inner end, provided with a shoulder adapted to engage the stopping and starting lever, and at its outer end provided with a segmental stop surface which lies beneath the inner end of the lifting lever.

1,193,267. SETTING OR GUIDING DEVICE FOR BAND RESAW-MACHINES. IRVIN W. JOHNSON, Cosmopolis, Wash. Filed Nov. 27, 1915. Serial No. 63,842. (Cl. 143—5.)

1. In mechanism of the character described, parallel longitudinally movable beams, a presser roll mounted upon each of said beams, means for simultaneously shifting said beams and the presser rolls, and independently adjustable stops for engagement by the respective beams to limit their movement in one direction and permit of a continued movement of one beam with respect to the other.

2. In mechanism of the character described, parallel longitudinally movable beams, a presser roll mounted upon each of said beams, means operatively connected to the beams to move the same in unison in either direction, a stop element movably mounted upon each beam, and means for adjusting the stop element upon the beam and holding the same stationary with respect thereto in position for operative engagement by the beam to limit the movement of each beam in one direction and thereby predetermine the space between the presser rolls.



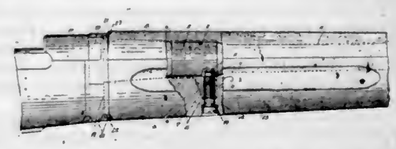
3. In mechanism of the character described, presser rolls mounted for shifting movement toward or from each other, means for predetermining the desired relative positions of the rolls, means for subsequently shifting the rolls to such position, and means for preventing further movement of the rolls in one direction from their predetermined set positions, said means permitting of the bodily shifting movement of one of the rolls away from the other roll but positively preventing such movement by the latter roll.

4. In mechanism of the character described, parallel longitudinally movable beams, a presser roll mounted upon each beam, means for simultaneously moving the beams in each direction, and manually operable, independently adjustable stop elements mounted upon the beams, each of said beams being provided with means for engagement with the stop element thereon to limit the movement of the beam in one direction.

5. In mechanism of the character described, a pair of presser rollers mounted for shifting movement toward or from each other, means for shifting the rolls in unison in either direction, relatively adjustable stop elements, manually opefable means for independently adjusting said elements, and means operatively connected to the rolls and movable therewith to engage the respective stop elements and limit the movement of the rolls to their set positions.

[Claims 6 to 9 not printed in the Gazette.]

1,193,268. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed May 17, 1916. Serial No. 98,059. (Cl. 42—75.)



1. In a firearm, the combination with the barrel thereof, of a receiver having an extension formed in its forward face with a shallow recess encircled by a forwardly projecting flange, and a barrel-cover and a forestock respectively formed at their rear ends with tennons adapting them to enter the said recess and fit within the said flange.

2. In a firearm, the combination with the barrel and receiver thereof, of a receiver-extension screwed upon the receiver and formed in its forward face with a shallow recess encircled by a forwardly projecting flange, and a barrel-cover and a forestock respectively formed at their rear ends with tennons adapting them to enter the said recess and fit within the said flange.

3. In a firearm, the combination with a gun-barrel formed with a cylindrical portion located forward of its rear end, of a forestock, a forestock-lock comprising a sleeve adapted to fit the said cylindrical portion of the barrel and formed with a depending lug having a threaded

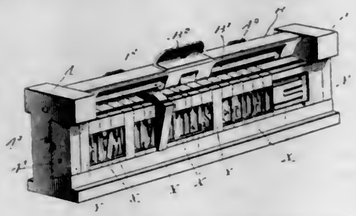
bore, and a screw passing upward through the forestock and entering the said lug for securing the forestock to the said forestock-lock.

4. In a firearm, the combination with the barrel thereof, of a forestock formed in its upper face with a recess, a forestock-lock consisting of a sleeve adapted to fit over the said barrel and formed with a depending-lug having a threaded bore and adapted to fit into the said recess, a screw located in the upper or inner end of the said threaded bore and engaging with the barrel for fixing the said sleeve thereupon, and a screw passing upward through the forestock from the lower face thereof and entering the said lug for securing the forestock to the forestock-lock.

5. In a firearm, the combination with the barrel thereof, of a forestock having in its upper face a recess the rear wall of which is beveled, a forestock-lock consisting of a sleeve adapted to fit over the said barrel and having a depending lug adapted to enter the said recess and formed with a threaded bore and having its rear face beveled, a screw located in the upper or inner end of the said bore and entering a recess in the gun-barrel for securing the forestock-lock thereto, and a screw passing upward through the forestock and entering the bore of the said lug for securing the forestock to the said forestock-lock.

[Claim 6 not printed in the Gazette.]

1,193,269. QUAD-BLOCK FOR SLUG-CASTING MACHINES. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 2, 1915. Serial No. 37,665. (Cl. 199—12.)



1. A quad-block for slug casting machines comprising a body portion formed with laterally projecting ears to adapt it for support in such machines, and a series of interchangeable matrix sections supported therein side by side, the whole constituting an assembled matrix line for use in said machine.

2. A quad-block for slug casting machines comprising a body portion formed with laterally projecting ears to adapt it for support in such machines, and a series of independently removable matrix sections supported therein side by side, the whole constituting an assembled matrix line for use in said machine.

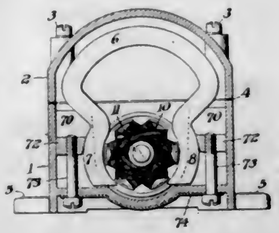
3. A quad-block for slug casting machines comprising a body portion formed with laterally projecting ears to adapt it for support in such machines, and a series of matrix sections supported therein side by side, some of the sections containing letter-characters and arranged in word groups, and others being plain and interposed between the word groups to act as spacers, the whole thus constituting an assembled matrix line for use in said machine.

4. A quad-block for slug casting machines comprising a body portion formed with laterally projecting ears to adapt it for support in such machines formed in its front face with a longitudinal groove or recess and a series of matrix sections supported in said groove with their forward edges flush with the front face of the body portion, the whole constituting an assembled matrix line for use in said machine.

5. A quad-block for slug casting machines comprising a body portion formed in its front face wih a longitudinal groove open at one side, a series of matrix sections supported in the groove and a locking plate secured to the body portion to close the groove at its open side and hold the matrix sections therein against removal, the said plate being movable at will from its operative position to permit the removal of said sections.

[Claims 6 to 12 not printed in the Gazette.]

1,193,270. MAGNETO-GENERATOR. PETRUS VAN SANTEN KOLFF, Moylan, Pa., assignor, by mesne assignments, to The Electric Tachometer Corporation, a Corporation of Delaware. Filed Sept. 14, 1914. Serial No. 861,544. (Cl. 171—227.)



1. In a magneto, the combination of a revoluble armature, a magnet having its poles situated upon opposite sides of the said armature, walls spaced from the poles of said magnet, and adjustable means interposed between the said poles and said walls for adjusting the said poles with relation to the said armature, for the purpose stated.

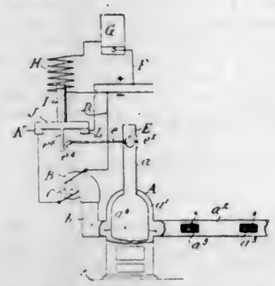
2. In a magneto, the combination of a casing having flanges upon opposing sides thereof, a horseshoe magnet having its poles situated between the said flanges, the said magnet being supported by the said flanges, a revoluble armature interposed between the poles of said magnet, blocks interposed between the poles of said magnet and the opposing walls of said casing, and means for adjusting the said blocks to cause an adjustment of the said poles with relation to the said armature for the purpose stated.

3. In a magneto, the combination of a casing having parallel flanges upon the opposite walls thereof, a magnet of horseshoe type having its poles projected into the spaces between the said flanges and being supported thereby, an armature situated between the said poles, blocks interposed between the opposite poles of said magnet and the opposing walls of said casing intermediate the said flanges, the inner ends of said blocks being beveled and resting against the outer surfaces of the said poles, adjusting screws projecting through the bottom of the said casing and being in engagement with the said blocks for adjusting the same to cause adjustment of the said poles with relation to the said armature, for the purpose stated.

1,193,271. HEATING AND VENTILATING SYSTEM. FRANK A. KUNTZ, New York, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Aug. 20, 1915. Serial No. 46,518. (Cl. 237—2.)

1. In a heating and ventilating system, a stove, a stack therefor, a damper in the stack, a blower adapted to supply air to an air heating chamber in the stove, an electric motor for the blower, an operating circuit for said motor having separated contact jaws, a shunt circuit, a thermostatic controller therein affected by the temperature of the surrounding atmosphere, an electromagnet in said shunt, a bridge operatively connected to the moving part of the said electromagnet and adapted to engage said contacts and close the motor operating circuit, and an operating connection from said moving part to said damper, whereby when the thermostatic controller changes the condition of the shunt, the electromagnet is caused to correspondingly operate the blower and damper.

2. In a heating and ventilating system, a stove, a stack therefor, a damper in the stack, a blower adapted to supply air to an air heating chamber in the stove, an electric motor for the blower, an operating circuit for said motor having separated contact jaws, a shunt circuit, a thermostatic controller therein affected by the temperature of the surrounding atmosphere, an electromagnet in said shunt, a bridge of magnetic metal attached to the core of said electromagnet and adapted to engage said contacts and close the motor operating circuit, and an operating connection from said moving part to said damper, whereby when the thermostatic controller closes the shunt the magnet is energized and the bridge closes the damper and breaks the blower circuit and acts as a magnetic blowout to destroy arcs.



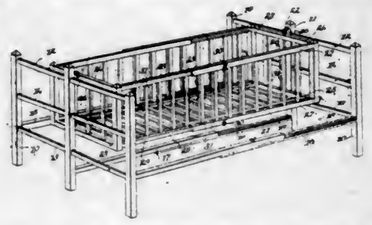
3. In a heating and ventilating system, a fuel consuming stove, a stack therefor, a draft regulator therein, means for supplying air to an air heating chamber in the stove, electric driving means therefor, a main circuit including said driving means, a bridge adapted to close said main circuit and having an operating connection to said damper, a shunt circuit, means for opening and closing the shunt, an electromagnet in the shunt, and an operating connection from the moving part of said electromagnet to said bridge.

4. In a heating and ventilating system, a fuel consuming stove, a stack therefor, a draft regulator therein, means for supplying air to an air heating chamber in the stove, electric driving means therefor, a main circuit including said driving means, a bridge made of magnetic metal and adapted to close said main circuit and having an operating connection to said damper, a shunt circuit, means for opening and closing the shunt, a solenoid in the shunt and a connection between the core thereof and said bridge whereby when said controlling means opens the shunt the magnet is deenergized and the bridge opens the draft regulator and closes the main circuit, and when the controlling means closes the shunt the magnet is energized and the bridge closes the draft regulator and breaks the main circuit and at the same time blows out the arcs.

5. In a heating and ventilating system, a fuel consuming stove, a draft regulator therefor, means for supplying air to an air heating chamber therein, an electromagnetic device for controlling said air supplying means, a direct connection from a moving part of said electromagnetic device to said draft regulator, an electric circuit including said electromagnetic device, and a thermostat affected by the temperature of the apartment to be heated and adapted to control said circuit.

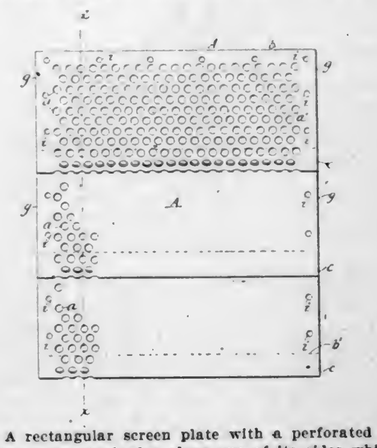
1,193,272. COMBINED BED AND CRIB. EDWARD F. LAFOREST, Nashua, N. H. Filed Oct. 27, 1913. Serial No. 797,492. (Cl. 5—8.)

A device of the character described comprising a support including end pieces, rails extending from said end pieces and slidably connected, fastening means for said rails to releasably connect the same and hold said support at an adjusted length, and a receptacle movably and pivotally connected with the end sections of said support and comprising end pieces, side walls extending from the end pieces and slidably connected, and fastening means for



releasably securing the walls of said receptacle and releasably holding the receptacle at an adjusted length.

1,193,273. SCREEN. JOSEPH L. LEE, Carbondale, Pa. Filed Mar. 11, 1916. Serial No. 83,462. (Cl. 83—56.)



1. A rectangular screen plate with a perforated body portion, a marginal edge along one of its sides which is on the same plane as the perforated body portion, the opposite side of said section having its perforated portion bent into a semi-circle and terminating in a marginal edge adapted to be superimposed upon and secured to the marginal edge of an adjoining duplicate section substantially as shown and described.

2. A rectangular screen plate having a perforated body portion, a marginal edge along its upper side on the same plane as the body portion, the lower perforated part of said plate being crooked under the body portion and terminating in a reversed marginal edge extending under the perforated main portion, which is alined with the upper marginal edge and adapted to be superimposed upon and secured to the upper edge of a duplicate plate, substantially as and for the purposes shown and described.

3. A rectangular screen plate having a flat perforated body portion, a marginal edge along one side thereof on the same plane as said perforated body portion, a transverse curved portion along its opposite side terminating in a reversed marginal edge on a lower plane than the main body and alined parallel with the said flat marginal edge, substantially as and for the purposes shown and described.

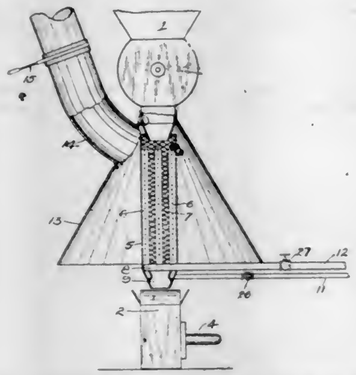
4. A coal screen of the class described comprising two or more rectangular perforated sheet metal sections, the lower border portion of each section being bent back in a curve under the main perforated body portion thereof and terminating in a marginal edge which rests upon and is bolted to a marginal edge of a continuing section, said

curved border portion of section extending across the face of the screen and forming a stiffening corrugation substantially as shown and described.

5. A screen comprising two or more rectangular perforated plates joined together along their edges and having spacing washers and slots between the edges, where the sections are superimposed, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

1,193,274. APPARATUS FOR FREEING LUMP-STARCH FROM ADHERING DUST OR POWDER. ADOLPH W. H. LENDERS, Cedar Rapids, Iowa. Filed Mar. 30, 1914. Serial No. 828,415. (Cl. 83—40.)



1. The combination with a hopper of a polygonal structure which receives the contents of said hopper, there being an unobstructed passage through said structure the side walls of said structure being formed of screen, means to direct a plurality of jets of compressed air across the path of travel of the material discharged by the hopper, whereby all the surface adhering dust or starch-flour is taken up by the air and driven through the screen, and means to draw off said dust-laden air, said means extending to the lower plane of the walls of said chamber, and being open to the atmosphere.

2. A device of the character described comprising the combination with a hopper of a many-sided structure the walls of which are formed of foraminated material said structure being adapted to receive the contents of the hopper, a delivery spout at the bottom of said many-sided structure said delivery spout being formed of a double-walled jacket, there being a plurality of perforations adapted to direct jets of air upwardly formed in the inner walls of the jacket, means to lead a supply of compressed air to said jacket, a plurality of upwardly extending pipes in said structure, there being a plurality of perforations in said pipes, means to lead a supply of compressed air to said pipes, means surrounding said structure to draw off the dust laden air.

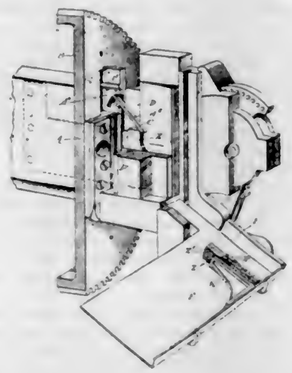
3. A device of the character described comprising the combination with a hopper, of a many-sided structure, the walls of which are formed of screen, said structure being adapted to receive the contents of the hopper, a delivery spout at the bottom of said structure formed of a double-walled jacket the walls of which taper inwardly, there being a plurality of vertical perforations in the inner wall, means to lead a supply of compressed air to the interior of said jacket, a plurality of upwardly extending pipes in said structure, means to lead a supply of compressed air to the said pipes, there being a plurality of perforations in said pipes, a cone surrounding said structure, a pipe leading from the interior of said cone, said pipe being connected to means for producing a suction.

4. A device of the character described comprising the combination with a hopper, of a many-sided structure, the walls of which are formed of screen, said structure being adapted to receive the contents of the hopper, a plurality of upwardly extending pipes in said structure, means to lead a supply of compressed air to the said pipes, there being a plurality of perforations in said pipes, said perforations being angularly inclined, a cone surrounding said structure, a pipe leading from the interior of said cone, said pipe being connected to means for producing a suction.

5. A device of the character described, comprising the combination of a hopper, of a polygonal structure, the walls of which are formed of foraminated material, there being an unobstructed passage through said structure, said structure being adapted to receive the contents of the hopper, a supply of compressed air, means to direct said compressed air in jets from various directions, a cone surrounding said structure, whose sides flare downwardly and outwardly, said means extending to the lower plane of the walls of said chamber and being open to the atmosphere, a pipe leading from the interior of said cone adjacent its upper part, said pipe being connected to means for producing a suction whereby a zone of clean air is maintained adjacent the bottom of the polygonal structure.

[Claims 6 to 8 not printed in the Gazette.]

1,193,275. SLUG-CASTING MACHINE. WILLIAM C. LIEBERKNECHT, Bisbee, Ariz., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 30, 1915. Serial No. 42,700. (Cl. 199—13.)



1. In a slug casting machine, the combination of slotted mold, a composed line arranged in operative relation thereto and comprising matrices formed with and without formative cavities, and means attached to the mold for partially filling the mold slot at the front and to one side of the matrices having the formative cavities; whereby a slug is produced with a type carrying surface and a recess located beyond such surface.

2. A slotted mold provided with an attached strip or member projecting into the mold slot and only partially filling the same at the front, so as to produce a recess along the upper edge of the slug cast in the mold.

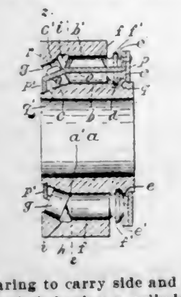
3. A mold comprising top and bottom portions and an intermediate end portion, the latter being provided with a strip or member projecting into and extending longitudinally of the mold slot and only partially filling the same at the front, so as to produce a recess along the upper edge of the slug cast in the mold.

4. A slotted mold comprising top and bottom portions and an intermediate adjustable liner, the latter being provided with a strip or member projecting into and extending longitudinally of the mold slot and only partially filling the same at the front, so as to produce a recess along the upper edge of the slug cast in the mold.

5. A slotted mold provided with a strip or member projecting into and extending longitudinally of the mold slot and only partially filling the same at the front, the said member being movable from its operative position to permit the ejection of the slug from the mold.

[Claims 6 to 15 not printed in the Gazette.]

1,193,276. ROLLER-BEARING FOR SIDE AND END STRAIN. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Apr. 15, 1916. Serial No. 91,269. (Cl. 64—62.)



1. In a roller bearing to carry side and end strains, the combination, with a hub having a cylindrical seat and a tapering seat adjacent thereto, of rolls fitted respectively to the said seats and abutting against one another.

2. In a roller bearing to carry side and end strains, the combination, with a hub having a cylindrical seat and a tapering seat adjacent thereto, of rolls fitted respectively to the said seats and having end surfaces rotating at equal velocity and abutting against one another.

3. In a roller bearing, the combination, with a hub having a cylindrical seat and a tapering seat adjacent thereto, of cylindrical rolls fitted to the cylindrical seat and tapering rolls fitted to the tapering seat, and the cylindrical rolls having each a tapering or conical end abutting upon an adjacent flat end of a tapering roll.

4. In a roller bearing, the combination, with a hub having a cylindrical seat formed with a shoulder as set forth, and a tapering seat adjacent to the cylindrical seat, of cylindrical rolls fitted to the cylindrical seat and tapering rolls fitted to the tapering seat and contacting each with the end of a cylindrical roll, a casing having cylindrical and tapering seats to bear upon the said rolls, and a collar upon each of the cylindrical rolls engaging a shoulder upon the cylindrical seat of the hub.

5. In a collar bearing, the combination, with a hub having a cylindrical seat and a tapering seat adjacent thereto, of cylindrical rolls fitted to the cylindrical seat and tapering rolls fitted to the tapering seat and contacting each with the end of a cylindrical roll, a casing having cylindrical and tapering seats to bear upon the said rolls, a shoulder at the end of the cylindrical seat of the hub beyond the bearing portion of the cylindrical roll, and collars upon the rolls clearing the end of the casing and engaging the shoulder upon the hub-seat.

[Claims 6 to 10 not printed in the Gazette.]

1,193,277. FLEXIBLE SHAFTING. GEORGE F. LONG, Elmhurst, N. Y., assignor to Gottfried Piel, New York, N. Y. Filed Dec. 12, 1913. Serial No. 806,238. (Cl. 64—30.)



1. A flexible shaft composed of a plurality of sections, one of said sections comprising a metal shell having a longitudinal opening communicating with the interior thereof, and having relatively flat end portions integral with the side walls thereof, said flat portions being bent toward each other to form bearing surfaces and being bent away from each other at their outer ends, and the other section being pivoted on the interior of the shell and provided with a flat face adapted to engage the bearing surfaces.

2. A flexible shaft composed of a plurality of sections, one of said sections comprising a metal shell having a tubular central portion with its side walls spaced apart to provide a longitudinal passage communicating with the interior, an extension integral with each side wall and flush therewith and provided with an interior bearing, and an annular segment integral with the side wall and surrounding each extension, said segment being depressed to form a bearing surface adjacent the central portion and flaring at its outer ends, and a separate section being pivoted to the shell section and provided with a flat head having a bearing on said depressed portion of the shell.

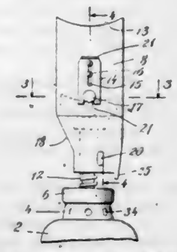
3. A flexible shaft composed of a plurality of sections, one of said sections comprising a central portion substantially circular in cross-section and having a longitudinal passageway communicating with the interior thereof, and end portions integral with the side walls each comprising a central portion having an interior bearing formed therein and an annular outer portion depressed with respect to the central portion and flaring at its outer ends, and a separate section having a bearing engagement inside the shell and provided with a flat head adapted to engage the depressed portion.

4. A flexible shaft composed of a plurality of sections, one of said sections consisting of a one piece hollow shell formed from a sheet metal blank having spaced side walls provided with flaring ends and a bottom wall integral with the side walls intermediate the ends thereof, said ends comprising extensions flush with the side walls having grooves formed on the interior thereof communicating with the interior of the shell to provide a bearing spaced from the adjacent end and a portion depressed relatively to said extensions, and another section having a head provided with pivot pins adapted to be inserted transversely of the shell at about the center thereof and seating in said grooves so that the head may have lateral movement with respect to the shell.

5. An element of a flexible shaft consisting of a one-piece hollow shell formed from a sheet metal blank having spaced side walls provided with flaring ends and a bottom wall integral with the side walls intermediate the ends thereof, said ends comprising extensions flush with the side walls having grooves formed on the interior thereof communicating with the interior of the shell to provide a bearing spaced from the adjacent end and a portion depressed relatively to said extensions.

[Claims 6 to 12 not printed in the Gazette.]

1,193,278. EXTENSION-HEAD LIFTING-JACK. THOMAS C. LUCE, Stratford, Conn., assignor to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed Nov. 6, 1915. Serial No. 59,898. (Cl. 254—100.)



1. In lifting jacks for automobiles and so forth, a short supporting frame, a lifting head and an attached screw lifting member mounted in said frame, a lifting nut having threaded engagement with said lifting member, a relatively rotating cap mounted on said nut and an extension

head adapted to disengageably coöperate with said lifting head and lifting member and formed with a screw slot to pass around said screw and having its upper portion in the form of a channel to accommodate said lifting head, a lifting pin coöperating with said extension head and detachably latched across said channel to have lifting engagement with said lifting head and retainer devices to hold the lower part of said extension head in substantial alinement with said lifting member and comprising a retainer bar having a locking member to releasably hold it in retaining position and depending retainer lugs adapted to coöperate with the upper part of said cap to maintain alinement therewith.

2. In lifting jacks for automobiles and so forth, a short supporting frame, a lifting head and an attached screw lifting member mounted in said frame, a lifting nut having threaded engagement with said lifting member and an extension head adapted to disengageably coöperate with said lifting head and lifting member and formed with a screw slot to pass around said screw and having its upper portion in the form of a channel to accommodate said lifting head, a lifting pin coöperating with said extension head to have lifting engagement with said lifting head and retainer devices to hold the lower part of said extension head in substantial alinement with said lifting member.

3. In lifting jacks for automobiles and so forth, a short supporting frame, a lifting head and an attached screw lifting member mounted in said frame, a supporting member located adjacent the top of said frame past which said lifting member passes and an extension head adapted to disengageably coöperate with said lifting head and member and slotted to be passed around said lifting member and raised around said lifting head and adapted to support a load from said supporting member while said lifting head is lowered within said extension head, coupling devices disengageably coupling said extension head with a lifting member of the jack and retainer devices to hold the extension head in substantial alinement with such lifting member.

4. In lifting jacks for automobiles and so forth, a supporting frame, a lifting head and an attaching lifting member mounted in said frame, a supporting member located adjacent the top of said frame past which said lifting member passes and an extension head having a channeled upper portion adapted to disengageably coöperate with said lifting head and member and slotted to be passed around said lifting member and raised around said lifting head and adapted to support a load from said supporting member while said lifting head is lowered within said extension head, and coupling devices disengageably coupling said extension head with a lifting member of the jack.

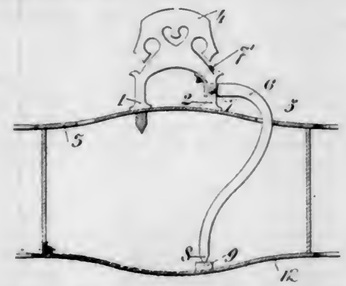
5. In lifting jacks for automobiles and so forth, a supporting frame, a lifting head and an attached lifting member mounted in said frame, a supporting member located adjacent the top of said frame past which said lifting member passes and an extension head adapted to disengageably coöperate with said lifting head and member and be passed around said lifting member and raised around said lifting head and adapted to support a load from said supporting member while said lifting head is lowered within said extension head, and coupling devices disengageably coupling said extension head with a lifting member of the jack.

[Claims 6 to 16 not printed in the Gazette.]

1,193,279. VIOLIN-BRIDGE. LOUIS LUMIÈRE, Lyon, France. Filed Oct. 6, 1914. Serial No. 865,225. (Cl. 84—73.)

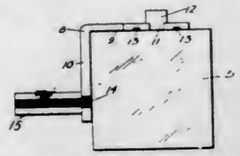
1. A violin bridge provided with two feet adapted to bear on the belly of the instrument and a supplemental leg and foot adapted to be inserted into the body of the instrument through one of the *f*-holes and to bear on the back of the instrument.

2. A violin bridge provided with two feet adapted to bear on the belly of the instrument and a supplemental leg and foot adapted to be inserted into the body of the instrument through one of the *f*-holes and to bear on the back of the instrument and means for adjusting the length of the supplemental leg.



3. A violin bridge provided with two feet adapted to bear on the belly of the instrument, a bracket rigidly attached to said bridge, and a supplemental leg adjustably connected to said bracket and adapted to be inserted into the body of the instrument through one of the *f*-holes and to bear on the back of the instrument.

1,193,280. MEANS FOR LOCATING AND GUIDING RAIL HOLDING AND LOCKING SPIKES. JOHN A. LUNGER, High Bridge, N. J. Filed May 28, 1914. Serial No. 841,421. (Cl. 1—47.)



1. Means for locating and guiding a pair of spikes while being driven into a railroad tie, one spike having an opening therein and being guided to enter from the top of the tie and the other spike being guided to enter from the side of such tie and pass into the opening in the first spike, said means independent of and removable from said tie after the interlocking of the spikes and before both spikes have been completely driven and comprising a part for determining the position of and directing the rail-holding spike as it passes into said tie from the top thereof and a part for determining the position of and directing the spike during a part of the driving thereof as it passes through the side of the tie and into the opening of the rail-holding spike.

2. A device for insuring the driving of an interlocking spike through the side of a railroad tie so as to project into an opening of a rail-holding spike passing into the top of such tie, said device consisting of a guide for the rail-holding spike and a guide for the interlocking spike, said first guide comprising a slotted plate having a spike-guiding stop and having one or more knife edges for insertion under the rail.

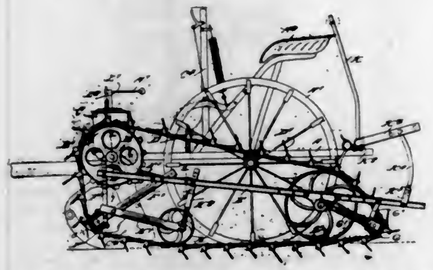
3. A device for insuring the driving of an interlocking spike through the side of a railroad tie so as to project into an opening of a rail-holding spike passing into the top of such tie, said device consisting of a guide for the rail-holding spike and a guide for the interlocking spike, said second guide comprising a plate having a recess and a laterally extending member having a groove in its side to guide the interlocking spike.

4. A device for insuring the driving of an interlocking spike through the side of a railroad tie so as to project into an opening of a rail-holding spike passing into the top of such tie, said device consisting of a guide for the rail-holding spike and a guide for the interlocking spike, said first guide comprising a slotted plate having a spike-guiding stop and said second guide comprising a plate having a recess and a laterally extending member having a spike-guiding groove in its side.

5. A device for insuring the driving of an interlocking spike through the side of a railroad tie so as to project into an opening of a rail-holding spike passing into the top of such tie, said device consisting of a guide for the rail-holding spike and a guide for the interlocking spike, said first guide comprising a slotted plate having a spike-guiding stop and one or more knife edges for insertion under the rail and said second guide comprising a plate having a recess and a laterally extending member having a spike-guiding groove in its side.

[Claims 6 to 12 not printed in the Gazette.]

1,193,281. CORN-PLANTER. JOHN T. MCCLAIN, Greentown, Ind. Filed Dec. 1, 1915. Serial No. 64,464. (Cl. 111—6.)



1. In a planter including a main wheeled frame and seed dropping mechanisms therein, endless chains mounted at opposite sides of said main frame, and including links certain of which are provided with inclined outstanding brackets, ground entering shovels secured at their inner portions to said brackets whereby to outstand from the links at inclined angles with respect thereto, and operative connections between the said endless chains and the said seed dropping mechanisms, certain of said shovels at spaced points on the chains being of greater lengths than the others.

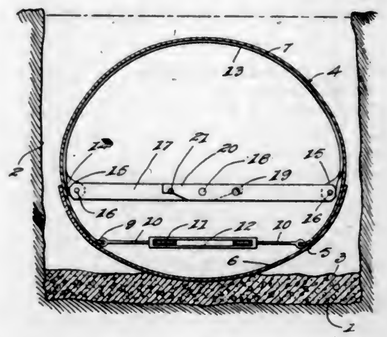
2. In a planter including a main wheeled frame and seed dropping mechanisms therein, endless chains mounted at the sides of the main frame and including links certain of which are provided with inclined outstanding brackets, shovels secured at ther inner portions to said brackets whereby to outstand therefrom and enter the ground at inclined angles with respect to the links, the shovels of the various links being of the same shape and similarly projecting from the links, and certain of said shovels being of increased length with respect to the other shovels, for the purpose described.

3. In a planter, including a main wheeled frame and seed dropping mechanisms therein, endless chains at opposite sides of the frame, each having a series of links, certain of which are provided with inclined outstanding brackets, ground entering shovels attached to said brackets, arms the outer ends of which are extended through the said brackets and the said shovels whereby to rigidly connect the same and the shovels with the said brackets, said arms having flattened inner ends overlying the pivotal connections between the links.

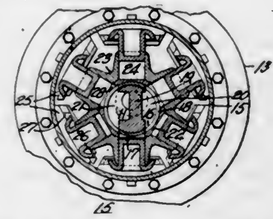
1,193,282. CULVERT-MOLD. JOHN L. MCGEE, Des Moines, Iowa. Filed Dec. 22, 1914. Serial No. 878,566. (Cl. 25—128.)

1. A concrete mold of the character described including an upper and lower arcuate body, the upper body being designed to fit within the lower body, brace elements to expand the bodies in operative position, and means connected to one of the bodies independent of the brace rod to contract the same after the brace rod has been removed to enable the mold to be easily removed.

2. A concrete mold of the character described including an upper and lower arcuate body, the upper body being designed to fit within the lower body having its edges turned slightly upwardly and provided with a plurality of spaced apertures, a movable brace element positioned in the upper body adapted to expand the same in an operative position, a plurality of screw-threaded bars having one end terminating into eyes secured in the openigs in the edges of the upper body a turn buckle on their threaded ends adjoining the side walls of the upper body toward one another after the brace rods have been removed to facilitate the easy removal of the bodies when in use.



1,193,283. COMBINED PUMP AND MOTOR. ROBERT MAW and WILLIAM B. MCLEAN, Montreal, Quebec, Canada. Filed May 29, 1914. Serial No. 841,968. (Cl. 138—19.)



1. A device of the character described comprising a hollow axle, an eccentric portion thereon, and a wall dividing said axle into two chambers arranged in the plane of the axis of said axle and eccentric portion thereof.

2. A device of the character described comprising an axle having inlet and outlet passages therethrough, an eccentric portion on said axle, a casing concentric with the axle, pistons in said casing, and a cylinder member on the eccentric portion of the axle coöperating with said pistons.

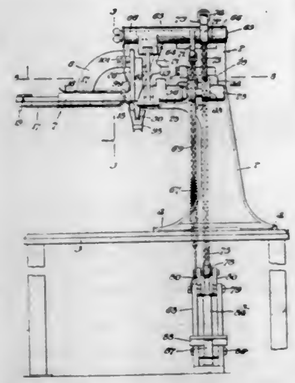
3. A device of the character described comprising an axle having inlet and outlet passages, an eccentric portion on said axle, a casing revoluble on the axle and concentric therewith, pistons in said casing, a cylinder member revoluble on the eccentric portion of the axle cooperating with the pistons, and ports in said cylinder member communicating with the inlet passage during outward piston movement and with the outlet passage during inward piston movement.

4. A device of the character described comprising an axle, an eccentric portion thereon, a casing concentric with the axle, a cylinder member revoluble on the eccentric portion, pistons in the casing coöperating with said cylinder member, guides holding said pistons against movement toward or away from the casing axis and permitting lateral movement of the pistons.

5. A device of the character decribed comprising an axle, an eccentric portion thereon, a casing concentric with said axle, a cylinder member revoluble on the eccentric portion, pistons in the casing coöperating with said cylinder member, and means supporting said pistons in the cylinder and permitting lateral movement without oscillation.

[Claims 6 to 8 not printed in the Gazette.]

1,193,284. STAPLING-MACHINE. ELWOOD H. MICHENER, Woodlynne, N. J., assignor to Acme Staple Company, Camden, N. J., a Corporation of New Jersey. Filed May 17, 1915. Serial No. 28,506. (Cl. 1—3.)



1. In a staple-setting machine, the combination of a supporting frame, a fixed staple-setting anvil, staple-supplying means, a movable staple-carrier, means to cause said carrier to receive and carry a staple from the source of supply into a hollow article which is to be stapled from the interior of the article outward, a movable work-support actuated by said carrier and adapted to be brought thereby into operative position relatively to said fixed staple-setting anvil, and actuating devices to impart to said elements the cycle of movements stated to successively insert and set the staple.

2. In a staple setting machine, the combination of a supporting frame, a movable work supporting member, staple-supplying means, a staple carrier, with means to cause said staple-carrier to carry a staple from the source of supply to the interior of a hollow article to be stapled, by a movement of said carrier, first in a direction transversely to the prongs of the staple carried thereby, and then in a direction parallel to said prongs; a fixed staple-setting anvil, and means to operatively actuate said work supporting member during the aforesaid second movement of the staple carrier.

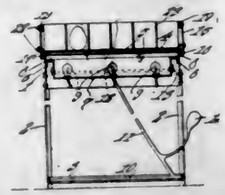
3. In a staple-setting machine, the combination of a supporting frame, a movable support thereon, a staple carrier movable on said support, staple-supplying means, a fixed staple-setting anvil, and means operative to impart motion to said carrier on said support in a direction transversely to the prongs of a staple carried by the carrier to a staple-setting position within the interior of a hollow article to be stapled from the interior outward, and thereafter to impart motion to said support and said carrier in a direction parallel to said prongs and toward said anvil to set the staple.

4. In a staple setting machine, the combination of a supporting frame, a staple carrier, staple supporting means, a staple setting anvil, a work-supporting guard adjacent to but spaced from said anvil, and means operative to move said carrier first in one direction from said staple supplying means to a position adjacent to said anvil and then in another direction toward said anvil to set a staple.

5. In a staple setting machine, the combination of a supporting frame, a staple carrier, staple supplying means, a staple setting anvil, a work-supporting guard adjacent to but spaced from said anvil and means operative to move said carrier first in one direction from said staple supporting means to a position adjacent to said anvil and then in another direction toward said anvil to set a staple, said guard moving with said carrier when said carrier moves toward said anvil to set a staple.

[Claims 6 to 36 not printed in the Gazette.]

1,193,285. EGG HOLDER AND CANDLER. LEWIS E. MILLER, Neodesha, JOHN MORTON MILLER, Salina, and ARTHUR L. CARLTON, Bird City, Kans.. Filed Dec. 13, 1915. Serial No. 66,582. (Cl. 99—6.)



1. An egg candler embodying a frame having an opaque top plate provided with apertures, and a holder embodying a frame having its lower edge fitted over the upper edge of the aforesaid frame and having a meshed wire bottom upon said top plate.

2. An egg candler embodying a frame having an opaque top plate provided with apertures, a source of light within said frame, and a holder embodying a frame having its lower edge fitted over the upper edge of the aforesaid frame and provided with a reëntrant portion having a flange seating upon said top plate, said holder having a meshed wire bottom seating upon said flange and tucked between said reëntrant portion and body of the second mentioned frame.

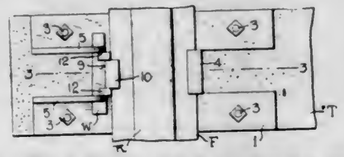
3. An egg candler embodying means for supporting a plurality of eggs, and a source of light below said means movable to illuminate the eggs in succession.

4. An egg candler embodying egg holding means, a reflector movable therealong, and a source of light within said reflector, the reflector directing the rays of light totoward the eggs.

5. An egg candler embodying egg holding means, rails extending along the same, a reflector movable along said rails, a source of light within the reflector, the reflector directing the rays of light toward said means, and means for moving the reflector along said rails.

[Claims 6 to 11 not printed in the Gazette.]

1,193,286. RAIL-FASTENER. CHURCHILL B. MOODY, Minneapolis, Minn. Filed Jan. 10, 1916. Serial No. 71,257. (Cl. 238—2.)



1. A rail fastener comprising a plate and having a tongue adapted to overlie the base flange of a rail, a second plate adapted to underlie the first named plate and provided with a flange adapted to overlie the second flange of a rail, the first named plate being provided with upstanding transversely spaced lips terminating in outwardly disposed extensions, and a wedge coacting with the lips and the second named plate, the extensions of the lips overlying the wedge.

2. A rail fastener comprising a plate provided with securing means and having a tongue adapted to overlie the base flange of a rail, a second plate adapted to underlie the first named plate and provided with a flange adapted to overlie the second flange of a rail, the first named plate being provided with upstanding transversely spaced lips, and a wedge coacting with the lips and the second named plate, said second named plate being provided with extensions overlying the wedge.

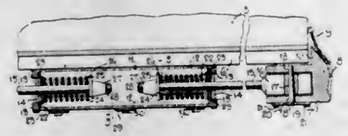
1,193,287. BEARD-SOFTENER. THOMAS G. MORGAN, Shamokin, Pa. Filed Dec. 22, 1915. Serial No. 68,202. (Cl. 15—38.)



1. In a beard softener, a brush head including a cap having apertures in its rim, a brush back or block disposed within said cap and having slots adapted to coincide with the openings of the cap rim, and a brush member disposed upon the said brush back or block within the cap, a handle on said head having extensions projecting through the apertures of the cap rim and into the said slots of the brush back or block, and an adhesive securing the brush member to its back or block, extending into the slots of the brush back or block whereby to secure the handle to the head.

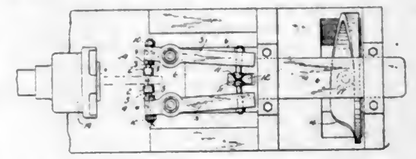
2. In a beard softener, a U-shaped handle, a brush head including a cap having a rim provided with apertures to receive the extensions of said handle, a brush back or block disposed within the cap and having slots extending therein coincident with the openings of the cap rim and into which slots the said extensions of the handle project, a brush member disposed upon the said brush back or block, and an adhesive uniting the brush member and its back or block together and with the cap, and a portion of which adhesive extends into the slots of the brush back or block and around the extensions of the handle, whereby to firmly unite the parts.

1,193,288. RAILWAY DRAFT-GEAR. WILLIAM JESSE MORRIS, Rector, Ark. Filed Jan. 19, 1916. Serial No. 73,000. (Cl. 213—42.)



A railway draft gear including a gear box and draw head, a draw bar yieldably connected at one end to the gear box, a plate suspended upon the car from which the draw head is slidably supported, said draw bar and head having coinciding tapering openings, a conical-shaped pin adapted to be inserted upwardly through said openings and normally held against displacement by said guide plate, said pin being moved with relation to said plate upon an excessive movement of the draw head whereby the pin may gravitate downwardly and disconnect the draw bar from the draw head.

1,193,289. WORK-HOLDER. BOUGHTON T. NOBLE, Plantsville, Conn., assignor to The Clark Bros. Bolt Co., Milldale, Conn., a Corporation. Filed Apr. 10, 1916. Serial No. 90,245. (Cl. 10—107.)

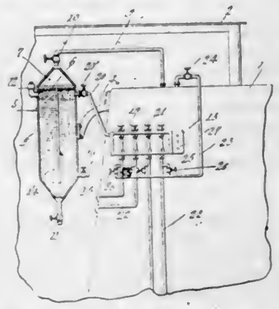


1. A work holder comprising a pair of levers each carrying a jaw at its outer end, said jaw comprising a stem extending through said levers, and a transverse pin coupling the work-holding jaws with the levers.

2. A work holder comprising a pair of jaws each having a stem, levers through which said stems extend, collars on said stems and bearing against said levers, pins extending through the collars and stems, whereby the work-holding jaws are spaced with relation to the levers, and means for moving the rear ends of the levers, whereby the work-holding jaws are moved toward and from each other.

3. A work holder comprising a slide, means for reciprocating said slide, a pair of work-holding levers mounted on said slide, said levers each provided at its inner end with an inwardly projecting pin, a dog mounted in the slide and extending into line between the adjacent ends of said pins, and means for forcing said dog between said pins and for withdrawing it.

1,193,290. LUBRICATOR. THOMAS KNOX ODEN, Sacramento, Cal. Original application filed May 17, 1915, Serial No. 28,803. Divided and this application filed Sept. 25, 1915. Serial No. 52,619. (Cl. 184—30.)

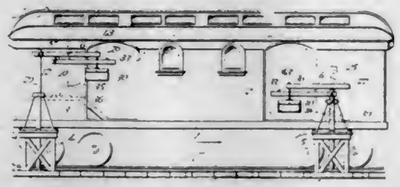


1. In a lubricator for flange oilers, the combination with a locomotive boiler, of a reservoir mounted on the boiler; a partition extended transversely of the reservoir and dividing the same into a steam space and an oil space; means for supplying oil to the oil space; a pipe opening through the partition and extended downwardly to a point adjacent the bottom of the oil space; a steam pipe leading from the boiler to the steam space; a valve in said pipe; a plurality of sight feed devices; a pipe leading from the oil space to the sight feed devices; a valve in said pipe and common to all of the sight feed devices; valves controlling each of the sight feed devices individually; independent outlets for the sight feed devices; a steam pipe leading from the boiler and having branches communicating respectively with the outlets; a valve in the last specified steam pipe and common to all of the branches; and valves in the branches and individual to the branches.

2. In a lubricator for flange oilers, a reservoir; a partition extended transversely of the reservoir and dividing the same into a steam space and an oil space; means for

supplying oil to the oil space; a pipe opening through the partition and extended downwardly to a point adjacent the bottom of the oil space; a source of steam supply communicating with the steam space; means for controlling said source; a plurality of sight feed devices; a pipe leading from the oil space to the sight feed devices; a valve in said pipe and common to all of the sight feed devices; valves controlling the sight feed devices individually; independent outlets for the sight feed devices; a heating pipe leading from the boiler and having branches communicating respectively with the outlets; a valve in the heating pipe and common to all of the branches; and valves in the branches.

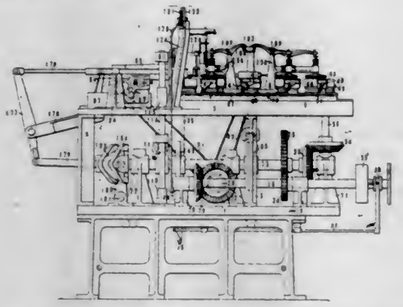
1,193,291. MAIL-TRANSFERRING DEVICE. HARRY S. OLGARD, Cooperstown, N. D. Filed June 23, 1914. Serial No. 846,880. (Cl. 258—25.)



1. In a mail delivery apparatus, a support arm provided with a longitudinal recess, a partition, a rod extending longitudinally of the recess and fitting a slot therefor in said partition, a flange upon the rod, a support element for the mail bag acted on, said element fitting a socket therefor in the arm, a spring arranged to embrace the rod and to abut respectively the flange and the partition to releasably lock said element in engagement with the arm, means having connection with the rod to withdraw it from engagement with said element, and a spring engaging the element to forcibly eject it when released.

2. In a mail delivery apparatus, the combination with the support element for the mail bag acted on, said element being provided with a shank, of an arm having a socket formed therein and into which the shank extends, means to releasably lock the shank and the arm, and a spring arranged within the socket to abut respectively the shank and the socket walls to forcibly eject the element when released, and means to release said element.

1,193,292. LABELING-MACHINE. LYNDON CONSTANTINE PALMER, Buffalo, N. Y., assignor to F. N. Burt Company, Limited, Buffalo, N. Y., a Corporation of Ontario, Canada. Filed Dec. 9, 1911. Serial No. 664,774. (Cl. 216—35.)



1. In an apparatus of the character described, in combination, a box rest, means adapted to feed a box to and position the same on the rest, and a pivoted latch adapted to be interposed alongside the box in the path of feed to retain the box on the rest.

2. In an apparatus of the character described, in combination, a presser pad, means adapted to move the same to press an article comprising a spring, and a resilient device positioned to oppose said movement.

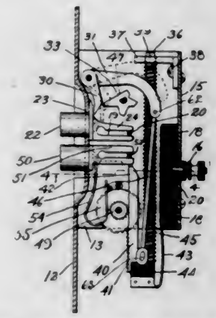
3. In an apparatus of the character described, in combination, a presser pad, resilient means for supporting the pad, and means for moving the pad in opposition to the resilient means comprising a relatively weak spring.

4. In an apparatus of the character described, in combination, a fixed support, a movable presser pad having a non-rotary shaft slidably mounted on the support, a relatively stiff spring surrounding the shaft and adapted to move the pad in one direction, operating means comprising a pin longitudinally movable in the shaft adapted to move in the opposite direction, and a relatively weak spring interposed between said pin and the pad.

5. In an apparatus of the character described, in combination, a press, a relatively strong spring adapted to resiliently support the same, and means to move the press against the resistance of said spring, comprising a relatively weak spring.

[Claims 6 to 67 not printed in the Gazette.]

1,193,293. TIME-SWITCH. RALPH CLIFTON PATTON, Providence, R. I., assignor to D. & W. Fuse Company, Providence, R. I., a Corporation of Rhode Island. Filed June 17, 1915. Serial No. 34,754. (Cl. 161—27.)



1. A time switch comprising a slidable actuator bar, a spring acting upon the same, a contact member movable with said actuator bar, means for moving the actuator bar to shift the contact member and to compress the spring in one operation, timing mechanism, a rack member attached to said bar and having a toothed portion and a smooth portion, said smooth portion being normally in engagement with said timing mechanism, the toothed portion of said rack member being positioned to engage the timing mechanism when the bar is moved to compress said spring, the smooth portion of the rack member permitting accelerated return movement of the actuator bar at the end of the period for which the timing mechanism is set.

2. A time switch comprising a slidable actuator bar, a spring acting upon the same, a contact member movable with said actuator bar, a push button, means operated by the push button for moving the actuator bar to shift the contact member and to compress the spring in one operation, timing mechanism, a rack member attached to said bar and having a toothed portion and a smooth portion, said smooth portion being normally in engagement with said timing mechanism, the toothed portion of said rack member being positioned to engage the timing mechanism when the bar is moved to compress said spring, the smooth portion of the rack member permitting accelerated return movement of the actuator bar at the end of the period for which the timing mechanism is set.

3. A time switch comprising a slidable actuator bar, a spring acting upon the same, a contact member movable

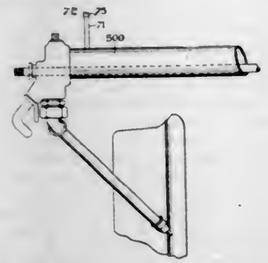
with said actuator bar, a pivoted arm connected with the actuator bar, a push button for rocking said arm, whereby the actuator bar is moved to shift the contact member and to compress the spring in one operation, timing mechanism, a rack member attached to said bar and having a toothed portion and a smooth portion, said smooth portion being normally in engagement with said timing mechanism, the toothed portion of said rack member being positioned to engage the timing mechanism when the bar is moved to compress said spring, the smooth portion of the rack member permitting accelerated return movement of the actuator bar at the end of the period for which the timing mechanism is set.

4. A timing switch comprising a slidable actuator bar, a spring acting upon the same, a contact member movable with said actuator bar, a rock shaft provided with an arm connected with said actuator bar, a finger also carried by said rock shaft, a button positioned to engage said finger to rock said shaft, whereby the actuator bar is moved to shift the contact member and to compress the spring on one operation, timing mechanism, a rack member attached to said bar and having a toothed portion and a smooth portion, said smooth portion being normally in engagement with said timing mechanism the toothed portion of said rack member being positioned to engage the timing mechanism when the bar is moved to compress said spring, the smooth portion of the rack member permitting accelerated return movement of the actuator bar at the end of the period for which the timing mechanism is set.

5. A time switch comprising a slidable actuator bar, a spring acting upon the same, a contact member movable with said actuator bar, means for moving the actuator bar to shift the contact member and to compress the spring on one operation, timing mechanism, a rack member attached to said bar and having a toothed portion and a smooth portion, said smooth portion being normally in engagement with said timing mechanism, the toothed portion of said rack member being positioned to engage the timing mechanism when the bar is moved to compress said spring, the smooth portion of the rack member permitting accelerated return movement of the actuator bar at the end of the period for which the timing mechanism is set, and means for variably limiting the movement of said actuator bar in the spring-compressing direction.

[Claims 6 to 14 not printed in the Gazette.]

1,193,294. FLANGE-OILER. FRANCIS R. PENNEFATHER, Winnipeg, Manitoba, Canada. Filed June 14, 1915. Serial No. 34,039. (Cl. 184—3.)



1. A flange oiler for railway rolling stock comprising a normally horizontal oil reservoir rigidly mounted on the frame of the piece of rolling stock; an oil conducting stylus communicating with the reservoir and projecting to a point within close proximity of the flange of one of the wheels; valvular means controlling the flow of oil through the stylus and means constructed and arranged to be impinged upon by the flange when the piece of rolling stock is rounding a curve for the purpose of causing an automatic flow of oil during the period of impingement.

2. A flange oiler for railway rolling stock comprising an oil reservoir adapted to be mounted on the frame of a piece of rolling stock; an oil conducting stylus carried by and communicating with the reservoir and containing valvular means for controlling the oil passage therethrough and means protruding from the stylus and having movement axially therein for engagement with and operation of the valvular means when the protruding end is impinged upon by a wheel-flange.

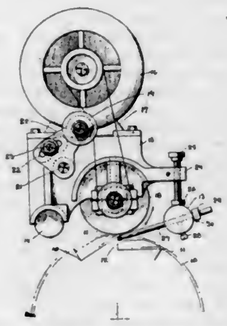
3. A flange oiler for railway rolling stock comprising an elongated cylindrical reservoir united at its opposite ends to, and communicating with a pair of chambers, each chamber having an oil conducting stylus attached thereto and communicating therewith and each stylus containing valvular means and protruding valve opearting contact means, the oiler being constructed and arranged to have the reservoir mounted upon the frame of the piece of rolling stock with each stylus projecting respectively in a radial plane of its wheel and located with its protruding ends in close proximity to the flange thereof

4. A flange oiler for railway rolling stock comprising an oil reservoir mounted upon the frame of the said piece of rolling stock, a pair of members united to the opposite ends of said reservoir; said members having chambers therein; ports effecting communication between the reservoir and the chambers; valvular means for controlling the said ports; a steam supply pipe mounted upon the said frame; an oil conducting stylus attached to each casting and in communication with the chamber therein and constructed and arranged to be impinged upon by the flange of the adjacent wheel; and means for heating the oil in the reservoir, said means consisting of a pipe extending through the reservoir and connected to the steam supply pipe.

5. A flange oiler for railway rolling stock comprising an oil reservoir adapted to be mounted on the frame of the said piece of rolling stock and an oil conducting stylus carried by and communicating with the reservoir and projecting to within close proximity of one of the wheels of the said piece of rolling stock, said stylus consisting of a sleeve having midway its length a valve seat containing a port and a gravity valve located above the valve seat and within the sleeve and consisting of a bar having a tapered end adapted to project through the said port for the purpose of controlling the same and a plunger bar protruding from the lower end of the sleeve and adapted to be impinged upon by the flange of the wheel, the inner end of the said plunger bar being constructed and arranged to force the gravity valve out of the valve seat and open the port when impinged upon by the said flange.

[Claims 6 to 8 not printed in the Gazette.]

1,193,295. CUTTER-HEAD GRINDER. HIRAM A. PERKINS, Rochester, N. Y., assignor to American Splint Corporation, New York, N. Y., a Corporation of New Jersey. Filed Apr. 20, 1916. Serial No. 92,437. (Cl. 51—7.)



1. A grinder of the kind described comprising a sliding and tilting carriage adapted to be positioned above the cutter head, a rotary grinding wheel on the carriage, a

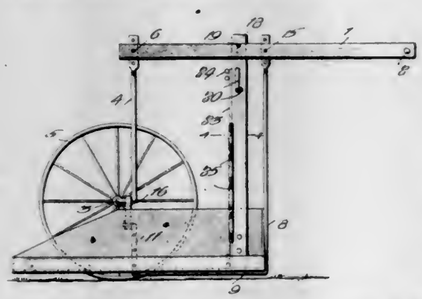
shaft adjacent one side of the carriage and parallel with the axis of the cutter head to be operated on, means connecting the carriage and shaft for fixing the pitch of the carriage, and an index finger extending through the shaft and adapted to engage the cutter head being operated on.

2. A grinder for rotary cutter heads comprising a sliding and tilting carriage adapted to be positioned above a cutter head, a shaft parallel with the axis of the cutter head to be ground, a screw connected with the carriage and riding on the shaft, an index finger extending through the shaft to engage the work being operated on, and a grinding wheel on the carriage.

3. A grinder for rotary cutter heads comprising a pair of parallel shafts positioned above the cutter head to be ground, a carriage having a seat on one shaft which permits it to slide and tilt on said shaft, a screw connected with the carriage and riding on the second shaft, an index finger extending through the second shaft at an angle to the screw, and a grinding wheel on the carriage.

4. A grinder for cutter heads comprising a sliding and tilting carriage adapted to be positioned above a cutter head to be ground, a motor on said carriage, a grinding wheel driven by the motor, a shaft parallel with the travel of the carriage, means riding on the shaft and connected with the carriage for adjusting the pitch of the latter, and an index finger extending through the shaft and adapted to abut with the work to be operated on.

1,193,296. BOLL-WEEVIL DESTROYER. EDWIN C. POELLNITZ, Myrtlewood, Ala. Filed Apr. 7, 1916. Serial No. 89,623. (Cl. 43—1.)



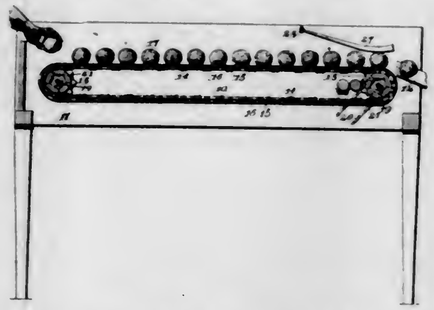
1. A boll weevil destroyer, comprising a beam, a sectional arched axle having wheels at the outer ends of the sections, the inner ends of the sections being connected to the beam for vertical adjustment thereon, receiving pans of approximately rectangular outline arranged below the beam and between the wheels and spaced apart at their adjacent sides to form a passage extending longitudinally of the machine, a supporting bar for each pan connected at one end of the beam and at the other to the adjacent end of the axle and adjustable vertically with respect to the beam to raise and lower the pan, a supporting bar extending upwardly from each pan at the outer side thereof and near the rear ends, said bars being in register and being connected at their upper ends, and a series of dislodging members detachably connected with each bar.

2. A boll weevil destroyer, comprising a beam, spindles connected with the beam and spaced below the same and wheels on the spindles, a hanger on each spindle, a plurality of pans supported below the beam and spaced apart from each other to permit the passage of the plants in the row, and a supporting bar for each pan, each bar being connected at one end to the beam and at the other end to the hanger on the adjacent spindle and being adjustable with respect to the beam and the hanger to permit the pans to be adjusted vertically.

3. In a boll weevil destroyer, a pair of pans, means for supporting the pans to pass on each side of the row, a supporting bar extending upwardly from each pan, each bar having a series of flexible inwardly extending dislodging members arranged in the same vertical plane and coöperating with the members of the other bar to dislodge the weevil, each of the said members being approximately triangular and having its apex detachably connected with a bar, said connection comprising a vertical slot in the bar at right angles to the plane of the members, a plate secured to the bar at one opening of the slot to which the members are connected, and a second plate detachably connected with the bar at the opposite end of the slot, and pressing said members toward the bar to cause them to extend inwardly toward the members of the other bar.

4. In a boll weevil destroyer, oppositely positioned vertical series of dislodging members, each consisting of a substantially triangular member of flexible resilient material, the members of each series being supported by their apices in the same vertical plane, and with their bases adjacent to the bases of the other series.

1,193,297. FRUIT-BRANDING MACHINE. EDWARD P. PORCHER, Cocoa, Fla. Filed Mar. 17, 1916. Serial No. 84,807. (Cl. 101—83.)



1. A fruit branding machine comprising the combination of a conveyer including side sprocket chains and a belt having openings in spaced apart relation and in alined series and forming seats for the fruit, shafts at opposite ends of the conveyer having sprocket wheels engaging the said side chains of the conveyer, a stamping roller around one of said shafts between its sprocket wheels and having a spaced series of stamps thereround, to successively aline with the openings of the belt at the upper portion of the roller, a presser foot mounted above the conveyer and engaging the fruit as it successively arrives above the stamping roller, and a discharge plate receiving the stamped fruit from the delivery end of the conveyer.

2. A fruit branding machine comprising the combination of a conveyer including an endless belt having openings therein spaced apart and in alined series for the reception of the fruit, a stamping roller around which the belt passes at one end of the conveyer, shafts for actuating the conveyer to one of which said stamping roller is secured whereby to rotate in consonance with the conveyer, a plurality of stamping members secured to said roller in spaced apart relation to coincide with the several openings of the belt as the latter arrive above the stamping roller, said stamping members projecting outwardly from the roller to engage the fruit, and inking rollers adjacent the said stamping roller and with which the stamping members succesively contact in their movements with the roller.

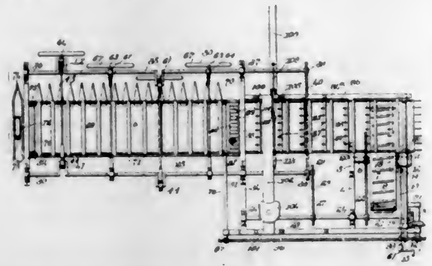
3. A fruit branding machine comprising the combination of a conveyer including an endless belt having spaced openings in alined series for the reception of the fruit, a stamping roller around which the belt travels at one end of the conveyer having a plurality of peripheral outstanding stamps spaced apart therearound distances equal to the spacing of the belt openings, means for rotating the cylinder in consonance with the belt, and means for successively engaging and holding the fruit in the openings of the belt in their movement across the top of the stamping roller.

4. A branding machine including the combination of an endless conveyer having openings in which the articles to be branded are seated, and a stamping roller around which one end of said conveyer travels, having peripheral stamps and rotating in consonance with the belt whereby to move its stamps successively into contact with the moving articles.

5. A branding machine of the character described, including an endless conveyer having openings therein forming seats for the articles to be branded, a stamping roller having rigid stamp supports thereon and rotating in consonance with the conveyer, and yielding stamp members on said supports.

[Claim 6 not printed in the Gazette.]

1,193,298. ROCK-PICKING MACHINE. MANFORD C. PREVO, Purdy, Mo. Filed Dec. 27, 1913. Serial No. 809,036. (Cl. 55—17.)



1. In a rock picking machine, a wheeled frame, a horizontal platform projecting laterally from the frame near the ground and beyond the wheel base, a plurality of reciprocating means for drawing rocks from the ground toward the platform, means projecting from the front of said platform to guide the rocks thereonto, a carrier on said platform, and a carrier on the frame that coöperate to transport gathered spoil to a point of disposal.

2. In a rock picking machine, a wheeled frame, a horizontal platform projecting laterally from the frame near the ground and beyond the wheel base, a plurality of reciprocating means acting in front of the platform for drawing rocks from the ground toward said platform, horizontal fingers having upwardly inclined top surfaces projecting from the front of the platform for directing the gathered rocks upon the platform, and coöperating carriers on the platform and on the frame to transport the gathered spoil to a point of disposal.

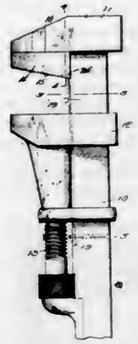
3. In a rock picking machine, a frame, a traction wheel mounted in said frame, a horizontal platform projecting laterally from the frame near the ground and beyond the wheel base, a pair of parallel crank shafts extending longitudinally of said platform and above the same, driving means between the traction wheel and said shafts, gathering means operable over the ground in front of said platform and actuated by said crank shaft and coöperating carriers on the platform and on the frame to transport the gathered spoil to a point of disposal.

4. In a rock picking machine, a frame, a traction wheel mounted in said frame, a horizontal platform projecting laterally from the frame near the ground and beyond the wheel base, a pair of horizontal shafts extending longitudinally of said platform and above the same, driving means between said shafts and the traction wheel, a plurality of reciprocating gathering means operable upon the ground in front of the platform for drawing rocks to said platform and actuated by said crank shafts, and coöperating carriers on said platform and on the frame to transport the gathered spoil to a point of disposal.

5. In a rock picking machine, a frame, a traction wheel mounted in said frame, a horizontal platform projecting laterally from the frame near the ground and beyond the wheel base, a pair of parallel horizontal shafts extending longitudinally of the platform and above the same, driving means between the said shafts, and the traction wheel, a plurality of reciprocating gathering devices operable upon the ground in front of the platform for drawing rocks toward said platform and actuated by said crank shafts, a plurality of tapering fingers having upwardly inclined top surfaces projecting from the forward end of said platform to direct the gathered rocks upon the platfrom, a carrier on said platform, and a carrier on the frame that coöperate to transport the gathered spoil to a point of disposal.

[Claims 6 to 12 not printed in the Gazette.]

1,193,299. WRENCH ATTACHMENT. DANIEL JONES PUGH, Pottsville, Pa. Filed Jan. 5, 1916. Serial No. 70,431. (Cl. 81—180½.)



1. In a wrench attachment, the combination with a wrench having a fixed head provided with an opening; of a removable jaw having a shank adapted for engagement with said opening, said jaw being also provided with a seat, and a spring member having one end fixed to the shank of said wrench and its other end bowed outwardly therefrom, the latter end being adapted to engage the seat in said removable jaw whereby to retain the same in operative position.

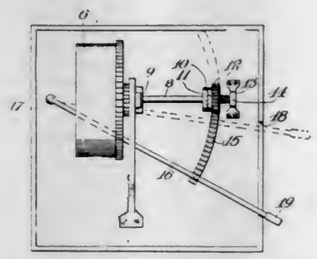
2. In a wrench attachment, the combination with a wrench including a shank and a fixed head, said shank being provided therein with a longitudinal groove; of a removable jaw associated with said head and having a seat therein adjacent the shank of said wrench, and a spring member having one end secured to said shank and engaging the groove therein for a major portion of its length, said spring member at its free end being bowed and adapted to engage the seat of said removable jaw.

3. In a wrench attachment, the combination with a wrench including a shank and a fixed head; of a removable jaw associated with said head, and a spring member secured to said shank and being of a length greater than the distance between its point of attachment with said shank and said jaw whereby the free end of said spring member may be jammed into engagement with the jaw.

4. In a wrench attachment, the combination with a wrench including a shank and a fixed head, of a removable jaw associated with said head, and a spring member having one end secured to said shank and extending longitudinally thereof, the other end of said member being adapted to engage said removable jaw.

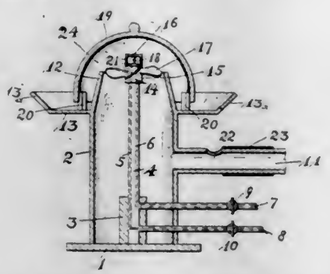
5. A wrench including a fixed head, a sliding jaw, a shank provided with a longitudinal groove over which the sliding jaw travels and having at the end of said groove opposite the fixed head of the wrench a recess, a spring having an enlarged head at one end seated in the recess of the shank with the spring projecting within the longitudinal groove of the shank and through the sliding jaw and spring outwardly at its free end, and a removable jaw detachably held to the head of the wrench by said end of the spring.

1,193,300. SPRING-WINDING MECHANISM. OTTO RIEKE, Chicago, Ill. Filed Mar. 29, 1915. Serial No. 17,739. (Cl. 185—39.)



The combination with a spring motor; of a rotary shaft for winding the motor spring, coöperating clutch members on the shaft, one of said members being fast on the shaft and the other member being loose and slidable on the shaft, a pinion fast on the last-mentioned clutch member, yielding means for holding the clutch members locked together, a rack bar in mesh with the pinion, and a lever extending in the direction of the shaft and connected to the rack bar, said rack bar extending from one side of the lever, and the latter being mounted to swing toward and from the shaft.

1,193,301. OIL-BURNER. CLARENCE C. ROBINSON and HENRY STRELOW, Venice, Cal.; said Robinson assignor to said Strelow. Filed Apr. 11, 1916. Serial No. 90,398. (Cl. 158—28.)



1. An oil burner comprising a casing, a jet formed on the termination of the casing, a standard mounted concentrically in the casing and the jet, said standard provided with channels, fuel supply-tubes communicating with the channels in the standard, an air supply-tube communicating with the casing, a fan turnably mounted on the standard within the jet opening, a combustion pan formed a suitable distance back from the jet opening, and a cap covering the jet forming a combustion chamber in the burner, a discharge space being formed between the cap and the combustion pan.

2. An oil-burner comprising a casing closed at one end and terminating in a jet at the other end, an air supply-tube communicating with the casing having a lighting opening provided therein, a sleeve slidably mounted on the tube adapted to cover the lighting opening, a standard mounted concentrically in the casing having fuel supply channels therein, fuel supply pipes secured to the casing communicating with the channels in the standard, a fan turnably mounted on the standard within the jet opening, and a cap covering the jet opening forming a combustion chamber between the jet and the cap.

3. An oil-burner comprising a casing terminating in a jet, a standard mounted concentrically in the casing and the jet, said standard provided with channels, a combustion pan formed a suitable distance back from the jet opening, a cap covering the jet spaced from said pan forming a combustion chamber, a fan consisting of vanes and a cylindrical body, said cylindrical body being turnably mounted on the standard having jet openings therein communicating with the channels in the standard, and a top-plate closing the upper end of the cylindrical body forming the thrust-bearing for the fan.

1,193,302. SHOWER ATTACHMENT FOR BATH-TUBS. PETER SELTNER, McMechen, W. Va. Filed Feb. 7, 1916. Serial No. 76,807. (Cl. 4—26.)



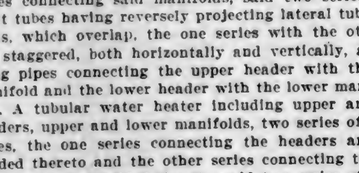
1. The combination with a bath cock, of an upright tube coupled to said cock, an upright cylinder connected to the upper end of said tube, a pipe of materially less diameter than said cylinder telescoped within the upper end of the latter, a piston encircling the lower end of said pipe and movable within said cylinder, said piston preventing withdrawal of said pipe from said cylinder, a hinge valve having one arm connected to the upper end of said pipe, and a shower ring connected to the opposite arm of said valve, said ring being adapted to swing from a suspended position to a horizontal position, and vice versa, respectively opening and closing said valve, said piston and superposed connected parts being automatically elevatable under the pressure of water admitted to the cylinder when said ring occupies suspended position.

2. In a shower attachment for bath tubs, the combination with an upright cylinder and means connecting said cylinder with a bath cock, of a pipe partially disposed within and having vertical movement with respect to said cylinder, a piston disposed about the lower end of said pipe and preventing withdrawal of said pipe from said cylinder, the upper end of said pipe extending above the top of said cylinder, a shower ring, a hinge valve connecting said shower ring to the upper end of said pipe, said ring being adapted to be swung from a suspended to a horizontal position, and vice versa, respectively opening and closing said valve, said piston and superposed connected parts being automatically elevated under the pressure of water admitted to the cylinder when said ring occupies suspended position.

1,193,303. EMBROIDERING-MACHINE. GOTTWALT SIEBER, Plauen, Germany, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Filed July 24, 1915. Serial No. 41,806. (Cl. 112—7.)

1. In an embroidering machine, the combination with the tambour frame, of a device for fixing the position of the connection line between two successive sections of an embroidery design, and comprising a frame capable of being removably suspended from the tambour frame and having detachable bracing members formed each with a system of gripping means adapted to grip and hold the fabric in stretched condition.

2. In an embroidering machine, the combination with the tambour frame, of a device for fixing the position of the connection line between two successive sections of an embroidery design, and comprising a frame capable of being removably suspended on the tambour frame, and detachable bracing members at one end of said frame, each formed on the side facing the fabric with a system of gripping means adapted to grip and hold the fabric in stretched condition.



3. In an embroidering machine, the combination with the tambour frame, of a device for fixing the position of the connection line between two successive sections of an embroidery design and comprising a frame capable of being suspended from the tambour frame and adapted to be fed along with the fabric, detachable bracing members at one end of said frame each formed on the side facing the fabric with gripping or holding means to secure the fabric in stretched condition.

1,193,304. TUBULAR HEATER. GEORGE E. SIMONDS, Minneapolis, Minn., assignor to Domestic Engineering Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Oct. 18, 1915. Serial No. 56,520. (Cl. 122—316.)

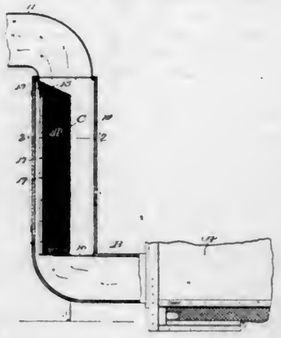
1. A tubular water heater including upper and lower headers, upper and lower manifolds, two series of upright tubes, the one series connecting said headers and the other series connecting said manifolds, said two series of upright tubes having reversely projecting lateral tube extensions, which overlap, the one series with the other and are staggered, both horizontally and vertically, and coupling pipes connecting the upper header with the upper manifold and the lower header with the lower manifold.

2. A tubular water heater including upper and lower headers, upper and lower manifolds, two series of upright tubes, the one series connecting the headers and being welded thereto and the other series connecting the manifolds and being welded thereto, said two series of upright tubes having reversely projecting lateral tube extensions, which overlap, the one series with the other and are staggered, both horizontally and vertically, and separable coupling tubes, connecting the upper header with the upper manifold and the lower header with the lower manifold.

3. A tubular water heater including upper and lower headers, upper tubes connecting said headers, an upright manifold and a lower manifold located on each side of the headers, upright tubes connecting the upper and lower manifolds on each side of the headers, the upright tubes of the headers having reversely projecting tube extensions, the upright tubes of the manifolds having inwardly projecting tube extensions which overlap the tube extensions of the upright tubes of the headers, said tube extensions being staggered both horizontal and vertical, and tubes connecting the upper header with the upper manifolds and the lower header with the lower manifolds.

4. A tubular water heater including upper and lower headers, upright tubes connecting said headers and being welded thereto, an upper manifold and a lower manifold located on each side of the headers, upright tubes connecting the upper and lower manifolds, on each side of the headers, and being welded thereto, the upright tubes of the headers having reversely projecting tube extensions welded thereto, the upright tubes of the manifolds having inwardly projecting tube extensions welded thereto and which overlap the tube extensions of the upright tubes of the headers, said tube extensions being staggered both horizontal and vertical, and coupling tubes connecting the upper header with the upper manifolds and the lower header with the lower manifolds.

1,193,305. AIR-PURIFIER FOR LAUNDRY-DRYING MACHINES. WILLARD G. SLAGLE, Memphis, Tenn. Filed May 26, 1915. Serial No. 30,612. (Cl. 83—47.)



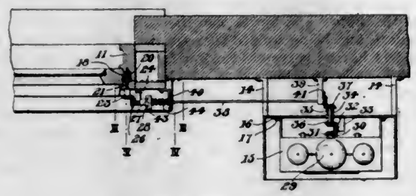
In an air straining apparatus for laundry tumbling machines the combination of a pipe providing an air passageway adapted to communicate with the machine, a partition located at one end of the passageway and providing an imperforate barrier thereat for a section of said passageway, a removable screen structure of semi-circular cross section supported at one end on said partition and formed with an inclined top resting against said pipe at the other end thereof and closing the passage therethrough, said pipe having a door extending substantially the full length of the screen whereby the accumulated matter may be readily removed therefrom and the screen bodily removed, substantially as set forth.

1,193,306. BURGLAR-ALARM. JAN SMOTER, Conemaugh, Pa., assignor of one-fourth to Adalbert Rys, Conemaugh, Pa. Filed Sept. 9, 1915. Serial No. 49,704. (Cl. 116—44.)

1. A burglar alarm comprising in combination with a shiftable window sash, a shaft journaled adjacent said sash, an alarm clock positioned adjacent said sash, a removable rod operatively connected at one end to the setting mechanism of the alarm of the clock, and operative connections between the opposite end of the said rod and the said shaft operable only during the opening of the window.

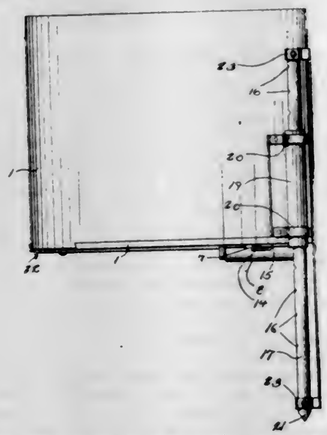
2. A burglar alarm comprising in combination with a sliding sash and an alarm clock having a setting shaft for the alarm thereof, a rod revolubly-mounted and detachably operably connected with the said setting shaft, and releasable operative connections between the opposite end of the said rod and the said sash.

3. A burglar alarm comprising in combination with a sliding sash and an alarm clock having a setting shaft for the alarm thereof, a rod revolubly-mounted and detachably operably connected with the said setting shaft, a stub-shaft journaled adjacent the said sash, rack and gear connections between the said stub-shaft and sash, a clutch head operatively connected to said stub-shaft, and automatically releasable clutching means between the said rod and head in operative engagement during the opening of the sash.



4. A burglar alarm comprising in combination with a sliding sash of a window, a casing having an open front and secured adjacent the said sash, an alarm clock removably positioned within the said casing and having a setting shaft for the alarm mechanism thereof, an axle journaled adjacent the said sash, operative connections between the said axle and sash, a clutch head at one end of the said axle having inclined teeth thereon, the said head and axle having a central longitudinal bore therein, a bracket secured adjacent said head, a rod journaled in the said bracket and bore and having a squared portion adjacent the said head, operative connections between the opposite end of the said rod and the said setting shaft, a clutch-disk slidably-mounted upon the said squared portion adjacent the said head teeth, and an expansion spring between the said disk and bracket.

1,193,307. PAINTER'S BUCKET. HARTVIG SORLEY, Macomb, Ill. Filed Jan. 21, 1916. Serial No. 73,421. (Cl. 91—66.)



1. The combination with a bucket; of a bracket plate mounted upon the bottom of said bucket and provided with a surface engaging edge, adjustable surface engaging members mounted upon said bucket for coöperation with said bracket plate to secure the bucket in upright position upon an inclined surface, guide means for said adjustable surface engaging members, a spring locking member for said adjustable surface engaging members, said locking member being mounted in said bracket plate, guide means for said locking member, and a releasing member for withdrawing said locking member from said adjustable surface engaging member.

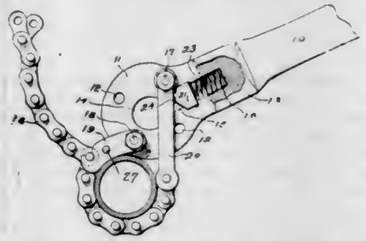
2. A bucket having a stationary surface-engaging plate secured to its bottom, adjustable surface-engaging members mounted for sliding movement upon one side of said bucket, supporting means for said members, spring-locking means for said members, said stationary surface-engaging plate inclosing a portion of and serving as supporting means for said spring-locking means, guide means for said spring-locking means, and means for moving said spring-locking means to inoperaive position.

3. The combination with a bucket; of a bracket member mounted upon the bottom of the same and having a surface-engaging edge, a spring locking member mounted in said bracket, adjustable surface-engaging members mounted upon said bucket, said spring-locking means having engagement with said adjustable surface-engaging members to lock the latter in adjusted position, guiding means for said spring-locking means, and means for disengaging said spring-locking means from said adjustable surface-engaging members.

4. The combination with a bucket; of a bracket plate mounted upon the bottom of the same and having a surface-engaging edge extended at an angle, adjustable surface-engaging members mounted upon said bucket, means for supporting and guiding said surface-engaging members, a double spring-locking member mounted in said bracket plate and having its opposite end engaged with said adjustable surface-engaging members to lock the latter in adjusted position, and means engaged with said double-spring-locking member to force the ends of the same away from said surface-engaging members.

5. The combination with a bucket; of a stationary bracket plate mounted upon the bottom of said bucket and having a surface-engaging edge, adjustable surface-engaging members mounted upon said bucket at a point opposite said bracket plate, a curved spring-locking member mounted in said bracket plate and engaged with said adjustable surface-engaging members to lock the latter in adjusted position, the said curved locking member having opposite turned portions, guiding means for said spring-locking member, said opposite curved portions being engaged through said guiding means, and means engaged with said curved portion of said locking member to force the same away from said adjustable surface-engaging members.

1,193,308. PIPE-WRENCH. JOHN E. STONE, Sweetwater, Tex. Filed Feb. 16, 1916. Serial No. 78,647. (Cl. 81—68.)



1. In a wrench, a handle having a fulcrum head, a chain having one end connected therewith, means adjustable longitudinally on the chain to connect intermediate parts thereof with the head, and a spring pressed member associated with the chain in a relation to the chain to be compressed thereby when the wrench is engaged with work, and tending to tauten the chain.

2. A wrench comprising a lever including a handle having a fulcrum head, a movable member mounted on the lever, a chain, means to connect the chain to the head and means to connect the chain to said movable member, one of the last named said means being adjustable longitudinally on the chain, and resilient means engaged with the movable member tending to move it in a direction to tauten the chain when engaged around work.

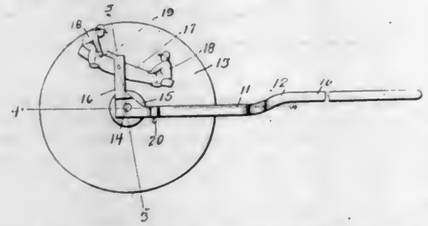
3. In a wrench, a lever including a handle and a fulcrum head, a long link element pivoted on the inner part of the head at one side and extending toward the other side and beyond the head, a spring pressed member carried by the lever bearing upon the said link, a chain, means to connect the chain to the outer part of the head and means to connect the chain to the outer end of the long link element, one of the last named means being adjustable longitudinally on the chain.

4. A wrench comprising a lever including a handle and fulcrum head, long links pivoted on opposite faces of the head to one side of the axis of the handle, and extending beyond the head at the opposite side, a chain attached to the swinging ends of the links, means to connect intermediate parts of the chain selectively to the outer part of the head, and a spring-pressed longitudinally reciprocable member on the lever inwardly of and bearing upon the said long link.

5. A wrench comprising a lever including a handle and a flattened fulcrum head having a central enlarged opening therethrough and a reduced slot extending therefrom long links pivoted on opposite faces of the head to one side of the slot and extending thereacross and beyond the head, a chain connected to the outer ends of the links, means to connect intermediate parts of the chain alternately to the outer part of the head, and a block H-shaped in cross section, of a size to be passed through said opening for alinement of its central portion with the slot and engagement of its flanges on opposite faces of the head as described, said block being engaged in the slot inwardly of the long links, and resilient means bearing upon the block at the side opposite the links.

[Claim 6 not printed in the Gazette.]

1,193,309. TOY. JOHN C. STOOPS, WILLIAM J. FATE, and FRED BENNAGE, Neodesha, Kans. Filed Oct. 12, 1915. Serial No. 55,459. (Cl. 46—45.)

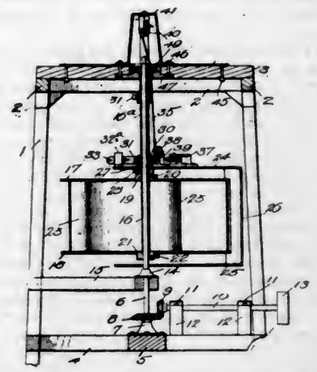


1. A toy comprising a forked handle a ground engaging wheel rotatably mounted within the forked end of the handle, a vertical support carried by the forked end, a projection carried by one face of the wheel, and a figure carrying rocking element mounted on the vertical support and adapted to be rocked by engagement of the said projection as the wheel rotates.

2. A toy comprising a handle, a wheel mounted in one end of the handle and adapted to be rolled along the ground, a vertical arm carried by the handle at one side of the wheel, an unequally balanced member pivotally mounted on the vertical arm, one end of the said member being normally depressed by gravity, a projection carried by one face of the wheel for engagement with the depressed end of the member to raise the same above a horizontal plane and subsequently release the same, and a stop member carried by the upper end of the arm for engagement with the other end of the rocking member to limit the gravitational movement of the member.

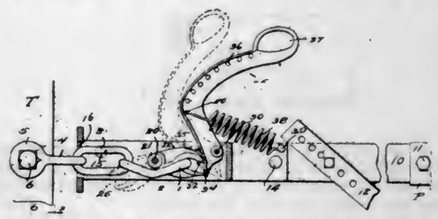
1,193,310. WINDMILL. GEORGE WESLEY TARR, Santa Barbara, Cal. Filed Dec. 18, 1914. Serial No. 877,905. (Cl. 170—14.)

1. In combination, a horizontally disposed wind wheel, a vertical shaft therefor, a hood inclosing a portion of the wheel and adapted to control the effective force of the air upon the wheel, a sleeve loose upon the shaft above the hood, a vane attached to the sleeve and movable therewith, a bracket attached to the framework of the wind wheel in line with the shaft, a guide pulley having swivel connection with the bracket, other guide pulleys mounted upon the hood and framework, a flexible connection attached to the hood and passing over the several guide pulleys, a spring between the hood and the vane to move the hood to expose more or less of the wheel to the action of the wind, and stops upon the hood to engage the vane.



2. In combination, a framework, a vertical shaft, a wind wheel attached to the vertical shaft, a hood mounted loosely upon the shaft and inclosing a portion of the wheel and adapted to control the effective force of the air thereon, a sleeve loose upon the shaft above the hood and wheel, a vane secured to the sleeve, a recessed bearing carried by the framework and receiving the shaft and sleeve, a second bearing supported within the recessed bearing and having the loose sleeve fastened thereto, means attached to the recessed bearing and overhanging the recess thereof to retain the second bearing in place therein, a spring between the hood and vane, stops on the hood to limit the movements of the vane, a bracket mounted upon the framework in line with the shaft, a guide pulley having swivel connection with the said bracket, other guide pulleys mounted upon the hood, and a flexible connection attached to the hood and passing over the several guide pulleys and extending within convenient reach.

1,193,311. SPRING-TRIP HITCH. LESLIE A. THOMAS, Evansville, Ind., assignor to The Vulcan Plow Co., a Corporation of Indiana. Filed Jan. 20, 1916. Serial No. 73,244. (Cl. 21—75.)



1. In a coupling of the class described, the combination with a beam for attachment to a machine, a draw bar connected to said beam and having an open mouth with spaced shoulders, a knuckle pivoted in said draw bar and having a jaw, and yielding means for holding the knuckle in position with its jaw projecting away from said mouth; of a draft element including a clevis larger than said mouth and having shoulders adapted to contact with

those in the mouth, a link whose rear end is removably held by said jaw, and connections between the clevis and link.

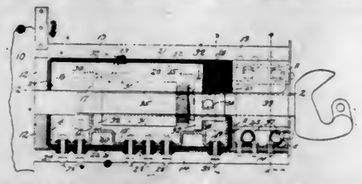
2. In a coupling of the class described, the combination with a draw bar having an open head provided with a mouth at its front end, a pivot across said head in line with the center of its mouth, a knuckle mounted at one end on said pivot and having a pair of jaws at its other end, and yielding means for holding said knuckle behind such pivot with its jaws in position to project away from said mouth; of a draft element adapted to pass into said mouth and including a link bent transversely to pass around said pivot when its inner end is engaged between said jaws.

3. In a coupling of the class described, the combination with an open draw head having a mouth at its front end, a pair of upright pins through said head, a knuckle having a boss at one end mounted on the forward pin and a pair of jaws at its other end, and a latch having a boss pivoted on the rearward pin, a hook to engage one of said jaws, and a lever projecting out of the draw head; of yielding means for moving the lever in a direction to engage the hook with one jaw, and a draft element including a link having its body passing the boss of the knuckle when its rear end lies between said jaws.

4. In a coupling of the class described, the combination with an open draw head, two pivot pins therethrough, a knuckle mounted on the forward pin, and a latch mounted on the rearward pin and having a hook adapted to engage the free end of said knuckle, and a lever projecting out of the draw head and provided with a series of holes; of a spring connected at one end to the draw head and having a hook at its other end, and a draft element having at one end a link adapted to pass the pivot of the knuckle and engage its jaw while the latter is engaged with said hook.

5. In a coupling of the class described, the combination with a frame-like draw head having a mouth at its front end, a U-shaped knuckle pivoted near its bend within said head and its arms constituting jaws spaced to form a mouth, and a draft element leading through the mouth of the head and having at its rear end a link adapted to enter the mouth of the knuckle; of a latch mounted on another pivot in said head and having at its inner end a hook to engage one jaw and a nose extending across the jaw-mouth and engaging the other jaw, the latch having a lever projecting beyond the head, and yielding means for swinging the lever to the rear and engaging the latch with the knuckle.

1,193,312. DRAW-BAR FOR RAILROAD-CARS. GUY P. THURBER, Pittsburgh, Pa., assignor, by mesne assignments, to Automatic Train Control & Signal Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Sept. 1, 1911. Serial No. 647,281. (Cl. 246—58.)



1. An insulated coupling means for cars comprising: supporting means connected to the car, a housing mounted on said supporting means and insulated therefrom, and draft gear carried by the housing.

2. An insulated coupling means for cars comprising: supporting means connected to the car, a housing mounted on said supporting means and insulated therefrom, draft gear carried by the housing, a draw bar pivotally connected to the draft gear, and an insulated guard on the supporting means for limiting the pivotal movement of the draw bar.

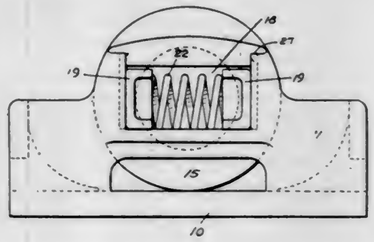
3. An insulated coupling means for cars comprising: supporting means connected to the car consisting of transverse forward and rearward end abutment members and longitudinally extending connecting members, a housing mounted between the abutment and connecting members and insulated therefrom, and draft gear carried by the housing.

4. An insulated coupling means for cars comprising: supporting means connected to the car consisting of transverse forward and rearward end abutment members and longitudinally extending connecting members, a housing mounted between the abutment and connecting members and insulated therefrom, draft gear carried by the housing, a draw bar pivotally connected to the draft gear, and an insulated guard on the supporting means for limiting the pivotal movement of the draw bar.

5. An insulated coupling means for cars comprising: supporting means connected to the car, a housing mounted on said supporting means and insulated therefrom, draft gear carried by the housing, a draw bar pivotally connected to the draft gear, and a transverse supporting bar carried by the supporting means and insulated therefrom on which the said draw bar rests.

[Claims 6 to 16 not printed in the Gazette.]

1,193,313. RAILWAY-CAR ROLLER SIDE BEARING. FREDERICK B. TOWNSEND, Hinsdale, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 6, 1915. Serial No. 6,415. (Cl. 64—64.)



1. In a roller side bearing, the combination with a retaining member, of an anti-friction roller mounted thereon, and means for detachably connecting said roller with said member and permitting the roller to move bodily relatively thereto, said means including a spring entirely located within the roller adapted to exert its expanding force in lines radial to the roller.

2. In a roller side bearing, the combination with a retaining member, of an anti-friction roller mounted thereon, and means for detachably connecting said roller with said member and permitting the roller to move bodily relatively thereto, said means including a spring located within the roller, and elements extending transversely through said roller in engagement with said member.

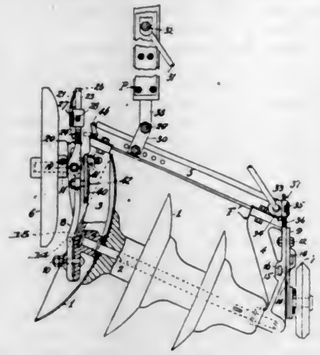
3. In a roller side bearing, the combination with a retaining member, of a bodily movable anti-friction roller mounted on said member, and an expansible and contractible journal extending through said roller and having the ends thereof slidable in slots in said member.

4. In a roller side bearing, the combination with a base casting having spaced side walls, of a roller mounted between said walls, said walls being provided with longitudinally arranged slots, and readily insertible and detachable means extending through said roller and having the ends thereof slidable in said slots.

5. In a roller side bearing, the combination with a base casting having spaced side walls, of a roller mounted between said walls, said walls being provided with longitudinally arranged slots, and readily insertible and detachable means extending through said roller and having the ends thereof slidable in said slots, said means including a pair of spring followers and a spring, therebetween, the spring being confined within the roller.

[Claims 6 to 8 not printed in the Gazette.]

1,193,314. DISK CULTIVATOR. WILLIAM TREWHELLA, Trentham, Victoria, Australia. Filed Aug. 23, 1915. Serial No. 46,936. (Cl. 97—37.)



1. In disk cultivators, a plurality of disks, an axle therefor, an invertible frame in which said axle is journaled, a draft attachment for said frame, the draft end of said frame being adapted to be swung over the disks on the axle thereof to face in either direction.

2. In disk cultivators a plurality of disks, an axle therefor, an invertible frame in which said axle is journaled, a draft attachment for said frame adapted to be swung with the latter over the disks on the axle thereof and a guide wheel on the furrow side thereof.

3. In disk cultivators a plurality of disks, an axle therefor, an invertible frame in which said axle is journaled, a draft attachment for said frame adapted to be swung with the latter over the disks on the axle thereof, a guide wheel on the furrow side and a supporting wheel on the land side of said frame.

4. In disk cultivators a plurality of disks, an axle therefor, an invertible frame in which said axle is journaled and a draft attachment for said frame connected thereto by means of a pivot and swivel rod.

5. In disk cultivators, a series of disks, an axle therefor, an approximately U-shaped invertible frame consisting of a beam set inclined to the line of travel and provided with rearwardly extending rigid arms at each end in which the respective ends of the axle are journaled, said axle being parallel to said beam, and a draft attachment on said frame.

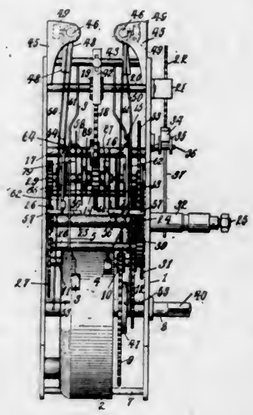
[Claims 6 to 15 not printed in the Gazette.]

1,193,315. CLOCK. BENJAMIN TRIVUS, New York, N. Y. Filed Oct. 24, 1912. Serial No. 727,522. (Cl. 58—8.)

1. In an improvement of the kind described, the combination of a sound-producing device, a pair of arms having knobs to engage said device, means for actuating the arms, a pair of hanger bars having projections to engage the arms and arrest the same, means for causing said arms and the projections thereon to be moved out of arresting position to permit the knobs to strike the device when required.

2. In an improvement of the kind described, the combination of a sound-producing device, a pair of arms having knobs to engage the same, means for actuating the knobs, a pair of hanger bars having means to engage the arms and arrest the same, means for pivotally mounting said hanger bars, counterweights attached thereto to hold said hanger bars in arresting position, means for engaging and swinging said hanger bars about their pivots and releasing the same, one of said bars being released before the other bar, whereby when the bars return to their starting position they will swing apart to allow the arms to strike the sound-producing device, means for arresting the other bar, and means for subsequently releasing the other bar to permit it to complete its return movement.

3. In an improvement of the kind described, the combination of a sound-producing device, a pair of arms having knobs to engage the same, means for actuating the knobs, a pair of hanger bars having means to engage the arms and arrest the same, means for pivotally mounting said hanger bars, counterweights attached thereto to hold said hanger bars in arresting position, means for engaging and swinging said hanger bars about their pivots and releasing the same, one of said bars being released before the other bar, whereby when the bars return to their starting position they will swing apart to allow the arms to strike the sound-producing device, means for arresting the other bar, means for subsequently releasing the other bar to permit it to complete its return movement, and means for controlling the length of the period during which the knobs strike the engaging device.



4. In a clock, the combination of a sound-producing device, an arm having a knob to actuate the same, a pair of bars having means to engage the bar and arrest the same before the knob strikes the said device, one of said bars being released before the other, and each of said bars being pivotally mounted and having counterweights to return the same to starting position, a catch carried by one of said bars, a cam for swinging said bars against the action of the counterweights and releasing the same, means to engage the catch to retard the movement of one of said bars and subsequently release the same to permit said bar to finish its return movement and again arrest the knob, and means for regulating the releasing means to change the period during which the sound-producing device is actuated.

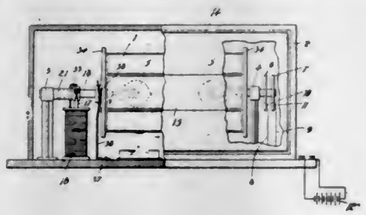
5. A clock, comprising a sounding member; a plurality of striking members; a continuously-operating mechanism for said striking members to normally actuate said striking members; a plurality of intercepters, each arranged to be moved into the path of one of said striking members; and a rotary disk for normally holding said intercepters removed from the path of said striking members.

[Claims 6 to 9 not printed in the Gazette.]

1,193,316. ILLUMINATED ADVERTISING APPARATUS. ALBERT ERNEST TURNHAM, Adelphi, London, England. Filed May 17, 1913. Serial No. 768,346. (Cl. 40—55.)

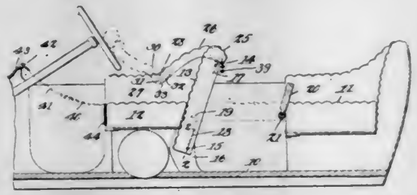
1. An advertising device comprising in combination a rotatably mounted drum bearing advertisements for display, a shaft carrying said drum, a wheel fixed on said shaft and formed with circumferential teeth of square section, an arm mounted loosely on said shaft and projecting radially therefrom, a bell-crank lever, pivoted in the end of said arm, a pawl connected to one arm of said lever in position to be moved into and out of engagement with the teeth of said wheel, when said lever is rocked, and

plates one closing each end of said drum and one being formed with a series of holes equally spaced from the center of the end plate, a springy arm fixed to the frame of the device, a pin carried by said arm normally pressed into one of said holes, a cam surface on said arm, a solenoid with its core connected to the second arm of said bell-crank lever to rock the latter and to rotate said toothed wheel and having its core formed with a nose adapted to coöperate with said cam surface to release said pin at the beginning of the driving movement of the core and means in connection with the circuit of said solenoid for alternately periodically energizing and deënergizing the latter.



2. In an advertising device, the combination of a rotatably mounted drum bearing advertisements for display, a toothed wheel fixed to one end of said drum, a pawl adapted to turn said toothed wheel, end plates one closing each end of said drum and one being formed with a series of holes equally spaced from the center of the end plate, a springy arm fixed to the frame of the device, a pin carried by said arm normally pressed into one of said holes, a cam surface on said arm, a solenoid with its core in operative connection with said pawl and having its core formed with a nose adapted to coöperate with said cam surface to release said pin at the beginning of the driving movement of the core and means in connection with the circuit of said solenoid for alternately periodically energizing and deënergizing the latter.

1,193,317. VEHICLE-SEAT. DAVID VAUGHN, Walla Walla, Wash. Filed Nov. 8, 1915. Serial No. 60,264. (Cl. 21—43.)



1. The combination with the front and rear seats of a vehicle; of a back rest for the front seat movably supported and adjustable to extend horizontally between the said seat and the rear seat, means for supporting the back rest in horizontal position, top cushions for the sides of the front seat hinged to said sides to swing upward and forward, and a top cushion for the back rest connected to the first-mentioned cushions to swing therewith.

2. The combination with the front and rear seats of a vehicle; of a back rest for the front seat movably supported and adjustable to extend horizontally between the said seat and the rear seat, means for supporting the back rest in horizontal position, and a top cushion for the back rest pivotally supported to swing upward and forward.

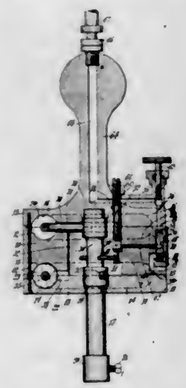
3. The combination with a vehicle having vertically slotted supporting members on the side walls, and front and rear seats; of a back rest for the front seat adjustable to extend horizontally between said seat and the rear seat, and studs on the side edges of the back rest, said studs seating slidably in the slots of the aforesaid supporting members and being located, respectively, adjacent to the top and bottom of the back rest, and the slots of the supporting members being correspondingly located and running parallel to the back rest, the bottom slot having a lateral branch at its upper end.

4. The combination with a vehicle having vertically slotted supporting members on the side walls, and front and rear seats; of a back rest for the front seat adjustable to extend horizontally between said seat and the rear seat; and studs on the side edges of the back rest, said studs seating slidably in the slots of the aforesaid supporting members and being located, respectively, adjacent to the top and bottom of the back rest, and the slots of the supporting members being correspondingly located and running parallel to the back rest, the bottom slot having a lateral branch at its upper end, and the top slot being open at its upper end.

5. The combination with the front and rear seats of a vehicle; of a back rest for the front seat movably supported and adjustable to extend horizontally between said seat and the rear seat, a swinging and vertically slidable auxiliary seat supported on the back rest, said seat being foldable against the back rest, and also adjustable to extend with the same horizontally between the front and rear seats, and means for supporting said auxiliary seat and the back rest in horizontal position.

[Claim 6 not printed in the Gazette.]

1,193,318. PNEUMATIC TOOL. ROBERT E. VELTUM, Eugene, Oreg. Filed Oct. 24, 1914. Serial No. 868,460. (Cl. 121—43.)

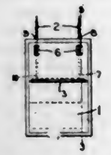


1. A portable motor comprising a main block having two arcuate cylinders, oppositely disposed pistons within said cylinders, so that when one is at one end of its working stroke, the other is at the opposite end of its working stroke, and a shaft adapted to be oscillated by the working of said cylinders, a valve chest on the main block, means for supplying air to said chest, inlet ducts from said chest to said arcuate cylinders, an exhaust duct, a valve within said chest adapted to be oscillated, and provided with inlet ports adapted to alternately register with the said inlet ducts, and an exhaust port adapted to alternately register with said ducts and said exhaust port, and means for oscillating the said valve.

2. A portable motor comprising a main block, having two arcuate cylinders, oppositely disposed pistons within said cylinders, so that when one is at one end of its working stroke, the other is at the opposite end of its working stroke, a shaft adapted to be oscillated by the working of said pistons, and radial projections on the said shaft, a valve chest on said main block, means for supplying air to said valve chest, ducts from said valve chest to said arcuate cylinders adapted to alternately supply and exhaust air into and out of said cylinders, an exhaust duct, a valve within said chest adapted to be oscillated and provided with inlet ports adapted to alternately register with said inlet ducts to supply air to the cylinders, an exhaust port adapted to register with said ducts and said exhaust duct to exhaust air from the said cylinders, and a valve-stem adapted to be alternately engaged by the projections of the said oscillating shaft, to oscillate the said valve.

3. A portable motor comprising a main block having a central opening, a front plate and a rear plate, a shaft in said opening journaled in said front plate and rear plate, means adapted to be alternately operated to oscillate the said shaft, an air valve mounted to oscillate on the main block, and having a stem extending to the central opening of the said main block, a valve tripping device in said opening adapted to oscillate said valve-stem, an air-supply duct in the main block leading to the said valve, ducts from the valve to the said means for oscillating the shaft, an exhaust passage from the valve to the outside of the main block, means on the rear plate for regulating the supply of air through the air-supply duct therein, a handle extending rearwardly from the rear plate, and having an air conduit connecting with the air-supply duct of the rear plate, a swivel hose coupling at the end of the handle, a tool clamp on the exposed end of the shaft, and detachable means securing said main block, front plate and rear plate together in operative alinement.

1,193,319. PIN-TICKET. SIDNEY WACHTEL and SAM REISS, Boston, Mass. Filed July 23, 1915. Serial No. 41,602. (Cl. 40—25.)



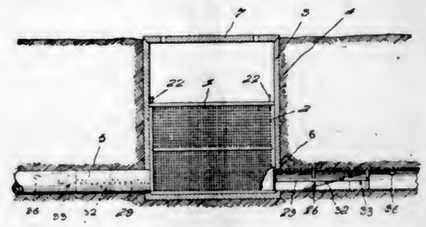
1. A pin ticket comprising a card, a staple affixed thereto at a distance from the edge thereof, the legs of the staple extending in parallelism beyond the edge of the card, recesses intermediate of the points of attachment of the staple to the card and the end of the card adapted to receive the bent back tips of the staple.

2. A pin ticket comprising a card, a staple affixed thereto at a distance from the edge thereof, the legs of the staple extending in parallelism beyond the edge of the card, and having upwardly curved tips, recesses intermediate of the points of attachment of the staple to the card and the end of the card adapted to receive the curved tips of the staple.

3. A pin ticket comprising a card, a staple affixed thereto at a distance from the edge thereof, the legs of the staple extending parallel to the reverse face of the card and to a distance beyond the edge thereof, recesses formed by depressing portions of the card adjacent to the staples so that the reverse face of the card will lie adjacent the shanks of the staple whereby the displacement of the legs of the staple when thrust into the merchandise is prevented and the recess thus formed provides protection for the bent-over end of the staple.

4. A pin ticket comprising a card, a staple affixed thereto at a distance from the edge thereof the legs of the staple extending parallel to the reverse face of the card and to a distance beyond the edge thereof, recesses in the form of narrow slots having walls extending from the reverse face of the card and adapted to engage the legs of the staples and maintain them in parallelism while the ticket is being applied to the merchandise, said slots forming apertures to receive the ends of the staple when the staple is bent back upon itself from the edge of the card.

1,193,320. TILE-TRAP. WILLIAM WALKER and THOMAS EASTON, Fairbury, Ill. Filed Nov. 2, 1915. Serial No. 59,271. (Cl. 43—24.)



1. A trap of the class described including a receiving trap provided at opposite sides with openings and designed to be arranged in a line of pipe in communication with the same and provided at the said openings with automatically closable trap doors, a horizontal partition or floor dividing the receiving trap into upper and lower compartments, an inclined run-way extending downwardly from an opening in the said floor or partition, a door casing surrounding the said opening and having inclined edges at opposite sides of the same and a trap door hinged to the door casing and normally supported in a closed position upon the said inclined edges.

2. A trap of the class described including a receiving trap having a side opening and designed to be arranged in communication with a line of pipe and an inlet located within the line of pipe and extending from the said side openings and having means for anchoring it thereat, said inlet being composed of spaced rings or bands, and an inclined trap door hinged within one of the rings or bands and supported by the other ring or band at the bottom thereof.

3. A trap of the class described including a receiving trap having a side opening and designed to be arranged in communication with a line of pipe and an inlet located within the line of pipe and extending from the said side openings and having means for anchoring it thereat, said inlet being composed of spaced bands, side bars connecting the bands and having anchoring arms extending to the said receiving trap and an inclined trap door hinged within one of the rings or bands at the upper portion thereof and supported within the other ring or band at the lower portion thereof.

4. A trap of the class described including an inlet device comprising spaced rings designed to be arranged within a pipe, means for connecting the rings, one of the rings being provided at the bottom with projections and an inclined trap door hinged within the upper portion of the other ring and having rods or members supported between the projections.

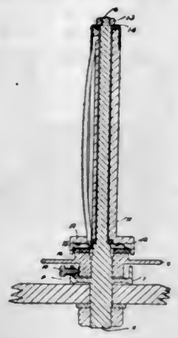
5. A trap of the class described including an inlet device comprising spaced rings designed to be arranged within a pipe, side bars connecting the same and provided with anchoring arms having terminal engaging portions and an inclined trap door hinged within one of the rings at the upper portion thereof and supported within the other ring or band at the lower portion thereof.

[Claim 6 not printed in the Gazette.]

1,193,321. SPINNING, TWISTING, WINDING, AND LIKE MACHINE. ALEXANDER GROUNDWATER WALLS, Paisley, Scotland. Filed Jan. 10, 1914. Serial No. 811,361. (Cl. 242—156.)

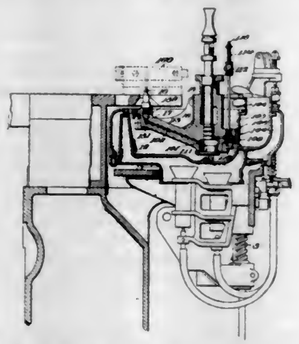
A tension device comprising in combination with two members rotatable relatively to one another, a spring member for applying frictional drag in opposition to such relative rotation, said spring member provided with spring elements each apertured at its free end, said spring elements projecting from the plane of one face of said annulus, said annulus provided on the opposite face with

a body of frictional material, and retaining elements of less diameter than the apertures in said spring elements



for securing said spring elements to one of said relatively rotatable members.

1,193,322. FLUID-METAL-INJECTING MECHANISM FOR TYPE-CASTING MACHINES. WILLIAM L. WALTZ, Pittsburgh, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Jan. 16, 1915. Serial No. 2,738. (Cl. 22—70.)



1. In a type casting machine, the combination of a melting pot, a pump having a discharge duct for supplying molten metal to the mold, and an intake duct, a reciprocatory piston in the pump, a non-return valve in proximity to the end of the discharge duct, a spring pressed intake valve controlling the intake passage, means for reciprocating the piston embodying a yielding connection, and means for opening and closing the intake valve independently of the variation of pressure between the pump cylinder and melting pot due to the piston movements.

2. A fluid injecting mechanism for type casting machines, embodying a pump having a reciprocatory piston, induction and eduction passages, a check valve in the eduction passage, an intake valve in the induction passage, and mechanical means for operating both said intakle valve and piston non-synchronously.

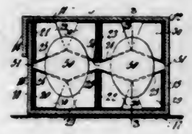
3. A fluid injecting mechanism for type casting machines embodying a pump, having induction and eduction passages, a check valve in the eduction passage, with means whereby said valve will be momentarily sustained in an open position to permit a limited reverse flow in the eduction passage, a reciprocatory piston, an intake valve in the induction passage supported to open inwardly to admit molten metal to the pump and mechanical means to operate said intake valve and piston non-synchronously.

4. A fluid metal injecting mechanism for type casting machines embodying a pump having induction and eduction passages, a reciprocatory piston, an outwardly closing spring-seated valve in the induction passage, means for reciprocating the piston, and means for opening said valve positively against the pressure of its closing spring.

5. In a type casting machine, the combination of the following instrumentalities, to wit: a mold, a pusher for transferring the type cast in the mold, a melting pot, a pump for injecting fluid metal from the melting pot into the mold and having induction and eduction passages, a reciprocatory piston in the pump, an intake valve in the induction passage of the pump, and connections intermediate said valve and pusher mechanism for opening the valve independently of the movements of the piston.

[Claims 6 to 8 not printed in the Gazette.]

1,193,323. SHIPPING-BOX FOR EGGS AND OTHER FRAGILE ARTICLES. THOMAS WEBSTER, New York, N. Y. Filed Nov. 16, 1914. Serial No. 872,385. (Cl. 217—27.)



1. A shock absorbing holder for eggs or other fragile articles, comprising a blank having supporting side walls and a top integral therewith and provided with transverse openings constituting skeleton pockets and a longitudinal score along said top intersecting said transverse openings and permitting said pocketed top to rise and fall and laterally spread and contract under shock, and means for limiting such movement.

2. A shock absorbing holder for eggs or other fragile articles, comprising a blank having supporting side flaps and a central body portion provided with a skeleton pocket and a folding crease intersecting said pocket and forming a hinge along which said body portion bends freely, rising and falling and laterally spreading and contracting under shock, and end flaps having beveled edges adapted to engage said side walls and limit such movements.

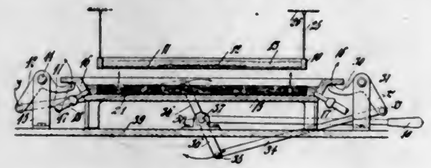
3. A shock absorbing holder comprising two members disposed in inverted relation and holding an article between them, each member having a central body portion and supporting side flaps integral therewith, said central body portion having a skeleton pocket and a folding crease intersecting said pocket and forming a hinge along which said body portion bends freely, rising and falling under shock, and means for limiting such movement.

4. A blank for a container consisting of a flexible sheet comprising a top having a series of transverse openings forming skeleton pockets disposed apart from one an other along said top and with a longitudinal score intersecting said pockets between the ends thereof, said score permitting said top to bend and form an angular bulge at the sides of said pockets in setting up for use.

5. In a device of the class described, comprising a body portion, a longitudinally extending crease formed therein, dividing the body portion into sections, side-walls formed with the body portion, end flaps formed with the side-walls, having locking-means for holding the side walls in an operative position, and for including the sections of the body portion, end flaps formed with the body portion for limiting the movement of the sections of the body portion, said body portion having elongated openings formed therein, and a like body portion arranged inverted above the first-named body portion, with the openings of the second body portion in substantial registration with the openings of the first-named body portion.

[Claim 6 not printed in the Gazette.]

1,193,324. APPARATUS FOR BACKING ELECTROTYPES. THOMAS WEBSTER, New York, N. Y. Filed June 24, 1915. Serial No. 36,148. (Cl. 22—4.)



1. An apparatus of the character described comprising a backing pan for containing the backed electrotype, a cooling pan for containing a cooling material, and means for moving one of said pans toward and from the other to bring the bottom of the backing pan into contact with and away from cooling material in the cooling pan.

2. An apparatus of the character described comprising a backing pan for containing the backed electrotype, a cooling pan, means for supplying a cooling liquid to said cooling pan, and means for moving one of said pans toward and from the other to bring the bottom of the backing pan into contact with and away from cooling material in the cooling pan.

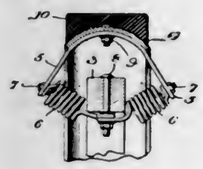
3. An apparatus of the character described comprising a backing pan for containing the backed electrotype, a liquid absorbent cooling pad, and means for effecting contact and separation between said pad and the bottom of said pan.

4. An apparatus of the character described comprising a backing pan for containing the backed electrotype, an absorbent pad of felt saturated with a cooling liquid, and means for effecting contact and separation between said pad and the bottom of said pan.

5. An apparatus of the character described comprising a backing pan for containing the backed electrotype, an absorbent pad of felt saturated with a cooling liquid, means for effecting contact and separation between said pad and the bottom of said pan, and means for supplying a cooling liquid to the pad during said contact.

[Claims 6 to 9 not printed in the Gazette.]

1,193,325. SPRING-WHEEL. FRED WEINMAN, Round Valley, Nebr. Filed June 16, 1915. Serial No. 34,439. (Cl. 152—32.)



1. The combination with a wheel including a felly and spokes, of a concavo-convex rim spaced from the felly, substantially U-shaped flat springs rigidly secured to the concave face of the rim, said flat springs having their free ends extended laterally beyond the opposite sides of the rim, pins secured to the felly between the free ends of the arms of the springs, and coil springs secured to the inner faces of the flat U-shaped springs and extending over the inner face of the felly for engagement with the pins.

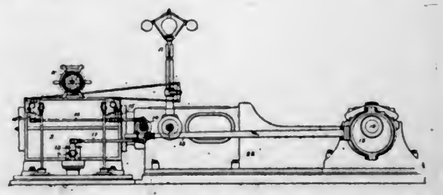
2. The combination with a wheel including a felly and spokes, of a concavo-convex rim spaced from the felly, substantially U-shaped flat springs having their intermediate portions rigidly secured to the convex face of the rim and their free ends reduced and extended laterally beyond the adjacent side edges of the rim, pins extending through the felly and provided with threaded terminals disposed at the inner face of the felly, oppositely inclined coil springs interposed between the free ends of the flat springs and the felly, said springs each having one end thereof provided with an eye bearing against the inner face of the adjacent flat spring and its other end extended over the inner face of the felly and provided with an eye fitting over the threaded end of the adjacent pin, the eyes at the inner ends of the springs being fitted over the threaded ends of the pins in overlapped relation, fastening devices extending through the free ends of the flat springs and engaging the eyes at the outer ends of the coil springs, and fastening devices engaging the threads on the pins and bearing against the overlapping eyes at the inner ends of the springs.

1,193,326. WRENCH. LESTER WESTCOTT, Theresa, N. Y. Filed Nov. 9, 1915. Serial No. 60,537. (Cl. 81—179.)



A wrench of the class described comprising a shank, a frame carried by one end of the shank and including a pair of side bars and an outer connecting end bar, a stationary jaw carried by one side of the frame and having a gripping surface disposed inwardly of the frame, a movable jaw associated with the other side bar of the frame and being substantially U-shaped in cross section and having a gripping surface disposed inwardly of the frame, the sides of the movable jaw being arranged, respectively, on the opposite sides of the adjacent side bar of the frame and extending therebeyond, and a pin extending through the sides of the U-shaped jaw and slidably engaging the outer edge of the adjacent side bar of the frame.

1,193,327. STEAM-ENGINE. ROBERT WETHERILL, Chester, Pa. Filed Nov. 24, 1915. Serial No. 63,226. (Cl. 121—45.)

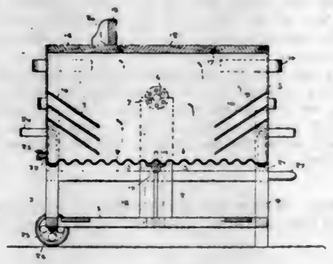


The combination in a steam engine of a cylinder; two oscillatory admission valves at opposite ends of said cylinder; an oscillatory exhaust valve mounted to control the flow of steam through ports at the middle of the cylinder; a piston in said cylinder; a crank shaft; means connecting the piston with said shaft; an eccentric on the crank shaft; a rocker arm extending in opposite directions from its pivot; a rod connecting the eccentric with the rocker arm; a second rod connecting one branch of the rocker arm with the exhaust valve; and a third rod connecting the oppositely extending branch of the rocker arm to the admission valves.

1,193,328. WASHING-MACHINE. JAMES WILLIAM WHALEN and CORNEALIUS J. MCLAUGHLIN, Tekoa, Wash. Filed Nov. 20, 1915. Serial No. 62,514. (Cl. 68—21.)

A washing machine, the combination with a frame and a receptacle pivotally mounted thereon, of a spring having one of its ends attached to said frame, a bolt pivotally secured to the receptacle, said bolt having a block through which the opposite end of the spring extends, said spring

being at the longitudinal center of the receptacle whereby when the receptacle is rocked, the tension of the spring



will be increased and the rocking movement of the receptacle facilitated by the tension of the spring.

1,193,329. ARTIFICIAL TOOTH. ROBERT MORSE WITHYCOMBE, Sydney, New South Wales, Australia. Filed Sept. 24, 1915. Serial No. 52,418. (Cl. 32—9.)



1. An artificial tooth structure comprising a socketed tooth supporting member, a tooth fitted therein, an anchorage means arranged internally of said socket and secured in the tooth, the means connecting a wall of the socket and the tooth to prevent displacement of the tooth from said socket, and permitting a slight yielding of the tooth, and a yielding cushion arranged within said socket, at the bottom thereof, the tooth having its base disposed directly against said cushion.

2. An artificial tooth structure comprising a socketed tooth supporting member, a tooth fitted therein, a yieldable anchorage means arranged internally of said socket and secured in the tooth, the means connecting a wall of the socket and the tooth to prevent displacement of the tooth from said socket, and a yielding cushion arranged within said socket, at the bottom thereof, the tooth having its base disposed directly against said cushion.

3. An artificial tooth structure comprising a socketed tooth supported member, a diatoric tooth fitted therein and having a transverse opening below its occlusal face and a central bore extending from said opening to its inner face, an anchorage means arranged internally of said socket and comprising connected parts disposed in said opening and in said bore, the anchorage means being connected to a wall of said socket and preventing displacement of the tooth from the socket while permitting a slight yielding of the tooth, and a yielding cushion arranged within said socket at the bottom thereof, the material of said cushion filling said opening and said bore, the tooth having its base disposed directly against said cushion.

4. An artificial tooth structure comprising a socketed tooth supporting member, a diatoric tooth fitted therein and having a transverse opening below its occlusal face and a central bore extending from said opening to its inner face, an anchorage means arranged internally of said socket and comprising a bar in said opening and a part of yielding construction in said bore connected to said bar and to the base of the socket and a yielding cushion arranged wholly within said socket at the bottom thereof, the material of said cushion filling said opening and said bore, the tooth having its base disposed directly against said cushion.

1,193,330. FASTENING OF BRACELETS AND THE LIKE. PERCY LASSAU WRAY, Middle Park, South Melbourne, Melbourne, Victoria, Australia, assignor to Thomas William Tilbury and Norman Comper, trading as The Tilbury Manufacturing Company, Melbourne, Victoria, Australia. Filed June 28, 1915. Serial No. 36,760. (Cl. 24—230.)



1. Improvements relating to the fastening of bracelets and the like, consisting in a bracelet having a first half and a second half hinged together, said first half having a negative meeting end, a plate closing said end, said plate having an opening therein provided with shoulders, a spring tongue having an inner member secured in said opening and an outer member having a free end adjoining the closing plate, said second half having a positive meeting end, a plate closing said end, said plate having an opening therein to pass the spring tongue, a locking tongue projecting from said opening of said positive end, said tongue having gullets formed therein to receive the shoulders of the negative end.

2. Improvements relating to the fastening of bracelets and the like consisting in a bracelet having a first half and a second half hinged together, said first half having a negative meeting end, a plate closing said end, said plate having a major opening formed therein, said plate having a minor opening formed therein communicating with the major opening, shoulders disposed at each side of the minor opening, a spring tongue projecting from the closing plate of the negative end, said tongue comprising an inner member secured to the plate and an outer member having a free end adjoining the plate, said second half having a positive meeting end, a plate closing said end, said plate having an opening formed therein to receive the spring tongue, a locking tongue projecting from said plate, said tongue having gullets formed therein and shoulders formed by the gullets to engage the shoulders of the negative end.

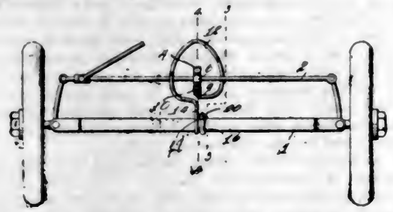
3. An improved bracelet or the like having first and second halves hinged together and capable of being sprung radially out of alinement or de-centered at their meeting ends, and a locking tongue projecting from the meeting end of the one half and adapted to enter into the end of the other half and lock said meeting ends together until one of them is forcibly radially displaced or de-centered relative to the other.

4. Improvements relating to the fastening of bracelets and the like, consisting in a bracelet having a first half, a second half hinged thereto, said first half having a negative meeting end, shoulders disposed in said negative end, said second half having a positive meeting end, a locking tongue carried by the positive end, and shoulders formed upon the locking tongue and engaging the shoulders in the negative end, said tongue holding the parts together but capable of being disengaged by forcibly moving the end of one half radially relative to the end of the other half, substantially as described.

5. Improvements relating to the fastening of bracelets and the like, consisting in a bracelet having a first half and a second half hinged together, said first half having a negative meeting end, a plate closing said end, having communicating major and minor openings formed therein, said second half having a positive meeting end, a plate closing said positive end, a locking tongue projecting from said plate, and having a root and gullets forming shoulders adjacent the root, and a spring tongue carried by the locking tongue and having a free end adjoining the closing plate of the positive end of the bracelet, the first and second halves being capable of being radially sprung out of alinement at their meeting ends to disengage the locking tongue, substantially as described.

[Claim 6 not printed in the Gazette.]

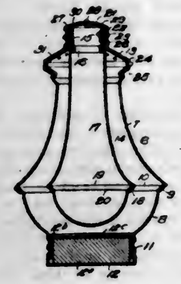
1,193,331. AUTO STEERING DEVICE. ALBERT E. YAGER, Lemmon, S. D. Filed Aug. 31, 1915. Serial No. 48,246. (Cl. 21—200.)



1. The combination with an axle of a vehicle having a longitudinally extending channel upon the front face thereof, of a safety spring provided with a forwardly extending end having a depending loop formed upon the outer extremity thereof, said loop being elongated and adapted to fit in the channel of the front face of said axle, a clamp for clamping said loop against forward movement with respect to said axle, a steering rod, said clamp provided with an inwardly extending lug for fitting within said first mentioned loop and holding said loop in detachable engagement with said axle, said safety spring provided with a rearwardly extending loop portion of material size projecting in the rear of said steering rod and being secured at one end to said steering rod in detachable engagement with said axle.

2. The combination with an axle of a vehicle having a longitudinally extending channel upon the front face thereof, of a safety spring provided with a forwardly extending end having a depending loop formed upon the outer extremity thereof, said loop being elongated and extending longitudinally of said axle and adapted to fit in the channel of the front face of said axle, a removable clamp for clamping said loop firmly against the front face of said axle and holding said loop against forward movement with respect to said axle and also holding said loop against twisting, a steering rod, said safety spring provided with a rearwardly extending loop portion projecting in the rear of said steering rod and being secured at one end to said steering rod in detachable engagement with said axle.

1,193,332. CONDIMENT-HOLDER. JOSEPH E. YOUNG and ERNEST V. YOUNG, New York, N. Y. Filed Sept. 2, 1915. Serial No. 48,649. (Cl. 65—45.)

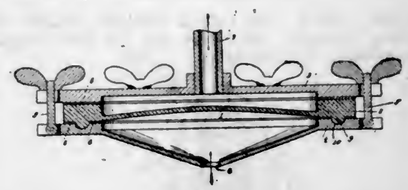


1. A condiment holder comprising,—an outer container opening at the bottom and having an apertured top, an interior container open at the top suspended within the outer container through the aperture in the top, a plug closing the bottom of the outer container and forming the base of the holder, a perforated thimble covering the open top of the inner container, a cover having perforations fitting over the top of the outer container, said top having perforations adapted to register with the perforations of the cover, and a cap detachable from the cover and having perforations adapted to register with the perforations in the thimble, substantially as and for the purpose set forth.

2. A condiment holder comprising,—an outer container open at the bottom and having an apertured enlarged top, an interior container open at the top suspended within the outer container, a sleeve securing the top of the inner container to the top of the outer container at the aperture in the top, a perforated thimble fitting on the sleeve, said thimble and sleeve having means preventing the thimble from turning on the sleeve but allowing the thimble to be pulled off or forced upon the sleeve, a cover mounted to turn on the top of the outer container, said cover having a collar surrounding the thimble, a cap threaded on to the collar and secured to the thimble so that the same is free to turn relative to the thimble but is prevented from axial displacement upon said thimble, and a plug for the bottom of the outer container forming a base for the holder, said top of the outer container having perforations adapted to register with the perforations in the cover and said cap having perforations adapted to register with the perforations in the thimble.

3. A condiment holder comprising,—an outer compartment open at the bottom and having an apertured enlarged top, an interior container open at the top, a sleeve securing the top of the inner container to the top of the outer container at the aperture thereof, whereby said inner container is suspended within the outer container and whereby the outer container is closed at the top, a perforated thimble fitting over the sleeve whereby the inner container is closed at the top, coöperating means on the sleeve and thimble preventing the turning of the thimble on the sleeve but allowing an axial movement of the thimble upon the sleeve, a perforated cover mounted to turn on the top of the outer container but prevented from axial displacement, means limiting the movement of said cover on the top of the outer container, a collar associated with said cover and surrounding the thimble, a cap detachably associated with the collar but adapted to participate in the movement of the cover on the top, means securing the cap to the thimble so that the cap is free to turn on the thimble, said cap adapted to remove the thimble over the sleeve when the cap is detached from the cover, said cap having perforations adapted to register with the perforations in the thimble, the top of the outer container having perforations adapted to register with the perforations in the cover, and a plug for the opening in the bottom of the outer container forming a base for the holder.

1,193,333. FILTER. EDWARD G. ACHESON, New York, N. Y., assignor to Acheson Corporation, New York, N. Y., a Corporation of Delaware. Filed Mar. 3, 1916. Serial No. 81,983. (Cl. 210—11.)

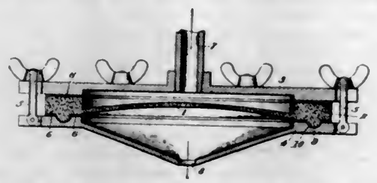


1. A filter element comprising a porous ceramic septum, and a surrounding bearing member integral therewith, said bearing member of greater thickness than said septum.

2. A filter element comprising a porous ceramic septum, and a surrounding bearing member integral therewith, said bearing member of greater thickness than said septum, and said septum wholly comprised between the upper and lower planes of said bearing member.

3. A filter element comprising an arched, porous septum, and a surrounding bearing member integral therewith, said septum wholly comprised between the upper and lower planes of said bearing member.

1,193,334. FILTRATION OF LIQUIDS. EDWARD G. ACHESON, New York, N. Y., assignor to Acheson Corporation, New York, N. Y., a Corporation of Delaware. Filed Mar. 3, 1916. Serial No. 81,984. (Cl. 210—9.)

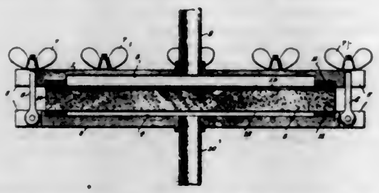


1. As a new article of manufacture, a filtering medium, constituent particles of which have been subjected to a process of deflocculation followed by baking.

2. The method of making a filtering medium which consists in subjecting a finely-divided amorphous substance to a process of deflocculation, forming the resulting mass into the desired shape, and baking the article.

3. The method of making a filtering medium which consists in stirring or kneading clay in presence of a deflocculating agent, shaping the resulting mass, and baking the article.

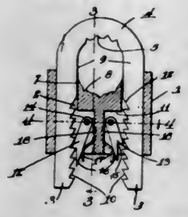
1,193,335. FILTER. EDWARD GOODRICH ACHESON, New York, N. Y., assignor to Acheson Corporation, New York, N. Y., a Corporation of Delaware. Filed June 5, 1916. Serial No. 101,811. (Cl. 210—9.)



1. A composite filter comprising a body portion of relatively permeable material, and a superficial portion, constituent particles of which have been subjected to a process of deflocculation followed by baking.

2. A composite filter comprising a body portion of relatively permeable material, and a superficial portion containing clay, constituent particles of which have been subjected to a process of deflocculation followed by baking.

1,193,336. ROPE AND CABLE CLAMP. JEROME N. ADAMS, Neuhardt, Ark. Filed Dec. 29, 1914. Serial No. 879,580. (Cl. 24—115.)



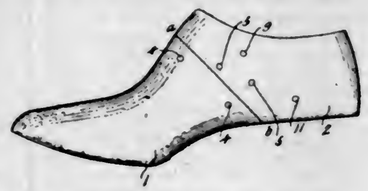
1. A device as specified, including a body portion having a plurality of parallel disposed passages therein, a shackle of substantially U-shaped configuration having its arms slidably mounted in said passages, a plurality of locking elements of different sizes having extensions thereon and engageable with said shackle, spring means engaging said extensions to maintain the locking elements normally in engagement with the shackle, said extensions affording means to permit manual disengagement of the locking elements to permit release of the shackle.

2. A device as specified, including a body portion having a plurality of perforations therein, a shackle slidably mounted in said perforations, said body portion having a plurality of laterally disposed recesses communicating with the said perforations, teeth on said shackle, and pawl locking members mounted in said lateral recesses and engageable with the teeth on said shackle, said pawls being of different sizes, and successively engaging the said teeth, as and for the purpose set forth.

3. A rope and cable clamp, including a body having a plurality of perforations therein, a shackle slidably mounted in the perforations, said body having laterally extending recesses communicating with the perforations, and locking spring pressed pawls in the recesses engageable with the arms of the shackle, said pawls extending beyond the body to facilitate manual releasing of the shackle.

4. A rope and cable clamp, including a body having parallel perforations therein, a shackle having toothed arms slidable in said perforations, said body having a plurality of recesses communicating with the parallel perforations, pawls pivoted in said recesses and engageable with the toothed arms of the shackle, said pawls being of different lengths and extending beyond the surface of the body to facilitate manual operation of the pawls to release the shackle.

1,193,337. LAST. THOMAS J. ALDRIDGE, Rochester, N. Y. Filed Mar. 15, 1916. Serial No. 84,313. (Cl. 12—135.)

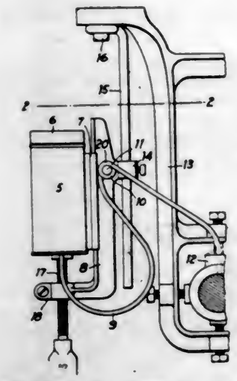


1. A shoe last consisting of toe and heel sections, a connecting plate intermediate said sections and formed with a lateral arm, connecting pins passing through the sections and said connecting plate, a stop member secured in the heel section against which the connecting plate arm aforesaid impinges to limit relative movement of said section, the heel section having a transverse bore adjacent to an edge of the connecting plate and substantially parallel thereto, and a spring in said bore having one end fixed to the heel section and the other end attached to the lateral arm aforesaid for holding the section in normal position.

2. A shoe last consisting of relatively movable toe and heel sections, a connecting plate intermediate said sections and having a rearwardly extending arm, guide pins extending through said sections and the connecting plate whereby to permit of relative movement of said sections, a spring connected to one of said sections and to the connecting plate arm tending to return the sections to normal registering position, and a stop pin carried by one of said sections, the arm aforesaid having an open end slot to receive the stop pin whereby to limit relative movement of said sections.

1,193,338. LUBRICATOR. FRANK R. ASHTON, Rochester, N. Y. Filed Apr. 22, 1915. Serial No. 23,087. (Cl. 184—38.)

1. A lubricator having, in combination, an oil-receptacle; a guideway on which the oil-receptacle is vertically movable; means for supporting the guideway in overhead position alongside the bearing to be lubricated; a conduit communicating with the oil-receptacle and extending therefrom to said bearing; and means accessible from below for raising the oil-receptacle to expel the oil through said conduit.

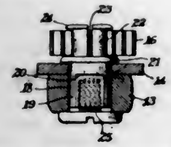


2. A lubricator having, in combination, an oil-receptacle; means for supporting the oil-receptacle adjacent the bearing to be lubricated and for guiding the oil-receptacle in substantially vertical movement; a conduit communicating with the oil-receptacle and extending from the bottom of the receptacle to a point which is above said bottom in all but the highest position of the receptacle, and from said point downwardly to the bearing; and means for gradually elevating the oil-receptacle to cause the oil to overflow said point in the conduit and run to the bearing.

3. A lubricator having, in combination, an oil-receptacle; a guideway on which the oil-receptacle is vertically movable; means for supporting the guideway, in overhead position, alongside a bearing to be lubricated; a screw engaging the bottom of the oil-receptacle and accessible from below, to elevate the receptacle; and a flexible tube extending, from the bottom of the receptacle, to a point which is higher than said bottom when the receptacle is in its lowest position, and thence downwardly to the bearing.

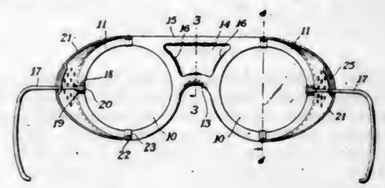
4. A lubricator having, in combination, an oil-receptacle which is movable upwardly; a conduit communicating with the receptacle and having a stationary part which is as high as the upper part of the receptacle when the latter is in its lowermost position, the conduit extending, from said part, downwardly to the bearing which is to be lubricated; and means for gradually elevating the receptacle to cause the oil to overflow through the conduit.

1,193,339. EYEGLASS-MOUNTING. GUSTAV A. BADER, Rochester, N. Y. Filed July 12, 1915. Serial No. 39,421. (Cl. 88—50.)



In an eye-glass mounting, the combination with a bridge provided with a non-circular opening and a flat surface surrounding the opening, of a pivot stud comprising a portion fitting in and conforming to the non-circular opening, a cylindrical bearing portion, a shoulder at the junction of the bearing portion with the non-circular portion, said shoulder engaging the flat surface on the bridge, and a flange spaced from said flat surface; a screw engaging the post and the bridge and holding the shoulder against the flat surface, a nose-clamp lever pivoted to the stud and engaging the flange and the flat surface on the bridge; and a spring secured at one end to the stud and at the other end to the nose clamp lever.

1,193,340. GOGGLES. GUSTAV A. BADER, Rochester, N. Y. Filed Sept. 15, 1915. Serial No. 50,907. (Cl. 2—149.)



1. Eyeglasses comprising a frame formed from a single piece of sheet material and provided with lens seats, flanges bent outwardly about the seats to secure the lenses, and a nose-engaging flange on the under side of the frame between the lens seats bent outwardly from the frame.

2. Eyeglasses comprising a frame formed of a single piece of sheet material and provided with lens seats, flanges bent from the edges of the frame about the lens seats to secure the lenses to their seats, and a bridging portion, the upper edge of the bridging portion being rolled to provide a portion for bearing against the forehead, and the lower portion of the bridging portion being rolled to engage the nose.

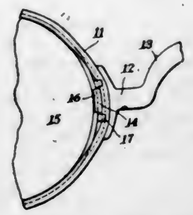
3. Eyeglasses comprising lens frames and a bridging portion connecting the lens frames and formed from a single piece of sheet material, the upper edge of the bridging portion being rolled to bear against the forehead, and the lower portion of the bridging portion being rolled to engage the nose.

4. Eyeglasses comprising a frame formed from a single piece of sheet material and provided with lens seats, flanges bent from the sheet material about the seats, and a bridging portion having a rolled upper edge forming a continuation of the flanges about the lens seats.

5. Eyeglasses comprising a frame formed from a single piece of sheet material and provided with lens seats, a bridging portion connecting the lens seats, flanges bent from the edges of the sheet material about the seats except at the bridging portion, and a portion pressed from the bridging portion and having edges adapted for cooperation with lenses on the seats.

[Claims 6 to 8 not printed in the Gazette.]

1,193,341. LENS-MOUNTING. GUSTAV A. BADER, Rochester, N. Y. Filed Dec. 18, 1915. Serial No. 67,587. (Cl. 88—47.)

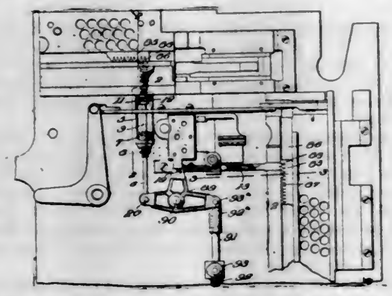


1. In a lens-mounting, the combination of a lens and a continuous rim therefor, one of these parts having a groove for the reception of the other, and the rim being large enough to slip over the lens; and a filler interposed between the rim and a portion of the periphery of the lens and adapted to take up slack between the rim and the lens and hold them in firm engagement.

2. In a lens-mounting, the combination of a lens and a continuous rim therefor, one of these parts having a groove for the reception of the other, and the rim being large enough to slip over the lens; and a filler interposed

between the rim and a portion of the periphery of the lens and adapted to take up slack between the rim and the lens and hold them in firm engagement, said filler having lugs which engage one of the adjacent parts to prevent lateral displacement of the filler.

1,193,342. CENTERING-BAR LOCK FOR TYPE-CASTING MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Nov. 28, 1914. Serial No. 873,583. (Cl. 101—200.)



1. In a type casting machine, a locking mechanism for the die case centering devices embodying a detent bar, a sectional locking bolt having relatively light and heavy sections, the forward section being the lighter section which coöperates with the bar, a spring for holding the sections extended with relation to each other, and an operating lever connected with the heavier rear section of the bolt.

2. In a type casing machine, a locking mechanism for the die case centering devices embodying a detent bar, a locking bolt formed in sections, the forward section being provided with detent teeth for coöperation with the bar, a spring interposed between the sections for holding them extended with relation to each other, shoulders for limiting the relative movement of the sections, and an operating lever connected with the rear section for controlling the bodily movements of the bolt.

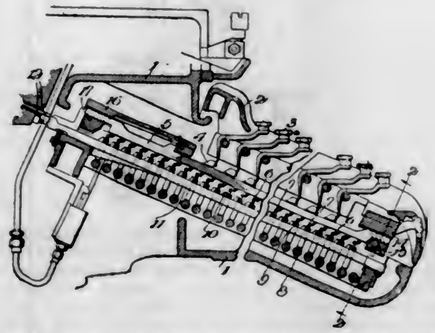
3. In a type casing machine, locking mechanism for the die case centering devices embodying two detent bars, a sectional locking bolt for each, each of said locking bolts embodying a forward lighter section for coöperation with its bar and a rear heavier section, connections intermediate said sections whereby they are permitted a limited movement with relation to each other, and a spring for holding the sections extended, an operating lever pivotally connected with the rear section of each bolt and a spring of greater strength than either of the bolt-extending springs for advancing said operating lever and moving the bolts into engagement with the detent bars.

4. In a type casting machine, the combination with a plurality of locking bars having detent teeth thereon, a corresponding plurality of locking bolts, each embodying a spring pressed member having teeth thereon for cooperation with the teeth on the locking bars, and means for advancing said locking bolts embodying a spring exerting a pressure sufficient to overcome the resistance of at least one of the spring pressed sections of the locking bolts.

5. In a type casting machine, a locking mechanism for the die case centering devices embodying a plurality of locking bars having detent teeth thereon, a corresponding plurality of locking bolts each embodying a forward section having detent teeth thereon for coöperation with the teeth on the bars, a rear section movably connected with the forward section, stop shoulders for limiting the relative movements of the sections, and a spring for yieldingly advancing the forward section, and means for simultaneously advancing said locking bolts embodying a spring exerting a pressure sufficient to overcome at least the resistance offered by one of the yielding sections of the bolts.

[Claims 6 to 9 not printed in the Gazette.]

1,193,343. KEYBOARD-MACHINE. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Jan. 11, 1915. Serial No. 1,657. (Cl. 164—112.)



1. In a keyboard machine, the combination with a series of actuating keys, a series of relatively movable parallel bars actuated by said keys, and guiding members for said bars embodying spacing projections located between alternate bars to form side guides therefor, said projections forming edge guides for the intermediate bars.

2. In a keyboard machine, the combination with a series of actuating keys, guiding members embodying alternate projections and recesses and a series of parallel key controlled bars mounted in said guiding members with alternate bars in the recesses, whereby lateral pressure between the bars is prevented.

3. In a keyboard machine, the combination with a series of actuating keys, a series of relatively movable parallel bars actuated by said keys, and guiding members for said bars embodying spacing projections located between alternate bars to form side guides therefor, said projections being of greater width than the thickness of the bars and forming edge guides for the intermediate bars.

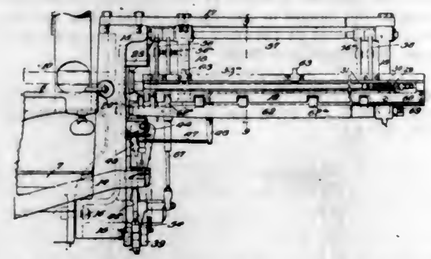
4. In a keyboard machine, the combination with a series of actuating keys, guiding members embodying alternate projections and recesses, and a series of parallel key controlled bars mounted in said guiding members with alternate bars in the recesses and intermediate bars coöperating at the edges with the projections, said bars being of less thickness than the width of the projections and recesses, respectively.

5. In a keyboard machine, the combination with a series of actuating keys, a series of relatively movable parallel bars actuated by said keys, and top and bottom guiding members for said bars embodying spacing projections located between alternate bars to form side guides therefor, said projections forming edge guides for the intermediate bars and the projections on the upper guiding member being located opposite the recesses between projections on the lower guiding member.

[Claims 6 and 7 not printed in the Gazette.]

1,193,344. SHEARING MECHANISM FOR LEAD AND RULE STRIP CASTING MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Sept. 30, 1915. Serial No. 53,379. (Cl. 199—10.)

1. In apparatus for producing printers' leads and rules, the combination of the following instrumentalities, to wit: means for alternately casting and feeding successive sections of an integral strip, whereby the strip is at rest during the casting interval, a cutter to which the strip is fed, and means for actuating the cutter to sever the strip during an interval when a cast is being made and the strip is at rest.



2. In apparatus for producing printers' leads and rules, the combination of the following instrumentalities, to wit: means for alternately casting and feeding successive sections of an integral strip, whereby the strip is at rest during the casting interval and the feed movements correspond to the length of the sections cast, a cutter to which the strip is fed movable longitudinally of the strip, means for adjusting the cutter longitudinally of the strip preliminary to the cutting operation, and means for actuating the cutter to sever the strip during an interval when a cast is being made and the strip is at rest.

3. In an apparatus for producing printers' leads and rules, the combination with means for casting successively sections of an integral strip, and means for feeding the strip intermittently distances corresponding to the length of the sections cast and allowing the strip to remain at rest while a cast is being made, of a cutter for severing the strip into sections, means for actuating the cutter while the strip is at rest, and means for adjusting the cutter longitudinally of the strip preliminary to each cutting operation for determining the length of the severed section.

4. In apparatus for producing printers' leads and rules, the combination with means for casting successively sections of an integral strip, and means for feeding the strip intermittently distances corresponding to the length of the sections cast and allowing the strip to remain at rest while a cast is being made, of a cutter for severing the strip into sections longitudinally of the strip, means for actuating the cutter to sever the strip while at rest, and means for adjusting the cutter longitudinally of the strip during feed movements of the strip.

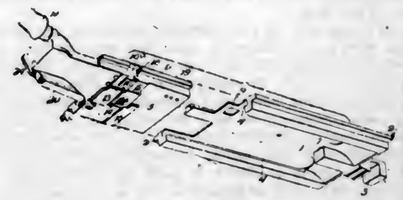
5. In apparatus for producing printers' leads and rules, the combination with means for casting successively sections of an integral strip, and means for feeding the strip intermittently distances corresponding to the length of the sections cast and allowing the strip to remain at rest while a cast is being made, of a cutter for severing the strip into sections movable longitudinally of the strip, actuating means for the casting, feeding and cutting means, timed to actuate the cutter while the strip is at rest, and means controlled by the advance movement of the strip for adjusting the cutter longitudinally of the strip preliminary to a cutting operation.

[Claims 6 to 26 not printed in the Gazette.]

1,193,345. MATRIX-HOLDER FOR TYPE-CASTING MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Dec. 16, 1915. Serial No. 67,222. (Cl. 101—200.)

1. A holder for matrices of type casting machines, embodying opposing movable clamping jaws, a lever coöperating with both jaws to move them in opposite directions, and a spring for holding the jaws advanced with a yielding pressure.

2. A holder for matrices of type casting machines embodying opposing movable clamping jaws, a lever with which said jaws coöperate at separated points in the length of the lever, a spring coöperating with the lever for imparting movement to the jaws in opposite directions, and means for moving the lever against the tension of the spring.



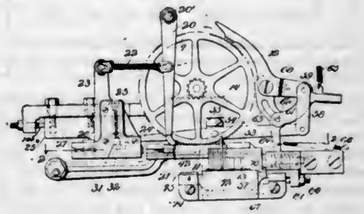
3. A holder for matrices of type casting machines embodying opposing movable clamping jaws, a lever with which both of the jaws are pivotally connected at points spaced from each other, in the direction of the length of the lever, a spring for moving the lever in one direction and a finger piece for moving the lever in the opposite direction whereby the jaws are moved toward and from each other.

4. A holder for matrices of type casting machines embodying opposing movable clamping jaws, a lever pivotally connected with the respective jaws at points spaced apart in the direction of the length of the lever, said lever being free to move on axes in proximity to the jaws, a spring for moving the lever in one direction and a finger piece for moving the lever in the opposite direction whereby the jaws are moved successively into open or closed positions.

5. A holder for matrices of type casting machines embodying opposing movable clamping jaws, a lever having a plurality of pivotal axes and coöperating with the respective jaws in proximity to the respective axes, a spring for holding the lever under spring pressure in one direction, and means associated with the lever for moving it against the tension of the spring whereby the jaws will be caused to move successively in opposite directions.

[Claims 6 to 12 not printed in the Gazette.]

1,193,346. UNITS-RACK-STOP MECHANISM FOR COMPOSING-MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Feb. 17, 1916. Serial No. 78,983. (Cl. 164—112.)



1. In a machine of the character described, the combination with a units wheel and a units rack movable into and out of engagement with the units wheel and movable longitudinally to control the rotation of the wheel, of means for returning the units rack to its initial position comprising a lever engaging at one end thereof with the rack, and a spring acting upon the lever at a point which is nearer the fulcrum thereof than is the rack engaging end thereof, and means for arresting the forward and return movements of the rack, said last mentioned means comprising yielding impact buffers in position for receiving the impact blows of the rack.

2. In a machine of the character described, the combination with a units wheel, a units rack movable into and

out of engagement with said wheel and movable forwardly by said wheel while in engagement therewith to control the rotation of the wheel, and means for returning said units rack while out of engagement with the units wheel, to its initial position, of means for arresting both the forward and return movements of the rack substantially without rebound, said last mentioned means comprising yielding impact buffers in position for receiving the impact blows of the rack.

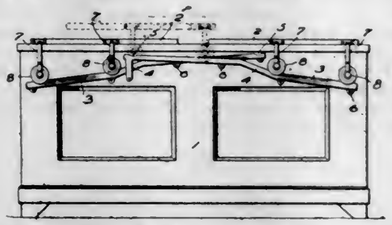
3. In a machine of the character described, the combination with a units wheel, a units rack movable into and out of engagement with said wheel and movable forwardly by said wheel while in engagement therewith to control the rotation of the wheel, and rearwardly by spring action when out of engagement with the wheel, of buffer means for absorbing the impact blows of said rack substantially without rebound, said means comprising yielding mechanism, the inertia of which is such as substantially to counteract the force of impact of the moving parts upon said mechanism, and a fixed stop with which the rack contacts to determine its initial retracted position.

4. In a machine of the character described, the combination with a units wheel and a units rack movable into and out of engagement with the units wheel and movable longitudinally to control the rotation of the wheel, of means for returning the units rack to its initial position comprising a lever pivoted at one end and directly engaging at the other end with a shoulder upon the units rack, and a spring operative upon an intermediate portion of the said lever.

5. In a machine of the character described, the combination with a units wheel and a units rack in engagement with and movable forwardly longitudinally to control the rotation of the wheel, of means for arresting the forward movement of the rack, said means comprising a group of laterally yielding stop bars, said bars being individually movable into and out of the path of the rack, and a yielding impact buffer for supporting the stop bars in opposition to the impact blow of the units rack.

[Claims 6 to 12 not printed in the Gazette.]

1,193,347. ICE-BOX. FREDERICK H. BAUER, Fort Worth, Tex. Filed Mar. 8, 1916. Serial No. 82,971. (Cl. 211—26.)

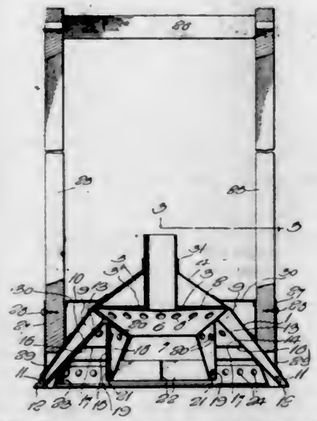


1. The combination with an ice box, of a pair of covers therefor, tracks disposed on the sides of the ice box and inclined from their inner to their outer ends and having their inner ends extended past each other, and traveling members secured to the covers at the outer ends of the same and between the centers thereof and the inner ends of the same to engage the tracks and permit either cover to be moved to a position over the other cover.

2. The combination with an ice box, of a pair of covers therefor, tracks upon the sides of the ice box having their inner ends extended past each other and inclined downwardly from their inner to their outer ends, stops at the inner ends of the tracks, brackets secured to the side edges of the covers and extending laterally therefrom and turned downwardly beyond the sides of the ice box, said brackets being located at the outer ends of the covers and between the inner ends and the centers of the same, and rollers carried by the lower extremities of said brackets and engaging the tracks, the rollers and brackets on one cover being out of longitudinal alinement with the rollers and brackets on the other cover.

3. The combination with an ice box, of inclined tracks secured to the sides of the same and having their inner upper ends extended past each other, the tracks on one side of the ice box having upstanding flanges and the tracks at the other side of the ice box having smooth upper surfaces, covers for the ice box, and traveling members carried by said covers and adapted to ride upon said tracks, the traveling members at one side being constructed to engage the flanges of the tracks on that side and the traveling members on the other side being smooth-faced to engage the smooth-face track.

1,193,348. WASHING-MACHINE. WILLIAM W. BAYS, Charlotte, N. C. Filed Apr. 6, 1916. Serial No. 89,488. (Cl. 68—5.)

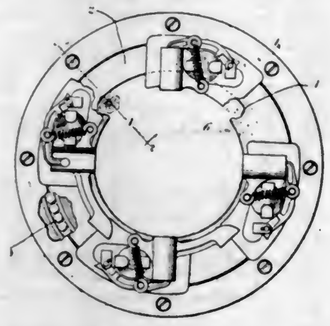


1. In a device of the class described, a conical shaped member, a funnel shaped member secured to the upper edge thereof, an inner cone secured at its upper edge to the lower edge of said funnel shaped member, an annular band secured to the funnel shaped member by one edge and at its other edge to the inner cone, said band having a plurality of inlet openings adjacent its bottom and a plurality of outlet openings adjacent its upper edge, and a handle for operating said device.

2. In a device of the class described, a conical shaped member, a funnel shaped member secured to the upper edge thereof, an inner cone secured at its upper edge to the lower edge of said funnel shaped member, an annular band secured to the funnel shaped member at one edge and at its other edge to the inner cone, said band having a plurality of inlet openings adjacent its bottom and a plurality of outlet openings adjacent its upper edge, a horizontal partition connecting said conical shaped member and said band to form a chamber, said partition having a plurality of outlet openings, and a handle for operating said device.

3. In a device of the class described, an outer cone, a funnel shaped member depending from the inner wall thereof and having a plurality of openings adjacent its outer edge, a conical shaped member secured by its lower edge to the lower edge of said cone, its other edge being secured to said funnel shaped member at a point spaced inwardly from said openings to form a chamber, said chamber having a plurality of outlet openings to permit the escape of water entering through the other openings, an inner cone secured at its upper edge to the lower edge of said funnel shaped member, an annular band secured to the funnel shaped member at one edge and at its other edge to the inner cone, said band having a plurality of inlet openings adjacent its bottom and a plurality of outlet openings adjacent its upper edge, a horizontal partition connecting the said conical shaped member and said band to form a chamber, said partition having a plurality of outlet openings, said conical shaped member also having a plurality of apertures opening into said last mentioned chamber, and a handle for operating said device.

1,193,349. DYNAMO-ELECTRIC MACHINE. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Sept. 16, 1912. Serial No. 720,532. (Cl. 171—318.)



1. In combination, a shiftable member provided with stops, a fixed member, said fixed member being provided with a bolt adapted to be located between said stops and to coöperate therewith, said bolt being provided with spring pressed means biased to move into position between said stops, and normally concealed signal means to indicate when said spring pressed means is not in its biased position.

2. In combination, a shiftable brush mechanism and a spring pressed element to limit movement thereof, and automatically movable into the desired relation therewith upon rotation of said mechanism, said spring pressed element being provided with a normally concealed signal means.

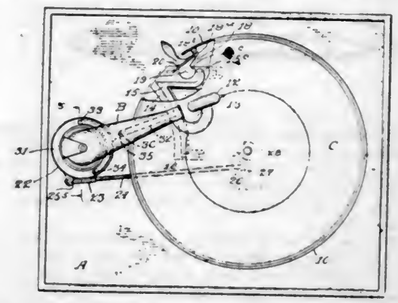
3. In combination, a movable brush carrier having a slot therein, and spring-pressed means for limiting the movement of said brush carrier adapted to automatically snap into position in said slot upon movement of said brush carrier, said spring pressed means being provided with normally inclosed signal means.

4. In combination, a casing for a dynamo electric machine, a brush mechanism movable therein and having a slot therein, and a stop for said brush mechanism adapted to be inserted from the exterior of said casing and having a spring pressed plunger therein adapted to snap into position in said slot upon rotation of said movable element, said plunger being provided with normally concealed signal means to indicate when said plunger is not in its biased position.

5. In combination, a dynamo electric machine casing, a stationary brush ring carried therein, a movable brush ring rotatably mounted in said stationary ring, said movable ring having a slot therein, and a spring pressed plunger extending through the end of said casing and adapted to snap into said slot upon the rotation of said inner ring, said plunger being provided with normally concealed signal means.

1,193,350. PHONOGRAPH-CONTROLLING DEVICE. BURR B. BLOOD, Chicago, Ill., assignor to The Rajah Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1913. Serial No. 761,581. Renewed Oct. 9, 1915. Serial No. 55,110. (Cl. 74—46.)

1. In a phonograph controlling device, the combination with a rotating member and operating mechanism therefor and a traveling member, a brake-member, means whereby said brake-member is held out of braking-position, means operatively connected with the traveling member so as to be moved thereby, and means intermediate of the rotating member operating mechanism and said second mentioned means whereby the latter is given movement at an angle to the normal direction of travel thereof so that the first mentioned means is moved out of engagement with the brake-member and the latter permitted to move into braking relation with the rotating member.



2. In combination with a rotating member, operation mechanism therefor, and a traveling member, a controlling device comprising a pivotally mounted brake-member adapted to engage with the rotating member, means whereby said brake-member is held out of braking position, pivotally mounted means operatively connected with the traveling member so as to be controlled thereby, and rotatably mounted means arranged intermediate of the rotating member operating mechanism and the second mentioned means whereby the second mentioned means is given movement at an angle to the normal direction of the travel thereof when the traveling member becomes stationary so that the first mentioned means is moved out of engagement with the brake-member and the latter permitted to move into braking engagement.

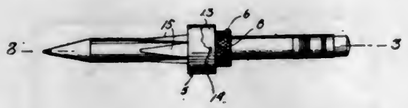
3. In combination with a rotating member and a traveling member, a controlling device comprising a brake-member, a spring controlled member normally engaging said brake-member to hold the same out of operative position, a pivotally mounted lever adapted to be controlled by said traveling member, and rotating mechanism operatively connected with said lever and arranged to move with the traveling member, said mechanism, when the traveling member is stationary being adapted to give movement to the lever in a direction at an angle to the normal direction of travel whereby said lever will move said spring controlled member out of holding engagement with the brake-member.

4. In combination with a rotating member, operating mechanism therefor, and a traveling member, a controlling device comprising a brake-member adapted to engage with the rotating member, a movable arcuate member normally held in engagement with said brake-member to hold the latter out of braking position, a pivotally mounted lever operatively connected with the traveling member while one end of the lever is adapted to move in juxtaposition to said arcuate member, and rotating means operatively connected with said lever and with the rotating member operating mechanism, said rotating means being arranged to move the end of said lever against said arcuate member when the traveling member becomes stationary, thereby moving the arcuate member out of holding engagement with the brake-member.

5. In combination with a rotating member, rotating mechanism therefor, and a traveling member, a controlling device comprising a brake-member normally adapted to form braking engagement with the rotating member, a spring controlled pivoted member normally holding said brake-member in inoperative position, a bifurcated lever pivotally secured at one of the bifurcations and in operative engagement with the traveling member, and means adapted to be rotated by the rotating member rotating mechanism and in operative engagement with said lever whereby the latter is forced against said spring controlled pivoted member so as to release the brake-member when the traveling member becomes stationary.

[Claims 6 to 16 not printed in the Gazette.]

1,193,351. PENCIL-SHARPENER. ANDREW BOSSHARDT, York, Pa. Filed June 16, 1914. Serial No. 845,448. (Cl. 120—15.)



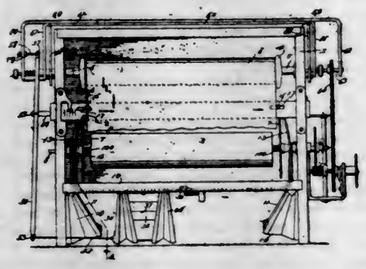
1. In combination, a body portion arranged to engage a pencil, means on said body portion to clamp the same to the pencil, knives pivotally mounted on the body portion, said clamping means being constructed and arranged to move the knives to operative positions when operated to release the pencil.

2. In combination, a body portion constructed and arranged to engage a pencil, knives pivoted to said body portion, means on said body portion to grip the pencil and means to actuate said gripping means and on the reverse movement to move the knives to operative positions.

3. In combination, a body portion of annular formation and having a tubular member extending therethrough, said tubular member having resilient fingers on the rear end thereof, wedges on the resilient fingers, a collar mounted in the body portion and having a cam face on its forward end, knives pivotally mounted in the body portion having extensions engaging the cam face, means for causing the collar to move the knives to operative positions when moved in one direction, and to actuate the resilient fingers to grip the fingers when moved in the other direction.

4. In combination, an annular body portion adapted to receive a pencil, knives pivoted thereto, means rotatably mounted in said body portion to throw the knives into operative position, said means maintaining the knives in such position during the reverse movement of the body portion in one direction to cut the point of a pencil.

1,193,352. FLANGE-CONTROLLING MECHANISM. GEORGE P. BRAND, New York, N. Y. Filed Apr. 13, 1915. Serial No. 21,164. (Cl. 84—161.)



1. A take-up spool with relatively movable flanges, and means under control of the surface of a note sheet for moving said flanges.

2. In a device of the character described, a take-up spool having movable flanges, pneumatic means for moving the flanges, and means controlled by the surface of a note sheet for causing the pneumatic means to move said flanges.

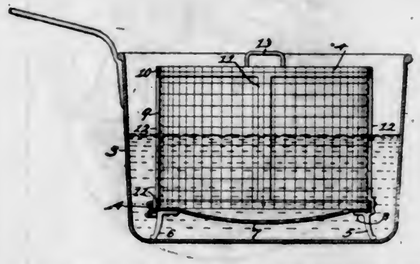
3. A take-up spool with relatively movable flanges and pneumatic means under control of the surface of a note sheet for moving said flanges.

4. A spool having movable flanges, means under control of the surface of a note sheet, and pneumatic means and connections whereby said flanges and note sheet controlled means are actuated simultaneously.

5. A spool having movable flanges, means under control of the surface of a note sheet, and pneumatic means and connections whereby said flanges and note sheet controlled means are actuated simultaneously in opposite directions.

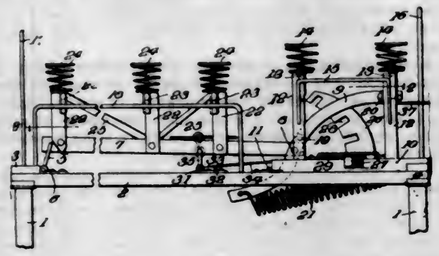
[Claims 6 to 28 not printed in the Gazette.]

1,193,353. COOKING UTENSIL. MARY CORNELIA BROWN, Fargo, N. D. Filed Sept. 8, 1915. Serial No. 49,498. (Cl. 53—1.)



As an article of manufacture, a foraminous vessel, handles at the top thereof, a plurality of supporting legs therefor provided, each, with an inwardly directed lug, a perforate bottom plate slidable on said lugs, a supplemental leg beneath one edge of said bottom plate, and a catch between said bottom plate and said vessel.

1,193,354. INVALID-BED. RICHARD S. BROWN, Amboy, Ill. Filed July 13, 1915. Serial No. 39,613. (Cl. 5—43.)

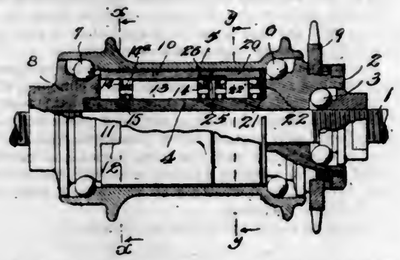


1. In combination, a main frame, a swinging section mounted upon the main frame, notched bars rising from the main frame at the sides of the swinging section, a latch bar slidably mounted upon the swinging section and adapted to engage the notched bars to hold the swinging section in adjusted position, and operating means for the latch bar mounted on the main frame.

2. In combination, a main frame, a swinging section mounted upon the main frame, means normally tending to elevate the swinging section, notched bars projecting from the main frame, a latch bar mounted upon the swinging section and adapted to engage the notched bars to hold the swinging section in adjusted position, an operating member mounted upon the main frame, and connecting means between the operating member and latch bar for throwing the latter into and out of engagement with the notched bars.

3. In combination, a main frame, a section hinged to the main frame, spring means normally tending to elevate the hinged section, a notched bar attached to the main frame, a latch mounted upon the hinged section and adapted to coöperate with the notched bar to hold the hinged section in an adjusted position, a shaft mounted upon the main frame and having crank portions, connecting means between one of the crank portions and the latch, and operating means connected with the other crank portion.

1,193,355. COASTER-BRAKE. WALTER S. BULLARD, Middletown, Ohio. Filed Oct. 10, 1913. Serial No. 794,436. (Cl. 208—57.)



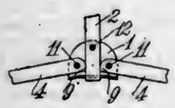
1. In a coaster brake, the combination of an axle, a driver, a hub, a brake holder, an expansible brake sleeve engaging the holder within the hub, an expansible drive clutch member within the hub, brake-operating means between the brake and driver to operate the brake upon reverse movement of the driver, driving-clutch operating-means between the driving clutch member and the driver to connect said clutch member with the hub upon forward movement of the driver, and a retarder for resisting forward rotation of said driving clutch member.

2. In a coaster brake, the combination of an axle, a driver having a sleeve extending along the axle, a wheel hub, a brake holder on the axle, an expansible brake sleeve within the hub engaging said brake holder, an expansible driving clutch sleeve within the hub, a retarder for resisting forward movement of said driving clutch sleeve, means comprising connectors intermediate the driver sleeve and brake and intermediate the driver sleeve and driving clutch member for expanding the brake upon rearward rotation of the driver and expanding the driving clutch member upon forward rotation of the driver, said hub being entirely free to rotate in either direction when the driver is held stationary.

3. In a coaster brake, the combination of an axle, a driver having a sleeve extending along the axle, a wheel hub, a brake holder on the axle, an expansible brake sleeve within the hub engaging said brake holder, an expansible driving clutch sleeve within the hub, a retarder for resisting forward movement of said driving clutch sleeve, cam-shaped connectors between said driver sleeve and brake sleeve arranged so that rearward movement of the driver expands said brake sleeve, and similar connectors between the driver sleeve and driving clutch sleeve arranged so that forward rotation of the driver expands said driving clutch sleeve.

4. In a coaster brake, the combination of an axle, a driver, a hub, a brake holder, a brake engaging the holder to prevent rotation of the brake, an expansible driving clutch sleeve within the hub, brake operating means between the brake and driver to operate the brake upon reverse movement of the driver, driving clutch operating means between the driving clutch member and the driver to connect said clutch member with the hub upon forward movement of the driver, and a retarder to slightly resist forward rotation of said driving sleeve.

1,193,356. GARMENT-HANGER. WARNER R. BUXTON, Springfield, Mass. Filed Feb. 1, 1915. Serial No. 5,359. (Cl. 211—13.)



A folding garment hanger, comprising, a suspension hook and two foldable arms, a central union having two ears spaced apart just enough to receive therebetween the ends of the arms and the shank of the hook all in the same plane, pivot pins connecting the ears on which the arms are respectively pivoted, means to rigidly bind the hook shank to the ears between and close to the pivot pins, said hook and said union forming stops whereby the arms may fold together substantially parallel to the hook shank or swing outwardly substantially at right angles thereto, all constructed and arranged so that the individual parts may be made of small dimensions.

1,193,357. GARMENT-HANGER. WARNER ROCKWELL BUXTON, Springfield, Mass. Filed Mar. 8, 1915. Serial No. 12,929. (Cl. 211—13.)



1. A garment hanger, comprising, a union formed with two spaced plates, an upstanding hook portion attached centrally to the union, foldable arms pivoted between the plates and at the ends of the union, each arm having an outer portion, a U-shaped member within which the arm and its outer portion is pivoted in substantially abutting relation, all constructed and arranged so that said arms may be folded into parallel relation in the same plane as the shank of the hook member, whereby certain ends of the arms will be received within the spaced plates of the union and the U-shaped member will cover the other ends of the arms to form a flat compact hanger.

2. A garment hanger, comprising, a U-shaped union, an upstanding hook portion fastened transversely between the walls thereof, foldable arms pivoted between the walls of said union near the ends thereof, each of said arms arranged to swing through an arc of substantially 90°, being limited by the stops provided by the bottom of the union and said hook, an outer portion for each arm pivotally connected thereto by a U-shaped link which embraces the adjacent ends of the arm and its outer portion, said portion arranged to swing through an arc of substantially 180° with respect to its arm, a stop provided on said link adapted for engagement by either of the connected portions to turn the link and prevent binding, all constructed and arranged so that the arms may be folded into adjacent and parallel relation with the hook portion in a single plane between the walls of said union.

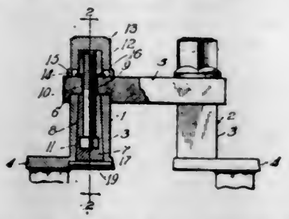
3. A metal garment hanger, comprising, a union, made up of flat metal bent in U-shaped form, a flat upstanding hook arm, the shank of which is fastened transversely and centrally between the walls of the union, said hook arm having an offset upper portion bent into a relatively large hook of a width about equal to the length of the union, a flat foldable arm at each end of the union with its inner end pivoted between the walls of the union near the end thereof, the pivotal movement of each arm being limited by the bottom wall of the union and said hook, and at the outer end of each arm a flat foldable portion pivotally connected thereto by a U-shaped flat link within the walls of which the adjacent ends of the arm and foldable portion are pivoted for movement, limited in one direction by the bottom walls of the link and in the other by a stop on the link intermediate its pivots all constructed and arranged so that the arms may be folded into the same plane between the walls of the union with the offset hook portion arranged flat against said arms or folded into spread out position to support a garment.

4. A foldable garment hanger comprising a central union made up of flat metal bent in U-shaped form, a flat upstanding hook arm, the shank of which is fastened transversely to and centrally between walls of said union, said hook arm having an offset upper portion bent into a relatively large hook of a width equal to the length of the union, a flat foldable arm at each end of the union with its inner end pivoted between the walls of the union near the end thereof, said arm being limited in movement by

the side of said hook and the bottom wall of the union, and at the outer end of each arm a flat foldable portion connected thereto by a U-shaped flat link within the walls of which the adjacent ends of the arm and foldable portion are pivoted for movement, limited in one direction by the bottom walls of the link and in the other by a stop on the link intermediate its pivot, said stop disposed on the interior walls of said link and arranged to limit the movement of either the arm or foldable portion relative thereto to 90°, all constructed and arranged so that the arms may be folded into the same plane between the walls of the union with the offset portion of the hook portion arranged flat against said arms or folded into spread out position to support a garment.

5. A garment hanger, adapted to be folded into thin, flat and compact form, comprising in combination, a flat upstanding hook arm, a central union made of flat metal bent to form upstanding ears spaced apart just sufficiently to receive said arm therebetween, the latter being rigidly secured to and arranged centrally and transversely between the said spaced ears, a flat foldable arm at each end of the union with its inner end pivoted between the ears near the ends thereof, the pivotal movement of each arm being limited by the bottom wall of the union and said hook, and at the outer end of each arm, a flat foldable portion pivotally connected thereto by a U-shaped link within the walls of which the adjacent ends of the arm and foldable portion are pivoted for movement, limited in one direction by the bottom walls of the link and in the other by a stop on the walls of the link intermediate its pivots, said hook, arms and foldable portions of equal width and thickness so that the arms and foldable portions may be folded into the same plane and in parallel relation with said hook between said ears, whereby the hanger may be folded into flat, thin and substantially rectangular form.

1,193,358. ELECTRICAL TERMINAL CONNECTION. CAMPBELL C. CARPENTER, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Nov. 19, 1914. Serial No. 872,973. (Cl. 204—52.)



1. Means for attaching a battery connector to a battery terminal lug including in combination, the battery terminal lug of relatively soft acid-proof material, said terminal having an opening therein, an insert of relatively hard conducting material in said opening, a battery connector, and means exerting a stress on said relatively hard material for clamping said connector to said terminal, said insert being readily removable from said terminal without mutilating the parts, whereby said insert may be renewed or repaired without destroying the terminal.

2. In combination, a battery terminal having a tapered aperture therethrough, a conducting member to be clamped to said terminal, a tapered screw-threaded member of relatively hard material removably fitted in said aperture, and a threaded nut carried by said tapered member, said tapered member and threaded nut coöperating to clamp said conducting member to said terminal.

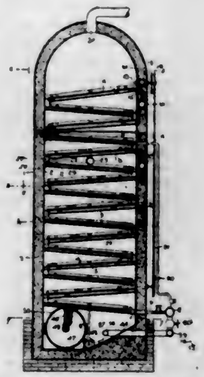
3. In combination, a battery terminal having a tapered opening therethrough, a conducting member to be clamped to said terminal, a tapered threaded member removably fitted in said opening, and a threaded stud coöperating with said threaded tapered member, said tapered member and threaded stud coöperating to clamp said conducting member to said terminal.

4. In an acid-proof battery terminal connection, in combination, a terminal having an aperture formed therethrough, a conducting member, and a clamping device attached to said terminal for clamping said conducting member thereto, said device having a portion fitted in said aperture, said portion being so shaped that it can be removed only from one end of said aperture.

5. In combination, a battery terminal having an aperture therethrough, a conducting member, and a clamping device for clamping said conducting member to said terminal, said clamping device having a threaded portion fitted in said aperture, said portion being removable from one end only of said aperture, said clamping device also having a threaded portion adapted to coöperate with the threaded portion fitted in said aperture to clamp said conducting member to said terminal.

[Claims 6 to 9 not printed in the Gazette.]

1,193,359. CONTINUOUSLY-OPERATING VACUUM-EVAPORATOR. JOAO DO AMARAL CASTRO, Sao Paulo, Brazil. Filed Dec. 17, 1915. Serial No. 67,390. (Cl. 127—9).



1. A vacuum evaporator comprising a plurality of superimposed inclined shelves or pans down which the liquid to be evaporated flows from the top to the bottom, each pan having a chamber, and the chambers being connected together in series relation, and means connected with the lowermost pan for supplying heat thereto, whereby the heat rises successively through the chambers in a direction counter to the flow of the cold liquid down the pans.

2. A vacuum evaporator comprising a chamber, means for connecting the chamber with a vacuum-producing device, shelves or pans arranged in superimposed relation and alternately oppositely inclined, whereby the liquid to be evaporated flows successively down the shelves, means for supplying the liquid to the uppermost shelf, said shelves having chambers, means connecting a certain number of chambers in series, means for connecting certain other chambers in series, separate means for supplying a heating medium to the series of chambers independently, and separate outlets for the series of chambers.

3. A vacuum evaporator comprising a chamber, means for connecting the chamber with a vacuum-producing device, a plurality of chambered shelves or pans arranged in superimposed relation and alternately oppositely inclined, means for connecting the chambers of the shelves in series relation, means for producing a flow of a heating medium through the shelves, means for supplying the heating medium to the lowermost shelf, whereby the heating medium flows upwardly; means for supplying the material to be evaporated to the uppermost shelf whereby the said material flows downwardly over the shelves successively and in a direction opposite to the flow of the heating medium, and scrapers movable on the top surfaces of the shelves to keep the material free therefrom.

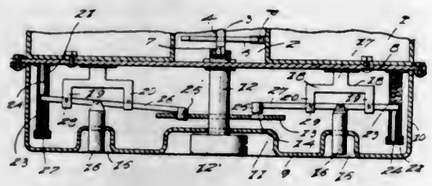
4. A vacuum evaporator comprising a chamber, means for connecting the chamber with a vacuum-producing de

vice, a plurality of chambered shelves or pans arranged in superimposed relation and one discharging on the other, means for connecting the chambers of the shelves in series relation, means for producing a flow of a heating medium through the shelves, means for supplying the material to be evaporated to the uppermost shelf, scrapers movable on the top surfaces of the shelves to keep the material free therefrom, and means at the bottom of the chamber cooling and carrying away the evaporated material.

5. A vacuum evaporator comprising a chamber, means for connecting the chamber with a vacuum-producing device, a plurality of chambered shelves or pans arranged in superimposed relation and one discharging on the other, means for connecting the chambers of the shelves in series relation, means for producing a flow of a heating medium through the shelves, means for supplying the material to be evaporated to the uppermost shelf, scrapers movable on the top surfaces of the shelves to keep the material free therefrom, and a screw conveyer internally cooled for cooling and conveying away the evaporated material.

[Claims 6 to 12 not printed in the Gazette.]

1,193,360. KEYLESS LOCK FOR AUTOMOBILES. LYMAN CORNWELL, De Beque, Colo. Filed Apr. 21, 1916. Serial No. 92,688. (Cl. 70—54.)



1. A keyless lock comprising a casing, a central shaft journaled in said casing, a circular disk secured to the shaft within the casing and provided with a plurality of openings arranged in circular formation, a plurality of brackets secured within the casing and arranged in circular formation, locking arms pivotally secured to said brackets, lugs formed on the ends of said arms, means for holding some of the lugs within the openings of the disk, and means for holding the lugs on the other arms from engagement with the disk, and push buttons pivotally connected to the arms for moving the arms from engagement with the disk to free the shaft.

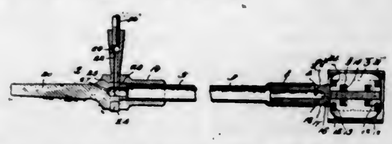
2. A keyless lock comprising a casing, a central shaft extending through said casing, a circular disk secured to said shaft and provided with a plurality of openings arranged in circular formation, a plurality of brackets secured within the casing and arranged in circular formation, arms secured to said brackets, lugs formed on said arms, cylindrical casings secured within the casing and ararnged in circular formation, means mounted within some of the cylindrical casings to normally hold the lugs on some of the arms into engagement with the openings of the circular disk, and means mounted within the other circular casings for normally holding the lugs on the other arms from engagement with the circular disk, and push buttons pivotally secured to the arms for operating said arms.

3. A keyless lock comprising a base, a cover secured to said base, a central shaft extending through the cover and base, a circular disk secured to said shaft and provided with a plurality of openings arranged in circular formation, a plurality of brackets secured to the base and arranged in circular formation, extensions formed on the brackets, a pair of relatively spaced plates formed on the ends of the extensions, arms pivotally secured between the pair of relatively spaced plates of each bracket, lugs formed on the ends of said arms, cylindrical casings secured to the base and provided with slots intermediate their ends to receive the ends of the arms, springs mounted in some of the cylindrical casings to bear against the base and the ends of the arms to hold said arms normally from an engagement with the disk, and means mounted in the lower ends of last mentioned cylindrical casings to limit the movement of the arms, springs mounted in the other cylindrical casing and bearing against the ends of the cylindrical casing and the ends of the arms to normally hold said arms in engagement with the disk, and means mounted in the other end of the last mentioned cylindrical casings to form a stop for the arms, and push buttons connected to the arms for freeing the arms from engagement with the disk.

4. A keyless lock comprising a base, a cover provided with an angular flange detachably secured to the base, said cover provided with a central depression having an opening therein, a central shaft extending through the opening and base, a handle formed on said shaft, and located within the central depression, a disk secured to said shaft and provided with a plurality of openings therein, brackets secured to the base, arms pivotally secured to said brackets, lugs formed on the arms, means connected to some of said arms for holding the lugs on these arms into engagement with the disk, means connected with the other arms for holding the lugs thereon from engagement with the disk, and means connected with the arms for operating said arms to free the shaft.

5. A keyless lock comprising a base, a cover provided with an angular flange detachably secured to the base, said cover provided with a central depression and having an opening therein, a central shaft extending through the opening in the depression and the base, brackets secured to the base, a disk secured to the shaft, and provided with a plurality of openings therein, arms secured to said brackets, lugs formed on said arms, means for normally holding the lugs of some of said arms into engagement with the disk, means for normally holding the other arms from engagement with the disk, said cover provided with a plurality of circularly arranged depressions having openings therein, push buttons slidably mounted within the openings of last mentioned depression and pivotally connected to the arms for moving said arms from engagement with the disk to free the shaft.

1,193,361. BOILER-TUBE SCRAPER. JOSEPH ARTHUR CREPEAU, Sorel, Quebec, Canada. Filed Oct. 29, 1915. Serial No. 58,722. (Cl. 83—64.)

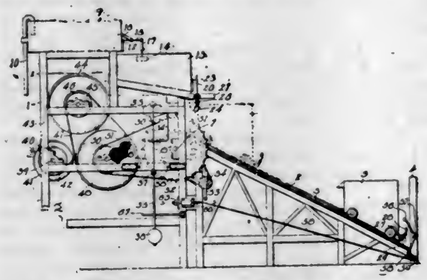


A boiler scraper including a tool comprising a cylindrical body provided with longitudinal grooves and having reduced portions at the ends of the grooves, blades operating in the grooves and provided with spaced radially arranged rectangular recesses at their inner edges and having reduced terminal portions, spaced coiled springs located in the recesses and bearing against the bottom walls of the said grooves for urging the blades outwardly and rings mounted on the reduced portions of the said body portion and arranged to be engaged by the terminal projecting portions of the blades to limit the outward movement thereof.

1,193,362. GRAVITY-MOTOR. WILLIAM O. CROSBY and NELSON C. CARLISLE, Washington, D. C. Filed July 10, 1915. Serial No. 39,088. (Cl. 253—17.)

1. A gravity motor including an inclined track, a water reservoir at the top of the track, a drum, a car mounted to travel up and down upon the track and formed with a tank body, a cable connecting the drum to the car, means for discharging water from the reservoir into the tank body of the car when the car is at the top of the track, speed governing means having an operative connection with the drum for controlling the descent of the car, means for discharging the tank body of the car at the

bottom of the track, and manually operated means for returning the car to the top of the track.



2. A gravity motor including an inclined track, a car mounted to travel up and down upon the inclined track, means for loading the car at the top of the track, speed controlling means governing the descent of the car, driven means actuated by the descent of the car, means for automatically discharging the car at the bottom of the track, means for returning the car to the top of the track, and means actuated by the car for automatically locking the driven means during the ascent of the car.

3. A gravity motor including an inclined track, a car mounted to travel up and down upon the inclined track, a drum at the top of the inclined track, a cable connecting the drum and the car, the track being inclined laterally with respect to the drum so that the cable will wind upon the drum and unwind therefrom evenly as the car moves up and down upon the inclined track, means for loading the car at the top of the track, means for discharging the car at the bottom of the track, and driven means having an operative connection with the drum.

4. A gravity motor including an inclined track, a water reservoir at the top of the track, a drum, a car mounted to travel up and down upon the track and formed with a tank body, a cable connecting the drum to the car, means for discharging water from the reservoir into the tank body of the car when the car is at the top of the track, speed governing means having an operative connection with the drum for controlling the descent of the car, driven means having an operative connection with the drum, and means for discharging the tank body of the car at the bottom of the track.

5. A gravity motor including an inclined track, a water reservoir at the upper end of the track, a drum, a car mounted to travel up and down upon the inclined track and formed with a tank body, a cable connecting the drum and the car, means for discharging water from the reservoir into the tank body of the car when the car is at the top of the track, a wheel having a pawl and ratchet connection with the drum so as to be driven thereby upon the descent of the car, speed controlling means coöperating with the wheel to govern the descent of the car, driven means having an operative connection with the beforementioned wheel, and means for discharging the car at the bottom of the track.

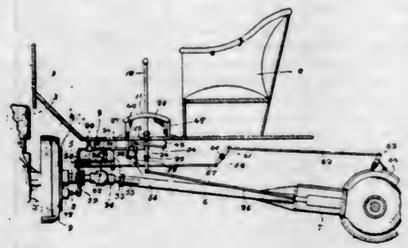
[Claims 6 to 15 not printed in the Gazette.]

1,193,363. AUTOMOBILE-CONTROL SYSTEM. ERNEST G. CROSSLEY, Stockbridge, Mich. Filed Sept. 14, 1915. Serial No. 50,664. (Cl. 74—39.)

1. The combination with the gear shifting hand lever of an automobile, of a brake setting element arranged in the path of said lever and adapted to be actuated by said lever when the latter is shifted beyond its gear selecting position.

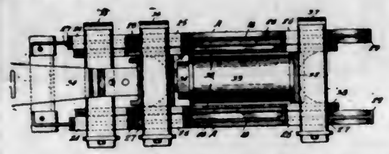
2. The combination with the gear shifting hand lever of an automobile, of a plurality of brake setting elements arranged in the path of said lever and adapted to be actuated by said lever when the latter is shifted beyond any of its gear selecting positions.

3. The combination with the gear shifting hand lever of an automobile, of a brake setting and clutch releasing element arranged in the path of said lever and adapted to be actuated by said lever when the latter is shifted beyond its gear selecting position.



4. The combination with the gear shifting hand lever of an automobile, of a plurality of brake setting and clutch releasing elements arranged in the path of said lever and adapted to be actuated by said lever when the latter is shifted beyond any of its gear selecting positions.

1,193,364. DRAFT-ARM FOR RAILWAY-CARS. CHARLES E. DATH, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Nov. 30, 1914. Serial No. 874,654. (Cl. 213—42.)



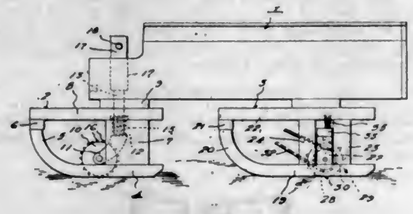
1. In an under-frame for railway cars, the combination with wooden center sills having channel beams secured to the outer sides thereof, of draft arms, each draft arm having a horizontal upper flange secured to the underside of a sill and the lower flange of a channel, each draft arm having also a vertical web provided with elongated slots therein.

2. In a structure of the character described, the combination with wood center sills having reinforcing plates secured to the outer sides thereof, each of said plates being provided at its lower end with an outturned flange, of draft arms, each draft arm having a horizontal upper flange and a vertical web depending therefrom, said draft arms being secured to said sills and flanges of the reinforcing plates by securing devices passing through the horizontal flanges of the draft arms, said draft arms being each provided with means by which a draft gear may be secured thereto.

1,193,365. MOTOR-SLEIGH. JOHN O. DECKER, Orafino, Nebr. Filed Mar. 20, 1915. Serial No. 15,822. (Cl. 21—47.)

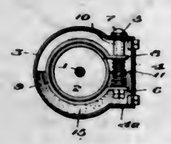
1. In combination with a bob having a pair of uprights, bearings slidable in said uprights, a roller journaled in the bearings, pins in the roller to engage the surface being traversed, a cleaner bar connected to the upper ends of the bearings at a point above the roller, pins carried by the cleaner bar and passing between the pins on the roller to prevent the same from clogging, and springs bearing downwardly on the bar to force the roller into engagement with the surface traversed.

2. In combination with a bob having spaced uprights, said uprights having their opposing faces provided with grooves, bearings provided with tongues slidably mounted between the uprights in the grooves, a roller provided with a plurality of staggeredly arranged pins journaled in said bearings, a cleaner bar resting upon and connected to the upper end of said bearings, pins depending from and connected to the under side of said bar, said pins passing between the pins of the roller to prevent clogging of the same, said bar located at a predetermined point above said



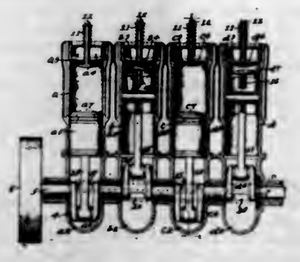
roller, springs carried by the bobs and connected to the cleaner bar for forcing the bearings downwardly thereby forcing the pins of the roller into the surface being traversed.

1,193,366. AUTOMOBILE-BRAKE CONSTRUCTION. EUGENE A. DEMARA, Woonsocket, R. I. Filed Feb. 3, 1916. Serial No. 76,004. (Cl. 74—37.)



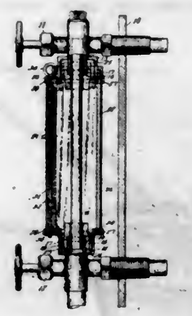
The herein described motor vehicle brake comprising a shaft having a band wheel fixed thereon, a brake band surrounding the wheel and having spaced arms, a casing surrounding the wheel and band and having a lateral offset in which said arms are arranged and adapted to move; said offset being open at its outer end, a closure plate detachably connected to and closing the offset, an endwise-movable rod connected with one of said arms and extending loosely through the other arm and one end wall of said casing offset, a sleeve surrounding the rod and bearing against such other arm and said offset wall, an expansion spring surrounding the rod and interposed between the arms, and means outside the casing and connected with the rod for moving the same against the action of said spring.

1,193,367. EXPLOSIVE-GAS ENGINE. OLIN DEER, East Orange, N. J. Filed Aug. 2, 1915. Serial No. 43,160. (Cl. 123—47.)



An internal combustion engine, comprising a plurality of cylinders arranged in pairs, pistons therein, a crankshaft in operable connection with said pistons, an inlet valve and an exhaust valve for each cylinder, a casing provided with a gas-tight compartment connected with each of said cylinders, and a pipe arranged externally of said engine for connecting the compartments of each pair of cylinders.

1,193,368. WATER-GAGE-GLASS SHIELD. JULIUS DIETRICH, Lincoln, Nebr. Filed Aug. 17, 1914. Serial No. 857,068. (Cl. 73—54.)



1. In a device of the character described, the combination with upper and lower water glass cocks having a gage glass extending therebetween, of a bushing adjustably mounted on one of said cocks, and without affecting the attachment of the gage glass thereto, a plate adjustably mounted directly on said bushing, a second plate carried by the other cock, and a plurality of members extending between said plates arranged to inclose the gage glass, some of said members being transparent.

2. In a device of the character described, the combination with upper and lower water glass cocks having a gage glass extending therebetween, of an upper plate carried by the upper cock, a lower plate carried by the lower cock, each of said plates being provided with a plurality of spaced ribs on the opposed faces thereof, a plurality of glass panes extending between said plates and having the upper and lower edges thereof located between some of said ribs, a perforated sheet metal member extending between said plates and having the upper and lower edges thereof located between others of said spaced ribs; said glass panes and perforated sheet metal member being arranged edge to edge and removable from between said plates, and detachable means for retaining said panes and sheet metal member in position.

3. In a device of the character described, the combination with upper and lower water glass cocks having a gage glass extending therebetween, and packing nuts for securing the glass to said cocks, of a shield for said gage glass, and means for supporting said shield, said means including a plate supported by and adjustable relatively to one of said cocks and independently of the packing nut and free from engagement with the packing nut.

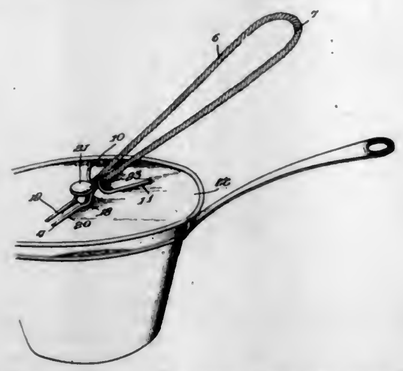
4. In a device of the character described, the combination with upper and lower water glass cocks having a gage glass extending therebetween, of a shield for said gage glass including a plurality of glass panes, and means for removably supporting said glass panes in position, said means including upper and lower plates carried directly respectively by said upper and lower cocks, each of said plates on its inner face being provided with a plurality of spaced ribs between which the upper and lower edges of said glass panes are adapted to be inserted, and sheet metal corner strips overlapping the adjacent vertical edges of said glass panes.

5. In a device of the character described, the combination with upper and lower cocks having a gage glass extending therebetween and attached thereto by packing nuts, of a shield for said gage glass, and means for adjustably mounting said shield, said means including a sub-

stantially cup shaped bushing adjustably mounted on one of said cocks, a plate adjustably threaded on the exterior of said bushing, and a second plate threaded on the nipple of the other cock, said plates being provided with means for retaining the shield in place.

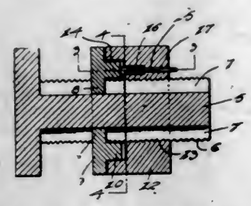
[Claim 6 not printed in the Gazette.]

1,193,369. LID-LIFTER. CHARLES E. DOLAN, Newark, N. J. Filed Aug. 20, 1915. Serial No. 46,533. (Cl. 65—32.)



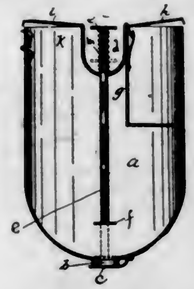
A lid lifter comprising a piece of wire bent about midway of its length to form two legs brought substantially together near the free ends, the legs beyond the point where they are brought together forming part of a handle and the other portion of the bent wire beyond where they are brought together being spread apart to provide a pair of spaced fingers, each of said fingers being bent outwardly intermediate its length to form with the bent portion of the companion finger a seat for the knob of a vessel top, a second wire bent intermediate its length to correspond with and twisted with the first mentioned wire from the point where the legs of the latter are brought together, the twisted portions of the two wires forming a handle reinforced throughout its length, one free end of the second mentioned wire being bent laterally across the opposite finger of the first mentioned wire and is then bent rearwardly and terminating in a lateral leg, the other free end of the second mentioned wire being bent across the other opposite finger of the first mentioned wire and the before mentioned lateral leg and bent rearwardly and terminating in a second lateral leg and a tie wire engaging the first and second mentioned wires between the beginning of the twisted part and the bent lateral legs, the tie wire serving to lock the handle's legs together to prevent spreading to form a rigid structure.

1,193,370. NUT-LOCK. PATRICK E. DUFFY, Mace, Idaho. Filed Mar. 3, 1916. Serial No. 81,942. (Cl. 151—10.)



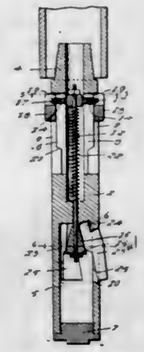
A nut lock including a bolt, a washer slidably and nonrotatably engaged with said bolt, ratchet teeth arranged in a circular line on the outer face of said washer, a nut fitted upon said bolt, a locking member slidably and rotatably mounted in said nut including a head having one side face thereof beveled and adapted to ride over said ratchet teeth during the rotation of said nut, the outer extremity of said locking member projecting outwardly of the outer face of said nut, whereby said locking member may be withdrawn from engagement with said ratchet teeth, and means normally retaining said locking member in inwardly extended position.

1,193,371. TOBACCO AND MATCH POUCH. CHARLES H. EDDY, Attleboro, Mass. Filed May 3, 1915. Serial No. 25,475. (Cl. 206—41.)



A pouch, whose body portion is of an inflexible character, having a depression in its upper end portion and a closure controlled discharge opening in its bottom, and a plunger whose head is arranged to be normally suspended in elevated position within said pouch body portion, in alinement with said closure controlled opening, said plunger having its upper actuating end received within said depression and equipped therein with a resilient member adapted to control the position of said plunger.

1,193,372. UNDERREAMER. FRANCIS J. FOX, Pittsburgh, Pa. Filed Apr. 21, 1916. Serial No. 92,651. (Cl. 255—78.)



1. An under reamer comprising an elongated cylindrical body, a tapered threaded extension at the upper end of the body, the body being provided with a reduced axial bore extending from the upper end to a point substantially centrally of the longitudinal extremities of the body, the opposite end of the body being provided with a relatively large axial bore extending to a point below the lower terminal of the first mentioned bore, the portion of the body between the bores being provided with an axial aperture, a rod slidable through said aperture, a cross head at the upper end of the rod, a spring bearing on the under side of the cross head and on the bottom wall of the upper axial bore, the body being provided with a pair of diametrically disposed grooves having enlarged chambers formed at the lower terminal, the inner wall of each groove being slotted, said slots communicating with the reduced bore, arms on the cross head slidable in the slots, said arms being provided with longitudinal slots near their outer ends, latch members mounted on the slotted ends of the arms and adapted to travel in the grooves, springs to normally urge the latch members outwardly, a wedge at the lower end of the rod and adjustably mounted thereon, the body being provided with slots near its lower terminal, said slots being radially arranged around the body and cutters operable in said slots, said cutters being provided with inclined inner faces for engagement with the wedge member.

2. An under reamer comprising a body having an axial bore in its upper end extending to a point centrally of the longitudinal extremities of the body, the said body being provided with a bore in its lower end extending to a point slightly below the lower terminal of the upper bore, the material between the bores being provided with an axial aperture, a rod slidable in said aperture, a cross head at the upper end of the rod, a spring for engagement with the under side of the cross head and the bottom wall of the upper bore to normally urge said cross head and rod upwardly, the body being provided with a pair of diametrically opposed grooves near its upper end, the inner walls of the grooves being provided with longitudinally extending slots which communicate with the bore, the lower ends of the grooves terminating into chambers, latch members carried by the ends of the arms of the cross head and slidable in the grooves, said arms being slidable in the slots, a wedge member at the lower end of the rod and cutters operable through the body and controlled by the wedge member.

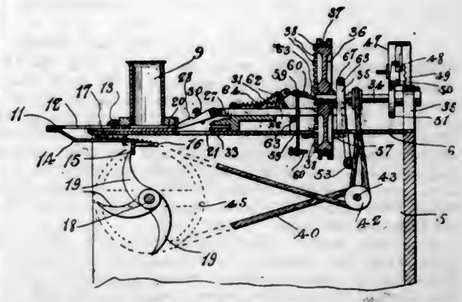
3. An under reamer comprising a body having an axial bore extending from its upper end to a point substantially centrally of its longitudinal extremities, the said body being also provided with a bore extending from its lower end to a point slightly below the lower end of the upper bore, said bores being conected by an axial aperture, the upper end of the body being provided with a pair of diametrically opposed slots and having grooves extending the length of the slots and arranged in alinement therewith, the lower terminals of the grooves opening into chambers, a rod slidable through the axial opening, a cross head at the upper end of the rod, means to normally urge the cross head upwardly, latches carried by the cross head and adapted to engage the end walls of the chambers to hold the cross head downwardly, a wedge carried by the lower end of the rod and cutters adapted to be forced into operative position by the wedge when the cross head moves upwardly.

4. An under reamer comprising a body, an axial bore extending into the body from its upper end, a second axial bore extending into the body from its lower end, said bores terminating short of each other, the body between the bores being provided with an axial aperture, the upper end of the body being provided with an elongated slot communicating with the bore and having grooves disposed in alinement with the slot, the lower terminals of the grooves being enlarged to form chambers, shoulders formed by the upper end walls of the chambers, a rod slidable through the aperture connecting the bores, a cross head at the upper end of the rod, means to urge the cross head upwardly, latches carried by the ends of the arms of the cross head and slidable in the grooves, said latches being adapted to engage the shoulders formed by the chambers to hold the cross head downwardly against the influence of the upwardly urging means, cutters carried by the lower end of the body and means at the lower end of the rod to urge the cutters outwardly upon upward movement of the rod.

5. An under reamer comprising a hollow body, said body being provided with slots near its lower end and having slots near its upper end, the body also having grooves alining with the slots near its upper end, the bottoms of the grooves being formed with recesses, a rod slidable through the body, a substantially T-shaped head at the upper end of the rod, the arms of said head projecting through the slots near the upper end of the body, latches slidably mounted on the ends of the arms and adapted to slide in the grooves, the said latches when the device is in its inoperative position resting in the recesses at the bottom of the grooves, cutters operable through the slots near the bottom of the body and a wedge block carried by the rod for moving the cutters outwardly upon the upward movement of the rod and means to normally tend to move said rod upwardly.

[Claim 6 not printed in the Gazette.]

1,193,373. COIN-COUNTING MACHINE. IRA D. FULLER, Vona, Colo. Filed Aug. 11, 1914. Serial No. 856,275. (Cl. 133—4.)



1. In combination, a support, an ejector on said support, a registering mechanism on said support, operating means for said registering mechanism including a pivoted member operable by a coin ejected by said ejector, and means for automatically raising said pivoted member from engagement with the coin.

2. In combination, a support, coin ejectors operably mounted on said support, a registering mechanism on said support, operating means for said registering mechanism including a plurality of pivoted members adapted to be engaged by coins ejected by said ejectors, and adjustable means for automatically disengaging said pivoted members from said coins.

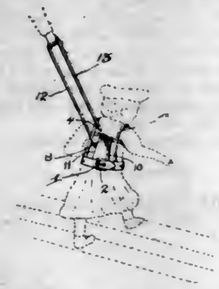
3. In combination, a support, coin ejectors operably mounted on said support, a registering mechanism on said support, operating means for said registering mechanism including a plurality of pivoted members adapted to be engaged by coins ejected by said ejectors, and adjustable means for automatically disengaging said pivoted members from said coins including inclined surfaces on said support, and screws fitted in said pivoted members slidable upon said inclined surfaces.

4. In combination, a support, a plurality of coin ejectors operably mounted on said support, a registering mechanism on said support, operating means for said registering mechanism including a rotatable shaft, a wheel on said shaft, and means for locking said wheel against rotation, means operable by the coins ejected by said ejectors to actuate said locking means, and means operable by said coin actuated means for releasing said wheel.

5. In combination, a support, a plurality of coin ejectors operably mounted on said support, driving means for said coin ejectors, a registering mechanism on said support, operable connections between said coin ejectors and said registering mechanism, operating means for said registering mechanism including a rotatable shaft, a wheel on said shaft, a plurality of pins slidably mounted in said wheel, an abutment secured adjacent said wheel adapted to be engaged by said pins to lock said wheel against rotation, and means operable by the coins ejected by said ejectors for moving said pins to normal position to release said wheels.

[Claims 6 to 11 not printed in the Gazette.]

1,193,374. BABY-WALKER. VIOLA B. GILLIAM, Thurmond, W. Va. Filed Mar. 30, 1915. Serial No. 18,055. (Cl. 155—12.)



1. A baby walker provided with a waist belt, shoulder straps connected to the waist belt at relatively spaced distances apart, a front strap connected to the inner arms of said shoulder straps and extending outwardly beyond the same, said strap passing under the arm pits of a child and fastened in the rear of the back thereof, vertical straps connected to the waist belt and the front strap, means on the ends of said front straps for adjusting the same and suspending straps connected to said vertical straps intermediate their ends and provided with buckles for adjusting the same.

2. A baby walker comprising a waist belt, shoulder straps connected thereto, a front strap connected between the shoulder straps, adjustable straps connected to opposite sides of the shoulder straps, means on the ends of said adjustable straps for securing the same under the arm pits of a baby, vertical straps connected to the rear ends of the adjusting strap their opposite ends being connected to the waist belt, and a suspending strap connected to said vertical straps intermediate the ends thereof, providing means for supporting a baby positioned within the walker.

1,193,375. CASTING-MACHINE. ERNEST E. GILMER, Portland, Oreg. Filed July 20, 1915. Serial No. 40,997. (Cl. 22—76.)



1. A casting machine comprising an endless conveyer with divided molds thereon, each having oppositely-acting actuating means for separating and closing together the mold sections, means to close the molds, and other means for operating the actuating means to open the molds, both of said operating means being located in the line of travel of portions of the actuating means and spaced apart in the line of travel for a distance to permit the pouring of the metal into and the cooling of the metal in the molds after said molds are closed and before they are opened.

2. A casting machine comprising a traveling support with two-part molds thereon, oppositely acting screws connected to the two parts of the mold for moving said parts simultaneously in a direction to separate them or to close them, controlling members on the screws, and means located in and spaced apart lengthwise of the path of travel of the controlling members for a distance to permit the pouring of the metal into and its solidification in the molds after the molds are closed and before they are opened.

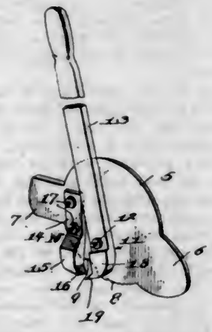
3. A casting machine, comprising an endless conveyer having cross bars with wheels at the extremities, tracks for the wheels, molds each comprising sections mounted on the cross bars and slidable lengthwise of said bars in a direction laterally of the length of the conveyer, each mold section having a threaded passage on the side remote from the other mold section, screws mounted on the conveyer and engaging the threaded passages on the molds, said screws having threads of opposite pitch to cause the separation or approach of the mold sections by the simultaneous movement of the screws in the same direction, an angle lever for each screw, and elongated controlling strips in fixed relation to the conveyer and in the path of the respective extremities of the angle levers for rocking said levers together with the screws controlled thereby in one direction or the other in accordance with the strip engaging said levers, and said strips being spaced apart lengthwise of the direction of travel of the conveyer, whereby the mold sections are closed together prior to reaching the pouring location and are separated to discharge the casting after a lapse of time sufficient to permit the metal to solidify.

4. A casting machine comprising a series of divided molds with means for causing them to travel progressively, means for causing the closing and opening of the molds by moving the mold sections together or apart, means for receiving cast articles discharged from the molds, means for discharging cooling liquid simultaneously upon the matching parts of each mold after the casting is discharged, and means for directing other liquid simultaneously upon the matching parts of each mold to prevent sticking of molten metal thereto.

5. A casting machine comprising a series of divided molds with means for causing them to travel progressively, means for causing the closing and opening of the molds by moving the mold sections together or apart, means for receiving cast articles discharged from the molds, means for discharging cooling liquid simultaneously upon the matching parts of each of the molds after the castings are discharged, and means for directing other liquid simultaneously upon the matching parts of each mold to prevent sticking of molten metal thereto, the second-named means for discharging liquid upon the molds being located to act upon the molds subsequent to the cooling of the molds.

[Claims 6 and 7 not printed in the Gazette.]

1,193,376. SPIKE-PULLER. EDWARD FISHER GOBEN, Dewar, Okla., assignor of one-third to Meinholtz & McKay, a Partnership composed of Henry Meinholtz and Duncan McKay, Okmulgee county, Okla. Filed Jan. 22, 1916. Serial No. 73,692. (Cl. 254—22.)



1. In a spike puller, a flat support having a lower curved edge with teeth forming a primal fulcrum edge and a rear semi-elliptical extension formed with a lower edge of less arcuate extent than the said primal fulcrum edge and providing an additional fulcrum means which intersects and continues from the terminal of the said toothed lower curved edge, the lower edge of the extension being normally above the said toothed edge of the support, a fixed jaw removably applied to the outer side of the support having a lower extremity with a toe depending below the lower edge of the support, and a pivoted jaw also having a lower toe depending below the lower edge of the support to coöperate with the toe of the fixed jaw, the pivoted jaw also having an elongated handle forming a prying lever for operating the complete device, the pivoted jaw with a portion of its elongated handle being applied to and movable over the outer side of the said support.

2. In a spike puller, a support consisting of a flat plate having lower fulcrum means consisting of forward and rear curved edge portions respectively differing in arcuate extent and the rear edge portion being normally higher than the front edge portion, the support also having an inner flat unbroken side adapted to bear against and be braced by the head of a rail, and fixed and movable jaws disposed exclusively on the outer side of the support and provided with depending portions to engage the head of a spike, the movable jaw having an elongated handle forming a prying lever for turning the support and the jaws unitedly on and against different portions of a rail.

3. In a spike puller, a support consisting of a flat plate mainly circular in form and having an inner smooth side and a rear semi-elliptical fulcrum extension, the lower edge of the support in advance of the extension and below the lower edge of the latter being formed with teeth to engage the flange of a rail or other support, the flat supporting plate also having a tapping projection at a plane above and at a point opposite the location of the extension, a fixed jaw removably secured on the outer side of the flat plate support and having the lower extremity thereof depending below the lower edge of the support and formed with an inwardly inclined toe, and a movable jaw also mounted against the outer side of the flat plate support and provided with an inwardly inclined toe depending below the lower edge of the support to coöperate with the toe of the fixed jaw, the lower edge of the plate support between the jaws having a clearance recess for the head of a spike and the pivoted jaw having an elongated handle which forms a prying lever for operating the complete device on its fulcrums.

1,193,377. PENCIL-POINT PROTECTOR. ANDREW W. GRAHAM, Buffalo, N. Y. Filed Nov. 23, 1915. Serial No. 62,997. (Cl. 120—84.)

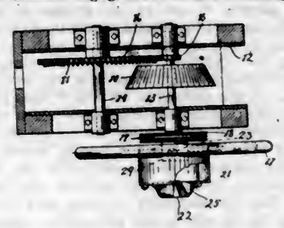


1. A pencil point protector comprising a cylindrical body portion slit from one end to a point adjacent the other end and provided with a diagonal inwardly extending rib opposite the slit, and a frusto-conical nose extending integrally from the last mentioned end of the body and having its extremity open.

2. A pencil point protector comprising a cylindrical body portion, slit from one end to a point adjacent the other end and provided with a diagonal inwardly extending friction rib opposite the slit, and a frusto-conical nose extending integrally from the last mentioned end of the body and having its extremity open to permit the point of a pencil to protrude therefrom for the purpose of writing, said body, nose and rib all being formed from sheet metal.

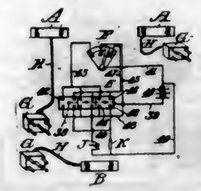
1,193,378. COMBINED PULLEY AND CORN-TIPPER. CLARK GRAVES, Sandwich, Ill., assignor to Sandwich Manufacturing Co., Sandwich, Ill., a Corporation of Illinois. Filed Mar. 23, 1916. Serial No. 86,138. (Cl. 130—9.)

In a device of the kind described, in combination, a tapering internally roughened shelling cup, an annular base flange larger than the cup formed integral with the walls of the cup with the smaller end of the cup extending axially into the space inclosed by the said flange and with the said flange projecting beyond the said smaller end of the cup for coaxial engagement with a rotating part over



a projecting hub, and clamping means for removably securing the said flange upon the rotating part.

1,193,379. AUTOMOBILE-SIGNAL. EDWIN T. GRAY and ALFRED T. HOEVET, New York, N. Y. Filed Apr. 14, 1914, Serial No. 831,826. Renewed Jan. 3, 1916. Serial No. 70,081. (Cl. 177—337.)



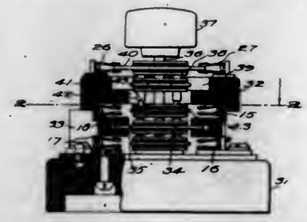
1. The combination with a plurality of signal boxes each having a plurality of compartments, electric lamps in said compartments, a generator, a switch board having a plurality of groups of sockets, electric connections from one pole of the generator to one of the sockets of each group, a single switch having a plurality of contacts, electric connections from each of said contacts to another one of the sockets in each group, electric connections from the arm of the switch to the other pole of the generator, and a plurality of plugs, each carrying conductors from the lamps in the compartments of a different one of said boxes, each plug also having a plurality of fingers adapted to engage the sockets of one of the groups in the switch board for placing said lamps in circuit with the switch and generator.

2. The combination with a plurality of signal boxes, each having a plurality of compartments, electric lamps in said compartments, a generator, a switch board having a plurality of groups of sockets, electric connections from one pole of the generator to one of the sockets of each group, a single switch having a plurality of contacts, electric connections from each of said contacts to another one of the sockets in each group, electric connections from the arm of the switch to the other pole of the generator, electric connections from the second pole of the generator to another one of the sockets in each group, and a plurality of plugs, each carrying conductors from the lamps in the different ones of the compartments of said boxes, each plug also having a plurality of fingers adapted to engage the sockets of one of the groups in the switch board for placing certain of said lamps in each box in circuit with the switch and one lamp in each box in direct circuit with the generator.

3. The combination with a plurality of signal boxes, each having a plurality of compartments, electric lamps in said compartments, a generator, a switch board having a plurality of groups of sockets, electric connections from one pole of the generator to one of the sockets of each group, a single switch having a plurality of contacts, electric connections from each of said contacts to another one of the sockets in each group, electric connections from the arm of the switch to the other pole of the generator, electric connections from the second pole of the generator to another one of the sockets in each group, and a plurality of plugs, each carrying conductors from the lamps in

the different ones of the compartments of said boxes, each plug also having a plurality of fingers adapted to engage the sockets of one of the groups in the switch board for placing certain of said lamps in each box in circuit with the switch and one lamp in each box in direct circuit with the generator, there being a switch in the part of the conductor which runs from the second pole of the generator to the sockets in certain of said groups and a solenoid in the part of said conductor which runs to the socket in another of said groups, the circuit in the latter part of said conductor being normally closed, and the solenoid being connected to the switch in the other part of said conductor for normally holding that part open, and means for automatically closing said last named switch when the circuit to the solenoid is opened.

1,193,380. ELECTRIC SWITCH. MONROE GUETT, Hartford, Conn., assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed May 5, 1915. Serial No. 26,066. (Cl. 175—290.)



1. An electric switch comprising a support, a switching member, the support having contacts coöperative with said switching member, a second support, a second and independent switching member, the second support having contacts coöperative with the second switching member and also having an opening, the second switching member having a driving connection with the first switching member through said opening, and manually operable snap means common to both switching members for effecting the simultaneous action thereof.

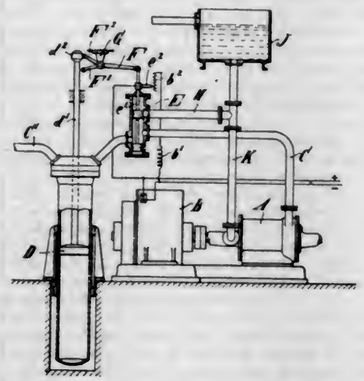
2. An electric switch comprising a support, a switching member, the support having contacts coöperative with said switching member, means for moving the switching member between on and off positions, a second support, and a second and independent switching member, the second support having contacts coöperative with the second switching member and also having an opening, the second switching member having a driving connection with the first switching member through said opening.

3. An electric switch comprising a support, a switching member, the support having contacts coöperative with said switching member, means for moving said switching member between on and off positions, a second support, and a second and independent switching member, the second support having contacts coöperative with the second switching member and also having an opening, and pins connecting the two switching members and extending through said opening.

4. An electric switch comprising a switching member, a second and independent switching member, a manually operable spindle extending through the switching members, snap means actuated by the spindle for moving the first switching member between on and off positions, and means for moving the second switching member to off when the first switching member is moved to on and vice versa.

1,193,381. REGULATING DEVICE FOR HYDRAULIC-POWER PLANTS. EUGEN HAGENBUCHER, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Dec. 14, 1914. Serial No. 877,207. (Cl. 103—89.)

1. In a regulating device for hydraulic power plants having a centrifugal pump and an accumulator; a feed conduit between the pump and the accumulator, and a line conduit from the latter; regulating means in the feed conduit having a waste conduit, a member in said accumulator for controlling said regulating means, said means comprising a member for regulating the speed of the pump, whereby the number of revolutions of said pump will be less, when the pump has been adjusted by said means to feed into the waste conduit, than when adjusted to feed into the line conduit.

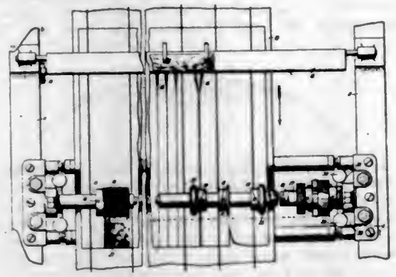


2. In a regulating device for hydraulic power plants having a centrifugal pump and an accumulator; a feed conduit between the pump and the accumulator, and a line conduit from the latter; regulating means in the feed conduit having a waste conduit, said means comprising a member for regulating the speed of the pump, whereby the number of revolutions of said pump will be less, when the pump has been adjusted by said means to feed into the waste conduit, than when adjusted to feed into the line conduit; and a float in said accumulator for actuating said regulating means.

3. In a regulating device for hydraulic power plants having a centrifugal pump and an accumulator; a feed conduit between the pump and the accumulator, and a line conduit from the latter; a piston valve in said feed conduit having a waste outlet, an actuating lever journaled to the valve piston, said lever having two spread-out fingers, a piston head and rod in said accumulator, said fingers projecting into the path of said piston rod, whereby the end of the piston rod is made to contact with one of said fingers, thereby closing the feed conduit to the accumulator and opening the waste outlet, when the accumulator is completely filled; and the end of the piston is made to contact with the other of said fingers during normal running and when the accumulator is not full, thereby opening the feed conduit to the accumulator, and to the line conduit, and closing the waste outlet.

4. In a regualting device for hydraulic power plants having a centrifugal pump and an accumulator; a feed conduit between the pump and the accumulator, and a line conduit from the latter; a piston valve in said feed conduit having a waste outlet, an actuating lever journaled to the valve piston, said lever having two spread-out fingers, a piston head and rod in said accumulator, said fingers projecting into the path of said piston rod, whereby the end of the piston rod is made to contact with one of said fingers, thereby closing the feed conduit to the accumulator and opening the waste outlet, when the accumulator is completely filled; and the end of the piston is made to contact with the other of said fingers during normal running and when the accumulator is not full, thereby opening the feed conduit to the accumulator, and to the line conduit, and closing the waste outlet; said valve piston simultaneously and respectively decreasing and increasing the speed of said pump.

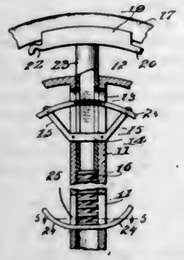
1,193,382. CREASING AND CUTTING ATTACHMENT FOR RULING-MACHINES. JOSEPH HAYES and GEORGE HORN, New York, N. Y. Filed Feb. 26, 1916. Serial No. 80,631. (Cl. 92—70.)



1. An attachment as characterized comprising a conveyer belt for supporting sheets to be ruled; a plurality of guide rollers for deflecting said belt from the general level thereof; a plurality of shafts disposed transverse said belt; means disposed on said shafts for engaging sheets when delivered thereto from said belt for transferring the same to said belt; and means for separating said shafts to avoid engagement of said sheets, said means embodying a plurality of bushings having eccentric bearings for said shafts.

2. An attachment as characterized comprising a conveyer belt for supporting sheets to be ruled; a plurality of guide rollers for deflecting said belt from the general level thereof; a plurality of shafts disposed transverse said belt; means disposed on said shafts for engaging sheets when delivered thereto from said belt for transferring the same to said belt; and means for separating said shafts to avoid engagement of said sheets, said means embodying a plurality of bushings having eccentric bearings for said shafts, and means manually operated for rotatively shifting said bushings.

1,193,383. VEHICLE-WHEEL. OTTO HECKEL, St. Louis, Mo., assignor of one-fourth to Matthew D. Vosburg and one-half to Lowell T. Rambo, St. Louis, Mo. Filed Nov. 13, 1911. Serial No. 660,035. (Cl. 152—30.)



A vehicle wheel comprising a hub, tubular spokes secured to said hub and provided with oppositely disposed slots therein, an inner rim secured to said spokes and provided with openings therein, bars secured to said spokes and extending therethrough, upwardly directed arms formed on said bars, lugs provided with bifurcated lower ends reciprocately mounted within said spokes and adapted to receive said bars between the arms, levers pivoted to said arms and pivotally secured to said lugs, the opposite end of said levers extended into the next adjacent spokes and adapted to interlock with the next adjacent lever, a coil spring interposed between the lugs and the lower ends of the levers adapted to move the lower end of the levers in one direction and move the lugs in an opposite direction, and a flexible outer rim carrying a tire secured to the lugs.

1,193,384. TUNING MECHANISM FOR STRINGED INSTRUMENTS. GUSTAV KARL HENNIG, Böhlitz-Ehrenberg, near Leipzig, and LUDWIG BAJDE, Leipzig-Eutritzsch, Germany, assignors to the Firm of Ludwig Hupfeld Aktiengesellschaft, Böhlitz-Ehrenberg, near Leipzig, Germany. Filed May 4, 1914. Serial No. 836,258. (Cl. 84—40.)



1. A musical stringed instrument having the string attached at one end thereto, a wheel and axle, means to connect the free end of the string to the wheel, and a weight suspended from the periphery of the wheel to rotate the latter in one direction to maintain a constant uniform load on the string.

2. A musical stringed instrument having the string connected at one end thereto, a winding device connected with the string, a wheel to which the string is connected, a weight, and means to suspend the weight from the periphery of the wheel to rotate the latter in one direction and maintain a constant uniform load on the string.

3. A musical stringed instrument having the string connected at one end thereto, a wheel and axle, a string connected to the wheel, a weight, suspension means connecting the weight to the wheel, and a string winding mechanism carried by the latter.

4. In a string tuning mechanism, means for maintaining a constant tension on a string comprising a rotating element, means to rotate the element in one direction, a second rotating element connected to the first element and to which the string is attached, and means to adjust the leverage between the two elements.

5. In a string tuning mechanism comprising a pulley, means to urge the pulley to rotate in one direction, an expansible drum connected to said pulley around which the string is wound, a threaded shaft on which one end of said drum is slidable and a nut on said shaft to cause the change in diameter of said drum.

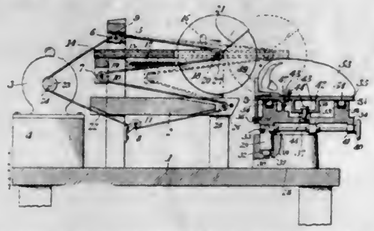
[Claims 6 to 8 not printed in the Gazette.]

1,193,385. MEAT-CUTTING MACHINE. ARTHUR H. HIEATZMAN, Baltimore, Md., assignor of one-third to Stanley P. Hieatzman, Baltimore, Md. Filed Aug. 14, 1915. Serial No. 45,546. (Cl. 143—47.)

1. A beef loin steaking machine comprising a frame having a vertical pivot adjacent to one edge, a table movable parallel with the edge of the frame, and a saw movable transversely of the frame and table to engage the loin at a point substantially in line with the pivot.

2. A beef loin steaking machine comprising a frame having a pivot adjacent to one longitudinal edge thereof, said frame provided upon its pivotal edge with laterally projecting flanges, spaced apart at their inner ends and between which a saw is adapted to move, a table mounted to have a longitudinal movement underneath said flanges, said flanges adapted to support the bone part of a loin while being cut.

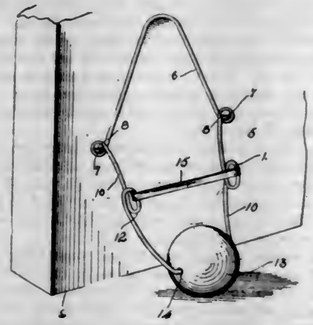
3. A beef loin steaking machine comprising a frame having a pivot adjacent to one edge, a bearing in which the same is mounted, said frame provided with upright projecting flange, a table mounted to have a longitudinal movement parallel with said flange, the latter being adapted to hold a loin in position while being cut.



4. A beef loin steaking machine comprising a frame having a pivot adjacent to one edge, a bearing in which the same is mounted, said frame provided with upright projecting flanges, spaced apart at their inner ends and between which a saw is adapted to move, a table mounted to have a longitudinal movement parallel with said flanges, the latter being adapted to hold a loin in position while being cut.

5. A beef loin steaking machine comprising a frame having a pivot projecting therefrom adjacent to one of its longitudinal edges and having a lateral projecting flange, a table mounted to have a longitudinal movement under said flange, the latter being adapted to support the bone part of a loin while being cut.

1,193,386. DOOR-STOP. ALVIN E. HILL, Lawrenceville, Ill. Filed Feb. 27, 1915. Serial No. 10,984. (Cl. 16—79.)



A door stop comprising a frame formed of a single piece of wire bent intermediate its ends to provide an attaching portion, the ends of the wire being continued from the attaching portion and extended downwardly and outwardly therefrom and coiled, and then extended from the coiled portion and having their free terminals bent in the direction of each other, a cushioning element interposed between the extended ends of the wire and having an opening extending therethrough for detachably receiving the bent terminals of the ends of the wire, and a strap extending transversely of the ends of the wire and having its opposite terminals connected to the coils, for the purpose specified.

1,193,387. PLUG FOR REPAIRING PNEUMATIC TIRES. CHARLES AUGUST HILL, Wellsburg, W. Va. Filed Aug. 14, 1915. Serial No. 45,501. (Cl. 152—26.)

1. A plug for repairing pneumatic tires comprising sheet metal inner and outer disks adapted for engagement against the opposite sides of an inner tube wall, the inner disk having a depressed flat bearing face and an annular bead surrounding the flat face, and the outer disk having an inwardly extending peripheral bead in registry with said flat face for engagement with the wall of the inner tube inwardly of said bead to bind said wall against the flat face, and means for binding said disks together against the opposite sides of the inner tube wall.



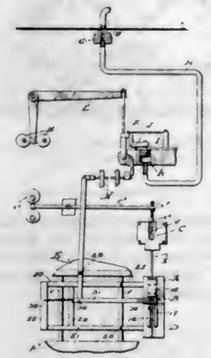
2. A plug for repairing pneumatic tires comprising an inner member formed of a sheet metal disk having its bottom formed with a central depression and having its marginal edge rolled over and inturned to provide an annular peripheral bead and a flat bearing face inwardly of the bead, a stiff metal plate fitting between the bottom portion of the disk and said flat face and held in position thereby, an outer member of less diameter than the inner member and formed of a second sheet metal disk having its marginal edge rolled downwardly and inwardly to provide an annular peripheral bead, said annular bead of the outer member being spaced inwardly from the marginal bead of the inner member, so as to bind the inner tube wall against said flat face of the inner member, and a binding screw passing through said outer member and engaging in threaded relation with said stiff plate of the inner member to bind the members together.

3. A plug for repairing pneumatic tires comprising an inner member formed of a sheet metal disk rolled over concentrically at its intermediate portion to provide an annular rounded bead at the outer edge of the member, the edge of the disk extending inwardly and horizontally from the bead to form a flat bearing face to receive the wall of a tire thereagainst, and to maintain said wall in flat position, a relatively stiff metallic plate fitted in said member beneath the flat marginal edge thereof to support the same and having a central threaded opening, an outer member formed of a sheet metal disk having its marginal edge rolled downwardly to provide a depending annular bead at the outer edge of the outer member, the outer member being of a diameter less than that of the inner member to register the depending bead over and upon said flat bearing face, and a clamping screw passing downwardly through the outer member and into said threaded opening in the supporting plate to draw the members together and clamp the wall of the tire between the flat face and the depending bead.

4. A plug for repairing pneumatic tires comprising sheet metal inner and outer disks adapted for engagement against the opposite sides of an inner tube wall, the inner disk having its marginal edge rolled over and inturned to provide an annular peripheral bead and a flat bearing face inwardly of said bead, said bearing face being arranged in a plane below the bead, a stiff metal plate mounted within the inner disk below the said face and constituting a support for the latter, an outer disk of less diameter than the inner disk and having its edge formed with an annular peripheral bead, which, when the outer disk is applied to the inner disk, is spaced inwardly from the marginal bead of the inner disk so as to bind the inner tube wall against the flat bearing face of the inner disk, and a screw connecting the outer disk with the plate of the inner disk to bind said disks together.

1,193,388. MEANS FOR MAKING PRINTERS' LEADS OR RULES. CHARLES C. HOCKMAN, Dorchester, Mass., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Dec. 11, 1914. Serial No. 876,661. (Cl. 199—10.)

1. In combination, mechanism adapted to mold a strip of metal composed of successively cast sections having their ends integrally united with each other, the said mechanism including means for intermittently feeding the strip away from the molding mechanism and a cutting mechanism including a perforated controller whose perforations are spaced at intervals such that each cutting operation occurs when a predetermined number of sections of the strip have been cast and during the pauses in the movements of the strip.



2. In combination, mechanism adapted to mold a strip of metal composed of successively cast sections having their ends integrally united with each other, the said mechanism including a molding chamber and a reciprocatorily mounted intermittently-operated gate or blade wohse movement controls the length of the sections cast, the said gate or blade also serving to feed the strip intermittently away from the mold, and a cutting mechanism having means arranged to operate it during the pauses in the movement of the strip and after a predetermined number of sections thereof have been cast.

3. In combination, means for molding a strip of metal, and a cutting mechanism comprising relatively movable members having channels to receive the strip as it comes from the molding means and cutting edges adjacent to the channels, the said cutting mechanism also having means for automatically operating it at predetermined times.

4. In combination, means for molding a strip of metal and a mechanism for cutting said strip automatically into sections of predetermined length while the strip is being formed, the said cutting mechanism having a perforated element for controlling the times of the operations thereof.

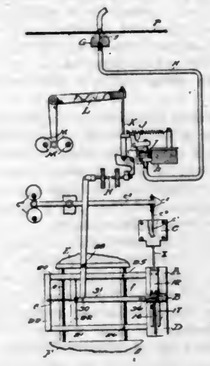
5. In combination, mechanism for molding a strip composed of successively cast sections having their ends integrally united, the said mechanism including a molding chamber in which the said sections are successively cast and united with each other to form the strip and an element for intermittently feeding the strip away from the molding mechanism, and a cutting mechanism arranged to sever the strip into sections of predetermined length, the said cutting mechanism including a controller for timing its cutting operations with relation to the casting and feeding operations.

[Claims 6 to 41 not printed in the Gazette.]

1,193,389. CUTTING MECHANISM. CHARLES C. HOCKMAN, Dorchester, Mass., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Original application filed Dec. 11, 1914, Serial No. 876,661. Divided and this application filed Mar. 26, 1915. Serial No. 17,233. (Cl. 164—68.)

1. A cutting mechanism comprising relatively movable cutting members having channels to receive the material to be cut and coöperating cutting edges adjacent the channels and a lever mechanism for operating the movable member transversely of the channels, the lever mechanism comprising a member having a lost-motion operating connection to the movable cutting member.

2. A cutting mechanism comprising relatively movable cutting members having channels to receive the material to be cut and coöperating cutting edges adjacent the channels and a lever mechanism for operating the movable member, the lever mechanism comprising a member having a lost-motion connection to the movable cutting member and the said connection including a spring.



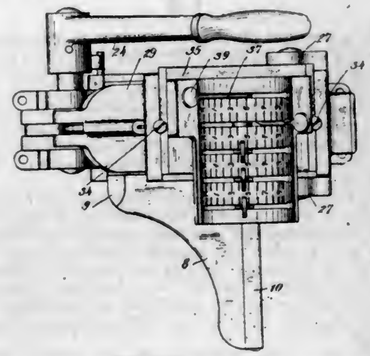
3. A cutting mechanism comprising a movable cutting member and a means for operating the same, the operating means including an actuating lever and an arm connected to the lever and having a lost-motion connection with the cutting member, the lost-motion connection including a spring.

4. A cutting mechanism comprising a movable cutting member and a means for operating the same, the said operating means including an actuating lever, an arm having connection with the lever and cutting member and a returning spring.

5. A cutting mechanism comprising a movable cutting member and a means for operating the same, the said operating means including an actuating lever, an arm having connection with the lever and cutting member and a returning spring, the connection between the arm and cutting member being of a lost-motion nature.

[Claims 6 to 19 not printed in the Gazette.]

1,193,390. QUICK-SETTING PUNCH. HERMAN HOLLERITH, Washington, D. C., assignor to The Tabulating Machine Company, East Orange, N. J., a Corporation of New Jersey. Filed Feb. 14, 1912. Serial No. 677,497. (Cl. 164—111.)



1. In a quick-setting punch, in combination, a bed forming a support for a record-card, a punch-carrier, a plurality of punches controlled by said carrier above a record-card on said bed, means for raising and lowering said carrier to place the punches into or move them out of contact with a record-card, and means independent of the

last mentioned means for positively engaging and forcing one or more punches through a record-card.

2. In a quick-setting punch, in combination, a bed having a support for a record-card, a plurality of punches arranged in rows in vertical alinement above said bed, supporting means for said punches movable toward and away from said bed, means for lowering the punch-supporting means whereby the punches may contact with a record-card, and means independent of the last mentioned means for engaging one of said punches of each row when the punches are in contact with a card for perforating the same.

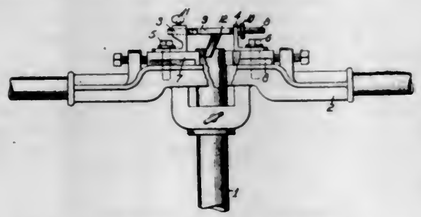
3. In a quick-setting punch, in combination, a bed having a support for a record-card, punches for perforating such record-card, a carrier for said punches, a frame connected to said bed, means on said frame for engaging the punches, and means for effecting a relative movement between the punches and the punch-engaging means to cause the former to perforate a card.

4. In a quick-setting punch, in combination, a bed having a support for a record-card, punches for perforating such record-card, means located above and connected to said bed for supporting said punches, a frame connected to the bed and movable from and toward the punch-supporting-means, means on said frame for engaging the punches, and means for moving the frame to operate the punches.

5. In a quick-setting punch, in combination, a bed for supporting a record-card, a plurality of punches, a support therefor, means independent of said punch-support for operating one or more of said punches, and means for effecting a relative movement between the card-support and the punch-support and simultaneously actuating the punch-operating means.

[Claims 6 to 32 not printed in the Gazette.]

1,193,391. PIPE-REAMER. DUDLEY HENRY HOSEA and FRANK GERHARDT SCHULZE, Portage, Wis. Filed Feb. 5, 1916. Serial No. 76,397. (Cl. 77—73.)

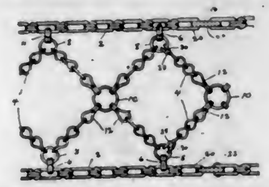


1. In a device of the character described, the combination with a stock and die for threading a pipe, of a reamer for reaming the pipe, said reamer being provided with an inclined cutter having a cutting edge on each side, and means for adjusting the cutter whereby either cutting edge of the cutter may be used, one edge acting as a reaming edge when the threads are being cut and the other edge acting as a reaming cutter when the die is being backed off.

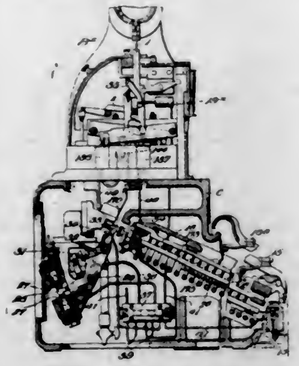
2. In a device of the character described, the combination with a stock and die for threading a pipe, of a reamer for reaming said pipe, said reamer being provided with a pair of posts and adapted to be clamped to the stock, a bar extending through said posts, a clamping member for clamping the bar in one of said posts, an adjustable member for pulling said bar longitudinally, and a cutter extending from said bar and arranged to engage said pipe.

1,193,392. ANTISKIDDING TIRE-CHAIN. ROY T. HUGHES, Kansas City, Mo. Filed Oct. 22, 1915. Serial No. 57,282. (Cl. 152—14.)

In a tire armor construction, a tread member comprising a ring provided with securing chains connected thereto by means of replaceable hook links having their hook portions extending outwardly in position to act as tread surfaces and projecting a sufficient distance above said ring to relieve the latter from tread wear.



1,193,393. MULTIPLEX COMPOSING-MACHINE. MAURITZ C. INDAHL, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed June 12, 1915. Serial No. 33,766. (Cl. 164—112.)



1. In a typographic machine embodying a plurality of composing units, and a selecting unit common to all composing units, the combination of repeat mechanism, and means whereby the action of the repeat mechanism in the composing units may be selectively controlled.

2. In a typographic composing machine embodying a plurality of composing units, each provided with means for justifying a line, and a selecting unit common to all composing units, the combination of repeat mechanism under the control of the selecting unit, and means whereby the action of the repeat mechanism in the composing units may be selectively controlled.

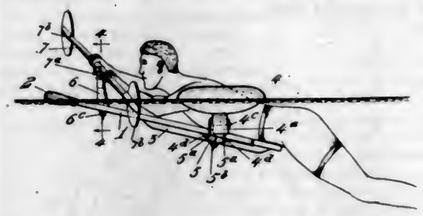
3. In a typographic composing machine embodying a plurality of composing units and a selecting unit common to all composing units, the combination of repeat mechanism, and means under the control of the selecting unit for determining at will in which of the composing units the repeat mechanism shall be effective.

4. In a typographic composing machine embodying a plurality of composing units, and a selecting unit common to all the composing units, the combination of repeat mechanism common to all the composing units, and means under the control of the selecting unit for determining at will in which of the composing units the repeat mechanism shall be effective.

5. In a typographic composing machine, embodying a plurality of composing units, and a selecting unit common to all the composing units, the combination of a repeat mechanism common to all the composing units, means whereby the repeat mechanism may be controlled exclusively by any one composing unit, and means for determining at will which composing unit shall control the repeat mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,193,394. SWIMMING-MACHINE. ALEX H. JAHNSON, Hicksville, N. Y., assignor of one-third to Herman Meyer, Roslyn, N. Y. Filed Oct. 14, 1915. Serial No. 55,885. (Cl. 9—18.)



1. In a swimming machine, a frame, an oscillatory paddle supported on the front end of said frame, and floats connected with said frame in rear of the paddle and adapted to be adjusted to support the body of the swimmer, substantially as specified.

2. In a swimming machine the combination of a frame, floats connected with the frame so as to be adjustable to suit the swimmer, a standard mounted upon the front end of the frame, and a paddle pivotally connected with said standard adapted to be operated by the hands of the swimmer.

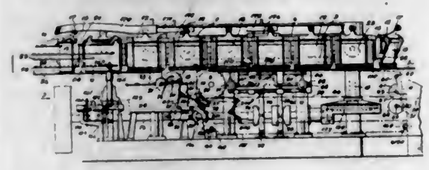
3. In a swimming machine the combination of a frame having a buoyant head and a keel, floats connected to the frame adapted to be adjusted to suit the swimmer, and a paddle pivotally connected to said frame so as to be operable by the hands of the swimmer.

4. In a swimming machine the combination of a frame having a keel, floats connected to the frame adapted to be adjusted to suit the swimmer, a standard adjustably attached to the front end of the frame, and a paddle pivotally connected to said standard so as to be operable by the hands of the swimmer.

5. A swimming machine comprising a frame having a keel, a pair of floats adjustably connected with said keel, and propelling devices attached to the front end of the frame and adapted to be actuated by the hands of the operator.

[Claims 6 to 11 not printed in the Gazette.]

1,193,395. BOOK OR PAMPHLET COVERING MACHINE. CHARLES A. JUENGST, Croton Falls, N. Y. Original application filed Mar. 19, 1910, Serial No. 550,305. Divided and this application filed Apr. 18, 1916. Serial No. 91,863. (Cl. 11—33.)



1. A book covering machine comprising a traveling conveyer, movable book clamping jaws carried by the conveyer arranged to have an opening and closing movement at an angle with respect to the movement of the conveyer, means for opening and closing the jaws, means for feeding books in substantially the same direction with the traveling movement of the conveyer into position beneath the open jaws, and means for applying covers to the books held in the jaws.

2. A book covering machine comprising, a conveyer having a continuous advancing movement, movable book clamping jaws carried by the conveyer and arranged to have an opening and closing movement at an angle with respect to the movement of the conveyer, means for opening and closing the jaws, means for feeding books in substantially the same direction with the traveling movement of the conveyer into position beneath the open jaws, and means for applying covers to the books held in the jaws, while the books are traveling.

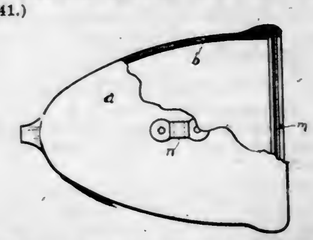
3. A book covering machine comprising, a traveling conveyer, movable book clamping jaws carried by the conveyer arranged to have an opening and closing movement at an angle with respect to the movement of the conveyer, means for opening and closing the jaws, means for feeding books in an upright position and in substantially the same direction with the traveling movement of the conveyer into position beneath the open jaws, and means for applying covers to the books held in the jaws.

4. A book covering machine comprising, a conveyer having a continuous advancing movement, book clamping jaws carried by the conveyer having an opening and closing movement at an angle with respect to the advancing movement of the conveyer, means for opening and closing the jaws, means for feeding books in an upright position and in substantially the same direction with the traveling movement of the conveyer into position beneath the open jaws, and means for applying covers to the books held in the jaws, while the books are traveling.

5. In a book covering machine, a book conveyer having a longitudinal advancing movement, means for feeding a cover in the same direction as the movement of the book conveyer, and gages on the book conveyer and cover feeding means for bringing the book and cover into register.

[Claims 6 to 82 not printed in the Gazette.]

1,193,396. HEADLIGHT. HORACE E. KENT, Dorchester, Mass. Filed Feb. 8, 1916. Serial No. 77,012. (Cl. 240—41.)



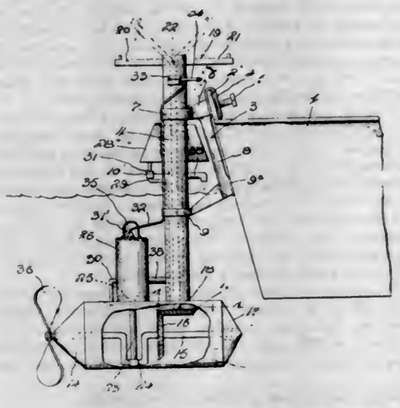
A headlight comprising, in combination, a papier maché housing rabbeted at its open end, springs in said rabbet, a packing ring seated on said springs, a disk of glass seated on said packing, and means for removably securing the said glass in said rabbet.

1,193,397. MOTOR. ROBERT M. KEYES, West Allis, Wis. Filed Aug. 19, 1915. Serial No. 46,318. (Cl. 115—18.)

1. In a motor for boats, the combination, of a vertical casing, a substantially horizontally positioned housing carried by the lower end of said vertical casing, a crank shaft rotatably supported by said housing, a shaft rotatably carried by said vertical housing, miter gears carried by said crank shaft and said vertical shaft for operatively connecting the shafts for synchronous rotation, a propeller carried by said crank shaft, an internal combustion engine operatively connected to said crank shaft and supported by said housing for submersion within the water upon which the boat is riding, means carried by said vertical casing for controlling the operation of said internal combustion engine, a steering arm carried by the upper end of said vertical shaft and adapted for engagement with said vertical casing for changing the position of said housing and the mechanism carried thereby for steering the boat.

2. In a motor for boats, the combination, of a vertical casing, a substantially horizontally positioned housing carried by the lower end of said vertical casing, a crank shaft rotatably supported by said housing, a shaft rotatably carried by said vertical housing, miter gears

carried by said crank shaft and said vertical shaft for operatively connecting the shafts for synchronous rotation, a propeller carried by said crank shaft, an internal combustion engine operatively connected to said crank shaft and supported by said housing for submersion within the water upon which the boat is riding, means carried



by said vertical casing for controlling the operation of said internal combustion engine, a steering arm carried by the upper end of said vertical shaft and adapted for engagement with said vertical casing for changing the position of said housing and the mechanism carried thereby for steering the boat, and means connected to said vertical casing for attaching the motor structure to a boat.

1,193,398. RAILROAD-TIE. THOMAS P. KIRBY, Canon City, Colo., assignor of one-fourth to J. G. Blake, Canon City, Colo. Filed Apr. 2, 1915. Serial No. 18,791. (Cl. 238—5.)

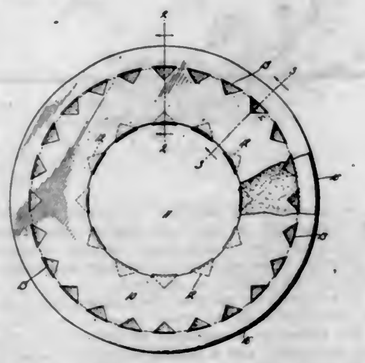


1. A rail fastening means including the combination, with a tie structure, of means mounted therein and engaging one side of the base flange of a rail to hold the latter from displacement in one direction, a floating clamping bar positioned in said tie and having a working end engaged with the opposite side of said base flange, a stationary member within said tie, the opposite end of said floating clamping bar being engaged with said stationary member, and means connected with said floating clamping bar for adjusting the latter between said stationary member and said rail.

2. A rail fastening means including the combination with a tie structure, of means mounted on the tie for engagement with one side of a rail base flange, an inclined stationary member within said tie, a clamping bar engaged with said inclined stationary member and having a working end engaged with the opposite side of the base flange, means to prevent upward movement of the working end of said clamping bar, and means pivoted to said clamping bar to tighten the latter against said rail base flange.

1,193,399. STOVE-MAT. NETTIE M. LADD, Leesburg, Ohio. Filed Apr. 12, 1916. Serial No. 90,695. (Cl. 126—221.)

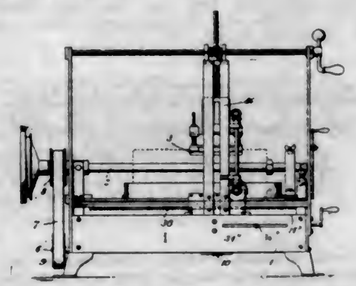
1. A stove mat comprising an annular sheet of thin metal, a like sheet of fire resisting material superposed against the same, a circular row of fingers on the inner edge of the metal adapted to engage the inner edge of the fire resisting sheet, and a similar row of fingers near the outer edge of the metal sheet to clamp the outer edge of said fire resisting sheet.



2. A stove mat comprising an annular sheet of metal having a row of fingers projecting radially from its inner edge, a like row of fingers within the outer edge cut from said sheet and bent downwardly, and an annular sheet of fire resisting material superposed against one side of the metal sheet and secured in place by folding said fingers over the edges of said fire resisting sheet.

3. A stove mat comprising an annular sheet of thin metal having a row of pointed fingers projecting radially from its inner edge and an inwardly turned bead on its outer edge, a circular row of fingers within said beaded edge cut from said sheet and bent downwardly, and an annular sheet of asbestos superposed against one side of the metal sheet and fitted between its inner circular edge and the outer row of fingers and secured in place by folding said fingers over the edge of the asbestos sheet.

1,193,400. REVERSING MECHANISM FOR COPPER-ROLLER-POLISHING MACHINES. NICHOLAS LAUDIERO, New York, N. Y. Filed Sept. 24, 1915. Serial No. 52,468. (Cl. 74—58.)



1. An automatic reversing means for machines for polishing copper rollers, comprising, in combination with a frame, a driven shaft, a stationary rack bar upon said frame, a movable frame adapted to carry a polishing block, a plate projecting from said movable frame, a carriage mounted upon the plate and having an independent movement thereon, intermeshing gear wheels journaled upon said carriage, a worm wheel splined to the driven shaft and in mesh with one of said intermeshing gear wheels, said carriage having apertured spring-pressed bosses mounted upon said driven shaft, a gear wheel journaled upon the movable frame in mesh with said rack bar, and

releasing means upon the carriage for allowing the same to move in one direction or the other to cause the gear wheel upon the movable frame to rotate in one direction or the other.

2. An automatic reversing means for machines for polishing copper rollers, comprising, in combination with a frame, a driven shaft, a stationary rack bar upon said frame, a movable frame adapted to carry a polishing block, a plate projecting from said movable frame, a carriage mounted upon the plate and having an independent movement thereon, intermeshing gear wheels journaled upon said carriage, a worm wheel splined to the driven shaft and in mesh with one of said intermeshing gear wheels, said carriage having apertured spring-pressed bosses mounted upon said driven shaft, a gear wheel journaled upon the movable frame in mesh with said rack bar, spring-pressed locking members upon said carriage, and means for releasing the locking members as the carriage approaches its limit in opposite directions.

3. An automatic reversing means for machines for polishing copper rollers, comprising, in combination with a frame, a driven shaft, a stationary rack bar upon said frame, a movable frame adapted to carry a polishing block, a plate projecting from said movable frame, a carriage mounted upon the plate and having an independent movement thereon, intermeshing gear wheels journaled upon said carriage, a worm wheel splined to the driven shaft and in mesh with one of said intermeshing gear wheels, said carriage having apertured spring-pressed bosses mounted upon said driven shaft, a gear wheel journaled upon the movable frame in mesh with said rack bar, spring-pressed locking members upon said carriage, cam members positioned in the paths of said spring-pressed locking members and adapted to actuate the same as the carriage approaches its limit in opposite directions.

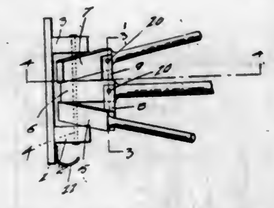
4. An automatic reversing means for machines for polishing copper rollers, comprising, in combination with a frame, a driven shaft, a stationary rack bar upon said frame, a movable frame adapted to carry a polishing block, a plate projecting from said movable frame, a carriage mounted upon the plate and having an independent movement thereon, intermeshing gear wheels journaled upon said carriage, a worm wheel splined to the driven shaft and in mesh with one of said intermeshing gear wheels, said carriage having apertured spring-pressed bosses mounted upon said driven shaft, a gear wheel journaled upon the movable frame in mesh with said rack bar, spring-pressed locking members upon said carriage, a stationary cam member positioned in the path of one of said spring-pressed locking members and an adjustable cam in the path of the adjustable locking member, said locking members designed to engage said plate.

5. An automatic reversing means for machines for polishing copper rollers, comprising, in combination with a frame, a driven shaft, a stationary rack bar upon said frame, a movable frame adapted to carry a polishing block, a plate projecting from said movable frame, a carriage mounted upon the plate and having an independent movement thereon, intermeshing gear wheels journaled upon said carriage, a worm wheel splined to the driven shaft and in mesh with one of said intermeshing gear wheels, said carriage having apertured spring-pressed bosses mounted upon said driven shaft, a gear wheel journaled upon the movable frame in mesh with said rack bar, spring-pressed locking members mounted upon the carriage and having L-shaped ends normally engaging slots in said plate, and cams in the paths of the ends of said locking members.

[Claims 6 to 8 not printed in the Gazette.]

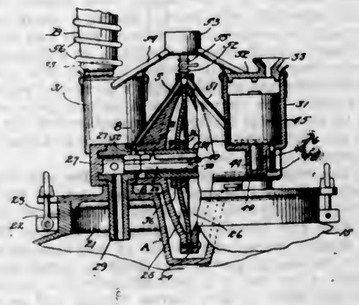
1,193,401. TOWEL-RACK. WALTER F. LAUENROTH, Brooklyn, N. Y. Filed Feb. 29, 1916. Serial No. 81,193. (Cl. 45—32.)

A towel rack comprising a base, blocks secured to each end of said base, a bolt carried by said blocks, arms journaled on said bolt, said arms adapted to swing in a horizontal plane about the bolt, and plates pivotally secured to some of the arms for engagement with the side of the next adjacent arm to hold said arms in radially extended positions and said plates adapted to be swung in parallel



alinement with the arms to allow said arms to be swung in parallel alinement with each other.

1,193,402. MILKING-MACHINE. ELMER A. LAUGHLIN, Chicago, Ill. Filed Apr. 24, 1915. Serial No. 23,668. (Cl. 31—99.)



1. In a milking machine, the combination of a can adapted for attachment to an air exhausting device, a pulsator rigid with the can and automatically operated by the exhaust of air from the can, teat cup supports on the pulsator, teat cups carried by the supports and operatively connected to the pulsator, and means for suspending the can bodily from the animal in correct relation for the application of the teat cup.

2. In a milking machine, the combination of a plurality of teat cups, a pulsator operatively connected with said cups and adapted to simultaneously exhaust air from a predetermined number of the cups and simultaneously supply air to the remainder of the cups, said pulsator including a reciprocating piston adapted in its movement to control the supply and exhaust of air to and from the cups, a movable diaphragm secured to the piston for actuating the latter, and means for effecting movement of the diaphragm subsequent to the exhaust and supply of air to respective sets of cups.

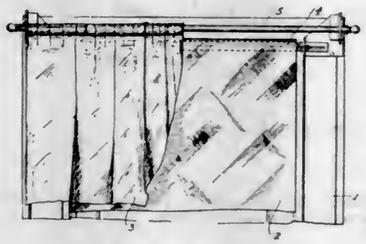
3. In a milking machine, the combination of a pulsator, a float casing operatively connected to the pulsator, a float in said casing adapted to normally close communication between the pulsator and casing and actuated by the accumulation of milk in the casing to hold open communication between the latter and pulsator, and a teat cup connected to the float casing and communicating therewith.

4. A teat cup comprising a flexible tubular shell, a spiral rib formed integral with the shell on the outer side thereof, said rib increasing in thickness from the upper toward the lower end of the cup.

5. A teat cup comprising a flexible tubular shell, a spiral rib formed integral with the shell on the outer side thereof, the convolutions of said rib approaching each other in a direction from the top to the bottom of the cup.

[Claims 6 to 9 not printed in the Gazette.]

1,193,403. COMBINED SHADE-ROLLER AND CURTAIN-POLE SUPPORT. CHARLES S. LITTLE, Harrison City, Pa. Filed Sept. 14, 1915. Serial No. 50,549. (Cl. 156—23.)



1. A combined shade roller and curtain pole support comprising a plate adapted to be secured to a window frame and formed with a slot and a slotted flange, an arm integral with said plate and formed with a slotted flange, said arm disposed at right angles with respect to said plate, an adjustable pole bracket having a shank extending through the slotted flange of said plate and carrying a pin engaging in the slot of the plate, an adjustable element extending through the slotted flange of said arm and having its outer end provided with a forwardly projecting pintle support, the shank of said curtain pole bracket having its lower edge toothed for engaging with the lower wall of the slot in the flange of said plate to arrest shifting movement of said bracket.

2. A combined shade roller and curtain pole support comprising an angular-shaped element, each of the arms of said element provided with a slotted flange, an adjustable curtain pole bracket extending through one of said slotted flanges, connected with one of said arms and having teeth for engaging with said flange to arrest shifting movement of the bracket, an adjustable arm extending through the other of said slotted flanges and provided with a bracket for supporting the pintle of a shade roller, and means for maintaining said adjustable arm in adjusted position.

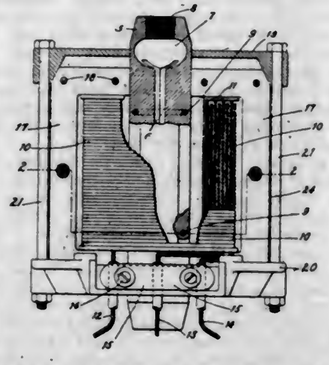
3. A combined shade roller and curtain pole support comprising an angular-shaped element, each of the arms of said element provided with a slotted flange, an adjustable curtain pole bracket extending through one of said slotted flanges, connected with one of said arms and having teeth for engaging with said flange to arrest shifting movement of the bracket, an adjustable arm extending through the other of said slotted flanges and provided with a bracket for supporting the pintle of a shade roller, means for maintaining said adjustable arm in adjusted position, and means whereby said element can be secured to a window frame.

1,193,404. INDUCTION-HEATER. WAYNE DOUGLAS LUDWICK, Tacoma, Wash., assignor to Electric Heating Company, a Corporation of Washington. Filed Apr. 24, 1916. Serial No. 93,223. (Cl. 219—47.)

1. In an electric heater, the combination of a core formed of integral cast magnetizable metal with a portion of the core chilled to increase the coercive force of the metal, said core having a cavity therein for containing the material to be heated, a magnetizing coil surrounding the core, and a return for the magnetic circuit in contact with the core at opposite ends of the coil and having less magnetic resistance than the core.

2. In an electric heater, the combination of a core formed of integral cast magnetizable metal with the outer surface of the core chilled to increase the coercive force of the metal, said core having a cavity therein for containing the material to be heated, a magnetizing coil surrounding the core, and a return for the magnetic circuit in contact with the core at opposite ends of the coil and having less magnetic resistance than the core.

3. In an electric heater, the combination of a core formed of integral cast magnetizable metal with the outer surface of the core chilled to increase the coercive force of the metal, said core having a cavity therein for containing the material to be heated, a magnetizing coil surrounding the core, and a laminated return for the magnetic circuit in contact with the core at opposite ends of the coil.

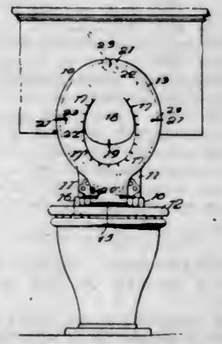


4. In an electric heater, the combination of a magnetic core of integral cast iron with the outer surface of the core chilled to increase the coercive force of the iron, said core having a cavity therein for containing the material to be heated, a magnetizing coil surrounding the core, and a return for the magnetic circuit in contact with the core at opposite ends of the coil and having less magnetic resistance than the core.

5. In an electric heater, the combination of a magnetic core formed partially of integral cast magnetizable metal but of relatively low electric conducting properties, and partially of metal having relatively higher electric conducting properties, said core having a cavity therein for containing the material to be heated, a magnetizing coil surrounding the core, and a return for the magnetic circuit in contact with the core at opposite ends of the coil and having less magnetic resistance than the core.

[Claims 6 to 23 not printed in the Gazette.]

1,193,405. SANITARY ATTACHMENT FOR WATER-CLOSET SEATS. MARY LOUISE MCCLURE, Coshocton, Ohio. Filed May 13, 1916. Serial No. 97,345. (Cl. 4—18.)

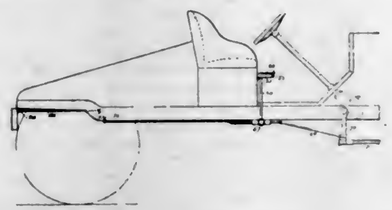


1. A device of the class described including a base member having a projection, a plurality of sheets of relatively thin material superimposed upon said base and each having an opening and a projection corresponding to the base member, means operating through the projections of the base and of the sheets and adapted to connect the same to the cover member of a water closet seat, binding cords uniting the base and the sheets, and a plurality of clip devices adapted to be connected to said cover and engaged by said cords.

2. A device of the class described comprising a base member, a plurality of sheets of relatively thin material superimposed upon the said base and each having an opening and a plurality of registering clefts in their margins and a plurality of registering apertures spaced from the clefts, binding cords extending through the clefts and through the apertures, and means adapted to attach said cords to a closet seat cover.

3. A device of the character described comprising a base member, a plurality of sheets of relatively thin material superimposed upon the said base and each having an opening and a plurality of registering clefts in their margins and a plurality of registering apertures spaced from the clefts, binding cords extending through the clefts and through the apertures, and a plurality of clips adapted to be attached to a closet seat cover and engaged by said cords.

1,193,406. REAR-END SIGNAL FOR VEHICLES. MULFORD MARTIN, Rye, N. Y. Filed Mar. 15, 1913, Serial No. 754,503. Renewed Feb. 27, 1914. Serial No. 821,525. (Cl. 116—31.)

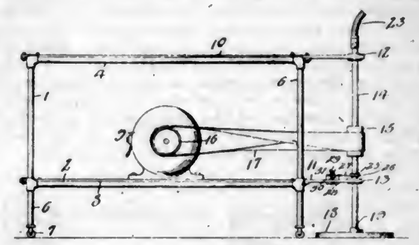


1. In a signal as characterized; a plurality of panels, each having direction-indicating symbols; a plurality of suspension mechanisms for said panels to elevate and lower the same; a containing box for said panels, having a face member to normally conceal said panels; means operable adjacent the driver's seat for lowering said panels to expose the same below said box; and means operatively connected with the steering mechanism of the vehicle equipped with said signal for raising said panels within said box.

2. In a signal as characterized; a plurality of direction-indicating members; an open-bottomed box for normally containing said members; a plurality of shafts rotatively mounted in said box; a plurality of lever arms arranged in pairs, to be operated by said shafts; a connecting mechanism for each pair of said shafts, to operate the same in relatively opposite directions; a manually-operable mechanism for rotating said shafts, said mechanism being disposed adjacent the driver's seat; and means for reversely rotating said shafts, said means being operable by the steering mechanism of the vehicle equipped with said signal.

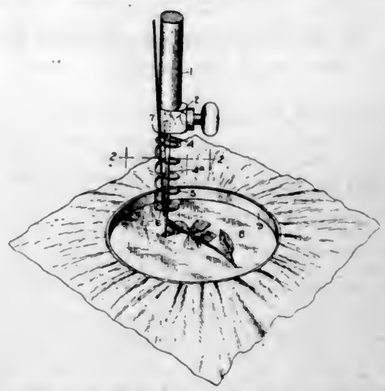
1,193,407. FINISHING-TOOL. LEONARD H. MITCHELL, Oakdale, Cal., assignor of one-half to Zue G. Peck, Sr., Tulare, Cal. Filed Sept. 16, 1914. Serial No. 862,070. (Cl. 51—13.)

A machine of the class described comprising a frame, a vertical shaft journaled in said frame and capable of rotation and having one end equipped with a finishing device, said shaft being capable of vertical adjustment in its bearings, a collar fixed to said shaft and formed with an annular groove, a yoke having the legs thereof disposed within said groove, and an adjusting member carrying said



yoke and vertically adjustable on said frame to lower and elevate said shaft, and means for driving said shaft.

1,193,408. SEWING-MACHINE. EDWARD ISAAC MOSES and WILLIAM EDMOND KELLAR, Luling, Tex. Filed Aug. 14, 1915. Serial No. 45,456. (Cl. 112—18.)



1. In a sewing machine, a needle bar, a needle, a clamp encircling the bar for securing the needle thereto, and a spring presser foot having a portion gripped between the clamp and needle bar to move with the latter.

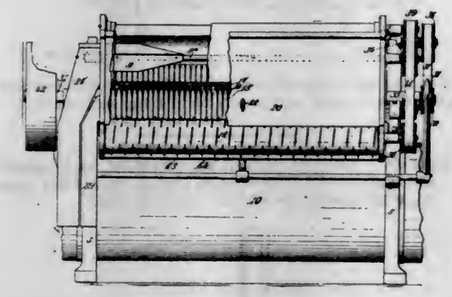
2. In a sewing machine, a needle bar, a needle clamp thereon, a spring presser foot consisting of a helical coil formed with an axially disposed upwardly extending shank extending between the clamp and needle bar, and a needle extending between the clamp and needle bar, whereby the clamp secures the needle and presser foot in place.

1,193,409. HULLER-GIN. STEPHEN D. MURRAY, Dallas, Tex. Filed Jan. 7, 1911. Serial No. 601,317. (Cl. 13—9.)

1. In a huller gin, a hulling chamber provided with a main end discharge opening, a feeding means extending over a portion of the chamber at a point distant from said discharge opening, means for throwing material therein upwardly and also moving it longitudinally of the chamber toward said main discharge opening and causing the hully material to be fed through said end opening, a ginning roll box also having an end discharge outlet toward which seed is constantly crowded longitudinally in the box, and ginning devices coöperating both with the chamber and box, seed cotton being delivered into the roll box in greaterest quantity adjacent the point of feed of the chamber.

2. In a huller gin, a hulling chamber provided with an enlarged end discharge outlet and with means for moving

material therein longitudinally thereof toward said enlarged outlet, feeding means disposed along a portion of said chamber at a point distant from the enlarged outlet, a ginning roll box having an enlarged end discharge outlet toward which material therein is moved in a longitudinal direction, the ginning roll box being supplied with a greater quantity of seed cotton adjacent to the feeding means for the chamber than at the remaining portion thereof, all of the material being moved longitudinally of the hulling chamber and the cotton picked up from the hulling chamber and taken into the roll box, and ginning devices coöperating with the chamber and roll box.



3. In a huller gin, a hulling chamber having an outlet at one extremity, a huller roller in the chamber having means for rotating and longitudinally moving the material in the chamber in one direction only, a ginning roll box, ribs interposed between the chamber and roll box and having deflecting portions above the roller and also having the spaces between them decreasing in width above the deflecting portions and below the latter, and ginning saws coöperating with the chamber and roll box and projecting into both of the latter, the hull deflecting portions of the ribs being over the portions of the saws projecting into the chamber.

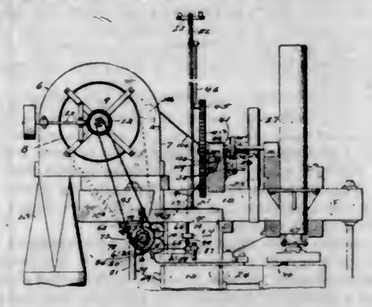
4. In a huller gin, a hulling chamber having a huller roller mounted therein and provided with an enlarged outlet, the roller having means for rotating and longitudinally moving the material in the chamber, the ordinary outlet being provided along the front and rear of the roller, a ginning roll box, ginning devices interposed between the roll box and chamber, and means for temporarily closing the lower portions of the chamber and the ordinary outlets and causing residuum from the seed cotton to be discharged solely through the enlarged outlet and the small particles of cotton that may pass down under the roller to be returned to the chamber.

5. In a huller gin, a hulling chamber provided with an enlarged outlet and also having a roller therein having the usual outlets along the front and rear portions thereof normally open and having means for moving the material longitudinally of the chamber, a ginning roll box, ginning devices interposed between and coöperating with the chamber and roll box, and removable means applied under the roller for closing the said usual outlets along the front and rear portions of the roller.

[Claims 6 to 13 not printed in the Gazette.]

1,193,410. COMBINED FILLER AND PACKER FOR BALING-PRESSES. STEPHEN D. MURRAY, Dallas, Tex. Filed Feb. 10, 1915. Serial No. 7,346. (Cl. 100—25.)

1. In a filler and packer for baling presses, a cotton supply means having a lint cotton accumulating and feeding chamber at its lower portion into which the loose cotton gravitates, the inner wall of said chamber being provided with an outlet, rotary feeding means operatively associated with and partially located in the chamber outlet and receiving the lint cotton thereon within the chamber, a packer movable adjacent to said outlet and feeding means, and mechanisms for intermittently and alternately operating the feeding means and packer whereby when the packer is acting the lint cotton will be temporarily stored in the said chamber.



2. In a filler and packer for baling presses, a cotton supply means having a lint cotton accumulating and feeding chamber at its lower portion into which the loose cotton gravitates, the inner wall of said chamber being provided with an outlet, movable feeding means operatively associated with the chamber outlet and receiving the lint cotton thereon within the chamber, a packer adjacent to said outlet and feeding means and having a movement independent of the movement of the feeding means, and mechanism for alternately and intermittently operating the feeding means and packer whereby when the packer is active the feeding means will be inactive and cause lint cotton to be temporarily stored in said chamber.

3. A baling apparatus including a bale box, a reciprocating packing means coöperative with said apparatus, a lint cotton receiving chamber having a wall with an outlet opening therein communicating with a portion of the baling apparatus, and feed rollers at the lower extremity of the said chamber and extending over the bottom of the latter and also partially projecting into the said feed opening, the lint cotton falling upon the said rollers and delivered through the outlet opening by said rollers.

4. A baling apparatus, a reciprocating packing means coöperating with said apparatus, a lint cotton receiving chamber having an outlet opening communicating with a portion of the baling apparatus, and feed rollers in the lower portion of and fully taking up the space of the chamber in which they are located and also projecting partially into the outlet opening and directly exposed to the portion of a baling apparatus with which the outlet opening communicates, the lint cotton falling upon said rollers and delivered laterally by the rollers through the outlet opening.

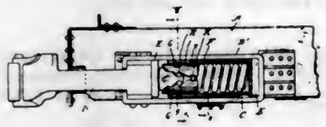
5. A baling apparatus, a reciprocating packing means coöperating with said apparatus, a lint cotton receiving chamber having communication at its lower portion with a part of the baling apparatus, and feed rollers at the lower extremity of the said chamber and extending into the point of communication of the chamber with the baling apparatus and directly exposed to a part of said apparatus, the lint cotton being deposited upon the said rollers.

[Claims 6 to 16 not printed in the Gazette.]

1,193,411. FRICTION DRAFT-RIGGING FOR RAILWAY-CARS. CHARLES J. NASH, Chicago, Ill., assignor, by mesne assignments, to William H. Miner, Chicago, Ill. Filed Feb. 10, 1908. Serial No. 415,020. (Cl. 213—64.)

1. In a friction draft rigging, the combination with the draw-bar, spring and followers, of a longitudinally movable malleable iron friction shell and cast steel friction blocks within the shell having cyanid hardened friction surfaces frictionally engaging said friction shell, the interengaging friction surfaces of said blocks and shell coöperating to produce both high frictional resistance to movement and also durability against wear, substantially as specified.

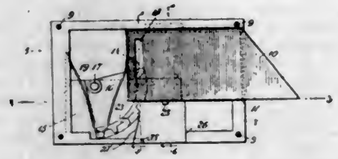
2. In a friction draft rigging, the combination with the draw-bar, spring and followers, of a longitudinally movable malleable iron friction shell and cast steel friction blocks within the shell having cyanid hardened friction surfaces frictionally engaging said friction shell, said friction blocks having each an inclined cyanid hardened anti-friction roller bearing face, the interengaging friction surfaces of said blocks and shell coöperating to produce both high frictional resistance to movement and also durability against wear, substantially as specified.



3. In a friction draft-rigging, the combination with the draw-bar, spring and followers, of a longitudinally movable malleable iron friction shell and cast steel friction blocks within the shell having cyanid hardened friction surfaces frictionally engaging said friction shell, the interengaging friction surfaces of said blocks and shell coöperating to produce both high frictional resistance to movement and also durability against wear, said friction blocks having each an inclined cyanid hardened anti-friction roller bearing face, and a hardened steel anti-friction roller having a rolling action upon said roller bearing face of one of said blocks, substantially as specified.

4. In a friction spring draft rigging, the combination with the draw-bar, followers and spring, of a longitudinally movable malleable iron friction shell, cast steel friction blocks within said shell having cyanid hardened exterior friction faces contacting with said shell, and provided each with an inclined or wedging cyanid hardened roller bearing face, a cast steel wedge between said friction blocks having cyanid hardened inclined roller bearing faces, and anti-friction rollers between said wedge and friction blocks, the interengaging friction surfaces of said blocks and shell coöperating to produce both high frictional resistance to movement and also durability against wear, substantially as specified.

1,193,412. LOCK STRUCTURE. FRANK G. NELSON, New York, N. Y. Filed Feb. 4, 1914. Serial No. 816,527. (Cl. 70—46.)



1. In a lock, the combination with a casing and a part movable with respect to the casing, of a pivoted member carried by the casing and slidably engaged with said movable part, a key adapted to coöperate with said pivoted member to cause partial rotation of the latter and to shift the movable part into and out of the casing, and means independent of the movable part and pivoted member for holding the key in a position with the movable part located within the area of the casing.

2. The combination with a lock casing and movable barriers to the introduction of the key mounted in said casing; of a key grooved transversely across its faces to match said barriers to permit the introduction of the key and operation of the lock.

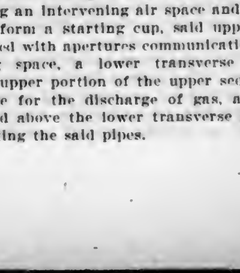
3. In a lock, a bolt carrying barriers to the introduction of the key and a key transversely grooved across its faces to match said barriers thereby permitting operation of the lock when the key is inserted.

4. In a lock, the combination with a serrated pivoted bolt; of a grooved key with serrated edge, engaging the serrated bolt, spaced barriers carried by the bolt to enter said grooves, permitting the operation of the lock.

5. In a lock, a bolt carrying barriers to the introduction of the key and connected with a serrated segment, a key with serrated edge engaging said segment and grooved transversely to match said barriers, thereby permitting the operation of the lock by receiving the barriers when the key is operated.

[Claims 6 to 11 not printed in the Gazette.]

1,193,413. OIL-BURNER. ROY S. NELSON and WINFIELD S. NELSON, Oklahoma, Okla., assignors of one-third to C. H. Fleet, Oklahoma, Okla. Filed Oct. 9, 1915. Serial No. 55,007. (Cl. 158—64.)



1. A burner of the class described including a burner proper composed of a base, and an upper section extending into the base and fitting against the same at the top and bottom thereof and spaced therefrom between the top and bottom of the said base to form an intervening space, said base being provided at the bottom of the intervening space with an air inlet and the said upper section having an air outlet communicating with the said base, said upper section being closed at the bottom to form a starting cup, and a pipe extending across the upper section and provided at an intermediate point with a discharge aperture.

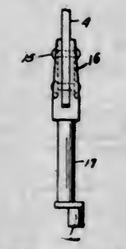
2. An oil burner of the class described including a substantially cylindrical base provided at the bottom with an inwardly extending flange having apertures and an upper section of substantially cylindrical form fitting within the base and the flange and forming an intervening air space, said upper section being closed at the bottom to form a starting cup and provided with perforations located at the upper portion of the said intervening space, and a transverse pipe supported by the upper section and provided with a discharge nipple.

3. An oil burner of the class described including a burner proper comprising a base consisting of a casing and provided at the bottom with an inwardly extending flange having an air inlet, an upper section consisting of an upper portion and a lower reduced portion fitting within the outer section or base and forming an intervening air space, said lower portion being also provided with an air passage communicating with the said intervening space, and a pipe extending across the upper section and provided with an aperture for the escape of gas.

4. An oil burner of the class described including a burner proper comprising a base of substantially cylindrical form provided at the bottom with an inwardly extending flange having an air inlet, an upper section consisting of an upper substantially cylindrical portion and a lower reduced portion fitting the base and the flange thereof and forming an intervening air space and having a closed bottom to form a starting cup, said upper section being also provided with apertures communicating with the said intervening space, a lower transverse pipe extending across the upper portion of the upper section and having an aperture for the discharge of gas, a top generating pipe located above the lower transverse pipe, and means for connecting the said pipes.

5. An oil burner of the class described including a burner proper comprising a base and an upper section supported by the base at the top and bottom thereof and spaced therefrom between the top and bottom of the base to form an intervening air space, said base and upper section having inlet and outlet apertures communicating with the said air space and the upper section being closed at the bottom to form a starting cup, a lower transverse pipe extending across and supported by the upper section at opposite sides thereof and provided at an intermediate point with a discharge aperture, and an upper generating pipe located above the discharge aperture.

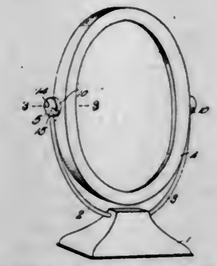
1,193,414. REFRIGERATOR-CAR-DOOR-OPERATING MECHANISM. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed July 21, 1910. Serial No. 573,003. (Cl. 16—61.)



1. An operating shaft for refrigerator car doors and the like, said shaft comprising two, separate, relatively short end-members and an intermediate connecting bar to the ends of which said end-members are rigidly attached, each of said end-members having a crank arm at its outer end.

2. An operating shaft for refrigerator car doors and the like, said shaft comprising two, separate, like, relatively short end-members, and an intermediate connecting bar rectangular in cross section to the ends of which said end-members are rigidly attached, each of said end-members having a crank arm at its outer end and forked at its inner end where joined to the end of said connecting bar, each end member being also provided with a rounded bearing portion 17 intermediate its crank arm and its forked end.

1,193,415. EASEL-FRAME. ERNEST OLDENBUSCH, New York, N. Y. Filed Dec. 7, 1915. Serial No. 65,490. (Cl. 16—142.)

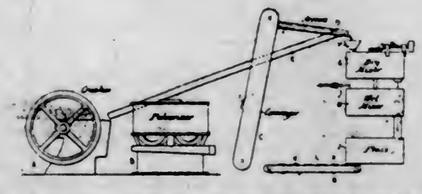


1. A swivel-joint for a frame having a pressed-out section comprising a casing having a tongue interlocking with said pressed-out section, means for connecting said tongue and said pressed-out section rigidly together, and a bearing cap fitting in said casing.

2. A swivel-joint for a frame comprising a bearing cap, a casing provided with a bottom having a tongue projecting therefrom, means for securing said tongue to said frame, an up-standing wall partially surrounding said bearing cap, and overlapping lugs for preventing lateral movement of the cap while allowing a pivotal movement of the casing.

3. A swivel-joint for a frame having a pressed-out section and an arm comprising a bearing casing formed with a bottom having a tongue extending therefrom, said tongue being arranged to interlock with said pressed-out section, said casing being also provided with an upstanding wall having overlapping ears and a bearing cap adapted to be secured to said arm, said bearing cap fitting in said casing, the wall of said casing being cut away for allowing the casing to move back and forth pivotally while said arm is in engagement with said cap.

1,193,416. MANUFACTURE OF ARTIFICIAL ROOFING-SLATE. OWEN JONES OWEN, Blaenau Festiniog, Wales. Filed Dec. 30, 1914. Serial No. 879,659. (Cl. 106—30.)



1. The herein described method for manufacturing artificial roofing slate from waste slate, consisting in mixing coarse waste slate material, fine waste slate material, cement and water, then pressing the resultant mixture while moist into the form of a slate and supporting the slate throughout its under surface, then drying the slate in a moist atmosphere and while so supported filling the pores of the pressed slate with a silicate to render the slate insoluble and non-porous.

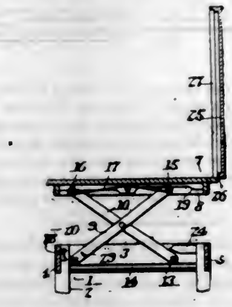
2. The herein described method for manufacturing artificial roofing slate from waste slate material consisting in mixing coarse granular waste slate material, pulverized impalpable waste slate material and a binding substance, then moistening the mixture, then pressing the moistened mixture into a slate and supporting the slate throughout its under surface, then drying the slate in a moist atmosphere and while so supported, then saturating the slate with silicate of soda and subsequently with chlorid of calcium to permeate the slate with silicate of calcium.

3. The herein described method for producing artificial roofing slate from waste slate material, consisting in reducing the waste slate material to coarse granular form, then reducing a portion of the said coarse granules into fine impalpable powder form, then mixing the coarse and fine slate material with cement, then mixing the resultant dry mixture with water to form a plastic mass, then pressing the plastic mass into a slate and supporting the latter throughout its under side, then drying the slate in a moist atmosphere, then applying a solution of silicate of sodium to the slate to allow the said solution to soak in, and then applying a solution of chlorid of calcium to the slate to soak in and combine with the silicate of sodium to form a hard insoluble silicate of calcium filling the pores of the slate.

1,193,417. COMBINATION LIBRARY AND DRAWING TABLE. PETER D. PAULS, Denver, Colo. Filed Aug. 4, 1915. Serial No. 43,624. (Cl. 45—110.)

1. A table of the class described comprising a frame consisting of supporting legs and top rails connecting the same, a top movably mounted upon the frame, a supporting device for the top including side pairs of medially pivoted bars, adjacent ends of corresponding bars of both pairs being pivotally connected with the side rails of the frame, the corresponding ends of the other bars being pivotally connected with the top, the opposite ends of the first-named bars being frictionally engaged with the top, the side rails of the frame being constructed to provide horizontal ledges adapted to support the opposite ends of the last-named bars of both pairs, means by which the relatively movable bars of each pair may be adjusted angularly, and detachable means for securing the side bars connected with the frame in vertically disposed position.

3. A table of the class described comprising a frame consisting of supporting legs and top rails connecting the same, a top removably mounted upon the frame, a supporting device for the top including side pairs of medially pivoted bars, adjacent ends of corresponding bars of both pairs being pivotally connected with the side rails of the frame, the correspondingly ends of the other bars being pivotally connected with the top, the opposite ends of the first named bars being frictionally engaged with the top, the side rails of the frame being constructed to provide horizontal ledges adapted to support the opposite ends of the last mentioned bars of both pairs, and means by which the relatively movable bars of each pair may be adjusted angularly including a transverse operating shaft journaled in the top, means for rotating said shaft, flexible member connecting the free end of each side bar which is pivoted to the frame with the shaft being adapted to be wound thereon, means for guiding said flexible member, and detachable means for securing the side bars connected with the frame in vertical position.

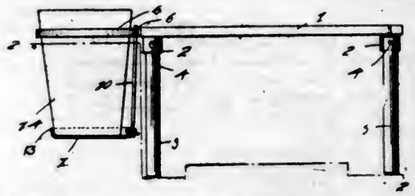


2. A table of the class described comprising a frame consisting of supporting legs and top rails connecting the same, a top movably mounted upon the frame, a supporting device for the top including side pairs of medially pivoted bars, adjacent ends of corresponding bars of both pairs being pivotally connected with the side rails of the frame, the corresponding ends of the other bars being pivotally connected with the top, the opposite ends of the first-named bars being frictionally engaged with the top, the side rails of the frame being constructed to provide horizontal ledges adapted to support the opposite ends of the last-named bars of both pairs, means by which the relatively movable bars of each pair may be adjusted angularly, and detachable means for securing the side bars connected with the frame in vertically disposed position.

1,193,418. MILK-STOOL. HANNA W. PETERS, Mapleton, Minn. Filed Apr. 12, 1916. Serial No. 90,685. (Cl. 31—13.)

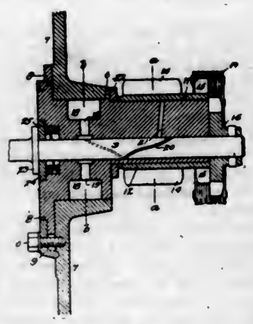
1. A milk stool comprising a ring, an attaching base formed on said ring, said base provided with a longitudinally extending bore and a vertically extending slot adapted to intersect the longitudinal bore, a vertically extending supporting bar provided with a plurality of openings received by said vertically extending aperture, a bolt extending through the longitudinal extending bore and the vertically extending supporting bar, means for securing the end of the bolt to a stool, and a tray secured to the lower end of the supporting bar for receiving and supporting the lower end of a bucket positioned within the ring.

2. A milk stool comprising a seat, legs detachably secured to said seat, said seat provided with a recess in one end thereof, an internally screw-threaded boxing positioned within said recess, a ring, a bolt extending through



said ring and received by the boxing, a vertically extending supporting bar secured to said bolt, a tray secured to said supporting bar, and an angular flange formed on said tray for receiving the lower end of a bucket to support said bucket within the ring.

1,193,419. MEANS FOR TAKING UP DRIVE-CHAINS. HAROLD S. PIERCE, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 17, 1916. Serial No. 78,925. (Cl. 64—53.)

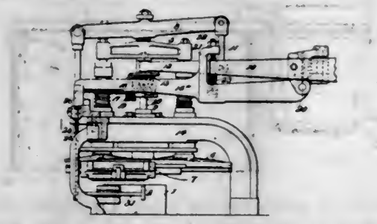


1. The combination in means for taking up the slack of drive chains, of a frame; a bearing mounted therein; a shaft located in the bearing and concentric with the opening in the frame, said bearing having an eccentric portion; a sprocket wheel on the eccentric portion having main driving teeth and having transmitting teeth; a toothed sprocket wheel secured to the shaft and having teeth of the same pitch as the transmitting teeth of the first mentioned wheel; a drive chain adapted to drive the first-mentioned sprocket wheel; and a transmitting chain extending over the transmitting teeth of the said first-mentioned sprocket wheel and over the teeth of the wheel secured to the shaft.

2. The combination in means for taking up the slack of drive chains, of a frame; a bearing mounted therein; a shaft located in the bearing and concentric with the opening in the frame, said bearing having an eccentric portion; a sprocket wheel on the eccentric portion having main driving teeth and having transmitting teeth; a toothed sprocket wheel secured to the shaft; a drive chain adapted to drive the first-mentioned sprocket wheel; and a transmitting chain extending over the transmitting teeth of the said first-mentioned sprocket wheel and over the teeth of the wheel secured to the shaft.

3. The combination in means for taking up the slack of drive chains, of a frame; a bearing mounted therein; a shaft located in the bearing and concentric with the opening in the frame, said bearing having an eccentric portion; a sprocket wheel on the eccentric portion having main driving teeth; and a transmitting chain connecting the shaft with the sprocket wheel, whereby motion of the sprocket wheel will be transmitted to the shaft.

1,193,420. LOW-QUAD MECHANISM FOR TYPE-MACHINES. FRANK HINMAN PIERPONT, Horley, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Jan. 9, 1914. Serial No. 811,250. (Cl. 101—200.)



1. In a type casting machine the combination with a matrix-clamping mechanism embodying an operating member and a variably movable member and a mold provided with a main blade and a cut-off section of an interponent carried by and movable relatively to the operating member for the matrix-clamping mechanism and mechanism carried by the variably movable member of the clamping mechanism to position the interponent, an actuator coupled with the cut-off section and coöperating with the interponent to position the cut off section substantially as described.

2. In a type casting machine furnished with a matrix-clamping mechanism having a variably movable member and a mold having a main and a cut-off section, the combination with an operator for the clamping-mechanism, of an interponent yieldingly connected with the operator, of a projection carried by the variably movable member of the clamping mechanism and adapted when its travel is interrupted to move the interponent relatively to the operator and operating means for the cut-off section controlled by the interponent substantially as and for the purpose described.

3. In a type casting machine furnished with a matrix-clamping mechanism having a variably movable member and a mold furnished with a main and a cut-off section, the combination with an operator 10 for the clamping mechanism, of an interponent carried by the operator, a projection on the variably movable member 9, and two actuators separately pivoted to stationary supports and arranged to move a lever 31 that is connected to the cut-off section, substantially as described.

4. In a type casting machine, the combination with an actuator 10 of an interponent pivotally and yieldingly coupled with the actuator and a projection 29 carried by a variably movable member 30 of the clamping mechanism to move the interponent and two pivotally supported actuators 25 and 26 with which the interponent is adapted to engage substantially as described.

5. In a type casting machine, the combination with a matrix clamping mechanism embodying an operating member and a variably movable member and a mold provided with a sectional mold blade, of an interponent carried by and movable relative to the operating member, means intermediate the interponent and variably movable member for positioning the interponent, and means intermediate the interponent and one of the sections of the blade for positioning the latter in accord with the movements of the interponent.

[Claims 6 and 7 not printed in the Gazette.]

1,193,421. BOOK OR LESSON MARKER AND PAPER-CUTTER. EDITH E. PRETTYMAN, Portland, Oreg. Filed Sept. 15, 1915. Serial No. 50,804. (Cl. 11—12.)

1. A device of the character described comprising a body portion and a plurality of tongues extending parallelly from said body portion, the mid-tongue being of greater length than the side tongues, said mid-tongue having a sharpened edge to serve as a paper cutter, said body portion and said tongues being integrally formed from a single piece of material, said tongues lying normally in a single plane throughout their entire length.

2. A device of the character described comprising a body portion and a plurality of tongues extending parallelly from said body portion, the mid-tongue being of greater length than the side tongues, said body portion being adapted to receive advertising matter and having a space provided with a serial number, said tongues lying normally in a single plane throughout their entire length.



3. A device of the character described comprising a body portion and three tongues extending from one end of said body portion in the longitudinal direction of the same, two of said tongues being short and the middle tongue being longer than the other two tongues, said device having means for indicating the lesson, said tongues lying normally in a single plane throughout their entire length.

1,193,422. BLOCK-PRINTING MACHINE. GEORGE PRIFOLD, Linwood, Pa., assignor, by mesne assignments, to United Roofing & Manufacturing Company (Department of Barrett Manufacturing Company), Wilmington, Del., a Corporation of Delaware. Filed Apr. 26, 1915. Serial No. 23,906. (Cl. 101—89.)



1. The combination in a block printing machine of the horizontal type in which the material is intermittently moved forward over a bed, of a series of reciprocating carriers; printing blocks thereon; cams for raising the carriers; shafts on which the cams are mounted and means for driving the shafts; a pivoted latch arranged to engage each carrier when in the raised position; an endless chain; means for driving said chain; and a lug on the chain arranged to actuate a given latch at a certain time so as to release the carrier controlled by the latch and to allow its block to make an impression.

2. The combination in a block printing machine of the horizontal type, of a frame; a series of block carriers mounted on the frame; blocks on each carrier; a transverse shaft in line with each carrier; a cam on each shaft for raising the carrier; a latch for holding the carrier in the elevated position and out of action; a pin on each latch; a series of endless chains; lugs on each chain for engaging the pins of certain of the latches; and means for driving the chains in unison, the lugs releasing certain of the latches at predetermined points so as to allow certain blocks to make an impression.

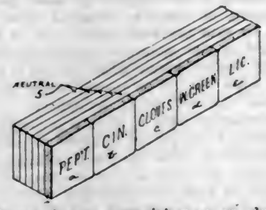
3. The combination in a block printing machine, of a frame; a series of block carriers; a printing block on each carrier; means for reciprocating each block carrier; a weighted latch arranged to engage each carrier and to hold it out of engagement; a series of longitudinally arranged endless chains; means for driving the chains; lugs on each chain, the lugs of one chain differing in height from those of the other chains; pins varying in length so that certain of the pins will project into the path of certain lugs, whereby certain latches are actuated by certain pins; and means for intermittently feeding a fabric through the machine.

1,193,423. CHEWING-GUM. JOHN DONALD PRYOR, Providence, R. I. Filed Apr. 14, 1916. Serial No. 91,087. (Cl. 127—4.)

1. A package of chewing gum comprising a supply of neutral gum and an accompanying concentrated flavor stick.

2. A package of chewing gum comprising as an element thereof a highly-concentrated-flavor stick.

3. A package of gum comprising a supply of neutral gum and an accompanying stick of gum having a highly-concentrated flavor.

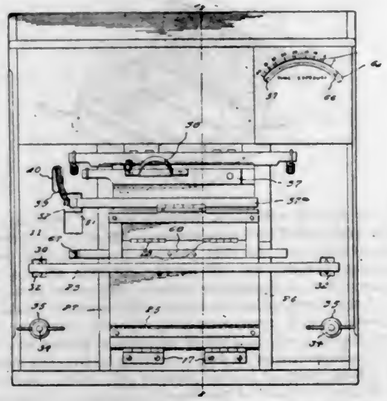


4. A package of gum comprising as an element thereof a stick of gum having a highly-concentrated flavor.

5. A package of gum comprising as an element thereof a stick of gum having a plurality of sections each possessing a different flavor.

[Claims 6 to 10 not printed in the Gazette.]

1,193,424. AUTOMATIC PRINTING-CAMERA. ALMOND R. RANCIER, Lima, N. Y. Filed July 16, 1915. Serial No. 40,301. (Cl. 95—73.)



1. In a device of the class described, the combination with a casing including a negative holder, means adapted to press the sensitized paper against the negative, said means being hinged to the casing to swing toward and from the negative in the holder, a clock work mechanism including a winding arbor, connections between the swinging means and arbor arranged to wind the clock when the means is swung away from the negative, a pointer movable with the connections, and a time scale wherewith the pointer coöperates to indicate the passage of time after the swinging means is moved toward the negative.

2. In a device of the class described, the combination with a casing including a negative holder, means adapted to press the sensitized paper against the negative, said means being hinged to the casing to swing toward and from the negative in the holder, a clock work mechanism including a winding arbor, connections between the swinging means and arbor arranged to wind the clock when the means is swung away from the negative holder, a screen for non-actinic rays movable toward and from the negative holder, and an operative connection between said means and screen arranged to close the screen while the clockwork mechanism is wound.

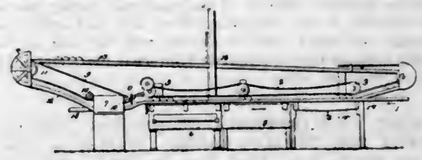
3. In a device of the kind described, the combination with a casing including a negative holder, means adapted to press the sensitized paper against the negative, said means being hinged to the casing to swing toward and from a negative in the holder, a screen for non-actinic rays arranged to swing toward and from the negative holder, and tension means including a flexible member arranged to draw the screen into position before the negative holder, said tension means being operated by swinging the first named means away from the negative holder, the screen being gravity operated in its opposite direction.

4. In a device of the kind described, the combination with a casing including a negative holder, means adapted to press the sensitized paper against the negative, said means being hinged to the casing to swing toward and from a negative in the holder, a screen for non-actinic rays arranged to swing toward and from the negative holder, and tension means including a flexible member arranged to draw the screen into position before the negative holder, said tension means being operated by swinging the first means away from the negative holder, the screen being gravity operated in its opposite direction, and elements operated by movement of the first means toward the negative holder and arranged to impart an initial falling movement to the screen.

5. In a device of the kind described, the combination with a casing including a negative holder, means adapted to press the sensitized paper against the negative, said means being hinged to the casing to swing toward and from a negative in the holder, a screen for non-actinic rays arranged to swing toward and from the negative holder, and tension means including a flexible member arranged to draw the screen into position before the negative holder, said tension means being operated by swinging the first means away from the negative holder, the screen being gravity operated in its opposite direction, a releasable lock for holding the screen away from the negative, and elements operated by movement of the first means toward the negative holder and arranged to primarily release the lock and thereinafter impart initial movement away from the negative holder to the screen.

[Claims 6 to 24 not printed in the Gazette.]

1,193,425. SOLDERING-MACHINE. DANIEL P. ROBINSON and JOHN COYLE, Baltimore, Md., assignors, by mesne assignments, to Continental Can Company, Inc., a Corporation of New York. Filed Mar. 2, 1912. Serial No. 681,133. (Cl. 113—68.)

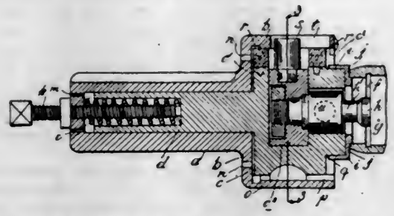


A soldering machine including in combination, a solder receptacle in which solder may be kept in molten condition, a track having a plurality of unobstructed spaced openings therein and leading to said receptacle, means for causing the solder in said receptacle to issue in continuous jets from the openings in said track, means for rolling cans along said track, whereby a globule of molten solder is caused to adhere to each can and roll or flow along the end joint and along the track.

1,193,426. TOOL-HOLDER. ERNEST ROLLINSON and EDWARD ERNEST MOXHAM, London, England, assignors to The Coats Machine Tool Company Limited, London, England. Filed Nov. 12, 1915. Serial No. 61,147. (Cl. 82—1.)

1. A tool holder having a cylindrical casing, a cam head on said casing, a stock guided to slide axially in the casing, means for preventing relative rotary movement between the stock and casing, an enlarged recessed head on the stock and fitting within the cam head of the casing, a tool slide movable transversely to the axis of the stock and casing within the recess in said enlarged head, and a pin projecting from said tool slide to engage with the cam on the cam head.

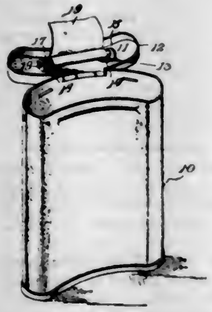
2. A tool holder having a cylindrical casing, a cam head on said casing, a stock guided to slide axially in the casing, a spring pressing the stock and casing apart, means for adjusting the amount of relative sliding movement of the casing and stock, means for preventing relative rotary movement between the stock and casing, an enlarged recessed head on the stock and fitting within the cam head of the casing, a tool slide movable transversely to the axis of the stock and casing within the recess in said enlarged head, and a pin projecting from said tool slide to engage with the cam on the cam head.



3. A tool holder having a cylindrical casing, a cam head on said casing, a stock guided to slide axially in the casing, means for preventing relative rotary movement between the stock and casing, an enlarged recessed head on the stock and fitting within the cam head of the casing, said head being flattened at one side, a tool slide movable transversely to the axis of the stock and casing within the recess in said enlarged head, a cover piece over the flattened portion of the head and closing the recess therein, and a pin projecting from said tool slide and through said cover piece to engage with the cam on the casing head.

4. A tool holder having a cylindrical casing, a cam head on said casing, a stock guided to slide axially in the casing, means for preventing relative rotary movement between the stock and casing, an enlarged recessed head on the stock and fitting within the cam head of the casing, said head being flattened at one side, a tool slide movable transversely to the axis of the stock and casing within the recess in said enlarged head, a cover piece over the flattened portion of the head and closing the recess therein, a pin projecting from said tool slide and through said cover piece to engage with the cam on the casing head and an external and internal tool clamp carried by said tool slide.

1,193,427. CIGARETTE-PAPER-HOLDING ATTACHMENT FOR TOBACCO-BOXES. BERTRAM A. ROSE, Fort Worth, Tex. Filed June 18, 1914. Serial No. 845,897. (Cl. 206—38.)

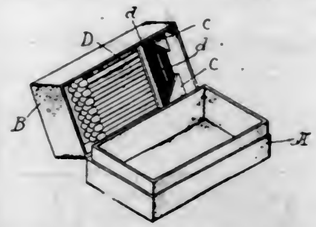


1. The combination with a receptacle having an open top and including a lid adapted to close the open end of the receptacle, of a roll of paper supported upon the lid and having its free end depending within the receptacle when the lid is closed, the roll of paper when the lid is opened being movable with the lid to expose the free end of the paper.

2. The combination with a receptacle having an open top and including a lid adapted to close the open end of the receptacle, of brackets mounted upon the lid, a spool carried by said brackets, and a roll of paper rotatably supported by the spool and having its free end depending within the receptacle when the lid is closed, said roll of paper when the lid is opened being movable with the lid to expose the free end of the paper.

3. The combination with a receptacle having an open top and including a flanged lid adapted to close the open end of the receptacle with the flange engaging the wall of the receptacle, of a roll of paper supported upon the lid and having its free end depending within the receptacle when the lid is closed, said roll of paper when the lid is opened being movable with the lid to expose the free end of the paper with the said flange adapted to provide a cutting element therefor.

1,193,428. COMBINED CIGARETTE AND MATCH BOX. EDGAR S. ROSENBLATT, San Francisco, Cal. Filed Dec. 6, 1913. Serial No. 805,025. (Cl. 206—48.)



1. As a new article of manufacture, a combined cigarette and match box embodying a cigarette receptacle, a cover pivoted at one side thereof, and retaining means extending across one end of the interior of the cover and secured to the opposite sides of said cover and to the end of the cover adjacent which said means is positioned to provide rigid match-engaging means, whereby, when a package of book matches is positioned within the cover and in engagement with said retaining means, the matches will extend parallel to the pivoted side of the cover and the striking surface of the match package will extend at right angles thereto, said retaining means being cut away for a portion of its extent to expose the striking surface of the package.

2. As a new article of manufacture, a combined cigarette and match box embodying a cigarette receptacle, a cover pivoted along one edge thereof, retaining means positioned interiorly of the cover and at the ends thereof adjacent the pivoted side, whereby the retaining means at either end of the cover may maintain a package of book matches rigidly in position interiorly of the cover, with the matches extending parallel to the pivoted edge and the striking surface at right angles thereto, each of said retaining means being cut away for a portion of its extent to expose the striking surface of the package, and said retaining means being conjointly operable to engage with the opposite ends of the cigarettes in the receptacle, when the cover is in closed position, for the purpose of precluding displacement of the cigarettes.

1,193,429. METAL-CHLORID BATH FOR WEIGHTING SILK. PETER SCHMID and KARL GROSS, Basel, Switzerland; said Gross assignor to said Schmid. Filed Oct. 7, 1915. Serial No. 54,499. (Cl. 8—13.)

1. A metal chlorid bath for weighting silk comprising a solution of at least one metal chlorid with silk and silkworm-chrysalises, the said metal chlorid being the chlorid of a metal able to be fixed on the silk fiber by an alkali metal phosphate bath.

2. A metal chlorid bath for weighting silk containing zinc chlorid, silk and silkworm-chrysalises in solution.

3. A metal chlorid bath for weighting silk containing zinc chlorid, tin chlorid, silk and silkworm-chrysalises in solution.

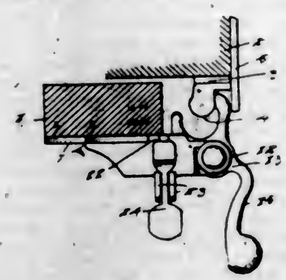
1,193,430. FOAM OR FROTH DYEING-BATH FOR SILK. PETER SCHMID and KARL GROSS, Basel, Switzerland; said Gross assignor to said Schmid. Filed Oct. 7, 1915. Serial No. 54,501. (Cl. 8—13.)

1. A foam or froth dyeing bath for silk prepared with the liquid obtainable by boiling of silkworm-chrysalises with water.

2. A foam or froth dyeing bath for silk prepared with the liquid obtained by boiling silk wastes containing silkworm-chrysalises with water.

3. A foam or froth dyeing bath for silk prepared with the liquid obtained by boiling silkworm-chrysalises with water containing sericin.

1,193,431. AUTOMATIC GATE-LATCH. AUGUST J. SCHULTZE, Galveston, Tex. Filed Apr. 15, 1916. Serial No. 91,370. (Cl. 70—28.)



1. A gate latch comprising a casing, a sleeve formed on one end of said casing, a pin journaled in said sleeve, a swinging latch secured to the pin and adapted to engage a keeper when the gate is in a closed position, means for locking the swinging latch against movement when the gate is in a closed position, and means for holding the swinging latch in an active position when the gate is in an opened position.

2. A gate latch comprising a casing secured to a gate, a sleeve formed on one end of the casing, said sleeve provided with a cut away portion to form a bearing, a pin journaled in said sleeve and resting upon the bearing, a swinging latch secured to the pin, a handle formed on the swinging latch and extending to the cut away portion of the sleeve, a pair of relatively spaced arms formed on the swinging latch and adapted to engage a keeper when the gate is in a closed position, means for locking the swinging latch against movement when the gate is in a closed position, and means for holding the swinging latch in an active position when the gate is in an opened position.

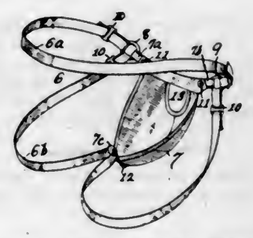
3. A gate latch comprising a casing secured to a gate and a keeper secured to a gate post, a striker plate secured to the keeper providing a space between the keeper and the striker plate, a sleeve formed on one end of the casing, said sleeve provided with a cut away portion to form a bearing, a pin journaled in said sleeve and resting upon the bearing, a swinging latch secured to the pin, an arm formed on the swinging latch, a pair of relatively spaced arms formed on the swinging latch and one of said arms being of shorter length than the other to engage one side of the keeper when the gate is moved to a closed position, the other arm adapted to pass between the keeper and the striker plate when the gate is in a closed position, and means for locking the swinging latch against movement when in a gate locking position, and means for holding the swinging latch in an active position when the gate is in an opened position.

4. A gate latch comprising a casing secured to a gate, a sleeve formed on said casing, said sleeve provided with a cut out portion to form a bearing, a pin journaled in said sleeve and resting upon the bearing, a swinging latch secured to the pin, a handle formed on the swinging latch and extending through the cut out portion of the casing, a pair of relatively spaced arms formed on the swinging latch and adapted to engage a keeper when the gate is in a closed position, a lug formed on the swinging latch, a sliding pin within the casing and adapted to engage the lug to lock the swinging latch against movement when the gate is in a closed position, and means for raising the locking pin from an engagement with the lug to release the swinging latch.

5. A gate latch comprising a casing, a swinging latch journaled to said casing, a handle formed on said swinging latch, a pair of relatively spaced arms formed on the swinging latch and adapted to engage a keeper when the gate is in a closed position, a substantially triangular shaped lug formed on the swinging latch and provided with an inclined bearing surface, a pin slidably mounted in the casing and resting upon the inclined bearing face of the lug when the gate is in an opened position, said pin provided with a reduced extension adapted to engage one side of the lug and lock the swinging latch against movement when the gate is in a closed position, and means for raising the pin from an engagement with the lock to free the swinging latch.

[Claims 6 to 8 not printed in the Gazette.]

1,193,482. SUSPENSORY. AUGUSTUS J. SCHWARZER, Western Port, Md. Filed Apr. 12, 1916. Serial No. 90,615. (Cl. 128—38.)



1. A suspensory, comprising a bag member and a belt member, said belt member consisting of two similar straps and rings joining the ends thereof, and detachable loops joining said bag to said rings, and a detachable loop joining the posterior portion of said bag with one of said straps intermediate the ends thereof.

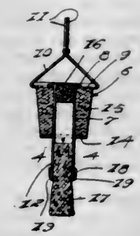
2. A suspensory, comprising a bag member provided with a loop at each upper corner and a loop at the lower and posterior end, detachable fasteners for said loops, a belt member formed of two similar straps joined by rings at their respective ends, and means for adjusting the lengths of said straps.

1,193,433. MUCILAGE BOTTLE AND BRUSH. THOMAS J. SEARCY, Madison, Mo. Filed Jan. 26, 1916. Serial No. 74,431. (Cl. 91—67.2.)

1. In combination with a mucilage bottle, a stopper comprising a tubular core, a disk secured to one end of the core, a cork surrounding the core immediately beneath the disk and extending to a point substantially midway of the core, means to retain the cork in its place, spring fingers formed at the lower end of the core and a brush adapted to be held in place by the spring fingers.

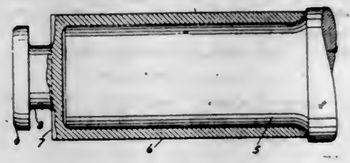
2. In a stopper for mucilage bottles, a cylindrical core, a disk secured to the upper end of the core, a finger hold formed integral with the disk, a cork surrounding the core immediately beneath the disk to form a stopper, said cork extending to a point midway of the core, means to hold the cork in place, a closure within the upper end of the core, spring fingers forming the lower end of the core,

a brush adapted to be held in place in the core by the spring fingers, and a ring surrounding the core and adapt-



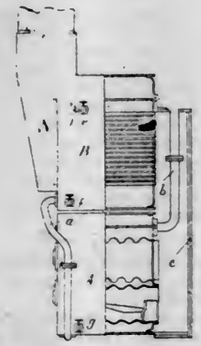
ed to be slid downwardly on the spring fingers to force them into engagement with the brush.

1,193,434. CAR-AXLE. ELIEL L. SHARPNECK, Winthrop, Mass. Filed May 25, 1914. Serial No. 840,604. (Cl. 105—67.)



A car axle having an end of reduced diameter and a shoulder, and a sleeve of hard metal shrunk onto said reduced end and adapted to fit against said shoulder, the outer end of said sleeve being closed and having an integral stud extension having a head, the inner surface of said head extending parallel to said closed end of said sleeve.

1,193,435. STEAM-BOILER. REIJI SHIBATA, Kobe, Japan. Filed Aug. 22, 1912. Serial No. 716,511. (Cl. 122—80.)



The combination with a cylindrical boiler having a plurality of furnaces only, of a cylindrical boiler having smoke tubes only, an external combustion chamber common to both boilers, the furnace boiler having a water space around all the furnaces and no steam space and the smoke tube boiler formed with a steam space, circulating water pipes connecting the bottom of one water space of one boiler with the bottom of the water space of the other boiler, and circulating water pipes connecting the top water space of one boiler with the top water space of the other boiler, substantially as described.

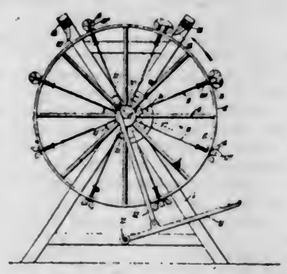
1,193,436. ANCHOR. LEWIS C. SHOUP, Fairmount City, Pa. Filed Feb. 15, 1916. Serial No. 78,466. (Cl. 189—29.)



1. An anchor including a hook, a shank connected therewith having a longitudinal groove, and spaced recesses arranged on opposite sides of said groove, a bar slidable longitudinally of said shank and arranged in said groove, means for effecting lateral or outward movement of said bar with relation to said shank during longitudinal movement of said bar, and a plurality of anchoring members carried by said bar projecting laterally upon opposite sides of the latter and movable into said recesses.

2. An anchor including a hook, a shank carried thereby, said shank having a longitudinal groove, and a plurality of recesses formed in the grooved surface thereof, ratchet teeth formed upon the inner wall of said groove, a bar slidable longitudinally of said shank and arranged in said groove, a plurality of laterally projecting ratchet teeth formed upon the inner edge of said bar engaging the first-mentioned ratchet teeth, and a plurality of anchoring members carried by said bar and movable into said recesses.

1,193,437. POTATO-CUTTER. WALTER SCOTT SMALL, Charleston, Me., assignor of one-half to Sylvanus C. Small, Charleston, Me. Filed Nov. 17, 1915. Serial No. 61,926. (Cl. 146—11.)



1. In a potato cutter, a rotatable cup for receiving a potato, a knife, means for moving the cup by the knife, so the knife will cut the potato disposed in the cup, and resilient means for holding the cup yieldingly against rotation.

2. In a potato cutter, a rotatable member for receiving a potato, two knives one disposed in advance of the other, means for moving the member relatively to the knives so that the knives will cut a potato disposed in the member, and resilient means for holding the member yieldingly against rotation.

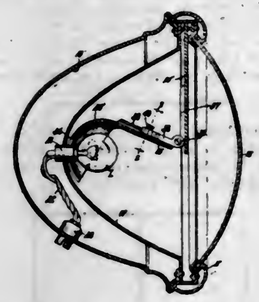
3. In a potato cutter, a wheel having an annular member with a bearing, a rod rotatably mounted in the bearing, a member for holding a potato and secured to the rod, a knife disposed in the path of the second mentioned member for cutting the potato held by the second mentioned member, a pin on the rod, and a member for engaging the pin for rotating the rod and the member relatively to the wheel.

4. In a potato cutter, a wheel having an annular member with a bearing, a rod rotatably mounted in the bearing, a member for holding a potato and secured to the rod, a knife disposed in the path of the second mentioned member for cutting the potato held by the second mentioned member, a pin on the rod, a member for engaging the pin for rotating the rod and the member relatively to the wheel, and resilient means for holding the rod yieldingly against rotation.

5. In a potato cutter, a wheel having an annular member with a bearing, a rod journaled in the bearing, a member for holding a potato and secured to the rod, a knife disposed in the path of the member for cutting the potato held by the second-mentioned member, a pin on the rod, a member for engaging the pin for rotating the rod, and the member, relatively to the wheel, and resilient means for holding the rod and the second-mentioned member yieldingly relatively to the wheel.

[Claims 6 to 10 not printed in the Gazette.]

1,193,438. AUTOMOBILE-LAMP. ALVIN G. SMITH, Hempstead, N. Y. Filed Mar. 4, 1916. Serial No. 82,076. (Cl. 240—41.)

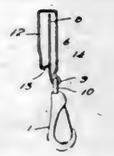


1. In an automobile lamp, the combination with a main casing and a source of light carried within the casing, of reflecting means to receive the rays of light passing upwardly and downwardly from the source of light, the lower portion of the reflecting means being parabolic and the upper portion of the reflecting means being relatively flat and inclined forwardly and downwardly and serving to concentrate a portion of the light received by it downwardly in front of the vehicle, and means to adjust the upper portion of the reflecting means vertically with respect to the main casing and source of light.

2. In an automobile lamp, the combination with a main casing and a source of light carried therein, of reflecting means for the light, the same comprising a parabolic reflector below the source of light and a reflector of a flat nature inclined forwardly and downwardly and having its front edge portion terminating about the focal axis of the lamp, and supporting means for the latter mentioned reflector providing for both longitudinal and vertical adjustment thereof with respect to the main casing and source of light.

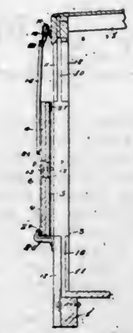
3. In an automobile lamp, the combination of a main casing, a source of light carried therein, reflecting means for the light, said reflecting means being parabolic below the focus of the light and serving to project the rays of light forwardly unobstructedly in parallelism from the casing throughout that portion thereof below the focal axis of the lamp, a shutter carried within the upper portion of the casing at the front thereof and serving to close that portion of the casing above the focal axis, the upper portion of the reflecting means being located in the rear of said shutter and being inclined forwardly and downwardly with its front edge coinciding approximately with the lower edge of the shutter, and means to secure the reflecting means in position in the casing.

1,193,439. KEY-HOLDER. DREWRY H. SMITH, Bluefield, W. Va. Filed Feb. 23, 1916. Serial No. 80,046. (Cl. 24—4.)



A key holder, comprising a strip blank bent on itself to provide long and short resilient limbs, the long limb being struck inwardly adjacent to the bight in the strip to provide a shoulder, said long limb being further bent to provide a hook extending in over-lapping relation to the short limb, a pointed nib formed at the terminal of the hook, said short limb being formed with an aperture for detachably receiving the nib and a hanger having an eye engaged in the bight in the strip between the limbs thereof and held against displacement by the shoulder.

1,193,440. CAR-DOOR. JOSEPH B. STRAUSS, Chicago, Ill. Filed July 27, 1912. Serial No. 711,931. (Cl. 20—31.)



1. In combination with a car door, comprising two sections movable to register with each other or to project beyond each other in opposite directions, of a mount therefor in doorway providing upper and lower walls to engage the end edges of the door sections when extended while leaving an intermediate space wherethrough the door may be moved bodily and laterally through the doorway.

2. In combination with a car door, comprising two sections movable to register with each other or to project beyond each other in opposite directions, of a mount therefor in a doorway providing upper and lower walls to engage the end edges of the door sections when extended while leaving an intermediate space wherethrough the door may be moved bodily and laterally through the doorway, a support extending along the outside of the car, and a movable connection between said sections and said support, whereby they may move along the side of the car to a point at one side of the door opening.

3. A car door comprising two sections adapted to be slid up and down in the door opening inside of the plane of the outer face of the wall of the car, pinions at each side of said sections, racks on said sections engaging said pinions, movable side door frame pieces to which said pinions are fastened, hangers connected with said movable side frame pieces, a support on the outside of the car wall engaged by said hangers whereby, when the door

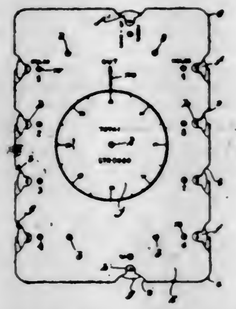
sections are in a predetermined position, said sections and movable side frame pieces may be moved outwardly and slid along the support outside of the car.

4. A car door comprising two sections connected together so that one section counterbalances the other and adapted to be moved in opposite directions, movable side frame pieces with which said sections are connected, a support outside of the car and hangers connected with said support and attached to said movable side frame pieces near their middle.

5. A door comprising two sections connected together so that one section counterbalances the other, movable side frame pieces with which said sections are connected, hangers connected with said movable side frame pieces and a support for said hangers.

[Claims 6 to 8 not printed in the Gazette.]

1,193,441. GOLF-SCORE DEVICE. EDGAR M. STROUD, Jenkintown, Pa. Filed Sept. 13, 1915. Serial No. 50,490. (Cl. 235—114.)



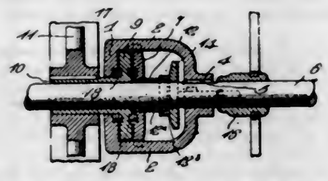
1. A device of the class described embracing a backing element, a face-plate rigidly secured to each face of said backing element, and a set of rotatably mounted scoring disks for each face plate so positioned that the two sets of scoring disks have staggered relation and that the peripheral edges thereof do not protrude beyond the marginal contour of a face-plate.

2. A device of the class described embracing a backing element, a face-plate rigidly secured to each face of said backing element, the marginal edges of each face-plate being notched at intervals for finger tip accommodation, the two sets of notches having staggered relation, and a set of rotatably mounted scoring disks for each face-plate and so positioned that a notch is in register with each disk, the peripheral edges of which disks do not protrude beyond the contour of a face-plate.

3. A device of the class described embracing a backing element, a face-plate rigidly secured to each face of said backing element, each face-plate being shaped and proportioned to marginally extend beyond the backing element an appreciable distance, the marginal edges of each face-plate being notched at intervals for finger tip accommodation, whereof the notches of one face-plate are in staggered relation with respect to the notches of the other face-plate, and a set of rotatably mounted scoring disks for each face-plate, so positioned that a notch is in register with each disk, the peripheral edges of which disks do not protrude beyond the marginal contour of the face-plate.

4. A device of the class described embracing a backing element, a face-plate rigidly secured to each face thereof, the marginal edges of which are notched at intervals to form combined finger tip accomodating and sight openings, the two sets of notches having staggered relation and a series of relatively small scoring disks rotatably mounted between said backing element and each face-plate and so positioned that a notch is in register with each disk, the peripheral edges of which disks do not protrude beyond the contour of the face-plate.

1,193,442. FRICTION-CLUTCH. JACOB H. STULL, Fremont, Ohio. Filed Aug. 12, 1915. Serial No. 45,168. (Cl. 192—7.)



1. A clutch comprising a friction disk, a hub member spaced axially therefrom, a pair of spaced arms connecting the disk and hub member and disposed parallel to the axis thereof, a second friction disk between the two arms and having guides slidable on said arms, a third disk interposed between the other disks and rotatable independently thereof, and a disk-shifting lever fulcrumed to the aforesaid hub member for shifting the second disk.

2. A clutch comprising a friction disk having a central opening, a pair of spaced arms projecting from said disk at diametrically opposite points and disposed parallel to the axis thereof, said arms having their ends directed inwardly toward each other, a hub to which said inwardly directed ends are joined, a second disk between the two arms having notches at diametrically opposite points in its edge slidably receiving said arms, a third disk interposed between the other disks and having an axial extension projecting through the opening in the first named disk, a hub on the second disk extended toward the first named hub, and an operating lever fulcrumed to said first named hub for shifting the other hub axially.

1,193,443. PONCHO. EDWARD W. SWAN, Brookline, Mass., assignor to A. J. Tower Co., Boston, Mass., a Corporation of Massachusetts. Filed Apr. 21, 1915. Serial No. 22,926. (Cl. 2—60.)

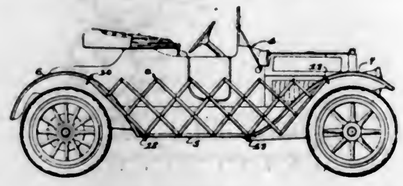


1. The poncho herein described consisting of a sheet of waterproof fabric having an elongated slot, and a collar-flap attached to the sheet adjacent the slot, said collar-flap consisting of a body-portion and forwardly and inwardly extended portions arranged on one side of the body-portion, at the ends thereof, and also arranged to overlap one another at their extremities, the adjacent sides of all said portions being of circular formation, means for detachably securing said body-portion to the sheet at both ends, and means for securing the extremities of said forwardly and inwardly extended portions together.

2. The poncho herein described consisting of a sheet of waterproof fabric having an elongated slot, and a collar-flap attached to the sheet adjacent the slot, said collar-flap consisting of a body-portion and forwardly and inwardly extended portions arranged on one side of the body-portion, at the ends thereof, and also arranged to overlap one another, at their extremities, the adjacent sides of all said portions being of circular formation, and means for securing the extremity of one of said forwardly and inwardly extended portions to the sheet at the front of the slot, and means for securing said forwardly and inwardly extended portions together at their extremities.

3. The poncho herein described consisting of a sheet of waterproof fabric having an elongated slot, a collar-flap comprising a body-portion with forwardly and inwardly extended portions, the extremities of which are arranged to overlie one another, said flap being secured to the sheet adjacent the slot, and adapted to lie flat on the sheet and to extend over the slot, and fastening-means for connecting the flap with the sheet at the middle and sides of the body-portion when lying flat thereon, and fastening-means for connecting the sides of the body-portion with the sheet when extended about the neck of the wearer, and fastening-means for connecting the end of one of the forwardly and inwardly extended portions with the middle connecting-means, and means for connecting the end of the other forwardly and inwardly extended portion with the aforesaid portion, thus securely holding the flap in both positions, and forming a tight closure at the front of the neck.

1,193,444. ADJUSTABLE AUTOMOBILE LUGGAGE-RACK. HARRY WALKER, Anaheim, Cal., assignor of one-half to George Bishop, Anaheim, Cal. Filed Oct. 27, 1915. Serial No. 58,200. (Cl. 224—29.)



1. A luggage carrier, comprising the combination with an automobile body provided with front and rear fenders and a foot-board, of a longitudinally adjustable rack, clamps secured to said rack for detachably securing the latter to said foot board and other clamps secured to said rack for detachably securing the latter to said fenders.

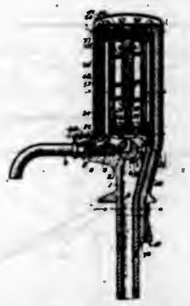
2. A luggage carrier, comprising the combination with an automobile body, of a rack comprised of lazy tongs, clamps secured to the lower end of said rack, detachably securing the latter to the foot board of said automobile body, and clamps secured to the ends of said rack for detachably securing the latter to the fenders of said automobile.

1,193,445. ELECTRIC WATER-HEATING FAUCET. ERNEST C. WEBSTER, East Oakland, Cal. Filed May 17, 1915. Serial No. 28,657. (Cl. 219—40.)

1. In an electric water heater having wide and narrow inlet conduits, a discharge spout, and an electric heating chamber communicating with said discharge spout, a rotary valve adapted to form a communication in one position between the wide inlet conduit and the discharge spout, and in another position between the narrow inlet conduit and the heating chamber.

2. In an electric water heater having an inlet conduit, a discharge spout, and an electric heating chamber communicating with said discharge spout, a rotary valve adapted in one position to form a communication between the conduit and the discharge spout, and a nozzle leading from said valve and discharging into said discharge spout.

3. In combination with a body having a discharge conduit and a valve seat, a valve therein, a conduit leading from said valve seat to the top of the body, an insulating cup on said body, the bottom of which has a hole communicating with said last-named conduit, and a hole communicating with the discharge conduit, a central conductor supported upon said bottom, a tubular conductor around the first-named conductor and between the holes, metallic conductors electrically connected to said conductors, and an insulating cap closing said cup.

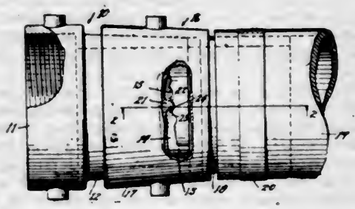


4. In combination with a body having a discharge conduit and a valve seat, a valve therein, a conduit leading from said valve seat to the top of the body, an insulating cup on said body, the bottom of which has a hole communicating with said last-named conduit, and a hole communicating with the discharge conduit, a central conductor supported upon said bottom, a tubular conductor around the first-named conductor and between the holes, metallic conductors electrically connected to the upper ends of said conductors, a plate of insulating material upon said cup, and having recesses for said metallic conductors, wires connected to said metallic conductors, and a cap of insulating material on said plate.

5. In combination with a body having a discharge conduit and a valve seat, a valve therein, a conduit leading from said valve seat to the top of the body, an insulating cup on said body, the bottom of which has a hole communicating with said last-named conduit, and a hole communicating with the discharge conduit, a central conductor supported upon said bottom, a tubular conductor around the first-named conductor and between the holes, metallic conductors electrically connected to the upper ends of said conductors, a plate of insulating material upon said cup, and having recesses for said metallic conductors, wires connected to said metallic conductors, a cap of insulating material on said plate and screws passed through holes in said cap, plate and cup and screwed to said body.

[Claims 6 to 10 not printed in the Gazette.]

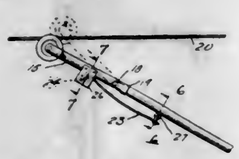
1,193,446. HOSE-COUPLING. CHIPMAN J. WELLS, Long Beach, Cal., assignor of one-third to Sarah L. De Land, Long Beach, Cal. Filed Nov. 30, 1914. Serial No. 874,785. (Cl. 137—28.)



A hose coupling, comprising a conoidal member having an inclined channel extending peripherally thereof, said channel being formed with a series of serrations on its

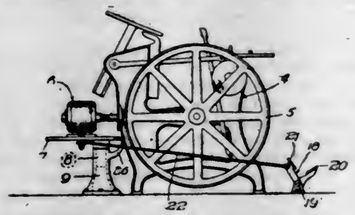
outer wall, a sleeve adapted to receive the conoidal member, and studs on the inner wall of said sleeve having a face of relatively great longitudinal slope on the side thereof in the direction of advancement of the stud in coupling the cylindrical member and sleeve and a face of relatively small slope on the opposite side thereof, said stud disposed to extend into the channel and to be engaged by the serrated wall thereof.

1,193,447. TROLLEY. CHIPMAN J. WELLS, Long Beach, Cal., assignor of one-third to Sarah L. De Land, Long Beach, Cal. Filed Dec. 9, 1914. Serial No. 876,306. (Cl. 191—64.)



A trolley pole comprising in combination, a pole formed in two sections, means pivotally connecting said sections permitting movement either side of the axis of one section, a harp, a trolley wheel, a flat spring provided with a spiral portion at one end secured to one section, slidingly engaged with the other section, and offset from the pole intermediate its ends, and means on the other section of said pole slidingly securing said spring thereto.

1,193,448. VARIABLE-SPEED MOTOR-DRIVE. CECIL C. ASHTON and ARTHUR WAGNER, Chicago, Ill. Filed Apr. 29, 1914. Serial No. 835,254. (Cl. 74—26.)

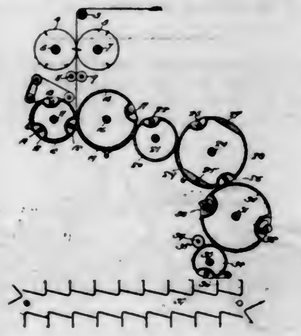


1. In a variable speed friction driving mechanism, the combination with a driven wheel, of a driving motor, a platform on which said motor is mounted, a pivotal mounting for the platform, the axis of said pivotal mounting intersecting the axis of the motor shaft, a friction disk slidably mounted on the motor shaft in position adjacent to the driven wheel, the peripheral portion of the working surface of said friction disk being formed on a sphere having its center at the point of intersection of the axis of the pivotal mounting with the motor shaft, and the central portion of the working surface of said disk being flattened, a driving connection between the motor shaft and said disk, means for carrying the disk toward the driven wheel, said driving connection also arresting said carrying movement before the friction disk contacts the driven wheel when the friction disk stands in neutral position, and means for swinging the platform into desired positions.

2. In a friction drive mechanism, the combination with a driven wheel, of a motor, a pivotal mounting for said motor whereby the shaft of the motor may be swung across the plane of the driven wheel, said pivotal mounting intersecting the shaft of the motor, a friction disk slidably mounted on the motor shaft, the peripheral portion of the working surface of said friction disk being formed on the surface of the sphere having its center at the point of intersection of the pivotal mounting with the motor shaft, and the central portion of said working surface being flattened, means for carrying the friction disk toward the driven wheel, means for arresting said carrying movement before the friction disk contacts with the driven wheel when the friction disk stands in neutral position, and means for swinging the motor about its pivotal mounting to carry the friction disk across the face of the driven wheel.

3. The combination with a driven wheel, of a motor, a pivotal mounting for said motor whereby it may be swung to carry the center line of its shaft across the plane of the driven wheel, a frictional disk mounted on the motor shaft in position to engage the driven wheel, a pedal for swinging the motor in either direction, said pedal being mounted adjacent to that portion of the driven wheel away from the motor, and an operative connection from said pedal to the pivotal mounting of the motor.

1,193,449. SHEET CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed June 4, 1915. Serial No. 32,170. (Cl. 101—120.)



1. In a machine of the character described, means for cutting sheets from a traveling web, sheet folding mechanism traveling at a lesser speed than the web and means for gradually retarding the sheets and feeding them to the folding mechanism at the speed thereof.

2. In a machine of the character described, means for cutting sheets from a traveling web, sheet folding mechanism traveling at about half the speed of the web and means for gradually retarding the sheets and feeding them to the folding mechanism at the speed thereof.

3. In a machine of the character described, a sheet carrying mechanism traveling at a certain speed, a sheet folding mechanism traveling at a lesser speed and an interposed variable speed transfer mechanism.

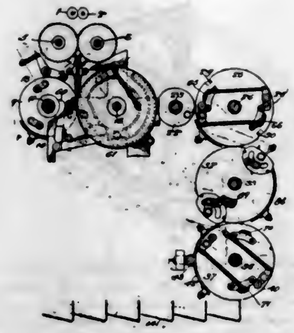
4. In a machine of the character described, a sheet carrying mechanism traveling at a certain speed, a sheet folding mechanism traveling at a lesser speed and a variable speed transfer mechanism arranged to take the sheets at the speed of the carrying mechanism and transfer the sheets at the speed of the folding mechanism.

5. In a machine of the character described, a sheet collecting mechanism traveling at a certain speed, a sheet folding mechanism traveling at a lesser speed and an interposed variable speed transfer mechanism.

[Claims 6 to 14 not printed in the Gazette.]

1,193,450. SHEET CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed June 4, 1915. Serial No. 32,172. (Cl. 101—120.)

1. In a machine of the character described, means for cutting sheets from a traveling web, sheet folding mechanism traveling at a lesser speed than the web and means for feeding the sheets to the folding mechanism at the speed thereof.



2. In a machine of the character described, means for cutting sheets from a traveling web, sheet folding mechanism traveling at a lesser speed than the web and means for retarding the sheets and feeding them to the folding mechanism at the speed thereof.

3. In a machine of the character described, means for cutting sheets from a traveling web, sheet folding mechanism traveling at a lesser speed than the web and means for abruptly retarding the sheets and feeding them to the folding mechanism, at the speed thereof.

4. In a machine of the character described, means for cutting sheets from a traveling web, sheet folding mechanism traveling at about half the speed of the web and means for feeding the sheets to the folding mechanism at the speed thereof.

5. In a machine of the character described, means for cutting sheets from a traveling web, sheet folding mechanism traveling at about half the speed of the web and means for retarding the sheets and feeding them to the folding mechanism at the speed thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,193,451. LIFTING DEVICE FOR MOTOR-VEHICLES. CHARLES O. BLEE, Fort Wayne, Ind., assignor of two-thirds to William O. Chaney and George F. Seymour, Fort Wayne, Ind. Filed Oct. 5, 1915. Serial No. 54,170. (Cl. 254—88.)



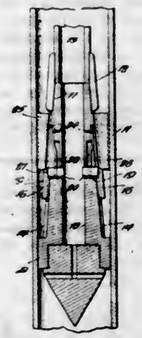
1. A lifting device comprising tiltable lifting bars, runways mounted on the sides of the bars and extending on opposite sides of the fulcrum thereof, swinging front axle supports carried by the lifting bars in advance of the forward ends of the runways, swinging rear axle supports carried by the rear ends of the lifting bars, a connection between the front and rear axle supports, and a swinging prop for holding the front ends of the lifting bars elevated.

2. A lifting device comprising tiltable lifting bars, runways mounted on the sides of the bars and extending on opposite sides of the fulcrum thereof, said runways being inclined upward toward the forward ends of the lifting bars, front axle supports carried by the lifting bars in advance of the forward ends of the runways, rear axle supports carried by the rear ends of the lifting bars, and a swinging prop for holding the front ends of the lifting bars elevated.

3. A lifting device comprising tiltable lifting bars, runways mounted on the sides of the bars and extending on opposite sides of the fulcrum thereof, front and rear axle supporting means carried by the lifting bars, and means for holding the front ends of the lifting bars elevated.

4. A lifting device comprising tiltable lifting bars, runways mounted on the sides of the bars and extending on opposite sides of the fulcrum thereof, front and rear axle supporting means carried by the lifting bars, and a swinging prop for holding the front ends of the lifting bars elevated.

1,193,452. CASING-SPEAR AND TRIP THEREFOR. HARRY C. BREWSTER, Shreveport, La. Filed Mar. 7, 1916. Serial No. 82,725. (Cl. 57—9.)



1. A casing spear including a tapered mandrel having its smaller end uppermost and provided with vertical dove-tailed grooves in the lower portions of its sides and with transverse diametrically opposed openings at the upper ends of said grooves, laterally movable plungers disposed in the said openings, slide rests having dovetailed ribs slidably disposed in the said grooves and having extensions at their upper ends, said extensions and the outer ends of said plungers having relatively engaging projections and recesses, spring supporting members engaging the said plungers and secured to the mandrel whereby to force the plungers outwardly, and a tubular gripping member disposed around the mandrel, having an outer toothed gripping surface and an inner tapered surface conforming to the taper of the mandrel.

2. A casing spear comprising a tapered mandrel having its smaller end uppermost, a tubular gripping member disposed around the mandrel and provided with an outer toothed gripping surface and an inner tapered surface conforming to the tapered surface of the mandrel, laterally movable plungers having guided movement in the mandrel at points below the lower edge of the said gripping member when the latter is in its upper released position, springs normally engaging the said plungers to move the latter outwardly, and bearing members movable on the mandrel and normally engaging the said plungers to prevent outward movement thereof.

3. A casing spear comprising a tapered mandrel having its smaller end uppermost, a tubular gripping member disposed around the mandrel and provided with an outer toothed gripping surface and an inner tapered surface conforming to the tapered surface of the mandrel, laterally movable plungers having guided movement in the mandrel at points below the lower edges of the said gripping member when the latter is in its upper released position, springs normally engaging the said plungers to move the latter outwardly, bearing members movable on the mandrel and normally engaging the said plungers to prevent outward movement thereof, said bearing members having dovetailed ribs, and said mandrel having dovetailed grooves

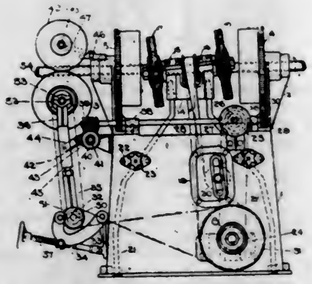
in which the ribs are slidably disposed in order to movably support the said bearing members.

4. A casing spear comprising a tapering mandrel, a gripping member disposed therearound, and provided with a tapering bore and with an outer gripping face, laterally movable spring actuated plungers carried by the mandrel intermediate its ends and below the lower edge of the said gripping member when the latter is in its uppermost position with respect to the mandrel, and means carried by the mandrel for normally engaging and holding said plungers in retracted position, said means being in the path of lowering movement of the gripping member and releasable thereby from said plungers to free the latter.

5. A casing spear comprising a tapered mandrel, a gripping member disposed therearound and provided with a tapering bore and with an outer gripping face, laterally movable spring actuated plungers carried by the mandrel intermediate its ends and below the lower edge of the said gripping member when the latter is in its uppermost position with respect to the mandrel, and means carried by the mandrel for normally engaging and holding said plungers in retracted position, said means being disposed in the path of movement of the said gripping member along the mandrel and releasable thereby.

[Claim 6 not printed in the Gazette.]

1,193,453. POLISHING-MACHINE. LOUIS H. BRINKMAN, Glen Ridge, N. J., assignor, by mesne assignments, to Baltimore Tube Company, Incorporated, a Corporation of Virginia. Filed Nov. 28, 1911. Serial No. 662,875. (Cl. 51—4.)



1. In a polishing machine, in combination, means for longitudinally feeding work, and rotative polishing means automatically self adjustable relatively to and to irregularities in said work.

2. In a polishing machine, polishing means, a plurality of means for feeding work to said means, one on each side of said polishing means and operating at different speeds whereby one of said feeding means tends to feed longitudinally in a direction toward the other of said feeding means faster than the last named means tends to feed in the same direction.

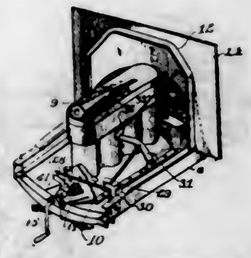
3. In a polishing machine, polishing means, a plurality of means for longitudinally feeding work rotatively to said means, one on each side of said polishing means and operating at different speeds, whereby one of said means tends to feed longitudinally in a direction toward the other of said means faster than the other of said means tends to feed in the same direction.

4. In a polishing machine, in combination, means for longitudinally feeding work rotatively, rotative polishing means automatically held against and adjustable to the irregularities of said work, and means for adjusting said rotative polishing means relative to the axis of the said work.

5. In a polishing machine, means for longitudinally and rotatable feeding work thereto and means for polishing said work consisting of a rotating buff oscillating longitudinally with reference to said work.

[Claims 6 to 21 not printed in the Gazette.]

1,193,454. STARTING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. WILLIAM H. CARD and JOSEPH J. CUSHMAN, Los Angeles, Cal. Filed July 14, 1915. Serial No. 39,803. (Cl. 74—53.)



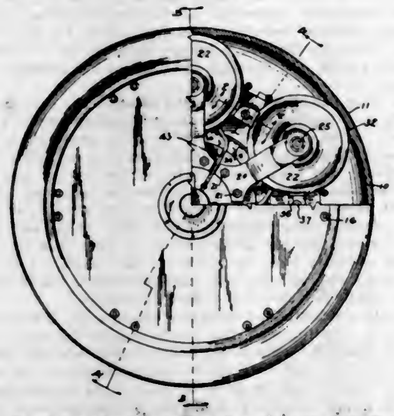
1. A starter for internal combustion engines, comprising a shaft for an internal combustion engine, an arm rotatably mounted on said shaft, a lever pivotally mounted on said arm, intermittent grip means operatively interposed between said lever and said arm, a link pivotally secured to the opposite end of said lever, said lever provided with a stop limiting the pivotal movement of said link, a flexible member secured to said link, a lever pivotally secured at one end to the end of the frame, said flexible member secured intermediate the ends of said lever, a pivoted link secured to the free end of said lever, a pull rod secured to said link and adapted to extend through the dash board, and a guide tube for said pull rod adapted to be mounted on the dash board.

2. A starter for internal combustion engines, comprising a shaft for an internal combustion engine, an arm rotatably mounted on said shaft, a lever pivotally mounted on said arm, intermittent grip means operatively interposed between said lever and said arm, a link pivotally secured to the opposite end of said lever, said lever provided with a stop limiting the pivotal movement of said link, a flexible member secured to said link, a lever pivotally secured at one end to the free end of the frame, said flexible member secured intermediate the ends of said lever, a pivoted link secured to the free end of said lever, a pull rod secured to said link and adapted to extend through the dash board, a guide tube for said pull rod provided with threads on the exterior, washers having inclined faces loosely mounted on said tube, and adjusting nuts mounted on the threaded end of said tube for engagement with said washers.

3. A starter for internal combustion engines, comprising a shaft for an internal combustion engine, a member provided with a cylindrical surface adapted to be connected thereto, an arm rotatably mounted on said shaft, a lever pivotally mounted on said arm eccentric to said shaft and provided on one end with a curved surface eccentric to the pivotal point thereof and disposed to engage the surface of said cylindrical member, a link pivotally secured to the opposite end of said lever, said lever provided with a stop limiting the pivotal movement of said link, a flexible member secured to said link, a lever pivotally secured at one end to the engine frame, said flexible member secured intermediate the ends of said lever, a pivoted link secured to the free end of said lever, a pull rod secured to said link and adapted to extend through the dash board, a guide tube for said pull rod provided with threads on the exterior, washers having inclined faces loosely mounted on said tube, adjusting nuts mounted on the threaded end of said guide tube for engagement with said washers, and a handle adjustably mounted on said pull rod.

1,193,455. VEHICLE-WHEEL. HENRY B. COATS, Veedersburg, Ind. Filed Mar. 7, 1913. Serial No. 752,655. (Cl. 152—46.)

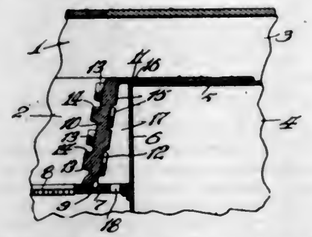
1. A vehicle wheel including a transversely curved rim, a central hub structure, and a plurality of pneumatic cushions for supporting said hub structure in said rim, the outer portions of said cushions being embedded in said rim so as to be substantially concentric transversely with the adjacent portions of the rim.



2. A vehicle wheel including an outer structure formed of side castings, a transversely curved tire rim and a transversely curved tire in said tire rim, a central hub structure, and a series of annular pneumatic cushions for supporting the hub structure within said external structure, the outer portion of each cushion being embedded in said rim so as to be substantially concentric transversely with the adjacent portions of the rim.

3. A vehicle wheel including an outer structure having a recessed tire rim, a central hub structure, a series of annular pneumatic cushions for supporting the hub structure within said external structure, and a clencher rim surrounding each cushion with its outer portion embedded in a part of the recesses in the tire rim.

1,193,456. FIRE-LINING FOR STOVES. BERTRAM B. CULVER, St. Louis, Mo. Filed Sept. 27, 1913. Serial No. 792,163. (Cl. 126—144.)

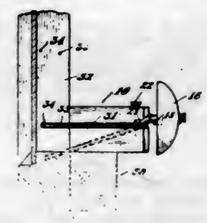


1. In a stove, a combustion chamber, a fire lining located in said combustion chamber, a series of lugs formed on each side of said lining, an air chamber formed in said stove on one side of said lining, said lugs on one side of said lining adapted to protrude into said air chamber, said lugs on the opposite side of said lining adapted to protrude into said combustion chamber, recesses formed in said combustion chamber lugs, said recesses of said lugs serving as depositing place for the reception of products of combustion from said combustion chamber.

2. A fire lining comprising a body portion, a series of lugs formed on each side of said body portion, said lugs on one side of said body portion being staggered relative to the position of the lugs on the opposite side, said lugs on one side of said body portion being recessed on their upper surfaces.

3. A fire lining comprising a body portion, a series of lugs formed on each side of said body portion, said lugs on one side of said body portion being staggered relative to the position of the lugs on the opposite side, said lugs on one side of said body portion being recessed on their upper surfaces, said recessed lugs serving as arresting members for the depositing of ashes and the like.

1,193,457. ALARM MECHANISM. LOUIS A. ENGELMAN, Los Angeles, Cal. Filed Feb. 3, 1915. Serial No. 5,882. (Cl. 116—44.)



1. In an alarm mechanism, the combination of a bell, a tapper, means for operating said tapper to sound the bell, and a pivoted lever formed with a notch arranged to engage said tapper to hold same against operation, said lever adapted to be operated to move it out of engagement with the tapper to permit operation of same to sound the bell, and a rotatable shaft provided with an offset portion disposed to engage said tapper and lock the same in inoperative position.

2. In an alarm mechanism, the combination of a bell, a tapper, means for operating said tapper to sound the bell, a pivoted lever formed with a notch arranged to engage said tapper to hold same against operation, said lever adapted to be operated to move it out of engagement with the tapper to permit operation of same to sound the bell, and said lever having a second notch adapted to engage said tapper when the lever is disposed in an inoperative position, and a rotatable shaft provided with a thumb piece and with an offset portion disposed to engage said tapper and lock the same in inoperative position.

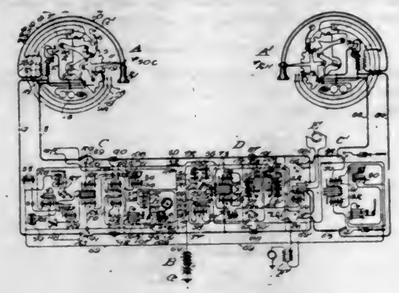
3. In an alarm mechanism for a window, the combination of an alarm mounted on a sash, comprising a bell, a tapper, a source of power for actuating said tapper, a trip lever, means on said lever for engaging said tapper adapted to be disengaged therefrom to sound the bell on operation of said trip lever; a pin on the other sash, a slotted link removably mounted on the last named window sash with said pin disposed in the slot of said link and the end of said link disposed for engagement with said lever, and a stop pin on the last mentioned window sash disposed to engage said link whereby opening movement of either sash will effect a rocking movement of said link to actuate said lever and release said tapper.

1,193,458. MEASURED-SERVICE TELEPHONE SYSTEM. EDWARD D. FALES, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed Dec. 8, 1906. Serial No. 346,843. (Cl. 179—9.)

1. In a telephone exchange system, the combination of a calling telephone line, a called telephone line, connections from the calling line to the called line, including an automatic switch, a call-registering device allotted to the calling line, responsive to the called subscriber, provided with an electro-magnet associated with said switch, at the central station, bridged across the calling line, and means including the called telephone line for operating said device to register the successful call through said switch.

2. In a telephone exchange system, the combination of calling and called telephone lines, connections from the calling line to the called line, means at a central office for registering the call as soon as the called subscriber answers, provided with a normally open bridge across the

call'ng line, and means including said called telephone line and bridge for controlling the registering operations of said means.



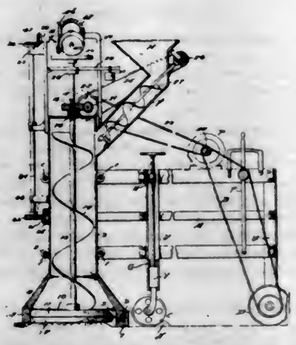
3. In a telephone exchange system, the combination of connectors for making the final connections with called telephone lines, automatic means for trunking calling telephone lines into connection with said connectors, call-registering devices allotted to the different telephone lines for registering the calls as soon as the called subscribers answer, each call-registering device provided with a normally open bridge across its allotted line, and means by which the called subscribers close said bridges and cause said devices to register the calls.

4. In a telephone exchange system, the combination of telephone lines, automatic means for connecting calling lines with called lines, call-registering devices allotted to the different telephone lines, responsive to the called subscribers for the registration of calls, means including the called telephone lines for controlling the said devices and causing the same to register all successful calls, each call-registering device provided with a normally open resistance-bridge across its allotted line, and means under the control of the called line for closing said bridge.

5. In a telephone exchange system, the combination of telephone lines, call-registering devices allotted to the different lines, responsive to the called subscribers for the registration of calls, common battery means for operating said devices and supplying talking current to the telephone lines, and means by which closure of any called line operates the registering device of the calling line to register the call, each registering device provided with but a single pair of relay windings for feeding talking current to the calling line.

[Claims 6 to 47 not printed in the Gazette.]

1,193,459. MACHINE FOR SPREADING ASPHALT, &c. JUSTUS O. FRAISHER, Seattle, Wash. Filed May 11, 1915. Serial No. 27,430. (Cl. 94—6.)



1. In a machine for spreading plastics, the combination with a main framework having uprights at its front corners and at about the mid-length of its sides, wheels carried by the front uprights, caster wheels movably mounted in the other uprights, and means for adjusting them vertically; of transverse tracks carried by the rear ends of the frame-bars, spreading mechanism including an upright fountain movably mounted on said tracks, means for sliding it thereon, a tamper mounted on an upright shaft within said fountain, and means for rotating said shaft.

2. In a machine for spreading plastics, the combination with a main framework having supporting wheels at its front corners, caster wheels movably mounted in the framework at other points, and means for adjusting them vertically; of transverse tracks carried by the rear end of the framework, spreading mechanism including an upright fountain movably mounted on said tracks and a rotary tamper mounted on an axial shaft within said fountain, a rack bar across the rear end of said main frame, a gear engag'ng this bar, a feed shaft journaled on the fountain and carrying said gear, and means for throwing said shafts into connection with each other.

3. In a machine for spreading plastics, the combination with a vehicle, spread'ng mechanism including an upright fountain mounted on and movable laterally across said vehicle, and a rotary tamper mounted on an axial shaft within said fountain; of a rack bar across the vehicle, a gear engaging therewith, an upright feed shaft journaled in bearings on said fountain and carrying said gear, and means for throwing said shafts into connection with each other.

4. In a machine for spreading plastics, the combination with a vehicle, spreading mechanism including an upright fountain mounted on and movable laterally across said vehicle, and a rotary tamper mounted on an axial shaft within said fountain; of a rack bar across the vehicle, a gear engaging therewith, an upright feed shaft journaled in bearings on said fountain and carrying said gear, means for rotating said tamper shaft, driving mechanism for the other shaft, and means for throwing the driving mechanism into connection with the tamper shaft.

5. In a machine for spreading plastics, the combination with a vehicle, spreading mechanism including an upright fountain mounted on and movable laterally across said vehicle, and a rotary tamper mounted on an axial shaft within said fountain; of a rack bar across the vehicle, a gear engaging therewith, an upright feed shaft journaled in bearings on said fountain and carrying said gear, driving mechanism for said tamper shaft, a disk on its upper end, driving mechanism for said other shaft, a rocking shaft pivoted above said disk, wheels thereon adapted for selective contact with said disk, and connections between said wheels and feed shaft.

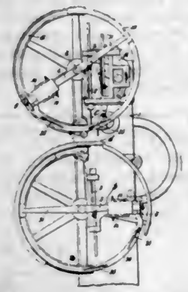
[Claims 6 to 14 not printed in the Gazette.]

1,193,460. THONG-SEWING MACHINE. EMIL GNOETH, Cincinnati, Ohio, assignor to The International Harness Machinery Company, Cincinnati, Ohio, a Corporation. Filed Feb. 17, 1913. Serial No. 748,931. (Cl. 112—21.)

1. In a sewing machine of the class described, a channeled thong receiver, a rotative thong drawing carrier having a series of fingers as a unit journaled upon said carrier each finger respectively adapted to engage the thong, draw the same into the receiver channel and release therefrom, a ratchet member coaxially connecting with said fingers and spring tensioned pawl levers fulcrumed to yieldingly engage said ratchet member upon opposite sides of its axis.

2. In a sewing machine of the class described, a rotative thong drawing member having a plurality of fingers as a unit journaled thereon consecutively to intercept the thong for thong drawing engagement and release and tension devices exerting an equalized pressure concentrically upon opposite sides of the axis of said fingers and toward said axis for yieldingly resisting rotative influence.

3. In a sewing machine of the class described, a rotative thong drawing member having a plurality of fingers as a unit journaled thereon, said fingers consecutively providing means for thong drawing engagement and release, a ratchet member coaxially and rotative with said finger unit, pawl levers fulcrumed to concentrically engage said ratchet member upon opposite sides of its axis, and a spring interveningly engaging said pawl levers for urging said pawl levers toward said ratchet.

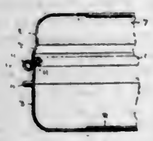


4. In a thong sewing machine, thong drawing mechanism, and a thong receiver into which a thong loop is drawn by said drawing mechanism, said receiver having opposite circumferential surfaces for the thong loop runs, one thereof roughened to withhold the thong loop from reactionary motion.

5. In a thong sewing machine thong drawing mechanism and a thong receiver into which a thong loop is deposited by said drawing mechanism in completing a stitch, said receiver having opposite circumferential walls providing thong loop receiving surfaces, one thereof inclined in step-like arrangement for separably sustaining the loop runs of the thong.

[Claims 6 to 18 not printed in the Gazette.]

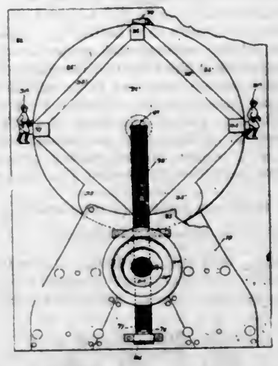
1,193,461. METAL CONTAINER OR BOX. HENRY A. HISGEN, THOMAS WOLFE, TOM ARMITAGE, JR., and GEORGE C. HISGEN, Albany, N. Y., assignors to Hisgen Brothers, Albany, N. Y. Filed June 3, 1915. Serial No. 31,922. (Cl. 220—6.)



1. A metallic container comprising a body having an upstanding side wall, a circumferential rib formed by swaging out portions of said wall and crimping the parts thereof until the sections are parallel and in horizontal position, that portion of the wall above the rib being inclined inwardly, the upper edge of said wall being formed into an inwardly curved roll, a cover having a depending wall, said wall comprising two straight portions and an outwardly and downwardly flared portion between said straight portions, the diameter of the lower straight portion being greater than the diameter of the upper straight portion, said flared portion being adapted to frictionally engage the inclined portion of the wall of the body, the lower free edge of the cover wall being formed into an outwardly curved roll, the upper edge of the straight portion of the cover wall at its intersection with the flared portion forming a stop for the downward movement of the cover when engaged with the roll of the body wall.

2. A metallic container comprising a body portion, the upstanding wall of which is provided with a peripheral rib between its upper and lower edges, the walls of the rib being crimped into close proximity to each other and resting in a horizontal position, a cover for the body, the depending wall of which is provided with an upper and lower straight portion of different diameters and an outwardly flared portion connecting said upper and lower straight portions, said flared portion being adapted to frictionally engage that portion of the wall of the body above the rib and hold the cover in position over the body, the edge of the upper straight portion of the depending wall at the point of its connection with the flared portion engaging the free edge of the wall of the body whereby the descent of the cover onto the wall of the body portion will be stopped and the lower edge of the lower straight portion held slightly spaced from said rib whereby an instrument may be introduced between said edge and rib to remove the cover.

1,193,462. SHOOTING-GALLERY. CHARLES HORTON, New York, and AUGUSTUS M. HENRY, Larchmont, N. Y.; said Horton assignor to said Henry. Filed July 21, 1914. Serial No. 852,193. (Cl. 46—59.)



1. In an apparatus of the class described, in combination, means carrying characteristic indicia suggestive of a contest; target-means; means adapted to indicate movements and positions of a factor in such contest; and means adapted to be actuated by a displacement of said target-means due to the striking of a missile thereagainst thereby to actuate said indicating means; said target-means including a plurality of elements the striking of one element whereof being adapted to cause said indicating means to give a predetermined indication and the striking of another whereof being adapted to cause said indicating means to give another predetermined indication.

2. In an apparatus of the class described, in combination, means carrying characteristic indicia suggestive of a contest; target-means; means adapted to indicate movements and positions of a factor in such contest; driving means for actuating said indicating means; a controlling latch normally preventing said driving means from actuating said indicating means and a means adapted to move said latch to permit said driving means to actuate said indicating means upon the striking of a missile against said target-means.

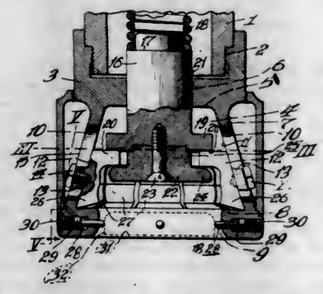
3. In an apparatus of the class described, in combination, means carrying characteristic indicia suggestive of a contest; target-means; means adapted to indicate movements and positions of a factor in such contest; driving means for actuating said indicating means; a controlling means normally preventing said driving means from actuating said indicating means but adapted to permit said driving means to actuate said indicating means upon the striking of a missile against said target-means, said target-means including a plurality of elements the striking of one element whereof being adapted to permit said indicating means to be actuated to give a predetermined indication and the striking of another whereof being adapted to permit said indicating means to be actuated to give another predetermined indication.

4. In an apparatus of the class described, in combination, means carrying characteristic indicia suggestive of a contest; target-means; means adapted to indicate movements and positions of a factor in such contest; driving means for actuating said indicating means; a controlling means normally preventing said driving means from actuating said indicating means but adapted to permit said driving means to actuate said indicating means upon the striking of a missile against said target, means including a plurality of concentric segments the striking of one segment whereof being adapted to permit said indicating means to be actuated to give a predetermined indication and the striking of another whereof being adapted to permit said indicating means to be actuated to give another predetermined indication.

5. In an apparatus of the class described, in combination, means carrying characteristic indicia suggestive of a contest; target-means; means adapted to indicate movements and positions of a factor in such contest; driving means for actuating said indicating means; a controlling means normally preventing said driving means from actuating said indicating means but adapted to permit said driving means to actuate said indicating means upon the striking of a missile against said target-means, said target-means including a plurality of concentric segments the striking of one segment whereof being adapted to permit said indicating means to be actuated to give a predetermined indication and the striking of another whereof being adapted to permit said indicating means to be actuated to give another predetermined indication; said segments being permanently located at a significant location.

[Claims 6 to 15 not printed in the Gazette.]

1,193,463. BOTTLE-CAPPING MACHINE. JOHN JANUCHOWSKY and HEINRICH ALBERT, St. Louis, Mo. Filed Apr. 24, 1915. Serial No. 23,564. (Cl. 113—4.)



1. In a bottle capping machine, a head rigidly held against vertical movement, a series of radially arranged cap-pressing members slidably mounted in said head, inclined guideways for said members and coacting means on said members and said guideways for retracting the members.

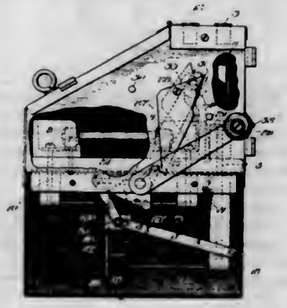
2. In a bottle capping machine, a head rigidly held against vertical movement, a series of radially arranged cap-pressing members slidably mounted in said head and a single means located in said head for guiding said members inwardly and upwardly, and retracting them outwardly.

3. In a bottle capping machine, a head rigidly held against vertical movement, a series of radially arranged cap-pressing members slidably mounted in said head and a single means located in said head for guiding said members inwardly and upwardly while said members are being elevated, and retracting them outwardly when the members are being depressed.

4. In a bottle capping machine, a head rigidly held against vertical movement, a series of radially arranged cap-pressing members slidably mounted in said head and a single means located in said head for guiding said members inwardly and upwardly while said members are being elevated, and a spring-cap plunger having one end extending beneath the upper portions of said members and engaging therewith.

5. In a bottle capping machine, a head rigidly held against vertical movement, said heads having a cone-shaped wall with longitudinal slots, an inwardly pointing cap-pressing member slidably engaged in each slot, said member being provided with retracting means engaging the outside of said wall and a spring-actuated plunger mounted axially in the head, said plunger having constant engagement with said member.

1,193,464. CONTROLLER-CHECK. SWAN J. LEVEEN, Rock Island, Ill., assignor to Trio Manufacturing Company, Rock Island, Ill., a Corporation of Illinois. Filed Oct. 15, 1913. Serial No. 795,315. (Cl. 74—88.)



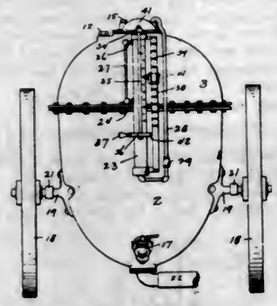
1. A stop device for the purpose of arresting the swinging handle, said handle being provided with a contacting portion, said stop device comprising a plate pivoted at a point above its center of gravity, a lug on said plate standing in the line of travel of the contacting portion when the plate stands at the lowest position of its center of gravity, and stationary stops for limiting the swing of the plate in either direction, one of said stops being so positioned that the normal swing of the plate away from said stop under the influence of gravity will carry the lug away from the line of travel of said contacting portion.

2. A stop-device for the purpose of arresting the travel of a swinging handle, said handle having a contacting portion, said stop device comprising a plate pivoted above its center of gravity, a contact on said plate located to one side of a line drawn through the center of gravity and the pivotal point of the plate, and a stationary stop for limiting the swing of the plate, the contact normally standing in the line of travel of the contacting portion, and said stop being so positioned that the normal swing of the plate away from said stop under the influence of gravity will carry the contact away from the line of travel of the contacting portion.

1,193,465. GAS-GENERATING APPARATUS. CORNELIUS J. MARVIN, Los Angeles, Cal., assignor to The Braun Corporation, Los Angeles, Cal., a Corporation of California. Filed Feb. 15, 1915. Serial No. 8,140. (Cl. 23—1.)

1. A gas generating apparatus comprising a receptacle containing two separated storage chambers, each adapted to contain a different reagent, means for removing and measuring a definite quantity of reagent from one chamber and introducing it into the second chamber, the reaction between the introduced reagent and a portion of the reagent in the second chamber causing the generation of gas, and an outlet in said second chamber for said gas.

2. A gas generating apparatus comprising a chamber adapted to contain a quantity of acid, a second chamber adapted to contain a quantity of reagent solution and a pump connected at its intake side to said solution containing chamber and at its discharge side to said acid containing chamber whereby charges of solution may be drawn from said solution containing chamber and introduced into said acid containing chamber into contact with the acid, and a gas outlet to said acid containing chamber.



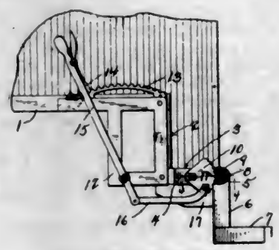
3. A gas generating apparatus comprising a chamber adapted to contain a reagent, a second chamber adapted to contain another reagent, and means for withdrawing successive predetermined charges of reagent from one chamber and introducing said charges into the other chamber.

4. A gas generating apparatus comprising a chamber adapted to contain a quantity of reagent, a second chamber adapted to contain a quantity of liquid reagent, a pump connected at its intake side to said liquid reagent containing chamber and at its discharge side to said first chamber and means for varying and limiting the stroke of said pump whereby different predetermined amounts of the liquid reagent may be introduced into said first chamber.

5. A gas generating apparatus comprising a chamber adapted to contain a reagent, a second chamber adapted to contain another reagent, a pump barrel connected at its intake side to said second chamber and at its discharge side to said first chamber, a piston in said barrel, a bar arranged adjacent said barrel, and adjustable means on said bar for limiting the stroke of the piston.

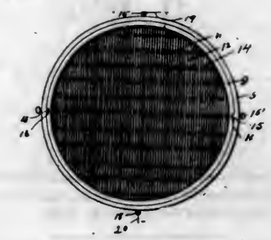
[Claims 6 to 15 not printed in the Gazette.]

1,193,466. FOLDING CAR-STEP. ROBERT C. MEALER, Colorado Springs, Colo. Filed Sept. 25, 1915, Serial No. 52,633. Renewed June 29, 1916. Serial No. 106,729. (Cl. 105—86.)



The combination with the steps of a car, of a folding step having its riser pivotally supported by the usual steps, a pinion carried by one of the pivotal connections of the riser, a stub shaft carried by the car steps, and having a toothed segment carried thereby adapted to mesh with said pinion, an operating lever associated with the car steps, a link having its inner end connected to the lever and its outer end pivoted eccentrically of the segmental plate, whereby when said lever is shifted the segment will be operated to fold or unfold the folding step.

1,193,467. APPARATUS FOR COOLING HEATED AIR BY ELECTRIC CURRENTS. ARTHUR L. MILLS, New York, N. Y. Filed Jan. 8, 1914. Serial No. 811,086. (Cl. 62—131.)



1. The herein described apparatus for cooling air compressing a series of electrical conductors each composed of two dissimilar metals, the ends of which are joined together, and the junctures of which are enlarged, the said enlarged junctures being disposed in staggered relation, a conduit in which said conductors are disposed, and means for forcing air through said conduit.

2. An apparatus of the character described, comprising a conduit, an air current creating element arranged to force air through said conduit, a plurality of conductor carrying elements arranged in said conduit, and a plurality of electrical conductors spanning each of the conductor carrying elements, each of said conductors being composed of two dissimilar metals.

3. An apparatus of the character described, comprising a conduit, an air current creating element arranged to force air through said conduit, a plurality of conductor carrying elements arranged in said conduit, a plurality of electrical conductors spanning each of the conductor carrying elements, each of said conductors being composed of two dissimilar metals, the junctures of said metals being arranged in horizontal rows.

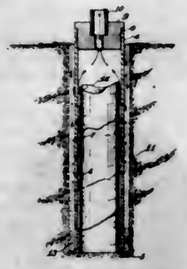
4. An apparatus of the character described, comprising a conduit, an air current creating element arranged to force air through said conduit, a plurality of conductor carrying elements arranged in said conduit, a plurality of electrical conductors spanning each of the conductor carrying elements, each of said conductors being composed of two dissimilar metals, the junctures of said metals being arranged in horizontal rows, and the row of junctures of each set of conductors being disposed at a different height within said conduit, from any other row.

5. In a device of the character described the combination with a conduit, of means for forcing a current of air therethrough, a plurality of rings disposed within said conduit, a plurality of vertical conductors carried by each of said rings, each of said conductors comprising two dissimilar metals, having their junctures arranged in horizontal alinement, a common conductor to which all of the said conductors are connected at one end, a second common conductor, to which all of said conductors are connected at the opposite end, binding members traversing the wall of said conduit to make an electrical contact with said conductors, and an electric circuit of which all of said binding members form a part.

1,193,468. CORE-DRILL. JAMES H. OKELL, Los Angeles, Cal. Filed Sept. 8, 1915. Serial No. 49,514. (Cl. 255—72.)

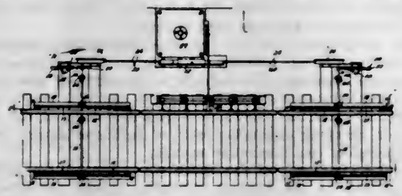
1. The combination of a tubular drill, comprising a barrel provided in its cylindrical wall with perforations adapted to be plugged, said perforations distributed over the cylindrical surface of said barrel for the outflow of water, and loose abrasives disposed at the cutting edge of said drill.

2. The combination of a tubular drill, comprising a barrel provided in its cylindrical wall with perforations



adapted to be plugged, said perforations disposed over the length of the barrel in helical form, and loose abrasives disposed at the cutting edge of said drill.

1,193,469. OPERATING MECHANISM FOR TRACK INSTRUMENTS. BENTON C. ROWELL, Chicago, Ill.; Lilla C. Rowell executrix of said Benton C. Rowell, deceased. Filed July 29, 1910. Serial No. 574,440. (Cl. 246—59.)



1. An apparatus of the character described including, in combination: opposed track instruments having operative and inoperative positions; shifting mechanism; continuous connections from the shifting mechanism to the track instruments to operate the latter; and casings inclosing said shifting mechanism and the connections, said casings protecting the inclosed parts from injury by the weather, substantially as specified.

2. An apparatus of the character described including, in combination: a track instrument having operative and inoperative positions; shifting mechanism; connections from the shifting mechanism to the track instrument for operating the latter; casings within which said shifting mechanism and connections are inclosed, said casings being liquid-tight; and a non-freezing solution in said casings and in which the shifting mechanism and the connections are immersed whereby the latter are protected from injury by the weather, substantially as specified.

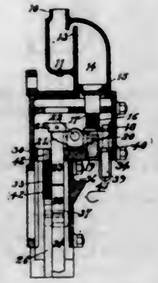
3. An apparatus of the character described including, in combination: a pair of track instruments separated from each other along the line of the track; shifting mechanism located intermediate the track instruments; flexible connections between the shifting mechanism and the track instruments and adapted to operate the latter; a housing within which the shifting mechanism is inclosed; and pipes inclosing the flexible connections and joined to the housing by expansion joints, the housing and pipes protecting the shifting mechanism and the flexible connections from the weather, substantially as specified.

4. An apparatus of the character described including, in combination: a pair of track instruments separated from each other along the line of the track; shifting mechanism intermediate the track instruments; flexible connections from the shifting mechanism to the track instruments to operate the latter; casings inclosing the shifting mechanism and the flexible connections, the casings being liquid-tight; and a non-freezing solution in said casings and in which the shifting mechanism and flexible connections are immersed, whereby the latter are protected from the weather, substantially as specified.

5. An apparatus of the character described including, in combination: a pair of track instruments separated from each other along the line of the track, each track instrument having operative and inoperative positions; a positioning element for each of the track instruments for changing the position of the latter from operative to inoperative and vice versa; connections between said positioning elements operating both simultaneously, one from operative to inoperative and the other from inoperative to operative and vice versa; and means associated with each track instrument and its positioning element for holding the track instrument in an operative position substantially as specified.

[Claim 6 not printed in the Gazette.]

1,193,470. TRAIN INSTRUMENT FOR SIGNAL SYSTEMS. BENTON C. ROWELL, Chicago, Ill.; Lilla C. Rowell executrix of said Benton C. Rowell, deceased. Filed Sept. 1, 1910. Serial No. 579,978. (Cl. 246—59.)



1. A train instrument adapted to coöperate with a track instrument and comprising a valve controlling the air brakes of the train, a device acting against the pressure of air for holding the valve closed, a slide controlling said holding device, means for locking the slide, and means for releasing the slide.

2. A train instrument adapted to coöperate with a track instrument and comprising a valve controlling the air brakes of the train held to its seat against the pressure of said air, a rocking device for holding the valve closed, a slide controlling said holding device, means for locking the slide, and means for releasing the slide.

3. A train instrument adapted to coöperate with a track instrument and comprising a valve controlling the air brakes of the train, a device acting against the pressure of air for holding the valve closed, a slide acting to control said holding device, means for locking said slide, and means for releasing the slide.

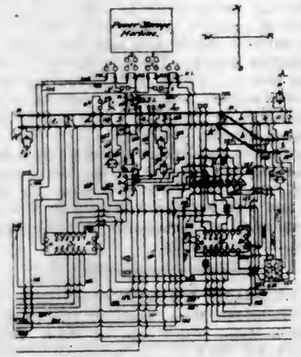
4. A train instrument adapted to coöperate with a track instrument and comprising a valve controlling the air brakes of the train, a device acting against the pressure of air for holding the valve closed, a slide controlling said holding device, movable dogs for locking said slide, and a second slide for releasing said dogs.

5. A train instrument adapted to coöperate with a track instrument and comprising a valve controlling the air brakes of the train, a device acting against the pressure of air for holding the valve closed, a slide controlling said holding device, movable dogs for locking said slide, and a second slide for releasing said dogs, said slides being one in advance of the other.

[Claims 6 to 8 not printed in the Gazette.]

1,193,471. SYSTEM FOR AUTOMATIC CONTROL OF RAILWAY-TRAINS. BENTON C. ROWELL, Chicago, Ill.; Lilla C. Rowell executrix of said Benton C. Rowell, deceased. Filed Oct. 6, 1910. Serial No. 585,580. (Cl. 246—31.)

1. The combination of a series of blocks, signals for each block having clear, caution and danger positions, train stops for each block and having operative and inoperative positions, means normally set into operation when a train is at a predetermined distance from a train stop for moving the same to inoperative position, and means governed by the corresponding signal when in caution position for delaying the operation of said first mentioned means, substantially as specified.



2. The combination of a series of blocks, a visual signal having clear, caution and danger positions, a train stop having operative and inoperative positions corresponding to the clear and danger positions of said signal, train controlling means for moving said stop from one position to the other, and means for delaying the movement of the stop from danger to clear position when the signal is at caution position, substantially as specified.

3. The combination of a series of blocks, signals for each block having clear, caution and danger positions, train stops for each block having operative and inoperative positions, means normally set into operation when a train comes within a predetermined distance from a stop for moving the same to inoperative position, and means governed by the corresponding signal when in caution position for delaying the operation of said first-named means until the train has traveled a predetermined distance nearer the stop, substantially as specified.

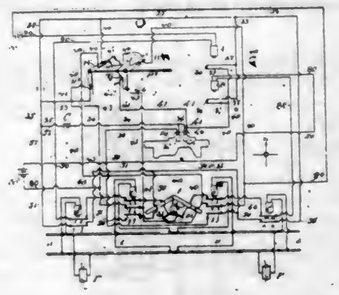
4. In combination: a track composed of a series of blocks; a signal station for each block, each station having signal arms adapted to indicate safe, caution and danger; circuits for governing the position of the danger signals; circuits governing the position of the caution signals and dependent upon the operation of the danger signals; a pair of spaced train stops for each signal station, the train stops having operative and inoperative position and being always in opposed relation to each other; and means for shifting the positions of said train stops while a train is traversing the portion of the track between the same, substantially as specified.

5. In combination: a track having a series of blocks; signal stations for each block, each signal station having two signal arms normally indicating danger and caution respectively; circuits governing the positions of said signal arms; train stops corresponding in number to the signal stations and having operative and inoperative positions and operated in conjunction with the danger signal arms and means controlled by the signal arms when in caution position for delaying the normal operation of said train stops, substantially as specified.

[Claims 6 to 20 not printed in the Gazette.]

1,193,472. MECHANISM FOR OPERATING BRAKES IN SIGNAL SYSTEMS. BENTON C. ROWELL, Chicago, Ill.; Lilla C. Rowell executrix of said Benton C. Rowell, deceased. Filed Feb. 13, 1911. Serial No. 608,246. (Cl. 246—31.)

1. In combination with a train stop located adjacent a railway track and having an operative and an inoperative position, a signal alongside the track, a shifting appliance electrically controlled and in part by said signal for operating the train stop and operable to throw the train stop to inoperative position only when the signal has been operated from clear to danger, substantially as specified.



2. In combination with a train stop located adjacent a railway track and having operative and inoperative positions, a signal alongside the track adapted to indicate clear and danger, a shifting appliance for operating the train stop, and means preventing the shifting appliance from throwing the train stop to its inoperative position while the signal is at clear, substantially as specified.

3. In combination with a train stop located adjacent a railway track, and having operative and inoperative positions, a shifting appliance for said train stop having controlling magnets, circuits for energizing said magnets, a signal alongside the track mechanically connected to the shifting appliance, and mechanical means for preventing the shifting appliance from throwing the train stop to inoperative position while the signal indicates clear, substantially as specified.

4. In combination, a train stop, a signal located beside the track, signal circuits governing the movements of the signal, a controlling appliance for said train stop, said appliance taking its initial power from the signal beside the track and having fluid controlling means for regulating the speed of its operation, and electric means for controlling the operation of said appliance, substantially as specified.

5. In combination: a train stop; a shifting appliance for said train stop; a signal, the signal being adapted to store energy in the shifting appliance; track circuits; signal circuits having included therein contacts governed by relays in the track circuits and also a controlling magnet; and circuit breakers in the signal circuit operated in accordance with the indication of the signal, substantially as specified.

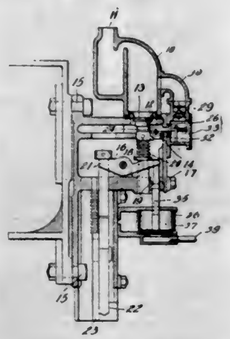
[Claims 6 to 35 not printed in the Gazette.]

1,193,473. TRAIN-BRAKE-CONTROLLING MECHANISM. BENTON C. ROWELL, Chicago, Ill.; Lilla C. Rowell executrix of said Benton C. Rowell, deceased. Filed Aug. 4, 1913. Serial No. 782,762. (Cl. 246—59.)

1. A controlling instrument for train brake systems including, in combination: a valve casing in communication with the train pipe and having a valve therein; mechanism for holding said valve normally closed against the train-pipe air pressure; releasing means for said mechanism adapted to be operated by a train stop; a stop normally preventing said valve from opening completely when said releasing means are operated and to thereby permit only a service application of the air brakes; and means for moving said stop to an inoperative position to thereby permit said valve to open fully and cause an emergency application of the air brakes, substantially as specified.

2. An instrument for controlling train brakes including, in combination: a casing having a valve therein; mechanism for holding said valve normally closed; means for releasing and opening said valve and adapted to be automatically operated; a stop normally preventing said valve from opening to its full extent to thereby cause only a

service application of the air brakes; and means, automatically operated, for subsequently moving said stop to an inoperative position after said valve is partly opened, to thereby cause an emergency application of the air brakes, substantially as specified.



3. An instrument for controlling train brakes including, in combination: a train pipe, a casing the interior of which is in communication with the train pipe, said casing having a valve therein; mechanism normally holding said valve closed against the train-pipe air pressure; means, adapted to be tripped, to release and open said valve; a stop normally preventing the valve from assuming a completely open position to thereby cause only a service application of the air brakes; and automatically operated train-pipe air-pressure-governed means for subsequently moving said stop to an inoperative position to thereby permit said valve to open fully and cause an emergency application of the brakes, substantially as specified.

4. An instrument for controlling train brakes including, in combination: a train pipe; a casing communicating therewith having a valve and a port in said casing, said valve normally closing said port; means, adapted to be automatically tripped, for releasing and opening said valve; means normally permitting said valve to open only partially; and timed devices for rendering said means inoperative whereby the valve may assume a completely open position, substantially as specified.

5. A train brake controlling system of the character described including, in combination: an instrument having a valve therein normally closing a port in communication with the train pipe, means controlled in accordance with track conditions for releasing said valve, means for stopping the valve when it has opened sufficiently to cause a service application of the brakes only; and means, automatically operated when the air pressure in the train pipe has decreased to a predetermined amount due to said valve being automatically opened, for causing said stopping means to release the valve to cause an emergency application of the brakes, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

1,193,474. CHEMICAL COMPOUND OF CALCIUM CHLORID AND HEXAMETHYLENAMIN AND A PROCESS RELATING TO THE SAME. EDGAR SAMSON, New York, N. Y., assignor to Carl F. Stiefel, New York, N. Y. Filed Mar. 13, 1914. Serial No. 824,544. (Cl. 23—24.)

1. As a new article of medicine, the dry, stable, and free running chemical compound of calcium chlorid and hexamethylenamin capable of being tableted and maintained in permanent tablet form.

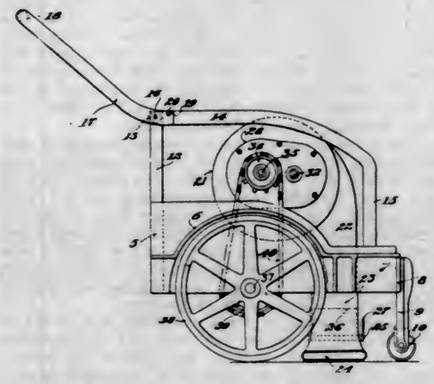
2. As a new article of medicine, a compound of calcium chlorid and hexamethylenamin, and substantially free from water of crystallization, substantially as described.

3. A method of making a new article of medicine, consisting of the combination of calcium chlorid and hexamethylenamin substantially free from water of crystallization, which consists in dissolving the said calcium chlorid and said hexamethylenamin in a substantially non-aqueous solvent capable of ionizing them and bringing together said non-aqueous solutions and crystallizing the compound formed thereby.

4. A method of forming a new article of medicine consisting of the combination of calcium chlorid and hexamethylenamin and substantially free from water of crystallization, which consists in dissolving molecular quantities of said calcium chlorid and said hexamethylenamin in water, bringing together said solutions, crystallizing the compound thereby formed, and redissolving said compound in a substantially non-aqueous solvent capable of ionizing them, and recrystallizing said compound from said non-aqueous solvent.

5. A method of making a new article of medicine, consisiting of the combination of calcium chlorid and hexamethylenamin, which consists in dissolving the said calcium chlorid and said hexamethylenamin in alcohol, and bringing together said alcoholic solutions and crystallizing the compound formed thereby.

1,193,475. PNEUMATIC BLOWING-MACHINE. JOSEPH J. SMITH, Cambridge, Mass., assignor to William Firth, Chestnut Hill, Mass. Filed Jan. 19, 1914. Serial No. 813,107. (Cl. 15—60.)

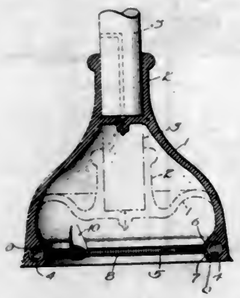


A pneumatic blowing machine of the nature described comprising a frame provided with side plates having wheel receiving recesses, a shaft journaled in bearings of said side plates and having traction wheels positioned in said recesses and a sprocket located between said side plates, a cross member mounted between said side plates, a fan casing mounted on said cross member and having a gear case, an air delivery pipe extending from said fan casing, a mouth piece communicating with said delivery pipe and terminating in diverging nozzles, a rotary fan in said fan casing and having a shaft extending into said gear case, multiplying drive gears for said fan shaft positioned in said gear case one of which gears has a shaft extending outside of said gear case and having a sprocket, and a chain connecting the latter sprocket with the sprocket of the traction wheel shaft.

1,193,476. FORCE-PUMP. MANDEL BLOCK, Chicago, Ill., assignor to Illinois Force Cup & Specialty Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1916. Serial No. 91,551. (Cl. 4—1.)

1. A force pump for plumbers having a dome-like body with an annular base, said body being impervious, resilient material, means for depressing the upper portion of the body, and an annular stiffening element for stiffening the base of said dome-like body, said stiffening element being also slightly expansible, whereby its diameter may be slightly varied.

2. A device of the class described, consisting of a domelike rubber body, a handle at the top for collapsing it, and a helical spring bent to form a torus and being embedded in the base slightly above the extreme bottom, whereby there is a portion of rubber beneath the spring and separating the spring from the object upon which the device rests.



3. A plumber's force pump comprising a domelike body of rubber, a handle for collapsing it, and a spring torus made from a wire helix, said body having an annular chamber formed in the base and communicating, through a slot, with the inside of the body, whereby the torus may be inserted or removed after the domelike body has been formed.

1,193,477. FOOD PRODUCT AND METHOD OF PRODUCING THE SAME. RALPH W. CRARY, Waukesha, and STEWART R. BARNETT, Albany, Wis., assignors to Crary Brokerage Company, Waukesha, Wis., a Corporation of Wisconsin. Filed Apr. 14, 1916. Serial No. 91,070. (Cl. 99—11.)

1. That improvement in the art of producing a food product from animal milk, which comprises the addition to a concentrate of skimmed milk, of an alimentary vegetable oil and the homogenization of said mixture.

2. That improvement in the art of producing a food product, which comprises the addition to a concentrate of skimmed cow's milk of an alimentary vegetable oil from which the free fatty acids have been removed, and the homogenization of said mixture.

3. That improvement in the art of producing a food product, which comprises the addition to a concentrate of skimmed cow's milk of an alimentary vegetable oil, and the homogenization of said mixture.

4. That improvement in the art of producing a food product, which comprises the addition to a concentrate of skimmed cow's milk of cocoanut oil from which the free fatty acids have been removed, and the homogenization of said mixture.

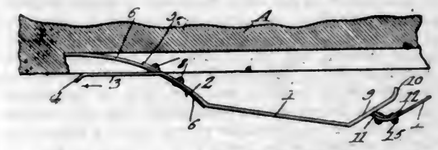
5. As an article of manufacture, a food product composed of a homogenized mixture of a concentrate of skimmed animal milk to which has been added, after concentration, an alimentary vegetable oil from which the free fatty acids have been removed.

[Claims 6 to 15 not printed in the Gazette.]

1,193,478. MASON'S JOINTER. ANTHONY WAYNE DOWNS, Dallas, Tex., assignor of two-fifths to H. J. Nelson, Dallas county, Tex. Filed Sept. 22, 1914. Serial No. 863,038. (Cl. 72—138.)

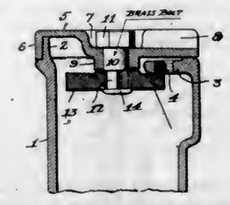
1. The combination with a shank, of a runner extending from one end portion thereof and having a rounded terminal, a combined clearing out and smoothing blade curved from end to end and having its concavity facing the runner and its free end portion extending beyond the terminal of the runner, and means for adjustably connecting the blade to the shank, said blade intersecting the plane of the runner.

2. The combination with a shank, of a runner extending from one end portion thereof and having a rounded terminal, a combined clearing out and smoothing blade curved from end to end and having its concavity facing the runner and its free end portion extending beyond the



terminal of the runner, and means for adjustably connecting the blade to the shank, said blade intersecting the plane of the runner and being located beyond one side of the shank and runner and constituting a side extremity of the tool.

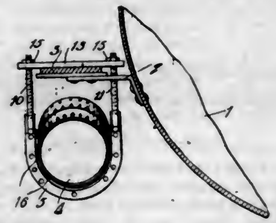
1,193,479. COVER FOR SERVICE-BOXES. OTTO G. HITCHCOCK, Erie, Pa., assignor to Hays Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Jan. 31, 1916. Serial No. 75,379. (Cl. 137—13.)



1. The combination with a service box embodying an inwardly projecting lug and an upstanding flange cut-away at one side, of a cover therefor adapted to fit over said flange, a cam disk adapted to engage said lug, a bolt rotatably connecting said cover and disk, and a projecting under portion on said cover adapted to register with the cut-away portion of the flange of said box when said cover is positioned thereon.

2. The combination with a service box embodying an inwardly projecting lug and an upstanding flange cut-away at one side, of a cover therefor adapted to fit over said flange, a cam disk adapted to engage said lug, a bolt rotatably connecting said cover and disk, and a radial groove in said cover forming a projecting under-portion adapted to register with the cut-away portion of the flange of said box when said cover is positioned thereon.

1,193,480. SUPPORT FOR LOCOMOTIVE AIR-RESERVOIRS. THOMAS J. O'DAY, Malone, N. Y. Filed Feb. 12, 1916. Serial No. 77,974. (Cl. 248—31.)

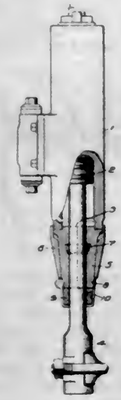


1. In a device of the class described, in combination with a platform, a plurality of cradles, supporting members pivotally connected therewith and extending on each side of said platform, means bearing upon the upper surface of the platform and adjustably associated with said supporting members for the purpose set forth.

2. A supporting cradle, including a pair of spaced U-shaped straps having anti-friction rollers interposed therebetween, bolts pivoted between said straps at the free ends thereof, a transverse supporting bar associated with said bolts, and nuts on the free ends of said bolts for retaining the latter in engagement with said bar.

3. In a device of the class described, a cradle comprising a pair of straps substantially U-shaped in configuration and arranged in spaced relation, anti-friction rollers mounted between said spaced straps to revolubly support a cylindrical object, suspending arms pivotally associated with said cradle between the free ends of the spaced straps, and a transverse bar engageable with the free end of the said arm and adapted to rest upon a supporting object for the purpose set forth.

1,193,481. PISTON-ROD PROTECTOR. DANIEL J. O'ROURKE, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 27, 1911. Serial No. 651,520. (Cl. 74—86.)



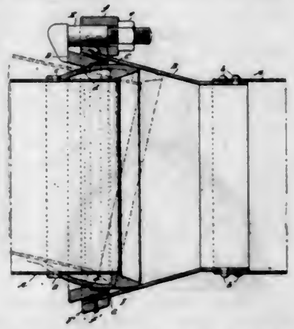
1. In a piston rod swab, the combination with a cylinder of a piston, a piston rod, a guide bushing for the piston rod, the latter having a circumferential groove, a piston rod wiping device having a ring-like wall adapted to seat in the groove of the bushing, and means for clamping the wiping device about the bushing.

2. In a piston rod swab, the combination with a cylinder of a piston and piston rod, a guide bushing for the piston rod projecting from the end of the cylinder, a piston rod wiping device including a plurality of separated holding members for holding wiping material, and means for securing them to the end of the bushing to present the wiping material to the piston p[illegible] its passage through the bushing.

3. In a piston rod swab, the combination with a piston and piston rod of a detachable wiper holder comprising a split ring member, means at one end of said ring member for clamping the same to the engine to encircle the rod, and a plurality of holding fingers projecting from the opposite end of the ring member and adapted to hold the wiping material about the rod.

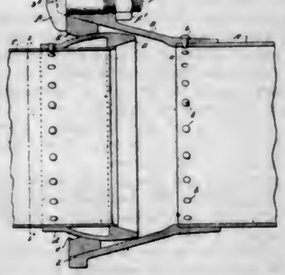
1,193,482. PIPE-COUPLING. LEVIN S. PARKER, New York, N. Y., assignor to Parker Universal Coupling Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 22, 1913. Serial No. 743,522. (Cl. 137—88.)

A pipe coupling comprising one member having an annular frustum-shaped member, a second annular member having a curved or arc-shaped outer surface which enters the frustum-shaped member and which curved or arc-shaped surface, when the two members are assembled, has a bearing on the straight inner surface of the frustum-shaped member, a ring fitting between the two said members and having two surfaces which conform with the adjacent surfaces of the said two members, a gasket engaged by the ring to hold it between the adjacent faces of the two members, lugs carried by the first mentioned



member, and each provided with an opening, a bolt extending through the opening in each lug and provided with a hook which engages with the said ring, and a nut for each bolt for holding the hook thereof against the ring whereby, upon loosening the nut and by a partial turn of the bolts, the hooks are made to engage and disengage the ring.

1,193,483. PIPE-COUPLING. LEVIN S. PARKER, New York, N. Y., assignor to Parker Universal Coupling Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Feb. 20, 1915. Serial No. 9,757. (Cl. 137—88.)



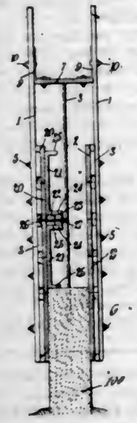
1. A flexible pipe coupling comprising a flared member, a second member entering the flared member, a ring between the two members for holding them together and having a face thereof coinciding with the edge of the flared member when the ring is in proper position between the two members and having two surfaces which conform to the adjacent surfaces of the two said members, and means for holding the ring in position between the two members, said means comprising a flange for preventing movement of the holding means and thus displacement of the ring from between the two members.

2. A flexible pipe coupling comprising a flared member, a second member entering the flared member, a ring between the two members for holding them in position and having two surfaces which conform to the adjacent surfaces of the two said members, bolts and nuts for holding the ring in position, and means carried by one of said members for preventing the bolts being disengaged from the ring.

3. A flexible pipe coupling comprising a flared member, a second member entering the flared member, a ring between the two members for holding them in position and having two surfaces which conform to the adjacent surfaces of the two said members, lugs carried by one of the members, bolts carried by the lugs and having hooks for engaging the ring, and a flange carried by each lug for holding the hooks from disengagement from the ring.

4. A flexible pipe coupling comprising a flared member, a second member having an arc-shaped surface entering therein, a ring between the two said members for holding them in position and having two surfaces which conform to the adjacent surfaces of the two said members, and having a tapering portion to permit and limit the flexing of the joint, and means for holding the ring in position between the two members.

1,193,484. MOLD FOR CASTING CONCRETE WALLS WITH A TILE FACING. CHARLES O. ELLERT, New York, N. Y. Filed Oct. 23, 1911, Serial No. 656,224. Renewed Dec. 17, 1915. Serial No. 67,488. (Cl. 25—131.)



1. A tile element mold comprising spaced uprights; mold walls supported by said uprights; and a tile or wall facing supporting means, said means including a plurality of elements adapted to detachably engage one of said mold walls, and a plurality of elements adapted to engage said first elements and the rear faces of said tiles or wall facing.

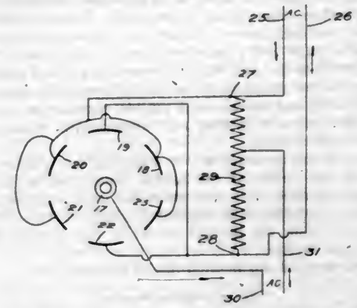
2. A tile element mold having a plurality of facing elements or tiles adjacent the inner faces of mold sections in a mold wall of said mold; holding means in engagement with the rear faces of said tile elements; and a plurality of removable means passing through said mold wall and said holding means to position said tile or facing element.

3. In combination, a tile element mold comprising spaced uprights; mold sections supported by said uprights; facing elements adjacent the inner faces of said mold sections; holding devices adjacent the rear faces of said facing elements, together with means passing through said holding devices and the mold sections whereby the facing elements are detachably positioned.

4. In combination, a tile element mold comprising spaced uprights, mold sections supported by said uprights; a plurality of facing elements adjacent the inner faces of said mold sections; longitudinally extending holding means engaging the rear faces of said facing elements; and removable securing means engaging said holding means and said mold sections.

1,193,485. CONVERTER. ALEXANDER T. KASLEY, Swissvale, Pa. Original application filed Sept. 14, 1909, Serial No. 517,606. Divided and this application filed May 27, 1913. Serial No. 770,195. (Cl. 175—363.)

1. A current transformer, comprising a movable terminal, a plurality of stationary sectors adapted to be periodically and successively placed in electrical connection with the movable terminal, said sectors being located in sets, and means for impressing different voltages on different sectors of a set so arranged that the voltage impressed on the center sector of each set is higher than the voltage at the end sectors.



2. In a current transformer, a moving terminal, sets of stationary sectors adapted to be successively electrically connected to the moving terminal, alternate sectors in each set being, at any instant, of opposite polarity to the other sectors of the set, each end sector of each set being at an instant of the same polarity as the end sector nearest to it of the adjacent set.

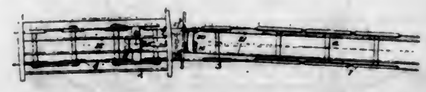
3. A current transformer comprising a movable terminal, a plurality of sets of stationary sectors adapted to be successively connected to the moving terminal, means for impressing various voltages on the sectors so arranged that said sectors increase in voltage from the ends of each set toward the center.

4. A current transformer comprising a movable terminal, a plurality of sets of stationary sectors adapted to be successively electrically connected with the moving terminal, means for impressing various voltages on the different sectors so that the voltage of the middle sector of each set is higher than the voltage of the end sectors, and synchronous means for moving said movable terminal.

5. In combination with a source of alternating current, a utilization circuit, means interposed between said source and said utilization circuit for reducing the frequency of the current delivered to the utilization circuit, comprising a movable terminal, a plurality of stationary sectors adapted to be successively electrically connected with the movable terminal, and means for causing the instantaneous current and voltage values in the utilization circuit to approximate a sine curve.

[Claims 6 and 7 not printed in the Gazette.]

1,193,486. ENGINE-COUPLING. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 13, 1911, Serial No. 627,039. Renewed Apr. 28, 1914. Serial No. 835,047. (Cl. 213—42.)



1. In an engine coupling, a coupling member engaging the tender, and its other end having connection with the engine frame at a point to the rear of the center of its driving wheel truck, said member being movable radially about said center.

2. In an engine coupling, a coupling member engaging the tender and having its other end provided with a movable engagement with the engine frame at a point at the rear of the pivotal center of the driving wheel truck, the line of movement of said connection being substantially equidistant from said center at all points.

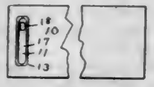
3. In an engine coupling, a bar pivoted to the tender truck and having its end portion engaging with and moving along a pulling segment on the engine.

4. In an engine coupling, an engine and tender having coöperating buffers with convex faces, and a buffer block concaved on opposite faces to engage the convexed faces of both buffers, the convex faces of the buffers being substantially on arcs struck respectively from the center of the engine truck and a point adjacent to the center of the tender truck, and a bar with its rear end pivoted adjacent to the center of the tender truck and having its other end engaged with and moved on a pulling segment on the engine, said bar also having an intermediate engagement with the buffer block.

5. In an engine coupling, a coupling bar pivoted adjacent to the center of the tender truck and having its front end engaged with and traveling over a pulling segment on the engine, said segment having its arc of curvature struck from the pivotal center of the driving wheel truck of the engine.

[Claims 6 to 12 not printed in the Gazette.]

1,193,487. EMERGENCY-LEVER-SLOT-FILLING DEVICE. SOLON FRANK PRESTON, Middletown, Conn. Filed Jan. 19, 1916. Serial No. 72,929. (Cl. 21—90.)



1. In combination with a foot-board for an automobile having a slot for an emergency lever, a filling piece serving as a blind to cover the said slot, having a hole in which the said lever is housed, and positioned on the under side of the said board, guide-ways for guiding the said piece in parallelism with the said slot and the said guide-ways being formed of a pair of pieces of sheet material, each bent into L-shape to form a base portion, a connecting portion and a flange portion, the two flange portions being opposed and supporting the said filling piece, whereby the said guide-ways are adapted to yield under abnormal conditions of pressure.

2. A foot-board for an automobile having a slot for an emergency lever and locking devices connected to the said lever, a filling piece having a hole for receiving the said lever and locking devices, and slidably mounted on the under side of the said board, guide-ways for guiding the said filling piece in parallelism with the said slot, and the said filling piece comprising a single piece of yielding fibrous materal, rectangular in form, and of appreciable thickness, suitable to serve as a bridge to cover the said slot, whereby noiseless operation is insured and a close fit is obtainable between the side walls of the said hole and the sides of the said lever.

1,193,488. STEAM-METER. CARL C. THOMAS, Madison, Wis. Filed Apr. 14, 1909, Serial No. 489,840. Renewed May 28, 1913. Serial No. 770,488. (Cl. 73—68.)



1. Apparatus such as described, comprising an outer main conduit and an inner conduit within such main conduit and spaced away from the walls thereof, said conduits adapted for proportional flow through them of steam or other gas or vapor, heating means within the inner conduit and temperature determining means upon opposite sides of such heating means, said inner conduit being jacketed by the steam or other gas or vapor flowing through the space between the inner and outer conduits.

2. Apparatus such as described, comprising two conduits located one within the other, and adapted for the flow through them of steam or other gas or vapor, the outer of such conduits comprising a plurality of sections secured together, supporting means for the inner conduit comprising rings interposed between sections of the outer conduit, and thereby supported, heating means within one such conduit, and temperature determining means upon opposite sides of such heating means.

3. Apparatus such as described, comprising two conduits located one within the other, and adapted for the flow through them of steam or other gas or vapor, the outer of such conduits comprising a plurality of sections secured together, supporting means for the inner conduit comprising rings interposed between sections of the outer conduit, and thereby supported, heating means within the inner conduit, and temperature determining means upon opposite sides of such heating means.

4. Apparatus such as described, comprising two conduits located one within the other, the interior of the inner conduit and the annular space between such inner conduit and the walls of the outer conduit, forming proportional flow-spaces, heating means within one such flow space, such flow space having a narrow discharge-orifice, and temperature-determining means upon opposite sides of such heating means, one such temperature-determining means located in the path of fluid passing through such discharge orifice.

5. Apparatus such as described, comprising in combination two conduits, one within the other, said inner conduit provided with heating means within it and also provided at its discharge end with a discharge nozzle having a narrow orifice, and temperature determining means upon opposite sides of such heating means, one such temperature determining means in the path of fluid flowing through such discharge orifice.

[Claims 6 to 9 not printed in the Gazette.]

1,193,489. MOTOR-DRIVE. ALFRED F. WELCH, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed Dec. 17, 1914. Serial No. 877,688. (Cl. 172—179.)



1. In combination a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake for the motor, a switch for the motor supply circuit, means normally holding the brake in engagement to stop the motor, and common actuating means for first closing the switch and thereafter progressively releasing the brake to start the motor and to control the speed thereof.

2. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake for the motor, a switch for the motor supply circuit, tension means normally maintaining the brake in operative engagement with the motor, other tension means normally maintaining the switch open, and actuating means for first closing the switch under tension and thereafter progressively decreasing the tension on the brake to start the motor and to control the speed thereof.

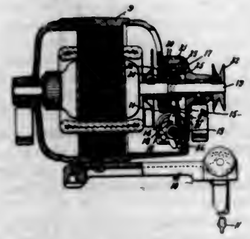
3. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake, tension means normally maintaining said brake in operative engagement with the motor, a switch for the motor supply circuit, tension means normally maintaining said switch open, and a common actuating device adapted to be progressively operated and in the course of its operation to first close the switch under tension and thereafter to act upon the tension device of the brake to render the same progressively ineffective, whereby the motor may be started and thereafter its speed may be controlled through its whole range by a continuous progressive motion of the actuating means.

4. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, and means for controlling said motor comprising a brake drum on the motor spindle, a pivoted brake lever carrying a shoe thereon, a make and break switch for the motor circuit, an actuating lever for said switch, and opposite unequal tension means connecting said lever with the brake lever on the one side and a fixed anchorage on the other, whereby the brake lever is normally maintained under tension and the switch open, but pressure on the switch lever, by first increasing the strain on one tension means and thereafter decreasing the strain on the other, will first close the switch and thereafter progressively release the brake, to start the motor and control the speed thereof.

5. In combination, a machine having actuating means, an electric motor adapted to drive said actuating means, said motor having an armature and a field winding connected in series, and means for controlling said motor comprising a switch, a brake, tension means for normally maintaining the brake in engagement with the motor to hold the same stationary, and means for first closing said switch and thereafter progressively decreasing the tension on the brake to start the motor and to control the speed thereof.

[Claims 6 to 16 not printed in the Gazette.]

1,193,490. MOTOR-DRIVE. JAMES J. WOOD, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed July 15, 1915. Serial No. 40,118. (Cl. 172—179.)



1. The combination with a machine to be driven, of an electric motor adapted to drive the same, said motor having a frame, and means for controlling said motor comprising a switch for the motor supply circuit, a brake for the motor shaft, a brake lever operatively connected with said brake and pivotally mounted on the motor frame, an actuating lever, a member mounted on said actuating lever, said member being normally positioned out of engagement with said brake lever and rotatable to engage said brake lever to release said brake, means positively connecting said switch and said member, spring means engaging said brake lever for normally applying said brake, and means for actuating said actuating lever to rotate said member, said member in its rotation first closing said switch and thereafter progressively releasing said brake.

2. The combination with a machine to be driven, of an electric motor adapted to drive the same, said motor having a frame, and means for controlling said motor comprising a switch for the motor supply circuit, a brake for the motor shaft, a brake lever operatively connected with said brake and pivotally mounted on the motor frame, an actuating lever, a member mounted on said actuating lever, said member being normally positioned out of engagement with said brake lever and rotatable to engage said brake lever to release said brake, means positively connecting said switch and said member, spring means engaging said brake lever for normally applying said brake, other spring means operatively associated with said member for normally maintaining said member in the position in which the switch is open and the brake applied, and means for actuating said actuating lever to rotate said member, said member in its rotation first closing said switch and thereafter progressively releasing said brake.

3. The combination with a machine to be driven, of an electric motor adapted to drive the same, said motor having a frame, and means for controlling said motor comprising a switch for the motor supply circuit, stationary and rotatable friction plates surrounding the motor shaft, a brake lever operatively connected with said friction plates and pivotally mounted on the motor frame, an actuating lever, a member mounted on said actuating lever, said member being normally positioned out of engagement with said brake lever, and rotatable to engage said brake lever to release the pressure between said friction plates, means positively connecting said switch and said member, spring means engaging said brake lever for normally maintaining said friction plates in engagement with each other, and means for actuating said actuating lever to rotate said member, said member in its rotation first closing said switch and thereafter progressively releasing the pressure between said friction plates.

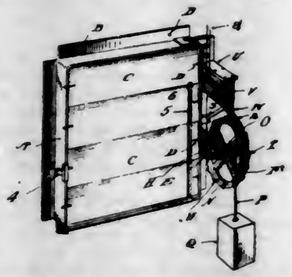
4. The combination with a machine to be driven, of an electric motor adapted to drive the same, said motor having a frame, and means for controlling said motor comprising a switch for the motor supply circuit, stationary and rotatable friction plates surrounding the motor shaft, a brake lever operatively connected with said friction plates and pivotally mounted on the motor frame, an actuating lever, a member mounted on said actuating lever, said member being normally positioned out of engagement with said brake lever and rotatable to engage said brake lever to release the pressure between said friction plates, means positively connecting said switch and said member, spring means engaging said brake lever for normally maintaining said friction plates in engagement with each other, other spring means operatively associated with said member for normally maintaining said member in the position in which the switch is open and the friction plates engage each other, and means for actuating said actuating lever to rotate said member, said member in its rotation first closing said switch and thereafter progressively releasing the pressure between said friction plates.

1,193,491. DISPLAY DEVICE. GEORGE E. BAIRD, Peoria, Ill.; Florence Searing Baird, administratrix of said George E. Baird, deceased, assignor to Albert R. MacKusick, Boston, Mass. Filed June 26, 1913. Serial No. 775,942. (Cl. 40—54.)

1. In a device of the character described, in combination, a support, a vane or wing pivoted thereon, a pinion fixed relatively to the said vane at the pivot thereof, a gear in mesh with said pinion and having a part lying at each side of its axis of movement, a member adapted for a single direction of movement and including two series of extensions, said two series of extensions lying at opposite sides of said axis of movement of the gear, the extensions of each series adapted to alternately engage the said part of said gear.

2. In a device of the character described, in combination, a support, a vane or wing pivoted thereon, a pinion fixed relatively to the said vane at the pivot thereof, a

gear in mesh with said pinion having a part lying at each side of its axis of movement, a member adapted for a single direction of movement and including two series of extensions, said two series lying at opposite sides of said axis of movement of the gear, said extensions of the two series of extensions adapted to alternately engage the said part of said gear, and means to impart rotation to said member in a single direction.



3. In a device of the character described, in combination, a support, a vane or wing pivoted thereon, a pinion fixed relatively to the said vane at the pivot thereof, a gear in mesh with said pinion having a part lying at each side of its axis of movement, a rotatable member including two series of extensions, said two series lying at opposite sides of said axis of movement of said gear, the said extensions of the two series of extensions adapted to alternately engage the part on said gear, and means constantly tending to impart rotation to said member in a single direction.

4. In a device of the character described, in combination, a support, a vane or wing pivoted thereon, a pinion fixed relatively to the said vane at the pivot thereof, a gear in mesh with said pinion having a part lying at each side of its axis of movement, a rotatable member including two series of extensions, said two series lying at opposite sides of said axis of movement of said gear, the said extensions of the two series of extensions adapted to alternately engage the part on said gear, means constantly tending to impart rotation to the member, in a single direction, and an escapement in control of said member.

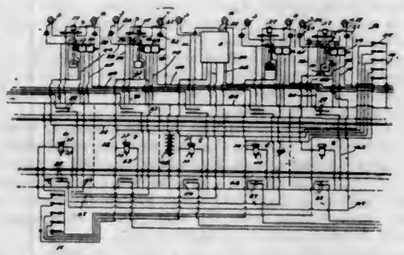
5. In a device of the character described, in combination, a support, a vane or wing pivoted thereon, a pinion fixed relatively to the said vane at the pivot thereof, a gear in mesh with said pinion having a part lying at each side of its axis of movement, a rotatable member including two series of extensions, said two series lying at opposite sides of said axis of movement of said gear, the said extensions of the two series of extensions adapted to alternately engage the part on said gear, and a manually controlled escapement in control of the member.

[Claims 6 to 11 not printed in the Gazette.]

1,193,492. TRAIN-CONTROLLING APPARATUS. BENJAMIN B. BREEDEN, Indianapolis, Ind., assignor of one-half to Clarence Lawson and one-fourth to William L. Vaughn and Hazel Vaughn, Indianapolis, Ind. Filed Mar. 27, 1915. Serial No. 17,418. (Cl. 246—31.)

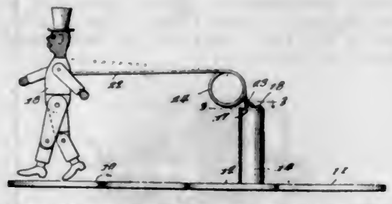
1. In train controlling apparatus, track signals spaced apart along the trackway, a controlling device for each signal operable to render the signal active and controlled from a remote point, means for locking each controlling device automatically in operated position and controlled from a remote point different from the point of control of the associated controlling device, a track obstacle under the control of each controlling device, and means for rendering said track obstacles active independently of said controlling devices and of each other.

2. In train controlling apparatus, track signals spaced apart along the trackway, a controlling device for each signal operable to render the signal active and controlled from a remote point, means for locking each controlling device automatically in operated position and controlled from a remote point different from the point of control of the associated controlling device, a track obstacle under the control of each controlling device, and manually operable means for rendering each controlling device active independently of said controlling means and of each other.



3. In train controlling apparatus, track signals spaced apart along the trackway and dividing the trackway into sections, means controlling each signal and operable to render the signal active, companion devices in each section connected with controlling means at opposite sides of the particular section and operable simultaneously by a train in the particular section to render the corresponding controlling means active simultaneously to render the controlled signals active whereby a train will be protected at both the front and the rear, a track obstacle under the control of each controlling device, and manually operable means for rendering said track obstacle active independently of said controlling devices and of each other.

1,193,493. DANCING TOY. WALTER M. COLVIN, Washington, D. C. Filed July 7, 1915. Serial No. 38,549. (Cl. 46—40.)



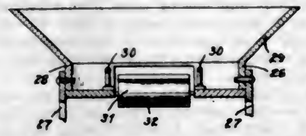
1. A dancing toy comprising a platform, a resilient arm extending longitudinally of said platform and mounted for oscillating movement transversely of said platform, and a figure connected with the free end portion of said arm.

2. A dancing toy comprising a body portion, a carrying arm mounted for oscillating movement above said body portion and transversely thereon, and a figure connected with the free end portion of said arm.

3. A dancing toy comprising a body portion, a supporting post carried by said body portion and provided with an arcuate pocket, a supporting arm having its inner end portion rotatably connected with said post and provided with a guiding finger extending into said arcuate pocket, and a figure connected with the free end portion of said arm.

4. A dancing toy comprising a body portion, a supporting post carried by said body portion and provided with an arcuate pocket, a plate secured to the upper end of said post and provided with an arcuate slot registering with said pocket, a carrying arm having one end portion passing through plate into said post to mount the arm for oscillating movement, a finger extending from the arm into said pocket to limit the oscillating movement of the arm, and a figure connected with the free end portion of said arm.

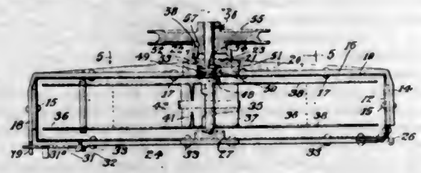
1,193,494. GRAIN PITCHER AND FEEDER. HERBERT L. CROCKER, Jetmore, Kans. Filed Aug. 12, 1913. Serial No. 784,459. (Cl. 193—4.)



A feeding device for a threshing machine including a suitably supported hopper, an endless conveyer belt mounted in the lower portion of the hopper, and longitudinally extending and elevated bars mounted in the bottom of the hopper and opposite sides of the conveyer belt for supporting the greater part of the weight of the grain from resting on the belt.

REISSUES.

14,174. MAGAZINE FOR MOVING-PICTURE MACHINES. WALTER A. DIETZE, Chicago, Ill., assignor to Nicholas Power Company, New York, N. Y., a Corporation of Delaware. Filed May 4, 1915. Serial No. 25,861. Original No. 1,081,926, dated Dec. 16, 1913, Serial No. 681,583. (Cl. 88—17.)



1. In a magazine structure for moving picture machines, the combination of a reel shaft a reel therefor upon which the film thereof is supported, a magazine for inclosing said reel, and means for moving said shaft, whereby the reel is maintained against operating until the opening in the magazine for the insertion and removal of its film is sealed against the admission of air therethrough sufficient for the ignition of the film, substantially as described.

2. In a magazine structure for moving picture machines, the combination of a shaft, a reel fixed thereon means for supporting and inclosing said reel, and means shifting said shaft to thereby maintain the reel against operation until the inclosing means are sealed against the admission of air sufficient for the ignition of the film therein, substantially as described.

3. In a magazine structure for moving picture machines, the combination of a film, a support for the opposite end portions of the film, means for operating said support and the film, means for inclosing the same, means for the introduction of the film to said inclosure, and means for laterally shifting the film, and thereby prventing the operation of the film until its inclosure is sealed against the substantial admission of air, as and for the purpose described.

4. In a magazine structure for moving picture machines, a combination of film supply, and receiving reels, magazines for inclosing said reels and film, provided with doors for the insertion and removal of the reels, and means whereby one or both of said reels are bodily moved to their operative position on the closing of its door, and likewise out of operative position when its door is moved toward an open position, substantially as described.

5. A magazine for moving picture machines, comprising in combination film supply and receiving reels, means for simultaneously operating said reels, magazines therefor provided with doors, means connecting said doors with and shifting said reels, whereby the reels are moved to an operative position by the closing of the doors, and out of operation when the doors are open, substantially as described.

6. A magazine structure for moving picture machines comprising in combination a magazine, a door therefor, a film reel inclosed by said magazine, a shaft for said reel, means by which said shaft is automatically moved, and means for locking the shaft against operation on the opening of the door, and until moved by contact with the door on closing the same, substantially as described.

7. A magazine structure for moving picture machines comprising in combination film supply receiving reels, and actuating shafts for and supporting said reels, a spring on each of said shafts, one end of which is connected with the shaft, and the other with a hub therefor, stops actuated to engagement by the spring, magazines having doors providing a bar for one end of said shaft whereby the closing of said doors moves said shaft to a position disengaging said stops, substantially as described.

8. A magazine structure for moving picture machines comprising in combination magazines, film supply and receiving reels adapted to be inclosed by said magazines, a supporting shaft for each of said reels, means for moving said shafts longitudinally, a driving pulley on one of said shafts, and means respectively engaged and disengaged by the movement of said shaft for preventing the operation of the machine, substantially as described.

9. A magazine structure for moving picture machines comprising in combination a magazine, a reel therein, a door for closing said magazine, a hub mounted upon said reel, a shaft journaled in said hub, means for removably securing the reel to the shaft, recesses in said hub, a driving pulley provided with a stop for engaging said recesses, and means whereby on the opening of the magazine for the insertion and removal of a reel, said stop and recesses engage and lock the pulley against movement and on closing the magazine it will disengage, substantially as described.

10. In a mechanism of the class described, the combination with a magazine having a door on one side thereof, a film reel supported in said magazine, means for driving said film reel, means for normally preventing rotation of said film reel, and means operative upon the closing of said magazine door for rendering said last named means inoperative.

11. In a machine of the class described, the combination with a reel for a roll of film to be fed through a moving picture machine, a magazine inclosing said reel having one side thereof forming a door, means for rotatably supporting said reel in said magazine, means preventing the rotation of said film reel, and means controlled by the closing of said magazine door for releasing said last named means.

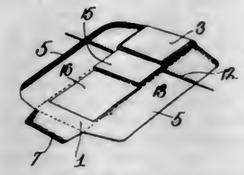
12. In a machine of the class described, the combination with receiving and delivering reels of a moving picture machine, magazines inclosing said reels each having a door on one side thereof, means including a shiftable device for preventing exhibition of said film when said magazine doors are opened, and means operatable upon the closing of said doors for shifting said device to release said last mentioned means.

13. In a machine of the class described, the combination of a magazine inclosing a reel of film and provided with means for rotating said film reel, means for preventing the operation of said film comprising a member having an operative and an inoperative position and adapted to normally assume its inoperative position, and means for adjusting said member to its operative position comprising a part carried by the magazine door adapted when said magazine is closed to shift and maintain said member in its operative position.

14. In a mechanism of the class described, the combination of a fireproof casing, a door on one side of the casing, a driving mechanism including a power driven shaft mounted in said casing, means for preventing rotation of said shaft normally operative when said door is open.

said mechanism including a shiftable part operated upon the closing of the door for adjusting said last named means to render said shaft rotatable.

14,175. MONEY-TRANSMITTING ENVELOP. WILLIAM P. FAULKNER, Kansas City, Mo., assignor to John R. Sutter, Kansas City, Mo. Filed Aug. 11, 1915. Serial No. 45,068. Original No. 1,136,948, dated Apr. 27, 1915, Serial No. 850,162. (Cl. 229—72.)

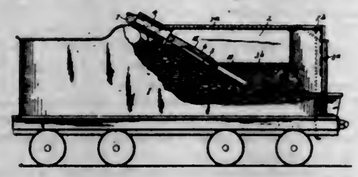


1. An envelop comprising individual body and pocket members having a common back, end flaps foldable onto the back from opposite edges thereof, side flaps foldable onto the pocket portion of said back to form a pocket; the said pocket being foldable onto the body portion of the back, side flaps foldable onto the body portion of said back; the said back and body flaps having a permanent line of severance, whereby the pocket and part of the body member may be separated from the remainder of the body member.

2. An envelop comprising body and pocket members having a common back, end flaps foldable onto the back from opposite edges thereof, side flaps foldable onto the pocket portion of said back to form a pocket, said pocket being foldable onto the body portion of the back, side flaps foldable onto the body portion of said back, the said back and body flaps having a continuous line of perforation extending transversely thereacross whereby the pocket and part of the body member may be separated from the remainder of the body member.

3. A money transmitting envelop consisting of an oblong sheet of suitable fabric having a portion thereof separately provided with oppositely disposed overlapping side flaps and with an end flap adapted to overlap the outer ends of said side flaps and thereby forming an envelop, the remaining portion of the sheet being separately provided with oppositely disposed overlapping and united side flaps and with an end flap which overlaps the outer ends of said overlapping side flaps and is united therewith, said side flaps forming the side and said end flap the bottom of a pocket adapted to fold forwardly at its open end and lie within said envelop portion, said envelop portion having a crosswise extending line of perforations traversing the body and said side flaps, and a cable secured on the inner sides of the envelop portion and extending along said perforations and adapted for totally separating the envelop at said perforations.

14,176. COAL-PASSER FOR LOCOMOTIVE-TENDERS. CHARLES L. HEISLER, Schenectady, N. Y. Filed Feb. 23, 1916. Serial No. 80,070. Original No. 1,088,418, dated Feb. 24, 1914, Serial No. 777,138. (Cl. 105—260.)



1. In a locomotive tender coal passer, the combination of a fluid pressure operating cylinder adapted for attachment to a tender tank, a piston fitting therein, and a coal passing mechanism comprising a plurality of articulated sections coupled to said piston and adapted to be traversed, by the movement thereof, forwardly and rearwardly over the floor and rear wall of a tender coal bin.

2. In a locomotive tender coal passer, the combination of a fluid pressure operating cylinder adapted for attachment to a tender tank, a piston fitting therein, and a coal passing mechanism comprising a plurality of articulated carrier sections and one or more pusher sections hinged thereto, said mechanism being coupled to said piston, and adapted to be traversed, by the movements thereof, forwardly and rearwardly over the floor and rear wall of a tender coal bin.

3. In a locomotive tender coal passer, the combination of a fluid pressure operating cylinder adapted for attachment to a tender tank, a piston fitting therein, a cross head fixed on the rod of said piston, guides engaging said cross head for insuring its movement parallel with the inclined rear wall of a tender coal bin, and a coal passing mechanism comprising a plurality of articulated sections coupled, through said cross head, to the piston, and adapted to be traversed, by the movements thereof, forwardly and rearwardly over the floor and rear wall of a tender coal bin.

4. In a locomotive tender coal passer, the combination, of a movable pusher member adapted to be mounted to reciprocate forwardly and rearwardly upon and parallel with an inclined rear wall of the coal bin of a tender, a motor secured to a fixed member of the tender, and operating means connecting said motor with the pusher member.

5. In a locomotive tender coal passer, the combination of a plurality of articulated carrier sections adapted to be mounted to reciprocate forwardly and rearwardly upon the floor and inclined rear wall of the tender coal bin, and a fluid pressure motor for reciprocating said sections.

6. In a locomotive tender coal passer, the combination of a plurality of articulated carrier sections adapted to be mounted to reciprocate forwardly and rearwardly upon the floor and inclined rear wall of the tender coal bin, one or more pusher sections pivotally mounted transversely upon said carrier sections, and a fluid pressure motor for reciprocating said carrier sections.

7. In a locomotive tender coal passer, the combination of a cross head section adapted to be mounted to reciprocate upon the inclined rear wall of the coal bin, a piston and rod connected to said cross head, a cylinder containing said piston, and a guard covering said rod and a portion of the cross head when the same is reciprocated.

8. In a locomotive tender coal passer, the combination with a movable section adapted to be mounted to reciprocate upon the inclined rear wall of the tender coal bin, and a fluid pressure motor for operating the same, of supplemental pusher sections mounted to traverse over the inclined rear wall to assist the gravitating movement of the fuel.

9. In a locomotive tender coal passer, the combination with a movable section adapted to be mounted to reciprocate upon the inclined rear wall of the tender coal bin, and a fluid pressure motor for operating the same, of swinging arms mounted on the said inclined rear wall, supplemental pusher sections pivoted on said arms, and connections from said arms to the reciprocating section.

10. In a locomotive tender coal passer, the combination with a carrier section mounted to reciprocate upon the middle portion of the floor of the fuel bin, of pusher sections mounted to traverse near the side walls to impel the fuel toward the carrier at the middle portion.

11. In a locomotive tender coal passer, the combination with a carrier section mounted to reciprocate forwardly and rearwardly through the middle portion of the coal bin, of a rock shaft extending transversely of the fuel bin, pivoted pusher sections depending from said shaft near the side walls, and means for oscillating said shaft.

12. In a locomotive tender coal passer, the combination with a carrier section mounted to reciprocate forwardly and rearwardly through the middle portion of the coal bin, of a rock shaft extending transversely of the fuel bin, an arm fixed on said shaft and coupled to the carrier section, and pivoted pusher sections depending from said shaft near the side walls for impelling the fuel toward the middle portion.

13. The combination, with a tender fuel bin having a bottom, a stationary sloping rear wall, oppositely disposed side walls, and an open front for fuel discharge, of a fluid pressure motor operating parallel with the rear wall, a coal passer section connected to said motor and adapted to reciprocate on said wall, and means, fixed independently of the side walls, for guiding said coal passer section.

14. The combination, with a tender fuel bin having a bottom, a stationary sloping rear wall, oppositely disposed side walls, and an open front for fuel discharge, of a fluid pressure cylinder fixed at the rear of the rear wall, a piston reciprocating therein parallel with said wall, a coal passer section connected to said piston and adapted to be reciprocated thereby on said wall, and guides fixed to said wall and engaging said coal passer section.

15. The combination, with a tender fuel bin having a bottom, a stationary sloping rear wall, oppositely disposed side walls, and an open front for fuel discharge, of a fluid pressure motor operating parallel with the rear wall, a reciprocating pusher member comprising a cross head connected to the motor, and a feathering member disposed transversely on and hinged to the cross head and adapted to impel fuel toward the front of the bin on the forward stroke of the cross head and to minimize the resistance of the fuel on the rearward stroke, and means, fixed independently of the side walls, for guiding the cross head.

16. The combination, with a tender fuel bin having a bottom, a stationary sloping rear wall, oppositely disposed side walls, and an open front for fuel discharge, of a fluid pressure motor operating parallel with the rear wall, a coal passer section connected to said motor and adapted to reciprocate on said wall independently of connection with the side walls, and guides, fixed independently of the side walls, and engaging the coal passer sections.

17. In a locomotive tender coal passer, in combination, a suitable motor, a plurality of fuel pushing elements for advancing fuel, such elements being articulated together and adapted to reciprocate over a fuel supporting wall of a tender bin, and operative connection between the motor and pushing elements.

18. In combination, a locomotive tender having a fuel bin and a shoveling platform, a plurality of pushing elements articulated together and reciprocable over a fuel-supporting wall of the bin for advancing fuel to the shoveling platform, and power means for actuating the pushing elements.

14,177. PROCESS OF MAKING A PYROTECHNICAL COMPOSITION. MARIUS MAGNARD, New York, N. Y. Filed May 3, 1916. Serial No. 95,270. Original No. 759,387, dated May 10, 1904, Serial No. 188,769. (Cl. 52—6.)

1. A process for the production of a pyrotechnical compound consisting in mixing gum-arabic and carbonate of magnesium in water, heating the mixture, adding white phosphorus, allowing the mixture to cool under continuous agitation, adding red ocher and potassium chlorate, and finally dividing the product into small pieces.

2. A process for the production of a pyrotechnical compound consisting in mixing five kilograms of gum-arabic and 1.5 kilograms of carbonate of magnesium in 5 liters of water, heating the mixture to 50° centigrade, adding one kilogram of white phosphorus, allowing the mixture to cool under continuous agitation, adding 2.5 kilograms of red ocher and three kilograms of potassium chlorate, and finally dividing the product into small pieces.

14,178. SAMPLE-DISPLAYING DEVICE. EMMETT MCCARRELL, Bedford, Ind. Filed Dec. 17, 1915. Serial No. 67,483. Original No. 1,119,087, dated Dec. 1, 1914, Serial No. 804,414. (Cl. 35—17.)

1. In a device of the character specified, a framing member provided with an opening outlining the form of a human body, a form member adapted to project into said opening and to carry a fabric over the front of said form member into said opening, a wire frame secured to the framing member over the opening therein and adapted to lie in front of the fabric so projected through said opening over said form member, said framing member representing in conjunction with the fabric and form member supporting the same a person clothed in a tailor-made suit, the wire frame coöperating in representing the front or free edges of the upper garment.



2. In a device of the character specified, a framing member having an opening therein outlining the form of a human figure, a form member representing the body, arms and legs of a human figure and having a marginal configuration which matches the opening in the framing member, said form member being adapted to enter the opening in the framing member and to carry a fabric over the front thereof and to thereby represent in said opening a clothed human figure, a wire frame mounted on said framing member in front of said opening and representing the free edges of the upper garment.

3. In a sample displaying device, the combination with a base, of a backing adapted to have fabric placed over its face, said backing having portions thereof formed in relief on the face of the backing, a framing member having a cut-out portion simulating the outline of the body, with the portions of the backing in relief adapted to lie in the cut-out portion of the framing member, and wire-like members on the framing member and lying within the plane of the cut-out portion to press against the fabric so that those portions of the fabric covering the portions in relief on the backing will be pressed forwardly adjacent the said members.

4. In a sample displaying device, the combination with a base, of a framing member mounted to swing thereon and provided with a cut-out portion simulating the outline of the body, a backing carried by the base and having portions thereof set out in relief on the face of the backing, with the said portions adapted to project into the cut-out portion of the framing member, said backing being adapted to have a fabric placed over its face and be visible through the cut-out portion of the framing member, and means on the framing member and lying within the plane of the cut-out portion, said means being adapted to press against the fabric so that the portions of the fabric covering the raised portions on the face of the backing will stand out in relief adjacent the said means.

5. In a device of the character specified, a backing or form member adapted to have a fabric placed over its front face, and having portions formed in relief on the face thereof, a framing member having a cut-out portion simulating the outline of a human body with said portions of the backing in relief adapted to lie in the cut-out portion of the framing member, and wire members on the framing member projecting in front of the cut-out por-

tions in said framing member and adapted to press against the fabric and to outline the front edges of the upper garment.

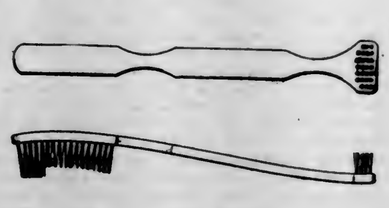
DESIGNS.

49,471. DISPLAY-STAND. EDWARD L. BEHRING, Wykoff, Minn. Filed May 23, 1916. Serial No. 99,470. Term of patent 7 years.



The ornamental design for a display stand, as shown.

49,472. TOOTH-BRUSH. CHARLES DIERKE, Portland, Oreg. Filed Apr. 18, 1916. Serial No. 92,051. Term of patent 14 years.



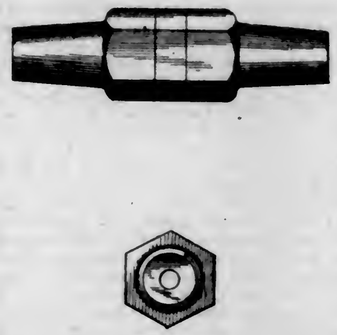
The ornamental design for a tooth brush, substantially as shown.

49,473. SIGNAL-LAMP. JOHN R. DOOLEY, Chicago, Ill., assignor to International Signal Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1914. Serial No. 833,812. Term of patent 3½ years.



The ornamental design for a signal lamp as shown.

49,474. CONNECTOR. ARTHUR H. FARGO, Poughkeepsie, N. Y., assignor to Fargo Manufacturing Company, Inc., a Corporation of New York. Filed June 25, 1914. Serial No. 847,322. Term of patent 3½ years.

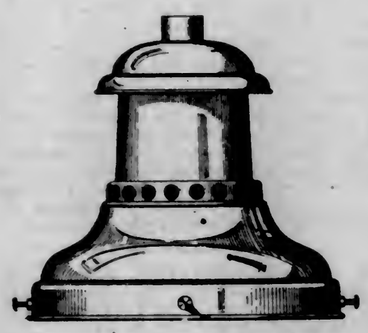


The ornamental design for a connector substantially as shown.

49,475. TRIMMING. SAMUEL N. GOODMAN, Philadelphia, Pa., assignor to Friedberger-Aaron Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 29, 1916. Serial No. 100,728. Term of patent 7 years.

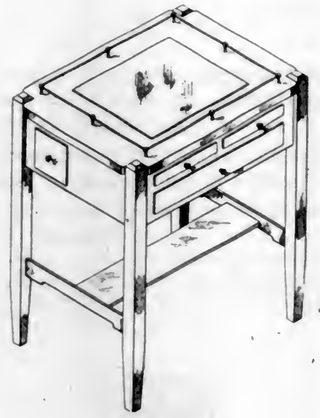
The ornamental design for a trimming as shown and described.

49,476. VENTILATED SHADE-HOLDER. CLARENCE W. LUCAS, Decatur, Ill., assignor to Faries Manufacturing Co., Decatur, Ill., a Corporation of Illinois. Filed Jan. 29, 1915. Serial No. 5,155. Term of patent 7 years.



The ornamental design for a ventilated shade holder, as shown.

49,477. SILVERWARE-STAND. EARL L. MINCH, Bellevue, Ohio. Filed June 7, 1916. Serial No. 102,229. Term of patent 7 years.



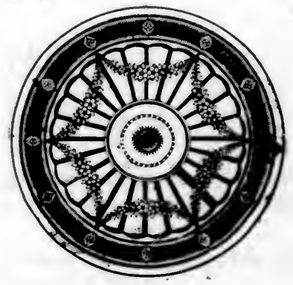
The ornamental design for a silverware stand as shown.

49,478. JUG. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Feb. 23, 1916. Serial No. 80,076. Term of patent 14 years.



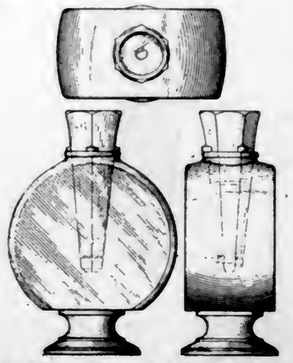
The design for a jug, substantially as shown.

49,479. DISH. HENRY P. SINCLAIRE, Corning, N. Y. Filed Mar. 27, 1916. Serial No. 87,133. Term of patent 14 years.



The ornamental design for a dish as shown.

49,480. COMBINED AQUARIUM AND VASE. GEORGE R. WEST, Pittsburgh, Pa. Filed May 15, 1916. Serial No. 97,748. Term of patent 14 years.



The ornamental design for a combined aquarium and vase, as shown.

49,481. TOP FOR A HAND-BAG. CHARLES A. WHITING, Franklin, Mass., assignor to Whiting & Davis Company, Plainville, Mass., a Corporation of New York. Filed Mar. 16, 1915. Serial No. 14,814. Term of patent 3½ years.



The ornamental design for a top for a hand-bag as shown.

TRADE-MARKS

PUBLISHED AUGUST 1, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 65,654. (CLASS 37. PAPER AND STATIONERY.) THE SAMUEL C. TATUM CO., Cincinnati, Ohio. Filed Sept. 9, 1912.



Consisting of a block letter "T" with a shield as a background, the word "Tatum" in horizontal and vertical display in the letter "T," and a crest-ribbon above the shield bearing the words "The Line of True Merit" "Established 1859," no claim being made to the exclusive use of the words "The Line of True Merit" "Established 1859" apart from the mark shown in the drawing.

Particular description of goods.—Journal and Ledger Paper, Indexes, Photo-Album Sheets, Letter-Paper, Envelops, Ledger-Sheets, Glass Inkstands, Glass Inkstands with Glass Bases, Glass Inkstands with Wooden Bases, Revolving Inkstands, Glass Inkstands with Metal Bases, Glass Inkstands with Metal Bases and Racks, Automatic Inkstands, Ink-Wells, Sponge-Cups, Stamp and Envelop Moisteners, Glass Pen-Racks, Wire Pen-Racks, Hook-Files, Spindle Paper-Files with Iron Bases, Desk and Telephone Tablets, Iron Paper-Weights, Glass Paper-Weights, Copying-Presses, Photo-Albums, Loose-Leaf Books, Loose-Leaf-Ledger Binders, Loose-Leaf Binders, Transfer-Binders, Post-Binders, Prong-Binders, Sectional-Post Binders, and Manuscript-Covers.

Claims use of the word "Tatum" since 1864 and of the mark as shown since February, 1911.

Ser. No. 75,360. (CLASS 39. CLOTHING.) WARREN MACPHERSON, Cambridge, Mass. Filed Jan. 22, 1914.



Particular description of goods.—Rubber Aprons, Rubber Gloves, and Rubberized Rain-Coats.

Claims use since on or about Dec. 15, 1913.

Ser. No. 75,908. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALKER MILLING CO., Minneapolis, Minn. Filed Feb. 14, 1914.



Consisting of the pictorial representation of an ear of corn in a setting of a corn-husk, together with the words "Cream of Corn." In this application no claim is made to the phrase "Cream of Corn" disassociated from the pictorial illustration of the ear of corn sitting in a corn-husk.

Particular description of goods.—Breakfast-Food Preparation Composed of Wheat and Corn, Toasted.

Claims use since the 1st day of August, 1912.

Ser. No. 78,531. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PEET BROS. MFG. CO., Kansas City, Kans. Filed May 25, 1914.



The same consisting of the representation of a wild rose with buds and leaves, no claim being made to the words "Wild Rose" apart from the mark as shown.

Particular description of goods.—Soap.

Claims use since January, 1900.

Ser. No. 79,559. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCIS M. COX, Winterset, Iowa. Filed July 6, 1914.



No claim being made for the words "Iowa Herb Hog-Cholera" and "Trade Mark."

Particular description of goods.—A Medicine for the Treatment of Hog-Cholera.

Claims use since Sept. 1, 1913.

Ser. No. 82,707. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSERVE ALIMENTARI L. TORRIGIANI, Sesto Fiorentino and Asmara, Italy. Filed Nov. 20, 1914.



Disclaiming the use of the words "Marca Depositata ta Conserve Alimentari, L. Torrigiani, Societa Anonima, Sesto Fiorentino (Firenze.)"

Particular description of goods.—Coffee, Tea, Bacon, Honey, Biscuits, Fruit Jelly, Marmalades, Comfitures, (Dry Sweetmeats,) Vinegar, Tomatoes, Preserved Tomatoes, Plums, Pears, Artichokes, and Eatable Oils.

Claims use since the year 1909.

Ser. No. 85,201. (CLASS 2. RECEPTACLES.) H. BEHRENS M'F'G CO., Winona, Minn. Filed Mar. 17, 1915.



The portrait and signature shown in the drawing are those of H. Behrens, now deceased, the founder of the applicant company. No claim is made for the words "Never-Mend" except in connection with the picture and signature shown.

Particular description of goods.—Tin Dairy-Pails, Strainer-Pails, Cream-Cans, Milk-Cans, Commode-Pails, Dinner-Pails, Barn-Pails, Cement-Pails, Garbage-Cans, and Oil-Cans.

Claims use since January, 1912.

Ser. No. 86,122. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN T. STANLEY CO. INC., New York, N. Y. Filed Apr. 22, 1915.

CUTANEOL

Comprising the word "Cutaneol."

Particular description of goods.—Soaps.

Claims use since about 1800.

Ser. No. 87,163. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. DEWENDER, Brooklyn, N. Y. Filed June 7, 1915.



Particular description of goods.—Toilet Preparations—Namely, Hair-Tonics for the Promotion of the Growth of Hair, Restoring the Color, and the Prevention of Dandruff, Skin-Cream, Headache-Cologne, and Toilet Water.

Claims use since Aug. 7, 1901.

Ser. No. 87,415. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

103

Particular description of goods.—Sensitive Photographic Film.

Claims use since May, 1905.

Ser. No. 87,428. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

126

Particular description of goods.—Sensitive Photographic Film.

Claims use since May, 1905.

Ser. No. 87,429. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 19, 1915.

127

Particular description of goods.—Sensitive Photographic Film.

Claims use since May, 1905.

Ser. No. 87,861. (CLASS 33. GLASSWARE.) CORNING GLASS WORKS, Corning, N. Y. Filed July 10, 1915.

PYREX

Particular description of goods.—Glass.

Claims use since May 20, 1915.

Ser. No. 88,166. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GLENN S. MCMILLAN, Falls City, Nebr. Filed July 24, 1915.



No claim being made to the use of the word "Eucalyptine" apart from the trade-mark shown in the drawing.

Particular description of goods.—An External Application for the Relief of Sore Throat and Headache.

Claims use since Mar. 1, 1915.

Ser. No. 88,713. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CLIFFORD L. MEYER, Pittsburgh, Pa. Filed Aug. 20, 1915.

KEYSTONE



Particular description of goods.—Garters, Armbands, and Trouser-Belts.

Claims use since May, 1893.

Ser. No. 89,025. (CLASS 37. PAPER AND STATIONERY.) EATON, CRANE & PIKE COMPANY, Pittsfield, Mass. Filed Sept. 4, 1915.

CHAMIVOR
VELLUM

No claim being made to the word "Vellum" apart from the mark shown in the drawing.

Particular description of goods.—Writing-Paper, Printing-Paper, Envelops, Tablets, Writing-Cards, and Cardboard.

Claims use since May 24, 1911.

Ser. No. 89,225. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed Sept. 15, 1915.



Particular description of goods.—Picks, Mattocks, Bit-Braces, Pliers, Files, Rakes, Scythe-Blades, Garden-Trowels, Nail-Pullers; Shears, All Kinds; Grape-Fruit Knives, Lawn-Mowers, Wedges, Carpenters' Wrecking-Bars; Coal-Miners' Tools—viz., Needles, Blasting-Barrels, Bit-Drills, Double-End Scrapers, Sledges; Ship-Augers, Ship Car-Bits, Auger-Bits, Expansive Bits, Expansive Hollow Augers, Pointers, Bell-Hangers' Bits, Electricians' Bits, Wood-Bits, Drill-Bits, Gimlet-Bits, Reamer-Bits, Screw-Driver Bits, Countersink-Bits, Gimlets, Mallets, Trowels, Plasterers' Floats, Plasterers' Hawks, Cold-Chisels, Cape-Chisels, Cotter-Pin Lifters and Spreaders; Linemen's Tools—viz., Splicing-Clamps, Splicing-Tools, Splicing-Pliers, Vises, Wire-Tighteners, Climbers, Climber-Straps, Come-Alongs or Wire Stretchers, Pike-Poles, Crow and Digging Bars, Wrenches; Saw Tools—viz., Setting-Blocks, Tooth-Sets, Setting-Hammers, Circular Saws, Lathes, Formers, Mortising-Machines, Mortising-Machine Chisels, Combined Circular, Scroll Saws and Boring Attachments, Circular Rip-Saws; Saws; Saw-Blades, All Kinds; Saw-Frames, Saw-Sets, Twist-Drills, Post-Drills, Rakes, Forks, Hoes, Corn-Knives for Agricultural Purposes; Cane-Knives, Asparagus-Knives, Hedge-Knives, Beet-Topping Knives, Bush-Hooks, Tree-Pruners, Hedge-Shears, Pruning-Shears, Post-Hole Diggers, Post-Hole Augers, Horse and Mule Clippers, Pocket-Knives, Scissors, Carvers, Steels, Butcher-Knives, Table-Knives of Base Metal, Putty-Knives, Steak-Knives, Kitchen-Knives, Slicers, Bread-Knives, Mauls; Granitoid or Cement Tools—viz., Jointers, Edgers, Groovers, Corner-Tools, Rollers, Floats, Radius-Tools, Corrugating-Tools, Roller-Jointers, Roller-Edgers, Tampers or Rammers, Tuck-Pointers; Chain Drilling Attachments—viz., an Automatic Contrivance Like a Brace, Used in Connection with Drills; Straight-Bit Extensions, Automatic Hand-Drills, Breast-Drills, Chisels, Slicks, Gouges, Drawing-Knives, Screw-Drivers, Awl and Tool Sets, Scratch-Awls, Planes, Extra Parts for Planes, Cabinet-Scrapers, Veneer-Scrapers, Floor-Scrapers, Burnishers, Pincers, Clencher-Tongs, Cutting-Nippers; Punches, All Kinds; Rivet Sets and Headers, Nail Sets, Hand-Screws; Handles for Tools and Implements Used in Agriculture, Blacksmithing, Carpentry, and Mining; Grinding Machines, Vises, Pipe-Cutters, Wrenches, Machine-Blowers, Stocks and Dies, Screw-Plates, Reamers, Grass-Hooks, Lawn-Edgers, Grass-Catchers, Garden-Forks, Garden-Weeders, Corn-Shellers, Bone-Shell and Corn Mills, Grist-Mills, Shovels and Spades, Drain-Cleaners, Scoops, Hair-Clippers, Shearing-Machines, Meat-Choppers, Food-Choppers, Cleavers, Kraut-Cutters, Mincing-Knives, Steak-Pounders, Can-Openers, Glass-Cutters, Ice-Picks, Corkscrews, Pruning-Knives, Farrier-Knives, Glaziers' Knives; Chip-Carving Knives, Sidewalk-Cleaners, Food-Chopper Parts, Garden Sets, Fetlock-Clippers, Razors, Sticking-Knives, Skinning-Knives, Lunch-Knives, Cook-Knives, Axes, Adzes; Hammers, All Kinds; Boring-Machines, Ship Auger-Bits, Spokeshaves, Brad-Awls, Garden-Plows, Snathes, Feed-Cutters, Hay-Knives, Hay-Carrying Tools, Cotton or Box Hooks, Box-Scrapers, Tack-Claws, Staple-Pullers, Tinners' Snips, Riveters, Safety-Razors, Hunting-Knives, Tobacco-Knives, Broom or Corn Knives, Shoe-Knives, Chicken-Sticking Knives, Scrapping-Knives, Sloid-Knives, Stock-Cutters, Tobacco-Cutters, Meat-Cutter Parts, Lawn-Spuds, Bud-

ding-Knives, Scissor-Sets, Boning-Knives, Ribbing-Knives, Kitchen-Carvers, Spatulas, Broadaxes, Hatchets, Grub-Hoes, Nut-Augers, Car-Bits, Plane-Irons, Miter-Boxes, Eye-Hoes, Extra Parts for Lawn-Mowers.

Claims use since Nov. 11, 1905.

Ser. No. 89,480. (CLASS 37. PAPER AND STATIONERY.) CHEMICAL PAPER MANUFACTURING CO., Holyoke, Mass. Filed Sept. 27, 1915.

INTERWOVEN COVER

No claim being made to the word "Cover" apart from the mark shown in the drawing.

Particular description of goods.—Cover-Paper.

Claims use since on or about Feb. 1, 1915.

Ser. No. 90,091. (CLASS 39. CLOTHING.) B. KUPPENHEIMER & COMPANY, Chicago, Ill. Filed Oct. 25, 1915.

Air-o-Weave

Particular description of goods.—Overcoats, Coats, Vests, and Trousers.

Claims use since May 29, 1915.

Ser. No. 90,223. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CITY ICE DELIVERY COMPANY, Cleveland, Ohio. Filed Oct. 30, 1915.

Hyklas

Particular description of goods.—Carbonated Beverages Consisting of Soft Drinks.

Claims use since Apr. 1, 1915.

Ser. No. 90,266. (CLASS 10. FERTILIZERS.) HIRSHSTEIN & Co., Chicago, Ill. Filed Nov. 1, 1915.

CALUMET

No claim being made to the word "Calumet" except in association with the mark as shown.

Particular description of goods.—Fertilizers.

Claims use for eight years.

Ser. No. 90,366. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) DANIEL STEINBERG, New York, N. Y. Filed Nov. 2, 1915.

KEE-N-SURE

Comprising the letters and word "Kee-N-Sure."

Particular description of goods.—Celluloid Identification-Tags.

Claims use since Sept. 20, 1915.

Ser. No. 90,720. (CLASS 10. FERTILIZERS.) HAMPTON GUANO COMPANY, Norfolk, Va. Filed Nov. 18, 1915.

EXCELSIOR

Particular description of goods.—Fertilizers.

Claims use since January, 1908.

Ser. No. 91,076. (CLASS 10. FERTILIZERS.) MINERAL FERTILIZER COMPANY, Chicago, Ill., assignor to Mineral Fertilizer Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 1, 1915.

Nu-Life Fertilizer

No claim is made to the words "Fertilizer" and "Chicago—1915" apart from the mark shown in the drawing.

Particular description of goods.—Mineral Fertilizer.

Claims use since Nov. 25, 1915.

Ser. No. 91,257. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. A. JOHNSON & Co., San Bernardino, Cal. Filed Dec. 6, 1915.

The May Flower
The Great Blood and Stomach Medicine

No claim being made for the use of the words "The Great Blood and Stomach Medicine" apart from the mark shown in the drawing.

Particular description of goods.—A Preparation for the Treatment of Rheumatism, Indigestion, Dyspepsia, Asthma, St. Vitus's Dance, Dropsy, Kidney Trouble, Neuralgia, Colic, Aches and Pains of Any Kind.

Claims use since Oct. 1, 1880.

Ser. No. 91,295. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR H. GREGORY, Norwich, N. Y. Filed Dec. 8, 1915.



The representation of the human head being that of the applicant, Arthur H. Gregory.

Particular description of goods.—An Ointment for the Treatment of Cuts, Bruises, Burns, Scalds, Eczema, Irritation of the Skin, Sore Throat, Sprains, Hemorrholds, Soreness of the Chest, Inflammation of the Bladder, or other Inflamed Parts.

Claims use since June, 1915.

Ser. No. 91,690. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 22, 1915.

ASHER

Particular description of goods.—Light-Weight Rubber Shoes.

Claims use since on or about Sept. 16, 1915.

Ser. No. 91,725. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEHLOR FLOUR MILLS COMPANY, St. Louis, Mo. Filed Dec. 23, 1915.



Particular description of goods.—Wheat-Flour and Self-Rising Flour.

Claims use since November, 1915.

Ser. No. 91,994. (CLASS 27. HOROLOGICAL INSTRUMENTS.) EMILE GEISER, La Chaux-de-Fonds, Switzerland. Filed Jan. 7, 1916.

FIDÉLIA

Particular description of goods.—Watch-Springs.

Claims use since 1897.

Ser. No. 92,410. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GOODRICH DRUG COMPANY, Omaha, Nebr. Filed Jan. 26, 1916.

Velvetna

EGYPTA

Particular description of goods.—Face-Powder, Rouge.

Claims use since Mar. 1, 1914.

Ser. No. 92,881. (CLASS 37. PAPER AND STATIONERY.) THE SIMPLE ACCOUNT SALES BOOK COMPANY, Fremont, Ohio. Filed Feb. 15, 1916.

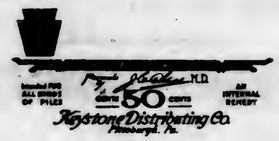
SIMPLE ACCURATE SAFE BEST

No claim being made to the words "Simple," "Accurate," "Safe," and "Best" except in association with the mark as shown.

Particular description of goods.—Account and Credit Register Books and Sheets.

Claims use since March, 1912.

Ser. No. 92,900. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHAS. A. SCHMIDT, Pittsburgh, Pa. Filed Feb. 16, 1916.



No claim is made for the exclusive use of any of the written matter shown on the drawing apart from the remaining features.

Particular description of goods.—Proprietary Remedy, the Same Being an Internal Medicine for Hemorrhoids, Commonly Known as Piles.

Claims use since Jan. 6, 1916.

Ser. No. 92,907. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WRIGHT CROSSLEY & Co., Liverpool, England. Filed Feb. 16, 1916.



Particular description of goods.—Rice, Rice-Flour, Tapioca, and Sago.
Claims use since about the year 1868.

Ser. No. 93,027. (CLASS 12. CONSTRUCTION MATERIALS.) THE B. F. NELSON MANUFACTURING CO., Minneapolis, Minn. Filed Feb. 21, 1916.



Particular description of goods.—Prepared Roofing—Namely, Asphalt Shingles, Asphalt and Coal-Tar Products, Building-Papers, Box-Boards, and Wall-Boards.
Claims use since Jan. 1, 1916.

Ser. No. 93,175. (CLASS 25. LOCKS AND SAFES.) GRAND RAPIDS REFRIGERATOR CO., Grand Rapids, Mich. Filed Feb. 29, 1916.

TRIGGER

Particular description of goods.—Latches for Refrigerators.
Claims use since Oct. 1, 1914.

Ser. No. 93,403. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) P. F. VOLLAND & Co., Chicago, Ill. Filed Mar. 8, 1916.

QUACKY DOODLES

Particular description of goods.—The Figure of a Duck.
Claims use since Feb. 17, 1916.

Ser. No. 93,404. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) P. F. VOLLAND & Co., Chicago, Ill. Filed Mar. 8, 1916.

DANNY DADDLES

Particular description of goods.—The Figure of a Duck.
Claims use since Feb. 17, 1916.

Ser. No. 93,476. (CLASS 12. CONSTRUCTION MATERIALS.) THE ALEXANDER LUMBER COMPANY, Aurora, Ill. Filed Mar. 13, 1916.



Particular description of goods.—Lumber, Lime, and Composition Roofing.
Claims use since Jan. 1, 1916.

Ser. No. 93,481. (CLASS 38. PRINTS AND PUBLICATIONS.) BLACKSTONE INSTITUTE, Chicago, Ill. Filed Mar. 13, 1916.

MODERN AMERICAN LAW

Particular description of goods.—Printed Books, Booklets, Pamphlets, Circulars, Catalogues, "Guides," "Talks," "Lectures," "Problems," "Solutions," and Circular Letters.
Claims use since September, 1913.

Ser. No. 93,482. (CLASS 38. PRINTS AND PUBLICATIONS.) BLACKSTONE INSTITUTE, Chicago, Ill. Filed Mar. 13, 1916.

MODERN AMERICAN
LAW COURSE
AND SERVICE

Particular description of goods.—Printed Books, Booklets, Pamphlets, Circulars, Catalogues, "Guides," "Talks," "Lectures," "Problems," "Solutions," and Circular Letters.
Claims use since September, 1913.

Ser. No. 93,593. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) WM. ZINSSER & Co. INC., New York, N. Y. Filed Mar. 16, 1916.

Bulls-Eye



The letter "Z" being shown in red.
Particular description of goods.—Painters', Paper-Hangers', Roofing, and Artists' Brushes.
Claims use since the year 1912.

Ser. No. 93,709. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MILWAUKEE-WESTERN FUEL Co., Milwaukee, Wis. Filed Mar. 20, 1916.



The words "Kentucky Prime" are not claimed apart from the trade-mark shown by the drawing.
Particular description of goods.—Coal.
Claims use since Nov. 17, 1915.

Ser. No. 93,711. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MILWAUKEE-WESTERN FUEL Co., Milwaukee, Wis. Filed Mar. 20, 1916.



No claim is made to the words "Hi-Heat" apart from the trade-mark shown by the drawing.
Particular description of goods.—Coal.
Claims use since Nov. 23, 1915.

Ser. No. 93,800. (CLASS 20. MEASURING AND SCIENTIFIC APPLIANCES.) EDWIN N. KRAEMER, Cedarburg, Wis. Filed Mar. 23, 1916.



No claim being made for the words "Compass, The Luminous Compass Company, Cedarburg, Wis. Manufacturers under U. S. Pat. 1035973, made in U. S. A.," nor for the representation of the dial-plate of a compass.
Particular description of goods.—Compass.
Claims use since Aug. 1, 1915.

Ser. No. 93,831. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CRANE COMPANY, Chicago, Ill. Filed Mar. 24, 1916.



Particular description of goods.—Machinery Packing Composed of Rubber.
Claims use since Sept. 1, 1909.

Ser. No. 93,920. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE SYMPHOGRAPH COMPANY, St. Louis, Mo. Filed Mar. 27, 1916.

Symphograph

Particular description of goods.—Phonographs.
Claims use since Mar. 22, 1916.

Ser. No. 94,002. (CLASS 38. PRINTS AND PUBLICATIONS.) MOTION PICTURE NEWS, INC., New York, N. Y. Filed Mar. 30, 1916.

Motion Picture
News
HAS THE QUALITY CIRCULATION OF THE TRADE

The words "Has the Quality Circulation of the Trade" on the drawing is no part of the trade-mark and should not be considered.
Particular description of goods.—A Weekly Publication.
Claims use since about September, 1913.

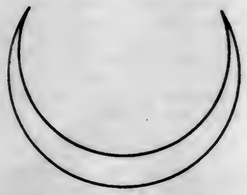
Ser. No. 94,034. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) BRADFORD B. FLINT, Saranac Lake, N. Y. Filed Apr. 1, 1916.

INITIALOID

Particular description of goods.—Tooth-Brushes.
Claims use since Mar. 27, 1916.

Ser. No. 94,245. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BURKENROAD-GOLDSMITH CO. L'T'D, New Orleans, La. Filed Apr. 8, 1916.

CRESCENT CITY



No claim being made to the words "Crescent City" apart from the mark as shown.
Particular description of goods.—Rice.
Claims use since Mar. 15, 1916.

Ser. No. 94,274. (CLASS 2. RECEPTACLES.) AYER & MCKINNEY, Philadelphia, Pa. Filed Apr. 10, 1916.

MERIFOIL

Particular description of goods.—Butter and Cheese Wrappers.
Claims use since Feb. 18, 1916.

Ser. No. 94,293. (CLASS 39. CLOTHING.) R. H. MACEY & Co., New York, N. Y. Filed Apr. 10, 1916.

BOYSIE

Particular description of goods.—Boys' Knickerbocker Suits.
Claims use since Mar. 15, 1916.

Ser. No. 94,310. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) A. A. CUTTER COMPANY, Eau Claire, Wis. Filed Apr. 11, 1916. Under ten-year proviso.

WITHAM'S

Said trade-mark consisting of the word "Withams".
Particular description of goods.—Boot-Calks.
Claims use for the past 29 years.

Ser. No. 94,412. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) VICTOR BALATA & TEXTILE BELTING COMPANY, Brooklyn, N. Y., and Easton, Pa. Filed Apr. 14, 1916.

VICTOR

Particular description of goods.—Lug-Straps and Balata Valves.
Claims use since March, 1915.

Ser. No. 94,430. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) PEOPLE'S OUTFITTING COMPANY, Detroit, Mich. Filed Apr. 14, 1916.

Triolian

Particular description of goods.—Pianos, Automatic Pianos, and Piano-Players.
Claims use since on or about Feb. 1, 1916.

Ser. No. 94,519. (CLASS 37. PAPER AND STATIONERY.) THE WINTERBOTTOM BOOK CLOTH COMPANY, LIMITED, Manchester, England. Filed Apr. 18, 1916.



The applicant disclaims the right to the exclusive use of the words "Trade Mark," "Tracing Cloth," and "Ruby" apart from the mark shown.
Particular description of goods.—Tracing-Cloth.
Claims use since the 22d day of November, 1915.

Ser. No. 94,553. (CLASS 39. CLOTHING.) SANGER BROTHERS, New York, N. Y., and Dallas and Waco, Tex. Filed Apr. 19, 1916.



Particular description of goods.—Hosiery, Gloves, and Knit Underwear.
Claims use since March, 1907.

Ser. No. 94,718. (CLASS 2. RECEPTACLES.) WIREBOUNDS CORPORATION, Portland, Me., and Chicago, Ill. Filed Apr. 25, 1916.

TYLOOP

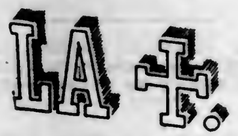
The trade-mark consists of the word "Tyloop."
Particular description of goods.—Boxes and Packing-Cases.
Claims use since Dec. 20, 1915.

Ser. No. 94,731. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) SOCIÉTÉ ANONYME D'EXPLOITATION DES PAPETERIES L. LACROIX FILS, Angouleme, France. Filed Apr. 26, 1916.

L
L
F

Particular description of goods.—Cigarette-Paper.
Claims use since December, 1881.

Ser. No. 94,732. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) SOCIÉTÉ ANONYME D'EXPLOITATION DES PAPETERIES L. LACROIX FILS, Angouleme, France. Filed Apr. 26, 1916.



Particular description of goods.—Cigarette-Paper.
Claims use since November, 1869.

Ser. No. 94,766. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE COLUMBUS HANDLE & TOOL COMPANY, Columbus, Ind. Filed Apr. 28, 1916.



No claim being made to the exclusive use of the word "Columbus," the words "Handles" and "Tools" apart from the mark shown in the drawing.
Particular description of goods.—Tool-Handles.
Claims use since Mar. 26, 1916.

Ser. No. 94,771. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) KNICKERBOCKER CASE CO., Chicago, Ill. Filed Apr. 28, 1916.

PULLMAN DINER

Particular description of goods.—Combined Carrying-Cases and Tables.
Claims use since on or about the 1st day of May, 1915.

Ser. No. 94,809. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HENRIETTA H. GILLASPYE, Cleveland, Ohio. Filed May 1, 1916.



A portrait of my daughter.
Particular description of goods.—Furniture-Polishing Material.
Claims use since Apr. 1, 1915.

Ser. No. 94,855. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) GEORGE A. HATHAWAY, New York, N. Y. Filed May 2, 1916.

Rembrandt

Particular description of goods.—Manicure Sets.
Claims use since January, 1916.

Ser. No. 94,859. (CLASS 5. ADHESIVES.) STANDARD WOVEN FABRIC COMPANY, Framingham, Mass. Filed May 2, 1916.

MULTIBESTOS

"Multibestos."
Particular description of goods.—Tire-Tape.
Claims use since May 14, 1915.

Ser. No. 94,876. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PODUNDA COMMERCIAL COMPANY, New York, N. Y. Filed May 3, 1916.

BLAZO

Particular description of goods.—Solidified Alcohol for Heating Purposes When Ignited.
Claims use since Apr. 18, 1916.

Ser. No. 94,924. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HART & Co., New York, N. Y. Filed May 5, 1916.



Color in red. The applicant disclaims the use of the word "Brand" except as shown on the drawing.
Particular description of goods.—Bouillon.
Claims use since Feb. 1, 1915.

Ser. No. 94,931. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, INC., New York, N. Y., and Kansas City, Mo. Filed May 5, 1916.



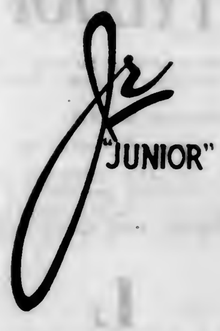
No claim is made to the words "Soft Wheat Flour" apart from the mark shown in the drawing.
Particular description of goods.—Soft-Wheat Flour.
Claims use since November, 1914.

Ser. No. 94,975. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY MILLER VAUGHAN, Fayetteville, Ark. Filed May 6, 1916.

VON-OL

Particular description of goods.—A Sulfonated Hydrocarbon Preparation to be Used in the Preparation of Ointments.
Claims use since Apr. 3, 1916.

Ser. No. 95,009. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) REX J. FLATAU, New York, N. Y., assignor to The Junior Products Co., Inc., a Corporation of New York. Filed May 9, 1916.



Particular description of goods.—Hair-Tonic, Toilet Water, Dental Cream, Face-Cream, and Talcum Powder.
Claims use since Apr. 17, 1916.

Ser. No. 95,039. (CLASS 37. PAPER AND STATIONERY.) KEITH PAPER COMPANY, Turners Falls, Mass. Filed May 10, 1916.

TISRITE

Particular description of goods.—Writing and Printing Papers.
Claims use since on or about Jan. 1, 1909.

Ser. No. 95,040. (CLASS 37. PAPER AND STATIONERY.) KEITH PAPER COMPANY, Turners Falls, Mass. Filed May 10, 1916. Under ten-year proviso.

KEITH

Particular description of goods.—Writing and Printing Papers.
Claims use since on or about Jan. 1, 1873.

Ser. No. 95,073. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLINTON P. DRUM, Los Angeles, Cal. Filed May 11, 1916.

CALOGEN

Particular description of goods.—A Treatment of Epithelioma, Warts, Wens, Moles, Sebaceous Cysts, Bodent Ulcers, Varicose Ulcers, Fistula, and other Morbid Growths Where an Escharotic is Indicated.
Claims use since Apr. 21, 1916.

Ser. No. 95,098. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARNATION MILK PRODUCTS COMPANY, Portland, Me., and Seattle, Wash. Filed May 12, 1916.

CARNATION

Particular description of goods.—Whole Dry Milk and Skimmed Dry Milk and Desiccated Milk.
Claims use since Jan. 12, 1916.

Ser. No. 95,107. (CLASS 15. OILS AND GREASES.) WILLIAM PETERMAN INC., Passaic, N. J., and New York, N. Y. Filed May 12, 1916.

HOMOL

Particular description of goods.—An Oil for Lubricating and Preventing Rust.
Claims use since Apr. 6, 1916.

Ser. No. 95,163. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MORTON E. CONVERSE & SON, Winchendon, Mass. Filed May 13, 1916.

HIKE-BIKE

Particular description of goods.—Children's Coasters.
Claims use since Apr. 1, 1916.

Ser. No. 95,218. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) E. KIRSTEIN SONS CO., Rochester, N. Y. Filed May 18, 1916.

SHELLTEX

Particular description of goods.—Eyeglasses and Spectacles and Parts Thereof.
Claims use since June, 1914.

Ser. No. 95,219. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BERNHARD MITTELSTAEDT, New York, N. Y. Filed May 18, 1916.



The picture being fanciful. No claim is made to the exclusive right to the use of the words "Best Quality Silk and Very Fine Mesh," "Invisible Hair Net with Elastic," "Stays in Place Without Hair Pins," "Fits Perfectly," "Easy to Adjust," and "Color."
Particular description of goods.—Silk Hair-Nets.
Claims use since Feb. 10, 1916.

Ser. No. 95,242. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHILIPP SCHELLER, New York, N. Y. Filed May 18, 1916.



Particular description of goods.—A Chemical Preparation for a Hair-Dye.
Claims use since the 1st day of May, 1916.

Ser. No. 95,269. (CLASS 17. TOBACCO PRODUCTS.) HENKEL-DUKE MERCANTILE CO., Pueblo, Colo. Filed May 19, 1916.

SILVER SAN JUAN

No claim being made to the words "San Juan" apart from the mark as shown.
Particular description of goods.—Cigars.
Claims use since Jan. 1, 1895.

Ser. No. 95,282. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE WALLACE & SMITH COMPANY, Laporte, Ind. Filed May 19, 1916.



No claim is made to the representation of the robe as shown in the drawing.
Particular description of goods.—Automobile and Carriage Robes.
Claims use since May 12, 1916.

Ser. No. 95,335. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. S. HOROVITZ CHEM. CO., INC., New York, N. Y. Filed May 22, 1916.

COMATIN

Particular description of goods.—Preparations for the Treatment of Tuberculosis of Human Beings.
Claims use since 1880.

Ser. No. 95,367. (CLASS 37. PAPER AND STATIONERY.) C. B. HEWITT & BROTHERS, New York, N. Y. Filed May 23, 1916.

PAT <ABC> TERN
BOARD

No claim being made to the words "Pattern Board" apart from the mark as shown.
Particular description of goods.—Paper-Board for Making Shoe-Patterns and the Like.
Claims use since Apr. 15, 1915.

Ser. No. 95,369. (CLASS 37. PAPER AND STATIONERY.) C. B. HEWITT & BROTHERS, New York, N. Y. Filed May 23, 1916.

F <S> F

Particular description of goods.—Paper-Board for Use in Making Travelers' Trunks and Friction-Pulleys Therefor.
Claims use since 1880.

Ser. No. 95,375. (CLASS 15. OILS AND GREASES.) TRUE'S OIL COMPANY, Spokane, Wash. Filed May 23, 1916.

AGATE

Particular description of goods.—Kerosene and Illuminating-Oils.
Claims use since Jan. 1, 1916.

Ser. No. 95,376. (CLASS 15. OILS AND GREASES.) TRUE'S OIL COMPANY, Spokane, Wash. Filed May 23, 1916.

TRULITE

Particular description of goods.—Kerosene; Illuminating-Oils.
Claims use since Jan. 1, 1916.

Ser. No. 95,377. (CLASS 15. OILS AND GREASES.) TRUE'S OIL COMPANY, Spokane, Wash. Filed May 23, 1916.

TRUTEST

Particular description of goods.—Lubricating-Oils.
Claims use since Jan. 1, 1916.

Ser. No. 95,378. (CLASS 15. OILS AND GREASES.) TRUE'S OIL COMPANY, Spokane, Wash. Filed May 23, 1916.

CORALINE

Particular description of goods.—Gasolene; Fuel-Oils for Internal-Combustion Engines and Motors.
Claims use since Jan. 1, 1916.

Ser. No. 95,398. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN KUNST, New York, N. Y. Filed May 24, 1916.

RID A MOBILE

Particular description of goods.—A Wheeled Toy of the General Scooter Type.
Claims use since Mar. 1, 1916.

Ser. No. 95,448. (CLASS 39. CLOTHING.) OHIO OVERALL COMPANY, Wooster, Ohio. Filed May 26, 1916.

ALL-OVER

Particular description of goods.—Automobilists' and Motor-Cyclists' Suits.
Claims use since May 11, 1916.

Ser. No. 95,483. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) STATES CHEMICAL CO., Chicago, Ill. Filed May 27, 1916.

SPEE-DEE

Particular description of goods.—Cleansers.
Claims use since the 1st day of November, 1915.

Ser. No. 95,521. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) GRIP NUT COMPANY, Chicago, Ill. Filed May 29, 1916.



Particular description of goods.—Nuts, Bolts, and Metal Washers.
Claims use since Apr. 15, 1916.

Ser. No. 95,530. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES M. NOON, Sumner, Iowa. Filed May 29, 1916.

20th CENTURY
POULTRY TONIC



No claim being made for the words "Poultry Tonic" apart from the mark shown in the drawing.
Particular description of goods.—Poultry-Tonic and Fly-Oil.
Claims use since April, 1915.

Ser. No. 95,536. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) STANDARD NOVELTY WORKS, Duncannon, Pa. Filed May 29, 1916.

Lightning Guider

No claim is made to the exclusive rights in the word "Guider" in other connection than in the mark shown.
Particular description of goods.—Coasting-Sleds.
Claims use since on or about the 1st day of April, 1907.

Ser. No. 95,566. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TWEETLETS COMPANY, Boise, Idaho. Filed May 31, 1916.

TWEETLETS

Particular description of goods.—A Package of Whole-Wheat Breakfast Food.
Claims use since March, 1916.

Ser. No. 95,599. (CLASS 38. PRINTS AND PUBLICATIONS.) NEWSPAPER FEATURE SERVICE, INC., New York, N. Y. Filed June 2, 1916.

REVELATIONS
OF A WIFE

Particular description of goods.—A Newspaper-Section.
Claims use since July 19, 1915.

Ser. No. 95,604. (CLASS 38. PRINTS AND PUBLICATIONS.) TRUSTEES LOAN & GUARANTY CO. INC., Birmingham, Ala. Filed June 2, 1916.

THE INDUSTRIAL BANKER

Particular description of goods.—Monthly Magazines.
Claims use since Feb. 26, 1916.

Ser. No. 95,616. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TRENTON MILLING CO., Trenton, Ill. Filed June 3, 1916.

PALS

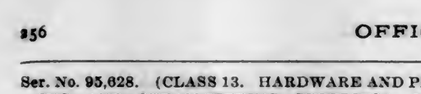
Particular description of goods.—Wheat-Flour.
Claims use since May, 1916.

Ser. No. 95,626. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) LEE TIRE & RUBBER CO., Whitemarsh township, Montgomery county, Pa. Filed June 5, 1916.

"VELVET"

Particular description of goods.—Inner Tubes.
Claims use since Feb. 5, 1914.

Ser. No. 95,628. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) MUTUAL ELECTRIC & MACHINE CO., Detroit, Mich. Filed June 5, 1916.



Particular description of goods.—Metal Products—Namely, Bolts, Ferrules, Dowels, and Acorn-Nuts.
Claims use since May 16, 1916.

Ser. No. 95,642. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEANNETTA A. COBB, Jackson, Miss. Filed June 6, 1916.



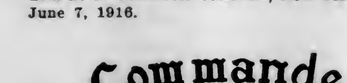
Particular description of goods.—A Preparation for Promoting Growth of the Hair.
Claims use since Mar. 1, 1916.

Ser. No. 95,648. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) J. MILHENING, INC., Chicago, Ill. Filed June 6, 1916.



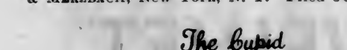
Particular description of goods.—Finger-Rings, Scarf-Pins, Scarf-Rings, Pendants, Cuff-Buttons, Dress-Pins, Necklaces, Dress-Studs, Fobs, Necklace-Snaps, Bracelets, Silver, Bronze, and Gold Medals, Ear-Rings, Brooches, Bar-Pins, Fraternity-Pins, School-Pins, Neck-Collars, Watch-Chains, Cigarette-Cases, Lorgnettes, Lorgnette-Chains, and Sautoirs, All of the Above Articles Being Made in Whole, in Part, or Plated with Precious Metal.
Claims use since the 18th day of February, 1909.

Ser. No. 95,671. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE B. F. GOODRICH COMPANY, New York, N. Y. Filed June 7, 1916.



Particular description of goods.—Pneumatic Tires.
Claims use since about May 15, 1915.

Ser. No. 95,676. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) LEVY & MERZBACH, New York, N. Y. Filed June 7, 1916.



Consisting of the word "Cupid," no claim being made to the exclusive use of the word "The."
Particular description of goods.—Hand-Bags and Purses.
Claims use since June 1, 1916.

Ser. No. 95,677. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) LEVY & MERZBACH, New York, N. Y. Filed June 7, 1916.



Consisting of the word "Cherub," no claim being made to the exclusive use of the word "The."
Particular description of goods.—Hand-Bags and Purses.
Claims use since June 1, 1916.

Ser. No. 95,678. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) LEVY & MERZBACH, New York, N. Y. Filed June 7, 1916.



Particular description of goods.—Hand-Bags and Purses.
Claims use since 1907.

Ser. No. 95,687. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TRENTON MILLING CO., Trenton, Ill. Filed June 7, 1916.



Particular description of goods.—Wheat-Flour, More Specifically Self-Rising Flour.
Claims use since May, 1916.

Ser. No. 95,701. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) H. C. EVANS & CO., Chicago, Ill. Filed June 8, 1916.



Particular description of goods.—Games.
Claims use since Apr. 24, 1916.

Ser. No. 95,736. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WASHBURN-CROSBY CO., Minneapolis, Minn. Filed June 8, 1916. Under ten-year proviso.



Particular description of goods.—Wheat and Buckwheat Flours, Cornmeal, Feeding Stuffs, Middlings, and Bran.
Claims use since July 22, 1889.

Ser. No. 95,737. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WOLFF-WILSON DRUG COMPANY, St. Louis, Mo. Filed June 8, 1916.



Particular description of goods.—Toilet Waters, Perfumes, Face-Powders, Rice Powders, Face-Creams, Cleansing-Creams, and Vanishing Creams.
Claims use since Sept. 13, 1915.

Ser. No. 95,738. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WOLFF-WILSON DRUG COMPANY, St. Louis, Mo. Filed June 8, 1916.



Particular description of goods.—Face-Creams, Cucumber Creams, Peroxid Creams, Wrinkle-Creams, Vanishing Creams, Massage-Creams, Orange-Flower Creams, Cold-Creams, Hair-Shampoos, Perfumes, Toilet Waters, Rice Powders, Face-Powders, and Talcum Powders.
Claims use since Sept. 14, 1915.

Ser. No. 95,749. (CLASS 2. RECEPTACLES.) GENERAL APPLIANCE CO., Hammond, Ind. Filed June 9, 1916.



Particular description of goods.—Gasolene-Storage Tanks.
Claims use since Nov. 23, 1915.

Ser. No. 95,764. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES ELMER SMITH, Irwin, Pa. Filed June 9, 1916.



The words "Trade Mark" being disclaimed.
Particular description of goods.—A Certain Preparation Used as a Sour in the Laundrying of Linens and other Fabrics.
Claims use since Feb. 1, 1916.

Ser. No. 95,777. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACME MILLING COMPANY, Talbott, Tenn. Filed June 10, 1916.



Particular description of goods.—Wheat-Flour.
Claims use since Apr. 1, 1916.

Ser. No. 95,783. (CLASS 39. CLOTHING.) THE ELBINGER SHOE MFG. CO., Lebanon, Ohio. Filed June 10, 1916.



Particular description of goods.—Shoes Made of Leather or Partly of Leather and Canvas and Rubber.
Claims use since May 18, 1916.

Ser. No. 95,791. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) REBA P. MILLER, Lancaster, Pa. Filed June 10, 1916.



I hereby disclaim use of the words "East India Bayberry Shampoo."

Particular description of goods.—A Scalp and Hair Shampoo.

Claims use since Mar. 15, 1916.

Ser. No. 95,800. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



Particular description of goods.—Toilet-Paper.

Claims use since June 9, 1914.

Ser. No. 95,804. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed June 10, 1916.



Particular description of goods.—Toilet-Paper.

Claims use since Apr. 2, 1915.

Ser. No. 95,822. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LEWIS & BETTINSON, INC., New York, N. Y. Filed June 12, 1916.

Undine

Particular description of goods.—Silks, Satins, and Crape in the Piece.

Claims use since the 8th of April, 1916.

Ser. No. 95,831. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALVIN A. REINHARDT, Berea, Ohio. Filed June 12, 1916.

Auto
Fizik

Particular description of goods.—Compound for Addition to Internal-Combustion-Engine Fuels.

Claims use since Dec. 1, 1914.

Ser. No. 95,834. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES WIRE MAT COMPANY, Decatur, Ill. Filed June 12, 1916.

REX

Particular description of goods.—Fly-Killers or Hand Devices for Killing Flies and other Insects.

Claims use since or about May 15, 1916.

Ser. No. 95,838. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE WILLARD STORAGE BATTERY COMPANY, Cleveland, Ohio. Filed June 12, 1916.

Willard STORAGE BATTERY

Exclusive right in the use of the words "Storage Battery," which appear as a part of the trade-mark, is hereby disclaimed.

Particular description of goods.—Storage Batteries.

Claims use since about June 1, 1916.

Ser. No. 95,844. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) RICHARD HAUGHTON, Paoli, Pa. Filed June 13, 1916.

REDDEN QUAIL

Particular description of goods.—Hearth Brooms and Brushes.

Claims use since June 2, 1916.

Ser. No. 95,871. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LUTIES PHARMACY COMPANY, St. Louis, Mo. Filed June 14, 1916.

PURGOID TABLETS

No claim is made to the word "Tablets" apart from the mark shown in the drawing.

Particular description of goods.—A Cathartic and Purgative Remedy.

Claims use since April, 1916.

Ser. No. 95,916. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H P COFFEE COMPANY, St. Louis, Mo. Filed June 16, 1916.

KAKE KAN

Particular description of goods.—Coffee.

Claims use since Feb. 15, 1916.

Ser. No. 95,919. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed June 16, 1916.

ESTRELLA

Particular description of goods.—Biscuit.

Claims use since at least Aug. 10, 1910.

Ser. No. 95,920. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed June 16, 1916.

MID-DAY

Particular description of goods.—Biscuit.

Claims use since at least Apr. 10, 1916.

Ser. No. 95,969. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) LIBERTY MOTOR CAR COMPANY, Detroit, Mich. Filed June 19, 1916.

LIBERTY

Particular description of goods.—Automobiles.

Claims use since Apr. 19, 1916.

Ser. No. 95,993. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BABY BEET PULLER MANUFACTURING COMPANY, Denver, Colo. Filed June 20, 1916.

BABY

Particular description of goods.—Beet-Pullers.

Claims use since June 15, 1915.

Ser. No. 96,013. (CLASS 2. RECEPTACLES.) AMERICAN THERMOS BOTTLE COMPANY, Portland, Me., and New York, N. Y. Filed June 21, 1916.

THERVAC

Particular description of goods.—Vacuum-Walled Vessels for Temperature Retention.

Claims use since Feb. 8, 1916.

Ser. No. 96,021. (CLASS 17. TOBACCO PRODUCTS.) NEUMANN & MAYER CO., Philadelphia, Pa. Filed June 21, 1916.

SQUARE DEAL

Particular description of goods.—Cigars, Cigarettes, and Manufactured Tobacco.

Claims use since Mar. 1, 1916.

Ser. No. 96,053. (CLASS 37. PAPER AND STATIONERY.) EATON, CRANE & PIKE COMPANY, Pittsfield, Mass. Filed June 22, 1916.

EATONIA

Particular description of goods.—Writing-Paper, Printing-Paper, Envelops, Tablets, Writing-Cards, and Cardboard.

Claims use since Mar. 15, 1916

Ser. No. 96,102. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AUTO POWER COMPANY, Chicago, Ill. Filed June 24, 1916.

"HELPING HENRY"

Particular description of goods.—Power-Transmitting Devices for Adapting an Automobile to Serve as Means for Driving Light Machinery.
Claims use since January, 1916.

Ser. No. 96,104. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILLIAM L. CRONENBERG, Ontario, Cal. Filed June 24, 1916.

Lem-O-Lime

Particular description of goods.—A Non-Alcoholic Beverage Flavored with Lemon and Lime Juice and Syrups for Making Same.
Claims use since Apr. 30, 1915.

Ser. No. 96,111. (CLASS 39. CLOTHING.) THE LURIE CO., New York, N. Y. Filed June 24, 1916.

CLASSYLASS

Particular description of goods.—Dresses for Girls and Women.
Claims use since June 5, 1916.

Ser. No. 96,117. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE TOY TINKERS, Evanston, Ill. Filed June 24, 1916.

TINKERPINS

The trade-mark consists of the name "Tinkerpins."
Particular description of goods.—Game Apparatus.
Claims use since June 15, 1916.

Ser. No. 96,131. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ABRASIVE MATERIAL COMPANY, Philadelphia, Pa. Filed June 26, 1916.

Electrolon

Particular description of goods.—Grinding and Polishing Wheels Made of Carbid of Silicon.
Claims use since May 10, 1916.

Ser. No. 96,169. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE SHELBY STEEL TUBE COMPANY, Pittsburgh, Pa. Filed June 26, 1916. Under ten-year proviso.

SHELBY

Particular description of goods.—Seamless Metal Pipes, Tubes, and Casings.
Claims use since the year 1890.

Ser. No. 96,219. (CLASS 2. RECEPTACLES.) THE STRONG BOX COMPANY OF AMERICA, Baltimore, Md. Filed June 28, 1916.

BOXKRAFT

Particular description of goods.—Paper Boxes.
Claims use since June 19, 1916.

Ser. No. 96,238. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio. Filed June 29, 1916.

MIL-LITE

Particular description of goods.—Dry and Ready-Mixed Paints, Driers, Enamels, Stains, Wall-Paints, Lacs, Fillers, and Varnishes.
Claims use since June 7, 1916.

Ser. No. 96,336. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SOCIETE RODIER, Paris, France. Filed July 5, 1916.

BURELLA

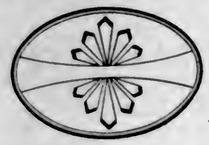
Particular description of goods.—Textile Fabrics, Woolen Stuffs, and Woolen Piece Goods.
Claims use since May 25, 1914.

Ser. No. 96,367. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHAS. SCHOOLHOUSE & SON, New York, N. Y. Filed July 6, 1916.

Jersey Lily

Comprising the words "Jersey Lilly."
Particular description of goods.—Knitted Textile-Fabric Silk Piece Goods.
Claims use since May 26, 1916.

Ser. No. 96,436. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MERRIMACK MANUFACTURING COMPANY, Lowell, Mass. Filed July 8, 1916.



Particular description of goods.—Cotton Piece Goods.
Claims use since June 29, 1916.

Ser. No. 96,535. (CLASS 47. WINES.) TO KALON VINEYARD CO., Oakville, Cal. Filed July 12, 1916.



Particular description of goods.—Wines.
Claims use since May 1, 1916.

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 1, 1916.

111,678. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,099. PUBLISHED MAY 16, 1916.

111,679. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,102. PUBLISHED MAY 16, 1916.

111,680. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,103. PUBLISHED MAY 16, 1916.

111,681. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,105. PUBLISHED MAY 16, 1916.

111,682. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,106. PUBLISHED MAY 16, 1916.

111,683. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,107. PUBLISHED MAY 9, 1916.

111,684. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,109. PUBLISHED MAY 16, 1916.

111,685. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,110. PUBLISHED MAY 9, 1916.

111,686. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,111. PUBLISHED MAY 16, 1916.

111,687. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,112. PUBLISHED MAY 16, 1916.

111,688. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,114. PUBLISHED MAY 16, 1916.

111,689. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,116. PUBLISHED MAY 9, 1916.

111,690. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,117. PUBLISHED MAY 16, 1916.

111,691. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,119. PUBLISHED MAY 16, 1916.

111,692. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,120. PUBLISHED MAY 16, 1916.

111,693. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,121. PUBLISHED MAY 16, 1916.

111,694. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,123. PUBLISHED MAY 16, 1916.

111,695. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,124. PUBLISHED MAY 16, 1916.

111,696. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,125. PUBLISHED MAY 16, 1916.

111,697. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,126. PUBLISHED MAY 9, 1916.

111,698. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,128. PUBLISHED MAY 16, 1916.

111,699. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,131. PUBLISHED MAY 16, 1916.

111,700. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,132. PUBLISHED MAY 16, 1916.

111,701. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 4, 1916. Serial No. 94,134. PUBLISHED MAY 16, 1916.

111,702. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 20, 1916. Serial No. 94,562. PUBLISHED MAY 23, 1916.

111,703. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed April 20, 1916. Serial No. 94,563. PUBLISHED MAY 23, 1916.

111,704. SHOE SOLES AND HEELS MADE OF RUBBER AND FIBER. A & A RUBBER COMPANY, Framingham, Mass.
Filed March 4, 1916. Serial No. 93,315. PUBLISHED MAY 16, 1916.

111,705. CANNED FRUITS AND CANNED VEGETABLES. E. S. ALPAUGH & COMPANY, New York, N. Y.
Filed April 3, 1916. Serial No. 94,052. PUBLISHED MAY 16, 1916.

111,706. CANNED FRUITS AND CANNED VEGETABLES. THE J. K. ARMSBY CO., San Francisco, Cal.
Filed March 7, 1916. Serial No. 93,354. PUBLISHED MAY 16, 1916.

111,707 CERTAIN NAMED KNIT GOODS FOR MEN, WOMEN, MISSES, CHILDREN, AND INFANTS. ABRAHAM ARONOW, New York, N. Y.
Filed January 8, 1916. Serial No. 92,010. PUBLISHED MAY 23, 1916.

111,708. TRADING-STAMPS, REDEEMABLE COUPONS, AND CIRCULARS. ROBERT ASHDON, Los Angeles, Cal., assignor to Guarantee Advertising Company, a Corporation of California.
Filed December 14, 1915. Serial No. 91,466. PUBLISHED APRIL 25, 1916.

111,709. BUTTER. P. BERRY & SONS INCORPORATED, Hartford, Conn.
Filed April 5, 1916. Serial No. 94,160. PUBLISHED MAY 16, 1916.

111,710. SHAMPOO PREPARATION AND HAIR-TONIC. NANCY JANE BURGHAM, East Palestine, Ohio.
Filed March 17, 1916. Serial No. 93,595. PUBLISHED MAY 16, 1916.

111,711. TOWELS AND TOWELING. CANNON MANUFACTURING COMPANY, Kannapolis, N. C.
Filed April 13, 1916. Serial No. 94,374. PUBLISHED MAY 23, 1916.

111,712. CANDY. CHOCOLATE PRODUCTS COMPANY, Baltimore, Md.
Filed March 30, 1916. Serial No. 93,987. PUBLISHED MAY 9, 1916.

111,713. PHARMACEUTICAL PREPARATION FOR RHEUMATISM AND MUSCULAR AILMENTS. CIDDIO AND COMPANY, Las Vegas, N. Mex.
Filed February 9, 1916. Serial No. 92,722. PUBLISHED MAY 9, 1916.

111,714. PIECE GOODS PARTLY OR WHOLLY OF COTTON, WOOLEN, OR SILK. THE H. B. CLAFLIN CORPORATION, New York, N. Y.
Filed April 8, 1916. Serial No. 94,250. PUBLISHED MAY 23, 1916.

111,715. LITHOPONE AND WHITE LEAD. FREDERICK H. CONE, New York, N. Y.
Filed February 18, 1916. Serial No. 92,937. PUBLISHED MAY 16, 1916.

111,716. CAUSTIC SODA, BICHROMATE OF SODA, CAUSTIC POTASH, AND EUCALYPTIC OIL. FREDERICK H. CONE, New York, N. Y.
Filed February 18, 1916. Serial No. 92,939. PUBLISHED MAY 16, 1916.

111,717. OLIVE-OIL. COSMOPOLITAN GROCERY CO., Chicago, Ill.
Filed January 27, 1913. Serial No. 68,137. PUBLISHED MAY 16, 1916.

111,718. WOOLEN FABRICS IN THE PIECE. DETMER WOOLEN CO., New York, N. Y.
Filed February 5, 1916. Serial No. 92,664. PUBLISHED MAY 23, 1916.

111,719. LARD, SUGAR-CURED PICNICS, AND COOKED PIGS' TONGUES. FARMERS' COOPERATIVE PACKING COMPANY OF LA CROSSE, La Crosse, Wis.
Filed January 20, 1915. Serial No. 83,968. PUBLISHED MAY 16, 1916.

111,720. HORSE COLLARS AND HARNESS. HORACE AMSDEN FAY, Janesville, Wis.
Filed September 3, 1915. Serial No. 89,001. PUBLISHED MAY 16, 1916.

111,721. GLASS FRUIT-JARS. FISHER, BRUCE & CO., Philadelphia, Pa.
Filed March 8, 1916. Serial No. 93,387. PUBLISHED MAY 16, 1916.

111,722. MEN'S AND BOYS' SUITS, OVERCOATS, TROUSERS, COATS, AND VESTS. JOSEPH G. GEDIOHN, Pittsburgh, Pa.
Filed October 8, 1915. Serial No. 89,733. PUBLISHED MAY 16, 1916.

111,723. FABRIC COVERS FOR SPARE TIRES. THE J. P. GORDON CO., Columbus, Ohio.
Filed February 11, 1915. Serial No. 84,482. PUBLISHED MAY 9, 1916.

111,724. KNITTED UNDERWEAR IN ONE OR TWO PIECE GARMENTS, KNITTED CAPS, KNITTED OUTER COATS, AND SWEATERS. A. S. HAIGHT & CO., New York, N. Y.
Filed January 15, 1916. Serial No. 92,160. PUBLISHED MAY 23, 1916.

111,725. WASHING-POWDER. ELLA HARDIN, Strathmore, Cal.
Filed April 22, 1916. Serial No. 94,644. PUBLISHED MAY 23, 1916.

111,726. NAINSOOK UNDERWEAR IN ONE AND TWO PIECE GARMENTS. HECHT & CAMPE INC., New York, N. Y.
Filed March 13, 1916. Serial No. 93,500. PUBLISHED MAY 23, 1916.

111,727. RAT OR MICE POISON, BEDBUG-DESTROYER, AND ROACH-DESTROYER. B. HELLER & CO., Chicago, Ill.
Filed February 11, 1916. Serial No. 92,779. PUBLISHED MAY 23, 1916.

111,728. EMBROIDERY-SILKS. M. HEMINWAY & SONS SILK CO., Watertown, Conn.
Filed March 24, 1916. Serial No. 93,840. PUBLISHED MAY 16, 1916.

111,729. DISK-RECORD BRUSH ADAPTED FOR ATTACHMENT TO SOUND-BOX OF A TALKING-MACHINE. ARTHUR HERRMAN, New York, N. Y.
Filed January 26, 1916. Serial No. 92,411. PUBLISHED APRIL 25, 1916.

111,730. MEN'S SUITS. HICKEY-FREEMAN CO., Rochester, N. Y.
Filed February 7, 1916. Serial No. 92,676. PUBLISHED MAY 16, 1916.

111,731. CHOCOLATE DROPS, BONBONS, CAKES, AND SQUARES. HOOTON LOWRIE COCOA & CHOCOLATE, INC., Jersey City, N. J.
Filed November 1, 1915. Serial No. 90,263. PUBLISHED MAY 16, 1916.

111,732. ENAMELED PAPER IN SHEETS FOR COVERING BOXES. IDEAL COATED PAPER CO., Brookfield, Mass.
Filed February 29, 1916. Serial No. 93,177. PUBLISHED MAY 16, 1916.

111,733. ADJUSTABLE FLOOR-SLEEVES. ILLINOIS MALLEABLE IRON CO., Chicago, Ill.
Filed March 15, 1916. Serial No. 93,551. PUBLISHED MAY 16, 1916.

111,734. PERFORATED MUSIC-ROLLS. ALICE SMYTHE JAY, Los Gatos, Cal.
Filed January 17, 1916. Serial No. 92,195. PUBLISHED MAY 16, 1916.

111,735. MUSTARD. JOHNSTOWN GROCERY COMPANY, Johnstown, Pa.
Filed March 14, 1916. Serial No. 93,528. PUBLISHED MAY 16, 1916.

111,736. COFFEE. C. D. KENNY CO., Baltimore, Md.
Filed April 3, 1916. Serial No. 94,073. PUBLISHED MAY 16, 1916.

111,737. PREPARATION FOR RESTORING GRAY HAIR TO ITS ORIGINAL COLOR. THE "KOLOR-BAK" PRODUCTS CO., Chicago, Ill.
Filed February 25, 1916. Serial No. 93,101. PUBLISHED MAY 23, 1916.

111,738. LIFTING-JACKS. LANE BROTHERS COMPANY, Poughkeepsie, N. Y.
Filed March 29, 1916. Serial No. 93,967. PUBLISHED MAY 23, 1916.

111,739. CERTAIN NAMED FOODS. LAUDERBACH BARBER CO., Philipsburg, Pa.
Filed February 5, 1915. Serial No. 84,313. PUBLISHED MAY 16, 1916.

111,740. OVERALLS. THE H. D. LEE MERCANTILE CO., Salina, Kans.
Filed March 6, 1916. Serial No. 93,339. PUBLISHED MAY 16, 1916.

111,741. SOFT DRINK. LEMON-KOLA SALES AGENCY CO., INC., Roanoke, Va.
Filed April 1, 1916. Serial No. 94,038. PUBLISHED MAY 16, 1916.

111,742. QUARTZ-GLASS CRUCIBLES, TUBES, RETORTS, FLASKS, DISHES, RODS, PIPES, CAPSULES, MUFFLES, BASINS. LENZ & NAUMANN, INC., New York, N. Y.
Filed January 25, 1916. Serial No. 92,396. PUBLISHED MAY 9, 1916.

111,743. PREPARATION TO BE ADDED TO FUEL FOR INTERNAL-COMBUSTION ENGINES. LLOYDS OF AMERICA, Bradley Beach, N. J.
Filed March 20, 1916. Serial No. 93,707. PUBLISHED MAY 23, 1916.

111,744. STEAM AND HOT-WATER HEATERS AND HEATING SYSTEMS AND PARTS THEREOF. LORD & BURNHAM CO., Irvington, N. Y.
Filed February 26, 1916. Serial No. 93,126. PUBLISHED MAY 23, 1916.

111,745. WHEAT-FLOUR AND SELF-RISING WHEAT-FLOUR. THE LOVELAND MILLING & ELEVATOR COMPANY, Loveland, Colo.
Filed March 27, 1916. Serial No. 93,909. PUBLISHED MAY 9, 1916.

111,746. INTERNAL-COMBUSTION ENGINES, BOAT-MOTORS, AND MOTOR-PLOWS. LYSEKILS MEK. VERKSTADS AKTIEBOLAG, Lysekil, Sweden.
Filed January 15, 1916. Serial No. 92,161. PUBLISHED MAY 16, 1916.

111,747. PILES. MACARTHUR CONCRETE PILE & FOUNDATION COMPANY, New York, N. Y.
Filed June 5, 1915. Serial No. 87,143. PUBLISHED MARCH 14, 1916.

111,748. SMOKED MEATS. OSCAR F. MAYER & BRO., Chicago, Ill.
Filed March 7, 1916. Serial No. 93,370. PUBLISHED MAY 16, 1916.

111,749. SHOES IN BOTH CLOTH AND LEATHER. THE MELVILLE SHOE CORPORATION, New York and Brooklyn, N. Y., and Philadelphia, Pa.
Filed March 8, 1916. Serial No. 93,391. PUBLISHED MAY 16, 1916.

111,750. TOY BALLOONS. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed March 20, 1916. Serial No. 93,717. PUBLISHED MAY 23, 1916.

111,751. CANDY. MILLER-ELMER MANUFACTURING CO., LTD., New Orleans, La.
Filed April 6, 1916. Serial No. 94,205. PUBLISHED MAY 16, 1916.

111,752. WHEAT-FLOUR. MONTANA FLOUR MILLS COMPANY, Lewistown, Mont.
Filed June 28, 1915. Serial No. 87,642. PUBLISHED MAY 16, 1916.

111,753. COTTON DUCK OR CANVAS. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed June 10, 1915. Serial No. 87,222. PUBLISHED OCTOBER 5, 1915.

111,754. BLANK BOOKS AND BLANK CARDS. THE NATIONAL BANKERS SERVICE INC., New York, N. Y.
Filed February 21, 1916. Serial No. 93,026. PUBLISHED MAY 16, 1916.

111,755. WASHBOARDS. NATIONAL WASHBOARD COMPANY, Chicago, Ill.
Filed February 8, 1916. Serial No. 92,714. PUBLISHED MAY 16, 1916.

111,756. BOND, LEDGER, AND WRITING PAPERS. NEENAH PAPER COMPANY, Neenah, Wis.
Filed April 3, 1916. Serial No. 94,080. PUBLISHED MAY 16, 1916.

111,757. ANIMAL-TRAPS. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.
Filed March 27, 1916. Serial No. 93,918. PUBLISHED MAY 16, 1916.

111,758. MECHANICAL DEVICE FOR REMOVING CARBON FROM GAS-ENGINE CYLINDERS. THE OXYGENERATOR CO., Chicago, Ill.
Filed February 4, 1916. Serial No. 92,626. PUBLISHED MAY 16, 1916.

111,759. LUBRICANTS. PANAMA LUBRICANTS COMPANY, Los Angeles, Cal.
Filed January 12, 1916. Serial No. 92,088. PUBLISHED MAY 9, 1916.

111,760. CLOTHING FOR MEN AND BOYS—NAMELY, COATS, VESTS, TROUSERS, AND OVERCOATS. PARK & TAYLOR, INC., New York, N. Y.
Filed March 18, 1916. Serial No. 93,664. PUBLISHED MAY 16, 1916.

111,761. MEDICINAL PREPARATION FOR EXTERNAL APPLICATION IN TREATING CERTAIN NAMED AILMENTS. BRONISLAW PREBOL, Passaic, N. J.
Filed March 15, 1916. Serial No. 93,558. PUBLISHED MAY 16, 1916.

111,762. CLEANING AND POLISHING MATERIAL FOR CERTAIN NAMED SURFACES. C. J. RENTZ & COMPANY, Cincinnati, Ohio.
Filed November 8, 1915. Serial No. 90,526. PUBLISHED MAY 16, 1916.

111,763. CIGARS. F. R. RICE MERCANTILE CIGAR COMPANY, St. Louis, Mo.
Filed April 1, 1916. Serial No. 94,044. PUBLISHED MAY 23, 1916.

111,764. CIGARS. F. R. RICE MERCANTILE CIGAR COMPANY, St. Louis, Mo.
Filed April 1, 1916. Serial No. 94,045. PUBLISHED MAY 23, 1916.

111,765. SECTIONS OF BLOCKS FOR SEWER OR CONDUIT CONSTRUCTION. SOUTHERN PIPE & CULVERT CO., Macon, Ga.
Filed April 19, 1916. Serial No. 94,552. PUBLISHED MAY 23, 1916.

111,766. NEWSPAPER-SECTION. STAR COMPANY, New York, N. Y.
Filed April 10, 1916. Serial No. 94,302. PUBLISHED MAY 16, 1916.

111,767. NEWSPAPER-SECTION. STAR COMPANY, New York, N. Y.
Filed April 10, 1916. Serial No. 94,303. PUBLISHED MAY 16, 1916.

111,768. RUBBER AND LEATHER SHOES. SUCS. DE JOSE MARTINEZ S. EN C., San Juan, Porto Rico.
Filed April 28, 1916. Serial No. 94,778. PUBLISHED MAY 23, 1916.

111,769. KEROSENE-OIL. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed February 10, 1916. Serial No. 92,764. PUBLISHED MAY 16, 1916.

111,770. WHEAT AND BUCKWHEAT FLOUR. UNION MILLING CO., Union, Iowa.
Filed February 2, 1914. Serial No 75,636. PUBLISHED JULY 14, 1914.

141,771. SAFETY-RAZORS AND SAFETY-RAZOR BLADES. UNITED DRUG COMPANY, Boston, Mass.
Filed March 22, 1916. Serial No. 93,780. PUBLISHED MAY 16, 1916.

111,772. STUCCO AND BUILDING-CEMENT FOR FLOORING. U. S. MATERIALS CO., Chicago, Ill.
Filed April 12, 1916. Serial No. 94,365. PUBLISHED MAY 23, 1916.

111,773. CLARINET, SAXOPHONE, OBOE, ENGLISH HORN, BASSOON, DOUBLE BASSOON, AND SARUSOPHONE. MICHEL EUGÈNE VANDOREN, Paris, France.
Filed October 27, 1915. Serial No. 90,162. PUBLISHED MAY 16, 1916.

111,774. CHEWING-GUM. THE VANOLA COMPANY, Winston-Salem, N. C.
Filed April 6, 1916. Serial No. 94,215. PUBLISHED MAY 16, 1916.

111,775. GINGER-ALE, SARSAPARILLA, AND CLUB-SODA. THE VARUNA SPRING CO., Stamford, Conn.
Filed April 3, 1916. Serial No. 94,092. PUBLISHED MAY 16, 1916.

111,776. REMEDY FOR CATARRH, COLD IN HEAD, SORE NOSE AND THROAT, AND HAY-FEVER. EDWARD B. WEIDKNECHT, Peoria, Ill.
Filed February 17, 1916. Serial No. 92,931. PUBLISHED APRIL 11, 1916.

111,777. CERTAIN NAMED CLOTHING. SADIE WEISERBS, New York, N. Y.
Filed March 23, 1916. Serial No. 93,810. PUBLISHED MAY 16, 1916.

111,778. BALL CHEWING-GUM. HARRIS C. WILKINSON, Los Angeles, Cal.
Filed April 10, 1916. Serial No. 94,299. PUBLISHED MAY 16, 1916.

111,779. SPOOL-COTTON AND EMBROIDERY-COTTON. THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y.
Filed April 6, 1916. Serial No. 94,217. PUBLISHED MAY 16, 1916.

111,780. FELT SHOES. WORCESTER FELT SHOE CO., Worcester, Mass.
Filed April 19, 1915. Serial No. 86,066. PUBLISHED MAY 16, 1916.

LABELS

REGISTERED AUGUST 1, 1916

19,486.—*Title:* "CLUFF BLUE RIBBON." (For Corn.) WILLIAM CLUFF COMPANY, San Francisco, Cal. Filed October 1, 1916.

19,487.—*Title:* "POND LILLY VANISHING CREAM." (For a Cosmetic Face Preparation.) MACARMS COSMETIC CO., Jacksonville, Fla. Filed June 6, 1916.

19,488.—*Title:* "SOAP BUBBLE APRON." (For a Child's Apron.) THE SOLVOS COMPANY, Chicago, Ill. Filed May 13, 1916.

PRINTS

REGISTERED AUGUST 1, 1916.

4,413.—*Title:* "THE BRAND OF QUALITY." (For Meats.) THE ANGEL MEAT PACKING CO., Los Angeles, Cal. Filed June 26, 1916.

4,414.—*Title:* "JOHNNY APPETITE." (For Cheese.) J. L. KRAFT & BROS. CO., Chicago, Ill. Filed June 29, 1916.

4,415.—*Title:* "WARDS TIP TOP BREAD—DUSTITE—SANTARY." (For Bread.) THE MEYERCORD COMPANY, Chicago, Ill., assignor to The Ward Baking Company, New York, N. Y. Filed March 22, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE KIDDER.

Decided October 25, 1915.

PATENTABILITY—OPERATIVENESS—RES ADJUDICATA.

Where in an interference involving a later application the applicant relied upon this application to prove his priority and judgment was rendered against him on the ground that this application does not disclose an operative device, and therefore could not show prior inventorship, *Held* that the question of operativeness, now raised on *ex parte* appeal, is *res adjudicata*.

APPEAL from Examiners-in-Chief.

RIBBON MECHANISM FOR TYPE-WRITERS.

Messrs. Warfield & Duell and *Messrs. Duell, Warfield & Duell* for the applicant.

WHITEHEAD, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Primary Examiner in finally rejecting all the claims of this application.

The ground upon which the Primary Examiner based his rejection was that the device as shown and described is inoperative. He also rejected claims 32 and 33 on the additional ground that applicant having been involved in an interference which was decided adversely to him the question of the patentability to him of these claims, which correspond to the issue of the interference, is *res adjudicata*.

The Examiners-in-Chief held that the question of the operativeness of the device disclosed in this application is *res adjudicata* and that this applies not only to claims 32 and 33, but to the entire application.

The Primary Examiner, on May 29, 1913, held that the device as shown and described is entirely inoperative for the purpose set forth, and this action was repeated on August 5, 1913, and applicant was refused permission to amend the drawing, as requested. On April 8, 1913, an interference had been declared between a later application of this applicant and an application of William Smith. Appealed claim 32 is the same as count 1 of the issue of that interference, and appealed claim 33 is substantially the same as count 2 thereof. Kidder was the junior party as the interference was declared, but moved to shift the burden of proof on the ground that the invention in issue was disclosed in the present application. This motion was denied by the Examiner of Interferences on the ground that in view of the holding of the Primary Examiner that the device of this applicant was inoperative it was not clear beyond a reasonable doubt that Kidder had a right to make the claims herein. No testimony having been taken on behalf of Kidder within the time set, a motion for judgment was filed by Smith. The Examiner of Interferences granted this motion and awarded priority to Smith on the ground that this application, which was relied upon by Kidder as establishing priority, was inoperative. From this decision of the Examiner of Interferences no appeal was taken.

It is contended that the question of the operativeness of the device shown herein is not *res adjudicata* for the reason that the court of appeals in *Lotterhand* v. *Hanson* (110 O. G., 861; 23 App. D. C., 372) held that it would not consider the question of operativeness on the appeal from a decision awarding priority. The decision referred to, however, was rendered before the decision of that court in *Podlesak and Podlesak* v. *McInnerney*, (129 O. G., 2127; 26 App. D. C., 399.) in which it was held that the right of a party to make the claims would be reviewed as ancillary to the question of priority, and the court since the decision in that case has considered the question of operativeness in at least two cases—namely, *Mark* v. *Greenawalt* (138 O. G., 965; 32 App. D. C., 253) and *Peters* v. *Pike, Jr.*, (143 O. G., 259; 33 App. D. C., 59.) In this connection attention is also called to the decision of the court of appeals in the case of *United States of America, ex rel. The Newcomb Motor Company*, v. *Moore, Commissioner of Patents*, (133 O. G., 1680; 30 App. D. C., 464.) in which it was held that where a party did not appeal from a decision of the Primary Examiner dissolving an interference on the ground that he had no right to make the claims the question of his right to make these claims is *res adjudicata*.

The question in issue before the Examiner of Interferences was whether this application as filed disclosed an operative device or could, without the addition of new matter, be amended so as to make

the device operative, and the award of priority to Smith was based on the ground that this device was inoperative.

The Examiner of Interferences did not base his decision merely upon the fact that the Primary Examiner had held the device of the applicant to be inoperative, but stated that he had independently considered the question and that he was of the opinion that the device as shown and described was inoperative; that while a limited movement of the carriage would be permitted equal to the distance between the guides there was nothing to indicate that the applicant contemplated any such limited movement or that the guides were far enough apart to afford sufficient movement to accomplish any useful function. He further held that there was nothing in the specification to suggest that applicant had any idea of providing a sliding movement between the parts 10 and 11, and that the provision of a splined connection between these parts would therefore not be obvious from the disclosure of the application as filed.

Obviously applicant is seeking by this appeal to reopen the very question which was decided adversely to him in the interference. Having failed to appeal from the decision of the Examiner of Interferences, the question of the operativeness of the device of this application was properly held to be *res adjudicata*. The fact that the interference as declared did not involve this application is immaterial. (*In re Marconi*, 179 O. G., 577; 38 App. D. C., 286; *New Departure Manufacturing Company* v. *Robinson*, 188 O. G., 1055; 39 App. D. C., 504.)

The claims were, however, properly rejected even if the decision in the interference is not conclusive.

It is contended that as shown the carriage can have a limited movement equal to the distance between the guides; but there is nothing in the specification to suggest that applicant contemplated any such use of the device, which is described as an attachment for the ordinary type-writer. Furthermore, there is nothing to indicate that the guides are to be placed far enough apart for this limited movement to be of any utility. There is nothing in the original specification or drawing to suggest that applicant had any idea of a sliding movement between the parts 10 and 11 or that the device was to operate other than as described with the arm 10 "fixed" to the shaft 11. There is therefore no basis for the proposed amendment.

The decision of the Examiners-in-Chief is affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Marshall patent, No. 784,695, for insulating-lining, claim 6 *Held* void for lack of patentable invention. *Marshall* v. *Wirt*, 232 Fed. Rep., 606.

(U. S. C. C. A.) The Medalie patent, No. 1,010,065, for a leather-skiving machine, is void for lack of patentable invention and anticipation in the prior art. *Apple* v. *American Shoe Machinery & Tool Co.*, 232 Fed. Rep., 603.

Amendment to Patent Law.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 21, 1916.

The following excerpt from the act of July 6, 1916, pertaining to the armament and defense of the United States, is published for the information of those concerned.

THOMAS EWING,
Commissioner.

[Copy.]

An act making appropriations for fortifications and other works of defense, for the armament thereof, for the procurement of heavy ordnance for trial and service, and for other purposes.

* * * * * * *

For the procurement of the exclusive rights of John Hays Hammond, junior, and the Radio Engineering Company of New York (Incorporated) to their discoveries and inventions in the art of control by radiodynamic energy of the movement of water-borne carriers of high explosives, in accordance with a proposal heretofore made by said John Hays Hammond, junior, and said company, known as proposal Z, $750,000: *Provided*, That said sum shall not be paid except upon the approval by the President of a report of a board of three Army and three Navy officers, to be appointed by him, which report shall be favorable to the acquisition of such rights, such report to be made after a demonstration of the application of the said system to the control of torpedoes; and, to provide for such demonstration, $30,000 of the sum so appropriated, or so much thereof as may be necessary for the purpose, may be applied to the expense of conducting the same exclusive of the services of said Hammond, which services shall be rendered free of charge, the amount so applied and which shall be immediately available, in the event of the purchase of such rights, to be considered as part payment of the purchase price of the same.

The Commissioner of Patents is authorized and directed, in the event of the entrance by the Government into a contract with the above-mentioned parties for the purchase of such rights in all instances where it would grant patents to John Hays Hammond, junior, or to the Radio Engineering Company upon request of the United States to issue said patents to the United States, and, in the event of said contract being made, the Commissioner of Patents is further authorized and directed to keep applications for such patents in the secret archives of the Patent Office, not open to disclosure even in cases of interferences.

For procurement and installation of one radiodynamic torpedo unit, $417,000: *Provided*, That no part of said sum shall be so expended unless the United States shall first acquire as heretofore provided the rights of the said John Hays Hammond, junior, and the Radio Engineering Company of New York.

Section forty-eight hundred and ninety-four of the Revised Statutes is amended so as to read as follows:

"SEC. 4894. All applications for patents shall be completed and prepared for examination within one year after the filing of the application, and in default thereof, or upon failure of the applicant to prosecute the same within one year after any action therein, of which notice shall have been given to the applicant, they shall be regarded as abandoned by the parties thereto, unless it be shown to the satisfaction of the Commissioner of Patents that such delay was unavoidable: *Provided, however*, That no application shall be regarded as abandoned which has become the property of the Government of the United States and with respect to which the head of any department of the Government shall have certified to the Commissioner of Patents, within a period of three years, that the invention disclosed therein is important to the armament or defense of the United States: *Provided, further*, That within ninety days, and not less than thirty days, before the expiration of any such three-year period the Commissioner of Patents shall, in writing, notify the head of the department interested in any pending application for patent, of the approaching expiration of the three-year period within which any application for patent shall have been pending."

Approved July 6, 1916.

Disclaimers.

1,109,858.—*George W. Mills, Jr.*, New York, N. Y. NECKWEAR. Patent dated September 8, 1914. Disclaimer filed July 25, 1916, by *Slip Scarf Company*, assignee by mesne assignments.

"Hereby disclaims claims 4, 5, 6, and 7 of said Letters Patent, but * * * does not hereby disclaim the subject-matter of claims 1, 2 and 3 of said Letters Patent."

1,139,885.—*Glenville Mellen*, East Orange, N. J. METHOD OF AND APPARATUS FOR CONTINUOUS CASTING. Patent dated May 18, 1915. Disclaimer filed July 18, 1916, by the assignee, *Continuous Casting Corporation*.

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"26. In a casting machine, a frame, parallel guides running through said frame, means to cool some of said guides, and means to exert pressure upon said guides."

1,161,315.—*Frederick Wm. Jonas* and *Christopher Steele Spofford*, Sturgis, Mich. COLLAPSIBLE CARRIAGE. Patent dated November 23, 1915. Disclaimer filed July 19, 1916, by the assignee, *Sturgis Steel Go-Cart Co.*

Enters this disclaimer—

"To claims 5, 14, 16, 26 and 32 of the said Letters Patent, which claims are in the following words, to wit:

"5. In a collapsible carriage, the combination of a frame, wheel supports mounted on said frame to collapse under the same, means for erecting and collapsing said wheel supports comprising levers pivoted on said frame, a tongue pivoted to said frame, links connecting said levers to said tongue.

"14. In a collapsible carriage, the combination of a frame, wheel supports mounted on said frame to collapse under the same, means for actuating said wheel supports comprising a lever mounted on said frame, a tongue pivoted on said frame, links connecting said lever to said tongue whereby the lever is actuated to erect and collapse the wheel supports when the tongue is extended and collapsed, and a foot rest, said foot rest having operative connections to said tongue so that it is moved toward and from the frame as the tongue is extended and collapsed.

"16. In a collapsible carriage, the combination of a frame, wheel supports mounted on said frame to collapse under the same, means for actuating said wheel supports comprising a tongue mounted on said frame to collapse rearwardly thereon, said tongue having operative connections with said wheel supports whereby they are erected and collapsed, and a movable foot rest having operative connection with said tongue whereby the foot rest is moved toward and from the frame when the tongue is collapsed and extended.

"26. In a collapsible carriage, the combination of a frame, wheel supports mounted on said frame to collapse under the same, means for actuating said wheel supports comprising a tongue mounted on said frame to collapse rearwardly thereon, and a collapsible foot rest having operative connection with said tongue whereby the foot rest is collapsed and extended when the tongue is collapsed and extended.

"32. In a collapsible carriage, the combination of a frame, a collapsible tongue, a collapsible foot rest, a standard, and operative connections for said foot rest and standard to said tongue whereby said foot rest and standard are swung to and from extended position as the tongue is swung to and from its extended position."

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 25, 1916.

Allen S. Rand and George Bell, their assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of The Wallace Maxwell Co., of 416½ University street, Seattle, Wash., to effect the cancelation of the trade-mark registration of Allen S. Rand and George Bell, of Cincinnati, Ohio, and Peoria, Ill., respectively, registered August 15, 1893, No. 25,485, and the notice of such proceeding sent by registered mail to said Rand and Bell to the said addresses having been returned by the post-office undeliverable, notice is hereby given that unless said Rand and Bell, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 22, 1916.

Plate & Clark Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Oneida Knitting Company, of Second street and Allegheny avenue, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered April 2, 1907, No. 61,714, to Plate & Clark Co., of 31 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Plate & Clark Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Plate & Clark Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 22, 1916.

W. G. Hitchcock & Co., their assigns or legal representatives, take notice:

An interference having been filed by this Office between the application of Belding Bros. & Co., of 902 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered July 5, 1892, No. 21,415 to W. G. Hitchcock & Co., of 453 Broome street, New York, N. Y., and a notice of such declaration sent by registered mail to said W. G. Hitchcock & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said W. G. Hitchcock & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 21, 1916.

Henry Newell Palmer, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Louis H. Schaarschmidt, of Limbach, Germany, for registration of a trade-mark and trade-mark registered July 28, 1908, No. 70,111, to Henry Newell Palmer, of 170 Fifth avenue, New York, N. Y., and the registry return-receipt for the notice of such declaration sent to Henry Newell Palmer having been returned signed by Mrs. H. N. Palmer, and Mrs. H. N. Palmer having failed to file evidence of her right to intervene on behalf of Henry Newell Palmer within the time allowed for that purpose, notice is hereby given that unless said Henry Newell Palmer, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 21, 1916.

Allen Ainslie, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Samuel S. Dworkin, 151–153 St. Ann's avenue, corner of Thirteenth street, New York, N. Y., for registration of a trade-mark and trade-mark registered June 27, 1899, No. 33,148, to Allen Ainslie, 220 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Ainslie at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Ainslie, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 18, 1916.

Weiss & Segal, their heirs or legal representatives, take notice:

The Patent Office on July 5, 1916, instituted an interference between the application of Charles Kaufman & Bros., of No. 230 Market street, Chicago, Ill., for registration of a trade-mark and trade-mark registered October 3, 1905, No. 46,733, to Weiss & Segal, of No. 8 Washing-

ton Place, New York, N. Y. The notice sent by registered mail to Weiss & Segal has not yet been returned; but a verified showing filed by Charles Kaufman & Bros. constitutes a *prima facie* showing that Weiss & Segal are no longer in business.

In view of the above, Weiss & Segal, their heirs or assigns, are hereby notified that unless they shall enter an appearance herein within thirty days from the first publication of this order a judgment will be entered permitting Charles Kaufman & Bros. to register notwithstanding the registration of Weiss & Segal.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

[Vol. 229. No. 1.]

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 229—No. 2. TUESDAY, AUGUST 8, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 8, 1916	273
CHANGES IN CLASSIFICATION	273
DISCLAIMER	273
AMENDMENTS TO AMENDMENTS	273
APPLICATIONS UNDER EXAMINATION	274
PATENTS GRANTED	275
REISSUES	577
DESIGNS	579
TRADE-MARKS—REGISTRATION APPLIED FOR	583
TRADE-MARK REGISTRATIONS GRANTED	605
LABELS	611
PRINTS	612
COMMISSIONER'S DECISIONS— Liebmann and Megrath v. Newcomb	613
DECISIONS OF THE U. S. COURTS— Great Bear Spring Co. and Fulton Water Works Co. v. Bear Lithia Springs Company and Bear Lithia Water Company	613
ADJUDICATED PATENTS	614
PATENT, TRADE-MARK, AND COPYRIGHT REGULATIONS IN FINLAND	614
ADVERSE DECISIONS IN INTERFERENCE	615
NOTICE OF CANCELATION	615
INTERFERENCE NOTICES	615

ISSUE OF AUGUST 8, 1916.

Patents	851—	No. 1,193,495 to No.	1,194,345, inclusive.
Designs	22—	No. 49,482 to No.	49,503, inclusive.
Trade-Marks	138—	No. 111,781 to No.	111,918, inclusive.
Labels	30—	No. 19,489 to No.	19,518, inclusive.
Prints	20—	No. 4,416 to No.	4,435, inclusive.
Reissues	2—	No. 14,179 to No.	14,180, inclusive.
Total	1063		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	.....	North Carolina	3	3
Arizona	1	.....	North Dakota	1	.....
Arkansas	2	.....	Ohio	53	14
California	41	17	Oklahoma	5	.....
Colorado	7	1	Oregon	8	.....
Connecticut	23	6	Pennsylvania	75	16
Delaware	.....	1	Rhode Island	5	.....
Florida	3	.....	South Carolina	1	.....
Georgia	3	3	South Dakota	2	.....
Idaho	.....	.....	Tennessee	3	.....
Illinois	81	18	Texas	17	1
Indiana	35	4	Utah	2	.....
Iowa	21	1	Vermont	.....	.....
Kansas	9	.....	Virginia	8	1
Kentucky	4	2	Washington	13	1
Louisiana	2	.....	West Virginia	2	2
Maine	3	1	Wisconsin	25	3
Maryland	6	4	Wyoming	1	.....
Massachusetts	61	4			
Michigan	32	3	Alaska, District of	.....	.....
Minnesota	17	3	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	4	1
Missouri	21	3	Hawaii Territory	.....	.....
Montana	2	1	Philippine Islands	.....	1
Nebraska	10	3	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	.....	.....
New Jersey	27	4			
New Mexico	4	.....	Total to residents of the United States	787	184
New York	135	62			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	3	.....
Belgium	1	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	1	.....
Canada	11	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	1	1
Denmark	.....	.....	South Australia	.....	.....
England	33	.....	Spain	1	.....
Finland	.....	.....	Sweden	1	.....
France	5	.....	Switzerland	2	1
Germany	14	1	Transvaal, South Africa	.....	.....
Guatemala	1	.....	Victoria	3	.....
India	.....	.....	Wales	1	.....
Ireland	1	.....			
Italy	5	.....	Total to residents of foreign countries	84	4
Japan	.....	1			
Mexico	.....	.....			

Changes in Classification.

(ORDER No. 2,273.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 1, 1916.

It is hereby directed that class 41, Ornamentation, be transferred from Division XXXII to Division XVII, to take effect immediately.

R. F. WHITEHEAD,
Acting Commissioner.

Disclaimer.

S13,841.—*Maximilian Toch*, New York, N. Y. METHOD OF TREATING CEMENT AND CEMENT CONSTRUCTION. Patent dated February 27, 1906. Disclaimer filed July 31, 1916, by the inventor and assignee, *Henry M. Toch*.

Enter their disclaimer as to said Letters Patent No. S13,841—

"of any method, product, or construction excepting where a mixture containing Manila or other copal gum, or china-wood oil, is employed."

Amendments to Amendments.

RULE 74. When an amendatory clause is amended, it must be wholly rewritten, so that no interlineation or erasure shall appear in the clause, as finally amended, when the application is passed to issue. If the number or nature of the amendments shall render it otherwise difficult to consider the case or to arrange the papers for printing or copying, the Examiner or Commissioner may require the entire specification to be rewritten.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 5, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications waiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	June 17	June 24	324
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Mar. 1	May 13	672
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	July 19	July 17	125
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	June 3	July 24	209
167	5. Bookbinding; Harvesters; Jewelry; Music	Apr. 20	May 20	261
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 13	July 10	305
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Mar. 2	May 23	573
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 7	June 21	1286
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Mar. 2	June 5	483
235	10. Carriages and Wagons; Spring Devices	Mar. 4	July 1	753
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 23	July 24	111
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Feb. 10	June 17	574
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 21	July 3	456
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 1	June 2	261
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	June 6	July 5	274
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Jan. 24	June 2	540
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Feb. 7	June 19	319
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 17	July 13	119
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces	June 1	June 23	170
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	July 14	July 14	174
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 1	June 27	326
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 25	June 10	388
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Feb. 19	Apr. 3	476
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Feb. 5	May 19	...
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers.	July 3	June 30	184
106	26. Electricity, Generation; Motive Power	Jan. 20	May 23	582
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	June 26	July 6	212
65	28. Internal-Combustion Engines	Apr. 21	June 7	535
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Apr. 11	July 5	318
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	May 19	July 22	263
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	June 21	472
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Feb. 4	July 6	654
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 27	June 15	361
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Feb. 15	May 1	372
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Apr. 1	July 20	466
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Mar. 23	June 21	814
107	37. Electric Lamps; Electricity, Conduits; Electricity, General Applications	Feb. 5	June 24	714
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	June 17	June 29	214
321	39. Water Distribution	Feb. 23	June 22	389
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	July 6	742
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Apr. 8	June 28	406
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Dec. 10	Apr. 3	651
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 28	June 13	132

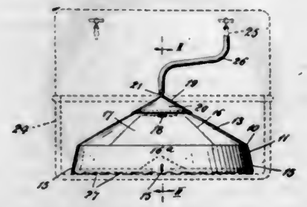
Oldest new case, Dec. 10; oldest amended, Apr. 3.
Total number of applications awaiting action..... 18,123

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-marks	July 1	July 21	656
	Designs	July 1	June 27	241
	Labels and Prints	July 27	July 27	38

PATENTS

GRANTED AUGUST 8, 1916.

1,193,495. DISH-WASHING APPLIANCE. ARNALDO M. ABRAMO, New York, N. Y. Filed Mar. 30, 1915. Serial No. 18,033. (Cl. 141—9.)



A dish washing appliance, comprising a casing substantially oval in cross-section and having a cone-like top portion with an opening in its apex and having an annular bottom portion with a corrugated lower edge, a sprinkler head mounted in the opening in the top portion, and having a tube extension providing means for connection with a hot water supply, an opening for obtaining access through one side of the casing, a closure therefor, and an intersticed bottom removably secured to the casing.

1,193,496. METHOD OF PRODUCING STEEL AND HIGH-PHOSPHORUS SLAG. ANSON W. ALLEN and EUGENE GUY LILLY, Birmingham, Ala. Filed June 18, 1915. Serial No. 34,839. (Cl. 75—46.)

1. The process of producing steel and a slag rich in phosphates which consists in desiliconizing pig iron, refining the desiliconized metal with a basic slag containing the necessary amount of lime and iron oxid to oxidize and carry into the slag the phosphorous contained in the desiliconized metal so as to take up the bulk of the phosphorous therein, and removing the duplex metal thus produced together with the high phosphorous slag and separating the latter from the duplex metal.

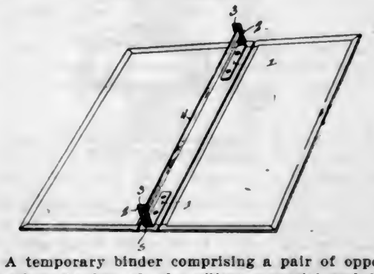
2. The process of producing steel and a slag rich in phosphates which consists in desiliconizing pig iron, refining the desiliconized metal with a basic slag containing the necessary amount of lime and iron oxid to oxidize and carry into the slag the phosphorus contained in the desiliconized metal so as to take up the bulk of the phosphorus therein, and removing the duplex metal thus produced together with the high phosphorous slag and separating the latter from the duplex metal, and further refining said duplex metal to reduce the remaining phosphorus therein.

3. The process of producing steel and a slag rich in phosphates which consists in desiliconizing pig iron, refining the desiliconized metal with a basic slag to take up the bulk of the phosphorus therein, and removing a part of the duplex metal and high phosphorus slag thus produced, and replacing the same with a new supply of desiliconized metal and of slag-forming materials so as to maintain a continuous supply of blown metal and dephosphorizing slag, and separating from the portion of duplex metal withdrawn the high phosphorus slag thereon.

4. The process of producing steel and a slag rich in phosphates which consists in desiliconizing pig iron, refining the desiliconized metal with a basic slag to take up the bulk of the phosphorus therein, and removing a part of the duplex metal and high phosphorus slag thus produced, and replacing the same with a new supply of desiliconized metal and of slag-forming materials so as to maintain a continuous supply of blown metal and dephosphorizing slag, and separating from the portion of duplex metal withdrawn the high phosphorus slag thereon, and further refining the duplex metal thus withdrawn and separated from its slag.

5. The process of producing steel and a slag rich in phosphates which consists in desiliconizing pig iron, treating the desiliconized metal, freed from its slag, with a new slag formed of substantially theoretical quantities of lime and iron oxid to dephosphorize the blown metal, removing the duplex metal and the high phosphorus slag thus formed, separating the slag and further refining the duplex metal with a slag containing an excess of lime and oxid to thoroughly dephosphorize it.

1,193,497. TEMPORARY BINDER. EGMONT B. ARNOLD, Milwaukee, Wis. Filed July 26, 1915. Serial No. 42,068. (Cl. 129—38.)



1. A temporary binder comprising a pair of oppositely disposed posts formed of resilient material and having their free portions provided with alined openings, and a fold engaging bar having end hooks and notches adapted to be interlocked with the openings of the resilient posts.

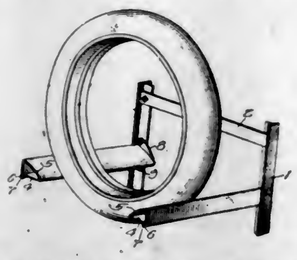
2. A temporary binder comprising supporting posts formed of resilient material and capable of being flexed to permit a folding-engaging bar to be detachably connected thereto, said posts being provided with openings, and a fold-engaging bar provided with means for interlocking with the edges of said openings.

3. A temporary binder comprising posts formed of a flat strip of resilient material shaped to provide a binder back-engaging base and posts that project at right angles therefrom, said posts being capable of being flexed outwardly from the base and being provided with means for engaging with the ends of a fold-engaging bar and a fold-engaging bar having its ends adapted for connection with the bar-engaging means of the posts.

1,193,498. TIRE-RACK. JAMES E. BALES and JOHN B. O'CONNOR, Aurora, Ill., assignors to Lyon Metallic Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Dec. 6, 1915. Serial No. 65,197. (Cl. 211—14.)

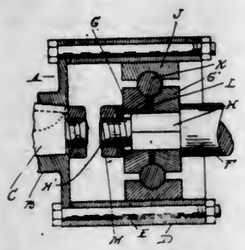
1. A tire rack having uprights and tire bars extending horizontally from one upright to another, said tire bars being of sheet metal and having a top curving downwardly and inwardly, said top having carrying radii of curvature, the longer radius being employed for the portion nearer the back wall, and the shorter radius for the portion nearer the inner edge.

2. In a tire rack, the combination of uprights and tire bars extending horizontally from one to the other, said tire bars having three principal portions, forming a back wall, bottom wall, and tire supporting surface, the latter



pitching downwardly and inwardly, the bottom wall having a depending marginal flange at the back and the back wall having a marginal flange at the lower edge folding up and around the flange on the bottom wall.

1,193,499. UNIVERSAL JOINT. WILLIAM J. BARKER, Pontiac, Mich. Filed Aug. 26, 1915. Serial No. 47,403. (Cl. 74—19.)



1. A universal joint, comprising a drive and a driven shaft, a polygonal socket member secured to the one, a polygonal member secured to the other within said socket, slidable blocks engaging the polygonal faces of said socket member, and ovoidal rolls between said blocks and inner polygonal member on the shaft engaging corresponding recesses formed therein.

2. A universal joint, comprising drive and driven shafts, a polygonal socket member secured to one, a polygonal member upon the other within said socket, slidable blocks engaging the polygonal faces of said socket member, ovoidal rolls between said blocks and inner polygonal member engaging corresponding recesses therein, and means for adjusting one of said members to compensate for wear.

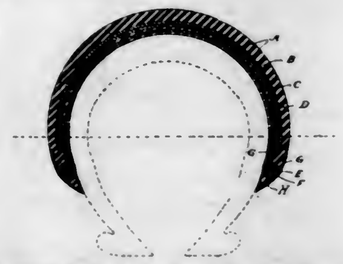
3. A universal joint, comprising drive and driven shafts, a polygonal socket member secured to the one, a polygonal member secured to the other within said socket member, said inner polygonal member being formed of a plurality of sections relatively adjustable longitudinally of said shaft, blocks slidably engaging the polygonal faces of said socket member, and ovoidal rolls between said blocks and inner polygonal member engaging recesses therein, the adjustment between the sections of said inner polygonal member compensating for wear.

4. A universal joint, comprising drive and driven shafts, a polygonal socket member secured to one, a polygonal member secured to the other within said socket member, said member being formed of a plurality of sections relatively adjustable longitudinally of said shaft, shims between said sections, a nut engaging a threaded portion of said shaft for clamping said sections against said shims, blocks slidably engaging the polygonal faces of said socket member, and ovoidal rolls engaging recesses in said blocks and the sections of said inner polygonal member, and forming a means of transmitting the torque from the one to the other.

5. A universal joint, comprising a drive and a driven shaft, a polygonal socket member secured to the one, a polygonal member secured to the other within said socket, pivotal members intermediate said polygonal members, and means for adjusting one of said polygonal members to compensate for wear.

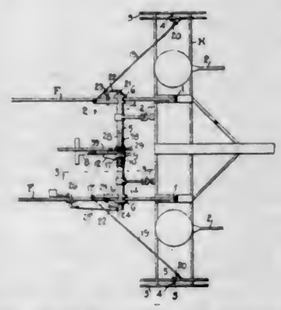
[Claim 6 not printed in the Gazette.]

1,193,500. AUXILIARY TREAD. OTTO BASTEN, East Rutherford, N. J., assignor to Rutherford Rubber Company, Rutherford, N. J. Filed Mar. 3, 1915. Serial No. 11,918. (Cl. 152—17.)



In an auxiliary tread for incasing a tire, the combination of a body to fit over the outer surface of the tire, a plurality of endless wire reinforcements embedded in each of the edge portions of the body, a fabric covering for the reinforcements in each of said edge portions, a fabric strip embedded in the body and extending from one side to the other throughout the body and having its opposite edges folded over the reinforcements and their covers, and protecting strips folded over and attached to the inside and the outside of the edge portions and lying against portions of the fabric strip adjacent the reinforcements, to coöperate with the strip, the reinforcements, and their coverings to strengthen the edge portions of the body, said reinforcements being of such diameter as to be placed under tension by the tire, and act upon said edge portions to stretch the tread across the tire.

1,193,501. PLANTER. GEORGE W. BEHREND, Wausa, Nebr. Filed Mar. 11, 1916. Serial No. 83,626. (Cl. 111—5.)



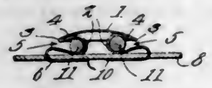
1. In combination with a planter including a frame, a hopper frame supported for rocking movement by the first named frame, and runners depending from the hopper frame, a transverse shaft carried by the first named frame inwardly of the hopper frame and operatively engaged with the hopper frame, a pedal mounted upon the shaft and having a limited movement independently of the shaft, a lever fixed to the shaft and angularly related to the pedal, a rack carried by the frame, a latch carried by the lever coacting with the rack, and a member carried by the pedal and contacting with the latch for disengaging the latch from the rack during the independent movement of the pedal.

2. In combination with a planter including a frame, a hopper frame supported for rocking movement by the first named frame, and runners depending from the hopper frame, a transverse shaft carried by the first named frame inwardly of the hopper frame and operatively engaged with the hopper frame, a pedal mounted upon the shaft and having a limited movement independently of the shaft, a lever fixed to the shaft and angularly related to the pedal, a rack carried by the frame, a latch carried by the lever coacting with the rack, a member carried by the pedal and contacting with the latch for disengaging the latch from the rack during the independent movement of the pedal, and a second locking means coacting with the lever for holding the shaft against return movement upon predetermined depression of the pedal.

3. In combination with a planter including a frame, a hopper frame supported for rocking movement by the first named frame, and runners depending from the hopper frame, a transverse shaft carried by the first named frame inwardly of the hopper frame and operatively engaged with the hopper frame, a pedal mounted upon the shaft and having a limited movement independently of the shaft, a lever fixed to the shaft and angularly related to the pedal, a rack carried by the frame, latch carried by the lever coacting with the latch for disengaging the latch from the rack during the independent movement of the pedal, a second locking means coacting with the lever for holding the shaft against return movement upon predetermined depression of the pedal, and means carried by the lever for releasing said second locking means.

4. In a planter, the combination with a frame, a hopper frame pivotally carried thereby, runners depending from the hopper frame, a check wire head carried by the hopper frame and having its lower end open, and a latch normally underlying the open portion of the head, a shaft rotatably supported by the first named frame and operatively engaged with the hopper frame, means for rocking the shaft, means operated by the shaft when rocked in one direction for releasing the latch of the check wire head, and independent means for rendering said last named means inoperative upon rocking of the shaft.

1,193,502. BOX-FASTENER. ALLEN R. BINGHAM, Webster, Mass. Filed May 7, 1915. Serial No. 26,574. (Cl. 24—127.)



A binder fastener for boxes, comprising in a one piece structure, a concavo-convex disk-like head, underlying, binder receiving loops embodying upper and lower arms, and angularly disposed clenching prongs projecting from the outer ends of the lower arms, the upper arms bearing at their outer ends against the under surface of the head adjacent its periphery, the upper and lower arms being disposed in converging relation, thereby to form restricted throats for the loops, and the lower arms being outwardly extended beyond the periphery of the head to form guiding means for the throats.

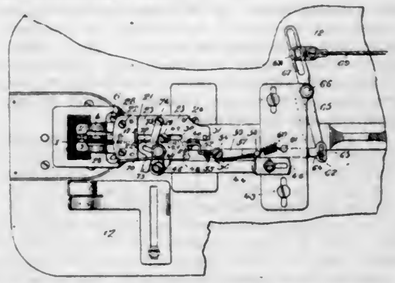
1,193,503. WIRE NAIL. EDWARD I. BRADDOCK, Winchester, Mass. Filed Feb. 2, 1916. Serial No. 76,831. (Cl. 85—10.)

1. A wire nail having a cylindrical portion provided at one end with a head of greater diameter than said cylindrical portion and having extended from it a body portion of greater length than said cylindrical portion and provided with two opposing sides which are straight and parallel and separated a distance substantially equal to the diameter of said cylindrical portion, and having the other two opposing sides tapering and diverging from near the point of the nail toward and merging with the said cylindrical portion.



2. A wire nail having a cylindrical portion provided at one end with a head of greater diameter than said cylindrical portion and having extended from it a body portion of greater length than said cylindrical portion and provided with two opposing sides which are straight and parallel and separated a distance substantially equal to the diameter of said cylindrical portion, and having the other two opposing sides tapering and diverging from near the point of the nail toward and merging with the said cylindrical portion, said tapering sides merging near the point of the nail with substantially parallel surfaces which terminate in beveled surfaces to form a chisel point.

1,193,504. BUTTON PLACING AND RELEASING ATTACHMENT FOR SEWING-MACHINES. JULIUS J. BRELL, New York, N. Y., assignor to Sigmund Basch, New York, N. Y. Filed May 5, 1914. Serial No. 836,401. (Cl. 112—32.)



1. In a machine of the class described, in combination, stitch forming mechanism including a needle, a button holder provided with jaws and means for causing said jaws to engage or release a button and hold the same over the substance to which it is to be attached, means for shifting the button about its axis while held between the button holding jaws so that the button holes will register with said needle.

2. In a machine of the character described, in combination, stitch forming mechanism including a needle, means for holding a button over the substance to which it is to be attached, means for causing the button to turn in the button holding means until its holes register with said needle which is to sew it in place, and means for releasing the button after the same has been sewn.

3. In a machine of the class described, in combination, stitch forming mechanism including a needle, means for holding a button, means for shifting the button while held in the button holding means until its holes register with

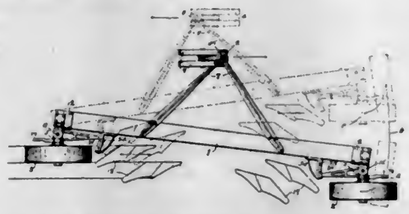
said needle which will be used for sewing the button in place and elevating means for raising the button holding mechanism, and simultaneously causing it to release the button after it has been sewn in place.

4. In a machine of the class described, jaws for holding a button, means for raising said jaws, actuating means for drawing together or separating said jaws and mechanism for driving said actuating means so that the jaws will be separated during the first part of their elevating movement, then be brought together, and not thereafter separated until the next raising of these jaws.

5. In a machine of the class described, in combination, stitch forming mechanism including a needle, jaws for holding a button, means for raising said jaws, actuating means for drawing together or separating said jaws, mechanism for driving said actuating means so that the jaws will be separated during the first part of their elevating movement, then be brought together, and not thereafter separated until the next raising of these jaws, and means for placing a button in said jaws so that its holes will register with said needle.

[Claims 6 to 16 not printed in the Gazette.]

1,193,505. MOTOR AGRICULTURAL MACHINE. ALEXANDER T. BROWN, Syracuse, N. Y. Filed Sept. 22, 1911. Serial No. 650,753. (Cl. 97—50.)



1. In an agricultural machine, a frame, front and rear tractors, the frame and the tractors being connected by vertical pivots, farming implements supported by the frame, a motor carried by the frame, means operated by the motor for driving and for shifting the tractors about their pivots and causing the tractor at either end of the frame to move laterally and hence move the frame about the pivot at the other end thereof and means for normally holding the tractors from turning on their pivots, substantially as and for the purpose specified.

2. In an agricultural machine, a frame, tractors supporting the frame and pivotally connected thereto, farming implements supported by the frame, a motor carried by the frame, power-transmitting means operated by the motor for actuating the tractors alternately and turning the same on their pivots at an angle to the normal line of travel of the machine to swing one end of the machine laterally relatively to the other end, means for controlling the operation of the power-transmitting means and means for normally holding the tractors parallel to the line of draft, substantially as and for the purpose set forth.

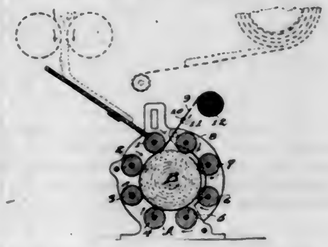
3. In a self propelled agricultural machine, a frame, tractors supporting the frame, a motor, and power-transmitting connections operated by the motor for driving the tractors and for changing the angle of the same to swing either end of the frame laterally relatively to the other end, and means for normally holding the tractors in a straight line and preventing changing of the angle thereof by said power transmitting connections, substantially as and for the purpose described.

4. In a self propelled agricultural machine, a frame, tractors supporting the frame and pivotally connected thereto near opposite ends of the frame, the axes of such pivotal connections extending substantially vertically, farming implements carried by the frame, a motor, power-transmitting connections operated by the motor for driving the tractors and for swinging either end of the frame about the axis near the other end thereof, said connections being constructed to normally move the tractors about the vertical pivotal axes of the frame in a forward direction and hence move the frame about the pivotal axis of the other end thereof, and means for normally preventing movement of the tractors about the vertical axes by the power-transmitting means, substantially as and for the purpose described.

5. In a self propelled agricultural machine, a frame, furrow turning elements carried by the frame, advance and rear tractors supporting the frame and being pivotally connected thereto near opposite ends of the frame and arranged to travel on opposite sides of a line parallel to the line of draft so that the advance tractor normally travels in the last furrow turned during the preceding trip of the machine and the rear tractor travels in one of the furrows being turned, the axes of the pivotal connections extending substantially vertical, farming implements carried by the frame, a motor, and power-transmitting means operated by the motor for swinging either end of the frame about the axis near the other end thereof, substantially as and for the purpose specified.

[Claims 6 to 32 not printed in the Gazette.]

1,193,506. METHOD OF WRAPPING AND FASTENING THE COVER OF A ROUND BALE OF COTTON. GEORGE RAYMOND BROWN, Oklahoma, Okla., assignor to the Firm of Anderson, Clayton & Company, Oklahoma, Okla., composed of F. E. Anderson, W. L. Clayton, M. D. Anderson, and Benjamin Clayton. Filed July 7, 1915. Serial No. 38,578. (Cl. 100—14.)



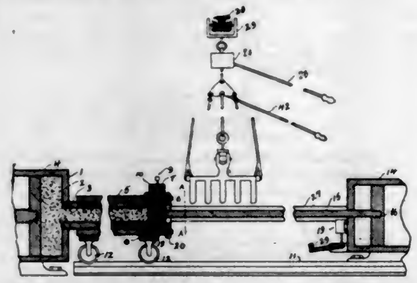
The herein described method of wrapping and fastening the cover of a round bale of cotton, it consisting in securing a pointed fastening means to a section of the fabric at the place where overlap is to occur, feeding the said section of the fabric with the fastening means to the press to wrap the bale after the completion thereof, and causing pressure exerted by the press to force the said pointed fastening means into the overlapped fabric.

1,193,507. APPARATUS FOR FORCING BODIES FROM PLASTIC MATERIAL. JOHN W. BROWN, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Aug. 10, 1912. Serial No. 714,333. (Cl. 18—30.)

1. In a molding apparatus, a cylinder adapted to contain a mix, means for applying pressure to the mix in said cylinder, a die secured to the cylinder adapted to further compress the mix when forced therethrough by said pressure means, a mold slidingly fitted over the die, and means adapted to retard the movement of the mold as the mix is forced therein.

2. In a molding apparatus, a cylinder adapted to contain a mix, a die secured to the cylinder, a mold fitting over the die, means for forcing the mix through the die whereby it is compressed therein and forced into the mold and means adapted to retard the movement of the mold as the mix is forced therein and force the molded article from the mold.

3. In an apparatus for molding electrodes from a plastic material, a cylinder, a piston head in the cylinder, a relatively long hollow die secured to the cylinder adapted to compress the plastic material when forced therethrough by said piston, and an incasing mold closely fitting the die and adapted to move relatively thereto.

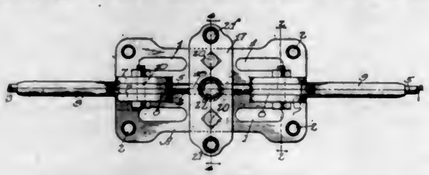


4. In an apparatus for molding electrodes from a plastic material, a mud cylinder, a relatively long die secured in the end of the cylinder, a piston head in the cylinder, adapted to force the plastic material through the die to compress it to a solid compact mass therein, and an incasing mold closely fitting the die and adapted to move longitudinally thereon whereby the electrode can be formed with a reduced end when said mold is moved beyond the end of the die.

5. In a molding apparatus for electrodes, a mud cylinder, a die attached thereto, having an enlarged orifice, and a mold slidingly incasing the die.

[Claims 6 to 15 not printed in the Gazette.]

1,193,508. TROLLEY-WIRE APPARATUS. GEORGE BUTTRICK, Allentown, Pa., assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Apr. 6, 1912. Serial No. 689,024. (Cl. 191—40.)



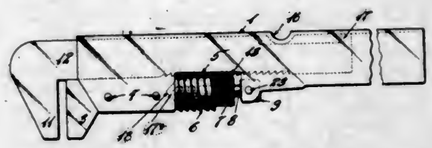
1. In a trolley wire apparatus, the combination with a clamping plate having eyes at the end adapting it to be independently supported by means thereof transversely of and above a trolley wire, a body member with a wire-receiving groove adapted to be positioned below a trolley wire, and means for securing the plate and member together without rotation of either part and for clamping a trolley wire between them.

2. In a trolley wire apparatus, the combination with a clamping plate having eyes at the end adapting it to be independently supported by means thereof transversely of and above a trolley wire with an integral depending clamping portion, a body member with a wire-receiving groove and a particular portion thereof adapted to coöperate with the said clamping portion of the plate below a trolley wire, and clamping bolts for securing the plate and member together without rotation thereof and for clamping a trolley wire between the said coöperating parts.

3. In a trolley wire apparatus, the combination with a clamping plate having eyes at the ends adapting it to be independently supported transversely of and above a trolley wire and with a depending clamping portion, a body member comprising a strain plate with a longitudinal groove therein and a portion coöperating with the said depending clamping portion of the other plate adapted to be placed below a trolley wire and having guy wire holes at the corners of the plate by means of which the said body member is independently supported below a trolley wire and prevented thereby from longitudinal movement with respect to a trolley wire, and fastening means to bind the said body member and the clamping plate together below and above the trolley wire respectively, and to grip the trolley wire between the said coöperating clamping portions.

4. In a trolley wire apparatus, the combination with a rectangular strain plate having guy wire holes at the corners and a longitudinally extending groove with upstanding ears forming a trolley cross-over on its lower side, a cam member pivotally mounted in the ears at each end of the groove having an extending grooved arm adapted to embrace a wire seated in the groove from the upper side of the wire and forming a gradual approach for the said cross-over, a clamping plate bridging the groove between the ears extending transversely of the trolley wire and above the trolley wire with guy wire apertures at its ends by means of which it is independently supported above the trolley wire and with a depending portion insertible in the groove of the strain plate, and bolts for clamping the strain plate and the clamping plate whereby said clamping portion will engage and bind the wire in the groove.

1,193,509. QUICK-ADJUSTING WRENCH. ARTHUR CARP, St. Louis, Mo. Filed Jan. 23, 1913. Serial No. 743,747. (Cl. 81—157.)



1. An improved quick-adjusting wrench having a ratchet-toothed shank and relatively sliding jaws, a ratchet-screw for adjusting said jaws, a journal on which said screw is mounted to slide axially and to rotate, a conical-bearing at the outer end of said screw for locking the screw in a working position, a pivot for the inner end of said journal, and a suitable spring for urging said screw toward said conical-bearing.

2. An improved quick-adjusting wrench having a ratchet-toothed shank and relatively sliding jaws, a ratchet-screw for adjusting said jaws, a journal on which said screw is mounted to slide axially and to rotate, a conical-bearing at the outer end of said screw arranged to automatically guide and force the teeth of said screw into engagement with the teeth of said ratchet-toothed shank, and also for locking the screw in a working position; a pivot for the inner end of said journal, and a suitable spring within said screw for urging said screw toward said conical-bearing.

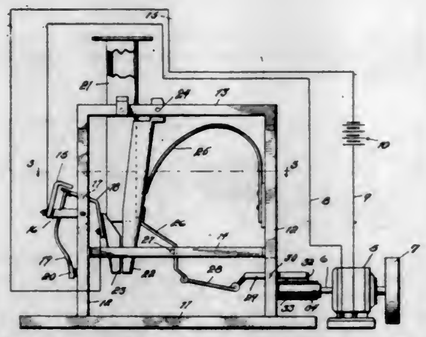
3. A quick-adjusting wrench having relatively sliding jaws, a suitable casing, ratchet teeth on one of the relatively sliding parts, a rocking-journal, a screw having ratchet threads to engage said ratchet-teeth and a knurled portion and mounted on said rocking-journal, a pivot for the inner end of said rocking-journal, a suitable socket-bearing for the outer end of said screw, suitable mechanism arranged to force said screw toward and into said socket-bearing and tightly lock said screw in position while the wrench is under working strain, and a suitable stop to limit the outward movement of said sliding part having the said ratchet teeth.

4. In a quick-adjusting wrench, relatively sliding jaws, one of which is provided with ratchet-teeth, a handle having an open front edge, a rock-lever pivotally mounted within said handle with the front edge of said rock-lever exposed through the said open front of said handle, whereby the operator's fingers may engage said rock-lever either in advance or in rear of the lever-pivotal-point, to assist to retard the rocking movement of said rock-lever, and a suitable screw having ratchet threads to engage said ratchet-teeth and carried by the outer end of said rock-lever and adapted to engage the said ratchet teeth on one of the sliding parts, in adjusting the jaws.

5. In a quick-adjusting wrench, relatively sliding jaws, one of which is provided with ratchet-teeth, a handle having an open front edge, a rock-lever pivotally mounted within said handle with the front edge of said rock-lever exposed through the said open front portion of said handle, said opening in the front edge of said handle being large enough to permit the operator's fingers to engage said rock-lever either in advance or in rear of the lever-pivotal-point to assist or retard the rocking movement of said rock-lever, a suitable screw having ratchet threads and carried by the outer end of said rock-lever and adapted to engage teeth on one of the sliding parts in adjusting the jaws, and a suitable spring for throwing the outer end of said lever inwardly and thereby urging said screw toward the teeth on said sliding part.

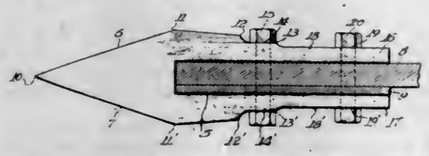
[Claim 6 not printed in the Gazette.]

1,193,510. CIRCUIT-CLOSING APPARATUS. GEORGE L. CARRUTHERS and JAMES S. HOLDERNESS, Pine Bluff, Ark. Filed Mar. 2, 1916. Serial No. 81,716. (Cl. 194—9.)



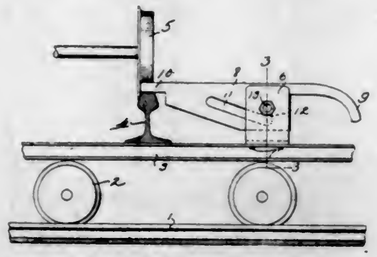
In apparatus of the character described, a circuit, a motor connected in the circuit, a frame, a contact device for opening and closing the circuit supported by said frame and comprising a stationary contact member supported by the frame, a pivoted contact member having adjacent its contact end a depending weighted portion whereby it is normally held out of contact and having at its opposite end a coin contacting member, a co-acting coin contacting member pivoted near the first named coin contacting member, a coin chute delivering between the said coin contact members, motor operated means to automatically move the second named coin contacting member to the outer position when the motor has operated for a predetermined time.

1,193,511. TOOTH FOR POWER-SHOVELS. GEORGE T. CHAMBERS, La Grange, Ill. Filed Aug. 6, 1914. Serial No. 855,352. (Cl. 37—16.)



In combination with a power shovel having a plate-bottom of uniform thickness, of a reversible tooth, said tooth comprising a pointed portion symmetrically tapering with respect to a median longitudinal plane; leg portions separated by a parallel sided slot, wider than the thickness of the plate, and a removable shim in said slot, outside of said shovel, to vertically displace the tooth so that the point of the tooth will lie below the median plane of the plate.

1,193,512. WHEEL AND RAIL CHOCK-BLOCK. GEORGE W. CHESNUT, Cartwright, Pa. Filed July 29, 1915. Serial No. 42,514. (Cl. 104—227.)



1. A device of the class described, in combination with a railway rail, a supporting member, a bearing thereon, and an arm having an angular slot receiving the bearing, said arm being operable upwardly and laterally into and out of proximity to the rail.

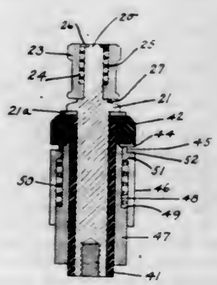
2. In a chock-block, a bearing, a slotted member in engagement therewith, and handle means on said slotted member to move the latter into and out of operative position.

3. In a chock-block, a support, a bearing thereon, and an arm having a slot in engagement with the bearing, said slot being formed to lock said arm in operative position.

4. In a wheel and rail chock-block, in combination, a vertically disposed bifurcated guide member, a bearing mounted upon said guide member transversely thereof, an arm adapted to slide within said guide member, said arm formed with an elongated slot therethrough, said bearing adapted to slidably engage with the slot in said arm, a finger formed on one end of said arm, and a handle formed on the other end of said arm.

5. In combination with a transfer-table, a bifurcated guide member vertically mounted upon said transfer-table, a bearing interposed between the sides of said guide member, an arm adapted to slide within said guide member, said arm formed with an elongated angular slot therethrough, said arm formed with a vertical slot therethrough in continuation of said angular slot, said bearing adapted to slide within said slot, a finger formed upon one end of said arm, and a handle formed upon the other end of said arm.

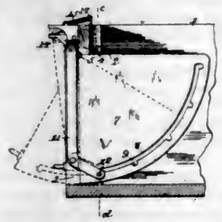
1,193,513. BINDING-POST. WILLIAM A. CHRYST, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Jan. 6, 1913. Serial No. 740,437. (Cl. 173—259.)



In a binding post, the combination with a plurality of movable clamping elements; of a supporting stud of conductive material having a shoulder coöperating with one of said clamping elements; an insulating sleeve separating said stud from the conductive elements of the other clamping element, whereby independent circuit connections may be made with each of said clamping elements

and independent springs means operable relative to said movable clamping elements to maintain the same in clamping position.

1,193,514. END-GATE. JOHN V. CIZEK, Clutier, Iowa. Filed Feb. 28, 1916. Serial No. 80,823. (Cl. 21—21.)



1. An end-gate, comprising a three-sided frame, a gate hinged to the upper cross-bar of the frame, notched sector-wings attached to the ends of the gate, and a bail hinged to the frame uprights, and with inwardly extending arms adapted to engage with the notches of the sector-wings.

2. An end-gate, comprising a three-sided frame, a gate hinged to the upper cross-bar of the frame, sector wings attached to the ends of the gate, and slotted in arcs concentric with the hinges, with notches leading from the slots, a bail hinged to the frame uprights, the extended inner ends of bail being provided with studs positioned in said slots, and means adapted to hold the bail in locking position.

3. An end-gate, comprising a three-sided frame, a gate hinged to the upper cross-bar of the frame, sector wings attached to the ends of the gate, and slotted in arcs concentric with the hinges, with notches leading from said slots, a bail hinged to the frame uprights, the inner ends of the bail being provided with studs to engage said slots and notches, and tension means adapted to force the bail into locking position.

1,193,515. ROAD CONSTRUCTION. FRANK E. CLARK, Bridgeport, Conn. Filed Mar. 8, 1915. Serial No. 12,754. (Cl. 94—1.)

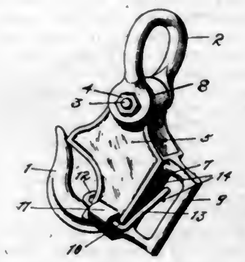


1. A road construction comprising concrete blocks, each block constructed to occupy a certain predetermined place to conform to a predetermined pitch of the road bed, said blocks having recesses, tie rods projecting within said recesses, open spring links connecting the tie rods of adjacent abutting blocks, said recesses adapted to be filled with cement when the blocks are laid and connected together transversely of the road bed.

2. A road construction, comprising blocks having recesses at their upper corners, tie rods embedded in the blocks and having hook portions projecting into said recesses, links engaging the hook portions of said tie rods of adjacent abutting blocks to lock the blocks together, said links lying within said recesses, and a concrete filling for said recesses concealing said hook portions and said links.

3. A road construction, comprising concrete blocks having recesses at their corners, tie rods embedded in said blocks and provided with hook portions projecting into said recesses, elastic links adapted to engage the hook portions of adjacent abutting blocks for locking the blocks together and permitting expansion and contraction of the road, and a concrete filling for said recesses concealing said hook portions and connecting links.

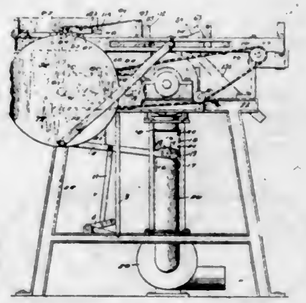
1,193,516. SAFETY-HOOK. RALPH CLARKE, Ramsey, N. J., assignor to Contractors Trading Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 18, 1915. Serial No. 27,777. (Cl. 24—241.)



1. In a locking device for safety hoisting hooks, the combination with a hook and its pivotally mounted guard shell, of a transverse shaft journaled upon one side of the shell, a latch arm projecting laterally from one end of the transverse shaft and adapted to be swung into engagement with the body of the hook to lock the shell in operative position, and a finger lever projecting laterally from the opposite end of the transverse shaft.

2. In a locking device for safety hoisting hooks, the combination with a hook and its pivotally mounted guard shell which has a looped handle at the back thereof, a transverse shaft journaled upon one side of the shell, a latch arm projecting laterally from one end of the transverse shaft, and a finger lever projecting from the opposite end of the transverse shaft and extending within the looped handle of the shell so as to be manipulated by the fingers of the hand grasping the handle, the latch arm being adapted to be swung into engagement with the body of the hook to lock the shell in operative position.

1,193,517. LABELING-MACHINE. LAWRENCE COBB, Richmond, Va. Filed July 28, 1914. Serial No. 853,645. (Cl. 216—55.)



1. In a can labeling machine, the combination with a label picker comprising a drum having planate perforated faces, its interior connected with an exhaust, and means for turning the drum intermittently; of means for gluing the label lying upon the uppermost face of the drum, and means for subsequently rolling a can over the glue-coated label.

2. In a can labeling machine, the combination with a label picker comprising a drum having planate perforated faces, its interior connected with an exhaust, and means for turning the drum intermittently; of means for gluing the label lying upon the uppermost face of the drum, means for subsequently rolling a can over the glue-coated label, and a nozzle directing a blast of air beneath the end of the label at the moment the can reaches it.

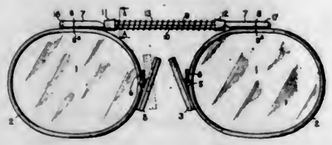
3. In a can labeling machine, the combination with a label picker comprising a drum having planate perforated faces, its interior connected with an exhaust, and means for turning the drum intermittently; of a carriage reciprocating horizontally above the uppermost of said faces, gluing mechanism including a roller in said carriage, and a fixed glue pot with which the roller coacts at one limit of movement of the carriage, can feed mechanism at the other limit of movement, can gripping and rotating mechanism on the carriage adapted to take a can from the feed mechanism and roll it over said planate face, and label affixing mechanism comprising rollers mounted in the carriage on opposite sides of the gripping mechanism, movable bearings for one of them, yielding means pressing such bearings toward the other roller, and tripping mechanism for overcoming the yielding means and spreading the rollers apart when the can gripping mechanism releases the can.

4. In a can labeling machine, the combination with a label picker comprising a drum having planate perforated faces, its interior connected with an exhaust, and means for turning the drum intermittently; of a carriage reciprocating horizontally above the uppermost of said faces, gluing mechanism including a roller in said carriage, and a fixed glue pot with which the roller coacts at one limit of movement of the carriage, can feed mechanism at the other limit of movement, spaced rollers on the carriage, and means for moving one of them yieldingly toward the other for applying the label to the can, between said rollers a can gripping mechanism comprising alined centers slidably mounted through the sides of the carriage, yielding means bearing them normally inward and cam mechanism for overcoming said means to release the finished can, a pinion connected with one of said centers, and a rack engaged by the pinion for rotating the can as it moves over said face.

5. In a can labeling machine, the combination with label picking mechanism including a level face, tracks extending past said face, a carriage reciprocating on the tracks, and gluing mechanism including a roller in the carriage moving over the label on said face; of can feeding mechanism above one end of the tracks, a trip on the carriage and a coacting trip on the feed for actuating the latter when the carriage comes beneath it, can gripping mechanism in the carriage, means for actuating this mechanism to engage the can dropped from the feed and to rotate the can as it passes over said face, and label-applying rollers, for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,193,518. EYEGLASS CONSTRUCTION. CARL E. H. COLLIANDER, Providence, R. I., assignor to Martin-Copeland Company, Providence, R. I. Filed July 2, 1915. Serial No. 37,653. (Cl. 88—46.)



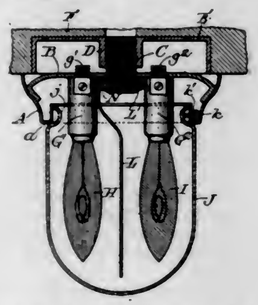
1. In eyeglass construction, in combination, a rim, a tubular bridging member having an uncollapsed portion secured to said rim and a collapsed portion extending toward the opposite glass, whereby there is attained a bridging portion of substantially solid and relatively flattened form, said tubular portion and said rim being cut through at substantially registering points, and means securing the portions of said tubular member one to another.

2. In eyeglass construction, in combination, a pair of lens supports, a pair of tubular members each of which has a portion secured to one of said lens supports and a collapsed portion overlapping a similar portion of the other, and means holding said overlapped portions in slidable relation one to the other.

3. In eyeglass construction, in combination, a pair of lens supports, a pair of tubular members each of which has a portion secured to one of said lens supports and a collapsed portion overlapping a similar portion of the other, means holding said overlapped portions in slidable relation one to the other, said tubular members and the portions of the rims to which they are secured being severed at substantially registering points, and means releasably securing the severed portions of said bars to the parts from which they are cut.

4. In eyeglass construction, in combination, a pair of rims, a pair of tubular members the end portions of which are respectively connected with the upper portions of said rims, each of said tubular members having a collapsed portion overlapping the corresponding part of the other, means holding said overlapping parts in relatively slidable relation, each of said rims and the portions of said bars mounted thereon being severed at substantially registering portions, and a pair of screws respectively connecting the severed portions of said bars to the portions from which they are cut.

1,193,519. LIGHTING-FIXTURE. DAVID CROWNFIELD, Cambridge, Mass. Filed June 9, 1915. Serial No. 33,174. (Cl. 240—78.)



1. In a lighting fixture, a plurality of lamps adapted to be lighted independently of each other, a shield between said lamps adapted to screen said lamps from each other, a bridge piece common to said lamps and shield having a central aperture, and a stem passing through the aperture to secure the screen and bridge piece together and to support all of said elements.

2. In a lighting fixture, a collar, a bridge piece secured within and extending across the collar, a plurality of lamps adapted to be lighted independently of each other secured to said bridge piece, a shield also secured between said lamps adapted to screen said lamps from each other, and a globe-supported by said collar and inclosing said lamps and shield.

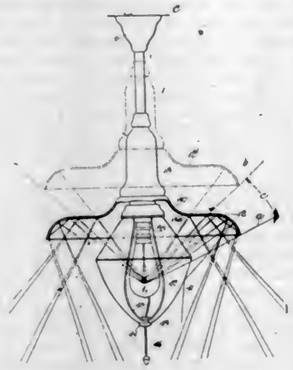
3. In a lighting fixture, a collar, a bridge piece secured within and extending across said collar, a nipple screwed into the center of said bridge piece and supporting the whole fixture, a pair of lamps adapted to be lighted independently of each other, one secured to said bridge piece at each side of said nipple, a shield also secured to said bridge piece between said lamps adapted to screen said lamps from each other, and a globe supported by said collar and inclosing said lamps and shield.

4. In a lighting fixture, a collar having an inturned flange provided with apertures, a globe, a globe-holding ring within said collar-flange, and screws passing through said globe-holding ring, the inner ends of which secure the globe to said ring, and the outer ends of which constitute projections adapted to pass through said apertures in the collar-flange and to rest upon said flange.

5. In a lighting fixture, a collar having an inturned flange provided with apertures, a globe, a globe-holding ring within said collar-frame, and screws passing through said globe holding ring, having a shoulder to limit the inward movement of said screws, the inner ends of said screws loosely engaging and securing the globe to said ring, and the heads of said screws constituting projections adapted to pass through said apertures in the collar-flange and to rest upon said flange.

[Claim 6 not printed in the Gazette.]

1,193,520. LIGHTING-FIXTURE. DAVID CROWNFIELD, Cambridge, Mass. Filed June 17, 1915. Serial No. 34,720. (Cl. 240—78.)



1. In a lighting fixture, a stem, a lamp secured at the bottom of said stem, a downwardly reflecting shade above said lamp, a shade supporting shell surrounding said stem, an exteriorly screw threaded member on said stem, and an interiorly screw threaded member secured to the interior of said shell, by which the shell may be adjusted lengthwise on said stem, and means wholly interior to the shell for supporting the shade.

2. In a lighting fixture, a stem, a lamp secured at the bottom of said stem, a downwardly reflecting shade above said lamp, a shade supporting shell surrounding said stem, means for adjusting said shell lengthwise on said stem, and a heat deflector above the lamp extending across the bottom opening of said shell.

3. In a lighting fixture, a stem, a light source secured at the end of said stem, a cover holder secured to said stem, an upper dust cover supported by said holder, a lower bowl which together with said dust cover incloses said light source, said bowl having a central aperture in its bottom, means to support said bowl, and a flexible light controlling member extending downward through said aperture.

4. In a lighting fixture, a stem, a light source secured at the end of said stem, a cover holder secured to said stem, an upper dust cover supported by said holder, a lower bowl which together with said dust cover incloses said light source, and a frame comprising a series of ribs, interior to said cover and bowl, secured to said stem, embracing said light source, and supporting said bowl.

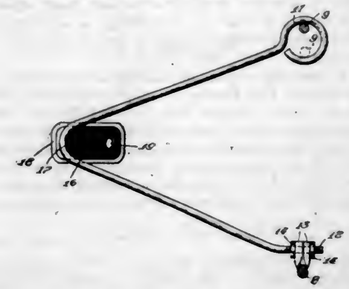
5. In a lighting fixture, a light source, an upper dust cover and a lower bowl-like shade, together forming a closed housing surrounding said light source, means to support said cover and shade with their edges juxtaposed, and a seating ring between said edges adapted to prevent relative movement therebetween.

[Claims 6 to 13 not printed in the Gazette.]

1,193,521. WIRE-HANGER. EDWARD ROBERT CUNNINGHAM, Portland, Oreg. Filed Aug. 23, 1915. Serial No. 46,777. (Cl. 191—40.)

1. In a catenary suspension for trolley wires, a single V-shaped member attached directly both to the trolley wires and to the suspension member and forming the only connection between them.

2. In a catenary suspension comprising a messenger wire, a trolley wire, and a resilient V-shaped member directly attached at its ends to the wires.



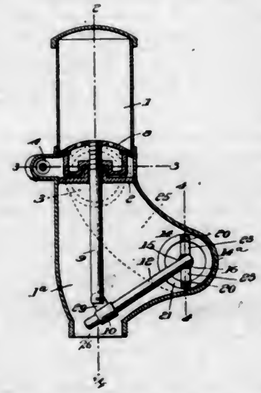
3. In a catenary suspension for trolley wires, a single piece resilient wire hanger to support and brace both the suspension and trolley wires at a curve forming the sole connection between them.

4. In a catenary suspension for trolley wires, a V-shaped wire hanger directly attached both to the messenger and trolley wires and adapted to be drawn at and by its apex to support the wires at a curve and forming the only connection between them.

5. A wire hanger of the class described consisting of a bent flexible member with two extremities, and means at the bend to insulate it.

[Claims 6 to 22 not printed in the Gazette.]

1,193,522. FLUSHING APPARATUS. EDWARD L. DELANY, New York, N. Y. Filed Sept. 27, 1912. Serial No. 722,615. (Cl. 137—93.)



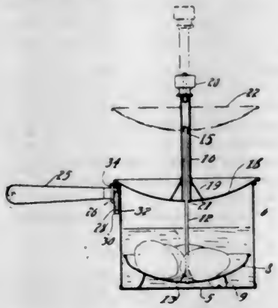
1. In a flushing device the combination with a cylinder and piston, a casing subjacent said cylinder, a tubular rod opening into the cylinder above said piston and depending from said piston into said casing, and means for admitting water to said cylinder beneath said piston, of a main supply pipe and a valve therein, a rod secured to said valve and having a sleeve movable thereon and secured to said tubular stem.

2. In a flushing device the combination with a cylinder and piston, a subjacent outlet casing, a tubular rod depending from said piston and opening into the cylinder above the piston and into said casing, means for admitting water to said cylinder, means for exhausting water from said cylinder to said casing, and means for controlling said latter means, of a main supply pipe and a valve therein, and a rod secured to said valve and to said tubular stem.

3. In a flushing device the combination with the cylinder and piston and the tubular rod depending from said piston, and means for admitting water to said cylinder, of a main supply pipe and valve therein, said valve comprising a threaded stem, a rod secured to said stem, and a sleeve movable on said rod and pivotally secured to said tubular stem.

4. In a flushing device the combination with the cylinder and piston, and means for admitting water to said cylinder, of a main supply pipe, a valve therein comprising a threaded stem, a yoke, a threaded sleeve supported by said yoke and engaging the threads of said stem, and a valve carried by said stem, a rod secured to said stem, a sleeve movable on said rod, and a tubular stem pivotally secured to said block and movable with said piston.

1,193,523. EGG-BOILING DEVICE. WILLIAM L. DEMING, Salem, Ohio. Filed Apr. 1, 1914. Serial No. 828,659. (Cl. 53—1.)



1. In a device of the character described, the combination of an upper and a lower tray, a rod rigidly secured to the lower tray and rising from it, a tube rigidly secured to the upper tray and rising from it, the rod extending into the tube, a stop carried by the tube adapted to engage the rod and enable it to support the upper tray, and means for preventing the rod drawing out of the tube, whereby the lower tray may be suspended.

2. In a device of the character described, the combination of a lower tray adapted to support and confine eggs, an upper tray saucer-shaped and adapted to support egg shells, a telescoping joint between the two trays provided with upper and lower stops allowing the distance between the trays to be changed while enabling the upper tray and lower stop to suspend the lower tray or the lower tray and upper stop to support the upper tray.

3. In a device of the character described, the combination of a vessel, a tray adapted to stand within the vessel and having supporting feet, a rod rising from such tray, a larger saucer-shaped tray adapted to constitute a cover for the vessel, and a limited sliding connection between the lower tray and the cover, such connection comprising the rod 12 and the stop 20, and enabling either tray to be supported by the other.

1,193,524. ATOMIZER. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Co., Toledo, Ohio, a Corporation of Ohio. Filed Dec. 6, 1915. Serial No. 65,434. (Cl. 128—2.)

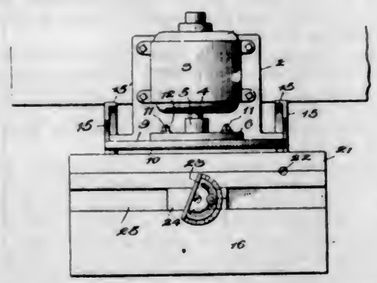


1. In an atomizer, a nozzle, air and liquid discharge tubes carrying said nozzle and projecting rearwardly therefrom in transversely spaced relation, said tubes having the distance between their outer sides broadened with respect to their forward ends at a point which is distant from said ends, and a nasal tip for removably receiving the nozzle and forward end portions of said tubes, said tip being of a length for its rear end to extend beyond the broadened portion of said tubes and having its rear end opening of a size less than the distance between the broadened outer side portions of the tubes to effect an inward springing of the tubes when the tip is placed in operative engagement therewith.

2. In an atomizer, a nozzle, air and liquid tubes carrying said nozzle and extending rearward therefrom, said tubes having their forward ends spaced apart and outwardly bulged at a point to the rear of the nozzle, and a nasal tip for fitting over said nozzle and the forward end portions of said tubes and having its forward end provided with a restricted opening for receiving and coöperating with the nozzle to center the tip with respect thereto and having its rear end adapted to coact with the bulged portion of said tubes to yieldingly retain the tip in position thereon.

3. In an atomizer, a nozzle, air and liquid tubes projecting rearwardly in spaced relation from opposite sides of said nozzle and having their outer sides tapered outward for a distance from their forward ends, and a nasal tip for fitting over said nozzle and the outwardly tapered end portion of said tubes, said tip having a restricted opening in its forward end for receiving and coacting with the nozzle to center the tip therewith and having its rear end slightly contracted and coacting with said tubes at a distance from their forward ends to effect an inward springing of the tubes when the tip is placed thereon.

1,193,525. DISK-GRINDING MACHINE. PETER DOSCH and CHARLES R. DOSCH, Stratford, Conn. Filed Jan. 26, 1916. Serial No. 74,327. (Cl. 51—13.)



1. In a grinding machine, a grinding disk, a dust collector therebeneath, and a work table adjustably supported on the collector and covering the latter.

2. In a grinding machine, a grinding disk, a dust collector arranged therebeneath and partly receiving the disk, a work table, and arc-shaped brackets adjustably supporting the table from and above the collector to constitute a guard and closure for the latter.

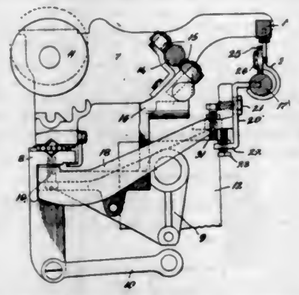
3. In a grinding machine, a grinding disk, a dust collector arranged therebeneath and having its opposite sides provided with arcuate channels, a work table, and arcuate brackets adjustably engaged in the channels of the collector for supporting the table.

4. In a grinding machine, a grinding disk, a dust collector arranged therebeneath and having its opposite sides provided with arcuate channels, a work table, arcuate brackets slidable in the channels of the collector and supporting the table, and clamp means carried by the collector for engaging with and adjustably securing the brackets.

5. In a grinding machine, a grinding disk, a dust collector arranged therebeneath and partly receiving the disk, said collector having its opposite sides between which the disk is disposed provided with arcuate channels, a work table, arcuate brackets slidable in the channels of the collector and supporting the table with its forward edge substantially at a fixed point above the dust collector to always overlie the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,193,526. CARRIAGE-SUPPORT FOR TYPE-WRITING MACHINES. BARNARD J. DOWD and ANTHONY UTZ, Hartford, Conn., assignors to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 19, 1914. Serial No. 867,270. (Cl. 197—69.)



1. In a typewriting machine, the combination with a platen carriage of a front guide way, an intermediate guide bearing rod secured to the carriage, a central support therefor fixed relatively to the feeding movement of the carriage, a bar secured to the carriage at the rear part thereof, bearing rollers carried and depending from said bar, and a guide rod beneath said bar upon which the bearing rollers rest fixed relatively to the movement of the carriage.

2. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of an intermediate carriage bearing and a rear bearing for the carriage comprising a bearing rod at the rear of the machine supported from said front bearing and fixed relatively to the feeding movement of the carriage and two rollers at the rear part of the carriage supported by the carriage frame and adapted to bear on the bearing rod to support the rear part of the carriage.

3. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing and to which the rear bearing rod is connected and two rollers at the rear part of the carriage adapted to bear on the bearing rod to support the rear part of the carriage.

4. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing, angle plates secured to the bearing rod and vertically adjustably connected to the rear ends of the bracket arms and two rollers at the rear part of the carriage adapted to bear on the bearing rod to support the rear part of the carriage.

5. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing, adjustable stops on the arms adapted to bear on the frame of the machine, angle plates secured to the bearing rod and vertically adjustably connected to the rear ends of the bracket arms, and two rollers at the rear part of the carriage adapted to bear on the bearing rod to support the rear part of the carriage.

[Claims 6 to 12 not printed in the Gazette.]

1,193,527. TRAP. JOHN J. DOWNEY, Roslindale, Mass. Filed Dec. 23, 1914. Serial No. 878,633. (Cl. 182—12.)



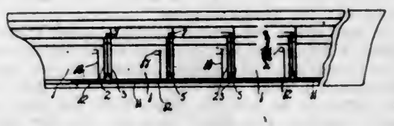
1. A trap comprising a pipe section having a horizontal member, upwardly extending arms above the plane of the horizontal member and at different angles from the axis thereof adapted to form a water-seal, an expanded portion intermediate the ends of the horizontal member forming a circular seat, a cap for said seat and means for detachably securing the cap therein.

2. A trap comprising a pipe section, having a straight portion and angled continuations, said pipe continuations being upwardly inclined at different angles to the straight section whereby either end may be connected to the outlet or inlet connections and wide range of adjustability secured, said upwardly inclined continuations forming in conjunction with the straight portion, a water seal, the central portion of the straight section having an opening therein to afford access thereto, a cap hermetically to seal said opening, and means removably to secure said cap to said straight portion.

3. A trap comprising a shallow horizontal body portion having an opening in its top of greater diameter than the width of the body portion formed by vertically flared walls, upwardly extending arms above the plane of the horizontal portion and at different angles thereto and forming therewith a water-seal, a clean-out closure detachably secured in said opening below the trap water-line and adapted to afford easy access to the trap interior.

4. A trap formed by an integral pipe portion comprising a shallow horizontal section, an expanded portion in said section having an opening to said section of greater diameter than the diameter of the pipe portion, a clean-out closure for said opening, means for detachably securing said closure therein, integral continuations of said horizontal section upwardly extending above the plane of said section and at different angles to the axis thereof, said continuations forming a water-seal whereby said clean-out closure is below the water-level of the trap.

1,193,528. SHIP. CHARLES VICTOR ALBERT ELEY, Edgbaston, Birmingham, England. Filed Feb. 17, 1916. Serial No. 78,978. (Cl. 114—68.)



1. In a ship, the combination of a series of watertight compartments; a pipe connecting said compartments; valves one in each compartment whereby each of said compartments may be put into connection with the pipe; and pumping mechanism in each of said compartments; for the purpose specified.

2. In a ship the combination of a series of double plated bulkheads dividing the ship into water tight compartments; a pipe connecting said compartments; valves one in each compartment whereby each of said compartments may be put into connection with the pipe and thus with each other; and pumping mechanism in each of said compartments; for the purpose specified.

3. In a ship the combination of a series of double plated bulkheads dividing the ship into water tight compartments; a pipe connecting said compartments; valves one in each compartment whereby each of said compartments may be put into connection with the pipe and thus with each other; and a series of centrifugal pumps lo-

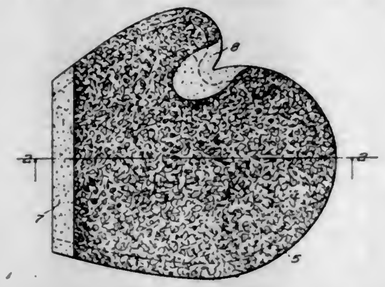
cated between the plates of each bulkhead and each adapted to receive water from one of the compartments; for the purpose specified.

4. In a ship, the combination of a series of water tight compartments; a pipe connecting said compartments; valves one in each compartment whereby each of said compartments may be put into connection with the pipe and thus with each other; pumping mechanism in each of said compartments; and means for indicating the head of water in each of said compartments; for the purpose specified.

5. In a ship the combination of a series of double plated bulkheads dividing the ship into water tight compartments; a pipe connecting said compartments; valves one in each compartment whereby each of said compartments may be put into connection with the pipe and thus with each other; a series of centrifugal pumps located between the plates of each bulkhead and each adapted to receive water from one of the compartments; and means for indicating the head of water in each of said compartments; for the purpose specified.

[Claims 6 to 15 not printed in the Gazette.]

1,193,529. BATH-MITTEN. JOSEPH ELLIS, Chicago, Ill. Filed Aug. 7, 1915. Serial No. 44,152. (Cl. 2—100.)



1. A bath mitten comprising a mitten formed of spongy material, and a lining of a more compact and tenacious material on the inside of the mitten integral with the spongy material.

2. A bath mitten comprising a mitten formed of spongy material, and a lining of a more compact and tenacious material on the inside of the mitten, extending over the outer side of the spongy material for a short distance around the wrist opening of the mitten, said lining being integral with the spongy material.

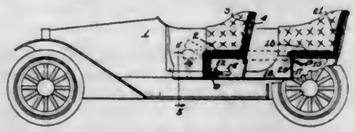
3. A bath mitten comprising a mitten formed of spongy material, a lining of a more compact and tenacious material on the inside of the mitten integral with the spongy material, and a tough covering reinforcing the outer side of the mitten at the juncture of the thumb and finger portions of the latter and formed integrally with the spongy material.

4. A bath mitten comprising a mitten formed of spongy material, a lining of a more compact and tenacious material on the inside of the mitten, extending over the outer side of the spongy material for a short distance around the wrist opening of the mitten, said lining being integral with the spongy material, and a tough covering reinforcing the outer side of the mitten at the juncture of the thumb and finger portions of the latter and formed integrally with the spongy material.

5. A bath mitten comprising a mitten of rubber sponge, a tough rubber coat lining the inner side of the mitten and extending out on the outer side for a short distance around the wrist opening thereof, said lining being integral with the sponge rubber, and a tough coat of rubber formed integrally with the rubber sponge on the outer side of the mitten at the juncture of the thumb and finger portions thereof.

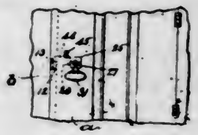
[Claim 6 not printed in the Gazette.]

1,193,530. DAVENPORT AUTOMOBILE-BODY. RICHARD L. FITZGERALD, Joliet, Ill. Filed Sept. 23, 1915. Serial No. 52,204. (Cl. 21—43.)



In a motor car body of the class described, the combination with the front and rear seats thereof, of a hingedly mounted back for the front seat adapted to be swung into horizontal position to span the space between said front and rear seats, a hingedly mounted kick board for the front seat adapted to be swung upwardly into horizontal position, and a hingedly mounted rear kick board adapted to be shifted at its upper end into position to support the rear end of the front seat back when the latter is adjusted to its horizontal position.

1,193,531. FASTENING DEVICE FOR DOORS. IRA W. FOGG, Lynn, Mass. Filed Nov. 3, 1915. Serial No. 59,474. (Cl. 70—45.)



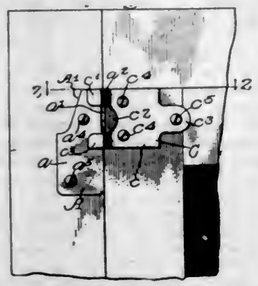
1. In a fastening device for doors, in combination, a latching member carried by the door casing and projecting into the path of movement of the side of the door, a striker carried by the side of the door and coöperating with said latching member to hold the door in its closed position, a disengaging member carried by the door and arranged substantially parallel with said striker and substantially at right angles with the latching member to effect disengagement of said member from said striker, and a handle pivoted to the outside of the door and having an arm extended into the door substantially parallel with said latching member to engage the disengaging member.

2. In a fastening device for doors, in combination, a lever carried by the door casing and provided with a lug having a substantially straight rear face and a cam-shaped front face and having its free end extended beyond said lug, a striker plate carried by the side of the door and coöperating with said lug to lift the said lever by engagement with the cam-shaped face thereof and to hold the door in its closed position by engagement with the substantially straight rear face of said lug, a lever carried by the door and arranged substantially at right angles to the lever carried by the door casing and cooperating with the portion thereof beyond the lug thereon to disengage the said lug from said striker plate, and means for operating said disengaging lever.

3. In a fastening device for doors, in combination, a latching member carried by the door casing and provided with a holding lug and arranged substantially parallel with the edge of the door in the closed position of the latter, a striker carried by the side of the door and cooperating with said holding lug, and means carried by the door and extended transversely with relation to said latching member to disengage said holding lug from said striker.

4. The combination with a door provided with a slot extended from one edge thereof and having a transverse striker slot located in the side of the door near the edge thereof and a transverse handle slot located in the side of the door removed from the edge thereof, a lever located in the first-mentioned slot, a striker in the striker slot, a handle pivoted to the outside of said door and having an arm extended into the handle slot to engage said lever, of a door casing having pivoted thereto a lever which projects into the path of movement of the side of said door to enter the striker slot and engage the said striker and the first-mentioned lever.

1,193,532. WINDOW SCREEN OR SASH HANGER. PETER FRANTZ, Sterling, Ill., assignor to Frantz Manufacturing Company, Sterling, Ill., a Corporation of Illinois. Filed May 20, 1912. Serial No. 698,571. (Cl. 16—48.)



1. In hangers for sashes or screens, a stationary sheet-metal bracket-plate formed with an up-turned lug extending outward from the plane of the sash or screen, and a movable sheet-metal plate for attachment to the sash or screen, said movable plate having a notch in one end thereof to receive said lug, said notch being shaped to permit variable positioning of either plate relative to the other about an axis passing through the base of said lug at right angles to said plane, whereby each plate has a plurality of effective positions relative to the other.

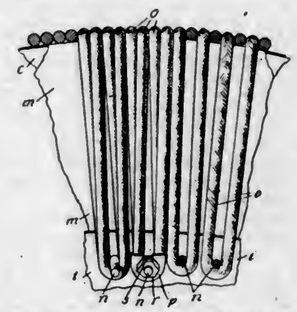
2. In hangers for sashes or screens, a stationary sheet-metal bracket-plate formed with an up-turned lug extending outward from the plane of the sash or screen, and a movable sheet-metal plate for attachment to the sash or screen, said movable plate having a notch in one end thereof to receive said lug, said notch being shaped to permit variable positioning of either plate relative to the other about an axis passing through the base of said lug at right angles to said plane, whereby each plate has a plurality of effective positions relative to the other, and the two plates having their body portions disposed in the same plane, the notched portion of the movable plate resting flatwise against the bracket-plate body.

3. In hangers for sashes or screens, a stationary sheet-metal bracket-plate formed with an up-turned lug extending outward from the plane of the sash or screen, and a movable sheet-metal plate for attachment to the sash or screen, said movable plate having a notch in one end thereof to receive said lug, said notch being shaped to permit variable positioning of either plate relative to the other about an axis passing through the base of said lug at right angles to said plane, whereby each plate has a plurality of effective positions relative to the other, and the other end of said movable plate having an attaching portion of the same shape as said notch.

1,193,533. TIRE-PROTECTOR. DAVID W. FREEMAN, Mist, Oreg. Filed Feb. 14, 1916. Serial No. 78,320. (Cl. 152—16.)

1. In a device of the character described, the combination with a wheel and a tire thereon, of parallel rings rigidly mounted on the sides of the wheel, lateral studs projecting outwardly from the rings, a continuous cable wound alternately around said studs twice around the periphery of the wheel, and said studs being so located that the consecutive convolutions of each winding of the cable will be spaced apart a distance approximately equal to the diameter of the cable.

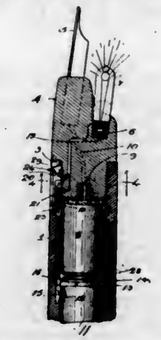
2. In a device of the character described, the combination with a wheel and a tire thereon, of parallel rings rigidly mounted on the sides of the wheel, lateral studs projecting outwardly from the rings, a continuous cable wound alternately around said studs, twice around the periphery of the wheel, said studs being so located that the consecutive convolutions of each winding of the cable will be spaced apart a distance approximately equal to the diameter of the cable, and concaved washers adapted to bear on the turns of the cable.



3. In a device of the character described, the combination with a wheel and a tire thereon, of parallel rings rigidly mounted on the sides of the wheel, lateral threaded studs projecting outwardly from the rings, a continuous cable wound alternately around said studs twice around the periphery of the wheel, concaved washers adapted to bear on the turns of the cable, and nuts threaded on the studs for holding said washers rigidly in place.

4. In a device of the character described, the combination with a wheel and a tire thereon, lateral studs projecting outwardly from the wheel, a continuous cable wound alternately around said studs, and means for clamping the cable against movement relative to the studs.

1,193,534. FOUNTAIN-PEN FLASH-LIGHT. JULIUS FRIEDMAN and JOSEPH L. FRIEDMAN, New York, N. Y. Filed Oct. 5, 1915. Serial No. 54,121. (Cl. 240—8.4.)



1. A combined fountain pen and electric light comprising a casing, a pen holder secured thereto, an electric lamp carried in the end of said holder and extending in the direction of the length and within the circumferential area thereof, a current source carried in said casing, circuit connections therefrom to the clamp, means to control said circuit connections, and a cover cap to telescope over the pen holder and lamp to inclose the same.

2. A combined fountain pen and electric light comprising a casing, a pen holder secured thereto, an electric lamp mounted in the end of the holder and extending in the direction of length and within the circumferential area thereof, an inkwell inclosed within the casing and delivering to the holder, a current source inclosed within the

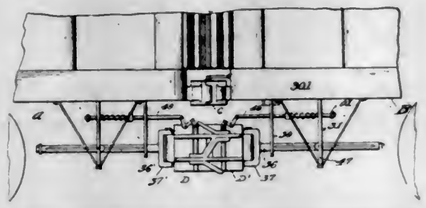
casing, circuit connections between said source and lamp, means for controlling said circuit connections, and a cover cap to telescope over and inclose the holder and lamp, said cap being detachably connected to the casing.

3. A combined fountain pen and electric light comprising a casing having its end threaded both interiorly and exteriorly, a pen holder fitted to the interior threads, a lamp carried by said holder, means to supply current to the lamp, and a cover cap to inclose the holder and lamp and fitted to the exterior threads of the casing.

4. A combined fountain pen and electric light comprising a casing, a pen holder having a depression, an inkwell housed within said casing and having a spout to be received in said depression when the holder is applied to the casing, a duct extending through the holder from said depression to the pen, a lamp carried by the holder, a battery housed within the casing and having circuit connections to the lamp, means to control said connections, and a cap cover detachably connected to the casing and inclosing said holder and lamp.

5. A combined fountain pen and electric light including a casing having an ink chamber therein, a pen holder carried by said casing and communicating with said ink chamber, an electric lamp carried by said holder, a source of current inclosed within said casing, means for establishing an electric circuit between said source and said lamp, a cap for said casing, and means for automatically breaking said circuit when said cap is placed over said casing.

1,193,535. AUTOMATIC COUPLING FOR RAILWAY-CARS. THOMAS J. FUTRELL, Los Angeles, Cal., assignor to Automatic Steam, Air, Electric Light and Telephone Coupler Company, Phoenix, Ariz., a Corporation of Arizona. Filed Jan. 4, 1916. Serial No. 70,201. (Cl. 188—13.)



1. The combination of railway cars provided with automatic couplers for the draw-bars, a pair of coöperating coupling heads provided with end connections of electric, steam and air conduits, adapted to make tight joints when said heads are in coupling position, protector plates projecting horizontally from the upper forward ends of said heads adapted to form a roof over said joints, hangers arranged in pairs and connected to said cars for supporting said heads, one hanger of each of said pairs being stationary, the other hanger being vertically movable in relation to said car, a horizontal supporting member for each head slidably mounted in said hangers, means for limiting the horizontal movement of said supporting member in relation to said hangers, coupling bars projecting from said heads and provided on their inner sides with inclined notches and vertical slots, the free ends of said coupling bars being inclined horizontally from said heads, guide bars arranged in pairs on said heads to coöperate with the coupling bars of the opposite head, the free ends of said guide bars forming divergent vertical angles adapted to guide the coupling bars of the opposite head in locking position, vertical locking bars slidably mounted on the sides of said heads, lugs on said locking bars adapted to coöperate with said notches and to engage said slots of the coupling bars, levers fulcrumed to said heads for operating said locking bars, rods operatively connected to said levers, springs engaging said rods and tending to move said lugs in locking engagement with said coupling bars and means on said rods operative when said cars recede from each other a predetermined distance for operating said levers to unlock said coupling bars and allow said heads to separate.

2. The combination of railway cars provided with automatic couplers for the draw-bars, a pair of coöperating coupling heads provided with end connections of electric steam and air conduits adapted to make tight joints when said heads are in coupling position, hangers arranged in pairs and connected to said cars for supporting said heads, a horizontal supporting member for each head slidably mounted in said hangers, means for limiting the horizontal movement of said supporting member in relation to said hangers, coupling bars projecting from said heads and provided on their inner sides with inclined notches and vertical slots, the free ends of said coupling bars being inclined horizontally outward from said heads, guide bars arranged in pairs on said heads, the free ends of said guide bars forming divergent vertical angles adapted to guide the coupling bars of the opposite head in locking position, locking bars movably mounted on the sides of said heads, means on said locking bars adapted to coöperate with said notches and to engage said slots of the coupling bars, levers fulcrumed to said heads for operating said locking bars, rods operatively connected to said levers, resilient means tending to move said locking bars in locking engagement with said coupling bars and means operative when said cars recede from each other a pre-determined distance for operating said levers to unlock said coupling bars and allow said heads to separate.

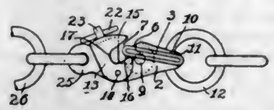
3. The combination of railway cars provided with automatic couplers for the draw-bars, a pair of coupling heads provided with end connections of one or more conduits adapted to make tight joints when said heads are in coupling position, hangers connected to said cars, head supporting members slidably mounted in said hangers, means for limiting the horizontal movement of said supporting member in relation to said hangers, coupling bars projecting from said heads and provided on their inner sides with vertical slots, the free ends of said coupling bars being inclined horizontally outward from said heads, guide bars arranged in pairs on said heads, the free ends of said guide bars forming divergent vertical angles adapted to guide the coupling bars of the opposite head in locking position, locking bars movably mounted on the sides of said heads and adapted to coöperate with said slots of said coupling bars, resilient means tending to move said locking bars in engagement with said coupling bars and means operative when said cars recede from each other a pre-determined distance for operating said levers to unlock said coupling bars and allow said heads to separate.

4. The combination of railway cars provided with automatic couplers for the draw-bars thereof, a pair of coupling heads provided with end connections of one or more conduits adapted to make tight joints when said heads are in coupling position, hangers connected to said cars, a supporting member for each head slidably mounted in said hangers, means for limiting the horizontal movement of said supporting member in relation to said hangers, coupling bars projecting from said heads, the free ends of said coupling bars being inclined horizontally outward therefrom, guide bars arranged in pairs, the free ends of said guide bars forming divergent vertical angles adapted to guide the coupling bars of the opposite head in locking position, locking means movably mounted on the sides of said heads and adapted to engage said coupling bars, levers fulcrumed to said heads for operating said locking means, means operatively connected to said locking means for moving the latter into locking position, and means operative when said cars recede from each other a predetermined distance for moving said locking means into inoperative position to release said coupling bars and allow said heads to separate.

5. The combination of railway cars provided with automatic couplers for the draw-bars thereof, a pair of coupling heads provided with end connections of conduits adapted to make tight joints when said heads are in coupling position, hangers connected to said cars for supporting said heads, a head supporting member slidably mounted in said hangers, means for limiting the horizontal movement of said supporting member in relation to said hangers, coupling bars projecting from said heads, guide bars arranged in pairs and adapted to guide the coupling bars of the opposite head in locking position, locking bars movably mounted in said heads and adapted to lock said coupling bars in position, resilient means operatively connected to said locking bars to move the same into operative position and means operative when said cars recede from each other a predetermined distance for moving said locking bars into inoperative position and allow said heads to separate.

[Claim 6 not printed in the Gazette.]

1,193,536. EMERGENCY-COUPLING. ANTON GRASTNER and FRANK PEHAM, St. Paul, Minn. Filed Aug. 9, 1915. Serial No. 44,618. (Cl. 24—241.)



1. An emergency coupling comprising two separable links, means for holding them normally interlocked in the same plane, said interlocking means comprising an idler disk journaled in the locking end of one of said links so as to turn upon a transverse axis, and a fixed element carried by the locking end of the other link and engaging said disk, and a lifting lever pivotally supported upon one of said links so as to turn upon a transverse axis and extending under the locking end of the other link whereby to lift it out of said plane.

2. An emergency coupling comprising two separable links lying normally interlocked in the same plane, a peripherally notched idler disk journaled in the locking end of one of the links so as to turn upon a transverse axis, a cross bar carried by the locking end of the other link and seating in a notch of the disk and a lifting lever pivotally supported upon the disk carrying link so as to turn upon a transverse axis and engageable with the locking end of the other link whereby to lift it out of said plane.

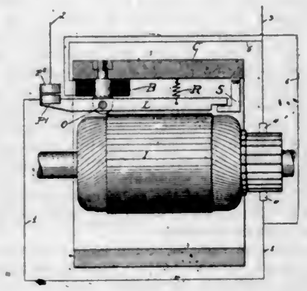
3. An emergency coupling comprising a supporting link having a central longitudinally slotted opening and being formed with a terminal notch in its outer end and a notch extending down from the top at the rear of said slot, a peripherally notched disk mounted in the slot so as to turn upon a transverse axis, said end and top notches lying in the same plane as the axis of the disk, a skeleton removable link fitting over said supporting link with one end lodged in said terminal notch and the other end lodged in the notch at the rear of said slot and seating in a peripheral notch of the disk, and means carried by the supporting link for lifting the locking end of the removable link out of the plane of said terminal notch and the axis of the disk.

4. An emergency coupling comprising a supporting link having a central longitudinally slotted opening and being formed with a terminal notch in its outer end and a notch extending down from the top at the rear of said slot, a peripherally notched disk mounted in the slot so as to turn upon a transverse axis and protruding into said notch at he rear of said slot, said end and top notches lying in the same plane as the axis of the disk, a skeleton removable link fitting over the supporting link with one end lodged in said terminal notch and the other lodged in the notch at the rear of the slot and seating in a peripheral notch of the disk, and a lifting lever pivotally supported upon the supporting link at the rear of said disk and having heels extending under the locking end of the removable link in position, when the lever is tilted, to engage and lift the locking end of the removable link out of the plane of said terminal notch and the axis of the disk, whereby to release the removable link.

5. An emergency coupling comprising a supporting link having a central longitudinally slotted opening and being formed with a terminal notch in its outer end and a notch extending down from the top at the rear of said slot, a peripherally notched disk mounted in the slot so as to turn upon a transverse axis, said end and top notches and the axis of the disk lying in the same plane, a removable link supported upon said supporting link and having at one end a cross bar lodged in said terminal notch and at the other end a cross bar lodged in the notch at the rear of said slot and seating in a peripheral notch of the disk, a lifting lever pivotally supported upon the supporting link at the rear of said disk and having heels engageable with the underside of the locking end of the removable link, whereby to lift it out of the plane of the terminal notches and the axis of the disk, and a spring controlled stop at the rear of the lever whereby to hold it normally tilted forward with said heels in downturned position.

[Claim 6 not printed in the Gazette.]

1,193,537. DYNAMO IN COMBINATION WITH AUTOMATIC SWITCH. EMILE GIRARDEAU, Paris, France. Filed Mar. 11, 1916. Serial No. 83,535. (Cl. 171—313.)



1. A charging unit comprising in combination a continuous current generator, and an automatic switch comprising a magnetizing coil connected to the brushes of the generator in such a way, that the magnetic field produced by this coil assists the one produced by the generator armature.

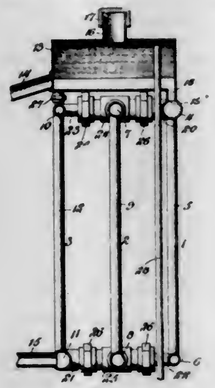
2. The combination with a continuous current generator of an automatic switch comprising a slip of magnetic material on which is mounted one of the switch contacts, said slip being pivotally mounted and having one end placed in position to be responsive to the armature flux to open the switch and a coil connected across the brushes of the generator for magnetizing said slip.

3. The combination with a continuous current generator of an automatic switch comprising a slip of magnetic material on which is mounted one of the switch contacts, said slip being pivotally mounted and having one end placed in position to be influenced by the armature flux, and a coil connected across the brushes of the generator for magnetizing said slip, said slip being attracted by the armature when the current flows through the armature in the normal direction and being repelled by the armature when the current reverses therein.

1,193,538. RADIATOR FOR AUTOMOBILES. THOMAS JEFFERSON GOODWIN, Waco, Tex. Filed May 22, 1915. Serial No. 29,800. (Cl. 257—129.)

1. A radiator for automobiles, comprising a plurality of radiator sections each made up of headers and connecting

pipes, readily removable couplings between the respective headers of adjacent radiator sections, and a distributing chamber or crown reservoir connected along one edge to a corresponding header and having readily removable connections at the other edge to the corresponding header of another radiator section.



2. A radiator for automobiles comprising a plurality of radiator sections with readily separable circulating connections between the corresponding ends of the radiator sections, and a distributing chamber permanently connected to one radiator section and removably connected to the corresponding portion of another radiator section.

3. An automobile radiator comprising front, rear and intermediate radiator sections, and a distributing chamber therefor constituting the crown of the radiator, said crown being fast to the front radiator section and provided with readily separable circulating connections to the rear section, readily separable circulating connections between the upper ends of the radiator sections, and readily separable circulating connections between the lower ends of the radiator sections.

4. An automobile radiator comprising radiator sections each made up of top and bottom headers and connecting pipes, readily separable circulating connections between the ends of the upper headers, readily separable circulating connections between the ends of the lower headers, a crown or reservoir or distributing chamber fast to and communicating with the upper header of one of the radiator sections, and readily separable circulating connections between the crown reservoir and the upper header of another one of the radiator sections.

5. An automobile radiator provided with a series of circulating radiator sections each having upper and lower headers and connecting pipes between them, the upper headers decreasing in diameter toward the rear of the radiator, and the lower headers decreasing in diameter toward the front of the radiator, and a distributing chamber for the top of the radiator connected to the front and rear top headers of the radiator.

[Claims 6 to 9 not printed in the Gazette.]

1,193,539. SIGNALING DEVICE FOR AUTOMOBILES. DE WITT H. GRAY, Fresno, Cal. Filed Mar. 27, 1916. Serial No. 87,137. (Cl. 177—311.)

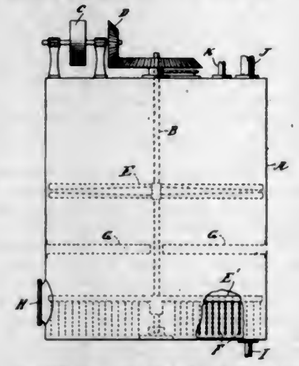


1. In a signaling apparatus for an automobile, the combination of a tubular container having a lateral slot therein, at one end thereof, having a notch on each side of the slot, a hollow rod having a collar near one end thereof, slidably disposed in the container and having a handle at the end of said rod and adjacent to the collar, the handle being constructed to project through the slot and outside the container, a signaling device consisting of a green electric light bulb attached to one end of said hollow rod, and a target surrounding the bulb, two curved spring projections on opposite sides of said rod adjacent to the handle and between the handle and the collar, attached to the rod with insulation between the rod and the springs, such springs being constructed to press against the interior wall of the container, the springs being separated from the rod by blocks of non-conducting material, insulated wire connections from the poles of the electric light bulb to each of such springs, two blocks of non-conducting material inserted in the wall of the container, opposite to each other, and at one end of the slot, contact members constructed of conducting material projecting through the insulation blocks in the container in such relation to the curved springs that when the handle is in the slot or in one of said notches, the springs will not touch the contact members, but when the handle is in the other notch the springs will touch the contact members, an electric battery, and a wire from each of the poles of the battery to the contact members.

2. In a signaling apparatus for an automobile, the combination of a tubular container having a lateral slot therein; with a notch at one end thereof, a hollow rod having a collar near one end thereof, slidably disposed in the container, and having a handle at the end of said rod and adjacent to the collar, the handle being constructed to project through the slot and outside the container, a signaling device consisting of a green electric light bulb attached to one end of said hollow rod, two curved spring projections on opposite sides of said rod between the handle and the collar, attached to the rod with insulation between the rod and the springs, such springs being constructed to press against the interior wall of the container, insulated wire connections from the poles of the electric light bulb to each of such springs, two blocks of non-conducting material through the wall of the container, opposite to each other, and at one end of the slot, contact members of conducting material constructed to project through the insulation blocks in the container in such relation to the curved springs that when the handle is in the slot the springs will not touch the contact members, but when the handle is in the notch the springs will touch the contact members, an electric battery, and a wire from each of the poles of the battery to the contact members.

3. In a signaling apparatus for an automobile, the combination of a tubular container having a lateral slot therein, with notches at one end thereof, on opposite sides of the slot, the container having an inwardly projecting flange at one end thereof, a hollow rod having a collar near one end thereof, slidably disposed in the container and having a handle attached thereto, at the end of said rod and adjacent to the collar, the handle being constructed to project through the slot and outside the container, a signaling device consisting of a target, and a green electric light bulb in the center of such target attached to one end of said hollow rod, two curved spring projections on opposite sides of said rod adjacent to the handle and between the handle and the collar, and insulated from such rod, such springs being constructed to press against the interior wall of the tubular container, insulated wire connections from the poles of the electric light bulb to each of such springs, two blocks of insulation through the wall of the container, opposite to each other, and at one end of the slot, contact members constructed of conducting material projecting through the insulation blocks in the container in such relation to the curved springs that when the handle is in one of the notches the springs will register with the contact members, but they will not register when the handle is in the other notch or in the slot, an electric battery, and a wire from each of the poles of the battery to the contact members, and a compression spring between the flange and the collar constructed to normally force the rod into the container when the handle is free to slide in the slot.

1,193,540. METHOD FOR CONVERTING HIGHER-BOILING PETROLEUM HYDROCARBONS INTO LOWER-BOILING PETROLEUM HYDROCARBONS. GEORGE WILLIAM GRAY, Houston, Tex. Filed Jan. 23, 1913. Serial No. 743,713. (Cl. 196—26.)



1. The process of converting hydrocarbons having higher-boiling-points into naphtha, which consists in heating said hydrocarbons in the presence of anhydrous aluminum chlorid to a temperature producing vapor having a temperature not substantially above the end-boiling-point of naphtha and maintaining them at such temperature.

2. The process of converting hydrocarbons having higher-boiling-points into hydrocarbons having lower-boiling-points; which consists in heating said hydrocarbons in the presence of anhydrous aluminum chlorid, to a temperature producing vapor having a temperature not substantially above the end-boiling point of illuminating oil and maintaining them at such temperature.

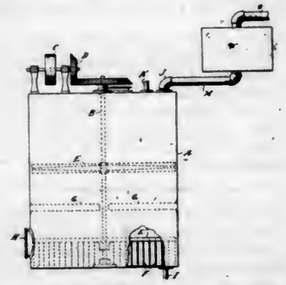
3. The process of converting hydrocarbons having higher-boiling-points into naphtha, which consists in heating said hydrocarbons in the presence of anhydrous aluminum chlorid, to a temperature producing vapor having a temperature not substantially above the end-boiling-point of naphtha and maintaining such vapor temperature until the greater part of the oil has been separated as naphtha.

4. The process of converting hydro-carbons having higher boiling-points into hydrocarbons having lower boiling-points, which consists in heating said hydrocarbons in the presence of anhydrous aluminum chlorid, to a temperature producing vapor having a temperature not substantially above the end-boiling-point of illuminating oil and maintaining such vapor temperature until the greater part of the oil has been separated as naphtha and illuminating oil.

1,193,541. METHOD FOR CONVERTING HIGHER-BOILING PETROLEUM HYDROCARBONS INTO LOWER-BOILING PETROLEUM HYDROCARBONS. GEORGE WILLIAM GRAY, Houston, Tex. Filed Jan. 23, 1913. Serial No. 743,714. (Cl. 196—26.)

1. The process of converting hydrocarbons having higher-boiling-points into hydrocarbons having lower-boiling-points, which consists in heating such hydrocarbons in the presence of anhydrous aluminum chlorid to a temperature producing vapor having a temperature above the end-boiling-point of naphtha, but below the end-boiling-point of illuminating oil, maintaining such vapor temperature to separate the oil as naphtha and illuminating oil, condensing the illuminating oil driven off in a preliminary cooling chamber, and conducting the naphtha driven off to a condenser.

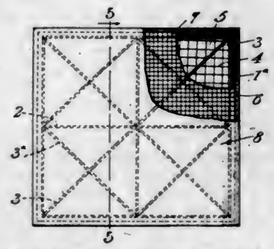
2. The process of converting hydrocarbons having higher-boiling-points into naphtha, which consists in heating said hydrocarbons in the presence of anhydrous aluminum chlorid to a temperature producing vapor having a temperature above the end-boiling-point of naphtha, but below the end-boiling-point of illuminating oil, condensing the illuminating oil driven off in a preliminary cooling chamber, returning said oil to the still to be further acted on whereby higher-boiling oil is converted into naphtha, and conducting the naphtha driven off to a condenser.



3. The process of converting hydrocarbons having higher-boiling-points into hydrocarbons having lower-boiling-points, which consists in heating such hydrocarbons in the presence of anhydrous aluminum chlorid to a temperature producing vapor having a temperature above the end-boiling-point of naphtha, but below the end-boiling-point of illuminating oil, maintaining such vapor temperature until the greater part of the oil has been separated as naphtha and illuminating oil, condensing the illuminating oil driven off in a preliminary cooling chamber, and conducting the naphtha driven off to a condenser.

4. The process of converting hydrocarbons having higher-boiling-points into naphtha, which consists in heating said hydrocarbons in the presence of anhydrous aluminum chlorid to a temperature producing vapor having a temperature above the end-boiling-point of naphtha, but below the end-boiling-point of illuminating oil, condensing the illuminating oil driven off in a preliminary cooling chamber, returning said oil to the still to be further acted on, whereby the greater portion of the higher-boiling oil is converted into naphtha, and conducting the naphtha driven off to a condenser.

1,193,542. BUILDING BLOCK OR SECTION. EUGENE GREGORY, Michigan City, Ind. Filed June 12, 1912. Serial No. 703,217. (Cl. 72—42.)



1. A building section comprising a frame, intersecting bracing strips within the frame, a layer of non heat-conducting material upon such frame, a wrapping of wire around said layer, and an outer composition covering.

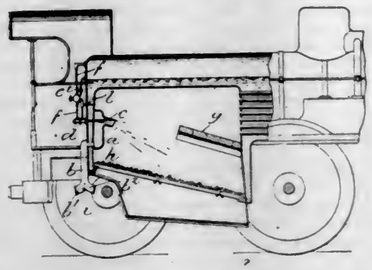
2. A building section comprising a frame composed of strips of suitable material, with intersecting strips within the frame and X-braces between the intersecting strips, a non-heat-conducting layer upon the exterior of such frame, a wrapping of wire around said frame, and an outer composition covering.

3. A building section comprising a foundation frame composed of narrow strips of suitable material arranged on edge; intersecting braces arranged within the frame and X-braces between the first braces; a layer of paper or felt upon such frame, a wrapping of wire around said layer, and an outer covering of cement.

4. A building section comprising a foundation frame composed of narrow strips of suitable material arranged on edge, intersecting braces in said frame, a layer of paper or felt upon such frame, a wrapping of wire, a second wrapping of wire around said frame intersecting the first wrapping of wire around said layer, and an outer covering of cement.

5. A building section comprising a foundation frame composed of narrow strips of suitable material arranged on edge, intersecting strips arranged within the frame, and X-braces between the intersecting strips; a layer of paper or felt upon such frame; a wrapping of wire, a second wrapping of wire around said frame intersecting the first wrapping of wire around said layer, and an outer covering of cement.

1,193,543. LOCOMOTIVE-BOILER FURNACE. ROBERT GREGORY, deceased, late of Westminster, England, by Mary Ann Gregory, administratrix, and George Robert Gregory, Westminster, England. Filed May 25, 1912. Serial No. 699,749. (Cl. 110—22.)



1. The combination with a locomotive boiler furnace of an air chamber that is exposed to the furnace heat, but that constitutes a compartment separate from the interior of the furnace with which it communicates through a nozzle, an air inlet pipe having one end connected to said air chamber and its other end open and facing the direction of travel of the locomotive, a liquid fuel reservoir disposed at a higher level than said air chamber, and means for injecting fuel from said reservoir into the stream of heated air being discharged through said nozzle above the grate of the furnace, said means comprising an injector opposite to said nozzle, a fuel supply pipe connecting said fuel reservoir with said injector and having a portion extending upwardly from the injector casing, a tubular connection between the furnace and said portion, and a fuel nipple arranged within said upwardly extending portion in proximity to the junction therewith of said tubular connection, as set forth.

2. The combination with a locomotive boiler furnace of an air chamber that is exposed to the furnace heat, but that constitutes a compartment separate from the interior of the furnace with which it communicates through a nozzle, an air inlet pipe having one end connected to the lower part of said air chamber and its other end portion formed with branches whose open ends are respectively directed forwardly and backwardly, a liquid fuel reservoir disposed at a higher level than said air chamber, and means for injecting fuel from said reservoir into the stream of heated air being discharged through said nozzle above the grate of the furnace, said means comprising an injector opposite to said nozzle, a fuel supply pipe connecting said fuel reservoir with said injector and having a portion extending upwardly from the injector casing, a tubular connection between the furnace and said portion, and a fuel nipple arranged within said upwardly extending portion in proximity to the junction therewith of said tubular connection, as set forth.

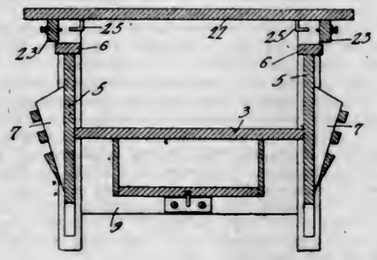
3. The combination with a locomotive boiler furnace of an air chamber that is exposed to the furnace heat, but that constitutes a compartment separate from the interior of the furnace with which it communicates through a nozzle, an air inlet pipe having its upper end connected to the lower part of said chamber and its lower end extended below the furnace and open in the direction of travel of the engine, a liquid fuel reservoir disposed at a higher level than said air chamber, and means for injecting fuel from said reservoir into the stream of heated air being discharged through said nozzle above the grate of the furnace, said means comprising an injector opposite to said nozzle, a fuel supply pipe connecting said fuel reservoir with said injector and having a portion extending upwardly from the injector casing, a tubular connection between the furnace and said portion, and a fuel nipple arranged within said upwardly extending portion in proximity to the junction therewith of said tubular connection, as set forth.

4. The combination with a locomotive boiler furnace of an air chamber that is exposed to the furnace heat, but that constitutes a compartment separate from the interior of the furnace with which it communicates through a nozzle, an air inlet pipe having one end connected to said chamber and its other end open and facing the direction of travel of the locomotive, a liquid fuel reservoir disposed at a higer level than said air chamber, and means for mixing hot gases with fuel from said reservoir and then injecting this mixture into the steam of heated air being discharged from the nozzle above the grate of the furnace, said means comprising an injector opposite to said nozzle, a fuel supply pipe connecting said fuel reservoir with said injector and having a portion extending upwardly from the injector casing, a tubular connection between the furnace and said portion, and a fuel nipple arranged within said upwardly extending portion in proximity to the junction therewith of said tubular connection, as set forth.

5. The combination with a locomotive boiler furnace of an air chamber that is exposed to the furnace heat, but that constitutes a compartment separate from the interior of the furnace with which it communicates through a nozzle, means whereby air is forced into said air chamber by the movement of the locomotive, a grate for supporting solid fuel, a liquid fuel reservoir, and means for injecting fuel therefrom into the stream of heated air being discharged through said nozzle above the grate of the furnace, said means comprising an injector opposite to said nozzle, a fuel supply pipe connecting said fuel reservoir with said injector and having a portion extending upwardly from the injector casing, a tubular connection between the furnace and said portion and a fuel nipple arranged within said upwardly extending portion in proximity to the junction therewith of said tubular connection, as set forth.

[Claims 6 to 8 not printed in the Gazette.]

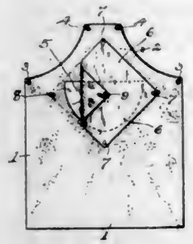
1,193,544. COMBINATION TABLE AND SEAT. MARION JAY HARDEN, Akron, Ohio. Filed Nov. 10, 1915. Serial No. 60,766. (Cl. 155—6.)



1. An article of furniture comprising posts; a seat connecting the posts; a top resting on the posts; and angular keepers carried by the under surface of the top, the ends of the keepers projecting outwardly in opposite directions, the posts being provided in their inner edges with longitudinal grooves which open through the upper ends of the posts, the grooves receiving the said ends of the keepers when the top is disposed vertically, thereby to hold the top in coöperating relation with the seat, to serve as a back.

2. In a device of the class described, posts; a seat connecting the posts; a top supported on the posts; locking devices carried by the top and coacting with the posts to hold the top against movement with respect to the posts; fingers carried by the under surface of the top, there being openings in the posts adjacent their upper ends and adapted to receive the fingers, thereby to hold the top in an upright position and substantially at right angles to the seat, to form a back coöperating with the seat; and means for holding the latches in retracted positions, thereby to prevent the latches from engaging the posts when the top is in back forming relation with respect to the seat.

1,193,545. APRON. JAMES H. HART, Forest Park, N. Y. Filed Oct. 13, 1913. Serial No. 794,771. (Cl. 2—54.)



1. An apron comprising a body, a pocket secured to the outer face of the body centrally thereof, and a rotatable reinforcing member detachably secured to the body and covering the pocket in its successive positions.

2. An apron comprising a body having a bib portion at one end, a pocket secured to the body adjacent to the bib portion centrally thereof, a rotatable reinforcing member of rectangular form in outline upon the body and covering the pocket with one of its corners extending upon the bib portion centrally thereof and an opposite corner extending downward upon the body below the pocket and capable of having either corner arranged upon the bib portion to present a new wearing surface, and a fastener adjacent to each corner of the member for detachably securing the member to the body and covering the pocket.

1,193,546. LINOLEUM-STRETCHER. ROSS L. HAUGH and WILLIAM G. HAUGH, Cleveland, Ohio. Filed Oct. 5, 1915. Serial No. 54,145. (Cl. 254—62.)

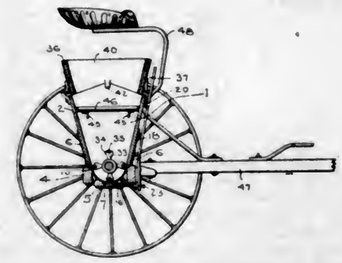


1. In a linoleum stretcher, the combination of a base-member; a clamping-member pivotally mounted upon said base-member and adapted to secure the linoleum between it and the latter; and a locking pawl mounted upon said base-member and adapted to engage said clamping-member so as to fix the latter and said base-member relatively to each other.

2. In a linoleum stretcher, the combination of a base-member; a clamping-member pivotally mounted upon said base-member and adapted to secure the linoleum between it and the latter; and a locking pawl mounted upon said base-member and adapted to frictionally engage said clamping-member so as to fix the latter and said base-member relatively to each other.

3. In a linoleum stretcher, the combination of a base-member having an upwardly and rearwardly extending front portion; a clamping member having its forward end pivotally secured upon the rear extremity of said front portion; said forward end being upwardly and rearwardly curved and terminating in an extension forming a handle; and a pawl pivotally mounted upon the end of said rearwardly extending front portion adapted to engage said clamping-member and fix the latter and said base-member with relation to each other.

1,193,547. FERTILIZER-DISTRIBUTER. DAVID R. HOLDEN, Peoria, Ill. Filed Dec. 15, 1913. Serial No. 806,749. (Cl. 111—34.)



1. In a fertilizer distributer and in combination, a hopper having a plurality of discharge openings in its bottom and also a plurality of depending projections extending therefrom, each of said projections having an elongated slot therein, and agitator in said hopper, means for regulating the discharge through said openings including a bar passing through said slots, links pivotally connecting said bar to said hopper and means for moving said bar longitudinally of itself whereby due to its link connection, it is moved across said discharge opening.

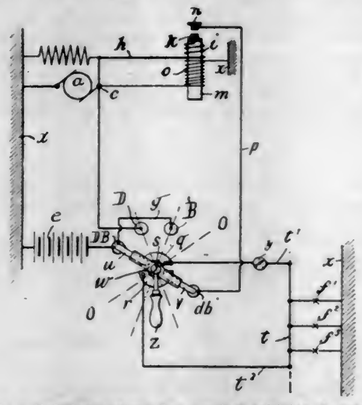
2. In a fertilizer distributer, and in combination, a hopper comprising front and rear members, end members, bottom beams for supporting said front and rear members, a bottom for said hopper comprising sections, each section being curved in cross-section and having laterally extended flanges adapted to rest on said bottom beams, said sections having offset portions and corresponding shoulders in each end whereby they fit together to form a continuous bottom with a smooth inner surface.

3. In a fertilizer distributer, and in combination, a hopper having bottom beams, and a bottom for said hopper comprising sections, each section being curved in cross-section and having laterally extended flanges adapted to rest on said bottom beams, said sections having offset portions and corresponding shoulders in each end whereby they fit together to form a continuous bottom, each section having discharge openings therein and having a projection provided with an elongated slot, and transversely movable means passing through said slots to regulate said discharge openings.

4. In combination, in a fertilizer distributer, a hopper comprising front and rear members, end members engaging the ends of said front and rear members, a bottom for said hopper having a plurality of discharge openings therein, means for regulating said openings, inwardly extending lugs on said end members, and a screen supported on said lugs, said lugs being located intermediate the upper and lower edges of the end members so that the screen is supported in a portion removed from the upper edge of the hopper.

5. As an article of manufacture, a hopper bottom section curved in cross-section, having discharge openings therethrough and a latterly extending flange on each side and a lug extending downwardly from its under side having an elongated slot therein.

1,193,548. LIGHTING SYSTEM FOR MOVING VEHICLES. GOTTLOB HONOLD, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed June 7, 1915. Serial No. 32,776. (Cl. 171—313.)



1. In a lighting system for moving vehicles, a generator driven at varying speed, an automatic voltage switch for the generator, a second source of current, electric lamps, and circuit connections including a switch having one position in which the generator alone is connected to the lamps, and having a second position in which the generator and the automatic switch are connected to the lamps in parallel with the second source of current.

2. In a lighting system for moving vehicles, a generator driven at varying speed, an automatic voltage switch for the generator, a battery, electric lamps, and circuit connections including a switch having one position in which the generator alone is connected to the lamps, and having a second position in which the generator and the automatic switch are connected to the lamps, and also having a third position in which the battery alone is connected to the lamps.

3. In a lighting system for moving vehicles, a generator driven at varying speed, an automatic voltage switch for the generator, a battery, electric lamps, and circuit connections including a switch having one position in which the battery alone is connected to the lamps, and having a second position in which the generator alone is connected to the lamps, and also having a third position in which the generator and the automatic switch are connected to the lamps in parallel with the battery.

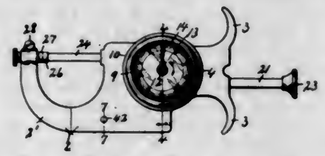
4. In a lighting system for moving vehicles, a generator driven at varying speed, an automatic voltage switch having a shunt exciting winding connected across the generator terminals and also having coöperative series contacts, a battery, electric lamps, and circuit connections including a switch having one position in which the generator alone is connected to the lamps and also having a second position in which the generator and the series contacts are connected to the lamps in parallel with the battery.

5. In a lighting system for moving vehicles, a generator driven at varying speed, an automatic voltage switch for the generator, a battery, electric lamps, and circuit connections including a switch having one position in which the generator is connected to the lamps and also having a second position in which the generator is connected to the lamps in parallel with the battery, said switch having an auxiliary arm arranged to connect the automatic switch in circuit with the generator when the battery and generator are connected in parallel.

[Claims 6 to 8 not printed in the Gazette.]

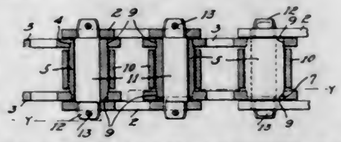
1,193,549. MICROMETER-GAGE. THOMAS HOOKER, Syracuse, N. Y. Filed July 12, 1912. Serial No. 709,114. (Cl. 33—147.)

A micrometer gage comprising a frame having a U-shape arm at one end and a relatively stationary contact member thereon, a pinion journaled in the frame, a sliding contact member having a toothed rack engaged with one side of the pinion, a plunger mounted on the frame and provided with a toothed rack engaging the opposite side of the pinion whereby the movement of the plunger



in one direction will cause the movement of the sliding contact bar in the opposite direction, a dial concentric with the pinion, an index finger movable around the dial, and means for transmitting motion from the pinion to the index finger.

1,193,550. SPROCKET DRIVE-CHAIN. ANTON I. HOVLAND, Marshall, Minn. Filed June 16, 1913. Serial No. 773,982. (Cl. 74—32.)

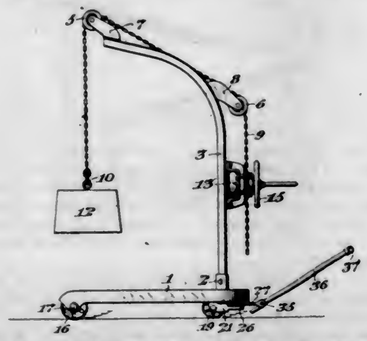


1. A sprocket chain having links composed of side bars, the bars of one link lapping over the adjacent bars of the adjoining link, bushings mounted in the inner bars of said links and having eccentric openings therein, and pins having eccentric surfaces fitting within said openings and seated in the outer bars of said links, said bushings and pins being capable of being turned end for end, for the purpose specified.

2. A sprocket chain comprising links composed of side bars, bushings having end portions fitting within the side bars of some of said links, said bushings having flat and tapered surfaces at their ends seated against corresponding surfaces in said bars, whereby strain on said bars will draw them inwardly on said bushings, and pivot pins passing through said bushings and having bearings in the bars of said other links.

3. A sprocket chain comprising links having side bars, pivot pins for said links, and bushings having eccentrically arranged openings therein to receive said pins, said bushings being adapted to be turned end for end to raise or lower the links.

1,193,551. PORTABLE CRANE. FRANK H. HOWARD, Reading, Pa. Filed Sept. 7, 1915. Serial No. 49,143. (Cl. 21—65.)



1. In a portable truck, the combination of a channeled frame, a pair of rollers mounted upon stationary axes, a pair of rollers mounted upon relatively movable axes, caster frames in which the movable rollers are mounted, forwardly projecting arms on said caster frames, a yoke connecting said arms, a draw bar formed with a trunnion on its inner end, a socket in the frame for engagement with said trunnion, said draw bar having a longitudinal slot, a bolt carried by said yoke and adapted to travel in said slot, and an operating handle pivotally attached to the free end of the draw bar.

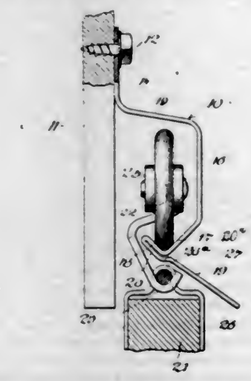
2. In a portable truck the combination of a substantially U-shaped, channeled frame, a stationary roller mounted in each free extremity of said frame, a pair of caster frames rotatably mounted in the frame near the opposite end thereof, each of said caster frames having a forwardly projecting arm, rollers mounted in said caster frames, a yoke attached to and connecting the said projecting arms, a bolt carried by said yoke at its longitudinal center, a draw bar formed with a trunnion at its inner end, a bearing socket in the frame to accommodate said trunnion, said draw bar having a longitudinal slot adapted to be engaged by said bolt, and an operating handle attached to the free end of the yoke.

3. The combination of a truck frame, a set of movable rollers, a caster frame for each roller, said caster frames each being formed with a pivot pintle and a forwardly projecting arm, a draw bar formed with a trunnion at its inner end, a socket in the frame to provide a single pivot point for the draw bar, said draw bar being slotted longitudinally, a yoke connecting the ends of the caster arms, and a bolt carried by said yoke and in engagement with said slot.

1,193,552. PROCESS OF MAKING MINERAL ACIDS. HENRY HOWARD, Brookline, Mass. Filed July 13, 1914. Serial No. 850,674. (Cl. 23—1.)

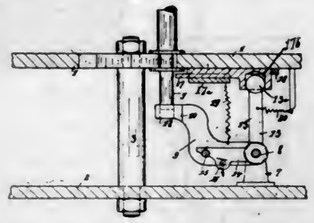
In a process of making nitric acid and hydrochloric acids, the method of effecting an adjustment between the nitric and hydrochloric acid furnaces, the latter of greater capacity than the former, which consists in producing nitric acid and acid sodium sulfate by reaction between sodium nitrate and sulfuric acid, mixing the acid sodium sulfate residue from the nitric acid furnaces with an excess of sodium chlorid, supplying sulfuric acid in proportion to compensate the deficiency of acid sulfate and to produce normal sodium sulfate, and stirring and heating the mixture.

1,193,553. BARN-DOOR TRACK. WILLIAM F. JACOBS, Ottawa, Ill., assignor to J. E. Porter Company, Ottawa, Ill., a Corporation of Illinois. Filed Apr. 22, 1915. Serial No. 23,021. (Cl. 16—7.)



A track member made of sheet material and bent to comprise an upper flange adapted to be rigidly secured to the wall of a building, a web integral with and extending outwardly from said flange, a web integral with and extending downwardly from said outwardly extending web, said downwardly extending web having the lower marginal portion thereof bent inwardly and upwardly to form a substantially V-shaped, upwardly opening trough adapted to receive therein the rollers of a door hanger; the opposed surfaces of the inclined walls of said trough constituting the tread surface of said track member, and the inner inclined wall of said trough being bent outwardly and downwardly upon itself to provide a double thickness of sheet material for said inner inclined wall and to provide a flange extending outwardly and downwardly from said track member and below said trough, and said last named flange being provided intermediate its longitudinal edges and adjacent to the bottom of said trough with an upwardly offset portion forming a downwardly facing shoulder.

1,193,554. BRAIDING-MACHINE. WALTER KELLNER, Barmen-Wichlinghausen, Germany, assignor to Carl F. Ahlstrom and Otto J. Ahlstrom, New York, N. Y. Filed Aug. 9, 1912. Serial No. 714,190. (Cl. 28—4.)



1. In a braiding machine in combination, a bobbin movable along a track arranged to stop at determined stations out of the path of travel, ejecting means at each station for projecting the bobbin into the path of travel, a bell crank lever mounted so as to actuate said means, and a movable arm connected to an arm of said lever and having a seat for engaging the end of the bobbin to lock the same, said last named arm movable independently of said ejecting means to permit said seat to engage the bobbin.

2. In a braiding machine in combination, a bobbin movable along a track and arranged to stop at determined stations out of the path of travel, ejecting means at each station for projecting the bobbin into the path of travel, a bell crank lever to actuate said means and locking means for engaging the end of the bobbin and independently movable with respect to said bell crank lever to permit the same to lock the bobbin without actuating said ejecting means.

3. In a braiding machine in combination, a bobbin movable along a track arranged to stop at determined stations out of the path of travel, means at each station for projecting a bobbin into the path of travel, a bell crank lever arranged to actuate said means and a locking arm arranged to swing downwardly independently of said bell crank lever, to engage a bobbin and lock the same, and means for actuating said locking lever when said bell crank lever is actuated to release the bobbin.

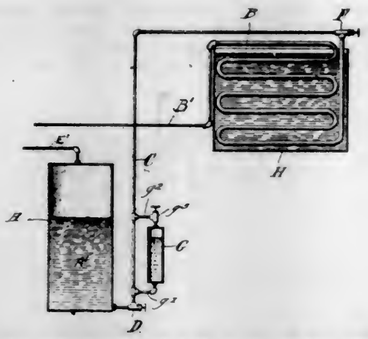
4. In a braiding machine, a bobbin movable along a track and adapted to stop at determined stations therein out of the path of travel, a lever at each of said stations depressible by said bobbin for locking the same against movement, a reciprocating slide also at each of said stations for projecting the bobbin into the path of travel, and an automatically operated angle lever one arm of which contacts with and depresses the locking lever to disengage the bobbin, and the other arm actuates the slide to forward said bobbin into the path of travel.

5. In a braiding machine in combination, a bobbin movable along a track arranged to stop at determined stations out of the path of travel, means at each station for projecting a bobbin into the path of travel, a bell crank lever arranged to actuate said means and a locking arm ar-

ranged to swing downwardly independently of said bell crank lever to engage a bobbin and lock the same, and means for actuating said locking lever when said bell crank lever is actuated to release the bobbin, said locking lever having a seat for engaging the lower end of the bobbin when locking the same, said seat having an inclined face in the path of the bobbin adapted to move said locking lever independently of said bell crank lever in locking the bobbin.

[Claims 6 and 7 not printed in the Gazette.]

1,193,555. REFRIGERANT MEASURING AND DISPENSING DEVICE. WILLIAM J. KELLY, Chicago, Ill., assignor to Autovacuum Refrigerating Company, New Orleans, La., a Corporation of Louisiana. Filed June 9, 1914. Serial No. 843,970. (Cl. 62—124.)



In a refrigerating apparatus, a refrigerant reservoir, king-valve, refrigerant pipe, expansion valve and refrigerating coil, in combination with an auxiliary refrigerant reservoir having upper and lower connections with said refrigerant pipe between said king-valve and said expansion valve, and a valve for closing said upper connection, for the purposes described.

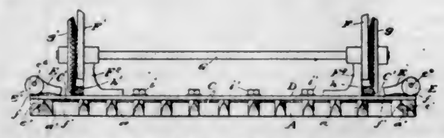
1,193,556. HAT-PIN-POINT-PROTECTING DEVICE. JOHN T. KEMPS, Cuba, Wis., assignor of one-third to Henry Fush and one-third to Sherman E. Smalley, Cuba, Wis. Filed Aug. 22, 1912. Serial No. 716,509. (Cl. 24—155.)



A pin protector comprising a cylindrical tube provided with a side opening communicating with its longitudinally extended opening, pivot ears extending from said tube, a pawl pivotally connected with said pivot ears and provided with a gripping tongue extending through the side opening of said tube, said pawl being formed of resilient material and provided with side walls extending along the side portions of said tube in contacting relation therewith to cause a binding engagement therewith when said pawl is moved to a releasing position, and resilient means normally holding said pawl in an operative position.

1,193,557. MOWING-MACHINE. GEORGE H. KENDALL, New York, N. Y. Filed Mar. 19, 1910, Serial No. 550,354. Renewed Jan. 27, 1916. Serial No. 74,700. (Cl. 56—45.)

1. In a cutting apparatus, the combination of a finger bar, a plurality of series of gears mounted thereon, the gears of each series meshing with one another and the adjacent gears of the different series being disconnected, a plurality of series of rotatable knives equal in number to the number of series of gears and each knife being operable by one gear, a common source of power for operating the gears, and separate means communicating with said source of power and with each series of gears, whereby each of said series is driven independently of its adjacent series.



2. In a cutting apparatus, the combination of a finger bar, a plurality of series of gears mounted thereon, each of said series of gears being in train and each train being disconnected from its adjacent train, a power shaft, traction wheels adapted to generate the power for driving said power shaft, separate means communicating with said power shaft and each of said gear trains, whereby each of said trains is driven independently from the power shaft, and a cutter disk coöperating with each gear and rotatable thereby.

3. In a cutting apparatus, the combination of a frame bar, a finger bar positioned below said frame bar, locking means coöperating with said bars for detachably securing them together, gears and rotary cutters positioned intermediate the frame and finger bars and supported by the latter, means coöperating with the frame bar for properly positioning said gears and cutters, said positioning means being unattached to the finger bar, whereby, upon the releasing of said locking means, the frame bar and coöperating positioning means may be simultaneously removed from the finger bar, leaving said finger bar and the gears and cutters which it supports as a detached unit.

4. In a cutting apparatus, the combination of a frame bar, a finger bar positioned below the frame bar, cutting mechanism mounted upon the finger bar and retained in relative position by positioning means mounted on the frame bar, and locking means mounted on one of said bars and coöperating with the other bar for the purpose of locking the bars against relative movement, said locking means being operable to disengage the bars whereby the frame bar with its positioning devices is simultatneously removable from the finger bar and the gears and cutters which depend upon said finger bar for support.

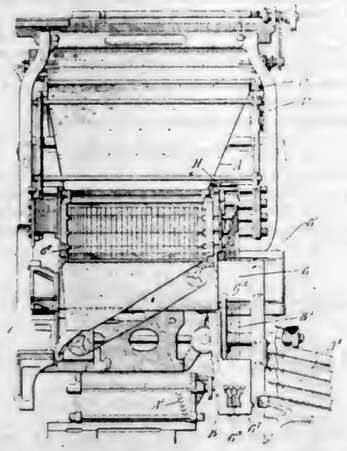
5. In a cutting apparatus, the combination of a frame bar, a finger bar positioned below said frame bar, means for detachably locking said bars against relative movement, gears and cutters positioned intermediate the frame and finger bars and supported by the latter, spindles for said gears and cutters, said spindles being secured to the frame bar and unattached with respect to the finger bar, whereby, upon the releasing of the locking means, the frame bar and spindles may be simultaneously removed from the finger bar, leaving as a detached unit the finger bar and the gears and cutters which it supports.

[Claims 6 and 7 not printed in the Gazette.]

1,193,558. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 19, 1914. Serial No. 819,605. (Cl. 199—7.)

1. In a typographical machine, the combination of a plurality of magazines for the type or matrices, escapement mechanism tending to release the type or matrices from all the magazines simultaneously, a series of locking devices, one for each magazine, to prevent the escape of the type or matrices, each of said devices being movable independently to inactive position to permit the escape of the type or matrices from the corresponding magazine, and means for preventing the movement of more than one of said locking devices to inactive position at a time, for the purpose described.

2. In a typographical machine, the combination of a plurality of magazines each provided with an escapement to control the release of the type or matrices therefrom, a common actuating device for the escapements of all the magazines, a series of locking devices, one for each of the escapements, and each of said locking devices being movable independently to inactive position to permit the operation of the corresponding escapement to the exclusion of the others, and means for preventing the movement of more than one of said locking devices to inactive position at a time, for the purpose described.



3. In a typographical machine, the combination of a plurality of magazines, a series of magazines selecting keys, means for locking the keys in their operated position, a movable frame, and mechanism whereby the movement of the frame will automatically effect the release of the operated keys.

4. In a typographical machine, the combination of a plurality of magazines, a series of independently-operable magazine-selecting devices, means for locking said devices in their operated position, a movable frame, and mechanism whereby the movement of the frame will effect the release of the operated devices.

5. In a typographical machine, the combination of a plurality of magazines, a series of shiftable magazine-selecting devices, means for locking said devices in their shifted position, a movable frame, and connections between the frame and locking means to insure the release of the selecting devices when the frame is moved.

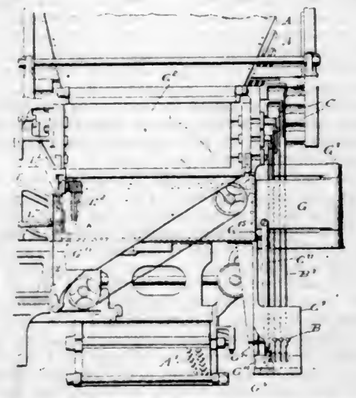
[Claims 6 to 70 not printed in the Gazette.]

1,193,559. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 23, 1914. Serial No. 840,469. (Cl. 199—7.)

1. In a typographical machine, the combination of a magazine having a series of escapements, a series of actuating devices therefor located in advance of the magazine, a supporting frame for said devices mounted to move outwardly away from the magazine, means for disconnecting the actuating devices from their escapements, and means for preventing the movement of the frame until the actuating devices have been so disconnected.

2. In a typographical machine, the combination of a magazine having a series of escapements, a series of actuating devices therefor located in advance of the magazine, a supporting frame for said devices mounted to move outwardly away from the magazine, and means to insure the disconnection of the actuating devices from their escapements before the frame is moved.

3. In a typographical machine, the combination of a magazine having a series of escapements, a series of actuating devices therefor located in advance of the magazine, an outwardly movable supporting frame for said devices, means for locking the frame against movement, and mechanism for shifting the actuating devices into and out of operative relation with their escapements as said locking means are rendered active and inactive, respectively.

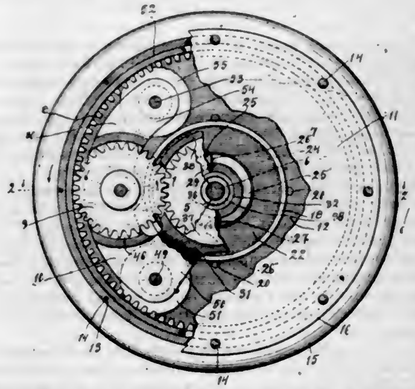


4. In a typographical machine, the combination of a magazine having a series of escapements, a series of actuating devices therefor located in advance of the magazine, an outwardly movable supporting frame for said devices, mechanism for shifting said devices out of operative relation with their escapements, and means controlled by said mechanism for locking the frame against movement.

5. In a typographical machine, the combination of a series of escapement-actuating devices, a movable supporting frame whereby they are carried bodily to and from operative position, and manually-controlled means carried by the frame for shifting the actuating devices longitudinally from their normal position on the frame.

[Claims 6 to 34 not printed in the Gazette.]

1,193,560. MOTOR-DRIVEN WHEEL. RUDOLPH E. KERLIN, Cudahy, Wis. Filed July 6, 1915. Serial No. 38,093. (Cl. 21—90.)



1. The combination, with the drive-shaft of a vehicle and the wheel thereof, of a driving mechanism for said wheel comprising an orbit gear carried by the wheel, a sun gear carried by the shaft, a planetary gear meshing with said sun and orbit gears, and a frame swingingly mounted for limited movement upon the shaft for carrying said planetary gear to provide a flexible drive.

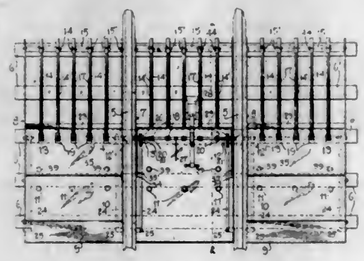
2. The combination, with the driven-axle of a vehicle, of a sun gear carried by said axle, an annular wheel mount-

ed concentrically about said axle, an orbit gear mounted on said wheel, a planetary gear meshing with sun and orbit gears, a frame for carrying said planetary gear swingingly mounted about the axle and carrying rollers, a guideway formed in said wheel for said rollers, and means for limiting the swinging movement of the frame.

3. The combination, with a driven axle of a vehicle, of a gear carried by said axle, a wheel comprising an annular member having annular guideways therein, an internal gear carried by said wheel adjacent said guideways, a gear-carrying frame swingingly mounted for limited movement about the axle and provided with a concentrically disposed arc-shaped extension, rollers on said extension rotatably mounted in said annular guideways, and a gearing connection between said gears carried by said frame to form a flexible drive for said gears.

4. The combination, with the driven axle of a vehicle, of a sun gear carried by said axle, a gear carrying frame journaled on said axle on opposite sides of said sun gear and having limited movement about the axle, a shaft casing in which a part of said gear-carryiwng frame is journaled, an annular wheel mounted concentrically about said axle, gear frame and shaft casing and provided with an orbit gear, thrust bearings between said annular wheel and said shaft casing, annular guideways in said wheel, rollers mounted in the gear frame and running in said guideways to permit movement of said gear frame with respect to said wheel and axle, and a planetary gear carried by said frame and meshing with said sun and orbit gears.

1,193,561. CATTLE-GUARD FOR RAILROADS. JOSEPH M. KIRBY and BERT E. HARTSON, Boulder, Colo. Filed Jan. 26, 1916. Serial No. 74,438. (Cl. 39—19.)



1. In a cattle guard for railroads, the combination of guards mounted to swing in a vertical plane, animal actuated means operable when the animal approaches the guard from one direction to move the guards to their effective positions, and means also operated by the animal when approaching the guard from the opposite direction to lock said first named means against actuation and maintain the guards in their normal positions.

2. In a cattle guard for railroads, the combination of movable guard means arranged between the track rails, animal actuated means arranged upon one side of the guard means and operable in the approach of the animal from one direction for operating the latter, and additional means arranged upon the other side of the guard means and operable in the approach of the animal from the opposite direction to lock said first named means against operation.

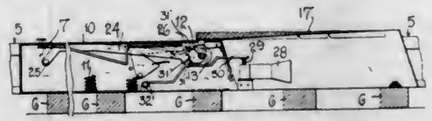
3. In a cattle guard for railroads, the combination of movable guard means arranged between the track rails, animal actuated means for operating said guard means including a vertically movable tread plate, said means being operated by the animal when approaching the guard from one direction, and means operated by the animal when approaching the guard from the other direction to engage and lock the tread plate against operation.

4. In a cattle guard for railroads, the combination of movable guard means arranged between the track rails, animal actuated means for operating the guard means including a vertically movable tread plate adapted to be engaged and operated by the animal when approaching the guard from one direction, a movable locking dog, and animal actuated means operated when the animal approaches the guard from the opposite direction to move the locking dog into coöperative engagement with the tread plate and lock the latter against operation.

5. In a cattle guard for railroads, the combination of movable guard means arranged between the track rails, animal actuated means for operating the guard means including a vertically movable tread plate adapted to be engaged and operated by the animal when approaching the guard from one direction, a movable locking dog, and an animal actuated platform operated when the animal approaches the guard from the opposite direction, said platform being coöperatively engaged with the dog to move and project the same beneath the tread plate and lock the latter against operation.

[Claims 6 to 9 not printed in the Gazette.]

1,193,562. CATTLE-GUARD. JOSEPH M. KIRBY and BERT E. HARTSON, Boulder, Colo. Original application filed Jan. 22, 1916, Serial No. 74,438. Divided and this application filed Apr. 5, 1916. Serial No. 89,150. (Cl. 116—1.)

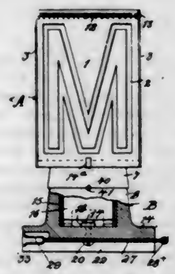


1. In a cattle guard for railroads, a vertically movable tread plate, a sound producing device, a pivoted operating bar for said device, a shaft provided with spaced pins to intermittently engage said bar and actuate said device, and operating connections between said shaft and the tread plate.

2. In a cattle guard for railroads, the combination of a vertically movable tread plate, a sound producing device, a pivoted operating bar for said device, a shaft provided with spaced pins to intermittently engage said bar and operate the device, and levers supporting the tread plate operatively connected to said shaft.

3. In a cattle guard for railroads, the combination of a vertically movable tread plate, a sound producing device, a pivoted operating bar for said device, a shaft provided with spaced pins to intermittently engage the bar and operate the device, pivoted levers upon which the tread plate is mounted, interrupted gears on the ends of the shaft, and racks on the ends of said levers meshing with said interrupted gears to rotate the shaft.

1,193,563. ELECTRIC SIGN. EDWARD R. KNOWLES, New York, N. Y., assignor to Mercantile Advertising Company, a Corporation of New York. Filed Mar. 1, 1913. Serial No. 751,459. (Cl. 40—132.)



1. A lamp and letter unit comprising a rectangular base piece of insulation having a rising chambered projection forming a lamp socket, a lamp in the socket, a letter bearing structure inclosing the lamp and having a downwardly extending neck on its bottom fitting the exterior of the projection, and interlocking means on the projection and neck for preventing turning of the said structure.

2. A lamp and letter unit comprising a base piece consisting of a base having a rising upwardly tapering socket projection, a lamp carried thereby, and a letter bearing structure having a downwardly flaring neck fitting the upper portion of the said projection for supporting the structure in spaced relation above the base.

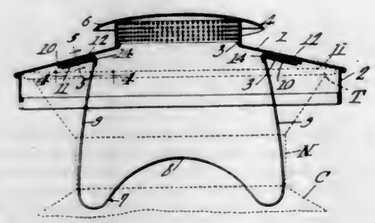
3. A lamp and letter unit for signs comprising a socket having a base provided with a plurality of grooves in its bottom, and opening into opposite sides of the base, and metallic connectors fastened in the respective grooves and each having an end projecting out of its groove.

4. A lamp and letter unit for signs comprising a socket having a base provided with a plurality of grooves in its bottom, and metallic connectors fastened in the respective grooves, each connector consisting of a strip doubled on itself with its extremities forming spring contact jaws and having its doubled portion formed into a contact plug or tongue to engage the jaws of a connector of an adjacent unit.

5. A lamp and letter unit comprising a base and socket having contacts in the socket and provided in its bottom surface with grooves extending from one side to the other, connectors extending longitudinally in the grooves, with one end of each connector projecting out of the end of its groove and from the base and single fasteners between the connectors and the respective contacts.

[Claims 6 and 7 not printed in the Gazette.]

1,193,564. SANITARY MILK-CAN COVER. ERNST KREUTZBERG, Alhambra, Ill. Filed June 23, 1915. Serial No. 35,879. (Cl. 31—77.)



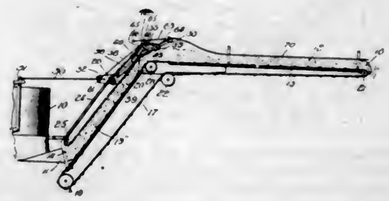
1. In a device of the class described including a cover having an aperture; a perforated member surrounding the said aperture; a supplemental cover secured to the said perforated member; an upstanding annular flange formed about the said aperture and within the perforated member, said flange being adapted to prevent the entrance of extraneous liquids through the said aperture by capillary attraction.

2. In a device of the class described including a cover having an aperture formed therein; a perforated member secured to the said cover and surrounding the said aperture; a supplemental cover secured to the perforated member; attaching plates secured to the said cover; opposed overhangs extending from the said attaching plates; a resilient securing member; and means for attaching the resilient securing member to the said attaching plates.

3. In a device of the class described including a cover having an axial aperture; a perforated member secured to the cover and surrounding the said aperture; a supplemental cover secured to the perforated member; an upstanding annular flange formed about the said aperture and adapted to prevent the entrance of extraneous liquids through the said aperture by capillary attraction; attaching plates secured to the said cover; opposed overhangs formed on the said attaching plates; a resilient securing member; and means for attaching the securing member to the said attaching plates.

4. In a device of the class described including a cover having a concentric aperture; a perforated member surrounding said aperture; a supplemental cover secured to the upper terminal of said perforated member; attaching plates secured to the cover, said attaching plates having opposed overhangs and inwardly extending lips; a securing member comprising a resilient intermediate portion, resilient arms extending substantially perpendicularly from said intermediate portion and securing feet extending angularly from the resilient arms, said securing feet being adapted to be slidably received by the opposed overhangs and held rigidly therebetween by bending the said lips behind the securing feet.

1,193,565. STRAW-CARRIER. WILLIAM H. KRUNFUS and HERMAN F. KRUNFUS, Barrington, Ill. Filed Aug. 6, 1915. Serial No. 43,951. (Cl. 198—15.)



1. The combination with a straw carrier comprising a lower throat member and an upper swinging member, of down-bearing means pivoted to the throat member below, and overlapping the hinged lower end of the swinging member and embracing also traveling means to urge the straw rearwardly to prevent bunching of the straw as it passes from the throat member to the swinging member.

2. The combination with a straw carrier comprising a lower throat member and an upper swinging member, with upper and lower conveyers for the throat member, the latter extending along the swinging member, of down-bearing means carried by the throat member and overlapping the hinged lower end of the swinging member and provided with traveling means to coöperate with said upper conveyer to urge the straw rearwardly and to prevent bunching of the straw as it passes from the throat member to the swinging member.

3. The combination with a straw carrier for threshing machines comprising a throat member and a swinging member, with pulleys and upper and lower conveyers trained about the same, of an extension frame hinged to the throat member and overlying the lower hinged end of the swinging member and provided with pulleys about which a prolongation of the upper conveyer is trained.

4. The combination with a straw carrier comprising a lower throat member and an upper swinging member, with upper and lower conveyers for the throat member, the latter extending along the swinging member, a frame comprising upper and lower sections adapted to overlap the lower hinged end of the upper member, said lower section being hinged to the throat member, and pulleys carried by said sections over which said upper conveyer is trained.

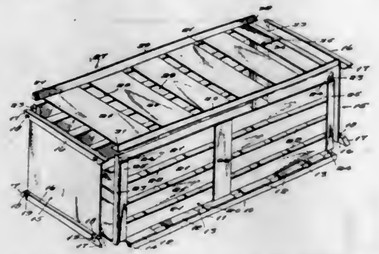
5. The combination with a straw carrier for threshing machines comprising a throat member, a swinging member hinged thereto and adapted to be folded backwardly over the throat member and the machine, and a lower conveyer carried by the throat member and swinging member, of an extension frame hinged to the throat member and overlying the lower hinged end of the swinging member, and an upper conveyer carried by the throat member and said extension frame and constructed to be folded, with the swinging member, backwardly over the machine.

[Claims 6 to 16 not printed in the Gazette.]

1,193,566. COMPOUNDS FOR USE IN THE PRODUCTION OF DYESTUFFS. FELIX KUNERT, Offenbach-on-the-Main, Germany, assignor to The Corporation of Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Filed Apr. 23, 1915. Serial No. 23,360. (Cl. 8—6.)

Compounds, for use in the production of dyestuffs, consisting of mixtures of nitrosamin-alkali-metal-salts and alkali metal salts of the 2.3-oxynaphthoic-acid-arylamids.

1,193,567. BOX OR CRATE. OSCAR A. LANE and DUKE GUICE, Greenville, Ala. Filed Apr. 28, 1915. Serial No. 24,480. (Cl. 217—43.)

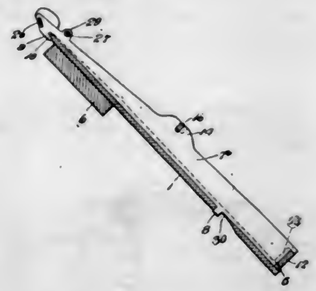


1. In a knock-down crate or box, a bottom-member provided with longitudinal locking bars having their ends reduced and extending beyond the ends of the bottom-member; end-members provided with normally substantially horizontal upper and lower locking bars having reduced ends extending outwardly beyond the end-members with the reduced ends of the lower locking bars being adapted to be arranged beneath and contact with the reduced ends of the longitudinal locking bars of the bottom-member, said upper and lower locking bars being provided upon their outer sides with notches arranged near their ends; side-members having normally vertical locking bars secured thereto near their ends and extending outwardly beyond the same with the normally vertical locking bars being adapted to be arranged exteriorly of the end-members and their ends entering the notches in the upper and lower bars of the end-members; a cover-member having longitudinal locking bars extending outwardly beyond its ends, the ends of the last named locking bars being reduced and adapted to be arranged beneath and contact with the ends of the upper locking bars of the end-members; and means to prevent the cover-member from moving longitudinally with relation to the body portion of the crate or box.

2. In a knock-down crate or box, a bottom-member provided with longitudinal locking bars having inner beveled faces and extending outwardly beyond the ends of the bottom-member; end-members provided with normally substantially horizontal upper and lower locking bars having their ends beveled and extending outwardly beyond the end-members, the beveled ends of the lower locking bars being adapted to be arranged beneath and contact with the inner beveled faces of the locking bars of the bottom-member, the upper and lower locking bars being provided inwardly of and near their ends with notches; side-members having normally vertical locking bars secured to their ends, the ends of the normally vertical locking bars being beveled and extending outwardly beyond the side-members and adapted to enter the notches in the locking bars of the end-members; and a cover-member having longitudinal locking bars provided with inner beveled faces and extending outwardly beyond the ends of the cover-member and adapted to be arranged beneath and contact with the beveled ends of the upper locking bars of the end-members.

3. In a knock-down crate or box, a bottom-member provided with exteriorly arranged longitudinal locking bars having inner beveled faces and extending outwardly beyond the ends of the bottom-member; end-members provided with exteriorly arranged normally horizontal upper and lower locking bars having their ends beveled and extending outwardly beyond the end-members, the beveled ends of the lower locking bars of the end-members being adapted to be arranged beneath and in contact with the beveled faces of the longitudinal locking bars of the bottom-member, the upper and lower locking bars having notches formed upon their outer sides near and inwardly of the beveled ends thereof; side-members having interiorly arranged normally vertical locking bars secured to their ends, the normally vertical locking bars having their ends beveled and extending outwardly beyond the side-members and adapted to enter the notches upon the upper and lower locking bars of the end-members; a cover-member having exteriorly arranged longitudinal locking bars having inner beveled faces and extending outwardly beyond the ends of the cover-member, the ends of the last named locking members being adapted to be arranged beneath and in contact with the beveled ends of the upper locking bars of the end-members; and means to hold the cover-member against longitudinal movement with relation to the body portion of the crate or box.

1,193,568. NEEDLE-BED FOR KNITTING-MACHINES. ELIHU LIPPITT, Grand Rapids, Mich., assignor to Grand Rapids Underwear Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Jan. 18, 1915. Serial No. 2,925. (Cl. 66—28.)



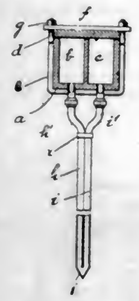
1. A needle bed for knitting machines comprising a base plate, a plurality of guide members detachably secured to and extending above the base plate, each guide member being formed with a hook at its upper end and receiving an edge of the base plate, and means formed integrally with the base plate for spacing the guide members from each other on the base plate.

2. A needle bed for knitting machines comprising a base plate having a plurality of transverse grooves on its upper side, a plurality of guide members seated in the grooves, each having a hooked upper end receiving the upper edge of the base plate and each provided at its lower end and at a point between its ends on its upper edge with slots, said slots being in alinement, bars detachably seated in said slots to thereby secure the guide members together and a bar of hardened material passing through all of the guide members a short distance beyond the end of the base plate.

3. A needle bed for knitting machines comprising a base plate having a plurality of grooves cut transversely of the base plate on one face thereof and spaced apart, a plurality of guide members seated in said grooves, each having a hooked upper end receiving the upper edge of the base plate, and each provided at its lower end and at a point between its ends on its upper edge with slots which lie in alinement, and bars having ribs formed thereon seated in said slots with the ribs extending between the guide members, said ribs and the grooves of the base plate being equal in width, substantially as described.

4. A guide member for needle beds comprising a comparatively long piece of flat metal provided with a slot in the lower end and in the upper edge thereof and with an opening adjacent the upper end, an ear on the upper edge of the member near its upper end, said ear having an opening therethrough, a lug integral with the member at its lower edge and between its ends, and a downwardly turned hook adjacent the upper end of the guide member, substantially as described.

1,193,569. ICE-MAKING APPARATUS. WILLIAM H. LLEWELLYN and ARTHUR G. OLNEY, New York, N. Y., assignors to The Centerfreze Ice Process Company, New York, N. Y., a Corporation of Arizona. Filed Oct. 9, 1912. Serial No. 724,716. (Cl. 62—162.)

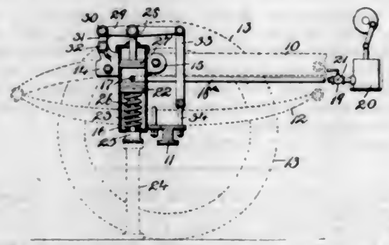


1. A freezing member comprising a header formed with refrigerant inlet and outlet chambers and a plurality of vertically disposed parts spaced apart and each comprising two pipes connected at the outer ends, arranged side by side and joined together so as to form an unbroken exterior outline, the inner ends of said pipes being in communication respectively with the refrigerant inlet and outlet chambers.

2. A freezing member comprising a header formed with refrigerant inlet and outlet chambers and a plurality of vertically disposed parts spaced apart and each comprising two pipes each of which has a flat side the two flat sides of the two pipes being in juxtaposition, a cap connecting the outer ends of the pipes and means for connecting their respective inner ends with inlet and outlet chambers in the header, the pipes and cap being so arranged that said part will readily draw from the ice cake.

3. A freezing member comprising a header formed with refrigerant inlet and outlet chambers and a plurality of vertically disposed parts spaced apart and each comprising two pipes connected at the outer ends, arranged side by side and joined together so as to form an unbroken exterior outline, the inner ends of said pipes being in communication respectively with the refrigerant inlet and outlet chambers and insulating means interposed between the contiguous faces of pipes of the same part.

1,193,570. COMBINED ELEVATING DEVICE AND SHOCK-ABSORBER. HARRY LOHMILLER, Rahway, N. J. Filed Dec. 16, 1915. Serial No. 67,120. (Cl. 267—1.)



1. A combined elevating device and shock absorber comprising a cylinder with opposed pistons with piston rods projecting from the opposite ends of the cylinder, an air space between the pistons, means for supplying air under pressure to the space, a spring under one of the pistons, a connection between the other piston and the axle of a vehicle, and means for securing the cylinder to the chassis of the vehicle.

2. A combined elevating and shock absorbing device comprising a cylinder having means for securing it to a chassis, a piston in the cylinder, said piston being connected to the axle of the vehicle, a second piston in the cylinder, means for admitting air under pressure to act on the second piston, and a projecting part connected to the second piston.

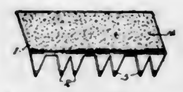
3. A combined elevating device and shock absorber comprising a cylinder secured to the chassis of a vehicle, a pipe supplying air under pressure to the central part of the cylinder, a piston on each side of the central part, the piston rods of the pistons projecting from opposite ends of the cylinder, and a connection between one of the piston rods and the axle of the vehicle.

4. A combined elevating device and shock absorber comprising a chamber secured to the chassis, a pipe connection between the chamber and a source of air under pressure, an elevating device in the chamber, and a shock absorber in the chamber and connected with the axle of the vehicle.

5. A combined elevating device and shock absorber comprising a cylinder secured to the chassis of a vehicle, pistons in the cylinder and having separate rods projecting from the opposite ends of the cylinder, a spring operating one piston in one direction, a pipe connection to supply air under pressure to the cylinder so as to force the spring to yield, and a connection between the other piston rod and the axle of the vehicle.

[Claim 6 not printed in the Gazette.]

1,193,571. TENNIS-COURT MARKER. FREDERICK W. LORD, New York, N. Y. Filed Dec. 11, 1915. Serial No. 66,232. (Cl. 46—24.)



1. A tennis marker or the like comprising a flexible strip having a plurality of independently formed teeth and a plurality of projections from the upper side of said strip to roughen the surface and add to the flexibility thereof.

2. A tennis marker comprising a metallic strip adapted to be attached to a court and having a roughened surface exposed approximately upon the plane of the court.

3. A tennis marker comprising a strip of semi-flexible material and means for attaching it to a court said strip having a roughened surface, in simulation of the surface of the court.

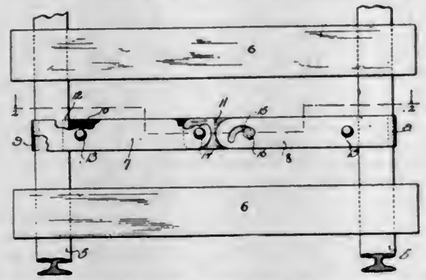
4. A device of the character described comprising a flexible metallic body member having a plurality of cross cuttings adapted to produce a non-directional roughening thereof in combination with a plurality of flexible teeth formed integral with said body member as herein specified and for the purpose set forth.

1,193,572. ANTISPREADING DEVICE FOR RAILS. AUGUST LOTH, Brookfield, Wis. Filed May 29, 1916. Serial No. 100,494. (Cl. 238—5.)

1. A rail securing device comprising a pair of pivotally connected bars, the free end of one bar being bent to embrace a rail base flange, the free end of the other bar being adapted to engage the rail base flange, a bar connected with the first bars and adapted to engage the base flange of another rail, a fourth bar slidably connected with the third bar and having its end bent to embrace the base flange of said other rail, and means for holding said fourth bar against relative movement.

2. A rail securing device comprising a pair of bars, the free end of one bar being bent to embrace a rail base

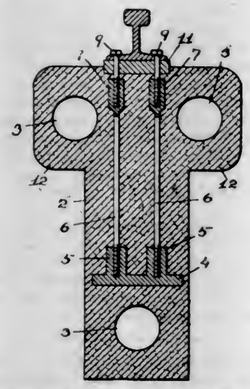
flange, the free end of the other bar being adapted to engage the said rail base flange, a third bar connected with the first bars and adapted to engage the base flange of another rail, a fourth bar slidably connected with the third bar and having its end bent to embrace the outer base flange portion of said other rail, means for holding all the bars against relative movement, and said means serving also to clamp the rails between respective bars.



3. A rail holding device comprising a pair of bars adapted to engage and hold one rail, a third bar connected with said pair of bars, the adjacent ends of the three bars being pivotally connected, a fourth bar slidably connected with the third bar and means associated with said third and fourth bars whereby they are adapted to engage and hold a respective other rail.

4. A rail holding device comprising a pair of bars adapted to engage and hold one rail, a third bar, the adjacent ends of the three bars being pivotally connected, a fourth bar provided with a longitudinal arcuate slot, a pivot member on the third bar engaged in said slot and means associated with the third and fourth bars whereby they are adapted to engage and hold a respective other rail.

1,193,573. MEANS FOR CONNECTING RAILROAD-RAILS TO CEMENT FOUNDATIONS. JOHN B. LOTT, Anderson, Ind. Filed Nov. 16, 1915. Serial No. 61,837. (Cl. 238—4.)

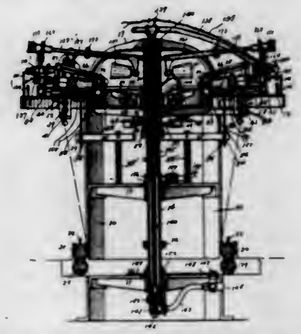


1. Means for connecting railroad rails to cement foundations, consisting of a cement foundation, an anchoring means, anchor bolts inclosed by the cement material of said foundation and having lower ends connected with said anchoring means, and enlarged, internally-threaded upper ends to provide seats, and surface bolts extending through the rail flanges and engaging said seats.

2. Means for connecting railroad rails to cement foundations, consisting of a cement foundation, an anchor plate inclosed by the cement material of the foundation and having upstanding internally-threaded bosses to provide seats, anchor bolts also inclosed by said cement material and having lower threaded ends engaging said seats, and enlarged upper internally-threaded ends to provide seats, and surface bolts extending through the rail flanges and engaging said seats of the anchor bolts.

3. Means for connecting railroad rails to cement foundations, consisting of T-form cement foundations underlying and parallel to the rails, an anchor plate inclosed by the cement material of each foundation and having upstanding, internally-threaded bosses to provide seats, anchor bolts also inclosed by said cement material and having lower threaded ends engaging said seats, and enlarged upper internally-threaded ends to provide seats, and surface bolts extending through the rail flanges and engaging said seats of the anchor bolts.

1,193,574. MACHINE FOR MAKING CONTAINERS. LAWRENCE W. LUELLEN, New York, N. Y., assignor to Individual Drinking Cup Company, New York, N. Y., a Corporation of Maine. Filed May 22, 1911. Serial No. 628,850. (Cl. 93—39.)



1. In a machine for making containers the combination with a relatively horizontal revoluble tapered form of means including blanking and bottom supplying instrumentalities coöperating with the form to complete a plurality of cups during each revolution of the form.

2. In a machine for making containers, the combination with a continuously revoluble form, of relatively stationary container-producing means having an extended surface over which the form travels and container-producing means traveling with the form and coöperating therewith and being movable longitudinally of its axis.

3. In a machine for making containers the combination with a relatively horizontal revoluble tapered form of means including blanking and bottom supplying instrumentalities coöperating with the form to complete a plurality of cups during each revolution of the form and discharging means acting upon the cups for discharging them from the form when completed.

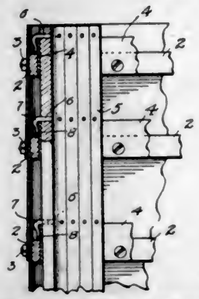
4. A machine for making containers comprising a revoluble form and cutting mechanism actuated by the rotation of the form to sever the material into a blank, said blank being acted upon by the form to produce a container.

5. A machine for making containers comprising a traveling form blanking means including cutting instrumentalities coöperating with the form and means for bringing the form, blanking and cutting instrumentalities into cooperative relation and means coöperating with the form for producing a container, said latter means including bottom supplying means.

[Claims 6 to 71 not printed in the Gazette.]

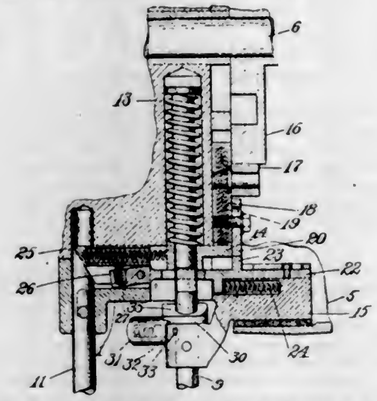
1,193,575. SIDING OR STAVE FOR SILOS. HARVEY P. MCFARLAND, Burlington, Iowa. Filed May 10, 1915. Serial No. 27,160. (Cl. 20—1.4.)

In a silo the combination with a body provided with a plurality of stave supporting plates secured to the inner face thereof and held in spaced relation to the inner face thereof, a plurality of closely arranged staves, each stave provided with a spring metal hook, each hook being provided with an outwardly bulged portion terminating in an inwardly extending spring end, said spring end being slightly outturned at the lower extremity thereof for facilitating the fitting of said hook over said plate carried by the inner face of said wall whereby said staves will be firmly and snugly held in engagement with the



inner face of said plates and thereby held against accidental removal from said plates, and at the same time permitting the expansion and contraction of the staves due to the atmospheric conditions surrounding the staves, said outwardly turned lower end of said hooks being adapted to facilitate the lateral sliding movement of said hooks upon said plates under the expansion and contraction of said staves.

1,193,576. CONTROLLING MECHANISM FOR MACHINERY. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 17, 1913. Serial No. 801,502. (Cl. 74—46.)



1. In a controlling mechanism for machinery, a clutch; a brake; normal controlling means therefor including a rod, a spring arranged to impart a clutch closing and brake lifting movement to the rod, a plate through which the rod is guided and having a hole larger than the rod; a safety device rotatable on the rod and shaped to be moved by the rod into the hole in the plate when the clutch is closed if the device occupies one angular position on the rod and to prevent clutch closing movement of the rod if the device occupies another angular position on the rod, and means for turning said device, said safety device having a cam face coöperating with said plate to depress the rod against the stress of said spring and lock the rod in a position in which the clutch is open and cannot be closed.

2. In a controlling mechanism for machinery, a clutch; a brake; normal controlling means therefor including a rod, a spring arranged to impart a clutch closing and brake lifting movement to the rod; and a safety device constructed and arranged for manual operation to depress the rod against the stress of the spring and lock it in a position in which the clutch is open and cannot be closed.

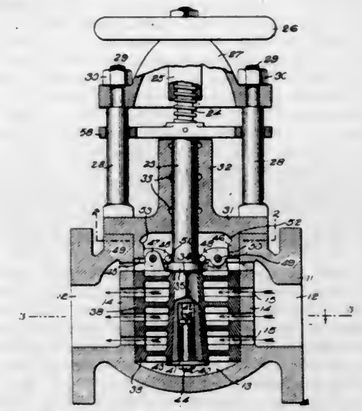
3. In a controlling mechanism for machinery, a clutch; a brake; normal controlling means operating to close the clutch and release the brake and thereafter to open the clutch and apply the brake; and normally idle means arranged to be operated in the event of stopping of the parts with the clutch in closed position for opening the clutch while the brake is released.

4. In a controlling mechanism for machinery, a clutch; a brake; normal controlling means including mechanism normally tending to close the clutch and release the brake and arranged to operate after the clutch has been closed to open the clutch and apply the brake; and means to open the clutch independently of said normal controlling means.

5. In a controlling mechanism for machinery, a clutch; a brake; normal controlling means comprising mechanism normally tending to close the clutch and release the brake and including automatic means arranged to operate after the clutch has been closed to open the clutch and apply the brake; and additional means for manually opening the clutch in the event of stopping of the parts with the clutch in closed position.

[Claims 6 to 11 not printed in the Gazette.]

1,193,577. VALVE. OWEN J. MCGOWAN, New York, N. Y. Filed Oct. 30, 1915. Serial No. 58,815. (Cl. 137—5.)



1. A valve comprising a casing embodying inlet and delivery passages, and a series of parallel bars forming a centrally disposed valve chamber; a cage valve embodying a plurality of separable members each having a series of parallel passageways corresponding with the bars forming said valve chamber; a valve stem for moving said cage valve to register the solid portions of the walls thereof with the passageways between said bars; a tapered member rigidly mounted on said stem extending between said separable members for wedging the same apart; means for arresting the movement of said separable members in registry with the spaces between said bars; and means connecting said stem and said members to permit independent movement of said stem, said means embodying a compression spring normally operative to maintain the smaller section of said stem between said members.

2. A valve comprising a casing embodying inlet and delivery passages, and a series of parallel bars forming a centrally disposed valve chamber; a cage valve embodying a plurality of separable members each having a series of parallel passageways corresponding with the bars forming said valve chamber; a valve stem for moving said cage valve to register the solid portions of the walls

thereof with the passageways between said bars; a tapered member rigidly mounted on said stem extending between said separable members for wedging the same apart; means for arresting the movement of said separable members in registry with the spaces between said bars; means connecting said stem and said members to permit independent movement of said stem, said means embodying a compression spring normally operative to maintain the smaller section of said stem between said members; and means for housing said spring within said tapered member, said means embodying an end-opening recess in said stem, a closure plug therefor, a supporting bolt, and a disk bearing on said members in supporting relation thereto.

3. A valve comprising a casing embodying inlet and delivery passages, and a series of parallel bars forming a centrally disposed valve chamber; a cage valve embodying a plurality of separable members each having a series of parallel passageways corresponding with the bars forming said valve chamber; a valve stem for moving said cage valve to register the solid portions of the walls thereof with the passageways between said bars; a tapered member rigidly mounted on said stem extending between said separable members for wedging the same apart; means for arresting the movement of said separable members in registry with the spaces between said bars; means yieldingly connecting said stem and said members for permitting the movement of said stem after the arrestation of said members; and means for normally preventing the separation of said members.

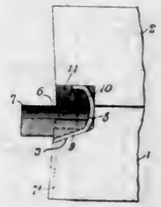
4. A valve comprising a casing embodying inlet and delivery passages, and a series of parallel bars forming a centrally disposed valve chamber; a cage valve embodying a plurality of separable members each having a series of parallel passageways corresponding with the bars forming said valve chamber; a valve stem for moving said cage valve to register the solid portions of the walls thereof with the passageways between said bars; a tapered member rigidly mounted on said stem extending between said separable members for wedging the same apart; means for arresting the movement of said separable members in registry with the spaces between said bars; means yieldingly connecting said stem and said members for permitting the movement of said stem after the arrestation of said members; and means normally operative to prevent the separation of said members when the solid portions thereof are not registered with the spaces between said bars.

5. A valve comprising a casing embodying inlet and delivery passages, and a series of parallel bars forming a centrally disposed valve chamber; a cage valve embodying a plurality of separable members each having a series of parallel passageways corresponding with the bars forming said valve chamber; a valve stem for moving said cage valve to register the solid portions of the walls thereof with the passageways between said bars; a tapered member rigidly mounted on said stem extending between said separable members for wedging the same apart; means for arresting the movement of said separable members in registry with the spaces between said bars; means yieldingly connecting said stem and said members for permitting the movement of said stem after the arrestation of said members; a plurality of dogs mounted on said members in engaged relation with said casing for normally preventing the separation of said members; and means embodying a recess in said casing for permitting the movement of said dogs to permit the separation of said members.

[Claim 6 not printed in the Gazette.]

1,193,578. CUTTING DEVICE. ELMER T. MCPHERSON, Wilmington, Ohio, assignor to The Irwin Auger Bit Company, Wilmington, Ohio, a Corporation of Ohio. Original application filed Dec. 23, 1915, Serial No. 68,307. Divided and this application filed May 24, 1916. Serial No. 99,692. (Cl. 164—58.)

1. The combination, with coöperating cutting devices, one of which is fixed constituting a fulcrum for the articles to be severed and the other of which is movable, of a fixed device spaced longitudinally from said fulcrum and provided with an exposed surface constituting a stop on the side opposed to said fulcrum, whereby when the article is rotated around the fulcrum as an axis a portion thereof will engage the stop, limiting the rotation and holding the same firmly in position.



2. The combination, with coöperating cutting devices, one of which is movable and the other of which acts as a fixed fulcrum for the article to be severed, of a fixed stop mounted to one side of said fulcrum, spaced therefrom and on a side toward said movable device, whereby when one end of the article is moved it will rotate around the fulcrum as an axis and engage the stop to hold it firmly in position.

3. In a cutting device, a lower die and an upper die provided with cutting edges, and means to hold one end of the article to be severed during the cutting operation, said means comprising a hook mounted on the lower die extending vertically above the plane of said lower die into a recess in the lower portion of said upper die.

4. In a cutting device adaptable for severing the shanks of boring tools from the unused stock, a pair of dies provided with cutting edges in alinement with their adjacent faces, the lower of said dies being provided with a hook mounted thereon at one side of its cutting edge, the upper of said dies being provided with a recess at its lower side adjacent its knife edge, said hook curving upwardly into said recess and above the knife edge of the lower die.

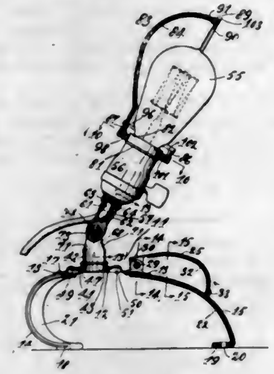
5. In a cutting device, a lower die provided with a knife edge and a bevel portion, a vertically extending groove below said bevel portion, a hook provided with a vertically extending portion mounted within said groove and bent back upon said bevel portion, an upper die provided with a knife edge coöperating with said first-mentioned knife edge, and a recess at its lower side, said hook extending upwardly into said recess and above the lower knife edge.

[Claims 6 to 8 not printed in the Gazette.]

1,193,579. FIXTURE FOR ELECTRIC INCANDESCENT LAMPS. ROBERT A. MAHAN, Jonesboro, Ark., assignor of one-half to William J. Baker, Newport, Ky. Filed Aug. 30, 1915. Serial No. 48,011. (Cl. 240—53.)

1. A portable fixture for electric incandescent lamps, comprising in combination a support provided with a bearing, a pivot-member journaled in said bearing, said bearing provided with a flange extending laterally therefrom, a spring-plate secured to rotate with said pivot-member, said spring-plate provided with radially extending separated spring-fingers extending outwardly beyond said bearing, said spring-fingers and flange provided with coacting tooth and notch means pressed one toward the other by said spring-fingers for maintaining said pivot-member in adjusted positions, and a socket pivot-member pivoted to said first-named pivot-member arranged for receiving an electric incandescent light-bulb, whereby said first named pivot-member is arranged to rotate on said support and said socket pivot-member is arranged to swing on said first-named pivot-member, for adjusting the light-bulb to inclination and angular position with relation to said support.

2. In a portable fixture for electric incandescent lamps, the combination of a socket pivot-member, a socket for an electric incandescent light-bulb thereon, an annular bearing-piece mounted to revolve on said socket, and a pair of shade-sections comprising an outer shade-section and an inner shade-section, said shade-sections having bases, one of said bases having bearing upon the other of said bases, one of said bases fixed to said annular bearing-piece, both said bases arranged annularly with relation to said annular bearing-piece, and said shade-sections pivoted together at their ends opposite their bases by a pivot in substantial line with the longitudinal axis of the light-bulb received in said socket.



3. In a portable fixture for electric incandescent lamps, the combination of a socket pivot-member, a socket for an electric incandescent light-bulb thereon, an annular bearing-piece mounted to revolve on said socket, and a pair of shade-sections comprising an outer shade-section, an inner shade-section, said outer shade-section fixed to said annular bearing-piece, the base of said inner shade-section having bearing in the base of said outer shade-sections and said annular bearing-piece, and said shade-sections pivoted together at their ends opposite their bases by a pivot in substantial line with the longitudinal axis of the light-bulb received in said socket.

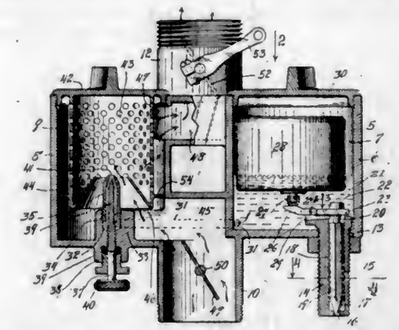
4. In a portable fixture for electric incandescent lamps, the combination of a portable support comprising a plate and legs extending divergingly therefrom comprising a pair of legs whose lower ends are curved inwardly toward the perpendicular axis of said plate and a third leg of less curvature, and a clamp-arm pivoted at the inner end of said third leg and being of bowed form and extending lengthwise of said third leg and coacting therewith for clampingly supporting said support.

5. In a fixture for an electric incandescent lamp, the combination of a light-bulb socket, an annular bearing-piece about said socket, a shade-section having its base fixed to said bearing-piece, said bearing-piece and the base of said shade-section provided with an inner annular groove, an inner similarly shaped shade-section, said shade-sections pivoted together at their outer ends in substantially the line of the longitudinal axis of said socket, and a spring extending from the base of said inner shade-section and movable in said groove in said annular bearing-piece and the base of said outer shade-section, and said inner shade-section arranged to be moved laterally within and outwardly from said first-named shade-section.

[Claim 6 not printed in the Gazette.]

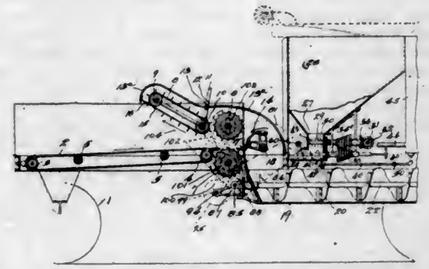
1,193,580. CARBURETER. MICHAEL E. MALLO, Greeley, Colo. Filed Sept. 25, 1915. Serial No. 52,604. (Cl. 48—155.1.)

A carbureter comprising a carbureting chamber, a liquid-containing chamber communicating with the said carbureting chamber, a nozzle located in the carbureting chamber and in communication with the passage connecting the two chambers, a cap closing the top of the said carbureting chamber and provided with a depending annularly arranged perforated wall having a coniform frustum-shaped member extending upwardly from its lower



edge, this member being smallest at the top and whose opening surrounds the upper extremity of the nozzle, a valve in the latter, and means for regulating the valve to control the passage of liquid to the carbureting chamber.

1,193,581. FERTILIZER MACHINERY. FRITZ P. MANSBENDEL, New York, N. Y., assignor, by mesne assignments, to The Standard Soil Fertility Company of America, Incorporated, a Corporation of New York. Filed June 2, 1914. Serial No. 842,413. (Cl. 71—1.)



1. In a fertilizer mixing machine or the like, the combination of a cutter, serrated feed rollers in advance of the cutter arranged to deliver body material directly to the cutter, a conveyer for delivering body material to the feed rolls, and conveying means for moving material from the cutter.

2. In a fertilizer mixing machine or the like, the combination of a cutter, means for feeding body material thereto, and means for regulating the delivery of body material to the cutter.

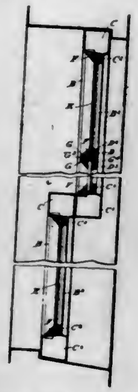
3. In a fertilizer mixing machine or the like, the combination of a cutter, feed rolls therefor, a feed conveyer and a feed regulator moving substantially opposite to the movement of the conveyer for regulating the feed.

4. In a fertilizer mixing machine or the like, the combination of a cutter, feed rolls therefor, a feed conveyer and a feed regulator moving substantially opposite to the movement of the conveyer for regulating the feed and a mixing conveyer for mixing and removing the material from the cutter.

5. In a fertilizer mixing machine or the like, the combination of a cutter, means for feeding body material thereto, a mixing conveyer receiving material from the cutter, a container for a solid fertilizer ingredient, and adjustable means for delivering said ingredient from the container to the mixer adjacent to the cutter.

[Claims 6 to 27 not printed in the Gazette.]

1,193,582. PRESSED-METAL DOOR AND WINDOW SASH. WILLIAM R. MARSDEN, New York, N. Y. Filed June 9, 1914. Serial No. 843,989. (Cl. 189—76.)

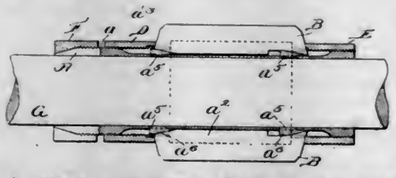


1. A door and window sash comprising a single sheet of metal, said sheet having a plurality of rectangular openings in it, and slitted in the corners of each of the openings and at the corners of the sheet, forming thereby a plurality of bendable flanges, the marginal flanges of the sheet being bent around to form hollow rails and stiles and having the edges of the sheet interlocking with a plurality of the bendable flanges, the flanges surrounding the openings being doubled over to form muntin plates.

2. A door and window sash comprising a single sheet of metal, said sheet having a plurality of rectangular openings in it, and slitted in the corners of each of the openings and at the corners of the sheet, forming thereby a plurality of bendable flanges, the marginal flanges of the sheet being bent around to form hollow rails and stiles and having the edges of the sheet interlocking with a plurality of the bendable flanges, the flanges surrounding the openings being doubled over to form muntin plates, and muntin bars embraced by said muntin plates.

3. A door and window sash comprising a single sheet of metal, said sheet having a plurality of rectangular openings in it, and slitted in the corners of each of the openings and at the corners of the sheet, forming thereby a plurality of bendable flanges, the marginal flanges of the sheet being bent around to form hollow rails and stiles and having the edges of the sheet interlocking with a plurality of the bendable flanges, the flanges surrounding the openings being doubled over to form muntin plates, and muntin bars having a base embraced by said muntin bars.

1,193,583. REAMER. ALBERT A. MARTELL, Mansfield, Mass. Original application filed Sept. 8, 1913, Serial No. 788,536. Divided and this application filed Dec. 23, 1914. Serial No. 878,797. (Cl. 77—75.5.)



1. A reamer comprising a shank; a blade movably mounted on the shank; and wedge members connected to the shank for adjusting the blade with relation to the axis of the shank, the wedge members being of less length than the blade and adapted to give the blade a relatively large movement radially of the shank during a relatively small movement along the shank, said members being removable transversely of the shank but fixed to it during adjustment of the blade.

2. An expansible tool comprising a shank; a blade; and a member to adjust the blade, said member being removable from the shank but fixed to the latter during said adjustment.

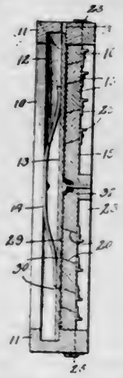
3. A reamer comprising a shank; wedge members having parallel engaging surfaces and fixed to the shank during adjustment of the blade, but removable therefrom transversely thereof; and a blade mounted to engage said surfaces and to be adjusted thereby.

4. An expansible tool comprising a shank; a blade; and a wedge member having a flat engaging surface to adjust the blade, said member being removable transversely from the shank but fixed to the latter during said adjustment.

5. An expansible tool comprising a shank with a circular hole extending transversely of the shank; an adjusting member having a projection to enter said hole; means to prevent rotation of said adjusting member; and a blade to engage said adjusting member.

[Claims 6 to 11 not printed in the Gazette.]

1,193,584. PHOTOGRAPHIC-PRINTING FRAME. CHARLES W. MARTIN, Fort Stanton, N. Mex. Filed Aug. 12, 1915. Serial No. 45,147. (Cl. 95—77.)



1. A printing frame of the class described, comprising a main frame, a plurality of mask frames nested within the main frame, means for detachably locking the nested mask frames with each other, and a resiliently supported glass panel within the outer main frame.

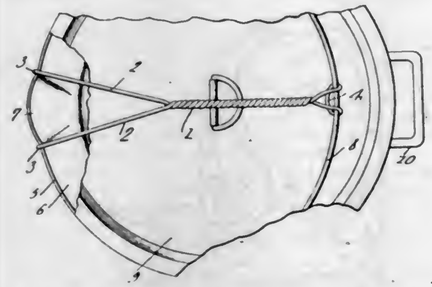
2. A printing frame of the class described, comprising a main frame, a plurality of mask frames nested within the main frame, means for detachably locking the nested mask frames with each other, means for swingingly connecting the outermost mask frame to the main frame, and means for detachably locking the said outermost mask frame to the main frame.

3. A printing frame of the class described comprising a main frame, a glass panel within the same, means resiliently supporting the panel in said main frame, a plurality of mask frames nested within the main frame, means for detachably locking the mask frames to each other, a back section swingingly connected with the main frame, means for automatically opening the back section, a filling block on the back section and engageable in the innermost mask frame, means for locking the block with the innermost mask frame, and means for locking the back section to the main frame.

4. A printing frame, a plurality of nested mask frames removably held therein, a swinging back section carried by the printing frame, a filling block engageable in the innermost mask frame, means for detachably locking the block in said innermost frame, a suction element carried in the inner face of the block, means for detachably locking the nested mask frames to each other, and a mat carried on the inner face of each mask frame and providing an internal supporting flange for a negative and sensitized paper.

5. A printing frame, a plurality of nested mask frames removably held therein, a swinging back section carried by the printing frame, a filling block engageable in the innermost mask frame, means for detachably locking the block in said inner mask frame, a suction element carried by the inner mask frame, means for detachably locking the nested mask frames to each other, a mat carried on the inner face of each mask frame and providing an internal marginal supporting flange therein for a negative or sensitized paper, means for locking the back section closed, and means for automatically opening the said back section.

1,193,585. COVER AND BAIL HOLDER FOR COOKING UTENSILS. FREDERICK NEWELL MARTINDALE, Gouverneur, N. Y. Filed Mar. 24, 1915. Serial No. 16,661. (Cl. 53—8.)



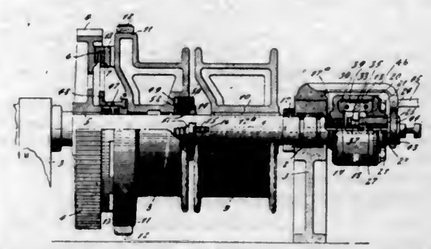
1. A cover and bail holder for vessels, constructed solely of a single length of doubled wire, the wire being twisted between its bend and terminals to provide a shank, the bend of the wire providing a loop at one end of the shank, said loop being bent to provide a hook to engage the bail of a vessel for supporting it in an inclined position, the terminal portions of the wire diverging from the other end of the shank to provide a fork, and the terminals of the wire being bent to provide hooks to engage the rim of the vessel astride the spout thereof, as and for the purposes set forth.

2. A cover and bail holder for vessels, constructed solely of a single length of doubled wire, the wire being twisted between its bend and terminals to provide a shank, the bend of the wire providing a loop at one end of the shank, said loop being bent to provide a hook to engage the bail of a vessel for supporting it in an inclined position, the terminal portions of the wire diverging from the other end of the shank to provide a fork, the terminals of the wire being bent to provide hooks to engage the rim of the vessel astride the spout thereof, the twisted portion of the wire being provided between the ends of the shank with an outstanding loop bent to provide a hook engageable with the bail of a smaller vessel.

1,193,586. CLUTCH. THOMAS SPENCER MILLER, South Orange, N. J. Filed May 6, 1910. Serial No. 559,680. (Cl. 192—8.)

1. In combination, a clutch, a shaft, a longitudinally movable thrust-pin, and a second thrust pin both supported by the shaft and rotatable therewith, a power mutliplying clutch setting mechanism rotating with the shaft, and means for adjusting the relative position between the second thrust pin and the clutch-setting mechanism to regulate the degree of pressure exerted on the first mentioned thrust pin.

2. The combination of a shaft, a driving element and a driven element thereon having friction surfaces for connecting the same to drive the driven element, said driven element being movable lengthwise of the shaft to connect the friction surfaces, a reciprocable member operable to move the driven element, guiding means for said member, a sleeve adjustably engaging said member, toggles for operating the sleeve, and a reciprocating member for operating the toggle means.



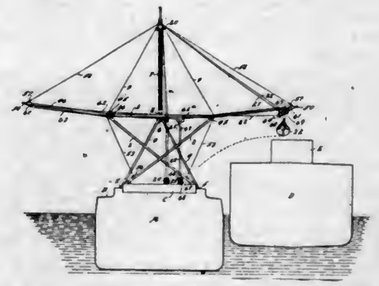
3. The combination of a shaft, a driving element and a driven element thereon having friction surfaces for connecting the same to drive the driven element, said driven element being movable lengthwise of the shaft to connect the friction surfaces, a reciprocable member operable to move the driven element, a sleeve threaded to said member, toggle means for reciprocating the sleeve, and means for operating the toggle means.

4. In combination, a clutch, a shaft, a reciprocable member on the shaft for operating the clutch, toggle means connecting the shaft and said member, an operating sleeve reciprocably mounted on the shaft and surrounding said first mentioned reciprocable member, and engaging the toggles to operate same.

5. The combination of a shaft, a driving element and a driven element thereon having friction surfaces for connecting the same to drive the driven element, said driven element being movable lengthwise of the shaft to connect the friction surfaces, a support on the shaft, a reciprocable member on the support for moving the driven element, guiding means on the support for said member, toggle means connected to the support and member, an operating sleeve reciprocably mounted on the support and surrounding said first-mentioned reciprocable member, and a connection between the operating member and the toggles whereby the latter are operated.

[Claims 6 to 18 not printed in the Gazette.]

1,193,587. LOAD-TRANSFER APPARATUS. THOMAS SPENCER MILLER, South Orange, N. J. Filed May 12, 1914. Serial No. 837,977. (Cl. 212—94.)



1. A load transfer apparatus comprising a mastlike structure, two booms pivotally mounted on said structure, means whereby the pivots of said booms may be adjusted transversely of said structure, and a rope system supported at its ends by the two booms.

2. A load transfer apparatus comprising a mastlike structure, a member slidable transversely of said structure, a boom pivoted to said member, a second boom piv-

oted on said structure, and a rope system supported at its ends by the two booms.

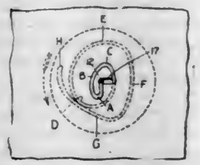
3. A load transfer apparatus comprising a mastlike structure, a member slidable transversely of said structure, a boom having a universal connection with said member, a second boom mounted on said structure and a rope system supported at its ends by the two booms.

4. A load transfer apparatus comprising a mastlike structure, a boom pivoted on said structure, means for moving the pivot for said boom transversely of said structure, a second boom mounted on said structure, and a rope system supported at its ends on the two booms.

5. A load transfer, a mastlike structure, a guide on the mast, a member movable in said guide, a boom pivoted to said member, a support located on the opposite side of the mast from said boom, and a rope system supported by said boom and support.

[Claims 6 to 29 not printed in the Gazette.]

1,193,588. SAFETY-FASTENER. WILLIAM P. MITCHELL, New York, N. Y. Filed Aug. 7, 1915. Serial No. 44,250. (Cl. 229—78.)



1. The herein described fastener comprising a head and a coil secured to one side of the head, said coil comprising a shank secured to the head and extending perpendicularly therefrom, that portion of the coil directly adjacent the shank being formed into a laterally directed sharp loop and thence turned in a spiral direction ending in a free point remote from the shank, said loop constituting the advancing and entering portion of the coil when being applied, and the latter free portion of the coil lying in a plane directly between the intermediate portion of the coil and the head.

2. The herein described irremovable fastener comprising a head and a coil, said coil comprising a shank secured rigidly and permanently to one side of the head and extending perpendicularly therefrom, the coil being thence bent parallel to the head and thence bent upon itself forming a loop constituting the advancing entering point and thence continued in a spiral direction terminating in a free point at a distance from the shank greater than the radial distance from the shank to any other point of the coil, the latter portion of the coil lying directly between the head and that portion of the coil adjacent the entering loop aforesaid.

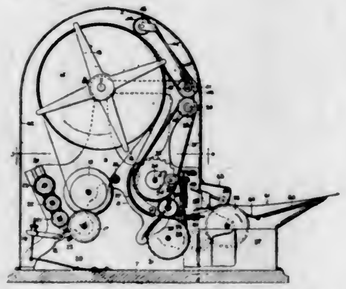
3. The combination with an envelop having a pair of short registering slots in the back and flap portions, of a sealing fastener therefor comprising a head and a coil, said coil comprising a shank secured to the inner wall of the head and also comprising directly adjacent the shank a sharp loop constituting an entrance point for initial passage through the slots, said point extending laterally radially from the shank and to a distance greater than the length of the slots, and the latter free portion of the coil lying in a plane between the immediate or entering part of the coil and the head.

4. The herein described fastener comprising a head and a coil, said coil comprising a shank secured rigidly to one side of the head, the coil being bent thence laterally in a plane parallel to the head and thence bent sharply upon itself forming a loop constituting the entering portion of the fastener when applying it, and said coil being thence continued in a spiral direction terminating in a free end portion lying in a plane between the plane aforesaid and the head, certain portions of the intermediate part of the coil overlapping said free end portion, the extreme free end of the coil being flattened and deflected laterally slightly with respect to the main portion of the coil.

5. The combination with an envelop having registering slots formed in its back and sealing flap portions, of a fastener therefor comprising a head and a coil, said coil comprising a shank secured to the head and adapted to constitute the only connection between the head and the remaining portion of the coil in fastening position, said coil also including a loop portion extending radially directly from the shank, said loop being flattened and constituting the starting point for inserting the fastener, and the coil extending thence in a spiral direction terminating in a single free end at a distance from the shank greater than the length of said slots.

[Claims 6 and 7 not printed in the Gazette.]

1,193,589. AUTOMATIC TAPE-STRIP PRINTING AND DISPENSING DEVICE. SIMON NAGER, Jr., Rockville Center, N. Y. Filed Dec. 29, 1914. Serial No. 879,491. (Cl. 91—145.)



1. In a device of the class described, means for supporting a roll of gummed tape, a continuous-feed mechanism adapted to dispense tape from the roll, a printing device adapted to impress the tape while it is fed, an intermittent feed to advance the tape fed by the first-mentioned feed, a cutting mechanism to sever strips from the tape advanced by the intermittent feed, and a moistener for the gummed surface of the strips.

2. In a device of the class described, means for supporting a roll of gummed tape, a continuous-feed mechanism for dispensing a constant length of tape from the roll at any size of the roll, a printing device to impress the tape fed, an intermittent feed adapted to receive the tape fed from the roll and feed the same length of tape as fed by the continuous-feed, a cutting mechanism for severing the strips from the tape advanced by the intermittent feed, and a moistener for the gummed surface of the strips.

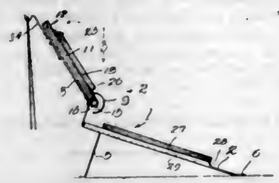
3. In a device of the class described, means for supporting a roll of gummed tape, a roller engaging the tape on the roll, means for maintaining said roller against the tape on the roll, means for turning said roller through a predetermined distance through each revolution of the device whereby a constant length of tape is unwound from the roll, a printing mechanism for impressing the tape, means for severing the tape into strips, and means for moistening the gummed side of the strips.

4. In a device of the class described, means for supporting a roll of gummed tape, a pivotally mounted arm, a roller carried by the arm, a resilient member forcing the arm against the tape on the roll, means for revolving the roller through a predetermined distance through each revolution of the device, whereby a constant predetermined length of tape is unwound from the roll at each revolution, means for printing the tape, means for cutting the tape into lengths equal to the length fed by the roller during each revolution of the device, and a moistener for wetting the gummed surfaces of the lengths of severed tape.

5. In a device of the class described, means for supporting a roll of gummed tape, a revoluble feed mechanism operable continuously, including means for dispensing intermittently a predetermined length of tape from the roll, a cutting mechanism adapted to sever the length of tape fed, and a moistener for wetting the surface of the gummed strips of tape.

[Claims 6 to 11 not printed in the Gazette.]

1,193,590. TELEPHONE-DIRECTORY. CHARLES E. NAPP, Los Angeles, Cal. Filed June 1, 1915. Serial No. 31,355. (Cl. 40—1.)



1. A telephone directory comprising a base plate, an index supporting plate formed integral with the base plate, index fingers formed upon said index supporting plate and adapted to extend through a set of index cards so as to hold said cards on said plate, a calendar plate hingedly secured to said index plate, a calendar on said calendar plate, and means for normally holding said calendar plate closed against said index cards.

2. A telephone directory comprising a base plate adapted to support a memorandum pad, an index supporting plate formed integral with the base plate and adapted to support a set of index cards, hinge members upon said index plate, a calendar plate, hinge members on said calendar plate adapted to register with the hinge members on said index plate, a pintle extending through said hinge members and a spring attached to said pintle and said index plate to normally hold the calendar plate against the index cards.

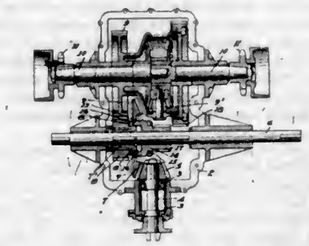
3. A telephone directory comprising a base plate, an index supporting plate formed integral with said base plate, index fingers upon the supporting plate adapted to extend through a set of index cards, hinge members upon said supporting plate, a calendar plate, hinge members on said calendar plate, registering with the hinge members on said supporting plate, a pintle extending through said hinge members and a spring attached to said pintle, and means for adjusting the tension of said spring.

4. In a telephone directory, comprising a base plate, an index supporting plate formed integral therewith, index fingers upon said supporting plate and adapted to extend through a set of index cards to support said cards on said supporting plate, hinged members formed integral with said supporting plate, a calendar plate, hinged members on said calendar plate registering with the hinged members on said supporting plate, a pintle extending through said hinged members and a spring attached to said pintle for normally holding said calendar plate against said index cards.

5. A device of the character disclosed comprising a base, said base being adapted to support a writing pad, a supporting plate forming part of said base and extending upwardly from said base, fingers stamped out of said supporting plate adapted to extend through a set of index cards to support said cards on said plate and to permit said cards to be swung down from said plate so that the respective cards may be read, hinge members stamped out of said supporting plate, all of the above specified parts being stamped out of a single piece of sheet metal, a calendar plate, hinge members on said calendar plate registering with the hinge members on said supporting plate, a pintle extending through said hinge members, a spring adapted normally to hold said calendar plate against said index cards and lugs on said calendar plate for holding a calendar on said plate.

[Claims 6 and 7 not printed in the Gazette.]

1,193,591. TRANSMISSION-GEARING. LEONARD NILSON and HAROLD NILSON, Wayzata, Minn. Filed Nov. 23, 1915. Serial No. 63,020. (Cl. 74—58.)

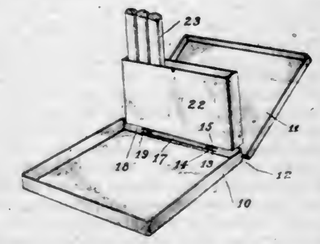


1. A transmission gearing comprising a transmission shaft, a gear mounted thereon having holes in its web, a pinion loosely mounted on said gear and having teeth in one end thereof, a pinion splined on said transmission shaft and having lugs to enter said holes and engage the teeth of said loosely mounted pinion for one speed, and a gear mounted to mesh with the teeth of said splined pinion for another speed.

2. In a transmission gearing, a shaft, a loosely mounted pinion, a driving gear secured on said shaft and having holes in its web, a pinion splined on said shaft and having means for engagement with the teeth of said loosely mounted pinion through the holes of said driving gear, for the purpose specified.

3. In a transmission gearing, a shaft, a driving gear secured thereon, transmission gears mounted upon opposite sides of said driving gear and a transmission pinion mounted to move into engagement with the transmission gear on one side of said driving gear for one speed and through said driving gear into mesh with the transmission gear on the other side of said driving gear for another speed.

1,193,592. CONTAINER. VICTOR NIVOIS, Brooklyn, N. Y. Filed July 30, 1914. Serial No. 854,127. (Cl. 206—41.)



1. A container of the class described comprising two hinged members having a pintle at their hinge connection, said pintle having free projecting parts and a holder attached directly to the said projecting parts of the pintle, said holder being adapted to be inclosed by said members when they are brought together.

2. A container of the class described comprising two hinged members having a pintle at their hinge connection, said pintle having free projecting parts and a holder attached directly to the said projecting parts of the pintle, said holder being adapted to be inclosed by said members when they are brought together, said pintle being freely movable with respect to one of said members in one direction and means for limiting the movement of the pintle with respect to that member in the other direction.

3. A container of the class described comprising a body, a lid to close said body, a hinge pintle connecting said lid and said body to enable said lid to swing open, said hinge pintle having extensions at the ends thereof and a holder

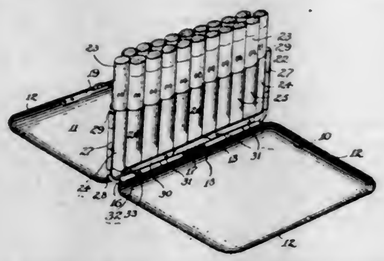
attached to said extensions and arranged to fold into the interior of the container when the same is closed.

4. A container of the class described comprising a body, a lid to close said body, a hinge pintle connecting said lid and said body to enable said lid to swing open, said hinge pintle having extensions at the ends thereof and a holder attached to said extensions and arranged to fold into the interior of the container when the same is closed, said ld having frictional engagement with said pintle to rotate the pintle when the container is opened and thereby move said holder out into the angle between said body and said lid.

5. A container of the class described comprising two hinged members having a pintle connecting the same, a holder attached to said pintle and lying in the space between said members when the same are brought together, one of said members having a connection with said pintle adapted to rotate said pintle when said members are swung apart, the other of said members having means for limiting the movement of said pintle when the holder is projecting into the angle formed between said members.

[Claims 6 to 8 not printed in the Gazette.]

1,193,593. CIGARETTE-CASE. VICTOR NIVOIS, Brooklyn, N. Y. Filed Sept. 14, 1915. Serial No. 50,600. (Cl. 206—41.)



1. A pocket cigarette case comprising a pair of hingedly connected covers having tapered converging side edges and a cigarette holder adapted to be incased by said covers when the latter are closed together, said holder having an intermediate section constructed to receive and maintain a plurality of rows of cigarettes in an upright position and reduced end sections each constructed to receive and retain a single cigarette in an upright position, the said reduced end sections lying between the tapered converging sides of the covers when the latter are in closed position.

2. A pocket cigarette case comprising a pair of hingedly connected covers having tapered converging side edges, a cigarette holder adapted to be incased by said covers when the latter are closed together, said holder having an intermediate section constructed to receive and maintain a plurality of rows of cigarettes in an upright position, and reduced end sections each constructed to receive and retain a single cigarette in an upright position, the said reduced end sections lying between the tapered converging sides of the covers when the latter are in closed position and means for causing the holder to assume an upright position relative to the covers when the latter are opened.

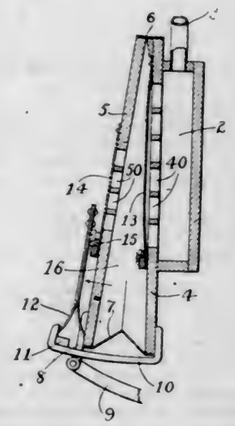
3. A pocket cigarette case consisting of two dished plates constructed to close together and having converging edges meeting together so that when closed said case presents an interior with a relatively wide portion of substantially uniform width and tapering side portions of reduced width at the opposite edges of the case, and a cigarette holder attached within the case comprising a pair of oppositely disposed plates forming between them retaining pockets for receiving and retaining two rows of cigarettes, the walls of said holder at the opposite ends thereof being oppositely and similarly arched to provide a single pocket at each end of the holder to receive and embrace a single cigarette, said end pockets projecting into the said tapering side portions at the edges of the case.

4. The combination with a holder including a relatively wide intermediate section adapted to contain a plurality of rows of articles, a partition adapted to separate adjacent rows of the articles, said holder having tapered end sections of relatively small article carrying capacity located beyond the side edges of the partition, and a pair of cover plates having tapered marginal edges, said plates being adapted when closed to constitute a casing conforming to the general contour of the holder.

5. In a pocket case, an article holder having a relatively wide intermediate portion and a partition dividing said intermediate portion into parallel rows of pockets, a pocket located beyond each side edge of the partition and a pair of covers hingedly connected with the partition and having converging meeting marginal edges, whereby said cover when closed will conform to the general contour of the holder and incase the latter.

[Claims 6 to 10 not printed in the Gazette.]

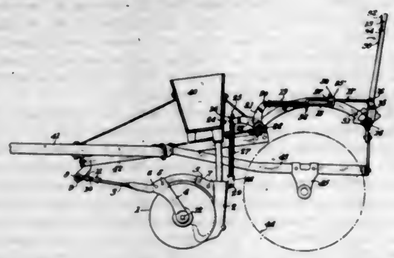
1,193,594. PUMPER-BELLOWS. JAMES O'CONNOR, New York, N. Y. Filed Mar. 16, 1914. Serial No. 824,852. (Cl. 230—2.)



1. Pumper bellows including in combination a tension box, a bellows wall fixed to said tension box, another bellows wall movable toward and from said fixed wall, means for moving the movable wall toward and from the fixed wall, an air inlet port leading from within the tension box to within the bellows, an air outlet port leading from within the bellows to without the bellows, an air inlet valve to said inlet port and an air outlet valve to said outlet port, said inlet port having a preponderance of area over the area of said outlet port whereby when the movable wall is moved toward the fixed wall an augmentation of pressure is produced within the bellows for accelerating the closing of said air inlet valve.

2. Pumper bellows including in combination a tension box, a bellows wall fixed to said tension box, another bellows wall movable toward and from said fixed wall, means for moving the movable wall toward and from the fixed wall, a plurality of inlet ports leading from within the tension box to within the bellows, a plurality of outlet ports in the movable wall leading from within the bellows to without the bellows, an air inlet valve to said inlet ports and an air outlet valve to said outlet ports, said inlet ports having a preponderance of area over the area of said outlets ports whereby when the movable wall is moved toward the fixed wall an augmentation of pressure is produced within the bellows for accelerating the closing of said air inlet valve.

1,193,595. CONVERGING DISK MECHANISM. JOSEPH P. OFFERMAN, Beaver Dam, Wis. Filed Apr. 12, 1915. Serial No. 20,659. (Cl. 111—18.)



The combination of a supporting frame, a draw bar pivotally connected at one end to the frame and carrying earth engaging elements, an operating handle pivotally connected near one end with said supporting frame, a pair of links, means for slidably and yieldingly connecting said links together one of said links being connected to said handle, a horizontal rocking bar, an arm connected at one end to said bar and at its opposite end to the other of said links, a second arm connected at one end with said horizontal bar and slidably connected at its opposite end with a third link through a pivotal bolt and a sliding collar, a spring interposed between said sliding collar and lugs formed on the opposite end of said link, said lugs being pivotally connected with said earth engaging elements, whereby when said handle is moved in one direction said earth engaging elements are forced downward with a yielding pressure, and whereby when said lever is moved in the opposite direction said earth engaging elements will be raised, and means for securing said operating handle at any desired point of adjustment, all substantially as and for the purpose specified.

1,193,596. DRY-KILN. JOHN F. OLDFIELD, Bel Air, Md. Filed Oct. 16, 1912. Serial No. 726,032. (Cl. 34—47.)

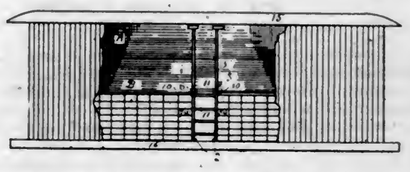


1. A dry-kiln having a bottom, top, side walls and end walls, one of which latter is larger than the other and the top sloping downward from the higher to the lower end wall and having a plurality of openings therein along the opposite sides,—said side walls of the kiln having vertical lower flues and vertical upper flues with an opening between said lower and upper flues which communicates with the interior of the kiln and the upper flues being in register with the openings in the sloping top, a track extending longitudinally in the kiln and means in the kiln below the track for heating the interior thereof.

2. A dry-kiln having outer and inner side walls, bottom, top and end walls and provided between the outer and inner side walls with a series of spaced-apart vertical partitions which extend from the bottom to the top and support the latter and also form a series of vertical flues the vertical partitions and the flues formed between the latter increasing in length from one end to the other of the kiln and said flues having communication with the interior of the kiln between their upper and lower ends; a track extending longitudinally of the kiln and means between the track and bottom of the kiln for heating the interior of the kiln.

3. A dry-kiln having outer and inner side walls, bottom, top and end walls, and between the outer and inner side walls said kiln having a series of spaced-apart vertical partitions of unequal length which extend from the bottom to the top of the walls and support the top and said kiln having vertical flues between adjoining partitions,—the flues opening at the bottom of the kiln and extending through the top thereof and also having openings which communicate with the drying chamber between the bottom and top, the openings from the several flues into the drying chamber being progressively higher from the bottom from one end of the kiln to the other; a track in said kiln that is elevated with respect to the bottom openings of the flues and means between the track and the bottom openings of the flues for heating the drying chamber in the kiln.

1,193,597. FLOATING BRACE FOR PACKING BOXES IN RAILROAD-CARS. ORIN O. OLIVER and LUCIUS POWERS, Sanger, Cal. Filed May 1, 1916. Serial No. 94,779. (Cl. 105—15.)



1. In a floating brace for a railroad car the combination of two members, each of which is constructed of two horizontal ties slightly shorter than the inside of the car, to which is attached a plurality of vertical supports, two of said supports having bumpers attached to the top thereof and the length of said supports and the bumpers thereon combined being slightly less than the inside height of the car, a stop strip attached to the vertical supports on the side opposite to the horizontal ties, and stays inserted between, and attached to the members, substantially as described and for the purposes set forth.

2. In a floating brace for a railroad car, the combination of two members, each of which consists of a plurality of upright supports, two of said supports on each member having bumpers at the top thereof, the vertical supports with the bumpers thereon being of such length that they will extend from the floor of the car approximately to the ceiling thereof, and the other vertical supports being shorter, horizontal tie strips shorter than the inside width of the car connecting the vertical supports, one at the bottom of the supports, and one near the top of the shorter supports, a stop strip attached horizontally across the vertical supports on the side opposite to the tie strips, and means for holding said members apart consisting of stay braces attached to the upright supports which are approximately opposite each other when said members are placed upright in the car, all substantially as described and for the purposes set forth.

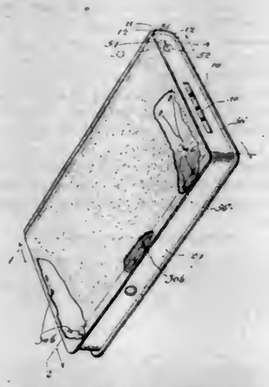
1,193,598. BOOK OR BOX LIKE FORM SAVINGS-BANK. WINSLOW R. PARSONS, Chicago, Ill. Filed May 31, 1912. Serial No. 700,616. (Cl. 232—6.)

1. A book-form savings bank comprising in combination, a back and covers bent from a single piece of metal, a strip forming the edges of the book, a pivotal joint in said strip and means at the back edge of the book connecting and locking said strip at opposite ends respectively to the back and covers.

2. A book-form savings bank comprising in combination a back and covers bent from a single piece of metal, a strip of metal forming side edges therefor, a sliding latch plate detachably locking said strip to the back of said covers.

3. A book-form savings bank comprising in combination a back and covers bent from a single piece of metal, a bent strip of metal forming two side edges thereof, a

sliding latch plate provided with a slot, and a lug secured to the back engaging the slot, for detachably connecting said strip with the covers.

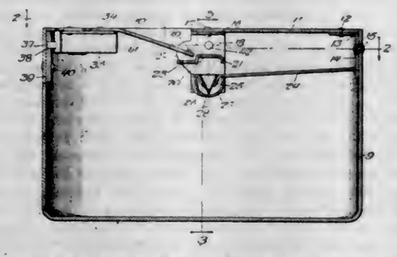


4. A book-form saving bank comprising in combination a back and covers bent from a single piece of metal, a bent strip of metal forming two side edges thereof, a slidable spring latch plate and a lug secured to the back detachably connecting said strip and plate with the back of the covers.

5. A book-form savings bank comprising in combination a back and covers bent from a single piece of metal, a bent strip of metal forming two side edges thereof, a hook connecting said strip and cover, a lug and a sliding spring latch plate provided with a slot detachably locking said hook against disengagement, and the strip to the covers.

[Claims 6 to 10 not printed in the Gazette.]

1,193,599. SAFETY-DEPOSIT BANK. WINSLOW R. PARSONS, Chicago, Ill. Filed Oct. 7, 1912. Serial No. 724,296. (Cl. 232—62.)



1. A safety deposit bank comprising in combination a coin receptacle provided with a sectional cover, consisting of a fixed section, a movable section, and a pivot connecting said sections, the adjacent ends of which sections are located in differing planes, and thereby providing a coin slot between said sections, extending substantially the width of the receptacle.

2. A safety deposit bank comprising in combination a coin receptacle, a sectional cover therefor, one section of which is fixed and the other movable, the adjacent ends of which sections are in differing planes, and a hinge connection between said sections in a plane below the fixed section.

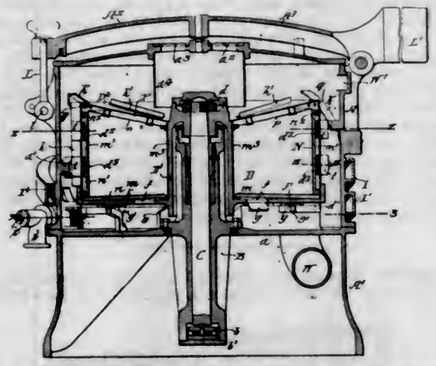
3. A safety deposit bank comprising in combination a coin receptacle, a cover therefor, consisting of a hinged member, and a fixed member, a coin supporting bar projecting inwardly beyond the end of the hinged member, and a coin receiving plate substantially conforming in area to that of the fixed member receiving coins from said supporting bar.

4. A safety deposit bank comprising in combination a coin receptacle, a sectional cover, one section of which cover is fixed to the receptacle, and the other section is movable therein, a hinge connection between said sections, projecting inwardly in a plane below the fixed section, whereby the hinge section may be swung to and from a locking position in the receptacle, a coin receiving plate, and a coin supporting bar intermediate the fixed section of the cover, and the coin receiving plate.

5. A safety deposit bank comprising in combination a coin receptacle, a cover composed of fixed and movable members, a hinge connection between the adjacent ends of said members, in a plane below the fixed member, a coin receiving plate in a plane below both of said members secured to the fixed member, and to the walls of the receptacle, and provided with seats, a plurality of gravitating cones adapted to be supported upon and project through said seats, and means between said cones and the coin slot supporting said cones in a position projecting them across the coin slot, when the receptacle is in an upside down position, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,193,600. WASHING-MACHINE. THOMAS S. PATTERSON, Rosemont, Pa. Filed Feb. 26, 1912. Serial No. 679,932. (Cl. 68—37.)



1. The combination in a washing machine, of a casing; a rotating basket mounted on a vertical axis and rotated within the casing; means for rotating the same, said basket having openings in its side walls and having inclined guides between the openings for directing the water therethrough, said casing having conduits opening into the interior of the casing and registering with the openings in the side walls of the basket; and means for causing the water to discharge into and through the openings in the basket.

2. The combination in a washing machine, of a casing; a rotating basket located within the casing; means for rotating the same, said basket having openings in its side wall, said casing having conduits opening into the interior thereof and registering with the openings in the basket; and means for discharging water through the conduits, said water being projected from the conduits and through the openings in the side wall of the basket and into the basket, said basket having openings in the bottom through which the water circulates.

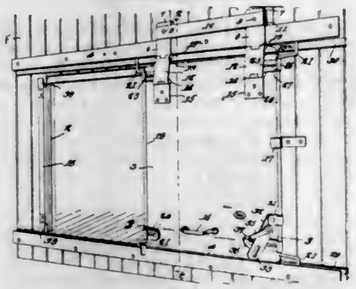
3. The combination of a casing; a basket within the casing; means for rotating the basket, said basket having two sets of openings in its side wall, one set located above the other set; two series of conduits in the casing having outlet openings, one set of conduits registering with the upper set of openings in the side wall of the basket and the other set of conduits registering with the lower set of openings in the basket so that, as the basket is rotated, the material therein will be agitated first by water projected through one set of openings and then through the other set of openings.

4. The combination in a washing machine, of a casing; a basket within the casing; means for supporting the basket; means for rotating the basket, said basket having a series of openings in its side wall; and a series of openings in its bottom, said casing having conduits opening into the chamber at intervals and registering with said openings in the basket; a valve at each bottom opening of the basket, said valves depending from the bottom of the basket so that, as the basket rotates, water will be projected at intervals into the basket through the side openings and will be projected through the bottom openings by the action of the valves in order that the material in the basket may be constantly agitated.

5. The combination in a washing machine, of a casing; a basket within the casing; a central support in the basket; means for rotating the basket, said basket having a series of openings in its side wall and a series of openings in its bottom, the casing having conduits opening into the chamber in which the basket is located and registering with the said openings in the basket; a valve in each bottom opening of the basket and depending from the bottom of the basket; cams in the bottom of the casing arranged to close the valves during a certain portion of the revolution of the basket; and means for causing the water to circulate through the conduits so that, as the basket is rotated, the material therein will be agitated first by water projected through the side openings and then by water projected through the openings in the bottom of the basket.

[Claims 6 to 22 not printed in the Gazette.]

1,193,601. FREIGHT-CAR DOOR. FRANCIS E. PATTON, Williamsport, Pa. Filed Mar. 24, 1916. Serial No. 86,442. (Cl. 20—24.)



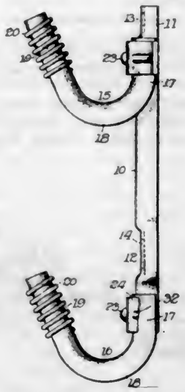
1. The combination with a wall having an opening, of a door adapted to fit in said opening, oscillatory vertical rods carried by the door adjacent the side edges thereof and having cranks at their ends, and upper and lower guiding means for the terminals of said cranks, said guiding means and cranks being so constructed that when the door is moved away from said wall the cranks are slidable freely along said means and when the door is moved within said opening a binding action is produced between said cranks and means.

2. The combination with a wall having a door opening, of upper and lower rails attached to said wall, a door between said rails adapted to fit in said opening, hangers engaging the upper rail, means connecting said hangers and door for permitting said door to be moved to and from said wall, oscillatory vertical rods carried by the door adjacent the edges thereof and having cranks at their ends whose terminals extend behind the rails, means carried by the wall adjacent one edge of said opening to engage the cranks of one rod and move them toward said wall, and a member attached to the other rod for rotating it and adapted to be held against the door by a seal.

3. The combination with a wall having a door opening, of upper and lower rails attached to said wall, a door between said rails adapted to fit in said opening, hangers engaging the upper rail, means connecting said hangers and door and permitting said door to be moved to and from said wall, oscillatory vertical rods carried by the door adjacent the edges thereof and having cranks at their ends whose terminals extend behind the rails, a stop strip carried by the wall adjacent one edge of the opening, plates attached to the ends of said strip and so arranged that the cranks of one rod engage behind said plates, when the door is moved against said stop strip to force said cranks and corresponding edge of the door toward said wall, a keeper carried by the door, and a hasp attached to the other rod to swing against the door and engage said keeper.

4. The combination with a wall having an opening, of upper and lower rails attached to the wall, a door between said rails adapted to fit in said opening, hangers engaging the upper rail, means connecting said hangers and door to permit the door to be moved to and from said wall, strips behind said rails, and vertical oscillatory rods carried by the door adjacent the edges thereof and having cranks whose terminals project between the rails and strips, said terminals being flattened and arranged to bind against the rails when the door is moved into the opening.

1,193,602. INSULATOR-SUPPORTING FIXTURE. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 6, 1916. Serial No. 89,369. (Cl. 173—321.)



1. A fixture comprising an insulator receiving member and a strap for securing said member to a support, said member being pressed from flat sheet metal and being of arch shaped cross section open to the rear, said strap being arched to saddle over and intimately engage at all points with the front and sides of said member, means securing the strap to the member, and laterally extending wings on said strap provided with bolt holes.

2. A fixture comprising an insulator receiving member and a strap for securing said member to a support, said member being pressed from flat sheet metal and being of arch shaped cross section open to the rear, said strap being arched to saddle over and intimately engage at all points with the front and sides of said member, means securing the strap to the member, laterally extending wings on said strap provided with bolt holes, and transversely extending strengthening corrugations for the bends between the arch and wings of said strap.

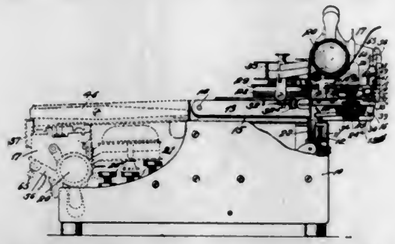
3. An insulator supporting fixture comprising a body part and a bracket member, said body part being pressed up from sheet metal to arched cross-section and open at the rear, said bracket member being pressed up from sheet metal to arched transverse cross-section, the end of said bracket member saddling over and intimately engaging

with the front and sides of the body part to be locked against rotational displacement, and means securing the bracket member to the body part against longitudinal displacement.

4. An insulator supporting fixture comprising a body part and a bracket member, said body part being pressed up from flat sheet metal to arched transverse cross-section and open to the rear, said bracket member being pressed up from flat sheet metal to arched transverse cross-section, the end of said bracket member saddling over and intimately engaging at all points with the front and sides of said arched body part, a strap pressed up from sheet metal and arched at its center to saddle over and intimately engage with the front and sides of the bracket member, means securing the strap, bracket member and body part intimately together, and lateral wings on said strap provided with bolt holes.

5. An insulator supporting fixture comprising a body part and a bracket member, said body part being pressed up from flat sheet metal to arched transverse cross-section and open to the rear, said bracket member being pressed up from flat sheet metal to arched transverse cross-section, the end of said bracket member saddling over and intimately engaging at all points with the front and sides of said arched body part, a strap pressed up from sheet metal and arched at its center to saddle over and intimately engage with the front and sides of the bracket member, means securing the strap, bracket member and body part intimately together, and lateral wings on said strap provided with bolt holes, said strap having strengthening corrugations at its bends between its arched section and the wings.

1,193,603. TYPE-WRITING MACHINE. OTTO PETERMANN, Groton, N. Y., assignor, by mesne assignments, to Corona Typewriter Company, Incorporated, a Corporation of New York. Original application filed June 12, 1909, Serial No. 501,852. Divided and this application filed Oct. 2, 1913. Serial No. 792,994. (Cl. 197—176.)



1. In a typewriting machine, the combination of a support, a carriage adapted to move along said support, a bar having a rocking movement only on said carriage, a plurality of stops detachably held to said bar, escapement mechanism, means for releasing said escapement only, and a second means coöperating and interlocking with the first-mentioned means for releasing said escapement mechanism including a part adapted to be moved into the path of said stops.

2. In a typewriting machine, the combination of a support, a carriage adapted to move along said support, a bar having a rocking movement only on said carriage, a plurality of stops of relatively different lengths detachably held to said bar, escapement mechanism, means mounted on the carriage for releasing said escapement mechanism, a second means coöperating and interlocking with the first-mentioned means mounted on the support for releasing the escapement and including a part adapted to be moved into the path of certain of said stops, and means adapted to be engaged by other of said stops to arrest the movement of the carriage.

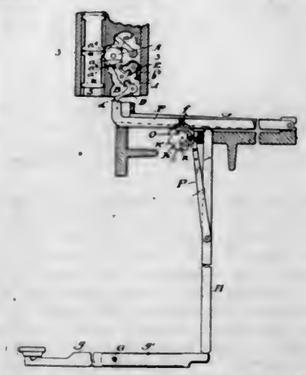
3. In a typewriting machine, the combination of a support, a platen carriage adapted to travel along said support, a stop bar pivotally held to said carriage at the rear thereof, means for moving said bar on its pivot, a plurality of stops of relatively different lengths adapted to be held to said bar, a relatively stationary part located on the support adapted to be engaged by certain of said stops, a movable element adapted to engage certain of said stops and guided in said stationary part, escapement mechanism, and means to release said escapement mechanism and move said stop engaging element.

4. In a typewriting machine, the combination of a support, a platen carriage adapted to travel along said support, a slotted stop bar pivotally held to said carriage at the rear thereof, a lever for moving said bar on its pivot, a plurality of stops detachably held to said bar, a relatively stationary part adapted to be engaged by certain of said stops, a vertically movable element adapted to engage certain of said stops and guided in said stationary part, escapement mechanism, and a second interlocking element adapted to release said escapement mechanism and adapted to be moved when the first-mentioned element is moved or independently of said first-mentioned element.

5. In a typewriting machine, the combination of a support, a platen carriage adapted to travel along said support, a slotted stop bar held to said carriage, a plurality of stops detachably held to said bar, a relatively stationary part mounted on the support adapted to be engaged by certain of said stops, feed mechanism, and two relatively movable interlocking members one adapted to coöperate with the other as means to release said feed mechanism and to engage anyone of said plurality of stops and arrest the movement of the carriage and the other as escapement releasing means only.

[Claims 6 to 21 not printed in the Gazette.]

1,193,604. TYPOGRAPHIC COMPOSING-MACHINE. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 16, 1913. Serial No. 795,397. (Cl. 199—7.)



1. In a typographic composing machine, the combination of a matrix magazine having matrix holding channels, a plurality of two-step escapement mechanisms, a single key, and means operated thereby for serially moving said escapements through the first half cycle of movement, and whenever an escapement is so moved, for causing another escapement to move through the last half cycle of its movement.

2. In a typographic composing machine, the combination of a matrix magazine containing magazine channels, two step escapements mounted on said magazine, an escapement operator for each escapement, an associated key, and means whereby the two escapement operators are caused to move reciprocally,—the one from and the other back to its normal position by successive complete actuations of said key.

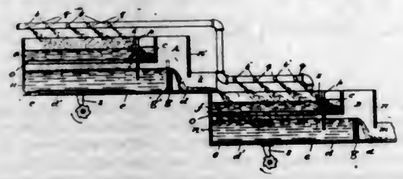
3. In a typographic composing machine, the combination of a matrix magazine having a plurality of matrix channels, a two-step escapement mechanism for each channel, which escapement mechanisms are mounted upon said magazine, two escapement operating levers mounted on the framework of the machine and engaging, respectively, with two of said escapement mechanisms, two connected rotatable disks whose peripheries are formed with alternately placed depressions and cam-shaped elevations,—the depressions in one disk being alined with the elevations in the other disk, a single key and means operated thereby for imparting step by step rotary movements to said disks.

4. In a typographic composing machine the combination of a matrix magazine having matrix channels, a plurality of two-step escapement mechanisms mounted on said magazine, a rotatable shaft, as many disks fixed to said shaft as there are escapements, each having in its periphery alternately placed depressions and cam-shaped elevations,—said disks being placed relatively to each other so that, as shown, the depressions are in staggered relations, an equal number of escapement operating levers which engage respectively with said escapements and with said disks, a ratchet wheel fixed to said shaft, a single key, a vertically movable reed operable by said key, and a pawl carried by said reed to engage and operate said ratchet wheel.

5. In a typographic composing machine, the combination of two two-step escapements, a single key, intermediate mechanism by which one down stroke of said key will cause one escapement to move through the first half of its cycle and the other escapement mechanism to move through the second half of its cycle, while the next down stroke of said key will produce the reverse movement of both escapements, and means for holding said escapements in the intermediate position in the interval between two successive down strokes of said key.

[Claims 6 and 7 not printed in the Gazette.]

1,193,605. APPARATUS FOR WASHING PULP AND FOR SEPARATING PULP FIBERS FROM IMPURITIES. BISMARCK WM. PETSCHE, Yonkers, N. Y., assignor to The Pembee Company, New York, N. Y., a Corporation of New York. Filed May 19, 1910. Serial No. 562,208. (Cl. 92—32.)



1. An apparatus for washing pulp, and for separating pulp fibers from impurities, comprising a box, a partition, set therein not extending to the bottom; a second partition, set in the box beyond the first and extending from the bottom of the box to below the top of the first partition; an outflow from the box beyond the second partition; a screen, set, approximately parallel to the bottom of the box, between the first partition and the opposite side of the box; a trough, adjoining the screen but separated from it by a wall, extending above the screen, and means for conveying water into the box, above the screen, in streams directed toward, and upon the edge of, the wall, separating the screen from the trough; substantially as herein shown and described.

2. An apparatus for washing pulp, and for separating pulp fibers from impurities, comprising a box; a partition, set therein not extending to the bottom; a vertically extensible partition, set in the box beyond the first, and extending from the bottom of the box to below the top of the first partition; an outflow from the box beyond the second partition; a screen, set, approximately parallel to the bottom of the box, between the first partition and the opposite side of the box; a trough, adjoining the screen but separated from it by a wall, extending above the screen, means for conveying water into the box, above the screen, in streams directed toward, and upon the edge of, the wall, separating the screen from the trough; substantially as herein shown and described.

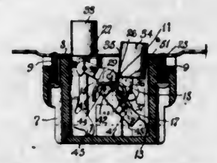
3. An apparatus for washing pulp, and for separating pulp fibers from impurities, comprising a box; a partition set therein not extending to the bottom, a second partition, set in the box beyond the first and extending from the bottom of the box to below the top of the first partition; an outflow from the box beyond the second partition; a screen, set, approximately parallel to the bottom of the box, between the first partition and the opposite side of the box; a trough, adjoining the screen but separated from it by a wall, extending above the screen, means for conveying water into the box, above the screen, in streams directed toward, and upon the edge of, the wall, separating the screen from the trough, and means for imparting an undulating motion to the water in the box; substantially as herein shown and described.

4. An apparatus for washing pulp, and for separating pulp fiber from impurities, comprising a box, a partition set therein not extending to the bottom; a vertically extensible partition, set in the box beyond the first, and extending from the bottom of the box to below the top of the first partition; an outflow from the box beyond the second partition; a screen, set, approximately parallel to the bottom of the box, between the first partition and the opposite side of the box; a trough, adjoining the screen but separated from it by a wall, extending above the screen, means for conveying water into the box, above the screen, in streams directed toward, and upon the edge of, the wall, separating the screen from the trough, and means for imparting an undulating motion to the water in the box; substantially as herein shown and described.

5. An apparatus for washing pulp, and for separating pulp fiber from impurities, comprising a box, having a movable bottom; a partition set therein not extending to the bottom; a second partition, set in the box beyond the first, and extending from the bottom of the box to below the top of the first partition; an outflow from the box beyond the second partition; a screen, set, approximately parallel to the bottom of the box, between the first partition and the opposite side of the box; a trough, adjoining the screen, but separated from it by a wall extending above the screen, means for conveying water into the box, above the screen, in streams directed toward, and upon the edge of, the wall, separating the screen from the trough; and means for moving the bottom of the box toward, and away from, the screen; substantially as herein shown and described.

[Claims 6 to 9 not printed in the Gazette.]

1,193,606. SNAP-SWITCH. CLARENCE D. PLATT, Bridgeport, Conn. Filed Sept. 10, 1915. Serial No. 49,959. (Cl. 175—293.)



1. In a quick throw switch, an insulating base, a support mounted on said insulating base, a rocking switch operating lever pivoted on said support having side arms extending in opposite directions from the point of pivotal support and angularly extending arms dependent from the point of pivotal support, stops carried by the support on opposite sides of the pivotal center of the operating lever and disposed beneath the side arms of said operating lever to be engaged thereby and limit the throw of said operating lever, a contact making lever pivoted to the

dependent arms of the switch operating lever and swinging to opposite sides into engagement with the stops on the support, a spring connected on its lower end to the free end of the contact making lever and anchored on its upper end at a point above the pivotal connections between the levers and push buttons connected to the respective side arms of the switch operating lever.

2. In a quick throw switch, a support having pivot lugs and spaced apart stop bars disposed at opposite sides of the pivotal axis of said lugs, a rocking switch operating lever pivoted on said lugs and limited in its rocking movements by engagement with the upper sides of said stop bars, a dependent contact-making lever pivoted to said switch-operating lever below the pivotal support of said switch-operating lever and limited in its swinging movements by engagement with the under sides of the stop bars and a spring connection between the free lower end of the swinging contact-making lever and a point above the connection between the two levers to thereby constitute said two levers a spring toggle.

3. In a quick throw switch, a support having attaching lugs at the ends thereof, spaced upstanding pivot lugs between the attaching lugs and dependent arms at opposite sides of the pivot lugs carrying stop bars, a rocking switch-operating lever pivotally supported between the pivot lugs and limited in its rocking movements by engagement with the upper sides of said stop bars, a dependent contact-making lever pivoted to said switch-operating lever below the pivotal support of said switch-operating lever and limited in its swinging movements by engagement with the under sides of the stop bars and a spring connection between the free lower end of the swinging contact-making lever and a point above the connection between the two levers to thereby constitute said two levers a spring toggle.

4. In a quick throw switch, a support having spaced apart pivot lugs and spaced stop bars disposed at opposite sides of the pivotal axis of said lugs, a rocking switch operating lever having spaced side portions pivotally engaged between the spaced pivot lugs and oppositely extending arms engaging the upper sides of the stop bars to limit the rocking movements of said lever, a dependent contact-making lever having spaced sides pivoted to the spaced side portions of the switch-operating lever and a spring connection between the free end of the contact-making lever and a point above the pivotal connection between the two levers.

5. In a quick throw switch, a support having spaced apart pivot lugs and spaced stop bars disposed at opposite sides of the pivotal axis of said lugs, a rocking switch-operating lever having spaced side portions engaged between the spaced pivot lugs and oppositely extending arms to engage the upper sides of the stop bars, a pivot pin passed through the pivot lugs and the spaced side portions of the switch-operating lever, a dependent contact-making lever having spaced sides pivoted to the spaced side portions of the switch-operating lever and an attachment loop on the lower end thereof and a spring connected to the pivot pin at its upper end and to said attachment loop at its lower end.

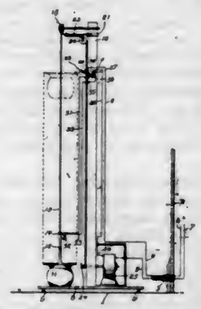
[Claim 6 not printed in the Gazette.]

1,193,607. ELEVATING-CUSPIDOR. BERNARD J. POST, San Francisco, Cal. Filed Jan. 3, 1914. Serial No. 810,230. (Cl. 4—38.)

1. In combination, an expectorant receiver, means for moving the same toward the user, and means for illuminating an area adjacent the receiver, said means being operable by the elevation of the receiver to facilitate use of the same substantially as described.

2. In combination, an expectorant receiver, means for elevating the same toward the user, a device operated upon elevation of the receiver to a usable position for throwing out said means to permit descent by gravity of said receiver to an initial position.

3. In combination, an expectorant receiver, an upright, a driven shaft carried by the upright, a cord-like element connected with said receiver and shaft to be elevated by movement of said shaft, and means actuated by the receiver for arresting movement of said shaft, substantially as described.

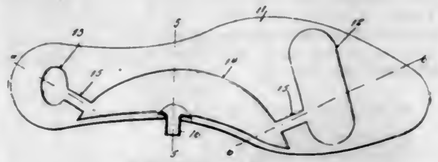


4. In combination, an expectorant receiver, an upright, a power-driven winding shaft, pulleys carried by said upright, a cord-like element connected with said receiver and with said shaft and trained about said pulleys, and means actuated by the receiver for arresting movement of said shaft, substantially as described.

5. In combination, an expectorant receiver, an electric motor provided with a shaft, a cord-like element connected with the receiver and with said shaft for elevation of the receiver to a usable position upon winding movement of said shaft, and a switch for said motor adapted to be actuated by the receiver to arrest elevating movement of the latter, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,193,608. INSOLE. PALMER O. POULSON, Roswell, N. Mex. Filed Oct. 26, 1915. Serial No. 57,993. (Cl. 36—71.)



As a new article of manufacture, an insole comprising an outer casing, an inner cushion positioned within said outer casing, said inner cushion provided with a substantially crescent shaped pocket near one side thereof and adapted to extend under the arch of the foot of the wearer, said inner cushion also provided with an oval pocket near the rear end of said in-sole to extend under the heel of the wearer, said inner casing also provided with a forward pocket adapted to extend under the ball of the foot of the wearer, said in-sole provided with passageways forming a communication between said crescent shape pocket and both of said other pockets, and a filling tube communicating with said crescent shape pocket whereby the pockets in said in-sole may be inflated when so desired.

1,193,609. PNEUMATIC FLUID-LIFT. JAMES K. PUTNAM, Tulsa, Okla. Filed July 6, 1915. Serial No. 38,235. (Cl. 103—84.)

1. A pneumatic fluid lift including a revolubly mounted outlet pipe, continuing rigidly throughout the depth of the well and having a number of vertically spaced ports, valves for the ports, circumferentially revoluble members upon the pipe adjacent the ports for operating the valves, means for yieldingly locking said members against movement and means for rotating the pipe whereby the ports may be opened and closed by the valves.

2. A pneumatic fluid lift including a revolubly mounted outlet pipe continuing throughout the depth of the well and having a number of vertically spaced ports, valves for the ports, circumferentially revoluble members on the pipe adjacent the ports, segmental extensions projecting from said members and lying in the lateral paths of the ports for operating the valves, means for yieldingly holding the members against movement, and means for rotating the pipe, whereby the ports may be opened and closed by the valves.



3. A pneumatic fluid lift including a revolubly mounted outlet pipe continuing throughout the depth of the well and having a number of vertically spaced ports, valves for the ports, circumferentially revoluble members on the pipe adjacent the ports, segmental extensions projecting from said members and lying in the lateral paths of the ports for operating the valves, means for yieldingly holding the members against movement, stops in the swinging path of said segmental extensions, and means for rotating the pipe whereby the ports may be opened and closed by the valves.

4. A pneumatic fluid lift including a revolubly mounted pipe extending rigidly throughout the depth of the well and having a number of vertically spaced ports, sleeves encircling the pipe and having upright segmental projections lying in the paths of the ports, means for yieldingly holding the sleeves against rotation, and means for rotating the pipe whereby the ports may be opened and closed by the projections.

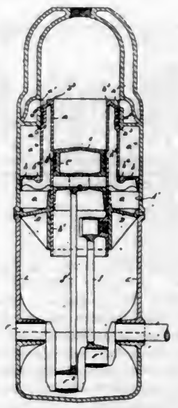
5. A pneumatic fluid lift including a revolubly mounted pipe extending rigidly throughout the depth of the well and having a number of vertically spaced ports, sleeves encircling the pipe and having upright segmental projections of varied lengths and lying in the planes of the ports, means for yieldingly holding the sleeves against rotation and means for rotating the pipe, whereby the ports may be opened and closed by said projections.

[Claims 6 to 9 not printed in the Gazette.]

1,193,610. INTERNAL-COMBUSTION ENGINE. GEORGE FREDRIC RAYNER, Acton, England. Filed Dec. 15, 1911. Serial No. 665,997. (Cl. 123—69.)

1. In a two stroke internal combustion engine, a cylinder, an annular power piston within the cylinder and an inner power piston within the annular power piston, both pistons being acted on by the expanding gases to move them in the same direction but for a different distance and inlet ports controlled by one piston and exhaust ports by the other.

2. In a two stroke internal combustion engine, a cylinder, an annular power piston within the cylinder and an inner power piston within the annular power piston, exhaust ports controlled by the annular piston and inlet ports controlled by the inner piston, connections from the annular piston and the inner piston to cranks arranged so that the pistons move in similar directions to open and close the exhaust ports in advance of the opening and closing respectively of the inlet ports.



3. In a two stroke internal combustion engine, a cylinder, an annular power piston within the cylinder and an inner power piston within the annular power piston both working in the same direction, exhaust ports in the cylinder controlled by the annular piston and inlet ports in the annular piston controlled by the inner piston, a flange on the annular piston working in a closed enlarged portion of the cylinder to form a pump to supply air or explosive mixture direct from the pump to the cylinder through inlet ports in the inner wall of the annular piston and controlled by the inner piston.

4. In a two stroke internal combustion engine, a cylinder, an annular power piston within the cylinder and an inner power piston within the annular power piston both working in the same direction, exhaust ports near the middle of the cylinder adapted to be uncovered by the annular piston near the end of its outstrake to effect an efficient clearing of the exhaust gases in a minimum of time and inlet ports in the inner wall of the annular piston adapted to be uncovered and covered by the inner piston at a suitable period after the opening and closing respectively of the exhaust ports.

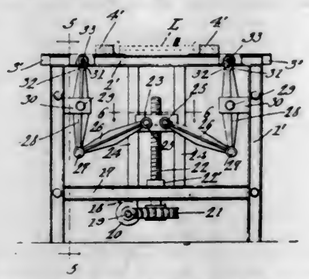
5. In a two stroke internal combustion engine, having a cylinder and annular power piston within the cylinder and an inner power piston within the annular power piston, inlet and exhaust ports controlled one by each of the pistons and connections from the pistons to cranks so that the expansion of the explosive mixtures causes them to move in the same direction but for different distances; two pump chambers formed one on each side of a flange on the annular piston working in an enlarged portion of the cylinder, ports in the wall of this enlarged portion of the cylinder controlled by the flange to admit air alternately to each of the pump chambers in one of which it is compressed and transferred to the working cylinder through the inlet ports while in the other it is compressed and utilized to convey the fuel to the working cylinder and a valve in the combustion head through which the fuel is injected after the inlet and exhaust ports are both closed.

[Claims 6 and 7 not printed in the Gazette.]

1,193,611. LADDER-ASSEMBLING BENCH. JOSEPH V. RICHARDSON, Goshen, Ind., assignor to The Superior Ladder Company, Goshen, Ind. Filed Feb. 1, 1915. Serial No. 5,494. (Cl. 144—291.)

1. A ladder assembling bench including opposed levers, slidable members movably engaged by the levers and constituting means for engaging opposed portions of a lad-

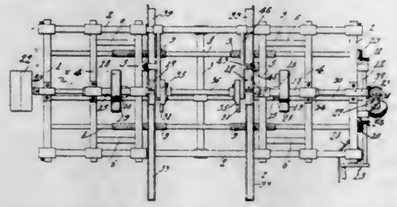
der, a toggle, and means for actuating the toggle to shift the levers simultaneously and move the slidable members toward or from each other.



2. A ladder assembling bench including opposed levers, slidable members movably engaged by the levers and constituting means for engaging opposed portions of a ladder, a toggle, and means for actuating the toggle to shift the levers simultaneously and move the slidable members toward or from each other, said toggle comprising a slidable block, guides therefor, links connecting the block to the respective levers, and means for shifting the block upon its guides.

3. A ladder assembling bench including parallel guide members, channeled members slidably mounted upon the guide members, ladder engaging elements carried by the channeled members, an actuating shaft extending transversely under the guide members, shiftable blocks, means operated by said shaft for simultaneously actuating the blocks, links extending from the blocks, and connections between the links and the respective channeled members.

1,193,612. TENONING-MACHINE. JOSEPH V. RICHARDSON, Goshen, Ind., assignor to The Superior Ladder Co., Goshen, Ind. Filed Apr. 21, 1915. Serial No. 22,845. (Cl. 144—203.)



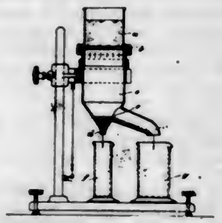
1. The combination with a fixed arcuate support and revoluble means for lifting articles one at a time onto the support, of a revoluble cutter concentric with the support, a shaft extending through the cutter, means supported by and revoluble with the shaft for engaging the articles at points between their ends to roll them along the support while acted on by the cutter, and means for pressing said article engaging and rolling means yieldingly against the engaged articles.

2. The combination with an arcuate fixed support, and a shaft concentric with the support, of a revoluble cutter supported by the shaft, an article engaging roller mounted upon and shiftable radially to said shaft, yielding means for pressing the roller against the articles on the support to roll said articles while being acted on by the cutter, means for transmitting motion from the shaft to the roller independently of such radial movement of the roller, and an additional means for rotating the cutter upon the shaft.

3. The combination with arcuate fixed supports and a shaft concentric with the supports, opposed heads slidably mounted on the shaft, means for adjusting the heads toward or from each other, said means being shiftable with the heads, spaced cutters mounted for rotation on the shaft, tubular bearing members fitted loosely on the shaft and mounted to move radially relative thereto, spring pressed supports for the bearing members, rollers journaled on said bearing members for engaging articles and rolling them along the supports, and a coupling between the shaft and each roller for transmitting motion to the roller independently of the radial movement of said roller relative to the shaft.

4. The combination with arcuate fixed supports and a shaft concentric with the supports, opposed heads slidably mounted on the shaft, means for adjusting the heads toward or from each other, said means being shiftable with the heads, spaced cutters mounted for rotation on the shaft, tubular bearing members fitted loosely on the shaft and mounted to move radially relative thereto, spring pressed supports for the bearing members, rollers journaled on said bearing members for engaging articles and rolling them along the supports, and a coupling between the shaft and each roller for transmitting motion to the roller independently of the radial movement of said roller relative to the shaft, said coupling including a disk fixedly secured to the shaft and engaging one side of the roller, said disk having openings therein, and means extending loosely through the openings and into engagement with the roller for fastening the roller to the disk.

1,193,613. METHOD AND MEANS FOR TESTING PAPER-PULP. MICHAEL RIEGLER, Unterkochen, near Aalen, Germany, assignor of one-half to Louis Schopper, Leipzig, Germany. Filed Sept. 8, 1913. Serial No. 788,674. (Cl. 73—51.)



1. An apparatus for testing paper pulp, comprising a hopper, a perforated bottom therefor, a container in communication with the hopper, a plurality of outlets arranged in the bottom wall of the container at different heights, and independent means for collecting the constituents passing from each of the outlets in the bottom wall of the container.

2. The method of testing paper pulp consisting in collecting a quantity of pulp, draining off the water from said pulp into a receptacle having openings arranged at different heights and discharging into independent collecting vessels, the variations of the quantity of water in the vessels determining the quality of the pulp.

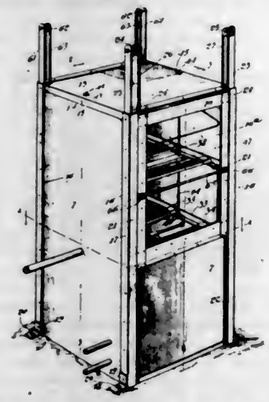
3. An apparatus for testing paper pulp comprising a hopper for the reception of the pulp, a perforated bottom for said hopper, a container in communication with the hopper having a plurality of outlets passing through the walls thereof at different heights, and a collecting means in communication with said outlets.

4. An apparatus for testing paper pulp comprising a hopper, a container below said hopper having a plurality of constantly opened outlets at different heights arranged within the wall of the retainer, and separate collecting means in communication with said outlets.

5. An apparatus for testing paper pulp comprising a hopper, a perforated bottom therefor, a container having an inclined wall in communication with the hopper, a plurality of outlets arranged in the inclined wall of the container at different heights, and a collecting vessel in communication with each of said outlets.

[Claims 6 and 7 not printed in the Gazette.]

1,193,614. APPARATUS FOR HEATING WAX-CASES. JOSEPH P. RIVETT, Chicago, Ill. Filed Sept. 16, 1914. Serial No. 862,122. (Cl. 34—39.)



1. An apparatus for heating wax cases comprising an inclosing structure, vertically sliding doors in the front and rear walls thereof, and means whereby each of said doors may be moved to a position above the bottom and below the top of their respective doorways for the purposes described.

2. An apparatus for heating wax cases comprising an inclosing structure, a rack therein adapted to maintain wax cases in spaced, perpendicular arrangement, doorways in the front and rear walls thereof, sliding doors therefor, and a stop between one of said doors and the rack maintaining the doors from contact with wax cases in the rack, and means whereby said stop is actuated by the movement of the door.

3. An apparatus for heating wax cases comprising an inclosing structure, a rack for supporting and maintaining wax cases in a vertical position therein, means located below said rack for supplying a rising heat to the wax cases, and means for introducing between said heating source and the rack currents of air under pressure.

4. An apparatus for heating wax cases comprising an inclosing structure, a rack for supporting and maintaining wax cases in a vertical position therein, means located below said rack for supplying a rising heat to the wax cases, and means for introducing between said heating source and the rack air under pressure, the currents of which rise in the path of the ascending heat for the purposes described.

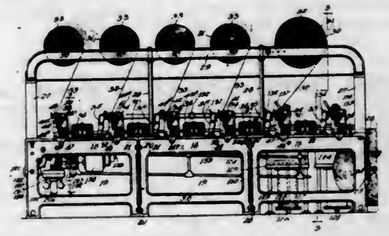
5. An apparatus for heating wax cases comprising an inclosing structure, a rack for supporting and maintaining wax cases in a vertical position therein, means located below said rack for supplying a rising heat to the wax cases, and means for introducing between said heating source and the rack rising jets of air under pressure in sheet like form, mixing with and ascending with the heated air currents to simultaneous contact with the surfaces of each wax case whereby the heated air is prevented from concentrating at and toward the upper and lower ends of the wax cases, and a uniform heat is imparted to and throughout the wax surfaces thereof.

[Claim 6 not printed in the Gazette.]

1,193,615. FLONG-MACHINE. JOSEPH P. RIVETT, Chicago, Ill. Filed Feb. 8, 1915. Serial No. 6,888. (Cl. 91—25.)

1. A flong machine comprising in combination a plurality of non-rotatable swinging supports for and extending at intervals across a corresponding number of moving fibrous strips in contact respectively therewith, adapted to adjust and direct said several strips in the same path of movement.

2. A flong machine comprising in combination a number of swinging guides, individually projecting across to contact with as many moving webs of material directed through the machine in differing planes, and whereby said guides are adapted for adjusting the adjacent edges of the several webs to and maintain said edges in a predetermined lateral path of movement common to all.



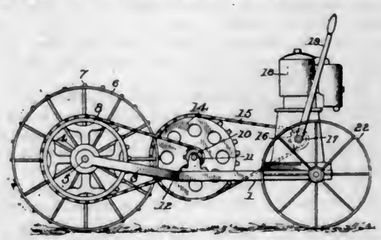
3. A flong machine comprising in combination non-rotatable guide rods pivoted at one end, and extending across and in frictional contact with the surface of moving webs of paper, whereby said guide rods have a swinging movement and exert a frictional resistance adapted to vary at will the path of movement of the web through the machine in the quickest possible time.

4. A flong machine comprising in combination non-rotatable horizontally swinging guide rods pivoted at one end, extending across, and means forward of and for maintaining said rods in contact with the opposing surface of webs of paper descending therefrom, and whereby on shifting of the angle of said rods, the subsequent path of movement of the webs may be varied and accordingly adjusted and thereafter be maintained in the same path during their onward movement through the machine.

5. A flong machine comprising in combination guide rods extending transversely of and in contact with as many webs of moving paper conducted thereto along varying paths, and means for severally swinging said guide rods to a position whereby said webs are directed onwardly therefrom in a lateral path of movement common to all.

[Claims 6 to 29 not printed in the Gazette.]

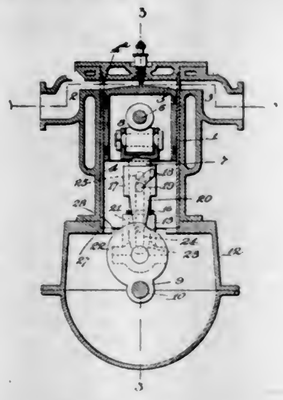
1,193,616. TRACTION-ENGINE. ADRIAN J. ROBERTS, Floydada, and WAYNE C. WRIGHT, Sr., Plainview, Tex. Filed Jan. 15, 1915. Serial No. 2,394. (Cl. 21—114.)



A traction engine comprising a frame having spaced side bars converging toward their rear ends, a front bar connected to the forward ends of said side bars, an axle journaled transversely across the rear converging ends of said side bars, a tractor wheel mounted on said axle and located between the side bars, a sprocket wheel secured on said axle and one side of said tractor wheel, a pair of bearing brackets secured on the side bars centrally thereof, a stub shaft journaled in said brackets, a pair of sprocket wheels journaled on said shaft at spaced distances apart, means connecting one of the sprocket wheels of the central shaft with the sprocket wheel on the tractor wheel shaft, an axle journaled in said side

bars adjacent the forward ends thereof, a pair of ground wheels secured on the opposite end of said axle and disposed on the outer side of said bars, a motor positioned in the forward end of the frame and disposed above the axle, a sprocket wheel carried on the motor shaft, and being in direct alinement with one of the sprocket wheels of the central shaft, means connecting the sprocket wheels of the central shaft with the sprocket wheels of the motor shaft for rotating said central shaft and in turn rotating the tractor wheel.

1,193,617. INTERNAL-COMBUSTION ENGINE. MAURICE S. ROSENFELD, Morris Park,, N. Y., assignor to Anelois Holding Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 18, 1913. Serial No. 785,408. (Cl. 123—81.)



1. An internal combustion engine comprising a stationary cylinder, having a port, an oscillating piston, a second cylinder movable relatively to the first cylinder, and means for oscillating the second cylinder to govern the port.

2. An internal combustion engine comprising a stationary cylinder, having a port, an oscillating piston, a second cylinder disposed between the stationary cylinder and the piston, and means for oscillating the second cylinder to govern the port.

3. An internal combustion engine comprising a stationary cylinder, having a port, an oscillating piston, a second cylinder disposed between the stationary cylinder and the piston, and means for oscillating the second cylinder to govern the port.

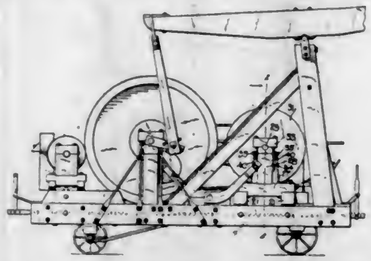
4. An internal combustion engine comprising a stationary cylinder having inlet and exhaust ports, an oscillating piston, a second cylinder having a port, and means for oscillating the second cylinder to govern both the inlet and exhaust ports.

5. An internal combustion engine comprising a stationary cylinder having inlet and exhaust ports, a second cylinder, a piston working in the second cylinder, means for oscillating the piston, and connections between the second cylinder and piston whereby the former is oscillated to govern the ports.

[Claims 6 to 15 not printed in the Gazette.]

1,193,618. BEARING-SUPPORT FOR WELL-DRILLING MACHINES. FRANK C. ROWLAND, Chanute, Kans. Filed Oct. 3, 1914. Serial No. 864,880. (Cl. 64—10.)

1. In a well drilling machine, the combination with a bearing standard and a shaft bearing mounted thereon, of plates fixed to the opposite sides of the standard, each of said plates being provided upon its upper end with spaced vertically disposed bolts adapted for engagement through openings in the shaft bearing whereby the bearing may be secured upon the standard, a hook formed upon each of the plates, and vertically inclined brace rods having eyes on their upper ends for engagement with said hooks.



2. In a well drilling machine, the combination with a standard and a shaft bearing mounted on the upper end of said standard, of plates fixed to the opposite sides of the standard, each of said plates having spaced vertically disposed bolts formed upon one end extending above the standard and adapted for engagement through openings in the shaft bearing, said bolts having threaded terminals to receive suitable nuts whereby the bearing is secured on the standard, a downwardly and outwardly curved hook formed on each of the plates between the spaced rods thereof, and vertically inclined brace rods having eyes on their upper ends for engagement with said hooks.

1,193,619. SPRINKLER-HEAD. ARTHUR C. ROWLEY, Cincinnati, Ohio, assignor to Globe Automatic Sprinkler Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 31, 1915. Serial No. 42,867. (Cl. 169—5.)



1. In combination with an automatic sprinkler head having outlet closing means, a link operative to maintain said means in position, said link comprising a compression member, a lever member bearing thereon and extending substantially at right angles therewith provided with a downwardly depending strut, a tie member engaging said compression member and said lever member and forming a bearing for said strut, and means operative to exert pressure on said lever member without the plane of said compression member to force said compression member against said outlet closing means.

2. In combination with a sprinkler head having an outlet, a cap operative to close said outlet, a compression member, a lever member having a strut and bearing on said compression member and extending on opposite sides thereof, a tie member engaging one end of said lever member and bearing on said compression member and forming a bearing for said strut, and a pressure screw adapted to bear adjacent the other end of said lever member and to exert pressure thereon without the plane of said compression member.

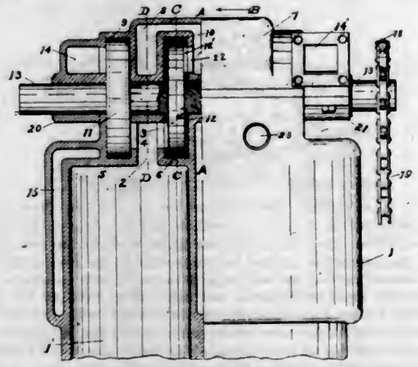
3. In combination with a sprinkler head having outlet closing means and a pressure screw, a link comprising a plurality of coacting members, one of said members bearing upon said outlet closing means and having its major portion angularly offset from the axial line of said screw, a second of said members contacting with said first-mentioned member and with said screw, and having a depending strut and a third of said members comprising a plurality of parts normally united by fusible material and operative to normally engage both of said other members and to support said strut to maintain all of said members in assembled position until the fusing of said fusible material.

4. The combination with a sprinkler head having a fluid outlet a pressure screw and means to cover said outlet, of means to normally hold said outlet covering means in position adjacent said outlet, said means comprising a stirrup shaped member, a lever member fulcrumed on said stirrup-shaped member having a strut and adapted to be engaged adjacent one of its ends by said screw, and a tie member comprising a plurality of separable parts normally united by fusible material, one of said parts having a hook engaging said stirrup and the other of said parts engaging the other end of said lever to normally restrain the movement thereof against the pressure of said screw, said tie member having a bearing for said strut adjacent said hook.

5. The combination with a sprinkler head having a fluid outlet a cap operative to close said outlet and a pressure screw, of means operative to normally maintain said cap adjacent said outlet, said means comprising a lever member having a strut extending substantially at right angles therefrom, the end of said lever more nearly adjacent said strut being adapted for engagement with said screw, a stirrup member operative to engage said cap and having an aperture, said lever being fulcrumed upon said stirrup member and a separable tie member operative to engage the other end of said lever member and to engage an edge of said aperture, the upper face of said tie member affording a bearing for the end of said strut.

[Claims 6 and 7 not printed in the Gazette.]

1,193,620. INTERNAL-COMBUSTION ENGINE. EPPA H. RYON, Waltham, Mass. Filed Dec. 4, 1913. Serial No. 804,636. (Cl. 123—59.)



1. In a gas engine, in combination, a rotary valve comprising an inclosed hollow cylinder having a gas passage through each end wall thereof to the hollow interior of said valve, said openings being angularly disposed with reference to each other, and a casing for said valve having a cylindrical recess formed therein closely fitting said valve, said casing including end walls adjacent said valve and having gas passages therethrough angularly disposed with reference to each other and corresponding in relative angular position to the passages in the end walls of the rotary valve.

2. In a gas engine, in combination, a valve shaft, a plurality of spaced separate cylindrical valves having gas passages through their end walls only and rotatable with said shaft, a valve casing having a plurality of spaced substantially semi-cylindrical recesses formed therein to receive said valves, and a casing cap having a corresponding number of similarly disposed substantially semi-cylindrical recesses formed therein, said casing and cap being separable along a substantially axial plane, whereby said shaft and valves may be removed as a unit without loss of relative adjustment, the parallel walls of the recesses in the casing having ports formed therein connecting with the engine cylinders and the parallel walls of the recesses in said cap having ports formed therein connected to the gas supply and to the exhaust.

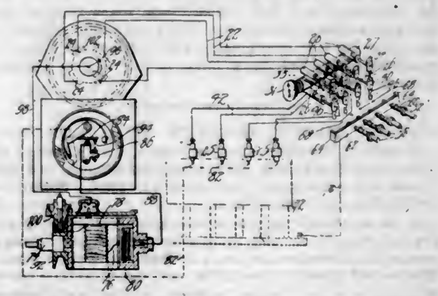
3. In a gas engine, in combination, a cylinder, a combustion chamber connected therewith, inlet and outlet ports formed in opposite sides of said combustion chamber, a pair of rotary disk valves located in recesses on each side of said combustion chamber, and a cap for said valves having additional ports formed therein, each of said valves having a hollow interior portion formed between the sides thereof and having an opening through one of said sides adapted to register with one of the ports in the combustion chamber, and a second opening through its opposite side adapted to register with one of the ports in said cap, the openings in the opposite sides of said valve being out of axial alinement with each other.

4. In an internal combustion engine, a cylinder casting, a removable cap for said casting, means to secure said cap to said casting, a rotary valve shaft, a disk valve on said shaft having an opening therethrough, and means to rotate said shaft and valve, said casting and cap being separable substantially in the plane of the axis of said valve shaft and having oppositely disposed valve recesses therein, and said casting and cap having ports formed therein to register with the opening in said valve.

5. In an internal combustion engine, a cylinder casting, a removable cap for said casting, means to secure said cap to said casting, a rotary valve shaft, a hollow disk valve on said shaft having openings through the end walls thereof, and means to rotate said shaft and valve, said casting and cap being separable substantially in the plane of the axis of said valve shaft and having oppositely disposed valve recesses therein, said casting having a port to register with the opening in one side of said valve and said cap having a port to register with the opening in the opposite side of said valve.

[Claim 6 not printed in the Gazette.]

1,193,621. APPARATUS FOR INDICATING AND LOCATING DEFECTS IN THE IGNITION, VALVE AND CARBURETER SYSTEMS OF INTERNAL-COMBUSTION ENGINES. ERNEST HUMPHREY SCOTT, Malvern, near Melbourne, Victoria, Australia. Filed Nov. 18, 1914. Serial No. 872,849. (Cl. 175—183.)



1. In a device of the character described, in combination, a casing, insulating supporting blocks within said casing, a switch plug in one of said blocks, means for rotating said plug, terminal pins extending into recesses of the insulating blocks, line wires attached to said pins and leading to the magneto and spark plugs of the engine, plugs in the other of said blocks adapted to be engaged by said pins and extending with their points into recesses of said last named block, spark gaps in each line wire visible to the driver and adapted to be cut into the circuit upon

the rotation of said switch plug for testing the magneto, substantially as described.

2. In a device of the character described, comprising a casing, insulated supporting blocks within said casing, and terminal pins connecting the line wires from the magneto terminals and connecting plugs the points of which are air gapped from the points of a corresponding set of plugs engaging terminals connecting the line wires to the spark plugs, a switch plug for bridging the gap between each pair of terminal pins and for normally leading the current direct to the spark plugs, the lower set of terminals being in contact with another set of plugs, press buttons or equivalent switch mechanism arranged within the insulator blocks and normally spaced from the latter plugs, the press buttons being provided with return springs and arranged whereby the pressing in of the buttons causes air spaces to be bridged and contact to be made by the buttons with the lower set of plugs in order to deflect the current from the spark plug lines through a contact plate in frictional contact with the indicator casing to an earth wire leading to the engine frame as and for the purposes specified.

3. In a device of the character described, in combination, a casing, recessed insulating blocks within said casing, vertical screw plugs projecting into recesses of said blocks, spring-controlled push buttons within the horizontal recesses in said blocks, contact points on said buttons, air spaces between the points of said buttons and the plugs, and connection between said plugs and the spark plugs so arranged that upon the pressing of one of said buttons the spark plugs are short circuited and rendered inoperative.

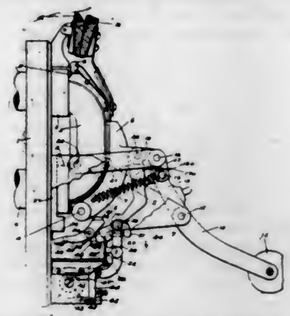
4. In a device of the character described, in combination, a casing, insulating supporting blocks within said casing, a switch plug in one of said blocks, means for rotating said plug, terminal pins extending into recesses of the insulating blocks, line wires attached to said pins and leading to the magneto and spark plugs of the engine, plugs in the other of said blocks adapted to be engaged by said pins and extending with their points into recesses of said last named block, spark gaps in each line wire visible to the driver, and a switch for cutting out the spark gaps and normally leading the current directly to the spark plugs, substantially as described.

5. In a device of the character described, in combination, a casing, insulating supporting blocks within said casing, a switch plug in one of said blocks, means for rotating said plug, terminal pins extending into the recesses of the insulating blocks, line wires attached to said pins and leading to the magneto and the spark plugs of the engine, plugs in the other of said blocks adapted to be engaged by said pins and extending with their points into the recesses of said last named block, spark gaps in each line wire visible to the driver, said switch plug adapted to short circuit said spark gaps, and a set of switches for short circuiting the spark plugs of the engine, substantially as described.

1,193,622. CIRCUIT-BREAKER. WILLIAM M. SCOTT, Tredyffrin township, Chester county, Pa. Original application filed Feb. 5, 1912, Serial No. 675,534. Divided and this application filed Nov. 28, 1914. Serial No. 874,396. (Cl. 175—282.)

1. In an electric switch, a base, a contact carrying arm pivoted directly to said base, a contact secured on said arm in fixed relation thereto, a link pivoted to said base, a shorter link pivoted to said link and to said contact carrying arm, a second toggle connected at the joint between said links, and a dog pivoted to said second toggle and thrusting against said base to hold said toggles extended.

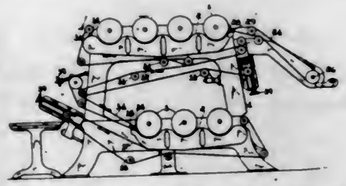
2. The combination with a base, of a contact carrying member movable toward and away from said base, a toggle comprising links pivoted to said member and to said base respectively, a second toggle for operating said first toggle, both toggles being underset when said contact carrying member is in normal position, a projection on a link of said second toggle engaging the other link of said toggle to limit extension of said second toggle, and a dog pivoted at the joint of said second toggle and thrusting against said base to restrain said toggles in their extended positions.



3. In an electric switch, a base, a movable contact member, a toggle for actuating the same, a dog pivoted at the joint of said toggle and thrusting against said base for holding said toggle extended, a dog actuator pivoted on said base and adapted to engage said dog at its base engaging end, and a pivoted member for actuating said dog actuator.

4. In an electric switch, a base, a movable contact member, toggle links for actuating the same, a pivot common to said links, a dog supported on said pivot, a roller pivoted on said base, the free end of said dog thrusting against said roller, and a dog actuator pivoted on said base concentrically with said roller.

1,193,623. MANGLE. LEWIS H. SLAGHT, GEORGE E. SUTTON, and JOHN C. O'BRIEN, Toronto, Ontario, Canada. Filed Sept. 25, 1915. Serial No. 52,745. (Cl. 68—9.)



1. In a mangle, the combination of a steam chest and a coöperating roller; an endless apron adapted to take goods from the roller and draw them back to the feed end of the apparatus against the underside of the steam chest; a second endless apron adapted to receive the goods from the first mentioned apron and carry them back to the delivery end of the apparatus out of contact with the aforesaid steam chest; a second steam chest and coöperating roller rotating in the reverse direction to the first; a third separate endless apron adapted to receive the goods from the second apron and deliver them to the second roller which moves them toward the feed end of the machine; and a fourth separate endless apron adapted to take the goods from the roller and draw them back to the delivery end of the apparatus against the underside of the second steam chest.

2. In a mangle the combination of a steam chest and a coöperating roller; an endless apron adapted to take goods from the roller and draw them back to the feed end of the apparatus against the underside of the steam chest; a second endless apron adapted to receive the goods from the first mentioned apron and carry them on a downward incline back to the delivery end of the apparatus out of contact with the aforesaid steam chest; a second steam chest and coöperating roller rotating in the reverse direction to the first; a third separate endless apron downwardly inclined toward the feed end of the apparatus and adapted to receive the goods from the second apron and deliver them to the second roller which moves them toward the feed end of the machine; and a fourth separate endless apron adapted to take the goods from the roller and draw them back to the delivery end of the apparatus against the underside of the second steam chest.

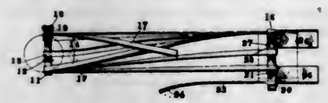
3. In a mangle, the combination of a steam chest and a coöperating roller; an endless apron adapted to take goods from the roller and draw them back to the feed end of the apparatus against the underside of the steam chest; a second endless apron adapted to receive the goods from the first mentioned apron and carry them back to the delivery end of the apparatus out of contact with the aforesaid steam chest, the upper surface of the second apron being in contact with the lower surface of the first apron for a short distance adjacent the feed end of the apparatus; a second steam chest and coöperating roller rotating in the reverse direction to the first; a third separate endless apron adapted to receive the goods from the second apron and deliver them to the second roller which moves them toward the feed end of the machine; and a fourth separate endless apron adapted to take the goods from the roller and draw them back to the delivery end of the apparatus against the underside of the second steam chest.

4. In a mangle, the combination of a steam chest and a coöperating rooler; a continuously moving apron adapted to feed goods between the steam chest and roller, said apron being run at a lower surface speed than the roller coöperating with the steam chest, whereby goods on reaching the roller are dragged over the surface of the feed apron and effectively straightened.

5. In a mangle, the combination of a plurality of ironing rollers; bearing boxes in which said rollers are journaled; guides in which said boxes are movable; a journaled shaft adjacent each set of bearing boxes; pairs of eccentrics on said shaft one pair for each bearing box; and spring compressing devices engaging said boxes each provided with a leg at each side directly engageable by said pairs of eccentrics to vary the pressure on the rollers.

[Claims 6 and 7 not printed in the Gazette.]

1,193,624. CAN-TURNING DEVICE. CHESLEY T. SMALL, St. Louis, Mo. Filed Jan. 15, 1914. Serial No. 812,237. (Cl. 193—29.)



1. A can turning device comprising a spiral trough extending in a substantially straight line and conforming in cross section to the shape of the can and adapted to receive the can in one position and deliver it in another position, adjustable means extending throughout a portion only of the length of the trough for varying the size of the trough in the direction of one dimension of the can, and a second adjustable means also extending throughout only a portion of the length of the trough for varying the size of the trough in the direction of the other dimension of the can.

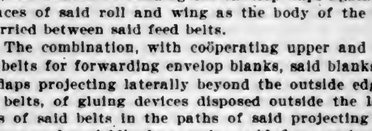
2. A can turning device comprising a spiral trough extending in a substantially straight line and conforming in cross section to the shape of the can and adapted to receive a can in one position and deliver it in another position, and means for adjusting one end of said trough to the diameter of the can and the other end of said trough to the height of the can.

3. A can turning device comprising a spiral trough, two sides of which are composed of walls extending from end to end of the trough, and the remaining sides of which are composed of members extending through only a portion of the length of the trough.

4. A can turning device comprising a trough having two continuous sides, one of said sides acting as a bottom at the receiving end and as one lateral wall at the discharge end, and the other side acting as a lateral wall at the receiving end and as a bottom at the discharge end, and a pair of fingers forming the remaining sides, each extending approximately one-half the length of the trough.

5. A can turning device comprising a trough having two continuous sides, one of said sides acting as a bottom at the receiving end, and as one lateral wall at the discharge end, and the other side acting as a lateral wall at the receiving end and as a bottom at the discharge end, and a pair of adjustable fingers forming the remaining sides, each extending approximately one-half the length of the trough.

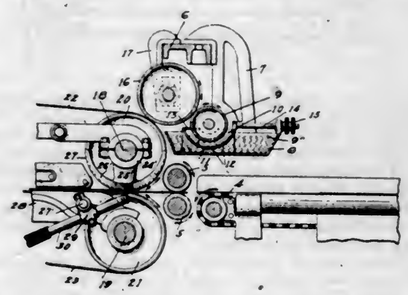
1,193,625. VEHICLE-SPRING. AUGUST SONDEREGGER and OTTO SCHRÖDER, Hamburg, Germany. Filed June 17, 1914. Serial No. 845,525. (Cl. 267—27.)



1. A vehicle spring comprising a main leaf, depending end loops on said leaf, spirals extending partly around the end loops, and upper limbs on the spirals, said upper limbs being adapted to be secured to the vehicle frame and having a tension opposite to that of the main leaf.

2. A vehicle spring comprising a main leaf, an upwardly extending spiral at the end of the leaf, one of said parts being provided with a hook, and the other part being provided with a knob engaging said hook, to form a sectional depending loop at the junction between main leaf and spiral.

1,193,626. ENVELOP-MACHINE. EDWIN G. STAUDE, Minneapolis, Minn., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass., a Corporation. Filed Oct. 21, 1912. Serial No. 727,001. (Cl. 93—68.)



1. The combination, with the upper and lower feed belts for forwarding an envelop blank, of a gluing roll disposed near one edge of said belts, an angular wing having a gluing surface disposed near the opposite edge of said belts, means for applying glue to said roll and said wing, and means for holding the envelop flaps against the surfaces of said roll and wing as the body of the blank is carried between said feed belts.

2. The combination, with coöperating upper and lower feed belts for forwarding envelop blanks, said blanks having flaps projecting laterally beyond the outside edges of said belts, of gluing devices disposed outside the lateral edges of said belts in the paths of said projecting flaps, and means for yieldingly pressing said flaps against said gluing devices.

3. The combination, with the upper and lower feed belts and pulleys and shafts therefor, of a gluing roll disposed near one edge of said belts, a wing having an

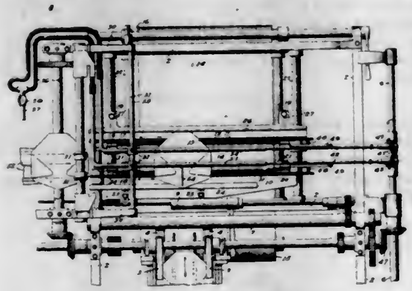
angular curved surface disposed near the other edge of said belts, means for applying glue to said roll and surface, and slotted pipes arranged beneath said roll and wing and adapted to direct air under pressure upwardly toward said roll and wing, for the purpose specified.

4. The combination with pairs of upper and lower feed belts for forwarding envelop blanks, each blank having a flap projecting beyond the outside lateral edges of one of said pairs of belts and on the opposite side thereof from said other pair of belts, a gluing device disposed in the path of said projecting flap, and means for yieldingly pressing said flap against said gluing device.

5. The combination, with the upper and lower feed belts and shafts and pulleys therefor, of a gluing roll mounted on one of said shafts near one edge of said belts, a gluing wing mounted on the same shaft near the other edge of said belts, means for applying glue to the surface of said roll and wing, studs mounted adjacent to said roll and wing, pipes having slots therein carried by said studs and adjustable thereon and communicating with a source of air under pressure, said pipes directing currents of air to said roll and gluing surface to hold the envelop flaps in contact therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,193,627. ENVELOP-MACHINE. EDWIN G. STAUDE, Minneapolis, Minn., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass., a Corporation. Filed Nov. 30, 1912. Serial No. 734,377. (Cl. 93—62.)



1. In an envelop machine, the combination with means for feeding blanks having folded flaps, of means for delivering air under pressure upon said blanks in a blast crossing said folded flaps, whereby the same are maintained in folded position and means for coördinating the operations of said blank feeding means and said air delivering means, whereby the action of said last mentioned means is inaugurated simultaneously with the beginning of the movement of the blank.

2. In an envelop machine, the combination with means for successively feeding blanks, of means for delivering air under pressure upon each blank and means for coordinating the operations of said feeding means and said air delivering means, whereby the action of the last mentioned means is inaugurated simultaneously with the beginning of the movement of each blank.

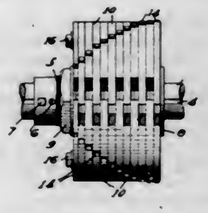
3. In an envelop machine, the combination with a blank feeding means, of means for successively projecting blanks thereon, means for delivering air under pressure upon each blank and means for inaugurating the operation of said air delivering means simultaneously with the beginning of movement of each blank by said feeding means, whereby each blank is maintained in predetermined position during the whole of its movement on said feeding means.

4. The combination, with an initial feeding means, of a secondary feeding means operating at an angle with respect to said initial feeding means and adapted to receive a blank therefrom, means for centering the blank on said secondary feeding means, means for delivering air under pressure upon the blank and means for inaugurating the operation of said air delivering means simultaneously with the arrival of each blank against said centering means, whereby each blank is maintained in the position determined by said centering means during its movement by said secondary feeding means.

5. The combination, in an envelop machine, with an initial blank feeding means, of a secondary feeding means operating at an angle to said initial feeding means, means for centering the blank upon said secondary feeding means, means for delivering air under pressure upon the forward and rear edges of said blank and means for inaugurating the operation of said air delivering means simultaneously with the arrival of each blank against said centering means, whereby each blank is maintained in the position determined by said centering means during its movement by said secondary feeding means.

[Claims 6 to 17 not printed in the Gazette.]

1,193,628. GLUING-ROLL. EDWIN G. STAUDE, Minneapolis, Minn., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass., a Corporation. Filed Feb. 14, 1913. Serial No. 748,346. (Cl. 93—68.)



1. In a gluing roll, opposing series of peripherally disposed gumming members, with the corresponding opposed members of each series in planes transverse to the axis of the roll, and means for adjusting the members of each series relatively to each other and to the corresponding members of the other series.

2. A device of the character described, comprising roll segments, and opposing series of peripherally disposed gluing points mounted on said roll segments, the gluing points of each series being relatively adjustable with respect to those of the same series and with respect to the corresponding points of the opposing series.

3. A gluing roll comprising roll segments arranged in groups, the segments of each group having curved slots therein and bolts securing the segments of the same group together, the segments of each group being capable of adjustment with respect to one another and with respect to the segments of the other group, said segments having peripheral gluing surfaces.

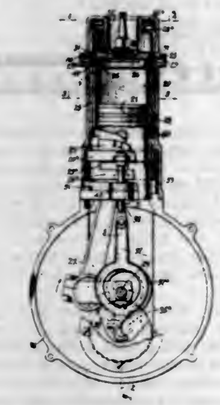
4. A gluing roll comprising a series of roll segments arranged in groups, the segments of one group having their ends lapping by the adjacent segments of the other group and capable of rotary adjustment with respect to one another, said segments having peripheral gluing surfaces.

5. A gluing roll, comprising opposing series of segments, with the corresponding opposed segments of each series in planes transverse to the axis of said roll, a hub on which said segments are angularly adjustable, and gumming members disposed on the peripheries of said segments.

[Claims 6 to 10 not printed in the Gazette.]

1,193,629. INTERNAL-COMBUSTION ENGINE. HENRY C. STOLL, New York, and GEORGE W. GAY, Elmhurst, N. Y. Filed Aug. 17, 1915. Serial No. 45,856. (Cl. 123—75.)

1. In an internal combustion engine, a cylinder having diametrically opposite intake ports and diametrically opposite exhaust ports in the side wall thereof, diametrically opposite intake valve segments engaging the diametrically opposite portions of the cylinder wall in which the intake ports are formed, said intake valve segments having ports therein to register with the intake ports and connected together so as to move in unison, diametrically opposite exhaust valve segments engaging the diametrically opposite portions of the cylinder wall in which the exhaust ports are located, said exhaust valve segments being connected to move in unison and provided with ports to register with the cylinder exhaust ports, a crank shaft, a piston in the cylinder connected with said crank shaft and valve operating gearing between the crank shaft and the connected valve segments.



2. In an internal combustion engine, the combination of a cylinder having ports in the cylindrical side wall thereof, a segmental valve construction comprising four valve segments in sliding engagement with the cylindrical side wall of the cylinder and in sliding edge to edge engagement with each other, opposite valve segments being connected together to move in unison, a crank shaft, a piston in the cylinder connected with said crank shaft and valve operating gearing between the crank shaft and the connected valve segments.

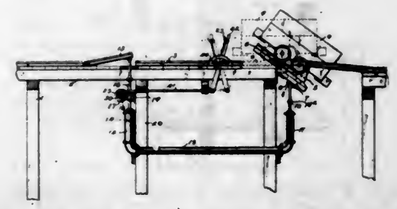
3. In an internal combustion engine, a cylinder having ports in the cylindrical side wall thereof, valve segments arranged in oppositely disposed pairs in sliding edge to edge engagement with each other and having a sliding engagement with the cylindrical side wall of the cylinder, opposite valve segments being connected together to move in unison, a crank shaft, a piston in the cylinder connected with the crank shaft and valve operating gearing between the crank shaft and the respective pairs of valve segments.

4. In an internal combustion engine, a cylinder provided with intake and exhaust ports in the side wall thereof, diametrically opposite intake valve segments sliding over the cylinder, and provided with ports to register with the intake ports, rings connecting the upper and lower ends of said valve segments, diametrically opposite exhaust valve segments slidingly mounted on the cylinder between the intake valve segments and provided with ports to register with the exhaust ports, rings connecting the upper and lower ends of said exhaust valve segments, a crank shaft, a piston in the cylinder connected with said crank shaft, and valve operating means operated by the crank shaft and connected with the lower rings of the valve segments.

5. In an internal combustion engine, a cylinder provided with intake and exhaust ports in the side wall thereof, diametrically opposite intake valve segments in sliding engagement with the cylinder wall and provided with ports to register with the intake ports in said wall, means connecting said valve segments to cause them to move as a unit, diametrically opposite exhaust valve segments between the intake valve segments and provided with ports to register with the exhaust ports, means connecting said exhaust valve segments to cause them to move as a unit, a crank shaft, a piston in the cylinder connected with said crank shaft, and valve operating means operated by the crank shaft and connected with the respective sets of connected valve segments.

[Claims 6 to 9 not printed in the Gazette.]

1,193,630. MECHANISM FOR HANDLING CARS. SAMUEL ALFRED TAYLOR, Wilkinsburg, Pa. Filed Jan. 29, 1907. Serial No. 354,690. (Cl. 214—11.)



1. In coal car dumping mechanism, a trestle, a track supported thereon, the said track having at the end thereof a tilting table, and a short distance to the rear thereof a hinged section in combination with a pair of communicating cylinders adapted to contain a fluid, the respective pistons of said cylinders being connected to the tilting table and the hinged section respectively, and means to enable the piston connected to the tilting table to descend in its cylinder by successive drops.

2. In a coal car dumping mechanism, the combination of a trestle or track supported thereon, a tilting table at the end of said track having means to arrest the forward movement of the car, a hinged section a short distance to the rear of said tilting table, a pair of communicating cylinders adapted to contain a fluid, pistons operable in said cylinders and connected to the tilting table and the hinged section respectively and adapted to be operated by the weight of the car acting on and compressing the fluid in said cylinder.

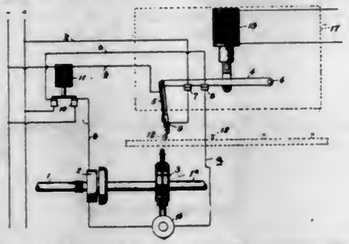
3. In a car dumping mechanism, the combination of a track, a tilting table at the end of said track, a hinged section in said track a short distance to the rear of said tilting table, a plurality of communicating cylinders adapted to contain fluid, having pistons operable therein, the said pistons being connected to the tilting table and the hinged section, respectively, a car adapted when on the said hinged section to move the piston connected therewith downward and thereby compress the fluid in said cylinders, and force the piston connected to the tilting table upward; and when on the tilting table to reverse the movement of the pistons, and means to cause the piston connected to the tilting table to drop at successive intervals whereby the car on said table is tilted and the contents discharged in a regulated stream.

4. In a car-dumping mechanism, the combination of a track, a tilting table at the end of said track, a hinged section located in said track a short distance to the rear of said tilting table, two communicating cylinders having pistons operable therein, the piston of one of said cylinders being connected to said hinged section, and having teeth or serrations in one side thereof and the piston of the other cylinder being connected to the tilting table, a pawl and ratchet mechanism adapted to control the movement of the piston connected to the hinged section, and a car adapted to actuate automatically the pistons of said cylinders, substantially as described.

5. A car dumping device including a track, supporting means for the track, a tilting table at one end of the track, manually controlled means for imparting a step by step movement to the tilting table as it is tilted to dump a car thereon, a hinged section interposed in the length of the track, two communicating cylinders, and pistons operable within the cylinders, one of the pistons having an operative connection with the hinged section while the other piston has an operative connection with the tilting table

whereby the hinged section will operate as a car passes over the same to return the tilting table to normal position.

1,193,631. METAL-PUNCHING MACHINERY. GEORGE PAUL THOMAS, Glenshaw, Pa. Filed June 29, 1914. Serial No. 847,978. (Cl. 164—116.)



1. In a metal-punching machine the combination of a carriage runway, a carriage movable upon said runway, a support movable in said carriage, a finger pivoted to said support, a succession of abutments arranged adjacent said runway and in operative relation to said pivoted finger, a make-and-break device operated by the swinging of said finger on its pivot and arranged in an electric circuit controlling carriage advance, and a second make-and-break device operated by the movement of said support and arranged in the same circuit with the make-and-break device first named.

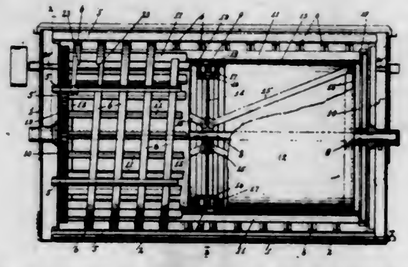
2. In a metal punching machine the combination of a carriage runway, a carriage movable on said runway, a support movable in said carriage, a finger pivoted to said support, a succession of abutments arranged adjacent said runway and in operative relation to said pivoted finger, an electric circuit controlling carriage advance, a make-and-break device in said circuit controlled by the movement of the support above named, a second make-and-break device in said circuit, an electro-magnet controlling said second make-and-break device, and means for energizing said electro-magnet upon the swinging of said pivoted finger.

3. In a metal-punching machine the combination of a carriage runway, a carriage movable thereon, an arm pivoted in said carriage, a finger pivoted in said arm, two electric contacts closed when said arm is in lowered position and opened when said arm is raised, a third electric contact, closed when said finger is swung aside and opened when said finger hangs free from its pivot, a circuit controlling carriage advance closed through one of the contacts first named, a make-and-break device in said circuit controlled by an electro-magnet, and magnet-energizing circuit closed through the second other of said first named contacts and through the third contact named above.

4. In a metal-punching machine the combination of a punch, a carriage runway, and a carriage; a stopping-mechanism including an element movable automatically at predetermined intervals in the range of carriage advance, an electric circuit containing two make-and-break elements, one of said elements remaining normally closed and the other closing periodically on the movement of the movable element mentioned above; means operating in sequence after the closing of the second make-and-break element and opening the first named make-and-break element.

1,193,632. COOKER. ALBERT R. THOMPSON, San Jose, Cal., assignor to Anderson-Barngrover Mfg. Co., San Jose, Cal., a Corporation of California. Filed Mar. 22, 1916. Serial No. 85,815. (Cl. 126—272.)

1. In a cooker, the combination of a heating box; a can-path within said box composed of an annular series of rails and a fixed helically directed rail concentric with and lying outside of said series; means for imparting axial rotation to said annular series of rails to effect the advance of the cans through said path; and a floor-member concentric with and lying within the annular series of rails, said floor member coacting with said series to effect the rolling of the cans on their own axes while in contact with said member.



2. In a cooker, the combination of a heating box; a can-path within said box composed of a rotatable annular series of rails and a fixed helically directed rail concentric with and lying outside of said series; a shaft mounted in the box and forming the support and axis for the rotatable annular series of rails; and a floor-plate supported from said shaft and lying concentrically within the annular series of rails and co-acting therewith to effect the rolling of the cans on their own axes while in contact with said plate.

3. In a cooker, the combination of a heating box; a can-path within said box composed of a rotatable annular series of rails and a fixed helically directed rail concentric with and lying outside of said series; end spiders carrying said annular series of rails; a shaft mounted in the box and forming the support and axis for said end spiders; a floor-plate lying concentrically within and co-acting with the annular series of rails to effect the rolling of the cans on their own axes while in contact with said plate; connections supported by said shaft and carrying said floor-plate; and anti-friction bearings between the annular rail-series structure and the floor-plate structure.

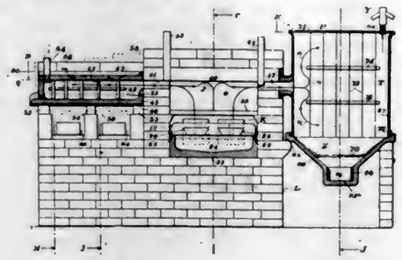
4. In a cooker, the combination of a heating box; a can-path within said box composed of a rotatable annular series of rails and a fixed helically directed rail concentric with and lying outside of said series; end spiders carrying said annular series of rails; a shaft mounted in the box and forming the support and axis for said end spiders; a floor-plate lying concentrically within and coacting with the annular series of rails to effect the rolling of the cans on their own axes while in contact with said plate; connections supported by said shaft and carrying said floor-plate; and anti-friction bearings between the annular rail-series structure and the floor-plate structure comprising a series of caged floating rollers.

5. In a cooker, the combination of a heating box; a can-path within said box composed of a rotatable annular series of rails and a fixed helically directed rail concentric with and lying outside of said series; end spiders carrying said annular series of rails and a connecting ring at the middle of said series; a shaft mounted in the box and forming the support and axis for said end spiders; a floor-plate lying concentrically within and coacting with the annular series of rails to effect the rolling of the cans on their own axes while in contact with said plate; disks supported by said shaft and carrying said floor-plate at its ends and middle; and anti-friction bearings between the middle ring of the annular series of rails and the middle disk of the floor-plate.

[Claims 6 to 9 not printed in the Gazette.]

1,193,633. ELECTRIC FUMING OR DISTILLING FURNACE AND CONDENSER THEREFOR. JOHN THOMSON, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 2, 1915. Serial No. 53,733. (Cl. 204—64.)

1. A zig-zag plate-resistor, its inner end, or ends, being attached to and sustained by a bar, or connector, resting upon ledges in the furnace and along which the said bar or connector may be slid in or out.



2. A zig-zag plate-resistor having a cross-section in the form of a trapezoid, the side-angles of which are presented to the surface, or in the direction, where the radiated heat is to be utilized.

3. A zig-zag plate-resistor the cross-section of which is such that the current-density is greatest at or near to the surface, or surfaces, from which its radiated heat is utilized.

4. A zig-zag plate-resistor the cross-section of which is in the form of a trapezoid having its greatest current-density in a horizontal zone between the lower portions of the converging sides.

5. An electric fuming furnace having the following elements disposed in horizontal zones and in the order named: a trough containing a bath of molten metal; a zig-zag resistor whose heat is radiated downwardly and upwardly; a system of spaced or perforated plates and an over-lying chamber into which the ascending fume flows and expands.

[Claims 6 to 19 not printed in the Gazette.]

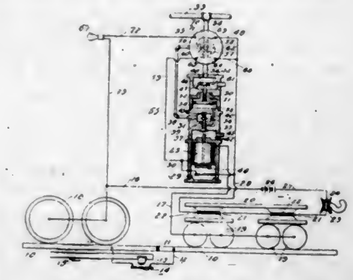
1,193,634. ANESTHETIC BODIES. LAMBERT THORP, Detroit, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 24, 1916. Serial No. 93,302. (Cl. 23—24.)

1. As new products, the mono-salts of the esters of 1.3-tetraalkyl-diamino-2-hydroxy-propane, being colorless, crystalline compounds, soluble in water or alcohol, very slightly soluble in ether or benzene, of faintly alkaline reaction to litmus, decomposed when heated with acids or alkalis with formation of an organic acid and 1.3-tetraalkyl-diamino-2-hydroxypropane, yielding a precipitate of the oily esters of 1.3-tetraalkyl-diamino-2-hydroxypropane when treated in aqueous solution with potassium carbonate, and displaying a local anesthetic action.

2. As a new product, the mono-hydrochlorid of the benzoic ester of 1.3-tetraethyl-diamino-2-hydroxypropane, being a colorless, crystalline compound, melting at 130° centigrade, soluble in water or alcohol, very slightly soluble in ether or benzene, of faintly alkaline reaction to litmus, decomposed when heated with hydrochloric acid or sodium hydroxid solution into benzoic acid and 1.3-tetraethyl-diamino-2-hydroxypropane, yielding a precipitate of the oily ester, namely, the benzoic ester of 1.3-tetraalkyl-diamino-2-hydroxypropane when treated in aqueous solution with potassium carbonate, and displaying a local anesthetic action.

1,193,635. AUTOMATIC TRAIN-CONTROLLING SYSTEM. GUY P. THURBER, Pittsburgh, Pa. Filed Mar. 31, 1913. Serial No. 757,853. (Cl. 246—58.)

1. In a system of train control, the combination with train controlling means, of a fluid actuated device which when supplied with fluid holds said train controlling means inoperative, a magnet valve which when energized supplies fluid to the fluid actuated device, a normally closed charged electric train controlling circuit normally completed through the traffic track normally holding said magnet valve energized, and a circuit breaker in said circuit normally held closed by said magnet valve.



2. In a system of train control, the combination with the fluid pressure brake system, of a train pipe venting device, an electro-magnetic-valve normally acting to restrain the operation of the train pipe venting device when energized, a normally closed charged electric train controlling circuit normally completed through the traffic track normally holding said magnet valve energized, and a circuit breaker in said circuit constituting an armature of the electro-magnetic-valve and normally held closed thereby.

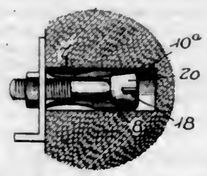
3. In a train controlling system, the combination of a train pipe, a fluid actuated valve controlling said train pipe, a normally closed charged electric train-circuit, normally completed through the traffic track, and an electro-magnetic-valve interposed in the electric circuit and exercising control over the electric circuit and over the fluid actuated valve.

4. In a system of train control, the combination of a fluid pressure train controlling system, a normally closed charged electric train-circuit, normally completed through the traffic track, a valve in said fluid pressure circuit, an electro-magnetic device in said electric circuit, a circuit breaker in said electric circuit constituting an armature for the electro-magnetic device, and a plunger, in said electro-magnetic device, connected to the valve aforesaid.

5. In a system of train control, the combination of a fluid pressure train controlling system, a normally closed charged electric train-circuit, normally completed through the traffic track, an electro-magnetic device in said electric circuit, and two armatures under the control of said electro-magnetic device, one constituting a circuit breaker for the electric circuit and the other constituting a valve for the fluid circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,193,636. EXPANSION-BOLT. CLARENCE B. VAN ANTWERP, Chicago, Ill. Filed Sept. 25, 1915. Serial No. 52,541. (Cl. 85—2.4.)



1. An expansion bolt comprising an expansible sleeve consisting of a blank of suitable metal rolled with an outer substantially cylindrical section having an inner tapered surface, a portion of reduced section adjacent said cylindrical portion, longitudinal slots extending outwardly from the inner end of said sleeve through said cylindrical and tapered portion, and means for locking the meeting edges thereof at the opposite end of said sleeve blank for pre-

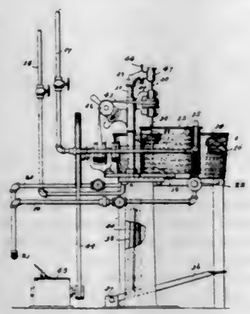
venting circumferential expansion or longitudinal displacement thereof, and means for expanding the opposite end or cylindrical portion of said sleeve.

2. An expansion bolt comprising an expansible sleeve having longitudinal slots extending outwardly from the inner end thereof and means for expanding a portion of said sleeve comprising a bolt and a tapered nut engaged thereby one end of the bore of said nut being provided with a transversely disposed destructible web.

3. An expansion bolt comprising an expansible sleeve having longitudinal slots extending outwardly from the inner end thereof and means for expanding a portion of said sleeve comprising a bolt and a two piece tapered nut engaged thereby, each of the pieces of said nut being provided with a transversely disposed destructible web across the bore thereof.

4. An expanding bolt comprising an expansible shield, means for expanding the inner end thereof, said means comprising a nut provided with a destructible web across the bore thereof, and means for moving said nut and destroying said web.

1,193,637. METHOD OF MACHINING THERMOSTATIC MEMBERS. FRANK VAN INWAGEN, Chicago, Ill., assignor to Illinois Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed May 14, 1915. Serial No. 28,001. (Cl. 29—148.)

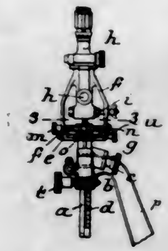


1. The method of machining a thermostatic diaphragm valve so as to exactly fit a standard casing having two oppositely located valve seats which consists in seating the valve on a support, heating the valve to a temperature equal to the predetermined temperature necessary to expand the valve to closed position when in the casing and machining the valve while so heated by feeding a tool to a point fixed at a distance from said support equal to the distance between said seats.

2. The method of machining an expansible metallic member adapted to fit closely between two seats of a casing when expanded which consists in seating said member on a support, heating it to a temperature necessary to expand it to a point where it will fit closely between the seats when in the casing and machining the member while so heated by feeding a tool to a point fixed at a distance from said support equal to the distance between said seats of the casing.

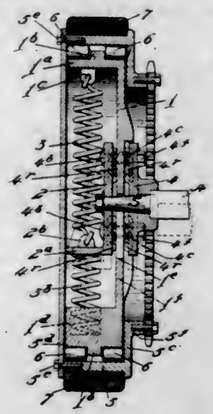
1,193,638. GUN-SIGHT. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metall- Waaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Nov. 18, 1911. Serial No. 660,942. (Cl. 33—48.)

A sighting device for guns comprising a support, a sleeve carried by said support, a sight bar mounted in said sleeve, said sleeve and sight bar being capable of being turned on said support about an axis parallel to the axis of the gun barrel, a sight, a carrier therefor mounted on the sight bar, and means connecting said carrier and said bar permitting the turning of said carrier about an axis par-



allel to the line of sight, and a spirit level mounted on said carrier at right angles to the latter axis.

1,193,639. WHEEL. GEORGE W. WALK, Tyrone, Pa. Filed Oct. 19, 1915. Serial No. 56,670. (Cl. 21—187.)



1. In a vehicle wheel, the combination of a main body, a casting slidably mounted on the front of said body, springs supporting this casting on the body; a second casting at the rear of said body rigidly connected with the front casting, said rear casting being adapted to be attached to the vehicle or body mounted on said wheel, an annular rim rotatably fitted around said body, anti-friction bearings interposed between the rim and body, a plate covering the front of the body, and means connected with the rim whereby power may be transmitted to the rim to rotate same, substantially as described.

2. A vehicle wheel comprising a body having a peripheral annular flange provided with vertically disposed slots, vertically movable castings at front and rear of said body, bolts extending through said slots and rigidly uniting said castings, springs suspended from the upper portion of the body and connected to the lower end of the front casting, an annular rim fitted around the periphery of the body, anti-friction bearings interposed between the opposed peripheral faces of the rim and body, a means attached to the rim whereby the latter may be rotated upon the body, and means for attaching the outer casting to the vehicle.

3. A vehicle wheel comprising a body having a peripheral annular flange provided with vertically disposed slots, movable castings at front and rear of said body, said rear casting being attachable to the vehicle to be mounted on such wheel, bolts extending through said slots and rigidly uniting said castings, springs suspended from the upper portion of the body and connected to the front casting, an annular rim fitted around the periphery of the

body, anti-friction bearings interposed between the opposed peripheral faces of the rim and body, means connected with the rim whereby power may be transmitted to the rim causing the same to rotate, and supplemental compression springs interposed between the lower side of the inner casting and the lower portion of the body.

4. The herein described wheel comprising a circular slotted body having a peripheral annular flange, a slidable casting at the front of said body, a slidable casting at the rear of the body adapted to be connected with a vehicle, bolts rigidly connecting said castings and extending through slots in the said body, spacers interposed between the said castings and extending through said slots, anti-friction devices interposed between said castings and the body, springs suspending the inner casting from the upper portion of the body flange, supplemental compression springs interposed between said casting and the lower part of the body flange, an annular rim surrounding said body, a series of roller bearings interposed between the opposed peripheries of the body flange and the rim, a disk attached to the outer edge of said flange and covering the outer face of the body, and an annular gear attached to the rear face of said rim.

5. A vehicle wheel comprising a body provided with vertically disposed slots, said body having a peripheral annular flange provided with a rib on its outer face, opposed movable castings at front and rear of said body, said rear casting being rigidly attached to the vehicle, bolts and spacing means interposed between said castings and extending through said slots and rigidly uniting said castings, a series of springs suspended from the upper portion of the flange of the body and connected to the lower end of the front casting and suspending the same, an annular rim fitted around the periphery of the body, a disk attached to the rim and covering the outer face of the body, means attached to the rim whereby power may be transmitted to the rim causing the same to rotate, and supplemental compression springs interposed between the lower side of the inner casting and the lower portion of the body, a series of anti-friction bearings on opposite sides of said rib interposed between the body and the rim—said bearings being composed of a series of alternately large and small rollers, substantially as described.

1,193,640. ACCELERATOR FOR INTERNAL-COMBUSTION ENGINES. JOHN WALKER and CARL FISCHER, Grand Rapids, Mich.; said Walker assignor to Joseph F. Kennedy, Grand Rapids, Mich. Filed Oct. 30, 1915. Serial No. 58,839. (Cl. 74—81.)



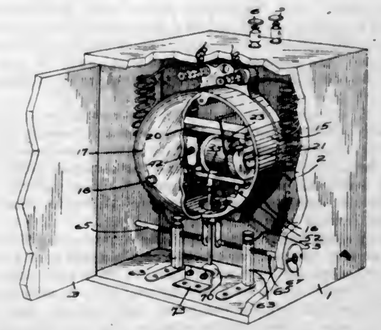
1. Foot controlled accelerating means for internal combustion engines embodying in combination with the engine and carbureter, a rock shaft, bearings for said shaft fastened directly to the body of the engine, a foot lever fast on said shaft, an arm on said shaft, a throttle plate attached to and movable with the throttle lever of the carbureter, a link connecting said throttle plate with the arm of the rock shaft, a stud on said plate, and a link rod controlled at one end by the hand throttle lever and slotted at its other end to receive said stud on the throttle plate, whereby the foot accelerating means may be operated without affecting the hand throttle lever.

2. Foot controlled accelerating means for internal combustion engines embodying in combination with the engine and carbureter, a rock shaft, bearings for said shaft fastened directly to the body of the engine, a foot lever fast on said shaft, an arm on said shaft, a throttle plate attached to and movable with the throttle lever of the carbureter, a link connecting said throttle plate with the arm of the rock shaft, a stud on said plate, a link rod controlled at one end by the hand throttle lever and slotted at its other end to receive said stud on the throttle plate, whereby the foot accelerating means may be operated without affecting the hand throttle lever, and means for yieldingly holding said rock shaft and foot lever in non-accelerating position.

3. Foot controlled accelerating means for internal combustion engines embodying in combination with the engine and carbureter, a throttle lever on the carbureter, a throttle member attached to and movable with said lever, a stud on the throttle member, a link rod slotted at one end to receive said stud, hand operated means to move the link rod and thereby actuate the throttle member and attached lever; and foot operated means mounted solely on the engine connected to said plate for operating it and the attached throttle lever without affecting the hand operated means.

4. Foot controlled accelerating means adapted to be used in connection with internal combustion engines comprised of a rock shaft, a bearing for said shaft adapted to be secured to the body of the engine, a member adapted to be attached to the throttle lever of the engine carbureter, means to impart rotation to the rock shaft attached solely to said shaft, connections between said member and rock shaft for moving the member on rotation of the shaft, a stud on said member and a link member slotted at one end to slidably receive said stud, said link member being adapted for attachment to a separate carbureter control, substantially as described.

1,193,641. ELECTRICAL RECTIFIER. CLYDE M. WALL, Toledo, Ohio. Filed Dec. 2, 1915. Serial No. 64,681. (Cl. 175—365.)



1. In a vibrator for current rectification having a reed, a spherical body located near the free end of the reed and having adjusting points extending in a direction transverse to the movement of the spherical body and located on each side of the equator of the spherical body.

2. In a vibrator for the rectification of electric currents having a magnetic coil, an armature extending through the coil, a pair of poles located in proximity to the armature at each end of the armature, the armature and the coils permanently magnetized, means for pivotally supporting the armature centrally and between the coils, the poles at one end of the field hooked to one side of the armature to cause coaction of the poles with respect to the central pivot point of the armature, and means for adjusting one pair of poles.

3. In a vibrator for the rectification of electric currents having a magnetic coil, an armature extending through the coil, two pairs of poles located in proximity to the armature, a pair at each end, the poles permanently magnetized, means for pivotally supporting the armature centrally and between the coils, the poles at one end of the field hooked to one side of the armature to cause coaction of the poles with respect to the central pivot point of the

...mature, means for adjusting one pair of poles, a sphere connected to the reed, and adjusting pins having points extending in a direction transverse to the direction of movements of the sphere by the operation of the reed and on each side of the equator extending transverse to the direction of movement of the sphere.

4. A vibrator for current rectification having a reed, a body located near the free end of the reed and having surfaces inclined to the direction in which the reed oscillates, adjusting points extending in a direction transverse to the movement of the body and located on each side of the body so as to limit the movements of the reed by striking the inclined surfaces of the body.

1,193,642. CLAMP. CARL J. WALLACE, Springfield, Ohio. Filed July 31, 1915. Serial No. 42,988. (Cl. 248—20.)



1. A clamp comprising two members each having at one end a hook-shaped portion, a connecting device comprising parts to be engaged by said hook-shaped portion, a surface to engage the part which is clamped and means on said surface to hold said last-mentioned part and connecting device against relative movement, and means engaging the ends of said members remote from the hook-shaped portions thereof for clamping them together.

2. A clamping device comprising two pairs of bands, each band having a hook-shaped portion at one end, a connecting device arranged between said pairs of bands and having parts to be engaged by the hook-shaped portions of said bands, said connecting device also comprising surfaces to engage the parts to be clamped and means thereon to prevent relative movement thereof and the parts to be clamped, and means to act upon those ends of each pair of bands opposite said connecting device to draw the bands of each pair toward each other.

3. A clamping device comprising two pairs of curved bands, each band having a hook-shaped portion, a connecting device arranged between said pairs of bands and having parts to be engaged by the hook-shaped portions of each band, and means to act upon those ends of each pair of bands opposite said connecting device to draw said bands toward each other.

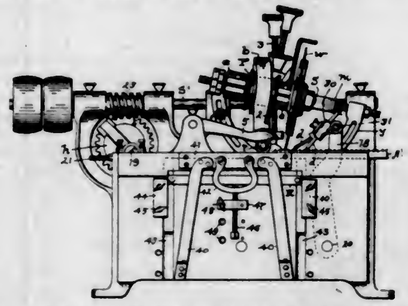
4. A clamping device comprising a connecting plate having at each end two transverse bars, curved bands having hook-shaped portions to engage the respective bars, two of said bands being arranged on one side of said connecting plate and two on the other side thereof, said bands having ears at those ends opposite the hook-shaped portions thereof, and bolts extending through said ears to draw the bands of each pair toward each other.

1,193,643. SAW-GRINDING MACHINE. FRANK WELLINGTON WARDWELL, Jr., Cleveland, Ohio. Filed June 1, 1914. Serial No. 842,280. (Cl. 76—40.)

1. In a machine as described, an adjustable saw support and means to feed a saw therein step by step, in combination with a grinding wheel and an adjustable supporting frame therefor, comprising an adjustable cam to raise and lower said frame in respect to said saw, and a rocking arm carrying said cam.

2. A saw grinding machine having an adjustable rest and a spring clamp for a saw, in combination with a flexible wheel to grind the saw, an oscillatory member having means adjustably connected therewith to move the saw lengthwise and a cam member and means adjustably mounted thereon to raise and lower the said wheel into grinding positions with respect to the said teeth, the said means comprising a rocking arm on which said cam member is pivoted and means on said arm to raise and lower said member at its free end.

3. A saw grinding machine having a saw support at its front, a transversely positioned frame and an adjustable yoke on which said frame is pivoted at its rear end and adapted to fix the angle of the grinding wheel, a shaft and a grinding wheel thereon mounted on the front end of said frame, an adjustable stop to limit the drop of said frame, and an adjustable cam finger adapted to raise and lower the said frame in respect to said stop.



4. A saw grinding machine having a grinding wheel, a shaft carrying said wheel, a pivoted frame carrying said shaft and an adjustable yoke on which the inclination of said frame can be changed in respect to a horizontal plane, a pivoted arm and a screw adjustable in said frame engaging said arm, and adapted to fix the working elevation thereof, a rock-arm and a cam member adjustably secured thereon and adapted to raise and lower said arm, and means to raise and lower the free end of said cam member.

5. In a saw grinding machine, a main frame, a grinding wheel and a pivoted frame carrying said wheel at its free end and a segmentally curved yoke adjustable on the said main frame on which said pivoted frame is supported at its rear, in combination with a rocking member, a slotted cam finger adjustably mounted on said rocking member, a pivoted arm and means connected with said frame and engaging said arm and adapted to fix the elevation of the frame.

[Claims 6 to 9 not printed in the Gazette.]

1,193,644. ROTARY TOOTH-BRUSH. CLARENCE GLADSTONE WAUDBY, Jackson, Mich. Filed Sept. 22, 1915. Serial No. 51,973. (Cl. 15—37.)



1. In combination, a tubular member, a plunger telescoping therein, a spring in said member normally resisting the entrance of the plunger, a shaft having a brush on one end inserted in the tubular member and into the plunger, means to automatically rotate the shaft on movements of the plunger, a shield pivotally carried by the tubular member adapted to partially cover the brush and a bearing in the shield for one end of the shaft, said bearing being moved away from the shaft on pivotal movement of the shield, thereby freeing the shaft for removal.

2. In combination, a tubular member, a spring therein, a finger hold on said member, a plunger inserted in said member and bearing against the spring, a bearing in one end of the tubular member, a spirally formed shaft mounted in the bearing extending through the spring into the plunger, means carried by the plunger for automatically rotating the shaft as the plunger moves with reference to the tubular member, a shield pivotally mounted on said tubular member having a bearing for the end of the shaft, and a brush on the shaft partially inclosed by the shield.

3. In combination, a tubular member, a shaft removably mounted therein, a shield pivotally mounted on the tubular member, a brush on the shaft partially inclosed by the shield, a bearing in the shield receiving the end of the shaft, and means to manually rotate the shaft and brush, substantially as described.

1,193,645. APPARATUS FOR CASTING PORCELAIN. LOUIS J. WEINSTEIN, New York, N. Y., assignor to Detroit Dental Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 9, 1914. Serial No. 871,187. (Cl. 22—97.)



1. In an apparatus for forming porcelain casts, a crucible formed of refractory material having a depending hollow portion for attachment to the pattern and forming a sprue connection with the mold cavity.

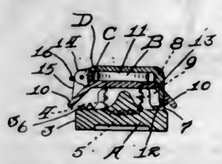
2. An apparatus for casting porcelain, comprising a mold flask, and a crucible formed of refractory material constituting a sealing cap for said flask, said crucible having an orifice for discharging fluid material into the flask and having a depending annular flange exteriorly overlapping and protecting the top of the flask, said flange restraining the crucible against lateral displacement relative to the flask.

3. An apparatus for casting porcelain, comprising a mold flask, a crucible formed of refractory material constituting a sealing cap to said flask, and a hollow projection from said crucible forming the means of attachment to the pattern and constituting the sprue connection with the mold cavity.

4. An apparatus for casting porcelain, comprising a mold flask, a crucible formed of refractory heat-insulating material constituting a cap for said flask, a central hollow lug depending from said crucible forming a means of attachment to the pattern and constituting a sprue connection to the mold cavity.

5. An apparatus for casting porcelain, comprising a mold flask, and a crucible forming a cap for said flask having an orifice for discharging fused material into the flask, and having an annular depending rib substantially concentric with said orifice.

1,193,646. FUSE-RECEPTACLE LOCK. GUSTAF WESLEY, St. Paul, Minn. Filed Sept. 18, 1915. Serial No. 51,371. (Cl. 175—277.)



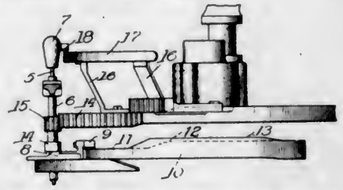
1. A device of the class set forth, comprising, in combination, a base having a receptacle with an opening to receive a fuse plug, a cover provided with a hole registering with said receptacle opening, said cover extending over said receptacle when in registering position, a false plug threaded into said receptacle opening and holding said cover in place and means coöperating with said cover for locking said false plug in inserted position through said cover.

2. A device of the class set forth, comprising, in combination, a base having a receptacle with an opening to receive a fuse plug, a cover provided with a hole registering with said receptacle opening, said cover extending over said receptacle when in registering position, a plug passing through the hole in said cover and entering said receptacle opening for holding said cover on said base and means coöperating with said cover for locking said plug in inserted position.

3. A device of the class set forth, comprising, in combination, a base having a fuse plug receptacle with an opening to receive a fuse plug, a cover provided with a hole registering with said receptacle opening, said cover extending over said receptacle when in registering position, and covering said base, a plug inserted through said hole and entering said receptacle and engaging said cover, a lock plate detachably engaged with said cover and extending over said plug to prevent the latter from being removed from said receptacle and means for locking said lock member on said cover.

4. A device of the class set forth, comprising in combination, a base having a fuse plug receptacle, a cover over said base having a hole registering with said receptacle, a plug passing through said hole and entering said receptacle for holding said cover upon said base, a lock plate detachably mounted upon said cover over said plug to prevent the latter from being removed from said receptacle and a seal locking said lock member to said cover.

1,193,647. SAFETY ATTACHMENT FOR CAN-CAPPERS. FRANK G. WESTLAND, Hoopeston, Ill., assignor to Sprague Canning Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 5, 1914. Serial No. 865,094. (Cl. 113—106.)



1. A can capping machine comprising a capping steel, a vent rod associated therewith, means for causing said steel and vent rod to travel in a definite path, and cam means for preventing the vent rod from dropping down into an uncapped can during that part of the travel of the steel in which soldering takes place.

2. A rotary can capping machine comprising a capping steel, a vent rod associated therewith, means for causing said steel and vent rod to travel in a circular path, and cam means for preventing the vent rod from dropping down into an uncapped can during that part of the travel of the steel in which soldering takes place.

3. A can capping machine comprising a steel and a vent rod, means for causing said steel and vent rod to travel in a definite path, means whereby the steel is given a vertical movement during its travel, and cam means whereby the vent rod is given a different vertical movement during its travel.

4. A can capping machine comprising a steel, a vent rod associated therewith, a follower secured to said vent rod, and a cam track engaged by said follower.

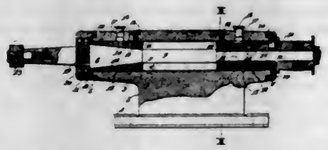
5. A can capping machine comprising a capping steel, a vent rod associated therewith, a weight secured to the upper end of said vent rod, and a follower secured to said weight.

[Claims 6 to 8 not printed in the Gazette.]

1,193,648. SHAFT-BEARING. GEORGE G. WHITNEY, Detroit, Mich. Filed Apr. 14, 1916. Serial No. 91,001. (Cl. 64—55.)

1. In a shaft bearing, a barrel, a shaft therein, reversely disposed conical members on said shaft, bushings in the ends of said barrel to receive said conical members and an adjusting member on one end of said barrel con-

nected to one of said bushings adapted for adjustment to move said conical members and said shaft.



2. In a shaft bearing, a barrel, a shaft therein, reversely disposed conical members on said shaft, bushings in the ends of said barrel to receive the conical members and capable of longitudinal movement in said barrel, nuts on said shaft at one end of the barrel adapted to be loosened to permit longitudinal movement of said shaft, and an adjusting member engaging the bushing at the opposite end of said barrel adapted to be rotated to shift said bushing toward its cone member and said shaft and other cone member in the same direction.

1,193,649. ANESTHETIC BODIES AND METHOD OF PREPARING THE SAME. ERNEST A. WILDMAN, New York, N. Y., and LAMBERT THORP, Detroit, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 17, 1916. Serial No. 91,825. (Cl. 23—24.)

1. As an anesthetic, a body of the series of aryl esters of gamma-dialkylamino propyl alcohols, being colorless compounds, oils or low-melting solids, readily soluble in alcohol, ether or benzene, very slightly soluble in water, of alkaline reaction toward litmus, decomposed when heated with acids or strong alkalis into aromatic acids and gamma-dialkylamino propyl alcohols, forming salts with acids, which salts are readily soluble in water, whose solution is possessed of anesthetic action and whose toxicity is slight in comparison with cocaine.

2. As an anesthetic, the cinnamic ester of gamma-diethylamino propyl alcohol, being a colorless oil, readily soluble in alcohol, ether or benzene, very slightly soluble in water, of alkaline reaction toward litmus, decomposed when heated with hydrochloric acid or soda-lye into cinnamic acid and a gamma-diethylamino propyl alcohol, forming a salt with hydrochloric acid, which salt is readily soluble in water and which crystallizes in a mixture of alcohol and ether in the form of white needles, melting at 137° centigrade, the solution of which is possessed of anesthetic action and whose toxicity is slight in comparison with cocaine.

3. The method of forming aromatic esters of gamma-dialkylamino propyl alcohol, comprising the dissolving of the gamma-dialkylamino propyl alcohol in an inert solvent, such as benzene, ether, acetone, etc., treating the same with an equivalent amount of an aromatic acid halid, and removing the product by filtration.

4. The method of forming the cinnamic ester of the gamma-diethylamino propyl alcohol, comprising the dissolving of gamma-diethylamino propyl alcohol in an inert solvent, such as benzene, ether, acetone, etc., gradually adding to the solution an equivalent weight of cinnamoyl chlorid, and removing the crystalline product,—namely, the hydrochlorid of the cinnamic ester of gamma-diethylamino propyl alcohol, by filtration, from whose solution in water the free base, namely, the gamma-diethylamino propyl cinnamate may be precipitated as an oil by the addition of a solution of potassium carbonate.

1,193,650. ANESTHETIC BODIES. ERNEST A. WILDMAN, New York, N. Y., and LAMBERT THORP, Detroit, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 17, 1916. Serial No. 91,826. (Cl. 23—24.)

1. As new products, the alkamin esters of anisic acid, being colorless compounds, oils or low-melting solids, slightly soluble in water, readily soluble in alcohol, ether or benzene, of alkaline reaction to litmus, decomposed when heated with acids or alkalis, with formation of an alkamin and anisic acid, forming salts soluble in water, which solution produces local anesthesia.

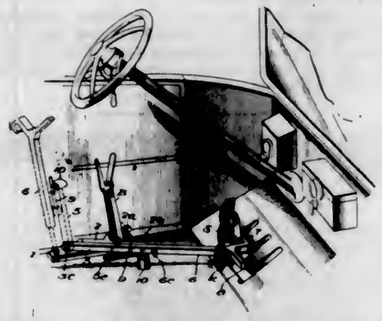
2. As an new product, the alkamin ester gamma-diethylamino propyl ester of anisic acid, being a colorless oil slightly soluble in water, readily soluble in alcohol, ether or benzene, of alkaline reaction to litmus, decomposed when heated with hydrochloric acid or sodium hydroxid, with formation of gamma-diethylamino propyl alcohol and anisic acid, forming a salt with hydrochloric acid which crystallizes from a mixture of acetone and ether in the form of snow-white crystals melting at 129° centigrade, an aqueous solution of which is of anesthetic action.

1,193,651. ANESTHETIC BODIES. ERNEST A. WILDMAN, New York, N. Y., and LAMBERT THORP, Detroit, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 17, 1916. Serial No. 91,827. (Cl. 23—24.)

1. As new products, the alkamin esters of para-toluic acid, being colorless compounds, oils or low-melting solids, readily soluble in alcohol, ether or benzene, very slightly soluble in water and of alkaline reaction toward litmus, forming salts readily soluble in water, decomposed when heated with acids or alkalis with formation of para-toluic acid and an alkamin, and whose solution in one equivalent weight of dilute acid produces local anesthesia.

2. As a new product, the alkamin ester, namely, the gamma-diethylamino propyl ester of para-toluic acid, being a colorless oil, readily soluble in alcohol, ether or benzene, very slightly soluble in water and of alkaline reaction toward litmus; decomposed when heated with hydrochloric acid or sodium hydroxid into para-toluic acid and gamma-diethylamino propyl alcohol, forming a salt with hydrochloric acid readily soluble in water and crystallizing from a mixture of acetone and ether in the form of snow-white crystals, the aqueous solution of which is of anesthetic action.

1,193,652. AUTOMOBILE-LOCKING DEVICE. HENRY WIND, Moline, Ill. Filed Nov. 11, 1915. Serial No. 60,856. (Cl. 70—90.)



1. Automobile locking devices comprising a base member adapted to be attached to the vehicle, a member attached to the base adapted to be engaged by the brake lever when the latter is in applied position, and a member adjustably attached to said base adapted to engage the controlling levers to hold the same in neutral position, with a common locking means for locking said members when in applied positions, substantially as described.

2. In a locking device of the character specified, the combination of a base, a member rigidly connected therewith and having a slot or bifurcation adapted to receive the brake lever when the latter is in applied position, a member connected with the base adapted to engage the speed lever and the reverse lever when the same are in neutral positions, and a locking bolt adapted to transfix the bifurcation and the said member to hold the brake lever in applied position and the speed and reverse levers in neutral position, substantially as described.

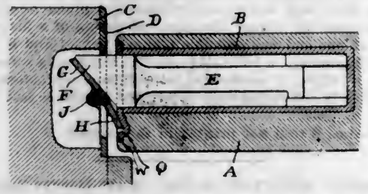
3. In a locking device of the character specified the combination of a base, a member connected therewith adapted to engage and hold the brake lever when the latter is in applied position, a second member adapted to engage the speed lever and the reverse lever when the same are in neutral position and a common locking means for locking said members in applied positions.

4. In an automobile lock the combination of a base member adapted to be attached to a vehicle, a bifurcated member attached to the base and adapted to engage the brake lever when in applied position, and an adjustable member attached to said base adapted to engage the speed and reverse levers to hold the same in neutral position, and a common locking means for locking said members in applied positions, substantially as described.

5. In combination a base member, a member rigidly connected therewith, having a bifurcation adapted to receive the brake lever when in applied position, an adjustable member attached to this base adjacent the first member and provided with portions adapted to respectively engage the speed lever and reverse lever and hold same in neutral position, and a common locking means adapted to engage the bifurcation and said adjustable member to hold same in locking position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,193,653. SAFETY-LOCK. JOHN WINN, Brookline, and AARON FEINBERG, Dorchester, Mass. Filed Sept. 3, 1914. Serial No. 859,942. (Cl. 70—15.)

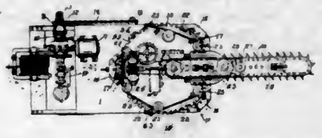


1. In a spring-latch lock, the combination with the lock casing, bolt having a beveled end, and strike, of a guard pivoted at the opening of the strike, one portion of the said guard being adapted to be pushed inwardly by the bolt, so that the remaining portion of the guard is swung outwardly to form an obstruction in the space between the door and door jamb and a retracting spring for returning the guard to normal position when the bolt is withdrawn, the said portion of the guard which is adapted to be pushed inwardly by the bolt being capable of greater angular movement about the pivot than the remaining portion of the guard.

2. In a spring-latch lock, the combination with the lock casing, bolt having a beveled end, and strike, a two piece guard, a common pivot located at the opening of the strike, the members of said guard being pivoted on said pivot, independent springs for each of the members of said guard, so that one member of the guard may rock about the pivot to a greater extent than the other, the bolt being adapted to push one member of the guard inwardly and thereby carry the other member outwardly into the space between the door and door jamb.

3. In a spring-latch lock, the combination with the lock casing, bolt having a beveled end, and strike, a two piece guard, a common pivot located at the opening of the strike, the members of said guard being pivoted on said pivot, independent springs for each of the members of said guard, so that one member of the guard may rock about the pivot to a greater angular extent than the other, the bolt being adapted to push one member of the guard inwardly and thereby carry the other member outwardly into the space between the door and door jamb, the lock casing having a recess to receive the end of the other member of the guard which is swung outwardly into the said space between the door and door jamb.

1,193,654. MINING-MACHINE. ALEXANDER HAMILTON WOOD, Petros, Tenn., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed June 17, 1915. Serial No. 34,704. (Cl. 125—14.)



1. In a mining machine of the character set forth, the combination of a base frame, track wheels supporting the base frame, a cutter mechanism having an elongated cutter arm projecting horizontally from the base frame and mounted to swing laterally in relation thereto, means for locking the cutter mechanism against swinging with the cutter arm extended laterally from the base frame, and feeding mechanism comprising a power actuated flexible draft member, circularly extending guide means for the draft member mounted to move with the cutter mechanism, and an auxiliary guide device for the draft member mounted on the cutter mechanism radially outside the aforesaid guide means, the draft member being adapted when passed over the said guide means to swing the cutter mechanism against the coal and when extended over the auxiliary guide device and thence along the coal face to exert a propelling draft on the machine on a line close to the coal face.

2. In a mining machine of the character set forth, the combination of a base frame, track wheels supporting the base frame, a cutter mechanism having an elongated cutter arm projecting horizontally from the base frame and mounted to swing laterally in relation thereto, means for locking the cutter mechanism against swinging with the cutter arm extended laterally from the base frame, and feeding mechanism comprising a power actuated flexible draft member, circularly extending guide means for the draft member mounted to move with the cutter mechanism, and an auxiliary guide device mounted on the cutter mechanism radially outside the aforesaid guide means for adjustment toward and from the coal face, whereby the flexible draft member can be passed over the circularly extending guide means to swing the cutter mechanism against the coal or can be extended around the auxiliary guide device and thence along and closely adjacent to the coal face to advance the machine bodily along the coal face.

3. In a mining machine of the character set forth, the combination of a base frame, track wheels supporting the base frame, a cutter mechanism having an elongated cutter arm projecting horizontally from the base frame and mounted to swing laterally in relation thereto, means for locking the cutter mechanism against swinging with the cutter arm extended laterally from the base frame, and feeding mechanism adapted to swing the cutter mechanism relative to the base frame and to advance the machine bodily to feed the cutters against the coal, said feeding mechanism comprising a power actuated flexible draft member and a guide device for the draft member mounted on the cutter mechanism for adjustment outward and inward relative to the base frame, whereby the line of draft on the machine can be brought close to the coal face.

4. In a mining machine of the character set forth, the combination of a base frame, track wheels supporting the base frame, a cutter mechanism having an elongated cutter arm projecting horizontally from the base frame and mounted to swing laterally in relation thereto, means for locking the cutter mechanism against swinging with the cutter arm extended laterally from the base frame, and

feeding mechanism adapted to swing the cutter mechanism relative to the base frame and to advance the machine bodily to feed the cutters against the coal, said feeding mechanism comprising a power actuated flexible draft member and a guide device for the draft member carried by the machine and mounted for adjustment outward and inward relative to the base frame, whereby the line of draft on the machine can be brought close to the coal face.

1,193,655. SAFETY-RAZOR. FREDERICK W. WOOD, Jasper, N. Y., assignor of one-half to Albert R. Smith, Rathbone, N. Y. Filed July 15, 1914. Serial No. 851,164. (Cl. 30—12.)



1. In a safety razor, a hollow handle, a frame secured to said handle, a rotatable support carried by said frame, a blade secured to said support, a combined guide and guard movable relatively to said frame, a rotatable means secured to said combined guide and guard and turnable within said hollow handle to move said combined guide and guard, a segment mounted on said support, a roller movable with said combined guide and guard, a segment mounted on said roller for engagement with said first mentioned segment to oscillate said blade in one position of the combined guide and guard, and a means on said combined guide and guard to engage with the blade to lock said blade against movement, substantially as described.

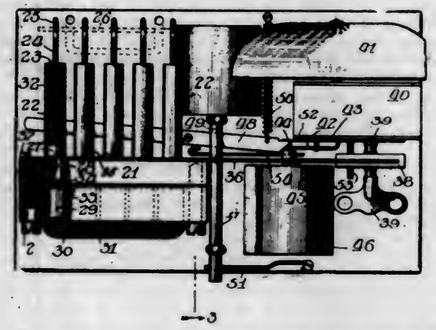
2. In a safety razor, a movable blade, a support therefor, teeth upon said support, a blade guard, an operating screw actuatable to move said guard, a segment carried by said guard, said segment being movable with said plate into and out of engagement with the teeth of said support, means integral with said segment and operating within a slot of said guard plate to limit movement of the support and the blade carried thereby, means operable to aline the teeth of the segment with the teeth of said support, and means upon said guard engageable with the blade to lock the latter immovable with respect thereto, as for the purpose set forth.

1,193,656. BURGLAR AND HOLDUP ALARM. GEORGE E. YEAGER, Chicago, Ill. Filed Sept. 25, 1915. Serial No. 52,551. (Cl. 177—314.)

1. A burglar alarm comprising a plurality of cartridge-holding chambers and means for successively firing the same comprising a corresponding number of firing pins, retractable plungers on which said pins are mounted, a blade movable in front of said plungers adapted to retain the same in retracted position, and devices for moving said blade away from said plungers whereby the latter are released in succession.

2. A burglar alarm comprising detonating elements including a plurality of retractable plungers provided with firing pins, and means controlling said plungers adapted to successively release the same consisting of a pivoted element movable transversely of and in front of said plungers, and a movable device adapted to move said element out of the path of said plungers.

3. A burglar alarm comprising detonating elements including a plurality of retractable plungers provided with firing pins, and means controlling said plungers adapted to successively release the same consisting of a pivoted element movable transversely of and in front of said plungers, a rotatable cam block engaging said element, and mechanism for rotating said block.

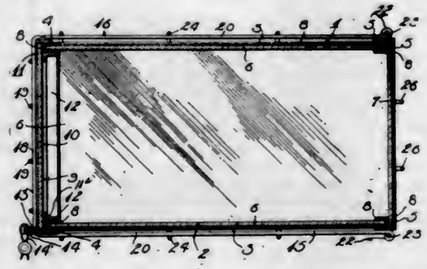


4. A burglar alarm comprising detonating elements including a plurality of retractable plungers provided with firing pins, and means controlling said plungers adapted to successively release the same consisting of a pivoted element movable transversely of and in front of said plungers, a rotatable cam block engaging a free end of said element, mechanism for rotating said block and electrically controlled devices adapted to release said mechanism.

5. A burglar alarm comprising detonating elements including a plurality of retractable plungers provided with firing pins, and means controlling said plungers adapted to successively release the same consisting of a blade pivoted at one end and movable transversely of and in front of said plungers, a rotatable cam block engaging a free end of said blade, a clockwork for rotating said block, and electrically controlled devices adapted to release said clockwork.

[Claims 6 to 9 not printed in the Gazette.]

1,193,657. SHIPPING-CRATE. JAMES HARVEY ZEEK, Albia, Iowa. Filed Mar. 18, 1915. Serial No. 15,254. (Cl. 220—111.)



1. A container guard or cage comprising intersecting spaced wires extending longitudinally in opposite directions and bent to form sides and one end of said cage, said wires being fixedly connected at their points of intersection, bands encircling said longitudinal wires and fixedly connected thereto at their points of intersection, the free ends of said longitudinal wires being secured to one of said bands, and a closure hinged to said open end.

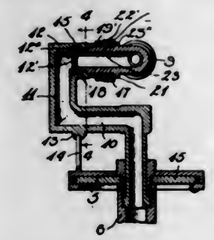
2. A container guard or cage closed at one end and open at the other comprising two series of U-shaped wires, the wires of one series being spaced from each other, and the cross bars of the two series intersecting each other and fixedly connected at their points of intersection to form the closed end of the cage, the side bars

of the two series forming the sides of the cage, longitudinally spaced bands encircling said side bars and fixed thereto at their points of intersection, and a closure for said open cage end.

3. A container comprising a metal frame composed of angle irons L-shaped in cross section, transparent panels mounted in said angle irons to form sides and one end of the container, rubber strips disposed between the abutting edges of said transparent panels, a closure hinged to the open end of said container and having a depending flange spaced inwardly from the edges thereof and adapted to shut into the open end of the container, and means for sealing said closure.

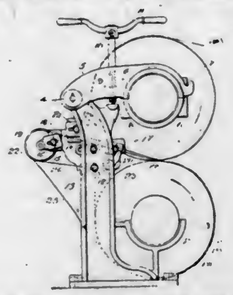
4. A container composed of a metal box-like frame, panels mounted in said frame to form sides and one end of said container, a closure hinged at one end to one side of the open end of said container and comprising a panel having an encircling border corresponding in shape and size to the cross sectional contour of the container, a continuous flange extending around the inner face of said closure at points spaced from the outer edge of said border, said flange being shaped to conform with the cross sectional contour of the container and adapted to fit snugly therein with the projecting edges of the border resting on the open end of the container.

1,193,658. COUPLING. GEORGE ZINT, Wapakoneta, Ohio. Filed Apr. 12, 1915. Serial No. 20,898. (Cl. 137—34.)



A coupling comprising a socket member with its terminal exteriorly threaded, an annular shoulder formed at the base of said threaded portion on its inner face and having a notch therein, said member having an annular recess at the rear of said shoulder, the rear wall of said recess extending laterally into the socket member beyond the free edge of the shoulder thereof to form a spring supporting seat, a coöperating male member having a reduced free end to extend through the shouldered portion of the socket member and having an external shoulder formed at the base of said reduced portion and adapted for abutting engagement with the shoulder of the socket member, the body portion of said male member at the rear of its shoulder fitting within the socket member in advance of the shoulder thereof, an annular flange formed on said male member at a point spaced rearwardly from its shoulder, a laterally extending lug on the reduced portion of said male member for insertion through a notch in the shoulder of the socket member, an adjustable internally threaded locking and packing nut of a size to fit the threaded outer end of the socket member, the threads of said nut terminating about midway the ends thereof, a shoulder extending laterally inward from said nut at the inner end of the threaded portion thereof to form a stop for engaging the end of the threaded portion of the socket member for limiting the inward movement of said nut on said socket member, the bore of said nut beyond the shoulder thereof being unthreaded and corresponding in diameter to the internal diameter of the socket member to permit the body portion of the male member to be readily inserted therethrough and to enter the socket member while the nut is in engagement therewith, and a coil spring mounted on the seat in said socket member between it and the free end of the male member.

1,193,659. GUIDE FOR PAPER-MAKING MACHINES. ALONZO ALDRICH, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a Corporation of Wisconsin. Filed Oct. 5, 1915. Serial No. 54,143. (Cl. 92—49.)



1. In a paper making machine, the combination with a press or smoothing roll frame, of press or smoothing rolls journaled therein, auxiliary feed rolls also journaled in said frame and means operating between said auxiliary rolls for facilitating the feed of the paper between the press or smoothing rolls.

2. In a paper making machine, the combination with a press or smoothing roll frame, of press or smoothing rolls journaled therein, tape feed rolls journaled in said frame, feed tapes operating between said last mentioned rolls, and a direction feed roll located over and between said tape feed rolls to direct the paper from one of said press or smoothing rolls onto said tapes and between said press or smoothing rolls.

3. In a paper making machine, the combination with a press or smoothing roll frame, of press or smoothing rolls journaled therein, and auxiliary feed rolls also journaled in said frame, and means to adjust independently each of said rolls in any direction relative to one of said press or smoothing rolls.

4. In a paper making machine, the combination with a press or smoothing roll frame, of press or smoothing rolls journaled therein, tape feed rolls journaled in said frame, feed tapes operating between said last mentioned rolls, and a direction feed roll located over and between said tape feed rolls to direct the paper from one of said press rolls onto said tapes and between said press or smoothing rolls, means to vertically adjust one of said press or smoothing rolls relative to the other and means to adjust each of said tape rolls and said direction feed roll relative to said press or smoothing rolls and to each other.

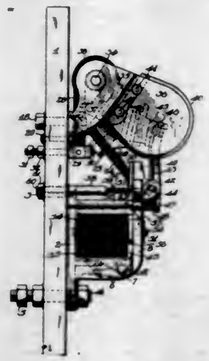
5. In a paper making machine, the combination with a press or smoothing roll frame, of press or smoothing rolls journaled therein, tape feed rolls journaled in said frame, feed tapes operating between said last mentioned rolls, and a direction feed roll located over and between said tape feed rolls to direct the paper from one of said press or smoothing rolls onto said tapes and between said press or smoothing rolls, means to vertically adjust one of said press or smoothing rolls relative to the other and means to adjust said direction feed roll and said tape rolls as a unit relative to said press or smoothing rolls.

[Claims 6 to 8 not printed in the Gazette.]

1,193,660. ELECTRIC SWITCH. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 21, 1908. Serial No. 463,751. (Cl. 175—281.)

1. In a magnetic switch, in combination, a magnetic frame, an electromagnetic winding thereon, a compound switch element comprising two rigid members, one pivoted to said frame and arranged in front of said winding to be attracted thereby and the other pivoted on the front face of the former at a point removed from the free end thereof and having its free extremity extending therebeyond and biased toward said former member, a contact mounted on the free end of each of said members, a rigid con-

tact holder, a main laminated contact and an arcing contact carried by said holder for respective engagement by the aforesaid contacts, said laminated contact being inclined toward the pivot of said element.



2. In an electromagnetic switch, in combination, a magnet frame, an electromagnetic winding mounted thereon, said frame having a magnetic extension paralleling the axis of said winding, a compound switch element comprising two rigid members, one pivoted to said frame and arranged in front of said winding to be attracted thereby toward said magnetic extension of said frame and the other of said members being pivoted on the front face of the former at a point removed from the free end thereof and having its free extremity extending therebeyond and biased toward said former member, a contact mounted on the free end of each of said members, a rigid contact holder, a main laminated contact and an arcing contact carried by said holder for respective engagement by the aforesaid contacts, said laminated contact being inclined toward the pivot of said element.

3. A magnet frame for electric switches formed of sheet metal and comprising a main portion provided adjacent to one end, with a pair of lateral extensions bent substantially at right angles thereto for supporting a switch member, said main portion being also provided with a pair of obliquely disposed extensions bent substantially at right angles thereto and adapted to provide magnetic paths for the magnet carried by said frame.

4. A contact member for electric switches, formed of sheet metal and comprising an elongated main portion provided adjacent to one end with extensions adapted to support said main portion on a suitable pivot, said main portion being provided adjacent to its opposite end with a pair of lugs disposed substantially perpendicular thereto for supporting an auxiliary switch member.

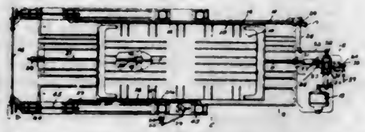
5. A contact holder for electric switches formed of sheet metal and having an inclined portion for receiving a laminated main contact, and a portion disposed substantially at right angles to said inclined portion for receiving a carbon contact.

[Claim 6 not printed in the Gazette.]

1,193,661. GRINDING-MACHINE. CARL BARTELS, Hamilton, Ohio, and GEORGE T. REISS, deceased, by Joseph L. Blair and Ernst G. Ruder, administrators, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed Mar. 18, 1916. Serial No. 85,204. (Cl. 51—12.)

1. A grinding machine comprising in its mechanism, an adjustable saddle, a cylindrically bored sleeve carried by the saddle, a hollow spindle-bar carried by the sleeve and mounted for reciprocating motion relative thereto and provided with means to prevent its rotation, a grinding-spindle rotatable in the spindle-bar, mechanism for rotating the grinding-spindle, and mechanism for reciprocating the spindle-bar relative to the sleeve.

2. A grinding machine comprising in its mechanism, an adjustable saddle, a hollow spindle-bar carried by the saddle and mounted for reciprocating motion relative thereto and provided with means to prevent its rotation, a grinding-spindle rotatable in the spindle-bar, a pinion on the end of the spindle, an electric motor mounted on the spindle-bar with the axis of its armature-shaft parallel with the axis of the spindle and eccentric thereto, an internal gear carried by the armature-shaft and engaging the pinion, and mechanism for reciprocating the spindle-bar relative to the saddle, combined substantially as set forth.



3. A grinding machine comprising in its mechanism, an adjustable saddle, a hollow spindle-bar carried by the saddle and mounted for reciprocating motion relative thereto and provided with means to prevent its rotation, a grinding-spindle rotatable in the spindle-bar, mechanism for rotating the grinding-spindle, a screw fixed to and parallel with the spindle-bar, a rotary nut supported by the saddle and engaging said screw, and hand-operable mechanism supported by the saddle and adapted to serve in turning the nut upon the screw, combined substantially as set forth.

4. A grinding machine comprising in its mechanism, an adjustable saddle, a hollow spindle-bar carried by the saddle and mounted for reciprocating motion relative thereto and provided with means to prevent its rotation, a grinding-spindle rotatable in the spindle-bar, mechanism for rotating the grinding-spindle, a screw fixed to and parallel with the spindle-bar, a rotary nut supported by the saddle and engaging said screw, a worm gear formed on the nut, a worm-shaft supported by the saddle and provided with a worm engaging the worm-wheel, and a handle on the worm-shaft, combined substantially as set forth.

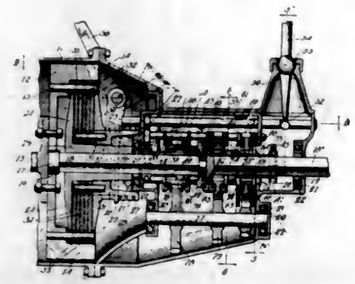
5. A grinding machine comprising in its mechanism, an adjustable saddle, a hollow spindle-bar carried by the saddle and mounted for reciprocating motion relative thereto and provided with means to prevent its rotation, a grinding-spindle rotatable in the spindle-bar, mechanism for rotating the grinding-spindle, a screw fixed parallel with the spindle-bar, a rotary nut supported by the saddle and engaging said screw, a worm-gear formed on the nut, a worm-shaft supported by the saddle and provided with a worm engaging the worm-wheel, a handle on the worm-shaft, a motor supported by the saddle, gearing connecting the motor idly with the worm-shaft, and a clutch serving to connect the gearing positively with the worm-shaft, combined substantially as set forth.

[Claims 6 to 38 not printed in the Gazette.]

1,193,662. POWER-TRANSMISSION GEARING. JOHN E. BECKMAN, Chicago, Ill. Filed Jan. 13, 1915. Serial No. 1,913. (Cl. 74—59.)

1. In a power transmission gearing, the combination with a driving shaft, of a main driven shaft and an auxiliary driven shaft, a jack shaft in parallelism therewith, gears fixed to the jack shaft, gears having internal clutching means and surrounding the driven shafts and in mesh with the gears on the jack shaft but capable of independent rotation with respect to the driven shafts, bearings independent of said shafts for the clutch-gears, a male clutch member slidably mounted on each of the driven shafts, and means to shift said members into and out of engagement with the clutching means of the last named gears.

2. In a power transmission gearing, the combination with a driving shaft, of a main driven shaft and an auxiliary driven shaft alined therewith, a female clutch member mounted on the end of the auxiliary shaft adjacent to the main driven shaft, a jack shaft journaled in parallelism with the driven shafts, gears fixed to the jack shaft, gears having internal clutching means and surrounding the driven shafts and in mesh with the gears on the jack shaft but capable of independent rotation with respect to the driven shafts, said clutch-gears having their bearings independent of said shafts, a male clutch member slidably mounted on each of the driven shafts and having means to engage the internal clutching means of said gears and the clutching means of said female clutch member, and means to shift said members into and out of engagement with said clutching means.



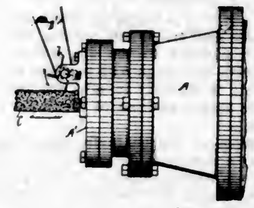
3. In a power transmission gearing, the combination with a driving shaft, of a main driven shaft, clutch engaging means coöperating with said shafts, an auxiliary driven shaft, a jack shaft journaled in parallelism therewith, gears fixed to the jack shaft, internally splined gears surrounding the driven shafts and in mesh with the gears on the jack shaft but capable of independent rotation with respect to the driven shafts, bearings independent of said shafts for the splined gears, a male clutch member slidably mounted on each of the driven shafts and having external splines to engage the splines of said gears, and means to shift said members into and out of engagement with splines of the last named gears.

4. In a power transmission gearing, the combination with a driving shaft, of a main driven shaft, clutch engaging means coöperatively connecting said shafts, an auxiliary driven shaft, a jack shaft journaled in parallelism therewith, gears fixed to the jack shaft, internally splined gears surrounding the driven shafts and in mesh with the gears on the jack shaft but capable of independent rotation with respect to the driven shafts, bearings independent of said shaft for the splined gears, one of the splines of each of said gears being flush with one of the faces thereof and the other of said splines being located with their ends at a distance from the faces of the gears, a male clutch member slidably mounted on each of the driven shafts and having external splines to engage the splines of said gears, one of the splines on each of the male members being flush with its end and the other splines thereon being located at a distance from the end thereof, and means to shift said members into and out of engagement with the splines of the last named gears.

5. In a power transmission gearing, the combination with a driving shaft, of a main driven shaft and an auxiliary driven shaft alined therewith, a female clutch member mounted on the end of the auxiliary shaft adjacent to the main driven shaft, one of the splines of said member being flush with the front end thereof and the other of said splines being located with their forward ends at a distance from the forward end of said member, a jack shaft journaled in parallelism with said driven shafts, gears fixed to the jack shaft, internally splined gears surrounding the driven shafts and in mesh with the gears on the jack shaft but capable of independent rotation with respect to the driven shafts, bearings independent of said shafts for the splined gears, one of the splines of each of said gears being flush with one of the faces thereof, and the other of said splines being located with their ends at a distance from the corresponding faces of the gears, a male clutch member slidably mounted on each of the driven shafts and having external splines to engage the splines of said gears and of said female clutch member, one of the splines of each of the male members being flush with its end and the other splines thereon being located at a distance from the end thereof, and means to shift said members into and out of engagement with the splines of the last named gears and with said female clutch member.

[Claims 6 to 8 not printed in the Gazette.]

1,193,663. CLAY-PRODUCTS-SURFACING MECHANISM. JOHN A. BOYD and PATRICK ROGAN, St. Marys, Pa. Filed Sept. 30, 1915. Serial No. 53,414. (Cl. 25—1.)

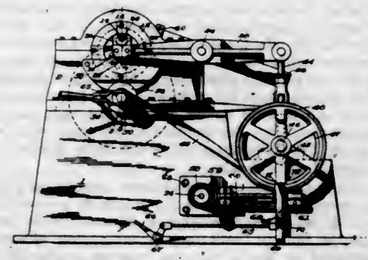


1. In a device of the class described, a shaft, straight blades thereon, means to support the same in engagement with a column of clay, and means to rotate said shaft, whereby the surface of the column will be caused to break into irregular upturned projections, substantially as set forth.

2. In a device of the class described, a clay forming die, means to force a continuously moving column of clay through said die, a shaft, supported adjacent to said die, straight blades thereon adapted to effect a trailing engagement with said column of clay, and means to cause said shaft and blades to rotate, substantially as described.

3. In a device of the class described, a clay forcing mechanism adapted to eject a continuously moving column of clay, a square shaft mounted transversely to said column, straight scraper blades secured upon the flat sides of said shaft and engaging said column with a trailing engagement, and means to cause said shaft and blades to rotate, whereby the surface of said column is caused to break into upturned irregular projections, substantially as described.

1,193,664. MACHINE FOR FORMING WHEEL-HUBS. CARL B. CHANDLER, Havana, Ill., assignor to Havana Metal Wheel Co., Havana, Ill., a Corporation of Illinois. Filed Mar. 15, 1915. Serial No. 14,522. (Cl. 153—73.)



1. A mechanism of the character described, including in combination, a rotatable die, means for rotating said die, a mandrel adapted to support a blank and present the same to the die, and means for moving the mandrel so as to present the blank to the die, said means including a lever, pressure blocks secured to said lever and engaging said mandrel, and means for reciprocating said lever.

2. A mechanism of the character described, including in combination, a rotatable die, means for rotating said die, a mandrel adapted to support a blank and present the same to the die, and means for moving the mandrel so as to present the blank to the die, said means including a lever having forked portions, pressure blocks secured to said forked portions and adapted to engage the end portions of said mandrel, and means for reciprocating said lever.

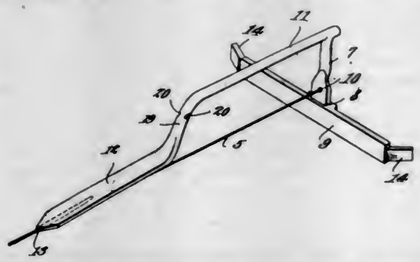
3. A mechanism of the character described, including in combination, a rotatable die, means for rotating said die, a mandrel adapted to support a blank and present the same to the die, means for moving the mandrel so as to present the blank to the die, and a centering device adapted to receive the blank and position it so that the mandrel presents it properly to said die.

4. A mechanism of the character described, including in combination, a rotatable die, means for rotating said die, a mandrel adapted to support a blank and present the same to the die, and means for moving the mandrel so as to present the blank to the die, a centering device adapted to receive the blank and position it so that the mandrel presents it properly to said die, and a gage for determining the proper position of the blank transversely of the machine.

5. A mechanism of the character described, including in combination, a rotatable die, means for rotating said die, a mandrel adapted to support a blank and present the same to the die, means for moving the mandrel so as to present the blank to the die, and means for holding and adjusting said mandrel, so as to permit the application of the blank thereon.

[Claims 6 to 33 not printed in the Gazette.]

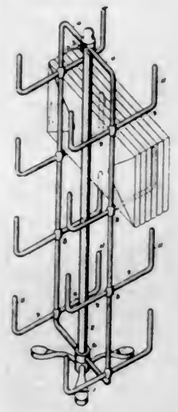
1,193,665. BRICKLAYER'S TOOL. THOMAS H. COBURN, Orangeville, Md. Filed Aug. 6, 1915. Serial No. 43,930. (Cl. 33—85.)



1. A holder for masonry gage-lines, comprising a shank having means at its inner end for attaching one end of the line and a lateral arm extending from its outer end at right-angles thereto, said lateral arm being adapted to be positioned in spaced parallel relation to the line and formed with an offset extremity which lies substantially in alinement with the line attaching means at the inner end of the shank, said offset extremity adapted to support said line intermediate its ends, and a base bar secured to the inner end of said shank and having ends extending at right-angles from the shank and provided with a flat face which lies substantially in the same plane of the inner face of said shank.

2. A holder for masonry gage-lines, comprising a shank having means at its inner end for attaching one end of the line and a lateral arm extending from its outer end at right-angles thereto, said lateral arm being adapted to be positioned in spaced parallel relation to the line and formed with an offset extremity which lies substantially in alinement with the line attaching means at the inner end of the shank, said offset extremity being grooved to support said line intermediate its ends, and a base bar secured to the inner end of said shank and having ends extending at right-angles thereto and provided with a flat face which is flush with the inner face of the shank.

1,193,666. STORE-FIXTURE. MAX W. COMBS, Modesto, Cal. Filed Aug. 18, 1915. Serial No. 46,068. (Cl. 211—20.)



In combination with a stationary standard, a frame rotatably supported thereon comprising vertical rods on opposite sides of the standard and bent inwardly and directly toward each other at their upper and lower ends, a ring secured to the lower ends and surrounding said standard, a block rotatably supported on the top of said standard and to which the upper ends are secured, and, rigidly secured to each rod, a series of pairs of supporting bars, the bars of each pair extending horizontally in opposite directions from the rod and parallel with those secured to the other rod and being turned upwardly at their outer ends to form supporting posts.

1,193,667. METHOD OF PRODUCING COMPOUND METAL OBJECTS. FRED B. COREY, Edgewood Park, Pa. Filed Mar. 2, 1916. Serial No. 81,662. (Cl. 29—188.)



1. The process of producing compound bodies of unlike metals welded together, which consists in coating one metal body with metal of low melting point and in subsequently eliminating the said coating by alloying the said coating with a second metal body.

2. The process of producing compound bodies of unlike metals welded together, which consists in coating one metal body of high melting point with metal of low melting point and in subsequently eliminating the said coating by alloying the said coating with a second metal body of high melting point.

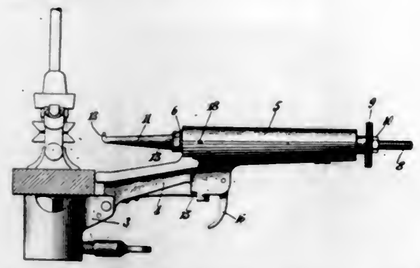
3. The process of producing compound bodies of unlike metals welded together, which consists of coating one metal body with metal of low melting point and in subsequently eliminating the said coating by alloying the said coating with a second metal body at a temperature below the melting point of the second metal body.

4. The process of producing compound bodies of ferrous and non-ferrous metals welded together, which consists in coating a ferrous metal body with metal of low melting point and in subsequently eliminating the said coating by alloying the said coating with a non-ferrous metal body.

5. The process of producing compound bodies of ferrous and non-ferrous metals welded together, which consists in coating a ferrous metal body with metal of low melting point and in subsequently eliminating the said coating by alloying said coating with a non-ferrous metal body at a temperature below the melting point of the said non-ferrous metal body.

[Claims 6 to 10 not printed in the Gazette.]

1,193,668. BAND-TYING GAGE. MALCOLM CURRY, Holyoke, and ALBERT COOK, Fall River, Mass. Filed Aug. 7, 1915. Serial No. 44,170. (Cl. 73—15.)



1. A band tying gage comprising a support, a yieldably mounted tying rod carried by said support and over which the band is to be tied, and means for automatically locking said tying rod in a predetermined relation to the support when a predetermined tension on the band has been reached.

2. A band tying gage comprising a support, a yieldably mounted device carried by said support and over which the band is to be tied, and means for locking said yieldably mounted device in a fixed relation to the support when a predetermined strain has been placed thereon during the band tying operation.

3. A band tying gage comprising a support, a yieldably mounted device carried by said support and over which the band is to be tied, and means for locking said yieldably mounted device against longitudinal movement in either direction when a predetermined strain has been placed thereon during the band tying operation.

4. A band tying gage comprising a support, a yieldably mounted device carried by said support and over which the band is to be tied, means for locking said yieldably mounted device in a fixed relation to the support when a predetermined strain has been placed thereon during the band tying operation, and means for releasing the said locking device.

5. A band tying gage comprising a support, a yieldably mounted device carried by said support and over which the band is to be tied, said device being adapted to yield to the tension placed on the band, and means for automatically locking said yieldable device against longitudinal movement in a fixed relation to the support when a predetermined strain has been placed thereon in the band tying operation.

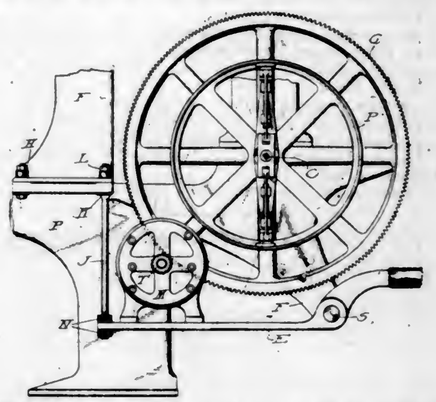
[Claims 6 to 27 not printed in the Gazette.]

1,193,669. DRIVE FOR LINOTYPE-MACHINES. FRED C. DAMM, Chicago, Ill. Filed Nov. 8, 1913. Serial No. 799,903. (Cl. 74—7.)

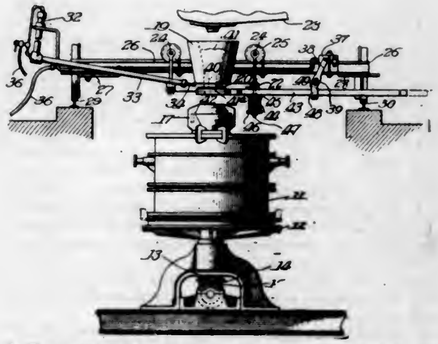
1. The combination with the drive shaft and frame of a linotype machine, of a gear mounted upon the drive shaft, a platform pivoted upon the frame, a motor secured to the platform, a pinion driven by the motor, and a screw adjustment for turning the platform on its pivot so as to adjust the pinion with respect to the gear.

2. The combination with the frame and the drive shaft of a linotype machine, of a motor pivotally supported on the frame, a pinion driven by the motor, a gear on the drive shaft engaged by the pinion, and a rod supported from the frame and provided with a screw adjustment for turning the motor on its pivot so as to adjust the pinion with respect to the gear.

3. The combination with the frame and the drive shaft of a linotype machine, of a motor, connections from the motor to the shaft for driving the latter, a bolt for securing the frame in place, said bolt having an extending portion, and a screw adjustment on the extended part of the bolt for adjusting the motor with respect to the shaft.



1,193,670. CASTING APPARATUS AND PROCESS. JAMES CAREY DAVIS, Hinsdale, Ill. Filed Feb. 21, 1911. Serial No. 610,007. Renewed Oct. 18, 1915. Serial No. 56,592. (Cl. 22—79.)



1. In a casting apparatus, the combination with a container, of means external of the container movable laterally for closing the orifice of such container, a yieldingly resistant device arranged at an angle thereto for holding said closing means in contact with said orifice, and means for moving said closing means against the resistance of said yieldingly resistant device.

2. In a casting apparatus the combination with a container having a substantially vertical orifice, of substantially horizontally disposed and vertically movable means arranged exteriorly of the container but adapted to cover said orifice for closing the same, a substantially vertically disposed spring bearing on said closing means for holding the same in contact with said orifice, and means for moving said closing device laterally.

3. In a casting apparatus, the combination with a choke device, and a device for introducing a modifying element into flowing metal as it runs from said choke device, of means for closing the orifice of said choke device and actuating said introducing device.

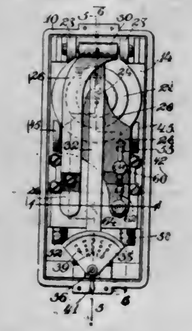
4. In a casting apparatus, the combination with a choke device, and a device for introducing a modifying element

into flowing metal as it runs from said choke device, of means for closing the orifice of said choke device and means for actuating said introducing device, the said closing means and actuating means being arranged for simultaneous operation.

5. In a casting apparatus, the combination with a choke device, and a device for introducing a modifying element into flowing metal as it runs from said choke device, of means for closing the orifice of said choke device and fluid pressure means for actuating said introducing device, a valve for controlling said fluid pressure means and a connection between said valve and said closing means, whereby when said closing means is operated said valve is simultaneously operated.

[Claims 6 to 23 not printed in the Gazette.]

1,193,671. TEMPERATURE-REGULATOR. VERNER F. DAVIS, Orange, N. J. Filed Sept. 23, 1915. Serial No. 52,150. (Cl. 236—8.)



1. A regulator comprising a structure having a valved passage for conducting fluid under pressure, thermostatic means for controlling the passage of air under pressure through the passage, means operated in one direction by air when admitted to the passage, yielding means, as a spring, for opposing the air-operated means, and a spring latch adapted to be placed in and out of operative contact with the air-operated means so as to assist the spring when in operative contact.

2. A regulator comprising a lever, a diaphragm for operating the lever in one direction, thermostatic means for controlling the operation of the diaphragm, a spring opposing the diaphragm, an additional spring having no influence on the lever when released, and means on the lever for engaging the spring to make it operative on said lever so as to assist the first spring.

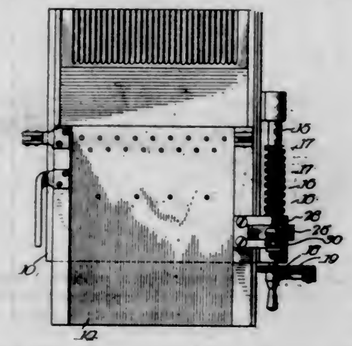
3. A regulator comprising a lever, a diaphragm for operating the lever in one direction, thermostatic means for controlling the operation of the diaphragm, a spring opposing the diaphragm, an additional spring having no influence on the lever when released, a latch on the lever and bearing on the additional spring, and a holding and releasing means for the latch so that when the latch is held, the additional spring assists the first spring in opposing the action of the diaphragm.

4. A regulator comprising a lever, a diaphragm operating the lever, thermostatic means for controlling the operation of the diaphragm, a spring for operating the lever against the pressure from the diaphragm, an additional spring adjacent the lever, a latch swinging on the lever and in engagement with the additional spring, a button on the latch, and a holding and releasing means for the latch.

5. A regulator comprising a lever, a diaphragm operating the lever, thermostatic means for controlling the operation of the diaphragm, a spring for operating the lever against the pressure from the diaphragm, an additional spring adjacent the lever, a latch swinging on the lever and in engagement with the additional spring, a button on the latch, a swinging finger having a nose thereon for engaging the latch, and a spring for swinging the arm to its locking position.

[Claim 6 not printed in the Gazette.]

1,193,672. FEEDING MECHANISM. PIETER DE GROOT, Rotterdam, Netherlands, assignor to U. S. Slicing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 26, 1914. Serial No. 847,371. (Cl. 74—40.)



1. Feeding mechanism, embodying a rotatable shaft with screws of different pitch, a shiftable element cooperating with the shaft and movable into operative engagement with one of the screws and out of operative engagement with the other, a movable member with which the shaft element is connected, the said screws being both operative to advance the member and feed the shiftable element in the same direction and in a direction lengthwise of the axis of the rotatable shaft, and means for rotating the shaft and screws.

2. Feeding mechanism, embodying a plurality of rotatable feeding screws, a shiftable element coöperating therewith and movable into operative relation with one and out of operative relation with the other, a movable member with which the said shiftable element is connected, and means for causing a relative movement between the said shiftable element and the respective feeding screws to advance the member, both of said feeding screws causing the movement of the member in the same direction, and operating to feed the said shiftable element in a direction lengthwise of the axis of the feeding screws.

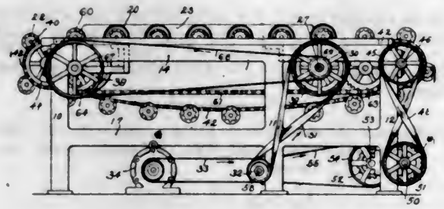
3. Feeding mechanism, embodying rotatable feeding screws, a shiftable element coöperating therewith and movable into operative connection with one and out of operative connection with the other, means for maintaining the shiftable element in its shifted position, a movable member with which the said shiftable element is connected, and means for causing a relative movement between the said shiftable element and the respective feeding screws to advance the member, both of said feeding screws causing the movement of the member in the same direction, and operating to feed the said shiftable element in a direction lengthwise of the axis of the feeding screws.

4. Feeding mechanism, embodying a plurality of rotatable feeding screws, a shiftable element coöperating therewith and moving into operative relation with one and out of operative relation with the other, a movable member with which said shiftable element is connected, and means for causing a relative movement between the said shiftable element and the respective feeding screws to intermittently advance the member, both of said feeding screws causing the movement of the member in the same direction, and operating to feed the shiftable element in a direction lengthwise of the axis of the feeding screws, and one of said feeding screws adapted to impart a greater extent of movement to the member upon each movement of the latter, than the other of said feeding elements.

5. Feeding mechanism, embodying a plurality of feed screws, the thread of one being arranged at a different pitch from the thread of the other, a shiftable element movable into operative relation with one and out of operative relation with the other, said shiftable element having portions coöperating with the thread of the respective screws, a movable member with which the shiftable element is connected, and provisions for rotating the screws, both screws operative to feed the member in the same direction.

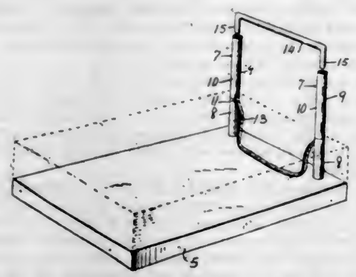
[Claims 6 to 22 not printed in the Gazette.]

1,193,673. MACHINE FOR CLEANING HOLLOW ARTICLES. GUSTAVE P. DELBAUVE and JOHN W. FOX, Elwood, Ind. Filed May 22, 1914. Serial No. 840,302. (Cl. 141—7.)



A machine for cleaning hollow cylindrical articles including a movable external cleaner, an internal cleaner adapted to travel in the same direction as and immediately above the external cleaner and at a slower speed, and means for rotating said internal cleaner as it travels at a greater speed than the external cleaner.

1,193,674. PAPER-SHEET-TYING DEVICE. SOYER ECONOMY, Boston, Mass. Filed Jan. 29, 1916. Serial No. 75,189. (Cl. 129—22.)



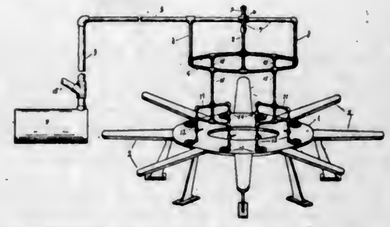
1. The combination with a base board provided with spaced filing pins, of tubular metal posts adapted for removable engagement upon said pins, each of said posts including a movable section to engage and removably secure the end of a binding cord in connection therewith, substantially as and for the purpose specified.

2. The combination with a base board provided with spaced filing pins, of tubular metal posts adapted for removable engagement upon said pins, each of said posts including an end portion of continuous circular form in cross section to receive the filing pins, a semi-circular portion and a hinged section mounted upon said latter portion and adapted for gripping engagement with the end of a cord or tape when in its closed position to detachably retain the same in connection with the post, substantially as and for the purpose specified.

3. The combination with a base board provided with spaced filing pins, of tubular sheet metal posts each having an end portion of continuous circular cross-sectional form adapted to receive one of the filing pins and provided at its upper edge with a notch, a stationary portion extending from the circular end portion, and a relatively movable post section mounted upon said stationary portion, said latter section and the opposed stationary portion of the post being provided at one of their ends with inwardly projecting spurs for gripping engagement with the end of a cord or tape to detachably retain the same in connection with the post, substantially as and for the purpose specified.

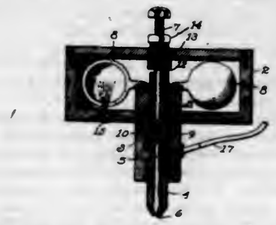
4. The combination with a base board provided with spaced filing pins, of tubular metal posts adapted for removable engagement upon said pins, each of said posts including means for detachably retaining one end of a cord or tape in connection therewith, and a connecting rod having its extremities bent at right angles to the intermediate portions thereof for engagement in the upper ends of said tubular posts, substantially as and for the purpose specified.

1,193,675. SYSTEM OF GAS DISTRIBUTION. ROBERT F. ELDER, Lakeland, Ky., assignor of one-half to John C. Elder, Louisville, Ky. Filed Feb. 10, 1916. Serial No. 77,362. (Cl. 48—191.)



In combination a gas generator, a work table, a distribution chamber suspended above said table and contoured to conform therewith, a plurality of burners positioned on the table, service pipe connecting said burners with the distribution chamber, a supply pipe leading from the generator and a plurality of feeder pipes leading from a restricted area of the supply pipe to connections with the distribution chamber at points equi-distant in its circumference.

1,193,676. MARKING DEVICE. ALFRED H. EMERSON, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association. Filed June 26, 1913. Serial No. 775,998. (Cl. 90—16.)

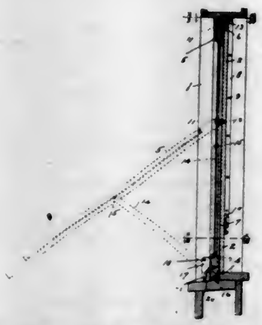


1. In a device of the character described, the combination with a bearing and a rotor having a marking portion projecting from the bearing, of a fluid supply in communication with the bearing, whereby said fluid will flow into the bearing and along the rotor and marking point to the work.

2. A device of the character described, including a casing member having an adjustable gage sleeve at the lower end thereof, a spindle having a point projecting beyond the gage sleeve, a floating journal for the upper portion of the spindle, a bearing having sliding engagement with the top of the spindle, means engaging the float journal for resiliently holding the spindle against said bearing,

and means for securing the bearing in desired adjusted position to regulate the projection of the point from the gage sleeve.

1,193,677. WINDOW-SASH HANGER AND OPERATOR. JOSEPH FIBNER, Prescott, Wis. Filed Oct. 2, 1915. Serial No. 53,701. (Cl. 20—42.)



1. The combination with a window frame, of a window sash secured to the window frame for compound sliding and pivotal movements, a link pivotally connecting the window sash to the window frame and permitting said window sash to be reversed end for end, and a self-locking device for imparting swinging movement to the link and for holding the same in different set positions.

2. The combination of the window frame, of a window sash secured to the window frame for compound sliding and pivotal movements, a link pivotally anchored at one end to the intermediate portion of the window sash and at its other end to the window frame, said link permitting the window sash to be reversed end for end, and a self-locking device for imparting swinging movement to the link and for holding the same in different set positions.

3. The combination with a window frame, of a window sash secured to the window frame for compound sliding and pivotal movements, a link pivotally connecting the window sash to the window frame and permitting said window sash to be reversed end for end, a feed screw mounted on the window frame and having a traveling nut block, and a connection between the link and nut block.

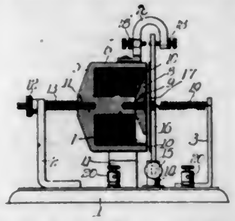
4. The combination with a window frame, of a window sash, secured to the window frame for compound sliding and pivotal movements, a link pivotally connecting the window sash to the window frame and permitting said window sash to be reversed end for end, a feed screw mounted on the window frame and having a traveling nut block, a connection between the link and nut block, and a stop limiting the pivotal movement of the link with respect to the window sash.

5. The combination with a window frame having guides with movable sections, of a window sash secured at one end to the guides for compound sliding and pivotal movements, a link pivotally connecting window sash, at its intermediate portion to the window frame, the movable sections of the guides permitting the window sash to be reversed end for end during its sliding and pivotal movements.

[Claims 6 and 7 not printed in the Gazette.]

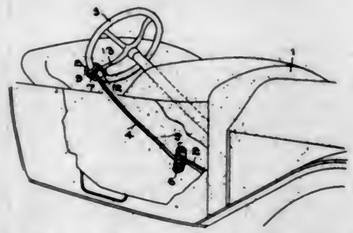
1,193,678. ELECTROMAGNET. FRANK F. FOWLE, Chicago, Ill. Filed Dec. 15, 1910. Serial No. 597,471. (Cl. 175—321.)

An electromagnet relay comprising a base, an inclosed cylindrical electromagnet mounted thereon and adjustable longitudinally with respect thereto, said electromagnet having an inclosing annular shell, one edge of which constitutes one of the pole faces of said electromagnet, and having a central concentric core having an enlarged disk, the outer side of which constitutes the other pole face of said electromagnet, an electromagnetic winding located between said core and said annular shell, a frame pivotally supported by said base and having stops to limit its oscillation, a thin disk of magnetic material mounted on said



frame adjacent to said pole faces and of a size to at least overlap the edge of said shell whereby a nearly closed magnetic circuit is formed, and a spring for normally withdrawing said frame and said armature from said pole faces.

1,193,679. AUTOMOBILE-LOCK. JOHN E. R. FOX, Philadelphia, Pa. Filed Dec. 2, 1915. Serial No. 64,627. (Cl. 70—90.)



1. A device of the character described, comprising a member having a hook at one end adapted to engage a lever, and having twin shackles at its other end adapted to engage a steering wheel at opposite sides of a spoke thereof, substantially as described.

2. A device of the character described, comprising a rod having a hook at one end adapted to engage a lever, a block fixed to the other end of the rod, and twin shackles carried by the block and adapted to engage a steering wheel at opposite sides of a spoke thereof, substantially as described.

3. A device of the character described, comprising a rod having a laterally projecting hook at one end, and a block at its other end, said block having a pair of recesses in its opposite ends, a pair of shackles pivotally secured in the recesses at one end of the block and at their free ends movable into the recesses at the other end of the block, and a lock carried by the block and adapted to lock the free ends of the shackles, substantially as described.

1,193,680. RECOVERY OF ZINC. CHARLES H. FULTON, Cleveland, Ohio, assignor to David B. Jones, Chicago, Ill. Substitute application Serial No. 878,973, filed Dec. 24, 1914. This application filed Dec. 23, 1915. Serial No. 68,383. (Cl. 75—153.)

1. The herein described method of recovering zinc from zinc-bearing ore, consisting of grinding and calcining the ore, mixing it with pulverized coke in quantity more than sufficient for the reduction of metallic oxids in the ore and with a carbonaceous binding material, forming said mixture into briquets under pressure, heating said briquets to a temperature sufficiently high to destructively distil and coke the carbonaceous binding material, but not high enough to volatilize the zinc content of the ore, to form a briquet capable of withstanding without disintegration zinc-distillation temperatures; and subsequently subjecting the briquets to the usual zinc-distillation process to recover the zinc.

2. The herein described method of recovering zinc from zinc-bearing ore, consisting in grinding and calcining the ore, mixing it with pulverized coke in quantity more than sufficient for the reduction of metallic oxids in the ore and with a carbonaceous binding material, forming said mixture into briquets under pressure, heating said briquets while supported against collapse to a temperature sufficiently high to destructively distil and coke the carbonaceous binding material, but not high enough to volatilize the zinc content of the ore, to form a briquet capable of withstanding without disintegration zinc-distillation temperatures; and subsequently subjecting the briquets to the usual zinc-distillation process to recover the zinc.

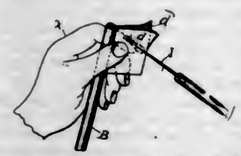
3. The herein described method of recovering zinc from zinc-bearing ore, consisting in grinding and calcining the ore, mixing it with pulverized coke in quantity more than sufficient for the reduction of metallic oxids in the ore and with pitch and tar, forming said mixture into briquets under pressure, heating said briquets while supported against collapse to a temperature sufficiently high to destructively distil and coke the pitch and tar, but not high enough to volatilize the zinc-content of the ore, to form a briquet capable of withstanding without disintegration zinc-distillation temperatures; and subsequently subjecting the briquets to the usual zinc-distillation process to recover the zinc.

4. The herein described method of recovering zinc from zinc-bearing ore, consisting in grinding and calcining the ore, mixing it with pulverized coke and a carbonaceous binder such as pitch or tar, the quantity of coke being such as to furnish the necessary carbon for reduction of all the metallic oxids in the ore, plus such an additional amount of coke that the weight of the briquet, after distillation, will not be less than forty to fifty per cent. of the weight of the briquet before distillation; briqueting the mixture under pressure in molds, heating the briquets to a temperature high enough to destructively distil and coke the carbonaceous binder without volatilizing the zinc-content of the ore; and subsequently subjecting said briquets to the usual zinc-distillation process to recover the zinc.

5. The herein described method of recovering zinc from zinc-bearing ore, consisting in grinding and calcining the ore, mixing it with pulverized coke and a carbonaceous binder such as pitch or tar, the quantity of coke being such as to furnish the necessary carbon for reduction of all the metallic oxids in the ore, plus such an additional amount of coke that the weight of the briquet, after distillation, will not be less than forty to fifty per cent. of the weight of the briquet before distillation, and the quantity of binder being from twelve to fifteen per cent. of the combined weight of the ore and the coke, briqueting the mixture under pressure in molds, heating the briquets to a temperature high enough to destructively distil and coke the carbonaceous binder without volatilizing the zinc-content of the ore, supporting the briquets against collapse or breaking-down during such heating operation; and subsequently subjecting said briquets to the usual zinc-distillation process to recover the zinc.

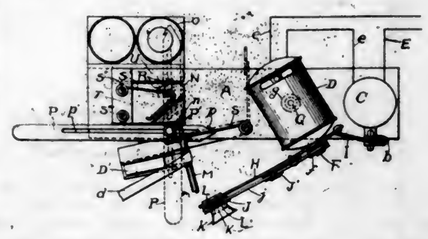
[Claims 6 to 14 not printed in the Gazette.]

1,193,681. PROCESS OF LOADING DENTAL BROACHES AND NEEDLES. LEVI L. FUNK, Chicago, Ill. Filed Feb. 24, 1916. Serial No. 80,239. (Cl. 32—10.)



The process of covering the end of a broach consisting in folding together leaves of resilient material, depositing fibrous material between the same, placing a broach between said leaves and in contact with said fibrous material and producing relative rotation of the end of said broach and said leaves and fibrous material.

1,193,682. MACHINE FOR WRAPPING BROACHES AND THE LIKE. LEVI L. FUNK, Chicago, Ill. Filed June 2, 1916. Serial No. 101,430. (Cl. 32—10.)



1. A base, a fiber container and a fiber retainer on said base, an electric motor and a rotatable pulley mounted on said base to turn in a plane parallel thereto, an electric switch and a link connecting said motor and said switch, in combination with means to remove fiber from said container and to deposit said fiber under said retainer, and a broach, said pulley provided with a central aperture adapted to hold said broach, a driving connection between said apertured pulley and said motor, said motor, pulley, broach, and switch so connected that when said pulley and broach are moved into position that said broach is engageable with said retained fiber, said switch, is closed.

2. A base, a fiber container and a fiber retainer on said base, an electric motor and a rotatable pulley mounted on said base to turn in a plane parallel thereto, an electric switch and a mechanical connection between said motor and said switch, in combination with a hook movably mounted on said base, said hook adapted to remove fiber from said container and to deposit said fiber under said retainer, a broach, said pulley provided with a central aperture adapted to hold said broach, and a driving connection between said apertured pulley and said motor, said motor, pulley, broach, and switch so connected that when said pulley and broach are moved into position that said broach is engageable with said retained fiber, said switch, is closed.

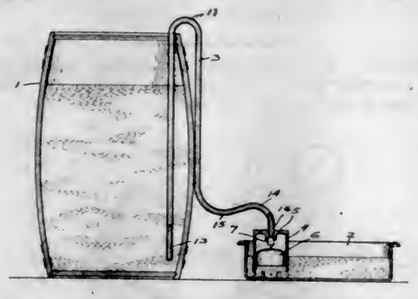
3. A base, a fiber container comprising a cylinder provided with a slot, and a fiber retainer on said base, in combination with a hook adapted to be inserted in said slot and to remove fiber from said container and to deposit said fiber under said retainer, a broach, and means to rotate said broach.

4. A base, a fiber container comprising a cylinder provided with a slot, and a fiber retainer on said base, in combination with a hook adapted to be inserted in said slot and to remove fiber from said container and to deposit said fiber under said retainer, a broach, means to control the quantity of fiber so deposited, and means to rotate said broach.

1,193,683. STOCK-FOUNTAIN. HENRY W. GLANZ, Jr., Napoleon, Ohio. Filed Oct. 27, 1915. Serial No. 58,209. (Cl. 119—80.)

1. The combination of a receptacle for containing water, a siphon extending over the edge of the receptacle to near the bottom thereof, a cylinder threaded on to the end of the siphon located without the receptacle and having an opening registering with the passage-way through the siphon, a cylinder having a valve seat surrounding the opening, a float substantially fitting the interior of the cylinder and guided by the wall of the cylinder, a valve member located centrally on the top of the float for registering with the valve seat and closing the said open-

ing when the float is raised, a container for water for receiving the cylinder.



2. The combination of a receptacle for containing water, a siphon extending over the edge of the receptacle to near the bottom thereof, a weighted cylinder threaded on to the end of the siphon located without the receptacle for supporting the siphon in an upright position and having an opening registering with the passage-way through the siphon, a cylinder having a valve seat surrounding the opening, a float substantially fitting the interior of the cylinder and guided by the wall of the cylinder, a valve member located centrally on the top of the float for registering with the valve seat and closing the said opening when the float is raised, a container for water for receiving the cylinder.

3. The combination of a receptacle for containing water, a siphon extending over the edge of the receptacle to near the bottom thereof, a weighted cylinder threaded on to the end of the siphon located without the receptacle for supporting the siphon in an upright position and having an opening registering with the passage-way through the siphon, a cylinder having a valve seat surrounding the opening, a float substantially fitting the interior of the cylinder and guided by the wall of the cylinder, a valve member located centrally on the top of the float for registering with the valve seat and closing the said opening when the float is raised, a container for water for receiving the cylinder, the siphon having near its outer end an S-curve for preventing the escape of water and the entrance of air into the siphon above the edge of the first-named receptacle.

1,193,684. FISHING BOB OR FLOAT. WALTER W. GREGORY and PETER D. MAIRE, Lakewood, Ohio; said Maire assignor to W. R. White, Cleveland, Ohio. Filed Jan. 27, 1915. Serial No. 4,583. (Cl. 43—4.)



1. A bob or float and fishing-line couplings pivoted directly at the ends thereof and adapted to swing laterally to either side from the bob and the extremities of said couplings having openings to thread a line through the same in free running engagement therewith.

2. A fishing bob or float having a swiveled snap hook pivoted on one end and adapted to provide a rotatable and quick-detachable connection for a fish-line and a flexible coupling pivoted directly on the other end thereof, and said snap hook and coupling constructed to thread a line through the ends thereof and to have running engagement therewith within limits.

3. A bob or float comprising a thin light hollow air tight body having a metallic reinforcement permanently secured to each end thereof and a fish-line attachment pivotally engaged with each of said reinforcements and constructed to have running engagement of the line through the outer ends thereof.

1,193,685. IMPLEMENT FOR HANDLING INCANDESCENT LAMPS. ROBERT T. HARVEY, Peoria, Ill. Filed Feb. 15, 1915. Serial No. 8,356. (Cl. 240—101.)



1. In an implement for applying and removing incandescent light bulbs, the combination of a handle including an open frame at one end, a shaft extending through the handle and one side of said frame and having a bevel gear fixed relative to it within said frame, a second bevel gear journaled in the frame and including a shaft extension projecting outside the frame, a third bevel gear journaled in the frame and meshing with the second described gear and also having a shaft extension, a lamp carrying portion including a pair of clamping arms adapted to engage a lamp, said portion adapted for engaging either of the said shaft extensions, there being interengaging portions on the said shaft extensions and the said lamp carrying portion whereby the latter will positively turn with the said gears, a thread bar rotatably mounted in the said lamp carrying portions, a threaded sleeve engaging it, toggle arms pivoted to the sleeve and the described clamping arms, a shaft independently rotatable within each of the described shaft extensions and adapted to have driving engagement with the said thread bar, a shaft extending through the handle and terminating with the described frame and operatively engaging both independently rotatable shafts.

2. In an implement for applying and removing incandescent light bulbs, the combination of a handle including an open frame at one end, a shaft extending through the handle and one side of the frame, two shafts each carried by the frame, one of them lying substantially perpendicular to the first shaft and the other in substantially the same axial line with said first shaft and both having operative connection with the same, a lamp carrying portion including a pair of clamping arms adapted to engage a lamp, said portion adapted to be attached to either of the two second described shafts, there being interengaging portions on the said shafts and the lamp carrying portion whereby the latter will be positively turned with said shafts, a thread bar rotatably mounted in the said lamp carrying portion, a threaded sleeve engaging the same, toggle arms pivoted to the sleeve and the said clamping arms, a shaft independently rotatable in each of the two said second described shafts and adapted to have driving engagement with the thread bar, a second shaft extending through the handle and operatively engaging both the independently rotatable shafts, and an extension including a finger piece extending from one of the said independently rotatable shafts.

3. In an implement for applying and removing incandescent light bulbs, the combination of a handle including an open frame at one end, a shaft extending through the handle and one side of the frame, two shafts each carried by the frame, one of them lying substantially perpendicular to the first shaft and the other in substantially the same axial line with said first shaft and both having operative connection with the same, a lamp carrying portion including a pair of clamping arms adapted to engage a lamp, said portion adapted to be attached to either of the two second described shafts, there being interengaging portions on the said shafts and the lamp carrying portion whereby the latter will be positively turned with said shafts, a thread bar rotatably mounted in the said lamp carrying portion, a threaded sleeve engaging the same, toggle arms pivoted to the sleeve and the said clamping arms, a shaft independently rotatable in each of the two said second described shafts and adapted to have driving engagement with the thread bar, a second shaft extending through the handle and operatively engaging both the independently rotatable shafts, and an extension including a finger piece extending from one of the said independently rotatable shafts.

4. In an implement for applying and removing incandescent light bulbs, the combination of a handle including a frame at one end, a shaft extending through the handle, a short shaft mounted in the frame at an angle to and operatively engaging the first and rotated by it, a second shaft within the handle, a shaft independently rotatable within the said short shaft and operatively engaging the said second shaft, a lamp carrying portion comprising a member adapted for attachment to said short shaft, a thread bar rotatable therein and adapted for driving engagement with said independently rotatable shaft, a sleeve engaging the thread bar, lamp clamping arms mounted on the member, and toggle arms pivoted at one of their ends thereto and at their other ends to said sleeve.

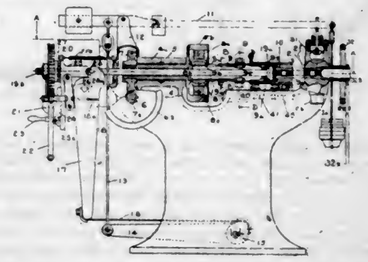
5. In an implement for applying and removing incandescent light bulbs, the combination of a handle including a frame at one end, a shaft extending through the handle and provided with a bevel gear at its end within the frame, a second bevel gear journaled in the said frame and having a shaft extension projecting outside said frame, said gear meshing with the first, a second shaft independently rotatable within the first and having a gear fixed relative to it, a shaft independently rotatable within the shaft extension of the second named bevel gear and including a gear in mesh with that of the said second shaft, and a lamp carrying portion including a member adapted to have driving connection with the said shaft extension, and means rotatable within the said member adapted to have driving engagement with and operated by the said independently rotatable shaft, and clamping arms operated by said means adapted to engage a lamp.

[Claims 6 and 7 not printed in the Gazette.]

1,193,686. ROTATIVE VIBRATORY TESTING-MACHINE. CHARLES L. HEISLER, Schenectady, N. Y. Filed Feb. 13, 1915. Serial No. 8,081. (Cl. 73—51.)

1. The combination in a vibratory testing machine, of a base having formed thereon a journal bearing and means for rigidly fastening one end of a test specimen, a head formed on a spindle supported in said bearing, means for rotating the head, an eccentric journal bearing having means for lateral adjustment positioned and carried by the head, a vibratory chuck member journaled eccentrically at one end in said eccentric bearing and extending axially outward therefrom to the chuck formed on said member and adapted to engage and vibrate the opposite or movable end of the specimen.

2. The combination in a vibratory testing machine, of a base having formed thereon a journal bearing and means for rigidly fastening one end of a test specimen, a head formed on a spindle supported in said bearing, means for rotating the head, an eccentric journal bearing having means for lateral adjustment positioned and carried by the head, a vibratory chuck member eccentrically journaled at one end in said eccentric bearing, and extending outward therefrom to the chuck formed on said member and adapted to engage and vibrate the opposite or movable end of the specimen, a tension rod coupled to said chuck and means for applying tension to said rod.



3. The combination in a vibratory testing machine, of a base having formed thereon a journal bearing and means for rigidly fastening one end of a test specimen, a head formed on a spindle supported in said bearing, means for rotating the head, an eccentric journal bearing having means for lateral adjustment, positioned and carried by the head, a vibratory chuck member eccentrically journaled at one end in said eccentric bearing and extending outward therefrom to the chuck formed on the chuck member and adapted to engage and vibrate the opposite or movable end of the specimen, a tension rod coupled to said chuck and a weighing mechanism adapted to measure the stress applied through said rod to the specimen.

4. The combination in a vibratory testing machine, of a base having formed thereon a journal bearing and means for rigidly fastening one end of a test specimen, a head formed on a tubular spindle supported in said bearing, means for rotating the head, an eccentric journal bearing having means for lateral adjustment positioned and carried by the head, a tubular vibratory chuck member having a chuck formed thereon and actuated by the head, means for weighing and applying tension, and a tension rod disposed within said spindle and vibratory chuck member, coupled to said chuck and to the tension and weighing means.

5. The combination in a vibratory testing machine, of a base having formed thereon a journal bearing and means for rigidly fastening one end of a test specimen, a head formed on a spindle supported in said bearing, means for rotating the head, a laterally adjustable spherical bearing and a ring embraced thereby positioned by said head, and a vibratory chuck member journaled at one end in said ring and having a chuck formed on its other end adapted to engage and vibrate the movable end of said test specimen.

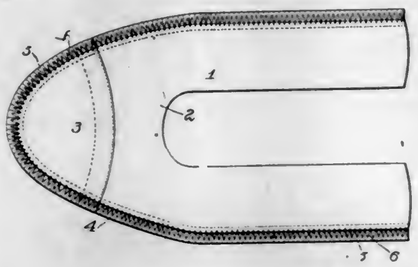
[Claims 6 to 13 not printed in the Gazette.]

1,193,687. SHOE. HIRAM HOLDEN, Manchester, N. H. Filed Dec. 2, 1915. Serial No. 64,741. (Cl. 36—45.)

1. A shoe upper comprising a body portion of leather, and an edge portion co-extensive therewith, said edge portion comprising a relatively narrow strip of stiff material, and a row of stitching extending back and forth from adjacent the outer edge of said leather to a point adjacent the outer edge of said strip for securing said strip to said leather.

2. A shoe upper comprising a body portion of leather, a marginal portion coextensive therewith, said marginal portion comprising a relatively narrow strip of thin stiff material, and a row of stitching extending from adjacent

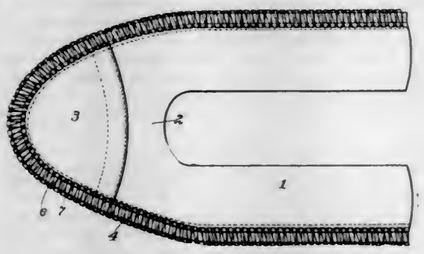
the outer edge of the leather to a point adjacent the outer edge of said narrow strip for securing said strip to said leather.



3. A shoe upper comprising a body portion of leather, a marginal portion coextensive therewith, said marginal portion comprising a narrow strip of corrugated material and a row of stitching extending through the outer marginal portion of the leather portion and the inner marginal portion of said strip at the inner edge of the row and through the outer marginal portion of said strip at the outer edge of the row of stitching.

4. A shoe upper comprising a body portion of leather, a marginal portion coextensive with one edge thereof and projecting therefrom, said marginal portion comprising a row of projecting zig zag stitching and a narrow strip of corrugated paper, the paper forming suitable support for the outer ends of the stitching, and the inner ends of the stitching providing fastening means securing the paper strip to the leather.

1,193,688. SHOE. HIRAM HOLDEN, Manchester, N. H. Filed Mar. 20, 1916. Serial No. 85,502. (Cl. 36—45.)



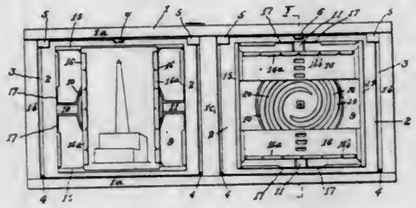
1. A shoe upper comprising a body portion of leather and an edge portion co-extensive therewith, said edge portion comprising a relatively narrow strip of material, and a row of stitching extending back and forth from adjacent the outer edge of said leather to the outer edge of said strip for securing the strip to said leather.

2. A shoe upper comprising a body portion of leather, a marginal portion co-extensive therewith, said marginal portion comprising a strip of thin material, and a row of stitching secured to the outer edge of the leather and extending to and beyond the outer edge of said narrow strip.

3. A shoe upper comprising a body portion of leather, a marginal portion co-extensive therewith, said marginal portion comprising a narrow strip and a row of stitching extending from adjacent the edge of the leather out and around the outer edge of said narrow strip, said row of stitching being formed with a row of lock stitches at its outer edge.

4. A shoe upper comprising a body portion of leather, a marginal portion co-extensive therewith, said marginal portion comprising a narrow strip of corrugated material and a row of stitching extending through the outer marginal portion of the leather portion and the inner marginal portion of said strip at the inner edge of the row and around the outer marginal portion of said strip.

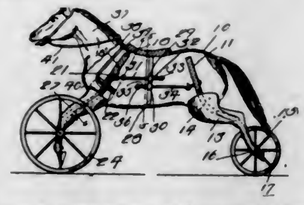
1,193,689. HOLDER FOR PROJECTING-MACHINES. GUSTAVE J. HOLL, Cleveland, Ohio, assignor to The Mirroscope Company of Ohio, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 9, 1914. Serial No. 871,144. (Cl. 88—26.)



1. In an object-holder for a projecting machine, the combination of a main object-holder frame provided with guide-ways; two object-holding members slidably mounted in said guide-ways so as to be reciprocable toward and from each other; and a rotatable actuating member provided with a spiral lug engaging said holding members, whereby the rotation of said actuating member will effect the approach or recession of said holding member.

2. In a projecting machine, the combination of a suitable support; an object-holder comprising a main object-holder frame, two oppositely disposed holding members slidable on said frame, a pintle mounted upon said support and extending through same, an actuating member secured to the inner end of said pintle, engaging said holding members and adpated upon rotation to effect the approach or recession of the latter, a rotatable sleeve surrounding said pintle mounted on and projecting through said support and having the main holder frame secured to its inner end, a thumb wheel secured to the exterior end of said pintle; a thumb wheel secured to the exterior end of said rotatable sleeve; and a fixed bearing member projecting from the exterior of said support and forming the bearing for said rotatable sleeve.

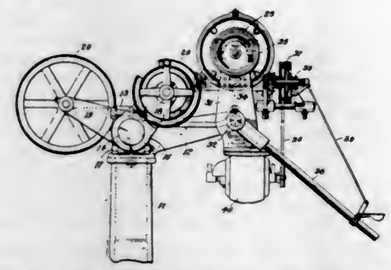
1,193,690. FIGURE VELOCIPEDE. HOWARD J. HOUGHLAND, Texas City, Tex. Filed Dec. 23, 1914. Serial No. 878,664. (Cl. 208—42.)



1. A velocipede comprising the figure of a horse, blocks pivotally mounted interiorly of the body of the figure adjacent the front and rear thereof, each block having a pair of legs associated therewith, a vertical member arranged between the blocks, means yieldably connecting the blocks and member to cause the legs to move toward each other after being moved away from each other.

2. A velocipede comprising a figure of a horse, blocks pivotally mounted interiorly of the body of the figure and at each end thereof, a vertical member in the body and disposed between said blocks, rods having their outer ends connected with the blocks and their inner ends slidably and yieldably connected to the member, hind legs rigidly associated with the rear block, an axle supported by said legs, wheels for the axle, front legs having a fork fixed thereto, said fork being pivotally engaged with the front block, a pedal shaft engaged with the front legs and fork, a wheel fixed to the shaft, the neck portion of the body having a part pivotally connected to the body and a part rigidly connected to the front legs, as and for the purpose set forth.

1,193,691. TIRE-INSPECTING MACHINE. HOMER J. HOYT, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed Mar. 26, 1915. Serial No. 17,117. (Cl. 73—51.)



1. A tire inspecting machine embodying co-acting members forming a support for a tire to be inspected, and a member disposed between two of the said members adapted to engage the tire and force the same radially at one point between said members to assume an inward bulge or bow.

2. A tire inspecting machine embodying co-acting members forming a support for a tire to be inspected, a stop between two of said members, and a member adapted to engage the tire and force the arch of the same radially past said two members into contact with said stop thereby producing an inward bow or bulge in the tire.

3. A tire inspecting machine embodying coacting members for supporting a tire, and a rotary member contacting with the tire and serving to simultaneously rotate the tire on its axis and bow the tire inwardly at the point of contact of the tire with the rotary member.

4. A tire inspecting machine embodying co-acting members forming a three point suspension for the tire, a stop disposed on a common axis with two of said members, and a rotary wheel adapted to contact with the tire and force the same radially past said tow members into contact with said stop thereby simultaneously rotating the tire on its axis and bowing the tire inwardly to the surface of said stop.

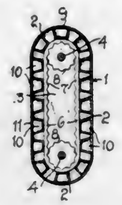
5. A tire inspecting machine, comprising means adapted to engage the inner surface of the tire at two points spaced transversely thereof, means for engaging the outer surface of the tire at a point between said two points, and means for producing relative movement between the first and second named means for temporarily changing the curvature of the tire.

[Claim 6 not printed in the Gazette.]

1,193,692. RECEPTACLE. WILLIAM H. HUFFMAN, Bridgewater, Va. Filed Apr. 5, 1916. Serial No. 89,124. (Cl. 206—21.)

1. A device of the character described comprising a container having an opening in one of its walls, endless members positioned within the container, means for imparting movement to said members, and a plurality of receptacles connected to said members and disposed longitudinally in the same direction as the longitudinal axis of the opening, said receptacles being interposed between the endless members and the walls of the container with their outer faces open, said receptacles being in frictional engagement with the walls of the container.

2. A device of the character described comprising a container having an opening in one of its walls, endless members positioned within the container, means for imparting movement to said members, and a plurality of receptacles connected to said members and disposed longitudinally in the same direction as the longitudinal axis of the opening, said receptacles being interposed between the endless members and the walls of the container with their outer faces open, said endless members being elastic.



3. A device of the character described comprising a container provided with an elongated slot in one of its walls, shafts rotatably supported by and positioned within the container and arranged substantially in parallelism with the opening, one of said shafts extending exteriorly of the container and being provided with operating means, elastic endless members disposed around the shafts, and receptacles secured to the endless members and interposed between said endless members and the walls of the container and adapted to frictionally contact with said walls.

4. A device of the character described comprising a container provided with an elongated slot in one of its walls, shafts rotatably supported by and positioned within the container and arranged substantially in parallelism with the opening, one of said shafts extending exteriorly of the container and being provided with operating means, elastic endless members disposed around the shafts, and receptacles secured to the endless members and interposed between said endless members and the walls of the container and adapted to frictionally contact with said walls, the inner faces of the endless members being serrated.

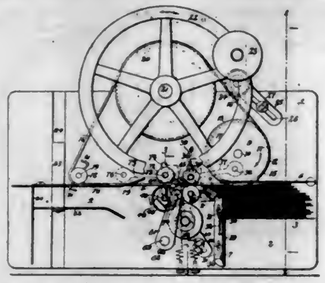
5. A device of the character described comprising a container rectangular in plan with the longitudinal walls thereof outwardly bowed in cross section, one of said longitudinal walls being provided with an elongated slot disposed substantially the entire length thereof, shafts rotatably supported by and positioned within the container adjacent the longitudinal walls thereof and arranged substantially in parallelism with the opening, one of said shafts extending exteriorly of the container and being provided with operating means, endless members disposed around the shafts adjacent the opposite extremities thereof, and receptacles secured to the endless members and interposed between said members and the walls of the container and adapted to frictionally contact with said walls.

1,193,693. MAIL-MARKING MACHINE. AUGUST IELFIELD, Silver Creek, N. Y., assignor to Columbia Postal Supply Co., Silver Creek, N. Y., a Corporation of New York. Filed Mar. 31, 1914. Serial No. 828,499. (Cl. 101—39.)

1. A mail marking machine comprising a letter feed wheel provided on its periphery with a segmental flange the ends of which are separated by an intervening space or gap, a circular feeding band mounted on the periphery of said wheel and having its outer face of a diameter less than the diameter of said flange and greater than the periphery of said wheel, a supporting pulley arranged concentric with said wheel and turning therewith, and a feeding belt passing around said supporting pulley and having its face flush with the face of said feeding band.

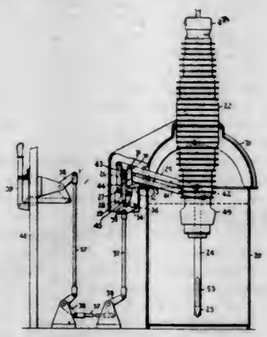
2. A mail marking machine comprising a letter feeding belt, and means for guiding the letters comprising two rollers arranged on opposite sides of the path of the letters, one of said rollers having a lower section engaging with the face of said belt and an upper section arranged above said belt and the other roller having a reduced

lower part which engages with the back of said belt and an enlarged upper part engaging with the upper section of the other roller above the belt, a fixed pivot on which



one of said guide rollers is journaled, and a spring pressed arm on which the other of said guide rollers is pivotally mounted.

1,193,694. ELECTRIC SWITCH. ERNEST H. JACOBS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 9, 1911. Serial No. 613,376. (Cl. 175—283.)



1. In an electric switch, the combination of an oil vessel, a cover for said vessel having a projecting part which extends over one side of said vessel, relatively movable cooperating contacts mounted in said cover, an operating lever connected to one of said contacts, actuating mechanism mounted in and contained within said projecting part of said cover and connected to said operating lever to cause the end thereof to move up and down to close and open the switch, and means extending out of said projecting part and connected to said mechanism to actuate said mechanism to open and to close said switch.

2. An electric switch comprising an oil vessel, a cover for said vessel having an extension which projects to one side of said vessel, means coöperating with said extensions to form a hood at one side of said vessel, stationary contacts mounted in said cover on opposite sides of said hood, a movable bridging contact mounted to move vertically and to coöperate with said stationary contacts, an operating lever mounted in said hood to overhang said vessel with one end between said fixed contacts and connected to said movable contact, operating mechanism contained in said extension and connected to said operating lever to cause the end of said lever and said contact to move up and down, and means extending downward out of said hood and connected to said mechanism to actuate said operating lever to bring said movable contact into and out of engagement with said stationary contacts.

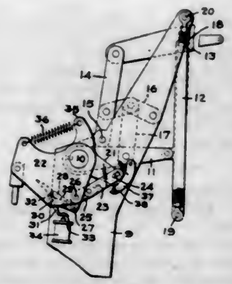
3. In an electric switch, the combination of an oil vessel, a cover for said oil vessel divided into sections, a stationary contact secured to one section, a second stationary contact secured to an adjacent section, each of said sections having a projection which extends beyond the side of said oil vessel, an operating lever mounted on said projections to overhang said oil vessel, a bridging contact suspended from the end of said operating lever to coöperate with said stationary contacts, and actuating mechanism mounted on said projections to one side of said vessel and connected to said operating lever to cause the end thereof to move up and down and to bring said movable contact into and out of engagement with said stationary contacts.

4. In an electric switch, the combination of an oil vessel, a cover for said oil vessel divided into sections, two of said sections being mounted adjacent each other to leave a space between them and having projections which extend beyond the side of said oil vessel, stationary contacts mounted on said sections of the cover, an operating lever pivotally mounted on said projections to move vertically between them and to overhang said oil vessel, a movable contact suspended from said operating lever, actuating mechanism mounted between said projections and connected to said operating lever to move said contact up and down, and a third section of said cover detachably secured to said other sections to form a hood which covers the space between said first mentioned sections and extends over said projections to protect said operating mechanism.

5. In an oil switch, the combination of an oil vessel, a cover for said vessel having an opening near the middle thereof, stationary contacts mounted on said cover on opposite sides of said opening, pressure retaining chambers surrounding said contacts and embedded in insulation and each having a vent in alinement with the stationary contact, operating mechanism rigidly mounted at one side of said tank and comprising an operating arm which overhangs said vessel in alinement with said opening, actuating mechanism connected to said operating arm, a movable contact suspended from said arm and moved up and down by said actuating mechanism to pass through the vents in said pressure retaining chambers and coöperate with said stationary contacts, and a hood detachably secured to said cover to inclose said operating mechanism and to cover said opening.

[Claims 6 to 9 not printed in the Gazette.]

1,193,695. ELECTRIC SWITCH. ERNEST H. JACOBS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Mar. 9, 1911, Serial No. 613,376. Divided and this application filed Apr. 26, 1912. Serial No. 693,402. (Cl. 175—267.)



1. In an actuating mechanism for electric switches, the combination of a switch actuating member and an operating member mounted to be movable relatively to each other, a collapsible connection between said members for transmitting force from one member to the other, a locking toggle for normally preventing the collapse of said connection, said toggle comprising a link pivoted at one end to said connection, a second link pivoted to said operating member and to said first link at a point between the ends thereof, and a latch mounted on the pivot of said second link to engage the free end of said first link and thereby normally prevent collapse of said locking toggle.

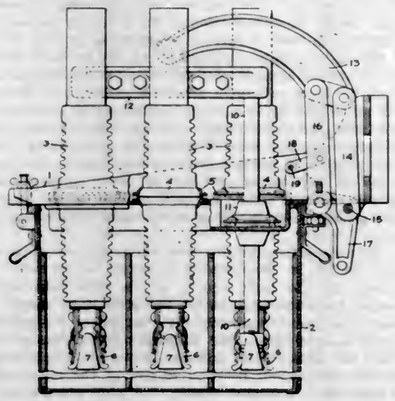
2. In an actuating mechanism for electric switches, the combination of a switch actuating member, an operating member, a normally underset collapsible main toggle connecting said members, a locking toggle pivoted to said main toggle and to said operating member for normally preventing the collapse of said main toggle, and a latch pivoted on said operating member to engage one of the links of said locking toggle and thereby prevent collapse of both said toggles.

3. In a switch actuating mechanism, the combination of a switch actuating member and an operating member mounted to oscillate independently of each other about a common axis, a normally positive collapsible connection between said members having a lost motion connection with one of said members to permit a limited movement of said connection independently of said member, and a detent mounted to engage said switch actuating member and hold the switch in open position and to be moved into position to release said switch actuating member by movement of said connection incident to closing of the switch.

4. In a switch actuating mechanism, the combination of a switch actuating member and an operating member mounted to rock about the same axis, a main toggle having one end connected to said operating member and the other end to said actuating member, a locking toggle having one end pivoted to one link of said main toggle and the other end pivoted on said operating member, a latch pivoted on said operating member to coöperate with one of the links of said locking toggle, and means responsive to abnormal conditions on the circuit controlled by the switch for moving said latch and thereby permitting both said toggles to collapse and said members to move relatively to each other.

5. In an actuating mechanism for electric switches, the combination of a switch actuating member, an operating member, a collapsible main toggle connecting said members, a locking toggle operatively related to said main toggle for normally preventing the collapse of said main toggle, and electromagnetic means for controlling the collapse of said locking toggle.

1,193,696. OPERATING MECHANISM FOR ELECTRIC SWITCHES. ERNEST H. JACOBS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Mar. 9, 1911, Serial No. 613,376. Divided and this application filed Aug. 15, 1914. Serial No. 856,979. (Cl. 74—14.)



1. An operating mechanism for an electric switch comprising an actuating lever mounted upon a fixed pivot, a link mounted upon a fixed pivot, a second link having one end pivoted to said actuating lever at a point eccentric to the pivot of said lever, a contact operating lever pivoted at different points to the other ends of said links, and means connected to one of said links between the ends thereof and actuated by the movement of said actuating lever about its pivot to swing said first link about its pivot and thereby cause a point on said contact operating lever to move in a straight line.

2. An operating mechanism for an electric switch comprising an actuating lever, an operating lever, two links pivoted to said operating lever at different points, one of said links being mounted on a fixed pivot and the other pivoted to said actuating lever, and a guide link mounted at one end on a fixed pivot and pivoted at the other end to one of said links intermediate the ends thereof to swing said first link about its pivot and thereby cause a point on said operating lever to move in a straight line.

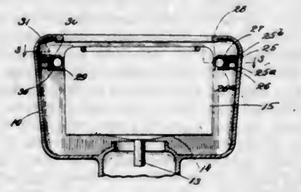
3. An operating mechanism for an electric switch comprising an actuating lever mounted upon a fixed pivot, a link having one end mounted on said pivot, a second link having one end pivotally connected to said actuating lever at a point eccentric to said pivot, a contact operating lever pivoted at two different points to the other ends of said links, and means connected to one of said links and actuated by the movement of said actuating lever about said pivot to cause said operating lever to move about said pivot and thereby cause a point on said operating lever to move in a straight line.

4. An operating mechanism for an electric switch comprising a support, an operating lever having near one end a fulcrum movable relatively to said support in a horizontal direction, an actuating lever, a vertical link pivoted to said actuating lever eccentric to the pivot thereof and to said operating lever eccentric to the fulcrum thereof, and a guide link having a pivot fixed in said support and extending toward the pivot of said actuating lever, said guide link being connected to said vertical link to shift the movable fulcrum of said operating lever and thereby cause a point on said operating lever to move in a straight line.

5. An operating mechanism for an electric switch comprising a support, two pivots fixed on said support, an actuating lever mounted on one of said fixed pivots, a link having one end pivoted to said support, a second link pivoted to said actuating lever at a point eccentric to the fixed pivot of said lever, an operating lever having different points pivoted to the other ends of said links, and a guide link mounted on the other fixed pivot to extend toward the first pivot, said guide link being pivoted to one of said links between the ends thereof to control the position of said operating lever to cause a point on said lever to move in a straight line.

[Claims 6 and 7 not printed in the Gazette.]

1,193,697. CENTRIFUGAL EXTRACTOR. AUGUST E. W. JAHN, New York, N. Y., assignor to Troy Laundry Machinery Company, Ltd., a Corporation of New York. Filed Aug. 4, 1914. Serial No. 854,933. (Cl. 64—48.)



1. The combination in a centrifugal extractor of a supporting frame, a shell carried by said frame, a spindle, a basket within said shell and concentrically mounted on said spindle, a bearing for said spindle carried by said frame, and an antifriction bearing for said basket carried by said shell.

2. In a centrifugal extractor, a frame, a shell carried by said frame, a spindle rotatably mounted in said frame, a basket concentrically located within said shell and mounted on said spindle, and a ball bearing guide for said basket interposed between the same and said shell.

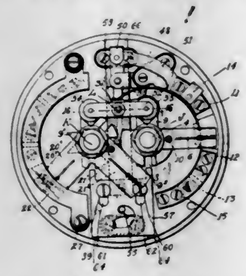
3. In a centrifugal extractor, a frame, a shell carried by said frame, a spindle rotatably mounted in said frame, a basket concentrically located within said shell and mounted on said spindle, a bearing ring carried by said basket, and antifriction bearings carried by said shell to coact with said bearing ring.

4. In a centrifugal extractor, a frame, a shell carried by said frame, a spindle rotatably mounted in said frame, a basket concentrically located in said shell and mounted on said spindle, a bearing ring carried by said basket, to permit a limited vibration of said basket.

5. In a centrifugal extractor, a frame, a shell carried by said frame, a spindle rotatably mounted in said frame, a basket concentrically located within said shell and mounted on said spindle, a bearing ring carried by said basket, a cage carried by said shell, and antifriction bearings carried in said cage to coact with said bearing ring.

[Claims 6 to 9 not printed in the Gazette.]

1,193,698. IGNITION-SWITCH. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 10, 1913. Serial No. 760,180. (Cl. 175—282.)



1. A switch device comprising a light switch, an ignition switch and a starting switch having different positions, a locking device common to said switches, and means for rendering said locking device ineffective except when said ignition and starting switches are in inoperative positions.

2. A switch device comprising light, ignition, and starting switches, each of said switches having operative and inoperative positions, a locking device common to said switches for rendering them ineffectively movable, and means for rendering said locking device ineffective except when said ignition and starting switches are in inoperative positions.

3. A switch device comprising light, ignition and starting switches, each of said switches having operative and inoperative positions, a locking device common to said switches for rendering them ineffectively movable, means whereby said locking device may be operated to render said switches ineffectively movable, and means to prevent such an operation of the locking device except when said ignition and starting switches are in inoperative positions.

4. A switch device comprising light ignition and starting switches having operative and inoperative positions, a locking device common to said switches, a removable key for said locking device, said key being adapted for operataing the locking device for rendering said switches ineffectively movable, and means to prevent the ineffective operation of said key and the removal thereof except when said ignition and starting switches are in inoperative positions.

5. A switch device comprising light, ignition, and starting switches having operative and inoperative positions, a locking device common to said ignition and starting switches, and means for rendering said locking device ineffective except when said ignition and starting switches are in inoperative positions.

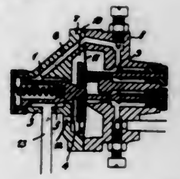
[Claims 6 to 32 not printed in the Gazette.]

1,193,699. PATTERN-CLAMP. JAMES C. KEER, Columbus, Ohio. Filed Dec. 30, 1914. Serial No. 879,786. (Cl. 85—50.)



A pattern clamp comprising a plate, and an integral central upwardly extending stem, the latter having a peripheral recess formed between the body of the plate and the upper end of the stem, said plate and stem having a nail receiving opening therethrough, said plate being further provided with a concaved under surface.

1,193,700. AUTOMATIC LIGHTING AND EXTINGUISHING APPARATUS FOR GAS-LAMPS. GEORGE KEITH, London, England, assignor of one-half to James Keith, London, England. Filed Dec. 8, 1915. Serial No. 65,675. (Cl. 69—18.)



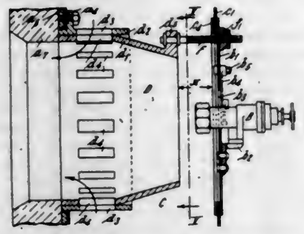
1. In automatic lighting and extinguishing apparatus for gas lamps, in combination, a casing formed with passageways for the main supply and the pilot light supply, a branch from the passage for the pilot light supply terminating in a vent leading to the atmosphere, a diaphragm movable in said casing and adapted when in one position to open the main supply and cut off the pilot light supply and when in another position to cut off the main supply and open the pilot light supply, and means movable with said diaphragm and adapted to open said branch when the main supply is permitted to pass and to close said branch when the main-supply is prevented from passing.

2. In automatic lighting and extinguishing apparatus for gas lamps, in combination, a main supply connection, a pilot supply control valve, a diaphragm serving to control the main supply of gas and to act on said control valve, a loaded plunger acting on said diaphragm, said plunger having a spindle, a guide for said spindle between which guide and spindle is an annular space in communication with the pilot supply, a connection leading to the atmosphere and in communication with said annular space in the position of the plunger corresponding to the closed position of said valve, and cut off from communication with said annular space by said spindle in the position of the plunger corresponding to the open position of said valve.

3. In automatic lighting and extinguishing apparatus for gas lamps, in combination, a casing formed with passageways for the main supply and a pilot light supply, a branch from the passage for the pilot light supply terminating in a vent leading to the atmosphere, a diaphragm movable in said casing and adapted when in one position to open the main supply and cut off the pilot light supply and when in another position to cut off the main supply and open the pilot light supply, a loaded plunger engaging said diaphragm, a spindle connected to the plunger and having a conical portion, and a spindle guide presenting a valve seat for said conical portion, said spindle movable with said diaphragm so as to be out of engagement with said seat and to open said branch when the main supply is permitted to pass and to engage said seat and thereby to close said branch when the main supply is prevented from passing.

4. In automatic lighting and extinguishing apparatus for gas lamps, in combination, a casing formed with passageways for the main supply and a pilot light supply, a branch from the passage for the pilot light supply having a vent leading to the atmosphere, means including a diaphragm for controlling the main supply and a pilot supply to permit only one supply to pass at a time, and a valve member movable with said diaphragm and permitting the escape to the atmosphere through said branch and said vent of leakage of gas passing the pilot supply controlling means during the time the main supply is permitted to pass.

1,193,701. APPARATUS FOR BURNING LIQUID FUEL. JOHN JONATHAN KERMODE, Liverpool, England. Filed Aug. 8, 1912. Serial No. 714,119. (Cl. 158—1.5.)



1. In an air controlling device for furnaces the combination with a furnace front having an opening, of an air casing arranged across the front thereof, a burner, a jet casing located in the air casing in line with the burner and surrounding the furnace opening, said casing consisting of two parts, one fixed to the furnace front and being provided with through ports and the other part axially and angularly movable relatively thereto and adapted to control the air supply; substantially as described.

2. In an air controlling device for furnaces, the combination with a furnace front having an opening, of an air casing arranged across the front thereof, a burner, a jet casing located in the said air casing in line with the burner and surrounding the furnace opening, said casing consisting of two parts, one being a cylindrical part fixed to the furnace front and being provided with through ports, and the other having a cylindrical portion and through ports and being axially and angularly movable relative to the fixed part and adapted to control the air supply entering through the said ports, substantially as described.

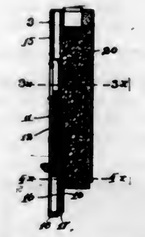
3. A furnace comprising in combination a furnace front having an opening, an air casing arranged across the front thereof, a jet casing located in the air casing and surrounding the furnace opening, said casing including a part fixed to the furnace front, an opening in the air casing front, a tamp adapted to be introduced through the opening in the air casing front and to block the furnace opening, and a detachable plate adapted to close the opening in the air casing front and alternately to carry a burner or to hold the said tamp in position, substantially as described.

4. In an air controlling device for furnaces the combination with a furnace front having an opening, of an air casing arranged across the front thereof, a burner, a jet casing located in the air casing in line with the burner and surrounding the furnace opening, said casing consisting of two parts, one part being fixed to the furnace front and the other part being movable axially and angularly relatively thereto, air ports in the fixed part and air ports in the movable part and means operable exteriorly of the air casing for imparting such angular and axial movement to the said moving part; substantially as described.

5. In an air controlling device for furnaces the combination with a furnace front, having an opening, of an air casing arranged across the front thereof, a burner, a jet casing located in the air casing in line with the burner, and surrounding the furnace opening, said casing consisting of two parts, one part being fixed to the furnace front and the other part being movable axially and angularly relatively thereto, tangentially arranged air ports in the fixed part and tangentially arranged air ports in the movable part and means operable exteriorly of the air casing for imparting such angular and axial movement to the said moving part; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,193,702. PROTECTOR FOR AUTOMOBILE-RADIATORS. WALTER L. KRON, La Fayette, Ind., assignor of one-third to James S. McDoniels and one-third to William McDoniels, La Fayette, Ind. Filed June 21, 1915. Serial No. 35,441. (Cl. 257—132.)



1. An automobile radiator protector comprising a shell having front and rear openings, said rear opening adapted to admit the front end of the radiator to support the shell on the latter; a stationary, vertically disposed member extending across the upper front portion of the shell and having its lower edge provided with a downwardly presented horizontal channel; and a shutter having vertical side edges slidably mounted in the sides of the shell, said shutter adapted to be raised and lowered relatively to said member to wholly or partially close the opening through the front of the shell, and said shutter having an upper edge to enter the channel in the lower edge of said stationary member.

2. An automobile radiator protector comprising a shell having front and rear openings, said rear opening adapted to admit the front end of the radiator to support the shell on the latter; a stationary, vertically disposed member extending across the upper front portion of the shell having its lower edge provided with a downwardly presented horizontal channel; a pad extending across the lower front portion of the radiator having a bottom horizontal flange extending forwardly; a shutter in front of said pad having vertical side edges slidably mounted in the sides of the shell, said shutter adapted to be raised and lowered relatively to said stationary member to wholly or partially close the opening in the front of the shell, and having an upper edge to enter the channel in the lower edge of said stationary member, said bottom flange of the pad forming a seat against which the bottom of the shutter closes edgewise to thereby limit the downward movement of said shutter.

3. An automobile radiator protector, comprising a shell having front and rear openings, said rear opening adapted to admit the front end of a radiator to thereby support the shell thereon; upper and lower stationary members on the front of the shell and vertically disposed, a shutter vertically movable between said members and adapted to close edgewise thereagainst to close and expose the front opening of the shell; and lugs on the side members of the shell for the attachment of auxiliary means by which the shell may be fastened in place on the radiator.

1,193,703. METHOD OF PREPARING SHAPED FIBERS. GEORGE LANZENDORFER, Braintree, Mass. Filed July 21, 1913. Serial No. 780,315. (Cl. 13—5.)

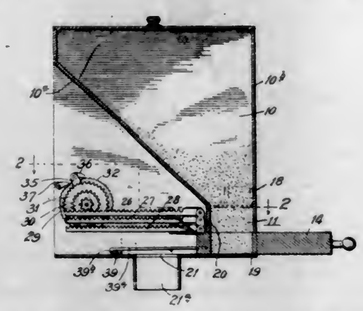
1. That method of imparting a permanent set to fibers which consists of twisting a mass of fibers together, impregnating the mass with a mercerizing agent, washing and drying the mass, and then reversing the twisting operation to separate the individual fibers.

2. That method of imparting a permanent set to fibers which consists of grouping the fibers into a plurality of slivers or strands, twisting said slivers into a rope, impregnating the rope with caustic soda, washing and drying the rope and then reversing the twisting operation to separate the individual fibers.

3. That method of imparting a permanent set to fibers which consists in treating them in a loose state with a shrinking agent, washing the fibers, twisting a mass of the fibers together and permitting them to set, and finally separating the mass into its constituent fibers.

4. That method of imparting a permanent set of fibers which consists in grouping the fibers into a plurality of slivers or strands, twisting said slivers together into a rope, so that the fibers of each sliver constitute a former fo rthe fibers of the other sliver or slivers, impregnating the rope with a shrinking agent and then untwisting the rope into its constituent twisted fibers.

1,193,704. DISPENSING APPARATUS. GEORGE M. LUDLOW, Chicago, Ill., assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 2, 1912. Serial No. 668,966. (Cl. 221—105.)



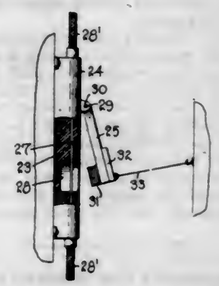
1. In a device of the class described, a storage bin having an outlet opening at its base, a measuring slide adjacent thereto, a register, a shaft for actuating said register, a gear operatively connected to said shaft, and a rack actuated by said slide and yieldably engaging said gear.

2. In a device of the class described, a storage bin having an outlet opening at its base, a plurality of measuring slides of different capacity adjacent thereto, a register, a rotatable shaft to actuate the register, a plurality of gears operatively connected to said shaft, and racks actuated by said slides yieldably and permanently engaging said gears, said gears having their pitch circle diameters inversely proportional to the capacities of the respective slides.

3. In a device of the class described, a storage bin having an outlet opening at its base, a displaceable measuring element adjacent thereto, a register, a rotatable shaft to actuate the register, a gear operatively connected to said shaft, and a rack actuated by said element yieldably and permanently engaging said gear.

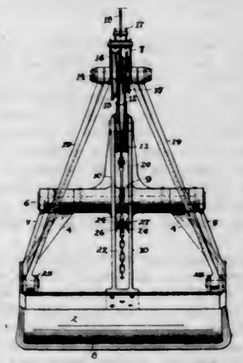
4. In a device of the class described, a storage bin having an outlet opening at its base, displaceable measuring means adjacent thereto, a register, a rotatable shaft to actuate the register, ratchet mechanism between said shaft and register, and rack and gear connection from said displaceable measuring means to said shaft, whereby the register will be actuated proportionally to the quantity of material measured.

1,193,705. CIRCUIT-CLOSER. WALTER G. LYNCH, Roanoke Rapids, N. C. Filed Mar. 10, 1915. Serial No. 13,511. (Cl. 200—33.)



A circuit closer including a wall block of insulating material provided with a recess opening through its outer face, continuous parallel spaced conductors passing through the block and intersecting the recess, those portions of the conductor contained within the recess being spaced from the side and bottom walls thereof, a pivoted arm mounted upon the block, the pivot point of said arm being above the recess, a wedge-shaped contact member carried by the free end of the arm, a weight member mounted upon the arm at the free end thereof, and a fusible member coacting with the arm for normally holding the same in open circuit position, wherein the contact member is withdrawn from the recess, said arm being adapted to fall by gravity when released, whereby the wedge-shaped contact member is wedged between those portions of the conductors intersecting the recess.

1,193,706. CLAM-SHELL BUCKET. WARREN ELLSWORTH MCWHIRK, ROBERT DAVID LEWIS, and HERBERT J. DESSON, Pittsburgh, Pa., assignors to The McWhirk Engineering Company, L't'd., Niagara Falls, N. Y., a Corporation of New York. Filed Jan. 8, 1916. Serial No. 70,955. (Cl. 37—30.)



1. In a device of the kind described, bucket sections in hinged connection, supporting means for said sections, a closing lever for said sections, sheaves mounted upon said lever and supporting means, a pivoted lever carried by said bucket, a closing cable connected with said pivoted lever and rove upon said sheaves, and means to impart an independent movement to said pivoted lever during opening movements of the bucket sections.

2. In a clam-shell bucket, a set of hinged scoops having a closing lever, an oscillatory lever and a closing cable connected therewith, and means to produce an independent movement of said oscillatory lever during opening movements of said scoops.

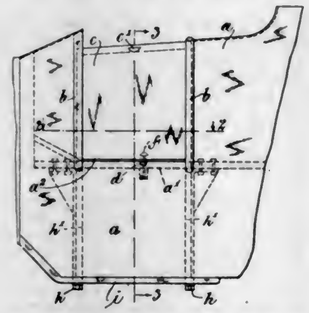
3. In a clam-shell bucket, a set of hinged scoop members, a closing lever for one of said members, having a closing cable in running connection therewith, an auxiliary lever pivoted between its ends upon the bucket, a detaining member for one end of said auxiliary lever, said cable being connected with the other end thereof.

4. In a clam-shell bucket, a set of hinged scoop members, means to hold said members in a suspended position, a closing cable and a closing lever for said members, a pivoted lever mounted to oscillate within predetermined stop limits and connected with said closing cable, and an operating connection extending from said holding means to said pivoted lever.

5. In a clam-shell bucket, a set of scoops having a hinge pin, holding means and a closing cable and lever for said scoops, an auxiliary lever rotatably mounted upon said hinge pin and connected with said cable, stops for said auxiliary lever, and a flexible connection between said auxiliary lever and said holding means to actuate said lever during opening and closing movements of said scoop members for the purposes described.

[Claim 6 not printed in the Gazette.]

1,193,707. SLIDING DOOR FOR MOTOR-VEHICLES. ALFRED F. MASURY, New York, N. Y., assignor to International Motor Company, New York, N. Y., a Corporation of Delaware. Original application filed Feb. 16, 1915, Serial No. 8,465. Divided and this application filed Sept. 30, 1915. Serial No. 53,272. (Cl. 21—125.)



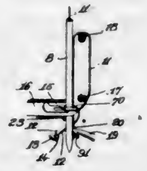
1. In combination with the body of a motor vehicle, a door moving vertically to close the usual doorway in the body, and devices to guide the door loosely in its vertical movement to opened or closed position, said devices comprising channels formed in the jambs of the doorway and separate channels mounted beneath the door sill and forming respectively virtual continuations of the channels in the jambs and a wall for the vehicle body carried downward over said guide channels to conceal the same and to conceal the door when the latter is dropped to opened position.

2. In combination with the body of a motor vehicle, a door movable vertically to close the usual door way in the body, channels formed in the jambs of the doorway to guide the door loosely in its vertical movement, and step brackets secured to the body below the door sill and having guide channels formed therein to constitute virtual continuations of the channels in the jambs.

3. In combination with the body of a motor vehicle, a rigid door movable vertically to close the usual doorway in the body, devices to guide the door loosely in its vertical movement to opened or closed position, and releasable means to hold the door in raised position, said means being operable to permit the door to drop gravitally to opened position and a wall for the body carried downward to conceal the door when it is dropped to opened position.

4. In combination with the body of a motor vehicle, a door movable vertically to close the usual doorway in the body, channels formed in the door jambs to guide the door loosely in its vertical movement, step brackets secured to the body below the door sill and in substantial alinement, respectively, with the channels in the jambs and having guide channels formed therein to constitute virtual continuations of the channels in the jambs, the last named channels being provided with shoulders to limit the downward movement of the door, a handhold formed in the upper edge of the door to permit the same to be raised conveniently, a spring-pressed latch to engage the door when in raised position, a foot rod in operative engagement with said latch and operable to retract the same and permit the door to drop gravitally to opened position and a wall for the body carried downward over said guide channels to conceal the same and to conceal the door when the latter is dropped to opened position.

1,193,708. KNOTTER FOR MATTRESS-TUFTING MACHINES. WILFRED B. MATHEWSON, North Weymouth, Mass., assignor to United Mattress Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 29, 1912. Serial No. 687,078. (Cl. 112—24.)



1. In a knotter, the combination with a gripper device to grip and hold momentarily the end of a length of twine leading from a source of supply, of a looper, means to give the looper a reciprocatory motion in a direction transverse to the direction of the length of twine to cause it to engage said length of twine at a distance from its end and an oscillatory motion to cause it to form a loop in said twine, means to insert a second loop of twine through the first mentioned loop and means to draw the loose end of the twine through said second loop when said end is released by the gripper.

2. In a knotter, the combination with a reciprocating needle to present a length of twine having a loose end, of a gripper to grip the end of the twine when the needle is lowered whereby a length of twine is drawn off during the upward movement of the needle, an oscillatory, reciprocatory looper to engage the length of twine and form a loop therein, said needle upon its next downward movement carrying a second loop through the first-mentioned loop, and means to draw the loose end of the twine through said second loop.

3. In a knotter, the combination with a gripper device to grip and hold momentarily the end of a length of twine leading from a source of supply, of a looper, means to reciprocate the looper to cause it to engage said twine at a distance from the end and draw the twine laterally to form a bend therein, means acting on the looper to turn it on its axis thereby to form a loop in the twine, means to insert a second loop through the first-mentioned loop, means to open the gripper device to release the loose end and means to draw said loose end through said second loop.

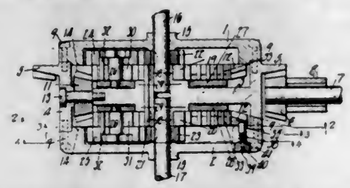
4. In a knotter, the combination with means to present a length of twine having a loose end, of a looper having a shank provided with one set of gear teeth extending longitudinally thereof and another set of gear teeth extending circumferentially thereof, a rack meshing with the first-mentioned teeth and adapted to rotate the looper on its axis, a pinion meshing with the circumferential teeth and adapted to move the looper longitudinally whereby said looper engages the length of twine and forms a loop therein, means to insert a second loop through the loop thus formed, and means to draw the loose end through said second loop.

5. In a knotter, the combination with a twine-carrying needle and means to vibrate it, of means to grip the end

of the twine carried by said needle and cause a length of twine to be drawn off therefrom as the needle is retracted, a looper, means to reciprocate said looper in a direction transverse to the direction of movement of the twine-carrying needle to cause it to engage the twine and draw it laterally and then to turn said looper on its axis to form a loop in said length, said needle-operating means causing the needle to insert a second loop through the loop thus formed, and means to draw the end of the twine through said second loop.

[Claims 6 to 11 not printed in the Gazette.]

1,193,709. DIFFERENTIAL GEARING. WILLIAM MENNIE, Detroit, Mich., assignor of forty-nine one-hundredths to Carl A. Fettig, Detroit, Mich. Filed May 13, 1915. Serial No. 27,743. (Cl. 74—34.)



1. A differential construction comprising in combination with alined sections of a divided shaft, supporting means rotatable about the axis of the divided shaft, a differential pinion carried by the supporting means, opposed gears driven by the differential pinion, a pair of gears, one secured to each of the shaft sections, and planetary gearing interposed between each of the opposed gears and the corresponding member of the last mentioned pair of gears.

2. A differential construction comprising in combination with alined sections of a divided shaft, a casing, means for causing the casing to turn about the axis of the divided shaft, differential pinions carried by the casing and mounted to turn about axes radial in respect to the axis of the divided shaft, gears with which the pinions are in mesh, a pair of gears, one secured to each of the shaft sections, and planetary gearing interposed between each of the first mentioned gears and the corresponding member of the last mentioned pair of gears.

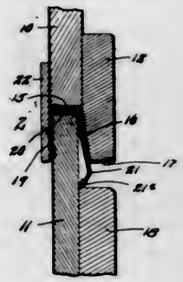
3. A differential construction comprising in combination with alined sections of a divided shaft, supporting means rotatable about the axis of the divided shaft, a differential pinion carried by the supporting means, opposed gears driven by the differential pinion, a second pair of gears rigid with the supporting member, a third pair of gears, one interposed between each of the opposed gears and the corresponding gear secured to the supporting member, said last mentioned pair of gears being capable of traveling in circular paths about the axis of the divided shaft, a fourth pair of gears, one secured to each of the sections of the shaft, and means for causing the third pair of gears to turn the fourth pair of gears.

4. A differential construction comprising in combination with alined sections of a divided shaft, a casing, means for causing the casing to turn about the axis of the divided shaft, differential pinions carried by the casing and mounted to turn about axes radial in respect to the axis of the divided shaft, gears with which the pinions are in mesh, a second pair of gears with which the pinions are, respectively, in mesh, said second pair of gears being mounted for movement in circular paths about the axis of the divided shaft, a third pair of gears rigid with the casing, the members of the third pair being in mesh, respectively, with the members of the second pair, a fourth pair of gears, one secured to each of the shaft sections, and a fifth pair of gears rigidly connected with the corresponding members of the second pair and being in mesh with the corresponding members of the fourth pair.

5. A differential construction comprising in combination with alined sections of a divided shaft, supporting means rotatable about the axis of the divided shaft, a differential pinion carried by the supporting means, opposed gears driven by the differential pinion, a pair of gears, one secured to each of the shaft sections, planetary gearing interposed between each of the opposed gears and the corresponding member of the last mentioned pair of gears, and means for locking one of the gears to the supporting means.

[Claims 6 to 9 not printed in the Gazette.]

1,193,710. TRUNK OR BOX. HARRY B. MORGAN, St. Louis, Mo., assignor to Groover Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed July 19, 1915. Serial No. 40,609. (Cl. 217—56.)



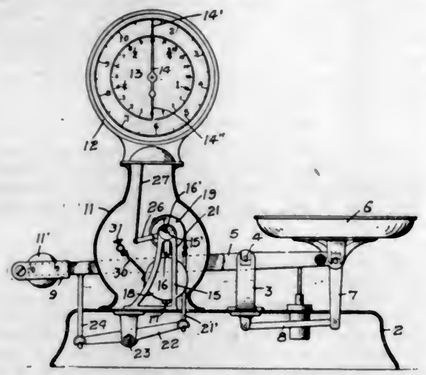
1. The combination with a pair of walls, the edges of which are adapted to meet, of a strip of metal applied to one of the meeting edges, said strip being of substantial Z-shape in cross section, the central portion of said strip being resilient and curved outwardly with respect to the face of the part to which it is applied, and a metal strip applied to the other edge, which last mentioned strip is substantially U-shape in cross section with one of its legs yielding with respect to the part to which said strip is applied.

2. The combination with a container having a pair of walls, the edges of which are adapted to meet and said meeting edges being provided with corresponding shoulders, of a metal strip applied to one of the shouldered edges, said strip being substantially Z-shape in cross section, and a metal strip applied to the projecting portion of the other shouldered edge, which last mentioned strip is substantially U-shape in cross section and one of the legs of said strip being free at one end so as to yieldingly engage a portion of the strip on the other shouldered edge when the two edges are brought together.

1,193,711. SCALE. NILS NILSON, Wayzata, Minn. Filed Aug. 7, 1911. Serial No. 642,808. (Cl. 75—29.)

1. A scale comprising a graduated beam having a pivot and a scale platform, a dial having groups of graduations thereon and an indicator hand therefor, a weighted rocking device connected with said indicator, flexible means connecting said rocking device with said beam, a poise for said beam, and a suitable counter-balance for said platform, said indicator moving over one group of graduations when the load on said platform exceeds a predetermined weight indicating approximately the adjustment of the poise on said beam, said indicator moving over the other group of graduations when the poise has been adjusted on said beam to indicate the weight of the load in ounces and fractions thereof, plus the weight balanced by the adjustment of said poise and means for augmenting the rate of increasing resistance to the movement of said rocking device at a predetermined point in its travel.

2. A scale comprising a beam having pivots, a scale pan supported on said beam on one side of said pivots, a dial having an inner and outer circle of graduations, an indicator hand therefor, an oscillating yoke having bearings, weights carried by said yoke, a wheel having bearings in said yoke, a weight carried by said wheel, flexible means connecting said wheel with said beam, means operatively connecting said wheel with said indicator hand, the weight of a comparatively light article on said pan oscillating said wheel and weight to move said indicator hand, and means in the path of said wheel weight and connected with said yoke weights for oscillating them also to balance a heavier load on the scale pan.



3. A scale comprising a beam having a pivot and scale pan, a dial having groups of graduations thereon, an indicator for said dial, means operatively connecting said indicator hand with said beam, a poise for said beam and a counter-balance for said pan, said indicator moving over one group of graduations when the load on the pan exceeds a predetermined weight indicating approximately the proper adjustment of the poise of said beam, said indicator moving over the other group of graduations when the poise has been adjusted on the beam to indicate the weight of the load plus the weight balanced by the adjustment of said poise and means for augmenting the rate of increasing resistance to the movement of said rocking device at a predetermined point in its travel.

4. A scale comprising a beam and a scale pan, a dial having graduations representing fractions of ounces, and also a graduation representing pounds, an indicator movable back and forth over said graduations, a rocking wheel connected with said indicator, a weight carried by said wheel, flexible means connecting said wheel with said beam, a poise for said beam and a counter balance for said pan, said indicator moving over said pound graduations when the load on the pan exceeds a predetermined weight, indicating approximately the adjustment of the poise of said beam, said indicator moving over said ounce graduations when the poise has been adjusted on the beam to indicate the weight of the load in ounces and fractions thereof, plus the weight balanced by the adjustment of the poise.

5. In a scale, upright standards, a yoke having knife edged pivots thereon, weights carried by said yoke, a wheel having knife edged pivots in said yoke concentric with the pivots of said yoke in said standards, a weight carried by said wheel, means connected with said wheel for attachment to the scale beam and means in the path of said wheel weight for oscillating said yoke weights at a predetermined point.

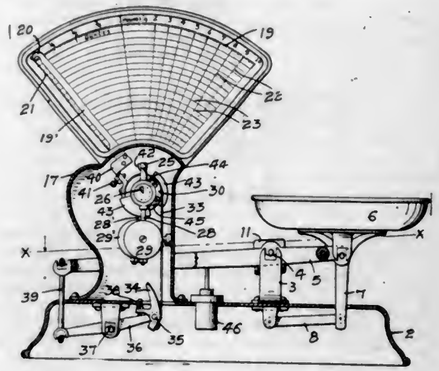
[Claims 6 to 13 not printed in the Gazette.]

1,193,712. SCALE. NILS NILSON, Wayzata, Minn. Filed July 1, 1912. Serial No. 707,011. (Cl. 73—104.)

1. A scale comprising a pivoted beam and a scale pan, a pivoted disk, means connecting said disk with said beam, a dial, an indicator hand mounted on said disk and movable over the face of said dial, a poise for said disk, and weights mounted concentrically with respect to said disk and rotatably adjustable independently of one another in planes parallel substantially with the plane of said disk.

2. A scale comprising a pivoted beam and a scale pan, a rocking disk, means connecting said disk with said beam, an indicator hand mounted on said disk, a dial over which said indicator hand is movable, a poise for said disk, supplemental weights mounted for independent movement around the axis of said disk, and adjusting devices for moving one weight independently of the other weight.

3. A scale comprising a beam having a pivot and a scale pan, a member having a hub and pivots therefor and a balance weight carried by said member, means connecting said member with said beam, a graduated dial, an indicator hand mounted on said member and movable over the face of said dial, supplemental weights having means for clamping said hub and mounted for rotary adjustment thereon independently of one another and of said member, for the purpose specified.

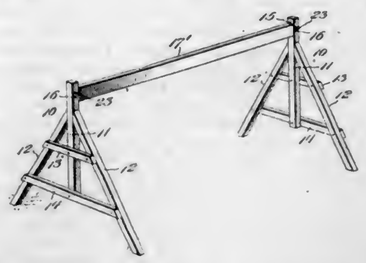


4. A scale comprising a beam having a pivot and a scale pan, a pivoted disk, an indicator hand mounted thereon, a dial over which said indicator hand is movable, a ribbon secured to the face of said disk, a tilting member having a cam surface whereto said ribbon is secured, a lever device connecting said tilting member with said beam, and a weight carried by said disk.

5. A scale comprising a pivoted beam, a rocking disk, a graduated dial, an indicator hand mounted on said disk and movable over the face of said dial, a weight carried by said disk, flexible means secured to the periphery of said disk, a pivoted cam whereto said flexible means is secured, a lever supporting said cam, and a link connecting said lever with said scale beam.

[Claims 6 to 11 not printed in the Gazette.]

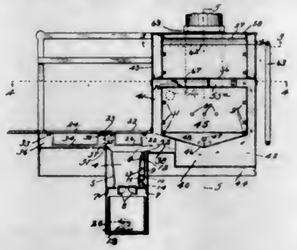
1,193,713. SHOCK-HOLDER. HERMAN OLSON, Conroy, Iowa. Filed Aug. 19, 1912. Serial No. 715,933. (Cl. 56—5.)



A shock holder comprising two similar posts, two divergently held supporting legs secured to each post, each post near its upper end having a socket extending length-

wise with a flat bottom, said sockets being oppositely positioned, a pin within each post passing through a socket, a rail, a flat beak hook extending centrally from each end of said rail, each hook fitting into one of said sockets, each hook having a concave edge arranged to engage one of said pins, the outer edge of each hook being straight to engage the flat bottom of a socket whereby the ends of said rail are anchored to said posts, and a removable pin passing through the walls of a socket and the beak of a hook, as, and in the manner set forth.

1,193,714. COMBINED GAS AND COAL RANGE. MORTIMER L. PACKER, Columbus, Ohio. Filed July 31, 1911. Serial No. 641,505. (Cl. 126—36.)



1. A combined gas and coal range comprising a solid fuel heating means, a gas heating means, an oven arranged in superposed relation and laterally disposed with respect to said first named means, a casing surrounding said oven to form a space for the circulation of the heat products from said solid fuel means, an outlet flue pipe communicating with the space formed by said casing adjacent the top of said oven, a damping structure operable when in one position to allow the heat products to pass into said pipe by a passage up one side of said oven and when in the other position, up the other side of said oven, and a baffle plate on the top of said oven extending forwardly from the rear thereof between the flue outlet opening and the last-named passageway to force the products toward the front of the top of said oven.

2. A combined gas and coal range comprising a solid fuel heating means, an oven, a casing surrounding said oven to form a space for the circulation of the heat products from said means, a gas heating means within said oven, an outlet flue pipe connected to carry away the products from either of said means, and a single damper operable when in one position to break the communication of said gas heating means with said flue when the products from said solid fuel heating means are forced entirely around the space formed by said casing and when in the other position to permit a direct flow from the solid fuel heating means into said flue.

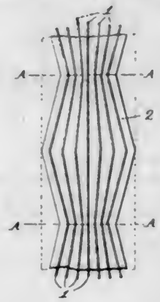
3. A combined gas and coal range comprising a solid fuel heating means, an oven, a casing surrounding said oven to form a space for the circulation of the heat products from said means, a gas heating means within said oven, an outlet flue pipe connected to carry away the products from either of said means, a damping device operable when in one position to break the communication of said gas heating means with said flue when the products from said solid fuel heating means are forced entirely around the space formed by said casing and when in the other position to permit a direct flow from the solid fuel heating means into said flue, and a single throw lever for effecting the movements of said device.

4. A combined gas and coal range comprising a solid fuel heating means, superposed ovens, said ovens being out of communication with each other, an outlet flue pipe communicating with both of said ovens and being also arranged to carry away the products of combustion from said solid fuel heating means, and a gas heating means within each of said ovens.

5. A combined gas and coal range comprising a solid fuel heating means, an oven, a casing surrounding said oven to form a space for the circulation of the heat products from said means, a gas heating means within said oven, an outlet flue pipe connected to be in communication with the interior of said oven and also with the space formed by said casing, and a damper located at the top of said oven in the space formed by said casing and extending into said pipe to break the communication of said pipe with the interior of said oven when desired, said damper being also arranged when in one position to permit a direct flow from said solid fuel heating means to said pipe and when in the other position to deflect the products of combustion completely around said oven.

[Claim 6 not printed in the Gazette.]

1,193,715. FABRIC FOR TIRES AND THE LIKE. RAYMOND B. PRICE, Mishawaka, Ind., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Jan. 3, 1912. Serial No. 669,210. (Cl. 154—52.)



1. A fabric for tires and the like embodying therein a plurality of independent adjacent and non-intersecting strands, or threads, or groups thereof, of a length to extend lengthwise about a tire or other annular body, transversely thereof, and converging toward their opposite ends, whereby when applied to a tire or other annular body each will extend in the plane of a radius of said tire or other annular body.

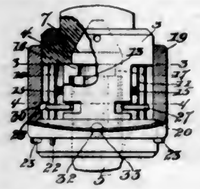
2. A fabric for tires and the like embodying therein a plurality of independent sections, each of a length to extend lengthwise about a tire or other annular body, transversely thereof, each section having therein a plurality of independent strands or threads extending lengthwise thereof and converging toward their opposite ends whereby when applied to a tire or other annular body each will extend in the plane of a radius of said tire or other annular body.

3. A fabric for tires and the like embodying therein a vulcanizable plastic base of a length to extend lengthwise about a tire or other tubular annular body, transversely thereof, and a plurality of independent strands or threads embedded in said plastic base and extending longitudinally thereof, said strands or threads converging toward opposite ends thereof whereby each strand or thread, when said base is applied to a tire or other annular body, will lie in the plane of a radius of said tire or other annular body.

1,193,716. CHUCK. JAMES B. PURSSELL, Boston, Mass., assignor to Clarence V. Purssell, Wynnevie M. Purssell, and Roger Wynne Purssell, Boston, Mass. Filed Aug. 13, 1915. Serial No. 45,338. (Cl. 145—75.)

1. A ratchet structure, having, in combination, a driving chuck having a body with a tool receiving chamber and longitudinal pockets communicating with said chamber, means in said pockets for rotating the inserted tool in either direction or for holding it against rotation in the chuck, and for automatically locking the tool against withdrawal, and mechanism for changing and controlling said means.

2. A ratchet structure, having, in combination, a driving, chuck-body axially chambered to receive a rotatably fitting tool, and having side openings extending to said chambers, tumblers longitudinally pivoted in the openings of said body and automatically operative to tangentially abut an inserted, removable tool, and means mounted on said body for controlling the position of the tumblers to automatically lock the tool against withdrawal when inserted and for rotating the inserted tool in either direction, and for unlocking the tool to permit its withdrawal.



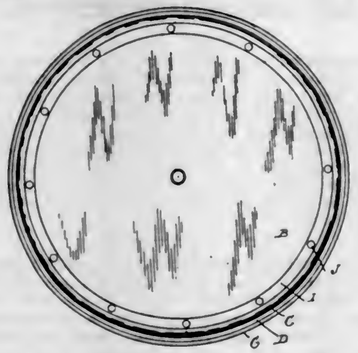
3. A ratchet tool, having, in combination, a driving stock with a chuck body, a tool insertible and rotatively fitting the chuck, tumblers pivoted in said body with their axes parallel the axis of said tool and having locking engagement with the inserted tool to prevent its withdrawal and also operative to tangentially abut said tool to rotate it in either direction, and a manually adjustable device mounted on the chuck body and operative to actuate said tumblers and control their locking and driving positions as to the tool.

4. A ratchet tool, having, in combination, a driving stock with a chuck body having side openings, tumblers, one pivoted in each of said openings and operating automatically toward each other to engage a tool insertible in the chuck, from tangentially opposite directions, said tumblers having shoulders operative to lock the inserted tool against withdrawal, and a sleeve rotative on the chuck body and having a cam-face engageable with said tumblers for positioning them to jointly or severally abut, or to unlock the inserted tool.

5. A chuck comprising a body part chambered to receive a removable, interchangeable tool, ratchet tumblers mounted in said body for rotating the inserted tool in either direction or for holding it against rotation in the chuck, and for automatically locking the tool against withdrawal, and means for changing and controlling the position of the tumblers.

[Claims 6 to 10 not printed in the Gazette.]

1,193,717. WHEEL. ALDEN L. PUTNAM, Detroit, Mich., assignor to Detroit Pressed Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 31, 1916. Serial No. 87,953. (Cl. 21—69.)



1. A wheel, comprising complementary dished disks, each provided with an inwardly-extending threaded hub, a threaded coupling sleeve with which said hubs are engaged by a relative rotation of the disks, and means for normally locking said disks from relative rotation.

2. A vehicle wheel, comprising complementary dished disks having inwardly-extending threaded hubs, a threaded coupling sleeve for engaging said hubs, a tire, and peripheral flanges oh said disks forming a seat and securing means for said tire, being adjusted toward each other by a relative rotation of said disks to screw said hubs into engagement with said coupling sleeve.

3. A vehicle wheel, comprising a pair of complementary dished disks, each provided with an inwardly-extending threaded hub and a peripheral flange for seating and clamping the tire, a threaded coupling sleeve for engaging said threaded hubs by a relative rotation of said disks and a series of clamping bolts adjacent to the periphery of said disks for clamping said tire and holding the disks from relative rotation.

4. A vehicle wheel, comprising a pair of complementary dished disks, each provided with an inwardly-extending externally-threaded and interiorly bushed hub, an internally-threaded coupling sleeve for engagement with said hubs by a relative rotation of said disks, and tire-clamping means at the periphery of said disks.

5. In a vehicle wheel, the combination of a pair of complementary dished disks, each provided with an inwardly-extending threaded hub, a laterally-extending peripheral flange terminating in an outwardly-extending flange and having a series of apertures in the portion adjacent to said laterally-extending flange, a threaded coupling sleeve engageable with said hubs by a relative rotation of said disks, a tire seated on said laterally-extending flanges and clamped between said outwardly-extending flanges upon the relative rotation of said disks to screw the hubs into said sleeve, and clamping bolts passing through registering apertures in said disks for holding the same from relative rotation and additionally clamping said tire.

1,193,718. INTERLOCK. GUSTAVE B. REISBACH, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 13, 1911. Serial No. 626,947. (Cl. 175—281.)



1. In combination, a plurality of separately movable members, a locking device for each of said members including a part fixed to the latter and a coöperating movable part and interconnected oscillatable shafts operatively connecting said movable parts of said locking devices, each of said movable parts having locking and releasing positions corresponding to certain angular positions of said shafts and certain of said parts being normally positioned to lock their respective members and another to release its respective member, said members in turn acting to move certain and restrain other of said

movable parts to interlock said members against simultaneous operation.

2. In combination, a plurality of separately movable members, a locking device for each of said members including a part fixed to the latter and a coöperating movable part, and oscillatable means operatively connecting said movable parts of said devices, said movable parts having locking and releasing positions corresponding to certain angular positions of said oscillatable means and being arranged to normally occupy different relative positions, said devices each functioning upon movement of its respective member to restrain said oscillatable means in a predetermined angular position corresponding to the locking position of the movable part of the other of said devices.

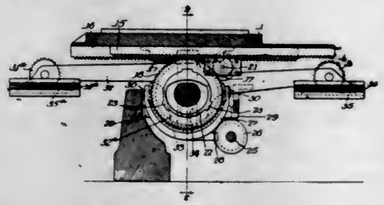
3. In combination, two separately movable members, a locking device for each including a part fixed thereto and a coöperating movable part and interconnecting means for said movable parts of said devices including an oscillatable shaft, said movable parts of said locking devices having locking and releasing positions corresponding to predetermined angular positions of said shaft and normally occupying positions intermediate their locking and releasing positions for actuation of each by its respective member when moved, said connecting means functioning upon such actuation of either of said movable parts to move the other to locking position.

4. In combination, a plurality of separately movable members, a locking device for each of said members including a part fixed to the latter and a coöperating movable part, and oscillatable means operatively connecting said movable parts of said devices, the movable parts of certain of said locking devices being normally positioned to lock their respective members while the movable part of another of said devices is normally positioned to release its respective member and each of said devices upon movement of its respective member functioning through said means and the movable parts of the other devices to lock all other of said members.

5. In combination, a plurality of separately movable members, a locking device for each of said members including a part fixed to the latter and a coöperating movable part and oscillatable means operatively connecting said movable parts of said devices, the movable part of one of said devices being positioned to release its respective member when the movable part of other of said devices are positioned to lock their respective members, said former device upon movement of its respective member functioning through said means to restrain said latter devices in locking position and each of said latter devices upon movement of its respective member functioning through said means to effect locking action of all other of said devices.

[Claims 6 to 8 not printed in the Gazette.]

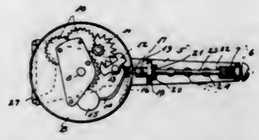
1,193,719. BED-MOTION FOR PRINTING-PRESSES. CHARLES J. ROBERTSON, Taunton, Mass., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1914. Serial No. 827,040. (Cl. 74—98.)



1. In a printing press, the combination of a bed, a downfacing rack for each direction of bed travel disposed at different clearance levels, a bed reciprocating gear for one direction, a bed reciprocating pinion oppositely rotated and eccentric to and geared with said bed reciprocating gear for the other direction, a connection between the gear and pinion coupling the same together against relative axial displacement, means to slide axially the gear and pinion to and fro together bodily as one, and bed reversing means, substantially as described.

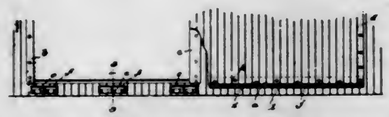
2. In a printing press, the combination of a bed, a down-facing rack for each direction of bed travel disposed at different clearance levels, a bed reciprocating gear for one direction and having a peripheral groove, a bed reciprocating pinion, oppositely rotated and eccentric to and geared with said bed reciprocating gear for the other direction, a disk fastened to the pinion and projecting peripherally therefrom into said groove, means to slide axially the gear and pinion to and fro together bodily as one, and bed reversing means, substantially as described.

1,193,720. AUTOMATIC FIRE-ALARM MECHANISM. JULIUS J. RUBENS, Aurora, Ill. Filed Dec. 11, 1915. Serial No. 66,349. (Cl. 116—11.)



In an automatic fire alarm device, the combination of a supporting base having one end turned at right angles thereto and an abutment screw threading through said end, a spring wound alarm bell secured at the other end of said base, a detent tongue within the bell and a spring tending to hold said tongue away from the alarm mechanism to permit sounding of the bell, an intermediate extension from said base and a bar slidable therein and extended into the bell in engagement with said spring actuated detent tongue, and a length of fusible material inserted between said abutment screw and bar and adapted when said screw is adjusted to press said bar against the detent tongue to cause said tongue to lock the alarm mechanism against actuation, fusing of said length releasing said bar to allow the tongue to release the alarm mechanism.

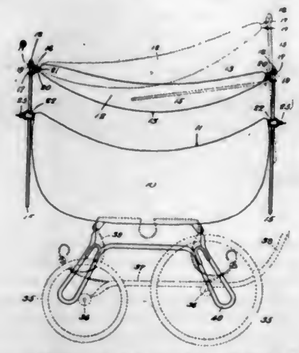
1,193,721. CAR-DOOR. JAMES W. RUMSEY, West Berkeley, Cal., assignor to Rumsey Car-Door and Equipment Company, a Corporation of Illinois. Filed Oct. 29, 1913. Serial No. 798,017. (Cl. 20—25.)



In combination with a car body, of a horizontally sliding door provided at its lower edge with an outwardly extending metal flange whose outer edge is formed into a cam, and a plurality of guide brackets fastened to the car body and having lugs extending upwardly in front of said cam, said cam being formed by inclining its outer or cam face from the ends of the flange toward its middle, said brackets being so located that one of them engages the middle of said cam when the door is closed, for the purpose set forth.

1,193,722. CHILD'S BASSINET AND CANOPY THEREFOR. OTTO W. SIEBERT and ORA N. TURNER, Templeton, Mass.; said Turner assignor to Bay State Metal Wheel Company, Templeton, Mass., a Corporation of Maine. Filed June 16, 1915. Serial No. 34,372. (Cl. 5—14.)

1. In combination, a bassinet and canopy therefor, a pair of rod-supporting devices fastened to the ends, respectively, of said bassinet, a pair of canopy-supporting rods engaging said devices respectively, and hinges connecting said rods respectively with the ends of said canopy, the axes of said hinges extending transversely of the canopy, each of said rod-supporting devices comprising a fixture, and swiveled clamping means arranged to clamp such fixture and rod conjointly, said rods being adjustable endwise with relation to said clamping means, and the latter being adjustable to enable said rods to tilt forward and back, and from side to side, relatively to said bassinet.



2. In combination, a bassinet and canopy having conforming rims, a pair of rod-supporting devices fastened to the ends, respectively, of said bassinet, a pair of canopy-supporting rods engaging said devices respectively, and hinges connecting said rods respectively with the ends of said canopy, the axis of said hinges extending transversely of the canopy, each of said rod-supporting devices comprising a fixture, and swiveled clamping means arranged to clamp said fixture and rod conjointly, said rods being adjustable endwise with relation to said clamping means to enable the rim of said canopy to lie in substantially contiguous relation to the rim of said bassinet, and to enable said canopy to be raised, each said clamping means being adjustable relatively to its said fixture to enable said rods to tilt forward and back, and from side to side, relatively to said bassinet.

1,193,723. CORNER CONSTRUCTION FOR BURIAL-CASES. PATRICK D. SKAHEN, Syracuse, N. Y. Original application filed Feb. 20, 1907, Serial No. 358,497. Divided and this application filed July 25, 1912. Serial No. 711,457. (Cl. 27—7.)

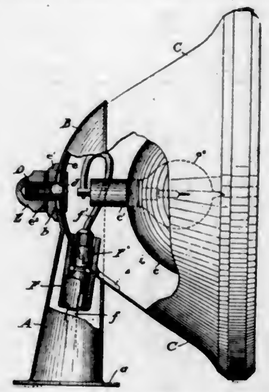


1. A burial case having each of the meeting ends of two of its walls provided with an external groove, the grooves being reversely-arranged, and a hollow corner post formed of sheet metal and having an intermediate body portion and lengthwise marginal flanges, the latter being interlocked in the grooves, the body portion of the hollow corner post between the bases of the flanges being bowed outwardly and engaging with the end edges of said two walls near the median line of the corner post, substantially as and for the purpose specified.

2. A burial case having each of the meeting ends of two of its walls provided with an external groove, the grooves being reversely-arranged, and a hollow corner post formed of sheet metal and having an intermediate body portion and lengthwise marginal flanges, the latter being interlocked in the grooves, the body portion of the hollow corner post between the bases of the flanges being bowed outwardly and engaging with the end edges of said two walls on opposite sides of the median line of said post for holding the side walls connected by the post from endwise movement, substantially as and for the purpose set forth.

3. A burial case having each of the contiguous edges of two of its walls provided with an external groove, said grooves being reversely-arranged and said walls engaging each other along their contiguous edges, and a hollow corner post having an intermediate body portion and lengthwise marginal flanges, the latter being interlocked in the grooves, the body portion between the flanges being bowed outwardly and spaced apart from said walls, and engaging the end edges of said walls between the flanges of the corner post for holding the walls connected by the corner posts engaged with each other and from endwise movement, substantially as and for the purpose described.

1,193,724. LAMP SUPPORT AND REFLECTOR. OWEN RAY SKELTON, Detroit, Mich., assignor to The Studebaker Corporation, a Corporation of New Jersey. Filed Feb. 29, 1916. Serial No. 81,089. (Cl. 240—41.)



1. A device of the class described embodying a standard provided with a concave portion having an aperture, a lamp housing shaped to conform to and engage with the concave portion of the standard and provided with a threaded stem extending through the aperture in said portion, said aperture being larger than the stem whereby the housing may be oscillated about the center of curvature of the concave portion, while in engagement with said portion, and a threaded member coöperating with the stem for locking the housing against such movement.

2. A device of the class described embodying a supporting member adapted to be mounted in fixed position and provided with a concave portion, a lamp housing shaped to conform to and engage with the concave portion of the supporting member whereby the housing may be oscillated about the center of curvature of the concave portion while in face engagement therewith, and means for clamping the housing and concave portion together in face engagement to preclude such oscillation.

3. A device of the class described embodying a supporting member adapted to be mounted in fixed position and provided with a concave portion, a lamp housing shaped to conform to and engage with the concave portion of the supporting member whereby the housing may be oscillated about the center of curvature of the concave portion while in engagement therewith, and means for locking the housing against relative movement to the concave portion, with the concave and convex faces of the respective parts in engagement with one another.

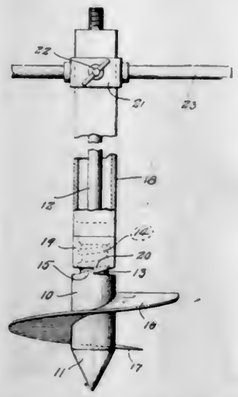
4. A device of the class described embodying a lamp housing, a portion of which is convex, which housing is provided interiorly with a reflector and a lamp mounted in fixed position relative thereto, in combination with a

fixed support provided with a concave portion complementary to the convex portion of the housing, and means for normally locking the housing to the support against relative movement, with their complementarily shaped portions in engagement with one another, said means being operable to allow of angular adjustment of the lamp housing.

5. A device of the class described embodying a fixed support having a concave portion provided with an aperture, a lamp housing shaped to conform to said concave portion and seated therein, with the concave and convex faces of the respective parts in engagement with one another, a bolt passing through an aperture in the housing and extending through the aperture in the concave portion, and a nut on said bolt for locking the lamp housing against movement on its support.

[Claims 6 to 8 not printed in the Gazette.]

1,193,725. GUY-ANCHOR. MARTIN P. SMITH, St. Louis, Mo., assignor to W. N. Matthews & Brother, Inc., St. Louis, Mo., a Corporation of New Mexico. Filed June 24, 1915. Serial No. 36,138. (Cl. 189—91.)

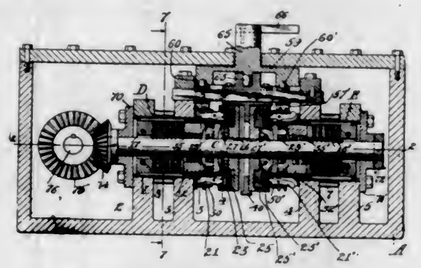


The combination with a ground anchor comprising a pointed body, a spiral flange integral therewith, a threaded shank integral with and projecting upwardly from said body, lugs in the top of said shank and an anchor rod rigidly fixed to said body, of an anchor sinking device comprising a tubular member adapted to inclose the anchor rod the lower end of which tubular member is threaded for engagement with the threaded shank on the anchor body, whereby the anchor and sinking device may be locked to each other against relative longitudinal movement and lugs depending from the lower end of the tubular member and adapted to engage the lugs on the upper end of the shank for limiting the rotary movement of the tubular member with respect to the pointed body when said parts are brought into assembled relation.

1,193,726. DRIVING AND REVERSING MECHANISM. FREDERICK SNOW, Chicago, Ill., assignor, by mesne assignments, to Allen Conkling, Chicago, Ill. Filed Sept. 6, 1910. Serial No. 580,605. Renewed Mar. 23, 1916. Serial No. 86,276. (Cl. 192—10.)

1. A driving and reversing mechanism, comprising a shaft to be driven, in combination with oppositely driven clutch members thereon, means longitudinally movable on said shaft and rotatable therewith for engaging said members with said shaft, radially movable members carried by said oppositely driven clutch members and rotated therewith for engagement with said longitudinally movable means, and other means controlling said radially movable members for alternately engaging said clutch members with said shaft.

2. A driving and reversing mechanism comprising a shaft to be driven, in combination with oppositely rotated clutch parts thereon, independent means longitudinally movable independently on said shaft and rotatable therewith for frictionally engaging each of said clutch parts with said shaft, and means whereby said independent means are controlled to alternately engage said clutch parts with said shaft.



3. A driving and reversing mechanism comprising a shaft to be driven, in combination with oppositely rotated clutch members thereon, means longitudinally movable on said shaft and rotatable therewith for independently engaging said clutch members with said shaft and capable of being moved longitudinally of the shaft independently of each other, and other means controlling said engagement means, whereby one only of said clutch members can be engaged at one time.

4. In a driving and reversing mechanism, a shaft, in combination with opposite direction clutch members rotatable about said shaft, intermediate clutch members longitudinally movable on said shaft and rotatable therewith, means carried by said opposite direction clutch members and relatively movable thereto for engagement with said intermediate clutch members, and a cam controlling said engaging means for alternately engaging said clutch members with said relatively movable shaft.

5. In a driving and reversing mechanism a shaft to be rotatively reciprocated, in combination with clutch members revoluble about said shaft, intermediate clutch sleeves slidably fixed upon said shaft, clutch parts revoluble with said clutch members and movable in relation thereto for engagement with said clutch sleeves for causing frictional engagement between said clutch members and said shaft, and a cam controlling the engagement of said clutch parts with said sleeves.

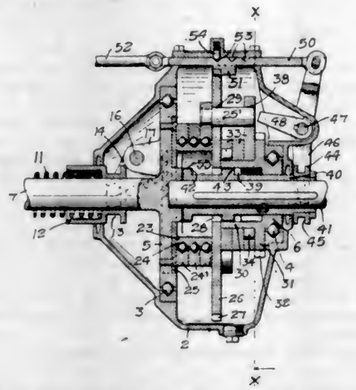
[Claims 6 to 22 not printed in the Gazette.]

1,193,727. VARIABLE-SPEED GEARING. EDWIN GUSTAVE STAUDE, Minneapolis, Minn., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn., a Corporation. Filed July 11, 1912. Serial No. 708,867. (Cl. 74—53.)

1. A variable speed gearing comprising a driving shaft, a driven shaft, independent disks having curved tangential slots therein and a driving connection with said driven shaft, pins fitting within said slots and operatively connected with said driving shaft and means for forcing said pins in said slots toward said driven shaft to increase their leverage thereon proportionately to the increase of the load on said driven shaft.

2. A variable speed gearing comprising a driving shaft, a driven shaft, independent disks having a clutch connection with said driven shaft, a power transmitting mechanism interposed between said disks and said driving shaft and operating to increase the leverage on said disks and driven shaft proportionately to the increase of the load on said driven shaft.

3. A variable speed gearing comprising a driving member, a driven member concentric therewith, an eccentric having a radial movement with respect to said members and interposed between them, means connecting said eccentric with said driving member and means connecting it with said driven member, said driving member connecting means operating to increase the degree of eccentricity of said eccentric and vary the leverage on said driven member proportionately to the load thereon.

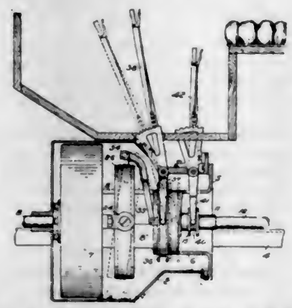


4. A variable speed gearing comprising a driving member, a driven member, an eccentric radially movable with respect to said members, sector gears having driving connections with said driving member and with said eccentric, and means operatively connecting said eccentric with said driven member, said eccentric moving radially and adjusting itself automatically to increase or decrease the leverage on said driven member.

5. A variable speed gearing comprising a driving shaft, a driven shaft coaxial therewith, an eccentric interposed between said shafts and radially movable with respect thereto, a spring for normally holding said eccentric at the limit of its eccentric position, means operatively connecting said eccentric with said driven shaft, said means including slotted disks and pins slidable therein and operated from said eccentric, said disks having clutch connections with said driven shaft and the leverage thereof increasing in proportion to the increase of load on said driven shaft.

[Claims 6 to 15 not printed in the Gazette.]

1,193,728. VARIABLE-SPEED GEARING. EDWIN GUSTAVE STAUDE, Minneapolis, Minn., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn., a Corporation. Filed Sept. 10, 1912. Serial No. 719,575. (Cl. 74—53.)



1. A variable speed gearing comprising a driving and a driven member, gears mounted concentrically with respect to said driving and driven members and adapted to revolve in opposite directions, means for operatively connecting said driven member with either of said gears, and a ratchet driving connection between said gears and said driving member.

2. A variable speed gearing comprising a driving and a driven member, gears mounted concentrically with respect to said members and revolving in opposite directions, means for operatively connecting said driven member with either one of said gears, a driving connection between said driving member and said gears, and means for connecting said driving member directly to said driven member.

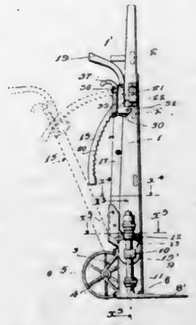
3. A variable speed gearing comprising a driving and a driven member, a gear having a driving connection with said driven member, a second gear meshing with said first named gear, oscillating means having a ratchet connection with said second gear, and means connecting said oscillating means with said driving member.

4. A variable speed gearing comprising a driving and a driven member, a gear operatively connected with said driven member, a second gear meshing with said first named gear, oscillating means having a clutch connection with said second gear, means connecting said oscillating means with said driving member and for varying the stroke of said oscillating means.

5. A variable speed gearing comprising a driving member and a driven member, a gear having a driving connection with said driven member, a second gear meshing with said first named gear, a clutch device provided in connection with said second named gear, and tilting means operatively connecting said clutch device with said driving member to revolve said second gear and through said first named gear to operate said driven shaft.

[Claims 6 to 13 not printed in the Gazette.]

1,193,729. HAND-TRUCK. FRED STEBLER, Riverside, Cal. Filed May 26, 1913. Serial No. 770,062. (Cl. 21—65.)



1. A truck comprising a frame and supporting wheels near one end constructed for transporting articles in a substantially vertical position of the frame, supporting members mounted on axes extending longitudinally of said frame and movable on said axes in a single plane transverse of the truck frame to support articles in front of the frame, and means for simultaneously operating said supporting members.

2. A truck comprising a frame provided with supporting wheels, clamp arms movably mounted on the respective sides of said frame to swing in a single plane disposed at a right angle to the longitudinal extension of the truck frame, inward and forward in front of the truck, and operating means movably mounted on the truck frame and connected to said clamp arms to operate the same simultaneously, said operating means having a pair of handles disposed below the upper ends of the frame whereby the truck may be conveniently moved with but very little tilting.

3. A truck comprising a frame provided with supporting wheels at its lower end, clamp arms having vertical axes mounted on the respective outer faces of said frame to swing inward and forward in front of the truck, in a

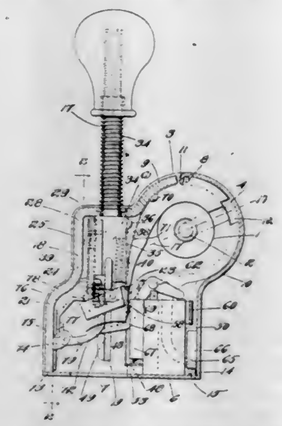
single plane transverse to the longitudinal extension of the truck frame, and operating means movably mounted on the truck frame and connected to said clamp arms to operate the same simultaneously, said operating means comprising a frame pivoted to the truck frame, and gearing connecting said operating frame to said clamp arms.

4. A truck comprising a frame having side bars and provided with supporting wheels at the lower end thereof, clamp arms pivotally mounted on the respective side bars of said frame to swing inward and forward in front of the truck in a plane at right angles thereto, and operating means movably mounted on the truck frame and connected to said clamp arms to operate the same simultaneously, said operating means comprising a frame pivoted to the truck frame, gearing connecting said operating frame to said clamp arms, and means for retaining said operating means in operated position.

5. A truck comprising a frame having side bars and provided with supporting wheels at the lower end thereof, clamp arms pivotally mounted on the respective side bars of said frame to swing inward and forward in front of the truck in a plane at right angles thereto, and operating means movably mounted on the truck frame and connected to said clamp arms to operate the same simultaneously, said operating means comprising a frame pivoted to the truck frame, gearing connecting said operating frame to said clamp arms, means for retaining said operating means in operated position, and means for releasing said retaining means.

[Claims 6 to 16 not printed in the Gazette.]

1,193,730. STAMP-AFFIXING MACHINE. FREDERICK W. STORCK, Somerville, Mass., assignor, by mesne assignments, to E. Charles Drouet, Somerville, Mass. Filed May 13, 1912. Serial No. 696,872. (Cl. 216—28.)



1. A vertically reciprocable plunger, a stamp strip container, reciprocable feed mechanism actuated by the plunger for feeding the strip in a vertical path parallel with the line of movement of the plunger, means for moistening a part of said parallel portion of the strip during said vertical movement, means for bending the advance moistened portion of the strip after it has been moistened, and means for severing and affixing the advance portion of the strip to an envelop or the like.

2. In a stamp affixing machine, a stamp strip container, a vertically reciprocable stamp strip feed blade which feeds the stamp strip in a vertical path parallel with the path of movement of the feed blade, means adjacent the path of movement of the said feed blade for moistening each stamp of the strip in succession while it is traveling in a vertical path parallel with the path of movement of the feed blade, means for severing the advance moistened stamp from the strip, and means for affixing the severed stamp to an envelop or the like.

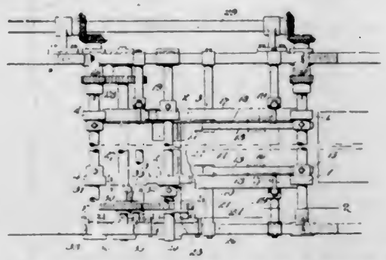
3. In a stamp affixing machine, a stamp strip container, a reciprocating feeding mechanism, means for bending the advance portion of the strip around said feeding mechanism, a stationary moistening device which is engaged by the strip during its feeding movement, thereby moistening a part of the strip, and a severing device for severing the advance portion from the strip.

4. In a stamp affixing machine, a stamp strip container, a reciprocable feeding mechanism which feeds the strip, means for bending the advance portion of the strip around the said feeding mechanism, means preventing the feeding mechanism from retrograde movement until its feeding stroke is completed, and a moistening device which engages the strip during its feeding movement thereby moistening a part of the strip.

5. In a stamp affixing machine, a stamp strip container, a reciprocable plunger, a reciprocable feeding mechanism adjacent to and traveling parallel to and with the plunger, means for preventing said reciprocable feeding mechanism from retrograde movement until the feeding stroke is completed, and means for severing the advance portion of the strip and affixing it to an article positioned to receive it.

[Claims 6 to 47 not printed in the Gazette.]

1,193,731. REGISTER DEVICE FOR FEEDERS. WARD B. STORY, New York, N. Y., assignor to Ward B. Story Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 12, 1912. Serial No. 683,330. (Cl. 101—38.)



1. A registering device having a roller, a moving gage, means for retarding the movement of the gage relatively to the roller, means for accelerating movement of the sheet and means for varying the amount of acceleration.

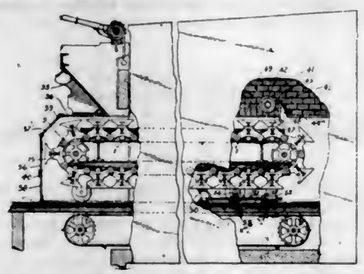
2. A registering device having means for feeding a sheet to a gage; a roller; a cam; connections between the cam and the roller, for accelerating or retarding the movement of the roller; and means for varying the period of retardation or acceleration while the feeding means are in operation.

3. A register device having a sheet roller, a movable gage, means for changing the relative movement of the gage and roller, and means for varying the speed of the roller, said means being adjustable while the roller is in operation.

4. A registering device having a sheet feeding roller; a movable gage; means for changing the relative movement of the gage and the feeding roller; a cam for accelerating or retarding the movement of the roller; and means for changing the position of the cam while the roller is in operation.

1,193,732. GRATE FOR BOILERS. HUBERT STRAETEN, Chicago, Ill., assignor to S. & S. Automatic Grate Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 29, 1913. Serial No. 809,180. (Cl. 110—40.)

1. In a device of the class described, an endless chain stoker, a pair of wheels around which said chain stoker is arranged, a boiler casing having recesses of unequal size with the smaller recess formed in a wall of the larger recess, lugs pivotally supported in the larger of said recesses and having projecting portions fitting in the smaller of said recesses.



2. In a device of the class described, an endless chain, wheels upon which said chain is supported, grate bars carried by said chain, a casing provided with a recess in its top wall, and a second smaller lateral recess in the side wall of said first mentioned recess, a rod mounted in the upper extremity of said first mentioned recess, a plurality of lugs within said first mentioned recess and pivotally depending from the rod, and laterally extending portions on said lugs adapted to project into the small lateral recess.

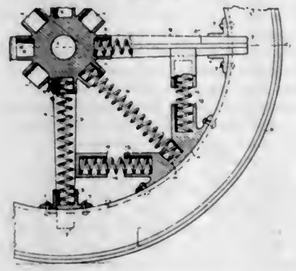
3. The combination of a chain grate stoker comprising grate bars supported upon endless chains, the boiler casing being recessed, lugs pivotally supported in said recess, and an ear upon each lug, said boiler casing being provided with a second recess adapted to receive said ears.

4. In a device of the class described, an endless chain stoker, a casing inclosing said stoker and having two recesses, one of which is smaller than and is formed in the walls of the other, lugs pivotally supported in the larger recess, and ears on said lugs projecting into the smaller recess.

5. The combination of an endless chain stoker, a pair of wheels over which said chain is adapted to travel, a plurality of pivotally-supported lugs adapted to come closely to the grates, said lugs being disposed intermediate the axes of said wheels and normally lying in substantially vertical planes, the boiler casing being recessed to receive said lugs, means upon which said lugs are pivotally mounted, and a cooling pipe disposed adjacent said lugs, said pipe forming part of the wall of the recess within which said lugs are received, thereby to permit said lugs to engage said pipe.

[Claims 6 and 7 not printed in the Gazette.]

1,193,733. RESILIENT WHEEL. BRUCE WILLIAM STRINGFELLOW, Elkwood, Va., assignor of one-fortieth to Severn M. Nottingham, Culpeper, Va., and one-fortieth to Ogle R. Singleton, Washington, D. C. Filed Dec. 14, 1915. Serial No. 66,728. (Cl. 152—28.)



1. A wheel, having a hub, radial spokes integral therewith and provided with forked ends, a rim carried between the sides of the forked ends by resilient connections directly with the hub, within the spokes, resilient connections bearing upon the rim at one end and directly upon the hub at the other end, such connections alternating with the connections within the spokes, and a single resilient connection between each side of each spoke and the rim.

2. A wheel, having a hub, radial spokes integral therewith and provided with forked ends, a rim carried between the sides of the forked ends by resilient connections directly with the hub, within the spokes, resilient connections bearing upon the rim at one end and directly upon the hub at the other end, such connections alternating with the connections within the spokes, and a single resilient connection between each side of each spoke and the rim, such connections being adapted at right angles to the line of each spoke.

3. The combination in a spring wheel of a hub, radial spokes integral therewith provided with forked ends, a rim provided with a felly, passing through the forked ends of the spokes and seated upon helical springs within the spokes bearing upon the hub, and provided with bearing plates, interposed between the spokes, having helical springs bearing upon the hub and helical springs bearing against the sides of the spokes.

1,193,734. RECOVERY OF NICKEL FROM ITS ORES. HENRY LIVINGSTONE SULMAN and HUGH FITZALIS KIRKPATRICK PICARD, London, England, assignors to The Madagascar Minerals Syndicate Limited, London, England. Filed Feb. 18, 1914. Serial No. 819,535. (Cl. 75—18.)



1. The herein described process comprising precipitating nickel from a solution of nickel and other sulfates, obtained by treating nickel silicate ores containing magnesium with sulfuric acid, crystallizing out a quantity of magnesium sulfate from the super-natant liquor, converting the magnesium sulfate into magnesium chlorid and a soluble sulfid, dissolving the magnesium chlorid and the sulfid products in water, and adding the solution thus obtained to a fresh quantity of the solution of mixed sulfates, for the purpose described.

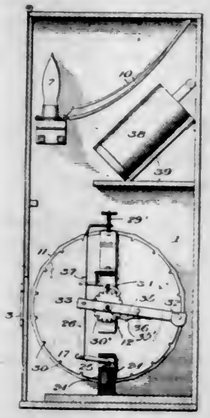
2. The herein described process comprising precipitating nickel from a solution of nickel and other sulfates, obtained by treating nickel silicate ores containing magnesium with sulfuric acid, crystallizing out a quantity of magnesium sulfate from the super-natant liquor, converting the magnesium sulfate into magnesium chlorid and a soluble sulfid, by means of a suitable chlorid and carbor, dissolving the magnesium chlorid and the sulfid products in water, and adding the solution thus obtained to a fresh quantity of the solution of mixed sulfates, for the purpose described.

3. The herein described process comprising precipitating nickel from a solution of nickel and other sulfates, obtained by treating nickel silicate ores containing magnesium with sulfuric acid, by the addition thereto of a soluble sulfid, crystallizing out a quantity of magnesium sulfate from the super-natant liquor, converting the magnesium sulfate into magnesium chlorid and a soluble sulfid, by means of a suitable chlorid and carbon, dissolving the magnesium chlorid and the sulfid products in water, and adding the solution thus obtained to a fresh quantity of the solution of mixed sulfates, for the purpose described.

4. The herein described process comprising precipitating nickel from a solution of nickel and other sulfates, obtained by treating nickel silicate ores containing magnesium with sulfuric acid, crystallizing out a quantity of magnesium sulfate from the super-natant liquor, heating the separated magnesium sulfate with a chlorid, adding carbon and further heating the mixture to produce magnesium chlorid and a soluble sulfid, dissolving the magnesium chlorid and the sulfid products in water, and adding the solution thus obtained to a fresh quantity of the solution of mixed sulfates, for the purpose described.

5. The herein described process comprising precipitating nickel from a solution of nickel and other sulfates, obtained by treating nickel silicate ores containing magnesium with sulfuric acid, by the action of sodium sulfid, crystallizing out a quantity of magnesium sulfate from the super-natant liquor, converting the magnesium sulfate into magnesium chlorid and a soluble sulfid, dissolving the magnesium chlorid and the sulfid products in water, and adding the solution thus obtained to a fresh quantity of the solution of mived sulfates, for the purpose described.

1,193,735. ROTARY EXHIBITOR. CARL SIMON SUTTER, Philadelphia, Pa., assignor of one-half to Stephen J. Picha, St. Paul, Minn. Filed May 13, 1915. Serial No. 27,837. (Cl. 40—55.)



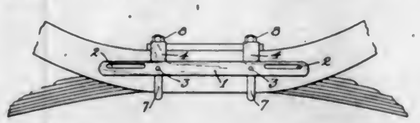
1. The combination in an opthalmic cabinet with a polysided drum and its shaft supported at one end, of a driving shaft and disk thereon, the other end of said drum shaft being detachably supported in the driving shaft, a coupling device between the driving disk and rotary drum, means normally holding the disk inoperative, and means for releasing and rotating the disk.

2. The combination with an intermittently rotatable drum and its shaft supported at one end and a driving shaft adapted to support the other end of the drum shaft, of a driving disk connected to the drum and carried by the driving shaft, said driving shaft having an end socket to receive the end of the drum shaft, and a releasable latch for holding said disk in normal position.

3. The combination with an intermittently rotatable drum and its shaft supported at one end and a driving shaft formed with a socket adapted to loosely support the other end of the drum shaft, of a driving disk coupled to the drum and provided with peripheral notches and carried by the driving shaft, and a latch engaging one of said notches to hold the disk in normal position.

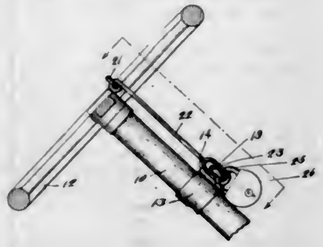
4. The combination in an opthalmic cabinet with a polysided intermittently rotatable drum, of a driving disk formed with a notched edge and having a coupling pin engaging an opening in the end wall of the drum, a driving shaft for the disk, a latch engaging the notched disk to hold it in normal position, and means for releasing said latch and rotating the driving disk.

1,193,736. NUMBER-PLATE HOLDER. WALTER G. SWIFT, Providence, R. I., assignor to George H. Flint, Cranston, R. I., doing business under the name of Flint Oil & Supply Company. Filed May 4, 1914. Serial No. 836,107. (Cl. 40—125.)



An article of the character described, comprising an elongated body member provided with a longitudinal slot adjacent each end thereof and two supporting members pivotally mounted upon the back of said body member between said longitudinal slots and having an upwardly extending portion and a rearwardly extending portion provided with a perforation adapted to receive securing means.

1,193,737. LOCKING MEANS FOR AUTOMOBILES. THEODORE B. THOMAS, Quincy, Mass. Filed Feb. 11, 1916. Serial No. 77,744. (Cl. 70—90.)

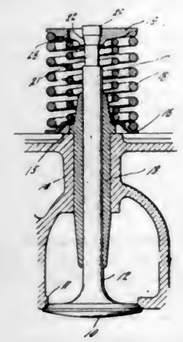


The locking-mechanism for the steering-gear of automobiles herein described consisting of a clamping element adapted to be arranged on the steering-post comprising an encircling member with spaced apart ears and a screw-eye, a set of connected links adapted to be passed over a spoke of the steering-wheel, one of the end-most links of the set being mounted on the shank of the screw-eye between the ears, and the other end-most link of the set having an eye adapted to receive the eye-portion of the screw-eye, said eye-portion projecting therethrough to receive a pad-lock by which the component parts are locked.

1,193,738. VALVE. MAX H. THOMS, Indianapolis, Ind., assignor to Howard Marmon. Filed Apr. 6, 1916. Serial No. 89,448. (Cl. 137—32.)

1. A one piece valve and valve stem, the end part of the valve stem opposite the valve having an end portion of larger diameter, a portion of smaller diameter removed from such end portion, and a tapered portion joining said larger and smaller portions, in combination with a spring-retaining washer having a hole portions of which fit said larger and tapering portions respectively of said valve stem, and a second hole of sufficient size throughout to allow the passage of said larger portion, said two holes being joined by a contracted passageway of sufficient size to allow the passage of said smaller stem portion from one hole to the other, and a spring tending to force said washer along said valve stem away from said valve.

2. A valve and valve stem, the end part of the valve stem opposite the valve having an end portion of larger diameter, a portion of smaller diameter removed from such end portion, and a tapered portion joining said larger and smaller portions, in combination with a spring-retaining washer having a hole portions of which fit said larger and tapering portions respectively of said valve stem, and a second hole of sufficient size throughout to allow the passage of said larger portion, said two holes being joined by a contracted passageway of sufficient size to allow the passage of said smaller stem portion from one hole to the other, and a spring tending to force said washer along said valve stem away from said valve.



3. A one piece valve and valve stem, the end part of the valve stem opposite the valve having an end portion of larger diameter and a portion of smaller diameter removed from such end portion, in combination with a spring-retaining washer having a hole one portion of which fits said larger portion of the valve stem and another portion of which is smaller than said larger portion so that the larger portion in its entirety cannot pass through such hole of said valve stem, and a second hole of sufficient size throughout to allow the passage of said larger portion, said two holes being joined by a contracted passageway of sufficient size to allow the passage of said smaller stem portion from one hole to the other, and a spring tending to force said washer along said valve stem away from said valve.

4. A valve and valve stem, the end part of the valve stem opposite the valve having an end portion of larger diameter and a portion of smaller diameter removed from such end portion, in combination with a spring-retaining washer having a hole one portion of which fits said larger portion of the valve stem and another portion of which is smaller than said larger portion so that the larger portion in its entirety cannot pass through such hole of said valve stem, and a second hole of sufficient size throughout to allow the passage of said larger portion, said two holes being joined by a contracted passageway of sufficient size to allow the passage of said smaller stem portion from one hole to the other, and a spring tending to force said washer along said valve stem away from said valve.

5. A one piece valve and valve stem, the end part of the valve stem opposite the valve being provided with a head which is larger than a portion of the valve stem between it and the valve, in combination with a spring-retaining washer having two holes one of which is large enough to allow the passage of said head and the other of which is too small to allow the passage of said head, the two holes being connected by a narrow neck sufficiently large to permit the passage therethrough from one hole to the other of the valve stem portion which is smaller than said head.

[Claim 6 not printed in the Gazette.]

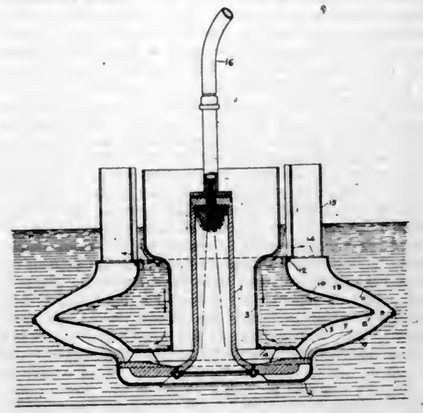
1,193,739. GRAVY COMPOUND AND PROCESS OF MAKING SAME. HENRY TILL, Pittsburg, Cal. Filed May 12, 1915. Serial No. 27,609. (Cl. 99—11.)

1. A compound for thickening gravy embodying in its composition browned flour, caramel, and an oleaginous binder.

2. A compound for thickening gravy embodying in its composition browned flour, a seasoning ingredient, an oleaginous binder, and caramel.

3. The herein described method of preparing a compound for thickening gravy consisting in browning flour in a suitable oven while being stirred, mixing with the browned flour an oleaginous binder in the presence of heat, and allowing the mixture to cool.

1,193,740. WATER-HEATER. HARRY E. TOWNSEND, New York, N. Y. Filed Aug. 21, 1911. Serial No. 645,109. (Cl. 126—360.)



1. In a water heater, the combination of a casing having spaced inner and outer walls, a burner centrally arranged relative to the casing and having combustion points between the walls thereof, a central down-draft flue attached to the casing and communicating with the space between the casing walls, the outer wall of the casing being upwardly inclined from the burner to its outer periphery and inwardly inclined therefrom toward the down-draft flue, the inner wall of the casing being upwardly inclined from the burner to its outer periphery and inwardly inclined therefrom to a junction with the outer wall near to but spaced from the down-draft flue to provide a water-containing chamber within the inner wall of the casing having a restricted combined inlet and outlet water passage between the contracted inner wall of the casing and the down-draft flue, said casing walls being spaced apart to provide an annular combustion space adjacent to the burner and an annular passage for the products of combustion in communication therewith, and an escape flue attached to the casing and in communication with the said annular passage for the products of combustion.

2. In a water heater, the combination of a casing, a burner centrally arranged therein, the casing comprising concentrically disposed inner and outer walls spaced apart to provide between them a burner space and a combustion chamber adjacent to the burner and a passage for the gases of combustion in communication with the combustion chamber, a central down-draft air flue communicating with the burner space of the casing, the inner wall of the casing being turned in toward but spaced away from the down-draft flue to provide a water chamber having a restricted combined inlet and outlet water passage between the top of the casing and the down-draft flue, and an escape flue communicating with the passage for the gases of combustion.

3. In a water heater, the combination of a casing and a burner centrally located therein, the said casing comprising inner and outer lower members of disb-like contour spaced apart to provide between them a space for the burner and a combustion space adjacent the outer edge of the burner, and inner and outer upper members of inverted dish-like form joined at their lower edges to the upper edges of the inner and outer lower members respectively and joined together at their upper edges to

form within said inner members a water-containing chamber open at the top for ingress and egress of water and said upper members being spaced apart to provide between them a passage for the gases of combustion in communication with the combustion space.

4. A partly submergible water heater comprising a burner having a substantially upright mixing tube and an enlarged base provided at its outer margin with points of combustion, a double-walled burner casing inclosing the burner base between its walls and flaring outward therefrom in substantially bowl-shape to provide a flaring combustion chamber between its inner and outer walls and tapering inward from the top of the combustion chamber and joined at the top to form between the walls a tapered receiving chamber for the hot products of combustion, the inner wall of the casing forming an imperforate water-containing chamber, a down-draft air-supply flue communicating with and projecting up from the burner-containing casing around and spaced from the mixing tube and also spaced from the top of the inner wall of the casing to provide an open combined inlet and outlet water passage to the water-containing chamber, and an exit flue communicating with and projecting up from the receiving chamber for the escape of the products of combustion.

5. A partly submergible water heater comprising a burner having a substantially upright central mixing tube and a concentric enlarged base provided at its periphery with points of combustion, a casing having spaced inner and outer walls inclosing the burner base and flaring upward from the periphery of the burner base to form an annular combustion chamber and tapering upward from the top of the combustion chamber and joined at the top to form an annular receiving chamber for the hot products of combustion, a down-draft air-supply flue communicating with the burner-containing space between the walls of the casing and projecting up concentrically between and in spaced relation to the mixing tube of the burner and the top of the inner wall of the casing, the inner wall of the casing and the air-supply flue providing an imperforate annular water-containing chamber having an annular restricted combined inlet and outlet water passage between the contracted inner wall of the casing and the down-draft flue, and a plurality of circumferentially spaced exit flues communicating with and projecting up from the receiving chamber for the escape of the products of combustion.

[Claims 6 to 8 not printed in the Gazette.]

1,193,741. METHOD OF PREVENTING DISINTEGRATION OF ANODES. GEORGE D. VAN ARSDALE, New York, N. Y. Filed Aug. 2, 1915. Serial No. 43,300. (Cl. 204—15.)

1. The method of preventing disintegration of anodes in the electrolysis of copper solutions, which consists in electrolyzing such solutions in the presence at the anode of ferrous sulfate and sulfur dioxid in sufficient amounts to prevent the evolution of free oxygen at the anode.

2. The method of preventing disintegration of graphite anodes in the electrolysis of copper solutions, which consists in electrolyzing such solutions in the presence at the anode of ferrous sulfate and sulfur dioxid in sufficient amounts to prevent the evolution of free oxygen at the anode.

1,193,742. GARMENT-STAY. FRANK L. O. WADSWORTH, Pittsburgh, Pa., assignor to The Spirella Company, Inc., Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,255. (Cl. 2—76.)

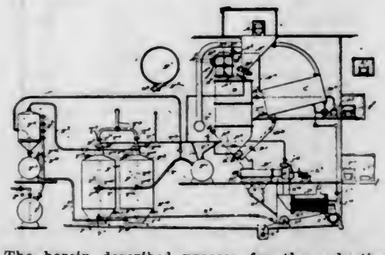
1. A garment stay, comprising wire bent back and forth across the stay to form a series of V-shaped crossing portions, the outer ends of successive crossing portions being joined to form two rows of edge loops and being bent out of the general direction of said crossing portion to form loop extensions extending longitudinally of the stay.

2. A garment stay, comprising wire bent back and forth across the stay to form a series of V-shaped crossing portions, the outer ends of successive crossing portions being joined to form two rows of edge loops and being bent out of the general direction of said crossing portion to form



loop extensions extending longitudinally of the stay, each of said loop extensions overlapping the next adjacent crossing portion of the wire inwardly of the loop extension to which it is connected.

1,193,743. PROCESS FOR REDUCING MATTER CONTAINING GREASE OR OIL. CHARLES S. WHEELWRIGHT, Providence, R. I. Filed May 14, 1912. Serial No. 697,292. (Cl. 71—6.)



1. The herein described process for the reduction of garbage, offal or like material containing extraneous matter which comprises cooking the material in a suitable container, withdrawing oil or grease set free in said container during the cooking operation, rejecting the extraneous matter contained in the cooked mixture, disintegrating and treating the remaining pulp-like material to successively remove oil, grease, etc., and part of the liquor freed therefrom, the material being confined in substantially air-tight mechanisms during the foregoing steps.

2. The herein described process of treating matter containing grease or oil which comprises cooking a mass containing raw garbage and extraneous matter, separating the extraneous matter from said cooked garbage, and adding suitable liquor to said garbage and extraneous matter during the separating step to convert said garbage into a pulp so that it will readily separate from the extraneous matter.

3. The herein described process of treating garbage, offal or matter containing grease and rubbish comprising cooking the material under steam pressure, withdrawing oil or grease liberated by the cooking operation, adding to the cooked material, while passing it through a separator adapted to remove rubbish therefrom, sufficient hot spent liquor to convert said material into a pulp-like material, treating the pulp to successively remove oil or grease and free water therefrom, drying the residue and evaporating the accumulated spent hot liquor, the several operations being performed in a continuous manner while the material is confined in apparatus preventing escape of noxious gases, dust, etc.

4. The herein described process of treating garbage, offal or matter containing grease and rubbish, comprising cooking the material under steam pressure, withdrawing oil or grease liberated by the cooking operation, adding to the cooked material, while passing it through a separator adapted to remove rubbish therefrom, sufficient return hot liquor to convert said material into a pulp-like material, heating the pulp and allowing it to settle in a tank, successively withdrawing oil or grease, clear liquor and the solid material from the tank, drying the latter, and exaporating the surplus hot liquor in drying the said solid material.

5. The herein described process of treating garbage or offal containing grease and rubbish, comprising cooking the material under steam pressure, withdrawing oil or grease liberated by the cooking operation, adding to the cooked material, while passing it through a separator adapted to remove rubbish therefrom, sufficient return hot liquor to convert said material into a pulp-like material, heating the pulp and allowing it to settle in a tank, successively withdrawing oil or grease and clear liquor from the tank and withdrawing and drying the residue.

[Claims 6 to 10 not printed in the Gazette.]

1,193,744. LIQUID-INDICATING GAGE. CHARLES PERRY WILKINSON, Jackson, Mich. Filed Oct. 30, 1915. Serial No. 58,845. (Cl. 73—82.)



1. A gage for liquids comprising a tube inserted in a vertical position in the liquid and provided with apertures at its lower end, a plurality of floats in the tube being guided therein so as to permit free air passage between the bodies of the floats and the tube, a rod attached to each one of said floats and extending in one direction therefrom through the tube parallel to its axis, a guide box at that end of the tube for the rods, a pointer on the end of each rod and scales being provided on said guide box on which said pointers are adapted to indicate the position of the floats.

2. A gage for liquids, comprising a tube inserted in a vertical position in the liquid and provided with apertures at its lower end, a float in the tube being guided therein so as to permit free air passage between the body of the float and the tube, a rod centrally attached to the one end of the float and extending axially through the upper end of said tube, a guide box at the upper end of the tube for the rod, a conical sleeve on said rod and flexible packing in the guide box having a central opening, said conical sleeve constructed to completely fill said opening so as to seal it when the float is in its uppermost position in the tube, and means on said rod and said guide box for indicating the relative position of the float and the tube.

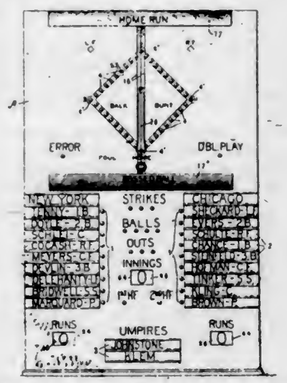
3. A gage for liquids, comprising a tube inserted in a vertical position in the liquid and provided with apertures at its lower end, a plurality of floats inserted in said tube one above the other, each of said floats having an axially positioned rod extending upward through the upper end of said tube, said rods being constructed to telescope with each other, the rod for the lowermost float extending beyond the upper end of the rod of the float next in order, each rod being provided with a pointer at its upper free end and a scale for each of said pointers being provided on said guide boxes.

4. A gage for liquids, comprising a tube inserted in a vertical position in the liquid and provided with apertures at its lower end, a plurality of floats inserted in said tube one above the other, each of said floats having an axially positioned rod extending upward through the upper end of said tube, said rods being constructed to telescope with each other, the rod for the lowermost float extending beyond the upper end of the rod of the float next in order, each rod being provided with a pointer at its upper free end and a scale for each of said pointers being provided on said guide box, said scales being graduated to form continuous reading from zero upward commencing with the scale for the pointer of the lowermost float.

5. A gage for liquids, comprising a tube inserted in a vertical position in the liquid and provided with apertures at its lower end, a plurality of floats inserted in said tube one above the other, each of said floats having an axially positioned rod extending upward through the upper end of said tube, said rods being constructed to telescope with each other, the rod for a lower float extending beyond the upper end of the rod of the float next above it, each rod being provided with a pointer at its upper free end and a scale for each of said pointers being provided on said guide box, a cushioning device in said guide box, and an abutment on the rod of the uppermost float for coöperating with said cushioning device when the uppermost float is in its lowest position.

[Claims 6 to 10 not printed in the Gazette.]

1,193,745. APPARATUS FOR GRAPHICALLY PORTRAYING GAMES OR OTHER EVENTS. CHARLES H. WILSON, New York, N. Y., assignor, by mesne assignments, to Mabel Crane Baker, Stamford, Conn. Filed Apr. 12, 1909, Serial No. 489,546. Renewed Jan. 8, 1916. Serial No. 71,128. (Cl. 235—1.)



1. In a ball game bulletin, the combination of a substantially unbroken surface, adapted to have delineated thereon a ball field, a lighted ball adapted to move indiscriminately to any portion of the field including the unbroken surface, and means operable at a point removed from the front surface of the board for moving the ball.

2. In a bulletin board, the combination of a board having thereon a field representation, a movably mounted lighted signal comprising a member of translucent material adapted to represent a ball, conductors projecting across the field, means for moving the member along the conductors, and a plurality of electrical lighting devices adapted to show through said member, the respective lighting devices in said member having distinguishing characteristics.

3. In a bulletin board, the combination of a board having thereon a field representation, a movably mounted

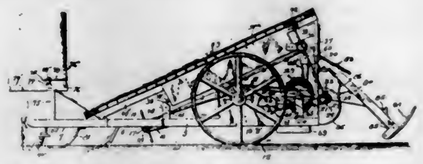
lighted signal comprising a member of translucent material adapted to represent a ball, means for moving the member over the field, said means taking the form of electrical conductors, and a plurality of devices lighted from said conductors adapted to show through said member, and means for operating one of said lights or both together.

4. In a ball bulletin, the combination of a surface having a field representation thereon, longitudinally extending guide members projecting across the field and mounted for movement, an electric lamp mounted on the guide members for independent movement, and said guides forming electric conducting means for said lamp.

5. In a ball bulletin board, the combination of a surface having a field representation, a plurality of series of electric lamps adapted to show at the front of the field, an annular series of electric contacts arranged at a point removed from the field, electric connections between the contacts and lamps, and a plurality of contact arms independently movable into and out of contact with the annular series of contacts.

[Claims 6 to 29 not printed in the Gazette.]

1,193,746. PEANUT-HARVESTER. JOHN WILLIAM WINTERS, Stephenville, Tex., assignor to Calvin C. Winters, Stephenville, Tex. Filed Mar. 9, 1916. Serial No. 83,154. (Cl. 55—108.)



1. In a peanut harvester, a frame, endless carrier chains supported by the frame, plows for dislodging vines from the earth and feeding the same to the carrier chains, means for removing dirt from the vines, means operating under the carrier chains for catching peanuts which fall from the vines, means for sieving said peanuts, and means for moving the plows into and out of engagement with the ground surface.

2. In a peanut harvester, a frame, endless carriers, means for supporting the endless carriers on the frame, means for dislodging vines from the ground, means for feeding the vines to the carriers, means for beating the earth from the roots of the vines, means for catching peanuts which fall from the vines, and means for sieving said peanuts.

3. In a peanut harvester, a frame, means carried by the frame for dislodging vines from the earth, endless carrier chains operating in parallel relation and adapted to grip the vines therebetween, an endless belt operating under the chains and carrying transverse bars for catching peanuts which fall from the vines during the passage of the vines to the rear of the machine, sieving means, said belt adapted to deliver peanuts to the sieving means, and means for operating the endless carrier chains, endless belt and sieving means.

1,193,747. [WITHDRAWN.]

1,193,748. CIGAR-BAND. LILLIAN R. ALEXANDRE, New York, N. Y. Filed Oct. 23, 1914. Serial No. 868,202. (Cl. 40—21.)

1. A device of the character described comprising a band, a severing member secured to the inner surface of said band intermediate the ends thereof, and a protecting section secured to the inner surface of said band and inclosing said severing member, substantially as specified.

2. A device of the character described comprising a band, a flexible severing member secured to the inner surface of said band intermediate the ends thereof, means secured to said severing member for manipulating the same to sever the band, and a protecting section secured to the inner surface of said band and inclosing said severing member, substantially as specified.



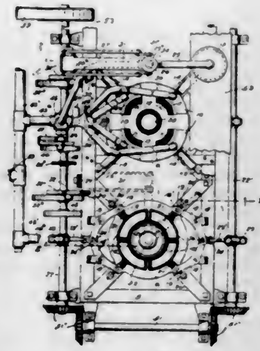
3. A device of the character described comprising a band, an integral projecting portion extending transversely therefrom, a flexible severing member secured to the inner surface of said cigar band and to the inner surface of the member projecting therefrom, and a finger portion at the free end of said projecting portion embracing one end of said severing member, substantially as specified.

4. A device of the character described comprising a band, an integral portion extending laterally from one edge of said band intermediate the ends thereof, a flexible severing member extending transversely of said band and secured to the inner surface thereof and to the inner surface of said projecting member, and a finger portion secured to the free end of said projecting member and embracing the end of said severing member, substantially as specified.

5. A device of the character described comprising a band, an integral member projecting transversely from one edge of said band intermediate the ends thereof, a flexible severing member secured transversely of said band to the inner surface thereof and to the inner surface of the projecting member, a protecting section secured to the inner surface of said band and of said projecting member and inclosing said severing member, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,193,749. BOTTLE-MAKING MACHINE. HARRY C. AYERST, Seattle, Wash. Filed Sept. 1, 1915. Serial No. 48,422. (Cl. 92—62.)



1. In a machine of the class described, a separable mold provided with a foraminated inner peripheral surface, power actuated means to move the mold members into and out of operative position with respect to each other, a pulp reservoir, a supply pipe extending from said reservoir into the mold, and pipe connections with the respective mold members whereby the air may be withdrawn from the mold to cause the pulp to be drawn from said reservoir and deposit it against the internal surface of the mold.

2. In a machine of the class described, a hollow mold having foraminated inner walls, pipes connected with the chambers of the mold, valves for controlling the flow of fluids through said pipes to and from said mold, a pulp supply pipe extending into the mold, and means to regulate the action of said valve to afford a suction within the mold to draw the pulp against the foraminated walls of said mold and also serving to subsequently admit air to release the pulp formed against the mold from the latter.

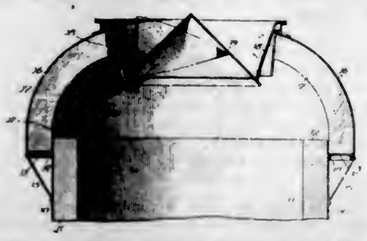
3. In a machine of the class described, a plurality of hollow mold members having foraminated inner walls, pipes connected with the chambers of the respective members, a valve for controlling the flow of fluids through said pipes to and from said mold members, a pulp supply pipe extending into the mold, means to move the mold members into and from operative positions, and means to regulate the action of said valve to afford a suction within the mold members to draw the pulp against the foraminated walls of said mold members and also serving to subsequently admit air into the members to release the pulp formed against the mold from the latter.

4. In a machine of the class described, the combination with a mold having a hollow stationary base member, a plurality of hollow members movable radially into and out of operative positions, a hollow cap member arranged for vertical movements, and means for successively moving said movable members, of pneumatic actuated devices for drawing vessel-forming material into the mold and against the inner surfaces of the respective members thereof, and means to regulate said pneumatic devices to render the cap member operable to support the vessel while the second named members are being withdrawn from the vessel and in the subsequent elevation of the cap member.

5. In a machine of the class described, the combination with a mold comprising a plurality of hollow members arranged for movements radially of the mold axis, a hollow cap member arranged for axial movements, each of said members being provided with a foraminated inner surface, and means to effect the relative movements of the respective members into and out of operative position, of pneumatic means to supply pulp material into the mold and eventually deposit such material against the aforesaid foraminated surfaces of said cap and mold members.

[Claims 6 to 14 not printed in the Gazette.]

1,193,750. BLAST-FURNACE TOP. WILLIAM H. BAILEY, Gary, Ind. Filed Dec. 18, 1915. Serial No. 67,549. (Cl. 266—31.)

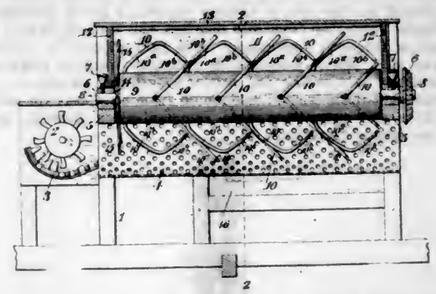


1. In a blast furnace, the combination of a shaft, including a shell and a masonry lining, a shelf secured to said shell and projecting outwardly from the shell, and a masonry top built on and supported by said shelf, substantially as described.

2. In a blast furnace, the combination of a shaft, including a masonry lining and a metallic shell, an annular plate secured to said shell near the top thereof and projecting laterally and outwardly therefrom, a top shell secured to said shelf and a masonry lining for the top built on said shelf, substantially as described.

3. In a blast furnace, the combination of a shaft, comprising a metallic shell and a masonry lining, an annular shelf projecting outwardly from said shell, and a hemispherical masonry top resting on and supported by said shelf, substantially as described.

1,193,751. GRAIN-SEPARATOR FOR THRESHING-MACHINES. SIMON M. O. BANGEN, Crookston, Minn. Filed Apr. 30, 1915. Serial No. 25,011. (Cl. 130—22.)



1. A grain separator for threshing machines comprising a rotor having straw propelling fingers thereon, a straw directing device at the receiving end of the propelling means and constituting a part of the rotor, a screen underriding the propelling means, and means for driving the rotor at a relatively slow speed as compared with the speed of the threshing cylinder.

2. A grain separator for threshing machines, comprising an elongated rotor having longitudinal series of straw engaging fingers or prongs thereon directed toward the discharge end of the separator at an angle to the length of the respective series, means at the receiving end of the separator for distributing the straw to the fingers, a screen in underriding relation to the rotor and having extensions rising at the sides of the rotor, and means for feeding the straw to the bottom portion of the receiving end of the screen.

3. A grain separator for threshing machines, comprising an elongated rotor having longitudinal series of straw engaging fingers or prongs thereon directed toward the discharge end of the separator at an angle to the length of the respective series, means on and fast to the rotor and confined solely to the receiving end of the separator for distributing the straw to the fingers, and a screen in underriding relation to the rotor and having extensions rising at the sides of the rotor, said screen having a threshing cylinder associated therewith to deliver the threshed grain to that end of the screen provided with the straw directing means at a point below the axis of rotation of the rotor.

4. A grain separator for threshing machines comprising an elongated screen curved in cross-section and adapted to receive threshed grain at one end and discharge the straw at the other end, and a straw propelling and agitating means comprising a rotor in substantially concentric relation to the screen, said rotor having straw engaging fingers or prongs bowed away from the axis of rotation and arranged in longitudinal series with each finger at an angle to the length of the axis of rotation with the free end of the finger more distant from the receiving end of the separator than the other end of the finger, and directing means for the straw at the receiving end of the separator comprising a circular series of blades participating in the movements of the rotor and each having the outer end twisted in a direction to engage and distribute the straw to the propelling fingers.

1,193,752. DEEP-WELL PUMP. CHARLES W. BARTHOLMES, Coalinga, Cal. Filed June 30, 1914. Serial No. 848,197. (Cl. 103—63.)

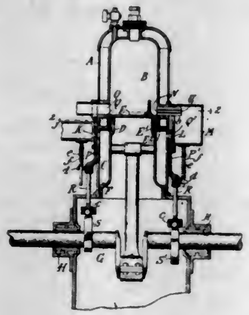
1. A piston for deep well pumps comprising a pair of oppositely pasitioned cage members, a union for rigidly connecting said members, a ball in the cage, said union being tubular in order to form a seat for the ball and together with it constituting a dash valve.

2. In a deep well pumping apparatus, the combination with a sucker rod made in sections, of a piston member including a valve formed on one section, a screw threaded nipple extending from said section, a piston member formed on the end of another section, a screw threaded nipple extending from said member, and a union having a screw threaded engagement with said nipples to couple the said piston members in intimate working relation whereby said sucker rod carries a series of pistons on it throughout its length, said union forming a seat for said valve and permitting fluid communication through the two adjoining pistons.



3. In a deep well pump having a main valve and a rod therefor; said rod comprising a plurality of pistons, each piston including a pair of oppositely positioned cage shaped members, a tubular union rigidly connecting said members and a ball within the cage portion, the end of said union forming a seat for said ball and constituting therewith a dash valve.

1,193,753. GAS-ENGINE. GEORGE WILLIAM BAYLEY, New York, N. Y. Filed Jan. 2, 1912. Serial No. 669,073. (Cl. 123—71.)



1. The combination in a two cycle engine, of a power cylinder, and a compression cylinder, a power piston and a compression piston, a compression chamber, a crank shaft, an inlet to said compression cylinder and an outlet from said compression cylinder into said compression chamber, said inlet and outlet being located substantially in a plane with said crank shaft, slide valves controlling said inlet and outlet, and actuating means therefor on said crank shaft, said valves having projections directly engaging said actuating means.

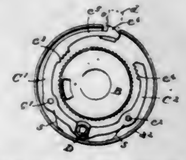
2. The combination in a two-cycle gas engine or a plurality of power cylinders, a plurality of compression cylinders, a plurality of pistons, each having a power face and a compression face, inlet ports to the compression cylinders, said inlet ports being arranged on adjacent sides of the cylinders, outlet ports from said compression cylinders, said ports being arranged on opposite sides of the cylinders, sliding shutter valves controlling said ports, an inlet port to each power cylinder, and a compression chamber for each power cylinder leading from the outlet from said compression cylinder to said inlet port.

3. The combination in a two-cycle gas engine of a plurality of power cylinders, a plurality of compression cylinders, a plurality of pistons, each having a power face and a compression face, inlet ports to the compression cylinders, said inlet ports being arranged on adjacent sides of the cylinders, outlet ports from said compression cylinders, said ports being arranged on opposite sides of the cylinders, sliding shutter valves controlling said ports, an inlet port to each power cylinder, and a compression chamber for each power cylinder leading from the outlet from said compression cylinders to said inlet port, said compression chamber being constructed in the form of a manifold and leading substantially quarter way around the cylinder.

4. In a gasolene-engine, the combination of a working cylinder, a piston therein, a fuel-charge compressing cylinder, and a fuel-charge receiving chamber, said compressing cylinder being adapted to empty into said receiving chamber, and said receiving chamber being adapted to empty into said working cylinder, said piston controlling the admission from said receiving chamber to said working cylinder, and a power operated valve controlling the admission from said compressing cylinder to said receiving chamber, said valve being located in a plane passing through the axis of the main shaft of the engine.

5. In a gasolene engine, the combination of a working cylinder, a piston therein, a fuel-charge compressing cylinder, and a fuel-charge receiving chamber, said compressing cylinder being adapted to empty into said receiving chamber, and said receiving chamber being adapted to empty into said working cylinder, said piston controlling the admission from said receiving chamber to said working cylinder, a power operated valve controlling the admission from said compressing cylinder to said receiving chamber, and a power operated valve controlling the inlet to said compressing cylinder, said valves being located in a plane passing through the axis of the main shaft of the engine.

1,193,754. TUMBLER FOR PERMUTATION-LOCKS. WILLIAM T. BENHAM, Norwood, Ohio, assignor to The Nydia Bank Lock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 27, 1916. Serial No. 87,080. (Cl. 70—53.)



1. In a permutation lock, a tumbler having a central disk and a rotatable annular casing, a clamping element upon the annular casing adapted to engage or disengage the central disk, an extension arm of the clamping element crossing beneath the engaging slot of the angle bar in the annular casing in such relation as that the movement of the clamping element to its disengaged position lifts and disengages the angle bar from its said slot.

2. In a permutation lock of the character indicated, embodying a central disk seated rotatively in an outer annular casing; a lever clamp pivoted in the casing and adapted to engage the disk against inter-rotation; a key-controlled cam actuating said lever-clamp to its position of engagement; a spring actuating said lever-clamp to its position of disengagement and an extension arm of said lever clamp adapted to lift and hold the angle bar disconnected from the tumblers while said disk and casing are disengaged.

3. In a permutation lock of the character indicated, a tumbler having a central peripherally toothed disk, an outer annular casing rotatable upon said inner disk one or more adjustable clamps seated in the outer casing engaging the teeth of the central disk, a series of graduations in the outer face of the annular casing corresponding with the teeth of the disk, representing unit fractions of inter-rotation, and a mark upon the corresponding face of the disk indicating a starting point for the rotation of the casing.

4. In a permutation lock of the character indicated, a tumbler having a central peripherally toothed disk, an outer annular casing rotatable upon said inner disk, one or more adjustable clamps seated in the outer casing engaging the teeth of the central disk, a series of graduations in the outer face of the annular casing corresponding with the teeth of the disk, representing unit fractions of interrotation, said graduations being numbered around half of the circle each way from a common starting point, and a key adapted to release the clamps from engagement, whereby any error of setting may be counted by sight and corrected, in the individual tumbler without changing the correctly set tumblers.

1,193,755. VALVE. JOHN BENTZ, Remsen, Iowa. Filed May 22, 1916. Serial No. 99,145. (Cl. 137—13.)

1. The combination with a valve casing, a supply pipe opening into one end thereof and a drain pipe extending from said end, of a distributing pipe extending from the other end of the casing, a valve mounted for rotation within the casing and having a longitudinal passage provided with a branch, means for rotating the valve in one direction to place the distributing pipe in communication with the supply pipe and in the opposite direction to place the distributing pipe into communication with the drain pipe, and means extending into the casing for limiting the rotation of the valve, said means being adjustable to bind upon the valve and hold it against rotation.

2. The combination with a valve casing having a supply pipe and a drain pipe opening into one end thereof and a distributing pipe extending from the other end thereof, of a cylindrical valve mounted for rotation in the casing and having a groove in the periphery thereof, there being a branch groove at one end portion of the valve, means for rotating the valve to shift the grooves and place the distributing pipe in communication with either the supply pipe or the drain pipe, a binding screw projecting into the valve for limiting the rotation thereof and for holding the valve against rotation.

1,193,756. METHOD OF PRODUCING HEEL-LOGS. WENDELL P. BOSWORTH, Brockton, Mass., assignor to Brockton Heel Company, Brockton, Mass., a Corporation of Massachusetts. Filed Apr. 20, 1914. Serial No. 833,075. (Cl. 12—147.)

1. The method of building heel log sections which consists in placing lifts coated with an adhesive one upon another, applying pressure from time to time to the endmost lift of the accumulation with sufficient force to propel such accumulation endwise against yielding resistance, placing parting layers which are repellent to adhesive at suitable intervals between adjacent superposed lifts to divide the log formed thereby into readily separable sections, removing such sections from time to time, and maintaining the sections under endwise pressure after they have been removed from the log while the adhesive becomes set.



2. The method of producing heel log sections which consists in piling lifts coated with an adhesive upon one another, applying pressure from time to time to the lift last placed and at the same time feeding the accumulation of lifts endwise, and placing parting layers which are repellent to adhesive from time to time between two adjacent lifts.

3. The method of producing heel log sections which consists in placing lifts coated with an adhesive one on top of another in a pile, applying pressure longitudinally to the pile after placing each lift thereon, placing paste-repellent parting layers between adhesive lifts at intervals, removing the sections of the pile of lifts between adjacent parting layers, and confining such sections under endwise pressure.

4. The method of producing heel log sections which consists in coating lifts with an adhesive and assembling such lifts one upon another in a log, applying pressure endwise of the log upon each lift so assembled, and placing at given points in such column layers which are repellent to the adhesive with which the lifts are coated, whereby the log is divided at the points of placement of such layers into sections, the length of such sections being determined by the distance between the layers in the log.

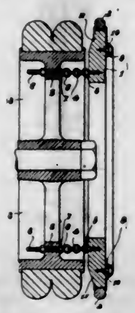
5. The method of producing unit assemblages of heel lifts by a continuous operation which consists in coating lifts with an adhesive and placing them one upon another in a pile, applying pressure lengthwise of the pile upon each lift last so placed and propelling the pile by such pressure against yielding resistance, placing upon the pile from time to time a layer having a surface repellent to the adhesive with which the lifts are coated, and continuing to place successive lifts bearing an adhesive coating on the pile, and to apply pressure thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,193,757. SIDE-SPLASH PREVENTER FOR VEHICLE-WHEELS. JOHN THOMAS BOWER, London, England. Filed Nov. 14, 1914. Serial No. 872,247. (Cl. 21—23.)

1. In means for preventing side splash from motor and like vehicles, an annular ring adapted to roll upon the ground adjacent to the vehicle wheel, lateral flexible connections between the vehicle wheel and the annular ring each of said connections comprising a member attached at one end to the wheel by an attachment allowing universal movement and attached at the other end to the guard by an attachment allowing universal movement, and means for adjustably securing these flexible connections to the vehicle wheel to enable the distance between the said wheel and the rolling flange to be varied.

2. In means for preventing side splash from motor and like vehicles, an annular ring adapted to roll upon the ground adjacent to the vehicle wheel, lateral flexible connections between the vehicle wheel and the annular ring each of said connections comprising a member attached at one end to the wheel by an attachment allowing universal movement and attached at the other end to the guard by an attachment allowing universal movement, and means for adjustably securing the flexible connections to the vehicle wheel comprising eye-bolts passing laterally through the vehicle wheel, and nuts upon the screw-threaded portion of the eye-bolts to adjustably clamp them in the desired position in the vehicle wheel.



3. In means for preventing side splash from motor and like vehicles, an annular ring adapted to roll upon the ground adjacent to the vehicle wheel, lateral flexible connections between the vehicle wheel and the annular ring, each of said connections comprising a flexible member attached at one end to the wheel by an attachment allowing universal movement and attached at the other end to the guard by an attachment allowing universal movement, and means for adjustably securing these flexible connections to the vehicle wheel to enable the distance between the said wheel and the rolling flange to be varied.

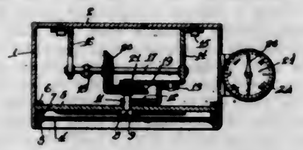
4. In means for preventing side splash from motor and like vehicles, an annular ring adapted to roll upon the ground surface adjacent to the vehicle wheel, an outwardly inclined inner surface to the annular ring, a rubber tire or tread upon the periphery of the ring, and a protecting ring of metal secured to the outer face of the said ring, and horizontally disposed short lengths of helical spring having hooked ends adapted to engage in eye-bolts on the annular ring and also in eye-bolts adjustably secured in the vehicle wheel by means of nuts upon their screw-threaded portions which serve to adjust and clamp them in lateral holes in the vehicle wheel near the rim.

5. In means for preventing side splash from motor and like vehicles, an annular ring adapted to roll upon the ground adjacent to the vehicle wheel, lateral flexible connections between the vehicle wheel and the annular ring, each of said connections comprising a resilient member attached at one end to the wheel by an attachment allowing universal movement and attached at the other end to the guard by an attachment allowing universal movement, and means for adjustably securing the flexible connections to the vehicle wheel comprising eye-bolts passing laterally through the vehicle wheel, and nuts upon the screw-threaded portion of the eye-bolts to adjustably clamp them in the desired position in the vehicle wheel.

[Claim 6 not printed in the Gazette.]

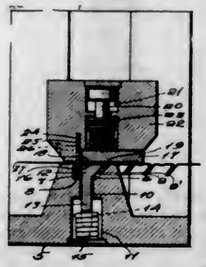
1,193,758. GRADOMETER. ADELBERT R. BRADSHAW, Visalia, Cal. Filed Sept. 8, 1913. Serial No. 788,572. (Cl. 33—215.)

In a gradometer for vehicles, a cylindrical casing to be rigidly attached to a fixed portion of the vehicle with its central axis extending in line with the direction of travel of the vehicle, a circular dial mounted in the forward part of the casing and provided with a central opening, a pair of brackets mounted on the rear wall of the casing and one of said brackets provided with an offset positioned the end of which is opposite the opening of the dial, a second bracket carried by said offset, an index shaft mounted in the offset and the bracket carried thereby and having its forward end extended through said dial, a pendulum shaft mounted in the brackets carried by the casing to extend at right angles to and adjacent



the inner end of the index shaft, an index hand carried by the forward end of the index shaft to work adjacent the dial, a pendulum carried by the pendulum shaft and depending therefrom to cause turning movement of said shaft as the vehicle varies its incline, a beveled gear carried by the index shaft, and a second beveled gear mounted on the pendulum shaft to mesh with said first gear to transmit movement from the pendulum to the index hand.

1,193,759. MACHINE FOR BENDING OR PRESSING SHEET METAL. THEODORE BRIEGEL, Rock Island, Ill., assignor to Harry E. Winters, Davenport, Iowa. Filed Nov. 16, 1915. Serial No. 61,801. (Cl. 153—76.)

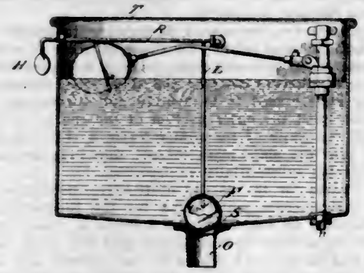


1. In a machine of the character described, a stationary anvil having a recess provided with a substantially vertical side wall and an inclined side wall, a vertically movable anvil section arranged within the recess and having a substantially vertical side wall disposed near the substantially vertical side wall of the recess and an inclined side wall disposed near the inclined side wall of the recess and permanently spaced therefrom for providing an inclined chamber, a vertically movable carriage arranged near the anvil, a die element connected with the carriage and vertically movable toward and away from it and with it toward and away from the anvil, a second die element connected with the carriage for movement therewith and disposed near the first named die element, yielding means to oppose the movement of the first named die element in one direction, and yielding means to oppose the movement of the anvil section in one direction and adapted to overcome the first named yielding means.

2. In a machine of the character described, a stationary anvil having a recess provided with a substantially vertical side wall and an inclined side wall, a vertically movable anvil section mounted within the recess and having a substantially vertical side wall disposed near and spaced from the substantially vertical side wall of the recess and an inclined side wall disposed near the inclined side wall of said recess and permanently spaced therefrom for providing an inclined chamber, a vertically movable carriage disposed above the anvil, a die element connected with the carriage and vertically movable toward and away from it and with the carriage toward and away from the anvil and having a rib adapted to enter the inclined chamber between the said inclined walls, a second die element connected with the carriage for movement therewith and adapted to pass between the said substantially vertical walls, yielding means to oppose the movement of the first named die element in one direction, and yielding means to oppose the movement of the anvil section in one direction and adapted to overcome the first named yielding means.

3. In a machine of the character described, a stationary anvil having a recess provided with a substantially vertical side wall and an inclined side wall, a vertically movable anvil section arranged within the recess and having a substantially vertical side wall disposed near and spaced from the substantially vertical side wall of the recess and an inclined side wall disposed near the inclined side wall of said recess and permanently spaced therefrom to provide an inclined chamber and provided on its top with a groove, a vertically movable carriage disposed near and above the anvil, a die element connected with the carriage and movable toward and away from it and with it toward and away from the anvil, said die element having a rib to enter the groove in the anvil section and a second rib to pass into the inclined chamber between the inclined side walls, a second die element rigidly secured to the carriage and adapted to pass between the said vertical side walls, yielding means to oppose the movement of the first named die element in one direction, and yielding means to oppose the movement of the anvil section in one direction and adapted to overcome the first named yielding means.

1,193,760. FLUSH-VALVE FOR FLUSHING-TANKS. WILLIAM B. CAMPBELL, Gadsden, Ala. Filed Jan. 31, 1914. Serial No. 815,771. (Cl. 4—5.)



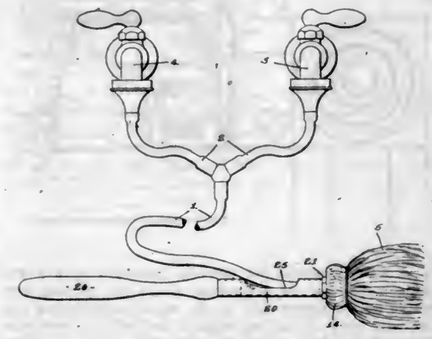
1. A flushing-tank having an unobstructed interior with a bottom which slopes to a common outlet, a buoyant valve capable of moving about at will located within the confines of the tank and adapted to seat itself at the outlet, and means connected with the tank which automatically assumes a position out of the path of the valve in seeking the outlet, and which means when moved out of its normal position engages the valve and moves it laterally from the outlet and away from the suction.

2. A gravity flushing-tank open to the atmosphere, and having an unobstructed interior with a bottom which slopes to a common outlet, a buoyant valve capable of moving about at will located within the confines of the tank and adapted to seat itself at the outlet, and means connected with the tank which automatically assumes a position out of the path of the valve in seeking the outlet, and which means when moved out of its normal position engages the valve and moves it laterally from the outlet and away from the suction.

3. A flushing-tank, a buoyant valve capable of moving about at will located within the confines of the tank, the tank having an unobstructed interior throughout the entire flush-valve path of movement, with its bottom sloping to a common outlet, and means connected with the tank which automatically takes a position out of the path of the valve and outlet, and which when moved out of its normal position engages the valve and moves it from the outlet and away from the suction.

4. A flushing-tank having an unobstructed interior throughout the entire flush-valve path of movement with its bottom sloping to a common outlet, a buoyant valve capable of moving about at will located within the confines of the tank, and a lever pivoted within the tank out of the path of the valve and in position when moved to engage the valve and move it laterally from the outlet and away from the suction, whereupon the lever returns automatically to a position alongside the inner wall of the tank.

1,193,761. FOUNTAIN-MOP. HERMAN CASLER, Canastota, N. Y., assignor to Isabel L. Lewis, Syracuse, N. Y. Filed Jan. 9, 1913. Serial No. 740,984. (Cl. 15—51.)



1. Means for coupling a hose and a mop comprising a tubular member including a body upon which the mop is mounted, said member having an enlarged spray head at one end formed with an internal shoulder, and a member including a tube extending into the former member and being expansible and contractile and having projections for engaging said shoulder, substantially as and for the purpose set forth.

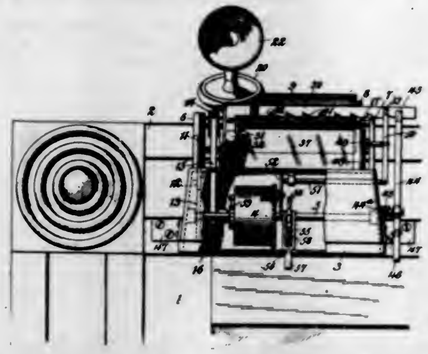
2. Means for coupling a hose and a mop comprising two tubular members, one having a portion telescoping within the other, the telescoping members having expansible and contractile means for holding said members together, substantially as and for the purpose described.

1,193,762. SOUND-REPRODUCING MACHINE FOR ADVERTISING PURPOSES. EDWARD L. CHRISTENSEN, Ann Arbor, Mich., assignor of one-half to William J. Ross, Detroit, Mich. Filed Nov. 20, 1914. Serial No. 873,182. (Cl. 274—17.)

1. A sound reproducing machine adapted to be intermittently set into operation by a movable object, said machine being provided with power storing means for its actuation, means under the control of the movable object in the installed position of the machine for causing progressive active movements of the sound reproducing parts of the machine with each of said movements limited to a fractional portion of the full range of movement of the said parts, and means also under the control of the movable object for restoring to the power storing means for each fractional actuation of the sound reproducing means an amount of power commensurate with that utilized in the said fractional actuation, the range of movement of the power restoring means being limited to the production of the stated restoration of power.

2. A sound reproducing machine provided with power storing means for its actuation, means for causing progressive active movements of the sound reproducing machine with each of such movements limited to a frac-

tional portion of the full extent of movement of the machine, and means for restoring to the power storing means for each actuation of the sound reproducing machine an amount of power commensurate with that utilized in the fractional actuation of the machine, the range of movement of the power restoring means being limited to produce the stated restoration of power, and the means for causing the fractional progressive actuations of the sound reproducing machine and the means for restoring power to the power storing means both having parts adapted to be located in the path of a movable object for actuation by the movements of the latter.



3. A sound reproducing machine provided with power storing means for its actuation, means for causing progressive active movements of the sound reproducing machine with each of such movements limited to a fractional portion of the full extent of movement of the machine, and means for restoring to the power storing means for each actuation of the sound reproducing machine an amount of power commensurate with that utilized in the fractional actuation of the machine, the range of movement of the power restoring means being limited to produce the stated restoration of power, and the means for causing the progressive fractional actuations of the sound reproducing machine and the means for restoring power to the power storing means being both provided with rockable members adapted to be located in the path of a two-way movable object and constructed to actively respond to movements of the latter in one only of the two directions.

4. A sound reproducing machine having means for driving it, means for releasing the machine to operation and stopping it after a predetermined fractional part of its full extent of operation, said starting and stopping means being susceptible of repeated actuations within the full limit of movement of the sound reproducing machine, and power restoring means having a range of active movement limited in extent to restore to the driving means only such an amount of power as is utilized by each limited active movement of the sound reproducing machine, said starting and stopping means and the power restoring means being constructed and arranged for successive actuations by a corresponding number of movements of a movable object.

5. A sound reproducing machine having means for driving it, means for repeatedly starting and stopping it at progressively different points along its full range of movement, means for delivering to the driving means an amount of power commensurate with that consumed in each active movement of the sound reproducing machine as often as such active movement occurs, and means for causing the return of the sound reproducing machine to initial position on reaching the other limit of its movement, the starting and stopping means and the power restoring means being constructed and arranged to actively respond to movements of a movable object.

[Claims 6 to 23 not printed in the Gazette.]

1,193,763. FUEL. HERMAN CLARKE, London, and JAMES A. CAMPBELL, Ilford, England. Filed Aug. 4, 1911. Serial No. 642,357. Renewed Jan. 24, 1916. Serial No. 74,062. (Cl. 202—8.)



1. A new product of manufacture, being a smokeless fuel consisting of a solid body of coke, the greater part of whose mass at the center contains a relatively high proportion of volatile matter and is relatively fragile, the remainder containing a small proportion of volatile matter and forming a relatively hard crust, the whole, however, forming an integral mass.

2. A new product of manufacture, being a smokeless fuel consisting of a solid body of coke, the greater part of whose mass at the center is relatively fragile and has a hard crust integral therewith.

3. A process for the partial destructive distillation of coal or carbonaceous matter, for the production of a fuel, which consists in subjecting the mass in a closed retort to destructive distillation past the stage when illuminating gases have ceased to be evolved and continuing the distillation until the outer portion of the charge in contact with the walls of the retort forms a crust of coke integral with the main mass thereof, and then arresting the distillation substantially as described.

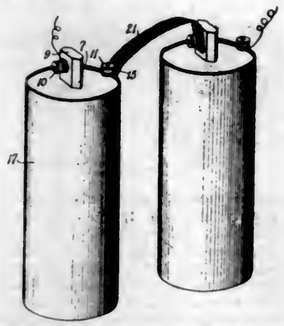
4. A process for the partial destructive distillation of coal or carbonaceous matter and for the production of fuel, consisting in subjecting the mass in a closed vertical retort to destructive distillation past the stage when illuminating gases have ceased to be evolved and continuing the distillation until the charge in the retort shrinks and a hard integral crust is formed around the charge, then arresting the distillation substantially as described.

5. A process for the partial destructive distillation of coal or carbonaceous matter, for the production of a fuel, which consists in subjecting the mass in a closed retort to destructive distillation at a medium temperature past the stage at which illuminating gases have ceased to be evolved and continuing the distillation until the outer portion of the charge in contact with the walls of the retort forms a crust of coke integral with the main mass thereof, and then arresting the distillation substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,193,764. DRY CELL. DAVID CONLAN, JR., Brooklyn, N. Y. Filed Nov. 16, 1915. Serial No. 61,753. (Cl. 204—52.)

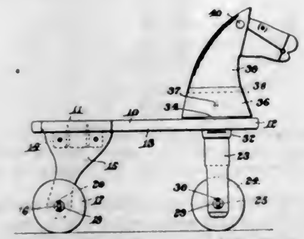
1. In a dry cell, the combination with a metallic container constituting one element of the cell and an insulating casing inclosing said container and readily removable therefrom, of a relatively flat flexible metallic strip secured to said container, normally lying flat against the container between the container and the insulating casing surrounding it and adapted to be exposed by removal of the casing and be thereupon withdrawn to form a connector for engagement with another cell and a binding post connected to the metallic container and securing the connecting strip thereto.



2. In combination, a dry cell including a metallic container constituting one element of the cell, active material in said container, a second element in said active material and binding posts carried by the respective elements and a relatively flexible connecting strip permanently secured at one end to one of said cell elements and provided at its opposite free end with means adapting it to be engaged with the binding device of an adjoining cell or other member.

3. In combination, a dry cell including a metallic container constituting one element of the cell, active material in said container, a second element in said active material and binding posts carried by the respective elements and a relatively flat flexible metallic strip secured at one end to the container element of the cell provided at its opposite free end with an opening adapted for engagement over a binding device and a casing of insulating material engaged over the container element and normally covering the flat connecting strip secured thereto.

1,193,765. VEHICLE. ATHERTON D. CONVERSE, Winchendon, Mass. Filed Feb. 29, 1916. Serial No. 81,513. (Cl. 21—191.)

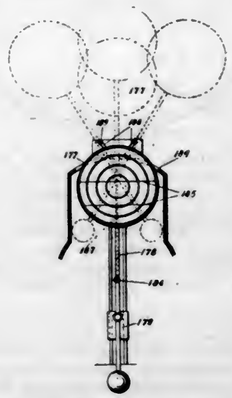


1. In a device of the class described, the combination of a plurality of revoluble wheels; a flat seat supported thereby at both ends and at a height permitting the occupant thereof to use the feet as a propelling force by engaging said feet with the surface upon which said wheels rest; a flat-sided steering member extending above said seat with the side walls extending longitudinally of said seat and at considerable distance from the outer edges thereof whereby the vehicle may be steered by the legs when coasting; and other means secured to said steering member whereby said member may be controlled by hand.

2. In a device of the class described, the combination of a seat member having widened portions at the front and rear ends connected by a narrow intermediate portion; a pair of depending members at the rear thereof; a pair of wheels supported by said depending members; an oscillating steering member having a shank formed integral therewith extending through the front portion of said seat; a wheel mounted in the bifurcated lower end of said oscillating member; a flat sided member secured to said shank above said seat and provided with a groove in its upper edge; a washer surrounding said shank between said seat and said grooved member; an upwardly extending member with its lower edge permanently mounted in said groove; and handles extending from opposite faces of said upwardly extending member.

3. In a device of the class described, the combination of a plurality of revoluble wheels; a flat seat supported thereby at both ends and at a height permitting the occupant thereof to use the feet as a propelling force by engaging said feet with the surface upon which said wheels rest; a flat-sided steering member extending above said seat with the side walls extending longitudinally of said seat and at considerable distance from the outer edges thereof whereby the vehicle may be steered by the legs when coasting, the under edge of said steering member being slightly above the upper face of the front portion of said flat seat.

1,193,766. MOTOR-VEHICLE. EDWARD P. COWLES, Sparta, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Sept. 6, 1901, Serial No. 74,497. Divided and this application filed Apr. 7, 1914. Serial No. 830,256. (Cl. 116—31.)



1. In a motor vehicle, the combination of devices for controlling the direction of movement and speed of the vehicle, a signal at the rear of the vehicle, and connecting means between said signal and said devices to automatically actuate said signal and cause the latter to indicate to occupants of following vehicles the action of the operator in varying the speed or changing the direction of the vehicle.

2. In a motor vehicle, a signal consisting of a movable disk suitably mounted on the vehicle, connections between said disk and the motor controlling devices whereby the disk will be reciprocated in one direction when the speed of the vehicle is changed, and means for vibrating said signal in another direction when the direction of movement of the vehicle is reversed.

3. In a motor vehicle, the combination of a signal device, means to actuate the same to cause it to indicate vehicle speed by one character of signal, and to indicate direction of movement of the vehicle by another and different character of signal, and control mechanism connected with said means, said mechanism being operable from the driver's seat.

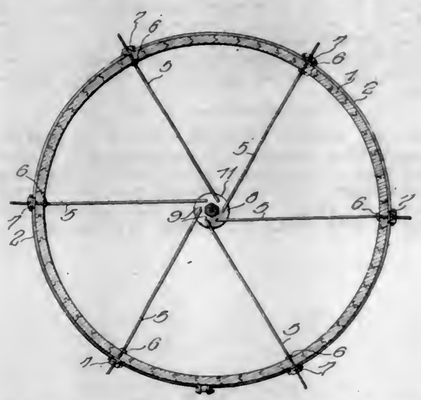
4. In a motor vehicle, a signal, means to cause said signal to assume a variety of positions to indicate certain changes in the operation of the vehicle and to cause said

signal to flicker to indicate a different character of change in the operation of the vehicle, and mechanism for operating said means.

5. In a motor vehicle, the combination of the motor control mechanism thereof, a signal device arranged at the rear of the vehicle, means to flicker said signal device, and connections between said means and said motor control mechanism to automatically operate such means.

[Claim 6 not printed in the Gazette.]

1,193,767. AUTOMATICALLY-ADJUSTABLE BRACE FOR SILOS. ALLEN A. CRISELL, Portland, Oreg., assignor to Monroe and Crisell, Portland, Oreg., a Copartnership. Filed Mar. 25, 1915. Serial No. 16,913. (Cl. 217—4.)



1. The combination of a cylindrical wall, a circumferentially expansible and contractible hoop surrounding said wall, and brace members connected at one end to said wall and with their other ends extending into the space inclosed by said wall and converging toward the center thereof, and means connecting said ends whereby they are adjustable automatically on the expansion and contraction of the hoop to hold said wall in a true circle at all times.

2. The combination of a cylindrical wall, a circumferentially expansible and contractible hoop surrounding said wall, brace members connected at one end to said wall, and means eccentrically connecting the other ends of said braces so as to automatically turn to reduce or enlarge said wall and retain it in the form of a perfect circle on the expansion or contraction of said hoop.

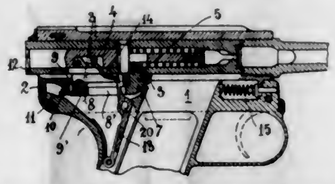
3. The combination of a cylindrical wall, a circumferentially expansible and contractible hoop surrounding said wall, brace members connected at one end to said wall, and a member disposed at the axial line of said circular wall, the inner ends of said braces being connected to said member eccentric to the axis thereof whereby said member is turned simultaneously with the expansion or contraction of said hoop and thereby retains said wall in a true circle at all times.

4. The combination of a cylindrical wall made up of interlockingly connected staves, an expansible and contractible hoop surrounding said wall, rods connected with said wall and extending inwardly toward the center of the space inclosed by said wall, and a member eccentrically connecting the inner ends of said rods at the axial line of said wall.

5. The combination of a cylindrical wall made up of interlockingly connected staves, an expansible and contractible hoop surrounding said wall, rods adjustably connected with said wall at intervals around the circumference thereof and extending toward the center of the space inclosed by said wall, and a member eccentrically connecting the inner ends of said rods.

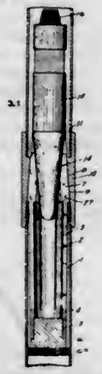
[Claims 6 to 9 not printed in the Gazette.]

1,193,768. FIREARM. ALESSANDRO CUCCURULLO, Brescia, Italy. Filed Dec. 27, 1915. Serial No. 68,908. (Cl. 42—3.)



In an automatic fire-arm having recoiling breech frame and block, a body, a breech frame reciprocating on the same, a breech block reciprocating in the breech frame, an opening in the breech frame and a notch in the breech bolt said opening and notch being intended to register with each other in the ordinary position of said parts, a spring controlled arm pivoted to the breech frame, a projection at one end of said arm, said projection being capable of engaging said opening and notch, a tail on the opposite end of said arm, and a slope on the body of the fire-arm, said slope coöperating with said tail for swinging said arm and withdrawing said projection from said notch when the breech frame recoils after firing.

1,193,769. CASING-PLUG. ROBERT W. CUSHING, Leetonia, Ohio. Filed Dec. 16, 1915. Serial No. 67,171. (Cl. 166—13.)



1. A well casing plug comprising a tubular body having an expansible locking portion, means for expanding said portion, and means on said body for closing the well casing.

2. A well casing plug comprising a tubular body, resilient members on said body arranged to engage the well casing, means on said body arranged to close said casing, and means for causing said arms to engage said casing.

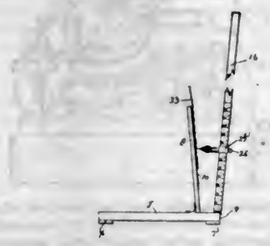
3. A well casing plug comprising a longitudinally split body of resilient material, means for expanding a portion of said body to cause the same to engage the casing wall, and a member secured to said body and arranged to close said casing.

4. A well casing plug comprising a toothed casing portion, a body member provided with toothed arms, means for bringing said toothed arms into engagement with the toothed portion of said casing, and means secured to said body member for closing said casing.

5. A removable closure for well casings comprising a casing portion, a plug, interlocking connections between said plug and casing portion, means for maintaining said members in mutual engagement, and means for breaking said engagement and removing said plug.

[Claims 6 to 22 not printed in the Gazette.]

1,193,770. GARMENT-MARKING DEVICE. ROSE B. DEAN and CLAUDE E. DEAN, Buffalo, N. Y. Filed Oct. 18, 1915. Serial No. 56,371. (Cl. 33—9.)



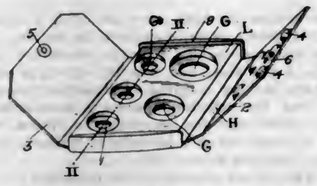
1. A garment marking device comprising a base, a rigidly mounted, upwardly extending platen secured to said base, and faced with friction producing material, a link pivotally mounted on said base, a marking stick pivoted at its lower end to said link, and a chalk-holder movably mounted on said stick.

2. A garment marking device comprising a base, a rigidly mounted, upwardly extending platen secured to said base, a link pivotally mounted on said base, a marking stick pivoted at its lower end to said link, cleats extending across the bottom of said base, one of said cleats forming a stop for limiting the outward motion of said stick, and a chalk-holder movably mounted on said stick.

3. A garment marking device, comprising a base, a rigidly mounted, upwardly extending platen secured to said base, a marking stick carried by said base and so mounted that it has a limited, hinged, side-wise motion and a limited, hinged motion at right angles thereto, and a chalk-holder movably mounted on said stick.

4. A garment marking device comprising a base, a rigidly mounted, upwardly extending platen secured to said base, a link pivotally mounted on said base, a marking stick pivoted at its lower end to said link, and a chalk-holder movably mounted on said stick.

1,193,771. COIN-PURSE. FRED EVANS, New York, N. Y., assignor to Philip Florin, New York, N. Y. Filed Dec. 8, 1915. Serial No. 65,651. (Cl. 150—37.)



1. A purse for containing coins or the like, comprising a body member and a cover member, the cover member being fixed to the under surface of the body member, the body member and the cover member having mating apertures therethrough, the apertures through the body member being adapted for receiving coins, the apertures through the body having ridges provided therein for preventing displacement of the coins through the bottom end of the apertures, and the cover member having parts adapted to be folded about the body member for retaining the coins against displacement from the upper ends of the apertures.

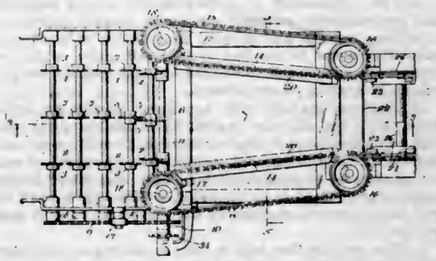
2. A purse for containing coins or the like, comprising a body member and a cover member, the body member having a seat formed through the upper surface thereof of a size to receive one or more coins laid flat in said seat, said seat being formed entirely within the marginal border of said body, and there being an opening in the bottom of said seat through which means may be introduced to force the coin or coins upwardly from said seat.

3. A purse for containing coins or the like, comprising a body member and a cover member, the body member having a seat formed through the upper surface thereof of a size to receive one or more coins laid fit in said seat, said seat being formed entirely within the marginal border of said body, and said cover member being fixed to the body beneath said seat and having an opening therethrough through which means may be inserted to force the coin or coins upwardly from said seat.

4. A purse for containing coins or the like, comprising a body member and a cover member, the body member having an opening therein for receiving one or more coins laid flat in said opening, the cover member having a part disposed beneath the body member formed with means permitting the coin or coins within the seat to be forced upwardly from said seat, and said cover member also having a part adapted to be folded over the upper surface of the body member normally to retain the coin or coins against accidental displacement from the upper end of the seat.

5. A purse for containing coins or the like, comprising a body member having a seat formed through the upper surface thereof of a size to receive one or more coins laid flat therein, the seat having a bottom wall therein, and the said bottom wall being formed with means permitting the coin or coins within the seat to be manually operated upon from beneath to force the coins upwardly from said seat.

1,193,772. DELIVERY MECHANISM FOR COATING-MACHINES. ALBERT J. FORD, New York, N. Y., assignor to The Fuchs & Lang Manufacturing Company, a Corporation of New York. Filed Oct. 27, 1915. Serial No. 58,230. (Cl. 193—1.)



1. In a delivery mechanism for a coating machine, means thrusting against opposite edges of a coated sheet for supporting such sheet in an upwardly arched condition and moving it along, such means comprising sheet-supporting members, and mechanism for imparting traveling movement to such members.

2. A delivery mechanism for a coating machine, such mechanism comprising means for initially upwardly arching a coated sheet, and means thrusting against opposite edges of the sheet for further upwardly arching the sheet and for supporting and moving the sheet along in the upwardly arched condition.

3. A delivery mechanism for a coating machine, such mechanism comprising means for initially upwardly arching a coated sheet, and means for gradually pushing toward each other opposite edges of the sheet as it travels along for further upwardly arching the sheet so as to support it by its edges only in the upwardly arched condition.

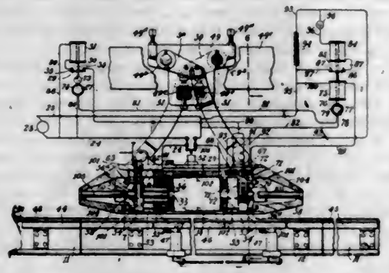
4. A delivery mechanism for a coating machine, such mechanism comprising means for initially upwardly arching a coated sheet, and carrier devices abutting opposite edges of the sheet and forming converging guideways so that the sheet is further upwardly arched and supported at its edges only as it is carried along.

5. In a delivery mechanism for a coating machine, a sheet-receiving device having a plurality of upwardly-projecting points for receiving and supporting a coated sheet upon its freshly coated side, and carrier devices abutting

opposite edges of the sheet for supporting such sheet in an upwardly arched condition and moving it along supported only by the thrust of the carrier devices against its edges.

[Claims 6 to 17 not printed in the Gazette.]

1,193,773. MAGNETIC DETECTOR APPARATUS FOR RAILWAYS. AUSTEN H. FOX, New York, and ARNOLD W. LENDEROTH, Stapleton, N. Y. Filed Aug. 8, 1912. Serial No. 713,965. (Cl. 246—25.)



1. In a railway control or signal system, the combination of a railway having an armature in the roadway thereof, a railway vehicle, and a detector carried by said vehicle and including a magnet member pivoted to oscillate toward and from said armature, transversely of the direction of vehicle travel.

2. The combination of a running rail having magnetic and non-magnetic sections, a detector magnet carried by a railway vehicle and pivoted to oscillate in a vertical plane transverse to the line of said rail under control of the latter, and means controlled by said magnet for giving an indication on the vehicle.

3. The combination with a railway having an armature rail, of a detector carried by a vehicle above said rail and comprising a magnet member pivoted on an axis parallel to the rail passing substantially through the center of gravity of said magnet member, the latter having pole-pieces adapted to be attracted downwardly toward the rail, and a switch operated by the movement of said magnet member.

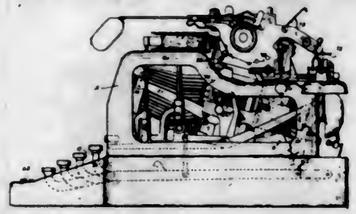
4. The combination with a railway having an armature rail, of a detector mounted to travel above said rail and comprising a gravity-balanced magnet pivoted to swing in a plane transverse to the line of travel, a spring for retracting said magnet, and a switch operated by the magnet.

5. The combination with a railway having an armature rail, of a detector mounted to travel above said rail and comprising a magnet member pivoted to swing its pole toward and from the rail, and stop members contacting in a substantially vertical plane for limiting the rail-approaching movement of said magnet member.

[Claims 6 to 30 not printed in the Gazette.]

1,193,774. TYPE-WRITING MACHINE. WILLIAM R. FOX, Grand Rapids, Mich. Filed Oct. 18, 1909. Serial No. 523,240. (Cl. 197—22.)

1. In a typewriting machine, the combination of a suitable base containing the key levers and their pivotal supports; frame sides carried on said base; a cross top bar toward the rear of said machine for carrying escapement mechanism; a carriage supporting bar containing suitable ways resting upon the said side pieces, with a carriage thereon; transverse bars secured to said side pieces and resting on the said base for carrying ribbon mechanism; a shiftable segment for carrying the type-bar hangers and type-basket secured by suitable shifting connections to the sides of the said frame and suitable casings to each side for incasing and protecting the working parts, coacting for the purpose specified, the said several parts with their attached mechanism being capable of separate manufacture.



2. In a typewriting machine, the combination of a suitable base with cross bars carrying the key levers and their intermediate connecting parts; frame sides supported on the said base; suitable cross bars on the said sides, a rear bar for carrying escapement mechanism, and a pair of front bars for carrying the ribbon mechanism; a transverse carriage bar support containing suitable ways and means for securing it to the frame sides; and a carriage with balls and ball-races supported on the said carriage ways, all capable of construction as separate devices whereby the various separate devices can be constructed separately and assembled together, coacting for the purpose specified.

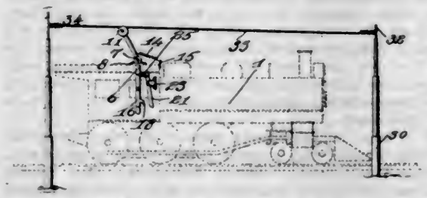
3. In a typewriting machine, a base casting containing the key levers with their fulcrums; sides arranged to rest on said base, cross bars on said base carrying the fulcrums for the intermediate levers; cross bars on the said sides for supporting the escapement dog mechanism and ribbon mechanism independently; a type-bar segment pivotally supported on said sides; a detachable carriage-bar support across the top of the said machine; and a carriage extending longitudinally thereof, coacting for the purpose specified.

4. A typewriting machine, provided with a frame divided up into unitary parts to support the various mechanisms of the machine each as a unitary structure; a base carrying the keys; sides affording connections and support to the type-bar segment; a cross bar affording a support to connections for intermediate levers; an upper rear bar affording a support for a unitary escapement dog mechanism; cross bars for carrying ribbon mechanism; a cross bar affording a support for a unitary carriage construction; and a casing surrounding the same, coacting as specified.

5. A typewriting machine, provided with a frame divided up into unitary parts to support the various mechanism of the machine, each as a unitary structure; a base carrying the keys; sides for carrying the type-bar segment; a cross bar for carrying intermediate levers; an upper rear bar for carrying a unitary escapement dog mechanism; cross bars for carrying the ribbon mechanism; and a cross bar for carrying a unitary carriage construction, coacting as specified.

[Claims 6 to 22 not printed in the Gazette.]

1,193,775. AUTOMATIC TRAIN-STOP. GREEN B. GARRISON, Thayer, Mo. Filed May 14, 1915. Serial No. 28,184. (Cl. 246—59.)



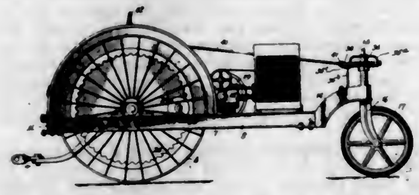
1. In a train stop, the combination with a railway track and a vehicle movable thereon, of an elevated inclined track member, a lever pivoted on the vehicle, said lever having connection with the control apparatus of the vehicle and adapted to engage the track member at times to gradually operate said control apparatus to obtain a service stop.

2. A train stop, including, in combination with a railway track and a vehicle movable thereon, a track ramp, a lever on the vehicle engageable with said track ramp, throttle closing means carried by the lever, means controlled by the lever for operating the engineer's valve, said track ramp being slightly inclined throughout its length to slowly operate the throttle and air valve to obtain a service stop.

3. In an automatic train stop, the combination with a railway track and a vehicle movable thereon, a yieldable track ramp disposed in parallelism to the path of travel of the vehicle and slightly inclined throughout its length, a lever pivoted on the vehicle engageable with the track ramp, a pawl member carried by the lever, a rigid arm carried by said lever, and a second lever pivoted for actuation by said first mentioned lever, as and for the purpose set forth.

4. In an automatic train stop, the combination with a trackway and a vehicle movable thereon, a yieldable track ramp slightly inclined throughout its length, a lever pivoted on the vehicle engageable with the track ramp, a pawl member carried by the lever for engagement with the throttle lever, an arm associated therewith for operating the air-valve and sand supply.

1,193,776. PLOW-TRACTOR. WILLIAM L. GILE, Ludington, Mich., assignor to Justus S. Stearns, Ludington, Mich. Filed Mar. 22, 1916. Serial No. 85,874. (Cl. 97—81.)

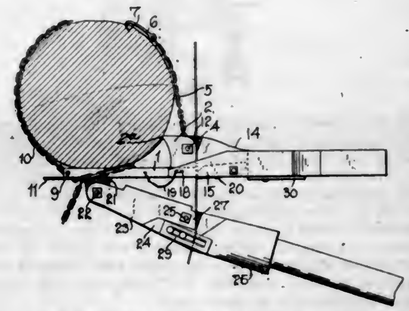


1. In a plow tractor, the combination of a pair of coaxial traction wheels at the sides of the tractor respectively, a single front steering wheel substantially alined longitudinally with one of the traction wheels, said longitudinally alined steering and traction wheels being disposed at the furrow side of the tractor and adapted to travel in the same furrow, a frame supported by said traction and steering wheels, differential gearing between the traction wheels and whereby both will be driven, and a motor mounted on the frame and connected to drive said gearing, said single front wheel when traveling in a furrow acting to automatically steer the tractor, said gearing causing the traction wheels to be driven at relatively different speeds in steering the tractor responsively to the front furrow wheel.

2. In a plow tractor, the combination of a pair of coaxial traction wheels at the sides of the tractor respectively, a single front steering wheel substantially alined longitudinally with one of the traction wheels, said longitudinally alined steering and traction wheels being disposed at the furrow side of the tractor, and adapted to travel in the same furrow, a frame supported by said traction and steering wheels, differential gearing between the traction wheels and whereby both will be driven, a motor mounted on the frame and connected to drive said gearing, said single front wheel when traveling in a furrow acting to automatically steer the tractor, said gearing causing the traction wheels to be driven at relatively different speeds in steering the tractor responsively to the front furrow wheel, and means for limiting the lateral turning of the steering wheel.

3. In a plow tractor, the combination of a pair of coaxial traction wheels at the sides of the tractor respectively, a single front steering wheel substantially alined longitudinally with one of the traction wheels, said longitudinally alined steering and traction wheels being disposed at the furrow side of the tractor and adapted to travel in the same furrow, a frame supported by said traction and steering wheels, differential gearing between the traction wheels and whereby both will be driven, a motor mounted on the frame and connected to drive said gearing, said single front wheel when traveling in a furrow acting to automatically steer the tractor, said gearing causing the traction wheels to be driven at relatively different speeds in steering the tractor responsively to the front furrow wheel, a lost motion connection for permitting limited lateral turning of said steering wheel, and mechanism for adjusting and turning the steering wheel.

1,193,777. WIRE-STRETCHER. WILLIAM SHERMAN GRAHAM, Ukiah, Cal. Filed Feb. 19, 1916. Serial No. 79,390. (Cl. 254—73.)



1. A wire stretcher including a plate, a lever pivotally engaged with one end portion of the plate, a holding pawl carried by the lever and coacting with the adjacent end of the plate, said lever being provided with an extension adapted to overlie a side wall of the plate, and means coacting with the extension and the plate for holding the lever against movement independently of the plate.

2. A wire stretcher including a plate, a lever pivotally engaged with one end portion of the plate, a holding pawl carried by the plate and coacting with the adjacent end of the plate, and a turn button carried by the lever and coacting with the pawl to lock said pawl against movement in one direction.

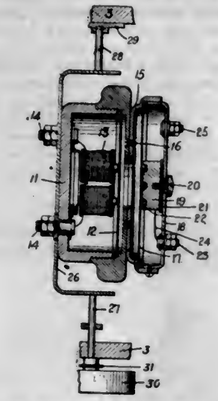
3. A wire stretcher comprising a plate, an arm pivotally engaged with the plate, a lever pivotally engaged with the outer extremity of the arm, the adjacent ends of the lever and arm coacting to afford clamping jaws, and an endwise movable member carried by the arm and adapted to overlie the adjacent end of the lever, said movable member being of such a length as to overlie the adjacent end of the lever irrespective of the swinging adjustment of the lever relative to the arm.

1,193,778. RECEIVING APPARATUS FOR RADIO TRANSMISSION SYSTEMS. ALFRED H. GREBE, Richmond Hill, N. Y., asignor to Eugene B. Miller, Richmond Hill, N. Y. Filed Nov. 2, 1914. Serial No. 869,783. (Cl. 179—170.)

1. A receiving apparatus comprising the combination of a receiving circuit, a telephone receiver connected thereto, a microphone including granular material mounted opposite said receiver, means for varying the angular position of the microphone whereby the degree of conductivity of the microphone is varied and a battery and a telephone receiver connected in circuit with the microphone, substantially as described.

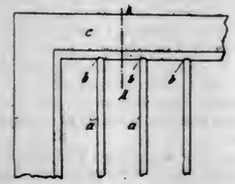
2. A receiving apparatus comprising the combination of a receiving circuit, a telephone receiver connected in said circuit, a microphone including granular material secured to said receiver, means for effecting angular adjustment of the receiver and microphone whereby the

degree of conductivity of the microphone is varied and a battery and a telephone receiver connected in circuit with the microphone, substantially as described.



3. A receiving apparatus comprising the combination of a receiving circuit, a telephone receiver connected therein, a microphone including granular material, means for securing the receiver and microphone together with their diaphragms opposite each other and a closed chamber between the diaphragms, means for pivotally mounting the combined receiver and microphone and permitting angular adjustment thereof whereby the degree of conductivity of the microphone is varied and a battery and telephone receiver connected in circuit with the microphone, substantially as described.

1,193,779. FILTERING-FRAME FOR FILTER-PRESSES. WLADIMIR GUERRERO, Madrid, Spain. Filed Mar. 17, 1915. Serial No. 14,894. (Cl. 210—13.)

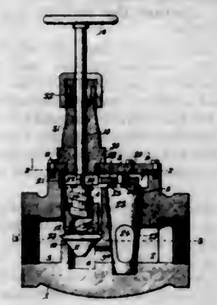


1. A filter element for filter-presses comprising a border frame having sockets in its inner edge, and a double grate provided within the frame and affording a free space between its side portions, said grate consisting of elongated members including parallel side portions and transverse connecting portions, the latter portions alone being engaged in the frame sockets and the side portions being substantially flush with the opposite faces of the frame.

2. A filter element for filter-presses comprising a border frame having sockets in its inner edge in the form of transverse grooves, and a double grate provided within the frame and affording a free space between its side portions, said grate consisting of elongated members including parallel side portions and transverse connecting portions, the latter portions alone being engaged in the socket-forming grooves of the frame.

1,193,780. STEAM-VALVE. PLUMUS P. HAAG, Coffeyville, Kans. Filed Sept. 10, 1915. Serial No. 50,000. (Cl. 137—4.)

1. A valve structure comprising a casing having a passageway for fluid therethrough, communicating spaced-apart valve chambers intersecting the passageway at right angles thereto and in parallel relation to each other, valves mounted within the respective chambers, one of the valves being rotatable and the other reciprocable, a manipulating means connected to the reciprocable valve to lower and raise the valve to and from its seat, and means connecting the manipulating means to the rotatable valve for actuating the latter simultaneously with the reciprocable valve, said connecting means being separable, whereby when the valves are in their closed position, the reciprocable valve may be bodily removed without disturbing the other valve.



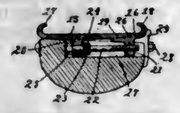
2. In a valve, a casing having an inlet, and an outlet, separate valve chambers provided in the casing between the inlet and outlet, and a channel leading from the side of one of the valve chambers to a point below the valve seat of the other chamber, in combination with a rotatable valve located in the chamber nearest the inlet, a reciprocable valve mounted in the other chamber, a rotary valve stem, means connecting the stem to the reciprocable valve to raise and lower it from its seat, and separate means connecting the said stem with the rotatable valve to turn the latter, the last-named connecting means being separable, whereby the reciprocable valve may be removed bodily from the valve structure at will without disturbing the position of the rotatable valve.

3. A valve comprising a casing having a passage therethrough with inlet and outlet openings, a rotatable tapered valve adjacent to the inlet opening and at right angles to the passage through the casing, a reciprocatory valve in the casing movable in a direction parallel with the longitudinal axis of the first named valve and located adjacent to the outlet opening, means individual to the valves for retaining them in place, and means common to both valves for simultaneously rotating the first named valve and reciprocating the second named valve to control the flow of fluid through the valve, whereby when the valves are closed the reciprocatory valve may be bodily removed from the casing without opening the passage therethrough.

4. A valve structure comprising a casing with a passage-way therethrough and with valve chambers intersecting the passage way and spaced apart lengthwise of said passage-way, and said casing being also provided with a chamber into which each valve chamber opens, a valve in each valve chamber, interconnected actuating means for moving both valves simultaneously to the open or closed position and located in the last named chamber, manipulating means for the actuating means, separate, removable retaining means in the last named chamber for the valves, and a removable closure for the last named chamber, whereby, when the valves are closed, the valve remote from the inlet to the casing may be bodily removed without opening the passage way through the casing.

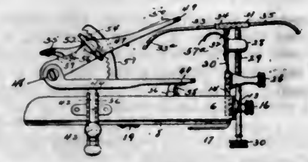
1,193,781. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. CHARLES F. HEINIG, Indianapolis, Ind., assignor of one-fourth to Morris L. Baugham, Indianapolis, Ind. Filed Aug. 25, 1913. Serial No. 786,511. (Cl. 152—21.)

1. In combination with a felly, a rim consisting of two circular tire clamping parts both separable from the felly and having their inner circumferential border portions relatively interfitting and overlapping transversely, radially extending lugs carried by the respective parts and transverse clamping screws being mounted to turn freely in one lug and to engage threads in the other lug and means for fixing said screw against longitudinal movement with respect to one of said lugs.



2. A demountable rim for vehicle wheels consisting of two circular members both separable from the felly, one of said members overlapping the other member along the inner edge portions thereof, opposing bosses arranged at intervals around the circumferences of said members, transverse threaded bolts passing through the bosses on one member and free to turn therein, said bolts having a nut on one side of each of said bosses and a collar preventing longitudinal movement of the bolt on the other side thereof and having threaded ends to engage the opposing member and means to clamp said members to the felly, substantially as described.

1,193,782. MOUTH-GAG AND TONGUE-DEPRESSOR. THOMAS M. HENDERSON, Pendleton, Oreg. Filed Nov. 22, 1915. Serial No. 62,753. (Cl. 128—24.)



1. In a device of the character described the combination with a supporting frame, of members carried thereby arranged to engage above and below the lower jaw of a patient to clamp said frame to the lower jaw, a tongue depressor and means for removably mounting said tongue depressor with relation to said frame.

2. The combination with a frame, means arranged to engage above and below the lower jaw of a patient for clamping said frame to the lower jaw, a tongue depressor support carried by said frame, a tongue depressor having removable engagement with said support, and means for adjusting said support vertically with relation to said frame.

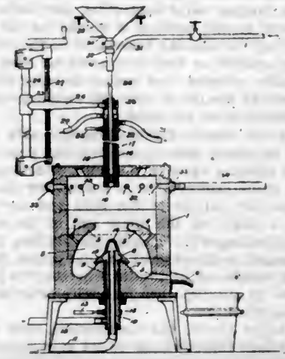
3. In a device of the character described the combination with a frame comprising a pair of side members adjustable toward and from each other, of means arranged to engage above and below the lower jaw of a patient for clamping said frame to the lower jaw, a vertically movable slide supported from said frame, a tongue depressor and a keeper plate for said tongue depressor mounted upon said slide.

4. In a device of the character described the combination with a frame comprising a pair of side members adjustable toward and from each other, of means arranged to engage above and below the lower jaw of a patient for clamping said frame to the lower jaw, a vertically movable slide supported from said frame, a tongue depressor and a keeper plate hinged to said slide.

5. In a device of the character described the combination with a frame comprising a pair of side members adjustable toward and from each other, of means for clamping said frame to the lower jaw of a patient, a vertically movable slide supported from said frame, a tongue depressor and a keeper plate for said tongue depressor mounted upon said slide, and means for adjusting said keeper plate with relation to said slide.

[Claims 6 to 18 not printed in the Gazette.]

1,193,783. ART OF REDUCING METAL ORES AND FUSING OTHER MATERIALS. CHARLES B. HILLHOUSE, New York, N. Y. Filed Nov. 25, 1912. Serial No. 733,803. (Cl. 204—63.)



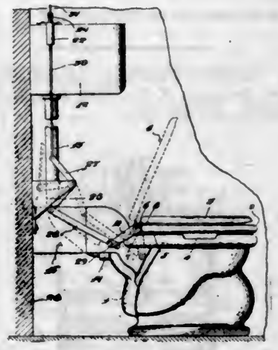
1. An improvement in the art of reducing metal ores which consists in passing finely divided ore at higher speed than that due to gravity axially through or along an electric arc area.

2. An improvement in the art of reducing metal ores which consists in passing finely divided ore at higher speed than that due to gravity axially longitudinally through and along an electric arc.

3. An improvement in the art of reducing material which consists in passing it vertically when comminuted axially through or along an electric arc area at accelerated speed beyond that due to gravity, the axis of the arc being vertically arranged.

4. An improvement in the art of reducing material which consists in passing it by means of a gas under pressure at a speed greater than that due to gravity axially through or along an electric arc area whose axis is vertically arranged, the said material falling upon a surface included in and heated by the arc circuit.

1,193,784. WATER-CLOSET. EDWIN C. HINKLE, Hempstead, N. Y. Filed Mar. 14, 1916. Serial No. 84,104. (Cl. 4—5.)



1. In a water closet, the combination with a bowl, a flush tank, a flushing pipe connecting the tank with the bowl, and a flushing valve controlling the outlet of water from the tank to the bowl, of a hinged lid on the bowl, means for stopping the opening movement of the lid while the latter is in an inclined position whereby the lid is compelled to fall by gravity to its closed position when

manually released, and means operated by the closing movement of the lid to open the flush valve to the tank, substantially as described.

2. In a water closet, the combination with a bowl, a flush tank, a flushing pipe connecting the tank with the bowl, and a flushing valve controlling the outlet of water from the tank to the bowl, of a hinged lid on the bowl, means limiting the opening movement of the lid whereby the lid is compelled to fall by gravity to closed position when manually released, and means operated by the closing movement of the lid to open the flushing valve in the tank, substantially as described.

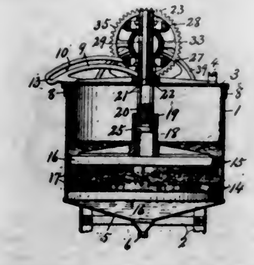
3. In a water closet, the combination with a bowl, a flush tank, an outlet pipe connecting the flush tank and bowl, and a flushing valve in the tank, of a hinged lid for the bowl, a crank arm secured to move with the lid, a rod supported on the outside of the tank and moved by the crank arm, a finger on the upper end of the rod, means operated by the finger for opening the flushing valve when the lid is moved to closed position, and means for limiting the opening movement of the lid whereby the lid is compelled to fall by gravity when manually released, substantially as described.

4. In a water closet, the combination with a bowl, a flush tank above the bowl, an outlet pipe connecting the flush tank and bowl, a flushing valve in the tank, a shaft supported on the bowl, a lid secured to the shaft, a crank arm secured on the shaft, a stationary support, a bell-crank-lever connected to the stationary support, a link connecting one end of the bell-crank-lever with the crank arm, a rod secured to the other end of the crank arm, a guide on the tank supporting said last-mentioned rod, means operated by the rod for opening the flushing valve when the lid is moved to closed position, and means limiting the opening movement of the lid whereby the lid is compelled to fall by gravity when manually released, substantially as described.

5. In a water closet, the combination with a bowl, a flush tank above the bowl, an outlet pipe connecting the flush tank and bowl, and a flushing valve in the tank, of a plate secured on the tank and having two brackets thereon, a lever pivotally supported between its ends on one of the brackets, a flexible device connecting one end of said lever with the flushing valve, a tripping lever pivotally supported between its ends on the other of said brackets and pivotally connected at one end to the first-mentioned lever, a lid hinged to the bowl, means operated by the pivotal movement of the lid for moving the tripping lever to open the flushing valve, and means limiting the opening movement of the lid whereby the lid is compelled to fall by gravity when manually released, substantially as described.

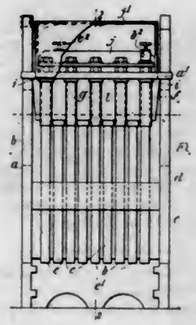
[Claim 6 not printed in the Gazette.]

1,193,785. GLOVE-WASHING MACHINE. ADON J. HOFFMAN, Syracuse, N. Y. Filed June 7, 1912. Serial No. 702,304. (Cl. 68—37.)



In a washing machine of the class described, the combination of a circular vat having diametrically opposite rearwardly extending brackets provided with lengthwise guide slots, a circular cover for the vat having diametrically opposite radial lugs riding in said slots and forming pivots about which the cover may turn, and a rotary brush-supporting shaft co-axial with the cover and movable therewith about said pivots.

1,193,786. ELECTROLYTIC APPARATUS FOR THE PRODUCTION OF LIQUOR FOR BLEACHING AND OTHER PURPOSES. ALBERT HOLLIDAY, Wimbledon, London, England. Filed Dec. 22, 1915. Serial No. 68,135. (Cl. 204—59.)



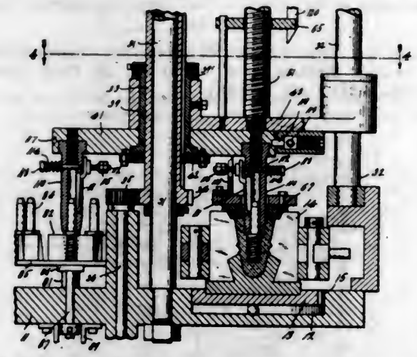
1. Electrolytic apparatus for the production of liquor for bleaching and other purposes comprising a portable frame adapted to be inserted in a receptacle containing the solution, said frame having a top bar and a removable lower support, a plurality of electrodes independently connected to and depending from said top bar and normally resting upon said lower support so as to permit of any separate electrode being removed from the frame when the lower support is displaced.

2. Electrolytic apparatus for the production of liquor for bleaching and other purposes comprising a portable frame adapted to be inserted in a receptacle containing the solution, said frame having a top bar and a removable lower support, a plurality of electrodes independently connected to and depending from said top bar so as to normally rest upon said lower support and to permit of the separate detachment of any electrode when the lower bar is removed said electrodes for this purpose being secured to the top plate by means of metal studs and having a rubber washer interposed between the upper ends of the electrodes and the said top plate.

3. Electrolytic apparatus for the production of liquor for bleaching and other purposes comprising a portable frame adapted to be inserted in a receptacle containing the solution, said frame having a fixed top bar and a removable lower support, a plurality of electrodes forming anodes and cathodes and detachably connected to and depending from said top bar so as to normally rest upon said lower support, metal studs nuts, and rubber washers for connecting the said electrodes to the said top bar, a pair of common bus bars connected respectively to the anodes and cathodes terminal fittings on said bus bars and a protective cover for inclosing the bus bars and the terminal fittings.

4. Electrolytic apparatus for the production of liquor for bleaching and other purposes comprising a portable frame adapted to be inserted in a receptacle containing the solution, said frame having a top bar and a removable lower support, a plurality of electrodes forming anodes and cathodes and detachably and independently connected to and depending from said top bar so as to normally rest upon said lower support, elongated lugs on said electrode arranged in series for the anodes and cathodes and a deflecting plate arranged between the two series of the lugs and serving to assist in the circulation of the liquid in the vessel.

1,193,787. GLASS-WORKING MACHINE. MINOT K. HOLMES, Muncie, Ind., assignor to Hemingray Glass Company, Muncie, Ind., a Corporation of Kentucky. Filed Mar. 17, 1913. Serial No. 754,771. (Cl. 49—36.)



1. In a glass working machine, the combination of a series of molds, means for bringing said molds successively to pressing position, a stud magazine, means for bringing said magazine to successive delivery positions, a presser head arranged to coact with the molds when they are brought successively to pressing position, a transfer arm rotatably mounted upon the presser head, means carried by the ends of said transfer arm for engaging and retaining a stud from the magazine, and means for intermittently shifting the transfer arm to bring its stud engaging means alternately into alinement with a portion of the magazine and a mold upon the mold table, and means associated with the presser head for releasing the stud-retaining means.

2. In a glass working machine, the combination of a series of molds, means for bringing said molds successively to pressing position, a stud magazine, means for bringing said magazine to successive delivery positions, a presser head arranged to coact with the molds when they are brought successively to pressing position, a transfer arm mounted upon the presser head, means carried by said transfer arm for engaging and retaining a stud from the magazine, and means for intermittently shifting the transfer arm to bring its stud engaging means alternately into alinement with a portion of the magazine and a mold upon the mold table, and means associated with the presser head for releasing the stud-retaining means.

3. In a glass working machine, the combination of a series of molds, means for bringing said molds successively to pressing position, a stud magazine, means for bringing said magazine to successive delivery positions, a presser head arranged to coact with the molds when they are brought successively to pressing position, a transfer arm rotatably mounted upon the presser head, means carried by the ends of said transfer arm for engaging and retaining a stud from the magazine, and means for intermittently shifting the transfer arm to bring its stud engaging means alternately into alinement with a portion of the magazine and a mold upon the mold table, said stud-engaging means being then in substantial alinement with the line of action upon the presser head.

4. In a glass working machine, the combination of a series of molds, means for bringing said molds successively to pressing position, a stud magazine, means for bringing said magazine to successive delivery positions, a presser head arranged to coact with the molds when they are brought successively to pressing position, a transfer arm mounted upon the presser head, means carried by said transfer arm for engaging and retaining a stud from the magazine, and means for intermittently shifting the transfer arm to bring its stud engaging means alternately into alinement with a portion of the magazine and a mold upon the mold table, said stud-engaging means being then in substantial alinement with the line of action upon the presser head.

5. In a glass working machine, the combination of a series of molds, means for bringing said molds successively to pressing position, a stud magazine, means for advancing said stud magazine step-by-step, a guide rod arranged adjacent the mold carrying means, a tubular shaft journaled upon said guide rod, means for intermittently rotating said tubular shaft upon said rod, a presser head reciprocably mounted upon said tubular shaft, a transfer arm carried by said presser head and splined upon said tubular shaft, means carried by said transfer arm for engaging and retaining studs presented by the magazine, and means carried by the presser head for withdrawing the stud-retaining means.

[Claim 6 not printed in the Gazette.]

1,193,788. GLASS-FURNACE. MINOT K. HOLMES, Muncie, Ind., assignor to Hemingray Glass Company, Muncie, Ind., a Corporation of Kentucky. Filed June 8, 1914. Serial No. 843,658. (Cl. 49—55.)



1. A glass furnace comprising a main bed, a floor at the delivery end of the main bed elevated above the main bed and lying below the normal level of glass, a delivery end wall erected at the delivery end of said elevated floor and having a delivery opening of material vertical extent therethrough, a flow block provided with a delivery chamber arranged to cover said opening, said flow block having a delivery opening formed through its bottom, and platforms erected upon said elevated floor with their upper faces above the normal glass level and laterally separated to form a channel registering with the opening in the delivery end of the wall.

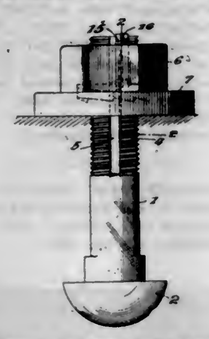
2. A glass furnace comprising a main bed, a floor at the delivery end of the main bed elevated above the main bed and lying below the normal level of glass, a delivery end wall erected at the delivery end of said elevated floor and having a delivery opening of material vertical extent therethrough, a flow block provided with a delivery chamber arranged to cover said opening, said flow block having a delivery opening formed through its bottom, and platforms erected upon said elevated floor and laterally separated to form a channel registering with the opening in the delivery end of the wall.

3. A glass furnace comprising a main bed, a floor at the delivery end of the main bed elevated above the main bed and lying below the normal level of glass, a delivery end wall erected at the delivery end of said elevated floor and having a delivery opening of material vertical extent therethrough, and a flow block provided with a delivery chamber arranged to cover said opening, said flow block having a delivery opening formed through its bottom.

1,193,789. NUT-LOCK. EMILE HOLOFFE, West Frankfort, Ill. Filed Aug. 28, 1915. Serial No. 47,848. (Cl. 151—11.)

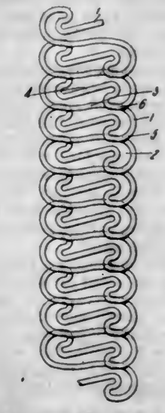
In a device of the class described, a bolt, a washer held against rotation with relation to the bolt and provided with a series of ratchet teeth surrounding its bolt opening, a nut threaded upon the bolt and provided in its face which is to contact the washer with an annular recess surrounding the bolt opening in the nut, the inner wall of the recess being plane, the said nut being provided with a threaded bore extending parallel to its axis and opening through the said inner wall of the recess

and the said wall of the recess having a seat formed therein at the inner end of the bore and of substantially the same dimensions as the said bore, a spiral lock washer fitted to the bolt and having an end coöperating with the ratchet teeth of the first mentioned washer and provided at its other end with a projection designed to engage within the said seat in the inner wall of the recess in the nut and to substantially fill the same, and a screw thread-



ed into the said bore in the nut and adjustable to have its inner end lie inwardly of the seat to permit of engagement of the said projection in the seat and also adjustable to force the said projection from engagement in the seat and to have its inner end substantially close the seat and lie substantially flush with the said inner wall of the recess whereby in such adjusted position of the said screw the nut may be freely rotated with relation to the said lock washer.

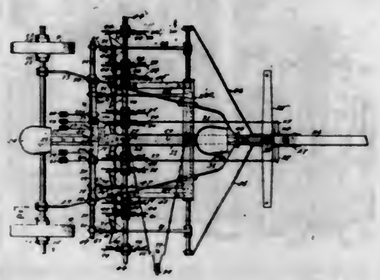
1,193,790. GARMENT-STAY. ELBERT L. HYDE, Pittsburgh, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,258. (Cl. 2—76.)



1. A garment stay, comprising wire bent back and forth in sinuous form from edge to edge of the stay to form a series of loops or eyes lying along the edges of the stay and connected by transverse portions or crossings, alternate crossings being respectively sinuous and substantially straight from edge to edge of the stay, the outer end portion of each loop being bent in the plane of the stay toward one end and then inwardly in said plane toward the center line of the stay.

2. A garment stay, comprising wire bent back and forth in sinuous form from edge to edge of the stay to form a series of loops or eyes lying along the edges of the stay and connected by transverse portions or crossings, alternate crossings being respectively sinuous and substantially straight from edge to edge of the stay, the outer end portion of each loop being bent in the plane of the stay toward one end and then inwardly in said plane toward the center line of the stay, the loops or eyes along opposite edges of the stay being bent toward its opposite ends.

1,193,791. BEET-BLOCKING MACHINE. JOSEPH LEWIS JENSEN, Richfield, Utah. Filed Jan. 25, 1916. Serial No. 74,242. (Cl. 97—47.)



1. A device of the class described, comprising a frame, wheels thereunder, a seat on said frame, a gang of plows, a shaft, a plurality of cutter units on said shaft, a guide-wheel, means for actuating said guide-wheel, means for raising said plows and cutters simultaneously, and means for raising each of said plows individually, all of said actuating means being adjacent said seat.

2. A device of the class described, comprising a frame, wheels thereunder, means for guiding the same, a draw-bar, a shaft, a plurality of straps connecting said draw-bar and shaft, a plurality of cutting units on said shaft, a plurality of plows drawn by said bar, and means for actuating said cutting units and said plows into and out of operative positions, jointly, or separately.

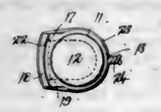
3. A device of the class described, comprising a frame, wheels thereunder, a seat on said frame, a gang of plows, a shaft, a plurality of cutter units on said shaft, means for raising said cutters, means connecting said cutter raising means with said plows whereby the latter are raised in the raising of the former, and means for raising each of said plows individually, all of said actuating means being adjacent said seat.

4. A device of the class described, comprising a frame, wheels thereunder, a seat thereon, a gang of plows, a plurality of telescoped elements in operative connection with the respective plows, a pedal on each of said elements whereby any one of said plows may be raised individually, a shaft, a plurality of cutter units thereon, and means for raising said cutters and plows simultaneously.

5. A device of the class described, comprising a frame, wheels thereunder, means for guiding the same, a draw-bar, a shaft, a plurality of straps connecting said draw-bar and shaft pivotally, a plurality of cutting units on said shaft, a plurality of plows drawn by said bar, a supplemental shaft, a plurality of arms carried thereby, links connecting the respective arms with said first named shaft, and means for rocking said supplemental shaft to raise said cutter units and said plows simultaneously.

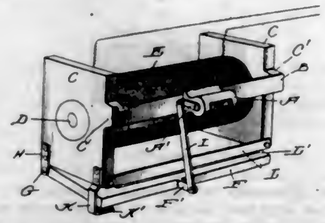
1,193,792. BOTTLE. LOUIS JILLY, Clinton, Iowa. Filed Apr. 19, 1913. Serial No. 762,391. (Cl. 215—77.)

A bottle having a laterally-extending enlargement formed adjacent the top thereof, a rectangular mouth presenting a slightly arcuate face formed in said enlargement upon the side of said bottle, a circumferentially-extending groove formed in said enlargement terminating adjacent opposite walls of the mouth, curved rims defining the upper and lower edges of said mouth, an arcuate cap having a groove formed in the curved face thereof, said second-mentioned groove being alinable with said first named groove, said cap adapted to be seated over said mouth, a plug formed on said cap receivable within said



mouth, and a tie member carried in said grooves embracing the enlargement and cap, as and for the purpose set forth.

1,193,793. ELECTROMAGNET. RICHARD E. JONES and VICTOR ST. CLAIR MONTEITH, Hagerstown, Md. Filed Oct. 11, 1912. Serial No. 725,304. (Cl. 175—336.)



An electromagnet comprising a core, rectangular pole pieces at the core ends, a cross strip connecting said cores, an armature plate hinged at its rear side to said cores, a hanger bracket carried by the front of one pole piece and acting as a stop to downward movement of the armature plate, a cushion on said bracket, a strip carried by the front edges of the pole pieces, and a cushion on said strip, said cushion acting as a stop for upward movement of the armature, as and for the purpose set forth.

1,193,794. PROCESS OF PRODUCING CHROMIUM-CONTAINING SILICATES. ADALBERT KOLB, Charlottenburg-Westend, Germany, assignor to The Permutit Company, New York, N. Y. Filed Mar. 28, 1916. Serial No. 87,328. (Cl. 23—13.)

1. The process of producing exchange silicates which comprises precipitating a solution containing chromium with an alkaline solution containing dissolved silica and washing and drying the precipitate.

2. The process of producing exchange silicates which comprises precipitating an alkaline solution containing chromium with an alkaline solution containing dissolved silica and washing and drying the precipitate.

3. The process of producing exchange silicates which comprises precipitating a solution containing chromium with an alkaline solution containing dissolved silica and washing, pressing and drying the precipitate.

4. The process of producing exchange silicates which comprises precipitating an alkaline solution containing chromium with an alkaline solution containing dissolved silica and washing, pressing and drying the precipitate.

1,193,795. PROCESS OF BASE EXCHANGE, &C. ADALBERT KOLB, Charlottenburg-Westend, Germany, assignor to The Permutit Company, New York, N. Y. Filed Mar. 28, 1916. Serial No. 87,359. (Cl. 210—1.)

1. The process of treating liquids which comprises passing such liquids through a bed of a hard granular material containing combined chromium, alkali, silica and water.

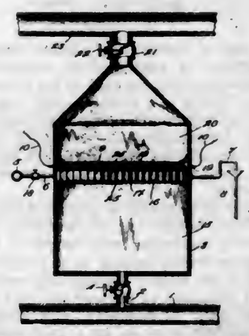
2. The process of treating liquids which comprises passing such liquids through a bed of a hard granular material containing combined chromium, the oxid of another metal, alkali, silica and water.

3. The process of purifying water which comprises passing water to be purified through a bed of hard granular material containing combined chromium, alkali, silica and water.

4. The process of purifying water which comprises passing water to be purified through a bed of hard granular material containing combined chromium, the oxid of another metal, alkali, silica and water.

5. In catalytically treating water and solutions, the process which comprises passing the liquid through a granular bed of minutely pervious material containing combined chromium, silica water and alkali and also containing a catalytically acting material.

1,193,796. METHOD OF OXIDIZING AMMONIA. WALTER S. LANDIS, Niagara Falls, N. Y., assignor to Frank S. Washburn, Nashville, Tenn. Filed Feb. 20, 1915, Serial No. 9,595. Renewed June 15, 1916. Serial No. 103,864. (Cl. 23—1.)



1. The process of oxidizing ammonia which consists in mixing air with said ammonia; passing the mixture through a catalyzing mass the temperature of which is above 500° C.; and preventing radiant heat from entering said mixture and raising its temperature above its point of dissociation just before reaching said catalyzer, substantially as described.

2. The process of oxidizing ammonia which consists in passing a mixture containing ammonia and oxygen through a heated catalyzer; and subjecting said mixture to a cooling means adapted to cut off radiant heat just before it reaches said catalyzer, substantially as described.

3. The process of oxidizing ammonia which consists in providing a mixture containing ammonia and oxygen in suitable proportions; subjecting said mixture to a cooling means adapted to cut off radiant heat just before it reaches the catalyzer; subjecting the cooled mixture to the action of the heated catalyzer; and maintaining the temperature of said catalyzer above 500° C., substantially as described.

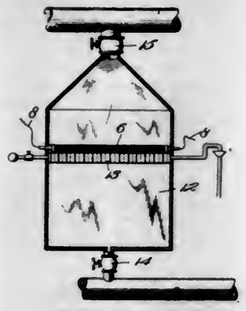
4. The process of oxidizing ammonia which consists in mixing said ammonia with air in excess; cooling said mixture and protecting it from radiant heat; and subjecting the cooled mixture to the action of a heated catalyzer, substantially as described.

1,193,797. PROCESS OF AND APPARATUS FOR OXIDIZING AMMONIA. WALTER S. LANDIS, Niagara Falls, N. Y., assignor to Frank S. Washburn, Nashville, Tenn. Filed Feb. 20, 1915. Serial No. 9,596. (Cl. 23—1.)

1. The process of oxidizing ammonia which consists in providing a suitable mixture of ammonia and air; and subjecting said mixture to the action of a catalyzer uniformly heated to a predetermined temperature, substantially as described.

2. The process of oxidizing a mixture containing ammonia and oxygen in predetermined proportions, which con-

sists in subjecting said mixture to the action of a catalyzer uniformly heated to a predetermined degree substantially throughout its mass, and maintaining said temperature at a predetermined point while the reaction proceeds, substantially as described.



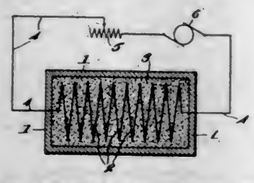
3. The process of oxidizing a mixture containing ammonia and oxygen in predetermined proportions, which consists in subjecting said mixture to the action of a catalyzer uniformly heated to a predetermined degree throughout its mass, while preventing the heat radiated by said catalyzer from decomposing said ammonia before reaching said catalyzer; and maintaining said temperatore at a predetermined point while the reaction proceeds, substantially as described.

4. The process of oxidizing a gaseous mixture containing ammonia and oxygen in predetermined proportions, which consists in subjecting said mixture to the action of a catalyzer uniformly heated to a predetermined degree throughout its mass; cooling said mixture before it reaches said catalyzer to prevent the heat radiated by said catalyzer from decomposing said ammonia; and maintaining said temperature at a predetermined point while the reaction proceeds, substantially as described.

5. The proces of oxidizing ammonia which consists in providing a suitable mixture of ammonia and air; subjecting said mixture to the action of a catalyzer of a uniform temperature throughout its active surface; and suitably controlling said temperature, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,193,798. CATALYZER APPARATUS FOR OXIDIZING AMMONIA. WALTER S. LANDIS, New York, N. Y., assignor to Frank S. Washburn, Nashville, Tenn. Original application filed Feb. 20, 1915, Serial No. 9,596. Divided and this application filed Jan. 27, 1916. Serial No. 74,671. (Cl. 204—31.)



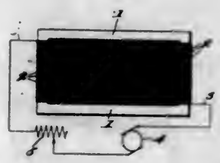
1. The herein described new catalyzer element comprising an electrical conductor joined in an electric circuit, and associated with a powdered catalyzing material adapted to be uniformly heated throughout its active mass by said conductor, substantially as described.

2. The herein described new catalyzer element comprising an electrical conductor joined in an electric circuit, associated with a powdered catalyzing material adapted to be uniformly heated by said conductor and having means in said circuit for controlling the energy passing through said conductor while the reaction is taking place, substantially as described.

3. The herein described new catalyzer element comprising a uniformly drawn platinum wire joined in an electric circuit, and a powdered catalyzing material adapted to be uniformly heated by said wire, substantially as described.

4. The herein described new catalyzer element comprising a uniformly drawn wire of iridium free platinum joined in an electric circuit, associated with a powdered catalyzing material and having means in said circuit for controlling the energy passing through said wire, substantially as described.

1,193,799. PLATINUM CATALYZER. WALTER S. LANDIS, New York, N. Y., assignor to Frank S. Washburn, Nashville, Tenn. Original application filed Feb. 20, 1915, Serial No. 9,596. Divided and this application filed Jan. 27, 1916. Serial No. 74,672. (Cl. 204—31.)



1. In an apparatus for oxidizing ammonia, the combination of a catalyzer adapted to be uniformly heated; means for uniformly heating said catalyzer; a cooler associated with said catalyzer; and means to regulate the temperature of said catalyzer, substantially as described.

2. In an apparatus for oxidizing ammonia, the combination of a catalyzer comprising an electric conductor adapted to be uniformly heated; an electric circuit in which said conductor is joined adapted to uniformly heat said catalyzer; a cooler associated with said catalyzer; and means to regulate the temperature of said catalyzer comprising a rheostat in said circuit, substantially as described.

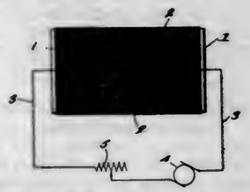
3. The herein described new catalyzing element comprising a uniformly drawn iridium free fine platinum wire joined in an electric circuit, combined with means for controlling the energy passing through said circuit, substantially as described.

4. The herein described new catalyzer element comprising substantially iridium free platinum.

5. The herein described new catalyzer element comprising substantially a wire of iridium free platinum.

[Claims 6 to 9 not printed in the Gazette.]

1,193,800. CATALYZER FOR OXIDIZING AMMONIA. WALTER S. LANDIS, New York, N. Y., assignor to Frank S. Washburn, Nashville, Tenn. Original application filed Feb. 20, 1915, Serial No. 9,596. Divided and this application filed Jan. 27, 1916. Serial No. 74,673. (Cl. 204—31.)



1. The herein described new catalyzer element comprising a wire gauze of iridium free platinum.

2. The herein described new catalyzer element comprising a wire gauze woven from a uniformly drawn wire of iridium free platinum.

3. The herein described new catalyzer element comprising a wire gauze fabric composed of uniformly drawn wire of iridium free platinum joined in an electric circuit, combined with means for controlling the energy passing through said circuit, substantially as described.

1,193,801. PROTRACTOR. WILLIAM CLAYTON LEFEBVRE, Tucson, Ariz. Filed Oct. 22, 1914, Serial No. 868,053. Renewed Jan. 12, 1916. Serial No. 71,806. (Cl. 33—75.)



1. A protractor comprising a disk, a guide for said disk, said guide having a rest plate formed on one face thereof, said plate being provided with a groove, a tongue formed on said disk for engagement with said groove, and a handle for rotating said disk.

2. A protractor comprising a disk, a guide for said disk, said guide provided with a slot and having a rest plate formed on one face thereof, said plate being provided with a groove, a tongue formed on said disk for engagement with said groove, a plate fastened to said disk, a plate fastened to said guide for engagement with the last mentioned plate, and a handle adapted to extend into said slot when the disk is revolved.

3. A protractor comprising a disk, a guide for said disk, said guide having a rest plate formed on its under face, said plate being provided with a groove, a tongue formed on said disk for engagement with said groove, a plate provided with a groove and fastened to said disk, a plate fastened to said guide, a tongue formed on said last named plate for engagement with the groove of the first mentioned plate, and a scale removably mounted on said disk.

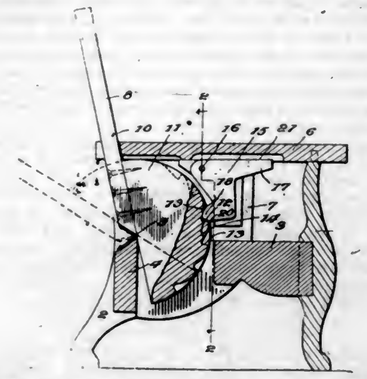
4. A protractor comprising a disk, a guide for said disk, said guide having a rest plate formed on its under face, said plate being provided with a groove a tongue formed on said disk for engagement with said groove, a plate provided with a groove and fastened to said disk, a plate fastened to said guide, a tongue formed on said last named plate for engagement with the groove of the plate fastened to the disk, a scale removably mounted on said disk, and means to hold said scale in engagement with the disk.

5. A protractor comprising a disk, a guide for said disk, said guide having a rest plate formed on its under face, said plate being provided with a groove, a tongue formed on said disk for engagement with said groove, a plate provided with a groove and fastened to said disk, a plate fastened to said guide, a tongue formed on said last named plate for engagement with the groove of the plate fastened to the disk, a scale removably mounted on said disk, and a spring clip to hold said scale in engagement with the disk.

[Claim 6 not printed in the Gazette.]

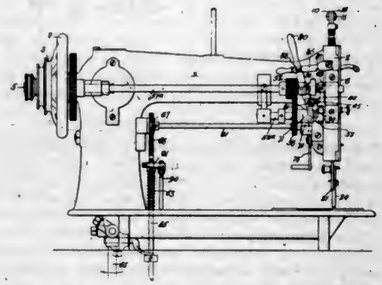
1,193,802. CHAIR. FERDINAND LENARD, Chicago, Ill. Filed Mar. 13, 1915. Serial No. 14,167. (Cl. 155—27.)

In a chair of the class described, a frame having a rear cross piece, a back hingedly connected with the said cross piece, the frame including an arm rest, a segment secured to the forward side of the back and having the mid point of its chordal side located substantially in registration with the hinge connecting the back with the cross piece, the arcuate side of the segment being presented forwardly and being provided with a series of rack teeth, and a pawl comprising a plate pivotally mounted at its rear upper corner beneath the arm rest and having its rear edge inclined downwardly and forwardly and provided at its lower end at its said rear edge with a rearwardly extending tooth for coaction with the said rack teeth, the plate being provided with a finger piece projecting forwardly from the upper end of its forward edge, the finger piece being located forwardly beyond the pivot for the plate



and the tooth upon the plate being located below the said pivot and the said plate resting by gravity with its tooth in engagement with the said rack teeth.

1,193,803. SEWING-MACHINE. RUDOLF LOEB, Camden, N. J. Filed Dec. 12, 1911. Serial No. 665,395. (Cl. 112—7.)



1. In a sewing machine, the combination of a vertically movable needle-bar, a needle carried thereby, means for raising and lowering the needle-bar, a spring tending to maintain said needle-bar in one position, means for oscillating said needle-bar in a single plane including a pivoted arm in engagement with the needle-bar, said arm serving to regulate the movement of said needle-bar in the opposite direction, and means under the control of the knee of the operator for changing the operative relation of said pivoted arm with respect to said needle-bar.

2. The combination, in a sewing machine, of a vertically movable needle-bar, a needle carried thereby, means for imparting oscillatory movement to said needle-bar, an adjustable member for regulating the extent of oscillatory movement of the needle-bar in one direction, a pivoted arm in operative engagement with the means for effecting oscillatory movement of the needle-bar for positioning the latter with respect to the means for effecting oscillation thereof, and a knee-controlled cam for effecting the operation of said arm.

3. In a sewing machine, the combination with a needle, a needle-bar carrying the same and means for moving the needle-bar vertically, of a jointed lever, means in engagement with said jointed lever to cause the latter to effect oscillating movement of said needle-bar simultaneously with its vertical movements, including a pivoted arm in operative engagement with the needle bar, means for regulating the extent of such oscillation, said jointed lever

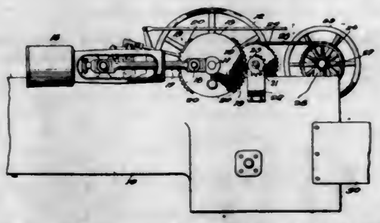
having a free end, and a spring for holding said jointed lever in contact with the means tending to move the same.

4. In a sewing machine, the combination with a vertically movable needle and a needle-bar carrying the same, of a jointed lever having a free end, a spring for effecting movement of said end in one direction, a bell-crank lever for effecting operation of said jointed lever in the opposite direction to effect oscillation of said needle, a cam controlling said bell-crank lever, and means for operating the oscillation causing mechanism whereby changes in the extent of such oscillation may be automatically effected.

5. In a sewing machine, the combination of a vertically movable needle, a jointed lever having a free end, a spring for controlling the movement of said free end, a pair of shafts, a cam on each of said shafts, a pivoted lever in engagement with said jointed lever, means for moving either one of said cams into engagement with said pivoted lever to effect oscillation of said needle, and an adjustable stop for limiting the extent of oscillation in one direction.

[Claim 6 not printed in the Gazette.]

1,193,804. DEVICE FOR OVERCOMING DEAD-CENTERS. HARRY B. LOGAN, Beaucoup, Ill., assignor of one-half to Thomas J. Logan, Beaucoup, Ill. Filed Oct. 4, 1915. Serial No. 54,003. (Cl. 74—7.)



1. The combination with a reciprocating engine including a cylinder piston connecting rod and crank plate, of gear segments carried by the crank plate at opposite sides thereof, a counter-shaft mounted for rotation, a mutilated gear carried by the counter shaft, the mutilated portion of the gear being disposed normally next to the paths of the segments, and means for rotating said counter-shaft to dispose the teeth of said mutilated gear in the paths of said segments.

2. The combination with a reciprocating engine including a cylinder piston connecting rod and crank plate, of gear segments carried by the crank plate at opposite sides thereof, a mutilated gear mounted for rotation, the mutilated portion of the gear being disposed normally next to the paths of the segments, and means for rotating said mutilated gear to dispose the teeth of the same in the paths of said segments.

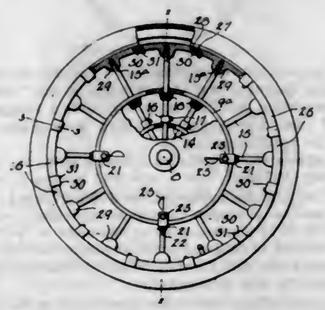
1,193,805. TOY WHEEL. LEANDER S. LONG, Pittsburgh, Pa. Filed Nov. 17, 1915. Serial No. 61,962. (Cl. 46—38.)



1. A noise producing toy of the barrow type and embodying a hollow wheel and a handle whereon the wheel is journaled, the wheel having a V-shaped tread provided with transverse internal ribs; and a rolling element in the tread and adapted to move across the ribs when the wheel is rotated.

2. A noise producing toy of the barrow type and embodying a hollow wheel and a handle whereon the wheel is journaled, the wheel having a V-shaped tread provided with transverse internal ribs; and a rolling element in the tread and adapted to move across the ribs when the wheel is rotated, the tread embodying a pair of approximately parallel marginal reinforcing flanges which are spaced apart transversely and are secured together at their extreme outer edges.

1,193,806. WHEEL. PETE LOPEZ, Tuolumne, Cal. Filed Nov. 27, 1915. Serial No. 63,859. (Cl. 152—20.)

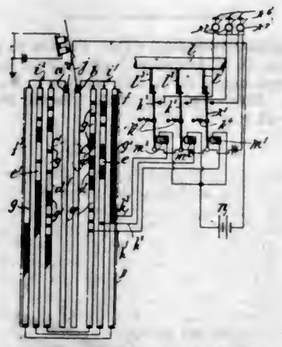


1. A vehicle wheel including an expansible felly formed in a series of independent sections each of which is provided with a threaded socket, a hub, an annular casing surrounding the hub and having an open side, radially extending spokes having the inner ends thereof journaled within the annular casing, while the outer ends thereof are threaded for engagement with the before mentioned threaded sockets of the felly sections, means for locking the spokes against longitudinal movement, pinions applied to the spokes, a plate rotatably mounted upon the hub and closing the open side of the casing, an annular rack upon the plate for engagement with the pinions of the spokes to simultaneously rotate all of the spokes, and means for locking the plate against rotation.

2. A vehicle wheel including an expansible felly formed in a series of independent sections each of which is provided with a threaded socket, a hub, an annular casing surrounding the hub and having an open side, said casing being formed with an outer annular flange and also with an inner concentric annular flange, radially extending spokes having the inner ends thereof journaled within the flanges of the casing, set collars applied to the spokes and bearing against the inner flange to lock the spokes against inward longitudinal movement, pinions applied to the spokes and bearing against the outer flange to lock the spokes against outward longitudinal movement, the outer ends of the spokes being threaded for engagement with the before mentioned threaded sockets of the felly sections, a plate rotatably mounted upon the hub and closing the open side of the casing, an annular rack upon the plate for engagement with the pinions of the spokes to simultaneously rotate the spokes, and means for locking the plate against rotation.

3. A vehicle wheel including an expansible felly formed in a series of independent sections each of which is provided with a threaded socket, a hub, an annular casing surrounding the hub and having an open side, said casing being formed with an annular flange, radially disposed spokes having the inner ends thereof journaled upon the casing flange and hub, while the outer ends thereof are threaded for engagement with the before mentioned threaded sockets of the felly sections, pinions applied to the spokes and engaging the casing flange to hold the spokes against outward longitudinal movement, inward longitudinal movement being prevented by the hub, a rotatable plate mounted upon the hub and closing the open side of the casing, an annular rack upon the plate for engagement with the before mentioned pinions of the spokes to simultaneously rotate all of the spokes and means for locking the plate against rotation.

1,193,807. ELECTRIC-TELEGRAPH RECEIVING APPARATUS OF THE SELECTIVE TYPE. WILLIAM JOSEPH LYONS, Dublin, Ireland. Filed June 26, 1914. Serial No. 847,431. (Cl. 177—353.)

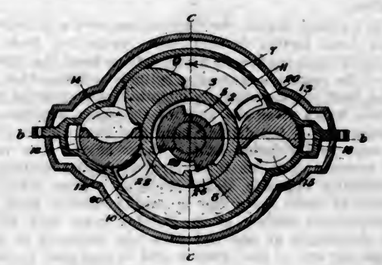


1. Electric telegraphic receiving apparatus of the kind herein referred to comprising a contact arm adapted to be moved on the receipt of an electric impulse, a surface arranged to move substantially at right angles to that of the motion of the operative end of said contact arm on the receipt of a signal, a number of paths or traces carried by said surface and formed of insulating and conducting material arranged to correspond to a number of specific signals to which the apparatus is designed to respond and a number of fixed brushes against which said paths or traces move, said brushes being arranged to be intermittently connected to the said arm upon displacement thereof whereby the apparatus can, by means of the single movable arm, respond to any one of a number of specific signals but to no other signals.

2. Electric telegraphic receiving apparatus of the kind herein referred to comprising a single contact arm adapted to be moved on the receipt of a signal, a movable drum, a number of circumferentially arranged paths or traces formed of insulating and conducting material arranged on said drum so as to correspond to a number of specific signals to which the apparatus is designed to respond, a set of brushes against which said paths or traces are arranged to bear and rotate, said set of brushes being arranged to be intermittently placed in communication with said contact arm, a call or other responsive device, a source of electric energy to the opposite poles of which said arm and the conducting material in each of the paths or traces are connected, and devices controlling means for determining whether the signal being received shall bring the call or other device into operation or not according as the signal corresponds to one or other of those for which the apparatus is designd to respond or does not correspond to any one of such signals.

1,193,808. ROTARY ENGINE. IVAN A. MCCARTHY, Vancouver, British Columbia, Canada. Filed Mar. 27, 1915. Serial No. 17,353. (Cl. 123—13.)

1. In a rotary engine, the combination with a hollow cylindrical driving head in which the driving shaft of the engine is secured, said driving head having a power vane and a suction vane projecting from diametrically opposite sides of its circumferential surface, a cylinder within which said driving head and its vanes is rotatable, said cylinder having ends which close the ends of the space between the circumference of the driving head and that of the cylinder swept by its vanes, partition valves rotatably mounted in the cylinder in contact with the driving head at diametrically opposite sides dividing the annular space swept by the vanes into two compartments the diameter of said valves being substantially half that of the driving head and each valve hollowed on one side to permit passage of the vanes as they rotate, means for delivering a gaseous fuel into one compartment of the annular space surrounding the driving head, and means controlled by the movement of the valves for passing the indrawn gas into a chamber in the produced end of each valve for subsequent delivery into the compartment of the cylinder in advance of each valve.



2. In a rotary engine, the combination with a hollow cylindrical driving head in which the driving shaft of the engine is secured, said driving head having a power vane and a suction vane projecting from diametrically opposite sides of its circumferential surface, a cylinder within which said driving head and its vanes is rotatable, said cylinder having ends which close the ends of the space between the circumference of the driving head and that of the cylinder swept by its vanes, partition valves rotatably mounted in the cylinder in contact with the driving head at diametrically opposite sides dividing the annular space swept by the vanes into two compartments the diameter of said valves being substantially half that of the driving head and each valve hollowed on one side to permit passage of the vanes as they rotate and having a ported chamber in a produced end of the valve produced beyond the end of the cylinder which port is connected by a passage in the valve seat to one compartment of the cylinder and by a port in the produced seat to the other compartment.

3. In a rotary engine, the combination with a hollow cylindrical driving head in which the driving shaft of the engine is secured, said driving head having a cross partition dividing it lengthwise into two compartments, said driving head having also a power vane and a suction vane and a port from one compartment of the driving head alongside the following side of the suction vane and a port from the leading side of the same vane delivering into the other compartment of the driving head, a cylinder within which said driving head with its vanes is rotatable, said cylinder having ends which close the ends of the space between the circumference of the driving head and that of the cylinder swept by its vanes, partition valves rotatably mounted in the cylinder in contact with the driving head at diametrically opposite sides and dividing the annular space swept by the vanes into two compartments, said valves adapted to permit passage of the vanes as they rotate, means for delivering a gaseous fuel into the compartment of the driving head which is connected to the following side of the suction vane, means for passing the compressed gas from one compartment of the annular space of the cylinder to the other coincident with the movement of a vane past the valve, means for igniting the compressed gas so delivered, and means for exhausting the products of combustion through the other compartment of the hollow driving head.

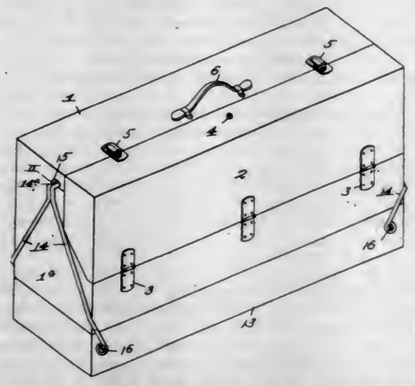
4. In a rotary engine, the combination with a cylindrical driving head having driving vanes projecting from its outer cylindrical surface in which driving head the driving shaft of the engine is secured, a cylinder within which the driv-

ing head is concentrically mounted, said cylinder having ends which close the ends of the space between the circumference of the driving head and that of the cylinder swept by its vanes, partition valves rotatably mounted at diametrically opposite sides to divide the annular space between the outer circumference of the driving head and the bore of the cylinder swept by its vanes, gearing external to the cylinder and coöperative with the driving head for driving the partition valves at the required speed, a gear case for said gearing, means for delivering an explosive mixture of gas and air through the gear case of the partition valves to the compartments of the cylinder, means for igniting the charge in these compartments, and means for exhausting the products of combustion therefrom.

5. In a rotary engine, the combination with a cylindrical driving head having driving vanes projecting from its outer cylindrical surface in which driving head the driving shaft of the engine is secured, a cylinder within which the driving head is concentrically mounted, said cylinder having ends which close the ends of the space between the circumference of the driving head and that of the cylinder swept by its vanes, said cylinder having also valve seats recessed from its inner circumferential surface at diametrically opposite sides, partition valves rotatably mounted in these seats and in rolling contact with the circumferential surface of the driving head, said valves being shouldered at one end to a less diameter to pass through one end of the cylinder and having gear teeth on the outwardly projecting end, which teeth mesh with others on the outer end of the driving head the pitch diameters of these teeth being respectively proportioned to drive the valves at twice the rotation of the head, a cover inclosing the gears of the driving head and valves, means for delivering an explosive mixture to within this casing, means for admitting it to the compartments of the cylinder swept by the vanes of the driving head, means for igniting the charge, and means for delivering the products of combustion from the compartments.

[Claim 6 not printed in the Gazette.]

1,193,809. COMBINATION TOOL-CHEST AND HAND-BOX. JAMES M. MAUK, Bethel, Kans. Filed May 22, 1915. Serial No. 29,814. (Cl. 206—16.)



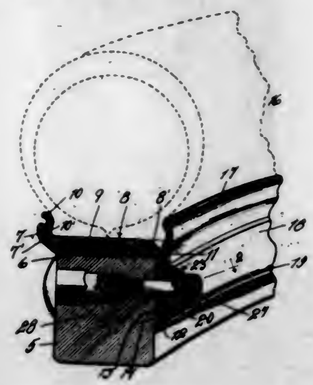
1. In combination, a tool chest, a hand box adapted to fit against said tool chest, bail members operably secured to said hand box and provided with eyes adapted to pass through openings in the tool chest, and means in said tool chest for engaging said eyes, for the purpose described.

2. In combination, a tool chest, a hand box adapted to fit against said tool chest, bail members operably secured to said hand box and provided with eyes adapted to pass through openings in the tool chest, pins to engage said eyes, and a lid on the tool chest adapted to hold said pins in engagement with the eyes.

3. In combination, a tool chest, a hand box adapted to fit against the bottom of said tool chest, upwardly converging metallic bail members pivoted to the sides of said hand box and adapted to engage the sides and ends of the tool chest, means for removably securing said bail members to the tool chest, and a handle for attachment to said bail members when the same are removed from the tool chest.

4. In combination, a tool chest, a block secured in said tool chest and having slits to receive the free ends of hand saw blades, and turnbuttons pivotally mounted within the tool chest and adapted to enter the handle openings of the saws or be adjusted transversely thereto, for the purpose described.

1,193,810. DEMOUNTABLE RIM. GEORGE S. MAXWELL, Washington, D. C., assignor of one-half to Maynard A. Bayles, Washington, D. C., and William F. Hale, Nokesville, Va. Filed Nov. 29, 1915. Serial No. 64,124. (Cl. 152—21.)



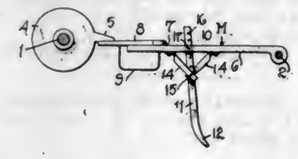
1. A demountable rim for securing a tire upon the felly of a wheel, comprising separable tire holding members, tubular locking elements serving to detachably connect the tire holding members, and means to detachably connect the tire holding members with the felly of the wheel comprising elements passing through the tubular locking elements.

2. In apparatus of the character described, a pair of coacting members for holding a tire and having flanges provided with openings, tubular elements adapted for insertion within the openings and serving to detachably lock the flanges together, and bolts extending through the tubular elements and adapted for connection with the felly of the wheel.

3. In apparatus of the character described, a tire holding member adapted to be removably mounted upon the felly of a wheel and carrying a flange having apertures with laterally extending openings leading into the apertures, a coacting tire holding member having a flange to be arranged adjacent the first named flange and having apertures adapted for registration with the first named apertures, tubular locking elements adapted for insertion within the apertures and provided with laterally extending elements to pass through the laterally extending openings in the first named flange, bolts extending through the tubular locking elements, and means for securing the bolts to the felly of the wheel.

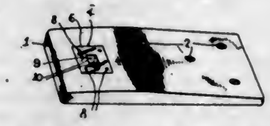
1,193,811. CORN-PLANTER. HERMAN J. MORRISON, Cascade, Iowa. Filed Apr. 8, 1916. Serial No. 89,950. (Cl. 111—6.)

1. In combination with the operating shaft of the dropping mechanism of a planter, a disk rotatably supported by the planter and provided with a trip finger, a rock arm engaged with the shaft, a second arm pivotally engaged with the upper face of the rock arm at a point inwardly of its free end, said second named arm extending in advance of the free end of the rock arm and adapted to be engaged by the trip finger of the disk, and a spring for normally holding the intermediate portion of the second named arm in contact with the upper surface of the rock arm, said spring being substantially U-shape in form and having one extremity secured to the second named arm at a point in advance of the first named arm and having its opposite extremity secured to the first named arm at a point inwardly of the outer end thereof.



2. In a planter, the combination with the operating shaft of the dropping mechanism, a movable trip carried by the planter, a rock arm secured to the shaft and adapted to be engaged by the trip, said rock arm being provided with a vertically directed opening intermediate the length thereof, a ground marking implement disposed through the opening of the rock arm, and means adjustably coacting with the ground marking implement for holding the same against movement independently of the rock arm, the movable trip serving to force the rock arm in a direction toward the ground.

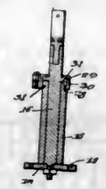
1,193,812. LATCH-KEEPER. CHARLES H. MULRONEY, Brown Station, N. Y. Filed Sept. 4, 1913. Serial No. 788,150. (Cl. 70—15.)



A device of the class described comprising a substantially rectangular shaped body portion secured to the lower end of a dipper body and projecting therefrom at one end in the path of the dipper door latch, said projecting end having a polygonal-shaped aperture extending therethrough with a correspondingly shaped enlargement at the end of the same adjacent the said door latch, a bushing shaped to fit said aperture and enlargement and forming a plurality of latch receiving faces corresponding in number to the walls of the polygonal shaped aperture, one face of which is adapted to receive the said latch, said enlarged portion of the bushing having a plurality of openings therethrough, removable fastening elements positioned through said openings and engaging the adjacent body portion to removably secure said bushing in place, said bushing extending through the aperture from its enlarged end and having its lower face flush with the adjacent surface of the body portion, and the walls of the bushing being of a substantial thickness whereby an easily accessible driving surface is presented at said lower face to facilitate the removal of the bushing from the aperture when the fastening elements have been withdrawn, and it is desired to turn the bushing to present a new latch receiving face in the path of the door latch.

1,193,813. SEARCH-LIGHT. NELS NELSON and RICHARD ELLIOTT, Fort Dodge, Iowa. Filed Apr. 9, 1915. Serial No. 20,251. (Cl. 240—62.)

A device of the class described comprising a sleeve constituting a bearing adapted to be secured to the frame of an automobile, a lamp bracket having a stem rotatably mounted in the said sleeve and formed with an annular shoulder resting upon the upper end of the sleeve, said sleeve being formed with an annular slot spaced from the upper end thereof, and a separable sectional sleeve-like



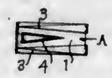
clamp arranged concentrically of the sleeve and having flanges engaging the shoulder on the stem and in the groove in said sleeve for locking the stem of the fork rotatably mounted in the sleeve.

1,193,814. PITMAN-ROD. MURVIN NORRIS, Cottageville, W. Va. Filed Feb. 7, 1914. Serial No. 817,263. (Cl. 74—17.)



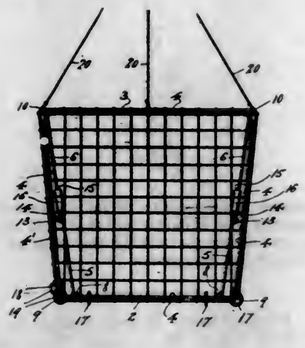
In a device of the character described, in combination, a pitman having a bifurcated portion, a pair of blocks snugly arranged between the parts of said bifurcated portion, one of said blocks being formed with a transverse substantially semi-cylindrical opening, and having a substantially U-shaped flange extending outwardly of each end of said semi-cylindrical opening and formed at right angles to its length, said flanges having semi-cylindrical pin receiving edges spaced above the surface of said opening, the other section being provided with a complemental semi-cylindrical opening and with outstanding U-shaped flanges similarly shaped and disposed relative to said latter opening as herein before set forth of the first named flanges, the flanges of the two sections contacting whereby to provide a pin receiving opening and whereby to form an oil collecting reservoir, one of said sections being formed together with said bifurcated portion with an oil feeding port leading to said semi-cylindrical openings.

1,193,815. SEPARABLE FASTENING DEVICE. HANNA B. NYLUND, Stambaugh, Mich., assignor of one-half to Gustavus R. Waeber, Iron River, Mich. Filed Feb. 12, 1916. Serial No. 78,012. (Cl. 24—227.)



A separable fastener including a hook member formed from an elongated strip of sheet metal having one end returned to afford a hook, the opposite end of the strip being provided with transversely spaced returned prongs reversely directed relatively to the tongue and overlying the opposite face of the strip and of a length substantially equal to the length of said face, said strip at a point midway the free ends of the prongs having a prong struck therefrom and arranged at the same side of the strip as the first named prongs, said last named prong being disposed reversely relatively to the first named prongs, the first named prongs and the second named prong affording securing means for the book member.

1,193,816. FISH AND CRAB TRAP. WILLIAM F. OTTMANN, New York, N. Y., assignor to Abbey & Imbrie, a Corporation of New York. Filed Oct. 9, 1915. Serial No. 54,930. (Cl. 43—20.)



1. In a device of the kind described, a bottom section, a top section, a plurality of articulated collapsible uprights between said bottom section and top section adapted to permanently interconnect the same; each upright comprising a lower member pivoted to said bottom section, an upper member pivoted to said top section, an articulation or joint interconnecting said lower member with said upper member, releasable means for retaining said articulation or joint against operation; and side sections, each side section being connected pivotally to said bottom section.

2. In a device of the kind described, a bottom section, a top section, a plurality of articulated collapsible uprights between said bottom section and top section adapted to permanently interconnect the same; each upright comprising a lower member pivoted to said bottom section, an upper member pivoted to said top section, an articulation or joint interconnecting said lower member with said upper member, said lower member having an extension beyond its jointure with said upper member, said extension being adapted to aline itself parallel to said upper member when said uprights are erected in normal supporting position, a tubular coupling member slidable on said upper member and adapted to be moved over said extension to rigidly bind the same to said upper member and thus prevent the operation of said articulation or joint; and side sections, each side section being connected pivotally to said bottom section.

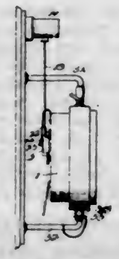
3. In a device of the kind described, a bottom section, a top section, a plurality of articulated collapsible uprights between said bottom section and top section adapted to permanently interconnect the same; each upright comprising a lower member pivoted to said bottom section, an upper member pivoted to said top section, an articulation or joint interconnecting said lower member with said upper member, said lower member having an extension beyond its jointure with said upper member, said extension being adapted to aline itself parallel to said upper member when said uprights are erected in normal supporting position, a tubular coupling member slidable on said upper member and adapted to be moved over said extension to rigidly bind the same to said upper member and thus prevent the operation of said articulation or joint; side sections, each side section having a hinge connected with the bottom section, and one of said side sections having journal portions spaced away from the periphery of said bottom section upon which its hinge is connected.

4. In a device of the kind described, a bottom section, a top section, a plurality of collapsible uprights between said bottom section and top-section adapted to permanently interconnect the same, side sections, each side section having a hinge connected with the bottom section, and one of said side sections having journal portions spaced away from the periphery of said bottom section upon which its hinge is connected.

5. In a device of the kind described, a bottom section, a top section, a plurality of articulated collapsible uprights between said bottom section and top section adapted to permanently interconnect the same; each upright comprising a lower member pivoted to said bottom section, an upper member pivoted to said top section, an articulation or joint interconnecting said lower member with said upper member, releasable means for retaining said articulation or joint against operation; side sections, each side section having a hinge connected with the bottom section, and one of said side sections having journal portions spaced away from the periphery of said bottom section upon which its hinge is connected.

[Claims 6 and 7 not printed in the Gazette.]

1,193,817. AUTOMATIC TIME CONTROL FOR LIGHTS. AUGUST L. PALIS, Upland, Cal. Filed Aug. 31, 1915. Serial No. 48,261. (Cl. 161—27.)



1. A time movement provided with the usual alarm mechanism including an indicating hand and a key, means mounted upon such key and having a limited movement thereon and adapted to be connected with a part to be moved, means yieldably connecting the first mentioned means with the key for returning said means to a given position after an initial operation of the alarm mechanism, and means for moving said indicating hand to a second position and adapted to be tripped by means of the first mentioned means.

2. In a time movement of the character specified and in combination with the winding key, a frame mounted loosely upon the key and having a limited movement, a yieldable connection between the frame and key, and means for holding the frame in a given position against the tension of the yieldable connection.

3. In a time movement and in combination with the winding key, a frame loosely mounted upon the key, a coil spring forming yieldable connecting means between the frame and key, a lever mounted upon the frame, and a stop carried by such lever and adapted to engage the coacting stop of the key to hold the frame in position against the tension of the coil spring.

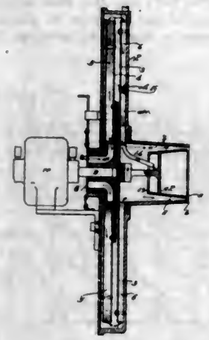
4. In a time movement and in combination with a key, a frame mounted loosely upon the key, a stop projecting from the frame and extending across the path of a portion of the key, a coil spring connected at one end to the stop and at its opposite end to the key, and means mounted upon the frame and adapted to engage the key to hold the frame in a given position against the tension of the coil spring.

5. A key comprising a shank and a thumb piece, a frame mounted loosely upon the shank and comprising spaced portions, a collar secured to the shank between the spaced portions of the frame, a spring connection between the frame and key, and coacting stop means mounted upon the frame and key for holding the frame in a given position against the tension of the spring.

[Claims 6 to 14 not printed in the Gazette.]

1,193,818. [WITHDRAWN.]

1,193,819. OIL-BURNER. WILLIAM R. RAY, San Francisco, Cal. Filed Nov. 30, 1914. Serial No. 874,754. (Cl. 158—77.)



1. An oil burner comprising a casing having a restricted tubular discharge nozzle, a rotatable blower mounted in the casing for impelling air through the nozzle, an oil spraying nozzle rotatable in the discharge nozzle of the casing and having a threaded stem for securing the spraying nozzle to the blower for rotation therewith, said spraying nozzle comprising a cup provided with a rearwardly projecting flange of angular section overhanging the stem and a circular series of perforations provided in the bottom of the cup for establishing communication between the interior of the cup proper and its rear flange, and an oil supply pipe fixed in the casing and projecting into the flange of the cup for feeding oil thereto.

2. An oil burner comprising a casing having a restricted tubular discharge nozzle, a rotatable blower mounted in the casing for impelling air through the nozzle, an oil spraying nozzle comprising a stemmed cup mounted for rotation by the blower and a rearwardly extending flange overhanging the stem and provided with an inwardly projecting annular flange having a central opening surrounding the stem, the bottom of the cup having a series of perforations arranged in proximity to the inner side wall of the cup, and an oil supply means arranged to discharge oil in the flange of the cup.

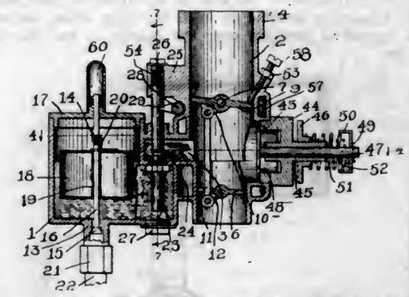
3. An oil burner comprising a casing having a restricted tubular discharge nozzle, a rotatable blower mounted in the casing for impelling air through the nozzle, an oil spraying nozzle comprising a cup having a perforated bottom carrying a stem secured to the blower for rotation therewith and a rearwardly extending flange overhanging the stem, and a pipe for delivering oil into the flange, and through the perforated cup bottom for deliverance in a centrifugal manner into the surrounding air jet.

4. In an oil burning apparatus, a casing having a nozzle, an oil spraying cup rotatable within the nozzle, and provided with a plurality of perforations in its bottom only, means for rotating the cup and supplying air for the nozzle, and means for supplying oil for passage through the perforations of the cup and discharge from the latter.

5. A direct jet oil burner, including a circular revoluble cup with imperforate sides and perforated bottom, and a flanged extension beyond the bottom, means to deliver oil through the flange and bottom, to be discharged centrifugally over the edge of the cup, a tube concentrically surrounding the cup, a casing from the side of which the tube projects, a pump runner revoluble within the casing in unison with the cup, and a passage from the periphery of the runner to the annular passage of the tube, whereby the oil is delivered from the edge of the cup into the passage air blast, and its direction changed therewith to form a tubular column.

[Claims 6 to 13 not printed in the Gazette.]

1,193,820. CARBURETER. CHARLES L. RAYFIELD, Chicago, Ill., assignor, by direct and mesne assignments, of one-third to Charles W. Findeisen and one-sixth to Herbert E. Kropf, Chicago, Ill., and one-third to Findeisen & Kropf Mfg. Co., a Corporation of Illinois. Filed Dec. 8, 1909. Serial No. 532,114. (Cl. 48—155.1.)



1. A carbureter embracing a float feed chamber, a straight open ended mixing chamber, a passage connecting the two, a valve in said passage controlling the flow of fuel thereinto from said float feed chamber, a constantly open air inlet port in said passage and adjacent said valve, and acting to afford an inlet sufficient to carry the hydro-carbon into the mixing chamber.

2. In a device of the class described a float feed chamber, a straight tubular mixing chamber, a passage connecting the two, a needle valve in said passage controlling the flow of fuel thereinto from said float feed chamber, a constantly open horizontally disposed air port slightly at the rear of the valve in said passage, a valve in the eduction passage from the mixing chamber, and mechanism controlling said valves for adjusting the same simultaneously.

3. A carbureter embracing a tubular open ended casing affording a mixing chamber, a float feed chamber, a pipe connecting the same with a source of hydro-carbon supply, a substantially horizontal passage opening into the mixing chamber, a needle valve controlling the feed from the float feed chamber into said passage, a constantly open air port adjacent the needle valve and acting to carry the discharge therefrom into the mixing chamber, connected valves in said mixing chamber above and below said passage, a throttle lever for simultaneously opening said valves in the mixing chamber, and adjustable mechanism operated from said throttle lever to simultaneously adjust the needle valve.

4. A carbureter embracing a float feed chamber, an open ended tubular casing, a part of which affords a mixing chamber, operatively connected and simultaneously acting upper and lower valves affording the upper and lower walls of the mixing chamber, a passage opening from the float feed chamber into said mixing chamber, an adjustable spring pressed needle valve therein, an automatically acting air valve also opening into the mixing chamber between said valves, and operative connections between the needle valve and said valves in the mixing chamber whereby the adjustment of the one produces corresponding adjustment of the other.

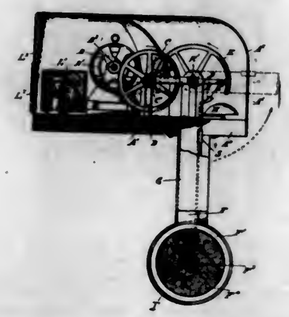
5. In a device of the class described a tubular open ended casing affording in part a mixing chamber, upper and lower butterfly valves in said chamber, a link connecting the same eccentrically, and an automatic air valve opening into said casing between the butterfly valves and adjustable means acting to hold said valves from wholly closing.

[Claims 6 to 21 not printed in the Gazette.]

1,193,821. AUTOMOBILE-SIGNAL. HARRY B. RICHARDS and RANDOLPH SOLOMON, Alexandria, Va. Filed Mar. 10, 1916. Serial No. 83,370. (Cl. 177—329.)

1. An automobile signal apparatus comprising a casing adapted to be attached to the body of a car and hav-

ing registering slots in the bottom and one end, a shaft journaled in the opposite walls of the casing, a segment gear fixed to the shaft, a semaphore arm rotating with the shaft and having a chambered end, the opposite walls of which are of transparent glass, a light interposed between the glasses, a housing fastened to the bottom of the casing, the rear wall of which is adapted to limit the movement of the arm in one direction, and electrical apparatus adapted to flash the light when thrown to a horizontal position over the fender at one side of the car.



2. An automobile signal apparatus comprising a casing adapted to be attached to the body of a car and having registering slots in the bottom and one end, a shaft journaled in the opposite walls of the casing, a segment gear fixed to the shaft, a semaphore arm rotating with the shaft and having a circular outlined chamber at its free end, the opposite walls of the chamber being provided with transparent glass, a lamp within the chamber, electrical means for flashing the lamp when thrown to a horizontal position to the side of the car, a housing terminating in a circular outlined portion for the reception of the chambered portion of the arm, a buffer secured to the inner wall of the circular outlined portion of the housing and against which the outer convexed wall of the chamber is adapted to contact when the semaphore is in its normal position, and a buffer upon the edge of said arm adapted to contact with the end of the slot in said casing as the arm is swung to a horizontal position.

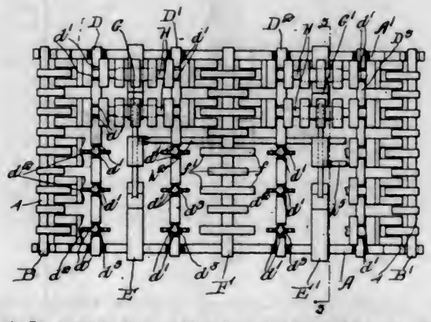
3. An automobile signal apparatus comprising a casing for attachment to a car and having a bottom and adjacent end which are slotted, a housing secured to the bottom of the casing, open upon one side and the inner surface of the rear of the wall of the housing being flush with the end wall of the slot in the bottom of the casing, a shaft journaled in the walls of the housing, a semaphore arm fixed to said shaft and designed to be limited in its swinging movement in one direction by the wall of the housing and end wall of the slot, said semaphore having a chambered portion with signal glasses forming the opposite faces thereof and through which light is adapted to be reflected in opposite directions, and means for rotating said shaft.

1,193,822. GRATE. WILLIAM E. RIDER, Mansfield, Mass. Filed Nov. 22, 1909. Serial No. 529,239. (Cl. 126—174.)

1. In a grate the combination of slotted hangers; two sections supported by the hangers, one section being movable independently of the other; a substantially fixed header located between the two sections and supported in the slots in the hangers to guide the movable section; and means to move the movable section.

2. In a grate the combination of two fuel-supporting sections, one movable independently of the other; bearings for said sections; hangers to support the bearings and being slotted between the bearings; a substantially fixed header located between the two sections and supported in said slots of the hangers to guide the movable section, and means to move the movable section.

3. In a grate the combination of two fuel-supporting sections, each movable independently of the other; bearings for said sections; hangers to support the bearings and being slotted between the bearings; a substantially fixed header located between the two sections and supported in said slots of the hangers to guide the movable sections; and means to move the sections independently of each other.

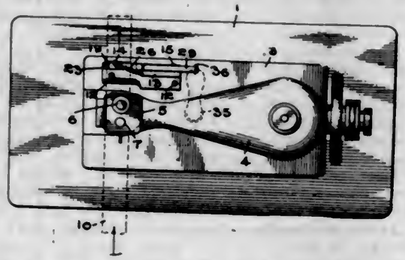


4. In a grate the combination of slotted hangers, two sections supported by the hangers, one section being movable independently of the other; a substantially fixed header located between the two sections and supported in the slots in the hangers to guide the movable section so as to prevent lateral movement thereof; and means to move the movable section.

5. In a grate the combination of two fuel-supporting sections, one movable independently of the other; bearings for said sections; hangers to support the bearings and being slotted between the bearings; a substantially fixed header located between the two sections, supported in said slots of the hangers and guiding the movable section so as to prevent lateral movement thereof; and means to move the movable section.

[Claim 6 not printed in the Gazette.]

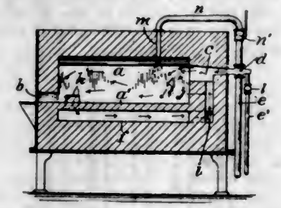
1,193,823. CUTTING ATTACHMENT FOR SEWING-MACHINES. AQUILA S. ROBINSON, Philadelphia, Pa. Filed Jan. 6, 1915. Serial No. 762. (Cl. 164—41.)



1. An attachment for sewing machines comprising a base adapted to be arranged directly behind the presser foot and having an upwardly and rearwardly inclined face terminating at the rear in a cutting edge, an arm pivotally mounted on said base, a blade on said arm adapted to coöperate with said cutting edge and means under the control of the operator for actuating said pivoted arm, substantially as described.

2. A cutting attachment for sewing machines comprising a base adapted to be secured to the machine directly behind the presser foot, said base being tapered upwardly and rearwardly terminating in a cutting edge at the back, an arm pivotally connected to said base, a blade on said arm adapted to coöperate with said cutting edge, a lever pivotally mounted adjacent said arm, and adapted to depress the same, a pedal and an operative connection between said pedal and said lever, substantially as described.

1,193,824. FURNACE. WALTER S. ROCKWELL, New York, N. Y., assignor to W. S. Rockwell Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 5, 1916. Serial No. 70,330. (Cl. 263—43.)



1. A furnace for heating, annealing, &c., having a heating-chamber with a fluid fuel inlet opening thereinto, a sub-chamber beneath the floor of the heating-chamber, means for drawing heated gases from the heating-chamber through such sub-chamber into the said inlet and discharging them into the heating-chamber with the burning gases, and a counter-blast projected into the heating-chamber to vary the movement of the heated gases therein.

2. A furnace for heating, annealing, &c., having a heating-chamber, a fluid-fuel burner-inlet, a sub-chamber under the floor of the heating-chamber with a port connecting it thereto and a duct connecting the sub-chamber with the said burner-inlet, whereby heated gases are circulated through the heating-chamber, and a counter-blast projected into the heating-chamber to vary the movement of the heated gases therein.

3. A furnace for heating, annealing, &c., having a fluid fuel burner-inlet opening into the rear end of the heating-chamber, a burner projecting fuel gases through the burner-inlet into such end of the heating-chamber, and a counter-blast projected downward through the roof of the chamber and operating to retard the burning gases discharged from the burner-inlet and to thus regulate the temperature at different parts of the heating chamber.

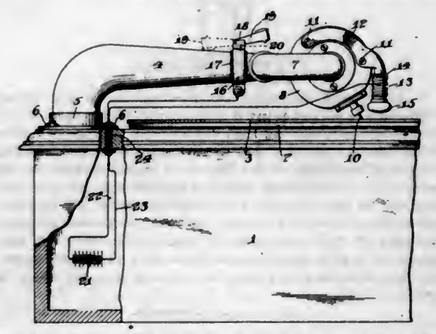
4. A furnace for heating, annealing, &c., having a heating-chamber with a fluid-fuel burner-inlet opening thereinto, a return-passage with a port connecting one end of it to the heating-chamber, a duct connecting its opposite end to the burner-inlet, the whole operating to cause the circulation of gases through the heating-chamber, and a counter-blast directed through the wall of the chamber toward the gases entering from the burner-inlet to retard and deflect such gases, substantially as and for the purpose set forth.

5. A furnace for heating, annealing, &c., having a heating-chamber, a fluid-fuel burner-inlet communicating therewith, a burner with means for supplying fluid-fuel and air to the burner, means for drawing heated gases from the heating-chamber through the burner-inlet and discharging them again into the heating-chamber, a counter-air-blast projected into the heating-chamber to vary the movement of the heated gases therein, and means for independently regulating the air-supply to such counter-air-blast and to the burner.

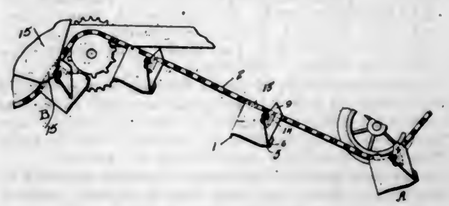
1,193,825. PHONOGRAPH. CLARENCE H. ROOP, Camden, N. J., assignor, by mesne assignments, of one-half to George H. M. Ivins, Camden, N. J. Filed Aug. 21, 1915. Serial No. 46,598. (Cl. 240—2.)

1. The combination with a phonograph having a tone arm, a goose neck at the free end of the tone arm, and a sound box at the free end of the goose neck, of an electric lamp on the sound box, a pivoted switch arm insulated from the tone arm and movable to either side of its pivot, said switch arm adapted when moved downwardly against the phonograph from either side of its pivot to close an electric circuit to the lamp, and a spring holding the switch arm elevated in one of its positions out of contact with the metal of the phonograph, substantially as described.

2. The combination with a phonograph having a tone arm, a goose neck at the free end of the tone arm, and a sound box at the free end of the goose neck, of a curved bracket secured to one side of the sound box and carrying an electric lamp at its free end in position to direct the light onto the needle carried by the sound box, a source of electricity, a clamp secured on the tone arm and insulated therefrom, a pivoted switch arm on the clamp movable to either side of its pivot, said switch arm adapted when moved downwardly against the phonograph from either side of its pivot to close the circuit to the lamp, and a spring normally holding the switch arm elevated in one of its positions out of contact with the metal of the phonograph, substantially as described.



1,193,826. CONVEYER-BUCKET. CHARLES H. RUTH, Brawley, Cal. Filed June 25, 1914. Serial No. 847,256. (Cl. 193—6.)



A conveyer bucket open at its forward and rear ends and at the top, the rear portion of the bottom of the bucket being bent upwardly and having an angularly disposed flange at the upper edge thereof, a door pivotally mounted in the bucket at its upper end and so arranged that its lower end will contact with the flange to limit its movement in one direction, an elongated ear secured to the door and extending at right angles thereto and at right angles to its line of pivot so as to brace the door, the said ear being in contact and secured to the door throughout its entire extent and having an upwardly extending portion adapted to be engaged by a suitable member to swing the door forwardly and means for limiting the forward movement of the door.

1,193,827. COMBINED KNIFE AND ERASER. GUST ANDREW SANTO, Virginia, Minn. Filed Mar. 12, 1915. Serial No. 13,878. (Cl. 120—1.)

1. The herein described combined knife and eraser comprising a plate having a blade projecting from one end thereof and also having lugs at said end, at opposite sides of the blade and arranged at an angle to and extending from the inner side of the plate, an eraser secured to the inner side of the plate, bearing at one end against said lugs and at the other end projecting beyond the opposite end of the plate and an attaching band of flexible material

arranged at right angles to the plate and eraser and having one side secured between them.



2. The herein described combination knife and eraser comprising a plate having a blade projecting from one end thereof and also having lugs at said end, at opposite sides of the blade and arranged at an angle to and extending from the inner side of the plate, an eraser secured to the inner side of the plate, bearing at one end against said lugs and at the other end projecting beyond the opposite end of the plate and an attaching band of flexible material arranged at right angles to the plate and eraser and having one side arranged between them and an eyelet passing through said plate, band and eraser and securing them together.

1,193,828. FOOD PRODUCT. ADDIE L. SATTLER, Plain, Wash. Filed Feb. 15, 1915. Serial No. 8,355. (Cl. 99—11.)

1. A food product for the preparation of a beverage consisting of a mixture of browned wheat kernels and browned and ground carrot.

2. A food product for the preparation of a beverage consisting of a mixture of browned wheat kernels and browned and ground carrot substantially in the proportions specified.

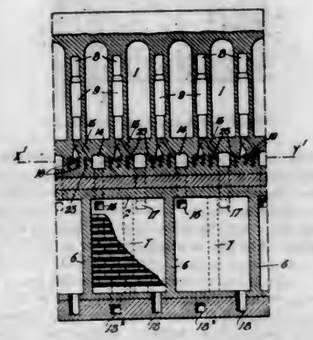
1,193,829. DISAZO-DYESTUFFS AND PROCESS OF MAKING THE SAME. RUDOLF SCHÜLE, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, a Corporation of New York. Filed Oct. 8, 1914. Serial No. 865,701. (Cl. 8—1.)

1. The manufacture of disazo dyestuffs by combining a diazo compound with a primary aromatic amin containing a free p-position, rediazotizing the monoazo dyestuff thus formed and combining with an aminoaryl-8-oxy-1.2-naphthimidazolesulfonic acid substantially as described.

2. As new products the disazo dyestuffs prepared by combining a diazo compound with a primary aromatic amin containing a free p-position, rediazotizing the monoazo dyestuff thus formed and combining with an aminoaryl-8-oxy-1.2-naphthimidazolesulfonic acid, these dyestuffs being in the dry state dark powders, dissolving in water with a greenish-black color, in concentrated sulfuric acid with a green color, dyeing cotton blackish-green shades, which are changed on being developed on the fiber with phenylmethylpyrazolone into brilliant green shades, substantially as described.

1,193,830. REGENERATIVE COKE-OVEN. NICHOLAS SCHUSTER, Westminster, London, England. Filed Dec. 21, 1914. Serial No. 878,419. (Cl. 202—9.)

1. A regenerative coke oven, comprising a structure having a series of separate coking chambers formed therein parallel to each other, the side walls of said coking chambers each having a heating chamber formed therein, means for supplying gaseous fuel to either end required of each heating chamber, said structure having formed in the base thereof two pairs of tunnels, walls to said tunnels to divide them each into a plurality of regenerative chambers of a number equal to half the number of heating chambers in the oven side walls, said structure having communicating passages connecting one half of each heating chamber in one side wall to one of the chambers in one tunnel of one pair, and communicating passages connecting the other half of said side wall with one of the regenerative chambers in one tunnel of the other pair, and having passages connecting the two halves of the next heating chamber respectively with a regenerative chamber in the other tunnel of each pair, two flues calculated to be connected either to an uptake or open to the atmosphere, and passages connecting each chamber of one pair of tunnels to one of said flues, and passages connecting each chamber of the other pair of tunnels to the other of said flues.



2. A regenerative coke oven, comprising a structure having a series of separate coking chambers formed therein parallel to each other, the side walls of said coking chambers each having a heating chamber formed therein and extending the length thereof, means for supplying gaseous fuel to one end part or the other end part of each heating chamber as required, said structure having formed in the base thereof two parallel pairs of tunnels extending transversely relatively to said coking chambers, walls in said tunnels extending transversely to the length thereof to divide each of said tunnels into a plurality of regenerative chambers of a number equal to half the number of heating chambers in the oven side walls, said structure having communicating passages connecting one half of each heating chamber in one side wall to one of the chambers in one tunnel of one pair, and communicating passages connecting the other half of said chamber in said side wall with one of the regenerative chambers in one tunnel of the other pair, and having passages connecting the two halves of the next heating chamber respectively with a regenerative chamber in the other tunnel of each pair, two flues calculated to be connected either to an uptake or open to the atmosphere, and passages connecting each chamber of one pair of tunnels to one of said flues, and passages connecting each chamber of the other pair of tunnels to the other of said flues.

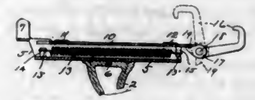
3. A regenerative coke oven, comprising a structure having a series of separate coking chambers formed therein parallel to each other, the side walls of said coking-chambers each having a heating chamber formed therein and extending the length thereof, means for supplying gaseous fuel to either end required of each heating chamber, said structure having two separate horizontal passages beneath the sole of each coking chamber, one of said horizontal passages communicating with one end part of the heating chamber in a side wall, and the other horizontal passage communicating with the other end part of said heating chamber in the same side wall, said structure having formed in the base thereof two pairs of tunnels, walls in said tunnels to divide them each into a plurality of regenerative chambers of a number equal to half the number of heating chambers in the oven side walls, a passage in said structure connecting one of said horizontal passages beneath the sole of a coking chamber to one of the heating chambers in one tunnel of one pair, and a passage in said structure connecting the other horizontal passage beneath the sole of said coking chamber with one of the regerenative chambers in one tunnel of the other pair, and said structure having passages connecting the two horizontal passages beneath the sole of the next coking chamber respectively with the regenerative chamber in the other tunnel of each pair, two flues calculated to be connected either to an uptake or open to the atmosphere, and passages connecting each chamber of one pair of tunnels to one of said flues, and passages connecting each chamber of the other pair of tunnels to the other of said flues.

4. A regenerative coke oven, comprising a structure having a series of coking chambers formed therein parallel to each other, the side walls of said coking chambers each having a heating chamber formed therein and extending the length thereof, vertical divisions in said heating chamber extending from the base thereof but not extending to the top of said chamber to form heating flues therein, means for supplying gaseous fuel to the bases of half the number of said heating flues in said chamber at one end thereof or for supplying gaseous fuel to half the number of said heating flues at the other end thereof as required, said structure having two separate horizontal passages beneath the sole of each coking chamber, one of said horizontal passages communicating with half the number of said heating flues in said heating chamber toward one end of a side wall, and the other horizontal passage communicating with the heating flues in said heating chamber in the same side wall and near the other end thereof, said structure having formed in the base thereof two pairs of parallel tunnels adjacent to each other and extending at right angles to the lengths of the coking chambers, walls in said tunnels to divide them each into a plurality of regenerative chambers of a number equal to half the number of heating chambers in the oven side walls, a passage in said structure connecting one of said horizontal passages beneath the sole of a coking chamber to one of the heating chambers in one tunnel of one pair, and a passage in said structure connecting the other horizontal passage beneath the sole of said coking chamber with one of the regerenative chambers in one turnnel of the other pair, and said structure having passages connecting the two horizontal passages beneath the sole of the next coking chamber respectively with the regenerative chamber in the other tunnel of each pair, two flues calculated to be connected either to an uptake or open to the atmosphere, and passages connecting each chamber of one pair of tunnels to one of said flues, and passages connecting each chamber of the other pair of tunnels to the other of said flues.

5. A regenerative coke oven, comprising a structure having a series of separate coking chambers formed therein parallel to each other, the side walls of said coking chambers each having a heating chamber formed therein, means for supplying gaseous fuel to either one end half or the other end half of each heating chamber as required, said structure having formed in the base thereof two pairs of tunnels parallel to each other and extending at right angles to the length of the coking chambers, transversely extending walls in said tunnels to divide them each into a plurality of regenerative chambers of a number equal to half the number of heating chambers in the oven side walls, said transversely arranged walls in one tunnel of a pair of tunnels being in a plane passing centrally between two opposite walls in the other tunnel of the pair, and communicating passages connecting the other half of said chamber in said wall with one of the regenerative chambers in one tunnel of the other pair, and having passages connecting the two halves of the next heating chamber respectively with a regenerative chamber in the other tunnel of each pair, two flues calculated to be connected either to an uptake or open to the atmosphere, and passages connecting each chamber of one pair of tunnels to one of said flues, and passages connecting each chamber of the other pair of tunnels to the other of said flues.

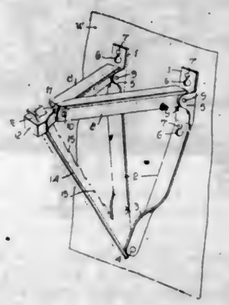
1,193,831. ADJUSTABLE FOOT-REST. EDWARD SCHUYLER, Syracuse, N. Y. Filed Jan. 20, 1915. Serial No. 3,201. (Cl. 15—58.)

1. In a foot rest, a hollow body having an open top and having at one end heel-clips projecting above said top, an extensible plate disposed in the open top of the body having a pair of lugs loosely gripping the sides of the body, a clamp clenched to said body for preventing the detachment of said plate and for limiting the extension of said plate, a pair of toe-hooks carried by said plate, and a spring disposed within the hollow-body for resiliently holding said hooks in engagement with the toe of the shoe.



2. A foot rest, including a standard, an adjustable foot support comprising a hollow body mounted on said standard having a plurality of clips for engaging the heel of a shoe, a longitudinally movable member slidable on said body having hooks adapted to engage the toe of the shoe and movable under the pressure of the foot for extending said plate for allowing the heel of the shoe to enter between said clips, and a spring retained within said body exerting its tension for tightening the grip of said toe hooks and for moving said plate to the closed position when the shoe is removed.

1,193,832. SCAFFOLD-BRACKET. AMOS F. SEYMOURE, Albion, Ind. Filed Apr. 22, 1916. Serial No. 93,004. (Cl. 20—84.)



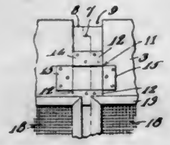
A scaffold bracket comprising two supporting members provided with anchoring means, plank supporting members pivotally engaged with the supporting members adjacent an upper end thereof, a brace bar T-shape in form and having its web disposed inwardly, the lower portion of the web being pivotally supported between the opposite extremities of the supporting members, a locking member pivotally engaged between the outer extremities of the supporting members and provided with an opening through which the brace bar is directed, said brace bar having the free longitudinal edge of the web provided with longitudinally spaced shoulders with which the inner end of the locking member is adapted to coact, the lower free corner of the web of the brace being sharp and adapted to extend beyond the rear edges of the first named supporting members when the plank supporting members are in extended position to afford a further support.

1,193,833. OCTAGONAL PORTABLE SUMMER-HOUSE. MYRON SHERMAN, Redlands, Cal. Filed June 3, 1914. Serial No. 842,728. (Cl. 20—2.)

1. In a portable house, wall panels each including a stile and a top rail, the top rails extending above the stiles to define openings above the ends of the stiles and between the ends of the top rails of the respective panels; and roof sections having rafters, the rafters of two adjacent roof sections being received in the openings.

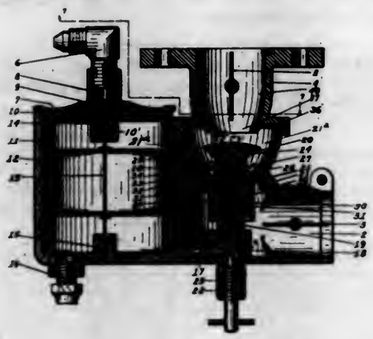
2. In a portable house, wall panels each including a stile and a top rail, the top rails extending above the stiles to define openings above the ends of the stiles and between

the ends of the top rails of the respective panels; and roof sections having rafters, the rafters of two adjacent roof sections being received in the openings, the upper ends



of the stiles being downwardly and outwardly inclined, and the rafters having shoulders in their lower edges which engage the upper ends of the stiles.

1,193,834. CARBURETER. JESSE C. SIMMONS, Shelby, Mich., assignor of one-half to Allen B. Way, Grand Rapids, Mich. Filed Mar. 8, 1915. Serial No. 12,879. (Cl. 48—155.1.)



1. In a carbureter, the combination of a carbureter body having a fuel reservoir and a carbureting chamber, the wall of said carbureter chamber being provided with an annularly projecting rib forming an air intake contracted portion; a post disposed within said carbureting chamber and having a mushroom head and a bore extending longitudinally thereof; a plug threaded into the upper portion of said bore and provided with transverse passages and a longitudinal passage communicating with said transverse passages; a needle valve stem adjustably carried by said carbureter body and extending into the bore of said post, said valve stem being of smaller diameter than said bore, the upper end of said valve stem engaging the lower end of said plug to close the central passage therein, said post being provided with transverse passages in line with the transverse passages of said block; an annular groove in which said passages terminate and a reduced portion above said groove; a sleeve on said post the upper end of said sleeve being spaced slightly from said reduced portion and said mushroom head; a regulating sleeve surrounding said post and having an angularly extending flange resting on the rib of said carbureter wall; ribs extending from the inner wall of said regulating sleeve and engaging the sleeve on said post to guide and support the regulating sleeve; connections from said fuel reservoir to the longitudinal bore in said post; and a head closing the top of said carbureting chamber and having a discharge passage, the wall of said discharge passage terminating in a downwardly extending flange, the lower surface of said head being provided with an annular groove disposed above said carbureting chamber.

2. In a carbureter, the combination of a carbureter body having a fuel reservoir and a carbureting chamber, the wall of said carbureter chamber being provided with an annularly projecting rib forming an air intake contracted portion; a post disposed within said carbureting chamber and having a mushroom head and a bore extending longitudinally thereof; a plug threaded into the upper portion of said bore and provided with transverse passages and a longitudinal passage communicating with said transverse passages; a needle valve stem adjustably carried by said carbureter body and extending into the bore of said post, said valve stem being of smaller diameter than said bore, the upper end of said valve stem engaging the lower end of said plug to close the central passage therein, said post being provided with transverse passages in line with the transverse passages of said block; an annular groove in which said passages terminate and a reduced portion above said groove; a sleeve on said post, the upper end of said sleeve being spaced slightly from said reduced portion and said mushroom head; a regulating sleeve surrounding said post and having an angularly extending flange resting on the rib of said carbureter wall; ribs extending from the inner wall of said regulating sleeve and engaging the sleeve on said post to guide and support the regulating sleeve; and connections from said fuel reservoir to the longitudinal bore in said post; and a head closing the top of said carbureting chamber and having a discharge passage, the lower surface of said head being provided with an annular groove disposed above said carbureting chamber.

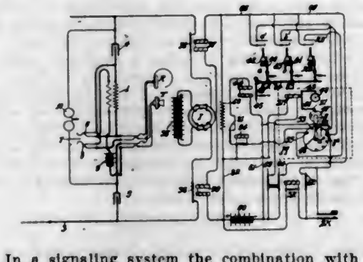
3. In a carbureter, the combination of a carbureter body having a fuel reservoir and a carbureting chamber, the wall of said carbureting chamber being provided with an annularly projecting rib forming an air intake contracted portion; a post disposed within said carbureting chamber and having a mushroom head and a bore extending longitudinally thereof; a plug threaded into the upper portion of said bore and provided with transverse passages and a longitudinal passage communicating with said transverse passages; a needle valve stem adjustably carried by said carbureter body and extending into the bore of said post, said valve stem being of smaller diameter than said bore, the upper end of said valve stem engaging the lower end of said plug to close the central passage therein, said post being provided with transverse passages in line with the transverse passages of said block; an annular groove in which said passages terminate and a reduced portion above said groove; a sleeve on said post, the upper end of said sleeve being spaced slightly from said reduced portion and said mushroom head; a regulating sleeve surrounding said post and having an angularly extending flange resting on the rib of said carbureter wall; ribs extending from the inner wall of said regulating sleeve and engaging the sleeve on said post to guide and support the regulating sleeve; connections from said fuel reservoir to the longitudinal bore in said post; and a head closing the top of said carbureting chamber and having a discharge passage, the lower surface of said head being provided with an annular groove disposed above said carbureting chamber.

4. In a carbureter, the combination of a carbureter body having a fuel reservoir and a carbureting chamber, the wall of said carbureter chamber being provided with an annularly projecting rib forming a contracted portion; a post disposed within said carbureting chamber and having a mushroom head and a bore extending longitudinally thereof; a plug threaded into the upper portion of said bore and provided with transverse passages and a longitudinal passage communicating with said transverse passages; a needle valve stem adjustably carried by said carbureter body and extending into the bore of said post, said valve stem being of smaller diameter than said bore, the upper end of said valve stem engaging the lower end of said plug to close the central passage therein, said post being provided with transverse passages in line with the transverse passages of said block; an annular groove in which said passages terminate and a reduced portion above said groove; a sleeve on said post, the upper end of said sleeve being spaced slightly from said reduced portion and said mushroom head; a regulating sleeve surrounding said post and having an angularly extending flange resting on the rib of said carbureter wall; and connections from said fuel reservoir to the longitudinal bore in said post.

5. In a carbureter, the combination of a carbureter body having a fuel reservoir and a carbureting chamber, a post disposed within said carbureting chamber and having a mushroom head and a bore extending longitudinally thereof; a plug threaded into the upper portion of said bore and provided with transverse passages and a longitudinal passage communicating with said transverse passages; a needle valve stem adjustably carried by said carbureter body and extending into the bore of said post, said valve stem being of smaller diameter than said bore, the upper end of said valve stem engaging the lower end of said plug to close the central passage therein, said post being provided with transverse passages in line with the transverse passages of said block; an annular groove in which said passages terminate and a reduced portion above said groove; a sleeve on said post, the upper end of said sleeve being spaced slightly from said reduced portion and said mushroom head; a regulating sleeve surrounding said post and having an angularly extending flange resting on the rib of said carbureter wall; and connections from said fuel reservoir to the longitudinal bore in said post.

[Claims 6 to 16 not printed in the Gazette.]

1,193,835. DESPATCHER'S TELEPHONE SYSTEM. CHARLES A. SIMPSON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 30, 1910. Serial No. 574,619. (Cl. 179—85.)



1. In a signaling system the combination with a despatcher's telephone and a plurality of substations, conductors uniting said telephone and said stations, signal relays for said stations, selective mechanism for each of said stations, an active and a passive contact for each of said mechanisms, means controlled by said depatcher to set said selective apparatus in operation, means controlled by said despatcher to energize one of said relays at the time that an active contact engages a passive contact at one of said stations, a local locking circuit effective upon energization of said relay, and means under control of the despatcher for deënergizing said relay.

2. In a telephone system, the combination with a telephone line, of a substation and despatcher's telephone connected thereto, a relay for said station provided with only one winding, means controlled by the despatcher for energizing said relay, a locking circuit local to said station for holding said relay energized, a call bell for said station actuated responsive to energization of said relay, and means under control of the despatcher for deënergizing said relay to render said call bell ineffective.

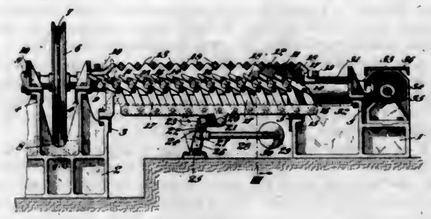
3. In a signaling system the combination with a despatcher's telephone and a plurality of substations, conductors uniting said telephone and said stations, a control relay and a signal relay for each of said stations, means under control of the despatcher for momentarily actuating one of said control relays, a circuit including contacts controlled by said control relay and one of said signal relays closed responsive to the energization of said control relay, a locking circuit for said signal relay effective upon its energization, and means for deënergizing said signal relay rendered effective upon another actuation of said control relay.

4. A telephone system comprising a pair of conductors, a plurality of operators' telephones or stations connected thereto, a despatcher's station connected to said conductors, a normally open local signal circuit for each telephone, selective mechanism including an active and a passive contact for each of said operator's stations, means controlled by said despatcher for operating said selective mechanisms to cause said active contacts to wipe over their passive contacts thereby closing said signal circuits to call said operators, means at each telephone for rendering its associated circuit effective until a complete response of the operator is secured, and means controlled by the despatcher for again rendering any of said circuits ineffective to which no complete response has been secured.

5. A telephone system comprising a despatcher's telephone and an operator's substation conductively united, a local signaling circuit for said station, means including a selector switch having a driving electromagnet controlled by the despatcher for rendering said circuit effective to call the operator, an induction coil for said station having one winding conductively united with said telephone, and means controlled subsequently by the despatcher for connecting the other winding of said coil with said circuit to inductively connect said circuit with said telephone.

[Clams 6 to 15 not printed in the Gazette.]

1,193,836. COOLING-BED. EDWIN E. SLICK, Westmont borough, Pa. Filed Feb. 1, 1915. Serial No. 5,599. (Cl. 80—42.)



1. A cooling-bed having a plurality of supporting plates provided with a series of alined serrations therein, a plurality of pivoted shifter arms provided with projecting shifters hinged thereto and adapted to be rigid therewith during their forward motion and to yield during their backward motion, whereby they shift the bars during their forward motion and pass below them during their backward motion.

2. A cooling-bed having a plurality of supporting plates provided with a series of alined serrations therein, a plurality of oscillatively pivoted shifter arms provided with projecting shifters hinged thereto and adapted to be rigid therewith during their forward motion and to yield during their backward motion, whereby they shift the bars during their forward motion and pass below them during their backward motion.

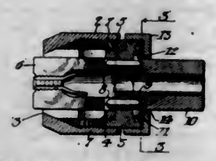
3. A cooling-bed having a plurality of supporting plates provided with a series of alined serrations therein, a plurality of oscillatively pivoted shifter arms provided with projecting shifters hinged thereto and adapted to extend in the same direction and to be rigid therewith during their forward motion and to yield during their backward motion, whereby they shift the bars step by step across the bed during their forward motion and pass below them during their backward motion.

4. In a cooling bed a pivoted shifter arm, a shifter finger pivoted to the outer end thereof, a stop adapted to prevent the rotation of said shifter finger in one direction while permitting its partial rotation in the other direction, and means for oscillating said shifter arm about its pivot.

5. In a cooling-bed a pivoted shifter arm, a shifter finger pivoted to the outer end thereof, means adapted to prevent the rotation of said shifter finger in one direction while permitting its partial rotation in the other direction and means for oscillating said shifter arm about its pivot.

[Claims 6 to 10 not printed in the Gazette.]

1,193,837. SPRING-DIE HOLDER. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 19, 1915. Serial No. 56,687. (Cl. 10—119.)



1. A spring-die holder comprising a split die-receiver, a spring die therein, and a member encircling said split die-receiver and coöperating with the split portions thereof to position and hold the cutting portions of the die at an equal distance from the work said receiver and member adjustable relatively to each other.

2. A spring-die holder comprising a split die-receiver, a spring die therein, and an adjustable cap coöperating with the split portions of said receiver for positioning and holding the cutting portions of the die at an equal distance from the work.

3. A spring-die holder comprising a split die-receiver, a spring die therein, means inclosing said receiver and die, and means coöperating with said receiver and inclosing means for adjusting one of said parts relatively to the other thereby to adjust the cutting portions of the die.

4. A spring-die holder comprising a split die-receiver, a spring die therein, means inclosing said receiver and die, and means coöperating with said receiver and inclosing means for adjusting the split receiver and thereby the cutting portions of the die.

5. A spring-die holder comprising a split die-receiver, a spring die therein, a cap inclosing said receiver and die and having its front end corresponding in shape at the interior thereof to the exterior of the front end of said receiver, and means coöperating with said receiver and cap for adjusting one of said parts relatively to the other thereby to adjust the cutting portions of the die.

[Claims 6 to 24 not printed in the Gazette.]

1,193,838. DYE OR STAIN. WILLIAM SOMERVILLE, Auburn, Victoria, Australia. Filed Dec. 15, 1915. Serial No. 66,966. (Cl. 8—5.)

1. An improved dye or stain consisting of the product obtained by the treatment of the resin of the species known as "grass tree" (and botanically known as *Xanthorrhœa*) with a solution of an alkali.

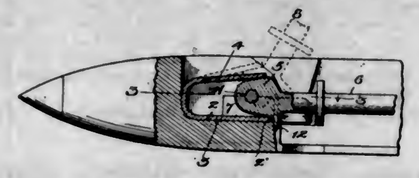
2. An improved dye or stain consisting of the product obtained by the treatment of the resin of the species known as "grass tree" (and botanically known as *Xanthorrhœa*) with a solution of alkali and separating the soil matters therefrom by filtration or otherwise substantially as described.

3. An improved dye or stain consisting of the product obtained by the treatment of the resin of the species known as "grass tree" (and botanically known as *Xanthorrhœa*) with a solution of an alkali and heating the mixture until the required consistency is obtained substantially as described.

4. An improved dye or stain consisting of the product obtained by the treatment of the resin of the species known as "grass tree" (and botanically known as *Xanthorrhœa*) with a solution of an alkali and subsequently using the same in coinjunction with known mordants substantially as described.

1,193,839. SHUTTLE. LEWIS P. SPENCER, New Bedford, Mass. Filed Feb. 17, 1916. Serial No. 78,980. (Cl. 139—27.)

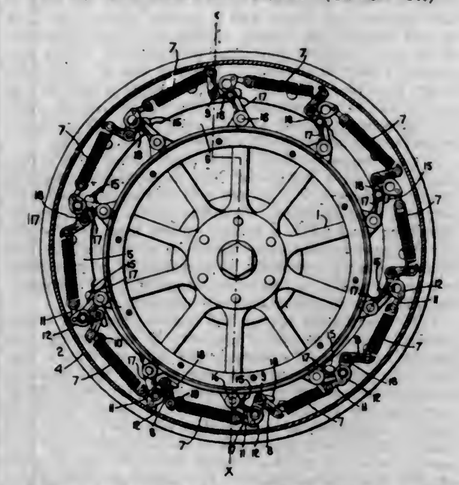
1. In combination with a shuttle, a spring U-shaped holder having a horizontal disposition and having integral side extensions projecting upwardly from the opposite sides of its lower arm, the top edges of said extensions being formed with U-shaped seats, the front ends of said extensions being formed with fingers for gripping the bobbin base, a spindle having a heel formed with an opening which registers with said seats, the upper arm of the holder being disposed above the seats in said extensions and bearing on said heel, said heel having a stop projecting down therefrom and normally abutting the free front end of the lower arm, and a pin extending through the shuttle, seats and heel opening and held under tension in the seats by said upper spring arm of the holder.



2. In a bobbin holder, a U-shaped spring holder having a horizontal disposition, the lower arm of the holder having bobbin base gripping means and upwardly facing open seats, and the upper arm of the holder forming a spring, a spindle having a heel formed with an opening the latter registering with said seats, and a pin passed through the seats and heel opening, said spring arm pressing down on the heel to hold the pin in said seats.

3. A shuttle having a recess, a U-shaped holder arranged on the recess of the shuttle with its arms horizontally disposed, seats associated with the lower arm of said holder, a spindle having a perforated heel received between said arms with its perforations in registry with the seats, and a pin passed through the shuttle and the perforation of the heel and engaged in said seats, the upper arm of the holder bearing on the heel and holding the pin in the seats under tension.

1,193,840. RESILIENT WHEEL. JOHN A. STAHLE, Boston, Mass., assignor to Stahle Mechanical Tire Company, Limited, Boston, Mass., a Corporation of Maine. Filed Oct. 27, 1913. Serial No. 797,384. (Cl. 152—37.)



1. In a resilient wheel, the combination with a wheel body, of an exterior rim, a plurality of contracting, spiral springs situated between said body and rim and a connection between each end of each spring and both the wheel body and rim by which the weight on the wheel causes each spring to expand from one end when on the upper side of the wheel and from the other end when on the under side of the wheel.

2. In a resilient wheel, the combination with a wheel body, of an exterior rim surrounding said body, a plurality of helical springs situated between said wheel body and rim and extending peripherally of the wheel body, means connecting each spring to the rim, and a connection between each end of each spring and the wheel body by which movement of the wheel body and rim toward each other from a neutral position will stretch the spring from one end and movement of said wheel body and rim away from each other from their neutral position will stretch the spring from the other end.

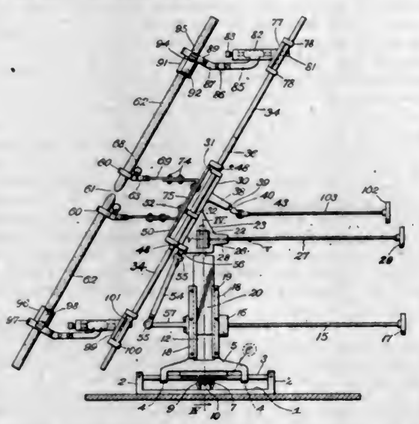
3. In a resilient wheel, the combination with a wheel body, of an exterior rim, a plurality of load-sustaining contracting springs situated between said parts, a movable connection between each end of each spring and one of said parts, means to limit the movement of each connection in one direction and means connecting said connections with the other part whereby when each spring is at the upper side of the loaded wheel one connection is moved in a direction to extend the spring, the connection at the other end being held against movement by its limiting means, and when said spring is at the lower side of said wheel the said other connection is moved in the opposite direction whereby the load is supported from first one end and then the other of said spring.

4. In a resilient wheel, the combination with a wheel body, of an exterior rim, a plurality of load-supporting springs between said wheel body and rim, a movable connection between each end of each spring and said rim, means carried by the rim to limit the movement of the connections for each spring toward each other and means connecting the wheel body with said movable connections and operating to transmit the load to each spring through one connection when the spring is at the upper side of the wheel and through the other connection when the spring is at the under side of the wheel.

5. In a resilient wheel, the combination with a wheel body, of an exterior rim, a plurality of load-supporting springs, a link connected to each end of each spring and pivotally connected to the rim, stops to limit the movement of the links for each spring toward each other and a connection between the wheel body and each link whereby the load is transmitted to each spring through one link when the spring is at the upper side of the wheel and through the other link when the spring is at the under side of the wheel.

[Claims 6 to 9 not printed in the Gazette.]

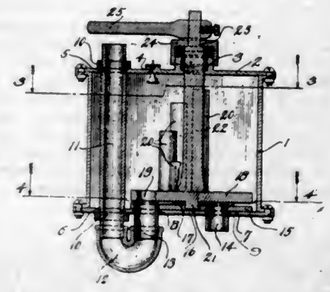
1,193,841. PROJECTING ARC-LAMP. ARCHIE D. STANDEFORD, Kansas City, Mo. Filed Feb. 3, 1913. Serial No. 745,907. (Cl. 176—103.)



1. In an arc lamp employing a pair of carbon rods and provided with a suitable frame, a plate mounted on said frame, a pair of superimposed inner shank members secured to said plate, two outer shank members mounted on said inner shank members, carbon guides supported by the outer shank members and permitting the carbon rods to be fed therethrough without movement of said guides, means permitting longitudinal adjustment of said guides, means carried by said plate for guiding carbon rods in a plane parallel to the plane of the plate and including guide plates and a universal joint connecting means between said guide plate and said carbon rods, and means for moving said guide plates.

2. In an arc lamp employing carbon rods, a carbon rod holder comprising a slide, a yoke rigidly mounted on the slide, a pair of pivotal set-screws mounted in opposite ends of said yoke, a trunnion pivotally supported by said screws, an extension from said trunnion, a lug secured to and insulated from said extension, a gimbal ring held by said lug, and a carbon rod clamp mounted pivotally in said ring, the pivotal axis of said clamp being at an angle to the pivotal axis of said trunnion.

1,193,842. MECHANICAL MEASURE. AUGUST STEPHAN, Freeport, Ill. Filed May 20, 1915. Serial No. 29,368. (Cl. 221—117.)



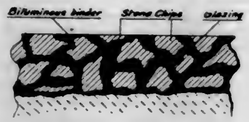
1. In combination, a tank having in its bottom a pair of spaced openings, a non-rotatable plate disposed in contact with said bottom and having openings alined with the aforesaid openings, an inlet pipe threaded through one of the openings in the bottom and into one of the openings in the plate, a delivery pipe threaded through the other opening in the bottom and into the other opening in the plate, a rotatable valve plate operating over the aforesaid plate and having its axis disposed nearer to one of the aforesaid pipes than to the other, a port in said valve plate normally alining with the inlet pipe, and an arcuate series of upstanding delivery tubes of unequal length rising from the valve plate and spaced from the axis thereof a distance equal to that at which the delivery pipe is spaced therefrom.

2. In a fluid measuring device, the combination of a horizontal rotary valve disk having concentric with its axis a series of upstanding fluid delivery tubes of unequal lengths, said disk also having an inlet opening spaced radially from the arc of the series of tubes, in combination with a tank, a fluid inlet into the bottom thereof adapted for registration with the inlet opening in the valve disk, and an outlet from said tank for registration with the aforesaid fluid delivery tubes.

3. A fluid measuring device comprising a closed tank having a flat horizontal bottom, a flat horizontal plate resting on said bottom and having in its upper side a central socket, a flat horizontal gasket resting on the plate and having an opening registering with the socket, an upright inlet pipe threaded through the tank bottom, the plate and into the gasket, an upright outlet pipe likewise threaded through the tank bottom, the plate and into the gasket, said pipes terminating in a plane below the upper side of the gasket and being spaced unequal distances in opposite directions from the socket, a flat horizontal valve plate resting on the gasket and having a central stud de-

pending into said socket, said plate also having a single inlet opening for registration with the inlet pipe, an arcuate series of upright outlet tubes of unequal lengths rising from the valve plate and adapted for registration with the outlet pipe, means for rotating said valve plate, and means for supplying fluid to the aforesaid inlet pipe.

1,193,843. FLOORING AND METHOD OF LAYING SAME. AMBRICUS E. SYMMES, Montreal, Quebec, Canada. Filed Sept. 10, 1915. Serial No. 49,992. (Cl. 94—1.)



1. A floor composed of individually glazed stone chips embedded in an asphalt binder.

2. A floor composed of stone chips individually coated with material impervious to asphalt oils and embedded in an asphalt binder.

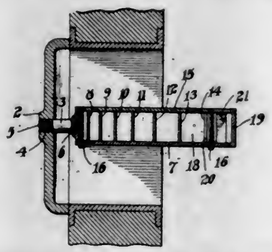
3. A floor composed of stone chips individually coated with sodium silicate and embedded in an asphalt binder.

4. A process of making floors and flooring material, which consists in coating stone chips with an insoluble and impervious material, mixing the chips with a binder, and depositing the mixture in suitable form for setting.

5. A process of making floors and flooring material, which consists in covering stone chips with a coating of material impervious to asphalt oil, mixing the chips with asphalt mastic, cooking the mixture, and depositing the mixture in suitable form for cooling and hardening.

[Claims 6 and 7 not printed in the Gazette.]

1,193,844. PREHEATER. SAMUEL H. TACY, Elkins Park, Pa., assignor to Pre-Heated Air Company, Philadelphia, Pa., a Corporation of Delaware. Filed Feb. 16, 1912. Serial No. 678,076. (Cl. 110—175.)



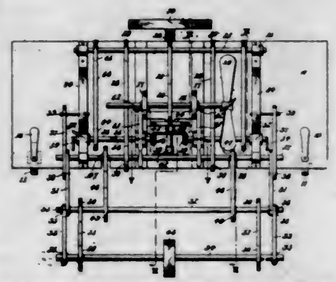
1. In a device of the character stated, a furnace door, a relatively flat pre-heater frame adapted to be mounted thereon, having outer walls and intermediate partitions arranged transversely to the length of the heater and across it from one face to the other in the direction of its thickness, sides exposed to the heat at the points of change of direction of the hot air currents, each side being spaced from alternate partitions to provide air passages at the sides, and a pipe for mounting the pre-heater within the furnace to swing with the furnace door supplying air to the pre-heater.

2. In a device of the character stated, a pre-heater frame having flat faces and inlet discharge openings, connecting partition members transverse to the length of the heater embracing successively increased cross sections from the point of air inlet to the point of discharge, and sides exposed to the heat of the furnace, against which the air is turned in its progression from one transverse passage to another and a pipe mount therefor adapted to supply air to the section of least cross sectional area.

3. In a device of the character stated, top and bottom pre-heater walls, intermediate partitions embracing substantially rectangular areas of successively increasing cross sections and edge walls, in combination with an inlet connection and an end wall having spaced apertures, and spaced baffle plates sloping with respect to the partitions and distributing the air among these apertures.

4. In a device of the character stated, a pre-heater frame of relatively flat form having substantially parallel faces and inlet and discharge openings, connecting partition members transverse to the length of the heater, alternate partitions terminating at a distance from opposite sides of the frame to provide longitudinal passages connecting the spaces between the partitions, the partitions being spaced progressively different distances apart from the inlet toward the point of discharge and sides exposed to the heat of the furnace against which the air is turned in its progression from one transverse passage formed to another in combination with an inlet air pipe for the pre-heater, which pipe also forms the support for it.

1,193,845. AIR-MOTOR. MARYAN TROYANOSKI, Rockfall, Conn. Filed Aug. 13, 1915. Serial No. 45,422. (Cl. 21—114.)



1. A fan motor including a supporting platform, a driving wheel and steering wheels carried thereby, a pair of centrally-positioned standards, a horizontal shaft journaled in the upper ends of said standard, a fan wheel mounted on the shaft, a pulley mounted on said shaft, a pair of upstanding brackets arranged adjacent the ends of the platform, a rearwardly-positioned horizontal shaft journaled in said brackets, a centrally-positioned pulley carried thereby in alinement with the pulley on the aforesaid shaft, a connecting belt between the two pulleys, a forward shaft journaled in the forward ends of said brackets, alined pulleys and connecting belts carried by the rearward and forward shafts, a link connected to each end of the forward shaft, a shaft journaled in the outer ends of said links, link arms connected at their inner ends to said last-named shaft, a shaft journaled in the outer ends of the link arms, alined pulleys and belt connections carried by the forward shaft and the two last-named shafts, means for controlling the positions of the outermost shafts, stub shafts supported on the end brackets, centrally-positioned stub shafts in alinement with the aforesaid stub shafts and adapted to be engaged thereby, a stub shaft journaled at right angles to the aforesaid shafts, a pulley and beveled gear carried thereby, pinions carried by the inner ends of the centrally-positioned stub shafts, means for causing said pinions and gear to selectively engage, and connections between the pulley on the gear supported shaft and axle whereby the entire frame may be moved.

2. An air motor comprising a platform, central standards mounted thereon, a shaft journaled in the upper ends of said standards, a pair of upstanding brackets arranged adjacent the ends of the platform, rearwardly and forwardly positioned shafts journaled in said brackets, connections between all of said shafts, a fan wheel carried by the upper shaft, and a forwardly swinging frame including a plurality of driven shafts in communication with the aforesaid shafts.

3. An air motor including a supporting frame, supporting wheels therefor, supporting standards carried by said platform, a shaft journaled in said standards, a fan carried by said shaft, forwardly and rearwardly positioned shafts journaled on said platform, connections between the shaft supported in the central standards and the other shafts, and mechanism forming communication between the supporting wheels and driving mechanism whereby the platform may be moved from one position to another.

4. An air motor including a platform, a power shaft carried thereby, a fan wheel mounted on said power shaft, driven shafts in communication with said power shaft, a forwardly-positioned swingingly mounted frame associated with said driven shafts, and means for controlling the position of said frame.

5. An air motor including a platform, supporting wheels therefor, a driving shaft carried by said platform, driven shafts carried by said platform in communication with said driving shaft, a forwardly positioned swingingly mounted frame associated with said driven shafts, and journaled shafts carried by said frame.

[Claims 6 to 13 not printed in the Gazette.]

1,193,846. SHUTTLE. JOSEPH F. VAILLANCOURT, Fall River, Mass. Filed Jan. 21, 1916. Serial No. 73,368. (Cl. 139—46.)



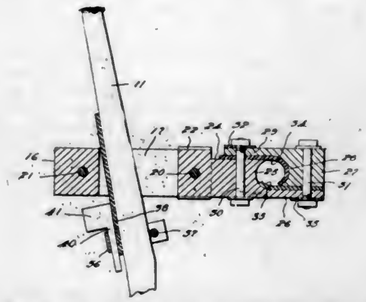
1. A shuttle, comprising a body having a bobbin recess opening through the top and bottom thereof and also provided with an inclined bore leading from the forward end of the recess through the bottom of the shuttle, a member removably fitted in the bore, spaced slit tubular portions formed on the member for communication with each oth[illegible]1 also for communication with the space between the same, a guide lip on the member and having edges for directing a thread into either tubular portion, and an open eye extension at the opposite end of the member.

2. A shuttle, comprising a body having a bobbin recess opening through the top and bottom thereof and also provided with an inclined bore leading from the forward end of the recess through the bottom of the shuttle, a member removably fitted in the bore, spaced slit tubular portions formed on the member for communication with each other and also for communication with the space between the same, a guide lip on the member and having edges for directing a thread into either tubular portion, and an open eye extension at the opposite end of the member, said body being further provided with a slit establishing communication between the bore and the opening of the recess through the bottom of said body.

3. A shuttle p rovided with a bobbin receptacle open through the top, and having an inclined bore leading from the forward end of the receptacle through the bottom of the shuttle, such bore being open its full length through the bottom of the shuttle, and a thread guide removably mounted in the bore, and comprising a tubular member having a longitudinal slot alined with the bottom opening of the bore, and providing two thread-guiding channels, a tension device at the forward end of the tubular member, and a thread directing means at the forward end of the tubular member for directing the thread into either channel.

4. A shuttle provided with a forwardly and downwardly inclined bore, the outlet end of which is toward the point and through the bottom of the shuttle, said bore being open throughout its length to the bottom of the shuttle, and such opening being provided for an initial thread guide, and a movable-thread guide mounted in the bore, and comprising a tubular member having two longitudinal channels, said channels having a longitudinal inlet common to both, a lip at the front end of the tubular member for directing the thread to either channel, and a tension member at the inner end of the tubular member.

1,193,847. PICKER-STICK LUG-STRAP. JOSEPH F. VAILLANCOURT, Fall River, Mass. Filed Jan. 21, 1916. Serial No. 73,369. (Cl. 139—48.)



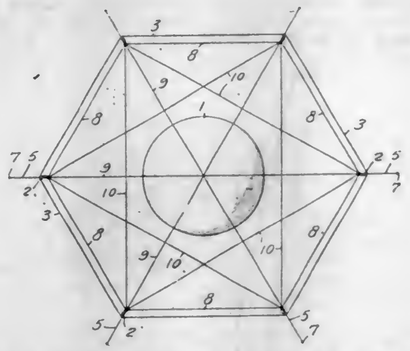
1. A picker stick lug strap, comprising a main body having a recess for a portion of its length to provide a flat terminal, a block mounted in the recess and having a terminal to engage the body, the recess and terminal of the body and block constituting a receptacle for the picker stick, bolt members passed through the terminals of the body and block for detachably connecting the same together, said body being formed with a further recess having a curvilinear wall, a second block having a recess provided with a curvilinear wall, means detachably securing the second block in the recess with the curvilinear walls arranged in coöperative relation to each other to provide a substantially circular opening for receiving the rocking arm of a loom, the opening being disposed at right angles to the first named recess.

2. A picker stick lug strap, comprising a main body having a recess for a portion of its length to provide a flat terminal, a block mounted in the recess and having a terminal to engage the body, the recess and terminals of the body and block constituting a receptacle for the picker stick, bolt members passed through the terminals of the body and block for detachably connecting the same together, said body being formed with a further recess having a curvilinear wall, a second block having a recess provided with a curvilinear wall, means detachably securing the second block in the recess with the curvilinear walls arranged in coöperative relation to each other to provide a substantially circular opening for receiving the rocking arm of a loom, the opening being disposed at right angles to the first named recess, and fibrous strips interposed between the body and last named block and extending within the opening.

1,193,848. LIGHTNING-ARRESTER. GEORGE WILLIAM VAN HORN, Tulsa, Okla. Filed July 21, 1915. Serial No. 41,076. (Cl. 173—31.)

1. In combination with the oil tank and the fire wall thereof, of a series of metal posts encircling the tank outside the fire wall, a wire encircling the posts at the outer sides thereof intermediate the ends of the posts, a pair of guy wires bracing each post at the outer side thereof, the members of each pair being connected with a common anchor and with the post at the level of the first-named wire and at the top, an insulator connected with the top of each post at the inner side thereof, conductors arranged between and connecting the insulators of adjacent posts, the alternate posts and the directly opposite posts, and forming a network above the tank, each of the said conductors having one end connected to the insulator and the other grounded, each of the said conductors passing downwardly through the hollow post, and each post having a

brush of small conducting wires at the top thereof, each of the insulators comprising an eye and a ring connected by insulating material, the eye of each insulator being connected to the post, and the ring being connected to the conductors.



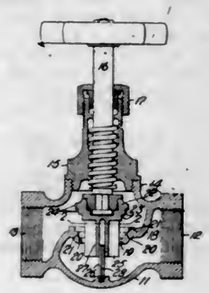
2. In combination with the oil tank and the firewall thereof, of a series of metal posts encircling the tank outside the fire wall, a wire encircling the posts at the outer sides thereof intermediate the ends of the posts, a pair of guy wires bracing each post at the outer side thereof, the members of each pair being connected with a common anchor and with the post at the top and at the level of the first-named wire, an insulator connected with the top of each post at the inner side thereof, each insulator having a ring at its inner end and conductors arranged between and connecting the rings of adjacent posts, of the alternate posts and of the directly opposite posts, and forming a network above the tank, and an insulated conductor connecting each ring with the ground, each of the said conductors having one end connected to the ring and the other grounded, each of the said conductors passing downwardly through the hollow post, and each post having a brush of small conducting wires at the top thereof.

3. In combination with the oil tank and the fire wall thereof, of a series of metal posts encircling the tank outside the fire wall, a wire encircling the posts at the outer sides thereof intermediate the ends of the posts, a pair of guy wires bracing each post at the outer side thereof, the members of each pair being connected with a common anchor and with the post at the top and at the level of the first-named wire, an insulator connected with the top of each post at the inner side thereof, each insulator having a ring at its inner end and conductors arranged between and connecting the rings of the adjacent posts, of the alternate posts and of the directly opposite posts, and forming a net work above the tank, and an insulated conductor connecting each ring with the ground, each of the said conductors having one end connected to the ring and the other grounded.

4. In combination with the oil tank, of a series of posts encircling the tank, means for bracing the posts against each other and against the ground, an insulator connected with the top of each post at the inner side thereof, each insulator having a ring at its inner end, and conductors arranged between and connecting the rings of the adjacent posts, of the alternate posts, and of the directly opposite posts, and forming a network above the tank, and an insulated conductor connected with each ring at one end and grounded at the other end, each of the said conductors passing downwardly through the post, and each post having a brush of small conducting wires at the top thereof.

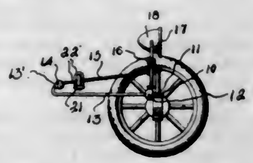
5. In combination with the oil tank, of a series of posts encircling the tank, means for bracing the posts against each other and against the ground, an insulator connected with the top of each post at the inner side thereof, each insulator having a ring at its inner end, and conductors arranged between and connecting the rings of the adjacent posts, of the alternate posts, and of the directly opposite posts, and forming a network above the tank, and an insulated conductor connected with each ring at one end and grounded at the other end.

1,193,849. VALVE. GEORGE H. VIGER, Montreal, Quebec, Canada. Filed Apr. 17, 1914. Serial No. 832,584. (Cl. 137—4.)



In a valve, a body having inlet and outlet passages, an apertured wall separating the inlet and outlet, a seat surrounding said wall aperture, a closure member adapted to make a fluid tight joint with the seat and means for guiding said member to its seat comprising the combination of a plurality of depending wings on said closure member and a slotted telescopic guide between the closure member and the valve body, the slot adapted to permit the escape of air.

1,193,850. DIRIGIBLE HEADLIGHT. FRANK E. WADDELL, Ingomar, Mont. Filed Sept. 25, 1915. Serial No. 52,673. (Cl. 240—62.)



A mechanism for steering the headlight of an automobile comprising an arm carried by the steering knuckle of the automobile, a pair of rearwardly extending converging rods, a ball and socket connection between one of said rods and the arm, a rotary lamp supporting post, a ball and socket connection between the other rearwardly extending rod and the lamp supporting post, and a bracket carrying a pair of grooved rollers adapted to receive and guide one of said converging rods.

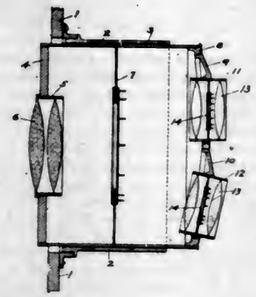
1,193,851. CAMERA-LENS. GEORGE E. WATTS, Portland, Oreg. Filed Oct. 18, 1915. Serial No. 56,567. (Cl. 88—57.)

1. A camera lens comprising in combination a lens barrel, a main lens therein, and a plurality of directing lenses all positioned to direct images through said main lens.

2. A camera lens comprising in combination a lens barrel, a main lens mounted in one end thereof, and a plurality of directing lenses adjustably mounted in the other end thereof, and each adapted to direct a different image through said main lens.

3. A camera lens of the character referred to, comprising in combination with a lens barrel having a main lens therein, a detachable lens plate at the opposite end of said lens barrel, said lens plate being provided with a plurality of directing lenses set therein at angles to said main lens, whereby to direct a plurality of images simultaneously through said main lens.

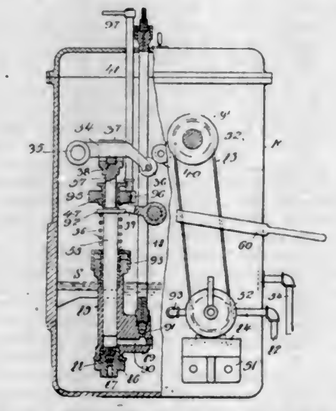
4. A camera lens of the character referred to, comprising in combination with a lens barrel having a main lens therein, a detachable lens plate at the opposite end of said lens barrel, said lens plate being provided with a plurality of directing lenses set therein and adjustable relative to each other and to said main lens, whereby to direct a plurality of images simultaneously through said main lens.



5. In combination with a camera lens barrel having a main lens in one end thereof, a convexed lens plate mounted in the opposite end thereof, and provided with a plurality of directing lenses therein, positioned at angles to said main lens, whereby to direct different images simultaneously through said main lens.

[Claims 6 to 10 not printed in the GAZETTE.]

1,193,852. FUEL-FEEDING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. GEORGE F. WHEELER, Erie, Pa. Original application filed July 20, 1911, Serial No. 639,527. Divided and this application filed Sept. 30, 1912. Serial No. 723,100. (Cl. 123—140.)



1. In an internal combustion engine, a cylinder and piston, a crank shaft, a counter shaft, a fuel feed pump, an inclosing casing therefor, means operated from the counter shaft and inclosed within said casing for actuating the pump, automatic devices for varying the stroke of the pump, and independent manually operated devices extending to the exterior of the casing for operating the pump, said pump delivering to said cylinder.

2. In an internal combustion engine, a cylinder and piston, a crank shaft, a counter shaft, a fuel feed pump, including a reciprocating plunger, an inclosing casing for the pump, automatic devices located within said casing for reciprocating said plunger, means for automatically varying the stroke of said plunger, and independent manually operated devices extending to the exterior of the casing for reciprocating said plunger.

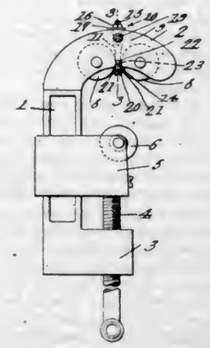
3. In an internal combustion engine, a cylinder and piston, a crank shaft, a fuel pump for delivering hydrocarbon oil to the cylinder, a casing inclosing said pump, means for operating said pump and driven from said shaft for supplying the fuel oil to said casing to immerse the pump therein.

4. In an internal combustion engine, a cylinder and piston, a crank shaft, a fuel feed pump for delivering hydrocarbon oil to the cylinder, means for operating said pump, a casing inclosing said pump to immerse the pump in the oil contained therein, and means driven from said shaft for maintaining a constant supply of fuel oil within said casing.

5. In an internal combustion engine, a cylinder and piston, a crank shaft, a fuel feed pump for delivering hydrocarbon oil to the cylinder, a casing arranged to inclose the pump, a pivotally mounted arm and means for rocking the same and located within said casing for automatically operating the pump, and manually controlled devices extending to the exterior of said casing for independently operating the pump.

[Claims 6 to 10 not printed in the Gazette.]

1,193,853. PIPE-CUTTER. FRANKLIN P. WHITE, Shallotte, N. C. Filed Apr. 20, 1916. Serial No. 92,489. (Cl. 81—192.)



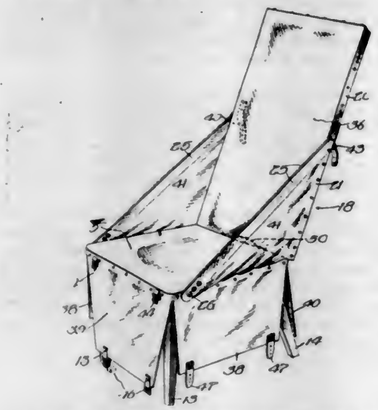
1. A bur cutting attachment for pipe cutters, comprising a shank having a threaded stem at one end and a T-head at the other end provided with a cutting edge and with lugs projecting from its ends, and a clamping nut threaded upon the said stem.

2. In a pipe cutter, a jaw having notches, a rotary cutter carried by the jaw, a bur cutting device embodying a shank engaged through the jaw and having a T-head engaged in the said notches and provided with a cutting edge, a nut threaded upon the said shank and bearing against the jaw, and spacers insertible in the said notches.

3. In a pipe cutter, a jaw having notches, a rotary cutter carried by the jaw, a bur cutting device embodying a shank engaged through the jaw and having a T-head engaged in the said notches and provided with a cutting edge and lugs at its ends forming recesses between the said lugs and shank, the said lugs overlapping the sides of the jaw, a clamping nut threaded upon the shank and bearing against the jaw, and spacers insertible into the said recesses and notches.

4. In a pipe cutter, a jaw, a rotary cutter carried by the jaw, a bur cutting device including a shank engaged through the jaw and having a T-head bearing against the jaw and provided with a cutting edge, the shank having a slot, a nut threaded upon the shank and bearing against the jaw, and a securing element engaged through the jaw and said slot.

1,193,854. FOLDING CHAIR. JOHANNAH LEONTINE WHITE, Chicago, Ill. Filed Nov. 18, 1915. Serial No. 62,086. (Cl. 155—8.)

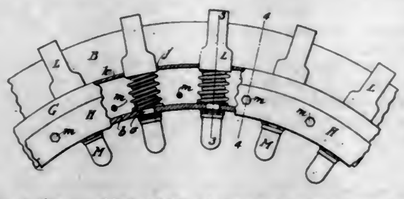


1. A folding chair comprising a seat frame, legs hinged thereto to fold flat beneath the seat frame, a hinged back frame to fold flat over the seat frame, a cover for the back frame, and flaps depending from the front, rear and side members of the seat frame adapted to be folded inwardly over each other and the folded chair legs and to be fastened together at their edges, whereby said cover and flaps completely inclose the folded chair structure to produce a satchel-like package.

2. A folding chair comprising a seat frame, legs hinged thereto to fold flat beneath the seat frame, a hinged back frame adapted to fold flat over the seat frame, a cover for the back frame, flaps depending from the front, rear and sides of the seat frame adapted to be folded beneath and inclose the folded leg structure, with means to fasten the flaps in their inclosing positions and means to fasten the back frame to the front of the seat frame.

3. A folding chair comprising a seat member, legs engaged to and foldable beneath the seat member, a back member hinged to and foldable over the seat member, a flexible cover to cover the seat member and extending over the back member and having depending flap appendages adapted to be folded beneath and inclose the folded legs, means to support the back member at a predetermined inclination relatively to the seat member and triangular arm rest flexible members attached to the seat and back member and adapted to be folded between said seat and back members.

1,193,855. ANTISKIDDING DEVICE FOR WHEELS. NELSON E. WRIGHT, Springfield, Mass. Filed Nov. 30, 1915. Serial No. 64,234. (Cl. 21—212.)



1. A tire-provided wheel having a shelf-like extension, projecting from the side of the felly, an annular, cross sectionally trough-shaped member having the edges of its opposite walls suported on said extension, and provided with regularly spaced holes in its transverse opposite wall-uniting portion, means for confining said annular member rigidly on the wheel, a series of antiskid members guided through said holes, springs by which said members are yieldingly inwardly resisted, and means for limiting the outward movements of the anti-skid members relatively to the annular trough shaped member.

2. A tire-provided wheel having a shelf-like extension, projecting from the side of the felly, and provided with regularly spaced holes, an annular cross sectionally trough shaped member having the edges of its opposite walls supported on said extension, and provided with regularly spaced holes in its transverse opposite wall-uniting portion, which are radially alined with those in said extension, means for confining said annular member rigidly on the wheel, a series of antiskid members guided through the holes in said wall uniting portion, and having inwardly extending studs having guiding engagements through the said holes in the shelf like extension, springs within the trough shaped member by which said antiskid members are yieldingly inwardly resisted, and means for limiting the outward movements of the anti-skid members relatively to the annular trough shaped members.

3. A tire-provided wheel having a shelf-like extension projecting from the side of the felly, and provided with regularly spaced holes, an annular cross sectionally trough shaped member having the edges of its opposite walls supported on said extension, and provided with regularly spaced holes in its transverse opposite wall-uniting portion, which are radially alined with those in said extension, means for confining said annular member rigidly on the wheel, a series of anti-skid members guided through the holes in said wall uniting portion, and having inwardly extending studs having guiding engagements through and inwardly beyond the said holes in the shelf-like extension, springs within the trough shaped member by which said anti-skid members are yieldingly inwardly resisted, and nuts on the inner ends of the studs, for limiting the outward movements of the anti-skid members.

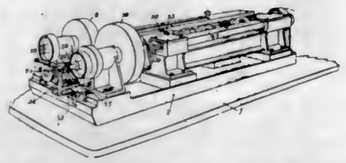
4. A tire-provided wheel having a shelf-like extension projecting from the side of the felly, and provided with regularly spaced holes, tubular bushings having portions engaged through said holes, and radially outwardly projecting relatively to the extension, and means for the confinement of the bushings on the extension, an annular cross sectionally trough shaped member having the edges of its opposite walls supported on said extension, and provided with regularly spaced holes in its transverse opposite wall uniting portions which are radially alined with those through said bushings, means for confining said annular member rigidly on the wheel, a series of anti-skid members guided through the holes in said wall uniting portion, and provided with inardly extending studs having guiding engagements through the bushings, springs in compression within the trough shaped member surrounding the bushings, and exerting their pressure outwardly against the anti-skid members, and nuts on the inner ends of the studs for limiting the outward movements of the anti-skid members.

5. A tire-provided wheel having a shelf-like extension projecting from the side of the felly, an annular cross sectionally trough shaped member having the edges of its opposite walls supported on said extension, and provided with regularly spaced holes in its transverse opposite wall-uniting portion, means for confining said annular member rigidly on the wheel, a series of anti-skid members each consisting of a body portion, a screw engaged interchangeable traction member, extending outwardly from said body portion and an inwardly projecting stud having a guiding engagement through the shelf-like member and provided at its inner end with a limiting nut and springs within the trough shaped annular member exerting outward pressures against the anti-skid members.

[Claims 6 to 13 not printed in the Gazette.]

1,193,856. SWAGING-MACHINE. ARTHUR A. ARNOLD, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Feb. 1, 1913. Serial No. 745,604. (Cl. 29—20.)

1. The combination with a bed, of feed slides mounted thereon, work heads supported by the base in alinement with the feed slides, a stock supply, jaws on one of the feed slides for grasping the stock, a drill, means for swinging the drill temporarily into operative position and then withdrawing the same, means for advancing one of the feed slides to bring the stock held thereby into engagement with the drill and withdrawing the same before the drill is withdrawn, means for operating the slide to feed the stock into one of the work heads and withdraw the same, a carrier adapted to engage the stock when withdrawn from the work head, shears for cutting a blank from the stock, means for releasing the stock from the jaws as it is grasped by the carrier and shears, means for swinging the carrier to tansfer the blank to the other slide, jaws on the second slide for grasping the blank, means for shifting the slide to reciprocate the blank in a second work head, a plurality of dies in said head for working on the blank, automatic means for throwing the various dies into and out of operative position, a stop actuated by the blank for limiting the feeding thereof, and means for automatically releasing the blank from the feeding jaws and for re-setting the stop.



2. A machine of the character described, including a drill for cupping out the end of the stock being operated on, tipping dies for rounding out the end of the cupped stock, means for severing the stock, transfer mechanism, feed mechanism having jaws for grasping the blank and removing the same from the transfer mechanism, and means for longitudinally reducing the blank while held by the feed mechanism to provide a semi-finished article.

3. A machine of the character described, including a work head having a set of dies mounted therein for operation on a blank of material to initially shape the same, a second head adjacent the first and provided with a plurality of sets of dies for operation on the initially shaped blank to provide a semi-finished article, timing mechanism for regulating the sequence of operation of the various sets of dies in the two heads, and a carrier operated by the timing mechanism for temporarily grasping the article being operated upon to transfer it from one head to the other.

4. A machine of the character described, including a pair of simultaneously operating work heads, one of said heads being adapted to initially operate on a blank of material, the other head being adapted to finish the operation of the first head, reducing dies in the heads, a reciprocating feed mechanism for each of the heads, grasping jaws in each feed mechanism for holding the blank in operative engagement with the work head, and the conveyer for temporarily grasping the material held by one set of jaws and transferring it to the grasp of the other set of jaws.

5. The combination with a pair of independent work heads, each being adapted to perform a distinct operation on a blank of material, of a feed mechanism alined with each of the work heads for feeding the blanks to the work heads, tipping dies in one of the heads for operation on the blanks, synchronously operating controlling devices for the feeding mechanisms, and a conveyer operated by the controlling mechanism for shifting the work from one to another of the work heads.

[Claims 6 to 52 not printed in the Gazette.]

1,193,857. TREAD-PLATE. WILLIAM S. ATWOOD, Montreal, Quebec, Canada. Filed Jan. 14, 1915. Serial No. 2,178. (Cl. 20—79.)

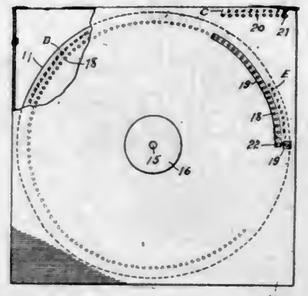
1. A device of the character described, comprising an apertured plate having a portion of the periphery of each aperture upwardly turned, and a tongue preventing passage through the aperture in a direction perpendicular to the plate.



2. A device of the character described, comprising an apertured plate, ridges or bosses partially surrounding each aperture formed by upward displacement of the metal at the edge of the aperture, and tongues below the apertures integral with the plate and formed by downward displacement of the metal removed from the apertures.

3. A tread plate comprising an apertured metal sheet having a portion of the metal at the edge of each aperture upwardly turned through an acute angle, and the metal displaced in formation of the aperture downwardly turned through an arcuate angle.

1,193,858. ADDING-MACHINE. ARTHUR R. BALL, Melvern, Kans. Filed Mar. 4, 1916. Serial No. 82,132. (Cl. 235—83.)



1. In an adding machine, a casing having an arcuate slot, an observation opening, characters comprising the digits arranged in a row at one side of said slot, and a rotary disk in said casing having one hundred and ten holes adapted to receive a stop pin inserted through said slot and spaced apart from each other at the same distance as the distance between the digits, the disk being provided with a series of numerals from zero to one hundred and nine inclusive arranged so as to pass consecutively in front of said observation opening, the disk being disposed concentric with said slot and provided with an imperforate space between the terminal holes, respectively designated by zero and 109, said space exceeding in length the distance covered by ten holes in the disk.

2. In an adding machine, a casing having a slot, an observation opening and characters comprising the digits arranged in a row at one side of said slot, and a rotary disk in said casing having a series of peripheral holes adapted to receive a stop pin inserted through said slot and spaced apart to correspond with said digits, the periphery of said disk between the ends of said series being provided with a blank space for indicating the maximum indication.

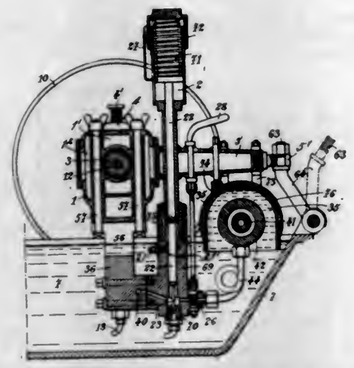
3. In an adding machine, a casing having a slot, an observation opening and characters comprising the digits arranged in a row at one side of the slot, and a rotary disk in said casing having a series of peripheral holes adapted to receive a stop pin inserted through said slot and spaced apart to correspond with the digits, the periphery of said disk between the ends of said series being provided with a blank space for indicating the maximum indication, said slot in length corresponding to the space occupied by said blank space and ten of the holes in said disk.

4. In an adding machine, a casing having a slot adapted to receive therethrough a stop pin, an observation opening

and a row of characters comprising the digits arranged parallel with the slot, and a rotary disk in said casing having a circularly arranged row of one hundred and ten holes spaced apart to correspond with said digits and adapted to receive a stop pin.

5. In an adding machine, a casing having a slot adapted to receive therethrough a stop pin and a row of characters comprising the digits arranged parallel with the slot, and a movable member mounted in said casing and having a row of one hundred and ten holes spaced apart to correspond with said digits and adapted to receive a stop pin inserted through said slot.

1,193,859. PUMPING APPARATUS FOR MOLTEN LEAD OR OTHER FUSIBLE SUBSTANCES. CHARLES PAUL BARY, Paris, France, assignor to Henry Pierre Charles Georges Debauge, Paris, France. Filed Feb. 12, 1913. Serial No. 747,866. (Cl. 22—70.)



1. In apparatus for shaping molten metal, a pump, said pump having a piston and cylinder adapted to be immersed in molten metal, said apparatus being pivotally mounted, and driving connections for said pump coaxial with the pivotal axis of the apparatus, said driving means being adapted to remain out of the molten metal, and said pump being movable into and out of immersion in the bath.

2. In apparatus for shaping molten metal, a pump, said pump having a substantially vertically arranged piston and cylinder adapted to be immersed in molten metal, means for continuously driving said pump, said driving means being adapted to remain out of the molten metal, and said pump being movable into and out of immersion in the bath.

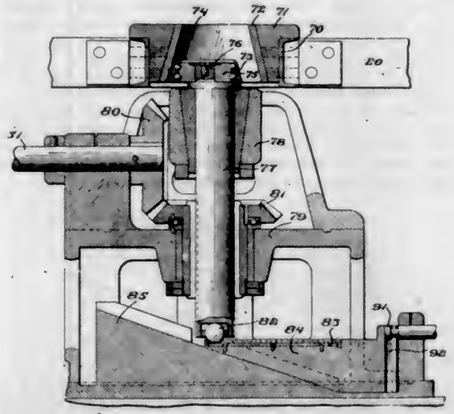
3. In apparatus for shaping molten metal, a pump, said pump having a piston and cylinder adapted to be immersed in molten metal, and driving connections for said pump adapted to remain outside of said molten metal, said apparatus being rotatably mounted whereby it is movable into and out of immersion in the bath, said cylinders having plug outlets at the lower ends thereof, adapted to be opened for venting the cylinders.

4. In apparatus for shaping molten metal, a pump, said pump having a piston and cylinder adapted to be immersed in molten metal, a drive shaft, and driving connections between said shaft and piston, a casing rotatable on an axis concentric with said shaft, said casing having said cylinder mounted thereon and adapted to carry the same out of immersion when rotated.

5. A force pump for molten metal, comprising a plurality of pistons and cylinders, and driving means for said pistons, said cylinders being formed in a single block of metal, having a space between the cylinders, said cylinders being adapted to be immersed in the molten metal and to have the molten metal surround the same through said intermediate space in the block of metal, said driving connections being outside of the metal bath, and an oil jacket around said driving connections, and a water jacket around said oil jacket.

[Claims 6 to 11 not printed in the Gazette.]

1,193,860. MECHANISM FOR PRODUCING COMPOUND OSCILLATORY MOTION. GEORGE F. BARTHOLMES, Coalinga, Cal. Filed Oct. 21, 1915. Serial No. 57,167. (Cl. 74—14.)



1. A mechanism for producing compound oscillatory motion to a slidably sustained organ, comprising a continuously revolving body, an eccentric tapering head on said body, a correspondingly shaped socket for the head in said organ, said socket having considerably greater diameter than said head and means for keeping the socket in contact with said head.

2. A mechanism for producing compound oscillatory motion to a slidably sustained organ, comprising a continuously revolving body, an eccentric tapering head on said body, a correspondingly shaped socket for the head in said organ, said socket having considerably greater diameter than said head, means for keeping the socket in contact with said head, and means for advancing said head axially in said socket for changing the degree of oscillatory motion while said body is revolving.

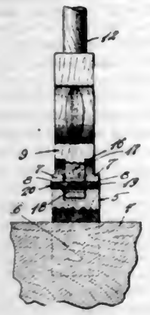
3. In a mechanism for producing compound oscillatory motion to a slidably sustained table; a revolving shaft situated with its axis of revolution perpendicularly to a frame sustaining said table, interengaging members on the table and on said revolving shaft, said interengaging members comprising a head on one and a socket on the other of said interengaging members, one of said interengaging members being eccentrically mounted on the end of said revolving shaft, and means for varying the amplitude of the oscillations.

4. In a mechanism for producing compound oscillatory motion to a slidably sustained table; a revolving shaft situated with its axis of revolution perpendicularly to a frame sustaining said table, interengaging members on the frame and on said revolving shaft, said interengaging members comprising a head on one and a corresponding socket on the other of said interengaging members, one of said interengaging members being eccentrically mounted on the end of said revolving shaft, means for axially advancing one of said members relatively to the other, thus varying the amplitude of the oscillations.

5. In a mechanism for producing compound oscillatory motion to a slidably sustained table; a revolving shaft situated with its axis of revolution perpendicularly to a frame, sustaining said table, an eccentric having a tapered head on one end of the shaft and a correspondingly shaped socket in the frame of greater diameter than said head, and means for keeping said head and socket in contact.

[Claims 6 to 12 not printed in the Gazette.]

1,193,861. BEARING FOR PIANO-ACTIONS. FREDERICK C. BILLINGS, Milwaukee, Wis. Filed Nov. 8, 1912. Serial No. 730,242. (Cl. 84—26.)



1. In combination with a working part of a piano action and a fixed support therefor, a bearing comprising a center-pin having a threaded connection with said support, and a metal bushing secured in said working part and journaled on said center-pin.

2. In a piano action, a connection for the relatively movable parts thereof, comprising a center-pin provided with means so that, when it is seated, it will be held against movement in one of the parts of said action, and a metallic bushing rotatably mounted on said pin and provided with means to hold it against axial movement when seated in the connected part.

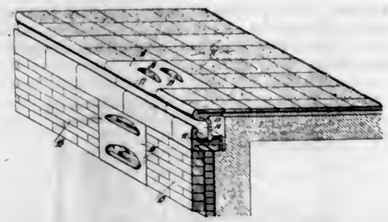
3. In a piano action a connection for the relatively movable parts thereof, comprising a screw-threaded pin seated against movement in one of the parts of said action, and an internally screw-threaded bushing mounted on said pin and seated against movement relative to the connected part.

4. A bearing for piano actions, comprising an internally threaded bushing and a threaded center-pin.

5. A bearing for piano actions, comprising an internally threaded bushing and a roughened external surface, and a threaded center-pin.

[Claim 6 not printed in the Gazette.]

1,193,862. PLUNGE-BATH TILE AND TERRA-COTTA CONSTRUCTION. JOHN FRANCIS BOORAEM, Greenwich, Conn. Filed June 16, 1915. Serial No. 34,331. (Cl. 4—2.)



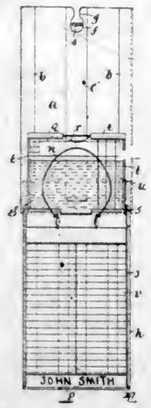
1. A tile unit for plunge baths, comprising a plurality of exposed walls, in different planes, one of said walls being provided with a recess forming a hand grip, and means connecting said recesses with another of said walls, to form a drain for said recess.

2. A tile unit for plunge baths, comprising an exposed front wall, a horizontally disposed exposed wall provided with recesses forming hand grips, and means connecting said recesses with said front wall to form a drain for said recesses.

3. In a tile unit for plunge baths, an exposed face provided with a recess forming a hand grip, and a channel connected to said recess and extending in a direction away from said exposed face to form a drain for said recess.

4. A tile unit for plunge baths, comprising a front wall, an overhanging portion, an upper portion provided with a plurality of inclined recesses forming hand grips, and means connecting said recesses with said front wall to for a drain for the said recesses.

1,193,863. BILL-FILE. HENRY BRAEN, Paterson, N. J. Filed Feb. 26, 1915. Serial No. 10,716. (Cl. 45—2.)



1. In combination, folding members pivoted together, and a sheath in which said members have sliding movement, the free ends of said members being toward the mouth of the sheath and one member having a rigid extension portion at its other end formed with lateral upstanding walls and affording a support for said members in the sheath upon the other member clearing the sheath.

2. In combination, folding members pivoted together, and a sheath in which said members have sliding movement, the free ends of said members being toward the mouth of the sheath and one member having a rigid extension portion at its other end and formed with lateral upstanding walls extending into extension portion, the other member having pivotal support in said walls and said extension portion affording a support for said members in the sheath upon said other member clearing the sheath.

3. In combination, a sheet metal sheath member and a sheet metal holder member slidably arranged in the sheath member, one of said members having a longitudinal groove bent therein and a stop at one end of the groove and the other member having a bent-off projection reaching into said groove and adapted to abut the stop.

4. In combination, a folding holder member having upstanding portions formed with opposite eyes and a complementary holder member of flat stiff sheet material having lateral projections rebent into trunnion form and journaled in said eyes.

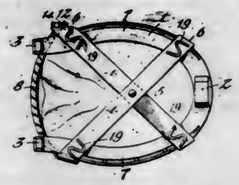
5. In combination, a folding holder member having upstanding portions formed with opposite eyes and a complementary holder member of flat stiff sheet material having lateral projections at one end thereof and said end including the projections rebent, said rebent projections forming trunnions and being journaled in said eyes.

[Claims 6 and 7 not printed in the Gazette.]

1,193,864. DETACHABLE CALK-FRAME. OSCAR E. BROWN, Buffalo, N. Y. Filed Dec. 10, 1915. Serial No. 66,083. (Cl. 168—30.)

1. A detachable calk-frame having bars which are adjustable toward and from each other and provided with means arranged to engage a horseshoe or hoof, and a clamping device connecting opposing ends of said frame-

bars and comprising a flexible member attached at one end to one of said bars, twisting means applied to the other end of said member, and means for locking said twisting means.



2. A detachable calk-frame having bars which are adjustable toward and from each other and provided with lugs, a clamping device comprising a flexible connection attached at one end to one of said lugs and having its other end passed through the opposite lug, a twisting wheel secured to the last-named end of said connection, and means for locking said twisting-wheel in place.

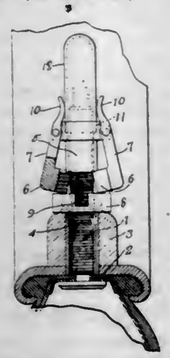
3. A detachable calk-frame having bars which are adjustable toward and from each other and provided with lugs, a clamping device comprising a flexible connection attached at one end to one of said lugs and having its other end passed through the opposite lug, a twisting-wheel secured to the last-named end of said connection and provided with locking notches, and a sliding locking pin mounted on the adjacent lug and arranged to engage said notches.

4. A detachable calk-frame having bars which are adjustable toward and from each other and provided with lugs, a flexible connection comprising a continuous doubled strip fastened at one end to one of said lugs and having its other end arranged in an opening in the opposite lug, a twisting-wheel bearing against the last-named lug and provided with a cross bar around which said strip is looped, and means for locking said twisting-wheel.

5. A detachable calk-frame having bars which are adjustable toward and from each other and provided with lugs, one of said lugs having an opening, a twisting-wheel having a bushing extending into said opening, a flexible connection passing through said bushing and attached to said twisting-wheel, the other end of the connection being attached to the opposite lug, and means for locking said twisting-wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,193,865. DUST-CAP FOR VALVE-STEMS. ROY M. BROWN, Wilmington, Ohio. Filed June 21, 1915. Serial No. 35,215. (Cl. 152—12.)



1. The combination, with an elongated member having exterior screw threads, of a second member removably mounted on said elongated member, an attaching device mounted on the outside of said second member and having screw-threaded portions movable into and out of engagement with the threads of said elongated member, and a retaining device mounted on said elongated member movable into and out of engagement with said attaching device and adapted to retain the threaded portions thereof in engagement with said elongated member.

2. The combination, with an elongated member having exterior screw threads, of a second member removably mounted on said elongated member, an attaching device mounted on the outside of said second member and having screw-threaded portions movable into and out of engagement with the threads of said elongated member, and a collar loosely mounted on said elongated member below said second member having parts to engage said attaching device and retain the threaded portions thereof in engagement with said elongated member.

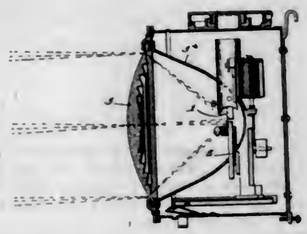
3. The combination, with an elongated member having exterior screw threads and a part arranged at a point between the ends of said member to form a stop, of a hollow member adapted to be placed loosely about said elongated member, and an attaching device comprising manually operable finger pieces mounted on said hollow member and having screw threaded parts movable into and out of engagement with the threads of said elongated member, and a collar loosely mounted about said elongated member between said hollow member and said stop and having parts to engage said attaching device and hold the threaded parts thereof in engagement with the threads of said elongated member.

4. The combination, with an elongated member having exterior screw-threads, of a second member removably mounted on said elongated member, an attaching device for said second member comprising manually operable arms pivotally mounted thereon and having at their free ends screw-threaded parts adapted to engage the threads of said elongated member, and a retaining device rotatably mounted on said elongated member and having parts to engage the screw-threaded parts of said attaching device to hold the same in engagement with said elongated member.

5. The combination, with an elongated member having exterior screw-threads, and a second member movably mounted on said elongated member, of a manually operable attaching device for said second member comprising a divided collar having interior screw-threads, means for pivotally connecting the parts of said collar to said second member, and a second collar loosely mounted on said elongated member and having an axially extending part arranged to embrace the adjacent portion of said divided collar and hold the latter in engagement with the threads of said elongated member.

[Claims 6 to 9 not printed in the Gazette.]

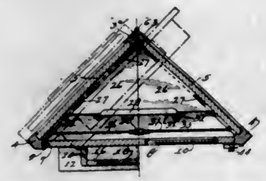
1,193,866. CONSUMING ELECTRODE FOR LUMINOUS-ARC ELECTRIC LAMPS. FRANK BUCHANAN, Syracuse, N. Y. Filed Feb. 24, 1912. Serial No. 679,577. (Cl. 240—41.)



1. In an arc lamp equipped with a focusing element, two electrodes arranged in superimposed relation, and with the arcing ends thereof on opposite sides of the focal axis of said element, said electrodes being of dissimilar cross-sectional area, and the electrode of smaller area being of greater dimensions in the direction of one transverse axis than in the direction of its other transverse axis, said longer axis being disposed in the direction of said focal axis of the focusing element, substantially as and for the purpose described.

2. In an arc lamp the combination with a focusing element, of a metallic positive electrode and a slow consuming luminous negative electrode arranged beneath the metallic electrode, and on the opposite side of the focal axis of said focusing element, said metallic electrode being larger in cross-sectional area than the negative, and the latter being substantially oblong in cross-section and arranged with its longer transverse axis substantially parallel to the focusing axis of said focusing element, substantially as and for the purpose specified.

1,193,867. PORTABLE AND COLLAPSIBLE CLOSET. MARY E. BUCKLEY, Los Angeles, Cal. Filed Aug. 31, 1915. Serial No. 49,131. (Cl. 45—118.)



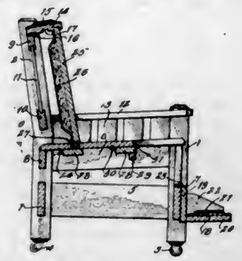
1. A portable closet having collapsible walls, normally held in rigid relation to each other, and a door movable inwardly and outwardly from said walls and forming the front wall of the closet, each of said walls having a plurality of pivoted shelf members coöperatively arranged to form shelves extending across the entire width of the closet in horizontal planes and rigidly braced together when in use, and removable ends forming a top and bottom for the closet and supported by said walls, all of said members being arranged to fold together in a compact form when the closet is collapsed.

2. A portable closet comprising a pair of pivoted side walls and a door pivoted to one of said walls and arranged to be locked to the opposite wall when the closet is in use, a plurality of paired shelf members carried pivotally by each of said walls and arranged to form horizontal shelves when the members of the pairs are extended, adjustable wall bracing means secured at opposite ends to and for holding the walls in rigid relationship, adjustable shelf supporting means carried by said shelves, and removable top and bottom supported by said walls forming end closures for the closet.

3. A portable closet comprising a pair of side walls pivoted together and arranged to fold together when not in use and to be held rigidly extended when in use, adjustable brace means for holding said walls extended, said means being permanently attached to one of said walls and removably attached to the other of the walls, a double acting door forming the front of the closet and arranged to move in a single direction when said walls are extended and in an opposite direction when the walls are collapsed for folding against said walls, pivoted shelf members carried by said walls at opposite points and arranged to be supported in horizontal positions for forming shelves for the closet, removable top and bottom members supported by said walls when the same are extended, said walls, door, top and bottom forming a substantially dust-proof inclosure when arranged as described.

4. A portable closet comprising a pair of rigidly braced side walls when in use and capable of being folded together when not in use, a double acting door pivoted to one of said walls, capable of temporary attachment to the other wall and forming a front closure therefor, said door being provided with a combination writing desk and altar and arranged to fold into position against said walls when not in use, removable top and bottom members supported by said walls, and a plurality of paired shelf members pivotally attached to said walls and capable of extension into horizontal positions for forming shelves for the closet, and means for adjustably supporting said shelf members in pairs in such positions.

1,193,868. CONVERTIBLE HOUSEHOLD AND DEVOTIONAL CHAIR. MARY E. BUCKLEY, Los Angeles, Cal. Filed Aug. 31, 1915. Serial No. 49,132. (Cl. 155—6.)



1. An article of furniture capable of conversion for use as a chair and for devotional purposes comprising an adjustable head and arm rest, a pivoted seat, a pivoted shelf normally resting beneath the seat, and an adjustable foot and knee rest, and means whereby all of said elements may be sustained in position for either of said uses.

2. An article of furniture capable of conversion for use as a chair and for devotional purposes comprising an adjustable head and arm rest, an adjustable seat, an adjustable foot and knee rest, and a pivoted shelf beneath the seat, and means whereby all of said elements may be sustained in position for either of said uses.

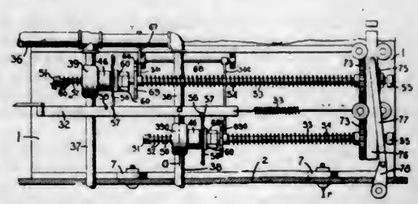
3. A portable chair for household use having adjustable head and foot rest members and an adjustable seat, a false-pivoted bottom beneath the seat, and means for converting said chair for devotional use, said head and foot rest members being converted into arm and knee rest members, respectively, said seat forming a back, and said bottom forming a shelf for books.

4. A portable chair for household and devotional use having adjustable head and foot rest elements, an adjustable seat and back and an adjustable false bottom beneath the seat normally forming a chair, and means for adjusting said elements for devotional purposes.

5. A combined and convertible household and devotional chair comprising a head rest element capable of conversion into an arm rest, a seat capable of conversion into a back, a false bottom capable of conversion into a book shelf, and a foot rest capable of conversion into a knee rest, all of said elements being normally capable of use for the first mentioned purpose and convertible for the last mentioned purpose and self sustaining in either of said positions.

[Claims 6 and 7 not printed in the Gazette.]

1,193,869. OVEN. ARTHUR M. BURNHAM, Gardiner, Me. Filed Sept. 19, 1914. Serial No. 862,512. (Cl. 236—5.)



1. In an oven, the combination with an oven chamber, of a plurality of burners for heating said chamber, a fuel supply valve for each burner, automatically-operative valve-actuating devices normally held inoperative, and

automatic means to release said devices successively when the temperature in the chamber increases beyond a predetermined point whereby the valves will be closed in succession.

2. In an oven, the combination with an oven chamber, of a plurality of burners for heating said chamber, a fuel supply valve for each burner, automatically-operative valve-actuating means for successively closing and opening each valve, and thermostatic means to control the operation of said valve-actuating means to effect the closing of the valves successively as the temperature increases and the opening of the valves successively as the temperature decreases.

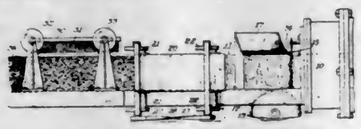
3. In an oven, the combination with an oven chamber, of a plurality of burners for heating the oven, a fuel supply valve for each burner, a motor device for closing each valve, and thermostatic means to render said devices operative to close one valve when the temperature in the oven reaches a predetermined point and to close another valve when the temperature reaches a higher point.

4. In an oven, the combination with an oven chamber, of a plurality of burners for heating the oven, a fuel supply valve for each burner, a motor device for operating each valve, and thermostatic means to render said devices operative successively to close first one valve and then another when the temperature in the oven increases beyond a predetermined point and to open first one valve and then another when the temperature decreases.

5. In an oven, the combination with an oven chamber, of a plurality of burners for heating said chamber, the latter having an inlet opening through which air is supplied to support combustion, a fuel supply valve for each burner, automatic means to close the valves successively as the temperature in the chamber rises above a predetermined amount and means to close said opening when all of the valves are closed.

[Claims 6 to 30 not printed in the Gazette.]

1,193,870. BRICKMAKING-MACHINE. FRANK W. BUTTERWORTH, Danville, Ill. Filed Aug. 19, 1915. Serial No. 46,236. (Cl. 25—1.)



1. In apparatus for making bricks or the like, the combination of a forming-die, means for forcing ceramic material through said die to form a ribbon, means for conveying said ribbon from said die, and resilient stippling means movable in the same direction as said ribbon and adapted to be brought into engagement with the surface thereof.

2. In apparatus for making bricks or the like, the combination of a forming-die, means for forcing ceramic material through said die to form a ribbon, means for conveying said ribbon from said die, and stippling means having a plurality of resilient members thereon adapted to be brought into engagement with the moving surface of said ribbon.

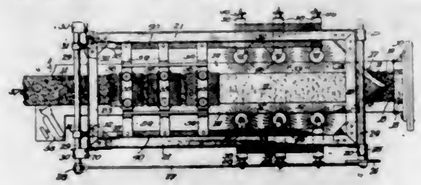
3. In apparatus for making bricks or the like, the combination of a forming-die, means for forcing ceramic material through said die to form a ribbon, means for conveying said ribbon from said die, and a brush movable in the same direction as said ribbon and having resilient bristles thereon adapted to be brought into engagement with the surface of said ribbon.

4. In apparatus for making bricks or the like, the combination of a forming-die, means for forcing ceramic material through said die to form a ribbon, means for conveying said ribbon from said die, means for removing a layer of material from the surface of said ribbon, and resilient stippling means for forming minute indentations in the surface of said ribbon from which said layer has been removed.

5. In an apparatus for making bricks or the like, the combination of a forming-die, means for forcing ceramic material through said die to form a ribbon, wires located at the mouth of said die for removing thin layers of material from the upper surface and sides of said ribbon, means for conveying said ribbon away from said die, and brushes having resilient bristles adapted to be brought into engagement with the upper surface and sides of said ribbon, said brushes being movable in the direction of travel of said ribbon.

[Claims 6 to 12 not printed in the Gazette.]

1,193,871. BRICKMAKING-MACHINE. FRANK W. BUTTERWORTH, Danville, Ill. Filed Dec. 27, 1915. Serial No. 68,742. (Cl. 25—1.)



1. In a brick-making machine, the combination of a rotatable brush having resilient bristles thereon adapted to engage the surface of a moving ribbon of ceramic material whereby said brush will be rotated, and means for reciprocating said brush.

2. In a brick-making machine, the combination of a rotatable brush having resilient bristles thereon adapted to engage the surface of a moving ribbon of ceramic material whereby said brush will be rotated, and means for reciprocating said brush in the direction of movement of said ribbon.

3. In a brick-making machine, the combination of a brush having thereon a plurality of bristles adapted to engage the surface of a moving ribbon of ceramic material, and means for resiliently mounting said brush.

4. In a brick-making machine, the combination of a brush having thereon a plurality of bristles adapted to engage the surface of a moving ribbon of ceramic material, means for mounting said brush to permit its movement toward and away from said ribbon, and spring means for holding the bristles of said brush in resilient engagement with the surface of said ribbon.

5. In a brick-making machine, the combination of a rotatable brush having thereon a plurality of resilient bristles adapted to engage the surface of a moving ribbon of ceramic material, means for mounting said brush to permit its movement toward and away from said ribbon, and spring means for holding the bristles of said brush in yielding engagement with the surface of said ribbon.

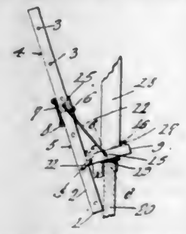
[Claims 6 to 9 not printed in the Gazette.]

1,193,872. COMBINED LADDER AND WINDOW-SCAFFOLD. THOMAS SYLVESTER CHAMBERLAIN, Meadville, Pa. Filed Mar. 1, 1916. Serial No. 81,538. (Cl. 20—87.)

1. A ladder and window scaffold embodying a ladder having upper and lower hinged sections adapted to be folded together, arms hinged to the lower ladder section and adapted to project through a window, and braces terminally pivoted to said arms and the upper ladder section, whereby the arms are swung against the lower ladder section when the ladder sections are folded, and are swung away from the lower ladder section when the ladder sections are swung into alinement.

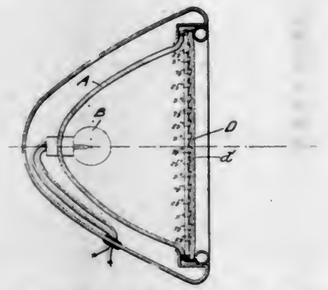
2. A combined ladder and window scaffold embodying a ladder and having upper and lower hinged sections adapted to be swung together, arms pivoted to the lower ladder section between the ends thereof and adapted to project through a window, braces terminally pivoted to said arms and the upper ladder section, means for holding

the ladder sections in alinement, and means for anchoring said arms to the window, the braces serving to swing



the arms against the lower ladder section when the ladder sections are swung together, the upper ladder section being adapted to pass between said arms.

1,193,873. REFRACTING COVER-GLASS FOR AUTOMOBILE-HEADLIGHTS. WILLIAM CHURCHILL, Corning, N. Y., assignor to Corning Glass Works, Corning, N. Y., a Corporation of New York. Original application filed Nov. 22, 1915, Serial No. 62,756. Divided and this application filed Apr. 8, 1916. Serial No. 89,990. (Cl. 240—48.4.)



1. A refracting cover glass having thereon similar groups of prismatic faces, the faces of certain of such groups differing among themselves in refractive power, the refractive power of the faces of each group increasing from the top downwardly.

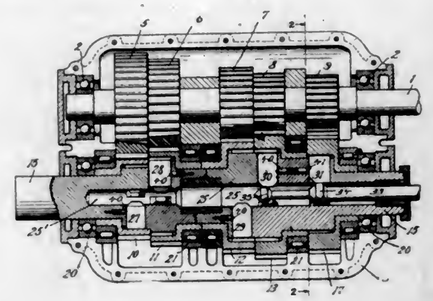
2. A refracting cover glass having its face covered with a series of prismatic faces, such a series of faces being formed by the alternation of similar groups of faces, the refractive power of each face of each group being different from the refractive power of other faces of the same group.

3. The combination with a reflector projecting a substantially parallel beam of light, of a refracting cover glass in front of such reflector having thereon similar groups of prismatic faces, the faces of certain of such groups differing among themselves in refractive power, the refractive power of the faces of each group increasing from the top downwardly.

4. The combination with a reflector projecting a substantially parallel beam of light, of a refracting cover glass in front of such reflector covered with a series of prismatic faces, such series of faces being formed by the alternation of similar groups of faces, the refractive power of each face of each group being different from the refractive power of other faces in the same group.

1,193,874. TRANSMISSION-GEARING. ROBERT G. CLARK, New York, N. Y., assignor to Willis H. Simpson, East Orange, N. J. Filed Nov. 27, 1915. Serial No. 63,720. (Cl. 74—59.)

1. In a transmission gearing, in combination, a motor shaft, a driving member, a plurality of sets of gears of varying diameters forming a normally inoperative connection between said motor shaft and driving member, the gears of each set being always in mesh, a plurality of devices adapted to establish operative connections between said gears and driving member, and an operating member having a plurality of parts adapted to operate the said devices, one of said parts being adapted to operate certain of said devices and to move freely past the devices engaged by the other part.



2. In a transmission gearing, in combination, a motor shaft, a driving member, a plurality of sets of gears of varying diameters forming a normally inoperative connection between said motor shaft and driving member, the gears of each set being always in mesh, a plurality of sliding pawls adapted to establish operative connections between said gears and driving member, and an operating member for said pawls, said operating member having a plurality of cam parts one of which is adapted to operate certain of said pawls and to move freely past the other pawls.

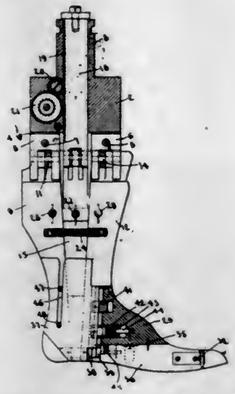
3. In a transmission gearing, in combination, a motor shaft, a plurality of gears of varying diameters fixed on said shaft, a driving member, a plurality of complementary gears loose upon said driving member, the corresponding gears on the motor shaft and driving member being always in mesh, radially slidable pawls carried by the driving member and adapted to operatively engage the gears thereon, and a slidably mounted operating member having a plurality of cam parts thereon adapted to operate said pawls, one of said parts being adapted to operate certain of said pawls and to slide freely past the other pawls.

4. In a transmission gearing, in combination, a motor shaft, a plurality of gears of varying diameters fixed on said shaft, a driving member, a plurality of complementary gears loose on said driving member, the corresponding gears on the motor shaft and driving member being always in mesh, radially slidable pawls carried by the driving member and adapted to operatively engage the gears thereon, and an operating member mounted centrally of said driving member to slide therein, such operating member having a plurality of cam parts of different radial dimensions adapted to operate different ones of said pawls.

5. In a transmission gearing, in combination, a motor shaft, a plurality of gears of varying diameters fixed on said shaft, a driving member, a plurality of complementary gears loose on said driving member, the corresponding gears on the motor shaft and driving member being always in mesh, radially slidable pawls carried by the driving member and adapted to operatively engage the gears thereon, means yieldingly retaining said pawls in inoperative position and an operating member mounted centrally of said driving member to slide therein, such operating member having a plurality of cam parts of different radial dimensions adapted to operate different ones of said pawls.

[Claims 6 to 8 not printed in the Gazette.]

1,193,875. SHOE-TREE. JEREMIAH F. COLLINS, Brockton, Mass. Filed Aug. 9, 1915. Serial No. 44,387. (Cl. 12—117.)



1. A shoe tree comprising a leg having laterally-expansible front and back portions arranged for relative movement in the direction of the length of the foot, and means for expanding said leg in both directions.

2. A shoe tree comprising a leg having laterally-expansible front and back portions and an intermediate portion which is also laterally-expansible and serves as an expander for the leg in the direction of the length of the foot, and means for expanding said leg portions laterally.

3. A shoe tree comprising a laterally-expansible leg, a detachable foot, and means carried by the foot for laterally expanding the leg.

4. A shoe tree comprising a laterally-expansible leg, a laterally-expansible foot, and means for expanding said leg and foot.

5. In a shoe tree, a foot comprising longitudinally-extending lower sections constituting collectively the entire lower portion of the foot and pivotally connected to each other near their front ends, an upper section overhanging the rear portions of said lower sections in sliding engagement therewith, and means for laterally expanding said lower sections.

[Claims 6 to 25 not printed in the Gazette.]

1,193,876. FOLDING TABLE. BERNARD E. COMEY, Springfield, Mass., assignor, by direct and mesne assignments, to Yemoc Manufacturing Company, Springfield, Mass., a Corporation of Massachusetts. Filed June 4, 1915. Serial No. 32,093. (Cl. 45—116.)



1. A foldable table comprising, top members, legs hinged to each of said members in normal relation thereto and arranged to be folded flat against said members, means connecting the latter arranged to permit one member with its leg frame folded thereagainst to be superposed upon the other member, whereby the table may be folded into small compass, and a device associated with said means, when said members are in table forming position to rigidly support said members.

2. A foldable table comprising top sections, legs hinged to each of said sections near one end thereof in normal relation and arranged to be foldable flat against said sections, foldable braces connecting said legs and sections, means to hold said braces in bracing position, connecting means between said sections and a device associated with said means to hold and support said sections in table forming position, said means arranged to permit one section with its leg folded thereagainst to be superposed upon the other section, whereby the table may be folded into small compass.

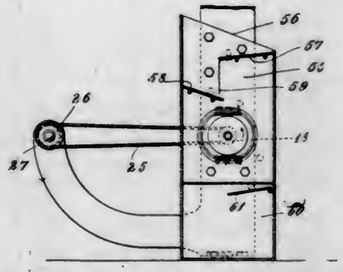
3. A foldable table comprising table top sections, legs hinged to each near one end thereof and in normal relation thereto, said legs arranged to be foldable flat against said sections when desired, foldable braces to hold said legs in normal relation to said sections, links connecting the latter and a rod extending between said links and below said sections arranged to hold and support the latter in table forming position, said links arranged to permit one section with its leg folded thereagainst to be superposed upon the other section, whereby said table is foldable into compact form.

4. A foldable table comprising two top sections arranged to partially overlap, legs hinged to each section near one end thereof and in normal relation thereto, said legs arranged to be folded flat against said sections, when desired, a jointed brace arranged to hold said legs in normal relation to said sections, links connecting the latter and a rod extending between said links and beneath said overlapping portion of said sectiohs arranged to hold and support the sections in table forming position, said links arranged when said rod is withdrawn, to permit one section with its leg folded flat thereunder to be superposed upon the other section, whereby the table may be folded into convenient form for transportation.

5. A folding table comprising top table sections, two ends of which are constructed to lie in overlapping relation, a series of supporting bars to connect the same in rigid or folded positions, two of said bars having their ends pivoted one to each table section to bridge the ends of the latter and a cross bar to connect said pivoted bars and underlie the overlapping ends of the table sections whereby the latter may be rigidly supported.

[Claim 6 not printed in the Gazette.]

1,193,877. BOBBIN-STRIPPER. JOHN CRAIG, New York Mills, N. Y., assignor of one-third to Albert Curley and one-third to Charles Caryl, New York Mills, N. Y. Filed Mar. 11, 1916. Serial No. 83,472. (Cl. 19—15.)



1. In a bobbin stripper, a hopper in which the bobbins are placed, a flexible textile retarding partition in said hopper, adapted to unravel the loose ends of yarn on the bobbin, a conical stripper upon which the bobbins make contact, and a removable container suited to receive the bobbins after passage past said stripper.

2. In a bobbin stripper, the combination with a hopper, a retarding means adapted to engage with and unravel the loose end of a yarn on the bobbins, a conical stripper revoluble in said hopper, against which the bobbins are brought singly into contact, means for driving said stripper, and a receptacle for receiving the bobbins, said receptacle having a deflecting plate in its upper portion.

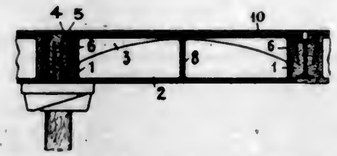
3. In a bobbin stripper, a conical hollow roller, wire brushes operable through openings in the walls of said roll, means for extending or retracting said brushes, and means for feeding bobbins past the periphery of said conical stripper.

4. In a bobbin stripper, the combination with a casing, a conical stripper roll revolubly mounted therein, means for driving said roll, wire brush elements mounted in said roll at opposite points therein, means for projecting said brushes outwardly or retracting the same within said conical roll, and means for stripping said conical roll.

5. In a bobbin stripper, the combination with a casing, a shaft revolubly mounted therein, a disk head fixed upon said shaft, a sleeve rotated upon said shaft, a second disk loosely mounted upon said sleeve, curved plates connecting between said disks, having openings between their adjacent edges, brush elements supported by said sleeve, and means combined with said sleeve for projecting or retracting said brush elements with respect to the periphery of the casing plates.

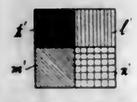
[Claim 6 not printed in the Gazette.]

1,193,878. REINFORCED-CONCRETE BUILDING-BLOCK. ROBERTO DI FILIPPO, Salerno, Italy. Filed Jan. 14, 1915. Serial No. 2,271. (Cl. 72—66.)



A hollow reinforced concrete block for constructing floors or roofings comprising, in combination, an upper plate-like wall; a lower plate-like wall; two heads, located at the ends of said walls; arch-shaped members springing laterally from said heads and disposed between the same, said members forming a support whereon said upper wall rests, and being free of direct contact with said lower wall; a framework of metal bars disposed in the body of the block; and projections on the outer faces of said heads, said bars being provided at their ends with eyes which are disposed within said projections, to permit two contiguous blocks to be connected together.

1,193,879. COLOR PHOTOGRAPHY AND CINEMATOGRAPHY. FRANK WORDSWORTH DONISTHORPE, Barnes, England. Filed Mar. 26, 1914. Serial No. 827,484. (Cl. 95—2.)



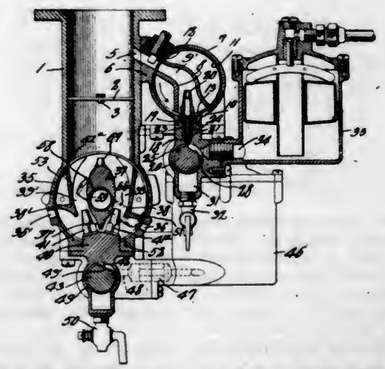
1. A process for the production of photographs and cinematographs in natural colors consisting in making negatives through color filters of different colors, making a positive from one of said negatives, superimposing said positive on the other negative to produce a combination negative, making a print from said combination negative, suitably coloring the portions of said print affected and unaffected by the action of light respectively and finally superimposing upon said print a print in black and white to produce contrasts and to give the finished picture.

2. The process for the production of photographs and cinematographs in natural colors, consisting in making negatives through complementary color filters, making a transparency from one of said negatives, superimposing said transparency with the other negative so that the two completely neutralize one another on all parts except where the subject is colored, making a print from said combined negative, suitably coloring the portions of said print affected and unaffected by the action of light respectively, and finally superimposing a positive in black and white upon said colored print to produce contrasts.

3. A process for the production of photographs and cinematographs in natural colors consisting in making a pair of negatives taken through complementary color filters, making a positive print from one of said negatives, producing a combination negative by superimposing said positive upon the other negative, obtaining a print from said combination negative, toning the silver image, on said print, by a reagent, rendering it impermeable to liquid dyes and dyeing the parts unaffected or only partly affected by the toning reagent by means of a dye of suitable color, and finally superimposing upon said printing color a black and white print of the subject to produce contrasts in the finished picture.

4. Process for the production of photographs and cinematographs in natural colors consisting in making a pair of negatives taken through complementary color filters, producing a positive from one of said negatives, making a combination negative by combining said positive with the other negatve, making a print from said combination negative, toning said print with a suitable reagent so that a pigment of any desired color is deposited into the silver of the image so that while coloring the silver image it fills up the pores of the gelatin and so prevents liquid dyes from permeating said gelatin, dyeing said print by means of a liquid dye of suitable color, and finally combining said print with a black and white print to give contrasts to the final picture.

1,193,880. CARBURETER. RALPH A. DUFF, Nebraska City, Nebr. Filed Apr. 25, 1913. Serial No. 763,685. (Cl. 48—150.1.)



1. A carbureter having an explosive mixture directing member, a valve in said member, separate means for supplying explosive mixtures, one of said means being adapted to supply a mixture at one side of the valve and the other being adapted to supply a mixture at the other side of the valve, and a controlling device for regulating the extent and sequential order of operation of said supplying means.

2. A carbureter, having an explosive mixture directing member, a valve disposed in said member intermediate of its ends, separate consecutively operable means for supplying explosive mixtures, respectively containing fuels of relatively greater and less volatility, one of said means being located for supplying its explosive mixture above and the other below the valve, and a controlling device for regulating the extent and sequential order of operation of the supplying means.

3. A carbureter, having an explosive mixture directing member, a valve disposed in said member intermediate of its ends, separate consecutively operable means for supplying explosive mixtures, respectively containing fuels of relatively greater and less volatility and for cutting off such supply, one of said means directing its mixture above and the other below the valve, and a controlling device for regulating the relative periods of actuation of said supplying means and whereby the cut off of one mixture succeeds the supply of the other.

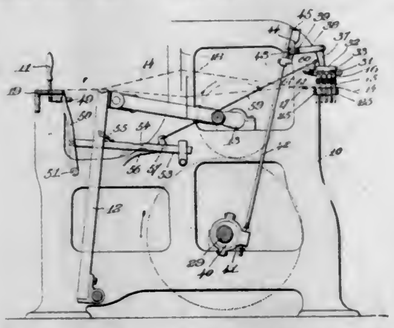
4. A carbureter, having an explosive mixture directing member, a valve disposed in said member intermediate of

its ends, separate consecutively operable means for supplying explosive mixtures, respectively containing fuels of relatively greater and less volatility, means for adding water to one of said mixtures, and a controlling device for regulating the extent and sequential order of operation of the explosive mixture supplying and the water adding means.

5. A carbureter, having an explosive mixture directing member, a valve disposed therein intermediate of its ends, means for supplying an explosive mixture containing a volatile explosive fuel at a point above the valve, means for supplying an explosive mixture containing a less volatile fuel below the valve, means for consecutively operating the two supplying means and for operating the valve, whereby one supplying means is operated and a lapping action is produced between it and the other supplying means.

[Claims 6 to 11 not printed in the Gazette.]

1,193,881. WARP STOP-MOTION FOR LOOMS. JOHN F. DUSTIN, Lawrence, Mass. Filed Feb. 17, 1915. Serial No. 8,794. (Cl. 139—92.)



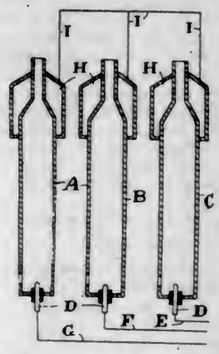
1. A warp stop motion for looms having, in combination, warp detectors, a detector bar, a detector bar operating lever having a bracket rigidly secured thereto provided with fingers, a shipper, and connections between the shipper and the detector bar operating lever including a T-shaped lever engaged by the fingers for controlling the actuation of the shipper.

2. A warp stop motion for looms having, in combination, warp detectors, a detector bar, a detector bar operating lever having a bracket provided with two fingers, a shipper, and connections between the shipper and the detector bar operating lever including a T-shaped lever for controlling the actuation of the shipper, said shipper controlling lever having provision whereby said fingers engage different sides of the cross piece of the T-shaped lever to move it in the same direction.

1,193,882. ELECTRIC-ARC FURNACE. EMIL EDWIN, Christiania, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed May 13, 1915. Serial No. 27,830. (Cl. 204—31.)

1. In a system comprising a plurality of electric arc furnaces, a tube forming the reaction chamber of each furnace, an electrode insulated from the tube at one end and an electrode electrically connected with the tube at the other end, a gas inlet near the said insulated electrode and a gas outlet near the other electrode, an electrical connection to a source of electricity from each of the said insulated electrodes and an electrical connection insulated from earth between the other electrodes.

2. In a system comprising a plurality of electric arc furnaces, a tube forming the reaction chamber of each furnace, an electrode insulated fom the tube at one end and an electrode electrically connected with the tube at the other end, a gas inlet near the said insulated electrode and a gas outlet near the other electrode, a polyphase source of electricity, an electrical star connection between the said insulated electrodes of the furnaces and the source of electricity, and an electrical connection insulated from earth between the other electrodes.



3. In a system comprising a plurality of electric arc furnaces, a tube forming the reaction chamber of each furnace, an electrode insulated from the tube at one end and an electrode electrically connected with the tube at the other end, a gas inlet near the said insulated electrode and a gas outlet near the other electrode, a polyphase source of electricity, an electrical star connection between the said insulated electrodes belonging to a group of the furnaces and the corresponding phase of the source of electricity, groups of furnaces being connected in parallel with said source of electricity, and an electrical connection insulated from earth between the other electrodes.

1,193,883. METHOD OF PRODUCING ARTICLES OF A VULCANIZABLE PLASTIC. ALBERT G. EMERY, Brooklyn, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Mar. 12, 1915. Serial No. 13,856. (Cl. 18—58.)

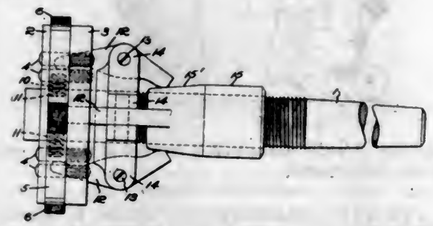


1. The method of producing articles of a vulcanizable plastic which comprises, dipping a form into a solution of said plastic in a volatile solvent, supplying localized heat from within said form in varying degrees of intensity according to the relation of the surface area of the parts of the form to their respective volumes, thereby causing equal rates of evaporation from each unit of the entire surface of said form.

2. The method of producing articles of a vulcanizable plastic which comprises, dipping a form into a solution of said plastic in a volatile solvent, generating heat within said form in varying degrees of intensity according to the relation of the surface area of the parts of the form to their respective volumes, thereby causing equal rates of evaporation from each unit of the entire surface of said form.

3. The method of producing articles of a vulcanizable plastic which comprises, dipping a form into a solution of said plastic in a volatile solvent, generating heat within said form in varying degrees of intensity by the production of electric currents in varying degrees of conduction according to the relation of the surface area of the parts of said form to their respective volumes, thereby causing equal rates of evaporation from each unit of the entire surface of said form.

1,193,884. GRINDER. VICTOR J. EMERY, Wollaston, Mass., assignor of one-half to Mellen N. Bray, Boston, Mass. Filed Nov. 8, 1915. Serial No. 60,179. (Cl. 51—1.)



1. A grinder comprising, in combination, an abrading member mounted for orbital movement, resilient means to hold said member from deflection from its orbit and means to change the orbit against the resistance of said means.

2. A grinder comprising, in combination, an abrading member mounted for orbital movement, held resiliently against inward and positively against outward deflection from said orbit.

3. A grinder comprising, in combination, a shaft and an abrading member mounted to revolve about the axis of said shaft and radially distant therefrom and a wedge to vary the radial distance.

4. A grinder comprising, in combination, a shaft and an abrading member mounted to revolve about the axis of said shaft and radially distant therefrom and a screw adjusted wedge to vary the radial distance.

5. A grinder comprising, in combination, a shaft, holders rotatable therewith and mounted to swing in a plane transverse thereto, abrading members carried by said holders and means to control the swinging thereof.

[Claims 6 to 18 not printed in the Gazette.]

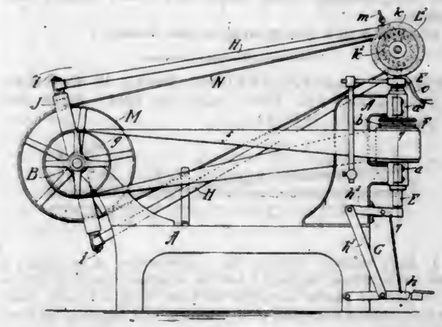
1,193,885. COLLAR. MORRIS FINK and MAE J. DUNN, Chicago, Ill., assignors to The Warren Featherbone Company, Three Oaks, Mich., a Corporation of Michigan. Filed Jan. 6, 1915. Serial No. 721. (Cl. 2—68.)



1. A collar comprising two relatively long and resilient end stays, intermediate stays less in length than said end stays, a fabric to which said stays are secured, said end stays converging toward the upper edge of said fabric, guimpes secured to said end stays and having their upper edges arranged below the upper ends of said end stays and a strap secured to the upper end of one end stay and detachably connected to the other end stay.

2. A collar comprising a central resilient stay, two long end stays and an intermediate stay interposed between the central and each end stay but less in length than said end stays, a fabric to which said stays are secured, said end and intermediate stays converging toward the top of the fabric, guimpes secured to the end stays and arranged below the upper ends thereof, a binding strip secured to the lower edges of said collar and guimpes, an edging secured to the upper edges of said collar and guimpes and a strap secured to the upper end of one of said end stays and detachably connected to the other end stay.

1,193,886. GRINDING, POLISHING, AND BUFFING MACHINE. MICHAEL J. FLAVIN, Greenfield, Mass., assignor to William Barry, Orange, Mass. Filed Sept. 18, 1915. Serial No. 51,373. (Cl. 51—4.)



1. In a polishing machine, in combination, an upright spindle for carrying the work at its upper end, and means for rotating the spindle, a head, carrying a horizontal polishing wheel, above the work spindle, pivotally mounted and free for a swinging movement in a vertical plane down into proximity to and upwardly away from the spindle, and also freely movable transversely relatively to the axis of the spindle, and means for rotating the grinding wheel.

2. In a polishing machine, in combination, an upright work-carrying spindle having a clutch member thereon, a pulley through which the spindle is substantially vertically movable, formed with a clutch member, a treadle coacting with the spindle for vertically moving the latter for effecting the clutching and unclutching of the spindle and pulley, a head carrying an axially horizontal polishing wheel above the work spindle pivotally mounted for a vertical swinging movement down toward and upwardly away from the spindle, and also movable transversely relatively to the spindle, means for rotating said pulley, and means for rotating the grinding wheel.

3. In a polishing machine, in combination, a substantially upright spindle for carrying the work at the upper end thereof, a head,—in which such work carrying spindle is rotatively carried,—mounted for revolubie adjustment on a horizontal axis, and means for rotating the spindle, a head, carrying a horizontal polishing wheel, above the work spindle, pivotally mounted and free for a swinging movement in a vertical plane down into proximity to and upwardly away from the spindle, and also freely movable transversely relatively to the spindle, and means for rotating the grinding wheel.

4. In a polishing machine, in combination, an upright work-carrying spindle having a downwardly convergent clutch member thereon, a pulley through which the spindle is substantially vertically movable, formed with an upwardly open, downwardly convergent clutch socket and

below which pulley the spindle extends, a treadle coacting with the lower end of the spindle, and operable to vertically move the latter to lift the conical clutch member from, and to permit it to fall to engagement in the conical socket in said pulley, a head carrying a horizontal polishing wheel above the work spindle pivotally mounted for a vertical swinging movement down toward and upwardly away from the spindle, and also movable transversely relatively to the spindle, means for rotating said pulley, and means for rotating the grinding wheel.

5. In a polishing machine, in combination, a supporting frame, a horizontal driving shaft mounted in the rear portion of said frame, an upright spindle, for carrying the work at the upper end thereof, mounted in a forward portion of said frame and provided with a pulley, a pulley on said driving shaft and a belt connecting such pulley and the spindle pulley, a frame mounted for a vertical swinging movement on said driving shaft, extended forwardly therefrom, such frame being also capable of a movement horizontally and transversely of the said spindle, and provided at its forward extremity with a head above the spindle, a horizontal shaft in said head provided with a polishing wheel, pulleys on the driving shaft and the polishing wheel shaft, and a belt around said pulleys.

[Claims 6 to 9 not printed in the Gazette.]

1,193,887. RAILWAY-SWITCH. FRANK M. FREEBURG, Philadelphia, Pa. Filed Sept. 16, 1914. Serial No. 861,937. (Cl. 104—12.)



1. In a railway switch, the combination of a frame, a pair of vertically-movable switch tongues mounted therein, a pair of shafts mounted to turn in said frame, cams on said shafts engaging said tongues, and gearing between said shafts.

2. In a railway switch, the combination of a frame, a pair of vertically-movable switch tongues mounted therein, a pair of shafts mounted to turn in said frame, cams on said shafts engaging said tongues, co-acting gear wheels on said shafts, a gear rack coacting with one of said gear wheels, and means operative to reciprocate said rack.

3. In a railway switch, the combination of a frame, a pair of vertically-movable switch tongues mounted therein, a pair of shafts mounted to turn in said frame, cams on said shafts engaging said tongues, coacting gear wheels on said shafts, a gear rack coacting with one of said gear wheels, a head mounted to turn in said frame, and means operated by said head for reciprocating said rack.

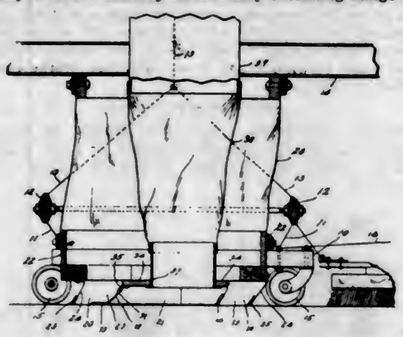
4. In a railway switch, the combination of a frame, a vertically movable switch tongue mounted therein, a shaft mounted to turn in said frame, a cam on said shaft engaging said tongue, a head mounted to turn in said frame, and gearing between said head and said shaft.

5. In a railway switch, the combination of a frame, a pair of vertically-movable switch tongues mounted therein, a pair of shafts mounted to turn in said frame, cams on said shafts engaging said tongues, gearing between said shafts, a head mounted to turn in said frame, and means operated by said head for turning said shafts.

[Claims 6 to 8 not printed in the Gazette.]

1,193,888. STREET-SWEEPER HOOD. ROBERT W. FURNAS, Indianapolis, Ind.; Frank A. Hamilton and Lelia F. Hamilton executor and executrix of said Furnas, deceased. Filed Oct. 8, 1914. Serial No. 865,622. (Cl. 15—17.)

A hood for pneumatic street sweepers having inner and outer chambers open to the surface of the ground, the rear wall of the inner chamber being inclined rearwardly and downwardly, and having at its lower edge a rearwardly and substantially horizontally extending flange the



rear edge of which flange is well forward of the rear wall of the outer chamber.

1,193,889. MAGAZINE-GUN. JOSEPH E. GADBOIS, Springfield, Mass. Filed Dec. 8, 1915. Serial No. 65,841. (Cl. 42—59.)



1. In a magazine gun, an endless series of cartridge carriers, a magazine, means for moving cartridges from the carriers to the magazine, a firing drum, means for feeding the cartridges to the latter from the magazine, a hammer for firing the cartridges in the drum, an ejector, and a trigger controlling the aforesaid means, hammer and ejector.

2. In a magazine gun, a firing drum, a magazine having a lower chamber from which cartridges are loaded into the drum, said chamber communicating with the magazine, a plunger in said chamber for moving the cartridges into the firing drum and closing communication between the chamber and magazine, a follower in the latter connected for movement with the plunger, and a firing mechanism operative to actuate the plunger.

3. In a magazine gun, a rotatable firing drum having cartridge chambers and an axial opening, an ejector slidable in the drum opening and adapted for entering the chambers, a hammer, a trigger, and a releasable connection between the trigger and ejector.

4. In a magazine gun, a rotary firing drum, means for feeding cartridges thereto, a hammer, means for rotating the drum, and a trigger for operating the hammer and the aforesaid means.

5. In a magazine gun, a hollow stock, spaced sprockets therein, a chain taking over the sprockets, a series of carriers on the chain, a magazine having a receiving opening opposite which the carriers are adapted to move, means for intermittently driving the sprockets, and a firing mechanism into which the magazine leads.

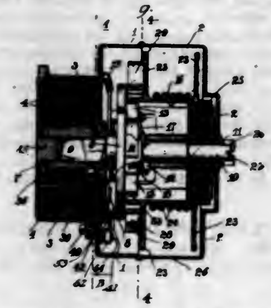
[Claims 6 to 9 not printed in the Gazette.]

1,193,890. TROLLEY CATCHER AND RETRIEVER. CHARLES E. GIERDING, New Haven, Conn. Filed Jan. 11, 1915. Serial No. 1,584. (Cl. 191—93.)

1. In a combined trolley catcher and retriever, having holding dogs for forming an operative engagement therebetween; of cam means for positively moving said dogs into their holding position prior to the operation of the retrieving mechanism.

2. In a device of the character described, the combination with a reel; of dogs pivotally connected therewith;

and means for preventing a lateral movement of said dogs, said means comprising a member integral with said reel and projecting across one side of said dogs at a point beyond its pivot mounting.



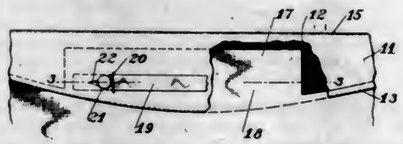
3. In a combined trolley catcher and retriever, the combination with a casing; of a member rotatably mounted therein; a reel mounted upon said member; a spring for moving said member in one direction; means for separately connecting said reel with said member, whereby the same will move as a unit; means for actuating said means whereby the same will have an operative engagement with said reel prior to the time said spring exerts its influence to rotate said member; and means for predetermining the number of unwinding revolutions of said latter spring.

4. In a combined trolley catcher and retriever, the combination with a reel; of a rotary member; a retriever spring for rotating the same in one direction; holding dogs for forming an operative engagement between said reel and rotary member; one of said dogs having a tooth thereon in the path of a lug on said reel to prevent a premature reverse movement of the reel while said dogs are in their outward position.

5. In a device of the character described, the combination with a reel having a lug thereon with a part substantially parallel with that portion of the reel with which it is connected; of a dog pivotally connected therewith and moving between the parallel portion of said lug and reel.

[Claims 6 to 29 not printed in the Gazette.]

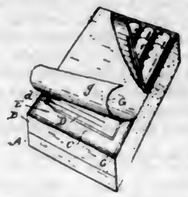
1,193,891. COAT-HANGER. NOAH LINCOLN GREENE, Boston, Mass., assignor to American Rubber Company, a Corporation of Massachusetts. Filed Sept. 25, 1914. Serial No. 863,432. (Cl. 2—53.)



A garment including a body portion, a collar piece comprising two layers connected thereto, a tab projecting from the neck of the body portion and lying between said layers, and a hanger loop connected to the tab and projecting therefrom through the collar between the upper edge of the collar and the junction line of the collar with the body of the garment.

1,193,892. CIGARETTE-BOX. ERNST J. GUENZEL, Milwaukee, Wis., and CLEOPHES E. WYANT, Chicago, Ill., assignors, by direct and mesne assignments, of one-half to said Guenzel and one-half to said Wyant. Filed Apr. 26, 1915. Serial No. 23,824. (Cl. 206—48.)

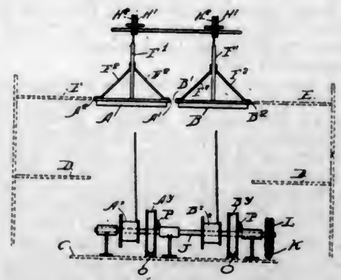
1. A box for cigarettes and similar articles having one of its walls inset to provide a match receiving pocket adapted to receive a single series of matches in parallel relation, in combination with a paper wrapper secured to said box and forming the outer wall of such pocket whereby said wall may be progressively torn away to expose one or more matches at a time, substantially as described.



2. A box for cigarettes and similar articles having one of its walls inset to form a broad shallow pocket of a width equal to the length of the matches, means for securing a match slab in said pocket in a position to permit independent separation of the matches successively, and a thin outer covering for said box extending across the pocket and constituting an outer wall thereof, said covering being adapted to be progressively removed from the box from one end of the strip of matches to the other to expose them for removal successively.

3. A paper box for cigarettes and similar articles having its bottom wall embossed to form a broad open pocket adapted to receive a single set of matches in parallel relation, and an outer paper covering for said box extending across said pocket and constituting the outer wall thereof, whereby the matches may be successively exposed by breaking said outer cover at one end of the series of matches contained in said pocket, and removing the cover progressively as the matches are used.

1,193,893. CONVERTIBLE ELEVATOR. CHARLES HAMMEN, Chicago, Ill., assignor of one-half to Elwyn W. Seymour, Evanston, Ill. Filed July 23, 1915. Serial No. 41,466. (Cl. 187—1.)



1. The combination of a plurality of platform elevator cars mounted for travel side by side, and hoisting gear adapted for moving said cars in unison with their platforms substantially alined in a common plane.

2. The combination of a plurality of platform elevator cars mounted for travel side by side, the adjacent sides of said cars being clear for access from one car to another, and hoisting gear adapted for moving said cars in unison with their platforms substantially alined in a common plane.

3. The combination of a plurality of platform elevator cars mounted for travel side by side, the adjacent sides of said cars being clear for access from one car to another, the opposite side of one car being clear for access to a landing, together with hoisting gear adapted for moving said cars in unison with their platforms substantially alined in a common plane.

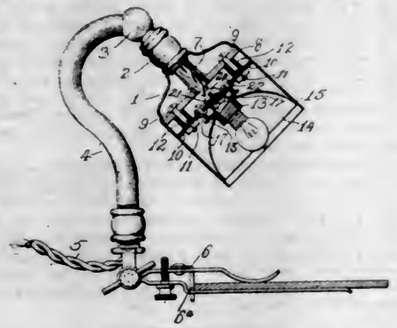
4. In combination with a pair of platform elevator cars mounted for travel side by side, hoisting apparatus for both cars and means for synchronizing said apparatus to

secure simultaneous movement of the cars in definite relation to each other, such hoisting apparatus for one of the cars including a connection reversible at will adapted to cause travel of the cars in the same or in opposite directions simultaneously as desired.

5. In combination with a pair of platform elevator cars mounted for travel side by side, hoisting apparatus for both cars and means for synchronizing said apparatus to secure simultaneous movement of the cars, such apparatus including means for varying the speed ratio between said cars at will for causing them to travel equal or different distances simultaneously as desired.

[Claims 6 to 10 not printed in the Gazette.]

1,193,894. ELECTRIC LAMP. WILLIAM A. HARVEY, Scranton, Pa. Filed Apr. 19, 1915. Serial No. 22,462. (Cl. 240—41.)



1. In a lamp, the combination of a housing, a reflector seating against said housing, a socket member protruding through said reflector and having a shoulder through which it engages the reflector in the direction to hold it against its seat upon the housing, a supporting bar carrying the socket member in position to clamp the reflector between the shoulder and said supporting bar, and means for holding the bar within the housing with the reflector seated against the housing.

2. In a lamp, the combination of a housing, a reflector seating against said housing, a socket member protruding through said reflector and having a shoulder through which it engages the reflector in the direction to hold it against its sent upon the housing, a supporting bar carrying the socket member in position to clamp the reflector between the shoulder and said supporting bar, and means for holding the bar within the housing with the reflector seated against the housing, comprising a shank connected with the supporting bar, and a coupling member outside the housing, receiving the shank; the housing being drawn against said coupling through means of said shank.

3. In a lamp, the combination of a housing, a socket member adapted to receive a suitable illuminating device and having a shoulder thereon, a reflector seated against the housing and also against said shoulder, means for drawing the socket endwise into the housing, and thereby fixing the reflector in position; said means comprising a bar with which the socket member is connected, and the housing being provided with a seat against which the bar rests when the reflector is seated, a shank projecting from said bar, in the direction to draw the bar and reflector to their seats, and a coupling outside the housing, receiving and holding the shank, and seated against the housing when the bar and reflector are seated.

4. In a lamp, the combination of a coupling, a housing seated against said coupling, an attaching shank fitted to said coupling and provided with a shoulder-forming member through which it is seated against the housing, and adapted to draw the housing to its seat against the coupling, a reflector seated against the housing, and a socket member seated against the reflector and connected with the shank and held by the shank in position to hold the reflector to its seat upon the housing.

5. In a lamp, the combination of a coupling, a housing seated against said coupling, an attaching shank fitted to said coupling and provided with a shoulder-forming member through which it is seated against the housing, and adapted to draw the housing to its seat against the coupling, a reflector seated against the housing, and a socket member seated against the reflector and connected with the shank and held by the shank in position to hold the reflector to its seat upon the housing; said shank being adjustable in the coupling for tightening its seating against the housing and the seating of the housing against the coupling.

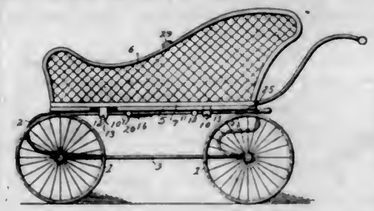
[Claims 6 to 15 not printed in the Gazette.]

1,193,895. CLASP FOR HOLDING BEDCLOTHES OR LAP-ROBES. ROWLAND F. HEMINGWAY, Andrews, N. C. Filed Oct. 12, 1914. Serial No. 866,372. (Cl. 24—260.)



A clasp of the character described, comprising a continuous U-shaped strip of resilient material forming the legs of opposite jaw members, the outer faces of said legs being corrugated, a slidable locking loop for holding said legs in compressed position, a roller carried on each end of said loop to frictionally engage the corrugated faces of said legs, and pivoted means carried by said U-shaped strip intermediate of its ends for attachment of same to a strap or the like, substantially as described.

1,193,896. DETACHABLE-BODY BABY-VEHICLE. OTTO A. HENSEL, Milwaukee, Wis. Filed Aug. 19, 1912. Serial No. 715,702. (Cl. 21—12.)



1. The combination in a baby vehicle of a basket supporting platform having openings therein near its front and rear ends, a basket provided with a flat bottom having projections adapted to pass through the openings in the platform, locking pins mounted to slide along the under surface of the platform and adapted to socket in said projections, an operating rod linked to said pins, said operating rod extending longitudinally along the under surface of the platform and projecting at the rear end thereof, a spring normally holding said operating rod with pins in locking position, and a stop limiting the forward movement of said rod under the tension of said spring.

2. The combination with a baby vehicle platform provided with openings, of a basket having a bottom adapted to fit the platform, projections on the basket adapted to enter the platform openings, locking pins carried by said platform and adapted to interlock with said projections, means for manually retracting said pins, said projections being tapered at their lower ends and adapted to automatically push the locking pins out of normal position while the projections are moving to pin-receiving position; said basket having a handle to facilitate lifting it from the platform when the pins are manually retracted.

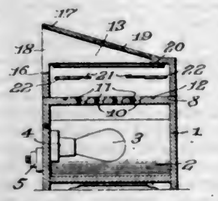
1,193,897. DYNAMO-ELECTRIC MACHINERY. RICHARD AMBROSE HOLBECH, Ellesmere, England, assignor to Arthur Rolfe, London, England. Filed July 29, 1911. Serial No. 641,267. (Cl. 171—252.)



1. In a dynamo-electric machine, a rotating magnet with salient poles adapted to act as a centrifugal fan to force the air in the inter-polar spaces radially in an outward direction, inlets to said inter-polar spaces and means for forcing air through said inter-polar spaces, axially with respect to the said magnet to impinge against the air moving radially in the inter-polar spaces at right angles thereto.

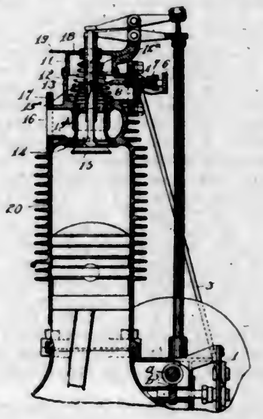
2. The combination with a stator provided with radial air ducts, an inclosing casing having end air inlet passages and an intermediate outlet passage, a driving shaft journaled coaxially of the stator, a rotor secured on said shaft and including pole pieces, said rotor having peripherally thereof spaced-apart longitudinally extending channels extending from end to end thereof, and arranged substantially concentric to the magnetic path, and having radial air passages spaced-apart along the length thereof, and being further provided with internal longitudinally extending air channels, said longitudinal internal and peripheral channels intersecting the radial air passages, and said inner air channels being disposed in a plane extending between the peripheral channels, said pole pieces having spaced-apart teeth, the spaces between the teeth communicating with the adjacent peripheral channels and extending radially in reference thereto, and being adapted to receive the windings, and fans secured to the shaft at opposite ends of the rotor for forcing air currents through the channels toward the middle of the rotor, said air currents causing pressure on the interpolar air at right angles to the air currents through the radial passageway or ducts.

1,193,898. EGG TESTER AND CRATER. CHAUNCEY A. HUGHES and GEORGE W. MILLER, Rossville, Ill. Filed Oct. 19, 1914, Serial No. 867,473. Renewed June 23, 1916. Serial No. 105,519. (Cl. 99—6.)



An egg testing device comprising a light box of frustopyramidal form, said box having its walls converging toward its top, illuminating means arranged within said box, a hinged lid for closing the top of the box, said lid having combined light apertures and egg receiving recesses therein and provided with transverse grooves adjacent to the ends thereof, a hood comprising a box-like cover hinged to the lid at the rear portions thereof, said lid and hood being of relative weights to substantially counterbalance each other, and said hood being provided in its sides with guide grooves and having in its top a light aperture, a cover arranged over said aperture and having an open end forming an observation aperture at one end of the hood, the upper wall of said cover inclining at a downward and inward angle from said aperture toward the opposite end of the hood, ball-shaped grippers slidably mounted in said guide grooves, and a retaining curbing at the top of the cover about said light aperture.

1,193,899. MEANS FOR DIRECT INJECTION OF FUEL INTO AN INTERNAL-COMBUSTION MOTOR. HENRY W. JACOBS and WILLIAM J. LEIGHTY, Topeka, Kans. Filed Apr. 11, 1912. Serial No. 690,097. (Cl. 123—34.)



1. The herein described fuel injecting means for an internal combustion motor provided with inlet and exhaust valves, which compriaes a liquid fuel pump having connection with the fuel supply reservoir or tank, means whereby the fuel is conveyed from the pump to the point of injection into the cylinder and excess fuel returned to the reservoir, means intermediate of said first mentioned means and the mixing chamber whereby a predetermined quantity of fuel is injected into said chamber, and means located within the chamber, intermediate of the injecting means and the admission port of the cylinder, arranged to receive the injected fuel, said means being adapted to receive vibratory movements through the closure of the exhaust valve, whereby the fuel injected is broken up into globules or a spray.

2. The hereindescribed fuel injecting means comprising a liquid fuel pump which has connection with the fuel supply, means whereby the fuel is conveyed from the pump to the point of injection into the cylinder and excess fuel returned to the fuel supply, means intermediate of the mixing chamber of the cylinder and the first mentioned means whereby the fuel is injected into said chamber, means whereby pressure in the supply connection from the pump to the chamber is controlled, and means located within the chamber intermediate of the injecting means and the admission port of the cylinder, arranged to receive the injected fuel, said means being adapted to receive vibratory movements through the closure of the exhaust valve, whereby the fuel injected is broken into globules or a spray.

3. The herein described fuel injecting means for an internal combustion motor provided with inlet and ex-

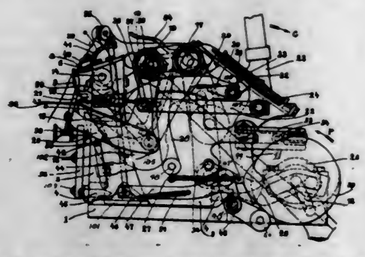
haust valves, comprising a liquid fuel pump having connection with the fuel supply reservoir, means whereby the fuel is conveyed from the pump to the point of injection into the cylinder and excess fuel returned to the reservoir, means whereby the fuel is injected into said mixing chamber, means for regulating the amount of fuel injected, and means located within the chamber intermediate of the injecting means and the admission port of the cylinder, arranged to receive the injected fuel, said means being adapted to receive vibratory movements through the closure of the exhaust valve, whereby the fuel injected is broken into globules or a spray.

4. The herein described fuel injecting means for an internal combustion motor having intake and exhaust valves, comprising a liquid fuel pump having connection with a liquid fuel supply and with the mixing chamber of a cylinder, a return line intermediate of said pump and fuel supply, a three-way valve in the connection between the pump and said mixing chamber and communicating with said return line whereby the course of the fuel may be determined, means whereby the fuel is injected into said mixing chamber in a predetermined quantity, and means located within said mixing chamber intermediate of the injecting means and the admission port of the cylinder, arranged to receive the injected fuel, said means being adapted to receive vibratory movements through the closure of the exhaust valve whereby the injected fuel is broken up into globules or a spray.

5. The herein described fuel injecting means for an internal combustion motor provided with intake and exhaust valves comprising a liquid fuel supply adapted to have connections with the mixing chambers of the motor, means located in said connections and intermediate of the supply and the mixing chambers of the cylinders whereby the liquid fuel may be alternately conveyed to the cylinders or returned to the supply, means whereby the liquid fuel in said fuel supply connections is put under pressure and the excess of fuel returned to said supply, and means within the mixing chambers of the cylinders intermediate of the injecting means and the admission port of the cylinder, arranged to receive the injected fuel, said means being adapted to receive vibratory movements through the closure of the exhaust valve whereby the injected fuel will be intermittently broken up into minute globules or a spray.

[Claims 6 to 15 not printed in the Gazette.]

1,193,900. MACHINE FOR SEWING ON THE SOLES OF SHOES AND THE LIKE. ALEXANDER JOHANSSON and SVEN IVAR GÖSTA JOHANSSON, Gottenborg, Sweden, assignors to Albert M. Hoyt, Swampscott, Mass. Filed Mar. 18, 1911. Serial No. 615,399. (Cl. 112—20.)



1. In a machine for the purpose described, the combination of a work-support having an aperture, a reciprocating awl, a reciprocating barbed needle; said awl and needle being constructed and arranged to swing and penetrate the work from the same side thereof, a movable looper through which the thread passes, a pivoted hook above the work support, means for operating said looper and said hook in such manner that during the upward stroke of the needle the hook is turned so that its hooked end crosses the end of the thread depending from the looper and brings the same into a bight in front of the barbed point of the needle, a fixed shuttle directed obliquely upward toward the aperture in the work support, a hook actuable forwardly after the thread has been pulled by the needle in a bight through the work, to seize the thread bight and draw it in a long loop backwardly and downwardly around the shuttle and to finally release the bight behind the shuttle, and a take-up for pulling the thread taut so that the bight which has caught the under thread during its motion around the shuttle is pulled upwardly.

2. A sewing machine having, in combination, a work-support having an aperture therein, a reciprocatory curved needle barbed on its inner edge and located on one side of said work-support, a looper through which the thread passes and a movable thread measuring finger located on the opposite side of said work-support, mechanism constructed and arranged to move said looper across the path of said needle on the barbed side thereof in one direction and means connecting said looper and thread measuring finger constructed and arranged to move said finger across the path of said needle on the barbed side thereof in the opposite direction and between said work-support and looper, whereby a bight of thread is fed to said needle.

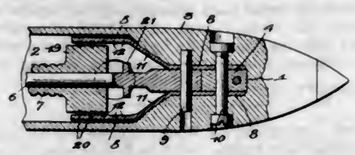
3. A sewing machine having, in combination, a work-support having an aperture therein, a reciprocatory curved needle barbed on its inner edge located on one side of said work-support and arranged to pass through said aperture, a pivotally mounted looper through which the thread passes, a pivotally mounted thread measuring finger located on the opposite side of said work-support, mechanism constructed and arranged to swing said looper across the path of said needle on the barbed side thereof in one direction and a projection on said looper extending into a slot provided in said thread measuring finger and constructed and arranged to move said finger across the path of said needle on the barbed side thereof in the opposite direction and between said work-support and looper, whereby a bight of thread may be fed to said needle.

4. A sewing machine having, in combination, a work-support inclined to the horizontal plane and having an aperture therein, a reciprocatory curved needle barbed on its inner edge located on one side of said work-support and arranged to pass through said aperture, a looper through which the thread passes and a pivotally mounted thread measuring finger located on the opposite side of said work-support, a rock-shaft to which said looper is fastened, mechanism constructed and arranged to simultaneously rock and reciprocate said shaft whereby said looper may be moved at an angle to the horizontal plane across the path of said needle on the barbed side thereof in one direction and a pin on said looper projecting into a slot provided in said thread measuring finger and constructed and arranged to move said finger across the path of said needle on the barbed side thereof in the opposite direction and between said looper and work-support, whereby a bight of thread may be fed to said needle.

5. A sewing machine having, in combination, a work-support inclined to the horizontal plane and having an aperture therein, a reciprocatory needle barbed on its inner edge located on one side of said work-support and arranged to pass through said aperture, a looper through which the thread passes, a pivotally mounted thread measuring finger located on the opposite side of said work-support, a rock-shaft to which said looper is fastened, an arm on said rock-shaft projecting into an inclined slot provided in the frame of said machine, mechanism constructed and arranged to move said arm longitudinally of said slot, whereby said looper may be moved at an angle to the horizontal plane across the path of said needle on the barbed side thereof in one direction and means connecting said looper and said thread measuring finger constructed and arranged to move said finger across the path of said needle on the barbed side thereof in the opposite direction and between said work-support and looper, whereby a bight of thread may be fed to said needle.

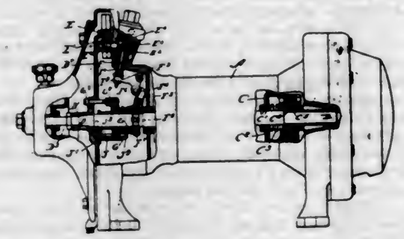
[Claims 6 to 16 not printed in the Gazette.]

1,193,901. BOBBIN HOLDING AND GRIPPING DEVICE. JOHN JOHNSTON, Woonsocket, assignor of one-half to George H. Bridge, Jr., Providence, R. I. Filed Sept. 15, 1915. Serial No. 50,881. (Cl. 139—27.)



In a shuttle, spaced gripping arms, an anchor block positioned between the arms, a bolt passing through the gripping arms and anchor block for securing the same to the shuttle, a bobbin holder having one of its ends positioned between the arms, a pivot pin extending through the arms and bobbin holder, a spring engaging the bobbin holder and anchor block, and means extending through the spring and into the anchor block for holding the spring in position.

1,193,902. STEAM-TURBINE. JOHN E. KILKER, Chicago, Ill., assignor to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed May 21, 1915. Serial No. 29,487. (Cl. 121—118.)



1. A turbine wheel in combination with a steam supply nozzle, a valve to control the supply of steam thereto and a governor responsive to the speed of the wheel to operate the valve and to move the wheel to reduce the supply of steam to the wheel.

2. A turbine wheel in combination with a steam supply nozzle, means for holding the turbine wheel yieldably in normal relation to the nozzle, a governor responsive to the speed of the wheel, a valve controlled by said governor to control the supply of steam, means responsive to the operation of the governor for moving said wheel out of the normal relation with the nozzle.

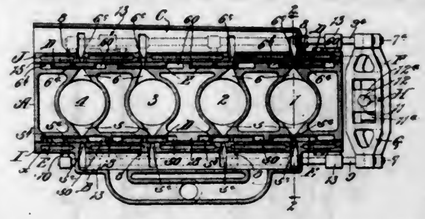
3. The combination with a turbine wheel and steam supply nozzle of a valve for controlling the supply of steam to the nozzle, a governor operated by the wheel for controlling said valve, and means responsive to the operation of the governor and operative after the manipulation of the valve by the governor for displacing the wheel out of register with the nozzle.

4. The combination with a turbine wheel and steam supply nozzle of a valve controlling it, a governor actuated by the wheel to control the valve, and a connection between the governor and the wheel to laterally displace the wheel in response to excess rotational speeds thereof to throw the wheel out of line with the nozzle.

5. The combination with a turbine wheel and steam supply nozzle of a valve for controlling the supply of steam to the nozzle, a governor operated by the wheel for controlling said valve, and means responsive to the operation of the governor and operative after the manipulation of the valve by the governor for displacing the wheel out of register with the nozzle, and yielding means for normally holding the wheel in line with the nozzle.

[Claims 6 and 7 not printed in the Gazette.]

1,193,903. INTERNAL-COMBUSTION ENGINE. WALTER F. KOKEN, St. Louis, Mo. Filed July 12, 1915. Serial No. 39,387. (Cl. 123—59.)



1. In an internal combustion engine, a cylinder casting provided with a planed surface in which a recess is formed to produce a valve chamber that communicates with the cylinder, a removable valve seat member clamped tightly against the planed surface on the cylinder casting to form one wall of said valve chamber and provided with guideways that project into said chamber, and a reciprocating valve in said guideway that controls a port formed in the outer wall of said valve chamber, said valve seat member having a seat on which said valve slides.

2. A multi-cylinder internal combustion engine, each of whose cylinders is provided with an inlet and an exhaust gas passageway formed in the side walls thereof on opposite sides of the engine, a separate valve chamber communicating with each of said gas passageways and cut off from the other valve chambers of the engine, and reciprocating slide valves in said valve chambers that cooperate with ports in same to control the inlet and exhaust of the gases to and from the cylinders.

3. An internal combustion engine provided with a plurality of cylinders that have inlet and exhaust gas passageways formed in the side walls thereof at opposite sides of the engine, valve chambers that are always in open communication with their respective cylinders, and vertically-disposed slide valves of plate form that move longitudinally of the crank shaft of the engine and control the inlet and exhaust of the gases into and out of the cylinders.

4. An internal combustion engine provided with a plurality of cylinders that have inlet and exhaust gas passageways formed in the side walls thereof, separate valve chambers that communicate with the cylinders through said passageways, and reciprocating slide valves of plate form that move longitudinally of the engine and control the inlet and exhaust of the gases to and from the cylinders, said valves being arranged in two groups, each of which comprises exhaust valves for certain of the cylinders and inlet valves for the remaining cylinders.

5. A multi-cylinder internal combustion engine provided with cylinders that have inlet and exhaust valve chambers arranged on opposite sides of the engine, and slide valves of plate form that reciprocate longitudinally of the engine and control the admission and exhaust of the gases to and from the cylinders, the valves being arranged in two groups, each of which comprises inlet valves and exhaust valves that are directly connected together and which move in unison.

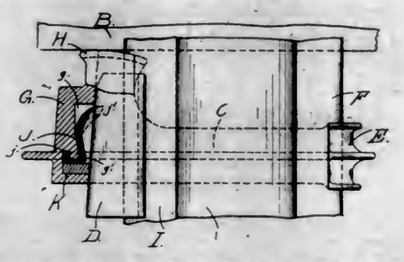
[Claims 6 to 15 not printed in the Gazette.]

1,193,904. RAIL-ANCHOR. EDWARD LAAS, Chicago, Ill., assignor to Otto R. Barnett, Chicago, Ill. Filed Oct. 18, 1915. Serial No. 56,481. (Cl. 238—4.)

1. A rail anchor comprising coengaging members adapted to have a gripping engagement with a rail and to bear against a tie on which the rail is laid, in combination with means for maintaining the intimacy of engagement between said anchor and rail comprising an elastic device interposed between said members and provided with an edge adapted to bite into one of the same.

2. A rail anchor comprising coengaging members adapted to have a gripping engagement with a rail and to bear

against a tie on which the rail is laid, in combination with means for maintaining the intimacy of engagement between said anchor and rail comprising a bent spring interposed between said members and terminating in an edge adapted to bite into one of the same.



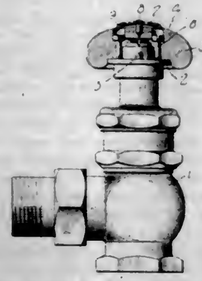
3. A rail anchor adapted to have a gripping engagement with a rail and to bear against a tie on which the rail is laid, in combination with means for maintaining the intimacy of engagement between said anchor and rail comprising a spring member secured at one end to the anchor with its free end provided with a biting edge.

4. A rail anchor adapted to have a wedging engagement with a rail and to bear against a tie on which the rail is laid, in combination with means for maintaining intimacy of engagement between the anchor and rail comprising a spring member secured to the anchor at one end and having a biting edge at the other.

5. A rail anchor adapted to have a wedging engagement with a rail and to bear against a tie on which the rail is laid, in combination with means for maintaining intimacy of engagement between the anchor and rail comprising a spring member secured to the anchor at one end and having a biting edge at the other and disposed obliquely with respect to the longitudinal axis of the rail.

[Claims 6 to 12 not printed in the Gazette.]

1,193,905. VALVE-HANDLE. JOSEPH P. LAVIGNE, Detroit, Mich. Filed Dec. 6, 1915. Serial No. 65,218. (Cl. 16—171.)



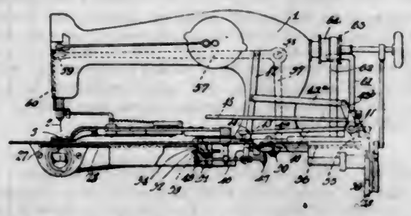
1. In a valve, a rotatable closure operating member, a handle of insulating material non-rotatably and detachably secured on the closure operating member, and a shield detachably secured on the handle and insulated thereby from the valve.

2. In a valve, a closure operating member, a handle of insulating material mounted thereon, means securing the handle detachably to the member, a shield on the handle, and means securing it thereto as a guard for the handle securing means and in heat insulated relation from the valve.

3. In a valve having a closure stem operating plate, a handle of heat insulated material resting on the plate which it houses, means for securing the handle to the plate, and a shield mounted on the handle to lie in a plane above it and secured to the handle in heat insulated relation from the valve.

4. In a valve, a member for operating the valve closure extending above the valve casing, a handle of heat insulated material formed to provide a hand grip and non-rotatably engage on the member, securing means insulated through the handle from the upper side and engaging into the member, a shield plate mounted on the handle to extend above the plane thereof and a holding member for the plate entering the handle and plate and the securing member thereof being in heat-insulated relation to the valve.

1,193,906. APPARATUS FOR CUTTING THREAD IN SEWING-MACHINES. ARTHUR E. LINDNER, Brooklyn, N. Y. Filed Jan. 2, 1915. Serial No. 238. (Cl. 112—33.)



1. A thread cutting device for sewing machines, comprising a cutting member consisting of a single plate, provided with an elongated slot therein, adapted to embrace one limb of thread not to be cut, cutting edges at either side of said slot adapted to cut limbs of thread not embraced by said slot and means for moving said cutting member into engagement with the said thread.

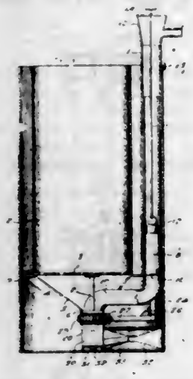
2. A thread cutting device for sewing machines, comprising a cutting member provided with a longitudinal slot adapted to embrace one limb of thread not to be cut, inclined cutting edges at either side of said slot adapted to cut limbs of thread not embraced by said slot and means for reciprocating said cutting member.

3. A thread cutting device for sewing machines, comprising a cutting member, provided with a longitudinal slot adapted to embrace one limb of thread not to be cut, inclined cutting edges at either side of said slot adapted to cut limbs of thread not embraced by said slot, means for reciprocating said cutting member, and guiding means adapted to move said limbs in the path of said slot and cutting edges.

4. A thread cutting device for sewing machines, comprising a cutting member having cutting edges and a slot, means for reciprocating said cutting member, and guiding means provided with a slot adapted to embrace one limb of thread not to be cut and guiding surfaces adapted to guide the limbs of thread to be cut in the path of the said cutting edges.

1,193,907. PUMP AND CLEANER FOR ACETYLENE-GAS GENERATORS. MILES EDWARD LOEHR, Warsaw, Ind. Filed Oct. 3, 1914. Serial No. 864,926. (Cl. 48—57.)

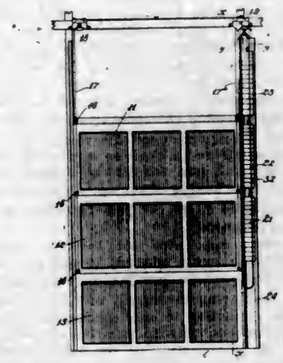
1. A device of the class described including the combination with a gas generator casing, brackets secured in said casing adjacent the bottom thereof, and a tank seated in said gas generator casing upon the upper portions of the brackets, of a discharge pipe positioned vertically between the casing and tank, the upper end of said pipe extending outwardly beyond the upper edges of the casing, the lower end of said pipe directed inwardly and downwardly and positioned directly under the bottom of the tank, a rotary sleeve carried on the lower end of said pipe, a residue gathering member carried by said rotary sleeve, a ratchet wheel positioned on the upper end of said rotary sleeve, an arm connected to said sleeve and provided with a pawl to engage said ratchet wheel for rotating the same, a piston rod slidably mounted in said pipe, a cross arm connected to the upper end of the piston rod, an operating rod connected at one end of the free end of the cross arm and extending downwardly from along the outside of said pipe, the free end connected to the first mentioned arm for rotating said rotary sleeve and turning the residue gathering members for sucking the residue up into the pipe and out of the same.



2. The combination of an acetylene gas generator casing and tank, said tank positioned in said casing and held spaced from the walls thereof and elevated above the bottom, of a discharge pipe positioned between the casing and the walls of the tank, the upper end of said pipe projecting beyond the upper edges of said casing, and means for holding the same positioned therein, the lower end of said pipe directed horizontally in toward the center thereof and directed downwardly, the downwardly projecting portion positioned directly under the bottom of the tank, a rotary sleeve carried on the lower end of said pipe, a gathering member carried by said rotary sleeve, a ratchet wheel positioned on the upper end of said rotary sleeve, an arm connected to said sleeve and provided with a pawl to engage said ratchet wheel for rotating the same, a piston slidably mounted in the pipe, a cross arm connected to the upper end of the piston rod, an operating rod connected at one end to the free end of the cross arm and extending downwardly along the outside of said pipe, the free end connected to the first mentioned arm, whereby upon movement of said arm the first named arm will be rotated and in turn rotate said sleeve moving the gathering member around the bottom of the tank gathering the residue up through the same and out through the pipe.

3. A device of the class described comprising the combination with the casing and tank of a generator; of a discharge pipe projecting upwardly between said tank and casing, a discharge spout for said discharge pipe, the lower end of the discharge pipe being directed inwardly and curved downwardly, a flange formed on the lower end of said discharge pipe, supporting means for the tank projecting upwardly and outwardly from said flange, a sleeve rotatably mounted upon the lower end of said discharge pipe, a ratchet wheel mounted on said sleeve, a gathering finger projecting from one side of the sleeve for gathering the residue from the bottom of the casing, a conducting pipe leading from the center of the gathering finger to the interior of the sleeve to conduct the residue to the same, means within the discharge pipe for drawing the material upwardly through the same and forcing the residue outwardly through the discharge pipe, means for returning the discharge pipe in position, a pawl engaged with the ratchet wheel, means for operating the pawl to rotate the sleeve and gathering finger, and connections between the last mentioned means and the means within the discharge pipe, whereby the sleeve and gathering finger may be operated upon operation of the means within the discharge pipe.

1,193,908. SLIDING SHUTTER OR DOOR. EDWARD H. MCCLOUD, Columbus, Ohio, assignor to The Kinnear Manufacturing Company, Columbus, Ohio, a Corporation of West Virginia. Filed Oct. 27, 1913. Serial No. 797,446. (Cl. 20—19.)

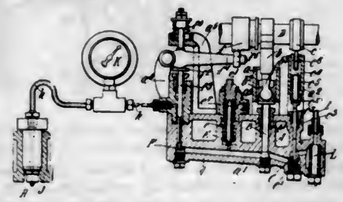


1. A shutter or door comprising, in combination, a shutter or door proper composed of a plurality of separately sliding sections, a counterbalancing weight for each of said sections, a flexible member connecting each sliding section with a separate one of said weights, and means adapted to cause the operation of said flexible members in succession to successively raise or lower said sections.

2. A shutter or door comprising, in combination, a shutter or door proper composed of a plurality of separately sliding sections, a counter-balancing weight for each of said sections, a flexible member connecting each sliding section with a separate one of said weights, and separate driving members for said flexible members provided with intermediate connecting devices for causing the successive actuation of the sections.

3. A shutter or door comprising, in combination, a shutter or door composed of a plurality of separately sliding sections, a counter-balancing weight for each of said sections, a flexible member connecting each sliding section with a separate one of said weights, and separate driving members, for said flexible members provided with intermediate connecting devices including a separate idler member adapted to connect the driving members to cause the successive actuation of the sections.

1,193,909. INJECTION OF LIQUID FUEL IN INTERNAL-COMBUSTION ENGINES. JAMES MCKECHNIE, Barrow-in-Furness, England, assignor to Vickers Limited, Barrow-in-Furness, England. Filed Aug. 5, 1913. Serial No. 783,054. (Cl. 123—139.)



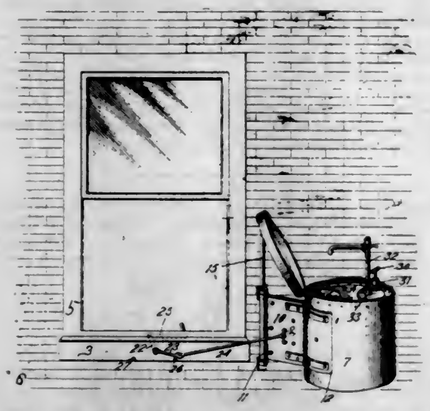
1. Fuel injecting apparatus for internal combustion engines, comprising a pump adapted to pump a large excess of fuel at each stroke, mechanically operated valve mechanism for regulating the supply of fuel to the engine cylinder and for admitting it only during the latter part of the pump compressed stroke, a valve allowing escape of fuel during the idle portion of the pump compression stroke and mechanical means for maintaining the open-

ing of the said valve, before the admission of the fuel to the cylinder, so small as to exercise a substantial choking effect on the escape of the fuel and for slowly closing the valve so as to increase the choking effect up to complete closing and thus gradually to raise the fuel pressure up to the high pressure of injection.

2. Fuel injecting apparatus for internal combustion engines, comprising a pump adapted to pump a large excess of fuel at each stroke, mechanically operated valve mechanism for regulating the supply of fuel to the engine cylinder and for admitting it only during the latter part of the pump compression stroke, a pump suction valve and means for maintaining the opening of the said suction valve during the idle portion of the compression stroke of the pump so small as to exercise a choking effect on the escape of the fuel, and for slowly closing the valve so as to increase the choking effect up to complete closing and thus gradually to raise the fuel pressure up to the high pressure of injection.

3. Fuel injecting apparatus for internal combustion engines, comprising a pump adapted to pump a large excess of fuel at each stroke, mechanically operated valve mechanism for regulating the supply of fuel to the engine cylinder and for admitting it only during the latter part of the pump compression stroke, a valve allowing escape of fuel during the idle portion of the pump compression stroke, mechanical means for maintaining the opening of the said valve, before the admission of the fuel to the cylinder, so small as to exercise a substantial choking effect on the escape of the fuel and for slowly closing the valve so as to increase the choking effect up to complete closing and thus gradually to raise the fuel pressure up to the high pressure of injection, and a relief valve between the pump and the engine, set to open at a predetermined fuel pressure which controls the pressure of injection.

1,193,910. WINDOW CAN-SUPPORT. WILLIAM H. MCNUTT, New York, N. Y., assignor to Carrie Emma Owen, Franklin, N. Y. Filed Apr. 25, 1914. Serial No. 834,435. (Cl. 45—104.)



The combination with a window portion of a building, of a receptacle, a hinge member secured to the receptacle, hinge members secured to the wall and supporting the said hinge member to permit the receptacle to be swung from a position in front of the window to a position against the wall away from the window, an operating device comprising a shaft supported to turn in the window sill, a handle on the shaft inside of the window, an arm secured on the outer end of the shaft, a link pivotally connecting the arm with the hinge member of the receptacle, and stops for the said arm, whereby upon swinging the handle and arm, the link will shift the receptacle from a locked position in front of the window with the arm and link on a dead center against one of said stops, to a position away from the window with the arm and link locked on a dead center against the other of said stops.

1,193,911. PYROMETER. GEORGE F. MACHLET, Elizabeth, N. J. Filed Aug. 26, 1910, Serial No. 579,056. Renewed Feb. 17, 1916. Serial No. 78,979. (Cl. 73—32.)



1. The combination of a heat-conducting element to be directly exposed to high heat; a heat-measuring element to be heated thereby; a receptacle to contain a stable body of heat-absorbing liquid with which the heat-conducting element is directly in contact, whereby the liquid is constantly heated by said heat-conducting element; and means for constantly maintaining said liquid at substantially its boiling point, to establish a standard or normal temperature for the heat-measuring element which is far below the temperature to which said heat-conducting element is actually exposed, and to protect said heat-conducting element from being injured by such heat.

2. The combination of a heat-conducting element to be directly exposed to high heat; a heat-measuring element to be heated thereby; a receptacle to contain a stable body of heat-absorbing liquid with which the heat-conducting element is directly in contact; and a condenser for cooling and returning the vapor arising from said liquid to constantly maintain the latter at a substantially unvarying temperature, thereby to establish a standard or normal temperature for the heat-measuring element which is far below the temperature to which said heat-conducting element is actually exposed, and to protect said heat-conducting element from being injured by such heat.

3. The combination of a heat-conducting element to be directly exposed to high heat; a heat-measuring element to be heated thereby; a receptacle to contain a stable body of heat-absorbing liquid with which the heat-conducting element is directly in contact; and means for dissipating the heat absorbed by said liquid from said heat-conducting element in a manner to constantly maintain said liquid at a substantially unvarying temperature, thereby to establish a standard or normal temperature for the heat-measuring element which is far below the temperature to which said heat-conducting element is actually exposed, and to protect said heat-conducting element from being injured by such heat.

4. The combination, with a flask; of a heat-conducting sheath arranged within the flask and having a portion projecting therefrom to be directly exposed to high heat; a thermotic device having a part inserted in said sheath to be directly heated thereby; said flask containing a stable body of cooling liquid wherein said sheath is immersed; and a condenser for cooling and returning the vapors arising from said liquid, to constantly maintain the latter at a substantially unvarying temperature, thereby to establish a standard or normal temperature for the thermotic device which is far below the temperature to which the sheath is actually exposed, and to protect the sheath from being injured by such heat.

5. The combination of a heat-conducting sheath having a terminal nipple to be directly exposed to high heat; a thermotic element having a part extending into said sheath and contacting with said nipple to be immediately heated thereby; a receptacle to contain a stable body of heat-absorbing liquid with which the body of said sheath is directly in contact whereby the liquid is constantly heated by said sheath; and means for constantly maintaining said liquid at substantially its boiling point while subjected to the heating action of said sheath, thereby to establish a standard or normal temperature for the thermotic element which is far below the temperature to which said nipple is actually exposed, and to protect said sheath from being injured by such heat.

[Claims 6 to 21 not printed in the Gazette.]

1,193,912. FISHING-TACKLE. PETER D. MAIRE and WALTER W. GREGORY, Lakewood, Ohio; said Maire assignor to W. R. White, Cleveland, Ohio. Filed Jan. 27, 1915. Serial No. 4,584. (Cl. 43—4.)



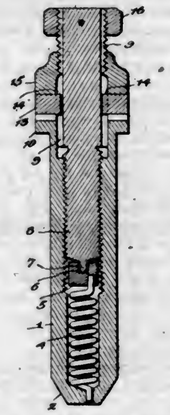
1. A fishing-line attachment comprising a relatively small cylindrical body having longitudinal slots and axial bores open thereto in its opposite end portions and provided with an annular groove in its central body portion and having spiral surface grooves extending from said annular groove to said longitudinal slots and axial bores.

2. A fishing-line, in combination with a relatively small cylindrical body having longitudinal and spiral surface grooves at opposite ends thereof and an annular groove centrally of the body, said annular groove being of greater width relatively than the longitudinal and spiral grooves to accommodate more than a single winding of the fishing line therearound.

1,193,913. TAPPET FOR VALVE MECHANISMS OF EXPLOSIVE-ENGINES. RODNEY W. MANNING, Riverside, R. I. Filed Mar. 15, 1916. Serial No. 84,330. (Cl. 74—17.)

1. In a tappet, a casing having a hardened closed end and an opened end formed with a circular series of teeth, a spring within the casing having one end anchored thereto, a follower fixed to the opposite end of the spring and formed with a groove, a rod threaded in the casing and having a flange entered in the groove of the follower, said rod projecting from the casing and being provided with a longitudinal groove, and a disk having teeth arranged reversely to the teeth of the casing for interlocking therewith, said disk being provided with a feather to engage in the groove of the rod.

2. In a tappet, a casing having a hardened closed end and an opened end formed with a circular series of teeth, a spring within the casing having one end anchored thereto, a follower fixed to the opposite end of the spring and formed with a groove, a rod threaded in the casing and having a flange entered in the groove of the follower, said rod projecting from the casing and being provided with a longitudinal groove, a disk having teeth arranged reversely to the teeth of the casing for interlocking therewith, said disk being provided with a feather to engage in the groove of the rod, and means to hold normally the teeth of the disk interlocked with those of the casing.



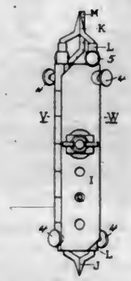
3. In a tappet, a casing, a rod threaded therein and projecting therefrom, a spring tending to unscrew the rod to extend the latter from the casing, and means slidable on the rod for being in constant interlocking relation with the casing to hold the rod from turning reversely to the action of the spring.

4. In a tappet, a casing, a rod having adjustable connection with the casing to be rigidly connected thereto against longitudinal stress, means within the casing to extend automatically the rod from the latter as wear occurs, and ratchet means for preventing reverse movement of the rod.

5. In a tappet, a casing, a rod threaded therein, a spring tending to unscrew the rod to extend the same from the casing, and means carried by the rod and constantly interlocking with the casing for preventing a reverse rotation of the rod.

[Claims 6 to 10 not printed in the Gazette.]

1,193,914. PROPORTIONAL COMPASSES FOR PERSPECTIVE DRAWING. JOHANNES HUBERT ANTON MIALARET, Maastricht, Netherlands. Filed May 16, 1914. Serial No. 839,063. (Cl. 33—150.)



1. Proportional compasses for perspective drawing comprising, in combination, two body pieces, a screw and nut for pivotally connecting said body pieces together, two pairs of legs one of each pair being slidably contained in each body piece, and means for locking the individual legs after they have been adjusted, independently of each other.

2. Proportional compasses for perspective drawing comprising, in combination, two body pieces, a screw and nut for pivotally connecting said body pieces together, each of said body pieces having a plurality of holes adapted

to receive the pivot of the compasses, two pairs of legs one of each pair being slidably contained in each body piece, and means for locking the individual legs after they have been adjusted, independently of each other.

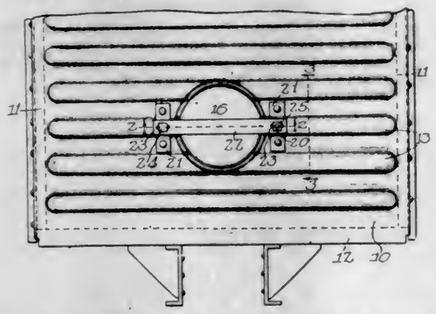
3. Proportional compasses for perspective drawing comprising, in combination, two body pieces, a screw and nut for pivotally connecting said body pieces together, two pairs of legs one of each pair being slidably contained in each body piece, a distance indicator slidable in one body piece for indicating the distance from the pivot of the compasses on the leg contained in that body piece and means for locking the individual legs after they have been adjusted, independently of each other.

4. Proportional compasses for perspective drawing comprising, in combination, two body pieces, a screw and nut for pivotally connecting said body pieces together, two pairs of legs one of each pair being slidably contained in each body piece, a distance indicator slidable in one body piece having a center hole on its outer extremity for setting off therefrom a given dimension (the distance from the point to be projected to the picture plane) on the leg contained in that body piece and means for locking the individual legs after they have been adjusted, independently of each other.

5. Proportional compasses for perspective drawing comprising in combination two body pieces one of which is provided with a groove and a slot on the inside in connection with the groove, a screw and nut for pivotally connecting the said body pieces together, two pairs of legs one of each pair being slidably contained in each body piece, a distance indicator slidable in the groove, and having a center hole on the outer extremity also having a plurality of center holes visible through the slot and which are adapted to be employed instead of the center hole on the outer extremity of the distance indicator for setting off a given dimension (the distance from the point to be projected to the picture plane) on one of the legs, and means for locking the individual legs after they have been adjusted, independently of each other.

[Claim 6 not printed in the Gazette.]

1,193,915. DOOR STRUCTURE FOR SHEET-METAL CAR ENDS AND THE LIKE. WALTER P. MURPHY, Chicago, Ill. Filed Mar. 5, 1912. Serial No. 681,785 (Cl. 220—124.)



1. The combination with a sheet metal wall structure formed with corrugations, with a circular door opening intercepting one or more of said corrugations and with a circular depression around said opening providing an outstanding flange, of a door formed with an inturned rim which overlaps said flange and provided with a relatively compressible lining, which bears against said flange, a strap adapted to extend diametrically across said door, and means for securing the ends of said strap to an intercepted corrugation on opposite sides of said opening so as to press the door against said flange.

2. The combination with a sheet metal wall structure formed with corrugations and with a door opening intercepting one or more of said corrugations, of an outwardly extending continuous flange on said structure surrounding the opening therein arranged to transmit stresses around the opening, a door which bears against said flange and closes the opening, a strap extending across the door, and means for securing the ends of the strap to said sheet metal wall structure.

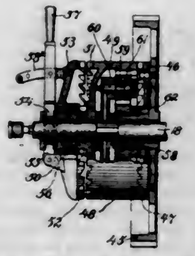
3. The combination with a sheet metal wall structure formed with corrugations and with a door opening intercepting one or more of said corrugations, of a continuous flange on said structure surrounding the opening therein and arranged to transmit stresses around said opening, a door which bears against said end structure closing the opening therein, a strap extending across the door parallel with said corrugations, and means for securing the ends of the strap to an intercepted corrugation on opposite sides of said opening so as to press said door against said wall structure.

4. The combination with a sheet metal wall structure formed with corrugations and with a circular door opening intercepting one or more of said corrugations, and provided with an outwardly extending, circumferential flange around said opening, of a door provided with an inturned rim which overlaps said flange, a strap extending across the door, and means for securing the ends of said strap to said sheet metal wall structure so as to cause said door to be pressed against said flange.

5. The combination of a corrugated sheet of metal having an opening formed therein intercepting corrugations thereof, a continuous flange struck up in said sheet about said opening, a door having a continuous flange fitting closely about said opening flange, and means for removably securing said door over the opening.

[Claims 6 and 7 not printed in the Gazette.]

1,193,916. TRANSMISSION MECHANISM. ALMON E. NORRIS, Cambridge, Mass. Filed Feb. 19, 1907. Serial No. 358,171. (Cl. 74—34.)



1. A transmission mechanism comprising a driving member carrying a gear, a driven member, having a shaft mounted to turn within said driving member, a rotatable member carrying a gear, means for holding said rotatable member fixed or for clutching the same to said driving member and a planet gear journaled on said driven member and meshing with the first and second mentioned gears.

2. A transmission mechanism comprising a shaft, a driving member rotatably mounted thereon, a driven member secured to said shaft, intermediate planetary gearing between said driving and driven members, and means for locking said driving member to said planetary gearing or for causing said driving member to drive said driven member through said intermediate planetary gearing.

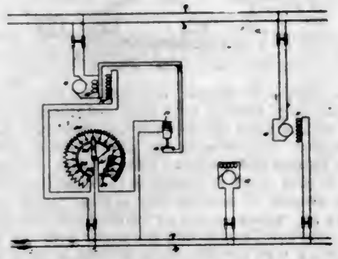
3. In a transmission mechanism, the combination with planetary gearing including a driving member carrying an externally toothed gear, an axially fixed driven member, and a planet gear carried by said driven member, of a non-rotatable member, a sliding member mounted for sliding movement to lock said driving member, said planet gear, and said sliding member together to rotate as a unit, or to cause transmission of driving movement through rotation of said planet gear about its axis upon opposite sliding movement of said sliding member into engagement with said non-rotatable member, and means for moving said sliding member axially independently of said driven member.

4. A transmission apparatus comprising a transmission shaft, a driving member loosely mounted on said shaft, a driven member fixedly secured to said shaft, an intermediate planet gear between the driving and the driven member, a sliding toothed locking member adapted to be moved into engagement with said driving member and having a gear simultaneously meshing with said planet gear, thereby locking said driving and said driven members together, means for withdrawing said sliding member from engageent with said driving member to permit the transmission of driving movement through said planet gear, and means for holding said sliding member against rotation.

5. A transmission apparatus comprising an axially immovable driven member carrying a planet gear, a driving member carrying an externally toothed gear, an axially movable rotatable member carrying an internally toothed gear, and means for axially moving and locking said rotatable member to said driving member or for disengaging the same from said driving member and holding it fixed against rotation.

[Claims 6 to 13 not printed in the Gazette.]

1,193,917. MOTOR-CONTROL SYSTEM. HENRY V. NYE, West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Oct. 4, 1911. Serial No. 652,815. (Cl. 172—239.)



1. In combination, a motor, a generator having series and separately excited field windings and adapted to supply said motor with current, and means for varying the resistance of the circuit of said separately excited field and for cutting the entire series winding into or out of circuit during the period of variation of the resistance of said separately excited field circuit.

2. In combination, a motor, a generator having a plurality of field windings and adapted to supply said motor with current, a resistance in circuit with one of said windings, and means for varying said resistance and cutting the entire length of another of said windings into or out of the generator circuit during the period of variation of said resistance.

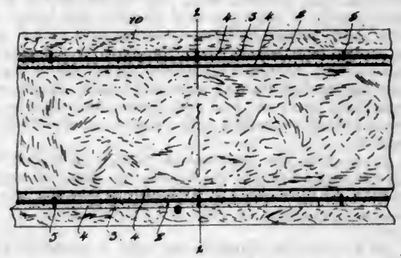
3. In combination, a motor, a generator having a plurality of windings and adapted to supply said motor with current, a resistance in circuit with one of said windings and a switch in circuit with another of said windings, and means for varying said resistance and for controlling the operation of said switch to cut the entire length of said other winding into or out of the generator circuit between the limits of variation of said resistance.

4. In combination, a motor, a generator having a plurality of field windings and adapted to supply current to said motor, a resistance in circuit with one of said field windings, and an automatically operated switch in circuit with another of said field windings, and means for varying said resistance and for operating said switch to cut said other field winding into or out of the generator circuit.

5. In combination, a motor, a generator having a separately excited field winding and a series field winding said generator being adapted to supply said motor with current, a resistance in circuit with said separately excited field, and means for varying said resistance and cutting the entire series field winding into or out of the generator circuit while said generator is operating with portions of said resistance in circuit.

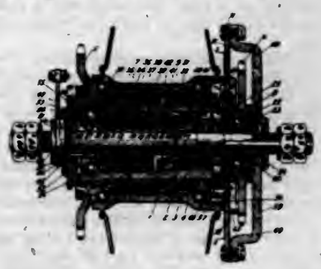
[Claims 6 to 19 not printed in the Gazette.]

1,193,918. ROADWAY FOR VEHICLES. RICHARD H. OBARR, Harper, Tex. Filed Oct. 18, 1913, Serial No. 796,012. Renewed Apr. 20, 1916. Serial No. 92,588. (Cl. 104—178.)



A vehicle track including a plastic rail having a longitudinal groove formed therein, the mentioned groove in cross section conforming approximately to the configuration of a vehicle tire, the extensions formed by and at each side of said groove being provided with rounded bearing surfaces, each of the said extensions terminating upon the same horizontal plane, the respective lateral faces of the rail being formed at an angle to the vertical and diverging toward the rail base, the said rail being provided with a drain opening leading outwardly from the groove for the purpose specified, and a plastic rail chair having a longitudinal dove-tailed groove formed therein within which the rail is seated, the engagement of the chair with the rail providing for the retention of the latter, substantially as described.

1,193,919. PROPELLING AND CONTROLLING MECHANISM. VICTOR W. PAGE, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Nov. 5, 1912. Serial No. 729,572. (Cl. 21—90.)



1. In a device of the character indicated, an ultimate driven element, an intermediate driven member, means for connecting said member with a prime mover to drive the prime mover, means for connecting said element with said prime mover to be driven thereby, and means for driving said member; said member and said element being arranged for independent movement, whereby said prime mover can be driven through said driving means, said member and said first named connecting means without driving said element; substantially as described.

2. In a device of the character indicated, an ultimate driven element, an intermediate controlled member, means

for connecting said member with a prime mover to control the prime mover, means for connecting said element with said prime mover to be driven thereby, a brake for said member, and means for actuating said brake; said member and said element being arranged for independent control, whereby said prime mover can be braked through said actuating means, said brake, said member and said first named connecting means without braking said element; substantially as described.

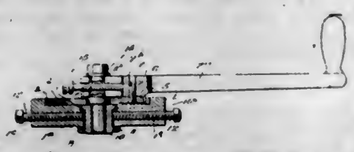
3. In a device of the character indicated, an ultimate driven element, an intermediate driven and controlled member, means for connecting said member with a prime mover to drive and control the prime mover, means for connecting said element with said prime mover to be driven thereby, a brake for said member, and means for driving said member and for actuating said brake; said member and said element being arranged for independent movement and control, whereby said prime mover can be driven and braked through said last named means, said member, said brake and said first named connecting means without driving or braking said element; substantially as described.

4. In a cycle, the combination with a spoke-carrying wheel-hub and an engine for driving the same, of mechanism received within said hub whereby said engine can be driven independently of said hub; substantially as described.

5. In a cycle, the combination with a spoke-carrying wheel-hub and an engine for driving the same, of mechanism received within said hub whereby said engine can be braked independently of said hub; substantially as described.

[Claims 6 to 30 not printed in the Gazette.]

1,193,920. METHOD OF AND MEANS FOR SHAPING AND TENSIONING PISTON-RINGS. HERBERT G. PECK, Franklin township, Somerset county, N. J. Filed Sept. 27, 1915. Serial No. 52,824. (Cl. 29—148.)



1. The method of imparting varying degrees of stiffness to rings consisting in passing a roller along and in contact with the surface of a ring, and imparting a greater degree of pressure to the ring at one point than on opposite sides thereof.

2. The method of imparting varying degrees of stiffness to rings consisting in applying gradually increasing rolling pressure to the ring for a suitable distance and applying suitable decreasing pressure to the ring for a farther distance along the same.

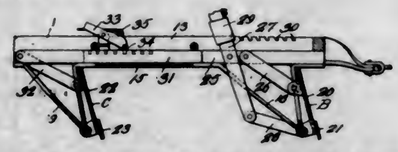
3. A machine of the class described comprising a member having an abutment for a ring, a roller opposed to said abutment, and means to rotate said roller and said abutment relatively one to another along an interposed ring, and means whereby the distance between the roller and the abutment is gradually varied during the rolling operation thus producing varying pressure against the ring.

4. A machine of the class described comprising a member having an annular abutment, a roller adapted to oppose said abutment providing a space therebetween to receive a ring, and means to rotatively and eccentrically support said roller to engage said ring to cause said roller to bear upon said ring with varying degrees of pressure.

5. A machine of the class described comprising a member having an annular abutment, a roller adapted to oppose said abutment providing a space therebetween to receive a ring, a movable support for said roller, a spindle for said support, and means to eccentrically support said spindle with respect to said abutment.

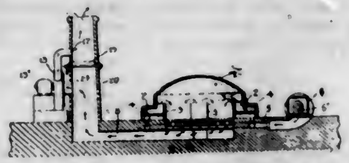
[Claims 6 to 11 not printed in the Gazette.]

1,193,921. ROAD-DRAG. GEORGE A. POLLARD, Sturgeon, Mo. Filed May 19, 1916. Serial No. 98,633. (Cl. 37—5.)



A road drag comprising a frame, a pair of cutters hingedly mounted on the frame, spaced bars slidable on the frame, a lever pivotally supported by the frame and secured to said bars, a link connecting said bars with one of the cutters, a third bar slidable between the spaced bars, means for detachably locking the third bar to the spaced bars in different adjustments, and a link connecting the third bar with the other cutter.

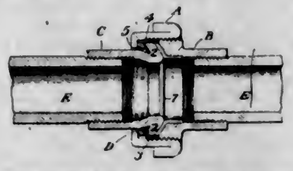
1,193,922. MANUFACTURE OF CLAY ARTICLES. JOHN C. QUINN, New York, N. Y., assignor to The Acme Furnace Equipment Company, New York, N. Y., a Corporation of New York. Filed June 15, 1911. Serial No. 633,451. (Cl. 25—157.)



1. The process of burning clay articles which consists in stacking such articles in a kiln, establishing a bed of burning fuel, forcing air through such bed into the kiln and artificially withdrawing the air and gases from the kiln, the forcing and inducing efforts being controlled in relation to each other according to the conditions desired.

2. The process of burning clay articles which consists in forcing air through a bed of burning fuel and simultaneously artificially exhausting the gases from the kiln so as to create a high velocity draft through a stack of such articles in the kiln, and conjointly controlling the forcing and exhausting means.

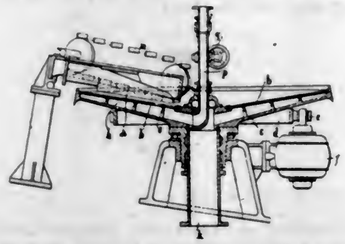
1,193,923. PIPE-COUPLING. CHARLES J. RATHKE, Chicago, Ill., assignor to Cyrus Mark, Anson Mark, and Clayton Mark, Copartners doing business as Mark Manufacturing Company, Chicago, Ill. Filed Sept. 9, 1914. Serial No. 860,838. (Cl. 137—28.)



1. In a pipe coupling, a head piece, a tail piece having an outwardly-extending flange, a coupling nut having an inwardly extending lip and a compensating member bearing on said flange and said lip, the compensating member having a convex face co-acting with a correspondingly shaped face on the under side of said flange, and being adapted to provide a firm bearing between the tail piece and the coupling nut when these parts are brought together out of alinement.

2. In a pipe coupling, a head piece, a coupling nut, and a tail piece having a flange extending outwardly at an angle to the tail piece, and forming between the flange and body portion an annular recess, a compensating member having a bearing on the coupling nut on one side and a bearing upon said tail piece within said recess on the other, said compensating member being adapted to provide a bearing between the several parts when the coupling nut and the tail piece are drawn up out of alinement with each other.

1,193,924. TREATMENT OF WET CARBONIZED PEAT OR THE LIKE. THOMAS RIGBY, Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Filed July 11, 1914. Serial No. 850,483. (Cl. 44—3.)



1. A process for dewatering peat consisting in subjecting a wet pulp of the peat to digestion under pressure sufficient to prevent ebullition until its water is rendered freely expressible, spreading the treated pulp in a thin layer, dewatering such layer by suction applied thereto until it has acquired by virtue of loss of water sufficient solidity for handling as a solid, and thereafter subjecting it to a further dewatering process.

2. A process for dewatering peat consisting in digesting a wet pulp of it by heat without evaporation until its water has been unbound, continuously converting the treated mass into a thin layer in contact with a filtering surface, subjecting the continuously formed layer to pressure created by a vacuum, maintaining such pressure until the material has acquired enough solidity for handling as a solid, and thereafter subjecting the solid to a further drying operation.

3. A process for dewatering peat consisting in converting it into a wet pulp, digesting the wet pulp at an elevated temperature and under pressure sufficient to prevent ebullition until its water binding properties are destroyed, removing water from a continuously formed thin layer of the material by suction until the material has acquired solidity, and thereafter dewatering the material further as a solid.

4. A process of dewatering wetcarbonized peat pulp, consisting in automatically and continuously distributing the treated pulp as a thin layer upon a filtering surface, dewatering said pulp by pressure produced by a vacuum under said surface until the material contains some 75% to 80% of water, likewise automatically and continuously removing said pulp from said surface and thereafter dewatering it by high pressure applied thereto while in a suitably spread-out condition; as set forth.

1,193,925. PRIMING-CUP. EARL W. ROBERTS, Detroit, Mich., assignor to The Roberts Brass Mfg. Co., Detroit, Mich., a Corporation of Michigan. Filed June 7, 1915. Serial No. 32,534. (Cl. 137—7.)

1. In a priming cup, the combination of a casing having a passage therein, a cup on the casing communicating with the passage, a valve in the casing controlling the passage, a closure for the cup, and a rigid connection between the closure and the valve for effecting the opening and closing of the closure upon the opening and closing of the valve respectively.

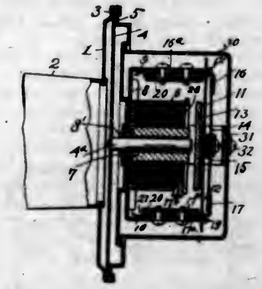
2. In a priming cup, the combination of a casing having a passage therein, a cup on the casing communicating with the passage, a valve in the casing controlling the passage, a closure for the cup, and a connection between the closure and the valve for simultaneously displacing the same from their closed to their open position and vice versa.



3. In a priming cup, the combination with a casing having a passage therein, of a cup upon the casing having the outer edge thereof in a plane slanting to the longitudinal axis of the casing, a valve within the casing controlling said passage, a handle for said valve, having rigid connection therewith, and a disk closure for said cup carried by said handle.

4. In a priming cup, the combination with a casing, having a passage therein, a cup on the casing communicating with said passage, a valve in the casing controlling the passage, a closure for the cup, and a connection between the closure and valve for displacing the same about a common axis from their closed to their open positions and vice versa.

1,193,926. ELECTRIC SIGNALING DEVICE. RALPH R. ROOT, Cleveland, Ohio. Filed Oct. 23, 1915. Serial No. 57,388. (Cl. 177—7.)



1. In an electric signaling device comprising an electric magnet, a support therefor, a pair of oppositely disposed resilient arms, a transverse flexible member engaging and holding the said resilient arms, an armature carried by the said transverse member, a conducting member extending transversely of the armature, contact members located adjacent each end of the conducting members with which the ends of the conducting members may contact, a diaphragm, and means whereby movement of the armature may be transmitted to the diaphragm.

2. In an electric signaling device comprising an electric magnet, a support therefor, a pair of oppositely disposed resilient arms, a transverse flexible member engaging and holding the said resilient arms against their outward tension, an armature carried by said transverse member, a conducting member extending transversely of the armature, adjustable contact members located adjacent each end of the conducting member with which the ends of the conducting member may contact, a diaphragm, and means whereby movement of the armature may be transmitted to the diaphragm.

3. In an electric signaling device comprising an electric magnet, a support therefor, a pair of oppositely disposed resilient arms, a transverse flexible member engaging and holding the said resilient arms, an armature carried by the said transverse member, a conducting member extending transversely of the armature, contact members adjustably carried by the said resilient arms, the said contact members coöperating with the ends of the conducting member,

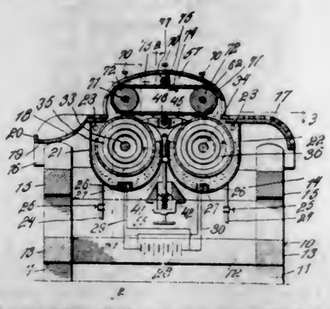
a diaphragm, and means whereby movement of the armature may be transmitted to the diaphragm.

4. In an electric signaling device comprising an electric magnet, a support therefor, a pair of oppositely disposed resilient arms, contact members carried by the said arms, said contact members being insulated from the said arms and adjustable thereon, a transverse flexible member engaging and holding said resilient arms against their outward tension, an armature carried by said transverse member, a conducting member carried by the transverse member, which conducting member is insulated from the transverse member, the conducting member coöperating with the contact members, a diaphragm, and means whereby movement of the armature may be transmitted to the diaphragm.

5. In an electric signaling device comprising an electric magnet, a support therefor, a pair of oppositely disposed resilient arms, a contact member adjustably mounted on each arm, said contact member comprising a head portion and an extension, said extension being provided with slots, means extending through the slots securing the extensions of the contact members upon said arms, said contact members being insulated from the said arms, a transverse flexible member engaging and holding said resilient arms, an armature carried by said transverse member, a resilient conducting member extending transversely of the armature, said conducting member extending beneath the head portions of the contact members, a diaphragm, and means whereby movement of the armature may be transmitted to the diaphragm.

[Claim 6 not printed in the Gazette.]

1,193,927. MACHINE FOR SPONGING LEATHER. CARLETON RUHE, Olean, N. Y. Filed Aug. 10, 1915. Serial No. 44,745. (Cl. 149—15.)



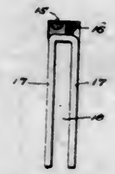
1. In a machine of the character described, a supporting structure, a plurality of liquid holding receptacles mounted upon the supporting structure, substantially horizontal rotatable brushes operating within the liquid holding receptacles to receive a liquid therefrom in a continuous manner, and a substantially horizontal endless conveyer arranged near and above the rotatable brushes to contact with the stock traveling thereon, and completely spanning the space between the brushes and overlapping them for a substantial distance.

2. In a machine of the character described, a supporting structure, a plurality of rotatable brushes connected therewith and adapted to have the stock or leather travel above and contact therewith, means for holding a liquid or liquids in contact with the brushes, and an endless conveyer arranged above the brushes and having prongs to engage the upper side of the stock or leather.

3. In a machine of the character described, a supporting structure, a plurality of rotatable brushes connected therewith, a corresponding number of receptacles adapted to hold liquids and to receive the brushes, means to heat the receptacles, and a guide element arranged above the brushes to hold the stock or leather in proper contact with the brushes.

4. In a machine of the character described, a supporting structure, liquid holding receptacles mounted thereon, a pair of substantially horizontal brushes rotatably mounted within the receptacles, means to drive the brushes, a pair of upper rolls disposed above and near the brushes, vertically movable spring pressed bearings for the upper rolls to move them downwardly, an endless conveyer surrounding the upper rolls, and means to drive the upper rolls.

1,193,928. METHOD OF FORGING BRAKE-FULCRUMS. FREDERICK J. SCHROEDER, Cleveland, Ohio, assignor, by mesne assignments, to The Damascus Brake Beam Company, Cleveland, Ohio, a Corporation of Ohio, (Incorporated Feb. 25, 1916.) Filed June 8, 1915. Serial No. 32,946. (Cl. 29—164.)



1. The method of forging brake fulcrums consisting in impressing a pair of grooves in positions on a bar which leave a central head between the grooves; second, in forging out to the desired thinness the metal of the bar which extends from the grooves outward toward the ends and which lies on the same side of the bar as the central head; also making a truss-member seat in said central head and in turning back the two reduced shanks until they lie beneath the head.

2. The method of forging brake fulcrums consisting in impressing a pair of grooves on a bar, in positions which leave a central head on one side of the bar between said grooves; then forging out to the desired thinness the metal on the same side of the bar as the head and extending from the grooves endwise of the bar, and thereby forming reduced shanks in the plane of the lower side of the head; making a truss-member seat diagonally of the bar, in said central head, and turning back the two reduced shanks until they lie axially beneath the ends of the truss-member seat in the head.

3. The method of forging brake fulcrums consisting in impressing a pair of angular grooves on one face of the bar in positions which leave between the grooves, a parallel sided head having two of its corners in approximate alinement with the longitudinal axis of the bar and the other two corners transversely thereto, reducing the metal on the same side of the bar with the head, from the grooves toward the ends, making a tension member seat, between two sides of the head and diagonally of the bar, and finally in turning back the two shanks in the direction away from the reduced side until they lie beneath said first named corners of the head with a space between them, and with the head bridging said space.

1,193,929. THIRD-POINT SUSPENSION-CLIP. FREDERICK J. SCHROEDER, Cleveland, Ohio, assignor, by mesne assignments, to The Damascus Brake Beam Company, Cleveland, Ohio, a Corporation of Ohio, (Incorporated Feb. 25, 1916.) Filed Nov. 15, 1915. Serial No. 61,659. (Cl. 188—70.)

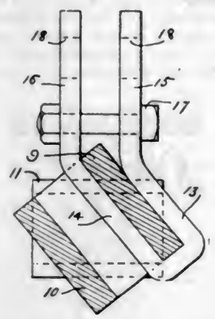
1. A third point suspension clip for brake beams having a gripping portion and a suspension portion, the gripping portion being constructed to embrace a part of the brake beam, and means on the suspension portion and exteriorly to the brake beam for tightening said gripping portion around the brake beam, said suspension portion being provided with eyelets for attaching the hanger to a suspension rod.

2. A third point suspension clip for brake beams, comprising a double bent band having a gripping portion and a suspension portion, the gripping portion being constructed to embrace a part of the brake beam, and means on the suspension portion for tightening said gripping portion around the brake beam, said suspension portion being provided with eyelets for attaching the hanger to a suspension rod.

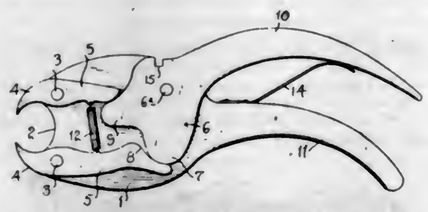
3. A third point suspension clip for brake beams, comprising a double bent band, the free ends of the band forming a suspension portion and the connected part thereof forming a gripping portion embracing the brake beam, and means on the suspension portion for tightening said gripping portion around the brake beam.

4. A third point suspension clip for brake beams, comprising a double bent band, the free ends of the band forming a suspension portion and the connected part thereof forming a gripping portion embracing the brake beam, and means on the suspension portion for tightening said gripping portion around the brake beam, said gripping portion being offset relatively to said suspension portion an amount equal to the angularity of the brake beam against the perpendicular when the beam is in operating position.

5. A third point suspension clip for brake beams, comprising a double bent band, the free ends of the band forming a suspension portion and the connected part thereof forming a gripping portion embracing the brake beam, and means on the suspension portion for tightening said gripping portion around the brake beam, said gripping portion being offset relatively to said suspension portion, in order to bring the center of gravity of the brake beam into the central vertical plane between the two ends of the suspension portion, when the beam is in operating position.

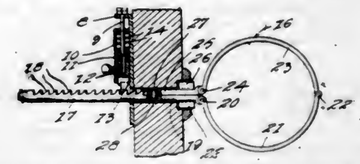


1,193,930. STAPLE-PULLER. THEODOR SCHULZ, Olivet, S. D. Filed Apr. 22, 1916. Serial No. 92,979. (Cl. 81—43.)



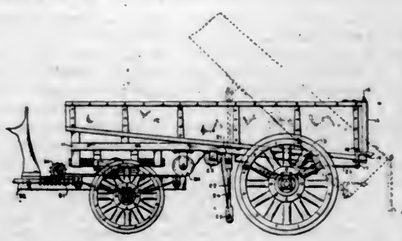
A staple puller comprising a plate, coacting jaws pivotally supported by the plate and extending beyond an end thereof, said jaws being curved one toward the other, the end of the plate intermediate of the jaws being recessed, inwardly disposed extensions carried by the jaws, one of said extensions being of a greater length than the extension of the second jaw, a cam member pivotally supported by the plate at a point rearwardly of the jaw provided with the short extension, said cam being provided with a substantially transversely disposed extension and coacting with the outer end portion of the longer extension, the outer contacting edge portion of said extension being of cam formation, and a substantially longitudinally disposed extension coacting with the inner edge of the short extension, a rectractile member interposed between and connected to the extensions of the jaws for maintaining said extensions in contact with the cam, a stationary handle carried by the plate, a handle carried by the cam and coacting with the first named handle and a spring interposed between the handles for normally maintaining the same in spaced relation.

1,193,931. MILK-BOTTLE-LOCKING DEVICE. JOHN G. R. SCHUMANN, Elizabeth, N. J. Filed Nov. 20, 1915. Serial No. 62,578. (Cl. 232—41.)



The combination with a door having an opening near its bottom, a ratchet plate secured on the inside of the door, said ratchet plate being formed with an opening alining with the opening in the door, a front plate on the outside of the door having a central opening therein alining with the opening in the door, the front plate also having a transverse slot extending therethrough and communicating with the opening, and a ratchet on the ratchet plate, of a stem arranged to extend through the openings, the teeth on the stem arranged to be engaged by the ratchet, a semi-cylindrical extension on the forward end of the stem, a semi-circular neck engaging member pivoted to the forward end of the semi-cylindrical extension, a coöperating semi-circular neck engaging member pivoted to the forward end of the first mentioned neck engaging member, a semi-cylindrical member pivoted to the free end of the last mentioned semi-circular member, the semi-cylindrical member being of a size equal to the semi-cylindrical extension, and lugs on the extension of the semi-cylindrical member engaging in the slot in the front plate to lock the whole against turning.

1,193,932. TRUCK. WILLIAM OSCAR SHADBOLT, New York, N. Y. Filed Mar. 8, 1916. Serial No. 82,872. (Cl. 21—20.)



1. In a truck, the combination with running gear, a frame, and a body pivotally secured to said frame; of means adapted to tilt said body comprising a pulley on said frame, a pair of horizontal pulleys on the front running gear, a chain operatively connected with said body and adapted to pass around said first named pulley and between said second named pulleys, and means adapted to pull said chain.

2. In a truck, the combination with running gear a frame, and a body pivotally secured to said frame; of means adapted to tilt said body comprising a pulley on said frame, a second pulley on said frame, a pair of horizontal pulleys on the front running gear, a chain operatively connected with said body and adapted to pass

around said first named pulley, around said second named pulley, and between said third named pulleys; and means adapted to pull said chain.

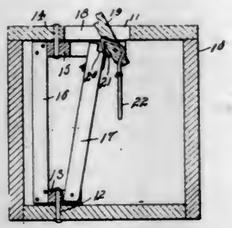
3. In a truck, the combination with running gear, a frame, and a body pivotally secured to said frame; of means adapted to tilt said body comprising a pulley on said frame, a pair of horizontal pulleys on the front running gear in a plane tangent to said first named pulley, a chain operatively connected with said body and adapted to pass around said first named pulley and between said second named pulleys, and means adapted to pull said chain.

4. In a truck, the combination with running gear, a frame, and a body pivotally secured to said frame; of means adapted to tilt said body comprising a pulley on said frame, a second pulley on said frame, a pair of horizontal pulleys on the front running gear in a plane tangent to said second named pulley, a chain operatively connected with said body and adapted to pass around said first named pulley, around said second named pulley, and between said third named pulleys; and means adapted to pull said chain.

5. In a truck, the combination with running gear, a frame, and a body pivotally secured to said frame; of means adapted to tilt said body comprising a pulley on said frame, a pair of horizontal pulleys on the front running gear forward of the point at which said running gear is pivoted to the frame of said truck, a chain operatively connected with said body and adapted to pass around said first named pulley and between said second named pulleys, and means adapted to pull said chain.

[Claims 6 to 8 not printed in the Gazette.]

1,193,933. CATTLE-STANCHION. GARRETT S. SHEPARD, Linesville, Pa. Filed Aug. 21, 1914. Serial No. 857,873. (Cl. 119—150.)

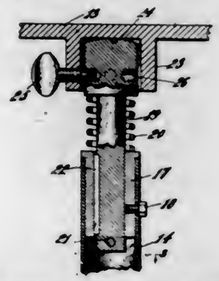


A cattle stanchion including upper and lower members, a relatively stationary bar connecting the members, the upper of the members being provided with an open-ended slot, a movable stanchion bar pivotally mounted in the lower member, and having its upper end movable in the slot, a pivoted latch mounted in the slot and arranged for engagement with the upper end of the movable bar, said latch being formed with openings therethrough, a flexible element extending through the openings of the latch and connected to the movable stanchion bar whereby when the flexible element is pulled the latch will be positively raised out of engagement with the movable bar and the said bar subsequently and positively moved in a direction away from the stationary bar.

1,193,934. YIELDING PLATEN CONNECTION. FROST V. SIMPSON, Milwaukee, Wis., assignor to Kieckhefer Box Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 7, 1914. Serial No. 875,746. (Cl. 93—2.)

1. In a box forming press, a platen having a socket on the bottom thereof, and a platen supporting member loosely fitting in the socket and having a spherically rounded bearing surface at its end engaging the bottom of the platen to permit the platen to rock in any direction, said socket having a substantially flat bearing surface for engaging the rounded extremity of said member.

2. In a box forming press, a platen having a socket on the bottom thereof, a platen supporting member loosely fitting in the socket and having a spherical rounded bearing surface at its end engaging the bottom of the platen to permit the platen to rock in any direction, said socket having a substantially flat bearing surface for engaging the rounded extremity of said member, and a set screw threaded in the socket and engaging an opening in the side of the platen supporting member.



3. A platen connection for box forming presses, comprising a slidably mounted spring pressed pin having a rounded bearing surface for tiltably supporting the platen and a slidable support for said pin adapted through the agency of said spring to take the thrust from said platen.

4. In a box press or the like, a platen having a socket formed on the bottom thereof, a platen supporting stem, a spring pressed pin tiltably mounted in the platen supporting stem and having a head fitting in the socket of the platen with a rounded bearing surface between the head of the pin and the bottom of the platen to permit the platen to rock and a slidable support for said pin adapted through the agency of said spring to take the thrust from said platen.

5. In a press for forming paper boxes and the like, a platen having a socket formed on the bottom thereof, a platen supporting stem having a threaded connection for longitudinal adjustments, a shouldered bushing fitting in the platen supporting stem, means for preventing the bushing from turning within the platen supporting stem, a headed pin slidably mounted in the bushing, a key for preventing the turning of the pin in the bushing, a coil spring surrounding the pin and engaging the head of the pin and the bushing respectively, the head of the pin fitting within the socket of the platen and having a spherically rounded bearing surface to permit the platen to rock in any direction, and a set screw threaded in the socket and loosely engaging an opening in the head of the pin to prevent the platen turning on the pin.

[Claim 6 not printed in the Gazette.]

1,193,935. MACHINE FOR TRIMMING STRING-BEANS, &c. WILLIAM H. SMITH and CHARLES C. BROWN, Le Roy, N. Y., assignors, by mesne assignments, to The Phinney Engineering Company, Chillicothe, Ohio, a Corporation of Ohio. Filed June 18, 1908. Serial No. 439,166. (Cl. 146—11.)



1. A machine for trimming the ends of articles comprising a plurality of movable pockets which are arranged in a row lengthwise of the line of movement thereof and which receive and support said articles in a position transversely to the line of movement of the pockets, a rotatable brush having its bristles arranged spirally and adapted to engage successively with the articles in the pockets for moving the same therein transversely to the line of movement of the pockets, and a cutter past which the articles are moved by said pockets for trimming off the ends of the articles.

2. A machine for trimming the ends of articles comprising a plurality of movable pockets which are arranged in a row lengthwise of the line of movement thereof and which receive and support said articles in a position transversely to the line of movement of the pockets, a rotatable brush having its bristles arranged spirally and adapted to engage successively with the articles in the pockets for moving the same therein transversely to the line of movement of the pockets so that said articles project beyond the end of said pockets, a gage for limiting the transverse movement of the articles in the pockets, and a cutter past which the articles are moved by said pockets for trimming off the ends of the articles.

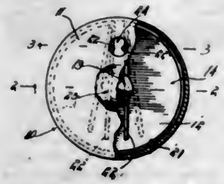
3. A machine for trimming the ends of articles comprising a plurality of movable pockets which are arranged in a row lengthwise of the line of movement thereof and which receive and support said articles in a position transversely to the line of movement of the pockets, a rotatable brush having its bristles arranged spirally and adapted to engage successively with the articles in the pockets for moving the same therein transversely to the line of movement of the pockets so that said articles project beyond the end of said pockets, a gage for limiting the transverse movement of the articles in the pockets, a retaining plate arranged above the gage in line with said brush and projecting inwardly toward said pockets, and a cutter past which the articles are moved by said pockets for trimming off the ends of the articles.

4. A machine for trimming the ends of articles comprising a plurality of movable pockets which are arranged in a row lengthwise of the line of movement thereof and which receive and support said articles in a position transversely to the line of movement of the pockets, a rotatable brush having its bristles arranged spirally and adapted to engage successively with the articles in the pockets for moving the same therein transversely to the line of movement of the pockets, means for driving said brush comprising a longitudinal shaft to which the brush is secured and a transverse shaft connected by gearing with the brush shaft, and a cutter past which the articles are moved by said pockets for trimming off the ends of the articles.

5. A machine for trimming the ends of articles comprising a plurality of movable pockets which are arranged in a row lengthwise of the line of movement thereof and which are adapted to receive and support said articles in a position transversely to the line of movement of the pockets, means for shifting the articles in said pockets in a direction transversely to the line of movement of the pockets, a cutter past which said articles are moved by said pockets for trimming off the ends thereof, and means for holding the articles in said pockets while in the trimming position comprising a rotatable support and an annular series of rollers or bars mounted on said support and adapted to successively enter said pockets and engage with the articles therein.

[Claims 6 to 14 not printed in the Gazette.]

1,193,936. DETACHABLE BUTTON. WILLIAM J. SMITH, Waterbury, Conn. Filed Feb. 28, 1916. Serial No. 81,015. (Cl. 24—208.)



A separable fastener including head and back members said head comprising a shell provided with a central opening, and said back including a shank insertible through said opening, and spring fingers arranged in said head and yieldably spaced apart to normally intersect the opening and detachably engage the shank, said head having therein an aperture opening at right angles to said fingers for the insertion of means transversely between the latter to spread and disengage the same from the shank.

1,193,937. RAIL-JOINT. LESLIE M. SNODGRASS, Bloomington, Ill., assignor of one-half to Henry Neuerburg, Bloomington, Ill. Filed June 16, 1914. Serial No. 845,477. (Cl. 239—8.)



In a rail joint, the adjoining rails, extensions formed on the respective rail terminals, a shoulder formed at an angle to the vertical and at the inner end of each extension, a shoulder formed at an angle to the vertical and upon each extension intermediate its ends, a shoulder formed at an angle to the vertical and at the outer end of each extension, the inner shoulder and the intermediate shoulder of each extension extending at an angle to each other, a biting edge laterally engaging a longitudinally extending projection formed upon the inner face of each of the said extensions between the outer shoulder and the intermediate shoulder to engage in a complemental recess therefor formed in the other of the said extensions between the intermediate shoulder and the inner shoulder, the under face of each projection extending at an acute angle to a horizontal plane, and a means transversely penetrating the complemental extensions to maintain the rail ends joined.

1,193,938. NON-SLIPPING PAVING COMPOSITION. PATRICK F. SOLAN and HERBERT S. BALLIET, New York, N. Y. Filed Mar. 16, 1915. Serial No. 14,759. (Cl. 106—24.)

1. A new composition of matter composed of granite grit, sand, cement, an abrasive and a liquid well mixed together in substantially the proportions set forth and allowed to set.

2. A new composition of matter composed of granite grit, sand, cement, carborundum, and a liquid, well mixed together in substantially the proportions set forth, and allowed to set.

3. A new composition of matter composed of granite grit, sand, cement, an abrasive, and a liquid, together with a coloring matter, well mixed together in substantially the proportions set forth, and allowed to set.

4. A new composition of matter composed of granite grit, sand, cement, an abrasive, in about the proportions of four hundred pounds of grit to 100 to 250 pounds of sand, 300 to 600 pounds of cement and about 40 pounds of carborundum, together with liquid to make a plastic mass, well mixed together and allowed to set.

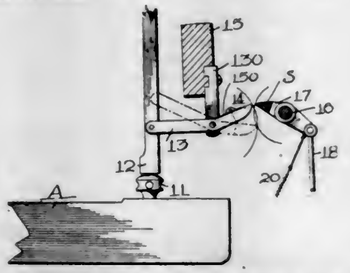
5. A new composition of matter composed of granite grit, sand, cement, an abrasive and ferric oxid, in about the proportions set forth, together with liquid to make a plastic mass, well mixed together and allowed to set.

[Claim 6 not printed in the Gazette.]

1,193,939. ACCENTING DEVICE FOR PIANO-PLAYERS. LOUIS W. SOUTHGATE, Worcester, Mass., assignor to Auto Pneumatic Action Co., New York, N. Y., a Corporation of New York. Filed Dec. 29, 1910. Serial No. 599,906. (Cl. 84—168.)

1. player piano having a series of pneumatic mechanisms arranged to operate the piano action and an independently-operated striker arranged to impart through positively operating devices additional power to particular units of the action so that said particular units will op-

erate more forcibly than when operated only by said pneumatic mechanisms.



2. A player piano having a series of pneumatic mechanisms arranged to operate the piano action, and an independently-operated striker arranged to impart through positively operating devices additional power to particular units of the action started in operation just before the striker starts to operate.

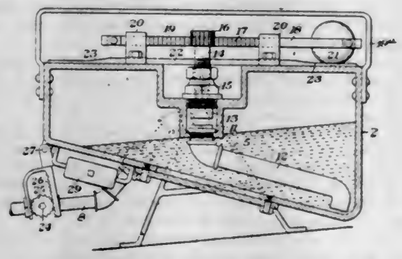
3. A player piano having a series of pneumatics arranged to operate the piano action, and an independently-operated pivoted striker arranged to impart through positively operating devices additional power to particular units of the action started in operation in proper time relation therewith.

4. A player piano having a series of pneumatics arranged to operate the piano action, and an independently-pneumatically-operated striker arranged to impart through positively operating devices additional power to particular units of the action, started in operation in proper time relation therewith.

5. A player piano having a series of pneumatics arranged to operate the piano action, and an independently-operated striker arranged to impart through positively operating devices additional power to the abstracts of the particular units of the action started in operation in proper time relation therewith.

[Claims 6 to 10 not printed in the Gazette]

1,193,940. WATER-TRAP. WERNER I. STAAF, Pittsburgh, Pa., assignor of one-half to Edward B. Tyler, Pittsburgh, Pa. Filed June 2, 1914. Serial No. 842,400. (Cl. 137—101.)



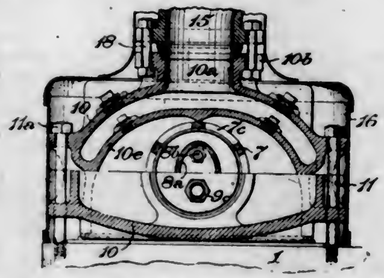
1. A trap comprising a tiltable trap vessel, a ball runway mounted thereon, a discharge valve having a stem provided with a pinion, a longitudinally movable frame carrying rack teeth which engage the pinion, and a ball mounted on said runway and adapted to engage said frame at the limits of the travel of the ball to shift the said frame to thereby actuate the valve stem, substantially as described.

2. A trap comprising a tiltable trap vessel, having an inlet connection for the steam and water to be trapped, an outlet connection for the water, a valve normally closing said outlet, a connection for live steam, another valve which normally closes the live steam connection, toothed gears on the stems of the valves, and racks connected to the vessel and engaging said gears, together with a shiftable weight member mounted on the vessel and arranged to actuate the rack when shifted by the tilting movement of the vessel, substantially as described.

3. In a trap, the combination with a tiltable trap vessel, having a valved connection, of a frame mounted for independent endwise movement on the vessel, a gravity-actuated shiftable member mounted to move in said frame, and actuating connections between said frame and the stem of the valve, substantially as described.

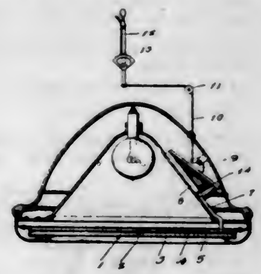
4. In a trap, the combination with a tiltable trap vessel, having a valved connection, of a frame mounted for independent endwise movement on the vessel, a gravity-actuated shiftable member mounted to move in said frame, and actuating connections between said frame and the stem of the valve, together with means for retarding the movement of said member at the beginning of its travel, substantially as described.

1,193,941. STEAM-ENGINE VALVE-CHEST. HAL R. STAFFORD, Plainfield, N. J. Filed Mar. 29, 1916. Serial No. 87,460. (Cl. 136—5.)



The combination, with an engine cylinder having a transversely ported valve face, of a valve chest fitted at its middle portion on said valve face and having the bottom and end walls of its end portions forming a closure exterior thereto, the bottom walls being downwardly curved between vertically extending side walls, and having also an upper steam supply passage; an integral cylindrically bored open ended port casing having three internal bridged ports, each communicating with one of the valve face ports of the cylinder; and bolts disposed laterally on the valve chest and securing said chest to the cylinder.

1,193,942. LAMP-DIMMER. WILLIAM J. STARKWEATHER and FLOYD C. MILLER, Los Angeles, Cal. Filed May 19, 1915. Serial No. 29,069. (Cl. 240—45.)



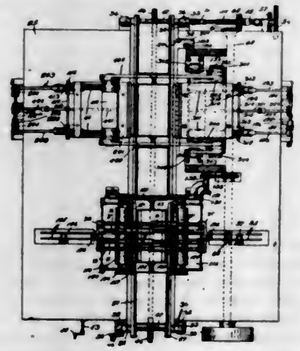
1. In a lamp dimmer the combination with a lamp including a lens formed of two glass plates held one upon the other, one of the plates being recessed upon the upper half of its inner face to form a dimming fluid receiving space between the plates, of a dimming fluid supply carried by the lamp and communicating with the space in the lens, and means to force the fluid into and draw it out of the space, said space being enlarged at one edge thereof, the enlargement adapted to receive air disposed by the dimming fluid when the latter is forced into the space.

2. In a lamp dimmer the combination with a lamp including a casing, a source of light and a lens having a dimming fluid receiving space therein covering only a portion of its area, a pump carried by the lamp, a tube communicating with the pump and fluid receiving space, a dimming fluid mounted in said tube and being normally held by force of gravity out of the space therefor, and means to operate the pump whereby fluid will be forced into the space therefor and bright light will be prevented issuing through the portion of the lens covered by the dimming fluid receiving space.

3. In a lamp dimmer the combination with a lamp, including a casing and a lens mounted in and closing the casing, of a bellows mounted in the casing, said lens having a fluid receiving space therein covering the upper half of its area, a tube connected with the bellows and space, a dimming fluid mounted in the tube adapted to be forced into the space in the lens, means to compress the bellows to force the fluid into the space and means to open the bellows to cause the fluid to be drawn from the space into the tube.

4. In a lamp dimmer the combination with a casing including a lens having a dimming fluid receiving space covering the upper half only thereof, a bellows mounted in said casing and a spring in said bellows to normally hold it open, a tube connected with the space and bellows, a dimming fluid mounted in the tube, a bell crank pivoted in said casing having one end resting upon one side of the bellows, a flexible element connected with said bell crank, and a lever connected with said flexible element.

1,193,943. MACHINE FOR PRODUCING AND ATTACHING LACINGS TO BOXES. DALE G. STEELY, Cambridge, FREDERICK W. BLAKE, Medford, and GUSTAVE A. LORENTZEN, Boston, Mass., assignors to W. F. Schrafft & Sons Corporation, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 4, 1915. Serial No. 43,676. (Cl. 93—57.)



1. In a machine for attaching laces to boxes, the combination of gluing-mechanism and lace-attaching mechanism arranged side by side with a box-receiving space between them, and an intermittently operated feeding-device for feeding the boxes through the machine for cooperative relation with said mechanisms in succession, and for permitting the boxes to dwell for an interval of time in the space between said mechanisms.

2. In a machine for attaching laces to boxes, the combination of gluing-mechanism and lace-attaching mechanism, parallel tracks associated with the mechanisms, supporting-means for said tracks arranged for vertical adjustment, and a feeding-device for moving the boxes along the track, said feeding-device being supported by the means which supports the track and being adjustable therewith.

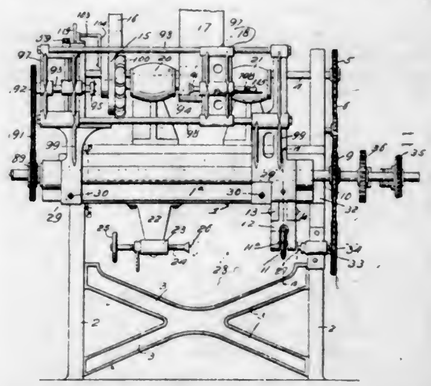
3. In a machine for attaching laces to boxes, the combination of gluing-mechanism, lace-attaching mechanism, parallel tracks associated with said mechanisms, end supports for said tracks, means for adjusting said end-supports vertically and a feeding-device for the boxes supported by the end-support.

4. In a machine for attaching laces to boxes, the combination of gluing-mechanism, lace-attaching mechanism, a pair of parallel tracks associated with the mechanisms, supporting means for the tracks arranged for transverse relative adjustment, and a feeding-device for the boxes supported by said supporting-means.

5. In a machine for attaching laces to boxes, the combination of gluing-mechanism and lace-attaching mechanism, a pair of parallel tracks associated with said mechanisms, said tracks having right-angularly-formed spaces with recesses opening thereinto, and arranged with said spaces facing each other, and means to feed the boxes along on said tracks.

[Claims 6 to 78 not printed in the Gazette.]

1,193,944. MACHINE FOR ROUGH-TURNING LAST-BLOCKS. WALLACE W. STODDARD, Bingham, Me. Filed May 27, 1915. Serial No. 30,713. (Cl. 142—11.)



1. In a machine of the class described, a pulley, a clutch member having a depression, a latch movable therein, said pulley being freely rotatable upon its shaft and said clutch member keyed to said shaft, a push-out bar having a depression, means for coöperation with the last-named depression, a pawl movable therewith, means cooperating with said pawl, and means coöperating with said latch to allow the clutch to be thrown into operation.

2. In a machine of the class described, a driving pulley, a clutch member fast on the shaft thereof, a clutch latch carried by said member, a shaft having a portion constituting a pawl to engage said clutch latch, an arm, a pawl operating roll carried by the free end of said arm, a push-out bar having a notch to coöperate with said roll, a slidable member, and a bar engageable therewith to be moved to cause said roll to engage said notch and to allow said pawl to contact with said clutch member.

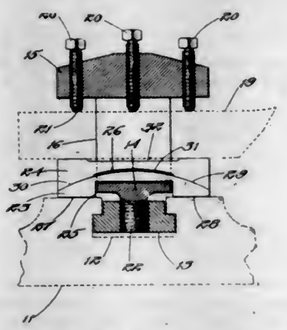
3. In a machine of the class described, a pulley, a clutch member, said pulley being freely rotatable upon its shaft and said clutch member keyed to said shaft, said clutch member having a depression, a pivotally mounted latch movable in said depression, a latch member extended beyond said clutch member and carrying a pin extending into said depression, a spring acting on said latches, a pawl for coöperation with the extended latch, and means for actuating said pawl to cause it to move said latch member and disengage the clutch from the pulley.

4. In a machine of the class described, a pulley, a clutch member, said pulley being freely rotatable upon its shaft and said clutch member keyed to said shaft, said clutch member having a depression, a pivotally mounted

latch movable in said depression, a latch member extended beyond said clutch member and carrying a pin extending into said depression, a spring acting on said latches, a pawl for coöperation with the extended latch, a push-out bar having a depression, means for moving said push-out bar, a movably mounted member carrying a roll for cooperation with said depression, and a pawl movable with said member for coöperation with the extended latch.

5. In a machine of the class described, a pulley, a clutch member, said pulley being freely rotatable upon its shaft and said clutch member keyed to said shaft, said clutch member having a depression, a pivotally mounted latch movable in said depression, a latch member extended beyond said clutch member and carrying a pin extending into said depression, a spring acting on said latches, a pawl for coöperation with the extended latch, a push-out bar having a depression, means for moving said push-out bar, a movably mounted member carrying a roll for coöperation with said depression, a pawl movable with said member for coöperation with the extended latch, a clutch, and a reciprocatory rod connected with one member of said clutch and having a depression, a lever for cooperation with said depression, a slide, a gravitating lever and a latch controlled thereby to be brought into the path of said slide to move said push-out bar.

1,193,945. TOOL-HOLDER. GEORGE A. TAYLOR, Boston, Mass., assignor of one-half to Harold J. Goepper, Cambridge, Mass. Filed Sept. 15, 1915. Serial No. 50,776. (Cl. 82—37.)



1. In combination with a tool holding slide of a lathe having a tool slot therein with inwardly projecting shoulders at the sides thereof, a tool holder comprising a head and a base having a transverse opening between them in which a tool is received, said base being located above the said shoulders, a member secured to said base and extending into said slot, a clamping member in said slot which is secured to said member, said parts being arranged to permit the said tool holder to swivel, a second clamping member which extends through the said opening and spans the said base and rests on the said tool holding slide at the sides of said slot, and means for forcing the tool downwardly and bringing pressure to bear on the said second clamping member whereby the said clamping members are held forcibly against the tool holding slide.

2. In combination with the tool holding slide of a lathe having a slot therein, a tool holder comprising a head and base between which a tool is received, a shank secured to said base and extending into said slot, a clamping member in said slot having a swivel connection with said shank, a second clamping member spanning the base of the tool holder which rests on the slide of the lathe and is supported entirely by the said slide, and means for forcing the tool downwardly and bringing pressure to bear on the second clamping member whereby said clamping members are held forcibly against the slide.

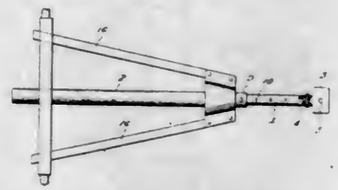
3. In combination with the tool holding slide of a lathe having a slot therein, a tool holder having a head and base between which a tool is received, a connecting member secured to said base and projecting into said slot, a clamping member in said slot having a swivel connection with said connecting member, a second clamping member having a recess therein into which said base is received which rests on the slide of the lathe, and means for forcing the tool downwardly and bringing pressure to bear on the second clamping member whereby said clamping members are held forcibly against the slide.

4. In combination with the tool holding slide of a lathe having a slot therein, a tool holder comprising a head beneath which a tool is received and a base secured to said head and located above the tool holding slide of the lathe, a clamping member in said slot, a connecting member secured to said base which projects into said slot and has a swivel connection with said clamping member, a second clamping member which rests upon the said tool holding slide and has a recess therein for the reception of said base, and means for forcing the tool downwardly and bringing pressure to bear on the said second clamping member whereby said clamping members are held forcibly against the tool holding slide.

5. In combination with the tool holding slide of a lathe having a slot therein, a tool holder having a head and base between which a tool is received, a connecting member secured to said base and extending into said slot, a clamping member in said slot rotatably connected with said connecting member, a second clamping member having a convex upper surface and end portions which rest on said slide, and having a recess in the central portion thereof for the reception of said base, a pillow block having a concave surface which coöperates with the convex surface of the said second clamping member upon which the tool is mounted, and means for forcing the tool downwardly and bringing pressure to bear on the said second clamping member whereby said clamping members are held forcibly against the tool holding slide.

[Claim 6 not printed in the Gazette.]

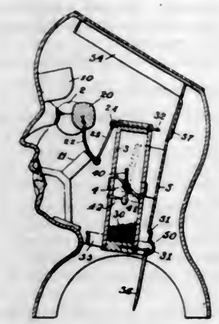
1,193,946. SWIVELED TELESCOPING WAGON-REACH. HENRY A. TOWNSON, Bingham, Nebr. Filed Feb. 16, 1915. Serial No. 8,554. (Cl. 21—39.)



A device of the class described including a rear bearing having means for securing it to the rear hounds of a running gear, said bearing being provided with an interior annular groove, a reach composed of front and rear sections, a sleeve screw-threadedly fitted on the front end of said rear section, a collar screw-threadedly mounted on the opposite end of said sleeve and projecting beyond the same, said collar provided with an opening therein, said front section provided with a plurality of spaced openings slidably mounted through the collar into the rear section, a pin in the opening of the collar adapted to be inserted into the openings of the front section for holding the same in any desired adjusted position, means on said sleeve fitting into the groove of said bearing holding the same against longitudinal movement, a head having a shank secured in the front end of the front reach sections and means for securing the reach sections in their adjustment.

1,193,947. DOLL. WILLIAM A. TROST, Seattle, Wash. Filed Apr. 15, 1915. Serial No. 21,495. (Cl. 46—40.)

1. The combination with a doll's head having eyes movable into open and closed position, of an eye opening and closing mechanism comprising a weight mass actuatively connected to the eye, said mass being positioned to move bodily by gravity to close the eyes when the doll is in recumbent position, and frictional means acting to restrain said motion.



2. The combination with a doll's head having eyes movable into open and closed position, of an eye opening and closing mechanism comprising a weight mass actuatively connected to the eye, said mass being positioned to move bodily by gravity when the doll is in recumbent position, self-contained means acting to restrain said mass, and additional frictional means acting to restrain said motion.

3. The combination with a doll's head having eyes movable into open and closed position, of an eye opening and closing mechanism comprising a weight mass actuatively connected to the eye, said mass being positioned to move bodily by gravity to close the eyes when the doll is in recumbent position, and frictional means acting to restrain said motion, said means being active throughout the eye-closing movement.

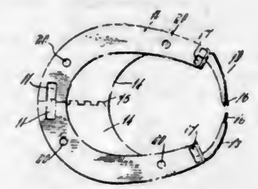
4. The combination with a doll's head having eyes movable into open and closed position, of an eye opening and closing mechanism comprising a weight mass actuatively connected to the eye, said mass being positioned to move bodily by gravity to close the eyes when the doll is in recumbent position, frictional means acting to restrain said motion, said means being active throughout the eye-closing movement, and a catch acting to hold said mass in eye-open position, said catch being releasable by agitation of the doll when in recumbent position.

5. The combination with a doll's head having eyes movable into open and closed position, of an eye opening and closing mechanism comprising a weight mass actuatively connected to the eye, said mass being positioned to move bodily by gravity to close the eyes when the doll is in recumbent position, and frictional means acting to restrain said motion, said means being active throughout the eye-closing movement, a catch acting to hold said mass in eye-open position, a supplementary catch adapted to hold the mass in partly-eye-closed position, said catches being releasable by continuous agitation of the doll when in recumbent position.

[Claims 6 to 13 not printed in the Gazette.]

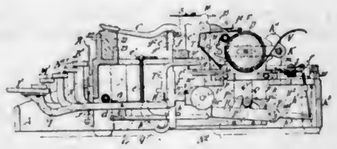
1,193,948. HORSESHOE. CRIS TRÜCK, Grand Rapids, Mich. Filed Apr. 7, 1913. Serial No. 759,462. (Cl. 168—19.)

A nailless horse shoe comprising a base portion in the form of the ordinary horse shoe divided at the forward part and having an elongated opening formed across the line of division for the clamping reception therethrough of the toe calk of an ordinary shoe which is attached to the horse's hoof, the rear ends of the base having openings for the passage therethrough of the heel calks, said base portion being provided with threaded openings for the reception of the stems of detachable calks, a sectional hinged shield carried by the base and completely inclosing the horse's hoof, and straps secured to the sections of the



shield and detachably connected together at the rear of the hoof.

1,193,949. TYPE-WRITER. RICHARD W. UHLIG, Arlington, N. J., assignor to Atlas Typewriter Co., Inc., New York, N. Y., a Corporation of New York. Filed May 21, 1913. Serial No. 769,001. (Cl. 197—26.)



1. In a typewriter, a down-strike type-bar moving through approximately a half circle, having pinion teeth, an upright slide having rack-teeth at its upper end engaging said pinion teeth, and a key-lever connected to the lower part of said slide to lift it and impart the printing movement to the type-bar.

2. In a typewriter, a platen, a series of down-trike type-bars, a fixed segment having radial slots receiving the pivotal portions of the type-bars, and upright actuating slides for the type-bars moving vertically in said slots and having a toothed engagement with the type-bars.

3. In a typewriter, a fixed slotted segment, a down-strike type-bar pivoted in a slot of said segment, and having pinion-teeth, an upright slide movable in such slot and having rack-teeth at its upper end engaging said pinion-teeth, and a key-lever connected to the lower part of said slide to lift it for imparting the printing movement to the type-bar.

4. In a typewriter, a slotted segment, down-strike type-bars pivoted in the slots thereof and having pinion teeth in such slots, upright slides having their upper ends in such slots with rack-teeth engaging said pinion teeth and their lower portions projecting below such segment, and key-levers beneath such slides.

5. In a typewriter, a slotted segment, down-strike type-bars pivoted in the slots thereof, upright slides in front of the pivotal portions of said type bars, having their upper ends in such slots and having actuating engagement with the type bars, and an arc-piece fixed in front of said segment to close its slots and hold the slides in operative engagement with the type-bars.

[Claims 6 to 15 not printed in the Gazette.]

1,193,950. POKER. ANTOINE EMILE VÉZINA, Outremont, Quebec, Canada. Filed Oct. 29, 1915. Serial No. 58,690. (Cl. 126—324.)

1. An improved poker comprising a stem having a handle at one end, the other end of said stem being of a fork shape, said forked shape end being secured to a rectangular plate and flush with the sides of said plate, substantially as described.

2. In an improved poker, a stem terminating in three branches projecting and spreading therefrom at one end,

a rectangular plate centrally slotted, the outer ends of said projecting branches being secured to a rectangular

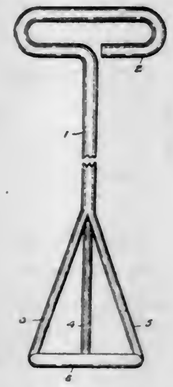


plate and flush with the sides of said plate and a handle at the other end of said stem, substantially as described.

1,193,951. MANUFACTURE OF BY-PRODUCTS FROM DISTILLERY-SLOP. ALADÁR VON LÁSZLOFFY, Peoria, Ill. Filed Mar. 27, 1911. Serial No. 617,026. (Cl. 23—24.)

1. The process of extracting a solution containing lactic acid, succinic acid and glycerin from a mixture of substances derived from distillery slop consisting in treating said mixture with a solvent capable of dissolving lactic acid and having but a small solvent action on glycerin, whereby the lactic acid, succinic acid and glycerin are dissolved, separating the solution resulting from this treatment from the insoluble part, and separating the products so extracted from each other by utilizing the difference in the solubility of the same in said solvent.

2. The process of recovering lactic acid, succinic acid, glycerin and fat from a mixture of substances derived from distillery-slop consisting in treating said mixture with a solvent capable of dissolving lactic acid and having but a small solvent action on glycerin, whereby the lactic acid, succinic acid and glycerin are dissolved, separating the solution resulting from this treatment from the insoluble part and singling out from this solution lactic acid, succinic acid, glycerin and fat, by utilizing the difference in the solubility of the named products in a solvent of the nature characterized herein.

3. The process of recovering lactic acid, succinic acid, glycerin and fat from a mixture of substances derived from distillery-slop consisting in treating said mixture with a solvent capable of dissolving lactic acid and having but a small solvent action on glycerin whereby the lactic acid, succinic acid and glycerin are dissolved, separating the solution resulting from this treatment from the insoluble part and singling out from this solution lactic acid, succinic acid, glycerin and fat, by utilizing the difference in the solubility of the named products in said solvent.

4. The process of recovering lactic acid, succinic acid, glycerin and fat from distillery-slop which consists in removing water from the slop, afterward treating said slop with a solvent capable of dissolving lactic acid and having but a small solvent action on glycerin, whereby the lactic acid, succinic acid and glycerin are dissolved, separating the solution resulting from this treatment from the insoluble part, and separating the lactic acid, succinic acid, glycerin and fat so extracted from one another by utilizing the difference in the solubility of the same in said solvent.

5. The process of recovering lactic acid, succinic acid, glycerin and fat from distillery-slop which consists in separating the slop into a solid part and into a liquid part, removing water from the liquid part, afterward treating the latter with a solvent capable of dissolving lactic acid and having but a small solvent action on glycerin, whereby the lactic acid, succinic acid and glycerin are dissolved, separating the solution resulting from this treatment from the insoluble part, and separating the lactic acid, succinic acid, glycerin and fat so extracted from one another by utilizing the difference in the solubility of the same in said solvent.

[Claims 6 to 12 not printed in the Gazette.]

1,193,952. PLASTIC COMPOSITION FOR MAKING PAVING-BRICK, BUILDING-BRICK, AND BUILDING-TILE. EARL V. WAGNER, Scranton, Pa., assignor to The Wagner Fire Brick Company, Helena, Mont. Filed Jan. 8, 1916. Serial No. 70,984. (Cl. 106—35.)

1. The herein described plastic composition consisting of coal ash, crude fibrous asbestos and water mixed, molded and burned, substantially as described.

2. The herein described plastic composition for making paving brick, building brick and building tile, consisting of coal ash, .99 cubic yard; crude fibrous asbestos, .01 cubic yard; water, 35 gallons mixed, molded and burned, substantially as described.

1,193,953. HYDRAULIC CONCENTRATOR OR CLASSIFIER. FRANK F. WAGNER, Denver, Colo. Filed June 29, 1915. Serial No. 36,918. (Cl. 83—82.)



1. An hydraulic plant concentrator or classifier comprising a number of tanks disposed one above another and in communication with each other, each tank except the lowermost being open at the top for overflow purposes, hoods fitted over the top of the same and forming troughs for catching the overflow therefrom, the top of each hood being provided with an opening, means for connecting the lower extremity of the tank next above with said opening, an outlet connected with each hood, and a valve located in each outlet except the uppermost for regulating the discharge and for controlling the flow of water to the tank directly above.

2. An hydraulic concentrator and classifier comprising a number of tanks disposed one above another and in communication with each other, each tank except the lowermost being open at the top for overflow purposes, and hoods fitted over the same forming troughs for catching the overflow therefrom, the top of each hood being provided with a central opening, means for connecting the lower extremity of the tank next above with said opening, an outlet connected with each hood, a valve located in each outlet except the uppermost, valve-controlled means for introducing water under pressure to the lowermost tank, and means for feeding the material to be treated to the uppermost tank.

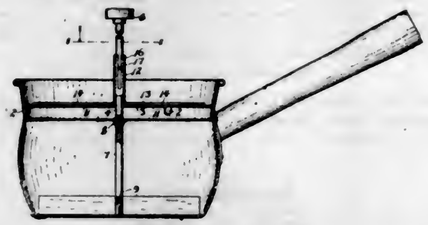
3. An hydraulic concentrator or classifier comprising a number of tanks disposed one above another and in communication with each other, each tank except the lowermost being open at the top for overflow purposes, and hoods fitted over the top of the same forming troughs for catching the overflow therefrom, the top of each hood being provided with a relatively small opening, and conduits for connecting the lower extremity of the tank next above the said opening, an outlet connected with each hood, and a valve located in each outlet except the uppermost, for the purpose set forth.

4. An hydraulic concentrator or classifier comprising a number of frusto-conical tanks disposed one above another and in communication with each other, each tank except the lowermost being open at the top for overflow purposes, and hoods fitted over the top of the same and forming troughs for catching the overflow therefrom, the top of each hood being provided with a central opening, means for connecting the lower extremity of the tank next above with said opening, an outlet connected with each hood, and means located in each outlet except the uppermost for controlling the flow of water to the tank directly above.

5. An hydraulic concentrator or classifier comprising a number of tanks disposed one above another, including a number of frusto-conical tanks disposed one above another with their larger extremities uppermost, hoods fitted over the top of the respective tanks and forming troughs for catching the overflow therefrom, the top of each hood being provided with a relatively small opening, conduits for connecting the lower extremity of the tank next above with said opening, said conduits diminishing in size from the bottom toward the top, an outlet connected with each hood, a valve located in each outlet except the uppermost for regulating the discharge and controlling the flow of water to the tank directly above.

[Claims 6 and 7 not printed in the Gazette.]

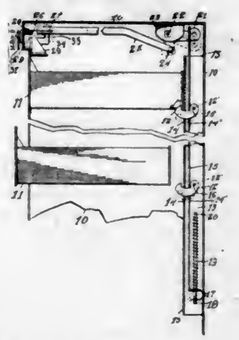
1,193,954. COVER FOR COOKING VESSELS. MARCUS A. WALDEN, San Francisco, Cal. Filed Nov. 22, 1915. Serial No. 62,732. (Cl. 53—8.)



In a device of the character described, the combination of a substantially flat circular plate having a central hole, a second substantially flat plate adapted to rest upon the first plate and having a central hole therethrough and a tube secured to said second plate around said latter hole and having a vertical slot therein, open at the upper end, said plates having other holes therethrough adapted to register with each other when one is turned relatively to the other, a stem within said tube, having a pin engaging said slot to turn the second plate with reference to the first plate, and a stirring arm secured to the lower end of said stem.

1,193,955. LOCK FOR DRAWERS IN SERIES. WILLIAM W. WATSON and JOHN G. CARLSON, Jamestown, N. Y., assignors to Watson Mfg. Company, Jamestown, N. Y., a Corporation of New York. Filed Dec. 16, 1912. Serial No. 736,965. (Cl. 45—94.)

1. In a device of the class described, the combination of the case, a bell crank pivotally supported within said case, a vertical bar supported on one arm of said bell crank, a channel strip to receive said vertical bar, drawers in said case, spring catches on said channel strip extending through said vertical bar to release said catches from said drawers, a plate pivotally attached to the front plate of said case, link connection between said plate and the other arm of said bell crank, means on said mechanism for withdrawing said pivotally mounted plate and said spring catches, a spring catch to engage one end of said pivotally mounted plate, and a lock for operating said spring catch.

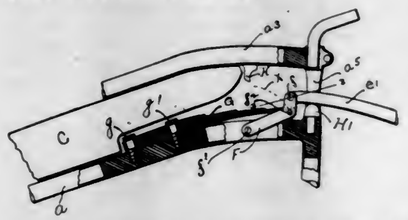


2. In a device of the class described, the combination of the case, drawers in said case, a bell crank pivotally supported within said case, a channel strip in said case, spring catches in said channel strip, a vertical bar supported on one arm of said bell crank to be raised and lowered thereby to move said spring catches out of holding engagement with said drawers, a spring attached to said channel strip and pressing downward on said vertical bar, a plate pivotally attached to the front plate of said case, link connection between said pivotally attached plate and the other arm of said bell crank, a spring catch to engage one end of said pivotally mounted plate, and a lock for said spring catch.

3. In a device of the class described, the combination of the case, drawers in said case, a bell crank pivotally supported within said case over said drawers, a bar vertically supported on one arm of said bell crank adjacent to said drawers to move up and down with said arm, a channel strip to receive said bar, spring catches on said channel strip to spring onto said drawers in holding engagement when said bar is in the raised position and releasing said drawers when in the lowered position, a plate pivotally attached to the inner side of the front plate of said case, one end of said pivotally attached plate extending through a slot in said front plate, a pull on the exposed end of said pivotally attached plate, link connection between said plate and the other arm of said bell crank, a spring catch to engage the other end of said pivotally mounted plate, and a lock for said spring catch, substantially as and for the purpose specified.

4. In a device of the class described, the combination of the case, drawers in said case movable in and out thereof, a bell crank pivotally supported within said case over said drawers, a channel strip attached within said case beneath one arm of said bell crank and having spaced vertical slots therein, a bar vertically supported on said arm of said bell crank and extending down said channel strip and having spaced slots coinciding with said spaced slots in said channel strip, spaced catches pivotally mounted on crosswise pins in said channel strip and extending out through said slots in said bar and channel strip to engage said drawers, an upwardly actuating spring for each catch on said channel strip, a downwardly actuating spring on said bar to aid in releasing said catches, and means extending from the other arm of said bell crank to the front of said case for operating said spring catches into and out of engagement with said drawers, substantially as and for the purposes specified.

1,193,956. FRAME CONSTRUCTION FOR BICYCLES, MOTOR-CYCLES, AND THE LIKE. EDWARD YOUNG WHITE, San Antonio, Tex. Filed Sept. 10, 1913. Serial No. 789,155. (Cl. 208—94.)



1. A motorcycle having a main frame, a rear fork pivoted to the lower portion of said frame, braces pivoted to the rear portion of said fork and extending forward and upward to the upper rear portion of the main frame, a flat spring lying along the main frame and secured at its forward end thereto, and a connecting device bearing against the other end of the spring and pivoted both to the main frame and to the upper end of the braces.

2. A motorcycle having a main frame, a rear fork pivoted to the lower portion of said frame, braces pivoted to the rear portion of said fork at one end and terminating at the other end in a shank at the upper rear portion of the frame, a lever pivoted to the shank at its rear end and to the frame at its forward end, and a flat spring having its rear free end bearing upon said lever and its forward end secured to the frame.

3. A motorcycle having a main frame containing two horizontal upper members connected by suitable upright portions at front and rear, thereby inclosing a suitable fuel tank space, a flat spring within said space secured at its forward end to the frame and having its rear free end adjacent to the rear upright portion, a rear fork pivoted at its forward end to the lower portion of the main frame, braces pivoted to the rear portion of said fork and extending therefrom to a point near the free end of said spring, and a lever pivoted to the braces and the frame and having a suitable bearing resting against the free end of the spring.

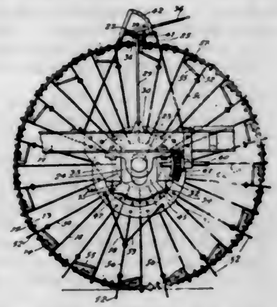
4. A motorcycle having a main frame containing two horizontal upper members connected front and rear by upright portions, the rear upright being of annular form, a flat spring secured to one of said members at its forward end and having a free end near and forward of said rear upright, a rear fork pivoted at its forward end to the lower portion of the main frame, braces pivoted at their lower ends to the rear portion of said fork and terminating at their upper ends in a shank extending through said rear upright and a lever pivoted to the shank and the main frame and having a portion bearing against the free end of said spring.

5. The combination with the frame of a motorcycle, of a rear fork pivoted to the frame, rear braces pivoted to the fork, a link connection between the braces and the frame, and a spring fast at one end to the frame, and having a sliding engagement at its other end with said link connection.

[Claims 6 to 16 not printed in the Gazette.]

1,193,957. TRACTION-WHEEL. FREDERICK YOUNGGREN, River Falls, Wis. Filed Apr. 26, 1915. Serial No. 23,978. (Cl. 21—210.)

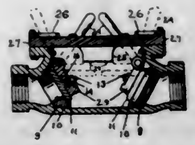
1. In combination with a single traction wheel and frame members on each side thereof and the axle of the traction wheel journaled therein, said traction wheel having its face formed with transverse slots, a block mounted to slide vertically on each side of said frame members each of said blocks having a vertical slot through which the axle extends, a rotatable ring journaled on each block, means under the control of the operator for simultaneously sliding said blocks so that the rings may be made concentric to said axle or eccentric to the same either above or below the axle, links pivotally connected with the wheel rim, traction plates extending through said slots pivotally connected with the links, and rods rigidly secured to the traction plates and pivotally connected with said rings.



2. A traction wheel comprising a hub, a pair of tire rings, spokes securing said tire rings to the hub, transverse plates secured to said tire rings and spaced apart at intervals to leave transverse slots between the plates and tire rings, links having a pivotal connection with said tire rings, traction plates extending through said slots having pivotal connection with the links, and means connected with the plates and rotatable with the wheel for projecting and retracting the traction plates.

3. A traction wheel comprising a hub, a pair of tire rings, spokes securing said tire rings to the hub, transverse plates secured to said tire rings and spaced apart at intervals to leave transverse slots between the plates and tire rings, links having a pivotal connection with said tire rings, traction plates extending through said slots having pivotal connection with the links, means connected with the plates and rotatable with the wheel for projecting and retracting the traction plates, and means under the control of the operator for adjusting said projecting means so that the traction plates may be projected a greater or less degree either from the top or the bottom of the wheel or may be projected equally throughout the circumference of the wheel.

1,193,958. SAFETY CHECK DEVICE. JAY M. YOUNGS, Toledo, Ohio. Filed Nov. 9, 1914. Serial No. 870,953. (Cl. 137—4.)



1. The combination with a plurality of boilers of a common waste therebelow, and connections between said boilers and waste including a check valve device between each boiler and said waste, said waste having an outlet below the check valves for draining therefrom.

2. The combination with a plurality of boilers of a common waste therebelow, and connections between each boiler and said waste including a check valve automatically operable against normal flow from either boiler into the other boiler, said waste being below the check valves for draining therefrom.

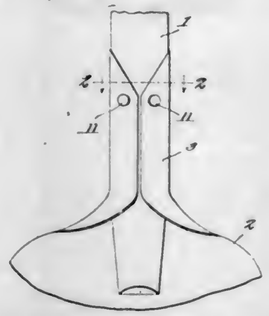
3. The combination with a plurality of boilers, a main waste duct, a branch waste duct from the main waste to each boiler, and a check valve in the branch waste normally opened by blow off from the boiler to which the branch extends and disposed to be closed by blow off or pressure from the main waste or some other boiler, thereby providing automatic safety means when one boiler is off against pressure from another boiler, there being a housing member for said valve having an opening extending from adjacent the valve to intercept the extension of the axis of the valve opening, a cap for the opening whereby removal of the cap and valve provides clearance for seat grinding tool operation through said opening.

4. A plural valve fitting embodying an automatic check valve, manual operable means connected thereto for positioning said valve for blowing therethrough, and holding means for the valve in blow off position, there being an outlet for said fitting on the side toward which the valve opens, said outlet being below said valve.

5. A branch fitting embodying a plurality of inlet openings, and an outlet opening, two of said inlet openings being opposed, a check valve for each inlet opening and disposed above said outlet opening, and an arm for one of said valves to permit opening thereof so that the other may act to blow therethrough.

[Claim 6 not printed in the Gazette.]

1,193,959. HANDLE-FASTENING. ALBERT L. ADAMS, Cedar Rapids, Iowa. Filed Dec. 18, 1914. Serial No. 877,903. (Cl. 55—116.)



The combination with a handle, of a member having a split handle receiving socket, and crossed means extending from the socket and driven into the handle for drawing the edges of the split socket toward each other and for securing the socket to the handle.

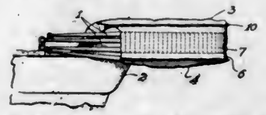
1,193,960. INDEX-TAB. GEORGE J. AIGNER, Chicago, Ill. Filed Jan. 19, 1914. Serial No. 813,044. (Cl. 40—2.)



1. A series of index tabs arranged in the form of a strip, each of the tabs having a horizontal body portion composed of a folded portion, and attachment legs for each of the tabs, projecting angularly from the rear end of the horizontal body portion, one upwardly and one downwardly when the tab is attached to a vertically-disposed sheet, the attachment legs of the series of tabs being attached to each other at their extreme rear edges only, for purposes substantially as set forth.

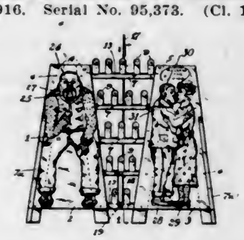
2. A set of index tabs of the character set forth comprising a series of tabs normally in a strip and provided with different characters thereon arranged consecutively according to a predetermined arrangement, the said strip comprising a folded portion having a front portion for the characters and a rear portion for providing attachment legs for the individual tabs, the said tabs being cut entirely apart through the said front portion between the said characters and through the said rear portion to within a short distance from the rear edge of the strip whereby attachments between the individual tabs are provided at the rear edge of the strip, said attachments holding the said tabs in their predetermined arrangement in the said strip but permitting of them being readily torn apart by hand.

1,193,961. SLIP-COVER FOR AUTOMOBILE-TOPS. WILLIAM B. ALBURY, Tampa, Fla. Filed Dec. 11, 1915. Serial No. 66,372. (Cl. 21—62.)



A slip cover for automobile tops formed of waterproof material and comprising a top, a bottom, a back and closed sides, and elastic webbing extending the length of the sides and attached along its top and bottom edges to the top and bottom edges of the sides and adapted to be put under substantial tension when the sides are drawn taut.

1,193,962. GAME. JOHN B. ALEY, Pittsburgh, Pa. Filed May 4, 1916. Serial No. 95,373. (Cl. 124—15.)



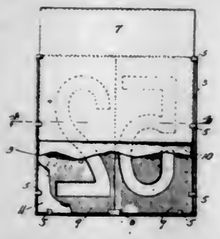
1. In a device of the character described an easel-like structure comprising a pair of substantially upright flat boards connected together by cross bars, said bars having dolls or the like pivotally connected thereto, one of said boards having painted thereon the representation of a male and female figure in the act of kissing, the head portion of one of said figures being cut away and hinged to the body portion thereof, said dolls and said pivoted head being adapted to be tilted rearwardly upon being struck by a ball, means for simultaneously returning said dolls and said pivotal head to their normal upright position and means for supporting said boards in substantially upright position.

2. In a device of the character described a board or the like containing the representation of a male and female figure normally in the act of kissing, the head of one of said figures being pivotally connected to the body portion of said figure, said head being adapted to be tilted rearwardly on its pivot upon being struck by a ball, and means for returning said head to its normal position.

3. An amusement device comprising a substantially upright board normally representing a male and female figure in the act of kissing, the head of one of said figures being pivoted and adapted to be tilted rearwardly upon being struck by a ball and manually operable means for returning said head to normal position.

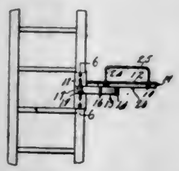
4. An amusement device comprising a substantially upright board bearing a male and female figure, the heads of said figures being normally in horizontal alinement, one of said figures having a pivoted head adapted to be tilted on its pivot out of alinement with the head of the other of said figures and means for returning said head to normal position.

1,193,963. CHANGEABLE NUMBERING DEVICE. JOSEPH E. ALLEN, Stamford, Conn. Filed Sept. 12, 1912. Serial No. 719,914. (Cl. 40—140.)



A weather-proof changeable numbering or lettering device, comprising an integral metal frame having top, side and bottom front flanges in the same plane, side and bottom members at right angles thereto, with inwardly extending lugs in the same plane at the back thereof, in combination with a sheet of transparent material engaging said front flanges, a plurality of similarly sized changeable carriers of thin sheet metal arranged side by side, each having cut out therefrom the configuration of a single letter or number, a backing of a material of contrasting color, and a sliding metal back piece adapted to engage the side and bottom members of the frame and be engaged by the tabs to hold the backing, carriers, and transparent sheet against each other and against the front flanges, said backing piece having at the top an inwardly extending flange forming a cover for the top of the frame and protecting the parts contained therein.

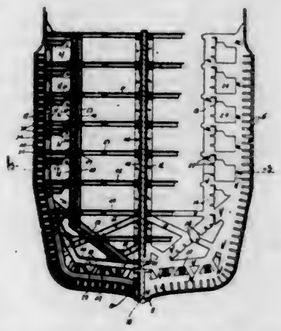
1,193,964. LADDER ATTACHMENT. HENRY ALPEN, Hempstead, N. Y. Filed Apr. 14, 1916. Serial No. 91,188. (Cl. 228—26.)



A shelf attachment for a ladder comprising a tray, a substantially U-shaped spring disposed under one end of the tray and extending beyond the same, means carried by the bottom of the tray for rigidly securing the intermediate portion of the spring and one arm thereof, a guide yoke strap secured to the bottom of the tray and straddling the other arm of the spring, ladder rail engaging jaw members secured to the outwardly extending portions of the spring and provided with tangs for engagement in the rail of the ladder and handles carried by the jaw members for applying and removing the jaws.

1,193,965. CONSTRUCTION OF MARINE VESSELS. EUGENE AMBROZY, New York, N. Y. Filed Dec. 27, 1915. Serial No. 68,890. (Cl. 114—78.)

1. An iron vessel comprising an outer and an inner hull having a common keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates, forming the transverse frames of said inner hull, longitudinal frames connecting the transverse frames of said outer hull, and longitudinal frames connecting the transverse frames of said inner hull, both sets of longitudinal frames being disposed exterior of their respective transverse frames.



2. An iron vessel comprising an outer and an inner hull having a common keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates, forming the transverse frames of said inner hull, longitudinal frames connecting the transverse frames of said outer hull, longitudinal frames connecting the transverse frames of said inner hull, both sets of longitudinal frames being disposed exterior of their respective transverse frames, and a sheathing applied to the inner faces of both sets of longitudinal frames.

3. An iron vessel comprising an outer and an inner hull having a common keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates, forming the transverse frames of said inner hull, longitudinal frames connecting the transverse frames of said outer hull, longitudinal frames connecting the transverse frames of said inner hull, both sets of longitudinal frames being disposed exterior of their respective transverse frames, a sheathing applied to the inner faces of both sets of longitudinal frames, and a sheathing applied to the outer face of the longitudinal frame of said outer hull.

4. An iron vessel comprising a keel, transverse plates attached to said keel having slots in their outer edge portions, channel-irons disposed in parallel relation to the outer edges of said plates and attached to said keel, thereby constituting the transverse frames of the hull, U-shaped stringers having their flanges disposed in the slots of said plates, thus forming the longitudinal frames of said hull, the abutting flanges of each adjacent pair of stringers being disposed in a common slot, means for fastening said stringers to said plates, a sheathing secured to the outer faces of said stringers, and a sheathing applied to the inner faces of said stringers.

5. An iron vessel comprising a keel, transverse plates attached to said keel having slots in their outer edge portions, channel-irons disposed in parallel relation to the outer edges of said plates and attached to said keel, thereby constituting the transverse frames of the hull, U-shaped stringers having their flanges disposed in the slots of said plates, thus forming the longitudinal frames of said hull, the abutting flanges of each adjacent pair of stringers being disposed in a common slot, means for fastening said stringers to said plates, and a sheathing applied to the inner faces of said stringers.

[Claims 6 to 10 not printed in the Gazette.]

1,193,966. SOCKET-SHELL. LAURITZ W. ANDERSEN, Waterbury, Conn., assignor to General Electric Company, a Corporation of New York. Filed Mar. 3, 1915. Serial No. 11,728. (Cl. 173—362.)

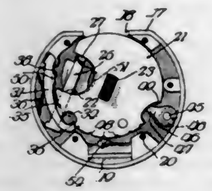


1. A socket shell comprising a cap having a skirt, a cylindrical body portion having a bead intermediate its ends, and also a bead adjacent its lower end, and a collar arranged upon the body portion between said beads, said collar and lower end of skirt of cap being provided with engaging means, whereby said parts are connected together.

2. A socket shell comprising a cap having a skirt, the lower end of said skirt being threaded, a cylindrical body portion having a bead intermediate its ends and also a bead adjacent the lower end, and a collar on said body portion between said beads, said collar being threaded and adapted to engage the threaded end of skirt, the upper end of body extending into said skirt.

3. A socket shell comprising a cap having a threaded lower end and a shoulder at the upper end of said threaded portion, a body portion having a bead intermediate its ends and also a bead adjacent its lower end, the upper portion of said body being adapted to fit into the cap, and a collar arranged upon the body portion between the beads, said collar being turnable upon the body and having a shoulder adapted to engage the intermediate bead, the upper portion of said collar being threaded and adapted to engage the threaded portion of the cap whereby said cap and body portions are connected together.

1,193,967. CHECK-DETECTOR FOR CHECK-ACTUATED MACHINES. ALFRED D. ANTOINE and CLARENCE C. TRAVIS, Chicago, Ill., assignors to Advance Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 3, 1913. Serial No. 804,339. (Cl. 192—102.)



1. A device of the character described, embodying a casing having a check entrance and a check discharge opening, a rotatable check carrier provided with a check receiving orifice, a normally inactive catch, said catch having a shoulder, means operating to move the catch to cause the said shoulder to enter the check receiving orifice when the latter is positioned adjacent the shoulder and in the absence of a check in the orifice, an additional catch disposed between the periphery of the check carrier and the casing and being also disposed entirely within the plane formed by the side faces of the check carrier, and with which shoulder the second recited catch coöperates when the first said catch is inactive, a portion of the second recited catch projecting into the path of movement of the edge of the check in the receiving orifice.

2. A device of the character described, embodying a casing having a check entrance and a check discharge opening, a rotatable check carrier provided with a check receiving orifice, a normally inactive catch, said catch having a shoulder, means operating to move the catch to cause the said shoulder to enter the check receiving orifice when the latter is positioned adjacent the shoulder and in the absence of a check in the orifice, an additional catch disposed between the periphery of the check carrier and the casing and being also disposed entirely within the plane formed by the side faces of the check carrier, a shoulder on the periphery of the check carrier and with which shoulder the second recited catch coöperates when the first said catch is inactive, a portion of the second recited catch projecting into the path of movement of the edge of the check in the receiving orifice, means for rotating the carrier, and a stop device for limiting the degree of rotation of the carrier.

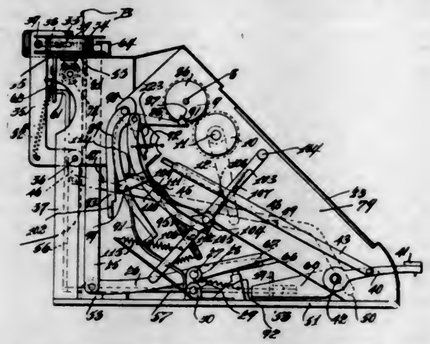
3. A device of the character described, embodying a casing having a check entrance and a check discharge opening, a rotatable check carrier provided with a check receiving orifice, a normally inactive catch, said catch having a shoulder, means operating to move the catch to cause the said shoulder to enter the check receiving orifice when the latter is positioned adjacent the shoulder and in the absence of a check in the orifice, an additional catch disposed between the periphery of the check carrier and casing and being also disposed entirely within the plane formed by the side faces of the check carrier, a shoulder on the periphery of the check carrier and with which shoulder the second recited catch coöperates when the first said catch is inactive, a portion of the second recited catch projecting into the path of movement of the edge of the check in the receiving orifice, means for rotating the carrier, and a stop device for limiting the degree of rotation of the carrier.

4. A device of the character described, embodying a casing, having a check entrance and a check discharge opening, a rotatable check carrier provided with a check receiving orifice a normally inactive catch, said catch having a shoulder, means operating to move the catch to cause the said shoulder to enter the check receiving orifice when the latter is positioned adjacent the shoulder and in the absence of a check in the orifice, an additional catch disposed between the periphery of the check carrier and the casing and being also disposed entirely within the plane formed by the side faces of the check carrier, a shoulder on the periphery of the check carrier and with which shoulder the second recited catch coöperates when the first recited catch is inactive, a portion of the second recited catch projecting into the path of movement of the edge of the check in the receiving orifice, and interengaging means between the carrier and casing for limiting the extent of the rotation of the carrier.

5. A device of the character described, embodying a casing having a check entrance and a check discharge opening, a rotatable check carrier provided with a check receiving orifice, a normally inactive catch, said catch having a shoulder, means operating to move the catch to cause the said shoulder to enter the check receiving orifice when the latter is positioned adjacent the shoulder and in the absence of a check in the orifice, an additional catch disposed between the periphery of the catch and the casing and being also disposed entirely within the plane formed by the side faces of the check carrier, a shoulder on the periphery of the check-carrier and with which shoulder the second recited catch coöperates when the first said catch is inactive, a portion of the second recited catch projecting into the path of movement of the edge of the check in the receiving orifice, and an additional shoulder on the carrier and with which the second recited catch coöperates under predetermined conditions.

[Claims 6 to 13 not printed in the Gazette.]

1,193,968. ADDING-MACHINE. ORAZIO ANTONELLI, Jersey City, N. J., assignor to Abraham Drusin, Brooklyn, N. Y. Filed July 3, 1915. Serial No. 37,799. (Cl. 235—58.)



1. In combination with an adding machine, a record sheet, a plurality of vertically movable type carriers, means to actuate said carriers, a swinging frame adjacent thereto, a hammer for each carrier carried by said frame and slidably mounted thereupon, means to actuate said frame to cause all of the hammers thereon to move toward the sheet and to force said sheet against the type on said carriers, and means to block off the hammers corresponding to the carriers not in use.

2. In combination with an adding machine, a record sheet, a plurality of vertically movable type carriers, a swinging frame adjacent thereto, a hammer for each carrier carried by said frame and slidably mounted thereupon, means to actuate said frame to cause the hammers thereon to force said sheet against the type on said carriers, a slidable frame adjacent said hammers, a plate carried thereby arranged to block off the hammers on said frame, and a stop carried by said frame arranged to contact with a raised type-carrier to cause the plate on said slidable frame to come to rest adjacent the hammers to be blocked off.

3. In an adding machine, a plurality of independently operable numeral-carriers, means to actuate said carriers to cause the numerals carried thereby to aline with a given point, a printing mechanism to record the numeral selected, means operable by the carrier operating mechanism to actuate said printing mechanism, means to restore the printing mechanism to zero without disturbing said numeral-carriers, an independent device to restore the numeral-carriers to zero, and means operable by the numeral carrier restoring mechanism to automatically prevent the actuation of the printing mechanism during the numeral-carrier restoring operation.

4. In an adding machine, a plurality of disks containing numerals, means to rotate same by the fingers, a space-bar to automatically advance said disks one step, a type-carrier for each disk, means operable by the numeral carrier operating means to set the type-carrier, an impression device for said type-carriers, means operable by the space-bar to actuate said impression device and to restore said type-carriers to normal position, and means also operable by said space-bar to block off the type on the carriers not in use.

5. In an adding machine, the combination of a plurality of independently operable numeral-carriers, means operable by the fingers to actuate same, a space-bar, means operable by the space-bar to advance said carriers one step, a movable support adjacent said carriers, a plurality of levers supported by said movable support, a type-carrier carried by each lever, means actuated by the operating means for said carriers to operate said levers, an impression device for the type on said type-carriers, means operable by the space-bar to actuate the impression device, and means also operable by the space-bar to move said lever support to carry said levers out of engagement with the operating device for the numeral-carriers.

[Claims 6 to 28 not printed in the Gazette.]

1,193,969. ARTIFICIAL HAND. CLYDE AUNGER, San Francisco, Cal. Filed Aug. 23, 1915. Serial No. 47,902. (Cl. 3—12.)



1. An artificial hand comprising a socket adapted to be fastened onto the stump of an amputated arm; a hook detachably and rotatably mounted in and extending beyond the end of the socket; a second hook pivotally mounted upon the first mentioned hook and arranged to form a gripping means therewith; fastening means pivotally connected to the socket and adapted to be fastened to the arm above the elbow; and means operatively connected to the hooks and to the fastening means whereby said hooks may be partially rotated when the arm of the wearer is bent.

2. An artificial hand comprising a socket adapted to be fastened to the stump of an amputated arm; a plate rotatably mounted within the end of the socket; a hook detachably secured to the plate; a second hook pivotally mounted upon the first mentioned hook and arranged to form a gripping element therewith; fastening means pivotally connected to the socket and arranged to be secured to the arm and above the elbow; means operatively connected to the hooks and to the fastening means whereby the said hooks may be partially rotated when the elbow of the wearer is bent; and means operatively connected to the plate and adapted to detachably secure the first mentioned hook thereto.

3. An artificial hand comprising a socket adapted to be fastened to the stump of an amputated arm; a plate rotatably mounted within the end of a socket; a hook detachably secured to the plate; a second hook pivotally mounted upon the first mentioned hook and arranged to form a gripping element therewith; fastening means pivotally connected to the socket and arranged to be secured to the arm above the elbow; means operatively connected to the hooks and to the fastening means whereby the said hooks may be partially rotated when the elbow of the wearer is bent; means operatively connected to the plate and adapted to detachably secure the first mentioned hook; and means operatively connected to the socket and to the plate and adapted to normally return said plate and the hooks detachably secured thereto to a normal position when the elbow and arm of the wearer is straightened.

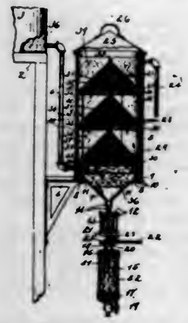
4. An artificial hand comprising a socket adapted to be secured to the stump of an amputated arm; fastening means pivotally connected to the socket and adapted to secure the same to the arm; a plate rotatably mounted within the end of the socket; a hook detachably secured to the plate; a second hook having an arm thereon and pivotally mounted upon the first mentioned hook and matching therewith; a suitable spring adapted to normally close the hooks together; a cord fastened to the arm of the second mentioned hook and to the shoulder of the wearer whereby the hooks may be separated; a second cord secured to the rotatable plate and to the fastening means of the socket and adapted to partially rotate the hooks when the elbow is bent; and means adapted to return the plate and hooks secured thereto to a normal position when the arm is extended.

5. An artificial hand comprising a socket adapted to be secured to the stump of an amputated arm; fastening means pivotally connected to the socket and adapted to secure the same to the arm; a plate rotatably mounted within the end of the socket; a hook detachably secured to the plate; a second hook pivotally mounted upon the first mentioned hook and arranged to form a gripping element therewith; fastening means pivotally connected to the socket and arranged to be secured to the arm and above the elbow; means operatively connected to the hooks and to the fastening means whereby the said hooks may be partially rotated when the elbow of the wearer is bent; and means operatively connected to the plate and adapted to detachably secure the first mentioned hook thereto.

cure the same to the arm; a plate rotatably mounted within the end of the socket; a hook detachably secured to the plate; a second hook having an arm thereon and pivotally mounted upon the first mentioned hook and matching therewith; a suitable spring adapted to normally close the hooks together; a cord fastened to the arm of the second mentioned hook and to the shoulder of the wearer whereby the hooks may be separated; a second cord secured to the rotatable plate and to the fastening means of the socket and adapted to partially rotate the hooks when the elbow is bent; and a suitable spring operatively connected to the rotatable plate and to the socket and adapted to normally retain the said plate in a normal position.

[Claims 6 and 7 not printed in the Gazette.]

1,193,970. FILTER. PHILIP J. BACHER, Galesburg, Ill. Filed May 11, 1916. Serial No. 96,844. (Cl. 210—16.)

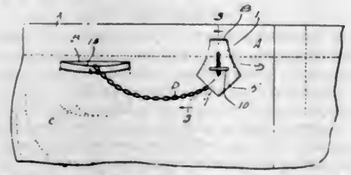


1. A filter-unit comprising a hoop, a conical wire-mesh strainer fitted at its base thereto, legs soldered to said strainer, and a conical absorbent filtering-element fitted to said strainer, the edge portion of its base folded over said hoop and stitched to its own body portion and through said mesh.

2. In a filter, a filter-tank, means for furnishing liquid thereto, an outlet pipe for the sediment, an outlet pipe for the purified liquid, and a filtering unit removable from the tank and comprising a hoop, a conical wire-mesh strainer fitted at its base thereto, and a conical absorbent filtering element fitted to said strainer, the edge portion of its base folded over the hoop and stitched to its own body portion and through said mesh, and said folded edge resting in close contact with the inner wall of the tank.

3. A filter-unit comprising a hoop, a conical wire-mesh strainer fitted at its base thereto, and a conical absorbent filtering element fitted to said strainer, the edge portion of its base folded over said hoop and stitched to its own body portion and through said mesh.

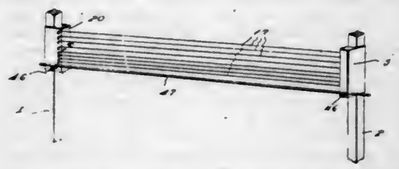
1,193,971. WATCH-CHAIN GUARD FOR TROUSERS. EDWARD G. BAILEY, Eufaula, Okla. Filed Oct. 15, 1915. Serial No. 56,131. (Cl. 24—3.)



1. A watch chain guard for garments comprising a body formed of companion pieces of material secured together to form a pocket having an entrance opening for the passage of the free end of the watch chain therein, and one of the pieces of material having an opening therein communicating with the pocket for the passage of the cross bar or the free end of the chain after the same has been inserted into the pocket.

2. In combination with a garment, of an elongated body formed of companion pieces of material secured together to provide a pocket having an entrance opening for the passage of the free end of a watch chain, one of the pieces of material having an opening therein communicating with the pocket for the passage of the cross bar of the watch chain therethrough, the said body having one end secured to the garment and having its other end free.

1,193,972. ATTACHMENT FOR JUMPING-STANDARDS. MICHAEL R. BALENTI and GEORGE E. BALENTI, Calumet, Okla. Filed Apr. 14, 1915. Serial No. 21,344. (Cl. 46—69.)



1. The combination with a jumping standard including vertical standards and a cross bar, of a plurality of threads suspended between said standards above and parallel to the cross bar.

2. The combination with ordinary jumping standards including vertical standards and a cross bar, of a plurality of threads suspended between said standards above and parallel to said cross bar, and means for cutting said threads when engaged by a jumper.

3. The combination with an ordinary vaulting or jumping standard including vertical standards and a cross bar, of a plurality of thread retaining spools carried by one of said standards, means carried by the other standards for connection with the ends of threads unwound from said spools and suspended between said standards, said threads being positioned above and parallel to said cross bar, at spaced predetermined distances.

4. The combination with an ordinary jumping or vaulting standard including a pair of vertical standards, and a cross bar carried by said standards, of a box carried by one of said standards, a plurality of spools rotatably carried by said box, threads wound upon said spools, a plurality of devices carried by the other standards for engagement with the ends of the threads, said threads adapted for unwinding from said spools and suspension between said standards above and parallel to said cross bar.

5. The combination with an ordinary jumping or vaulting standard including a pair of vertical standards, and a cross bar carried by said standards, of a box carried by one of said standards, a plurality of spools rotatably carried by said box, threads wound upon said spools, a plurality of devices carried by the other standards for engagement with the ends of the threads, said threads adapted for unwinding from said spools and suspension between said standards above and parallel to said cross bar, a plurality of knives adjustably carried by the standards carrying the thread attaching means, and means for moving said knives into or out of a thread engaging position.

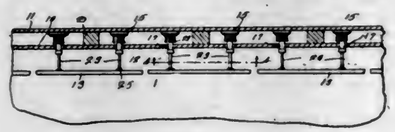
[Claim 6 not printed in the Gazette.]

1,193,973. BUFFER. LEONIDAS E. BARNES, Omaha, Nebr. Filed Dec. 29, 1915. Serial No. 69,253. (Cl. 119—7.)

1. A buffer including a buffer plate, a base plate, a housing movable relative to said base plate, means for yieldably retarding the movement of said housing with relation to said base plate, and yieldable means connecting said housing with said buffer plate.

2. A buffer including a buffer plate, a base plate, a housing movable relative to said base plate, means for

limiting and yieldably retarding the movement of said housing with relation to said base plate, and yieldable means connecting said housing with said buffer plate.

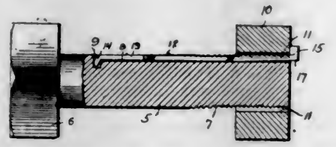


3. A buffer including, a buffer plate, a base plate, a housing movable relatively to said base plate, a stop flange carried by said housing adapted to engage said base plate for limiting the tilting movement of the housing with relation to the base plate, means normally retaining said flange in engagement with said base plate, and spring retarding means connecting said buffer plate with said housing.

4. A buffer including a buffer plate, a base plate, a housing movable relative to said base plate, a flange carried by said housing adapted to engage the adjacent surface of said base plate, means normally retaining said flange in engagement with said base plate, a plunger reciprocably mounted in said housing and being connected with said buffer plate, and means for retarding the inward movement of said plunger with relation to said housing.

5. A buffer including a buffer plate, a base plate, a housing movable relative to said base plate, means for yieldably retarding the movement of said housing with relation to said base plate, and means connecting said housing with said buffer plate.

1,193,974. NUT-LOCK. CESAR A. BASTIEN, Newport, Mich., assignor of one-half to Charles H. Barron, Newport, Mich. Filed Nov. 30, 1914. Serial No. 874,925. (Cl. 151—8.)

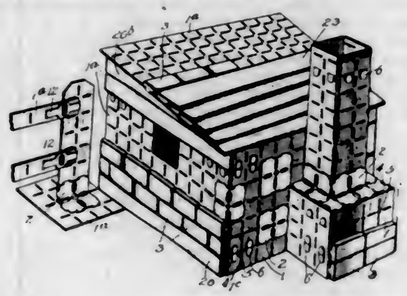


A nut lock comprising a bolt including a threaded shank having a longitudinally disposed slot extending inwardly from the threaded end thereof and terminating at its inner extremity in a depression or seat, a nut threaded on said bolt and having diametrically opposed slots, a locking pin engaged in the slot in said bolt having an inner extremity directed inwardly and engaged within said seat or depression and having a portion of the inner face at the outer end beveled, an enlargement formed opposite said beveled surface, extending longitudinally of said pin and engaged in one of the slots in said nut to lock the latter against rotation, and a head at the outer extremity of said pin engaging the outer face of said nut.

1,193,975. TOY OR THE LIKE. ROBERT F. BEARDSLEY, Chicago, Ill., assignor to Henry W. Angsten, Chicago, Ill. Filed Nov. 5, 1914. Serial No. 870,338. (Cl. 46—35.)

1. In a toy of the kind described and in combination, a plurality of sheets of suitable material, provided with suitably disposed apertures therein, means for detachably securing said parts together, as desired, comprising a plurality of fastening members, each constructed of bendable material and having parts arranged to engage the structure board in the apertures formed therein, and covering means for said structure provided with fasteners arranged to engage in said structure board slots, and clench on the opposite side thereof.

2. A structure board of the kind described, consisting of a sheet of suitable material provided with a series of regularly disposed disconnected slots therein.



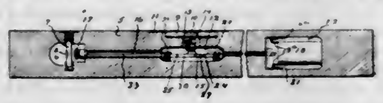
3. A structure board consisting of a sheet of suitable material of the desired thickness and size, and provided with a series of slotted apertures therethrough, extending lengthwise and transversely across the sheet.

4. A structure board consisting of a sheet of suitable material provided with a plurality of disconnected slotted apertures arranged in a series of spaced parallel lines lengthwise the sheet, with spaces between the slots in each line and a plurality of disconnected slots also arranged in series in parallel lines, and at right angles to the first mentioned slots, and in lines extending between the ends of the first mentioned slots.

5. A structure board consisting of a sheet of suitable material, said sheet substantially divided into a plurality of regular sections by a plurality of disconnected slotted apertures disposed in regular lines lengthwise and across the sheet.

[Claims 6 to 13 not printed in the Gazette.]

1,193,976. ILLUMINATED LEVEL. RAPHAEL BENNETT and ALVAH E. BLANCHARD, Presque Isle, Me. Filed Sept. 22, 1914. Serial No. 863,037. (Cl. 240—8.4.)



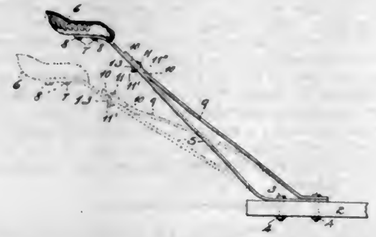
The combination with a casing having a spirit level and plumb gage therein, of a metallic member within said casing extended adjacent said level and gage, incandescent lamps engaged with and carried by said member and disposed adjacent said level and gage, a member engageable by one contact of one of the lamps, an insulated spring finger mounted in the casing, means for moving it to engage said last member, a second spring finger engageable with the first finger, means for moving it to such engagement and a source of electrical energy, a connection between said source of energy and the metallic member, a connection between said source of energy and the first named finger and a connection between the second named finger and the other of said lamps.

1,193,977. SPRING-SEAT. WILLIAM F. BERETH, Monmouth, Ill., assignor to Monmouth Plow Factory, Monmouth, Ill., a Corporation of Illinois. Filed Nov. 30, 1915. Serial No. 64,268. (Cl. 155—25.)

1. A seat support comprising a seat-supporting spring, and an auxiliary spring slidably connected thereto and in such manner that it will bow away therefrom when weight is placed on the first recited spring.

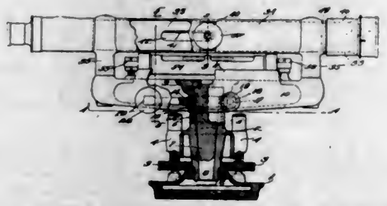
2. A seat-support comprising a seat-supporting spring, means for securing one of its ends to a relatively fixed object, an auxiliary spring, means for securing one of its ends to the same object and to the first recited spring, one of said springs provided with a slot near its other end and

the other spring with an aperture adapted to register with said slot, and a bolt movable relatively to said slot and seated in said aperture.



3. The combination with a horizontally arranged and relatively fixed support, of a seat-supporting spring having its lower end parallel therewith and its body portion divergent therefrom, a bolt, as 4, for securing the rear end of said parallel portion to the support, an auxiliary spring having its forward portion parallel with the support-paralleling portion of the seat-spring and its body portion divergent from said support but at a less degree of divergency than is the body portion of the seat-supporting spring, a bolt securing said parallel portions to each other and to said support, and means for slidably securing the body portions of said springs to each other.

1,193,978. SURVEYOR'S INSTRUMENT. LOUIS H. BERGER, Roxbury, Mass. Filed May 24, 1915. Serial No. 30,030. (Cl. 33—73.)



1. A surveyor's instrument, comprising a telescope, a hollow crossbar in alinement with said telescope and carrying supports for said telescope, a rotatable supporting post secured to the central uppermost part of the crossbar, and a surrounding bearing for said post extending within the sides of said crossbar, whereby the crossbar protects the rotatable post and bearing from dust, moisture, and injury.

2. A surveyor's instrument, comprising a telescope, a hollow crossbar carrying supports for said telescope, a rotatable supporting post secured to the central uppermost part of the crossbar, and a surrounding bearing for said post, a tangent bracket rotatably mounted on said bearing, a spindle clamp adjustably secured to said bearing and extending entirely within the sides of said hollow crossbar, whereby the crossbar protects the rotatable post and said tangent bracket from dust, moisture, and injury.

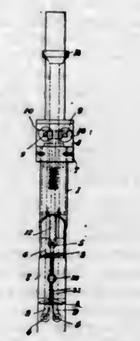
3. In a surveyor's instrument, a telescope, a hollow crossbar carrying the telescope bearings at each end of said bar, a rotatable supporting post for said crossbar and a surrounding bearing for said post, a tangent bracket rotatably mounted on said bearing, a spindle clamp adapted to be clamped to the post bearing and extending entirely between the hollow sides of the crossbar, and means to adjust the alinement of the crossbar with the tangent bracket.

4. In a surveyor's instrument, a telescope, a hollow crossbar carrying the telescope bearings at each end of said bar, a rotatable supporting post for said crossbar and a surrounding bearing for said post, a spindle clamp adapted to be clamped to the post bearing and extending entirely between the hollow sides of the crossbar, means to adjust the alinement of the crossbar with the spindle clamp, comprising a spring pressed plunger carried by the crossbar, adapted in position to bear on one side of said bracket, and an adjusting screw carried by the crossbar in position to bear on the other side of said bracket in opposition to said plunger.

5. In a surveyor's instrument, a telescope, a hollow crossbar carrying the telescope bearings at each end of said bar, a rotatable supporting post for said crossbar and a surrounding bearing for said post, a tangent bracket rotatably mounted on said bearing, a spindle clamp adapted to be clamped to the post bearing and extending entirely between the hollow sides of the crossbar, a clamping screw to bind the clamp on its bearing extending through an aperture in said crossbar, and means carried by said crossbar to adjust the alinement thereof with the tangent bracket.

[Claims 6 to 8 not printed in the Gazette.]

1,193,979. GALVANOMETER. ANDRÉ BLONDEL, Paris, France. Filed Apr. 9, 1913. Serial No. 760,082. (Cl. 171—95.)



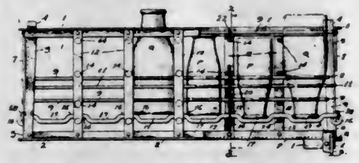
In a galvanometer or the like, the combination of a vertical support adapted to be placed in an oil box; a pair of magnetically separated pole pieces secured on the lower part of the support and providing a narrow vertical air gap between the pole pieces; a pair of bridges respectively placed at opposite ends of the air gap; a pair of terminals near one end of the air gap; a pulley at the upper end of the air gap, a rod for supporting said pulley; a looped wire having its ends secured to said terminals and its intermediate parts passed over said pulley and bridges and through the air gap; an adjusting device engaging said rod; widely separated binding screws connected to said terminals; and means for adjusting the height of the support in the oil box, said adjusting device, said means and said binding screws all being located at the upper part of the support and easily accessible when the support is in the oil box.

1,193,980. MILK-BOTTLE CASE. JOHN L. BOWEN, San Francisco, Cal. Filed Dec. 7, 1914. Serial No. 876,168. (Cl. 220—111.)

1. A milk bottle case comprising upper and lower rectangular frames, corner pieces of angle iron secured at their lower ends to the outside of the lower frame and near their upper ends to the inside of the upper frame and with their uppermost ends extending above this frame, and longitudinal and transverse elements dividing said case into cells.

2. A milk bottle case comprising an upper frame of angle iron having its inner flange vertical and its upper flange horizontal, a lower frame also of angle iron with its inner flange vertical and its lower flange horizontal, said inner flanges standing in alinement with each other, mem-

bers having their lower ends secured outside the upright flange of the lower frame, their bodies inclining inward, and their upper portions secured inside the upright flange of the upper frame, upright straps connecting said frames, and longitudinal and horizontal elements between said straps and producing cells.

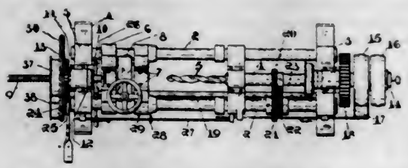


3. A milk bottle case comprising an upper rectangular frame composed of L-iron having one flange thereof extending outward and the other flange thereof extending downward; a lower rectangular frame composed of L-iron having its horizontal flange lowermost and the other flange thereof extending upward; corner angle irons having the upper ends thereof secured inside of and extending above the corners of the upper frame and the lower ends thereof secured outside of the upwardly extending flange of the lower frame; vertically disposed straps secured between the upper and lower frames and arranged at intervals around the sides and ends of the case; and longitudinal and transverse elements connecting said straps and producing compartments within the case.

4. In a milk bottle case, the combination with upper and lower frames, uprights connecting them, and longitudinal and transverse elements between the uprights and producing compartments; of bottle supports comprising wires arranged in pairs and extending across said compartment, each pair of wires having an offset seat within its compartment smaller than the size of the bottom of the bottle, but sufficiently large to receive its mouth.

5. In a milk bottle case; the combination with upper and lower frames, uprights connecting them, and longitudinal and transverse elements between the uprights and producing compartments; of horizontal straps across the endmost uprights, longitudinal wires connecting said straps and arranged in pairs passing through said compartments, each pair of wires being depressed within each compartment to produce a seat smaller than the bottom of the bottle, and transverse wires supporting said longitudinal wires between their seats.

1,193,981. POWER-DRILL. ALEXANDER GRAHAM BOYD, Toronto, Ontario, Canada. Filed Sept. 4, 1915. Serial No. 49,109. (Cl. 77—33.)

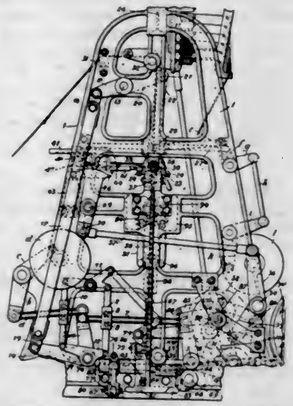


1. In a power drill the combination of a drill spindle and chuck; side bars parallel to said spindle; a work holder carriage movable on said side bars; a screw extending from said carriage; a nut through which said screw is threaded; means for holding said nut from movement longitudinally of the apparatus; and a feed shaft geared to said nut and to the drill spindle.

2. In a power drill the combination of a drill spindle and chuck; side bars parallel to said spindle; a work holder carriage movable on said side bars; a screw extending from said carriage; a nut through which said screw is threaded; means for holding said nut from movement longitudinally of the apparatus; a feed shaft geared to said nut and to the drill spindle; a clutch controlling the feed drive; a clutch shifter; and a tappet on the work holder carriage for shifting the clutch to stop the feed drive.

3. In a power drill the combination of a drill spindle and chuck; side bars parallel to said spindle; a work holder carriage movable on said side bars; a screw extending from said carriage; a nut through which said screw is threaded; means for holding said nut from movement longitudinally of the apparatus; a feed shaft geared to said nut and to the drill spindle; a belt pulley on the feed spindle; an intermediate shaft; a belt pulley thereon; a belt connecting said pulleys; a second pulley on the intermediate shaft; a pulley on the aforesaid nut; a belt connecting said pulleys; and a belt tightener, one of said belts being normally loose and adapted to be tightened by said belt tightener.

1,193,982. ATTACHMENT TO CARPET-KNOTTING MACHINES FOR SHOOTING IN THE FILLING. FERNAND BOYER, Paris, France. Filed July 22, 1915. Serial No. 41,248. (Cl. 139—66.)



1. In a carpet weaving machine in which the warps move vertically and in combination, a mechanism for forming a shed in the warps, devices for actuating the said mechanism, a reed, devices for imparting a vertical movement to said reed, guide members for the shuttle, and means for moving said guiding member for the shuttle to and from the postion in which it directs the movement of the shuttle.

2. In a machine for weaving carpets in which the warps move vertically, and in combination, parallel straight bars, guide plates fixed thereto, one of said parallel straight bars lying on one side of the warps and the other on the other side of the warps, and means for moving said parallel straight bars to position to guide the shuttle when thrown and remove said parallel straight bars from said position when the wefts are beaten to position between the warps.

3. In a machine for weaving carpets in which the warps move vertically, and in combination, a reed, devices for vertically moving said reed, movable guides for directing the path of the devices for moving said reed, and means for moving said guides into and out of their operative positions.

4. In a machine for weaving carpets in which the warps move vertically and in combination, a frame, a reed mounted in said frame, links connected to said frame, means for imparting a vertical movement to the said links so that said reed is moved correspondingly, movable guides for maintaining the said links in a predetermined path during the travel thereof, and means for moving said guides into and out of their operative positions.

5. In a machine for weaving carpets in which the warps move vertically, and in combination, a frame, a reed mounted in said frame, links connected to the said frame, means for imparting a vertical movement to the said links and consequently a corresponding movement to the said links and reed, guides for maintaining said links in a predetermined path during the travel thereof, mechanism for forming a shed in the warps, devices for actuating the said mechanism, and means for throwing a shuttle to properly place the wefts within the warps.

[Claims 6 and 7 not printed in the Gazette.]

1,193,983. PINCE-NEZ. HUGO BRINKHAUS, High Holborn, London, England. Filed Aug. 3, 1915. Serial No. 43,420. (Cl. 88—50.)



1. In a pince-nez the combination with the lenses and means connecting them, of a spring member comprising an upper curved portion arranged in a substantially horizontal plane and rearwardly and downwardly extending portions carried by the upper portion and forming plackets and operating means carried by said connecting means, adapted to move the said plackets apart against the action of the spring member.

2. In a pince-nez, the combination with the lenses and connecting means between them, of a C-shaped spring member arranged in a substantially horizontal plane and having rearwardly and downwardly extending end portions adapted to form plackets and arms having finger grips pivoted to the connecting means and connected to and carrying said plackets.

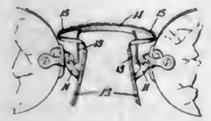
3. In a pince-nez, the combination with the lenses and a bridge piece connecting them, of a spring member arranged substantially in a horizontal plane and of approximately C-shape as seen in plan, and having rearwardly and downwardly extending portions forming plackets and placket-carrying arms pivoted to said bridge piece and connected to said plackets.

4. In a pince-nez, the combination with the lenses and a bridge piece connecting them and having a horizontal portion, of a spring member arranged in a substantially horizontal plane and of C-shape as seen in plan, the forward portion of said spring member being arranged in front of said bridge piece and the rear portions of said spring member being connected to rearwardly and downwardly extending portions forming plackets and placket carrying arms pivoted to the bridge piece and connected to and carrying said plackets.

5. In a pince-nez, the combination with the lenses of a bridge piece comprising a horizontal member and downwardly extending side member connected to the lenses, a spring member of C shape arranged substantially horizontally with its forward portion in front of the horizontal portion of the brige piece, plackets connected to the rear end portions of said spring member and placket carrying arms pivoted to the horizontal portion of said bridge piece near to the ends thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,193,984. EYEGLASSES. HUGO BRINKHAUS, Brooklyn, N. Y. Filed Feb. 29, 1916. Serial No. 81,103. (Cl. 88—50.)



1. In a pince-nez, the combination with the lenses, of a lens-supporting spring member comprising an upper curved portion arranged in a substantially horizontal plane and rearwardly and downwardly extending portions carried by the upper portion and forming plackets, and operating means carried by the spring member and adapted to move the plackets apart against the action of the spring member.

2. In a pince-nez, the combination of a lens-supporting spring member comprising a portion arranged substantially horizontally and forming a bridge and rearwardly and downwardly curved end portions, plackets extending downwardly from the ends of the end portions of the spring member, and placket-operating lever arms adapted to move the plackets apart against the tension of the spring member.

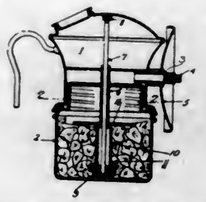
3. In a pince-nez, the combination of a spring member comprising a portion arranged substantially horizontally and forming a bridge, lens supports extending downwardly from the ends of the bridge portion, the spring member having rearwardly and downwardly curved end portions extending beyond the lens supports, plackets extending downwardly from the ends of said end portions of the spring member, and placket-operating lever arms adapted to move the plackets apart against the tension of the spring member.

4. In a pince-nez, the combination of a spring member comprising a portion arranged substantially horizontally and forming a bridge, lens supports extending downwardly from the ends of the bridge portion, the spring member having rearwardly and downwardly curved end portions extending beyond the lens supports, plackets extending downwardly from the ends of said end portions of the spring member, and placket-operating lever arms fulcrumed on the spring member at the ends of the bridge portion thereof and connected to the upper ends of the plackets for moving the plackets apart against the tension of the spring member.

5. In a pince-nez, the combination of a lens-supporting spring member comprising a stiffened portion arranged substantially horizontally and forming a bridge and flexible rearwardly curved end portions turned downwardly, plackets extending downwardly from the downwardly turned end portions of the spring member, and placket-operating lever arms adapted to move the plackets apart against the tension of the spring member.

[Claims 6 to 9 not printed in the Gazette.]

1,193,985. ACETYLENE-LAMP. JOHN M. BROCK, Brooklyn, N. Y. Filed June 3, 1915. Serial No. 31,836. (Cl. 48—29.)



1. In an acetylene lamp, the combination with a water reservoir, a carbid receptacle, and a water supply tube arranged to conduct water from the water receptacle to the carbid receptacle, of a rod extending through the water-supply tube and provided with a head arranged to be embedded in the carbid below the end of the water-supply tube, a telescopic tube surrounding the rod, and means actuated by the expansion of the carbid and arranged to move the telescopic tube with relation to the carbid as the latter expands.

2. In an acetylene lamp, the combination, with a water-reservoir, a carbid receptacle, and a water-supply tube arranged to conduct water from the water receptacle to the carbid receptacle, of a restricting rod extending through the water-supply tube and arranged to predetermine the maximum flow of water therethrough, said rod having a head arranged to be embedded in the carbid below the end of the water-supply tube, a telescopic tube surrounding the rod and movable with relation to the water-supply tube, said head limiting the downward movement of the telescopic tube, and means resting on the carbid and arranged to be lifted by the expansion of the carbid, said means being attached to the telescopic tube.

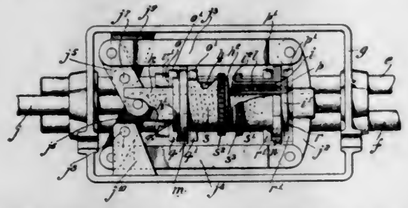
3. In an acetylene lamp, the combination, with a water-reservoir, a carbid-receptacle, and a water-supply tube arranged to conduct water from the water receptacle to the carbid receptacle, of a rod extending through the water-supply tube and provided with a head tapering downward and arranged to be embedded in the carbid, a telescopic tube surrounding the rod and having an open lower end arranged to contact with the upper surface of the rod head, said telescopic tube having an outward extending enlargement for engaging the carbid, and means actuated by the expansion of the carbid for moving the telescopic tube relative to the carbid in the recpetacle.

4. In an acetylene lamp, the combination, with a water-reservoir, a carbid receptacle, and a water-supply tube arranged to conduct water from the water-receptacle to the carbid receptacle, of a rod extending through the water-supply tube and provided with a head arranged to be embedded in the carbid, a telescopic tube surrounding the rod and having an open lower end and an opening in its wall near its upper end, and means resting on the carbid and arranged to be lifted by the expansion of said carbid, said means being attached to the telescopic tube.

5. In an acetylene lamp, the combination, with a water-reservoir, a carbid-receptacle, a water-supply tube arranged to conduct water from the water-receptacle to the carbid-receptacle, a stationary nut secured to the water receptacle and a rod screwed into the said nut and extending through the water-supply tube and arranged to be embedded in the carbid, said rod being provided with a head below the end of the water-supply tube, of a telescopic tube surrounding the rod and arranged to be embedded in the carbid, said telescopic tube having an open lower end and an opening in its wall near its upper end, and means actuated by the expansion of the carbid and arranged to move the telescopic tube.

[Claims 6 and 7 not printed in the Gazette.]

1,193,986. SHIFTING MECHANISM FOR VARIABLE-SPEED GEARING. GEORGE W. BUNGAY, New York, N. Y., assignor to Bungay Mfg. Company, a Corporation of New York. Filed Aug. 22, 1913. Serial No. 786,057. (Cl. 74—58.)



1. A shifting mechanism for variable speed gearing embodying therein an engine clutch, means operative to set and release said clutch, a shifting rod adapted to impart variable movement to a movable member of a transmission gear system, actuating means having a normal tendency to move said rod, connections between said means and the means operative to set and release the engine clutch, whereby said means are permitted to operate when the clutch is set and are restored to normal when the clutch is released, selectively operative means whereby the operative effect of said actuating means upon said rod may be predetermined, and a controller for operating said last named means.

2. A shifting mechanism for variable speed gearing embodying therein an engine clutch, means operative to set and release said clutch, a shifting rod adapted to impart variable movement to a movable member of a transmission gear system, actuating means having a normal tendency to move said rod, connections between said means and the means operative to set and release the engine clutch, whereby said means are permitted to operate when the clutch is set and are restored to normal when the clutch is released, means whereby the movements of said actuating means are timed with relation to the movements of said means for controlling said clutch, whereby said actuating means are inoperative to move said rod while the clutch is set, selectively operative means whereby the operative effect of said actuating means upon said rod may be predetermined, means independent of said connections whereby said actuating means may be made inoperative, or held in a neutral position, and a controller for operating said selectively operative means.

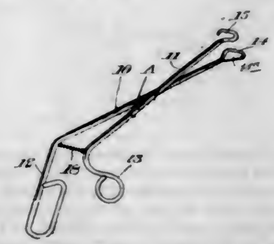
3. A shifting mechanism for variable speed gearing embodying therein an engine clutch, means operative to set and release said clutch, a shifting rod adapted to impart variable movement to a movable member of a transmission gear system, actuating means having a normal tendency to move said rod, connections between said means and the means operative to set and release the engine clutch, whereby said means are permitted to operate when the clutch is set and are restored to normal when the clutch is released, selectively operative means whereby the operative effect of said actuating means upon said rod may be predetermined, means independent of said connections whereby said actuating means may be made inoperative, or held in a neutral position, and a controller for operating said selectively operative means.

4. A shifting mechanism for variable speed gearing embodying therein an engine clutch, means operative to set and release said clutch, a shifting rod adapted to impart variable movement to a movable member of a transmission gear system, actuating means having a normal tendency to move said rod, connections between said means and the means operative to set and release the engine clutch, whereby said means are permitted to operate when the clutch is set and are restored to normal when the clutch is released, means whereby the movements of said actuating means are timed with relation to the movements of said means for controlling said clutch, whereby said actuating means are inoperative to move said rod while the clutch is set, selectively operative means whereby the operative effect of said actuating means upon said rod may be predetermined, means independent of said connections whereby said actuating means may be made inoperative, or held in a neutral position, and a controller for operating said selectively operative means.

5. A shifting mechanism for variable speed gearing embodying therein an engine clutch, means operative to set and release said clutch, a plurality of shifting rods adapted respectively to impart variable movement to movable members of a transmission gear system, actuating means having a normal tendency to move both of said rods, connections between said means and the means operative to set and release the engine clutch, whereby said means are permitted to operate when the clutch is set and are restored to normal when said clutch is released, selectively operative means common to both of said rods, whereby the operative effect of said actuating means upon said rods may be predetermined, a controller for said last named means, and means carried by said rods respectively and adapted to be acted upon by said selectively operative means whereby said rods respectively may be moved in either direction under the control of said selectively operative means.

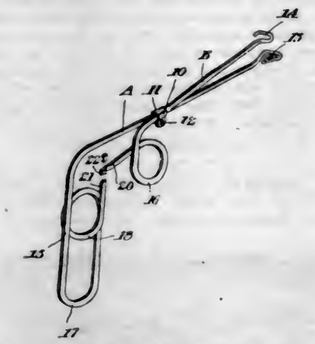
[Claims 6 to 26 not printed in the Gazette.]

1,193,987. CAPONIZING-TOOL. SCOTT K. BURDIN, Ottawa, Ontario, Canada. Filed Mar. 23, 1915. Serial No. 16,427. (Cl. 128—27.)



A caponizing tool comprising a lever having an offset handle portion adapted to be engaged by a plurality of the operator's fingers, and having also a hook shaped end with a pan below the same, and a second lever fulcrumed to the first and being formed with an offset finger grip, and having the end shaped to coöperate with the end of the other lever for use in caponizing.

1,193,988. CAPONIZING INSTRUMENT. SCOTT K. BURDIN, Ottawa, Ontario, Canada. Filed Aug. 20, 1915. Serial No. 46,452. (Cl. 128—27.)



1. A caponizing instrument comprising a pair of pivoted levers having gripping means on one end, finger or thumb grips on the opposite end including a pan on one lever and a hook shaped end on the other lever, and means for interlocking the levers when the gripping means have been engaged.

2. A caponizing instrument comprising a pair of resilient levers adapted to automatically interlock when the gripping operation is completed, a pan on the end of one lever and a hook formed on the end of the other lever and coöperative with the pan.

3. A caponizing instrument comprising a pair of levers, means for pivoting the same intermediate of their length, gripping parts formed on the outer ends of the levers, grips formed on the inner ends of said levers, one of said grips comprising an eye and the other comprising a U-shaped bend with an eye thereon.

4. A caponizing instrument comprising a pair of levers, means for pivoting the same intermediate of their length, gripping parts formed on the outer ends of the levers, grips formed on the inner ends of said levers, one of said grips comprising an eye and the other comprising a U-shaped bend with an eye thereon, and means for interlocking the levers.

5. A caponizing instrument comprising a pair of operating levers, one of which has a hook-shaped end, and the other of which has a pan formed by spirally winding the end.

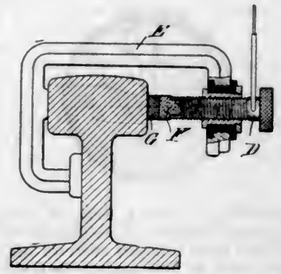
[Claim 6 not printed in the Gazette.]

1,193,989. ELECTRODE FOR WELDING, BRAZING, SOLDERING, OR THE LIKE. CHARLES L. CADLE, Rochester, N. Y. Filed Feb. 25, 1915. Serial No. 10,587. (Cl. 219—4.)

1. The combination with a high tension conductor, of an electrode for welding, brazing or soldering adapted to receive a high voltage current directly from the conductor and comprising a solid body composed in part of carborundum.

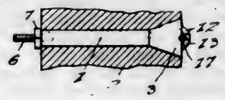
2. The combination with a high tension conductor, of an electrode for welding, brazing or soldering adapted to receive a current of high voltage directly from said conductor and comprising a solid body composed of a large proportion of carborundum combined with carbon and a binding medium.

3. The combination with a high tension conductor, of an electrode for welding, brazing or soldering adapted to receive a current of high voltage directly from the conductor and comprising a solid body characterized by a high resistance at the welding point.



4. An electrode for welding, brazing or soldering by contact with the work composed of a relatively high resistance material of such character that it can be heated to an incandescent state when connected directly to a conductor of relatively high voltage current without interposing a current increasing element.

1,193,990. WIRE-FASTENER FOR FENCE-POSTS. GLEN I. CHASE, Ishpeming, Mich. Filed June 29, 1915 Serial No. 37,060. (Cl. 256—50.)



A wire fastener of the class described, comprising a tubular sleeve, said sleeve having an outwardly diverging flaring mouth at one end thereof, a tensioning stem slidably arranged for longitudinal movement in said tubular casing, the inner end of said stem bifurcated to form arms, a pair of jaws pivotally connected at their inner ends between the arms of the stem, one of said jaws provided with a pair of curved bills, the opposite bill of the adjacent jaw adapted to be caught between said spaced bills of the opposite jaw, and a spring coiled around the pivot of the jaws, its opposite free ends engaging the inner faces of the jaws normally forcing the same outward from one another, and means upon the opposite end of said stem for drawing the same inwardly causing the outer faces of the jaws to engage the inner faces of the casing and clamping a wire there between.

1,193,991. RUBBER TOP. FRANK A. CIGOL, Little Falls, N. J. Filed Mar. 23, 1916. Serial No. 86,186. (Cl. 46—32.)

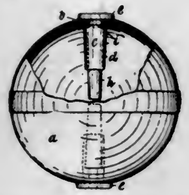


1. A spinning top comprising a hollow elastic rubber body formed with an aperture therein and a spinning-point member fitted into said aperture, and extending short of a point in said body diametrically opposite said aperture.

2. A spinning top comprising a hollow elastic rubber sphere and opposite spinning-point members secured in the wall of the sphere.

3. A spinning top comprising a hollow elastic rubber sphere and opposite spinning-point members secured in the wall of the sphere, the sphere being grooved exteriorly in planes crossing the axis of said spinning-point members.

1,193,992. MUSICAL RUBBER BALL. FRANK A. CIGOL, Little Falls, N. J. Filed Mar. 23, 1916. Serial No. 86,137. (Cl. 46—46.)

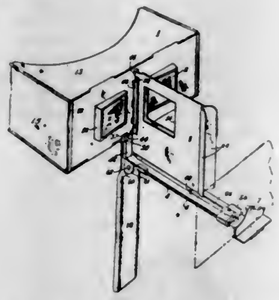


1. In combination, a hollow body of elastic material having an aperture therein, an elastic tubulure including a cylindrical part fitted into said aperture and an exterior flange on said part to bear against the outside of said body, and an expanding member for the cylindrical part arranged in and holding the portion thereof within said body expanded to a diameter exceeding that of the aperture.

2. In combination, a hollow body of elastic material having an aperture therein, an elastic tubulure including a cylindrical part fitted into said aperture and an exterior flange on said part to bear against the outside of said body, and a tube for the cylindrical part arranged in and holding the portion thereof within said body expanded to a diameter exceeding that of the aperture.

3. In combination, a hollow body of elastic material having an aperture therein, an elastic tubulure including a cylindrical part fitted into said aperture and an exterior flange on said part to bear against the outside of said body, and a musical device for the cylindrical part arranged in and holding the portion thereof within said body expanded to a diameter exceeding that of the aperture.

1,193,993. STEREOSCOPE. HARRY N. CLARKE, Cleveland, Ohio, assignor to The Corte-Scope Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 9, 1915. Serial No. 65,873. (Cl. 88—29.)



1. In a folding stereoscope, the combination with a shaft, of a hood carried at the rear end of the shaft, a pivoted handle, and means carried by the handle for detachably engaging the hood to hold the handle in its extended position.

2. In a folding stereoscope, the combination with a shaft, of a hood movably carried at the rear end of the shaft, a handle pivoted to the shaft and adapted to depend therefrom, and means carried by the handle for detachably engaging the hood to hold the handle in its extended position.

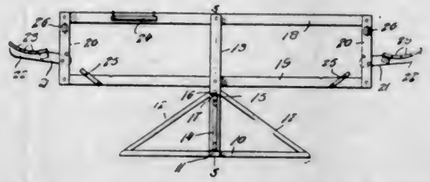
3. In a folding stereoscope, the combination with a shaft, of a hood adapted to swing about an axis of the rear of the shaft, a handle pivoted to the shaft and adapted to fold closely along the shaft or stand in operative position projecting away from the same, and an extension carried by the handle adapted to removably engage the hood to hold the handle in its latter position.

4. In a folding stereoscope, the combination with a shaft, of a hood, means for carrying the hood at the rear of the shaft and permitting relative vertical movement of the same, a handle pivoted at the rear of the shaft adapted to lie closely along the shaft or stand at an angle thereto, an upward extension rigid with the handle and means on the hood for engaging said extension when the hood is extended and in its lower position.

5. In a folding stereoscope, the combination with a shaft, of a hood, means for carrying the hood at the rear of the shaft and permitting relative vertical movement of the same, a handle pivoted at the rear of the shaft adapted to lie along the shaft beneath the same or stand substantially at right angles thereto, an upwardly extending finger rigid with the handle, said hood having an opening for engaging said finger.

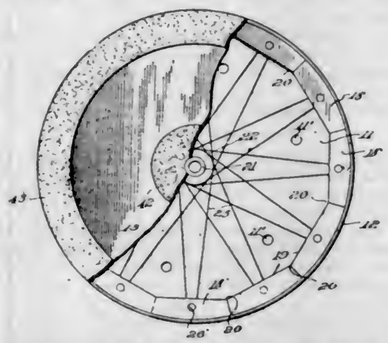
[Claims 6 to 14 not printed in the Gazette.]

1,193,994. SEESAW. JAMES M. CLAYTON, Iola, Kans. Filed Oct. 21, 1914, Serial No. 867,863. Renewed Mar. 16, 1916. Serial No. 84,700. (Cl. 46—22.)



A see-saw comprising a base including a strip, a standard mounted on the center of said strip, laterally extending members, hinged to the lower end of the standard at opposite sides thereof, rigid braces secured to the ends of the strip and to the support, braces hinged to the lateral members and detachably secured to the standard, a pair of horizontal and superposed parallel rocking beams mounted on the standard, link members pivotally connected to the ends of the beams and spacing said beams apart, adjustable footrests carried by one of the beams, seats secured to the connecting links, and a shiftable weight carried between the upper beam of one side of the pivot thereof.

1,193,995. RESONANT BODY. JAMES H. COLLINS, Harrisburg, Pa. Filed July 15, 1915. Serial No. 39,952. (Cl. 274—39.)



1. A resonant record support for sound reproducing machines, comprising a tensioned vibratory member operative to be set into vibration by a record adjacent thereto.

2. A resonant record support for sound reproducing machines, comprising a tensioned vibratory member operative to be set into vibration by physical connection with a record upon the support.

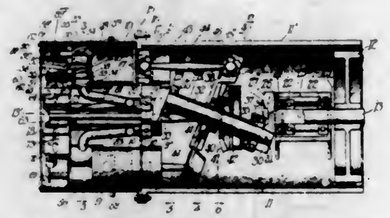
3. A resonant record support for sound reproducing machines, comprising a hollow casing, and a tuned string mounted therein, and operative to be set into vibration by a record disk through the medium of said casing.

4. A record support, comprising spaced walls one of which is adapted to support a record, a rim inclosing the space between said walls, and a tunnel string supported by said rim and operative to vibrate in sympathy with certain periods of vibration of said record, when the same is in cooperation with a stylus.

5. A record support, comprising spaced resonant walls one of which is adapted to support a record, a rim including the space between said walls, a bridge within said inclosure, and a vibratory member supported by said rim and in contact with said bridge, and operative to vibrate in sympathy with certain periods of vibration of said record, when the same is in coöperation with a stylus.

[Claims 6 to 23 not printed in the Gazette.]

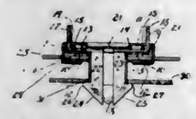
1,193,996. MOTOR. HUGO COOK, Dayton, Ohio. Filed Nov. 3, 1910. Serial No. 590,484. (Cl. 121—25.)



1. In a device of the class described, the combination of a rotary shaft having coaxial end sections and an inclined intermediate section, crank arms connecting said intermediate section with the respective end sections, a series of motors arranged about and substantially parallel to said shaft, a lever member rotatably mounted upon the intermediate section of the shaft, a concentric rack upon the lever member, a stationary annular rack with which the concentric rack upon the lever member engages and connections between the motors and the lever member.

2. In a device of the class described, a rotary shaft comprising end bearing portions and an intermediate inclined portion, arms connecting the ends of the inclined portions to the respective end bearings, a spider mounted midway between the ends of the inclined portion of the shaft and sleeve thereon, end bearings between said sleeve and the shaft, a thrust bearing at one end of said sleeve and between the same and the adjacent arm, a stationary annular rack, a rack formed upon the spider and engaging said stationary rack, a series of motors arranged about and substantially parallel to said shaft and connected to said spider.

1,193,997. CURTAIN-FASTENER. CHARLES M. A. COSTELLO, New Haven, Conn., assignor to C. Cowles & Co., New Haven, Conn., a Corporation. Filed May 26, 1916. Serial No. 100,029. (Cl. 24—211.)

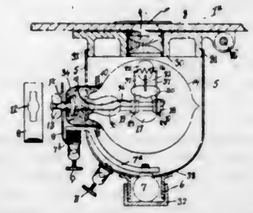


1. A curtain fastener comprising a hollow post, a back in which the post is mounted, hooks extending through the post and projecting beyond the side walls at the outer end thereof, and means for retracting said hooks.

2. A curtain fastener comprising a hollow post formed at its outer end with a slot, a disk at the inner end of said post, a cup-shaped back inclosing said disk, plates located between the disk and back, said plates formed with outwardly projecting hooks which extend through the slot in the outer end of the post, means for normally separating said plates, and means for moving said plates to retract the said hooks.

3. A curtain fastener comprising a hollow post pointed at its outer end and the outer end formed with a transverse slot, a flanged disk around the inner end of the post, a cup-shaped back inclosing said disk, said back formed with prongs adapted to be folded over the face of said disk, said back also formed with fingers, plates located between the back and disk, the adjacent faces of the plates notched and each formed with a hook projecting outward through the slot in the end of the post, said plates each provided with a finger-piece, a spring the ends of which engage with said plates and normally tending to separate said hooks, said finger-pieces projecting outward through said back, combined with a curtain through which the post extends, the said fingers being adapted to be turned down over said curtain, whereby the fastening device is secured thereto.

1,193,998. PROJECTION APPARATUS. CASIMIR DE PROSZYNSKI, London, England. Filed July 20, 1912. Serial No. 710,617. (Cl. 88—24.)



1. An incandescent electric lamp for optical projection apparatus having a filament closer to one portion of the bulb than any other portion thereof, mechanical means for shifting the filament relative to the bulb and thereby causing the accumulation of deposit from the filament to take place successively on different places of said bulb while maintaining the filament body incandescent; substantially as described.

2. An incandescent electric lamp having a transparent wall and a filament closer to one portion of the wall than another portion thereof, mechanical means for shifting one element relative to the other and thereby causing the accumulation of deposit from the filament to take place successively on different places on said wall without changing the position of the filament, substantially as described.

3. An incandescent electric lamp for optical projection apparatus having a filament and a transparent body in which the deposit from the filament has a tendency to accumulate on a restricted portion of the transparent body through which the light first passes, said filament being closer to one portion of the transparent body than another portion thereof, mechanical means for shifting one element relative to the other and thereby causing the accumulation to take place successively on different places of said body while maintaining the filament stationary, substantially as described.

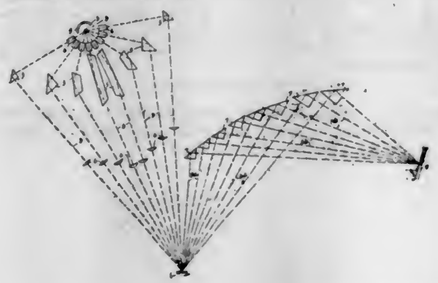
4. An incandescent electric lamp for optical projection apparatus having a filament and a transparent body in which the deposit from the filament has the tendency to accumulate on a restricted portion of the transparent body through which the light first passes, said filament being closer to one portion of the transparent body than another portion thereof, mechanical means for shifting one element relative to the other and thereby causing the accumulation to take place successively on different places of said body while maintaining the filament in the same position and incandescent, substantially as described.

5. An optical projection apparatus for cinematographs, having an incandescent electric lamp for illuminating the picture, said lamp having a filament and a transparent body in which the deposit from the filament has the tendency to accumulate on a restricted portion of the

transparent body through which the light first passes before reaching the picture, said filament being closer to one portion of the transparent body than another portion thereof, means for moving the said transparent body relative to the filament so as to bring fresh portions of the same between the filament and the picture, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,193,999. METHOD OF AND APPARATUS FOR TRANSFORMING MOTION INTO ELECTRICAL WAVES OR IMPULSES. THOMAS BULLITT DIXON, New York, N. Y. Filed July 19, 1915. Serial No. 40,694. (Cl. 178—88.)



1. The herein described method of transforming motion into electrical waves or impulses, which comprises concentrating a plurality of separate pencils of radiant energy at a definite point, and permitting them to diverge from such point of concentration, and thereafter concentrating said pencils of radiant energy upon one or more radio-electro-sensitive devices, and by acting upon such pencils of radiant energy at their point of first concentration causing variation of the action of said pencils of radiant energy upon said radio-electro-sensitive device or devices, and consequent variation of an electric current or currents in a circuit or circuits containing such radio-electro-sensitive device or devices.

2. The herein described method of transforming motion into electrical waves or impulses, which comprises concentrating a plurality of separate pencils of light at a definite point and reflecting them divergently relatively to one another, from such point of concentration, and thereafter concentrating such pencils of light upon one or more radio-electro-sensitive devices, and by varying the angle of reflection of said pencils of light at said first point of concentration causing motion of said pencils of light across the surface of said radio-electro-sensitive device or devices, and thereby causing consequent variation of an electric current or currents in a circuit or circuits containing said radio-electro-sensitive device or devices.

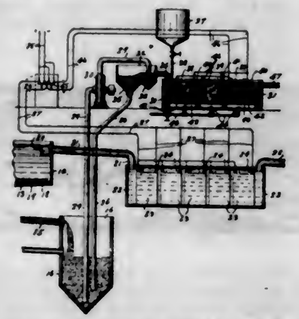
3. The herein described method of transforming motion into electrical waves or impulses, which comprises deriving a plurality of separate pencils of light from different portions of the sphere of illumination of an illuminant, concentrating such pencils of light at a definite point and reflecting them divergently, relatively to one another, from such point of concentration, and thereafter concentrating such pencils of light upon one or more radio-electro-sensitive devices, and by varying the angle of reflection of said pencils of light at said first point of concentration causing motion of said pencils of light across the surface of said radio-electro-sensitive device or devices, and thereby causing consequent variation of an electric current or currents in a circuit or circuits containing said radio-electro-sensitive device or devices.

4. The combination with a source of radiant energy, a primary actuating device, means for concentrating a plurality of separate pencils of radiant energy from that source upon such primary actuating device, such primary actuating device adapted to permit the said pencils of radiant energy to pass from it, and to be varied by it, and means for concentrating upon one or more radio-electro-sensitive devices the said pencils of radiant energy after they have passed from such primary actuating device.

5. The combination with a source of illumination, a primary actuating device, means for concentrating a plurality of separate pencils of light from that source of illumination upon such primary actuating device, said primary actuating device adapted to permit the pencils of light to pass from it, and be deflected variably by it, and means for concentrating upon one or more radio-electro-sensitive devices the said pencils of light after they have passed from said primary actuating device.

[Claims 6 to 14 not printed in the Gazette.]

1,194,000. METHOD OF PURIFYING SEWAGE AND THE LIKE. DANIEL T. DOBYNS and JAMES K. ELDERKIN, Jr., Newark, N. J., assignors to Clark Process Corporation, a Corporation of Delaware. Filed Dec. 22, 1915. Serial No. 68,138. (Cl. 204—25.)



1. The process of purifying sewage which consists in substantially removing the solids in suspension from the liquid of the sewage, then subjecting the liquid of the sewage to electrolytic oxidation, and collecting the removed solids in a separate mass, then subjecting the separated mass to independent electrolytic oxidation.

2. The process of purifying sewage which consists in separating the liquid from the solids, adding to the separated solids a chemical which will develop under electrolytic activity a germicide, and subjecting said solids with the added chemical to electrolysis to create in the presence of said solids a chemical which reacts on the water content of the solids to produce a germicide in the form of nascent oxygen.

3. The process of purifying sewage which consists in substantially separating from the water solids, bacteria and matter in solution by chemical precipitation, then subjecting the products of said separation to independent electrolytic activity.

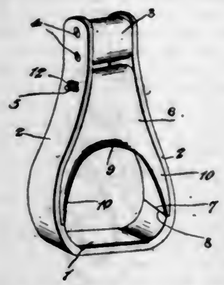
4. The process of purifying sewage which consists in separating the liquid from the solids, subjecting said separated solids to electrolysis to create in the presence thereof, nascent oxygen.

5. The process of purifying sewage which consists in substantially removing the solids in suspension from the liquid of the sewage, then subjecting the liquid of the sewage to intimate contact and mixture with nascent oxygen produced by electrolysis, collecting the removed solids in a separate mass, mixing therewith a chemical which under electrolytic reactions will produce a germicide, and then subjecting said mass of combined solids and chemical to independent electrolytic activity to produce in the presence of said solids both a germicide and nascent oxygen.

[Claims 6 to 11 not printed in the Gazette.]

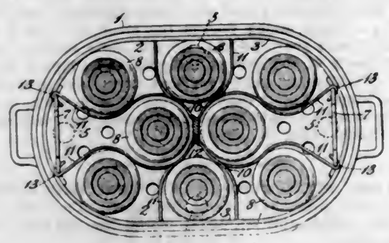
1,194,001. SAFETY-STIRRUP. SAMUEL ESTRIKEN, Springville, Cal. Filed Jan. 9, 1915. Serial No. 1,405. (Cl. 54—49.)

A stirrup comprising a foot rest, side members, and a guard pivoted between said side members near the upper end and to one side of the center of said side members for normally holding the guard in operative position, the outer faces of said guard being of the same contour as the inner faces of the side members, the lower ends of said guards being inclined, inclined shoulders extending trans-



versely across the inner faces of said side members adjacent the foot rest adapted to receive the inclined ends of said guards thereby forming a smooth inner surface for the stirrup, said inclined shoulder also limiting the movement of the guard in one direction.

1,194,002. PRESERVING VESSEL OR BOILER FOR FRUIT, &c. OLIVER M. FAGLEY, Philadelphia, Pa. Filed Oct. 29, 1915. Serial No. 58,591. (Cl. 53—1.)



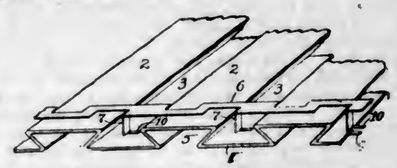
1. In a boiler of the character stated, a receptacle embracing rack formed of arms extending in longitudinal and transverse directions forming pockets, said arms meeting centrally of the rack and being united thereat, and hooks on certain of said arms continuities of the same, and a receptacle supporting tray, the latter having rising therefrom handles with which said hooks may be connected.

2. In a boiler of the character stated, a receptacle supporting tray, the same having handles rising therefrom, a pocketed rack adapted to be placed above said tray and embrace the receptacle and being formed of arms extending in longitudinal and transverse directions, means for uniting said arms at the center of the rack, and hooks on certain of said arms, the same being adapted to be connected with said handles.

3. In a preserving vessel of the character stated, a handled tray adapted to rest on the bottom of said vessel, and a rack on said tray, said rack being formed of a series of united crossed arms diverging from the center of the rack to the sides and ends thereof, the terminals of parts of the opposite arms having thereon hooks which are adapted to be connected with the handles of the tray, said handles rising from the tray.

1,194,003. LATH-BOARD. SILAS M. FORD, St. Paul, Minn. Filed Mar. 24, 1916. Serial No. 86,411. (Cl. 20—13.)

1. A lath-board comprising a sheet of flexible material corrugated to form interspaced lath projections and intermediate depressions, strips arranged transversely of the projections, and struts securing the strips to the board at intervals, said struts extending down through the bottom portions of the board and being formed with lateral shoulders in position to bear against the upper face of said bottom board portion whereby to form struts between said strips and said board portions.

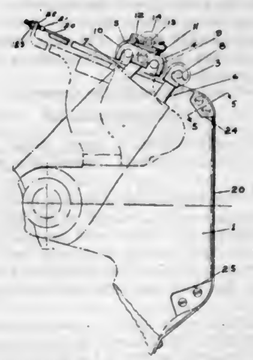


2. A lath-board comprising a sheet of flexible material corrugated to form keyed-lath shaped projections and intermediate depressions, strips arranged transversely of the projections, and struts securing the strips to the board at intervals, said struts extending down at the side edges of the projections and through the board portions at the bottom of the depressions, and being formed with lateral shoulders in position to bear against the upper faces of said bottom board portions.

3. A lath-board comprising a sheet of flexible material corrugated to form interspaced lath projections and intermediate depressions, sheet metal strips supported upon, and extending transversely across, the faces of the projections, and struts carried by the strips at intervals, said struts extending down into the depressions and through the board portions at the bottoms thereof, said struts being formed intermediate their length with lateral shoulders in position to bear against the upper faces of said bottom board portions.

4. A lath-board comprising a sheet of flexible material corrugated to form keyed-lath shaped projections and intermediate depressions, said projections having inwardly inclined sides, sheet metal strips supported upon, and extending transversely across, the faces of the projections, and struts carried by the strips at intervals, said struts extending down adjacent the side edges of the projections into the depressions between them and through the board portions at the bottom of the depressions, said struts being formed with lateral shoulders in position to bear against the upper faces of said bottom board portions.

1,194,004. INKING DEVICE FOR PRINTING-PRESSES. DAVID W. FRACKELTON, Cleveland, RALPH S. TYLER, Cleveland Heights, and WILLIAM M. REICHART, Cleveland, Ohio, assignors to The Chandler & Price Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 29, 1915. Serial No. 5,163. (Cl. 101—79.)



1. In a platen printing press, the combination with the bed and angularly related inking disk; of an inking roller adapted to be moved across and in contact with said bed

and disk; a distributing roller mounted so as to rotate in contact with said inking roller as the latter is thus moved; a pulley connected with said distributing roller; and a belt relatively fixedly attached at its ends and intermediately supported so as to have one portion lie parallel with the bed and another angularly related portion parallel with the disk, said belt passing over said pulley so as to positively drive the same and said distributing roller.

2. In a platen printing press, the combination with the bed and angularly related inking disk; of an inking roller adapted to be moved across and in contact with said bed and said disk; a distributing roller mounted so as to rotate in contact with said inking roller as the latter is thus moved; a pulley connected with said distributing roller; a belt relatively fixedly attached at its ends and intermediately supported so as to have one portion lie parallel with the bed and another angularly related portion parallel with the disk, said belt passing over said pulley so as to positively drive the same and said distributing roller; and means for adjusting the tension of said belt.

3. In a platen printing press, the combination with the bed and angularly related inking disk; of an inking roller adapted to be moved across and in contact with said bed and disk; a distributing roller mounted so as to rotate in contact with said inking roller as the latter is thus moved; a pulley connected with said distributing roller; a belt relatively fixedly attached at its ends and intermediately supported so as to have one portion lie parallel with the bed and another angularly related portion parallel with the disk, said belt passing over said pulley so as to drive the same and said distributing roller; and means coöperating with the latter to reciprocate the same longitudinally of its axis as it is thus driven.

4. In a platen printing press, the combination with the bed and angularly related inking disk; of an inking roller adapted to be moved across and in contact with said bed and disk; a distributing roller mounted so as to rotate in contact with said inking roller as the latter is thus moved; a pulley connected with said distributing roller; a belt relatively fixedly attached at its ends and intermediately supported so as to have one portion lie parallel with the bed and another angularly related portion parallel with the disk, said belt passing over said pulley so as to drive the same and said distributing roller; and means coöperating with the latter to reciprocate the same longitudinally of its axis as it is thus driven, said means including an endless, reverse screw-thread on said roller and a relatively stationary member engaging such thread.

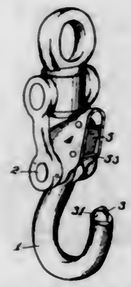
5. In a platen press, the combination with the bed and an inking disk; of an inking roller adapted to be moved across and in contact with said bed and disk; a distributing roller mounted so as to rotate in contact with said inking roller as the latter is thus moved; a pulley connected with said distributing roller; an idler pulley rotatable about the axis of said inking roller; and a belt supported so as to lie parallel with the path of travel of said rollers and passing under said idler pulley and over the pulley connected with said distributing roller, so as to positively drive the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,194,005. SAFETY-HOOK. OTTO FROM, Rochester, Wash. Filed Aug. 23, 1915. Serial No. 46,824. (Cl. 24—241.)

1. A safety hook comprising a hook and a guard member having a common pivot, the tip of said hook having a notch facing toward the pivot, said guard member being recessed and receiving the tip of the hook, a catch slidable in said recess toward and from the pivot transversely of the axis of the pull, and adapted to engage in said notch.

2. A safety hook comprising a hook, a guard member and a pivot common to both, the hook having a tip section reduced on its outer and side faces and having a notch at its inner side having its face nearest the throat of the hook lying in a plane which extends crosswise the throat opening, the guard member being recessed and receiving the tip of the hook, and a catch mounted in the recess of the guard member to reciprocate crosswise the throat and having a surface complemental to and engaging said side face of the notch in the hook tip to prevent swinging open of the guard.



3. A safety hook comprising a hook, a guard member formed of a plate bent in a substantially U shape, a common pivot for said guard and hook, the tip of said hook having a notch facing toward the pivot, a catch in the recess of said guard slidable toward and from said pivot transversely of the axis of pull, and adapted to engage in said notch, guides for said catch and a spring secured to said guard and bearing upon said catch to hold said catch in locked position.

4. A safety hook comprising a hook, a guard member formed of a plate bent in a substantially U shape, a common pivot for said guard and hook, the tip of said hook having a notch facing toward the pivot, a catch in the recess of said guard slidable toward and from said pivot transversely of the axis of the pull, and adapted to engage in said notch, guides for said catch, said guides acting as stops to limit the movement of said catch, and a spring secured to said guard and bearing upon said catch to hold said catch in locked position.

1,194,006. STUMP-JUMP CULTIVATING IMPLEMENT. RICHARD JOHN FRY, North Melbourne, Victoria, Australia. Filed July 27, 1914. Serial No. 853,307. (Cl. 97—11.)



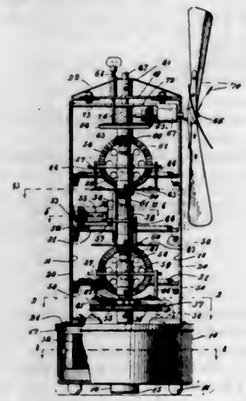
1. A stump jump mechanism for plows and like cultivating implements comprising a beam pivoted at its forward end, an implement frame to which said beam is pivoted, a tilling member fitted to said beam at its free end, a roller mounted near the free end of said beam, a curved lever having its forward end pivotally mounted between the pivot points of the said beam and said roller on said beam, the pivot of said curved lever being horizontal, a coiled torsional spring fitting around said spindle and having one end arranged to bear downwardly on the curved lever, and a pressure adjusting device on the opposite end of said torsional spring.

2. A stump jump mechanism for plows and like cultivating implements comprising in combination, a beam pivoted at its forward end, an implement frame to which said beam is pivoted, a tilling member fitted to said beam at its free end, a roller mounted near the free end of said beam, vertical lugs on said implement frame, a spindle supported horizontally in said lugs, a curved lever having its forward end pivotally mounted on said horizontal spindle, a coiled torsional spring fitting around said spindle and having one end bearing on the top of the curved lever and the opposite end formed into a hook, a screw rod having an eye at one end engaging the hook on the spring and its opposite end passing through a bracket on the implement frame, and a nut on the screwed end of the rod bearing against the said bracket.

3. A stump jump mechanism for plows and like cultivating implements comprising in combination a beam pivoted at its forward end, an implement frame to which said beam is pivoted, a tilling member fitted to said beam, at its free end, a roller mounted near the free end of said beam, vertical lugs on the implement frame between the pivot point of the beam and the roller thereon, a spindle supported horizontally by said lugs, a coiled torsional spring fitting around said spindle and having one end projecting rearwardly and bearing on the roller, and adjusting means connected to the opposite end of said spring and fixedly connected to the implement frame.

4. A stump jump mechanism for plows and like cultivating implements comprising in combination, a beam pivoted at its forward end, an implement frame to which said beam is pivoted, a tilling member pivoted to said beam at its free end, a roller mounted near the free end of said beam, a lever pivotally mounted on the implement frame between the pivot point of the beam and the roller mounted thereon, a forward extension on said lever, and a resilient member connected to said forward extension and pivotally connected to said implement frame, said resilient member being arranged to force the lever down on the roller.

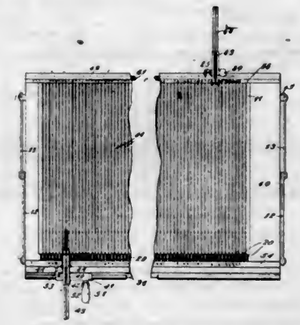
1,194,007. SPRING-ACTUATED FAN. HENRY GABEL, New York, N. Y. Filed Apr. 12, 1915. Serial No. 20,692. (Cl. 230—1.)



1. The combination in a portable fan, a spring motor, a disk driven thereby, a plurality of speed increasing units arranged interconnectedly one above the other, the lower being driven by said disk, a transversely mounted fan driven by the uppermost of said units, means for constantly changing the axial direction of rotation of said fan, said means being operated in one direction by the movement of said units, and in the other direction by the reaction of the fan, and a locking means whereby said fan may be prevented from operation.

2. The combination in a motor driven fan, the combination with a vertical casing, a revoluble horizontal shaft carrying fan blades, gear trains conveying rotary motion to said shaft from the motor, said gear trains being movable about the axial center of said casing, a fixed guide having a slot concentric with the axial center, said slot extending outwardly at one end, a traveler movable in said slot, an element combined with one of said gear trains rotatable within said casing, said element being engageable with said traveler, causing it to traverse the slot until the outward extension has been reached, a connection between said traveler and said fan shaft whereby the latter is caused to partially rotate on the horizontal axis of the casing as the traveler is moved, and means for returning said traveler to its initial position when released by said rotating element.

1,194,008. MECHANISM FOR STORING, ASSEMBLING, AND DISTRIBUTING TYPE. HARRY C. GAMMETER, Bratenahl, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 19, 1910. Serial No. 577,901. (Cl. 101—130.)



1. The combination of an inclined type case having parallel overhanging rails extending up and down its face and providing channels for holding type grooved on its opposite sides, the type being adapted to slide downwardly in the channels by gravity, of a series of individual stops at the lower ends of the respective channels, adapted to engage the bottom type therein, a second stop adapted to enter between the bottom type and the next to the bottom type in a channel, and means for concurrently withdrawing the first stop and presenting the second, and holding the second in position to support the column while the bottom type is delivered.

2. The combination, in a type case, of a body having parallel overhanging rails extending up and down its face and providing channels for holding type grooved on its opposite sides, the type being adapted to slide downwardly in the channels by gravity, of a pivoted shiftable composing stick adapted to be swung into and out of alinement with any channel, a series of individual stops at the lower ends of the respective channels, adapted to engage the bottom type therein, said stops having downward extensions adapted to be engaged by said composing stick brought into registration with the channel whereby the stop is moved to idle position, and a spring adapted to be brought into engagement with the next to the bottom type in the channel by such movement of the stick.

3. The combination of a flat type case consisting of a series of up and down channels arranged in a plane and open in the direction of the length of the channel at their upper and lower ends, of guides parallel with such upper and lower ends, laterally shiftable type sticks movable along said guides respectively, and means for ejecting type sidewise of the type from the upper stick into any channel of the type case and ejecting type sidewise of the type from the lower portion of any channel of the type case into the lower stick.

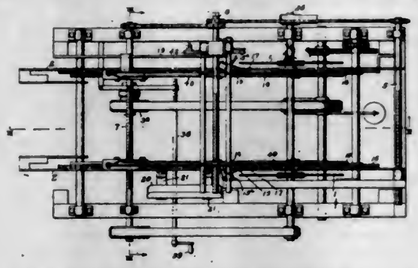
4. The combination, with a flat type case having gravitational channels, of a traveling type stick movable in a right line along the upper end of the case and having means adapted to occupy the grooves of type and thereby hold a line of laterally grooved type and provided near its lower end with a movable spring controlled gate, there being means for automatically actuating said gate consequent upon the presentation of the stick to the case.

5. A type distributing stick comprising a member movable as a unit and having a pair of parallel separated edges adapted to hold a line of grooved individual type, said stick being provided near its exit end with a spring-

controlled gate, and a device carried by the lower part of the stick and adapted to locate it with reference to a type receiving channel.

[Claims 6 to 30 not printed in the Gazette.]

1,194,009. WOODWORKING-MACHINE. GEORGE C. GOODYEAR, McKees Rocks, Pa., assignor of one-half to William L. Russell, Pittsburgh, Pa. Filed Apr. 29, 1915. Serial No. 24,668. (Cl. 144—242.)



1. In a wood-working machine the combination of a runway, a swinging spring-impelled vane normally extending athwart the runway, a latch normally engaging the said vane and securing it against swinging, and means for swinging said latch operated on the advance of work along said runway.

2. In a wood-working machine the combination of a skidway arranged to sustain material resting by gravity upon it, a work-engaging block movable first in a direction parallel with the surface of said skidway and while in the course of such movement extending above said skidway, and movable farther in an obliquely descending direction with respect to the surface of said skidway, and a face plate pivoted to said block.

3. In a wood-working machine the combination of a horizontally extending skidway, a sprocket chain extending parallel with and beneath said skidway, a sprocket wheel arranged beneath and adjacent one end of said skidway over which said sprocket chain extends, a block borne by said sprocket chain, a face plate pivoted to said block and normally extending in a direction perpendicular to said sprocket chain, and means tending to bring said face plate to its normal position when swung on its pivotal mounting.

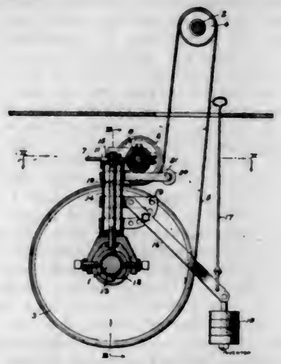
4. In a wood-working machine means for truing a pile of articles to be operated upon, such means including a suitable support upon which a pile of articles may rest by gravity and opposite abutments arranged on either side of said support, one of said abutments movable transversely of said support toward and away from its opposite fellow abutment, and in the range of such movement automatically adjustable in the angularity of its position with respect to said support.

5. In a wood-working machine, the combination with a runway of a clapper for truing work when placed upon said runway said clapper consisting of a suitably shaped body carried on an arm having an eye at the supporting end and supported on and having play upon the shank of a pin set in a suitable support and extending through said eye, and a spring normally holding said arm at the inner end of its range of play upon said pin.

[Claims 6 to 12 not printed in the Gazette.]

1,194,010. BELT-TIGHTENER. GEORGE C. GOODYEAR, McKees Rocks, Pa., assignor of one-half to William L. Russell, Pittsburgh, Pa. Filed Apr. 29, 1915. Serial No. 24,669. (Cl. 64—5.)

1. A belt tightening device including a frame adapted to swing to and fro in a direction transverse to the extent of a machine belt to which it stands adjacent, and a pair of belt engaging abutments mounted in said frame and adapted within the range of the swing of the frame to engage alternately and on opposite sides a belt extending between them.



2. A belt tightener including in its structure a forked shaft-engaging head, a frame carrying a belt-engaging abutment, a spacing sleeve, and a bolt uniting the said head frame and sleeve.

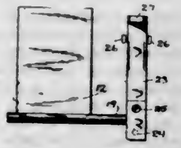
3. A belt tightening device including in combination with a shaft a belt pulley mounted on said shaft and a belt extending over the face of said pulley, an arm extending radially from said shaft and a belt engaging abutment borne by said arm, said arm being counterweighted and by virtue of such counterweighting exerting when in vertical position a lateral thrust upon such belt through its belt engaging member.

4. A belt-tightener including in its structure an arm carrying at one end a belt-engaging abutment and provided at the other end with a shaft seat and a second weighted arm extending angularly from the first and angularly adjustable.

5. A belt-tightener including a roller-supporting frame provided with two bolt-holes spaced at an interval one from the other, one of said bolt holes being an elongate adjustment affording bolt-hole, and a pair of arms to which said frame is bolted, said arms being pivotally applicable to a fixed support.

[Claim 6 not printed in the Gazette.]

1,194,011. DAMPER. GEORGE V. GREEY, Amityville, N. Y., and RICHARD ROUSE, Jr., Newark, N. J., assignors to Boynton Furnace Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 8, 1916. Serial No. 76,892. (Cl. 126—293.)



1. A damper of the kind described having a fixed pintle, a plate on the pintle extending at an angle thereto, a detachable lever adapted to extend from either end of the plate having a seat to fit the top and at least one end of the plate, and means for fastening the lever to the plate.

2. The combination with a smoke pipe having an opening through the wall thereof, a pivoted damper adapted to close said opening, a flat plate rigid on the pintle of the damper and with its flat surface in essentially the same plane as the damper, and a weighted lever having means for attachment to the flat plate, and a shoulder adapted to fit either end of said flat plate.

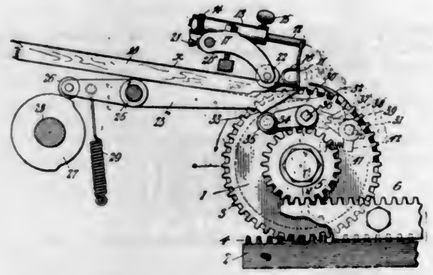
3. A damper having a fixed pintle, a plate rigid on the pintle, a weighted lever having one end recessed to fit against the plate and overlap one end thereof, and means for attaching the plate and lever together.

4. A damper having a fixed pintle and a perforated plate on the pintle and in essentially the same plane as the damper, the damper, pintle and plate forming a single integral casting.

5. A damper of the kind described having a fixed pintle, a perforated plate rigid on the pintle, and a weighted lever having a pin thereon to fit one of the perforations of the said plate, and a shoulder adapted to abut with either end of the plate, said lever being shaped to fit snugly against the plate.

[Claim 6 not printed in the Gazette.]

1,194,012. SHEET-FEEDING MACHINE. AUSTIN S. GRIMMER, Flushing, N. Y., assignor to The Autopress Company, a Corporation of New York. Filed Oct. 11, 1910, Serial No. 586,500. Renewed Jan. 10, 1916. Serial No. 71,381. (Cl. 101—115.)



1. A printing press including in combination, a reciprocating cylinder, grippers carried by said cylinder, front gages for positioning the sheet, means for causing said grippers to close on the sheet while the cylinder is moving toward the sheet and just prior to the end of such movement, whereby the edge of the sheet after being gripped is pushed slightly back from the front stop and means for raising the front stop when the edge of the sheet is pushed back.

2. A printing press, including in combination, a reciprocating cylinder, spring closed grippers on said cylinder, an arm on said cylinder for operating said grippers against their spring, a lever pivoted on a stationary support and having a part shaped to cause said gripper opening arm to open the grippers and to then permit them to close while the cylinder is moving in one direction, and means for moving said lever out of the path of said arm when the cylinder is moving in the opposite direction.

3. A printing press including in combination, a reciprocating cylinder, spring closed grippers on cylinder, an arm on said cylinder for opening said grippers against their spring, a lever pivoted on a stationary support, and having a part shaped to cause said gripper opening arm to open the grippers and to then permit them to close while the cylinder is moving in one direction, means for moving said lever out of the path of said arm when the cylinder is moving in the opposite direction, a front stop, and connections whereby said lever causes said front stop to raise to permit the sheet to pass onto the cylinder.

1,194,013. METHOD OF REFINING WOOL-GREASE. JAMES O. HANDY and ROBERT M. ISHAM, Pittsburgh, Pa., assignors to Pittsburgh Testing Laboratory, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 22, 1916. Serial No. 92,843. (Cl. 87—26.)

1. In the art of refining wool grease, the method which consists in dissolving the grease in petrolic ether, and then treating the solution with ammonia, substantially as described.

2. In the art of refining wool grease, the method which consists in dissolving the grease in petrolic ether, and then treating the solution with ammoniacal alcohol, substantially as described.

3. In the art of refining wool grease, the method which consists in dissolving the grease at ordinary temperatures and at substantially atmospheric pressure in a neutral solvent containing no chemical reagent, and then treating the solution with an ammonium hydrate liquor, substantially as described.

4. In the art of refining wool grease, the method which consists in dissolving the grease at ordinary temperatures and at substantially atmospheric pressure in a neutral solvent containing no chemical reagent, and then treating the solution with ammoniacal alcohol, substantially as described.

5. In the art of refining wool grease, the method which consists in dissolving the grease at ordinary temperatures and at substantially atmospheric pressure in a neutral solvent containing no chemical reagent, and then treating the solution with a mixture of ammonium hydrate and alcohol, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,194,014. METHOD OF REFINING WOOL-GREASE. JAMES O. HANDY and ROBERT M. ISHAM, Pittsburgh, Pa., assignors to Pittsburgh Testing Laboratory, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 22, 1916. Serial No. 92,844. (Cl. 87—26.)

1. In the art of refining wool grease, the method which consists in melting the raw grease and treating it with alcohol to reduce the fatty acids contained therein, forming a solution of the partly neutralized grease, and treating such solution with a neutralizing agent in the form of a dry powder, substantially as described.

2. In the art of refining wool grease, the method which consists in melting the grease and treating it with alcohol to partially remove the free fatty acid contained in the grease, and completing the neutralization by agitating the grease in a petrolic ether solution with a basic oxid or hydroxid in the form of a dry powder, substantially as described.

3. In the art of refining wool grease, the method which consists in melting the grease and treating it with alcohol to partially remove the free fatty acid contained in the grease, and completing the neutralization by agitating the grease in a petrolic ether solution with magnesium oxid in the form of a dry powder, substantially as described.

4. In the art of refining wool grease, the method which consists in treating the grease with alcohol to remove a portion of the contained free fatty acid therefrom, completing the neutralization by agitating the grease in a petrolic ether solution with a basic oxid or hydroxid in the form of a dry powder, and simultaneously treating with fullers' earth for bleaching purposes, substantially as described.

5. In the art of refining wool grease, the method which consists in treating the grease with alcohol to remove a portion of the contained free fatty acid therefrom, completing the neutralization by agitating the grease in a petrolic ether solution with magnesium oxid in the form of a dry powder, and simultaneously treating with fullers' earth for bleaching purposes, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,194,015. METHOD OF TREATING WOOL-GREASE. JAMES O. HANDY, Pittsburgh, Pa., assignor to Pittsburgh Testing Laboratory, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 22, 1916. Serial No. 92,845. (Cl. 87—26.)

1. In the art of treating wool grease, the method of bleaching which comprises forming a solution of the grease in a solvent, and then agitating the solution with fullers' earth, substantially as described.

2. In the art of treating wool grease, the method of bleaching which comprises forming a solution of the grease in petrolic ether, and then agitating the solution with fullers' earth, substantially as described.

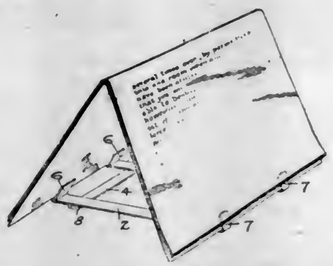
3. In the art of treating wool grease, the method which comprises drying the grease, then forming a solution in a suitable solvent and then agitating the solution with fullers' earth, substantially as described.

4. In the art of treating wool grease, the method which comprises drying the grease, then forming a solution in petrolic ether and then agitating the solution with fullers' earth, substantially as described.

5. In the art of treating wool grease, the method which comprises drying the grease, then forming a solution in petrolic ether, then agitating the solution with fullers' earth, and then distilling off the solvent and recovering the grease, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,194,016. BOOK-HOLDER. LAURA L. HARFORD, Berkeley, Cal. Filed Mar. 9, 1915. Serial No. 13,110. (Cl. 120—28.)



A book holder comprising a frame, a plurality of upwardly and backwardly inclined rigid fixed lips formed integrally with the frame and spaced apart transversely at the front and rear ends thereof, and L-shaped spring members attached to the outside of said frame, adjacent said lips to form V-shaped clamps therewith opening upwardly adapted to receive the covers of a book.

1,194,017. DENTAL TECHNICON. JAMES P. HARPER, St. Louis, Mo. Filed Apr. 6, 1914. Serial No. 829,854. (Cl. 35—12.)



1. A dental technicon comprising a base, a carrier thereon, an articulator mounted on said carrier and comprising teeth holding jaws, and means for holding said jaws in relatively adjusted positions constructed and arranged to permit dental operations on the teeth.

2. A dental technicon comprising a base, a carrier thereon, an articulator mounted on said carrier and comprising teeth holding jaws, means for holding said jaws in relatively adjusted position, and a flexible shield applied to the articulator, said parts being constructed and arranged to permit dental operations on the teeth.

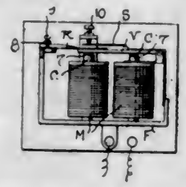
3. A dental technicon comprising a base, a carrier adjustably mounted thereon, an articulator mounted on said carrier and comprising teeth holding jaws, and means for holding said jaws in relatively adjusted positions constructed and arranged to permit dental operations on the teeth.

4. A dental technicon comprising a base, a rotatable support mounted thereon, an articulator comprising teeth holding jaws, means for holding said jaws in relatively adjusted position, and adjustable connections between the articulator and support, said parts being constructed and arranged to permit dental operations on the teeth.

5. A dental technicon comprising a base, a vertically adjustable, rotatable support mounted thereon, an articulator comprising teeth holding jaws, means for holding said jaws in relatively adjusted position, and connections between the articulator and support, said parts being constructed and arranged to permit dental operations on the teeth.

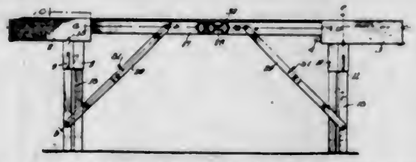
[Claims 6 to 15 not printed in the Gazette.]

1,194,018. SOUNDING DEVICE FOR DECOYS. FRED VITUS HARTNER, Toledo, Ohio. Filed Mar. 18, 1916. Serial No. 85,146. (Cl. 177—7.)



A sounding device including a magnet in connection with a suitable source of electrical energy, a vibrator coacting therewith, a loop supported independently of the vibrator, a reed having one end portion disposed through the loop and its opposite end portion overlying the vibrator, a set screw adjustable through the loop and coacting with the reed, and a set screw operatively supported relative to the vibrator and coacting with the reed, said set screws affording means whereby the pitch of the reed may be varied.

1,194,019. COLLAPSIBLE TABLE. OTTO C. L. HIRSCH, Evanston, Ill. Filed Oct. 7, 1915. Serial No. 54,554. (Cl. 190—11.)



1. A collapsible, portable table structure of the character described having two top sections adapted to form the end portions of the table top, legs for said top sections, collapsible side frames detachably uniting said top sections, and a collapsible top on top of said side frames between said top sections and supported by said side frames.

2. A collapsible, portable table structure of the character described having two top sections adapted to form the end portions of the table top, said top sections being both substantially alike and each forming one-half of a carrying case, legs for said top sections, collapsible side frames detachably uniting said top sections, and a collapsible top on top of said side frames between said top sections and supported by said side frames.

3. A collapsible, portable table structure of the character described having two top sections adapted to form

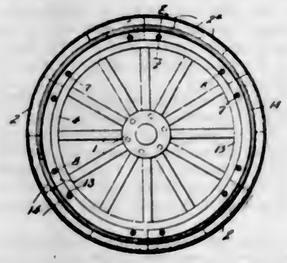
the end portions of the table top, said top sections being both substantially alike and each forming one-half of a carrying case, means for detachably holding said sections together when said table structure is collapsed, said top sections serving as a container for the remaining elements of said table structure, legs for said top sections, collapsible side frames detachably uniting said top sections, and a collapsible top on top of said side frames between said top sections and supported by said side frames.

4. A collapsible, portable table structure of the character described having two top sections adapted to form the end portions of the table top, said top sections being both substantially alike and each forming one-half of a carrying case, means for detachably holding said sections together when said table structure is collapsed, said top sections serving as a container for the remaining elements of said table structure, collapsible legs for said top sections, collapsible side frames detachably uniting said top sections, and a collapsible top on top of said side frames between said top sections and supported by said side frames.

5. A collapsible, portable table structure of the character described having two top sections adapted to form the end portions of the table top, said top sections being both substantially alike and each forming one-half of a carrying case, means for detachably holding said sections together when said table structure is collapsed, said top sections serving as a container for the remaining elements of said table structure, collapsible legs for said top sections, said legs being hinged to said top sections, side frames detachably uniting said top sections, and a collapsible top on top of said side frames between said top sections.

[Claims 6 and 7 not printed in the Gazette.]

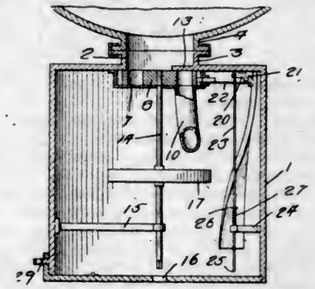
1,194,020. DEMOUNTABLE RESILIENT TIRE-SEATING RIM FOR AUTOMOBILE-WHEELS. JOHN G. HODGSON, Maywood, Ill. Filed Apr. 17, 1911. Serial No. 621,494. (Cl. 152—9.)



In a demountable vehicle wheel rim, the combination of a continuous metal band shrunk upon the felly of a wheel and being higher at one side than at the other, a sectional band adapted to engage both sides of the first mentioned band, said band having coöperating wedge faces, holding bolts extending horizontally through said bands, sectional tire holding flanges and a sectional tire held thereby, a tire section, its holding flanges and a corresponding section of said sectional band being removable upon release of appropriate clamping bolts to permit replacement of the tire sections without disturbing other tire sections.

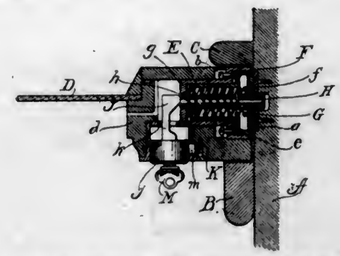
1,194,021. VENDING-MACHINE. HERBERT H. HOLT, Holt, Mo. Filed Nov. 15, 1915. Serial No. 61,649. (Cl. 194—25.)

1. In a device of the class described, the combination with a dispensing disk, said disk having notches in the edge thereof, of a pawl adapted to engage said notches successively, a bell crank lever, a link connecting the pawl and the bell crank lever, a rod extending from the bell crank lever and having a toe portion thereon and a spring encircling said rod for normally urging the pawl into engagement with the disk.



2. In a device of the class described, the combination with a rotatable dispensing disk having a plurality of notches in its edge, of a pawl for engaging said notches, means for disengaging the pawl from the notches, which means includes a bell crank lever, a link connecting one arm of the lever and the pawl, a rod connected to the other arm of the lever and extending downwardly through a bearing member, a spring for normally forcing said rod upwardly and a coin chute, the said rod having a toe portion extending beneath the coin chute.

1,194,022. SASH-FASTENER. ALEXANDER M. HUDSON, New York, N. Y. Filed Mar. 18, 1914. Serial No. 825,525. (Cl. 16—119.)



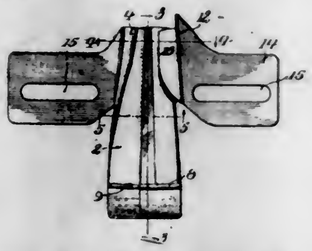
1. In a sash fastener, the combination with a casing, of a hollow plunger fitting within and next to the casing and having an open end within the casing and a closed outer end, a coil spring within the plunger acting against the casing and plunger to force the plunger outwardly, a bolt passing centrally through the bottom of the casing and the said closed outer end of the plunger, a coil spring encircling the bolt, the said spring being attached to the bolt and to the casing and constructed to draw the bolt inwardly with respect to the casing, and a member movably supported adjacent to the bottom of the casing and constructed to force the bolt outwardly by one movement and by another movement to allow the bolt to retract.

2. In a sash fastener, the combination with a casing, of a hollow plunger fitting within and next to the casing and having an open end within the casing and a closed outer end, a coil spring within the plunger acting against the casing and plunger to force the plunger outwardly, a bolt passing centrally through the bottom of the casing and the said closed outer end of the plunger, a coil spring encircling the bolt, the said spring being attached to the bolt and to the casing and constructed to draw the bolt inwardly with respect to the casing, a member movably supported adjacent to the bottom of the casing and constructed to force the bolt outwardly by a movement in one direction, and means for locking the said member in its position at the end of said movement, the said member being movable in another direction to allow the bolt to retract.

3. In a sash fastener, the combination with a window frame provided with a keeper, of a window sash having a bolt arranged to engage the said keeper, a lock borne by the sash and having a movement bodily with respect to the sash and bolt, the said lock having a bolt whereby in one position the lock may be locked to the sash, and means connected with the said lock and actuated by the said bodily movement thereof for effecting the operation of the bolt first mentioned.

4. In a sash fastener, the combination with a sash, of a casing set in the sash, a hollow plunger movably fitting within and next to the casing and having an open end within the casing and a closed outer end, a coil spring within the plunger acting against the casing and plunger to force the plunger outwardly, a bolt passing centrally through the bottom of the casing and the said closed outer end of the plunger, a coil spring encircling the bolt, the said spring being attached to the bolt and to the casing and constructed to draw the bolt inwardly with respect to the casing, a member movable within the sash at right angles to the bolt, the said member being movable outwardly and inwardly with respect to the sash, the said member being constructed and arranged to force the bolt outwardly by the said outward movement of the member, and means for locking the said member in its position at the end of the said outward movement, the said member being constructed and arranged to allow the bolt to retract during the said inward movement of the member.

1,194,023. FOLDER FOR SEWING-MACHINES. ROBERT R. HUGHES, Jr., New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 1, 1914. Serial No. 848,398. (Cl. 112—9.)



1. A folder for sewing machines including spaced guiding plates, said guiding plates at one side thereof terminating in a folding scroll for folding over on to its upper face the edge of a lining strip guided between the plates, and a folding scroll extending about the other side edges of said plates for folding under the edge of a fabric passed over said plates.

2. A folder for sewing machines including spaced guiding plates, said guiding plates at one side terminating in a folding scroll for folding over on to its upper face the edge of a lining strip guided between the plates, and a folding scroll attached to the lower plate underneath the same and extending outwardly, upwardly and inwardly about the other side edges of said plates, whereby a body fabric may be guided over said plates and its edge directed into said scroll for forming a fold in the edge of the body garment which surrounds the raw edge of the lining strip.

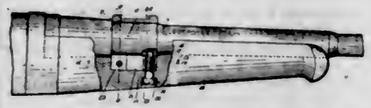
3. A folder for sewing machines including spaced guiding plates, each of which is formed in sections, a supporting base plate for the sections at each side of said plates, said plates terminating at one side thereof in a folding scroll for folding a lining strip, and a folding scroll surrounding the other side edges of said plates for receiving a body garment guided over said folding plates and folding the edge thereof around the other edge of the lining strip.

4. A folder for sewing machines including spaced upper and lower guiding plates formed in sections, said lower guiding plate at one side thereof being gradually turned over on to the upper face of the upper plate, so as to fold the edge of a strip guided between the said plates on to the upper face of said strip, and an independent scroll at the other edges of said plates for receiving a body garment and folding the edge thereof underneath the other edge of said strip.

5. A folder for sewing machines including spaced guiding plates, said guiding plates at one side thereof terminating in a folding scroll for folding over on to its upper face the edge of a lining strip guided between said plates, a folding scroll at the other side of said plates for receiving the edge of the body fabric guided over said plates and folding the edge thereof underneath said plates, said lower plate having an extension bent at an angle, so as to direct a lining strip into the folder.

[Claims 6 and 7 not printed in the Gazette.]

1,194,024. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed June 2, 1916. Serial No. 101,243. (Cl. 42—75.)



1. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock consisting of a yielding sleeve adapted to be applied to the barrel and having a depending, split lug, means applied to the lug for clamping the sleeve upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm in place.

2. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock consisting of a sleeve adapted to fit over the barrel and formed with a depending lug having its rear end split, a binding-screw passing through the split portion of the said lug for clamping the forearm-lock upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm thereto.

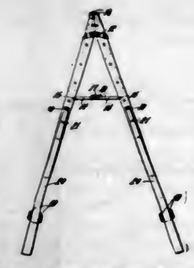
3. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock having a yielding sleeve adapted to fit over the barrel and formed with a depending lug, means applied to the said lug for clamping the sleeve upon the barrel, and a screw passing upward through the forearm into the said lug and entering the barrel for securing the forearm to the lock and the lock to the barrel.

4. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock comprising a yielding sleeve adapted to be applied to the barrel, having its upper face formed with a transverse undercut groove for the application of a sight and the said sleeve being also formed with a depending split lug, means applied to the said lug for clamping the said sleeve upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm thereto.

5. In a firearm, the combination with the barrel thereof, of a forearm formed in its upper face with a recess, a forearm-lock comprising a yielding sleeve adapted to be applied to the barrel and formed with a depending lug entering the said recess in the forearm, means applied to the said lug for clamping the said sleeve upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm thereto.

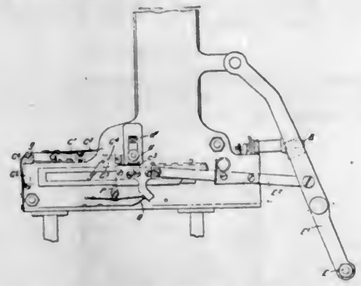
1,194,025. TRESTLE. JOHN R. JONES. Oshkosh, Wis. Filed May 8, 1915. Serial No. 26,702. (Cl. 228—15.)

1. In a device of the character described, a pair of members hinged together near their upper ends, tie rods hinged together and pivotally connected with the said members, and a guard plate pivotally mounted on the hinge connection of the tie rods and provided with stop lugs for engaging the tie rods and limiting the movement thereof.



2. In a trestle, a pair of ladders, comprising side runners and connecting rungs, hinges connecting the ladders together, each ladder having diverging brace legs secured to the side runners thereof at a distance from their ends and continuing beyond the ends of the side runners, said brace legs being of greater width than the side runners, and bowed cross pieces on the front and the rear of the lower end of each ladder secured to the ends of the side runners and to intermediate parts of the brace legs forming a truss to give strength to the spreading base of the ladders.

1,194,026. TICKET PRINTING AND ISSUING MACHINE. ALFRED JAMES JUNO, North Kensington, London, England, assignor to Chex Ticket Machines (1914) Limited, Westminster, England. Filed July 9, 1914. Serial No. 849,980. (Cl. 101—187.)



1. A ticket-printing and issuing machine having in combination the following elements, to wit, a series of printing couples comprising relatively movable members, means for simultaneously operating the couples to effect the feeding, printing and delivery of a ticket, and a series of separate controllable devices for feeding a ticket blank to the members of a printing couple.

2. A ticket printing and issuing machine having in combination the following elements, to wit, a series of printing couples, the members of which are relatively movable, a corresponding series of stationary ticket-blank receptacles, means for operating the printing couples to effect the feeding, printing and delivery of a ticket, and selective means for determining from which receptacle or receptacles a blank shall be delivered to be printed.

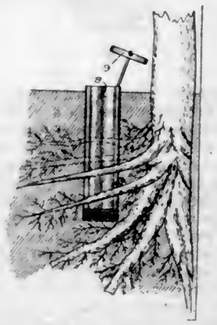
3. A ticket printing and issuing machine having in combination the following elements, to wit, a series of printing couples, comprising relatively movable members, a corresponding series of stationary ticket-blank receptacles, means for actuating all the printing couples simultaneously, and controllable and selective feeding means one for each of the various printing couples.

4. In a ticket printing and issuing machine, the combination with a series of printing couples comprising relatively movable members, means for simultaneously actuating the printing couples to effect the printing and issuing of a ticket or tickets, and a series of stationary ticket blank containers, of a hand controlled feeding device for each container, a locking device for one member of the couple, and means coupled with the feeding devices for actuating the locking device.

5. In a ticket printing and issuing machine, the combination with a series of printing couples, comprising relatively movable members, means for simultaneously operating the printing couples, and a series of ticket blank containers, of controllable feeding devices for the containers, and means for raising a ticket from a member of the printing couple, after printing, for the purpose described.

[Claims 6 to 26 not printed in the Gazette.]

1,194,027. TREE-IRRIGATOR. EDWIN A. KANST, Chicago, Ill. Filed Mar. 2, 1914. Serial No. 821,987. (Cl. 137—60.)



1. A tree irrigator, comprising a corrugated metal tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, and a locking-rod connected with the cover and operated thereby, said locking rod being adapted to limit the extent to which the cover may be moved away from said tube.

2. A tree irrigator, comprising a corrugated metal tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, a locking-rod connected with the cover and moved thereby, and a locking-plate secured in said tube and adapted to engage said locking-rod for limiting the movement thereof.

3. A tree irrigator, comprising a corrugated metal tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, a locking-rod connected with the cover, said locking-rod having one or more intermediate webs, and having a head at its lower end, and a locking-plate secured to the tube and having a slot for the passage of said webs.

4. A tree irigator comprising a tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, and a locking rod connected with the cover and operated thereby, said locking rod being adapted to limit the extent to which the cover may be moved away from said tube.

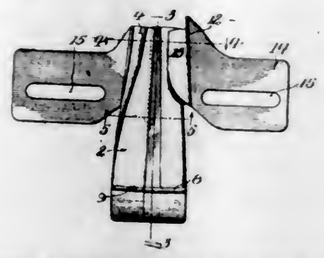
1,194,028. SHAFT-COUPLING. JULIAN KENNEDY, Pittsburgh, Pa. Filed Apr. 7, 1916. Serial No. 89,587. (Cl. 64—13.)

1. A flexible shaft coupling, comprising a driving member and a driven member having a plurality of pairs of contacting bearing surfaces, and means for relatively ad-

3. In a sash fastener, the combination with a window frame provided with a keeper, of a window sash having a bolt arranged to engage the said keeper, a lock borne by the sash and having a movement bodily with respect to the sash and bolt, the said lock having a bolt whereby in one position the lock may be locked to the sash, and means connected with the said lock and actuated by the said bodily movement thereof for effecting the operation of the bolt first mentioned.

4. In a sash fastener, the combination with a sash, of a casing set in the sash, a hollow plunger movably fitting within and next to the casing and having an open end within the casing and a closed outer end, a coil spring within the plunger acting against the casing and plunger to force the plunger outwardly, a bolt passing centrally through the bottom of the casing and the said closed outer end of the plunger, a coil spring encircling the bolt, the said spring being attached to the bolt and to the casing and constructed to draw the bolt inwardly with respect to the casing, a member movable within the sash at right angles to the bolt, the said member being movable outwardly and inwardly with respect to the sash, the said member being constructed and arranged to force the bolt outwardly by the said outward movement of the member, and means for locking the said member in its position at the end of the said outward movement, the said member being constructed and arranged to allow the bolt to retract during the said inward movement of the member.

1,194,023. FOLDER FOR SEWING-MACHINES. ROBERT R. HUGHES, Jr., New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 1, 1914. Serial No. 848,398. (Cl. 112—9.)



1. A folder for sewing machines including spaced guiding plates, said guiding plates at one side thereof terminating in a folding scroll for folding over on to its upper face the edge of a lining strip guided between the plates, and a folding scroll extending about the other side edges of said plates for folding under the edge of a fabric passed over said plates.

2. A folder for sewing machines including spaced guiding plates, said guiding plates at one side terminating in a folding scroll for folding over on to its upper face the edge of a lining strip guided between the plates, and a folding scroll attached to the lower plate underneath the same and extending outwardly, upwardly and inwardly about the other side edges of said plates, whereby a body fabric may be guided over said plates and its edge directed into said scroll for forming a fold in the edge of the body garment which surrounds the raw edge of the lining strip.

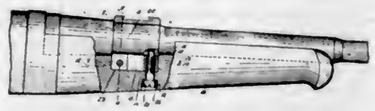
3. A folder for sewing machines including spaced guiding plates, each of which is formed in sections, a supporting base plate for the sections at each side of said plates, said plates terminating at one side thereof in a folding scroll for folding a lining strip, and a folding scroll surrounding the other side edges of said plates for receiving a body garment guided over said folding plates and folding the edge thereof around the other edge of the lining strip.

4. A folder for sewing machines including spaced upper and lower guiding plates formed in sections, said lower guiding plate at one side thereof being gradually turned over on to the upper face of the upper plate, so as to fold the edge of a strip guided between the said plates on to the upper face of said strip, and an independent scroll at the other edges of said plates for receiving a body garment and folding the edge thereof underneath the other edge of said strip.

5. A folder for sewing machines including spaced guiding plates, said guiding plates at one side thereof terminating in a folding scroll for folding over on to its upper face the edge of a lining strip guided between said plates, a folding scroll at the other side of said plates for receiving the edge of the body fabric guided over said plates and folding the edge thereof underneath said plates, said lower plate having an extension bent at an angle, so as to direct a lining strip into the folder.

[Claims 6 and 7 not printed in the Gazette.]

1,194,024. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed June 2, 1916. Serial No. 101,243. (Cl. 42—75.)



1. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock consisting of a yielding sleeve adapted to be applied to the barrel and having a depending, split lug, means applied to the lug for clamping the sleeve upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm in place.

2. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock consisting of a sleeve adapted to fit over the barrel and formed with a depending lug having its rear end split, a binding-screw passing through the split portion of the said lug for clamping the forearm-lock upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm thereto.

3. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock having a yielding sleeve adapted to fit over the barrel and formed with a depending lug, means applied to the said lug for clamping the sleeve upon the barrel, and a screw passing upward through the forearm into the said lug and entering the barrel for securing the forearm to the lock and the lock to the barrel.

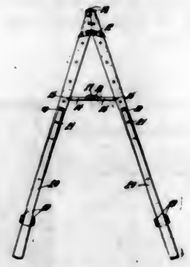
4. In a firearm, the combination with the barrel thereof, of a forearm, a forearm-lock comprising a yielding sleeve adapted to be applied to the barrel, having its upper face formed with a transverse undercut groove for the application of a sight and the said sleeve being also formed with a depending split lug, means applied to the said lug for clamping the said sleeve upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm thereto.

5. In a firearm, the combination with the barrel thereof, of a forearm formed in its upper face with a recess, a forearm-lock comprising a yielding sleeve adapted to be applied to the barrel and formed with a depending lug entering the said recess in the forearm, means applied to the said lug for clamping the said sleeve upon the barrel, and a screw passing upward through the forearm into the said lug for securing the forearm thereto.

1,194,025. TRESTLE. JOHN R. JONES, Oshkosh, Wis. Filed May 8, 1915. Serial No. 26,702. (Cl. 228—15.)

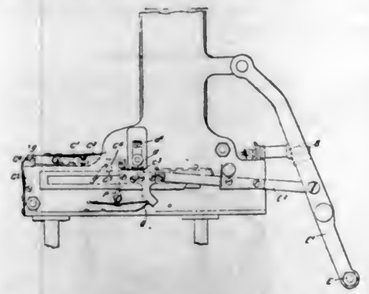
1. In a device of the character described, a pair of members hinged together near their upper ends, tie rods hinged together and pivotally connected with the said members, and a guard plate pivotally mounted on the

range connection of the tie rods and provided with stop lugs for engaging the tie rods and limiting the movement thereof.



2. In a trestle, a pair of ladders, comprising side runners and connecting rungs, hinges connecting the ladders together, each ladder having diverging brace legs secured to the side runners thereof at a distance from their ends and continuing beyond the ends of the side runners, said brace legs being of greater width than the side runners, and bowed cross pieces on the front and the rear of the lower end of each ladder secured to the ends of the side runners and to intermediate parts of the brace legs forming a truss to give strength to the spreading base of the ladders.

1,194,026. TICKET PRINTING AND ISSUING MACHINE. ALFRED JAMES JUNG, North Kensington, London, England, assignor to Chex Ticket Machines (1914) Limited, Westminster, England. Filed July 9, 1914. Serial No. 849,980. (Cl. 101—187.)



1. A ticket-printing and issuing machine having in combination the following elements, to wit, a series of printing couples comprising relatively movable members, means for simultaneously operating the couples to effect the feeding, printing and delivery of a ticket, and a series of separate controllable devices for feeding a ticket blank to the members of a printing couple.

2. A ticket printing and issuing machine having in combination the following elements, to wit, a series of printing couples, the members of which are relatively movable, a corresponding series of stationary ticket-blank receptacles, means for operating the printing couples to effect the feeding, printing and delivery of a ticket, and selective means for determining from which receptacle or receptacles a blank shall be delivered to be printed.

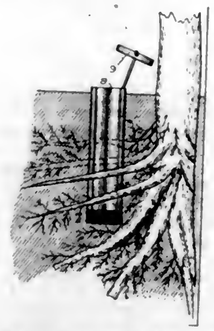
3. A ticket printing and issuing machine having in combination the following elements, to wit, a series of printing couples, comprising relatively movable members, a corresponding series of stationary ticket-blank receptacles, means for actuating all the printing couples simultaneously, and controllable and selective feeding means one for each of the various printing couples.

4. In a ticket printing and issuing machine, the combination with a series of printing couples comprising relatively movable members, means for simultaneously actuating the printing couples to effect the printing and issuing of a ticket or tickets, and a series of stationary ticket blank containers, of a hand controlled feeding device for each container, a locking device for one member of the couple, and means coupled with the feeding devices for actuating the locking device.

5. In a ticket printing and issuing machine the combination with a series of printing couples, comprising relatively movable members, means for simultaneously operating the printing couples, and a series of ticket blank containers, of controllable feeding devices for the containers, and means for raising a ticket from a member of the printing couple, after printing, for the purpose described.

[Claims 6 to 26 not printed in the Gazette.]

1,194,027. TREE-IRRIGATOR. EDWIN A. KANST, Chicago, Ill. Filed Mar. 2, 1914. Serial No. 821,987. (Cl. 137—60.)



1. A tree irrigator, comprising a corrugated metal tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, and a locking-rod connected with the cover and operated thereby, said locking rod being adapted to limit the extent to which the cover may be moved away from said tube.

2. A tree irrigator, comprising a corrugated metal tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, a locking-rod connected with the cover and moved thereby, and a locking-plate secured in said tube and adapted to engage said locking-rod for limiting the movement thereof.

3. A tree irrigator, comprising a corrugated metal tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, a locking-rod connected with the cover, said locking-rod having one or more intermediate webs, and having a head at its lower end, and a locking-plate secured to the tube and having a slot for the passage of said webs.

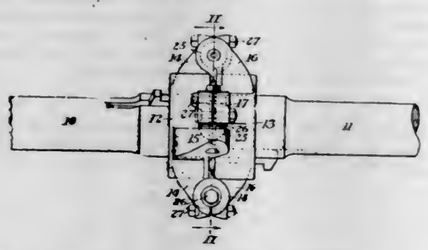
4. A tree irigator comprising a tube adapted to be inserted in the ground and having an opening at its upper end for the introduction of water thereinto, a circular cover fitted upon the upper end of said tube and adapted to turn axially thereon, and a locking rod connected with the cover and operated thereby, said locking rod being adapted to limit the extent to which the cover may be moved away from said tube.

1,194,028. SHAFT-COUPLING. JULIAN KENNEDY, Pittsburgh, Pa. Filed Apr. 7, 1916. Serial No. 89,587. (Cl. 64—13.)

1. A flexible shaft coupling, comprising a driving member and a driven member having a plurality of pairs of contacting bearing surfaces, and means for relatively ad-

justing each pair of surfaces, substantially as described.

2. A flexible shaft coupling, comprising a driving member and a driven member each having a plurality of forwardly and backwardly facing bearing surfaces, the forwardly facing bearing surfaces of one member engaging the backwardly facing bearing surfaces of the other member, and means for relatively adjusting toward and from each other the bearing surfaces forming such engaging pairs, substantially as described.



3. A flexible shaft coupling, comprising a driving member and a driven member having a plurality of pairs of contacting bearing surfaces, blocks supported by some of said members and having a limited rocking movement relative thereto, at least one of the bearing surfaces of each pair being formed on one of said blocks, and means for relatively adjusting each pair of bearing surfaces toward and from each other, substantially as described.

4. A flexible shaft coupling, comprising a driving member and a driven member, one of said members having a substantially hemispherical bearing block mounted to have a limited rocking movement relative to its supporting member and the other member having a bearing surface engaging the flat surface of said hemispherical bearing block, and means for adjusting said surfaces toward and from each other, substantially as described.

5. A flexible shaft coupling, comprising a driving member and a driven member having a plurality of interfitting arms, substantially hemispherical bearing blocks mounted in some of said arms to have a limited rocking movement therein, and other of said arms having cooperating flat bearing surfaces engaging the flat surfaces of said hemispherical blocks, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

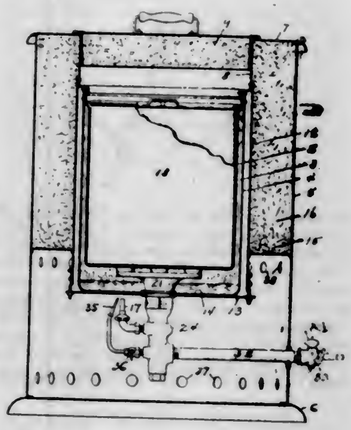
1,194,029. COOKER. ARTHUR J. KERCHER, Berkeley, Cal., assignor to Berkeley Electric Cooker Company, Berkeley, Cal., a Corporation of California. Filed Jan. 16, 1915. Serial No. 2,672. (Cl. 126—39.)

1. A cooker comprising a shell, a cooking receptacle comprising an annular closed chamber arranged within said shell and spaced apart therefrom, a metallic cylinder surrounding said receptacle and supported within said shell, a plate secured to the lower end of said cylinder and bearing against the bottom of said receptacle, and means for heating said receptacle.

2. A cooker comprising a shell, an annular plate having a depending flange at its inner edge partly closing the top of said shell, a cooking receptacle comprising an annular closed chamber arranged within the shell and secured at its upper edge to said flange, a metallic cylinder surrounding said receptacle secured at its upper edge to said flange, a plate secured to the lower edge of the cylinder and bearing against the bottom of said receptacle, a filling of heat insulating material between said cylinder and shell, a cover arranged to fit inside of said flange, and means for heating said receptacle.

3. In a cooker, a receptacle comprising an annular vacuumized chamber, a cylinder surrounding and spaced from said receptacle, a shell surrounding and spaced from said cylinder, a downwardly turned flange on said shell to which said receptacle and cylinder are attached, and means for heating said receptacle.

4. In a cooker, a receptacle comprising an annular vacuumized chamber, a cylinder surrounding and spaced from said receptacle, a shell surrounding and spaced from said cylinder, a downwardly turned flange on said shell for supporting said receptacle and cylinder, a closure for said cooker arranged to fit within said flange and means for heating said receptacle.



5. In a cooker, a receptacle comprising an annular vacuumized chamber, a wall forming a second annular chamber about said receptacle, a shell surrounding and spaced from said wall, a flange on said shell for supporting said receptacle and wall, a filling of heat insulating material between said shell and said wall and means for heating said receptacle.

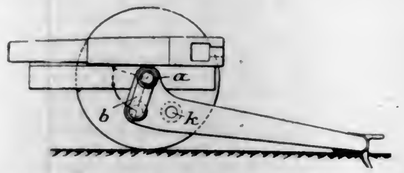
1,194,030. ARTICLE FOR HOUSEHOLD USE. MARIAN P. KING, Brooklyn, N. Y. Filed Mar. 6, 1916. Serial No. 82,322. (Cl. 248—41.)



1. A culinary frame comprising a plurality of rigid upright members, and a plurality of lazy tongs frames pivotally connected at the median line thereof with said members in circular formation so as to permit the adjustability of said frame to circles of varying diameters.

2. A culinary frame comprising a plurality of rigid upright members, a plurality of lazy tongs frames pivotally connected with said members in circular formation so as to permit the adjustability of said frame to circles of varying diameters, a series of inwardly projecting supporting members carried by said upright members below the center of the length thereof, and a series of inwardly projecting supporting members carried by said upright members near the top thereof.

1,194,031. GUN WITH ADJUSTABLE CRANKED AXLE-TREE. KURT KLETTE, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Feb. 10, 1914. Serial No. 817,843. (Cl. 89—40.)

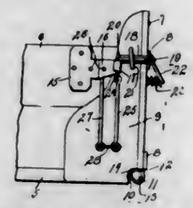


1. In combination, a gun, a carriage to which said gun is pivoted, a cranked axle mounted on the carriage, and means for securing said crank in line with the pivots of said gun to counterbalance the masses about the wheel axle in traveling.

2. In combination with a gun and its carriage to which the gun is pivoted, a cranked axle mounted on the gun carriage, and means for securing the crank of the axle in line with the gun pivots or at a lower point on the gun carriage when the gun is elevated.

3. In combination with a gun and its carriage to which the gun is pivoted, a cranked axle mounted on the gun carriage, and means for securing the crank of the axle in line with the gun pivots or at a lower point on the gun carriage to the rear of the pivots when the gun is elevated.

1,194,032. SCOOP END-GATE. JACOB B. KLINE, Thurman, Iowa, assignor of one-half to C. R. Paul, Thurman, Iowa. Filed July 7, 1913. Serial No. 777,717. (Cl. 21—21.)



The combination with a wagon body and an end gate, of a plate disposed on the upper face of the body bottom and having one side extended therepast and bent downwardly and inwardly to form a continuous tubular longitudinally extending open sleeve, said plate having flanges at its sides resting against the sides of the body, and a plate on the inner face of the end gate having one side extending therepast and downwardly and upwardly bent to provide a longitudinally extending tubular open sleeve, the last-mentioned plate being provided with side flanges terminating short of the front of the plate and lying in the planes of the first flanges, said end gate sleeve being engaged with the body bottom sleeve and forming a hinge, the bodies of the plates lying in the same plane when the gate is dropped.

1,194,033. PROCESS OF TREATING PETROLEUM AND SHALE OILS. HERMAN WILLEM KNOTTENBELT, Brussels, Belgium. Filed Jan. 13, 1910. Serial No. 537,858. (Cl. 196—26.)

1. A process of producing illuminants which comprises separating petroleum and shale oils into fractions having different boiling points, and subjecting one of said fractions to the action of nitric oxid gas.

2. A process of treating oil distillates which comprises bringing into contact with said distillate, NO in excess under conditions to react therewith and thereafter treating said distillate with an agent capable of removing nitrogen compounds.

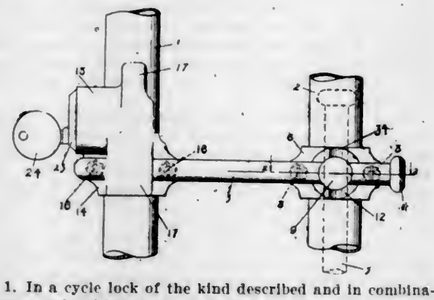
3. A process of treating oil distillates which comprises bringing into contact with said distillate NO under conditions to react therewith and thereafter treating said distillate with a ferrous compound.

4. A process of treating oil distillates which comprises bringing into contact with said distillate, NO under conditions to react therewith, and thereafter treating said distillate with a solution of ferrous sulfate.

5. A process of treating oil distillates which comprises passing bubbles of NO through the body of the distillate, until an excess of NO is in the oil, and thereafter treating said distillate with a ferrous compound to remove nitrogen compounds.

[Claims 6 and 7 not printed in the Gazette.]

1,194,034. CYCLE-LOCK. BERNARD F. KOCH, Chicago, Ill., assignor to Angsten-Koch Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1912. Serial No. 727,389. (Cl. 70—90.)



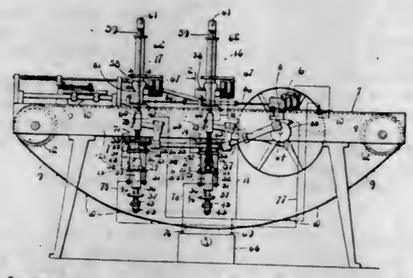
1. In a cycle lock of the kind described and in combination, a pair of brackets, means for securing said brackets to one of the forks of the cycle, one on each side of the wheel, a locking bar, means carried by one bracket for slidably and pivotally securing the bar thereto, comprising a member pivotally secured to the bracket and arranged to slidably carry said bar, said bracket provided with a groove across the face of the same, and resilient means arranged between the bracket and said member for maintaining said bar in said groove when the bar is out of operative position, and key-controlled means carried by the other bracket for locking said bar in operative position, as desired.

2. A cycle lock of the kind described and in combination, comprising a locking bar, a pair of supporting brackets therefor, comprising two parts, means arranged at points between the bracket parts and locking bar for securing the bracket parts together, one bracket provided with a bar carrying member pivotally and resiliently secured in operative position on the bracket, said bar being slidably carried by said member, the other bracket provided with a chambered extension and locking member arranged in said chamber, and provided with parts extending to each side of said bar and arranged to engage the same when in operative position, a rotatable cam member arranged between said parts, and a key-controlled cylinder extending into said chambered extension and secured to said cam member.

1,194,035. TILE SIZING AND GRADING MACHINE. CHARLES F. KOCH, Cincinnati, Ohio. Filed Sept. 25, 1912. Serial No. 722,198. (Cl. 101—83.)

1. In an apparatus of the character described, a way along which tile are movable, separate warpage testing mechanisms located along the way, for simultaneously grading tile in accordance with their various degrees of warpage, a conveyer for moving tile along the way, into engagement with one mechanism and then the other and for simultaneously moving a tile into engagement with each mechanism, driving means for periodically actuating the conveyer, separate clamping means for forcing each tile into engagement with each of said mechanisms, and

means actuated by said driving means for periodically and simultaneously actuating each clamping means during periods of rest of the conveyer.



2. In an apparatus of the character described, means for grading tile in accordance with the degree of their warpage and comprising a mechanism for indicating a determined degree of warpage, a second mechanism for indicating a different determined degree of warpage from that indicated by the first mechanism and means for simultaneously moving a tile into engagement with each mechanism.

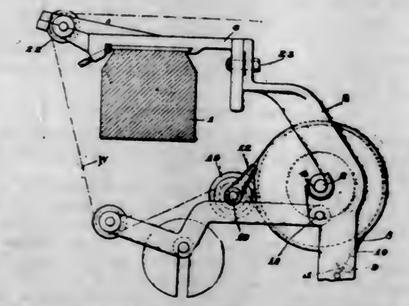
3. In an apparatus of the character described, means for grading tile in accordance with the degree of their warpage, comprising, coöperating sets of movable pins for engaging the tile, a separate indicating mechanism controlled by each set of pins and periodically moving means for moving tile to be tested into engagement with one and then the other of said sets of pins.

4. In an apparatus of the character described, means for grading tile in accordance with the degree of their warpage, comprising two sets of movable pins for engaging the tile, a separate indicating mechanism controlled by each set of pins, and periodically moving means for moving tile to be tested into engagement with one and then the other of said sets of pins and for simultaneously moving tile into operative positions with relation to each set of pins.

5. In an apparatus of the character described, warpage testing means comprising separate coöperating sets of movable pins for engaging the tile, separate indicating mechanisms controlled by each set of pins, means for moving tile to be tested into engagement with one and then the other set of pins and separate sets of reciprocable fingers for simultaneously pressing tile into engagement with each set of pins during the testing operation.

[Claims 6 to 33 not printed in the Gazette.]

1,194,036. WARP-LET-OFF MECHANISM. OTTO W. SCHAUM, Philadelphia, Pa., assignor to Schaum & Uhlinger, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 18, 1916. Serial No. 91,848. (Cl. 139—58.)



1. A loom having in combination, with the longitudinally extending rails or beams that connect or are secured to the main frames or housings, the warp-beam and the supporting side-frames therefor which are secured to said longitudinally extending beams, of flexible cords which engage grooves in flanges or grooved disks at each end of the warp-beam, one set of ends of said cords being adjustably secured to said side-frames and the other set of ends of said cords having thereupon terminals carrying bearings upon which is mounted a warp-engaging roller, brake-disks carried by said terminals and located between the terminals and the ends of said warp-engaging roller, which brake-disks engage the grooves in the flanges or grooved disks, a set of pivoted levers carrying a warp-engaging roller, which levers are arranged so that as the free ends thereof are raised by the warp from the warp-beam pulling against the roller thereupon they will engage said terminals in a manner to lessen the braking effect of the brake disks and cords which engage the grooved portions of said flanges or grooved disks.

2. A let-off mechanism for looms, which mechanism comprises in combination the warp-beam having grooved flanges or disks at each end thereof, side frames carrying said warp-beam, of cables passing over said flanges in the grooves thereof, one set of ends of said cables being adjustably secured to said side-frames and the other set of ends of said cables having terminals secured thereto, a bearing member carried by said terminals, a warp-engaging roller supported by said bearing member, rolling disks carried by said terminals which rolling disks are located between the ends of said roller and said terminals and are arranged so as to engage the grooved portion of the flanges or grooved disks, a weighted lever construction carrying a warp-engaging roller, which weighted lever construction is arranged whereby said construction can engage said terminals to release the braking effect of the rolling disks and cables.

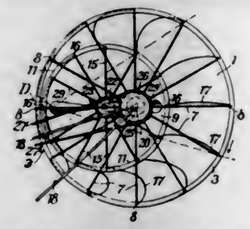
3. A device of the class described having in combination with the flanges or grooved disks of a warp-beam flexible cables seated in the grooves of said flanges or grooved disks, terminals carrying a warp-engaging roller which is free to revolve, rolling disks which can revolve in the same direction that said warp-engaging roller revolves but independent of the latter, which disks engage said flanges or grooved disks, and a weighted lever construction carrying a warp-engaging roller, said weighted lever construction being arranged so that it can release or lessen the braking effect of the flexible cables or cords and rolling disks carried at the ends of the cords.

4. A device of the class described comprising in combination a warp-beam having flanges or grooved disks at each end thereof, side-frame members supporting said warp-beam, flexible cables or cords adjustably secured to said side-frame members, terminals supporting a warp-engaging roller which is free to rotate, and rolling disks which can rotate in the same direction as but independent of said warp-engaging roller, and a weighted lever construction having thereupon a second warp-engaging roller which weighted lever construction can engage and raise the terminals whereby the rolling disks will be moved upwardly and the tension of the cables which engage the grooved portions of the flanges or grooved disks will be decreased.

5. In a device of the class described the combination of a warp-beam having flanges or grooved disks at each end thereof, a flexible cable or cord engaging each flange or grooved disk in the grooved portion thereof, a warp-engaging roller carried by said cables or cords, rolling disks that can rotate in the same direction as but independent of said warp-engaging roller, which rolling disks engage the flanges or grooved disks at each end of the warp-beam, and means having a second warp-engaging roller whereby when sufficient pull is exerted by the warp against said last-mentioned roller the braking effect of the cables or cords upon the warp-beam will be lessened.

1,194,037. AIR-PROPELLER AND THE LIKE. CARL KROPP, Deuben, near Dresden, Germany. Filed July 3, 1914. Serial No. 848,752. (Cl. 244—25.)

1. A device of the class described, comprising two drums of different diameters, one located within the other eccentrically, a connection between said drums whereby they are compelled to rotate in unison, and flexible connecting members or surfaces extending from one drum to the other and adapted to be expanded and contracted alternately as the drums rotate.



2. A device of the class described, comprising two drums of different diameters, one located within the other eccentrically and reaching at least to the center of the larger drum, a connection between said drums whereby they are compelled to rotate in unison, and flexible connecting members or surfaces extending from one drum to the other and adapted to be expanded and contracted alternately as the drums rotate.

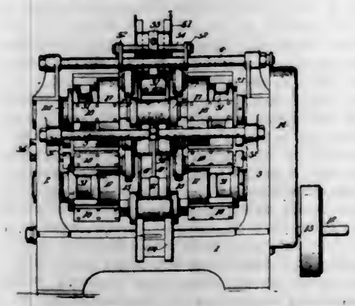
3. A device of the class described, comprising two rotary members, one located eccentrically within the other, a connection between said members whereby they are compelled to rotate in unison, and flexible connecting members or surfaces extending from one rotary member to the other and adapted to be expanded and contracted alternately as said members rotate.

4. A device of the class described, comprising two rotary members, one located eccentrically within the other, a connection between said members whereby they are compelled to rotate in unison at the same angular velocity, and flexible connecting members or surfaces extending from one rotary member to the other and adapted to be expanded and contracted alternately as said members rotate.

5. A device of the class described, comprising two drums of different diameters, the smaller located eccentrically within the larger, and their axes being parallel, each drum comprising hubs, rims, spokes connecting the rims with the hubs, and longitudinal rods connecting the rims of the same drum, an operative connection between the two drums to compel them to rotate in unison, and flexible members or surfaces having their respective ends secured to corresponding longitudinal rods of the two drums.

[Claim 6 not printed in the Gazette.]

1,194,038. AUTOMATIC FLANGING-MACHINE. LOUIS CHARLES KRUMMEL, Clinton, Conn., assignor to Continental Machine Company, Syracuse, N. Y., a Corporation of New York. Filed June 17, 1910. Serial No. 567,510. (Cl. 153—21.)



1. A flanging machine having in combination, continuously operating mechanism including a movable support, a plurality of flanging stations carried by said support, each flanging station having a support for the can body and flanging dies, a second movable support and a plurality of flanging stations carried thereby, each of which includes means for supporting the can body and flanging dies, and means for presenting the can body to a flanging station on one of said supports whereby a preliminary curl in each end of the can body may be formed, and means for subsequently presenting said can body to a flanging station on the other support, whereby a finished flange on each end of the can body may be formed.

2. A flanging machine having in combination, a plurality of supports rotating about horizontal axes, a flanging station carried by and moving bodily with each support, means for presenting a can body to the flanging station on one support, whereby a preliminary curl is formed in each end of the can body, and means for subsequently presenting said can body to the flanging station on the other support, whereby a finished flange is formed on each end of the can body.

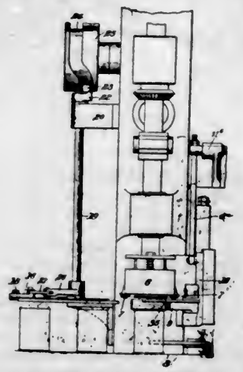
3. A flanging machine having in combination, a plurality of oppositely rotating supports, a flanging station carried by each support, means for presenting a can body to the flanging station on one support whereby a preliminary curl is formed in each end of the can body, and means for subsequently presenting said can body to the flanging station on the other support, whereby a finished flange is formed on each end of the can body.

4. A flanging machine having in combination, a plurality of rotating supports, flanging stations carried by each support, and means for presenting can bodies first to a station on one support, and then to a station on the second support.

5. A flanging machine having in combination, a rotatable support, a plurality of sets of non-rotating dies, bodily movable with said support, means for presenting can bodies to said dies, and stationary cams operatively connected with said dies for moving the same toward and from each other for flanging the can bodies.

[Claims 6 to 16 not printed in the Gazette.]

1,194,039. DEVICE FOR FEEDING CAN ENDS TO A SEAMING MECHANISM. LOUIS C. KRUMMEL, Clinton, Conn., assignor to Continental Can Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed Mar. 20, 1911. Serial No. 615,571. (Cl. 113—114.)



1. The combination of a can support, a seaming mechanism located above said support and including a seaming head, mounted to rotate about a fixed axis and having seaming rolls, means located beneath the seaming head and supported independently thereof for receiving a can end and centering the same relative to the seaming head, a carrier having means for supporting a can end, and means for reciprocating said carrier, whereby a can end placed thereon may be carried underneath the seaming head and placed on said can end receiving means.

2. The combination of a can support, seaming mechanism including a rotating seaming head and seaming rollers carried thereby, devices underneath said head for centering a can end, jaws between the main portion of said centering devices and said seaming head for temporarily supporting the can end, a carrier for supporting and placing a can end underneath said seaming head and in said jaws, and means for operating said carrier.

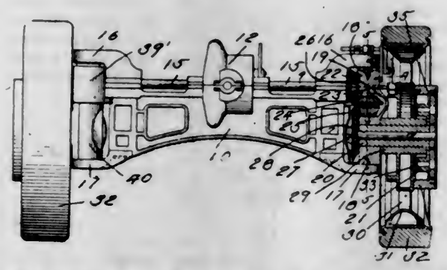
3. The combination of a can support, a seaming mechanism having a rotating seaming head and seaming rollers carried thereby, means for feeding can ends beneath said seaming head including a carrier, a supporting ledge at the forward end of said carrier upon which said can ends are adapted to rest, and means for reciprocating said carrier in timed relation to the operation of the seaming head, whereby said carrier is moved forward to place a can end underneath the seaming head, when the seaming head is raised.

4. The combination of a can support, seaming mechanism having a rotating seaming head, means for feeding can ends beneath the seaming head including a reciprocating carrier, a supporting ledge at the forward end of said carrier, a rock shaft, an arm carried by said rock shaft, a link connecting said arm to said carrier, and means whereby the connection between said arm and said carrier may be adjusted to vary the reciprocating position of the carrier.

5. The combination of a can support, seaming mechanism having a rotating seaming head, means for feeding can ends beneath the seaming head including a reciprocating carrier, a supporting ledge at the forward end of said carrier, a rock shaft, an arm carried by said rock shaft, a link connecting said arm to said carrier, and an edge gage adjacent the end of said carrier in its retracted position for positioning a can end on said carrier.

[Claim 6 not printed in the Gazette.]

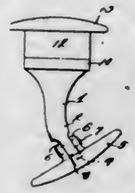
1,194,040. DRIVING MECHANISM FOR MOTOR-VEHICLES. WILLIAM O. KUHN, Weber, Wash. Filed July 28, 1915. Serial No. 42,398. (Cl. 21—90.)



The combination with an axle, of a knuckle pivoted to the axle and provided with a recess and including a stub axle, a circumscribing flange on the outer end of the stub axle, a wheel rotatable on the stub axle, an internal gear ring secured to the wheel, a plurality of gears rotatably mounted on said flange and meshing with said gear ring, a shaft rotatable in the stub axle, a gear fixed on the outer end of said shaft and meshing with the gears carried by the flange, a gear fixed on the inner end of said shaft, a second shaft rotatable on the axle, a gear fixed on the end of the second shaft, a third shaft rotatably mounted in the recess of the knuckle, and gears fixed on the third shaft meshing respectively with a gear on the second shaft and with the gear on the inner end of the first shaft.

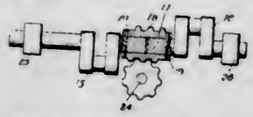
1,194,041. CUFF-BUTTON. WILLIAM MARCELLUS LARRABEE, Waupun, Wis. Filed Dec. 3, 1915. Serial No. 64,873. (Cl. 24—97.)

1. A link cuff button comprising a connecting link or bar having a button pivoted upon one end, and a second button integrally and stationary with the other end, said link or connecting bar substantially midway its end merging into a circular disk having a flat face spaced at an interval from the stationary button, and a flat shank of the same diameter of a disk and being integrally connected to the disk, and being in turn integrally connected to the stationary button.



2. A link cuff button, comprising a pair of buttons, a connecting link or bar having one end integrally connected to one of the buttons, the other end portion of the link or bar having a gradual curve, the extremity of which terminates in a flat part terminating in a lateral curved tongue, the other button being solid and having a pair of ears on its rear face between which the flat part extends, a pivot pin extending through the ears and the flat part, said pivoted button on its rear face having a recess between the ears curved on a radius from the pivot pin and into which recess the tongue extends, said recess having a shoulder at one end to contact with the tongue to limit the pivoted button in a position with the link extending centrally from the button.

1,194,042. CRANK-SHAFT. AXEL F. LARSON, Chicago, Ill., assignor to Marquette Piano Company, Chicago, Ill., a Corporation of Michigan. Filed Jan. 18, 1913. Serial No. 742,842. (Cl. 74—36.)



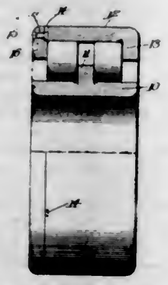
1. A crank shaft comprising a pair of cranks, bearings for the shaft, an integral hollow cylindrical member connecting said cranks, each of said cranks comprising an arm projecting into said hollow cylindrical member, and tapered pins passing through the cranks and cylindrical member to secure the same together, said hollow cylindrical member comprising an external worm, formed integral therewith, and disposed in close proximity to the axis of the crank shaft.

2. A crank shaft comprising a pair of cranks, bearings for the shaft, an integral hollow cylindrical member sleeved directly on the shaft and connecting said cranks, each of said cranks comprising an arm projecting into said hollow cylindrical member, means for connecting the cylindrical member to the cranks to secure the same together, said hollow cylindrical member comprising an external worm formed integral therewith and disposed in close proximity to the axis of the crank shaft.

3. In a device of the class described, the combination of a pair of shafts each provided with a crank arm, bearings for the shafts, a sleeve mounted directly on the shafts surrounding and connecting the inner ends thereof and a worm carried by the sleeve, the engaging surfaces of said worm being disposed in close proximity to the shafts.

4. In a device of the class described, the combination of a pair of shafts each provided with a crank arm, bearings for the shafts, a sleeve mounted directly on the shafts surrounding and connecting the inner ends thereof and a worm carried by the sleeve, the engaging surfaces of said worm being disposed in close proximity to the shafts, said shafts extending outwardly into the bearings disposed on the outside of the crank arms.

1,194,043. ROLLER-BEARING. ARTHUR M. LAYCOCK, Kingston, Pa. Filed Apr. 18, 1916. Serial No. 91,991. (Cl. 64—39.)



1. In a roller bearing, an outer ring, an inner ring, interposed rollers, a flange, means for attaching said flange to one of the rings, comprising rivets carried by the flange and having a dove-tailed connection with the last mentioned ring.

2. In a roller bearing, an outer ring, an inner ring, interposed rollers, a flange, one of the rings provided with dove-tail-grooves in an end face thereof, apertures in the flange, rivets coöperating with the grooves and apertures to attach the flange to the last mentioned ring.

3. In a roller bearing, an outer ring, an inner ring, interposed rollers, axially extending pins carried by one of the rings on its end face, a flange carried by said pins, the pins adapted to have their outer ends riveted over to thereby hold the flange in position.

1,194,044. PRUNING DEVICE FOR BANANA CULTURE. HOWARD H. LOOMIS, Quirigua, Guatemala. Filed Feb. 12, 1916. Serial No. 78,015. (Cl. 30—11.)



1. A pruning device for banana culture comprising a blade provided with a handle and having a plurality of angularly arranged cutting edges, one of said cutting edges being formed as a continuous straight line edge intersected by the axial line of the blade and the remaining cutting edges being inclined forwardly in a direction toward said axial line.

2. A pruning device for banana culture comprising a blade provided with a handle and with three straight cutting edges all converging forwardly and meeting at angles to each other, the intermediate cutting edge being intersected by the axial line of the blade.

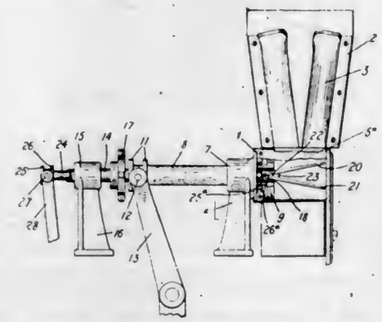
3. A pruning device for banana culture comprising a blade provided with a handle and having three straight edges sharpened for cutting and meeting at obtuse angles to each other, the intermediate cutting edge being intersected by the axial line of the blade.

4. A pruning device for banana culture comprising a blade provided with a handle and with a pair of cutting edges converging forwardly and meeting at a point displaced laterally with reference to the axial line of the blade, said blade being provided with a dull-edged recess at the rear of one of said cutting edges to form a rearwardly pointing hook portion.

5. A pruning device for banana culture comprising a blade provided with a handle and having three edges sharpened for cutting and meeting at obtuse angles to each other, the intermediate cutting edge being intersected by the axial line of the blade and said blade being recessed at the rear of one of the remaining cutting edges to form a rearwardly pointing hook portion.

[Claims 6 and 7 not printed in the Gazette.]

1,194,045. PACKAGE-FORMING MACHINE. LAWRENCE W. LUELLEN, Mountain Lakes, N. J., assignor to Individual Drinking Cup Company, New York, N. Y., a Corporation of Maine. Filed Dec. 15, 1913. Serial No. 806,823. (Cl. 242—60.)



1. A package forming mechanism including in combination shaping and winding mechanism operating to wrap into package form a substantially rectangular flexible article, said shaping and winding mechanism including a pair of curved guides, a cylindrical wrapper holder adjacent the discharged end of the guides, a winding spindle rotatably mounted within the cylindrical wrapper holder and means for imparting rotary movement to said winding spindle.

2. A package forming mechanism including in combination a pair of trough-like guide members, a wrapper holder at the discharge end of the guide member, a clamping spindle located within the holder and adapted to clamp the end of a flexible article and wind the same thereon, means for automatically operating said clamping spindle, and means for rotating the spindle to wind the article thereon.

3. A package forming and wrapping mechanism comprising in combination a pair of trough-like guides adapted to accommodate and shape an article passing therethrough, a bi-sected clamping spindle adapted to engage the end of the article and wind the same thereon, mechanism for rotating said spindle, and ejecting mechanism for removing said article from said spindle when completely wound.

4. A package forming mechanism including in combination a pair of trough-like guide members, a clamping spindle adapted to clamp the end of a flexible article and wind the same thereon, means for automatically operating said clamping spindle, means for rotating the spindle to wind the article thereon, and means for removing said article from the spindle when completely wound.

5. A package forming mechanism comprising a pair of trough-like forming guides, a drum juxtaposed to the discharge end of said guides, said drum being provided with a slot to permit the passing of the article from the guides to the interior of the drum and to support a wrapper

2. The combination of a can support, seaming mechanism including a rotating seaming head and seaming rollers carried thereby, devices underneath said head for centering a can end, jaws between the main portion of said centering devices and said seaming head for temporarily supporting the can end, a carrier for supporting and placing a can end underneath said seaming head and in said jaws, and means for operating said carrier.

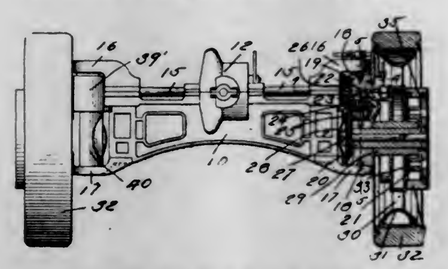
3. The combination of a can support, a seaming mechanism having a rotating seaming head and seaming rollers carried thereby, means for feeding can ends beneath said seaming head including a carrier, a supporting ledge at the forward end of said carrier upon which said can ends are adapted to rest, and means for reciprocating said carrier in timed relation to the operation of the seaming head, whereby said carrier is moved forward to place a can end underneath the seaming head, when the seaming head is raised.

4. The combination of a can support, seaming mechanism having a rotating seaming head, means for feeding can ends beneath the seaming head including a reciprocating carrier, a supporting ledge at the forward end of said carrier, a rock shaft, an arm carried by said rock shaft, a link connecting said arm to said carrier, and means whereby the connection between said arm and said carrier may be adjusted to vary the reciprocating position of the carrier.

5. The combination of a can support, seaming mechanism having a rotating seaming head, means for feeding can ends beneath the seaming head including a reciprocating carrier, a supporting ledge at the forward end of said carrier, a rock shaft, an arm carried by said rock shaft, a link connecting said arm to said carrier, and an edge gage adjacent the end of said carrier in its retracted position for positioning a can end on said carrier.

[Claim 6 not printed in the Gazette.]

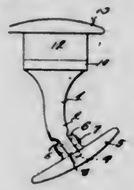
1,194,040. DRIVING MECHANISM FOR MOTOR-VEHICLES. WILLIAM O. KUHN, Weber, Wash. Filed July 28, 1915. Serial No. 42,398. (Cl. 21—90.)



The combination with an axle, of a knuckle pivoted to the axle and provided with a recess and including a stub axle, a circumscribing flange on the outer end of the stub axle, a wheel rotatable on the stub axle, an internal gear ring secured to the wheel, a plurality of gears rotatably mounted on said flange and meshing with said gear ring, a shaft rotatable in the stub axle, a gear fixed on the outer end of said shaft and meshing with the gears carried by the flange, a gear fixed on the inner end of said shaft, a second shaft rotatable on the axle, a gear fixed on the end of the second shaft, a third shaft rotatably mounted in the recess of the knuckle, and gears fixed on the third shaft meshing respectively with a gear on the second shaft and with the gear on the inner end of the first shaft.

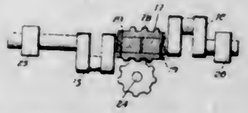
1,194,041. CUFF-BUTTON. WILLIAM MARCELLUS LARRABEE, Waupun, Wis. Filed Dec. 3, 1915. Serial No. 64,873. (Cl. 24—97.)

1. A link cuff button comprising a connecting link or bar having a button pivoted upon one end, and a second button integrally and stationary with the other end, said link or connecting bar substantially midway its end merging into a circular disk having a flat face spaced at an interval from the stationary button, and a flat shank of the same diameter of a disk and being integrally connected to the disk, and being in turn integrally connected to the stationary button.



2. A link cuff button, comprising a pair of buttons, a connecting link or bar having one end integrally connected to one of the buttons, the other end portion of the link or bar having a gradual curve, the extremity of which terminates in a flat part terminating in a lateral curved tongue, the other button being solid and having a pair of ears on its rear face between which the flat part extends, a pivot pin extending through the ears and the flat part, said pivoted button on its rear face having a recess between the ears curved on a radius from the pivot pin and into which recess the tongue extends, said recess having a shoulder at one end to contact with the tongue to limit the pivoted button in a position with the link extending centrally from the button.

1,194,042. CRANK-SHAFT. AXEL F. LARSON, Chicago, Ill., assignor to Marquette Piano Company, Chicago, Ill., a Corporation of Michigan. Filed Jan. 18, 1913. Serial No. 742,842. (Cl. 74—36.)



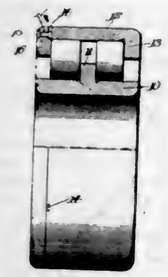
1. A crank shaft comprising a pair of cranks, bearings for the shaft, an integral hollow cylindrical member connecting said cranks, each of said cranks comprising an arm projecting into said hollow cylindrical member, and tapered pins passing through the cranks and cylindrical member to secure the same together, said hollow cylindrical member comprising an external worm, formed integral therewith, and disposed in close proximity to the axis of the crank shaft.

2. A crank shaft comprising a pair of cranks, bearings for the shaft, an integral hollow cylindrical member sleeved directly on the shaft and connecting said cranks, each of said cranks comprising an arm projecting into said hollow cylindrical member, means for connecting the cylindrical member to the cranks to secure the same together, said hollow cylindrical member comprising an external worm formed integral therewith and disposed in close proximity to the axis of the crank shaft.

3. In a device of the class described, the combination of a pair of shafts each provided with a crank arm, bearings for the shafts, a sleeve mounted directly on the shafts surrounding and connecting the inner ends thereof and a worm carried by the sleeve, the engaging surfaces of said worm being disposed in close proximity to the shafts.

4. In a device of the class described, the combination of a pair of shafts each provided with a crank arm, bearings for the shafts, a sleeve mounted directly on the shafts surrounding and connecting the inner ends thereof and a worm carried by the sleeve, the engaging surfaces of said worm being disposed in close proximity to the shafts, said shafts extending outwardly into the bearings disposed on the outside of the crank arms.

1,194,043. ROLLER-BEARING. ARTHUR M. LAYCOCK, Kingston, Pa. Filed Apr. 18, 1916. Serial No. 91,991. (Cl. 64—39.)



1. In a roller bearing, an outer ring, an inner ring, interposed rollers, a flange, means for attaching said flange to one of of the rings, comprising rivets carried by the flange and having a dove-tailed connection with the last mentioned ring.

2. In a roller bearing, an outer ring, an inner ring, interposed rollers, a flange, one of the rings provided with dove-tail grooves in an end face thereof, apertures in the flange, rivets coöperating with the grooves and apertures to attach the flange to the last mentioned ring.

3. In a roller bearing, an outer ring, an inner ring, interposed rollers, axially extending pins carried by one of the rings on its end face, a flange carried by said pins, the pins adapted to have their outer ends riveted over to thereby hold the flange in position.

1,194,044. PRUNING DEVICE FOR BANANA CULTURE. HOWARD H. LOOMIS, Quirigua, Guatemala. Filed Feb. 12, 1916. Serial No. 78,015. (Cl. 30—11.)



1. A pruning device for banana culture comprising a blade provided with a handle and having a plurality of angularly arranged cutting edges, one of said cutting edges being formed as a continuous straight line edge intersected by the axial line of the blade and the remaining cutting edges being inclined forwardly in a direction toward said axial line.

2. A pruning device for banana culture comprising a blade provided with a handle and with three straight cutting edges all converging forwardly and meeting at angles to each other, the intermediate cutting edge being intersected by the axial line of the blade.

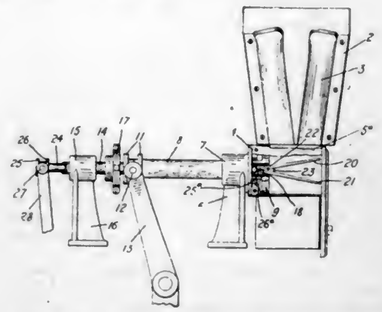
3. A pruning device for banana culture comprising a blade provided with a handle and having three straight edges sharpened for cutting and meeting at obtuse angles to each other, the intermediate cutting edge being intersected by the axial line of the blade.

4. A pruning device for banana culture comprising a blade provided with a handle and with a pair of cutting edges converging forwardly and meeting at a point displaced laterally with reference to the axial line of the blade, said blade being provided with a dull-edged recess at the rear of one of said cutting edges to form a rearwardly pointing hook portion.

5. A pruning device for banana culture comprising a blade provided with a handle and having three edges sharpened for cutting and meeting at obtuse angles to each other, the intermediate cutting edge being intersected by the axial line of the blade and said blade being recessed at the rear of one of the remaining cutting edges to form a rearwardly pointing hook portion.

[Claims 6 and 7 not printed in the Gazette.]

1,194,045. PACKAGE-FORMING MACHINE. LAWRENCE W. LUELLEN, Mountain Lakes, N. J., assignor to Individual Drinking Cup Company, New York, N. Y., a Corporation of Maine. Filed Dec. 15, 1913. Serial No. 806,823. (Cl. 242—60.)



1. A package forming mechanism including in combination shaping and winding mechanism operating to wrap into package form a substantially rectangular flexible article, said shaping and winding mechanism including a pair of curved guides, a cylindrical wrapper holder adjacent the discharged end of the guides, a winding spindle rotatably mounted within the cylindrical wrapper holder and means for imparting rotary movement to said winding spindle.

2. A package forming mechanism including in combination a pair of trough-like guide members, a wrapper holder at the discharge end of the guide member, a clamping spindle located within the holder and adapted to clamp the end of a flexible article and wind the same thereon, means for automatically operating said clamping spindle, and means for rotating the spindle to wind the article thereon.

3. A package forming and wrapping mechanism comprising in combination a pair of trough-like guides adapted to accommodate and shape an article passing therethrough, a bi-sected clamping spindle adapted to engage the end of the article and wind the same thereon, mechanism for rotating said spindle, and ejecting mechanism for removing said article from said spindle when completely wound.

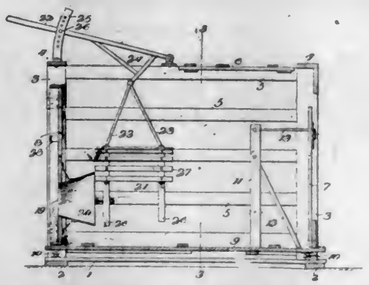
4. A package forming mechanism including in combination a pair of trough-like guide members, a clamping spindle adapted to clamp the end of a flexible article and wind the same thereon, means for automatically operating said clamping spindle, means for rotating the spindle to wind the article thereon, and means for removing said article from the spindle when completely wound.

5. A package forming mechanism comprising a pair of trough-like forming guides, a drum juxtaposed to the discharge end of said guides, said drum being provided with a slot to permit the passing of the article from the guides to the interior of the drum and to support a wrapper

after the article has become completely wound, a clamping spindle rotatably mounted within said drum, means for operating said clamping spindle to cause the same to engage and clamp the end of the article, said clamping spindle automatically operating to release the end of the article when the latter is completely wound, and means for automatically ejecting the wound article and wrapper from the drum.

[Claims 6 to 8 not printed in the Gazette.]

1,194,046. STANCHION. RUFUS J. LUTTRELL, Whitley township, Moultrie county, Ill. Filed Oct. 28, 1915. Serial No. 58,458. (Cl. 119—99.)



1. A stanchion having an opening in its front wall for reception of the snout of an animal and having a longitudinally movable bottom, and a rear wall hingedly connected at its lower edge to the bottom whereby it is movable with the bottom and may be turned down to constitute an extension of the bottom to admit an animal to the stanchion.

2. A stanchion having a longitudinally movable bottom, a rear wall carried by said bottom and adapted to swing down beyond the same, standards on said bottom adjacent said rear wall, and a bail pivoted to the upper ends of said standards and adapted to engage with the upper ends of said rear wall to hold the same in a raised position.

1,194,047. RAIL-SPIKE. EUGENE V. LYNCH, New York, N. Y. Filed June 30, 1915. Serial No. 37,294. (Cl. 85—20.)



1. A rail spike including a shank having a pointed end nd a head, spiral ribs gradually increasing in height from the pointed end toward the head and terminating a distance therefrom, and oppositely arranged spiral ribs extending downwardly from the head.

2. A rail spike including a shank having a pointed end and a head, spiral ribs extending upwardly from the pointed end and increasing in size the more remote from the point, said ribs having a portion thereof tapered to a cutting edge and the remainder provided with a serrated edge, and oppositely arranged spiral ribs extending downward from the head.

3. A rail spike including a shank having a pointed end and a head, spiral ribs extending upwardly from the pointed end and terminating at a distance from the head, and oppositely arranged spiral ribs extending downwardly from the head.

4. A rail spike including a shank having a pointed end and a head, spiral ribs extending upwardly from the pointed end and terminating at a distance from the head, and oppositely arranged spiral ribs extending downwardly from the head and terminating between the first mentioned ribs in the plane of the upper ends thereof.

1,194,048. MOP. LEWIS A. MCKAY, Indianapolis, Ind. Filed Feb. 25, 1916. Serial No. 80,382. (Cl. 15—56.)

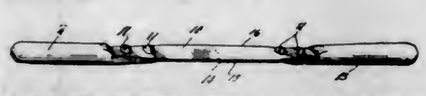


1. The combination with a mop and a tie for said mop having a pair of loops, of a handle, a guide for the loops on the end of the handle, a bifurcated lever, hooks to engage the loops, said hooks being carried by the lever, a ring sliding on the handle to which the lever is fulcrumed and a spring to press the ring away from the guide.

2. The combination of a mop, a tie for said mop comprising a wire bent around it in the form of an elongated body, said body being crossed by a pair of integrally formed laterally extended parallel loops, a handle, and a head on the handle having an elastic lever-operated means for engaging said loops and for drawing the mop tightly against a portion of the head.

3. The combination of a mop, a tie for said mop comprising a wire bent around it in the form of an elongated loop, a pair of parallel loops extending across the first loop and laterally thereof, a handle, a guide for the loops on the end of the handle, a bifurcated lever, a ring sliding on the handle to which ring the lever is fulcrumed and a spring to press the ring away from the guide.

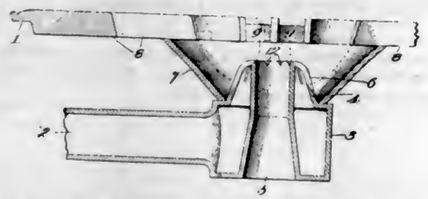
1,194,049. SCRAPER. ANDREW F. MARSH, Plainfield, N. J. Filed Dec. 14, 1915. Serial No. 66,826. (Cl. 145—47.)



1. A scraper for uneven surfaces, variable in longitudinal configuration during a single scraping stroke and consisting of a flexible metal strip having a longitudinal scraping edge and provided with end handles for drawing it and simultaneously changing its longitudinal configuration.

2. A scraper for uneven surfaces consisting of a metal blade having terminal handles, the blade being variable in longitudinal configuration during a single scraping stroke, under the influence of said terminal handles.

1,194,050. GAS-BURNER. JOSEPH E. MARTIN, Kansas City, Mo. Filed Mar. 10, 1916. Serial No. 83,293. (Cl. 158—99.)



1. A burner comprising a hollow head, having an upwardly projecting boss of truncated-cone form and also having a central tube extending from the bottom of the head to the crest of the boss; the wall of the boss having gas jet openings whose innermost ends lie at the crest of the boss adjacent the upper end of said tube and whose outermost ends lie at points diagonally downward and outward from said innermost ends.

2. A burner comprising a hollow head having an upwardly projecting boss of truncated-cone form and also having a central tube extending from the bottom of the head to the crest of the boss; the wall of the boss having gas jet openings whose innermost ends lie at the crest of the boss adjacent the upper end of said tube and whose outermost ends lie at points diagonally downward and outward from said innermost ends, in combination with an inverted frustum-shaped collar fitting around the boss of the burner and provided with openings for secondary air in planes below and in alternate radial planes with respect to the openings of the burner.

3. A burner having a hollow head provided with openings for discharging mixed gas and primary air vertically and laterally in a circular series of thin sheets spaced apart, the gas issuing vertically at the top of the burner and laterally in a plane substantially below the top of the burner; said burner having a central vertical passage extending from its bottom to its top for the upward passage of secondary air; the burner being provided with notches at the upper end of the passage arranged in staggered relation to the inner ends of the openings.

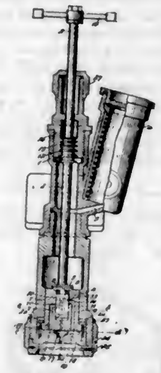
1,194,051. ATOMIZER FOR LIQUIDS. PAOLO MEJANI, Spezia, Italy. Filed June 5, 1913. Serial No. 771,963. (Cl. 138—86.)

1. In an atomizer, the combination of a member provided with a perforation having a circular enlarged portion, the member being also provided with curved channels meeting the periphery of the enlargement substantially tangentially and having a curvature opposite to that of said periphery; and means for conducting fluid to said channels.

2. In an atomizer, the combination of a disk provided with a central perforation having a circular enlarged portion at one end, the disk being provided with curved channels meeting the periphery of said enlargement substantially tangentially and having a curvature inverse to that of the periphery; and means for conducting fluid to said channels.

3. In an atomizer, the combination of a member provided with a perforation having a substantially circular enlargement therein, the member being also provided with arcuate channels meeting the periphery of said enlargement substantially tangentially and having a curvature inverse to that of said periphery; and means for conducting fluid to said channels.

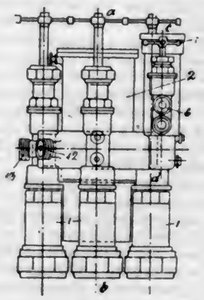
4. In an atomizer, the combination of a disk having a perforation and channels communicating therewith; a counterplate contacting said disk and provided with a bore and conduits communicating with said channels respectively at different heights of said bore; screws holding the counterplate against said disk; a hollow valve-spindle in said bore and provided with openings at different heights and angles and adapted at times to register with one or more of said conduits respectively; and means for conducting fluid into said spindle.



5. In an atomizer, the combination of a member provided with a circular perforation and a plurality of curved channels communicating therewith and having a curvature inverse to that of the periphery of the perforation; a counterplate superposed on said member and provided with conduits communicating with the respective channels; and means for at will conducting fluid to one or more or all of said conduits.

[Claim 6 not printed in the Gazette.]

1,194,052. APPARATUS FOR BURNING COMBUSTIBLE LIQUIDS IN STEAM-BOILER FURNACES. PAOLO MEJANI, Spezia, Italy. Original application filed June 5, 1913, Serial No. 771,963. Divided and this application filed Feb. 18, 1915. Serial No. 9,063. (Cl. 158—73.)



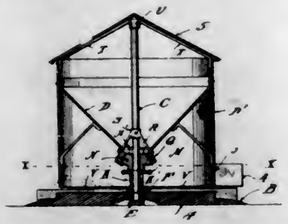
1. A liquid fuel burner for steam boiler furnaces provided with a conduit through which the air for the combustion is made to pass; a plurality of atomizers arranged around said conduit for atomizing the liquid to be burnt; means for working and controlling the atomizers each independently from the others; and means for regulating the amount of air entering the air conduit, said means comprising an inwardly opening valve arranged at the inlet end of the air conduit and adapted to open automatically by air pressure from the outside and to close automatically when the outside pressure is less than the pressure within the furnace.

2. A liquid fuel burner for steam boiler furnaces provided with a conduit through which the air for the com-

bustion is made to pass; a plurality of atomizers arranged around said conduit for atomizing the liquid to be burnt; means for working and controlling the atomizers each independently from the others; passages through which the fuel to be atomized is made to pass; and additional conduits through which heating fluid is made to pass for heating the fuel in said passages.

3. A liquid fuel burner for steam boiler furnaces provided with a conduit through which the air for the combustion is made to pass; a plurality of atomizers arranged around said conduit for atomizing the liquid to be burnt; means for working and controlling the atomizers each independently from the others; passages through which the fuel to be atomized is made to pass; and additional conduits through which heating fluid is made to pass for heating the fuel in said passages, said passages and said additional conduits being arranged in a circle around the conduit for the passage of the air required for the combustion.

1,194,053. FEED GRINDING AND FEEDING MACHINE. ALFRED F. MEYER, Morton, Ill. Filed Jan. 29, 1914. Serial No. 815,273. (Cl. 83—7.)



1. In a machine of the class described, the combination with a base and a part fixed relatively to it including a feed grinding portion, a hopper, a second feed grinding portion, and a rotatable member operatively connected to said second portion including an arm to move in close proximity to the upper surface of the base and constructed and arranged to move outward across the base the reduced feed falling thereon from said grinding portions, said member being operated by an animal feeding from the machine.

2. In a feed grinding and feeding machine of the class described, the combination with a base and an upright fixed relatively, of a hopper, a grinding device, and a rotatable member beneath the grinding device arranged to deposit feed upon said base having a part of the said grinding device operatively connected to it and terminating at its extremity in a wing, said member adapted to be operated by an animal feeding at said wing and adapted and arranged to move the reduced material across the base to its outer edge behind said wing.

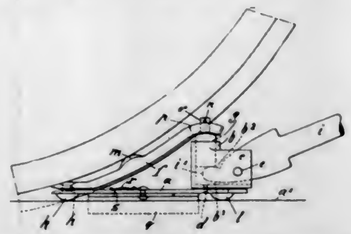
3. In a machine of the class described, the combination with a base and an upright fixed relatively, of a hopper fixed relatively to the upright, a grinding device, and a rotating part beneath the hopper adapted to move in close proximity to the base, one of the parts of the grinding device being rotatable therewith, said member terminating in a substantially upright portion adapted to be operated by an animal feeding on said base.

4. In a feed grinding machine of the class described, the combination with a support, a grinding device, and a base in position to receive material reduced by said grinding device, a member rotatable relatively to the base and adapted to travel over the same in close proximity to its upper surface, and operatively connected to the grinding device, said member terminating distant from the latter in a wing and adapted to be operated by pressure of an animal against the wing in feeding to operate said grinding device, the said member including a part to move the material outward from its place of deposit toward the edge of the base.

5. In a machine of the class described the combination with a base and an upright fixed relatively, of a hopper and a portion of a feed grinding device fixed relatively to the upright, an inclosing shell depending below the hopper, its lower end being spaced above the base, and a rotatable member between the shell and the base and projecting outward from the former and terminating in a substantially upright portion or wing, said member having a portion of the grinding device operatively connected to it and adapted to be operated by an animal feeding at said portion or wing.

[Claims 6 to 20 not printed in the Gazette.]

1,194,054. VEHICLE OR LOCOMOTIVE PUSHER. FRIEDA MEYER, Zurich, Switzerland. Filed Jan. 3, 1916. Serial No. 69,778. (Cl. 254—38.)



1. A vehicle or locomotive pusher, comprising a base, a push lever movably connected to the front end of the base and acting upon the wheel, a casing arranged in a turnable manner on the after end of the base, a lever pivotally mounted in the casing and an intermediate member movable in the casing, acting at the top upon the upper end of the push lever and receiving at the lower end the pressure from the lever, the latter being capable of working in any oblique position from 0° to approximately 180°.

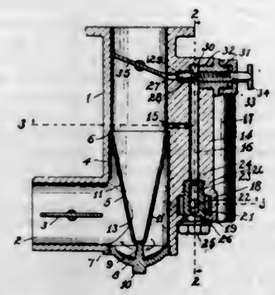
2. A vehicle or locomotive pusher, comprising a supporting base, a curved push lever movably connected to the front end of the base and acting upon the wheel, a casing arranged in a laterally turnable manner on the after end of the base and having a lateral aperture and two side cheeks, a lever pivotally mounted between the side cheeks of the casing and entering with its front end into the said aperture, and an intermediate member movable in the casing, acting at the top upon the upper end of the push lever and receiving at the lower end the pressure from the hand lever, the latter being capable of working in any oblique position from 0° to approximately 180°.

3. A vehicle or locomotive pusher, comprising a supporting base having transversal ledges on the under side, a push lever movably connected to the front end of the base, having a driving projection and acting upon the wheel, a casing arranged in a laterally turnable manner on the after end of the base, a lever pivotally mounted in the casing and an intermediate member in the form of a plunger movable in the casing and resting on the front end of the lever, the upper portion of the plunger having a slightly rounded off supporting surface for the push lever and terminating as a pin extending through a slot in the push lever, the lever being capable of working in any oblique position from 0° to approximately 180°.

4. A vehicle or locomotive pusher, comprising a base, a push lever movably connected to the front end of the base and acting upon the wheel, a casing arranged in a laterally turnable manner on the after end of the base, a lever pivotally mounted on the casing, an intermediate member movable in the casing, acting at the top upon the upper end of the push lever and receiving at the lower end the pressure from the lever and a guide plate of angular section pivotally mounted on the lower side of the base and having means for securing it in the operative position, the lever being capable of working in any oblique position from 0° to approximately 180°.

5. A vehicle or locomotive pusher, comprising a base having two transversal ledges on the under side, a curved push lever vertically and horizontally movably connected to the front end of the base, having a driving projection on the upper face and acting upon the wheel, a casing arranged in a laterally turnable manner on the after end of the base and having a lateral aperture and two side cheeks, a lever pivotally mounted between the side cheeks of the casing and entering with its front end into the aperture of the casing, an intermediate member in the form of a plunger movable in the casing and resting on the front end of the lever, the upper portion of the plunger having a slightly rounded off supporting surface for the push lever and terminating as a pin extending through a slot of the push lever and a guide plate of angular section pivotally mounted on the lower side of the base and having two holes each of same receiving a spring actuated locking pin in the respective operative position of the guide plate, the lever being capable of working in any oblique position from 0° to approximately 180°.

1,194,055. CARBURETER. OLNEY B. MONOSMITH, Lorain, Ohio. Filed Aug. 17, 1914. Serial No. 857,058. (Cl. 48—150.3.)



1. In a carbureter, the combination of an air passage, the air passage having a feed opening through its wall, a float chamber connected with the feed opening, a bent-up spray plate consisting of a pair of diverging sides connected by a bottom arranged within the air passage for receiving the flow from the feed opening upon its inner surfaces, and the spray plate being perforated, substantially as described.

2. In a carbureter, the combination of an air passage, the air passage having a feed opening through its wall, a float chamber connected with the feed opening, a bent-up spray plate consisting of a pair of flat diverging sides connected by a bottom arranged within the air passage for receiving the flow from the feed opening upon its inner surfaces, the spray plate being provided with perforations, and the perforations having tapering sides with their larger areas at the inner surfaces of the spray plate, substantially as described.

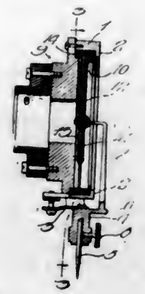
3. In a carbureter, the combination of a vertical air passage having a side inlet, the air passage having a feed opening through its wall, a float chamber connected with the feed opening, a removable V shaped spray plate arranged within the air passage below said feed opening for receiving the flow from the feed opening upon its inner surfaces, the spray plate being perforated, the air passage having a lower open end for admitting the spray plate, and means for closing said open end of the air passage, substantially as described.

4. In a carbureter, the combination of a vertical air passage having a side inlet, the air passage having a feed opening through its wall, a float chamber connected with the feed opening, the air passage having a lower open end, the lower portion of the air passage being of larger bore to form a shoulder below said feed opening, a spray plate having diverging sides arranged in the air passage with its sides abutting said shoulder, the spray plate being perforated, and a cap for closing the lower open end of the air passage and engaging the spray plate to hold it in position, substantially as described.

5. In a carbureter, the combination of a vertical air passage, the air passage having a feed opening through its wall, a spray plate arranged in the air passage below the feed opening, the wall of the air passage having a vertical opening communicating with the feed opening, the vertical opening being open at its lower end, a plug nozzle removably threaded into the open end of the vertical opening, the plug nozzle being hollow and having a tapering outlet, the plug nozzle having a lateral opening leading to its hollow center, and a float chamber connected with the lateral opening of the plug nozzle, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,194,056. DIAPHRAGM FOR PHONOGRAPHS AND TALKING-MACHINES. FRANK VAN VLECK MORSE, Minneapolis, Minn. Filed Feb. 15, 1915. Serial No. 8,246. (Cl. 181—32.)



1. A diaphragm for phonographic reproducers comprising a circular disk of a material sensitive to sound vibrations, and two triangular planes of unequal thicknesses of a material more sensitive to sound vibrations than the material from which said disk is made, said planes being arranged on opposite sides of said disk.

2. A diaphragm for phonographic reproducers comprising a circular disk of a material sensitive to sound vibrations, and two triangular planes of unequal thicknesses of a material more sensitive to sound vibrations than the material from which said disk is made, said planes working independently on opposite sides of said disk.

3. A diaphragm for phonographic reproducers comprising a circular disk of a material sensitive to sound vibrations, and two triangular planes of unequal thicknesses of a material more sensitive to sound vibrations than the material from which said disk is made, said planes being arranged on opposite sides of said disk and being secured to the latter only at their vertices and at their centers, whereby said planes respond independently to sound vibrations.

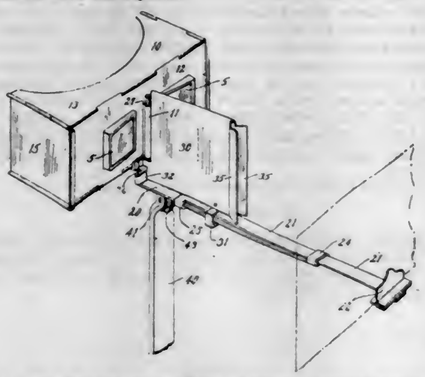
4. A diaphragm for phonographic reproducers comprising a circular disk of a material sensitive to sound vibrations, and two triangular planes of unequal thicknesses of a material more sensitive to sound vibrations than the material from which said disk is made, said planes being arranged in coincident relation on opposite sides of said disk and being secured to the latter only at their vertices and at their centers, whereby said planes respond independently to sound vibrations.

1,194,057. STEREOSCOPE. JOHN J. MURPHY, Toledo, Ohio, assignor to The Corte-Scope Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 12, 1915. Serial No. 20,620. (Cl. 88—29.)

1. In a folding stereoscope, the combination with a shaft, of a hood permanently hinged on a vertical axis connected with the shaft.

2. The combination of a shaft, a septum carried thereby, and a hood hinged on a vertical axis at the rear end of

the septum and adapted to be swung into substantial parallelism with the septum.



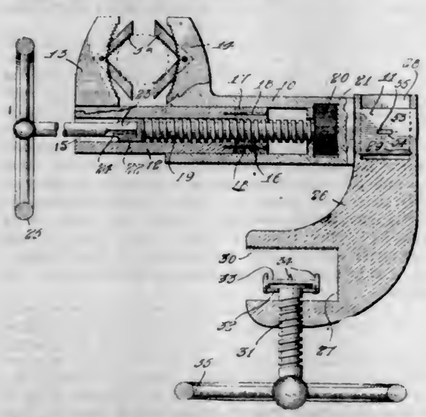
3. The combination of a shaft, a septum carried thereby, and a collapsible hood hinged on a vertical pivot at the rear end of the septum.

4. In a stereoscope, the combination of an extensible shaft, a septum rising from the upper side of one member of the shaft, a handle pivoted to the under side of such member of the shaft, and a hood hinged adjacent to the rear end of the septum.

5. In a folding stereoscope, the combination of a shaft, an upwardly extending portion carried thereby adjacent to the rear end of the shaft, and a collapsible hood connected with the shaft by having its lens plate hinged on said upwardly extending portion.

[Claims 6 to 21 not printed in the Gazette.]

1,194,058. COMBINATION WRENCH AND VISE. ANTHONY NEUMAYER, Belleville, Ill. Filed May 14, 1915. Serial No. 28,178. (Cl. 81—41.)



1. The combination with a wrench including a stock, having a reduced extremity, a shank slidable in the opposite extremity of said stock, a jaw rigid with said shank, and a jaw rigid with said stock, of a bracket formed with intersecting sockets for the several receptions of said reduced extremity in variously positioning said wrench as a vise.

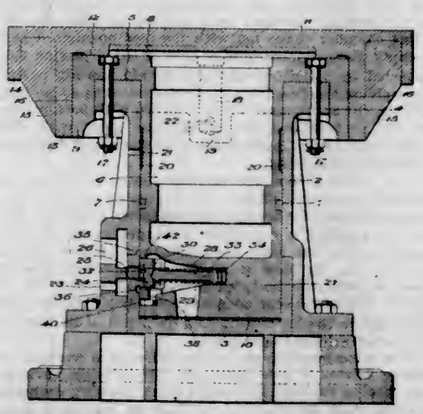
2. In a wrench, a stock having a longitudinal bore, a shank slidable in said bore, and similarly bored from end to end, a jaw carried by said shank, a jaw carried by said stock, a screw for determining movement of said shank with relation to said stock, and means for operating said screw at each extremity thereof.

3. The combination with a wrench including a stock, a shank slidable in said stock, jaws carried by said stock and shank, a screw member controlling movement of said shank, a nut carried at one extremity of said screw member for manual control thereof, removable key means operable at the opposite extremity of said screw for a similar control thereof, of a bracket formed with intersecting sockets for the reception of said shank in variously positioning said wrench as a vise, and means for mounting said bracket upon a support.

4. The combination with a wrench having a longitudinally bored stock with an integral laterally projecting jaw on one end and a reduced extension on the other end in alinement with said stock and provided with a transverse perforation, a longitudinally bored shank slidable in said stock with a jaw on one end mating with the jaw on the stock and a short thread terminating the bore at its opposite end, a screw in the bore of the shank passing through the threaded end and engaging therewith, means at each extremity of said screw for operating the same, a support for holding the wrench having a socket in one end for the reduced extension on said stock, and a key fitting transversely in said support and the perforation in the reduced extremity.

5. In combination with a wrench having a longitudinally bored stock opening through one end only, an integral laterally projecting jaw on the open end of said stock and a reduced extension on the other closed end in alinement with said stock and provided with a transverse perforation, a shank slidable in said stock with a jaw on one end mating with the jaw on the stock, said shank having a longitudinal bore extending entirely through the same, a nut removably secured to the end of the shank opposite the end provided with the jaw, a screw in the bore of the shank passing freely therethrough and engaging with said nut, a head on the inner end of said screw for turning the same and moving the shank longitudinally, a socket in the opposite end of said screw to receive means for turning the same, a support for the wrench having a socket therein for the reduced extension on the shank, and a key fitting the transverse perforations in the support and the perforation in the reduced extremity.

1,194,059. SAND-MOLDING MACHINE. WILLIAM C. NORCROSS, Terre Haute, Ind., assignor to American Molding Machine Co., Terre Haute, Ind., a Corporation of Indiana. Filed July 30, 1915. Serial No. 42,761. (Cl. 121—19.)



1. In a machine of the class described, the combination with a cylinder, of a piston having a depending guide arranged exteriorly of the cylinder and coöperating therewith, and a table carried by the piston and telescoping over said guide and extending laterally beyond said guide.

2. In a machine of the class described, the combination with a cylinder having an annular head, of a piston having a depending annular guide telescoping around and bearing on the annular piston head, and a table telescoping over and fitting the depending annular guide and extending laterally beyond said guide.

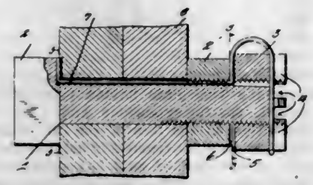
3. In a machine of the class described, the combination with a cylinder having a striking head at its mouth, of a piston having a striking head adapted to coöperate with the aforesaid striking head, and also provided with a depending guide telescoping over the striking head on the cylinder and bearing against the side thereof, and a table carried by said piston.

4. In a machine of the class described, the combination with a cylinder having an annular striking head at its mouth, of a piston having an annular striking head adapted to coöperate with the striking head aforesaid, and also provided with a depending annular guide telescoping over the annular striking head on the piston and bearing against the side thereof, and a table telescoping over, and fitting, the annular guide and extending laterally beyond said guide.

5. In a machine of the class described, the combination with a cylinder, of a piston, a table carried by the piston, a guide pin carried by the piston, a guide lug on the cylinder coöperating with said pin, said piston having an oil channel and said cylinder having an oil hole communicating with the interior of the cylinder and with the guide lug.

[Claims 6 to 10 not printed in the Gazette.]

1,194,060. NUT-LOCK. JOHN OBERDIER, Mount Gilead, Ohio. Filed Mar. 7, 1916. Serial No. 82,751. (Cl. 151—4.)



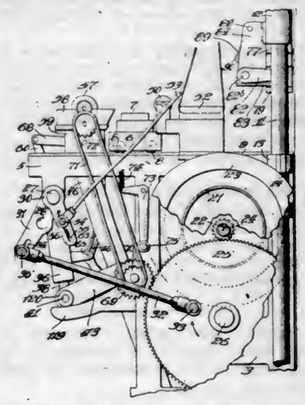
In a device of the class described the combination of a bolt, the head of said bolt provided with a notch, the body of said bolt provided with a longitudinal groove, primary and secondary nuts adapted to screw upon said bolt, both faces of said primary nut provided with notches, the outer face of said secondary nut provided with notches, and a key adapted to be bent so as to fit in the notch provided upon the head of said bolt and in the groove of said bolt and in the notches provided upon said nuts whereby said nuts will be prevented from rotating upon said bolt.

1,194,061. EMBOSSING-PRESS. ALEXANDER F. PHILIPPI, St. Louis, Mo. Filed Nov. 17, 1911. Serial No. 660,772. (Cl. 101—103.)

1. In a machine of the character described, the combination with a rigidly mounted cross head, of a reciprocably mounted counterdie, said counterdie adapted to travel toward and away from said cross head, a filler block carried by said counterdie, said block being reciprocably mounted on said counterdie, and means for raising and lowering said counterdie.

2. In a device of the character described, the combination with a rigid cross head provided with stepped abutments, of a counterdie reciprocable toward and away from said abutments, and a stepped filler block adapted to be disposed with one of its steps successively in abutment with said abutments on the cross head.

3. In a device of the character described, the combination with a rigid cross head provided with stepped abutments, of a counterdie reciprocable toward and away from said abutments, and a stepped filler block adapted to be disposed with one of its steps successively in abutment with said abutments on the cross head, said filler block being swingingly suspended from said cross head and operatively connected to said counterdie.

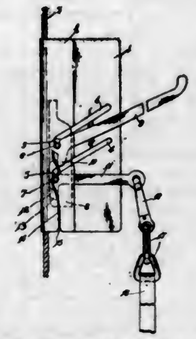


4. In a device of the character described, the combination of an inking roll, a fountain reciprocable toward and away from said inking roll, said fountain being provided with a driven roller which is moved into and out of contact with the inking roll by its reciprocable movement, and a die operatively related to said inking roll.

5. In an embossing machine, a reciprocable die holder, a throw lever therefor, a socket lever swingingly suspended from one end and having a tubular socket open at its other end, a plunger reciprocable in said socket and having a tubular socket opening into the first said socket, means disposed within said sockets and tending to force the plunger outwardly, and a link connecting the plunger with said throw lever.

[Claims 6 to 16 not printed in the Gazette.]

1,194,062. FIRE-ESCAPE. JOSEPH NAPOLÉON PICHÉ, St. Basile, Quebec, Canada. Filed Mar. 24, 1916. Serial No. 86,827. (Cl. 227—25.)



1. A fire escape comprising a body member, a block slidable on the body member, a lever pivotally connected to the block, a second lever pivoted to the block and arranged to contact with a part of the first lever, and means for supporting an operator from the second lever.

2. A fire escape comprising a body member, a block slidable on the body member, a lever pivotally connected to the block, a second lever pivoted to the block having a face straight for a portion of its length and having rounded ends and arranged to contact with a part of the first lever, and means for supporting an operator from the second lever.

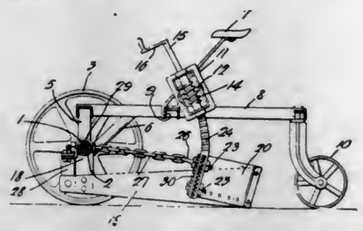
3. A fire escape comprising the combination of a plate having a bent over edge and a plurality of inclined slots

terminating in vertical extensions, headed pins disposed in the extensions, a block disposed on the plate, a plurality of levers, the pins being disposed through the block, levers and the extensions, and means for retaining the pins in position.

4. A fire escape comprising the combination of a plate having a bent over edge and a plurality of inclined slots terminating in vertical extensions, headed pins disposed in the extensions, a block disposed on the plate, a plurality of levers, the pins being disposed through the block, levers and the extensions, and a spring having one end secured to the plate and its body disposed around one of the pins.

5. A fire escape comprising the combination of a plate having a bent over edge, a flexible member disposed between the bent over edge and the body of the plate, a block slidably disposed adjacent the flexible member, levers pivoted to the blocks so that one will bear on the other, and means for supporting a body from one of the levers.

1,194,063. STONE-SPREADER. NELSON E. POPE, Bloomdale, Ohio, assignor of one-half to Harry P. Guthrie, Bloomdale, Ohio. Filed May 23, 1916. Serial No. 99,391. (Cl. 37—7.)



1. A stone spreader including a tubular axle, wheel engaging spindles adjustable longitudinally within the end portions of the axle, a frame supported by the axle, rearwardly extending guard blades connected to the respective spindles, a scraping blade comprising forwardly converging sections secured to the respective guard blades, said sections being adjustably connected to each other, and means for raising and lowering the scraping and guard blades relative to the frame.

2. A stone spreader including a tubular axle, wheel engaging spindles adjustable longitudinally within the end portions of the axle, a frame supported by the axle, rearwardly extending guard blades connected to the respective spindles, a scraping blade comprising forwardly converging sections secured to the respective guard blades, said sections being adjustably connected to each other, an arcuate wear member extending across the front faces of the lapping portions of the members of the scraping blade, a reinforcing connection between the central portion of the scraping blade and the axle, and means for raising and lowering the scraping blade.

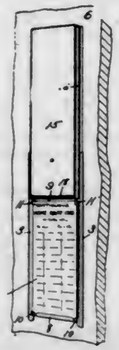
3. A stone spreader including an extensible wheel supported axle, a frame supported thereby, a scraping blade including adjustably connected rearwardly diverging portions, guard blades fixedly connected to the outer ends of said portions and mounted to swing about the axle, and means for raising and lowering the scraping blade and the guard blades attached thereto.

4. A stone spreader including an extensible wheel supported axle, a frame supported thereby, a scraping blade including adjustably connected rearwardly diverging portions, guard blades fixedly connected to the outer ends of said portions and mounted to swing about the axle, and means for raising and lowering the scraping blade and the guard blades attached thereto, the middle portion of the scraping blade being higher than the end portions thereof.

5. A stone spreader including an extensible wheel supported axle, a frame supported thereby, a scraping blade including adjustably connected rearwardly diverging portions, guard blades fixedly connected to the outer ends of said portions and mounted to swing about the axle, means for raising and lowering the scraping blade and the guard blades attached thereto, the middle portion of the scraping blade being higher than the end portions thereof, and an arcuate wear member in front of and detachably secured to the middle portion of the scraping blade.

[Claims 6 and 7 not printed in the Gazette.]

1,194,064. RECORD-CARD HOLDER FOR FREIGHT-CARS AND OTHER PURPOSES. EDWIN R. PROBERT, Covington, Ky., assignor to The Moeschl-Edwards Corrugating Company, Covington, Ky., a Corporation of Kentucky. Filed July 26, 1915. Serial No. 41,992. (Cl. 40—10.)

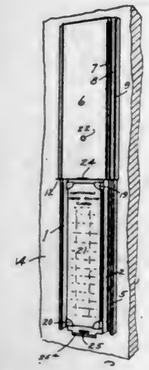


1. A record-sheet holder for use on freight-cars or the like, comprising a base-plate having longitudinal, rearwardly-disposed, spacing-extensions and adapted to be secured in position on the face of the car or other supporting-object, pockets for removably-holding one or more record-sheets on the face of said base-plate, guide-ways along said spacing-extensions, and a front closure-plate adapted to slidingly-engage the said guide-ways for the protection of said record-sheets.

2. A route-card or record-sheet holder or tablet comprising a backing or base-plate having guide-ways along its opposite vertical edges and adapted to be secured in place for use on a feight-car or other supporting-object, a lower card or sheet pocket having side-guards, an upper card or sheet pocket having side-guards, an upper, forwardly-projecting flange on the base-plate, a front covering or closure plate having flanged extensions along its opposite vertical edges adapted to slidingly-engage the said guide-ways on the base-plate, an inwardly-turned stop and covering-flange on the upper edge of the closure-plate adapted to engage the upper edge of the base-plate, when the device is closed, and an inwardly-disposed projection on the inner face of the closure-plate adapted to engage the said upper flange on the base-plate when the device is open for making a record or viewing that already made on the said cards or sheets.

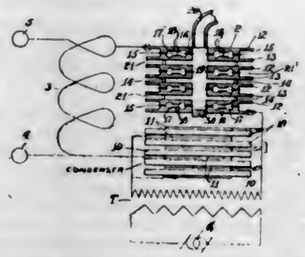
1,194,065. RECORD-CARD HOLDER FOR FREIGHT-CARS AND OTHER PURPOSES. EDWIN R. PROBERT, Covington, Ky., assignor to The Moeschl-Edwards Corrugating Company, Covington, Ky., a Corporation of Kentucky. Filed Jan. 27, 1916. Serial No. 74,716. (Cl. 40—10.)

1. In a record or route card holder for freight-cars of the like, the combination of a vertical base-plate or backing provided with attaching and spacing, rearwardly-extending V-shape ribs along its opposite longitudinal edges, lateral inverted-L-shape extensions along the outer edges of said ribs, outwardly-bulging corner-pockets suitably spaced apart and provided on the outer face of said base-plate for the reception of the corners of the record or route cars, rearwardly-bulging beads adjacent the said corner-pockets for shedding or diverting the downward trickle of water along the back of said base-plate, and a right-angled or flanged closure or cover-plate slidably-interlocked with the said V-shape ribs and inverted-L-shape extensions along the longitudinal edges of said base-plate and having a rearwardly-extending capping-member that is adapted to telescope and close the upper end of the base-plate when the device is in closed condition for use.



2. In a record or route card holder for freight-cars or like exposed supports, the combination of a vertical base-plate or backing having flanged guide-ways along its opposite longitudinal edges and outwardly-bulging corner-pocket formations made in its surface and adapted to seat or contain the corners of the record or route cards in use, rearwardly-bulging water-sheds made in the base-plate adjacent said corner-pockets, a forwardly-extending stop at the upper end of the base-plate, a closure or cover-plate having longitudinal, flanged formations along its opposite edges adapted to slidingly-interlock with the said guide-ways on the base-plate, a rearwardly-extending stop-pin provided on the inner face of the cover-plate, a transverse slot in the lower edge of the base-plate, a downwardly-flanged, rearwardly-extending capping-formation at the top of the cover-plate, a transverse slot in the lower edge of the cover-plate, and a sealing strip or wire adapted to engage both of the said transverse slots in locking the device when closed.

1,194,066. SYSTEM OF WIRELESS COMMUNICATION. JOHN ALBERT PROCTOR, Revere, Mass., assignor to Wireless Specialty Apparatus Company, Boston, Mass., a Corporation of New York. Filed July 3, 1912. Serial No. 707,414. (Cl. 250—17.)



1. In wireless signaling by electric ether waves, the method of preventing extra discharges which consist in impressing upon the exciting circuit of the sender, a gradually charging asymmetrical wave of potential, characterized by an ascending portion less steep than the descending portion.

2. In wireless signaling by electric ether waves, the method which consists in charging the exciter with a gradually charging asymmetrical potential wave, characterized by an ascending portion less steep than the descending portion, and charging the radiator with the energy of the exciter discharge.

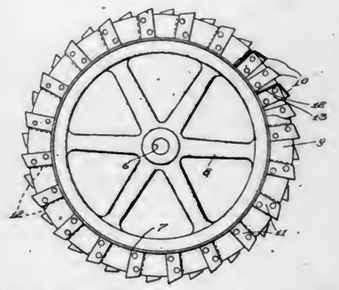
3. In wireless signaling by electric ether waves, the method which consists in charging the sender with a gradually charging asymmetrical potention wave, characterized by an ascending portion less steep than the descending portion.

4. Means for charging a sending apparatus of a system of signaling by electric ether waves, and constructed and arranged to produce a gradually charging asymmetrical potential wave, characterized by an ascending portion less steep than the descending portion.

5. Means for charging a sending apparatus of a system of signaling by electric ether waves, and constructed and arranged to charge the exciter with a gradually charging asymmetrical potential wave, characterized by an ascending portion less steep than the descending portion.

[Claims 6 to 48 not printed in the Gazette.]

1,194,067. ROTARY PLOWING-CYLINDER. CHASE C. REED, Toledo, Ohio, assignor of one-half to John N. Magee, Toledo, Ohio. Original application filed Nov. 7, 1905, Serial No. 286,229. Divided and this application filed Nov. 9, 1915. Serial No. 60,516. (Cl. 97—63.)



1. A plow comprising a rotatable plowing cylinder, a series of rings along the length thereof, and separate series of knife blades along the length of the cylinder to form substantially a continuous cutting surface, the blades of each series extending over two adjacent rings and secured to the outer sides thereof.

2. A plow comprising a rotatable plowing cylinder, a series of end and intermediate rings along the length thereof, a series of longitudinally-disposed knife blades whose opposite ends extend over to adjacent rings and are secured to the outer sides thereof, and a series of plates secured to the inner sides of such rings to cooperate with said blades.

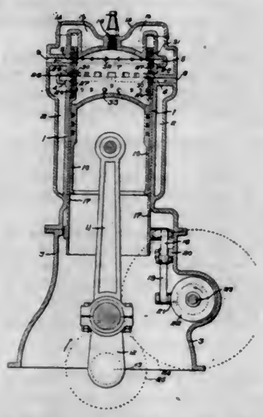
3. A plow comprising a rotatable plowing cylinder, a series of end and intermediate rings along the length thereof, a series of longitudinally-disposed knife blades having a convex cutting edge, and a corresponding series of plates having similar convex edges to support said knife blades.

4. A plow comprising a rotatable plowing cylinder consisting of an imperforate shell, a series of end and intermediate rings along the length thereof, and series of knife blades secured to such rings.

5. A plow comprising a rotatable plowing cylinder consisting of an imperforate shell, a series of end and intermediate rings along the length thereof, and a series of knife blades secured to the rings and arranged in staggered relationship.

[Claims 6 to 9 not printed in the Gazette.]

1,194,068. INTERNAL-COMBUSTION ENGINE. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed Feb. 21, 1911. Serial No. 609,872. (Cl. 123—75.)



1. In an internal combustion engine the combination with a cylinder having inlet and outlet ports, a working piston, a movable sleeve between the piston and cylinder, means for imparting an intermittent motion to said sleeve and a split expansion ring carried by said sleeve and adapted to overlie said cylinder ports, said ring being exposed to the working pressure of the cylinder and having ports to register with ports in the sleeve whereby communication between the inlet and outlet ports and the working space of the cylinder is controlled.

2. In an internal combustion engine, the combination with a cylinder having inlet and outlet ports, a working piston, a sleeve movably arranged between the piston and cylinder, means for actuating said sleeve, a split expansion ring carried by said sleeve and overlying said ports, a second split expansion ring between said outer ring and the sleeve, said rings and sleeve having ports in registration and adapted to control communication between the working space of the cylinder and the said inlet and outlet ports and said sleeve also being perforated to expose said rings to the pressure of the cylinder space.

3. An internal combustion engine having a cylinder, one or more ports therein, a working piston, a sleeve having one or more ports to control the cylinder port or ports, a split expansion ring having a port or ports in registration with the ports of the sleeve, said ring being carried by said sleeve and being adapted to overlie said cylinder port or ports, and means to impart an intermittent motion to said sleeve.

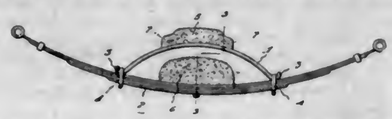
4. In an internal combustion engine the combination with a cylinder provided with a port or ports, a working piston, a sleeve having a port or ports to control communication between the cylinder space and the cylinder ports, a split expansion ring carried by said sleeve and adapted to coöperate with said cylinder port or ports, and means to impart an intermittent motion to said sleeve.

5. In an internal combustion engine the combination with a working piston of a ported cylinder, a sleeve valve controlling said ports, the working portion of said valve including a split expansion ring adapted to travel over the cylinder ports, and means to impart an intermittent motion to said sleeve.

[Claims 6 to 15 not printed in the Gazette.]

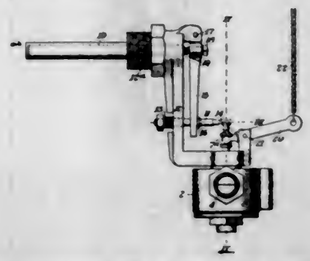
1,194,069. SHOCK-ABSORBER FOR AUTOMOBILE-SPRINGS. JOHN S. ROBERTS, Osgood, Iowa, assignor of one-half to S. W. Breffle, Osgood, Iowa. Filed July 17, 1915. Serial No. 40,470. (Cl. 267—21.)

The combination with a semi-elliptic vehicle spring, a centrally arranged cushion mounted upon the central portion of the vehicle spring, an auxiliary shock absorbing spring reversely curved with respect to the vehicle spring and arching the central portion thereof and located above and spaced from the said cushion and means for securing



the ends of the auxiliary shock absorbing spring to the vehicle spring at opposite sides of the said cushion, the latter being adapted to limit the downward movement of the auxiliary spring which also limits the downward movement of the vehicle spring.

1,194,070. THERMOSTATIC VALVE. FREDERICK W. ROBERTSHAW and WILLIAM HOUSHOLDER, Pittsburgh, Pa.; said Housholder assignor to said Robertshaw. Filed Jan. 19, 1914. Serial No. 813,091. (Cl. 236—5.)

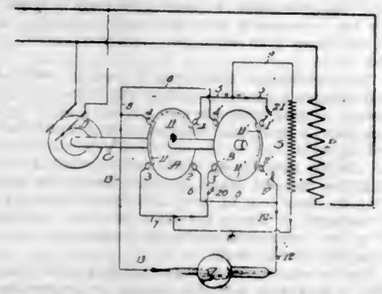


1. The combination with a valve having a stem member and means normally tending to close said valve, of a manually operable lever having an actuating engagement with said stem member to open the same, said stem member having a holding portion with a beveled under surface, and a thermostatically controlled pawl having a point which is shaped and arranged to ride over said inclined surface as the valve is opened, and to then engage the said holding portion and hold the valve opened; substantially as described.

2. The combination with a valve, having automatic closing means, of manually operable means for opening said valve against the action of said closing means, the valve having an upwardly extending stem member provided with a holding surface, a reduced portion below said surface, and an inclined or beveled portion leading outwardly and upwardly from the reduced portion, and a thermostatically controlled pawl which coöperates with said holding surface to hold the valve opened and which is adapted to ride on said inclined or beveled portion; substantially as described.

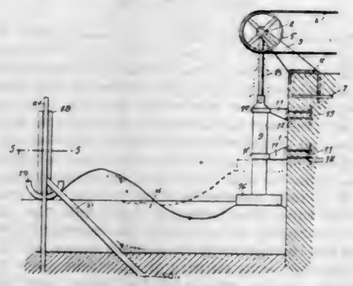
1,194,071. METHOD OF EXCITING X-RAY TUBES. CLARENCE E. ROHRER, Elkhart, Ind., assignor to Scheidel-Western X-Ray Coil Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 16, 1913. Serial No. 806,985. (Cl. 175—364.)

1. The combination with a transformer, an X-ray tube, and a motor driven shaft, of a pair of disks of insulating material mounted in spaced relation on said shaft, a metallic segment on each disk in diametrically opposite position, a pair of diametrically opposite collector brushes for each disk, the brushes of one pair being in axial alinement with those of the other pair, circuits connecting adjacent brushes of each pair to one of the secondary terminals of the transformer and the opposite adjacent brushes to the other secondary terminal, a second pair of collector brushes for each disk positioned at approximately 90 degrees to the first pair, circuits connecting adjacent brushes of each second mentioned pairs to one terminal of the X-ray tube and the opposite adjacent brushes of the second mentioned pairs to the other terminal of the X-ray tube and means for disconnecting one of said brushes from its associated terminal.



2. The combination with a transformer, an X-ray tube, and a motor driven shaft, of a pair of disks of insulating material mounted in spaced relation on said shaft, a metallic segment on each disk in diametrically opposite position, a pair of diametrically opposite collector brushes for each disk, the brushes of one pair being in axial alinement with those of the other pair, circuits connecting adjacent brushes of each pair to one of the secondary terminals of the transformer and the opposite adjacent brushes to the other secondary terminal, a second pair of collector brushes for each disk positioned at approximately 90 degrees to the first pair, circuits connecting adjacent brushes of each second mentioned pairs to one terminal of the X-ray tube and the opposite adjacent brushes of the second mentioned pairs to the other terminal of the X-ray tube, means for disconnecting one of the brushes from a terminal of the X-ray tube, and means for disconnecting one of the brushes from its connection with a secondary terminal of the transformer.

1,194,072. WAVE-MOTOR. MARTIN ALFONS ROHMER, Florence, Nebr. Filed May 26, 1914. Serial No. 841,005. (Cl. 253—10.)



1. A wave motor comprising a float bar, a float connected to the lower end of said bar, guides for said float bar, a connecting rod pivotally connected to said bar, a crank shaft to which said connecting rod is hinged, pulleys on said crank shaft, walls one upon each side of said wave motor, said walls having divergent outer ends, and a regulating gate provided with a curved shoe, said gate being mounted in guide posts and adapted to modify the action of the waves upon the float.

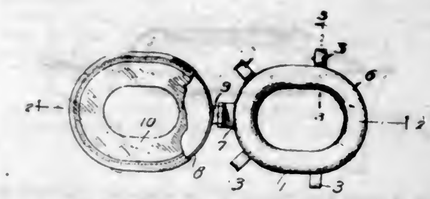
2. A wave motor comprising a float bar, a float connected to said bar, guides for said bar, a connecting rod attached to said bar, a crank shaft to which the connecting rod is hinged, in combination with a regulating gate having a shoe upon its lower end to ride the wave and to regulate the action of the float.

3. The combination of a wave motor comprising a float, a crank shaft, connections between said float and crank shaft to rotate the latter as the waves rise and fall, and a regulating gate provided with a curved shoe, said gate being connected to parallel walls extending from opposite sides of the motor.

4. A wave motor comprising a float, a float bar, a connecting rod, a crank shaft, means for supporting said float bar from a sea wall, walls extending outward from said sea wall and provided with diverging outer ends, a regulating gate mounted between said walls and adapted to rise and fall upon the waves, and a curved shoe secured to the lower end of said gate.

5. A wave motor comprising a sea wall having an opening therein, a basin at one side of said sea wall, a float provided with a shutter for closing a portion of said opening in said sea wall, a rod to which said float is connected, guides for said rods, an arch connected to said rod, a guide rod upon the opposite side of said sea wall and a wave motor mounted on said rod.

1,194,073. SANITARY CLOSET-SEAT. LAMBERTUS ROMINE, Fresno, Cal. Filed May 17, 1916. Serial No. 98,042. (Cl. 4—18.)



1. A seat ring for closet bowls of rigid material and arched transversely and arranged with its convex face upward, the ring having clips for engaging the upper end of the bowl to support the ring at the inner side and above the edge of the bowl, said ring supporting a series of superposed sheets of toilet paper in ring form and shaped to fit the convexity of the ring, a rigid form for supporting the sheets and fitting the ring, said ring having an upstanding lug at the rear of the bowl, a ring frame hinged to the lug and adapted to fold downward encircling the ring or upward, and a protective cover of water proof material secured to the ring and extending inwardly over the paper when the frame is in downward position.

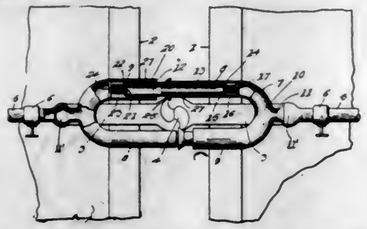
2. A seat ring for closet bowls of rigid material and arched transversely and arranged with its convex face upward, the ring having clips for engaging the upper edge of the bowl to support the ring at the inner side and above the edge of the bowl, said ring supporting a series of superposed sheets of toilet paper in ring form and shaped to fit the convexity of the ring, said ring having an upstanding lug at the rear of the bowl, a ring frame hinged to the lug and adapted to fold downward encircling the ring or upward, and a protective cover of water proof material secured to the ring and extending inwardly over the paper when the frame is in downward position.

3. A seat ring for closet bowls of rigid material and arched transversely and arranged with its convex face upward, the ring having clips for engaging the upper edge of the bowl to support the ring at the inner side and above the edge of the bowl, said ring supporting a series of superposed sheets of toilet paper in ring form and shaped to fit the convexity of the ring, said ring having an upstanding lug, a ring frame hinged to the lug and adapted to fold downward encircling the ring or upward, and a cover connected to the ring and extending over the paper when the frame is in downward position.

1,194,074. TRAIN-PIPE COUPLING FOR RAILROAD-CARS. JOSEPH RONCAGLIONE, Carlisle, W. Va. Filed Feb. 9, 1915. Serial No. 7,031. (Cl. 188—13.)

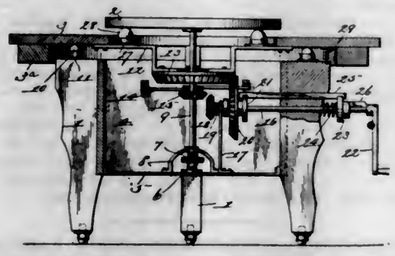
1. A train pipe coupler of the character described including a hollow U-shaped body, a sleeve slidable in one

arm of said body, a perforated closure plate at the inner end of the sleeve, a spring bearing at one end against the perforated closure plate, a spider within the arm, said spider engaging the free end of the spring limiting the inward movement of the same, said sleeve projecting beyond the end of the arm and flared, lugs formed in said arm to limit the outward movement of said sleeve, a slidable member in the adjacent arm, a perforated closure plate formed at the inner end of the slidable member, said slidable member projecting beyond the end of the adjacent arm and having a tapered flange adjacent its outer end, a spring bearing at one end against the perforated closure for forcing the sleeve outwardly, a spider to limit the inward movement of said spring, lugs formed in said adjacent arm to limit the outward movement of said slidable member, said flaring portion of the sleeve and the tapering flange of the slidable member adapted to engage a corresponding sleeve and flange on an opposing head of an adjacent car.



2. A train pipe coupler of the character described including a hollow U-shaped body, a sleeve slidable in the arm of the body, a perforated closure plate in the inner end of the sleeve, a spring bearing at one end against and connected to the perforated closure plate, a spider within the arm, said spider connected to the spring for limiting the inward movement of the same, said sleeve having its outer end flared and provided on its interior with a gasket, the outer end of the sleeve projecting beyond the end of the arm, a slidable member in the adjacent arm, a tapered inclined flange adjacent the outer end of the slidable member, a perforated closure plate formed on the inner end of the slidable member, the said slidable member projecting beyond the end of the adjacent arm, a spring bearing against the perforated closure plate and connected thereto to force the sleeve outwardly, a spider to limit the inward movement of the same, and means to limit the outward movement of the sleeve and slidable member, said tapered inclined flange provided with a gasket, said slidable member with its tapered flange and sleeve with its flared portion adapted to form an air tight connection between the sleeve and slidable members of an opposing car head.

1,194,075. GEARING. HARVEY S. RORICK, Detroit, Mich. Filed June 17, 1914. Serial No. 845,667. (Cl. 74—58.)

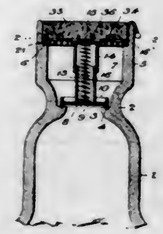


1. Gear mechanism comprising a vertical rotatable shaft, a horizontal member supported thereby, a horizontally arranged gear loose on said shaft, a horizontal member for supporting said loose gear, a slidable horizontally arranged shaft, means for sliding said shaft, means for locking said shaft against sliding movement, and means carried by said horizontal shaft for transmitting rotation to the loose gear when the horizontal shaft is locked and means for disengaging said rotation transmitting means from the loose gear when the horizontal shaft is unlocked.

2. Gear mechanism comprising a vertical shaft, a rotatable member mounted concentrically therewith, a gear supported by said rotatable member and loosely mounted on the shaft, a horizontal longitudinally slidable shaft, an operating crank fixed to the outer end thereof, a gear and collar slidably mounted on the horizontal shaft, a connecting link for the said gear and collar, means for normally holding the gears out of mesh, and means carried by the collar adapted to engage the shaft crank for shifting the gear on the horizontal shaft into engagement with the gear on the vertical shaft.

3. Gear mechanism comprising right-angularly disposed shafts, a gear and rotatable means for supporting the same loosely mounted on one of said shafts, a gear and collar slidably mounted on the other shaft, connecting spacing means for the gear and collar, coöperating means carried by the collar and last-named shaft for holding the gears in engagement, and means for disconnecting the gears when the coöperating means is inoperative.

1,194,076. NON-REFILLABLE BOTTLE. HERMAN ROSENHEIM, Savannah, Ga. Filed July 9, 1915. Serial No. 38,903. (Cl. 215—21.)



1. In a non-refillable bottle, the combination with a bottle neck having an internal discharge port communicating with the interior of the bottle and provided with a valve-seat surrounding said port, said neck also having an enlarged chamber into which the discharge port directly opens, said chamber permitting freedom of fluid discharge thereinto and therefrom, a cup-shaped, valve which faces the interior of the bottle and whose rim is adapted to telescope with the valve-seat, said valve being adapted to close, or to fully uncover or unseat from, said discharge port, said valve also having a cup within the enlarged chamber aforesaid, the aforesaid cups serving to assist in opening and closing the valve, guiding means for the valve adapted to determine its path of movement when it opens and closes, closing means for the valve, said enlarged chamber providing a free space around the valve when the valve is either opened or closed, and means for guarding the outlet portion of the chamber without interfering with the free passage of the fluid to the mouth of the bottle.

2. In a non-refillable bottle, the combination with a bottle neck having an internal discharge port communicating with the interior of the bottle and provided with a valve-seat, said neck also having an enlarged chamber into which the discharge port directly opens, said chamber permitting freedom of fluid discharge thereinto and therefrom, a valve adapted to close, or to fully uncover or unseat from, said discharge port, and having cups respectively facing toward the internal discharge port and the outlet of the neck, closing means for the valve, guiding means for the valve adapted to determine its path of movement when it opens and closes, said enlarged chamber providing a free space around the valve when the valve is either opened or closed.

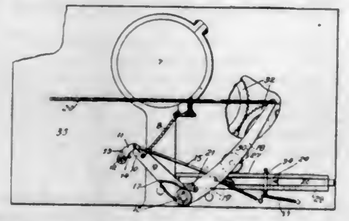
1,194,077. PROCESS FOR PREPARING A CONCENTRATED FERTILIZER. WILLIAM H. ROSS, ALBERT R. MERZ, and JOHN N. CAROTHERS, Washington, D. C. Filed May 20, 1916. Serial No. 98,795. (Dedicated to the public.) (Cl. 23—21.)

1. A process for the production of a concentrated fertilizer containing nitrogen and phosphorus which consists in allowing gaseous ammonia, in the presence of water vapor, to react with fumes consisting of oxidized phosphorus, then allowing the reacting gases to cool, and finally collecting the product thus formed, substantially as specified.

2. A process for the production in the dry state of a concentrated fertilizer, containing nitrogen and phosphorus, which consists in allowing gaseous ammonium, in the presence of water vapor, to react with the oxidized phosphorus fumes evolved in the volatilization method of decomposing phosphate rock or other source of phosphorus by heat, then allowing the reacting gases to cool, and collecting in the dry state the solid product thus formed.

3. A process for the production in the dry way of a concentrated fertilizer in the form of ammonium metaphosphate, which consists in allowing gaseous ammonia, in the presence of water vapor, to react with the fumes of phosphoric anhydrid evolved in the volatilization method of decomposing phosphate rock or other source of phosphorus by heat, then allowing the reacting gases to cool, and collecting the solid product thus formed in the dry state.

1,194,078. TIME-SWITCH FOR ELECTRIC LIGHTS. WALDEN T. ROWELL, Chicago, Ill., assignor of one-half to C. F. Wiedmaier, Chicago, Ill. Filed Dec. 18, 1915. Serial No. 67,596. (Cl. 161—27.)



1. In a time-controlled-switch-mechanism, the combination of a switch, setting means for moving and maintaining said switch in an on position, means for tripping and releasing said switch-controlling means, an adjustable stop carried by said last mentioned means for regulating the duration of movement of the latter, a motor for imparting movement to the latter, and a connection between said motor and the switch-operating means for fully winding up the motor in the act of setting the switch, substantially as described.

2. In a time-controlled-switch-mechanism, the combination of a pull switch, means for moving said switch to an on position, a trip mechanism for engaging said switch-controlling means, a time-controlled member for releasing said trip mechanism, a motor for operating said time-controlled mechanism, an independently adjustable member on said time-controlled mechanism for regulating the period of its movement, and a connection between said switch-controlling means and said motor for winding up the latter by the same movement which serves to set the former, substantially as described.

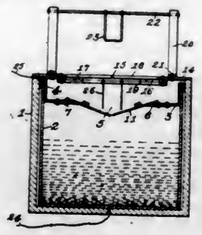
3. In a time-controlled-switch-mechanism, the combination of a pull switch having a pull chain depending therefrom, a lever to which the chain is connected, a trip member for holding the lever in on position, a time-controlled member for actuating the trip member after a predetermined period of time, a motor for operating the time-controlled member, and means for simultaneously setting the switch-operating lever and winding up the motor, and throwing the time-controlled-member into train with the motor, substantially as described.

4. In a time-controlled-switch-mechanism, the combination of a switch, means for throwing the switch into on position, trip means for holding said switch in on position, time-controlled means for releasing the trip member after a predetermined period of movement, a motor for imparting movement to the time-controlled means, and a draw lever adapted when drawn forward to throw the trip-controlling means into on position, to wind up the motor, and to throw the time-controlled means into train with the motor, and adapted when released to return to normal position without disturbing the adjustment of the parts mentioned, substantially as described.

5. In a time-controlled-switch-mechanism, the combination of a pull switch operable by a pull chain, a switch-operating lever to which the chain is connected, a trip member adapted to engage said lever when the latter is moved to on position, releasing means for said trip member, a movable time-operated member adapted to engage said trip releasing member after a predetermined period of time, a motor for moving said time-controlled member, and a setting lever adapted to move the switch-operating lever to on position, to wind up the motor, to throw the time-controlled member into train with the motor, and to return to initial position without disturbing the arrangement of the members mentioned, substantially as described.

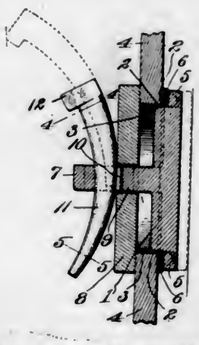
[Claims 6 to 9 not printed in the Gazette.]

1,194,079. RAT-TRAP. JOHN SCHACK, Pittsburgh, Pa. Filed Mar. 29, 1913. Serial No. 757,512. (Cl. 43—84.)



In a rat trap, in combination, an outer casing, a metallic vessel for insertion in said casing, a series of pivoted metallic trap-platforms carried by the upper part of said metallic vessel, a cover for said casing, a series of pivoted trap-platforms carried by said cover, contact members depending from said last named trap-platforms, and means for connecting said contacts and said metallic vessel with a source of electric current.

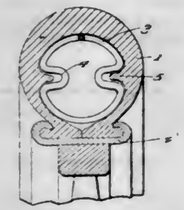
1,194,080. CLOSURE FOR HAND-HOLES. ARTHUR H. SCHAUM, St. Louis, Mo. Filed May 18, 1915. Serial No. 27,745. (Cl. 220—124.)



In a hand hole closure, the combination of an inner plate of like outline as the hand hole and fitting easily

therein with a peripheral flange to bear on the inner wall of a boiler, a central outwardly-projecting lug on the plate protruding through the hand hole and having a triangular, slightly tapering opening therethrough, an outer cover plate adapted to bear on the external wall of a boiler over the hand hole and having a central aperture therein for said lug to pass freely, one side of said triangular opening in the lug being within the aperture back of the outer side of the cover plate, and a curved wedge-key of triangular cross section tapering from end to end, adapted to be driven into the triangular opening in said lug with its convex side toward the cover plate and bearing thereagainst immediately adjacent the aperture only, while the other two sides and the rounded angle of the wedge between are forced into contact with similar sides and angle of the opening in the lug to hold the wedge immovable by frictional engagement of the said parts.

1,194,081. RESILIENT TIRE. ERNEST L. SCRANTON, Rising Sun, Ind. Filed Aug. 10, 1915. Serial No. 44,804. (Cl. 152—8.)



1. The combination with a tire casing provided interiorly upon its walls with integral inwardly projecting annular beads, the beads being located diametrically opposite each other with relation to the center of the casing, of a resilient cushioning member comprising a hollow annular body substantially circular in cross section, the body being disposed within the casing and being provided in its sides with annular flutes to receive the said beads.

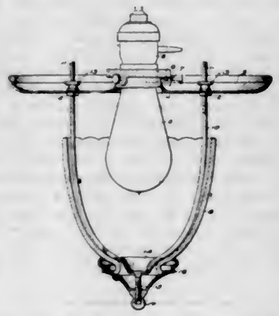
2. The combination with a tire casing provided interiorly upon its walls with integral inwardly projecting annular beads, the beads being located diametrically opposite each other with relation to the center of the casing, of a resilient cushioning member comprising a hollow annular body substantially circular in cross section, the body being disposed within the casing and being provided in its sides with annular flutes to receive the said beads, the beads being of a thickness and width less than the width and depth of the respective flutes.

1,194,082. SNAP-BUTTON. JACOB SILBERMAN, New York, N. Y. Filed Mar. 4, 1916. Serial No. 82,106. (Cl. 24—217.)



In a snap button of the character described, a plate provided with a stud having an enlarged end, a base formed with an annular turned-over flange forming a groove, said base being formed with a plurality of thread receiving apertures, and a resilient washer with its edge fitting loosely in said groove, said washer being formed with a central aperture of less diameter than the enlarged end of said stud, with a slit extending from said aperture to the outer edge of the washer and with a notch opposite each of the thread receiving apertures in said base, said notches being comparatively large in respect to said last mentioned apertures.

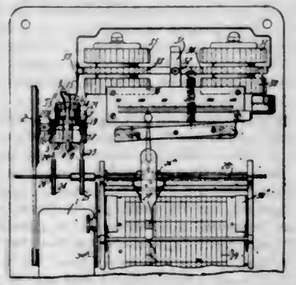
1,194,083. SEMI-INDIRECT-LIGHT ATTACHMENT. PHILIP SIMPSON, New York, N. Y. Filed May 24, 1915. Serial No. 29,989. (Cl. 240—92.)



1. In combination with an incandescent lamp socket, a shade holder, a reflector detachably supported by the holder, a translucent shade, a U-shaped suspension supported by the reflector, and means for securing the shade to the suspension to maintain the shade opposite the reflector.

2. In combination with an incandescent lamp socket, a shade holder, a reflector detachably supported by the holder, a translucent shade, a U-shaped suspension the ends of which project through the reflector, means adjustable on the ends of the U securing the same to the reflector, and means for securing the shade to the suspension so that the shade is opposite the reflector.

1,194,084. ELECTRICAL MEASURING INSTRUMENT. BENJAMIN H. SMITH, Turtle Creek, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 28, 1913. Serial No. 803,440. (Cl. 234—5.5.)



1. In a measuring instrument, the combination with a meter having a tripping device, of a governing device comprising a uniformly rotating shaft, an arm mounted upon said shaft, two pawls pivotally mounted on said arm and so shaped as to engage said tripping device on said meter, two ratchet wheels loosely mounted on said shaft, and means for throwing said pawls out of engagement with said ratchet wheels.

2. In a graphical measuring instrument, the combination with a meter having a tripping device on the movable member thereof, of a recording mechanism, a mechanically operated governing device comprising a uniformly rotating shaft, an arm mounted on said shaft, two pivotally mounted pawls on said arm, loosely mounted ratchet wheels on said shaft, projections on said pawls for engaging the tripping device on the movable member of said meter, and means for throwing said pawls out of engagement with said ratchet wheels.

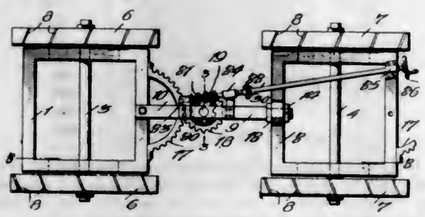
3. In an electrical measuring instrument, the combination with a meter having a tripping device on the movable member thereof, of a recording mechanism, a mechanically operated governing device comprising a uniformly rotating shaft, an arm mounted on said shaft, two pivotally mounted pawls on said arm, loosely mounted ratchet wheels on said shaft, projections on said pawls for engaging said tripping device on the movable member of said meter, and stationary projections for throwing said pawls out of engagement with said ratchet wheels.

4. In an electrical measuring instrument, a governing mechanism comprising uniformly rotating shaft, a counterbalanced arm mounted on said shaft, pivotally mounted pawls on the respective sides of said arm, ratchet wheels loosely mounted on said shaft, projections on said pawls for throwing said pawls out of engagement, and resilient means for maintaining said pawls in desired positions.

5. In an electrical measuring instrument, a governing device comprising a uniformly rotating shaft, a counterbalanced arm mounted on said shaft, pivotally mounted pawls on the respective sides of said arm, ratchet wheels loosely mounted on said shaft, projections on said pawls for throwing them into engagement with said ratchet wheels, and stationary projections for throwing said pawls out of engagement.

[Claims 6 to 8 not printed in the Gazette.]

1,194,085. TRACTOR. CHRIS F. SMITH, Scottsbluff, Nebr. Filed Apr. 10, 1916. Serial No. 90,239. (Cl. 21—114.)

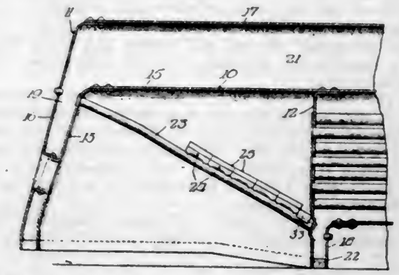


A tractor, comprising units, each consisting of a frame, an axle journaled below the frame, bolster brackets rigid with the frame and in which the axle is journaled, a rigid coupling bar for connecting adjacent units, said bar having a rigid connection with one unit and being forked, and the arms of the fork engaging above and below the frame of the other unit and being pivoted thereto, a toothed sector secured to the last named unit between the arms, a pinion journaled between the arms and engaging the sector, and means for turning the pinion.

1,194,086. LOCOMOTIVE ARCH-BRICK. WILLIAM SMITH, Chicago, Ill., assignor to Universal Arch Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1916. Serial No. 92,165. (Cl. 110—87.)

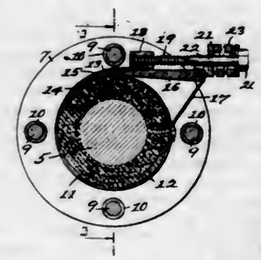
1. A locomotive arch brick, comprising a body formed with intersecting ribs on its under face extending from opposite corners of the bricks, and inwardly extending ribs running from the termini of the intersecting ribs, said inwardly extending ribs being grooved to fit over a tube, and the adjacent edges of said inwardly extending ribs being spaced apart to provide a space between the body of the brick and the outer periphery of the tube to permit a circulation of heat completely around the tube, substantially as described.

2. A locomotive arch brick, comprising a body grooved along the under side edges to fit over a tube, and formed with intersecting ribs on its under face constituting an X-shaped reinforcement for the body, and said ribs also furnishing a series of diagonally-extending baffle walls on the under face of the brick, substantially as described.



3. A locomotive arch brick, comprising a body grooved along its under side edges to fit over a tube, and formed with intersecting ribs on its under face to create an X-shaped reinforcement for the body, each rib being V-shaped in cross-section, and said ribs combining to form a series of diagonally-sloping baffle walls on the under face of the brick, substantially as described.

1,194,087. PACKING-BOX. WILLIAM T. SNELL, El Paso, Tex. Filed Sept. 15, 1915. Serial No. 50,745. (Cl. 137—115.)



1. The combination with a piston rod, of a tubular, flanged bush, a ring held to said flange in spaced relationship, packing material surrounding the rod between said ring and flange, a strap surrounding said packing and provided with a projection adjacent its inner end, a block secured to the outer end of said strap, a headed screw threaded into said block, and means interposed between the head of said screw and said strap projection for forcing said packing material into contact with said piston rod when said screw is set up.

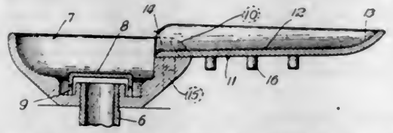
2. The combination with a piston rod, of a tubular, flanged bush, a ring held in spaced relationship with said flange, packing material surrounding said rod between said ring and flange, a strap surrounding said packing and provided with a projection adjacent its inner end, a block secured to the outer end of said strap, a headed screw threaded into said block, and a toggle-wedge interposed between said screw head and said strap projection for forcing said packing material into contact with said piston rod when said screw is set up.

3. The combination with a piston rod, of a tubular, flanged bush, a ring held in spaced relationship with said flange, packing material surrounding said rod between said ring and flange, a strap surrounding said packing and provided with a projection on the inner end thereof, a block secured to the outer end of said strap, a headed screw threaded into said block, a washer on said screw, and a toggle-wedge interposed between said washer and said projection, said screw head limiting outward washer movement.

4. The combination with a piston rod, of a tubular, flanged bush, a ring held in spaced relationship with said flange, packing material surrounding said rod between said ring and flange, a strap surrounding said material and provided with a projection at its inner end, a block secured to the outer end of said strap, a headed screw threaded into said block, a washer on said screw, a coil spring interposed between said washer and screw head, and a toggle-wedge interposed between said washer and said projection.

5. The combination with a piston rod, of a flanged bush, a ring held in spaced relationship with said flange, packing material around said rod between said ring and flange, a strap encircling said material and provided with a projection at its inner end, a block secured to the outer end of said strap, a headed screw threaded into said block, a toggle-wedge interposed between said screw head and said projection, and a strip in detachable connection with said strap for maintaining said toggle-wedge in position.

1,194,088. DRAIN. WALTER STANLEY, Chicago, Ill. Filed Mar. 20, 1916. Serial No. 85,511. (Cl. 182—13.)



1. In a device of the class described, the combination of a circular bowl having a central drain opening and a recess in its side wall, there being a pair of vertical openings in the side wall at the said recess, an elongated spout adapted to drain into the bowl and having its under surface of contour complementary to the contour of the recess, and a plurality of pairs of downwardly projecting lugs on the lower face of the spout, the lugs of each pair being suitably spaced for simultaneous entry into the aforesaid openings, whereby the spout may be set in any desired position of adjustment with respect to the bowl, substantially as described.

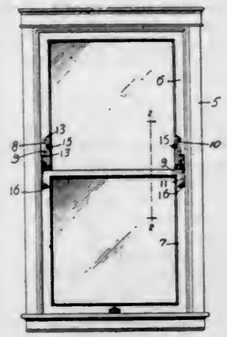
2. In a device of the class described, the combination of a bowl having a drain opening and having a peripheral notch, there being an opening in the bowl at the position of the notch, an elongated spout adapted to drain into the bowl and having its lower surface of contour complementary to the contour of the notch, and a plurality of lugs on the lower portion of the spout, each lug being adapted for entry into the aforesaid opening, whereby the spout may be set into different adjusted positions with respect to the bowl, substantially as described.

3. In a device of the class described, the combination of a bowl having a peripheral recess, an elongated spout adapted to drain into the bowl and having its lower portion of contour complementary to that of the recess, and a plurality of lugs on the lower portion of the spout adapted for engagement with the bowl for the purpose of securing the spout in any desired position of adjustment with respect to the bowl, substantially as described.

4. In a device of the class described, the combination of a bowl, an elongated spout adapted to drain into the bowl, said spout being adjustable with respect to the bowl longitudinally of its length, and means for securing the spout to the bowl in any desired adjusted position, substantially as described.

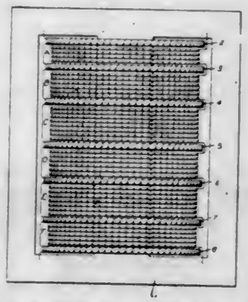
1,194,089. WINDOW-LOCK. GEORGE W. STEIN, Chicago, Ill. Filed Feb. 14, 1916. Serial No. 78,171. (Cl. 16—18.)

A locking device for windows including a pivoted locking member formed from a single length of rod material and bent at one end to provide a locking portion adapted to be swung into and out of the path of movement of one of the sashes, said member also having intermediate its ends another angular locking portion, the extremity of the last-named locking portion extending at right angles to the first-named locking portion, whereby said extremity will be in the path of movement of said sash when the



first-named locking portion is out of the path of movement thereof.

1,194,090. ELECTRICAL WINDING. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,168. (Cl. 175—30.)



1. An electrical winding comprising a plurality of coils assembled in groups, the adjacent groups thereof comprising different numbers of coils to restrain the building up of dangerously high voltages through resonance.

2. An electrical winding comprising a plurality of coils assembled in groups, said groups having different numbers of coils to restrain the building up of dangerously high voltages through resonance.

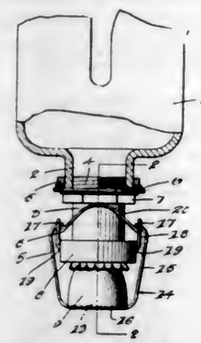
3. An electrical winding comprising a plurality of coils connected in series and assembled in more than two groups, each of the two terminal groups comprising a different number of coils than the inner groups to restrain the building up of dangerously high voltages through resonance.

4. In a transformer, a winding comprising a plurality of electrically connected coils assembled in groups and a second winding separating the said groups, adjacent groups comprising unequal numbers of coils respectively, to restrain the building up of dangerously high voltages through resonance.

1,194,091. CLEAN-OUT PLUG. HENRY STENQUIST, New York, N. Y. Filed Apr. 18, 1914. Serial No. 832,867. (Cl. 137—76.)

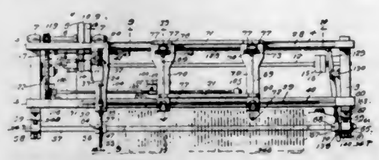
A clean out plug for sinks comprising a short pipe section connected to the discharge nozzle of a sink trap, a tapered valve having its upper smaller end extending into the lower end of the pipe section, said valve having lower and upper flat faces, said lower face having a groove, a compressible gasket mounted upon said upper flat face and extending downwardly in contact with the side of the

valve to a point below the lower end of the pipe section, a bearing block positioned upon the gasket directly above said upper flat face, a bolt extending centrally through the bearing block and through the gasket, said bolt extending into the valve to a point adjacent said lower flat face thereof and alining vertically with said groove, a bail



having a horizontal portion longer than the diameter of the valve and seated in said groove, said bail also having arms secured to the ends of the horizontal portion, and means connected to the pipe section and said arms by which the bail may be moved upwardly to seat the valve, the valve when seated clamping the gasket between its side walls and the pipe section.

1,194,092. SAW-GUMMER. FRED STRICKLAND, Anderson, S. C. Filed May 27, 1914, Serial No. 841,240. Renewed June 24, 1916. Serial No. 105,709. (Cl. 76—40.)



1. In a saw gummer, a supporting frame, a driving shaft journaled longitudinally of the frame, a carriage movable longitudinally of the frame, a mandrel supported by the frame and adapted to support a series of saws, gumming shafts journaled on the carriage and mounted for upward movement with respect to the carriage at the ends adjacent to the saws, gumming wheels secured to the front ends of the shafts, springs normally acting to hold the front ends of the shafts in lowered position with the gumming wheels engaging the saws, a driving connection between each gumming wheel and the driving shaft, pawl and ratchet mechanism for advancing the mandrel at predetermined intervals and connected to the driving shaft, means operated by the said pawl and ratchet mechanism for lifting the front ends of the gumming shafts when the mandrel is advanced, and means controlled by the rotation of the mandrel for moving the carriage at predetermined intervals.

2. A saw gummer comprising a supporting frame, a driving shaft journaled longitudinally of the frame, a mandrel for supporting a series of saws journaled longitudinally of the frame at the front thereof, a carriage movable on the frame longitudinally of the mandrel, gumming wheels supported by the carriage for simultaneously engaging the saws on the mandrel, pawl and ratchet mechanism operated by the driving shaft for advancing the mandrel at predetermined intervals, the gumming wheels being movable vertically with respect to the carriage, springs pressing the gumming wheels into engagement with the saws, means operated by the pawl and ratchet mechanism when advancing the mandrel for lifting the gumming wheels out of engagement with the saws, and means operated by the mandrel at each complete rotation thereof for moving the carriage a predetermined distance.

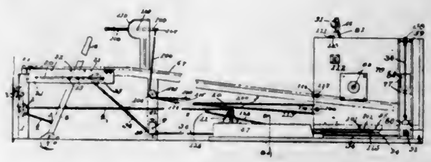
3. In a saw gummer, means for supporting a mandrel, a carriage movable longitudinally of the mandrel, gumming wheels journaled on the carriage for engaging saws supported by the mandrel, means for rotating the gumming wheels and for advancing the mandrel at predetermined intervals, means operated by the advancing means for the mandrel for moving the gumming wheels out of engagement with the saws, and means controlled by the rotation of the mandrel for moving the carriage.

4. In a saw gummer, a supporting frame having means for supporting a mandrel carrying a series of saws to be gummed, a carriage movable longitudinally of the frame and of the mandrel and provided with gumming means for gumming the saws, said gumming means being movable vertically with respect to the carriage, springs normally pressing the gumming means toward the saws, means for intermittently advancing the mandrel at predetermined intervals, means for operating the gumming mechanism, and the advancing means for the mandrel, and means operated by the advancing means for advancing the mandrel for moving the gumming wheels out of engagement with the saws.

5. In a saw gummer, a frame having means for supporting a mandrel carrying a series of saws, gumming mechanism movable on the frame longitudinally of the mandrel, means for operating the gumming mechanism and for moving the same longitudinally of the mandrel, said mechanism being mounted to yield upwardly away from the saws, means for advancing the mandrel at predetermined intervals, and means controlled by the said advancing means when advancing the mandrel for moving the gumming mechanism out of engagement with the saws.

[Claims 6 to 11 not printed in the Gazette.]

1,194,093. BASE-BALL-PITCHING MECHANISM. DEE STROUP, Cleveland, Ohio. Filed Jan. 17, 1916. Serial No. 72,491. (Cl. 124—1.)



1. In a ball-throwing machine, a pivotally mounted throwing arm, actuating means therefor, an elevator and pivoted means carried by the elevator for delivering the ball to the throwing arm at a predetermined time.

2. In a ball-throwing machine, an elevator, a pivoted trough, an inclined way for delivering balls to the trough, a stop member carried by the trough, and means coöperating with the trough to prevent the delivery of more than one ball at a time.

3. In a ball-throwing machine, an elevator, a pivoted trough, an inclined way for delivering balls to the trough, a stop member carried by the trough, means coöperating with the trough to prevent the delivery of more than one ball at a time, and a pivoted member carried by the elevator to deliver a ball therefrom.

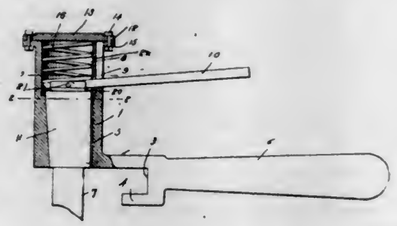
4. In a ball-throwing machine, an elevator, a pivoted trough, an inclined way for delivering balls to the trough, a stop member carried by the trough, means coöperating with the trough to prevent the delivery of more than one ball at a time, a pivoted member carried by the elevator to deliver a ball therefrom, and a pivoted throwing arm.

5. In a ball-throwing machine, an elevator, a pivoted trough, an inclined way for delivering balls to the trough,

a stop member carried by the trough, means coöperating with the trough to prevent the delivery of more than one ball at a time, a pivoted member carried by the elevator to deliver a ball therefrom, a pivoted throwing arm, and a ball-guiding member for delivering a ball discharged from the elevator to the ball-throwing arm.

[Claims 6 to 10 not printed in the Gazette.]

1,194,094. AIR-BRAKE HANDLE OR CONTROLLER-HANDLE. GEORGE J. SWEETSER, San Francisco, Cal. Filed Apr. 26, 1916. Serial No. 93,656. (Cl. 74—33.)



1. A device of the character described comprising a cylindrical barrel provided with a tapering bore, a handle formed on said barrel, a pair of wedge-shaped members slidably mounted within the tapering bore of the barrel, a wedge-shaped member formed on the rear edges and adjacent the upper end of the pair of wedge-shaped members, a pair of inwardly extending ears formed on the upper ends of the pair of wedge-shaped members, a releasing lever pivoted to said barrel and extending therein, a bolt extending through the ears and the lever to pivotally secure the wedge-shaped members to the lever, and a spring mounted within the barrel for urging the wedge-shaped members downwardly within the tapering bore of the barrel.

2. A device of the character set forth comprising a barrel having a tapering bore in its lower end terminating into an enlarged bore in its upper end thereof, said enlarged bore opening out through the upper end of the barrel to receive lubricant, a cap detachably secured to the upper end of the barrel, a chuck slidable within the tapering bore, ears formed on said chuck, said barrel having a slot extending from its upper end and terminating adjacent the tapering bore, a lever extending through the slot and pivoted to said ears for raising the chuck, and a spring interposed between the chuck and lever for urging the chuck downwardly.

3. A device of the character set forth comprising a barrel having a tapering bore in its lower end and terminating into an enlarged bore in its upper end thereof, said enlarged bore opening out through the upper end of the barrel to receive lubricant, a cap detachably secured to the upper end of the barrel, said barrel having a slot extending from its upper end to a point adjacent the tapering bore, a chuck mounted in the tapering bore, ears formed on said chuck, a lever extending through the slot and resting upon the lower wall and pivoted to said ears for raising the chuck, a spring for urging the chuck downwardly, and a flexible washer mounted in the enlarged bore and having a slot to receive the lever for closing the slot in the barrel.

4. A device of the character set forth comprising a barrel, having a tapering bore, a chuck mounted in said bore and consisting of wedge-shaped side members, a rear wedge-shaped member formed on the side members and having a pair of relatively spaced slots terminating adjacent the upper end thereof to add flexibility thereto, a pair of ears formed on the upper ends of the side members and bent inwardly and upwardly, a lever pivoted to said ears between the inwardly and upwardly bent ends, and a spring for urging the chuck downwardly in the bore.

1,194,095. PRIMING OR DETONATING COMPOSITION. MAURICE R. SWOPE, New York, N. Y. Filed Feb. 28, 1916. Serial No. 80,957. (Cl. 52—2.)

1. A priming or detonating composition which comprises nitrocarbohydrate, thiocyanate, and an oxygen delivering substance.

2. A priming or detonating composition, which comprises compactly congealed nitrocarbohydrate, thiocyanate, and an oxygen delivering substance.

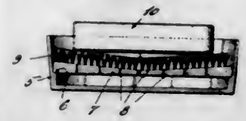
3. A priming or detonating composition, which comprises nitrocellulose, a thiocyanate, and an oxygen delivering substance.

4. A priming or detonating composition, which comprises a compactly congealed nitrocellulose, thiocyanate, and an oxygen delivering substance.

5. A priming of detonating composition, which comprises nitrocarbohydrate, thiocyanate, and a chlorate.

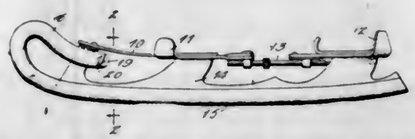
[Claims 6 to 24 not printed in the Gazette.]

1,194,096. SANITARY SOAP-DISH. LINCOLN TIJOU, Corpus Christi, Tex. Filed Jan. 24, 1914. Serial No. 814,069. (Cl. 15—26.)



An improved holder for a cake of soap, comprising a back having (when inverted) a draining-surface which inclines downwardly from its ends toward its center, said back having a number of drain-perforations formed vertically therein for draining the liquid from said inclined surface at various points; and tufts of brush-material, all of uniform length, projecting from said inclined surface, to form a receptacle for a cake of soap, above the said downwardly and centrally inclined surface.

1,194,097. SNOW-SKATE. JOSEPH JOHN TRITZ, Omaha, Nebr. Filed Apr. 7, 1916. Serial No. 89,555. (Cl. 46—50.)



1. In combination with a skate including a blade, a tubular runner having a longitudinal slot to receive the lower longitudinal edge portion of the blade therein, having its forward end bent upwardly and inwardly and having its extremity bifurcated to provide extensions embracing the upper forward portion of the blade, said extensions being provided with transversely alined openings, and a clamping bolt extending through the openings whereby to clampingly engage the upper forward portion of the blade and maintain the runner in position.

2. In combination with a skate including a blade, a tubular runner having a longitudinal slot to receive the lower longitudinal edge portion of the blade therein, having its forward end bent upwardly and inwardly and having its extremity bifurcated to provide extensions embracing the upper forward portion of the blade, said extensions being provided with transversely alined openings, and a clamping bolt extending through the openings whereby to clampingly engage the upper forward portion of the blade and maintain the runner in position, said bolt having threaded engagement with one of the said extensions at its said opening.

3. In combination with a skate including a blade, a tubular runner having a longitudinal slot to receive the blade of the skate and provided with a clamp engaging a portion of the skate whereby to maintain the runner in position.

4. In combination with a skate including a blade, a tubular runner longitudinally slotted to receive the blade of the skate.

1,194,098. FIRE-ESCAPE. LUIGI VIEZZI, Jersey City, N. J. Filed May 31, 1913, Serial No. 770,925. Renewed Feb. 9, 1916. Serial No. 77,300. (Cl. 227—7.)



1. In a fire escape a main spiral chute, an auxiliary chute telescoping with the main chute, a standard mounted axially relatively to the main chute, a bearing, mounted on the standard, and members connecting the bearing with the auxiliary chute.

2. In a fire escape a main spiral chute, an auxiliary chute slidably engaging the main chute, a standard mounted axially relatively to the main chute, a bearing, mounted on the standard, members connecting the bearing with the auxiliary chute, and a member movable relatively to the bearing for engaging the bearing to support the auxiliary chute.

3. In a fire escape a main spiral chute, an auxiliary chute telescoping with the main chute, a standard mounted axially relatively to the main chute, a bearing mounted on the standard, members connecting the bearing with the auxiliary chute, a friction wheel engaging the auxiliary chute, and an alarm adapted to be operated by the friction wheel.

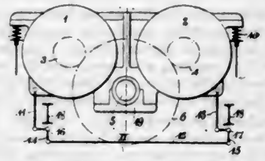
4. In a fire escape a main spiral chute, an auxiliary chute slidably engaging the main chute, a standard mounted axially relatively to the main chute, a bearing mounted on the standard, members connecting the bearing with the auxiliary chute, a rock shaft having an arm for engaging the bearing to support the auxiliary chute, and means to rock the shaft.

5. In a fire escape a main spiral chute, an auxiliary chute slidably engaging the main chute, a standard mounted axially relatively to the main chute, a bearing mounted on the standard, members connecting the bearing with the auxiliary chute, a rock shaft having an arm for engaging the bearing to support the auxiliary chute, a door, and means connecting the door with the shaft for rocking the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,194,099. ELECTRIC RAILWAY-VEHICLE. KALMAN VON KANDO, Vado Ligure, Italy, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 9, 1914. Serial No. 876,381. (Cl. 105—220.)

1. In a railway vehicle, the combination of a crank shaft adapted to be connected to the driving wheels, an electric motor the stator of which is journaled on said crank shaft, toothed gears operatively connecting the rotor of said motor with said crank shaft, and a link in the line of the resultant force between the gears connecting the motor stator with the vehicle frame.



2. In a railway vehicle, the combination of a pair of electric motors the rotors of which are operatively connected through toothed gears with a common crank shaft and the stators of which are journaled on said crank shaft, resilient supporting means between the motor stators and the vehicle frame, interconnecting bell crank levers pivoted on said vehicle frame, and links connecting the motor stators to said bell crank levers.

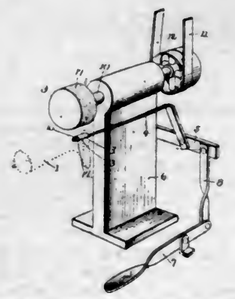
3. In a railway vehicle, the combination of a crank shaft journaled in the vehicle frame and connected to the driving wheels through coupling rods, a pair of electric driving motors operatively connected to said crank shaft through toothed gearing and having their stators journaled on said crank shaft and resiliently connected to the vehicle frame, and a link in line with the resultant force due to the reaction of said toothed gearing connecting the stators of the motors to the vehicle frame.

4. In a railway vehicle, a crank shaft, a pair of electric motors having their stators mechanically connected and journaled on said crank shaft, toothed gearing between the rotors of said motors and said crank shaft, and a link between the vehicle frame and said motor stators in line with the resultant of the reactive forces due to the toothed gearing.

5. In a railway vehicle, a crank shaft, journaled in the vehicle frame, coupling rods between said crank shaft and the driving wheels, a pair of electric motors, toothed gears between said crank shaft and the rotors of said motors, means for mechanically connecting the stators of said motors and pivoting them on said crank shaft, and a link connecting the stators of the motors to the vehicle frame in line with the resultant of the forces due to the reaction of the toothed gears and the forces acting on the motor bearings due to the reaction in the coupling rods.

[Claims 6 to 8 not printed in the Gazette.]

1,194,100. METHOD OF FINISHING FOOT-COVERINGS AND LEGGINGS. JOHN VINCENT WALSH, Haverhill, Mass. Filed Aug. 4, 1915. Serial No. 43,622. (Cl. 12—142.)



1. The method of producing a lustrous and smooth finish to a foot covering consisting in pouncing the entire inner and outer surfaces thereof each in one general direction with an abrasive, and then buffing the pounced surfaces in the same directions, substantially as set forth.

2. The method of producing a lustrous and smooth finish to a foot covering consisting in pouncing the entire inner and outer surfaces thereof each in one general direction with sandpaper, and then buffing the pounced surfaces in the same direction, substantially as set forth.

3. The method of producing a lustrous and smooth finish to a foot covering consisting in providing an opening in the sole portion thereof, supporting the foot covering through said opening and pouncing the surface thereof in one general direction, and then buffing the pounced surface in the same direction, substantially as set forth.

4. The method of producing a lustrous and smooth finish to a foot covering consisting in providing an opening in the sole portion thereof, supporting the foot covering through said opening, and pouncing the surface of the upper in one general direction, buffing the pounced surface in the same direction, turning inside-out the foot covering, and then treating the new surface as aforesaid, substantially as set forth.

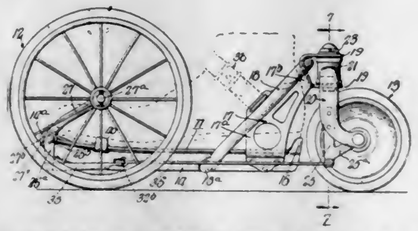
5. The method of producing a lustrous and smooth finish to a foot covering consisting in providing an opening in the sole portion thereof, supporting the foot covering through said opening and pouncing the surface of the upper in one general direction with sandpaper, buffing the pounced surface in the same direction with a woolly surface, turning inside-out the foot covering, and then treating the new surface of the upper as aforesaid, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,194,101. COMPOSITION OF MATTER TO BE USED FOR THE WELDING AND SOLDERING OF DIFFERENT ARTICLES CONSTRUCTED OF ALUMINUM ONLY. ROBERT LEE WEATHERFORD, Fort Worth, Tex. Filed May 22, 1916. Serial No. 99,090. (Cl. 75—1.)

The herein-described composition for welding and soldering articles constructed of aluminum, consisting of aluminum one part, lead one part, block tin two parts, zinc two parts, commercial bismuth one part, and antimony one part, substantially as described.

1,194,102. SKATE. GEORGE S. WEBB, Aurora, Ill., assignor of one-half to Samuel S. Sencenbaugh, Aurora, Ill. Filed July 3, 1915. Serial No. 37,793. (Cl. 46—51.)



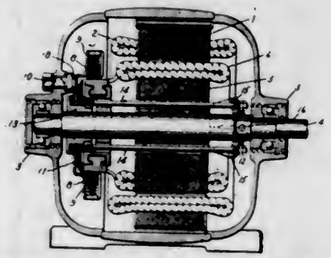
1. In a skate, in combination with a foot plate, a pair of front wheels and rear wheels below the axes of which said foot plate is located, means suspending said foot plate from said front wheels, said means being constructed to maintain said front wheels in a plane parallel to the direction of weight imposed upon said foot plate and means connecting said front wheels with said rear wheel whereby the skate is steered by said rear wheel.

2. In a skate, the combination of a foot plate, a pair of large front wheels and a smaller rear wheel, said foot plate being suspended below the axes of all of said wheels, means providing a pivotal connection between said rear wheel and said foot plate, means suspending said foot plate from said front wheels whereby the axes of said front wheels will always be maintained parallel to a transverse line of said foot plate, and means operatively connecting the suspension means of said front wheels with said rear wheel, whereby said skate is steered.

3. In a skate, the combination with a foot plate, a pair of large front wheels and a single smaller rear wheel, said foot plate being supported below the axes of all of said wheels, a fork carrying said rear wheel pivoted on a vertical axis at the rear of said foot plate, arms for suspending the front end of said foot plate from said wheels, said arms having axle parts and coaxial journal parts, the latter being journaled to said foot plate, and means operatively connecting said arms with the fork of said rear wheel, whereby said skate is steered.

4. In a skate, the combination with a foot plate, a pair of large front wheels and a single smaller rear wheel, said foot plate being supported below the axes of said wheels, a fork carrying said rear wheel, means connecting said fork with said foot plate providing for a swinging movement of said fork on a vertical axis, arms by means of which the front end of said foot plate is suspended from said front wheels, said arms including axle parts on which said front wheels are mounted, and coaxial journal parts operatively connected with said foot plate, means operatively connecting said arms with said rear fork, whereby the shifting movement of said arms in the shifting of the weight of the skater on the foot plate is communicated to the fork of said rear wheel, and a device for normally maintaining said rear wheel in line with the longitudinal center axis of said foot plate.

1,194,103. ALTERNATING-CURRENT MOTOR. ALFRED F. WELCH, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed Nov. 30, 1915. Serial No. 64,349. (Cl. 172—279.)



1. In an alternating current motor, a rotor having a winding connected to a commutator, brushes bearing on said commutator, brush-holders in which said brushes are mounted, means for holding said brush-holders stationary, a switch, and a centrifugal means for moving said switch into the position in which it short-circuits said rotor winding and for releasing said holding means when said rotor reaches a predetermined speed, whereby said brush-holders and brushes revolve with said rotor.

2. In an alternating current motor, a rotor having a winding connected to a commutator, brushes bearing on said commutator, brush-holders in which said brushes are mounted, means for holding said brush-holders stationary, a switch, and centrifugal means for moving said switch into the position in which it short-circuits said rotor windings and for moving said brush-holders so as to release said holding means when said rotor reaches a predetermined speed, whereby said brush-holders and brushes revolve with said rotor.

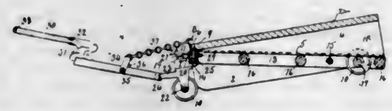
3. In an alternating current motor, a rotor having a winding connected to a commutator, brushes bearing on said commutator, brush-holders in which said brushes are mounted, means for holding said brush-holders stationary, a switch, a longitudinally movable sleeve on which said brush-holders and said switch are mounted, and centrifugal means operatively connected with said sleeve for moving the same when said rotor reaches a predetermined speed so that said switch short-circuits said rotor winding and said holding means for said brush-holders is released.

4. In an alternating current motor, a rotor having a winding connected to a commutator, brushes bearing on said commutator, brush-holders in which said brushes are mounted, a switch, centrifugal means for moving said switch into the position in which said rotor winding is short-circuited and said brush-holders into the position in which they revolve with said rotor when the rotor reaches a predetermined speed, and means for stopping the revolution of said brush-holders when the speed of said rotor falls below a predetermined value.

5. In an alternating current motor, a rotor having a winding connected to a commutator, brushes bearing on said commutator, brush-holders in which said brushes are mounted, a switch, a longitudinally movable sleeve on which said brush holders and said switch are mounted, centrifugal means operatively connected with said sleeve for moving, the same when said rotor reaches a predetermined speed so that said switch short-circuits said rotor winding and said brush-holders revolve with said rotor and means for stopping the revolution of said brush-holders when the speed of said rotor falls below a predetermined value.

[Claims 6 to 8 not printed in the Gazette.]

1,194,104. TRUCK. ENOCH WHALLEY, Willimansett, Mass. Filed Feb. 26, 1915. Serial No. 10,700. (Cl. 254—5.)



1. The combination, in a truck, of a separate floor platform provided with an intermediate wedge, a carriage adapted for temporary engagement with said platform, such carriage being provided with wedge-receiving supports arranged on an inclined plane, and normally unsupported by said carriage, actuating means connected with said carriage and adapted to be temporarily connected with said platform, whereby the latter may be drawn forward onto the former and thus raised from the floor, and lateral means of support for said platform when overbalanced, such lateral means of support being outside of and inclined to correspond with said wedge.

2. The combination, in a truck, with a separate floor platform provided with underneath shoulders at the sides and an intermediate wedge, such shoulders having a pitch to correspond to that of said wedge, of a carriage adapted for temporary engagement with said platform, said carriage comprising a frame provided with wedge-receiving supports, such frame with said supports being inclined to correspond to the inclination of said shoulders and wedge, and actuating means connected with said carriage and adapted to be temporarily connected with said platform, wherewith the latter may be raised onto the former, said shoulders being over the sides of said frame when the latter is beneath said platform.

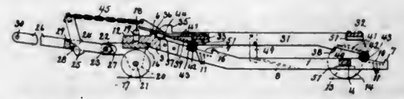
3. The combination, in a truck, with a separate floor platform having a wedge intermediate and parallel with its longitudinal edges, of a plurality of wheels, a frame mounted at an incline on said wheels, a plurality of wedge-receiving revoluble supports mounted in said frame and extending between the sides thereof, the axes of said supports being fixed, and actuating means connected with said frame and adapted to be temporarily connected with said platform, the two latter being relatively longitudinally movable.

4. The combination, in a truck, with a wedge-provided platform, of a frame provided with plurality of rollers, the axes of said rollers being fixed, and one of such rollers having trunnions journaled in said frame, wheels mounted on said trunnions, a swivel support at the front end of said frame, a wheel carrying said support and with the latter retaining said frame in an inclined position with the front end higher than the back end, a handle pivotally attached to said support, and detachable connecting means between said handle and said platform.

5. The combination, in a truck, with a separate platform having floor supports adapted normally to rest on the floor, and provided underneath with lateral shoulders and an intermediate wedge, the bottom edges of said shoulders being inclined similarly to the wedge incline, of a carriage adapted for temporarily engagement with said platform, said carriage consisting in part of an inclined frame receivable beneath said shoulders and provided with supporting members for said wedge, and actuating means connected with said carriage and adapted to be temporarily connected with said platform, whereby the latter may be raised onto the former.

[Claims 6 to 9 not printed in the Gazette.]

1,194,105. TRUCK. ENOCH WHALLEY, Willimansett, Mass. Filed Oct. 7, 1915. Serial No. 54,665. (Cl. 254—5.)



1. In a truck, relatively movable upper and under sections provided with inclined bearings and racks, and revoluble members between said bearings, said members being provided with pinions to intermesh with said racks.

2. In a truck, relatively movable upper and under sections provided with inclined bearings, revoluble members between said bearings, an angular lifter comprising rigid arms one of which is pivotally mounted at its free end, a flexible connection between said upper section and the free end of the other of said lifter arms, and means normally independent of said lifter but adapted to operate the same.

3. In a truck, relatively movable upper and under sections provided with inclined bearings, revoluble members between said bearings, an angular lifter comprising rigid arms one of which is pivotally mounted at its free end, a flexible connection between said upper section and the free end of the other of said lifter arms, and a pivotally-mounted tongue adapted to operate said lifter, such tongue being normally independent of said lifter.

4. In a truck, upper and under mutally reciprocable sections arranged for elevation and depression, an angular lifter pivotally mounted at one end, connections between said upper section and said lifter, a tongue pivotally mounted and longitudinally movable on the same pivot with said lifter and means whereby said tongue may be interlocked with and released from said lifter.

5. The combination, in a truck, of a carriage, a swivel at the front end of said carriage, said swivel being provided with a pivot pin, an angular lifter mounted at one end on said pin, a slotted tongue also mounted on said pin with the latter in the slots, said tongue and lifter having engaging and disengaging means, a platform mounted on said carriage, said carriage and platform being mutually reciprocable and arranged for the elevation and depression of the platform, and connections between said platform and said lifter.

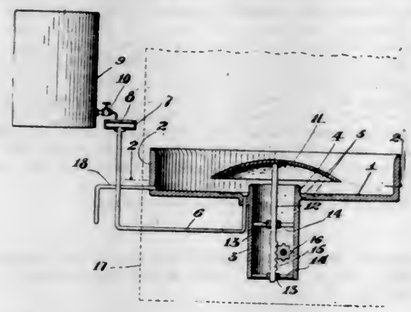
[Claims 6 to 9 not printed in the Gazette.]

1,194,106. LIQUID-FUEL BURNER. WILLIAM A. WHITE and JAMES MCDONALD, New York, N. Y. Filed Apr. 19, 1915. Serial No. 22,229. (Cl. 158—91.)

1. A liquid fuel burner comprising a plate having a central draft orifice, and a depression in the inner portion of said plate to localize the fuel thereon, said plate also having an extended fuel supporting surface, and a valve in the path of the burning products.

2. A liquid fuel burner comprising a plate having a central draft orifice, and a depression in the inner portion of said plate to localize the fuel thereon, said plate

also having an extended fuel supporting surface, in combination with fuel feed means, and a valve in the path of the burning products.



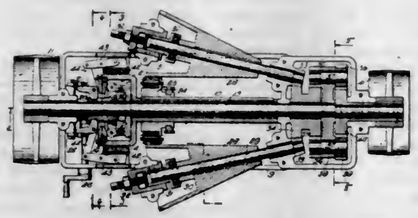
3. A liquid fuel burner comprising a plate having a central draft orifice, and a depression in the inner portion of said plate to localize the fuel thereon, said plate also having an extended fuel supporting surface, in combination with an adjustable valve in the path of the burning products.

4. A liquid fuel burner comprising a plate having a central draft orifice, and a depression in the inner portion of said plate to localize the fuel thereon, said plate also having an extended fuel supporting surface, in combination with regulating fuel feed means, and an adjustable air admission valve in the path of the burning products.

5. A liquid fuel burner comprising a horizontally disposed plate, a draft tube extending centrally therethrough a concentric fuel receiving groove in the inner portion of said plate about said draft tube, to localize the fuel upon the plate, and to form a restricted flame zone relatively to the area of said plate, a gravity fuel feed in communication with said groove, and means for regulating the admixture of air to support combustion of the fuel.

[Claims 6 to 13 not printed in the Gazette.]

1,194,107. VARIABLE-SPEED-TRANSMISSION MECHANISM. SAMUEL P. WHITESIDE, Curtis Bay, Md. Filed Oct. 27, 1915. Serial No. 58,136. (Cl. 74—34.)



1. A variable-speed transmission mechanism comprising, a driving member, a friction roller, a friction clutch for coupling the roller to the driving member, friction cones engaging the roller, means for displacing the roller along the cones, a member constrained to rotate with the driving member, two sets of pinions carried by said member, a gear constrained to rotate with the cones meshing with one set of pinions, a driven member, a gear constrained to turn with the driven member in mesh with the other set of pinions, a brake for the friction clutch adapted to engage the same when the friction clutch is not coupled to the driving member, whereby the friction cones are prevented from turning, substantially as and for the purpose set forth.

2. A variable-speed transmission mechanism comprising,—a driving member, a friction roller, a friction clutch for coupling the roller to the driving member, means for operating the clutch, a brake for the clutch, means connecting the brake to the clutch-operating means so that the brake is applied to the clutch when the same has passed neutral position and the roller is uncoupled from the driving member, friction cones engaging the roller, means for displacing the roller along the cones, a member constrained to rotate with the driving member, two sets of pinions carried by said member, a gear constrained to rotate with the cones meshing with one set of pinions, a driven member, and a gear constrained to turn therewith in mesh with the other set of pinions.

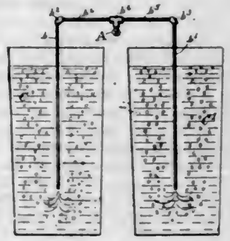
3. A variable-speed transmission mechanism comprising,—a driving member, a friction roller driven thereby, friction cones engaging the roller, means for displacing the roller along the cones, a member constrained to rotate with the driving member, two sets of pinions carried by said member, a gear constrained to rotate with the cones meshing with one set of pinions, a driven member, a gear constrained to turn with the driven member in mesh with the other set of pinions, and means for preventing the rotation of the cones substantially as and for the purpose set forth.

4. A variable-speed transmission mechanism comprising,—a driving member, a friction roller driven thereby, friction cones engaging the roller, means for displacing the roller along the cones, a pinion constrained to rotate with each cone, a gear in mesh with said pinions, a second gear constrained to turn with said first gear, a member constrained to rotate with the driving member, two sets of pinions carried by said member, one of which sets is in mesh with said second gear, a driven member, a gear constrained to rotate therewith in mesh with the other set of pinions, and means for preventing the rotation of the cones, whereby the driven member is reversed.

5. A variable-speed transmission mechanism comprising,—a driving member, a friction roller driven thereby, friction cones engaging the roller, means for displacing the roller along the cones, a pinion constrained to revolve with each cone, a gear in mesh with said pinion, a second gear constrained to rotate with the first, a member constrained to rotate with the driving member, pins carried by said member, pinions on said pins in mesh with the second gear, a driven member, a gear constrained to rotate therewith, other pinions on said pins in mesh with said gear, and means for preventing the rotation of the cones for reversing the driven member.

[Claims 6 to 11 not printed in the Gazette.]

1,194,108. WATER-AGITATOR FOR ICE PLANTS. JEWEL BANGS WILLIAMS, Cincinnati, Ohio, assignor to The Triumph Electric Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 13, 1915. Serial No. 66,584. (Cl. 261—3.)



1. In water agitators for ice plants, where ice cans are used in any fixed position for ice making, the combination of a pipe for supplying air under pressure, an outlet member in said air supply pipe, a valve adapted to close said outlet by air pressure from within said pipe, a manifold and connections for conveying air from said outlet to the centers of a plurality of ice cans, and unitary means for simultaneously opening said valve, and for centering said manifold; said unitary means being adapted to keep said valve open so long as the manifold remains in said position and to hold the said manifold and its connections in said positions against accidental displacement.

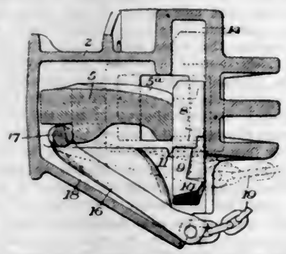
2. In water agitators for ice plants, where ice cans are used in any fixed position for ice making, the combination of a pipe for supplying air under pressure, an outlet member in said air supply pipe, a valve adapted to close said outlet by air pressure from within said pipe, a guide on said outlet member for centering a manifold, a manifold and connections for conveying air from said outlet to the centers of a plurality of ice cans, and means for uniting the manifold with the guide on the outlet member to center the manifold, and the manifold so formed as to open the valve and hold it open only when and so long as the manifold is centered on said outlet member.

3. In water agitators for ice plants, the combination of a pipe for supplying air under pressure between two rows of cans in pairs, an air outlet opposite the center of the cans of each pair, a valve adapted to close said outlet by air pressure from within, a manifold and connections for conveying the compressed air from the supply pipe to said cans and means for simultaneously holding said valve open and the manifold drop pipes in the center of said cans.

4. A water agitating device for artificial ice plants having in combination an air main, an air outlet from said main, a valve within said outlet adapted to close by being raised by air pressure within the main, vertical slots in the top of said air outlet, a yoke of such size and shape as to form conduits from the air outlet to an ice can on either side of the main opposite the air outlet, and means on the yoke for operatively connecting the air outlet through the yoke with the cans only when the yoke is so placed astride the main as to place the drop pipes of the yoke in the center of the contiguous ice cans.

5. In water agitating apparatus of the character indicated, a main distributing air-conduit having a service outlet; a self-seating valve controlling said outlet; a removable service manifold adapted to be connected with said outlet; and unitary means for securing said connection and maintaining the proper service relation of the manifold to the distributing main, and at the same time maintain the outlet-controlling valve in open position.

1,194,109. CAR-COUPLING. JOHN WILLISON, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 30, 1910. Serial No. 579,686. (Cl. 213—10.)



1. In a coupler, a head, a knuckle having a tail, a vertically movable and tilting locking block having a lock-to-the-lock engagement with the coupler head when in locked position, and a tilting and endwise bodily movable pulling lever engaging the knuckle tail within the coupler cavity, said pulling lever extending underneath the locking block, the lever and block being shaped to tilt the locking block out of the lock-to-the-lock position in the initial upward swing of the pulling lever, substantially as described.

2. In a coupler, a head, a knuckle having a tail, a vertically movable and tilting locking block having a lock-to-the-lock engagement with the coupler head when in locked position, and provided with a lower inclined face, and a tilting and endwise bodily movable pulling lever engaging the knuckle tail and arranged to act upon the inclined face of the locking block to tilt the block out of the lock-to-the-lock position and then lift it by the swinging movement of the pulling lever, substantially as described.

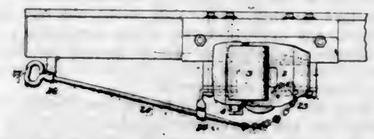
3. In a coupler, a head, a knuckle having a tail, a vertically movable and tilting locking block, the locking block having on its forward and rear sides respectively a lock-to-the-lock and lock-set engagement with the coupler head, and a tilting and endwise bodily movable pulling lever engaging the knuckle tail, said lever extending under the locking block and coöperating with said lock to tilt it and disengage the lock-to-the-lock and lockset it in lifting, substantially as described.

4. In a car coupler, a knuckle having a tail with a shoulder on its lower face, a vertically movable and tilting lock, and a knuckle opener comprising a pulling rod engaging the lower shoulder on the knuckle tail, and thence extending under the knuckle and under the locking block, in combination with a connection arranged to tilt the rod and move it bodily endwise; substantially as described.

5. In a coupler, a knuckle having a tail, a vertically movable and tilting locking block having a beveled lower face, said block being arranged to lockset on the coupler head, and a tilting and endwise bodily movable pulling lever engaging the knuckle tail and extending beneath the locking block, and a connection to tilt and move the lever bodily endwise to act on the inclined or beveled face of the locking block and lift the same and tilt it into lockset position; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,194,110. CAR-COUPLING. JOHN WILLISON, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 9, 1910. Serial No. 596,533. (Cl. 213—10.)



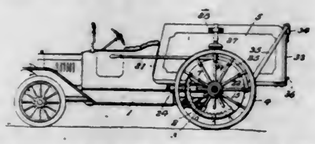
1. In a car coupler, a head, a pivoted knuckle, a tilting and vertically-movable lock, a lock-lifting and knuckle-opening member, said member being attached to the tail of the knuckle and passing transversely across the head beneath the lock, said member being flexible as to that portion which passes beneath the lock and having a sliding engagement with the lower surface of said lock, and a channel formed for said member beneath the floor of the coupler cavity, in which the member depends when inoperative and out of which, the portion beneath the lock is raised as it moves transversely.

2. In a car coupler, a head, a pivoted knuckle, a tilting and vertically movable lock, and a flexible lock lifting and knuckle throwing member, said member being attached at one end to the tail of the knuckle and having a point of support on the coupler head, said flexible member depending beneath the lock from its point of attachment to the knuckle and its point of support on the coupler head when the lock is in lowermost position, and having a transverse sliding movement with the lower surface of the lock to lift the lock, the said member being adapted to move across the point of support and to rise substantially into the plane of the point of attachment and point of support as it lifts the lock, the further transverse movement of the said member being adapted to pull the knuckle open.

3. In a car coupler, a coupler head and knuckle, a tilting and vertically-movable lock having an engagement

with an under-cut surface on the coupler head, to afford a lock-to-the-lock, the lock having a depending leg with a bottom inclined face, and a flexible connection secured to the knuckle tail and arranged to act upon the inclined face by a transverse movement to tilt the leg of the lock rearwardly and to lift it.

1,194,111. ATTACHMENT FOR MOTOR-VEHICLES. PINCKNEY A. WOOD, Memphis, Tenn., assignor of one-half to Thomas U. Sisson, Winona, Miss. Filed June 12, 1916. Serial No. 103,249. (Cl. 21—90.)



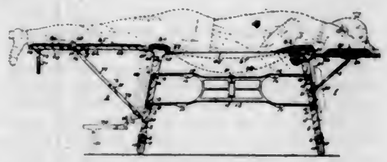
1. A motor driven vehicle comprising in part an ordinary automobile having the wheels of the driven axle thereof removed and pinions substituted therefor, and another vehicle attached to said automobile by connection whereby the rear of the automobile is supported by an axle of said attached vehicle, said axle of said attached vehicle being secured adjacent to and parallel with the driven axle of said automobile and the wheels of said axle being provided with gears fixedly attached thereto and arranged to mesh with and be driven by the pinions on the driven axle of the automobile, substantially as set forth.

2. A motor driven vehicle comprising an automobile of any appropriate type having the wheels removed from its driven axle, pinions mounted on said driven axle, a second load-carrying vehicle connected by hounds to the chassis of the automobile to support and carry the rear end thereof, an axle of said second vehicle being arranged parallel with and adjacent to the rear axle of said automobile, wheels on said axle of the attached vehicle, and gears fixedly attached to said wheels and meshing with the pinions on the driven axle of the automobile, whereby the load-carrying vehicle also carries the rear of the automobile and the driven axle of the automobile propels the combined motor driven vehicle through the traction wheels of said attached vehicle by direct intermeshing gears, substantially as set forth.

3. In a motor driven vehicle, the combination of an automobile of any appropriate type having a driven axle with the wheels thereof removed, pinions mounted on said axle, a second vehicle attached to the rear of the chassis of the automobile to support and carry the same, an axle of the attached vehicle being secured adjacent to and parallel with the driven axle of the automobile, spoked load-carrying wheels mounted on said axle of the attached vehicle, gear wheels fitted around the hubs of said spoked wheels and provided with internal gears meshing with the pinions on the driven axle of the automobile, and means for detachably securing said gear wheels to the several spokes of said wheels, substantially as set forth.

1,194,112. COLLAPSIBLE ADJUSTING OR MANIPULATING TABLE. WALTER S. WOOD, Kalamazoo, Mich., and DORA E. WOOD, Chicago, Ill. Filed Jan. 26, 1915. Serial No. 4,430. (Cl. 128—16.)

1. A table for the purpose described comprising a chest-supporting-section and a hip-supporting section each provided with radially-disposed legs supporting tangentially arranged tops, shifting supporting feet pivotally secured to each of said legs and adapted to project laterally from the sides thereof, interchangeable adjustable folding side-braces detachably secured to said legs to maintain said supporting-sections in their relative positions, a tie-piece detachably secured to each of said side-braces to prevent buckling of same, oppositely disposed side-plates secured to each of said supporting sections at the junction of their legs and tangentially arranged tops, a head-rest provided with a central face-opening pivotally secured to the side-plates of the chest-supporting-section, ratchet-plates secured to the under side of said head-rest, a brace pivotally secured to the legs of the chest-supporting section and adapted to engage said ratchet-plates for the purpose of adjusting said head-rest to varying positions, a spring actuated cylinder between the side-plates of the chest-supporting-section and journaled therein, a coiled-spring within said cylinder for actuating the same, a ratchet and pawl mechanism for varying the torsional tension of said spring, a ratchet and pawl mechanism for locking said cylinder against turning in one direction, an idle-roller between said side-plates and journaled therein, a flexible abdominal-support secured to said cylinder and wound thereon and adapted to pass over said idle-roller and be detachably secured to the hip-supporting-section, a thigh-support hinged to the top of said hip-supporting-section, a kneeling-support hinged to said thigh-support in abutting alinement therewith, a supporting ball pivotally secured to said kneeling-support and provided with a stop to limit its rearward movement, a foldable-brace pivotally secured to said thigh-support and the legs of the hip-supporting-section and provided with joints having stop members to lock said brace against folding in one direction while permitting of its being folded in the opposite direction.



2. A table for the purpose described comprising a chest supporting-section and a hip-supporting-section each provided with radially disposed legs supporting tangentially arranged tops, shifting supporting feet secured to each of said legs and adapted to project laterally for the purpose of widening the supporting base of the table, springs to hold said feet in either of their shifted positions, interchangeable adjustable foldable side-braces adapted to be detachably secured to said legs to maintain said supporting-sections in their relative positions, oppositely disposed side-plates secured to each of the supporting-sections, a head-rest provided with a face-opening pivotally secured to the side-plates of the chest supporting-section, a brace pivotally secured to the legs of the chest-supporting-section and adapted to engage with said head-rest for supporting the same in varying positions, a spring-actuated cylinder between the side-plates of the chest supporting-section and journaled therein, a spring within said cylinder for actuating the same and means for varying the torsional tension thereof, a ratchet and pawl for locking said cylinder against turning in one direction, an idle-roller journaled to the side-plates of the chest-supporting-section, a flexible abdominal-support secured to said cylinder and wound thereon and adapted to pass over said idle-roller and its free-end detachably secured to the hip-supporting-section, a thigh-support hinged to said hip-supporting-section, a kneeling-support hinged to said thigh-support in abutting alinement therewith, a supporting-ball pivotally secured to said kneeling-support and provided with a stop to limit its rearward movement, a foldable-brace pivotally secured to said thigh-support and the legs of the hip-supporting-section and provided with stop-members to lock said brace against folding in one direction while permitting of its folding in the opposite direction.

3. A table of the character described comprising a chest-supporting-section and a hip-supporting-section each provided with radially disposed legs supporting tangentially arranged tops secured thereto, shifting supporting-feet secured to said legs, interchangeable adjustable side-braces detachably secured to said legs to maintain said sections in their relative positions, a head-rest provided with a face opening pivotally secured to said chest-supporting-section and means for supporting the same in varying positions, a spring-actuated cylinder suitably journaled to said chest supporting-section, a spring within said cylinder for actuating the same in one direction and means for varying the torsional tension thereof, suitable means for locking said cylinder against turning in one direction, an idle-roller suitably journaled in said chest-supporting-section, a flexible abdominal-support secured to said cylinder and wound thereon and adapted to pass over said idler-oller and be detachably secured to said hip-supporting-section, a thigh-support hinged to said hip-supporting-section, a kneeling-support hinged to said thigh-support, a supporting-member suitably secured to said kneeling-support, a foldable-brace pivotally secured to said thigh-support and the legs of the hip-supporting-section and provided with joints adapted to lock said brace against collapsing or folding in one direction under end pressure while permitting of its being readily collapsed or folded in the opposite direction.

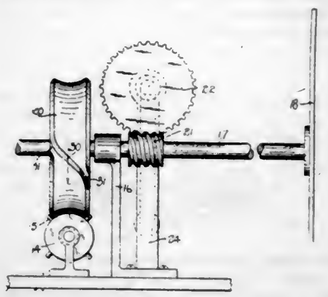
4. A table for the purpose described comprising a chest supporting-section and a hip-supporting section each provided with legs divergently disposed with relation to each section and supporting top-members perpendicular thereto, interchangeable adjustable side-braces detachably secured to said legs to maintain said sections in their relative positions, a head rest provided with a face opening pivotally secured to said chest-supporting-section and means for supporting the same in various positions, a spring-actuated cylinder journaled to said chest-supporting-section, a suitable spring for actuating said cylinder and means for varying the torsional tension thereof, suitable means for locking said cylinder against turning in one direction, an idle-roller suitably journaled to said chest-supporting-section, a flexible abdominal support secured to said cylinder and wound thereon and adapted to pass over said idle-roller and be detachably secured to said hip-supporting section, a thigh-support hinged to said hip-supporting section, a kneeling-support hinged to said thigh-support, a supporting member suitably secured to said kneeling-support, a foldable brace pivotally secured to said thigh-support and the legs of the hip-supporting section and provided with joints adapted to lock said brace against folding in one direction while permitting it to fold in the opposite direction.

5. A table for the purpose described comprising a chest supporting-section and a hip-supporting-section, interchangeable adjustable side-braces detachably secured to said sections to maintain the same in their relative positions, a head rest secured to said chest-supporting-section and provided with suitable means for supporting it in various positions, a spring-actuated cylinder suitably journaled to said chest-supporting-section, a spring for actuating said cylinder and means for regulating the torsional tension thereof, a flexible abdominal-support secured to said cylinder and wound thereon and adapted to be detachably secured to said hip-supporting-section, a thigh-support hinged to said hip-supporting section, a kneeling-support hinged to said thigh-support, a supporting-member suitably secured to said kneeling support, a foldable-brace suitably secured to said thigh-support and said hip-supporting-section and provided with joints adapted to lock against folding in one direction while permitting of their being folded in the opposite direction.

[Claims 6 to 20 not printed in the Gazette.]

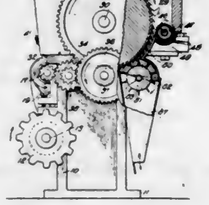
1,194,113. POWER-TRANSMISSION MECHANISM. CLARENCE E. WRIGHT, Louisville, Ky., assignor of one-half to Ernest S. Carpenter, Franklin, Ind. Filed Jan. 24, 1913. Serial No. 743,885. (Cl. 74—41.)

1. The combination of a star wheel with radially projecting pins, a cam wheel adjacent thereto and mounted at a right angle to the star wheel and provided with a cam groove across its periphery, and a shoulder on the edge of the cam wheel in position to engage the outer side of a pin of the star wheel and deflect it into the cam groove, whereby one of said wheels will cause a partial rotation of the other wheel.



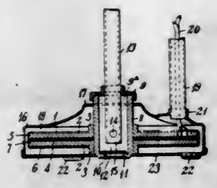
2. The combination of a star wheel with radially projecting pins, a cam wheel adjacent thereto and mounted at a right angle to the star wheel and with its periphery curved transversely concentric with the star wheel and lying between a pair of pins from the star wheel and with its lateral edges beveled and in engagement with said pins, and a shoulder on each lateral edge of the cam wheel projecting laterally and in position to engage the outer side of a pin of the star wheel and deflect it into said cam groove and whereby said device can be operated in either direction.

1,194,114. TOBACCO-FEEDING MACHINE. JOHN G. ZOHUMINSKY, New York, N. Y. Filed Oct. 26, 1915. Serial No. 57,965. (Cl. 131—39.)



In a machine of the class set forth, the combination of a main feeding drum having sharp forwardly directed teeth, a concave located closely adjacent one side of the bottom of the feeding drum, a distributing drum journaled closely adjacent the upper portion of the concave and serving to regulate the quantities of materials being delivered by the feeding drum along the concave, means to operate one of the drums from the other so as to cause their adjacent surfaces to move in opposite directions, a beater drum coöperating with the lower portion of the concave and having fingers projecting between adjacent rows of pointed teeth, means to operate the beater in such direction as to cause the fingers to move in the opposite direction from the teeth between which they operate, thereby causing the material to be stripped and torn from the teeth and finely divided, means to receive the material from the beater, power devices to drive the main feeding drum, and devices to drive the beater from the main power devices, certain of said devices being variable in speed so as to vary the relative speeds of the feeding drum and beater, substantially as set forth.

1,194,115. PERCOLATING APPARATUS. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 17, 1913. Serial No. 748,788. (Cl. 219—41.)



1. A heating apparatus embodying a well for containing liquid, means for heating said liquid, a tube extending into said well, means near the lower end of the said well for admitting the liquid thereto, and means for limiting the height of said liquid therein.

2. A heating apparatus embodying a centrally-disposed well for containing liquid, means for heating said liquid, a fountain tube of relatively small diameter extending into said well, means near the lower end of the said well for intermittently admitting liquid thereto, and means for limiting the height of said liquid in a portion of said well.

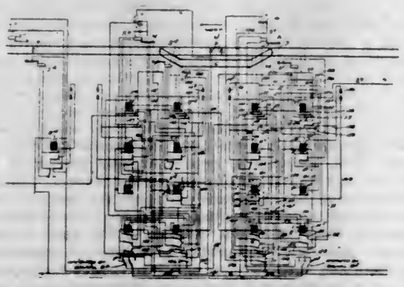
3. A heating apparatus embodying a centrally-disposed well for containing liquid, means for heating said liquid, a fountain tube of relatively small diameter extending into said well and nearly to the bottom thereof and dividing the well into an inner and an outer chamber, one of which has a closed end, means near the lower end of the said well for intermittently admitting the liquid thereto, and means for limiting the height of said liquid in the closed chamber.

4. A heating apparatus embodying a well for containing liquid, means for heating said liquid, a tube of relatively small diameter extending into said well for dividing the well into an upper steam compression-chamber and a lower liquid-containing chamber.

5. A heating apparatus embodying a well for containing liquid, means for heating said liquid, a fountain tube of relatively small diameter extending into said well and having an opening near the lower end thereof, said tube serving to divide said well into a steam-compression chamber above said opening and a liquid-containing chamber below the same.

[Claims 6 to 24 not printed in the Gazette.]

1,194,116. RAILWAY SIGNALING. HARRY D. ABERNETHY, Cleveland, Ohio. Filed June 24, 1915. Serial No. 36,070. (Cl. 246—30.)



1. In combination, a stretch of railway track, signals at opposite ends of the stretch for governing the entrance of trains into the stretch, a relay for the control of each signal each relay comprising two coils, a source of current adjacent each end of the stretch, means for normally energizing one coil of each relay from the adjacent source of current to hold the relay closed, and means controlled by a train approaching one end of the stretch for connecting the two remaining relay coils in series with one of said sources, the currents in the two coils of the relay at the end of the stretch remote from the train being then in such relative directions as to oppose each other whereby that relay opens and the signal controlled thereby changes to stop indication, and means controlled at the same time by the said train for opening the circuit of the locally energized coil of the relay at the end of the stretch nearest the train whereby that relay then is held closed by the current in its other coil.

2. In combination, a section of railway track, two signals at opposite ends thereof for governing traffic into the stretch, a polarized relay for controlling one of said signals and a clear indication relay and a caution indication relay for controlling the other signal, a track circuit for the stretch for controlling said caution indication relay, a line circuit controlled also by said track circuit and including said clear indication relay and said polarized relay and a source of current, a shunt around the polarized relay, said polarized relay being effectively responsive to the current flowing therein when the line circuit is closed irrespective of whether or not the shunt is closed and said clear indication relay being effectively responsive to the current in the line circuit only when the shunt is closed, means for opening said shunt controlled by a train beyond the end of the section at which is located the signal controlled by the polarized relay, and a pole-changer included in said line circuit and controlled by a train beyond the other end of the section.

3. In combination, a stretch of railway track, two signals as S^5 and S^{14}, relays X^7 and X^{12} for controlling said two signals respectively, each relay comprising two coils 1 and 2, sources of current H^2 and H^3 for said relays, means for normally energizing coil 2 of each relay from the adjacent source of current whereby each relay is normally closed, means controlled by a train in the rear of either of said signals for disconnecting coil 2 of the relay for the signal nearest said train from its source of current and for connecting coil 1 of each relay and the two sources of current all in series whereby the relay for the signal nearest the train remains closed because of the current in its coil 1, the current in coil 1 of the other relay being then of such value and in such direction as to counteract the effect of the current in coil 2 thereof whereby the latter relay then opens.

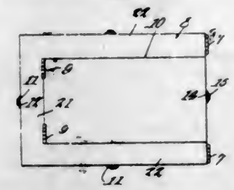
4. In combination, a stretch of railway track, two signals as S^5 and S^{14}, relays X^7 and X^{12} for controlling said two signals respectively, each relay comprising two coils 1 and 2, means for normally energizing coil 2 of each relay whereby said relays are normally closed, means controlled by a train approaching either signal for de-energizing coil 2 of the relay for the signal nearest the train and energizing coil 1 of both relays, whereby the relay for the signal nearest the train remains closed by virtue of the current in its coil 1, the current in coil 1 of the other relay being then of such value and direction that it counteracts the effect of coil 2 whereby the latter relay opens.

5. In combination, a stretch of railway track, two signals as S^5 and S^{14}, relays X^7 and X^{12} for controlling said two signals respectively, each relay comprising two coils 1 and 2, means for normally energizing coil 2 of each relay whereby said relays are normally closed, and means controlled by a train approaching either of said signals for energizing coil 1 of the relay for the signal farthest from the train with current of such value and direction as to counteract the effect of the current in coil 2 of that relay whereby the relay opens.

[Claim 6 not printed in the Gazette.]

1,194,117. PRINTING-FRAME. JOHN Q. ADAMS, Frances, Wash. Filed Aug. 28, 1915. Serial No. 47,812. (Cl. 95—77.)

1. In a device of the class described, a front frame; a U-shaped rear frame comprising an intermediate portion and arms; means for hingedly connecting the rear frame with the front frame; means for detachably connecting the front frame with the rear frame against hinging movement; a closure fitting within the rear frame; means for hingedly connecting the closure with the rear frame; and means for detachably connecting the closure with the front frame between the ends of the arms.



2. In a device of the class described, a front frame; a U-shaped rear frame comprising an intermediate portion and arms; a closure fitting within the rear frame; a hinge uniting the closure with the rear frame; hinges uniting the ends of the arms with the front frame; a detachable connection between the frames; and a detachable connection between the front frame and the closure.

3. In a device of the class described, a front frame; a U-shaped rear frame comprising an intermediate portion and arms; a closure fitting within the rear frame; a hinge uniting the closure with the intermediate portion of the rear frame; hinges uniting the ends of the arms of the rear frame with the front frame; a detachable connection between the frames; and a detachable connection between the front frame and the closure.

1,194,118. DRYING APPARATUS. FREDERICK W. ADLOF, New Brighton, Pa. Filed Mar. 1, 1916. Serial No. 81,373. (Cl. 34—42.)



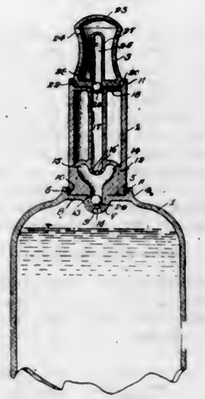
1. A drying apparatus comprising three concentric tubes, means for supplying fire gases to the bottom of the inner tube, helical flanges between the inner and intermediate tubes dividing the space into alternate helical heating and drying passages, said heating passages having their upper ends communicating with the top of the inner tube to receive the fire gases therefrom, means for supplying to the upper end of the drying passages the material to be dried, and means for conducting the fire gases from the heating passages to the bottom of the outer tube, the outer tube having its upper end open to the atmosphere.

2. A drying apparatus comprising a furnace, a central vertical tube in open communication at its bottom with the furnace, a deflector closing the upper end of the tube and having lateral openings, a tube surrounding the first-mentioned tube, flanges intermediate the tubes for dividing the space into separate passages, certain of the passages communicating with the inner tube through the said openings, a mouth on the upper end of the second tube for receiving the material to be dried, and in communication with the other of the said passages, valve means for controlling the feed of the material from the mouth to the communicating passages, a third tube surrounding the second-mentioned tube to form a passage open to the atmosphere at its top and communicating with the passages that communicate with the inner tube, and an outlet means passing out of the bottom of the outer tube for the discharge of the material after being dried.

3. A drying apparatus comprising a furnace, a structure having separate portions through which fire gases from the furnace pass upwardly to a given point and thence downwardly and thence upwardly to escape to the atmosphere, and a plurality of material-drying ducts disposed in that portion of the structure down which the fire gases flow, said ducts being heated throughout their length and entirely around the sides thereof.

4. A drying apparatus comprising a furnace, a structure having separate portions through which fire gases from the furnace pass upwardly to a given point and thence downwardly and thence upwardly to escape to the atmosphere, a plurality of material-drying ducts disposed in that portion of the structure down which the fire gases flow, said ducts being heated throughout their length and entirely around the sides thereof, means for regulating the feed of the material to the said ducts, means for controlling the draft through the said structure, and means for drawing off the evaporations from the material passing through the ducts.

1,194,119. BOTTLE. PHILIP AMICO, East Boston, Mass. Filed Mar. 23, 1916. Serial No. 86,267. (Cl. 215—68.)

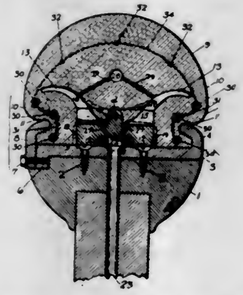


1. A bottle having a separable neck secured thereto and a separable cap secured to the neck, the neck having a Y-shaped depression therein, the opposite walls being provided with openings, a valve normally closing the lower opening, the cap being hollow and having a centrally arranged tube, the opposite ends of which are round and one of which projects into the neck, the lower wall of the tube having an opening, a valve for closing this opening, the said tube adjacent its opposite end having lateral openings and the cap having an outlet opening upon one of the sides thereof arranged out of a line with the openings in the tube.

2. A bottle comprising a body portion having its shoulder formed with a depressed portion provided with a central hollow teat, the said teat having a central opening, a

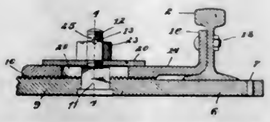
neck fitted in the depression and secured thereto, said neck having its lower portion provided with an interior Y-shaped depression, the end walls of which are round, and the lower wall projecting beyond the end of the neck to within the teat of the bottle and being formed with an opening, a spherical valve in the depression normally closing the opening, the connecting wall of the branch of the depression having openings, a tube in the bottle neck surrounding these openings, a hollow cap member seated upon the end of the neck and secured thereto, said cap member having a central tube provided with rounded end walls and the lower wall being provided with an opening and being arranged in the tube of the neck, a spherical valve within the tube of the cap and normally closing the opening, the said tube of the cap adjacent its upper end having lateral openings, the top of the cap being dome-shaped and provided with an outlet opening which is disposed above the tube, all as and for the purpose set forth.

1,194,120. CUSHION-TIRE. JOSEPH S. BAHEN, Rock Island, Ill. Filed May 3, 1915. Serial No. 25,415. (Cl. 152—1.)



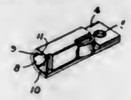
A wheel embodying a rim; an elastic tire and means for clamping the same to said rim, said tire being provided with an annular cavity and a circumferentially-extending rib projecting inwardly from the tread and provided with longitudinally and transversely extending grooves; and a retaining ring lying against and surrounding the said rim and having interlocking engagement therewith and also with the bead portions of the elastic tire, said ring being provided on its outer face with a circumferential rib and also with transverse ribs engaging the corresponding grooves formed in the inwardly-projecting rib on the elastic tire, for the purpose set forth.

1,194,121. SWITCH-POINT CONNECTOR. COMMODORE P. BAKER, Lincoln, Mo., assignor of one-half to A. W. Baker, Brookfield, Mo. Filed Jan. 7, 1916. Serial No. 70,816. (Cl. 104—96.)



A connector for switch rails comprising a rod or bar having outer end portions forming seats for the rails and toothed portions adjacent thereto, angular bolts upon said toothed portions provided with screw stems, fastening members having toothed surfaces to interlock with the toothed surfaces of the rod or bar and longitudinally slotted for sliding engagement with the bolts, cuffs apertured for the passage of said screw stems and engaging the sides of the toothed fastening members and the rod or bar, and nuts upon the screw stems and holding the aforesaid parts in position.

1,194,122. CONNECTING-PLUG. HENRY PRICE BALL, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 6, 1915. Serial No. 748. (Cl. 173—328.)



1. The method of making a socket for a connecting plug, which consists in forming a blank with an elongated spring finger, bending the finger back upon itself to form a spring contact, and then bending the blank to form a socket inclosing the spring finger.

2. The method of making a metal socket for a connecting plug, which consists in forming a metal blank with an elongated spring finger, bending the finger back upon itself to form a spring finger, and then bending the blank transversely of the bend in the spring finger and thereby forming a socket having a spring finger within the same and extending longitudinally thereof.

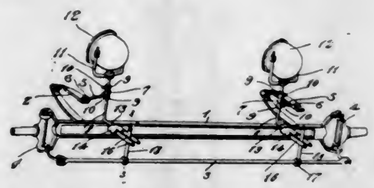
3. The method of making a socket for a connecting plug, which consists in preparing a blank with an elongated spring finger, bending the finger back upon itself to form a contact spring, and then forming the blank into a socket with the portions of the socket opposite the spring forming an angle.

4. A socket for a connecting plug formed with a contact finger bent back upon itself within the socket and having faces opposite the spring forming an angle whereby the spring contact is adapted to press the terminal pin which is received within the socket against at least two interior faces of the socket opposite the contact spring.

5. A socket for a connecting plug formed of a single piece of metal and provided with a spring contact finger bent back upon itself within the socket.

[Claims 6 and 7 not printed in the Gazette.]

1,194,123. DIRIGIBLE HEADLIGHT. JOSEPH E. BARNETT, Prentiss, Miss. Filed Dec. 22, 1915. Serial No. 68,247. (Cl. 240—62.)

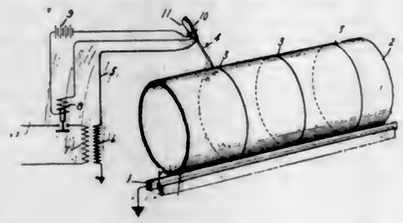


1. A dirigible headlight comprising a bracket, a lamp standard rotatably mounted in said bracket, means for preventing upward and downward movement of the lamp standard within said bracket, a headlight carried by said lamp standard, said lamp standard bent at right angles intermediate its ends to provide an operating rod, a substantially U-shaped member secured to the free end of said operating rod, and means for connecting said U-shaped member to a connecting rod of an automobile for rotating said lamp standard in the direction of the wheels of an automobile and to allow for upward and downward movement of the lamp standard with respect to the connecting rod.

2. A dirigible headlight comprising a bracket secured to the springs of an automobile, an enlarged portion formed on the end of said bracket and provided with a central bore, a lamp standard journaled in said bore, collars adjustably secured on said lamp standard and adapted to bear upon each end of the enlarged portion to prevent upward and downward movement of the lamp standard within said bore, an operating rod formed on said lamp standard and extending rearwardly above the front axle of an automobile, a headlight carried by the upper end of said lamp standard, a substantially U-shaped member secured to the end of the operating rod, a pair of spaced arms secured to said U-shaped member, a vertically extending operating arm secured to a connecting rod of an automobile and extending between said spaced arms to move the headlight according to the movement of the vehicle.

3. A dirigible headlight comprising a bracket secured to a spring of an automobile, a lamp standard journaled in said bracket, a headlight carried by the upper end of said lamp standard, an operating rod formed on the lower end of said lamp standard and extending at right angles therefrom, a substantially U-shaped member secured to the free end of said operating rod, a pair of spaced arms secured to said U-shaped member, friction sleeves journaled on said arms, a vertically extending operating arm secured to the connecting rod of an automobile and provided with a friction sleeve journaled thereon to be received between the spaced arms to facilitate the movement of the headlight in the direction of the front wheels of an automobile.

1,194,124. METHOD OF WORKING GLASS. CHARLES J. BARROW, Los Angeles, Cal. Filed Aug. 21, 1913. Serial No. 785,848. (Cl. 49—77.)



1. The method of severing glass and similar material which consists in marking a definite high resistance path for electric current on and in intimate conducting contact with the surface of said material and directing along said path a flow of current sufficient to sever the material.

2. The method of severing a vitreous material which is a conductor of the second class consisting in establishing by any suitable means an adherent conducting streak on the surface along the line where fracture is desired and in intimate conducting contact with said surface, applying current which immediately transfers from the conducting streak to the material to be cut and produces intense local heat, and discontinuing the current flow to produce fracture along the line of current flow.

3. The method of severing glass and similar material, which consists in forming upon the surface of the material to be cut a conducting path composed of conducting particles adherent to the material, and causing an electric current to flow along said path.

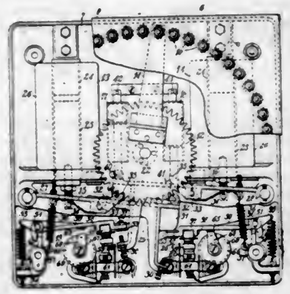
4. The method of severing glass which consists in painting a conducting stripe upon the glass, and causing sufficient electric current to flow along said stripe to sever the glass.

5. The method of severing glass which consists in painting a stripe upon the glass with a conducting paint adherent to the glass, permitting said paint to dry, and then passing electric current along said stripe.

[Claim 6 not printed in the Gazette.]

1,194,125. RHEOSTAT. HARRY F. BETHUNE, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 1, 1911. Serial No. 611,730. (Cl. 171—229.)

1. The combination with a rheostat comprising coöperating stationary and movable contact members and a resistor connected to said stationary contact members, of a ratchet wheel rigidly associated with said movable member, independent operating mechanisms for intermittently actuating said ratchet wheel, each comprising an electromagnet, a pawl, a time element device, a positively actuated make and break device and an electromagnet connected in series circuit with said make and break device for effecting the operation thereof.



2. The combination with a rheostat comprising coöperating stationary and movable contact members, and a resistor connected to said stationary contact members, of a ratchet wheel rigidly associated with said movable member, independent and duplicate means for actuating said ratchet wheel in opposite directions, each comprising an electro-magnet, a pivotally mounted pawl member connected to said electro-magnet, a time element device associated with said pawl member, means positively actuated by said pawl member for intermittently applying electrical energy to said electro-magnet and means in circuit with said electro-magnet for opposing said last means.

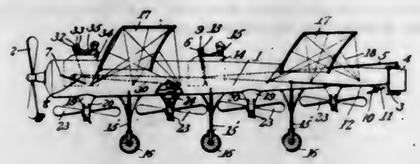
3. In a rheostat, the combination with a plurality of resistance elements, a set of stationary contact terminals disposed in a circle and connected thereto, and a movable contact arm to coöperate with said contact terminals, of a ratchet member rigidly associated with said movable arm, independent and duplicate operating mechanisms embodying electro-magnets adapted to cause movement of said ratchet member in opposite directions, make and break devices associated with each operating mechanism and normally arranged to close the energizing circuits of the respective electro-magnets, electro-magnetic means tending to maintain said devices closed and means associated with said operating mechanism for positively opening and positively closing said make and break devices subsequent to the operative movement of said mechanism.

4. In a rheostat, the combination with coöperating stationary and movable contact members, and resistance elements associated therewith, of a ratchet wheel associated with the movable member, independent operating mechanisms embodying electro-magnets for actuating said wheel in opposite directions, and make and break devices electrically associated with said electro-magnets and embodying coöperating movable and stationary contact terminals, and electro-magnets normally arranged in series circuit with said operating electro-magnets and said coöperating contact terminals and adapted to maintain engagement of said coöperating terminals, said operating mechanisms being adapted to effect the initial separation of said contact terminals subsequent to the movement of said ratchet wheel.

5. The combination with a rotatable member, a ratchet wheel attached thereto and independent electrically operated means for intermittently actuating said wheel in either direction, of adjustable means for regulating the speed of operation in either direction, means for securing a uniform speed of operation embodying coöperating contact members and an electromagnet coöperating therewith, said contact members and said last named electromagnet being in series circuit.

[Claims 6 to 10 not printed in the Gazette.]

1,194,126. AEROPLANE. CHARLES J. BLOSSING, Omaha, Nebr. Filed May 17, 1915. Serial No. 28,624. (Cl. 244—15.)

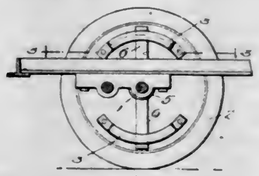


1. An aeroplane consisting of a body, planes extending laterally from the body, horizontal wings at the front and rear, a steering blade at the rear of the body, a series of casings depending from the body, propellers mounted in said casings, individual driving mechanism for said propellers, raising and lowering wings, and individual means for controlling the driving mechanisms, the steering blade and the raising and lowering wings.

2. An aeroplane consisting of a body, lateral planes, ground or supporting means, horizontal wings, a rear steering blade, levers for controlling said wings, a series of propellers arranged below the body, individual driving means for said propellers, and a series of hand levers for controlling said driving means.

3. An aeroplane consisting of a body, planes extending laterally from the body, horizontal wings at the front and rear for raising and lowering, a steering blade at the rear of the body, a driving propeller at the front of the body, a series of casings depending from the body, propellers mounted in said casings, individual driving mechanism for said propellers, and individual means for controlling the driving mechanisms, the steering blade and the raising and lowering wings, consisting of rods leading from said driving mechanism, steering blade and raising and lowering wings to operating hand levers within reach of the drivers' seats.

1,194,127. MOTOR-VEHICLE. JEREMIAH BOHAN, New Hartford, Iowa. Original application filed June 24, 1915, Serial No. 36,114. Divided and this application filed Mar. 28, 1916. Serial No. 87,206. (Cl. 21—90.)



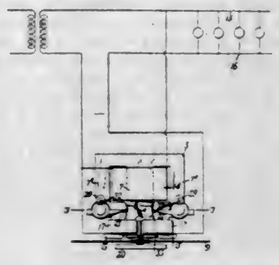
1. The combination with an axle and wheels mounted loosely upon the axle, of members projecting radially from the axle, and pairs of arcuate plates attached to the wheels and receiving the outer ends of the said members between them, and permitting said wheels having a limited angular movement in each direction.

2. The combination with an axle and wheels mounted loosely thereon, a cross head on the axle at each wheel, and arcuate guides on the wheels for receiving the ends of the cross heads, and of a length to permit the wheels to have a limited angular movement in each direction.

1,194,128. PROCESS FOR PRESERVING EGGS. HENRY D. BOSTOCK, Jacksonville, Fla. Filed Dec. 27, 1915. Serial No. 68,848. (Cl. 99—8.)

The herein described process for preserving eggs, the same consisting in providing the eggs with a packing of the leaves and stems of *Desmodium tortuosum* (*velvetbonia*).

1,194,129. WATTMETER. WILLIAM M. BRADSHAW and ALMON W. COPLEY, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 9, 1912. Serial No. 682,797. (Cl. 171—264.)



1. An alternating current motor-meter comprising a rotatable disk, a magnetizable core having polar members that are separated by a small air gap, certain of said polar members being provided with a laterally extending horn to permit proximate relationship between the polar surface of the core and the edge of the disk, whereby the torque of the meter is increased and substantial accuracy of its registrations is maintained, a potential coil upon the core, and a series winding surrounding the separated portions of the polar members behind the horn and constituting the total series winding of the meter.

2. An alternating current motor-meter comprising an armature, a magnetizable core having polar members that are separated by small air gaps and are disposed adjacent to one side only of the armature, certain of said polar members being provided with laterally extending horns, whereby corner portions of the poles are brought substantially opposite to the edge of the armature, a potential coil upon the core, and a series winding surrounding the separated portions of the polar members behind the horns and constituting the total series winding of the meter.

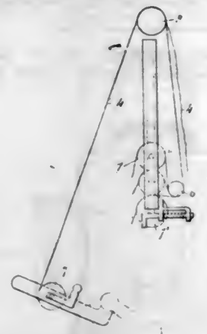
3. An alternating current motor-meter comprising a rotatable disk, a magnetizable core having a central member and side members joined to one end of the central member and separated from its other end by small air gaps, the central member being provided with a slot in its free end and the free ends of the side members being provided with lateral extensions to permit proximate relationship between the polar surface of the core and the edge of the disk, whereby the torque of the meter is increased and substantial accuracy of its registrations is maintained, a complete series winding partially located in the slot in the central member and surrounding the adjacent ends of the side members, and a potential coil upon the core.

4. An alternating current motor-meter comprising a magnetizable core having a central member and side members joined to one end of the central member and separated from its other end by small air gaps, the central member being provided near its free end with a slot that is partially closed and the free ends of the side members being provided with lateral polar extensions that project outwardly, a series winding partially located in the slot in the central member and surrounding the adjacent free ends of the side members, the said winding constituting the total series winding of the meter, and a potential coil upon the core.

5. In an alternating current motor-meter, the combination with a magnetizable core having a central member and side members separated therefrom at one end by air gaps, of two closed-circuit conductors having sides movable respectively in said air gaps, and means for simultaneously but oppositely adjusting the positions of the said sides of the conductors in the air gaps.

[Claims 6 to 9 not printed in the Gazette.]

1,194,130. AUTOMATIC WEFT-REPLENISHING LOOM. ALBERT BRIOT, Nomexy, France. Filed Sept. 19, 1912. Serial No. 721,135. (Cl. 139—85.)

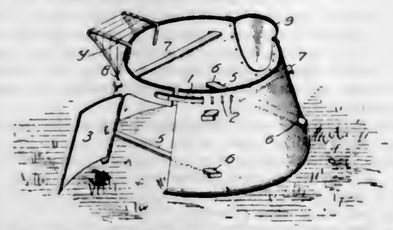


1. In looms, an automatic bobbin replenishing mechanism, having a magazine adapted to contain a plurality of full bobbins therein resting one above the other, and means on said mechanism over which a length of thread is looped, the end of said length being held between the bobbin of which it forms a part and the one immediately thereabove.

2. In looms, the combination with a shuttle-box having a shuttle therein, with its threader adjacent the fabric on the loom when in said box, of an automatic bobbin replenishing mechanism operatively associated therewith, said mechanism having a magazine adapted to contain a plurality of full bobbins arranged one on top of the other, pins on said mechanism each bobbin in said mechanism having a length of thread looped over said pins of sufficient length to complete one shot of the shuttle, the ends of said lengths of thread being held between the bobbin of which it forms a part and the one immediately thereabove.

3. In looms, the combination with a shuttle-box having a shuttle, with its threader arranged adjacent the fabric on the loom when within said box, of an automatic bobbin replenishing mechanism operatively associated therewith, said mechanism having a magazine adapted to contain a plurality of full bobbins, arranged one above the other, a plurality of members over which is passed a length of thread from each bobbin of sufficient length to complete one shot of the shuttle, the free ends of said lengths of thread being held between the bobbin of which it constitutes a part and the one immediately thereabove.

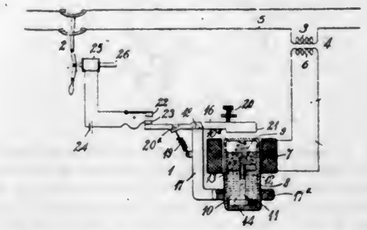
1,194,131. PORTABLE FURNACE. ARCHIE EDWARDS BROWN, Faywood, N. Mex. Filed Sept. 24, 1915. Serial No. 52,394. (Cl. 126—29.)



1. A portable furnace constructed of sheet metal in the form of a truncated cone divided vertically, the adjacent and opposed ends of the said body having an adjustable hook fastening and one of the said ends being cut out below the fastening, whereby a fuel opening is formed whose sizes may be enlarged when required.

2. A portable furnace whose body is formed of sheet metal and divided vertically and having an adjustable fastening applied at its opposed ends and provided with a series of horizontal slots, flat bars having pendent hooked ends and resting in said slots, the latter being of sufficient vertical width to permit manual insertion and removal of the bar, as described.

1,194,132. TIME-LIMIT RELAY. HAROLD W. BROWN, Ithaca, N. Y., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 18, 1913. Serial No. 774,351. (Cl. 175—270.)



1. A time-limit device comprising a magnetizing coil, a casing containing a body of fluid, a movable magnetizable core member having a central portion of relatively small cross-sectional area, said member being located within the said casing and adapted to travel in the magnetic field of the coil, means for retarding the free movement of the said core, and a magnetizable member adapted to be actuated when the said core assumes a predetermined position.

2. A time-limit device comprising a magnetizing coil, a casing containing a body of fluid, a movable magnetizable core having a central portion of relatively small cross-sectional area, said core being located within the said casing and positioned to travel in the magnetic field of the coil, means for coöperating with the said fluid to oppose the free movement of the said core and a member adapted to be actuated when the said core assumes a predetermined position.

3. A time-limit device comprising a magnetizing winding, a vessel containing a body of liquid, a two-part movable magnetizable core member having a connecting portion of relatively small cross-sectional area, means for retarding the free movement of the core member and a magnetizable member adapted to be actuated when the core assumes a predetermined position.

4. A time-limit relay comprising a magnetizing winding, a two-part movable magnetizable member having an easily saturated connecting portion, a vessel containing a body of fluid, means coöperating with the fluid to oppose the free movement of the said movable member and a member adapted to be actuated when the said core assumes a predetermined position.

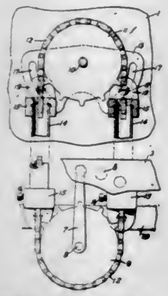
5. A time-limit device comprising a magnetizing winding, a vessel containing a body of liquid, a two-part movable magnetizable core member having a relatively easily saturated connecting portion for its two parts, means for retarding the free movement of the core, the said core being adapted to be operative when a predetermined current traverses the winding, and a magnetizable member adapted to be actuated when the said core has assumed a predetermined position.

[Claims 6 and 7 not printed in the Gazette.]

1,194,133. SWITCHBOARD APPARATUS. JAMES M. BROWN, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 24, 1911. Serial No. 662,216. (Cl. 74—31.)

1. In a switchboard device, the combination with cooperating relatively movable members, an operating member and an endless driving mechanism for transmitting the movement of said operating member to one of the movable

members, of means for coöperating with the said mechanism for protecting and definitely positioning the same, and adjustable means for changing the position of said means.



2. In a switchboard device, the combination with a movable member, an operating member and a chain and sprocket mechanism for connecting the said movable member and the said operating member, of means for inclosing portions of said chain, and adjustable means associated with said operating member for supporting the inclosing means in tangential relation to the associated sprocket wheel.

3. In a switchboard device, the combination with a movable member, an operating member, sprocket wheels respectively attached to said movable member and to said operating member and a chain connecting said sprocket wheels, of a plurality of conduit sections for independently inclosing portions of said chain, and adjustable means for supporting said conduit sections in tangential relation to one of said sprocket wheels.

4. A switchboard device comprising a movable member, an operating member, mechanical means for transmitting the movement of said member to the said movable member, conduits for inclosing portions of said mechanical means, a slotted supporting member, and end members secured to said conduits and adapted to be adjustably attached to said slotted member.

5. A switchboard device comprising an operating member associated with a switchboard panel, a remotely disposed device having coöperating movable and stationary members, a chain and sprocket mechanism connecting the operating member and the movable member of the remotely disposed device, a supporting member loosely associated with said operating member, pipes inclosing portions of said chain, and end members attached to said pipes and adapted to be adjustably secured to said supporting member in tangential relation with the sprocket wheel that is associated with the said operating member.

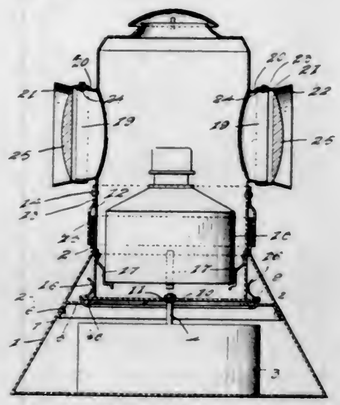
[Claims 6 and 7 not printed in the Gazette.]

1,194,134. SWITCH. MIDDLETON D. BROWN, Waterloo, Iowa. Filed Dec. 21, 1915. Serial No. 68,049. (Cl. 175—282.)



A switch for flash lights comprising a transversely U-shaped body, wings on the free edges of the arms of the body adapted to provide a means by which the switch is attached to a flash light, a clip within the body at one end, a stationary contact at the opposite end of the body, a sliding contact comprising a shaft, a pointed extension at one end of the shaft adapted to engage the stationary contact, the body being provided with a longitudinal slot, a thumb piece on the shaft extending through the slot providing a means by which the sliding contact is moved and a head at the end of the shaft opposite the contact end adapted to enter the clips to hold the sliding contact away from the stationary contact when the device is not in use.

1,194,135. SHEEP-PROTECTOR. ROY F. BROWN, Encino, N. Mex. Filed Dec. 11, 1915. Serial No. 66,336. (Cl. 240—49.)



1. A device of the character described comprising a hollow base, a vertically disposed rotatable shaft located within the base, a disk carried by the upper end of the shaft and adapted to rotate therewith, a lantern casing having one end extending into the base and resting on the disk, the said lantern casing having lens receiving openings adjacent its upper end, a burner positioned within the lantern casing, and means for securing the body to the disk so as to cause the casing to rotate with the disk when the shaft is rotated and means for rotating the shaft.

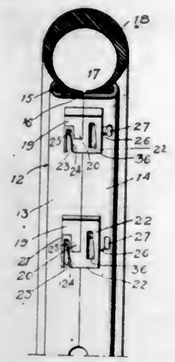
2. A device of the class described comprising a base, a lantern casing revolubly associated with the base and provided with diametrically opposed openings, lateral cylindrical extensions projecting outwardly from the walls of the opening, lens holders adjustably mounted on the extensions and each adapted to receive a lens, means for holding the holders in adjusted positions and a burner positioned within the lantern casing.

1,194,136. DEMOUNTABLE RIM. BENN A. BRYON, Ridgefield, Conn. Filed Apr. 23, 1915. Serial No. 23,398. (Cl. 152—21.)

1. A demountable rim comprising a pair of rim sections, lugs carried on the inner faces of the rim sections and arranged to interlock, studs carried by one of the rim sections, turn buttons on the ends of the studs, a ring having apertures therein arranged to fit the studded rim section, the apertures in the ring receiving the studs, arms on the ring engaging the lugs on the rim sections, and means to removably hold the demountable rim on a wheel rim.

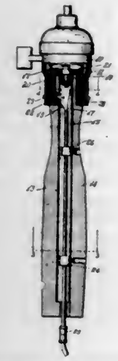
2. A demountable rim comprising a pair of rim sections, inwardly extending lugs on the inner faces of the rim sections, interlocking tongues on the lugs adapted to hold the rim sections in their assembled positions, studs carried by one of the rim sections, turn buttons on the ends of the studs, a ring provided with slots therein to receive the studs on the rim sections, arms on the rings engaging the lugs to prevent the rim sections from becoming separated and means to hold the rim on a wheel.

3. A demountable rim comprising a pair of rim sections, interlocking means carried by said sections, and adapted to hold the rim sections in locked positions when rotated in one direction and to unlock the sections when rotated in the opposite direction, lugs carried by one of the rim sections, rotatable tongues on the lugs, a ring provided with slots at spaced intervals therein, said slots being adapted to receive the lugs and being of sufficient length to slip over the tongues and means carried by the rings to



fill the space between one of the end walls and the lug to prevent the ring from being accidentally removed from the rim sections and means carried by said ring to prevent relative rotation of the rim sections and hold the same in their assembled positions.

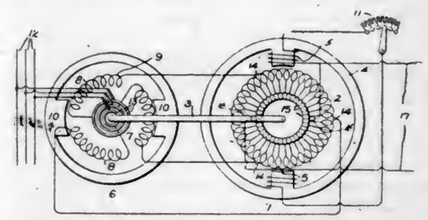
1,194,137. ELECTRIC PLUG. GEORGE H. BUCKLEY, Indianapolis, Ind. Filed Dec. 26, 1914. Serial No. 879,132. (Cl. 173—360.)



1. An electric plug adapted to engage a socket, said plug having a plurality of members, one of said members having an inner longitudinal groove, and guiding and holding means extending from the other member into said groove, whereby the two members may be longitudinally moved independently of each other, the end of the grooved member being formed to engage the inner wall of the socket and the end of the other member being smooth and wedge shape for wedging between the end of said grooved member and the wall of the socket.

2. An electric plug adapted to engage a socket, said plug having a plurality of members, one of said members having an inner longitudinal groove, guiding and holding means extending from the other member into said groove, whereby the two members may be longitudinally moved independently of each other, the end of the grooved member being formed to engage the inner wall of the socket and the end of the other member being smooth and wedge shape for wedging between the end of said grooved member and the wall of the socket, and electrical conductors located in the groove of said grooved member.

1,194,138. ROTARY CONVERTER. JOSEPH L. BURNHAM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 11, 1915. Serial No. 7,596. (Cl. 171—123.)



1. The combination with a rotary converter for converting alternating current to direct current, of a dynamo electric machine connected in series between the alternating current source and said rotary converter and operated in synchronism therewith, said dynamo electric machine comprising a field member excited by armature reaction and so positioned and shaped relatively to the magnetic axis of the armature of said machine that the field excitation is due to the wattless component of the armature current.

2. The combination with a rotary converter for converting alternating current to direct current, of a dynamo electric machine connected in series between the alternating current source and said rotary converter and operated in synchronism therewith, said dynamo electric machine comprising a field member having polar projections and being excited by armature reaction, said polar projections being so positioned relatively to the magnetic axis of the armature of said machine that the field excitation is due to the wattless component of the armature current.

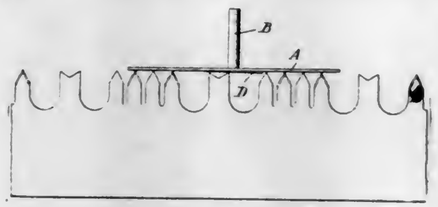
3. The combination with a rotary converter for converting alternating current into direct current, a dynamo electric machine connected in series between the alternating current source of said rotary converter and operated in synchronism therewith, said dynamo electric machine comprising a field member having polar projections but no magnetizing windings and being excited by armature reaction, said polar projections being so positioned relatively to the magnetic axis of the armature of said machine that the field excitation is due to the wattless component of the armature current.

4. The combination with a rotary converter having a revoluble armature and a stationary field member, and means for varying the strength of the field of said rotary converter to make it take out of phase current, of a machine designed to run at synchronous speed and having a member mechanically connected to the armature of said converter, said member having windings connected in series with the armature of said converter and being excited by armature reaction, and a stationary member in close proximity to said first mentioned member having no magnetizing windings and so positioned and shaped as to form a path of low reluctance for the component of the field produced by the armature reaction corresponding to the wattless component of the current flowing through said windings.

5. The combination with a rotary converter having a revoluble armature and a stationary field member, and means for varying the strength of the field of said rotary converter to make it take out of phase current, of a machine designed to run at synchronous speed and having a member mechanically connected to the armature of said converter, said member having windings connected in series with the armature of said converter and being excited by armature reaction, and a stationary member having polar projections in close proximity to said first mentioned member but no magnetizing windings, said polar projections being so positioned as to be in line with the component of the field produced by the armature reaction corresponding to the wattless component of the current flowing through said windings.

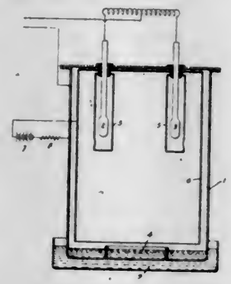
[Claims 6 and 7 not printed in the Gazette.]

1,194,139. GAGE FOR SAWS. SIVERT BUSKALA, Shine, Wash. Filed Nov. 3, 1915. Serial No. 59,407. (Cl. 33—202.)



A combined raker saw gage and saw tooth aliuing device, the same comprising a plate having a handle projecting therefrom, one side of the plate being flat and the opposite side having a centrally disposed longitudinally inclined elevated portion provided with transverse division marks.

1,194,140. VACUUM-TYPE CONVERTER. LEWIS W. CHUBB, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 7, 1915. Serial No. 54,558. (Cl. 175—354.)



1. In a vacuum-type converter, the combination with a casing, of an anode and a cathode therein, a conducting shield surrounding substantially the entire arc path therebetween, and means for maintaining a positive charge on said shield.

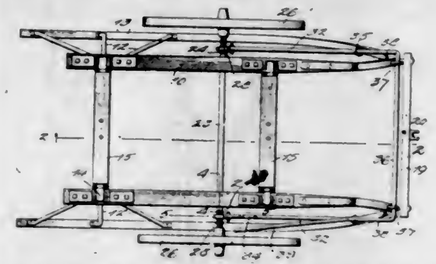
2. In a vacuum-type converter, the combination with a casing, of a plurality of anodes and a cathode therein, a conducting shield surrounding substantially the entire arc path therebetween, and means for maintaining a positive charge on said shield.

3. In a vacuum-type converter, the combination with a conducting casing, of an anode and a cathode therein, said cathode being in intimate contact therewith, a conducting shield surrounding substantially the entire arc path, and means for maintaining an electrostatic charge on said shield that is positive with respect to said cathode.

4. In a vacuum-type converter, the combination with a conducting casing, of a plurality of anodes and a cathode therein, said cathode being in intimate contact therewith, a conducting shield surrounding substantially the entire arc path, and means for maintaining an electrostatic charge on said shield that is positive with respect to said cathode.

5. In a vacuum-type converter, the combination with a conducting casing, of a cathode therein and in intimate contact therewith, a plurality of anodes therein and insulated therefrom, a shielding member for each anode, a conducting shield surrounding all of said anodes and extending into proximity to said cathode, and means for imparting to said last mentioned shield a charge that is positive with respect to said cathode.

1,194,141. COMBINATION VEHICLE-TRUCK. HENRY W. CLARK, West Vienna, N. Y. Filed Feb. 16, 1916. Serial No. 78,635. (Cl. 21—96.)



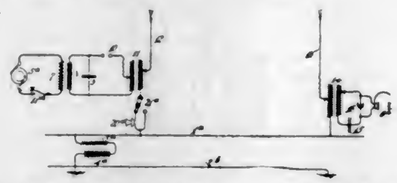
1. A combination vehicle truck of the character described having upper intermediate side bearings and lower runners provided with upturned forward ends, a transverse shaft journaled in said bearings and provided with crank arms at its opposite ends having extensions forming wheel spindles, wheels mounted on said spindles, draw bars at opposite sides of the truck having their rear ends flexibly connected to the said crank arms and provided with upwardly extending handles adjacent their said rear ends and with upright spaced ears at their forward ends, and a U-shaped lever journaled transversely across the forward upturned ends of the runners, having rearward extensions pivotally connected to the spaced ears of the said draw bars, and one of which extensions has a rearwardly projecting portion extending rearwardly of its pivot and forming an operating arm whereby the wheel shaft may be rotated to raise and lower the wheels.

2. A combination vehicle truck of the character described having upper side bars and lower runners provided with upturned forward ends connected to the forward ends of the upper side bars, a transverse shaft journaled across the upper side bars intermediate their ends and provided with crank arms at its opposite extremities having extensions forming wheel spindles and provided with rounded portions adjacent said spindles, wheels mounted on said spindles, connecting members swiveled on the said rounded portions of the said cranks, draw bars at opposite sides of the truck having their rear ends pivotally connected to the said connecting members and provided with upright spaced ears at their forward ends, a handle carried by one of the draw bars adjacent its rear end, and a U-shaped lever journaled transversely across the forward upturned ends of the runners, having rearward extensions pivotally connected to the said spaced ears of the draw bars, and one of which extensions has a rearwardly projecting portion extending beyond its pivot and forming an operating arm whereby the wheel shaft may be rotated to raise and lower the wheels.

3. A combination vehicle truck of the character described having upper side bars and lower side runners, a transverse shaft journaled across the said upper side bars and provided with crank arms at opposite sides of the truck having extensions forming wheel spindles, wheels mounted on the said spindles, draw bars at opposite sides of the truck having their rear ends flexibly connected to the said crank arms of the shaft, a handle projecting upwardly from one of the said draw bars, and a U-shaped lever journaled transversely across the forward portion of the truck, having rearward extensions pivotally connected to the forward ends of the said draw bars, and one of which extensions has a rearwardly projecting handle portion for manipulating the same whereby to rotate the wheel shaft and raise and lower the wheels.

4. A combination vehicle truck of the character described having lower side runners, wheels at opposite sides thereof, cranks upon which the said wheels are mounted to raise and lower, draw bars at opposite sides of the truck having their rear ends flexibly connected to the said cranks and one of which draw bars is provided with a handle, and a U-shaped lever journaled in the forward portion of the truck and having rearwardly projecting extensions pivotally connected to the forward ends of the said draw bars, one of which extensions is provided with a rearwardly projecting arm for the purpose described.

1,194,142. SYSTEM FOR TELEGRAPHIC AND TELEPHONIC COMMUNICATIONS. JOSEPH H. CLAUS, West Philadelphia, Pa. Filed Aug. 29, 1913. Serial No. 787,290. (Cl. 250—2.)



1. The combination of two conductors extending from a sending to a receiving station and one at least being a metallic conductor, means for creating an electro-static tension between the two conductors, said means comprising a source of continuous current and an inductance in series and permanently connected with the conductors, an alternating current source for impressing energy continuously upon the metallic conductor, means for interrupting the energy for forming signals, means for varying the amplitude of the impressed energy in accordance with sound waves, and means for detecting, as messages, said interruptions or variations in the impressed energy.

2. The combination of two conductors, means for creating an electrostatic tension between them, said means comprising a source of current and an inductance in series and permanently connected respectively with the conductors, a sending capacity, a high frequency alternating current generator inductively related thereto, means energized by the generator for continuously impressing high frequency oscillating electric waves upon the conductor, means for varying the amplitude of the oscillating electric waves in accordance with variations in sound waves, and means for detecting such variations in the oscillating electric waves.

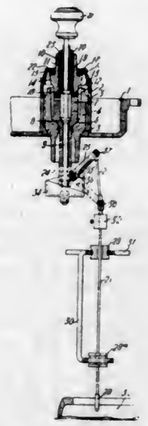
3. The combination of a metallic conductor, a charging means grounded on one side and on the other connected with the conductor for subjecting the same to an electrostatic tension, said means comprising a source of continuous current and an inductance in series with each other and connected respectively with the conductor and ground, means for impressing continuously high frequency oscillating electric waves on the conductor, means for preventing said waves from passing through the said charging means, a sending capacity connected with the means for creating the oscillating electric waves, a telephone transmitter between the said conductor and the means for producing the oscillating electric waves, a receiving capacity connected with the conductor and tuned to the means for sending the oscillating electric waves, and means inductively related to the receiving capacity for detecting the oscillating electric waves.

4. The combination of a conductor with a continuous current means permanently connected with and continuously electrically charging said conductor, a coil of excessively high inductance in series with said charging means, means for generating continuously alternating electric currents in said conductor, means for interrupting said continuously alternating electric currents to form signals, means for detecting said interruptions as signals, means for varying the amplitude of said continuously alternating electric currents in accordance with the pitch, duration and amplitude of sound waves, and means for detecting said variations, all for the purpose specified.

5. The combination of a conductor with a continuous current means permanently connected with and continuously electrically charging said conductor, a coil of excessively high wave length in series with said charging means, means for generating high frequency oscillating electric waves of various distinct wave lengths, means for impressing said high frequency oscillating electric waves upon said conductor, means for interrupting said high frequency oscillating electric waves to form signals, means for detecting said interrupted waves of various distinct wave lengths, means for varying the amplitude of continuously oscillating electric waves in accordance with the pitch, duration and amplitude of sound waves, and means for detecting said variations, all for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,194,143. STARTING-ELECTRODE FOR VAPOR ELECTRIC DEVICES. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 30, 1914. Serial No. 815,354. (Cl. 175—354.)



1. A vapor electric device comprising a casing, a vaporizable electrode contained therein, a starting electrode and an operating means therefor having a carbon bearing.

2. A vapor electric device comprising a casing, a vaporizable electrode and a starting electrode contained therein, and means for operating the starting electrode comprising a cam-actuated lever provided with an anti-friction bearing.

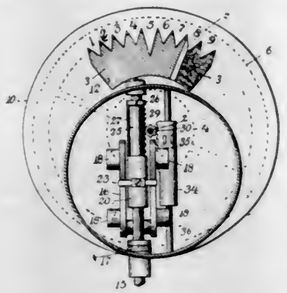
3. A vapor electric device comprising a casing, a bushing extending into the casing, a tubular member seated in the bushing and extending through the same into the casing, a rotatable rod seated in and extending through the tubular member, an electrode within the casing, and means actuated by rotation of the said rod to raise and lower the electrode.

4. A vapor electric device comprising a casing, a vaporizable electrode and a starting electrode contained therein and means sealed in and extending through the casing for actuating the starting electrode, said actuating means comprising a lever having a carbon bearing and means controlled from the exterior of the casing for operating the lever.

5. A vapor electric device comprising a casing, a starting electrode, means extending through the casing for operating the starting electrode and means for sealing the operating means in the casing, said sealing means comprising a bushing of insulating material having external and internal seats coöperating respectively with similar seats on the casing and on a tubular member inclosed within the bushing, a rod within the tubular member having an enlarged portion coöperating with an internal seat on the tubular member, and means for forcing the several coöperating parts into gas-tight engagement.

[Claim 6 not printed in the Gazette.]

1,194,144. SPEEDOMETER. MOSES G. COOK, Lynn, Mass. Filed Dec. 17, 1913, Serial No. 807,227. Renewed Jan. 15, 1916. Serial No. 72,371. (Cl. 116—65.)



1. A speedometer comprising a rotary member provided with differently colored sections designed to be indicative of different ranges of speed, means controlled by the speed of the conveyance carrying the speedometer for turning said member, and a case inclosing said member, said case having a window substantially equal in dimensions to one of said sections, an edge of said window being formed with nine serrations each bearing one of the nine digits.

2. A speedometer comprising an indicating means, a vertical shaft adapted to be revolved by the body whose speed is to be measured, a rotary member having its axis of rotation transverse to and carried by said shaft, weights carried by said member, a sleeve slidable on said shaft, a rack carried by said sleeve, a spindle connected with said indicating means, two pinions on said spindle, one meshing with said rack, and a second weighted rack meshing with the other of said pinions for counterweighting said sleeve.

3. A speedometer comprising an indicating means, a shaft adapted to be revolved by the body whose speed is to be measured, two parallel disks having a common axis transverse to and carried by said shaft, two oppositely disposed heavy cross bars rigid with said disks, and means whereby the centrifugally engendered partial rotation of said disks on their common axis is communicated to said indicating means.

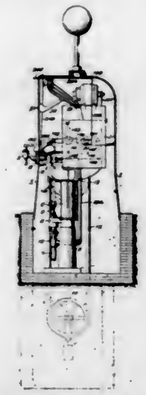
4. A speedometer comprising a rotative indicating means, a shaft adapted to be revolved by the body whose speed is to be measured, two parallel disks having a common axis transverse to and carried by said shaft, two oppositely disposed heavy cross bars rigid with said disks, and two oppositely disposed weights on the outer surface of each disk, and means whereby the centrifugally engendered partial rotation of said disks on their common axis is communicated to said indicating means.

5. A speedometer comprising a rotative indicating means, a shaft adapted to be revolved by the body whose speed is to be measured, two parallel disks having a common axis transverse to and carried by said shaft, weights carried by said disks at opposite points of their peripheries, a sleeve slidable on said shaft, a radially disposed screw carried by said sleeve, a cross arm terminally supported by said screw, said disks having each a radial slot receiving an end of said cross arm, and means for turning said indicating means actuated through the reciprocation of said sleeve.

[Claim 6 not printed in the Gazette.]

1,194,145. LIQUID-VENDING MACHINE. GEORGE C. K. CULMER, Philadelphia, Pa. Filed Apr. 11, 1916. Serial No. 90,414. (Cl. 194—73.)

1. The combination of a pump; a motor; means connecting said pump and motor; a manually operated member for starting the motor; a second member controlling the means for connecting the motor and pump; and coin-controlled means for governing the operation of said latter member.



2. The combination of a pump; a motor therefor; a manually operated member for causing starting of the motor; a second manually operated member controlling the connection of the motor to the pump; and coin-controlled means connected to govern the operation of said latter member.

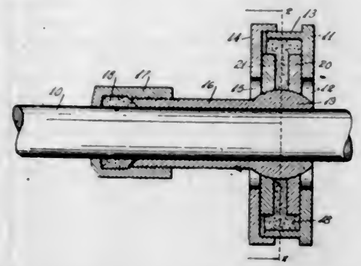
3. The combination of a pump; a motor therefor; a manually operated member for starting the motor; a second member controlling the connection of the motor and pump; and coin-controlled means connected to govern the operation of both of said members.

4. The combination of a pump; a source of power therefor; a separable connection between the source and the pump; and coin-controlled hand operated means for causing said connection to become operative to transmit power from the source to the pump; with manually operated means for starting the pump.

5. The combination of a pump; a source of power therefor; a clutch between the source of power and the pump; and a plurality of coin-controlled devices respectively responsive to coins of different denominations for operating said clutch to cause it to transmit power from the source to the pump for times dependent on the denominations of the coin inserted.

[Claims 6 to 30 not printed in the Gazette.]

1,194,146. STUFFING-BOX. CLESSIE LYLE CUMMINS, Columbus, Ind. Filed Mar. 4, 1915, Serial No. 12,215. Renewed June 26, 1916. Serial No. 106,057. (Cl. 64—10.)



1. The combination of a shaft, a fixed stuffing box, a bearing member surrounding the shaft, and a member extending from the said bearing member into the stuffing box, one of said members being movable in a plane substantially transversely of the shaft.

2. The combination of a shaft, a fixed stuffing box, a bearing member surrounding the shaft, and a member extending from said bearing member into the stuffing box and movable therein.

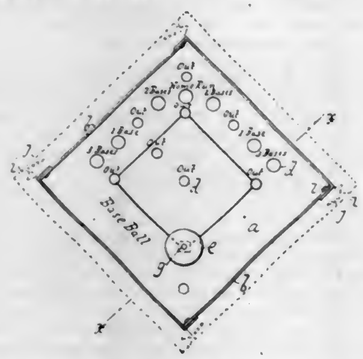
3. The combination of a shaft, a bearing member surrounding the shaft, a fixed stuffing box with an opening through it for said bearing member which is appreciably greater in diameter than said bearing member, and a plate extending from said bearing member into the stuffing box and movable therein.

4. The combination with a shaft, a bearing member surrounding the shaft, a fixed stuffing box with an opening through it for said bearing member of greater diameter than the bearing member and there being a chamber in said bearing member, and a plate extending from said bearing member into said chamber of the stuffing box and movable therein in a plane transversely of the shaft.

5. The combination with a shaft, a bearing member surrounding the shaft, a fixed stuffing box with an opening through it for said bearing member of greater diameter than the bearing member and there being a chamber in said bearing member, grease filling said chamber, and a plate extending from said bearing member into said chamber of the stuffing box and movable therein in a plane transversely of the shaft.

[Claims 6 to 12 not printed in the Gazette.]

1,194,147. GAME APPARATUS. CHRISTIAN DANCEL, Brooklyn, N. Y. Filed Sept. 28, 1914. Serial No. 863,913. (Cl. 46—63.)



A game device formed of a single sheet of cardboard provided with a collapsible rim normally inclosing the board, a series of holes of different diameters located in the body of the board, and a disk shaped spinning top actuated by an operator for coöperation with the holes, the smaller holes being adapted to denote when the operator is out, while the larger holes represent the average of the operator.

1,194,148. MEMORIAL BURIAL-VAULT. ISAAC S. DAULEY, Oneonta, N. Y. Filed Feb. 7, 1916. Serial No. 76,702. (Cl. 72—7.)

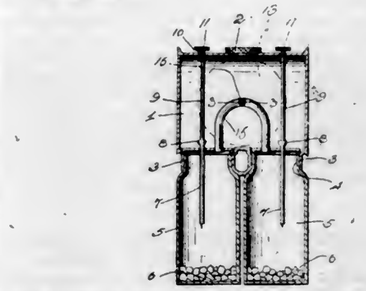


1. The herein described burial vault comprising a concrete construction having integral bottom, side and end walls, there being formed a gutter surrounding the upper portion of the side and end walls and drainage devices leading downwardly and outwardly from said gutter, and a solid arched cover for the receptacle having a rim fitted to the upper edge of the receptacle and resting thereon on the outside of said gutter.

2. In a burial vault, the combination of a main receptacle comprising integral bottom, side and end walls, the side and end walls being offset forming a support in the same plane, there being formed a gutter extending entirely along the offset and having drainage means leading therefrom to cause any moisture received upon the offset to be carried away before entering the receptacle, and a solid cover having a downwardly projecting rim lying in a plane corresponding to the plane of the offset support and adapted to be supported upon that portion of the support on the outside of the gutter.

3. In a burial vault, the combination of a receptacle structure comprising integral bottom, side and end walls providing a compartment adapted to receive a burial casket, said side and end walls being offset forming a support, said offset support being formed with a drainage gutter below the extreme top of the side and end walls to exclude all moisture or other extraneous matter from the compartment for any desired length of time prior to filling and sealing, and a cover resting upon said support outside of the gutter and spaced upwardly from the inner edge of the gutter.

1,194,149. ACETYLENE-LAMP. JOHN C. DAVIS, Nanty Glo, Pa. Filed Sept. 26, 1914. Serial No. 863,727. (Cl. 48—23.)

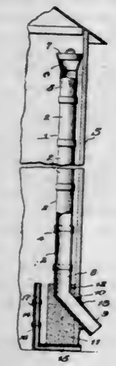


An acetylene lamp including a water tank, independent carbid tanks secured to and depending from the under side of the water tank, an inverted U-shaped gas supply pipe arranged vertically within the water tank, the respective ends of said pipe passing through the bottom wall of the water tank and communicating with the respective carbid tanks, a horizontally disposed gas feed pipe having its inner end connected to the front wall of the upper curved portion of the gas supply pipe and communicating with the latter, the gas feed pipe passing through the front wall of the water tank and having its outer end disposed in spaced relation to said wall, a burner tip secured in the outer end of the gas feed pipe, a single partition located within and dividing the gas supply pipe into separate passages, the outer end of said partition extending into said burner tip and its inner end extending beyond the inner end of the gas feed pipe into engagement with the inner surface of the rear wall of the gas supply pipe to divide the latter into two sections, each communicating with one of said passages and means for controlling the supply of water to the respective carbid tanks.

1,194,150. SILO VENTILATOR AND DISCHARGE. WILLIAM H. DICKSON and LESTER S. OVERHOLT, Omak, Wash. Filed July 19, 1915. Serial No. 40,740. (Cl. 20—1.42.)

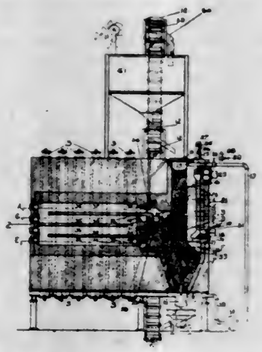
1. The combination with a silo having a discharge and ventilating pipe comprising a plurality of superimposed sections with the bottom section projecting through the wall of the silo adjacent its lower end, of a supplemental substantially L-shaped ventilating pipe with its base por-

tion positioned adjacent the bottom of the silo and projecting through the wall of the same and its upright portion comprising a plurality of superimposed detachable sections the uppermost of which is positioned below the top of the bottom section of the discharge and ventilating pipe.



2. A silo including a discharge and ventilating pipe comprising a plurality of detachable superimposed sections positioned vertically adjacent its wall, the bottom section of said pipe being bent laterally and projecting downwardly through the wall of the silo adjacent the bottom of the same, a supporting base for said bottom section of the discharge and ventilating pipe, and a supplemental ventilator having a pipe with its horizontal portion positioned on the bottom of the silo and projecting through the side of the same, and its vertical portion comprising a plurality of superimposed detachable sections, the uppermost of which being positioned below the top of the bottom section of the discharge and ventilating pipe.

1,194,151. METHOD OF HEATING. HENRY L. DOHERTY, New York, N. Y. Original application filed Nov. 15, 1911, Serial No. 660,450. Divided and this application filed Jan. 9, 1912. Serial No. 670,339. (Cl. 110—31.)



1. The method of heating, which comprises, withdrawing hot heating gases from a heating chamber before said gases have been entirely consumed, withdrawing completely burned gases from said chamber and mixing said incompletely burned and said completely burned gases, the said gases being withdrawn at such temperatures that the resulting mixture will carry sufficient heat to support the reaction of a regulated proportion of its combustion products with carbon, passing said hot gaseous mixture through a bed of ignited fuel to convert a regulated portion of the combustion products of said mixture into combustible gases by reaction with the fuel of said fuel bed, conducting said gases after their passage through said fuel bed into said heating chamber, and adding air to said gases in said heating chamber to burn the combustible constituents of said gases.

2. The method of heating which comprises, igniting gases containing a proportion of combustible constituents in a heating chamber, withdrawing from said chamber a portion of said gases before the same have been completely consumed at a temperature at which said gases will carry sufficient sensible heat to support the reaction of a regulated proportion of their combustion products with carbon, passing the said gases through a fuel bed, whereby said regulated portion of the combustion products carried by the said gases is caused to react with the fuel in said fuel bed to regenerate combustible gases at the expense of the sensible heat of the said gases, and returning the effluent gases from said fuel bed to said heating chamber.

3. The method of heating which comprises, passing a mixture of combustible and combustion gases at a comparatively high temperature first through a fuel bed to generate a portion of combustible gases by reaction between the combustion products in the said gases and a portion of the fuel in said bed at the expense of the sensible heat of said gases and then through a heating chamber, adding air to the said gases in said chamber to support the combustion of the combustible constituents of said gases, and repassing a portion of the gases from such combustion before said gases have been entirely consumed through said fuel bed, whereby more or less of the fuel of the said fuel bed is burned by reaction with the products of the combustion carried into the said fuel bed by the said stream of mixed gases.

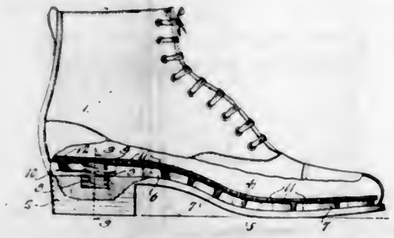
4. The method of heating which comprises, burning combustible constituents of a stream of circulating gases in a heating chamber by successive additions of heated air, withdrawing from a plurality of localities of said heating chamber regulated portions of hot completely and incompletely burned gases, mingling the several portions of said gases withdrawn and passing the same through a bed of carbonaceous fuel to convert a portion of the products of combustion of the withdrawn gases into combustible gases by reaction with the carbon of said fuel at the expense of the sensible heat of said withdrawn gases, returning the effluent gases from said fuel bed to said heating chamber, and passing through a recuperator to heat the air for sustaining the said combustion in said heating chamber, the portion of the completely burned effluent gases from said heating chamber that is not passed through said fuel bed.

5. The method of heating which comprises, burning combustible constituents of a stream of circulating gases in a heating chamber by successive additions of heated air, whereby the said stream of circulating gases is subjected to gradual combustion, withdrawing from said stream of gases a volume of completely burned gases equivalent to the volume of air added to said gaseous stream in said heating chamber, conducting said volume of completely burned gases through a recuperator to heat the air introduced into said heating chamber, withdrawing incompletely burned gases from said gaseous stream, passing the said incompletely burned gases together with the residue of said completely burned gases in admixture through a bed of carbonaceous fuel to convert a portion of the products of complete combustion in said gaseous mixture into combustible gas, and returning the effluent gases from said fuel bed to said heating chamber.

[Claims 6 to 14 not printed in the Gazette.]

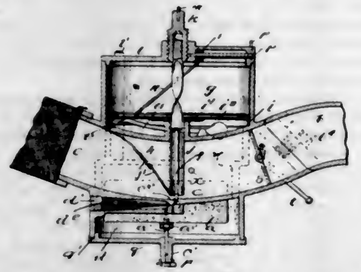
1,194,152. CUSHION-INSOLE FOR BOOTS AND SHOES. PHILIP FAIRCLEUGH DOUGLAS, Minnedosa, Manitoba, Canada. Filed Oct. 19, 1915. Serial No. 56,766. (Cl. 36—3.)

1. An insole construction for boots or shoes comprising a layer of flexible material, cushion means attached beneath said material at the toe portion of said insole and consisting of a plurality of rib members, and heel cushioning means comprising a primary cushion member consisting of a compressible spring normally holding the heel portion of the insole spaced from the shoe heel, and a secondary cushion member consisting of a rib element substantially surrounding the spring, normally spaced from the shoe heel, and adapted to receive the jar upon compression of said spring.



2. An insole construction for boots or shoes comprising an upper layer of flexible material and a lower layer of rubber material having formed thereon a plurality of elongated rib members, certain of said rib members being arranged longitudinally of the sole and adjacent to its edges, and certain of said rib members being arranged transversely of the sole intermediate the lateral rib members aforesaid, the rib members at the central portion of the sole being relatively larger than the rib members at the end portion of said sole.

1,194,153. CARBURETER. CHARLES E. DURYEA, Saginaw, Mich. Filed Dec. 23, 1911. Serial No. 667,486. (Cl. 48—154.1.)



1. In a carbureter, a mixing chamber, a float chamber having a concentric inlet and an outlet having its discharge end eccentric to and in close proximity to said inlet, there being a curved air passage a portion of which passes transversely through the upper portion of said float chamber, and means operable by change in air pressure for regulating the volume of air through said passage.

2. In a carbureter, a mixing chamber, a float chamber having a concentric inlet and an outlet having its discharge end eccentric to and in close proximity to said inlet, there being a curved air passage a portion of which passes transversely through the upper portion of said float chamber, and means operable by change in air pressure for regulating the volume of air through said passage, said outlet being to the rear.

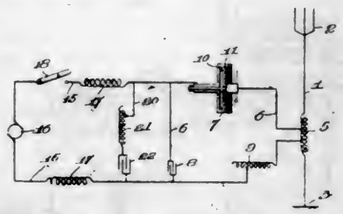
3. In a carbureter, a mixing chamber and a float chamber having a concentric inlet and an outlet having its discharge end eccentric to and in close proximity to said inlet and to the rear thereof and adjustable means operable by change in air pressure for controlling said outlet, said inlet being controlled by means carried by a float in said float chamber.

4. In a carbureter, a slightly curved air passage, a portion of which passes transversely through the upper portion of the float chamber, a diaphragm chamber above and communicating with said passage, automatic suction-operated means in the diaphragm chamber controlling the liquid inlet to the said passage, a diaphragm, a valve movable therewith, and movable means for regulating the size of the air passage.

5. In a carbureter, a slightly curved horizontally disposed air passage a portion of which extends transversely through the upper portion of the float chamber, a diaphragm chamber above said passage and through which a portion of said passage extends, a diaphragm in said chamber operable by change in air pressure, said air pressure having an oil opening in its bottom, an automatic pivoted variable closure for said passage, and connections between said diaphragm and closure.

[Claims 6 to 13 not printed in the Gazette.]

1,194,154. APPARATUS FOR PRODUCING ELECTRICAL OSCILLATIONS. MELVILLE EASTHAM, Cambridge, Mass., assignor to General Radio Company, a Corporation of Massachusetts. Filed Dec. 28, 1914. Serial No. 879,299. (Cl. 250—37.)



1. An apparatus for producing electrical oscillations having, in combination, an oscillatory circuit, an impulse circuit coupled with the oscillatory circuit, the coefficient of coupling between the two circuits being greater than fifty per cent., said impulse circuit including a condenser and a discharge gap comprising two relatively rotating sectored parallel metallic plates, and a feeder circuit for charging the condenser.

2. Apparatus for producing electrical oscillations having, in combination, an oscillatory circuit in which the oscillations are produced, an impulse circuit coupled with the oscillation circuit including a condenser and a discharge gap comprising two relatively moving good heat conducting surfaces, and a feeder circuit for charging the condenser at such a rate that the condenser discharges in the impulse circuit will occur before the previously excited trains of oscillations in the oscillatory circuit dies down, said oscillations in the oscillatory circuit reacting on the impulse circuit and serving to trigger off the condenser discharges in a predetermined phase relation with the oscillations so as to reinforce and sustain the declining oscillations.

3. Apparatus for producing electrical oscillations having, in combination, an oscillatory circuit, and means for producing oscillations in the oscillatory circuit by impact excitation comprising an impulse circuit closely coupled with the oscillation circuit and including a condenser and a discharge gap having two relatively moving good heat conducting metallic surfaces, said spark gap in conjunction with the transfer of energy from the impulse circuit to the oscillatory circuit, due to the close coupling, serving to cause a substantially non-oscillatory condenser discharge in the impulse circuit, and a feeder circuit for charging the condenser.

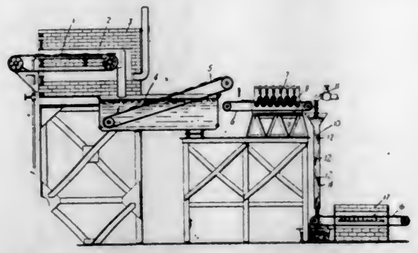
4. An apparatus for producing electrical oscillations having, in combination, an oscillatory circuit, an impulse circuit coupled with the oscillatory circuit, the co-efficient of coupling between the two circuits being greater than fifty per cent., said impulse circuit including a condenser and a discharge gap comprising two relatively moving good heat conducting metallic surfaces, and a feeder circuit for charging the condenser.

5. Apparatus for producing electrical oscillations having, in combination, an oscillatory circuit, and means for producing oscillations therein by impact excitation comprising an impulse circuit closely coupled with the oscil-

latory circuit and including a condenser and a discharge gap having relatively moving good heat conducting metallic surfaces, said impulse circuit having a natural time period of at least considerably greater than the natural time period of the oscillatory circuit, said discharge gap taken in conjunction with the transfer of energy from the impulse circuit due to the close coupling between them, serving to cause a substantially non-oscillatory condenser discharge of a duration greater than one-half the time of a complete current oscillation in the oscillatory circuit, and a feeder circuit for charging the condenser.

[Claims 6 to 11 not printed in the Gazette.]

1,194,155. PROCESS OF SPLITTING MICA. HENRY R. EDGECOMB, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 24, 1912. Serial No. 711,221. (Cl. 125—5.)



1. The method of splitting a mica block which comprises heating it and subsequently subjecting it to an edgewise-directed stream of liquid.

2. The method of splitting a mica block which comprises first heating and then cooling it and subsequently subjecting it to an edgewise-directed stream of liquid.

3. The process of splitting mica blocks which consists in heating, cooling and bending them and then applying a stream of liquid to them in the direction of cleavage.

4. The method of splitting mica blocks which consists in heating them, applying liquid to them, bending them, and then directing a stream of liquid against their edges.

5. A machine for splitting mica blocks comprising means for temporarily retaining them, and means for applying a stream of liquid against the edges while so retained.

[Claim 6 not printed in the Gazette.]

1,194,156. DIRIGIBLE HEADLIGHT. JOHN F. ELLMAUERER, Fairchild, Wis. Filed Apr. 4, 1916. Serial No. 88,844. (Cl. 240—62.)

1. A dirigible headlight comprising substantially U-shaped brackets detachably secured to the front axle of an automobile a casing secured to said U-shaped brackets, cups secured to each end of said casing, ball bearings within said cups, a lamp standard extending through said casing, cones secured to the lamp standard and bearing upon said ball bearings, a lamp bracket secured to the upper end of the standard, a headlight secured to said lamp bracket, and means connected to the lower end of the lamp standard and to the connecting rod of an automobile to turn the headlight according to the turn of the front wheels of the automobile.

2. A dirigible headlight comprising a substantially U-shaped bracket, said U-shaped bracket provided with its ends bent at right angles to form feet adapted to rest upon the upper side of the front axle of an automobile, means for securing said feet to the front axle, a casing secured to said U-shaped bracket, a lamp standard extending through said casing, cups secured to the upper and lower ends of the casing, ball bearings within said cups, cones carried by the lamp standard and bearing upon said ball bearings, a lamp bracket secured to the upper end of the standard, a headlight secured to the lamp bracket, and means for connecting the lower end of the lamp standard to the connecting rods of an automobile.



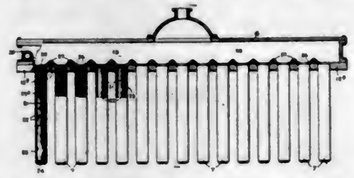
3. A dirigible headlight comprising a substantially U-shaped bracket provided with its free end bent at right angles to form feet adapted to rest upon the upper side of the front axle of an automobile, U-shaped clamps for clamping the feet of the U-shaped bracket to the front axle, said U-shaped bracket provided with an opening therein, a casing extending through the opening of the U-shaped bracket and frictionally engaging the walls of said opening, a lamp standard extending through said casing, cups secured to each end of the casing, ball bearings in said cups, cones carried by the lamp standard and bearing upon the ball bearings, a lamp bracket secured to the upper end of the lamp standard, a headlight carried by said lamp bracket, and means for connecting the lower end of the lamp standard to the connecting rod of an automobile to turn the headlight.

4. A dirigible headlight comprising a substantially U-shaped bracket provided with its free end bent at right angles to form feet adapted to rest upon the front axle of an automobile, U-shaped clamps securing the feet to the front axle, said U-shaped bracket provided with an opening therein, a casing extending through the opening of the U-shaped bracket and frictionally engaging the walls of the opening, cups secured to each end of the casing, ball bearings in said cups, a lamp standard extending through the casing and cups, said lamp standard provided with an enlarged portion adjacent its upper end and provided with screw-threads thereon, a cone threaded to the enlarged portion and adapted to bear upon the ball bearings, a second cone carried by the lower end of the standard for an engagement with the ball bearings in the lower cup, a lamp bracket detachably secured to the upper end of the lamp standard, a headlight carried by said lamp bracket, and means for operatively connecting the lower end of the lamp standard to the connecting rod of an automobile.

1,194,157. BOILER. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 12, 1912, Serial No. 736,323. Renewed Dec. 3, 1915. Serial No. 64,937. (Cl. 122—318.)

1. A boiler for vaporizing liquids, comprising a plurality of heating tubes, and a core for each tube formed of a material which is a poor conductor of heat and which is of but slightly less diameter than said tube whereby a narrow annular space is formed between the outer surface of the core and the inner surface of the tube, said core having a relatively small axial opening.

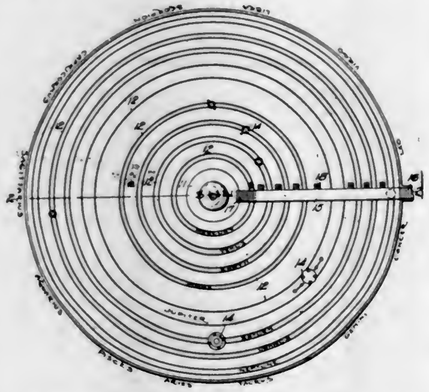
2. A boiler for vaporizing liquids, comprising a plurality of heating tubes, a core for each tube formed of a material which is a poor conductor of heat and which is of relatively large diameter, whereby but a narrow space is formed between the outer surface of the core and the inner surface of the tube, and means for spacing each core relative to its tube, each core being provided with a relatively small axial opening communicating at one end with the space and having a cup-shaped opening at the other for feeding liquid by gravity thereto.



3. A boiler for vaporizing liquids, comprising a vapor chamber, a plurality of heating tubes depending from and communicating at one end with said chamber and closed at the other end, a core for each tube formed of a material which is a poor conductor of heat and which is of but slightly less diameter than the tube whereby a comparatively narrow annular space is formed between the outer surface of the core and the inner surface of the tube, said core having a relatively small axial opening communicating at one end with said chamber and at the other with the space between the core and the tube.

4. A boiler for vaporizing liquids comprising heating tubes, thin tubular metal envelops located in the tubes and separated therefrom by clearance spaces, a filling of relatively non-heat conducting material for the envelops, each of said envelops and its filling being provided with a longitudinally extending passage that communicates with the space between the envelop and its tube.

1,194,158. PLANETARY AMUSEMENT APPARATUS. CLEMENT ENGEL, New York, N. Y. Filed Oct. 14, 1915. Serial No. 55,803. (Cl. 46—27.)



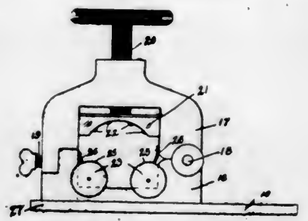
1. A planetary amusement apparatus, comprising a support, a representation of the sun located centrally on the said support, spaced annular tracks on the said support in concentric relation to the said representation of the sun, the tracks representing the orbits of the planets around the sun, cars mounted to travel on the said tracks, and planet-indicating members revolubly mounted on the cars and representing the several planets.

2. A planetary amusement apparatus, comprising a support, a representation of the same located centrally on the said support, spaced annular tracks on the said support in concentric relation to the said representation of the sun, the tracks representing the orbits of the planets around the sun, cars mounted to travel on the said tracks, planet-indicating members revolubly mounted on the cars and representing the several planets, a bridge on the said support and extending across the tracks from one side of the support to the said central representation of the sun, and steps leading from the bridge to the support between adjacent tracks.

3. A planetary amusement apparatus, comprising a support, a representation of the sun located centrally on the said support, spaced annular tracks on the said support in concentric relation to the said representation of the sun, the tracks representing the orbits of the planets around the sun, cars mounted to travel on the said tracks, planet-indicating members revolubly mounted on the cars and representing the several planets, and a zodiac ring around the said support and provided at its inner surface with the signs of the zodiac.

4. A planetary amusement apparatus, consisting of a support provided with a marginal wall having the signs of the zodiac on its inner face and representing a zodiac ring, a lamp at the center of the support and representing the sun, spaced annular tracks on the support in concentric relation to the representation of the sun and representing the orbits of the planets around the sun, and cars mounted on the tracks and having revoluble bodies representing the several planets.

1,194,159. PIPE-VISE. OTTO H. FITZKE, Owatonna, Minn. Filed Jan. 12, 1916. Serial No. 71,789. (Cl. 81—19.)



1. A pipe vise, including a base, a rear pipe support longitudinally adjustable upon the base, a two-membered frame at the forward end of the base, a manually controlled jaw mounted in the upper member of the frame, two corrugated pipe gripping rollers mounted for rotation in the lower member of the frame, and coöperable means carried by each roller and the frame for locking the roller from rotation.

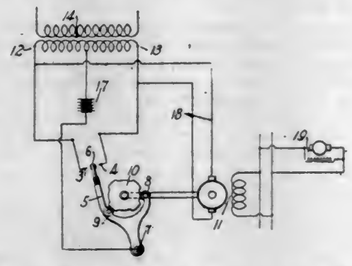
2. A pipe vise, including a base, a rear pipe support longitudinally adjustable upon the base, a two membered frame mounted at the forward end of the base, a manually controlled jaw mounted in the upper member of the frame, two gripping rollers journaled in the lower member of the frame, each roller being provided with a corrugated surface interrupted intermediate of its ends with a gear of lesser diameter than the roller, and a locking device for engaging the gear of each roller.

1,194,160. CAM-RECTIFIER. CHARLES LE G. FORTESQUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 30, 1914. Serial No. 828,209. (Cl. 175—365.)

1. A mechanical rectifier comprising a pair of fixed contact members mounted upon a base and insulated therefrom, a rotatable cam, a pivotally mounted, oscillatory member of Y-shape, both arms of which engage the cam, and a contact member carried by an extension of said oscillatory member and vibratory between the two fixed contact members.

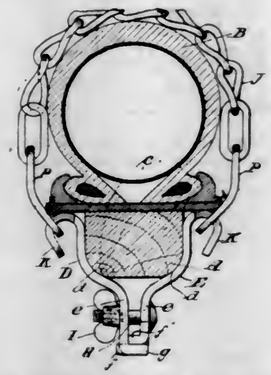
2. A mechanical rectifier comprising a pair of fixed contact members mounted upon a base and insulated therefrom, a rotatable cam, a pivotally mounted, oscillatory member of Y-shape engaging the rotatable cam on substantially opposite sides thereof, a contact member

carried by an extension of said oscillatory member and vibratory between the two fixed contact members, and a current lead to said vibratory contact member.



3. The combination with a source of alternating current, of a fixed contact member connected to each terminal of said source, a movable contact member between said fixed contact members, and means comprising a cam engaging the support of the movable contact member and a synchronous motor operating from said source and driving said cam, whereby said movable contact member is caused to vibrate in synchronism with the frequency of the alternating current source.

1,194,161. ANTISKIDDING DEVICE FOR TIRES. GEORGE B. M. FOUST, Cleveland, Ohio, assignor to Charles H. Keith, Cleveland, Ohio. Filed May 1, 1914. Serial No. 835,777. (Cl. 152—14.)



1. In a non-skidding attachment for a vehicle wheel having a felly, a metal rim and a resilient tire thereon, a pair of opposed clamping plates adapted to engage said felly and extend radially toward the center of the wheel, the inner ends of said plates interlocking to prevent lateral movement thereof, a flange upon the end of one plate abutting against the other plate to form a fulcrum point, a bolt and nut for adjustably securing said clamps in position, said bolt located intermediate of the outer and inner ends of said plates, attaching means upon the outer ends of said plates, and a non-skid device detachably secured to said attaching means.

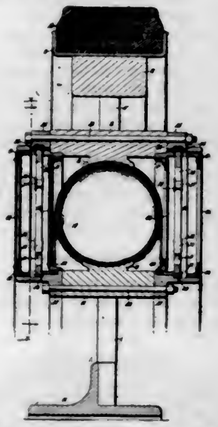
2. In a non-skidding device for a wheel having a felly, a tire holding rim and a tire thereon, a pair of clamping plates shaped to conform to the felly and adapted to be attached thereto each plate having an attaching means at its outer end, interlocking tongues at the inner ends of said plates, a member at the extremity of one plate engaging the extremity of the other plate and forming a fulcrum point thereon, a bolt adjustably connecting said plates and positioned intermediate of said fulcrum point and the outer ends of said plates, a chain adapted to encircle said tire and curved plates attachable to the outer ends of said clamping plates, and to the extremities of said chain, said curved plates adapted to pass around the edges of said rim.

1,194,162. RAZOR-HONE. ALVIN A. FRANCIS and RAYMOND F. HILL, Marcus, Wash. Filed Sept. 8, 1914. Serial No. 860,619. (Cl. 51—16.)



A hone formed of sealing wax, slate, flour, and emery.

1,194,163. RESILIENT VEHICLE-WHEEL. ALFRED FREUND, St. Louis, Mo. Filed Mar. 15, 1916. Serial No. 84,303. (Cl. 152—35.)



1. A resilient vehicle wheel, comprising an inner rim having a hub, a felly having a solid tread, an outer rim connected with the felly, resilient means interposed between the said rims, and links pivotally connecting the said rims with each other, each link being made in two parts slidable one on the other in the direction of the length of the link, the link section engaging the outer rim having a sliding connection with the same in the direction of the periphery of the rim.

2. A resilient vehicle wheel, comprising an inner rim having a hub, a felly having a solid tread, an outer rim connected with the felly, resilient means interposed between the said rims, and links pivotally connecting the said rims with each other, each link being made in two sections provided with roller guide-ways for the sections to slide one on the other.

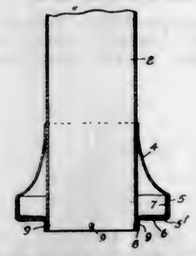
3. A resilient vehicle wheel, comprising an inner rim having a hub, a felly having a solid tread, an outer rim connected with the felly, resilient means interposed between the said rims, and links pivotally connecting the said rims with each other, each link being made in two sections provided with roller guideways for the sections to slide one on the other, the outer section having a sliding connection with the outer rim in the direction of the periphery of the rim.

4. A resilient vehicle wheel, comprising an inner rim having a hub, a felly having a solid tread, an outer rim connected with the felly, resilient means interposed between the said rims, outer and inner link rings removably fastened to the edges of the said rims, and links pivotally connecting the said outer and inner link rings with each other, each link being made in sections slidable one on the other.

5. A resilient vehicle wheel, comprising an inner rim having a hub, a felly having a solid tread, an outer rim connected with the felly, resilient means interposed between the said rims, outer and inner link rings removably fastened to the edges of the said rims, links pivotally connecting the said outer and inner link rings with each other, each link being made in sections slidable one on the other, and flexible covers attached to the said inner and outer link rings and interposed between the resilient means and the links.

[Claims 6 to 10 not printed in the Gazette.]

1,194,164. BOTTOM MOUNT FOR BEDPOSTS. FRANK R. FROST, Butler, Pa., assignor to Pittsburgh-Hickson Company, Butler, Pa., a Corporation of Pennsylvania. Filed Aug. 25, 1915. Serial No. 47,274. (Cl. 5—4.)



1. The combination of a bed-post, a mount therefor formed of relatively thin metal with the mount flared outwardly at one end and at its opposite end adapted to fit around the post, and a ring-like reinforcement entered in the flare of the mount, the inner periphery of the reinforcement flanged for bearing against the post extending therethrough and with means for securing the flange to the post.

2. The combination of a bed-post, a mount therefor comprising a metallic shell at one end embracing the post and at the opposite end having an outwardly flared portion, and a reinforcement entered in the flared portion, said reinforcement provided with a post-embracing passage through which the post is adapted to extend.

3. The combination of a bed-post, a mount therefor comprising a metallic shell having one end adapted to fit around the post and the other end outwardly flared a distance therefrom, and a reinforcement embracing the post and fitting within the flared portion thereby stiffening said portion and maintaining the mount in position around the post.

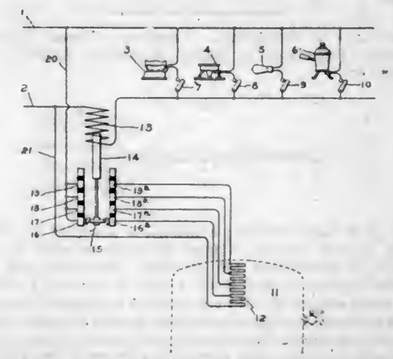
1,194,165. ENERGY-SUPPLY SYSTEM. WINTHROP H. FRY, Great Barrington, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 17, 1915. Serial No. 15,117. (Cl. 219—20.)

1. A system of electric energy supply comprising a supply circuit, a load connected thereto comprising a variable portion and a heat storage mass, and means for varying the rate of energy supply to said heat storage mass in inverse proportion to the variations in the variable part of the load.

2. A system of electric energy supply comprising a supply circuit, a plurality of translating devices connected to said supply circuit, a heat storage device, and means for varying the rate of energy supply to said heat storage device inversely as the rate of supply to the various translating devices.

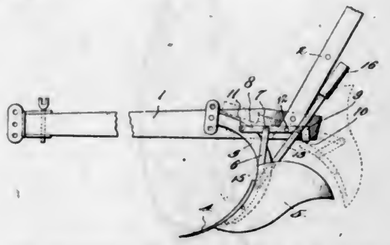
3. A system of electric energy supply comprising a supply circuit, a load connected thereto comprising a variable portion and a heat storage device, and means responsive to the variable part of the load current for varying the rate of energy supply to said heat storage device inversely as the load current varies, so as to maintain a substantially constant demand on the supply circuit.

4. A system of electric energy supply comprising a supply circuit, a plurality of translating devices connected thereto, an electric heat storage device, and electromagnetic means responsive to the rate of energy supply to the translating devices for varying the amount of energy supplied to the heat storage device inversely as the rate of supply to the translating devices varies.



5. A system of electric energy supply comprising a supply circuit, a plurality of translating devices connected thereto, a heat storage mass, an electromagnet included in series with the translating devices, and means responsive to the movement of the armature of said magnet for varying the rate of energy supplied to said heat storage mass inversely as the rate of supply to the translating devices.

1,194,166. PLOW. HENRY L. GAINES, Gainesville, Ga., assignor of one-half to Hillyer M. Cooper, Gainesville, Ga. Filed Feb. 9, 1915. Serial No. 7,082. (Cl. 97—21.)



1. The combination with a plow having a center foot, of a pair of wings located at opposite sides of the plow and provided with upwardly extending bars pivoted to the plow to permit the wings to swing upwardly and downwardly in a vertical direction into and out of operative position with relation to the foot, a pair of independently movable levers and links connecting the levers with the wings and arranged to form a lock for holding the wings in operative position, said levers and links being arranged at an angle to the bars of the wings when the latter are in position for use.

2. The combination with a plow having a center foot, of a pair of wings located at opposite sides of a plow and provided with upwardly extending standards pivoted to the plow, levers fulcrumed on the plow at opposite sides thereof at points intermediate of the ends of said levers, links connecting the lower arms of the levers with the wings, and weights carried by the upper arms of the levers and adapted to counter-balance and support the wings in an elevated position.

3. An attachment for plows comprising a central foot, a support having spaced sides and a connecting portion and adapted to embrace the rear portion of a plow beam, of

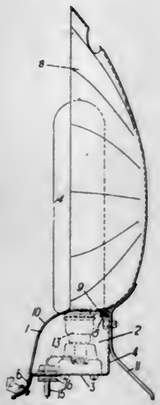
side wings provided with members pivotally connected to the sides of the said support, said side wings being adapted to swing into and out of coöperative relation with the said foot, operating levers fulcrumed on the support, and links connecting the operating levers with the wings.

1,194,167. PITCHFORK. CHARLES GARBER, Clayton, Ohio. Filed Mar. 7, 1916. Serial No. 82,695. (Cl. 256—2.)



A pitch fork including a handle, a plurality of curved tines carried thereby, a lever pivotally secured to said handle, a connecting rod pivotally connected with the medial portion of said lever, a pair of forwardly diverging arms secured to said rod and having parallel forward ends arranged on opposite sides of the end tines, a cleaner bar having apertures receiving said curved tines, means pivotally securing said cleaner bar between the parallel forward ends of said arms, whereby said cleaner bar may turn between said arms as it moves longitudinally over said curved tines.

1,194,168. LUMINOUS RADIATOR. ALBERT J. GEIGER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 15, 1913. Serial No. 742,198. (Cl. 219—45.)



1. In an electric heater, a one-piece terminal-box having an open side, a reflecting member located above said terminal box and having an integral portion that covers said open side, and supports embodying downwardly projecting integral portions of said terminal box and said reflector.

2. In an electric heater, a one-piece terminal-box having an open front side, a reflector located above said terminal box and having an integral portion that projects forwardly and downwardly over said front side, front supports embodying downwardly projecting integral portions of said terminal box and said reflector, and a rear supporting member.

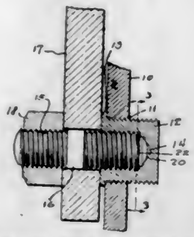
3. In an electric heater, a one-piece sheet-metal terminal box having an open front side, a continuously curved sheet-metal member constituting a reflector located above said terminal box and having an integral portion that projects forwardly and downwardly over said front side, and means for supporting said members.

4. In an electric heater, a one-piece sheet-metal terminal-box having an open front side, a one-piece sheet-metal reflector located above said terminal box and having an integral portion that projects forwardly and downwardly to cover the top and front of said box, front supports embodying integral portions of said terminal-box and said reflector, and a rear supporting member.

5. In an electric heater, a substantially rectangular one-piece sheet-metal terminal-box having an open front side, a one-piece sheet-metal scalloped reflector located above said terminal box and having an integral portion that projects forwardly and downwardly over the top and front of said box, front supports embodying downwardly projecting integral portions of said terminal-box and said reflector, and a rear supporting member.

[Claims 6 and 7 not printed in the Gazette.]

1,194,169. STUD-MOUNTING FOR STEAM-BOILERS AND THE LIKE. GEORGE G. GREENWOOD, Indianapolis, Ind. Filed Mar. 8, 1916. Serial No. 82,905. (Cl. 85—1.)



1. The combination with the plate of a steam boiler or other tank under pressure, of a socket secured therein with a threaded opening extending partially therethrough, a stud or bolt removably secured in said socket, and a rotatable disk in said socket to prevent drills from boring through said socket while drilling out the ends of broken studs or bolts.

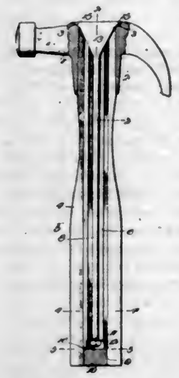
2. The combination with the plate of a steam boiler or other tank under pressure, of a socket secured therein with a threaded opening extending partially therethrough, a stud or bolt removably secured in said socket, a rotatable disk in said socket to prevent drills from boring through said socket while drilling out the end of a broken stud or bolt, and a washer of soft metal in said socket against said disk and adapted to spread into the thread of the socket when the bolt or stud is screwed tightly into the socket and against said washer.

1,194,170. TOOL-HANDLE. FREDRICK W. GROSSMANN, Mount Vernon, N. Y. Filed Feb. 2, 1915. Serial No. 5,698. (Cl. 145—79.)

1. A tool handle divided longitudinally to form co-acting sections, one end of the handle seated in the eye of the tool, a rod extending longitudinally through the handle between the sections and having means at the one end to spread the handle in the eye and means at the other end to hold the handle sections together, and means on the rod to both actuate the spreading means and hold the section-holding means in place.

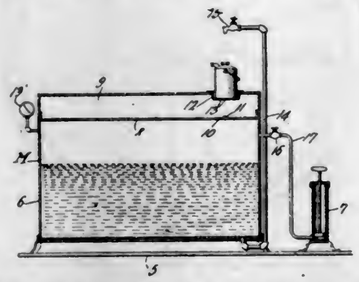
2. A tool having an outwardly-flared eye and formed with opposed recesses at the outer end of the eye, a handle consisting of mating longitudinal sections having one end filling the eye in the tool and having a longitudinal opening coterminous with the handle, said opening being enlarged at its opposite ends, a rod inserted through said opening and threaded at one end and formed at its opposite end with a wedge and projections at opposite ends of the wedge, said wedge fitting in the enlarged part of the opening at the outer end of the handle and expanding said end of the handle against the flared walls of the eye in the tool and the projections extending beyond the sides of the handle and fitting in the recesses at the end

of the eye, a washer mounted upon the threaded end of the rod and interlocking with the handle sections to prevent spreading of the same, a nut engaging the threaded end of the rod and bearing against the washer to serve as tightening and holding means for the parts, said washer and nut occupying the enlarged part of the opening at the inner end of the handle, and a plug fitted in the enlarged end of the opening to conceal the nut and washer.



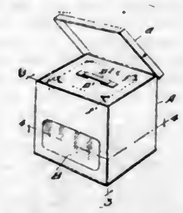
3. A tool having an eye, a handle inserted in said eye and consisting of mating members provided with interengaging longitudinal grooves and ribs on their opposed faces and having central longitudinal grooves whereby to form an opening extending entirely through the handle, a rod inserted through said central longitudinal opening, means at one end of said rod to spread the handle in the eye of the tool, and means at the opposite end of the rod to hold the handle in place and prevent the sections of the same from spreading.

1,194,171. LIQUID-DISPENSING APPARATUS. COY E. HAMILTON, Elkhart, Tex. Filed Apr. 21, 1915. Serial No. 22,727. (Cl. 221—77.)



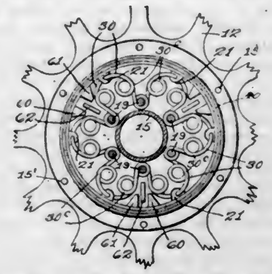
A liquid dispensing apparatus, comprising a rectangular shaped tank forming a reservoir, means for supporting the reservoir slightly above a foundation, a partition intermediate of the reservoir and disposed horizontally in spaced parallel relation to the top of said reservoir, and having a threaded aperture, a plug detachably engaged in the threaded aperture, said top of the reservoir being formed with an opening in vertical alinement with the threaded aperture, reticulated cup within the opening and having an annular flange raised on the top of the reservoir concentrical of the opening therein, a supply pipe leading from the bottom of the reservoir to a point above the cup, a valved faucet on the upper end of the pipe, and a valved compressed air inlet pipe communicating with the reservoir immediately below the partition, the point of communication of the supply pipe with the reservoir being in close proximity to the vertical alinement of the aperture and opening in the partition and top of the reservoir respectively for permitting the cleaning of the pipe.

1,194,172. FOOD-DISPENSING DEVICE. JERVIS R. HARBECK, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 1, 1912. Serial No. 712,648. (Cl. 220—91.)



The combination with the sheet metal display box having a window through which its contents may be seen, of the loose, interior fitting, sealed food containing package made of paper rendered moisture proof, said interior package having one of its walls marked for cutting to conform to the window in the sheet metal box, and provided with means for performing the cutting act, consisting of a string threaded in the paper at the corners of the opening so as to perform such cutting in a continuous straight line along each side of the opening, substantially as specified.

1,194,173. RESILIENT WHEEL. LESLIE HARRINGTON, Chicago, Ill., assignor to American Resilient Wheel Company, Chicago, Ill., a Corporation of Delaware. Filed Feb. 26, 1915. Serial No. 10,727. (Cl. 152—45.)



1. In a resilient wheel, the combination of a hub housing, an axle bushing in and substantially concentric with the hub housing, flanges on the axle bushing and coöperating with the ends of the hub housing inclosing an annular space between the hub housing and axle bushing, bolts extending through the flanges substantially parallel with the axis of the axle bushing, inwardly extending lugs spaced apart around the inner surface of the hub housing, each lug having a perforation therein substantially parallel with the axis of the hub housing, and wire springs each having its central portion disposed in a loop and engaging one of said bolts and its end portions disposed in the perforations of two of the adjacent lugs on the interior of the hub housing.

2. In a resilient wheel, the combination of a hub housing, an axle bushing in and substantially concentric with the hub housing, flanges on the axle bushing and engaging the ends of the hub housing inclosing an annular space between the hub housing and axle bushing, bolts extending through the flanges substantially parallel with the axis of the axle bushing, inwardly extending lugs on the inner surface of the hub housing, each lug being shorter than the length of the hub housing and having a perfo-

ration therein parallel with the axis of the hub housing, and wire springs disposed around the annular space between the hub housing and the axle bushing each spring having its central portion engaging one of the bolts and its ends bent and disposed in the perforations of two of said lugs, said flanges serving to hold the end portions of the springs in said lugs.

3. In a resilient wheel, the combination of a hub housing, spokes and a felly supported thereby, an axle bushing in and substantially concentric with the hub housing, flanges on the axle bushing engaging the ends of the hub housing to inclose an annular space between the hub housing and axle bushing, bolts extending through the flanges substantially parallel with the axis of the axle bushing with their body portions spaced apart within the hub housing, inwardly extending lugs on the inner surface of the hub housing, each lug being shorter than the distance between the end plates or flanges of the hub housing and having each a perforation therein parallel with the axis of the hub housing, and wire springs disposed around the annular space between the hub housing and the axle bushing, each spring having its central portion coiled around one of the said bolts and with its terminals bent and disposed in the perforations of two adjacent spaced lugs, said flanges being adapted to prevent withdrawal of the end portions or trunnions from said lugs and said springs being arranged peripherally around the said hub housing so that terminals of adjacent springs enter each of the perforations in said lugs from the opposite ends thereof.

4. In a resilient wheel, the combination of a hub housing, an axle bushing in and substantially concentric with the hub housing, flanges on the axle bushing coöperating with the ends of the hub housing inclosing an annular space between the hub housing and the axle bushing, bolts extending through the flanges substantially parallel with the axis of the axle bushing, radial inwardly extending lugs spaced apart on the interior surface of the hub housing, each lug having a perforation therein substantially parallel with the axis of the hub, and a spring comprising an integral rod or bar of spring metal formed at its terminals with trunnions extending angularly to the adjacent body portions of the spring and being adapted to coöperate with the perforations in said spaced lugs, there being a coil or helix of a single loop formed intermediate the said angularly extending trunnions, said loop being adapted to encircle said bolts extending through and between said flanges, and helices or coils containing a plurality of loops formed intermediate the first said single loop coil or helix and said terminal trunnions.

5. In a resilient wheel, the combination of a hub housing, an axle bushing in and substantially concentric with the hub housing, flange plates on the axle bushing spaced apart and arranged to coöperate with the ends of the hub housing for inclosing an annular space between the hub housing and the axle bushing, a plurality of bolts extending between the said flanges with their terminals anchored in said flanges and being spaced peripherally around the axle bushing within said housing each of said bolts being provided with terminals of less diameter than the body portions thereof thereby providing shoulders for engaging the said flanges on the axle bushing, a plurality of spaced lugs on the interior periphery of the housing, each lug having a perforation therein substantially parallel with the axis of the wheel, and a plurality of springs each comprising an integral rod or bar of spring metal formed at its terminals with trunnions extending angularly to the adjacent body portions of the spring, the said trunnions being disposed in the perforations of said lugs, a coil or helix formed intermediate the said angularly extending trunnions of the spring and surrounding the body portions of the said bolts and being held in position thereby on the interior of the housing, there being helices or coils of a plurality of loops formed intermediate the first said coil or helix and said trunnions, the last said coils or helices being free to move bodily during the variable movements of the branches of the springs between said bolts and trunnions.

[Claims 6 and 7 not printed in the Gazette.]

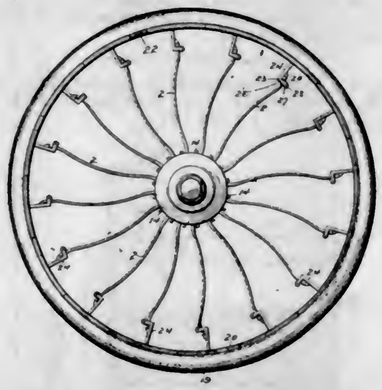
1,194,174. AUTOGRAPHIC REGISTER. EDWARD P. HARRIS, Superior, Nebr. Filed Dec. 7, 1915. Serial No. 65,581. (Cl. 11—36.)



1. In an autographic register, the combination of chambered end supports formed with spool receiving slots open at the upper edges thereof, a writing bed supported at an elevation thereby, displaceable writing bed extensions forming covers for said chambered supports and being spaced in relation to the writing bed to provide adjacent to one end of the register a slot through which a plurality of record webs may be passed, and adjacent to the other end of the register a slot through which one of the webs may be drawn, the bed being formed with an additional slot through which one of the webs may pass in order that said webs may be separated from each other.

2. In an autographic register, the combination of chambered end supports formed with spool receiving slots open at the upper edges thereof, a writing bed supported at an elevation thereby, web delivery and receiving spools journaled in said slots, displaceable writing bed extensions forming covers for said chambered supports, and upper and lower feed rolls between which the record webs pass, said feed rolls being of equal diameter and being geared together for simultaneous rotation.

1,194,175. RESILIENT WHEEL. OWEN L. HARRISON, Coleta, Ill. Filed May 18, 1914. Serial No. 839,392. (Cl. 152—29.)



1. A wheel comprising a hub, a resilient rim free to be depressed at any point, blocks rigidly secured to said rim, slightly bowed spring spokes connected with the hub, and connections between the outer ends of said spokes and the fixed blocks, whereby the spokes will be retained under tension, said connections constructed to permit longitudinal play of the spokes when considerable depression in the rim occurs.

2. In a wheel, the combination with a hub and a resilient rim free to be depressed at any point, of blocks secured to said rim, and spring spokes secured to the hub and having pivotal and also sliding connections with said blocks.

3. In a wheel, the combination with a hub, of a resilient rim free to be depressed at any point, blocks secured to and projecting inwardly therefrom, said blocks having spaced shoulders projecting laterally therefrom and also having laterally projecting lugs above said shoulders, and spring spokes secured to the hub and having heads at their outer ends normally resting upon the shoulders of the block and under the lugs on the latter.

4. In a wheel, the combination with a hub, of a resilient rim free to be depressed at any point, blocks secured to and projecting inwardly from said rim, said block having spaced shoulders projecting laterally therefrom and also having laterally projecting lugs above said shoulders, spring spokes secured to the hub and having contracted outer end portions entering between the shoulders of the block, heads on said contracted portions of the spokes and normally resting on the shoulders of the blocks and under the lugs on said blocks, and removable pins connecting said shoulders.

5. In a wheel, the combination of a resilient rim, a hub comprising flanged disks having radial grooves, sheet spring spokes connected with the resilient rim, connector plates movable in the radial grooves of the hub disks and removably connected with the spokes, each connector plate having a lug, a screw threaded through each lug and projecting freely through the flange of one of the hub disks, and collars on said screws to engage the inner face of said flange.

[Claim 6 not printed in the Gazette.]

1,194,176. IMPRESSION COMPOSITION. ARTHUR E. HEALY, New York, N. Y. Filed Feb. 19, 1915. Serial No. 9,303. (Cl. 106—34.)

1. An impression material comprising a mixture of plaster of Paris and starchy material in the proportions of approximately four to one, and sodium chlorid in the approximate proportion by weight of one unit of sodium chlorid to fifty units of plaster of Paris.

2. An impression material comprising a mixture of plaster of Paris and starchy material in the proportions of approximately four to one, and sodium chlorid in the approximate proportion by weight of one unit of sodium chlorid to fifty units of plaster of Paris, and a suitable quantity of flavoring and coloring material.

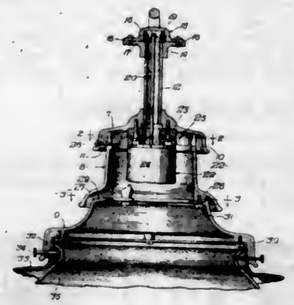
3. A composition for impression material, consisting of plaster of Paris 50 lbs., rice flour 6 lbs., cornstarch 6 lbs., washing starch 2 lbs., sodium chlorid 1 lb., color (vermilion) 1 oz., flavor (synthetical oil of wintergreen) ½ fluid oz.

1,194,177. CUSHION-TIRED WHEEL. ALBERT H. HENDERSON, Baltimore, Md., assignor to The Henderson Rubber Company, Baltimore, Md., a Corporation of Maryland. Filed Aug. 14, 1911. Serial No. 644,061. (Cl. 152—1.)



A resilient cushion tire having a central annular cavity in its inner side and a bead on each side of the mouth of said cavity projecting outwardly from the edges of the tire, said cavity being approximately V-shaped in cross section with curved apex extending into the body of the tire substantially to the center thereof, and symmetrically curved walls diverging toward said beads and continuous with the surfaces thereof, said divergence gradually lessening the thickness of the tire in the direction of the beads, combined with a metallic rim having at each edge an inwardly bent portion adapted to clamp a bead of the tire, and a sinuous tire-supporting part comprising a central curved portion and at each side thereof a reversely curved part continuing said central curved portion and also uniting with one of said inwardly bent edge portions whereby, under varying loads, the tire will be compressed more or less and the walls of said cavity caused to approach each other, and under maximum load will bear upon and be supported directly by the curved portion of the rim surface.

1,194,178. LIGHT-FIXTURE. WILLIAM D. HERWIG, Jr., Chicago, Ill. Filed June 23, 1915. Serial No. 35,772. (Cl. 240—78.)



1. In a sectional fixture, the combination of a cap, a conduit extending upward therefrom, an electric light socket mounted on the lower face of said cap, wires extending through the conduit and connected to the socket, the cap having a downwardly depending peripheral flange, a sleeve having its upper portion serrated and of smaller periphery than the said flange and seated inside of the flange of the cap, means for securing the sleeve to the said flange, there being a peripheral flange on the lower portion of the sleeve, a shade holding ring having its upper portion of smaller size than the flange on the sleeve and seated inside of said flange, means for securing the shade holding ring in such position, there being a downwardly depending peripheral flange on the shade holding ring, and means for securing a globe in position on said flange.

2. In a sectional fixture, the combination of a cap, a holder mounted therein for the accommodation of a lighting element, the cap having its upper portion water-tight, there being a downwardly depending peripheral flange on the cap, a sleeve having its upper portion serrated and of smaller dimension than said flange and seated inside of the flange, the flange projecting below the serrations, means for securing the sleeve in such position, there being a downwardly depending peripheral flange on the lower portion of the sleeve, a shade holding ring having its upper portion of smaller dimension than the said flange, and mounted inside of the said flange, means for securing the shade holding ring in such position, the flange on the sleeve extending below the upper edge of the shade holding ring, there being a downwardly depending flange on the shade holding ring, and means for securing a globe to the said flange.

3. In a sectional fixture, the combination of a cap having its upper portion water-tight, a downwardly depending peripheral flange on said cap, means for securing a lighting-element to the under portion of said cap, a sleeve having its upper portion serrated and of smaller dimension than the said flange and seated inside of said flange, the flange extending below the serrations of the sleeve, and a peripheral flange downwardly depending from the lower portion of the sleeve.

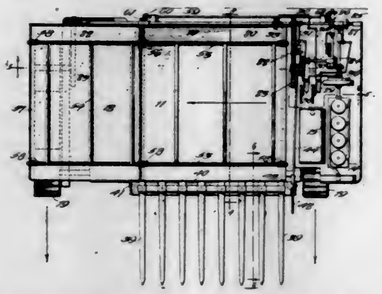
4. In a sectional fixture, the combination of a cap having its upper portion water-tight, a downwardly depending peripheral flange on said cap, means for securing a lighting element to the under portion of said cap, a sleeve having its upper portion serrated and of smaller dimension than the said flange and mounted inside of the flange, the flange depending below the said serrations, a downwardly depending flange on the sleeve, a plurality of separated lugs downwardly extending from the under surface of said

flange and a downwardly depending element secured to said lugs, there being a ventilating opening between said element and the flange and lugs.

5. In a sectional fixture, the combination of a cap having its upper portion water-tight, a downwardly depending peripheral flange on said cap, a plurality of inwardly extending lugs on said flange, means for securing a lighting element within said cap, a sleeve having its upper portion serrated and of smaller dimension than the said flange and seated between the said lugs, means for securing the sleeve to said lugs, the flange depending below the serrations of the sleeve, a downwardly depending peripheral flange on the lower portion of the sleeve, and a plurality of downwardly depending lugs on the lower surface of said flange.

[Claim 6 not printed in the Gazette.]

1,194,179. HAY-LOADING MACHINE. CLEVELAND HILL, Merrillville, Cal. Filed Oct. 9, 1915. Serial No. 55,086. (Cl. 56—62.)



1. A loading machine comprising a frame, propelling devices therefor, means for operating said propelling devices independently of each other, means for gathering and transferring a load onto said frame, and means including a common source of power for actuating the first and last named means independently of each other, said gathering and transferring means being capable of transporting a load while the propelling means are inactive.

2. A loading machine comprising a frame, a plurality of gathering fingers pivoted thereto and normally in a substantially horizontal position, a segmental gear associated with said fingers, a worm shaft for oscillating said gear to raise and lower said fingers, a conveyer arranged transversely of said frame and adapted to carry the load to the delivery end thereof, and reversible mechanism for operating said shaft.

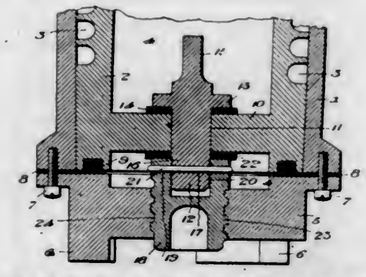
3. In a loading machine comprising a frame including a central loading platform, an elevated supporting platform at one end thereof, tractors for propelling said frame, a source of driving power mounted upon said elevated platform, a shaft extending transversely of the rear of the machine and operated by said source of power, driving connections between said shaft and said tractors, a clutch associated with said shaft, a sleeve associated with said shaft and carrying one of the members of said clutch whereby the tractor at one end of the machine is operated when the members of the clutch are in engagement, a second clutch mounted upon said shaft and adapted to operate the other of the tractor members, and means for operating each of said clutches whereby said tractors may be simultaneously or independently operated.

4. A loading machine comprising a frame, a plurality of loading fingers pivoted thereto, a segmental gear associated with said fingers, a worm shaft for operating said gear to raise and lower said fingers, a loading platform for receiving material from said fingers when the latter are raised, an endless conveyer movable transversely of said platform, shafts for supporting said conveyer extending longitudinally of said platform, another shaft extending transversely of the rear of said platform and connected to one of the first-named shafts, a source of driving power carried by said frame and including a main driving shaft, an auxiliary shaft connected to said main driving shaft and extending parallel thereto, and gear connections between said auxiliary shaft and said transversely arranged shaft for driving the latter to operate the conveyer supporting shafts.

5. A loading machine comprising a frame, a loading platform associated with said frame, an endless conveyer movable transversely of said platform, shafts for supporting said conveyer extending longitudinally of said platform, another shaft extending transversely of the rear of said platform and connected to one of the first-named shafts, a source of driving power carried by said frame and including a main driving shaft, an auxiliary shaft connected to said main driving shaft and extending parallel thereto, and gear connections between said auxiliary shaft and said transversely arranged shaft for driving the latter to operate the conveyer supporting shafts.

[Claim 6 not printed in the Gazette.]

1,194,180. LIQUID-COOLER. JOHN W. HURLEY, Washington, D. C. Filed Apr. 22, 1915. Serial No. 23,089. (Cl. 257—250.)

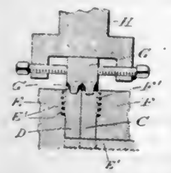


1. In a liquid cooler, the combination with inner and outer shells, one of which has a fluid circulating channel, the outer shell being provided with a bottom and the inner shell having an internal portion or member, of a single rotary connector permanently mounted in the internal portion or member of the inner shell and bodily carried by and removable with said inner shell, said connector having means to engage the bottom of the outer shell and arranged at its inner end in the interior of the inner shell in position to be turned by means inserted inside the inner shell.

2. In a liquid cooler, the combination with inner and outer shells, one of which has a fluid circulating channel, the outer shell being provided with a foot-piece or bottom having a screw-threaded opening, the inner shell being provided with an internal portion or bridging member, of a turning member journaled in the internal portion or bridging member and having an upper flange or collar and a portion adapted for engagement by turning means and at its lower end provided with screw-threads, a locking member having external screw-threads engaging the screw-threaded opening in the foot-piece or bottom and having other screw-threads engaging those on the lower end of the turning member, a pin connecting the turning member and the locking member, and washers interposed between the flange or collar and the bridging member and between the locking member and the bridging member, said parts of the connector being bodily carried by the inner shell.

1,194,181. METHOD OF PRODUCING MATRICES. WILLIAM H. KAISER, Floral Park, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed June 30, 1915. Serial No. 37,134. (Cl. 76—107.4.)

1. The method of producing matrices which consists in assembling a plurality of matrix bodies side by side in a suitable support, holding said matrix bodies together with their adjacent faces in firm contact with each other, and subjecting the several matrix bodies simultaneously to a punching action.

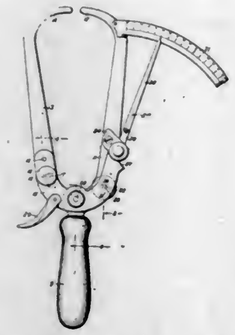


2. The method of producing matrices which consists in assembling a plurality of matrix bodies side by side in a suitable support, holding said matrix bodies together with their adjacent faces in firm contact with each other, and subjecting the several matrix bodies to the action of a single integral punch.

3. The method of producing matrices which consists in assembling a plurality of matrix bodies side by side in a suitable support with their edges exposed, holding said matrix bodies firmly together by a pair of clamping jaws formed with relief cavities in their active or engaging faces, and subjecting the several matrix bodies simultaneously to a punching action; whereby the metal displaced by the punching action will flow into the relief cavities of the clamping jaws and away from the region of contact between the matrix bodies.

4. The method of producing matrices, which consists in assembling a plurality of matrix bodies side by side in a suitable support with their edges exposed, applying a clamping pressure to the matrix bodies to hold their adjacent faces in firm contact with each other, and punching a single character in the exposed edges of the matrix bodies.

1,194,182. CALIPERS. LADISLAV KAPLAN, Clinton, Conn. Filed Jan. 4, 1916. Serial No. 70,146. (Cl. 33—148.)

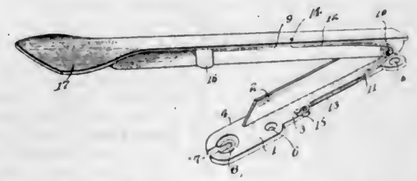


1. Calipers comprising a stationary arm; a movable arm; means pivotally connecting said arms intermediate the ends of said movable arm; a calibrated blade fixedly mounted on said stationary arm and extending outwardly therefrom; a pointer pivotally mounted on said stationary arm with the free end of said pointer moving in juxtaposed relation with said blade; means for rotating said pointer in correspondence with the movement of said movable arm, said means embodying a wheel supporting said pointer; means on the adjacent end of said movable arm rotatively engaging said wheel; a handle fixedly mounted on said stationary arm; a trigger mounted on said movable arm in juxtaposed relation to said handle for rotating said movable arm on its pivotal mounting; and means mounted on one of said arms for engaging the other of said arms to regulate the spacing of the free ends thereof.

3. Calipers comprising a stationary arm; a movable arm; means pivotally connecting said arms intermediate the ends of said movable arm; a calibrated blade fixedly mounted on said stationary arm and extending outwardly therefrom; a pointer pivotally mounted on said stationary arm with the free end of said pointer moving in juxtaposed relation with said blade; means for rotating said pointer in correspondence with the movement of said movable arm, said means embodying a wheel supporting said pointer; means on the adjacent end of said movable arm rotatively engaging said wheel; a handle fixedly mounted on said stationary arm; a trigger mounted on said movable arm in juxtaposed relation to said handle for rotating said movable arm on its pivotal mounting; and means for engaging said arms to regulate the spacing of the free ends thereof, said means embodying a cam rotatively mounted on said stationary arm, and a pin on said movable arm, said pin extending into the path of said cam for engagement therewith.

4. Calipers comprising a stationary arm; a movable arm; means pivotally connecting said arms intermediate the ends of said movable arm; a calibrated blade fixedly mounted on said stationary arm and extending outwardly therefrom; a pointer pivotally mounted on said stationary arm with the free end of said pointer moving in juxtaposed relation with said blade; means for rotating said pointer in correspondence with the movement of said movable arm, said means embodying a wheel supporting said pointer; means on the adjacent end of said movable arm rotatively engaging said wheel; a handle fixedly mounted on said stationary arm; a trigger mounted on said movable arm in juxtaposed relation to said handle for rotating said movable arm on its pivotal mounting; means for engaging said arms to regulate the spacing of the free ends thereof, said means embodying a cam rotatively mounted on said stationary arm, and a pin on said movable arm, said pin extending into the path of said cam for engagement therewith; and a wheel rigidly connected with said cam in juxtaposed relation to the handle of said calipers for moving said cam.

1,194,183. NAIL-LEATHER-HEADING PRESS. FRANK E. KEIFFER, Manheim, Pa. Filed May 25, 1915. Serial No. 30,377. (Cl. 1—47.)



A nail leather heading press embodying a fixed base formed with a recess in the upper face thereof to contain and position a washer and also provided with a slot intersecting said recess, and a presser lever pivotally connected to said base at a point remote from said recess and provided with a nail head centering recess which when the lever is depressed lies directly over the recess in the base, said lever projecting at its free end beyond the base.

1,194,184. PLASTIC COMPOSITION. THOMAS DANIEL KELLY, Southend-on-Sea, England. Filed Aug. 19, 1911. Serial No. 644,932. (Cl. 106—39.)

A method of producing a substance for use as a substitute for india rubber or as a cementing medium, consisting of boiling plants, seeds or seed husks containing mucilaginous or resinous matter with alkali, producing a mucilaginous or resinous substance, and mixing said substance with vegetable oils and hydraulic cement.

1,194,185. ROUGE-PAD. WILLIAM G. KENDALL, Newark, N. J., assignor of one-half to Irvin S. Zeluff, Long Island City, N. Y. Filed June 15, 1915. Serial No. 34,303. (Cl. 132—28.)



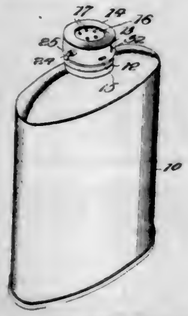
1. A rouge pad including a base having a face surrounded by an upwardly and inwardly directed peripheral flange adapted to lockingly engage rouge pressed against the face of the pad.

2. A rouge pad including a base having a face surrounded by an upwardly and inwardly directed peripheral flange adapted to lockingly engage rouge pressed against the face of the pad, said pad being formed of aluminum.

3. A rouge pad including a base having a face surrounded by an upwardly and inwardly directed peripheral flange adapted to lockingly engage rouge pressed against the face of the pad and having additional rouge anchoring means.

4. A rouge pad including a base having a face surrounded by an upwardly and inwardly directed peripheral flange adapted to engage rouge pressed against the face, the base within the boundary of the flange being upstruck to provide an annular shoulder terminating in a laterally directed flange.

1,194,186. CAP FOR RECEPTACLES. WILLIAM G. KENDALL, Newark, N. J. Filed July 13, 1915. Serial No. 39,693. (Cl. 221—62.)

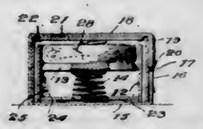


1. A sifter cap for containers including a cap body having a top formed with perforations and a wall outstruck to provide an interior seat formed with a slot, a sliding plate mounted in the cap and formed with perforations adapted, in one position of the plate, to aline with those of the cap, means normally holding the plate with its perforations out of alinement with those of the cap, a tongue extending from the plate through the slot, whereby the plate may be operated, and a ring secured around the tongue to engage in the seat when the plate is in normal position.

2. A sifter cap for containers including a cap body having a perforated top, a plate slidably mounted in the body and formed with perforations adapted, in one position of the plate, to aline with those of the top, a tongue extending from the plate through the body of the cap, a second tongue depending from the plate within the cap, the cap, at either side of the second tongue, being formed with interior depressions, and a helical spring surrounding the depending tongue and having opposed V-shaped spring arms, the free ends of which seat in the depressions, the spring holding the plate with its perforations out of alinement with those of the cap body.

3. A sifter cap for containers including a cap body having a perforated top, a plate slidably mounted in the body and formed with perforations adapted in one position of the plate to aline with those of the top, means extending through the body of the cap, whereby the plate may be reciprocated, a tongue depending from the plate within the cap, the cap at either side of the tongue being formed with interior depressions, and a helical spring surrounding the depending tongue and having opposed V-shaped arms, one side of each of which extends substantially tangential to the helix of the spring and the free terminals of which are bent to extend parallel to the axis of the helix and to seat in the depressions of the cap, whereby the spring will hold the plate in engagement with the inner face of the top of the cap and in a position such that its perforations are out of alinement with those of the cap.

1,194,187. ROUGE-BOX. WILLIAM G. KENDALL, Newark, N. J. Filed Aug. 5, 1915. Serial No. 43,813. (Cl. 132—28.)



1. A rouge package including a box having a hinged cover, a false bottom within the box and spaced from the bottom thereof and provided with an opening, a rouge pad within the box, and a helical spring having one convolution passed through the opening in the false bottom and anchored beneath the bottom, the spring being connected at its opposite end to the rouge pad.

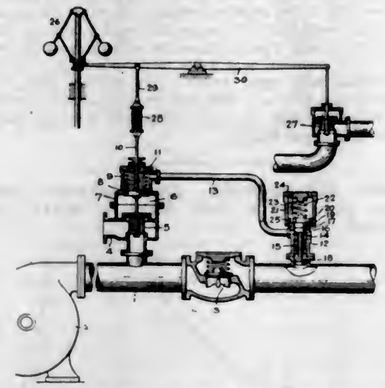
2. A rouge package including an outer box having a hinged cover, an inner box positioned within the outer box with its bottom spaced above that of the outer box and provided with an opening, a rouge pad formed with an annular undercut shoulder upon its bottom, and a helical spring having a terminal convolution sprung under the shoulder and with its other end passed through the opening in the false bottom.

3. A rouge package including a box having a true and a false bottom spaced apart, the false bottom being formed with an opening, a helical spring having one end passed through the opening and anchored below the false bottom, a rouge pad positioned in the box, and a ring of wire secured to the lower face of the rouge pad to engage the upper end of the spring.

4. A rouge package including a box having a hinged cover, an inner box centrally disposed in the first box with its peripheral wall spaced from the walls of the first box, the second box having a double bottom formed centrally with openings, the opening in the upper bottom being more reduced than that in the lower bottom, a rouge pad fitting within the inner box and guided by its wall, and a helical spring connected at one end to the bottom of the pad and having a terminal convolution passed through the smaller opening of the upper bottom member of the inner box and seating in the larger opening of the lower bottom member of the inner box.

1,194,188. DEVICE TO PREVENT SURGING IN CENTRIFUGAL COMPRESSORS. WALTER KIESER, Charlotenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 11, 1914. Serial No. 876,694. (Cl. 230—24.)

1. The combination with a motor driven centrifugal compressor, having an admission conduit and a discharge conduit, of a blow-off valve in the discharge conduit, means connected with the blow-off valve for opening it upon a predetermined increase in pressure, a regulator for the motor, and means associated therewith and operated upon the opening of the valve for moving the regulator to decrease the speed of the motor.



2. Means to prevent the surging of a motor-driven centrifugal air compressor, comprising a blow-off valve in the delivery pipe, a movable piston controlling said valve, and exposed to the pressure in said pipe, a device responsive to an increase in pressure in said pipe, and means controlled thereby for unbalancing the pressure on said piston.

3. Means for preventing surging in a motor-driven centrifugal air compressor, comprising a blow-off valve in the delivery pipe, a movable piston controlling said valve and exposed on both sides to the air pressure in said pipe, a vent on the side away from the valve, a valve controlling said vent, and a differential piston for moving said valve suddenly and exposed on one side to the pressure in said pipe.

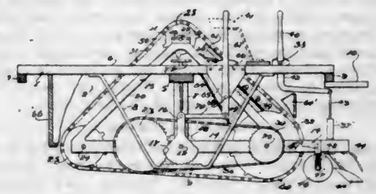
4. Means for preventing surging in a motor-driven centrifugal air compressor, comprising a blow-off valve in the delivery pipe, a movable piston controlling said valve and exposed on both sides to the air pressure in said pipe, a vent on the side away from the valve, a valve controlling said vent, a differential piston for moving said valve suddenly and exposed on one side to the pressure in said pipe, and means for insuring rapid movement of the differential piston in opening the valve and for allowing it to move freely in closing.

5. Means for preventing surging in a motor-driven centrifugal air compressor, comprising a blow-off valve in the delivery pipe, a movable piston controlling said valve and exposed on both sides to the air pressure in said pipe, a vent on the side away from the valve, a valve controlling said vent, a differential piston for moving said valve suddenly and exposed on one side to the pressure in said pipe, means for insuring rapid movement of the differential piston in opening the valve and for allowing it to move freely in closing comprising a hole in the larger piston, and a stationary pin adapted to fill said hole when the piston has moved far enough to permit the air pressure to act upon it.

[Claims 6 to 8 not printed in the Gazette.]

1,194,189. BEET-HARVESTING MACHINE. HENRY S. KINCAID, Bellevue, Mich. Filed July 7, 1915. Serial No. 38,441. (Cl. 55—108.)

1. In a beet harvesting machine a frame, supports, including a traction wheel, for said frame, a shaft turned by the traction wheel, a counter shaft geared to the shaft of the traction wheel and turned reversely thereby, an endless traveling carrier, endless traveling puller chains arranged on opposite sides of the vertical plane of the carrier and provided with beet puller plates, direction elements for the endless carrier, direction elements for the puller chains, and power connections between the endless carrier, endless puller chains, and the countershaft so that said carrier and endless puller chains are driven from the countershaft.



2. In a beet harvesting machine a frame, a driving shaft mounted in bearings in the frame and provided with a traction wheel, a countershaft geared to the driving shaft and turned reversely thereby, said counter shaft having sprocket wheels, endless puller chains arranged in spaced relation and in vertical planes and provided on their opposing sides with beet puller plates, shafts mounted in the frame and having sprocket wheels engaged by said puller chains, one of said shafts also having sprocket wheels, chains connecting said sprocket wheels with those of the counter shaft, a sprocket wheel on said counter shaft, and arranged midway between the puller chains, a direction sprocket wheel also mounted for rotation on said frame and arranged between the puller chains and an endless traveling carrier connecting the last-named sprocket wheels and arranged between the puller chains, one lead of said endless carrier being arranged in spaced relation to and between leads of said puller chains.

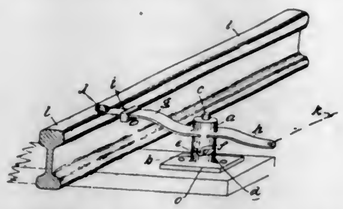
3. In a beet harvesting machine a frame, a driving shaft mounted in bearings in the frame and provided with a traction wheel, a countershaft geared to the driving shaft and turned reversely thereby, said counter shaft having sprocket wheels, endless puller chains arranged in spaced relation and in vertical planes and provided on their opposing sides with beet puller plates, shafts mounted in the frame and having sprocket wheels engaged by said puller chains, one of said shafts also having sprocket wheels, chains connecting said sprocket wheels with those of the counter shaft, a sprocket wheel on said counter shaft, and arranged midway between the puller chains, a direction sprocket wheel also mounted for rotation on said frame and arranged between the puller chains and an endless traveling carrier between the last named sprocket wheels and arranged between the puller chains, one lead of said endless carrier being arranged in spaced relation to and between leads of said puller chains, the said frame being also provided at its front end with plows to operate on opposite sides of the beet row.

4. In a beet harvesting machine a frame, a driving shaft mounted in bearings in the frame and provided with a traction wheel, a countershaft geared to the driving shaft and turned reversely thereby, said counter shaft having sprocket wheels, endless puller chains arranged in spaced relation and in vertical planes and provided on their opposing sides with beet puller plates, shafts mounted in the frame and having sprocket wheels engaged by said puller chains, one of said shafts also having sprocket wheels, chains connecting said sprocket wheels with those of the counter shaft, a sprocket wheel on said counter shaft, and arranged midway between the puller chains, a direction sprocket wheel also mounted for rotation on said frame and arranged between the puller chains and an endless traveling carrier between the last named sprocket wheels and arranged between the puller chains, one lead of said endless carrier being arranged in spaced relation to and between leads of said puller chains, the said frame being also provided at its front end with plows to operate on opposite sides of the beet row, and being further provided with lifting arms arranged in front of said plows.

5. In a beet harvesting machine a frame, endless puller chains arranged in spaced relation and in vertical planes

and having upwardly and rearwardly inclined front leads, supporting devices for said puller chains, beet digging devices carried and operated by said puller chains, an endless carrier arranged in spaced relation to, between, and in rear of the front leads of the puller chains, supporting devices for said endless carrier, means to operate said puller chains and endless carrier and cause their front leads to move upwardly, a cutter arranged above the endless carrier and to which beet tops are presented between the carrier and the puller chains and a revoluble element having arms to move across the cutter and coact therewith to cause the cutter to cut off the beet tops.

1,194,190. AUDIBLE SIGNALING DEVICE FOR RAILWAY-WORKING. EDWIN KIRK, London, England. Filed Dec. 22, 1914. Serial No. 878,532. (Cl. 246—16.)



1. A device of the character substantially as described, comprising a lower member having an enlarged bottom portion, an upper member mounted concentrically and rotatably upon said lower member, an arm transverse said upper member and fixed thereto, detonator means upon said transverse arm and means whereby said upper member is raised and lowered when rotated upon said lower member, said means including an abutment to limit the movement of the arm to insure the detonator being properly positioned directly on the surface of the track.

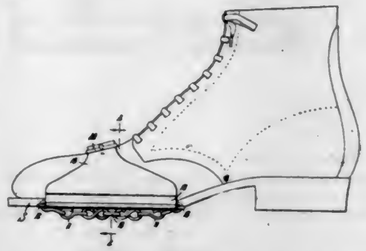
2. A device of the character substantially as described comprising a lower member having an enlarged bottom portion, an upper member mounted concentrically and rotatably upon the upper reduced portion of said lower member and resting upon said enlarged portion, an arm fixed transverse said upper member and carried thereby, and means whereby said upper member and arm are raised and lowered and stopped at a determined point, said stopping means comprising a lug on the upper member and a lug on the lower member.

3. A device of the character substantially as described comprising a lower member having an enlarged bottom portion, said enlarged portion having a section of its upper edge downwardly sloped and a portion having a vertical wall, an upper member mounted concentrically and rotatably upon the reduced portion of said lower member and bearing upon said enlarged portion, means on said upper member having an edge coöperating with said sloped upper edge of said enlarged portion to raise and lower the upper member when the latter is rotated, said lug having a vertical wall which engages the vertical wall on the lower portion to properly position a detonator on a track, and means on said upper member for holding and placing a detonator.

4. A device of the character substantially as described comprising a lower member having an enlarged bottom portion, said enlarged portion having a section of its upper edge downwardly sloped and terminating at a vertical wall formed in said portion, an upper member mounted concentrically and rotatably upon the reduced portion of said lower member and bearing upon said enlarged portion of said member, a projection depending from said upper member coöperating with the sloping edge of said lower member whereby said upper member is raised or lowered upon rotation, said projection having a vertical wall which coöperates with the vertical wall on the lower member whereby to stop the upper member whereby to properly locate the detonator on a track, and arms carried by said upper member for holding and positioning detonators.

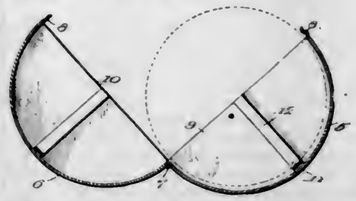
5. A device of the character substantially as described comprising a lower member having an enlarged bottom portion, said enlarged portion having a section of its upper edge downwardly sloped and a vertical wall, an upper member mounted concentrically and rotatably upon the reduced portion of said lower member and bearing upon the enlarged portion of said member, a projection depending from said upper member coöperating with the sloping edge of said enlarged bottom portion, said projection having a vertical wall which coöperates with the vertical wall on the lower member, said walls forming a stop, a spring for pressing said upper member downwardly upon said bottom portion normally with said projection at the lowest point of said sloped edge and detonator carrying means fixed to said upper member.

1,194,191. ICE-CREEPER. JOHN KIRKWOOD, Lenox, Mass. Filed Mar. 8, 1916. Serial No. 82,835. (Cl. 36—62.)



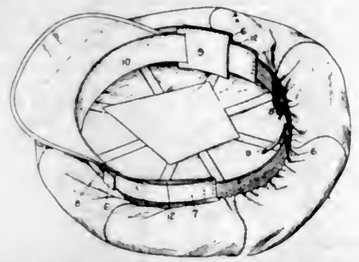
In an ice creeper, the combination of a pair of metallic wings each comprising an upstanding metal plate and a bar secured to the lower edge thereof, each bar conforming to an edge of the sole along which it is adapted to extend and having eyes at its ends the upper edge of each wing having an outwardly and downwardly projecting flange, a binding strap having its lower edge projected upwardly and clamped beneath the aforesaid flange of each wing and extending thence outwardly and upwardly thereover, and link means extending from the eyes of the bars of the wings across the bottom of the sole.

1,194,192. COIN-HOLDER. HINTON G. KITTRELL, Mountpleasant, Tenn. Filed Apr. 30, 1915. Serial No. 24,876. (Cl. 133—9.)



A coin holder comprising a pair of semi-tubular body sections hingedly connected together along adjacent longitudinal edges, resilient tongues provided along the opposite longitudinal edges of the body sections and adapted to coact with each other when the body sections are moved into engagement with each other for maintaining said body sections in closed position, a semi-circular closure plate provided at each end of both body sections, said plates adapted when the body sections are folded together, to form closures at each end of the coin holder, a strip of compressible material provided longitudinally of each body section within the same, a strip of compressible material provided on each closure plate on the inner face of the same, and means whereby the contents of the coin holder may be viewed.

1,194,193. ADJUSTABLE SWEAT-BAND FOR HEADWEAR. LOUIS KRONTHAL, New York, N. Y. Filed Sept. 22, 1915. Serial No. 51,994. (Cl. 2—106.)



1. In a headwear, an expansible band and an endless sweat band formed of sections of moisture-proof material, said sections being associated with the expansible band, said sweat band sections including means for compensating for the increase or decrease in size of the expansible band.

2. In a headwear, an endless expansible band and an extensible sweat band of moisture-proof material associated with the expansible band, substantially as and for the purposes set forth.

3. In a headwear, an expansible band formed of inelastic and elastic sections, and sweat band of sweat-proof material sections each secured to the inelastic section of the expansible band, said sections of the sweat band having interengaging means whereby they can move relatively to one another when the size of the expansible band is varied.

4. In a headwear, an expansible band comprising an inelastic portion, the ends of which are secured by an elastic portion, said inelastic and elastic portions being secured to the body of the headwear, a second inelastic portion, the ends of which are secured by an elastic portion encompassing said first mentioned inelastic and elastic portions, said second inelastic portion being disposed symmetrically to the first inelastic portion, means securing the second inelastic portion to the central part of the first mentioned elastic portion; and a sweat band section secured to each inelastic portion at the lower edges thereof, one of said sweat band sections having slits at the ends thereof through which the ends of the other sweat band section projects.

1,194,194. ELECTRIC-CIRCUIT-CONTROLLING DEVICE. WILLIAM L. KUBACH and EVAN J. EDWARDS, Cleveland, Ohio, assignors to General Electric Company, a Corporation of New York. Filed Feb. 23, 1915. Serial No. 9,812. (Cl. 175—268.)



1. In a circuit controlling device, a substantially vertically disposed solenoid, a stationary contact beneath said solenoid, a hollow member slidably mounted in said solenoid and having at its lower end a contact normally held by gravity in engagement with said stationary contact, and a magnetic core within said member and adapted upon the passage of an abnormal current through said solenoid to strike said member and disengage said contacts.

2. In a circuit controlling device, a solenoid adapted to be substantially vertically disposed, a hollow member slidably supported in said solenoid and a core loosely supported upon the bottom of said member, the top of said member being so disposed as to be struck by said core upon the passage of an abnormal current through said solenoid, a stationary contact and a movable contact, and means whereby the latter is caused to follow the movement of the aforesaid hollow member.

3. In a circuit controlling device, a substantially vertically disposed solenoid, a tubular member slidably mounted in said solenoid, a core normally resting upon the bottom of said member and adapted to strike the top thereof upon the passage of an abnormal current through said solenoid, thereby moving the member upwardly in said solenoid, a contact carried by said tubular member, and a stationary contact normally supporting said tubular member and the elements carried thereby.

4. In a circuit controlling device, a substantially vertically disposed solenoid, a stationary contact, a movable contact biased to engage said stationary contact, a hollow member slidably mounted in said solenoid and operatively related to said movable contact, and a magnetic core normally resting on the bottom of said member and adapted to strike the top thereof upon the passage of an abnormal current through the solenoid whereby said contacts are disengaged.

5. In a circuit controlling device, a substantially vertically disposed solenoids, a stationary contact beneath said solenoid, a hollow member slidably mounted in said solenoid and having at its lower end a contact normally resting on said stationary contact, means whereby said contacts when separated are always biased to reëngage, and a magnetic core loosely mounted in said member and normally resting on the bottom thereof and adapted to strike the member and thereby move the member upwardly upon the passage of an abnormal current through said solenoid thereby effecting the disengagement of said contacts.

1,194,195. LIGHTNING-ARRESTER. RAY P. JACKSON, Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 31, 1913. Serial No. 798,514. (Cl. 175—30.)



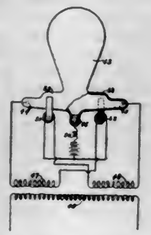
1. A protective device comprising a tubular condenser composed of alternate layers of insulating and conducting material, a non-inductive resistance element disposed in the opening thereof, inclosed thereby, and connected in shunt relationship thereto, a pair of spaced electrodes to form an air gap, and means to connect one terminal of the condenser to one of said electrodes.

2. A protective device comprising a tubular condenser, a non-inductive resistance element disposed in the opening thereof, inclosed thereby, and connected to said condenser to maintain it normally in a discharged state, a pair of spaced electrodes to form an air gap, means to connect one terminal of the condenser to one of aid electrodes, and means to connect the other terminal to ground.

3. A protective device comprising a condensive reactance element of tubular form and composed of alternate layers of insulating and conducting materials, a non-inductive resistance element disposed in the opening thereof and inclosed thereby, spaced electrodes to form an air gap, and means to connect corresponding terminals of the condensive and resistance elements to one of said electrodes and to ground.

4. A protective device comprising a condensive reactance element of tubular form and composed of alternate layers of conducting and insulating materials, a non-inductive resistance element inclosed by said condensive element and connected in parallel relationship therewith, adjustable spaced electrodes to form an air gap one of which is connected to the line conductor to be protected, and the other of which is connected to one terminal of said condensive reactance element, and means to connect the other terminal of the condensive reactance element to ground.

1,194,196. CURRENT-RECTIFIER. RAY P. JACKSON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 18, 1914. Serial No. 825,505. (Cl. 175—363.)

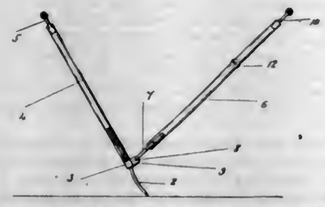


1. The combination with a vapor converter provided with a cathode and with a plurality of anodes, of a blowout magnet mounted adjacent to each anode and connected to be energized from the supply lead to another anode, said converter being provided with an arc blowout chamber adjacent to each anode.

2. The combination with a vapor converter embodying a cathode, a plurality of alternately active anodes and a condensing chamber, of a blowout magnet mounted adjacent to each anode and arranged to force an arc from the associated anode toward said condensing chamber, and connections for inserting the energizing winding of each magnet in series relation with the supply lead of another anode.

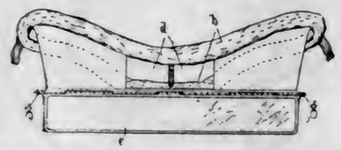
3. The combination with a transformer having a split secondary winding, of means for energizing the primary winding thereof, a vapor converter provided with two anodes and with a cathode, a connection from a terminal of one of said half windings to one of said anodes, a connection from a terminal of the other half winding to the other anode, connections from the remaining terminals of said half-windings to said cathode, and two blowout magnets, one of which is connected in each of said last-named connections, the magnet associated with each half winding being mounted to extinguish an arc from the anode connected to be energized from the other half winding.

1,194,197. STONE-SPREADER. JOSEPH M. JONES, Cardington, Ohio. Filed Mar. 25, 1916. Serial No. 86,621. (Cl. 55—2.)



In a stone spreader, a fork provided with a toothed crossbar having widely spaced lugs on one side, a main handle secured to the said crossbar, an auxiliary handle, and a pair of diverging arms having their upper ends secured to the auxiliary handle and having outwardly projecting pivots formed integral with their lower ends and pivoted in holes in the said lugs.

1,194,198. MOTOR-GOGGLES. HAY T. LOUCH, London, England. Filed Oct. 12, 1914. Serial No. 866,281. (Cl. 2—149.)



1. Motor goggles comprising in combination a framework, a fabric casing secured to said framework and forming with the lens a closed box-like structure with the exception of one or more apertures therein and a screen connected with the framing adjacent to the apertures and arranged at an angle relatively to the plane thereof.

2. Motor goggles comprising in combination a framework, a fabric casing secured to said framework and forming with the lens a closed box-like structure with the exception of an aperture therein and an adjustable screen secured to the framework adjacent to said aperture and arranged at an angle to the plane of the aperture.

3. Motor goggles comprising in combination a framework, a lens mounted in said framework, a fabric casing secured to said framework and forming with the lens a closed box-like structure with the exception of an aperture in the upper part of said fabric casing and an adjustable screen connected to said framework and arranged at an angle to the plane of said aperture.

4. Motor goggles comprising in combination a framework, a lens mounted in said framework, a fabric casing secured to said framework and forming therewith a closed box-like structure with the exception of an aperture in said fabric, a screen hingedly secured to said framework so that it may be arranged at any angle to the plane of said aperture and means for holding said screen in any desired angular position.

5. Motor goggles comprising a framework, a transparent plate mounted in said framework, a fabric casing secured to said framework and forming with said plate a closed box-like structure having an aperture in said casing, a screen hingedly secured upon a rod forming part of said framework so that it may be set at any desired angle to the plane of the aperture and right and left-hand screw-threaded nuts engaging correspondingly screw-threaded portions of said rod for holding the screen in any angular position in which it may be set.

1,194,199. CATTLE-STANCHION. WILLIAM LOUDEN and ALBERT H. NELLER, Fairfield, Iowa, assignors to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed June 5, 1914. Serial No. 843,272. (Cl. 119—149.)

1. In cattle stanchions, a pair of vertically disposed spaced apart bars hinged together at their lower ends, a pair of separable, horizontally disposed plates having their central and lower portions spaced apart and their upper edges brought together to form a housing, the upper end of one of said bars being secured between the plates under the housing and near one of the ends thereof, and the upper end of the other bar being slidable in the space between the plates, a toothed section of less length than the plates hinged at one end to the upper end of the slidable bar and its other end arranged to slide between the plates, and a latch to engage the toothed section and hold the bars in closed position.

2. In cattle stanchions, a pair of vertically disposed spaced apart members hinged together at their lower ends, a pair of horizontally disposed plates set side by side with an open space between their central and lower sides, and having inwardly extending ribs near one of the ends thereof, a pair of castings having outwardly disposed recesses adapted to embrace and slide on said ribs, secured to the upper end of one of the members, and having a series of holes in their upper ends, said castings being secured in position by a bolt passed through the plates and through one of the holes in the castings, the other member being slidable between the plates, and a latch mounted between the plates whereby the movable member will be held in closed position.



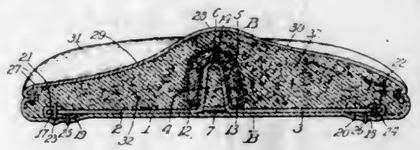
3. In cattle stanchions, a pair of vertically disposed spaced apart members hinged together at their lower ends, a pair of horizontally disposed plates set side by side with an open space between their central and lower sides, the upper end of one of the members being secured between said plates near one of the ends thereof, a pair of castings secured to the upper end of the movable member and their upper ends slidable between the plates, a toothed section hinged at its outer end to the upper end of said castings and slidable between the plates, a bolt passed through the central portion of the plates to abut the end of the toothed section and prevent it from moving farther inward, and a latch mounted between the plates so as to engage the toothed section, whereby the movable member will be held in closed position.

4. In cattle stanchions, a pair of vertically disposed spaced apart members hinged together at their lower ends, a pair of horizontally disposed plates set side by side with an open space between their central and lower sides and having a series of centrally located holes, the upper end of one of the members being secured between said plates near one of the ends thereof, a pair of castings secured to the upper end of the movable member, a section having a series of teeth hinged at its outer end to the upper end of said castings and slidable between the plates, a bolt inserted in one of the central holes in the plates to abut the end of the toothed section and prevent it from moving farther inward, and a latch mounted in between the plates so as to engage the tooth of the section corresponding to the hole where the bolt is set, whereby the movable member will be held in different positions with regard to the other member.

5. In cattle stanchions, a pair of vertically disposed spaced apart members hinged together at their lower ends, a pair of horizontally disposed plates set side by side with an open space between their central and lower sides, the upper end of one of the members being secured between said plates near one of the ends thereof, a pair of castings secured to the upper end of the movable member, a toothed section hinged at its outer end to the upper end of said castings and slidable between the plates, a latch to engage the toothed section, a bolt passed through the central portion of the plates to abut the end of the toothed section and prevent it from moving farther inward, the free end of the toothed section being fitted with outwardly projecting lugs and the adjacent ends of the plates being provided with inwardly projecting lugs adapted to come in contact with the lugs on the toothed section and arrest its outward movement.

[Claims 6 to 9 not printed in the Gazette.]

1,194,200. BED-PILLOW. LILLIAN CROCKETT LOWDER, Indianapolis, Ind. Filed June 9, 1915. Serial No. 33,028. (Cl. 5—15.)



1. A pillow comprising a thin flat foundation having two inclined side supports fixed thereon intermediate of its ends, the tops of the side supports being fixedly connected together, the end portions of the foundation having perforations therein; a tick inclosing the foundation and side supports, securing devices in said perforations and connected to the tick, a pad extending over and covering the top and the faces of the side supports and secured to the supports, and stuffing material filling the tick and covering the top of the foundation and the pad.

2. A pillow comprising a tick, a foundation in one portion of the tick and comprising two flat members secured upon the under portion of the tick, two head-supports connected to the members respectively and extending upward convergently each toward the other, an arch connected to the tops of the supports, and a tie-bar secured to the head-supports; a pad extending over and covering the arch and the head-supports and secured to the supports and the flat members of the foundation, and stuffing material filling the tick and covering the flat members of the foundation and the pad.

1,194,201. RESINOUS PRODUCTS AND METHOD OF PRODUCING SAME. JAMES P. A. MCCOY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 14, 1912. Serial No. 703,704. (Cl. 106—22.)

1. A process for the manufacture of resinous products which comprises mixing factis or oil rubber with phenol and hardening the resulting substance by the addition of formaldehyde and the application of heat and pressure.

2. A process for the manufacture of resinous products which comprises mixing phenol with a reaction product of oleaginous material and a sulfur chlorid and hardening the resulting material with formaldehyde.

3. The method of making a resinous product that comprises mixing factis with phenol and solidifying the resulting substance with formaldehyde.

4. A process for the manufacture of resinous products which comprises mixing a reaction product of an oleaginous substance and a sulfur chlorid with phenol.

5. A process for the manufacture of resinous products that comprises reacting upon phenol with formaldehyde in the presence of a condensing agent comprising a reaction product of a sulfur chlorid and an oleaginous substance.

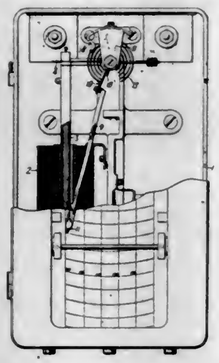
[Claims 6 to 11 not printed in the Gazette.]

1,194,202. ELECTRICAL MEASURING INSTRUMENT. PAUL MACGAHAN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 27, 1912. Serial No. 700,060. (Cl. 171—95.)

1. In an electrical measuring instrument, the combination with a movable member, and means for actuating the same, of means for yieldingly opposing the said actuating means, and adjustable gravity-actuated means for supplementing the said actuating means, said gravity-actuated means being disconnected from the movable member under predetermined conditions.

2. In an electrical measuring instrument, the combination with a movable member, and means for actuating the same, of means for yieldingly opposing the said actuating means, and a freely movable gravity-actuated means

adapted to be engaged by the movable member to supplement the actuating means under predetermined conditions.



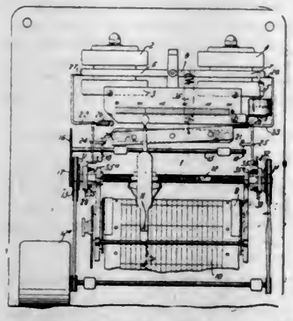
3. In an electrical measuring instrument, the combination with a movable member, and means for actuating the same, of means under initial strain for yieldingly opposing the said actuating means, and an independently operative gravity-actuated means having an inactive normal position but serving to supplement said actuating means when moved from its normal position.

4. In an electrical measuring instrument, the combination with a movable member, and means for actuating the same, of means under initial strain for yieldingly opposing the said actuating means, and a gravity-actuated means for supplementing said actuating means but disconnected from it during a predetermined portion of its movement.

5. In an electrical measuring instrument, the combination with a movable member, and means for actuating the same, of means for yieldingly opposing the said actuating means, and an independently pivoted gravity-actuated means for supplementing the said actuating means through a portion only of the range of movement of the movable member.

[Claims 6 to 14 not printed in the Gazette.]

1,194,203. ELECTRICAL MEASURING INSTRUMENT. PAUL MACGAHAN, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 3, 1913. Serial No. 793,082. (Cl. 234—5.5.)



1. In a graphical measuring instrument, the combination with an electrical measuring instrument of the Kelvin balance type and a recording device, of two pulleys, means for normally driving said pulleys in opposite directions, clutches disposed between the pulleys and the recording device, and non-electrical means actuated by the measuring instrument for connecting the clutches to the pulleys.

2. In an electrical measuring instrument, the combination with a recording device, of two pulleys, means for driving the said pulleys in opposite directions, means whereby the said pulleys operate said recording device, means governed by one of the said pulleys for controlling the time of operation of the said recording device, and means for mechanically controlling the operation of the said recording device.

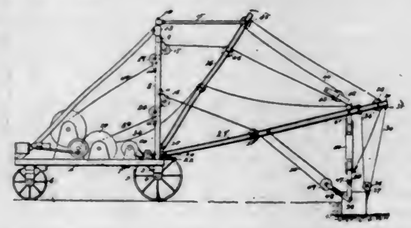
3. In an electrical measuring instrument, the combination with a meter, of two oppositely rotating pulleys, a screw shaft upon which said pulleys are loosely mounted, a recording device operated by the said screw shaft, means for limiting the travel of the said recording device at any one time, clutches for connecting the said pulleys to the said screw shaft, and mechanical means governed by the said meter for controlling the action of the said clutches.

4. In a graphical measuring instrument, the combination with a movable meter element having projections on its ends, of pivotally mounted members, the movements of which are governed by said projections, resilient means for operating said pivotally mounted members, a screw shaft, clutch members operating loosely upon said shaft in opposite directions, means whereby said pivotally mounted members control the direction of rotation of said shaft, and means for limiting the length of time said shaft rotates continuously.

5. In a graphical measuring instrument, the combination with a movable meter element having projections on its ends, of pivotally mounted members the movements of which are governed by said projections, resilient means for operating said pivotally mounted members, a screw shaft, loosely mounted, oppositely rotatable pulleys on said shaft, clutch members attached to said pulleys and to said shaft, said pivotally mounted members being adapted to effect engagement of said clutch members, and means for limiting the length of time said shaft rotates.

[Claims 6 and 7 not printed in the Gazette.]

1,194,204. DITCHING-MACHINE. DANIEL H. MAHONEY, Vincennes, Ind., assignor to Mahoney Railroad Ditching Machine Co., Vincennes, Ind. Filed Feb. 10, 1915. Serial No. 7,348. (Cl. 37—16.)



1. In a ditching machine, a wheel supported carriage, drums mounted on the carriage, actuating means for the drums, a mast provided with sheaves, a boom pivoted at one end to a turn table and associated with the carriage in such manner that the end of the boom farthest from its pivot may be moved both upward and sidewise, means for raising, lowering and laterally moving the boom, a scoop-beam pivoted to the boom, a pulley associated with the upper end of the scoop-beam, a pulley associated with the lower end of the scoop-beam, flexible connections for engagement with the pulleys attached to the scoop-beam and with sheaves on the mast and a flexible connection that engages with a pulley attached to the rear portion of the scoop for turning the scoop upon the scoop-beam.

2. In a ditching machine, a wheel supported carriage, a capstan mounted on the wheel supported carriage and provided with a plurality of drums, means for actuating the drums, a mast having attached thereto pulleys, a boom associated with the wheel supported carriage to swing vertically and laterally, flexible connections for raising; lowering and swinging the boom, a scoop-beam pivoted to the boom and provided with a pulley that is attached to the end thereof that extends above the boom, a scoop pivoted to the scoop-beam, means engaging with a pulley attached to the lower portion of the scoop-beam for moving the scoop toward the wheel supported carriage, and a flexible connection which engages the boom, a pulley at the rear portion of the scoop and a pulley on the boom to provide means for turning the scoop upon the scoop-beam.

1,194,205. ADDING-MACHINE. JAMES HENRY MASON, London, England. Filed Oct. 23, 1915. Serial No. 57,446. (Cl. 235—78.)



1. An adding device comprising in combination a casing, a counting ring provided with teeth engageable by a stylus to rotate the ring, the said casing being provided with a key board having upper radially disposed and numbered guiding grooves for the stylus.

2. An adding device comprising a casing composed of upper and lower portions, a counting ring rotatably held between said portions, means on said counting ring which may be engaged by a pencil to rotate the said ring, the upper casing portion being cut away partly along its peripheral edge to form a keyboard and expose the said pencil engaging means, and the lower casing portion having a groove along and below said board and said pencil engaging means to prevent the pencil from accidental displacement from the said engaging means.

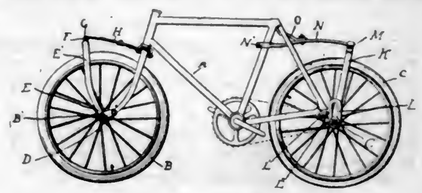
3. An adding device comprising a casing composed of upper and lower portions, a counting ring rotatably held between said portions, means on said counting ring which may be engaged by a pencil to rotate the said ring, the upper casing portion having a numbered keyboard exposing the said pencil engaging means and provided with a pair of spaced pencil stops, and the numbers of the keyboard being arranged in two separate series, one series in advance of each of said pencil stops, for the purpose described.

4. An adding device comprising in combination a casing; a counting ring rotatably supported in said casing and adapted to be rotated by a pencil, a keyboard on said casing which is divided into two parts to separate the odd and even numbers thereof and a stop for each part of the keyboard to limit the movement of the pencil.

1,194,206. SPRING-MOUNTING FOR CYCLE-WHEELS. WENDYL MEDLOCK, Jr., Coquille, Oreg., assignor to R. J. Galbraith, Coquille, Oreg. Filed Oct. 15, 1915. Serial No. 55,944. (Cl. 208—97.)

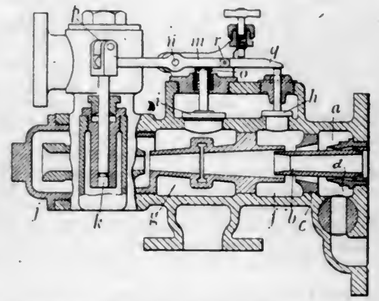
1. In combination with the frame and rear wheel of a cycle, a spring connection between the frame and rear wheel consisting of a spring bar connected at one end to the frame, a fork having its upper end connected to the other end of said spring bar and its lower end secured to the axle of the wheel, and a pair of plates secured to said frame, said axle having bearing in said plates.

2. A spring connection between the rear wheel and frame of a cycle, consisting of a spring bar connected at one end to the frame, a fork having its upper end connected to the other end of said spring bar, a strut secured to the frame and spring bar, and a pair of slotted plates secured to said frame, said fork having its lower end se-



cured to the axle of the wheel, said axle having bearing in said plates.

1,194,207. INJECTOR. JAMES METCALFE, RICHARD DAVID METCALFE, and JAMES CROXON METCALFE, Romiley, England. Filed Oct. 29, 1915. Serial No. 58,682. (Cl. 162—1.)



1. In injectors, in combination, a steam nozzle, a combining nozzle, a compartmentally divided overflow chamber, a water inlet, overflow valves upon said overflow compartments, a delivery chamber, a lever controlling one overflow valve and loaded by the pressure in said delivery chamber, an extension piece attached to said lever and controlling the other overflow valve, and a locking member for said extension piece, as set forth.

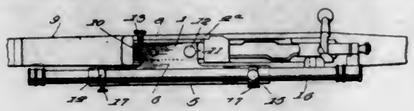
2. In injectors, in combination, a steam nozzle, a combining nozzle, an overflow chamber divided into two compartments around said combining nozzle, an overflow valve upon each of said compartments, a delivery chamber, a lever engaging at one end of said overflow valves, a plunger extending into the delivery chamber and loading the other end of said lever, an extension piece pivotally attached to said lever and engaging the other overflow valve, and a screwed spindle for engaging said extension piece, as set forth.

3. In injectors, in combination, a steam nozzle, a combining nozzle, an overflow chamber divided into two compartments around said combining nozzle, an overflow valve upon each of said compartments, a delivery chamber, a lever controlling at one end of said overflow valves, a plunger extending into the delivery chamber and loading the other end of said lever, a spring resisting the movement of said lever to load the overflow valve, an extension piece pivotally attached to said lever and controlling the other overflow valve, and a screwed spindle for acting on said extension piece, as set forth.

4. In injectors, in combination, a steam nozzle, a combining nozzle, an overflow chamber divided into two compartments around said combining nozzle, an overflow valve upon each of said compartments, a delivery chamber, a lever engaging at one end one of said overflow valves, a plunger extending into the delivery chamber and loading the other end of said lever, a swing link establishing connection between said plunger and lever, a spring resisting the movement of said lever to load the overflow

valve, an extension piece pivotally attached to said lever and engaging the other overflow valve, and a screwed spindle for engaging said extension piece, as set forth.

1,194,208. DEVICE FOR ATTACHING TELESCOPES TO FIREARMS. JOHN F. MEYER, Cheyenne, Wyo. Filed Aug. 23, 1915. Serial No. 46,863. (Cl. 33—50.)



1. A device for attaching telescopes to firearms, comprising a horizontal elongated plate having in its lower side a circular socket, and having its opposite ends formed on arcs having as their centers the center of said socket, and a horizontal telescope attaching bar carried by the plate and offset laterally therefrom in substantially a horizontal direction.

2. A device for attaching telescopes to firearms, comprising a horizontal elongated plate having in its lower side a circular socket, and having its opposite ends formed on arcs having as their centers the center of said socket, and a horizontal telescope attaching bar carried by the plate and offset laterally therefrom in substantially a horizontal direction, said bar having its opposite ends offset downwardly and provided with telescope attaching means.

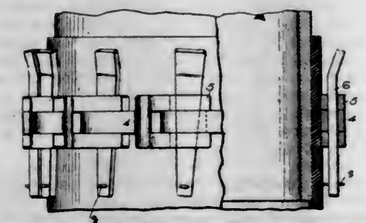
3. A device for attaching telescopes to firearms, comprising a horizontal elongated plate having in its lower side a circular socket, and having its opposite ends formed on arcs having as their centers the center of said socket, one end of said plate being provided with screw threads for engagement by an adjusting screw carried by the firearm, and a telescope attaching bracket carried by said plate.

4. A device for attaching telescopes to firearms, comprising a horizontal elongated plate having in its lower side a circular socket, and having its opposite ends formed on arcs having as their centers the center of said socket, one end of said plate being provided with screw threads for engagement by an adjusting screw carried by the firearm, and a horizontal bar offset laterally from the plate and having its intermediate portion increased in width at one edge and joined to said plate, the ends of said bar being offset downwardly and provided with telescope attaching means.

5. A device for attaching telescopes to rifles comprising a horizontal telescope attaching bracket bar having a laterally offset attaching base to be received in the seat usually receiving the rear sight of the rifle.

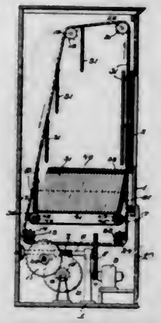
[Claims 6 and 7 not printed in the Gazette.]

1,194,209. PIPE-CLAMP. MELVIN MILLARD MIDDAUGH, Tampa, Fla. Filed Sept. 9, 1915. Serial No. 49,713. (Cl. 137—28.)



In a clamp of the class described, a plurality of links each having a bifurcated end engaging the end of the adjacent link, said links having openings in the ends thereof adapted to register, and wedge-shaped keys engaging the registering openings whereby the links are connected, each of said links having a reduced portion on the outer side thereof between its ends disposed transversely of the link, whereby the link is adapted to give at the reduced portions, substantially as and for the purpose set forth.

1,194,210. MOVING SIGN. NATHAN MININBERG, Dickinson, N. D., assignor to The Mininberg Automatic Advertising Company, Dickinson, N. D., a Corporation of North Dakota. Filed Aug. 9, 1915. Serial No. 44,458. (Cl. 40—36.)



1. In a movable sign apparatus, the combination of a pair of endless belts; sprocket wheels for guiding said belts in predetermined paths; oppositely projecting lifting pins carried by said belts; a motor and connections for intermittently moving said belts; independent sign members provided with hook like members adapted to be engaged by said lifting pins; movable means to support said members; a bottomless frame above said movable means to hold said sign members in place; and means comprising a pawl and ratchet to cause said supporting means to move said hook like members into the paths of said lifting pins, substantially as described.

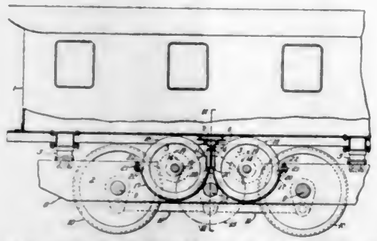
2. In a movable sign apparatus the combination of a pair of endless belts; sprocket wheels for guiding said belts in predetermined paths; oppositely projecting lifting pins carried by said belts; means for intermittently moving said belts; indepedent sign members provided with hook like members adapted to be engaged by said lifting pins; movable means comprising a smooth endless belt to support said sign members when disengaged from said pins; means actuated by said first named endless belts for intermittently moving said second endless belt; and a bottomless frame provided with an inclined wall above said second endless belt, adapted to hold said sign members in alinement and to incline them so as to bring their upper portions only in the paths of said lifting pins, substantially as described.

1,194,211. ELECTRIC LOCOMOTIVE. BENJAMIN S. MOORE, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 23, 1915. Serial No. 3,979. (Cl. 105—259.)

1. In a vehicle, the combination with a body, a running gear and a pair of motors mounted thereon and severally embodying removable magnetizable cores, of a single means for positioning the cores of said motors and for providing a pivotal connection with said body.

2. In a vehicle, the combination with a body, a running gear, and a pair of motors mounted thereon and severally embodying removable magnetizable cores, of a running-gear cross-tie for locking the cores of both motors in position and for providing a pivotal connection with said body.

3. In a vehicle, the combination with a body, a running gear, and a pair of motors mounted thereon and severally embodying removable magnetizable cores, of a single detachable member associated with said running gear and disposed between said motors for clamping the cores of said motors in position and for providing a pivotal connection with said body.

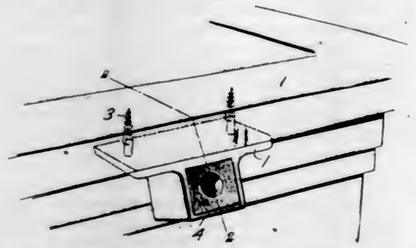


4. In a vehicle, the combination with a body, a running gear, a pair of motors mounted thereon and severally embodying removable magnetizable cores, and a counter-shaft mechanically connected to said motors, of a running-gear cross-tie disposed between the motors directly above the counter-shaft and having a downwardly projecting portion for locking the adjacent sides of the two motor cores in position and also having an upwardly projecting portion forming a centering device for the running gear.

5. In a vehicle truck, the combination with side frames, a pair of motors mounted thereon and severally embodying removable magnetizable cores, of separate keys for clamping the outer sides of the motor cores in position, and a single key for engaging the two adjacent sides of the motor cores and having an upwardly projecting portion forming a truck center-pin.

[Claims 6 and 7 not printed in the Gazette.]

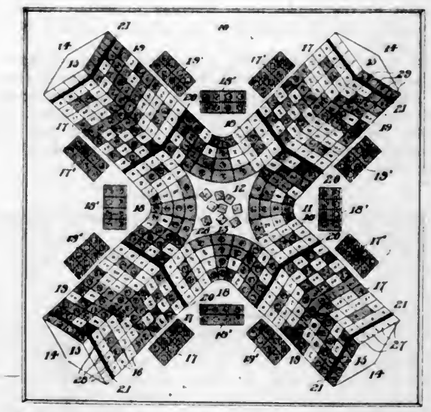
1,194,212. CHALK-HOLDER. CLIFFORD LANDON MOORE, Seattle, Wash. Filed Oct. 14, 1915. Serial No. 55,868. (Cl. 46—8.)



A chalk holder, substantially as herein described, comprising a base plate and a socket secured to the under side thereof and at an angle to the base plate inclining upwardly toward its outer end, the base plate projecting at both ends of the socket and affording ears, whereby the holder may be secured to the under side of a table flange and the socket may be arranged in close proximity to the under side of said flange, and a screw threaded through the side wall of the socket and adapted to secure a chalk block in said socket in any desired adjustment, whereby a chalk block may be secured in the socket with its outer face approximately flush with the open mouth of the socket regardless of the size or extent of wear of the chalk block, the inclination of the socket securing the chalk block in convenient position for use, substantially as set forth.

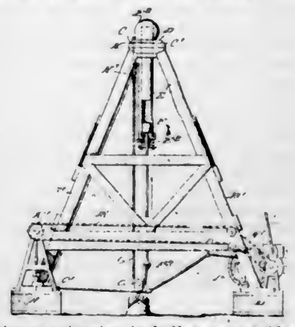
1,194,213. EDUCATIONAL GAME APPARATUS. DORA MORGAN, Corning, Cal. Filed May 8, 1916. Serial No. 96,032. (Cl. 46—64.)

1. A game board having a playing ground of concavo-cruciform shape divided into individual numbered fields, the board having prison locations for the playing men of each player and having a home field location, each prison location being distinguished from the other, the portion of the field allotted to each player being distinguished from the remaining portions.



2. A game board having a playing ground divided into individual fields for different players, the individual fields bearing numbers corresponding to numbers on playing members used in playing the game, each of said fields being provided with separate playing paths divided into playing spot positions, and playing members bearing numbers thereon, the said field numbers being progressively arranged and constituting products of the number designations of the playing members.

1,194,214. STUMP-EXTRACTOR. JOHN L. MORRIS, Pine Grove, La., and DAVID E. MORRIS, Gulfport, Miss. Filed June 4, 1915. Serial No. 32,099. (Cl. 254—93.)



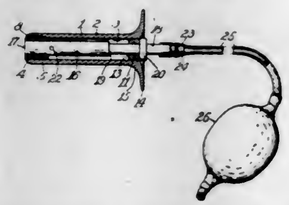
1. A stump extractor including a portable frame comprising a structural support and skids upon which said support is mounted, a crown plate supported at the upper portion of the said structural support and having a socket, and stump extracting means including a fluid pressure cylinder depending through the crown plate and having a detachable ball at its upper end resting in the socket of the said crown plate.

2. In a stump extractor, a portable frame including spaced side skids, stump extracting means carried thereby, guide cables extending from the ends of said skids and having guide blocks at their outer ends, an adjusting cable engageable with the guide blocks of either of the guide cables, one end of which adjusting cable is attached to the frame at one side, and a power operated drum at the opposite side of the frame and around which the opposite end of said adjusting cable is extended.

3. In a stump extractor, the combination of a supporting frame having a crown plate provided with a socket, and stump extracting means including a vertically disposed fluid pressure cylinder having a threaded upper end and a ball having a threaded bore engageable with the said upper end of the cylinder and adapted to rest in the socket of the crown plate whereby to permit swinging movement of the lower end of the said cylinder in all directions.

4. In a stump extractor, a portable frame, stump extracting means carried thereby, adjusting cables for moving the frame from place to place, power operated means for controlling and actuating said adjusting cables, and guide cables also carried by the said frame and with which the said adjusting cables coöperate to control the direction of movement of the frame.

1,194,215. MEDICINE APPLICATOR AND MOISTENER. JOSEPH O. MORRISON, Anderson, Ind. Filed Nov. 13, 1915. Serial No. 61,410. (Cl. 128—28.)



1. A medicine applicator including a hollow main part having a cylindrical exterior, the front end portion of the part having a cylindrical guide bore of less diameter than the rearward adjacent interior of the part, the end portions of the wall of the part being relatively thicker internally than the remaining portion to constitute heads for the part and a chambered interior between the heads, the wall of the front end portion having ducts therein extending from the chambered interior and about the guide bore to the extremity of the wall, the extremity of the wall having a rounded edge, the head in the opposite or rearward end portion of the part constituting a stop and having a guideway therein, the exterior of the rearward end portion having a closure flange thereon that has a fillet adjacent to the exterior of the main part; and a rod movable in the main part and comprising a head closely fitted in the guide bore and a stem extending from the head through the guideway, the head being stopped by the head that has the guideway, the rod having a duct therein that extends from the outer end of the stem into the head portion and out of the side of the head portion thereof to the chambered portion of the main part, the outer portion of the stem having a stop collar thereon to engage the rear head of the main part.

2. A medicine applicator and moistener comprising a main part having a chamber in its front portion to receive and carry the medicine, the chamber having a movable bottom to be advanced to eject the medicine, the front portion of the main part having also a chambered interior and ducts extending therefrom to conduct liquid to the ejected medicine, and a stem connected to the movable bottom and extending out of the rear portion of the main part for controlling the bottom, the stem having a duct therein extending to the chambered interior of the main part.

1,194,216. PUZZLE-RATTLE. AMELIA MORSE, New York, N. Y. Filed Apr. 20, 1916. Serial No. 92,376. (Cl. 46—46.)

1. The herein described puzzle rattle comprising a holder, and a plurality of independently movable sounding elements journaled for independent rotation upon said holder, said elements having formed upon alined faces thereof a plurality of sectional characters, parts of one character on certain elements being adapted to register with remaining parts of the same or a different character of other elements.



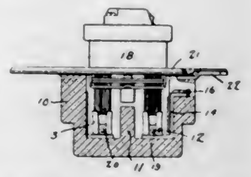
2. In a nursery rattle, the combination of a rigid holder, and a plurality of hollow sounding members journaled upon said holder, said members having plane faces adapted to register with one another, certain of said plane faces being ornamented with figures, parts of the figures being carried by as many different elements.

1,194,217. PICTURE-FRAME. JOHN LEWIS MURRAY, New York, N. Y. Filed Jan. 16, 1915. Serial No. 2,621. (Cl. 40—155.)



A picture frame comprising a plurality of elongated side members for covering the edges of a picture card, a plurality of pockets having each front and rear sides, said pockets having each an edge opening for receiving said picture card and the ends of said side members; and a plurality of sharpened pins, one permanently mounted on the rear side of each of said pockets for engaging a standing structure when said pockets are pressed thereon, said pins being adapted to be covered by the exposed side of said pockets and the article framed thereby.

1,194,218. ATTACHMENT-PLUG FITTING. ARVID H. NERO, New Britain, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 10, 1913. Serial No. 805,807. (Cl. 173—330.)



1. A shutter mechanism for the apertured face plate of a flush receptacle, comprising a pair of shutters meeting at the aperture in said face plate, means for causing said shutters to diverge on their inward movement, and spring means common to said shutters for returning them to closure position at the aperture.

2. A shutter mechanism for the apertured face plate of a flush receptacle, comprising a pair of shutters meeting at the aperture in said face plate, means for causing said shutters to diverge, in the same plane, on their inward movement, and spring means common to said shutters for returning them to closure position at the aperture.

3. A shutter mechanism for the apertured face plate of a flush receptacle, comprising a pair of shutters meeting at the aperture in said face plate, a frame in which the ends of said shutters are supported, divergent guides for said shutters separating the same as they are depressed and means common to said shutters for automatically returning the same to original position upon their release.

4. A shutter mechanism for the apertured face plate of a flush receptacle, comprising a pair of shutters meeting at the aperture in said face plate, a frame having divergent guide slots in which the ends of said shutters are supported whereby the shutters are separated on depression, and means common to said shutters for automatically returning the same to original position upon their release.

5. A shutter mechanism for the apertured face plate of a flush receptacle, comprising a pair of shutters meeting at the aperture in said face plate, a frame having divergent guide slots in which the ends of said shutters are supported whereby the shutters are separated on depression, a vertically guided presser plate beneath said shutters, and a spring constantly forcing said presser plate against said shutters whereby upon the release of the latter after depression they are automatically returned to original position.

[Claims 6 to 18 not printed in the Gazette.]

1,194,219. PROCESS OF MAKING FERTILIZER. SPENCER B. NEWBERRY, Sandusky, Ohio, and GEORGE R. FISHBURNE, Charleston, S. C. Filed Mar. 30, 1910. Serial No. 552,399. (Cl. 71—7.)



1. The herein described process of making citrate soluble phosphate which consists in grinding phosphate rock to a powder of such a fineness that 90% thereof will pass a 100-mesh screen, calcining with a reagent to the point of fusion or semi-fusion and grinding the calcined product to powder.

2. The herein described process of making citrate soluble phosphate which consists in grinding phosphate rock to a powder of such a fineness that 90% thereof will pass a 100-mesh screen, calcining with a reagent consisting of an alkali metal compound to the point of fusion and grinding the calcined product to powder.

3. The herein described process of making citrate soluble phosphate which consists in passing an insoluble phosphate and a reagent through a revolving calcining kiln where the materials are subjected to heat, so as to cause the conversion of the insoluble phosphate into citrate soluble form, and subjecting the discharged gases to a spray.

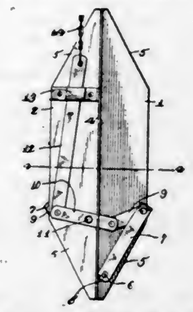
4. In making citrate soluble phosphate, the herein described process of calcining insoluble phosphate consisting in feeding the material to a revolving kiln, passing a hot draft therethrough, and condensing the discharged gases.

5. The herein described process of making citrate soluble phosphate which consists in calcining finely ground insoluble phosphate in a revolving kiln.

[Claims 6 to 10 not printed in the Gazette.]

1,194,220. TILE-SETTER. CHARLES A. NOVOTNY, Toledo, Iowa; Anna Novotny and E. J. Stayskell administrators of said Charles A. Novotny, deceased. Filed July 20, 1915. Serial No. 40,960. (Cl. 57—9.)

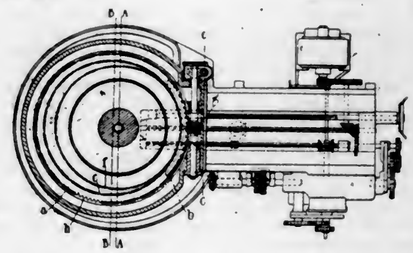
1. In a tile setter, a body portion consisting of a plurality of wings extending in angular relation to each other and having tapered upper and lower ends, retaining members pivotally mounted on certain of said wings, links connected to the retaining members at their upper ends, levers pivoted to the body portion and connected to the links and operating bars connected to the levers and extending upwardly in contact with certain of said wings.



2. In a tile setter, the combination with a body portion including a plurality of wings extending at right angles to each other, of retaining members pivotally mounted on certain of said wings, the pivoted end of each of the retaining members having a shoulder thereon arranged to engage the adjacent wing to limit its outward movement and means for moving the retaining members pivotally.

3. In a tile setter, the combination with a body portion including wings extending in angular relation to each other, of retaining members pivoted to certain of said wings, and having shoulders thereon arranged to engage the adjacent wings to limit their outward movement, links connected to said retaining members, levers pivoted to the body portion and to the links and means for actuating the levers, the shoulders being arranged to limit the movement of the retaining members so that the levers and links will lie in angular relation to each other.

1,194,221. GEAR-CUTTING MACHINE. CHARLES ALGERNON PARSONS and ALFRED QUINTIN CARNEGIE, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Carnegie and Cook assignors to said Parsons. Filed Feb. 27, 1914. Serial No. 821,500. (Cl. 90—4.)



1. In combination, in a gear cutting machine, a rotating work carrying element, an indexing member rotating about an axis non-coincident with the axis of rotation of said element, means to rotate said indexing member, and means transmitting rotary motion from said member to said element.

2. In combination, in a gear cutting machine, a rotating work carrying element, a ring form indexing member rotating about an axis non-coincident with the axis of rotation of said element, means to rotate said indexing member, and means transmitting rotary motion from said member to said element.

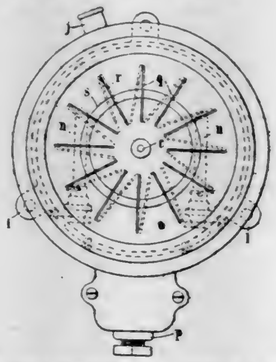
3. In combination, a work table, a ring element adapted to rotate about an axis non-coincident with the axis of ro-

tation of said table, teeth upon said ring, driving means engaging said teeth, teeth upon said table, further teeth upon said ring co-acting with said table teeth to transmit motion from said ring to said table.

4. In combination in a gear cutting machine, a work table, a ring element, means acting to constrain said element to rotate about an axis non-coincident with the axis of rotation of said table, teeth upon said ring, driving means engaging said teeth, teeth upon said table, teeth upon said ring co-acting with said table teeth to transmit rotary motion to the table, said co-acting teeth having slightly different pitch circle diameters.

5. In combination in a gear cutting machine, a work table, a ring element, means acting to constrain said element to rotate about an axis non-coincident with the axis of rotation of said table, teeth upon said ring, driving means engaging said teeth, internally projecting teeth upon said ring, teeth upon said table co-acting with said internally projecting ring teeth to transmit rotary motion to said table, said co-acting teeth having different pitch circle diameters.

1,194,222. MEANS FOR SYNCHRONIZING REVOLVING BODIES. CHARLES ALGERNON PARSONS, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Cook assignor to said Parsons. Filed Apr. 4, 1914. Serial No. 829,688. (Cl. 88—14.)



1. Means for determining the relative angular velocity and phase of two revolving bodies comprising two co-axial disks provided with elongated apertures and rotated in the same direction, each by one of the bodies, the said apertures in the respective disks being relatively inclined, making different angles to the radial direction in the two disks, in combination with a source of light on one side of said disks, and so arranged that light can pass through the intersections of the said apertures.

2. In means for determining the relative angular velocity and phase of two revolving bodies, in combination, two rotatable adjacent co-axial disks, radial slots in one of said disks, slots in the other of said disks, inclined to the radial direction, and means for causing light to pass through the intersections of said slots.

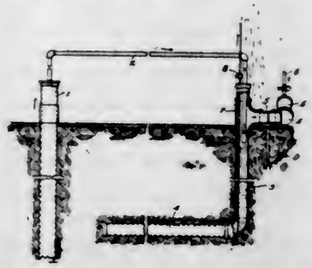
3. In means for determining the relative angular velocity and phase of two revolving bodies, in combination, two co-axial rotatable elements in proximity, elongated apertures in said elements, said apertures being so positioned in the respective disks that they intersect upon rotation of the elements, and means to cause light to pass through the intersection of said apertures.

4. In means for determining the relative angular velocity and phase of two revolving bodies, in combination, two rotatable co-axial elements, means in said elements to permit light to pass, said means being adapted to progressively intersect on relative rotation of the elements, and means to cause light to pass through said intersections.

5. In means for determining the relative angular velocity and phase of two revolving bodies, in combination, a hollow shaft, bearings to support said shaft, a disk upon said shaft, a second shaft mounted in bearings within said hollow shaft, a second disk upon said second shaft, elongated apertures in each of said disks, the apertures being inclined at different angles to the radial direction in the respective disks, means adapted to cause light to pass through the intersections of said apertures, and means to rotate each of the disks respectively by one of the said bodies.

[Claims 6 and 7 not printed in the Gazette.]

1,194,223. GAS-PURIFYING APPARATUS. HERBERT L. PEARCE, Nicklerille, Pa. Filed Dec. 12, 1913. Serial No. 806,294. (Cl. 48—140.)



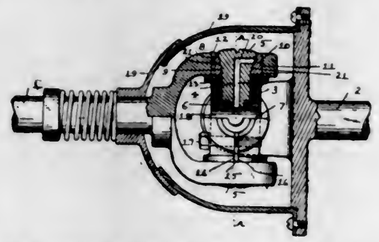
1. In a device of the class described, the combination of a horizontal and a vertical pipe of similar enlarged diameter in communication and forming a liquid chamber, the horizontal pipe being embedded in protecting material at a depth beyond the area of freezing, a cap closing the upper end of the vertical pipe, a laterally extending gas discharge pipe communicating with the vertical pipe, the said laterally extending pipe being of substantially the same diameter as the vertical and horizontal pipes, a gas supply pipe adapted to communicate with a natural gas well, the said gas pipe extending downward through the cap and axially into the vertical pipe and longitudinally thereof beyond the discharge pipe, a water discharge pipe arranged within the vertical pipe and extending substantially throughout the length thereof and through the cap to a point beyond the vertical pipe, a controlling valve for the water discharge pipe outside of the vertical pipe, and a gas discharge pipe communicating with the lateral pipe and of less diameter than said lateral pipe.

2. In a device of the class described, the combination of a horizontal and a vertical pipe of similar enlarged diameter in communication and forming a liquid chamber, the horizontal pipe being embedded in protecting material at a depth beyond the area of freezing, a cap closing the upper end of the vertical pipe, a laterally extending gas discharge pipe communicating with the vertical pipe, the said laterally extending pipe being of substantially the same diameter as the vertical and horizontal pipes, a gas supply pipe adapted to communicate with a natural gas well, the said gas pipe extending downward through the cap and axially into the vertical pipe and longitudinally thereof beyond the discharge pipe, a water discharge pipe arranged within the vertical pipe and extending substantially throughout the length thereof and through the cap to a point beyond the vertical pipe, a controlling valve for the water discharge pipe outside of the vertical pipe, and a gas discharge pipe communicating with the lateral pipe and of less diameter than said lateral pipe, the said lateral pipe extending on an upward incline away from the vertical pipe and being thence extended at substantially right angles also on an upward incline to the point of communication of the gas discharge pipe.

3. In communication with a gas supply pipe disposed to discharge downwardly, of a stand pipe inclosing the discharge portion of said gas supply pipe, said stand pipe having an enlarged discharge opening at its upper portion above the discharge end of the gas supply pipe, an enlarged gas supply pipe communicating with said discharge opening for receiving the discharge therefrom, the last named pipe being disposed to drain back into the discharge opening, a service pipe connecting with and leading from the enlarged discharge pipe, the service pipe being relatively small with respect to said discharge pipe, a liquid discharge pipe extending from a point below the liquid level of the stand pipe, and extending upwardly through the upper end thereof, and a valve outside of the stand pipe for controlling discharge through the liquid discharge pipe.

4. In a device of the class described, the combination of a stand pipe embedded in protecting material and having an enlarged container at its lower portion communicating with the stand pipe, the upper portion of the stand pipe having an enlarged discharge opening, a discharge pipe communicating with the opening and disposed to drain back into the stand pipe, a service pipe communicating with the enlarged discharge pipe, a gas supply pipe extending downwardly longitudinally of the stand pipe from a point above the same to a point beneath the discharge opening within the stand pipe, and a fluid discharge pipe extending from a point beneath the liquid level of the stand pipe through the upper portion thereof to a point of discharge and having means for controlling the discharge therefrom.

1,194,224. UNIVERSAL JOINT. CHARLES E. PERKINS. Grand Rapids, Mich. Filed July 3, 1915. Serial No. 37,864. (Cl. 74—19.)



1. In a universal joint; shaft members; a connecting member therefor; oppositely disposed adjustable spindles threaded in the connecting member and having tapering portions; bearings on one shaft member corresponding with the spindles' tapering portions and in which such portions rock; and bearings in which the connecting member rocks on the other shaft member; the spindles having engaging portions extending outside the joint and adapted to be engaged by adjusting means.

2. In a universal joint; shaft members; a connecting member therefor; oppositely disposed spindles carried by the connecting member and having inwardly-tapering portions, one of said spindles being adjustably threaded in the connecting member; bearings on one shaft member in which the tapering portions of the spindles respectively rock; and bearings in which the connecting member rocks on the other shaft member.

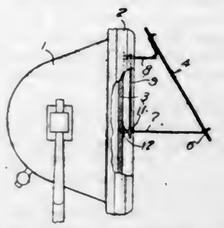
3. In a universal joint; shaft members; a connecting member therefor; oppositely disposed spindles carried by the connecting member and having inwardly-tapering portions, one of said spindles being adjustably threaded in the connecting member; one shaft member having bearings in which the tapering portions of the spindles respectively rock; the bearing for one spindle being in a bearing block axially movable on said shaft member; and bearings in which the connecting member rocks on the other shaft member.

4. In a universal joint; shaft members; a connecting member therefor; two pairs of adjustable spindles threaded in the connecting member and having tapering portions, each pair being oppositely disposed; bearings on one shaft member in which one pair of spindles rock; bearings on the other shaft member in which the other pair of spindles rock, said bearings corresponding with and embracing the spindles' tapering portions; the diagonally-opposite portions of the connecting member being split into clamping parts; and screws adapted to hold said parts in clamping engagement with the spindles.

5. In a universal joint; shaft members; a connecting member therefor; oppositely disposed spindles carried by the connecting member and having tapering portions, one of said spindles being adjustably threaded in the connecting member; bearings on one shaft member in which the spindles respectively rock; a portion of the connecting member being split into clamping parts; a screw adapted to hold said parts in clamping engagement with the adjustable spindle; and bearings in which the connecting member rocks and on the other shaft member.

[Claims 6 to 9 not printed in the Gazette.]

1,194,225. SCREEN FOR HEADLIGHTS. EDWARD B. PHIPPEN, Salt Lake City, Utah. Filed Mar. 11, 1916. Serial No. 83,542. (Cl. 240—48.4.)



1. A shield for headlights comprising, a plate having a series of openings, spring arms having bent portions arranged to enter said openings, means for spacing said spring arms apart, and means for securing each of said spring arms to the glass of the headlight.

2. In a shield for headlights, a semicircular plate or sheet provided with a series of openings disposed at equal distances from the center of the sheet and provided with eyelets, a series of spring arms having bent portions arranged to enter said openings, the lowermost of the spring arms being longer, whereby the sheet is supported in an inclined position, and each of said spring arms being provided with adhering means for securing the arm to the glass of the headlight.

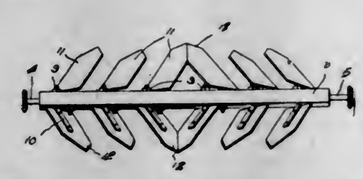
3. In a shield for headlights, a semicircular plate or sheet provided with a series of openings disposed at equal distances from the center of the sheet and provided with eyelets, a series of spring arms having bent portions arranged to enter said openings, the lowermost of the spring arms being longer, whereby the sheet is supported in an inclined position, and each of said spring arms being provided with vacuum cups for securing the arm to the glass of the headlight.

4. In a shield for headlights, a semicircular plate or sheet provided with a series of openings disposed at equal distances from the center of the sheet and provided with eyelets, a series of spring arms having bent portions arranged to enter said openings, the lowermost of the spring arms being longer whereby the sheet is supported in an inclined position, each of said spring arms being provided with vacuum cups for securing the arm to the glass of the headlight, and a semicircular spacing member provided with movable sleeves arranged to receive said spring arms for adjustably spacing said spring arms.

1,194,226. SCATTERER ATTACHMENT FOR MANURE-SPREADERS. HERDIE B. PICKETT and FREDERICK A. PICKETT, Baltimore, Md. Filed Nov. 15, 1915. Serial No. 61,576. (Cl. 111—40.)

1. The combination with a manure spreader, of a scatterer including a rotary shaft, sets of oppositely inclined scattering blades secured to said shaft and inclining toward the transverse center of the shaft.

2. The combination with a manure spreader, of a scatterer including a rotary shaft, sets of oppositely inclined scattering blades secured to said shaft and inclining toward the transverse center of the shaft, and a pair of correspondingly inclined sets of said scattering blades secured to said shaft diametrically opposite said first mentioned sets.



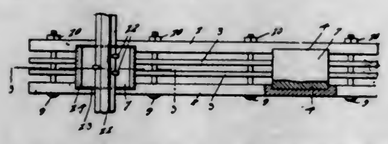
3. The combination with a manure spreader, of a scatterer including a rotary shaft, sets of oppositely inclined scattering blades secured to said shaft and inclining toward the transverse center of the shaft, a pair of correspondingly inclined sets of said scattering blades secured to said shaft diametrically opposite said first mentioned sets, the innermost of said scattering blades having their ends cut angularly, and said innermost blades of said oppositely inclined sets having their angularly cut ends abutting.

4. The combination with a manure spreader, of a scatterer including a rotary shaft, sets of oppositely inclined scattering blades secured to said shafts and inclining toward the transverse center of the shafts, said blades being inclined with respect to both the longitudinal and transverse centers of said shafts.

5. The combination with a manure spreader, of a scatterer including a rotary shaft, sets of oppositely inclined scattering blades secured to said shaft, a pair of correspondingly inclined sets of said scattering blades secured to said shaft diametrically opposite said first mentioned sets, said blades being inclined with respect to both the longitudinal and transverse centers of said shaft, said blades adapted for adjustment to incline toward or from the transverse center of the shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,194,227. RAILWAY-TIE. JACOB POSTEL, Jr., and MASON B. DICKENS, St. Louis, Mo. Filed Mar. 17, 1916. Serial No. 84,815. (Cl. 238—5.)

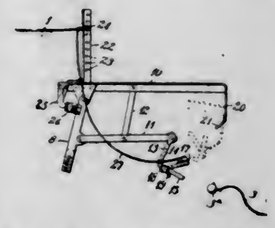


1. A rail tie consisting of a body formed of opposite side plates having opposed recesses formed on the inner surfaces adjacent the opposite ends thereof, plates positioned between the side plates and having recesses therein registering with the recesses in the side plates, rail-supporting blocks removably received by the recesses in the side plates and the second-mentioned plate, and fastening elements extending through the sides plates and the said second-mentioned plates for causing the sides plates to hold the block in position.

2. A rail tie consisting of a body formed of opposed side plates, plates positioned between the side plates and spaced from each other and having registering recesses therein, rail-supporting blocks received by the recesses in the second-mentioned plates and having ribs formed on the under surfaces thereof, the said ribs extending into the spaces between the second-mentioned plates, and fastening elements extending through the sides plates and the second-mentioned plates.

3. A rail tie consisting of a body having recesses therein, rail-supporting blocks mounted within the recesses, reinforcing elements extending around the sides of the blocks at the upper ends thereof, and flanges carried by the reinforcing elements and overlying the upper sides of the blocks.

1,194,228. PROTECTIVE DEVICE. ARTHUR PURDON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 21, 1912. Serial No. 705,004. (Cl. 175—280.)



1. In a protective device for connecting and disconnecting two portions of a transmission line conductor that are normally held in tension, the combination with a collapsible linkage mechanism, of a retaining member therefor pivotally secured to one link of the mechanism, an extension provided on another link for normally restraining said retaining member, means tending to disengage said retaining member and said extension, and additional means whereby a conductor-portion held in tension may neutralize the effect of said first means.

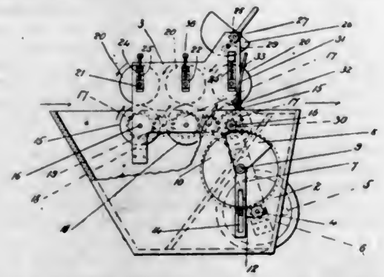
2. In a protective device for connecting and disconnecting two portions of a transmission line conductor that are normally held in tension, the combination with a parallel-motion linkage mechanism, of a retaining member secured to one link of said mechanism, an extension provided on another link thereof for normally engaging said retaining member, means tending to disengage said retaining member and said extension, and additional means effective only when transmitting the tension obtaining in one of the conductor-portions for neutralizing the effect of said first means.

3. In an apparatus for connecting and disconnecting two portions of a transmission line conductor one of which is normally held in tension, the combination with a linkage mechanism, and a retaining means therefor that normally holds said mechanism in operative position by reason of the force imparted thereto by the conductor-portion held in tension, of means for effecting disengagement between said retaining means and said mechanism when the tension in said conductor-portion is relaxed, thereby releasing one of the conductor-portions.

4. In a protective system for an electrical transmission line conductor mounted upon adjacent supporting structures in order to provide a conductor-portion that is normally subjected to tension, the combination with a parallel-motion linkage device adapted to be mounted upon one of the supporting structures, and a retaining member associated therewith, of means for restraining said retaining member in its set position, means tending to move said linkage device whereby said retaining member may be released, and an end member adapted to be connected to said tensioned conductor-portion and engaging said retaining member to normally prevent movement of said linkage device by reason of the tension thereby imparted and to permit the movement thereof when the tension is released, whereby the said end member disengages from the said retaining member.

5. In a protective system for an electrical transmission line conductor mounted upon adjacent supporting structures, the combination with a parallel-motion device adapted to be mounted upon one of said supporting structures and comprising a plurality of pivotally mounted parallel arms and a connecting link, of a forked-retaining member pivotally associated with one of said arms and adapted to be engaged and restrained by the other arm under normal conditions, means tending to move said parallel-motion device to release said retaining member, and an end member associated with a portion of the transmission line conductor and normally supported upon said retaining means whereby movement of said parallel-motion device is prevented.

1,194,229. WASHING-MACHINE. ERNEST N. QUEEN, Comanche, Tex. Filed June 8, 1916. Serial No. 102,480. (Cl. 68—22.)



1. In a washing machine, washing rollers, a shaft for revolving one of the said rollers, a toothed pinion mounted to revolve with and slide longitudinally on the said shaft, a countershaft, a toothed wheel secured on the countershaft, a toothed segment mounted loosely on the countershaft, means for oscillating the toothed segment and revolving the toothed wheel, and means for placing the said pinion into and out of gear with the said segment and wheel.

2. In a washing machine, washing rollers, a shaft for revolving one of the said rollers, a toothed pinion mounted to revolve with and slide longitudinally on the said shaft, a countershaft, a toothed wheel secured on the countershaft, a toothed segment mounted loosely on the countershaft and provided with a rocker-arm, a driving pinion gearing into the said toothed wheel, a crank revolving with the driving pinion and engaging with the rocker-arm so that the toothed segment is oscillated as the toothed wheel is revolved, and means for placing the slidable pinion into and out of gear with the said segment and wheel.

3. In a washing machine, a series of washing rollers arranged in pairs, driving mechanism operatively connecting the lower rollers of the pairs, springs for pressing the upper rollers toward the lower rollers, pivoted cams for increasing the pressure of the springs of the discharge rollers at will, a shaft for driving the said lower rollers, a toothed pinion mounted to revolve with and slide longitudinally on the said shaft, a countershaft, a toothed wheel secured on the countershaft, a toothed segment mounted loosely on the countershaft, means for oscillating the toothed segment and revolving the toothed wheel, and means for placing the said pinion into and out of gear with the said segment and wheel.

1,194,230. FRUITED WORT EXTRACT. CARL RACH, Stapleton, N. Y. Filed Nov. 9, 1915. Serial No. 60,585. (Cl. 99—11.)

1. A food preparation having as an essential ingredient thereof a concentrated wort extract having less than ten per cent. maltose therein.

2. A food preparation having as an essential ingredient thereof a concentrated wort extract having less than ten per cent. maltose therein, together with a suitable food ingredient mixed therewith.

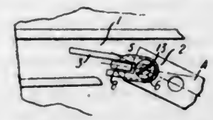
3. A food preparation having as an essential ingredient thereof a concentrated wort extract having less than ten per cent. maltose therein and a suitable flavoring substance mixed therewith.

4. A food preparation having as an essential ingredient thereof a concentrated wort extract having less than ten per cent. maltose therein and combined with a fruit preparation.

5. A food preparation having as an essential ingredient thereof a concentrated wort extract having less than ten per cent. maltose therein and in the form of a dry tablet.

[Claims 6 to 8 not printed in the Gazette.]

1,194,231. BINDING-POST. KARL C. RANDALL, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 844,091. (Cl. 173—259.)



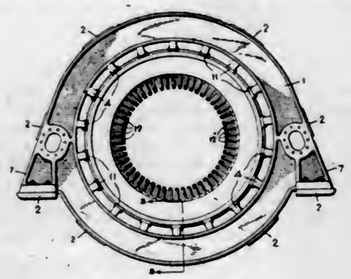
1. A binding post comprising a base member having a projecting ear, a clamping member having two spaced-apart arms disposed one on either side of the projecting ear and having chamfered edges, and means for securing the clamping member to the base member.

2. A binding post comprising a base member having a laterally-extended portion, and a clamping member having two spaced-apart arms between which is disposed the laterally-extended portion of the base member, the edges of the spaced-apart arms adjacent the base member being chamfered.

3. A binding post for a fusible conductor comprising a base member having a laterally-extended portion, and a clamping member having an opening therein for registering with the laterally-extended portion, said clamping member being chamfered at one of its edges to prevent reducing the cross-sectional area of the fusible conductor.

4. A binding post for a fusible conductor comprising a base member having a laterally-extended portion, and a clamping member having an opening therein for registering with the laterally-extended portion, said clamping member being chamfered to prevent reducing the cross-sectional area of the fusible conductor, the laterally-extended portion of the base member being provided to prevent the doubling of the conductor between the base member and the clamping member and to prevent the clamping member from turning.

1,194,232. DYNAMO-ELECTRIC MACHINE. CHARLES S. RAYMOND, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 25, 1915. Serial No. 57,653. (Cl. 171—252.)



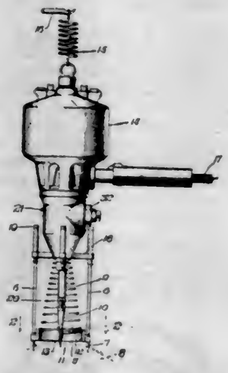
1. In a dynamo electric machine, a frame comprising a plurality of independent ring-shaped members spaced apart, supporting plates secured to the outer periphery of said members and fastening the same together, independent ribs extending at right angles to said members, means for fastening said ribs to the inner periphery of said members, and laminations mounted on said ribs.

2. In a dynamo electric machine, a frame comprising a plurality of independent ring-shaped members, spaced apart, each of said members having projecting foot portions, supporting plates, certain of said supporting plates being secured to the outer periphery of said members and two of said supporting plates being secured to the foot portions of said members and thereby fastening said members together, independent ribs extending at right angles to said members, means for fastening said ribs to the inner periphery of said members, and laminations mounted on said ribs.

3. In a dynamo electric machine, a frame comprising a plurality of ring-shaped members spaced apart, said members being I-shaped in cross-section, supporting plates secured to the outer periphery of said members and fastening the same together, independent ribs extending at right angles to said members, means for fastening said ribs to the inner periphery of the flanges of said members, and laminations mounted on said ribs.

4. In a dynamo electric machine, a frame comprising a plurality of ring-shaped members spaced apart, said members being I-shaped in cross-section, each of said members having projecting foot portions, supporting plates, certain of said supporting plates being secured to the outer, periphery of said members and two of said supporting plates being secured to the foot portions of said members and thereby fastening said members together, independent ribs extending at right angles to said members, means for fastening said ribs to the inner periphery of the flanges of said members, and laminations mounted on said ribs.

1,194,233. CORING-MACHINE AND THE LIKE. ANDREW L. REINER, Highland, Ind., assignor to Libby, McNeill & Libby, Chicago, Ill., a Corporation of Maine. Filed Dec. 6, 1915. Serial No. 65,296. (Cl. 146—6.)



1. In a device of the class described, the combination of a centering frame, a plurality of pointed projections on the same for insertion into an article, a plurality of upstanding guide rods on said frame, a spider slidably mounted with respect to said guide rods, a driving shaft extending downwardly from said spider, a cutting device connected to said shaft, a spring interposed between the centering frame and the spider tending to raise the spider away from the frame, a motor, and a clutch device interposed between the motor and the shaft.

2. In a device of the class described, the combination of a centering frame, a plurality of pointed projections connected to the lower portion of the same, a plurality of upstanding guide rods connected to the upper portion of the centering frame, a spider slidably mounted on the said guide rods, a cutting device working through the central portion of the frame, a motor connected to the spider, and a clutch device interposed between the motor and the cutting device.

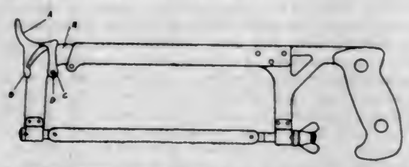
3. In a device of the class described, the combination of a centering frame, a plurality of pointed projections on the lower portion of the same, a plurality of upstanding guide rods connected to the upper portion of the centering frame, a spider slidably mounted on said guide rods, a motor connected to the spider, a cutting device working through the central portion of the centering frame, an operative connection from the motor to the cutting device, and a spring interposed between the spider and the centering frame tending to raise the spider and the motor away from the centering frame.

4. In a device of the class described, the combination of a centering frame, means for securing the same at a desired position on an article to be operated upon, a plurality of upstanding guide rods connected to the centering frame, a spider working on said guide rods, a motor connected to said spider, a cutting device working through the centering frame, an operative connection from the motor to the cutting device, and a spring tending to raise the spider and motor away from the centering frame.

5. In a device of the class described, the combination of a centering frame, means for securing the same to a desired portion of an article to be operated upon, a motor, a sliding connection between the motor and the centering frame, a cutting device working through the centering frame, an operative connection from the motor to the cutting device, and a spring interposed between the centering frame and the motor.

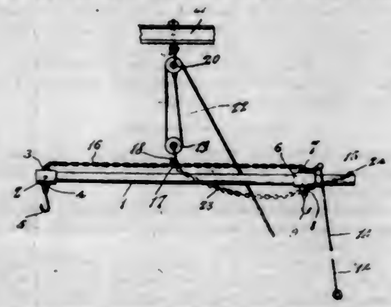
[Claims 6 to 10 not printed in the Gazette.]

1,194,234. ATTACHMENT FOR SAW-FRAMES. ALFRED M. REMINGTON, Fitchburg, Mass., assignor to Simonds Manufacturing Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Mar. 30, 1916. Serial No. 87,703. (Cl. 145—35.)



An attachment for saw frames consisting of a forked portion to embrace the frame bar, means to clamp the forked portion to the frame, a projecting lug to engage the frame in opposition to said clamping means, and a thumb rest extending outward from the attachment.

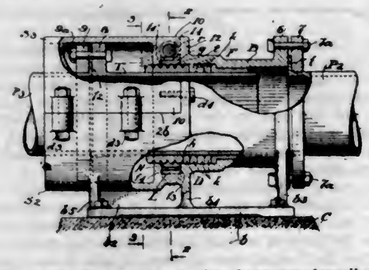
1,194,235. GAMBREL. OLE A. RICE, Roseau, Minn. Filed Mar. 28, 1916. Serial No. 87,257. (Cl. 17—30.)



1. A gambrel comprising a horizontal rod, a collar secured to one end of said rod, ears formed on said collar, a collar slidably mounted on said rod, ears formed on said slidably mounted collar, hooks secured to the ears of said collars, a chain secured to the ears of the collars, means attached to the chain for raising and lowering the device, means for locking the movable collar at various points along the rod, and means for supporting one end of the horizontal rod when the movable collar is in close relation to the first mentioned collar.

2. A gambrel comprising a horizontal rod, a collar secured to said rod, a movable collar on said rod, means for locking said movable collar against sliding movement on the rod, a chain attached to said collars, means attached to said chain for supporting the device, and a second chain connected to the first mentioned chain intermediate its ends and to one end of the rod for supporting the rod in a horizontal position when the movable collar has been moved against the first mentioned collar.

1,194,236. PIPE-LINE-CONNECTING MECHANISM. FRANCIS H. RICHARDS, Hartford, Conn., assignor to Scott C. Ross, Buffalo, N. Y. Filed Mar. 17, 1916. Serial No. 84,846. (Cl. 137—75.)



1. In a pipe-line device of the character described, the combination with a packing-cylinder having therein a packing-chamber and provided with packing-adjusting devices, of a tubular member having one end thereof slidable in the packing-chamber and having an annular head on the outer end thereof, and a head-guiding cylinder in axial alinement with the packing-cylinder and comprising two cylinder-segments separated on lines longitudinally of the cylinder, one of said cylinder-segments being a fixed segment constituting a part of a casing which also includes the packing-cylinder, and the other of said cylinder-segments being removably secured to the casing and thereby forming a removable cap-segment for closing-in and for giving access to the cylinder-space between said annular head and the packing-adjusting devices.

2. In a pipe-line device of the character described, the combination with a packing-cylinder having therein a packing-chamber and provided with packing-adjusting devices, of a tubular member having one end thereof slidable in the packing-chamber and having an annular head on the outer end thereof, and a head-guiding cylinder in (axial) alinement with the packing-cylinder and comprising two cylinder segments separated on lines longitudinally of the cylinder and having circular-arc guide-faces, one of said cylinder-segments being a fixed segment constituting a part of a casing which also includes the packing-cylinder, and the other of said cylinder-segments being removably secured to the casing thereby to form a complete head-guiding cylinder and also to form a removable cap-segment for closing-in and for giving access to the cylinder-space between said annular head and the packing-adjusting devices.

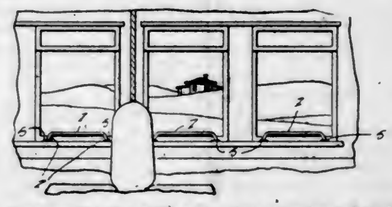
3. In a pipe-line device of the character described, in combination, a packing-cylinder having therein a packing-chamber and packing-adjusting means including a gland-ring and gland-ring-actuating means, a tubular member having one end thereof slidable in the packing-cylinder and in the gland-ring and having extending outwardly from the other end thereof a flange-form head, and a head-guiding slideway comprising two slideway-segments having head-engaging surfaces in longitudinal alinement with said tubular member, one of said slideway-segments constituting a part of a casing which also includes the packing-cylinder, and another of said slideway-segments being removably-secured to the said casing and thereby forming a slideway-member and also a cap-segment for protecting and giving access to said tubular member and the gland-ring.

4. In a pipe-line device of the character described, in combination, a packing-cylinder having at one end thereof pipe-connecting means, and at the other end thereof having packing-adjusting means including a gland-ring and gland-ring-actuating means, a tubular member having one end thereof slidable in the packing-cylinder and in the gland-ring and having extending outwardly from the other end thereof a flange-form head, and a head-guiding slideway comprising slideway-segments having head-engaging surfaces in longitudinal alinement with said tubular member, one of said slideway-segments constituting a part of a casing which also includes the packing-cylinder and another of said slideway-segments being removably-secured to the said casing and thereby forming a slideway-member and also a cap-segment for protecting and giving access to said tubular member and the gland-ring.

5. In a pipe-line device of the character described, in combination, a packing-cylinder having at one end thereof pipe-connecting means, and at the other end thereof having packing-adjusting means including a gland-ring and gland-ring-actuating means, a tubular member having one end thereof slidable in the packing-cylinder and in the gland-ring and having extending outwardly from the other end thereof a flange-form head, and a head-guiding slideway comprising two complemental slideway-segments having head-engaging surfaces in longitudinal alinement with said tubular member, one of said slideway-segments constituting a part of a casing which also includes the packing-cylinder, and another of said slideway-segments being removably-secured to the said casing and thereby forming a slideway-member and also forming a cap-segment which extends over the said gland-ring actuating means, and arranged for giving access to said tubular member, the gland-ring and said actuating means.

[Claims 6 to 8 not printed in the Gazette.]

1,194,237. SAFETY-HANDHOLD FOR SLEEPING-CARS. JAMES N. ROBERSON, Wadley, Ga. Filed Mar. 21, 1916. Serial No. 85,652. (Cl. 105—19.)



1. The combination with a sleeping car, of a safety hand hold comprising a horizontal handle bar extending along the side of the car over the window sill and provided with arms supporting the horizontal handle rod in an elevated position above the window sill and secured to the latter.

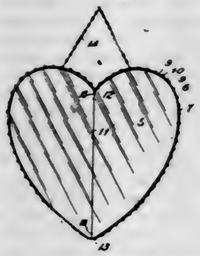
2. The combination with a sleeping car, of a safety hand hold comprising a horizontal rod located above the window sill and being of a length substantially equal to the width of the window and provided with terminal supporting arms piercing the window sill and provided at the upper face of the same with collars and having lower fastening means, said horizontal rod being in convenient position to be grasped by a person lying within the berth.

3. The combination with a car of a safety hand hold comprising a horizontal rod located above the window sill and being of a length to extend substantially across the window, an arm supporting the horizontal rod in spaced relation with the window sill and provided with means for engaging the said window sill.

1,194,238. PICTURE-FRAME. JOHN GIBBONS ROBERTS, Holly Springs, Miss. Filed Apr. 8, 1916. Serial No. 89,825. (Cl. 40—153.)

1. In an article of the class described, a heart shaped member, a ladder chain disposed around the edge of the

member, and engaging the opposite sides of the member at its edge, and a wire secured to the chain at the recess in the top of the heart, the wire extending to the bottom of the heart and being secured to the chain adjacent thereto.



2. In an article of the class described, a member having an edge, a chain having links, each of which has a transverse member disposed across the edge of the member, and two eyes through which a transverse member on an adjacent link is disposed, the eyes being disposed one at each side of the member for holding the chain in position.

1,194,239. ANIMAL-TRAP. GEORGE R. ROGERS, Ladoga, Ind., assignor of one-half to Floyd B. Youngblood, Montgomery county, Ind. Filed Jan. 4, 1915. Serial No. 461. (Cl. 43—21.)

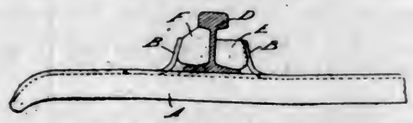


1. In an animal trap, an upright support, a weighted spear mounted for movement by gravity from an elevated position upon said support to a position in penetrating engagement with the ground, a pivoted trigger mounted on said support in the path of movement of said spear to be engaged thereby in elevating the spear for automatically and releasably fastening said spear in its elevated position, a trip mechanism, and a means on said trip mechanism to engage with and lock said trigger against movement.

2. In an animal trap, an upright support, a weighted spear mounted for movement by gravity from an elevated position upon said support to a position in penetrating engagement with the ground, a slotted trigger pivoted at one side of said support, means on said spear to engage with said trigger in elevating the spear, said means operating automatically to seat itself in the slot of said trigger to thus releasably fasten the spear in its elevated position, and a trip mechanism operable to disengage said means and said trigger to release said gear, substantially as described.

3. In an animal trap, an upright body, a weighted spear movable vertically relatively to the body, a trigger oscillatable at a point adjacent the top of said body, trip mechanism movable relatively to the body, means forming a part of said trip mechanism and engaging the trigger to normally hold the latter against oscillation, means on the carrier and engaging the trigger to hold the former in its uppermost position, means to limit movement of the trigger subsequent to movement of the trip mechanism out of engagement therewith, said trigger when moved adapted to automatically release the spear, and means to support the body in an upright position.

1,194,240. SLEEPER FOR PERMANENT WAY. CHRISTER PETER SANDBERG, London, England. Filed May 17, 1915. Serial No. 28,806. (Cl. 238—5.)



1. A metal sleeper having jaws formed integral with the metal of the sleeper and turned up from a single slot to provide the jaws of a chair in which the track rail is retained by the coöperation of both of said jaws with the web of the rail and by the coöperation with one of said jaws of a wedge interposed between it and said web, said sleeper having seatings for the rail integral therewith at opposite sides of said slot.

2. A metal sleeper having track-rail-receiving jaws formed integral with the metal of the sleeper and turned upward and away from one another from a single slot to provide the jaws of a chair in which the track-rail is retained by the coöperation of both of said jaws with the web of the rail and by the coöperation with said jaws of members interposed between them and said web, said sleeper having seatings for the rail integral therewith at opposite sides of said slot.

3. A metal sleeper having a strip cut from the upper portion thereof and severed approximately at its center to form jaws of substantially equal length, said jaws being turned up from the single slot formed by cutting the strip and providing a chair in which a track rail is held by the coöperation of both of said jaws with the web of the rail and by the coöperation with one of said jaws of a wedge interposed between it and said web, said sleeper having seatings for the rail integral therewith at opposite sides of said slot.

4. A metal sleeper having a strip cut therefrom and struck upwardly and leaving a single slot, the strip being transversely severed to provide jaws of approximately equal length but longer than half the length of the slot from which they are formed, the jaws serving as a chair to receive a track rail and being each formed to coöperate with the web of the rail.

5. A metal sleeper having jaws formed integrally with the metal of the sleeper and turned up from a single slot to form a chair to receive the track rails in which the metal strip cut from the sleeper to form the jaws is severed irregularly so as to form jaws both of which cooperate with the web of the rail and the sum of whose over all lengths is greater than that of the slot from which they are cut.

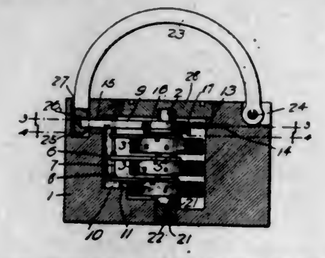
[Claims 6 to 8 not printed in the Gazette.]

1,194,241. LOCK. WILLIAM P. SAVAGE, Belleville, Ill. Filed Oct. 19, 1915. Serial No. 56,873. (Cl. 70—111.)

1. A lock comprising a casing, a shaft within said casing, a plurality of dials upon said shaft, a movable rod for actuating said dials, and a spring actuated bar operated by the opening or closing of the lock.

2. A lock comprising a casing, a shaft within said casing, a plurality of dials upon said shaft, a rod provided with a plurality of ratchet wheels and dogs for actuating said dials, and a spring actuated bar carrying said rod and means for controlling the movement of said bar by the opening or closing of the lock.

3. A lock comprising a casing, a shaft within said casing, a plurality of dials rotatable upon said shaft, a sliding bar, a rod carried by said bar, ratchet wheels and pawls carried by said bar, and means for rotating said dials upon the operation of the lock.

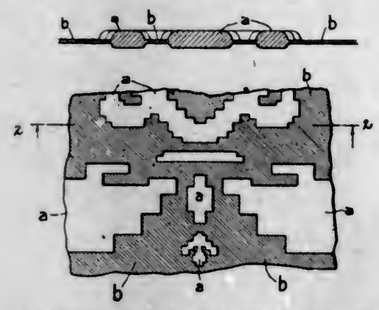


4. A lock comprising a casing, a shaft within said casing, a plurality of dials freely mounted upon said shaft, a sliding bar, a rod carried by said bar, spring pressed pawls carried by said rod, ratchet wheels carried by the dials, a cam mounted upon the shaft for engagement with said bar, and means for actuating said bar upon the operation of the lock.

5. A lock comprising a casing, a shaft within said casing, a plurality of numbered dials freely mounted upon said shaft, a sliding spring pressed bar, a rod having one end mounted in said bar and its opposite end mounted in a sliding bearing in said casing, spring pressed pawls carried by said rod for engagement with ratchet wheels carried by the dials, pawls mounted in the casing and engaging said dials, a cam mounted upon the shaft, and means for causing the rotation of the dials upon the operation of the lock.

[Claim 6 not printed in the Gazette.]

1,194,242. EMBOSSED WALL AND CEILING COVERING. CARL SCHONLAU, Riehen, near Basel, Switzerland. Filed Oct. 16, 1913. Serial No. 795,587. (Cl. 154—47.)



1. A stamped fibrous wall and ceiling covering having the characteristics of a textile material, formed by a sheet of wadding compressed and embossed and having its front face further decorated with fine flutings, substantially as described.

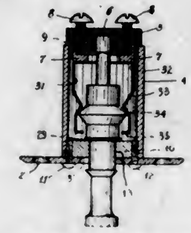
2. A stamped fibrous wall and ceiling covering having the characteristics of a textile material, formed by a sheet of wadding compressed and embossed and comprising at least one layer of fibers, which does not form its front face, impregnated with a water-proofing substance, as described.

3. A stamped fibrous wall and ceiling covering having the characteristics of a textile material, formed by a sheet of wadding compressed and embossed and comprising at least one layer of fibers, which does not form its front face, impregnated with a hardening substance, as described.

4. A stamped fibrous wall and ceiling covering having the characteristics of a textile material, formed by a sheet of wadding compressed and embossed and comprising at least one layer of fibers, which does not form its front face, impregnated with a hardening substance, the said sheet of wadding being further decorated on its front face with fine flutings, substantially as described.

5. A stamped fibrous wall and ceiling covering having the characteristics of a textile material, formed by a sheet of wadding compressed and embossed and comprising at least one layer of fibers, which does not form its front face, impregnated with a water-proofing substance, the said sheet of wadding being further decorated on its front face with fine flutings.

1,194,243. ELECTRIC SWITCH. CHARLES E. SCHULTZE, Denver, Colo. Filed Mar. 8, 1915. Serial No. 12,946. (Cl. 175—284.)



1. In an electric switch, the combination with a tubular casing, and a pair of terminals in its rear end; of a plunger slidable along the axis of the casing and having within the same a two-faced cam, and a disk-like plate having a central hole loosely embracing the plunger and peripheral spring arms extending forward within the casing and each having two inward projections adapted to be engaged by the cam on the plunger.

2. In an electric switch, the combination with a tubular casing, a plug in its front end having a central hole, an insulated plug in its rear end having a central socket, and a pair of terminals extending through this plug; of a plunger slidable through said hole and having its rear end slidably mounted in said socket, a disk-like plate having a central hole loosely embracing the rear end of said plunger and peripheral spring arms extending forward within the casing and each having an inward hump, and a two-faced cam on the plunger adapted to be forced through the humps when the plunger is reciprocated.

3. In an electric switch, the combination with a tubular casing, a plug in its front end having a central hole, an insulated plug in its rear end having a central socket, and a pair of terminals carried by this plug; of a plunger slidable through said hole and having a pin in its rear end slidably mounted in said socket, a disk-like plate having a central hole loosely embracing the pin of said plunger and peripheral spring arms extending forward within the casing and each inclined inward and thence outward, carried farther forward, and terminating in inwardly directed feet, and a two-faced cam on the plunger adapted to be forced past said inclines by the reciprocation of the plunger.

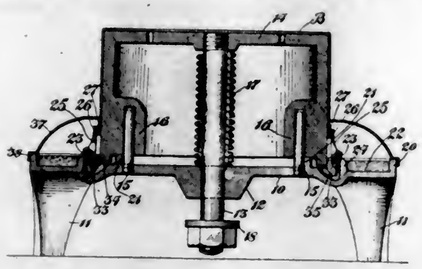
4. In an electric switch, the combination with a tubular casing, a removable plug in its front end having a central hole, and a pair of terminals carried by its rear end; of a plunger slidable through said hole, a disk-like plate having a central hole loosely embracing the plunger and peripheral spring arms extending forward within the casing and each inclined inward and thence outward, carried further forward, and terminating in inwardly directed feet, and a two-faced cam on the plunger adapted to be forced past said incline by the reciprocation of the plunger and to engage said feet when the plunger is withdrawn from the casing.

5. In an electric switch, the combination with a tubular casing, a plug in its front end having a central hole, a face plate having a hole registering with that in the plug, and screws passing through the face plate and partly into the plug and casing; of terminals in the rear end of the

casing, a plunger movably mounted through the holes in the face plate and front plug, a two-faced cam on the plunger within the casing, a circuit closing plate loosely mounted on the plunger, and spring arms projecting from said plate and having humps engaged by said cam when the plunger is reciprocated and feet engaged by the cam when the plunger is withdrawn from the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,194,244. BOX-PASTING MACHINE. ROBERT J. SCHWARTZ and EDWARD J. RETZBACH, St. Louis, Mo. Filed July 1, 1914. Serial No. 848,393. (Cl. 91—47.)



1. A box machine comprising a support, means for holding a box thereon, pasting means on said support disposed and operable for applying a streak of paste simultaneously along the edges of a plurality of the outer faces and adjacent the open end of the box, and means controlled by relative movement of said box holding means and support for effecting said paste applying operation.

2. A box machine comprising a support, means for positioning a box on said support, pasting means, and means operable by movement of the box to move said pasting means into engagement with the box, adapted to apply paste along the edges of said box.

3. A box machine comprising a support, means for positioning a box on said support, a paste font, pasting means, and means operable by movement of the box to move said pasting means from said font into engagement with the box, adapted to apply paste along the edges of said box.

4. A box machine comprising a support, a box mandrel movably mounted on said support, and pasting means operable by movement of said mandrel to move into engagement with the outer face of the box, adapted to apply paste adjacent the edge thereof.

5. A box machine comprising a support, a box mandrel mounted over said support, a font on said support and extending around said mandrel, and pasting means movable from said font into engagement with the box.

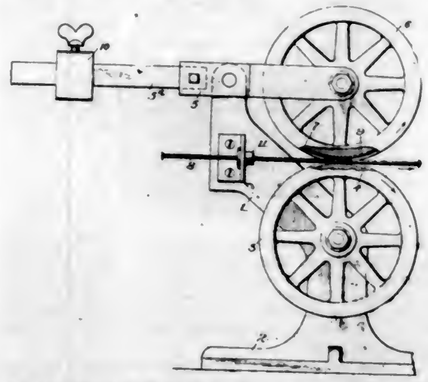
[Claims 6 to 12 not printed in the Gazette.]

1,194,245. MARKING INSULATED WIRE. THOMAS J. SEWARD, Bridgeport, Conn., assignor to The Electric Cable Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 5, 1915. Serial No. 54,231. (Cl. 101—84.)

1. The method of marking preformed insulated wire having a fibrous covering impregnated and coated with insulating material, which consists in indenting a designating mark into the outer face of the insulating covering while the insulating material is in a relatively soft state or condition.

2. The method of marking preformed insulated wire, which consists in passing such wire into operative relation with a periodically-acting indenting or marking die, and thereby impressing in the insulating surface, and without reformation of the insulating body, a series of designating marks.

3. The method of marking insulated wire, having a fibrous covering impregnated with insulating material, which consists in indenting a designating mark into the outer face of the insulating covering while the insulating material is in a relatively soft state or condition, whereby the fibers or threads of the covering will be displaced sufficiently to prevent injury thereto.



4. The method of marking insulated wire, having a braided exterior treated with an insulating compound, which consists in indenting or impressing the outer surface thereof while the insulating compound is in a relatively soft condition, and the threads of the braided portion are free to move under the action of the indenting or impressing element.

5. The herein-described process of marking preformed insulated wire, consisting in impressing, and without reformation of the insulating body, identifying marks at intervals through its length, while the insulating material is in such condition that it is free to be slightly displaced and to maintain such displacement without further treatment upon the withdrawal of the indenting or impressing element.

[Claim 6 not printed in the Gazette.]

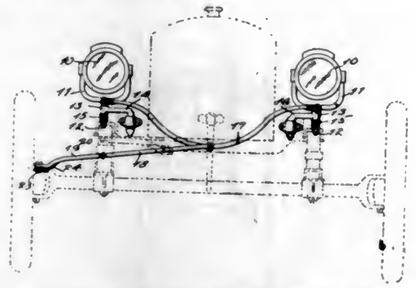
1,194,246. TEETHING DEVICE. ISAAC H. SHAMBAUGH, Avilla, Ind. Filed Apr. 6, 1915. Serial No. 19,555. (Cl. 128—28.)



As a new article of manufacture, a reversible teething device comprising a pair of spaced solid heads, each circular in outline and having convex upper and lower faces, and a handle member connecting the heads, the said handle member being of less diameter but of greater length than the width of either head.

1,194,247. DIRIGIBLE LAMP. WILLOUGHBY A. SHIVE, Trumbauersville, Pa. Filed Dec. 22, 1915. Serial No. 68,257. (Cl. 240—62.)

1. A device of the character described including lamp brackets, lamp carrying yokes pivotally supported by said brackets, arms extending from said yokes, a connecting rod pivotally connected with said arms, a draw bar pivotally connected with said connecting rod and having its outer end portion pivotally connected with the inner end portion, a lever arm adapted to be pivotally mounted and connected with a steering mechanism, a pin extending from the outer end portion of said draw bar to pivotally connect the draw bar with the lever arm, and a lever latch pivotally connected with the outer end portion of said draw bar and engaging said pin to releasably connect the draw bar with the lever arm.



2. A mechanism of the character described including pivotally mounted lamp yokes, arms extending from said lamp yokes, a connecting bar pivotally connected with said arms, a draw bar pivotally connected with said connecting bar, a lever arm adapted to be pivotally mounted and connected with a steering gear and having its outer end portion provided with an opening, a pin extending from the outer end portion of said draw bar for passing through the opening of said lever arm, and means for engaging said pin to releasably hold the same in the opening formed in said lever arm.

3. A mechanism of the character described including pivotally mounted lamp yokes, arms extending from said lamp yokes, a connecting bar pivotally connected with said arms, a draw bar pivotally connected with said connecting bar and having its outer end portion pivotally connected with the inner end portion whereby the outer end portion may be swung back against the inner end portion of the draw bar and the inner and outer end portions of the draw bar releasably connected with a supporting device, and means for releasably connecting the outer end portion of said draw bar with a steering gear.

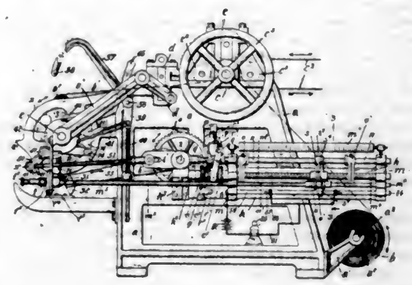
4. A mechanism of the character described including a lamp yoke connecting bar, a draw-bar connected with said connecting bar, a lever arm adapted to be connected with a steering gear and having its outer end portion provided with an opening, a pin extending from said draw-bar for passing through the opening of said lever arm, and means for engaging said lever arm to releasably hold the pin in the opening formed in said lever arm.

5. A mechanism of the character described including pivotally mounted lamp yokes, arms extending from said lamp yokes, a connecting bar connected with said arms, a draw bar pivotally connected with said connecting bar, a stem extending from the outer end of said draw bar, a resilient lever latch pivotally connected with said draw bar to engage said stem and provided with a finger for limiting its pivotal movement in one direction by engagement with said draw bar, and a pin carried by said draw bar for engaging said lever latch to releasably hold the same in an operative position.

1,194,248. ROLL-REWINDING MACHINE. WILLIAM BROWN SMITH, Camas, Wash. Filed Jan. 21, 1915. Serial No. 3,657. (Cl. 242—64.)

1. In a machine of the character described, a reel, a continually driven pinion journaled on the axis of the reel, core-arbors journaled in the circumference of the latter, a companion pinion carried by each core-arbor, means normally holding the companion pinions out of contact with said driven pinion, automatic means for moving said companion pinion into contact with said driven pinion during the rotation of the reel, and means for periodically rotating the latter.

2. In a machine of the character described, a reel, core-arbors journaled in the circumference of the reel, means for rotating the core-arbors, such means normally inactive, cam-elements adapted to throw such means into action during the rotation of the reel, and thereby causing the successive rotation of the core-arbors, and means for partially rotating the latter, periodically.



3. In a machine of the character described, a revoluble shaft, a reel mounted thereon, a pinion loose on the shaft of the reel, means for rotating such pinion, a plurality of core-arbors radially disposed at one end of the reel, arms hinged at radially disposed points on the other end of the reel, core-arbors carried by such hinged arms, companion pinions carried by the latter core-arbors, a flange disposed circumferentially of the reel, a cam-element on such flange, the extremities of said hinged arms bearing on said flange, and means for holding said arm extremities on said flange.

4. In a machine of the character described, a revoluble shaft, a reel mounted thereon, a pinion loose on the shaft of the reel, means for rotating such pinion, a plurality of core-arbors radially disposed at one end of the reel, arms hinged at radially disposed points on the other end of the reel, core-arbors carried by such hinged arms, companion pinions carried by the latter core-arbors, a flange disposed circumferentially of the reel, a cam element on such flange, the extremities of said hinged arms bearing on said flange, means for holding said arm extremities on said flange, and means for periodically rotating the reel.

5. In a machine of the character described, a revoluble shaft, a reel mounted thereon, a pinion loose on the shaft of the reel, means for rotating such pinion, means on one end of the reel for holding core-arbors, arms hinged at radially disposed points on the other end of the reel, core-arbor holding devices carried at the extremities of such hinged arms, companion pinions carried by said holding-devices, a flange disposed circumferentially of the reel, a cam-element on such flange, the extremities of said hinged arms bearing on said flange, means operating to hold such extremities on said flange.

[Claims 6 to 25 not printed in the Gazette.]

1,194,249. MANDREL FOR CORES OF ROLL-REWINDING MACHINES. WILLIAM BROWN SMITH, Camas, Wash. Filed Feb. 5, 1915. Serial No. 6,382. (Cl. 242—72.)



1. A mandrel having a plurality of circumferentially located yielding movable core-grippers adapted to be arranged close to the periphery of the mandrel and to be projected therefrom, and means for placing the core-grippers in either of such positions.

2. A mandrel having a plurality of circumferentially and helically located movable yielding core-grippers adapted to be arranged close to the periphery of the mandrel and to be projected therefrom, and means for placing the core-grippers in either of such positions.

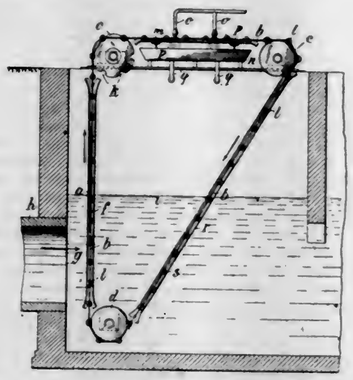
3. A mandrel having a plurality of circumferentially located movable core-grippers adapted to be arranged close to the periphery of the mandrel and to be projected therefrom, means for placing the core-grippers in either such positions, a core-aliner pivoted in the cavity therefor provided in the circumference of the mandrel, means for normally holding the core-aliner retracted, the core-aliner having operative connection with said core-gripper placing means, and being projected by the movement of the latter in a direction for retracting said core-grippers.

4. A mandrel having a plurality of circumferentially located movable core-grippers adapted to be arranged close to the periphery of the mandrel and to be projected therefrom, means for placing the core-grippers in either such positions, a core-aliner pivoted in the cavity therefor provided in the circumference of the mandrel, a spring normally holding the core-aliner retracted, the core-aliner having operative connection with said core-gripper placing means, and being projected by the movement of the latter in a direction for retracting said core-grippers.

5. A mandrel having a plurality of circumferentially located movable, yielding core-grippers adapted to be arranged close to the periphery of the mandrel and to be projected therefrom, a movable rod for placing the core-grippers in either of such positions, and a pivoted lever engaging with the rod and adapted for moving the same.

[Claims 6 to 18 not printed in the Gazette.]

1,194,250. SCREEN. JACOB JOSEPH LOUIS SMITS, Utrecht, Netherlands. Filed Mar. 26, 1915. Serial No. 17,267. (Cl. 210—16.)



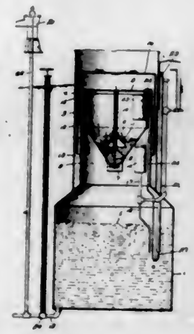
1. An endless traveling screen partially submerged, guide means for maintaining the submerged reaches of the screen in V-shape, and the unsubmerged reach between the upper ends of the submerged reaches in substantially horizontal position above the latter, in combination with means acting on the said horizontal reach of the screen to cleanse the latter before resubmersion.

2. An endless traveling screen, partially submerged, marginal guides therefor arranged at an angle to each other and at least partially submerged to maintain the submerged portion of the screen in V-shape, a portion of the screen not submerged having a substantially horizontal travel and means acting on the latter portion of the screen to cleanse the latter before resubmersion.

3. An endless traveling screen partially submerged and guide means for maintaining said screen in substantially triangular shape with two sides of the triangle partially submerged and the third side unsubmerged and substantially horizontal, for the purposes specified.

4. An endless traveling screen partially submerged, comprising an endless carrier element, divergent guides engaging the same, in the submerged area of the screen and guide means to support said carrier element between the divergent guides.

1,194,251. ACETYLENE-GAS GENERATOR. JOHN C. SPROULL, Lawrence, Kans. Filed July 30, 1915. Serial No. 42,785. (Cl. 48—38.)



An acetylene gas generator comprising a generating tank having the lower portion thereof adapted to contain a quantity of water and the upper portion circumferentially reduced to form a neck, a carbid container within the neck of said tank and closing the upper end thereof, said neck being formed with apertures, a shell surrounding said neck and spaced apart therefrom, a body of sealing liquid within the space between said neck and shell, a gas bell surrounding said neck and having the lower end thereof immersed in the sealing liquid and adapted to be elevated by the gas flowing from the generating tank through the opening in the neck thereof into the bell, a valve controlling communication between said carbid container and generating tank, an auxiliary carbid container in said first container formed with a hinged bottom, an arm arranged at the upper end of said first carbid container and projecting therethrough into said auxiliary container, a chain connecting the lower end of said arm to said hinged bottom, a vertical rod extending downwardly into the lower portion of said neck and then bent upon itself and projecting upwardly through the inclined portion of the neck that connects said neck with the bottom portion of the tank, a tube surrounding the upwardly projecting portion of said rod and having the lower end thereof immersed in the liquid in said tank, and a connection between said arm and the adjacent end of said rod.

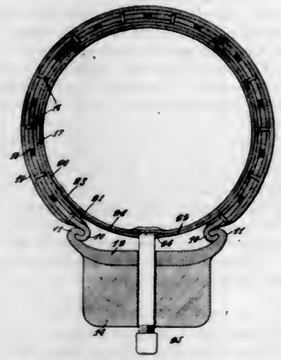
1,194,252. TRUSS OR RUPTURE-BELT OR OTHER SURGICAL APPLIANCE. JAMES STOTT, Conway, Wales. Filed Mar. 23, 1915. Serial No. 16,473. (Cl. 128—261.)



1. A truss or rupture belt or analogous surgical device, comprising a belt, an adjustable skeleton base attached thereto and a pad carried by said skeleton base and composed of normally plastic material which is applied to and secured over the affected part of the body to produce in the pad an accurate impression of the said part while the device is *in situ* on the body.

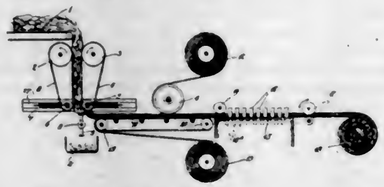
2. A truss or rupture belt or analogous surgical device, comprising a belt, an adjustable skeleton base attached thereto and a pad carried by said skeleton base and composed of normally plastic material which is applied to and secured over the affected part of the body to produce in the pad while pliable an accurate impression of the said part while the device as a whole is *in situ* on the body for the purpose of producing another pad from the impression made in the first pad.

1,194,253. TIRE. ROLLEN E. STUMP, Fresno, Cal. Filed May 24, 1915. Serial No. 30,174. (Cl. 152—18.)



In a device of the class described, a guard comprising a plurality of plate-like metal links; means for pivotally connecting the links of the guard along their longitudinal and transverse edges; an inner flexible cover and an outer flexible cover applied to the respective faces of the guard; securing devices passing through each of the links and through both covers, a casing secured to the outer cover independently of the securing devices and constituting an abutment for the outer ends of the securing devices; and a facing secured to the inner cover independently of the securing devices and constituting an abutment for the inner ends of the securing devices; the links along the longitudinal edges of the guard extending beyond the covers, the casing and the facing, and being provided with rim-engaging means independent of the covers, the casing and the facing, the covers and the securing devices serving to relieve strain on the means for pivotally connecting the links, and serving to retain the links in place when said means are broken, the facing and the casing serving to retain the securing devices in place when the same are broken.

1,194,254. QUILTING-MACHINE. ROBERT SUMNER, Cowley, England. Filed Mar. 4, 1916. Serial No. 82,188. (Cl. 112—14.)



1. In a quilting apparatus in combination, two endless belts for guiding and conveying the material to be quilted, said belts running in planes at right angles to each other, a beater receiving said material from one of said belts and directing it on to the other, and means for quilting the material received by the one of said belts which receives the material from said beater.

2. A quilting apparatus comprising in combination two endless belts for guiding and conveying the material to be quilted, said belts running in planes at right angles to each other, a beater receiving said material from one of said belts and directing it on to the other, means for guiding webbing strips on both sides of said material, and sewing machines disposed in two lines inclined transversely of the direction of movement of the material, each machine being disposed nearer the center of the material than the preceding one in the same line by a distance corresponding to the distance apart which the seams are required to be.

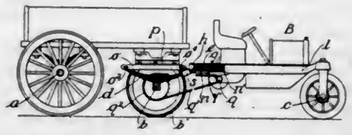
3. A quilting apparatus comprising in combination a belt for conveying materials to be quilted, means for guiding webbing strips on both sides of said material and separate sewing machines of ordinary type disposed in two lines inclined transversely of the direction of movement of the material, each machine being disposed nearer the center of the material than the preceding one in the same line by a distance corresponding to the distance apart which the seams are required to be and the machines in one line being staggered with respect to the machines in the other line.

4. A quilting apparatus comprising in combination two endless belts for guiding and conveying the material to be quilted, said belts running in planes at right angles to each other, a beater receiving said material from one of said belts and directing it on to the other, means for leading a webbing strip between said material and the one of said belts which receives the same from said beater, and means for guiding a webbing strip on the other side of said material, said last mentioned means comprising a perforated drum over which the webbing strip passes, means for producing a partial vacuum in said drum, and means for stitching said strips.

5. A quilting apparatus comprising in combination a conveyer for carrying a sliver of material to be quilted, means for leading a webbing strip between said conveyer and one surface of said sliver, and means for guiding a webbing strip on the other side of said sliver comprising a perforated drum over which said webbing strip passes and means for creating a partial vacuum in said drum, and means for stitching said strips.

[Claims 6 to 8 not printed in the Gazette.]

1,194,255. MOTOR-VEHICLE. EDWARD O. SUTTON, Springfield, Mass. Filed May 26, 1913. Serial No. 769,883. (Cl. 21—90.)



1. The combination in a tractor and trailer involving three supporting axles of a trailer frame, supporting springs on the intermediate axle for the trailer frame, integral extensions of said springs connected to said tractor and adapted to support the tractor member more yieldingly than the trailer frame is supported.

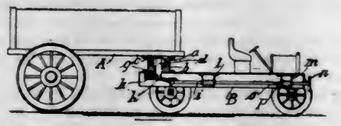
2. In a tractor and trailer device involving three supporting axles, springs on the intermediate axle to support the trailer, a portion of said springs being extended and connected to the tractor and adapted to more resiliently support the tractor than the trailer.

3. In a tractor and trailer mechanism involving three supporting axles, springs for the trailer having forward extensions, a tractor frame, and connections between the front ends of the springs and the tractor frame, said connections including blocks longitudinally slidable in the tractor frame and springs acting on said blocks to resist forward or backward movement whereby the extensions of the first named springs under their load may be substantially taken up without forcing the tractor and trailer members apart.

4. The combination in a motor device involving three supporting axles, of a spring for supporting the trailer upon the intermediate axle, a tractor frame, yieldable connections from the tractor frame to said springs, said connections comprising the draft connection between the tractor and the trailer.

5. In a motor vehicle involving three supporting axles, springs for supporting the trailer having forward extensions, a tractor frame, a member slidable in the tractor frame substantially longitudinally thereof but resiliently supported, and connections between the forward extensions of the spring and said member, together with a fifth wheel supported upon the said springs.

1,194,256. ATTACHMENT FOR VEHICLES. EDWARD O. SUTTON, Springfield, Mass. Filed Aug. 30, 1913. Serial No. 787,478. (Cl. 21—90.)



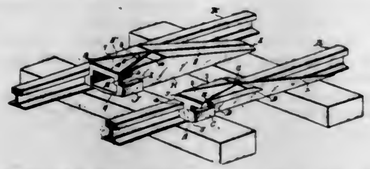
1. In a vehicle, a pair of mutually-engageable bolster-plates one thereof provided with an unsymmetrical aperture, a king-bolt provided with a head of the same shape as said aperture, and adapted to pass therethrough, means whereby said king-bolt may be raised, lowered and turned at will, said last-named means being operable at a distance from said bolster-plates.

2. In a motor-vehicle, a pair of bolster-plates having apertures therethrough, a king-bolt having a head designed to slip through one of said apertures in one position but to be locked against withdrawal through said aperture in another position, a crank on said king-bolt, a link connected to said crank, a rod connected to said link, an arm on said rod, means for holding said rod in longitudinally-adjusted position, whereby longitudinal movements of the rod operate to turn the king-bolt on its axis and turning movements thereof operate to move the king-bolt along its axis, all for the purpose described.

3. In a combined tractor and trailer, a fifth wheel structure including bolster-plates, a coupling element for said bolster-plates adapted in one position to lock said bolster-plates together and in another position to release said bolster-plates, and means operable at a distance from said bolster-plates whereby said coupling element may be manipulated to assume and retain locking position or releasing position at will.

4. In a vehicle, a pair of mutually engageable bolster plates, one thereof provided with a rectangular aperture, a king bolt provided with a T-head of the same shape as said aperture and adapted to pass therethrough, means whereby said king bolt may be raised, lowered and turned at will, said means being operable at a distance from said bolster plates.

1,194,257. RAILWAY RERAILING-FROG. RICHARD M. TAYLOR, Chicago, Ill. Filed May 19, 1913. Serial No. 768,653. (Cl. 104—163.)

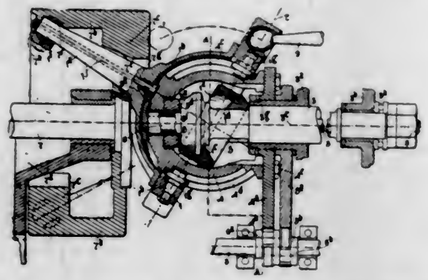


1. A rerailing frog comprising a body portion having an inclined upper surface terminating in a substantially horizontal straight platform, the said platform having its end round and the sides of the frog being formed with rail receiving pockets, a bolt having one of its ends provided with a rail engaging hook adjustable upon the frog, and the said frog having side members spaced from the inclined plane and platform and integrally formed therewith to provide side ribs for the frog.

2. The herein described car rerailer including an inner and an outer frog, said frogs each having their ends provided with pockets to receive the heads of the rail and their underfaces to contact with the webs of the rails, adjustable rail head engaging hooks upon each of the said frogs, each of said frogs including an inclined plane which terminates in a substantially horizontally disposed platform, the rear of the platform being rounded downwardly, and each of said frogs having side ribs providing guides for the wheels of a truck.

3. The herein described car rerailer including an inner and an outer frog member, each of the frogs including a horizontally straight platform portion and an inclined plane leading from said platform, the sides of the platform being formed with rail head receiving pockets and with outwardly extending portions to be received in the fishing spaces of the rails, the underfaces of the frogs being inclined from their sides to their center to engage with the base flange of the rail, a transversely disposed adjustable hook member at the platform of each of the frogs to engage with the heads of the rails, the said platforms being formed with oppositely diverging grooves for the rims of the wheels of the rolling stock, the said grooves communicating with the inclined planes of the said frogs, and one of the frogs at the said grooved portion thereof being provided with a pivoted switch.

1,194,258. MECHANICAL MOVEMENT. CHARLES LESLIE WALKER, Hampstead, London, England. Filed May 1, 1915. Serial No. 25,335. (Cl. 74—14.)



1. For the purpose of anchoring two contrary members one having its axis inclined to that of the other and taking up axial thrust; a combination comprising a plurality of oscillating members having their axis of oscillation coincident with that of the non-inclined contrary member, means for operative connection of the inclined contrary member with the said oscillating members, a give-and-take element whose opposed parts have means for operative engagement respectively with the said oscillating members, means for mounting the said give-and-take element on the non-inclined contrary member, male and female opposed circular rolling tracks concentrically carried by the said contrary members respectively, a part extending from the non-inclined contrary member through the opening within the female rolling track for supporting the male rolling track, means to enable one of the said rolling tracks to rotate in relation to the contrary member which carries it and means for supporting and coördinating the said contrary members and oscillating members in their angular and axial relationship.

2. For the purpose of anchoring two contrary members one having its axis inclined to that of the other; a combination comprising a plurality of oscillating members having their axis of oscillation coincident with that of the non-inclined contrary member, means for operative connection of the inclinel contrary member with the said oscillating members, a give-and-take element whose opposed parts have means for operative engagement respectively with the said oscillating members, means for mounting the said give-and-take element on the non-inclined contrary member, and means for supporting and coördinating the said contrary members and oscillating members in their angular and axial relationship substantially as described.

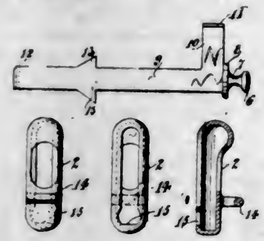
3. For the purpose of anchoring two contrary members one having its axis inclined to that of the other; a combination comprising intermediate members mounted with axes disposed radially and 90° apart within the medial plane of the inclined contrary member, two oscillating members adapted to engage with the said intermediate members, a balance having ends adapted for interaction respectively with the said oscillating members, a fulcrum for the said balance supported by the non-inclined contrary member and means for supporting and coördinating the said contrary members and oscillating members in their angular and axial relationship substantially as described.

4. In a machine of the order having two contrary members one with its axis inclined to that of the other and having axially reciprocating elements (as pistons, etc.) in connection with the inclined contrary member; for the purpose of taking up axial thrust a combination comprising male and female opposed rolling tracks concentrically carried by the said contrary members respectively, a part extending through the opening within the female track for supporting the male track, and means for anchoring the said contrary members.

5. In a machine of the order having two contrary members one with its axis inclined to that of the other and having axially reciprocating elements (as pistons, etc.) in connection with the inclined contrary member; for the purpose of taking up axial thrust, a combination comprising opposed rolling tracks concentrically carried by the said contrary members respectively, means for enabling one of the said tracks to rotate in relation to the contrary member which carries it, means for anchoring the said contrary members.

[Claim 6 not printed in the Gazette.]

1,194,259. SAFETY DEVICE FOR WINDOW-CLEANERS. ALEX WENDELBURG, New York, N. Y., assignor to Frank E. Hume, New York, N. Y. Filed July 20, 1911, Serial No. 639,502. Renewed Jan. 4, 1916. Serial No. 70,308. (Cl. 72—108.)



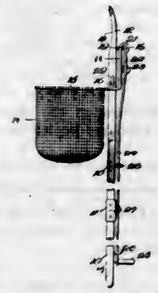
1. An anchor bolt comprising a head, a longitudinally extending body portion, a laterally extending leg provided at its extremity with a vertically extending lip, said leg being located adjacent to the head end of the bolt the other end of the bolt being provided with a vertically extending projection carried by the body and laterally projecting ears carried by the body which ears are located between the leg and the projection carried by the body.

2. In a brick wall building construction an anchor bolt having a longitudinally extending body portion located between horizontal faces of the bricks, a laterally extending leg integral with the body which leg is provided with a lip that engages the inner vertical side portion of the bricks, the body portion being also provided with a vertically extending lip that engages a vertical face of a brick, said last mentioned lip being located between the sides of the wall of the building.

3. In the brick walls of a building an anchor bolt having a head which is engaged by a clip or a safety device for window cleaners, a longitudinally and horizontally extending body portion, a laterally and horizontally extending arm, a vertically and transversely extending lip on the body, and a vertically and longitudinally extending lip on the free end portion of said arm, the longitudinally extending body and the arm both being located in the mortar between the horizontal face portions of adjacent bricks, the transversely and vertically extending lip being in engagement with the vertically extending end face of a brick and the vertically extending lip on the arm being arranged to engage a vertically extending face portion of a brick, which last mentioned portion faces the interior of the building.

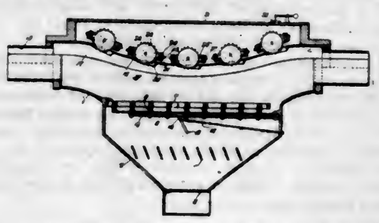
4. In the brick walls of a building an anchor bolt having a clip engaging head, a longitudinally and horizontally extending body portion which is located in the mortar between the adjacent horizontally extending surface portions of the bricks that are arranged one above the other and a laterally extending leg having a horizontally extending portion that is located in the mortar between horizontal faces or surfaces of the opposing bricks, said leg also being provided with a vertically extending lip that is arranged to be opposed by a vertically extending surface portion of a brick which surface portion is located on the side of the brick that is on the inner side of the wall.

1,194,260. FRUIT-GATHERER. BENJMIN F. WHITE, Winnsboro, Tex., assignor of one-half to John S. McLeod, Bivins, Tex. Filed Dec. 10, 1915. Serial No. 66,124. (Cl. 56—99.)



In a fruit gatherer, a staff, a support for a receptacle formed from a single rod bent intermediate the ends into a relatively large loop to form a rim to the receptacle and smaller loops to receive pivot devices whereby the support may be swingingly mounted on to the staff, one terminal of the support being formed into an eye and the other terminal of the support passing through the eye and extended into an arm, and means connected to said arm for swinging said receptacle support upon its pivots.

1,194,261. AUTOMATIC SEED-COTTON CLEANER, WILLIAM J. WHITE, Birmingham, Ala. Filed Dec. 4, 1915. Serial No. 65,085. (Cl. 13—19.)



1. A seed cotton cleaner comprising a body, a series of perforated plates pivotally mounted therein, means for normally holding the said plates in a closed position with relation to each other, a cover telescopically fitting upon the body, means for securing the cover at an adjusted position with relation to the body and a series of jour-

nailed wheels carried by the cover and provided with knobs located upon their peripheries.

2. A seed cotton cleaner comprising a body, a series of perforated plates pivotally mounted therein, said plates having below their pivots solid portions which normally lie approximately in vertical position, said plates being provided above their pivots with curled edges, means for normally holding the plates in closed position with relation to each other and a cover mounted upon the body and having a series of journaled wheels provided with knobs located upon their peripheries.

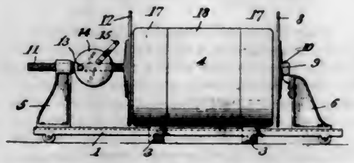
3. A seed cotton cleaner comprising a body, a series of perforated plates pivoted in the body, said plates having below their pivots solid portions and provided above their pivots with curled edges, rods located below the plates, a shaft journaled in the body and provided with a crank which lies under the rods and spring means connecting the crank of the shaft with the body and adapted to hold the plates normally in closed position with relation to each other.

4. A cotton cleaner comprising a body, perforated plates mounted therein, a cover telescopically fitted upon the body, means for securing the cover at an adjusted position with relation to the body, said cover having a series of longitudinally disposed slots and wheels journaled above the cover and having their lower portions projecting through the said slots.

5. A seed cotton cleaner comprising a body, perforated plates pivotally mounted in the body, a cover telescopically fitting upon the body, means for securing the cover at an adjusted position with relation to the body, the cover being provided at its intermediate portions with a series of longitudinally disposed slots, bars adjustably mounted upon the cover, wheels journaled in the bars and provided with knobs located upon their peripheries, the said wheels passing through the slots and means for securing the bars at adjusted positions with relation to the cover.

[Claim 6 not printed in the Gazette.]

1,194,262. COMPRESSING DEVICE. FRANK P. WILDER, Harrisville, N. Y. Filed Jan. 21, 1916. Serial No. 73,417. (Cl. 100—57.)

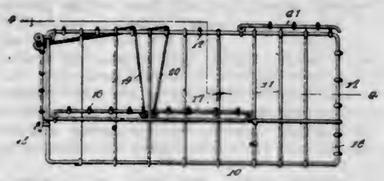


1. A compressor device for holding caps upon the ends of reels of paper while adhesive matter upon the caps is setting, comprising a truck, standards thereon, disks, one of which is stationary and mounted upon one of said standards, the other disk having a plunger mounted in a standard, a wheel mounted eccentrically upon the plunger, and a handle fixed to the wheel, said wheel adapted to bear against the stationary standard to cause the plunger to be moved forward as the wheel rotates.

2. A compressor device for holding caps upon the ends of reels of paper while adhesive matter upon the caps is setting comprising a truck having grooved wheels on the center thereof and laterally projecting beams having inclined portions, standards fastened to the truck, disks, one having a bracket mounted upon one standard, the other disk having a plunger movable within the standard, a wheel pivotally mounted eccentrically upon said plunger, and a handle fixed to the wheel.

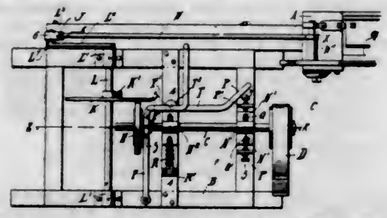
1,194,263. HEN'S NEST. JOHN L. WILSON, Buffalo, Mont. Filed May 21, 1915. Serial No. 29,571. (Cl. 119—50.)

A nest comprising a body portion having a front wall provided with an inlet opening, an upper bar extending transversely across the front wall in spaced relation thereto, a lower bar extending across the front wall in spaced relation thereto, doors having vertically extending bars slidably connected with the upper bar extending across the front wall and having their lower end portions



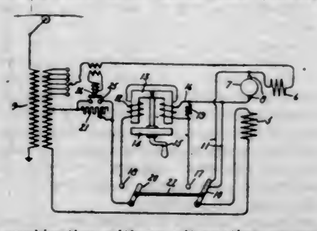
bent to extend beneath the lower bar extending across the front wall, actuating platforms mounted in said body portion, and flexible means leading from said platforms and connected with said doors whereby movement of said platforms will slide said doors upon said upper bar.

1,194,264. FRICTIONAL GEARING. SAMUEL W. WOMBLE, Cheriton, Va., assignor to Womble Machine Company, Incorporated, Cheriton, Va. Filed July 27, 1914. Serial No. 853,525. (Cl. 74—26.)



A stave saw-feeding apparatus for stave machines comprising a frame and a rotatable driven shaft mounted in suitable bearings thereon and designed to drive a stave feeding carriage, a disk fixed to said shaft, a plate secured to said frame and having angled ends, set screws mounted in apertures in said angled ends, a boxing having slotted wings mounted upon said plate and against the ends of which wings said screws are adapted to bear, bolts carried by the frame and passing through said plate and slots, a second bearing plate, a sliding boxing upon the frame and bolts carried by the latter and passing through slots in the sliding boxing, a spring bearing yieldingly against the latter, a driving shaft journaled in said boxings and designed to have a slight tilting movement against the tension of said spring, a friction disk splined to the driving shaft and adapted to engage the disk upon the driven shaft.

1,194,265. ALTERNATING-CURRENT MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 24, 1914. Serial No. 868,384. (Cl. 172—276.)



1. The combination with an alternating current motor having a commuted armature winding and an inducing winding and an exciting winding, of means for separately supplying current to the exciting and armature windings on the one hand and to the inducing winding on the other hand, a transformer winding connected in series relation with the inducing winding, and means for including a part only of said transformer winding in series relation with said exciting and armature windings.

2. The combination with an alternating current motor having a commuted armature winding and an inducing winding and an exciting winding, of a transformer winding connected in series relation with the inducing winding to form one circuit of the motor, and means for connecting the exciting and armature windings and a part only of said transformer winding in series relation to form a second circuit of the motor.

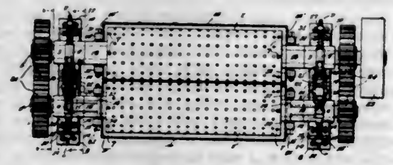
3. The combination with an alternating current motor having a commuted armature winding and an inducing winding and an exciting winding, of a transformer winding connected in series relation with the inducing winding to form one circuit of the motor, said transformer winding having a magnetic circuit with an air gap therein, and means for connecting the exciting and armature windings and a part only of said transformer winding in series relation to form a second circuit of the motor.

4. The combination with an alternating current motor having a commuted armature winding and an inducing winding and an exciting winding, of means including one common connection for separately supplying current to the exciting and armature windings on the one hand and to the inducing winding on the other hand, and a transformer winding included in said common connection, said transformer winding having a magnetic circuit with an air gap therein.

5. The combination with an alternating current motor having a commuted armature winding and an inducing and an exciting winding, of a source of electromotive force, a transformer winding electrically connected at a point intermediate its terminals to the armature winding and having one of its terminals electrically connected to said source and its other terminal electrically connected to said inducing winding, and means including said transformer winding and said source of electromotive force for separately impressing voltages on the exciting and armature windings on the one hand and on the inducing winding on the other hand.

[Claims 6 to 10 not printed in the Gazette.]

1,194,266. PRESS. ELISHA H. ALVORD, Seattle, Wash., assignor to Alvord Automatic Machine Co., Seattle, Wash., a Corporation of Washington. Filed Mar. 29, 1912. Serial No. 687,223. Renewed Nov. 1, 1915. Serial No. 59,150. (Cl. 100—47.)



1. A press comprising opposing presser members supported in opposing relation for movement, means for simultaneously moving said presser members to thereby press and advance the material in the direction of its delivery movement, and an expansible discharge throat for the material arranged at the delivery side of said members to receive the pressed material from the latter and be expanded by said material.

2. A press comprising an expansible discharge throat yieldingly held against expansion, presser members for simultaneously pressing and advancing material through said throat, one of said presser members being supported for movement from the other, and means yieldingly holding said last named presser member against movement from the other.

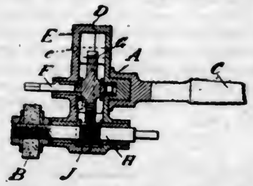
3. A press comprising a discharge throat having a laterally movable yieldingly held side wall section, opposing rotatable members for advancing material through said throat, and means for rotating said members.

4. A press comprising a discharge throat having a laterally movable yieldingly held side wall section, opposing rotatable members for pressing and advancing material through said throat, one of said members being supported for movement from the other, means yieldingly holding said last named member against movement from the other, and means for rotating said members.

5. A press comprising a discharge throat having side wall sections yieldingly supported for movement toward and from one another, a rotatable presser member, another presser member associated with said rotatable member for simultaneously pressing and advancing material to said throat for passage therethrough, and means yieldingly pressing one of said presser members toward the other.

[Claims 6 to 20 not printed in the Gazette.]

1,194,267. GRINDING WHEEL OR TOOL. SYDNEY GUY ASHBY, Edenbridge, England. Filed Mar. 16, 1915. Serial No. 14,745. (Cl. 51—1.)

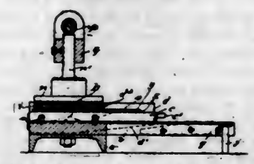


1. A grinding tool for use in combination with lathes, comprising a frame adapted to be held engaged on one side thereof by the loose headstock of a lathe, a spindle extending from the other side of said frame and adapted to be secured in a chuck carried by the fixed headstock of the lathe, and a grinding wheel carried by the frame driven from said spindle.

2. A grinding tool for use in combination with lathes comprising a frame having a projecting portion at one end thereof adapted to be centered in the loose headstock of a lathe, a spindle journaled on the opposite end of the frame and adapted to have the projecting end thereof secured in the chuck carried by the fast headstock of the lathe, a second spindle journaled on the frame, a grinding wheel on said second spindle, and means for driving said second spindle from said first spindle.

3. A grinding tool for use in combination with lathes comprising a frame consisting of a gear box having a projecting portion at one end thereof and adapted to be centered in the loose headstock of a lathe, a spindle journaled in the gear box and projecting from the opposite end thereof and adapted to be secured in the chuck carried by the fast headstock of the lathe, a second spindle journaled in the gear box and projecting therefrom, a grinding wheel fast to the projecting end of said spindle, and means for driving said second spindle from said first spindle.

1,194,268. MACHINE FOR PUNCHING AND AFFIXING CHARACTERS AND THE LIKE OF PAPER. WALTER BAUCHWITZ, Leipzig, Germany. Filed Mar. 28, 1914. Serial No. 828,054. (Cl. 164—26.)



1. In a machine for the purpose set forth the combination of a press, a bed, a manually reciprocatable anvil

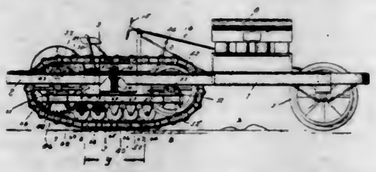
movable on said bed to and from said press, a movable punch support carried by said anvil, and means whereby said punch support is automatically raised from said anvil by the movement of the latter from said press.

2. In a machine for the purpose set forth the combination of a press, a bed, a manually reciprocatable anvil movable on said bed to and from said press, a movable punch support carried by said anvil, and abutments fixed to said bed whereby said punch support is automatically raised from said anvil in the course of the movement of the latter from said press.

3. In a machine for the purpose set forth the combination of a press, a bed, a manually reciprocatable anvil movable on said bed to and from said press, a movable punch support carried by said anvil, and abutments fixed to said bed, whereby said punch support is automatically raised and lowered on said anvil in the course of the movements of the latter from and to said press respectively.

4. In a machine for the purpose set forth the combination of a press, a bed, a manually reciprocatable anvil movable on said bed to and from said press, vertically movable vertical plates engaged with the sides of said anvil and having horizontal slots above the level of said anvil, cross bars over said anvil extending with their ends through said slots and adapted to support a punch, nuts on the ends of said cross bars, whereby the same are fixable in selected positions in said slots, and abutments fixed to said bed, whereby said vertical plates are automatically raised in the course of movement of said anvil from said press.

1,194,269. TRACTOR-ENGINE. CLARENCE LEO BEST, San Leandro, Cal. Filed Jan. 18, 1913. Serial No. 742,909. (Cl. 21—114.)



1. In a tractor, and in combination a main frame, a steering wheel normally positioned for load carrying service, a tractor truck mechanism comprising a driving sprocket wheel, a truck frame pivotally mounted concentric with the axis of the sprocket wheel, a tractor chain, a curved idler surface, rollers interposed between the idler surface and the sprocket wheel, and a spring member normally tensioned for load carrying service and positioned intermediate the idler surface and the sprocket wheel.

2. In a track laying tractor, an endless track member, a driving sprocket wheel for the member, a swinging truck member having a pivotal connection concentric with the axis of the sprocket wheel member, means carried by the swinging truck member for engaging the track and for supporting the load, and a spring interposed between the frame of the machine and the swinging truck member for maintaining the active part of the track member in contact with the surface irrespective of the contour thereof while maintaining substantially the normal position of the frame of the machine.

3. In a tractor, the combination of a main frame, a supporting and guiding wheel at the front of the said frame, an elongated tractor frame, a sprocket chain wheel on the tractor frame, at each end thereof, an endless traction chain trained over said sprocket chain wheels, the tractor frame being pivotally connected at its rear end to the rear of the main frame, to permit free up and down movement of the front end of the tractor frame, forward idler wheels rigidly supported on the tractor frame, and rear idler wheels yieldably mounted upon the tractor frame, said forward and rear idlers being arranged intermediate the sprocket chain wheels and supporting a length of the lower run of the endless tractor chain for engagement with the road surface.

4. In a tractor, the combination of a main frame, a supporting and guiding wheel at the front of said frame, an elongated tractor frame, a sprocket chain wheel on the tractor frame, at each end thereof, an endless traction chain trained over said sprocket chain wheels, the tractor frame being pivotally connected at its rear end to the rear of the main frame to permit free up and down movement to the front end of the tractor frame, yieldable means interposed between the main frame and tractor frame, in advance of the pivotal connection of the tractor frame with the main frame, forward idler wheels rigidly supported on the tractor frame, and rear idler wheels yieldably mounted on the tractor frame between the said yieldable means and the pivotal connection of the tractor frame with the main frame, said forward and rear idler wheels engaging and supporting a length of the lower run of the endless traction chain for engagement with the road surface.

1,194,270. MAGAZINE-FIREARM. JOHN HENRY BLAKE, Washington, D. C. Filed Apr. 7, 1915. Serial No. 19,838. (Cl. 42—25.)



1. In a firearm the combination with a barrel provided with a chamber, and a recess at each side of said chamber, of a reciprocating breech bolt adapted to close the barrel, said reciprocating breech bolt being provided with an undercut flange adapted to engage the end of the body of the extractor, an extractor carried by said breech bolt and having a lip engaging said undercut flange on the breech bolt, and having its head adapted to project into one of said recesses in said barrel, a shell starter mounted in the opposite recess of said barrel and actuated by the rearward movement of said breech bolt, and adapted to coöperate with said extractor in centering the cartridge case in the chamber and starting same to the rear, and a combined bolt stop and ejector located in the path of said breech bolt and provided with a lug adapted to engage the rim of the cartridge case opposite to said extractor and to eject the same, and with a second lug adapted to arrest the rearward movement of said breech bolt, substantially as described.

2. In a firearm the combination with a barrel provided with a chamber, and a recess at each side of said chamber, of a reciprocating breech bolt adapted to close the barrel, said reciprocating breech bolt being provided with an undercut flange adapted to engage the end of the body of the extractor, an extractor carried by said breech bolt and having a lip engaging said undercut flange on the breech bolt, and having its head adapted to project into one of said recesses in said barrel, a shell starter in the form of a bell-crank lever having one arm adapted to be struck by the rearward movement of said breech bolt, and the other arm terminating in a claw adapted to engage the rim and sides of the cartridge case and to co-act with the extractor in centering said cartridge case and starting same to the rear, and a combined bolt stop and ejector located in the path of said breech bolt and provided with a lug adapted to engage the rim of the cartridge case opposite to said extractor and to eject the same, and with a second lug adapted to arrest the rearward movement of said breech bolt, substantially as described.

3. In a firearm the combination with a hollow breech bolt, of a firing pin mounted therein provided with a cylindrical stem and a flanged annular head, a striker removably mounted on said head and provided with a recessed groove opening laterally and adapted to receive said flanged head of the firing pin, said striker terminating at its rear in a reduced cylindrical portion, a locking ring surrounding said firing pin and adapted to slip over said reduced cylindrical portion of the striker, and a coil spring adapted not only to impel the firing pin forward when said firing pin is released, but also to press against the base of said locking ring and to hold said locking ring in the engaging position for locking said striker in place on the firing pin, substantially as described.

4. A firing pin provided with a cylindrical stem and a flanged head, a striker removably mounted on said head and provided with a recessed groove opening laterally and adapted to receive said flanged head of the firing pin, said striker terminating at its rear in a reduced cylindrical portion, and a locking ring surrounding said cylindrical stem and adapted to slip over said reduced cylindrical portion of the striker, substantially as described.

5. A firing pin provided with a cylindrical stem and a flanged head, a striker removably mounted on said head and provided with a recessed groove opening laterally and adapted to receive said flanged head of the firing pin, said striker terminating at its rear in a reduced cylindrical portion, and a locking ring surrounding said cylindrical stem and adapted to slip over said reduced cylindrical portion of the striker, with means for holding said locking ring in place when said firing pin is in use, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,194,271. WRENCH. ROGER H. CANFIELD, Vivian, La., and CARL W. LEMON, Marietta, Ohio. Filed Feb. 16, 1916. Serial No. 78,730. (Cl. 81—91.)



1. In a wrench, the combination with movable jaws, a single handle for said wrench in operative relation to actuate either of said jaws singly, and means between said jaws for moving the companion from the operated jaw, substantially as described.

2. In a wrench, the combination with movable jaws, a single handle for said wrench in operative relation to actuate either of said jaws singly and selectively accordingly as the jaw is shifted in one or the other direction, and a gear connection between said jaws for simultaneously moving the companion from the operated jaw, substantially as described.

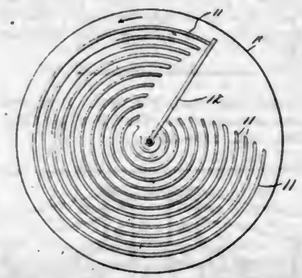
3. In a wrench, the combination with movable jaws, flaring noses on said jaws, means for operating one jaw, and a gear connection between said jaws for operating the companion jaw from the operated jaw substantially as described.

4. In a wrench, the combination with movable jaws, tail pieces on said jaws, a handle for engaging one tail piece only to move the respective jaw, and means for operating the companion jaw simultaneously with and from the moved jaw, substantially as described.

5. In an improved wrench, the combination of a frame, jaws pivoted in said frame, tail pieces on said jaws, a handle for engaging either tail piece to rock the respective jaw, and a gear connection between said jaws connecting the same for simultaneous operation, substantially as described.

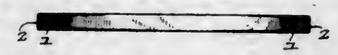
[Claim 6 not printed in the Gazette.]

1,194,272. ELECTRIC SWITCH. ROY H. CARL, Greenfield, Iowa. Filed Apr. 12, 1915. Serial No. 20,824. (Cl. 200—14.)



A switch for electric signs comprising a disk body of insulating material, a plurality of substantially coextensive parallel spaced concentrically arranged conductors secured against one end of the body, said conductors having one set of corresponding ends receding successively from the outermost conductor inwardly, and the other set of corresponding ends advancing successively from the outermost conductor inwardly, and a switch arm pivoted to the center of the body and adapted to simultaneously engage all of said conductors during a portion of its rotation.

1,194,273. SEALING-RING. JOSEPH S. CARLITZ, Philadelphia, Pa., assignor to Reno Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed June 27, 1910, Serial No. 569,079. Renewed Oct. 20, 1913, Serial No. 796,516. Divided and this application filed Mar. 21, 1914. Serial No. 826,395. (Cl. 91—68.)

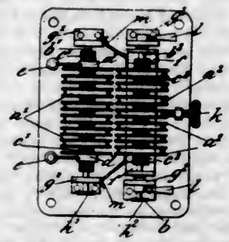


1. A packing for a closure consisting of a body of porous material impregnated with a normally liquid substance and having a coating of pyroxylin.

2. A packing for a closure consisting of a body of wood pulp impregnated with glycerin and provided with a coating of pyroxylin.

3. A packing for a sealing closure made of relatively porous material containing a substance for maintaining it in a pliable condition; said substance being of a nature to be capable of escaping from said material under normal conditions; with an impervious coating on the closure for preventing escape of the substance for keeping it pliable.

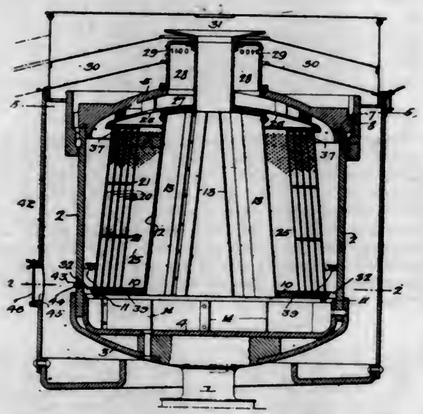
1,194,274. TRANSMITTER FOR SIGNALING BY ELECTROMAGNETIC WAVES. FREDERICK JOHN CHAMBERS, London, England, assignor to Automatic Telephone Manufacturing Company Limited, Liverpool, England. Filed Oct. 31, 1914. Serial No. 869,674. (Cl. 250—38.)



In the transmission of wireless signals, a transmitter comprising two sets of conducting disks of large heat ca-

pacity, respectively secured to but insulated from rotatable shafts, the axes of the shafts being parallel, and the peripheries of the disk of one set being adjacent those of the other set to form a plurality of spark gaps in series with each other, each having as one electrode a disk of one set and as the other electrode an oppositely disposed disk of the other set.

1,194,275. CENTRIFUGAL FILTER. HARRY C. CHRISTIANSON, Ridgewood, N. J. Filed Feb. 21, 1914. Serial No. 820,190. (Cl. 210—25.)



1. The process of treating liquids containing solids in suspension, which consists in passing a solid-containing liquid through a series of concentric rapidly rotating centrifugal chambers and toward the axis of rotation thereof, said chambers each having opposed walls perforated substantially throughout their extent and said chambers having successively decreasing rates of peripheral speed, the rotary and centrifugal action imparted to the liquid in one chamber being continued but in lesser degree in the next, and succeeding chambers, thereby separating from the liquid the suspended matter displaced in the several chambers and depositing said suspended matter on the inner surfaces of the walls of the chambers between the perforations thereof, and discharging the clear liquid adjacent the axis of rotation.

2. The process of treating liquids containing solids of differing specific gravity in suspension, which consists in passing a solid-containing liquid through a series of concentric centrifugal separating chambers and toward the axis of rotation thereof, said chambers each having opposed walls perforated throughout their extent and said chambers having successively decreasing rates of peripheral speed, the rate of peripheral speed of one chamber decreasing at different portions thereof, the centrifugal action imparted to the liquid in one chamber being continued but in lesser degree in the next and succeeding chambers, thereby separating from the liquid the suspended matter displaced by each chamber and at the same time depositing said suspended matter on the inner surfaces of the walls of the chambers between the perforations thereof, and discharging the clear liquid adjacent the axis of rotation.

3. The process of treating liquids, which consists in subjecting a liquid to a continuous rapid centrifugal action, in concentric chambers having opposed walls with perforations throughout their extent, said chambers successively and progressively decreasing the peripheral speed of said centrifugal action, thereby separating from the liquid and collecting on the inner walls of said chambers between the perforations thereof, the suspended matter displaced by centrifugal action at each stage of decrease of peripheral speed, whereby the liquid is freed at each stage from impurities not removable by centrifugal action at the progressively decreased peripheral speeds, and discharging the clear liquid adjacent the axis of rotation of the chambers.

4. The process of treating liquids, which consists in subjecting the same to rapid and continuous centrifugal action in concentric chambers having opposed walls with perforations throughout their extent, said chambers successively and progressively decreasing the peripheral speed of said centrifugal action, thereby separating in said chambers the liquid matter and at the same time depositing on the inner walls of the chambers between the perforations thereof the suspended matter displaced by centrifugal action at each stage of decrease of the peripheral speed, and passing said liquid at each successive decrease of peripheral speed through a filtering medium whereby the liquid is freed at each stage or change of peripheral speed from impurities not removable by centrifugal action at the progressively decreased peripheral speeds.

5. The process of treating solid-containing liquids, which consists in subjecting the same to continuous rotary and centrifugal actions in concentric chambers having opposed walls with perforations throughout their extent, said chambers rotating at different peripheral speeds, first increasing directly and then decreasing progressively, said peripheral speeds ranging from substantially 20,000 to substantially 10,000 feet per minute, thereby separating in said chambers the liquid under treatment, and at the same time depositing on the inner walls of the chambers between the perforations thereof the suspended matter displaced progressively, first at the increased and then at the decreased rates of peripheral speed, and discharging the clear liquor at a point adjacent the axis of rotation of said chambers.

[Claims 6 to 13 not printed in the Gazette.]

1,194,276. FOOD COMPOSITION. JOHN CONSTANTINE, Cedar Rapids, Iowa. Filed Jan. 29, 1916. Serial No. 75,171. (Cl. 99—11.)

1. The hereindescribed method of preparing a food composition which consists in reducing the fleshy constituents of a plurality of fruits to a pulpy commingled mass, then comminuting the pits of said fruits and adding the same to said pulpy mass to form an admixture, and finally adding an oleaginous preservative.

2. The hereindescribed method of preparing a food composition which consists in reducing the fleshy constituents of a plurality of fruits to a pulpy commingled mass, then comminuting the pits of said fruits and adding the same to said pulpy mass to form an admixture, adding an oleaginous preservative, and finally agglomerating said mass into cakes.

3. The hereindescribed method of preparing a food composition which consists in reducing the fleshy constituents of a plurality of fruits to a pulpy commingled mass, then comminuting the pits of said fruits and adding the same to the pulpy mass to form an admixture, blending bran with the resultant mass, and finally adding an oleaginous preservative.

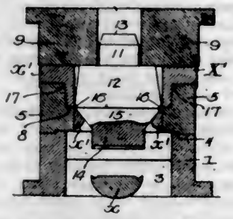
4. The hereindescribed method of preparing a food composition which consists in reducing the fleshy constituents of a plurality of fruits to a pulpy commingled mass, then comminuting the pits of said fruits and adding the same to said pulpy mass, blending bran with the resulting mass, adding an oleaginous preservative, and finally agglomerating the mass into cakes.

5. The hereindescribed method of preparaing a food composition which consists in reducing to a pulpy mass the fleshy constituents of a plurality of fruits having laxative properties, thoroughly agitating the pulpy mass and adding thereto the comminuted pits of said fruits, and finally adding an oleaginous preservative.

[Claim 6 not printed in the Gazette.]

1,194,277. METHOD OF MAKING FLANGES. CHARLES C. DAVIS, Philadelphia, Pa. Filed Oct. 22, 1912. Serial No. 727,166. (Cl. 113—51.)

1. The method which consists in bending the central portion of a blank in lines substantially at right-angles to the plane thereof to form a tubular hub; and trimming surplus material from the wall of the passage through said hub to form a cylindrical surface.

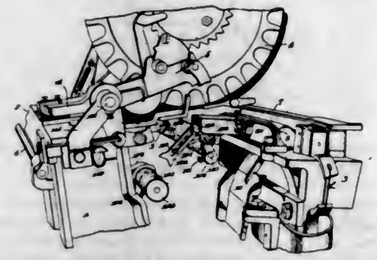


2. The method which consists in forming a hole in a blank adjacent the center thereof; bending the edges of the hole to form a tubular hub; and shearing the surplus metal from the wall of the passage through said hub to form a cylindrical surface.

3. The method which consists in forming a hole in a blank adjacent the center thereof; bending the edges of the hole to form a hub; and simultaneously shearing the surplus metal from the wall of the passage through the hub to form a cylindrical surface.

4. The method of making a flanged structure which consists in cutting a hole in a blank; expanding said hole; bending the edges of the hole into lines substantially at right-angles to the plane of the blank to form a tubular boss; and trimming the wall of the passage through said boss to form a cylindrical surface.

1,194,278. FILLING-END CONTROLLER FOR LOOMS. HARRY A. DAVIS, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 23, 1914. Serial No. 873,439. (Cl. 139—85.)



1. In a filling replenishing loom, the combination of means for parting the filling adjacent the cloth selvage, means for parting the filling at the shuttle-box, a feeler parter for parting and holding the filling between the selvage and shuttle-box and carrying the ends toward the front of the loom, means for releasing the filling ends from the feeler parter when at front position, and means for taking control of the pieces of filling released by the feeler parter.

2. In a filling replenishing loom, the combination of means for parting the filling at a point between the ends of the shuttle, means for parting the filling at the cloth selvage, a feeler parter for parting and holding the filling at two adjacent points between said first two parting means, means for moving the feeled parter toward the front of the loom, means for engaging the pieces of filling held by the feeler parter at the front of the loom, and mechanism for causing the feeler parter to release the pieces of filling to the control of the last-named means.

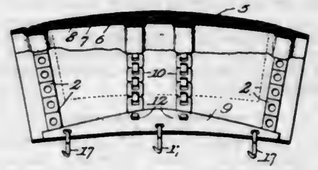
3. In a filling replenishing loom, means for parting the filling between the ends of the shuttle, a feeler parter for parting and holding the filling end between the shuttle and cloth selvage, mechanism for moving the feeler parter toward the front of the loom while holding the end of the filling to draw it from the shuttle-box, and means for taking the piece of filling from the feeler parter when at the front of the loom.

4. In a filling replenishing loom, a feeler parter and holder movable toward and from the lay following a call for filling replenishment to part the filling and hold the parted ends and carry them toward the front of the loom, means for causing the said parter and holder to release the ends of the filling at the front of the loom, and means for taking the pieces of filling thus released from the parter and keeping them from being carried into the shed.

5. In a filling replenishing loom, a feeler parter and holder movable toward and from the lay following a call for filling replenishment to part the filling and hold the parted ends and carry them toward the front of the loom, means for causing said parter and holder to release the ends of the filling at the front of the loom after a predetermined number of picks, and means for taking the pieces of filling thus released from the parter and keeping them from being carried into the shed.

[Claims 6 to 32 not printed in the Gazette.]

1,194,279. BLOW-OUT PATCH FOR PNEUMATIC TIRES. JASPER N. DAVIS, Denver, Colo. Filed Aug. 16, 1915. Serial No. 45,816. (Cl. 152—24.)



1. In a blow out patch for pneumatic tires, a piece of suitable flexible material folded upon itself to form three laps of substantially equal length, truss bars which rest in the portions where the two bends occur, and flexible means which are secured to the truss bars and extend around between the laps of the patch to prevent bulging of the same under expansion.

2. In a blow out patch for pneumatic tires, a piece of suitable flexible material folded upon itself to form three laps of equal length, the middle lap terminating within the bend formed by the two other laps, the whole being given a U-shaped curve, truss bars which rest in the portions where the two bends occur, flexible means which are secured to the truss bars and extend around between the laps of the patch to prevent bulging of the same under expansive pressure, and means for holding said truss bars against the outward pulls exerted by the said flexible means.

3. In a blow out patch for pneumatic tires, a piece of suitable flexible material folded upon itself to form three laps of substantially equal length, truss bars which rest in the portions where the two bends occur, means for holding the said truss bars against outward pull when the patch is under expansion pressure and hooks for preventing creeping of the patch within the tire.

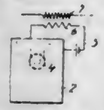
4. The combination with a pneumatic tire comprising inner and outer tubes, of a patch interposed between the said tubes, the longitudinal edges of which terminate at the terminal edges of the said outer tube, truss bars in the longitudinal edges of said patch, and means extending around the end portions of said patch and engaging the end portions of the said truss bars, to hold them against outward pull due to expansion pressure.

5. The combination with a pneumatic tire comprising inner and outer tubes, of a patch interposed between the said tubes, the longitudinal edges of which extend parallel with the terminal edges of the said outer tube, truss bars in the longitudinal edges of the said patch, means connected with the said truss bars and extending around the patch to prevent bulging of the same under expansion pressure, and means extending around the ends of

the patch and engaging the ends of the truss bars, for holding them against outward pull exerted by the means for preventing bulgings.

[Claims 6 to 13 not printed in the Gazette.]

1,194,280. TELEPHONY. PATRICK B. DELANY, South Orange, N. J. Filed June 5, 1911. Serial No. 631,494. (Cl. 179—1.)



1. The combination with a main telephone line of a transmitter for the sending station, a receiver at the receiving station, a transcribing board at the receiving station, a microphone mounted thereon and secured thereto, and a battery circuit for said microphone connected with the main telephone line.

2. The combination with a main telephone line, of a transmitter for the sending station, a receiver at the receiving station, a transmitter at the receiving station, a transcribing device at the receiving station insulated from extraneous sounds and mechanically connected with the transmitter at the receiving station whereby messages received from the sending station may be transcribed at the receiving station and telephonic impulses corresponding in general characteristics with the impulses received from the sending station may be sent back over the line to the sending station.

1,194,281. ELECTRIC-CIRCUIT-CONTROLLING DEVICE. SAMUEL E. DOANE, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Apr. 24, 1914. Serial No. 834,259. (Cl. 175—268.)



1. In a circuit controlling device, contacts normally engaging each other, an electromagnetic device and an armature mounter so as to be moved by said device upon the passage of an abnormal current through the latter, means disposed so as to be struck by said armature during said movement for causing the said contacts to be quickly separated, means independent of said armature for subsequently causing said contact to reëngage and means for causing the reëngagement movement to be somewhat slower than the previous separation movement.

2. In a circuit controlling device, contacts normally engaging each other, means whereby said contacts when separated are always biased to reëngage, an electromagnetic device and an armature adapted to be moved thereby upon the passage therethrough of an abnormal current, means disposed so as to be struck by said armature during its movement for causing the said contacts to be quickly separated, and means for retarding the reëngagement of said contacts.

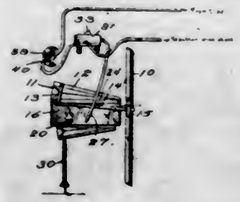
3. In a circuit controlling device, contacts normally engaging each other, means whereby said contacts when separated are always biased to reëngage, an electromagnetic device and an armature adapted to be moved thereby upon the passage therethrough of an abnormal current, means disposed so as to be struck by said armature during its movement for causing the said contacts to be quickly separated and means for retarding the reëngagement of said contacts at least until the return of said armature to its normal position.

4. In a circuit controlling device, contacts normally engaging each other, means whereby said contacts when separated are always biased to reëngage, an electromagnetic device and an armature adapted to be moved thereby upon the passage therethrough of an abnormal current, means disposed so as to be struck by said armature during its movement for causing the said contacts to be quickly separated and means for preventing the reëngagement of said contacts before the return of the said armature to its normal position.

5. In a circuit controlling device, a stationary contact, a movable contact normally engaging therewith, means whereby said movable contact is continually biased to reengage said stationary contact upon separation therefrom, an electromagnetic device and an armature mounted so as to be moved thereby upon the passage of an abnormal current therethrough, means disposed so as to be struck by said armature during its movement and for causing said movable contact to be quickly separated from said stationary contact, and means for slightly retarding the return movement of said movable contact.

[Claims 6 to 10 not printed in the Gazette.]

1,194,282. AUTOMATIC PEDAL FOR PLAYER-PIANOS. FRANCIS W. DRAPER, Richmond, Ind., assignor to Starr Piano Company, Richmond, Ind., a Corporation of Indiana. Filed July 31, 1913. Serial No. 782,303. (Cl. 84—160.)

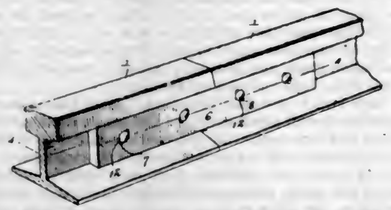


1. In a player piano, a plurality of pneumatics, a block separating the pneumatics, constituting mounting means therefor, and provided with a bore and a depression communicating with the atmosphere and surrounding the upper portion of the bore, and with a passage extending laterally from the bore and communicating with one of the pneumatics, said block having a second passage communicating with the lower end of the bore and with the other pneumatic, a depression being provided in the wall of the passage last-mentioned in alinement with the bore, a conduit connected with said depression, a pouch covering the depression, and a valve located in the bore and operated by the movement of the pouch.

2. In a player piano, the combination of two pneumatics connected by a conduit, a valve in the conduit, having a head, means including a porous pouch contacting with the head, a conduit leading from the pouch for communicating with a tracker bar, a pipe opening into one of the pneumatics from a source of exhaust, means for closing the pipe upon closing the pneumatic, said means comprising a tubular member rigidly mounted and communicating with the pipe and a device rigid with the movable portion of the pneumatic last mentioned and adapted to contact with the end of the tubular member and close the latter.

3. In a player piano, an actuating pneumatic, a pneumatic reservoir, a conduit connecting the reservoir with a source of exhaust, a nipple rigidly mounted within the reservoir at the inner end of said conduit, a member rigid with the movable wall of the reservoir, adapted to close said nipple, a second conduit providing communication between the pneumatics, a valve in the last-mentioned conduit, adapted to normally close the latter and cut off one pneumatic from the exhaust, a porous pouch for operating the valve, and means including a conduit leading from the pouch for communicating with a tracker bar.

1,194,283. RAIL-JOINT. ALGOT ERICKSON, Lowell, Ind. Filed Oct. 23, 1915. Serial No. 57,534. (Cl. 239—9.)

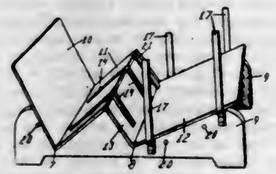


1. In a rail joint, the combination with two alining rails and each of said rails having its web at its end formed with a substantially V-shaped opening, fish plates for the opposite sides of the rails, said fish plates being of a less width than the distance between the head and base of the rail, one of said plates having a central lateral lug, the end walls of which being inclined in opposite directions and engaging with the angular ends of the webs of the rails, the second plate being straight, and means for securing the plates to the rails.

2. In a rail joint, two alining rails, each having its web formed with a substantially V-shaped depression at its end, fish plates of a less width than the distance between the head and base of the rails arranged one upon each of the sides of the rails, one of said fish plates having a central lateral lug, the opposite walls of which being inclined downwardly in opposite directions, said inclined walls engaging with the angular ends of the rail webs, means for securing the plates to the rails, and means actuated by said securing means for forcing the lug against the end walls of the webs of the rails to support the latter irrespective of the longitudinal movement of the rails.

3. In a rail joint, two registering rails, each having its web at its end cut to provide an angular opening, fish plates for the opposite sides of the rails, said fish plates being of a less width than the distance between the heads and webs of the rails, one of said fish plates being provided with a lateral lug which conforms to the opening in the ends of the rails and engaging with the side walls thereof, the said plates having bolt openings arranged in series, each of said series registering with the series of openings in the respective rails and each series being inclined toward the end of said respective rails, and securing elements passing through the said openings.

1,194,284. BINDER DEVICE. GEORGE FARRON, Detroit, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Filed Mar. 11, 1915. Serial No. 13,826. (Cl. 45—64.)



1. In a support for temporary binders, the combination of a pair of base members, side members disposed in an oppositely inclined relation, end members disposed between said side members to coact therewith, said end members being vertically slotted, the slots being adapted to receive the binding strips of binders arranged with a binder member in each holder, slotted supporting arms for said side members, and clamping screws on said base members engaging said slotted side member supporting arms whereby said side members are supported for adjustment transversely of their coacting end members.

2. In a support for temporary binders, the combination of a pair of holders each comprising a side and an end member disposed with their end members in an oppositely inclined relation and with the upper edges of the end members meeting, said end members having registering slots therein.

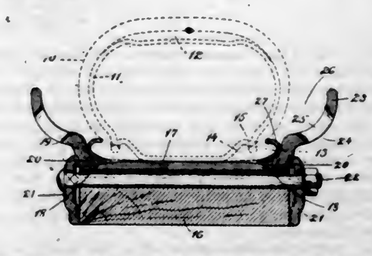
3. In a support for temporary binders, the combination of a pair of holders each comprising a side and an end member disposed with their end members adjacent, said end members having openings therein adapted to receive the binding strips of a binder arranged in the support with one binder member in each holder.

4. In a support for temporary binders, the combination of a pair of holders each comprising a side and an end member disposed oppositely with their end members adjacent, said end members having openings therein adapted to receive the binding strips of a binder arranged in the support with one binder member in each holder, said side members being adjustable relative to said end members.

5. In a support for temporary binders, the combination of a pair of holders each comprising side and end members disposed oppositely with their end members adjacent and outwardly inclined, one of said side members being adjustable relative to its end member.

[Claim 6 not printed in the Gazette.]

1,194,285. GUARD-RIM FOR PNEUMATIC TIRES. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Mar. 25, 1916. Serial No. 86,582. (Cl. 152—21.)



1. The combination of a wheel-felly having a pneumatic tire thereon, a guard ring secured to the felly on one side and having a seat for the tire base, an adjacent edge portion normally separated from the tire-wall but adapted progressively to support the latter under increasing load and flexure, and an open-work guard portion terminating about midway radially of the tire and separated therefrom by a substantial space when the tire is distended, and tire-retaining means on the opposite side of the felly

2. The combination of a wheel-felly adapted to support a resilient tire, a guard and tire-retaining structure on one side of the felly having an annular tire-guarding and emergency supporting member, situated radially outward from and at the side of the felly, and a laterally-projecting portion overlying the felly and deriving radial support therefrom, removable retaining means engaging said structure for securing the latter to the felly, and tire-retaining means on the opposite side of the felly.

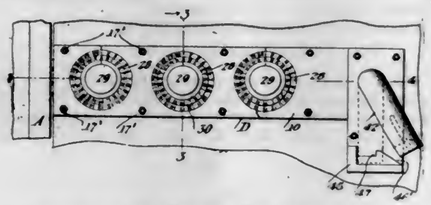
3. The combination of a wheel felly having a pneumatic tire thereon, a guard and tire-retaining ring on one side, overlying and deriving radial support from the felly, said ring outwardly forming a part of the tire seat

and having an annular portion situated about midway of, and normally separated by a substantial space from, the side of the inflated tire and adapted to act as a guard and emergency supporting member, a series of clamps provided with lateral bolts for removably securing said ring in place, and tire-retaining means on the opposite side of the felly.

4. The combination of a wheel felly having a pneumatic tire thereon and a tapering flange seat, a guard and tire-retaining structure on one side of the felly having a lateral flange wedge-shaped in section, abutting inwardly against said flange-seat and outwardly forming a portion of the tire seat, the outer part of said structure forming a further portion of said tire seat, and a guard portion separated by a substantial space from the tire when the latter is distended and terminating radially about midway of said tire, clamps and lateral bolts for removably securing said structure to the felly, and tire-retaining means on the opposite side of the felly.

5. A guard and tire-retaining structure for attachment to a wheel felly, the same comprising a ring adapted to be attached to the felly at the side thereof, said ring having a laterally-projecting portion on one side adapted to be radially supported on the felly-band, and an annular guard portion on the other side located radially beyond said laterally-projecting portion and connected therewith by spaced integral arms or bridges.

1,194,286. PERMUTATION-LOCK. IRA F. GORHAM, Ensley, Ala. Filed Sept. 15, 1914. Serial No. 861,864. (Cl. 70—53.)



1. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, and mechanism for rotating alternate gears of each series.

2. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, and permutation dials included in said mechanism.

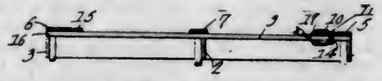
3. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, permutation dials included in said mechanism, and means for shifting certain of the gears with relation to the other gears to vary the combination of the permutation dials.

4. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, permutation dials included in said mechanism, means for shifting certain of the gears with relation to the other gears to vary the combination of the permutation dials, and manually operable means for shifting the slide when released by the hubs.

5. In a lock of the class described, a slide having spaced circular large and small openings and straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate hubs of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, permutation dials included in said mechanism, means for shifting certain of the gears with relation to the other gears to vary the combination of the permutation dials, manually operable means for shifting the slide when released by the hubs, a keeper, and means on the slide for engagement in the keeper.

[Claims 6 and 7 not printed in the Gazette.]

1,194,287. SELF-FASTENING AND SEAL-LOCK LID. CHARLES E. GRANT and BERT F. GRANT, Marion, Ind. Filed July 11, 1914. Serial No. 850,406. (Cl. 217—62.)



1. A coop comprising a top having an opening; a fixed guide bar on the top and extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure slidable beneath the guide bar, one end of the closure being engaged beneath one keeper and the other end of the closure terminating inwardly of the other keeper to permit a lifting of said other end of the closure; stops on the closure, the stops engaging the inner edges of the keepers, that stop which is adjacent the liftable end of the keeper overhanging the top to prevent a depression of said end of the closure, the stops being adapted to engage with the guide bar at different times to limit the movement of the closure in opposite directions; and a supporting member disposed transversely of the opening and engaging the lower face of the closure to prevent a depression of the stops below the guide bar.

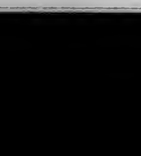
2. A coop comprising a top having an opening; a fixed guide bar on the top and extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure slidable beneath the guide bar, one end of the closure being engaged beneath one keeper and the other end of the closure terminating inwardly of the other keeper to permit a lifting of said other end of the closure; stops on the closure, the stops engaging the inner edges of the keepers; and a support mounted upon the under face of the top and engaging the liftable end of the closure to uphold the same.

3. A coop comprising a top having an opening; a fixed guide bar on the top and extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure slidable beneath the guide bar, one end of the closure being engaged beneath one keeper and the other end of the closure terminating inwardly of the other keeper to permit a lifting of said other end of the closure; stops on the closure, the stops engaging the inner edges of the keepers; and a support mounted upon the under face of the top and engaging the liftable end of the closure to uphold the same; a portion of the closure and the support having alined, seal receiving openings.

4. A coop comprising a top having an opening; a fixed guide extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure comprising longitudinal slats and a stop bar connecting the slats, the closure being slidable beneath said guide and engaged at one end beneath one keeper, the bar carrying end of the closure being liftable to clear the other keeper and to permit an endwise movement of the closure; an inwardly projecting seal extended between the slats and embracing the inner edge of the stop bar, the seal passing through the stop bar and the top.

5. A coop comprising a top having an opening; a fixed guide extended across the intermediate portion of the opening; a fixed keeper on the top at one end of the opening; a closure slidable beneath the guide and engaged at one end beneath the keeper; a support carried by the top and secured to the under face thereof and upholding the other end of the closure; and a seal connecting said other end of the closure with the support.

1,194,288. MECHANICAL MOVEMENT. GEORGE W. GRISDALE, Jr., Philadelphia, Pa. Filed Dec. 15, 1915. Serial No. 67,028. (Cl. 74—26.)



1. The combination of two shafts; a member rotatable concentrically of said shafts; a circular structure on one shaft; an eccentric structure on the other shaft; and means for transmitting movement from the eccentric structure to the circular structure or vice versa.

2. The combination of two shafts; a member rotatable concentrically of said shafts; a circular structure on one shaft; an eccentric structure on the other shaft; with means for transmitting movement from the eccentric structure to the circular structure or vice versa, the same including a ring structure rotatable on the eccentric; and a series of rollers of progressively varying diameters operative between the ring structure and the rotatable member.

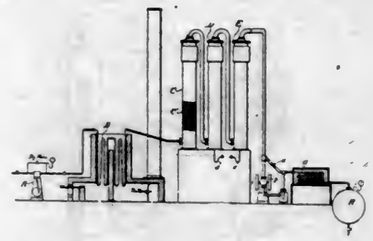
3. The combination of two shafts; an inclosing casing rotatable concentrically with said shafts; a circular structure on one shaft; an eccentric structure on the other shaft; and means for transmitting movement from the eccentric structure to the circular structure or vice versa, the same including a ring structure rotatable on the eccentric; and two series of rollers of progressively varying diameters operative between the ring structure and the adjacent cylindrical inner surface of the casing.

4. The combination of two shafts; a member rotatable concentrically with the shafts and having a cylindrical interior bearing surface; a circular structure on one shaft; an eccentric structure on the other shaft; means for transmitting movement from the eccentric structure to the circular structure or vice versa, the same including a ring structure rotatable on the eccentric; a series of rollers of progressively varying diameters operative between said ring structure and the bearing surface of the rotatable member; with means for maintaining the rollers properly spaced and in engagement with their coöperating surfaces.

5. The combination of two shafts; a member rotatable concentrically with said shafts; a circular structure on one shaft having circular openings therein; an eccentric structure on the other shaft; a ring rotatably mounted on said eccentric structure; pins on the ring projecting respectively into the openings of the circular structure; and means for causing rotation of the ring structure when either of the shafts is rotated.

[Claims 6 to 10 not printed in the Gazette.]

1,194,289. PROCESS OF CRACKING HYDROCARBONS. WILLIAM AUGUSTUS HALL, New York, N. Y. Filed Mar. 21, 1916. Serial No. 85,735. (Cl. 196—25.)



1. A process of cracking an oil consisting largely of fractions having higher boiling points than ordinary gasolene, which comprises passing said oil at a rate of flow sufficient to prevent deposition of any material amount of free carbon, through a pipe under a pressure materially above atmospheric, while at a temperature sufficient to vaporize the said oil and to only partially crack the same into products having a boiling point range suitable for use directly as gasolene, then suddenly introducing the products of the partial cracking step while discontinuing the external heating, into a separate receptacle and against obstructions therein, under conditions capable of converting a material proportion of the energy of velocity into heat, and thereby developing, within the gases and vapors, a sufficient amount of heat to effect a further cracking of the said vapors.

2. In the process of cracking oils, the step of suddenly converting into heat, a portion of the energy represented by the velocity of a rapidly flowing mixture of gases and vapors of cracked hydrocarbons, a part only of which have a suitable boiling point range for use directly as gasolene, by directing said rapidly flowing mixture against obstructions, whereby the temperature is raised and a further cracking is effected.

3. In the cracking of oil, the step of passing the hydrocarbon oil rapidly through a coil at an elevated temperature and under a superatmospheric pressure suitable to produce some cracking and to leave a mixture consisting essentially of vapors and gases, and then raising the temperature of the said vapors and gases sufficiently to further crack the said vapors, while avoiding the application of external heat during said second heating step.

4. A process of cracking oil for the production of motor fuel or of products containing members of the aromatic series, such as benzene, toluene, xylene, which comprises the successive steps of forcing the oil at a high rate of flow through tubes heated to a temperature below the desired cracking temperature and under a pressure materially above atmospheric, but low enough to permit vaporization of the bulk of the oil, and thereafter directing the rapidly flowing current of vapors and gases against obstructions, while suddenly reducing the velocity of the vapors and gases, and thereby raising the temperature thereof by heat generated therein, substantially as and for the purpose described.

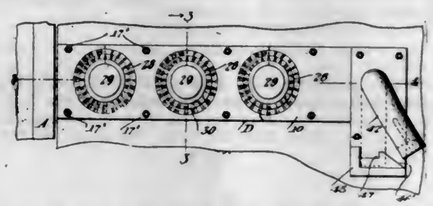
5. A process of cracking oil which comprises forcing the oil at a high rate of flow, under pressure materially above atmospheric through a tubular retort heated to a temperature sufficient to produce a mixture of vapors and gases containing some cracked hydrocarbons of a lower boiling point range than the original oil employed, and suddenly directing the rapidly flowing mixture of vapors and gases against obstructions while reducing the velocity

and having an annular portion situated about midway of, and normally separated by a substantial space from, the side of the inflated tire and adapted to act as a guard and emergency supporting member, a series of clamps provided with lateral bolts for removably securing said ring in place, and tire-retaining means on the opposite side of the felly.

4. The combination of a wheel felly having a pneumatic tire thereon and a tapering flange seat, a guard and tire-retaining structure on one side of the felly having a lateral flange wedge-shaped in section, abutting inwardly against said flange-seat and outwardly forming a portion of the tire seat, the outer part of said structure forming a further portion of said tire seat, and a guard portion separated by a substantial space from the tire when the latter is distended and terminating radially about midway of said tire, clamps and lateral bolts for removably securing said structure to the felly, and tire-retaining means on the opposite side of the felly.

5. A guard and tire-retaining structure for attachment to a wheel felly, the same comprising a ring adapted to be attached to the felly at the side thereof, said ring having a laterally-projecting portion on one side adapted to be radially supported on the felly-band, and an annular guard portion on the other side located radially beyond said laterally-projecting portion and connected therewith by spaced integral arms or bridges.

1,194,286. PERMUTATION-LOCK. IRA F. GORHAM, Ensley, Ala. Filed Sept. 15, 1914. Serial No. 861,864. (Cl. 70—53.)



1. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, and mechanism for rotating alternate gears of each series.

2. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, and permutation dials included in said mechanism.

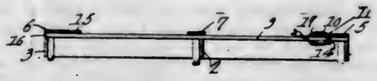
3. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, permutation dials included in said mechanism, and means for shifting certain of the gears with relation to the other gears to vary the combination of the permutation dials.

4. In a lock of the class described, a slide having spaced circular large and small openings and also straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate gears of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, permutation dials included in said mechanism, means for shifting certain of the gears with relation to the other gears to vary the combination of the permutation dials, and manually operable means for shifting the slide when released by the hubs.

5. In a lock of the class described, a slide having spaced circular large and small openings and straight slots therebetween and communicating therewith, a plurality of pairs of gears arranged in series independent of each other, the gears of each pair meshing with each other, alternate hubs of one series being movable into the larger circular openings in the slide, hubs on certain gears of both series engageable in the smaller openings and having straight surfaces in correspondence with the slots to be received therein, mechanism for rotating alternate gears of each series, permutation dials included in said mechanism, means for shifting certain of the gears with relation to the other gears to vary the combination of the permutation dials, manually operable means for shifting the slide when released by the hubs, a keeper, and means on the slide for engagement in the keeper.

[Claims 6 and 7 not printed in the Gazette.]

1,194,287. SELF-FASTENING AND SEAL-LOCK LID. CHARLES E. GRANT and BERT F. GRANT, Marion, Ind. Filed July 11, 1914. Serial No. 850,406. (Cl. 217—62.)



1. A coop comprising a top having an opening; a fixed guide bar on the top and extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure slidable beneath the guide bar, one end of the closure being engaged beneath one keeper and the other end of the closure terminating inwardly of the other keeper to permit a lifting of said other end of the closure; stops on the closure, the stops engaging the inner edges of the keepers, that stop which is adjacent the liftable end of the keeper overhanging the top to prevent a depression of said end of the closure, the stops being adapted to engage with the guide bar at different times to limit the movement of the closure in opposite directions; and a supporting member disposed transversely of the opening and engaging the lower face of the closure to prevent a depression of the stops below the guide bar.

2. A coop comprising a top having an opening; a fixed guide bar on the top and extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure slidable beneath the guide bar, one end of the closure being engaged beneath one keeper and the other end of the closure terminating inwardly of the other keeper to permit a lifting of said other end of the closure; stops on the closure, the stops engaging the inner edges of the keepers; and a support mounted upon the under face of the top and engaging the liftable end of the closure to uphold the same.

3. A coop comprising a top having an opening; a fixed guide bar on the top and extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure slidable beneath the guide bar, one end of the closure being engaged beneath one keeper and the other end of the closure terminating inwardly of the other keeper to permit a lifting of the said other end of the closure; stops on the closure, the stops engaging the inner edges of the keepers; and a support mounted upon the under face of the top and engaging the liftable end of the closure to uphold the same; a portion of the closure and the support having alined, seal receiving openings.

4. A coop comprising a top having an opening; a fixed guide extended across the intermediate portion of the opening; fixed keepers on the top at the ends of the opening; a closure comprising longitudinal slats and a stop bar connecting the slats, the closure being slidable beneath said guide and engaged at one end beneath one keeper, the bar carrying end of the closure being liftable to clear the other keeper and to permit an endwise movement of the closure; an inwardly projecting seal extended between the slats and embracing the inner edge of the stop bar, the seal passing through the stop bar and the top.

5. A coop comprising a top having an opening; a fixed guide extended across the intermediate portion of the opening; a fixed keeper on the top at one end of the opening; a closure slidable beneath the guide and engaged at one end beneath the keeper; a support carried by the top and secured to the under face thereof and upholding the other end of the closure; and a seal connecting said other end of the closure with the support.

1,194,288. MECHANICAL MOVEMENT. GEORGE W. GRISDALE, Jr., Philadelphia, Pa. Filed Dec. 15, 1915. Serial No. 67,028. (Cl. 74—26.)

1. The combination of two shafts; a member rotatable concentrically of said shafts; a circular structure on one shaft; an eccentric structure on the other shaft; and means for transmitting movement from the eccentric structure to the circular structure or vice versa.

2. The combination of two shafts; a member rotatable concentrically of said shafts; a circular structure on one shaft; an eccentric structure on the other shaft; with means for transmitting movement from the eccentric structure to the circular structure or vice versa, the same including a ring structure rotatable on the eccentric; and a series of rollers of progressively varying diameters operative between the ring structure and the rotatable member.

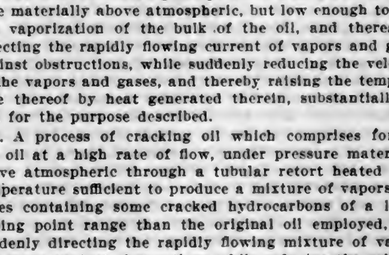
3. The combination of two shafts; an inclosing casing rotatable concentrically with said shafts; a circular structure on one shaft; an eccentric structure on the other shaft; and means for transmitting movement from the ecentric structure to the circular structure or vice versa, the same including a ring structure rotatable on the eccentric; and two series of rollers of progressively varying diameters operative between the ring structure and the adjacent cylindrical inner surface of the casing.

4. The combination of two shafts; a member rotatable concentrically with the shafts and having a cylindrical interior bearing surface; a circular structure on one shaft; an eccentric structure on the other shaft; means for transmitting movement from the eccentric structure to the circular structure or vice versa, the same including a ring structure rotatable on the eccentric; a series of rollers of progressively varying diameters operative between said ring structure and the bearing surface of the rotatable member; with means for maintaining the rollers properly spaced and in engagement with their coöperating surfaces.

5. The combination of two shafts; a member rotatable concentrically with said shafts; a circular structure on one shaft having circular openings therein; an eccentric structure on the other shaft; a ring rotatably mounted on said eccentric structure; pins on the ring projecting respectively into the openings of the circular structure; and means for causing rotation of the ring structure when either of the shafts is rotated.

[Claims 6 to 10 not printed in the Gazette.]

1,194,289. PROCESS OF CRACKING HYDROCARBONS. WILLIAM AUGUSTUS HALL, New York, N. Y. Filed Mar. 21, 1916. Serial No. 85,735. (Cl. 196—25.)



1. A process of cracking an oil consisting largely of fractions having higher boiling points than ordinary gasolene, which comprises passing said oil at a rate of flow sufficient to prevent deposition of any material amount of free carbon, through a pipe under a pressure materially above atmospheric, while at a temperature sufficient to vaporize the said oil and to only partially crack the same into products having a boiling point range suitable for use directly as gasolene, then suddenly introducing the products of the partial cracking step while discontinuing the external heating, into a separate receptacle and against obstructions therein, under conditions capable of converting a material proportion of the energy of velocity into heat, and thereby developing, within the gases and vapors, a sufficient amount of heat to effect a further cracking of the said vapors.

2. In the process of cracking oils, the step of suddenly converting into heat, a portion of the energy represented by the velocity of a rapidly flowing mixture of gases and vapors of cracked hydrocarbons, a part only of which have a suitable boiling point range for use directly as gasolene, by directing said rapidly flowing mixture against obstructions, whereby the temperature is raised and a further cracking is effected.

3. In the cracking of oil, the step of passing the hydrocarbon oil rapidly through a coil at an elevated temperature and under a superatmospheric pressure suitable to produce some cracking and to leave a mixture consisting essentially of vapors and gases, and then raising the temperature of the said vapors and gases sufficiently to further crack the said vapors, while avoiding the application of external heat during said second heating step.

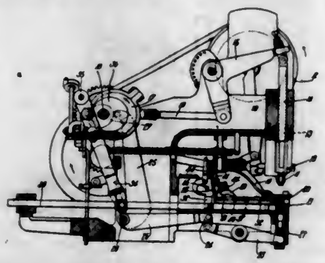
4. A process of cracking oil for the production of motor fuel or of products containing members of the aromatic series, such as benzene, toluene, xylene, which comprises the successive steps of forcing the oil at a high rate of flow through tubes heated to a temperature below the desired cracking temperature and under a pressure materially above atmospheric, but low enough to permit vaporization of the bulk of the oil, and thereafter directing the rapidly flowing current of vapors and gases against obstructions, while suddenly reducing the velocity of the vapors and gases, and thereby raising the temperature thereof by heat generated therein, substantially as and for the purpose described.

5. A process of cracking oil which comprises forcing the oil at a high rate of flow, under pressure materially above atmospheric through a tubular retort heated to a temperature sufficient to produce a mixture of vapors and gases containing some cracked hydrocarbons of a lower boiling point range than the original oil employed, and suddenly directing the rapidly flowing mixture of vapors and gases against obstructions while reducing the velocity

of the vapors and gases produced and thereby raising the temperature thereof, to produce the desired amount of cracking.

[Claims 6 to 11 not printed in the Gazette.]

1,194,290. CAP-FEEDING MECHANISM FOR RIVETING-MACHINES. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'f'g. Co., a Corporation of Massachusetts. Filed Jan. 24, 1916. Serial No. 73,787. (Cl. 218—2.1.)



1. A machine for feeding rivet caps and the like having, in combination, a raceway comprising a vertically disposed portion and a horizontally disposed portion joined together by a curved corner portion, means for temporarily supporting two of said rivet caps on said vertically disposed portion of said raceway and constructed and arranged to be withdrawn, a detent adjacent to said curved corner portion and means constructed and arranged to move said detent laterally with relation to the faces and between two of said rivet caps on the vertical portion of said raceway, in such manner that the lower one of said rivet caps will be pushed downwardly with sufficient force to cause it to pass around said corner portion of said raceway after said supporting means has been withdrawn and the upper one of said rivet caps will be prevented by said detent from passing down said raceway.

2. A machine for feeding rivet caps and the like having, in combination, a raceway comprising a vertically disposed portion and a horizontally disposed portion joined together by a curved corner portion, means for temporarily supporting two of said rivet caps on said vertically disposed portion of said raceway and constructed and arranged to be withdrawn, a detent adjacent to said curved corner portion and means constructed and arranged to move said detent laterally with relation to the faces and between two of said rivet caps on the vertical portions of said raceway and to move said detent downwardly in such manner that the lower one of said rivet caps will be pushed downwardly with sufficient force to cause it to pass around said corner portion of said raceway after said supporting means has been withdrawn and the upper one of said rivet caps will be prevented by said detent from passing down said raceway.

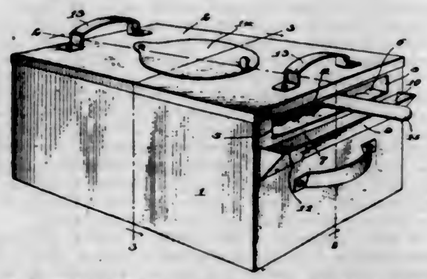
3. A machine for feeding rivet caps and the like having, in combination, a raceway comprising a vertically disposed portion and a horizontally disposed portion joined together by a curved corner portion, means for temporarily supporting two of said rivet caps on said vertically disposed portion of said raceway and constructed and arranged to be withdrawn, a detent adjacent to said curved corner portion with two fingers thereon and means constructed and arranged to move said fingers laterally with relation to the faces and between the adjacent edges of two of said rivet caps on the vertical portion of said raceway and to move said fingers downwardly, in such manner that the lower one of said rivet caps will be pushed downwardly with sufficient force to cause it to pass around said corner portion of said raceway after said supporting means has been withdrawn and the upper one of said rivet caps will be prevented by said fingers from passing down said raceway.

4. A machine for feeding rivet caps and the like having, in combination, a raceway comprising a vertically disposed portion and a horizontally disposed portion joined together by a curved corner portion, means for temporarily supporting two of said rivet caps on said vertically disposed portion of said raceway and constructed and arranged to be withdrawn, a detent adjacent to said curved corner portion, a pivot for said detent substantially parallel to the faces of said rivet caps on said vertically disposed portion of said raceway, two fingers on said detent and means to rock said detent on said pivot, said pivot being so located relatively to said raceway that when said fingers are moved toward said raceway and between two of said rivet caps on said vertical portion of said raceway, said fingers will move downwardly, in such manner that the lower one of said rivet caps will be pushed downwardly with sufficient force to cause it to pass around said corner portion of said raceway after said supporting means has been withdrawn and the upper one of said rivet caps will be prevented by said fingers from passing down said raceway.

5. A machine for feeding rivet caps and the like having, in combination, a raceway comprising a vertically disposed portion and a horizontally disposed portion joined together by a curved corner portion, means for temporarily supporting two of said rivet caps on said vertically disposed portion of said raceway and constructed and arranged to be withdrawn, a detent adjacent to said curved corner portion, a pivot for said detent substantially parallel to the faces of said rivet caps on said vertically disposed portion of said raceway, means constructed and arranged to move said detent laterally with relation to the faces and between two of said rivet caps on the vertical portion of said raceway and to move said detent downwardly, in such manner that the lower one of said rivet caps will be pushed downwardly with sufficient force to cause it to pass around said corner portion of said raceway after said supporting means has been withdrawn and the upper one of said rivet caps will be prevented by said detent from passing down said raceway and a plate on said detent constituting a cover for said corner portion of said raceway when said detent is in operative position, said plate being moved away from said corner portion and leaving the same uncovered when said detent is out of operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,194,291. COOKING UTENSIL. MAY HEDRIQUE, Farmington, Mo. Filed July 7, 1915. Serial No. 38,471. (Cl. 53—1.)



1. A cooking utensil comprising a handled agitator and a receptacle having an end wall slitted and the material bounded by the slit bent inwardly to provide an opening for receiving the handle of the agitating member, a drip pan carried by the end wall beneath said opening exteriorly of the body, and means for establishing communication between the drip pan and the interior of the body.

2. A cooking utensil comprising a handled agitator and a receptacle having a slitted end wall, a scraper blade formed from the material bounded by the slit and extending interiorly of the body to engage the handle of the agitator, corrugations formed in said blade to provide a plurality of deflecting surfaces, a drip pan secured exteriorly of the end wall adjacent the deflecting surfaces, and means for establishing communication between the drip pan and the interior of the utensil.

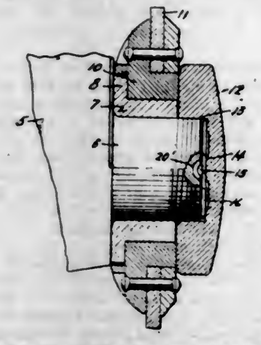
3. A cooking utensil comprising a handled agitator and a receptacle having a slotted end wall one of said slots providing a passage way for the handle of the agitating member, a scraper blade extending exteriorly of the body beneath said slot, a drip pan secured to the exterior of said end wall beneath said blade to receive a portion of the drippings therefrom, and a flap hinged to the end wall and normally closing the remaining opening therein to permit the contents of the drip pan to return to the interior of said body.

1,194,292. FASTENER. JACOB P. HOLTZHOUSER, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 22, 1915. Serial No. 23,088. (Cl. 16—30.)



A fastener comprising a base member, a stud carried thereby, a cam member having a flat central body-portion flatly resting on the base member and having a central opening for receiving the stud, the stud engaging the upper face of the cam member for holding the same in position, the said cam member being substantially semi-circular in plan view with a substantially straight front edge, a horizontal inclined wall carried by the flat central body-portion of the cam and having the high and low edges terminating at the straight front side, a handle carried by the rear edge of the inclined wall, a keeper having a raised central portion, and an inclined forwardly projecting lip adapted to be engaged by said cam.

1,194,293. NUT-LOCK. HOWARD R. HUGHES, Houston, Tex., assignor to Sharp-Hughes Tool Company, Houston, Tex., a Corporation of Texas. Filed July 25, 1914. Serial No. 853,196. (Cl. 151—2.)



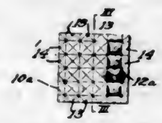
1. The combination with an arbor, of a cap nut formed with a depression having threaded walls adapted to be screwed on the arbor, a plate formed with laterally extending prongs adapted to be interposed between the end of the arbor and the closed end of the nut to effect a locking engagement between the arbor and the cap nut, whereby the latter is locked against reverse rotation.

2. In combination with an arbor having a threaded outer end portion, a cap nut formed with an internally threaded depression to receive the threaded end of the arbor, a plate pivotally mounted in the bottom of the depression in the cap nut, arms formed on said plate, and laterally extending prongs on said arms adapted to engage the end of the arbor and the bottom wall of the depression in the cap nut to lock the cap nut against reverse rotation when screwed in position on the arbor.

3. The combination with an arbor of a cap nut threaded on the arbor, and a plate formed with radiating arms having laterally extending prongs on their outer ends adapted to bear against the end of the arbor and be engaged by the cap nut by which the latter is locked in place.

4. The combination with an arbor threaded on its outer end, of a cap nut screwed on the threaded end of the arbor, and means provided with laterally extending teeth disposed between the cap nut and the end of the arbor to hold the cap nut against reverse rotation.

1,194,294. COMPOUND PRISMATIC REFRACTOR. EMIL GOTTFRIED JOHANSON, Rockford, Ill., assignor to John Martenson, Chicago, Ill. Filed Nov. 21, 1912. Serial No. 732,730. (Cl. 240—106.)



1. A light diffuser or refractor having a plurality of rows of prismatic bodies on each surface thereof, each prismatic body having a plurality of axial planes, the bases of the prismatic bodies on each surface being arranged with all their axial planes intersecting at acute angles all the axial planes of the prismatic bodies on the opposite surface.

2. A light diffuser or refractor having a plurality of rows of prismatic bodies on each surface thereof, each prismatic body having a plurality of axial planes, the bases of the prismatic bodies on each surface being arranged to completely cover the adjacent bases of the prismatic bodies on the opposite surface and with all their axial planes intersecting at acute angles all the axial planes of the prismatic bodies on the opposite surface.

3. A light diffuser or refractor having on each surface a plurality of rows of prismatic bodies each having more than two faces, the axial planes of all the prismatic bodies on one surface intersecting at acute angles all the axial planes of the prismatic bodies on the opposite surface.

4. A light diffuser or refractor having a plurality of rows of obtuse angled prismatic bodies on each surface thereof, the axial planes of all the prismatic bodies on one surface intersecting at acute angles all the axial planes of the prismatic bodies on the opposite surface.

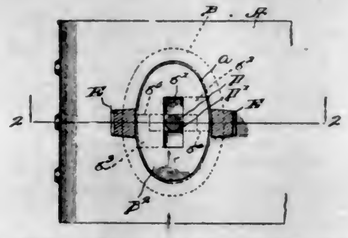
5. A light diffuser or refractor having prismatic bodies of more than two sides arranged on both surfaces thereof, the axis of each prismatic body on one surface being offset and symmetrical with respect to the axes of the adjacent prismatic bodies on the opposite surface.

[Claim 6 not printed in the Gazette.]

1,194,295. HAND OR MAN HOLE COVER. ARCHIE M. JOLIVETTE, Greenfield, Mass. Filed Sept. 8, 1915. Serial No. 49,595. (Cl. 220—124.)

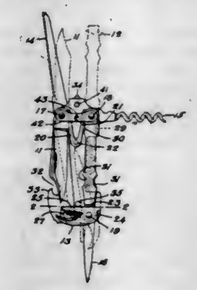
1. In a man or hand hole closure for boilers, the combination with an elliptical plate provided with an elliptical boss projecting inwardly therefrom, and a bearing surface for the gasket exterior to said elliptical boss, the said boss having a rectangular central recess in the inner wall thereof and two laterally-disposed wing chambers opening through the sides of said boss arranged in staggered relation and connected interiorly with said central recess, of a T-shaped locking bolt provided with a laterally elongated rectangular head adapted to pass through said recess, and to engage, when turned through an angle, with said laterally-disposed wing chambers, and means for connecting said bolt to the boiler, substantially as described.

2. In a man or hand hole closure for boilers, the combination with an elliptical plate provided with an elliptical boss projecting inwardly therefrom, and a bearing surface for the gasket exterior to said elliptical boss, the said boss having a rectangular central recess in the inner wall thereof and two laterally-disposed wing chambers opening through the sides of said boss arranged in stag-



gered relation and connected interiorly with said central recess, of a T-shaped locking bolt provided with a laterally elongated rectangular bead adapted to pass through said recess, and to engage, when turned through an angle, with said laterally-disposed wing chambers, and a yoke and nut for connecting said bolt to the boiler, substantially as described.

1,194,296. COMBINATION-TOOL. HENRY V. JONES, Newton, Mass., and HUGH MCNALLY, Richland Center, Wis.; said McNally assignor to said Jones. Filed June 24, 1913. Serial No. 775,530. (Cl. 7—16.)



1. The combination with a handle having two pivot studs and tools mounted on said studs to swing thereabout, of a detachable tool having a shank provided with a keyhole slot, and a shank-confining member carried by said pivot studs for holding said shank against the handle, said handle having a headed stud for coöperating with said keyhole slot, said shank and said confining member having stud and socket portions arranged to be coöperatively engaged with each when said headed stud is in the narrow part of said keyhole slot.

2. The combination with a handle having two tools pivotally mounted thereon and spring arms coacting respectively with said tools to hold them, of a detachable tool having a shank adapted to coact with said spring arms, and means carried by said handle for coöperating with said spring arms to hold said detachable tool.

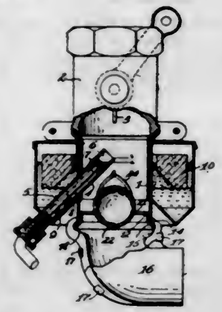
3. The combination with a handle having two tools pivotally mounted thereon and spring arms coacting respectively with said tools to hold them, of a detachable tool, and means carried by said handle for coöperating with said spring arms to hold said detachable tool, said means and spring arms forming a socket for the shank of said detachable tool.

4. The combination with a handle, a tool pivotally mounted thereon, and a spring arranged to hold said tool in open or closed position, of a second tool and means connecting the latter with said handle, said second tool being arranged to hold said spring so as to lock the first said tool in one of said positions and being movable to release said spring and the first said tool.

5. The combination with a handle, a plurality of tools pivotally mounted thereon, and springs arranged to hold said tools in different positions, of a detachable tool, and means carried by said handle to hold said detachable tool in position to lock said pivotally mounted tools.

[Claims 6 and 7 not printed in the Gazette.]

1,194,297. CARBURETER. FRANK L. KINOSTON, Cleveland, Ohio. Filed Mar. 4, 1914. Serial No. 822,266. (Cl. 48—155.2.)



1. In a carbureter, the combination, with a cylindrical carbureting chamber, and a fluid fuel supply nozzle projecting into said chamber and communicating with a source of fluid fuel supply, said chamber communicating at one side with an inlet fitting, of a closure traversing said chamber at the opposite side of said nozzle from said fitting, said closure having a central high-suction air-inlet and also having a plurality of low-suction air-inlets surrounding said central inlet, and means located in the center of said chamber and spaced from the wall thereof for concentrating upon said nozzle the air entering through all of said inlets.

2. In a carbureter, the combination, with a carbureting chamber and a nozzle tube projecting into said chamber, of a rounded body supported at one side of said nozzle, and means for admitting air to said chamber at the sides of said body whereby such entering air will follow the curvature of said body and be concentrated upon said nozzle.

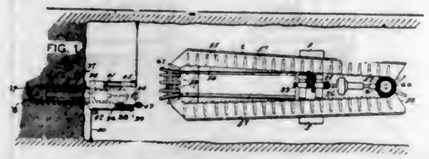
3. In a carbureter, the combination, with a carbureting chamber having an air inlet and a mixture outlet at opposite points, and a nozzle tube projecting into said chamber between said inlet and outlet, of a rounded body located in said chamber between said inlet and said nozzle tube and having a diameter greater than that of the nozzle tube, whereby the entering air will follow the curvature of said body and be concentrated upon said nozzle.

4. In a carbureter, the combination, with a fluid fuel receptacle and a carbureting chamber, of a nozzle tube communicating with such receptacle and projecting into said carbureting chamber, a plate supported transversely of the lower end of said chamber and having a plurality of air-inlet apertures arranged around its periphery, and means located inside said chamber between said plate and said nozzle for concentrating upon the discharge end of said nozzle the air entering through all of said apertures.

5. In a carbureter, the combination, with a fluid fuel receptacle and an upright carbureting chamber, of a nozzle tube communicating with such receptacle and projecting into said carbureting chamber, between its upper and lower ends a plate supported transversely of the lower end of said chamber and having a plurality of air-inlet apertures arranged around its periphery, and a rounded smooth-surfaced body supported in said chamber between said plate and said nozzle and having a diameter substantially equal to the diameter of the circle inscribed within said apertures, whereby the air entering through said apertures may be deflected around the surface of said body and concentrated upon said nozzle.

[Claims 6 to 21 not printed in the Gazette.]

1,194,298. METHOD OF MINING COAL. HARRY A. KUHN, Pittsburgh, Pa. Filed Oct. 21, 1913. Serial No. 796,497. (Cl. 125—14.)



1. The method of mining coal consisting in undercutting the solid wall of coal, expanding and disrupting the coal along lines of its cleavage, whereby it dislodges and settles down into the undercut, subsequently undercutting this settled mass of coal and simultaneously lifting it with a vertical force traveling laterally in the plane of the first cut to further disrupt the mass along the lines of its cleavage, and simultaneously therewith dislodging the mass of the disrupted coal and conveying it away.

2. The method of mining coal consisting in undercutting the solid wall of coal, expanding the coal and disrupting it along lines of its cleavage, whereby it settles down in the undercut, subsequently undercutting this mass of coal and lifting the settled mass with a vertical force traveling laterally in the plane of the undercut, and simultaneously therewith dislodging the mass of coal and conveying it away.

3. The method of mining coal consisting in undercutting the solid mass of coal, expanding and disrupting the coal along lines of its cleavage, whereby it settles down into the undercut, subsequently undercutting this mass of settled coal along the floor of the original undercut and simultaneously therewith dislodging the mass of settled coal and conveying it away.

4. The method of mining coal consisting in undercutting the solid mass of coal, expanding and disrupting the coal along lines of its cleavage, whereby it settles down into the undercut, subsequently undermining this settled mass of coal with a force traveling laterally along the floor of the original undercut and simultaneously therewith dislodging the mass of settled coal and conveying it away.

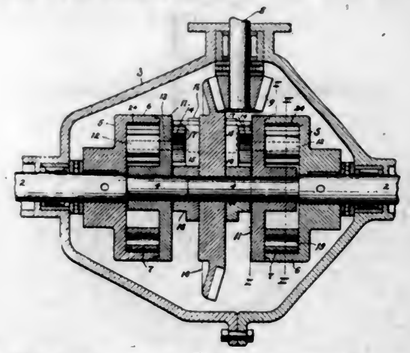
5. The method of mining coal consisting in making a cut in a wall or seam of coal, introducing an expanding force into the body of the coal, thereby expanding and dislodging the coal along lines of its cleavage, and into the space made by the cut, making a second cut into the dislodged coal, and simultaneously therewith introducing into said second cut dislodging and conveying forces working in the same plane as said second cut, whereby the coal is dislodged and conveyed away.

[Claims 6 to 8 not printed in the Gazette.]

1,194,299. TRANSMISSION-GEARING. CHRISTOPHER W. LEVALLEY, Milwaukee, Wis. Filed Apr. 6, 1915. Serial No. 19,495. (Cl. 74—7.)

1. In a transmission gearing, the combination of a driven shaft, a fixed clutch member carried thereby, a main drive gear, a movable clutch member for engaging with the fixed clutch member, means for operating the movable clutch member, an arm loosely supported so as to be free to turn in a path that is concentric with the axis about which the main gear revolves, and arranged to operate the said clutch operating means, and a projection carried by the drive gear for acting on the arm and causing it to turn therewith.

2. In a transmission gearing, the combination of a divided driven shaft, a fixed clutch member carried by each section thereof, a main drive gear, movable clutch members for engaging with the fixed clutch members, means for operating the movable clutch members, arms loosely supported so as to be movable in paths concentric with the axis about which the main gear turns, and projections carried by the drive gear for acting upon the said arms and causing them to turn therewith and act upon the movable clutch operating means.



3. In a transmission gearing, the combination of a driven shaft, a fixed clutch member carried thereby, a main drive gear free to turn about the axis of the said shaft, a movable clutch member for engaging with the fixed clutch member, means for operating the movable clutch member to cause it to engage with the fixed clutch member, an arm loosely supported adjacent to the main drive gear and to the said clutch members and free to turn about the axis of the driven shaft, the arm being arranged to act upon the said means for operating the movable clutch member whether turning in one direction or the other, and a projection carried by the drive gear for acting on the arm and causing it to turn therewith.

4. In a transmission gearing, the combination of a divided driven shaft, fixed clutch members carried by the sections thereof, a main drive gear supported between the said clutch members and free to turn upon an axis concentric with the axis of the driven shaft, movable clutch members for engaging with the fixed clutch members, means for operating the movable clutch members to cause them to engage with the fixed clutch members, supports for the said clutch operating means loosely supported and free to turn about the axis of the driven shaft, and arms loosely supported and free to turn about the axis of the main shaft and arranged to act upon the said clutch-operating means, and projections carried by the drive gear for acting upon the said arms and causing them to turn therewith, the said arms being free to be moved out of engagement with the said projections.

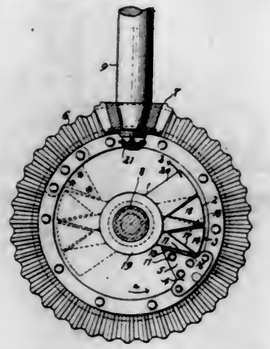
5. In a transmission gearing, the combination of a divided driven shaft, fixed clutch members secured to the sections thereof, a main drive gear supported by the driven shaft between the said fixed clutch members, movable clutch members for engaging with the fixed clutch members, means for operating the movable clutch members, supports for the said clutch-operating means loosely supported by the driven shaft and located respectively adjacent to the fixed clutch members, arms loosely supported by the driven shaft and located between the said supports and the main drive gear and arranged when revolved to act upon the said clutch operating means, and projections carried by the main drive gear for acting on the said arms.

[Claims 6 to 10 not printed in the Gazette.]

1,194,300. TRANSMISSION-GEARING. CHRISTOPHER W. LEVALLEY, Milwaukee, Wis. Filed July 14, 1915. Serial No. 39,844. (Cl. 74—7.)

1. In a transmission gearing, the combination of a drive gear, a pair of driven shafts and connections be-

tween the drive gear and the shafts, including a contact projection carried by one of the driven shafts, a projection carried by the driving gear, and a floating intermediate connecting member free to turn about the axis of rotation of the drive gear and arranged to be driven by the projection carried by the drive gear and to drive the said projection of the driven shaft.



2. In a transmission gearing, the combination of a drive gear, a pair of driven shafts and connections between the drive gear and the driven shafts, including a projection carried by one of the driven shafts, a projection carried by the drive gear, and a floating member intermediate between the main drive gear and the driven shaft, the drive gear, intermediate member and the driven shaft being all rotatable about the same axis of revolution and free to turn independently one of the other, and the intermediate floating member being arranged to be acted on by the contact projection of the drive gear and itself to act upon the projection fixed to the driven shaft.

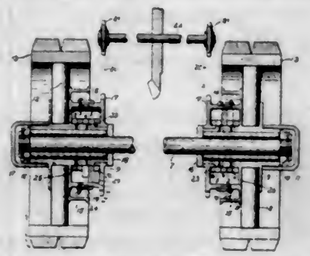
3. In a transmission gearing for driving the more slowly turning of a pair of driven shafts, the combination of one of the driven shafts, a contact piece fixed to the shaft and through which it is driven, a floating member free to turn about the axis of revolution of the shaft, and a drive gear also free to turn about the said axis carrying a laterally extending projection, the lateral projection carried by the drive gear, the floating member, and the contact piece carried by the driven shaft, being in stepped relation to each other, each overlapping the next in succession.

4. In a transmission gearing, the combination with a drive gear and a pair of driven shafts, of connections between the said gear and shafts comprising a set of revolving connecting members between the gear and one of the shafts arranged in lateral stepped relation to each other, each overlapping and engaging with the next in succession, the intermediate members of the set of connections being free to rotate independently of either the driving or the driven elements, and each intermediate connection being arranged to be driven by a preceding member of the series and to act as a driver for a succeeding member.

5. In a transmission gearing, the combination of a driven shaft, a drive gear, these two rotating about the same axis but free to turn independently of each other, a contact piece carried by the drive gear, a contact piece carried by the driven shaft, these two being located in different planes of rotation, whereby they do not engage when one part rotates independently of the other, floating connections between the said contact pieces supported so as to turn freely about the same axis as that of the drive gear and driven shaft, the said floating connections being in the path of both the said driving and driven projections and serving as coupling means between them, a second driven shaft and driving connections between it and the drive gear.

[Claims 6 to 8 not printed in the Gazette.]

1,194,301. TRANSMISSION-GEARING. CHRISTOPHER W. LEVALLEY, Milwaukee, Wis. Filed Oct. 7, 1915. Serial No. 54,600. (Cl. 21—90.)



1. In a transmission gearing, the combination of a drive gear, a driven element formed with a web substantially parallel with the drive gear, flanges extending respectively from the said drive gear and web of the driven part, the edges of the said flanges abutting and together forming a closed annular chamber, and coupling devices between the drive gear and the driven part located in the said chamber.

2. In a transmission gearing, the combination of a drive gear, a wheel driven thereby, a shaft by which said gear and wheel are supported and about which they turn, an annular flange carried by the drive gear and extending toward the driven wheel, an annular flange carried by the driven wheel and extending toward the drive gear, the edges of the said flanges meeting and forming a close joint, and coupling devices between the drive gear and the driven wheel located in the chamber inclosed by the said flanges.

3. In a transmission gearing, the combination of a driven wheel, a shaft by which the wheel is supported and about which it turns, a drive gear coaxial with the driven wheel, a set of revolving connecting members between the drive gear and the driven wheel arranged in lateral stepped relation to each other, each overlapping and engaging with the next in succession, the intermediate members of the set being free to rotate independently of each other and of the driving and driven elements and each intermediate connection being arranged to be driven by a preceding one of the series and to act as a driver for a succeeding one, and a casing concentric with the axis of the said supporting shaft and carried by the said drive gear and driven wheel, inclosing a chamber in which are located the said connecting members.

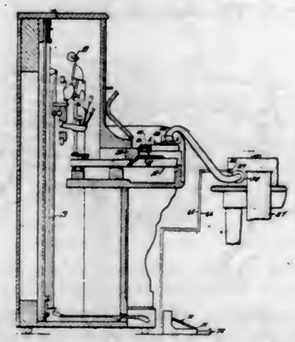
4. In a transmission gearing, the combination of a shaft, a wheel supported thereby, a drive gear supported loosely upon the hub of the wheel which acts as a supporting bearing therefor, a set of independent loose power transmitting devices supported upon the hub of the driven wheel and constituting driving connections between the drive gear and the latter, the connections being arranged to permit the driven wheel to overrun and thereby interrupt its driving connection.

5. In a transmission gearing, the combination of a pair of driven wheels, a pair of drive gears coaxial with the driven wheels, a drive shaft, driving gear connections between the shaft and the said drive wheels independent driving connections between each drive gear and driven wheel consisting of a set of connecting members arranged in lateral stepped relation to each other, the intermediate connections being loose and independently supported and arranged to permit the driven wheel to overrun and temporarily break its connection with the drive shaft.

[Claim 6 not printed in the Gazette.]

1,194,302. MUSIC-RECORDER. BENJAMIN FREDERICK LIEFIELD, Los Angeles, Cal. Filed Mar. 30, 1914. Serial No. 828,150. (Cl. 84—68.)

1. In a music recorder, the combination of branch electrical circuits each controlled by a key in an octave of a musical instrument, a plurality of magnets one in each branch circuit, a tone recording means operated by each of the magnets, means by which each of said magnets and its tone-recording means will be operated by the depression of a corresponding key in another octave of the instrument, a separate magnet, and a recording device operated by said separate magnet energized by the depression of any one of the keys in said other octave.

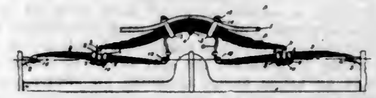


2. In a music recorder, the combination of branch electrical circuits each controlled by a key of an octave in a keyed musical instrument, a series of electrically operated tone recording devices, one in each branch circuit, means by which each of the keys in another octave of the instrument will actuate the corresponding tone recording device in the first mentioned octave, and an octave recording device operated upon the depression of any one of the keys in the last mentioned octave but not operated upon the depression of any one of the keys in the first mentioned octave.

3. In a music recorder, the combination of means for feeding a recording strip, movable marking members normally out of contact with said recording strip, electrically actuated means for moving said marking members into contact with said strip, a pair of electrical control means connected to each electrically actuated means, one electrical control means being located so as to be operated by a key of one octave and the other by the corresponding key of a second octave, a movable octave marking member, electrically actuated means for moving said octave marking member, and electrical control means located so as to be operated by each key of the second octave, and electrically connected to the last mentioned electrically actuated means.

4. In a music recorder, the combination of a circuit closing device comprising a casing shaped to fit over a piano keyboard; a pair of electrical conducting strips for each key of an octave; a pair of electrical conducting strips for each key of a second octave; a contact maker for each pair of said strips located so that each contact maker engages with one key; a second pair of electrical conducting strips for each key of the second octave, a contact maker for each second pair of strips located so that each of said contact makers engages with one key of said second octave; a tone recording device comprising electrically actuated tone markers, one terminal of each connected electrically with a strip of a pair of strips for each key of the first mentioned octave, the other terminal of each tone marker connected to a source of electrical energy, the other strip of each pair of strips for each key of the first mentioned octave connected electrically to said source of electrical energy; an octave-recording device comprising an electrically actuated octave marker, one terminal thereof connected electrically with a strip of each pair of strips for each key of the second octave, the other strip of each of said pairs being connected to a terminal of a tone marker connected to a corresponding key in the first mentioned octave, the other terminal of said octave marker electrically connected with a strip of each second pair of strips for each key of the second octave, the other strip of each of said pairs being connected to the other terminal of said source of electrical energy.

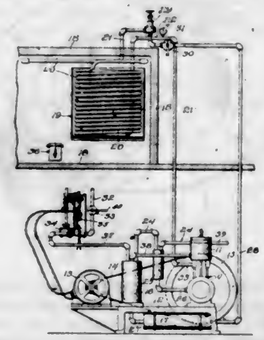
1,194,303. VEHICLE-SPRING AND SHOCK-ABSORBER. JOHN A. MCANULTY, Indianapolis, Ind. Filed Aug. 2, 1915. Serial No. 43,289. (Cl. 267—27.)



1. In a vehicle, the combination with the body and axle, of a pair of lever springs having their outer ends secured thereto, a bow spring adapted to have its central part secured to the body, means for connecting the ends of said bow spring to said lever springs, and a spring yoke having its central portion secured to said bow spring and its ends pivoted to the inner ends of said lever springs.

2. In a vehicle, the combination with the body and axle, of springs having their outer ends secured thereto, yielding means on said springs for securing them to the body, and a spring yoke secured to said yielding means having its ends pivoted to the inner ends of said springs.

1,194,304. CONTROL DEVICE FOR REFRIGERATING APPARATUS. BENJAMIN S. MCCLELLAN, Chicago, Ill. Filed Jan. 4, 1915. Serial No. 352. (Cl. 177—311.)



1. In a refrigerating apparatus, the combination of a compressor, means for supplying a cooling medium to the apparatus, including a shut-off valve, an alarm circuit arranged to be closed automatically by the cessation of the cooling water supply, and a switch operatively connected with said shut-off valve and adapted to open the alarm circuit upon the closing of said shut-off valve.

2. In a refrigerating apparatus, the combination of a compressor, a motor for operating said compressor, means for supplying cooling water to said compressor, including a shut-off valve, means automatically operated by the variation in pressure of the cooling water to control the supply of motive power to said motor, an alarm circuit arranged to be closed upon the cessation of motive power to said motor and including a switch acting to open said alarm circuit when the cooling water supply is shut off through the medium of said shut-off valve.

3. In a refrigerating apparatus, the combination of a compressor, a motor for operating said compressor, means for supplying cooling water to the apparatus, including a shut-off valve, a switch for controlling the current supply to the motor, means operated by the variation in pressure of the cooling water to open said switch upon the cessation of the water supply, and an alarm device including an electric circuit provided with a switch operated by said shut off valve and arranged to be closed when said shut-

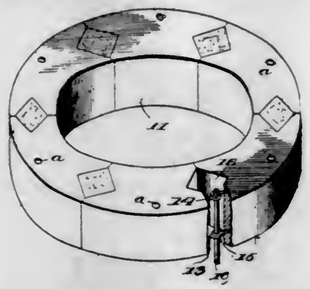
off valve is open; said electric circuit being arranged to be closed to operate said alarm device by the opening of said motor switch.

4. In a refrigerating apparatus, the combination of a compressor, a motor for operating said compressor, a condenser, means for supplying cooling water to said condenser embracing a shut-off valve, a switch for controlling the current supply to said motor, and provided with tension means constantly acting to throw said switch into open position, a member arranged to be actuated by the variation in pressure of the water supply, including a detent adapted to removably engage said switch and normally acting to maintain the said switch in closed position, and an alarm device including an electric circuit arranged to be closed to operate said alarm device, when said valve is operated by the cessation of the water supply to open said switch.

5. In a refrigerating device, the combination of a compressor, a condenser, means for supplying cooling water to said condenser, including a water shut-off valve, an alarm device including an electric circuit provided with a switch operated by said shut-off valve, and arranged to be closed when said valve is open, and means operated by the variation of pressure of said cooling water to operate said alarm device upon the cessation of the water supply.

[Claims 6 to 15 not printed in the Gazette.]

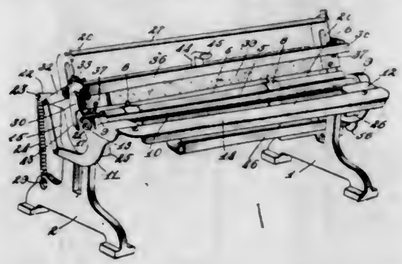
1,194,305. CEMENT BLOCK FOR SILOS. JOSEPH S. MCMILLAN, Republic, Mo. Filed July 13, 1914. Serial No. 850,767. (Cl. 72—6.)



1. A silo including a plurality of arcuate blocks laid in superposed courses and arranged to break joint, the blocks of each course having flat top and bottom faces and vertical substantially V-shaped recesses formed in the opposite ends thereof and extending the entire height of the blocks, each block being provided intermediate its ends with a vertically disposed recess opening through the flat top face of the block and spaced from the bottom flat face thereof, horizontal truss members arranged within the blocks and provided with terminal eyes projecting within the V-shaped recesses, and a plurality of relatively short vertical locking rods connecting the eyes of the truss members of the blocks of each course and arranged in staggered relation with the lower extremities of the rods of each course above the bottom course extending within and housed by the recesses of the blocks of an adjacent course.

2. A silo including superposed courses, each formed of a plurality of arcuate blocks having flat top and bottom faces and vertical substantially V-shaped recesses formed in the opposite ends thereof and extending the entire height of the blocks, the blocks of each course being each provided intermediate its ends and near its outer convex side face with a vertically disposed recess opening through the flat top face of the blocks and spaced from the bottom flat face thereof, spaced horizontal truss members arranged within each block on one side of the longitudinal center thereof and provided with terminal eyes projecting within and housed by the V-shaped recesses, and a plurality of relatively short vertical locking rods connecting the eyes of the truss members of the blocks of each course and arranged in staggered relation with the lower extremities of the rods of each course above the bottom course extending within and housed by the recesses of the blocks of an adjacent course.

1,194,306. COPY-HOLDER. GEORGE A. MARSH, Norfolk, Va., assignor to Specialty Manufacturing-Sales Corporation, Norfolk, Va., a Corporation of Virginia. Filed Nov. 7, 1914. Serial No. 870,873. (Cl. 120—29.)



1. In a copy-holder, the combination of reciprocatory copy feeding mechanism, a stop for limiting the movement of the copy feeding mechanism and adjustable to a plurality of predetermined positions, and means for further adjusting said stop when in any one of said positions.

2. In a copy-holder, the combination of reciprocatory copy feeding mechanism, a stop for limiting the movement of the copy feeding mechanism, a lever adapted to shift the stop into a plurality of predetermined positions, and means operatively associated with said lever for adjusting the stop into positions intermediate said predetermined positions.

3. In a copy-holder, the combination of reciprocatory copy feeding mechanism, supporting means for said mechanism, a lever pivoted to said supporting means and carrying a stop for limiting the movement of said copy feeding mechanism, means for shifting said lever into a plurality of predetermined positions to adjust said stop and vary the range of movement of said copy feeding mechanism, and means for adjusting the stop into positions intermediate said predetermined positions.

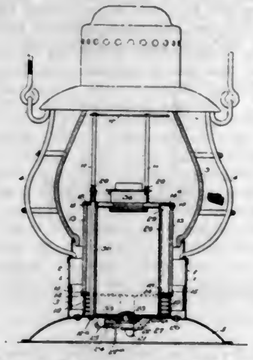
4. In a copy-holder, the combination of reciprocatory copy feeding mechanism, a stop for limiting the movement of said copy feeding mechanism, a lever device for shifting said stop into different positions of adjustment, an adjustment determining element operatively associated with said lever device, and means for changing the position of said lever device independently of the adjustment determining element.

5. In a copy-holder, the combination of reciprocatory copy feeding mechanism, supporting means for said mechanism, a stop for limiting the movement of said copy feeding mechanism, a lever device for shifting said stop into different positions of adjustment, a member operatively associated with said lever device and provided with a plurality of adjustment defining notches each of which is adapted to be engaged by a portion of said supporting means when the lever device is shifted, and means for shifting the lever device independently of said member.

[Claim 6 not printed in the Gazette.]

1,194,307. LANTERN. GEORGE A. MARSH, Norfolk, Va., assignor to Specialty Manufacturing-Sales Corporation, Norfolk, Va., a Corporation of Virginia. Filed Dec. 10, 1915. Serial No. 66,151. (Cl. 240—39.)

1. In a lantern, the combination with the base having a plurality of upwardly extending rods mounted thereon, of a shield mounted to slide on said rods whereby it may be raised and lowered and having downwardly extending hooks at its lower end, a yoke slidably mounted in the base having means for lowering the shield, and a locking member mounted on the base in position to engage said hooks and hold the shield in its lower position independently of the yoke.



2. In a lantern, the combination with the base having a plurality of upright rods mounted thereon, of a shield having annuli forming flanges thereon provided with apertures for said rods, said shield being slidable in a vertical plane on said rods, downwardly projecting hooks on one of the annuli, a yoke slidably mounted in the base and cooperating with one of said annuli when the shield and yoke are in their upper positions whereby said shield may be lowered by a downward movement of the yoke, and a latch mounted on the base and engaging said hooks when the shield is in its lowered position to retain the shield whereby the yoke may be returned to its upper position independently of the shield.

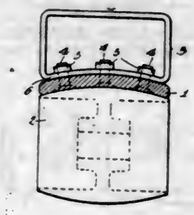
3. In a lantern, the combination with the base having a plurality of slots therein, of a shield having annuli forming flanges thereon, upwardly extending rods on the base extending loosely through the annuli, said shield being adapted to be raised and lowered on said rods, downwardly projecting hooks on one of said annuli, a yoke slidably mounted in the slots in the base and having the upper ends of its side portions enlarged, said enlarged ends being extended above and in loose engagement with one of the annuli whereby the shield may be depressed by a downward movement of the yoke, and a latch mounted on the base to engage the hooks and hold said shield in its lower position, whereby the shield is held in its lower position independently of the yoke.

4. In a lantern the combination with the base, of a shield having annuli forming flanges at its upper and lower ends, upwardly extending rods mounted on the base and extending through the annuli on the shield, said shield being adapted to be raised and lowered on said rods, hooks on the lower annulus and projecting downwardly therefrom, a yoke slidably mounted in the base and shield and in loose engagement with the lower annulus of the shield for depressing the shield by a downward movement of the yoke, a latch mounted on the base for engaging said hooks when the shield is lowered and holding it in its lowered position independently of the yoke whereby said yoke may be raised upwardly independently of the shield, and a latch on the yoke adapted to engage the base and hold said yoke in its raised position.

5. In a lantern, the combination with the base having an aperture therein, of an oil pot mounted thereon, a wick actuating gear wheel mounted on the top of the oil pot and adapted to actuate the wick when revolved, a tube extending vertically through the oil pot and having one of its terminals adjacent said gear wheel, a bar extending from below the base through the aperture and tube, rack teeth on the upper end of said bar, and an offset on one edge of said bar adapted to abut against the wall of the tube and form a pivot upon which the bar may be turned in a vertical plane, whereby the upper end of the bar may be thrown into engagement with the gear wheel and said wheel revolved by a vertical movement of the bar.

[Claims 6 to 8 not printed in the Gazette.]

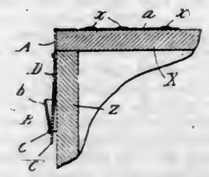
1,194,308. BELT ELEVATOR AND CONVEYER. FREDERICK MARSTON, El Paso, Tex. Filed Apr. 8, 1914. Serial No. 830,413. (Cl. 193—6.)



1. In combination with a crowned wheel, a belt adapted to be disposed therearound, a bucket secured to the belt, the contacting face of the bucket being disposed on a curve concentric to the transverse curvature of the periphery of the crowned wheel whereby the belt is disposed on a corresponding transverse curvature and means for rigidly connecting the contacting face of the bucket and the adjacent portion of the belt.

2. In combination with a crowned wheel, a belt adapted to be disposed therearound, a bucket having its back face secured to the belt, said back face of the bucket being concaved to conform to the transverse curvature of the periphery of the crowned wheel, bolts disposed through the back face of the bucket and the adjacent portion of the belt, said bolts being positioned at substantially the transverse center of the back and adjacent opposite margins thereof, the heads of the bolts being arranged inwardly of the belt and flush with the inner face thereof, and clamping nuts engaged with the extremities of the bolts, within the bucket.

1,194,309. FASTENER FOR CRATES, BOXES, &c. GEORGE C. D. MILLER, New York, N. Y., assignor to Cary Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 25, 1912. Serial No. 678,301. (Cl. 70—82.)

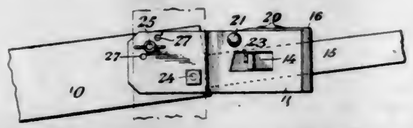


1. In a box or crate fastener, the combination of a keeper comprising a substantially U-shaped plate member having spacing ears to secure the keeper to a crate or box, and a hasp adapted to be fastened at one end and to have its free end pass through the keeper, said free end being provided with an outwardly directed retaining lug, said hasp having a portion thereof slitted and bent intermediate its ends to provide an inwardly directed resilient tongue positioned for sliding contact with the crate or box adjacent the keeper for the purpose of directing the hasp outwardly and to retain its lug into locking engagement with the lower edge of the keeper.

2. In a box or crate fastener, the combination of a keeper formed from a sheet of metal to provide an inclined wall and a plurality of retaining ears adapted to contact with a box or crate to space said inclined wall of the keeper away from the supporting surface, and a hasp formed from a single strip of metal and adapted to have a free end thereof pass through said keeper, said hasp being provided with an inwardly directed resilient tongue cut and bent from a central longitudinal portion of the hasp strip, which tongue is adapted to ride against the crate or box and to direct the hasp outwardly, said hasp being provided also with a lug near its free end adapted to engage and to ride against the inclined wall of the

keeper for guiding the lug to its locking position with respect to the lower edge of the keeper and against the action of the resilient tongue.

1,194,310. TOBACCO-LATH HOLDER. OLAUS MOE, Deerfield, Wis. Filed Dec. 14, 1915. Serial No. 66,780. (Cl. 131—21.)



1. A tobacco lath holder comprising a U-shaped body portion having a bridge and arms leading therefrom, said bridge being provided with a slot having a tapered lower end portion, tongues struck from said arms and bent inwardly to engage the side faces of a lath, a strip secured to the bridge of said body portion and having its free end portion secured between the arms thereof, said strip being provided with a slot registering with the slot in the bridge of said body portion and having its lower end portion tapered, a cleat secured to said strip and provided with jaws extending adjacent the free ends of said tongues and provided with converging edges, and means for connecting the arms of said body portion with a support.

2. A tobacco lath holder comprising a body portion having an end wall and side walls, said end wall being provided with a vertically extending slot and said side walls having tongues struck therefrom and bent inwardly, a cleat secured between the side walls and provided with jaws extending adjacent the free ends of said tongues, and means for connecting the side walls with a support.

3. A tobacco lath holder comprising a body portion having an end wall and side walls, a strip secured to the end wall and having its upper portion bridging the space between the side walls, said strip and the end wall of said body portion being provided with registering openings to permit a lath to be passed into said body portion, means extending from the side walls of said body portion to engage the inner end portion of a lath and prevent transverse movement of the same, and means extending from said strip adjacent said last mentioned means to limit the upward movement of the inner end portion of a lath.

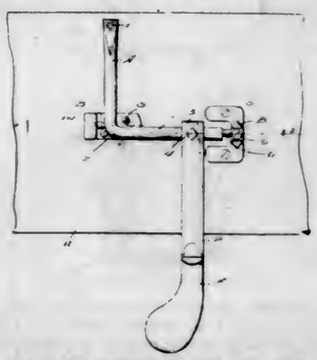
4. A tobacco lath holder comprising a body portion having an end wall and side walls, said end walls being provided with a vertically extending slot and said side walls having tongues extending inwardly therefrom, and a cleat extending between the side walls and provided with jaws for engaging the inner end portion of a lath.

1,194,311. PEDAL. ALBERT F. NORRIS and CLIFTON H. NORRIS, Stoughton, Mass. Filed May 21, 1915. Serial No. 29,575. (Cl. 74—81.)

1. In a pedal mechanism, the combination with a rocking element consisting of a shaft having a member projecting from one end in one direction and a second member projecting from its other end in the opposite direction, said element having sockets substantially opposite the ends of the shaft; of cone bearings engaging said sockets, brackets supporting said bearings and holding them yieldably in such engagement, and manual means for adjusting the relative position of said bearings.

2. In a pedal mechanism, the combination with transversely spaced cone bearings, and means for permitting the automatic adjustment of one of them and the manual adjustment of the other; of a rock shaft having sockets at its ends journaled on said bearings, an integral member projecting laterally from one end of the rod in one direction, and a second member rigidly connected with the rod near its other end and projecting laterally therefrom in the opposite direction.

3. In a pedal mechanism, the combination with a rod bent twice at substantially right angles into an intermediate rock shaft, an arm projecting integrally from one end thereof in one direction, and a pedal projecting integrally from the other end thereof in the other direction; of bearings opposite the ends of said shaft engaging the outer sides of the arm and pedal adjacent said angles in a line at right angles to said arm and pedal.

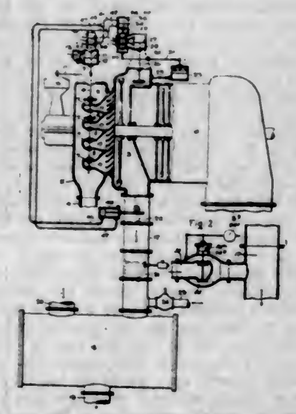


4. In a pedal mechanism, the combination with a rod bent twice at less than right angles into an intermediate shaft, an arm projecting integrally from one end thereof in one direction, and a pedal projecting integrally from the other end thereof in the other direction; of a subjacent base, brackets rising therefrom, and bearings carried by the brackets and having pointed inner ends, said arm and pedal having sockets in their outer sides beyond said angles and with which said ends engage.

5. In a pedal mechanism, the combination with a rod bent twice at less than right angles into an intermediate shaft, an arm projecting integrally from one end thereof in one direction, and a pedal projecting integrally from the other end thereof in the other direction, said arm and pedal having sockets in their outer sides beyond said angles; of a subjacent base, brackets rising therefrom, bearings carried by the brackets and having pointed inner ends entering said sockets, and means for adjusting the position of the bearings with respect to each other.

[Claims 6 and 7 not printed in the Gazette.]

1,194,312. ELASTIC-FLUID TURBINE. WILHELM PAPE, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 13, 1915. Serial No. 39,724. (Cl. 121—118.)



1. In an elastic fluid turbine having an extraction conduit connected with an intermediate stage, and an overflow valve between such stage and the next lower, the combination of a valve mechanism controlling the supply of elastic fluid to the turbine, a speed governor for regulating said mechanism, a pressure responsive device which regulates the overflow valve independently of the speed governor, and means controlled by said speed governor for positively closing the overflow valve after the governor has closed said valve mechanism in case the speed exceeds a predetermined maximum.

2. In an elastic fluid turbine having an extraction conduit connected with an intermediate stage, and an overflow valve between such stage and the next lower, the combination of a valve mechanism controlling the supply of elastic fluid to the turbine, a speed governor for regulating said mechanism, a motor having a pilot valve for operating the overflow valve, a pressure-responsive device for regulating the pilot valve, a sliding sleeve which carries the ports of the pilot valve, and means regulated by the speed governor for moving the sliding sleeve in a direction to cause the motor to positively close the overflow valve in case the speed exceeds a predetermined maximum.

3. In an elastic fluid turbine having an extraction conduit connected with an intermediate stage, and an overflow valve between such stage and the next lower, the combination of a valve mechanism controlling the supply of elastic fluid to the turbine, said valve mechanism having a stem capable of independent movement after said valve mechanism is closed, a speed governor for controlling the movements of the stem, a pressure-responsive device for controlling the overflow valve, and means which is operated when the stem is moved by the speed governor after the valve mechanism is closed to positively close the overflow valve.

4. In an elastic fluid turbine having an extraction conduit connected with an intermediate stage, and an overflow valve between such stage and the next lower, the combination of a valve mechanism controlling the supply of elastic fluid to the turbine, a speed governor, a non-return valve in the extraction conduit, an emergency shut-off valve in the extraction conduit located between the non-return valve and the turbine, a speed governor which controls the valve mechanism, and means controlled by the governor for positively closing the overflow valve and also closing the emergency shut-off valve when the speed exceeds a predetermined maximum.

5. In an elastic fluid turbine having an extraction conduit connected to an intermediate stage, a non-return valve in said conduit, and an overflow valve between the extraction stage and the next lower, the combination of a valve mechanism controlling the supply of elastic fluid to the turbine, a fluid motor therefor, a speed governor for the motor, a fluid motor for the overflow valve, a pressure-responsive device for controlling it, the pilot valve of said last-named motor having a sliding sleeve which carries its ports, and a fluid motor for moving said sleeve having its pilot valve controlled by the movement of the first-named motor.

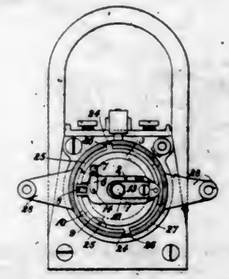
1,194,313. MAGNETO IGNITION DEVICE FOR INTERNAL-COMBUSTION ENGINES. ALEXANDER FLEXMAN PAYNE, Harborne, Birmingham, England. Filed Jan. 5, 1916. Serial No. 70,497. (Cl. 123—166.)

1. In a magneto-electric ignition apparatus; a detachable contact-breaker rocker arm which is mounted upon a fulcrum, which is maintained in removable engagement with an open bearing by means of a spring.

2. In a magneto-electric ignition apparatus; a detachable contact-breaker rocker arm which is mounted upon a fulcrum which is maintained in removable engagement with an open bearing recess by means of a spring which tends to close the contact points.

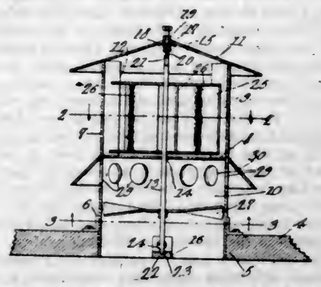
3. In a magneto-electric ignition apparatus; a detachable contact breaker rocker arm mounted upon a fulcrum which is situated nearer that end of the arm which is acted upon by the cam, said fulcrum being maintained in position by means of a spring.

4. In a magneto-electric ignition apparatus; the combination with the contact breaker carrier plate, of a detachable rocker arm mounted thereon by means of a knife-edge fulcrum engaging an open groove, a contact point on the rocker arm, a cam, a striker block carried by the rocker for engagement by the cam, an insulating block fixed to the carrier plate, an arm mounted thereon in electrical connection with the primary winding of the armature, and a contact point, said arm coöperating with the contact point on the rocker arm.



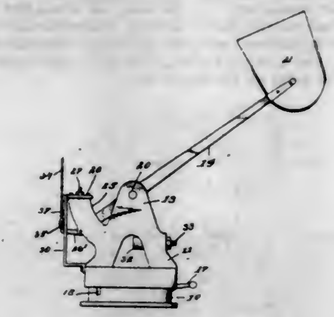
5. In a magneto-electric ignition apparatus; the combination with the contact-breaker carrier plate, of a detachable rocker arm mounted thereon, a contact point on the rocker arm, a cam, a striker block carried by the rocker for engagement by the cam, an insulating block fixed on the carrier plate, a spring arm mounted thereon in electrical connection with the primary winding of the armature, a contact point on said spring arm, an adjusting screw acting on said arm, and a spring locking device engaging with the head of the screw.

1,194,314. VENTILATOR. PETER PEARSON, Menominee, Mich. Filed July 22, 1914. Serial No. 852,409. (Cl. 98—20.)



The combination with a structure to be ventilated, said structure having an opening in the top thereof, of a housing having an open end seated within the opening in said structure, said housing extending above the structure, an imperforate partition dividing the housing into a lower and upper compartment, said compartments being out of communication, there being outlet openings in the upper portion of the lower compartment and diametrically opposed front and back openings in the wall of the upper compartment, a central shaft extending longitudinally within the housing, an exhaust fan revoluble with the shaft and arranged within the lower compartment, a driving fan secured to the shaft and located in the upper compartment in position to be actuated by a current of air flowing through the said compartment by way of the diametrically opposed openings therein, the blades of said fan being V-shaped in transverse section and separated at their inner ends, and an endless hood extending around the casing above the openings in the wall of the lower compartment, said hood extending downwardly across the openings and being substantially frusto-conical.

1,194,315. MAIL-DELIVERING DEVICE. SAMUEL J. PECK, Eaton, Ind. Filed Aug. 27, 1915. Serial No. 47,633. (Cl. 258—7.)

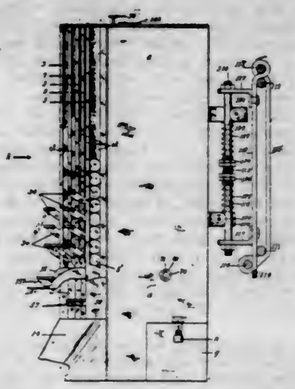


1. A mail delivering apparatus comprising a rotatably supported stand having a bifurcation providing spaced vertical ears, an arm pivoted to the ears for movement therebetween, a bag hopper supported upon the arm, an adjustable buffer mounted in the stand in the path of movement of the lower end of the arm, arcuate shaped extensions directed upwardly and integral with the ears to form a split guide barrel, resilient means held within the said barrel and working against the lower end of the arm, and a trip lever pivoted between the extensions forming the barrel and having a pivotal detent located in the path of movement of the lower end of the arm to permit the movement of the arm to pass the lever in one direction before locking it against movement in the reverse direction until said lever has been tripped.

2. A mail delivering apparatus comprising a rotatably supported stand having a bifurcation providing spaced vertical ears, an arm pivoted to the ears for movement therebetween, a bag hopper supported upon the arm, an adjustable buffer mounted in the stand in the path of movement of the lower end of the arm, arcuate shaped extensions directed upwardly and integral with the ears to form a split guide barrel, resilient means held within the said barrel and working against the lower end of the arm, a trip lever pivoted between the extensions forming the barrel and having a pivoted detent located in the path of movement of the lower end of the arm to permit the movement of the arm to pass the lever in one direction before locking it against movement in the reverse direction until said lever has been tripped, means on the stand for locking the same against rotation, and an adjustable follower located in the barrel and working against the outer end of the resilient means for varying the tension thereof.

3. A mail delivering apparatus comprising a rotatably supported stand having a bifurcation providing spaced vertical ears, an arm pivoted to the ears for movement therebetween, a bag hopper supported upon the arm, an adjustable buffer mounted in the stand in the path of movement of the lower end of the arm, arcuate shaped extensions directed upwardly and integral with the ears to form a split guide barrel, resilient means held within the said barrel and working against the lower end of the arm, a trip lever pivoted between the extensions forming the barrel and having a pivotal detent located in the path of movement of the lower end of the arm to permit the movement of the arm to pass the lever in one direction before locking it against movement in the reverse direction until said lever has been tripped, means on the stand for locking the same against rotation, an adjustable follower located in the barrel and working against the outer end of the resilient means to vary the tension thereof, a bracket fixed to the stand, a trip member pivoted to the bracket and having a peripherally grooved roller journaled in the said member, and a nib formed on the lever and working in the groove in the periphery of the roller.

1,194,316. CHANGE-MAKING MACHINE. JAMES A. PLOPPER, Portland, Oreg. Filed Oct. 1, 1913. Serial No. 792,893. (Cl. 133—2.)



1. A machine of the character described comprising a coin-tube adapted for holding a column of coins edgewise and discharging by gravitation; pay-key mechanism; a gate operated by the latter controlling the outlet of the coin-tube; means locking the gate in place, such means adapted to be operated to release the gate when coin in the tube bears on the latter; means operated by the pay-key adapted to hold back the upper coin or coins of the column to be retained in the coin-tube, deducting key mechanism, including a member adapted to be inserted under the coin or coins to be held back when the pay-key mechanism is operated; means for temporarily locking the deducting mechanism against return movement when its key is released; other means adapted to release said locking means, such other means coöperatively connected with the pay-key mechanism and operated by the return movement of the latter.

2. A machine of the character described comprising a coin tube adapted for holding a column of coins edgewise and discharging by gravitation; pay-key mechanism; a gate operated by the latter controlling the outlet of the coin-tube; means locking the gate in place, such means adapted to be operated to release the gate when coin in the coin tube bears on the latter; means operated by the pay-key adapted to hold back the upper coin or coins of the column to be retained in the coin tube, and simultaneously impose a weight on the coin or coins to be discharged; deducting key mechanism, including a member adapted to be inserted under the coin or coins to be held back when the pay-key mechanism is operated; means for temporarily locking the deducting mechanism against return movement when its key is released; other means adapted to release said locking means, such other means coöperatively connected with the pay-key mechanism and operated by the return movement of the latter.

3. A machine of the character described comprising a coin-tube adapted for holding a column of coins edgewise and discharging by gravitation; pay-key mechanism; a gate operated by the latter controlling the outlet of the coin-tube; means locking the gate in place, such means adapted to be operated to release the gate when coin in the coin-tube bears on the latter; means operated by the pay-key adapted to hold back the upper coin or coins of the column to be retained in the coin-tube, and simultaneously impose a weight on the coin or coins to be discharged; deducting key mechanism, including a member adapted to be inserted under the coin or coins to be held back when the pay-key mechanism is operated; means for temporarily locking the deducting mechanism against return movement when its key is released; other means adapted to release said locking means, such other means coöperatively connected with the pay-key mechanism and operated by the return movement of the latter; and

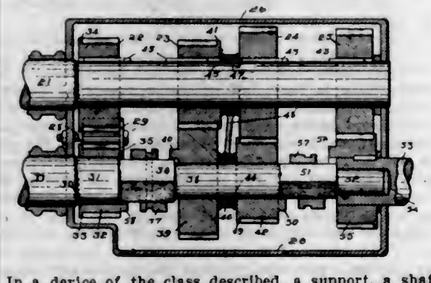
means for operating said releasing means of the deducting mechanism independently of said pay-key mechanism.

4. In a machine of the character described, comprising a coin-tube adapted for holding a column of coins and discharging by gravitation, pay-key mechanism, a gate operated by the latter controlling the outlet of the coin-tube, means operated by the pay-key and operating to hold back the upper coin or coins of the column when the pay-key is operated; and also adapted to impose downward pressure on the coin or coins to be expelled.

5. In a machine of the character described, comprising a coin-tube adapted for holding a column and discharging by gravitation, pay-key mechanism, a gate operated by the latter controlling the outlet of the coin-tube, a movable bar provided with a projecting piece adapted for being inserted between two coins, and operative connections between said bar and the pay-key mechanism including a slotted link adapted to cause the weight of said bar to be imposed on the coin or coins to be discharged when said gate has been moved from the outlet of the coin tube.

[Claims 6 to 17 not printed in the Gazette.]

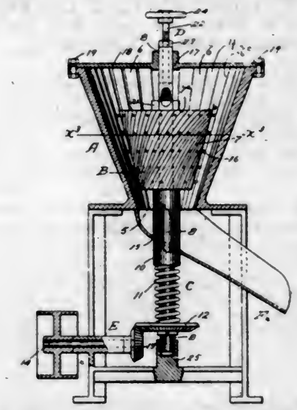
1,194,317. TRANSMISSION-GEARING. EZRA G. PLUMMER, Newton, Iowa. Filed Mar. 15, 1913. Serial No. 758,055. (Cl. 74—59.)



In a device of the class described, a support, a shaft rotatably mounted thereon having a relative large portion at one end, a comparatively smaller cylindrical portion adjacent thereto, an angular portion adjacent to said cylindrical portion somewhat smaller in its greater diameter than said cylindrical portion, a second cylindrical portion adjacent to said angular portion smaller in diameter than the shortest diameter of said angular portion, a section angular portion shorter in diameter than said second cylindrical portion, and a third cylindrical portion having a shorter diameter than said second angular portion, said shaft being so formed that gears may be placed thereon from one end and located on said cylindrical portions, and one-piece clutch members may be placed on the shaft from one end and located on the angular portions, gears loosely mounted on said cylindrical portions having clutch members, double clutch members slidably but nonrotatably mounted on said angular portions, a counter shaft, gears fixed thereon, two of said gears being in mesh with two of the gears on the first shaft, an idler shaft in mesh with one of the gears on the first shaft and one on the second shaft, a shaft mounted in said support having an opening received in one end of said first shaft, a gear fixed on said last shaft in mesh with one of the gears on said second shaft, means for operating said double clutch members, certain gears on the respective shafts being provided near one side with peripheral annular flanges adapted to engage the sides of the gears meshing with the gears having flanges, whereby the gears on the first shaft are held against sliding movement toward the smaller end of said shaft.

1,194,318. NUTCRACKER. JOHN POWER, Los Angeles, Cal. Filed Mar. 14, 1914. Serial No. 824,709. (Cl. 146—3.)

1. Mechanism of the character disclosed, comprising a conical hopper, a conical rotor mounted within the hopper, means for operating the rotor, there being a downwardly decreasing inter-space between the rotor and the hopper, the hopper being provided with downwardly ranging channels formed in its inner walls, and the rotor being provided with spirally produced channels in its periphery; said channels in the hopper walls being angular in formation and separated by edge portions to which the material is presented upon the rotation of the rotor; and the rotor being provided in the channels with spaced pins projecting beyond the periphery of the rotor.



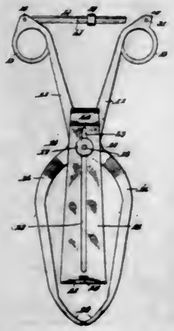
2. Mechanism of the character disclosed, comprising a conical hopper, a conical rotor mounted within the hopper, means for operating the rotor, there being a downwardly decreasing inter-space between the rotor and the hopper, the hopper being provided with downwardly ranging channels formed in its inner walls, and the rotor being provided with spirally produced channels in its periphery; said channels in the hopper walls being angular in formation and separated by edge portions to which the material is presented upon the rotation of the rotor; and the rotor being provided with spaced pins projecting beyond the periphery of the rotor and seated in the channels in the rotor; said pins being generally distributed over the rotor surface from end to end thereof.

3. Mechanism of the character disclosed, comprising a conical hopper, a conical rotor mounted therein, there being an inter-space between the hopper and the rotor and the opposed walls of both being formed to engage and reduce material fed to the said inter-space; a vertical shaft in the hopper upon which the rotor is feathered, a yielding support for the rotor, means for rotating said shaft, a key above the rotor and lying within a transverse elongated slot in the shaft and in a tubular upper portion thereof, and an adjusting shaft threaded in said tubular portion of said rotor shaft and connected with said key; said rotor being provided with relatively small pins distributed generally over the surface thereof and projecting into the interspace between the rotor and the hopper.

4. A machine for cracking nuts of varying sizes, comprising a conical hopper provided with downwardly ranging channels formed in its inner walls, a conical rotor movably mounted within the hopper and decreasing in transverse section downwardly in such relation to the formation of the conical hopper that there is provided a downwardly decreasing inter-space between the rotor and the hopper, and the rotor being provided with curved channels produced in its periphery; said channels in the hopper being angular in formation and separated by edge portions to which the nuts are presented upon rotation of the rotor, and the rotor being provided with spaced pins seated in the channels of the rotor and projecting beyond the periphery thereof and substantially equidistant from the walls of such channels and projecting materially

beyond the rotor surface in curved series; said pins being uniformly distributed over the rotor surface from top to bottom thereof and terminating at their outer ends in decreasing distances from the opposed inner walls of the hopper; whereby the shells of the nuts are broken up and the meats extracted by the combined action of the inter-related channeled hopper walls and the walls of the rotor and the pins set in the grooves thereof, substantially as and for the purpose set forth.

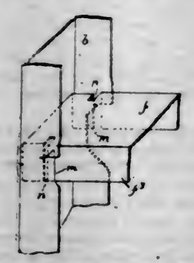
1,194,319. VAGINAL SPECULUM AND RETRACTOR. WILLIAM W. PRETTS, Platteville, Wis. Filed Feb. 23, 1915. Serial No. 9,988. (Cl. 128—24.)



1. In a device of the class described, a pair of pivotally connected members, handles upon one end of said members, blades upon the opposite ends of said members, a bar pivotally connected to one of said handles and provided with a longitudinally disposed slot, a pair of lugs upon the opposite handle to receive said bar between them, and a thumb screw threaded through one of said lugs and adapted to engage in said slot, substantially as described.

2. In a device of the class described, a pair of pivotally connected members, handles upon one end of said members, blades upon the opposite ends of said members, a bar pivotally connected to one of said handles and provided with a longitudinally disposed slot, a pair of lugs upon the opposite handle to receive said bar between them, a thumb screw threaded through one of said lugs and adapted to engage in said slot, and a thumb nut threaded upon said bar and adapted to engage said lugs, substantially as described.

1,194,320. STRUCTURE OR FRAME FOR BUILDINGS OR THE LIKE. FRANCESCO PUCILLO, London, England. Filed Feb. 23, 1916. Serial No. 79,915. (Cl. 189—36.)



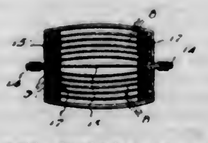
1. In a frame-work structure for buildings and the like, members formed from easily bendable material of uniform section and being of channel shape in cross-section, and means for connecting pairs of said members when the end of one in inserted in the other comprising a projecting part on one of the members and a slotted portion on the other member adapted to fit over the projecting part so as to form a sliding connection, and a bent portion on one of said members engaging a portion of the other so as to prevent disengagement of such members when the sliding member is in position.

2. In a frame-work structure for buildings and the like, members formed from easily bendable material of uniform section and being of channel shape in cross-section, and means for connecting pairs of said members when the end of one is inserted in the other comprising a projecting part on one of the members and a slotted portion on the other member adapted to fit over the projecting part so as to form a sliding connection, and a bent portion on one of said members engaging a portion of the other so as to prevent disengagement of such members when the sliding member is in position, and means for rigidly connecting certain of the members so as to form compound members.

3. In a frame-work structure for buildings and the like, the combination of upright members of channel cross-section and made of easily bendable material, horizontal members of the same in cross-section having slotted portions near the ends thereof, means for connecting the ends of the horizontal members to the upright members comprising inturned portions of the flanges of the upright members adapted to be slidably engaged by said slotted portions, and means for rigidly retaining the latter when slid into position comprising inwardly bent portions of the flanges of the upright members.

4. In a frame-work structure for buildings and the like, the combination of an upright member composed of two parts of easily bendable material of channel section arranged back to back and rigidly connected by distance pieces, horizontal members of the same cross section as each part of the upright member and having slotted portions near the ends thereof, means for connecting the ends of said horizontal members to the upright member comprising inturned portions of the flanges of each of the channeled parts of the upright member adapted to be slidingly engaged by said slotted portions, the ends of the horizontal members being pressed inward so as to fit between the flanges of the upright member, and means for rigidly, but separately, retaining the horizontal members in position comprising slightly inwardly bent portions of the flanges of the upright member.

1,194,321. PHOTOGRAPHIC DEVELOPING-HOLDER. LEWIS L. RANDALL, Ottumwa, Iowa. Filed Sept. 5, 1911. Serial No. 647,712. (Cl. 95—100.)



1. In a photographic developing apparatus, a negative holder adapted to be removably positioned in a receptacle, said holder being provided with protruding longitudinal flanges, and a plurality of negative carriers adapted to be positioned endwise within said holder, each of said carriers having means to maintain a space adjacent one face thereof.

2. In a photographic developing apparatus, a holder having protruding longitudinal flanges along the sides thereof and a compartment, a series of negative carriers adapted to be positioned endwise within said compartment, and means on each of said carriers for maintaining a space adjacent one face thereof.

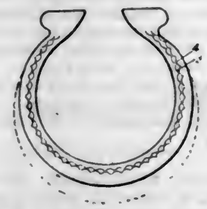
3. In a photographic developing apparatus, a holder having a plurality of compartments, a stop at the base of each compartment, and a series of negative carriers adapted to be positioned endwise within said compartments and to rest upon the stop of the compartment.

4. In a photographic developing apparatus, a holder having a plurality of compartments, each of said compartments being provided with a stop, and a series of negative carriers removably mounted within said holder, and adapted to have one of their ends engage said stop, each of said negative carriers being provided with means for producing a space adjacent to one face thereof.

5. In a photographic developing apparatus, a holder having longitudinal protruding flanges, a division wall within said holder, the ends of said wall being clamped between opposite longitudinal protruding flanges of the holder, thereby forming compartments within said holder, and a series of concavo-convex negative carriers adapted to be positioned endwise within said compartments.

[Claims 6 to 9 not printed in the Gazette.]

1,194,322. VEHICLE-TIRE CONSTRUCTION. WILLIAM S. TEMPLE, Mount Vernon, Ohio. Filed Feb. 12, 1915. Serial No. 7,703. (Cl. 152—18.)



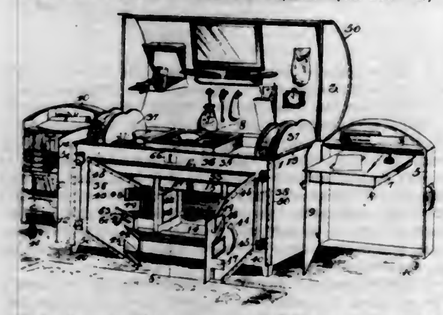
1. In a vehicle tire structure, the combination of a shoe, and an armor carried by said shoe comprising sheet metal disks with concave sides facing outward.

2. In a vehicle tire structure, the combination of a shoe, and an armor carried by said shoe element comprising superposed layers of sheet metal disks staggered to offer an imperforate armor, said disks having concave surfaces facing outward.

3. A reinforcing element for vehicle tire structure in the form of a disk having one side roughened and the other side concave.

4. A reinforcing element for vehicle tire structure in the form of a concavo-convex disk having its convex side roughened.

1,194,323. TRUNK. KATIE L. TRAWEEK, Waelder, Tex. Filed Oct. 12, 1915. Serial No. 55,412. (Cl. 190—4.)



1. In a trunk, the combination with a frame having an open front, closed ends and superimposed movable compartments therein, a lid for closing the frame top and preventing access to said compartments, locking means for said lid, laterally disposed swingable compartments at the ends of the frame and closing thereagainst and against said lid, and locking means for said last named compartments.

2. In a trunk, the combination with a frame having closed ends, of laterally movable drawers, means for supporting the drawers, superimposed trays arranged above the drawers, a lid hinged to the frame and adapted to close over the upper one of the said trays, locking means for the lid, individual compartments hinged to the ends of the body of the trunk and closing against said ends and said lid, and locking means for said last named compartments.

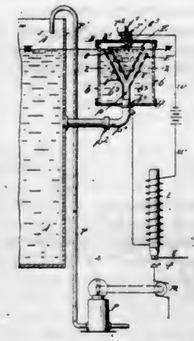
3. In a trunk, the combination with a trunk body having an open front and top, a lid for closing the top of the body, locking means therefor, doors for the open front, locking means for said doors, compartments hinged to the ends of the trunk body and closing thereagainst and against said lid, said compartments being each of a like cross sectional contour to the cross sectional contour of the trunk body, locking means for the said compartments, and means overlapping the closure joints of the tops, doors, and compartments.

4. In a trunk, the combination with a trunk body having an open front and top and closed at the ends thereof, a lid for closing the top, doors for closing the open front, compartments hinged to the said closed ends of the body, said compartments being each of a like cross sectional contour to the cross sectional contour of the trunk body and its lid and closing thereagainst, and means overlapping the closure joints of the said lid, doors, and end compartments.

5. A trunk comprising a rectangular body having an open front, a top, a series of superposed drawers arranged lengthwise of the body and slidable through the open front thereof, trays arranged above the drawers and movable through the top of the body, side compartments hinged to the ends of the body and projecting above the top thereof, and a lid closing the top of the trunk body and the inner sides of the projecting portions of the side compartments.

[Claim 6 not printed in the Gazette.]

1,194,324. CIRCUIT-CLOSER. ALBERT E. WILLIAMS, Jersey City, N. J., assignor to Electric Liquid Operator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 19, 1914. Serial No. 857,453. (Cl. 200—27.)



1. In a device of the character designated, in combination with a tank or receptacle for containing a liquid, a casing connected with said tank inclosing two electrodes of conical shape, means for maintaining an electric circuit between said electrodes, for the purpose described.

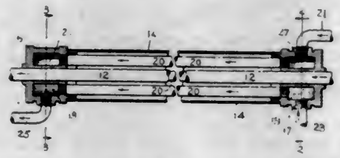
2. In a device of the character designated, in combination with a tank or receptacle for containing a liquid, a casing connected with said tank and inclosing two electrodes of conical shape, means for adjusting one electrode with relation to the other, means for maintaining an electric circuit between said electrodes for the purpose described.

3. In a device of the character designated, in combination with a tank or other receptacle for containing a liquid, a casing connected with said tank inclosing two electrodes of conical shape, each of said electrodes being perforated for the purpose described, means for maintaining an electric circuit between said electrodes.

4. In a device of the character designated, in combination with a tank or other receptacle for containing a liquid, a casing connected with said tank inclosing two

electrodes of conical shape, means for adjusting one electrode with relation to the other, each of said electrodes being perforated for the purpose described, means for maintaining an electric circuit between said electrodes, for the purpose described.

1,194,325. HEATING APPARATUS FOR INJECTOR-PIPES OF LOCOMOTIVES. JOHN ZIMMERMAN, Council Bluffs, Iowa, assignor of one-half to Benjamin F. Madison, Council Bluffs, Iowa. Filed Jan. 21, 1916. Serial No. 73,452. (Cl. 137—75.)



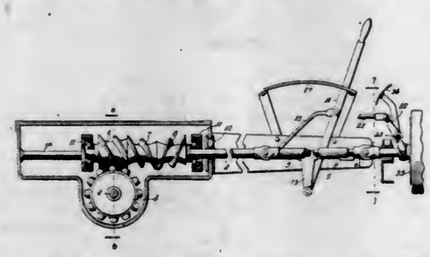
1. Apparatus of the specified class for heating an injector pipe, comprising a steam radiator, and a casing inclosing both the radiator and a portion of the injector pipe.

2. Apparatus of the specified class for heating an injector pipe, comprising piping for a heated medium, and a closed casing containing both a portion of the piping and a portion of the injector pipe.

3. Apparatus of the specified class for heating an injector pipe, comprising a steam radiator, and a tubular casing inclosing both the radiator and a portion of the injector pipe.

4. Apparatus of the specified class, comprising an injector pipe, a steam radiator, a casing inclosing both the radiator and a portion of the pipe, and means for conducting steam to and from the radiator.

1,194,326. TRANSMISSION-GEARING FOR AUTOMOBILES. WARREN W. ANNABLE, Grand Rapids, Mich. Filed Aug. 23, 1915. Serial No. 47,002. (Cl. 74—36.)



1. Transmission gearing comprising a worm gear, a yoke member adapted to oscillate about its axis, and also longitudinally movable, arms projecting laterally from said members, a shaft carried by the arms, a series of worms carried by the shaft and adapted to severally engage the said gear, means for adjusting the yoke about its axis and means for adjusting the yoke longitudinally to separately engage the respective worms with the said gear.

2. Transmission gearing comprising a worm gear, a series of worms to separately engage and drive the same, means for shifting the worms to engage and disengage a respective worm with the gear, a clutch to connect the worms with means for driving the same, and means for locking the respective worms in engagement with the gear whenever the clutch is operative.

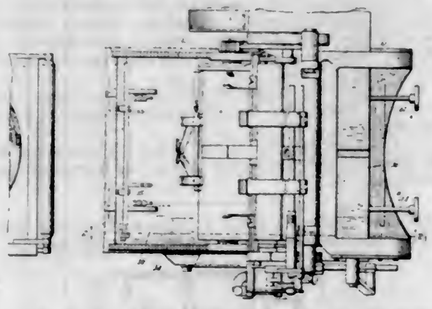
3. The transmission gearing comprising a worm gear, a worm, a laterally movable bearing in which the worm is journaled, means for laterally shifting the bearing to engage and disengage the worm with the gear, a lug on the bearing, a fixed member having a recess to receive the lug when the worm is engaged with the gear, a clutch to engage the worm with driving means, means for locking the lug within the recess and means for operating the clutch, also connected to the locking means and arranged to lock the lug when the clutch is operative and to release the lug when the clutch is inoperative.

4. Transmission gearing comprising a worm gear, a laterally movable worm to engage the gear, means for laterally adjusting the worm to engage and disengage it with the gear, a lug connected to the worm to hold the same engaged or out of engagement with the worm, a fixed member having a recess to receive the lug, a slide to close the recess and prevent ingress or egress of the lug, a clutch to connect the worm to driving mechanism, means for operating the clutch and the locking mechanism, whereby the same are simultaneously operative and inoperative.

5. Transmission gearing comprising a worm gear, a worm adjustable to engage and disengage the gear, a clutch to connect and disconnect the worm with driving means, means for engaging and disengaging the clutch, and automatic means for locking of the worm in engagement with the gear when the clutch is adjusted to connect the worm with the driving mechanism.

[Claims 6 to 13 not printed in the Gazette.]

1,194,327. SHEET SEPARATING AND MOVING DEVICE. EDWARD CHESHIRE, Pittsburgh, Pa., assignor to Miller Saw Trimmer Company of Michigan, Pittsburgh, Pa., a Corporation of Michigan. Filed Sept. 18, 1913. Serial No. 790,526. (Cl. 101—41.)



1. Mechanism for separating sheets one by one from a pile of stock comprising a separator bar disposed transversely above the front portion of the pile and vertically movable with respect thereto, a suction foot adjustably carried by said separator bar and adapted to engage from the front edges of the sheets rearwardly, a pair of suction feet adjustably carried by said separator bar and adapted to engage the sheets from the side edges thereof inwardly, and means for moving said separator bar toward the pile to permit said feet to receive a sheet therefrom, and subsequently moving it away from said pile, for the purposes set forth.

2. Mechanism for separating sheets one by one from a pile of stock comprising a support, vertical guides carried by said support, a separator bar slidably mounted in said guides, a spring-returned lever for operating said separator bar, a cam shaft, a cam carried by said shaft for actuating said lever, a suction foot carried by said separator bar, a controlling valve for said suction foot, and a second cam carried by said shaft for actuating said controlling valve.

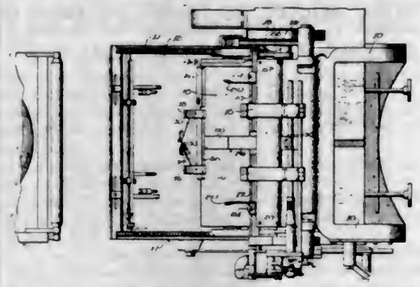
3. Mechanism for separating sheets one by one from a pile of stock comprising a support, vertical guides carried by said support, a separator bar slidably mounted in said guides, a spring-returned lever for operating said separator bar, a cam shaft, a cam carried by said shaft for actuating said lever, a plurality of suction feet carried by said separator bar, a valve for controlling all of said suction feet, and a second cam carried by said shaft for actuating said controlling valve.

4. A suction foot for separating the top sheet from the remainder of a pile of stock, said foot having a suction opening in the lower side thereof and having such lower side formed to prevent the creation of vacuum spaces between the top and second sheets, at the parts of such sheets embracing said suction opening.

5. A suction foot for separating the top sheet from the remainder of a pile of stock, the lower surface of said foot having a suction opening therein and being formed to create, between the first and second sheets, an air chamber embracing the edge of said opening and in communication with the atmosphere.

[Claims 6 to 8 not printed in the Gazette.]

1,194,328. SHEET-STACKER. EDWARD CHESHIRE, Pittsburgh, Pa., assignor to Miller Saw Trimmer Company of Michigan, Pittsburgh, Pa., a Corporation of Michigan. Filed Sept. 18, 1913. Serial No. 790,529. (Cl. 101—34.)



1. In a sheet stacker, in combination, an inclined receiving table having a sheet-engaging end stop at the lower part thereof, and a vertical tapping device associated with said end stop.

2. In a sheet stacker, the combination with an inclined table having a fixed sheet-engaging end stop at the lower part thereof, of a pair of oppositely disposed side joggers, means for causing said joggers to reciprocate simultaneously in opposite directions; and a vertical tapping device associated with said end stop to operate upon the sheets in engagement therewith.

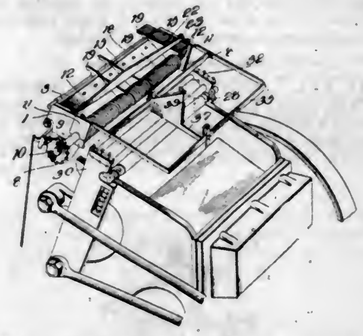
3. In a sheet stacker, the combination with an inclined table, of a pair of oppositely disposed side joggers slidably mounted thereon, means for causing said joggers to reciprocate simultaneously, a vertical tapping device disposed on said table below said joggers, and means associated with said joggers for operating said tapping device.

4. In a sheet stacker, the combination with an inclined receiving table and means for delivering sheets thereto, of a fixed sheet engaging end stop on said table at the lower part thereof, and a vertical tapping device associated with said end stop to operate upon the sheets in engagement therewith, said tapping device including a tapping member and tending to move downward, and means for intermittently raising and subsequently releasing said member.

5. In a sheet stacker, a support, a pair of pivoted tapping members extending diagonally across each other and having a slot and pin connection to permit simultaneous movement of said members about their pivots, and means for intermittently moving one of said members to raise its free end and subsequently releasing said members.

1,194,329. INK-FOUNTAIN. WELLER R. CRANDALL, Leavenworth, Kans., assignor of one-half to Percival W. Darrah, Leavenworth, Kans. Filed Oct. 4, 1915. Serial No. 54,029. (Cl. 101—74.)

1. In an ink fountain, the combination of a trough having extended ends, a fountain roll shaft journaled in said extended ends, a plurality of similar disks fitted on said shaft to rotate therewith and slide along the same, a plurality of partitions mounted within the trough and adjustable along the same and adapted to fit between adjacent disks in intimate contact therewith, the combined thickness of all the disks and partitions being approximately equal to the distance between the inner faces of the extended ends of the trough, means for securing the partitions in their adjusted positions, and an adjusting screw mounted in one extended end of the trough and arranged to force the disks and partitions against the opposite extended end of the trough.



2. The combination of an ink trough, a fountain roller co-acting therewith and consisting of a series of like disks, a rod secured upon the outer wall of the trough, a series of partitions adapted to fit within the trough and enter between adjacent disks of the ink roller, and arms projecting from the several partitions over the trough and slidably and pivotally engaging the said rod.

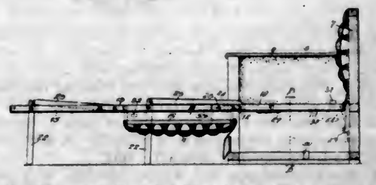
3. The combination of an ink trough, a rod secured upon the outer wall of the trough, a roller disposed at the opposite side of the trough and co-acting therewith and consisting of a series of similar disks, partitions adapted to fit within the trough and between adjacent disks, arms extending from the several partitions over the trough, and collars depending from said arms and encircling the said rod to pivotally and slidably connect the partitions therewith.

4. The combination of an ink trough, a fountain roll cooperating therewith, a plurality of partitions within the trough in intimate engagement with the said roll, a ductor roll mounted to travel to and from the fountain roll, and a plurality of wipers in alinement respectively with the partitions and arranged to bear upon the ductor roll in its travel toward and from the fountain roll.

5. The combination of an ink trough, a fountain roll cooperating therewith, a partition within the trough in intimate engagement with the fountain roll, a ductor roll arranged to travel to and from the fountain roll, a wiper pad arranged to bear upon the ductor roll, and means controlled by the ductor roll to supply a cleaning medium to the wiper pad.

[Claims and 7 not printed in the Gazette.]

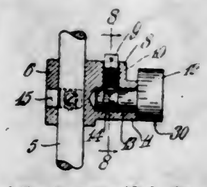
1,194,330. SOFA-BED. FRED M. DAVIS, Chicago, Ill., assignor to Pullman Couch Company, Chicago, Ill., a Corporation of Illinois. Filed May 15, 1913. Serial No. 767,782. (Cl. 5—51.)



A sofa bed, comprising a frame, a foldable sectional bed bottom mounted thereon including a seat section, an inner

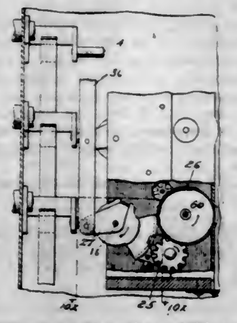
section, and a connecting section having rule joint connections, the pintles for which are each in substantially the same plane as the bed bottom when unfolded, said bed bottom being turnably connected to the front part of said frame adjacent to the joint for the connecting and seat sections, a resiliently yielding outwardly movable stop on the back part of said frame for supporting said inner section in its bed position, said stop having a guide face inclined inwardly and upwardly for coaction with said inner section in unfolding whereby said stop is retracted, and an upwardly facing part or seat adjacent to the upper end of said face to receive and support the coacting part of said inner section when the latter is raised sufficiently to permit said stop to spring inward thereunder.

1,194,331. QUANTITY-STOP FOR DISPENSING-PUMPS. JOHN B. DAVIS, Springfield, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a Corporation of Massachusetts. Filed Aug. 7, 1915. Serial No. 44,190. (Cl. 221—103.)



In a device of the type specified, the combination of a reciprocable member, a smooth rod parallel with said member, an indicating stop having a hub constructed to slide on said rod, a horizontal slot in said hub, means passing through said slot and into the rod to bind the hub against a complete rotation and against vertical movement on the rod, a circular contacting portion for the stop having a horizontal stud mounted eccentrically and adapted to fit a horizontal recess in the hub, a vertically arranged set screw mounted in a threaded opening of greater length than the screw leading to said recess, and a member fitting in said opening above the screw having means to seal the screw in place.

1,194,332. VOTING-MACHINE. JAMES H. DEAN, Chicago, Ill., assignor, by mesne assignments, to Empire Voting Machine Company, a Corporation of New York. Filed Aug. 11, 1910. Serial No. 576,620. (Cl. 235—54.)



1. The combination of a voting machine, of a series of decimal counters, each having a plurality of wheels, a gear in each counter idly meshing with the units wheel thereof, a mutilated pinion for each counter meshing with said gear, an actuator for driving and locking each of said mutilated pinions, a lever on each of said actuators, and a universal bar connected to a plurality of said levers to simultaneously operate said actuators.

2. The combination in a voting machine of a plurality of oscillating actuators, a lever attached to each of said actuators, and a universal bar pivotally connected to a plurality of said levers to communicate simultaneous movement back and forth to a plurality of said actuators.

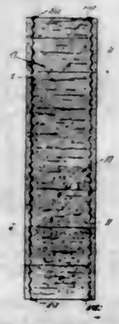
3. The combination in a voting machine of an oscillating counter actuator having a cylindrical segment having a driving tooth extending from its periphery perpendicular to the plane of motion of its oscillation and having a recess in its periphery, said recess being in line with said tooth.

4. The combination in a voting machine of a mutilated pinion comprising a hub, and two sets of teeth thereon separated by an open space, the teeth of one set being staggered with reference to the teeth of the other set.

5. The combination in a voting machine of a mutilated pinion comprising a hub, two sets of teeth thereon separated by an open space, the teeth of one set being staggered with reference to the teeth of the other set, one set of said teeth being used for driving said pinion, the other set being used for locking and driving said pinion.

[Claims 6 to 30 not printed in the Gazette.]

1,194,333. BRIQUET. IRA FOREMAN, Los Angeles, Cal., assignor to Frank W. Thompson, Los Angeles, Cal. Filed May 6, 1916. Serial No. 95,783. (Cl. 44—1.)



1. A briquet of the character described, comprising a body made up of layers of compressed material, and a crimped binding wire embedded in and through the layers of said material.

2. A briquet of the character described, comprising a body made up of layers of compressed material, and a crimped binding wire embedded in and through the layers of said material from end to end of the briquet transverse of the layers of material.

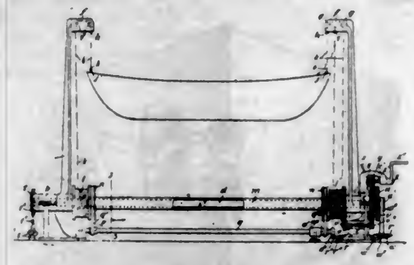
3. A briquet of the character described, comprising a body of compressed material, and a wire reinforcement embedded in the briquet, said reinforcement having an irregular lengthwise configuration.

4. A briquet of the character described, comprising a body of layers of compressed material, and a metallic wire reinforcement embedded in the briquet from end to end transverse of the layers of material, said wires having an irregular lengthwise configuration to prevent relative movement of the layers of the briquet on the wire.

5. A briquet of the character described, comprising a cylindrical body of layers of compressed material, the planes of the layers being parallel to the ends of the cylindrical body, and the length of the body being relatively great as compared with its diameter, and a pair of longitudinally extending binding wires arranged opposite each other near the exterior of the cylindrical body, said binding wires in crimped formation and extending from end to end of the body and solidly embedded in the layers of material of the body.

1,194,334. BOAT-DAVIT. CHARLES HENRY FULLER, Portland, Oreg. Filed Oct. 5, 1915. Serial No. 54,278. (Cl. 9—22.)

1. In a life-boat launching apparatus, a rotatable main shaft, davit arms fixed on said shaft, a tubular shaft rotatably mounted on said main shaft, and selective means for rotating said main shaft and tubular shaft independently or in unison.



2. In a life-boat launching apparatus, a rotatable main shaft, davit arms fixed on said shaft, winding drums rotatable on said main shaft, and selective means for rotating said main shaft and winding drums independently or in unison.

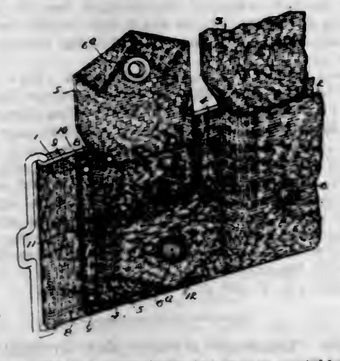
3. In a life-boat launching apparatus, a rotatable main shaft, davit arms fixed on said shaft, a tubular shaft rotatably mounted on said main shaft, winding drums fixed on said tubular shaft, and means for holding said main shaft and tubular shaft in any position to which they have been rotated.

4. In a life-boat launching apparatus, a rotatable main shaft, davit arms fixed on said shaft, a tubular shaft rotatably mounted on said main shaft, and means for holding said main shaft and tubular shaft in any position to which they have been rotated.

5. In a life boat launching apparatus, the combination of companion shafts independently rotatable about a common axis, davit arms mounted on one of said shafts, and selective means for rotating said shafts independently or in unison.

[Claims 6 and 7 not printed in the Gazette.]

1,194,335. CARTRIDGE BELT OR CARRIER. VICTOR H. JENNINGS, Worcester, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 23, 1912. Serial No. 721,868. (Cl. 224—28.)

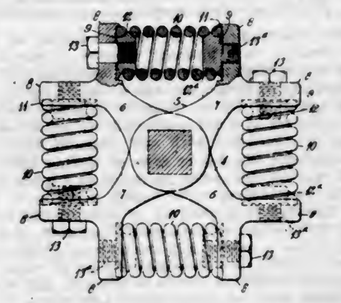


1. The method of manufacturing woven cartridge belts or carriers which consists in weaving a band or body with one or more pockets produced integral therewith and in the weaving operation producing a plain portion or extension adjoining the said pocket or one of the said pockets, weaving a web with sets of smaller pockets repeated throughout the length of such web, separating such web by cutting the same into sections each provided with a set of the smaller pockets, and attaching one of the said sections to the plain portion or extension aforesaid of the band or body, thereby mounting the said set of smaller pockets upon the band or body adjoining the integral pockets or one thereof.

2. In a cartridge-belt or carrier, the combination with a band or body woven with one or more pockets integral therewith and with a plain web-portion or extension adjoining said pocket or pockets, of a woven patch-pocket piece applied to said plain web-portions and comprising a backing-web and duplicate pockets one above the other woven integral therewith, the said backing-web constituting a rear wall for said pockets, and attaching means engaging with said patch-pocket piece and permanently fastening it to said plain web-portion or extension alongside the said woven pocket.

3. In a cartridge-belt or carrier, the combination with a band or body woven with one or more pockets integral therewith and with a plain web-portion or extension adjoining said pocket or pockets, of a woven patch-pocket piece applied and permanently attached to said plain web-portion alongside an integrally woven pocket and comprising a pair of smaller pockets one above the other and integral with said pocket piece.

1,194,336. FLEXIBLE COUPLING. LESTER H. KEIM, Pittsburgh, Pa., assignor to R. D. Nuttall Company, a Corporation of Pennsylvania. Filed Aug. 12, 1912. Serial No. 714,496. (Cl. 64—13.)



1. A flexible coupling comprising two side-by-side members severally provided with lateral projections having opposing seats, in combination with a set of helical springs interposed between the projections and coöperating with said opposing seats, blocks screwed into the ends of said springs, and bolts coöperating with said blocks to clamp the ends of the springs into said seats in the projections.

2. A flexible coupling comprising two members severally having laterally projecting parts having seats therein, a set of helical springs interposed between said laterally projecting parts and coöperating with said seats, blocks screwed into the ends of the springs, and bolts coöperating with said blocks to clamp the ends of the springs into said seats in the laterally projecting parts.

3. A flexible coupling comprising two side-by-side members having laterally projecting parts provided with opposing sockets, helical springs having their ends seated in said sockets, blocks screwed into the ends of said springs, and bolts coöperating with said blocks and said projecting parts to clamp the ends of the springs in the sockets.

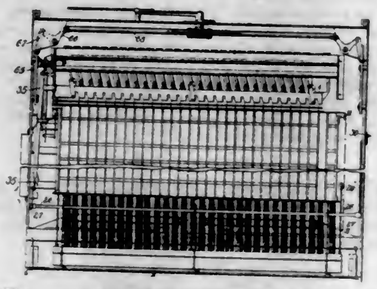
4. A flexible coupling comprising a pair of side-by-side members having alined shaft sockets and laterally projecting arms each provided with two sockets at right angles to each other, helical springs having their ends seated in said sockets, blocks screwed into the ends of said springs and bolts projecting through said arms and sockets and engaging said blocks for clamping the ends of the springs in the sockets.

5. A flexible coupling comprising two side-by-side members each of which is provided with lateral projections at substantially right angles to each other, and having sub-

stantially cylindrical recesses therein, a set of uniform helical springs, substantially cylindrical blocks screwed into the ends of said springs, and means coöperating with said blocks and said projections for clamping said springs in an axial direction into said recesses.

[Claims 6 to 10 not printed in the Gazette.]

1,194,337. VOTING-MACHINE. WILLIAM J. LAUSTERER, Jamestown, N. Y., assignor, by mesne assignments, to Empire Voting Machine Company, a Corporation of New York. Filed June 4, 1910. Serial No. 565,146. (Cl. 235—54.)



1. The combination in a voting machine of locking means arranged in a plurality of rows, means normally holding said locking means against operation, said means being operable to release any one or more of said rows of locking means, a row of irregular balloting devices for voting for candidates not nominated, and recording means operable in connection with said irregular balloting device to indicate the row or rows of locking devices that may be unlocked for voting operation at a given moment.

2. The combination in a voting machine of locking means arranged in a plurality of rows, means normally holding said locking means against operation, said means being operable to release any one or more of said rows of locking devices, and a recording device to record which of said rows of locking devices is released, said recording device being set by the operation of said means.

3. The combination in a voting machine of locking devices arranged in a plurality of rows, means normally holding said locking devices against operation, said means being operable to release any one or more of said rows of locking devices, a recording device indicating which of said rows of locking devices is released, and additional means operable by the voter to cause the operation of said recording device to record the unlocking of said rows.

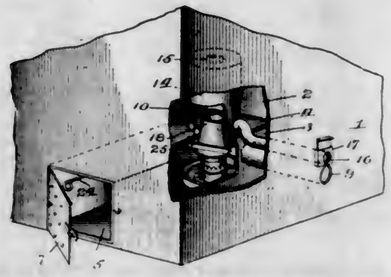
4. The combination in a voting machine of locking devices arranged in a plurality of rows, means normally holding said locking devices against operation, said means being operable to release any one or more of said rows of locking devices, and a recording device connected to and moved by said means capable of recording marks indicating the setting of said means.

5. The combination in a voting machine of a frame, a stationary rod thereon, and a plurality of locking dogs pivoted on said rod.

[Claims 6 to 47 not printed in the Gazette.]

1,194,338. BROODER-HEATER. ALEXANDER MAHON, Fairfax, Va., assignor of one-half to James P. Coon, Washington, D. C. Filed Dec. 22, 1914. Serial No. 878,510. (Cl. 237—14.)

1. In a brooder, the combination of a hover chamber, formed with an opening in its floor near the center thereof, and a brooder heater, said heater comprising a tunnel portion located below the floor of the hover chamber and extending to the wall of the brooder into open relation to the exterior thereof, and a dome, secured to the tunnel by a gas-tight and fire resisting connection and arranged to extend through said opening into the hover chamber, said tunnel and dome being sealed against the accidental escape of products of combustion and other fumes, except where the tunnel is in open relation to the exterior of the brooder.



2. In a brooder, the combination of a hover chamber, formed with an opening in its floor near the center thereof, and a brooder heater, said heater comprising a tunnel portion located below the floor of the hover chamber and extending to the wall of the brooder into open relation to the exterior thereof, and a dome arranged to extend through said opening into the hover chamber removably secured to said tunnel by a gas tight and fire resisting connection.

3. In a brooder heater, the combination with a brooder having an upper hover chamber and a lower heating chamber, of a gas-tight casing within said heating chamber, having a dome at one end forming a gas-tight part of said casing and at its other end extending into open relation to the exterior of the brooder, smoke pipe or pipes connecting said casing with the outer air, a source of heat located within said casing beneath the dome thereof, and a second dome surrounding the heating dome, having air supply ducts, substantially as described.

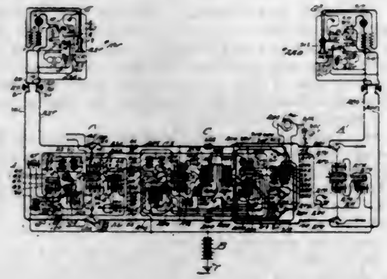
4. In a brooder heater, the combination with a brooder having an upper hover chamber and a lower heating chamber, of a gas-tight casing within said heating chamber, having a dome forming a gas-tight part of said casing and extending into the hover chamber, said casing extending in open relation to the exterior of the brooder and closing the opening therein for such extension against communication to the lower heating chamber, a source of heat within said casing, and draft pipe or pipes similarly extending to the exterior, whereby the source of heat is disposed centrally of the brooder and gas and fire within the heater prevented from being communicated to the interior of the brooder.

5. In a brooder heater, the combination with a brooder having an upper hover chamber and a lower heating chamber, of a gas-tight casing within said heating chamber having a dome at one end forming a gas-tight part of the casing, said casing extending in open relation to the exterior of the brooder, a source of heat within said casing beneath said dome, smoke pipe or pipes for said casing, a second dome surrounding the heating dome and supported on and closed at its base by the casing and extending into the hover chamber, said second dome having an outlet at or near its top and air supply pipes connecting said dome with the outer air.

[Claims 6 to 13 not printed in the Gazette.]

1,194,339. TELEPHONE-EXCHANGE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed Apr. 17, 1906, Serial No. 312,156. Renewed Oct. 14, 1914. Serial No. 866,726. (Cl. 179—18.)

1. In a telephone system, a calling subscriber's line, a called subscriber's line, means whereby said called line is busy or occupied, and a connector for connecting the calling line with the called line, adapted to distinguish between busy and non-busy lines, provided with a ringer-relay, a busy-signal circuit for the calling subscriber's line, a busy-signal transmitter comprising a ringer-generator common to all subscribers, a circuit-interrupter common to all subscribers, and an energizing circuit for said ringer-relay, controlled by said circuit-interrupter, whereby each time the ringer-relay is energized current from the ringer-generator is set through the busy-signal circuit to the calling subscriber's station.



2. In a telephone system, a calling subscriber's line, a called subscriber's line, a common battery, and a connector for connecting the calling line with the called line, a ringer-generator common to all subscribers, adapted for providing all ringing or signaling current, having one terminal connected to ground, and a busy-signal circuit for the calling subscriber, comprising said ringer-generator and the said ground terminal and the common battery.

3. In a telephone system, a calling subscriber's line, a called subscriber's line, means whereby the called line is already occupied or busy, and a connector for connecting the calling line with the called line, said connector adapted to distinguish between busy and non-busy lines, and provided with a three-position side-switch, a private-wiper, a busy-signal circuit for the calling subscriber's line, a ringer-generator common to all subscribers, a ringer-relay individual to the connector, and a circuit-interrupter for controlling the said ringer-relay, the said busy-signal circuit established when the connector attempts to connect the calling line with the called line, while the side-switch is in second position, closed each time that the said interrupter energizes the ringer-relay, and including said ringer-generator and contacts of said side-switch.

4. In a telephone system, a calling subscriber's line, a called subscriber's line, means whereby the called line is already occupied or busy, and a connector for connecting the calling line with the called line, said connector adapted to distinguish between busy and non-busy lines, and provided with a side-switch adapted to be locked in second position to establish a busy-signal circuit to the calling subscriber's station.

5. In a telephone system, a calling subscriber's line, a called subscriber's line, means whereby the called line is already occupied or busy, and a connector for connecting the calling line with the called line, said connector provided with a side-switch and automatic means including a private-magnet for locking said side-switch in second position until the calling subscriber releases the connector after failing to connect the two lines.

[Claims 6 to 128 not printed in the Gazette.]

1,194,340. COMPOSITION FOR PRESERVING EGGS. JOHN HALL O'DELL, Oakland, Cal., assignor to International Egg Company, Inc., New York, N. Y., a Corporation of New York. Filed Aug. 30, 1915. Serial No. 47,945. (Cl. 134—1.)

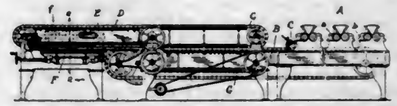
1. A composition for preserving eggs consisting of a solution of wax and gum in mineral oil in substantially the proportions described.

2. A composition for preserving eggs consisting of a solution of odorless wax and odorless gum in a substantially colorless oil and substantially in the proportions described.

3. A composition for preserving eggs, consisting of a colorless oil, the specific gravity of which is substantially .85, Japanese wax and an odorless gum substantially in the proportions described.

4. A composition for preserving eggs, consisting of a colorless oil, the specific gravity of which is substantially .85, Japanese wax, and the gum of the cherry tree substantially in the proportions described.

1,194,341. MEANS FOR MANUFACTURING FILAMENTOUS BISCUIT. CHARLES E. SMITH, Niagara Falls, N. Y., assignor to The Shredded Wheat Company, Niagara Falls, N. Y. Filed Jan. 11, 1912. Serial No. 670,691. (Cl. 107—2.)

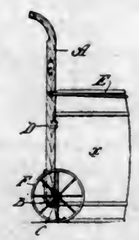


1. In a machine of the character described, a movable carrier, means for reducing grain to filamentous form and depositing the same upon said carrier in a structurally open layer, means coöperating with said carrier to press the filaments together and substantially close the interstitial openings thereof, and an intermittent exhaust device for lifting the layer having its interstitial openings so closed, carrying the said layer forward and dropping the same.

2. In a machine of the character described, a movable carrier, means for reducing grain to filamentous form and depositing the same upon said carrier in a structurally open layer, means coöperating with said carrier to press the filaments together and substantially close the interstitial openings thereof, including a roller having upper and lower micrometric adjustment means to hold said roller fixedly spaced from said carrier, and an intermittent exhaust device for lifting the layer having its interstitial openings so closed, carrying the said layer forward and dropping the same.

3. In a machine of the character described, a movable carrier, means for reducing grain to filamentous form and depositing the same upon said carrier in a structurally open layer, means coöperating with said carrier to press the filaments together and substantially close the interstitial openings thereof, including a roller, pivotal arms carrying said roller, a lever upon the pivot rod of said arms, and upper and lower screws engaging the outer end of said lever for micrometric adjustment of said roller and to hold the roller fixedly spaced from said carrier, and an intermittent exhaust device for lifting the layer having its interstitial openings so closed, carrying the said layer forward and dropping the same.

1,194,342. HAND-TRUCK. CASPAR P. DE LORE, St. Louis, Mo., assignor to J. C. Finck Mineral Milling Co., St. Louis, Mo., a Corporation of Missouri. Filed Mar. 25, 1916. Serial No. 86,775. (Cl. 21—121.)



1. A two-wheeled hand truck, comprising a frame that is adapted to be arranged in a vertical position

against the rear side of an object standing on a floor or support, and wheels on said frame that contact with the support on which the object rests at a point slightly in front of the point where the lower edge of the rear side of said object rests on said support, when said frame is arranged in an upright position against the rear side of said object.

2. A two-wheeled hand truck, comprising a frame that is adapted to be arranged in a vertical position against one side of the object standing on a floor or support, wheels on said frame that contact with the support on which the object rests at a point substantially in alinement with the point where the lower edge of the rear side of said object rests on said support, means for causing the upper end of said object to tilt rearwardly when the frame of the truck is tilted rearwardly, and means for preventing the object from moving longitudinally of the truck after said object has been raised from its support.

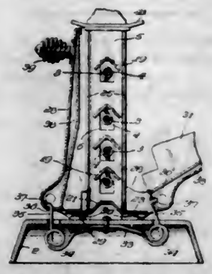
3. A two-wheeled hand truck, comprising a frame that is adapted to be arranged in a vertical position against the rear side of an object preparatory to loading said object onto the truck, means on said frame that is adapted to bite into the rear side of said object adjacent the lower edge of same, and wheels on said frame which engage the support on which said object rests at a point in front of the rear side of said object against which said frame bears, thereby causing the object to fulcrum on said support when the upper end portion of the object is tilted rearwardly during the operation of loading it onto the truck.

4. A two-wheeled hand truck, comprising side rails, a cross member connected to said side rails adjacent the lower end of same, arms on said cross member arranged at substantially an acute angle with relation to said side rails so that they will project forwardly beyond the rear side of an object standing in an upright position on a floor or support, and wheels on said arms whose axes lie above the lower rear edge of said object.

5. A two-wheeled hand truck, comprising side rails, a metal cross member provided with integral portions to which the lower end portions of the side rails are connected, arms on said cross member arranged at substantially an acute angle with relation to said side rails so that they will project forwardly beyond the rear side of an upright object when the side rails are arranged in an upright position with the cross member in engagement with the rear side of said object, and wheels on said arms whose axes lie in front of the rear side of said object at a point above the lower edge of same.

[Claims 6 and 7 not printed in the Gazette.]

1,194,343. ELECTRIC HEATER. HARRY W. DENHARD, San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 31, 1911. Serial No. 657,807. (Cl. 219—19.)



1. An electric heater having a plurality of horizontally disposed heat radiating units arranged in substantially the same vertical plane, a supporting frame therefor having struck-up portions to which said units are attached, and hoods above each of said units to reduce the heat loss in an upward direction.

2. An electric heater having a plurality of heating units arranged in substantially the same plane comprising insulated rods wound with resistance material, a supporting frame therefor having struck-up portions to which said heating units are attached, said resistance material having its ends extending through the openings formed by said struck-up portions, and binder plates located between said struck-up portions and insulated from said frame whereby said units may be connected together electrically.

3. An electric heater having a plurality of horizontally disposed heating units arranged in substantially the same plane, a supporting frame therefor having struck-up portions to which said units are attached, insulating strips between certain of said struck-up portions, and binder plates on said insulating strips whereby the heating units may be electrically connected.

4. An electric heater comprising a plurality of heat radiating units arranged in substantially the same plane, a supporting frame therefor, guards on opposite sides of said heating units arranged substantially at right angles thereto for confining the heat to the inclosure thus formed and a hood for each of said units to reduce the heat loss in an upwardly direction.

5. An electric heater having a plurality of heating units, a supporting frame therefor having struck-up portions to which said units are attached, said struck-up portions being formed so that openings are provided in the frame through which the ends of the resistance material of the heating units may pass to the outside of the frame.

[Claims 6 to 11 not printed in the Gazette.]

1,194,344. PROCESS OF RECOVERING WATER-SOLUBLE POTASSIUM SALTS FROM FELDSPATHIC ROCKS OR THEIR DERIVATIVES IN THE MANUFACTURE OF PORTLAND CEMENT. FREDERICK W. HUBER and FRANK FREELAND REATH, Riverside, Cal. Filed Jan. 26, 1916. Serial No. 74,494. (Cl. 23—22.)

1. A process of making Portland cement and soluble potassium salts, which comprises heating together an insoluble haloid salt of an alkali earth metal in a state of extreme subdivision, a potassium-containing silicate rock, and a calcareous material in proportions to form Portland cement, to a temperature not materially below 950° C. for a length of time sufficient to drive off at least the major portion of the potassium present in said rock.

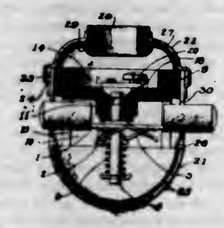
2. In the manufacture of Portland cement, the step of heating together a precipitated alkali earth metal fluorid, a feldspathic rock, and a calcareous material all in comminuted form, and so proportioned as to produce a Portland cement raw mix, to a sufficiently high temperature and for a sufficient length of time, to drive off at least the major portion of the potash present.

3. The herein described cyclical process which comprises heating together an alkali earth metal fluorid, an insoluble potassium-containing silicate, and a calcareous material, existing in the form of an intimate mixture, in proportions to form a Portland cement raw mix, said heating being to a sufficiently high temperature and for a sufficient length of time to drive off at least the major portion of the potassium present in said silicate; collecting the potassium fluorid and reacting with a solution thereof upon an alkali earth metal compound to regenerate alkali earth metal fluorid for reuse in the process, and returning said alkali earth metal fluorid to the cycle of operations.

4. The herein described cyclical process which comprises heating together calcium fluorid, a feldspathic rock and a calcareous material, in the form of an intimate mixture in proportions to form a Portland cement raw mix, said heating being to a sufficiently high temperature and for a sufficient length of time to drive off at least the major portion of the potassium present in the silicate; collecting the potassium fluorid and reacting with a solution thereof, upon a calcium compound to regenerate calcium fluorid for reuse in the process and returning said calcium fluorid to the cycle of operations.

5. A process which comprises mixing together a solution of potassium fluorid and an alkali earth metal salt insoluble in water, to produce an insoluble alkali earth metal fluorid and a soluble potassium salt, and separating said two materials.

1,194,345. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 3, 1912. Serial No. 713,047. (Cl. 175—287.)

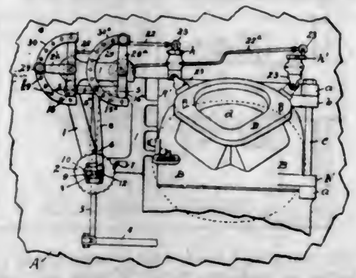


1. In a pendent switch, in combination, a casing comprising a cupped shell and a cap therefor having a conductor opening, an insulating base transversely supported within said shell, said base having a substantially continuous depending peripheral flange affording a central recess, a snap switch mechanism mounted in said recess and insulated from said shell by said flange, said mechanism including a push button operating member projecting through said flange and a contactor pivoted medially and movable in a plane substantially parallel to the plane of movement of said operating member, and binding posts for said mechanism mounted upon the upper face of said base and beneath said cap.

2. In combination, a casing comprising a cup-shaped shell and a cap therefor, an insulating base within said shell having a depending peripheral flange forming a chamber, an insulating lining in said cap extending to said base and an insulating lining in said shell extending to said flange, and a snap switch mechanism mounted on said base and within said chamber.

REISSUES.

14,179. MECHANICAL STOKER. WILLIAM T. HANNA, Cincinnati, Ohio, assignor, by mesne assignments, to The Mechanical Construction Company, Cincinnati, Ohio, a Corporation of Ohio. Filed May 9, 1913. Serial No. 766,634. Original No. 991,614, dated May 9, 1911, Serial No. 548,945. (Cl. 110—104.)



1. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; arms eccentrically connected with the ratchet wheel; crank connections between the eccentric arms and the guide wing actuating rods whereby the latter may be actuated; and means for adjusting the throw of the cranks.

2. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; arms eccentrically connected with the ratchet wheel; crank connections between the eccentric arms and the guide wing actuating rods whereby the latter may be actuated; and means for adjusting the throw of the cranks independently of each other.

3. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; arms eccentrically connected with the ratchet wheel; crank connections between the eccentric arms and the guide wing actuating rods whereby the latter may be actuated; and means for adjusting the throw of the cranks independently of each other.

4. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate on the feed plate; pivot shafts adapted to actuate the guide wings; rock shafts adapted to actuate the pivot shafts; rods adapted to actuate the rock shafts; a ratchet wheel pivotally mounted upon the bracket; a reciprocating arm; a lever arm pivotally connected therewith; a pallet carried by the lever arm adapted to actuate the ratchet wheel; arms eccentrically connected with the ratchet wheel; and connections between the eccentric arms and the rods which actuate the guide-wing rock shafts whereby the latter may be actuated.

5. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate on the feed plate; pivot shafts adapted to actuate the guide wings; rock shafts adapted to actuate the pivot shafts; rods adapted to actuate the rock shafts; a ratchet wheel pivotally mounted upon the bracket; a reciprocating arm; a lever arm pivotally connected therewith; a pallet carried by the lever arm adapted to actuate the ratchet wheel; arms eccentrically connected with the ratchet wheel; crank connections between the eccentric arms and the rods which actuate the guide wing rock shafts whereby the latter may be actuated; and means for adjusting the throw of the cranks.

6. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate on the feed plate; pivot shafts adapted to actuate the guide wings; rock shafts adapted to actuate the pivot shafts; rods adapted to actuate the rock shafts; a ratchet wheel pivotally mounted upon the bracket; a reciprocating arm; a lever arm pivotally connected therewith; a pallet carried by the lever arm adapted to actuate the ratchet wheel; arms eccentrically connected with the ratchet wheel; crank connections between the eccentric arms and the rods which actuate the guide wing rock shafts whereby the latter may be actuated; and means for adjusting the throw of the cranks independently of each other.

7. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; arms eccentrically connected with the ratchet wheel; cranks pivotally connected with the eccentric arms; rock shafts adapted to be actuated by the cranks; cranks fixed to the driving ends of the rock shafts; rollers carried by the wrist pins of the cranks; and levers having grooves adapted to receive the rollers; the levers being fulcrumed at one end and pivotally connected at the other end with the guide wing actuating arms.

8. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; arms eccentrically connected with the ratchet wheel; cranks pivotally connected with the eccentric arms;

rock shafts adapted to be actuated by the cranks; cranks fixed to the driving ends of the rock shafts; rollers carried by the wrist pins of the cranks; levers having grooves adapted to receive the rollers, the levers being fulcrumed at one end and pivotally connected at the other end with the guide wing actuating rods; and means for changing the position of the fulcrum of the levers relatively to the arcs of travel of the rollers.

9. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; arms eccentrically connected with the ratchet wheel; cranks pivotally connected with the eccentric arms; rock shafts adapted to be actuated by the cranks; cranks fixed to the driving ends of the rock shafts; rollers carried by the wrist pins of the cranks; pivot shafts mounted in the bracket, hand bars fixed to the pivots; cranks carried by the pivot shafts; pivot bolts carried by the cranks; levers fulcrumed at one end on the pivot bolts and pivotally connected at the other end with the guide wing actuating rods and having grooves adapted to receive the rollers, and means for securing the hand bars in selected positions.

10. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; arms eccentrically connected with the ratchet wheel; means for changing the position of the eccentric axis for one of the arms relatively to that of the other arm; and connections between the eccentric arms and the guide wing actuating rods whereby the latter may be actuated.

11. The combination with a furnace door casing of a bracket; a feed plate; guide wings adapted to oscillate thereon; rods intermediately connected with and adapted to actuate the guide wings; a ratchet wheel pivotally mounted on the bracket; means for actuating the ratchet wheel; a plate secured to the ratchet wheel and having a slot extending across the center thereof; a bolt adapted to be secured in either end of the slot; a disk carried by the bolt; an arm loosely mounted thereon; another arm concentrically connected with the ratchet wheel; and connections between the arms and the guide wing actuating rods whereby the latter may be actuated.

12. In a fuel distributing apparatus, the combination with a feed chute and an oscillatory guide member, of an oscillatory actuating member connected with said guide member, means for actuating said oscillatory actuating member, means for shifting the center of oscillation of said oscillatory actuating member with respect to said actuating means whereby the range of movement of said guide member may be varied.

13. In a fuel distributing apparatus, the combination with a delivery chute and an oscillatory guide member, of an oscillatory actuating member connected therewith, an actuating crank arm for actuating said oscillatory actuating member, means for shifting the center of oscillation of said oscillatory actuating member with respect to the center of oscillation of said crank arm whereby the range of movement of said oscillating guide member may be varied.

14. In a fuel distributing apparatus, the combination with a delivery chute and an oscillatory guide member therein, of an oscillatory actuating member connecting with said guide member, a shiftable pivot for said actuating member, said actuating member having a cam-way, an actuating crank arm having a wrist pin engaging said cam-way, means for shifting the center of oscillation of said actuating member with respect to the center of oscillation of said crank arm whereby the range of movement of said guide member may be varied.

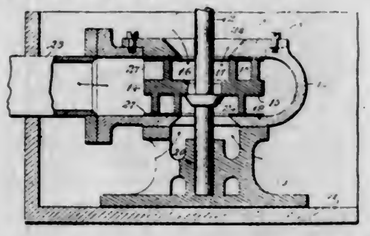
15. In a fuel distributing apparatus, the combination with a delivery chute and an oscillatory guide member therein, of an actuating lever connected at one end with said guide member, said actuating lever being pivoted at its opposite end upon a shiftable center of oscillation, said lever having a cam-way, an actuating crank arm having a wrist pin engaging said cam-way, and means for shifting the center of oscillation of said actuating lever with respect to said wrist pin to vary the range of oscillation of said lever and thereby vary the range of movement of said guide member.

16. In a fuel distributing apparatus, the combination of a delivery chute and an oscillatory guide member therein, of an oscillatory actuating member connected with said guide member, a crank arm mounted on a fixed pivot the free end of said arm being pivotally connected with said oscillatory actuating member eccentrically of said connection with the guide member, whereby the center of oscillation of said actuating member may be varied with respect to said connection to vary the range of movement of said guide member, and an actuating crank arm having a fixed pivot and having its free end engaging with said actuating member to oscillate the same.

17. In a distributing apparatus, the combination with a delivery chute and an oscillatory guide member mounted therein, of an oscillatory actuating member pivotally connected with said guide member, a shiftable center of oscillation for said actuating member, a cam-way extending radially from said center of oscillation, an actuating crank arm having a fixed pivot and having a wrist pin engaging said cam-way whereby when the center of oscillation of said actuating member is shifted the position of said cam-way with respect to said wrist pin will be correspondingly shifted to vary the oscillatory effect of said wrist pin upon said actuating member.

18. In a distributing apparatus the combination with a delivery chute and a guide member mounted therein, of an oscillatory actuating member connected with said guide member eccentrically with respect to the center of oscillation of said actuating member, means for shifting the center of oscillation of said actuating member with respect to said connection, said actuating member having a cam-way extending radially from its center of oscillation and means for actuating said actuating member, the shifting of the center of oscillation of said actuating member serving to shift the point of application of said actuating means with respect to the center of oscillation of said actuating member whereby the range of oscillation of said actuating member may be varied for a constant range of movement of said actuating means.

14,180. ROTARY PUMP. WALTER AIKEN SIMOND, Franklin, N. H., assignor, by direct and mesne assignments, to The Gyro Pump Company, Franklin, N. H., a Corporation of New Hampshire. Filed Apr. 6, 1916. Serial No. 89,506. Original No. 1,062,803, dated May 27, 1913, Serial No. 690,295. (Cl. 253—190.)



1. In a centrifugal pump, a rotor consisting of a simple disk having on each side thereof a single spiral channel, the channel on one side of the disk being approximately 180° in advance of the channel on the other side, and the said channels being non-alined throughout their length, a shaft on which the disk is mounted and by which it is adapted to be rotated, and a casing inclosing the said disk and provided with a bearing in which the shaft is rotatable, and having opposite central openings for the admission of fluid, and a peirpheral opening for the discharge of fluid.

2. In a centrifugal pump; a casing having a peripheral discharge opening and at least one centrally disposed admission opening for the fluid to be pumped; a rotor mounted in said casing and having on each side thereof a single spiral channel, the channel on one side of the disk being approximately 180° in advance of the channel on the other side, and the said channels being non-alined throughout their length; and a shaft on which the rotor is mounted and by which it is to be rotated.

3. In a centrifugal pump, a rotor consisting of a disk-like member having on each side thereof a single spiral channel, the channel on one side of said member being approximately 180° in advance of the channel on the other side, and the said channels being non-alined throughout their length; a shaft on which the disk is mounted and by which it is adapted to be rotated; and a casing inclosing the said disk-like member and provided with a bearing for said shaft, said casing likewise having a peripheral opening for the discharge of fluid and means for admitting fluid centrally thereto.

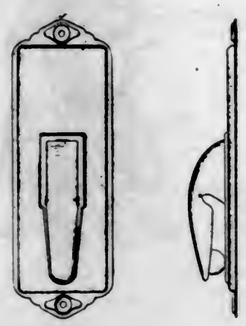
DESIGNS.

49,482. ELECTRIC LAMP. LUIGI ANGIULLI, New York, N. Y., assignor to Automobile Supply Mfg. Co., Inc., a Corporation of New York. Filed May 20, 1916. Serial No. 98,957. Term of patent 7 years.



The ornamental design for an electric lamp as shown.

49,483. TOWEL-HOLDER. CLAUS E. ERICKSON, Des Moines, Iowa. Filed June 10, 1916. Serial No. 103,027. Term of patent 7 years.



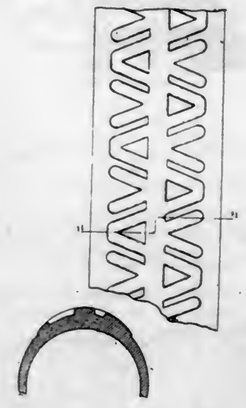
The ornamental design for a towel holder, as shown.

49,484. BADGE. PAUL EDWARD FLEMING, Huron, S. D. Filed June 20, 1916. Serial No. 104,828. Term of patent 3½ years.



The ornamental design for a badge, as shown.

49,485. VEHICLE-TIRE. MARK J. GILLEN, Cleveland, Ohio, assignor to The Standard Tire & Rubber Manufacturing Company, a Corporation of Ohio. Filed June 10, 1916. Serial No. 103,039. Term of patent 14 years.



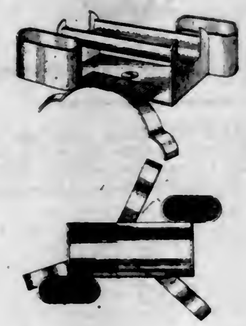
The ornamental design for a vehicle tire substantially as shown.

49,486. NUT-BOWL. ALFRED GOLDSMITH, New York, N. Y., assignor to L. D. Bloch & Company, New York, N. Y., a Corporation of New York. Filed May 29, 1916. Serial No. 100,697. Term of patent 7 years.



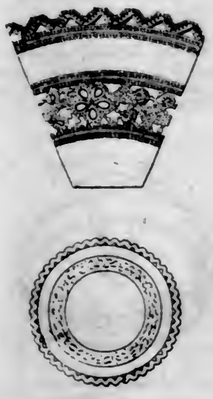
The ornamental design for a nut bowl, as shown.

49,487. TOBACCO-STAND. GEORGE C. GROFF and BENJAMIN F. MEHRER, Philadelphia, Pa. Filed May 3, 1916. Serial No. 95,277. Term of patent 3½ years.



The ornamental design for a tobacco stand, as shown.

49,488. PAPER DOILY. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Mar. 13, 1916. Serial No. 83,983. Term of patent 3½ years.



The ornamental design for a paper doily, as shown.

49,489. WEAPON. MARKO MAYERLE and MICHAEL MAYERLE, Kansas City, Kans. Filed June 3, 1916. Serial No. 101,622. Term of patent 7 years.



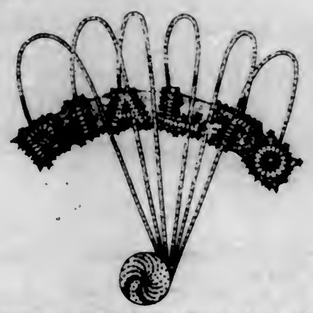
The ornamental design for a weapon, as shown.

49,490. TOY. FRITZ CARL THEODOR MEINECKE, Philadelphia, Pa. Filed June 17, 1916. Serial No. 104,285. Term of patent 7 years.



The ornamental design for a toy, as shown.

49,491. ELECTRIC SIGN. MORTIMER NORDEN, New York, N. Y., assignor of one-fourth to Joseph Norden and one-half to Samuel Rothapfel, New York, N. Y. Filed June 16, 1916. Serial No. 104,116. Term of patent 7 years.



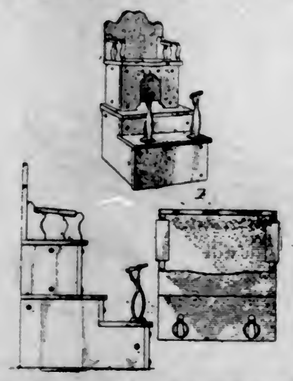
The ornamental design for an electric sign, as shown.

49,492. ELECTRIC-LIGHT OR GAS FIXTURE. DOANE POWELL, Omaha, Nebr. Filed Feb. 7, 1916. Serial No. 76,869. Term of patent 3½ years.



The ornamental design for an electric light or gas fixture as shown.

49,493. BOOT-BLACK STAND. NICHOLAS TOMPANIS, New York, N. Y. Filed May 16, 1916. Serial No. 97,948. Term of patent 14 years.



The ornamental design for a boot black stand, as shown.

49,494. DOILY. ROSE PAULINE JABOULET-VERCHERRE, London, England. Filed May 11, 1916. Serial No. 96,933. Term of patent 7 years.



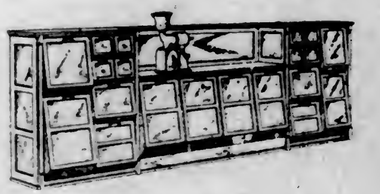
The ornamental design for a doily, as shown and described.

49,495. FIXTURE FOR STORES. EDWIN J. WALKER, Jr., Penn Yan, N. Y. Filed Apr. 4, 1916. Serial No. 88,942. Term of patent 14 years.



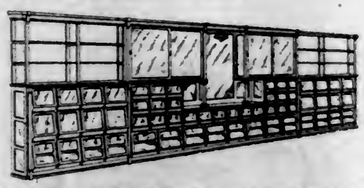
The ornamental design for a fixture for stores, substantially as shown.

49,496. FIXTURE FOR STORES. EDWIN J. WALKER, Jr., Penn Yan, N. Y. Filed Apr. 4, 1916. Serial No. 88,943. Term of patent 14 years.



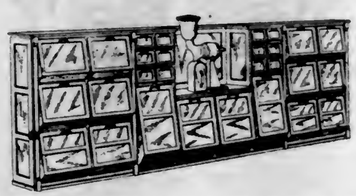
The ornamental design for a fixture for stores, substantially as shown.

49,497. FIXTURE FOR STORES. EDWIN J. WALKER, Jr., Penn Yan, N. Y. Filed Apr. 4, 1916. Serial No. 88,944. Term of patent 14 years.



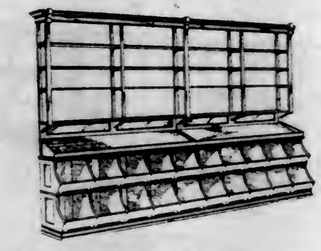
The ornamental design for a fixture for stores, substantially as shown.

49,498. FIXTURE FOR STORES. EDWIN J. WALKER, Jr., Penn Yan, N. Y. Filed Apr. 4, 1916. Serial No. 88,945. Term of patent 14 years.



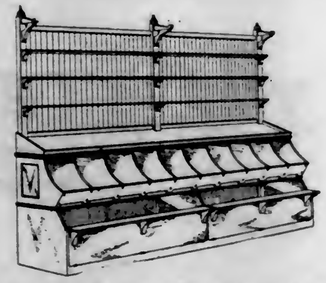
The ornamental design for a fixture for stores, substantially as shown.

49,499. FIXTURE FOR STORES. EDWIN J. WALKER, Jr., Penn Yan, N. Y. Filed Apr. 4, 1916. Serial No. 88,946. Term of patent 14 years.



The ornamental design for a fixture for stores, substantially as shown.

49,500. FIXTURE FOR STORES. EDWIN J. WALKER, Jr., Penn Yan, N. Y. Filed Apr. 4, 1916. Serial No. 88,947. Term of patent 14 years.



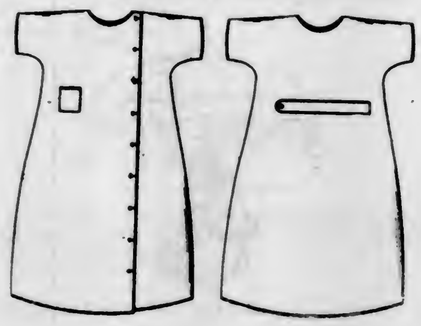
The ornamental design for a fixture for stores, substantially as shown.

49,501. FIXTURE FOR STORES. EDWIN J. WALKER, Jr., Penn Yan, N. Y. Filed Apr. 4, 1916. Serial No. 88,948. Term of patent 14 years.



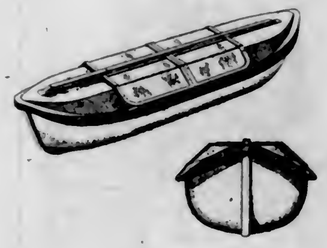
The ornamental design for a fixture for stores, substantially as shown.

49,502. APRON. GEORGE R. WINSLOWE, Rochester, N. Y. Filed Mar. 8, 1915. Serial No. 12,970. Term of patent 14 years.



The ornamental design for an apron as shown and described.

49,503. BOAT. HENRY V. HARTZ, deceased, Cleveland, Ohio, by William G. Metzger, administrator, Painesville, Ohio; said William G. Metzger assignor of one-third to himself, one-third to Henrietta V. Metzger, and one-third to Helen von Hartz. Filed May 8, 1916. Serial No. 96,247. Term of patent 7 years.



The ornamental design for a boat, as shown.

TRADE-MARKS

PUBLISHED AUGUST 8, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 72,842. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK R. MCDERMAND, Kansas City, Mo. Filed Sept. 13, 1913.



Particular description of goods.—A Disinfectant and Antiseptic Vermicide, Germicide, and Insecticide for External Application to Live Stock.

Claims use since the year 1888.

Ser. No. 79,997. (CLASS 39. CLOTHING.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed July 22, 1914.

SALAMANDER

Particular description of goods.—Russian-Blouse Gowns, Cotton and Linen Tailored Suits, One-Piece Gowns, Evening-Gowns, Blouses, Dress-Waists, Shirt-Waists, and Underwaists, Stockings, Petticoats, Gloves, and Collar and Cuff Sets.

Claims use since about June 2, 1914.

Ser. No. 80,142. (CLASS 39. CLOTHING.) WILLIAM WOLFF, New York, N. Y. Filed July 28, 1914.

WOLFF'S

Particular description of goods.—Pajamas, Underwear, Dress and Negligée Shirts, and Combination-Suits of Shirts and Drawers in Textile Fabrics.

Claims use since June 15, 1914.

Ser. No. 82,139. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CLAYTON JAMES HOWEL, Chicago, Ill., assignor to Tropical Fruit Juice Company, a Corporation of Illinois. Filed Oct. 24, 1914.



The same being the first given name of the applicant and written in his own handwriting.

Particular description of goods.—A Non-Alcoholic Fruit Beverage and Syrup for Making the Same.

Claims use since Oct. 9, 1914.

Ser. No. 84,015. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) VICTOR SCHNEIDER and ALOYSIUS J. V. MCKENNA, Fort Worth, Tex. Filed Jan. 21, 1915.

GLOSSAY

Particular description of goods.—A Detergent Paste for Cleaning and Polishing Automobiles and other Devices.

Claims use since the 1st day of December, 1914.

Ser. No. 84,968. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NUT HOUSE, INC., Seattle, Wash. Filed Mar. 5, 1915.



No claim being made to the words "The Nut House" except in association with the mark as shown.
Particular description of goods.—Salted Nuts.
Claims use since September, 1913.

Ser. No. 86,844. (CLASS 39. CLOTHING.) L. ADLER BROS. & CO., Rochester, N. Y. Filed May 24, 1915.

Gold Eagle

Particular description of goods.—Men's Coats, Vests, Trousers, and Overcoats.
Claims use since March, 1914.

Ser. No. 87,136. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JULIUS KING OPTICAL CO., New York, N. Y. Filed June 5, 1915.

Arkwold

Particular description of goods.—Goggles.
Claims use since July 30, 1914.

Ser. No. 87,865. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HUNTER MFG. & COM. CO., New York, N. Y. Filed July 10, 1915.



Particular description of goods.—Cotton Piece Goods.
Claims use since about May 1, 1915.

Ser. No. 87,962. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE WHITMAN & BARNES MANUFACTURING COMPANY, Akron, Ohio. Filed July 15, 1915. Under ten-year proviso.

ELECTRIC

Particular description of goods.—Lawn-Mowers and Parts Thereof.
Claims use since prior to Mar. 1, 1894.

Ser. No. 88,128. (CLASS 38. PRINTS AND PUBLICATIONS.) UNITED TEXTILE WORKERS OF AMERICA, New York, N. Y. Filed July 22, 1915.



No claim being made to the words "Union Made" apart from the matter shown.
Particular description of goods.—Printed Books, Periodicals, (Published Monthly,) Pamphlets, and Circulars Used Between the Different Units of the Association for the Furtherance of its Objects.
Claims use since Nov. 19, 1901.

Ser. No. 88,368. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARDEN, ORTH & HASTINGS CO., Boston, Mass. Filed Aug. 2, 1915.

MOHLENE

The word "Mohlene."
Particular description of goods.—Tanners' Oils and Oils for the Treatment of Textile Fabrics.
Claims use since about June, 1910.

Ser. No. 88,522. (CLASS 38. PRINTS AND PUBLICATIONS.) LAUNDRY WORKERS' INTERNATIONAL UNION, Troy, N. Y. Filed Aug. 10, 1915.



Particular description of goods.—Printed Books, Pamphlets, and Circulars Used Between the Different Units of the Association for the Furtherance of its Objects.
Claims use since Nov. 1, 1909.

Ser. No. 88,761. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) KANSAS CITY AUTOMOBILE SUPPLY CO., Kansas City, Mo. Filed Aug. 23, 1915.



No claim is made to the word "Casey" apart from the mark shown in the drawing.
Particular description of goods.—Auto Touring-Tents.
Claims use since about July 10, 1915.

Ser. No. 88,833. (CLASS 27. HOROLOGICAL INSTRUMENTS.) CHATELAIN, LEAL & CIE., Chaux de Fonds, Switzerland, and London, England. Filed Aug. 27, 1915.



Particular description of goods.—Watches, Watch-Movements, and Watchcases.
Claims use since Jan. 17, 1907.

Ser. No. 89,349. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS R. HINTON, Springfield, Mo. Filed Sept. 21, 1915.



No claim being made to the words "Dry Shampoo."
Particular description of goods.—Shampoo-Powder.
Claims use since the 1st day of March, 1914.

Ser. No. 89,413. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ELI LILLY AND COMPANY, Indianapolis, Ind. Filed Sept. 23, 1915. Under ten-year proviso.

ELI LILLY & COMPANY

Particular description of goods.—Fluid Extracts for Medicinal Uses, Pills, Pink Granules, Aseptic Hypodermatic Tablets, Veterinary Hypodermatic Tablets, Medicated Tablets, Compressed Medicinal Lozenges, Elixirs, Syrups for Medicinal Preparations, Medicinal Wines, Medicinal Cordials, Solid Extracts, Powdered Extracts, Concentrations, Filled Capsules, Glycerites, Yerbazin, Pil. Aphrodisiaca, Suppositories, Alterative Juices, Laxatives, Medicinal Compounds in Solid and Liquid Form, All Pharmaceuticals, Chemicals, and Analogous Products Used for Medicinal Purposes of the Character Described in the Catalogue Filed and Made a Part of the Record in This Case.
Claims use since Jan. 1, 1881.

Ser. No. 89,420. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALKER PROPERTIES ASSOCIATION, Austin, Tex. Filed Sept. 23, 1915.



Hereby disclaim the descriptive language appearing on said drawing, as follows: "Extra Fancy High Grade Chile Con Carne" and "Walker's."
Particular description of goods.—Canned Chilli-Con-Carne.
Claims use since Apr. 1, 1915.

Ser. No. 89,422. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALKER PROPERTIES ASSOCIATION, Austin, Tex. Filed Sept. 23, 1915.



Applicant hereby disclaims the descriptive language appearing on said drawing, as follows: "For Making Mexican Dishes, Chile Con Carne, Tamales, etc.," and "Trade Mark Registered."
Particular description of goods.—"Mexene," a Powder Prepared from Chilli Pepper, Cayenne Pepper, Garlic, Flour, and Cominos-Seed; and is to be Used for Seasoning Soups and other Foods.
Claims use since Jan. 1, 1906.

Ser. No. 89,571. (CLASS 38. PRINTS AND PUBLICATIONS.) BROTHERHOOD OF PAINTERS, DECORATORS AND PAPERHANGERS OF AMERICA, La Fayette, Ind. Filed Oct. 1, 1915.



No claim being made to the words "Union Label" apart from the matter shown.
Particular description of goods.—Printed Books, Pamphlets, and Circulars Used Between the Different Units of the Association for the Furtherance of its Objects.
Claims use since 1902.

Ser. No. 89,731. (CLASS 39. CLOTHING.) GLOBE SHOE STORE, INC., New York, N. Y. Filed Oct. 8, 1915.

THE GLOBE SHOE

No claim being made to the exclusive use of the word "Shoe" apart from the mark shown in the drawing.

Particular description of goods.—Leather and Fabric Boots and Shoes.

Claims use since November, 1913.

Ser. No. 90,110. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Oct. 26, 1915.

COMMERCE



Particular description of goods.—Canned Salmon.

Claims use since 1896.

Ser. No. 90,217. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROGER I. SHERMAN, Brookline, Mass. Filed Oct. 29, 1915.

"NU-INGLAND"

Particular description of goods.—Canned Foods, and Particularly Tomatoes, Corn, Succotash, Peas, Refugee-Beans, Wax-Beans, Cranberry-Beans, Red Kidney-Beans, Horticultural Beans, Lima Beans, Baked Beans, Spinach, Dandelions, Pumpkin, Squash, Beets, Asparagus, Boiled Ham and Spinach, Boiled Tongue and Spinach, Ham and Cabbage, Sauer-Kraut and Sausages, Beef Stew with Vegetables, Chicken Stew and Vegetables, Clam-Chowder, Salmon, Shrimp, Lobster, Apples, Apple Sauce, Pineapple, Strawberries, Raspberries, Blueberries, Cranberry Sauce, Peaches, Pears, Apricots, Cherries, Plums, Boiled Dinner, Corned-Beef Hash, Vegetable Hash, Chicken Pot-Pie, Beans and Codfish Balls, Boiled Bacon and Greens, Lamb Stew with Vegetables, and Brown Bread.

Claims use since Sept. 1, 1914.

Ser. No. 90,656. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE B. MANISCHEWITZ COMPANY, Cincinnati, Ohio. Filed Nov. 15, 1915.



The Hebrew words within the scroll which appear on the drawing translated mean "We Hope to Meet Next Year in Jerusalem."

Particular description of goods.—Matzos and Matzos-Meal, Said Matzos Being Flat Squares of Unleavened Bread and Said Meal Being Used in Making Such Unleavened Bread and Also in Making Farfel, Egg-Matzos, Deutsche Matzos, and Macaroons.

Claims use since Nov. 1, 1915.

Ser. No. 90,696. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) CADILLAC MOTOR CAR COMPANY, Detroit, Mich. Filed Nov. 17, 1915.

Cadillac

The word "Cadillac."

Particular description of goods.—Automobiles.

Claims use since the year 1903.

Ser. No. 91,083. (CLASS 12. CONSTRUCTION MATERIALS.) ROCKWELL MANUFACTURING CO., Camden, Ark. Filed Dec. 1, 1915.

KASEMENT

Particular description of goods.—Screen-Doors.

Claims use since Mar. 1, 1915.

Ser. No. 91,215. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE F. J. BANTA & SON COMPANY, Lima, Ohio. Filed Dec. 6, 1915.



No claim being made to the words "Home Made Chocolates" apart from the mark shown in the drawing.

Particular description of goods.—Milk-Chocolates.

Claims use since the 1st day of October, 1913.

Ser. No. 91,260. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Nov. 26, 1915.



Particular description of goods.—Oleomargarin.

Claims use since Jan. 3, 1911.

Ser. No. 91,473. (CLASS 38. PRINTS AND PUBLICATIONS.) CERAMIC, MOSAIC AND ENCAUSTIC TILE LAYERS AND HELPERS' INTERNATIONAL UNION, Pittsburgh, Pa. Filed Dec. 14, 1915.



Particular description of goods.—Printed Books, Periodicals, (Published Monthly,) Pamphlets, and Circulars Used Between the Different Units of the Association for the Furtherance of Its Objects.

Claims use since Feb. 4, 1902.

Ser. No. 91,794. (CLASS 17. TOBACCO PRODUCTS.) PARODI CIGAR COMPANY, INC., Jersey City, N. J. Filed Dec. 27, 1915.



Particular description of goods.—Cigars and Smoking-Tobacco.

Claims use since Dec. 15, 1915.

Ser. No. 91,960. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GREENFIELD TAP AND DIE CORPORATION, Greenfield, Mass. Filed Jan. 6, 1916.

GUN

Particular description of goods.—Taps.

Claims use since Feb. 8, 1915.

Ser. No. 92,355. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill. Filed Jan. 24, 1916.

"MONARCH"

Particular description of goods.—Billiard Tables and Cushions, Billiard-Cue Tips, Billiard-Chalk, Billiard-Balls, and Pocket-Stops.

Claims use since July, 1877.

Ser. No. 92,488. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) WILLIAM H. JAHNS, Los Angeles, Cal. Filed Jan. 27, 1916.



No claim being made to the words "Truck Unit Made in California."

Particular description of goods.—Truck Attachments for Converting Passenger into Freight-Carrying Automobiles.

Claims use since Jan. 10, 1916.

Ser. No. 93,176. (CLASS 37. PAPER AND STATIONERY.) IDEAL COATED PAPER CO., Brookfield, Mass. Filed Feb. 29, 1916.

Perforator

Particular description of goods.—Gummed Paper Tape.

Claims use since May 1, 1915.

Ser. No. 93,273. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILLIAM LANDSBERG, Brooklyn, N. Y. Filed Mar. 3, 1916.



No claim being made to the words "Mayonnaise Mixer" and "Trade-Mark" apart from the mark shown in the drawing. The mark shown represents a fantastic conventionalized figure, the words "William's Mayonnaise Mixer," in blue, being displayed in peculiar type and in a peculiar manner to conform with the general configuration of the design, on a central field of bright yellow or gold. To either side of the above words are curved narrow vertical stripes of blue cutting the yellow field, the whole being surrounded by an irregular border of blue. Near the bottom of the figure the words "Trade-Mark" appear in yellow against a background of blue.

Particular description of goods.—Mixing-Machines of the Type Used for Preparing Mayonnaise, Salad-Dressings, and the Like.

Claims use since Sept. 1, 1915.

Ser. No. 93,327. (CLASS 39. CLOTHING.) A & A RUBBER COMPANY, Framingham, Mass. Filed Mar. 6, 1916.



No claim being made to the symbols "100% Line."

Particular description of goods.—Shoe Soles and Heels Made of a Composite Material Containing Mineral, Animal, and Vegetable Matter.

Claims use since June 1, 1915.

Ser. No. 93,393. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) POWELL SUPPLY COMPANY, Omaha, Nebr. Filed Mar. 8, 1916.

PIONEER

Particular description of goods.—Rubber, Canvas, Leather, and Non-Metallic Pneumatic Tires for Automobiles, Bicycles, Motor-Cycles, and other Vehicles; Inner Tubes for Same, and Patches for Inner Tubes and Pneumatic Tires.

Claims use since June 16, 1913.

Ser. No. 93,452. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & CO., New York, N. Y. Filed Mar. 11, 1916.



Particular description of goods.—Handkerchiefs.

Claims use since June, 1915.

Ser. No. 93,453. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & CO., New York, N. Y. Filed Mar. 11, 1916.



Particular description of goods.—Handkerchiefs.

Claims use since June, 1915.

Ser. No. 93,454. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & CO., New York, N. Y. Filed Mar. 11, 1916.



Particular description of goods.—Handkerchiefs.

Claims use since June, 1915.

Ser. No. 93,455. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & CO., New York, N. Y. Filed Mar. 11, 1916.



Particular description of goods.—Handkerchiefs.

Claims use since June, 1915.

Ser. No. 93,456. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & CO., New York, N. Y. Filed Mar. 11, 1916.



Particular description of goods.—Handkerchiefs.

Claims use since June, 1915.

Ser. No. 93,457. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HERRMANN, AUKAM & CO., New York, N. Y. Filed Mar. 11, 1916.



Particular description of goods.—Handkerchiefs.

Claims use since June, 1915.

Ser. No. 93,460. (CLASS 39. CLOTHING.) MONTGOMERY WARD & CO. INC., New York, N. Y., and Chicago, Ill. Filed Mar. 11, 1916.

Wardway

Particular description of goods.—Aprons; Bibs; Coats; Overcoats; Cloaks; Capes; Wraps; Scarfs; Vests; Sweaters; Sweater-Coats; Shirts; Blouses; Waists; Underwaists; Corset-Waists; Corset-Covers; Bodices; Corset-Shields; Corset-Protectors; Corsets; Skirts; Petticoats; Trousers; Knee-Pants; Bloomers; Trunks; Overall Single and Combination Garments; Suits; Dresses; Wrappers; Kimonos; Sacks; Underwear in Single Garment and Combination-Suits; Combination Outer Garments; Children's and Infants' Binders and Bands; Collars; Mufflers; Cuffs; Gloves; Mittens; Gauntlets; Hand-Shields; Muffs for Head and Hands; Hats; Caps; Bonnets; Hoods; Hooded Garments; Boots, Shoes, Leggings, Overgaiters, Slippers, Moccasins, Overshoes, Bootees, Made Wholly or Partly of Felt, Fabric, Rubber, Leather, Wood; Hosiery; Hosiery-Supporter Garments; Sleeping-Garments; Bath and Bathing Garments; Fur Garments; Sporting and Athletic Garments; Waterproof Garments; Aprons.

Claims use since 1914.

Ser. No. 93,461. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MONTGOMERY WARD & CO. INC., New York, N. Y., and Chicago, Ill. Filed Mar. 11, 1916.

Thornward

Particular description of goods.—Piece Goods Made of Cotton, Linen, Wool, Silk, and other Natural Fibers and of Artificial Fibers and Mixtures Thereof; Handkerchiefs; Napkins; Blankets; Comforters; Comforter-Filling; Pillow-Cases; Pillow-Shams; Pillow-Slips; Pillow-Tubing; Quilts; Quilted Mattress-Protectors; Mattress-Protectors; Bedspreads; Curtains; Portières; Valances; Draperies; Textile Carpets, Rugs, Mats, and Matting; Ribbons; Elastic and Non-Elastic Webbing; Veils and Veiling; Hair-Nets; Shawls; Lap-Robes and Lap-Dusters; Lap-Robe Borders; Towels; Washcloths; House-Cloths; Table-Cloths; Luncheon-Cloths; Doilies; Centerpieces; Scarfs for Personal Wear; Furniture-Scarfs; Furniture Slip-Covers; Textile Vehicle-Covers; Textile Farming-Implement Covers; Textile Machinery-Covers; Textile Hay-Covers; Upholstery-Covers; Table Pads and Padding.

Claims use since 1900.

Ser. No. 93,464. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MINT PRODUCTS COMPANY, INCORPORATED, New York, N. Y. Filed Mar. 11, 1916.

LIFE SAVER

Particular description of goods.—Cough-Drops and Tablets for Indigestion, Headache, Constipation, and Biliousness.

Claims use since July, 1915.

Ser. No. 93,628. (CLASS 39. CLOTHING.) BARGER, BAINS & MUNN, INC., Philadelphia, Pa. Filed Mar. 18, 1916.

Kiddies

Particular description of goods.—Hosiery.
Claims use since Jan. 12, 1916.

Ser. No. 93,710. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MILWAUKEE-WESTERN FUEL CO., Milwaukee, Wis. Filed Mar. 20, 1916.



The word "Splint" is not claimed apart from the trade-mark shown in the drawing.
Particular description of goods.—Coal.
Claims use since Nov. 23, 1913.

Ser. No. 93,712. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MILWAUKEE-WESTERN FUEL CO., Milwaukee, Wis. Filed Mar. 20, 1916.



Particular description of goods.—Coal.
Claims use since May 30, 1901.

Ser. No. 93,808. (CLASS 38. PRINTS AND PUBLICATIONS.) STOVE MOUNTERS INTERNATIONAL UNION, Detroit, Mich. Filed Mar. 23, 1916.



No claim being made to the words "Union Label" apart from the matter shown.

Particular description of goods.—Printed Books, Pamphlets, Magazines, (Published Monthly,) and Circulars Used Between the Different Units of the Association for the Furtherance of its Objects.
Claims use since Dec. 30, 1892.

Ser. No. 93,811. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) C. A. SMITH, New York, N. Y. Filed Mar. 21, 1916.

BUFFALO BRAND



ARE WHITE PINE

No claim is being made to the bale of shavings or to "Brand Are White Pine" apart from the mark shown in the drawing.
Particular description of goods.—Baled Shavings.
Claims use since Dec. 1, 1915.

Ser. No. 93,851. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HUGH G. MACWILLIAM, New Rochelle, N. Y. Filed Mar. 24, 1916.



The trade-mark consists of the arbitrary word "Original" and a number of horizontal orange-colored bars, as indicated in the accompanying drawing.
Particular description of goods.—Suspenders.
Claims use since Feb. 15, 1916.

Ser. No. 93,870. (CLASS 5. ADHESIVES.) GENERAL ADHESIVE MFG. CO., INC., New York, N. Y. Filed Mar 25, 1916.



Particular description of goods.—Adhesive Pastes.
Claims use since Jan. 2, 1915.

Ser. No. 93,969. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE W. LOFT, New York, N. Y., assignor to Loft, Incorporated, a Corporation of Virginia. Filed Mar. 29, 1916.

Loft

CANDY

PENNY A POUND PROFIT

No claim being made to the words "Penny a Pound Profit" and the word "Candy" apart from the mark as shown, the name "Loft" being printed as a facsimile of the handwriting of Mr. Geo. W. Loft, the applicant.
Particular description of goods.—Candy.
Claims use since October, 1905.

Ser. No. 94,049. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELIZABETH FAY WHITNEY, Columbia, Conn. Filed Apr. 1, 1916.



No claim being made for the representation of the egg apart from the mark nor for the words "Trade Mark" and "Columbia, Connecticut."
Particular description of goods.—Fruits, Fresh and Preserved, for Food; Poultry, Live and Dressed, for Food, and Eggs.
Claims use since Feb. 1, 1916.

Ser. No. 94,072. (CLASS 33. GLASSWARE.) INTERNATIONAL GLASS COMPANY, Millville, N. J., and Philadelphia, Pa. Filed Apr. 3, 1916.



Particular description of goods.—Glass.
Claims use since Feb. 25, 1916.

Ser. No. 94,143. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DENTAL AND TOILET PRODUCTS CORPORATION, New York, N. Y. Filed Apr. 4, 1916.



Consists of the word-symbol "Oranjdento" and a fanciful design of oranges and leaves.
Particular description of goods.—Dentifrices.
Claims use since Mar. 18, 1916.

Ser. No. 94,254. (CLASS 12. CONSTRUCTION MATERIALS.) HAWKEYE PORTLAND CEMENT COMPANY, Des Moines, Iowa. Filed Apr. 8, 1916.



Particular description of goods.—Portland Cement.
Claims use since 1907.

Ser. No. 94,272. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUGHINBAUGH CANNING COMPANY, OF DELAWARE, Milford, Del. Filed Apr. 10, 1916.



Particular description of goods.—Canned Shrimps.
Claims use since 1879.

Ser. No. 94,376. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COOPER RIDDICK CO. INC., Suffolk, Va. Filed Apr. 13, 1916.

BUTTERMILK

Particular description of goods.—Stock Food—viz., Horse and Dairy Food.
Claims use since Oct. 26, 1910.

Ser. No. 94,628. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RUBBER INSULATED METALS CORP., Richmond, Va., and Plainfield, N. J. Filed Apr. 21, 1916.

RIMCO

Particular description of goods.—Flexible Machine-Shaft Couplings.
Claims use since the 18th day of March, 1916.

Ser. No. 94,647. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM KORBACH, Hoboken, N. J. Filed Apr. 22, 1916.

METAL

No claim being made to the words "Metal Polish" appearing in the drawing.
Particular description of goods.—Metal-Polish.
Claims use since Apr. 8, 1916.

Ser. No. 94,679. (CLASS 39. CLOTHING.) LA BELLE CLOTHING COMPANY, Steubenville, Ohio. Filed Apr. 24, 1916.

La Belle

Particular description of goods.—Men's and Boys' Suits and Overcoats and Hats.
Claims use since October, 1902.

Ser. No. 94,742. (CLASS 38. PRINTS AND PUBLICATIONS.) GUARANTY SECURITIES CORPORATION, New York, N. Y. Filed Apr. 27, 1916.

Guaranty Plan
AUTOMOBILE Time Payments

No claim being made to the words "Guaranty Plan Automobile Time Payments" apart from the mark shown in the drawing.
Particular description of goods.—Publications of Advertising Information and Form-Sheets, Single or Grouped, Published from Time to Time.
Claims use since on or about the 1st of April, 1916.

Ser. No. 94,790. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) FORE RIVER SHIPBUILDING CORPORATION, Quincy, Mass. Filed Apr. 29, 1916.

F.R.S.C.

Particular description of goods.—Steel, Iron, and Bronze Forgings and Brass and Bronze Castings.
Claims use since Feb. 1, 1916.

Ser. No. 94,856. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MADRID CHEMICAL CO., Madrid, Iowa. Filed May 2, 1916.

RED BALL

The same being colored red.
Particular description of goods.—Menthol and Camphor Salve, Vanishing Face-Cream, Laxative Oil, a Vegetable Compound Used as a Pain-Killer, a Salve Containing Petroleum and Carbolic Acid for Use in Treating Cuts, Burns, Bruises, Mange, Etc., in Stock, Poultry-Tonic, Stock-Tonic, Stock-Dip, Liver-Tonic, Bilious and Liver Tablets, Headache-Tablets, Diuretic Tablets, Laxative Cold and Grippe Tablets, Carbolized Petroleum Jelly, Antichap Steaming-Cream, Massage-Cream, Dandruff-Remover, Baking-Powder, Toilet Waters, Perfumery, Face-Cream, Tooth-Paste, Tooth-Wash, Tooth-Powder, Complexion-Powder, Liquid Face-Powder, Rouge, and Liquid Shampoo.
Claims use since Jan. 1, 1916.

Ser. No. 94,956. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES MCCUTCHEON & CO., New York, N. Y. Filed May 6, 1916.



Particular description of goods.—Linens, Including Piece Goods of Linen, and Linen Articles—Namely, Table-Linen, Table-Cloths, Napkins, Bureau-Scarfs, Bed-Linen, Sheets, Pillow-Cases, Covers, Bedspreads, Towels, Handkerchiefs, Linen to be Embroidered, Linen Laces, and Crochet-Work.
Claims use since May 1, 1866.

Ser. No. 95,108. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROME IMPORTING CO., New York, N. Y. Filed May 12, 1916.

OIL
SILBRO BRAND
SALAD OIL

The printed matter "Oil, Extra Quality, Brand, Salad Oil, Pressed from Cottonseed, Net Contents One Quart" is not claimed to be a part of the trade-mark sought to be registered.
Particular description of goods.—Salad-Oil Pressed from Cotton-Seed.
Claims use since Feb. 15, 1912.

Ser. No. 95,109. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROME IMPORTING CO., New York, N. Y. Filed May 12, 1916.

SUPERFINE OLIVE OIL for table and Medicinal use
HUNTER BRAND
PACKED IN ITALY

The printed matter "Superfine Olive Oil for Table and Medicinal Use, Brand, Packed in Italy" is not claimed to be a part of the trade-mark sought to be registered.
Particular description of goods.—Olive-Oil.
Claims use since June 15, 1914.

Ser. No. 95,290. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.). PASQUALE BRIGANTI, Corona, N. Y. Filed May 20, 1916.

OBROL

Particular description of goods.—Eye Remedy.
Claims use since Feb. 15, 1916.

Ser. No. 95,303. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MICHAEL D. GRANELLA, New York, N. Y. Filed May 20, 1916.

GRANECOLINA
THE GRANA AMERICAN VETERINARY MEDICINES
NEW YORK

No claim being made to the words "Veterinary Medicines, New York" except as shown in the drawing.
Particular description of goods.—Veterinary Medicines—viz., Treatments for Flatulency, Colics, Intestinal Indigestion, Tympanitis, and Gaseous Troubles.
Claims use since May 17, 1916.

Ser. No. 95,362. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. R. BIGLER CO., Springfield, Ill. Filed May 23, 1916.

BIGLER

Particular description of goods.—Condition-Powders for Stock, Medicinal Preparation for Treatment of Hog-Cholera, Lice-Killer, and Medicinal Compound for Treatment of Cholera, Roup, and Gapes in Poultry.
Claims use since 1902.

Ser. No. 95,370. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. F. HILLERICH & SON COMPANY, INC., Louisville, Ky. Filed May 23, 1916.



The same being the portrait and signature of Jake E. Daubert, of Brooklyn, N. Y.

Particular description of goods.—Base-Ball Bats.

Claims use since May 15, 1916.

Ser. No. 95,386. (CLASS 48. MALT EXTRACTS AND LIQUORS.) MASSACHUSETTS BREWERIES COMPANY, Alexandria, Va., and Boston, Mass. Filed May 23, 1916. Under ten-year proviso.



Particular description of goods.—Malt Tonic.

Claims use since Dec. 31, 1890.

Ser. No. 95,387. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) APPERSON BROS. AUTOMOBILE CO., Kokomo, Ind. Filed May 24, 1916.

ROADAPLANE

Particular description of goods.—Automobiles.

Claims use since April, 1916.

Ser. No. 95,452. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SCHUSTER COMPANY, Cleveland, Ohio. Filed May 26, 1916.

Euclid

Particular description of goods.—Flavoring Extracts for Foods, Cocoa, Nuts; Maple, Nut, Caramel, Butter-Scotch, and Fruit Sundaes; Beef-Tea Extract, Bouillon-Cubes, Canned Clam Bouillon, Chicken Bouillon, Tomato and Beef Bouillon, Tomato Bouillon, Mallo Topping and Creamaid, Coffee, Coffee Extract, and Chocolate.

Claims use since May 1, 1910.

Ser. No. 95,465. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) AMERICAN SEEDTAPE COMPANY, Chicago, Ill., and New York, N. Y. Filed May 27, 1916.



No claim is made now in this application to the words "Better Quality Seeds, Plant the Tape, The Modern Way to Plant a Garden, Saves Time and Labor, Eliminates Backaches, American Seedtape Co., Woolworth Bldg., New York, Radish, Scarlet Turnip White Tip, Plant 1 Inch Deep," nor to the representation of the package nor of the roll of seed-tape, apart from the mark shown in the drawing. Applicant makes no claim to the word "Seedtape" except in association with the other features in connection with which it is shown in the drawing of said application.

Particular description of goods.—Seeds.

Claims use since on or about Jan. 2, 1915.

Ser. No. 95,512. (CLASS 39. CLOTHING.) BARNES & MENDELSON, New York, N. Y. Filed May 29, 1916.



The lines on the inner diamond merely indicate shading, color not being an essential feature of the mark, no claim being made to the words "Style," "Fit," "New York," and "Quality" apart from the mark shown.

Particular description of goods.—All Kinds of Gloves Made of Leather, Silk, Wool, and Cotton.

Claims use since about the 1st day of May, 1916.

Ser. No. 95,581. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HESTER PRICE, Berwyn, Pa. Filed June 1, 1916.

Hester Price

Which consists of the signature "Hester Price" in the handwriting of Ida Lee Follett.

Particular description of goods.—Brandied Apricots, Brandied Cherries, Brandied Peaches, Brandied Pears, Figs in Brandy, Apricot Jam, Blackberry Jam, Cherry Jam, Gooseberry Jam, Green-Gage Jam, Peach Jam, Pineapple Jam, Plum Jam, Quince Jam, Raspberry Jam, Strawberry Jam, Sweet-Orange Jam, Yellow-Tomato Jam, Blackberry Jelly, Crab-Apple Jelly, King-Apple Jelly, Currant Jelly, Black-Currant Jelly, Red-Currant Jelly, Currant and Blackberry Jelly, Currant and Raspberry Jelly, Currant and Strawberry Jelly, Grape Jelly, Fox-Grape Jelly, Grape-Fruit Jelly, Mint Jelly, Plum Jelly, Quince Jelly, Raspberry Jelly, Rose Jelly, Fig Marmalade, Fruit Marmalade, Grape-Fruit Marmalade, Orange Marmalade, Orange and Grape-Fruit Marmalade, Peach Marmalade, Pear Marmalade, Quince Marmalade, Preserved Cherries, Preserved Crab-Apple, Preserved Peaches, Preserved Pears, Preserved Strawberries, Preserved Yellow Tomatoes, Fresh Cherries, Fresh Peaches, Fresh Pears, Spiced Cherries, Spiced Peaches, Spiced Pears, Spiced Pineapple, Spiced Plums, Spiced Watermelon-Rind, Melba Peaches, Melba Sauce; Pickles, such as Chow-Chow; Colonial Chutney, Cucumber Sweetmeats; Green Tomato, Chopped; Melon Mangoes, Sweet-Cucumber Rings, and Mince-Meat, Plum-Pudding, Preserved Citron, and Preserved Ginger.

Claims use since about Apr. 1, 1907.

Ser. No. 95,584. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) TUTTLE AND BAILEY MFG. CO., New York, N. Y. Filed June 1, 1916.

The Beaut-i-ator

Particular description of goods.—A Radiator-Cover More Particularly Described as Follows: A Box Made of Ornamented Sheet Metal or other Material Placed Over a Radiator Used for Heating Purposes so as to Cover the Same, its Purpose Being Among other Things to Ornament and Beautify Both the Radiator and the Room in Which it is Placed.

Claims use since the 1st day of January, 1916.

Ser. No. 95,632. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SMITH, LICHTY & HILLMAN COMPANY, Waterloo, Iowa.. Filed June 5, 1916.

Reliance

The trade-mark consists of the word "Reliance."

Particular description of goods.—Coffee.

Claims use since on or about Sept. 1, 1903.

Ser. No. 95,641. (CLASS 39. CLOTHING.) JAMES W. CANNON, Concord, N. C., and New York, N. Y. Filed June 6, 1916.

Duratex

The trade-mark comprising the word "Duratex."

Particular description of goods.—Hosiery.

Claims use since Apr. 20, 1916.

Ser. No. 95,643. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE EDDYSTONE MANUFACTURING COMPANY, Eddystone and Philadelphia, Pa. Filed June 6, 1916.

LONNENE

Particular description of goods.—Bleached, Dyed, and Printed Cotton Fabrics in the Piece.

Claims use since Apr. 19, 1916.

Ser. No. 95,647. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MORITZ KALMUS & NEFFEN, New York, N. Y. Filed June 6, 1916.



The portrait being that of E. Coyne.

Particular description of goods.—Hair-Nets.

Claims use since about Jan. 13, 1916.

Ser. No. 95,691. (CLASS 37. PAPER AND STATIONERY.) CHARLES BECK COMPANY, Philadelphia, Pa. Filed June 8, 1916.

STABILITY

Particular description of goods.—Commercial Writing or Bond Paper.

Claims use since May 24, 1916.

Ser. No. 95,704. (CLASS 12. CONSTRUCTION MATERIALS.) THE FEDERAL LIME & STONE COMPANY, Cleveland, Ohio. Filed June 8, 1916.



The words "Cleveland Ohio" being disclaimed.

Particular description of goods.—Lime, Hydrated Lime, and Plaster.

Claims use since Dec. 10, 1915.

Ser. No. 95,706. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JONES-MOTROLA, INC., New York, N. Y. Filed June 8, 1916.

Motrola

Particular description of goods.—Electrical Winding Devices for Spring-Motors.
Claims use since Dec. 27, 1915.

Ser. No. 95,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., Eau Claire, Wis. Filed June 8, 1916.



Particular description of goods.—Canned Fruits and Vegetables.
Claims use since Nov. 6, 1901.

Ser. No. 95,724. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC PEA PACKING COMPANY, Eau Claire and Chetek, Wis., and Oakdale, Cal. Filed June 8, 1916.



Particular description of goods.—Canned Fruits and Canned Vegetables.
Claims use since June 7, 1905.

Ser. No. 95,728. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ROOD CANDY CO., Pueblo, Colo. Filed June 8, 1916.

Rood's

The mark is as written by Jesse Aaron Rood, secretary and treasurer of the applicant company.
Particular description of goods.—Candies.
Claims use since June 15, 1900.

Ser. No. 95,732. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed June 8, 1916.

ENERGEX

Particular description of goods.—Electric Vacuum-Cleaners.
Claims use since February, 1916.

Ser. No. 95,739. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WABASH CHEMICAL & BAKING POWDER COMPANY, Wabash, Ind. Filed June 8, 1916.

BLUE RIBBON



Particular description of goods.—Dessert-Powder.
Claims use since Jan. 6, 1915.

Ser. No. 95,765. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELL-MAID CONFECTION CO., INC., New York, N. Y. Filed June 9, 1916.



No claim being made to the exclusive use of the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Candy, Cocoa, and Chocolate.
Claims use since May 1, 1916.

Ser. No. 95,776. (CLASS 38. PRINTS AND PUBLICATIONS.) THE ARMY PUBLISHING COMPANY, San Francisco, Cal. Filed June 10, 1916.

THE ARMY MAGAZINE

No claim being made to the word "Magazine" except as associated with the mark shown.
Particular description of goods.—A Monthly Magazine.
Claims use since Jan. 1, 1916.

Ser. No. 95,778. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ACME MILLING COMPANY, Talbott, Tenn. Filed June 10, 1916.



Particular description of goods.—Wheat-Flour.
Claims use since Apr. 1, 1916.

Ser. No. 95,863. (CLASS 39. CLOTHING.) CHAS. A. GERBER, New York, N. Y. Filed June 14, 1916.

Evelynvaron

Comprising the word "Evelynvaron."
Particular description of goods.—Ladies' Hat Shapes and Frames.
Claims use since May 7, 1916.

Ser. No. 95,870. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAZELL PERFUMER, Newburgh, N. Y. Filed June 14, 1916.

BABYKIN

Comprising the word "Babykin."
Particular description of goods.—Talcum Powder.
Claims use since May 22, 1916.

Ser. No. 95,895. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN J. LAWRENCE, Pittsburgh, Pa. Filed June 15, 1916.



The words "Before Using A-O-Z" and "After Using A-O-Z" being disclaimed.
Particular description of goods.—Hair-Tonic.
Claims use since March, 1914.

Ser. No. 95,903. (CLASS 39. CLOTHING.) FRED'K H. SPRAGUE CO., Orange, Mass. Filed June 15, 1916.

NIGHTNEEDS

Particular description of goods.—Pajamas and Night-Gowns.
Claims use since December, 1915.

Ser. No. 95,921. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) DOUBLE SEAL TIRE VALVE CO., New York, N. Y. Filed June 16, 1916.



Particular description of goods.—Tire-Valves for Pneumatic Tires.
Claims use since Mar. 1, 1915.

Ser. No. 95,922. (CLASS 38. PRINTS AND PUBLICATIONS.) SOUTH AMERICAN PUBLISHING CO., INC., New York, N. Y. Filed June 16, 1916.

EL NORTE AMERICANO

Particular description of goods.—A Monthly Publication.
Claims use since April, 1914.

Ser. No. 95,923. (CLASS 38. PRINTS AND PUBLICATIONS.) SOUTH AMERICAN PUBLISHING CO., INC., New York, N. Y. Filed June 16, 1916.

THE SOUTH AMERICAN

Particular description of goods.—A Monthly Publication.
Claims use since Mar. 15, 1913.

Ser. No. 95,944. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) INDIANA TRUCK COMPANY, Marion, Ind. Filed June 17, 1916.

MOTORIZE AND ECONOMIZE
INDIANA
INDIANA TRUCK CO. MOTOR TRUCKS MARION, IND. U. S. A.

No claim being made to the words "Indiana," "Marion, Ind. U. S. A.," and "Motor Trucks" apart from the mark shown in the drawing.
Particular description of goods.—Motor-Trucks.
Claims use since Jan. 1, 1912.

Ser. No. 95,954. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) VELVATONE TALKING MACHINE COMPANY, Chicago, Ill. Filed June 17, 1916.

Velvatone

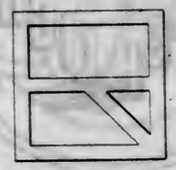
Particular description of goods.—Phonographs.
Claims use since Apr. 28, 1916.

Ser. No. 95,961. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) EMERSON-BRANTINGHAM COMPANY, Rockford, Ill. Filed June 19, 1916.



No claim being made to the words "No Nuts To Turn, No Wrench To Lose, Only Your Hands, Removed in 3 Seconds, Replaced in 5 Seconds, Emerson N 14 R 9," and the representation of a plowshare apart from the mark shown in the drawing.
Particular description of goods.—Plowshares.
Claims use since Mar. 1, 1916.

Ser. No. 95,980. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RADICAL BORING HEAD CORPORATION, New York, N. Y. Filed June 19, 1916.



RADBORE HEADS

The word "Heads" in the accompanying drawing is disclaimed by the applicant.
Particular description of goods.—Heads and Chucks to be Attached to Milling-Machines and Lathes for Holding Drills; Drills for Boring and Cutting Holes in Metal and other Substances; Grinding Attachments for Holding Drills When They are Being Sharpened, and Vises.
Claims use since Jan. 1, 1916.

Ser. No. 95,991. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ABILENE FLOUR MILLS CO., Abilene, Kans. Filed June 20, 1916.

NO-RISK

Particular description of goods.—Wheat-Flour.
Claims use since the 21st day of January, 1915.

Ser. No. 96,027. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) A. STEINHARDT & BRO., New York, N. Y. Filed June 21, 1916. Under ten-year proviso.

PERFECTION

Comprising the word "Perfection."
Particular description of goods.—Fancy Goods and Notions—viz., Hooks and Eyes and Snap-Fasteners.
Claims use since Dec. 24, 1891.

Ser. No. 96,076. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BERG BROS., New York, N. Y. Filed June 23, 1916.

MINA

Particular description of goods.—Snap-Fasteners.
Claims use since June 1, 1916.

Ser. No. 96,090. (CLASS 39. CLOTHING.) E. ROSENFELD & COMPANY, Baltimore, Md. Filed June 23, 1916. Under ten-year proviso.

Faultless
SINCE 1881

Particular description of goods.—Textile Night-Shirts, Pajamas, Dress and Negligée Shirts, and Textile and Knitted Undershirts, Drawers, and Union Suits for Men, Women, Boys, and Girls.
Claims use since the year 1881.

Ser. No. 96,096. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) VALENTINE VON DER LIN, New York, N. Y. Filed June 23, 1916.

ON THE LEVEL

Particular description of goods.—Caster-Treads for Furniture.
Claims use since May 12, 1916.

Ser. No. 96,105. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE DE VILBISS MANUFACTURING COMPANY, Toledo, Ohio. Filed June 24, 1916.

ASPIROMER

Particular description of goods.—A Combination Aspirating and Vaporizing Instrument.
Claims use since May 29, 1916.

Ser. No. 96,118. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) VULCAN BRAKE SHOE AND EQUIPMENT COMPANY, New York, N. Y. Filed June 24, 1916.

CLINCHER LUG



No claim being made to the use of the words "Clincher Lug" apart from the mark shown in the drawing.
Particular description of goods.—Brake-Shoes, Reinforcing Brake Equipment.
Claims use since June 8, 1916.

Ser. No. 96,119. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) VULCAN BRAKE SHOE AND EQUIPMENT COMPANY, New York, N. Y. Filed June 24, 1916.



Particular description of goods.—Brake-Shoes, Reinforcing Backs or Linings for Brake-Shoes, and Railway-Brake Equipment.
Claims use since June 8, 1916.

Ser. No. 96,120. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) VULCAN BRAKE SHOE AND EQUIPMENT COMPANY, New York, N. Y. Filed June 24, 1916.

VULCAN

Particular description of goods.—Brake-Shoes, Reinforcing Backs or Linings for Brake-Shoes, and Railway-Brake Equipment.
Claims use since June 8, 1916.

Ser. No. 96,132. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed June 26, 1916.

SUN-KIST

Particular description of goods.—Fresh Vegetables.
Claims use since May 17, 1916.

Ser. No. 96,138. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COBB, BATES & YERXA COMPANY, Boston, Mass. Filed June 26, 1916.

CORONATION

Particular description of goods.—Coffee.
Claims use since as early as Apr. 10, 1910.

Ser. No. 96,141. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. DUNNE CO., Norwich, N. Y. Filed June 26, 1916.

E.Z.SEAL

Particular description of goods.—Coffee, Cocoanut, and Cocoa.
Claims use since Dec. 8, 1915.

Ser. No. 96,142. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) R. FABIEN & COMPANY, New York, N. Y. Filed June 26, 1916.

IL SOLE D'AMERICA



Particular description of goods.—Macaroni, Spaghetti, and Vermicelli.
Claims use since July, 1907.

Ser. No. 96,152. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAYFLOWER MILLS, Fort Wayne, Ind. Filed June 26, 1916.

MAYSILL

Particular description of goods.—Wheat-Flour.
Claims use since October, 1907.

Ser. No. 96,166. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SANITARY FOOD MANUFACTURING COMPANY, St. Paul, Minn. Filed June 26, 1916.

ECLIPSE

Particular description of goods.—Wafers, Crackers, Breadstuffs, and Biscuits.
Claims use since the 12th day of April, 1916.

Ser. No. 96,167. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHERMAN WHITE & COMPANY, Fort Wayne, Ind. Filed June 26, 1916.

WHITE CROSS



Particular description of goods.—Dressed Poultry and Eggs.
Claims use since December, 1913.

Ser. No. 96,170. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SCHEIDEL-WESTERN X-RAY CO., Chicago, Ill. Filed June 26, 1916.

Royal

Particular description of goods.—Photographic Plates.
Claims use since September, 1915.

Ser. No. 96,179. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLT & COMPANY, New York, N. Y. Filed June 27, 1916.

CORINCA



Particular description of goods.—Wheat-Flour.
Claims use since May 26, 1916.

Ser. No. 96,180. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARTFORD CANNING CO., Hartford, Wis. Filed June 27, 1916.

REX

Particular description of goods.—Canned Vegetables.
Claims use since Sept. 14, 1915.

Ser. No. 96,182. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE T. MYERS, Seattle, Wash. Filed June 27, 1916.



Particular description of goods.—Canned Salmon.
Claims use since July 15, 1913.

Ser. No. 96,187. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EDWARD W. SEYMOUR, New York, N. Y. Filed June 27, 1916.

SANCY

Particular description of goods.—Electrical Flash-Lights or Torches.
Claims use since Dec. 1, 1915.

Ser. No. 96,188. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALLACE & CO., Brooklyn and New York, N. Y. Filed June 27, 1916.

THE MINUET

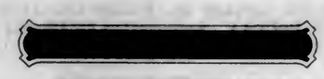
Particular description of goods.—Candies and Chocolates.
Claims use since the 6th day of July, 1915.

Ser. No. 96,189. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. E. WINEBRENNER CO., Hanover, Pa. Filed June 27, 1916.

HERMIT

Particular description of goods.—Canned Vegetables.
Claims use since 1899.

Ser. No. 96,192. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA CENTRAL CREAMERIES, San Francisco, Cal. Filed June 28, 1916.



Particular description of goods.—Butter, Cheese, Sweet Cream, Dry Whole Milk, Dry Skim-Milk, Dry Buttermilk, Eggs, Sterilized Liquid Milk and Cream.
Claims use since April, 1912.

Ser. No. 96,204. (CLASS 39. CLOTHING.) WALTER A. GOLDSMITH, Cleveland, Ohio. Filed June 28, 1916.



No claim being made to the use of the word "Petticoats."
Particular description of goods.—Petticoats.
Claims use since about Apr. 1, 1914.

Ser. No. 96,209. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MONMOUTH SEED COMPANY, Matawan, N. J. Filed June 28, 1916.

CRINE'S CHOICE

Particular description of goods.—Tomato Catsup.
Claims use since July 1, 1911.

Ser. No. 96,210. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MONMOUTH SEED CO., Matawan, N. J. Filed June 28, 1916.

BonnyBest

Particular description of goods.—Tomato Catsup.
Claims use since July 1, 1910.

Ser. No. 96,211. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MONMOUTH SEED CO., Matawan, N. J. Filed June 28, 1916.

MossRose



Particular description of goods.—Tomato Catsup.
Claims use since July 1, 1911.

Ser. No. 96,216. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SYRACUSE SMELTING WORKS, Brooklyn, N. Y. Filed June 28, 1916.

MASTER

Particular description of goods.—Babbitt Metal.
Claims use since Apr. 10, 1916.

Ser. No. 96,217. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SYRACUSE SMELTING WORKS, Brooklyn, N. Y. Filed June 28, 1916.

BEAVER

Particular description of goods.—Babbitt Metal.
Claims use since Apr. 10, 1916.

Ser. No. 96,228. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GOULD STORAGE BATTERY COMPANY, New York, N. Y. Filed June 29, 1916.

cp

Particular description of goods.—Storage Batteries and Parts Thereof.
Claims use since June 1, 1916.

Ser. No. 96,229. (CLASS 39. CLOTHING.) HILDRETH GEER MANUFACTURING CORPORATION, Cohoes, N. Y. Filed June 29, 1916.

"UWANTA"

Particular description of goods.—Aprons.
Claims use since June 15, 1916.

Ser. No. 96,233. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) GEORGE W. JESSUP, Boston, Mass. Filed June 29, 1916.

THE
LITTLE GIANT

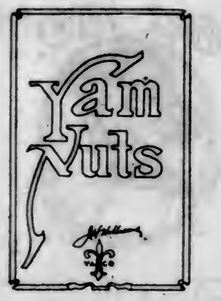
Comprising the words "The Little Giant."
Particular description of goods.—Syringes and Parts Thereof.
Claims use since 1907.

Ser. No. 96,235. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) E. A. MASSA, Atlanta, Ga. Filed June 29, 1916.

Rico

Particular description of goods.—Flavoring Extracts for Beverages Sold as Soft Drinks.
Claims use since the year 1909.

Ser. No. 96,242. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSHUA HUDSON WILLIAMS, Greenville, S. C. Filed June 29, 1916.



Particular description of goods.—A Baked Food Product Manufactured from Flour and Sweet Potatoes.
Claims use since June 15, 1916.

Ser. No. 96,243. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LOUIS WIEBKE, New York, N. Y. Filed June 29, 1916.

WIE-PULL

Particular description of goods.—Pulley-Guides.
Claims use since the 22d day of June, 1916.

Ser. No. 96,246. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHASE & SANBORN, Boston, Mass. Filed June 30, 1916.

'GOOD'
FELLOW

Particular description of goods.—Coffee.
Claims use since July 16, 1916.

Ser. No. 96,276. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MUTUAL, INC., Boston, Mass. Filed July 1, 1916.

MUTUAL

Particular description of goods.—Candy.
Claims use since prior to June 15, 1916.

Ser. No. 96,279. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo. Filed July 1, 1916.

SOUTHERN COMFORT

Particular description of goods.—Roasted Coffee.
Claims use since about June 14, 1916.

Ser. No. 96,311. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) STANDARD WOVEN FABRIC COMPANY, Walpole, Mass. Filed July 3, 1916.

MULTIBESTOS

"Multibestos."
Particular description of goods.—Friction-Tape.
Claims use since May 14, 1915.

Ser. No. 96,319. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CAPITAL CITY DAIRY CO., Columbus, Ohio. Filed July 5, 1916.

RAINBOW

Particular description of goods.—Oleomargarin.
Claims use since about the 2d day of June, 1916.

Ser. No. 96,323. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREEBURG MILLING COMPANY, Freeburg, Ill. Filed July 5, 1916.

SWEETLOCUST

Particular description of goods.—Wheat-Flour.
Claims use since about October, 1906.

Ser. No. 96,324. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREEBURG MILLING COMPANY, Freeburg, Ill. Filed July 5, 1916.

BIS-CUTE



Particular description of goods.—Self-Rising Flour.
Claims use since about March, 1916.

Ser. No. 96,327. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) IMPROVED GAUGE MFG. CO., Syracuse, N. Y. Filed July 5, 1916.

PRESSURITE

Particular description of goods.—Pressure-Gages.
Claims use since May 15, 1916.

Ser. No. 96,334. (CLASS 39. CLOTHING.) JAMES A. STRUTHERS, Minneapolis, Minn. Filed July 5, 1916.



Particular description of goods.—Hosiery.
Claims use since about the 1st day of May, 1916.

Ser. No. 96,356. (CLASS 39. CLOTHING.) THOMAS H. HALL, Jersey City, N. J. Filed July 6, 1916.

FABRICHANT

Particular description of goods.—Knitted Gloves of Cotton, Silk, or Mixed Yarns.
Claims use since the 14th day of June, 1916.

Ser. No. 96,454. (CLASS 39. CLOTHING.) THE BOSS MANUFACTURING COMPANY, Kewanee, Ill. Filed July 10, 1916.

TOBY

Particular description of goods.—Gloves and Mittens.
Claims use since 1902.

Ser. No. 96,463. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed July 10, 1916.

KODALOID

Particular description of goods.—Photographic Film, Photographic-Film Supports, and Photographic-Printing Masks.
Claims use since Oct. 30, 1915.

Ser. No. 96,486. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN TAXIMETER COMPANY, New York, N. Y. Filed July 11, 1916.

DREADNAUGHT

Particular description of goods.—Hubodometers.
Claims use since Apr. 6, 1916.

Ser. No. 96,506. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PIONEER SUSPENDER COMPANY, Philadelphia, Pa. Filed July 11, 1916.

PIONEER

Particular description of goods.—Belts, Arm-Bands, and Garters.
Claims use since prior to 1900.

Ser. No. 96,526. (CLASS 39. CLOTHING.) MORRIS & COMPANY, Baltimore, Md. Filed July 12, 1916.

UNDERALLS

Particular description of goods.—Woven and Knitted Union Undergarments.
Claims use since June 15, 1916.

Ser. No. 96,545. (CLASS 39. CLOTHING.) KILLION RUBBER COMPANY, Boston, Mass. Filed July 13, 1916.

DREAD NOT

Particular description of goods.—Rubber Heels.
Claims use since June 26, 1916.

Ser. No. 96,608. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y. Filed July 15, 1916.

RINEX

Particular description of goods.—Soles for Boots and Shoes.
Claims use since July 11, 1916.

[Vol. 229. No. 2.]

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 8, 1916.

111,781. PEANUT-BUTTER AND PEANUTS. THE AMERICAN PEANUT CORPORATION, Norfolk, Va.
Filed March 18, 1916. Serial No. 93,619. PUBLISHED MAY 16, 1916.

111,782. RUBBER BOOTS, RUBBER OVERSHOES, RUBBER SHOES, AND RUBBERS. APSLEY RUBBER COMPANY, Hudson, Mass.
Filed April 3, 1916. Serial No. 94,057. PUBLISHED MAY 23, 1916.

111,783. ALE. BARTHOLOMAY BREWERY COMPANY, Rochester, N. Y.
Filed May 8, 1915. Serial No. 86,475. PUBLISHED MAY 30, 1916.

111,784. CANNED FRUITS AND CANNED VEGETABLES. BAY SIDE CANNING CO., Alviso, Cal.
Filed January 3, 1916. Serial No. 91,864. PUBLISHED MAY 23, 1916.

111,785. MAYONNAISE, FRUIT MARMALADES, FRUIT PRESERVES, PEANUT-BUTTER, PREPARED FLOUR, PASTRY-FLOUR, TEA, COFFEE, AND CAKE. CHARLES A. BORST, Kingston, N. Y.
Filed April 4, 1916. Serial No. 94,139. PUBLISHED MAY 23, 1916.

111,786. HAND-WAGONS. THE BUFFALO SLED COMPANY, North Tonawanda, N. Y.
Filed April 8, 1916. Serial No. 94,242. PUBLISHED MAY 23, 1916.

111,787. LEATHER SHOES. EDWIN C. BURT CO., New York and Brooklyn, N. Y.
Filed March 2, 1916. Serial No. 93,222. PUBLISHED MAY 23, 1916.

111,788. MANUFACTURED OR PARTIALLY-MANUFACTURED LUMBER AND MANUFACTURED OR PARTIALLY-MANUFACTURED LOGS. CADWALLADER GIBSON LUMBER CO., Manila, Philippine Islands.
Filed December 23, 1915. Serial No. 91,713. PUBLISHED MAY 23, 1916.

111,789. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y.
Filed March 25, 1916. Serial No. 93,864. PUBLISHED MAY 16, 1916.

111,790. CALF-MEAL. CHAPIN & COMPANY, INCORPORATED, Hammond, Ind.
Filed May 20, 1915. Serial No. 86,761. PUBLISHED MAY 16, 1916.

111,791. LEATHER BOOTS AND SHOES. CHIPPEWA SHOE MFG. CO., Chippewa Falls, Wis.
Filed March 24, 1916. Serial No. 93,828. PUBLISHED MAY 23, 1916.

111,792. KNIT SHIRTS, DRAWERS, AND UNION SUITS. CLIMAX UNDERWEAR CO., INC., Utica, N. Y.
Filed February 8, 1916. Serial No. 92,712. PUBLISHED MAY 23, 1916.

111,793. TWINE AND CORDAGE. COLONIAL CORDAGE CO., Chicago, Ill.
Filed March 1, 1916. Serial No. 93,201. PUBLISHED MAY 30, 1916.

111,794. TWINE AND CORDAGE. COLONIAL CORDAGE CO., Chicago, Ill.
Filed March 1, 1916. Serial No. 93,202. PUBLISHED MAY 30, 1916.

111,795. NON-INFLAMMABLE, NON-POISONOUS, ODORLESS CHEMICAL DESTROYER OF INSECTS AND VERMIN. HARRY COOLEY, Madison, Wis.
Filed February 19, 1915. Serial No. 84,620. PUBLISHED JANUARY 25, 1916.

111,796. EMBOSSED PICTORIAL REPRESENTATIONS CONSISTING OF PAPER OR ITS EQUIVALENT. WILLIAM C. CORNWELL, New York, N. Y.
Filed March 27, 1916. Serial No. 93,897. PUBLISHED MAY 23, 1916.

111,797. BUTTER. ROBERT B. CRAMER, Philadelphia, Pa.
Filed February 1, 1916. Serial No. 92,567. PUBLISHED APRIL 11, 1916.

111,798. STRAINERS AND RICE-WASHERS. CRYSTAL MFG. COMPANY, Philadelphia, Pa.
Filed April 21, 1916. Serial No. 94,606. PUBLISHED MAY 23, 1916.

111,799. DOLLS AND OTHER TOY EFFIGIES. NELLIE S. DAY, Springfield, Mass.
Filed September 4, 1915. Serial No. 89,023. PUBLISHED DECEMBER 7, 1915.

111,800. IMITATION LEATHER. THE DURATEX COMPANY, Newark, N. J.
Filed March 17, 1916. Serial No. 93,599. PUBLISHED MAY 23, 1916.

111,801. POLISH-OIL. DUSKIL MOP COMPANY, Paducah, Ky.
Filed April 13, 1916. Serial No. 94,377. PUBLISHED MAY 30, 1916.

111,802. PHONOGRAPHS. THOMAS A. EDISON, INCORPORATED, West Orange, N. J.
Filed February 4, 1916. Serial No. 92,612. PUBLISHED MAY 16, 1916.

111,803. PERIODICAL ISSUING TRIMONTHLY DEVOTED TO DRY GOODS, CUTS, DRAWINGS, AND ADVERTISING PURPOSES. ECONOMY SERVICE COMPANY, New York, N. Y.
Filed April 1, 1916. Serial No. 94,031. PUBLISHED MAY 23, 1916.

111,804. SEMIMONTHLY PERIODICAL DEVOTED TO DRY GOODS, CUTS, DRAWINGS, AND COPY FOR ADVERTISING PURPOSES. ECONOMY SERVICE COMPANY, New York, N. Y.
Filed April 1, 1916. Serial No. 94,032. PUBLISHED MAY 23, 1916.

111,805. INSULATING COMPOUNDS FOR ELECTRICAL CONDUCTORS. THE ENGINEERING PRODUCTS CORPORATION, INCORPORATED, New York, N. Y.
LISHED NOVEMBER 16, 1915.
Filed September 7, 1915. Serial No. 89,056. PUB-

111,806. INSULATED JOINTS FOR ELECTRICAL CONDUCTORS. THE ENGINEERING PRODUCTS CORPORATION, INCORPORATED, New York, N. Y.
Filed September 7, 1915. Serial No. 89,057. PUBLISHED NOVEMBER 16, 1915.

111,807. SALVE, LINIMENT, AND DEAD-FLESH DESTROYER. ISAAC F. FITZWATER, North Beatrice, Nebr.
Filed March 10, 1916. Serial No. 93,431. PUBLISHED MAY 16, 1916.

111,808. OAK SOLE-LEATHER. WILLIAM FLACCUS OAK LEATHER COMPANY, Pittsburgh, Pa.
Filed March 2, 1916. Serial No. 93,225. PUBLISHED MAY 16, 1916.

111,809. FLAVORING-SYRUP FOR STILL-WATER AND CARBONATED BEVERAGES. THE FLORIDA PRODUCTS COMPANY, Covington, Ky.
Filed March 10, 1916. Serial No. 93,429. PUBLISHED MAY 23, 1916.

111,810. LATH, FIBROUS ROOFING, SIDING, SHEATHING-PAPER, ASPHALT SHINGLES, AND BUILDING-PAPERS. SILAS M. FORD, St. Paul, Minn.
Filed March 27, 1916. Serial No. 93,901. PUBLISHED MAY 23, 1916.

111,811. CRACKED WHEAT, WHEAT GERM OR MEAL MADE FROM HARD WHEAT, AND CEREAL BREAKFAST FOOD. FRANKLIN MILLS CO., Batavia, N. Y.
Filed December 10, 1915. Serial No. 91,370. PUBLISHED MAY 23, 1916.

111,812. DRY SALTED MEATS AND LARD. GALBAN & CO., INC., New York, N. Y., and Habana, Cuba.
Filed September 2, 1915. Serial No. 88,982. PUBLISHED FEBRUARY 22, 1916.

111,813. CERTAIN NAMED FOODS. GENERAL MERCANTILE CO., Omaha, Nebr.
Filed November 29, 1915. Serial No. 91,004. PUBLISHED MAY 23, 1916.

111,814. BUILDING TOYS. THE A. C. GILBERT COMPANY, New Haven, Conn.
Filed March 20, 1916. Serial No. 93,703. PUBLISHED MAY 23, 1916.

111,815. LINEN AND COTTON PIECE GOODS, SILKS, SILK AND COTTON PIECE GOODS, AND PILE FABRICS. HENRY GLASS & CO., New York, N. Y.
Filed March 31, 1916. Serial No. 94,011. PUBLISHED MAY 23, 1916.

111,816. HATS AND CAPS. GOLDENBERGS, Washington, D. C.
Filed May 10, 1915. Serial No. 86,515. PUBLISHED MAY 30, 1916.

111,817. PNEUMATIC TIRES COMPOSED PRINCIPALLY OF RUBBER AND TWISTED CORDS. THE B. F. GOODRICH COMPANY, New York, N. Y.
Filed July 30, 1915. Serial No. 88,299. PUBLISHED MAY 16, 1916.

111,818. PRESCRIPTION, FLUID FORM, FOR INTERNAL ADMINISTRATION FOR THE LIVER, STOMACH, AND BOWELS. GEORGE P. GRIMES, Nashville, Ga.
Filed March 13, 1916. Serial No. 93,496. PUBLISHED MAY 9, 1916.

111,819. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF. THE HARTMAN COMPANY, Chicago, Ill.
Filed February 21, 1916. Serial No. 93,013. PUBLISHED MAY 30, 1916.

111,820. LITHOGRAPHED AND ETCHED METAL SIGNS AND NAME-PLATES IN VARIOUS FORMS. THE HAEUSERMANN METAL MFG. CO., New York, N. Y.
Filed September 9, 1914. Serial No. 81,132. PUBLISHED MAY 9, 1916.

111,821. HANDLES FOR TOOLS. H. E. HESSLER CO., Syracuse, N. Y.
Filed January 4, 1916. Serial No. 91,912. PUBLISHED MAY 30, 1916.

111,822. COTTON GINGHAMS. E. M. HOLT PLAID MILLS, Burlington, N. C.
Filed March 30, 1916. Serial No. 93,993. PUBLISHED MAY 23, 1916.

111,823. VEHICLE-SPRINGS. HOOVER SPRING COMPANY, San Francisco, Cal.
Filed April 22, 1916. Serial No. 94,642. PUBLISHED MAY 23, 1916.

111,824. VEHICLE-SPRINGS. HOOVER SPRING COMPANY, San Francisco, Cal.
Filed April 22, 1916. Serial No. 94,643. PUBLISHED MAY 23, 1916.

111,825. AUTOMOBILES. HUDSON MOTOR CAR COMPANY, Detroit, Mich.
Filed October 6, 1911. Serial No. 59,017. PUBLISHED MAY 30, 1916.

111,826. FIRE-EXTINGUISHING APPARATUS. ROSCOE C. IDDINGS, Dayton, Ohio.
Filed March 24, 1916. Serial No. 93,847. PUBLISHED MAY 16, 1916.

111,827. CERTAIN NAMED HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS. INTERNATIONAL HEATER COMPANY, Utica, N. Y.
Filed March 25, 1915. Serial No. 85,404. PUBLISHED MAY 23, 1916.

111,828. CERTAIN NAMED HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS. INTERNATIONAL HEATER COMPANY, Utica, N. Y.
Filed March 25, 1915. Serial No. 85,405. PUBLISHED MAY 23, 1916.

111,829. PORTLAND CEMENT. INTERNATIONAL PORTLAND CEMENT CO., LTD., Spokane, Wash.
Filed March 27, 1916. Serial No. 93,908. PUBLISHED MAY 23, 1916.

111,830. CIGARS, CHEROOTS, AND LITTLE CIGARS. CHAS. KAISER, New York, N. Y.
Filed March 28, 1916. Serial No. 93,936. PUBLISHED MAY 16, 1916.

111,831. HAND-CARS. KANGAROO MANUFACTURING CO., Chicago, Ill.
Filed February 2, 1916. Serial No. 92,583. PUBLISHED MAY 2, 1916.

111,832. UMBRELLAS. EDWARD C. KUHN, Cincinnati, Ohio.
Filed April 10, 1916. Serial No. 94,288. PUBLISHED MAY 23, 1916.

111,833. CANDIES, MARSHMALLOWS, CHOCOLATES, AND PASTES. JAMES C. KUHN, New York, N. Y.
Filed February 21, 1916. Serial No. 93,015. PUBLISHED MAY 16, 1916.

111,834. DRESSES. ELIAS & LOWENSTEIN, Cincinnati, Ohio.
Filed February 21, 1916. Serial No. 93,007. PUBLISHED MAY 23, 1916.

111,835. FERMENTED MILK, CHEESE, AND BUTTER. LOUIS GUILLAUME MARTENS, Geneva, Switzerland.
Filed August 5, 1915. Serial No. 88,436. PUBLISHED MAY 16, 1916.

111,836. LIQUID PREPARATION FOR PRESERVING, HARDENING, IMPREGNATING, AND WATER-PROOFING CERTAIN NAMED CONSTRUCTION MATERIALS. THE MASTER BUILDERS COMPANY, Cleveland, Ohio.
Filed April 3, 1916. Serial No. 94,075. PUBLISHED MAY 23, 1916.

111,837. PAPETERIES, WRITING-PAPERS, AND WRAPPING-PAPERS. JAMES E. MITCHELL, Utica, N. Y.
Filed March 17, 1916. Serial No. 93,608. PUBLISHED MAY 16, 1916.

111,838. DRY PAINT. WILLIAM P. D. MOROSS, Rossville, Ga.
Filed December 8, 1915. Serial No. 91,317. PUBLISHED MAY 30, 1916.

111,839. CORN KERNELS FOR POPPING. SAM NELSON, JR. COMPANY, Grinnell, Iowa.
Filed December 8, 1915. Serial No. 91,324. PUBLISHED MAY 16, 1916.

111,840. GAMES—VIZ., CHECKERS. NEW CENTURY GAME CO., Orange, N. J.
Filed December 23, 1915. Serial No. 91,732. PUBLISHED MAY 30, 1916.

111,841. MONTHLY MAGAZINE. NEWMAN-KING FASHION CO., New York, N. Y.
Filed January 14, 1916. Serial No. 92,127. PUBLISHED MAY 23, 1916.

111,842. SYRUP, A PRODUCT OF PURE CANE-SUGAR. THE NULOMOLINE COMPANY, New York, N. Y.
Filed April 1, 1916. Serial No. 94,041. PUBLISHED MAY 16, 1916.

111,843. POULTRY FEEDS. WILLIAM ORR & SONS, Orrs Mills, N. Y.
Filed March 14, 1916. Serial No. 93,538. PUBLISHED MAY 9, 1916.

111,844. BATHING-SHOES. JOHN H. PARKER COMPANY, Malden, Mass.
Filed April 24, 1916. Serial No. 94,683. PUBLISHED MAY 23, 1916.

111,845. WHEAT-FLOUR. JOHN PAVLIK & SONS, Verdigre, Nebr.
Filed November 22, 1915. Serial No. 90,843. PUBLISHED MAY 23, 1916.

111,846. PORK SAUSAGE. LOUIS PFAELZER & SONS, Chicago, Ill.
Filed March 7, 1916. Serial No. 93,372. PUBLISHED MAY 23, 1916.

111,847. CLEANING, POLISHING, AND SCOURING SOAP. MILTON F. REESE, New York, N. Y.
Filed April 19, 1916. Serial No. 94,548. PUBLISHED MAY 23, 1916.

111,848. SOAP. RESINOL CHEMICAL CO., Baltimore, Md.
Filed March 27, 1916. Serial No. 93,919. PUBLISHED MAY 16, 1916.

111,849. CERTAIN NAMED SURGICAL AND DENTAL APPLIANCES. RICHTER & HOFFMANN THE HARVARD DENTAL MANUFACTURING CO. GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany, assignor to Richter & Hoffmann Harvard Gesellschaft mit beschränkter Haftung, of Berlin, Germany, a Corporation of Germany.
Filed May 16, 1914. Serial No. 78,337. PUBLISHED MAY 30, 1916.

111,850. PREPARED ROOFING. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed April 21, 1916. Serial No. 94,632. PUBLISHED MAY 23, 1916.

111,851. CLOAKS AND OUTER SUITS FOR CHILDREN, MISSES, AND LADIES. THE JOHN SHILLITO COMPANY, Cincinnati, Ohio.
Filed December 6, 1915. Serial No. 91,246. PUBLISHED APRIL 25, 1916.

111,852. NON-INTOXICATING BEVERAGE MADE OF MALT, HOPS, AND CEREALS. STANDARD BREWERY COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed March 14, 1916. Serial No. 93,543. PUBLISHED MAY 23, 1916.

111,853. BREAD-BOXES, BUCKETS, CANS, OIL-CANS, BINS, FLOUR-BINS, DAIRY-PAILS, AND STRAINER-PAILS. STUBER & KUCK CO., Peoria, Ill.
Filed October 7, 1915. Serial No. 89,723. PUBLISHED MAY 23, 1916.

111,854. FLEXIBLE METAL TUBES. TITEFLEX METAL HOSE CORPORATION, New York, N. Y., and Newark, N. J.
Filed April 12, 1916. Serial No. 94,364. PUBLISHED MAY 23, 1916.

111,855. SOAP. THE TROPICAL PHARMACAL CO., New York, N. Y.
Filed October 9, 1915. Serial No. 89,774. PUBLISHED MAY 16, 1916.

111,856. COTTON PIECE GOODS AND COTTON UPHOLSTERY. J. SPENCER TURNER COMPANY, New York, N. Y.
Filed April 15, 1916. Serial No. 94,464. PUBLISHED MAY 23, 1916.

111,857. BEER. UNITED BREWERIES COMPANY, Chicago, Ill.
Filed May 1, 1916. Serial No. 94,839. PUBLISHED MAY 30, 1916.

111,858. BEER. UNITED BREWERIES COMPANY, Chicago, Ill.
Filed May 1, 1916. Serial No. 94,844. PUBLISHED MAY 30, 1916.

111,859. CERTAIN NAMED VETERINARY REMEDIES. VETERINARY CHEMICAL CO., Churubusco, Ind.
Filed January 31, 1916. Serial No. 92,546. PUBLISHED MAY 16, 1916.

111,860. MACARONI. VIVIANO BROS. MACARONI CO. INC., Chicago, Ill.
Filed March 4, 1916. Serial No. 93,325. PUBLISHED MAY 23, 1916.

111,861. WATER OF AN APERIENT NATURE. VULCAN MINERAL WATER CO. INC., New York, N. Y.
Filed August 7, 1915. Serial No. 88,485. PUBLISHED SEPTEMBER 14, 1915.

111,862. CATSUP, TOMATO PURÉE, CANNED VEGETABLES. THE J. WELLER CO., Oakharbor, Ohio.
Filed November 18, 1915. Serial No. 90,754. PUBLISHED MAY 23, 1916.

111,863. BLANKETS. THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y.
Filed April 6, 1916. Serial No. 94,218. PUBLISHED MAY 23, 1916.

111,864. DEODORIZER. HENRY R. WOODWARD, New Albany, Ind.
Filed March 4, 1916. Serial No. 93,326. PUBLISHED APRIL 25, 1916.

111,865. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,814. PUBLISHED MAY 30, 1916.

111,866. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,817. PUBLISHED MAY 30, 1916.

111,867. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,818. PUBLISHED MAY 30, 1916.

111,868. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,821. PUBLISHED MAY 30, 1916.

111,869. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,822. PUBLISHED MAY 30, 1916.

111,870. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,823. PUBLISHED MAY 30, 1916.

111,871. LINOLEUM, CORK CARPET, AND FLOOR-COVERINGS COMPOSED MAINLY OF CORK. ARMSTRONG CORK COMPANY, Pittsburgh, Pa.
Filed April 4, 1916. Serial No. 94,096. PUBLISHED MAY 30, 1916.

111,872. SILK, COTTON, AND WOOLEN PIECE GOODS. ASHLAND TEXTILE COMPANY, New York, N. Y.
Filed April 14, 1916. Serial No. 94,409. PUBLISHED MAY 30, 1916.

111,873. TURPENTINE SUBSTITUTE. THE ATLANTIC REFINING COMPANY, Philadelphia, Pa.
Filed December 4, 1915. Serial No. 91,151. PUBLISHED MAY 30, 1916.

111,874. RUST-PREVENTIVE, KEROSENE-OIL, PARAFFIN-WAX, AND CANDLES. THE ATLANTIC REFINING COMPANY, Philadelphia, Pa.
Filed December 4, 1915. Serial No. 91,152. PUBLISHED MAY 30, 1916.

111,875. CERTAIN ELECTRIC-LIGHTING FIXTURES. BEARDSLEE CHANDELIER MANUFACTURING COMPANY, Chicago, Ill.
Filed February 21, 1916. Serial No. 92,999. PUBLISHED MAY 30, 1916.

111,876. ABRASIVE-COATED FABRICS OF PAPER, CLOTH, AND COMBINATIONS OF PAPER AND CLOTH. HERMAN BEHR & COMPANY, INCORPORATED, New York, N. Y.
Filed December 21, 1915. Serial No. 91,632. PUBLISHED MAY 23, 1916.

111,877. WAISTS AND SKIRTS. LURA S. BRAINERD, Meriden, Conn.
Filed March 27, 1916. Serial No. 93,885. PUBLISHED MAY 30, 1916.

111,878. METALLIC VALVES. FRANCIS H. BROWN, Stamford, Conn.
Filed March 30, 1914. Serial No. 77,045. PUBLISHED MAY 30, 1916.

111,879. POPLIN AND VELOUR COTTON PIECE GOODS. BURNS BROS. MFG. CO., New York, N. Y.
Filed April 8, 1916. Serial No. 94,246. PUBLISHED MAY 30, 1916.

111,880. ALFALFA-SEED. CHARLES CAMP, Greeley, Colo.
Filed September 4, 1915. Serial No. 89,021. PUBLISHED MAY 23, 1916.

111,881. CAST-IRON SOIL-PIPE AND FITTINGS. THE CENTRAL FOUNDRY COMPANY, New York, N. Y.
Filed April 6, 1916. Serial No. 94,188. PUBLISHED MAY 23, 1916.

111,882. CERTAIN NAMED UNDERGARMENTS. EDNA MAY CLAUSEN, Aurora, Ill.
Filed March 30, 1916. Serial No. 93,986. PUBLISHED MAY 23, 1916.

111,883. PIANO, PIANO-PLAYER, ORGAN, AND MECHANICAL OR OTHER MUSICAL-INSTRUMENT BENCHES, CHAIRS, OR SEATS. CONSERVATORY PLAYER ACTION COMPANY, Chicago, Ill.
Filed March 11, 1916. Serial No. 93,451. PUBLISHED MAY 23, 1916.

111,884. GLAZED SILK WRAPPING-PAPER. HARRY C. DAVIS, Philadelphia, Pa.
Filed April 17, 1916. Serial No. 94,470. PUBLISHED MAY 16, 1916.

111,885. PICKLED HERRINGS IN BARRELS. A. FLETT & Co., Buckie, Scotland.
Filed July 22, 1915. Serial No. 88,112. PUBLISHED MAY 23, 1916.

111,886. GREEN COFFEE. GRAHAM, HINKLEY & Co., New York, N. Y.
Filed March 14, 1916. Serial No. 93,527. PUBLISHED MAY 23, 1916.

111,887. SPARK-PLUG INSULATORS. HARTFORD MACHINE SCREW COMPANY, Hartford, Conn.
Filed April 25, 1916. Serial No. 94,708. PUBLISHED MAY 23, 1916.

111,888. FILTERING-PULP. HIRSH & SCHOFIELD, INC., New York, N. Y.
Filed February 17, 1916. Serial No. 92,916. PUBLISHED MAY 30, 1916.

111,889. ELECTRIC AND HAND LAUNDRY-WASHING MACHINES. HOME DEVICES CORPORATION, New York, N. Y.
Filed March 2, 1916. Serial No. 93,230. PUBLISHED MAY 30, 1916.

111,890. LUBRICATING OILS AND GREASES. INDIAN REFINING COMPANY, Augusth, Me., and New York, N. Y.
Filed April 8, 1916. Serial No. 94,257. PUBLISHED MAY 30, 1916.

111,891. PERFUMED WATERS, PERFUMED OILS, FACE-POWDERS, HAIR-OINTMENTS, SCENT-BAGS, INCENSES, AND FACE-LOTIONS. SAKAE ITO, Tokyo, Japan.
Filed October 26, 1915. Serial No. 90,123. PUBLISHED MAY 23, 1916.

111,892. CEREAL BREAKFAST FOODS. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed December 27, 1915. Serial No. 91,771. PUBLISHED MAY 23, 1916.

111,893. CHEMICAL OR MEDICAL PREPARATION—VIZ., AN ANTISEPTIC FOR CERTAIN USES. LAMBERT PHARMACAL COMPANY, St. Louis, Mo.
Filed January 22, 1916. Serial No. 92,341. PUBLISHED MAY 30, 1916.

111,894. TABLE-WATER. DANIEL B. LESTER, Savannah, Ga.
Filed April 28, 1916. Serial No. 94,773. PUBLISHED MAY 30, 1916.

111,895. PLASTIC MATERIAL FOR SURFACING FLOORINGS AND THE LIKE. THE LITOSILO CO. OF AMERICA, INCORPORATED, Philadelphia, Pa.
Filed April 12, 1916. Serial No. 94,359. PUBLISHED MAY 30, 1916.

111,896. BLEACHING-POWDER SOLUBLE IN WATER USED FOR BLEACHING STRAW HATS. SPIROS C. MARKATOS, New York, N. Y.
Filed December 13, 1915. Serial No. 91,435. PUBLISHED MAY 23, 1916.

111,897. READY-MIXED PAINTS. JAMES A. MCCAFFERTY & SONS MFG. CO., INC., Brooklyn, N. Y.
Filed April 26, 1916. Serial No. 94,726. PUBLISHED MAY 23, 1916.

111,898. WHEAT-FLOUR. MONTANA FLOUR MILLS COMPANY, Lewistown, Mont.
Filed February 10, 1916. Serial No. 92,756. PUBLISHED MAY 23, 1916.

111,899. UNGUENT PREPARATION FOR CLEANING AND POLISHING GLASS OR MIRRORED SURFACES. MOON-POWER MFG. CO., Plainfield, N. J.
Filed December 23, 1915. Serial No. 91,730. PUBLISHED MAY 16, 1916.

111,900. MIDDY-BLOUSES. MORRIS & Co., Baltimore, Md.
Filed July 9, 1915. Serial No. 87,855. PUBLISHED MAY 30, 1916.

111,901. RAIN-COATS. S. A. & H. MYERS, Boston, Mass.
Filed April 10, 1916. Serial No. 94,294. PUBLISHED MAY 30, 1916.

111,902. ANTIFRICTION-BEARINGS AND PARTS THEREOF. THE NEW DEPARTURE MANUFACTURING COMPANY, Bristol, Conn.
Filed April 21, 1916. Serial No. 94,622. PUBLISHED MAY 30, 1916.

111,903. ANTIFRICTION-BEARINGS AND PARTS THEREOF. THE NEW DEPARTURE MANUFACTURING COMPANY, Bristol, Conn.
Filed April 21, 1916. Serial No. 94,623. PUBLISHED MAY 30, 1916.

111,904. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. H. T. PAISTE COMPANY, Philadelphia, Pa.
Filed April 25, 1916. Serial No. 94,715. PUBLISHED MAY 23, 1916.

111,905. CHEESE. PHENIX CHEESE CO., New York, N. Y.
Filed December 17, 1915. Serial No. 91,554. PUBLISHED MAY 23, 1916.

111,906. CERTAIN NAMED DIAMOND-POINTED TOOLS AND TOOLS REQUIRING USE OF DIAMONDS AND BORT. THE S. ROSE CO., New York, N. Y.
Filed February 15, 1916. Serial No. 92,878. PUBLISHED MAY 30, 1916.

111,907. BOTTLE-SEALS. THE SANITARY SEAL MANUFACTURING COMPANY, Baltimore, Md.
Filed March 24, 1916. Serial No. 93,857. PUBLISHED MAY 30, 1916.

111,908. WOOD AND COAL STOVES AND RANGES. SHAKOPEE STOVE COMPANY, Shakopee, Minn.
Filed January 28, 1916. Serial No. 92,484. PUBLISHED MAY 16, 1916.

111,909. WASTE-FIXTURES FOR LAVATORIES. SPEAKMAN SUPPLY AND PIPE COMPANY, Wilmington, Del.
Filed April 5, 1916. Serial No. 94,177. PUBLISHED MAY 23, 1916.

111,910. COAL. THE ST. ANTHONY & DAKOTA ELEVATOR CO., Minneapolis, Minn.
Filed January 17, 1916. Serial No. 92,206. PUBLISHED MAY 9, 1916.

111,911. ELECTROTHERAPEUTIC INSTRUMENT FOR DIAGNOSIS AND TREATMENT. THE STANDARD APPARATUS COMPANY, Cincinnati, Ohio.
Filed January 3, 1916. Serial No. 91,895. PUBLISHED MAY 9, 1916.

111,912. HAIR-NETS. KALMAN THAU, New York, N. Y.
Filed January 8, 1916. Serial No. 92,029. PUBLISHED MAY 30, 1916.

111,913. GOODS USED IN THE MANUFACTURE OF SHOES AND CERTAIN NAMED PARTS THEREOF. JOHN G. TRAVER & COMPANY, Philadelphia, Pa.
Filed March 30, 1916. Serial No. 93,996. PUBLISHED MAY 30, 1916.

111,914. MILK-CANS. THE TRI-STATE BUTTER COMPANY, Cincinnati, Ohio.
Filed April 27, 1916. Serial No. 94,758. PUBLISHED MAY 30, 1916.

111,915. GOLF-BALLS. JOHN WANAMAKER, NEW YORK, New York, N. Y.
Filed April 11, 1916. Serial No. 94,344. PUBLISHED MAY 30, 1916.

111,916. FRESH APPLES AND LETTUCE. WESTERN NEW YORK FARMS CO., Elba, N. Y.
Filed November 17, 1915. Serial No. 90,715. PUBLISHED MAY 23, 1916.

111,917. SEWING-MACHINES. WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.
Filed April 14, 1916. Serial No. 94,439. PUBLISHED MAY 30, 1916.

111,918. WIPER DEVICE FOR WIND-SHIELDS, WINDOWS, AND THE LIKE. SAMUEL C. WOLFE, Angola, Ind.
Filed February 8, 1916. Serial No. 92,711. PUBLISHED MAY 2, 1916.

LABELS

REGISTERED AUGUST 8, 1916.

19,489.—*Title:* "TODAY'S." (For Canned Apricots.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,490.—*Title:* "TODAY'S." (For Canned Blackberries.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,491.—*Title:* "TODAY'S." (For Canned Black Cherries.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,492.—*Title:* "TODAY'S." (For Canned Royal-Anne Cherries.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,493.—*Title:* "TODAY'S." (For Canned Loganberries.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,494.—*Title:* "TODAY'S." (For Canned Peaches.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,495.—*Title:* "TODAY'S." (For Canned Sliced Peaches.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,496.—*Title:* "TODAY'S." (For Canned Bartlett Pears.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,497.—*Title:* "TODAY'S." (For Canned Egg-Plums.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,498.—*Title:* "TODAY'S." (For Canned Green-Gage Plums.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,499.—*Title:* "TODAY'S." (For Canned Sliced Pineapple.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,500.—*Title:* "TODAY'S." (For Canned Strawberries.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,501.—*Title:* "TODAY'S." (For Canned Tomatoes.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,502.—*Title:* "TODAY'S." (For Canned Fruits.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 19, 1916.

19,503.—*Title:* "THE MILLION DOLLAR HAIR TONIC." (For Hair-Tonic.) MATTHEW ARNONE, New York, N. Y. Filed June 2, 1916.

19,504.—*Title:* "BONNIE BLANCHE PRESERVES." (For Preserves.) BONNIE BLANCHE DE FRECE, New Rochelle, N. Y. Filed July 5, 1916.

19,505.—*Title:* "DR MUNS PILE AND ECZEMA OINTMENT." (For an Ointment.) THE D. HEBER CREECH CHEMICAL CO., Smithfield, N. C. Filed June 24, 1916.

19,506.—*Title:* "MORO LIGHT." (For Cigars.) A. C. HENSCHEL & CO., Chicago, Ill. Filed March 9, 1916.

19,507.—*Title:* "WHITE BEAUTY." (For Shortening.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed July 3, 1916.

19,508.—*Title:* "REACH WHIZ GOLF BALLS." (For Golf-Balls.) A. J. REACH COMPANY, Philadelphia, Pa. Filed May 25, 1916.

19,509.—*Title:* "REACH PARAMOUNT A GOLF BALLS." (For Golf-Balls.) A. J. REACH COMPANY, Philadelphia, Pa. Filed May 25, 1916.

19,510.—*Title:* "REACH PARAMOUNT B GOLF BALLS." (For Golf-Balls.) A. J. REACH COMPANY, Philadelphia, Pa. Filed May 25, 1916.

19,511.—*Title:* "DR. SCHOLL'S FOOT-EAZER." (For Arch-Supports.) SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill. Filed May 27, 1916.

19,512.—*Title:* "TATO BREAD." (For Bread.) PAUL SCHULZE, Chicago, Ill. Filed July 19, 1916.

19,513.—*Title:* "BUTTER-NUT BREAD." (For Bread.) PAUL SCHULZE, Chicago, Ill. Filed July 19, 1916.

19,514.—*Title:* "WE DRINKIT BLEND." (For Coffee.) JOHN SCOTT AND COMPANY, INCORPORATED, Philadelphia, Pa. Filed February 2, 1916.

19,515.—*Title:* "PEERLESS BLEND." (For Coffee.) JOHN SCOTT AND COMPANY, INCORPORATED, Philadelphia, Pa. Filed February 2, 1916.

19,516.—*Title:* "CHIEF'S BREAD." (For Bread.) CENTRAL WAXED PAPER CO., Chicago, Ill. Filed February 21, 1916.

19,517.—*Title:* "INDIVIDUAL SERVICE SHREDDED WHEAT." (For Shredded-Wheat Biscuit.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed May 15, 1916.

19,518.—*Title:* "TAK-A-TONIC." (For a Medicine.) TAK-A-TONIC CO., Bluefield, W. Va. Filed April 26, 1916.

PRINTS

REGISTERED AUGUST 8, 1916.

4,416.—*Title:* "THE SECRET OF PERFECT PANCAKES." (For Pancake-Flour.) AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed June 15, 1916.

4,417.—*Title:* "NIGHT OR DAY, AT WORK OR PLAY, B. V. D. CONSERVES YOUR COMFORT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed April 28, 1916.

4,418.—*Title:* "B. V. D.S AND A RIVER BREEZE—ISN'T THIS GREAT ON A HOT DAY?" (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed April 28, 1916.

4,419.—*Title:* "PA'S GOT HIS NEW B. V. D.S ON." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed April 28, 1916.

4,420.—*Title:* "'DAY OFF' OR 'DAY ON,' KEEP COOL IN B. V. D." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed April 28, 1916.

4,421.—*Title:* "COMING OR GOING, WEAR B. V. D. FOR COOLNESS." (For Atheletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed April 28, 1916.

4,422.—*Title:* "B. V. D. IS THE NATIONAL COOLER-OFF." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed April 28, 1916.

4,423.—*Title:* "TELL THE OLD PEPPER-POT TO PUT ON HIS B. V. D.S, AND COOL OFF." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed June 7, 1916.

4,424.—*Title:* "WHAT WOULD SUMMER BE WITHOUT BASEBALL AND B. V. D.?" (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed June 7, 1916.

4,425.—*Title:* "GOOD-BY, AND KEEP THAT GROUCHLESS B. V. D. GRIN." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed June 7, 1916.

4,426.—*Title:* "THE MERCURY'S HOPPING MAD, BECAUSE B. V. D. KEEPS US COOL." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed June 7, 1916.

4,427.—*Title:* "THAT TEAM'S PITCHER HAS A B. V. D. HEAD—ALWAYS KEEPS COOL." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed June 7, 1916.

4,428.—*Title:* "YOU CAN DANCE YOUR LEGS OFF IN B. V. D." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed June 7, 1916.

4,429.—*Title:* "FARANCO." (For Housing Equipment.) EDGAR C. FARIS, Kansas City, Mo. Filed August 9, 1915.

4,430.—*Title:* "FRANK'S MEAT-TREATS." (For Meat Treats.) L. FRANK & SON COMPANY, Milwaukee, Wis. Filed July 17, 1916.

4,431.—*Title:* "GORDON SEAT COVERINGS." (For Gordon Tire-Covers, Seat-Covers, and Radiator and Engine Robes.) THE J. P. GORDON COMPANY, Columbus, Ohio. Filed October 7, 1915.

4,432.—*Title:* "DR MUNS PILE AND ECZEMA OINTMENT." (For an Ointment.) THE D. HEBER CREECH CHEMICAL CO., Smithfield, N. C. Filed June 24, 1916.

4,433.—*Title:* "LITTLE FOLKS RECOGNIZE THE DELICIOUS OVEN-FLAVOR OF KELLOGG'S." (For Toasted Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed June 26, 1916.

4,434.—*Title:* "CHANGES DELIVERY TIME FROM HOURS TO MINUTES." (For Motor-Trucks.) LAWSON MANUFACTURING COMPANY, Pittsburgh, Pa. Filed July 8, 1916.

4,435.—*Title:* "ALL SUITS ALL OVERCOATS $17 NO MORE NO LESS." (For Suits and Overcoats.) THE UNITED WOOLEN MILLS COMPANY, Parkersburg, W. Va. Filed July 19, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

LIEBMANN AND MEGRATH *v.* NEWCOMB.

Decided July 12, 1916.

1. INTERFERENCE—AMENDMENT TO SUPPORT THE CLAIMS DURING INTERFERENCE.
   Where it is necessary that an application in interference be amended before a patent may be granted, it is desirable that the amendments be made during the interference, since questions may be involved respecting which the opposing party should be heard.
2. SAME—SAME—DRAWINGS SHOULD SHOW EVERY FEATURE CLAIMED.
   Where the only support for the counts of the issue was in the specification, *Held* that the drawing should be amended to show the features in question.
3. SAME—SAME—PRACTICE.
   The interference suspended for a period of a month to permit a necessary amendment to the disclosure.

APPEAL on motion.

MOTION to dismiss.

WELDED CONTACT MEMBERS.

Mr. Cornelius C. Billings for Liebmann and McGrath.

Mr. Wesley G. Carr for Newcomb.

EWING, *Commissioner:*

This is an appeal by Liebmann and Megrath from the decision of the Law Examiner denying their motion to dissolve the above-entitled interference. Newcomb has also filed a motion that the appeal of Liebmann and Megrath be dismissed.

The claims constituting the issue are as follows:

* * * * * * *

The drawings of the applicant, Newcomb, do not disclose a contact member. They disclose an assembly of the parts or a blank from which two contact members can be constructed in the manner set forth in the specification. Rule 50 says:

> The drawings must show every feature of the invention covered by the claims.

It is plain, therefore, that a figure should be added to the drawing illustrating an electrical make-and-break contact consisting of a face-plate of tungsten, with a supporting-base of another metal, as indicated in the claims in issue.

Where it is necessary that an application be amended before a patent may be granted under the rule, it is obviously desirable and proper that the amendments should be made during the interference, since such amendments frequently involve questions respecting which the opposing party may have a right to be heard.

The interference will be suspended for one month in order that the applicant may make such changes in his drawings and specification as he is advised.

In reaching this conclusion I have considered only the application here directly involved.

The motion to dismiss is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

GREAT BEAR SPRING CO. AND FULTON WATER WORKS CO. *v.* BEAR LITHIA SPRINGS COMPANY AND BEAR LITHIA WATER COMPANY.

Decided May 22, 1916.

TRADE-MARKS—INTERFERENCE—IMMATERIAL DIFFERENCES IN THE MARKS.
Where the prominent features of the interfering marks were a representation of a bear and the word "Bear," *Held* that priority and the right of registration were properly accorded the first to use a mark having these features, notwithstanding that one party used a black bear and the other a polar bear and notwithstanding the fact that the prior user had always used the word "Lithia" in connection with its mark.

Mr. W. P. Preble for the appellant.

Mr. Fritz v. Briesen for the appellee.

VAN ORSDEL, *J.:*

This is an appeal in an interference proceeding from the decision of the Commissioner of Patents awarding priority and right of registration to appellee.

Four trade-marks are involved in this interference,—the mark of appellant company, registered April 30, 1907, consisting of the words "Great Bear Spring;" the mark registered by the Fulton Water Works Company, October 23, 1894, now owned by appellant, consisting of the words "Great Bear Spring," arranged in a curve over the picture of a polar bear on a cake of ice; the mark of appellee company, registered June 9, 1891, consisting of the words "Bear Lithia Water," printed in white letters on the side of a black bear standing on the margin of a spring of water, and the mark here sought to

be registered by appellee, consisting of the representation of a bear, upon which is printed the word "Bear."

It will be observed that the common feature of the four marks in interference is the word "Bear," and that all the marks, with the exception of appellant's 1907 mark, contain, in addition to the word "Bear," the representation of a bear, which feature was held by the Commissioner to be equivalent to the word "Bear."

Prior use by appellee is conceded of the 1891 mark, but it is contended that it should not be permitted to establish priority over appellant's marks in a mark from which the word "Lithia" has been eliminated. In other words, appellant's contention is that prior to December 23, 1910, the filing date of the present application, appellee always used the word "Lithia" with the word "Bear," and it, therefore, has no right to priority in a similar mark from which the word "Lithia" has been eliminated.

The word "Lithia" is merely descriptive, like the words "Spring" and "Water." The dominating feature of the marks is the representation of a bear. It is not material, as affecting the similarity of the marks, whether the word "Lithia" is inserted or omitted; nor is it important that in one instance a black bear is shown, while in the other it is a polar bear; or whether the word "Bear" is printed beside the picture of the bear, or on it. The prominent feature of the mark is the representation of a bear, or its equivalent, the word "Bear." The case is governed by *Johnson* v. *Brandau*, (32 App. D. C., 348.)

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Sherman and Sherman patent, No. 700,381, *Held* not anticipated, valid, and infringed. *Sherman* v. *H. P. Marinelli, Limited*, 232 Fed. Rep., 730.

(U. S. C. C. A.) The Payzant patent, No. 758,381, for a pen, claim 2 *Held* valid and infringed. *Keuffel & Esser Co.* v. *Eugene Dietzgen Co.*, 232 Fed. Rep., 729.

(U. S. C. C. A.) The Todd patent, No. 793,249, for a printing apparatus, claims 1 and 3 *Held* valid and infringed. *Whitaker* v. *Todd*, 232 Fed. Rep., 714.

(U. S. C. C. A.) The Jones patent, No. 818,258, for an incandescent lamp, claim 1 *Held* void for anticipation. *General Electric Co.* v. *Philadelphia Electric & Mfg. Co.*, 232 Fed. Rep., 722.

Patent, Trade-Mark, and Copyright Regulations in Finland.

DEPARTMENT OF STATE,
Washington, D. C., July 29, 1916.

The Acting Secretary of State presents his compliments to the honorable the Secretary of the Interior, and has the honor to transmit herewith for the information of the Patent Office a copy of a report dated June 21, 1916, from the American vice-consul at Petrograd, Russia, relative to the regulations governing patents, trade-marks and copyrights in Finland.

Inclosure: As indicated.

800.54/5
S13

Triplicate 78673.

Patents.

PATENTS, TRADE-MARKS AND COPYRIGHTS IN FINLAND.

Felix Cale.

June 21, 1916.

American Vice-Consul, in Charge, Petrograd, Russia.

In Finland an invention is not regarded as new if it can be proved that the thing or method to be patented was generally known and could be practised by experts. Only the inventor or his legal assignee can take out patents, and in case several persons apply independently for a patent, the person receives the patent whose application first reached the Finnish Industrial Office, Helsingfors, an organ directly subordinated to the Economic Department of the Finnish Imperial Senate. This Industrial Office is the patent organ for the country. Finnish patents cover both the production in Finland and the sale in Finland of goods made according to the patented procedure or of the goods patented, subject to the monarch of Finland's right (the Czar of Russia) to declare the patent public property or requisition it to the State with proper compensation to the owner.

Application must be made to the Industrial Office with two copies of the specifications, which must be sufficient to enable an expert to reproduce the invention from them.

For each patent granted the owner must pay annually, beginning with the second year of the patent's validity, a graduated fee, starting at twenty Finnish marks (a mark is $0.193) for the second and third years, annually, and rising to an annual payment of seventy Finnish marks for the thirteenth to fifteenth years.

If the holder does not begin systematic exploitation of his patent within three years from its grant he must allow any other person who will exploit the patent systematically to do so.

Every person in Finland who manufactures or sells goods is entitled to the exclusive right to a trade-mark. This trade-mark may cover all sorts of goods unless in the act of registration the mark is limited to one sort of goods. The mark may be affixed either to the goods themselves or to the container or case in which they are packed. application must be made direct, in writing to the Finnish Industrial Office in Helsingfors, and should include the applicant's name or business designation and address and two copies, on heavy paper, of the mark to be registered.

A trade-mark may not be registered—

1. If the mark is already registered or if it be so similar to a mark already registered as to cause confusion.

2. If the mark consists of a sign or emblem which is the sign of a particular trade.

3. If any word or name is included without authorization from the person to whom the word or name rightfully belongs, or if the word or name used may be confused with a word or name belonging to another person.

4. If the mark offend decency or good order or be notoriously misleading.

When a business owning a registered trade-mark is transferred the trade-mark goes with the business unless otherwise provided for in the sale.

If a person feels that the registering of a certain trade-mark would do him damage he may obtain an injunction to stop the registration. It is forbidden to import goods bearing a trade-mark that infringes on a Finnish trade-mark.

A trade-mark registration is good for three years unless application has meanwhile been made for its renewal, and such application should be made every ten years thereafter.

Trade-marks already registered in Russia are registered in Finland with special privileges regarding their preliminary examination by the Finnish authorities, and when registered are on a par with regularly-registered Finnish trade-marks.

The Finnish copyright laws follow the usual lines in these matters and are valid for fifty years from the first date of publication, and cover music, maps, technical drawings, pictures, and works of art. Application should also be made to the Industrial Office.

[A true copy of the signed original.]

Adverse Decisions in Interference.

PATENT No. 1,128,043.

On July 3, 1916, a decision was rendered that Wirt S. Quigley was not the first inventor of the subject-matter covered by substantially the same as claims 3 and 4 of his Patent No. 1,128,043, subject, "Apparatus for feeding finely-divided material," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 883,959.

On July 3, 1916, a decision was rendered that Lars Jensen was not the first inventor of the subject-matter covered by claims 2 and 3 of his Patent No. 883,959, subject, "Bottling-machine," and no appeal having been taken within the time allowed such decision has become final.

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 25, 1916.

Allen S. Rand and George Bell, their assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of The Wallace Maxwell Co., of 416½ University street, Seattle, Wash., to effect the cancelation of the trade-mark registration of Allen S. Rand and George Bell, of Cincinnati, Ohio, and Peoria, Ill., respectively, registered August 15, 1893, No. 25,485, and the notice of such proceeding sent by registered mail to said Rand and Bell to the said addresses having been returned by the post-office undeliverable, notice is hereby given that unless said Rand and Bell, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 22, 1916.

Plate & Clark Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Oneida Knitting Company, of Second street and Allegheny avenue, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered April 2, 1907, No. 61,714, to Plate & Clark Co., of 31 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Plate & Clark Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Plate & Clark Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 22, 1916.

W. G. Hitchcock & Co., their assigns or legal representatives, take notice:

An interference having been filed by this Office between the application of Belding Bros. & Co., of 902 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered July 5, 1892, No. 21,415 to W. G. Hitchcock & Co., of 453 Broome street, New York, N. Y., and a notice of such declaration sent by registered mail to said W. G. Hitchcock & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said W. G. Hitchcock & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 21, 1916.

Henry Newell Palmer, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Louis H. Schaarschmidt, of Limbach, Germany, for registration of a trade-mark and trade-mark registered July 28, 1908, No. 70,111, to Henry Newell Palmer, of 170 Fifth avenue, New York, N. Y., and the registry return-receipt for the notice of such declaration sent to Henry Newell Palmer having been returned signed by Mrs. H. N. Palmer, and Mrs. H. N. Palmer having failed to file evidence of her right to intervene on behalf of Henry Newell Palmer within the time allowed for that purpose, notice is hereby given that unless said Henry Newell Palmer, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 21, 1916.

Allen Ainslie, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Samuel S. Dworkin, 151–153 St. Ann's avenue, corner of Thirteenth street, New York, N. Y., for registration of a trade-mark and trade-mark registered June 27, 1899, No. 33,148, to Allen Ainslie, 220 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Ainslie at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Ainslie, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 229—No. 3. TUESDAY, AUGUST 15, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS

	Page.
Issue of August 15, 1916	617
The Official Gazette	617
Briefs in Appealed Cases	617
Applications Under Examination	618
Patents Granted	619
Reissues	907
Designs	908
Trade-Marks—Registration Applied for	915
Trade-Mark Registrations Granted	933
Labels and Prints	937
Commissioner's Decisions—	
Ex parte Ferguson	939
Ex parte Burkhart	939
Adverse Decisions in Interference	940
Notice of Cancelation	940
Interference Notices	940

ISSUE OF AUGUST 15, 1916.

Patents	823	No. 1,194,346 to No.	1,195,168, inclusive.
Designs	28	No. 49,504 to No.	49,531, inclusive.
Trade-Marks	117	No. 111,919 to No.	112,035, inclusive.
Labels	19	No. 19,519 to No.	19,537, inclusive.
Prints	5	No. 4,436 to No.	4,440, inclusive.
Reissues	3	No. 14,181 to No.	14,183, inclusive.
Total	995		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	1	North Carolina	2	1
Arizona	3	.....	North Dakota	3	.....
Arkansas	1	.....	Ohio	60	14
California	41	9	Oklahoma	4	.....
Colorado	12	2	Oregon	6	4
Connecticut	25	4	Pennsylvania	67	7
Delaware	1	.....	Rhode Island	7	1
Florida	2	1	South Carolina	4	.....
Georgia	4	1	South Dakota	6	1
Idaho	2	.....	Tennessee	6	.....
Illinois	83	19	Texas	14	1
Indiana	15	5	Utah	3	1
Iowa	12	.....	Vermont	1	.....
Kansas	1	1	Virginia	9	3
Kentucky	7	3	Washington	9	1
Louisiana	5	1	West Virginia	2	.....
Maine	1	.....	Wisconsin	23	5
Maryland	14	1	Wyoming	3	.....
Massachusetts	49	7			
Michigan	18	4	Alaska, District of	.....	.....
Minnesota	14	1	Canal Zone	.....	.....
Mississippi	3	1	District of Columbia	4	.....
Missouri	23	7	Hawaii Territory	.....	.....
Montana	5	.....	Philippine Islands	.....	.....
Nebraska	6	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	.....	.....
New Jersey	48	3			
New Mexico	1	.....	Total to residents of the United States.	757	139
New York	124	28			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	2	.....
Austria-Hungary	.....	.....	New South Wales	1	.....
Belgium	1	.....	New Zealand	4	.....
British India	.....	.....	Nicaragua	1	.....
British West Indies	.....	.....	Norway	1	.....
Canada	15	.....	Portugal	.....	.....
Cape Colony	.....	.....	Russia	.....	.....
Chile	.....	.....	Scotland	2	.....
Costa Rica	.....	.....	South Australia	.....	.....
Cuba	1	.....	Spain	1	.....
Denmark	2	.....	Sweden	5	.....
England	24	1	Switzerland	4	.....
Finland	.....	.....	Transvaal, South Africa	.....	.....
France	4	.....	Uruguay	1	.....
Germany	16	1	Victoria	2	.....
Guatemala	.....	.....	Wales	1	.....
India	1	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	2	.....	Total to residents of foreign countries	91	2
Luxemburg	.....	.....			
Mexico	.....	.....			

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 12, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications waiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	June 22	June 26	338
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Mar. 8	May 22	658
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	July 27	July 26	110
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	June 7	July 24	244
167	5. Bookbinding; Harvesters; Jewelry; Music	Apr. 20	May 20	264
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 13	July 10	294
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Mar. 2	May 23	592
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 16	June 28	1276
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Mar. 8	June 5	475
235	10. Carriages and Wagons; Spring Devices	Mar. 6	July 10	826
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 27	Aug. 3	106
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Feb. 10	June 17	631
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 21	July 3	461
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 1	June 14	300
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	June 13	July 17	271
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Jan. '25	June 3	534
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Feb. 7	June 29	310
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 26	July 13	108
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces	June 1	June 29	170
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	July 19	July 14	215
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 1	June 27	316
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 25	June 12	398
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Feb. 26	Apr. 3	476
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Feb. 5	June 3	451
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers.	June 30	July 5	180
106	26. Electricity, Generation; Motive Power	Jan. 25	May 31	611
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	July 10	July 13	228
65	28. Internal-Combustion Engines	May 5	June 7	363
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Apr. 11	July 5	354
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	May 29	July 22	275
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	June 24	514
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Feb. 4	July 10	621
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 27	June 23	370
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Mar. 6	May 1	397
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Apr. 1	July 20	498
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Mar. 23	June 27	847
107	37. Electric Lamps; Electricity, Conduits; Electricity, General Applications	Feb. 15	June 26	722
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	June 17	June 29	202
321	39. Water Distribution	Feb. 23	June 22	386
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	June 21	718
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Apr. 20	June 28	427
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Dec. 28	Apr. 26	634
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	June 29	June 13	151

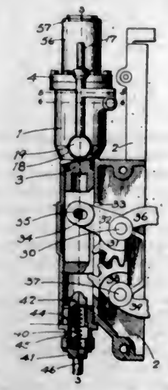
Oldest new case, Dec. 28; oldest amended, Apr. 3.
Total number of applications awaiting action..... 18,531

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-marks	July 8	July 26	738
	Designs	July 7	July 1	218
	Labels and Prints	July 31	July 27	68

PATENTS

GRANTED AUGUST 15, 1916.

1,194,346. FLUID-ACTUATED MOTOR. GEORGE AKANS, Atlanta, Ga., assignor to William S. Murrian, trustee, Knoxville, Tenn. Filed May 10, 1915, Serial No. 27,169. Renewed Mar. 23, 1916. Serial No. 86,281. (Cl. 121—45.)



1. In an apparatus of the nature described, the combination of a main expansion chamber and means associated with said chamber for performing work, means forming a passage from a source of fluid under pressure to said expansion chamber, a main valve on said passage, an auxiliary valve on said passage, and automatic means for closing the auxiliary valve at the expiration of a chosen time after the opening of the main valve, substantially as described.

2. In an apparatus of the nature described, the combination of a main expansion chamber and means associated with said chamber for performing work, means forming a passage from a source of fluid under pressure into the main expansion chamber, a main valve on said passage, an auxiliary valve on said passage between the main expansion chamber and the main valve, and automatic means for closing the auxiliary valve at the expiration of a chosen time after the opening of the main valve, substantially as described.

3. In an apparatus of the nature described, the combination of a main expansion chamber and means associated with said chamber for performing work, means forming a passage from a source of fluid under pressure into said main expansion chamber, a main valve on said passage, an auxiliary valve on said passage, an auxiliary expansion chamber for automatically closing said auxiliary valve at the expiration of a chosen time after the opening of the main valve, substantially as described.

4. In an apparatus of the nature described, the combination of a main expansion chamber and means associated with said chamber for performing work, means forming a passage from a source of fluid under pressure into said main expansion chamber, a main valve on said passage, an auxiliary valve on said passage between said main expansion chamber and the main valve, and an auxiliary expansion chamber for automatically closing said auxiliary valve at the expiration of a chosen time after the opening of the main valve, substantially as described.

5. In an apparatus of the nature described, the combination of a main expansion chamber and means associated with said chamber for performing work, means forming a passage from a source of fluid under pressure into said main expansion chamber, a main valve on said passage, a normally closed auxiliary valve on said passage between said main expansion chamber and the main valve, an auxiliary expansion chamber on said passage for automatically closing said auxiliary valve at the expiration of a chosen time after the opening of the main valve, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,194,347. TOP OR CAP FOR LIQUID-CONTAINERS. JAY M. ALLEN, Decatur, Ill. Filed May 1, 1916. Serial No. 94,543. (Cl. 91—67.4.)



1. An article of manufacture in the form of a cap having a neck portion adapted for attachment to a liquid container, said cap having a nozzle portion provided with an aperture therethrough, a combined valve and spreader member having a rounded portion extending through said aperture, an annular shoulder provided in said cap, a supporting bar resting against said shoulder, said bar having a plurality of cut-out tongues, and a spring resting on said bar and engaging under said tongues and yieldingly holding said combined valve and spreader member in said aperture.

2. An article of manufacture in the form of a cap having a neck portion adapted for attachment to a liquid container, said cap having a nozzle portion provided with an aperture therethrough, said nozzle portion being reduced from the neck portion to provide an annular shoulder, a bar resting against said shoulder and having tongues cut out and extending above the surface thereof, a combined valve and spreader member positioned in the top of the nozzle portion and having a rounded portion extending through said aperture, a spring resting on top of said bar and engaging under said tongues and supporting said combined valve and spreader member in said aperture.

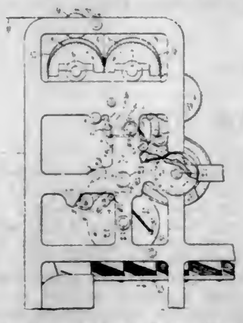
1,194,348. CREASING MECHANISM FOR SHEET COLLECTING AND FOLDING MACHINES. HOWARD M. BARBER, Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 15, 1913. Serial No. 801,298. (Cl. 92—70.)

1. In a machine of the character described, means for folding a signature and means for creasing the signature parallel to the fold.

2. In a machine of the character described, means for folding a signature transversely of its travel and means for creasing the signature parallel to the fold.

3. In a machine of the character described, means for folding a signature and means for reversely creasing the signature parallel to the fold.

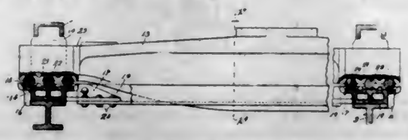
4. In a machine of the character described, means for folding a signature transversely of its travel and means for reversely creasing the signature parallel to the fold.



5. In a machine of the character described, means for folding a signature, a cylinder for receiving and carrying the folded signature to a predetermined point and means coacting with the cylinder for creasing the signature parallel to its folded edge.

[Claims 6 to 15 not printed in the Gazette.]

1,194,349. CAR-TRUCK. JOHN C. BARBER, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed May 6, 1916. Serial No. 95,797. (Cl. 105—243.)



1. In a car truck, the combination with side frames, of a roller bearing plate supported on each side frame, and a cross tie rigidly connecting the roller bearing plates to afford a self-contained structure.

2. In a car truck, the combination with side frames, of a roller bearing plate supported on each side frame, a cross tie rigidly connecting the roller bearing plates, to afford a self-contained structure, and means interlocking the roller bearing plates to the side frames against movement transversely of said side frames.

3. In a car truck, the combination with side frames, of a roller bearing plate supported on each side frame, a cross tie rigidly connecting the roller bearing plates to afford a self-contained structure, and means interlocking the roller bearing plates to the side frames against movement transversely of said side frames, but with freedom for lifting movement therefrom.

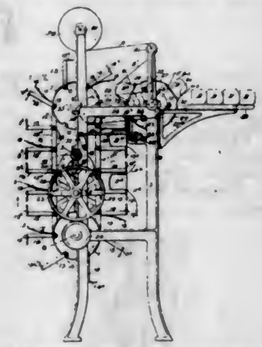
4. In a car truck, the combination with a side frame, of a roller bearing plate supported on the side frame and having a bracket projecting inward from the side frame, and a cross tie secured to said bracket.

5. In a car truck, the combination with a side frame, of a roller bearing plate supported on the side frame, a bracket on the roller bearing plate and having a stop shoulder engaging the side frame, and a cross tie secured to said bracket.

[Claims 6 to 12 not printed in the Gazette.]

1,194,350. WRAPPING-MACHINE. CHARLES BEERS, New Haven, Conn., assignor, by mesne assignments, to The International Bread Wrapping Machine Company, a Corporation of Maine. Filed June 28, 1911. Serial No. 635,789. (Cl. 93—7.)

1. A bread-wrapping machine comprising a loaf feeder, an intermittently movable series of carriers to receive loaves from the feeder, means for supplying wrapping material between the feeder and the carriers to be laid across the outer surface of each loaf as it passes from the feeder to a carrier, and means for severing the wrapping material after each loaf, with a covering of wrapping material, is transferred from the feeder to said carriers.



2. A bread-wrapping machine comprising a loaf feeder having means for supporting loaves projecting outwardly therefrom, an endless series of carriers to receive loaves from the feeder, means for supplying wrapping material between the feeder and the carriers to be laid across the outer surface of each loaf as it passes from the feeder to a carrier, and means for severing the wrapping material after each loaf, with a covering of wrapping material, is transferred from the feeder to said carriers.

3. In a wrapping machine of the character described, a series of intermittently and endlessly movable carriers, rotatable supports therefor having means for locating the carriers thereon, a loaf feeder adjacent to the carriers, said carriers adapted to automatically open while passing around their supports, said feeder adapted to force loaves of varying sizes in contact with a paper strip located between the feeder and carriers and draw off sufficient paper to envelop the top and sides of a loaf and deposit said wrapped loaf into one of the open carriers.

4. A wrapping machine of the character described comprising a series of intermittently and endlessly movable carriers, rods on which the carriers are pivotally supported, said supports having locating means thereon for the rods, said carriers adapted to open while passing around the supports and remain rigidly parallel intermediate thereof, a loaf feeder adjacent to the carriers adapted to carry loaves of varying sizes and force a loaf against an interposed paper strip and draw off paper sufficient to envelop the top and sides of each individual loaf and deposit said loaf on one of the open carriers, and means for automatically severing the paper.

5. A wrapping machine of the character described comprising carrier arms arranged to operated in pairs, each pair pivotally supported on a rod and having face plates at their free ends, intermittently rotatable supports for the carrier arms, locating means on the supports for the rods, said arms adapted to open while passing around the supports and remain rigidly parallel intermediate thereof, a loaf feeder adjacent to the carrier arms adapted to carry loaves of varying sizes and force a loaf against an interposed paper strip and draw off paper sufficient to envelop the top and sides of each individual loaf and deposit the loaf within the open arms, and an automatically actuated knife adapted to pass between the face plates of the arms to sever the paper strip.

[Claims 6 to 11 not printed in the Gazette.]

1,194,351. METHOD OF DEHYDRATING AND CURING TOBACCO. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Nov. 12, 1914. Serial No. 871,671. (Cl. 131—6.)

1. The method of treating tobacco which consists in subjecting it for a sufficient time primarily to the action of air currents of low temperature and high humidity, continuing the treatment until the tobacco becomes yellow, and then subjecting it for a sufficient time to the action of air currents of higher temperature and lower humidity.

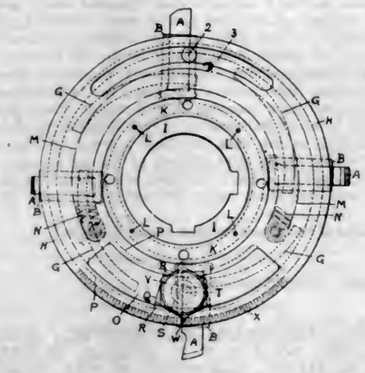
2. The method of treating tobacco which consists in subjecting it for a sufficient time primarily to the action of air currents heated to approximately 75° Fahrenheit and having a humidity of 85%, continuing the action of the air currents for a definite time until the tobacco becomes yellow, and secondarily to the action of air currents having a temperature of 100° and a humidity of from 70% to 75%.

3. The method of treating tobacco which consists in subjecting it for a sufficient time to the action of successively applied moving bodies of air, one body having a temperature of 75° Fahrenheit and a humidity of 85%, and the other a temperature of 100° Fahrenheit and a humidity of between 70% and 75%.

4. The method of treating tobacco, which consists in first subjecting it to the action of air currents having a temperature of 75° Fahrenheit and a humidity of 85%, continuing the action for approximately three days, or until the tobacco shows a change of color, then subjecting it to the action of air currents having a temperature of 100° Fahrenheit and a humidity of from 70% to 75%, and continuing the temperature and humidity for approximately three days, or until the required amount of the original moisture content has been removed and the stems become brittle.

5. The method of treating tobacco, which consists in first subjecting it to the action of air currents having a temperature of 75° Fahrenheit, and a humidity of 85%, continuing the action for approximately three days, or until the tobacco shows a change of color, then subjecting it to the action of air currents having a temperature of 100° Fahrenheit and a humidity of from 70% to 75% and continuing the temperature and humidity for approximately three days, or until aproximately 80% of the original moisture content has been removed, then removing the tobacco out of the action of the air currents, packing it, and setting up fermentation to effect final curing.

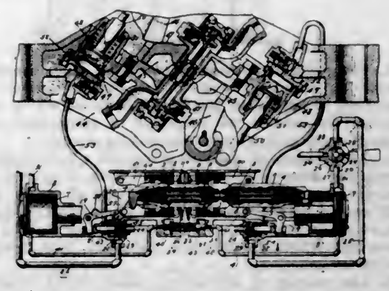
1,194,352. EXPANDING BORING-HEAD AND SCREWING-HEAD. JOHN WILLIAM BRADLEY, Leeds, England. Filed Jan. 30, 1913. Serial No. 745,280. (Cl. 10—144.)



1. In an expanding and collapsing boring and internal screw threading head, in combination a body portion, a rotatable cam plate mounted in the body and having projecting cams thereon; radially disposed slidable tool holding jaws having recesses adapted to engage with said projecting cams; the formation of two concentric slots in the rear of said head, an adjustable plunger box clamped in one of said slots, having an index finger adapted to cooperate with a graduated scale on the rear end of said head, a spring plunger in said box adapted to enter an orifice formed in said cam plate, a head on the exterior end of said plunger having radial orifices therein, a shank for said boring and screwing head, having a longitudinal slot therein, a trip key slidably secured in said slot in said shank and having a projecting part engaging with one of said radial orifices in said plunger head, means for automatically causing said jaws to retire by engaging said trip key and thereby removing said plunger from said spring operated cam plate, means for automatically re-setting said jaws in their desired operative position, comprising a pin secured to said rotatable cam plate and extending through said other concentric slot in the rear face of said head; a bracket or the like adapted to engage said pin and thereby rotate said cam plate until said plunger engages with its orifice in said cam plate.

2. In an expanding and collapsing boring and internal screw threading head, in combination, a rotatable cam plate having projecting cams thereon, radially disposed slidable tool holding jaws having recesses adapted to engage with said projecting cams, a slidably mounted plunger adapted to hold the cam plate in an operative position, spring means of rotating said cam plate, a pin projecting from said cam plate axially parallel therewith, and adapted to engage with a projecting part of a lathe or the like and automatically re-set said cam plate in its normal operative position, and means for automatically disengaging the plunger from the cam plate.

1,194,353. CAR AND ELECTRIC COUPLING. THOMAS R. BROWN, Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Mar. 11, 1914. Serial No. 823,970. (Cl. 173—332.)



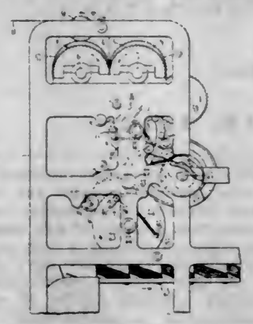
1. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a movable contact carrier having corresponding contacts, of hand controlled means for projecting said carrier to electrically connect the fixed contacts of counterpart couplings after engagement of said couplings.

2. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a longitudinally movable contact slide having corresponding contacts, of fluid pressure operated means for projecting said slide to electrically connect the fixed contacts of counterpart couplings, and a manually operated element for controlling the supply of fluid to said means.

3. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a longitudinally movable contact slide having corresponding contacts, of means for projecting said slide to electrically connect the fixed contacts of counterpart couplings and a locking device controlled by the movement of the slide for holding the same in its projected position.

4. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a longitudinally movable contact slide having corresponding con-

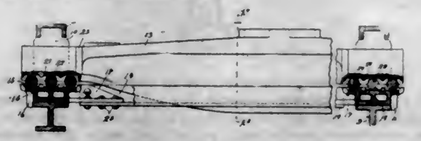
4. In a machine of the character described, means for folding a signature transversely of its travel and means for reversely creasing the signature parallel to the fold.



5. In a machine of the character described, means for folding a signature, a cylinder for receiving and carrying the folded signature to a predetermined point and means coacting with the cylinder for creasing the signature parallel to its folded edge.

[Claims 6 to 15 not printed in the Gazette.]

1,194,349. CAR-TRUCK. JOHN C. BARBER, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed May 6, 1916. Serial No. 95,797. (Cl. 105—248.)



1. In a car truck, the combination with side frames, of a roller bearing plate supported on each side frame, and a cross tie rigidly connecting the roller bearing plates to afford a self-contained structure.

2. In a car truck, the combination with side frames, of a roller bearing plate supported on each side frame, a cross tie rigidly connecting the roller bearing plates, to afford a self-contained structure, and means interlocking the roller bearing plates to the side frames against movement transversely of said side frames.

3. In a car truck, the combination with side frames, of a roller bearing plate supported on each side frame, a cross tie rigidly connecting the roller bearing plates to afford a self-contained structure, and means interlocking the roller bearing plates to the side frames against movement transversely of said side frames, but with freedom for lifting movement therefrom.

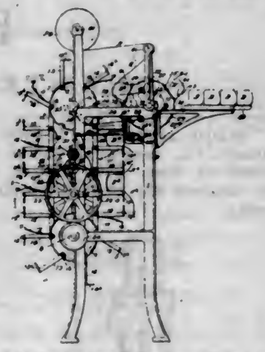
4. In a car truck, the combination with a side frame, of a roller bearing plate supported on the side frame and having a bracket projecting inward from the side frame, and a cross tie secured to said bracket.

5. In a car truck, the combination with a side frame, of a roller bearing plate supported on the side frame, a bracket on the roller bearing plate and having a stop shoulder engaging the side frame, and a cross tie secured to said bracket.

[Claims 6 to 12 not printed in the Gazette.]

1,194,350. WRAPPING-MACHINE. CHARLES BEERS, New Haven, Conn., assignor, by mesne assignments, to The International Bread Wrapping Machine Company, a Corporation of Maine. Filed June 28, 1911. Serial No. 635,789. (Cl. 93—7.)

1. A bread-wrapping machine comprising a loaf feeder, an intermittently movable series of carriers to receive loaves from the feeder, means for supplying wrapping material between the feeder and the carriers to be laid across the outer surface of each loaf as it passes from the feeder to a carrier, and means for severing the wrapping material after each loaf, with a covering of wrapping material, is transferred from the feeder to said carriers.



2. A bread-wrapping machine comprising a loaf feeder having means for supporting loaves projecting outwardly therefrom, an endless series of carriers to receive loaves from the feeder, means for supplying wrapping material between the feeder and the carriers to be laid across the outer surface of each loaf as it passes from the feeder to a carrier, and means for severing the wrapping material after each loaf, with a covering of wrapping material, is transferred from the feeder to said carriers.

3. In a wrapping machine of the character described, a series of intermittently and endlessly movable carriers, rotatable supports therefor having means for locating the carriers thereon, a loaf feeder adjacent to the carriers, said carriers adapted to automatically open while passing around their supports, said feeder adapted to force loaves of varying sizes in contact with a paper strip located between the feeder and carriers and draw off sufficient paper to envelop the top and sides of a loaf and deposit said wrapped loaf into one of the open carriers.

4. A wrapping machine of the character described comprising a series of intermittently and endlessly movable carriers, rods on which the carriers are pivotally supported, said supports having locating means thereon for the rods, said carriers adapted to open while passing around the supports and remain rigidly parallel intermediate thereof, a loaf feeder adjacent to the carriers adapted to carry loaves of varying sizes and force a loaf against an interposed paper strip and draw off paper sufficient to envelop the top and sides of each individual loaf and deposit said loaf on one of the open carriers, and means for automatically severing the paper.

5. A wrapping machine of the character described comprising carrier arms arranged to operated in pairs, each pair pivotally supported on a rod and having face plates at their free ends, intermittently rotatable supports for the carrier arms, locating means on the supports for the rods, said arms adapted to open while passing around the supports and remain rigidly parallel intermediate thereof, a loaf feeder adjacent to the carrier arms adapted to carry loaves of varying sizes and force a loaf against an interposed paper strip and draw off paper sufficient to envelop the top and sides of each individual loaf and deposit the loaf within the open arms, and an automatically actuated knife adapted to pass between the face plates of the arms to sever the paper strip.

[Claims 6 to 11 not printed in the Gazette.]

1,194,351. METHOD OF DEHYDRATING AND CURING TOBACCO. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Nov. 12, 1914. Serial No. 871,671. (Cl. 131—6.)

1. The method of treating tobacco which consists in subjecting it for a sufficient time primarily to the action of air currents of low temperature and high humidity, continuing the treatment until the tobacco becomes yellow, and then subjecting it for a sufficient time to the action of air currents of higher temperature and lower humidity.

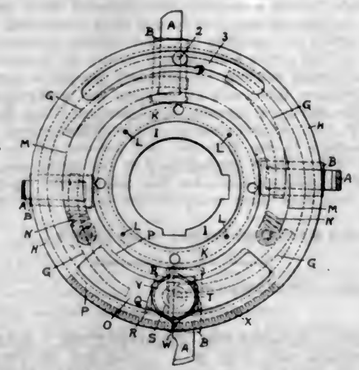
2. The method of treating tobacco which consists in subjecting it for a sufficient time primarily to the action of air currents heated to approximately 75° Fahrenheit and having a humidity of 85%, continuing the action of the air currents for a definite time until the tobacco becomes yellow, and secondarily to the action of air currents having a temperature of 100° and a humidity of from 70% to 75%.

3. The method of treating tobacco which consists in subjecting it for a sufficient time to the action of successively applied moving bodies of air, one body having a temperature of 75° Fahrenheit and a humidity of 85%, and the other a temperature of 100° Fahrenheit and a humidity of between 70% and 75%.

4. The method of treating tobacco, which consists in first subjecting it to the action of air currents having a temperature of 75° Fahrenheit and a humidity of 85%, continuing the action for approximately three days, or until the tobacco shows a change of color, then subjecting it to the action of air currents having a temperature of 100° Fahrenheit and a humidity of from 70% to 75%, and continuing the temperature and humidity for approximately three days, or until the required amount of the original moisture content has been removed and the stems become brittle.

5. The method of treating tobacco, which consists in first subjecting it to the action of air currents having a temperature of 75° Fahrenheit, and a humidity of 85%, continuing the action for approximately three days, or until the tobacco shows a change of color, then subjecting it to the action of air currents having a temperature of 100° Fahrenheit and a humidity of from 70% to 75% and continuing the temperature and humidity for approximately three days, or until aproximately 80% of the original moisture content has been removed, then removing the tobacco out of the action of the air currents, packing it, and setting up fermentation to effect final curing.

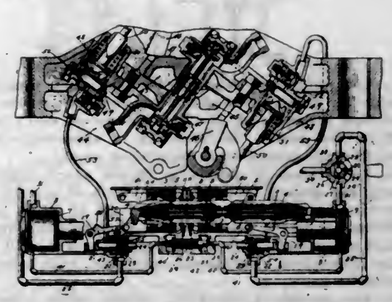
1,194,352. EXPANDING BORING-HEAD AND SCREWING-HEAD. JOHN WILLIAM BRADLEY, Leeds, England. Filed Jan. 30, 1913. Serial No. 745,280. (Cl. 10—144.)



1. In an expanding and collapsing boring and internal screw threading head, in combination a body portion, a rotatable cam plate mounted in the body and having projecting cams thereon; radially disposed slidable tool holding jaws having recesses adapted to engage with said projecting cams; the formation of two concentric slots in the rear of said head, an adjustable plunger box clamped in one of said slots, having an index finger adapted to cooperate with a graduated scale on the rear end of said head, a spring plunger in said box adapted to enter an orifice formed in said cam plate, a head on the exterior end of said plunger having radial orifices therein, a shank for said boring and screwing head, having a longitudinal slot therein, a trip key slidably secured in said slot in said shank and having a projecting part engaging with one of said radial orifices in said plunger head, means for automatically causing said jaws to retire by engaging said trip key and thereby removing said plunger from said spring operated cam plate, means for automatically re-setting said jaws in their desired operative position, comprising a pin secured to said rotatable cam plate and extending through said other concentric slot in the rear face of said head; a bracket or the like adapted to engage said pin and thereby rotate said cam plate until said plunger engages with its orifice in said cam plate.

2. In an expanding and collapsing boring and internal screw threading head, in combination, a rotatable cam plate having projecting cams thereon, radially disposed slidable tool holding jaws having recesses adapted to engage with said projecting cams, a slidably mounted plunger adapted to hold the cam plate in an operative position, spring means of rotating said cam plate, a pin projecting from said cam plate axially parallel therewith, and adapted to engage with a projecting part of a lathe or the like and automatically re-set said cam plate in its normal operative position, and means for automatically disengaging the plunger from the cam plate.

1,194,353. CAR AND ELECTRIC COUPLING. THOMAS R. BROWN, Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Mar. 11, 1914. Serial No. 823,970. (Cl. 173—332.)



1. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a movable contact carrier having corresponding contacts, of hand controlled means for projecting said carrier to electrically connect the fixed contacts of counterpart couplings after engagement of said couplings.

2. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a longitudinally movable contact slide having corresponding contacts, of fluid pressure operated means for projecting said slide to electrically connect the fixed contacts of counterpart couplings, and a manually operated element for controlling the supply of fluid to said means.

3. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a longitudinally movable contact slide having corresponding contacts, of means for projecting said slide to electrically connect the fixed contacts of counterpart couplings and a locking device controlled by the movement of the slide for holding the same in its projected position.

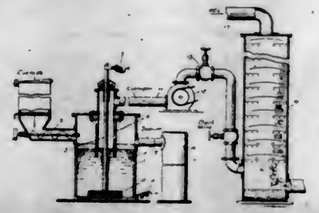
4. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a longitudinally movable contact slide having corresponding con-

tacts, of means for projecting said slide to electrically connect the fixed contacts of counterpart couplings, a locking device for holding the slide in its projected position, and fluid pressure operated means for releasing said locking device.

5. In an electric train line coupling, the combination with a casing containing a plurality of fixed contacts adapted to be connected to train line circuits and a longitudinally movable contact slide having corresponding contacts, of fluid pressure means for projecting said slide to electrically connect the fixed contacts of counterpart couplings, a spring actuated lock for holding said slide in the projected position, a fluid pressure operated means for releasing said lock, and manually operated means for controlling the fluid pressure for projecting the slide and for releasing said lock.

[Claims 6 to 19 not printed in the Gazette.]

1,194,354. ELECTROLYTIC AND SAPONIFYING PROCESS FOR PRODUCING NITRILE DERIVATIVES. JOHN E. BUCHER, Coventry, R. I., assignor to Nitrogen Products Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 23, 1915. Serial No. 9,955. (Cl. 204—19.)



1. The process of producing oxamid which comprises conducting gaseous cyanogen into a bath of aqueous concentrated halogen acid the temperature of which is insufficient to permit the formation of appreciable quantities of oxalic acid, to form the product sought.

2. The process of producing oxamid which comprises conducting gaseous cyanogen into a bath of aqueous concentrated halogen acid the temperature of which is insufficient to permit the formation of appreciable quantities of oxalic acid, to form the product sought, said bath being maintained substantially saturated with cyanogen during the reaction.

3. The process of producing oxamid which comprises conducting gaseous cyanogen into a heated bath of aqueous concentrated halogen acid under temperature conditions which do not permit the formation of appreciable quantities of oxalic acid to form the product sought.

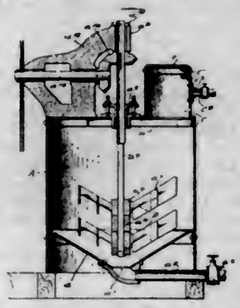
4. The process of producing oxamid which comprises conducting gaseous cyanogen into a bath of aqueous concentrated halogen acid under temperature conditions which favor the production of oxamid and agitating said bath while the gas is in contact therewith, to maintain the cyanogen saturation thereof.

5. The process of producing oxamid which comprises conducting gaseous cyanogen under pressure into an aqueous bath of catalytic material capable of combining the water present in said bath with said cyanogen to form oxamid.

[Claims 6 to 24 not printed in the Gazette.]

1,194,355. GROUT-MIXER. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Dec. 9, 1910. Serial No. 596,423. (Cl. 83—73.)

1. In a grout mixer, a receptacle for the mixer, a vertical shaft therein, the shaft being polygonal for a portion of its length and free at the lower end thereof, paddle wheels disposed one above the other on the polygonal portion of said shaft and removable from the lower end thereof, said paddles being mounted in pairs on arms that extend upwardly, and a funnel disposed below said wheels, the sides of said funnel corresponding to the pitch of said arms.



2. In a grout mixer, a receptacle for the mixture, a vertical shaft in said receptacle, a paddle wheel on said shaft, said wheel having upwardly extending arms on which the paddles or blades are carried, the said paddles or blades being arranged to throw the mixture inward, the rear ends of the paddles or blades being lower than their forward ends, and a funnel-shaped bottom for said receptacle, the sides of said funnel corresponding to the pitch of said arms and blades.

3. In a grout mixer, a receptacle for the mixture, a vertical shaft in said receptacle, a paddle wheel on said shaft, said wheel having upwardly extending arms on which the paddles or blades are carried, the said paddles or blades being arranged to throw the mixture inward, the rear ends of the paddles or blades being lower than their forward ends, a funnel-shaped bottom for said receptacle, the sides of said funnel corresponding to the pitch of said arms and blades, an off-take for the lower end of said funnel, means for introducing fluid pressure to expel the mixture, a stuffing box for the upper portion of said shaft, to prevent escape of pressure, a thrust bearing for the upper end of said shaft, and means for rotating said shaft, disposed between said stuffing-box and bearing.

4. A mixing machine comprising a receptacle having a fluid pressure inlet, and an opening for introducing the materials having a movable door disposed when open directly in front of and close to said inlet, presenting its inside surface to the fluid jet, and thereby automatically closed by the direct impingement of the jet thereon.

5. A mixing machine comprising a receptacle having a fluid pressure inlet, and an opening for introducing the materials having a movable door disposed when open directly in front of and close to said inlet, presenting its inside surface to the fluid jet, and thereby automatically closed by the direct impingement of the jet thereon, said receptacle having a dome, the door being at the top of said dome, and said inlet being located in the side of said dome.

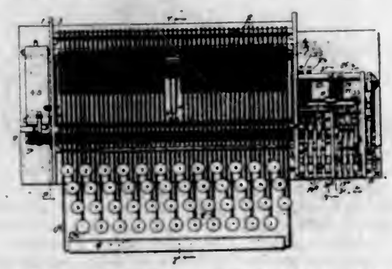
[Claims 6 and 7 not printed in the Gazette.]

1,194,356. [WITHDRAWN.]

1,194,357. TELEGRAPH-TRANSMITTER. ALLEN D. CARDWELL, New York, N. Y. Filed Jan. 15, 1913, Serial No. 742,111. Renewed Oct. 29, 1914. Serial No. 869,349. (Cl. 178—33.)

1. A telegraph transmitter comprising keys, contacts to transmit one character of current, contacts to transmit a different character of current, means controlled by said keys to cause either of said contacts to be closed successively or to close said contacts alternately, and means controlled by said keys to vary the duration of the impulses transmitted through said contacts.

2. A telegraph transmitter comprising keys, a plurality of contacts to cause impulses of different character respectively to be transmitted, a plurality of members to enable actuation of said contacts, each member being adapted to actuate either of said contacts, means controlled by said keys to actuate said members, mechanism to operate said members, and means controlled by said mechanism to control the duration of the impulses thrown on the line by said contacts.



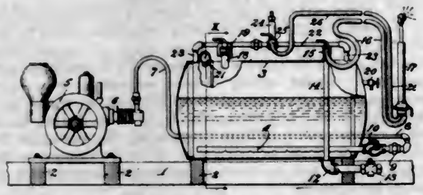
3. A telegraph transmitter comprising keys, make and break contacts, mechanism controlled by said keys for causing operation of said contacts, and mechanism independent of the first named mechanism controlled by said keys for changing the duration of engagement of said contacts.

4. A telegraph transmitter comprising keys, make and break contacts, mechanism controlled by said keys for causing operation of said contacts, and mechanism normally causing impulses of one duration to be transmitted by said contacts and adapted to be operated by said keys to cause impulses of a different duration to be transmitted by said contacts.

5. A telegraph transmitter comprising keys, make and break contacts, mechanism controlled by said keys for causing operation of said contacts, other make and break contacts, a member to actuate the latter, and mechanism controlled by said keys to operate said member to cause the latter to vary the engagement of the first named contacts.

[Claims 6 to 65 not printed in the Gazette.]

1,194,358. SPRAYING APPARATUS. ROBERT E. CECIL, Sewickley, and HORACE E. GRANT, Pittsburgh, Pa. Filed Jan. 17, 1912. Serial No. 671,594. (Cl. 137—67.)



1. In a spraying apparatus and in combination, a liquid containing tank, means for introducing air under pressure to said tank, a drain pipe at the bottom of the tank, an open-ended upwardly extending liquid discharge pipe having its inlet end within the drain pipe, and a nozzle operatively connected to said discharge pipe.

2. In a spraying apparatus and in combination, a liquid containing tank, means for introducing air under pressure to said tank, a drain pipe at the bottom of the tank and extending below the same, an open-ended liquid discharge pipe of less diameter than the drain pipe and extending through said tank and entering said drain pipe, a nozzle, and a hose connection between said discharge pipe and the nozzle.

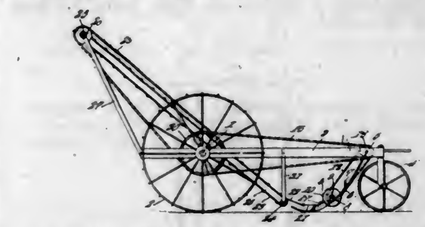
3. In a spraying apparatus and in combination, a liquid containing tank, means for introducing air under pressure to said tank, a drain pipe at the bottom of the tank and extending below the same, an open-ended liquid discharge pipe of less diameter than the drain pipe and extending through said tank and entering said drain pipe, a nozzle, and a hose connection between said discharge pipe and the nozzle, said means being in the form of a unit embodying an air-forcing device and mechanism for operating said device.

4. In a spraying apparatus and in combination, a liquid containing tank, means for introducing air under pressure to said tank, a drain pipe at the bottom of the tank and extending below the same, an open-ended liquid discharge pipe of less diameter than the drain pipe and extending through said tank and entering said drain pipe, a nozzle, and a hose connection between said discharge pipe and the nozzle, and an air discharge device in communication with said tank, said means being in the form of a unit embodying an air-forcing device and mechanism for operating said device.

5. In a spraying apparatus and in combination, a liquid containing tank having a controllable open-ended vertically-extending liquid discharge pipe, and also having an air discharge pipe adapted to coöperate with the liquid pipe in producing the spray, a drain pipe positioned relative to the open end of the discharge pipe to permit ready access thereto through the drain pipe, means for introducing air under pressure within said tank, and a supporting frame for said tank and means.

[Claims 6 to 8 not printed in the Gazette.]

1,194,359. MACHINE FOR TOPPING BEETS. ROBERT CHADWICK, Lexington, Nebr. Filed Nov. 20, 1915. Serial No. 62,575. (Cl. 55—107.)



1. A machine for topping beets, including an endless conveyer, runners mounted for up and down swinging movement and in advance of the conveyer, a connection between the runners, a knife adjustably secured to said connection and shiftable upwardly and downwardly relative to the runners, and means connected to said knife for splitting the crown portion of the beet and for severing said crown portion respectively, and means for directing the severed portions of the beets from said severing means onto the conveyer.

2. A machine for topping beets, including an elevator, runners mounted for up and down swinging movement, a connection between the runners, an arm between the runners, means depending from the connection and engaging the arm for adjusting said arm upwardly and downwardly relative to the runners, separate knives connected to the arm for successively dividing the tops, splitting the crowns and severing the split crowns of the beets, and means for directing the severed portion of the beets onto the elevator.

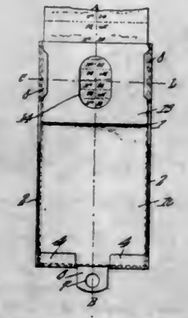
3. A machine for topping beets, including an elevator, runners mounted for up and down swinging movement, a connection between the runners, an arm between the runners, means depending from the connection and engaging the arm for adjusting said arm upwardly and downwardly relative to the runners, separate knives connected to the arm for successively dividing the tops, splitting the crowns and severing the split crowns of the beets, and means for directing the severed portions of the beets onto the elevator, said means being hingedly mounted and bearing upon the elevator.

4. In a machine for topping beets, a movable frame, an elevator supported thereby, a transverse shaft, runners pivotally mounted thereon and extending downwardly and rearwardly therefrom and normally engaging the ground,

an arm interposed between the runners and pivotally mounted on the shaft, a connection between the runners, means extending from said connection and engaging said arm for adjusting said arm upwardly and downwardly relative to the runners, a reel supported by the runners, means for transmitting motion from said shaft to the reel, means carried by the arm and back of the reel for severing the tops of the beets, splitting the crown portion of the beet and removing said crown portion, and means for directing said severed portion of the beet onto the elevator.

5. In a machine for topping beets, a movable frame, an elevator supported thereby, a transverse shaft, runners pivotally mounted thereon and extending downwardly and rearwardly therefrom and normally engaging the ground, an arm interposed between the runners and pivotally mounted on the shaft, a connection between the runners, means extending from said connection and engaging said arm for adjusting said arm upwardly and downwardly relative to the runners, a reel supported by the runners, means for transmitting motion from said shaft to the reel, a longitudinal cutting blade carried by the arm, a substantially vertical cutting blade carried thereby, a substantially horizontal severing blade extending rearwardly from the vertical blade, and an apron hingedly connected to said severing blade and bearing upon the elevator, said blades being rigid and fixed relative to each other and to the arm.

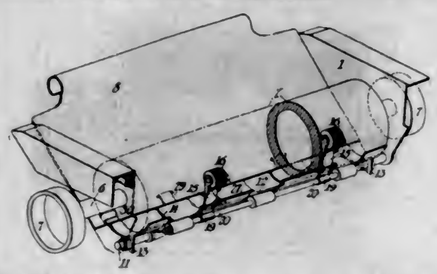
1,194,360. COUPON-HOLDER. KERRY E. CONLEY, Rochester, Minn. Filed Feb. 13, 1915. Serial No. 8,089. (Cl. 211—37.)



A holder of the class described formed of blank sheet metal and comprising a cover plate having side and end flanges coöperating to form an end pocket, angular retaining ears extending from the sides of the cover-plate at that end thereof remote from the pocket, a magazine including a box-like portion insertible longitudinally between the side flanges and into the pocket and having an open face, and a flexible tongue extending outwardly from and the full width of one end of said box-like portion and insertible longitudinally into engagement with the angular ears on the cover plate, said tongue being flush with the open face of the magazine and constituting means for holding the box-like portion pressed yieldingly with its open face against the cover plate and between the side flanges, the angular ears, tongues, flanges and pockets coöperating to hold the box-like portion against accidental displacement relative to the cover plate.

1,194,361. TYPE-WRITING MACHINE. THOMAS J. COO, Toronto, Ontario, Canada, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 3, 1914. Serial No. 848,742. (Cl. 197—127.)

1. In a typewriting machine having a revoluble platen, the combination of a paper apron supported at the bottom of the platen and curved to conform to the contour thereof, spring fingers detachably connected with said apron and extending forwardly therefrom, and hard, biting rolls carried by said springs in position to receive the bottom edge of a work-piece when introduced downwardly over the platen printing surface, and to feed and hold said work-piece to said printing surface in its introductory and advanced positions, said apron conducting the work-piece, in curved or flexed condition, around the bottom of the platen in proximity thereto.



2. In a typewriting machine having a revoluble platen, the combination of a paper apron at the bottom of the platen, a pair of hard, biting feed rolls, and a detachable connection between said rolls and paper apron comprising spring means whereby said rolls are normally pressed against the platen in the neighborhood of the printing zone thereon, said rolls being adapted to receive the bottom edge of a work-piece when introduced downwardly over the platen printing surface, and to feed and hold said work-piece to said printing surface in its introductory and advanced positions.

3. In a typewriting machine having a revoluble platen, the combination of a paper apron supported beneath the platen and curved to conform to the contour thereof, said apron having forward edges flared away from the platen to receive a downwardly introduced stiff work-piece, feed rolls with hard, biting surfaces also extending forwardly from said paper apron, in advance of the flared edges thereof, and means for pressing said rolls upon the platen in the neighborhood of the printing zone thereon, to enable said rolls to receive the bottom edge of the stiff work-piece and conduct said work-piece downwardly to the flared edges of said paper apron, for entry between said apron and platen, and said apron conducting the work-piece, in curved or flexed condition, around the bottom of the platen in proximity thereto.

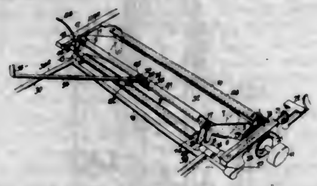
4. In a typewriting machine having a revoluble platen, the combination of a paper apron supported beneath the platen and having forward edges rolled or flared away from the platen to receive a downwardly introduced stiff work-piece, curved spring fingers extending from said apron to guide the work-piece to said apron edges, and feed rolls carried by said spring fingers and having hard, biting surfaces, said rolls pressing upon the platen in the neighborhood of the printing zone thereon, to receive the bottom edge of said work-piece and feed it downwardly to said paper apron.

5. In a typewriting machine having a revoluble platen, the combination of a paper apron at the bottom of said platen, spring fingers extending from the forward edge of said paper apron, hard, biting rolls supported by said fingers, and a releasable bearing upon said paper apron for each finger, said bearings forming fulcrums from which said rolls press against the platen in the neighborhood of the printing zone thereon, to receive and conduct a work-piece downwardly into said paper apron.

[Claims 6 to 25 not printed in the Gazette.]

1,194,362. TYPE-WRITING MACHINE. FRANK A. COOK, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 17, 1915. Serial No. 40,364. (Cl. 197—126.)

1. In a typewriting machine, a carriage, a frame on said carriage having a bodily swinging movement in a direction at right angles to the direction of letter-feed movement of the carriage, a platen revolubly mounted in said frame to swing therewith, means for locking the frame against such movement on the carriage, and means for unlocking and, in a single operation, swinging the frame to throw the platen to a paper-releasing position on the carriage.



2. In a typewriting machine, a carriage, a frame on said carriage having a bodily swinging movement in a direction at right angles to the direction of letter-feed movement of the carriage, a platen revolubly mounted in said frame to swing therewith, a latch on said frame for locking the frame in a normal writing position on the carriage, and means for unlatching and swinging the frame with the platen to a paper-releasing position on the carriage.

3. In a typewriting machine, a carriage, a platen, a frame on the carriage having the platen revolubly mounted therein, means for swinging said frame with the platen bodily in an arcuate path between a normal writing position and a paper-releasing position on the carriage, means for locking the platen frame in its normal writing position, means for automatically unlocking the frame in the operation of swinging it to paper-releasing position, and means in permanent position on the carriage for effecting line-space movement of the platen.

4. In a typewriting machine, a carriage, a platen, a frame pivoted to the carriage and having the platen revolubly mounted therein, a latch for locking the frame down against the carriage in normal writing position on the latter, and a lever adapted to operate said latch to release the frame and to engage and swing the frame bodily in an arcuate path to a paper-releasing position.

5. In a typewriting machine, a carriage, a platen, a frame pivoted to the carriage and having the platen revolubly mounted therein, a latch for locking the frame down against the carriage in normal writing position on the latter, and a lever pivoted to said frame to have a rocking movement thereon to unlock the frame from the carriage and to serve as a means for throwing the frame bodily in an arcuate path to a paper-releasing position on the carriage.

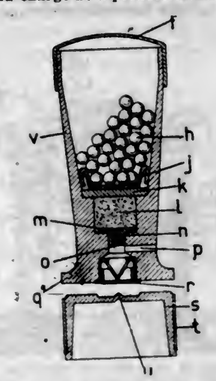
[Claims 6 to 15 not printed in the Gazette.]

1,194,363. ELONGATED PROJECTILE. BALTASAR FARGAS DE CASANOVAS and RAMÓN RUBIÓ Y ROGER, Barcelona, Spain. Filed Jan. 22, 1915. Serial No. 3,781. (Cl. 102—29.)

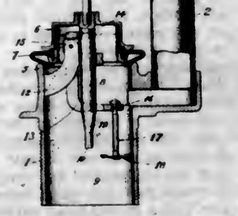
1. An elongated projectile for smooth bore guns, comprising a body having a head of the diameter of the caliber of the projectile and tapering rearwardly, and terminating at the rear in a circular flange of the diameter of the caliber of the projectile, said body being provided with a shot containing cavity at the forward end, an explosive charge containing cavity in the rear thereof, and means for igniting said charge at a predetermined time after discharge, and a slightly convex cover for said shot containing cavity.

2. An elongated projectile for smooth bore guns, comprising a body having a head of the diameter of the caliber of the projectile and tapering rearwardly, and terminating at the rear in a circular flange of the diameter of the caliber of the projectile, said body being provided with a shot containing cavity at the forward end, an explosive charge containing cavity in the rear thereof, means for igniting said charge, a slightly convex cover for said shot containing cavity, and a disk separating the shot containing and charge containing cavities.

3. An elongated projectile for smooth bore guns, comprising a body having a head of the diameter of the caliber of the projectile and tapering rearwardly, and terminating at the rear in a circular flange of the diameter of the caliber of the projectile, said body being provided with a shot containing cavity at the forward end, an explosive charge containing cavity in the rear thereof, means for igniting said charge at a predetermined time after discharge, a slightly convex cover for said shot containing cavity, a disk separating the shot-containing and charge containing cavities, a priming cap in the base of said projectile, and a striking member adapted to be discharged simultaneously with the projectile and provided with a projecting member adapted to impact against said priming cap.



1,194,364. VALVE MECHANISM. EDWARD L. DELANY, New York, N. Y. Filed July 9, 1914. Serial No. 850,004. (Cl. 4—5.)

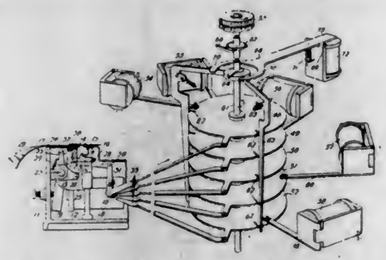


In a valve mechanism for flush tanks, the combination with a valve having a central depending stem formed with a tapered extremity, and a bracket rigidly mounted in the valve casing and formed with an aperture through which said stem projects, of a gravitating lever fulcrumed on said bracket and having an engaging surface adapted, when said valve is raised until the tapered extremity of said stem is within or above said bracket, to bear against said stem and hold the tapered extremity thereof in frictional engagement with said bracket to hold the valve elevated until the flow of water ceases.

1,194,365. PRINTING-TELEGRAPH RECEIVER. AMOS F. DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 20, 1914, Serial No. 825,996. Renewed Feb. 16, 1915. Serial No. 8,619. (Cl. 178—33.)

1. A receiving apparatus comprising two sets of selecting members, apparatus for controlling said sets of mem-

bers simultaneously, an operative instrumentality adapted to coöperate with one of said sets, means affected by the other said set for partially controlling the coöperation of said instrumentality and its associated set, and an electro-responsive device controlled by said apparatus independently of said sets for likewise partially controlling the coöperation of said instrumentality and its associated set.



2. In a telegraph receiver the combination of a plurality of selecting members, means for selecting combinations of said members, a plurality of perforating punches, a plurality of punch selecting mechanisms controlled by said members, an operating means for said punches, a controlling circuit for said operating means, contacts controlled by said members, means controlled by said contacts to partly prepare said circuit, and electromagnetic means operated by the selecting means for completing said circuit.

3. In a telegraph receiver, the combination of a plurality of selecting members, a perforating reproducer adapted to be prepared for operation by said members, an operating means for said reproducer, a controlling circuit for said operating means, contacts therefor controlled by said members, to partly prepare said circuit, and an electro-responsive device for completing said circuit independently of said members.

4. In a telegraph receiver, the combination of a plurality of selecting disks, a perforating reproducer adapted to be prepared for operation with said disks, an operating means for said reproducer, a controlling circuit for said operating means, two sets of contacts controlled by said disks, means controlled by one set of said contacts to partly prepare said circuit, independent means for completing said circuit, and means controlled by the other set of said contacts to open said circuit.

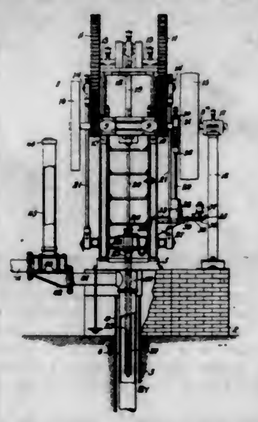
5. In a telegraph receiver, the combination of a plurality of selecting disks, a perforating reproducer adapted to be prepared for operation by said disks, an operating means for said reproducer, a controlling circuit for said operating means, two sets of contacts controlled by said disks, a relay operated by one set of said contacts to partly prepare said circuit, means for completing said circuit, a locking circuit for said relay operated by the same set of contacts, and a second relay controlled by the other set of said contacts to open the locking circuit for the first mentioned relay.

[Claims 6 and 7 not printed in the Gazette.]

1,194,366. CUSHIONING AND OILING MEANS FOR DEEP-WELL PUMPS. ROBERT M. DOWNIE, Beaver Falls, Pa., assignor to Keystone Driller Company, Beaver Falls, Pa., a Corporation of Pennsylvania. Filed July 12, 1915. Serial No. 39,437. (Cl. 103—79.)

1. A deep well pump provided with an air bell or chamber adjacent and in fixed relation to and located above and free from mechanical connection with the pump cylinder, whereby the air bell is normally stationary and may be applied to or removed from the pump cylinder with and by the pump piston or pistons, and means for directing air to said air bell.

2. A deep well pump provided with an annular air bell or chamber adjacent to and free from mechanical connection with the pump cylinder, whereby the air bell is normally stationary and may be applied to and removed from the pump cylinder with and by the pump piston or pistons, and means for directing air to said air bell.



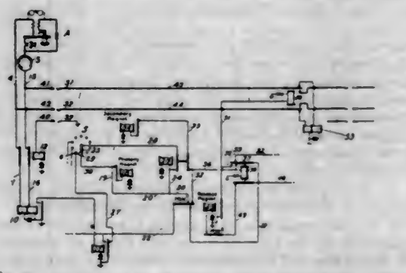
3. A deep well pump provided with an annular air chamber adjacent to the pump cylinder, said air bell or chamber comprising two tubular members in spaced relation one to the other, joined at the upper end and open at the lower end, with one of said members longer than the other and constituting the supporting member for the bell, said supporting member having passages therethrough at the lower end.

4. A deep well pump having a well tubing and a pump cylinder at the lower end thereof, an annular air bell or chamber within the well tubing and adjacent to and above the pump cylinder in spaced relation to the well tubing, and means for directing air to said air bell.

5. A deep well pump having a well tubing, a pump cylinder at the lower end thereof, an annular air bell having concentric walls in spaced relation joined at the upper end with the walls spaced apart at the lower ends to provide an annular entrance to the air bell, the outer wall of the air bell being longer than the inner wall and supporting the air bell in spaced relation to the well tubing with the outer wall provided with passages at its lower end opening into the space between the air bell and well tubing, and means for supplying air to the air bell.

[Claims 6 to 23 not printed in the Gazette.]

1,194,367. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. BERT G. DUNHAM, Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 7, 1915. Serial No. 32,688. (Cl. 179—23.)



1. In combination, groups of lines, finders wherein said lines terminate in multiple contacts, a starting conductor adapted to preselect an idle finder, a group switch associated with each finder and having a multiple contact for each group and a brush adapted to coöperate therewith, a relay for each group adapted normally to maintain

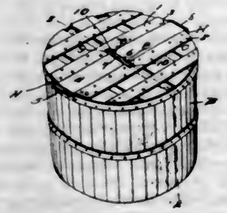
ground upon its group contact, a line relay for each line adapted to energize the corresponding group relay, and primary and secondary magnets for each finder, of a circuit for said primary magnet closed upon the energization of a group relay and leading through an off-normal contach of said finder, a control relay therefor energized in parallel therewith, circuits for said relay including a front contact thereof and grounded contacts of non-calling groups, a circuit for said secondary magnet controlled at a back contact of said control relay, and means for opening said circuit when the calling line is reached.

2. In combination, groups of lines, finders wherein said lines terminate in multiple contacts, multiple test terminals for the lines in said finders, a starting conductor adapted to preselect an idle finder, a group switch associated with each finder and having a multiple contact for each group and a brush adapted to coöperate therewith, a relay for each group adapted normally to maintain ground upon its group contact, a line relay for each line adapted to energize the corresponding group relay, and primary and secondary magnets for each finder, of a circuit for said primary magnet closed upon the energization of a group relay and leading through an off-normal contact of said finder, a control relay therefor energized in parallel therewith, circuits for said relay including a front contact thereof and grounded contacts of non-calling groups, a circuit for said secondary magnet controlled at a back contact of said control relay and a front contact of said group relay, and a cutoff relay for each line connected to the test terminal of said line in the finder and adapted to be operated when the calling line is reached to de-energize the line relay to cause the group relay to open the secondary stepping circuit.

3. The combination with an automatic switch, primary and secondary magnets therefor, a control relay, a circuit for energizing said primary magnet and said relay simultaneously, a circuit for continuing the operation of said magnet including an armature and front contact of said relay, and an operating circuit for said secondary magnet including an armature and back contact of said relay.

4. The combination with an automatic switch, primary and secondary stepping magnets therefor, a control relay, a circuit for energizing said primary magnet and said relay simultaneously, a circuit for maintaining the energization of said control relay, and a stepping circuit for continuing the operation of said primary magnet including an armature and front contact of said relay, and a stepping circuit for said secondary magnet including an armature and back contact of said relay.

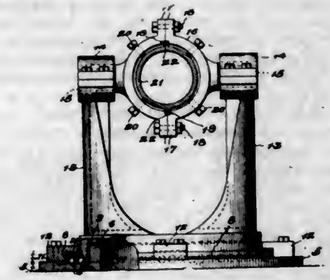
1,194,368. BASKET-TOP FASTENER. JOHN F. EAST, Norfolk, Va. Filed Oct. 22, 1914. Serial No. 868,092. (Cl. 217—124.)



1. In an open-topped receptacle having upstanding handles at its mouth, a closure therefor having spaced battens across it, a fastening strip removably disposed between said battens and with its ends engaging said handles, the battens and strip having registering notches at about their midlength, and a latch of resilient strap iron secured at its center upon said strip and having down-turned ends lying in the notches of the strip and adapted to spring into the notches of the battens, the extremities of said ends being up-turned for the purpose set forth.

2. The herein described fastener for a basket cover, the same comprising a strip longer than the width of said cover and adapted at its extremities to pass under the basket-handles, and a strap-metal latch secured at its center across said strip and having downturned ends, the cover having openings into which said ends spring when the fastener is in operative position.

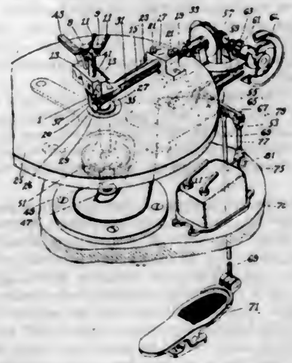
1,194,369. SUPPORT FOR DREDGE SUCTION-PIPES. FRANK L. ELWOOD, Gary, Ind. Filed Aug. 21, 1915. Serial No. 46,717. (Cl. 37—46.)



1. In a dredge, the combination, with a suction-pipe having a longitudinally-extending rib, of a collar enveloping said pipe and having a slot receiving said rib and comprising separable sections, trunnions, and set-screws clamping said pipe, and a rotatable support having bearings in which said trunnions are journaled.

2. In a dredge, the combination, with a suction-pipe having a longitudinally-extending rib, of a collar enveloping said pipe and having a slot receiving said rib and comprising separable sections, trunnions, and set-screws clamping said pipe, a base-plate, a base turnable on said base-plate and means holding said base and base-plate in proper relation, and pillars upstanding from said base and having bearings in which said trunnions are journaled.

1,194,370. MACHINE FOR FINISHING THE EDGES OF LEATHER. HERBERT E. ENSLIN, Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 13, 1913. Serial No. 800,793. (Cl. 69—1.)



1. An apparatus of the class described comprising means for shrinking the margin of a piece of leather and means for protecting the body of the piece from the action of said shrinking means.

2. An apparatus of the class described comprising a highly heated shrinking tool adapted to act on the margin of a piece of leather and a guard arranged to protect the body of the piece and to restrict the heat to said margin.

3. An apparatus of the class described comprising a highly heated shrinking tool adapted to act upon the

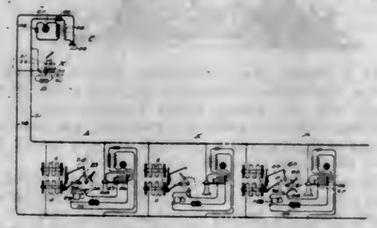
margin of a piece of leather and a guard mounted in proximity to said tool and adapted to protect the body of the piece and to restrict the heat to the margin.

4. An apparatus of the class described comprising a shrinking means, mechanism for causing said shrinking means to act upon the margin of a piece of leather, means for varying the length of time that said shrinking means acts upon a given portion of leather, and means for simultaneously varying the intensity of the action of said shrinking means.

5. An apparatus of the class described comprising a heated tool, means for causing the tool to traverse the margin of a piece of leather to shrink it, means for varying the rate of traverse and means operated by the traverse varying means for correspondingly varying the shrinking effect of the tool.

[Claims 6 to 10 not printed in the Gazette.]

1,194,371. SELECTIVE SIGNALING SYSTEM. JOHN ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed June 24, 1912. Serial No. 705,402. (Cl. 177—343.)



1. In a signaling system, a line circuit, a station selector, means responsive to a plurality of impulses transmitted over said line in one direction to operate said selector and means responsive to a single reverse current impulse over said line to release said selector when it is in certain positions and responsive only to a plurality of reverse current impulses over said line to release said selector when it is in other positions.

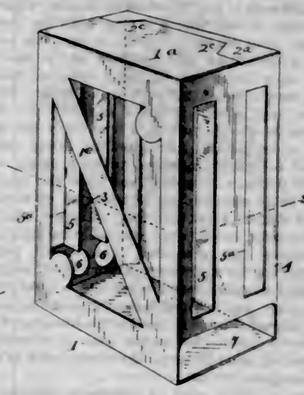
2. In a signaling system, a line circuit, a station selector, automatic means responsive to a plurality of impulses transmitted over said line in one direction to operate said selector, automatic means responsive to a single impulse over said line in the reverse direction to release said selector when it is in certain positions, said means responsive only to a plurality of impulses over said line in the reverse direction to release said selector when it is in other positions.

3. In a signaling system, a signaling circuit, means for controlling the same, said means comprising a driving mechanism and a magnet for said mechanism to close the circuit in response to impulses in one direction, and to break the circuit in response to impulses in the reverse direction.

4. In a signaling system, a line circuit, a plurality of switches thereon, each of said switches having electromagnetic means responsive to a group of impulses transmitted over said line circuit in one direction to operate said switches, certain of said switches having devices for preventing their release in response to a reverse impulse, the remainder of said switches having means responsive to said reverse impulse to release them, said electromagnetic means in all of said selectors on said line being then again responsive to impulses over said line circuit in the first direction to operate all of the selectors, the means in said remaining selectors being then responsive to a reverse impulse to release all the said remaining selectors but one, the means in said one being responsive to an additional and consecutive reverse impulse to release said one switch also.

5. In a telephone system, a line circuit, a plurality of station selectors on said line circuit, a signaling circuit for each selector, means for sending impulses of current in one direction or in the reverse direction, progressively movable means in each switch responsive to said impulses whereby a certain definite number of impulses will advance all of the selectors a corresponding number of steps to close all the signaling circuits, and means for releasing said selectors responsive only to two consecutive impulses of the said reverse character.

1,194,372. VENDING-CARTON. ALBERT T. FISCHER, Cleveland, Ohio. Filed Dec. 3, 1915. Serial No. 64,803. (Cl. 229—17.)



1. A carton having a dispensing opening and means within the carton for retaining the contents in vertically alined rows, and forming guide channels therefor, while permitting the contents to move into registry with said opening.

2. A carton having a dispensing opening and partition members extending inwardly from the walls of the carton for retaining the contents in vertically alined rows, and forming guide channels therefor, while permitting the contents to move into registry with said opening.

3. A carton having a dispensing opening and partition members formed by severing portions of the walls of the carton, said partition members being folded to extend inwardly and serving to divide the contents into vertical rows and to maintain the rows in vertical alinement, and forming guide channels therefor, while permitting the contents to move into registry with said opening.

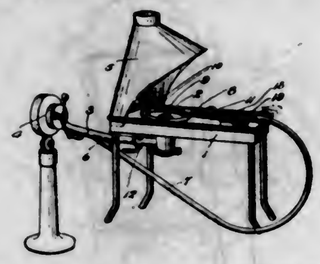
4. A carton having a dispensing opening, a plurality of panels partially cut in oppositely disposed portions of the carton, said panels being folded to extend inwardly, said panels serving to divide the contents of the box into vertical rows and to maintain the vertical rows in alinement, and forming guide channels therefor, while permitting the contents to move into registry with said opening.

5. A carton having oppositely disposed portions in one of which portions there is a dispensing opening and in the other of said portions an opening by which access may be had to the interior of the carton to push an article contained therein through the dispensing opening, said portions being provided with inwardly extending partition members which are above the said openings in the said portions, the partition members serving to retain the articles within the carton in vertical alinement, and forming guide channels therefor, while permitting the contents to move into registry with said opening.

[Claim 6 not printed in the Gazette.]

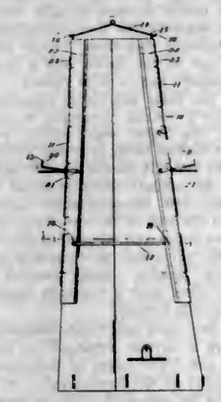
1,194,373. FORGE APPLIANCE. HENRY FRALICK, Grand Rapids, Mich. Filed Mar. 25, 1915. Serial No. 17,020. (Cl. 110—3.5.)

1. An appliance for use with forges comprising a tubular section, a controlling valve in said section, a flexible conduit connected at one end of the section, tubular devices extending in opposite directions from the other end of the said section, and provided on their inner upper surfaces with a plurality of openings, and a block connected to the flexible conduit adjacent said tubular devices, substantially as described.



2. An appliance for use in forges comprising a tubular section, a controlling valve in said section, a flexible conduit connected at one end of the section, tubular devices extending in opposite directions from the other end of said section, controlling valves in each of said devices, a tubular extension projecting forward from said devices substantially in alinement with said tubular section and a controlling valve in the extension.

1,194,374. STRETCHING AND PRESSING DEVICE FOR TROUSERS. SIMON FRANZON, Garwood, N. J. Filed Nov. 20, 1913. Serial No. 802,059. (Cl. 223—19.)



1. A trousers pressing and stretching device comprising the combination of two pairs of longitudinal clamp members, a transverse spring for urging said pairs of clamp members apart, and spring rods having straight body portions disposed diagonally of and along the backs of said clamp members and having bent ends inserted under torsion one into the back of one member and the other into the back of the complementary member so as to hold said members closed.

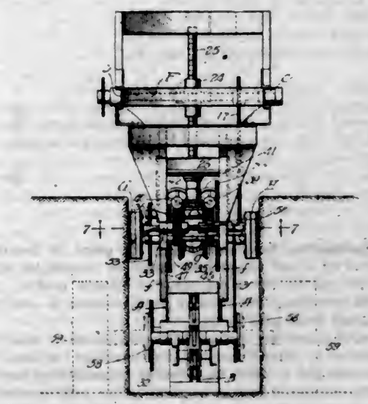
2. A trousers pressing and stretching device comprising the combination of two pairs of longitudinal clamp members, one or more transverse springs for urging said pairs of clamp members apart, springs for holding said clamp members closed, and fingers secured to the complementary clamp members of each pair for opening them and having means for connecting the fingers so as to hold the clamp members open.

3. A trousers pressing and stretching device comprising the combination of two pairs of longitudinal clamp members, a hanger rod with inclined portions from which said members are suspended, transverse bow springs pivotally secured each at one end to a clamp member and at the other end entering a socket in the member at the opposite side, spring rods disposed diagonally of the backs of said clamp members and having bent ends inserted under tension one into the back of one member and the other into the back of the complementary member so as to hold said members closed, and fingers secured to the complementary clamp members of each pair for opening them and having means for connecting the fingers so as to hold the clamp members open.

4. A trousers pressing and stretching device comprising the combination of two pairs of longitudinal clamp members extending along the legs of trousers for pressing them at their creases, one or more spring rods under torsion having straight body portions extending along the clamps arranged at the back of said clamps, and having ends inserted one into the back of one member and the other into the back of the complementary member so as to hold the members closed, means secured to the complementary clamp members of each pair for opening them and means for pressing the clamps apart to stretch the trousers.

5. A trousers pressing and stretching device comprising the combination of two pairs of longitudinal clamp members, one or more devices for urging said pairs of clamp members apart, torsion spring rods having straight body portions arranged at the back of said clamps and having ends inserted one into the back of one member and the other into the back of the complementary member, so as to hold the members closed and fingers pivotally secured to the complementary clamp members of each pair for opening them.

1,194,375. TRENCHING-MACHINE. JAMES C. FRENCH, Kenosha, Wis., assignor to Frederick C. Austin, Chicago, Ill. Filed Oct. 25, 1915. Serial No. 57,670. (Cl. 37—24.)



1. An excavating machine comprising a trench-cutter, a body for supporting said trench-cutter in position for operation in the ground, traction devices traveling in the trench to support said body therein, and means for engaging the sides of the trench to hold the machine upright.

2. An excavating machine comprising a trench-cutter, a body for supporting said trench-cutter in position for operation in the ground, traction devices traveling in the trench to support said body therein, and means for engaging the sides of the trench to hold the machine upright, said means including shoes which bear against the sides of the trench and manually operated worm gearing for adjusting said shoes.

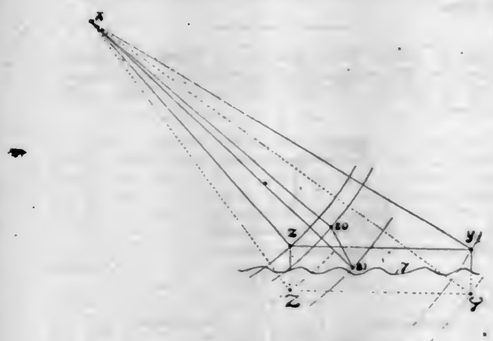
3. An excavating machine, comprising a trench-cutter, a body for supporting said trench-cutter in position for operation in the ground, traction devices traveling in the trench to support said body therein, and means for engaging the sides of the trench to hold the machine upright, said devices being narrower than said body, and a steering wheel at the rear end of said body.

4. An excavating machine comprising a trench-cutter, a body for supporting said trench-cutter in position for operation in the ground, traction devices traveling in the trench to support said body therein, and means for engaging the sides of the trench to hold the machine upright, said trench-cutter including an endless series of buckets disposed at the forward end of said body, said body and devices being narrower than said buckets, and means for shifting the rear end of said body sidewise to change the direction of travel of said machine in the trench.

5. An excavating machine comprising a trench-cutter, a body for supporing said trench-cutter in position for operation in the ground, traction devices traveling in the trench to support said body therein, and means for engaging the sides of the trench to hold the machine upright, said body having a steering mechanism at the rear end thereof, which mechanism includes a wheel to engage the bottom of the trench, means to swing said wheel about a vertical steering axis, and rollers at opposite sides of said wheel to engage the sides of the trench.

[Claims 6 to 10 not printed in the Gazette.]

1,194,376. APPARATUS FOR ASCERTAINING THE RELATIVE LOCATIONS OF DISTANT POINTS. HENRY J. FURBER, Jr., Chicago, Ill. Filed Mar. 8, 1911. Serial No. 613,014. (Cl. 181—26.)



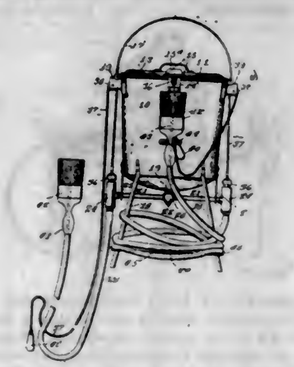
1. A mechanism for determining the point of location of a source of sound comprising receivers located in pairs in the air and in the water and at known points, and means for recording the instant each receiver is affected by the sound from said source.

2. A mechanism for determining the point of location of a source of sound comprising receivers located at known points and in pairs in different transmitting media, electrically actuated means controlled by said receivers for recording the time of the reception of the sound by the receivers.

3. A mechanism for determining the point of location of a source of vibratory impulses imparted to two different media, comprising receivers located in pairs in the two media and at known points, one receiver of a pair being in one medium and the other being in the other medium, and means for recording the instant each receiver is affected by the vibrations from said source.

4. An apparatus for determining the relative location of a point of unknown location, with relation to two established points at the place of observation, comprising means, located at the point of unknown location, for emitting vibrations capable of propagating in two transmitting media, a series of receivers located at established points at the place of observation, at least one of said receivers being in one medium and the remainder being responsive to vibrations propagated in the other medium, and means controlled by the receivers for recording the time each receiver responds to vibrations emited from said source.

1,194,377. FOUNTAIN-BRUSH. JAMES D. GARVEY, Chicago, Ill. Filed Jan. 21, 1914. Serial No. 813,880. (Cl. 91—39.)



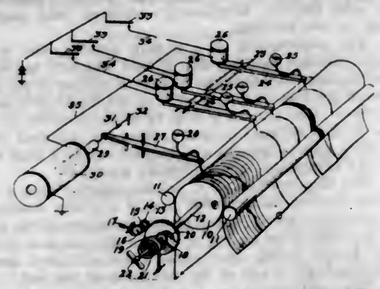
1. A device of the class described, comprising a pail provided with a bottom sloping toward the center thereof, an outlet at the lowermost point in said bottom, said outlet comprising a tube extending into the pail a short distance above the bottom adjacent thereto, the outer or discharge-end of said tube extending to a point substantially in alinement with the pail-sides, a valve secured to the outer end of said tube for controlling the flow therethrough, rotatable means adjacent the upper part of the pail-sides, flexible means secured to said rotatable means and to said valve whereby the flow-controlling valve may be operated at a distance therefrom, flexible tubing secured to the discharge end of the valve, and a fountain brush secured to the opposite end of said tubing.

2. A device of the class described, comprising a reservoir provided with a bottom arranged to extend into a lower plane than the lower edges of the reservoir, the lowest point in the bottom being provided with a discharge, a laterally disposed conduit connected with said discharge, the outer end of the conduit being provided with a valve for controlling the flow through said conduit, rotative means mounted on the side of the reservoir, flexible means connected with the valve and passing about said rotative means, whereby the valve may be controlled at a distance removed therefrom, flexible tubing secured to the discharge end of the valve, and a fountain brush secured at the opposite end of the tubing.

3. A device of the class described, comprising a reservoir provided with a bottom arranged to extend into a lower plane than the lower edges of the reservoir, a discharge tube arranged at the lowest point in said bottom and projecting into the reservoir slightly beyond said bottom, a laterally disposed conduit connected to said discharge tube and extending to opposite sides of the reservoir, a spring-controlled valve secured to each end of said laterally disposed conduit for controlling the flow from said conduit, rotative means mounted on the sides of the reservoir, separate flexible means secured to each valve and passing about said rotative means whereby the valves may be independently operated, fountain brushes, and flexible tubing secured to the discharge ends of said valves and to said brushes whereby the brushes may be independently supplied with fluid from said reservoir.

1,194,378. RECORDING DEVICE. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 30, 1915. Serial No. 37,187. (Cl. 234—33.5.)

1. In a traffic recording mechanism, devices of which it is desired to obtain a record of each individual and the total number of the said devices that are in operation at any instant of time, in combination with a recording medium, marking devices in contact therewith, means for operating said marking devices for recording each individual device and the total number of said first-named devices in use at any instant of time.



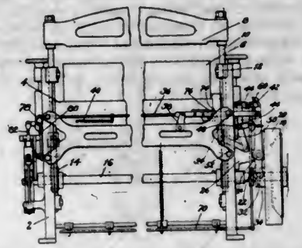
2. A recorder for obtaining a visual record of the performance of a plurality of trunks or switches of an automatic telephone system, the individual items of the record being arranged for instant comparison and study and comprising a constantly driven roller carrying a record medium, a plurality of marking devices each individual to a trunk or switch and each adapted to engage with the record medium but normally out of contact therewith, a marking device common to the said plurality of marking devices and normally in engagement with the record medium, and electrically operated means for both kinds of marking devices.

3. In a traffic recording mechanism, devices the operation of which it is desired to obtain a record, in combination with a recording medium, a plurality of marking devices, adapted to contact therewith, means for moving said recording medium past said marking devices at a constant rate of speed, means connected with the devices of which it is desired to obtain a record for moving said marking devices into engagement with said recording medium, a marking device constantly in engagement with said recording medium and common to the plurality of marking devices, and means electrically connected to first-named devices for causing the recording by the last-named marking device of the number of such devices simultaneously in use at any instant of time.

4. In a traffic recording mechanism, devices of which it is desired to obtain the individual and collective record at any instant or for any stated period of time, in combination with paper or other like recording medium, a plurality of marking devices adapted to contact with said recording medium, means for moving said recording medium past said marking devices at a constant rate of speed, a marking device common to the first-named marking devices and constantly in engagement with said recording medium, and means electrically connected with the devices of which it is desired to obtain a record for moving said plurality of marking devices into engagement with the recording medium and the other marking device across the face of the recording medium, whereby an individual and collective record of the number of devices employed, and the duration of such employment, is visually indicated on the recording medium.

1,194,379. STARTING AND STOPPING MECHANISM FOR PRESSES. JOSEPH GOULDBOURN and ARTHUR BATES, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 8, 1912. Serial No. 702,481. (Cl. 74—46.)

1. In a machine of the class described, driven mechanism, driving means, and starting and stopping mechanism comprising, in combination, a clutch through which connections may be effected between said driven mechanism and said driving means, means, comprising a brake, for preventing more than one operation of the machine for a single actuation, and means for preventing overthrow of the machine, said last-mentioned preventing means being rendered operative by the action of said first-mentioned preventing means and being arranged to operate only after said first-mentioned preventing means has operated.



2. In a machine of the class described, driven mechanism, driving means, and starting and stopping mechanism comprising, in combination, a clutch through which connections may be effected between said driven mechanism and said driving means, means connected with the driven mechanism for maintaining said clutch operative until the machine has substantially completed an operation, means, comprising a brake, for preventing more than one operation of the machine for a single actuation, and means for preventing overthrow of the machine, said last-mentioned preventing means being rendered operative by the action of said first-mentioned preventing means and being arranged to operate only after said first-mentioned preventing means has operated.

3. In a machine of the class described, starting and stopping mechanism comprising a clutch through which connections may be effected with a source of power, a brake, means for disconnecting said clutch and applying said brake, and means, arranged to operate only in case of overthrow of the machine, for increasing the braking action of said brake.

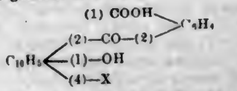
4. In a machine of the class described, driven mechanism, driving means, and starting and stopping mechanism comprising, in combination, a clutch through which connections may be effected between said driven mechanism and said driving means, a brake, means connected to said driven mechanism for disconnecting said clutch and applying said brake at the end of a complete operation of said mechanism, and means also connected to said mechanism and operated therefrom to increase the braking action of said brake in the event of a tendency of said mechanism to pass its normal position of rest.

5. In a machine of the class described, driven mechanism, driving means, and starting and stopping mechanism comprising, in combination, a clutch through which connections may be effected between said driven mechanism and said driving means, a brake, automatic means for disconnecting said clutch after a single operation of the machine and applying said brake, and means connected with said brake and controlled by said driven mechanism for increasing the braking action of said brake in the event of a tendency of said driven mechanism to pass its normal position of rest.

[Claims 6 to 15 not printed in the Gazette.]

1,194,380. PHTHALEIN DYE AND PROCESS OF MAKING THE SAME. HANS HAGENBACH, Basel, Switzerland, assignor to J. R. Geigy S. A., Basel, Switzerland. Filed Nov. 17, 1915. Serial No. 61,902. (Cl. 8—1.)

1. The process of manufacturing phthalein mordant dyestuffs consisting in condensing 1-oxy-2-naphthoyl-o-benzoic acid of the general formula:



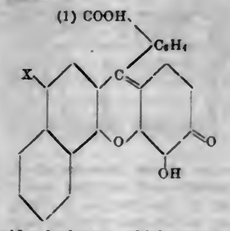
wherein X signifies hydrogen which may be replaced by a substitute *e. g.* SO_3H, halogen, NH_2 with pyrogallol in

equimolecular proportions by means of a condensing agent.

2. The process of manufacturing a phthalein mordant dyestuff consisting in condensing 1-oxy-2-naphthoyl-o-benzoic acid with pyrogallol in equimolecular proportions by means of concentrated sulfuric acid as described.

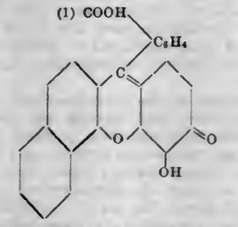
3. The process of manufacturing a phthalein mordant dyestuff consisting in condensing 1-oxy-2-naphthoyl-o-benzoic acid with pyrogallol in equimolecular proportions.

4. As new products the phthalein mordant dyestuffs of the general formula:



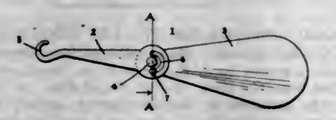
wherein X signifies hydrogen which may be replaced by a substitute *e. g.* SO_3H halogen, NH_2 which dyestuffs are in the shape of their sodium salts dark blue powders readily soluble in water with a violet to a blue color and which turn to a blue-green by the addition of soda-lye, and by adding caustic soda-lye to a green color; dissolved in concentrated sulfuric acid they give a red color and dye wool and cotton mordanted with aluminum salts from green to dark blue shades, and mordanted with chromium salts from yellowish-green to bluish-green shades.

5. As new product the phthalein mordant dyestuff of the formula:



which dyestuff is in the shape of its sodium salt a dark violet-blue powder, readily soluble in water, giving a violet shade, in soda-lye a blue green, in caustic soda-lye a green color; in concentrated sulfuric acid it dissolves to a red color, when adding water to this solution the free dyestuff acid precipitates as a dark red powder, dyeing wool and cotton mordanted with aluminum salts navy-blue shades, mordanted with chromium salts bluish-green shades of very good fastness to light, to fulling and to potting.

1,194,381. FOLDING IMPLEMENT. THOMAS HARDING, Newark, N. J., assignor to J. L. Sommer Manufacturing Co., a Corporation of New Jersey. Filed Apr. 15, 1915. Serial No. 21,514. (Cl. 24—40.)



1. The combination of a handle member, and a tool member pivoted thereto, one of said members having a wall eccentric to the pivotal mounting of the members and the other having a shoulder adapted to bind against a portion of said eccentric wall for frictionally retaining said members swung in one direction.

2. The combination of a handle member, and a tool member pivoted thereto, one of said members having a wall eccentric to the pivotal mounting of the members with a stop at the end of said wall and the other having a shoulder adapted to bind against a portion of said eccentric wall adjacent the stop as the shoulder approaches said stop thereby frictionally retaining said members swung in one direction.

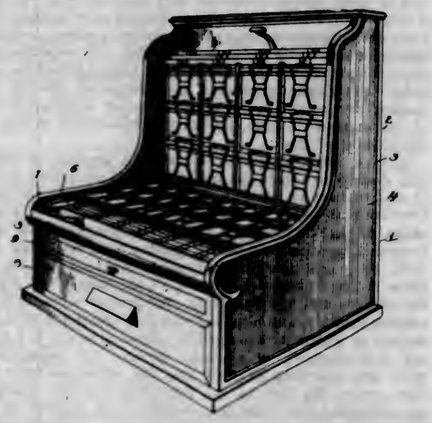
3. The combination of a handle member, and a tool member pivoted thereto, one of said members having an arcuate slot eccentric to the pivotal mounting of the members and the other having a stud or pin adapted to engage the end of said slot as a stop to limit swinging of said members and adapted to bind against the side wall of the slot as it approaches the end thereof whereby said members are frictionally held in swung position.

4. The combination of a handle member, and a tool member pivoted thereto, one of said members having an arcuate slot eccentric to the pivotal mounting of the members and the other having a stud or pin adapted to ride freely in the middle part of said slot and bind against the end portion of one of the side walls of the slot.

5. The combination of a handle member, and a tool member pivoted thereto, one of said members having an arcuate slot eccentric to the pivotal mounting of the members and the other having a stud or pin adapted to ride freely in the middle part of said slot and bind against an end portion of a side wall of the slot adjacent both ends thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,194,382. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Original application filed Dec. 11, 1912, Serial No. 736,176. Divided and this application filed Apr. 21, 1915. Serial No. 22,747. (Cl. 129—34.)



1. In a filing appliance, the combination of a leaf provided with a series of clips for removably holding papers or slips on said leaf, and a rib arranged beneath the slips held by each clip and between the clip and the leaf, and forming a shoulder over which the slips are folded.

2. In a filing appliance, the combination of a leaf provided with a series of clips for removably holding papers or slips on said leaf, and a rib extending parallel to and arranged beneath the slips held by each clip near the upper end thereof and forming a shoulder over which the slips are pressed to facilitate their insertion and removal.

3. In a filing appliance the combination of a leaf or frame, a clip for supporting papers on one face of said leaf or frame, and a device carried by said leaf or frame extending transversely of and arranged beneath the slip or slips held by the clip near the upper end thereof, whereby the slip or slips can be pressed backwardly.

4. In a filing appliance, the combination of a leaf, a plurality of clips mounted thereon, and a plate carried by the leaf at or near the free ends of said clips and bent longitudinally to form a shoulder or rib to facilitate the filing and removal of the records from behind each of said clips.

1,194,383. BOB OR COASTING SLED. CLAYTON D. HIMEBAUGH, Burr Oak, Mich., assignor to Adelbert C. Himebaugh, Burr Oak, Mich. Filed Dec. 27, 1915. Serial No. 68,773. (Cl. 21—94.)



1. In a bob sled, the combination of the top, a rear bob secured thereto, a bolster at the front, a front bob, a king bolt, a brace bar secured to the sled top toward its rear and to the king bolt at its forward end, a slotted yoke made up of members above and below the beam of said front bob, a pivoted cross rock bar pivoted between the yoke members and adapted to rest yieldingly against the forward side of the said bolster and beam, a spring secured at its forward end to said yoke, and an adjustable bolt for securing the rear end of said spring to said brace bar, coacting substantially as described for the purpose specified.

2. In a bob sled, the combination of the top, a rear bob secured thereto, a bolster at the front, a front bob, a king bolt, a brace bar secured to the sled top toward its rear and to the king bolt at its forward end, a slotted yoke, a pivoted cross rock bar pivoted to the yoke and adapted to rest yieldingly against the forward side of the said bolster and beam, a spring secured at its forward end to said yoke, and an adjustable bolt for securing the rear end of said spring to said brace bar, coacting substantially as described for the purpose specified.

3. In a bob sled, the combination of the top, a rear bob secured thereto, a bolster at the front, a front bob, a king bolt, a brace bar secured to the sled top toward its rear and to the long bolt at its forward end, a slotted yoke made up of members above and below the beam of said front bob, a pivoted cross rock bar pivoted between the yoke members and adapted to rest yieldingly against the forward side of the said bolster and beam, a spring secured at its forward end to said yoke, and means for connecting the rear end of said spring to said brace bar, coacting substantially as described for the purpose specified.

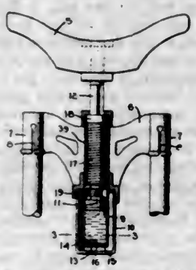
4. In a bob sled, the combination of the top, a rear bob secured thereto, a bolster at the front, a front bob, a king bolt, a slotted yoke made up of members above and below the beam of said front bob, a pivoted cross rock bar pivoted between the yoke members and adapted to rest yieldingly against the forward side of the said bolster and beam, a spring secured at its forward end to said yoke, and an adjustable bolt for securing the rear end of said spring to said top, coacting substantially as described for the purpose specified.

5. In a bob sled, the combination of a slotted yoke embracing the king bolt, a pressure bar disposed to brace against the forward side of the bolster and knee of the forward bob, an adjustable spring for putting tension on said yoke, as specified.

[Claim 6 not printed in the Gazette.]

1,194,384. CRUTCH. GEORGE HIPWOOD, Boston, Mass. Filed Mar. 11, 1916. Serial No. 83,648. (Cl. 135—53.)

1. In a crutch, the combination with a crutch body, of a head secured to the upper end of the body, a liquid-containing cylinder carried by said head, a plunger operating in said cylinder, an arm rest secured to the plunger, a chamber communicating with said cylinder, a controlling device interposed between said chamber and cylinder and which controls the flow of liquid from one to the other as the plunger moves in said cylinder, said controlling device permitting the liquid to flow more freely in one direction than in the other.

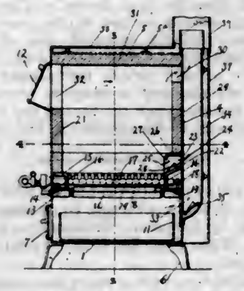


2. In a crutch, the combination with a crutch body, of a head at the upper end of the crutch body having two communicating liquid-receiving compartments, one of which is in the form of a cylinder, a plunger movable in said cylinder, an arm rest secured to the plunger, and a controlling device interposed between said compartments and which controls the flow of liquid from one to the other, said device permitting the liquid to flow more freely in one direction than in the other.

3. In a crutch, the combination with a crutch body, of a head at the upper end of the crutch body having two communicating liquid-receiving compartments, one of which is in the form of a cylinder, a plunger movable in said cylinder, an arm rest secured to the plunger, and a controlling device interposed between said compartments and which controls the flow of liquid from one to the other, said device permitting the liquid to flow more freely when the plunger is moving upward than when it is moving downward.

4. In a crutch, the combination with a crutch body, of a head at the upper end of the body having two communicating liquid-receiving compartments, one of which is in the form of a cylinder, a plunger movable in said cylinder, an arm rest secured to the plunger, a spring resisting the downward movement of the plunger, and a controlling device interposed between said compartments and which controls the flow of the liquid from one compartment to the other, said controlling device permitting the liquid to flow less freely when the plunger is moving downwardly than when it is moving upwardly.

1,194,385. INCINERATOR. HARRY J. HOOVER, Norwood, Ohio. Filed Sept. 3, 1915. Seral No. 48,754. (Cl. 110—18.)



1. In an incinerator, a fire pot, a plate set below said pot and carrying grate bars, tubular gas burners held on said plate immediately above it so as to lie above the supporting surface of the grate bars, and said burners adapted to project a jet of gas substantially parallel with the grate, a frame set on the plate, and a protecting grating comprising downwardly curving teeth extending from the sides of said frame, so as to lie over the burners, for the purpose described.

2. In an incinerator, a fire pot, lateral grate bars below said fire pot, gas burners at the base of the pot and above the garbage supporting surface of said grate bars, a fire clay lining for the fire pot, a flue at the rear of the incinerator and outside of the lining, and openings into said flue below the gas burners and grate bars and directly above the gas burners and grate bars.

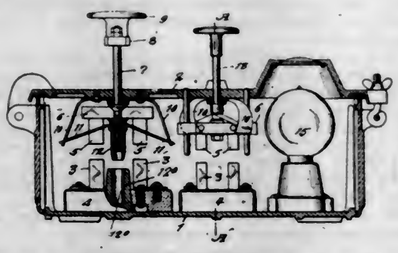
3. In an incinerator, a fire pot, grate bars below the said fire pot, gas burners above said grate bars, a flue at the rear of the incinerator, and openings into said flue located below the grate bars and directly above the grate bars, and means for protecting the opening above the grate bars from becoming clogged with garbage.

4. In an incinerator, a fire pot, grate bars below the said fire pot, gas burners above said grate bars, a flue at the rear of the incinerator, and openings into said flue located below the grate bars and directly above the grate bars, and a structure closed except at the front over said latter opening, said structure having a hood depending over the opening, for the purpose described.

5. In an incinerator, a fire pot, grate bars therefor, tubular gas burners set over the grate bars, and a frame set over the grate bars and burners, said frame having an extending toothed grating at the sides to protect the burners, an extending plate at the rear of the frame communicating without, and a draft opening in the incinerator, and a hood set over the said plate, for protecting the opening from becoming clogged with garbage.

[Claims 6 to 8 not printed in the Gazette.]

1,194,386. ELECTRICAL SWITCH. BRYSON D. HORTON, Detroit, Mich. Filed Mar. 22, 1913. Serial No. 756,067. (Cl. 175—282.)



In an electrical switch of the armor-clad type, the combination of a metal casing provided with a hinged unobstructed apertured cover, a plurality of switch mechanisms mounted within the casing comprising fixed contacts mounted upon the base thereof and movably-mounted coöperating contacts carried by the cover thereof and adapted to be exteriorly operated, one of said switch mechanisms constituting a double pole main circuit switch and the other of said switch mechanisms constituting single pole switches, and a lamp in circuit with the switches and mounted upon the base of the receptacle and located in proximity to the aperture in the cover.

1,194,387. CARD FOR LOOSE-LEAF-INDEX DEVICES. GARRETT H. HUISING, Chicago, Ill., assignor, by mesne assignments, to Automatic Utilities Co., a Corporation of Illinois. Filed Dec. 30, 1911. Serial No. 668,728. (Cl. 129—16.1.)

1. The combination with a loose leaf card index, provided with mechanism adapted to elevate a predetermined card or group of cards above their normal position, and comprising connectors secured to the bottom of the cards and adjustable longitudinally thereof, of a plurality of loose leaf cards, the ends of which are provided with a metal binding, the length of which corresponds to the height of the card, said binding being formed of material which forms a suitable bearing surface upon which the next adjacent protector slides when being elevated.

2. The combination with a casing and a plurality of bars therein adapted to elevate a card or group of cards above their normal position, of a plurality of cards each having a binding of metal secured to the ends, and concealed connectors detachably secured to the lower edges of said cards and adjustable longitudinally thereof.

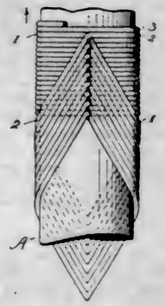


3. The combination with a casing having mechanism for elevating a single card or group of cards above their normal position and a plurality of loose leaf cards, of protectors on the ends of said cards whereby they are spaced apart, means to effect operative union between the cards and the elevating mechanism, said means being detachably secured to the lower edge of the card and adjustable longitudinally thereof.

4. The combination with a casing having mechanism therein for elevating a single card or group of cards above their normal position and a plurality of cards in said casing, a protector secured to each of the ends of the cards which engage the side walls of the casing, said protector being formed of material which is stiffer than the cards and adapted to form bearing surfaces on the sides thereof, a plurality of pins detachably secured to said cards, which engage the elevating mechanism.

5. The combination with a casing having mechanism for elevating a single card or group of cards above their normal position and a plurality of loose leaf cards, a plurality of pins which engage the elevating mechanism detachably secured to the lower edge of the cards, protectors on the ends of said cards whereby they are spaced apart, said protectors being formed of material which forms a suitable bearing surface upon which the cards slide when being elevated.

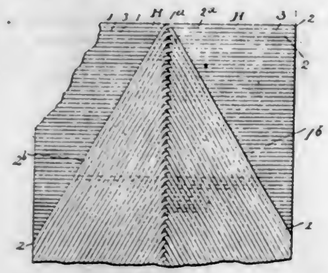
1,194,388. TIRE FABRIC. JOHN F. IVES, Cleveland, Ohio. Filed Jan. 8, 1914, Serial No. 810,942. Renewed Jan. 26, 1916. Serial No. 74,476. (Cl. 139—9.)



1. A cord tube formed of a continuous cord coated with a sticky rubber compound, which tube comprises an inner layer of transversely extended cords and a superimposed outer layer of cords which extend from the tread line divergingly around to or near to a parallel line 180° removed from the tread line.

2. A cord fabric tube composed of two layers of contacting rubber coated cord windings, the inner layer comprising cords lying in planes which are substantially at right angles to the axis of the tube, and the overlying layer comprising cords which extend from the tread line diagonally half way around the tube, and then diagonally back to the said tread line.

1,194,389. CORD TIRE FABRIC. JOHN F. IVES, Cleveland, Ohio. Original application filed Jan. 8, 1914, Serial No. 810,942. Divided and this application filed Sept. 29, 1915. Serial No. 53,179. (Cl. 139—9.)



1. A two-ply tire fabric strip composed of two layers of contacting rubber coated cords of which the cords in the lower layer extend at substantially right angles to the edges of the strip, and the cords of the overlying layer extend divergingly from the center line of the strip toward opposite edges thereof and at similar angles.

2. A two-ply cord fabric strip composed of contacting repetitions of groups of rubber coated cords of which each group consists of (1) a cord which extends from the left edge of the strip in a direction substantially at right angles thereof up to the center line of the strip, and from thence in a diagonal direction toward the right edge of the strip, (2) a cord which extends from the right edge of the strip to the center line thereof at right angles to said edge and center line and in substantial alinement with the corresponding part of the first named cord, and from the center line diagonally toward the left edge of the strip at substantially the same angle to said center line, and in the same general longitudinal direction as the diagonal part of the first named cord, and (3) a cord which extends transversely from one edge of the strip to the other in a direction at substantially right angles to said edges and in contact with the transversely extended parts of the other two cords.

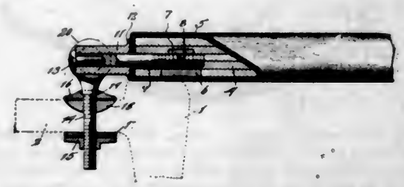
3. A tire fabric strip which consists of contacting cords of three series, viz., (1) a series of cords which extend from the right edge of the strip at right angles thereto to the center line, and thence diagonally toward the left edge of the strip, (2) a series of cords which extend from the left edge of the strip at right angles thereto to the center line, and thence diagonally toward the right edge of the strip, and in the same lengthwise direction of the strip, and at substantially the same angle to the edge of the strip as the diagonal parts of the first named cords, and (3) a series of cords which extend from one edge to the other of the strip at substantially right angles to said edges,—the diagonally disposed parts of said cords overlying the parts of said cords which are at right angles to the edges.

1,194,390. MOUNTING FOR CALCULATING-WEBS AND THE LIKE. EDWARD E. JENKINS, Flora, Ill. Filed Aug. 8, 1913. Serial No. 783,784. (Cl. 40—86.)



A device of the class described comprising a casing, spindles journaled at their ends in the ends of the casing and lying in parallel spaced relation, rollers fixed upon the spindles within the casing and terminating short of the ends of the casing, a web mounted on the rollers and arranged to be wound from one to the other, bars located between the ends of the rollers and the adjacent ends of the casing, said bars having their ends bifurcated and disposed with their furcations at opposite sides of the spindles, a rod loosely engaged through one of the bars and threaded through the other bar, said bar lying between the rollers and a collar carried by the rod outwardly of the bar through which it is loosely engaged, whereby, when the rod is rotated in one direction, the bars will be compressed against the ends of the rollers.

1,194,391. CLOSET-SEAT HINGE. EARLDLEY C. B. JUDD, Chicago, Ill., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed June 8, 1915. Serial No. 32,840. (Cl. 4—18.)



1. The combination of a water closet seat and a hinge therefor, said seat comprising a core of laminated wood and a veneer of hard vulcanized rubber thereon, and a plate embedded in the core with one side thereof flush with the bottom of the core and covered by the veneer on the bottom of the seat, said plate having upwardly directed lugs on its upper side terminating below the top of the core, there being threaded openings in the lugs and registering openings in the seat to receive parts of said hinge.

2. The combination of a water closet seat and a hinge therefor, said seat comprising a core of laminated wood and a veneer of hard vulcanized rubber thereon, and a plate embedded in the core with one side thereof flush with the bottom of the core and covered by the veneer on the bottom of the seat, said plate having upwardly directed lugs on its upper side located wholly within the edges of the plate and terminating below the top of the core, there being threaded openings in the lugs and registering openings in the seat to receive parts of said hinge.

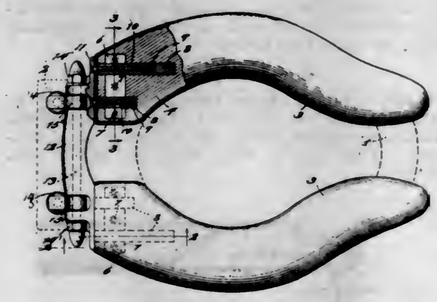
3. A water closet seat hinge, comprising a member adapted to be embedded within the seat and provided with threaded openings, a pair of bolts threadedly engaging said openings and extending rearwardly from said seat, a pair of bolts having means thereon for adjustably securing them to the closet bowl and provided with heads, a transversely extending hinge member pivotally mounted in said heads, and screws threadedly engaging said first-mentioned bolts to secure said hinge member thereto.

1,194,392. CLOSET-SEAT HINGE. EARLDLEY C. B. JUDD, Chicago, Ill., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed June 18, 1915. Serial No. 34,811. (Cl. 4—18.)

1. The combination of a closet seat and a hinge therefor, an anchor for said hinge embedded within said seat and comprising a plate extending transversely of the seat at or adjacent the bottom thereof and bearing on its upper side elongated lugs spaced apart and extending lengthwise of the seat and transversely of said plate, in parallel relation, and having threaded openings therein, and screws engaging said openings for securing the hinge to the seat.

2. The combination of a closet seat and a hinge therefor, an anchor for said hinge embedded within said seat and comprising a plate extending transversely of the seat at or adjacent the bottom thereof and bearing on its up-

per side elongated lugs spaced apart and having threaded openings therein, one of said lugs being longer than the other, and both extending lengthwise of the seat and transversely of said plate, and screws engaging said openings for securing the hinge to said anchor.



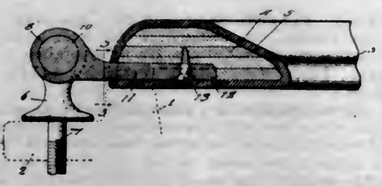
3. The combination of a closet seat and a hinge therefor, and anchors for said hinge embedded within said seat and comprising plates extending transversely of the seat at or adjacent the bottom thereof and bearing lugs on their upper sides spaced apart, the outer lug on each plate being longer than the inner lug.

4. A water closet seat hinge, comprising members adapted to be secured to a closet bowl, a complementary hinge member secured in pivotal relation therewith, a pair of members adapted to be embedded within the closet seat and each consisting of a plate bearing elongated lugs extending lengthwise of the seat and beyond the edges of said plate and having threaded openings therein, and means engaging said threaded openings for securing said complementary hinge members to said embedded members.

5. A closet seat hinge comprising members adapted to be secured to a closet bowl, a spindle disposed therebetween, a complementary hinge member pivotally mounted on said spindle, a pair of members adapted to be embedded within the closet seat and each consisting of a plate extending transversely of the seat and bearing elongated lugs extending lengthwise of the seat and beyond the edges of said plate and having threaded openings therein, and screws engaging said threaded openings for securing said complementary hinge members to said embedded members.

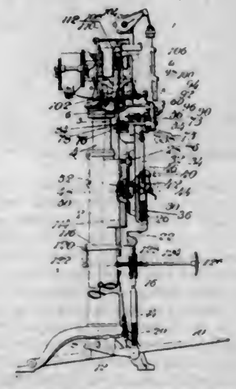
[Claims 6 and 7 not printed in the Gazette.]

1,194,393. CLOSET-SEAT HINGE. MORTON L. ADLER, New York, N. Y., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed June 17, 1915. Serial No. 34,653. (Cl. 4—18.)



The combination of a water closet seat and a hinge therefor, said seat comprising a core of laminated wood having a recess in its lower face at the rear of the core and a veneer of hard vulcanized rubber covering the core, a plate extending transversely of the seat at the rear thereof and embedded in said recess above the veneer at a distance from the rear edge of the seat, means for securing said plate to the core, and arms integral with said plate, at the ends thereof, and seated in said recess above the veneer and extending through said veneer at the rear of the seat to receive parts of said hinge.

1,194,394. TACKING AND WELT-BUTTING MACHINE. EUGENE L. KEYES, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 7, 1912. Serial No. 724,316. (Cl. 12—67.)



1. A machine of the class described having, in combination, mechanism for butting a welted shoe, a shoe supporting jack, a shoe clamping mechanism carried by the jack and comprising at each side of the rear part of the shoe a member to engage the side of the shoe, a member to engage the shoe in the welt crease, an equalizing connection between said members, and means for applying shoe clamping force through said connection and members to prepare the shoe for the action of the butting mechanism.

2. In a machine of the class described, the combination of laterally movable shoe clamping means for engaging the shoe in the welt crease forward of the heel seat and also at the sides of the shoe, welt butting means mounted for movement with the clamping means and arranged to swing relatively thereto about a center above the shoe to effect the welt butting operation, and means for operating the butting means.

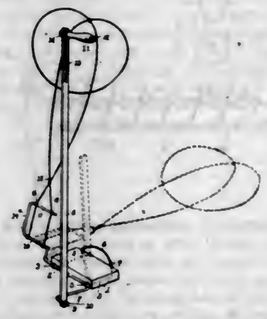
3. In a machine of the class described, the combination of clamping means comprising blades constructed and arranged to engage a welted shoe in the welt crease to apply yieldingly by lateral pressure a substantial lasting tension to the upper, side clamps for engaging the sides of the shoe adjacent to the crease engaging blades and constructed and arranged to maintain by lateral pressure the lasting tension effected by the said blades and to render the blades unyielding when the side clamps engage the sides of the shoe, and means for operating said clamping means to effect the shoe clamping operation.

4. A welt butting machine having, in combination, welt butting knives, means for operating the knives simultaneously by power independently of the other parts of the machine, and means acting in the welt crease on opposite sides of the shoe to hold the upper against the last and to locate the welt ends for the operation of the welt butting knives, said means also serving as cutting blocks against which the edges of the knives act to chop off the welt.

5. In a machine of the class described, the combination of means for clamping the shoe at the side and in the welt crease, anvil means carried by the welt crease engaging means and knives mounted for oscillation to bring their edges into and out of contact with the said anvil means to skive and chop off the welt ends.

[Claims 6 to 22 not printed in the Gazette.]

1,194,395. CARPET-BEATER. ANTHONY C. KOSTER, South Bend, Ind., assignor to Clinton C. Tiedemann, South Bend, Ind. Filed Jan. 24, 1916. Serial No. 73,862. (Cl. 15—8.)



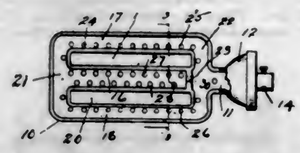
1. The combination with a base member adapted to be held against movement by the foot of the operator, of a member bowed intermediate its ends and extending vertically above the upper side of the base to receive the toe portion of the foot, the respective ends of said member extending in spaced relation across the under side of the base and attached thereto, a beater carried by the base, and means for actuating the beater.

2. The combination with a base, of a rock-shaft carried thereby having a crank-arm formation at one end thereof, a beater carried by the opposite end of said shaft at substantially right-angles to the crank-arm, and an operating handle connected with the crank-arm for manually rocking the shaft.

3. The combination with a base, of a rock-shaft carried by the base having a crank-arm formation at one end thereof, and its opposite end formed to provide spaced parallel portions disposed in a plane substantially at right-angles with the crank-arm, a beater secured at one end to both of said spaced portions, and an operating handle attached to the crank-arm for manually rocking said shaft.

4. The combination with a base, of a rock-shaft carried thereby having a crank-arm formation at one end thereof, a beater secured to the opposite end of the shaft at substantially right-angles to the crank-arm, and an operating handle attached at its lower end to the crank-arm for manually rocking the shaft, said base carrying means for coöperation with the foot of the operator to facilitate holding thereof against movement during the beating operation.

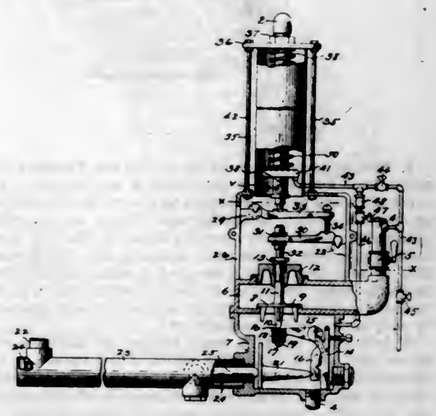
1,194,396. GAS-BURNER FOR WATER-HEATERS. GEORGE W. LAKE, Rumford, R. I., assignor to Frank W. Smith, Providence, R. I. Filed May 22, 1916. Serial No. 99,010. (Cl. 158—114.)



1. A burner for gas stoves comprising a rectangular frame having an inlet neck portion, and provided with a center channel and two spaced apart side channels and having jet orifices communicating with each of said channels directed upwardly and on an angle toward its corresponding row in the opposite channel, and a baffle plate closing the center channel from the inlet end, and provided with a vent hole admitting a portion of the gas thereto to stimulate circulation and supply the jets in the center channel.

2. A burner for gas stoves comprising a rectangular frame having an inlet neck portion and provided with a center channel and two spaced apart side channels each having orifices communicating with said channel, the opposing jets being on an angle toward each other, a baffle plate closing the center channel from the inlet neck end, said baffle plate being provided with a vent hole to stimulate circulation in the center channel, and a removable plate covering the back side of each channel.

1,194,397. WATER-HEATER. HAY LANGENHEIM, Pittsburgh, Pa. Filed Oct. 28, 1915. Serial No. 58,331. (Cl. 126—351.)



1. In a water heater, a gas burner, a gas valve, a water heating coil, thermostatic means through which the water passes to the intake of said coil for operating said gas valve in one direction, and independent thermostatic means at the outlet of said coil for operating said valve in the opposite direction.

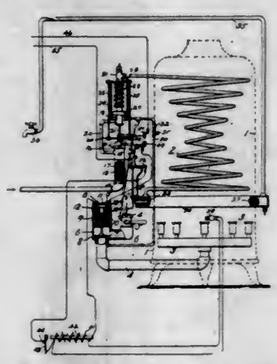
2. In a water heater, a gas burner, a gas valve, a water heating coil, a thermostat through which water passes to the intake of said coil, means operated by said thermostat for operating the gas valve in one direction, a thermostat in the coil circuit at the outlet thereof, and means operated by said thermostat for operating said valve in the opposite direction.

3. In a water heater, a gas burner, a gas valve, a water heating coil, thermostatic means at the intake of said coil for operating the gas valve in one direction, a gas burner disposed about and for heating said thermostat, and an independent thermostat at the outlet of said coil for operating said valve in the opposite direction.

4. In a water heater, a gas burner, a gas conduit leading thereto, a gas chamber, a gas valve therein, a water heating coil, a tubular thermostat forming a part of the intake of said coil, means operated thereby for operating the gas valve in one direction, a gas burner connected to said conduit for heating said tubular thermostat, a gas supply also leading from the gas valve chamber to said thermostat burner, and thermostat means at the outlet of said coil to operate said gas valve in the opposite direction.

5. In a water heater, a gas burner, a gas conduit leading thereto, a gas chamber, a gas valve therein, a water heating coil, a tubular thermostat forming a part of the intake of said coil, means operated thereby for operating the gas valve in one direction, a gas burner connected to said conduit for heating said tubular thermostat, a gas supply also leading from the gas valve chamber to said thermostat burner, thermostat means at the outlet of said coil, and means operated by said thermostat to operate said gas valve in the opposite direction.

1,194,398. AUTOMATIC WATER-HEATER. HAY LANGENHEIM, Pittsburgh, Pa. Filed Oct. 28, 1915. Serial No. 58,332. (Cl. 126—351.)



1. In a water heater, a water heating coil having a cold water inlet and a hot water outlet, a gas burner, a gas conduit leading to said burner, a gas valve in said conduit, an electric circuit, means in said circuit for operating said valve, thermostatic operated means in the cold water inlet side of said coil, contact means in said circuit operated by said thermostatic operated means, a second thermostatic means connected to the hot water outlet of the coil, and contact means also in said circuit and operated by said second thermostatic means.

2. In a water heater, a water heating coil having a cold water inlet and a hot water outlet, a gas burner, a gas conduit leading to said burner, a gas valve in said conduit, an electric circuit, means in said circuit for operating said valve, thermostatic operated means in the cold water inlet side of the coil, contact means in the electric circuit operated by said thermostat, thermostatic means connected to the hot water outlet of the coil, contact means also in said circuit operated by said thermostat, and sparking means operated from said circuit for igniting the gas from said burner.

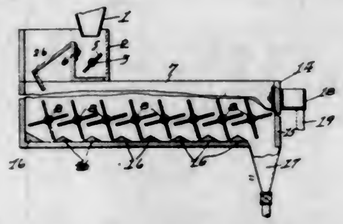
3. In a water heater, a water heating coil having a cold water inlet and a hot water outlet, a gas burner, a gas conduit leading to said burner, a gas valve in said conduit, an electric circuit, means in said circuit for operating said valve, a pair of thermostats located in the cold water intake to said coil, each being provided with and operating an electric contact connected in said circuit, a thermostat located in the hot water outlet of the coil above the burner, and contacts operated by said thermostat and included in said circuit.

4. In a water heater, a water heating coil having a cold water inlet and a hot water outlet, a gas burner, a gas conduit leading to said burner, a gas valve in said conduit, an electric circuit, means in said circuit for operating said valve, a pair of thermostats located in the cold water intake to said coil, each being provided with and operating an electric contact connected in said circuit, a thermostat located in the hot water outlet of the coil above the burner, contacts operated by said thermostat and included in said circuit, and sparking means operated from said circuit for igniting the gas from said burner.

5. In a water heater, a water heating coil having a cold water inlet and a hot water outlet, a gas burner, a gas conduit leading to said burner, a gas valve in said conduit, an electric circuit, means in said circuit for operating said valve, a pair of thermostats located in the cold water intake to said coil, each being provided with and operating an electric contact connected in said circuit, a thermostat located in the hot water outlet of the coil above the burner, contacts operated by said thermostat and included in said circuit, and sparking means operated from said burner, one of said thermostats in the cold water inlet being provided with a gas burner connected to said conduit.

[Claim 6 not printed in the Gazette.]

1,194,399. GERM-SEPARATOR. ADOLPH W. H. LENDERS, Cedar Rapids, Iowa. Filed May 11, 1914. Serial No. 837,626. (Cl. 127—23.)



1. The method of separating germs which consists of causing the cracked corn to pass through a shallow body of liquid of from 7 to 13% Baumé alternately elevating and releasing the solid mass in its passage whereby the germ is liberated and floats off from the top of the liquor while the starch, gluten and hulls are carried off at the bottom.

2. The method of separating germs which consists of causing the cracked corn to pass through a shallow body of liquid of from 7 to 13% Baumé in a different mass on the bottom of the liquid keeping the said mass continuously in agitation during its passage whereby the germ is liberated and floats off from the top of the liquor while the starch, gluten and hulls are carried off at the bottom.

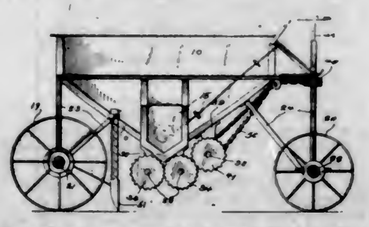
3. The method of separating substances which consists of passing them through a shallow body of liquid, the specific gravity of which is heavier than one and lighter than some of the substances, agitating the mass, whereby the lighter substance is freed from the mass and flows off of the top of the liquid, while the heavier substances are carried off at the bottom.

4. The method of separating substances which consists of passing them through a shallow body of liquid, the surface of which is maintained undisturbed, the specific gravity of which is heavier than one and lighter than some of the substances, agitating the mass, whereby the lighter substance is freed from the mass and flows off of the top of the liquid, while the heavier substances are carried off at the bottom.

5. The method of separating substances which consists of introducing them into a shallow body of liquid adjacent one edge, the specific gravity of said liquid being heavier than one and lighter than the other substances, carrying the mass from the point of entrance to the opposite edge of the body of liquid, and agitating the mass during said passage whereby the lighter substance is freed from the mass and flows off of the top of the liquid, while the heavier substances are carried off at the bottom.

[Claims 6 and 7 not printed in the Gazette.]

1,194,400. ROAD-GRADER. RAYMOND C. LESLIE and EDWARD J. K. SCHMIDT, Paulding, Ohio, assignors of one-third to Pliny A. Boyce, Paulding, Ohio. Filed Apr. 4, 1916. Serial No. 88,896. (Cl. 21—20.)



1. A road grader comprising a vehicle including a receptacle provided with an outlet and with side chutes communicating with the interior of said receptacle and provided with outlets, shafts rotatably mounted beneath said receptacle, sleeves rotatably mounted upon said shafts, closures rigidly mounted upon said shafts and upon said sleeves for closing the outlets of said receptacle and chutes, gears mounted upon said shafts and sleeves and meshing, a shaft rotatably mounted beneath said receptacle, gears carried by said shaft and meshing with the gears of one of said first mentioned shafts, sleeves mounted upon said last mentioned shaft and provided with gears meshing with the gears of the sleeves mounted upon one of said first mentioned shafts, and means for independently rotating said shafts and the sleeves mounted thereon for independently opening and closing the outlets of said receptacle and chutes.

2. A road grader comprising a vehicle including a body having an outlet in the bottom thereof, outlet spouts leading from said body, shafts rotatably mounted beneath said body upon opposite sides of the outlet in the bottom thereof and extending beneath said outlet spouts, sleeves carried by said shafts beneath said outlet spouts, closures rigidly mounted upon said shafts and sleeves, gears carried by said shafts and sleeves and meshing, and actuating means including gears meshing with certain of the gears of said shafts and sleeves for imparting independent movement to the shafts and sleeves to independently move the closures of said spouts and body.

3. A road grader including a vehicle having a body provided with an outlet and with side spouts having outlet openings, closures for the outlet openings of said body and spouts, carrying means for the closures of said spouts, rotatably mounted carrying means for the closures of said body serving as means for rotatably mounting the carrying means for the closures of said spouts, and means for independently moving the carrying means of said closures for independently opening and closing the closures of said body and spouts.

4. A road grading machine comprising a vehicle including a body having a bottom provided with an intermediate outlet opening for feeding material onto a road between wheel ruts formed therein, and with side outlets for feeding material from said body into wheel ruts formed in a road, closures for the intermediate and side outlet opening of said body, carrying means for the side closures, rotatably mounted carrying means for the intermediate closures of said body serving as means for rotatably mounting the carrying means for the side closures, and means for independently moving the carrying means of said closure for independently opening and closing the closures.

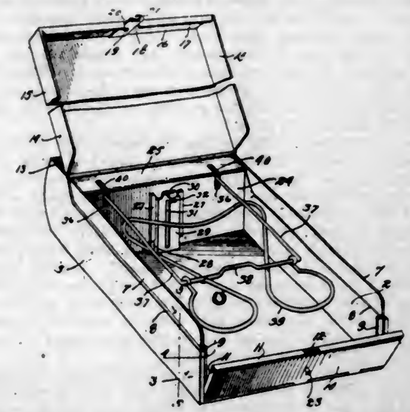
5. A grading machine comprising a vehicle including a body having a plurality of outlets, shafts rotatably mounted beneath said body upon opposite sides of the outlets and having meshing gears, sleeves mounted upon said shafts, closures carried by said shafts and sleeves for closing the outlets of said body, a driving shaft rotatably mounted beneath said body, sleeves rotatably mounted upon said driving shaft, gears carried by said shaft and last mentioned sleeves and meshing with the gears of said first mentioned shafts and sleeves, drums carried by said driving shaft and the sleeves mounted thereon, actuating posts rotatably mounted, drums carried by said actuating posts, and flexible means passed around the drums of said actuating posts and driving shaft and the sleeves carried thereby.

[Claims 6 and 7 not printed in the Gazette.]

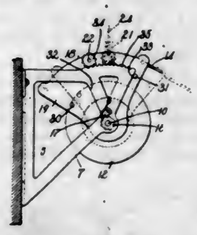
1,194,401. STORAGE-FILE. LAWRENCE A. LINDSTROM, Jamestown, N. Y. Filed June 21, 1915. Serial No. 35,444. (Cl. 129—15.)

1. In a storage file, a container including a pair of spaced walls, a wall extending between the same, a drop head hinged to the last mentioned wall and having flanges extending in angular relation thereto, the free ends of the first mentioned walls being bent back upon the walls and thence inwardly to form flanges, the flanges on the aforementioned head being adapted to contact with the flanges on the last mentioned walls to limit the movement of the drop head and render the joint fire proof.

2. In a storage file, the combination with a container, of a plate mounted therein and having a pair of spaced guides, a binder including a pair of spaced flanges adapted to engage beneath said guides and a raised body portion, the said body portion having a longitudinally extending slot therein and a slot extending at right angles thereto and communicating with the first mentioned slot at one of its ends, and a cover mounted on said container constructed and arranged, when closed, to prevent the accidental displacement of the binder.



1,194,402. RAZOR-STROPPING DEVICE. DEAN E. LOCHMAN, Boston, Mass. Filed Nov. 13, 1915. Serial No. 61,248. (Cl. 51—16.)



1. A stropping device having, in combination, a drum, a strop attached at one end to said drum and adapted to be wound upon and unwound therefrom, means constructed and arranged to rotate said drum and wind said strop thereon, a blade holder, a carrier frame for said holder pivoted to rock about the axis of said drum, said carrier frame being constructed and arranged to be rocked in opposite directions by the unwinding of said strop from said drum and the winding thereof upon said drum respectively, and means operated by said rocker frame adapted to oscillate said blade holder.

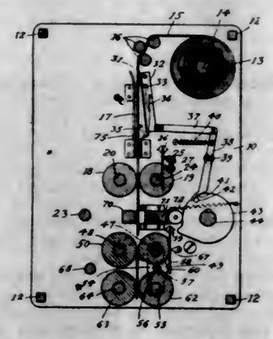
2. A stropping device having, in combination, a rotary member, a strop attached to said rotary member and adapted to be wound upon and unwound therefrom, means constructed and arranged to automatically rotate said rotary member to wind said strop thereon, a blade holder, a carrier frame for said blade holder constructed and arranged to swing about an axis coincident with the axis of said rotary member, means on said carrier frame adapted to be engaged by said strop and to cause said carrier frame to be moved in opposite directions by said strop during the winding and unwinding movements thereof, and means rendered operative by the movements of said carrier frame in opposite directions adapted to oscillate said blade holder.

3. A stropping device having, in combination, a rotary drum, a strop attached to said drum, adapted to be wound upon and unwound therefrom, a spring arranged within said drum to rotate the same in one direction and wind said strop thereon, an oscillatory blade holder, a carrier frame for said blade holder adapted to rock about an axis coincident with the axis of said drum, guide members for said strop arranged upon said carrier frame at opposite sides of the axis of blade holder, and means adapted to be operated by the movements of said carrier frame in opposite directions to move first one side of the blade carried by said blade holder and then to the opposite side thereof against said strop.

4. A stropping device having, in combination, a rotary member, a strop attached to said rotary member and adapted to be wound upon and unwound therefrom, a spring constructed and arranged to automatically wind said strop upon said rotary member, a rocker frame arranged to rock about an axis substantially coincident with the axis of said rotary member, a blade holder pivotally mounted upon said rocker frame, a pair of guide members mounted upon said rocker frame upon opposite sides of said blade holder, a pinion secured to said blade holder and a stationary gear segment adapted to rock said blade holder during the rocking movements of said rocker frame in opposite directions.

5. A stropping device having, in combination, a frame, a drum rotatably mounted on said frame, a strop attached to said drum and adapted to be wound upon and unwound therefrom, means constructed and arranged to rotate said drum to wind said strop thereon, a rocker frame pivoted to rock about an axis substantially coincident with the axis of said drum, stops adapted to limit the rocking movement of said rocker frame, a blade holder pivotally mounted upon said rocker frame, a pair of guide members on said rocker frame arranged at opposite sides of said blade holder, said guide members constructed and arranged to engage said strop, a pinion secured to said blade holder and a series of teeth arranged on said frame in an arc substantially concentric with the axis of said drum adapted to rotate said pinion whereby the opposite faces of the blade carried by said blade holder may be alternately moved to engage said strop.

1,194,403. STAMP-FEEDING MECHANISM. SIDNEY L. LONG, Minneapolis, Minn., assignor to Pence Mailing Machine Company, Minneapolis, Minn., a Corporation. Filed Aug. 20, 1914. Serial No. 857,695. (Cl. 211—33.)



1. A stamp feeding and separating device comprising means for holding a stamp strip in roll form and for guiding the end of the strip, means continuously operative upon the stamp strip tending continuously to feed the same forward, and means intermittently engageable with the perforations in the stamp strip for intermittently restraining such feeding movement.

2. A stamp-feeding and separating device comprising means for holding a stamp strip in roll form and for guiding the end of the strip, a pair of rollers yieldingly engaging said stamp strip, at least one of said rollers being constantly driven and tending to feed the stamp strip continuously, and means engageable in the perforations of the stamp strip to hold the stamp strip from being fed.

3. A stamp-feeding and separating device comprising means for holding a stamp strip in roll form and for guiding the end of the strip, a pair of rollers yieldingly engaging said stamp strip, at least one of said rollers being constantly driven and tending to feed the stamp strip continuously, means engageable in the perforations of the stamp strip to hold the stamp strip from being fed, and means acting periodically to withdraw said holding means from the perforations.

4. A stamp-feeding and separating device comprising means for holding a stamp strip in roll form and for guiding the end of the strip, a pair of rollers yieldingly engaging said stamp strip, at least one of said rollers being constantly driven and tending to feed the stamp strip continuously, and a multiplicity of toothed dogs adapted to engage the surface of the stamp strip with a yielding pressure and pass through perforations in the strip as the same is fed, thereafter holding the strip from feeding action of the rollers.

5. A stamp-feeding and separating device comprising means for holding a stamp strip in roll form and for guiding the end of the strip, a pair of rollers yieldingly engaging said stamp strip, at least one of said rollers being constantly driven and tending to feed the stamp strip continuously, a multiplicity of toothed dogs adapted to engage the surface of the stamp strip with a yielding pressure and pass through perforations in the strip as the same is fed, thereafter holding the strip from feeding action of the rollers, and means acting periodically to withdraw the teeth from the perforations and from engagement with the stamp strip and then to restore such engagement.

[Claims 6 to 8 not printed in the Gazette.]

1,194,404. PROCESS OF TREATING WOOD TO BE USED IN MAKING PLUNGERS, &c. JOHN J. MCINTYRE, Inverness, Nova Scotia, Canada. Filed Oct. 13, 1914. Serial No. 866,527. (Cl. 99—12.)

1. A pump of the class described having its plungers, valve seats and valves formed of hard wood which has been thoroughly boiled and treated with linseed oil and pine tar, and afterward thoroughly coated and rubbed with tallow for the purpose of producing a glossy surface and making the same water-proof.

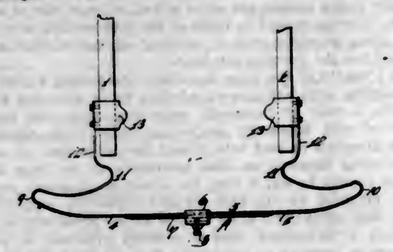
2. A method of preparing valve seats, plungers and valves for use in mining pumps which are formed of wood consisting in first boiling hard wood in water for two hours, then boiling the wood in linseed oil and pine tar of equal proportions for one hour, then removing the hard wood from this liquid, then thoroughly coating the wooden parts with tallow and rubbing the same until the surface of the wooden parts is glossy.

1,194,405. AUTOMOBILE-BUMPER. MICHAEL J. MAOUTH, Carlstadt, N. J. Filed Aug. 7, 1915. Serial No. 44,191. (Cl. 213—39.)

1. A motor-vehicle-bumper comprising a yieldable bar bent over intermediate the ends thereof to form yieldable loops or end-members, the end of each bent over end-member or loop being bent to form an ogee auxiliary loop to act supplementary to the loops at each end of said bumper, the free end of each auxiliary loop being adapted for attachment to a support.

2. A motor-vehicle-bumper, comprising a yieldable bar bent over intermediate the ends thereof to form yieldable loops or end-members, each bent over end of said bumper being formed intermediate its free end and the adjacent looped ends of the bumper into a plurality of reversely directed connected curves thereby providing yieldable portions adapted to act supplementary to the looped ends of the bumper to resist shock.

3. In combination with a motor vehicle bumper, means to secure same to the frame of a vehicle, said means consisting of a block having a channel to receive a frame member, a bracket detachably secured to said block and extending across the channel in said block, a vertically disposed locking screw carried by said bracket to contact with said frame-member, and a plurality of horizontally disposed locking screws also carried by said bracket and arranged to contact with said frame-member.



4. In combination with the chassis of a motor vehicle having channeled frame members, a bumper, a securing means for said bumper consisting of blocks secured to said bumper, each block being provided with a channel to receive the upper flange of a coöperating frame-member of the chassis, a bracket secured to said block, means carried by said bracket to engage the upper flange of the said frame-member, and means also carried by said bracket to engage the web of the aforesaid frame-member.

1,194,406. LAMP-WICK-ADJUSTING DEVICE. GEORGE W. MALLORY, Blenheim, Ontario, Canada. Filed July 1, 1915. Serial No. 37,418. (Cl. 67—66.)



1. The combination with a wick-adjusting stem, of a wheel on said stem for rotating the same, formed with a flange having internal serrations thereon, a member rotatably mounted on said stem having a finger engaging said serrations, and stops for limiting the angular adjustment of said rotatably mounted member in opposite directions of rotation, said finger being resilient, whereby said stem may be rotated relative to the rotatably mounted member.

2. The combination with a wick-adjusting stem, of a wheel on said stem for rotating the same, formed with a flange having internal serrations thereon, a member rotatably mounted on said stem having integral fingers at opposite ends, one of said fingers engaging the serrations on said flange and being resilient to permit the relative rotation of the stem and the rotatably mounted member, and stops in the path of the other finger for limiting the angular adjustment of said rotatably mounted member in opposite directions of rotation.

1,194,407. RAIN-SHIELD FOR WINDOWS. CHARLES EDWIN MARTIN, Louisville, Ky. Filed Dec. 12, 1914. Serial No. 876,879. (Cl. 156—15.)

1. A rain shield comprising a frame adapted to be arranged at an inclination in an open window, and provided at an intermediate point of its sides with means for engaging a window casing to fulcrum the shield thereon, flaps provided on the frame at each side thereof, and a longitudinally extensible spring-controlled brace for each flap connected to the frame and provided at the free end with hook-shaped means for engaging the window casing, said braces serving to draw the flaps taut.



2. A rain shield comprising a frame adapted to project at one end into a window and having lateral shoulders bearing against the window to pivotally support the frame, flaps secured to the lateral edges of the frame, and spring controlled braces secured across said flaps and adapted for engagement at one end with the window to swing the frame about said shoulders and bind the frame in the window, and to hold said flaps in substantially taut position.

3. A rain shield comprising a frame adapted to be arranged at an inclination in an open window, and provided at an intermediate point of its sides with shoulders for engaging a window casing to fulcrum the shield thereon, approximately triangular flaps provided on the frame at each side thereof, said flaps extending along the sides of the frame from the shoulder to one end thereof, and a longitudinally extensible spring-controlled brace for each flap connected to the frame and provided at the free end with hook-shaped means for engaging the window casing, said braces being housed in casings provided in the flaps and serving to draw the flaps taut.

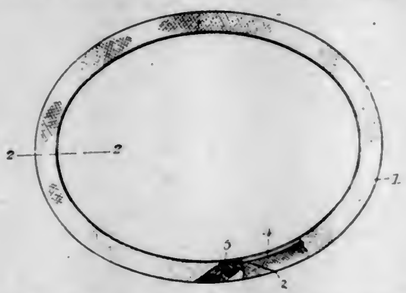
4. A rain shield comprising a frame adapted for positioning in a window in an inclined position and having laterally extending shoulders bearing against the sides of the window to pivotally support the frame, flaps secured to the opposite edges of the frame, coiled springs secured across the flaps, and hooks swiveled upon the free ends of the coiled springs for engagement when in horizontal position with the sides of the window and for engagement when in vertical position with a sash of the window to yieldingly bind the frame in various positions in the window and hold said flaps substantially taut in all of said positions of the frame.

1,194,408. PACKING. RICHARD B. MEANY, Weehawken, N. J., assignor to Peerless Rubber Manufacturing Company, a Corporation of New York. Filed Dec. 7, 1914. Serial No. 875,929. (Cl. 154—45.5.)

1. A packing comprising a plurality of plies of flexible material, a strip of flexible material forming the outer plies, and a narrow strand of stiff inelastic material located at one margin thereof within the central portion of said strip which is folded over said strand, the remainder of said plies being located laterally of said strand and between the two outer plies and forming the inner plies of the main portion of the packing.

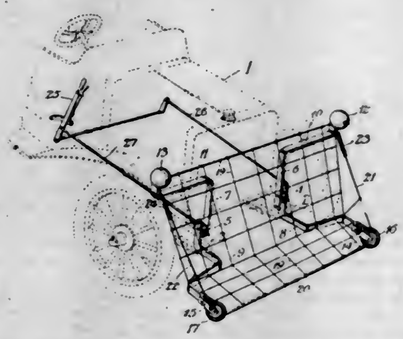
2. A packing comprising four plies of flexible fibrous material, and a strand of stiff wire located at the middle of a strip of said material between two of the plies thereof at one margin of the packing, the edges of two plies abutting said strand between said two outer plies and forming the inner plies of the packing, and means for securing said plies together.

3. A packing comprising four plies of a single strip of fabric impregnated with rubber, and an endless wire strand located at the middle of said strip between two of



the plies thereof, the edges of said strip being turned inward and abutting said strand between said two outer plies, said plies and strand being vulcanized together.

1,194,409. AUTOMOBILE-FENDER. JAMES MELIO, Chicago, Ill. Filed Mar. 18, 1916. Serial No. 85,034. No. 85,034. (Cl. 105—253.)



1. A fender of the class described, comprising a pair of upstanding supporting arms adapted to be attached to a vehicle, a pair of forwardly projecting arms, the inner ends of said forwardly projecting arms being adapted to be attached to said vehicle and the outer ends of said arms being disposed in close proximity to the base line of the vehicle to which they are attached, members mounted on the ends of said forwardly projecting arms, and normally held in spaced relation above the base line of such vehicle, said members being mounted for movement in a downward direction from said normal position when a weight is placed thereon so as to contact with the surface upon which such vehicle may be supported, yielding means for resisting such downward movement, said upstanding arms and forwardly projecting arms forming a framework, and a network attached to said framework.

2. A fender of the class described, comprising a pair of upstanding supporting arms adapted to be attached to a vehicle, a pair of forwardly projecting arms, the inner ends of said forwardly projecting arms being adapted to be attached to said vehicle and the outer ends of said arms being disposed in close proximity to the base line of the vehicle to which they are attached, said upstanding arms and forwardly projecting arms forming a framework, and a network attached to said framework forming an outwardly facing basket and comprising resilient means connecting said upstanding and forwardly projecting arms and forming the sides of said basket substantially as and for the purpose set forth.

3. A fender of the class described, comprising a pair of upstanding supporting arms adapted to be attached to a vehicle, a pair of forwardly projecting arms, the inner ends of said forwardly projecting arms being adapted to be attached to said vehicle and the outer ends of said arms being disposed in close proximity to the base line of the vehicle to which they are attached, said upstanding arms and forwardly projecting arms forming a framework, and a network attached to said framework forming an outwardly facing basket, the outer strand on each side of said network being located in front of the intermediate strands and being provided with a resilient spring substantially as and for the purpose set forth.

4. A fender of the class described, comprising a pair of upstanding supporting arms adapted to be attached to a vehicle, a pair of forwardly projecting arms, the inner ends of said forwardly projecting arms being adapted to be attached to said vehicle and the outer ends of said arms being disposed in close proximity to the base line of the vehicle to which they are attached, members yieldingly mounted on the ends of said forwardly projecting arms, said upstanding arms and forwardly projecting arms forming a framework, and a network attached to said framework forming an outwardly facing basket, the outer strands on each side of said network being attached to said yieldingly mounted members and each of said strands being provided with a resilient spring to permit said members to yield.

1,194,410. PRINTING APPARATUS. HARRY G. MITTELSTAEDT, New York, N. Y. Filed July 24, 1915. Serial No. 41,631. (Cl. 101—11.)

1. The combination of an actuating member for manually operating a mechanism, a printing apparatus, a connection between said member and apparatus comprising sections having a common major median line and movable relatively to each other, means for coupling said sections together whereby said member and apparatus may be simultaneously actuated, said means being movable to an inoperative position to permit a relative movement of said sections whereby said member is movable independently of said apparatus, and means whereby said coupling means is automatically returned to its operative position to couple said sections together.

2. The combination of an actuating member for manually operating a mechanism, a printing apparatus, a connection between said member and apparatus comprising telescopic sections slidable relatively to each other, means for coupling said sections together whereby said member and apparatus may be simultaneously actuated, said means being movable to an inoperative position to permit a relative movement of said sections whereby said member is movable independently of said apparatus and means for retaining said coupling means in its inoperative position.

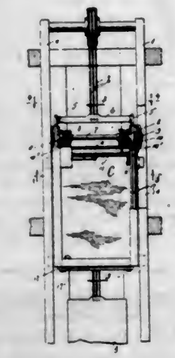
3. A printing apparatus comprising a printing bed on which the sheets to be impressed are adapted to be superimposed, a printing device, means for actuating said device and means for guiding said device to progressively higher planes as the number of sheets on said printing bed increases.

4. A printing apparatus comprising a printing bed on which the sheets to be impressed are adapted to be superimposed, a printing roller, means for moving said roller across said printing bed, and means for guiding said roller to progressively higher planes as the number of sheets on said printing bed increases and for holding the sheet being printed upon against movement.

5. A printing apparatus comprising a printing bed on which the sheets to be impressed are adapted to be superimposed, a movable member, a printing roller movably connected with said member, means for actuating said member to move said roller across said printing bed, and a pressure member whereby said sheets are held against movement during the printing operation and said roller is guided to progressively higher planes as the number of sheets on said printing bed increases.

[Claims 6 to 9 not printed in the Gazette.]

1,194,411. ELEVATOR-CAR. AUGUSTO E. MUELLER, San Francisco, Cal., assignor of one-half to Emil Pohli, San Francisco, Cal. Filed Aug. 3, 1915. Serial No. 43,367. (Cl. 187—1.)



1. In an elevator, the combination with the car, of a safety device therefor, comprising braking means and members serving normally as supports for the passengers and connected to said braking means to operate the latter in case of accident.

2. In an elevator, the combination with the car, of a safety device therefor, comprising braking means, members serving normally as supports for the passengers and connected to said braking means to operate the latter in case of accident and locking means for said members to normally hold the same locked.

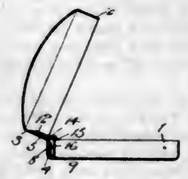
3. In an elevator, the combination with the car, of a safety device therefor, comprising braking means and actuating means therefor, including gripping members normally inoperative and serving as supports for the passengers.

4. In an elevator, the combination with the car, of a safety device therefor, comprising braking means, actuating means therefor, including gripping members extending from the ceiling of the car to be within the reach of the passengers to operate said braking means by pulling thereon and locking means for normally locking said gripping members in inoperative position so that the latter will serve as supports for the passengers without operating said braking means.

5. In an elevator, the combination with the car, of a safety device therefor, comprising braking means, and actuating means therefor, including a frame work suspended near the ceiling of the car and having gripping members normally inoperative and serving as supports for the passengers.

[Claims 6 to 22 not printed in the Gazette.]

1,194,412. BOX. LOUIS A. NEGRAVAL, Jersey City, N. J., assignor of one-third to Charles S. Gutmann and one-third to Albert S. Frank, New York, N. Y. Filed Mar. 11, 1914. Serial No. 823,958. (Cl. 220—12.)



1. A box comprising a body, a cover hinged thereto, a spring having one end rigidly secured to the body, and means carried by the cover and projecting into the body for engaging the other end of the spring to hold the cover in its open or closed position and for limiting the opening movement of the cover.

2. A box comprising a body, a cover hinged thereto, a spring having one end rigidly secured to the body, and an independent means fixed on the cover and projecting into the body for engaging the other end of the spring to hold the cover in its open or closed position and for limiting the opening movement of the cover.

3. A box comprising a body, a cover hinged thereto, a spring engaging member carried by the cover, shoulders on said member, a spring secured to the body engaged by said shoulders for holding the cover in its open or closed position, and means fixed on the cover and projecting into the box engaging the spring for limiting the opening movement of the cover.

4. A box comprising a body, a cover hinged thereto, a spring engaging member carried by the cover, said member being provided with a tongue and shoulders, and a spring secured to the body having a slot in the free end adapted to be engaged by the said tongue for limiting the opening movement of the cover, the said shoulders being arranged in position to engage the spring for holding the cover in its open or closed position.

5. A box comprising a body, a cover hinged thereto, a spring engaging member carried by the cover, said member being provided with a tongue, shoulders and abutments formed from the body of the said member and located upon opposite sides of said tongue, and a spring secured to the body having a slot in the free end adapted to be engaged by the said tongue for limiting the opening movement of the cover, the said shoulders being arranged in position to engage the spring for holding the cover in its open or closed position.

[Claim 6 not printed in the Gazette.]

1,194,413. ELECTRIC FAN. MATTHEW NESSELER, Kansas City, Mo. Filed July 8, 1914. Serial No. 849,799. (Cl. 230—1.)



1. In a device of the character described, a body, a rotary fan carried thereby, and a collapsible fan guard carried by the body and foldable thereagainst away from the plane of rotation of the fan.

2. In a device of the character described, a body, a rotary fan carried thereby whose blades have tips foldable away from the plane of rotation of the fan against

the body, and a collapsible fan guard carried by the body and foldable thereagainst in a direction similar to said tips.

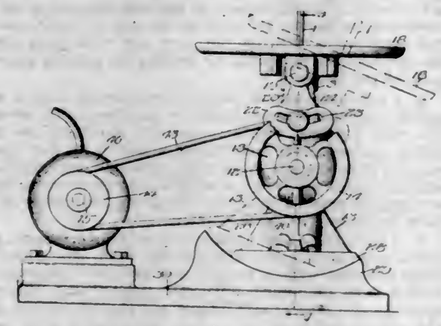
3. In a device of the character described, a body, a rotary fan carried thereby whose blades have tips foldable away from the plane of rotation of the fan against the body, a collapsible fan guard carried by the body and foldable thereagainst in a direction similar to said tips, and a foldable supporting member for the body foldable adjacent the same.

4. In a device of the character described, a body, a rotary fan carried thereby, and a fan guard carried by the body embodying supporting arms pivoted to the body foldable rearwardly against the body away from the plane of rotation of the fan, front rods pivoted to said arms, and means for detachably securing said rods together.

5. In a device of the character described, a body, a rotary fan carried thereby and a collapsible fan guard carried by the body embodying pivotally connected sections foldable rearwardly against the body away from the plane of rotation of the fan, and means for fastening them together when they are unfolded.

[Claims 6 and 7 not printed in the Gazette.]

1,194,414. FILING-MACHINE. CARL G. OLSON, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a Corporation of Illinois. Filed Jan. 13, 1916. Serial No. 71,821. (Cl. 29—76.)

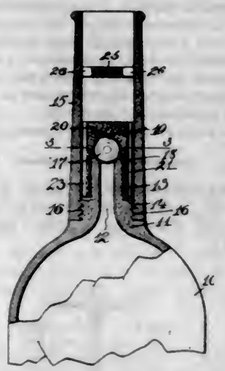


1. In a machine tool, a base, a frame mounted on said base, a tool holder reciprocating in said frame, a power device on said base for actuating said tool holder, and a work table mounted on said frame, the work table, frame and tool holder being adjustable as a unit on said base for the convenience of the workman without changing the angle of the tool relatively to the work, said power device being connected to and operative upon said tool holder for all positions of said tool holder and work table.

2. A machine tool having a frame, a tool holder reciprocating in a straight line in said frame, a work table mounted on said frame, and a base on which the frame is mounted, the table, frame and tool holder being tiltable as a unit upon the base for the convenience of the operator without changing the angle of cut, and the table being tiltable relatively to its supporting frame for all positions of said frame, whereby the operator may obtain various angles of cut regardless of the position of the supporting frame and tool holder relatively to the base.

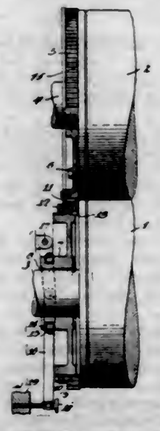
3. A filing machine having a base, a frame angularly adjustable upon said base about a fixed axis, a tool holder reciprocating in said frame, a work table mounted on said frame and being angularly adjustable upon said frame about an axis parallel to the axis of adjustment of the frame relatively to the base, a wheel mounted on said frame concentric with the axis of adjustment thereof for actuating the tool holder, and means mounted upon said base for driving said wheel in all positions of the frame, whereby the filing cut may be taken in the work at any desired angle, and the work table and file may be adjusted as a unit to accommodate the convenience of the workman.

1,194,415. NON-REFILLABLE BOTTLE. SILAS A. PARKER, Morristown, N. J., assignor to Theodore R. Peterson, Providence, R. I. Filed June 30, 1914. Serial No. 848,185. (Cl. 215—62.)



In a non-refillable bottle, a neck, a stop piece therein provided with a passage for liquid, an elongated nozzle within the botle neck, a thimble within the bottle neck and having a sliding fit upon and guided by said nozzle, liquid passages being provided between said thimble and neck, and the bottom of the thimble and the end of the nozzle being provided with recessed seats in alinement with one another, and a ball adapted to be received in said seats.

1,194,416. ROTARY PRINTING-MACHINE. RAYMOND PERCIVAL PAYNE, Leeds, England. Filed Jan. 16, 1914. Serial No. 812,438. (Cl. 101—111.)



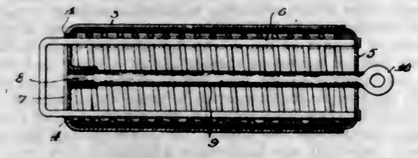
1. In a rotary printing machine, two cylinders operatively associated with each other, and adapted to carry printing surfaces, gearing connecting said cylinders, comprising a gear wheel mounted for rotation with one of said cylinders and a gear wheel and connections from said last named gear wheel to the other of said cylinders, said last named gear wheel and connections having a part mounted for rotation with said last named cylinder and a part capable of independent rotation thereto, one of said parts being movable longitudinally of the axis of said cylinder and means for causing an angular displacement of said independently rotatable part with respect to said cylinder upon the relative movement of said parts longitudinally of the axis of said cylinder.

2. In a rotary printing machine, two cylinders operatively associated with each other, and adapted to carry printing surfaces, gear wheels one for each cylinder in mash with each other, one of said gear wheels being capable of independent rotary movement relative to its corresponding cylinder, means for connecting said gear wheel to its corresponding cylinder comprising a part mounted for rotation with said cylinder and a sliding connection between said part and said gear wheel capable of changing the angular position of said gear wheel with respect to its cylinder upon relative movement longitudinally of the axis of said cylinder.

3. In a rotary printing machine, two cylinders operatively associated and adapted to carry surfaces in printing contact, gear wheels connecting said cylinders, one of said gear wheels being loosely mounted on its shaft, means for connecting said gear wheel to said cylinder, and for effecting a change in the angular position of said gear wheel with respect to its cylinder upon longitudinal movement of said gear wheel on its supporting shaft.

4. In a rotary printing machine, two cylinders operatively associated and adapted to carry surfaces in printing contact with each other, gearing connecting said cylinders including a gear wheel loosely mounted on the shaft of one of said cylinders, slide-ways projecting from one of the end faces of said cylinders which slide-ways have their surfaces inclined to the axial planes of the cylinders passing therethrough, and a pivoted block on said gear wheel adapted to slide in the said slide-ways and means for moving said gear wheel longitudinally on its shaft.

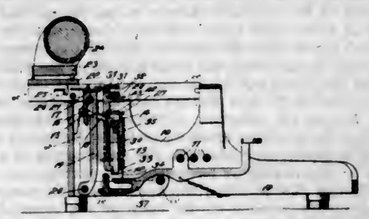
1,194,417. TENSION DEVICE FOR HITCHING-STRAPS. WALTER O. PELHAM, Monett, Mo. Filed Jan. 6, 1913. Serial No. 740,373. (Cl. 267—13.)



In a device of the class described, a casing, a spiral spring contained therein, a rod extending into said casing and at one end passing freely through one end of said casing, a head stop rigidly secured on the other end of said rod and adapted to receive one end of said spring thereagainst, guide rods secured within said casing and extending through apertures in said head stop properly to space the spring and guide said head stop during its movement, and a stop at the head stop end of said spring and fixed to said casing for engaging said head stop to limit the expansion of said spring.

1,194,418. DEAD-KEY ATTACHMENT FOR TYPE-WRITING MACHINES. OTTO PETERMANN, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated, a Corporation of New York. Filed Nov. 8, 1912, Serial No. 730,248. Renewed May 19, 1916. Serial No. 98,671. (Cl. 197—83.)

1. The combination of an escapement element, a rocking and pivotally held lever adapted to actuate said escapement, means for shifting the escapement element and rocking lever vertically, a controlling bar having a plurality of engaging portions spaced apart and adapted to be engaged by said escapement operating lever or permit said lever to be moved without engaging said bar, a spring tending normally to force the bar into an engaging position, a releasing lever, a spring of greater strength than the first-mentioned spring tending normally to hold the controlling bar in a disengaged position, and a key-operated lever adapted to actuate said releasing lever.



2. The combination of an escapement element, a rocking and pivotally held lever adapted to actuate said escapement, a controlling bar adapted to be engaged by said escapement operating lever or permit said lever to be moved without engaging said bar, a spring tending normally to force the bar into an engaging position, a releasing lever, a spring of greater strength than the first-mentioned spring tending normally to hold the controlling bar in a disengaged position, and key-operated means adapted to actuate said releasing lever.

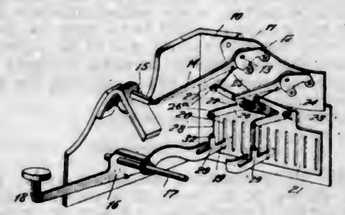
3. The combination of an escapement element, a rocking and pivotally held lever adapted to actuate said escapement, means for moving said lever and escapement element vertically, a controlling bar having a plurality of engaging portions spaced apart and adapted to be engaged by said escapement operating lever or permit the said lever to be moved without engaging said bar, and key-operated means to cause movement of the controlling bar.

4. The combination of an escapement element, a device adapted to actuate said escapement, a controlling bar having a plurality of engaging portions spaced apart and adapted to be engaged by said escapement operating device or permit said device to be moved without engaging said bar, a spring tending normally to force the bar into an engaging position, a releasing lever, a spring of greater strength than the first-mentioned spring tending normally to hold the controlling bar in a disengaged position, and a key-operated lever adapted to actuate said releasing lever.

5. The combination of an escapement element, a controlling bar, springs of relatively different strengths acting on said controlling bar, a key-operated lever adapted to permit the stronger spring to overcome the tension of the other spring to move the controlling bar, and means adapted to be actuated by the controlling bar to operate the escapement element.

[Claims 6 to 21 not printed in the Gazette.]

1,194,419. TYPE-WRITING MACHINE. OTTO PETERMANN, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated, a Corporation of New York. Filed May 16, 1914. Serial No. 839,074. (Cl. 197—27.)



1. In a typewriting machine, the combination of a support having pivotal portions, bell-crank levers having forwardly extending arms pivotally held to said portions to

move up and down thereon, type-bars located above the upper forwardly extending arms of said bell-crank levers, links connecting said upper arms to said type-bars, key-operated levers located under the lower forwardly extending arms of the bell-crank levers, means for guiding said levers at their inner ends, and links connecting the key-operated levers with the forward ends of the lower arms of the bell-crank levers, the arrangement of the links and arms of the bell-crank levers being such that each transmitting line of force is divided into two sections one of which follows the direction of travel of the type-bar and the other the direction of travel of the key-operated lever.

2. In a typewriting machine, the combination of a vertically arranged support having pivotal portions at opposite sides of the machine, said portions being angularly arranged with respect to the body of the support and those on one side of the machine angularly arranged with respect to those on the other side, bell-crank levers having forwardly extending arms pivotally held to said portions to move up and down thereon, type-bars located above the upper forwardly extending arms of said bell-crank levers, upwardly and rearwardly extending links connecting said upper arms to said type-bars, key-operated levers located under the lower forwardly extending arms of the bell-crank levers, and vertically disposed links connecting the key-operated levers with the forward ends of the lower arms of the bell-crank levers.

3. In a typewriting machine, the combination of a support having pivotal portions, bell-crank levers having forwardly extending arms pivotally held to said portions to move up and down thereon, type-bars located above the upper forwardly extending arms of said bell-crank levers, upwardly and rearwardly extending links connecting said upper arms to said type-bars, key-operated levers located under the lower forwardly extending arms of the bell-crank levers, said support being slotted to guide said levers at their inner ends, and vertically arranged links connecting the key-operated levers with the forward ends of the lower arms of the bell-crank levers, the arrangement of the links and arms of the bell-cranks being such that the transmitting line of force for each type action is divided into two sections one of which follows the direction of travel of the type-bar and the other the direction of travel of the key-operated lever.

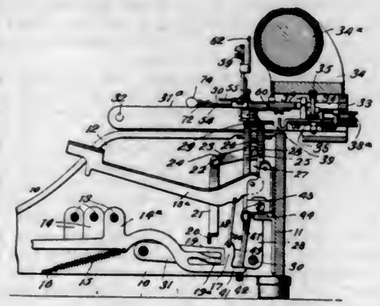
4. In a typewriting machine, the combination of a support having its body provided with slots forming a comb plate and having integral staggered pivotal portions at opposite sides of the vertical center thereof, bell-crank levers pivotally held to said pivotal portions and extending in substantially parallel relation to each other and projecting inwardly at an angle intersecting the center of the machine, type-bars connected to the bell-crank levers, and key-operated levers having their ends guided in the slots of the comb plate and connected to said bell-crank levers.

5. In a typewriting machine, the combination of a support having its body provided with slots and with angularly disposed integral pivotal portions, a plurality of bell-crank levers located on opposite sides of the machine and angularly arranged with respect to the support and the levers on one side of the machine angularly arranged with respect to those on the other and pivoted to said angular portions of said support, type-bars pivoted to swing upward and rearward at an angle, key-operated levers having ends guided in the slots of the support, and links connecting the angularly arranged bell-crank levers to the type-bars and other links connecting the key-operated levers to said bell-crank levers.

[Claim 6 not printed in the Gazette.]

1,194,420. TYPE-WRITING MACHINE. OTTO PETERMANN, Groton, N. Y., assignor to Corona Typewriter Company, Inc., a Corporation of New York. Filed July 16, 1914. Serial No. 851,334. (Cl. 197—83.)

1. In a typewriting machine, the combination of a carriage, escapement mechanism for letter-spacing the carriage, universal bar mechanism adapted to trip the escapement, type, key-operated levers for moving the type and adapted to trip the escapement through the universal bar mechanism, an accent key-operated lever for imparting a less movement to the universal bar mechanism and at a different part of its movement from the first-mentioned key-operated lever without tripping the escapement, and a stop adapted for positive engagement by a part of the accent key-operated lever to prevent further movement thereof and at a point just prior to the printing by the type but in such a way as to permit the type by its momentum to make an impression.



2. In a typewriting machine, the combination of a carriage, escapement mechanism for letter-spacing the carriage, ribbon vibrating mechanism, universal bar mechanism carrying a part of the ribbon vibrating mechanism and adapted to operate said ribbon vibrating mechanism and trip the escapement, type, key-operated levers for moving the type and the universal bar mechanism and adapted to trip the escapement through said universal bar mechanism, an accent key-operated lever for imparting a less movement to the universal bar mechanism to operate the ribbon vibrating mechanism without tripping the escapement, and a stop adapted for positive engagement by a part of the accent key-operated lever to prevent further movement thereof and at a point just prior to the printing by the type but in such a way as to permit the type by its momentum to make an impression.

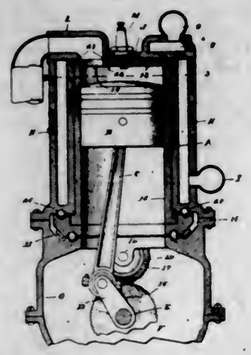
3. In a typewriting machine, the combination of a carriage, escapement mechanism for letter-spacing the carriage, universal bar mechanism adapted to trip the escapement, type, key-operated levers for moving the type and adapted to trip the escapement through the universal bar mechanism, an accent key-operated lever for imparting a less movement to the universal bar mechanism and at a different part of its movement from the first-mentioned key-operated levers, and a stop adapted for positive engagement by a part of the accent key-operated lever to prevent further movement thereof and at a point just prior to the printing by the type but in such a way as to permit the type by its momentum to make an impression.

4. In a typewriting machine, the combination of a carriage, key-operated levers, type operated by said levers, escapement mechanism for the carriage, a universal bar operatively connected to said escapement mechanism and normally separated from the key-operated levers, and stopping means for arresting a part only of said key-operated levers at such a point that sufficient movement to actuate the escapement mechanism will not be given said bar.

5. In a typewriting machine, the combination of a carriage, a key-operated lever, type operated by said lever, escapement mechanism for the carriage, a universal bar operatively connected to said escapement mechanism and normally separated from the key-operated lever, and a positive stop for arresting said lever at such a point that sufficient movement to actuate the escapement mechanism will not be given said bar.

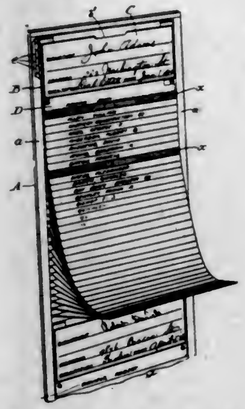
[Claims 6 to 19 not printed in the Gazette.]

1,194,421. ROTARY VALVE. EDWIN F. PRATER and FRED W. SIZER, Twin Falls, Idaho. Filed Sept. 30, 1915. Serial No. 53,444. (Cl. 123—80.)



In an internal combustion engine, a cylinder, a crank case detachably connected with the cylinder, said cylinder and crank case forming a raceway at the juncture thereof, an inner cylinder fitted within the first named cylinder and having an externally threaded end, a beveled gear threaded on the externally threaded end of the inner cylinder and movable in the raceway, the said gear being formed with a central opening corresponding to the size of the core in the inner cylinder, bearing balls interposed between the walls of the raceway and the faces adjacent thereto of the gear, a piston working within the inner cylinder, a crank operating said piston and located in the crank casing, gear connections between the crank and the said gear on the inner cylinder for rotating the same, inlet and exhaust pipes leading from the first named cylinder at the head thereof, a head on the inner cylinder and having openings adapted for alternate registration with the inlet and exhaust pipes, and a spark plug mounted centrally in the head on the inner cylinder and loosely projected through the head on the first named cylinder.

1,194,422. CARD SYSTEM. JAMES H. RAND and JAMES H. RAND, Jr., North Tonawanda, N. Y. Original application filed Apr. 8, 1914, Serial No. 830,508. Divided and this application filed Sept. 7, 1915. Serial No. 49,139. (Cl. 129—6.)



1. A card system, comprising a series of card-holders, and a series of cards removably held by said card-holders, said card-holders being adapted to support said cards one in front of another with their edges exposed, whereby the absence of any card from its card-holder will be visually indicated by the absence of its edge from the series of exposed card edges.

2. A card system, comprising a series of card-holders, and a series of cards removably held by said card-holders, said card-holders being adapted to support said cards one in front of another with their edges exposed, and a signal normally concealed behind the exposed edge of each card, whereby the removal of any card from its card-holder will expose its underlying signal and visually indicate the absence of such removed card.

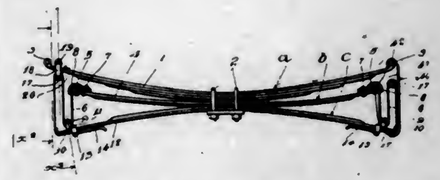
3. A card system, comprising a series of card-holders, and a series of cards removably held by said card-holders, said card-holders being adapted to support said cards one in front of another with their edges exposed, and the edges of the card-holders extending substantially to the exposed edges of the cards overlying and supported by them respectively, whereby the absence of any card from its card-holder will be visually indicated by exposing the edge of such card-holder.

4. A card system, comprising a series of card-holders, and a series of cards removably held by said card-holders, said card-holders being adapted to support said cards one in front of another with their edges exposed, and the edges of the card-holders extending substantially to the exposed edges of the cards overlying and supported by them respectively, the exposed edges of the cards and of the card-holders being visually distinguishable from each other.

5. A card system, comprising a series of card-holders, and a series of cards removably held by said card-holders, said card-holders being adapted to support said cards one in front of another with their margins exposed to view, and a sheath of transparent material on each card-holder covering the exposed margins of the cards.

[Claims 6 to 13 not printed in the Gazette.]

1,194,423. VEHICLE-SPRING. CLABORN P. RANDOLPH, Los Angeles, Cal. Filed May 11, 1914. Serial No. 837,615. (Cl. 267—27.)



1. In a spring, a plurality of sections, a strap connected at one end to one of said sections, said strap being loosely connected with the other sections with its ends secured to one of the latter sections.

2. A spring comprising a plurality of sections, a strap with its ends connected to two different sections, and rollers connected with certain of the sections and engaging intermediate portions of said strap.

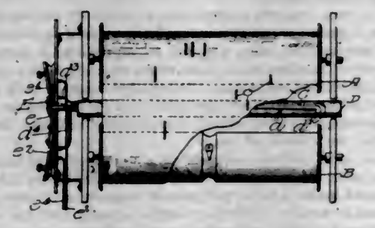
3. In a spring, a plurality of sections, a strap having its ends connected to different sections, a buffer over one end connection to shield the strap from the adjoining section, and rollers carried by certain of the sections engaging portions of the strap intermediate its ends.

4. In a spring, a plurality of sections, a hanger with a roller pressed against one of said sections, said latter section having a projection for limiting the position of said roller, said hanger provided with another roller, a strap connected at its ends to certain of said sections and passing over the second named roller.

5. A spring comprising a plurality of sections, a strap fixed at one end to one of said sections, means adjustably securing the other end of the strap to another section, and means on certain of the sections for engaging intermediate portions of the strap.

[Claims 6 and 7 not printed in the Gazette.]

1,194,424. AUTOMATIC MUSIC-TRACKER. CHARLES F. REEPS and FRED G. REEPS, Oak Park, Ill. Filed Mar. 23, 1912. Serial No. 685,829. (Cl. 84—161.)



1. A player mechanism for musical instruments, comprising a music sheet provided with perforations disposed along parallel lines, a tracker bar provided with openings coöperating with the perforations of said sheet, and means controlled by the note perforations of said sheet for automatically preserving alinement thereof with the openings of said tracker bar, having two rows of holes extending along the tracker bar, the holes of each row, being connected together, and the holes of one row being staggered relative to those of the other row, each note perforation passing between a hole of one row and a hole of the other row each pair of holes thus formed being individual to a single line of note perforations, the holes of one row communicating with each other, and the holes of the other row communicating with each other, internally of said tracker bar.

2. A player mechanism for musical instruments, comprising a traveling music sheet provided with perforations disposed along parallel lines, a tracker bar provided with openings coöperating with the perforations of said sheet, and means controlled by the note perforations of said sheet, for automatically preserving alinement thereof with the openings of said tracker bar, operated only by air passing through the perforations of the sheet, including holes in said tracker bar, some of which holes are brought within the paths of travel of said note perforations by the lateral shift of the sheet in either direction, there being a right and left hole for each of said perforations, said mechanism being controllable by the opposite edges of each note perforation.

3. A player mechanism for musical instruments, comprising a traveling music sheet provided with perforations disposed along parallel lines, a tracker bar provided with openings coöperating with the perforations of said sheet, and means controlled by the note perforations of said sheet for automatically preserving alinement thereof with the openings of said tracker bar, having holes disposed in the face of the tracker bar and in staggered relation to the said openings, the said holes being divided into two groups, and the members of each group being interconnected within the body of said tracker bar, together with a single connection to said tracker bar for each group.

4. A player mechanism for musical instruments, comprising a traveling music sheet provided with perforations disposed along parallel lines, a tracker bar provided with openings coöperating with the perforations of said sheet, and means controlled by the note perforations of said sheet, for automatically preserving alinement thereof with the openings of said tracker bar, including two rows of holes extending along the tracker bar, the holes of each row being connected together, and the holes of one row being staggered relative to those of the other row, each note perforation passing between a hole of one row and a hole of the other row, each pair of holes thus formed being individual to a single line of note perforation, the tracker bar having two separate longitudinal passages, the holes of one row communicating with one passage, and the holes of the other row communicating with the other passage, and said holes being disposed in staggered relation to each other, substantially as and for the purpose set forth.

5. A player mechanism for musical instruments, comprising a traveling music sheet provided with perforations disposed along parallel lines, a tracker bar provided with openings coöperating with the perforations of said sheet, and means controlled by the note perforations of said sheet, for automatically preserving alinement thereof with the openings of said tracker bar, including holes disposed in the face of the tracker bar and in staggered relation to the said openings, the said holes being divided into two groups, and the members of each group being interconnected within the body of said tracker bar, together with a single connection to said tracker bar for each group, and said holes being disposed in staggered relation to each other, substantially as and for the purposes set forth.

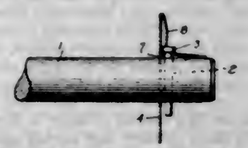
[Claims 6 to 15 not printed in the Gazette.]

1,194,425. SHOE-POLISH. JOHN A. REID, Gulfport, Miss. Filed June 18, 1915. Serial No. 34,871. (Cl. 134—7.)

1. A shoe cleaning or recoloring powder comprising Spanish whiting 7.5 pounds, oxid of zinc 2.5 pounds, pumice stone 1.5 pounds, sugar 1.5 pounds, flour 3 pounds.

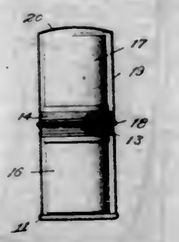
2. A shoe cleaning or recoloring powder comprising Spanish whiting 7.5 pounds, oxid of zinc 2.5 pounds, pumice stone 1.5 pounds, sugar 1.5 pounds, flour 3 pounds, and coloring matter 1.6 pounds.

1,194,426. DEVICE FOR LOCKING COTTERS AND PREVENTING SAME FROM DROPPING OUT OF LOCKING POSITION. CLIFFORD RICHEY, Unity Station, Pa. Filed Oct. 23, 1915. Serial No. 57,466. (Cl. 74—8.)



A locking device comprising a disk having an extension projecting from the rim thereof and having a portion partly cut from the center thereof, the said cut portion being bent at substantially right angles to the disk and having an orifice through which a pin is adapted to be inserted, the said extension being adapted to be turned down into engagement with the head of the pin for the purpose of locking same.

1,194,427. SHAVING-STICK AND THE LIKE. FELIX RIESENBERG, New York, N. Y., assignor to Maud C. Riesenberg, New York, N. Y. Filed Oct. 28, 1914. Serial No. 869,135. (Cl. 206—56.)



1. A shaving stick device comprising in combination a bar of soap, a band permanently secured to the said bar of soap substantially midway between its two ends, and a case having a holder portion adapted to invertibly receive and engage said band at the open end of said holder portion.

2. A shaving stick device comprising in combination a bar of soap, a band permanently secured about said bar of soap approximately midway between the two ends thereof, a case having a holder portion adapted to invertibly receive and engage said band at the open end of said holder portion, and a removable cover portion adapted to inclose the projecting portion of the bar of soap.

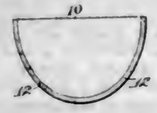
3. A shaving stick device comprising in combination a bar of soap, a band having an external medial rim and surrounding an interior zone of the bar of soap with portions projecting to either side of the band and a case therefor comprising a holder portion adapted to invertibly receive and engage said band in its open end and inclose that portion of the soap projecting from one side of said band, and a cover portion adapted to inclose the other portion of said bar of soap and removably engage said band with said medial rim interposed between the two portions of the case.

4. A shaving stick device comprising in combination a two-part band with a diaphragm between the two parts, a two-piece bar of soap having one portion seated in each side of said band against said diaphragm and projecting from the band, and a cup-shaped holder adapted to invertibly engage said band to inclose one of said bodies of soap and serve as a handle for the other.

5. A shaving stick device comprising in combination a band formed in two parts spun together to form a medial rim, soap fixed therein and projecting therefrom a substantially equal distance at either side, and a cup-shaped holder adapted to invertibly engage said band and seat against said medial rim.

[Claims 6 to 11 not printed in the Gazette.]

1,194,428. REINFORCED PAD FOR SHOES. LEOPOLD S. SAMUEL, Newark, N. J. Filed Sept. 6, 1912. Serial No. 718,823. (Cl. 36—59.)

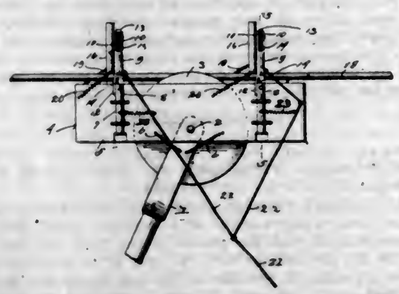


1. As an article of manufacture, a shoe pad comprising a body portion of cushion material of substantially the same thickness, the edge of the body portion being provided with a non-resilient wear-resisting gritty material.

2. As an article of manufacture, a flat sheet of cushion material having an edge portion made up of a binding agent and a gritty substance.

3. As an article of manufacture, a body portion of cushion material, said body portion being of substantially the same thickness throughout, and an edge section formed of a gritty substance mixed with a binding agent to hold the substance in a mass and to cause it to adhere to the body portion.

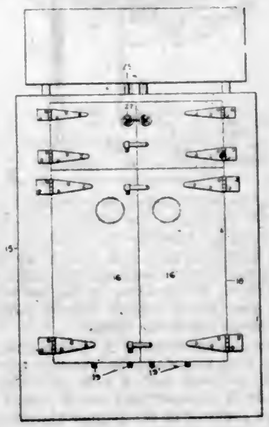
1,194,429. GUARD FOR TROLLEY-WHEELS. PETER RAYMOND SCHAFER, Brownfield, Pa. Filed Oct. 25, 1915. Serial No. 57,797. (Cl. 191—80.)



1. In a device of the class described, the combination with a harp, of a frame pivotally connected to the harp, posts pivotally connected to one side of the frame, tubular rods rotatably supported by the other side of the frame, upper and lower tubular arms having their adjacent ends pivotally connected, the lower arms being pivotally connected to the rods, cords having their upper ends fixed to the upper arms and their lower ends fixed to the rods, the upper arms being normally horizontal and engaged with said posts, and means for simultaneously swinging the upper and lower arms downwardly, whereby said cords compel the arms to aline, as and for the purpose set forth.

2. In a device of the class described, the combination with a harp, of a frame pivotally supported thereby, rods supported by one side of the frame, posts carried by the other side thereof, upper and lower pivotally connected arms, the lower arms being pivotally connected to the rods, said upper arms being normally horizontal and engaged with the posts, and means for simultaneously swinging the arms downwardly into horizontal alinement, as and for the purpose set forth.

1,194,430. PROCESS OF MANUFACTURING ICE. MARTIN SCHILDE, New Orleans, La. Filed Feb. 10, 1915. Serial No. 7,288. (Cl. 62—172.)



1. The herein-described process of manufacturing ice, which consists in maintaining in a closed chamber a film flow of water on a surface or on ice formed thereon, continuously directing a gaseous refrigerant against the flowing water to convert the same into ice, drawing off the refrigerant from the chamber after the same has acted on the water, lowering the temperature of the refrigerant and again supplying the same to the closed chamber.

2. The herein-described process of manufacturing ice, which consists in maintaining in a closed chamber a film flow of water on a surface or on ice formed thereon, continuously directing a gaseous refrigerant against the flowing water to convert a part of the same into ice, drawing off the refrigerant from the chamber after the same has acted on the water, proportioning the flow of water to the temperature of the refrigerant, so that only a part of the flowing water is converted into ice, removing the excess water from the chamber, drawing off the refrigerant from the chamber, lowering the temperature of the refrigerant, and returning the refrigerant to the chamber.

3. The herein-described process of manufacturing ice, which consists in continuously producing a downflow of water in a thin vertical sheet, and subjecting the sheet of water to a freezing atmosphere of substantially uniform temperature for building up a mass of ice by the freezing of the water.

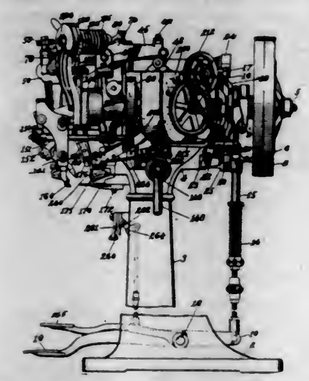
4. The herein-described process of manufacturing ice, which consists in maintaining a continuous gravity flow

of water in a thin sheet, and directing continuously against the onflowing water a freezing gas to convert the water into ice.

5. The herein-described process of manufacturing ice, which consists in supplying water in the form of a sheet, and directing numerous jets of freezing gas against the sheet, whereby the mass of ice is progressively formed by the freezing of the water.

[Claims 6 to 22 not printed in the Gazette.]

1,194,431. LASTING-MACHINE. THOMAS H. SEELY, Dorchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 31, 1912. Serial No. 718,031. (Cl. 12—2.)



1. A lasting machine having, in combination, a gripper, and means for operating the gripper to overdraw the upper, comprising an overdraw rod connected to the gripper, a block attached to the rod, a cam, a roll on the block and engaging the cam, a swinging arm connected to the roll carrying block, an operating spring one end of which engages said arm, and a manual tension adjusting lever engaging the other end of the spring.

2. A lasting machine having, in combination, a gripper, and means for operating the gripper to overdraw the upper comprising an overdraw rod, a yoke to which the front end of the rod is clamped and which has a depending arm, and a pin confined in the gripper and into which the arm extends to force the gripper forwardly and backwardly with freedom for the gripper to move vertically relatively to the arm, and means to operate the rod.

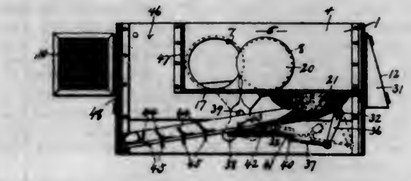
3. A lasting machine having, in combination, a gripper, anad means for operating the gripper to overdraw the upper comprising an overdraw rod located at one lateral side of the median plane of the machine and the gripper, a block extending laterally from the rear end of the rod and carrying a cam roll in said median plane, a yoke to one lateral side of which the front end of the rod is connected and which has an arm operatively connected with the gripper in said plane, and a cam to engage the cam roll.

4. In a machine of the class described, the combination with operating mechanism of a gripper comprising an upper jaw, plates spaced apart and provided with guiding surfaces for directing the movements of the upper jaw, and a lower jaw secured between the plates and having walls extending upwardly between the plates and forming portions of the guiding surfaces.

5. In a machine of the class described, the combination with a gripper, of means for operating the gripper to tension the work, a work rest comprising members extending downwardly upon opposite sides of the gripper closely adjacent thereto and inturned toward each other beneath the gripper to form a work engaging foot adapted to contact with the innersole inside the margin of the upper.

[Claims 6 to 14 not printed in the Gazette.]

1,194,432. TRAP-NEST. BENJAMIN F. SIGLER, Locke, N. Y. Filed Apr. 6, 1915. Serial No. 19,442. (Cl. 119—47.)



1. In a trap nest, an exit chamber and an entrance chamber, each having an opening in one end, a door for the entrance opening, tilting platforms in the bottoms of said chambers, connections between said platforms for transmitting rocking motion from one to the other, additional connections between the entrance platform and door for opening and closing said door as such platform is rocked in reverse directions, a nest chamber communicating with the entrance chamber and exit chamber through separate passages, a gate movable into and out of registration with each of said passages, means for automatically closing the gate across the entrance passage, and additional means actuated by the tilting of the exit platform in one direction for shifting the gate from the entrance passage across the exit passage.

2. In a trap nest, an exit chamber and an entrance chamber, each having an opening in one end, a door for the entrance opening, tilting platforms in the bottoms of said chambers, connections between said platforms for transmitting rocking motion from one to the other, additional connections between the entrance platform and door for opening and closing said door as such platform is rocked in reverse directions, a nest chamber communicating with the entrance chamber and exit chamber through separate passages, a gate movable into and out of registration with each of said passages, means for automatically closing the gate across the entrance passage, additional means actuated by the tilting of the exit platform in one direction for shifting the gate from the entrance passage across the exit passage, and means for locking the gate-operating means in the last named position.

3. In a trap nest, an exit chamber and an entrance chamber, each having an opening in one end, a door for the entrance opening, tilting platforms in the bottoms of said chambers, connections between said platforms for transmitting rocking motion from one to the other, additional connections between the entrance platform and door for opening and closing said door as such platform is rocked in reverse directions, a nest chamber communicating with the entrance chamber and exit chamber through separate passages, a gate movable into and out of registration with each of said passages, means for automatically closing the gate across the entrance passage, additional means actuated by the tilting of the exit platform in one direction for shifting the gate from the entrance passage across the exit passage, means for locking the gate-operating means in the last named position, and further means operated by an egg deposited in the nest chamber for tripping said holding means to allow the gate to open the exit and close the entrance opening.

1,194,433. CHAIN FOR PNEUMATIC TIRES. SAMUEL G. SILBERMAN, Philadelphia, Pa. Filed July 29, 1915. Serial No. 42,473. (Cl. 152—14.)

1. A device for attaching chains to wheels having pneumatic tires, which consists of attachment pieces inserted transversely across the groove of the rim, and held between the rim and the tire, the ends of each attachment piece projecting at the sides of the rim, chains corresponding one to each attachment piece, and means for detachably securing the ends of the chain to the ends of the attachment piece.

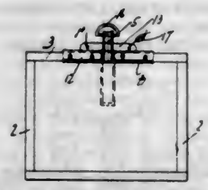
2. A device for attaching chains to wheels having pneumatic tires, which consists of attachment pieces inserted between the rim and the tire projecting at the sides of the rim in the form of notched lugs, and chains corresponding one to each attachment piece, the terminal links whereof are formed so as to be readily secured to said notched lugs.



3. A device for attaching chains to wheels having pneumatic tires, which consists of attachment pieces projecting at the sides of the rim in the form of notched lugs, chains corresponding one to each attachment piece, terminal links adapted to securely engage said attachment pieces when in their normal radial position, and to pass over the end of said pieces when turned from said position, and elastic links connecting said terminal links to said chains, whereby said end pieces are normally held in their normal radial position.

4. A device for attaching chains to wheels having pneumatic tires which consists of attachment pieces inserted transversely across the groove of the rim, and lying between the rim and the tire, said attachment pieces comprising paired plates with beveled abutting surfaces whereby each plate may be wedged against its fellow, the ends of each attachment piece projecting at the sides of the rim, and chains with means for attaching the terminal links of the chains to the projecting ends of the attachment pieces.

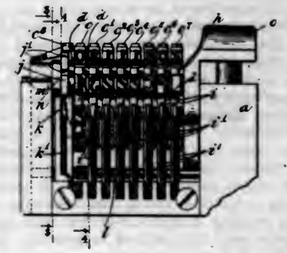
1,194,434. SHIPPING-BOX. JAMES G. SLAVENS, Seattle, Wash. Filed Nov. 1, 1915. Serial No. 59,064. (Cl. 217—56.)



1. In a device of the class described, the combination of a box open at the top, with a loose lid adapted to cover the said opening in the said box, means for normally holding the lid in contact with the top of the box and for limiting the distance which said lid can be raised while said means is in a holding position, and means for locking or sealing said holding means with respect to the lid, whereby the lid may be slightly raised from the box for the purposes of inspection of the contents of the box but not enough to permit of removal of said contents without releasing said lock or sealing means; the first mentioned means including spring retained bolts slidable to a limited extent with respect to the box, keys secured to said bolts and adapted to coöperate with sealing strips on the lid.

2. In a device of the class described, the combination of a box open at the top, with a loose lid having slots in either end and adapted to fit the open top of said box, spring retained bolts set in either end of said box and adapted to project through the slots in said cover, the bolts having a limited longitudinal movement against the resistance of their retaining springs and a free rotary movement, whereby the lid may be slightly raised from the box, perforated keys passing through said bolts near the upper ends thereof and adapted to pass through the slots in the ends of the cover when rotated a half turn to coöperate with perforated sealing strips on the lid and to hold the lid down tightly against the top of the box, sealing means adapted to pass through the perforations of the keys and sealing strips, whereby the keys and bolts are prevented from being rotated so as to allow the cover to be removed from the box but do not prevent a slight raising of the cover and bolts to permit of inspection of the contents of the box.

1,194,435. NUMBERING-HEAD. AMOS H. SMITH, New York, N. Y., assignor to American Bank Note Company, a Corporation of New York. Filed Aug. 12, 1914. Serial No. 856,341. (Cl. 101—184.)



1. A numbering head embodying therein a sequence of digit wheels, means adapted to successively act directly upon each of said wheels whereby said wheels may be progressively actuated, independently operative locking means acting upon the units wheel and upon each digit wheel of higher denomination respectively, means carried by each digit wheel of a lower denomination operative upon the locking means of the digit wheel of next higher denomination whereby said wheel of higher denomination will be released through the actuation of the wheel of next lower denomination at such times as the operation of transferring from the lower wheel to the higher wheel occurs, the wheel of higher denomination remaining locked at all other times, main actuating means, and means carried by said main actuating means and operative upon said units wheel locking means, whereby said units wheel locking means will be rendered inoperative upon each actuation of said main actuating means.

2. A numbering head embodying therein a sequence of digit wheels, means adapted to successively act directly upon each of said wheels whereby said wheels may be progressively actuated, independently operative locking means acting upon the units wheel and upon each digit wheel of higher denomination respectively, means carried by each digit wheel of a lower denomination operative upon the locking means of the digit wheel of next higher denomination whereby said wheel of higher denomination will be released through the actuation of the wheel of next lower denomination at such times as the operation of transferring from the lower wheel to the higher wheel occurs, the wheel of higher denomination remaining locked at all other times, main actuating means embodying therein a rotatable member and a cam carried thereby adapted to operatively engage the locking means of said units wheel whereby said units wheel locking means will be rendered inoperative during each actuation of said main actuating means.

3. A numbering head embodying therein a sequence of digit wheels, means adapted to successively act directly upon each of said wheels whereby said wheels may be progressively actuated, independently operative locking means acting upon each digit wheel of a denomination higher than the units wheel, means carried by each digit wheel of a lower denomination, operative upon the locking mechanism of the digit wheel of next higher denomination whereby said wheel of higher denomination will be released through the actuation of the wheel of next

lower denomination at such times as the operation of transferring from the lower wheel to the higher wheel occurs and the wheel of higher denomination is locked at all other times, a disk having peripheral sockets therein carried by the units digit wheel, a locking member cooperating with said disk, main actuating means embodying therein a rotatable member, and a cam carried by said rotatable member and adapted to operatively engage the locking member of said units wheel whereby said locking member will be rendered inoperative upon each actuation of said main actuating means.

4. A numbering head embodying therein a sequence of digit wheels, means adapted to successively act directly upon each of said wheels whereby said wheels may be progressively actuated, a shaft parallel with the axis of said digit wheels, a plurality of independently movable locking members mounted upon said shaft and adapted to act upon the units digit wheel and upon each digit wheel of higher denomination respectively, means carried by each digit wheel of a lower denomination operative upon the locking member of the digit wheel of next higher denomination whereby said wheel of higher denomination will be released through the actuation of the wheel of next lower denomination at such times as the operation of transferring from the lower wheel to the higher wheel occurs, the wheel of higher denomination remaining locked at all other times, main actuating means, means carried by said main actuating means and operative upon said units wheel locking member whereby said units wheel locking member will be rendered inoperative during each actuation of said main actuating means and means common to all of said locking members whereby they may be simultaneously disengaged from their digit wheels respectively.

5. A numbering head embodying therein a sequence of digit wheels, means adapted to successively act directly upon each of said wheels whereby said wheels may be progressively actuated, a shaft parallel with the axis of said digit wheels, a plurality of independently movable locking members mounted upon said shaft and adapted to act upon the units digit wheel and each digit wheel of higher denomination respectively, means carried by each digit wheel of a lower denomination operative upon the locking member of the digit wheel of next higher denomination whereby said wheel of higher denomination will be released through the actuation of the wheel of next lower denomination at such times as the operation of transferring from the lower wheel to the higher wheel occurs, the wheel of higher denomination remaining locked at all other times, main actuating means, means carried by said main actuating means and operative upon said units wheel locking member whereby said units wheel locking member will be rendered inoperative during each actuation of said main actuating means, a cam shaft adapted to operatively engage all of said locking members whereby they may be simultaneously disengaged from their respective digit wheels and means whereby said cam shaft may be turned.

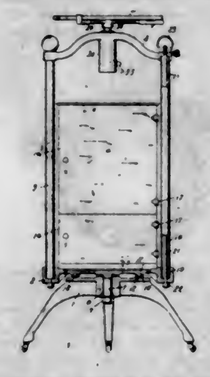
[Claim 6 not printed in the Gazette.]

1,194,436. DENTAL CABINET. WESLEY LINFORD SMITH, Pittsburgh, Pa. Filed May 14, 1915. Serial No. 28,145. (Cl. 45—26.)

1. A dental cabinet comprising a base, a frame rotatably mounted on said base, a member mounted in the top of said frame and vertically adjustable therein, and a tray rotatably mounted in said member.

2. A dental cabinet comprising a base, a frame comprising a bottom member rotatably mounted on said base, a top member and vertical supporting and tie members removably securing said top and bottom members together, said bottom member being provided with a depressed ledge inside of said vertical members for receiving and supporting a cabinet, and a cabinet resting on said ledge.

3. A dental cabinet comprising a base, a frame rotatably mounted on said base, a member mounted in the top of said frame and vertically movable therein, a spring arranged to elevate said member, means for clamping said member to said frame in the desired elevated position, and a tray supported by said vertically movable member.

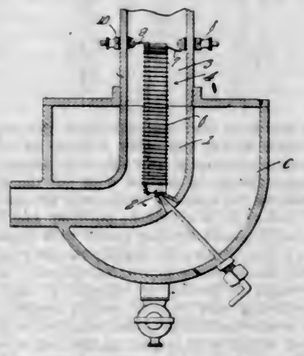


4. A dental cabinet comprising a base, a frame rotatably mounted on said base, a member mounted in the top of said frame and vertically movable therein, a spring arranged to elevate said member, means for clamping said member to said frame in the desired elevated position, and a tray rotatably mounted on said vertically movable member.

5. A dental cabinet comprising a frame, a member mounted in the top thereof and vertically movable therein, a spring arranged to elevate said vertically movable member in said frame, means for clamping said vertically movable member to said frame in the desired elevated position, a tray support rotatably mounted on said vertically movable member, and yielding extensible arms engaging the tray.

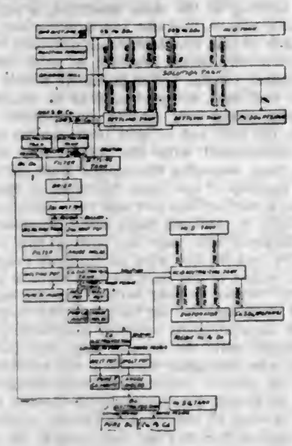
[Claims 6 to 8 not printed in the Gazette.]

1,194,437. CARBURETER ATTACHMENT. FIELDING MCCLUNG STARBUCK, Washington, D. C. Filed Sept 26, 1913. Serial No. 792,012. (Cl. 219—38.)



The combination with the intake manifold of an explosive engine, of an electrical heating device for volatilizing liquid fuel, adapted to be arranged longitudinally in the path of fuel in passing from the carbureter to the cylinder, said heating device consisting of a tubular body of porous insulating material, into one end of which the fuel to be volatilized is projected, and a bare metal coil adapted to be included in an electrical circuit and arranged surrounding and coiled upon said body with its extremities connected with terminals located exteriorly of the manifold.

1,194,438. PROCESS FOR SEPARATING METALS. ROYAL H. STEVENS, Salt Lake City, Utah, assignor to United States Smelting, Refining & Mining Company, Portland, Me., a Corporation of Maine. Filed Nov. 20, 1912. Serial No. 732,402. (Cl. 204—15.)



1. The process of separating metals from ores and like material containing cadmium, bismuth, copper, lead, tellurium, arsenic and similar metals consisting in oxidizing the ore and dissolving in sulfuric acid, electrolyzing the resulting sulfates at a low voltage to separate bismuth and copper therefrom, electrolyzing the solution remaining from the first electrolytic bath at a different voltage to deposit a cadmium residue therefrom, fluxing and melting said residue to separate tellurium, casting the bullion resulting from the reduced residue, electrolyzing the bullion in a cadmium electrolyte to separate pure cadmium, separating and melting the cadmium sludge resulting from the bullion electrolysis, and casting into plates, reëlectrolyzing the cadmium sludge plates in a cadmium electrolyte to abstract pure cadmium, separating and melting the bismuth residue from the cadmium bullion electrolysis, and casting into plates, electrolyzing the bismuth residue plates in a bismuth electrolyte to separate pure bismuth from a copper, lead and cadmium residue.

2. The process of separating metals from ores and the like material containing cadmium, bismuth, tellurium, lead and the like metals, comprising roasting the ore to oxidize and drive off volatile materials, dissolving in sulfuric acid, electrolyzing the sulfate solution to deposit a cadmium residue, separating, fluxing and melting said residue to separate tellurium therefrom, casting the cadmium bullion from the fluxed residue, electrolyzing the bullion in a cadmium electrolyte to deposit pure cadmium at the cathode, separating the electrolyte from the cathode and anode residues for neutralization to obtain arsenic acid, melting the anode and cathode residue from the bullion electrolysis and casting into plates, electrolyzing the anode residue casting in a cadmium electrolyte to separate pure cadmium at the cathode, separating the electrolyte from the cathode and anode residues for treatment with the bullion electrolysis electrolyte, melting the bismuth anode and cadmium cathode residue from the bullion anode residue electrolysis and casting, and electrolyzing the bismuth anode residue casting in a bismuth electrolyte to separate pure bismuth from the remaining metals.

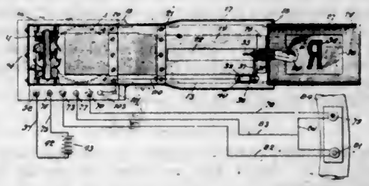
3. The process of separating metals from ores and the like material containing cadmium, bismuth, copper, tellurium, lead and like metals comprising roasting the ore, dissolving in sulfuric acid, electrolyzing the sulfate solution to get a cadmium residue, fluxing and melting said residue to separate tellurium therefrom, casting the cadmium bullion from the fluxed residue, electrolyzing the bullion in a cadmium electrolyte to separate pure cadmium at the cathode, melting the anode residue from the bullion electrolysis and casting, electrolyzing the anode residue casting in a cadmium electrolyte to separate pure cadmium at the cathode, melting the bismuth residue from the bullion anode residue electrolysis and casting, electrolyzing the bismuth residue casting in a bismuth electrolyte to separate pure bismuth from the remaining metals.

4. The process of separating metals from ores and the like materials containing cadmium, bismuth, copper, lead, arsenic, tellurium, &c., comprising roasting the ore to oxidize and expel volatile compounds, dissolving in a mineral acid, electrolyzing the acid solution to deposit a cadmium containing residue, fluxing and melting the cadmium containing residue to separate tellurium therefrom, casting the tellurium free residue into ingots, electrolyzing the ingots to separate pure cadmium at the cathode and a cadmium containing residue at the anode, removing the electrode deposits, melting and casting said anode residue into ingots and reëlectrolyzing in a cadmium electrolyte to obtain pure cadmium at the cathode and a bismuth containing residue at the anode.

5. The process of separating metals from ores and like material containing cadmium, bismuth, copper, lead, tellurium, arsenic, &c., comprising oxidizing the ores, dissolving in an acid, electrolyzing the solution to obtain a cadmium containing residue, separating and drying the residue, fluxing the residue with sodium hydroxid and carbon to separate tellurium in the slag from the cadmium residue.

[Claims 6 to 22 not printed in the Gazette.]

1,194,439. SIGNALING DEVICE FOR VEHICLES. ALBERT R. SUHNER and JOSEPH D. COAKLEY, New York, N. Y. Filed Mar. 19, 1915. Serial No. 15,565. (Cl. 40—53.)



1. In a signaling device for vehicles, a casing adapted to be applied on the vehicle, a signal movably disposed in the casing so as to be guided exteriorly thereof to give a danger warning and then guided interiorly of the casing for being obscured from view, a motor in the casing, a normally open circuit leading to the motor, manually operative means for closing the circuit to drive the motor, mechanism in the casing, operable by the driving of the motor to alternately guide the signal exteriorly and interiorly of the casing, and a controller in the casing, operable by the operation of the mechanism to open the circuit for stopping the motor when the signal has been moved outward of the casing and also when the signal has been moved inward thereof.

2. In a signaling device for vehicles, a casing adapted to be applied on the vehicle, a signal movably disposed in the casing so as to be guided exteriorly thereof to give a danger warning and then guided interiorly of the casing for being obscured from view, a motor in the casing, a normally open electric circuit leading to the motor, manually operative means for closing the circuit to drive the motor, gearing in the casing operable by the driving of the motor to alternately guide the signal exteriorly and interiorly of the casing, and a controller in the casing, operable by the operation of the gearing to open the circuit for stopping the motor when the signal has been moved outward of the casing and also when the signal has been moved inward thereof.

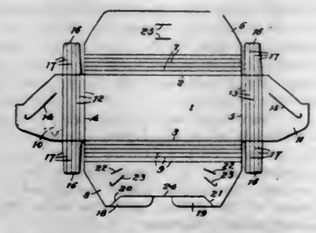
3. In a signaling device for vehicles, a casing adapted to be applied on the vehicle, an electric lamp movably disposed in the casing so as to be guided exteriorly thereof to give a danger warning and then guided interiorly of the casing for being obscured from view, a motor in the casing, a normally open electric circuit leading to the motor, means in the casing operable by the driving of the motor to alternately guide the lamp exteriorly and interiorly of the casing, and to open the circuit for stopping the motor when the lamp has been moved outward of the casing and also when the lamp has been moved inward thereof, a normally open electric sub-circuit leading to the lamp, and means connected to the lamp for closing the sub-circuit to light the lamp when exposed exteriorly of the casing.

4. In a signaling device for vehicles, a casing adapted to be applied on the vehicle, a hollow transparent signal colored so as to be easily seen during the day, and movably disposed in the casing for being guided exteriorly thereof to give a danger warning and then guided interiorly of the casing for being obscured from view, an electric lamp in the signal, a normally open circuit, mechanism in the casing, operable by the closing of the circuit to guide the signal exteriorly of the casing, and to open the circuit for stopping the signal when the signal has been moved outward of the casing and also when the signal has been moved inward thereof, a normally open electric sub-circuit leading to the lamp, and means connected to the lamp for closing the sub-circuit to light the lamp when the signal is exposed to view.

5. In a signaling device for vehicles, a casing adapted to be applied on the vehicle, a slide movably disposed in the casing, a signal on the slide for being guided exteriorly of the casing to give a danger warning and then guided interiorly of the casing for being obscured from view, a motor in the casing, a normally open circuit leading to the motor, manually operative means for closing the circuit to drive the motor, gearing in the casing operable by the driving of the motor, a belt in the casing driven by the gearing to move the slide for alternately guiding the signal exteriorly and interiorly of the casing, and a controller operable by the driving of the belt to open the circuit for stopping the motor when the signal has been moved outward of the casing and also when the signal has been moved inward thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,194,440. ENVELOP. HARRY A. SWORTFIGUER, New York, N. Y. Filed Apr. 28, 1916. Serial No. 94,156. (Cl. 229—87.)



1. In an envelop of the class described, a main retaining wall, a bottom flap and end flaps, and means for providing a sliding connection between the bottom flap and the end flaps, said means comprising a slit in one, and means carried by the other for engagement in said slit, so that the end flap is maintained in constant interlocking and sliding engagement with the bottom flap, the free end of said means also having interlocking engagement with the part which carries the same to prevent said means from becoming disengaged.

2. In an envelop of the class described, a main retaining wall, a bottom flap and end flaps, and means for providing a sliding connection between the bottom flap and the end flaps, said means comprising a diagonal slit in one, and a tongue carried by the other for engagement within said slit so that the end flaps are maintained in constant interlocking and sliding engagement with the bottom flap, the free end of said tongue also having interlocking engegement with the part which carries the same to prevent said tongue from becoming disengaged.

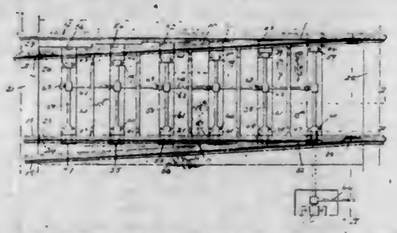
3. In an envelop of the class described, a main retaining wall and a bottom flap and end flaps all integral with said wall, each of said end flaps being provided with a slit and the bottom flap being provided at each end thereof with an integral tongue for engagement within said slit so that the end flaps are arranged to be maintained in constant interlocking and sliding engagement with the bottom flap, the free end of said tongues also having interlocking engagement with the bottom flap to prevent said tongue from becoming disengaged from the end flaps.

4. In an envelop of the class described, a main retaining wall and a bottom flap and end flaps all integral with said wall, each of said end flaps being provided with an elongated diagonal slit, and the bottom flap being provided at each end thereof with an integral tongue folded along a line where it lies parallel to and in a transverse position with respect to said bottom flap for engagement within said diagonal slit so that the end flaps are arranged to be maintained in constant interlocking and sliding engagement with the bottom flap, the free end of said tongue, also engaging within a slit provided in the bottom flap to prevent said tongue from becoming disengaged from its sliding engagement with the end flaps.

5. In an envelop of the class described, a main retaining wall, a bottom flap and end flaps, means for providing a tongue and slit slidable connection between the bottom flap and an end flap, and means whereby the free end of the tongue is secured to the part which carries the same to prevent said tongue from becoming disengaged from its slidable connection.

[Claims 6 to 12 not printed in the Gazette.]

1,194,441. RAILROAD-SWITCH. ROBERT A. TELLER, Leon, Nicaragua, assignor of one-fourth to Daniel W. Teller, New York, N. Y. Filed Aug. 24, 1915. Serial No. 47,133. (Cl. 104—12.)



1. In a railroad switch having two split rails, one of which is adapted to coöperate with one rail of a track and the other split rail being adapted to coöperate with one of the rails of a side track, the split rails each having one end tapered, in combination with means pivotally connecting one end of each of the split rails to one of the rails of one track, means holding the tapered end of each split rail in movable engagement with one of the rails of the second track, a plurality of pairs of irregularly curved cams supporting the split rails at spaced intervals, said cams being adapted to be simultaneously rotated for alternately raising the split rails relatively to their tapered ends from an incline to a level with the tracks or alternately lowering the split rails so as to be disposed on an incline with respect to the tracks, a plurality of shafts, each connecting one pair of the cams, bearings in which the shafts are journaled, and means operatively connecting all of the shafts whereby the cams may be manually rotated in unison.

2. In a railroad switch having two split rails, one of which is adapted to coöperate with one rail of a track and the other split rail being adapted to coöperate with

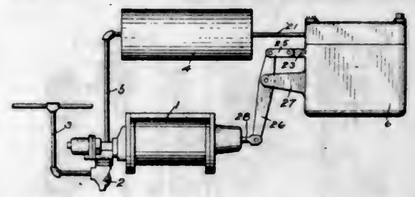
one of the rails of a side track, the split rails each having one end tapered, in combination with means pivotally connecting one end of each of the split rails to one of the rails of one track, means holding the tapered end of each split rail in movable engagement with one of the rails of the second track, a plurality of pairs of cams of varying curvatures supporting the split rails at spaced intervals, said cams being adapted to be simultaneously rotated for alternately raising the split rails relatively to their tapered ends from an incline to a level with the tracks or alternately lowering the split rails so as to be disposed on an incline with respect to the tracks, a plurality of shafts, each connecting one pair of the cams, bearings in which the shafts are journaled, and means operatively connecting all of the shafts whereby the cams may be manually rotated in unison.

3. In a railroad switch having two split rails, one of which is adapted to coöperate with one rail of a track and the other split rail being adapted to coöperate with one of the rails of a side track, the split rails each having one end tapered, in combination with means pivotally connecting one end of each of the split rails to one of the rails or one track, means holding the tapered end of each split rail in movable engagement with one of the rails of the second track, a plurality of pairs of peripherally grooved wheels, a plurality of cam-faced lugs, one extending from each of the wheels, and supporting the split rails at spaced intervals, said grooved wheels and cam-faced lugs being adapted to be simultaneously rotated for alternately raising the split rails relatively to their tapered ends from an incline to a level with the tracks or alternately lowering the split rail so as to be disposed on an incline with respect to the tracks, and means operatively connecting all of the grooved wheels whereby said wheels and the lugs may be manually rotated in unison.

4. In a railroad switch having two split rails, one of which is adapted to coöperate with one rail of a track and the other split rail being adapted to coöperate with one of the rails of a side track, the split rails each having one end tapered, in combination with means pivotally connecting one end of each of the split rails to one of the rails of one track, means holding the tapered end of each split rail in movable engagement with one of the rails of the second track, a plurality of pairs of peripherally grooved wheels, a plurality of cam-faced lugs, one extending from each of the wheels, and supporting the split rails at spaced intervals, said grooved wheels and cam-faced lugs being adapted to be simultaneously rotated for alternately raising the split rails relatively to their tapered ends from an incline to a level with the tracks or alternately lowering the split rails so as to be disposed on an incline with respect to the tracks, a plurality of cradles, each supporting one of the grooved wheels, and means operatively connecting all of the wheels and the cam-faced lugs whereby each wheel may be manually rotated in unison.

5. In a railroad switch having two split rails, one of which is adapted to coöperate with one rail of a track and the other split rail being adapted to coöperate with one of the rails of a side track, the split rails each having one end tapered, in combination with means pivotally connecting one end of each of the split rails to one of the rails of one track, means holding the tapered end of each split rail in movable engagement with one of the rails of the second track, a plurality of pairs of connected peripherally grooved wheels, a plurality of cam-faced lugs, one extending from each of the wheels, and supporting the split rails at spaced intervals, said grooved wheels and cam-faced lugs being adapted to be simultaneously rotated for alternately raising the split rails relatively to their tapered ends from an incline to a level with the tracks or alternately lowering the split rails so as to be disposed on an incline with respect to the tracks, a plurality of shafts one connecting each pair of the grooved wheels, a plurality of pairs of brackets, each pair rotatably supporting one of the shafts, a plurality of guides each disposed in the groove of each of the wheels for guiding the rotatable movement of the wheels, and means operatively connecting all of the shafts whereby the shafts and the grooved wheels may be manually rotated in unison.

1,194,442. BRAKE-CYLINDER-PRESSURE REGULATOR. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 30, 1915. Serial No. 64,231. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a brake cylinder and auxiliary reservoir, of a plurality of normally charged compartments and a valve operatively connected to the brake cylinder piston for connecting one or more compartments with the auxiliary reservoir according to the brake cylinder piston travel.

2. In a fluid pressure brake, the combination with a brake cylinder containing a piston having a piston rod, and an auxiliary reservoir from which fluid is supplied to the brake cylinder, of a plurality of compartments normally charged with fluid under pressure, a valve having positions for connecting one or more of said compartments with the auxiliary reservoir, and means operatively connecting said valve to said piston rod.

3. In a fluid pressure brake, the combination with a brake cylinder containing a piston having a piston rod, and an auxiliary reservoir from which fluid is supplied to the brake cylinder, of a plurality of chambers, a valve operatively connected to said piston rod for controlling communication between said chambers and the auxiliary reservoir and adapted in the release position of the brake cylinder piston to connect all of said chambers with the auxiliary reservoir for charging said chambers with fluid under pressure and when the brakes are applied to connect one or more of said chambers with the auxiliary reservoir according to the brake cylinder piston travel.

4. In a fluid pressure brake, the combination with an auxiliary reservoir and a brake cylinder having the usual piston and piston rod, of a casing containing a plurality of compartments, a slide valve having positions for connecting one or more of said compartments with the auxiliary reservoir, a bar for operating said valve, and a lever for connecting said bar with the brake cylinder piston rod.

5. In a fluid pressure brake, the combination with a brake cylinder and auxiliary reservoir, of a plurality of normally charged compartments of successively increasing volumes and means operated according to the increase in brake cylinder piston travel for successively connecting said compartments to the auxiliary reservoir.

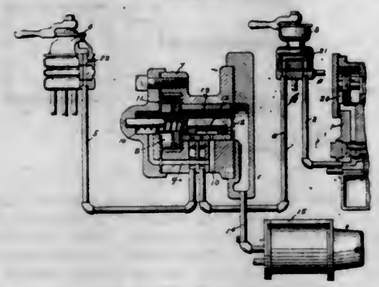
1,194,443. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Dec. 10, 1915. Serial No. 66,074. (Cl. 188—1.)

1. The combination with a distributing valve device having an application chamber and a brake valve device for controlling the pressure in said chamber, of means governed by the brake cylinder pressure for controlling the exhaust from the application chamber.

2. The combination with a brake cylinder, a distributing valve device having an application chamber and means controlled by the pressure in said chamber for supplying and releasing fluid to and from the brake cylinder, and a brake valve device for controlling the pressure in said chamber, of means operated upon a reduction in brake cylinder pressure to a predetermined degree for venting fluid from the application chamber.

3. The combination with a brake cylinder and a distributing valve device having an application chamber, variations in pressure in which are adapted to control the pres-

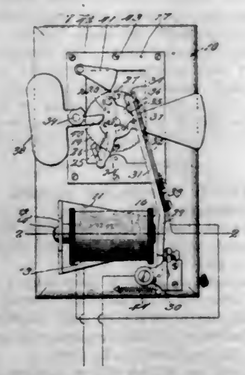
sure in the brake cylinder and a brake valve device for controlling the pressure in said application chamber, of a valve device subject to the opposing pressures of the brake cylinder and a spring and operated upon a predetermined reduction in brake cylinder pressure for opening said application chamber to the exhaust.



4. The combination with a brake cylinder and a distributing valve device having an application chamber, variations in pressure in which are adapted to control the pressure in the brake cylinder and a brake valve device for controlling the pressure in said application chamber, of a piston subject to the opposing pressures of the brake cylinder and a spring and a valve operated by said piston upon a predetermined reduction in brake cylinder pressure for venting fluid from the application chamber.

5. The combination with a distributing valve device having an application chamber, an independent brake valve, and an automatic brake valve for manually controlling the release of fluid from the application chamber through said independent brake valve, of a valve device controlling communication through which fluid is released from the application chamber and operated upon a predetermined reduction in brake cylinder pressure for automatically venting fluid from the application chamber.

1,194,444. SELF-WINDING CLOCK. WILLIAM J. VAN OSDEL, Chicago, Ill., assignor of one-half to Louis Sperling, Chicago, Ill. Filed Sept. 20, 1915. Serial No. 51,511. (Cl. 58—41.)



1. A device of the character described, embodying clock mechanism, actuating means therefor, electro-responsive means for controlling the said actuating means, and a supporting base for said parts, said base being constructed of a single piece of sheet material having a portion thereof cut and deflected to form a projection to which the electro-responsive means is secured, a portion of the electro-responsive means projecting into the opening formed by the cut-out portion and abutting the edge of said opening to brace the said deflected portion.

2. A supporting base for electric self-winding clocks, said base constructed of a single piece of sheet material formed into shape and having a portion cutout and deflected to form a lateral projection and an opening in the base adjacent the projection, an electro-responsive coil disposed to project into the opening with one end secured to the projection and the opposite end abutting the edge of the opening opposite the projection to brace the latter.

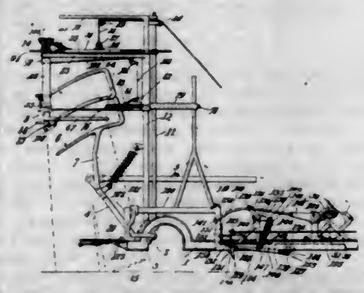
3. A self-winding clock embodying an operating shaft, gravity actuated means for actuating the shaft, electrically actuated means for returning the gravity actuated means, said electrically actuated means embodying spaced contacts movable into and out of engagement with each other, and means for arresting the movement of the contacts one with relation to the other to maintain the contacts spaced.

4. A self-winding clock embodying an operating shaft, gravity actuated means for actuating the shaft, electrically actuated means for returning the gravity actuated means, said electrically actuated means embodying spaced contacts movable into and out of engagement with each other, and stop mechanism for maintaining the contacts spaced.

5. A self-winding clock embodying an operating shaft, gravity actuated means for actuating the shaft, electrically actuated means for returning the gravity actuated means, said electrically actuated means embodying spaced contacts movable into and out of engagement with each other, and coöperating means operatively related to the contacts for holding the contacts in inoperative relation.

[Claims 6 to 9 not printed in the Gazette.]

1,194,445. SHOCK-FORMING APPARATUS. LUTHER T. VELEN, Washington, D. C. Filed Sept. 19, 1912. Serial No. 721,303. (Cl. 56—122.)



1. In shock forming apparatus, pairs of oppositely extending arms arranged to swing in horizontal planes and forming a support for the rear of the shock, a shaft carrying each pair of arms, bevel gears at the upper ends of said shafts, a horizontally disposed shaft having bevel gears intermeshing with those of the arm carrying shafts, a spring encircling the horizontal shaft, a shouldered locking disk on the horizontal shaft, a locking pawl engaging said shouldered disk, means for laying the bundles of stalks against the arms, means for compressing the stalks into shock form against the inner arms, a shock ejector arranged to engage the forward face of the shock, a pawl actuating means under the control of the ejector and serving to move said pawl to release position, the spring being placed under stress during the turning of the shafts and arms to free the shock and serving to restore said arms to initial position after the discharge of the shock.

2. In shock forming apparatus, pairs of oppositely extending arms arranged to form a support for the rear of the shock, vertical shafts carrying said arms and provided with bevel gears, a horizontal shaft having bevel gears intermeshing with those of the vertical shafts, a torsion spring carried by the horizontal shaft, a shouldered locking disk on said horizontal shaft, a pawl engaging said disk, a shock ejector engaging the forward end of the shock and including a notched bar, a pawl arranged to engage the notch in said bar, means for sliding the ejector rearwardly to eject the shock, thereby raising the pawl out of said notch and releasing the first mentioned pawl, connecting means between the two pawls, the spring being placed under stress during movement of the arms to free the shock and serving to restore said arms to initial position after each shock discharging operation, means for laying bundles of stalks against the arms, and means for compressing the stalks against the inner ends of said arms to form a shock.

3. In shock forming apparatus, pairs of oppositely extending arms arranged to form a support for the rear of the shock, vertical shafts carrying said arms and provided with bevel gears, a horizontal shaft having bevel gears intermeshing with those of the vertical shaft, a torsion spring on the horizontal shaft, a shouldered locking disk on said shaft, a locking pawl engaging said disk, an ejector in front of the pairs of arms and adapted to engage the front of the shock, means operated by the ejector for releasing the locking pawl from the disk, a needle, and an auxiliary arm serving to encircle the stalks and compress the same against the inner arms of the pairs, hollow shafts carrying the needle and auxiliary arm, and encircling said vertical shafts, means for connecting the hollow shafts for mutual movement, and an arm or lug carried by the needle and arranged to engage the inner arm of one of said pairs to force the same back to initial position after each shock discharging operation.

4. In shock forming apparatus, pairs of oppositely extending arms against which the stalks rest during the shock forming operation, vertical shafts carrying said arms, means for connecting said shafts for mutual movement, a pair of hollow shafts encircling said vertical shafts, a hook like needle mounted on one of the hollow shafts, an auxiliary arm carried by the other hollow shaft and co-acting with the needle in compressing the shock, a gear segment carried by the needle shaft, a crank pin on said gear segment, a crank arm on the other hollow shaft, a link connecting the crank arm to the crank pin, a master gear arranged to engage the gear segment and impart movement to the needle, means for locking the two pairs of arms from movement, said means including a notched disk geared to the arms, and a pawl normally engaging the disk, an ejector, a second pawl, a connection between the two pawls, and means operated by the ejector when moving in one direction for shifting said second pawl to actuate the other pawl and release the disk and the pairs of arms.

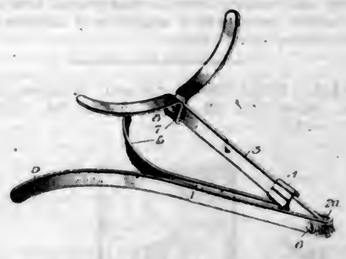
5. In shock forming apparatus, a pair of vertical hollow shafts, arms carried by said shafts and forming a support for the rear of the shock, means for connecting said shafts for mutual movement, a locking device for the shaft, a needle, an auxiliary arm, a connection between the needle and auxiliary arm for shifting them toward each other to encircle and compress the stalks against said arms to form a shock therebetween, a knotter shaft, and means on the knotter shaft for releasing the arms and permitting the discharge of the shock.

[Claims 6 to 22 not printed in the Gazette.]

1,194,446. HEAD-REST. BENJAMIN F. WALKER, Westport, Conn., assignor to The Embalmers' Supply Co., Westport, Conn. Filed Feb. 12, 1915. Serial No. 7,869. (Cl. 27—13.)

1. In a head rest, the combination of a base, a shank hinged to the base, a head holder arranged on and carried by the shank and means on the shank, constructed and arranged to be adjustably fixed to the shank and to bear on the base to support the shank in inclined position relative to the base and maintain the said holder in position above the base.

2. In a head rest, the combination of a base, a shank connected in hinged manner with the base, a head holder arranged on and carried by the shank, a fastener slidable on the shank and constructed and arranged to bear on the base to maintain the shank in inclined position relative to the base, and coöperating means carried by the shank and the fastener, whereby the fastener can be adjustably fixed at different points in the length of the shank to support the shank in different inclined positions.

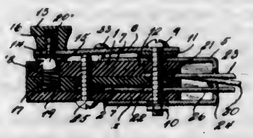


3. In a head rest, the combination of a base having spaced walls, a shank pivoted between the walls of the base, a head holder arranged on and carried by the shank, a sleeve slidable on the shank and arranged when on the forward portion of the shank to bear against the base and support the shank in inclined position, and when on the rear portion of the shank, to be nested with the shank between the spaced walls of the base, and coöperating means on the shank and the sleeve for adjustably fixing the latter to the former.

4. In a head rest, the combination of a base having a forward loop the walls of which are separated by an intervening space and also having the rear portions of said walls flared, a shank pivoted between the walls of the loop adjacent to the bight thereof, a head holder having a transverse curvilinear portion and also having a depending loop receiving and fixed to the rear portion of the shank, a sleeve movable on the shank toward and from the depending loop of the head holder; said sleeve being adapted in one position to bear on the spaced walls of the base loop and in another position to be nested together with the shank between the said walls, and coöperating means on the shank and the sleeve for adjustably fixing the latter to the former.

5. In a head rest, the combination with a shank, and a base to which the shank is pivotally connected, said shank having a notch in its edge adjacent to the base; of a sleeve slidable on the shank and having on its portion adjacent the base a lip adapted to enter the notch of the shank, said sleeve being adapted to bear on the base and to be held by the base with its lip in the notch of the shank.

1,194,447. SWITCH. HARRY WALKER and WILLIAM L. KREUSCHER, Anaheim, Cal. Filed Aug. 23, 1915. Serial No. 46,979. (Cl. 175—282.)

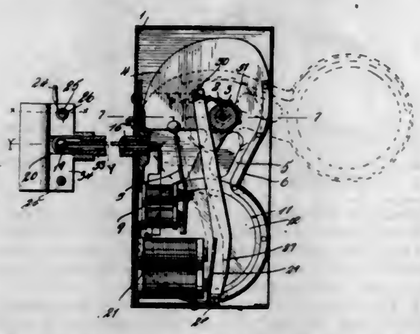


1. A switch of the class described comprising a body formed of a plurality of layers of insulating strips, contact points connected to said strips adjacent each side thereof, means for supplying an electrical current to said contact points, said lever adapted to close the circuit across said contact points, means for facilitating the yieldable holding of said lever in a neutral position, a cap for holding said layers of insulating strips together and said insulating strips provided with a plurality of channels for permitting the connection of said contact points with electrical contact wires.

2. A switch of the class described comprising a body formed of a plurality of layers of insulating material, a cap fitting over said layers and provided with a plurality of spaced lips, a pivot pin passing through said lips and

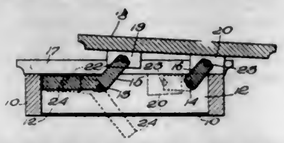
layers of insulating material for holding said layers firmly together, a contact lever pivotally secured to said pivot pin, a central contact point, means for yieldably holding said contact lever in engagement with said central contact point, and a plurality of auxiliary contact points carried by said body.

1,194,448. SEMAPHORE. HARRY WALKER, Anaheim, Cal. Filed Oct. 23, 1915. Serial No. 57,563. (Cl. 177—329.)



A signal of the class described comprising a casing, a semaphore arm, said semaphore arm comprising a pair of similarly constructed plates, a channel plate connecting said plates and extending along one side of said arm for reinforcing said plates, a drum carried by said semaphore arm, an armature lever, means for attracting said armature lever, and flexible means connected to said drum and armature lever for swinging said semaphore arm.

1,194,449. PIANO-BENCH. WILLIAM A. WATSON, Malden, Mass., assignor to National Piano Company, Boston, Mass., a Corporation of Maine. Filed Dec. 13, 1913. Serial No. 806,447. (Cl. 155—22.)



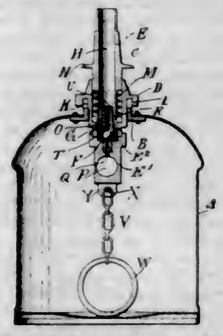
1. A piano bench having a frame and a sectional seat supported thereby, one section being movable to an elevated advanced position without reversal, two substantially parallel swinging members connecting said movable section with the frame, the rear swinging member being longer than the front one, and stop blocks carried by said movable section in position to bear on the top of the frame when said section is in its elevated advanced position.

2. A device of the character described, comprising a frame, a seat movable upwardly and forwardly therefrom, and front and rear substantially parallel link rockers connecting said frame and seat, the rear rocker having an angular extension adapted to swing rearwardly when said seat is shifted from its lower position to support clothing overhanging the rear edge of the seat.

3. A piano bench having a frame and a movable seat, and front and rear substantially parallel and swinging members pivotally connected at their ends with said frame and seat, said swinging members being of unequal length and having their pivotal connections with the frame and seat at fixed points, the movable seat being adapted to rest on the frame when in lowered position, said parts being relatively proportioned and connected to permit the seat to be raised from lower substantially horizontal position to an elevated advanced inclined position without reversal of the seat, said movable seat having blocks in position to bear on the front portion of the frame when the seat is in the last-named position.

4. A piano bench comprising a horizontal laterally elongated frame having legs, fixed seat sections at the ends of the frame, an intermediate movable seat section adapted to rest in lowered position on the front and rear members of the frame, two substantially parallel swinging members connecting the movable section with the frame, the rear swinging member being longer than the front one whereby the movable section may be shifted from a lower position between and flush with the fixed sections to an elevated advanced inclined position without reversal, said movable section having a stop on its under side adapted to bear on the top of the front member of the frame when in the last mentioned position.

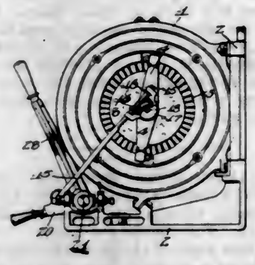
1,194,450. CAN. FERDINAND WESEL, New York, N. Y., assignor to F. Wesel Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 21, 1912, Serial No. 685,161. Renewed June 3, 1916. Serial No. 101,641. (Cl. 221—56.)



1. The combination of a can body and a plug, the can body being provided with a screw threaded plug receiving portion, the plug having a screw threaded member which is secured in place on the can by being screwed into the screw threaded portion of the can body, the plug also having a hollow movable member slidably mounted in said screw threaded member of the plug, the plug also being provided with a compression spring surrounding the hollow movable member and engaging said last mentioned member and said screw threaded plug member whereby the spring will press a valve packing on the hollow member into engagement with a valve seat on the screw threaded plug member so that the contents of the can will be prevented from flowing from the can past said valve seat and packing when the hollow movable member is held in its outer position by the spring, the screw threaded plug member and the hollow plug member being constructed so that when the hollow member is pressed inwardly the can contents can flow past said valve seat and packing directly into and from the hollow slidable plug member, said last mentioned member being provided with a spring pressed relief valve which normally closes an opening leading from the interior of the can to the hollow portion of said members, which valve is arranged so that it will permit an escape of gas from the interior of the can when the pressure within the can exceeds a certain amount.

2. A can body and a plug, the plug comprising a fixed member which can be detachably secured in place on the can body, a hollow member which is slidable in the fixed member and a compression spring which normally forces the hollow member outwardly whereby the hollow member and the fixed plug member can coöperate to prevent a flow of fluid from the interior of the can between said members into and from the hollow member when the hollow member is held in its outer position by the spring, said hollow member and said fixed member being constructed so that when the hollow member is pressed inwardly the can contents can flow between said members into and from the hollow member, the hollow member also being provided with an opening leading from the interior of the can directly into the hollow portion of said member whereby a relief valve carried by the hollow member will permit an escape of gas from the interior of the can when the pressure on the interior of the can rises above a certain amount.

1,194,451. THEATER-DIMMER. HENRY J. WIEGAND, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 12, 1906. Serial No. 305,668. (Cl. 175—312.)



1. In a theater dimmer in combination, a plurality of rheostats, a plurality of operating members therefor arranged at a distance therefrom, a single rigid member connecting each of said operating members with one of said rheostats, said rheostats being independently operable by their respective operating members, a master operating member, and means for connecting said first mentioned operating members to said master member for simultaneous operation of a plurality of said rheostats.

2. In a theater dimmer in combination, a plurality of rheostats, individual operating members therefor arranged at a distance therefrom and side by side in close proximity, a single rigid member connecting each of said rheostats with its respective operating member, each of said operating members being movable to operate its respective rheostat by reciprocation of its respective connecting member and to operate its respective rheostat independently of the others, and a master operating member, each of said individual operating members having means for rigidly connecting the same to said master member, said master member being operable to simultaneously operate a plurality of said rheostats.

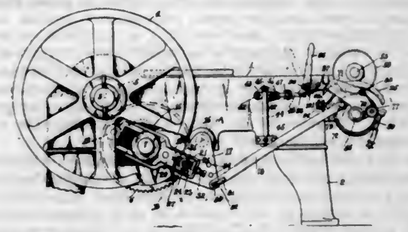
3. In a theater dimmer in combination, a plurality of rheostats, a plurality of operating levers therefor arranged at a distance therefrom, a common supporting shaft for said levers, a single rigid rod operatively connecting each of said levers with one of said rheostats and adapted by a substantially straight line movement to impart the movement of its respective lever to its respective rheostat, said levers being freely revoluble on said shaft independently of one another, means for locking said levers to said shaft, and means for revolving said shaft to operate a plurality of said levers and their respective rheostats simultaneously.

4. In a theater dimmer in combination, a plurality of rheostats each having a pivoted controlling element provided with a concentric pinion, a plurality of operating levers for said rheostat controlling elements arranged at a distance from said rheostats, a common supporting shaft for said levers, a single rigid rod operatively connecting each of said levers with the controlling element of one of said rheostats, each of said rods being fulcrumed to its respective lever and having a toothed portion meshing with the pinion of its respective rheostat element, said levers being freely revoluble on said shaft independently of one another to independently operate their respective rheostat elements, means associated with each lever for locking the same to said shaft, and a master lever for revolving said shaft to operate a plurality of said levers and their respective rheostat elements simultaneously.

5. In combination, an elongated frame having a substantially vertical back portion and a substantially horizontal portion projecting forwardly from said back portion, a plurality of rheostats mounted side by side upon said frame and rigidly secured thereto, each of said rheostats having a pivoted controlling element, a pinion connected to each of said controlling elements, a rack meshing with each of said pinions, an operating lever for each of said racks, and a single shaft revolubly supporting said levers, said shaft being mounted upon the horizontal portion of said frame adjacent to its forward edge.

[Claim 6 not printed in the Gazette.]

1,194,452. HEADER. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Dec. 17, 1914. Serial No. 877,756. (Cl. 10—12.)



1. In a header, the combination with a cam; of a movably mounted punch block; a feed mechanism for presenting stock in line with said punch block; and means for actuaing said block and feed mechanism from said cam.

2. In a header, the combination with a cam; of a movably mounted punch block; a feed mechanism for presenting stock in line with said punch block; and means for actuating said block and feed mechanism from said cam through a rock member.

3. In a header, the combination with a punch block; of a feed mechanism for presenting stock in line with said punch block; a rocking member; a connection between said rocking member and punch block; a connection between said rocking member and said feed mechanism; and cam means for actuating said rocking member.

4. In a header, the combination with a movably mounted punch block; of a feed mechanism for presenting stock in line with said punch block; a rock member, means for operating said punch block and feed mechanism from a single member, said means having the maximum operating strain thereon from only one of said elements, that is, said punch block and feed mechanism at a time, and cam means for actuating said rock member.

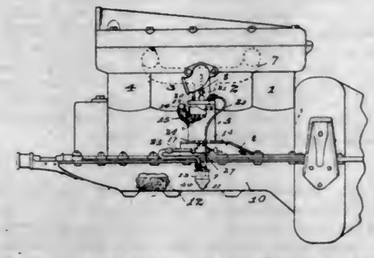
5. In a header, the combination with a movably mounted punch block; of a feed mechanism for presenting stock in line with said punch block; an intermediate rock shaft; an operative connection between said rock shaft and punch block; a cam; an operative connection between said cam and rock shaft whereby movement is imparted thereto; and a connection between said rock shaft and said feed mechanism whereby movement is imparted thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,194,453. LUBRICATING SYSTEM FOR GAS-ENGINES. HUGH H. WILBURN, Condon, Oreg., and FREDERICK E. BUTLER, Lewistown, Idaho. Filed May 7, 1914. Serial No. 836,948. (Cl. 184—103.)

1. In a lubricating system, the combination of lubricant chambers, one of said chambers having its lubricant level above the plane of the lubricant level in the other chamber, means for reducing the pressure in the upper

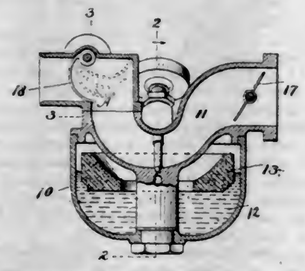
chamber to less than atmospheric pressure, a lubricant conduit connecting said chambers, and an air conduit also connecting said chambers, the said air conduit opening into the upper portion of the first mentioned chamber, and having its lower end opening in substantially the plane of the lubricant level in the lower chamber.



2. In a lubricating system, the combination of lubricant chambers having different lubricant levels, a stand glass in open communication with the chamber having the lower lubricant level, lubricant and air conduits opening into the chamber having the higher lubricant level, means for reducing the pressure in the last mentioned chamber to less than atmospheric pressure, said conduits having their lower ends terminate within the stand glass at substantially the plane of the desired lubricant level for the chamber having the lower level.

3. In a lubricating system, the combination of lubricant chambers arranged at different levels, a conduit leading from the chamber having the higher level to a suction producing means, an air conduit in open communication with the space above the lubricant in the chamber having the higher level, said air conduit having its lower end terminating in the plane of the desired lubricant level for the lower chamber, and a lubricant conduit connecting the two chambers.

1,194,454. CARBURETER. JOSEPH A. WILLIAMS, Cleveland, Ohio, assignor to The K-W Ignition Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 9, 1912. Serial No. 676,511. (Cl. 48—155.1.)



1. In a carbureter, a mixing chamber having a movable air valve adapted to be opened by the force of air pressure, a spring having a substantially constant tension throughout the range of movement of the valve and acting on said valve for opposing the opening movement, the force of air pressure acting through an average leverage, which varies substantially uniformly with the movement of the valve.

2. In a carbureter, a mixing chamber having a movable air valve adapted to be opened by air pressure, means acting on said valve with a force which remains substantially the same throughout the range of valve movement for opposing the opening movement, said valve being so shaped that the average leverage through which the force of air pressure acts diminishes at a rate sufficient to cause the proper ratio between the air admitted and vacuum maintained in the mixing chamber for any engine speed.

3. In a carbureter, a mixing chamber having a gasolene orifice and having an air valve adapted to be opened by the force of air pressure, a spring for opposing the opening movement of the valve, said spring having a substantially constant opposing action throughout the range of movement of the valve, the valve being so shaped that the effective surface area subjected to air pressure varies as the position of the valve varies, so that at any speed of the engine, the valve will establish the proper ratio between air admitted and vacuum maintained in the mixing chamber.

4. In a carbureter, a mixing chamber having a gasolene orifice and having a pivoted air valve adapted to be swung about an axis by the force of air pressure, a spring of substantially constant tension throughout the range of movement of the valve for opposing the opening movement, said valve having a convex curvature on its outer face, the curved face being so formed that as the valve is being opened, the free end of the valve dips into the rarefied space in the mixing chamber and the effective surface area subjected to the air pressure decreases at a rate such that at any engine speed, the valve will maintain the proper relation between air admitted and the vacuum in the mixing chamber.

1,194,455. BAKED FOOD PRODUCT CONTAINING SWEET POTATOES AND PROCESS OF MAKING SAME. JOSHUA HUDSON WILLIAMS, Greenville, S. C. Filed Mar. 15, 1916. Serial No. 84,361. (Cl. 99—10.)

1. A baked food product having as its principal ingredients steamed sweet potatoes and wheat flour, substantially as specified.

2. A flaked food product produced from a baked dough consisting of approximately 45 to 65 per cent. sweet potatoes and 55 to 35 per cent. wheat flour according to the fiber and moisture contained in the potatoes, and flavoring ingredients.

3. The process of manufacturing a food from sweet potatoes, consisting in cooking the potatoes by steam; peeling and mixing the potatoes to a dough; adding wheat flour, flavoring ingredients and yeast; baking; disintegrating in a pug mill; again disintegrating in a separate pug mill and forcing through a perforated end of same; drying; rolling into flakes; toasting the flakes.

4. The process of manufacturing a food from sweet potatoes, consisting in cooking the potatoes by steam; peeling; mixing the peeled potatoes to a dough; adding wheat flour to thicken; adding flavoring ingredients and yeast; baking; allowing to stand for 24 hours, disintegrating in a pug mill, disintegrating a second time and forcing through the perforated end of a pug mill; drying; toasting.

5. The process of manufacturing a food from sweet potatoes, consisting in cooking the sweet potatoes; peeling; mixing the peeled potatoes in a mechanical mixer to a dough; adding wheat flour to thicken; adding flavoring ingredients and yeast; baking; allowing to stand; disintegrating; disintegrating a second time and forcing through the perforated end of a pug mill; rolling; toasting.

[Claim 6 to 8 not printed in the Gazette.]

1,194,456. FOOD PRODUCT AND PROCESS OF MANUFACTURING SAME. JOSHUA HUDSON WILLIAMS, Greenville, S. C. Original application filed Mar. 15, 1916, Serial No. 84,361. Divided and this application filed May 15, 1916. Serial No. 97,557. (Cl. 99—10.)

1. A food product of nut-like particles produced from a baked dough of sweet potatoes and flour of a different substance.

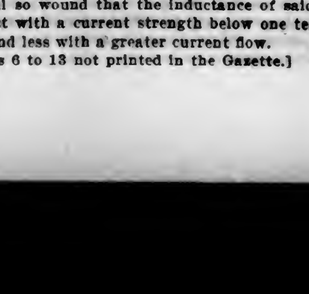
2. A baked and toasted nut-like food produced from a cooked dough of sweet potatoes, a flour of different substance, and flavoring ingredients.

3. The process of manufacturing a food from sweet potatoes, consisting in cooking the potatoes; peeling and mixing the potatoes to a dough; adding flour, flavoring ingredients and yeast; baking; slicing; toasting; grinding into nut-like particles.

4. The process of manufacturing a food from sweet potatoes, consisting in cooking the potatoes; peeling; mixing the peeled potatoes to a dough; adding flour to thicken; adding flavoring ingredients and yeast; mixing; baking; cooling; slicing; toasting; grinding into nut-like particles.

5. The process of manufacturing a nut-like food, consisting in cooking sweet potatoes; peeling; mixing the potatoes to a dough; adding from 35 to 55 per cent. flour to give the required consistency; adding flavoring ingredients and yeast; mixing to a dough; allowing to rise as many times as necessary; making into loaves; baking; allowing to cool; slicing; toasting; grinding into nut-like particles in a mill.

1,194,457. TELEPHONE-RECEIVER. BERNARD D. WILLIS, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 25, 1913. Serial No. 786,588. (Cl. 179—114.)



1. In combination in a receiver, a coil, and a magnetic circuit including a receiver diaphragm associated with said coil, the said coil so wound and the magnetic circuit so proportioned that with an energizing current below the strength of one tenth (.10) ampere the inductance reaches a maximum.

2. In combination in a receiver, a coil, and a magnetic circuit including a receiver diaphragm associated with said coil, the said coil so wound and the magnetic circuit so proportioned that with an energizing current below the strength of one tenth (.10) ampere the inductance reaches a maximum, and with a stronger magnetizing current the inductance will be lower.

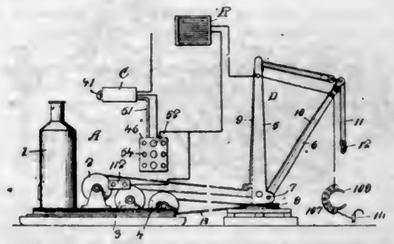
3. In combination in a receiver responsive to talking current, a diaphragm and an electromagnet, an electromagnetic circuit for said receiver including said diaphragm and the core of the electromagnet, which core and diaphragm are so constructed and proportioned and the coil so wound that the inductance of said receiver is greater with a current of one strength of flow than with a current of a greater strength of flow.

4. In combination in a receiver responsive to talking current, a diaphragm and an electromagnet, an electromagnetic circuit for said receiver including said diaphragm and the core of the electromagnet, which core and diaphragm are so constructed and proportioned and which soil so wound that the inductance of said receiver is greatest with a current strength below one tenth (.10) ampere.

5. In combination in a receiver responsive to talking current, a diaphragm and an electromagnet, an electromagnetic circuit for said receiver including said diaphragm and the core of the electromagnet, which core and diaphragm are so constructed and proportioned and which coil so wound that the inductance of said receiver is greatest with a current strength below one tenth (.10) ampere and less with a greater current flow.

[Claims 6 to 13 not printed in the Gazette.]

1,194,458. DERRICK AND HOD SIGNALING SYSTEM. HARRY A. YATES, New York, N. Y., assignor to The Y & G Electric Fuse & Engineering Company, a Corporation of New Jersey. Filed Aug. 8, 1912. Serial No. 713,992. (Cl. 177—337.)



1. In a signal system, a main circuit, a motor connected in said main circuit, a local signal circuit, a relay controlling said signal circuit and connected in said main circuit and normally energized to hold the local signal circuit open and adapted to close the local signal circuit in the event of failure of current in the main circuit, a fluid compressor driven from said motor, a tank connected with said compressor, audible signals connected to said tank, and means connected across said main circuit and controlling said audible signals.

2. In a signal system, a main circuit, a motor connected in said main circuit, a local signal circuit, a relay controlling said signal circuit and connected in said main circuit and normally energized to hold the local signal circuit open and adapted to close the local signal circuit in the event of failure of current in the main circuit, a fluid compressor driven from said motor, a tank connected with said compressor, audible signals connected to said tank, means connected across said main circuit and controlling said audible signals, and means controlling said last-named means to selectively energize the same.

3. In a signal system, a main circuit, a motor in shunt with said main circuit, a local signal circuit, a relay controlling said signal circuit and connected in shunt with said main circuit and holding said local signal circuit normally open and adapted to close the same in the event of failure of current in the main circuit, and audible signals controlled by said motor.

4. In a signal system, a main circuit, a motor in shunt with said main circuit, a local signal circuit, a relay controlling said signal circuit and connected in shunt with said main circuit and holding said local signal circuit normally open and adapted to close the same in the event of failure of current in the main circuit, audible signals controlled by said motor, and means for rendering said signals operative selectively from said motor.

5. In a signal system, a main circuit, audible signals, means connected across said main circuit for rendering said signals operative, visual signals connected in circuit with said means respectively, and means for selectively energizing the respective visual signals and corresponding means.

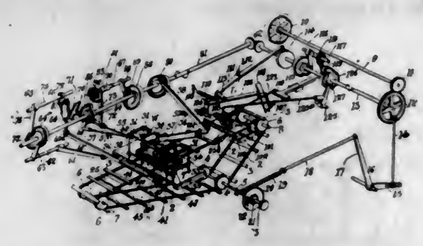
[Claims 6 to 8 not printed in the Gazette.]

1,194,459. MEASURING-MACHINE. FRANK B. YINGLING, Hamilton, Ohio, assignor to Ceramic Machinery Co., Hamilton, Ohio, a Corporation of Ohio. Filed Oct. 17, 1912. Serial No. 726,301. (Cl. 101—83.)

1. In measuring mechanism for tiles or the like, a feed belt, driving mechanism therefor, fixed warpage measuring points, a movable measuring point, and means for changing the elevation of a tile carried by the belt as it approaches the place for measuring to prevent sliding contact of the tile with said points.

2. In measuring mechanism for tiles or the like, a feed belt, driving mechanism therefor, fixed warpage measuring points, a movable measuring point, means for changing the vertical position of a tile carried by the belt as

it approaches the place for measuring to prevent sliding contact of the tile with said points and means for clamping the tile upon the fixed measuring points.



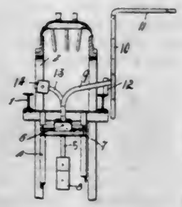
3. In measuring mechanism for tiles or the like, the combination of a feed belt, tile engaging slats thereon, a movable guide piece below the slats, fixed measuring points adjacent the said piece, a movable measuring point, means for raising said movable piece as the tile is moved over said points and means for clamping the tile on said fixed measuring points.

4. In measuring mechanism for tiles or the like, the combination of a feed belt, two fixed measuring points, a movable measuring point in line with the said fixed points, a printing device and selector mechanism, controlled by the movable measuring point, for moving the printing device in accordance with the position of the movable point.

5. In measuring mechanism for tiles or the like, the combination of a feed belt, two fixed measuring points, a movable measuring point in line with the said fixed points, a printing device, means for clamping the tile in measuring position, and selector mechanism controlled by the movable measuring point, for moving the printing device in accordance with the position of the movable point.

[Claims 6 to 26 not printed in the Gazette.]

1,194,460. SIGHT-ARM FOR DITCHING-MACHINES. CHARLES F. YOCUM, Findlay, Ohio, assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio, a Corporation of Ohio. Filed May 14, 1915. Serial No. 28,025. (Cl. 37—17.)



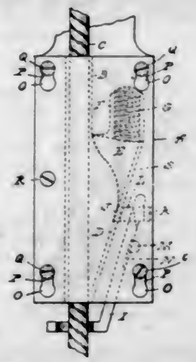
1. In a machine of the class described, the combination with a frame part, of a weighted pendulum pivoted to said part for transverse swinging movements relative thereto and having a horizontally projecting sight arm part.

2. In a machine of the class described, the combination with a frame part, and a cutting-wheel rotatably carried thereby, of a pendulum pivotally carried by said frame part within the wheel for transverse swinging movements relative thereto and having a sight-arm part projecting from within the wheel and disposed at one side thereof and normally maintained in level position by the gravity action of said pendulum.

3. In a machine of the class described, the combination with a frame part, and a cutting-wheel carried thereby, of a pendulum pivotally carried by said frame part within the wheel and having its pendant portion weighted to normally assume a vertical position and its upper portion extending transversely of the wheel, thence upward at the side thereof and thence outward to form an elevated horizontally projecting sight-arm part at a side of the wheel, the level of which sight arm part is normally maintained by the action of the lower weighted end of said pendulum, and means projecting from the upper end of the pendulum part in opposition to said sight arm part to counterbalance the latter.

4. In a machine of the class described, the combination with a frame part, of a pendulum pivoted to said frame part for transverse swinging movements relative thereto and having its lower end weighted, the upper end of said pendulum being offset, and a sight-arm part carried by the offset portion of said pendulum part for vertical adjustment relative thereto and normally maintained in horizontal position by said weighted pendulum part.

1,194,461. WIRE ROPE AND CABLE CUTTING TOOL. JOHN NORTH ZAHNISER, Waynesburg, Pa. Filed Mar. 28, 1916. Serial No. 87,348. (Cl. 255—34.)



1. A wire rope and cable cutting tool, comprising a body portion provided with a groove for receiving a rope or cable, and an inclined surface the upper end of which terminates into a recess, a spring contained in said recess and a knife adapted to bear against and slide upon said inclined surface, the upper end of said knife bearing against the lower end of the spring, all substantially as and for the purposes shown and described.

2. A wire rope and cable cutting tool, comprising a body portion provided with a groove for receiving a rope or cable, an inclined surface formed in said body portion, an intermediate groove lying adjacent to said inclined surface, a knife bearing against and sliding upon said inclined surface, a groove lying at an angle to the rope groove and parallel to said inclined surface, a trip having its upper end beveled and adapted to slide up and down in said groove, a transverse pin adapted to be engaged by the upper end of said trip, the said pin supporting the knife when in its normal position, together with a pin for preventing the trip from becoming disengaged from the body portion when the tool is in use, all substantially as shown and described.

3. A wire rope and cable cutting tool, comprising a body portion provided with suitable recesses for receiving a rope or cable, a trip and a knife contained within said body portion, said knife bearing against and sliding upon an inclined surface formed in said body portion, a recess in the upper part of the body portion containing a spring which in turn bears against the upper end of the knife, a transverse pin supporting said knife when in its normal or set position and a trip beveled at its upper end and adapted to engage a recess formed in the side of the transverse pin for moving the pin laterally, together with a pin for holding the trip from becoming disengaged from the body portion, all substantially as and for the purposes shown and described.

1,194,462. WREATH-FORM AND THE PROCESS OF MANUFACTURING THE SAME. HYMAN B. ABRAMS, Chicago, Ill. Filed Apr. 5, 1916. Serial No. 89,058. (Cl. 154—2.)



1. The manufacture of hollow articles which consists in applying a coating of glue to one side of a sheet of card board like material, laying a sheet of paper over the glued side of the material, and pressing the sheet of materials while still moist around a heated form, whereby the glue is dried while the sheet is around the form and after the sheet is formed into the shape of the hollow article.

2. The manufacture of hollow articles which consists in applying a coating of glue to both sides of a sheet of card board like material, laying a sheet of paper over the glue on both sides of the card board and pressing the sheet of materials while still moist around a heated form, whereby the glue is dried while the sheet is on the form and after the sheet is formed into the shape of the hollow article.

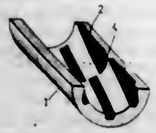
3. A wreath form of substantially semicircular cross section comprising super-imposed layers of paper, card board, buckram and paper, in the order given, glued together to form a rigid structure.

4. A wreath form of substantially semicircular cross section comprising super-imposed layers of paper, card board, rice net and paper, in the order given, glued together to form a rigid structure.

5. A wreath form of substantially semicircular cross section comprising super-imposed layers of paper, card board, buckram and paper, in the order given, glued together to form a rigid structure, and wire binding around the outer edge of the form.

[Claims 6 to 9 not printed in the Gazette.]

1,194,463. OILLESS BEARING. LEIGH S. BACHE, Boundbrook, N. J., assignor to Bound Brook Oil-Less Bearing Company, Boundbrook, N. J., a Corporation of New Jersey. Filed Aug. 15, 1914. Serial No. 857,000. (Cl. 64—24.)



1. In a bearing, a shell having a plurality of sets of spiral grooves of long pitch extending along the shell, and each set extending circumferentially entirely around the shell, the grooves of one set being offset at their ends with reference to those of the next set, thereby providing an intermediate circumferential body of metal at said offset, and a solid lubricant filling the said grooves.

2. A bearing shell having a plurality of sets of grooves of spiral form arranged in substantial continuation one of the other, the grooves of one set being slightly offset at their ends with reference to the grooves of an adjacent set whereby a full body of metal extends peripherally about the shell between the adjacent ends of the sets of grooves and a lubricant filling said grooves.

3. A bearing shell having a plurality of sets of spiral grooves of long pitch, each set extending entirely around the longitudinal axis of the bearing, the adjacent ends of the grooves of one set being slightly offset with reference to the ends of the adjacent set and the alternate grooves of each set being cut away at one side to provide a substantially wide opening and a lubricant filling said grooves.

4. A bearing shell having sets of spiral grooves of long pitch extending entirely around the longitudinal axis of the bearing, the grooves of one set being slightly offset at their ends and over-lapping the grooves of the adjacent set and the sets of grooves being arranged one in substantial extension of the other along the longitudinal lines of the bearing and a lubricant filling said grooves although separated by a circumferential body of metal the full thickness of the shell.

5. A bearing shell having sets of spirally formed grooves of long pitch, each set of grooves being arranged circumferentially concentric with the longitudinal axis of the bearing and entirely around it, the grooves of each set being at their ends offset with reference to the ends of the adjacent set of grooves and arranged one in substantial extension of the other longitudinally of the bearing, said sets of grooves being separated by a circumferential body of metal the full thickness of the shell, and the grooves being of substantially uniform depth and width at their bottoms, and alternate grooves being cut away on one side to form beveled walls, and an opening of greater width than is the width of the adjacent, intermediate, groove.

[Claims 6 and 7 not printed in the Gazette.]

1,194,464. PROCESS OF PRODUCING A POTASSIUM SALT FROM INSOLUBLE SILICATES. HARRY P. BASSETT, Catonsville, Md., assignor to The Spar Chemical Company, Baltimore, Md., a Corporation of Maryland. Filed Mar. 8, 1915. Serial No. 12,933. (Cl. 23—22.)

1. The process which consists in furnacing at a red heat a mixture of an insoluble potassium containing silicate, a body containing the radical SO_3 and a body capable of acting catalytically with respect to such SO_3.

2. The process which consists in furnacing at a red heat a mixture of an insoluble potassium containing silicate, sodium acid sulfate and a catalyzer.

3. The process which consists in furnacing at a red heat a mixture of an insoluble potassium containing silicate, a sulfate, and a catalyzer adapted to increase the action of the sulfur trioxid produced upon the silicate.

4. The process which consists in furnacing at a red heat a mixture of an insoluble potassium containing silicate, a sulfate, and a fluorid.

5. The process which consists in furnacing at a red heat a mixture of an insoluble potassium containing silicate, sodium acid sulfate, and a fluorid.

[Claims 6 to 10 not printed in the Gazette.]

1,194,465. SEPARATION OF SODIUM AND POTASSIUM SALTS. HARRY P. BASSETT, Catonsville, Md., assignor to The Spar Chemical Company, Baltimore, Md., a Corporation of Maryland. Filed Mar. 8, 1915. Serial No. 12,934. (Cl. 23—22.)

1. In the process of separating sodium and potassium sulfates, the steps which consist in adding sodium chlorid to a solution of said salts, crystallizing a proportion of the salts in solution, separating the crystals formed from the mother liquor, adding sodium nitrate to such liquor, crystallizing a portion of the salts in solution and removing the crystals formed.

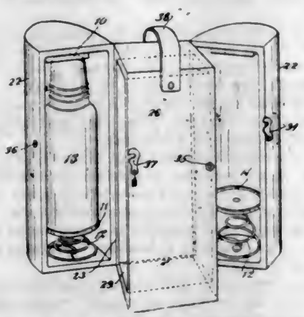
2. In the process of separating sodium and potassium sulfates, the steps which consist in adding sodium chlorid to a solution of said salts, crystallizing a proportion of the salts in solution, separating the crystals formed from the mother liquor, adding sodium nitrate to such liquor, crystallizing a portion of the salts in solution at an elevated temperature, removing the crystals formed, cooling the solution, and separating the precipitate formed.

3. In the process of separating sodium and potassium sulfates, the steps which consist in adding sodium chlorid to a solution of said salts, crystallizing a proportion of the salts in solution, separating the crystals formed from the mother liquor, adding sodium nitrate to such liquor, crystallizing a portion of the salts in solution at an elevated temperature, removing the crystals formed, cooling the solution, separating the precipitate formed, redissolving such crystals in water and adding sodium sulfate to the solution.

4. In the process of separating sodium and potassium sulfates, the steps which consist in adding sodium chlorid to a solution of said salts, crystallizing a proportion of the salts in solution, separating the crystals formed from the mother liquor, adding sodium nitrate to such liquor, crystallizing a portion of the salts in solution at an elevated temperature, removing the crystals formed, cooling the solution, separating the precipitate formed, redissolving such crystals in water, adding sodium sulfate to the solution, crystallizing a portion of the salts in solution and separating the crystals formed.

5. In the process of separating sodium and potassium sulfates, the steps which consist in adding sodium chlorid to a solution of said salts, crystallizing a proportion of the salts in solution, separating the crystals from the mother liquor, adding sodium nitrate to such liquor, crystallizing a portion of the salts in solution at an elevated temperature, removing the crystals formed, cooling the solution, separating the precipitate formed, redissolving the crystals in water, adding sodium sulfate to the solution, crystallizing a portion of the salts in solution, separating the crystals formed and washing such crystals with hot water.

1,194,466. LUNCH-BOX. JOSEPH BERG, New York, N. Y. Filed Dec. 18, 1914. Serial No. 877,869. (Cl. 206—4.)



1. In a lunch box having three provision-receiving sections, one section being an intermediate section comprising a four-walled casing open at two of its opposite sides, and the other two sections being end sections each having a floor member, a top wall member, and three side wall members secured to such floor member and top wall member, while a fourth side of each section is open, the open side of each end section being adapted to seat against one of the open sides of said intermediate section when swung against one another, the sections conforming to one another so that the open sides accurately register with one another when abutting one another, a longitudinal edge of each of said end sections being hingedly connected to one of the longitudinal edges of one of the walls of said intermediate section.

2. In a lunch box having three provision-receiving sections, one section being an intermediate section comprising a four-walled casing open at two of its opposite sides, and the other two sections being end sections, each having a floor member, a top wall member, and three side wall members, while a fourth side of each section is open, the open side of each end section being adapted to seat against one of the open sides of said intermediate section when swung against one another, the sections conforming to one another so that the open sides accurately register with one another when abutting one another, and hinge connections whereby the sections are connected to one another.

1,194,467. METHOD OF MAKING SLIPPERS. ERNEST A. BICKFORD, Worcester, Mass., assignor to The Wiley-Bickford-Sweet Co., Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 31, 1915. Serial No. 48,216. (Cl. 12—142.)



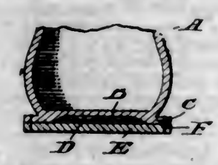
1. The method of making a slipper which comprises turning a slipper blank comprising an upper and insole, slitting the insole longitudinally, inserting an outsole member through the slit, and securing its edges to the blank along the line where the upper and insole merge.

2. The method of making a slipper which comprises turning a slipper blank wrong side out, said blank comprising an upper and insole, slitting the insole longitudinally from end to end, inserting an outsole member right side up through the slit, stitching the edges of the outsole member to the blank, then sewing up the slit and again turning the slipper to bring it right side out.

3. The method of making a slipper which comprises forming a slipper blank of a single piece of felt integral throughout and comprising an upper and insole of substantially the same thickness and texture, turning said blank wrong side out and bringing the insole to the top, slitting the insole centrally substantially from end to end, separating the slit edges, inserting an outsole of relatively tough material through the opening between the slit edges of the insole and securing its edges to the blank along the boundry of the insole, then sewing together the slit edges of the insole and again turning the blank.

4. The method of making a slipper which comprises turning a slipper blank comprising an upper and insole, slitting the insole longitudinally, inserting an outsole member through the slit and securing its edges to the blank along the line where the upper and insole merge, placing a soft, relatively thick cushion between the outsole and insole, and then sewing together the slit edges of the insole, and again turning the blank.

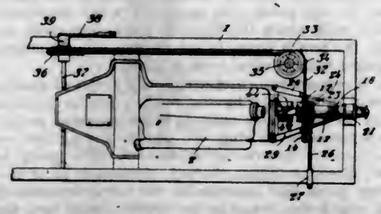
1,194,468. SLIPPER. ERNEST A. BICKFORD, Worcester, Mass., assignor to The Wiley-Bickford-Sweet Co., Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 15, 1915. Serial No. 50,887. (Cl. 36—9.)



1. As an article of manufacture a slipper comprising an upper and insole formed of a single piece of felt, a welt sewed to the insole on the bottom thereof and projecting outwardly therefrom, and an outsole secured to the welt.

2. As an article of manufacture a slipper comprising a felt upper and insole integral with each other, a narrow welt projecting down and outwardly from the edge of the insole, an outsole secured to the welt, and a packing between the outsole and insole and between the two portions of the welt on opposite sides of the slipper.

1,194,469. EXPLOSIVE-ENGINE STARTER. JAMES R. BINNS, Canton, Ohio. Filed July 26, 1915. Serial No. 41,831. (Cl. 123—185.)



1. In an explosive engine starter, comprising in combination with an explosive engine shaft, a receiving clutch member fixedly mounted upon the shaft of said engine, a second shaft arranged in alinement with the engine shaft, a movable clutch member slidably mounted upon said second named shaft, a radial spoke provided upon said movable clutch member, a segment carried by said spoke, arms supported upon the engine base and located adjacent each side of said movable clutch member, inclined faces provided upon said arms, said spoke adapted to engage said inclined faces, means for normally holding said spoke in engagement with one of said inclined faces, means for rotating said segment, a plate pivotally mounted upon said engine, a roller mounted upon the outer extremity of said plate and means for holding said roller in engagement with said segment.

2. In an explosive engine starter, comprising in combination with an explosive engine shaft, a receiving clutch member fixedly mounted upon the shaft of the engine, a second shaft arranged in alinement with said engine shaft, a movable clutch member slidably mounted upon said second named shaft, a radial spoke provided upon said clutch member, a segment carried by said clutch member, arms supported upon the engine base and located adjacent each side of said movable clutch member, inclined faces provided upon said arms, said spoke adapted to engage said inclined faces, means for normally holding said spoke in engagement with one of said inclined faces, a plate pivotally mounted upon said engine, means for limiting the movement of said plate in one direction, a roller mounted upon the outer extremity of said plate, means for normally holding said plate in engagement with said limiting means, said roller arranged to contact with said segment and means for rotating said segment.

3. In an explosive engine starter, comprising in combination with an explosive engine shaft, a receiving clutch member fixedly mounted upon the shaft of the engine, a second shaft, arranged in alinement with said engine shaft, a movable clutch member slidably mounted upon said second named shaft, a radial spoke provided upon said clutch member, a segment carried by said clutch member, arms supported upon the engine base and located adjacent each side of said movable clutch member, inclined faces provided upon said arms, said spoke adapted to engage said inclined faces, means for normally holding said spoke in engagement with one of said inclined faces, a plate pivotally mounted upon said engine, means for limiting the movement of said plate in one direction, a roller mounted upon the outer extremity of said plate, means for normally holding said plate in engagement with said limiting means, said roller arranged to contact with said segment, a flexible member connected to said segment and an operating lever connected to said flexible member.

4. In an explosive engine starter, comprising in combination with an explosive engine shaft, a receiving clutch member fixedly mounted upon the shaft of the engine, a second shaft, arranged in alinement with said engine shaft, a movable clutch member slidably mounted upon said second named shaft, a radial spoke provided upon said clutch member, a segment carried by said clutch member, arms supported upon the engine base and located adjacent each side of said movable clutch member, inclined faces provided upon said arms, said spoke adapted to engage said inclined faces, means for normally holding said spoke in engagement with one of said inclined faces, a plate pivotally mounted upon said engine, means for limiting the movement of said plate in one direction, a roller mounted upon the outer extremity of said plate, means for normally holding said plate in engagement with said limiting means, said roller arranged to contact with said segment, a compound pulley, a chain connected to said segment and passing around said compound pulley and an operating lever connected to said chain.

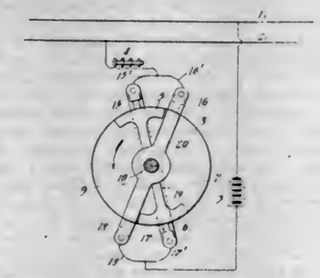
5. In an explosive engine starter, comprising in combination with an explosive engine shaft, a receiving clutch member fixedly mounted upon the shaft of said engine, a second shaft in alinement with said engine shaft, a movable clutch member slidably mounted upon said second shaft, a radial spoke provided upon said movable clutch member, a segment carried by said spoke, a half-round casing located beneath said clutch members, cam members supported upon said casing and provided with inclined faces, a spring attached to said segment and to a suitable support and adapted to hold said spoke in engagement with one of said inclined faces, means for rotating said segment, a bracket mounted upon said engine, a plate fixedly mounted on said bracket, a roller mounted upon the outer extremity of said plate, means upon said bracket for limiting the movement of said plate in one direction and a spring upon said bracket arranged to hold said roller in contact with said segment.

1,194,470. ALTERNATING-CURRENT RECTIFIER. DONALD M. BLISS, West Orange, N. J., assignor to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Apr. 28, 1911. Serial No. 623,845. (Cl. 175—364.)

1. In a rectifying device, a commutator, two sets of brushes coöperating therewith and two rocker arms mounted concentrically with the commutator, one at each end thereof and freely adjustable with respect to each other, each rocker arm carrying a plurality of said brushes including at least one brush of each set, substantially as described.

2. In a rectifying device, a rotatable commutator having a pair of connected and oppositely disposed conducting segments, rocker arms adjustable around the axis of rota-

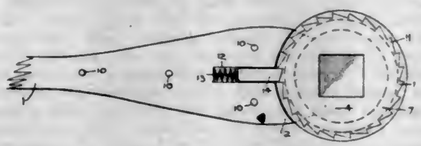
tion of the commutator, and two sets of brushes located to coöperate with the conducting segments, the said brushes being supported by the said rocker arms, and the brushes of each set being adjustable relatively to one another, substantially as described.



3. In an alternating current rectifier, a rotatable commutator having a plurality of conducting segments, a plurality of sets of brushes coöperating therewith, the brushes of each set being electrically connected together, and a plurality of the brushes of each set simultaneously contacting with each of said segments successively in each rotation of said commutator, and means whereby relative adjustment of the brushes of each set may be effected simultaneously to vary the duration of effective contact between each set of brushes and the conducting segments, substantially as described.

4. An alternating current rectifier, comprising a commutator having a pair of connected and oppositely disposed conducting segments and two sets of brushes cooperating therewith, the brushes of each set being relatively adjustable to vary the duration of effective contact between each conducting segment and a set of brushes, substantially as described.

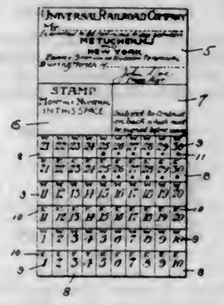
1,194,471. COMBINATION RATCHET-WRENCH. SAMUEL A. BOOSINGER, Youngstown, Ohio. Filed June 1 1916. Serial No. 101,042. (Cl. 81—60.)



1. In a tool of the class described comprising a handle a concave surface at base of same, a ratchet wheel and supporting plates, engaging rims on the circumference of the ratchet wheel, a slot, a spiral spring provided at one end with a cone-shaped portion, a pawl with a cup shaped indentation engaging the spring and ratchet teeth located within extended rims of the ratchet wheel, said ratchet wheel provided with grooves near the edge in the faces of said wheel, an inturned circular flange formed in the supporting plates to engage in said grooves of the ratchet wheel provided with an opening shaped to engage a bur or nut.

2. In a tool of the class described, a cylindrical body portion, provided at its center with an opening to engage a nut or bur, a handle, a concave portion of the base of the handle engaging outer rims on said cylinder, and teeth formed within said outer rims, supporting plates provided with an inturned curved flange to engage and slide in a groove near the edge of the surface of said cylindrical portion, a pawl to engage the teeth of cylindrical portion of wrench, a spiral spring provided with a cone shaped head to engage into a cup shaped indentation of the end of pawl, substantially as described for the purpose set forth.

1,194,472. COMMUTATION-TICKET. RICHARD BORGFELDT, Metuchen, N. J., assignor of one-half to Herbert G. Latimer, Brooklyn, N. Y. Original application filed Sept. 24, 1914, Serial No. 863,319. Divided and this application filed Oct. 9, 1915. Serial No. 54,986. (Cl. 11—15.)

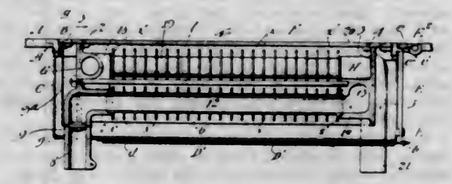


1. A commutation ticket having a series of punch boxes thereon, said ticket having printed matter entitling the owner to continuous rides between specified points, said punch boxes comprising two groups having like consecutive numbers for the boxes therein, each group bearing travel-direction indicia thereon common to all of the boxes in one group and opposite to the travel-direction indicia with which the boxes in the second group are supplied.

2. A commutation ticket having a series of punch boxes thereon, said ticket having printed matter entitling the owner to continuous rides between specified points, said punch boxes comprising two groups having like consecutive numbers for the boxes therein, each group bearing travel-direction indicia thereon common to all of the boxes in one group and opposite to the travel-direction indicia with which the boxes in the second group are supplied, the punch boxes in each group being symmetrically arranged with relation to each other.

3. A commutation ticket having a series of punch boxes thereon, said ticket having printed matter entitling the owner to continuous rides between specified points, said punch boxes comprising two groups having like consecutive numbers for the boxes therein, each group bearing travel-direction indicia thereon, common to all of the boxes in one group and opposite to the travel-direction indicia with which the boxes in the second group are supplied, certain of the boxes in each group having indicia therein to designate their acceptability for passage on dates prior to that for which they are normally available.

1,194,473. VEHICLE-HEATER. THOMAS BOVEY, Chicago, Ill. Filed Feb. 19, 1915. Serial No. 9,289. (Cl. 257—136.)

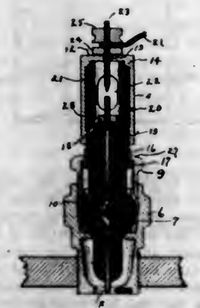


1. A heater of the kind specified comprising a perforated cover having a marginal frame, an outer imperforate rectangular casing secured thereto and depending therefrom having damper closed openings in its bottom, an inner depending bottomless rectangular frame separated all around from said outer imperforate casing and providing a continuous cooler air chamber surrounding the same, and a series of suitably disposed heating pipes within said inner rectangular structure.

2. A device of the kind specified comprising a marginal frame, a perforated cover seated in said frame, a rectangular casing secured to and depending from said frame having a series of openings in its bottom, a damper controlling said openings, an inner imperforate rectangular structure secured to and depending from said cover and separated both at its sides and ends from said casing to provide a continuous cooler air chamber around the same, and a series of suitably disposed heating pipes within said inner rectangular structure.

3. A device of the kind specified comprising a marginal frame, a perforated cover seated in said frame, a rectangular casing secured to and depending from said frame having a series of openings in its bottom, a damper controlling said openings, an inner imperforate rectangular structure secured to and depending from said cover and separated both at its sides and ends from said casing to provide a continuous cooler air chamber around the same; said inner imperforate structure consisting of side-plates and end header-plates one of which latter has an inlet passage and the other an outlet passage, and both of which have return passages therein, and interposed connecting pipes the ends of which are secured in the ends of said passages.

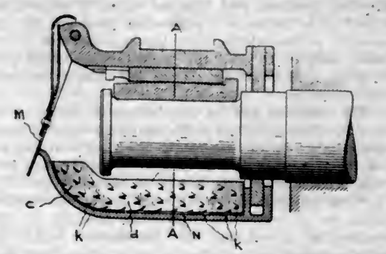
1,194,474. COMBINED SPARK-PLUG AND SPARK-GAP. WILLIAM C. BAUNKE and HARRY D. CLARKE, Omaha, Nebr. Filed Feb. 7, 1916. Serial No. 76,531. (Cl. 123—169.)



A spark-plug, including an electrode, an insulating plug or member with said electrode extending therethrough, a second insulating member also having said electrode extending through it, one of said insulating members fitting squarely upon the other insulating member, means adapted to provide for exerting pressure from said electrode upon one insulating member and through said insulating member, upon the other insulating member, a third insulating member superposing one of the aforesaid insulating members, a housing for the first-referred to insulating member, a coupling between said housing and the second insulating member, the latter having a flange engaged by said coupling, a jacket having a viewable opening therein, for said third insulating member adjustably connected to said second insulating member, said third insulating member having a reduced upper end engaged by an inner ridge of said jacket, the second insulating member having an upper reduced end forming a seat for the lower end of said third insulating member, a second electrode mounted in the upper end of said jacket, for positioning with respect to the first-referred to electrode, and means for adjustably supporting said second electrode in said jacket.

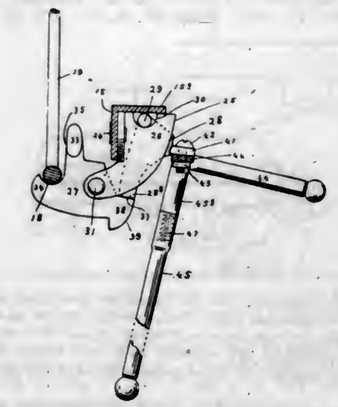
1,194,475. JOURNAL-BOX. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Mar. 13, 1913. Serial No. 754,135. (Cl. 64—24.)

1. The combination with a journal box; of an anti-creeping device for the lubricant carrier consisting of a unitary sheet-metal member of substantially U-cross-section presenting a uniformly flat bottom conforming to and in contact with the bottom of the interior of the journal box and a plurality of inwardly projecting barbs struck out of said member for the purpose of preventing axial displacement of the lubricant carrier outwardly relatively to the journal.



2. The combination with a journal box; of an anti-creeping device for the lubricant carrier consisting of a unitary sheet-metal member of substantially U-cross-section presenting a uniformly flat bottom conforming to and in contact with the bottom of the interior of the journal box and a plurality of series of inwardly projecting barbs, struck out of said member for the purpose of preventing axial displacement of the lubricant carrier outwardly relatively to the journal, the barbs of one series being in staggered relation with the barbs of the adjoining series.

1,194,476. FASTENING FOR SLING-SIDE CRIBS. GEORGE E. CAMP, Utica, N. Y., assignor to Foster Brothers Manufacturing Company, Utica, N. Y., a Corporation of New York. Filed Jan. 14, 1915. Serial No. 2,175. (Cl. 5—58.)



1. The combination in a sliding-side crib, of a crib frame, a vertically sliding side mounted thereon and tensioned to move to lowered position, a latch movably mounted on the frame so that it may be extended into position to support the side but adapted to normally move out of supporting position and a movable locking member adapted to hold the latch in supporting position and to be withdrawn therefrom and allow the latch to release the side.

2. The combination in a sliding-side crib, of a crib frame, a vertically sliding side mounted thereon and tensioned to move to lowered position, a latch movably mounted on the frame so that it may be extended into position to support the side but adapted to normally move out of supporting position and a movable locking member adapted to hold the latch in supporting position and to be withdrawn therefrom and allow the latch to release the side, said locking member moving to locking position again upon the latch being moved to supporting position.

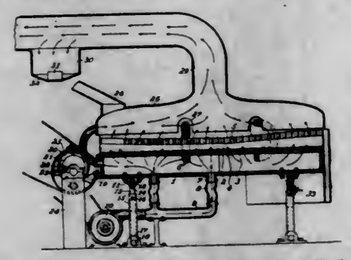
3. The combination in a sliding side crib, of a crib frame, a vertically sliding side mounted thereon and tensioned to move to lowered position, a latch movably mounted on the frame so that it may be extended into position to support the side but adapted to normally move out of supporting position and adapted when in non-supporting position to be moved to supporting position by upward movement of the sliding side thereagainst and a locking member adapted to hold the latch in supporting position and to be withdrawn therefrom and allow the latch to release the side.

4. The combination in a sliding-side crib, of a crib frame, a vertically sliding side mounted thereon and tensioned to move to lowered position, a latch movably mounted on the frame so that it may be extended into position to support the side but adapted to normally move out of supporting position and adapted when in non-supporting position to be moved to supporting position by upward movement of the sliding side thereagainst and a locking member adapted to hold the latch in supporting position and to be withdrawn therefrom and allow the latch to release the side, said locking member moving to locking position again upon the latch being moved to supporting position.

5. The combination in sliding-side crib, of a crib frame, a vertically sliding side mounted thereon and tensioned to move to lowered position, movably mounted on the frame a latch tensioned to drop to non-supporting position but adapted to be raised into position to support the side and a locking member adapted to hold the latch in supporting position and to be withdrawn therefrom and allow the latch to release the side.

[Claim 6 to 18 not printed in the Gazette.]

1,194,477. ORE-CONCENTRATOR. LOUIS DAVID CHEVALIER and HENRY CHARLES RECHE, Dubuque, Iowa. Filed Dec. 27, 1915. Serial No. 68,791. (Cl. 83—54.)



1. In an apparatus of the character described, an oscillatory recticulated table, means for forcing air upwardly through its reticulations and other means for creating opposed horizontal air currents over the upper surface thereof independent of those passing through the reticulations.

2. In an apparatus of the character described, an oscillatory table adapted to receive ore concentrates, separated means for forcing air currents vertically through said concentrates and also in opposed horizontal currents, independent of those which pass vertically through the concentrates, across its upper surface, and an inclosure for said table provided with an air delivery port.

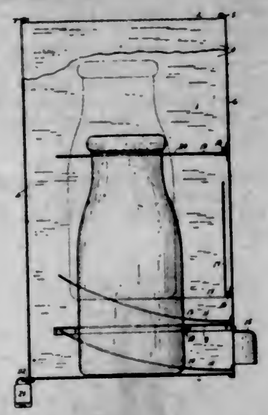
3. In an apparatus of the character described, an oscillatory table with reticulated upper surface, and means for passing fluid currents upwardly through the reticulated surface, said reticulated surface being medially concaved and depressed at one edge in communication with said concavity to facilitate the discharge of a heavier component of the concentrate moving thereupon.

4. In an apparatus of the character described, an oscillatory table with reticulated upper surface, and means for passing fluid currents upwardly through the reticulated surface, said reticulated surface being medially concaved and depressed at each of two delivery edges in communication with said concavity, to respectively separately discharge the heavier and lighter components of a concentrate moving thereupon.

5. In an apparatus of the character described, an oscillatory table in the form of a hollow box whose top is formed of reticulated material, independent means for conveying air, one means adapted to cause the passage of air vertically through the reticulated top and the other air conveying means adapted to deliver horizontal opposed currents across the top of the box.

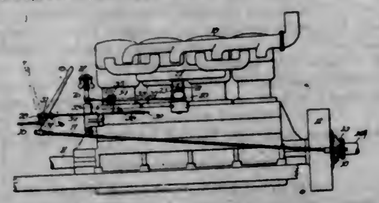
[Claims 6 to 10 not printed in the Gazette.]

1,194,478. RECEPTACLE FOR BOTTLES. CHRISTIAN B. CHRISTENSEN, San Francisco, Cal. Filed June 2, 1915. Serial No. 31,750. (Cl. 232—41.)



A receptacle for bottles having an upwardly hinged front door, a hinged guide plate projecting inwardly from said door in the upper portion of said receptacle and having an opening for the neck of a bottle, a fixed partition below said guide plate and projecting inwardly from said front door and having an opening for the body of a bottle, an upwardly curved locking plate fixed to said door having an opening for the body of a bottle above said partition and projecting inwardly from said door, an upwardly curved locking plate fixed to said door having an opening for the body of a bottle below said partition and projecting inwardly from said door, a rear door upwardly hinged to said receptacle, and a shelf hinged inwardly to said front door and positioned between the curved locking plate above said partition and said guide plate.

1,194,479. SPEED CONTROL FOR ENGINES. HARRY C. CLAY and ALBERT T. CLAY, Columbus, Ind., assignors to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed May 27, 1915. Serial No. 30,842. (Cl. 121—120.)



1. The combination of an engine, a transmission clutch, a clutch-actuating lever and connections therefrom to said clutch, a governor and connections therefrom to the throttle valve of the engine, a spring, and means actuated in one direction by said lever and in the reverse direction by said spring for varying the adjustment of said governor-actuated connections to the throttle-valve.

2. The combination of an engine, a transmission clutch, a clutch-actuating lever and connections therefrom to said clutch, a governor and connections therefrom to the throttle valve of the engine, means actuated by said lever when thrown to clutch-disengaging position for shifting said governor-actuated connections in a direction to effect a movement of said throttle valve in a closing direction, and a spring normally tending to shift said governor-actuated connections in the reverse direction to effect a movement of said throttle valve in an opening direction.

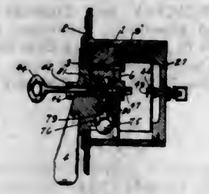
3. The combination of an engine, a transmission clutch, a clutch-actuating lever and connections therefrom to said clutch, a governor and connections, including a lever, therefrom to the throttle valve of the engine, a spring, and means actuated in one direction by said clutch lever for shifting the fulcrum of said governor-actuated lever in one direction and actuated in the reverse direction by said spring for shifting the fulcrum of said governor-actuated lever in the opposite direction.

4. The combination of an engine, a transmission clutch, a clutch-actuating lever and connections therefrom to said clutch, a governor and connections, including a lever, therefrom to the throttle valve of the engine, means actuated by said clutch lever when thrown to clutch-disengaging position for shifting the fulcrum of said governor-actuated lever in a direction to effect a movement of said throttle valve in a closing direction, and a spring normally tending to shift the fulcrum of said governor-actuated lever in the reverse direction to effect a movement of said throttle valve in an opening direction.

5. The combination of an engine, a transmission clutch, a clutch-actuating lever and connections therefrom to said clutch, a governor and connections therefrom to the throttle valve of the engine, a spring, means actuated in one direction by said lever and in the reverse direction by said spring for varying the adjustment of said governor-actuated connections to the throttle valve, and an adjustable stop device for controlling the extent of spring-actuated movement of said adjustment-varying means.

[Claims 6 to 15 not printed in the Gazette.]

1,194,480. SWITCH MECHANISM FOR AUTOMOBILE-LIGHTING SYSTEMS. HARRY A. CLUM, Wauwatosa, Wis., assignor to Clum Manufacturing Company, Wauwatosa, Wis., a Corporation of Wisconsin. Filed Sept. 29, 1913. Serial No. 792,279. (Cl. 175—282.)



1. A switch for automobile circuits, comprising a set of fixed abutments, an oscillatory member, a resilient bearing member connected therewith and adapted to move over said abutments and partially engage between them, a pin controlling the retractive movements of the bearing member, a cam mounted in the oscillatory member and adapted to move into and out of a locking position with reference to the pin and bearing member, and a key receiving member connected with the cam; said cam being otherwise inaccessible.

2. A switch for automobile systems, provided with an oscillatory member in combination with a cam mounted therein and provided with a key receiving post accessible from the exterior, a positioning piece carried by the oscillatory member, and means for utilizing the cam to lock the positioning piece in any desired adjustment.

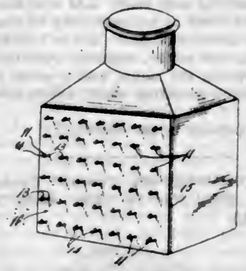
3. A switch for automobile lighting systems, provided with an oscillatory member in combination with a cam mounted therein and provided with a key receiving post accessible from the exterior, a positioning piece carried by the oscillatory member, means for utilizing the cam to lock the positioning piece in any desired adjustment, and a set of contact terminals selectively coöperative with the oscillatory member.

4. A switch mechanism for automobile lighting systems, comprising the combination of a set of stationary electrodes, arranged circularly in a pair of groups, and an auxiliary electrode, a pair of carriers provided with resilient contact devices adapted to slide over said electrodes, means for oscillating said carriers, and a set of push buttons adapted to selectively connect or disconnect the auxiliary electrode with one of the grouped electrodes and through the carriers with other electrodes in said groups.

5. A switch mechanism, including a base having a centrally disposed electrode, a series of electrodes circularly grouped about the central electrodes, a swinging switch member adapted to connect and disconnect the central electrode with one of those in the series, a set of push buttons operatively connected with the swinging switch member and adapted to actuate the same into and out of connecting relation to the central electrode and said series electrode, and an oscillatory carrier provided with a plurality of groups of contact members adapted for selective registry with electrodes in said series.

[Claim 6 not printed in the Gazette.]

1,194,481. POISON-INDICATOR. THOMAS HENRY COX and JAMES VOUGHNLEY COX, Holly Springs, Miss. Filed Jan. 5, 1916. Serial No. 70,467. (Cl. 215—113.)



1. A poison label including a strip of material and a wire secured to the strip, certain portions of the wire being looped to project laterally from one face of the strip whereby to provide spaced prongs.

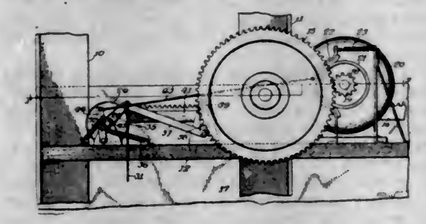
2. A poison label comprising a strip of material, a wire stitched through said strip, certain of said stitches being extended beyond a face of the strip and constituting prongs, and attaching means for said strip.

1,194,482. DOOR-OPENER. HERBERT W. CRANE, Chicago, Ill. Filed Jan. 17, 1916. Serial No. 72,446. (Cl. 268—9.)

1. In a door-operating mechanism, the combination of a rack bar secured to a door, a motor having a pinion engaging said rack bar, a reversing switch, a switch operating shaft and a plurality of clutches arranged to move said shaft in one direction only, automatic means for actuating one of said clutches and manually operable means for operating another of said clutches, substantially as described.

2. In a door-operating mechanism, the combination of a rack bar, a motor having a pinion engaging said rack bar, a reversing switch for starting and stopping said motor, said switch being operable by a movement in one direction only, a pair of clutches coöperating with said switch, either of which clutches is adapted to operate said switch to

operative and inoperative positions by an oscillating movement, automatic means for actuating one of said clutches and manually operable means for operating another of said clutches, substantially as described.



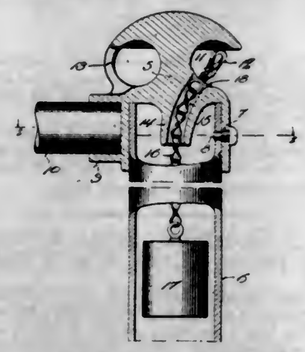
3. In a door-operating device, the combination of a door, a motor, connections between said door and said motor, a reversing switch for operating said motor, a shaft for operating said switch, a pair of oscillating arms having clutches engaging said shaft, manually operable means for moving one of said arms and automatic means operable by the motion of said door for operating the other of said arms, substantially as described.

4. In a door-operating mechanism, the combination of a rack bar secured to a door, a motor having a pinion engaging said rack bar, a switch for operating said motor and switch-actuating means, said last-named means including a slideway carried by said door and a trigger coöperating with said slideway, substantially as described.

5. In a door operating mechanism, the combination of a rack bar carried by the door, a motor having a pinion engaging said rack bar through suitable gearing, a one-way reversing switch, a shaft for operating said switch, clutches for operating said shaft, said clutches causing a movement of said shaft by an oscillating movement of the clutch-operating arms, automatic means operable by said door for stopping said motor, manually operable means for starting and stopping the motor, and a motor brake operable by said switch-operating shaft, substantially as described.

[Claim 6 not printed in the Gazette.]

1,194,483. HITCHING-POST. PETER F. DALLINGER, Milwaukee, Wis. Filed Mar. 18, 1916. Serial No. 85,022. (Cl. 119—124.)



1. A device of the class described comprising a hollow post, a head on the post having its upper portion reduced and then enlarged in inverted cup shape to provide an annular chamber, a passage through the head communicating with the intermediate portion of the chamber, an attaching member, retracting means in the post and a flexible member engaged through the passage and connecting the retracting means and the attaching member whereby said attaching member is normally held positioned within said annular chamber.

2. A device of the class described comprising a hollow post, a head on the post having its upper portion reduced and then enlarged in inverted cup shape to provide an annular chamber, an arm connecting the edge of the cup shaped portion with a lower portion of the head, a passage through the head communicating with the chamber, an attaching member, a retracting means in the post and a flexible member engaged through the passage and connecting the retracting means and the attaching member.

1,194,484. WATCHCASE, &c. CHARLES L. DEPOLLIER, New York, and EDWARD C. DUNCUFF, Mount Vernon, N. Y., assignors to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Dec. 11, 1915. Serial No. 66,254. (Cl. 224—4.)



1. The combination with a watch-case having recesses formed therein of opposed fingers adapted to be turned into said recesses to become practically invisible or to be extended to engage a bar between them.

2. The combination with a watch-case having recesses formed therein of opposed fingers pivotally mounted in said recesses and adapted to be turned into the same to become practically invisible or to be extended to engage a bar between them.

3. The combination with a watch-case of opposed fingers mounted thereon and a telescoping compression bar adapted to be received between the fingers and to be engaged thereby.

4. The combination with a watch-case of opposed fingers pivotally mounted on a watch-case and adapted to be turned inward to be practically invisible or to be extended, and a telescoping compression bar adapted to be received between the opposed fingers and to engage the same.

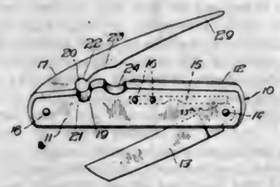
1,194,485. WATCHCASE, &c. CHARLES L. DEPOLLIER, New York, and EDWARD C. DUNCUFF, Mount Vernon, N. Y., assignors to Dubois Watch Case Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 21, 1916. Serial No. 73,278. (Cl. 224—4.)



1. The combination with a watch-case having a recess of links movably secured at one end within the recess, and a transverse bar pivotally secured to the links at its ends, whereby the bar and links may be folded into the recess to become practically invisible or extended to permit the bar to be engaged by a strap or ribbon.

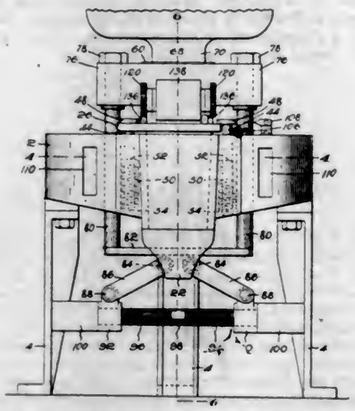
2. The combination with a watch-case having a recess of links pivotally secured within the recess, and a transverse bar pivotally secured at its ends to the links whereby the bar and links may be folded into the recess to become practically invisible or extended to permit the bar to be engaged by a strap or ribbon.

1,194,486. CAP-CRIMPING TOOL. WILBUR H. DOWNS, Wilmington, Del. Filed Apr. 28, 1915. Serial No. 24,422. (Cl. 86—22.)



A cap crimping tool, comprising a handle formed of two side members laterally spaced apart and secured together adjacent each end of the handle, and a lever arm pivotally secured at one of its ends to and between said side members and adjacent to one end of said handle, said lever arm having its inner edge located between said side members, when said lever arm is in closed position, said lever arm being provided in its inner edge and adjacent its pivoted end with a notch opening toward said handle; one of the side members of said handle being provided with a notch opposed to the notch in said lever arm and the edges of said notches being adapted to pass each other when said lever arm is moved into opened and closed positions, and the other side member of said handle having a recess, the edge of which is below the edge of the notch in said first mentioned side member.

1,194,487. DISPENSER. WILLIAM J. DRISCOLL, Boston, Mass. Filed Mar. 29, 1913. Serial No. 757,521. (Cl. 221—117.)



1. In a dispensing apparatus, in combination, an adjustable member provided with a passage therethrough adapted to receive the open end of a receptacle containing the fluid to be dispensed, the lower end of said member extending into a fluid chamber provided with an outlet passage; sustaining means for said member; means for securing said member to said sustaining means and the receptacle to said member; two containers each provided with a passage leading therefrom; a movable valve member provided with two chambers, one communicating with said outlet passage and adapted to communicate with the passage leading from either one of said containers and the other communicating with the discharge opening of the valve and adapted to communicate with the passage leading from either container; means for moving said valve member to cause said first named valve chamber which communicates with said outlet passage to communicate with the passage leading from either one of said containers and to cause the other valve chamber which communicates with the discharge opening of the valve to communicate with the passage leading from the other container; a counter; means for operating the latter by movement of said valve member; means for varying the position of the adjustable member to vary the amount of fluid to be dispensed; and indicator means to indicate the amount of fluid to be dispensed.

2. In a dispensing apparatus, in combination, an adjustable member provided with a passage therethrough adapted to receive the open end of a receptacle containing the fluid to be dispensed, the lower end of said member extending into a fluid chamber provided with an outlet passage; sustaining means for said member; means for securing said member to said sustaining means and the receptacle to said member; two containers each provided with a passage leading therefrom; a movable valve member provided with two chambers, one communicating with said outlet passage and adapted to communicate with the passage leading from either one of said containers, and the other communicating with the discharge opening of the valve and adapted to communicate with the passage leading from either container; means for moving said valve member to cause said first named valve chamber to communicate with the passage leading from either one of said containers and with the passage leading from said fluid chamber and to cause the other valve chamber to communicate with the passage leading from the other container; a counter; means for operating the latter by movement of said valve member; and means for carying the position of the adjustable member to vary the amount of fluid to be dispensed.

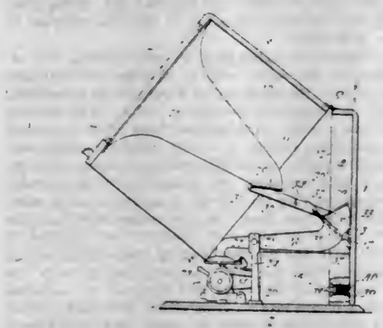
3. In a dispensing apparatus, in combination, an adjustable member provided with a passage therethrough adapted to receive the open end of a receptacle containing the fluid to be dispensed, the lower end of said member extending into a fluid chamber provided with an outlet passage; sustaining means for said member; means for securing said member to said sustaining means and the receptacle to said member; two containers each provided with a passage leading therefrom; a movable valve member provided with two chambers, one communicating with said outlet passage and adapted to communicate with the passage leading from either one of said containers, and the other communicating with the discharge opening of the valve and adapted to communicate with the passage leading from either container; a counter; means for operating the latter by movement of said valve member; means for varying the position of the adjustable member to vary the amount of fluid to be dispensed; and indicating means to indicate the amount of fluid to be dispensed.

4. In a dispensing apparatus, in combination, an adjustable member provided with a passage therethrough adapted to receive the open end of a receptacle containing the fluid to be dispensed, the lower end of said member extending into a fluid chamber provided with an outlet passage; sustaining means for said member; means for securing said member to said sustaining means and the receptacle to said member; two containers each provided with a passage leading therefrom; a movable valve member provided with two chambers, one communicating with said outlet passage and adapted to communicate with the passage leading from either one of said containers, and the other communicating with the discharge opening of the valve and adapted to communicate with the passage leading from either container; means for moving said valve member to cause said first named chamber of said valve member to communicate with the passage leading from either one of said containers and to cause the other chamber of said valve member to communicate with the passage leading from the other container; a counter; means for operating the latter; means for varying the position of the adjustable member to vary the amount of fluid to be dispensed; and indicating means to indicate the amount of fluid to be dispensed.

5. In a dispensing apparatus, in combination, a member provided with a passage therethrough adapted to be connected to a source of fluid supply, one end of said member extending into a fluid chamber provided with an outlet passage; sustaining means for said member; means variably to adjust the position of said member; means for securing said member to said sustaining means and the receptacle to said member; two containers each provided with a passage leading therefrom; a movable valve member provided with two chambers, one communicating with said outlet passage and adapted to communicate with the passage leading from either one of said containers, and the other communicating with the discharge opening of the valve and adapted to communicate with the passage leading from either container; and means for moving said valve member to cause said first named chamber of said valve member to communicate with the passage leading from either one of said containers and to cause the other chamber of said valve member to communicate with the passage leading from the other container.

[Claims 6 to 40 not printed in the Gazette.]

1,194,488. PHONOGRAPH OR TALKING-MACHINE. FRANK L. DYER, Montclair, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 21, 1910. Serial No. 544,972. (Cl. 274—2.)



1. In a phonograph or talking machine, the combination of a cabinet having a base portion and a portion extending upwardly from the rear of said base portion, a cover for said cabinet having a front, a top, and sides, the said cover being hinged about a substantially horizontal axis to the upwardly extending portion and adapted when closed to contact the top of the base portion at the lower edges of its front and sides, a rotatable record support and operating means therefor supported on the top of said base portion, a reproducer carried by said cabinet and adapted to operate upon a record carried by said support, and a sound conveyer carried by said cover and connected to said reproducer by a separable joint substantially vertically below the hinged connection of the cabinet and cover when the cover is closed, substantially as described.

2. In a phonograph or talking machine, the combination of a cabinet, a cover hingedly connected with said cabinet about a substantially horizontal axis, a record support, reproducer and sound conveying tube connected with said reproducer carried by said cabinet, and a forwardly extending amplifying sound conveyer carried by said cover, said tube and conveyer being provided with ends arranged to abut substantially vertically below said hinged connection when the cover is closed and form a joint inclined downwardly toward the front of the cabinet, substantially as described.

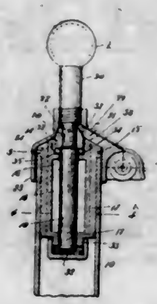
3. In a phonograph or talking machine, the combination of a cabinet, a cover hingedly connected to the top thereof about a substantially horizontal axis, a record support carried by said cabinet, a sound conveyer comprising a section supported by said cabinet and provided at one end with a reproducer adapted to operate upon a record carried by said support, and a forwardly extending amplifying section carried by said cover and adapted to abut against the other end of said first section when the cover is closed to form therewith substantially vertically below said hinged connection a joint inclined downwardly toward the front of the cabinet, substantially as described.

4. In a phonograph or talking machine, the combination of a cabinet, a cover hingedly connected to the top thereof about a substantially horizontal axis and having a wall forming the front of the cabinet when the cover is closed, a record support carried by said cabinet, a sound conveyer comprising a forwardly extending section carried by said cabinet and provided at its forward end with a reproducer adapted to operate upon a record carried by said support, and a forwardly extending amplifying section carried by said cover, said amplifying section being adapted to abut at its rear end against the rear end of said first section when the cover is closed to form therewith substantially vertically below said hinged connection a joint inclined downwardly toward the front of the cabinet, substantially as described.

5. In a phonograph or talking machine, the combination of a cabinet, a cover hingedly connected with said cabinet about a substantially horizontal axis, a record support, reproducer and sound conveying tube connected with said reproducer carried by said cabinet, and a forwardly extending amplifying sound conveyer carried by said cover, said tube and conveyer being provided with ends arranged to abut substantially vertically below said hinged connection when the cover is closed, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

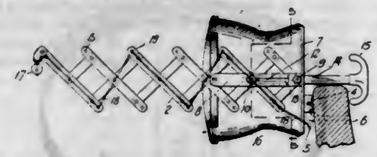
1,194,489. FLAGSTAFF. HARRY C. EARLE, Boston, Mass., assignor to Walworth Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 20, 1915. Serial No. 3,659. (Cl. 116—12.)



1. In a device of the class described, the combination of a vertical tubular member; a hollow head driven into the upper end thereof having alined bearings and a threaded boss projecting from the bottom thereof; a closure surrounding the lower bearing and threaded to said boss; a shaft revolubly mounted in said bearings; a cap secured to and revoluble with said shaft; a grease receptacle communicating with said bearings; and a halyard sheave carried by said cap.

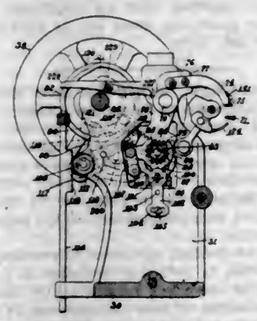
2. In a device of the class described, the combination of a vertical tubular member; a hollow head driven into the upper end thereof having alined bearings and a threaded boss projecting from the bottom thereof; a closure surrounding the lower bearing and threaded to said boss; a shaft revolubly mounted in said bearings; a plurality of caged balls surrounding said shaft in the upper end of said head; a cap secured to and revoluble with said shaft; a grease receptacle communicating with said bearings; and a halyard sheave carried by said cap.

1,194,490. SIGNALING DEVICE FOR VEHICLES. CHARLES A. ELLIS, Denver, Colo. Filed Oct. 18, 1914. Serial No. 866,436. (Cl. 116—31.)



In a signaling device for vehicles, a supporting element adapted to be secured at a side of a vehicle and including a pair of longitudinally slotted arms, and a signaling element comprising a lazy-tongs pivotally mounted at one of its ends on said supporting element, a pivot pin at the intersection of a pair of the series of levers of which the lazy tongs is formed, said pivot pin extending through the slots of said arms, and a sliding handle connected with said pivot-pin, the said slots having notches to receive the said pin when the lazy tongs is in its contracted condition.

1,194,491. PRESSER-FOOT-LOCKING DEVICE FOR SEWING-MACHINES. EDWARD ERICKSON, Lynn, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Continuation in part of application Serial No. 739,056, filed Dec. 28, 1912. This application filed Apr. 24, 1915. Serial No. 24,138. (Cl. 112—20.)



1. In a sewing machine, the combination of a presser foot; a pivoted carrier therefor having a lateral projection, a pivoted lever one arm of which is in engagement with said projection; mechanism for locking said presser foot during the stitch forming operation including in part an oscillating pinion; a rack engaging said pinion and under the control of the operator adapted to be moved to release said locking means and subsequently engage the outer end of the lever in engagement with said projection and move it about its pivot thereby causing said carrier to be moved about its pivot.

2. In a sewing machine, the combination of an oscillating presser foot controlling member; a locking spring coiled about said member and adapted to bind thereon to prevent oscillation thereof; a revoluble disk with a cam path therein, a revoluble shaft; a bell crank lever pivotally mounted thereon and having a roll on one arm in said cam path; means connected to the other arm adapted to control the locking action of said spring; a lever pivoted to one arm of said bell crank lever having at one end a roll engaging the periphery of said cam disk and provided with a slot at its opposite end; a cam projection on said shaft positioned in said slot; a stop member to limit the movement of said slotted lever about its pivot; means for rotating said shaft; and means for automatically releasing said locking spring from said controlling member prior to the feeding of the work.

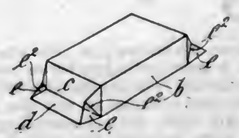
3. In a sewing machine, the combination of an oscillating presser foot controlling member; a locking spring coiled about said member and adapted to bind thereon to prevent oscillation thereof; a revoluble disk with a cam path therein; a pivoted member having a roll in said cam path; means secured to said member for controlling the locking action of said spring; and a lever pivoted to said member with a roll at one end and having provision for retaining said roll in engagement with the periphery of said disk.

4. In a sewing machine, the combination of an oscillating presser foot controlling member; a locking spring coiled about said member and adapted to bind thereon to prevent oscillation thereof; a revoluble disk with a cam path therein; a pivoted member having a roll in said cam path; means secured to said member for controlling the locking action of said spring; a lever pivoted to said member with a roll at one end and having provision for retaining said roll in engagement with the periphery of said disk; and means for separating said rolls to permit the unlocking of said spring operative at one point only in the revolution of said disk.

5. In a sewing machine, the combination of an oscillating presser foot controlling member; a locking spring coiled about said member and adapted to bind thereon to prevent oscillation thereof; a revoluble disk with a cam path therein; a pivoted member having a roll in said cam path; means secured to said member for controlling the locking action of said spring; a lever pivoted to said member with a roll at the outer end thereof; means to limit the outward movement of said lever; and means coacting with said lever for normally retaining its roll in engagement with the periphery of said disk, and adapted to rock said lever about said limiting means thereby separating said rolls and effecting the release of said locking spring at a predetermined time.

[Claims 6 to 9 not printed in the Gazette.]

1,194,492. WRAPPING METHOD. HERMAN OTTO FISCHER, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Jan. 17, 1914. Serial No. 812,662. (Cl. 93—2.)



1. The method of wrapping articles, which consists in folding a wrapper around an article to partially inclose the article and form a tubular end extension for each end closure to be made, then forming said end closure by folding said extension against the end of the article in such a manner as to form an end closing flap covering the other end folds and having its edges lying substantially flush with the edges of the end face of the package.

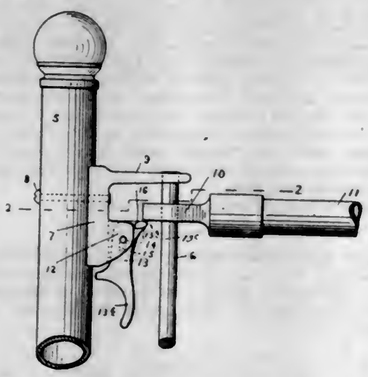
2. The method of wrapping an article of prismatic shape and of rectangular cross section, which consists in folding a wrapper around an article to partially inclose the article and to form a tubular end extension for each end closure to be made, then forming said end closure by folding said extension against the end of the article in such a manner as to form an end closing flap covering the other end folds and having its edges lying substantially flush with the edges of the end face of the package and sealing all the folds in place.

3. The method of wrapping an article of prismatic shape and of rectangular cross section, which consists in folding a wrapper around the article to form a tube covering the longitudinal faces of the article and having its ends extending beyond the ends of the article in opposite directions in the form of four-sided wrapper extensions, then folding the sides of each extension to form a sealing flap having substantially the same size and shape as the end face of the package, and folding said flap against said face over the other end folds and sealing it in its folded

position with its edges lying substantially flush with the edges of the end face of the package.

4. The method of wrapping an article of prismatic shape and of rectangular cross section, which consists in folding a wrapper around the article to form a tube covering the longitudinal faces of the article and forming four-sided wrapper extensions projecting beyond the opposite ends of the article, sealing the longitudinal edges of the wrapper in overlapping relationship with the visible edge lying substantially flush with one longitudinal edge of the article, then folding the sides of each extension to form a sealing flap having substantially the same size and shape as the end face of the package, and folding said flap against said face over the other end folds and sealing it in its folded position with its edges lying substantially flush with the edges of the end face of the package.

1,194,493. FASTENER FOR SLIDING-SIDE CRIBS. WILLIAM B. FOSTER, Utica, N. Y., assignor to Foster Brothers Manufacturing Company, Utica, N. Y., a Corporation. Filed Sept. 22, 1914. Serial No. 863,011. (Cl. 5—58.)

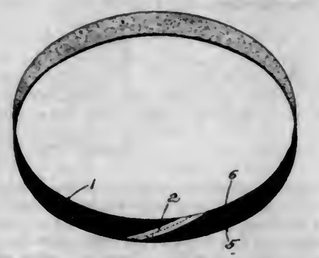


1. In a fastener for sliding side cribs the combination of a crib post, a guide rod supported in spaced relation therefrom, a projection from the crib side slidingly mounted on said guide rod, a bracket on said post adjacent the upper end of said guide rod and extending theretoward and a gravity latch pivotally and slidably mounted on said bracket with its outer point projecting toward said guide rod and adapted to support said crib side projection and means locking said latch from being swung back from supporting position except when said latch is moved upwardly.

2. In a fastener for sliding side cribs the combination of a crib post, a guide rod supported in spaced relation therefrom, a projection from the crib side slidingly mounted on said guide rod, a bracket on said post adjacent the upper end of said guide rod and extending theretoward, a gravity latch pivotally and slidably mounted on said bracket with its outer point projecting toward said guide rod and adapted to support said crib side projection and means locking said latch from being swung back from supporting position except when said latch is moved upwardly, upward movement of said projection against the outer point of said latch being adapted to raise said latch from locked position and then move said latch to retracted position and allow said projection to pass thereby.

1,194,494. ABRADING-BELT. LOUIS G. FREEMAN, Cincinnati, Ohio, assignor to Louis G. Freeman and Charles F. Freeman, Cincinnati, Ohio, trustees. Filed Sept. 8, 1915. Serial No. 49,493. (Cl. 51—1.)

1. As an article of manufacture, an abrasive belt formed from a strip of textile material or paper, having on one side an adhesive and the abrasive material, together with an additional coating of adhesive on the edges of the belt strip applied thereon after the abrasive material.



2. As an article of manufacture, an abrasive belt formed from a strip of textile material or paper, having on one side an adhesive and the abrasive material, together with an additional coating of adhesive on both edges of the belt strip and upon the marginal portion of the back of said strip.

3. As an article of manufacture, an endless abrasive belt, formed from a sheet of textile material or paper and cut from said sheet angularly with relation to the fibers thereof, an adhesive coating on one side and abrasive material applied thereto.

4. An article of manufacture, an endless abrasive belt, formed from a sheet of textile material or paper and cut from said sheet angularly with relation to the fibers thereof, an adhesive coating on one side and abrasive material applied thereto, together with an additional coating of adhesive on the projecting fibers left by said angular cut at the edges of said strip.

1,194,495. SOY-BEAN PRODUCTS AND METHOD OF PREPARATION. JACOB FRIEDMAN, Chicago, Ill. Filed Dec. 17, 1914. Serial No. 877,734. (Cl. 99—11.)

1. A method of treating soy beans to produce an article of food, consisting in reducing the beans in a raw state to a relatively fine state of division and then submitting the finely divided material in an autoclave to the action of heat and pressure at a temperature of 120 degrees to 300 degrees centigrade.

2. A method of treating soy beans to produce an article of food, consisting in reducing the beans in a raw state to a finely divided condition, submitting the finely divided material to the action of heat and pressure at a temperature of 120 degrees to 300 degrees centigrade and agitating the material during such submission.

3. A method of treating soy beans to produce an article of food consisting in reducing the beans to a finely divided condition, submitting the finely divided material in an autoclave to a temperature of 120 degrees to 300 degrees centigrade and agitating the material during said submission.

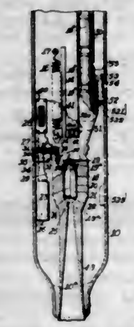
4. A method of treating soy beans to produce an article of food consisting in reducing them to a finely divided condition and submitting the finely divided material to the action of heat at a temperature of approximately 155 degrees centigrade without burning the beans and during a relatively protracted period.

5. The herein described food preparation consisting of soy beans reduced to a finely divided condition and then submitted to the action of heat at a temperature of 120 degrees to 300 degrees centigrade for a relatively protracted period.

1,194,496. ROCKET APPARATUS. ROBERT H. GODDARD, Worcester, Mass. Filed Dec. 23, 1915. Serial No. 68,437. (Cl. 102—23.)

1. A rocket apparatus having, in combination, a casing, a breech block fixed in said casing, a combustion chamber mounted for longitudinal movement in said casing and devices actuated by said chamber effective to eject a spent cartridge from the casing and to thereafter insert a fresh cartridge in place thereof.

2. A rocket apparatus having, in combination, a casing, a breech block fixed in said casing, a combustion chamber and nozzle mounted for longitudinal movement in said casing, a spring to restore said chamber to normal engagement with said breech block, and devices actuated by said chamber effective to eject a spent cartridge from the casing and to thereafter insert a fresh cartridge in place thereof.



3. A rocket apparatus having, in combination, a casing, a breech block fixed in said casing, a combustion chamber mounted for longitudinal movement in said casing, an extractor and an ejector supported by said breech block effective to actuate said ejector to eject the spent cartridge from the casing.

4. A rocket apparatus having, in combination, a casing, a breech block fixed in said casing, a combustion chamber mounted for longitudinal movement in said casing, a magazine containing fresh cartridges, and means to eject a spent cartridge from said chamber and to insert a fresh cartridge therein, said magazine comprising a member fixed to said casing and a second member movable with said chamber relative to said casing.

5. A rocket apparatus having, in combination, a casing, a breech block fixed in said casing, a combustion chamber mounted for longitudinal movement in said casing, a magazine for fresh cartridges comprising a member fixed to said casing and a second member movable with said chamber relatively to the casing, a device mounted on said casing for retaining certain cartridges in the fixed member of said magazine while the movable member of the magazine is lowered, and a member supported by said chamber effective to release said retaining device as the chamber returns to normal position.

[Claims 6 to 10 not printed in the Gazette.]

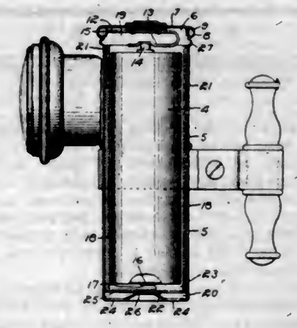
1,194,497. BATTERY AND CONTAINER. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed June 22, 1914. Serial No. 846,498. (Cl. 204—53.)

1. The combination with a portable battery, of a battery holder inclosing said battery and conforming substantially to the shape thereof but separated therefrom by an air space, and provided with one or more apertures to admit outside atmosphere to said air space into direct contact with the battery.

2. The combination with a portable battery, of a battery holder inclosing said battery and conforming substantially to the shape thereof but separated therefrom at the sides by an air space, and provided with one or more apertures to admit outside atmosphere to said air space into direct contact with the battery.

3. The combination with a portable battery, of a battery holder inclosing said battery and conforming substantially to the shape thereof but separated therefrom on the sides and bottom by an air space, and provided with one or more apertures to admit outside atmosphere to said air space into direct contact with the battery.

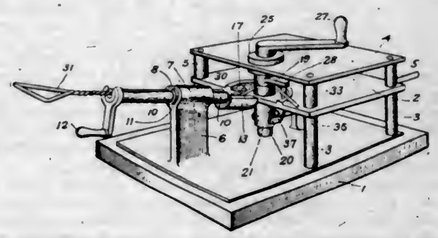
4. The combination with a portable battery, of a battery holder inclosing said battery and conforming substantially to the shape thereof but separated therefrom on the top, sides and bottom by an air space, and provided with one or more apertures to admit outside atmosphere to said air space into direct contact with the battery.



5. The combination with a battery, of a battery container inclosing said battery and having provision for supporting the same elevated above the bottom of said container to provide an air space between the bottom of said battery and said container, the sides of said battery being separated from said container by an air space, and the bottom of said container having one or more apertures to admit outside atmosphere to said air space and into direct contact with the battery.

[Claims 6 to 14 not printed in the Gazette.]

1,194,498. WIRE-BENDING MACHINE. GEORGE D. HENRY, Kansas City, Mo., assignor to Swift Fly Swatter Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed May 10, 1915. Serial No. 27,176. (Cl. 140—73.)



1. The combination with a wire holder, of a table, a plunger in the table, and a crank arm arranged for engaging a projecting end of a wire carried in said holder and turning the same about the plunger.

2. The combination with a wire holder, of a table, a plunger in the table, a crank arm arranged for engaging a projecting end of a wire carried in said holder and turning the same about the plunger, and means for withdrawing the plunger to free the wire.

3. The combination with a wire holder, of a plunger, a crank arm concentric with and extending along the plunger, and means for actuating the crank arm.

4. The combination with a wire holder, of a plunger, a crank arm concentric with and extending along the plunger, means for actuating the crank arm, and means for moving the plunger away from the crank arm.

5. The combination with a wire holder, of a table having a curved bearing rib thereon, a plunger in said table concentric with the rib, a rotatable crank arm having its end projected along the rib, and means for rotating the crank arm.

[Claims 6 to 12 not printed in the Gazette.]

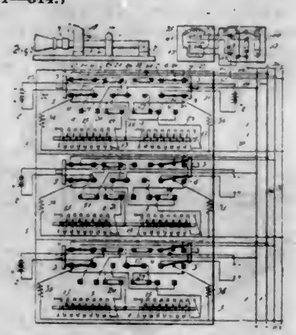
1,194,499. RAIL-JOINT. CHARLES HOHMAN, Chicago, Ill. Filed July 22, 1915. Serial No. 41,301. (Cl. 239—8.)



1. In a rail joint, the meeting ends of adjacent railway rails, said ends having registering vertical surfaces disposed obliquely at a comparatively slight incline to a transverse line; and a forwardly extending projection at the rearward end of said surface of each rail at the base flange only of the rail, the forward end portions of said surfaces at the base flanges of said rails registering with said projections, being formed to interlock with said projections, substantially as described.

2. In a rail joint, the meeting ends of adjacent railway rails, said ends having registering vertical surfaces disposed obliquely at a comparatively slight incline to a transverse line; and a forwardly extending projection at the rearward end of said surface of each rail at the base flange only of the rail, forming a substantially V-shaped recess, the forward end portions of said surfaces at the base flanges of said rails being formed to snugly engage in said recesses, substantially as described.

1,194,500. BATTERY-CHARGING PANEL. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 26, 1913. Serial No. 769,863. (Cl. 171—314.)



1. In combination, a plurality of storage batteries, a voltmeter common thereto, means for establishing and interrupting the voltmeter connections of each of said batteries and current reducing means included in the voltmeter connections of each of said batteries to be interposed between its respective battery and any other battery connected at the same time to said voltmeter.

2. The combination with a plurality of independently operable rheostats each having a switch for controlling the circuit thereto, of means for connecting said rheostats in series or in parallel to permit of their operation as a unit and their control by a single one of said switches.

3. A battery charging panel comprising a supporting base having charging rheostats and switches mounted thereon in duplicate to form two sets of control devices, each set being normally independent of the other, and contacts on said base electrically connected to said rheostats and having manually operable means for varying the circuit connections to said rheostats whereby the latter may be employed jointly in regulating the charging of a battery of a different capacity from that which either alone is capable of regulating.

4. A battery charging panel having rheostats, switches, clips for blade contacts, and fuses, said elements being arranged in two sets which are normally independent of each other, and a blade contact adapted to coöperate with either of a plurality of pairs of said clips to permit the use of said panel as a single unit.

5. A panel section having duplicate sets of devices thereon, each set comprising a knife blade switch, main contacts therefor, auxiliary meter contacts therefor, a manually adjustable rheostat, cartridge fuses, clips therefor, additional clips for a blade contact, and a blade contact adapted to operate with either of two alternate pairs of said clips, certain of said fuses being adapted also to bridge alternative pairs of clips.

[Claims 6 to 12 not printed in the Gazette.]

1,194,501. TURN-TABLE. KARL S. HOWARD, St. Louis, Mo., and ANDREW F. HOWE, Granite City, Ill. Filed Nov. 18, 1915. Serial No. 62,155. (Cl. 64—49.)



1. In a turntable of the class described, the combination of a base having a lower ball race member spaced apart therefrom and consisting of two opposite annular bearings at different approximate levels, a revoluble table having an upper ball race member concentric with, and corresponding to the said lower member, a circuit of balls between and adapted to be rotated without sliding along the said members, the said bearings of the lower ball race member having an intermediate continuous annular space extending vertically downward therefrom through the said base, and means for maintaining the said balls at a constant distance apart.

2. In a turntable of the class described, the combination of a base having a lower ball race member spaced apart therefrom and consisting of two opposite annular bearings arranged side by side at a suitable distance apart, a revoluble table having an upper ball race member concentric with, and corresponding to the said lower member, a circuit of balls between and adapted to be rotated along the said members, the said bearings of the lower race member having an intermediate continuous annular space extending vertically downward therefrom through the said base, and means for maintaining the said balls at a contant distance apart.

3. In a turntable of the class described, the combination of a base having a lower ball race member spaced apart therefrom, and consisting of two opposite annular bearings arranged side by side at a suitable distance apart, a revoluble table having an upper ball race member concentric with, and corresponding to the said lower member, and a circuit of balls between, and adapted to be rotated without sliding, along the said members, the said bearings of the lower ball race member having an intermediate continuous annular space extending vertically downward therefrom, and means for maintaining the said balls at a constant distance apart.

1,194,502. CURTAIN-FASTENER. MARSHALL N. JARVIS, Portland, Conn. Filed May 26, 1916. Serial No. 100,027. (Cl. 24—221.)



1. In a curtain fastener, the combination with a post having an oblong overhanging locking-head, of a gromet adapted to be applied to a curtain, and a rotary locking-member having swivel connection with the said gromet and adapted on partial rotation to co-act with the overhanging locking-head of the post to connect the same and the gromet.

2. In a curtain fastener, the combination with a post having an oblong overhanging locking-head and formed with locking-recesses, of a gromet adapted to be applied to a curtain, a rotary locking-member having swivel connection with the said gromet, and a locking-ball carried by the said member and brought into position by the partial rotation thereof for co-acting with a locking-recess of the post.

3. In a curtain fastener, the combination with a post having an oblong overhanging locking-head, and formed with longitudinal clearance-grooves and with locking-recesses, of a gromet adapted to be applied to a curtain, a rotary locking-member having swivel connection with the said gromet, and a locking-ball carried by the said member and co-acting with the said grooves and locking-recesses of the post.

4. In a curtain fastener, the combination with a post having an overhanging head, of a gromet, a rotary locking-member carried thereby, a locking-ball carried by the said member and coacting with the said post, a housing inclosing the said rotary locking-member, and a spring located within the said housing and coacting with the said ball.

5. In a curtain fastener, the combination with a post having an overhanging head and formed with a clearance groove and a locking recess, of a gromet provided with a rotary locking-member, a locking-ball located in an opening formed in the said locking-member and coacting with the said groove and the said recess in the said post, a housing inclosing the said locking-member, and a circular spring located in the space between the said member and housing and co-acting with the said ball for yieldingly holding the same in place.

[Claim 6 not printed in the Gazette.]

1,194,503. KNIFE OR TOOL. BRONISLAW JAWOISCH, Chicago, Ill. Filed Dec. 31, 1915. Serial No. 69,518. (Cl. 30—10.)

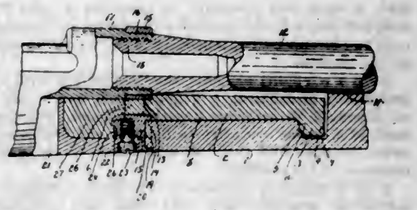


1. In a tool of the class described, a handle having an inner member and an outer member pivoted at one end to said inner member, said outer member being adapted to be raised from the inner member at its opposite free end and revolved on its pivot, and one of said members having a short longitudinal slot, a lock bar slidably mounted within the outer member, an end cap movably mounted on the end of the handle and connected to the lock bar, an angular stop extending laterally from the lock bar and having its extremity bent to project into the short longitudinal slot, means mounted on the handle and adapted to engage the bent extremity of the stop for securing said lock bar against longitudinal movement, when in its locking position, a blade in said handle adapted to be opened or closed by the revoluble movement of said outer member.

2. In a tool of the class described, a handle having a member pivotally mounted thereon so as to be capable of a revoluble movement and also provided with a long longitudinal recess and a short longitudinal slot on one side of said recess, a blade in said handle adapted to be opened or closed by the revoluble movement of said pivotal member, a lock bar slidably mounted in the longitudinal recess, an end cap on the end of the handle and connected to the lock bar, said end cap and lock bar being longitudinally shiftable together, an angular stop extending laterally from the side of the lock bar and having a bent extremity projecting into the short longitudinal slot, and a movable member attached to the side of the handle and adapted to engage the bent extremity of said stop to secure said locking bar against longitudinal movement when in its locking position.

3. In a tool of the class described, a handle having a revoluble member and also provided with an interior longitudinal recess and a short longitudinal slot, a blade in said handle adapted to be opened or closed by the revoluble movement of said member, a lock bar slidably mounted in the recess, a stop extending laterally from the lock bar and having a bent extremity projecting into the longitudinal slot, and a movable member attached to the side of the handle and adapted to engage the bent extremity of the stop to secure the lock bar against longitudinal movement when in its locking position.

1,194,504. MILITARY SHOULDER-ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Nov. 24, 1915. Serial No. 63,243. (Cl. 42—75.)



1. In a military shoulder-arm, the combination with the receiver thereof, of a forestock formed forward of its rear end and in its upper face with a downwardly extending locking-recess, and a longitudinally arranged forestock-lock removably connected at its rear end with the said receiver and provided at its forward end with a downwardly extending locking-lug or anchor entering the said recess to hold the said forestock against longitudinal forward movement.

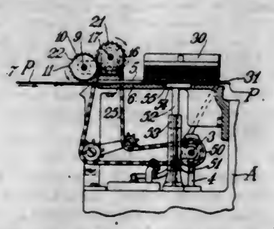
2. In a military shoulder-arm, the combination with the receiver thereof, of a forestock formed forward of its rear end and in its upper face with a downwardly extending locking-recess the rear wall of which is beveled, and a longitudinally arranged forestock-lock removably connected at its rear end with the said receiver and formed at its forward end with a downwardly extending locking-lug adapted to enter the said recess and having its rear face beveled, whereby the forestock is held against longitudinal forward movement.

3. In a military shoulder-arm, the combination with the receiver thereof, of a forestock formed in its upper face with a barrel-clearance groove and with a locking recess leading downwardly out of the bottom of the said groove at the forward end thereof, and a longitudinally arranged forestock-lock removably connected at its rear end with the said receiver, located in the said clearance groove and provided at its forward end with a downwardly extending locking-lug entering the said locking-recess, whereby the forestock is held against longitudinal forward movement.

4. In a military shoulder-arm, the combination with the receiver thereof, of a receiver-extension applied to the forward end of the said receiver, a forestock formed forward of its rear end and in its upper face with a locking-recess, a longitudinally arranged forestock-lock removably connected at its rear end with the said receiver-extension and formed at its forward end with a downwardly extending locking-lug entering the said recess, whereby the forestock is held against longitudinal forward movement.

5. In a military shoulder arm, the combination with the receiver thereof, of a forestock formed in its upper face with a locking-recess, of a forestock-lock removably connected at its rear end with the said receiver and provided at its forward end with a locking-lug or anchor arranged transversely with respect to its shank and projecting on opposite sides thereof and entering the said locking recess to hold the forestock against longitudinal forward movement.

1,194,505. WRAPPING-MACHINE. HENRY J. KEMPF, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed Jan. 17, 1914. Serial No. 812,657. (Cl. 93—2.)



1. In a wrapping machine, the combination of a wrapper feed, a card feed operative to associate a card with a wrapper, and a device operative thereafter to transfer said card and wrapper simultaneously to the wrapping elements of the machine.

2. In a wrapping machine, the combination with a band positioning mechanism, a wrapper feed, and a card feed, all arranged to associate together a band, wrapper and card, of a device operative to transfer simultaneously the band, wrapper and card, so associated, to the wrapping elements of the machine.

3. In a wrapping machine, a card feed, a wrapper feed, means to associate said card with said wrapper, including means operative to cause said card and wrapper to adhere to each other, and means to thereafter transfer said card and said wrapper to the wrapping elements of the machine.

4. In a wrapping machine, the combination of wrapping mechanism, means operative to transfer wrapping material to said wrapping mechanism, a wrapper feeding mechanism, a band feeding mechanism and a card feeding mechanism, said feeding mechanisms being arranged to feed respectively a wrapper, a band and a card one at a time to said transferring means, and said feeding mechanisms being operative to sandwich the card between the wrapper and the band.

5. In a wrapping machine, a wrapper feed, a band feed and a card feed, said feeds being arranged to sandwich the card between the wrapper and the band, means operative to cause the card to adhere to one of the other members of said assemblage, and means to thereafter transfer the assembled bunch to the wrapping elements of the machine.

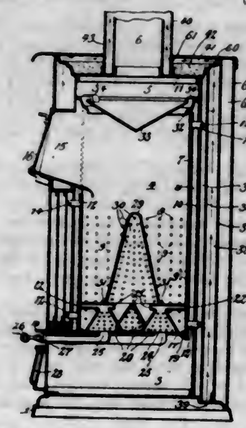
[Claims 6 to 11 not printed in the Gazette.]

1,194,506. REFUSE-INCINERATOR. EDWARD KENER, Jr., Buffalo, N. Y. Filed Mar. 23, 1914. Serial No. 826,613. (Cl. 110—18.)

1. A refuse incinerator comprising a refuse receptacle, a plurality of perforated spreading cones arranged in the lower part of said receptacle, a burner arranged below each of said cones, and a grate comprising an outer ring mounted on the lower part of said receptacle and supporting said cones, and an inner ring connecting the several cones independently of said outer ring.

2. A refuse incinerator comprising a refuse receptacle, an ash pit arranged below the refuse receptacle, a flue arranged adjacent to the outer side of said receptacle and communicating at its lower end with said ash pit, a perforated spreading cone arranged in said receptacle and provided at its upper end with a horizontal nozzle which opens into said flue, and a burner arranged below said cone.

3. A refuse incinerator comprising a refuse receptacle, an ash pit arranged below the refuse receptacle, a flue arranged adjacent to the outer side of said receptacle and communicating at its lower end with said ash pit, a perforated spreading cone arranged in said receptacle and provided at its upper end with an outwardly projecting nozzle which opens into said flue and an inwardly projecting nozzle which opens into said receptacle, and a burner arranged below said cone.



4. A refuse incinerator comprising a refuse receptacle, an ash pit arranged below the refuse receptacle, a flue arranged adjacent to the outer side of said receptacle and communicating at its lower end with said ash pit, a perforated spreading cone arranged in said receptacle and provided at its upper end with an outwardly projecting nozzle which opens into said flue and an inwardly projecting nozzle which opens into said receptacle and is provided below said nozzles with perforations, and a burner arranged below said cone.

5. A refuse incinerator comprising a refuse receptacle, a plurality of lower perforated spreading cones arranged side by side in said receptacle, an upper perforated spreading cone mounted on said lower spreading cones, and burners arranged below said lower spreading cones.

[Claims 6 to 11 not printed in the Gazette.]

1,194,507. TURBINE-ENGINE. FRED J. KEPPLER, Buffalo, N. Y. Filed Dec. 16, 1914. Serial No. 877,511. (Cl. 253—77.)



1. A turbine engine comprising a rotatable circular body, two bars lying one upon the other and extending around the periphery of said body and having their opposing sides constructed to form a plurality of sockets, a plurality of tubular buckets each of which is arranged in one of said sockets, and a nozzle for delivering a motive fluid into said buckets.

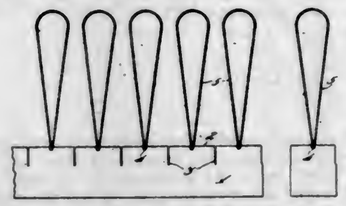
2. A turbine engine comprising a rotatable circular body, two coöperating channel bars which are mounted circumferentially on said body with the edges of their flanges engaging each other and constructed to form a plurality of sockets each of which is formed partly in the flanges of each bar, a plurality of tubular buckets each of which is arranged in corresponding sockets in said bars, and a nozzle for delivering a motive fluid into said buckets.

3. A turbine engine comprising a rotatable circular body, bars mounted circumferentially on said body and having a plurality of sockets the opposite ends of which are flared, a plurality of buckets each arranged in one of said sockets and having its ends flared to fit the flared ends of said sockets, and a nozzle for delivering a motive fluid into said buckets.

4. A turbine engine comprising a rotatable circular body, a bucket holder comprising two semi-circular sections mounted circumferentially on the periphery of the body and having a plurality of buckets, and means for detachably connecting the sections of said holder.

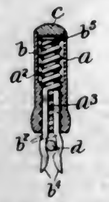
5. A turbine engine comprising a rotatable circular body, a sectional bucket holder mounted circumferentially on the periphery of the body and having a plurality of buckets, and means for detachably connecting the sections of said holder comprising a single eye arranged on the end of each holder section and engaging between two eyes on an opposing end of an adjacent holder section, a wedge passing transversely through the companion eyes of adjacent holder sections and having a screw shank at its small end, and a screw nut arranged on said screw shank and engaging with the outer side of the adjacent eye.

1,194,508. PRICE-TAG. FREDERICK KOHNLE, Dayton, Ohio, assignor, by mesne assignments, to The Monarch Tag Company, a Corporation of Ohio. Filed Mar. 11, 1912. Serial No. 683,161. (Cl. 40—20.)



A new article of manufacture comprising a tape folded upon itself with the fold edge extended longitudinally and the laps of the fold adhesively united forming a continuous tag strip longitudinally partially divided by parallel notches, adapted to coöperate with feeding devices into a plurality of tag widths, the notches extending from the fold edge inwardly, and a cord secured between the fold edge and projecting through a notch medial of each tag width.

1,194,509. CLOTHES-PIN. JACOB KOSOVSKY, New York, N. Y. Filed Feb. 29, 1916. Serial No. 81,127. (Cl. 24—138.)



1. A clothespin comprising a body or handle portion having a central threaded bore in one end part thereof and a cylindrical chamber in the other end part thereof, and a plug screwed into said bore and provided with normally diverging and projecting shanks the inner end portion of said plug being provided with a cap movable in said chamber and which limits the outward movement of said plug, and said chamber being closed by a cap.

2. A clothespin comprising a body or handle portion having a central longitudinally threaded bore, and a correspondingly threaded plug adapted to be screwed into said bore and provided at one end with diverging shank members.

3. A clothespin comprising a body or handle portion having a central longitudinal bore one end portion of which is enlarged and the other end portion threaded, and a threaded plug adapted to be screwed into said bore and the inner end portion of which is provided with a head movable in the enlarged portion of said bore and the outer end portion of which is provided with diverging spring shank members.

1,194,510. LEVER-FILLER FOUNTAIN-PEN. GEORGE M. KRAKER, Kansas City, Mo., assignor to Kraker Pen Co., Kansas City, Mo., a Corporation of Missouri. Filed Feb. 25, 1914. Serial No. 820,849. (Cl. 120—46.)



1. In a fountain pen having a barrel, a compressible ink-sack housed thereby, a sack-collapsing bar disposed within said barrel, an actuating member mounted in the circumferential wall of the barrel and manually operable to force said bar against the sack to collapse the latter, a pair of springs secured to opposite ends of said bar and extending longitudinally thereof in opposite directions, and anchoring elements at the other ends of said springs for securing the latter within the barrel.

2. In a fountain pen having a barrel, a compressible ink-sack housed thereby, a sack-collapsing bar disposed within said barrel, an actuating member mounted in the circumferential wall of the barrel and manually operable to force said bar against the sack to collapse the latter, a pair of guide members secured to opposite ends of said bar and extending longitudinally thereof in opposite directions, and anchoring elements at the other ends of said guide members for securing the latter within the barrel, said guide members maintaining said bar in engaging relation to said actuating member and normally holding the same out of sack-collapsing position.

3. In a fountain pen having a barrel, a compressible ink sack housed thereby and a compression bar bearing against one side of the said sack longitudinally of the barrel, the combination with manually operable actuating means mounted upon the barrel for forcing the bar to compress the said sack, of guide means carried by the barrel for maintaining the said compression bar in operative position relative to the said manually operable means; the said guide means comprising a pair of annular members and a pair of spring members connecting the said annular members respectively with the ends of the said bar, the said spring members normally disposed parallel of the said bar and laterally of each other, at least one of the said spring members having a portion thereof cut away to afford access by the said operating means to the said bar.

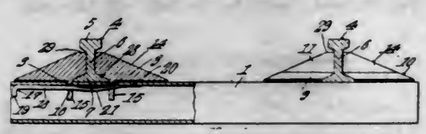
4. In a fountain pen having a barrel, a compressible ink sack housed thereby and a compression bar bearing against one side of the said sack longitudinally of the barrel, the combination with manually operable actuating means mounted upon the barrel for forcing the bar to compress the said sack, of guide means for maintaining the said compression bar in operative position relative to the said manually operable means; the said guide means comprising a pair of annular members and a pair of spring members connecting the said annular members respectively with the ends of the said bar, the said spring members normally disposed parallel of the said bar and laterally of each other, the said spring members equipped with opposed recessed portions coacting to afford an opening for permitting access by the said operating means to the said bar through the said opening.

5. In a fountain pen having a barrel, a compressible ink sack housed thereby and a compression bar bearing against one side of the said sack longitudinally of the barrel, the combination with manually operable means carried by the barrel, for forcing the bar to compress the said sack, of guide means for maintaining the said com-

pression bar in operative position relative to the said manually operable means; the said guide means including a pair of spring members secured at one end respectively to the ends of the said bar, the other ends thereof equipped respectively one with means for rigidly engaging and the other with means for slidably engaging the said barrel.

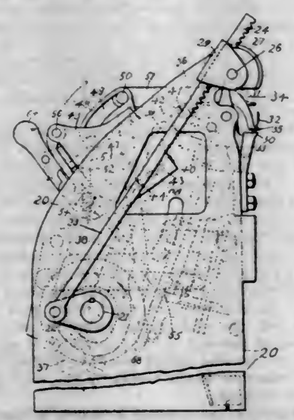
[Claims 6 to 8 not printed in the Gazette.]

1,194,511. FASTENING FOR RAILROAD-RAILS. THEODORA H. KRUSE, Arvada, Colo., assignor of one-half to Frederick A. Cantrall, Arvada, Colo. Filed Apr. 24, 1916. Serial No. 93,265. (Cl. 238—4.)



In a fastening of the class described, a tie; a rail disposed above the tie; braces located on opposite sides of the rail and equipped with lugs extended through the top of the tie, the lugs being provided with apertures; and a spring key in the apertures and coacting with the top of the tie, the key being curved, between the lugs, to prevent an accidental withdrawal of the key.

1,194,512. LOCK-STITCH SEWING-MACHINE. OSCAR L. LAWSON, Lynn, Mass., assignor of one-half to Carl Anderson, Lowell, Mass. Filed May 29, 1914. Serial No. 841,752. (Cl. 112—20.)



1. A sewing machine having a curved hook needle, an oscillating needle carrier, a movable presser foot and connections whereby the position of the needle carrier controls the height of the presser foot.

2. A sewing machine having a curved hook needle, an oscillating needle carrier having a cam, a movably mounted presser foot and means operated by said cam for raising and lowering the presser foot.

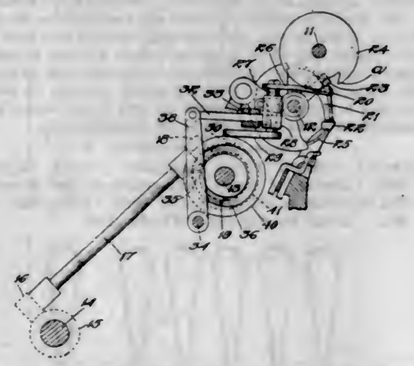
3. A sewing machine having a movably mounted presser foot, an oscillating needle carrier having a cam, and means controlled by said cam for raising and lowering the presser foot, said means including two clutch-connected members and means for releasing the clutch connections.

4. A sewing machine having a movable presser foot, an oscillating needle carrier, two pivotally mounted arms having clutch connections between them, one of said arms being connected to the needle carrier to be actuated thereby when the needle is raised, connections between the other arm and the presser foot to raise and lower the latter, and means for automatically releasing the clutch connections.

5. A sewing machine having a movably mounted presser foot, an oscillating needle carrier having a cam, and means controlled by said cam for raising and lowering the presser foot, said means including two clutch-connected members and means for releasing the clutch connections, means being also provided for manually raising the presser foot and simultaneously releasing the clutch connections.

[Claims 6 to 13 not printed in the Gazette.]

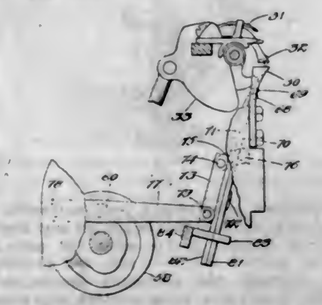
1,194,513. LOOP-SPREADER FOR SEWING-MACHINES. OSCAR L. LAWSON and JAMES H. REED, Lynn, Mass. Filed Mar. 24, 1915. Serial No. 16,766. (Cl. 112—20.)



1. In combination with stitch forming instrumentalities a loop spreader comprising a member forming one arm of a rock shaft, means for oscillating the spreader on the rock shaft and means for pushing the rock shaft forward bodily to cause the point of the spreader to enter the loop.

2. In combination with stitch forming instrumentalities, a rock shaft, one arm of which comprises a pointed member for engagement with the loop, and the other arm of which is provided with a cam follower, a cam to move said cam follower, a slidable member in which said rock shaft is mounted, and a cam to slide said member.

1,194,514. STITCH-FORMING MECHANISM FOR SHOE-SEWING MACHINES. OSCAR L. LAWSON, Lynn, Mass., assignor of one-half to Carl Anderson, Lowell, Mass. Original application filed May 29, 1914, Serial No. 841,752. Divided and this application filed Mar. 25, 1915. Serial No. 17,046. (Cl. 112—20.)



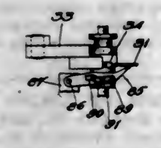
1. A looper mechanism for a hook needle sewing machine comprising a pivotally supported block, a pair of arms pivotally connected to said block, one arm having a thread guide, and the other having a hook, means for raising and lowering the block and swinging it to shift the guide and hook to and from juxtaposition to the path of the needle hook to present the thread in position to be engaged by the needle hook, and means for swinging said arms on their pivots as they rise and descend with the block.

2. A looper mechanism for a hook needle sewing machine comprising a pivotally supported block, a pair of arms pivotally connected to said block, one arm having a thread guide, and the other having a hook, means for raising and lowering the block and swinging it to shift the guide and hook to and from juxtaposition to the path of the needle hook, said arms having cam portions, and fixed members between which said cam portions slide, whereby the thread is presented to a position to be engaged by the hook of the needle and is then spread to draw out the thread for formation of a loop by movement of the needle.

3. A looper mechanism for a hook needle sewing machine comprising a pivotally supported block, a pair of arms pivotally connected to said block, one arm having a thread guide, and the other having a hook, means for raising and lowering the block and swinging it to shift the guide and hook to and from a position in a plane in juxtaposition to the path of the needle hook to present the thread to be engaged by the needle hook, said arms having diverging lower ends, and fixed pins between which said ends slide, to spread apart the guide and hook and draw out the thread for formation of a loop after it is engaged by the needle hook.

4. A looper mechanism for a hook needle sewing machine comprising a pivotally supported block, a pair of arms pivotally connected to said block, one arm having a thread guide, and the other having a hook, means for raising and lowering the block and swinging it to shift the guide and hook to and from a position in a plane in juxtaposition to the path of the needle hook to present the thread for engagement by the needle hook, said arms having deverging lower ends, and fixed pins between which said ends slide, the lower end of the arm having the hook being curved, the lower end of the other arm being substantially straight, to spread apart the guide and hook and draw out the thread for formation of a loop by the hook when the block moves upward and then to move the guide and hook again toward each other when the block moves downward.

1,194,515. LOOP-SPREADER FOR SEWING-MACHINES. OSCAR L. LAWSON, Lynn, Mass., assignor of one-half to Carl Anderson, Lowell, Mass. Original application filed May 29, 1914, Serial No. 841,752. Divided and this application filed Mar. 25, 1915. Serial No. 17,047. (Cl. 112—20.)

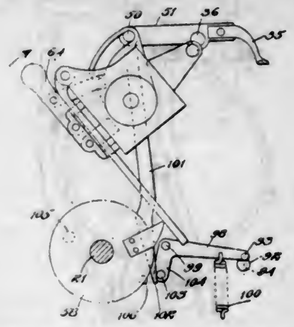


1. A sewing machine comprising in combination stitch forming mechanism including a curved hook needle movable upwardly and rearwardly, a loop spreader pivoted in the rear of the path of movement of the needle and having a cam slot, and an oscillating pin engaging said slot.

2. A sewing machine comprising in combination stitch forming mechanism including a curved hook needle movable upwardly and rearwardly and including a needle segment mounted on a hub, and a loop spreader pivoted to a fixed part of the machine to the rear of the hub of the needle segment, said loop spreader having a cam groove formed therein adjacent the hub of the needle segment, and a pin on said hub engaging said cam groove to move the spreader in time with the needle segment.

3. A sewing machine comprising in combination stitch forming mechanism including a curved hook needle movable upwardly and rearwardly, a loop spreader pivoted in the rear of the path of movement of the needle and having a curved extension, said spreader and extension being provided with a cam slot, and an oscillating member having a pin engaging said slot.

1,194,516. THREAD-MEASURING DEVICE. OSCAR L. LAWSON, Lynn, Mass., assignor of one-half to Carl Anderson, Lowell, Mass. Original application filed May 29, 1914, Serial No. 841,752. Divided and this application filed Apr. 22, 1915. Serial No. 23,220. (Cl. 112—20.)



1. In a sewing machine, a lever provided with a presser foot at one end thereof, a pendent lever pivotally connected to the said presser foot lever and having a wedge shaped lower end, said pendent lever being lowered by the rising of the presser foot, a lever carrying a thread clamping member at one end, the other end being in position to be engaged by the wedge shaped end of said pendent lever, and a rotary member having a projection which during its rotation is adapted to engage said wedge shaped portion of the pendent lever and to move it in a manner to turn the thread clamp lever and raise the thread clamp.

2. In a sewing machine, a lever provided with a presser foot at one end thereof, a pendent lever pivotally connected to the other end of said presser foot lever and having a wedge shaped lower end, said pendent lever being lowered by the rising of the presser foot, a lever carrying a thread clamping member at one end, the other end being in position to be engaged by the wedge shaped end of said pendent lever, and a rotary member having a projection which during its rotation is adapted to engage said wedge shaped portion of the pendent lever and to move it in a manner to turn the thread clamp lever and raise the thread clamp, the extent of elevation of the thread clamp being controlled by the extent of elevation of the presser foot and consequent depression of the wedge shaped pendent lever.

1,194,517. PHOTO-PLAY ORCHESTRAL DIRECTOR. STANLEY W. LAWTON, New York, N. Y. Filed Sept. 28, 1915. Serial No. 53,118. (Cl. 177—337.)

1. A photo-play orchestral director comprising the combination of a moving picture projecting machine with means driven synchronously therewith, switches operated by said means, and directing indicator means controlled by said switches in sequence with the progress of the picture.

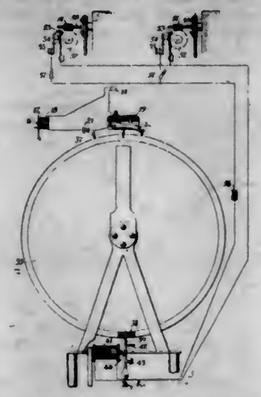
2. A photo-play orchestral director, comprising the combination with a picture projecting machine, of musical-direction indicating means, operating means therefor, and means for driving said operating means in synchronism with the picture machine.

3. A photo-play orchestral director, comprising the combination with a picture projecting machine, of musical-direction indicating means, a controlling member therefor, a magnet for moving said member and means for energizing said magnet controlled by the picture machine.

4. A photo-play orchestral director, comprising the combination with a picture projecting machine, of musical-direction indicating means an operating drum, a pawl for moving said drum intermittently, and means for moving said pawl synchronously with the picture changes.

5. In a photo-play orchestral director, the combination of a plurality of indicators, means for automatically oper-

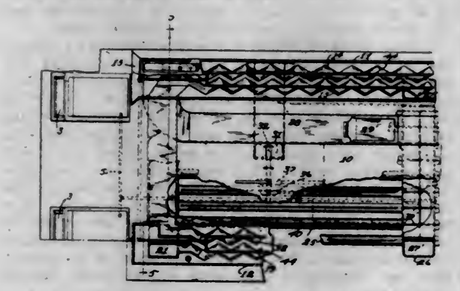
ating said indicators to denote changes of musical-directions corresponding with the action of the play and a



director chart with markings corresponding with the respective indicator operating means movable with said operating means.

[Claims 6 to 16 not printed in the Gazette.]

1,194,518. COOLING APPARATUS. HENRY E. LEAVITT and ALBERT D. LANE, Oakland, Cal. Filed Apr. 27, 1915. Serial No. 24,240. (Cl. 62—24.)



1. A cooling apparatus comprising a chamber, a system of connected ducts provided with inlet and outlet openings without said chamber and said ducts contacting with the air in said chamber and through which cooling air is adapted to circulate, means for circulating air through said ducts, and means for supplying a cooling fluid to said ducts while the air is circulating therethrough.

2. A cooling apparatus comprising a chamber to be cooled, a system of connected ducts provided with inlet and outlet openings without said chamber and through which cooling air is adapted to circulate toward the outlet, means for circulating air through said ducts, a portion of said ducts adjacent to said outlet extending within said chamber, and means for supplying a cooling fluid to the interior of certain of said ducts.

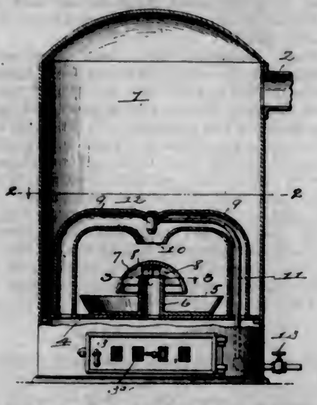
3. A cooling apparatus comprising a chamber to be cooled, a system of connected ducts provided with inlet and outlet openings without said chamber and through which cooling air is adapted to circulate toward the outlet, means for circulating air through said ducts, a portion of said ducts adjacent to said outlet extending within said chamber, and means for supplying a cooling fluid to the exterior of certain of said ducts and to the interior of certain other of said ducts.

4. A cooling apparatus comprising a chamber to be cooled, a system of connected ducts associated therewith and provided with air inlet and outlet openings without the chamber, means for circulating air through said ducts, said ducts being arranged to separate the air entering the inlet openings into a plurality of streams while passing therethrough and cause the same to pass through a single outlet opening, and means for supplying cooling fluid to said ducts to reduce the temperature of the air as it passes therethrough.

5. A cooling apparatus comprising a chamber to be cooled, a system of connected air circulating ducts associated therewith and provided with air inlet and outlet openings without the chamber and including a housing open at its opposite ends, and a plurality of ducts in said housing open at their opposite ends and connected at their opposite closed ends with ducts extending within the chamber, means for circulating air through said ducts toward said outlet, and means for supplying a cooling fluid to the surface of said ducts in said housing.

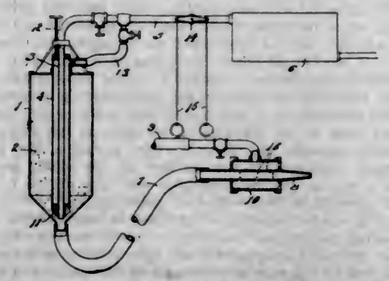
[Claims 6 to 19 not printed in the Gazette.]

1,194,519. OIL-BURNER. GUSSIE A. LEE, Omaha, Nebr., assignor of one-half to Eric T. Johnson, Omaha, Nebr. Filed Feb. 13, 1915. Serial No. 7,994. (Cl. 158—91.)



In an oil burner, a drip pan, an air tube centrally carried by the pan and opening downwardly through the bottom of the pan, a semi-spherical burner cap supported on the upper end of said tube and partially inclosing the same, the tube opening upwardly beneath said cap, an oil supply pipe adapted to discharge vertically upon the top of the cap, and an air supply pipe within which said oil pipe is arranged.

1,194,520. PROCESS OF LAYING SHEET-GLASS. HARRY F. LEWIS, Ford City, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 3, 1915. Serial No. 59,334. (Cl. 51—11.)



The process of laying sheet glass upon a table which consists in projecting powdered plaster of Paris in a stream, hydrating the said stream as it moves forward, directing the said stream upon the table to form a bed of uniform thickness, and then applying a glass sheet upon the said bed.

1,194,521. PROCESS OF EMBROIDERING. RUDOLF LOEB, Camden, N. J. Filed Oct. 2, 1912. Serial No. 723,572. (Cl. 112—34.)



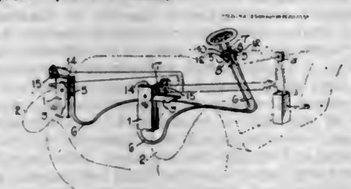
1. The process of embroidering fabrics, which consists in stretching the fabric, slitting the same, and applying stitches to the edges of the slit portion, the application of said stitches simultaneously pulling the edge of the fabric whereby the slit may be widened and the edge thereof caught up, turned under and inclosed by the stitches.

2. The process of embroidering fabrics, which consists in stretching the fabric, slitting the same, and applying paralleling stitches to the edges of the slit portion, the application of said stitches simultaneously pulling the edge of the fabric whereby the slit may be widened and the edge thereof caught up, turned under and inclosed by the stitches.

3. In the formation of eyelet embroidery, the process which consists in stretching the fabric and mounting it in a carrier, slitting said fabric, and applying stitches to the fabric at the margin of the slits, the application of said stitches simultaneously pulling and folding the fabric adjacent the slits whereby such portion may be caught under said stitches to stuff the stitched marginal edge or border of said eyelet.

4. In the formation of eyelet embroidery, the process which consists in stretching the fabric, slitting the same by cutting the threads thereof, and applying a plurality of paralleling stitches to the fabric at the slit portion thereof, the application of said stitches simultaneously pulling and folding the fabric adjacent the slits whereby such portion may be caught under said stitches to stuff the stitched marginal edge or border of said eyelet.

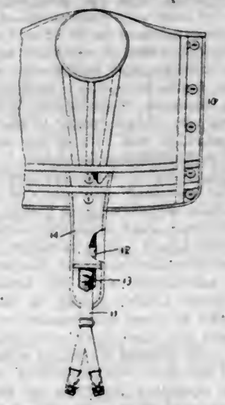
1,194,522. INDICATING DEVICE. JOHN W. MCCULLOCH, Haskell, N. J. Filed Oct. 6, 1915. Serial No. 54,389. (Cl. 177—311.)



In combination with a vehicle, a casing carried by the rear thereof, an indicator pivotally supported by the casing, means for elevating the indicator, a bracket carried by the casing, a lamp carried by the bracket in electrical connection with a source of supply, said connection having interposed therein a contact carried by the indicator, and a contact carried by the bracket, the contact carried by the indicator engaging the second contact when the indicator is elevated, the engagement of the contact serving to limit the upward movement of the indicator.

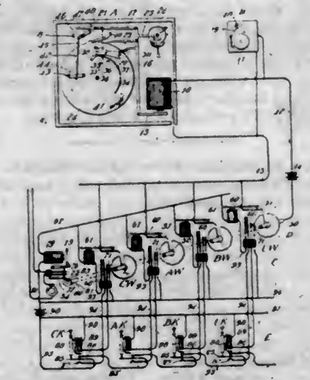
1,194,523. PROTECTIVE SHEATH FOR HOSE-SUPPORTERS. FRANCIS J. MCDERMOTT, New Haven, Conn., assignor to Birdsey Somers Company, Bridgeport, Conn., a Corporation of New York. Filed Nov. 15, 1915. Serial No. 61,479. (Cl. 2—98.)

The combination with a garment, a depending strap attached thereto, and a hose supporter having a buckle at its upper end adapted to engage the strap, of a depending tubular sheath attached to the garment and loosely and completely inclosing the upper portion of the strap,



the buckle, and the upper end of the hose supporter, said sheath being slidable longitudinally of said strap and of said hose supporter to permit of exposure of the buckle.

1,194,524. SELECTIVE SIGNALING MEANS. JUDSON MCFELL, Chicago, Ill. Filed May 9, 1912. Serial No. 696,082. (Cl. 177—342.)



1. Selective signaling means comprising a line, selectors coacting with said line each responsive to an individual number signal, and all responsive to a universal number signal, a signal transmitter comprising number wheels corresponding to the various number signals of the selectors, and a number wheel for the universal number to which all of the selectors respond, line switch means normally disabled for association with said wheels, driving means for the wheels, and manually operable means for placing any selected number wheel and the line switching means in operative relation to transmit a number signal in the line.

2. Selective signaling means comprising in combination a line, selectors coacting with the line respectively responsive to predetermined number signals, transmitting means comprising number wheels and line switch means normally disabled, and key means appropriate to each number wheel for placing said number wheel and the switch means in condition to transmit the number-wheel signal over the line, the operation of each key being dependent upon the condition of all keys antecedent thereto.

3. Selective signaling means comprising in combination a line, a plurality of selectors associated with said line,

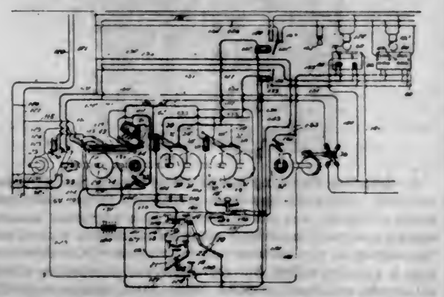
and responsive to different number signals, and operator's transmitting apparatus comprising a plurality of number wheels corresponding with the different selectors, line switch means for each said number wheel, normally disabled, motor means common to all of said number wheels, manually controlled means to condition any said number wheel and line switch means to transmit signal impulses in the line, and means including a switch, a latch therefor, an electro-responsive latch release, and a mechanical switch-restoring part, automatically to start the motor at the commencement of, and to stop the motor upon the completion of, each signaling operation.

4. Selective signaling means comprising in combination a line, selectors associated with said line and responsive to different number signals impulse groups, and transmitting means including a set of number wheels for the respective selectors, motor means therefor, motor starting means, line switch means, normally disabled and adapted for operative association with the respective number wheels, to transmit number signals in the line, electro-responsive means to bring said number wheels and the line switch means into operative association, a call initiating device for each number wheel for actuating the last said means and the motor starting means, latch means for preserving the operative condition of the line switch means and means controlled by the transmitter for releasing the said latch means.

5. Selective signaling means comprising in combination a line, selectors responsive to predetermined number signals in the line, signal initiating keys corresponding with said selectors, automatic latching means for said keys, and automatic transmitting means comprising number wheels, line switches operable by said number wheels, normally disabled, motor means for said wheels, means to start said motor when any line switch and number wheel are conditioned for operation, means controlling the release of said key-latching means, means to automatically stop said motor upon completion of the signaling operation, and means controlled by each said key to condition the corresponding number wheel and line switch for operation.

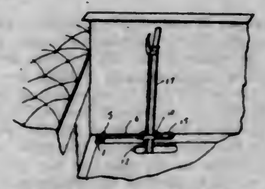
[Claims 6 to 11 not printed in the Gazette.]

1,194,525. ELECTRIC SIGNALING MEANS. JUDSON MCFELL, Chicago, Ill. Filed Dec. 21, 1912. Serial No. 737,969. (Cl. 177—338.)



1. Selective signaling means comprising, in combination, an operator's key-board having a plurality of self-restoring signal initiators, each individual to a signal to be transmitted; an automatic self-restoring transmitter responsive to each signal initiator to transmit a different signal; suitable line connections from said transmitter to a receiving station, and at the receiving station a plurality of parts to be moved corresponding with the respective signal initiators and each movable to two alternative positions, and a self-restoring selector operatively associated with the line connections and responsive to each line signal to select and actuate from either of its positions to the other the appropriate part to be moved.

2. Selective signaling means comprising, in combination, an operator's key-board having a plurality of switches each individual to a signal to be transmitted and an automatic transmitter comprising an electromagnet for each key switch, a plurality of signal wheels and line switch mechanism therefor respectively controlled by said key controlled magnet and responsive to the closure of any key switch to transmit the signal impulses individual thereto, suitable line connections from said line switch mechanism to the receiving station and at each receiving station a selector and a plurality of parts to be moved, said parts to be moved respectively corresponding with the several signal initiating switches and said selector comprising means common to all of the parts to be moved to select and actuate the appropriate part in response to each line signal.



3. In a selective signaling system the combination of a central station transmitter operable to transmit predetermined signals, receiving station apparatus comprising a plurality of parts to be moved each individual to one of said predetermined signals and each movable alternatively to two positions, a selector responsive to such predetermined signals to select and actuate from either position to the other, the appropriate part to be moved, and suitable signal line connections between said selector and said transmitter.

4. In a selective signaling system, receiving station apparatus comprising at one station a group of separate annunciating means for giving a number of different signals, a plurality of parts to be moved respectively controlling certain of said signal-annunciating means, electro-responsive means, including a common selecting magnet, for selecting any one of said parts to be moved; electro-responsive means including a common actuating magnet, for actuating the selected part to be moved, circuit connections for said magnets, and a central station transmitter operable to transmit impulses through the selecting magnet to select any desired part to be moved, and to transmit impulses through the actuating magnet to actuate the selected part to be moved.

5. Selective signaling means having in combination, receiving station apparatus comprising separate annunciating means for giving a number of different signals, a plurality of movable parts respectively controlling certain of said signal-annunciating means; a selector comprising means, including a selecting magnet, to select any one of said parts to be moved, a common means, including an actuating magnet, to actuate the selected part to be moved and restore the selector to normal condition, suitable circuit connections from said two magnets to the central station, and central station transmitting means selectively operable to transmit impulses through the selecting magnet for selection of the appropriate part to be moved, and thereafter to transmit an impulse through the actuating magnet for actuation of said parts to be moved.

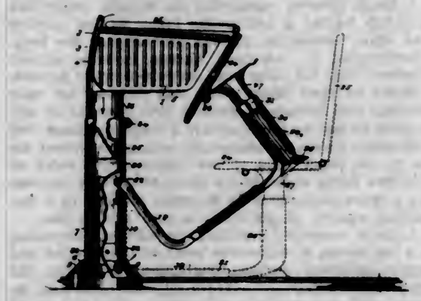
[Claims 6 to 20 not printed in the Gazette.]

1,194,526. AUTOMOBILE-LOCKING DEVICE. CLAUDE L. MCKESSON, Los Angeles, Cal. Filed Nov. 26, 1915. Serial No. 63,387. (Cl. 70—90.)

1. In a locking device, the combination of a clevis having a movable side, openings in the ends adapted to receive the shackle of a lock; said movable side; an adjusting bolt having an angular head securely held within said clevis; means for securing said adjusting bolt to an automobile; and a lock adapted to pass through the openings in the end of the clevis thereby closing the end of said clevis.

2. In an automobile locking device, the combination of a bolt adapted to pass through the body or frame of an automobile; squared shoulders on said bolt to prevent its being turned; an L shaped nut threaded to fit the end of said bolt and also threaded to receive the end of an adjusting bolt; said adjusting bolt having a threaded portion fitted to pass through the said nut and having a head rectangular in shape; a clevis having in its closed end an aperture through which the said adjusting bolt passes and being fitted to the head of the said adjusting bolt in such manner that the head of said bolt cannot be turned without also turning the said clevis; a movable side pivotally attached to said clevis; openings in the ends of the said clevis and the said movable side adapted to receive the shackle of a lock; and a lock having said shackle adapted to close the open end of said clevis.

1,194,527. VENTILATING SYSTEM FOR SCHOOL-ROOMS. EDWARD M. MCNAMARA, Chicago, Ill. Filed Apr. 5, 1915. Serial No. 19,104. (Cl. 98—27.)

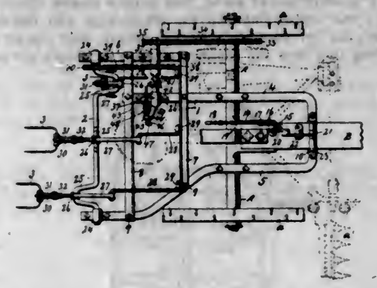


1. The combination, with an air trunk or duct; of a hollow pedestal located above the air trunk or duct and providing an air duct or passage in communication therewith, and a desk-body surmounting the hollow pedestal and having an individual air duct or passage extending upwardly from the air duct or passage of the hollow pedestal to a point adjacent to the top of the desk body.

2. The combination, with air trunks or ducts; of a hollow pedestal having a lower or base member formed with a lower expanded portion in communication with one air trunk or duct and having a series of openings in the side walls thereof, and an orificed adjustable register collar surrounding the lower expanded portion of the lower or base member of the hollow pedestal, a sleeve section or extension providing communication between the other air trunk or duct and the air duct or passage of the hollow pedestal and a desk-body surmounting the hollow pedestal and having an individual air duct or passage extending upwardly from the air duct or passage of the hollow pedestal to a point adjacent to the top of the desk-body.

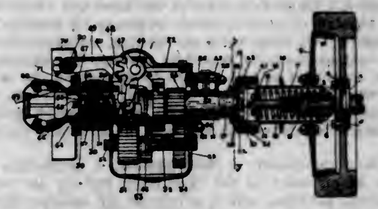
1,194,528. HAY-TEDDER FOR MOWING-MACHINES. WILLIAM H. MACDONALD, Elmwood, N. Y. Filed Nov. 4, 1911. Serial No. 658,509. (Cl. 56—28.)

The combination with a mowing machine having a frame, supporting wheels therefor and a pole attached to the frame, of a separate tedder frame journaled intermediate its ends on the mower frame co-axial with the axis of the wheels and wholly between said wheels in a horizontal plane close to said axis, the front end of the tedder frame being of considerably less width than the rear end and provided with a cross bar extending across the pole, connection between said pole and cross bar for rocking the tedder frame about its axis, a crank shaft journaled on the rear end of the tedder frame parallel with the axis of the wheels, a cross bar secured to the tedder frame between the crank shaft and axis of movement of said tedder frame, tedder forks journaled on the crank shaft, flexing connections between the front ends of the tedder forks and last-named cross bar, a counter shaft on the tedder frame between the crank shaft and last-named cross bar, driving connections between one of the wheels of the



mower and counter shaft, and additional driving connections between the counter shaft and crank shaft including a clutch.

1,194,529. COUPLING MEANS FOR TRANSMISSION MECHANISM. WALTER L. MARR, Flint, Mich. Filed Aug. 27, 1908. Serial No. 450,500. (Cl. 192—8.)



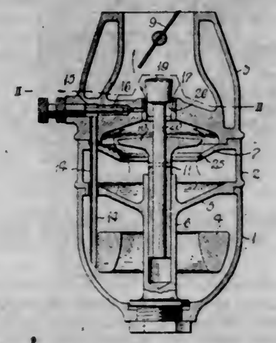
1. The combination in an automobile, of an engine shaft, a driving member of a clutch secured thereon, a clutch shaft forming an axial extension of the engine shaft, a follower member of the clutch rotatable and longitudinally reciprocable on the clutch shaft, a transmission mechanism driving shaft in alinement with the clutch shaft, a male coupling member non-rotatably secured on the driving shaft, a female coupling member non-rotatable and longitudinally reciprocable on the male member over which it may be moved to clear the clutch shaft, a sleeve on the follower clutch member abutting the female coupling member and dowels on the sleeve detachably engaging and driving the female coupling member.

2. The combination in an automobile, of an engine shaft, a driving member of a clutch secured thereon, a clutch shaft forming an axial extension of the engine shaft, a follower member of the clutch rotatable and longitudinally reciprocable on the clutch shaft, a transmission mechanism driving shaft, in alinement with the clutch shaft, a male coupling member non-rotatably secured on the driving shaft, a female coupling member non-rotatable and longitudinally reciprocable on the male member over which it may be moved to clear the clutch shaft, a sleeve on the follower clutch member abutting the female coupling member, dowels on the sleeve detachably engaging and driving the female coupling member, and a chassis on which the engine and driving shafts are secured in fixed relation, the coupling permitting the withdrawal of either without displacement of the other.

1,194,530. CARBURETER. WALTER L. MARR, Flint, Mich. Filed Mar. 17, 1915. Serial No. 15,101. (Cl. 48—150.3.)

1. In a carbureter, a casing having an air inlet and outlet, a diaphragm across the carbureter between the inlet

and outlet provided with a restricted auxiliary air opening that is constantly open and a main air opening, a closure for sealing the main opening through the diaphragm when the air velocity through the carbureter falls below a predetermined point, fuel supply means discharging into the casing between the diaphragm and the outlet, operated by the main opening closure, and means for delivering fuel into the constantly open auxiliary air passage.



2. In a carbureter, a casing having an air inlet and an air outlet, a diaphragm between the inlet and outlet having a constantly open restricted auxiliary air passage and a comparatively large main air opening, a closure for the main opening normally seated by gravity, fuel vaporizing means controlled by the closure to open when the latter uncovers the main opening and adapted to discharge into the casing between the diaphragm and the outlet thereof, and means for delivering fuel into the auxiliary air passage.

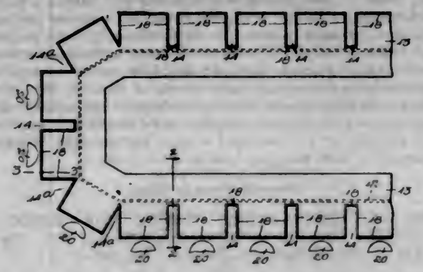
3. In a carbureter, a fuel chamber, a diaphragm between an air inlet in the carbureter and an air outlet therefrom, provided with a restricted air passage that is always open and a main air passage, a closure for the main passage, a fuel supply valve opened by the movements of the closure for delivering fuel from the fuel compartment between the diaphragm and air outlet, and an auxiliary fuel valve adapted to deliver fuel from the fuel compartment into the auxiliary air passage.

4. In a carbureter, a casing having a fuel compartment, and an air inlet and outlet connected by a main air passage, a diaphragm across the passage between the inlet and outlet having a restricted auxiliary air opening and a main air opening, a closure sealing the main air opening and lifting therefrom under influence of air passing from the inlet to the outlet, a fuel regulating valve controlling a main duct from the fuel compartment that opens into the main air passage between the diaphragm and air outlet, an auxiliary fuel valve controlling a duct leading from the fuel compartment and discharging into the constantly open auxiliary air opening, and a closure for the main duct outlet that is operated by and in unison with the main air opening closure.

5. A carbureter comprising a base having a fuel supply compartment, an intermediate section mounted on the base and provided with an air inlet and a diaphragm having a main air opening and a restricted auxiliary air opening, a fuel duct leading from the fuel compartment and discharging into the restricted auxiliary opening, a valve regulating the flow through the duct, a cap mounted on the intermediate section having an air outlet, a main fuel supply duct leading from the fuel compartment and discharging into the cap above the main diaphragm opening of the intermediate section, a closure restricting and sealing the discharge of the main fuel duct, and a closure for the main diaphragm opening adapted to be lifted therefrom by air passing from the inlet to the main outlet and arranged to operate the main fuel duct closure in response to the closure movement.

[Claims 6 to 8 not printed in the Gazette.]

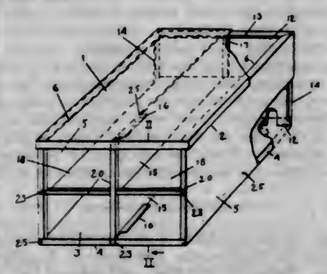
1,194,531. LUNCH-COUNTER. SHIRLEY MARSTON, Boston, Mass., assignor to R. Marston Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 17, 1915. Serial No. 67,382. (Cl. 211—11.)



1. A lunch counter comprising an upright supporting body, a top having a continuous inner serving portion and an outer customers' portion overhanging the body, and interrupted by relatively narrow recesses extending inward from its outer edge to said serving portion, and closed at their inner ends, said recesses not only subdividing the customers' portion into a series of sections, each formed to accommodate a single customer, but also affording access to customers' belongings stored adjacent to the inner ends of the recesses, the width of the recesses being such that a given number of sections occupy a space conforming to the space required by a corresponding number of customers located side by side.

2. A lunch counter comprising an upright supporting body, a top having a continuous inner serving portion and an outer customers' portion overhanging the body, and interrupted by relatively narrow recesses extending inward from its outer edge to said serving portion and closed at their inner ends, said recesses subdividing the customers' portion into a series of sections, each formed to accommodate a single customer, and means immediately below each recess for supporting customers' belongings convenient of access through said openings.

1,194,532. SKELETON CASE. CHARLES F. MEILINK, Toledo, Ohio. Filed Nov. 16, 1914. Serial No. 872,292. (Cl. 220—111.)



1. A housing comprising a pair of parallel members with flanges projecting away from the plane of one of the members, and side walls disposed within the flanges of one member and outside the flanges of the other member.

2. A housing comprising a pair of parallel members, the first of said members having flange means projecting toward the second member, the second member having flange means projecting away from the first member, and side walls disposed within the flanges of the first member and outside the flanges of the second member.

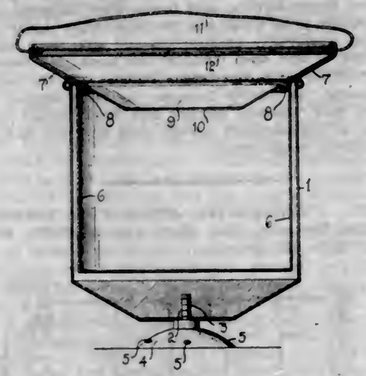
3. A housing having a partition therein, a face for an edge of said partition embodying a U-shaped member for receiving said partition edge, and means on the housing coacting with the member to maintain the member and partition in position.

4. A partition edge trimming embodying a U-shaped partition edge embracing member terminating in a tongue, a partition embraced by said member, and a housing for the partition having a recess for the tongue.

5. A partition edge trimming embodying a partition edge embracing member providing a flange on one side of the partition.

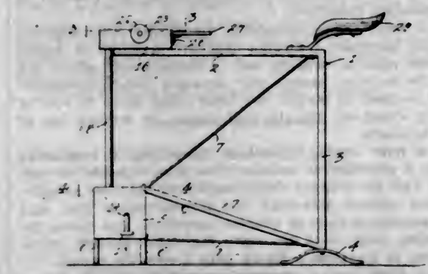
[Claims 6 and 7 not printed in the Gazette.]

1,194,533. CUSPIDOR. CONRAD E. NYSTRUM, Medford, Wis., assignor of one-fourth to Eugene M. White, Medford, Wis. Filed Mar. 25, 1916. Serial No. 86,707. (Cl. 4—38.)



A cuspidor comprising a permanent container and a receiving member formed of a material inflammable at a relatively high temperature removably insertible within the container, the upper end of the member being provided with an outwardly flared neck and with an inwardly disposed flange adjacent the lower end of the neck, and a substantially concaved top supported by the inwardly disposed flange, said top being provided with an opening at its center.

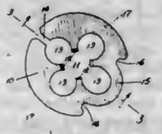
1,194,534. GEARING FOR EMERY-WHEEL GRINDERS. ALBERT F. O'CONNOR, New Hampton, Iowa. Filed June 7, 1915. Serial No. 32,671. (Cl. 74—58.)



1. A device of the class described comprising a frame, upper and lower casings supported by the frame, a longitudinal shaft mounted in the upper casing, means associated with the upper casing for reversing the rotation of said shaft, gear wheels mounted in the upper and lower casings, a shaft operatively connecting said gears, and means for operating the gear in the lower casing to rotate the last named shaft, and thus the gear wheel in the upper casing, as and for the purpose set forth.

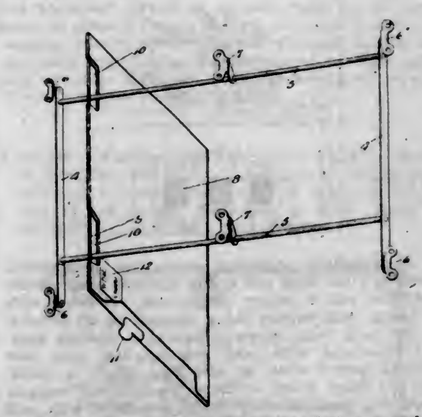
2. A device of the class described, comprising a frame consisting of a top bar and rear bar, upper and lower casings, the latter having supporting legs, brace bars connecting the lower casing and rear bar, said upper casing being connected to the lower casing by a tube, a shaft mounted in the tube and having its ends projected into the respective casings, gear wheels mounted in the upper and lower casings, and operatively connected to the shaft, means for rotating the gear in the lower casing, and thus the shaft, the gear in the upper casing having its upper surface provided with a circular series of teeth, a horizontal shaft rotatably supported by the upper casing, a sleeve slidably keyed to the horizontal shaft and having gears carried by its ends, and means for shifting the sleeve to cause the gears to alternately engage the circular series of teeth, as and for the purpose set forth.

1,194,535. SPRING THREADING-DIE. VALENTINE OLR, Bridgeport, Conn. Filed Apr. 22, 1916. Serial No. 92,826. (Cl. 10—118.)



A die of the character described comprising a body having cutting edges, clearance spaces, a split extending from one of the clearance spaces through the wall of the body, and opposite to the split a curved neck connecting the halves of the body, the inner face of said neck being the wall of one of the clearance spaces and the outer face being formed by removing metal from the outer side of the body on opposite sides of a diametric line extending through the split.

1,194,536. FILING DEVICE. WILLIAM J. OLIVER, Allegan, Mich. Filed Aug. 30, 1915. Serial No. 47,987. (Cl. 211—16.)



1. In a device of the character described, a record receiver having a rod at one edge thereof and a plurality of slots cut in the receiver at said edge, and devices slidably carrying the receiver engaging with and supporting the rod and inserted in said slots, said slots being of length sufficient to permit movement of the record receiver a distance in the direction of its length, substantially as described.

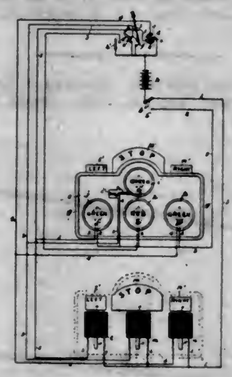
2. In a device of the character described, an envelop adapted to receive matter to be filed therein, and having a plurality of elongated portions cut from a side edge thereof, a rod inserted in the envelop at the bend at said side edge, and devices slidably engaging and carrying said rod and inserted in the spaces at the cut away portions whereby said envelop may be moved on said devices a distance in the direction of its length, substantially as described.

3. In a device of the character described, spaced part side supports having hooks projecting inwardly therefrom, a receiver for articles filed comprised of a flat member having spaced apart portions cut from each side edge, and a rod at each side edge slidably supported by the hooks, said hooks entering the spaces at the removed portions, substantially as described.

4. In a device of the character described, a container comprised of a back and spaced apart forwardly projecting sides, a door pivotally connected at the open front end of said container, a plurality of hooks projecting inwardly from said sides and a plurality of receivers slidably mounted on the hooks, each receiver comprised of a flat member having a plurality of portions cut from the side edges thereof and rods at each side edge, the rods being received by the hooks and the hooks entering into the spaces at the removed portions of the flat member, substantially as described.

5. A record receiver comprised of an envelop formed of paper or the like, the sides thereof being bent back upon each other at the edges thereof, a rod inserted between said sides at an edge of the record holder, there being a plurality of elongated slots cut in the holder at the said side edge adapting the holder for slidable mounting upon spaced apart supports and movement thereon in the direction of its length, substantially as described.

1,194,537. AUTOMOBILE SIGNALING SYSTEM. ARTHUR H. OTIS, Cleveland Heights, Ohio. Filed Sept. 14, 1914. Serial No. 861,666. (Cl. 177—337.)

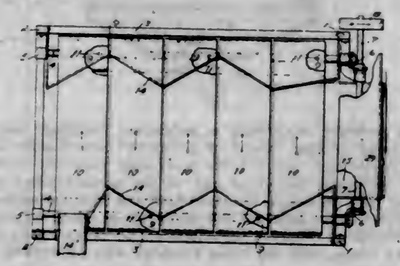


1. An automatic signaling system for automobiles, comprising a tail lamp and a stop signaling lamp, circuit connections and a battery respectively connected with said lamps, said battery being common to all circuits, said tail lamp being normally lighted, a flashing apparatus associated with said stop-signaling lamp and caused to operate when the said lamp circuit is closed, brake and clutch levers of the automobile, and contacts in said stop-signaling lamp circuit associated with said levers for automatically setting and extinguishing said stop signaling lamp.

2. An automatic signaling system for automobiles, comprising a plurality of electric lamps, two being direction lamps, one a stop-signaling lamp, and another a tail lamp, circuit connections and a battery respectively connected with said lamps, said battery being common to all the circuits, said tail lamp being normally lighted and definitely positioned with respect to the other lamps, a flashing apparatus associated with said stop-signaling lamp and caused to operate when said lamp circuit is closed, controlling mechanism for actuating the steering gear, brakes and clutch of the automobile, and contacts in said circuits actuated by and respectively associated with said controlling mechanism for automatically setting and extinguishing the different lamp signals, said brake and clutch controlling mechanism when actuated for completing a circuit causing the stop-signaling lamp to be operated, and the controlling mechanism of the steering gear when actuated operating one or the other of the direction lamps.

3. In signals for vehicles, consisting of a plurality of direction targets and a stop target, an electric battery, a plurality of normally open circuits between said battery and target signals, a steering column and foot and hand levers, a plurality of contacts in said circuits and associated with the steering column and levers, said steering column being adapted to engage a contact upon the rotation of the steering column for closing one or the other of the direction target circuits for operating one of the direction target signals, said levers when actuated causing a circuit to be closed and the stop target signal to be operated, a plurality of direction and stop lamp signals connected to said open circuits, and means for breaking the circuit between the target signals and the battery and closing the circuit between the lamp signals and battery, said steering column and brake levers being adapted to automatically operate said direction and stop lamp signals, respectively.

1,194,538. FRUIT-DRYING APPARATUS. GEORGE D. PARKER, Riverside, Cal. Filed Nov. 26, 1915. Serial No. 63,616. (Cl. 34—1.)



1. A fruit drying apparatus comprising superimposed coacting belts between which the fruit to be dried passes, certain of the belts providing a support for the fruit, means for operating the superimposed belts to cause the fruit to travel in a path transversely thereof to present all surfaces of the fruit to the belts for the removal of the moisture therefrom.

2. A fruit drying apparatus comprising fruit supporting and moisture absorbing elements arranged in superimposed relation between and in contact with which the fruit to be dried passes, said elements being correspondingly inclined to permit the fruit being dried to roll by gravity relatively thereto, and means for moving one of said elements.

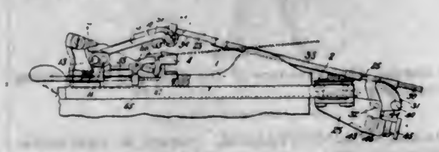
3. A fruit drying apparatus comprising a supporting frame, a plurality of endless belts lying adjacent to each other and providing a fruit supporting surface, a superimposed endless absorbent belt for movement over said first mentioned belts in contact therewith, and means for operating said belts to cause the fruit passing therebetween to travel in a zigzag path across the same.

4. A fruit drying apparatus comprising a supporting frame, a plurality of endless belts lying adjacent to each other and providing a fruit supporting surface, means for operating adjacent belts in opposite directions, a superimposed endless belt for movement over said first mentioned belts and in contact therewith, and means for operating said superimposed belts in a direction transversely to the path of movement of the first mentioned belts.

5. A fruit drying apparatus comprising a supporting frame, a plurality of endless belts lying adjacent to each other and providing a fruit supporting surface said belts being transversely inclined to permit the fruit to be dried to roll from one to another, a superimposed endless belt for movement over said first mentioned belts and in contact therewith and means for operating said belts to cause the fruit to travel in a zigzag path across the same.

[Claims 6 to 21 not printed in the Gazette.]

1,194,539. SOLE-PRESSING MACHINE. EDWIN N. PREBLE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 16, 1911. Serial No. 660,550. (Cl. 12—21.)



1. A sole pressing machine having, in combination, a pair of coöperating sole molding forms arranged to shape a sole between them, a marking device independent of the forms for imprinting a designating character upon the surface of the sole, and mechanism for actuating the marking device after the sole has been positioned upon one of the forms, substantially as described.

2. A sole pressing machine having, in combination, a pair of coöperating forms arranged to press the sole between them and a marking device arranged to automatically mark the sole prior to the pressure producing movement of the two forms, substantially as described.

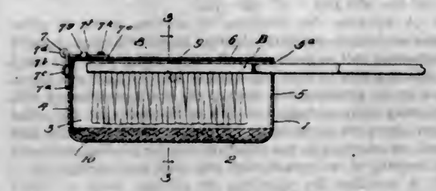
3. A sole pressing machine having, in combination, a pair of coöperating forms arranged to press the sole between them, a marking device supported adjacent to one of the forms, and mechanism for moving the device into operative engagement with the sole during the movement of the form from a position of presentation to a position of clearance, substantially as described.

4. A sole pressing machine having, in combination, a pair of coöperating forms arranged to press the sole between them, a marking device for imprinting a designating character upon the surface of the sole and simultaneously clamping the sole to the form, and means for actuating the marking device to operatively engage with the sole prior to the pressure producing movement of the forms, substantially as described.

5. A sole pressing machine having, in combination, a stationary sole pressing form, a supporting form arranged to move horizontally from a position of presentation to a position of clearance, a marking device for imprinting a designating character upon the surface of the sole, and means for actuating the marking device upon a horizontal movement of the supporting form, substantially as described.

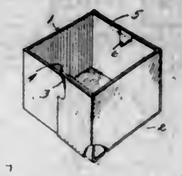
[Claims 6 to 15 not printed in the Gazette.]

1,194,540. TOOTH-BRUSH STERILIZER. VINCENT C. QUARTARARO, San Francisco, Cal. Filed Jan. 6, 1916. Serial No. 70,678. (Cl. 132—11.1.)



A tooth brush sterilizer comprising a horizontally elongated casing adapted to contain a sterilizing medium in its bottom, said casing being open at its top to allow the head of a tooth brush to be received therein and having the upper edge of one of its end walls formed with a notch to receive the handle of the brush, a horizontal closure for the open top of the casing hinged thereto at the end thereof remote from the notch, and a pair of transversely spaced resilient fingers secured to and depending from the intermediate portion of said closure to embrace the head of the brush and hold the bristles of the latter elevated above the sterilizing medium.

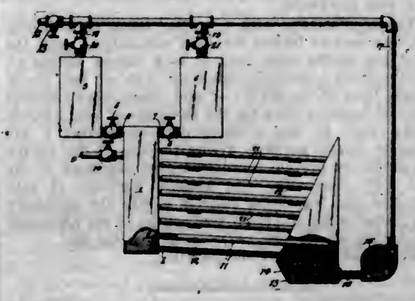
1,194,541. COMBINATION FLOWER-POT AND DIRT-BAND. GEORGE SUEL RAMSBURG, Somersworth, N. H. Filed Apr. 4, 1916. Serial No. 88,828. (Cl. 47—19.)



1. A flower pot consisting of a strip bent into rectangular form and having a tongue in one end thereof and a slit adjacent to the other end thereof, which tongue engages in said slit to lock the ends together, a strip extending from one side of the first mentioned strip and forming the bottom of the pot and extending upwardly in contact with the outer face of one side thereof, said first mentioned strip having a rectangular cut-out portion in one edge thereof and a downwardly extending tongue stamped from the other strip and engaging in said rectangular cut-out portion.

2. A flower pot blank consisting of a rectangular strip having a slit in one edge thereof extending at right angles to the edge and having also a slit in another edge thereof, which latter edge extends at right angles to the first edge and which slit extends at an acute angle to the second edge and forms a tongue, the said strip having also a rectangular cut-out portion between the ends of the first mentioned edge, and a strip extending at right angles from the first mentioned strip and having an inwardly extending tongue stamped therefrom.

1,194,542. METHOD OF CLEANING PIPES. NELSON H. RAYMOND, Buffalo, N. Y., assignor to Clifton Manufacturing Company, Jamaica Plain, Mass., a Corporation of New Jersey. Filed Dec. 5, 1911. Serial No. 664,076. (Cl. 148—42.)

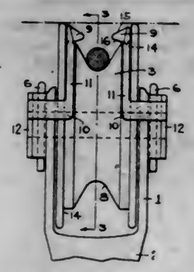


1. The herein described method of cleaning tubes which comprises passing a cutting solution through the tube, and then passing a neutralizing solution through the tube, said solution being returned from the outlet to the inlet of said tube.

2. The herein described method of cleaning tubes which comprises passing a cutting solution through the tube, then passing a neutralizing solution through the tube, and

then passing a washing medium through the tube, said solutions being returned from the outlet to the inlet of said tube.

1,194,543. TROLLEY-WHEEL CONSTRUCTION. JOHN H. RASAR, Butler, Pa. Filed Mar. 30, 1915. Serial No. 18,167. (Cl. 191—63.)



1. The combination with a trolley harp, of a trolley wheel, a pair of stop shoulders or lugs carried by said harp located wholly within the periphery of said wheel to prevent accidental disengagement of the trolley wire therewith, and means for supporting said lugs without increasing the width of the trolley wheel.

2. The combination with a trolley harp, of a trolley wheel, a pair of trolley wire retaining lugs mounted wholly within the groove of the wheel and upon either side of the mouth of said groove to prevent accidental disengagement of the trolley wire with the wheel, and means mounted on the trolley fork for supporting said lugs.

3. The combination with a trolley harp, of a trolley wheel rotatably mounted therein, of a pair of stop frames mounted respectively on each side of the fork, said frames having arcuate portions extending wholly within the groove of the trolley wheel, said arcuate portions having lugs extending partially across the upper portion of the periphery of the groove of the trolley wheel to prevent accidental disengagement of the trolley wheel therewith.

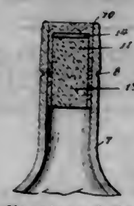
4. The combination with a trolley harp, of a trolley wheel, of a pair of frames mounted respectively upon the ends of the trolley fork, each of said frames having an arcuate portion concentric with the axis of the wheel, the inner faces of the groove of said wheel being rabbeted or inset at opposite sides for the reception of said arcuate portions, each of said arcuate portions having a lug adapted to extend partially across the top of the trolley wheel groove to prevent accidental disengagement of the trolley wire therewith.

5. The combination with a trolley harp, of a trolley wheel, of a pair of frames mounted respectively upon the ends of the trolley fork, each of said frames having an arcuate portion concentric with the axis of the wheel, the inner faces of the groove of said wheel being rabbeted or inset at opposite sides for the reception of said arcuate portions, each of said arcuate portions having a lug adapted to extend partially across the top of the trolley wheel groove to prevent accidental disengagement of the trolley wire therewith, said arcuate portions of said frames and said lugs being entirely within the periphery of the trolley wheel to permit free rolling of the perimeter of the trolley wheels over switch pans and the like.

[Claim 6 not printed in the Gazette.]

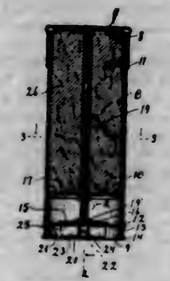
1,194,544. NON-REFILLABLE BOTTLE. JOHN REILLY, Sandwich, Mass. Filed Nov. 29, 1913. Serial No. 803,797. (Cl. 215—110.)

A closure for bottles including a stopper provided with a longitudinally extending recess opening on its lower face and leaving a thin wall at the top, an impenetrable disk positioned in the recess and contacting with the closed end thereof, said disk having substantially the same diameter as the recess, and a filler for said stopper abutting the disk and terminating flush with the open end of



the stopper, the diameters of the filler and recess being substantially equal.

1,194,545. SOAP-CONTAINER. HORACE W. REMINGTON, Milwaukee, Wis., assignor to B. J. Johnson Soap Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 26, 1914. Serial No. 879,198. (Cl. 206—56.)

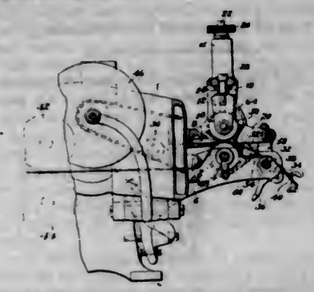


A soap container comprising a body portion of oval form in cross section having an inwardly flaring upper open end and with a lower open end, an inverted cup shaped bottom piece, provided with a rib, said bottom piece positioned within the lower open end of the body portion, the lower inner portion of said container being provided with a groove for receiving the rib on the bottom piece, thereby locking the said bottom piece to the container, a non-rotatable plunger positioned within the body portion, a threaded rod extending through the plunger and having a threaded engagement therewith, said rod also revolubly extending through the bottom portion and provided with a collar which bears upon the bottom portion, and a handle positioned within the bottom portion and secured to the lower end of the rod and having a flange which bears against the lower surface of the bottom.

1,194,546. MACHINE FOR SPLITTING OR SKIVING WELTS OR OTHER PIECES OF FLEXIBLE MATERIAL. FRED RICKS, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 2, 1914. Serial No. 875,106. (Cl. 69—13.)

1. A machine for splitting or skiving welts or other pieces of flexible material, having in combination, a work positioning roll, a pressure roll coöperating with the work positioning roll to feed the work, a stop to limit the movement of the pressure roll toward the work positioning roll, a skiving knife arranged to act on the work at the point where the work is normally gripped between the rolls, and means in addition to the pressure roll for feeding the work and holding it in contact with the work positioning roll.

2. A machine for splitting or skiving welts or other pieces of flexible material, having in combination, a work positioning roll, a pressure roll, a stop to limit the movement of the pressure roll toward the work positioning roll, a skiving knife arranged to act on the work at the point where the work is normally gripped between the rolls, and means in addition to the pressure roll for holding the work both against the work positioning roll in advance of and at the rear of the knife.



3. A machine for splitting or skiving welts or other pieces of flexible material, having in combination, a work positioning roll, a pressure roll, a stop to limit the movement of the pressure roll toward the work positioning roll, a skiving knife arranged to act on the work at the point where the work is normally gripped between the rolls, feeding means engaging the work at the rear of the knife, means in addition to the pressure roll for holding the work against the work positioning roll in advance of the knife, and guiding means for holding the work against the work positioning roll at the rear of the knife.

4. A machine for splitting or skiving welts or other pieces of flexible material, having in combination, a work positioning roll, a pressure roll, a stop to limit the movement of the pressure roll toward the work positioning roll, a skiving knife arranged to act on the work at the point where the work is normally gripped between the rolls, feeding means engaging the work at the rear of the knife, a yieldingly mounted roll in addition to the pressure roll for pressing the work against the work positioning roll in advance of the knife, and a guide for holding the work against the work positioning roll at the rear of the knife.

5. A machine for splitting or skiving welts or other pieces of flexible material, having in combination, a work positioning roll, a pressure roll, a stop to limit the movement of the pressure roll toward the work positioning roll, a skiving knife arranged to act on the work at the point where the work is normally gripped between the rolls, and means for simultaneously adjusting the knife and stop.

[Claims 6 and 7 not printed in the Gazette.]

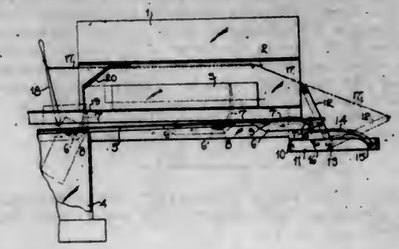
1,194,547. BLACKSMITH'S TONGS. WILLIAM JAMES ROGERS, Phenix, Va. Filed Nov. 30, 1915. Serial No. 64,317. (Cl. 81—47.)



In a tool of the character described, jaw piece provided with a chamber of greatest width at its base, the side walls being inclined inwardly, the chamber being of wedge shape in horizontal section, a jaw piece corresponding in form to the form of the chamber, and a set screw passed upwardly through the jaw at the inner end of the chamber and adapted to lock the jaw piece in place within the chamber, substantially as shown and described.

1,194,548. HEAD-BLOCK-SETTING DEVICE FOR BALING-PRESSES. NICHOLAS C. SANDERS, Louisville, Ill. Filed Oct. 16, 1915. Serial No. 56,236. (Cl. 100—24.)

1. In a baling press provided with a head block receiving chamber and a baling chamber, a trigger setting device carried by the press, a head block engaging trigger, means for reciprocating said trigger in a depressed position below the head block, and means for moving the trigger setting device to a position where it will be engaged by the trigger to cause the latter to move upwardly above the plane of the head block, whereby, upon the next movement of the trigger, it will engage the head block and move same from the receiving chamber toward the baling chamber.



2. In a baling press provided with a head block receiving chamber and a baling chamber, a trigger setting device including a vertically movable lever, a plunger apron mounted for reciprocating movement underneath the head block in the receiving chamber, a swinging trigger carried by said apron, a swinging bail operatively connected to said trigger raising member, and manually operable means connected to said bail for raising said lever to a position where it will be engaged by the trigger upon the rearward movement of the plunger apron and raise the trigger above the plane of the head block as and for the purpose set forth.

3. In a baling press, the combination with a head block receiving chamber, and a baling chamber, a plunger apron mounted to reciprocate underneath a head block mounted in the receiving chamber, of a bracket supported by the press, a lever fulcrumed on said bracket and adapted to extend forwardly and upwardly thereon, a pivoted bail carried by said bracket and provided with a cross bar upon which the lever is adapted to rest, means connected to said bail for swinging same forwardly and upwardly so as to raise the lever to an elevated position, a pivoted trigger carried by said apron and adapted to be engaged by the elevated lever upon a rearward movement of the apron whereby the trigger will be swung to a position where one end will project above the block in the receiving chamber, whereby a subsequent forward movement of the plunger apron will cause said trigger to engage the block and move it from the receiving chamber to the baling chamber, and a trigger depressing device mounted above said apron and engageable with the trigger upon the next forward movement of the apron to depress the trigger, as and for the purpose set forth.

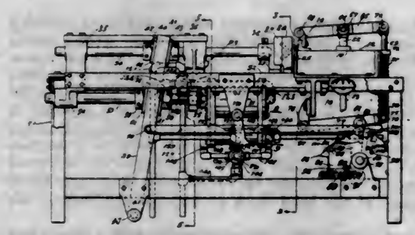
4. In a baling press, the combination with a receiving chamber for the head block, a baling chamber and a plunger apron movable underneath the head block mounted in the receiving chamber, of a trigger carried by said apron, means engageable with said trigger upon a rearward movement of the apron to cause said trigger to swing to a position where one end will project into the horizontal plane of the head block in the receiving chamber, manually operable means for setting the trigger engaging means, and means for automatically returning the trigger to depressed position upon the next rearward movement of the plunger apron.

5. In a baling press, provided with a head block receiving chamber and a baling chamber, a plunger apron adapted to reciprocate the head block mounted in the receiving chamber, longitudinally disposed blocks secured to the apron at the rear end thereof, a curved trigger pivotally mounted upon and between said blocks, means for supporting said trigger between said blocks in a depressed position, with one end projecting below the blocks, a rearwardly extending bracket carried by the press, a lever fulcrumed in said bracket and extending upwardly and rear-

wardly thereon, a bail pivotally mounted upon said bracket and provided with a cross bar upon which the lever rests, whereby the forward and upward movement of the bail will elevate said lever to a point where it will be engaged by the downwardly extending rear end of the trigger upon the rearward movement of the plunger apron and the bail being adapted for engagement by said apron to automatically be returned to its rearmost position and allow the lever to lower, the engagement of said trigger with said lever moving the trigger to a substantially upright position for engagement with the head block upon the subsequent forward movement of the plunger apron, and a trigger depressing device mounted in the receiving chamber and engageable with the trigger upon the next rearward movement of the plunger apron whereby to again depress the trigger, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,194,549. DIE-CASTING MACHINE. OSCAR SCHNITZLER, Remington, Ohio. Filed Oct. 9, 1913. Serial No. 794,265. (Cl. 22—57.)



1. In a die-casting machine, the combination with a die, of a die moving part, an injecting part for the molten metal, molten metal confining means coacting therewith, and means for actuating said injecting part comprising a fluid-actuated device, a valve therefor, and means operatively connected with said die moving part for operating said valve.

2. In a die-casting machine, the combination with a die, of a reciprocating die moving part, an injecting part for the molten metal, molten metal confining means coacting therewith, operating means for said injecting part, a lever, and means for swinging said lever on its pivot, said lever having connection with said die moving part for moving the same in both directions and with said operating means for moving the same.

3. In a die-casting machine, the combination with a die, of a die moving part, an injecting ' vice for molten metal comprising a movable member, operating means comprising a moving element for said movable member, a lever, means for swinging said lever on its pivot, said lever having connection with said die moving part and said moving element for actuating said die moving part and moving said moving element, said operating means further comprising a keeper, fluid-actuated means for operating said keeper, a valve for said fluid-actuated means, and controlling means for said valve actuated by said lever.

4. In a die-casting machine, the combination with a die, of a die moving part, actuating means for the same comprising a fluid-actuated device, an injecting part for the molten metal, molten metal confining means coacting therewith, actuating means for said injecting part comprising a fluid-actuated part, a valve for the latter, and controlling means for said valve actuated by said first-named actuating means.

5. In a die-casting machine, the combination with a die, of a die moving part, a fluid-actuated device for moving the same, a valve for the latter, a part under the control of the operator for actuating said valve, an injecting part for the molten metal, molten metal confining means coacting therewith, means for actuating said injecting part comprising a fluid-actuated device, a valve for said fluid-actuated device, and means for controlling said last-named valve having operative connection with said die moving part.

[Claims 6 to 15 not printed in the Gazette.]

1,194,550. BUTTON. ALOIS SCHOPPER, New York, N. Y. Filed Aug. 25, 1915. Serial No. 47,226. (Cl. 24—90.5.)



A button comprising a shank, a head at one end thereof, a shoe at the other end, a plate mounted on the shank between head and shoe, said plate being composed of a diametrically extending neck, and a pair of segmental arms formed on opposite ends of said neck, each arm being provided with a prong deflected toward the head, and with a tail piece deflected toward the shoe, the two tail pieces of said arms being arranged diametrically opposite each other, whereby said tail pieces are adapted to bear upon the garment confined between shoe and plate at diametrically opposite points and sustain the button with its axis at right angles to the plane of said garment.

1,194,551. STOOL. CARL EMIL SCHOSSLER, Toledo, Ohio, assignor to The Ransom & Randolph Company, Toledo, Ohio, a Corporation of Ohio. Filed Sept. 18, 1914. Serial No. 862,269. (Cl. 155—40.)



1. An apparatus of the class described comprising a hollow standard, a seat-post movable within the standard, a seat carried by the seat-post, a conical element carried by said seat-post, clutch balls disposed around said conical element, said conical element arranged to engage said balls and force the same into engagement with the standard, a sleeve disposed around said seat-post arranged when operated to engage and move the balls relatively to said conical element and standard to fully release the seat-post, and means for operating said sleeve.

2. A stool of the class described comprising a hollow standard, a seat-post movable within the standard, a seat carried by the seat-post, balls carried by the seat-post, said seat-post comprising a portion arranged to force said balls into engagement with the standard, and manually-operable means for engaging and moving said balls independently of the seat-post to release the seat-post from the standard.

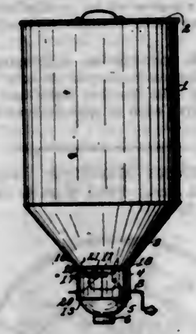
3. A device of the class described comprising a hollow standard, a seat post movable within the standard, a seat carried by the seat post, a cone formed upon the seat post near the lower end thereof, a pair of sleeves disposed around the seat post, a train of clutch balls between the sleeves and encircling said cone arranged to lock the seat post to the standard, a shoulder on the seat post at the lower end thereof, an expansion spring acting between said shoulder and the lower sleeve, and means for moving the upper sleeve to engage and move the clutch balls against the tension of said spring and independently of the seat post to fully release the seat post from the standard.

4. A stool comprising a standard, a seat post telescopically mounted thereon, a seat carried by the seat post, a cone carried by the seat post, clutch devices interposed between the cone and standard arranged to coöperate with the cone to lock the post to the standard, and positively acting mechanical releasing mechanism for moving the clutch devices to a position to release the post from the standard.

5. A stool comprising a standard, a seat post telescopically mounted thereon, a seat carried by the seat post, a cone carried by the seat post, clutch devices interposed between the cone and standard arranged to coöperate with the cone to lock the post to the standard, and positively acting mechanical releasing mechanism for rendering the clutch devices inoperative to fully release the post from the standard.

[Claim 6 not printed in the Gazette.]

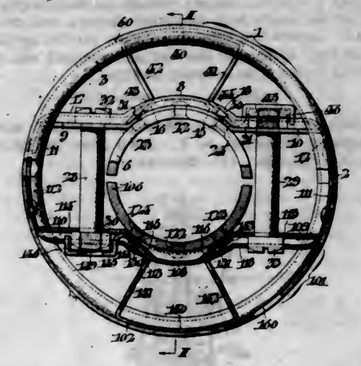
1,194,552. COMBINATION FLOUR BIN AND SIFTER. MARTIN SCHUILING, Grand Rapids, Mich. Filed Feb. 7, 1913. Serial No. 746,725. (Cl. 83—60.)



In a flour sifter, the combination of a receptacle provided with a neck at its lower end, said neck having an external annular groove therein, a sieve comprising a band-like body portion adapted to embrace said neck and having its upper edge turned inwardly to engage said groove and having telescoping ends permitting its expansion and contraction so that it may be expanded and contracted to engage and disengage its inturned edge with said groove, fastening means provided on the ends of said band-like body portion adapted to draw it together to clamp it upon said neck, and an agitator and sieve bottom carried by said body portion.

1,194,553. PULLEY. EBERHARD SCHUMACHER, Philadelphia, Pa., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 10, 1915. Serial No. 26,928. (Cl. 64—18.)

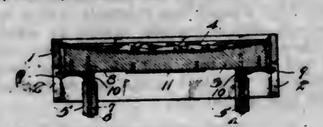
1. In a two-part diametrical-spoke pulley, the combination, in each part, with the pulley rim, the hub-shell and the diametrical clamping-spoke; of a stay-band integrally comprising two substantially radial plane portions, an arched intermediate portion conforming to the interior configuration of the pulley rim, and divergent seating portions at the inner extremities of said radial portions, said divergent seating portions conforming to the adjacent configuration of the clamping-spoke; means for securing said stay-band to said clamping-spoke; and means for securing the two parts of the pulley together, substantially as set forth.



2. In a two-part diametrical-spoke pulley, the combination, in each part, with the pulley rim and with the clamping-spoke having straight end portions connected by an intermediate arched portion and provided with inclined dished portions at the sides of the arched portion; of a stay-band integrally comprising a central arched portion having a curvature conforming to the interior curvature of the pulley rim, two radial portions extending inwardly from said arched portions, and divergent seating portions at the inner extremities of said radial portions, said seating portions conforming to the inclined dished portions of the clamping-spoke, and means for securing said stay-band to said clamping-spoke; and means for securing the two parts of the pulley together.

3. In a two-part diametrical-spoke pulley, the combination, in each part, with the pulley rim and the clamping-spoke having straight end portions connected by an intermediate arched portion and provided with inclined dished portions extending along the sides of the arched portion and prolonged into the straight end portions; of a stay-band integrally comprising a central arched portion having a curvature conforming to the inner curvature of the pulley rim, two radial portions extending inwardly from said arched portion, and divergent seating portions at the extremities of said radial portions, said seating portions conforming to the inclined dished portions of the clamping-spoke, and one of said seating portions being extended into the dished portion of the straight part of the clamping-spoke; a cup formed integrally with said prolonged portion of the stay-band; and a screw-bolt having a nut fitting in said cup.

1,194,554. DEVICE FOR FACING TILES. GEORGE J. SHILER, Turtle Creek, Pa. Filed Dec. 17, 1915. Serial No. 67,383. (Cl. 25—120.)

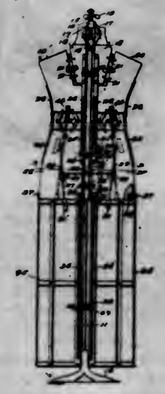


1. The combination with a mold box open at bottom and top and provided with a pair of perforated cleats attached to its bottom edges, of a matrix movable within the box and having posts guided by said perforated cleats, means for adjusting the distance of the matrix from the cleats, and means for supporting the matrix in the box when the latter is reversed.

2. The combination with a mold box having transverse perforated cleats, of a movable matrix with posts guided in the cleats, a plurality of washers between the cleats and matrix, and turn buttons on the matrix for supporting the same when the mold box is reversed.

3. The combination with a mold box open at bottom and top and provided with a pair of perforated transverse cleats, of a movable matrix within the box having posts fitted in the cleats and supported thereby, and movable, normally inoperative retaining means carried by the matrix adapted to engage the box and suspend the matrix when the latter is in reversed position.

1,194,535. ADJUSTABLE GARMENT-FORM. MICHAEL SELUBSKY, Brooklyn, N. Y. Filed June 26, 1914. Serial No. 847,378. (Cl. 223—18.)



1. In a garment form of the class described, a plurality of sections arranged in horizontal and vertical rows, said sections being adjustably locked in spaced relation, a telescoping standard for said sections, a spider carried by said standard, bars pivotally connected to some of said sections, said bars being adjustably carried by said spider, locking bars connecting the sections of each vertical row, said locking bars having wings formed thereon, said bars being rotatably carried by some of said sections, slotted brackets carried by others of said sections, said slotted brackets receiving said winged locking bars, a plurality of skirt sections having adjustably locked connections with the adjacent ones, and said skirt sections being telescopic over the others of said garment sections.

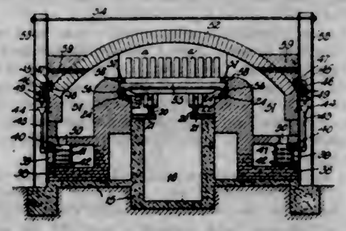
2. In a garment form of the class described, comprising a plurality of sections, a locking member for connecting pairs of said sections, winged bars rotatably carried by some of said sections, and slotted brackets carried by others of said sections, said winged bars having adjustable engagement with said slotted brackets.

3. In a garment form of the class described comprising a plurality of sections, a standard for said sections, bars pivotally carried by some of said sections, a spider carried by said standard having adjustable connection with said bars, winged bars rotatably carried by some of said sections, slotted brackets carried by others of said sections in vertical rows with respect to the sections supporting said winged bars, and said sections having vertical adjustment with said spider and each other by said bars, and said winged bars.

1,194,556. CONTINUOUS KILN. FRANCES D. SHAW, Chicago, Ill., assignor to Shaw Kiln Company, Atlanta, Ga., a Corporation of Georgia. Filed Dec. 19, 1910. Serial No. 598,053. (Cl. 25—142.)

1. In a kiln, the combination of a burning section, a pre-heating section, said burning section comprising a kiln chamber, a combustion chamber at each side of said kiln chamber, a common roof for said chambers, and a car adapted to be carried through said pre-heating section and kiln chamber in immediate proximity to said roof.

2. In a kiln, the combination of a burning section, a pre-heating section, said burning section comprising a kiln chamber, a combustion chamber at each side of said kiln chamber, a common roof for said chambers, and a moving floor disposed within said pre-heating section and kiln chamber in immediate proximity to said roof.

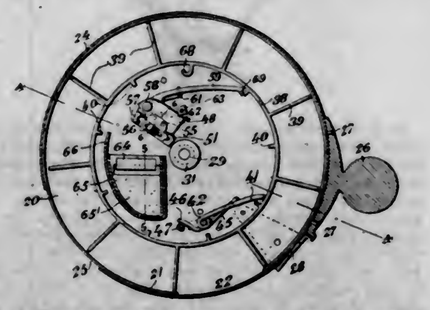


3. In a kiln, the combination of a burning section, a pre-heating section, said burning section comprising a kiln chamber, a combustion chamber at each side of said kiln chamber, an arched roof covering said sections, and a car adapted to be carried through said pre-heating section and kiln chamber in immediate proximity to said roof.

4. In a kiln, the combination of a burning section, a pre-heating section, said burning section comprising a kiln chamber and a combustion chamber on the side of said kiln chamber, an arched roof covering said chambers, and a car adapted to be carried through said pre-heating section and kiln chamber in immediate proximity to said roof.

5. In a kiln, in combination, a primary heating chamber, a vertical flue on each side of said chamber, a side outlet connecting said chamber with said flue, and a well communicating with each of said flues and disposed below said outlet.

1,194,557. VENDING-MACHINE. JOSEPH T. SHELHORN, St. Paul, Ind. Filed Mar. 4, 1916. Serial No. 82,148. (Cl. 194—70.)



1. A dispensing machine comprising a housing provided with an outlet, a closure rotatably mounted upon said housing and provided with an outlet registering with the outlet of the housing when the closure is moved to an adjusted position, a container rotatably mounted in said ing, means for releasably holding said container against rotary movement in said housing, and means carried by said closure for moving said container in said housing when said closure is moved to bring its outlet into registry with the outlet of said housing.

2. A vending machine comprising a housing provided with an outlet, a closure rotatably mounted upon said housing and provided with an outlet for registering with the outlet of the housing when the closure is moved to an adjusted position, a band rotatably mounted in said housing and provided with arms forming compartments, means carried by said housing to releasably hold said band against rotation in said housing, and means carried by said closure for rotating the band within the housing when the closure is moved to bring its outlet into registry with the outlet of said housing.

3. A vending machine comprising a housing, a closure rotatably connected with said housing and provided with an outlet moving to an operative position when said closure is rotated to an adjusted position, a container movably mounted in said housing, means carried by said closure for engaging said container to move the same to an adjusted position with said closure, and means for releasably preventing movement of said container.

4. A dispensing machine including a housing having an outlet, a container movably mounted in said housing, a closure movably connected with said housing and having engagement with said container for moving the same to an adjusted position with said closure, and means for releasably preventing movement of said container.

5. A dispensing machine including a housing, a container rotatably mounted in said housing, a closure having engagement with said container for moving the same to an adjusted position with said closure, and means for releasably preventing movement of said container, said means including a stationary jaw, a movable jaw, and a pawl forming an extension from said movable jaw, said pawl being swung to an inoperative position by said movable jaw when a coin is placed between the jaws.

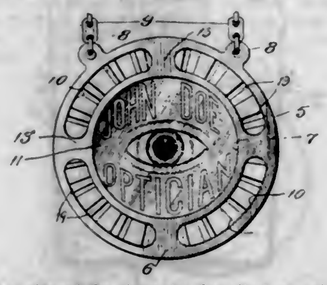
[Claims 6 to 12 not printed in the Gazette.]

1,194,558. FIRE AND WATER PROOF COMPOSITION AND PROCESS OF MAKING SAME. JEAN V. SKOGLUND, New York, N. Y. Filed Aug. 15, 1913. Serial No. 784,898. (Cl. 134—13.)

1. A fire-and waterproof composition for use as a covering or coating material containing a heavy hydrocarbon and dead oil combined with bromin substantially as and for the purpose specified.

2. The process of making a fire-and waterproof composition which consists in combining dead oil and bromin and then combining the same with a heavy hydrocarbon substantially as and for the purpose specified.

1,194,559. NOVELTY SIGN. LEROY R. SMITH, Charlotte, Mich. Filed Aug. 9, 1915. Serial No. 44,537. (Cl. 40—132.)

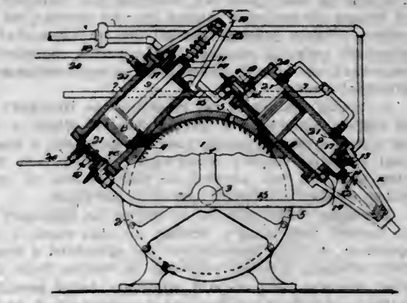


1. In a sign of the character described, a casing having a central aperture in its face and a series of slotted openings surrounding said aperture, a sign plate closing said aperture and provided with lettering rendered visible by the passage of light therethrough, and a rotor behind the face of said casing having a peripheral series of blades opposite the slotted openings in said face to be acted on by the wind entering through said openings, and a varicolored surface within the circle of the blades visible through the lettering.

2. In a sign of the character described, a casing having a central aperture in its face and a series of slotted openings surrounding the said aperture and other openings in sides perpendicular to the face, a sign plate closing said aperture and provided with lettering rendered visible by the passage of light therethrough, and a rotor behind the face of said casing having a peripheral series of blades opposite the slotted opening in said face and the openings in the other sides of the casing in position to be acted on by the wind entering said openings, and a vari-colored surface within said circle of blades visible through the lettering.

3. In a sign of the class described, a casing formed with lateral slots and with a forward apertured face, said face being concentrically slotted with respect to said aperture, a sign plate covering the aperture and provided with transparent lettering, a shaft journaled in said plate and said casing, a rotor, carried by said shaft within said casing, a coloring strip arranged upon the face of the rotor for exhibition through the sign plate lettering, and a series of integral fan blades peripherally struck out from the body of the rotor at right angles thereto and in alinement with said lateral and concentric slots for exposure to the action of the wind in driving the rotor.

1,194,560. GASOLENE-TURBINE. JAMES O. SNYDER, Decatur, Ill. Filed Nov. 30, 1915. Serial No. 64,307. (Cl. 123—9.)



The combination of a rotor, a rotor casing, a series of cylinders secured directly upon said casing, ports leading from the several cylinders through the rotor casing to the rotor, pistons in the several cylinders dividing the same into explosion and charging chambers, means for establishing communication between the charging chamber of one cylinder and the explosion chamber of another cylinder, means for supplying an initial charge to each chamber of each cylinder, and other means for supplying the fuel to each charging chamber.

1,194,561. EXPLOSIVE AND METHOD OF MANUFACTURING SAME. GIOVANNI SPICA, Venice, Italy. Filed June 4, 1914. Serial No. 842,847. (Cl. 52—3.)

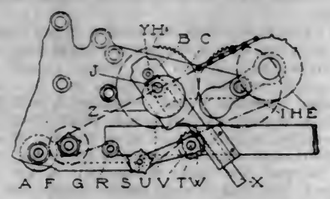
1. In the manufacture of smokeless powders of the character described, the herein described method which consists in mixing phenanthrene with a predetermined quantity of collodion cotton and putting the mass in a water bath kept at a temperature of from 40° to 45° C., stirring the mixture with the water while adding gradually a quantity of nitroglycerin, then removing the excess of the water by filtration and allowing the still pasty mass to dry at a temperature above 10° C., then centrifuging the dried pasty mass to free it as much as possible from the rest of the water, and then compressing the mass by means of cylinders which are meanwhile heated from the inside by means of steam, as set forth.

2. A smokeless powder of the character described consisting essentially of collodion cotton, nitroglycerin and phenanthrene in or about the proportions specified.

1,194,562. DRIVING CHAIN GEAR FOR RETARDING THE TRANSPORT IN SHEET-FEEDERS. GEORG SPIESS, Leipzig-Reudnitz, Germany. Filed June 4, 1915. Serial No. 32,067. (Cl. 74—31.)

1. A driving chain gear for retarding the transport in sheet feeders comprising a driving sprocket-wheel, a set of sprockets, a chain passing over all the sprockets, and a

longitudinal member subject to a compulsory displacement, one of said sprockets being mounted on said longitudinal member.



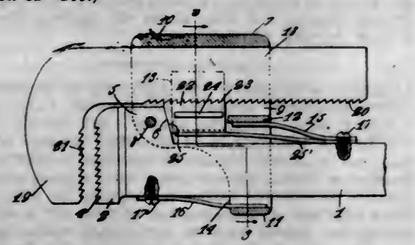
2. A driving chain gear for retarding the transport in sheet feeders comprising a driving sprocket-wheel, a set of sprockets, a chain passing over all the sprockets, and a longitudinal member subject to a compulsory displacement and performing a swinging motion, one of said sprockets being mounted on said longitudinal member.

3. A driving chain gear for retarding the transport in sheet feeders comprising a driving sprocket-wheel, a set of sprockets, a chain passing over all the sprockets, and a longitudinal swinging member, subject to a compulsory displacement, one of said sprockets being mounted on said longitudinal member.

4. A driving chain gear for retarding the transport in sheet feeders comprising a driving sprocket wheel, a set of sprockets, a chain running over the sprockets, a longitudinal swinging member receiving its motion from the driving sprocket and adapted to displace one of said sprockets to effect a uniform tension of the chain.

5. A driving chain gear for retarding the transport in sheet feeders comprising a driving sprocket-wheel, a set of sprockets, a chain passing over the sprockets, a longitudinal swinging member receiving its motion from the driving sprocket, one of said sprockets being mounted upon the longitudinal member, and a toothed wheel, and a toothed rack, both subject to compulsory displacement whereby the chain is tensioned.

1,194,563. PIPE-WRENCH. WILLIAM PRESTON STALEY, Sedalia, Mo. Filed Aug. 6, 1915. Serial No. 44,076. (Cl. 81—103.)

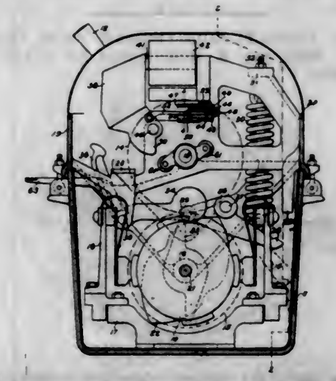


1. A wrench including a fixed shank; a fixed jaw; an oblique shoulder formed on the fixed shank; a spring controlled yoke pivotally secured to the said fixed shank; a movable shank slidably mounted in the said yoke; a movable jaw carried by the movable shank; a gripping block slidably mounted in the said yoke; and an oblique shoulder formed on the said gripping block and adapted to operably engage the oblique shoulder formed on the fixed shank.

2. A wrench including, a fixed shank; an enlargement formed at the outer end of the said fixed shank; an obliquely disposed shoulder formed on the said enlargement; a serrated fixed jaw carried by the said enlargement; a spring controlled yoke pivotally secured to the said enlargement; a serrated movable shank longitudinally slidable within the said yoke; a serrated movable jaw extending transversely from the said movable shank; a spring actuated serrated gripping block slidably mounted in the said yoke and adapted to operatively engage the said serrated movable shank; an oblique shoulder formed on the said gripping block and adapted to slidably engage the oblique shoulder of the said enlargment.

3. A wrench including a fixed shank; an oblique shoulder formed in the said shank; a fixed jaw carried by the said fixed shank; teeth formed in the outer face of the said fixed jaw; a yoke pivotally secured to the fixed shank, said yoke comprising opposed side walls having opposed rectangular slots formed therein, opposed edge walls, one of which is reduced, and a transverse partition formed in the yoke and extending from the opposed side walls; opposed flat springs having one end secured to the said fixed shank, the free end of one of said springs resiliently engaging the said reduced edge wall, while the free end of the remaining spring resiliently engages the said transverse partition, said springs adapted to normally hold the yoke in predetermined relation with respect to the said fixed shank; a movable shank slidably mounted in the said yoke; teeth formed on the said shank; a movable jaw extending from the said movable shank; teeth formed on the inner face of the said movable jaw and adapted to coöperate with the teeth formed in the said fixed jaw; a gripping block slidably mounted in the said yoke; teeth formed on the face of said block and adapted to operably engage the teeth formed on said movable shank; an ear extending laterally from each side of the said block and adapted to extend through and slidably engage the said rectangular slots; an oblique shoulder formed on the said block and adapted to slidably engage the oblique shoulder formed on the said fixed shank; and a leaf spring secured to the said fixed shank, the free end of which spring is adapted to resiliently engage the gripping block to normally press the teeth of said block into engagement with the teeth of the said movable shank.

1,194,564. SWITCHING MECHANISM. HALFDAN A. STEEN, Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Mar. 23, 1912. Serial No. 685,717. (Cl. 175—270.)



1. In a potential starter, the combination of a movable switch member, means for holding said switch member in a certain position, a member biased to one position but normally held in another position out of engagement with said holding means, said member being movable into engagement with said holding means to trip the same in response to no-voltage circuit conditions, and means associated with said member for retarding the first part of such movement while permitting free travel during the latter part of such movement.

2. In combination, a movable switch member, means for holding said switch member in a certain position, an electromagnet having a pivoted armature normally held out of engagement with said holding means and responsive to abnormal circuit conditions, said armature being movable on the occurrence of abnormal circuit conditions to trip said holding means, and means for retarding the tripping action of said armature while permitting said armature to deliver a hammer blow to said holding means to effectively trip the same on the existence of said abnormal conditions for a predetermined time.

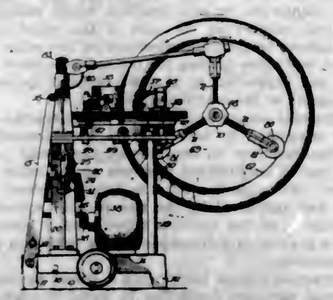
3. In combination, a movable switch member biased to one position, means for holding said switch member in another position, an electro-magnet having a pivoted armature normally held out of engagement with said holding means and movable in response to abnormal circuit conditions to trip said holding means, and means operative to retard the effective movement of said armature until said abnormal circuit conditions have existed for a predetermined time while permitting unrestricted final movement of said armature whereby the latter delivers a hammer blow in tripping said holding means, said retarding means comprising a dash-pot and a member directly connected to said armature and operatively associated with the piston of said dash-pot.

4. In combination, a movable switch member biased to one position, means for holding said switch member in another position, means for releasing said holding means comprising an electromagnet and an element held in inoperative position thereby during normal circuit conditions, said element being mechanically independent of said releasing means and biased to a position wherein it is engageable therewith to actuate said releasing means, said element being movable toward said latter position on the occurrence of low voltage circuit conditions, and means operative to retard the initial part of such movement while permitting free and unrestricted travel during the latter part of such movement.

5. In combination, a movable switch member normally retained in one position, and means for causing the actuation of said switch member to another position, said latter means comprising a member movable in response to abnormal circuit conditions and effective to produce a hammer blow in the actuation of said movable switch member, and means associated with said member for insuring a retarded initial movement thereof and an unretarded final movement thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,194,565. PORTABLE WRAPPING-MACHINE. WILLIAM C. STEVENS, Akron, Ohio, assignor to The Firestone Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Apr. 12, 1913. Serial No. 760,614. (Cl. 242—6.)



1. In combination, means for passing a strip of material spirally about an annular object, a support for said object on which the same may be rotated, means associated with the support by which the object and the support may be locked against relative movement, and means for rotating the object relative to the support.

2. In combination, means for passing a strip of material spirally about an annular object, a spider, rollers on said spider, on which the object is mounted, means to lock said object in relation to said spider, driving means for the object, and releasable connections for said driving means.

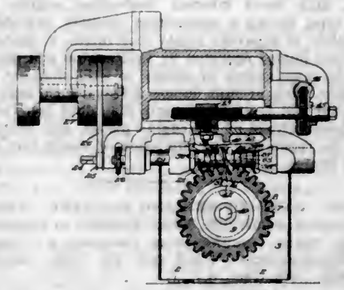
3. In combination, means for passing a strip of material spirally about an annular object, a spider, rollers on said spider, on which the object is mounted, means to force said rollers into locking engagement with said object, driving means for the object, and releasable connections for said driving means.

4. In combination, means for applying a strip of material spirally about an annular object, a support for said object, means effective at will for locking said support in relation to said object, means for rotating said object on said support when the locking means is ineffective, and releasable connections for said rotating means.

5. In combination, means for applying a strip of material spirally about an annular object, a spider, rollers on said spider on which said object is adapted to rest, means effective at will to lock said object in relation to said spider, and means to rotate the object when the locking means is ineffective.

[Claims 6 to 23 not printed in the Gazette.]

1,194,566. MACHINE FOR FINISHING OR GRINDING WORM-GEARS. ARTHUR L. STEWART, Rochester, N. Y., assignor to Gleason Works, Rochester, N. Y., a Corporation of New York. Filed May 8, 1915. Serial No. 26,881. (Cl. 51—4.)



1. In a machine for grinding worm gears, the combination with a rotary work support and means for driving it at uniform speed, of a guideway tool embodying a section of a worm formed of abrasive material and rotatable in engagement with a blank on the work support, the tool having movement longitudinally of its axis during the cutting operation.

2. In a machine for grinding worm gears, the combination with a rotary work support and means for driving it at uniform speed, of a grinding tool embodying a section of a worm formed of abrasive material and rotatable in engagement with a blank on the work support, and means for effecting a relative generating movement between the tool and blank during the cutting operation in addition to that due to their normal engaging relation.

3. A grinding tool embodying a plurality of worm sections formed of abrasive material and adjustable with relation to each other, the alternate worm sections being adapted for engagement with opposite sides of a tooth on a gear blank.

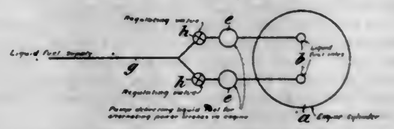
4. In a machine for grinding worm gears, the combination with a rotary work support, of a master worm gear fixed on the support, a driving worm engaging said worm gear, a grinding tool embodying a section of a worm formed of abrasive material rotatable in engagement with a blank on the work support and means for operating the driving worm and grinding tool.

5. In a machine for grinding worm gears, the combination with a rotary work support, of a master worm gear fixed on the support, a driving worm engaging said worm gear, a grinding tool embodying a section of a worm formed of abrasive material rotatable in engagement with a blank on the work support, means for operating the driving worm and grinding tool, and means for effecting

a relative generating movement between the tool and blank during the cutting operation in addition to that due to their normal engaging relation.

[Claim 6 not printed in the Gazette.]

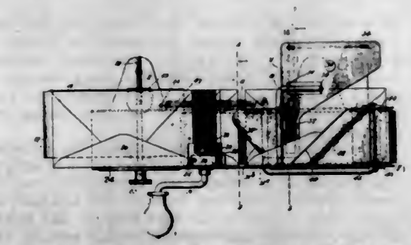
1,194,567. THE FEEDING OF FUEL TO INTERNAL-COMBUSTION ENGINES. PETER STOLTZ, Berlin, Germany. Filed June 26, 1912. Serial No. 705,900. (Cl. 123—127.)



1. A high speed internal combustion engine of the Diesel type having a combustion chamber, a plurality of liquid fuel pumps operated by said engine and delivering to said chamber in succession, each of said pumps serving to supply the liquid fuel for a separate power stroke of the engine piston, and independently controllable valves for separately regulating the admission of liquid fuel to each of said pumps.

2. A high speed internal combustion engine, of the Diesel type, having a combustion chamber provided with a plurality of separate liquid fuel inlets, a plurality of liquid fuel pumps operated by said engine and delivering from the same source of supply to said chamber and in succession, each of said pumps delivering through a separate inlet and serving to supply the liquid fuel for a separate power stroke of the engine piston, and controllable valves for regulating the admission of liquid fuel to each of said pumps.

1,194,568. ENVELOP-SEALING MACHINE. FREDERICK W. STORCK, Somerville, Mass., assignor to Standard Envelope Sealer Manufacturing Company, a Corporation of Massachusetts. Filed Oct. 13, 1913. Serial No. 794,892. (Cl. 120—6.)



1. In an envelop sealing machine the combination of a feeding means and a flap-raising member extending transversely across the path of the feed and loosely mounted at one end which is thereby held in an elevated position above one side of the path of the feed, the opposite end being free to swing above the other side of the path of the feed and to be elevated by the contact of an envelop passing thereunder.

2. In an envelop sealing machine the combination of a feeding means and a flap-raising member extending transversely across the path of the feed and loosely mounted at one end which is thereby held in an elevated position above one side of the path of feed, the opposite end being free to swing above the other side of the path of the feed and to be elevated by the contact of an envelop passing thereunder, said flap-raising member being provided with a tip and a fin extending rearwardly therefrom having an edge which slants toward the source of feed.

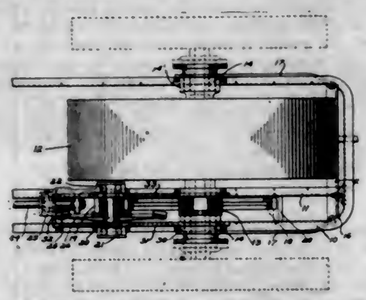
3. In an envelop sealing machine the combination of a means for feeding forward envelops in a sidewise slanting position, a flap-raising member and a moistener tank provided with a wick, said tank extending over envelops so fed in a substantially level position and being loosely mounted at one end whereby it may be swung upwardly by the contact of envelops passing thereunder and rocked slightly thereby.

4. In an envelop sealing machine the combination of a sidewise slanting feed belt, a flap-raising member consisting of a plate loosely mounted at one end and extending over said feed belt and having a tip at its opposite end resting normally on said feed belt and supporting said flap-raising member in a substantially level position and a fin extending rearwardly therefrom having a downturned edge which slants toward the source of a feed, a moistener tank extending beneath said plate which forms the top thereof, a slot in said plate and a wick mounted in said slot.

5. In an envelop sealing machine the combination of a feed belt, a flap moistener, a sealing plate mounted above said feed belt and extending beyond the feeding surface thereof, and a yieldably mounted rod whereon said sealing plate is mounted and about which it is adapted to be rocked by the passage of an envelop thereunder.

[Claim 6 not printed in the Gazette.]

1,194,569. DRIVE-GEARING FOR TRACTION-ENGINES. GEORGE T. STRITE and FRANK H. BIERMAN, Minneapolis, Minn., assignors of one-fifth to Howard J. Bierman and one-fifth to Ensley L. Strite, Minneapolis, Minn., and one-fifth to J. S. Clapper, Billings, Mont. Filed Jan. 16, 1914, Serial No. 812,471. Renewed May 6, 1916. Serial No. 95,920. (Cl. 21—114.)



1. A traction engine comprising a single traction wheel, a frame supported by said traction wheel embodying a longitudinal member on one side of the wheel and two parallel spaced longitudinal members on the other side of the wheel, and drive gearing for the traction wheel located between and supported by the two parallel spaced members alongside of the traction wheel.

2. A traction engine comprising a single traction wheel, a frame supported by said traction wheel embodying a longitudinal member on one side of the wheel and two parallel spaced longitudinal members on the other side of the wheel, drive gearing for the traction wheel located between and supported by the two parallel spaced members alongside of the traction wheel, and a housing for said drive gearing directly supported by both said parallel spaced members.

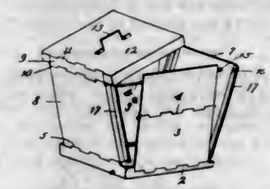
3. A traction engine comprising a frame having three longitudinal members extending in parallel relation and unequally spaced, a single traction wheel extending between the more widely spaced members and supporting the frame, a spur gear secured to move with the traction wheel and drive the same, and driving mechanism for said spur gear including a driving gear supported by and extending between the more closely spaced members in overlapping relation to the spur gear.

4. A traction engine comprising a frame having three longitudinal members extending in parallel relation and unequally spaced, a single traction wheel extending between the more widely spaced members and supporting the frame, a spur gear secured to move with the traction wheel and drive the same, driving mechanism for said spur gear including a driving gear supported by and extending between the more closely spaced members in overlapping relation to the spur gear, and a housing for said driving mechanism supported by both said more closely spaced members.

5. A traction engine comprising a single traction wheel, a frame supported by said traction wheel embodying a longitudinal member on one side of the wheel and two parallel spaced longitudinal members on the other side of the wheel, a driving gear secured to move with the traction wheel and drive the same, and drive gearing for operating the driving gear extending between and supported by said two parallel spaced members.

[Claims 6 to 13 not printed in the Gazette.]

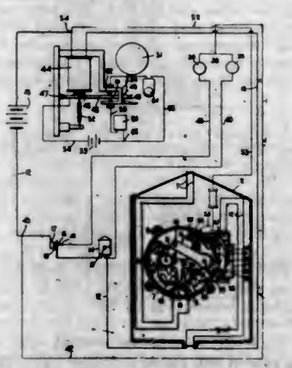
1,194,570. COLLAPSIBLE BOX. CLYDE STUART, Kansas City, Mo. Filed Feb. 26, 1916. Serial No. 80,640. (Cl. 220—17.)



1. In a collapsible box, a bottom having upturned margins, sides hinged to two of said margins to fold over the bottom, ends hinged to the other two margins of said bottom to fold over the sides, a lid having a resilient lip to secure the box in folded position, a handle on said lid, and a short section hinged to said lid and one of the ends to permit the lid to fold against the bottom of the box.

2. In a collapsible box, a bottom, sides hinged to said bottom to fold thereover, hinges intermediate the upper and lower ends of the sides to permit them to fold upon themselves, a removable tray adapted to rest upon the last-mentioned hinges, ends hinged to the bottom, and means on the sides to engage said ends and hold the box in set up position.

1,194,571. FIRE-ALARM SYSTEM. FREDERICK A. SWAN, Cliftondale, Mass. Filed Nov. 5, 1913. Serial No. 799,396. (Cl. 177—369.)



1. In a fire alarm system, the combination with a main signal system including a signaling wheel, of means tending normally to operate said signaling wheel, a stop to hold said wheel inoperative, which stop requires two successive movements in the same direction to withdraw it, an auxiliary closed circuit system, and means responsive to opening of said auxiliary circuit to partially withdraw said stop without, however, releasing the signaling wheel and responsive to closing of said auxiliary circuit again to completely withdraw said stop thereby releasing said signaling wheel.

2. In a fire alarm system, the combination with a signal box having a signaling wheel, an actuating spring therefor, a detent to hold said spring inoperative which detent requires two successive movements to release it and a setting lever for placing the spring under tension, of an auxiliary closed circuit system, means to give the detent its two successive movements upon openings and then closing the circuit of the auxiliary system and means operated by said lever to cause the detent to have said two successive movements.

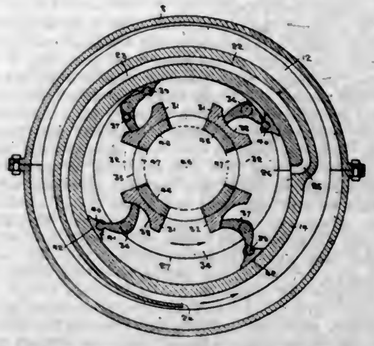
3. In a fire alarm system, in combination a signal box having a signaling wheel, an actuating spring therefor, a detent to hold said spring inoperative which detent required two successive movements to release the spring, a setting lever for said spring and means operated by said lever to cause the stop to have its two successive movements.

4. In a fire alarm system, the combination with a main signal system including a signaling wheel, an actuating spring therefor, a setting lever to place the spring under tension, a detent to hold said spring, inoperative which detent requires two successive movements in opposite directions to release it and means operated by the setting movement of the said lever to give the detent its two successive movements.

5. In a fire alarm system, the combination with a main signal system including a signaling wheel, of a stop to hold said signaling wheel inoperative, an auxiliary closed circuit system, and means rendered operative by the opening of said auxiliary circuit to give said stop a partial releasing movement and by the subsequent closing of said auxiliary circuit to give said stop a further movement in the same direction to completely release the signaling wheel and thereby permit the signal to be sounded.

[Claims 6 to 18 not printed in the Gazette.]

1,194,572. HYDRAULIC CLUTCH. ALLEN HERBERT SWEET, Clarks, La., assignor of one-fifth to A. P. Mackley, Des Loge, Mo., and one-fifth to J. P. Collins and one-fifth to T. L. Sorrell, Caldwell, La. Filed Nov. 30, 1914. Serial No. 874,787. (Cl. 192—18.)



1. In a fluid clutch, the combination with an engine or other casing containing fluid, a drive shaft, and a driven shaft operating in said casing, of an outer clutch member eccentrically mounted upon said drive shaft and providing a fluid chamber, an inner clutch member concentrically mounted upon said driven shaft and operating within the fluid in said outer clutch member, means carried by said inner clutch member to be engaged by the fluid within said outer clutch member, means within said inner clutch member for controlling the fluid within the clutch, said outer clutch member and said inner clutch member having oppositely disposed increasing and diminishing areas therebetween upon the revolution of said outer clutch member

around said inner clutch member, and means carried by said outer clutch member for automatically supplying fluid to the interior thereof from said casing by the force of impact caused by the revolution of said outer clutch member assisted by the suction created in certain of the increasing areas within said clutch.

2. In a fluid clutch, the combination with an engine or other casing containing a fluid, a drive shaft, and a driven shaft operating in said casing, of an outer clutch member eccentrically mounted upon said drive shaft and providing a fluid chamber, an inner clutch member concentrically mounted upon said driven shaft and operating within said outer clutch member, means carried by said inner clutch member to be engaged by the fluid within said clutch members, means within said inner clutch member for controlling the fluid within said members, means for actuating said fluid controlling means, a counterweight formed upon said outer clutch member, and a fluid conduit in said counter-weight, whereby the fluid in said fluid casing is automatically supplied to the interior of said outer clutch member upon the revolution of the latter.

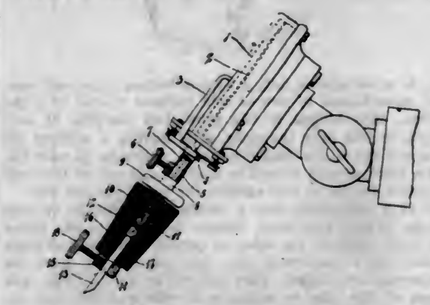
3. In a fluid clutch, the combination with a drive shaft, and a driven shaft provided with a central bore and a transverse slot therethrough, of an outer clutch member eccentrically mounted upon said drive shaft and providing a fluid chamber, an inner clutch member concentrically mounted upon said driven shaft and operating within said outer clutch member, a rotatively mounted valve operating within said inner clutch member for controlling the fluid within said members, a valve stem for actuating said valve projecting into the central bore of said drive shaft, said valve stem being rectangular in cross section and having a spiral formation adjacent its outer end, a clutch sleeve slidably mounted upon said driven shaft, an actuating bar carried by said clutch sleeve projecting through the transverse slot of said driven shaft and longitudinally slidable therein, said bar having a rectangular aperture for slidably receiving said valve stem, opposing clutch faces upon said clutch sleeve and said outer clutch member, and means for actuating said clutch sleeve, whereby upon the inward movement of said clutch sleeve, said actuating bar engages the spiral formation of said valve stem for rotating said stem and said valve for causing gradual clutching action between said inner and said outer clutch members, and subsequently rigidly locking said clutch members together upon the continued movement of said clutch sleeve.

4. In a clutch, the combination with a drive shaft, and a driven shaft, of an outer clutch member eccentrically mounted upon said drive shaft and providing a fluid chamber, an inner clutch member concentrically mounted upon said driven shaft and operating within said eccentrically mounted outer clutch member, said inner clutch member consisting of a hollow cylindrical cage comprising an end disk and an end ring member, and spaced bars connecting said disk and said ring member, blades pivotally mounted upon said cage for operating between the bars of said cage and said outer clutch member, a hollow cylindrical valve rotatably mounted within said cage and comprising end disks, and spaced bars connecting said disks and adapted to register with the bars of said cage, a valve stem for said valve having means adjacent its outer end to provide for the rotation of said valve stem and valve, and a clutch sleeve slidably mounted upon said driven shaft and carrying an actuating bar for operating said valve stem, whereby upon the inward movement of said sleeve and said bar said valve is rotated for closing the spaces between the bars of said cage by the bars of said valve to prevent the passage of the fluid through the cage and valve for causing clutching action between said clutch members.

5. In a clutch, the combination with a drive shaft, and a driven shaft, of an outer clutch member eccentrically mounted upon said drive shaft and providing a fluid chamber, an inner clutch member concentrically mounted upon said driven shaft and operating within said eccentrically mounted outer clutch member, said inner clutch member consisting of a hollow cylindrical cage having an end disk and an end ring member, spaced bars connecting said disk and said ring member at points remote from the peripheries thereof, said bars having concaved inner faces, and concaved grooves formed in their outer faces, a hollow cylindrical valve rotatably mounted within said cage and having end disks, spaced bars connecting said disks at their peripheries and provided with convexed outer faces adapted to register with and snugly engage the inner concaved faces of the bars of said cage, the meeting faces of said bars being of equal width but of greater width than the spaces between the respective bars, whereby upon the rotation of said valve the bars thereof efficiently close the spaces between the bars of said cage to prevent the passage of the fluid therethrough, a stem for said valve, means for rotating said valve, a plurality of concavo-convex blades pivotally mounted along their longitudinal medial lines upon said disk and said ring member of said cage and adjacent the peripheries thereof, the inner edges of said blades being rounded and operating within the concave grooves of the bars of said cage, ribs upon the outer ends of said blades, and shoes swingingly mounted upon the ribs of said blades.

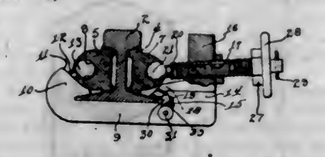
[Claims 6 to 14 not printed in the Gazette.]

1,194,573. ACOUSTIC-NEEDLE MOUNTING. WILLIAM A. TANGEMAN, Wyoming, Ohio. Filed Oct. 15, 1914. Serial No. 866,738. (Cl. 274—37.)



In an acoustic needle mounting, in combination with a diaphragm and the vibratory lever connected thereto, and a needle or stylus, a hollow cushioning body composed of flexible rubber making up a connection between the lever inserted in one end of said body and the needle or stylus inserted in the other end thereof, said body being tapered toward its free end and being unconfined throughout its length, and its upper end also being unconfined and spaced apart from its mounting and free to yield naturally, substantially as set forth and for the purposes specified.

1,194,574. CLAMP RAIL-JOINT. MASAICHI TANIMINE, Granger, Wyo. Filed Nov. 9, 1915. Serial No. 60,565. (Cl. 239—6.)



1. The combination with the meeting ends of a pair of rails, of a pair of fish plates arranged upon the respective sides of the rails, teeth formed on the upper and lower surfaces of the fish plates, and means for removably clamping the plates so that the teeth will bitingly engage the rails and prevent relative movement thereof.

2. A rail joint including in combination with the meeting ends of a pair of rails, a pair of fish plates arranged upon the opposite sides of the rails, teeth formed on the upper and lower edges of the plates and arranged to extend toward the center of the plates, chairs associated with the rails and one of said fish plates, means for clamping the plates to cause the teeth to engage the rails, and common means for supporting the clamping means and for maintaining the chairs in a supported position.

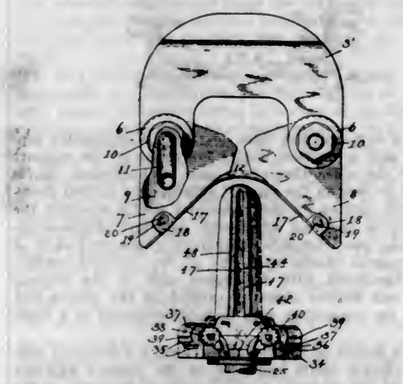
3. A rail joint including in combination with the meeting ends of a pair of rails, of serrated fish plates arranged in engagement with the opposite sides of the rails, means for supporting the fish plates, and means associated with the supporting means for removably clamping the fish plates in engagement with the rails to prevent relative movement of the rails.

4. A rail joint including in combination with the meeting ends of a pair of rails, serrated fish plates arranged upon the opposite sides of the rails, means for removably maintaining the fish plates in a supported position, means for removably clamping the fish plates in position to prevent relative movement of the parts, and means for preventing accidental reverse movement of the clamping means.

5. A rail joint including in combination with the meeting ends of a pair of rails, serrated fish plates arranged upon the opposite sides of the rails, rail chairs, means for connecting the chairs to one of the fish plates, means for supporting the other ends of the chairs in engagement with the rails, and clamping means adjustably mounted in the supporting means for the chairs for removably maintaining the plates in biting engagement with the rails to prevent relative movement of the rails.

[Claims 6 to 8 not printed in the Gazette.]

1,194,575. PRESS. NEWTON W. THOMAS, Cleveland, Ohio, assignor to Dana H. Benjamin, Cleveland, Ohio. Filed Apr. 19, 1909, Serial No. 490,820. Renewed June 3, 1916. Serial No. 101,642. (Cl. 68—9.)



1. In a cuff and wrist band press, in combination, a former, a pair of dies coöperating with the former and having faces adapted to coöperate with the faces of the former, and an ironing plate interposed between the dies and adapted to form a continuous ironing surface about the surface of the former and bridge the gap between the dies.

2. In a cuff and wrist band press, in combination, a former, a pair of dies coöperating therewith and adapted to close tightly against the surface thereof, and an ironing plate secured to the faces of the dies interposed between the dies and the former and adapted to move therewith tightly about the former and to provide a continuous ironing surface, and bridge the gap between the dies.

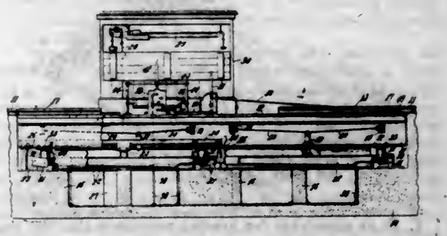
3. In a cuff and wrist band press, in combination, a frame, a former movably mounted in the frame, a pair of dies having ironing faces and mounted in the frame and when the former is out of engagement therewith being adapted to swing by gravity outward away from such former, an ironing plate carried by said dies and adapted to yield with the same and to conform to the surface of the former, means for shifting the former, and means whereby heat may be applied to the parts.

4. In a cuff and wrist band press, in combination, a frame, suitable ironing dies, a former coöperating therewith and movably mounted, an operating member, means between it and said former for causing the latter to be shifted quickly into engagement with the dies, a link also connected with the former and normally held out of straight line position, a pin carried by the operating member and adapted to engage the link and bring it into straight line position and thereby bring about an increased pressure at the end of the ironing operation.

5. In a cuff and wrist band press, in combination, a frame, suitable ironing dies, a former coöperating therewith and movably mounted, a treadle member mounted in the frame, suitable gearing between said treadle member and said former whereby the latter is moved upward into engagement with the dies when the treadle member is moved, a link connected to the former at one end and normally held out of parallel alinement with the vertical axis of the former, and a pin carried by said treadle member and adapted to engage said link and bring the same into straight line position thereby exerting a final increased pressure between the dies and the former.

[Claims 6 to 15 not printed in the Gazette.]

1,194,576. TRACK-SCALE. HENRY TIROS and SCOTT W. PALMER, Milwaukee, Wis. Filed Oct. 20, 1915. Serial No. 56,826. (Cl. 73—121.)



1. A track scale, comprising scale rails, a stationary support therefor, scale mechanism, and hydraulic jacks on the scale mechanism between the scale rails and the scale levers for lifting the scale rails off of the stationary support and thereby imposing the weight of the scale rails and their burden upon the scale mechanism.

2. A track scale, comprising scale rails, a stationary support therefor, a scale mechanism, hydraulic jacks mounted on the scale mechanism between the scale rails and the scale levers for lifting the scale rails off of the stationary support, and a liquid pump connected with the several hydraulic jacks for operating them to lift the weight of the scale rails and their burden off of the stationary support.

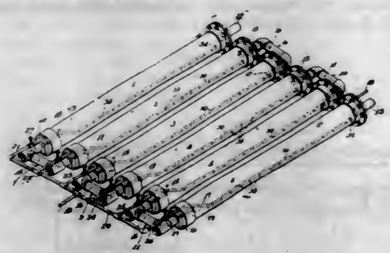
3. A track scale, comprising a foundation forming a pit with cross walls at intervals, standards mounted on the cross walls, scale levers pivotally mounted on the standards, a shelf lever pivotally mounted on standards and having the scale levers connected therewith, a scale beam connected with the shelf lever, stationary supporting beams extending lengthwise of the pit and seated on the cross walls of the foundation, movable beams adapted to rest on the stationary beams, a platform mounted on the movable beams, scale rails on the platform above the movable beams, track rails at the ends of the pit, in alinement with the scale rails, hydraulic jacks connecting the scale levers with the movable beams, and a liquid pump connected with the hydraulic jacks.

4. A track scale, comprising a foundation forming a pit with cross walls at intervals, standards mounted on the cross walls, scale levers pivotally mounted on the standards, a shelf lever pivotally mounted on standards and having the scale lever connected therewith, a scale beam connected with the shelf lever, stationary supporting

beams extending lengthwise of the pit and seated on the cross walls of the foundation, movable beams adapted to rest on the stationary beams, cross pieces connecting the movable beams, inverted U-shaped guides connecting the stationary beams and engaged by the movable beams to prevent lateral displacement of the movable beams, links connecting the cross pieces with the guides for preventing longitudinal movement of the movable beams, a platform mounted on the movable beams, scale rails on the platform above the movable beams, track rails at the ends of the pit in alinement with the scale rails, hydraulic jacks connecting the scale levers with the movable beams, and a liquid pump connected with the hydraulic jacks.

5. A track scale, comprising stationary supports, movable beams adapted to rest on the stationary supports, scale rails carried by the movable beams, suitably mounted scale levers, knife edges thereon, cylinders seated on the knife edges, plungers fitting in the cylinders and secured to the movable beams, flexible tubes connected with the cylinders, and a pipe system for liquid under pressure connected with the flexible tubes.

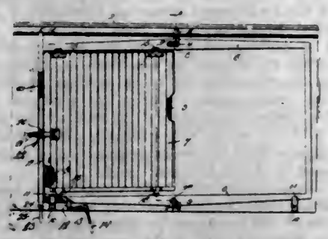
1,194,577. APPARATUS FOR HEATING PETROLEUM-OILS. MILON JAMES TRUMBLE, Artesia, Cal., assignor, by mesne assignments, to Simplex Refining Company, a Corporation of California. Filed Sept. 16, 1912. Serial No. 720,688. (Cl. 196—14.)



1. In an apparatus for heating petroleum oils, the combination of an oil heating coil arranged to absorb heat, an oil inlet pipe arranged to supply oil to such coil, an outlet pipe arranged to conduct heated oil from such coil, and by-pass means arranged to draw gas from the coil and deliver the same into the heated oil outlet pipe.

2. In an apparatus for heating petroleum oils, the combination of an oil heating coil consisting of a plurality of retorts and U-connections arranged to form a continuous passage for the oil, steam jet pipes arranged within such retorts, an oil inlet pipe arranged to supply oil to be heated to one end of the coil, an oil outlet pipe at the other end of such coil, and by-pass means arranged to by-pass gas from the retorts into the oil outlet pipe.

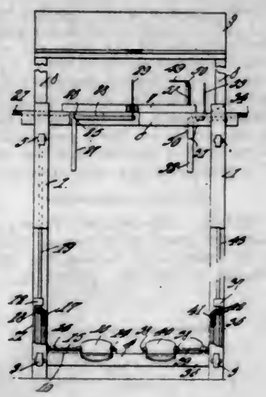
1,194,578. CAR-DOOR OPERATOR. FRANK J. VICKMAN, Walsh, Wis. Filed July 17, 1915. Serial No. 40,454. (Cl. 268—6.)



1. A door operating structure comprising the combination with a support of a rectangular vertically disposed supporting frame, means pivotally connecting the frame to said support, a door slidably mounted in the frame, a locking bar carried by the support for interlocking engagement with the frame, and locking means carried by the door for engaging the bar.

2. A door operating structure comprising the combination with a rectangular horizontally disposed supporting frame, means pivotally connecting the lower portion of the frame centrally of its ends to the support, the upper portion of the frame being provided with a centrally located longitudinal slot and a member projecting from the support and slidably engaged in said slot.

1,194,579. TYPE-WRITER ATTACHMENT. MIZELL BENJAMIN WARD, Marshall, Tex., assignor of one-fourth to Cornelius G. Lancaster, Marshall, Tex. Filed Feb. 9, 1915. Serial No. 7,024. (Cl. 197—65.)

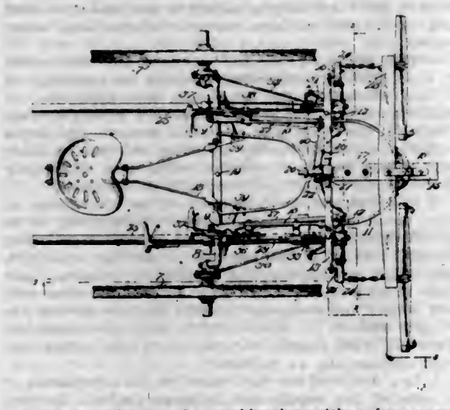


1. In a device of the class described, a typewriter support; a pair of vertical shafts journaled on the support adjacent the sides thereof; a pair of horizontal shafts mounted to rock on the support adjacent the bottom thereof; pedals carried by the horizontal shafts whereby the same may be operated selectively; angularly disposed intermeshing gear elements operatively connecting each of the horizontal shafts with one of the vertical shafts; wheels assembled with the upper ends of the vertical shafts; and flexible elements carried by the wheels and adapted for connection with movable elements of a typewriter.

2. In a device of the class described, a typewriter support, a vertical shaft journaled on the support adjacent the side of the support; a pedal mounted to swing on the support; means for operatively connecting the pedal with the lower end of the vertical shaft to rotate the vertical shaft; a wheel rotatable on the upper end of the vertical shaft; an automatically releasable clutch responsive to the rotation of the vertical shaft and constituting a means for operatively connecting the vertical shaft with the wheel; and a flexible element assembled with the wheel, the flexible element being adapted for connection with a movable element of a typewriter.

1,194,580. CULTIVATOR. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Dec. 6, 1913. Serial No. 805,078. (Cl. 97—35.)

1. In a cultivator, the combination with a frame supported by wheels movable relatively thereto for balancing the same and a shovel supporting beam attached to the frame and movable vertically relatively thereto, of a lever pivoted to the frame, a separate connection between the lever and wheels and the lever and beam whereby the said lever may move the wheels and raise the beam simultaneously, and a second lever pivoted to the frame and having a connection with the shovel-beam separate from said first lever connection therewith, for limiting the working depth of said beam.



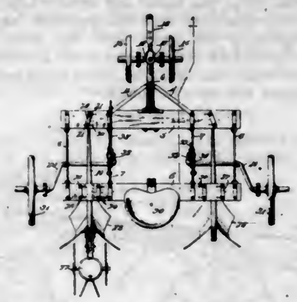
2. In a cultivator, the combination with a frame supported by wheels movable relatively thereto for balancing the same and a shovel supporting beam attached to the frame and movable vertically relatively thereto, of a pivoted lever, a separate connection between the lever and wheels and the lever and beam whereby said lever may move the wheels and raise the beam simultaneously, and adjustable means separate from said lever connection with the beam for limiting said beam in its working depth.

3. In a cultivator, the combination of a frame, supporting-wheels so connected to the frame as to be movable with respect thereto to effect balancing of the cultivator, vertically movable cultivator beams mounted on the frame, a lever pivoted intermediate its ends to the frame and having a connection at one side of its pivot with the supporting-wheels and at the opposite side of its pivot with the cultivator-beams, whereby the lever when locked will simultaneously effect balancing of the cultivator and movement of the cultivator-beams vertically, and lever means pivoted to the frame and connected to the cultivator-beams by means separate from the first named connections with the cultivator-beams, for limiting the working depth of said cultivator-beams.

4. In a cultivator, the combination of a wheel-supported frame, a tongue and a seat-bar each pivotally mounted intermediate its ends on the frame so as to swing laterally relatively thereto, cultivating devices, an arched support therefor, means connecting the arched support to the frame so that it can shift laterally with respect thereto, including a member connected to the crown of the arched support and slidably movable laterally between spaced horizontal guides, and connections between said member and the front and rear end of the seat-bar and tongue, respectively, whereby the arched support, tongue and seat-bar may be moved laterally in unison and held against vertical displacement by said guides.

5. In a cultivator, the combination of a wheel-supported frame, a tongue and a seat-bar each pivotally mounted intermediate its ends on the frame so as to swing laterally relatively thereto, cultivating devices, an arched support therefor, a bracket secured to the crown of the arched support, a roller mounted on the bracket and disposed between spaced horizontal guides on the frame so as to move laterally thereon and sustain and guide the arch against vertical displacement, and a pivotal connection between the bracket and the front and rear end of the seat-bar and tongue, respectively, whereby they will swing laterally in unison with the arch and be held against vertical displacement.

1,194,581. TWO-ROW LISTER. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Sept. 16, 1914. Serial No. 862,099. (Cl. 97—36.)



1. In an agricultural implement of the character described, the combination of a frame comprising a front and a rear cross-beam and a pair of spaced tie-bars fixedly connecting said beams at each end thereof, an implement carrying-beam extending in the line of draft intermediate the spaced tie-bars of each pair and fixedly mounted on the cross-beams, a crank-axle mounted on each pair of tie-bars with its axle at the outer side of said bars and having its inner end bent to form a crank portion, a supporting wheel mounted on each axle, and a lever fixedly mounted on each inner crank portion for swinging its crank-axle to raise and lower the frame.

2. In an agricultural implement of the character described, the combination of a frame comprising a front and a rear cross-beam and a pair of spaced tie-bars fixedly connecting each end portion of the cross-beams, a plow beam extending in the line of draft intermediate the spaced tie-bars of each pair and being adjustably mounted on the cross-beams so as to be movable laterally thereon intermediate the tie-bars, a crank-axle mounted on each pair of tie-bars with its axle at the outer side thereof, a supporting-wheel mounted on each axle, and a lever connected to the inner end of each crank-axle for swinging the same to raise and lower the frame.

3. In a lister plow, the combination of a plow beam, a front and a rear cross-beam mounted on the top of the plow beam, tie-bars connecting the cross-beams and shaped to extend beneath the plow beam intermediate the cross-beams, a crank axle mounted on the tie-bars below the plow beam, a carrying wheel for said crank axle, and means for adjusting the crank axle to raise and lower the plow beam supporting frame.

4. In a lister plow, the combination of a frame comprising a front and a rear cross-beam connected by tie-bars, a plow beam secured to the front and rear cross-beams, said tie-bars being depressed intermediate the cross-bars to form supports below the plow beam for crank axles, crank axles mounted on said support below the plow beam, carrying wheels mounted on the crank axles, and means for adjusting the crank axles to raise and lower the said frame.

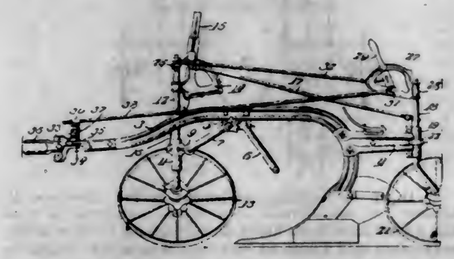
5. In a lister plow, the combination of a plow beam, a front and a rear cross-beam secured to the plow beam, the rear cross-beam being mounted on top of the plow beam, means securing the cross-beams together and providing a support for a crank axle intermediate the cross-beams below the plow beam, a crank axle mounted on said support below the plow beam, a carrying wheel for said crank axle, and means for adjusting the crank axle to raise and lower the plow beam carrying frame.

[Claim 6 not printed in the Gazette.]

1,194,582. WHEELED PLOW. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed May 17, 1915. Serial No. 28,801. (Cl. 97—74.)

1. In a wheeled plow, the combination of a frame, a front and a rear furrow wheel therefor connected with

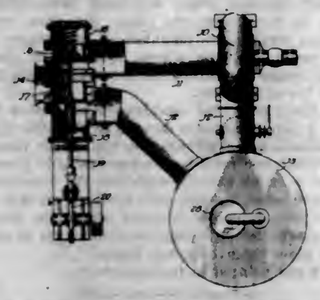
spindles journaled in upright bearings on the frame so that the wheels may be angularly adjustable, the rear spindle having a laterally projecting arm at its upper end, a notched quadrant pivotally connected on an upright axis directly to the outer end of said arm, a lever pivoted to and coöperating with the quadrant, and a link pivotally connecting the lever with the front spindle whereby the connection between the front and rear spindle is solely through the said link, lever and quadrant so that the spindles will turn in unison.



2. In a wheeled plow, the combination of a frame, a front and a rear furrow wheel therefor, mounted on axles having upright spindles so that wheels may be angularly adjusted, means connecting said spindles causing them to turn in unison comprising laterally extending arms fixed to the spindles, a toothed quadrant pivotally mounted directly on the rear arm, a lever mounted upon and coöperating with said quadrant and a link connection between the lever and front spindle, a laterally swinging draft device, and a link connection directly between said draft device and said quadrant to angle and adjust said wheels by the draft.

3. In a wheeled plow, the combination of a frame, a front and a rear furrow wheel therefor connected with upright spindles so as to be angularly adjustable, the rear spindle having its upper end bent to form a laterally projecting arm and thence upwardly terminating in an upright end, a notched quadrant and a tubular collar integral therewith, which collar receives the said upright end of the rear spindle arm so as to pivotally secure the quadrant to said arm, a lever pivoted to and coöperating with said quadrant, a link connection between said lever and the front spindle whereby the front and rear furrow wheel spindles will turn in unison, and means for maintaining the quadrant substantially in longitudinal alinement with the said link.

1,194,583. VALVE FOR COAL-WASHING JIGS. CARL A. WENDELL, Joliet, Ill. Filed Mar. 8, 1915. Serial No. 12,920. (Cl. 230—32.)



1. In a device of the class described, the combination of means for producing a continuous blast of air, a pressure equalizer, and a valve in the pressure line, said valve being provided with means for periodically interrupting the passage of air through one conduit and substantially simultaneously placing the pressure line in communication with a second air space, substantially as described.

2. In a device of the class described, the combination of blast producing apparatus, conduits for supplying air to and discharging the same from said apparatus, a leading conduit, a valve at the junction of said three conduits, and means periodically and alternately actuating said valve to place said leading conduit in communication with said supply and discharge conduits, substantially as described.

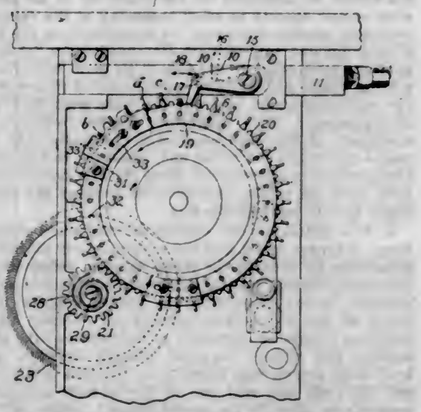
3. In a device of the class described, the combination of blast producing apparatus, conduits for supplying air to and discharging the same from said apparatus, an equalizing tank in one of said conduits, a leading conduit, a valve at the junction of said three conduits, and means periodically and alternately actuating said valve to place said leading conduit in communication with said supply and discharge conduits, substantially as described.

4. In a device of the class described, the combination of blast producing apparatus, conduits for supplying air to and discharging the same from said apparatus, a leading conduit, a valve at the junction of said three conduits, and means periodically and alternately actuating said valve to place said leading conduit in communication with said supply and discharge conduits and for placing one of said conduits in communication with the atmosphere when the other conduit is connected to said leading conduit, substantially as described.

5. In a device of the class described, the combination of an exhaust fan, supply and discharge conduits therefor, an equalizing tank in one of said conduits, a main, a valve at the junction of said conduits and main, and means for rapidly and alternately connecting said main to said supply and exhaust conduits, substantially as described.

[Claim 6 not printed in the Gazette.]

1,194,584. PATTERN MECHANISM FOR KNITTING-MACHINES. FRANK B. WILDMAN and GEORGE L. BALLARD, Norristown, Pa. Filed Sept. 9, 1914. Serial No. 860,917. (Cl. 66—22.)



1. In a pattern mechanism for knitting machines and in combination, a pattern member, a pawl for moving the pattern ratchet, a measuring pawl connected to the pattern ratchet pawl for controlling its engagement at times with said pattern ratchet, a measuring wheel having teeth with which the measuring pawl engages, and a drive gear for the measuring wheel meshing with the same teeth with which the measuring pawl engages, substantially as described.

2. In a pattern mechanism for knitting machines and in combination, a pattern member, a pattern ratchet for driving the pattern member, a pawl for moving the pattern ratchet, a measuring pawl connected to the pattern ratchet pawl for controlling its engagement at times with said pattern ratchet, a measuring wheel having teeth with which the measuring pawl engages, a drive gear for the measuring wheel meshing with the same teeth with which the measuring pawl engages, and a yielding driving connection for said driving gear, substantially as described.

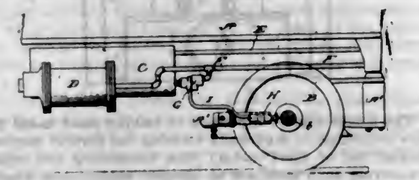
3. In combination in a pattern mechanism for knitting machines, a pattern member, a measuring wheel exerting control on the pattern member, said measuring wheel having gear teeth, a measuring pawl engaging said teeth, a drive gear wheel also engaging said teeth, and means for driving the gear wheel, substantially as described.

4. In combination in a pattern mechanism for knitting machines, a pattern member, a measuring wheel exerting control on the pattern member, said measuring wheel having gear teeth, a measuring pawl engaging said teeth, a drive gear wheel also engaging said teeth, means for driving the gear wheel consisting of a fabric roller and a yielding connection between the same and the drive gear, substantially as described.

5. In combination in a pattern mechanism for knitting machines, a pattern member, means for operating the same, a measuring wheel exerting control on said operating means, said wheel having long and short gear teeth, a pawl engaging the long teeth to operate the wheel step by step, and a gear wheel meshing with the long and short gear teeth to give the wheel a slow measuring movement, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,194,585. AIR-BRAKE. PERCY WARNER WILLIAMS, Ogden, Utah. Filed Aug. 5, 1915. Serial No. 43,852. (Cl. 188—72.)



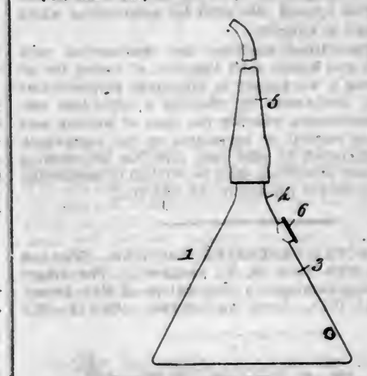
1. The combination with a brake cylinder of a governor valve, and a pressure reducing valve comprising a casing having a piston chamber communicating with the brake cylinder and the governor valve, a piston within said chamber having a port through it, a valve controlling said port, a spring resisting the movement of the piston in one direction, means for opening said piston valve when the piston has moved to a certain extent, an air relief valve, and means operated by the piston for opening said relief valve.

2. The combination with a brake cylinder of a governor valve and a pressure reducing valve comprising a casing having a piston chamber communicating with the brake cylinder and the governor valve, a piston within said chamber having a port through it, a valve controlling said port, a relief valve, a spring interposed between the piston and the relief valve for holding said relief valve closed, a spring for pressing the piston toward the air entrance port and means operated by the piston against the pressure of said last mentioned spring for opening the piston valve and the air relief valve.

3. The combination with a brake cylinder and a governor valve provided with means for permitting the escape of air from it and for closing such air escape, of a pressure reducing valve comprising a casing having a piston chamber communicating with the brake cylinder and the governor valve, a piston within said chamber having a port through it, a valve controlling said port, a relief valve, a spring for pressing the piston toward the air entrance port, and means operated by the piston when the air escapes from the governor valve for opening the piston valve and the air relief valve.

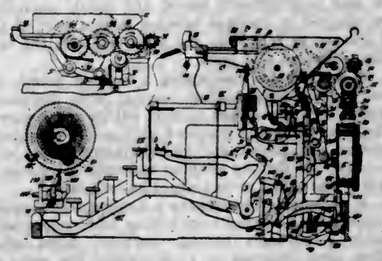
4. The combination with a brake cylinder and a governor valve provided with means for permitting the escape of air from it and for closing such air escape, of a pressure reducing valve comprising a casing having a piston chamber, a piston therein having a port through it, a valve controlling said port, an air relief valve, a spring interposed between the piston and the relief valve for closing the latter, a spring resisting the movement of the piston in one direction, means operated by the piston for opening the piston valve and the air relief valve, and connections between the governor valve and the piston chamber of the reducing valve.

1,194,586. OIL-CAN. EMANUEL HIBBERT YARWOOD, Newark, N. J. Filed Sept. 24, 1914. Serial No. 863,247. (Cl. 221—48.)



A dispensing can having a bottom, sides and a mouth, a valve seat at said mouth, a valve fitted to said seat, a stem connecting said valve and said bottom, comprising an upper and a lower section, the upper section being swiveled in said valve, and said lower section being rigidly connected to said bottom, a threaded connection between said sections, a head on said upper section adjacent said valve, and provided with means for rotating the same, and a spout removably connected to said can, substantially as described.

1,194,587. TYPE-WRITING MACHINE. J FRANK ALLARD, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 7, 1913, Serial No. 772,222. Renewed Jan. 21, 1915. Serial No. 3,636. (Cl. 197—1.)



1. In a typewriting machine, the combination of a platen, types movable into printing relation to the platen, a case shift for determining how said types shall print, and letter-feed mechanism to effect relative movements of the platen and types in different directions in a manner determined by said case shift.

2. In a typewriting machine, the combination of a platen, a set of type-bars, means to individually actuate the type-bars to printing position, a case shift for determining how the types shall print and letter-feed mechanism to impart relative movements to the platen and set

of type-bars in different directions for writing lines in different directions on a work-sheet in a manner determined by said case shift.

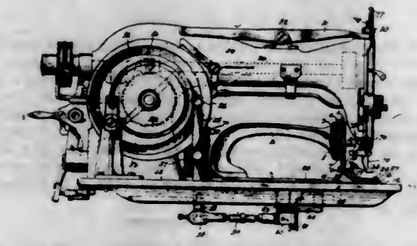
3. In a typewriting machine, the combination of a platen, type-bars, means to actuate the type-bars, a case shift for determining how the types shall print and mechanism to impart letter-feed movements to the platen selectively in different directions in a manner determined by said shift.

4. In a typewriting machine, the combination of a carriage, type-bars, a case shift for determining how the types shall print, mechanism for imparting a letter-feed movement to the carriage for printing lines in one direction on a work-sheet, additional letter-feed mechanism for writing lines in a different direction on the work-sheet, and means controlled by said case shift for determining which mechanism shall be effective.

5. In a typewriting machine, the combination with printing types and a case shift therefor, of means for selectively moving a work-sheet in directions perpendicular to each other, mechanism for effecting a letter-feed control of said movements whereby the lines of writing may be made either vertical or horizontal on the work-sheet, and means controlled by said case shift for determining whether the lines of writing shall be vertical or horizontal.

[Claims 6 to 66 not printed in the Gazette.]

1,194,588. BUCKLE-FASTENING MACHINE. WILLIAM L. BARRON, New York, N. Y., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 18, 1911. Serial No. 615,194. (Cl. 112—32.)



1. A work-holder comprising a holding frame, spaced spring-pressed jaws having bearing faces disposed in substantially the same plane and adapted to yield transversely to said plane, edge-guides extending longitudinally of said jaws, and longitudinally spaced and rigidly connected detents adapted to embrace between them a part of the object grasped by said jaws and positively lock the same in position between said jaws.

2. A work-holder comprising a holding frame, spaced spring-pressed jaws having bearing faces disposed substantially in and adapted to yield within and transversely of the same plane and provided with spaced longitudinally extending edge-guides, and longitudinally spaced and rigidly connected detents adapted to embrace between them a part of the object to be grasped by said jaws.

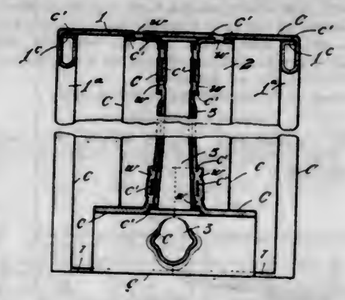
3. A work-holder comprising a holding frame constructed with spaced normally-unyielding and reciprocally adjustable clamp-arms having operative faces affording holding jaws disposed in substantially the same plane, detent shoulders carried by and spaced apart lengthwise of each of said clamp-arms and disposed transversely to said plane, and spring-pressed jaws also carried by and opposed to said clamp-arms and adapted to sustain an article to be stitched yieldingly in contact therewith and yieldingly confined between said detent shoulders.

4. A work-holder comprising a holding frame constructed with spaced normally-unyielding parallel clamp-arms provided with alined transversely disposed detent notches, and a spring-pressed jaw opposed to and secured directly upon each of said clamp-arms, said jaws being adapted by their resiliency to sustain an article to be stitched yieldingly in contact with the clamp-arms and in engagement with said detent notches.

5. A work-holder comprising a holding frame constructed with spaced rigidly connected parallel clamp-arms having operative faces affording holding jaws disposed in substantially the same plane, detents carried by said clamp-arms and disposed transversely to said plane, and spring-pressed jaws opposed to said clamp-arms and formed with angularly arranged lips embracing said clamp-arms, said spring-pressed jaws being adapted to yield both parallel with and transversely to the operative faces of the clamp-arms for sustaining an article to be stitched yieldingly in contact therewith and in engagement with said detents.

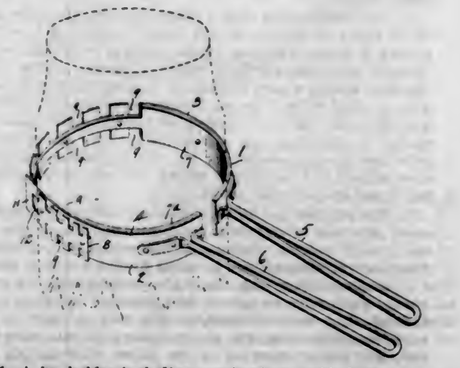
[Claims 6 to 10 not printed in the Gazette.]

1,194,589. PROCESS OF MAKING STEEL PULLEYS. NICHOLAS BARRY, Muscatine, Iowa, assignor to Barry Company, Muscatine, Iowa, a Corporation of Iowa. Filed July 30, 1915. Serial No. 42,737. (Cl. 29—159.)



The herein described process of making sheet metal pulleys consisting in separately forming the several members thereof out of sheet metal; then assembling and rigidly connecting such members by electric welds; then dipping the whole in molten metal to close all the crevices between the united parts of the members and around the welds and solidly solder the parts together, substantially as described.

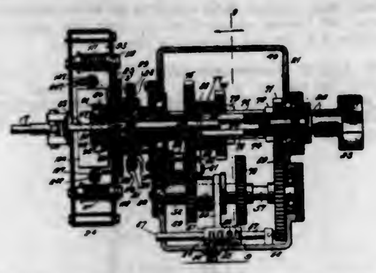
1,194,590. JAR-HOLDER. WILSON R. BEARCE and REES J. JONES, Sawtelle, Cal., assignors of one-third to Francesco Hammond, Casey, Ill. Filed Sept. 15, 1915. Serial No. 50,838. (Cl. 65—26.)



1. A jar holder including a pair of separable lever members each including a handle element and a jar gripping segment, one of said segments having a series of transversely disposed notches in both of its side edges, and the other of said segments having a terminal longitudinally-disposed mortise slot, the said segments being engaged and disengaged by a relative quarter turn thereof.

2. A jar holder including a pair of separable lever members each including a handle element and a metal jar gripping segment, one of said segments having a series of transversely disposed notches in both of its side edges and the other of said segments having a longitudinally-disposed mortise slot, and an inside cushioning gasket for each of said segments, the gasket for the notched segment having a reduced band lying at the inner side of the notched portion.

1,194,591. TRANSMISSION-GEAR FOR MOTOR-VEHICLES. LOUIS BIAVA, West Hoboken, N. J. Filed Aug. 31, 1915. Serial No. 48,184. (Cl. 74—58.)



1. In a motor vehicle, in combination, transmission gearing shiftable to vary the speed, a spring motor adapted to be potentially energized by the speed of the vehicle for shifting the gearing to vary the speed, and means under the control of the operator for releasing said motor to act.

2. In a motor vehicle, in combination, transmission gearing shiftable to vary the speed, a spring motor adapted to be actuated to store up power by the speed of the vehicle for shifting the gearing to secure a higher speed, and means for releasing said motor to act.

3. In a motor vehicle, in combination, transmission gearing shiftable to vary the speed, a spring motor adapted to be actuated to store up power by the speed of the vehicle for shifting the gearing to secure a higher speed, a spring motor adapted to be actuated to store up power by the speed of the vehicle for shifting the gearing to secure a lower speed, and means for releasing said motors to act.

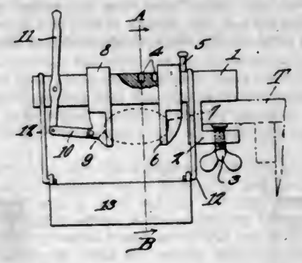
4. In a motor vehicle, in combination, transmission gearing shiftable to vary the speed, a rod connected with the movable gear, a normally stationary bar for moving said rod to shift the gear, a spring engaging said bar, means adapted to be actuated by the speed of the vehicle for placing said spring under tension against said bar, and means under the control of the operator for releasing said bar to move said rod under the force of said spring.

5. In a motor vehicle, in combination, transmission gearing shiftable to vary the speed, a rod connected with the movable gear, a normally stationary bar for moving said rod in either direction to shift the gear for a higher speed or a lower speed, opposite springs engaging said bar, means adapted to be actuated by the speed of the vehicle for placing either spring under tension against said bar, and means under the control of the operator for releasing said bar to move said rod under the force of the spring placed under tension.

[Claims 6 to 28 not printed in the Gazette.]

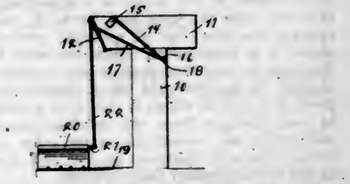
1,194,592. NUTCRACKER. WILLIAM E. BLAIR, Ballinger, Tex. Filed May 14, 1915. Serial No. 28,108. (Cl. 146—3.)

1. A nut cracker including a bar, support engaging means at one end of the bar, a lever fulcrumed upon the other end of the bar, a jaw adjustable longitudinally of the bar, said bar having a series of recesses in one face, a stop device detachably mounted in one of the recesses and engaged by said jaw, a second jaw slidably mounted on the bar, a link connection between said jaw and the lever, said link being connected to the jaw adjacent the lower end thereof, both jaws having recesses in the lower end portions.



2. A nut cracker including a bar, support engaging means at one end of the bar, a stationary jaw depending from the bar, means for adjusting the same, a jaw depending from and slidably mounted on the bar, means for actuating the slidable jaw, both jaws having recesses in the lower end portions, hangers straddling the bar and having downwardly diverging portions, and a tray detachably connected to the lower terminals of said downwardly diverging portions, the jaws being arranged between the hangers and above the tray.

1,194,593. MAIL-BOX. JOHN D. BOLAND, Dale, Okla. Filed Sept. 18, 1913, Serial No. 789,673. Renewed Jan. 11, 1916. Serial No. 71,577. (Cl. 232—34.)



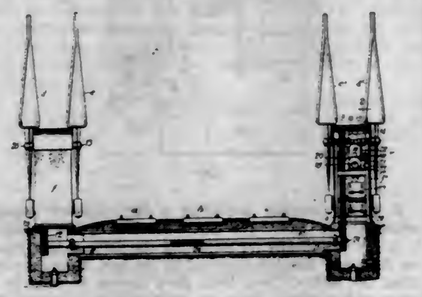
1. In a device of the class described the combination of a box having one end open, a hinged door for closing said open end, a rod pivotally mounted for movement across one side of the box and carrying a signal device at one end and having an eye provided on its other end, and a second rod slidable in the eye and having one end connected to the door and its other end provided with a lateral projection adapted to engage the first named rod and swing the latter to a position substantially at right angles to the box when the door is opened.

2. In a device of the class described the combination of a box having one end open, a hinged door for closing said open end, a rod pivotally mounted for movement across one side of the box and carrying a signal device at one end and having an eye provided on its other end, and a second rod slidable in the eye and having one end connected to the door and its other end provided with a lateral projection adapted to engage the first named rod and swing the latter to a position substantially at right angles to the box when the door is opened, and means operated by a vehicle moving across the front of the box for actuating said door to open positin.

1,194,594. AUTOMATIC RAILWAY-GATE. JAY BRIGGS, Hoopeston, Ill., assignor of one-half to Walter T. Gunn, Hoopeston, Ill. Filed Oct. 18, 1915. Serial No. 56,358. (Cl. 269—3.)

1. An automatic gate for railway crossing comprising a gate proper, a motor for operating the gate in opposite

directions, a switch for reversing the motor having two sets of stationary contacts and a movable contact member, means for moving said contact member alternately into engagement with the respective stationary sets of contacts, a source of current, a connection from the source of current to one side of said switch comprising a relay energized by a train on the track at some distance from the crossing, and connections from the source of current to the other side of the switch comprising a relay energized by a train on the track substantially at the crossing.



2. A gate for railway crossings comprising a gate proper and a reversing motor for opening and closing the same, a source of current, a switch having two sets of stationary contacts and a movable member having contacts to engage the stationary contacts, means to shift the movable member alternately into engagement with the respective sets of contacts, connections from the contacts to the motor and to the source of current such that when the movable member of the switch engages one set of contacts current flows to the motor in a direction to operate the same to close the gate and when the movable member engages the other set of contacts current flows to the motor in a direction to rotate the same in the opposite direction to open the gate, a relay controlling the connections to the first said set of stationary contacts energized by a circuit which is closed by a train on the track at some distance from the crossing, and a second relay controlling the connections to the other said set of stationary contacts energized by a circuit closed by a train on the track adjacent said crossing.

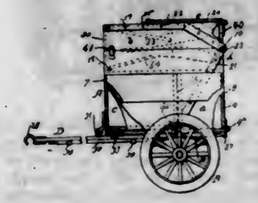
3. A gate for railway crossings comprising a gate proper and a reversing motor for opening and closing the same, a source of current, a switch having two sets of stationary contacts and a movable member having contacts to engage the stationary contacts, means to shift the movable member alternately into engagement with the respective sets of contacts, connections from the contacts to the motor and to the source of current such that when the movable member of the switch engages one set of contacts current flows to the motor in a direction to operate the same to close the gate and when the movable member engages the other set of contacts current flows to the motor in a direction to rotate the same in the opposite direction to open the gate, a pair of relays controlling connections to the first said set of stationary contacts energized by circuits which are closed by a train on the track at some distance from the crossing and on opposite sides thereof respectively, and a relay controlling the connections to the other set of stationary contacts energized by circuit closed by a train on the track adjacent said crossing.

4. A railway gate comprising a gate proper and a reversing motor for opening and closing the same, a switch having two operative positions in one of which current is supplied to the motor to operate it in one direction and in the other of which positions current is supplied to the motor to operate it in the other direction, an electric system including relays adapted to be energized by the presence of a train on the track at some distance from the gate proper for closing the same and to be energized by the presence of a train at a nearer point to the gate to open the same.

5. An automatic gate for railway crossings comprising a gate proper, a reversible motor for opening and closing the same, a pole changing switch connected to the motor for supplying it with current to operate it in opposite directions, comprising two sets of stationary contacts and a movable member also carrying contacts adapted and arranged when the member is in engagement with one set of contacts to supply current to the motor to drive it in one direction and when the member is in engagement with the other set of contacts to drive the motor in the other direction, said member being shifted with each operation of the gate, a source of current for operating the motor, connections from said source of current to the respective sets of stationary contacts and means controlling said connections operated by the approach of a train for closing the gate and by the nearer approach of a train to the crossing for closing connections to open the gate.

[Claims 6 to 28 not printed in the Gazette.]

1,194,595. EQUIPMENT-VEHICLE. WOODBURY SAXTON BRINTNALL, Los Angeles, Cal. Filed May 14, 1915. Serial No. 28,116. (Cl. 21—7.)



1. A vehicle provided with a tongue and a box-like body, and an extension of said body telescoping in said body, there being an anti-friction device between such body extension and the tongue.

2. A vehicle provided with a tongue and a box-like body, and an extension of said body telescoping in said body, there being an anti-friction device between such body extension and the tongue; there being a further anti-friction device between the body and said extension.

3. A vehicle provided with a tongue and a box-like body, and an extension of said body telescoping in said body, there being an anti-friction device between such body extension and the tongue; said body being also provided with a compartment provided with a hinged closure.

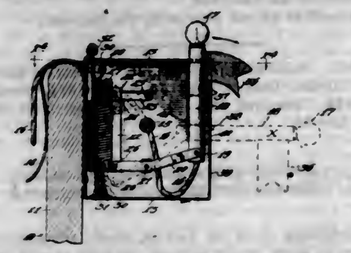
4. A vehicle body having a first box-like structure, a second box-like structure hinged to swing into position either above said first box-like structure or to constitute a continuous extension of the same, the ends of said box-like structure when so extended being open, and said two box-like structures when in superposed relation inclosing a storage compartment; and a closure carried by one of said box-like structures and adapted to cover both of said open ends when said structures are in superposed relation.

5. A vehicle body provided with a telescoping extension and a compartment provided with a hinged closure, and having a wall which limits the telescoping movement of said extension; said body being provided with a superposed box-like structure.

[Claims 6 to 14 not printed in the Gazette.]

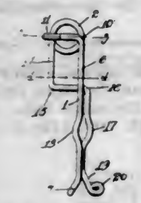
1,194,596. AUTOMOBILE-SIGNAL. ELIJAH W. BRYAN, Los Angeles, Cal. Filed Nov. 14, 1914. Serial No. 872,265. (Cl. 116—31.)

An automobile signal comprising a case having a hole in one side thereof, said hole having a rounded lip at the lower edge thereof, and said case having a vertical depression formed in the side thereof above said hole, an arm normally partially concealed in said depression, a display attached to said arm, and means for swinging said arm out of said depression and for rocking said arm



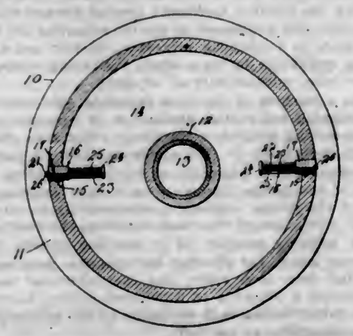
over said rounded lip to throw said display back into said depression.

1,194,597. CLOTHES-PIN. THOMAS F. BUDGE, Malad City, Idaho. Filed Oct. 18, 1913. Serial No. 795,982. (Cl. 24—261.)



A device of the character described including a single piece of wire bent upon itself to provide a coil, a duplex clamping member depending from one side of said coil, said member being formed by a portion of the wire being bent upon itself providing arms, the upper extremity of said duplex clamping member being bent at right angles so as to extend across the coil, a loop formed on the terminal of the duplex clamping member and engaged on the opposite side of the coil for binding the two strands of the coil together, a single clamping member bent at right angles from the body portion thereof and extending between the arms of the duplex member, said single clamping member being bent at right angles and having the lower end thereof bearing against said duplex clamping member, and said loop further constituting a stop for the thumb of the user when applying the pin to a clothes line.

1,194,598. LUBRICATING DEVICE FOR CABLES. WILLIAM H. CABE, Hamilton, Ohio. Filed Apr. 15, 1916. Serial No. 91,399. (Cl. 184—15.)



1. A lubricator for use with sheaves comprising a body portion adapted to be attached to said sheave and having an opening therethrough adapted to communicate at one end with an oil reservoir, an inwardly opening valve normally closing said opening and having a stem projecting beyond said body and adapted to be moved to open said valve by a cable and permit the escape of oil through said bore.

2. A lubricator for the peripheral faces of sheaves comprising an oil receptacle within the sheave, a plug having an opening therethrough secured to said sheave with one end flush with the groove therein and the other end opening into said oil receptacle, a valve adapted to close said opening to prevent the escape of oil therethrough, a spring for holding said valve closed, and a valve stem projecting through said opening into the groove in the sheave in position to be actuated by the cable for opening the valve and permitting the escape of oil through said opening in the plug.

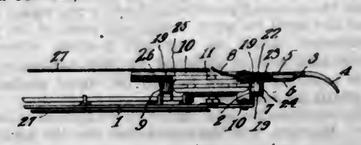
3. A lubricator for the peripheral surface of a sheave, comprising a threaded plug having a longitudinal bore therethrough with a valve seat at one end, a valve fitted to said seat and having a stem projecting loosely through said bore and a short distance beyond the same, a spiral spring tending to close the valve upon its seat and a bearing plate for said spring, supported from said plug.

4. Means for lubricating or oiling cables, comprising a sheave for said cable having an oil receptacle therein, a lubricating device connected to said sheave and communicating with said oil receptacle and opening into the groove of said sheave, and a valve for normally closing the outlet through said lubricating device adapted to be opened by a cable passing about the sheave.

5. Means for lubricating or oiling cables, comprising a hollow sheave forming an oil receptacle and a lubricating device flush with the peripheral surface of said sheave and extending into said oil receptacle, said lubricating device having a passageway therethrough for oil and having a valve with a stem extending through said passageway and beyond the same in position to be actuated by a cable passing around said sheave to open said valve and permit the escape of oil.

[Claim 6 not printed in the Gazette.]

1,194,599. CUTTING APPARATUS. DAVID CANTWELL, Condon, Oreg. Filed May 10, 1915. Serial No. 27,165. (Cl. 56—42.)

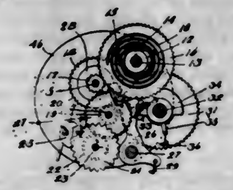


A portable structure including a beam, forwardly and downwardly curved fingers each including an upper arm extending rearwardly to a position above the beam, a lower arm stepped downwardly and extending under and secured to the beam, a guide plate secured at one edge between the upper arm of the beam and the upper arms of said fingers and extending rearwardly from the beam, a chain working between said beam and the stepped portion of the lower arm of the finger, cutters carried by said chain and movable between the upper and lower arms of the finger, and a draper having its upper flight extending close to and adapted to receive material from the guide plate.

1,194,600. SIGNAL-BOX. FREDERICK W. COLE, Newton, Mass., assignor to The Gamewell Fire Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Aug. 6, 1914. Serial No. 855,500. (Cl. 177—361.)

1. The combination of a signaling-mechanism, a detaining-lever therefor, a winding-mechanism for the signaling-mechanism having an independently movable winding-device, said detaining-lever and winding-mechanism each being arranged for coöperation with the other, the arrangement being such that the winding-mechanism holds the detaining-lever in engaging-position while it is being op-

erated to wind the signaling-mechanism and the detaining-lever, while it is in disengaging-position and the signal is being sent, holds the independently movable winding-device, and holding-means arranged to hold the winding-device with the winding-mechanism wound, which, when operated, permits independent movement thereof, substantially as described.



2. The combination of a signaling-mechanism, a winding-mechanism for the signaling-mechanism having an independently movable winding-device, a detaining-lever arranged, when in engaging-position, to hold the signaling-mechanism, and, when in disengaging-position, to hold the independently movable winding-device, and the winding-mechanism while in unwound position, being arranged to hold the detaining-lever in engaging-position, and to permit movement thereof into disengaging-position when moved into winding-position and the independently movable winding-device has been returned to unwound position, substantially as described.

3. The combination of a signaling-mechanism, a detaining-lever therefor, a winding-mechanism for the signaling-mechanism having an independently movable winding-device forming a part thereof, said detaining-lever and winding-mechanism each being arranged for coöperation with the other, the arrangement being such that the winding-mechanism, while it is in unwound position, holds the detaining-lever in engaging-position and while it is being moved into winding-position and while the winding-device is returning to unwound position independently of the other component parts of the winding-mechanism and permitting movement of said detaining-lever into disengaging-position with the train and into engagement with the winding-device and hold said winding-device after it has returned to unwound position and while the signal is being sent and until the other component parts of the winding-mechanism return to unwound position whereupon said detaining-lever is returned by said winding-mechanism, to engaging-position to stop the signal mechanism, substantially as described.

4. The combination of a signaling-mechanism, a detaining-lever therefor, winding-mechanism for the signaling-mechanism having a winding-device, made independent of the other component parts of said winding-mechanism, permitting of an independent movement thereof relative thereto, said detaining-lever when in disengaging-position and the signaling-mechanism is operating to send its signal, being arranged to lock said winding-device, thereby to hold the winding-device during such time, said detaining-lever automatically disengaging the winding-device when returned to its engaging-position, and the signal is sent, and holding-means arranged to hold the winding-device with the winding-mechanism wound, which, when operated, permits independent movement thereof, substantially as described.

5. The combination of a signaling-mechanism, a detaining-lever therefor, winding-mechanism for the signaling-mechanism having a winding-device made independent of the other component parts of said winding-mechanism, permitting of an independent movement thereof relative thereto, said detaining-lever and winding-device being arranged for engagement with each other in the different relative positions that they occupy and whenever they so engage the detaining-lever is held in engaging-position by the winding-mechanism while the signaling-mechanism is being wound and the independently movable winding-device is held by the detent-lever while the signaling-mechanism is running, and holding-means arranged to hold the winding-device with the winding-mechanism wound, which, when operated, permits independent movement thereof, substantially as described.

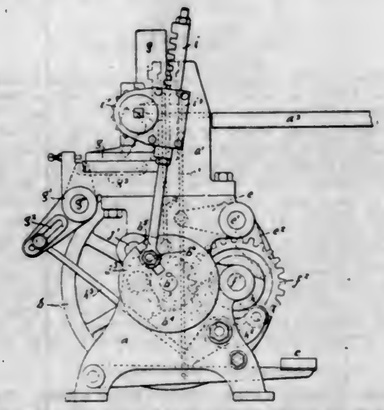
[Claims 6 to 24 not printed in the Gazette.]

1,194,601. REINFORCING-CHAIN. WILLIAM H. CORRIGAN, Delta, Iowa. Filed June 24, 1914, Serial No. 846,954. Renewed May 20, 1916. Serial No. 98,953. (Cl. 59—78.)



A reinforcing chain for harness traces, comprising bars arranged in pairs, bosses between the ends of said pairs of bars, the inner edges of said bosses being semicircular and the outer edges vertical, an oval link extending around the bosses at the meeting ends of the two pairs of bars, the ends of said pairs of bars and the vertical faces of the bosses being spaced apart, and rivets extending transversely through the bars and bosses pivotally securing the pairs of bars and the connecting link in assembled relation.

1,194,602. SHEET-METAL-FOLDING MECHANISM. ROY ELMER CURTIS, Cleveland, Ohio, assignor to Albert Lynn Lawrence, Cleveland, Ohio. Filed May 29, 1908. Serial No. 435,735. (Cl. 113—1.)



1. In a machine of the class described, the combination with a gripping and a folding appliance, of means for securing the relative movement thereof toward and from each other, and additional means for actuating the folding mechanism to accomplish successive interior and exterior folding operations during a single continuing actuation of the machine, substantially as set forth.

2. In a machine of the class described, the combination with gripping and folding appliances, of interrelated cams and connecting members respectively adapted to effect the relative movement of said appliances toward and from each other, and a plurality of duplicated folding movements of the folding appliance upon each gripping actuation of the former appliance, substantially as set forth.

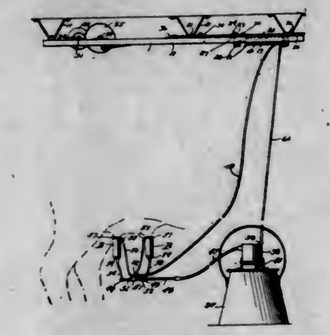
3. In a machine of the class described, the combination with a gripping member, of a co-acting pivotal folding appliance, means for effecting their relative movement toward and from each other, and cam-controlled members for securing a plurality of duplicated folding movements for the latter during each actuation of the gripping member, substantially as set forth.

4. In a machine for forming interlocking folds, the combination with a gripping member and its co-acting bed plate, of a folding frame mounted to reciprocate toward and from the latter, a stationary support, a reciprocating jaw, and a rotating folding member upon the said folding frame, interrelated cam shafts bearing cams and connecting mechanism for effecting the reciprocation of said frame, and a plurality of successive rotatable folding operations for said member upon each depression of the gripping jaw, substantially as set forth.

5. In a power machine for folding sheet metal, the combination with a driving shaft, of a cam shaft geared to rotate therewith in the relation of one to two, a gripping member, its cam and connecting mechanism associated with the cam shaft, a folding frame, its cam and connecting mechanism also associated with said cam shaft to effect the reciprocation of the frame, a folding jaw and its cam associated with the driving shaft, and a folding member and driving mechanism actuated by said driving shaft whereby two folding operations are effected and a complete reciprocation of the frame is secured during each rotation of the cam shaft, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,194,603. MILKING-MACHINE. HENRY C. DETERMAN, Rockwell, Iowa. Filed Aug. 28, 1915. Serial No. 47,778. (Cl. 31—100.)



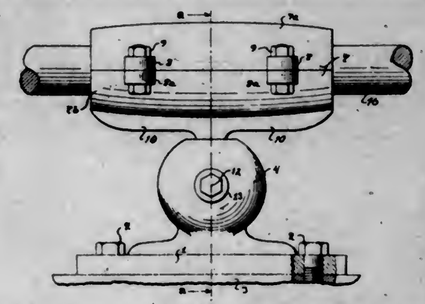
1. In a milking machine the combination of a receptacle, a casing mounted on the receptacle, a tubular extension depending from the casing, means for closing the tubular member under the influence of a vacuum in the casing, and for opening the tubular member under the influence of pressure within the casing, a pipe engaged through the wall of the casing and having its inner end closed by a gravity valve, teat cups, connection between the last named pipe and the interior of the teat cups, and means for successively forming a vacuum in the casing and introducing compressed air into the casing.

2. In a milking machine, the combination of a receptacle, a casing mounted on the receptacle, a tubular extension depending from the casing, a valve in the tubular extension opened by air pressure within the casing and closed under the influence of a vacuum within the casing, a pipe engaged through the wall of the casing, and a gravity valve closing the inner end of said pipe.

3. In a milking machine the combination of a receptacle, a casing mounted on the receptacle, connections between the casing and the receptacle, teat cups, a pair of pumps having air inlets and outlets at the same end thereof respectively, one of said pumps having a smaller diameter than the other, means for operating the pistons of the pumps in unison, connections between the pumps having the smaller diameter and the teat cups, connections between the pump having the larger diameter and the casing, and connections between the teat cup and the casing.

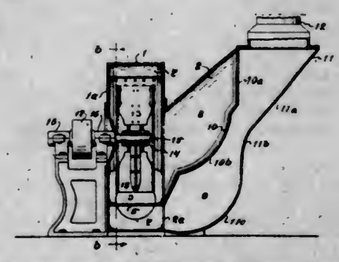
1,194,604. BEARING. EUSTICE E. DICKERSON, Cleburne, Tex. Filed Jan. 23, 1915, Serial No. 4,008. Renewed Apr. 17, 1916. Serial No. 91,748. (Cl. 64—54.)

An adjustable bearing comprising a two part bearing block and a two part hanger, one part of the bearing block being provided with a web and a spherical enlargement at the end of said web, and the hanger having a hollow spherical body adapted to receive and snugly fit the spherical enlargement, an opening in the hollow body of the hanger in which opening the web of the bearing block loosely plays, and openings diametrically opposite to each



other and formed in the walls of the hollow body at right angles to the opening for said web, in combination with a locking bolt loosely traversing the diametrically opposite openings of the hollow body of the hanger and snugly traversing diametrically the spherical enlargement of the bearing block, substantially as described.

1,194,605. FAN. EUSTICE E. DICKERSON, Fort Worth, Tex. Filed June 12, 1915. Serial No. 33,669. (Cl. 13—19.)



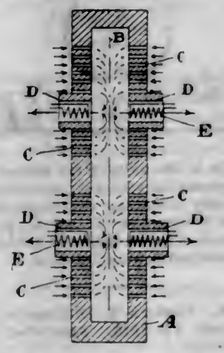
1. In a combined fan and blower, a main casing for the fan, a suction chamber communicating with the side of said casing and an outlet leading from the main casing tangentially to the periphery of the fan blades, a screen partition arranged within the main casing eccentric to the fan and dividing the main casing into a fan chamber and an air pressure chamber, said partition projecting through the tangential outlet to divide the same into two ducts whereof one forms the terminus for the air pressure chamber, a partition dividing the suction chamber into two compartments, said partition being perforated for a portion of its length, one of the compartments forming a passageway for the cotton under suction and delivering the same to the terminus of the air pressure chamber.

2. In a combined fan and blower, a fan casing having a suction inlet at one side, a perforated partition eccentrically arranged within said casing and dividing the same into two eccentric chambers, the outer of which forms an air pressure chamber separated from the fan by the partition, and a suction chamber arranged at right angles to the pressure chamber and to the suction inlet to the fan, combined with means for dividing the suction chamber into two compartments, said means being perforated to bring the compartment farthest from the fan under suction, said farthest compartment discharging at right angles into the pressure chamber of the fan.

3. In a fan or blower, a main chamber divided into a fan and a pressure chamber separated by a screen partition, a suction chamber divided into two compartments by

a screen partition, one of said compartments being in open communication with the fan chamber and the other constituting the suction passageway for the material, said passageway discharging directly into the pressure chamber, and an outlet projecting tangentially from the main chamber and divided by a perforated partition into two ducts, whereof one forms the terminus for the air pressure chamber.

1,194,606. ELECTRIC-ARC FURNACE FOR THE TREATMENT OF GASES. CARL OLAF ANDERSEN DÖVLE, Notodden, Norway, assignor to Norsk Hydro-elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed May 10, 1915. Serial No. 27,116. (Cl. 204—31.)



1. In an electric arc furnace for the treatment of gases a magnetically spread flame disk, gas inlet openings for introducing the gas into the furnace disposed over the area of the flame disk, and a number of gas outlets disposed between the center and the periphery of the said furnace with the object of obtaining a short passage of gases in the furnace.

2. In an electric arc furnace for the reduction of gases a magnetically spread flame disk, gas inlet openings for introducing gas into the furnace, said openings being disposed angularly to the flame disk and over the substantial area of the same and a number of gas outlets disposed between the center and the periphery of the said furnace with the object of obtaining a short passage of gases in the furnace.

3. In an electric arc furnace for the reduction of gases a magnetically spread flame disk, gas inlet openings for introducing gas into the furnace, disposed over the area of the flame disk, and gas outlets located between the center and the periphery of the furnace, said outlets being provided with means for cooling the gases with the object of obtaining short gas passages in the furnace and an effective cooling of the gases after leaving the furnace chamber.

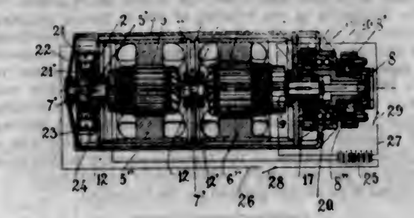
4. An electric arc furnace producing a magnetically spread flame disk having inlet openings in its side walls for the admission of gas through its sides to said flame disk and outlet openings disposed between the center of said disk and its periphery, whereby gas treated by said arc will exit through said outlet openings at points intermediate the ends of the radii of said disk.

5. An electric arc furnace producing a magnetically spread flame disk having outlet openings in its side walls between the center of said disk and its periphery surrounded by a number of inlet openings.

[Claims 6 and 7 not printed in the Gazette.]

1,194,607. COMBINED ELECTRIC LIGHTING AND STARTING APPARATUS FOR MOTOR-VEHICLES. LUIGI DUCA and ERCOLE NALDINI, Turin, Italy. Filed Apr. 12, 1915. Serial No. 20,942. (Cl. 171—315.)

1. In a combined electric lighting and starting apparatus for vehicles driven by explosion engines, a casing, a dynamo and a starting electromotor in alinement with each other in said casing, hollow shafts for the rotors of the dynamo and electromotor, an inner concentric shaft connected by one end with the dynamo shaft and by the other end with the electromotor shaft, means for coupling the electromotor shaft with the explosion engine shaft in a single direction and with reduced ratio.



2. In a combined electric lighting and starting apparatus for vehicles driven by explosion engines, a casing, a dynamo and a starting electromotor in alinement with each other in said casing, hollow shafts for the rotors of the dynamo and electromotor, an inner concentric shaft passing through said hollow shafts, a speed regulating coupling connecting the inner shaft with the dynamo shaft, a speed reducing gear between the starting electromotor shaft and a concentric sleeve, a free wheel mechanism on said sleeve, a member operated by the free wheel mechanism and connected with said inner shaft, and means for coupling said member with the engine shaft.

3. In a combined electric lighting and starting apparatus for vehicles driven by explosion engines, a casing, partitions forming chambers in said casing, a dynamo and a starting electromotor, each arranged in one of said chambers and in alinement with each other, hollow shafts for the rotors of the dynamo and electromotor, an inner concentric shaft, bearings in said partitions for said shafts, means for connecting the inner shaft with the dynamo shaft, means for coupling the inner shaft with the explosion engine shaft, and a reduction gearing between the motor and the engine shaft.

4. In a combined electric lighting and starting apparatus for vehicles driven by explosion engines, a casing, holed partitions forming communicating chambers in said casing, a dynamo and a starting electromotor each arranged in one of said chambers and in alinement with each other, hollow shafts for the rotors of the dynamo and electromotor, an inner concentric shaft, bearings in said partitions for said shafts, means for coupling the inner shaft with the dynamo shaft, said means comprising a rim having blades on the outer periphery for ventilating the casing, and means for connecting the electromotor shaft with the engine shaft in a single direction and with reduced ratio.

1,194,608. COMPOSITION AND PROCESS FOR TREATING PLANTS. CLARENCE W. EASTMAN, Great Falls, Mont. Filed Nov. 27, 1915. Serial No. 63,880. (Cl. 167—6.)

1. A process of treating a plant which comprises the application to the plant of a composition containing a plant treating agent, and also containing a water soluble substance which when subjected to the action of light, is converted into a substantially insoluble product, and allowing the same to be acted upon by light, whereby a coating containing a product substantially insoluble in water and also containing the plant treating agent, and retaining the same in close proximity to the plant tissue is produced, and whereby the plant treating agent is protected against moisture.

2. A process which comprises spraying a plant with a composition containing an agent capable of destroying organisms detrimental to the plant, and also containing substances which are capable of reacting together under the influence of light, with the production of a substantially water-insoluble, flexible product, holding said agent closely adherent to the surface of the plant.

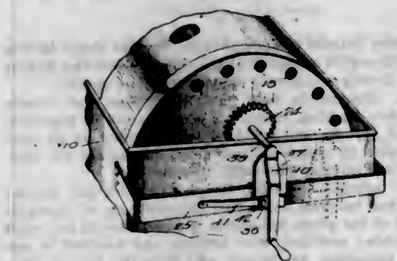
3. A process of treating plants which comprises the application to the plant of a liquid composition comprising an agent capable of destroying organisms detrimental to the plant, and containing a chromium compound and a soluble substance which is capable of being converted by said chromium compound into a substantially insoluble, leathery, flexible product, and thereafter allowing said chromium compound to react upon said substance, to produce a coating comprising said product, inclosing said agent and retaining the same in contact with the surface of the plant.

4. A process of treating plants which comprises the step of spraying the same with a solution containing an arsenical insecticidal agent, a dichromate and dextrin, and permitting the action of light thereupon.

5. A composition suitable for treating plants, which comprises a liquid vehicle containing a metal compound, and containing an organic substance capable of being converted by the action of light and said metal compound into a substantially insoluble product, and containing an agent capable of destroying organisms detrimental to the plant.

[Claims 6 and 7 not printed in the Gazette.]

1,194,609. WASHING-MACHINE. GEORGE LESLIE FERRIS, Quincy, Ill. Filed June 25, 1915. Serial No. 36,227. (Cl. 68—18.)



In a washing machine, the combination of a steam boiler having a supporting member extending across one end thereof and spaced therefrom, a cylinder rotatably mounted in said boiler, a gear carried by said cylinder, an element slidable longitudinally of said support and having a portion embracing the same, said element also consisting of a vertically extending bracket having at its upper end a laterally projecting bearing extending inwardly toward said cylinder, a rotatable shaft mounted in said bearing and having a gear at one end thereof for meshing with the first-named gear, a projection carried by the element slidable on said support, and a latch having one end secured to said support and its free end provided with an opening adapted to receive said projection whereby to retain said support in a position to operate said gears.

1,194,610. SIGN-STRETCHER. ABRAHAM FISCHER, Hillsboro, Kans., assignor of one-third to William H. De Walt and one-third to Peter P. Barkman, Hillsboro, Kans. Filed Nov. 10, 1915. Serial No. 60,756. (Cl. 40—125.)

1. A stretcher of the character described comprising a supporting member, oppositely bowed resilient end members attached to opposite ends of the supporting member, and means on the ends of said end members for gripping the article to be stretched.

2. In a stretcher of the character described, a supporting member made in two sections and longitudinally expansible and contractible, means for holding said sections in any adjusted relation, and end members mounted upon the opposite ends of said sections, each end member consisting of two divergent arms resiliently held in divergent relation and against movement into a position of alinement, each of said arms being movable relative to the supporting member.



3. In a stretcher of the character described, longitudinally adjustable stretcher sections, oppositely bowed resilient end members mounted each upon an end of one of the sections, the end members when so disposed being in oppositely bowed relation, latching means holding the stretcher sections in adjusted position and normally preventing their collapse, and means upon the extremity of the end members for gripping the corners of an article to be stretched.

4. A stretcher of the character described comprising a tubular stretcher section and a stretcher section having a telescopic relation to the tubular section, said last-named section being formed with ratchet teeth, a pawl carried by the tubular section and engaging said ratchet teeth, a support operatively connected to the tubular section, end members attached each to the outer end of one of said stretcher sections, each member consisting of a resilient bowed strip, the arms of one strip extending in a divergent relation to the arms of the opposite strip, and means on the extremities of the strips for engaging with the corners of an article to be stretched.

5. In a stretcher of the character described, a support comprising relatively longitudinally adjustable sections, means for holding the stretcher sections in adjusted relation against collapse, oppositely bowed resilient strips each mounted upon the outer end of one of said sections, each strip at each extremity being bent to provide lateral walls at right angles to the face of the strip, resilient ears extending over said walls, a lever supporting member having portions projecting over the ears, and levers mounted in said lever supporting member and engageable with said ears to hold them closed.

[Claim 6 not printed in the Gazette.]

1,194,611. JEWELRY. THEODORE H. FISHEL, New Rochelle, N. Y. Filed Oct. 30, 1915. Serial No. 58,773. (Cl. 63—4.)



1. An integral jewel setting adapted to receive and hold a jewel on two sides, consisting of a back, two side walls and two open sides, a tongue formed at one of the open sides and a loop formed at the other open side.

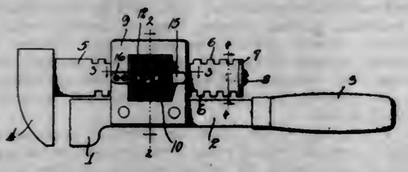
2. An integral jewel setting consisting of a back, two side walls and two open sides, a tongue formed at one of the open sides and a loop formed at the other open side, the loop being slightly raised above the bottom of the jewel setting.

3. An integral jewel setting consisting of a back, two side walls, each having on its inner side a shoulder on which a jewel is adapted to rest, and two open sides, a tongue formed at one of the open sides and a loop formed at the other open side.

4. An article of jewelry consisting of sections flexibly connected, each section having a tongue at one end and a loop at the other end, the tongue of one section being adapted to fit into from the bottom and fold over the loop in the adjacent section, the connecting means being concealed by the jewels placed in the sections.

5. An article of jewelry consisting of integral sections flexibly connected, each section being adapted to receive a jewel, the sections being connected closely together so that the jewels form a practically continuous line and are held in position by the side walls of the sections, each section having a tongue at one end and a loop at the other end, the tongue of one section being adapted to fit into and fold over the loop of the adjacent section.

1,194,612. WRENCH. JULIUS C. FJERDINGSTAD, Los Angeles, Cal. Filed Mar. 31, 1916. Serial No. 88,149. (Cl. 81—160.)



1. In a wrench, the combination of a pair of jaws, a shank for each of said jaws one of which is provided with screw threads, a housing mounted upon one of the shanks and having said screw threaded shank extending longitudinally through the housing, said housing provided with an opening in each of its sides, a nut surrounding said screw threaded shank and extending through the side openings in said housing, leaf springs secured to said housing at one edge thereof and extending through said nut and across the openings in the sides of said housing, said nut provided with recesses in which said leaf springs are adapted to register when said nut is turned to locked position.

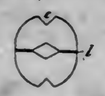
2. In a wrench, the combination with a pair of jaws one movable and the other stationary, said stationary jaw having a shank provided with a handle, said movable jaw having its shank provided with threads, a housing secured to the shank of said stationary jaw and provided with openings in its sides, a nut arranged in said housing and provided with interior threads, said threads having oppositely arranged cut-out portions whereby the threads of said nut may be disengaged from the threads of said shank, spring elements having one end secured to said housing and extending across the opening in said housing and through the threaded opening of said nut for frictionally engaging the threads of said nut.

3. In a wrench, the combination of a pair of jaws, one stationary and the other movable, said movable jaw provided with screw threads, a housing secured to said stationary jaw and having openings in its sides, a nut screw threaded mounted upon the screw threads of said stationary jaw and having oppositely arranged cut-out portions on its interior, spring elements secured to said housing and extending through said nut for frictionally engaging the threads of said nut when said movable jaw is in open position and adapted to engage the said recesses on the interior of said nut when said movable jaw is in locked position, and means mounted upon the outside of the nut for indicating the position of the threads on the interior of said nut.

4. In a wrench, the combination of a pair of jaws, one movable and the other stationary, the shank of said stationary jaw carrying a housing, the shank of said movable jaw provided with threads and extending longitudinally through said housing, a nut mounted upon the threads of the shank of said stationary jaw, springs extending through said nut and across the openings in the side of said housing and adapted to register with recesses provided in the threads of said nut when said nut is turned to locked position.

5. In a wrench, the combination of a pair of jaws, a shank for each of said jaws one of which is provided with screw threads, a housing mounted upon one of the shanks and having said screw threaded shank extending longitudinally through the housing, said housing provided with an opening in each of its sides, a nut surrounding said screw threaded shank and extending through the side openings in said housing, leaf springs secured to said housing at one edge thereof and extending through said nut and across the openings in the sides of said housing, said nut provided with recesses in which said leaf springs are adapted to register when said nut is turned to locked position, and characters stamped upon the outside of the nut for indicating the position of the threads on the interior of said nut.

1,194,613. MEANS FOR LIGHTING PETROLEUM-GAS BURNERS. ANDREW JOHN FREDRIKSON, Jakobsdal, near Jönköping, Sweden. Filed Dec. 1, 1913. Serial No. 804,098. (Cl. 44—2.)



1. A fuel briquet of substantially circular shape having formed thereon a diametrically disposed score and having formed therein a centrally disposed hollow space.

2. An inflammable solid fuel which does not become liquid when burning, consisting of a mixture of bog-moss, flour and paraffin and provided with notches on its side, and adapted to embrace a petroleum gas burner for holding the fuel in close proximity thereto.

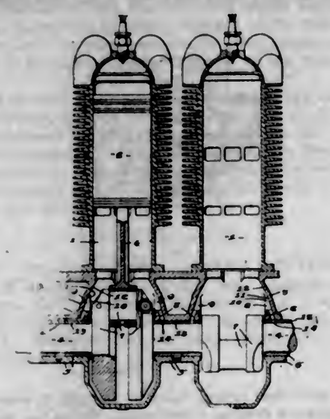
3. An inflammable solid fuel which does not become liquid when burning, consisting of a mixture of vegetable material of the genus *Sphagnum*, ground cereals, and solid hydrocarbons provided with notches and adapted to embrace a petroleum gas burner and hold the fuel in close proximity thereto.

4. An inflammable solid fuel which does not become liquid when burning, provided with notches on its diametrically opposite sides, adapted to embrace a petroleum gas burner and hold the fuel in close proximity thereto.

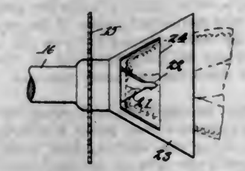
1,194,614. OILING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. EGBERT T. GEORGE and JACOB E. GRAMLICH, Syracuse, N. Y., assignors to Chase Motor Truck Co., Syracuse, N. Y., a Corporation of New York. Filed Feb. 9, 1914. Serial No. 817,524. (Cl. 184—11.)

1. In a base compression, internal combustion engine, a base or crank casing serving as an oil receptacle, and being formed with bearings, and a crank shaft journaled in the bearings, the crank casing being also formed with ducts leading to the bearings, the ducts being disconnected from the exterior of the casing except through the bearing openings, and each having an upwardly extending portion located above the bearing and opening into the interior of the crank casing in position to receive oil running down the sides of the crank casing and to be subject to the compressing and suction actions of the piston whereby an oil seal is maintained about the crank shaft, substantially as and for the purpose described.

2. In a base compression, internal combustion engine, a base or crank casing serving as an oil receptacle and formed with bearings for the crank shaft of the engine, the casing being formed with internal pockets in opposite sides thereof, the pockets being located above the bearings and open at their tops and inner sides, and oil ducts leading from the pockets to the bearings, and being disconnected from the outer air except through the bearing openings, the pockets being located in position to receive oil running down the sides of the crank casing and to be subject to the compressing and suction actions of the piston whereby an oil seal is maintained about the crank shaft, substantially as and for the purpose set forth.



1,194,615. CORN-HUSKING MACHINE. SOLOMON GERMAN, Jessups, Md. Filed Feb. 16, 1916. Serial No. 78,564. (Cl. 130—5.)



1. In a corn husking apparatus, means for severing the husks at their connection with the cob, said means comprising a rotatable tapered blade having a centering point at its apex, and a hood inclosing the blade and arranged to rotate therewith, said hood being open at its outer end.

2. In a corn husking apparatus, means for severing the husks at their connection with the cob, said means comprising a rotatable tapered blade having a centering point at its apex, and a hood inclosing the blade and arranged to rotate therewith, said hood being open at its outer end and having a side opening.

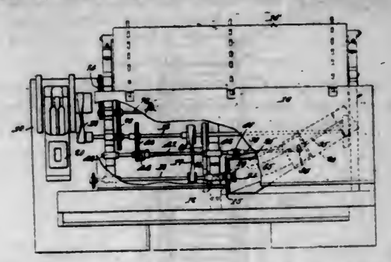
3. In a corn husking apparatus, means for severing the husks at their connection with the cob, said means comprising a rotatable tapered blade having a centering point at its apex, and a hood inclosing the blade, said hood being open at its outer end and flared toward said end.

4. In a corn husking apparatus, means for severing the butt from an unhusked ear of corn, consisting of a shaft with means for rotating the same, a flat cutter on the end of the shaft and tapering at its outer end forming a centering point thereon, and a guard secured to said shaft and surrounding said cutter, said guard flaring outwardly and open at its outer end and also on one of its sides.

1,194,616. PROCESS FOR HUSKING CORN. SOLOMON GERMAN, Jessups, Md. Filed Feb. 16, 1916. Serial No. 78,565. (Cl. 130—5.)

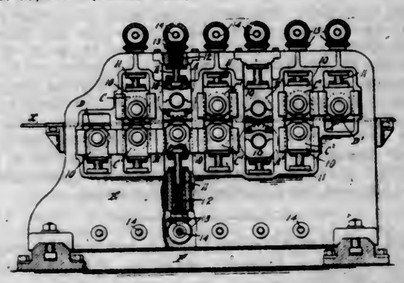
1. The method of removing husks from ears of corn, consisting of cutting the butt end of the cob from its center gradually outwardly to remove said butt end of the cob from beneath the husk connections.

2. The method of removing husks from ears of corn, consisting of cutting the butt end of the cob from its



center outwardly to its connection with the husks, and finally removing the husks from the ears.

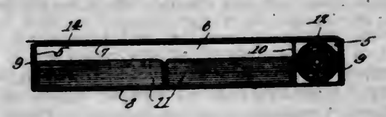
1,194,617. METAL-SCALPING MACHINE AND THE LIKE. EDWARD O. GOSS, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Dec. 8, 1915. Serial No. 65,700. (Cl. 29—81.)



1. In a metal scalping machine or the like, the combination with a scalping or cutting roll and its co-acting pressure roll, of feeding rolls on opposite sides of the scalping and pressure rolls, the pressure roll and feeding rolls being arranged out of line to press the metal against the pressure roll during scalping.

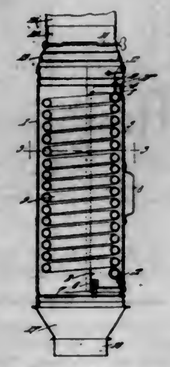
2. In a metal scalping machine or the like, the combination with scalping or cutting rolls for acting successively on opposite sides of the metal and their co-acting pressure rolls, of a series of feeding rolls including rolls on opposite sides of each pair of scalping and pressure rolls arranged out of line with the pressure rolls to press the metal against the successive pressure rolls during scalping.

1,194,618. COMBINED STATIONERY-BOX AND WRITING-TABLET. HENRY L. GOTTSCHALK, Chicago, Ill. Filed Apr. 27, 1916. Serial No. 93,925. (Cl. 11—22.)



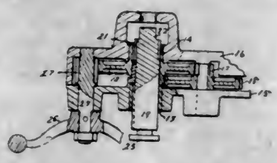
The combination of a receptacle having side and end walls, and a flat bottom; a top provided with depending marginal flanges fitting the outside of the side and end walls of the box, a roll of paper mounted in the box, parallel to one of the end walls thereof, the paper passing from the box between said end wall and the adjacent flange of the top, and adapted to be extended across the bottom of the box when the latter is inverted, and a paper tear-off string fixed at one end to one of the side flanges of the top and of a length to be extended across said bottom.

1,194,619. WATER-HEATER. JOHN BAIN GRANT, Atlanta, Ga. Filed June 2, 1915. Serial No. 31,729. (Cl. 220—124.)



A water heater comprising an upright cylindrical sheet metal casing having an opening at one side, a sheet metal door of arcuate cross section having its side edges overlapping the outer side of the casing at the side edges of said opening, the upper end of the door having a reduced portion fitting within the casing at the upper end of said opening, the lower end of the door overlapping the outer side of the casing at the lower end of the opening, and members attached to the inner side of the door adjacent the lower corners thereof and having inwardly offset portions engageable downwardly upon the inner side of that portion of the casing at the lower end of said opening and adjacent the side edges of said opening.

1,194,620. MACHINE-TOOL. WILLIAM A. GREAVES, Cincinnati, Ohio. Filed Apr. 30, 1915. Serial No. 24,928. (Cl. 82—22.)

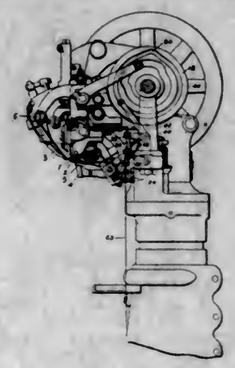


An engine lathe comprising a bed provided with a rack, a carriage movable on the bed, an apron the rear wall thereof depending from the carriage and, adjacent to the rack, said rear wall being formed with a bearing projecting rearwardly therefrom beyond the plane of the rack, a driven gear journaled in the walls of the apron, a shaft splined therein and formed with a pinion and with a rearwardly projecting journal, and a pull knob on the front end of the shaft for moving it longitudinally to simultaneously engage or disengage the pinion and journal with the respective rack and bearing.

1,194,621. WELT-SLASHING ATTACHMENT FOR WELT-SHOE-SEWING MACHINES. ANTON AUGUST HAAHR, Copenhagen, Denmark, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 1, 1915. Serial No. 37,464. (Cl. 112—20.)

1. A welt shoe sewing machine having, in combination, stitch forming devices, a welt guide, means for moving the welt guide toward and from the shoe during the stitch forming operation, and a welt slashing knife mounted on the welt guide for forming a series of transverse cuts in the under side of the welt.

2. A welt shoe sewing machine having, in combination, stitch forming devices, a welt guide, means for moving the welt guide toward and from the shoe, a welt slashing knife mounted on the welt guide, and means for moving the welt slashing knife relatively to the welt guide.



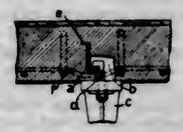
3. A welt shoe sewing machine having, in combination, stitch forming devices, a welt guide, means for moving the welt guide toward and from the shoe, a welt slashing knife under the control of the operator and acting when thrown into operation to form a series of cuts in the under side of the welt during the stitch forming operation, and means for preventing movement of the welt slashing knife, except when thrown into operation by the operator.

4. A welt shoe sewing machine having, in combination, stitch forming devices, a welt guide movable toward and from the shoe, a welt slashing knife for forming a series of transverse cuts in the under side of the welt, and means for actuating the welt slashing knife to cut a slash in the welt independently of the movement of the welt guide, and means for throwing the knife into and out of operation.

5. A welt shoe sewing machine having, in combination, stitch forming devices, a welt guide, a welt slashing knife, a cam for actuating the welt slashing knife, connections between the cam and the welt slashing knife, including a toggle, and a controlling lever having a toggle-breaking slot and a toggle-straightening slot.

[Claims 6 to 8 not printed in the Gazette.]

1,194,622. ARMATURE FOR REINFORCED CONCRETE CONSTRUCTION FOR THE PURPOSE OF SUSPENDING WEIGHTS THEREFROM. ERNST GOTTLOB HAHN, Stuttgart, Germany, assignor to Otto Hahn and William Hahn, Rochester, N. Y. Filed Apr. 2, 1913. Serial No. 758,326. (Cl. 72—105.)

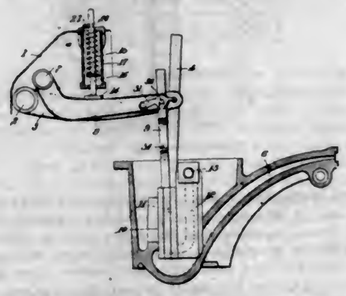


1. The combination with a reinforced concrete construction, of a metallic reinforcing and suspension member extending through and entirely embedded in the concrete and having a vertical portion having a horizontal flange and a horizontal portion of considerably greater thickness and provided near its edge spaced from the vertical portion with an upwardly extending flange, said reinforcing and suspending member being protected from fire and rust and adapted to be bared by breaking away portions of the concrete to uncover the horizontal portion for engagement of suspension members therewith, the bared portions of the reinforcing member and the suspension members being covered with concrete by plugging the recesses formerly cut away.

2. In a device of the character described, the combination comprising a body of reinforced concrete, a flange member disposed in the concrete body which has broken out areas, suspension members disposed in the broken out areas, disposed in engagement with the flange member and a body of plastic matter disposed in the broken out area.

3. In a device of the character described, the combination comprising a body of reinforced concrete, a flange member disposed in the concrete body which has broken out areas, suspension members disposed in the broken out areas, disposed in engagement with the flange member and a body of plastic matter disposed in the broken out area and over the suspension members.

1,194,623. SINGLE-TYPE-CASTING ATTACHMENT. JOHN E. HANRAHAN, Baltimore, Md., assignor to The Ad-Atype Matrix Company, Baltimore, Md., a Corporation of Delaware. Filed Aug. 19, 1913, Serial No. 785,556. Renewed June 12, 1916. Seral No. 103,339. (Cl. 22—6.)



1. In a machine of the class described the combination of means for casting a line of type comprising an operating lever, a melting pot and a cylinder in said pot; a second lever adapted to be moved by said operating lever; a second cylinder in said pot associated with said second lever; and means for delivering metal from said second cylinder for casting single type, substantially as described.

2. In a machine of the class described the combination of means for casting a line of type comprising an operating lever, a melting pot and a cylinder in said pot; a second lever adapted to be moved by said operating lever; a second cylinder in said pot associated with said second lever; and means comprising a piston and spout associated with the second cylinder for delivering metal from said second cylinder for casing single type, substantially as described.

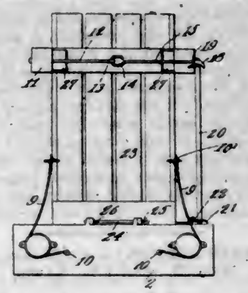
3. In a machine of the class described the combination of means for casting a line of type comprising an operating lever and a melting pot associated with said lever; a second lever associated with said operating lever and pot; connections by which said second lever may be raised by said operating lever; and means for holding said second lever in its raised position, substantially as described.

4. In a machine of the class described the combination of a means for casting a line of type comprising an operating lever and a melting pot associated with said lever; a second lever associated with said operating lever and pot; connections by which said second lever may be raised by said operating lever; means for causing said second lever to descend after being raised; and means for holding said second lever in its raised position, when desired, substantially as described.

5. In a machine of the class described the combination of means for casting a line of type comprising an operating lever and a melting pot associated with said lever; a second lever associated with said operating lever and pot; connections by which said second lever may be raised by said operating lever; means comprising a spring for normally returning said second lever after it has been raised; and means for holding said second lever in its raised position when desired, substantially as described.

[Claim 6 not printed in the Gazette.]

1,194,624. COTTON-PRESS. JOSEPH J. HANUS, TOM JOE HANUS, and JOHN F. PUTZ, Ennis, Tex. Filed Oct. 5, 1914. Serial No. 865,186. (Cl. 100—19.)



1. The combination with a press box having hingedly mounted side and end panels, of means upon the side panels for lapping the end panels to hold them against outward movement, springs connected to the side panels for resisting the outward swinging movement thereof, means upon the side panels for tying them together to resist the expansive force of material retained in the box under compression.

2. In a press box, the combination with sills, side panels having trunnions mounted for rotation in the sills, and detachably and hingedly mounted end panels, of a cap partly housing each of the trunnions, a spring coiled about each cap and secured at one end to the adjacent sill and at its other end to the adjacent side panel, all of said springs operating to hold the panels normally elevated and to resist outward movement thereof, means upon the side panels for lapping the end panels to hold them in raised positions, a revoluble holding device upon one of the side panels, tie devices connected to the other side panel and adapted to engage the holding device, said holding device being revoluble to release the tie devices, and means for securing said holding device against rotation while in engagement with the tie devices.

3. In a press box, the combination with sills, side panels having trunnions mounted for rotation in the sills, and detachably and hingedly mounted end panels, of a cap partly housing each of the trunnions, a spring coiled about each cap and secured at one end to the adjacent sill and at its other end to the adjacent side panel, all of said springs operating to hold the panels normally elevated and to resist outward movement thereof, means upon the side panels for lapping the end panels to hold them in raised positions, a revoluble holding device upon one of the side panels, tie devices connected to the other side panel and adapted to engage the holding device, said holding devices being revoluble to release the tie devices, and means for securing said holding device against rotation while in engagement with the tie devices, said means including an arm extending from said device, and a spring controlled keeper adapted to engage the arm.

1,194,625. ROAD-VEHICLE. JOHN FREDRICK HAYES, Consort, Alberta, Canada. Filed Oct. 1, 1914. Serial No. 864,369. (Cl. 21—182.)

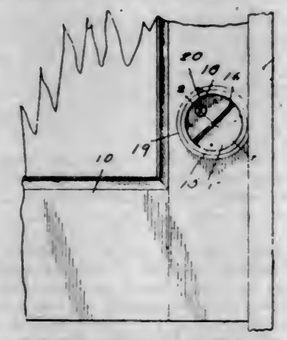
1. In combination, a chassis, front and rear axles, a casing carried by the said rear axle, a pair of divergent trusses flexibly connected by a single point to said casing, means for connecting the outer ends of said trusses to the outer ends of the front axle, a pair of brace rods carried by the opposite ends of the said rear axle, means for connecting the said brace rods to the center of said chassis, sleeves on said axles, and supporting springs

loosely coiled about said sleeves and having their opposite ends connected, respectively, to the chassis and to shackles carried thereby.



2. In combination, a chassis, front and rear axles, a casing carried by the said rear axle, a pair of divergent trusses flexibly connected at a single point to said casing, means for connecting the outer ends of said trusses to the outer ends of the front axle, a pair of brace rods carried by the opposite ends of the said rear axle and connected to the center of the chassis, means for connecting said brace rods to the center of said chassis, sleeves on said axles, supporting springs loosely coiled about said sleeves and having their opposite ends connected, respectively, to the chassis and to shackles carried thereby, and means for preventing spreading of the coils of said springs.

1,194,626. SASH-HOLDER. JOHN HERSEY, Devon, Mont. Filed Apr. 28, 1915. Serial No. 24,502. (Cl. 16—19.)



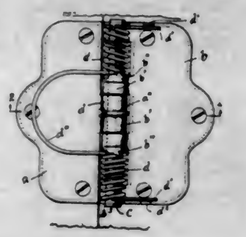
A sash holder comprising superimposed outer disks and an intermediate disk confined between the outer disks, the edge portion of the intermediate disk being directed longitudinally and then outwardly and the edge portion of one of the outer disks being coextensive and parallel to the outwardly directed edge portion of the intermediate disk, a rubber ring confined between the outwardly directed edge portion of the intermediate disk and the edge portion of the outer disk, a finger grip on the other outer disk, and a pivot screw passed through said disks, eccentrically to the latter.

1,194,627. APPAREL-PROTECTOR. EDITH M. HILL, Denver, Colo. Filed Feb. 1, 1913. Serial No. 745,532. (Cl. 2—95.)



A fabric apparel protector comprising a band adapted to be inserted within an article of apparel, said article being of approximately tubular form, and said band having two openings therein, a spring uniform in width throughout its length and of substantially the same length as the band and adapted to have its portions inserted in said openings in such a manner that the entire spring, except a small portion thereof, will be entirely inclosed by the band, whereby the spring will press outwardly against the inner wall of said tubular article of apparel, and also be readily removable therefrom, said protector having a portion of comparatively large diameter adapted to be folded back over the outside of the tubular article, substantially as described.

1,194,628. SEPARABLE SPRING-HINGE. JOHN HIST, Alliance, Ohio. Filed May 9, 1916. Serial No. 96,317. (Cl. 16—25.)



1. In a spring hinge, the combination with two co-acting leaves, one of which is provided with a substantially U-shaped pivotal member and the other with a sleeve of a pintle adapted pivotally to unite said leaves, and a coiled spring mounted upon said pintle and bearing upon each of the leaves, whereby the pintle is normally engaged within the U-shaped retaining portion and the hinge is maintained in assembled relation, substantially as set forth.

2. In a spring hinge, the combination with two co-acting stamped metal hinge sections, one of which is provided with a sleeve member and the other with a rearwardly open pivotal member, of a pintle adapted to be inserted within said members, and a spring engaging said pintle and both of said hinge sections, whereby the pintle is normally maintained within the rearwardly open pivotal member and the hinge is held assembled for use, substantially as set forth.

3. In a spring hinge, the combination with two separable leaves or hinge sections, of a spring mounted at the knuckle of said leaves and normally maintaining the same in pivotal relation; one of said leaves having a rearwardly open pivotal mounting, and the other with detaining means adapted temporarily to engage and restrain the spring, and a pintle normally uniting said leaves and spring, substantially as set forth.

4. In a spring hinge, the combination with two separable hinge sections, one of which is equipped with pivoting sleeves and a retaining detent and cam, and the other with a rearwardly open pivotal member, of a coiled spring mounted above and below said cams terminally bearing upon the first named hinge section and centrally bearing upon the second named hinge section, and a pintle extending through the coils of said spring and normally maintaining the pivotal members of the leaves in co-acting relation, substantially as set forth.

5. In a spring hinge, the combination with two stamped metal sections or leaves, of a pintle, a coiled spring upon said pintle re-acting against both hinge sections to maintain them in co-acting relation; one hinge section respectively being provided with an expanding cam and detent, and the other with a rearwardly open pivotal member, whereby the hinge sections may be separated upon engaging the spring with the cam and detent, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,194,629. EFFICIENCY-CHART. CHARLES H. HODGES, New York, N. Y. Filed Apr. 17, 1915. Serial No. 22,182. (Cl. 116—50.)



1. A chart comprising a base having thereon a scale, the graduations of which represent a progression of units, columns extending laterally from said scale in the order of progression of said units, other columns intersecting the aforesaid columns, and, with said scale, representing the entire span of an object to be accomplished, while the first said columns represent fractions of said span, and markers of diverse length associated with said other columns, each marker having a length covering a certain number of said units and indicating a certain fraction of said span in the order of progression of the first said columns.

2. A chart comprising a base having thereon a scale, the graduations of which represent a progression of units, columns extending laterally from said scale in the order of progression of said units, other columns intersecting the aforesaid columns, and, with said scale, representing the entire span of an object to be accomplished, while the first said columns represent fractions of said span, and markers of diverse length associated with said other columns, some at least in linear succession, each marker having a length covering a certain number of said units and provided with a name, and with indicia indicating a certain fraction of said span in the order of progression of the first said columns.

3. A chart comprising a base having a surface representing a field of ground, a scale, the graduations of which represent a progression of units, the length of said scale standing for the sum of a number of periods of planting of seed to maturity, columns extending laterally from said scale across said surface, in the order of progression of said units, and other columns intersecting aforesaid columns, and each representing the span of the sum of said periods, while the first said columns represent fractions of said span, and markers of diverse length associated with said other columns, each marker standing for a certain seed, and having a length standing for the period of planting to maturity of the seed which it stands for.

4. A chart comprising a base having a surface representing a field of ground, a scale, the graduations of which represent a series of units, the length of said scale standing for the sum of a number of periods of planting of seed to maturity, columns extending laterally from said scale across said surface, in the order of said series of units, and other columns intersecting aforesaid columns, and each representing the span of the sum of said periods, while the first said columns represent fractions of said span, and markers of diverse length associated with said other columns, each marker standing for a certain seed, and having a length standing for the perior of planting to maturity of the seed which it stands for, and bearing indicia readable in connection with the said units of said scale for ascertaining the period during which its designated seed may be planted.

5. A chart comprising a base having a surface representing a field of ground, a scale, the graduations of which represent a series of units, said units being numbered according to such progression and the length of said scale standing for the sum of a number of periods of planting of seed to maturity, calendric designations for the growing season, associated with said scale, columns defined by lines extending laterally from said scale across said surface, in the order of said series of units, and other columns intersecting aforesaid columns, and each representing the span of the sum of said periods, while the first said columns represent fractions of said span, and shiftable markers of diverse length associated with said other columns, some at least in linear succession, each marker standing for a certain seed, and having a length standing for the period of planting to maturity of the seed which it stands for, and bearing indicia readable in connection with the said units of said scale for ascertaining the period during which its designated seed may be planted.

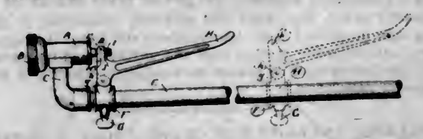
1,194,630. SKIRT AND WAIST SUPPORTER. THOMAS GILMOUR HOGAN, Edmonton, Alberta, Canada, assignor of one-fourth to E. P. Gaudet, Edmonton, Alberta, Canada. Filed Nov. 26, 1915. Serial No. 63,501. (Cl. 241—11.)



1. A skirt and waist supporter including a back plate provided with a pair of longitudinally extending slots intermediate of its breadth dividing the plate into two portions, one of the said portions having diverging tongues and the other portion having converging tongues, and means for preventing vertical displacement of the skirt and waist.

2. A skirt and waist supporter including a back plate provided with longitudinally extending slots intermediate of its breadth dividing the plate into two portions, means for preventing twisting of the skirt and waist, an upwardly disposed tongue on one portion of the plate adapted to engage the skirt, and a downwardly disposed tongue on the other plate adapted to engage the waist.

1,194,631. ADJUSTABLE VALVE-CONTROLLER. ARTHUR J. JASMIN, Albert Lea, Minn. Filed Dec. 16, 1915. Serial No. 67,245. (Cl. 137—80.)



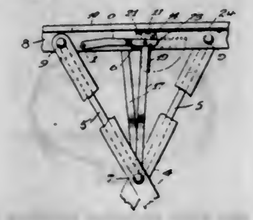
A nozzle valve shell, an L connection attached to said shell, a shut off pin longitudinally movable in said shell, said pin provided with an annular recess, and a supply pipe attached to said L, in combination with a collar movable on said pipe, means to secure said collar in an adjusted position, an L-shaped lever pivotally mounted on said collar, the shorter arm of said lever provided with a forked end adapted to engage with the annular groove in said pin, said forked end and pin provided with apertures adapted to receive a flexible wire to connect said lever and pin when the collar is adjusted to a position on said pipe remote from said shell.

1,194,632. CONDENSATION-TRAP FOR ACETYLENE-LIGHTING APPARATUS. ALEXANDER F. JENKINS, Baltimore, Md., assignor to The Alexander Milburn Company, Baltimore, Md., a Corporation of Maryland. Filed Dec. 12, 1911. Serial No. 665,284. (Cl. 48—140.)



The combination of two sections of flexible hose through which a vapor-containing gas flows, and a single device between the ends of the sections and constituting the following elements: a connector for uniting the sections, a weight for causing the hose sections to incline toward a common point, and being in the form of a condensation trap for collecting condensation that drains to the device by the inclining of the hose sections.

1,194,633. FOLDING TABLE. KARL G. JOHANSON, Concord Junction, Mass. Filed Nov. 24, 1915. Serial No. 63,350. (Cl. 45—116.)

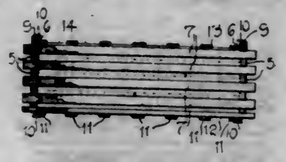


1. In a folding table having a top formed in two sections united by eccentrically pivoted top stays, each stay having a transverse projection extending beyond the plane of the other from the pivotal point throughout or part of their whole length, slots through said projections for receiving the top fastenings, a recess in the adjacent face of each top stay, pivots mounted in said recesses and projecting on the opposite sides of the top stays respectively, pairs of cross pivoted leg supports having their upper ends seated on said pivots, and a brace extending from the pivotal point at top of the inner leg support of each top section to the pivotal intersection of the opposite pair of leg supports.

2. In a folding table having a top formed in two sections united by eccentrically pivoted top stays, two pairs of leg supports pivoted together intermediate their ends the upper end of each pair being pivoted to the top stays, a locking device having its lower end pivotally connected to the leg supports adjacent the pivotal point thereof on a common pivot, the upper end pivotally connected to the top stay, a pivotal joint intermediate the ends, the upper part automatically folding with the unfolding of the table, and means operable to engage said upper part and lock the same in position.

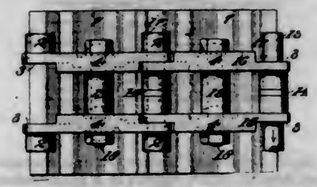
1,194,634. COLLAPSIBLE CRATE. JOHN J. JOHNS, Ponchatoula, La. Filed July 21, 1915. Serial No. 41,131. (Cl. 217—48.)

In a collapsible crate, side and end slats alternately arranged and having their ends overlapping, vertical pivot rods disposed through the intersecting ends of the slats and having their opposite end portions laterally bent, a longitudinal cleat secured in the inner face of each of the uppermost side slats, a removable top adapted to be slidably engaged beneath said cleats, and a detachable bottom section having longitudinal slats and superposed end bars connecting the same, said end bars being adapted for engagement upon the outer faces of the lowermost end slats of the crate when the bottom is in place, the lower angular ends of the pivot rods being adapted for engagement with



said bottom section when the rods are turned in one direction to retain said section in assembled position.

1,194,635. CHAIN. ALFRED C. JOHNSON, Winters, Cal. Filed May 25, 1915. Serial No. 30,327. (Cl. 21—150.)



1. A chain link consisting of two separable side plates, a bearing member formed on each end of each plate, a pin having a roller centrally formed thereon extending through each set of bearing members, said roller forming a spacer between the bearing members on the opposite plates, and means for securing the plates together.

2. A chain link consisting of two separable side plates, a bearing member formed on each end of each plate, a pin having a roller centrally formed thereon extending through each set of bearing members, said roller forming a spacer between the bearing members on the opposite plates, means for securing the plates together, said means comprising a bolt extending through the side plates of the link, and a spacing sleeve interposed between the plates and surrounding the bolt.

3. A track chain link comprising two separable reversible side plates, a rail flange formed on the upper edge of each plate, a bearing member formed on each end of each plate, a pin having a roller centrally formed thereon extending through each set of bearing members, said roller forming a spacer between the bearing members, and means for securing the plates together.

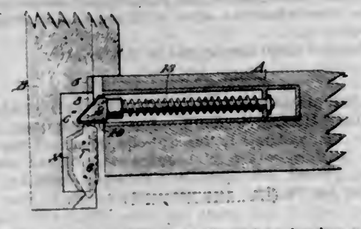
4. A track chain link comprising two separable side plates, a rail flange formed on the upper edge of each plate, a bearing member formed on each end of each plate, a pin having a roller centrally formed thereon extending through each set of bearing members, said roller forming a spacer between the bearing members, means for securing the plates together, and a corrugated shoe secured to the plates of the link.

5. A track chain link comprising two separable side plates, a rail flange formed on the upper edge of each plate, a bearing member formed on each end of each plate, a pin having a roller centrally formed thereon extending through each set of bearing members, said roller forming a spacer between the bearing members, means for securing the plates together, a shoe mounted crosswise of each set of plates forming a link, a seat formed on the lower edge of each plate to support the shoe, and a bolt extending through the seat on each plate and the shoe to secure the shoe.

[Claims 6 to 12 not printed in the Gazette.]

1,194,636. SILENT DOOR-LATCH. ROBERT JOY, San Francisco, Cal. Filed Nov. 22, 1915. Serial No. 62,735. (Cl. 70—15.)

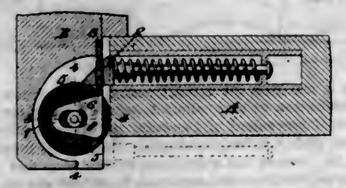
1. In combination with a striker plate having a latch receiving opening and an extension alined with the opening and having a chambered part, a contact piece embedded in said chambered part having its end free and tapered outwardly, the ends of said contact piece terminating beyond the ends of said extension and the end adjacent the latch receiving opening extending into the latter, said contact piece having a series of perforations adapted to receive a lubricating substance.



2. In combination with a striker plate having a latch receiving opening, and an extension formed with a chamber the front of which is open, said chamber having end walls, a non-metallic contact piece fitted in the chamber and rigidly secured thereto and having end parts abutting the end walls of the chamber and having its end terminals extending beyond the end walls of the chamber.

3. In combination with a latch, and a striker plate having a latch receiving opening and an extension, a non-metallic contact piece connected to and extending beyond the ends of the extension and into the latch receiving opening, and a facing of compressible material on the latch adapted to ride over said contact piece.

1,194,637. SILENT DOOR-LATCH. ROBERT JOY, San Francisco, Cal. Filed Mar. 7, 1916. Serial No. 82,589. (Cl. 70—15.)



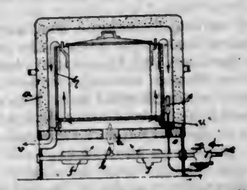
1. The combination with a spring-pressed latch, of a roller journaled in the line of movement of the latch so that said latch will be retracted by the pressure of the roller periphery during the closing movement of the door, and a pin fixed with relation to the roller and adjustable to be engaged by the back of the latch when the door is fully closed.

2. A latching device for doors, comprising a spring-pressed latch bolt, the end of which is adapted to pass through the latch plate on the door casing, a roller journaled within the latch plate with its periphery in the line of travel of the bolt, bearing plates for the axle of the roller, and screws by which said axle and the roller may be adjusted toward or from the edge of the door.

3. A latch device for doors, including a spring-pressed bolt movable in the edge of the door, a latch plate on the casing through which the bolt passes when the door closes, a roller journaled inside of the latch plate and projecting therethrough so that the latch may contact with and be retracted by the periphery of the roller during the closing movement of the door, and an adjustable pin against which the back of the latch contacts after it has completed its latching movement.

1,194,638. COOKING-CHEST. HUGO JUNKERS, Aix-la-Chapelle, Germany. Filed Nov. 29, 1912. Serial No. 734,158. (Cl. 126—39.)

1. A cooking chest of the character described, comprising a non-heat-conducting casing, having a separable portion constituting a cover, and containing partitions arranged to define a space available upon the removal of the cover to receive a food-containing vessel, and also to cause a circulation of heated air about said space within the casing, a heater for raising the temperature within the casing and a controlling device for the heater positioned entirely within the casing and in the path of the air circulating therein.

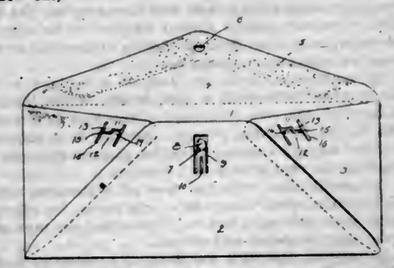


2. A cooking chest of the character described, comprising a non-heat-conducting casing, having a separable portion constituting a cover, and containing partitions arranged to define a space available upon the removal of the cover to receive a food-containing vessel, and also to cause a circulation of heated air about said space within the casing, a heater for raising the temperature within the casing and a controlling device for the heater positioned entirely within the casing and in the path of the air circulating therein, one of the circulating partitions being located between the controlling device and the space for the food-containing vessel.

3. A cooking chest of the character described comprising a non-heat-conducting casing, having a separable portion constituting a cover, and containing partitions arranged to define a space available upon the removal of the cover to receive a food-containing vessel, and also to cause a circulation of heated air about said space within the casing, a burner exterior to the casing, a heat transmitting element exposed on one side to the hot gases from the burner, and on the other side extending within the casing and lying in the path of the air which circulates within the casing, and a controlling device for the burner arranged within the casing.

4. A cooking chest of the character described, comprising a non-heat-conducting casing, partitions arranged within said casing to define an open space available to receive a food-containing vessel, and also to cause a circulation of the heated air about said space within the casing whereby the circulating air will come into direct contact with the vessel, a heater for raising the temperature within the casing and a controlling device for the heater, said controlling device being responsive to variations in temperature and being exposed solely to the air circulating within the casing.

1,194,639. SAFETY-ENVELOP. ROY L. KAY, California, Mo. Filed Apr. 14, 1916. Serial No. 91,215. (Cl. 229—82.)



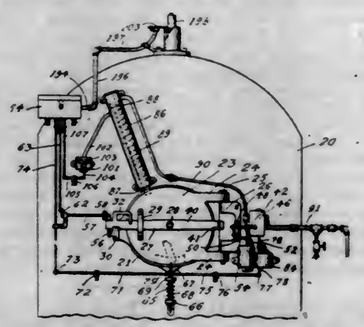
1. A safety envelop including a body and top and bottom flaps, the top flap being arranged to overlap the bottom flap and having an opening and the bottom flap being provided with an integral oblong tongue of substantially uniform width throughout its entire length cut from the bottom flap of material located entirely above the lower edge of the bottom flap when the latter is folded.

said tongue having its side and end edges arranged in spaced relation with the edges of the opening formed by the cutting of the flap, said tongue being provided at its inner portion with a longitudinal slot and the outer portion of the tongue being provided with adhesive material, said tongue being passed through the opening of the top flap and sealed against the envelop by the said adhesive material.

2. A safety envelop including a body portion, a bottom flap, end flaps secured to the bottom flap and provided at their upper portions with inner and outer interfitting sealing tongues having laterally reduced free terminal portions spaced from each other by an intervening slot and the side edges of the tongues being spaced from the adjacent portions of the end flaps by side slots and a top flap foldable over the bottom and end flaps and provided with an area having adhesive material adapted to cover and conceal the interfitting tongues of the end flaps.

3. A safety envelop including a body and top and bottom flaps, the top flap being arranged to overlap the bottom flap and having an opening, and the bottom flap being provided with an integral oblong tongue of substantially uniform width throughout its entire length cut from the bottom flap of material located entirely above the lower edge of the bottom flap when the latter is folded, said tongue having its side and end edges arranged in spaced relation with the edges of the openings formed by the cutting of the flaps, said tongue being provided at its inner portion with a longitudinal slot located at the opening of the top flap and the outer portion of the tongue being provided with adhesive material for securing it to the envelop.

1,194,640. FUEL-SUPPLY-RECORDING DEVICE. GEORGE C. KERR, Brainerd, Minn. Filed Mar. 24, 1915. Serial No. 16,664. (Cl. 234—1.)



1. In combination with the door of a furnace, a fuel supply recorder comprising a tape, and means within the door opening when the door is opened adapted to be actuated by the shovel when the fireman throws a shovelful of coal for making a record upon the tape.

2. In combination with the door of a furnace, a fuel supply recorder comprising a tape, means within the door opening when the door is opened adapted to be actuated by the shovel when the fireman throwns in a shovelful of coal for making a record upon the tape, and means for forwarding the tape after each actuation.

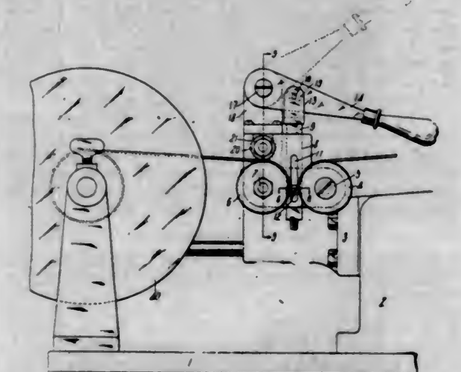
3. In combination with the door of a furnace, a fuel supply recorder comprising a tape, and means for effecting a record upon said tape and for forwarding the tape each time the door is opened and closed.

4. In combination with the door of a furnace, a fuel supply recorder comprising a tape, means for forwarding the tape rendered operative by opening of the door, and means for making a record on the tape when the door is closed.

5. In combination with the door of a furnace, a fuel supply recorder comprising a tape, means for punching the tape including a sliding rod having a bevel faced projection thereon, said rod being mounted for side swinging movement when the same has been slid longitudinally a sufficient distance to effect the punching operation, a plunger having a pivoted toe for engaging said projection to slide the rod until the same becomes displaced laterally to permit passage of the plunger and to return to position upon the return of the plunger, and means engaged by the door when the same is closed for operating the plunger.

[Claims 6 to 30 not printed in the Gazette.]

1,194,641. MACHINE FOR UNCOILING AND STRAIGHTENING METAL STRIPS. JOHN F. KITCHEN, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed Dec. 26, 1912, Serial No. 738,715. Renewed Jan. 14, 1916. Serial No. 72,183. (Cl. 153—32.)



1. In a machine for straightening wire garment stays, the combination of two rollers located on the same side of the path of movement of the stay, one of the rollers being provided with a groove to receive the stay, a member arranged to contact the other side of the stay and located between said rollers and arranged to deflect the stay from a straight line, a feeding roller provided with a plurality of pins or projections adapted to project into the groove in said grooved roller and engage the stay fabric, and means for rotating said feeding roller.

2. In a machine for straightening wire garment stays, the combination of two rollers located on the same side of the path of movement of the stay, one of said rollers being provided with a groove to receive the stay, a member arranged to contact the other side of said stay and located between said rollers and arranged to deflect the stay from a straight line, means for rotating one of said rollers, a feeding roller located in proximity to said grooved roller and provided with a plurality of pins or projections adapted to project into the groove of said grooved roller and engage the stay fabric beyond said deflecting member along the path of movement of the stay fabric, and means for rotating said feeding roller.

3. In a machine for straightening wire garment stays, the combination of two rollers located on the same side of the path of movement of the stay and provided with grooves to receive the stay, a member arranged to contact the other side of the stay and located between said rollers and arranged to deflect the stay from a straight line, a shaft carrying one of said rollers, means for rotating said shaft, a feeding roller provided with a plurality of pins or projections adapted to project into the groove of one of said grooved rollers and engage the stay fabric, and gearing connecting said shaft and said feeding roller for rotating the same.

4. In a machine for straightening wire garment stays, the combination of a frame, a roller rotatable idly thereon,

a second roller, a shaft rotatable in the frame and carrying the second roller, said rollers being located on the same side of the path of movement of the stay, and a member arranged to contact the other side of the stay and located between said rollers and arranged to deflect the stay from a straight line, a driving shaft, a gear loosely rotatable upon said roller shaft and operatively connected to said driving shaft, a ratchet fixed to said roller shaft, a pawl on said loosely rotating gear and engaging said ratchet, a feeding roller provided with a plurality of pins or projections adapted to engage the stay fabric, and connections between said roller shaft and the feeding roller for rotating the same, said roller shaft being loosely rotatable in one direction to permit the stay to be threaded through the machine.

5. In a machine for straightening wire garment stays, the combination of two rollers located on the same side of the path of movement of the stay, a deflecting member arranged to contact with the other side of the stay, a feeding roller provided with a plurality of pins or projections adapted to engage the stay fabric, and means for driving said feeding roller, said means including a pawl and ratchet arranged to permit loose rotation of said feeding roller with respect to its driving means to insert a stay into said machine.

[Claim 6 not printed in the Gazette.]

1,194,642. FOUNTAIN SHAVING-BRUSH. SYDNEY HERBERT KLEEBERG, New York, N. Y. Filed Mar. 18, 1916. Serial No. 85,042. (Cl. 15—50.)



1. A fountain shaving brush consisting of a hollow handle, a brush secured at one end of said handle, a tubular feeder disposed concentrically of said hollow handle and projecting into said brush, said feeder having a port, a valve, a filler ring integrally formed upon said handle, a bracket carried by said ring, a rod guided in said bracket and secured at one end to said valve, a spring bearing at one end against said bracket a push-button in said filler ring, a head screwed on said rod against which the opposite end of said spring bears, said push button adapted to depress said rod and valve, and means for holding said push-button against displacement.

2. A device as described consisting of a hollow handle, said handle being provided at one end with a brush head, a concentric spout, formed integrally upon said brush head and having a port, a brush secured at its inner end against said sleeve and around said spout, said handle being formed at its opposite end with a threaded opening, a transparent push-button arranged to close said opening, a tubular guide for said button being of a uniform diameter and threaded in said opening so as to project into said handle, a valve engaging the outer edge of said spout to close said port, and means controlled by said push button for causing said valve to open and close said port.

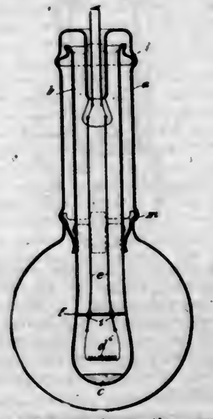
3. A device of the kind described consisting of a hollow handle, said handle being formed with an opening at one end, a brush, a brush head for said brush removably secured to the other end of said handle, a guide member having a tubular part threaded into said opening, a push-button slidable between the ends of said guide member, a central tube formed upon said brush head, said central tube being formed with a port, a valve arranged to close said port, and means controlled by said push-button and adapted to operate said valve.

4. A device of the kind described consisting of a hollow handle formed with a threaded opening at one end, an inwardly projecting bracket formed on said handle, a ring threaded into said opening, an outer flange on said ring and engaging said handle to hold said ring in position, a slidable push-button in said ring, limiting stops at the opposite ends of said ring between which said push button moves, a feeder fitting in said handle and having a valve seat, a valve adapted to engage said seat, a rod secured at one end to said valve, said rod passing through said bracket and bearing against said push-button, a spring coiled around said rod and bearing at one end against said bracket and adapted to cause said button to engage one of said stops to cause said valve to engage said seat.

5. In a device as described the combination of a hollow handle, said handle being formed with a threaded opening and with a bracket projecting in advance of said opening, a valve-operating rod operating in said bracket, a ring threaded into said threaded opening, an external flange formed on said ring and engaging said handle and forming means for unscrewing said ring, a piston sliding in said ring and having a peripheral packing engaging the inner wall of said ring and serving as the only closure for said opening, a head on said rod bearing against said piston, and a spring surrounding said rod and engaging said bracket at one end and said head at its opposite end.

[Claims 6 to 9 not printed in the Gazette.]

1,194,643. INCANDESCENT LAMP. HANS KREUSLER, Berlin-Wilmersdorf, HANS GERDIEN, Berlin-Schmargendorf, and MARCELLO VON PIRANI, Berlin-Wilmersdorf, Germany, assignors to Siemens & Halske A.-G., Berlin, Germany, a Corporation of Germany. Filed Sept. 22, 1914. Serial No. 863,030. (Cl. 176—16.)



1. In an incandescent lamp the combination of the lamp bulb, a gaseous filling therein, conductors projecting into the interior of said bulb, a carbon filament with filament parts which are closely adjacent to each other to reduce convection and conduction and carried between the ends of said conductors, an envelop of a material through which light passes, said envelop being mounted within said bulb and surrounding at some distance said conductors and said filament, a passage between the interior of said envelop and the interior of said bulb near the upper end of said envelop, and liquid mercury placed at the bottom of said envelop near to said filament.

2. In an incandescent lamp the combination of the lamp bulb, a gaseous filling therein, conductors projecting into the interior of said bulb, a carbon filament with filament parts which are closely adjacent to each other to reduce conduction and convection and carried between the ends of said conductors, an envelop of a material through which light passes, said envelop surrounding at some distance said conductors and said filament, fastening means between said envelop and said bulb, a passage between the interior of said envelop and the interior of said bulb near to the upper end of said envelop, and liquid

mercury placed at the bottom of said envelop near to said filament.

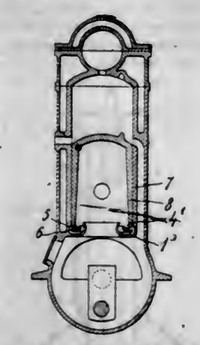
3. In an incandescent lamp the combination of the lamp bulb, a gaseous filling therein, conductors projecting into the interior of said bulb, a carbon filament with filament parts which are closely adjacent to each other to reduce conduction and convection and carried between the ends of said conductors, an envelop of a material through which light passes, said envelop surrounding at some distance said conductors and said filament, fastening means between said envelop and said bulb, a passage between the interior of said envelop and the interior of said bulb near to the upper end of said envelop, liquid mercury placed at the bottom of said envelop near to said filament, and a protective wire net mounted above said filament.

4. An incandescent lamp comprising in combination a lamp bulb, a gaseous filling therein and a carbon filament of concentrated construction therein.

5. An incandescent lamp comprising in combination a lamp bulb, a filling of an indifferent gas therein, and a carbon filament of concentrated construction therein.

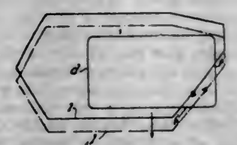
[Claims 6 to 10 not printed in the Gazette.]

1,194,644. LUBRICATION MEANS. LAURENTIUS LAURIN, Lyseki, Sweden. Filed May 12, 1915. Serial No. 27,705. (Cl. 184—18.)



In lubricating means of the kind described, the combination of a member having an oil receptacle, and a member constructed and arranged to be reciprocated relative to the first-named member and having an oil catcher movable into and out of the oil receptacle of the first-named member and also having a port leading from said oil catcher to the surface of the reciprocatory member that is to be lubricated.

1,194,645. VARIABLE-SPEED ELECTRIC MOTOR. JOHN C. LINCOLN, Cleveland, Ohio, assignor to The Lincoln Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 2, 1905. Serial No. 258,532. (Cl. 171—227.)



1. In a variable speed electric motor, the combination with a field-structure, of the armature excited thereby; an exciting circuit for the field-structure in shunt relation with said armature, a movable bearing supporting and in given relation with said armature and its commutator structure, and means for withdrawing the armature axially from the field structure and retaining it in adjusted positions, substantially as set forth.

2. In a variable speed electric motor, the combination with a field-structure, of the armature excited thereby; the same conforming to each other and having respectively inner and outer faces of frusto-conical contour, an exciting circuit for the field-structure in shunt relation with said armature, a movable bearing supporting and in given relation with said armature and its commutator structure, and means for withdrawing the conical armature axially from the field-structure and retaining it in adjusted positions, substantially as set forth.

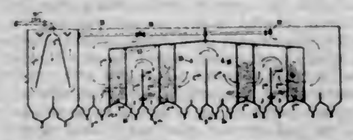
3. In a variable-speed constant-potential electric-motor, the combination with the field structure and its armature connected in shunt relation therewith, of means for securing their relative movement in line with the axis of the armature, whereby the latter may be operated in positions partially withdrawn from said field structure, and means associated with the armature for subjecting the armature windings or coils to an increase in effective flux during the respective periods of commutation, proportional to the withdrawal of said armature, substantially as set forth.

4. In an electric-motor of the class described, the combination with a single or unitary field-structure, of an exciting circuit therefor, in shunt relation with the armature, an armature having a core of approximately the same width as the field structure, means for effecting the partial operative withdrawal of the armature axially from its field structure for varying its speed of rotation; said armature having means associated therewith for successively producing an increase in voltage within its coils during the moment of commutation and proportional to the speed of the armature, substantially as set forth.

5. In a variable-speed constant-potential electric-motor, of the general class set forth, the combination with a single field-structure normally excited by shunt windings thereon, of an armature having a core approximately the width of the field poles mounted normally to rotate thereunder, suitable mechanism for effecting the lateral movement or adjustment of the armature and field structure to vary the speed of rotation; said armature and field having associated means for producing an increase in voltage during the period of commutation, proportional to the withdrawal of the armature from the field, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,194,646. TREATING LIQUIDS. LUCIEN LINDEN, Brussels, Belgium, assignor to William J. Stewart, Belfast, Ireland. Filed Mar. 4, 1914. Serial No. 822,484. (Cl. 210—18.)



1. A method of obtaining an increased output of purified liquid from filtering apparatus, consisting in passing the foul liquid through a filter medium alternately in opposed directions, and subjecting said liquid in each case after its passage through the medium to decantation.

2. A method of obtaining an increased output of purified liquid from filtering apparatus, consisting in dividing the liquid into two portions, passing these portions through respective filtering media, and cleansing one of the filtering media by interruption of the normal flow therethrough and sending through it in the opposite direction liquid which has already passed through the other filtering medium, and which is subsequently subjected to decantation to remove the washed-out impurities therefrom.

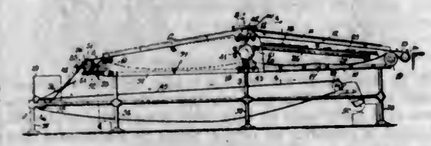
3. A method of obtaining an increased output of purified liquid from filtering apparatus, consisting in passing the foul liquid through filtering media arranged in series, said liquid being passed through the series of filtering material alternately in opposite directions, and subjected to decantation after leaving each filtering medium to minimize the fouling of the filtering material.

4. A method of obtaining an increased output of purified liquid from filtering apparatus, in which the foul water is passed through a filter medium of coarse pebbles alternately in opposite directions, and the filtering operation is in each case immediately succeeded by decantation to minimize the fouling of the filtering material.

5. A method of obtaining an increased output of purified liquid from filtering apparatus, in which the foul water normally is caused to flow successively through filter media of pebbles and of spongy iron, and at intervals the flow of water through these media is reversed for cleansing, the liquid being subjected to decantation after leaving each filter medium to minimize the fouling of the filtering material.

[Claims 6 to 9 not printed in the Gazette.]

1,194,647. RAISED-PRINTING APPARATUS. SAMUEL LIPSIUS, New York, N. Y. Filed Sept. 25, 1915. Serial No. 52,582. (Cl. 34—12.)



1. In apparatus for producing raised printing, an oven, a conveyer traveling through said oven, a sand pan beneath the conveyer having partitions dividing said pan into a plurality of sand trays and a heater beneath said sand pan.

2. In apparatus for producing raised printing, an oven, a conveyer traveling through said oven, a sand pan arranged on an upward incline beneath said conveyer and provided with upstanding partitions dividing said pan into a plurality of sand trays and a heater beneath said sand pan.

3. In apparatus for producing raised printing, an oven having spaced apart sides and a top, a sand pan supported between said sides and having upturned edges spaced inwardly from said sides, a conveyer traveling through the oven above said sand pan, and a heater beneath said sand pan.

4. In apparatus for producing raised printing, an oven, a conveyer traveling through said oven, a sand pan in said oven having upturned edges spaced apart from the walls of the oven and partitions dividing said pan into a plurality of sand trays, and a heater below said sand pan.

5. In apparatus for producing raised printing, an oven, a conveyer traveling through said oven and adapted to carry a freshly inked and powdered sheet in an upward and then downward direction, a heat retaining body beneath said conveyer inclined upwardly from its opposite ends into the apex of the conveyer and forming a heat pocket beneath said apex of said conveyer and a source of heat beneath said heat retaining body.

[Claims 6 to 13 not printed in the Gazette.]

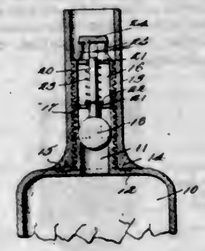
1,194,648. SOLDERING COMPOUND. FRANCIS E. J. LITOT, Wilkinsburg, Pa. Filed Mar. 22, 1915. Serial No. 16,253. (Cl. 75—1.)

1. A soldering compound containing zinc as its main ingredient and having alloyed therewith phosphorus in some form, the amount of phosphorus not exceeding 1 per cent. of the entire compound.

2. A soldering compound containing zinc as its main ingredient and having alloyed therewith phosphor tin, the phosphor tin not exceeding 5 per cent. of the entire compound.

3. A soldering compound containing zinc as its main ingredient and having alloyed therewith phosphor tin, the phosphor tin not exceeding 2 per cent. of the entire alloy.

1,194,649. NON-REFILLABLE BOTTLE. JOSEPH F. LOTS, Spokane, Wash. Filed Mar. 22, 1916. Serial No. 85,965. (Cl. 215—103.)



1. A bottle having a body portion, an externally threaded neck extending from said body portion, the body portion being provided with teeth at the base of the neck forming a circular rack, an auxiliary neck screwed upon the bottle neck, a resilient strip carried by the auxiliary bottle neck and engaging the rack teeth of the bottle to lock the auxiliary neck upon the bottle neck, a guard within the auxiliary neck provided with fluid outlets, a closure fitting within said guard and upon the bottle neck, and means yieldably holding the closure in engagement with the bottle neck.

2. A non-refillable bottle including a receptacle, an externally threaded neck for said receptacle, the receptacle being provided with rack teeth adjacent the bottom of the neck, an auxiliary neck screwed upon the threaded neck and provided with a pawl for engaging the rack teeth and lock the auxiliary neck in place, a closure ball fitting upon the threaded neck, a guard within the auxiliary neck and provided with outlet openings, and means in said guard engaging the closure ball to yieldably hold the same in engagement with the threaded neck.

3. A bottle, a neck for said bottle, an auxiliary neck screwed upon the bottle neck, said bottle being provided with rack teeth positioned in a circular track about the bottle neck and said auxiliary neck being provided with a pawl for engaging the rack teeth of the bottle, a closure fitting upon the bottle neck, a guard within said auxiliary neck, and a spring controlled plunger slidably mounted within said guard and engaging the closure to yieldably hold the same in engagement with the bottle neck.

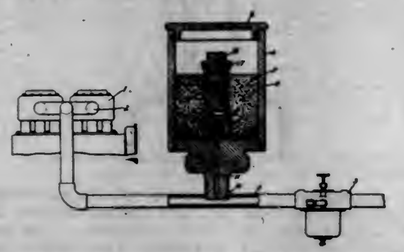
4. A bottle, a neck for said bottle, said bottle being provided with rack teeth positioned about the bottle neck, a closure movably mounted upon said bottle neck, an auxiliary neck secured upon said bottle neck, a pawl carried by said auxiliary neck for engaging the rack teeth of the bottle, a guard housing mounted in said auxiliary neck above said closure an open outer end, and a plunger slidably mounted in the housing and yieldably held in engagement with said closure.

1,194,650. LUBRICATING DEVICE. GUY MCKAY, Longview, Tex., assignor, by mesne assignments, to Graphite Lubricator Company, a Corporation of Delaware. Filed Feb. 11, 1916. Serial No. 77,630. (Cl. 184—76.)

1. A lubricating device for the cylinders of an internal combustion engine comprising a reservoir for containing a flaked lubricant, a hollow stem within the reservoir having an opening extending into the intake manifold of the engine and a lateral opening extending into the reservoir, and a normally opened resiliently mounted plunger adapted to alternately open and close the lateral opening in accordance with the pressure in the manifold.

2. A lubricating device comprising a reservoir for containing a lubricant, a hollow stem within the reservoir having a feeding port, a movable member disposed within the stem and adapted to normally maintain the port partially open, and means for causing the movable member to vibrate to successively close and open the port when it is subjected to relatively small changes in pressure.

3. A lubricating device for the cylinders of an engine comprising a casing, a hollow stem extending into the casing, an opening extending from the hollow stem into the intake manifold of the engine, a lateral opening from the casing to the interior of the hollow stem, a plunger loosely fitted within the hollow stem and means for yieldingly holding the plunger in such position that the lateral opening is normally open.

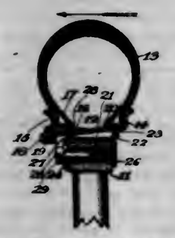


4. The combination with a dry lubricant container, a hollow stem having a passageway therein, of a movable member disposed within the stem and adapted to normally maintain the passageway open, and means for causing the movable member to vibrate in accordance with relatively small changes in pressure.

5. The combination with a dry lubricant container, a hollow stem therein having a feeding port, of a movable member disposed within the stem and adapted to normally maintain the port in its open position, and means for causing the movable member to positively vibrate when it is subjected to relatively small changes in pressure.

[Claims 6 to 19 not printed in the Gazette.]

1,194,651. VEHICLE-WHEEL. JOHN M. MCPHEETERS, Palo Alto, Cal. Filed Sept. 28, 1915. Serial No. 53,027. (Cl. 152—21.)

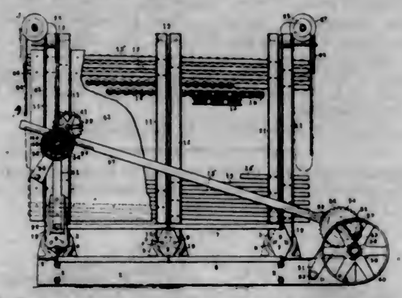


1. In combination, a wheel, a slanted rim therefor of greater diameter at its inner edge than at its outer edge, the outer edge of the rim being provided with a peripheral channel, a tire-retaining flange on the inner edge of the rim, a removable leveling ring on the outer edge of the rim, a tire-retaining flange on the ring, and a locking ring engaged in the rim channel and provided with a flat side to abut and lock the leveling ring to the rim.

2. In combination, a wheel, a slanted rim therefor of greater diameter at its inner edge than at its outer edge, the outer edge of the rim being provided with a peripheral channel, a tire-retaining flange on the inner edge of the rim, a removable leveling ring on the outer edge of the rim, a tire-retaining flange on the ring, and a split locking ring engaged in the rim channel and provided with a flat side to abut and lock the leveling ring to the rim.

1,194,652. VENEER-DRYING APPARATUS. LOUIS G. MERRITT, Lockport, N. Y. Filed May 6, 1915. Serial No. 26,268. (Cl. 34—16.)

1. In apparatus for drying veneer, in combination, a plurality of movable frames, each of said frames comprising upright columns and substantially horizontal supporting bars attached thereto, a plurality of fixed bearings, shafts mounted in said bearings, devices attached to said shafts and connected to the bottoms of said upright columns, means for rotating said shafts whereby each of said frames is moved relatively to the other, and drying platens adapted to be supported by said horizontal bars, said platens being so formed and mounted that they may adapt themselves to variations in the thickness of sheets of veneer held between them.



2. In apparatus for drying veneer, in combination, a series of supporting bars, drying coils adapted to rest upon said bars, each of said coils comprising a plurality of tubes, a plurality of return bends to which said tubes are connected, lugs upon said return bends adapted to engage said supporting bars, and plates attached to said tubes.

3. In an apparatus for drying veneer, in combination, a pair of movable frames, each frame consisting of upright members and substantially horizontal members connected thereto, drying platens carried by said horizontal members, and means adapted to relatively move said frames to impose the weight of the platens carried by one frame upon the platens carried by the other frame.

4. In an apparatus for drying veneer, in combination, a series of supporting bars, a plurality of hollow members, lugs mounted upon said members adapted to engage said supporting bars, a plurality of pipes connected to said hollow members in such a manner as to form a continuous coil, a plurality of plates, each of said plates being adapted to cover a relatively small number of said pipes, and means whereby said plates are attached to said pipes.

5. In an apparatus for drying veneer, in combination, a series of substantially horizontal bars, a plurality of pipes, return bends connecting the ends of said pipes, lugs upon said return bends adapted to engage said horizontal bars, perforated plates, and means whereby said plates are attached to said pipes, each of said plates engaging a number of pipes which is a relatively small fraction of the total number of pipes.

[Claims 6 to 28 not printed in the Gazette.]

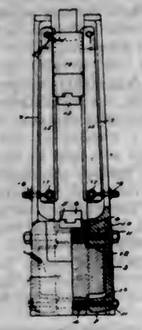
1,194,653. DROP-HAMMER. JOHN H. MONTSTREAM, Hartford, Conn. Filed Dec. 8, 1915. Serial No. 65,679. (Cl. 78—25.)

1. A drop hammer frame comprising an anvil, uprights supported by and movable vertically relatively to the anvil, and means holding the lower ends of the uprights to the anvil the construction being such that a slidable fit between the uprights and the anvil is provided.

2. A drop hammer frame comprising an anvil, uprights supported by the anvil, and means holding the uprights to the anvil in such manner that the anvil may move downward independently of the uprights.

3. A drop hammer frame comprising an anvil with wings projecting outwardly from the sides of the anvil, uprights supported by said wings, and means holding the anvil and the uprights firmly together without interfering with the vertical movement of the anvil relatively to the uprights.

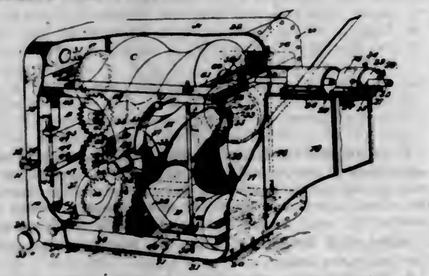
4. A drop hammer frame comprising an anvil having grooves in its sides and wings extending into the grooves, uprights loosely fitting the grooves and resting upon the wings, and means for holding the uprights to the anvil.



5. A drop hammer frame comprising an anvil with grooves in its sides and wings extending into the grooves, uprights slidably fitting the walls of the grooves and resting upon the wings, cushioning material between the wings and the uprights, and rods and nuts passing loosely through the anvil and holding the uprights in position.

[Claims 6 and 7 not printed in the Gazette.]

1,194,654. TRANSMISSION-GEAR. WILBER G. MOORE, Bellville, Ohio. Filed June 17, 1914. Serial No. 845,674. (Cl. 74—36.)



1. A transmission including a sectional housing, a bed removably mounted therein, said bed consisting in two separate sections, adjustable means connecting the sections, spacer blocks interposed between the sections whereby they may be vertically adjusted to increase or decrease the space between them, a driven worm journaled transversely in the bed, a pair of parallel spaced driving worms arranged on diametrically opposite sides of the driven worm and journaled longitudinally in the bed, and adjustable spacer blocks bearing against the terminals of the driving worms whereby they may be adjusted to increase or decrease the radial thrust thereof against the driven worm.

2. A transmission including a sectional bed, a driving worm mounted upon each section of the bed, means connecting the said sections, a driven worm mounted between confronting terminals of the sections and engaged by the driving worms, and means for adjusting the inclination of the driving worms relative to the driven worm.

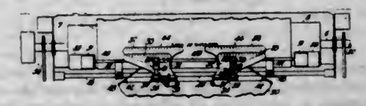
3. A transmission including a bed formed of sections each provided with spaced bearing blocks, the bearing blocks of one section confronting the bearing blocks of the other section, a driven worm mounted between the said confronting bearing blocks, a driving worm carried by each section of the bed and engaging the driven worm, means connecting the sections, and means interposed between the said bearing blocks for adjusting the inclination of the driving worms relative to the driven worm.

4. A transmission including a sectional bed, plates adjustable upon the ends of each section of the bed, a driving worm carried by the plates of each section and adjustable therewith longitudinally of the bed, a driven worm mounted between confronting terminals of the bed sections, and means connecting the sections of the bed.

5. A transmission including a sectional bed, plates arranged adjacent the ends of each section, pins carried by said plates and engaging the respective ends of the sections for slidably supporting the plates upon the sections, a driving worm carried by the plates of each section and adjustable thereon longitudinally of the bed, a driven worm mounted between confronting terminals of the bed sections, and means connecting the sections of the bed.

[Claims 6 to 9 not printed in the Gazette.]

1,194,655. TYPE-WRITING MACHINE. FRANK L. MORGAN, Cincinnati, Ohio, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 22, 1914. Serial No. 878,483. (Cl. 197—127.)



1. In a typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a line-gage extending along the face of the platen at the writing line, and means forming a running connection between the platen and gage for positively moving said gage both up and down with the platen as the latter is shifted, and thereby indicating the writing line when the platen is in both upper and lower case positions.

2. In a typewriting machine, the combination with a roller platen shiftable to upper and lower case positions, of a workpiece holding gage mounted on the machine frame and bearing against the platen or a work-piece thereon along the line of writing, and means forming a running connection between the platen and gage permitting the gage to remain stationary during the letter-feed travel of the platen and positively shifting said gage both up and down with the platen, thereby maintaining a substantially constant relation of the gage to the platen during the case-shifting movements of the latter.

3. In a front-strike writing machine, the combination with a carriage and a roller platen mounted thereon and shiftable to upper and lower case positions, of wings mounted on the machine frame on opposite sides of the printing center and having their upper edges extending horizontally along the printing line on the platen, means to hold said wings with a yielding pressure against the platen at the printing line, and means on the carriage to shift said wings up and down with the platen and maintain the relative position of the platen and said wings substantially unchanged as the platen is shifted to upper and lower case positions.

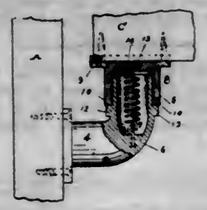
4. In a typewriting machine, the combination with a roller platen, of a set of type-bars having upper and lower case types, a support on which the type-bars are mounted to swing to and from the platen to cause the types to print, said platen and support relatively shiftable to enable the types of either case to print, a line-gage mounted on said support and extending along the printing line on the platen, and shifting means for said gage moving with the platen and having a positive running connection directly with the gage permitting the gage to remain stationary during the letter-feed travel of the platen, said shifting means operable positively to shift the gage relatively to its support during the case-shifting movements to both case positions to maintain the gage in position to indicate the line of writing for both case positions.

5. In a typewriting machine, the combination with a platen frame and platen shiftable up and down to upper and lower case positions, of a line-gage extending along the face of the platen, means on the platen frame having

a running connection with the line-gage to hold it at the writing line when the platen is in upper case position, and a spring to apply a downward pressure to said gage and coöperating with said means to move said gage downward into position to expose to view the writing line when the platen is shifted downward to lower case position.

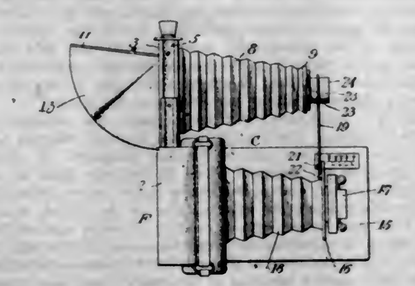
[Claims 6 to 27 not printed in the Gazette.]

1,194,656. GATE-HINGE. OLA T. OSMUNSON, Berkeley, Cal. Filed May 18, 1914. Serial No. 839,360. (Cl. 16—163.)



A gravity hinge, consisting of an elbow casting having a flange at one end adapted to be fixed to a post, the other end forming a hollow pintle adapted to house a spring and cam lugs cast integral with the pintle, an inverted cup casting having closing and locking cams and a flange adapted to be fixed to a gate frame, said cup swiveling upon the pintle and said cams engaging the lugs in a manner to close the gate by gravity and to lock the gate in either open or closed position, substantially as shown.

1,194,657. CAMERA. CHARLES JOSEPH OVERMAN, San Antonio, Tex. Filed Mar. 31, 1915. Serial No. 18,340. (Cl. 95—44.)



1. The combination with the box, lens and bellows of a folding camera, of a housing carried by the box, a focusing bellows foldable within the housing, and means for extending the focusing bellows and connecting it with the movable front of the camera for focusing.

2. The combination with the box, lens and bellows of a folding camera, of a housing at the rear of the box, a focusing ground glass and bellows folded within the housing, and means for connecting the front end of the focusing bellows to the camera lens so that the main and focusing bellows will move together in focusing.

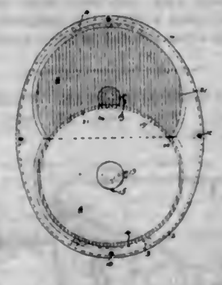
3. The combination with the box, lens and bellows of a folding camera, of a housing at the rear of the box, a focusing ground glass arranged to fold within the housing and to extend above the box substantially in line with the camera back when extended, a focusing bellows secured to the ground glass and adapted to fold within the housing, a focusing lens and means to connect the focusing lens to the camera lens and to the front of the focusing bellows.

4. The combination with the box, lens and bellows of a folding camera, of a housing at the rear of the box, a focusing ground glass arranged to fold within the housing and to extend above the box substantially in line with the camera back when extended, a focusing bellows secured to the ground glass and adapted to fold within the housing, a focusing lens movably secured to the camera lens and means for detachably connecting the front of the focusing bellows with the focusing lens.

5. The combination with the box, lens and bellows of a folding camera, of a housing at the rear of the box, a focusing ground glass arranged to fold within the housing and to extend above the box substantially in line with the camera back when extended, a focusing bellows secured to the ground glass and adapted to fold within the housing, a focusing lens, an arm carrying the focusing lens and pivotally and slidably connected to the camera lens and a quickly releasable device to connect the front of the focusing bellows with the focusing lens.

[Claims 6 and 7 not printed in the Gazette.]

1,194,658. COMBINATION AUTOMOBILE-LAMP. JAMES R. PAGIN, Valparaiso, Ind. Filed Dec. 6, 1915. Serial No. 65,211. (Cl. 240—46.)



1. In automobile lamps, a single casing, a lamp unit comprising a pair of reflectors attached to each other so that the curved portion of one partially stands in front of the other, a separate lamp for each reflector, means for holding the unit in the casing, means for independently focusing each lamp, and means for selectively supplying current to the lamps.

2. In automobile head lights, a single casing, an illuminating unit supported thereby, said unit comprising reflectors and separate lamps for each reflector, the reflectors being secured to each other so that the circular front of one passes over the major portion of the adjacent part of the other, and means for supplying current to the lamps over variable connections.

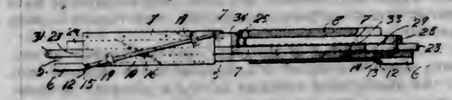
3. In automobile head lights, a single casing, an illuminating unit supported therein, said unit comprising a pair of reflectors so positioned with respect to the casing and to each other that a portion of one reflector is placed in front of a part of the other so as to obstruct the ascending rays from the latter reflector.

4. In an automobile head light, a single casing, an illuminating unit comprising a pair of reflectors placed one above the other so that the two axes are a less distance apart than the diameter of either reflector, the body of one being removed to form a clearance for the other, and means for supporting the same within the casing.

5. In automobile lamps, an elliptical casing, a similarly shaped light transmitting front therefor, a dimming portion extending over a portion of the upper part of the ellipse so as to form a circular transparent surface below the same, independent reflectors behind each surface respectively conforming in shape to said surfaces, a source of illumination for each reflector, and means for supplying current to the illuminators separately or simultaneously.

[Claims 6 and 7 not printed in the Gazette.]

1,194,659. FOLDING CRATE. LESTER A. PARKER, Denver, Colo., assignor of one-half to The Home Club Investment Realty Company, Denver, Colo., a Corporation of Colorado. Filed Mar. 18, 1915. Serial No. 14,073. (Cl. 217—47.)



1. A folding crate or box comprising a bottom, sides hinged thereto to fold inwardly and downwardly thereagainst, a removable top of the same width as the bottom and having a transverse bar secured to its lower surface and whose ends abut and space the sides when the crate is in use, the top member when the crate is collapsed being adapted to occupy a position on top of the side members, and end members hinged to the bottom to fold downwardly upon the top member, the combined width of the end members being somewhat less than the length of the top member, to leave room for the transverse bar of the top member when the parts are folded.

2. A folding crate or box having sides and ends hinged to fold inwardly, a removable top member having a transverse bar secured to its lower surface and whose ends abut and space the side members when the crate is in use, the top also having a longitudinally disposed locking bar connected therewith to permit a limited sliding movement in a longitudinal direction, the upper edges of the end members having retaining devices which the said locking bar enters, the sides of the crate being of such height or width that when folded, there shall be a space between their inner edges of sufficient width to receive the locking bar of the top member, the ends being of such height or width that when folded inwardly, there will be a space between their inner edges to receive the transverse bar of the top member.

3. A folding crate or box having sides and ends hinged to fold inwardly and a removable top having a longitudinally disposed locking bar connected therewith to permit a limited movement in a longitudinal direction, the upper edges of the ends having retaining devices which the said bar enters for securing purposes, the sides of the crate being of such height or width that when folded, there shall be a space between their inner edges of sufficient width to receive the locking bar of the top member.

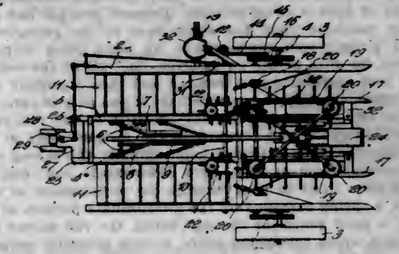
4. A folding crate or box having hinged end members provided with side flanges extending laterally beyond the side edges of the bottom member, the hinges of the end members consisting of rods extending transversely across the bottom of the crate and below the inner portions of the side flanges, when the end members are in the upright position, each rod extending upwardly from the opposite ends of its transverse member and diagonally across the side flanges to the upper and outer corners of the latter.

5. A folding crate or box having hinged end members provided with side flanges extending laterally beyond the side edges of the bottom member, the hinges of the end members consisting of rods extending transversely across the bottom of the crate and below the inner portions of the side flanges, when the end members are in the upright position, each rod extending upwardly from the opposite ends of its transverse member and diagonally across the side flanges to the upper and outer corners of the latter where the said rods are bent and carried inwardly along the upper edges of the top members and fastened.

[Claim 6 not printed in the Gazette.]

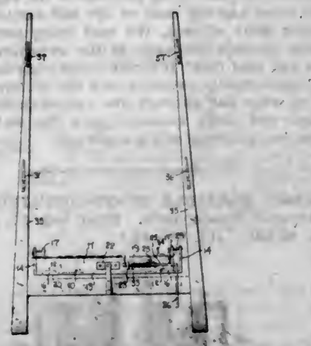
1,194,660. MOTOR-DRIVEN CORN-HARVESTER. WILLIAM M. PIATT, West Liberty, Ohio. Filed Feb. 17, 1916. Serial No. 78,924. (Cl. 56—103.)

1. In a two-row motor driven corn harvester, the combination of a portable frame disposed horizontally and having a pair of forwardly extending guide arms adapted to travel between the rows of corn being cut, an engine bed mounted between and secured to said arms to economize in space, an engine on said bed for driving the machine, and a pair of one-piece bars extending longitudinally beneath the frame and bed and secured rigidly to both, said bars serving to reinforce the frame sufficiently to withstand the vibration of the engine and at the same time relieving said arms of the weight of said engine.



2. In a two-row motor driven corn harvester, the combination of portable frame disposed horizontally and having a pair of forwardly extending guide arms adapted to travel between the rows of corn being cut, an engine bed mounted between and secured to said arms to economize in space, an engine on said bed for driving the machine, a pair of one piece bars extending longitudinally beneath the frame and bed and secured rigidly to both, said bars extending rearwardly from the frame, a bracket member secured rigidly between the rear ends of said bars, and a dirigible truck upon which said bracket member is mounted, the aforesaid bars serving to reinforce the entire frame sufficiently to withstand vibration from the engine, and also relieving the arms of the weight of said engine.

1,194,661. HORSE-DETACHER. SAMUEL J. PRATER, Clifton, Tenn. Filed Dec. 11, 1915. Serial No. 66,366. (Cl. 21—75.)



1. In a horse detacher, a swingletree having a pair of forwardly extending spaced ears at each end, the ears being perforated and adapted to receive a trace between each pair of ears, a longitudinally disposed plunger rod slidingly mounted upon the upper face of the swingletree, said plunger rod intermediate its ends being disposed above the face of the swingletree, one end of the rod being bent downwardly and forward and then angularly bent to extend through the perforations of one pair of ears, the other end of said intermediate portion of the rod being bent downward and forward to the forward edge of the swingletree, then extended longitudinally therealong over the second pair of ears, then downwardly bent and rebent upon itself to pass through the perforations of said ears, a spring surrounding the intermediate portion of the rod, a fixed abutment through which the rod passes and against which the spring bears, and a lever pivotally connected to the upper face of the swingletree and operatively connected to the rod adjacent one end of the spring whereby upon a movement of the lever in one direction the ends

of the rod will be retracted from engagement with the ears and upon the release of said lever the ends of the rod will be projected through the perforations of the ears.

2. In a horse detacher, a swingletree having a pair of forwardly extending spaced ears at each end, the ears being perforated and adapted to receive a trace between each pairs of ears, a longitudinally disposed plunger rod slidingly mounted upon the upper face of the swingletree, said plunger rod intermediate its ends being disposed above the face of the swingletree, one end of the rod being bent downward and forward and then angularly bent to extend through the perforations of one pair of ears, the other end of said intermediate portion of the rod being bent downward and forward to the forward edge of the swingletree, then extended longitudinally therealong over the second pair of ears, then downwardly bent and rebent upon itself to pass through the perforations of said ears, a spring surrounding the intermediate portion of the rod, a fixed abutment through which the rod passes and against which the spring bears, a lever pivotally connected to the upper face of the swingletree and operatively connected to the rod adjacent one end of the spring whereby upon a movement of the lever in one direction the ends of the rod will be retracted from engagement with the ears and upon the release of said lever the ends of the rod will be projected through the perforations of the ears, and a stop mounted upon the forward face of the swingletree and engaging with the first-named angular bend of the rod to limit the retractive movement of the rod and prevent the entire retraction of the ends of the rod from one of each pair of ears.

3. In a horse detacher, a swingletree having recesses on its rear face and at the ends of the tree, angle irons mounted in said recesses and extending across the ends of the swingletree and projecting beyond it, a reinforcing bar disposed upon the front face of the swingletree and extending between the angle irons, a reinforcing bar extending along the rear face of the swingletree and extending beyond it and having angular ends extending parallel to the forwardly projecting portions of the angle irons, said angle irons and the ends of the last-named bar together forming pairs of ears, the ears being perforated, bolts passing through the ends of the swingletree, the angle irons and said front and rear reinforcing bars, a plunger rod longitudinally shiftable into the perforations of each pair of ears and through the corresponding trace, said plunger rod being mounted upon the swingletree, and means for operating said plunger rod.

1,194,662. FLEXIBLE SHAFT-COUPLING. GEORGE J. RATHBUN, Toledo, Ohio. Filed Aug. 17, 1915. Serial No. 45,931. (Cl. 64—13.)



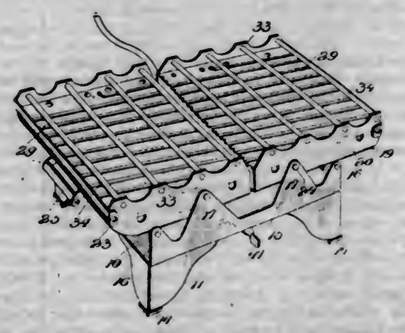
1. In a coupling of the class described, a pair of coupling members adapted to be secured to the adjacent ends of two shafts, each of said members having an annular series of circumferentially spaced transversely extending recesses in its periphery, said recesses having parallel side walls, flexible coupling bars of laminated form mounted at their ends in and transversely filling the respective recesses of said members, and means for securing the bars in the recesses of each member.

2. In a coupling of the class described, a pair of coupling members adapted to be secured to the adjacent ends of two shafts, said members having transversely extending peripheral recesses with the side walls of each recess parallel, flexible bars of laminated form connecting said members and mounted at their ends in respective recesses thereof, said bars having sufficient laminæ to transversely fill the recesses, and collars secured to said members and encircling the recessed peripheries thereof to retain the bars within said recesses, said bars being mounted to have limited radial oscillatory movements with respect to each member.

3. In a coupling of the class described, a pair of coupling members adapted to be secured to the adjacent ends of two shafts, said members having a plurality of transversely extending recesses arranged in circumferentially spaced order in the peripheries thereof, flexible bars of laminated form connecting said members and mounted at their ends in registering recesses of the members, said recesses having parallel side walls and the bars being of sufficient width to fill the recesses, a collar secured to and encircling each member and serving to retain the respective end portions of the connecting bars in the recesses, said collars coöperating with the bottoms of the recesses to grip the connecting bars at the respective ends only thereof whereby said bars are permitted to have limited radial oscillatory movements relative to each member.

4. In a coupling of the class described, a pair of coupling members adapted to be secured to the adjacent ends of two shafts, said members having transversely extending recesses in their peripheries, flexible bars of laminated form connecting said members and mounted at their ends in registering recesses in the members, a collar encircling each member and serving to retain the respective ends of the flexible bars within the recesses, said collars having annular inwardly projecting flanges at their outer ends which close the outer ends of the recesses, means for securing said collar flanges to the outer sides of the respective members, said recesses being radially reduced in depth at their outer ends and the inner side of each collar being recessed opposite the inner end portion of said recesses to permit said bars to have limited radial oscillatory movements relative to each member, and flexible means connecting the adjacent edges of said collars for closing the space therebetween.

1,194,663. COMBINED ELECTRIC STOVE AND TOASTER. GEORGE E. REINKING, Fort Wayne, Ind. Filed Jan. 4, 1916. Serial No. 70,248. (Cl. 219—19.)



1. A device of the character described including a base, coacting grate sections carried thereby, each of said sections being formed to provide end and bottom walls, partitions carried by the end walls of the said sections above the bottom walls to provide insulating air spaces between the partitions and the said bottom walls, heating units mounted upon said partitions, and grate bars extending between the end walls of the sections in spaced relation to said partitions.

2. A device of the character described including a base, upstanding posts carried by the base, coacting grate sections mounted upon the base and having the bottom walls thereof provided with slots freely receiving said posts, heating units carried by the sections, said posts being adapted to receive electrical connection for the said heating units with the sections adapted for movements upon the base to a postion confronting each other, and means for locking the said sections in such position.

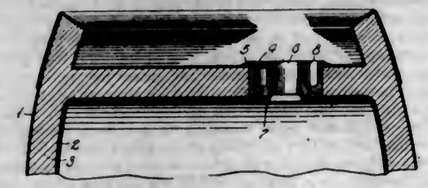
3. A device of the character described including a base, stop flanges carried thereby, coacting grate sections having notches formed in the bottom walls thereof, the said sections being movable upon the base to upright position confronting each other with the said bottom walls engaging said stop flanges, and a locking member provided with lugs confronting said flanges and adapted to pass freely through said notches, the locking member being shiftable to engage the said lugs with the bottom walls of the said sections for holding the said sections in upright position.

4. A device of the character described including a base, coacting grate sections carried thereby and movable upon the base to a position confronting each other, and manually operable means shiftable upon the base for simultaneously locking the sections in such position.

5. A device of the character described including a base, coacting grate sections carried thereby and movable upon the base to a position confronting each other, and means engaging between the inner extremities of said sections for locking the sections in such position.

[Claims 6 to 11 not printed in the Gazette.]

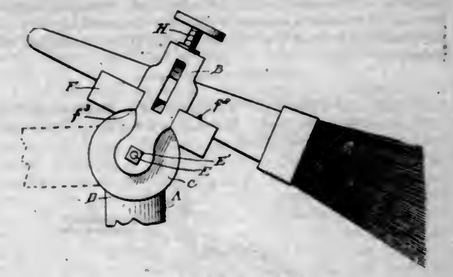
1,194,664. ADJUSTABLE FLANGE-BUSHING. FRANK E. RICE, Detroit, Mich., assignor to American Tap Bush Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 2, 1914. Serial No. 810,025. (Cl. 217—3.)



1. The combination with a liquid containing package having a wall formed with an outer metallic shell, an inner metallic lining, and insulating material separating the shell and lining, of a bushing having a cylindrical body provided with an exterior annular flange at the outer end and a recessed outer end face with a central opening through the inner end face, the outer exterior flange being adapted to bear against the outer metallic shell when the bushing is inserted in an opening through the wall of the package, and a nipple in screw threaded engagement with the central opening that is contained within the recess of the outer end face of the bushing, the inner end portion of the nipple having a exterior annular flange that bears against the lining on the interior of the package and prevents contact between any liquid contents of the package with the insulating material.

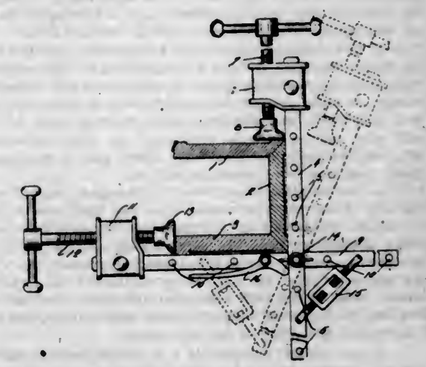
2. The combination with a liquid containing package having a wall with an apertured outer metallic shell, an inner metal lining having a smaller aperture alined with that of the outer metallic shell and insulating material separating the shell and lining having an opening substantially coincident with the outer opening of the outer shell, of a bushing having a cylindrical body that fits closely in the openings through the outer shell and insulation and is provided with an exterior annular flange that bears against the marginal portions of the shell surrounding the openings, the outer face of the bushing having a deep recess communicating with a screwthreaded opening at the inner end of the bushing that is in register with the opening of the inner lining, and a nipple threaded through the opening into the recess of the bushing and provided with an exterior annular flange on the inner end thereof that overlies the marginal portions of the lining that surrounds the opening therethrough.

1,194,665. BRUSH-HOLDER. ANTON RIEGGER, Baltimore, Md. Filed Nov. 11, 1915. Serial No. 60,910. (Cl. 15—54.)



In a brush holder, the combination with an operating handle having a cylindrical end, of a bridge member having a surface contacting with the end member and a concaved centrally disposed groove provided on the upper surface thereof and spurs secured to the upper surface of said bridge, a rectangular U-shaped frame provided with a clamped and a set screw whereby the brush is adapted to be clamped in position and whereby at the same time the angular relation of the brush and handle may be adjusted.

1,194,666. SCREW-CLAMP. JOSEPH ROMANOWSKI, Chicago, Ill. Filed Oct. 12, 1914. Serial No. 866,327. (Cl. 144—292.)



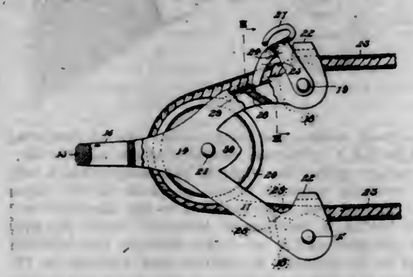
1. A screw clamp comprising apertured bars and an adjusting screw for entering the apertured portions of said bars to releasably connect them to each other, heads terminally carried by said bars, hand screws carried by said heads, contact shoes carried by said hand screws and a turnbuckle adapted for releasable connection with the apertured portions of said bars whereby they may be angularly adjusted with relation to each other.

2. A clamp of the type described, including bar members adjustably connected whereby they may be positioned at right angles to each other, said adjustably connected bar members being provided with clamp jaw-equipped members at their ends, the clamping action of the latter being exerted parallel with said adjustably connected members, respectively, said adjustably connected members providing at their point of connection a holding action for the work in conjunction with the aforesaid clamping action.

3. A clamp of the type described, including bar members adjustably connected whereby they may be positioned at right angles to each other, said adjustably connected bar members being provided with clamp-jaw equipped members at their ends, the clamping action of the latter

being exerted parallel with said adjustably connected members, respectively, said adjustably connected members providing at their point of union a holding action for the work in conjunction with the aforesaid clamping action, and an additional adjustable diagonal connection between terminals of two of the crossing adjustably connected bar members.

1,194,667. CLOTHES-LINE HANGER. MORRIS ROSENTHAL, New York, N. Y. Filed Jan. 24, 1916. Serial No. 73,831. (Cl. 254—197.)



1. A device of the class described comprising a Y-shaped bracket having a supporting ring at one end thereof, a pulley wheel centrally journaled in the said bracket, grooved wheels journaled in the ends of each of the bracket arms, overlying positioning loops carried on corresponding sides of the ends of the said arms, a clothes line passing over the said wheels, and a locking latch for the line operatively carried by one of the said arms.

2. A line support comprising a Y-shaped bracket having spaced flaring arms and a base, the said base having a terminal ring portion, a grooved pulley centrally journaled within the said bracket, bearing wheels journaled in the free ends of the said bracket arms, overlying loops for the said arm carried wheels positioned on adjacent lateral sides of the said journaled arm ends, and a line operatively positioned over the said wheels.

3. A line support comprising a Y-shaped bracket having spaced flaring arms and a base, the said base having a terminal ring portion, a grooved pulley centrally journaled within the said bracket, bearing wheels journaled in the free ends of the said bracket arms, overlying loops for the said arm carried wheels positioned on adjacent lateral sides of the said journaled arm ends, and an endless line passing over the said wheels and through the said bracket and inwardly of the said loops.

4. A line support comprising a Y-shaped bracket having spaced flaring arms and a base, the said base having a terminal ring portion, a grooved pulley centrally journaled within the said bracket, bearing wheels journaled in the free ends of the said bracket arms, overlying loops for the said arm-carried wheels positioned on adjacent lateral sides of the said journaled arm ends, an endless line passing over the said wheels and through the said bracket and inwardly of the said loops, braces carried by the said arms spaced from the said loops and a swinging locking latch carried by the arm having the outwardly positioned loop thereon.

5. A line support comprising a Y-shaped bracket having spaced flaring arms and a base, the said base having a terminal ring portion, a grooved pulley centrally journaled within the said bracket, bearing wheels journaled in the free ends of the said bracket arms, overlying loops for the said arm-carried wheels positioned on adjacent lateral sides of the said journaled arm ends, an endless line passing over the said wheels and through the said bracket and inwardly of the said loops, braces carried by the said arms spaced from the said loops, the said braces having cut-out cord-receiving guide portions, a U-shaped latch swingingly journaled upon one of the said arms in straddling relation with respect to the adjacent loop and the line extending therethrough, a V-shaped cord-engaging member carried by the said latch and a finger-hold upon the latter.

[Claim 6 not printed in the Gazette.]

1,194,668. SIGNALING DEVICE. CHARLES SCHATZLE and EDWIN SMITH, Palmerton, Pa. Filed Sept. 13, 1915. Serial No. 50,449. (Cl. 177—337.)



1. The combination with a suitable support, of an electric signal mounted thereon and means for making and breaking an electric circuit for the signal, said means including an intermediate pivoted arm, a pair of oppositely extending links connected with said arm, a second pivoted arm connected with one of said links, a third pivoted arm connected to the other of said links, a push button connected with the signal and operable by the third arm, and a depressible member for operating each arm.

2. The combination with a suitable support adapted to be located at the intersection of two roadways, of a pair of electric lamps each arranged to act as a signal for a respective section of roadway, a shield interposed between the two lamps, and means located at each roadway and operable by a passing vehicle for opening, then closing and then opening the electric circuit of the signal lamp at the other roadway.

3. The combination with a suitable support adapted to be located at the meeting point of two roadways, of a pair of electrically operated signaling devices mounted on the support, one of said devices for each roadway, and means located at one roadway for controlling the signaling device of the other roadway, said means including an electric switch for controlling an electric circuit to said signaling device, and means for operating the switch, said means including a series of depressible bars, a member operated by the depression of each bar, connections between all of said members, and means carried by one of said members for operating directly upon the switch to open and close the latter.

1,194,669. CONCENTRATING RADIUM ORE. HERMAN SCHLUNDT, Columbia, Mo. Filed Feb. 21, 1916. Serial No. 79,758. (Cl. 23—13.)

1. The method of producing radium concentrates from carnotite ores and other suitable radium containing material, which comprises treating the material with a suitable solvent to dissolve the radium, together with barium, as sulfates, diluting the resulting solution and thereby precipitating the radium-barium sulfates in a finely divided condition in admixture with the undissolved material, and separating the finely divided radium-barium sulfates by a differential sedimentation.

2. The method of producing radium concentrates from carnotite ores and other suitable radium containing material, which comprises treating the material with a suitable solvent to dissolve the radium, together with barium, as sulfates, diluting the resulting solution and thereby precipitating the radium-barium sulfates in a finely divided condition in admixture with the undissolved material, subjecting the resulting mixture to a differential sedimentation and thereby separating the radium-barium sulfates in the form of a concentrate, and repeating the differential sedimentation with water containing a barium salt to separate further amounts of the radium-barium sulfates.

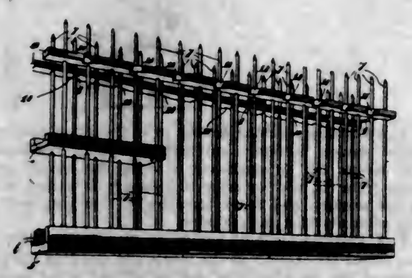
3. The method of producing radium concentrates from carnotite ores and other suitable radium containing material, which comprises extracting the radium with a suitable solvent, precipitating the dissolved radium, together with barium, as sulfates in admixture with the undissolved material, and subjecting the resulting mixture to a differential sedimentation in a solution saturated with barium sulfate, and thereby separating the radium-barium sulfates in the form of a concentrate without solution of the radium.

4. The method of producing radium concentrates from carnotite ores and other suitable radium containing material, which comprises treating the material with concentrated sulfuric acid to dissolve the radium, together with barium, as sulfates, diluting the resulting solution and thereby precipitating the radium-barium sulfates in a finely divided condition in admixture with the undissolved material, and separating the finely divided radium-barium sulfates by a differential sedimentation.

5. The method of producing radium concentrates from carnotite ores and other suitable radium containing material, which comprises treating the material with hot concentrated sulfuric acid of about 60° Bé. or stronger to dissolve the radium, together with barium, as sulfates, diluting the resulting solution and thereby precipitating the radium-barium sulfates in a finely divided condition in admixture with the undissolved material, and separating the finely divided radium-barium sulfates by a differential sedimentation.

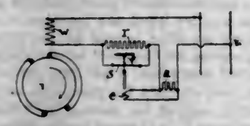
[Claims 6 to 13 not printed in the Gazette.]

1,194,670. DISH-DRIER. WILLIAM SCHMIDT, Chicago, Ill. Filed Feb. 18, 1915. Serial No. 9,026. (Cl. 141—11.)



A dish drier comprising a cup supporting rail; and upstanding pins on said rail, there being notches in the side of said rail, each notch being situated opposite a pin, substantially as described.

1,194,671. REPULSION-MOTOR GENERATOR. KARL SCHNETZLER, Baden, Switzerland, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Filed Nov. 3, 1910. Serial No. 590,513. (Cl. 172—277.)



1. In dynamo electric machinery in combination a repulsion generator including a stator and a rotor, windings on said stator and on said rotor, alternating current mains, electrical connections from said mains to said stator winding, a commutator in connection with the windings on said rotor, brushes therefor, an electrical connection between said brushes, means for supplying mechanical power to said rotor, a non-inductive resistance connected in circuit with at least one of said windings and a short circuiting switch for said resistance; as set forth.

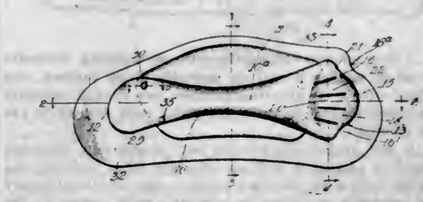
2. In dynamo electrical machinery in combination a repulsion generator including a stator and a rotor, windings on said stator and on said rotor, alternating current mains, electrical connections from said mains to said stator winding, a commutator in connection with the windings on said rotor, brushes therefor, an electrical connection between said brushes, means for supplying mechanical power to said rotor, a non-inductive resistance connected in circuit with at least one of said windings and a short circuiting switch for said resistance, together with a device for automatically operating said switch; as set forth.

3. In dynamo electric machinery in combination a repulsion generator including a stator and a rotor, windings on said stator and on said rotor, alternating current mains, electrical connections from said mains to said stator winding, a commutator in connection with the windings on said rotor, brushes therefor, an electrical connection between said brushes, means for supplying mechanical power to said rotor, a non-inductive resistance connected in series with said stator winding and means for varying the effect of said resistance; as set forth.

4. In dynamo electric machinery in combination a repulsion generator including a stator and a rotor, windings on said stator and on said rotor, alternating current mains, electrical connections from said mains to said stator winding, a commutator in connection with the windings on said rotor, brushes therefor, an electrical connection between said brushes, means for supplying mechanical power to said rotor, windings on said stator and said rotor, a non-inductive resistance in series with one of said windings and a switch the terminals of which are connected to the terminals of said non-inductive resistance; as set forth.

5. In dynamo electric machinery in combination a repulsion generator including a stator and a rotor, windings on said stator and on said rotor, alternating current mains, electrical connections from said mains to said stator winding, a commutator in connection with the windings on said rotor, brushes therefor, a direct electrical connection between said brushes, means for supplying mechanical power to said rotor, a non-inductive resistance connected in circuit with at least one of said windings and a short circuiting switch for said resistance, together with a device for automatically operating said switch; as set forth.

1,194,672. INSTEP-ARCH SUPPORT. WILLIAM M. SCHOLL, Chicago, Ill. Filed Mar. 20, 1915. Serial No. 15,958. (Cl. 36—71.)



1. In an arch support, a metallic plate adapted to underlie the anterior portion of the metatarsal bones in rear of the heads thereof, said plate having a transverse hump for support of the transverse arch, and slots extending through said hump portion, dividing the metal into strips adapted for independent shaping to vary the hump-formation.

2. In an arch support, a metallic plate adapted to underlie the anterior portion of the middle metatarsal bones in rear of the heads thereof, said plate having a hump to support the transverse arch and slots, wholly within the confines of the plate, extending in a general longitudinal direction across said hump and dividing the hump into a plurality of strips adapted to be shaped individually.

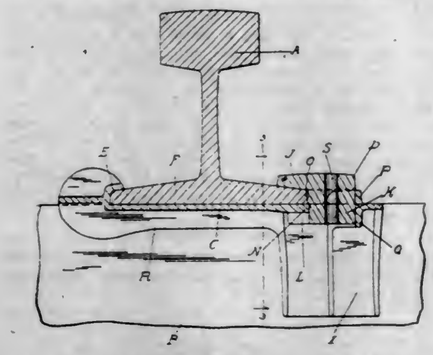
3. In an arch support, the combination of a base plate adapted to extend from a bearing point adjacent the heel of the foot to a bearing point adjacent the heads of the metatarsal bones, said plate having at its forward end a hump to support the transverse arch, and an arch plate, carried to said base plate, said arch plate shaped to conform to the waist portion of the plantar surface of the human foot, and bearing at both ends upon said base plate, the bearing of said arch plate upon said base plate at the front end being adjacent the base of the hump of the base plate.

4. In an arch support, the combination of a base plate adapted to extend from a bearing adjacent the heel of the wearer to a bearing approximately conforming to the heads of the metatarsal bones, said base plate having a hump adjacent its forward end to support the transverse arch of the foot, and an arch plate secured to said base plate at its rear end and at its front end bearing on the arch plate slidingly at substantially the base of said hump, said arch plate having a longitudinal curvature in excess of the curvature of the base plate.

5. In an arch support, a base plate, adapted to bear at its ends in a shoe and to span the shoe shank, and an arch plate, secured at one end to the base plate and at its other end free to slide thereon, said base plate being narrow and curved to arcuate cross section at its waist and having at its forward end a transverse hump to underlie the central metatarsal bones.

[Claims 6 to 8 not printed in the Gazette.]

1,194,673. RAIL-ANCHOR. JOHN M. SCOTT, Racine, Wis., assignor to Otto R. Barnett, Chicago, Ill. Filed Nov. 5, 1913. Serial No. 799,343. (Cl. 238—4.)



1. A rail anchor comprising two co-engaging elements adapted to engage a rail on opposite sides thereof, one provided with a tie abutting member, one of said elements being revoluble and movable vertically with respect to the other element.

2. A rail anchor comprising two co-engaging elements adapted to engage a rail on opposite sides thereof, one provided with a tie abutting member, one of said elements being revoluble and movable vertically with respect to the other element, and provided with a cam which bears against one edge of the base flange of the rail.

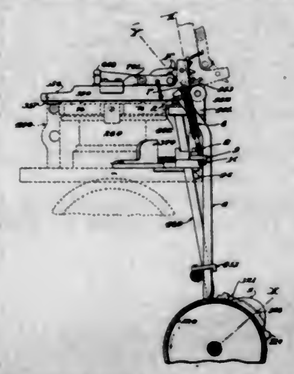
3. A rail anchor comprising two co-engaging elements adapted to engage a rail on opposite sides thereof, one provided with a tie abutting member, one of said elements being formed with an opening and the other with a shank extending through said opening and formed with a projection which engages the under side of the first mentioned member, said projection and the surface which it engages being formed so as to have a wedging engagement.

4. A rail anchor comprising two co-engaging elements adapted to engage a rail on opposite sides thereof, one provided with a tie abutting member, one of said elements being formed with an opening and the other with a shank extending through said opening and formed with a projection which engages the under side of said first mentioned member and with a cam which bears against the edge of the base flange of said rail, said projection and the surface against which it bears being formed so as to have a wedging engagement.

5. A rail anchor comprising two co-engaging elements adapted to engage a rail on opposite sides thereof, one provided with a tie abutting member, one of said elements being revoluble with respect to the other and provided with a cam which bears against one edge of the base flange of said rail, and with a cam bearing against the base flange of said rail.

[Claims 6 to 12 not printed in the Gazette.]

1,194,674. DEVICE FOR KNITTING ON TRANSFERRED FABRIC SECTIONS. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed June 21, 1915. Serial No. 35,251. (Cl. 66—24.)



1. A knitting machine having in combination needles, a guard device therefor, automatic stopping mechanism, and means for automatically moving the guard device away from the needles prior to stoppage to permit access to the needles, and for automatically returning said device after starting the machine.

2. A knitting machine having needles, leveling devices, and means for casting off the fabric and stopping the operation of the machine after casting off and after leveling, and also having a needle guard device in combination with automatic means for removing said guard device from the neighborhood of the needles prior to stoppage, and for returning said guard device to operative position during subsequent operation of the machine.

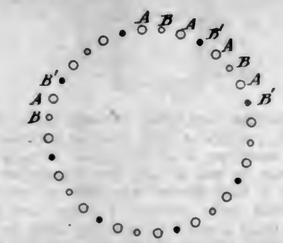
3. A knitting machine having in combination needles, a guard device, a movable yarn-feed guide on said device, automatic stopping mechanism, and automatic means for moving the guard device away from the needles, for positioning the yarn-guide operatively, and for returning the guard device and positioned yarn-guide to operative relation with the needles when the machine is again started.

4. A knitting machine having in combination a needle guard ring, a spring holding said needle guard ring in position for normal operation, a pattern surface, and a connection from said surface for positively moving said needle guard ring out of its normal position against the stress of said spring at predetermined times, said connection permitting manual movement of said guard ring.

5. A knitting machine having a needle guard device pivoted on a fixed part of the machine, a thrust-bar taking against a part of said needle guard device eccentric to said pivot, and means acting on said thrust-bar to rotate said device about its pivot.

[Claim 6 not printed in the Gazette.]

1,194,675. STOCKING AND METHOD OF KNITTING THE SAME. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Apr. 28, 1916. Serial No. 94,232. (Cl. 66—4.)



1. A seamless stocking knit from toe to top comprising a seamless toe, foot and heel of plain fabric, and a tubular leg continuous with foot and heel of multiple course accordion fabric having a greater number of wales than the foot.

2. A seamless stocking blank knit from toe to top comprising a beginning selvage, a short section of tubular fabric, a seamless toe, foot and heel of plain fabric, and a tubular leg continuous with foot and heel of multiple course accordion fabric having a greater number of wales than the foot.

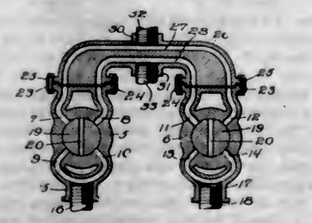
3. A seamless stocking knit from toe to top comprising a toe, foot and heel of plain fabric, a tubular leg continuous with foot and heel of multiple course accordion fabric having a greater number of wales than the foot, and an integral welt at the top followed by a short section of tubular fabric.

4. A seamless stocking blank knit from toe to top comprising a beginning selvage, a short section of tubular fabric, a toe, foot and heel of plain fabric, a tubular leg continuous with foot and heel of multiple course accordion fabric having a greater number of wales than the foot, and an integral welt at the top followed by a short section of tubular fabric.

5. A seamless stocking blank knit from toe to top comprising a beginning selvage, a short section of tubular fabric of a certain number of wales, a seamless toe, foot and heel of plain fabric of the same number of wales and relatively coarse yarn, and a tubular leg continuous with foot and heel of multiple course accordion fabric or finer yarns than the foot having a greater number of wales than the foot.

[Claims 6 to 11 not printed in the Gazette.]

1,194,676. CONTROLLING-VALVE MECHANISM. FRANK W. SLAW, Steubenville, Ohio, assignor of one-half to August H. Slater, Steubenville, Ohio. Filed Oct. 2, 1915. Serial No. 53,782. (Cl. 138—14.)

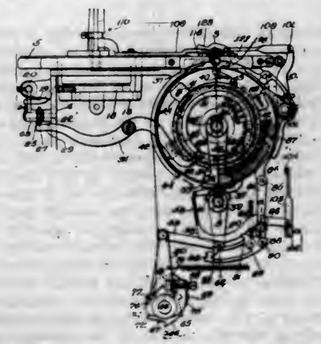


1. A controlling valve mechanism comprising a supply valve casing having a pair of ports leading to a source of supply, an exhaust valve casing having a pair of ports leading to an exhaust, each of said casings further provided with another pair of ports, a coupling member having a pair of passages for establishing communication between the last mentioned pairs of ports, conducting pipes leading from said passages, a shiftable valves arranged in said casings and capable when shifted to establish communication between a pair of ports of their respective casings to provide for supply through one of said passages and exhaust through the other of said passages, and adjustable means for operating said valves simultaneously.

2. A controlling valve mechanism comprising a supply valve casing having a pair of ports leading to a source of supply, an exhaust valve casing having a pair of ports, leading to an exhaust, each of said casings further provided with another pair of ports, a coupling member having a pair of passages for establishing communication between the last mentioned pairs of ports, conducting pipes leading from said passages, shiftable valve arranged in said casings and capable when shifted to establish communication between a pair of ports of their respective casings to provide for supply through one of said passages and exhaust through the other of said passages, the ports of each pair of ports of each of said casings extending at an inclination in opposite directions with respect to each other.

3. A controlling valve mechanism comprising a supply valve casing having a pair of ports leading to a source of supply, an exhaust valve casing having a pair of ports leading to an exhaust, each of said casings further provided with another pair of ports, a coupling member having a pair of passages for establishing communication between the last mentioned pairs of ports, conducting pipes leading from said passages, shiftable valves arranged in said casings and capable when shifted to establish communication between a pair of ports of their respective casings to provide for supply through one of said passages and exhaust through the other of said passages, and means for operating said valves simultaneously, the ports of each pair of ports of each of said casings extending at an inclination in opposite direction with respect to each other.

1,194,677. KNITTING-MACHINE. ALBERT E. STEWART, Franklin, N. H., assignor to Acme Knitting Machine and Needle Company, a Corporation of New Hampshire. Filed May 5, 1913. Serial No. 765,428. (Cl. 66—12.)



1. A knitting machine having a control wheel, a pivoted arm having a pawl to rotate said wheel, a pivoted lever for operating said pawl arm, yieldable actuating means for said lever, an abutment movably mounted relative to said lever, and means controlled by said wheel for moving said abutment to limit the operation of said lever.

2. A knitting machine comprising a control wheel, a pivoted arm having a pawl to rotate said wheel, means for operating said arm, movable means having a series of stops for intercepting said operating means, a lever for operating said movable means, and an actuator for said lever adjustably mounted on said wheel.

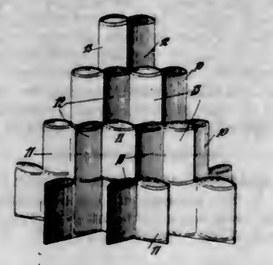
3. A knitting machine comprising a control wheel having a series of radially adjustable control members, a lever pivotally mounted and adapted to be actuated by one or more of said members when projected, an abutment pivotally mounted and operatively connected with said lever, and means for operating said wheel including an oscillatory shaft, a pawl and ratchet operated member mounted thereon, and means actuated by said latter member and adapted to be intercepted by said abutment at times.

4. A knitting machine comprising a control wheel, a swinging arm having a pawl to rotate said wheel, a second swinging arm to actuate said pawl arm, a movable abutment adapted at times to intercept said second arm, means for moving said abutment, a control member radially adjustable on said wheel and adapted to act against said abutment moving means, an oscillatory shaft and mechanism operated from the said oscillatory shaft for actuating said second arm.

5. A knitting machine comprising a control wheel having a series of radial guides, a series of cylindrical control members slidable in said guides and having seats at their side portions, and a series of spring pressed locking devices adapted to engage said seats whereby said members when rotated will force said devices away from the engaging position.

[Claims 6 and 7 not printed in the Gazette.]

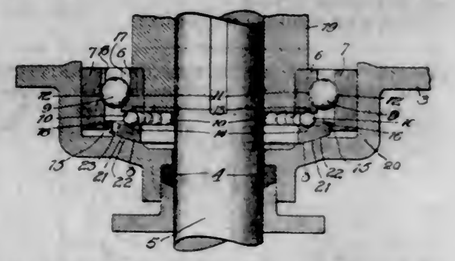
1,194,678. ADVERTISING DISPLAY-STAND. JULIUS STRANDERS, Brooklyn, N. Y., assignor to Harry B. Kruger, New York, N. Y. Filed Apr. 22, 1915. Serial No. 23,005. (Cl. 40—126.)



An advertising collapsible display device representing in multiple tiers a pile of articles to be displayed and comprising a set of flat step-shaped members disposed in parallel stepped relation and a set of flat step-shaped members disposed in parallel stepped relation at right angles to the first set, one member of the first set having near one end a short upward slit in line with the second step of said member and a longer upward slit in line with the third step thereof, the other member of said first set having a downward slit in line with the third step thereof and an upward slit in line with the fourth step thereof, one member of the second set having a short downward slit in line with the second step of said member and a longer upward slit in line with the third step thereof, and the other member of the second set having a downward slit in line with the third step of said member and a downward slit in line with the fourth step thereof, said slits permitting the interlocking of the members at their several points of intersection.

1,194,679. BALL-BEARING. WALTER H. STROM, Oak Park, Ill. Filed June 1, 1915. Serial No. 31,398. (Cl. 64—36.)

1. A ball-bearing comprising, in combination, three balls confined between races on two of said members, and a second series of balls confined between a race on one of said two referred-to ball-race members and a race on the third one of said members and interlocking these members together, the other of said two members and said third member interlocking, whereby a unitary three-part bearing is provided.



2. A ball-bearing comprising, in combination, three ball-race members, a series of balls confined between races on two of said members, a second series of balls confined between a race on one of said two referred-to ball-race members and a race on the third one of said members and interlocking these members together, and a projection on said third member interlocking with the other of said two members whereby a unitary three-part bearing is provided.

3. A ball-bearing comprising, in combination, three ball-race members, a series of balls confined between races on two of said members, a second series of balls confined between a race on one of said two referred-to ball-race members, and a race on the third one of said members and interlocking these members together, and a continuous flange on said third member interlocking with the other of said members, whereby a unitary three-part bearing is provided.

4. A ball-bearing comprising, in combination, three ball-race members, a series of balls confined between races on two of said members, and a second series of balls confined between a race on one of said two referred-to ball-race members and a race on the third one of said members and interlocking these members together, the other of said two members and said third member interlocking, whereby a unitary three-part bearing is provided, the parts of the bearing being so proportioned as to provide a clearance between said two last referred-to members to permit said third member to shift lengthwise of said members, except as restrained by said second-named series of balls.

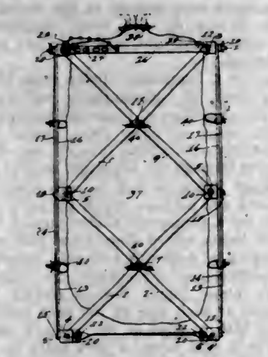
5. A ball-bearing comprising, in combination, three ball-race members, a series of balls confined between races on two of said members, a second series of balls confined between a race on one of said two referred-to ball-race members and a race on the third one of said members and interlocking these members together, and a projection on said third member interlocking with the other of said two members whereby a unitary three-part bearing is provided, the parts of the bearing being so proportioned as to provide a clearance between said two last referred-to members to permit said third member to shift lengthwise of said members, except as restrained by said second-named series of balls.

[Claim 6 not printed in the Gazette.]

1,194,680. SHIPPING-CRATE. CHARLEY M. STUDEBAKER, Los Angeles, Cal., assignor of one-third to Paul Beracka and one-third to John Dopyera, Los Angeles, Cal. Filed July 15, 1915. Serial No. 41,422. (Cl. 220—132.)

1. In a device of the character described, the combination of a plurality of pivotally connected pairs of slats forming the sides thereof, means for holding the slats in extensible relation, adjustable bottom slats, adjustable brace means for holding the frame rigid when extended, and a bag capable of being firmly held therein.

2. In a device of the character described, the combination of a frame having extensible sides composed of diagonal members arranged in pairs and the members of each pair being pivotally connected, adjustable bottom members, means for holding the sides of the frame rigidly extended to a desired degree, and means common to and for holding adjacent sides of the frame together.



3. In a device of the character described, the combination of a frame having extensible and pivotally connected sides composed of members arranged in pairs and series of pairs, bottom members adjustable to the movement of the side members, and means for holding the frame extended to a desired degree and for regulating the size thereof.

4. In a device of the character described, the combination of a frame having a plurality of extensible and collapsible sides composed of pivotally connected pairs of slats, common supporting means for the corners of adjacent sides, top and bottom members capable of adjustment to accommodate the extension of the sides of the frame, adjustable brace means for holding the sides extended to a desired degree and for fixing the size of the frame, a bag in the frame, and means on the frame for firmly holding the bag in position therein.

5. A shipping crate having collapsible sides and bottom composed of diagonal paired members, the members of each of the pairs forming the sides thereof being pivoted together in the center and the ends of adjacent members of the pairs being commonly pivoted, the bottom members being pivoted at the ends and forming braces for the crate, and horizontal braces being provided at the top for adjustably supporting the crate when extended.

[Claims 6 to 8 not printed in the Gazette.]

1,194,681. TIRE-ARMOR. ANDRÁS SZKOKNYA, Chicago, Ill. Filed Oct. 21, 1915. Serial No. 57,025. (Cl. 152—16.)



1. A tire armor comprising, a series of U shape sections having inner and approximately parallel side portions and formed with outer laterally curved bearing surfaces engaging the crown of the tire and with lateral pockets of an arc shape intermediate said bearing and parallel side portions and disposed mainly outside said parallel side portions, and means for movably connecting said side portions together, substantially as set forth.

2. A tire armor comprising, a series of U shape sections having inner and approximately parallel side portions provided with elongated slots and with overlapping side flanges for guiding engagement of said side portions, the portions of said sections outward of said flanges having separated relation, an annular series of links, and pivot bolts connecting said links together and having guiding engagement in the elongated slots of the armor sections substantially as set forth.

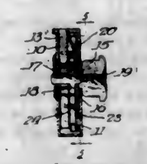
3. A tire armor comprising, a series of U shape sections having inner and approximately parallel side portions formed with elongated recesses and companion elongated slots, a pair of flexible rings connecting said side portions together and comprising a series of links, and a series of pivot bolts passing through said links and having radial movement in the elongated recesses and slots aforesaid, substantially as set forth.

4. A tire armor comprising a series of U shape sections having inner and approximately parallel side portions formed with elongated recesses and companion elongated slots, a pair of flexible rings connecting said side portions together and comprising a series of links, a series of pivot bolts passing through said links and having radial movement in the elongated recesses and slots aforesaid, and flanged bearing collars on the shanks of the pivot bolts providing bearings for the links aforesaid, substantially as set forth.

5. A tire armor comprising, a series of U shape sections having inner and approximately parallel side portions formed with elongated recesses and companion elongated slots, a pair of flexible rings connecting said side portions together and formed by a series of links, and a series of pivot bolts passing through said rings and having radial movement in the elongated slots aforesaid, said bolts having non-circular heads moving in the elongated recesses aforesaid and held thereby from a turning movement, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,194,682. DETACHABLE-CYLINDER LOCK. KONSTANTINE THULANDER, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a Corporation of Illinois. Filed Apr. 23, 1915. Serial No. 23,477. (Cl. 70—46.)



1. In a detachable cylinder-lock, the combination with a lock-casing and bolt, of a detachable key-cylinder, a cylinder-retainer located within said casing, and means, whereby said retainer is actuated to cylinder-release position upon movement of said bolt inwardly of said casing.

2. In a detachable-cylinder lock, the combination with the lock casing and bolt, of a detachable key cylinder, a cylinder-retainer located within said casing, a spring normally maintaining said retainer in locking relation to said cylinder, and engaging members on said bolt and retainer whereby the latter is moved to cylinder-release position by a movement of said bolt inwardly of said casing.

3. In a detachable-cylinder lock, the combination with the lock casing and bolt, of a detachable key cylinder formed with an annular locking groove, a slidable cylinder-retaining plate having a portion thereof adapted to enter said groove, a spring normally maintaining said retaining plate engaged with said groove, and engaging members on said bolt and retaining plate whereby the latter is moved to unlocking position relatively to said cylinder upon a movement of said bolt inwardly of said casing.

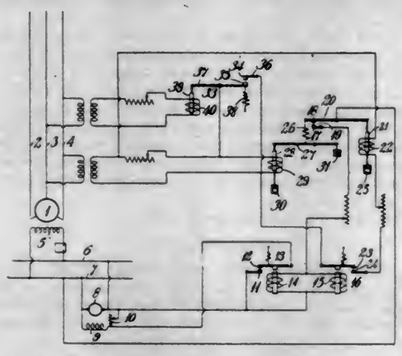
4. In a detachable-cylinder lock, the combination with the lock casing, of a bolt having a laterally projecting lug, a detachable key cylinder formed with an annular locking groove, a slidable cylinder-retaining member having a portion thereof adapted to enter said groove and a laterally

projecting lug extending across the path of movement of said bolt lug, and a spring normally maintaining said retaining member engaged with said groove.

5. In a detachable-cylinder lock, the combination with the lock casing and bolt, of a slidable cylinder-retaining plate having an opening therethrough for the key cylinder, a key cylinder formed with a cam and a locking groove in rear of said cam adapted to coöperate with an edge portion of said retaining plate around said opening for entering said cylinder through and locking the same to said retaining plate, a spring normally maintaining said retaining plate engaged with said groove, and engaging members on said bolt and retaining plate whereby the latter is moved out of locking engagement with said cylinder upon a movement of said bolt inwardly of said casing.

[Claims 6 and 7 not printed in the Gazette.]

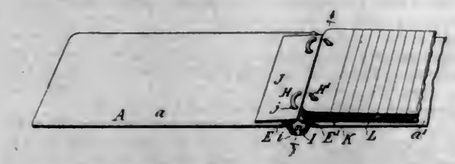
1,194,683. ELECTRICAL REGULATOR. ALLEN A. TIRRILL, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1914. Serial No. 822,132. (Cl. 171—229.)



1. An electrical regulator comprising coöperating stationary and movable contact members, a lever carrying the movable contact member, an electromagnet for actuating said lever, a second lever, resilient means interposed between the two levers and constituting the sole means whereby one may actuate the other, and means for actuating the second lever in accordance with variations of the quantity regulated.

2. An electrical regulator comprising coöperating stationary and movable contact members, a lever carrying the movable contact member, an electromagnet for actuating said lever, a second lever, resilient means interposed between the two levers and constituting the sole means whereby one may actuate the other, an electromagnet for actuating the second lever, and a relay for controlling the energization of the said electromagnet in accordance with variations of the quantity regulated.

1,194,684. TEMPORARY BINDER AND METHOD OF FORMING THE SAME. CLARENCE D. TRUSSELL, Poughkeepsie, N. Y. Filed June 2, 1915. Serial No. 31,668. (Cl. 129—24.)



1. A cover for a temporary binder, comprising a fibrous body, an outer lining secured thereto, an inner coating of adhesive, a prong-carrying spring plate inside of said cover, an outer plate, means for securing the parts together comprising lugs on the outer plate adapted to pass through the cover and secured to the spring plate, and hinge joints formed in said cover comprising grooves therein on each side of said back plate and parallel with the edges thereof.

2. A cover for a temporary binder comprising an integral fibrous body, of substantially uniform thickness throughout the area thereof, loose-leaf binding mechanism inside of said cover, an outer plate, means for securing the parts together comprising lugs on one of said parts adapted to pass through the cover and secured to the other part, and hinge joints formed in said cover comprising parallel grooves and between which the back is formed.

3. A cover for a temporary binder formed of a body of paper, a cloth lining affixed thereto and said paper having an inner coating of adhesive and said several materials extending continuously throughout the cover, and said cover having hinge joints formed therein by parallel grooves located at each side of the back portion and extending from edge to edge of the cover, a spring prong-carrying plate in said cover, a back plate on the outside thereof and between said grooves, and means for securing the parts together comprising lugs on the back plate passing through the cover and secured to the prong plate.

4. A temporary binder comprising a spring plate, prongs mounted therein and adapted to be moved to open or closed position and to be maintained in such position by the said plate, and means for simultaneously opening all said prongs comprising short perforated stubs, mounted on each prong, between the leaves of the book and the respective sides of the cover.

5. A temporary binder comprising a cover having a fibrous body, an outer lining secured thereto, and wherein the tendency of the body to warp has been corrected by an inner coating of liquid, a spring plate, prongs therein, a back plate and means for securing said parts together comprising lugs on the back plate passing through the cover and secured to the spring plate, hinge joints in the cover comprising grooves therein on each side of the back plate, and means for opening the prongs comprising short, perforated stubs, mounted on each prong, between the leaves of the book and the respective sides of the cover.

[Claims 6 to 24 not printed in the Gazette.]

1,194,685. ICE-CREAM DISHER. EDWIN WALKER, Erie, Pa. Filed Nov. 15, 1915. Serial No. 61,560. (Cl. 107—48.)



1. An ice-cream disher comprising a frame substantially consisting of shank and handle portions, a bowl secured to the shank portion of the frame, a scraper in the bowl, a scraper-shaft secured thereto, and extending along one side of the shank portion of the frame, a lever pivoted to the frame at the junction of the shank and handle portions thereof, a curved rack-gear mounted on the shank of the frame, a spur-gear on the scraper-shaft engaging therewith, a forwardly projecting arm on said lever engaging and operating said curved rack-gear, and a retracting spring operating on said curved rack-gear, substantially as set forth.

2. An ice-cream disher comprising a frame substantially consisting of shank and handle portions, a bowl secured to the shank portion of the frame, a scraper in the bowl, a scraper-shaft secured thereto, and mounted in said frame, a spur-gear on said shaft, and curved rack-gear mounted on the frame and engaging said spur-gear, a lever pivoted to the frame at the junction of the shank and handle portions, and extending rearwardly approximately parallel with the handle portion of the frame, an arm extending forwardly from the axis of said lever and engaging and operating said curved rack-gear, and a retracting spring operating on said curved rack-gear, substantially as set forth.

3. An ice-cream disher comprising a frame substantially consisting of shank and handle portions, the handle portion being offset to one side of the line of the shank portion, a hemispherical bowl secured to the shank portion of the frame, a scraper in the bowl, a trunnion on the outer end of the scraper secured in the bearing in the bowl, a scraper-shaft secured to the opposite end of the scraper and extending through a bearing in the side of the bowl and along one side of the shank of the frame, to the junction of the handle therewith, a lever pivoted at the junction of the shank and handle, a forwardly projecting arm on said lever, a curved rack-gear mounted on the shank of the frame, a spur-gear on the scraper-shaft engaging said curved rack gear, a forwardly extending arm on the lever engaging the axis of said curved rack-gear, and a spring around the axis of and engaging said curved rack-gear for actuating it in one direction, substantially as set forth.

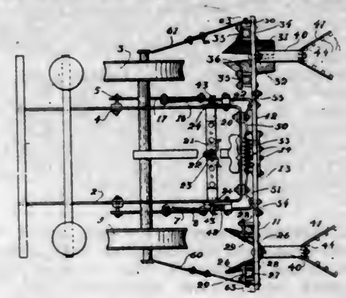
4. An ice-cream disher comprising a frame substantially consisting of shank and handle portions, a bowl secured to the shank portion of the frame, a semi-circular scraper in said bowl, a trunnion on the outer end of the scraper secured in a bearing in the bowl, a scraper-shaft secured to the inner end of said scraper and mounted in a bearing in the bowl at one side of the shank portion of the frame, a spur-gear and collar secured to said shaft near its rear end, a bearing at the rear end of the shank for the rear end of said shaft, a projection on said shank, a curved rack-gear mounted thereon and intermeshing with the spur-gear on said shaft, and engaging the collar thereon, a retracting spring on said projection engaging said curved rack-gear, a lever pivoted to the frame substantially at the junction of the shank and handle portions of the frame, and extending rearwardly approximately parallel with the handle portion of the frame, an arm on said lever extending forwardly from the axis thereof, gear teeth on the end of said extension and gear teeth on the hub of the curved rack-gear engaging the teeth of said extension, substantially as set forth.

5. An ice-cream disher comprising a frame substantially consisting of integral shank and handle portions, the handle portion being offset at one side of the line of the shank portion, a hemispherical bowl secured to the shank portion of the frame, a semi-circular scraper mounted in bearings in the bowl, a scraper-shaft embracing one end of the scraper with a lip thereon turned down over the inside of the scraper and secured thereto, said shaft extending centrally along one side of the shank to a bearing in the offset connecting the shank with the handle, a spur gear on the scraper-shaft near the rear end thereof, a curved rack-gear mounted on a projection on the shank portion of the frame and engaging the spur-gear on the scraper-shaft, a rearwardly extending lever pivoted at the offset connecting the shank and handle portions of the frame, a hub on the curved rack gear, an arm extending forwardly from the axis of said lever to and engaging the hub of the curved rack-gear, and a retracting spring on the projection supporting the curved rack-gear, and engaging said curved rack-gear so as to move it in one direction, substantially as set forth.

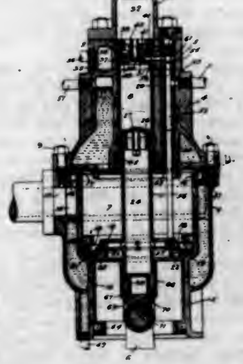
[Claims 6 to 8 not printed in the Gazette.]

1,194,686. CORN-PLANTER ATTACHMENT. WILLIAM J. WALSH, Creston, Iowa. Filed July 25, 1914. Serial No. 853,071. (Cl. 111—6.)

The combination with a corn planter of the ordinary construction having a supporting frame, and a pair of horizontally disposed bars adjustably connected to said frame on opposite sides thereof, a pair of laterally extending plates connected to the rear ends of said horizontal bars and positioned rearwardly in said corn planter supporting frame, vertical bars connected to said horizontal bars, a U-shaped bracket pivotally connected between the side bars and the corn planter supporting frame adjacent its rear end thereof and to said vertical bars for elevating said horizontal bars and lateral plates upon pivotal movement of said U-shaped bracket, a plurality of ridging elements adjustably carried by laterally extending plates to the opposite ends thereof, supporting arms secured to the rear face of said laterally extending plates and extending rearwardly and downwardly therefrom, and a substantially triangular shaped kicking member secured to the rear free terminal of said supporting arm, means for limiting the pivotal movement of said U-shaped bracket and for limiting the vertical adjustment of said plates.



1,194,687. MULTISTAGE COMPRESSOR. GEORGE WESTINGHOUSE, Pittsburgh, Pa.; Henry Herman Westinghouse, Charles A. Terry, and Walter D. Uptegraff executors of said George Westinghouse, deceased. Filed Sept. 8, 1910. Serial No. 580,971. (Cl. 230—32.)



1. In combination, a compressor casing having a discharge port communicating with a pressure reservoir, a discharge valve for delivering pressure from said compressor to said port and to a distributing chamber, a passage between said port and said distributing chamber and around said valve, and a valve responsive to differences in pressure existing in said chamber and in the reservoir communicating with said port for controlling the delivery of fluid through said passage.

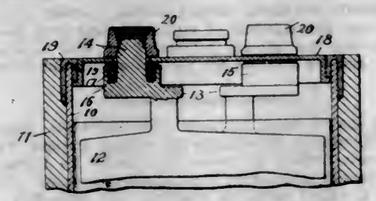
2. In a compressor, a cylinder having three bores and provided with an inlet port communicating with the largest bore, and a delivery port communicating with the smallest bore, a compound piston for drawing air through the inlet port into the largest bore of the cylinder and for compressing the air through valved ports in the portion of largest diameter of the piston and into an annular space segregated by the piston, a valve carried by the piston for controlling the delivery of air from the portion of largest bore of the cylinder through delivery passages formed within the piston, and a valve carried by the pis-

ton for controlling the delivery of air from the piston passage to the portion of smallest bore of the cylinder.

8. A compressor, comprising a cylinder having three bores, a compound piston having three diameters and operating in said cylinder, and coöperating therewith to form a plurality of compression chambers, an inlet port communicating with one of the chambers so formed and valved passages formed within the piston for establishing communication between said chambers.

4. A compressor comprising a cylinder having three alined bores of different diameter and open at one end, a trunk piston closing the open end of the cylinder and having three portions of different diameter operating in the different bores of the cylinders, and valves mounted on the piston for controlling the delivery of fluid through the piston during the operating of the compressor.

1,194,688. STORAGE BATTERY. THEODORE A. WILLARD, Cleveland, Ohio, assignor to The Willard Storage Battery Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 6, 1915. Serial No. 38,167. (Cl. 204—52.)



1. In a storage battery, a battery jar having a cover, and a terminal post extending through the cover and provided adjacent its base with an enlargement which contains an upwardly facing well surrounding the post, the cover being provided with a portion extending into and sealed in the well.

2. In a storage battery, a battery jar having a cover, and a terminal post having a portion of normal diameter which extends through the cover and is surrounded by an upturned flange forming a well, and the cover having a downturned portion extending into the well.

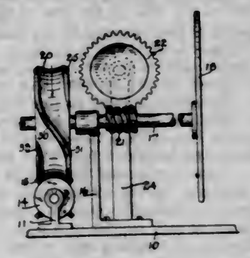
3. In a storage battery, a battery jar, a cover for the jar, a terminal post extending upwardly through the cover, said post having a recess or depression extending about the same and containing sealing compound, and the cover having a portion extending into the sealing compound in the recess.

4. In a storage battery, a jar having a cover provided with an opening for a terminal post, a terminal post extending through said opening, said post and cover having a pair of interfitting and overlapping flanges extending substantially in the direction of the axis of the post.

5. In a storage battery, a jar, a cover therefor provided with an opening, a terminal post extending through the opening, said post having an upstanding flange forming a recess or groove extending about the post, said recess or grooves containing a sealing compound, and said cover having a depending flange or petticoat extending about said opening and projecting downwardly into the sealing compound in said recess or groove.

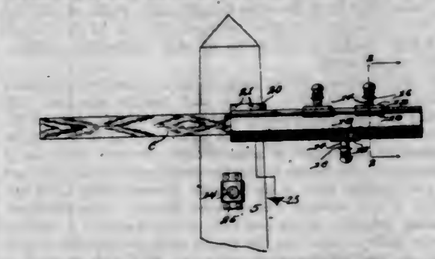
1,194,689. MECHANICAL MOVEMENT. CLARENCE E. WRIGHT, Louisville, Ky., assignor of one-half to Ernest S. Carpenter, Louisville, Ky. Filed Dec. 5, 1913. Serial No. 804,863. (Cl. 74—41.)

1. In a mechanical movement, a star wheel with radially projecting pins, a rotatable cam disk mounted at a right angle to the star wheel and with its periphery lying between a pair of pins on the star wheel and having a sinuous groove across its periphery, a projection outside each entrance to said groove for engaging a pin on the star wheel and deflecting it into the groove, and a projection on the opposite edge of the cam wheel and substantially opposite the entrance to said groove in position to engage a pin on the star wheel, said projections and groove being arranged so that the pin on the star wheel will be caused to travel in said groove throughout the length thereof.



2. In a mechanical movement, a star wheel with radially projecting pins, a rotatable cam disk mounted at a right angle to the star wheel and with its periphery lying between a pair of pins on the star wheel and having a sinuous groove across its periphery, a projection outside each entrance to said groove for engaging a pin on the star wheel and deflecting it into the groove, and a projection on the opposite edge of the cam wheel and substantially opposite the entrance to said groove in position to engage a pin on the star wheel, said projections being both lateral and radial and said projections and groove arranged so that the pin on the star wheel will be caused to travel in said groove throughout the length thereof.

1,194,690. TELEPHONE AND TELEGRAPH POLE CONSTRUCTION. HARRY E. ADAMS, Pittsburgh, Pa. Filed Feb. 19, 1914. Serial No. 819,540. (Cl. 173—321.)

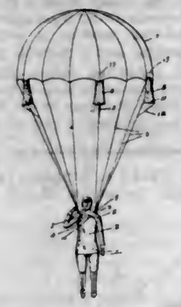


1. In a device of the character described, the combination with a pole supported member, of a plate, interengaging flanges carried by said plate, and said pole supported member, a tubular insulator receiving member carried by said plate, said pole supported member being provided with recesses adapted to register with the insulator receiving member of the plate so that an insulator screwed into said insulator receiving member may enter said recesses.

2. A plate having engaging flanges at its edges and an insulator receiving member upstanding from its upper face, said insulatof receiving member being of tubular formation and being internally threaded, the openings through said tubular member extending entirely through said plate, and a pole supported member, said pole supported member having a plurality of recesses formed therein with which the tubular insulator receiving members are adapted to register.

3. In a device of the character described, the combination with a pole and its usual wooden cross arm of a metallic sheathing constructed to slip over said cross arm, means for securing said sheathing against endwise movement with relation to said cross arm, laterally extending flanges along the edges of said sheathing and plates slidable upon said flanges, and insulating elements extending through said plates and through said sheathing and contacting with said cross arm.

1,194,691. LIFE-PRESERVER FOR AVIATORS. HERBERT L. ADAMS, Somerville, Mass. Filed May 31, 1912. Serial No. 700,827. (Cl. 244—21.)



1. A parachute having a series of circumferential and radial reinforcing bands applied thereto, the circumferential bands extending in a spiral form around the parachute.

2. The combination with a parachute having air escape openings at different points, valves for said openings, and independent operating means connected to said valves.

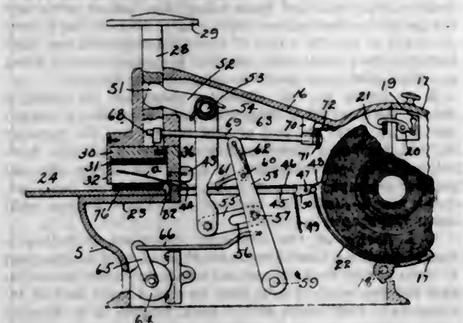
3. The combination with a parachute, of air gathering scoops mounted on the outer edge of the parachute and opening to the under surface thereof.

4. The combination with a parachute, of air gathering scoops mounted on the outer edge of the parachute and opening to the under surface thereof, and means for holding the air inlet ends of the scoops distended.

5. The combination with a parachute, of a body harness to which the parachute is connected, air gathering scoops mounted on the outer edge of the parachute and opening into the under surface thereof, and a controlling line connected to each scoop and extending to the body harness.

[Claim 6 not printed in the Gazette.]

1,194,692. STAMP-AFFIXING MACHINE. FRED R. ALLEN, Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, Boston, Mass., a Corporation of Massachusetts, (organized in 1912.) Filed Nov. 14, 1910, Serial No. 592,386. Renewed Feb. 25, 1916. Serial No. 80,538. (Cl. 216—28.)



1. In a machine of the character described, a casing for receiving stamps in coil form, said casing having a separable hinge portion adapted to be opened to receive the stamp coil, a curved supporting member on said portion on which the periphery of said coil may rest, means for feeding the strip from said coil and a plunger for affixing the stamps.

2. In a machine of the character described, a plunger having a foot, a housing for the latter, the rear plate of said housing being formed with a recess, a cutter mounted in said recess, the ends of the cutter and the side walls of the recess being formed with notches, pins located in said notches to lock the cutter in place, the upper edge of the latter being spaced from the opposing edge of the recess to form a slot, a plunger having an edge to coöperate with the cutter of the back plate of the housing, and means for feeding a strip of stamps through said slot.

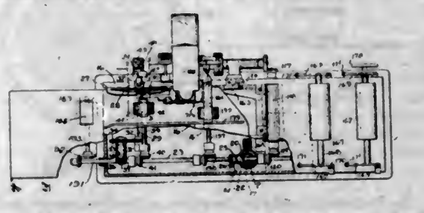
3. A stamp affixing machine, an affixing plunger, a stamp guard housing around the lower portion of said plunger, the rear wall of said housing comprising a recessed plate, a separate block having an upper cutting edge secured in said recess leaving a space above providing a narrow recess through which the stamp strip is fed over the cutting edge in said block beneath the plunger, means for securing said plate to said casing and a blade carried by said plunger to coöperate with said fixed cutter plate.

4. In a stamp affixing machine, a table for the support of the stamp strip, a pivoted arm having two laterally projecting substantially parallel pins, a series of fingers mounted on the lower pin, tension springs connecting said fingers with the upper pin, and an affixing plunger by the movement of which said arm is positively oscillated to cause said fingers to feed the strip.

5. In a stamp affixing machine, a support for a coil of stamps, a table over which the stamps are fed, a bifurcated guide above said table, an auxiliary spring for yieldingly pressing the guide toward the table, a series of feeding fingers engaging the stamp strip between the gripping edges of the guide, the surface of the table and the end of the guide nearest to the coil being curved to present a flaring entrance for the strip between the table and guide, and means for detaching stamps from the strip and applying them to envelops.

[Claim 6 not printed in the Gazette.]

1,194,693. ENVELOP-SEALING MACHINE. FRED R. ALLEN, Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, a Corporation of Massachusetts. Original application filed Mar. 13, 1911, Serial No. 614,096. Divided and this application filed July 5, 1911, Serial No. 637,014. Renewed Jan. 28, 1916. Serial No. 74,874. (Cl. 120—6.)



1. In an envelop sealing machine, the combination with a rotatable moistener disk, and means for supporting an envelop approximately level with the top of said disk, of a plurality of independent, freely rotatable presser disks mounted on an axis approximately parallel with the radius of said moistener disk, means for yieldingly holding said presser disks against the face of the moistener disk to engage the flap of an envelop, and means for regulating the pressure of the presser disks against the moistener disk.

2. In an envelop sealing machine, the combination with a rotatable moistener disk, and means for supporting an envelop approximately level with the top of said disk, of a spindle substantially parallel with the radius of said moistener disk, means for yieldingly supporting said spindle, and a plurality of sharp edged pressing disks mounted freely upon said spindle.

3. In an envelop sealing machine, the combination with a rotatable moistener disk, and means for supporting an envelop approximately level with the top of said disk, of a spindle substantially parallel with the radius of said moistener disk, means for yieldingly supporting said spindle, a plurality of sharp edged pressing disks mounted

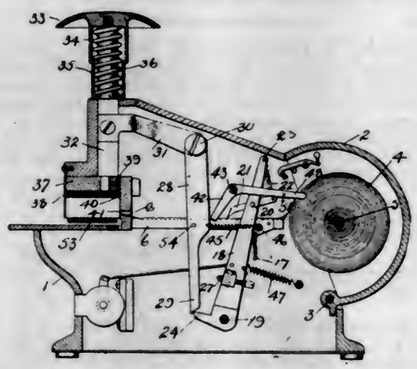
freely upon said spindle, and means for limiting movement of said spindle and said pressing disks toward said moistener disk.

4. In an envelop sealing machine, the combination with a rotatable moistener disk, and means for supporting an envelop approximately level with the top of said moistener disk, of a yoke, a spindle supported by said yoke and arranged substantially parallel with the radius of said moistener disk, a plurality of sharp edged presser disks freely mounted upon said spindle, means acting against said yoke to hold said presser disks yieldingly against the face of said moistener disk, and means for limiting the movement of the presser disks toward the moistener disk.

5. In an envelop sealing machine, the combination with a rotatable moistener disk, and means for supporting an envelop approximately level with the top of said moistener disk, of a yoke, a spindle supported by said yoke and arranged substantially parallel with the radius of said moistener disk, a plurality of sharp edged presser disks freely mounted upon said spindle, means acting against said yoke to hold the presser disks yieldingly against the face of said moistener disk, and a support for said yoke provided with means for adjustably limiting the movement of the presser disks toward said moistener disk.

[Claim 6 not printed in the Gazette.]

1,194,694. STAMP-AFFIXING MACHINE. FRED R. ALLEN, Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, a Corporation of Massachusetts. Filed Aug. 8, 1911, Serial No. 642,968. Renewed Jan. 28, 1916. Serial No. 74,875. (Cl. 211—33.)



1. In a stamp affixing machine, actuating means including a plunger, a feeder positively actuated by said plunger to feed the stamp strip, means for automatically disengaging the actuating means from the feeder means at a predetermined point in the forward movement of the latter, and a spring for returning and normally holding said feeder at the beginning of its feeding stroke.

2. In a stamp affixing machine, actuating means including a plunger, a feeder normally held at the beginning of its feeding stroke whereby the first operating motion of the plunger starts the feeder to feed the strip, and means for automatically disconnecting the actuated means from the feeder at a predetermined point in the forward stroke of the latter, and independent means for causing both feeder and actuator to return to normal.

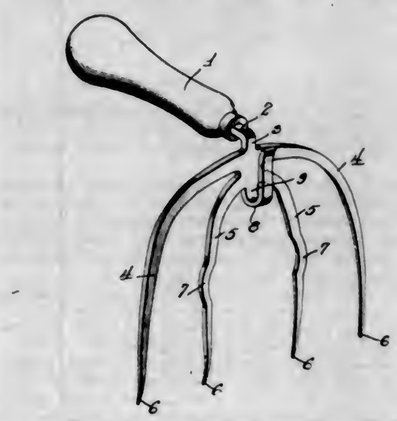
3. In a stamp affixing machine, actuating means including a plunger, a feeder normally held at the beginning of its feeding stroke whereby the first downward motion of the plunger actuates the feeder to feed the strip, and an adjustable tripper actuated by the feeder for disconnecting the actuating means from the feeder at a predetermined point in the forward stroke of the latter.

4. In a stamp affixing machine, a feeder comprising a pivoted arm carrying a plurality of stamp strip feeding fingers, a plunger, an actuating arm carried by said plunger, and means whereby the downward motion of said plunger causes said actuating arm to engage and operate said feeder to feed the stamp strip a predetermined distance and then to automatically disengage the same.

5. In a stamp affixing machine, a stamp strip feeder, actuating means therefor and a movable member actuated to disconnect said actuating means from said feeder whereby the former is rendered inoperative at a predetermined point in the forward stroke of the feeder.

[Claims 6 to 12 not printed in the Gazette.]

1,194,695. FORK. FRANK J. ANDERSON, Box Elder, Mont. Filed Apr. 5, 1916. Serial No. 89,164. (Cl. 55—2.)



1. A device of the character described including a tongue having a handle mounted thereon, a plurality of tines formed on said tongue and extending at right angles thereto, and means for forming a lifting element integrally formed with said tines at a point at which they join each other in a common center, said tines radiating from said common center and arranged in spaced relation at their terminals, the said tines which are embraced by the extreme outer tines being provided with bent portions intermediate their ends.

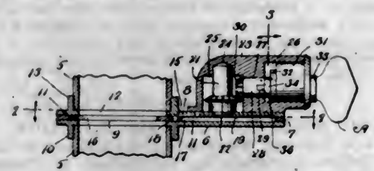
2. A device of the character described including a tongue, a plurality of tines integrally formed with said tongue and extending at right angles thereto, said tines arranged to provide a pair of U-shaped members, one large and the other small, said smaller U-shaped member being provided with bent portions intermediate its ends.

3. A device of the character described including a tongue, an inverted U-shaped member, a smaller U-shaped member, a hook, the end of said tongue and the vertexes of said U-shaped members and the shank of said hook being all connected together at a common center, the said smaller U-shaped member being provided with bent portions intermediate the ends of the tines forming said smaller U-shaped member.

4. A device of the character described including a tongue having a handle mounted thereon, said tongue bent at right angles near one end, a plurality of tines formed on said tongue, some of said tines having a bend formed intermediate their ends, and a hook formed of a strip of metal connected to the meeting ends of said tines.

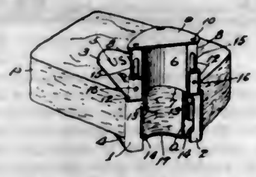
5. A device of the character described including a tongue having a handle mounted thereon, said tongue having its end bent at right angles to the end which holds the handle, an inverted U-shaped member having its center secured to said tongue, a similar smaller U-shaped member having its center secured to the center of said first mentioned U-shaped member, the arms of said smaller U-shaped member having bent portions provided thereon, and a hook integrally formed with and extending from the center of said smaller U-shaped member.

1,194,696. VALVE OPERATING AND LOCKING DEVICE. GEORGE A. ARNOLD, Middletown, Conn., assignor to Arnold Electric Company, a Corporation of Massachusetts. Filed June 28, 1915. Serial No. 36,702. (Cl. 137—5.)



A valve operating and locking device comprising a valve casing having a slidable valve and a rotatable crank disk operatively connected with said valve, said disk having a shaft furnished with a pinion, a frame mounted on said valve casing and having a pinion compartment to receive said pinion, a bearing for said shaft, and a bearing and bore at right angles to said shaft, a shaft journaled in said latter bearing and having a pinion engaged with the pinion of said first shaft, and a lock located in said frame bore and having a key operated member operatively connected with said second shaft.

1,194,697. TOBACCO-BITER. LOYD E. ABHENFELTER, Stillwater, Okla. Filed Aug. 17, 1914. Serial No. 857,262. (Cl. 131—34.)



1. A tobacco biter comprising a guide made of sheet metal bent to form two channeled members spaced apart, the open mouth of the channels facing each other; one wall of said channels being connected at its ends with plug retaining arms formed integral with and in angular relation to the channeled members and converging slightly toward each other from the channeled members and having a permanent spring construction, and a cutter in the form of a bent blade having one edge sharpened and being provided with a handle and having side flanges to run in the guide members.

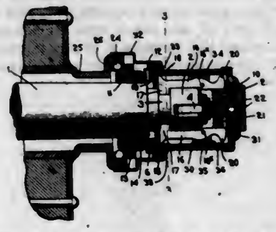
2. A frame adapted for attachment to a plug of tobacco and provided with guideways, telescopic members in said guideways; and a blade movable in said telescopic members and thereby mounted in movable relation to the frame.

3. A tobacco biter comprising guides, means for attaching the guides to a plug of tobacco; there being slots in said guides, channeled telescopic means in the slots; said telescopic means having detents in the slots of said guides; a cutter having slotted flanges at its sides; said flanges being in the channels of said telescopic means; and retainers connected to the telescopic means and extending through the slots of the cutter flanges.

4. The combination of a frame having plates to engage the sides of a plug of tobacco and also having channeled guides connecting said plates and spaced apart; of channeled telescopic sections movably fastened in said guides; and a cutter movably fastened in the telescopic sections.

1,194,698. WHEEL-RETAINING DEVICE. ELLEN M. AYRES, Boston, Mass. Filed June 25, 1915. Serial No. 36,234. (Cl. 21—30.)

1. A wheel retainer having a socket to receive the end of an axle, means for connecting the wheel retainer to such axle and an inclosing and protecting sleeve for said wheel retainer having means for locking said connecting means against removal.



2. A wheel retainer comprising a collar having a socket to receive the recessed end of an axle and provided with a longitudinally disposed aperture, a lever pivotally mounted in said aperture having at one end means for engaging said axle recess and projecting at its opposite end beyond the periphery of said collar, means for normally holding the axle engaging means in said recess and an inclosing sleeve removably secured upon said collar and having means for locking the axle engaging means against removal.

3. A wheel retainer comprising a collar having a socket to receive the axle having a recessed end and provided with a longitudinally disposed aperture, a lever pivotally mounted in said aperture having at one end means for engaging said axle recess and at its opposite end projecting beyond the periphery of the collar, resilient means for normally holding the axle engaging means in the axle recess and an inclosing sleeve having an internal rib engaging said lever and locking the same against displacement detachably secured to said collar.

4. A wheel retainer comprising a collar having a socket to receive the end of an axle provided with a locking recess, and a plurality of longitudinal apertures, levers mounted in said apertures having at one end inwardly extending projections to engage said locking recess and at the other end members projecting beyond the periphery of said collar, springs normally adapted to force said inwardly projecting portions into engagement with said recess and a sleeve removably secured to said collar having means for locking said levers in axle engaging position.

5. A wheel retainer comprising a collar having a socket to receive the end of an axle provided with an annular locking recess and a plurality of longitudinal apertures communicating with said socket, levers mounted in said apertures having at one end inwardly projecting portions to engage said locking recess and at the other end members projecting beyond the periphery of said collar, springs normally adapted to force said inwardly projecting portions into engagement with said locking recess, a sleeve inclosing said collar, and screw threaded thereon adapted to engage said levers and lock the same in axle engaging position.

[Claims 6 to 13 not printed in the Gazette.]

1,194,699. ADJUSTABLE FLEXIBLE SUPPORT. OLIVER LEWIS BADGER, Plainfield, N. J., assignor to Kerr Adjustable Strap Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 15, 1915. Serial No. 50,895. (Cl. 54—46.)

1. In a flexible support, the combination with a strap extended from its end to a point, thence returned upon itself to form a loop and extending to another point beyond said end, thence returned upon itself to form a second loop and extended to a point adjacent said end, and thence returned upon itself to a point within said second named loop, of a link having said end secured thereto and having portions of said strap passing therethrough, said link comprising two eyes disposed at an angle with each other.

2. In a flexible support, a link, a strap secured at one end to said link and extended from said link to a point, thence returned upon itself to form a loop and extending

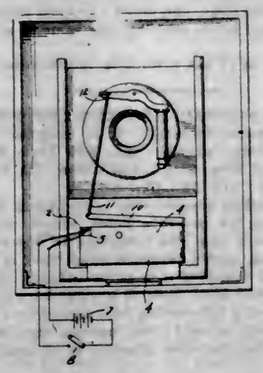
to another point beyond said link, thence returned upon itself to form a second loop and extended to said link, and thence passed through said link and returned upon itself to a point within said second named loop, and means for deflecting a portion of said strap from its normal position thereby to increase the resistance of the portions of said strap against movement with respect to one another.



3. In a flexible support, a link, a strap secured at one end to said link and extended from said link to a point, thence returned upon itself to form a loop and extending to another point beyond said link, thence returned upon itself to form a second loop and extended to said link, and thence passed through said link and returned upon itself to a point within said second named loop, said link being formed with means for deflecting a portion of said strap from its normal position, thereby to increase the resistance of the portions of said strap against movement with respect to one another.

4. In a flexible support, a link comprising a bar having an eye extending from each side thereof, said eyes being disposed at an angle to each other, and a strap secured at one end to said bar, said strap being extended to a point, thence back upon itself and through one of said eyes, so as to leave the other eye within the loop thus formed, and extended to a point, thence back upon itself so as to form a second loop, and thence through the same eye and back upon itself to a point within said second named loop.

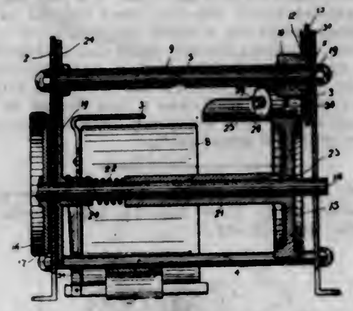
1,194,700. ATTACHMENT FOR CAMERAS. WILLIE O. BESAW and ALLEN E. MCCLANAHAN, Reedley, Cal. Filed Mar. 7, 1916. Serial No. 82,676. (Cl. 95—53.)



1. An attachment for cameras comprising an electromagnet, a pivoted armature for the magnet, an arm extending from the armature at an angle in position for movement transversely of the axis of the magnet when the armature is moved pivotally and a link connected with the arm of the armature and adapted for connection with the controlling lever of a camera shutter.

2. In an attachment for cameras, the combination with a casing, of a plurality of horizontally disposed electromagnets, a horizontally movable armature having a right angular extension thereon and a link connected to said extension and adapted to be connected to the controlling lever of the shutter of a camera.

1,194,701. MACHINE FOR OPENING ENVELOPS. EUGENE A. BIRCHER, Rochester, N. Y., assignor to Harry C. Nobles, Rochester, N. Y., William B. Thurston, Livonia, N. Y., and George A. Cogswell, Rochester, N. Y. Filed Dec. 14, 1911. Serial No. 665,858. (Cl. 164—60.)



1. In a machine for opening envelops, the combination with a table and a guide flange thereon, of a disk mounted to rotate substantially in a line with the guide flange, a circular cutter having less diameter than the disk, rotatable about an axis common to the axis of the said disk and adjustable toward and from the said disk to vary the depth of the cut, and a feeding cutter yieldingly engaging the circular cutter to adapt itself to the adjustment of the said circular cutter.

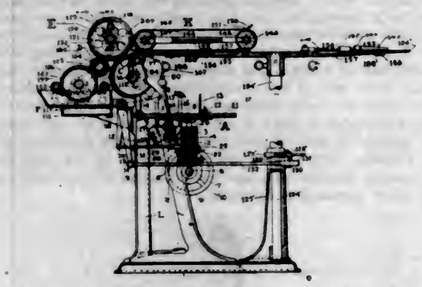
2. In a machine for opening envelops, the combination with a table having a guide thereon, of a shaft supported above said table and having a screw threaded portion and a shoulder adjacent thereto, a circular cutter arranged on said screw threaded portion, and a disk of greater diameter than the cutter, having screw threaded engagement with said screw threaded portion and adapted to clamp the cutter against the shoulder, said disk serving to determine the width of the cut by its relative position to the circular cutter.

3. In a machine for opening envelops, the combination with a table having a guide flange thereon, of a pair of rotary cutters for removing one edge of an envelop movable along the guide, one of said cutters turning about an axis on one side of the table and the other of said cutters turning about an axis on the other side of the table, and a disk arranged to turn about an axis common to the upper cutter, said disk having a greater diameter than the cutter and being adjustable toward and from the cutter to vary the width of the chip to be cut from an envelop.

4. In a machine for opening envelops, the combination of a table having a guide flange thereon, of a disk mounted to rotate substantially in a line with the guide flange, and a circular cutter rotatable about an axis common to the axis of the said disk and adjustable toward and from the said disk, and a feeding cutter yieldingly engaging the circular cutter to adapt itself to the adjustment of the said circular cutter.

1,194,702. GUMMING-MACHINE FOR BOX-COVER WRAPPERS. ROBERT S. BOLGER, Richmond Hill, N. Y. Filed Sept. 10, 1910. Serial No. 581,399. (Cl. 93—36.)

1. In a gumming machine for box wrappers, the combination of a wrapper-carrying platen, a device adapted to be set for gumming the entire surface of wrappers carried by the platen, and another device adapted to be set for gumming the marginal edges of wrappers carried by the platen, said devices being mounted for coöperative use with the platen only one at a time.



2. In a gumming machine for box wrappers, the combination of a platen, means for automatically delivering wrappers successively thereto, a gum-applying device arranged to apply gum to the entire surface of the wrappers on the platen, and another device capable of use interchangeably with the first to apply gum to the marginal edges of the wrappers, said devices being mounted for cooperative use with the platen only one at a time.

3. In a gumming machine for box wrappers, the combination of a wrapper-carrying platen, a device for gumming the marginal edges of wrappers on the platen, and a separate device adjustable to apply gum to the entire surface of the wrappers or to supply gum to the first-mentioned device.

4. In a gumming machine for box wrappers, the combination of a wrapper-carrying platen, a device for gumming the marginal edges of wrappers on the platen, a separate device adjustable to apply gum to the entire surface of the wrappers or to supply gum to the first-mentioned device, and means for feeding gum to the last-mentioned device in either of its operative positions.

5. In a gumming machine for box wrappers, the combination of a rotary platen cylinder, means for feeding wrappers thereto, a surface gumming roll disposed in cooperative relation with the platen, a marginal gumming roll arranged in coöperative relation with the platen, and means for supporting the surface gumming roll to be shifted from the platen to the marginal gumming roll to apply gum to the latter.

[Claims 6 to 43 not printed in the Gazette.]

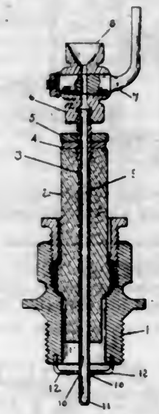
1,194,703. IGNITION DEVICE. JACOB J. BOTTLANDER, Toledo, Ohio, assignor, by direct and mesne assignments, of one-third to John Russell Harry and one-third to Harry C. Cotter, Toledo, Ohio. Filed Mar. 4, 1915. Serial No. 12,097. (Cl. 123—169.)

1. A priming spark plug embodying a bushing, an insulator mounted therein, a tubular electrode extending through the insulator, said electrode having its inner end closed and an opening spaced from the closed end, whereby in the tube below said opening a reservoir is provided which may be supplied through the electrode, which reservoir has an opening independent of the supply intake, and a terminal adjacent the opening and spaced therefrom to form a spark gap adjacent the reservoir.

2. A priming spark plug embodying an insulator, a tubular electrode therethrough, said electrode being closed at one end beyond the insulator to form an open surface reservoir, a valve in the electrode beyond the opposite end of the insulator and spark gap forming means over the reservoir surface.

3. The combination with a pair of electrodes spaced to form a spark gap therebetween, of a fuel holder in one of said electrodes, said holder having a fuel retaining bottom and providing a surface immediately below the spark gap, there being a duct to said fuel holder, and a valve in the duct.

4. The combination with a pair of electrodes spaced to form a spark gap therebetween, of a reservoir having a lip thereof forming at the reservoir edge one end of the spark gap, a duct leading to said reservoir, and a valve in the duct.



5. The combination with a pair of electrodes spaced to form a spark gap therebetween, of a reservoir below the spark gap, one of said electrodes providing a duct leading to said reservoir, and a valve in said duct.

[Claims 6 to 9 not printed in the Gazette.]

1,194,704. CONVEYER-BELT. WILLIAM F. BOWERS, San Francisco, Cal. Filed July 6, 1915. Serial No. 38,292. (Cl. 193—26.)



1. As an article of manufacture, a conveyer belt having as an integral part and on the upper face thereof a wearing member which constitutes the wearing surface of the belt, the same comprising a series of longitudinally disposed layers of textile fabric cut on the bias set at a transverse inclination relative to the horizontal surface of the upper face of the belt and united one to the other so that the face of adjacent members overlap, the said layers being united one to the other by rubber interposed between the faces thereof and vulcanized.

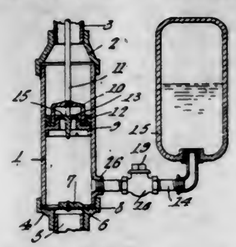
2. A wear pad for a conveyer belt, comprising a series of longitudinally disposed layers of textile fabric cut on the bias, set at a transverse inclination to the horizontal surface of the wear pad and united one to the other by adhesive elastic material interposed therebetween so that the faces of adjacent layers overlap, and spaced longitudinally disposed side binding members composed of adhesive elastic material and united to the outer fabric layers thereby.

3. The combination with a flexible conveyer belt of a wear pad therefor comprising a series of longitudinally disposed layers of textile fabric, set at a transverse inclination to the horizontal surface of the wear pad, and united one to the other so that the faces of adjacent layers overlap.

1,194,705. SUCTION-PUMP. CARL F. BRANDENBERGER and MARTIN W. REUTHER, Fort Madison, Iowa. Filed Jan. 4, 1916. Serial No. 70,210. (Cl. 103—61.)

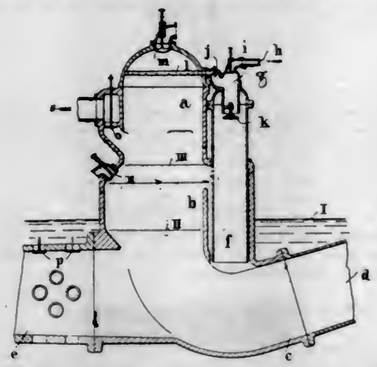
The combination with a pump embodying an upright barrel, a piston working therein and having a check valve provided with a restricted drain aperture, and a lower check valve for supporting the head of water, of an air chamber having its lower portion in communication with

the lower portion of said barrel below the piston and above said check valve, and a check valve between said barrel



and chamber and seating toward said chamber, the last mentioned valve having a restricted aperture.

1,194,706. TWO-CYCLE GAS-PUMP AND THE LIKE. ERIC BROWN, Bahnhofweg, Baden, Switzerland. Filed May 10, 1912. Serial No. 696,541. (Cl. 160—1.)



1. A two-stroke cycle gas pump and the like including a main and an auxiliary pumping chamber each substantially closed at one end, a connection adapted for the passage of gas between the substantially closed ends of said chambers, openings at the other ends of said chambers connecting with a liquid reservoir, a port at the side of the main chamber adapted for the exit of an elastic fluid, ports respectively above and below said exit port adapted for the entry of air, valves in connection with the auxiliary chamber adapted respectively to close one end of said chamber and to close connection between the main and the auxiliary chambers and an elastic fluid conduit in connection with the auxiliary chamber and a valve for closing the same; as set forth.

2. An internal combustion pump comprising a combustion chamber, a gaseous fuel chamber, a gas inlet to said fuel chamber, a connection between said chambers at the top adapted for the passage of gases, and a connection between said chambers at the bottom adapted for the flow of liquids in either direction, a liquid column part forming a liquid piston in the combustion chamber and part forming a liquid pston in the fuel chamber, the two pistons being driven downward on the outstroke, that in the fuel chamber acting to draw the gaseous fuel into that chamber during its outstroke and returning in both chambers on the instroke.

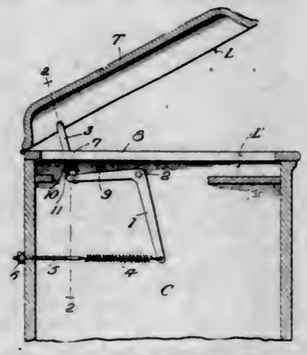
1,194,707. DEVELOPING-TANK. JOHN EDWIN BRYANT, Cambridge, Mass. Filed Aug. 19, 1914. Serial No. 857,549. (Cl. 95—90.5.)

1. A device of the kind described, consisting of a tank body, said tank body being of an increased width at its upper end, a roll gripping member consisting of a spring mounted at the upper enlarged end of said tank body, the tank body having a continuously flat wall at its upper end, said wall being returned inwardly and downwardly of said tank body to form a rounded edge, an exteriorly and integrally formed shoulder extending at the lowest part of said flat wall, a hinged cover at the upper end of said tank body having an outer flat wall adapted to extend in spaced parallel relation to said first named flat wall in spaced relation from said shoulder, a roll carrying the laminations of a film, said roll being engaged in said flat spring, with one of the laminations of said film passing snugly between said flattened walls and being deflected by said shoulder to hang in spaced relation from said tank body exteriorly thereof, said other lamination passing over said rounded edge, and a weight secured to the edge of said second lamination adapted to descend in said body as said other lamination descends.



2. In a device of the class described, in combination a tank body, a transversely disposed tube secured at the lower end thereof, an elongated web formed integrally upon said tube and forming a rest therefor, said tube having a restricted port communicating with said tank body, and a member secured upon an upper part of said tube within said tank body and having a portion extending over said port in spaced relation from said tube whereby to prevent access of light in said tank body, and a plug engaging said tube to close the same.

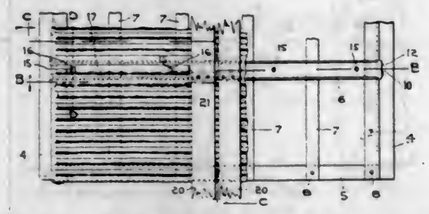
1,194,708. COUNTERBALANCE FOR HINGED COVERS. DANIEL THEODORE BUCKWALTER, Royersford, Pa. Filed May 17, 1915. Serial No. 28,694. (Cl. 217—60.)



The combination of a receptacle having a hinged lid and a laterally extending member at its upper end, a bell crank lever fulcrumed to one wall of said receptacle and having one arm extending approximately in a horizontal plane and the other depending, a link pivotally connected

at one end to the free end of said horizontally disposed arm and to said hinged lid, a cushioned element arranged between said horizontal arm and said laterally extending member, a coiled spring connected at one end to the free end of the depending arm of said bell crank lever, a threaded rod extending through one wall of said receptacle and connected at its inner end to the other end of said coiled spring, a nut on the outer end of said threaded rod outside said receptacle whereby the tension of said spring may be controlled, and means for fastening said lid in closed position.

1,194,709. CAR-ROOF. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Nov. 22, 1911. Serial No. 661,837. (Cl. 108—54.)

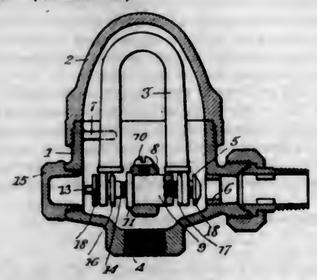


1. In a car the combination with the roof-frame containing a series of channel-iron carlines, of a series of roof-sheets having downwardly bent side edges of sufficiently greater width than the flanges of the carlines to provide clearance spaces therebetween, and means securing the extremities alone of the said side edges to the interior of the webs of the carlines.

2. In a car roof, a metallic carline of channel cross-section arranged with its flanged portions extending upwardly, a securing member welded to the top of the web portion of said carline, roof sheets having downwardly-bent edge portions extending between the flanges and upwardly-bent extreme edge portions adjacent the web portion of said carline, a clamping plate for engaging the edge portions of the roof sheets, and means for securing said clamping plate to said securing member.

3. In a car roof the combination with a roof-frame having a series of upwardly turned channel-iron carlines, of roof-sheets with downwardly turned side edges entering the carlines and having turned-back extreme edges, and means fastening the turned back edge-portions to the interior of the carlines.

1,194,710. AUTOMATIC VALVE. EUGENE S. CALDWELL, Philadelphia, Pa. Filed Mar. 17, 1915. Serial No. 15,142. (Cl. 236—9.)



1. An automatic thermostatically operated valve having the entire valve-operating and adjusting mechanism carried by a mounting that is removably fixed on an internal transverse bridge or support extending transversely to the line of movement of the valve, said mounting with the entire valve-operating and adjusting mechanism carried thereby being removable as a whole from said bridge.

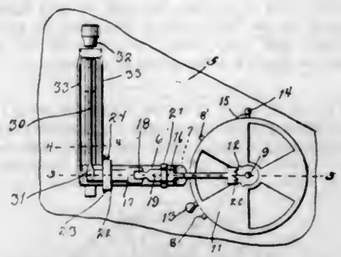
2. In an automatic thermostatically controlled valve, the combination with an internal supporting bridge, of a threaded mounting detachably secured in said bridge and a valve and adjusting screw therefor carried by said mounting, said screw being adapted to engage the mounting to adjust the valve.

3. In an automatic thermostatic valve, the combination with an internal supporting bridge, of a sleeve mounted in a horizontal opening therein, an adjusting screw set in said sleeve and provided with means for engagement by one end of the thermostatic tube, and a valve provided with a valve stem working in a bore in said screw, said valve being constructed for engagement by the opposite end of said thermostatic tube or device.

4. In an automatic thermostatically operated valve, the combination with a casing having a valve seat mounted in one side thereof and an opening in line therewith in the opposite side of the casing, of a valve and adjusting screw therefor, a transverse supporting bridge provided with means for supporting both the valve and its adjusting screw wholly within the casing with the end of the screw in line with the opening in the side of the casing and a cap nut or screw closing said opening whereby an adjustment of the valve is permissible only by removal of the cap screw and insertion of a tool into the interior of the casing.

5. In an automatic thermostatic valve, the combination of a trap casing, a valve and valve seat for said valve, a thermostat for operating said valve, an adjusting screw having a bore extending through the same from end to end and mounted entirely within the casing and a valve stem polygonal in cross-section and mounted and guided in said bore, said screw having one end located opposite an opening in the valve casing to permit it to be adjusted by a tool inserted through said opening.

1,194,711. SELF-REGULATING STOVE-DAMPER. JOSEPH E. CALIN, Depauw, Ind. Filed Oct. 23, 1913. Serial No. 796,907. (Cl. 236—5.)



In a device of the class described, the combination with a stove having a rotary damper, of an adjustable thermostatic element secured to the stove at one end, a bearing plate pivotally mounted at one end upon the stove and pivotally connected at its opposite end to the free end of the thermostatic element, a damper actuating lever pivoted adjacent one end on said plate and having a toothed segment at its free end, a toothed segment carried by the rotary damper and meshing with the segment of the lever, an adjustable block slidably mounted upon the bearing plate, an adjustable lever fulcrumed within the said block and connected at one end to the said damper actuating lever, and means for holding the said block in any desired adjusted position whereby the throw of the damper actuating lever may be varied to operate dampers of different sizes.

1,194,712. FASTENER FOR HATBANDS. EMILE CERF, San Francisco, Cal. Filed July 12, 1915. Serial No. 39,338. (Cl. 132—25.)

1. In combination, a hat, a pendent strap, means for adjustably fastening the strap in place thereon at one end, said means comprising a staple and a metallic clasp

slidably received upon the legs of said staple between which clasp and the head of the staple the strap is adapted to be placed, said clasp being adapted to fold over the strap and pinch the same against the head of the staple to retain it in position, and said staple being adapted to be detachably secured to the hat.



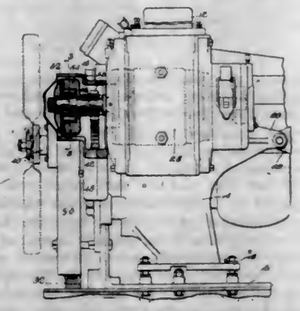
2. In combination, a hat having a fillet or annular band, a pendent strap therefor, and means for adjustably securing said strap in place on the hat, comprising an elongated staple, a metallic clasp provided with openings along its longitudinal axis to receive the legs of said staple, said clasp being movable to position for clamping the end of said strap between it and the head of the staple, and the legs of said staple being adapted to pierce the border of said fillet and be clenched on the opposite side.

3. In combination, a hat having an annular band or fillet, a pendent strap therefor, a staple adapted to pass through the border of said fillet and be clenched on the inner side, a bent clasp carried slidably upon the legs of said staple between which and the head of the staple said strap is received, and nibs carried on said clasp and piercing said strap at the outer side of the head.

4. A fastening device for fabric straps, comprising a staple, and a metallic clasp provided with openings in its longitudinal axis to receive the legs of said staple and movable to position adjacent the head thereof, between which and the head a strap is adapted to be received, said clasp being foldable along its longitudinal axis to bind the strap against the head of the staple.

5. A fastening device for fabric straps, comprising an elongated staple, a clasp provided with openings along its longitudinal axis to receive the legs of said staple, and nibs formed on the inner side of said clasp at either side of the axis, said clasp being foldable over the head of the staple to pinch a strap received between.

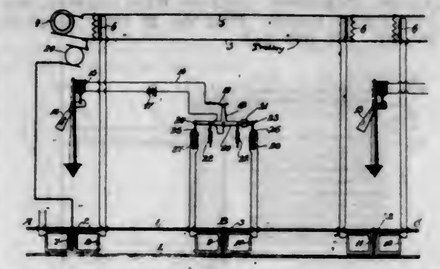
1,194,713. ELECTRIC POWER SYSTEM FOR INTERNAL-COMBUSTION ENGINES. ALEXANDER CHURCHWARD, Boston, Mass., assignor to A-B-C Starter Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 3, 1915. Serial No. 11,819. (Cl. 64—13.)



1. The combination with an internal combustion engine and a dynamo, of power transmitting mechanism between the engine and dynamo including a positive clutch for driving the engine from the dynamo and a yielding clutch for driving the dynamo from the engine, said clutches being inter-engaged to coöperate at all times.

2. The combination with an internal combustion engine and a dynamo, of power transmitting mechanism between the engine and dynamo including a combined clutch which comprises a clutch for positively driving the engine from the dynamo and a friction clutch engaged with said positive clutch for driving the dynamo from the engine which will slip on a face of the driven member whenever the torque on the transmitting mechanism exceeds a predetermined amount.

1,194,714. RAILWAY SIGNALING SYSTEM. CLYDE J. COLEMAN, New York, N. Y., assignor, by mesne assignments, to Hall Switch & Signal Company, New York, N. Y., a Corporation of Maine. Filed Sept. 22, 1908, Serial No. 454,214. Renewed Jan. 12, 1916. Serial No. 71,807. (Cl. 246—36.)



1. In a railway block signaling system, track rails, coils in inductive relation with the rails for supplying a signal controlling current thereto, coils in inductive relation to the rails, intermediate the above mentioned coils, a signal, and means responsive to current changes in said second mentioned coils for controlling the operation of said signal.

2. In a railway block signaling system, track rails, means for supplying signal controlling currents to the track rails of the block substantially at the ends of the block and in opposite directions in each rail of the block, means intermediate said ends of the block for confining the currents from each end to respective portions of the block between said confining means and said ends, a signal, and means responsive to changes in said currents for controlling the operation of said signal.

3. In a railway block signaling system, track rails, bonds connecting said rails at the ends of a block, a bond connecting the rails intermediate the ends of the block, a coil in inductive relation to said rails for supplying a signal controlling current thereto, means for supplying current to said coil, a signal and a coil responsive to current in said track rails for controlling the operation of said signal.

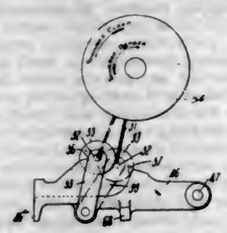
4. In a railway block signaling system, track rails, bonds connecting said rails at the ends of a block, a bond connecting the rails intermediate the ends of the block, a coil in inductive relation to said rails for supplying a signal controlling current thereto, a second coil in inductive relation to said rails, a signal, and a device responsive to current changes in said second mentioned coil for controlling the operation of said signal.

5. In a railway block signaling system, track rails, a coil at the end of the block in inductive relation with said rails, a source of signal controlling current supplying said coil, a coil intermediate the ends of the block in inductive relation with said rails, a signal, and signal controlling devices responsive to current changes in said last mentioned coil.

[Claims 6 to 17 not printed in the Gazette.]

1,194,715. RAILWAY-SIGNAL. JOHN P. COLEMAN, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Jan. 31, 1914. Serial No. 815,673. (Cl. 246—34.)

1. In combination, a signal biased in one direction, means for moving it in opposition to the biasing force, a rotatable member operatively connected with said signal, a blade carried by said member; a pivotally mounted arm, a roller journaled in said arm, the movement of the arm on its pivot being such that the roller moves into and out of the path of said blade; the relation between the blade, arm and roller being such that when the signal is moving in opposition to its biasing force and the roller is in the path of the blade the line of action of the pressure between the blade and roller lies substantially in the straight line between the pivotal point of the roller and the pivotal point of the arm, but that when the signal is moving or tending to move in response to the biasing force the said line of action of the pressure intersects said straight line in such direction that a force is then exerted by the blade on the roller tending to move the latter out of the path of the blade; and means for moving said arm into such position that the roller is in the path of the blade and for resisting said latter force.



2. In combination, a signal biased in one direction, means for moving it in opposition to the biasing force, a rotatable member operatively connected with said signal, a blade carried by said member, a roller mounted to move into and out of the path of said blade; and means for moving the roller into the path of the blade to arrest the momentum of the signal when the latter has been moved to a given point by the motor, and for holding the roller in said path to prevent return of the signal in response to the biasing force.

3. In combination, a signal biased in one direction, a motor for moving it in opposition to the biasing force, a movable member operatively connected with the signal, a second member movable into and out of the path of the first member; means for moving the second member into the path of the first member to arrest the momentum acquired by the moving parts while being moved by the motor, when the signal has reached a given position to which it is driven by the motor, and for holding said second member in said path to prevent return of the signal in response to the biasing force; and a contact operatively connected with said second member for controlling the motor.

4. In combination, a signal biased in one direction, a motor for moving it in opposition to the biasing force, a movable member operatively connected with the signal, a second member movable into and out of the path of the first member; a contact operatively connected with said second member for controlling said motor, the contact being open or closed according as the second member is in or out of the path of the first member; and means for moving said second member into the path of the first member when the signal has been moved to a given position by the motor whereby to deënergize the motor and to arrest the momentum acquired by the moving parts while being moved by the motor, and to prevent return of the signal in response to the biasing force.

5. In combination, a signal biased in one direction, a motor for moving it in opposition to the biasing force, a movable member operatively connected with the signal, a second member movable into and out of the path of the first member; means for moving the second member into the path of the first member to arrest the momentum acquired by the moving parts while being moved by the motor when the signal has reached a given position to which it is driven by the motor, and for holding said second member in said path to prevent return of the signal in response to the biasing force.

[Claims 6 to 11 not printed in the Gazette.]

1,194,716. GARMENT-LOOP. CLARK S. COMSTOCK, Sr., East Orange, N. J. Filed Mar. 17, 1916. Serial No. 84,834. (Cl. 24—224.)



1. A garment loop having a strap-receiving portion comprising an upper bar around which the strap passes, and a lower portion lying below the first and extending substantially across the loop, and a button-receiving portion, said garment loop being formed of a single piece of wire, the ends of which are connected at the juncture of such lower portion and button-receiving portions.

2. A garment loop having a strap-receiving recess and a button-receiving recess, said garment loop being formed of a single piece of wire and said wire passing completely across the bottom of the strap-receiving recess and the top of the button-receiving recess, and permanently separating the two.

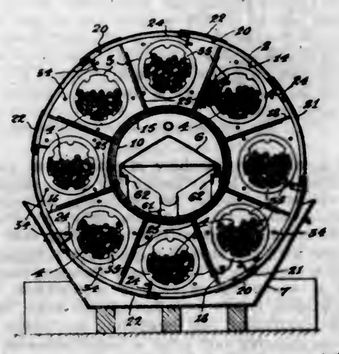
3. A garment loop having a strap-receiving recess and a button-receiving recess, said garment loop being formed of a single piece of wire, and each of said recesses being permanently closed by said wire.

4. A garment loop having a strap-receiving recess and a button-receiving recess, said garment loop being formed of a single piece of wire, and an end of said wire passing across the bottom of said strap-receiving recess and the top of said button receiving recess, and permanently separating the two.

5. A garment loop formed of a single piece of wire into a strap receiving recess and a permanently separate button-receiving recess, and one end of said wire passing across the top of said button-receiving recess and looped around the body of the wire, and the other end of said wire being connected to the body of the wire near the first end.

[Claims 6 and 7 not printed in the Gazette.]

1,194,717. GRINDING-MILL. JOHN W. COVER, Tacoma, Wash. Filed Nov. 16, 1915. Serial No. 61,847. (Cl. 83—9.)



1. A grinding mill comprising a drum mounted to be rotated and containing a series of pockets annularly disposed within its outer shell, a series of grinding rods loosely placed within each pair of pockets, radially placed deflecting plates between the sets of grinding rods, and a fixed screen lying in the central part of the drum in position to receive the discharge from said deflecting plates.

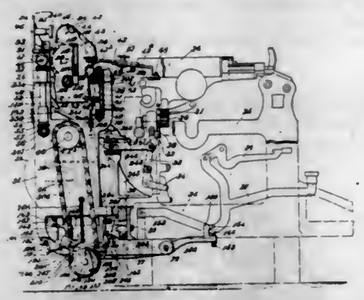
2. A grinding mill comprising a drum mounted to rotate, a series of circular pockets secured in pairs to opposite

heads, and spaced about the outer part thereof, grinding bars loosely grouped in said pockets, screens placed in the periphery of the drum between each group of grinding bars and to be beneath a radial plane between said groups at the side of the drum which is moving upward, deflecting plates connecting opposite heads and radially placed between each group of grinding bars, said plates having their outer edges spaced inward from the outer shell of the drums.

3. A grinding mill comprising a drum mounted to rotate, a series of circular pockets adapted to serve as seats for the grinding bars and placed about the outer zone of the drum, grinding bars seated in said pockets, deflecting plates radially placed between each group of grinding bars and having their outer edges spaced inward from the outer shell of the drum, the outer shell of the drum having screened openings between each group of grinding bars and at one side of the plane of the corresponding deflecting plate, and a plate extending inward from the shell at the other side of said screen openings from that of said deflecting plate.

4. A grinding mill comprising a drum having a series of groups of grinding bars constrained to occupy as a whole a definite position in the drum and free to roll or move upon each other within the limits of their position, the outer shell of the drum having screens therein and inwardly projecting flanges along one edge of said screens, radially positioned deflecting plates between the groups of grinding bars having their outer edges inward from the outer shell and substantially alined with the other edge of the screens in the outer shell, a screen occupying the space within the groups of grinding bars and a discharge chute beneath said centrally placed screen and extending without the drum through axial openings thereof.

1,194,718. CALCULATING-MACHINE. THOMAS D. CRIST, Holland Patent, and GEORGE H. SPITZLI, Utica, N. Y.; said Crist assignor to said Spitzli. Filed Feb. 12, 1914. Serial No. 818,217. (Cl. 235—62.)



1. In a calculating machine, in combination, computing mechanism, means for actuating the same, manually actuated operating members for controlling said computing mechanism, means for controlling said operating members, and means for operatively connecting said controlling means with said actuating means for actuation thereby at each operation of any of said operating members.

2. In a calculating machine, in combination, computing mechanism, means for actuating the same, operating arms for controlling said computing mechanism, a universal bar engaging said arms, a rocker operated by said universal bar, means for controlling said operating arms, and a clutch controlled by said rocker for operatively connecting said controlling means with said actuating means.

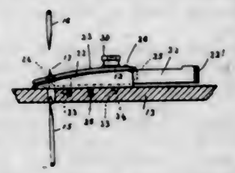
3. In a calculating machine, in combination, computing mechanism, a main shaft for actuating said computing mechanism, operating arms for controlling said computing mechanism, an auxiliary shaft provided with means for controlling said arms, a member mounted to rotate on said auxiliary shaft and operatively connected with said main shaft, a clutch for connecting said rotating member to said auxiliary shaft, an arm for controlling said clutch, a universal bar engaging said operating arms, a rocker operated by said universal bar, and a lever on said rocker for engaging and operating said clutch controlling arm.

4. In a calculating machine, in combination, computing mechanism, means for actuating the same, operating arms for controlling said computing mechanism, a shaft provided with means for controlling the arms, a clutch for operatively connecting said shaft with said actuating means, a lever for controlling said clutch, a rocker operated by said operating arms, a hooked lever on said rocker for engaging and operating said clutch controlling lever, and means to engage said last named lever and operate the same to release said clutch controlling lever.

5. In a calculating machine, in combination, a frame, computing mechanism in said frame, means for actuating said computing mechanism, operating arms for controlling said computing mechanism, a shaft provided with means for controlling said arms, a clutch for operatively connecting said shaft with said actuating means, a spring controlled lever for controlling said clutch, a rocker operated by said operating arms, a spring-controlled hooked lever on said rocker for engaging and operating said clutch controlling lever, said hooked lever having a cam surface, and a stationary member on said frame adapted to engage said cam surface and move said hooked lever out of engagement with said clutch controlling lever when said rocker is operated.

[Claims 6 to 94 not printed in the Gazette.]

1,194,719. CHANNELING DEVICE FOR SEWING-MACHINES. JOHN F. DAPRIX, Utica, N. Y. Filed Dec. 17, 1914. Serial No. 877,662. (Cl. 112—20.)

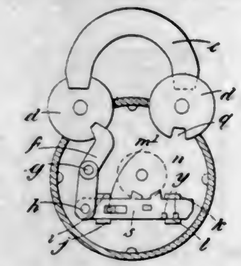


1. In a channeling device for sewing machines, the combination of a base having a needle aperture and adapted to rest upon the work bed of a sewing machine, a channeling knife extending upward from said base, a top plate over the base provided with a needle and knife aperture and a wedge shaped member interposed between the base and the top plate and adapted to support the latter at varying positions above the base by longitudinal adjustment of said wedge.

2. In a channeling device for sewing machines, the combination of a base having a needle aperture and adapted to rest upon the work bed of a sewing machine, a channeling knife extending upward from said base, a top plate over the base provided with a needle and knife aperture, a wedge shaped member interposed between the base and the top plate and adapted to support the latter at varying positions above the base by longitudinal adjustment of said wedge and adjustable means for holding said top plate down upon the wedge.

3. In a channeling device for sewing machines, the combination of a base having a needle aperture and adapted to rest upon the work bed of a sewing machine, a channeling knife extending upward from said base, a top plate over the base provided with a needle and knife aperture and a two-armed wedge-shaped member interposed between the base and the top plate and adapted to support the latter at varying positions by longitudinal movement of said wedge-shaped member, said wedge-shaped member having its outer ends connected by a loop forming a handle for adjustment of said member.

1,194,720. PADLOCK. ERUCHSHAW BYRAMJI DAROOWALLA, Bombay, India. Filed Jan. 4, 1916. Serial No. 70,202. (Cl. 70—104.)

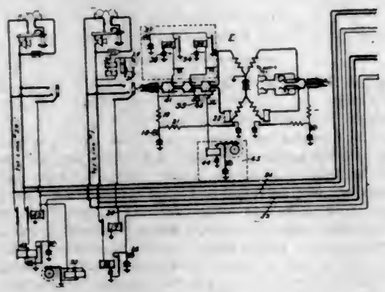


1. In a padlock, the combination of a shackle divided longitudinally into two sections, and rotatable bosses on opposite sides of the padlock to which each of the shackle sections respectively are permanently connected at one end and with which the other end of each shackle section respectively engages when in the closed position.

2. In a padlock, the combination of a shackle divided longitudinally into two sections, rotatable bosses on opposite sides of the padlock to which each of the shackle sections respectively are permanently connected at one end and with which the other end of each shackle section respectively engages when in the closed position, a bolt located within the padlock and pivoted intermediate its ends and adapted to engage one of said bosses with one end, and a key bar connected to the other end of the bolt for the purpose described.

3. In a padlock, the combination of a shackle divided longitudinally into two sections, rotatable bosses on opposite sides of the padlock to which each of the shackle sections respectively are permanently connected at one end and with which the other end of each shackle section respectively engages when in the closed position, a bolt located within the padlock and pivoted intermediate its ends and adapted to engage one of said bosses with one end, a key bar connected to the other end of the bolt, and a second bolt adapted to engage the other of said bosses and to be moved longitudinally out of engagement by a key for the purpose described.

1,194,721. SERVICE-OBSERVING SYSTEM. HARRY L DARRAH, Chatham, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Nov. 26, 1915. Serial No. 63,480. (Cl. 179—27.)



1. In a service observing system, a trunk circuit extending from a central office to a service observing desk, a plurality of telephone lines terminating at the central office, means associated with the trunk circuit for automatically connecting a calling telephone line with the trunk circuit, a signaling device at the service observing desk for each of the telephone lines, apparatus comprising marginal relays adapted to coöperate to cause the operation of the signaling device corresponding to the telephone line connected to the trunk circuit to indicate the number of the connected telephone line, and means controlled by the observer for causing said apparatus to coöperate.

2. In a service observing system, a trunk circuit extending from a central office to a service observing desk, a plurality of telephone lines terminating at the central office, a plurality of resistances at the central office, means associated with the trunk circuit for connecting a calling telephone line with the trunk circuit and for selecting one or more of the resistances, a source of current, a signaling device at the service observing desk for each of the telephone lines, apparatus comprising marginal relays adapted to coöperate to cause the operation of the signaling device corresponding to the telephone line connected to the trunk circuit to indicate the number of the connected telephone line, a key at the service observing desk, and a relay operating upon the actuation of the key to include the source of current, the selected resistance or resistances and said apparatus in circuit to cause the coöperation of said apparatus.

3. In a service observing system, a trunk circuit extending from a central office to a service observing desk, a plurality of telephone lines terminating at the central office, a plurality of resistances at the central office, means associated with the trunk circuit for connecting a calling telephone line with the trunk circuit and for selecting one or more of the resistances, a source of current, a signaling device at the service observing desk for each of the telephone lines, apparatus comprising three sets of relays, one of each set being marginal, adapted to cooperate to cause the operation of the signaling device corresponding to the telephone line connected to the trunk circuit to indicate the number of the connected telephone line, a key at the service observing desk, and a relay operating upon the actuation of the key to include the source of current, the selected resistance or resistances and one or more set of said relays in circuit to cause the coöperation thereof.

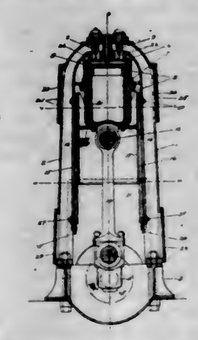
4. In a service observing system, a trunk circuit extending from a central office to a service observing desk, a plurality of telephone lines terminating at the central office, a plurality of high and low resistances, means associated with the trunk circuit for connecting a calling telephone line with the trunk circuit and for selecting one or more of the resistances, a source of current, a signaling device at the service observing desk for each of the telephone lines, a plurality of relays adapted to coöperate to cause the operation of the signaling device corresponding to the telephone line connected to the trunk circuit to indicate the number of the connected telephone line, and a relay operating under control of the observer to cause the operative association of the source of current, the selected resistance or resistances and said relays, whereby the signaling device corresponding to the connected telephone line is operated.

1,194,722. INTERNAL-COMBUSTION ENGINE. GEORGE K. DAVOL, San Francisco, Cal. Filed Nov. 12, 1912. Serial No. 730,884. (Cl. 123—73.)

1. In an internal combustion engine, the combination of a closed crank chamber in which compression of the air takes place, a base, a frame comprising two columns secured to the base on opposite sides of the crank shaft, and two end plates secured to and connecting the said two columns and making substantially air tight joints with said columns and with said base.

2. In an internal combustion engine, the combination of a closed crank chamber in which compression of the air takes place, a base, a cylinder head, a frame comprising two columns secured to the base on opposite sides of the crank shaft, the two said columns being hollow and forming passages between the crank chamber and the cylinder head, and two end plates secured to and connecting the two said columns and making substantially air tight joints with the base and with said columns.

3. In a substantially vertical internal combustion engine, the combination of a closed crank chamber in which compression of air takes place comprising an engine base, two columns secured at their lower ends to the engine base on opposite sides of the crank shaft, each of said columns having its two side surfaces which face the two ends of the crank shaft lying in two parallel planes approximately perpendicular to the axis of the crank shaft, the said plane surfaces extending from the lower end of the columns where connection with the base is made upward, and two flat end plates secured to said plane surfaces and connecting the two columns and making substantially tight connection with the engine base.



4. In an internal combustion engine, the combination of a closed crank chamber in which compression of the air takes place, said closed crank chamber comprising an engine base, two columns secured to the engine base on opposite sides of the crank shaft, and two end plates secured to and connecting the lower portions of the two said columns, and a cross-head reciprocating in said crank chamber and having a cross-section to fit the space between said columns and between said end plates.

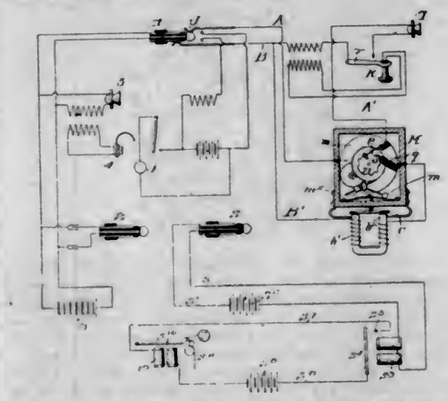
5. In an internal combustion engine, the combination of a closed crank chamber in which preliminary compression of the air takes place, an engine base, two columns secured to the engine base on opposite sides of the crank shaft, two end plates secured to and connecting the said two columns, two adjustable slides held against the opposing faces of said columns, and a reciprocating cross head or plunger of rectangular cross section moving in contact with said slides and with said end plates.

[Claims 6 to 17 not printed in the Gazette.]

1,194,723. FIRE-ALARM APPARATUS. DAVID G. DEE, Rochester, N. Y., assignor to Denio General Electric Company, Rochester, N. Y., a Corporation of New York. Filed July 25, 1912. Serial No. 711,471. (Cl. 179—5.)

1. The combination with a telephone system provided with an operator's receiver and subscriber's line circuits leading from the exchange, and subscriber's line signal, and a central battery current, of a fire alarm apparatus comprising a normally open alarm circuit in conjunction with the subscriber's line circuit, an alarm mechanism adapted to close and open said alarm circuit, means operated thereby to operate the line signal, and means operated by the alarm mechanism for superimposing an alternating current on said circuit when closed in addition to the battery current to produce an audible signal in the central operator's receiver.

2. The combination with a telephone system comprising an exchange and subscribers' line circuits leading therefrom and supplied with battery when closed, each subscriber's line circuit being provided with a line signal, of a fire alarm apparatus comprising a normally open alarm circuit in conjunction with the subscriber's line circuit, an electromagnet in said alarm circuit, an alarm mechanism adapted to cause current in said circuit to flow by impulses for operating the line signal aforesaid, and means for varying the magnet flux in the core of said magnet, during the transmission of such impulses, said flux variations producing an induced current in the winding of the magnet which is impressed upon the line circuit when the alarm circuit is closed.



3. The combination with a central energy telephone system comprising subscribers' liné circuits which are normally open and are supplied with battery current from a central source when closed, each subscriber's line circuit being provided with a central office line signal, of a fire alarm mechanism adapted to cause said current to flow by impulses over a subscriber's line circuit and thereby operate the line signal thereof, and means actuated by said mechanism for imposing an alternating current on said circuit during the transmission of the impulses.

4. A fire alarm system for telephone lines comprising a normally open circuit leading from the said line and adapted when closed to close the line circuit and to be energized by the current supplied to said line from the usual source, of an electro-magnet arranged with its coil in said circuit and means coöperating with the pole pieces of said magnet for varying the magnetic flux flowing through the core of the magnet and means for closing and opening the alarm circuit.

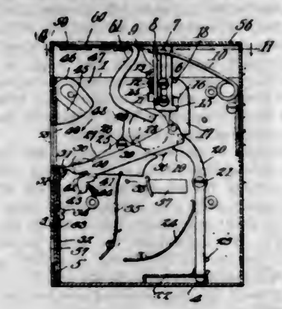
5. A fire alarm system for telephone lines comprising a normally open circuit leading from the said line and adapted when closed to close the line circuit and to be energized by the current supplied to said line from the usual source, of an electro-magnet having pole pieces located adjacent and arranged with its coils in said circuit, of an armature coöperating with said pole pieces, means for effecting a relative movement between the pole pieces and armature to vary the air gap between them and means for closing and opening said alarm circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,194,724. VENDING-MACHINE. HENRY D. DESHLER, Belvidere, N. J. Filed May 27, 1915. Serial No. 30,799. (Cl. 194—58.)

1. The combination with a structure having a package outlet, a door normally closing the outlet, and an ejector, of an actuating element, means normally holding said element against movement, door locking means connected to said holding means, means for directing a coin against said holding means to shift it out of holding position and unlock the door, and separate means operated by the coin under the action of the released actuating element, for successively opening the door and moving the ejector.

2. The combination with a structure having a package outlet, a door normally closing the outlet, and an ejector, of an actuating element, means normally holding said element against movement, a door shifting member, an ejector shifting member, means carried by said holding means for locking the door shifting member against movement, and means for directing a coin onto said member and against the holding means to unlock the door shifting member and the actuating means, said coin constituting means for transmitting motion from the actuating means to the door shifting and ejector shifting members.



3. The combination with a structure having a package outlet, a door normally closing the outlet, of a door shifting member, an actuating element, means for holding said element against movement, a latch connected to the holding means, means coöperating with the latch for fastening the door shifting member against movement, and means for directing a coin into position between the actuating means and the door shifting member, said coin constituting means for shifting the holding means and the latch out of active position and for transmitting motion from the actuating means to the door shifting member.

4. The combination with a structure having a package outlet, a door normally closing the outlet, and a lifting lever connected to the door, of a yieldingly supported plunger, a keeper for holding the plunger against movement in one direction, a latch pivotally connected to the keeper and supported by the lifting lever, means engaged by the latch for holding the lifting lever and door against movement out of normal position, and means for directing a coin against the keeper to release the plunger and lifting lever and to transmit motion from the plunger to the lifting lever.

5. The combination with a structure having a package outlet, a door normally closing the outlet, and a lifting lever engaging the door, of a yieldingly supported plunger, a keeper for limiting the movement of the plunger in one direction, a latch connected to the keeper, means normally engaged by the latch for locking the door and lifting lever against movement out of normal position, means for directing a coin against the keeper to disengage it from the plunger and to withdraw the latch from holding position, said coin constituting means for transmitting motion from the plunger to the lifting lever, and coöperating means upon the plunger and structure for holding the plunger against return movement to its normal position until after the completion of its movement in the opposite direction.

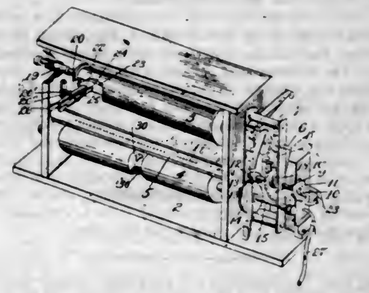
[Claims 6 to 10 not printed in the Gazette.]

1,194,725. SHEET-GUIDING MECHANISM. JOSEPH W. DICKINSON, Cranford, N. J., assignor to The Schubert Piano Company, New York, N. Y., a Corporation of New York. Filed Apr. 22, 1911. Serial No. 622,812. Renewed May 4, 1915. Serial No. 25,842. (Cl. 84—161.)

1. In a musical instrument, the combination with a permanently stationary tracker board, of means operative to move the music sheet laterally and means for controlling the operation of said means including a single independently adjustable port free of contact with the sheet.

2. In a musical instrument, the combination with a permanently stationary tracker board, of means operative to move the music sheet laterally, means for controlling the operation of said means including a single independently adjustable port free of contact with the sheet, and means in engagement with the sheet and having a valve for controlling said port.

3. In a musical instrument, the combination with a permanently stationary tracker board, of means operative to move the music sheet laterally, means for controlling the operation of said means including a single independently adjustable port located away from and free of contact with the sheet, and means in engagement with the edge of the sheet and having a single valve for controlling said port.

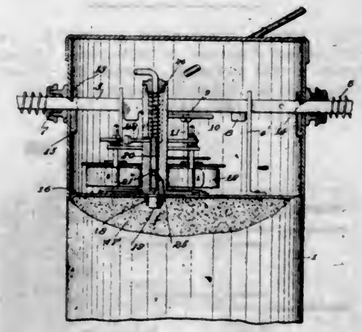


4. In a musical instrument, the combination with a permanently stationary tracker board, of a pair of rolls, means for winding a sheet from one roll to the other, means operative to move the sheet laterally by moving one of the rolls thereof, and means for controlling the operation of said means including a single independently adjustable port located away from and out of contact with the sheet and freely adjustable at the will of the operator.

5. In a musical instrument, the combination with a permanently stationary tracker board, of a pair of rolls, means for winding a sheet from one roll to the other, means operative to move the sheet laterally by moving one of the rolls thereof, means for controlling the operation of said means including a single independently adjustable port located away from and out of contact with the sheet and freely adjustable at the will of the operator, and means in engagement with the sheet and having a valve for controlling said port.

[Claims 6 to 52 not printed in the Gazette.]

1,194,726. SUBMARINE BOMB. DANIEL BUTTS DUNLOP, Petersburg, Va. Filed Jan. 29, 1916. Serial No. 74,977. (Cl. 102—2.)

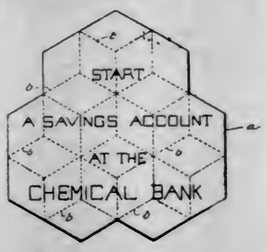


1. In a submarine bomb, in combination, a casing having wings or blades, an explosive charge in the casing, detonating means for the charge, means for holding the detonating means in retracted position, time measuring means for controlling the said means, means for locking the time measuring means, connections from the lock to the wings to release the lock when the bomb enters the water, and detents adapted to engage the locking means when it is released and hold it in unlocked position.

2. In a submarine bomb, in combination, a casing, an explosive charge therein, means for detonating the explosive charge, time measuring means for locking the detonating means, means for locking the time measuring means, and wings or blades controlling the locking device to release the lock when the bomb enters the water and a detent in the form of a sliding latch engaging the locking means to hold it in inoperative position during the operation of the time measuring means.

3. In a submarine bomb, in combination, a casing, an explosive charge in the casing, a percussion primer for igniting the charge, a hammer with means tending to advance the hammer into contact with the primer, means for holding the hammer in retracted position, time measuring means for operating the said means to release the hammer after a predetermined period, means locking the time controlling means, and means for releasing the lock when the bomb enters the water, the device for holding the hammer in retracted position consisting of a pivoted lever swinging transversely to the hammer's stroke, the time measuring means being provided with a swinging dog to engage the lever and release the hammer.

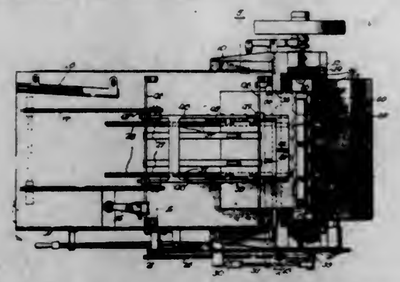
1,194,727. ADVERTISING DEVICE. JACOB W. ELVYN, Chicago, Ill. Filed Mar. 13, 1916. Serial No. 83,762. (Cl. 46—41.)



1. A card divided up into sections by perforated lines or scorings, printed matter on said card as a whole, certain lines of said printed matter coinciding with certain of said perforated lines or scorings.

2. A card divided up into diamond-shaped sections by perforated lines or scorings, printed matter on said card as a whole, certain lines of said printed matter coinciding with certain of said perforated lines or scorings.

1,194,728. METAL-SHEARING MACHINE. CHARLES E. ENNES and CHARLES D. MCDONALD, Chicago, Ill., assignors to The McDonald Machine Co., Chicago, Ill., a Corporation of Illinois. Filed May 4, 1916. Serial No. 95,485. (Cl. 164—48.)



1. In a machine of the class described, the combination of shearing mechanism, means for feeding the work in a direction toward the shearing mechanism with an intermittent movement, and means for imparting additional movement to the work in the same direction as the feeding movement and at the end of each feeding movement to center the work with respect to the shearing mechanism, substantially as described.

2. In a machine of the class described, the combination of shearing mechanism, means for feeding the work in a direction toward the shearing mechanism with an intermittent movement, a stop member, and means for imparting additional movement to the work in the same direction as the feeding movement and at the end of each feeding movement to bring it against the stop member, whereby the work is centered with respect to the shearing mechanism, substantially as described.

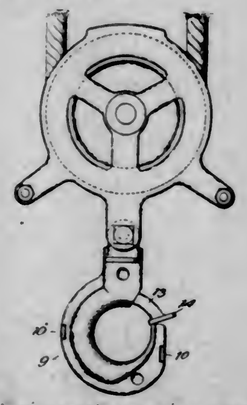
3. In a machine of the class described, the combination of shearing mechanism, means for feeding the work in a direction toward the shearing mechanism with a step by step movement, each step comprising a long movement followed by a short movement and both in the same direction, means for imparting the long portion of the feeding step, means for imparting the short portion of the feeding step, said short movement acting to center the work with respect to the shearing mechanism, substantially as described.

4. In a machine of the class described, the combination of shearing mechanism, reciprocating means for feeding the work in a direction toward the shearing mechanism with a step by step movement, and means for imparting an additional movement to the work in the same direction as the feeding movement and at the end of each feeding step to center the work with respect to the shearing mechanism, substantially as described.

5. In a machine of the class described, the combination of shearing mechanism, means for feeding the work in a direction toward the shearing mechanism with an intermittent movement, and intermittently acting means for imparting an additional movement to the work in the same direction as the feeding movement and at the end of each feeding movement to center the work with respect to the shearing mechanism, substantially as described.

[Claims 6 to 34 not printed in the Gazette.]

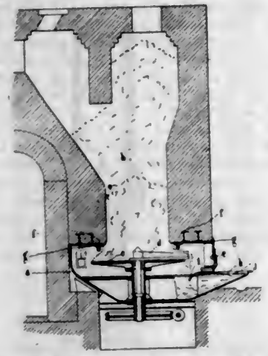
1,194,729. HOOK. HENRY L. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill., a Corporation of Illinois. Filed July 28, 1915. Serial No. 42,852. (Cl. 254—196.)



In a hay-carrier tackle, a sheave, a yoke pivotally connected to said sheave, a pin pivoted in said yoke and terminating in a block at its lower end, and a hollow hook formed of outwardly curved halves between which said block is riveted.

1,194,730. GAS-PRODUCER. SAMUEL GLOVER, St. Helens, and JOHN WEST, Southport, England. Filed Nov. 9, 1915. Serial No. 60,575. (Cl. 48—85.2.)

1. In gas producers, in combination, a furnace, a closed chamber around the lower end of said furnace, an open water sealed ash extraction outlet from said chamber projecting beyond the chamber wall, air admission means in said chamber wall, a table within said chamber adjacent to the open lower end of said furnace, and a vane upon said table, and means for rotating said vane, as set forth.

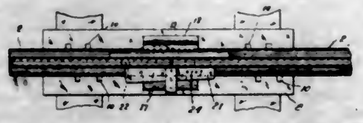


2. In gas producers, in combination, a furnace, a closed chamber around the lower end of said furnace, an open water sealed ash extraction outlet from said chamber projecting beyond the chamber wall, air admission means in said chamber wall, a table within said chamber adjacent to the open lower end of said furnace, a vane upon said table, means for rotating said vane, and means for spraying liquid on to the fuel on said table, as set forth.

3. In gas producers, in combination, a furnace, a chamber at the lower end of said furnace having a water sealed mouth projecting beyond the furnace wall, adjustable air inlets in said chamber wall, a table within said chamber adjacent to the open lower end of said furnace, an intermittently rotated vane upon said table, and a perforated water channel around the lower end of the furnace, as set forth.

4. In gas producers, in combination, a furnace, a chamber at the lower end of the furnace having a water sealed mouth projecting beyond the furnace wall, adjustable air inlets in said chamber wall, a perforated table within said chamber adjacent to the open lower end of said furnace, an intermittently rotating vane upon said table, and means for spraying liquid on to the fuel on said table, as set forth.

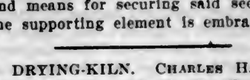
1,194,731. EMERGENCY RAIL-JOINT. MICHAEL GREGA, Conway, Pa., assignor of one-fifth to Adam Vujaklija, Conway, Pa. Filed Apr. 15, 1916. Serial No. 91,294. (Cl. 239—18.)



1. In an emergency rail joint the combination with cooperating rails with openings formed in the webs of said rails, a base plate with an abutment formed integral therewith, a detachable rail guide, a locking member provided with rectangular recesses, pins having a rectangular portion adapted to be detachably mounted in said recesses and engage the bolt holes in the webs of said rails, a slotted shank portion disposed at right angles and formed integral with said locking member, a wedge-shaped key extending through said slotted shank portion provided with a plurality of openings for the reception of a pin for holding said locking member and wedge-shaped key in locked position, substantially as shown and described.

2. In a device for the purpose set forth comprising the combination with cooperating rails having the webs of the abutting ends of said rails cut out forming an opening, a base plate rectangular in shape provided with an abutment formed integral therewith, a detachable rail guide extending upwardly and inwardly over adjacent base flanges of said rails, a T-shaped locking member comprising a slotted shank portion and formed with rectangular recesses, pins having a rectangular portion adapted to be detachably mounted in said recesses and engage the bolt holes in the webs of the said abutting rails, a wedge-shaped key adapted to extend through said slotted shank portion and provided with a plurality of openings for the reception of a pin for holding said wedge-shaped key in locked position, substantially as shown and described.

1,194,732. SOLE FOR SHOES. WILLIAM GREILICH, Brooklyn, N. Y. Filed Dec. 31, 1915. Serial No. 69,646. (Cl. 36—30.)



1. A sole for bathing shoes, outing shoes and the like comprising a structural body composed of superposed layers of canvas cemented one to another and a marginal border of soft rubber surrounding said canvas layers, the marginal fibers of said layers being embedded in said border and one of the canvas layers being exposed on the upper side of said sole, said parts being vulcanized together.

2. A sole for bathing shoes, outing shoes and the like comprising a structural body composed of superposed layers of canvas cemented one to another, an under layer of rubber, and a marginal border integral with said under layer and surrounding said canvas layers, the marginal fibers of said layers being embedded in said border and one of the canvas layers being exposed on the upper side of said sole, said parts being vulcanized together.

1,194,733. GEARING FOR WINCHES. CLAUDE HAMILTON, Bitterne, England. Filed Sept. 27, 1913. Serial No. 792,130. (Cl. 74—21.)

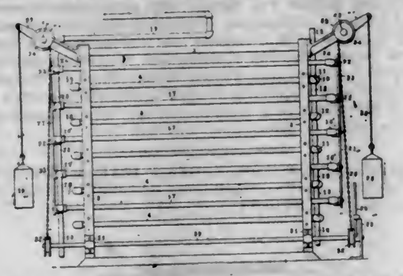


Gearing for winches comprising a separable sectional casting having horizontal tubular extensions and the sections thereof forming a vertical tubular portion, shafts extending through the horizontal tubular extensions, a hoisting pulley on one end of each shaft, a gear wheel on the opposite end of each shaft, a worm gear operating between the gear wheels for rotating the hoisting pulleys in opposite directions, a supporting element, the vertical tubular portion being adapted to embrace said supporting element, and means for securing said sections together, whereby the supporting element is embraced.

1,194,734. DRYING-KILN. CHARLES HARLEY, Ludington, Mich., assignor to Louis G. Merritt, Lockport, N. Y. Filed Aug. 28, 1915. Serial No. 47,736. (Cl. 34—16.)

1. A drying-kiln having, in combination, a plurality of fixed platens and a plurality of movable platens ar-

ranged one above the other and each comprising a continuous coil, means for raising and lowering said movable platens, and means permitting the passage of a heating medium through each of said platens.



2. A drying-kiln having, in combination, alternately arranged fixed and movable platens, each comprising a continuous coil, means for suspending the movable platens as a uit, means for moving the movable platens in juxtaposition to the fixed platens, and means permitting the passage of a heating medium through each of said platens.

3. A drying-kiln having, in combination, alternately arranged fixed and movable platens, each comprising a continuous coil, means for suspending the movable platens as a unit, means for counter-balancing the weight of said movable platens, means for maving the movable platens in juxtaposition to the fixed platens, and means permitting the passage of a heating medium through each of said platens.

4. A drying-kiln having, in combination, alternately arranged rows of fixed and movable pipes, the pipes of each row being connected together to form a continuous coil, means permitting the passage of a heating medium through each coil, counter-balanced means for supporting the rows of movable pipes as a unit, and means for moving said last-named rows into contact with the rows of fixed pipes.

5. A drying-kiln having, in combination, horizontally raranged platens each composed of parallel pipes, the ends of adjacent pipes of each platen being coupled together to form a continuous coil, fixed and movable frames to which said platens are alternately connected, counter-balanced means for supporting said movable frame, and means for raising and lowering said movable frame in order that the platens connected thereto may be placed in contact alternately with the upper and lower surfaces of the fixed platens.

[Claims 6 to 33 not printed in the Gazette.]

1,194,735. SHAVING-BRUSH. MURRAY P. HENDRICKS, Benwood, W. Va. Filed May 5, 1916. Serial No. 95,670. (Cl. 15—38.)

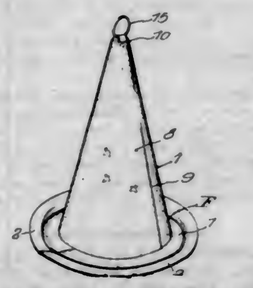
1. A shaving brush comprising a tubular handle closed at one end to provide a container, the opposite end of said handle being outwardly tapered, the tapered portion terminating in an exterior sleeve of cylindrical formation and of a diameter greater than the diameter of said container, a cup carried by said sleeve, said cup being integrally formed with the sleeve and formed by enlarging the extreme end of the sleeve, an interior cylindrical sleeve fitted within said exterior sleeve and extending outwardly beyond the end of said cup and provided with a plurality of apertures for establishing communication between the interior of said container and the said cup, the said interior sleeve adapted to be inverted whereby either end may be fitted within said exterior sleeve, a brush element carried by one end of said interior sleeve, and a disk mounted in said interior sleeve and disposed between the said openings and the interior ends of the bristles comprising said brush element, whereby the liquid passing from said cup into the container will be prevented from contacting with the end of said brush element.

2. A shaving brush comprising a tubular container provided with a tapered portion at one end, a sleeve carried by the tapered portion and having a cup formed at its extreme end, an interior sleeve mounted within said exterior sleeve beyond the outer end of said cup, a brush element carried by one end of said interior sleeve, said inte-



rior sleeve having a fastening means for the end of said brush element, a disk mounted within the said interior sleeve and bearing against said securing means, the diameter of said interior sleeve being equal throughout its length whereby either end of said sleeve may be releasably secured in said exterior sleeve.

1,194,736. FLY-TRAP. MARIA E. HOLDEN, Yonkers, N. Y. Filed May 24, 1915. Serial No. 30,084. (Cl. 43—22.)



1. A fly trap comprising a foldable base, a collapsible tubular member foldably secured at one end to said base plate, and a cone shaped insect attracting member disposed over said tubular member with its lower edge resting on said base plate, said cone shaped member being held against lateral displacement by said tubular member.

2. A fly trap comprising a foldable base having an upright flange, a tubular column provided at one end with laterally extending feet secured to said base plate, said column being foldable at the junction thereof with its feet and being slit longitudinally throughout its length to provide for the flat folding of the side walls thereof when in collapsed position, means for connecting the edges of said slit portion in overlapping relation when the column is in upright position, and a hollow fly attracting member arranged over said column on said base plate and held against lateral displacement by said column.

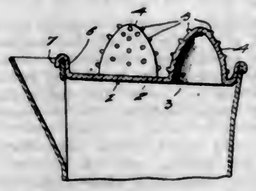
3. A fly trap comprising a foldable base having an upright flange, a tubular column provided at one end with laterally extending feet secured to said base plate, said column being foldable at the junction thereof with its feet and being slit longitudinally throughout its length to provide for the flat folding of the side walls thereof when in collapsed position, means for connecting the edges of said slit portion in overlapped relation when the column is in upright position, a hollow cone shaped member mounted on said base plate over said column provided with an adhesive material on its outer face, and a handle secured to the vertex of said cone shaped member.

4. A fly trap comprising a foldable base raving an upright flange, a tubular column provided at one end with laterally extending feet secured to said base plate, said column being foldable at the junction thereof with its feet and being slit longitudinally throughout its length to provide for the flat folding of the side walls thereof when in collapsed position, means for connecting the edges of said slit portion in overlapping relation when the column is in upright position, a hollow cone shaped member mounted on said base plate over said column provided with an adhesive material on its outer face, and a handle secured to the vertex of said cone-shaped member.

5. A fly trap comprising a supporting base, a longitudinally foldable tubular member having a plurality of laterally extending feet, one of which is fixedly secured to said base and the others movably connected therewith, and an insect carrying member supported by said tubular member.

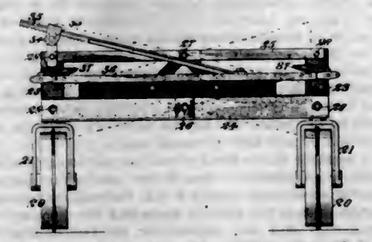
[Claims 6 and 7 not printed in the Gazette.]

1,194,737. COMBINED LEMON-SQUEEZER AND PITCHER-COVER. MARIA E. HOLDEN, Yonkers, N. Y. Filed Jan. 8, 1916. Serial No. 71,000. (Cl. 100—49.)



A lemon squeezer comprising a circular body, an upturned flange at a periphery of the body, outwardly and downwardly extending retaining flanges on the upper edge of the upturned flange, said retaining flanges being notched to form a tongue adapted to fit in the lip of a pitcher, the walls of the notches preventing the turning of the body with relation to the pitcher and squeezer domes formed integral with the body.

1,194,738. TRACTION-ENGINE. BENJAMIN HOLT, Stockton, Cal., assignor to The Holt Manufacturing Company, Stockton, Cal., a Corporation of California. Filed July 31, 1912. Serial No. 712,399. (Cl. 21—114.)



1. In a traction engine, the combination of a main frame, a steering wheel supporting member pivotally connected between its ends to the main frame, and steering wheels pivotally mounted on the opposite ends of said supporting member, whereby the steering wheels may move up and down in substantially straight vertical lines independently of the main frame.

2. In a traction engine, the combination of a main frame, a steering wheel supporting member pivotally connected between its ends to the main frame, bearings pivotally mounted on the opposite ends of said supporting member, and steering wheels journaled on vertical axes in said bearings, the steering wheels being movable up and down in substantially straight vertical lines independently of the main frame and also movable on their individual axes.

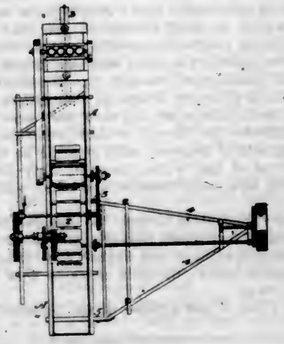
3. In a traction engine, the combination of a main frame, a steering wheel supporting member pivotally connected between its ends to the main frame, bearings pivotally mounted on the opposite ends of said supporting member, steering wheels journaled on vertical axes in said bearings, and longitudinally extending bracing members pivotally connecting said bearings with the main frame.

4. In a traction engine, the combination of a main frame, a transverse supporting frame comprising an upper and a lower rod both pivotally connected between their ends and in a vertical line to the main frame, the lower rod constituting the main support for the main frame on the steering wheels, bearings pivotally mounted on the opposite ends of said supporting frame, and steering wheels journaled on vertical axes in said bearings.

5. In a traction engine, the combination with a frame, of a pair of steering wheels having vertical spindles, boxes in which the spindles are journaled, a pair of parallel bars pivotally connecting the boxes with the frame to maintain the wheels in parallel relation independent of their up and down movements, and means for connecting said spindles and for turning the wheels sidewise in unison.

[Claim 6 not printed in the Gazette.]

1,194,739. TRAVELING HARVESTER. BENJAMIN HOLT, Stockton, Cal., assignor to The Holt Manufacturing Company, Stockton, Cal., a Corporation of California. Filed Jan. 27, 1913. Serial No. 744,532. (Cl. 21—114.)

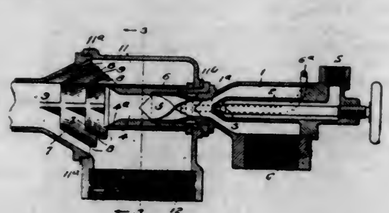


1. In a self-propelled vehicle, the combination of an endless, flexible traction member comprising a series of conjoined, articulated link sections forming continuous rails, each link section carrying a tread plate, a truck within the endless, flexible traction member having rollers running on the edges of said rails, and supplemental side rollers laterally outside of the truck rollers and bearing on the back of the ground run portions of said tread plates and near the side edges thereof to prevent sidewise rocking of the tread plates with relation to the truck.

2. In a traveling harvester, the combination with a main frame and a single pair of sprocket wheels arranged in the same plane one in front of the other, of a truck pivotally mounted on a horizontal axis to oscillate in a vertical plane between the sprocket wheels, an endless, flexible traction member passing around said sprocket wheels and truck and embodying jointed link sections forming continuous rails, a plurality of rollers on the truck bearing on the edges of said rails and a plurality of supplemental rollers laterally outside of the truck roll-

ers and bearing on the traction member outside of the rails whereby the lateral inclination of the traction member and main frame with relation to each other will be prevented.

1,194,740. ATMOSPHERIC BURNER. CAMPBELL MURRAY HUNTER, London, England. Filed Nov. 6, 1915. Serial No. 59,959. (Cl. 158—109.)



1. In an atmospheric burner, the combination with an internally disposed fuel duct, of a series of surrounding air ducts of constant cross-section for supplying the air to support combustion, and means for successively closing the air ducts at their delivery ends said means being adapted to constitute a continuation of the fuel duct.

2. In an atmospheric burner, the combination of a fuel duct, and a plurality of spaced cone frusta arranged in fixed relation to each other and in axial alinement with the fuel duct, the fuel duct and cone frusta being proportionate in size and relatively movable to close the several air ducts.

3. In an atmospheric burner, the combination of a fuel duct, a plurality of spaced cone-frusta arranged in fixed relation with each other, and a mouth-piece, said elements being arranged in axial alinement, the cone frusta and fuel duct being relatively movable, and a casing or hood which surrounds the fuel duct and cone frusta.

4. In an atmospheric burner, the combination with a fuel duct, of a plurality of spaced cone frusta, and a plurality of webs interposed between the cone frusta and which maintain the frusta in fixed relation, said webs being tangentially disposed with relation to the openings in the apices of the frusta, the fuel duct and the cone frusta being in axial alinement and being relatively movable.

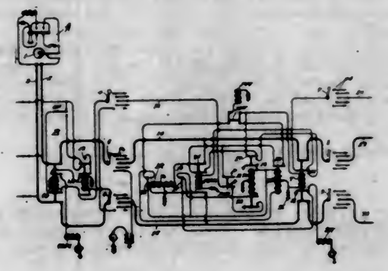
5. In an atmospheric burner, the combination of a fuel duct having an extension telescopically mounted thereon, and a plurality of fixed and spaced cone frusta, the fuel duct extension being relatively movable both to the fuel duct and frusta.

[Claims 6 and 7 not printed in the Gazette.]

1,194,741. AUTOMATIC TELEPHONE SYSTEM. HARRY H. IDE, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed June 19, 1914. Serial No. 846,018. (Cl. 179—18.)

1. In an automatic telephone exchange system the combination with a plurality of switches adapted to be set up in a series to establish a connection, means controlled by a calling subscriber's line to set said switches to complete a connection to a called line, and means controlled at the calling station operable after response of a called connected station to release the connection of said calling station from said called station independently of said connected called station, said last aforesaid means including a circuit controlling element adapted to be rapidly moved from one position to its alternative position and back again to thereby momentarily release the holding circuit for the other switches of the series.

2. In an automatic telephone exchange system the combination with a plurality of switches adapted to be set up in a series to establish a connection, means controlled by a calling subscriber's line to set said switches to complete a connection to a called line, and means controlled at the calling station operable after response of a called connected station to release the connection of said calling station from said called station independently of said connected called station, said last aforesaid means including a circuit controlling element adapted to be rapidly moved from one position to its alternative position and back again to thereby momentarily release the holding circuit for the other switches of the series, and by its second movement to restore the ground connection to the terminal of said holding circuit.



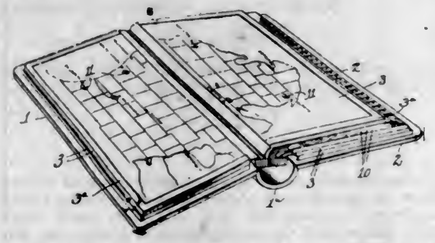
3. In an automatic telephone exchange system the combination with a plurality of switches adapted to be set up in a series to establish a connection, means controlled by a calling subscriber's line to set said switches to complete a connection to a called line, and means controlled at the calling station operable after response of a called connected station to release the connection of said calling station from said called station independently of said connected called station, said last aforesaid means including a circuit controlling element adapted to be rapidly moved from one position to its alternative position and back again to thereby momentarily release the holding circuit for the other switches of the series, and by its second movement to restore the ground connection to the terminal of said holding circuit, and a relay for operating said circuit controlling element.

4. In an automatic telephone exchange system the combination with a plurality of switches adapted to be set up in a series to establish a connection, means controlled by a calling subscriber's line to set said switches to complete a connection to a called line, and means controlled at the calling station operable after response of a called connected station to release the connection of said calling station from said called station independently of said connected called station, said last aforesaid means including a circuit controlling element adapted to be rapidly moved from one position to its alternative position and back again to thereby momentarily release the holding circuit for the other switches of the series, and by its second movement to restore the ground connection to the terminal of said holding circuit, a relay for operating said circuit controlling element, and a second relay controlled directly by the called line having means to effect the rapid dual action of said first aforesaid relay.

5. A metallic line control circuit for automatic switches comprising an impulse relay, a two conductor operating circuit for said relay having a call transmitter connected therewith, means for rapidly operating the impulse relay responsive to said call transmitter for transmitting primary impulses, a differential release relay having an initial operating winding responsive to the initial energization of the impulse relay to attract its armature, means for holding said armature attracted during the primary operations of the impulse relay, a neutralizing winding for said release relay effective to cause a retraction of its armature only responsive to an extended deënergization of the impulse relay, and a relay to control the connection of said impulse relay with said control circuit.

[Claims 1 to 16 not printed in the Gazette.]

1,194,742. SALES-BOOK. JOHN D. A. JOHNSON, Omaha, Nebr. Filed June 13, 1912. Serial No. 703,495. (Cl. 11—19.)



1. A sales book comprising, in combination with the cover, relatively thin paper leaves, and a relatively thick leaf adapted to receive thumb tacks and in which the shafts of the tacks may be fully embedded.

2. A sales book comprising, in combination with the cover, relatively thin leaves, and a relatively thick leaf having a depressed central surface adapted to receive thumb tacks and in which the shafts of the tacks may be fully embedded.

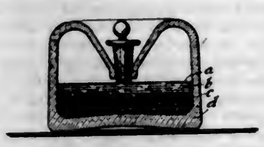
3. A sales book comprising, in combination with the cover leaves, and a board leaf adapted to receive thumb tacks and in which the shafts of the tacks may be fully embedded, said board leaf having raised marginal edges to compensate for the thickness of the heads of the tacks.

4. A sales book comprising, in combination with the cover, paper leaves indexed according to towns or cities written thereon, and a thickened leaf adapted to receive a map showing the towns or cities indexed, said thickened leaf being pervious to receive thumb tacks particularly designating one or more of the towns or cities.

5. A sales book comprising, in combination with the cover, a plurality of relatively thin leaves mounted in the cover, and a plurality of relatively thick leaves disposed between said thin leaves and the cover, the outermost of said thick leaves being hinged to the cover adjacent its outer edge to open therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,194,743. TRANSFER-INK. KARL KAELBLE, New York, N. Y. Filed Sept. 14, 1912. Serial No. 720,868. (Cl. 134—28.)



1. A transfer ink, comprising water, a finely-divided pigment therein, said pigment being of a specific gravity incapable of suspension in the water for periods of practicable working, and a non-pigment-binding substance in solution in the water increasing the specific gravity thereof to the point of practicable support of the pigment.

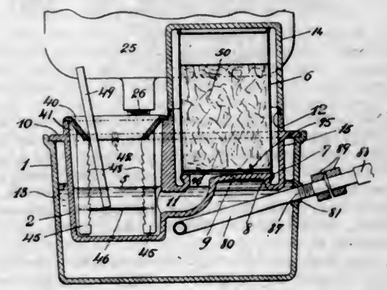
2. A transfer ink, comprising distilled water, finely-divided carbon therein, and common salt dissolved in the water to the point of suspension of the carbon for periods of practicable working.

3. As an article of manufacture, a container and a transfer ink contained therein, including a finely divided pigment which has a tendency to agglomerate, a non-pigment-binding liquid medium incapable by itself of holding the pigment in suspension for practical working periods, a non-pigment-binding substance in solution in said medium increasing the specific gravity thereof to the point of practicable support of the pigment, and a non-soluble abrading mass disposed in said medium and adapted to break up the agglomerated pigment.

4. A transfer ink, comprising a non-pigment-binding liquid medium, a finely divided pigment therein, said pigment being of a specific gravity incapable of suspension in the medium for periods of practicable working, and a non-pigment-binding substance in solution in said medium increasing the specific gravity thereof to the point of practicable support of the pigment.

5. A transfer ink, comprising a non-carbon-binding liquid medium, finely divided carbon therein, and common salt dissolved in said medium to the point of suspension of the carbon for periods of practicable working.

1,194,744. SUPPLY VESSEL. FRIMAN KAHRS, East Haddam, Conn.; Marie Kahrs, East Haddam, Conn., executrix of said Friman Kahrs, deceased. Filed Jan. 6, 1910. Serial No. 536,695. (Cl. 126—284.)



1. In a supply vessel; the combination with a heating base to receive a stock-receptacle, and a supply portion in communication with said heating base, of a wide-mouthed stock-receptacle for adhesive in jelly form inverted upon said heating-base, said base having a surrounding portion constructed and arranged to surround the region of juncture between said receptacle and heating-base to maintain a fluid seal therebetween; and said receptacle being arranged to present said jellied adhesive for progressive reduction to fluid form by said heating-base, and for delivery therefrom to said supply portion of a supply for current use.

2. Apparatus of the class described; said apparatus comprising a vessel having a portion to receive heating fluid and a portion to receive and present openly for use a supply of adhesive with said supply portion entering said heating fluid, to be heated thereby, and means to maintain both said adhesive and heating fluid automatically at the same predetermined level.

3. A supply-member for apparatus of the class described, such as melting-pots; said member comprising a metal cover for said pot and having a supply portion and a reserve cup removable with said cover and in communication with each other, and a heat-retaining closure for said cup; and a separable receptacle inclosed by said cup and closure, to furnish the supply; and means to heat said cover; substantially as described.

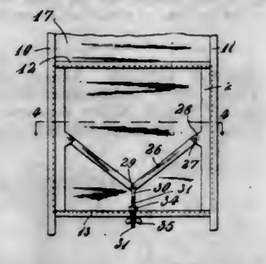
4. A supply-member for supply-vessels of the class described; comprising a receptacle part having a heating-base for a separable stock-receptacle; means to secure a stock-receptacle removably upon said base; a supply portion in communication with the portion of said base covered by said receptacle when in place thereon, to receive automatically a supply of heated fluid from said receptacle, and a receptacle inclosure surrounding the space occupied by said separable stock-receptacle, to confine the heat from said heating base.

5. A supply-member for supply-vessels of the class described; comprising a heating base for stock-receptacles; means to secure an inverted receptacle removably upon said base with an air-tight joint; an air-sealed outlet through said base to pass the heated contents of said receptacles; and a heating inclosure for said receptacle;

said inclosure being adapted to contain a fluid heat-retaining medium surrounding said receptacle when in place.

[Claims 6 to 8 not printed in the Gazette.]

1,194,745. DOMESTIC LAUNDRY APPLIANCE. CYRYL KARTOWICZ, Pittsburgh, Pa. Filed Apr. 27, 1916. Serial No. 93,841. (Cl. 68—29.)



1. In a wash-board, the combination with a pair of oppositely disposed grooved side frames, transverse bars connecting therebetween, a flexible corrugated plate adapted to engage within the grooves of said side frames, rigid wedge shaped bars adapted to clamp said plate in the grooves, and means for forcing said bars in opposite directions simultaneously whereby the flexible plate is clamped or released.

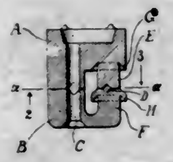
2. In a wash-board having grooved side bars, transverse bars connecting therebetween, said transverse bars being also grooved upon their adjacent surfaces, of a flexible plate, lateral ribs disposed upon one side of said plate, said flexible plate being suited to enter the mentioned grooves, strips coincident with the length of said flexible plate having a wedge shaped portion adapted to enter the grooves in said side bars, links engaging said strips, a clevis bolt pivoted to the inner ends of said links, and means for operating said bolt whereby the distance between said strips may be adjusted.

1,194,746. TAG-HOLDER. FRANK P. KEELER, Theresa, N. Y. Filed Feb. 2, 1912. Serial No. 674,997. (Cl. 40—125.)



The combination with a support adapted to be carried by the radiator of an automobile, of a rod mounted in the support, a pair of brackets slidably mounted on said rod, means extending transversely through said brackets and engaging said rod for holding the brackets at spaced distance apart, each of said brackets provided with a vertical opening and said openings alining with one another, a flexible V-shaped rod having its ends bent angularly and extending toward one another and received within the openings of the brackets providing an adjustable support to receive license tags of various sizes, a nut carried by the ends of said angular rod to hold the ends of said angular rod within the openings.

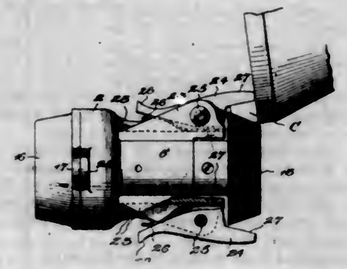
1,194,747. INSULATOR. HERBERT R. KELLS, New York, N. Y. Filed Dec. 3, 1915. Serial No. 64,802. (Cl. 173—314.)



1. An insulator comprising a support engaging member and a cap member, each of said members including a main portion and an extending post, said posts being respectively formed with the mating halves of a wire seat, said wire seat being isolated from the main portions of said members by an air space, and each post being provided at its upper part with a petticoat.

2. An insulator comprising a pair of members respectively formed with the mating halves of a wire seat, and a petticoat between each such half seat and the main portion of the member on which the same is formed.

1,194,748. HORSESHOE-CALK SHARPENER. CHARLES E. KELLY, Providence, R. I. Filed May 11, 1916. Serial No. 96,808. (Cl. 164—46.)



1. In a calk sharpener, a sleeve having a head the latter provided with a pair of chambers, intermeshing bevel gears in the chambers, a shaft extending through the sleeve and having one of the gears connected thereto, a shaft journaled in the head and having the other gear secured thereto, a sharpening element on the second shaft, said head having opposite side cut-outs and an upwardly extending ear, a cap inclosing the gear of the second shaft and having upwardly and downwardly extending ears the former secured to the ear of the head and the downwardly extending ear secured to the head, said cap also having side wings which extend into the cut-outs, upper and lower spaced ears on the opposite sides of the head, and spring pressed clamps pivoted between the last named ears and having fingers which project on opposite sides of the sharpening element to press the latter against the calk.

2. In a calk sharpener, a sharpening element, means to rotate the element, and means disposed on each side of the element in a diametrically opposed relation to engage the calk on the side opposite to the side engaged by the element to hold the element against the calk.

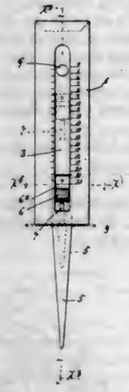
3. In a calk sharpener, a sharpening element, means to rotate the element, and a pair of diametrically opposed pivoted spring pressed guiding means for forcing the element against the calk by engaging the side of the calk opposite to the side engaged by the element.

4. In a calk sharpener, a rotatable sharpening element, and spring pressed means to engage the side of the calk opposite to the side which the element engages to press the element continually against the calk.

5. In a calk sharpener, a handle, a sharpener rotatable thereon and having its axis of rotation at right angles to the handle, means extending longitudinally through the handle to rotate the sharpener, and means disposed coextensive with the sharpener axis to guide the sharpener by holding same against the calk.

[Claims 6 to 10 not printed in the Gazette.]

1,194,749. PERFORATION-GAGE. ALVA H. KIRK, Minneapolis, Minn. Filed Oct. 26, 1914. Serial No. 868,593. (Cl. 33—178.)



1. A perforation gage comprising a casing having a longitudinal slot and graduations adjacent to said slot, of a tapered gage blade that works through the lower end of said casing and is provided with a head working in the slot thereof, the said blade having a laterally pressed spring finger partly cut therefrom and frictionally engageable with the back of said casing.

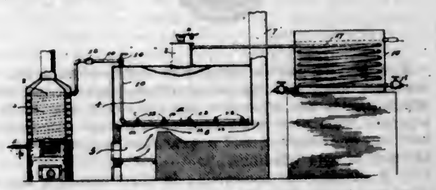
2. A perforation gage comprising a casing having a longitudinal slot and graduations adjacent to said slot, of a tapered gage blade that works through the lower end of said casing and is provided with a head working in the slot thereof, said head having a mark coöperating with the graduations on said scale to indicate the width of that portion of the blade which is alined with the lower end of said casing, the said blade having a laterally pressed spring finger partly cut therefrom and frictionally engageable with the back of said casing.

3. A perforation gage comprising a casing having a longitudinal slot and graduations adjacent to said slot, of a tapered gage blade that works through the lower end of said casing and is provided with a head working in the slot thereof, a screw connecting said head to said blade, the said casing in its back having a perforation through which the said screw may be applied and removed.

4. In a perforation gage, a casing made up of two plates, the one having a longitudinal slot and side and upper end flanges embracing the other plate, and said embraced plate having a longitudinally extended laterally pressed channel wider than the slot of said embracing plate, in combination with a tapered gage blade working through the lower end of said casing and slidable within said channel, and provided with a head working in the slot of said casing, said head and casing having coöperating marks for indicating the width of the blade at points alined with the lower end of said casing.

5. In a perforation gage, the casing made up of two plates, the one having a longitudinal slot and side and upper end flanges embracing the other plate, and said embraced plate having a longitudinally extended laterally pressed channel wider than the slot of said embracing plate, in combination with a tapered gage blade working through the lower end of said casing and slidable within said channel and provided with a head working in the slot of said casing, said head and casing having coöperating marks for indicating the width of the blade at points alined with the lower end of said casing, and the said blade having a spring finger partly cut therefrom and pressed laterally and frictionally engageable with the back of the channel of said casing.

1,194,750. ASPHALTIC PRODUCTS AND PROCESS OF MAKING THE SAME. LESTER KIRSCHBRAUN, Chicago, Ill. Filed Mar. 29, 1912. Serial No. 687,021. (Cl. 196—25.)



1. The process of preparing asphaltic products from semi-asphaltic base petroleum residuum, which consists in heating the residuum in a still at a gradually increasing temperature not in excess of 700 degrees F., and simultaneously blasting the charge with a non-oxidizing gas heated to a temperature not in excess of 700 degrees F., so as to distil off a grater part of the paraffin and analogous hydrocarbons contained in the original residuum without material decomposition.

2. The process of preparing asphaltic products which consists in heating semi-asphaltic base petroleum residuum in a still, simultaneously blasting the mass with large quantities of superheated steam, so as to profoundly modify the residuum, removing from such residuum the greater part of the paraffin and analogous hydrocarbons contained therein without material decomposition and without injury to the asphaltic hydrocarbons of the residuum, and thereby producing a product having a marked degree of ductility and cementitiousness.

3. The process of preparing asphaltic products which consists in heating semi-asphaltic base petroleum residuum in a still at a temperature not in excess of 700 degress F., simultaneously, blasting the mass with large quantities of superheated steam, the process being conducted at such temperature as to remove a considerable part of the paraffin hydrocarbons contained in the residuum without material decomposition or injury to the asphaltic hydrocarbons of the residuum and thereby producing a product having a marked degree of ductility and cementitiousness.

4. The process of preparing asphaltic products which consists in heating petroleum residuum in a still at a temperature not in excess of 700 degrees F., simultoneously blasting the mass with superheated steam at relatively high temperatures but not in excess of 700 degrees F., and at a minimum pressure, removing a considerable part of the paraffin hydrocarbons contained in the residuum so as to produce a product having a high degree of ductility and marked cementitiousness.

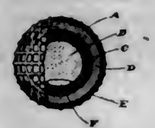
5. The process of preparing asphaltic products from asphalt bearing base petroleum residuum, which consists in heating such residuum in a still at a temperature not in excess of 700 degrees F., and simultaneously blasting the mass with large quantities of steam superheated to a temperature not in excess of 700 degrees F. to remove a considerable portion of the paraffin and analogous hydrocarbons, whereby the finished product will contain a substantially greater percentage of unsaturated hydrocarbons than did the untreated residuum and be free of any material decomposition.

[Claims 6 to 15 not printed in the Gazette.]

1,194,751. PLAYING-BALL. WILLIAM R. KNIGHT, Belleville, N. J., assignor to St. Mungo Manufacturing Company of America, Newark, N. J., a Corporation of New Jersey. Filed Jan. 31, 1916. Serial No. 75,264. (Cl. 46—4.)

1. A playing-ball comprising in combination a bag or container filled with a plurality of liquids of different

specific gravities, windings of rubber surrounding said bag, and a wear-resisting casing on the exterior of said windings.



2. A playing-ball comprising in combination a bag or container filled with liquids of different specific gravities which liquids are of such a character that they tend to separate from each other, rubber windings surrounding said bag or container, and a wear-resisting casing on the exterior of said windings.

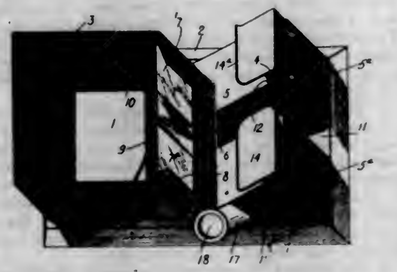
3. A playing-ball comprising in combination a bag or container having therein a plurality of liquids of different specific gravities and which liquids are of such character that they do not mix with each other, windings surrounding said container, and a wear-resisting casing surrounding said windings.

4. A playing-ball comprising in combination a bag or container having therein incompressible liquids of different specific gravities, windings surrounding said container, and a wear-resisting casing surrounding said windings.

5. A playing-ball having in combination a bag or container comprising a layer of rubber and a layer of material to protect said rubber, a plurality of liquids one of which is mercury contained in said bag, windings of rubber about said bag, and a wear-resisting casing constituting the outer portion of the ball.

[Claims 6 to 10 not printed in the Gazette.]

1,194,752. MOISTENING DEVICE FOR GUMMED STICKERS OR LABELS. THEODORE H. KRUEGER, New York, N. Y. Filed Oct. 25, 1915. Serial No. 57,660. (Cl. 91—38.)



1. A device for moistening gummed strips including a pair of independent moistening elements arranged side by side and spaced from each other across which the ends of the strip are adapted to be drawn, spaced and independent guard members mounted in coöperative relation to the moistening elements, and guide means for directing the gummed strips between the moistening elements and the guard members.

2. A device for moistening the ends of gummed strips, including a pair of spaced moistening elements having a finger clearance space between the same.

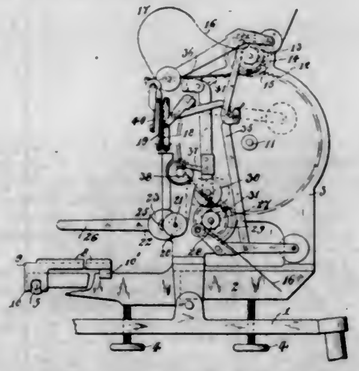
3. A device for moistening the ends of gummed strips, including a pair of spaced moistening elements having a finger clearance space between the same, independent guard plates arranged over the respective moistening elements, and guide means for directing the strips between the moistening elements and the guard plates, the finger clearance space enabling the strips to be grasped at the middle and drawn over the moistening elements.

4. A device for moistening the ends of gummed strips, including a guide plate having a notched end providing a finger clearance space, independent moistening elements projecting upwardly above the guide plate on opposite sides of the finger clearance space, and means arranged over the moistening elements for forcing the ends of the gummed strips into engagement therewith.

5. A device for moistening the ends of gummed strips, including an inclined guide plate having a notched end providing a finger clearance space, indepedent moistening elements projecting upwardly beyond the inclined guide plate on opposite sides of the finger clearance space, and guard plates having a spaced relation to the inclined guide plate and resting loosely upon the moistening devices so as to force the ends of the gummed strips into engagement with the moistening devices as the gummed strips are drawn between the inclined guide plate and the guard plates.

[Claims 6 to 15 not printed in the Gazette.]

1,194,753. MOVING-PICTURE MACHINE. PHILIP F. KRUG, New York, N. Y. Filed July 13, 1914. Serial No. 850,535. (Cl. 88—18.6.)



1. In a moving picture machine, means for feeding the film intermittently across the picture aperture, comprising a take-up sprocket and a pivotally supported member adapted to engage the film on the side thereof opposite the sprocket, said member having a reciprocating movement oscillating about its support over an arc of relatively short radius and across the path of the film substantially in the direction of movement of the sprocket and parallel to and as close as possible to the periphery thereof, whereby said member in its movement in one direction wraps the film partially about the sprocket in a direction contra to the direction of movement of said sprocket to feed a length of film greater than the length taken up by the sprocket during the interval of time when the member is moving in this contra direction and means for actuating said member.

2. In a moving picture machine, means for feeding the film intermittently across the picture aperture, comprising a pair of film engaging members adapted to have the film looped about opposite sides thereof, one of said members being a take-up sprocket and a mounting for the other member rockable about the axis of rotation of the take-up sprocket as a center so that the other member will have a reciprocating movement over an arc described about the axis of rotation of said take-up sprocket and in close proximity to the periphery of the take-up sprocket and reciprocating means engaging said other member to actuate the same.

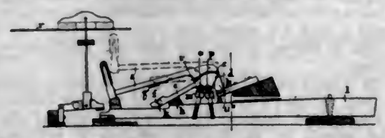
3. In a moving picture machine, means for feeding the film intermittently across the picture aperture including a take-up sprocket having a line of teeth extending from the periphery thereof to engage the film, a film engaging roller mounted for oscillatory movement in close proximity to the line of teeth on the take-up sprocket, engaging with the film and acting thereon to wrap the film about the sprocket and thus increase the number of sprocket teeth engaging the film during the movement of the same in one direction and for permitting the reducing of the number of engaging teeth during the movement of the roller in the opposite direction and driving means for oscillating said roller and for continuously driving said take-up sprocket.

4. In a moving picture machine, means for feeding the film intermittently across the picture aperture comprising a take-up sprocket continuously acting on the film, retaining means at one side of the sprocket for engaging the film to press the same into engagement with the sprocket and for causing the film to feed from the sprocket at a definite and fixed point, rockably mounted means adapted to engage the film and movable over a line positioned in close proximity to the periphery of the take-up sprocket and curved about said periphery, said means having a movement confined to a position on one side of the tangent to the sprocket at said fixed point, said means having a material movement away from said tangent on the side thereof having the sprocket, whereby said rockably mounted means at its limit of its movement away from the tangent will cause the film to assume a relatively wide angle with said tangent thereby to wrap the film about the take-up sprocket.

5. In a moving picture machine, means for feeding the film intermittently across the picture aperture, comprising a take-up sprocket, a reciprocating member movable across the film path between the picture aperture and take-up sprocket and over an arc curved about the periphery of the take-up sprocket having the axis of rotation of the sprocket as a center and designed so that said arc shall be in close proximity to the periphery of the take-up sprocket, said sprocket and member adapted to have the film looped S-shape about the same and means for reciprocating said member back and forth across the film path.

[Claims 6 to 9 not printed in the Gazette.]

1,194,754. PIANO-ACTION. FREDERICK WILLIAM LANCHESTER, Edgbaston, Birmingham, England. Filed Mar. 1, 1913. Serial No. 751,537. (Cl. 84—26.)



In a piano a hammer, a key, a member disposed between said key and said hammer, said member having a surface adapted to check the rebound of said hammer and being adapted to continue its movement when the hammer strikes the string, as set forth.

1,194,755. PICKLING COMPOUND. ALFRED J. M. LASCHÉ, Milwaukee, Wis. Filed Apr. 3, 1916. Serial No. 88,427. (Cl. 99—1.)

1. A pickling compound, comprising brine and fermentation lactic acid.

2. A pickling compound, comprising brine of approximately forty to seventy degrees saltometer, and fermentation lactic acid, the latter in sufficient quantity to provide for the brine containing about one-fourth of one per cent. of absolute lactic acid.

3. A pickling compound, comprising brine, fermentation lactic acid, and pure culture lactic bacillus.

4. A pickling compound comprising brine, fermentation lactic acid, and pure culture lactic bacillus, the latter being added in sufficient quantity to result in the production of approximately one-half of one per cent. of lactic acid in the brine.

1,194,756. PROCESS OF PRODUCING IRON OF HIGH GRADE FROM ORDINARY CAST-IRON. LEWIS A. LEONARD, New York, and JESSE P. LARRIMER, Brooklyn, N. Y. Filed Apr. 6, 1912. Serial No. 689,035. (Cl. 148—8.)

1. A process of treating cast iron for converting it into a metal of higher grade, which comprises the baking of the iron in a closed holder in the presence of a substance preparing the iron to be successfully acted on by carbon, and then quenching the iron in a bath containing carbon.

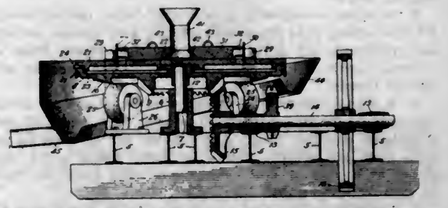
2. A process of treating cast iron for converting it into a metal of higher grade, which comprises the baking of the iron in a closed holder in the presence of a substance preparing the iron to be successfully acted on by carbon, and then quenching the iron in a bath containing sulfate of lime, ferric oxid and carboniferous material.

3. A process of treating cast iron for converting it into a metal of higher grade which comprises the baking of the iron in a closed holder in the presence of hydrated oxid of iron and silica, and then quenching the iron in a bath.

4. A process of treating cast iron for converting it into a metal of higher grade which comprises the baking of the iron in a closed holder in the presence of hydrated oxid of iron and silica, and then quenching the iron in a bath containing sulfate of lime, ferric oxid and carboniferous material.

5. A process of treating cast iron for converting it into a metal of higher grade which comprises the baking of the iron in a closed holder in the presence of hydrated oxid of iron, silica and phosphorus, and then quenching the iron in a bath containing carbon.

1,194,757. GRINDING-MILL. THOMAS J. LOVETT, Chicago, Ill., assignor to Copper Process Company, Chicago, Ill., a Corporation of South Dakota. Filed Apr. 4, 1912, Serial No. 688,365. Renewed Jan. 20, 1916. Serial No. 73,181. (Cl. 83—10.)



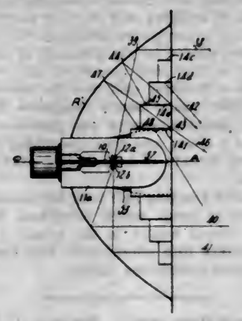
1. In a machine of the character set forth, the combination of a revoluble lower grinding member having a flat upper surface and equipped with a gear, a horizontal drive-shaft equipped with a driving pinion engaging said gear, a reciprocable upper grinding member having a flat lower surface and supported by and movable upon and across the revoluble member, guides restraining the upper member against turning, a rock-shaft disposed at a distance from said drive-shaft and connected therewith and actuated thereby, and connecting means between said rock-shaft and said upper grinding member.

2. In a machine of the character set forth, the combination of a revoluble lower grinding member having a flat upper surface and equipped with a gear, a horizontal drive-shaft equipped with a driving pinion, engaging said gear, a reciprocable upper grinding member having a flat lower surface and movable upon and across the revoluble member, guides for said upper member, a rock-shaft disposed at a distance from said drive-shaft, an eccentric on the drive-shaft, connecting means between the eccentric and said rock-shaft, and connecting means between said rock-shaft and said upper grinding member, the rock-shaft having one arm of adjustable length, whereby the throw of the upper grinding member with relation to the lower grinding member may be varied.

3. In a machine of the character set forth, the combination of a revoluble lower grinding member having a flat upper surface and equipped with a gear, a horizontal drive-shaft equipped with a driving pinion engaging said

gear, a reciprocable upper grinding member having a flat lower surface and movable upon and across the revoluble member, guides for said upper member, a rock-shaft disposed at a distance from said drive-shaft, an eccentric on the drive-shaft, an actuating arm on the rock-shaft, a connecting rod connected with the eccentric and adjustably connected with the said arm, a second arm on the rock-shaft, and connections between said last-named arm and said upper grinding member.

1,194,758. SIGNAL. DANIEL J. MCCARTHY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1913. Serial No. 783,719. (Cl. 240—41.)



1. A signal comprising a source of light, optical means for projecting rays from said source, and means for preventing all rays which enter said signal from an outside source of light from being projected back by said optical means.

2. A signal comprising a source of light, optical means for projecting rays from said source, and opaque screens for preventing all rays which enter said signal from an outside source of light from being projected back by said optical means.

3. A signal comprising a source of light, optical means for projecting rays from said source in a beam of substantially parallel lines, and means for preventing all rays from an outside source of light which enter said signal at angles to said beam from being projected back by said optical means.

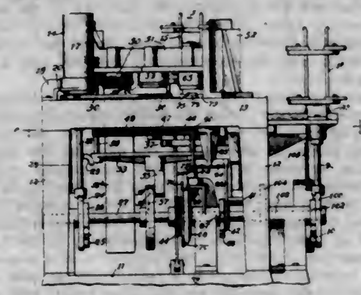
4. A signal comprising a source of light, a reflector for projecting rays from said source, and means for preventing all rays which enter said signal from an outside source of light from being projected back by the reflector.

5. A signal comprising a source of light, a reflector for projecting rays from said source, and opaque screens for preventing all rays which enter said signal from an outside source of light from being projected back by the reflector.

[Claims 6 to 12 not printed in the Gazette.]

1,194,759. MACHINE FOR PLACING PAPER RINGS IN CAN-HEADS. CHARLES D. MCDONALD and CHARLES E. ENNES, Chicago, Ill., assignors to The McDonald Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Sept. 7, 1915. Serial No. 49,233. (Cl. 113—80.)

1. In a machine of the class described, the combination of a frame, a head slidable on the frame, a cutting die, an assembling die, and a spinning die carried by said head, means for reciprocating said head, means for feeding a paper disk into position beneath the cutting die to have the cutting die act to form a ring therefrom, means for feeding a can top into alined position with the paper ring and beneath the assembling die to allow said die to act to place said ring within the top, said can top feeding means also acting to move said assembled ring and top beneath the spinning die to allow said die to engage one face thereof, a secondary spinning die for engaging the opposite face of the can top, means for rotating one of the spinning dies to turn the can top, and means for crimping the flange of the can top during the turning operation to bend the flange over the paper ring, substantially as described.



2. In a machine of the class described, the combination of a frame, a head slidable on the frame, a cutting die, an assembling die, and a spinning die carried by said head, means for reciprocating said head, means for feeding a paper disk into position beneath the cutting die to have the cutting die act to form a ring therefrom, means for feeding a can top into alined position with the paper ring and beneath the assembling die to allow said die to act to place said ring within the top, said can top feeding means also acting to move said assembled ring and top beneath the spinning die to allow said die to engage one face thereof, a secondary spinning die for engaging the opposite face of the can top, means for rotating one of the spinning dies to turn the can top, means for crimping the flange of the can top during the turning operation to bend the flange over the paper ring, and means for discharging the assembled can top and ring from the machine, substantially as described.

3. In a machine of the class described, the combination of a magazine for paper disks, a magazine for can tops, means for simultaneously feeding a disk from its magazine and a can top from its magazine, a carrier for said disks, a carrier for said can tops, a cutting die, means for moving the disks into position to be acted upon by the cutting die to form a ring therefrom, an assembling die, and means for actuating said assembling die when a can top and a ring are alined one above the other, whereby the ring is placed within the can top, substantially as described.

4. In a machine of the class described, the combination of a ring carrier, a seat formed of movable sections in said ring carrier adapted to receive said ring, a can top carrier, means for shifting the sections of said seat in said ring carrier to discharge the ring therefrom when a can top is alined with said ring, and an assembling die operatively connected for forcing said ring into said can top after said discharge, substantially as described.

5. In a machine of the class described, the combination of an intermittently revoluble ring carrier, an intermittently revoluble can top carrier, means for revolving said carrier in unison and with an intermittent motion, means for selecting paper disks and placing them on the ring carrier, means for feeding the can tops into position on the can top carrier, a ring forming die, an assembling die, and crimping means acting successively to form a paper ring, place the same within a can top, and to crimp the edge of the can top to turn it over the ring, a magazine for the assembled can tops and rings, means for discharging the can tops from the machine, means for stacking the assembled can tops and rings within said magazine, and said disk feeding mechanism and can top feeding mechanism, cutting mechanism and assembling die mechanism, crimping mechanism, and stacking mechanism all acting in unison and with an intermittent movement and during the periods of rest of the movement of the carriers, substantially as described.

[Claim 6 not printed in the Gazette.]

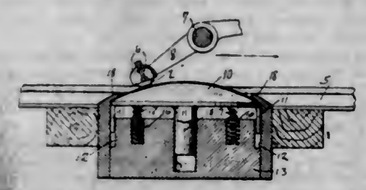
1,194,760. CALCULATING-MACHINE. GABRIEL MARTINEZ, New York, N. Y. Filed June 23, 1914. Serial No. 846,733. (Cl. 235—140.)



1. In a calculating machine comprising fixed dials disposed side by side in the same horizontal plane, the faces of said dials being individually inclined to said plane and the high part of one being adjacent to the low part of the next, rotary counter-plates severally disposed side by side on said individually inclined dials, said counter-plates being severally provided with a series of upright posts one of which has an elevated outward finger, the relative inclined positions of said counter-plates permitting such elevated finger of one counter-plate to pass over the top of and escape contact with the posts of the adjacent counter-plate of the next lower order and causing such finger to engage a post of the adjacent counter-plate of the next higher order, and stops for said counter-plates.

2. A calculating machine comprising a series of rotary disks severally disposed side by side in individual inclined planes, the high part of one being adjacent to the low part of the next, said disks being provided near their peripheries each with a series of upright posts and with an elevated outwardly extended finger, the relative inclined positions of said rotary disks permitting such elevated outwardly extending finger to pass over and escape the posts of the adjacent rotary disk of the next lower order and to engage successively the several posts of the adjacent disk of the next higher order, and stops for said disks.

1,194,761. SIGNAL APPARATUS. BENJAMIN F. MATTHIAS, Galion, Ohio. Filed June 23, 1913. Serial No. 775,182. (Cl. 246—59.)



1. In a contactor, the combination of a member suitably mounted adjacent to the rails of a track, said member having a curved surface of large radius, and being rotatably mounted about a vertical axis, and a second member having a curved surface of relatively very much smaller radius than the curved surface of said first-named member, such curved surface of said second member being adapted to contact such first-named curved surface on one side of the axis of the same and at a point causing such contact to rotate said first-named member slightly, the pressure of the contact being transmitted substantially vertically downward.

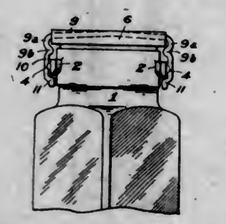
2. In a contactor, the combination of vertical guide means disposed adjacent to the rails of a track, a plate reciprocably mounted in said guide means and adapted to rotate about a vertical axis, said plate having a spherically formed upper surface, resilient supporting means disposed between said guide means and said plate and adapted to normally maintain said plate at a given position, a spherically formed socket attached to the frame of a car, and a relatively small ball rotatably mounted therein and adapted to contact such spherical surface of said plate on one side of its axis, thereby depressing and rotating said plate.

3. In a contactor, the combination of vertical guide means disposed adjacent to the rails of a track, a plate reciprocably mounted in said guide means and adapted to rotate about a vertical axis, said plate having a spherically formed upper surface, resilient supporting means disposed between said guide means and said plate and adapted to normally maintain said plate at a given position, a socket attached to the frame of a car, a spherically formed member reciprocably carried in said socket; resilient supporting means normally maintaining said member at a predetermined position, a ball rotatably held in said socket against said member, said ball being adapted to contact such spherical surface of said plate on one side of its axis, thereby depressing and rotating the same and simultaneously moving said ball and said member in said socket.

4. In a contactor, the combination of a plate rotatably mounted about a vertical axis adjacent to the rails of a track, said plate having a spherically formed upper surface, a ball rotatably attached to the frame of a car and adapted to contact the upper surface of said plate on one side of such axis, said plate being yieldingly mounted and actuated upon contact by said ball.

5. In a signal apparatus, the combination of guide means disposed adjacent to the rails of a track, a plate reciprocably mounted in said means and having a spherically shaped upper surface; a semaphore; operating levers connecting said plate and said semaphore and adapted to operate the latter upon depression of said plate, and a ball rotatably mounted in suitable socket means on said car and adapted to contact the spherically formed surface of said plate and to thereby depress the same in said guide means.

1,194,762. STOPPERING DEVICE FOR BOTTLES OR THE LIKE. EDWARD ALEXANDER MATTHIAS, Liverpool, England. Filed July 12, 1915. Serial No. 39,371. (Cl. 215—93.)



In a stoppering device for bottles or other receptacles; a bottle; projections on the bottle neck curved on their under surfaces to form cam faces; a stopper for the bottle; a shoulder on said stopper; a diametral groove in the stopper deeper at its outer ends than in the center; a wire frame having a limb disposed in the diametral groove; looped indents on the wire frame engaging beneath the shoulder of the stopper; and lugs on the wire frame adapted to be engaged with the projections by a rotational movement of the frame limb about its axis.

1,194,763. DRAFT DEVICE. HERMAN C. MICHEL, Dixie, Wash. Filed Nov. 10, 1915. Serial No. 60,677. (Cl. 97—4.)



1. A draft device comprising a clevis, a transverse shaft on which the clevis is slidably mounted, a vertically swinging support for the shaft, a lever having a connection with the support for swinging the same, means for shifting the clevis on the shaft, and an actuating means for said shifting means carried by the lever.

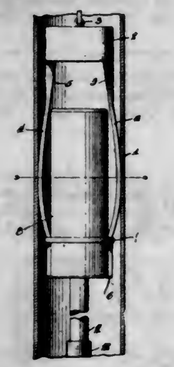
2. A draft device comprising a clevis, a transverse shaft on which the clevis is slidably mounted, a vertically swing-

ing support for the shaft, a lever having a connection with the support for swinging the same, a hauling line connected to opposite sides of the clevis, and a rotatable operating member for the line carried by the lever, to which member the hauling line is connected.

3. A draft device comprising a clevis, a transverse shaft on which the clevis is slidably mounted, a vertically swinging support for the shaft, a lever having a connection with the support for swinging the same, a hauling line connected to opposite sides of the clevis, guides on the support for the hauling line, and a rotatable operating member for the line carried by the lever, to which member the hauling line is connected.

4. A draft device comprising a clevis, a transverse shaft on which the clevis is slidably mounted, a vertically swinging support for the shaft, said support having a post, a lever having a connection with the post for swinging the support, means for shifting the clevis on the shaft, and an actuating means for said shifting means carried by the lever.

1,194,764. SEALING-PLUG FOR OIL-WELLS. DAVID C. MILLER, Tulsa, Okla. Filed May 4, 1916. Serial No. 95,430. (Cl. 166—13.)



1. A sealing plug for oil wells including a soft metal plug, a retaining frame carried by said plug, and means carried by said frame for receiving said plug whereby restraint may be imparted to said plug upon the impact of a blow upon said plug.

2. A sealing plug for oil wells including a soft metal plug, and a hard metal mandrel disposed beneath said soft metal plug.

3. A sealing plug for oil wells including a soft metal plug, a hard metal mandrel disposed beneath said soft metal plug, and anchoring means connected to the bottom of said mandrel.

4. A sealing plug for oil wells including an expansible plug, supporting arms depending from said plug, and resisting means carried by said depending arms and disposed beneath said plug, for receiving the bottom of said plug whereby a restraint will be offered to the impact of a blow on the top of said plug.

5. A sealing plug for oil wells including an expansible plug, supporting arms depending from said plug, and a supporting ring carried by said arms at the lower ends thereof, and restraining means carried by said depending arms and disposed beneath said plug for receiving the bottom of said plug when a blow is struck on the top of said plug.

[Claims 6 to 12 not printed in the Gazette.]

1,194,765. TELEPHONE-RECEIVER. DAVID PELTON MOORE, Washington, D. C. Filed July 30, 1913. Serial No. 781,990. (Cl. 179—108.)

1. A telephone receiver, including a permanent magnet, an armature, a diaphragm operatively attached to the armature, a coil having its pole in attractive relation to the armature and under the influence of the permanent magnet, means adjustable at will for moving the coil to vary the air-gap between its pole and the armature, and means also adjustable at will for moving the coil to vary the position of the pole relative to the fulcrum of the armature.



2. A telephone receiver, including a permanent magnet, a diaphragm, a support for the diaphragm, a pivoted lever having its free end operably connected to the diaphragm, the pivot of the lever being fixed, an armature operably connected to the lever, a longitudinally and laterally slidable coil connected to the permanent magnet and having its pole in attractive relation to the armature, and manually adjustable means for sliding the coil to vary its relation to the armature.

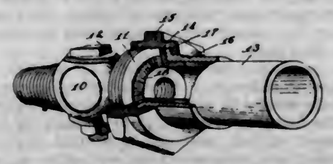
3. A telephone receiver, including a permanent magnet, a diaphragm, a support for the diaphragm, a lever having one end operably connected to the diaphragm, a fixed pivot for the other end of the lever, an armature operably connected to the lever, a longitudinally and laterally slidable coil under the influence of the permanent magnet, and manually operable means for moving the coil to vary the air-gap between the pole of the coil and the armature.

4. A telephone receiver, including a permanent magnet, a diaphragm, a support for the diaphragm, a lever having one end operably connected to the diaphragm, a fixed pivot for the other end of the lever, an armature operably connected to the lever, a coil under the influence of the permanent magnet, manually operable means for moving the coil to vary the air-gap between the pole of the coil and the armature, and a second manually operable means also for moving the coil to vary the position of the pole of the coil relatively to the fulcrum of the armature.

5. A telephone receiver, including a bi-polar permanent magnet, one pole of which is longer than the other, a longitudinally and laterally slidable coil connected to the other pole of the magnet, an armature fulcrumed upon the longer pole of the permanent magnet, a diaphragm operably connected to the armature, and manually operable means for sliding the coil to vary the air-gap between the pole thereof and the armature.

[Claims 6 to 17 not printed in the Gazette.]

1,194,766. LEAD-PIPE CONNECTION. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill. Filed Dec. 26, 1914. Serial No. 879,125. (Cl. 137—28.)



1. A coupling as specified comprising a head, a pipe, a sleeve for the pipe and a coupling nut securing said sleeve and said pipe to said head, said head having an interrupted flat surface for contact with said pipe whereby to prevent the turning of the same with respect to said head.

2. A coupling as specified comprising a head having a flat abutting face and having projections on said flat face arranged at an angle to the circumference of the head, a soft pipe provided with a flange abutting at one end said face, a flange sleeve for the end of the lead pipe, and a coupling nut carried by the head and engaging the flange of the sleeve or the pipe to compress the same against the head whereby to embed said projections in the end of the pipe and retain the pipe from relative turning movement with respect to the head.

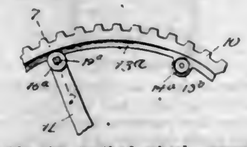
3. In a coupling as specified, a corporation cock having a head, a lead pipe provided with a flange abutting said head, a correspondingly flanged sleeve for the end of the lead pipe, a coupling nut on said head engaging said flange of the sleeve whereby to bind the same against the flange of the lead pipe and to compress the latter against said head, said head having a flat roughened surface for engagement with said pipe flange to prevent the turning of the pipe relative to said head.

4. A coupling as specified comprising a relatively hard member having a flat roughened abutting face, a relatively soft member, and a coupling device binding said members together to embed said soft member into the roughened abutting face of the hard member whereby not only to hold the members from longitudinal displacement relative to one another but to also hold the members from relative rotary displacement.

5. A coupling as specified, comprising a head provided with a flat face having thereon a series of circularly-arranged radially-disposed projections, a lead pipe provided with a flange abutting said face, and a coupling nut to compress the flange of said pipe against said face.

[Claims 6 to 9 not printed in the Gazette.]

1,194,767. DETACHABLE-RIM SPROCKET-WHEEL. DANIEL C. MULVIHILL, Hannibal, Mo. Filed Jan. 31, 1916. Serial No. 75,260. (Cl. 74—28.)



1. A detachable rim toothed wheel, comprising a rim portion and a spoke portion separated therefrom and lying in the plane thereof, said rim portion having recessed lug receiving portions in one face, and each spoke having a lug cast on one face thereof and adapted to seat in the recess of a lug receiving portion in the rim portion, and bolts extending through said lugs and recessed lug receiving portions of the rim.

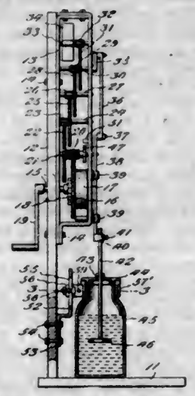
2. A detachable rim sprocket wheel, comprising a rim portion and a spoke portion separated therefrom and lying in the plane thereof, said rim portion having an inwardly extending annular web formed with recessed lug receiving portions in one face, and each spoke being formed with a lug adapted to seat in a recess of the lug receiving portions of the web, and bolts extending through said recessed lug receiving portions and lugs.

3. A detachable rim sprocket wheel, comprising a rim portion and a spoke portion bolted together, said rim portion having an inwardly extending web formed with tapering sided sockets in one face, there being one socket for each spoke and each spoke being formed with an offset end portion having a tapering sided lug adapted to be seated in a socket in the rim portion.

4. A detachable rim sprocket wheel, comprising a rim portion and a spoke portion lying in the plane thereof, said rim portion having an annular web formed with tapering sided sockets in one face and each spoke being formed with a shoulder adapted to engage the inner edge of said web, and also formed with an offset end portion having a tapering sided lug adapted to be seated in a lug receiving portion of the web, and bolts passing through said lug receiving portions of the web and through the lugs of the spokes.

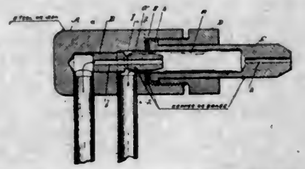
1,194,768. CHURN. JOSEPH H. MURRAY, Homer, Ga. Filed Nov. 8, 1912. Serial No. 730,244. (Cl. 215—87.)

The combination with a churn and its lid, of a base, a standard secured to said base, a bracket secured to said standard having an upstanding offset end provided with a slot, a bolt adjustably held within said slot, a clamping collar held upon said bolt having two bowed clamping arms arranged to clamp the neck of said churn, a clamping bolt passing through said arms, a wing nut upon said



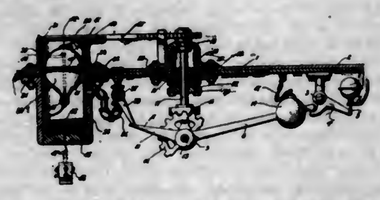
bolt to clamp said arms upon said churn and hold said churn to said base, and an upstanding spring hook secured to each arm the upper ends of said hooks being arranged to press upon said lid, whereby said lid is held in secured position.

1,194,769. GAS WELDING-TORCH. GUY MITCHELL NEAGLEY, Carrick, Pa. Substitute for application Serial No. 830,693, filed Apr. 9, 1914. This application filed Aug. 17, 1915. Serial No. 45,862. (Cl. 158—27.4.)



The combination with a gas torch welding head, a welding tip connected thereto, a mixing chamber formed in said tip, a duct leading from said chamber to the point of said tip, and an intermediate concentric injector tube pressed into said head and positioned to separate the one gas inlet from the other, said tube being made of a metal having a greater co-efficient of expansion than that of the welding head, thereby effectually separating the gases before their mixing and combustion.

1,194,770. AUTOMATIC SIGNALING DEVICE FOR MARINE VESSELS. EDWARD NELSON, Jersey City, N. J. Filed Aug. 9, 1915. Serial No. 44,554. (Cl. 114—16.5.)



1. A signaling device of the class described comprising a float case, a float within said float case, a cable connected with said float and with said float case, means for automatically opening said float case, and means operated by

the last-mentioned means for permitting entrance of water to said float case beneath said float.

2. A signaling device of the class described comprising a float case, a float within said float case, means for connecting said float with said float case, a water conducting pipe leading to the interior of said float case beneath said float, a valve within said water conducting pipe, means for opening the upper portion of said float case, and means controlled by the last-mentioned means for opening said valve to permit water to enter said float case beneath said float and raise the latter.

3. A signaling device of the class described comprising the combination with a vessel deck; of a float case extending through said deck, a float within said float case, a cable connected with said float and with the float case, a slide bar, a weight carrying arm, operable connections between said weight carrying arm and said slide bar, means for normally retaining said slide bar in unoperated position, said weight carrying bar being adapted when released to operate the slide bar and thereby open the case, and means for permitting entrance of water to the float case below the float upon opening of said float case.

4. A signaling device of the class described comprising the combination with a vessel; of a float case carried thereby, a float within said float case, a stationary shaft, a hub mounted for rotation upon said stationary shaft, a rotary shaft, operative connections between said hub and said rotary shaft, a slide bar, means for operating said slide bar from said rotary shaft, means for supporting said rotary shaft, a locking trigger, a weight carrying arm projecting from said hub and resting upon said locking trigger, a weight mounted upon said weight carrying arm causing outward movement of the latter upon movement of the locking trigger to inoperative position, a trigger operating float connected with said locking trigger, said weight being connected with said vessel to limit downward movement of said weight carrying arm, downward movement of said weight carrying arm causing operation of the slide bar in one direction to open the float case, and means for permitting entrance of water to said float case beneath said float to raise the latter.

5. A signaling device of the class described, comprising a normally closed float case, a float within said float case, a slide bar, means for operating said slide bar to open the upper portion of said float case, means for locking the last-mentioned means against operation, a float connected with the locking means, and means for permitting the entrance of water to said float case beneath said float upon operation of the slide bar.

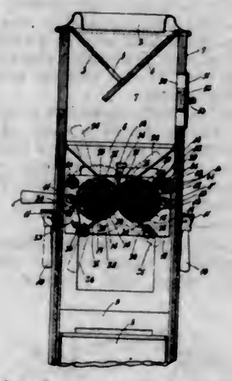
[Claims 6 to 11 not printed in the Gazette.]

1,194,771. TICKET-CHOPPER. SAMUEL NEWMAN and HENRY R. BOTHWELL, Cincinnati, Ohio; said Bothwell assignor to said Newman. Filed July 16, 1915. Serial No. 40,247. (Cl. 232—8.)

1. In a ticket chopper, an initial receptacle, a final receptacle, and coöperating rolls between said receptacles, between which rolls the ticket must pass from one receptacle to the other, one of said rolls having a groove and the other roll having a tooth entering said groove, said tooth comprising two distinct terminal cutting edges, and lateral cutting edges from one terminal cutting edge to the other, receding radially of the roll from said terminal cutting edges therebetween, whereby a part is completely severed from the ticket leaving a slot therein by the cooperation of said tooth with said groove.

2. In a ticket chopper, an initial receptacle, a final receptacle, and coöperating rolls between said receptacles, between which rolls the ticket must pass from one receptacle to the other, one of said rolls having annular grooves and the other roll having teeth entering said grooves, each of said teeth comprising two distinct terminal cutting edges, and lateral cutting edges from one terminal cutting edge to the other, receding radially of the roll from said terminal cutting edges therebetween, whereby a part is completely severed from the ticket leaving a slot therein by the coöperation of said teeth with a respective groove, said teeth being arranged helically on said roll.

3. In a ticket chopper, an initial receptacle, a final receptacle, coöperating rolls between said receptacles, between which rolls the ticket must pass from one receptacle to the other, one of said rolls having a groove and the other roll having a tooth entering said groove, whereby when said ticket passes between said rolls, said tooth perforates the ticket by removing material therefrom, and means adjacent to each of said rolls on the side near the final receptacle, said means adjacent to the roll that has a groove having a tine entering said groove, and said means adjacent to the other roll having a slot through which said tooth of said roll extends, each of these means being adapted to disengage the ticket from the respective roll, said tine being adapted to remove from said groove the material removed from said ticket.



4. In a ticket chopper, an initial receptacle and a final receptacle, ticket passing and canceling means between said receptacles, and yieldable feeding means to feed said tickets to said ticket passing and canceling means.

5. In a ticket chopper, an initial receptacle, a final receptacle, and coöperating rolls between said receptacles, between which rolls the ticket must pass from one receptacle to the other, and feeding means projecting between said rolls to feed said tickets between said rolls.

[Claims 6 to 11 not printed in the Gazette.]

1,194,772. LAMP-SUPPORT. SAMUEL NEWMAN and HENRY R. BOTHWELL, Cincinnati, Ohio; said Bothwell assignor to said Newman. Filed July 16, 1915. Serial No. 40,248. (Cl. 240—67.)

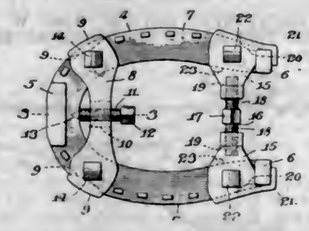


1. In a lamp support, in combination with a supporting member, lamp holding means on said supporting member comprising a foot with two alined downwardly turned lugs at one side and one downwardly turned lug at its other side, a U-shaped member with a long leg extended through and guided and supported by the alined lugs, and with a short leg extending through and guided and supported by the other lug at the other side, and means to draw the long leg through said lugs and draw the short leg into said lug or to permit said U-shaped member to be withdrawn far enough to allow the end of its short leg to escape from said lug, said U-shaped member being adapted to receive a part of a lamp inserted endwise, and the escape of said short leg from said lug allowing the passage of a lamp cord attached to the lamp while the part of the lamp is thus inserted, and said U-shaped member, as its legs are drawn through said lugs, being adjustable to parts of lamps of different sizes.

2. In a lamp support, an upper tubular member, a lower elongated member sliding into said upper tubular member, a mounting for said members connected to said upper member, and a foot fixed to said lower member near its lower end, means to hold said lamp to said foot, a cord-holder comprising an elongated main part and laterally extending eyes near the upper and lower ends of said main part, said eyes loosely embracing said upper member and said lower member, respectively, and said lower eye bearing down against said foot and said upper eye sliding up and down on said upper member, and an open loop formed in said cord-holder near its upper end to receive the lamp cord and hold it up away from the lamp when held in said foot.

3. In a lamp support, a member to hold a lamp, and a mounting for said member comprising a dome, a collar, and means to draw the collar toward the dome, and a substantially spherical head on said member held in said dome by said collar, an outer shell supporting said dome, and means extending from the bottom of said shell over to said dome and integrally joining the shell and dome the upper end of said shell being open, and engaging means on the upper end of said shell to project into the material of a supporting object, said dome having an opening in its top through which fastening means may be inserted into the material of said supporting object to draw said dome and said shell up toward the supporting object and insert said engaging means into the material of the supporting object, whereby the mounting is held toward the supporting object and prevented from turning thereon.

1,194,773. ATTACHMENT FOR HORSESHOES. SEIKICHI NORO, Philadelphia, Pa. Filed Nov. 20, 1915. Serial No. 62,464. (Cl. 168—30.)

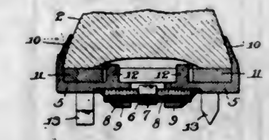


1. In an attachment for horseshoes, a plate adapted to engage the bottom of a horseshoe and having an upwardly extending part adapted to engage the outer face of a horseshoe, and means adjustably connected to said plate and adapted to engage the top of a horseshoe and to exert a downward pressure thereon and clamp the same between said plate and said means.

2. In an attachment for horseshoes, a plate adapted to engage the bottom of a horseshoe and having an upwardly extending part adapted to engage the outer face of a horseshoe and having an upwardly extending lug adapted to be located within a horseshoe, and an adjustable screw carried by said lug and adapted to engage the top of a horseshoe and clamp the same between said plate and said screw.

3. In an attachment for horseshoes, a plate adapted to engage the bottom of a horseshoe and having an upwardly extending part adapted to engage the outer face of a horseshoe and having an upwardly extending lug adapted to be located within a horseshoe, and an adjustable screw carried by said lug and having a tapered portion adapted to engage the top of a horseshoe and clamp the same between said plate and said tapered portion.

1,194,774. ATTACHMENT FOR HORSESHOES. SEIKICHI NORO, Philadelphia, Pa. Filed Jan. 12, 1916. Serial No. 71,675. (Cl. 168—30.)



1. In an attachment for horseshoes, a pair of side members adapted to engage the bottom of the side portions of a horseshoe, and means connecting said members and operative to draw them toward each other, said members having upwardly extending parts adapted to engage the outer converging faces of said side portions, and said members having upwardly extending projections adapted to engage the inner converging faces of said side members and prevent displacement of the attachment longitudinally of the horseshoe when said members are drawn toward each other.

2. In an attachment for horseshoes, a pair of side members adapted to engage the bottom of the side portions of a horseshoe, and an element having screw threaded end portions screwed into said members and operative to draw them toward each other, said members having upwardly extending parts adapted to engage the outer converging faces of said side portions, and said members having upwardly extending projections adapted to engage the inner converging faces of said side members and prevent displacement of the attachment longitudinally of the horseshoe when said members are drawn toward each other.

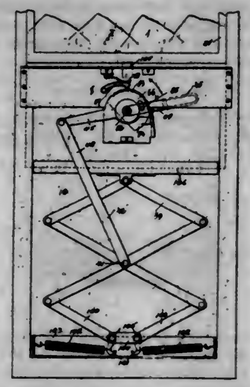
3. In an attachment for horseshoes, a pair of side members adapted to engage the bottom of the side portions of a horseshoe, and means connecting said members and operative to draw them toward each other, said members having upwardly extending parts adapted to engage the outer converging faces of said side portions, said members having upwardly extending projections adapted to engage the inner converging faces of said side members and prevent displacement of the attachment longitudinally of the horseshoe when said members are drawn toward each other, and said upwardly extending parts being constructed of malleable metal and being adapted to be bent inwardly to extend over the horseshoe after the application of the attachment thereto.

4. In an attachment for horseshoes, a pair of side members adapted to engage the bottom of the side portions of a horseshoe, and means connecting said members and operative to draw them toward each other, said members having upwardly extending parts adapted to engage the outer converging faces of said side portions, said members having upwardly extending projections adapted to engage the inner converging faces of said side members and prevent displacement of the attachment longitudinally of the horseshoe when said members are drawn toward each other, and said projections having forwardly extending upper end portions adapted to fit over a horseshoe.

1,194,775. SASH FASTENER AND LIFT. OSCAR OEHRING, Eisleben, and GEORG HEUER, Dresden, Germany, assignors to the Firm of Internationale Neverfail Patentkurbelfenster G. M. B. H., Berlin, Germany. Filed Sept. 4, 1912. Serial No. 718,587. (Cl. 16—53.)

1. In combination with a window frame and a sash therein, hoisting means for the sash, clamping means for the sash, locking means for said hoisting means, and

means common to said means for actuating all of said means.



2. In combination with a window frame and a sash therein, raising and lowering mechanism in the frame having connection with the sash, clamping means on the frame for engagement with the sash, means for locking said raising and lowering means in adjusted position, and a handle for said raising and lowering means, clamping means, and locking means, said handle operating these means to raise and lower the sash.

3. In a device as specified, a main frame, a vertically movable sash in the main frame, means for raising and lowering said sash in the frame, locking means for securing said raising and lowering means in adjusted position, clamping means on the main frame for securing the sash when adjusted, and a handle common to said raising and lowering means, locking means and said clamping means adapted when operated to first release the sash and said raising and lowering means and to subsequently raise and lower the sash.

4. In a device as specified, a main frame, a vertically movable sash in the frame, means for clamping the sash in the frame, raising and lowering means connected to the sash, locking means for securing said raising and lowering means in adjusted position, and a handle operatively connected to said clamping means, locking means and raising and lowering means adapted to release said clamping means from said sash and said locking means from said raising and lowering means, to raise and lower the sash, and to again clamp the sash and lock said raising and lowering means in adjusted position.

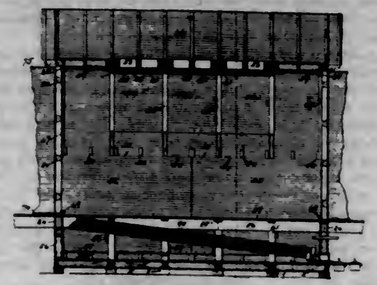
5. In combination with a window frame and a sash therein, hoisting means for the sash, locking means for securing the hoisting means in adjusted position, clamping means for securing said sash against rattling, and a handle common to said means adapted to actuate said locking means and clamping means to permit operation of said hoisting means and to subsequently lock said hoisting means and bring said clamping means against said sash.

[Claim 6 not printed in the Gazette.]

1,194,776. PORTABLE DRY-KILN. JOHN F. OLDFIELD, Bel Air, Md. Filed Oct. 16, 1912. Serial No. 726,033. (Cl. 34—19.)

1. A portable dry kiln structure having a plurality of side sections; a side bar extending crosswise of the lower ends of all the side sections to hold the same together; a plurality of ceiling sections; locking beams interposed between and locking the ceiling sections together said locking beams also engaging the side sections; tie bars extending crosswise of the upper ends of the side sections to hold said latter sections together at the top and in a direction lengthwise of the kiln and flues formed in the kiln at the inner side of the side sections.

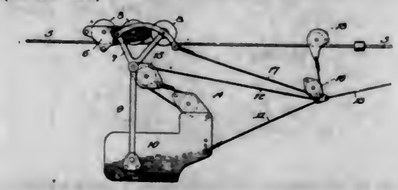
2. A portable dry kiln structure having a plurality of side sections; a plurality of ceiling sections; a locking beam interposed between adjacent ceiling sections and having a notch at its end to receive the upper edge of the side sections; a tie bar extending along the ends of the ceiling sections and securing the latter down on the side sections,—said tie bar also extending through the notches in the ends of the locking beams; and flues formed at the inner side of some of the side and ceiling sections.



3. A portable dry kiln structure having a plurality of side sections each with studs projecting above their upper ends; a plurality of ceiling sections each of which latter has a center and a side beam with a socket at the end of each beam to receive a stud on the side section; a locking beam between each two ceiling sections to lock the two together and the outer ends of said locking beams having a notch in the under side to engage the upper edge of the side sections and flues formed at the inner side of some of the side and ceiling sections.

4. A portable dry kiln structure having a plurality of rectangular side sections with vertical end and center studs in each section and each side section having a tongue and groove connection along its upper edge and below the upper ends of the side and center studs thereof; ceiling sections having tongue and groove connections at opposite ends to engage the connections on the upper ends of the side sections and the ceiling sections also having sockets at each end to receive the projecting ends of the side-section studs, and flues formed at the inner side of some of the side and ceiling sections.

1,194,777. EXCAVATING DEVICE. JOHN W. PAGE, Chicago, Ill. Filed Aug. 11, 1913. Serial No. 784,238. (Cl. 37—19.)



1. In apparatus of the character set forth, the combination of a main cable, a carriage movable thereon, a scraper-bucket pivotally mounted on said carriage in the rear of the center of gravity of the bucket when loaded, a hauling-line connected with said bucket in advance of its center of gravity for pulling the bucket along said main cable, and means operated by continuous forward movement of said hauling-line for permitting said bucket to swing on its pivot to dumping position during said continuous forward movement of said hauling-line.

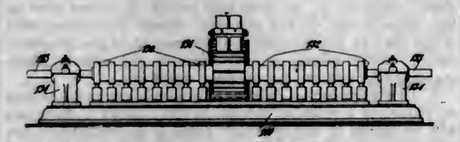
2. In apparatus of the character set forth, the combination of a main cable, a carriage movable thereon, a scraper-bucket pivotally mounted on said carriage in the rear of the center of gravity of the bucket when loaded, a hauling-line connected with said bucket in advance of its center of gravity for pulling said bucket along said main cable, and means engaging said hauling-line in advance of said bucket operating at a predetermined point to accelerate the movement of said carriage along said main cable relative to the movement of said hauling-line, for the purpose set forth.

3. In apparatus of the character set forth, the combination of a main cable, a carriage movable thereon, a scraper-bucket pivotally mounted on said carriage in the rear of the center of gravity of the bucket when loaded, a hauling-line connected with said bucket in advance of its center of gravity for pulling the bucket along said main cable, a block running on said main cable, a stop on said cable in the path of movement of said block, and a cable connected with said block and carriage and operatively engaging said hauling-line, for the purpose set forth.

4. In apparatus of the character set forth, the combination of a main cable, a carriage movable thereon, a scraper-bucket pivotally mounted on said carriage in the rear of the center of gravity of the bucket when loaded, a hauling-line for pulling the bucket along said main cable, formed of sections connected with said bucket in advance of its center of gravity, one of said sections extending in engagement with said carriage, and means operated by continuous forward movement of said hauling-line for permitting said hauling-line sections to become slackened.

5. In apparatus of the character set forth, the combination of a main cable, a carriage movable thereon, a scraper-bucket pivotally mounted on said carriage in the rear of the center of gravity of the bucket when loaded, a hauling-line for pulling the bucket along said main cable, formed of sections connected with said bucket in advance of its center of gravity, one of said sections extending in engagement with said carriage, a block running on said main cable, a stop on said cable in the path of movement of said block, and a cable connecting said block and carriage and operatively engaging said hauling-line, for the purpose set forth.

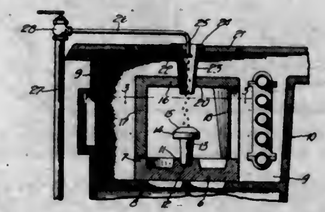
1,194,778. ELECTRIC-CURRENT MODIFIER. VITAL PAQUIT, Stapleton, N. Y. Filed Oct. Oct. 22, 1914. Serial No. 868,078. (Cl. 171—97.)



1. An improved electric current modifier, comprising a source of electric power, line wires connected thereto, means for withdrawing a portion of said power from said line wires, a motor driven by said withdrawn portion of said power, a shaft revolved by said motor, a disk of insulating material mounted on said shaft and having a series of rings composed of conducting material mounted on the face of said disk in substantially the asme vertical plane and insulated from each other, a series of commutator bars mounted on the periphery of said disk, the number of said rings being equal to the number of said bars, a brush for said commutator bars, wires connecting each of said bars to one of said rings, auxiliary brushes coacting with said rings to draw off current therefrom, and separate means of consuming electric power intermediate said auxiliary brushes and the second line wire, each of said separate means of consuming electric power being connected to one of said rings, and to said second line wire.

2. In an improved electric current modifier having a shaft, a disk of insulating material mounted on said shaft and having a series of rings composed of conducting material mounted on the faces of said disk in substantially the same vertical plane and insulated from each other, a series of commutator bars mounted on the periphery of said disk, the number of said rings being equal to the number of said bars, wires connecting each of said bars to one of said rings, a brush for said commutator bars, auxiliary brushes for withdrawing electric current from said rings, a line wire connected to said first-mentioned brush, and separate means of consuming electric power intermediate said auxiliary brushes, and the second line wire, each of said separate means of consuming electric power being connected to one of said auxiliary brushes and to said second line wire.

1,194,779. HYDROCARBON-BURNER. FREDERICK F. PARRISH, Los Angeles, Cal. Filed Jan. 4, 1916. Serial No. 70,197. (Cl. 158—8.)



1. A hydrocarbon burner comprising a base plate, a spreader mounted on said base plate, a baffle plate extending above the base plate and spreader, a fire back adjacent the spreader whereby flames generated in the combustion zone between the spreader and baffle plate will be confined to spread horizontally, the burner thus formed having three open sides, and means for introducing air and hydrocarbon fuel through the baffle plate centrally of the spreader.

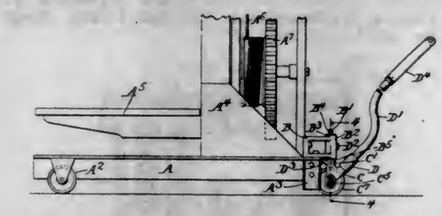
2. A hydrocarbon burner comprising a base, a spreader on said base, a horizontally extending baffle plate spaced from said base having an opening therein concentric with the vertical axis of the spreader, a fire back wall extending between the base and the baffle plate at one side of the spreader terminating adjacent the ends of the base leaving open spaces between the ends of the base and the baffle plate thereabove, means coöperating with the fire back for supporting the baffle plate, and a tube having convergent side walls extending into the opening in the baffle plate through which air and hydrocarbon fuel may be delivered downwardly and directed centrally of the spreader.

3. A hydrocarbon burner comprising a base plate formed with an upwardly projecting marginal flange forming a depression in its upper face, a vertically disposed stem seated in said depression, a spreader carried by said stem having a domed upper face, a horizontally extending baffle plate arranged above the base plate and spreader having a central opening arranged concentric with the vertical axis of the spreader, a fire back formed on said baffle plate at one edge thereof and depending therefrom, said fire back adapted to seat on the flange of the base member to one side of the spreader terminating adjacent the ends of the base leaving open spaces between the ends of the base and the baffle plate thereabove, a pair of supporting members on said baffle plate coöperating with the fire back to position the baffle plate in spaced relation to the base plate, and a convergent down draft tube extending into the opening in the baffle plate through which hydrocarbon fuel and air may be delivered to the combustion zone between the spreader and the under side of the baffle plate.

4. The combination with a fire box having a top wall, of a burner base plate in the fire box having a depression on its upper face, a fire back wall extending upwardly from the base plate along one of its edges terminating adjacent its ends, the space above the ends and the other side of the base opening direct to the fire box forming three open sides above the margin of the base plate, a spreader extending upwardly from the base plate in front of the fire back wall, and a down draft tube extending through the cover and through the top wall of the fire box and opening above the spreader in spaced relation thereto so that a free passage of air may be had between

the lower end of the down draft tube and the spreader and from thence throughout the fire box at the ends and one side of the base plate.

1,194,780. CASTER FOR TRUCKS. WILLIAM B. PAVEY and GEORGE M. FRENCH, Chicago, Ill., assignors to Economy Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed May 20, 1916. Serial No. 98,797. (Cl. 16—165.)



1. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the frame of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other.

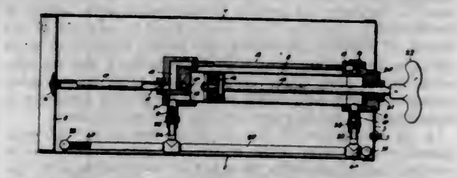
2. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the freme of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other, said axle being free to rotate with respect to the bell crank lever in a plane located by the axis of that arm of the bell crank lever which is pivoted to the frame.

3. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the frame of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other, said axle having a squared central portion, the bell crank lever being perforate to engage such squared axle portion, the perforation having curved side walls to permit rocking motion of the axle.

4. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the frame of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other, stops provided for limiting the pivotal movement of the bell crank lever in a vertical plane to prevent movement of the central portion of the bell crank lever toward the frame beyond that position when the axis of the pivoted arm of the lever is in a vertical position.

1,194,781. FIRE-EXTINGUISHER. GEORGE T. PEARSONS, New York, N. Y. Filed May 31, 1916. Serial No. 100,814. (Cl. 169—17.)

1. In combination with a receptacle, a pump comprising a piston, a cylinder in which said piston is arranged to reciprocate, and divided by said piston into two compartments, valved inlet connections from the receptacle to said compartments, an outlet means to discharge the liquid withdrawn from the receptacle, a casing arranged adjacent to said outlet means, said casing containing a chamber adapted to communicate with said outlet means, and having a port leading to the adjacent cylinder compartment, a valve movable in said chamber lengthwise of the pump and controlling said port, and a valved connection extending from said chamber to the other compartment of the pump cylinder.



2. In a syringe, the combination with a reservoir having an outlet, of a cylinder therein of less length than the reservoir and connected at opposite ends with the reservoir; outlets at opposite ends of the cylinder; means to connect said outlets to the reservoir outlet; a piston to reciprocate in the cylinder; and a rod to reciprocate the piston from the exterior of the cylinder and reservoir, and said piston during the reciprocation thereof alternately drawing liquid from the reservoir to the opposite ends of the cylinder, and alternately discharging the liquid from opposite ends of the cylinder through the cylinder outlets and connected reservoir outlet.

3. In a syringe, the combination with a reservoir having an outlet, of a cylinder therein connected at opposite ends to the reservoir; an outlet at one end of the cylinder; an outlet at the opposite end of the cylinder; a casing to connect said outlets to the reservoir outlet; and a piston to reciprocate in the cylinder, substantially as and for the purpose specified.

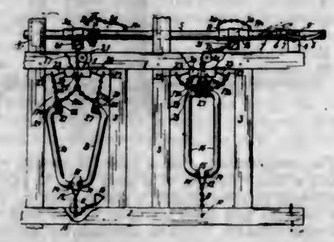
4. In a syringe, the combination with a reservoir having an outlet, of a cylinder therein; intakes at opposite ends of the cylinder to connect the cylinder to the reservoir; valves in said inlets opening into the cylinder and closing outward therefrom; a valved port in one end of the cylinder connected to the reservoir outlet; a valved port in the opposite end of the cylinder; means to connect said latter port to the cylinder port connected to the reservoir outlet; and a piston to reciprocate in the cylinder, substantially as and for the purpose specified.

5. In a syringe the combination with a reservoir having an outlet, of a cylinder therein having a head at each end and by means of one of which heads it is mounted in the reservoir; an intake to the cylinder in each cylinder head to connect the cylinder with the reservoir; valves for said intakes opening into the cylinder and closing outward therefrom; a port in one head of the cylinder, a valve in said port closing into the cylinder and opening outward therefrom; a tube connecting said port with the reservoir outlet; a port in the opposite head of the cylinder; a valve in said port closing into the cylinder and opening outward therefrom; a tube exterior of the cylinder to connect said latter port with the port in the opposite head connected to the reservoir outlet; and a piston to reciprocate in the cylinder, substantially as and for the purpose specified.

1,194,782. STANCHION. NELS PEDERSON, Trent, S. D. Filed Mar. 27, 1916. Serial No. 86,861. (Cl. 119—148.)

1. In a device of the class described, the combination with a frame, of one or more stanchions supported therein, each stanchion comprising two hame-shaped bars each with a clevis detachably attached to its lower end, a chain fastened in the lower part of the frame and having at one end a small ring and at the other end a large ring adapted to be alternately attached in said clevises.

2. In a device of the class described, the combination with a frame having in its upper part one or more downwardly flared apertures, a main chain extending downward through each aperture and formed at its lower end with two branches, a pair of hame-shaped stanchion members suspended one from each of said branches, horizontally slidable means above the aperture for raising and lowering the chain, and two other flexible members attached to the upper ends of the hames and having their upper ends secured to the frame in diametrically opposite directions from the aperture, so as to cause the hames to spread automatically by their weight when lowered by the chains in the aperture, and a flexible member attaching the lower ends of the hames to the lower part of the frame.

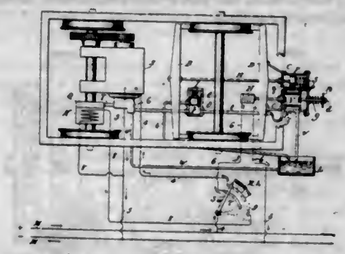


3. In a device of the class described, the combination with a frame having in its upper part one or more downwardly flared apertures, a main chain extending downward through each aperture and formed at its lower end with two branches, a pair of hame-shaped stanchion members suspended one from each of said branches, horizontally slidable means above the aperture for raising and lowering the chain, and two other flexible members attached to the upper ends of the hames and having their upper ends secured to the frame in diametrically opposite directions from the aperture, so as to cause the hames to spread automatically by their weight when lowered by the chains in the aperture, and a flexible member attaching the lower ends of the hames to the lower part of the frame, said means for raising and lowering the main chain comprising a horizontally slidable rod in the upper part of the frame, means for sliding and holding said rod in two different positions, slidable members on the rod for attaching several of the main chains thereto and movable locking means for holding the slidable members in their positions.

4. In a device of the class described, the combination with a frame having in its upper part one or more downwardly flared apertures, a main chain extending downward through each aperture and formed at its lower end with two branches, a pair of hame-shaped stanchion members suspended one from each of said branches, means above the aperture for raising and lowering the chain, and two other flexible members attached to the upper ends of the hames and having their upper ends secured to the frame in diametrically opposite directions from the aperture, so as to cause the hames to spread when lowered by the chains in the apertures, and a flexible member attaching the lower ends of the hames to the lower part of the frame, said means for raising and lowering the main chain comprising a horizontally slidable rod in the upper part of the frame, means for sliding and holding said rod in two different positions and means for attaching several of the main chains to the rod, said attaching means for the main chains consisting of sleeves slidable on the rod and removable pins inserted in the rod one at each end of each sleeve.

5. In cattle stanchions, and mounted in a suitable frame, the combination with a rod slidable in the upper part of the frame, a plurality of sleeves slidably mounted on the rod, means for holding the sleeves against sliding movement when so desired and means for sliding and holding the rod alternately in two different positions, clamping rings secured one about each sleeve, a chain attached with its upper end to each clamping ring, and a pair of stanchion bars suspended from each chain, and means for guiding said chain vertically up and down in the frame.

1,194,783. BRAKE SYSTEM FOR MOVING VEHICLES. GUSTAF RENNERFELT, New York, N. Y., assignor of one-half to Charles J. Kintner, New York, N. Y. Filed July 16, 1909, Serial No. 507,895. Renewed Mar. 19, 1915. Serial No. 15,577. (Cl. 188—4.)



1. A moving vehicle; a brake system therefor; a source of applied energy operatively connected with and acting on the brakes; a liquid under pressure and means for causing the liquid to oppose the applied energy; in combination with a source of electrical energy for the vehicle, and a motor therefor; means for regulating the application of electric power thereto; together with means comprising a circuit controlled by said regulating means for effecting the operation of the brakes when the power is cut off from the motor.

2. A vehicle; an electric motor and a source of electric power therefor; a brake system for the vehicle; a source of applied energy operatively connected with the brakes thereof, and a liquid under pressure operatively connected to the brakes and opposing the applied source of energy; an electric controller for applying power to the motor and means for controlling the application of the liquid to the brakes; together with connections comprising a circuit between the controller and the brake controlling means whereby on disconnecting the motor from its source of energy the brakes are automatically applied.

3. A vehicle; a source of electrical energy; an electric motor for propelling the vehicle; a controller for regulating the application of current from the source of electrical energy through the motor; a brake system and electrically and hydraulically controlled means for regulating the application thereof to the vehicle; circuits and circuit connections between the brake control mechanism and the aforesaid controller whereby when the motor is disconnected from the circuit the brakes are applied.

4. A brake system for power impelled vehicles, embracing mechanical and hydraulical sources of energy adapted to oppose each other and both operatively connected with the brakes; in combination with a source of electric power for moving the vehicle, and an electric controller therefor, said controller being operatively connected with means comprising a circuit for regulating the application of one of the brake controlling sources of energy to the brakes, and for cutting out the motor when said brakes are applied.

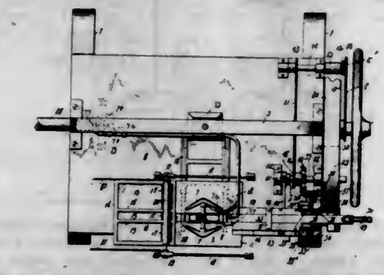
5. A brake system for power impelled vehicles, embracing mechanical and hydraulical sources of energy adapted to oppose each other and both operatively connected with the brakes; in combination with a source of power for moving the vehicle, and a controller therefor, said controller being operatively connected with means for regulating the application of one of the brake controlling sources of energy to the brakes; together with additional means operatively connected with the controller for bringing about an emergency braking effect.

[Claim 6 not printed in the Gazette.]

1,194,784. ENVELOP-MACHINE. ISAAC L. RHEUTAN, Richmond, Va., assignor to Union Envelope Company, Richmond, Va. Filed June 12, 1915. Serial No. 33,719. (Cl. 93—61.)

1. In an envelop machine, the combination with means for applying gum to an envelop blank in close proximity

to an opening in the same, of means located directly beneath the gumming means for applying a patch to the envelop blank to cover the opening, means for simultaneously folding the blank and pressing the patch upon the same, and means for uninterruptedly feeding the patched blank from the patch applying means to the folding and pressing means.



2. In an envelop machine, the combination with means for simultaneously applying gum to the flaps and around an opening in an envelop blank, of means located directly beneath the gumming means for applying a patch to the envelop blank to cover said opening, means for simultaneously folding the blank and pressing the patch upon the same, and means for feeding the patched blank from the patch applying means to the folding and pressing means.

3. In an envelop machine, the combination with means for applying gum to an envelop blank in close proximity to an opening in the same, of an air blast mechanism for applying a patch to the envelop blank to cover the opening, means for simultaneously folding the blank and pressing the patch upon the same, and means for feeding the patched blank from the patch applying means to the folding and pressing means.

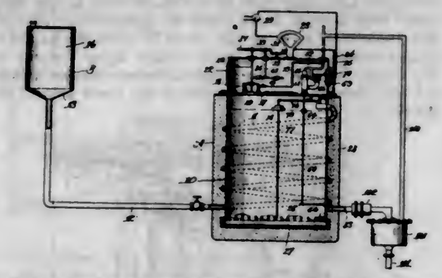
4. In an envelop machine, the combination of a feeding table, for supporting a pile of envelop blanks, a reciprocating gumming die for applying gum around an opening in the uppermost blank in said pile, means located directly beneath the gumming die for applying a patch to the envelop blank to cover said opening, means for simultaneously folding the blank and pressing the patch upon the same, and means for feeding the patched blank from the patch applying means to the folding and pressing means.

5. In an envelop machine, the combination with a feeding table for supporting a pile of envelop blanks, of a stripping plate arranged above said table, a reciprocating gumming die for applying gum around an opening in the uppermost blank in said pile, an air blast mechanism for directing air through said stripping plate for applying a patch to the envelop blank to cover said opening, means for simultaneously folding the blank and pressing the patch upon the same, and means for feeding the patched blank from the patch applying means to the folding and pressing means.

[Claims 6 to 19 not printed in the Gazette.]

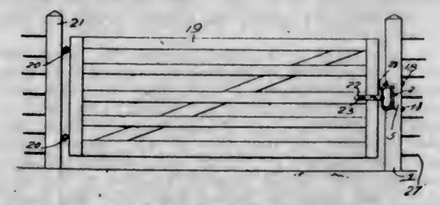
1,194,785. WATER-HEATER. SUMMERFIELD G. ROBERTS, Boston, Mass. Filed Mar. 3, 1915. Serial No. 11,795. (Cl. 219—48.)

1. The combination with a rheostat having a movable arm and a fluid cylinder, of a head fixed to said cylinder and having a piston cylinder, a piston working within the piston cylinder and operated upon by the fluid contained in the fluid cylinder, brackets stationarily mounted above the head, a rocking lever pivoted to one of said brackets, a stem connected with the piston and having slidable connection with said rocking lever, an arcuate extension formed on the arm of the rheostat, a second rocking lever supported above the head and having connection with said first named rocking lever, a lug on the second named lever and acting against the extension on the arm, a weight carrying arm pivoted to the other bracket and also pivoted to the said stem, and adjustable weights on said arm at opposite sides of its pivotal connection with the bracket.



2. The combination with a rheostat having a movable arm and a fluid cylinder, of a head fixed to said cylinder and having a piston cylinder, a piston working within the piston cylinder and operated upon by the fluid contained in the fluid cylinder, brackets stationarily mounted above the head, a rocking lever pivoted to one of said brackets, a stem connected with the piston and having slidable connection with said rocking lever, an arcuate extension formed on the arm of the rheostat, a second rocking lever supported above the head and having connection with said first named rocking lever, a lug on the second named lever and acting against the extension on the arm, a weight carrying arm pivoted to the other bracket and also pivoted to the said stem, adjustable weights on said arm at opposite sides of its pivotal connection with the bracket, and a coiled retractile spring having connection with the extension and the said arm of the rheostat for bringing the arm to normal position upon a reduction in the fluid pressure within the first named cylinder.

1,194,786. SWIVEL GATE-LATCH. CHARLEY C. ROSS, Springfield, Mo. Filed June 19, 1916. Serial No. 104,590. (Cl. 70—28.)

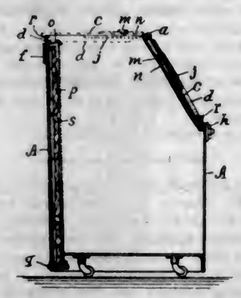


1. In a device of the class described, a support; a vertical keeper journaled on the support, the keeper comprising a loop embodying upper and lower bars, side bars connecting the upper and lower bars, and spindles projecting in opposite directions from the upper and lower bars; means for securing the spindles for rotation on the support; a horizontally swinging gate; and a latch outstanding from the gate, the latch including oppositely projecting arms terminating in back bent hooks, the bills of which lie substantially at right angles to the latch; the upper and lower bars of the keeper being reversely bent in opposite directions on opposite sides of the spindles.

2. In a device of the class described, a fence post having a notch in its forward edge defining upper and lower parallel horizontal shoulders and a reduced upright at the rear of the shoulders; a lower bolt resting on the lower shoulder and supported thereby against downward bending, the bolt passing through the upright and including an eye one flat side of which rests on the lower shoulder to prevent the bolt from rotating on its axis; an upper bolt passing through the post above the upper shoulder and including an eye; a keeper comprising a loop adapted to swing in the notch, and upper and lower spindles at the ends of the loop, the spindles being disposed at the forward edge of the post and being journaled, respectively, in the eyes of the upper and lower bolts, the loop having parallel horizontal upper and lower edges, the lower edge of the loop resting on the eye of the lower bolt to support the keeper for rotation, and a portion of the upper edge of the loop being adapted to engage beneath the upper shoulder to prevent an upward movement of the keeper; nuts on the rear ends of the bolts and coacting with the rear edge of the post, both nuts being adjustable to vary the position of the spindles with respect to the vertical, the lower nut being adjustable to cause the lower spindle to bear with a varying pressure against the forward edge of the post, thereby to regulate the speed of rotation of the keeper; a horizontally swinging gate; a latch coacting with the keeper; and means for securing the latch to the gate for adjustment toward and away from the keeper, whereby the latch may be made to coöperate with the keeper when the distance between the gate and the post varies.

3. In a device of the class described, a fence post having a notch in its forward edge defining upper and lower parallel horizontal shoulders and a reduced upright at the rear of the shoulders; a lower bolt resting on the lower shoulder and supported thereby against downward bending, the bolt passing through the upright and including an eye one flat side of which rests on the lower shoulder to prevent the bolt from rotating on its axis; an upper bolt passing through the post above the upper shoulder and including an eye; a keeper comprising a loop adapted to swing in the notch, and upper and lower spindles at the ends of the loop, the spindles being disposed at the forward edge of the post and being journaled, respectively, in the eyes of the upper and lower bolts, the loop having parallel horizontal upper and lower edges, the lower edge of the loop resting on the eye of the lower bolt to support the keeper for rotation, and a portion of the upper edge of the loop being adapted to engage beneath the upper shoulder to prevent an upward movement of the keeper; nuts on the rear ends of the bolts and coacting with the rear edge of the post, both nuts being adjustable to vary the position of the spindles with respect to the vertical, the lower nut being adjustable to cause the lower spindle to bear with a varying pressure against the forward edge of the post, thereby to regulate the speed rotation of the keeper; a horizontally swinging gate; a latch coacting with the keeper; and means for securing the latch to the gate.

1,194,787. SANITARY COVER FOR CANS AND UTENSILS. OTTO RUDOLPH, New York, N. Y. Filed Feb. 21, 1916. Serial No. 79,549. (Cl. 220—115.)



1. The combination, with a can having a sloping seat at one side with a hinge at the top edge of the seat, of a cover jointed to the said hinge and adapted to close the mouth of the can and shaped to lie upon the said seat and be secured thereon during the emptying of the can.

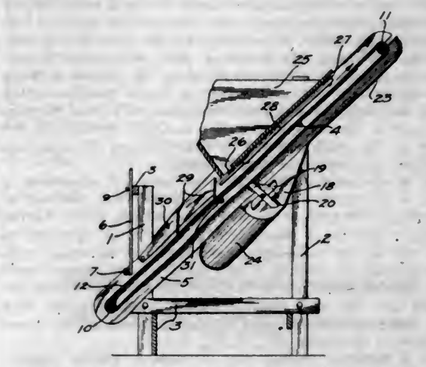
2. The combination, with a cam having a sloping seat at one side with a hinge at the top edge of said seat and a raised rib around the margin of such seat, of a cover jointed to the said hinge and adapted to close the mouth of the can and shaped to lie upon the seat within the said rib.

3. A can having a hinge upon a line across the top of the can with a sloping seat extended downward from such hinge and of the same size and shape as the mouth of the can, and a cover jointed to the said hinge and adapted to fit interchangeably to the mouth of the can or to the said seat.

4. The combination, with a can having a sloping seat at one side and a hinge at the top edge of the seat, of a cover jointed to the said hinge and fitted tightly to the mouth of the can and shaped to lie upon the said seat, and a fastening for securing it thereon.

5. The combination, with a can having a sloping seat at one side with a hinge at the top edge of the seat, of a cover jointed to the said hinge and fitted tightly to the mouth of the can and having an aperture for charging the can, a door-plate jointed to a pivot to swing within the cover to close the aperture, said cover having a segmental slot formed about such pivot, and a cover-plate for the slot on the outer side of the cover, with a connection to the door-plate for opening and closing the same without exposing the slot.

1,194,788. GRAIN-SEPARATOR. GUSTAV O. RUND, Christine, N. D. Filed Oct. 8, 1914. Serial No. 865,653. (Cl. 130—18.)



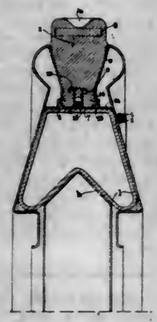
1. A separator of the kind described, including a traveling endless apron, having an upwardly moving inclined surface, means for distributing grain onto said upwardly moving inclined surface, a pair of arms pivotally secured for swinging movement toward and from said upwardly moving inclined surface, and a grain retarding plate secured to the free ends of said arms.

2. A separator of the kind described, including a traveling endless apron, having an upwardly moving inclined surface, means for distributing grain into said upwardly moving inclined surface, a pair of arms pivotally secured for swinging movement toward and from said upwardly moving inclined surface, and a pair of grain retarding plates secured to said arms, one in advance of the other, at points below the delivery of the grain onto said upwardly moving inclined surface.

1,194,789. SECTIONAL CUSHION-TIRE. JACOBUS SPYKER, Amsterdam, Netherlands. Filed Nov. 13, 1914. Serial No. 871,890. (Cl. 152—9.)

1. A sectional cushion tire for vehicles comprising in combination a rim, a circumferential series of openings in the rim having outwardly divergent walls, a circumferential series of tread studs having inwardly converging necks adapted for push-fit engagement with the walls of the said openings and snap-fastening means upon the bases of each stud adapted for passage through the openings and engageable with the walls thereof.

2. A sectional cushion tire for vehicle wheels comprising a rim, a circumferential series of tread studs having inwardly converging necks, a circumferential series of openings in the rim having outwardly diverging load receiving walls conforming in outline to the necks of the tread studs, enlargements at the bottoms of each of the openings, and a metallic spring clip for each of the studs adapted to pass through the openings and lock into the said enlargements.



3. A sectional cushion tire for vehicle wheels comprising a rim, a circumferential series of tread studs having inwardly converging necks and non-resilient heads, a circumferential series of openings in the rim having outwardly diverging load receiving walls conforming in outline to the necks of the tread studs, air spaces between the studs and the load receiving walls communicating with the outer atmosphere, enlargements at the bottoms of each of the openings, and a metallic spring clip for each of the studs adapted to pass through the openings and lock into the said enlargements.

4. A sectional cushion tire for vehicles comprising a rim, a circumferential series of tread studs having inwardly converging necks and non-resilient heads having recesses therein, a circumferential series of openings in the rim having outwardly diverging load receiving walls conforming in outline to the necks of the tread studs and against which the necks bear, air spaces between the studs and the load receiving walls communicating with the outer atmosphere, and fastening means at the bases of each of the studs.

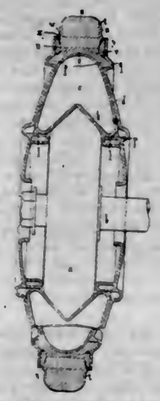
5. A sectional cushion tire for vehicle wheels comprising a rim, a circumferential series of tread studs having inwardly converging necks, a circumferential series of openings in the rim having outwardly diverging load receiving walls conforming in outline to the necks of the tread studs, enlargements at the bottoms of each of the openings, a metallic spring clip for each of the studs adapted to pass through the openings and lock into the said enlargements, said clips having anchorages extending into the necks of the studs.

[Claims 6 to 10 not printed in the Gazette.]

1,194,790. RESILIENT WHEEL. JACOBUS SPYKER, Amsterdam, Netherlands. Filed Nov. 13, 1914. Serial No. 871,891. (Cl. 152—34.)

1. In a yieldable wheel structure for vehicles the combination with a hollow outer wheel casing, an inner wheel, a resilient rolling surface in the form of studs projecting through holes in the outer wheel casing and an annular pneumatic cushion serving to hold the parts together, of a flat transverse annular surface on each side of the inner part of the outer wheel casing.

2. In a yieldable wheel structure for vehicles the combination with a hollow outer wheel casing, an inner wheel, a resilient rolling surface in the form of studs projecting through holes in the outer wheel casing and an annular pneumatic cushion serving to hold the parts together, of a flat transverse annular surface on each side of the inner part of the outer wheel casing and an annular recess in each side wall of the outer casing opening into the interior thereof.



3. In a yieldable wheel structure for vehicles the combination with a hollow outer wheel casing, an inner wheel, a resilient rolling surface in the form of studs projecting through holes in the outer wheel casing and an annular pneumatic cushion serving to hold the parts together, of a flat transverse annular surface on each side of the upper part of the outer wheel casing and an annular recess in each side wall of the outer casing opening into the interior thereof adjacent the flat annular surfaces.

4. In a yieldable wheel structure for vehicles the combination with a hollow outer wheel casing, an inner wheel, a resilient rolling surface in the form of studs projecting through holes in the outer wheel casing and an annular pneumatic cushion serving to hold the parts together, of a periphery for the inner wheel which is V-shaped in cross-section, the point of the V extending outward, a flat transverse surface on each side of the inner part of the outer wheel casing each terminating adjacent the shoulders of the inner wheel and an annular recess in each side wall of the outer casing opening into the interior thereof adjacent the flat annular surfaces.

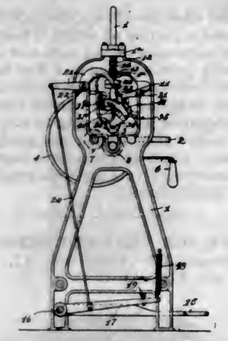
5. In a yieldable wheel structure for vehicles the combination with a hollow outer wheel casing, an outer wheel, a resilient rolling surface in the form of studs projecting through holes in the outer wheel casing and an annular pneumatic cushion serving to hold the parts together, of a periphery for the inner wheel which is V-shaped in cross-section, the point of the V extending outward, a flat transverse annular surface on each side of the inner part of the outer wheel casing, each terminating adjacent the shoulders of the inner wheel, an annular recess in each side wall of the outer casing opening into the interior thereof adjacent the flat annular surfaces, the annular pneumatic cushion normally leaving the annular recesses vacant and contacting with the flat transverse annular surfaces.

[Claim 6 not printed in the Gazette.]

1,194,791. MACHINE FOR CREASING LEATHER AND THE LIKE. EDWIN BALL STIMPSON, Brooklyn, N. Y. Filed May 11, 1912. Serial No. 696,629. (Cl. 69—2.)

1. In a creasing machine, the combination with a frame having spaced ends, one of which has an open portion, of a head mounted in the frame and having a supporting portion for creasing devices, one end of which is exposed in the open portion of the end, a creasing device that is movable through the open portion of the end and is applicable to and removable from the supporting portion of the head through said open portion of the end, and means mounted on the end of the frame and engaging the head in the open portion of said end for moving said head.

2. In a creasing machine, the combination with a frame having spaced ends provided with openings, of a head mounted in the frame and having a depending portion for supporting creasing devices, the ends thereof being in line with the open portions of the frame, creasing devices movable through the open portions and applicable to and removable from said exposed ends through the same, means for yieldingly moving the head downwardly, and devices mounted on the ends of the frame and engaging the ends of the head in the openings of said frame and above the supporting portion for elevating the head.



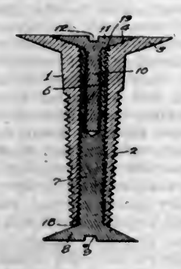
3. A creasing machine having an open ended frame, a vertically movable head having a lower edge adapted to slidably support creasing devices, a creasing device having its top constructed for interlocking engagement with said lower edge, said creasing device being adapted to be applied to or removed from said head through the opening in the end of the frame, and means on said creasing device for locking it in different positions of adjustment along said edge.

4. A creasing machine having a vertically movable head; and a creasing device supported from said head, said device comprising a creasing tool which is a rotatable support having a plurality of creasing dies around its periphery.

5. A creasing machine having a vertically movable head; a creasing device supported from said head, said device comprising a creasing tool which is a rotatable support having a plurality of creasing dies around its periphery; and pawl and ratchet means which permits the rotatable support to be rotated in one direction only.

[Claims 6 to 8 not printed in the Gazette.]

1,194,792. TELESCOPIC LOCK SCREW-BOLT OR FASTENER. WILLIAM DANIEL STEWART, Los Angeles, Cal. Filed Mar. 8, 1915. Serial No. 12,820. (Cl. 85—1.)



1. A telescopic lock screw-bolt comprising an external member having a head and also having a longitudinal screw-threaded bore that extends from end to end of said member; an externally and internally-threaded tubular second member provided with a head and adapted to screw into the bore of the external member; and a screw provided with a head and adapted to be screwed into the threaded end of the second member; the head of the screw engaging with the external member.

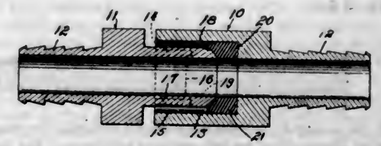
2. A telescopic lock screw-bolt comprising an external member having a head and a taper body, and a longitudinally screw-threaded bore that extends from end to end of said member; an externally and internally-threaded tubular second member provided with a head and adapted to screw into the bore of the external member; and a screw provided with a head and adapted to be screwed into the threaded end of the second member; the head of the screw engaging with the external member.

3. A telescopic lock screw-bolt comprising an external member having a head and a taper screw-threaded body, and a longitudinal screw-threaded bore that extends from end to end of said member; an externally and internally-threaded tubular second member provided with a head and adapted to screw into the bore of the external member; and a screw provided with a head and adapted to be screwed into the threaded end of the second member; the head of the screw engaging with the external member.

4. A lock screw bolt comprising a hollow member provided with a head and a threaded bore; a headed and externally and internally threaded member in the bore; and a headed screw adapted to be screwed into the second member, the head of said screw contacting with said hollow member; said members being variously threaded for the purpose set forth.

5. A telescopic lock screw-bolt comprising an external member having a counter-sunk head and also having a longitudinal screw-threaded bore that extends from end to end of said member; an externally and internally-threaded tubular second member provided with a head and adapted to screw into the bore of the external member; and a screw provided with a head and adapted to be screwed into the threaded end of the second member; the head of the screw seating in said counter-sink and engaging with the external member.

1,194,793. HOSE CONNECTION. HAROLD V. STYERS, Warwick, N. Y. Filed June 30, 1914. Serial No. 848,245. (Cl. 137—28.)

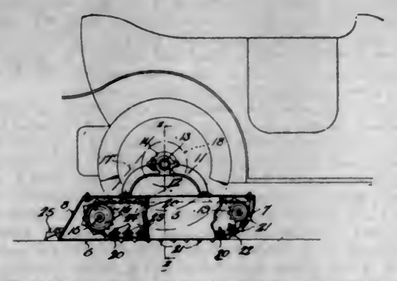


A hose coupling comprising a pair of tubular members, one of said members being provided with a cylindrical socket and a shoulder formed at the base of the socket, circumferentially spaced ribs formed in said socket, said ribs providing diametrically opposed channels between their mutually adjacent ends and having notches formed in their inner edges, a highly resilient gasket seated within the socket and presenting a substantially square shoulder opposite said ribs and bearing against the shoulder, the other of said members being provided with a cylindrical portion adapted for insertion within the socket and having its extremity rounded, diametrically opposite lugs formed on said portion and having curved outer surfaces which merge with the rounded extremity, said lugs being adapted to pass through said channel with the rounded end of said portion compressing the gasket radially from its opening between it and the shoulder to hold the outer ends of the lugs yieldably engaged in said notches to provide a tight joint between the members, said lugs upon rotation of the members in opposite directions serving to couple or uncouple the members under the expansive and contractive action of the gasket.

1,194,794. SLEIGH ATTACHMENT FOR AUTOMOBILES. THOMAS TRIONE, Iron Belt, Wis. Filed Nov. 29, 1915. Serial No. 63,928. (Cl. 21—47.)

1. In a sleigh structure, a runner casing provided in its bottom with a longitudinal slot, sprocket wheels in the

casing, a sprocket chain trained about said wheels, spurs carried by certain links of the chain and sprocket pinions disposed in the casing, adjacent the slot and meshing with said chain to hold the chain adjacent the slot and to close the link apertures of the chain.



2. In a sleigh structure, a runner casing, provided with a longitudinal slot in its bottom, sprocket wheels in the casing, a spur sprocket chain carried by said wheels, transverse shafts secured to the sides of the casing adjacent the slots and sprocket spurs carried on said shafts and meshing with the chain.

3. In a sleigh structure, a runner casing having an upwardly curved forward end, the bottom and said forward end being provided with a longitudinal slot, a driving sprocket in the rear portion of the casing, a sprocket in the forward portion of the casing, a spur chain trained about said sprockets, and spur pinions journaled in the casing adjacent the bottom and forward end for holding and guiding the chain adjacent the slot.

1,194,795. MATRIX FOR PRESSING SOUND-RECORDS. WALTER S. TYLER and FRANK L. CAPPS, Bridgeport, Conn., assignors to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed July 15, 1913. Serial No. 779,172. (Cl. 18—5.3.)



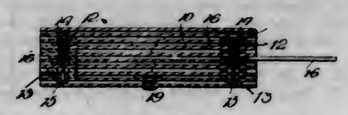
1. In a matrix for pressing sound-records, the combination of the shell or matrix surface proper and the backing therefor, each of which is provided with a central opening therethrough, with an eyelet extending through and fitting said opening, and having one flanged shoulder engaging the rear of the backing, and another flanged shoulder engaging the front face of the shell, one of said shoulders being formed by upsetting the end of the eyelet to hold the same in position.

2. In a matrix for pressing sound-records, the combination of a copper shell forming the face proper of the matrix, a metal backing therefor, said shell and backing being each provided with a central opening therethrough, an eyelet fitting in said opening and having a flange engaging the rear of the backing, and an outwardly turned annular bead engaging the front face of said shell.

3. In a matrix for pressing sound-records, the combination of a metal shell forming the face proper of the matrix, a metal backing therefor, said shell and backing being provided with a centering opening therethrough, and an eyelet fitting snugly in said opening and provided with an outwardly turned upset shoulder for engaging the shell.

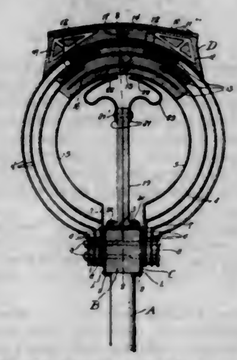
4. In a matrix for pressing sound-records, the combination of a metal shell forming the face proper of the matrix, a metal backing sweated thereto, said shell and backing each being provided with a centering opening therethrough, an eyelet fitting in said opening and having a flange engaging the rear of the backing and an outwardly turned upset annular bead engaging the front face of said shell.

1,194,796. KEY-POUCH. JAMES S. WARNER, New Philadelphia, Ohio. Filed Nov. 23, 1915. Serial No. 63,076. (Cl. 150—40.)



A device of the class described constructed from a strip of flexible material a portion of which is folded into a plurality of pockets each open at the ends and along one side and the remaining portion forming a flap to fold around the pockets, and fastening devices extending through the pockets and each including an internally threaded tubular member and a threaded pin engaging in the tubular member and said tubular member and pin being respectively formed with lateral heads at their outer ends, said fastening devices constituting pivots for keys within the pockets and adjustable longitudinally.

1,194,797. TIRE FOR VEHICLE-WHEELS. FRANK S. WEISE, Baltimore, Md. Filed Aug. 17, 1915. Serial No. 45,971. (Cl. 152—8.)



1. A vehicle tire having a tread, a plurality of half tubular members spaced apart at their inner peripheries and forming cushioning devices therefor, said devices being disposed on different sides of the tread, said tread having grooves, one on each of said sides thereof for receiving said cushioning devices and effecting the mounting of the tread as well as the cushioning thereof, and common means for fastening said devices together and connecting the tire to a wheel.

2. In combination with a wheel, a tire therefor having a tread, cushioning means for the tread separable from the wheel and attachable to the wheel to surround its periphery, cushioning elements within said cushioning means, means mounting said cushioning means, strut means detachable from the wheel mounted from the last mentioned means, and cushioning means for the tread mounted on said strut means intermediate said elements.

3. A vehicle tire having a tread, oppositely disposed cushioning elements therefor, said tread overlapping said elements, and a metallic ring embedded in said tread surrounding said elements on the exterior thereof.

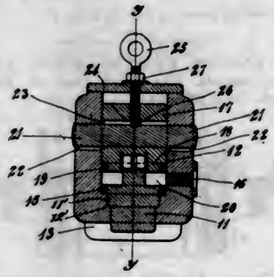
4. A vehicle tire having a tread, cushioning elements therefor, said tread having grooves receiving said elements, second cushioning elements, flanges on said tread disposed intermediate the first and second mentioned cushioning elements, resilient reinforcing means coöperating with said second mentioned cushioning means and common to said flanges, and reinforcing means extending from said reinforcing means and intermediate the first mentioned cushioning elements.

5. A vehicle tire having a tread, cushioning means therefor, cushioning elements additional to said means

intermediate said means on which the inner face of the tread rests, and strut cushioning means for the tread intermediate said cushioning elements.

[Claims 6 to 12 not printed in the Gazette.]

1,194,798. CLOSURE FOR PRESSURE-CHAMBERS. CLIFFORD E. WENTZEL, Cincinnati, Ohio, assignor to The Bahmann Iron Works Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 6, 1915. Serial No. 12,677. (Cl. 138—10.)



1. In a device of the character described, in combination with a cylinder and plunger in said cylinder, a resisting plug in the cylinder, said plunger and said plug and the walls of the cylinder inclosing a pressure chamber and said chamber having an inlet, and means slidable transversely of the cylinder to engage with said resisting plug and hold it toward said plunger.

2. In a device of the character described, in combination with a cylinder and a plunger in said cylinder, a resisting plug in said cylinder, said plunger and said resisting plug and the walls of the cylinder inclosing a pressure chamber, and said pressure chamber having an inlet, and fastening means slidable through a wall of said cylinder and across and in engagement with said resisting plug to hold the plug toward said plunger.

3. In a device of the character described, in combination with a cylinder and a plunger in said cylinder, a resisting plug in said cylinder, said plunger and said resisting plug and the walls of the cylinder inclosing a pressure chamber, and said pressure chamber having an inlet, and a shear bar engaging with a wall of said cylinder and in engagement with said resisting plug to hold the plug toward said plunger.

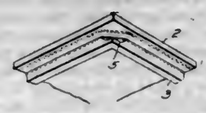
4. In a device of the character described, in combination with a fixed cylinder and a plunger in said cylinder, a resisting plug in said cylinder, said plunger and said resisting plug and the walls of the cylinder inclosing a pressure chamber, and said pressure chamber having an inlet, and fastening means slidable transversely of said cylinder, and across and in engagement with said resisting plug to hold the plug toward said plunger.

5. In a device of the character described, in combination with a fixed cylinder and a plunger in said cylinder, a resisting plug in said cylinder, said plunger and said resisting plug and the walls of the cylinder inclosing a pressure chamber, and said pressure chamber having an inlet, and a shear bar slidable transversely through a wall of said cylinder from its exterior, and across and in engagement with said resisting plug to hold the plug toward said plunger.

[Claims 6 to 21 not printed in the Gazette.]

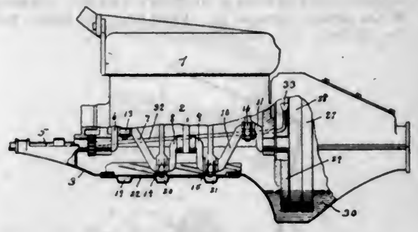
1,194,799. RECEPTACLE. GEORGE R. WEST, Grapeville, Pa., assignor to Falk Tobacco Co., New York, N. Y., a Corporation of New York. Filed Nov. 13, 1915. Serial No. 61,288. (Cl. 217—56.)

A receptacle comprising a rectangular body, a cover therefor having a depending flange that extends into and conforms to the contour of the body, said flange being provided with corner recesses, and a flat resilient seal and cushion surrounding the outer surface of the flange



and having portions seated in the corner recesses to hold said seal and cushion in a flat condition.

1,194,800. SPLASH-TROUGH FOR LUBRICANTS. ERNEST M. WHITE, Detroit, Mich. Filed Apr. 10, 1916. Serial No. 90,188. (Cl. 184—13.)



1. In a multi-cylinder engine, the combination of a crank case having a main oil receptacle and a bottom for the crank case formed with a series of alined auxiliary receptacles into which the lower ends of the connecting rod may dip to splash the oil out of said receptacles, means to elevate the oil from the main receptacle and conduct it to the auxiliary receptacle, bolts for securing the bottom to the crank case, and a sheet metal oil conveyer bent to constitute two portions, one of them consisting of a horizontal portion formed with holes through which said bolts may extend to secure the conveyer in position, and the other portion being inclined and having its upper edge in engagement with one wall of the crank case.

2. In a multi-cylinder engine, the combination of a crank case having a removable bottom provided with auxiliary oil receptacles and also having a main oil receptacle adjacent one end of said bottom and to one of the auxiliary receptacles, a reinforcing bar extending within said crank case along the opening which is normally closed by said bottom, screws extending through said bottom and crank case and into said bar, and an oil conveyer mounted within the bottom and consisting of an inclined portion extending from one wall of the crank case downwardly over the reinforcing bar and a second portion extending outwardly from the lower edge of the first below said reinforcing bar and secured in position by said screws.

3. In a multi-cylinder engine, the combination of a crank case formed of a plurality of parts, bolts for securing the parts together, one of said parts having a series of alined receptacles for lubricating oil, and an oil conveyer formed from a sheet of metal bent to constitute two strips at an oblique angle to each other, one of said strips being inclined and extending from a side wall of the crank case to the adjacent edges of said receptacles, the other being formed with holes through which a series of said bolts may extend to hold said conveyer in position.

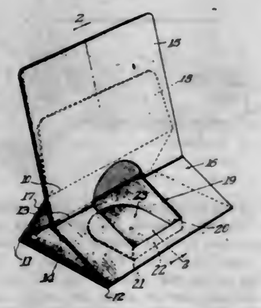
4. In a multi-cylinder engine, the combination of a crank case formed of a plurality of parts, bolts for securing the parts together, one of said parts having a series of alined receptacles for lubricating oil, and an oil conveyer formed from a sheet of metal bent to constitute two strips at an oblique angle to each other, one of said strips being inclined and extending from a side wall of the crank case to the adjacent edges of said receptacles, the other being formed with holes through which a series

of said bolts may extend to hold said conveyer in position, said inclined strip being formed with troughs for conveying the oil longitudinally of the crank case.

5. In a multi-cylinder engine, the combination of a crank case formed of a plurality of parts, bolts for securing the parts together, one of said parts having a series of alined receptacles for lubricating oil, and an oil conveyer formed from a sheet of metal bent to constitute two strips at an oblique angle to each other, one of said strips being inclined and extending from a side wall of the crank case to the adjacent edges of said receptacles, the other being formed with holes through which a series of said bolts may extend to hold said conveyer in position, said inclined strip being formed with troughs which incline downwardly toward one end of the strip.

[Claims 6 to 9 not printed in the Gazette.]

1,194,801. COLLAPSIBLE DISPLAY-EASEL. JOSEPH H. WILLIAMSON, Chicago, Ill. Filed Sept. 18, 1915. Serial No. 51,307. (Cl. 211—24.)



1. A collapsible display easel comprising base and front and back limbs, hingedly connected at their edges to form when erected a generally-triangular structure, there being a hinge formed in the front limb intermediate its ends to permit collapse of the structure, and means comprising the article to be displayed for bracing said front limb to prevent its movement about the last mentioned hinge.

2. A collapsible display easel comprising base, front, and back members, hingedly connected to form a triangular structure, the front member extending above its hinge connection with the back member, there being a hinge formed in the front member intermediate its connection with the base and the back members to permit collapse of the structure, and means on the lower portion of the front member to support the bottom of an article to be displayed, the upper end of which projects across the last mentioned hinge and rests upon the upper extension of the front member.

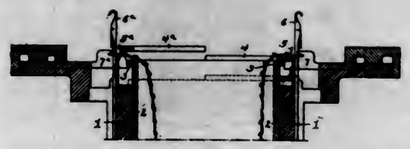
3. A collapsible display easel comprising a single strip of cardboard scored on parallel lines intermediate its ends to provide a base portion, the front and back portions of the strip being brought together and permanently secured above a scored line in the back member thereby forming a triangular structure, there being a hinge formed in the front member intermediate its connection with the base and rear members to permit collapse of the structure, and means comprising the article to be displayed for bracing said front member to prevent its movement about the last mentioned hinge.

4. A collapsible display easel comprising a single strip or cardboard scored on parallel lines intermediate its ends to provide a base portion, the front and back portions of the strip being brought together and permanently secured above a scored line in the back member thereby forming a triangular structure, there being a hinge formed in the front member intermediate its connection with the base and rear members to permit collapse of the structure, said front member having an opening formed therein near its lower portion to receive the base of an article to be displayed, the upper end of which rests upon the face member above its connection with the back member.

5. A collapsible display easel comprising base, front and back limbs hingedly connected at their edges to form when erected a generally triangular structure, there being a hinge formed in one of said limbs to permit collapse of the structure, and a brace member of material cut from the front limb to form an article receiving opening and joined to the front limb at the lower edge of the opening, said brace member being downwardly bent to engage the base and provide a brace to hold the structure in erected position.

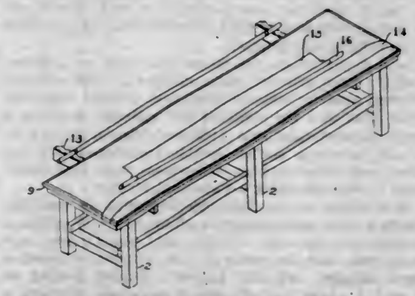
[Claim 6 not printed in the Gazette.]

1,194,802. UNITING KNITTED WEBS. LOUIS N. D. WILLIAMS, Ogontz, Pa. Filed June 10, 1915. Serial No. 33,244. (Cl. 66—32.)



The mode herein described of uniting stitches on opposite sides of a knitted web, said mode consisting in first projecting stitch receiving quills through stitches on one side of the web from below said web and projecting stitch receiving quills through stitches on the other side of the web from above the same, then folding one set of quills with the stitches upon them over into registry with the other set of quills, and causing the points of one set of quills to overlap the bases of the other set, and then uniting the pairs of stitches upon the quills by means of a separately produced chain of stitches, the stitch forming needle passing first through a stitch on one of the quills and then through the stitch on the quill which registers therewith.

1,194,803. TUBE-ROLLING TABLE. CLEMENT L. WITSAMAN, Summit county, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Mar. 10, 1915. Serial No. 13,488. (Cl. 154—7.)



1. A table on which inner tubes are rolled comprising a base and an air bag thereon.

2. A table on which inner tubes are rolled comprising a base, an air bag thereon and a cover for said air bag.

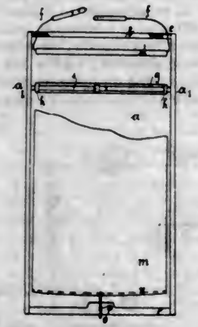
3. A table on which raw rubber tubes are rolled comprising a base, a rubber air bag thereon and a canvas cover for said air bag.

4. A table for rolling inner tubes of pneumatic tires comprising a base, an elongated air bag thereon and a canvas cover for said air bag, the longitudinal section of said table when inflated presenting a straight portion long enough to permit the rolling of a tube thereon.

5. A table for rolling inner tubes of pneumatic tires comprising a base, an elongated air bag thereon and a canvas cover for said air bag, the longitudinal section of said table when inflated presenting a straight portion long enough to permit the rolling of a tube thereon and the cross section thereof being curved throughout.

[Claim 6 not printed in the Gazette.]

1,194,804. FRAME FOR THE SUSPENSION OF SUITS OF CLOTHES FOR GENTLEMEN, IN TRUNKS. FRIEDRICH MORITZ WOLFF, Berlin, Germany. Filed Mar. 28, 1916. Serial No. 87,175. (Cl. 206—7.)



1. In a frame for suspending gentlemen's suits in trunks, the combination with an adjustable roller adapted for carrying a pair of trousers and a waist-coat in the inside of a box, of an adjustable rail provided with straps and adapted for carrying conveniently folded top coats, and a flexible protecting cover elastically stretched over said rail.

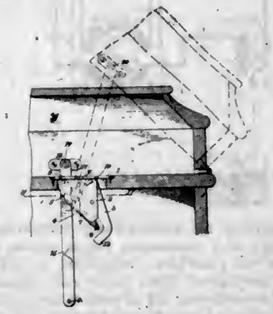
2. A garment-supporting device for trunks, comprising a frame having end-walls, one of said end-walls having an opening near one side and a bayonet-slot near the other side, a garment-supporting member within said frame, a strap connected to one end of said member and extending through said opening, a strap connected to the other end of said member and adapted to be passed through and adjustably gripped in said bayonet-slot, and means for securing the free ends of said straps together outside the frame.

3. A garment-suporting device for trunks, comprising a frame, a pair of straps each having one of its ends secured to said frame, a garment-supporting member having openings near its ends through each of which one of said straps passes and whereby said member is carried by said straps, and means for securing the free ends of said straps together over the garments.

4. A garment-supporting device for trunks, comprising a frame having end- and side-walls, one of said end-walls having openings therein, a garment-supporting member within said frame, straps connected to said member and adapted to extend through said openings, means for securing the free ends of said straps together outside said frame, a second pair of straps connected to said frame somewhat below the normal position of said garment-supporting member, a second garment-supporting member having openings adjacent its ends through which the latter straps pass, whereby said second garment-supporting member is carried by said straps, and means for adjustably securing the free ends of the latter straps together over the garments.

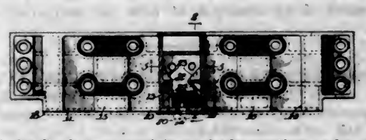
5. A garment-supporting device for trunks, comprising a frame having end- and side-walls, one of said end-walls having openings therein, a garment-supporting member within said frame, straps connected to said member and adapted to extend through said openings, means for securing the free ends of said straps together outside said frame, a second pair of straps connected to said frame somewhat below the normal position of said garment-supporting member, a second garment-supporting member having openings adjacent its ends through which the latter straps pass, whereby said garment-supporting member is carried by said straps, means for adjustably securing the free ends of the latter straps together over the garments, a flexible cover for said frame having one end attached to one of said end-walls, and means for securing the other end of said cover to the other end-wall.

1,194,805. AUTOMATIC LID-SUPPORT. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed July 23, 1914. Serial No. 852,656. (Cl. 217—60.)



An automatic prop for the hinged lid of a box or the like, consisting of a slotted plate secured to the top of such box, a flange-plate depending therefrom, a lower guide-plate secured to the side of said flange-plate and having a seat on the upper edge thereof, an upper guide-plate secured on the same side of said flange-plate and having its lower edge conforming to the upper edge of said lower guide-plate so as to produce a substantially M-shaped passageway between the adjacent edges of said guide-plates, a prop-bar pivoted to the lid and extending through said slot, and a projection on the lower end of said bar adapted to pass through said passageway and to rest in said seat.

1,194,806. DRAFT-PLATE. HENRY I. WRIGLEY, Chicago, Ill., assignor to Universal Draft Gear Attachment Co., a Corporation of Illinois. Filed Sept. 15, 1914. Serial No. 861,792. (Cl. 213—42.)



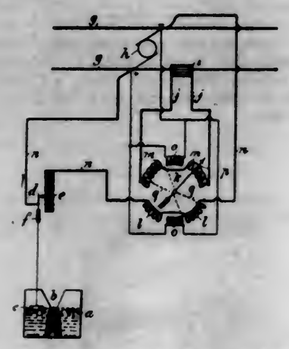
1. A draft plate comprising a body portion and a chambered abutment, such abutment having in its bottom a bolt hole and a separate entrance opening for the admission of a bolt.

2. A draft plate comprising a body portion and a chambered abutment, such abutment having a transverse partition apertured for the passage of a bolt head, the bottom of the abutment being provided with a bolt-hole and a separate entrance opening for the admission of a bolt.

3. A draft plate comprising a body portion and a chambered abutment, such abutment having a transverse apertured partition and guide ribs above and below the partition and inclined toward its aperture, and in its bottom a bolt hole and an entrance opening for the admission of a bolt.

4. A draft plate comprising a body portion and a chambered abutment, the abutment having in its bottom a bolt hole approximately on its vertical axis and an entrance opening for a bolt disconnected from the bolt hole, and guide ribs for centering a bolt over the bolt hole.

1,194,807. STEAM-MOTOR AND ELECTRICAL-GENERATOR COMBINED-EFFICIENCY INDICATOR. REGINALD SOLON XENAKY, Birmingham, England, assignor of one-half to Frank Gilman, Birmingham, England. Filed Aug. 1, 1914. Serial No. 854,530. (Cl. 73—15.)



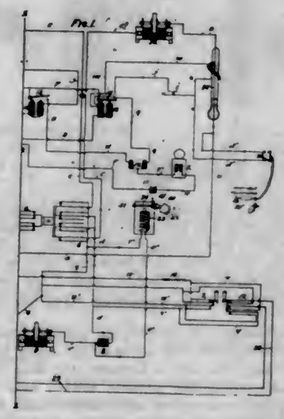
1. An apparatus for automatically indicating the combined efficiency of a condensing steam engine or the like and an electrical generator, comprising in combination a watt meter having an index hand and opposed sets of coils, means whereby one set of coils is in circuit with the generator through a variable resistance, a weir over which the air pump of the engine discharges, means for controlling said resistance according to the amount of water passing over said weir, means whereby the other set of coils is maintained in a shunt circuit of the electrical generator, the arrangements being such that any variation between the two sets of coils forming the combined watt meter is indicated by the deflection of said index.

2. An apparatus for automatically indicating the combined efficiency of a condensing steam engine, or the like, and an electrical generator comprising in combination with a watt meter having opposed coils, a weir located in the air pump discharge of the steam engine, a float in said weir, a rheostat, a brush therefor, means whereby said float controls the movements of said brush against said rheostat, means whereby said rheostat is maintained in circuit with the electrical generator and with one series of coils of said meter in combination with the opposed series of coils of said electric meter located in a shunt circuit from said generator, the two series of opposed coils of said meter being arranged to form an indicating watt meter.

1,194,808. TEMPERATURE INDICATING OR RECORDING SYSTEM AND APPLIANCE. ARTHUR BARR, Liverpool, England. Filed Jan. 31, 1914. Serial No. 815,645. (Cl. 177—351.)

1. Electrical systems for transmitting temperature data from a distance, comprising in combination, thermo-electric means and line connections; appliances connected therewith for signaling automatically the maximum and minimum, and special temperature data; a main battery and line; means for testing and adjusting the main battery and line, and for testing the said thermo-electric means and line connections, comprising a key switch, an adjustable rheostat connected with the switch, and a resistance having a zero temperature co-efficient; and an adjustable rheostat in the main line connections of the thermo-electric means for adjusting and regulating the same; all combined and adapted to operate substantially as and for the purposes set forth.

2. Electrical systems for transmitting temperature from a distance, comprising in combination, thermo-electric means having maximum and minimum contacts; a temperature indicating instrument; electric connections between the means and the instrument; a key-switch which controls the electric connections between the instrument and the thermo-electric means for indicating the temperature of said means; relay instruments having switches and connected with the maximum and minimum contacts; an indicator connected with the relay instrument; a main battery; connections between said battery, and said means and between said battery and said temperature indicating instrument; an adjustable rheostat which adjusts and regulates the connections with the thermo-electric means; a resistance having a zero temperature co-efficient and connected with the instrument, to enable the resistance of the thermo-electric means, the indicating instrument, battery and connections between these parts to be tested, and the resistance to be adjusted to a definite standard of resistance by the adjustable resistance connected with the thermo-electric means connections; an adjustable rheostat connected with the resistance; and a key switch which controls the connection and disconnection of the resistance and the rheostat with the instrument; substantially as set forth.



3. Electrical systems of transmitting temperature data from a distance, comprising in combination thermo-electric means; an indicating instrument; a battery and lines connected therewith; a key switch for controlling the instrument; maximum and minimum and special temperature transmitting and indicating means connected with the thermo-electric means; a key switch; an adjustable rheostat connected with the switch; a main battery and line; and a resistance having a zero temperature co-efficient connected therewith, arranged in connection with and for testing the said lines and indicating instrument and battery, substantially as and for the purposes set forth.

4. Electrical systems for transmitting temperature from a distance, comprising in combination, thermo-electric means; an indicating instrument; main electric connections between the means and instrument; a main battery and an adjustable rheostat in the connections; a resistance having a zero temperature co-efficient and electric connections between the instrument and the battery; and a key switch in the connections between the instrument and the battery; whereby the resistance of the main line connections can be tested and adjusted, and the measurement of the temperatures transmitted obtained; substantially as set forth.

5. Electrical systems for transmitting temperatures from a distance having a main line comprising thermo-electric means, an indicating instrument, battery and an adjustable rheostat; a secondary line comprising a resistance having a zero temperature coefficient; and a key switch connected with the secondary line and the indicating instrument, whereby the main line can be tested with the standard secondary line, and adjusted by the adjustable rheostat; substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,194,809. KEY-RING. SIDNEY O. BIGNEY, Attleboro, Mass. Filed Feb. 11, 1916. Serial No. 77,585. (Cl. 24—236.)



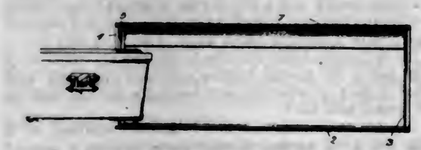
1. In a key ring, the combination with a shank, of a resilient loop upon the shank provided with a free end, an axially movable member on the shank, and an inturned flange on one end of the member, said flange being provided with a slot extending into the member adapted to receive the loop end, and with a second slot spaced from the first slot, said loop being provided with a notch adapted to receive the flange.

2. In a key ring, the combination with a shank, of a resilient loop upon the shank provided with a free end, an axially movable member on the shank, and an inturned flange upon the member, said flange being provided with a deep slot, and with a less deep slot spaced from the first slot, said slots being adapted to respectively receive and seat the end of the loop, said loop being provided with a notch to receive the flange.

3. In a key ring, the combination with a shank, of an open loop on the shank, an axially movable member on the shank, an inturned flange on the member adapted to engage the free end of the loop and provided with spaced slots to respectively receive and seat the loop end, and means for limiting the axial travel of said member in both directions.

4. In a key ring, the combination with a shank, of an open loop on the shank, a locking member comprising a core fast on the shank provided with a recess, a shell axially movable on the core, and a pin in the shell registering in the recess, and a flange on the shell adapted to engage the loop and provided with notches spaced from each other the length of said recess.

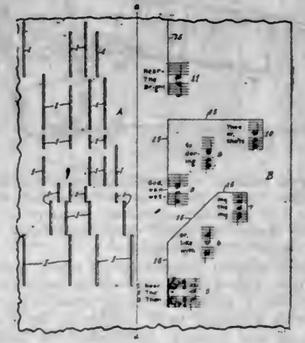
1,194,810. CASKET-CARRIAGE FOR BURIAL-VAULTS. GEORGE W. BELLIS, Galion, Ohio, assignor to The National Grave Vault Company, Galion, Ohio. Filed Mar. 13, 1915. Serial No. 14,273. (Cl. 27—3.)



The combination with a receptacle having a door opening therein and provided upon its bottom inwardly of the door opening with a flange, of a track arranged upon the said bottom of the receptacle and extending inwardly from the flange, and a carriage including a supporting body, and a roller supporting said body and located forwardly of the transverse middle of the carriage and resting upon the said track, the roller supporting the forward end of the carriage, and the said flange being adapted for the support of the rear end of the carriage.

1,194,811. MUSIC-ROLL FOR PIANO-PLAYERS, &c. FREDERICK C. BILLINGS, Milwaukee, Wis. Filed Mar. 18, 1916. Serial No. 85,015. (Cl. 84—162.)

1. A perforate music sheet having a series of perforations, each adapted to control the production of a note in a musical scale, and an imperforate border portion of said sheet at one side of the perforated portion being provided with a musical staff divided into fragments, each of which is lineally offset from those which immediately precede and succeed it, and each of which carries a note in a position to be exposed over the tracker bar of a player piano substantially in synchronism with the initial portion of a perforation in the music sheet controlling the production of the same note by the instrument, the lines of said staff fragments being disposed transversely of the sheet.



2. A perforate music sheet, provided with an imperforate border portion having thereon a musical staff, subdivided into fragments each provided with a printed note and with said fragments connected by group lines to form measures,—each of the fragments composing a measure having its lines disposed transversely of the sheet being laterally and lineally offset from the others, and the initial fragments of the measures being lineally alined with each other.

3. A perforate music sheet provided with a border portion having thereon a musical staff having transversely disposed lines and subdivided into fragments, each fragment carrying a note in a specific relation to and substantially alined with a perforation in the sheet controlling the production on the instrument of the same note, said fragments being grouped to form measures and having the initial and final fragments connected by group lines, each of the fragments composing a measure being lineally and laterally offset from the others.

4. A perforate music sheet provided with a border portion having thereon a musical scale having transversely disposed lines subdivided into fragments, said fragments being arranged in groups, each group constituting a measure, and the several fragments composing a group being offset from each other along a diagonal line,—each fragment carrying a note in a position for exposure over the tracker bar of a player piano substantially simultaneously with the initial position of a perforation controlling the production of the same note by the instrument.

5. A perforate music roll for piano players, including the combination with a portion of the roll having perforations, of a border portion, provided with a musical scale having transversely disposed staff lines, subdivided into fragments, with each fragment containing staff bars and a note and located on the roll above and laterally offset from the preceding fragment, lines connecting the fragments together in groups, each group constituting a measure, and each fragment being substantially horizontally alined with the initial portion of the perforation controlling the operation of the instrument to produce the note or notes appearing on the fragment.

[Claims 6 to 8 not printed in the Gazette.]

1,194,812. ARCH-SUPPORT. ALEXANDER E. BLOCK, St. Louis, Mo. Filed Oct. 9, 1915. Serial No. 55,095. (Cl. 36—71.)

1. In an arch support, an insole; a pocket mounted on the lower face of the insole and having apertures along its length; and an insert arranged to fit within said pocket and having means to engage with said apertures.

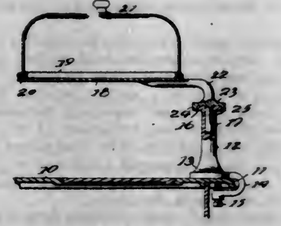
2. An arch support comprising an insole provided on its lower face with a detachable pocket extending longitudinally of said insole and a detachable pocket extending transversely of said insole; and inserts arranged to be adjustably mounted along the length of said pockets.



3. An arch support comprising an insole provided on its lower face with a pocket extending longitudinally of said insole and a pocket extending transversely of said insole; and inserts arranged to be adjustably mounted along the length of said pockets.

4. An arch support comprising an insole provided on its lower face with a pocket extending longitudinally of said insole and a pocket extending transversely of said insole; inserts arranged to be adjustably mounted along the length of said pockets; and means for locking said inserts within said pockets against accidental displacement.

1,194,813. STOVE-SHELF. JOHN Z. BROWN, High Point, N. C. Filed Mar. 1, 1916. Serial No. 81,429. (Cl. 248—18.)



A device of the class described comprising a standard adapted to be attached to a support and having a laterally enlarged head including an outer circular face and with an upwardly opening socket centrally of the head, and a shelf having an arm depending therefrom at one side, said arm enlarged laterally at the lower end and having an annular depending flange to engage the circular face of the standard head enlargement and with a stud engaging in the socket of the same.

1,194,814. GOLF-HOLE LINING. THOMAS J. W. BROWN, Washington, D. C. Filed May 16, 1916. Serial No. 97,933. (Cl. 46—4.)

1. A lining for golf-holes comprising in combination a bottom member apertured to receive a marker standard, and a non-continuous skeleton support for the lowermost end of such standard depending from said bottom member.

2. A lining for golf-holes comprising in combination a downwardly converging bottom member apertured centrally to receive a marker standard, and a non-continuous skeleton support for the lowermost end of such standard depending from said bottom member.

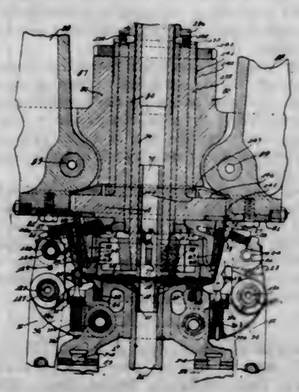
3. A lining for golf-holes comprising in combination a bottom member apertured to receive a marker standard, and a plurality of independent flanges depending from said bottom member to form a non-continuous support for the lowermost end of said standard.

4. A cylindrical lining for golf-holes comprising in combination a centrally apertured downwardly converging bottom member intermediate its ends, and a plurality of independent radial flanges beneath said bottom member



converging to the plane of its aforesaid aperture and adapted to coöperate therewith in producing a non-continuous support for said standards.

1,194,815. BOX-MAKING MACHINE. CHARLES BURNHAM, Los Angeles, Cal., assignor to Burnham Basket Company, a Corporation of California. Filed Feb. 4, 1915. Serial No. 6,109. (Cl. 93—41.)



1. In a box-making machine, the combination of a reciprocatory punch, and a die having wings the inner edges of which are free and yieldingly held against and adapted to move with a lapping effect about a part of said die.

2. In a box-making machine, the combination of a punch, and a die having folding members yieldingly held against a part of said die and having a rolling lapping effect about said part.

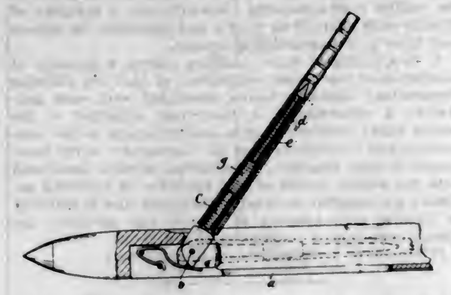
3. In a box-making machine, the combination of a punch, and a die having yielding parts forming a part of the base of said die, and wings the inner edges of which are held against said yielding parts.

4. In a box-making machine, the combination of a reciprocatory punch, a die having a head and a supporting part for shooks substantially the size of the bottom of the box to be made, wings in a normal position located in substantially parallel relation to the supporting part of the die and having their inner edges yieldingly held to move about the outer edges of said supporting part, means for moving the die bodily with the wings, and means whereby the wings may be moved at an angle with relation to the supporting part of the die and in such a way that the shooks are positively held at the place where they are folded to prevent breaking thereof.

5. In a box-making machine, the combination of a punch, a die having a supporting part for shooks substantially the size of the bottom of the box to be made, wings having their inner edges yieldingly held to move about the outer edges of said supporting part, and means whereby the wings may be moved at an angle with relation to the supporting part of the die with a lapping effect so that the shooks are positively held at the place where they are folded.

[Claims 6 to 61 not printed in the Gazette.]

1,194,816. SHUTTLE. MARIO CAMAGNI, Paterson, N. J. Filed Apr. 8, 1915. Serial No. 19,872. (Cl. 139—27.)



1. In combination, a spindle structure for shuttles including a spindle proper and a cop-grip shorter than the spindle proper and adjustable longitudinally on and between the ends of the latter, the spindle structure having approximately the same general diameter in any transverse section thereof between the ends of the cop-grip, whereby a cop or cop tube having a conical bore may be slipped over and entirely house the cop-grip.

2. In combination, a spindle structure for shuttles including a spindle proper and a cop-grip sleeve shorter than the spindle proper and adjustable longitudinally on and between the ends of the latter, the spindle structure having approximately the same general diameter in any transverse section thereof between the ends of the sleeve, whereby a cop or cop tube having a conical bore may be slipped over and entirely house the sleeve.

3. In combination, a threaded-shuttle spindle member, a cop-grip member screwed thereon, and adjustable by rotation thereon longitudinally thereof, and a key disengageably locking said members together against rotation of the cop-grip member on the spindle member.

4. In combination, a spindle member, a sleeve member screwed thereon and adjustable by rotation thereon longitudinally thereof, and a spring extending between the sleeve and spindle members and against each of them.

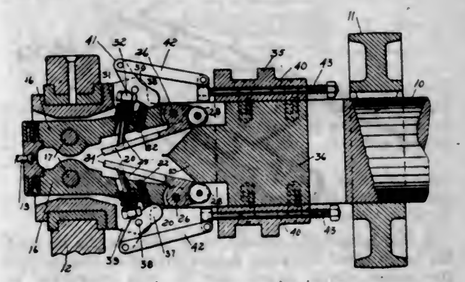
5. A shuttle spindle device including a spindle, a cop grip member rotative on substantially the longitudinal axis of the spindle and having a screw connection therewith, and means to secure the grip member against rotation in various positions to which it is advanced by screwing relatively to said spindle.

1,194,817. CHUCK FOR SCREW-MACHINES. TEUNAUSKI Z. CARPENTER, Providence, R. I., assignor to Federal Screw Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 10, 1913. Serial No. 753,161. (Cl. 29—130.)

1. In a screw machine, a rotatable shaft, jaws pivotally mounted thereon and each having a rearwardly extending arm, members pivoted to the respective arms, yieldable connections between one end of each member and its respective arm, and means engaging the opposite ends of said members to move said jaws.

2. In a screw machine, a rotatable shaft, jaws pivotally mounted thereon, each jaw having a rearwardly extending arm, levers pivoted in the respective arms, means for yieldingly connecting one end of each lever to its respective arm, and means for engaging the other ends of said levers to close said jaws.

3. In a screw machine, a rotatable shaft, jaws pivotally mounted thereon, each jaw having a rearwardly extending arm, levers pivoted in the respective arms, means for engaging one end of each lever to close said jaws, and springs acting on the other ends of said levers for regulating the gripping tension of said jaws.



4. In a screw machine, a rotatable shaft, jaws pivotally mounted thereon, each jaw having a rearwardly extending arm, levers pivoted in the respective arms, means for engaging one end of each lever to close said jaws, springs acting on the other ends of said levers for regulating the gripping tension of said jaws, and means for adjusting the tension of said springs.

5. In a screw threading machine, the combination with a rotatable shaft having a longitudinal slot therein, of jaws pivotally mounted in the slotted portion of said shaft and having rearwardly extended arms, levers mounted on said arms, springs engaging said levers at one end to regulate the gripping tension on the jaws, and a wedge-shaped jaw opening member for engaging the other ends of said levers.

[Claims 6 to 14 not printed in the Gazette.]

1,194,818. SEPARATOR FOR BATTERIES. RUFUS N. CHAMBERLAIN, Chicago, Ill., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Sept. 19, 1913. Serial No. 790,653. (Cl. 204—29.)



1. A wood separator for storage batteries having substantially its natural properties with a film of inert material lining the pores thereof.

2. A wood separator for storage batteries having substantially its natural structural formation and containing its natural constituents, and protected throughout is structure by a thin lining of inert material not filling the pores.

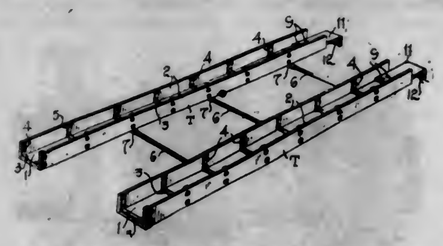
3. A wood separator for storage batteries comprising a piece of wood of substantially its natural structural formation and porosity and having its fibers thinly coated with inert material to retard the action of electrolyte on the constituents thereof but not filling the pores.

4. A battery separator comprising a wood diaphragm retaining substantially its natural porosity and all its natural constituents and having a film of inert material adapted to retard the action of the electrolyte upon the constituents of the wood without substantially affecing is natural permeability.

5. A wood separator for storage batteries having its natural pores lined with a material unaffected by dilute sulfuric acid.

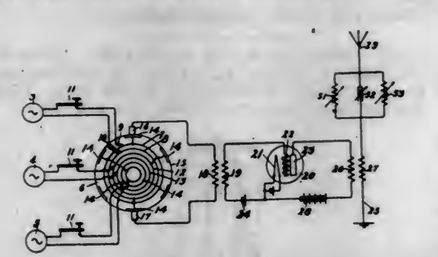
[Claims 6 to 15 not printed in the Gazette.]

1,194,819. SKID. CHARLES A. CLARK, Buffalo Center, Iowa. Filed Apr. 5, 1916. Serial No. 89,244. (Cl. 57—18.)



A skid comprising parallel track ways having upstanding longitudinal marginal flanges extending substantially the entire length thereof and tie rods interposed between the track ways and serving to maintain the same in pre-determined spaced relation, the extremities of said rods underlying the track ways, and U-shaped arms arranged within the track ways and spaced longitudinally thereof, and means for securing said arms to the track way, certain of said means serving to anchor the connecting rods to the track ways.

1,194,820. MULTIPLEX RADIOTELEGRAPH SYSTEM. EDWIN H. COLPITTS, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 11, 1915. Serial No. 50,173. (Cl. 250—9.)



1. In a multiplex radio signaling system, a plurality of generators of low power oscillations of high but differing frequencies; means for controlling the circuits of the generators in accordance with signals to be transmitted; means for rendering said generators effective in cyclic and rapid succession; means for amplifying the low power oscillations and an antenna for radiating the high power oscillations.

2. In a multiplex radio signaling system, a plurality of generators of low power oscillations of high but differing frequencies; signaling means for modifying said low power oscillations in accordance with signals; an amplifier; means for impressing said modified low power oscillations from the generators in cyclic and rapid succession on the input circuit of said amplifier; a radiating antenna asociated with the output circuit of said amplifier and means for receiving said signals simultaneously.

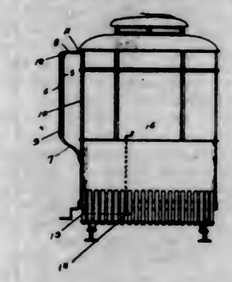
3. In a multiplex radio signaling system, a plurality of generators of low power oscillations of high but differing frequencies; signaling means for modifying said low power oscillations in accordance with signals; an amplifier; means for impressing said modified low power oscillations from the generators in cyclic and rapid succession on the input circuit of said amplifier; a radiating antenna associated with the output circuit of said amplifier; a receiving antenna and a plurality of circuits associated therewith, each adapted to receive and translate the signals sent from the corresponding generator.

4. In a multiplex radio signaling system, a plurality of generators of low power oscillations of high but differing frequencies; signaling means associated with each generator; a thermionic amplifier of the audion type; means for connecting said generators in cyclic and rapid succession to the input circuit of said amplifier; a radiating antenna associated with the output circuit of said amplifier; a receiving antenna; a thermionic amplifier of the audion type associated therewith and a plurality of circuits each adapted to receive and translate the signals sent from a corresponding generator.

5. In a multiplex radio signaling system, a plurality of generators of low power oscillations of high but differing frequencies; signaling means associated with each generator; a commutator; a thermionic amplifier of the audion type; connections from said generator to the commutator and connections from the commutator to the input circuit of said amplifier; a radiating antenna associated with the output circuit of said amplifier; a receiving antenna; an amplifier associated therewith and a plurality of circuits each adapted to receive and translate the signals sent from a corresponding generator.

[Claims 6 to 8 not printed in the Gazette.]

1,194,821. GUARD-RAIL FOR PASSENGER-CARS. WILLIAM H. CONIBEAR, Homer, Ontario, Canada. Filed Oct. 26, 1915. Serial No. 58,039. (Cl. 105—81.)



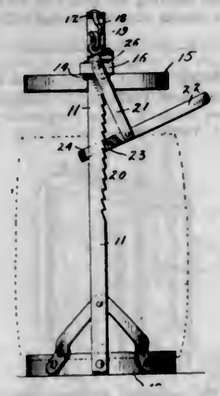
1. A guard rail for passenger cars comprising a plurality of rods in pairs supported by brackets and forming vertical supports and trackways out from the side of the car, a corresponding number of hollow posts to said pairs and communicating therewith through the upper brackets, a rail sliding in said tracks and cables extending through said posts and said upper brackets and secured to said rail and suitably operated.

2. The combination with a passenger car or the like of a pair of hollow posts secured adjacent to the opposite ends thereof and extending in parallel vertical relation, brackets secured to the opposite ends of the posts, the upper brackets being hollow and communicating with said hollow posts, spaced rods arranged in pairs and carried by the respective upper and lower brackets mounted on the posts, a guard rail slidable between said pair of rods, cables attached to the opposite ends of the guard rail and extending upwardly between the pairs of rods and through the upper brackets and posts and means for operating said cables for raising and lowering the guard rail.

1,194,822. FRUIT-PRESS. JOHN C. DARNALL, Staunton, Va. Filed Aug. 12, 1914. Serial No. 856,462. (Cl. 100—57.)

1. In a press of the class described the combination of a follower, a barrel-engaging base comprising a single ring whose lower edge is a bearing edge on which the press may rock and whose upper edge is a barrel support and a connection between the follower and the base permitting movement of the follower with reference to the base.

2. In a press of the class described the combination of a barrel supporting base, a pair of legs rising therefrom, a follower slidably mounted on said legs, a lever connected with said follower, ratchet teeth on the legs for



engagement by said lever, detent pawls on the follower to engage the ratchet teeth, and a suspension device for the follower supported by the legs.

1,194,823. ROLLER-CHAIN. BRAMAH JOSEPH DIPLOCK, Fulham, England. Filed July 9, 1914. Serial No. 849,888. (Cl. 21—150.)



1. The combination of a row of spring frames, a set of rollers lying in one plane, each roller being interposed between and pivoted to the ends of two adjacent spring frames, and a second set of rollers in a different plane, each of the latter rollers being pivoted to the side of one of the spring frames.

2. The combination of a row of spring frames of trapezoidal form, a set of rollers lying in one plane each roller being interposed between and pivoted to the ends of two adjacent spring frames, and a second set of rollers in a different plane, each of the latter rollers being pivoted to the side of one of the spring frames.

3. The combination of a plurality of parallel rows of rollers, adjacent rolers in each row being in different planes, means for permitting some of the rollers to move axially, and springs resisting this movement.

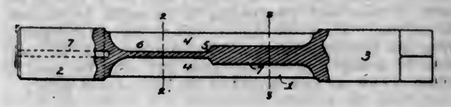
4. The combination of a plurality of parallel rows of spring frames, two sets of rollers lying in parallel planes, each roller being interposed between and pivoted to the ends of two adjacent spring frames, a third set of rollers in a plane at right angles to the first planes, each of the latter rollers being pivoted to the side of one of the spring frames, means for permitting some of the rollers to move axially, and springs resisting this movement.

5. The combination of a row of spring frames of trapezoidal form, and rollers interposed between and pivoted to the ends of two adjacent spring frames.

[Claim 6 not printed in the Gazette.]

1,194,824. STAY-BOLT FOR BOILERS. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Nov. 30, 1914. Serial No. 874,825. (Cl. 85—1.5.)

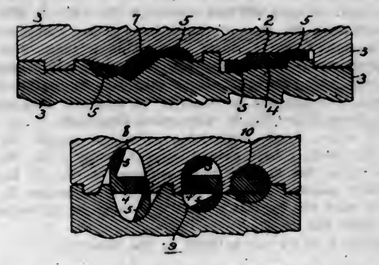
1. As a new article of manufacture, a stay bolt the shank of which is provided with slots each extending lengthwise the shank, and an integral web separating said slots and reducing the depth of the latter adjacent one head.



2. As a new article of manufacture, a stay bolt having integral heads and a shank the latter being grooved on its opposite faces, the said grooves being separated by an integral web which is thicker at one end than at the other.

3. As a new article of manufacture, a stay bolt comprising a shank and two heads, the shank having oppositely disposed grooves extending for a uniform depth part way the length of the shank, and at a lesser and uniform depth for remainder of its length, the said slots being separated by an integral web.

1,194,825. METHOD OF MANUFACTURING FLEXIBLE BOLTS. ETHAN I. DODDS, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Jan. 16, 1915. Serial No. 2,662. (Cl. 10—27.)



1. The method of making blanks for flexible bolts consisting in shaping a bar between rolls to produce a body and two oppositely disposed side wings, bending the side wings onto the body and rolling the whole into cylindrical shape.

2. The method of making blanks for flexible bolts consisting in shaping a rectangular bar between rolls to produce a body and two opposingly disposed side wings, bending the side wings over onto the body and rolling the bar into cylindrical form without welding the contacting faces of the body and wings.

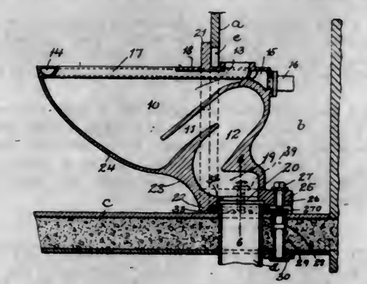
3. The method of making blanks for flexible bolts consisting in shaping a rectangular bar between rolls to produce a body and two oppositely disposed side wings, rolling the outer face of each side wing into the arc of a circle, bending said side wings against the opposite faces of the body and rolling the rod thus formed into cylindrical form.

4. The method of making bolts consisting in rolling a rectangular bar between rolls to produce a body and two side wings, bending the side wings onto the body and rolling the bar into cylindrical shape, cutting said bar into sections, welding the ends of each section and upsetting one end to form a head, twisting the shank of the bolt and then threading the same.

1,194,826. WATER-CLOSET. JOHN J. DONOVAN, Boston, Mass. Filed Jan. 9, 1915. Serial No. 1,363. (Cl. 4—18.)

1. A siphon closet for insertion in an apertured wall, and comprising a bowl, a siphon terminating in a vertical outlet in the rear of the bowl, a base adapted to rest upon the floor and through which said outlet extends, and a vertical lateral flange on each of its sides located in a transverse vertical plane between the said outlet and the said bowl.

2. A wall closet comprising a supporting base adapted to rest upon the floor, a bowl, a rearwardly extending siphon terminating in a discharge outlet in the rear of the bowl, a bowl vent terminating in an outlet in the rear of the bowl above the siphon outlet, and at a distance from the bowl opening, in consequence of which the closet may be arranged in an apertured wall with the bowl in front of and the said outlets in the rear of said wall.



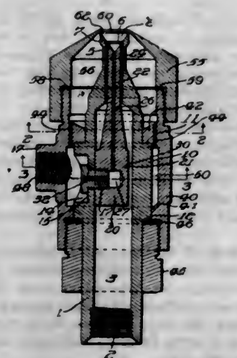
3. A water closet having a transverse rib to rest upon the floor, a bowl in front of said rib, a supporting base in the rear of said rib and means in the rear of said rib for anchoring the base of the closet against movement.

4. A siphon water closet comprising a transverse rib to rest upon the floor, a bowl in front of the rib extending upwardly and forwardly from said rib, an outlet from the bowl terminating in the rear of said rib, and means in the rear of the rib for anchoring the closet.

5. A water closet comprising a transverse rib to rest upon the floor, a base extending rearwardly from the rib to rest upon the floor, a bowl in front of the rib having an outlet passing through said base, and means in the rear of said rib by which said base may be anchored in place upon the floor.

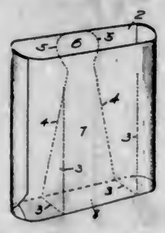
[Claims 6 to 24 not printed in the Gazette.]

1,194,827. ATOMIZING-NOZZLE. LLOYD B. EDGERTON, Upland, Pa. Filed Dec. 15, 1914. Serial No. 877,422. (Cl. 137—80.)



In an atomizing nozzle, the combination with a body having an internal chamber and a cylindrical passage leading therefrom, of a core within said chamber and projecting upwardly within said passage and having a gas passage extending longitudinally thereof, the mouths of said gas passage and of said cylindrical passage being correspondingly flared outwardly, a shell surrounding said body and providing an annular chamber, means operative to conduct compressed gas from said chamber to said gas passage, a cap mounted on said shell, and means operative to conduct compressed gas from said chamber to the interior of said cap, said cap comprising a central opening having its lower rim spaced from the upper end of said body, the diameter of said opening at said rim being equal to the diameter of the mouth of said passage adjacent thereto.

1,194,828. DISPENSING PACKAGE OR RECEPTACLE. ARTHUR FALK, New York, N. Y., assignor to Falk Tobacco Co., New York, N. Y., a Corporation of New York. Filed Mar. 11, 1916. Serial No. 83,503. (Cl. 206—56.)



1. A lining for packages or receptacles having weakened portions adapted to be separated therefrom to form an ejector.

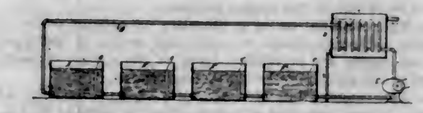
2. A lining for packages or receptacles having weakening lines arranged to permit portions to be separated from the lining to form an ejecting device including a finger-grip, a pull strip and an ejector.

3. A lining for packages or receptacles having weakening lines partially surrounding an integral portion thereof said portion being adapted to be separated from the lining on the said lines to form an ejector for elevating the contents of packages and receptacles.

4. A lining for packages or receptacles, having separable portions adapted to form an ejector for elevating the contents of the packages or receptacles.

5. A lining for packages or receptacles shaped to conform to the contour of the package, said lining having one side, its bottom, and a portion of the opposite side provided with weakening lines to permit portions of the lining to be separated therefrom on said lines to form an ejecting device including a finger-grip, a full strip, and an ejector.

1,194,829. PROCESS OF TEMPERING METAL. THOMAS J. FAY, Brooklyn, N. Y., assignor to The Perfection Spring Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 6, 1913. Serial No. 799,480. (Cl. 148—37.)



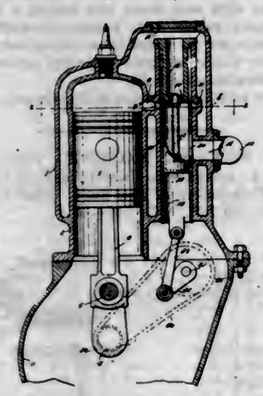
1. The process of tempering which consists in circulating a quenching liquid through a cooler and a connected series of tanks and immersing heated articles in said tanks respectively.

2. The process of tempering which consists in circulating a quenching liquid through a series of tanks each of which has a hot liquid overflow outlet at the top and a cool liquid inlet at the bottom, whereby the temperature of the liquid in the tanks is equalized, and immersing heated articles in said tanks.

3. The process of tempering which consists in circulating a quenching liquid through a cooler and through a succession of tanks arranged in series with an overflow connection from one tank to the lower part of the next in succession, and immersing heated articles in said tanks.

4. The process of maintaining the liquid in a plurality of tempering baths at substantially equal temperature, comprising circulating the liquid through a cooler and through said baths, the circulation in each bath being proportioned to the rise of temperature therein produced by the article being tempered.

1,194,830. INTERNAL-COMBUSTION ENGINE. THOMAS J. FAY, Brooklyn, N. Y., assignor to The Goby Engine Company, a Corporation of Ohio. Filed Aug. 2, 1913. Serial No. 782,583. (Cl. 123—177.)



1. In an internal combustion engine, the combination, with a cylinder, of a valve casing having a port communicating with the cylinder and a port longitudinally spaced from the first mentioned port, a valve sleeve reciprocably mounted in the casing and adapted to cover and uncover the first mentioned port and provided with a port adapted to communicate with the second port, an abutment within one end of the valve casing adjacent to the first mentioned port, and a second abutment carried by the first mentioned abutment and located within the valve sleeve adjacent to and shaped to guide the flow through the second port, said casing ports being included in the space between said abutments.

2. In an internal combustion engine, the combination, with a cylinder, of a valve casing having a port intermediate of its ends communicating with said cylinder and having a port beneath and longitudinally spaced from the first mentioned port, a liner sleeve within the upper end of the valve casing and extending adjacent to the first port and there provided with an abutment, a hollow abutment depending from the said liner sleeve and located below the second port, a tubular connection between the said liner sleeve and said second abutment, the second abutment being provided with an upwardly curved wall extending away from the second port, and a sliding sleeve valve mounted between the said casing and the said liner sleeve and abutments and having a port adapted to register with the second port.

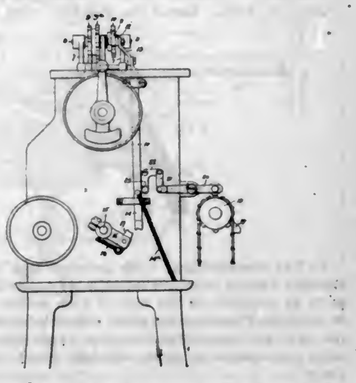
3. In an internal combustion engine, the combination, with a cylinder, of a valve casing having a port intermediate of its ends communicating with said cylinder and having a port longitudinally spaced from the first mentioned port, an abutment within the valve casing adjacent to the first port, an abutment adjacent to the second port, said ports being located in the space between said abutments and the second abutment having a wall which is inclined from its port toward the first mentioned port, and a sliding sleeve valve mounted between said casing and the said abutments and having a port adapted to register with the second port.

4. In an internal combustion engine, the combination, with a cylinder and a valve casing having a port intermediate of its ends communicating therewith, of a liner section comprising a sleeve inserted into the upper end of the said casing and having at its lower end an abutment adjacent to the upper side of said port, the said liner section being spaced from the valve casing to provide an annular seat, a second liner section depending from the first mentioned section and comprising a hollow abutment having a tubular connection with the first section, the valve casing being provided with a second port below and longitudinally spaced from the first mentioned port and the second liner section being located beneath and adjacent to said port and having its upper surface inclined upwardly away from said port, a sliding sleeve valve within the casing and interposed between the liner sections and the casing and having a port adapted to communicate with the second port in said casing, and a water jacket surrounding the cylinder and the valve casing and in communication with the first liner section.

5. In an internal combustion engine, the combination, with a cylinder and a valve casing having a port intermediate of its ends communicating therewith, of an abutment within the upper end of the said casing adjacent to the upper side of said port, a second abutment within the valve casing, the valve casing being provided with a second port below and longitudinally spaced from the first mentioned port and the second abutment being located beneath and adjacent to said port and having its upper surface inclined upwardly away from said port, and a sliding sleeve valve within the casing and interposed between the abutments and the casing and having a port adapted to communicate with the second port in said casing.

[Claim 6 not printed in the Gazette.]

1,194,831. STRIPING ATTACHMENT FOR KNITTING-MACHINES. RAYMOND FISHER, Philadelphia, Pa., assignor to William F. Taubel, Incorporated, Riverside, N. J., a Corporation of New Jersey. Filed Apr. 27, 1915. Serial No. 24,222. (Cl. 66—12.)

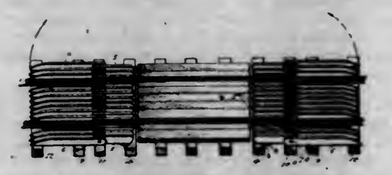


1. The combination, in a knitting machine, of a plurality of yarn feeders each movable into and out of feeding position, controllers, one for each of said yarn feeders, said controllers being such as to cause movement of one feeder out of feeding position as another feeder is moved into feeding position, and means for moving said controllers simultaneously, said means comprising a reciprocable bar, a vibrating actuator therefor, and means for moving said bar into and out of the path of said actuator, said means comprising a pattern chain, a lever acted on by said chain, and a bell crank lever having one arm connected to said first-named lever and the other arm having a bearing on the reciprocable bar, in respect to which bearing the bar is free to slide.

2. The combination, in a knitting machine, of a plurality of yarn feeders each movable into and out of feeding position, controllers, one for each of said yarn feeders, said controllers being such as to cause movement of one feeder out of feeding position as another feeder is moved into feeding position, and means for moving said controllers simultaneously, said means comprising a recipro-

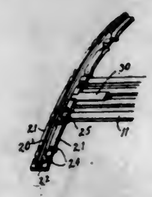
cable bar, a vibrating actuator therefor, having a spring-pressed toe thereon, and means for moving said bar into and out of the path of movement of said toe.

1,194,832. CATTLE-GUARD. ALFRED ANTOINE FRECHETTE, Grand Forks, British Columbia, Canada. Filed Nov. 13, 1914. Serial No. 871,873. (Cl. 39—19.)



In a cattle guard, in combination with the ties of a railway, a plurality of actuating arms, means for pivoting the arms to a tie to permit a rocking and a slight longitudinal movement, a plurality of arms pivoted to the first named arms and formed of an elongated diamond cross section, and means for pivoting the latter arms to a tie to permit a rocking movement, each of the actuating arms being provided with a recess having an inclined wall and each of the other arms having a pointed end arranged to abut the inclined wall adjacent thereto to prevent movement of the arms past the horizontal position when the arms are in normal position.

1,194,833. COLUMN-RULE. HARRY C. GAMMETER, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 21, 1913. Serial No. 780,159. (Cl. 101—179.)



1. The combination, with grooved type and a holder therefor having overhanging rails, of a column rule adapted to be mounted on the face of such holder between type in lines, and tongues no wider than the distance between the rails and extending from the supporting edge of the strip and spaced to enter channels which the type lines occupy.

2. In a duplicating machine, the combination, with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels, and a rule strip having a printing surface curved in concentric relation with said drum held between said flanged type and having lugs extending into the intermediate portions of the channels but not into the undercut portions.

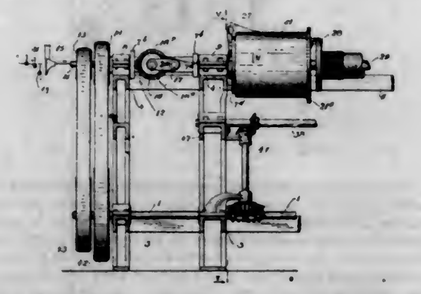
3. The combination of a drum-like type-holder having a plurality of parallel undercut channels in its periphery, type having flanges adapted to fit in said channels, and a rule strip having a printing surface curved in concentric relation with said drum and having inwardly projecting tongues which are no wider than the throat of the channels, whereby the rule may be inserted between typematter preëxisting on the drum.

4. In a duplicating machine, the combination with a rotary printing drum having a plurality of undercut channels in its periphery, of type having flanges fitted in said channels and a rule strip having a printing surface curved in concentric relation with said drum and having a radial dimension corresponding to the amount of projection of the type above the drum, arcual flanges on the opposite sides of the printing strip, and lugs rigid with such members and extending into the intermediate portions of the channels but not into the undercut portions thereof.

5. The combination of a drum-like type holder having a plurality of undercut channels in its periphery, type having flanges adapted to fit in said channels, and a rule strip having an arcual printing portion curved in concentric relation with said drum and having a laterally projecting arcual flange and having inwardly projecting tongues which are no wider than the throat of the channels, whereby the rule may be inserted between type matter preëxisting on the drum.

[Claims 6 to 15 not printed in the Gazette.]

1,194,834. SPINNING-MACHINE. JOHN GOOD, New York, N. Y., assignor to Good Inventions Co., Brooklyn, N. Y., a Corporation of New York. Filed Sept. 13, 1910. Serial No. 581,748. (Cl. 118—58.)



1. In a cordage or long-line spinner, the combination of a suitably journaled, balanced flier spindle provided with a metallic can flier and a balanced hauling-off mechanism, comprising a capstan device transversely journaled on the said spindle with equal portions of its mass disposed on opposite sides of the spindle axis, whereby said can flier can be operated to spin cordage yarns at high speeds.

2. In a cordage or long-line spinner, the combination of a flier spindle provided with a metallic can flier secured to one end thereof and a balanced hauling-off mechanism comprising main and auxiliary capstan devices both journaled on transverse axes on said spindle, intersecting the axis of the latter and each having substantially equal portions of its mass balanced on opposite sides of said spindle axis.

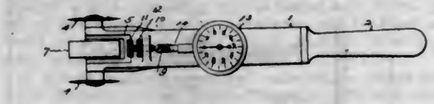
3. In a cordage or long-line spinner, the combination of a flier spindle, spaced spindle journals therefor, a can flier on the end of the spindle provided with means for guiding the yarn in a predetermined path thereon, and hauling-off mechanism for the yarn comprising one or more transversely journaled capstan devices mounted on the spindle between the journals thereof and each having substantially equal portions of its mass disposed on diametrically opposite sides of the spindle axis.

4. In a cordage or long-line spinner, the combination of a flier spindle, spaced spindle journals therefor, a can flier on one end of the spindle having yarn-guiding rollers thereon, an independently driven yarn tube within the journal portion of the spindle remote from the can flier, and hauling-off mechanism geared to the yarn tube and comprising one or more transversely journaled capstan devices mounted on the spindle between the journals thereof and each having substantially equal portions of its mass balanced on opposite sides of the spindle axis.

5. In a cordage spinner, the combination with a flier spindle, of a flier consisting of an open-end can, and yarn guides on the outside of the can arranged to conduct the yarn over but out of rubbing contact with the exterior surface of the can.

[Claims 6 to 25 not printed in the Gazette.]

1,194,835. MEASURING IMPLEMENT. WILLIAM ALEXANDER GORDON, Shelton, Conn. Filed May 12, 1915. Serial No. 27,555. (Cl. 33—172.)



1. A measuring instrument consisting of a frame, a disk with a sharpened edge mounted on the frame and having its axis stationary with relation thereto, a roll with a flat edge connected with the frame and having its axis movable with relation thereto, the axes of the disk and roll normally being in alinement, and a gage carried by the frame and operatively connected to indicate the amount of movement out of alinement of the axis of the roll with relation to the axis of the disk.

2. A measuring instrument consisting of a frame, axles fixed to the frame, an axle movable along the frame, penetrating disks mounted upon said fixed axles, a surface roll mounted upon said movable axle, and a gage carried by the frame and operatively connected to indicate the amount of movement of the axle of the surface roll with relation to the axles of the penetrating disks.

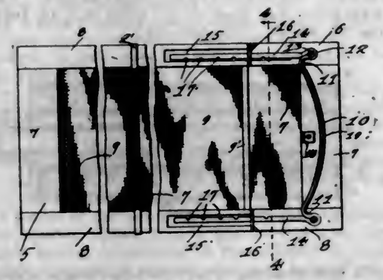
3. A measuring instrument consisting of a frame, a pair of rotary penetrating disks with sharpened edges mounted upon the frame, a slide movable along the frame, a flat faced roll rotarily mounted upon the slide, and a gage actuated by the movement of the slide to indicate the position of the roll with relation to the disks.

4. A measuring instrument consisting of a frame, a sharpened rotatory disk mounted upon an axle fixed with relation to the frame, a broad edged roll mounted upon an axle movable along the frame, adjustable means for limiting the outward movement of said roll, and means for indicating the amount of inward movement of said roll with relation to said disk.

5. A measuring instrument consisting of a frame, rotatory means mounted upon the frame for penetrating the material to be measured, rotatory means yieldingly connected with the frame and designed to bear on the surface of the material to be measured, and a gage actuated by the movement of said yielding means to indicate the position of said surface means with relation to said penetrating means.

[Claims 6 to 9 not printed in the Gazette.]

1,194,836. LOCK. OTTO C. GROSSGLASS, New Brighton, Pa. Filed June 7, 1915. Serial No. 32,660. (Cl. 156—39.)



1. The combination with a pair of slidably connected screen members, of means for locking them against relative movement, said means comprising a pair of arms pivotally mounted on one end member and resiliently connected for urging the arms for locking engagement.

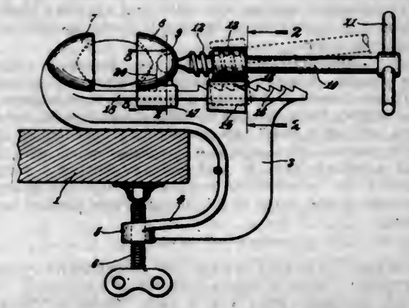
2. The combination with a pair of relatively movable screen members, of locking plates carried by one of said members and provided with openings, arms loosely passed through said openings and provided with notches to engage the edges of the openings and to lock the members against relative movement, said arms being resiliently connected to each other and also to the other member, and resiliently urged into locking engagement with the plates.

3. The combination with a screen including a pair of U-shaped members having their arms slidably connected, of a resilient U-shaped rod having the ends of its bight secured to the ends of the bight portion of one of the members and having its arms engaged with the arms of the other member and resiliently urged to locking engagement therewith.

4. The combination with a screen including a pair of U-shaped members having their arms slidably connected, of a resilient U-shaped rod having the ends of its bight bent to provide outwardly projecting portions, said portions being pivoted to the bight of one of said U-shaped members, locking plates carried by the ends of the other U-shaped member and the arms of the said rod being provided with notches to lockingly engage said plate and resiliently urged to said locking engagement.

5. The combination with a screen including a pair of U-shaped members having their arms slidably connected of a resiliently U-shaped rod having the ends of its bight bent to provide outwardly projecting portions, said portions being pivoted to the bight of one of said U-shaped members, the ends of the arms of the other member being slotted and adapted to receive the arms of the rod, a locking plate disposed across the said slotted ends and the arms of the rod being provided with notches to lockingly receive the edges of said plates.

1,194,837. NUTCRACKER. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-half to Leonard Matthews, Jr., and one-fourth to William Modra, St. Louis, Mo. Filed Apr. 3, 1916. Serial No. 88,078. (Cl. 146—3.)



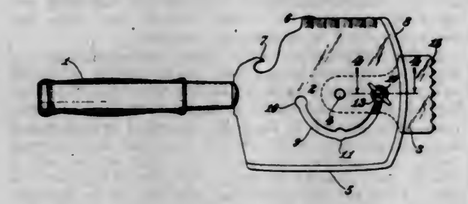
1. A nut cracking device comprising a body portion, a bearing block adjustably mounted thereon, a pair of nut cracking jaws, one of said jaws being movable with said block for effecting an initial rapid adjustment of the jaws, relatively, to accord with the size of the nut and independently of the block for exerting a nut cracking force, means for holding the block in adjusted positions, and means associated with said block for effecting said independent movement of said jaw, constructed and arranged to release the block from engagement with said body.

2. A nut cracking device comprising a body portion having a jaw, a bearing block mounted on said body for adjustment toward and from said jaw, means for holding the block in adjusted positions, a movable jaw interposed between said first named jaw and block and movable with the latter for effecting an initial rapid adjustment of the jaws, relatively, to accord with the size of the nut, and an operating member connecting said movable jaw on said block and operable for effecting an independent movement of the jaw to exert a nut cracking force, said member being constructed and arranged for movement to release the block from said body.

3. A nut cracking device comprising a body having a jaw, a bearing block mounted on said body for adjustment toward and from said jaw, means for holding said block

in adjusted positions, a movable jaw interposed between said block and first named jaw and adapted for coöperation with the latter in cracking the nuts, and an actuating screw operatively engaged with said block and movable jaw and connecting the latter for movement with the block in effecting an initial rapid adjustment of the jaws to accord with the size of the nut, said screw being operable for effecting independent movement of said movable jaw to crack the nut and for releasing said block from said body.

1,194,838. CULINARY IMPLEMENT. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-half to Leonard Matthews, Jr., and one-fourth to Albert von Hoffmann, St. Louis, Mo. Filed Apr. 3, 1916. Serial No. 88,679. (Cl. 17—22.)



1. A culinary implement of the type described, comprising a handle, a main blade mounted on said handle and consisting of a plate having a cutting edge and provided with a slot, an auxiliary blade lying at one side of and mounted directly on said main blade and movable to various operative positions thereon, said auxiliary blade lying normally within the surface plane of the main blade, and a clamping bolt movable with said auxiliary blade in said slot and operable for fixing said blades against movement relatively.

2. A culinary implement of the type described, comprising a handle, a main blade mounted thereon and provided with an arcuate slot having a plurality of enlargements, an auxiliary blade lying at one side of and pivoted directly upon said main blade and movable to a plurality of operative positions thereon, and a clamping bolt movable with said auxiliary blade in said slot and having a portion adapted for interlocking engagement with the enlarged portions of the latter to fix the said blade against movement.

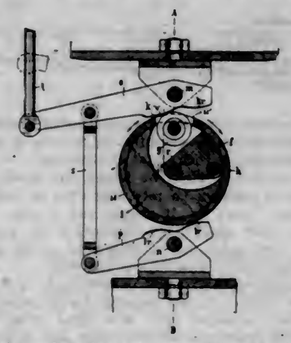
1,194,839. MANUFACTURE OF SYNTHETIC CAOUTCHOUC. ARTHUR HEINEMANN, West Kensington, London, England. Filed Aug. 9, 1913. Serial No. 783,877. (Cl. 23—24.)

1. An improvement in the manufacture of synthetic caoutchouc from isoprene consisting in polymerizing the isoprene to produce real caoutchouc and caoutchouc-like substances, and dissolving the caoutchouc-like substances by the use of ethyl acetate, substantially as and for the purpose described.

2. An improvement in the manufacture of synthetic caoutchouc from isoprene by polymerization, consisting in first polymerizing the isoprene and then adding to the polymerized product ethyl acetate in sufficient quantity to dissolve the caoutchouc-like substances which are not real caoutchouc and to precipitate the real caoutchouc, substantially as and for the purpose described.

1,194,840. FUEL-NOZZLE VALVE-GEAR. RUDOLF HENNIG, Hamburg, Germany, assignor to Gebr. Päglow, Kl. Grasbrook, near Hamburg, Germany. Filed Oct. 20, 1915. Serial No. 57,022. (Cl. 123—41.)

1. A fuel nozzle valve gear comprising a shaft, a radially movable member mounted on the shaft to rotate therewith, a rod connected at one end to said member, means connected to the rod and operatively engaging the valves and cams movable into and out of the path of the radially movable member, said cams being arranged to move the member inward upon engagement therewith, whereby to move the rod and operate the valves.

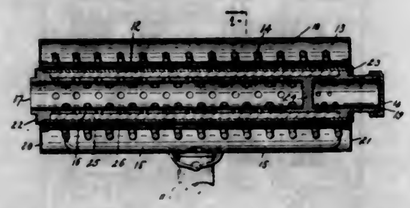


2. A fuel nozzle valve gear comprising a shaft, an arm eccentrically pivoted to the shaft, a rod connected at one end to the arm, means connected to the rod and operatively engaging the valves, and cams movable into and out of operative position relative to said arm, said cams being arranged to move the arm inward against centrifugal action in operative position, whereby to move the rod and operate the valves.

3. A fuel nozzle valve gear comprising a shaft, an arm eccentrically pivoted to the shaft, a pin on the arm normally concentric to the shaft, a rod connected at one end to the pin, means connected to the rod and operatively engaging the valves, and cams movable into and out of operative position relative to said arm, said cams being arranged to move the arm inward against centrifugal action in operative position, whereby to move the rod and operate the valves.

4. A fuel nozzle valve gear comprising a shaft, an arm pivoted eccentrically to the shaft, a pin on the arm normally concentric to the shaft, a valve operating rod having one end connected to the pin, a pair of cam levers fulcrumed on opposite sides of the shaft and each provided with a pair of cam surfaces on opposite sides of the fulcra and selectively movable into operative relation to the arm, a link connecting said levers, and means to move the arm and bring corresponding cam surfaces on the two levers into operative position, said cam surfaces being arranged to move said pin to eccentric position when in operative position.

1,194,841. HAIR-STEAMING APPARATUS. PAUL E. HERRMANN, New York, N. Y. Filed Mar. 11, 1916. Serial No. 83,601. (Cl. 132—19.)



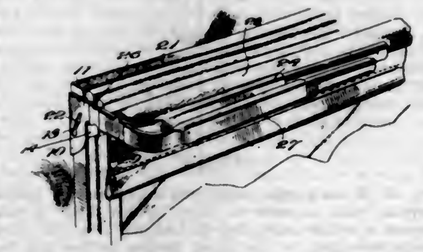
1. A hair steaming apparatus comprising a casing having a heating chamber, a perforated tubular member made of a heat insulating material within said casing, an absorbent sleeve drawn over said perforated member, a heat conducting tube inclosing said sleeve, one end of said tubular member being open and its other end closed by a removable cover, and a partition in said tubular member in front of its cover.

2. A hair steaming apparatus comprising a cylindrical casing having a heating chamber of annular cross section, a perforated tubular member made of a heat insulating material within said casing and encircled by said heating chamber, an absorbent sleeve drawn over said perforated member, a heat conducting tube inclosing said sleeve, one end of said tubular member being open and its other end closed by a removable cover, and a partition in said tubular member in front of said cover.

3. A hair steaming apparatus comprising a casing having a chamber, electric heating means within said chamber, a perforated tubular member made of a heat insulating material within said casing, an absorbent sleeve drawn over said perforated member, a heat conducting tube encircling said sleeve, one end of said tubular member being open and its other end closed by a removable cover, and a partition in said tubular member in front of said cover.

4. A hair steaming apparatus comprising a casing having a chamber of annular cross section, an electric heating member within said chamber, a perforated tubular member made of heat insulating material within said casing and encircled by said chamber, an absorbent sleeve drawn over said perforated member, a heat conducting tube inclosing said sleeve, one end of said tubular member being open and its other end closed by a removable cover, and a partition in said tubular member in front of said cover.

1,194,842. CURTAIN AND SHADE FIXTURE. ALEXANDER W. HUNTER and CHESTER C. HOWE, Vandergrift, Pa., assignors of one-third to John L. Hunter, Vandergrift, Pa. Filed Apr. 28, 1915. Serial No. 24,537. (Cl. 156—23.)



1. In a device of the character described, coacting attaching brackets provided with arms, shade roller brackets adjustable upon the said first mentioned brackets, and a lineally adjustable curtain supporting element carried by said arms.

2. In a device of the character described, coacting attaching brackets having arms formed thereon, a curtain supporting element carried by said arms, auxiliary brackets carried by said element, and a second curtain supporting element carried by said auxiliary brackets.

3. In a device of the character described, coacting attaching brackets provided with arms, a curtain supporting element detachably connected to said arms, auxiliary brackets having detachable connection with said curtain supporting element and provided with arms, and a second curtain supporting element detachably mounted upon said arms of the auxiliary brackets.

4. A device of the character described including an attaching bracket formed from a flat body member longitudinally tapered to provide an arm adapted to receive a curtain supporting element, the said member at its larger end being cut away adjacent one side thereof to provide an arm extending laterally from the plate, and a shade roller supporting bracket shiftable upon said last mentioned arm.

5. A device of the character described including a body plate having angularly disposed portions and adapted for attachment by one of said portions to the outer longitudinal side edge of a window casing with the other of said portions extending laterally in front of the casing and adapted to receive a curtain supporting element, there being an arm formed on said first mentioned portion extending laterally therefrom and transversely in front of the casing, and a shade supporting element carried by said last mentioned arm.

[Claims 6 to 9 not printed in the Gazette.]

1,194,843. METALLIC RAILWAY-TIE. JACOB A. HYLE, Harrisburg, Pa., assignor of one-third to James A. Twitchell and one-fourth to Theodore E. von Dorn, New York, N. Y., and one-sixth to John McE. Ames, Caney, Kans. Filed Dec. 31, 1915. Serial No. 69,565. (Cl. 238—5.)



1. A railway tie comprising a metallic plate having vertical side walls, a wooden block fitted between the side walls near each end of the tie, clamping bars extending across the upper surface and depending on each side in contact with said block, said bars being separated from the base of the track rail, a right angle bar secured within the tie intermediate the height of the tie with one arm resting against the outer side surface of the block and the other arm bolted to the body portion of the tie, and transverse bolts passing through the clamps, side walls and block for securely fastening the block within the tie.

2. A railway tie comprising a metallic plate having vertical side walls, a wooden block fitted between the side walls near each end of the tie, clamping bars extending across the upper surface and depending on each side in contact with said block, each side of each bar having an inward projecting shoulder fitted over the upper end of each side wall, and each of said bars being separated from the base of the rail, a right angle bar secured within the tie intermediate the height of the tie with one arm resting against the outer side surface of the block and the other arm firmly bolted to the body portion of the tie, and transverse securing bolts passing through the clamps, side walls and block.

3. A railway tie comprising a metallic plate having vertical side walls, a wooden block fitted between the side walls near each end thereof and projecting above the side walls, clamping bars extending across the upper surface and depending on each side in contact with said block, said bars being separated from the base of the track rail, a filling of concrete between said vertical walls and blocks, a series of depressions and ribs extending transversely across the bottom of the tie, and transverse bolts for securing the clamping bars to the blocks and tie.

4. A railway tie comprising a metallic plate having vertical side walls, a wooden block fitted between the side walls near each end thereof and projecting above the side walls, clamping bars extending across the upper surface and depending on each side in contact with said block, said bars being separated from the base of the track rail, a filling of concrete between said vertical walls and blocks, a series of depressions and ribs extending transversely across the bottom of the tie, transverse bolts for securing the clamping bars to the blocks and tie, and an inward integral extension formed at the upper end portion of each of the side walls between the said blocks.

5. A railway tie comprising a metallic plate having vertical side walls, a wooden block fitted between the side walls near each end thereof and projecting above the side walls, clamping bars extending across the upper surface and depending on each side in contact with said block, each side of each bar having an inward projecting shoulder fitted over the upper end of each side wall, and each bar being separated from the base of the track rail, a filling of concrete between said vertical walls and blocks, a series of depressions and ribs extending transversely

across the bottom of the tie, transverse bolts for securing the clamping bars to the blocks and tie, and an inward integral extension formed at the upper end portion of each of the side walls between the said blocks.

[Claims 6 and 7 not printed in the Gazette.]

1,194,844. HAIR-PIN. MARTA KALINOWSKA, New York, N. Y. Filed Nov. 23, 1915. Serial No. 63,122. (Cl. 132—22.)



1. A hair pin comprising a pair of prongs pivotally connected together and having oppositely inclined arms at the other side of the pivot, and a head permanently secured to the arm of one prong and overhanging the arm of the other prong for the purpose specified.

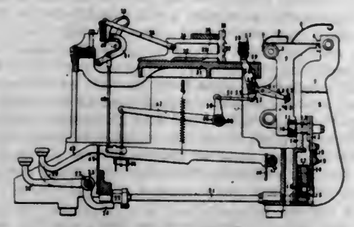
2. A hair pin comprising a pair of prongs pivotally connected together and having diverging arms on the other side of the pivot, and a head secured to the arm of one prong and extending across and into juxtaposition to the arm of the other prong and in the plane thereof, for the purpose specified.

3. A hair pin comprising a pair of prongs pivotally connected together, both prongs having channels facing one another, one channel being narrower than the other and adapted to fold into the same and a strip of rubber secured in the narrower channel for the purpose specified.

4. A hair pin comprising a pair of prongs pivotally connected together, one prong having a channel into which the inner face of the other prong is adapted to project, and a strip of rubber on the inner face of the other prong for the purpose specified.

5. A hair pin comprising a pair of prongs pivotally connected together and having channeled arms extending at the other side of the pivot, and a spring for yieldingly holding the prongs in closed position, said spring being entirely housed in the channels in said arms.

1,194,845. TYPE-WRITING MACHINE. WELLINGTON PARKER KIDDER, Boston, Mass., assignor to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed Dec. 15, 1910. Serial No. 597,490. (Cl. 197—157.)



1. In a typewriting machine, the combination with a reciprocating platen carriage, of a ribbon guide directly connected therewith, and means for holding said guide against movement as said carriage reciprocates.

2. In a visible typewriting machine, the combination with a shiftable longitudinally reciprocating platen carriage, of a ribbon guide pivotally supported from said carriage and shiftable therewith, and means for holding said ribbon guide against movement as said carriage reciprocates.

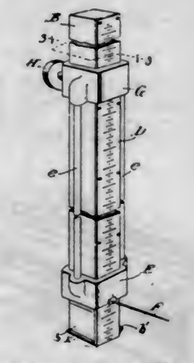
3. A longitudinally reciprocating carriage, a rod carried thereby, and a ribbon guide mounted on said rod to permit a relative movement therebetween as said carriage reciprocates.

4. A longitudinally reciprocating carriage, a rod carried thereby, a ribbon guide mounted on said rod to permit a relative movement therebetween as said carriage reciprocates, and means for setting said ribbon guide in a predetermined relation to said printing point.

5. A longitudinally reciprocating carriage, a rod carried thereby, a ribbon guide mounted on said rod to permit a relative movement therebetween as said carriage reciprocates, means for setting said ribbon guide in a predetermined relation to said printing point, and means for locking said ribbon in set position.

[Claims 6 to 15 not printed in the Gazette.]

1,194,846. OIL-TANK GAGE. HORACE B. KING, Boerne, Tex. Filed Jan. 31, 1916. Serial No. 75,426. (Cl. 73—120.)



1. An oil tank gage, comprising a gage pole, a needle-carrying slide mounted to move on the lower portion thereof, a needle projecting horizontally from the slide, means extending to the upper portion of the pole for raising and lowering said needle-carrying slide, and devices for securing said means to the upper end of the pole when the needle-carrying slide is adjusted.

2. An oil tank gage, comprising a gage-pole weighted at its lower end, a needle-carrying slide on the pole and another slide on the upper portion of the pole, a needle projecting horizontally from the slide, provided with means for making it fast to the pole and which is connected with the needle-carrying slide.

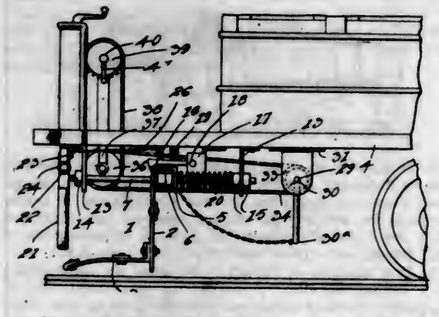
3. An oil tank gage, comprising a gage-pole, a needle-carrying slide mounted to move on the lower portion thereof, a needle projecting horizontally from the slide, another slide mounted to move on the upper portion of the pole, rods connecting the two slides and a set-screw carried by the upper slide.

4. An oil tank gage, comprising a wooden pole, a weight attached to the lower end of the pole, a plate secured to one side of the pole and which is provided with a suitable scale, a needle-carrying slide mounted to move on the lower portion of the pole, a needle projecting horizontally from the slide, another slide connected with said needle-carrying slide and mounted to move on the upper portion of the pole, and a set-screw carried by the upper slide.

5. An oil tank gage, comprising a gage pole provided with a weight having lugs near its lower edge, a needle-carrying slide mounted to move on the lower portion of the pole and the downward movement of which is limited by said lugs, and means extending to the upper portion of the pole for raising and lowering said needle-carrying slide.

[Claim 6 not printed in the Gazette.]

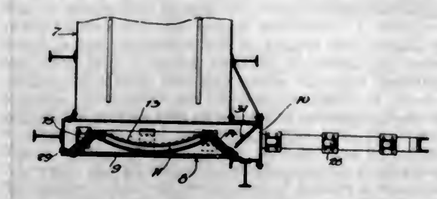
1,194,847. STREET-CAR FENDER. JOHN W. KIZESKI, Chicago, Ill. Filed Mar. 19, 1915. Serial No. 15,477. (Cl. 105—255.)



1. In combination with a car, a car fender, a pair of longitudinally extending guide rods secured to said car, substantially L-shaped arms secured to the upper end of the car fender, collars provided with an angular groove to receive ball bearings slidably mounted on said guide rods and positioned between the L-shaped arms and the car fender, a coil spring mounted on each of said guide rods and interposed between the arms and the securing means of the guide rods to move the car fender in the direction of the front end of the car, a catch pivoted to said car arms and adapted to hold the car fender against the tension of said springs, a coil spring interposed between the catch and the car for normally holding said catch into an engagement with the car fender, means for automatically releasing the catch from an engagement with the car fender to allow said car fender to move in the direction of the front end of the car under the tension of said springs, and means for returning the car fender in the direction of the rear end of the car against the tension of said coil spring.

2. In combination with a car, a car fender slidably mounted on said car, means for automatically moving the car fender in the direction of the front end of the car when the car fender has been released, a catch pivoted to said car and adapted to engage said car fender to hold it normally in the direction of the rear end of said car, means for holding the catch into an engagement with said car fender, a hinge trip member secured to the front end of the car and at a point forward of said fender, said trip member provided with its upper end narrowed to provide an operating arm, a chain connected to said operating arm and to the catch for raising said catch from an epgagement with the fender when the trip member is moved laterally, a rock shaft journaled to said car and at a point rear of the car fender, a crank loop formed in said rock shaft, a chain connected to said crank loop and to the car fender, and means for rotating the shaft to pull the car fender in the direction of the rear end of the car.

1,194,848. TANK-HEAD. ALBERT KRAETZER, Chicago, Ill. Filed June 23, 1915. Serial No. 35,933. (Cl. 220—124.)



1. In a device of the class described, the combination with a pressure receptacle, of a head compartment on one end of the same, said compartment having a front opening in alinement with the receptacle and of size and contour substantially the same as that of the interior of the receptacle, there being a peripheral seat on the interior side of said head compartment surrounding said opening and there being a side opening in the head compartment, a sidewise removable head of contour similar to that of the front opening and of a size to completely close said opening and overlap the edges thereof and rest against said seat, guiding means extending sidewise from the side opening of the head compartment and adapted to guide the removable head in its side movements, the side opening being of suitable size and contour to permit passage of the removable head therethrough, and a door mounted within the head compartment and adapted to seat against the periphery of the side opening and close the same.

2. In a device of the class described, the combination with a pressure receptacle, of a head compartment on one end of the same, said compartment having a front opening of desired size and contour in alinement with the pressure receptacle, there being a peripheral seat on the interior side of said head compartment surrounding said opening and having a side opening, a sidewise removable head of contour similar to that of the front opening and of a size to overlap the periphery of said opening, and rest against said seat, guiding means extending sidewise from the side opening and adapted to guide the sidewise removable head, the side opening being of proper size and contour to permit passage of the head therethrough, and a door mounted within the interior of the head compartment and adapted to close the side opening.

3. In a device of the class described, the combination with a pressure receptacle, of a head compartment on one end of the same, said head compartment having a front opening of desired size and contour in alinement with the pressure receptacle, and having a side opening, a sidewise removable head adapted to seat against the interior portion of the head compartment and completely close the front opening, the side opening being of proper size to permit passage of the sidewise removable head therethrough, and a door on the interior of the head compartment adapted to close the side opening.

4. In a device of the class described, the combination with a pressure receptacle, of a head compartment on one end of the same, there being a front opening in the said head compartment in alinement with the pressure receptacle, and there being a side opening in the head compartment, a sidewise removable head of proper size and contour to seat against the interior portion of the head compartment, and completely close the front opening thereof, the side opening being of proper size to permit the passage of the sidewise removable head therethrough, guiding means extending sidewise from the side opening and adapted to guide the sidewise removable head in its movements, and means for closing the side opening in a gas-tight manner.

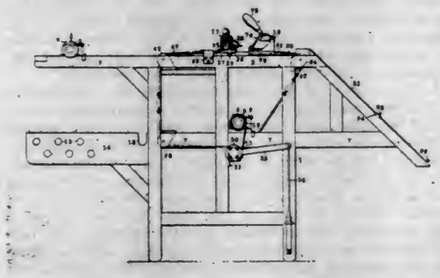
5. In a device of the class described, the combination with a pressure receptacle, of a head compartment on the same, there being front and side openings in said compartment, a sidewise removable head adapted to seat against the interior portion of the compartment, and completely close the front opening of the same, guiding means adjacent to the side opening and adapted to guide the sidewise removable head in its movements outside of the head compartment, the side opening being of proper size to permit passage of the sidewise removable head therethrough, and means for closing the side opening in a gas-tight manner.

[Claims 6 to 13 not printed in the Gazette.]

1,194,849. APPARATUS FOR APPLYING AN ORNAMENTAL CONFIGURATION TO MATERIAL. HARRY TAYLOR LOOMIS, Brooklyn, N. Y. Filed May 12, 1915. Serial No. 27,517. (Cl. 223—52.)

1. In an apparatus of the character described, in combination, a frame having horizontal members at the top thereof, a roller for holding fabric mounted upon said frame, a roller for holding backing mounted upon said

frame, two carriages mounted upon said horizontal members, each of said carriages being adapted to move longitudinally and transversely of said members, means for simultaneously moving said carriages in opposite directions, means whereby motion of one of said carriages causes said fabric and said backing to be drawn from said rollers, means for maintaining said backing under tension, and means whereby the return motion of the other of said carriages causes the fabric to assume a fullness with respect to said backing.



2. In an apparatus of the character described, in combination, a frame having horizontal members at the top thereof, a roller for holding fabric mounted upon said frame, a roller for holding backing mounted upon said frame, guides mounted upon said horizontal members, a carriage adapted to slide longitudinally and transversely of said guides, said carriage comprising two bars having adjacent faces formed with raised portions and depressions, the depressions of one bar coinciding with the raised portions of the other bar, a plurality of spring clips, each comprising a member fixed to each of said bars, a second movable carriage comprising a member adapted to move longitudinally upon said guides, and a member adapted to move transversely of said guides, means on said carriage for engaging said fabric and said backing, means for imparting longitudinal movement to said last named carriage whereby fabric is adapted to be drawn between the bars and spring clips of said first named carriage, means for moving said first named carriage to further increase the length of fabric drawn therethrough, and means for causing said first named carriage to move in an opposite direction in order that a fullness may be imparted to said fabric.

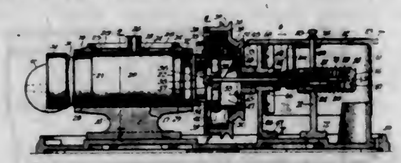
3. In an apparatus of the character described, in combination, a pair of rollers adapted to hold different kinds of fabric, a carriage through which one of said fabrics is adapted to pass, a second carriage to which both of said fabrics are adapted to be attached, means for imparting motion to said second carriage to draw one of said fabrics through said first carriage, means whereby said fabrics may be released from said second carriage, and means whereby motion of said first carriage imparts to one of said fabrics a fullness relative to the other of said fabrics.

4. In an apparatus of the character described, in combination, a plurality of rollers adapted to hold different kinds of fabric, means for unwinding said fabrics from said rollers, means whereby a fullness may be imparted to one of said fabrics with respect to the other of said fabrics, and means adapted to maintain the relative fullness of said fabric until the fabric can be permanently attached to said other fabric.

5. In an apparatus of the character described, in combination, a plurality of rollers adapted to hold different kinds of fabric, means for unwinding said fabrics from said rollers, means whereby a fullness may be imparted to one of said fabrics, with respect to the other of said fabrics, means adapted to maintain the fullness of said fabric until said fabric can be permanently attached to said other fabric, and means for withdrawing said fabrics after the same have been attached.

[Claims 6 to 45 not printed in the Gazette.]

1,194,850. LUBRICANT-TESTING MACHINE. JOHN W. LOWRY, Chicago, Ill. Filed Oct. 25, 1915. Serial No. 57,637. (Cl. 73—51.)



1. In a machine of the character described the combination of a driving member; a member to be driven; an index; a member interposed for the transmission of power between the driving and driven members and connected with the index, responsive to rotative displacement of said driving and driven members to move the index.

2. In a machine of the class described the combination of a driving member; a member to be driven; oblique, oppositely inclined cams, one carried by each said member; an index; a member interposed between said cams connected with the index, axially movable in response to rotative displacement of said driving and driven members to move said index.

3. In a machine of the class described the combination of a driving member; a member to be driven; means to maintain a constant predetermined resistance to rotation of the driven member; an index member between the driving and driven members, connected with the index, responsive to rotative displacement of said driving and driven members to move said index; and a spring for resisting said movement.

4. In a machine of the character described the combination of a driving member; a member to be driven; a split box in which the latter member is adapted and arranged to be rotated; means for yieldingly exerting a predetermined pressure upon the driven member, by pressing the box members into contact therewith; a driving connection between the driving and driven members and means axially movable by the rotative displacement of the driving and driven members to move the index.

5. In a machine of the character described the combination of a driving member; a member to be driven; a split box in which the latter member is adapted and arranged to be rotated; means for yieldingly exerting a predetermined pressure upon the driven member, by pressing the box members into contact therewith; a driving connection between the driving and driven members; means axially movable by the rotative displacement of the driving and driven members to move the index and an axially disposed concentric spring adapted and arranged to oppose the said movement.

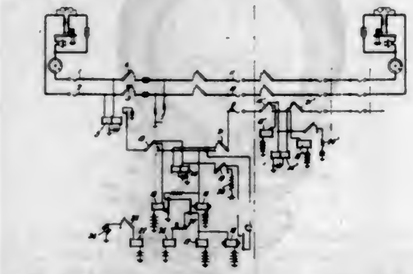
[Claims 6 and 7 not printed in the Gazette.]

1,194,851. AUTOMATIC TELEPHONE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 14, 1916. Serial No. 72,148. (Cl. 179—18.)

1. In a telephone system, an electrically operated switch, a conductor extending to said switch, a guarding contact for said switch connected to said conductor, a source of current, means for joining said source to said conductor, a controlling magnet for said switch, means for joining said magnet to said conductor, and a second source of current of different potential from said first mentioned source in series with said controlling magnet.

2. In a telephone system, an electrically operated switch, a conductor extending to said switch, a guarding contact for said switch connected to said conductor, a battery, an impulse relay for joining said battery to said conductor, a stepping magnet for said switch, means for joining said magnet to said conductor, and a second battery of different potential from the first mentioned battery in series with said stepping magnet, whereby battery potential is continuously applied to said guarding contact.

3. In a telephone system, an electrically operated switch, a connecting circuit extending to said switch, a guarding contact for said connecting circuit in one of the conductors of said circuit, a source of current, means for connecting said source to said conductor, a controlling magnet for said switch, means for joining said magnet to said conductor, and a second source of current of different potential from said first mentioned source in series with said magnet.

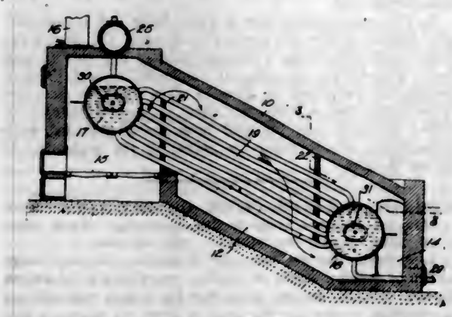


4. In a telephone system, an electrically operated switch, a conductor extending to said switch, multiply connected guarding contacts for said switch, one of said contacts being in said conductor, a source of current, means for joining said source to said conductor, a stepping magnet for said switch, means for joining said magnet to said conductor, and a second source of current of greater potential than said first mentioned source in series with said controlling magnet.

5. In a telephone system, an electrically operated switch, a conductor extending to said switch, multiply connected guarding contacts for said switch, one of said contacts being in said conductor, an impulse relay for joining said battery to said conductor, a stepping magnet for said switch, means for joining said magnet to said conductor, and a second battery of different potential from the first mentioned battery in series with said stepping magnet, whereby battery potential is continuously applied to said guiding contacts.

[Claims 6 to 11 not printed in the Gazette.]

1,194,852. WATER-TUBE BOILER. COLIN MCADIE, Rutherford, N. J. Filed Oct. 21, 1915. Serial No. 57,047. (Cl. 122—291.)



1. A water tube boiler, comprising a housing provided with a vertical partition extending from the front of the housing to within a distance from the rear end of the housing to form a fire box compartment and a return smoke compartment, the compartments being inclined and connected with each other at the rear ends, front and rear drums extending transversely through the partition in the front and rear ends of the compartments, spaced sets of inclined water tubes connecting the drums with each other and one extending in the fire box compartment and the other extending in the return smoke compartment, a fire box in the forward end of the fire box compartment and below the corresponding portion of the forward drum, and a smoke outlet at the forward end of the smoke return compartment.

2. A water tube boiler, comprising a housing inclined rearwardly and downwardly and provided with a vertical partition extending from the front upper end of the housing to within a distance from the rear lower end of the housing to form within the housing a fire box compartment inclined downwardly and rearwardly, and a return smoke compartment inclined upwardly and forwardly, the rear lower ends of the said compartments being connected with each other, a front and upper drum extending transversely in the upper front ends of the said compartments and passing through the said partition, a rear lower drum extending in the rear lower portions of the said compartments and passing through the said partition, sets of inclined water tubes connecting the drums with each other and one extending in the said fire box compartment and the other extending in the said smoke return compartment, a fire box in the upper portion of the fire box compartment and located beyond the corresponding portion of the upper drum, and a smoke outlet leading from the upper end of the smoke return compartments.

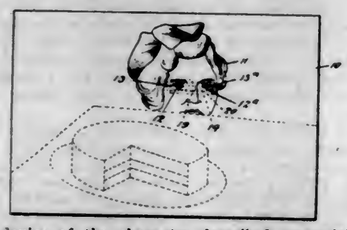
3. A water tube boiler, comprising a housing inclined rearwardly and downwardly and provided with a vertical partition extending from the front upper end of the housing to within a distance from the rear lower end of the housing to form within the housing a fire box compartment inclined downwardly and rearwardly and provided with a vertical partition extending from the front upper end of the housing to within a distance from the rear lower end of the housing to form within the housing a fire box compartment inclined downwardly and rearwardly and a return smoke compartment inclined upwardly and forwardly, the rear lower ends of the said compartments being connected with each other, a front upper drum extending transversely in the upper front ends of the said compartments and passing through the said partition, a rear lower drum extending in the rear lower portions of the said compartments and passing through the said partition, sets of inclined water tubes connecting the drums with each other and one extending in the said fire box compartment and the other extending in the said smoke return compartment, a fire box in the upper portion of the fire box compartment and located below the corresponding portion of the upper drum, a smoke outlet leading from the upper end of the smoke return compartments, and spaced transverse baffles in the said fire box compartment intermediate the said drums, one of the baffles extending upwardly in the rear of the fire box and the other extending downwardly in the front of the portion of the lower drum within the fire box compartment.

4. A water tube boiler, comprising two drums spaced apart, two sets of water tubes connecting the drums with each other, the sets of water tubes being spaced apart, two compartments, of which one is provided at one end with a fire box and the two compartments are connected with each other at the other end, the drums extending in both compartments and one set of water tubes being located in one compartment and the other set of water tubes being located in the other compartment, and spaced transverse baffles in the fire box compartment intermediate the said drums, one of the baffles extending upward at the rear of the fire box and terminating a distance from the roof of the fire box compartment and the other baffle extending downward from the roof of the fire box compartment to within a distance of the bottom of the said fire box compartment.

5. A water tube boiler, comprising a housing provided with a partition extending from the front of the housing to within a distance of the rear end of the housing to form a fire box compartment and a return smoke compartment, the compartments being connected with each other at the rear ends, front and rear drums extending in the front and rear ends of both compartments, spaced sets of water tubes connecting the drums with each other, one extending in the fire box compartment and the other

extending in the return smoke compartment, a fire box in the forward end of the fire box compartment, a bridge wall in the rear of the said fire box, a baffle extending upward from the said bridge wall in the rear of the front drum and terminating a distance from the roof of the fire box compartment, a second baffle extending downward from the roof of the said fire box compartment in front of the said rear drum, the lower end of the second baffle terminating a distance from the bottom of the said fire box compartment, spaced front and rear baffles in the said smoke return compartments, and a smoke outlet connected with the forward end of the smoke return compartments.

1,194,853. DEVICE FOR ADVERTISING PURPOSES. IRA A. MCCORMACK, New York, N. Y. Filed May 1, 1915. Serial No. 25,206. (Cl. 40—40.)



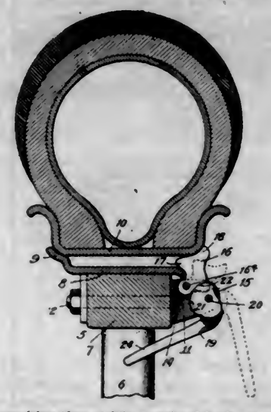
1. A device of the character described, comprising a backing member adapted to be displayed in a stationary position in a vehicle, and having on its front the representation of an animated object with orificed eye parts, separate optical members representing the eyes of the object, arranged on the back of the backing member to appear through the orifices of the object, and a carrier supporting the eyes, and movably mounted on the backing member so as to be oscillated longitudinally as well as rotatably moved vertically by the vibratory movement of the vehicle when traveling whereby the eyes will be synchronously moved therewith, for the purpose specified.

2. A device of the character described, comprising a board member adapted to be displayed in a stationary position in a vehicle, and having on its front the representation of an animated object with orificed eye parts, a casing on the back of the backing member, a bar movably mounted in the casing, and having a recess therein, separate optical members representing the eyes of the object, arranged on the bar to appear through the orifices of the object, and a ball rollable in the casing and in the recess of the bar so as to roll by the vibratory movement of the vehicle when traveling for oscillating the bar longitudinally whereby the eyes will be synchronously moved therewith, for the purpose specified.

3. A device of the character described, comprising a board member adapted to be displayed in a stationary position in a vehicle, and having on its front the representation of an animated object with orificed eye parts, a casing on the back of the backing member, a bar pivotally mounted in the casing so as to be oscillated longitudinally and rotatably moved vertically, and the bar having a recess therein, separate optical members representing the eyes of the object, arranged on the bar to appear through the orifices of the object, and a ball rollable in the casing and in the recess of the bar so as to roll by the vibratory movement of the vehicle when traveling for oscillating the bar longitudinally, and the bar independent of the ball being also rotatably moved by the vibrations of the vehicle, whereby the eyes will be synchronously moved therewith, for the purpose specified.

1,194,854. DEMOUNTABLE RIM. WILLIAM T. MCLEAN, Chicago, Ill., assignor of one-half to George W. Lyndon, Chicago, Ill. Filed Mar. 11, 1916. Serial No. 83,452. (Cl. 152—21.)

1. The combination with a wheel body and a demountable rim, of devices for removably securing the rim on the body, each comprising a clamping-lug and a cam-lever pivoted to and at one side of the wheel-body to swing laterally, the lug and lever being provided with coöperating cam-surfaces for operating the lug against the rim.



2. The combination with a wheel-body and a demountable rim, of devices for removably securing the rim on the body, each comprising a clamping lug and a cam-lever pivoted to and at one side of the wheel body to swing laterally, the lug and lever being provided with coöperating cam-surfaces for operating the lug against the rim, said lever being disposed to extend toward the axis of the wheel when it is in operative position.

3. The combination with a wheel body and a demountable rim, of devices for removably securing the rim on the body, each comprising a pivoted clamping lug and a cam lever pivoted to and at one side of the wheel body to swing laterally, the lug and lever being provided with coöperating cam-surfaces for operating the lug to secure the rim.

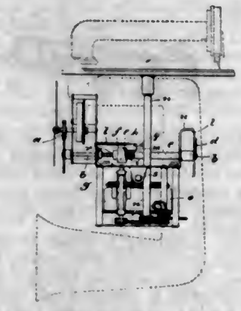
4. The combination with a wheel body and a demountable rim, of devices for removably securing the rim on the body, each comprising a bracket fixed to the wheel-body, a clamping-lug movably connected to said bracket, and a cam-lever pivoted to said bracket at one side of the wheel body to swing laterally, the lug and lever being provided with coöperating cam-surfaces for operating the lug against the rim.

5. The combination with a wheel body and a demountable rim, of devices for removably securing the rim on the body, each comprising a bracket fixed to one side of said body, a clamping lug pivotally connected to said bracket, having an extension to pass between the rim and the wheel-body, and a cam-lever pivoted to said bracket to swing laterally, the lug and lever being provided with coöperating cam-surfaces for operating the wedge-lug to secure the rim.

1,194,855. TALKING-CLOCK OR THE LIKE. MAX MARCUS, Pankow, near Berlin, Germany. Filed June 26, 1914. Serial No. 847,480. (Cl. 58—14.)

1. A device for releasing the sound reproducing mechanism of talking clocks or alarms comprising a clockwork driven spindle, driving gear for the sound reproducing mechanism, a stop for the same, a lever for engaging and releasing said stop and a plurality of controlling members for said lever mounted on said spindle, movable relatively to each other and yieldingly connected.

2. A device for releasing the sound reproducing mechanism of talking clocks or alarms comprising clockwork driving mechanism including an hour hand spindle, a spindle driven by the hour hand spindle, an auxiliary spindle mounted on the first spindle and movable relatively thereto, means for indicating the amount of said relative motion, a locking lever for the sound reproducing mechanism, controlling members therefor yieldingly connected to the spindle and auxiliary spindle respectively and a stop device for the sound reproducing mechanism controlled by the locking lever.



3. A device for releasing the sound reproducing mechanism of talking clocks and alarms comprising clockwork driving mechanism including an hour hand spindle, a spindle driven by the hour hand spindle, a cam-bearing member movable with said spindle, an auxiliary spindle mounted on the first spindle and movable relatively thereto, a second cam-bearing member carried by said auxiliary spindle and movable relatively to the first cam-bearing member, means for adjusting the position of one spindle relatively to the other, means for indicating the extent of such relative adjustment, a locking lever for the sound reproducing mechanism adapted to engage with the cam surfaces of the members and a stop device for the sound reproducing mechanism controlled by the locking lever.

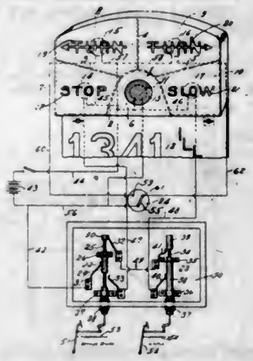
4. A device for releasing the sound reproducing mechanism of talking clocks and alarms comprising clockwork driving mechanism including an hour hand spindle, a spindle driven by the hour hand spindle, a cam sleeve coaxial with said spindle, an auxiliary spindle mounted on the first spindle and movable relatively thereto, a second cam sleeve carried by said auxiliary spindle and coöperating with the first cam sleeve, means for adjusting the position of one spindle relatively to the other, means for indicating the extent of such relative adjustment, a locking lever for the sound reproducing mechanism adapted to engage with the cam surfaces of the sleeve, and a stop device for the sound reproducing mechanism controlled by the locking lever.

5. A device for releasing the sound reproducing mechanism of talking clocks and alarms comprising clockwork driving mechanism, including an hour hand spindle, a spindle driven by the hour hand spindle, a cam sleeve yieldably connected to said driven spindle, an auxiliary spindle mounted on the driven spindle and movable relatively thereto, a second spring-controlled cam sleeve carried by said auxiliary spindle and coöperating with the first cam sleeve, means for adjusting the position of one spindle relatively to the other, means for indicating the extent of such relative adjustment, a spring-controlled locking lever for the sound reproducing mechanism adapted to engage with the cam surfaces of the sleeve and a stop device for the sound reproducing mechanism controlled by the locking lever.

[Claims 6 and 7 not printed in the Gazette.]

1,194,856. SIGNAL DEVICE. JOSEPH MARK, Chicago, Ill. Filed Feb. 7, 1916. Serial No. 76,682. (Cl. 177—337.)

1. In a signal device, the combination of a plurality of electric signs adapted to be illuminated to indicate changes in the progress of a vehicle, a pair of switches arranged to separately control the illumination of said signs, each of said switches comprising a rod mounted to shift longitudinally, a pair of contact elements on each of said rods, a yielding contact member normally and permanently engaging one of said contact elements on each of said rods, the contact member for one of said rods being connected to one terminal of each of said signs and the contact for the other said rod being connected to the other terminal of one of said signs, a pair of additional yielding contact members arranged adjacent to said one rod and positioned so as to be alternately engaged by the respective contact elements thereon, one of said pair of contact members being connected to the other terminal of the other said sign, a yielding contact member arranged adjacent to the other said rod and so positioned that the said other contact element thereon is shiftable into and out of engagement therewith, said last named contact member being connected with the other of said pair of contact members, all of said contact elements and contact members being arranged so that but one of said signs is capable of illumination at one time, and means for shifting said rods.

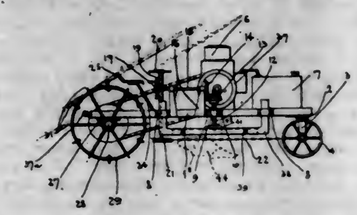


2. The combination with an automobile having a plurality of electric signs adapted to be illuminated to indicate changes in the progress thereof and having the usual service-brake and clutch-levers, of a signal device comprising a pair of switches arranged to separately control the illumination of said signs, each of said switches comprising a rod mounted to shift longitudinally, said rods being arranged adjacent to said levers so as to be shiftable in the respective planes of movement thereof, a pair of contact elements on each of said rods, a yielding contact member normally and permanently engaging one of said contact elements on each of said rods, the contact member for one of said rods being connected to one terminal of each of said signs and the contact for the other said rod being connected to the other terminal of one of said signs, a pair of additional yielding contact members arranged adjacent to said one rod and positioned so as to be alternately engaged by the respective contact elements thereon, one of said pair of contact members being connected to the other terminal of the other said sign, a yielding contact member arranged adjacent to the other said rod and so positioned that the said other contact element thereon is shiftable into and out of engagement therewith, said last named contact member being connected with the other of said pair of contact members, all of said contact elements and contact members being arranged so that but one of said signs is capable of illumination at one time, and means for shifting said rods.

1,194,857. SELF-PROPELLED AGRICULTURAL MACHINE. JOSEPH MARKUS, Pittsburgh, Pa. Filed July 19, 1915. Serial No. 40,741. (Cl. 97—30.)

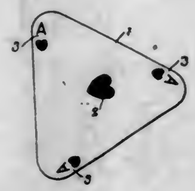
An agricultural machine comprising a shiftable body portion, means carried by the latter for propelling it, a pair of spaced coupling members secured to the outer face of each side of said body portion intermediate its ends, a longitudinally disposed and vertically adjustable one-piece yoke-shaped bar having its vertical arms extending

through a pair of said coupling members and its longitudinal arm having a row of openings to provide for adjustably connecting plow standards therewith, and vertical adjusting means for said yoke bar, and means se-



cured to the outer face of the longitudinal arm and projecting inwardly from the top edge of said bar and engaged by said adjusting means whereby said bar can be vertically adjusted.

1,194,858. PLAYING-CARD. JAMES G. MATTHEWS, South Bend, Ind. Filed Oct. 25, 1915. Serial No. 57,640. (Cl. 46—25.)

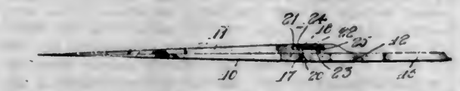


1. A triangular playing card having similar indexes in the angles thereof.

2. A playing card having a plurality of straight intersecting edges of substantially equal length and having similar indexes in the several corners thereof.

3. A playing card having three sides of substantially equal length, having similar indexes in the angles thereof and having a symbol arranged in central portion thereof.

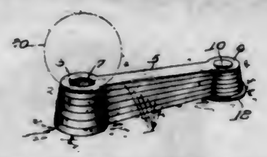
1,194,859. SHEARS OR SCISSORS. STEPHEN W. MEIDAM, Appleton, Wis. Filed May 12, 1915. Serial No. 27,595. (Cl. 30—13.)



The combination with a pair of scissors, one of the blades thereof having a threaded orifice and the other blade having a lateral opening; of a pin screw threaded a portion of its longitudinal extent having its screw threaded end received in said orifice, an enlarged head on one end of said pin for reception in said opening and to prevent rotation of said pin with respect to said second mentioned blade, said head provided with an opening, a second pin operable in said second mentioned blade having a tapered portion for reception in said last mentioned opening to adjust said blades relatively, and the pitch of the threads of said first mentioned pin being of slight degree to prevent excess lateral movement of said blades during operation, as and for the purpose specified.

1,194,860. GOLF-TEE. WILLIAM JACKSON MERRILL, Philadelphia, Pa. Filed Dec. 3, 1915. Serial No. 64,796. (Cl. 46—4.)

1. A golf tee comprising a series of tapering bars formed and arranged to lie flat with respect to each other in superimposed relation and selectively revoluble about a common center, each bar being adapted to support a golf ball adjacent the end thereof removed from said center.



2. A golf tee comprising a series of tapering bars formed and arranged to lie flat with respect to each other in superimposed relation, each bar being capable of revolution about a common pivot positioned adjacent an end thereof and adapted to support a golf ball adjacent the opposite end thereof.

3. A golf tee comprising a series of tapering bars formed and arranged to lie flat with respect to each other in superimposed relation each bar having a disk adjacent one end thereof adapted to support a golf ball, and a pivot passing through said bars adjacent the ends thereof opposite to said disks, said bars being capable of selective revolution about said pivot.

1,194,861. EGG HOLDER AND CARRIER. HERBERT L. G. MOORE, New York, N. Y. Filed Apr. 12, 1913. Serial No. 760,578. (Cl. 217—33.)



1. An egg tray comprising a plurality of alternating pockets and buffers, the central buffer being of the same dimensions as the pockets, the other buffers being of smaller dimensions, and a triangular buffer at each end of the tray.

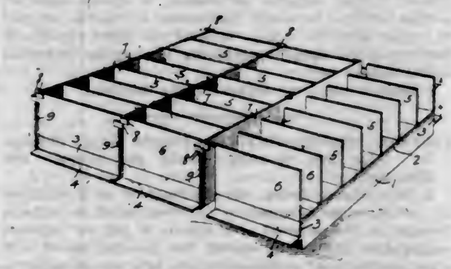
2. An egg tray composed of two elongated strips interlocked in zig-zag form to provide a single row of pockets having converging walls and intermediate buffers having walls converging in an opposite direction to the walls of the pockets.

3. An egg tray composed of two elongated strips each provided with spaced inclined slots and bent in opposite zig-zag form, said strips being united by means of said slots to form a plurality of pockets having converging walls and intermediate buffers having walls converging in an opposite direction to the walls of the pockets.

4. An egg tray composed of two members interlocked in zig-zag form producing a plurality of pockets having four converging walls with intervening buffers.

5. An egg tray composed of two members interlocked and producing a plurality of pockets, each having four converging walls with intervening buffers.

1,194,862. MOLD FOR POURED CONCRETE BRICKS OR BLOCKS. WILLIAM D. MOORE, Creston, Iowa. Filed Apr. 11, 1916. Serial No. 90,304. (Cl. 25—121.)



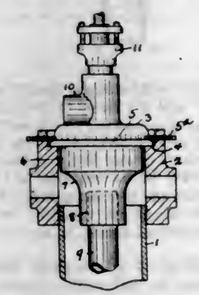
1. A mold section for poured concrete blocks, comprising a series of molds, a flexible base member having integral depending side walls at right angles thereto and an integral lateral extension at each side thereof, in combination with a partition plate for inclosing the ends of each mold, said plate having oppositely disposed flanges extending from each end of the plate and intermediate oppositely disposed flanges near the bottom of the plate.

2. A mold section for poured concrete blocks, comprising a base member having integral depending side walls at right angles thereto and a lateral extension at each side thereof, a series of molds formed of right-angled sheets of metal rigidly secured to said base member, in combination with a partition plate having oppositely disposed flanges extending from each end of the plate and intermediate oppositely disposed flanges near the bottom of said plate.

3. Mold sections for poured concrete blocks, each section comprising a series of molds, a flexible base member having integral depending side walls at right angles thereto and an integral lateral extension at each side thereof, in combination with a partition plate for inclosing the ends of each mold, said plate having oppositely disposed flanges at each end portion, a plurality of integral intermediate oppositely disposed flanges near the bottom of the plate, and a vertical portion at each end of said plate projecting beyond the side walls of each section.

4. Mold sections for poured concrete blocks, each section comprising a series of molds, a flexible base member having integral depending side walls at right angles thereto and an integral lateral extension at each side thereof, said molds being formed of right-angled sheets of metal permanently secured to said base, one mold of each section at one side thereof being formed of two right-angled sheets of metal rigidly fastened to the base, in combination with a partition plate having oppositely disposed flanges at each end portion, a plurality of integral intermediate oppositely disposed flanges near the bottom of the plate adapted to fit beneath the base of each mold section, and a vertical portion at each end of said plate projecting beyond the side walls of said sections.

1,194,863. CASING-HEAD FOR WELLS. FRED JOSEPH MOSER, Kane, Pa. Filed June 23, 1916. Serial No. 105,385. (Cl. 166—14.)



1. In combination with a casing for a well and a casing head having a vertical opening approximating the diameter of the well casing and an annular seat thereon forming a tubing support, of a top for the head having an annular plate resting on the seat; and a downward extension below the plate having a tubular connection at its lower end.

2. In combination with a casing for a well and a casing head having a vertical opening approximating the diameter of the well casing and an annular seat thereon forming a tubing support, of a top for the head having an annular plate resting on the seat; a downward extension below the plate having a tubing connection at its lower end; and a beveled guiding portion between the connection for the tubing and the plate.

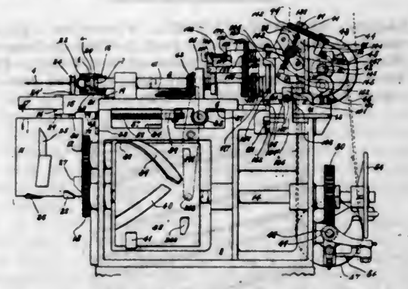
3. In combination with a casing for a well and a casing head having a vertical opening approximating the diameter of the well casing and an annular seat thereon forming a tubing support, of a top for the head having an annular plate resting on the seat; a downward extension below the plate having a tubing connection at its lower end; and a T formed with and above the plate.

4. In combination with a casing for a well and a casing head having a vertical opening approximating the diameter of the well casing and a seat thereon surrounded by an annular shoulder, of a top for the head having an annular plate resting on the seat; and a downward extension below the plate having a tubing connection at its lower end.

5. In combination with a casing head for a well, of a top for the head having an annular plate forming a support; means of attachment with a tubing at the lower end; and a beveled guiding portion between the plate and means of attachment with the tubing.

[Claim 6 not printed in the Gazette.]

1,194,864. METAL-WORKING MACHINE. FRIEDERICH MÜLLER, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed May 23, 1910. Serial No. 561,089. Renewed July 27, 1914. Serial No. 853,396. (Cl. 29—27.)



1. A machine for milling twist drills and the like, including in combination, a grooving tool, a backing-off tool, means for giving the blank a plurality of successive longitudinal and rotary movements with relation to the tools to form a plurality of grooves and backed-off portions on the blank, means for retracting the blank and changing its initial relation to the tools between successive milling operations.

2. A machine for milling twist drills and the like, including in combination, a grooving tool, a backing off tools, means for giving the blank a plurality of successive longitudinal and rotary movements with relation to the tools to form a plurality of grooves and backed-off portions on the blank, means for retracting the blank and changing its initial relation to the tools between successive milling operations, and means rendered operative after a plurality of successive milling operations for automatically presenting a succession of blanks to the milling tools.

3. A machine for milling twist drills and the like including in combination, a grooving tool, a backing off tool, means for giving the blank a plurality of successive longitudinal and rotary movements with relation to the tools to form a plurality of grooves and backed-off portions on the blank, means for retracting the blank and changing its initial relation to the tools between successive milling operations, means rendered operative after a plurality of successive milling operations for automatically feeding a predetermined length of stock to the milling tools, and means for cutting off the stock after a plurality of grooves have been formed therein.

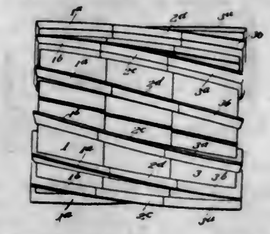
4. A machine for milling twist drills and the like including in combination, a grooving tool, a backing off tool, means for simultaneously advancing and rotating a blank with relation to said tool to form a spiral groove on one side of the blank and a spiral backed-off portion on the opposite side thereof, means for moving the tools out of

operative position when predetermined lengths of the spirals have been formed, means for retracting the blank, means for indexing the blank, means for again advancing the blank to present the opposite side thereof to the respective milling tools whereby a second spiral groove and backed-off portion are formed, means for cutting off a predetermined length of the blank after the second milling operation is completed, and means for forwarding a predetermined length of stock to form a succeeding blank.

5. A machine for milling twist drills and the like, including in combination, a grooving tool, a backing-off tool, means including a chuck for supporting a drill blank in the machine, means for effecting a relative longitudinal rotary movement between the blank and the said tools to form a spiral groove and backed-off portion on the blank, means for moving the tools out of operative relation to the blank after predetermined lengths of the spirals have been formed, means for retracting the blank, means for indexing the blank, means for effecting a second relative longitudinal and rotary movement between the blank and the milling tools to produce a second set of spirals upon the blank, whereby with a single chucking operation all the spiral grooves and clearances of a drill may be formed.

[Claims 6 to 49 not printed in the Gazette.]

1,194,865. MILLING-CUTTER. FRIEDERICH MÜLLER, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Dec. 23, 1911. Serial No. 667,518. Renewed Mar. 19, 1915. Serial No. 15,578. (Cl. 29—105.)



1. A composite milling cutter comprising a body having a plurality of helical grooves therein, and in each groove a plurality of blades of corresponding helical form, said blades being so arranged that the successive joints are relatively staggered, and means for removably clamping the blades in the grooves.

2. A composite milling cutter comprising a plurality of body-portions each having helical grooves therein of the same pitch, and a blade of corresponding helical form fitted to each of said grooves, certain of the blades of one body portion having their ends projecting beyond an end face thereof and adapted to enter corresponding grooves of an adjacent body portion.

3. A composite milling cutter comprising a plurality of body-portions each having helical grooves therein of the same pitch, a blade of corresponding helical form fitted to each of said grooves, certain of the blades of one body portion having their ends projecting beyond an end face thereof and adapted to enter corresponding grooves of an adjacent body portion, and means for removably clamping the blades in the grooves.

4. A composite milling cutter comprising a plurality of body portions, each having a plurality of helical grooves therein of the same pitch and a plurality of blades of corresponding form fitting said grooves, the body portions being assembled with their blades in alinement to form continuous helical cutting edges and certain of the blades projecting into the grooves of adjacent body portions and forming joints with adjacent blades which joints are in planes different from those containing joints of other of the cutting edges.

5. A composite milling cutter comprising a plurality of body portions, each having a plurality of helical grooves therein of the same pitch and a plurality of blades of corresponding form fitting said grooves, certain of the body portions having some blades terminating within the opposite end face and the blade arrangement at adjacent ends of the body portions being complementary one of the other, whereby the blades of the associated body portions form a plurality of substantially continuous helical cutting edges having broken or staggered joints.

[Claims 6 to 11 not printed in the Gazette.]

1,194,866. PAPER-SIZE AND THE PROCESS OF MAKING SAME. GEORG MUTH, Butzbach, Germany, assignor to the Firm of Dr. Graf & Comp., Neubabelsberg, near Berlin, Germany. Filed Jan. 25, 1916. Serial No. 74,092. (Cl. 134—21.)

1. As an article of manufacture, a paper size containing artificial resin obtained from coal tar.

2. As an article of manufacture, a paper size containing cumaron resin.

3. The herein described process of manufacturing a paper size, which consists in melting artificial resin obtained from coal tar and natural resin and maintaining the mixture in a molten condition until frothing thereof has ceased, and thereupon boiling the mass with alkalies until a uniform emulsion is formed.

4. The herein described process of manufacturing a paper size, which consists in melting artificial resin obtained from coal tar with a saponifiable fatty substance, and thereupon boiling the mass with alkalies.

5. The herein described process of manufacturing a paper size, which consists in melting cumaron resin with a saponifiable fatty substance, and thereupon boiling the mass with alkalies.

1,194,867. MATCH-IGNITING DEVICE. JACOB E. NEAHR, New York, N. Y. Filed Oct. 20, 1914. Serial No. 867,598. (Cl. 206—33.)



1. A match-safe comprising a match-ignition device comprising a coil, and a casing to contain said match-ignition device and the matches; said match-ignition device mounted for a movement to expose the same for striking a match thereon; means being connected with said match-ignition device to be effective at the movement thereof, for rendering the incased matches accessible when the match-ignition device is exposed, and inaccessible when the match-ignition device is returned within the casing.

2. The combination of an incasing structure within which matches may be inaccessibly confined; a match-ignition device comprising a coil normally inaccessible in said incasing structure; and means supporting said match-ignition device upon said incasing structure in a manner to permit movement of the match-ignition device away from the incasing structure and simultaneously cause the matches in the incasing structure to be rendered accessible.

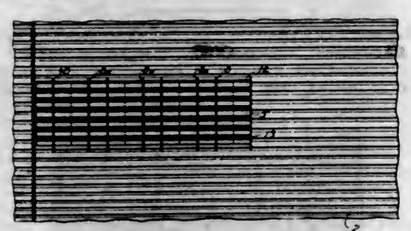
3. A combined match-safe and ignition-device, comprising a drum or magazine portion upon which an ignition-strip is applied and within which the strip is stored, and a match-containing handle portion forming a casing within which said drum with its strip is confined; means movable relatively to said casing being provided for rendering the matches accessible and for exposing the ignition strip to permit the striking of a match thereon.

4. A combined match-safe and ignition-device, comprising a drum or magazine upon which an ignition-strip is applied and within which the strip is stored, a match-holding box, a casing structure, and means connecting said drum and said match-holding box for simultaneous movement relatively to said casing structure, to render the matches accessible and expose the drum and ignition-strip to permit striking a match thereon.

5. The combination of an open-ended tube or casing; an open-sided match-box having a bottom and fitting in said casing, said bottom closing the lower end of said tube and affording means for thrusting the box at will out from the top of the tube; and a magazine or drum mounted upon the upper end of said match-box within said tube, and comprising a portion which closes the upper end of said tube; a strip of match-igniting material being applied upon said drum.

[Claims 6 to 28 not printed in the Gazette.]

1,194,868. COLUMN-RULE. SAMUEL ABRAHIMS NEIDICH, Edgewater Park, N. J., assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 10, 1913. Serial No. 760,228. (Cl. 101—179.)



1. A column rule consisting of an arcual strip having on its concave edge intermediate of the ends thereof, tongues integral with the strip which extend inwardly and project at their ends substantially circumferentially, whereby they may hook beneath overhanging rails on a type holder.

2. A column rule consisting of a curved strip having tongues projecting inwardly from the concave edge, said tongues extending circumferentially at their inner ends.

3. A column rule consisting of a curved strip having a tongue projecting from the concave edge, the lower portion of the tongue extending at an angle to the shank of the tongue.

4. A column rule consisting of an arcual strip having radial tongues projecting from the concave edge, said tongues extending circumferentially in the plane of the strip near their inner ends to enable them to hook under overhanging rails.

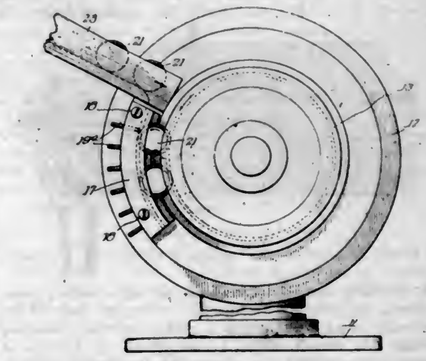
5. A column rule comprising a curved strip and a series of tongues located at intervals on the concave edge of the strip, said tongues projecting both inwardly and longitudinally of the strip.

[Claims 6 to 17 not printed in the Gazette.]

1,194,869. CROWN-SEAL-CAP MACHINE. JESSE W. NICHOLS, Chicago, Ill. Filed May 22, 1913. Serial No. 769,226. (Cl. 113—80.)

1. In a machine for securing a packing within a closure cap, means to indent the wall of the cap into peripheral engagement with the packing, said means comprising two members concentrically mounted to provide an arcuate channel between portions thereof, one of said members being rotatable and one of the members provided with radially disposed pricking elements, the channel adapted to receive the caps and transport the same therethrough in rolling contact with the opposed edge walls thereof, substantially as described.

2. In a machine for securing a packing disk within a crown seal cap, means to indent the wall of the cap to form spaced prongs inwardly projecting into peripheral engagement with the disk, said means comprising two members concentrically mounted to provide an arcuate channel between portions thereof, one of said members being rotatable and one provided with radially disposed pricking elements, the channel adapted to receive the caps and transport the same therethrough in rolling contact with the opposed edge walls thereof, substantially as described.



3. In a machine for securing a packing within a closure cap, means to indent the wall of the cap into peripheral engagement with the packing, said means comprising two members concentrically mounted to provide an arcuate channel between portions thereof, one of said members being rotatable, one of the members provided with radially disposed pricking elements and the other with teeth facing toward the channel, the channel adapted to receive the caps and transport the same therethrough in rolling contact with the opposed edge walls thereof, substantially as described.

4. In a machine for securing a packing disk within a crown seal cap, means to indent the wall of the cap to form spaced prongs inwardly projecting into peripheral engagement with the disk, said means comprising two members concentrically mounted to provide an arcuate channel between portions thereof, the inner one of said members being rotatable and one of the members provided with radially disposed pricking elements, the channel adapted to receive the caps and transport the same therethrough in rolling contact with the opposed edge walls thereof, substantially as described.

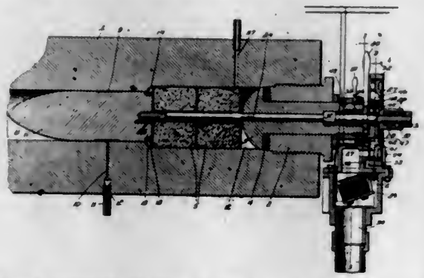
5. In a machine for securing a packing disk within a crown seal cap, means to indent the wall of the cap to form spaced prongs inwardly projecting into peripheral engagement with the disk, said means comprising two members concentrically mounted to provide an arcuate channel between portions thereof, the inner one of said members being rotatable and provided with radially projecting teeth and the other member provided with adjustable radially disposed pricking elements, the channel adapted to receive the caps and transport the same therethrough in rolling contact with the opposed edge walls thereof, substantially as described.

1,194,870. GUN. JOHN PATTEN, Baltimore, Md., assignor of seventy-five one-hundredths to C. Wilbur Miller and Ernest B. Miller. Filed Jan. 9, 1912. Serial No. 670,330. (Cl. 89—1.)

1. The combination with a gun having a smooth bore and breech block, of a projectile having a movable pawl, a spindle extending through the powder chamber and adapted to be engaged by the pawl of the projectile, for rotating the latter, and means for rotating the spindle.

2. The combination with a gun having a smooth bore, of a breech block, a rotary spindle mounted in the breech block, a turbine motor, a clutch device arranged between said motor and the spindle, and means for connecting the inner end of the spindle with a projectile to rotate the latter, said means being adapted to permit the projectile to rotate relative to the spindle.

3. The combination with a gun having a smooth bore, of means for rotating a projectile within the gun comprising a turbine motor, and means for automatically cutting off a portion of the fluid supply to said motor when the motor exceeds a predetermined speed.

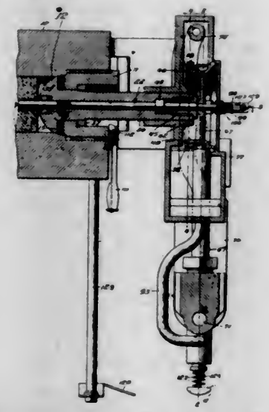


4. The combination with a gun having a smooth bore, of means for rotating a projectile within the bore of the gun, said means comprising a rotary spindle extending through the breech block, a compressed air turbine, a plurality of channels for conducting air to said turbine, valves for said channels, a governor and means controlled by the governor for cutting off the supply of air through said channels successively.

5. The combination with a gun having a smooth bore, of a projectile having two separated portions fitting said bore closely and an intermediate annular recess, and a conduit through the wall of the gun arranged to conduct lubricant to said recess.

[Claims 6 to 8 not printed in the Gazette.]

1,194,871. GUN. JOHN PATTEN, Baltimore, Md., assignor of seventy-five one-hundredths to C. Wilbur Miller and Ernest B. Miller. Filed July 15, 1912. Serial No. 709,472. (Cl. 89—1.)



1. The combination with a gun, of means for rotating the projectile within the gun before the gun is fired, said means comprising a fluid actuated motor and an explosion pump for supplying fluid under high pressure to said motor.

2. The combination with a gun, of means for rotating the projectile within the gun before the gun is fired, said means comprising a rotary motor and an explosion pump for supplying pressure fluid to said motor for actuating the same.

3. The combination with a gun having a breech block, of a spindle extending through the breech block, means for connecting the spindle with a projectile in the gun, an impact wheel on said spindle and an explosion pump for supplying pressure fluid to said impact wheel to actuate the same.

4. The combination with a breech loading gun and its breech block, of a spindle extending through the breech block, a clutch device for connecting the spindle with a projectile in the gun, whereby the spindle is adapted to rotate the projectile and to permit the projectile to rotate when the spindle is stationary, a motor for rotating said spindle and an explosion pump for supplying pressure fluid to said motor for actuating the same.

5. The combination with a breech loading gun, of a breech block, a spindle extending through said breech block, means for connecting said spindle with a projectile in the gun, whereby the spindle is adapted to rotate the projectile, an impact wheel mounted on the outer end of the spindle, a nozzle for said impact wheel, a chamber adapted to contain liquid, a pipe connecting said chamber and said nozzle and means for supplying pressure to the surface of said liquid to force the latter through said nozzle and against said wheel to rotate the latter.

[Claims 6 to 48 not printed in the Gazette.]

1,194,872. APPARATUS FOR BARKING WOOD. PETER A. PAULSON, Appleton, Wis., assignor of one-half to Kimberly-Clark Company, a Corporation of Wisconsin. Filed Dec. 15, 1915. Serial No. 67,021. (Cl. 144—208.)



1. In a wood barking machine, a series of spaced rotatable drums having practically smooth slotted interior surfaces and forming a substantially continuous passage for the wood, and bark restraining partitions between each of the drums.

2. In a wood barking machine, a series of rotatable drums each provided with apertures to permit continuous removal of the bark, bark restraining partitions between the drums, means for rotating said drums, and a shower pipe extending through said drums.

3. In a wood barking machine, a drum comprising a series of spaced bars extending longitudinally thereof and having their channels facing outwardly, a plurality of rings encircling said drum, the periphery of one of said rings being toothed to form spur gear, a cushion plate between each channel bar and each ring, and riveted to said ring, a plurality of blocks in the channels of said bars beneath each of said plates and riveted to said plates and channel bars, and means for rotating said drum.

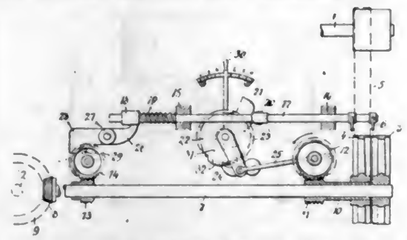
4. In a wood barking machine, a drum comprising a series of spaced bars extending longitudinally thereof, a plurality of rings encircling said drum, a cushion plate between each bar and each ring and secured to said ring, and blocks secured between each bar and plate.

5. In a wood-barking machine, a series of rotatable drums each provided with apertures to permit continuous removal of the bark, a conveyer extending beneath said drums, a perforated plate beneath said conveyer, means for rotating said drums, and means for moving said conveyer over said perforated plate.

[Claims 6 to 9 not printed in the Gazette.]

1,194,873. BELT-SHIFTING DEVICE. KAI PETERSEN, Copenhagen, Denmark. Filed July 30, 1913. Serial No. 781,938. (Cl. 64—4.)

1. An automatic belt-shifting device for constant time of engagement but variable intervals of time between engagements, comprising a shaft, a fixed and a loose pulley on the shaft, a shifting arm, arranged to be constantly driven by the loose pulley, means for actuating loose and fixed pulleys including a rod, adapted to be moved to control the pulley actuating means, a ratchet mechanism associated with the shifting arm and rod for moving the latter to render said fixed pulley operative with predetermined intervals between the starting and stopping thereof, means for holding said rod in the shifted position, means for releasing said last mentioned means, and means for returning said rod to its initial position whereby to render said fixed pulley inoperative.



2. An automatic belt-shifting device of the class described, comprising a shaft, a pulley fast thereon, a pulley loosely mounted thereon, a belt engageable with said pulleys, said belt being designed to overlap the loose pulley when engaged on the fast pulley whereby to continuously rotate the loose pulley, a rod slidably mounted and having a fork engageable with the belt to cause the belt to be shifted with respect to the pulleys upon the rod being shifted, an arm constantly actuated from the loose pulley, operative connections between the arm and the rod to cause the latter to be shifted at spaced intervals of time, means for varying the interval of time between the shifting of the rod by said last-mentioned means, means normally holding said rod with a belt engaged entirely upon the loose pulley, means for holding said rod in a shifted position against the action of said last-mentioned means, and means for releasing said holding means to permit the automatic return of the rod, as and for the purposes specified.

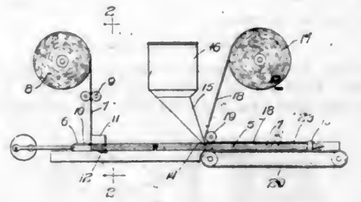
3. In an automatic belt shifting device for constant time of engagement but variable intervals of time between engagements, a shaft connected with the mechanism to be operated, a pulley fast thereon, a pulley loosely mounted thereon, a belt coöperable with respect to the pulleys, a shifting rod for the belt, a cog-pinion rotatably supported, an arm fixed to turn with said cog-pinion, a worm gear connected with the loose pulley and having crank connection with the arm for actuating the latter, a ratchet mechanism oscillating concentrically with respect to the arm and cog-pinion, a cam on said belt shifting rod and adapted to be actuated by the shifting arm during the rotation thereof, to shift the belt, a device for automatically returning said rod and oppositely shifting the belt, and means to vary the time of return of the rod.

4. In an automatic belt shifting device for constant time of engagement but variable intervals of time between engagements, a shaft connected with the mechanism to be operated, a pulley fast thereon, a pulley loosely mounted thereon, a belt coöperable with respect to the pulleys, a shifting rod for the belt, a cog-pinion rotatably supported, an arm fixed to turn with said cog-pinion, a worm gear connected with the loose pulley and having crank connection with the arm for actuating the latter, a ratchet mechanism oscillating concentrically with respect to the arm and cog-pinion, a cam on said belt shifting rod and adapted to be actuated by the shifting arm during the rotation thereof, to shift the belt, a device for automatically returning said rod and oppositely shifting the belt, and a device for preventing such return until the expiration of a certain time after engagement and for automatic release of the rod after the expiration of said time whereby to stop the rotation of the shaft and to cause the rotation thereof at intermittent intervals of time.

5. In an automatic belt shifting device for constant time of engagement but variable intervals of time between engagements, a shaft driven by belt power from a main shaft and adapted to transmit motion to the mechanism to be operated, a belt shifter coöperable with said belt, for throwing said shaft into and out of operation, a cam engageable with said shifter, means to rotate said cam at varying intervals of time to operate said belt shifter for moving it in one direction so as to throw the shaft in rotation, a return-spring adapted to be actuated during the action of the engaging cam on the belt shifter, a latch adapted to automatically coöperate with the belt shifter against the action of the return-spring, means for causing the belt shifter to be moved by the return-spring and means to vary the time of actuation of the belt shifter by the cam.

[Claims 6 to 8 not printed in the Gazette.]

1,194,874. BRISTLE FABRIC AND PROCESS OF MAKING THE SAME. CHRISTEN J. PETERSON, Chicago, Ill. Filed May 6, 1915. Serial No. 26,370. (Cl. 154—2.)



1. The process of manufacturing bristle fabric which consists in first cutting the bristles into uniform lengths, then treating one end of each bristle to an application of cementitious material, then applying a backing piece to the cementitious treated ends of the bristle while the cement is in plastic condition, and in maintaining the bristles in upright position with reference to the backing piece during the hardening of the cementitious material, substantially as described.

2. The process of manufacturing bristle fabric which consists in feeding bristles of uniform length into a receptacle, then embedding one end of each bristle in a cementitious material, then applying a backing piece over the cementious embedded ends of the bristles while the cement is in plastic condition, and then allowing the cementitious material to harden, substantially as described.

3. The process of manufacturing bristle fabric which consists in feeding bristles into a receptacle, then cutting the bristles into uniform lengths, then subjecting one end of the bristles to an application of cementitious material, then applying a backing piece to the cementitious treated ends while the cement is in plastic condition, and then drying the work, substantially as described.

4. The process of manufacturing a bristle fabric which consists in flexing one end of the bristle, then applying a cementitious composition to said end while the bristles are in flexed condition, then allowing the bristles to straighten, and then applying a backing strip to the cementitious treated ends, substantially as described.

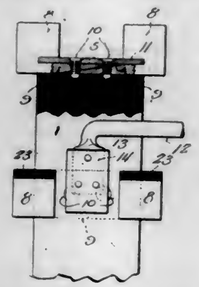
5. The process of manufacturing bristle fabric which consists in placing the bristle within a receptacle, then flexing one end of the bristle, then applying a cementitious composition to said end while the bristles are in flexed condition, then allowing the bristles to straighten, and then applying a backing strip to the cementitious treated ends, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,194,875. TRACTION-WHEEL FOR AGRICULTURAL AND LIKE MACHINES. ANDREW PFEIL, Oshkosh, Wis. Filed Apr. 24, 1916. Serial No. 93,113. (Cl. 21—23.)

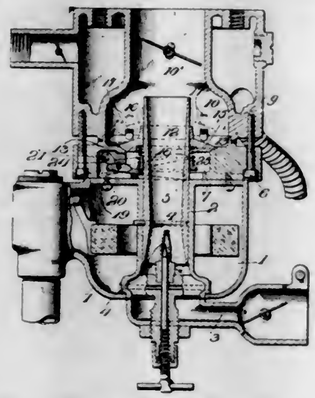
In a vehicle including a body and a traction wheel having an unobstructed intermediate tread surface and pro-

jections at the sides thereof, the combination of a transverse shaft carried by the body adjacent the tread, a scraper plate carried by the shaft to engage said inter-



mediate portion, an upstanding lever arm on the shaft, a second upstanding lever arm, a pawl and ratchet associated with the second arm and a resilient connection between said lever arms.

1,194,876. CARBURETER. BURT NEULON PIERCE, Flint, Mich. Filed Apr. 21, 1915, Serial No. 22,839. Renewed Jan. 26, 1916. Serial No. 74,478. (Cl. 48—150.3.)



1. A carbureter having a mixing chamber, a main air inlet extending into said mixing chamber, a fuel nozzle arranged within said air inlet, an auxiliary air chamber provided with air inlets, a floating valve for controlling communication between said auxiliary air chamber and mixing chamber, and means for adjusting the relative position of said floating valve in respect to its seat.

2. In a carbureter, the combination with a floating suction-controlled valve, a nozzle arranged under said valve, a pivoted member arranged in the path of travel of said suction-controlled valve for retarding the movement thereof, and a spring for floating said valve.

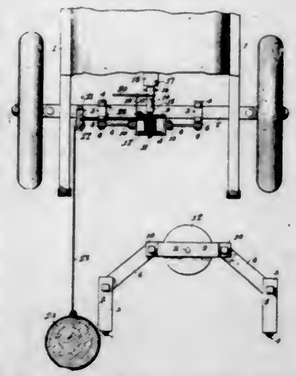
3. In a carbureter, the combination with the mixing chamber thereof, of a Venturi tube extending into said mixing chamber, a fuel nozzle arranged within said Venturi tube, an auxiliary air chamber, a floating valve slidably mounted upon said Venturi tube for controlling communication between said air chamber and mixing chamber, and means for adjusting the position of said floating valve in respect to its seat.

4. In a carbureter, the combination with a floating suction-controlled valve, a nozzle arranged under said valve, means for retarding the opening movement of said valve, and means for adjusting the relative position of said valve in respect to its seat.

5. A carbureter, having a main fuel nozzle and an auxiliary fuel nozzle, a floating valve arranged over the auxiliary fuel nozzle, means for retarding the upward movement thereof, and means for adjusting the position of said valve in respect to its seat.

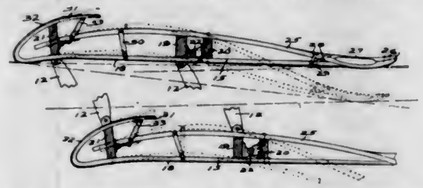
[Claims 6 to 22 not printed in the Gazette.]

1,194,877. EXTRACTOR FOR AUTOMOBILES. RICHARD MARVIN RICE, Light, Ariz. Filed May 15, 1915. Serial No. 28,360. (Cl. 21—90.)



In combination with a motor vehicle provided with a front axle, a driving engine, a crank shaft, of a frame supported upon said front axle, a drum carried by said frame and having its longitudinal axis placed in direct alinement with said crank shaft, said drum provided with a forwardly projecting shaft, a sleeve mounted upon said last mentioned shaft and slidable thereon, means carried by said sleeve and adapted to engage said crank shaft for causing said drum to be directly driven from said crank shaft, and flexible means entirely passing around said drum.

1,194,878. AEROFOIL. GEORGE ROESSLER, Toledo, Ohio. Filed Sept. 7, 1915. Serial No. 49,323. (Cl. 244—31.)



1. In an aeronautic device, a pivoted beam, ribs secured to one edge of the beam, thrust members secured to the opposite edge for varying the curvature and angle of incidence of the device, and flexible tension members connected to the ends of the thrust members and the ends of the ribs.

2. In an aeronautic device, a pivoted beam, ribs secured to one edge of the beam, thrust members secured to the opposite edge for varying the curvature and angle of incidence of the device, and flexible tension members connected to ends of the thrust members and the ends of the ribs, the tension members and the ribs being located on opposite sides of the thrust members.

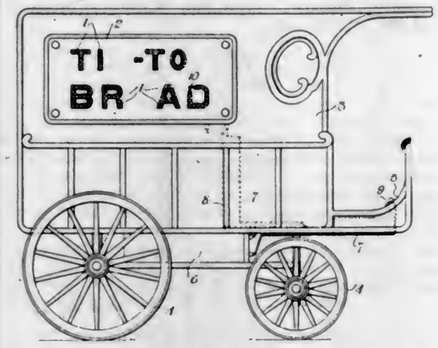
3. In an aeronautic device, a ledge, an aeroplane, and means for flexing the ledge and varying the angle of incidence and camber of the plane.

4. In an aeronautic device, a ledge, an aeroplane, and means for flexing the ledge and varying the angle of incidence and camber of the plane and flexing the trailing edge of the plane.

5. In an aeronautic device, an aerofoil and means for varying the camber and the angle of incidence of the body portion of the aerofoil and the reversed curvature of the trailing edge of the aerofoil.

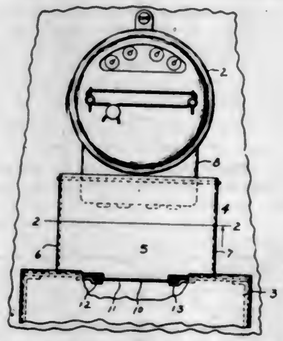
[Claims 6 to 10 not printed in the Gazette.]

1,194,879. TRAVELING ELECTRIC SIGN. VICTOR E. RUMBARGER, Dayton, Ohio. Filed Nov. 16, 1911. Serial No. 660,597. (Cl. 40—129.)



In a traveling electric sign, a vehicle comprising a top, a bottom, and a driver's seat, a plurality of electric lamps carried by the side of said top arranged to form a character or design, a source of electrical energy carried by said vehicle below the bottom thereof, an electrical connection between said source of electrical energy and said lamps, and a controlling device for said connection arranged adjacent to said driver's seat.

1,194,880. METER-ADAPTER. JOSEPH SACHS, Hartford, Conn. Filed July 27, 1915. Serial No. 42,217. (Cl. 247—17.)



1. A meter adapter body of a form to receive within it terminal chambers of different characters of meters, said body being provided with means for its connection with an electric appliance receiving cabinet and being also provided with means for the connection therewith of a closure member to conform to the terminal chamber of the meter, extending into said body.

2. A meter adapted comprising a body open at the ends, said meter adapter having means for connecting one open end thereof with an electric appliance receiving cabinet and a closure member distinct from and connected with the body at the other open end thereof, said closure member being shaped to fit the meter and said meter and closure member jointly closing the end of the body opposite that connected to the cabinet.

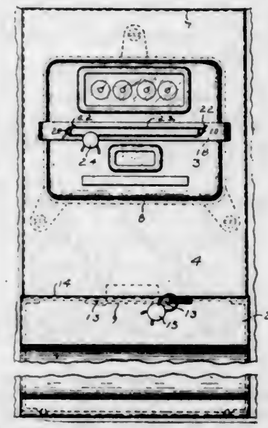
3. A meter adapter comprising a body to receive the terminal chamber of an electric meter and a closure member distinct from the body and fitted thereto, said closure member having an opening to conform to the terminal chamber of the particular meter associated with said body.

4. A meter adapter comprising a body and a closure member fitted in and interlocked to the body, the closure member having an opening to receive an electric meter and being bendable to position the same for interlocking relation with said body.

5. A meter adapter comprising a body to receive a meter, and a closure member to straddle the meter, said closure member being distinct from and abutting edgewise against the body.

[Claims 6 to 16 not printed in the Gazette.]

1,194,881. METER-ADAPTER. JOSEPH SACHS, Hartford, Conn. Filed July 27, 1915. Serial No. 42,218. (Cl. 247—17.)



1. A meter adapter for use in connection with meter installations, in the form of a casing for receiving the meter and means for directly sealing the meter, said sealing means also sealing the adapter.

2. A meter adapter for use in connection with meter installations, in the form of a casing for receiving a meter, and means for sealing the cover of the meter against removal, said sealing means also sealing the adapter.

3. A meter adapter for use in connection with meter installations, to receive the meter and means for sealing the meter, the meter sealing means also holding the adapter to its support in protective relation to the meter.

4. A meter adapter for use in connection with meter installations, in the form of a casing for receiving the meter and having means whereby the meter sealing means can seal the casing and the latter having means for interlocking connection with a box constituting a part of such installation.

5. A meter adapter for use in connection with meter installations, in the form of a casing for receiving the meter and having means whereby the meter sealing means can seal the casing, the latter having a wing to interlock with a box constituting a part of said installation.

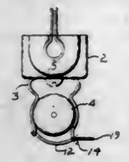
[Claims 6 to 18 not printed in the Gazette.]

1,194,882. CLIP. JOSEPH SACHS, Hartford, Conn. Filed July 27, 1915. Serial No. 42,219. (Cl. 175—273.)

1. A clip provided with a rigid member in coöperative riding relation therewith and operative to expand the clip.

2. A clip having resilient lips and a rigid member bridging across the lips at the open end of the clip and opera-

tive on its movement to relatively laterally separate said lips.



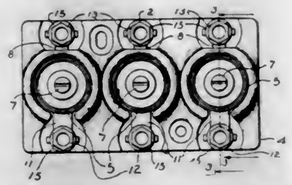
3. A clip provided with resilient lips and an expander in coöperative relation with said lips and operative to relatively laterally separate the same and to automatically lock and hold the same open.

4. A clip having resilient lips, a device movably connected with one of the lips and operative on its movement to relatively separate the lips and to automatically lock and hold them in their open positions.

5. A clip having resilient lips, an expander supported by one of the lips, the other lip having a bulged portion and the expander being movable along the bulged portion to effect separation of the lips.

[Claims 6 to 9 not printed in the Gazette.]

1,194,883. METER-TESTING APPLIANCE. JOSEPH SACHS, Hartford, Conn. Filed Oct. 9, 1915. Serial No. 54,993. (Cl. 175—183.)



1. The combination with the base and the fuse receiving and wire connecting contacts of a standard commercial fuse cut-out block, of means associated with said contacts to convert said block into a meter testing appurtenance.

2. The combination with the base and the fuse receiving and wire connecting contacts of a standard commercial fuse-cut-out block, of means associated with said contacts to convert said block into a meter testing appurtenance while maintaining the normal cut-out function of said block.

3. The combination with a standard commercial fuse cut-out block comprising a base and fuse receiving and wire connecting contacts for coöperation with a plurality of fuses, of means associated with the contacts of a plurality of fuses and their complemental wire connecting contacts, to convert said block into a meter testing appurtenance.

4. The combination with a plurality of standard commercial fuse receiving and wire connecting contacts and their support, each of said fuse receiving and wire connecting contacts being adapted for coöperation with a fuse and for connection independently in a circuit, one of said fuse receiving and wire connecting contacts being connectible on the service side and another of said fuse receiving and wire connecting contacts being connectible on the load side of a current coil of a meter and means associated with the fuse receiving and wire connecting contacts so connectible to adapt said appurtenance for meter testing.

5. The combination with a plurality of standard commercial fuse receiving and wire connecting contacts and their support, each of said fuse receiving and wire connecting contacts being adapted for coöperation with a fuse and for connection independently in a circuit, one of said fuse receiving and wire connecting contacts being connectible on the service side and another of said fuse receiving and wire connecting contacts being connectible on the load side of a current coil of a meter and means associated with the fuse receiving and wire connecting contacts so connectible to adapt said appurtenance for meter testing while maintaining in said appurtenance its cut-out function.

[Claims 6 to 11 not printed in the Gazette.]

1,194,884. PHYSICAL EXERCISER. EUGEN SANDOW, London, England. Filed July 7, 1915. Serial No. 38,459. (Cl. 46—69.)



1. A physical exerciser comprising a garment for a doll or figure and an extensible limb portion to such garment.

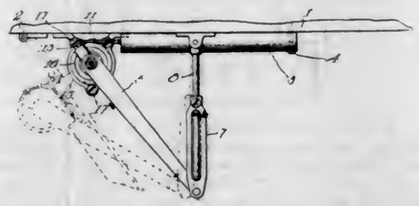
2. A physical exerciser comprising a garment for a doll or figure and extensible means applied to a limb portion of such garment.

3. A physical exerciser comprising a garment for a doll or figure and an extensible device concealed within a limb portion of same.

4. A physical exerciser comprising means adapted to be fitted over a doll or figure and including an extensible member.

5. A physical exerciser comprising a garment for a doll or figure and a tubular part carried by said garment adapted to cover a limb of the doll or figure and means carried by such tubular part to render same extensible.

1,194,885. DOOR-CHECK. JOHN C. SCHMIDT, Chicago, Ill. Filed Nov. 20, 1915. Serial No. 62,454. (Cl. 16—88.)

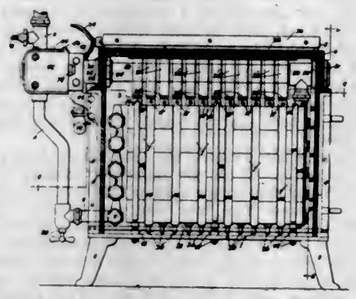


1. In apparatus of the class described, an arm, pivoted to a door frame, a hollow casing secured to the door, a return spring within said hollow casing, a chain connected to said return spring, a fluid check attached to the door, a lever operatively connected at its inner end to said check and pivoted at its outer extremity to the arm pivoted to the door frame, a projection on said lever to which the chain is attached, and an annular track on the inner end of the lever upon which said chain winds.

2. In an apparatus of the class described, an arm pivoted at one end to a door frame, a hollow casing secured to the door, a return spring within said casing, a chain extending loosely through the hollow casing, a disk at the inner end of the chain bearing against the inner end of the return spring, a check attached to the door, an operating lever extending from said check and pivoted at its outer extremity to the arm pivoted to the door frame, and means arranged on said lever upon which the outer portion of the chain is supported and wound.

3. In a door check, a hollow cylindrical casing having a closed bottom, a lower chamber forming a receptacle for fluid and an upper chamber, a piston mounted for reciprocation in the lower chamber and also adapted to partially turn therein, a cover on the casing, a stem integral with said piston and extending vertically up therefrom through the cover, said piston and stem being provided with a central vertical opening extending therethrough, and a medial portion of said opening being contracted to form a valve seat, a lateral offset formed on the stem, a stationary cam depending from the cover against which the offset engages, a regulating screw bar in the upper portion of the opening in the stem coöperating with the contracted valve seat to control the volume of fluid flow, a centering pin extending up from the oottom of the casing, and projecting into the lower portion of the central vertical opening, and a spring in the opening located between the top of the pin and the valve seat.

1,194,886. ELECTRIC WATER-HEATER. MAURICE SIMON, St. Louis, Mo. Filed June 1, 1915. Serial No. 31,460. (Cl. 219—39.)



1. A water heater, comprising a series of coils, heating units disposed between the stretches of the coils, a source of electrical energy for energizing the heating units, and automatic means under influence of the pressure in said coils for controlling the electrical energy for energizing the heating units, substantially as specified.

2. A water heater, comprising a sealed case, a series of water coils arranged in said case, a series of heating units disposed between the stretches of the coils, an electric circuit into which said heating units are connected, a device controlled by the differences of pressure in said coils for making and breaking said electrical circuit, a thermostat located within the case and under the influence of the temperature of the water passing from said coils, and automatic devices under the control of said thermostat for breaking the electrical circuit when the water passing from the coils has reached a predetermined maximum degree of heat, substantially as specified.

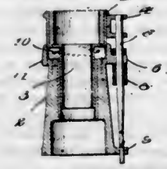
3. A water heater, comprising a case, a series of coils disposed in said case, the stretches thereof being in vertical alinement and in parallel series, electrical heating units disposed between said parallel series of stretches of said coils, a supply passage for supplying water to the lower part of said coil system, a discharge passage leading from the upper part of said coil system, a thermostat in said discharge passage, an electrical circuit for said heating units, a device operable to close said circuit when the water is withdrawn from said discharge passage, and a device under the control of said thermostat for breaking said circuit when the degree of heat of water passing from said discharge passage has attained a predetermined maximum temperature.

4. A water heater, comprising a case, a series of coils disposed in said case, the stretches thereof being in vertical alinement and in parallel series, electrical heating units disposed between said parallel series of stretches of said coils, a supply passage for supplying water to the lower part of said coil system, a discharge passage leading from the upper part of said coil system, a thermostat in said discharge passage, an electrical circuit for said heating units, a device operable to close said circuit when the water is withdrawn from said discharge passage, and a selectively settable device under the control of said thermostat for breaking said circuit when the degree of heat of water passing from said discharge passage has attained a predetermined maximum temperature.

5. A water heater, comprising a case, a lining of refractory material for said case, a coil system arranged in said case and comprising a series of coils connected to form a continuous, tortuous passage, said coils being arranged in vertical series with the stretches thereof disposed parallel to each other, heating units adapted to be removably set between the parallel stretches of said coil system, a supply passage leading into the lower end of said coil system, a discharge passage leading from the upper end of said coil system, a thermostat in said discharge passage, a pressure-operated valve in said supply passage, means under the control of said pressure-operated valve for energizing the heating units, and a selectively settable device actuated by said thermostat for controlling the supply of energy to said heating units, substantially as specified.

[Claims 6 to 15 not printed in the Gazette.]

1,194,887. CLARINET TUNING-SLIDE. TORKILD SOLBERG, St. Charles, Ill. Filed Apr. 18, 1916. Serial No. 91,915. (Cl. 84—7.)

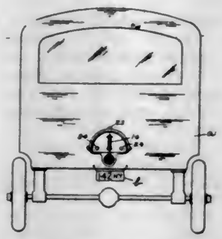


1. The combination with a tuning slide for clarinets and like wind instruments, of a rod attached to one member of the slide and slidably engaging the other member thereof and adapted to prevent relative rotary movement of said member, bearings for said rod carried by the other member, an elastic annulus, and an elastic sleeve carried by said rod and movable longitudinally therealong and coöperating with one of said bearings to hold the rod in adjusted position.

2. The combination with a tuning slide for clarinets and like wind instruments, of a rod attached to one member of the slide and slidably engaging the other member thereof and adapted to prevent relative rotary movement of said members, means carried by said rod for holding the members of the slide in adjusted position, and a spring between the confronting ends of said slide members acting to force the slide members away from each other.

3. The combination with a tuning slide for clarinets and like wind instruments, of a rod attached to one member of the slide and slidably engaging the other member thereof and adapted to prevent relative rotary movement of said members, means carried by said rod for holding the members of the slide in adjusted position, a spring between the confronting ends of said slide members acting to force the slide members away from each other, and a dust apron carried by one end of one of said slide members and overlying the adjacent end of the other member.

1,194,888. VEHICLE-SIGNAL. JOHN SPARRER, Newark, N. J. Filed Sept. 23, 1915. Serial No. 52,238. (Cl. 177—337.)



1. A vehicle signal comprising a case having a face plate forming the outer wall of a compartment within the case, a rock shaft mounted in the case and extending through said compartment and through said wall and at the outer face of said wall provided with a semaphore and within the compartment provided with and carrying a friction spring bearing against said wall, a counterweight carried by said shaft and arranged within said compartment to normally hold the shaft with the semaphore in upright position, a stop carried by said wall, a member carried by said shaft to engage said stop to limit the swing of the semaphore in either direction, and electromagnetic means arranged in said compartment for rocking said shaft in either direction.

2. A combined vehicle signal and tail light comprising a casing having means providing an internal tail light compartment and an internal indicator compartment shut off from said tail light compartment, said tail light compartment provided with a lateral window and also with an outer side window, means to provide a light in said tail light compartment, said indicator compartment having an outer side window, means to provide a light in said indicator compartment, a direction indicating visible indicator in said indicator compartment, and operating and controlling means for said indicator.

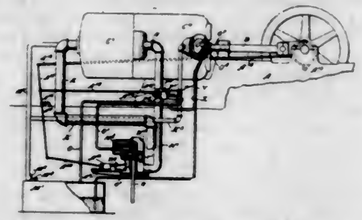
3. A combined vehicle signal and tail light comprising a casing provided with a lateral window and a tail light compartment from which said window opens, said casing having an outer side window opening into said compartment, a tail light in said compartment, direction indicating signaling means in said casing and shut off from said tail light compartment, said casing having an outer side window for exposing said signaling means, and controlling devices for said signaling means.

4. A combined vehicle direction indicator and tail light comprising a casing having a face plate and an outer section providing an indicator compartment at the outer side of said face plate and a tail light compartment at the outer side of said face plate, said section provided with a partition shutting off the tail light compartment from the indicator department, said face plate provided with means to support a tail light in the tail light compartment and with means to support an illuminating light in the indicator compartment, said section providing outer side windows exposing said compartments and with a lateral window from the tail light compartment, and direction indicating means in the indicator compartment.

5. A vehicle signal comprising a casing having a face plate and a transparent window, a rock shaft arranged longitudinally in the casing and provided with a visible semaphore between the face plate and window, a fixed stop, said shaft being provided with radial arms behind said face plate to engage said stop, oppositely arranged electromagnets in the casing, an armature for rocking said shaft in either direction, said armature being normally arranged between said magnets, said magnets being normally deënergized and provided with independent energizing circuits, and a counterweight behind said plate and fixed to said shaft for returning said rock shaft to and for normally maintaining the same in neutral position.

[Claims 6 to 8 not printed in the Gazette.]

1,194,889. INTERNAL-COMBUSTION ENGINE. ELMER A. SPERRY, New York, N. Y. Original application filed Dec. 10, 1892. Serial No. 454,752. Divided and this application filed Jan. 7, 1915. Serial No. 962. (Cl. 123—136.)



1. In a combustion engine, the combination, with a combustion chamber of a liquid fuel supply tank, means whereby the fuel may be mixed with an air supply to form the combustion charge, a hood or casing inclosing at least a part of such mixing means and in communication with the atmosphere, and conduit means connecting the interior of said casing with said supply tank and with said combustion chamber, whereby air may pass through said casing and over the liquid in the supply tank to said combustion chamber.

2. In a combustion engine, the combination, with a combustion chamber, of an air passage leading to said chamber, a supply tank affording a supply of liquid fuel under fluid pressure, conduit means arranged to conduct fuel from said supply tank and discharge the same into said air passage, means located in said conduit, means for establishing and maintaining a substantially constant level of the liquid fuel prior to entry thereof into the air passage, such level being below that at which the fuel is discharged into said air passage, and an air supply inlet opening into said air passage, and a common means for producing super-atmospheric pressure for causing air to pass through both said air supply passage and said air supply inlet.

3. In a combustion engine, the combination, with a combustion chamber, of an air induction passage leading thereto, a liquid fuel supply tank, a fuel-feeding nozzle arranged to deliver fuel into said air passage, conduit means connecting said supply tank with said nozzle, a device located in said conduit means intermediate said tank and nozzle for regulating flow of liquid from the tank, and a casing inclosing said device and connected to said induction passage, said casing being open to the atmosphere at a point remote from its connection to the induction passage.

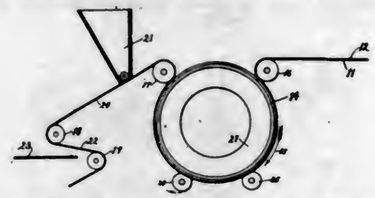
4. In a multi-cylinder heat engine having a common air induction passage for the cylinders, the combination with liquid fuel controlling devices for the engine, of a casing at least partially inclosing the fuel controlling devices and means of communication between the casing and said induction passage, whereby the engine may draw air through and from the casing.

5. In a heat engine having an air induction passage, the combination with a duct containing a liquid fuel under superatmospheric pressure, of fuel-controlling and feeding devices connected to said duct, a casing at least partially inclosing the fuel controlling devices, and means of communication between the casing and the induction passage, whereby the engine may draw air through and from the casing.

[Claims 6 to 11 not printed in the Gazette.]

1,194,890. METHOD AND APPARATUS FOR THE MANUFACTURE OF TWO-COLORED ROOFING. ALEXANDER S. SPIEGEL, Chicago, Ill., assignor to the Firm of Spiegel Patent Company, Chicago, Ill., composed of Alexander S. Spiegel and Lowell F. Lindley, Chicago, Ill. Filed Dec. 2, 1915. Serial No. 64,680. (Cl. 91—67.9.)

1. The method of making two-colored grit surfaced prepared roofing which consists in applying grit of one color to different portions comprising a part only of the adhesive face of a sheet of roofing material in excess of the quantity required to coat the said portions, permitting the surplus of grit so applied to fall away from the face of the sheet by gravity, and in then applying grit of another color to the entire face of the sheet.



2. The method of making two-colored grit surfaced prepared roofing which consists in depositing grit of one color upon sharply outlined separated areas of the adhesive surface of a sheet of roofing material in excess of the quantity required to coat the said areas, inverting the sheet to remove the surplus of grit so deposited, turning the sheet and in then depositing grit of another color upon the entire upwardly facing surface of the sheet.

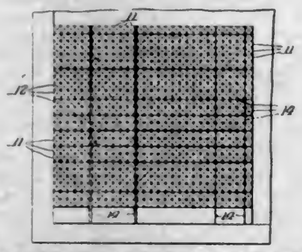
3. In a machine of the kind described, in combination, a horizontally disposed rotary drum having a reticular peripheral wall, means for guiding a strip of roofing material about the drum, said guiding means being so arranged that the strip is inverted during its engagement with the drum, means for delivering grit surfacing material upon one side of the said peripheral wall of the drum and a second means for delivering grit surfacing material upon the strip of roofing material after leaving the drum.

4. In a machine of the kind described, in combination, a horizontally disposed rotating drum having a reticular peripheral wall, a pair of separated rolls extending over the drum for guiding a strip of roofing material about the sides and underneath the drum, means for delivering grit surfacing material upon the outside of the said peripheral wall of the drum between the said guide rolls, means within the drum for receiving the grit surfacing material which passes through the openings in the said wall of the drum and means for delivering grit surfacing material upon the said strip of roofing material after leaving the drum.

5. In a machine of the kind described, in combination, a horizontally disposed reticular endless carrier, a pair of separated rolls adjacent the carrier for guiding a strip of roofing material to make face contact with the said carrier, means for delivering grit surfacing material upon the said carrier between the said guide rolls and means for delivering grit surfacing material upon the face of the said strip of roofing material after its engagement with the said carrier.

[Claims 6 and 7 not printed in the Gazette.]

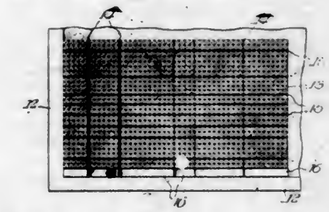
1,194,891. TABULAR QUAD OR SPACE. WINTON L. SPRINGER, Chicago, Ill., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 21, 1912. Serial No. 721,689. (Cl. 101—179.)



1. As an article of manufacture a spacing element for use in preparing type forms for printing ruled work, the body of which spacing element is less than type high and of rectangular cross section, the upper end thereof being uniformly tapered upwardly and inwardly from the four sides thereof, substantially as set forth.

2. As an article of manufacture a type-spacing quad having a body less than type high, square in cross section and with its upper end tapered uniformly from each side upwardly and inwardly, substantially as set forth.

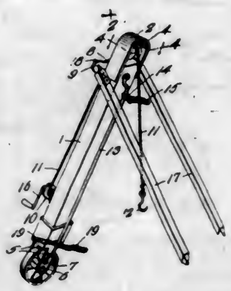
1,194,892. METHOD OF COMPOSITION OF RULED FORMS. WINTON L. SPRINGER, Chicago, Ill., assignor to American Type Founders Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 21, 1912. Serial No. 721,691. (Cl. 101—179.)



1. In the art of printing, a stock form for use in printing ruled work composed of spacing elements, rectangular in cross section and with sides of equal dimensions, loosely assembled in horizontal and vertical series, the several elements having their upper ends tapered uniformly from the four sides thereof to provide intersecting grooves dividing the vertical and horizontal lines of separation between adjacent series and adapting the form for the insertion between the series by way of the grooves of rules of the lengths required to produce a desired pattern, substantially as set forth.

2. In the art of printing the improved method of producing a ruled form which consists in taking a block of loosely assembled spacing quads less than type high, of rectangular form with their four sides tapered to a point at their tops in pyramidal form, and inserting type high rules in selected grooves thus formed between adjacent lines of the quads, separating said quads by the thickness of said rules, locking up the forms, and printing therefrom, substantially as set forth.

1,194,893. DERRICK. HARRY B. STALKER, Marion, S. D. Filed Mar. 20, 1916. Serial No. 85,513. (Cl. 254—145.)



A device of the class described comprising a wheeled standard, an arched bar connected to the upper end of the standard, a pulley supported by the arched bar, a windlass carried by the standard, a cable trained over the pulley and windable on the windlass, a hook carried by the free end of the cable for engagement with an object to be lifted, a bar carried by the upper end of the standard, and engaged flush against the standard and arched bar, said bar having eyes formed upon its ends, and poles having projections on their upper ends for detachably con-

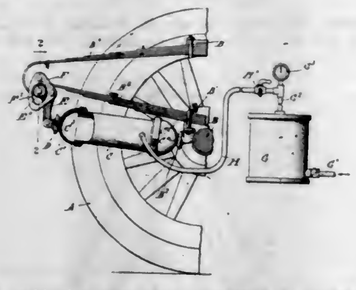
necting the eyes, the lower ends of said poles being pointed for penetrating the ground to hold the standard in a substantially vertical position.

1,194,894. EXTENSION BROOM-HANDLE. WAYNE B. STANDEFER, Meridian, Tex. Filed Feb. 1, 1916. Serial No. 75,549. (Cl. 15—24.)



In an extension broom handle, clamping sections each having recesses in their inner sides, the recesses for the reception of the broom handle being of increased area of cross section from the end toward the center thereof and conforming to the contour of the upper end of the handle, an extension seated between the clamping sections, screws in the clamping sections and embedded in the extension, one of said sections having a threaded aperture and the other of said sections having an aperture with plain walls, a screw rotatable in the last mentioned aperture and threaded in the first mentioned aperture for drawing the clamping sections into engagement with the broom handle and the extension.

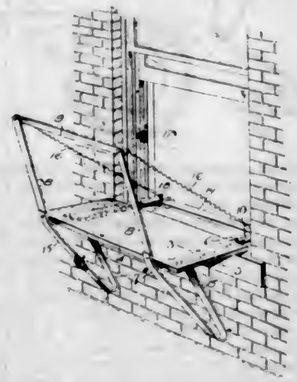
1,194,895. AUTOMATIC SPRING-GOVERNOR. ELIAL M. STAPLES, Elizabeth, N. J. Filed Mar. 3, 1916. Serial No. 81,953. (Cl. 267—22.)



1. A cushioning apparatus, comprising a cylinder having flexible heads, means for admitting air to the cylinder, an abutment carried by the vehicle axle and bearing against one of said heads, a lever pivoted to the body spring of the vehicle and carrying an abutment which bears against the other head, and a link pivoted to the axle spring and also to the lever and having an opening which receives a portion of the lever for limiting the swinging movement thereof.

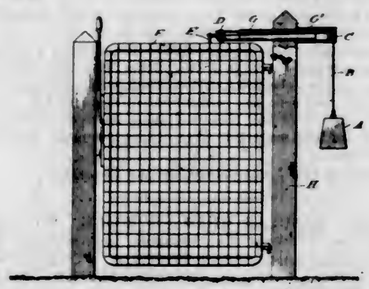
2. An apparatus for cushioning a vehicle comprising a cylinder having integral lugs thereon, an axle spring, link plates pivoted to the latter, a lever pivoted to said link plates, a body spring pivoted to said lever, socket abutment members, one secured to the axle and the other pivoted to said lever, portions of lateral projections of the lever adapted to bear against portions of said link plates when the springs are under heavy tension.

1,194,896. CHAIR FOR CLEANING WINDOWS. JOHN STERNAD, Jersey City, N. J. Filed Oct. 29, 1915. Serial No. 58,528. (Cl. 20—87.)



A chair for window cleaning comprising a seat, spaced bars supporting the seat, each of said bars having an upwardly extending arm at the outer end thereof, an adjustable extension from the other end of each arm having a hook-shaped end, a rod connecting pivotally the ends of said arms, a brace extending from each of said bars for maintaining the bars in a substantially horizontal position, and rows of U-shaped staples on the under surface of the seat straddling the bars.

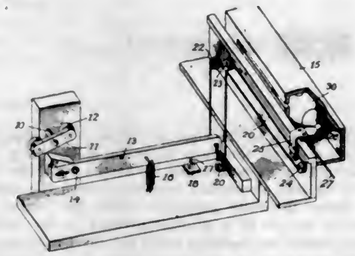
1,194,897. GATE-CLOSER. ABRAM A. STILL, Annette, Cal. Filed Apr. 15, 1916. Serial No. 92,519. (Cl. 39—23.)



1. The combination, with a post and a gate hinged thereto and adapted to swing laterally in either direction, of a horizontal support secured to the post and extending in opposite directions therefrom, the outer end of said support being provided with a horizontal pulley, and the inner end with two vertical pulleys arranged side by side, and a weighted cord running on the outer pulley and between the inner pulleys, and attached to the top portion of the gate, as described.

2. The combination, with a post and a gate hinged thereto and adapted to swing in either direction, of a tubular support passing through, and fixed in, the said post, and having a horizontal pulley in its outer end, its inner end being slotted and provided interiorly with two vertical pulleys, and a weighted cord attached to the gate and passing between the adjacent pulleys and through the tube and over the outer pulley, as described.

1,194,898. PICKING-MOTION FOR LOOMS. JOSEPH STOTT, Worcester, and WILLIAM STOTT, Shrewsbury, Mass. Filed Oct. 11, 1915. Serial No. 55,152. (Cl. 139—49.)



1. In a picking motion for a loom, the combination with a shuttle box, of a single flexible connection, means for guiding said flexible connection to move parallel with the length of the shuttle box, an arm fixed to said flexible connection and extending into the shuttle box, a picker on said arm for engaging the shuttle, the two ends of said flexible connection extending from the shuttle box in the same general direction and one of them having a guide around which it passes so that its extreme end projects in the opposite direction from the other end, a lever to which both ends of said flexible connection are secured, to positively cause the connection to reciprocate longitudinally in both directions and means for oscillating said lever.

2. In a picking motion for one end of a loom, the combination with a shuttle box, of a flexible connection having a portion thereof located parallel with the length of the shuttle box, a picker connected with said portion of the flexible connection to move therewith and extending into the shuttle box for the purpose of engaging the end of a shuttle therein, said flexible connection having its two ends extending downwardly therefrom, and one of them having a guide around which it passes so that at the extreme end it extends upwardly and vertically, a reciprocable lever to which both ends of the flexible connection are secured, means for positively moving said end of the lever in a direction to cause the picker to eject the shuttle from the box, and yielding means for moving the lever in the opposite direction.

3. In a picking motion for a loom, the combination of a lever mounted to oscillate, a spring for normally holding the lever down, a rotatable shaft, means on said shaft for engaging the lever and elevating the operative end of the lever in opposition to said spring, a pulley located below the operative end of the lever on one side, two pulleys located above the operative end of the lever, a fourth pulley located substantially in the plane of the last two pulleys and at substantially the same elevation as one of them, a flexible connection having both ends secured to the lever, one end passing downwardly therefrom around the first named pulley, the connection extending upwardly on both sides and over the two pulleys and then around the last named pulley, a picker secured to the strand of the flexible connection between the last named pulley and one of the two pulleys, and a shuttle box into which said picker extends.

4. In a picking motion for one end of a loom, the combination of a lever mounted to oscillate on a horizontal transverse axis, a spring for normally holding the lever down, a rotatable shaft, means on said shaft for engaging the lever twice during each revolution and elevating the operative end of the lever in opposition to said spring, an adjustable stop projecting from the bottom of said lever for limiting its downward motion caused by the spring, a pulley located below the operative end of the lever on one side, two pulleys located above the operative end of the lever, a fourth pulley located substantially in the plane of the last two pulleys and at substantially the same elevation as one of them, all of said pulleys being mounted to rotate on axes substantially parallel with the plane in which the lever oscillates, a flexible connection having both ends secured to the lever, one end passing downwardly therefrom around the first named pulley, the connection extending upwardly on both sides and over the two pulleys and then around the last named pulley, a picker secured to the strand of the flexible connection between the last named pulley and one of the two pulleys, and a shuttle box into which said picker extends, the length of the shuttle box being parallel with the strands of the flexible connection with which the picker is connected.

5. In a picking motion for a loom the combination of a lever mounted to oscillate on a transverse axis, a spring for normally holding the lever down, a rotatable shaft, means on said shaft for engaging the lever a plurality of times during each revolution and moving the operative end of the lever in opposition to said spring, a flexible connection having both ends secured to said lever, one end extending therefrom in one direction, and the other in the opposite direction and both strands of the flexible connection then extending in the same general direction, means for guiding said flexible connection and holding it, a picker secured to one strand of the flexible connection and a shuttle box into which the picker extends.

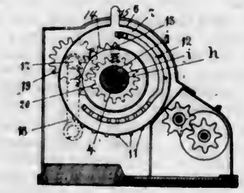
[Claim 6 not printed in the Gazette.]

1,194,899. METHOD OF PRODUCING A STENCILING FABRIC. ALBERT E. STRIPPEL, New York, N. Y. Filed Nov. 22, 1912. Serial No. 732,992. (Cl. 91—68.)

1. The method of producing a fabric for stenciling and similar uses, consisting in first subjecting the fabric to treatment in a heated solution including gelatin, glycerin and bichromate of potash in substantially the relative portions specified in which the glycerin by weight exceeds the gelatin, then to a treatment in warm water, and then to a treatment in a substantially fifteen per cent. solution of calcium chlorid.

2. The method of producing a fabric for stenciling and similar uses, consisting in first subjecting the fabric to treatment in a heated solution including gelatin, glycerin and bichromate of potash in substantially the relative proportions specified in which the glycerin by weight exceeds the gelatin, and away from the influence of light, then drying the fabric in the light, then submitting the fabric to a treatment in warm water, then submitting the fabric to treatment in a substantially fifteen per cent. solution of calcium chlorid, and finally subjecting the fabric to heat and pressure for drying and finishing the same.

1,194,900. COMPUTING OR CALCULATING MACHINE. FRANZ TRINKS and FERDINAND STEMMLER, Brunswick, Germany. Filed Jan. 4, 1916. Serial No. 70,229. (Cl. 235—80.)



1. In a computing machine, the combination of a tubular revoluble shaft; a disk mounted on said shaft having operating teeth slidably mounted therein; a second disk mounted coaxially with and in proximity to said first disk and adapted, when rotated relative to the latter, to shift said teeth into operative position, said second disk having indentations corresponding in number and position to the teeth in the first disk; a spring-actuated locking pin slidably mounted in said first disk and adapted to engage the indentations in said second disk; said tubular shaft having a radial aperture to receive one end of said locking pin; a shaft mounted within said tubular shaft and having a radial depression adapted, when said inner shaft is rocked, to be brought into register with said aperture in said tubular shaft to permit the inner end of said lock-

ing pin to enter said depression and the outer end of said locking pin to ride over said indentations when said second disk is being rotated; an arm on said inner shaft; means for rocking said arm to bring the depression in the inner shaft into register with the aperture in the tubular shaft; and a spring actuated detent for retaining said last-mentioned shaft in said last mentioned position.

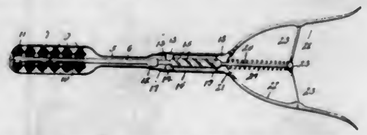
2. In a computing machine, the combination of a revoluble shaft having a radial opening; an actuating lever operatively connected to said shaft; a disk mounted on said shaft having operating teeth slidably mounted therein; a second disk mounted coaxially with and in proximity to said first disk and adapted to shift said teeth into operative position, said second disk having indentations corresponding in number and position to the teeth in said first disk; a spring-actuated locking pin slidably mounted in said first disk and having its lower end projecting into the opening of said tubular shaft and its upper end adapted to engage the indentations in said second disk; said inner shaft having a depression adapted, when the latter shaft is rocked, to be brought into register with the radial opening in said tubular shaft and receive the inner end of said locking pin and permit the outer end of said locking pin to ride over said indentations when said second shaft is rocked; an arm on said inner shaft; a pair of cooperating spring-actuated slides to oscillate said arm; a spring-actuated detent for retaining said inner shaft in rocked position and actuated by said actuating lever in the initial part of its movement for releasing said detent.

3. In a computing machine, a revoluble tubular shaft; a plurality of sliding number-operating teeth carried by said shaft; means mounted on said shaft adapted, when actuated, to shift said teeth into and out of operative position; means carried by said tubular shaft to lock said teeth-shifting means thereto in set position; a rock shaft within said tubular shaft coöperating with said locking means and adapted, when in normal position, to maintain said locking means in locked position and when in rocked position to release said locking means; means tending to maintain said rock shaft in the former position; means for rocking said rock shaft into unlocking position; and means for securing the rock shaft in rocked position.

4. In a computing machine, a revoluble tubular shaft; a plurality of sliding number-operating teeth carried by said shaft; means mounted on said shaft adapted, when actuated, to shift said teeth into and out of operative position; means carried by said tubular shaft to lock said teeth-shifting means thereto in set position; a rock shaft within said tubular shaft coöperating with said locking means and adapted, when rocked, to release said locking means and when in normal position to secure said locking means; means tending to maintain said rock shaft in the latter position; means for rocking said rock shaft into unlocking position: means for securing said rock shaft in rocked position; and means coöperating with said tubular shaft adapted, when the latter is restored to normal position, to release said rock shaft securing means.

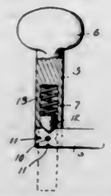
5. In a computing machine, a revoluble tubular shaft having a radial opening; a spring-actuated plunger mounted in said radial opening; a plurality of sliding number-operating teeth carried by said shaft; means rotatably mounted on said shaft adapted, when actuated, to shift said teeth into and out of operative position and having indentations for engagement by said plunger to lock said teeth-shifting means to said tubular shaft; a rock shaft mounted within said tubular shaft and having a radial depression adapted, when said shaft is rocked, to be brought into register with the radial opening of said tubular shaft to receive said plunger and permit the indentations of the teeth-shifting means to ride over said plunger; means normally tending to rock said inner shaft into a position with its radial depression out of register with the opening of the tubular shaft; means to rock said inner shaft to bring its radial depression into register with the radial opening of the tubular shaft; means to automatically secure said inner shaft in its latter position, and means associated with said tubular shaft adapted, when the latter shaft is rotated, to release said securing means.

1,194,901. ROTARY-BRUSH GEARING. GUSTAVE A. TRUMAN, Alborn, Minn. Filed Feb. 9, 1916. Serial No. 77,219. (Cl. 74—40.)



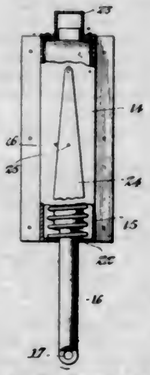
A rotary brush of the class described comprising a hollow stem, a shank rotatably mounted in the stem, a spirally slotted sleeve detachably connected with the shank, a barrel for said sleeve and detachable from the stem, opposed levers pivotally supported upon the barrel, links pivoted to the levers, a plunger pivoted to the links and movable within the barrel, a cross pin carried by the plunger and engaging in the spiral slots in the sleeve for traversing the same to rotate said sleeve, and a coiled spring surrounding the plunger and adapted to act thereon for pulling the same outwardly of the barrel after being forced inwardly thereof on compressing the levers.

1,194,902. SECURING DEVICE. WILLIAM A. F. URBAN, Yoakum, Tex. Filed Feb. 12, 1915. Serial No. 7,868. (Cl. 85—3.)



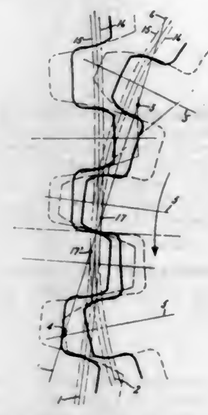
A securing device including a shank having a longitudinal bore extending inwardly from one end thereof, a head at the opposite end of said shank, a locking bar pivotally secured in said shank having a plurality of notches in the pivoted end thereof, a spring actuated locking member slidably mounted in said bore having a tapered end defining a concave edge engaged with the edge of the pivoted locking bar to prevent rotational movement of the spring actuated locking member and adapted to engage within the notches in said locking bar to secure the latter in adjusted position.

1,194,903. DOOR-LOCK. JOHN B. WADE, Animas, N. Mex. Filed Nov. 30, 1915. Serial No. 64,336. (Cl. 16—84.)



A door latch comprising a housing, a sliding latch bolt mounted in the housing and having a U-shaped slot, a shoulder formed on the latch bolt, a coiled retractile spring interiorly of the housing and working against the shoulder on the bolt to normally hold the latter extended, an arm pivoted exteriorly to the housing for swinging movement, a pin mounted in the arm and passed through the housing for engagement in the slot in the bolt to traverse the same for locking the said bolt in extended or retracted positions.

1,194,904. GEAR-TEETH. PAUL WAGNER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,101. (Cl. 74—41.)



1. A gear wheel of the herringbone type, the radial depth of whose teeth is about one-half the pitch.

2. Gear wheels of the helical type whose path of engagement in a plane of revolution is less than one-half the pitch.

3. In a gearing, the combination of meshing gear wheels of the helical type, the radial depth of whose teeth is about one-half the pitch, said teeth having their faces cut back so that the length of the path of engagement in a plane of revolution is less than one-half the pitch.

1,194,905. CIGARETTE-HOLDER. ISAAC WALLENSTEIN, Cincinnati, Ohio, assignor to Presto Cigarette Case Corporation, New York, N. Y., a Corporation of New York. Filed June 22, 1916. Serial No. 105,102. (Cl. 206—41.)

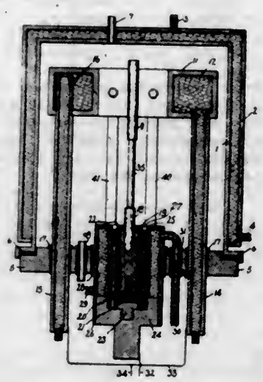


1. A cigarette holder provided with a pair of corrugated clamping members for clamping the cigarettes between them, one of the clamping members having its corrugations arranged for each to receive a single cigarette and the corrugations of the other clamping member exceeding in number the corrugations of the first-named member to hold cigarettes of different cross sections firmly clamped in position in the corrugations of the first-named member.

2. A cigarette holder including a body having an open end, a corrugated plate secured to and projecting outwardly from the open end of the said body, and a corrugated presser bar pivotally secured to and projecting outwardly from the open end of the said body and operating in conjunction with the said plate to clamp the cigarettes between them, the corrugations of the said plate being arranged for each to receive a single cigarette and the corrugations of the presser bar exceeding the number of corrugations of the plate to hold cigarettes of different cross sections firmly clamped in position in the corrugations of the plate.

3. A cigarette holder including a body having an open end, a corrugated plate secured to and projecting outwardly of the open end of the said body, and a corrugated presser bar pivotally secured to and projecting outwardly from the open end of the said body and operating in conjunction with the said plate to clamp the cigarettes between them, the corrugations of the said plate being arranged for each to receive a single cigarette and the corrugations of the presser bar exceeding the number of corrugations of the plate to hold cigarettes of different cross sections firmly clamped in position in the corrugations of the plate, the said presser bar being provided at its ends with upwardly extending fingerpieces.

1,194,906. METHOD AND APPARATUS FOR SINTERING METAL. RAYMOND B. WALLING, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Oct. 7, 1912. Serial No. 724,306. (Cl. 204—64.)



1. In apparatus for sintering rods, a fixed contact set in a water cooled member, a movable contact floated in mercury and water cooled, said floating contact exerting a pressure on said rods by which a firm electrical contact is made and maintained during the contraction of the rods in the sintering operation.

2. In a sintering apparatus, a container, a conductive liquid in said container, a metallic contacting member floated in said liquid, and means for adjusting the effective length of the metallic member.

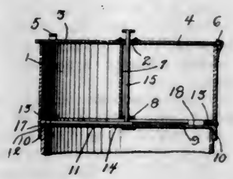
3. In a sintering apparatus, a container, a conductive liquid in said container, a metallic contacting member having refractory metal firmly mounted in one end, and adjustable means on the other end thereof, said member being floated in said liquid.

4. In apparatus for sintering rods, the combination of an upper and a lower contact for the ends of the rods, conductors for supplying current to said contacts, the conductors for the upper contact being symmetrically arranged to the rods to prevent bending of the rods during sintering.

5. In apparatus for sintering rods, the combination of an upper and a lower contact for the ends of the rods, conductors for supplying current to said contacts, said conductors being so arranged as to prevent bending of the rod during sintering.

[Claims 6 to 9 not printed in the Gazette.]

1,194,907. GARBAGE-RECEIVER. CHARLES H. WATSON, New York, N. Y. Filed June 9, 1915. Serial No. 33,107. (Cl. 220—115.)

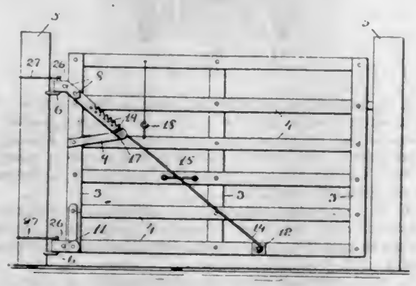


1. In a garbage receiver the combination with a cylindrical body portion having a bottom with a cut-out portion therein, of a pair of revoluble slides for closing said cut-out portion, a wall dividing the body portion into two compartments, at the lower end of one of which the cut-out portion is located and a pair of covers hinged to the body portion and adapted to independently cover the said compartments.

2. In a garbage receiver the combination with a cylindrical body portion having strips extending across the top and bottom thereof, of a bottom secured to said body portion, the said bottom having a cut-out portion therein located to one side of the said strip, a wall extending between the strips, rods extending through and rotatably mounted in the said strips, the said rods having handles on their upper ends, slides on the lower ends of the rods adapted to close said cut-out portions, and covers for said body portion.

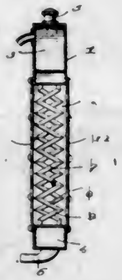
3. In a garbage receiver the combination with a cylindrical body portion having a bottom with a cut-out portion therein, of a wall dividing the body portion into two compartments, and revoluble slides for closing the cut-out portion movable beneath the said wall whereby the garbage will be pushed from the slides.

1,194,908. GATE. JOSEPH W. WHITAKER, Noble, Ill., assignor of one-half to James Smith, Bridgeport, Ill. Filed Sept. 11, 1915. Serial No. 50,197. (Cl. 39—80.)



In a gate having uprights and horizontal bars pivotally connected together and a gate post having hinge pintles, an oblique single strap hinge member located at one side of the gate, engaging the upper hinge pintle, having in its upper edge an oblique series of notches and in its body an oblique series of perforations, and an oblique single tie rod, also located at one side of the gate, in line with said oblique hinge member, pivotally connected at its lower end to the lower portion of the gate and at its upper end provided with a downturned hook end engaging one of said notches, whereby the weight of the gate is transmitted directly through said tie rod and hinge member to the upper hinge pintle, and a securing pin engaging one of said series of perforations and said downturned hook end of the tie rod.

1,194,909. RADIATOR. JAMES ROBERTSON WHITE, Schenectady, N. Y. Filed Apr. 14, 1914. Serial No. 831,853. (Cl. 257—131.)



In combination a radiator, a series of sinuous tubes having their opposite ends secured at the opposite sides of the radiator, each of said sinuous tubes being composed of a series of similarly sized and similarly shaped sections, each section consisting substantially of an oblong body hollowed out and formed with an opposite end with edges beveled in the same direction.

1,194,910. SLIP-SOCKET. CLARENCE P. WILLIAMS, Syracuse, Ohio. Filed Apr. 21, 1916. Serial No. 92,681. (Cl. 57—9.)

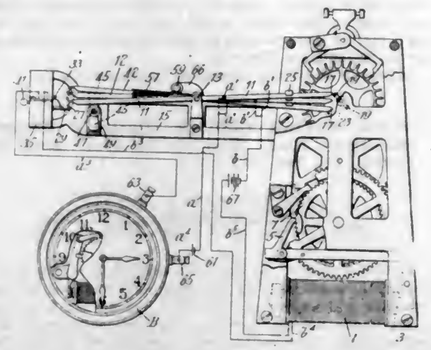


1. A slip socket comprising a hollow cylindrical shell, a head fixed in one end of said shell, said head being provided with shoulders on its upper end and having a pair of diametrically arranged grooves extending longitudinally therein, reins slidable in the grooves, a cross head between the reins below the lower terminal of the head, the lower end of the shell being provided with a pair of diametrically arranged grooves, said grooves inclining outwardly toward their upper ends, slips slidably connected to the reins and slidably mounted in the grooves and a breakable stopper bolt secured transversely of the shell to limit the upward movement of a tool when the same is being gripped by the slip socket.

2. A slip socket comprising a hollow cylindrical shell, a head secured in the upper end of the shell, said head being provided with diametrically arranged grooves, the shell being provided near its lower end with diametrically arranged grooves having their walls inclining outwardly toward their upper ends, reins slidable in the first mentioned grooves, a mandrel within the head to limit the upward movement of the reins, latches at the upper ends

of the reins for engagement over shoulders on the head, so as to lock said reins in a raised position, filler members removably secured in the lower end of the shell, breakable rivets for holding said filler members in place, cams on the filler members to slide within the inclined grooves, said filler members being connected to the reins and slips independently slidable in the filler members and the reins so that upon their descent they will move toward each other in order to grip a tool.

1,194,911. TIME SYSTEM. JOHN C. WILSON, Boston, Mass. Filed Nov. 4, 1912. Serial No. 729,364. (Cl. 58—25.)



1. In a time system, the combination of master and secondary clocks with means for transmitting time beats from said master clock to said secondary clock including a circuit, fixed contacts, fulcrumed contact levers, means operated by the master clock for rocking said levers into make and break engagement with said fixed contacts, whereby to control the electric action of the circuit, said means arranged to permit the shifting of circuit control from one to another of said levers without loss of beats.

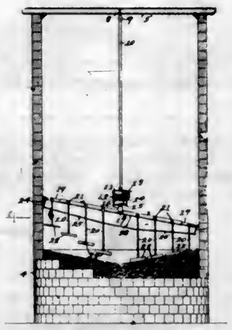
2. In a time system, the combination of master and secondary clocks with means to transmit time beats from said master to said secondary clocks including a circuit, readily accessible fixed contacts, fulcrumed levers having contact ends for make and break engagement with said fixed contacts and ends adjacent the master clock, means in the latter for moving said ends to tilt said levers into make and break engagement with said fixed contacts, whereby to control the electric action of said circuit, said means arranged to permit the shifting of circuit control from one to another of said levers without loss of time beats and means to hold one of said levers in an inoperative position for permitting access thereto for cleaning, replacement or repair.

3. In a time system, the combination of a master clock with one or more secondary clocks and means for transmitting time beats from the former to the latter including for said circuit, substitute contact actuating members for said circuit, and means for connecting said members to said master clock having provision permitting the connecting of one and disconnecting of the other from said clock without losing a beat.

4. In a time system the combination of a master clock having a pendulum with one or more secondary clocks and means for transmitting time beats from the former to the latter including an electric circuit, substitute contact actuating members, and means for connecting said members to said pendulum having provision permitting the connecting of one and disconnecting of the other from said pendulum without losing a beat.

5. In a time system, the combination of master and secondary clocks with means for transmitting time beats from said master clock to said secondary clocks including a circuit, fixed contacts, fulcrumed contact levers, means operated by the master clock for rocking said levers into make and break engagement with said fixed contacts whereby to control the electric action of the circuit, a shaft adapted for manual operation and having arms thereon extending in different radial directions and arranged to contact severally with different levers on movement of the shaft whereby to move a lever from the range of said rocking means and bring another within the same between succeeding time beats.

1,194,912. ENSILAGE-PACKER. WALTER J. WILSON and JOHN F. RUFF, Petersburg, Ind.; said Ruff assignor to said Wilson. Filed Sept. 15, 1915. Serial No. 50,739. (Cl. 100—57.)



1. The combination with a silo, of a support at the top thereof, a centrally pivoted beam carried thereby, dependent weights on each arm of said beam the lower surface of each of which is upwardly and outwardly inclined toward the walls of said silo, and means for adjusting the height of said beam.

2. The combination of a silo, of a support at the top thereof, a pulley dependent therefrom, a cable engaged in said pulley, a drum for receiving one end of said cable, means for rotating said drum, means for locking said drum, a beam carried beneath said drum provided with a central pivot, dependent rods on the arms of said beam, and weights carried by the lower ends of said rods.

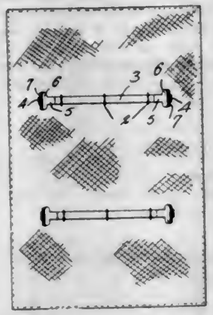
3. The combination with a silo, of a support at the top thereof, a pulley carried by said support above the top and said silo, a cable in said pulley, a frame secured to one end of said cable, a drum carried by said frame and upon which the other end of said cable is wound, means for rotating said drum, means for locking said drum, a yoke swiveled beneath said frame, a beam centrally pivoted in said yoke, telescopic extensions at the ends of said beam, a plurality of rods pivoted to each arm of said beam, a weight at the lower end of each rod, and means for maintaining said rods and weights in desired relationship with each other and with the ends of said beam.

1,194,913. BATH-TUB COVER. FRANK M. WOLFE, Minneapolis, Minn. Filed June 10, 1916. Serial No. 102,950. (Cl. 4—27.)

1. A bath tub cover comprising a sheet, and a resilient strip constituting a support for the sheet, the strip including depending feet adapted to engage the inner wall of a tub, and outwardly extended shoulders adapted to rest on the upper edge of a tub, the strip being outwardly expansible to cause the feet to grip the inner wall of a tub, and being upwardly arched to dispose the ends of the strip at an acute angle to the shoulders, thereby to cause the weight of the sheet to enhance the grip of the feet.

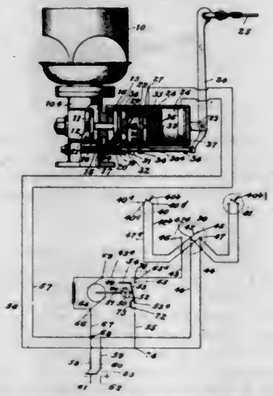
2. A bath tub cover comprising a sheet; and an arched support disposed transversely of the sheet, the support being provided at its ends with outwardly projecting

shoulders and with depending legs, the legs terminating in broadened feet provided upon their outer surfaces with



resilient pads extended transversely of the length of the support.

1,194,914. SIGNAL. FRANK W. WOOD, New York, N. Y., assignor to Charles Cory & Son, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 5, 1914. Serial No. 865,047. (Cl. 177—311.)



1. In a fluid operated signal apparatus, a whistle, valve-means for admitting the operating fluid thereto, hand operated means for actuating said valve-means, independent electrically controlled means for actuating said valve-means, a circuit through said electrically operated means, an electric motor, and a circuit therefor, a timing device controlling the opening and closing of said first named circuit, means for driving said timing device at a reduced rotary speed from said motor, and a hand operated switch member for simultaneously holding either of said circuits open and the other circuit closed.

2. In a fluid operated signal apparatus, a whistle, valve-means for admitting the operating fluid thereto, electrically controlled means for actuating said valve-means, a circuit through the same, automatic electrically operated means for periodically closing said circuit to blow the whistle, and a member for controlling said electrically operated means and for closing said circuit at will independently of said automatically operated means.

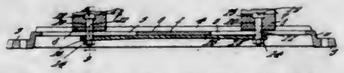
3. In a fluid operated signal apparatus, in combination, a whistle, a valve adapted to admit fluid thereto, a piston for actuating said valve, an auxiliary valve for admitting the operating fluid to said piston, a stem for actuating said valve, a hand operated lever for moving said stem to open said valve, an electro-magnet, an armature therefor, a member actuated by said armature for engaging said stem to actuate the stem independently of said lever, and means for closing a circuit through said electro-magnet.

4. In a fluid operated signal apparatus, in combination, a whistle, valve means for admitting operating fluid thereto, electrically controlled means for operating said valve means, electrically controlled automatic means for actuating the same periodically, and a member for closing a circuit through said automatic means to sound the whistle automatically and for closing a circuit through said electrically controlled means to blow the whistle at will.

5. In a fluid operated signal apparatus, a whistle, valve means for admitting operating fluid thereto, a controlling switch lever having a normal position, and adapted to move in either direction from said normal position, electrically controlled means for actuating said valve means, means for closing the circuit directly through said electrically controlled means by moving said controlling lever in one direction, automatic electrically operated means for actuating said signal periodically, and means for closing a circuit therethrough by moving said controlling lever in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

1,194,915. ENGINE-SUBBASE. HORACE E. WOOLERY, Minneapolis, Minn. Filed Oct. 20, 1915. Serial No. 56,996. (Cl. 248—20.)



1. In a device of the character described, a base, a supporting member movable thereon, bolts engaged through the base and supporting member, one of the first mentioned parts having slots in which the bolts work, and spring means between the bolts and one of the first two mentioned parts for holding the supporting member normally in position upon the base.

2. In a device of the character described, a base having a slot, a supporting member above the base having a bolt working in said slot, the base and supporting member having interengaging ribs and grooves, and a spring between the bolt and base for normally holding the supporting member in position upon the base.

3. In a device of the character described, a base having a pair of upstanding ribs and a slot therebetween, a supporting member having grooves engaging said ribs and having a bolt working in said slot, and a spring between said bolt and the base.

4. In a device of the character described, a base having slots, supporting means upon the base and having bolts working in said slots, and a bowed spring having its intermediate portion bearing upwardly against the base and having its ends engaged to said bolts.

5. In a device of the character described, a base having slots, a pair of supporting members movable upon the base and having bolts working in said slots, and a bowed spring having its intermediate portion bearing upwardly against the base and having its ends engaged to said bolts.

[Claims 6 to 8 not printed in the Gazette.]

1,194,916. COMBINED MOP-HEAD AND MOP-WRINGER. EDWIN C. WORNS, Rutherford, N. J. Filed May 2, 1913. Serial No. 765,082. (Cl. 15—43.)

1. In a mop head and wringer, a rigid presser frame having elongated side bars spaced to form a longitudinal slot extending through the back end of the frame, and an integral transverse mop loop at the front of the frame to hold the front end of a mop cloth, said loop communicating with the slot, a handled member directly pivoted to the said rigid presser frame at a point forward of the rear end of the said slot, and means at the rear of the presser frame to hold the rear end of the mop cloth, said side bars and front loop constituting the sole presser frame for the mop cloth.

2. A mop head and wringer, comprising a handle member, a presser frame for pressing the mop against the surface to be mopped, said frame having a transverse front loop to engage the front end of the mop, and being divided longitudinally in the rear of the loop into side sections joined by and rigid with said loop, there being a longitudinal slot between the side sections extending to and through the rear end of the frame, members rising from said rigid side sections, means forward of the rear end of the slot, directly connecting the said members on the frame with the handle member, said front loop and side sections constituting the sole presser frame for the mop cloth, a second loop revolubly mounted in the rear of the presser frame to engage the rear end of the mop cloth, and means for revolving the second loop.



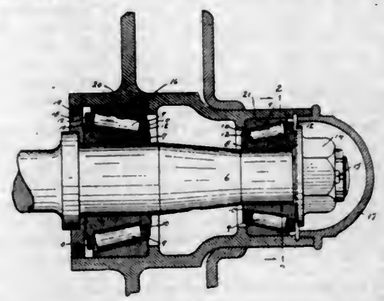
3. A combination mop head and wringer, comprising a handle member, a presser frame having a front loop to engage the front end of a mop cloth, and side members integral with said loop, the said side members being separated by a slot that extends from the front loop through the rear end of the frame, said front loop and side members constituting the sole presser frame for the mop cloth, means mounted to turn relatively to the presser frame for holding the mop cloth and twisting the same, and means directly and separably connecting the handle member with the side members of said presser frame and forming a connection between the said side members across the said slot.

4. In a mop head and mop wringer, a handle member, a presser frame pivotally mounted on the handle member, a fixed mop loop on the forward end of the frame, a second loop revolubly mounted on the handle member in the rear of the presser frame, and means for revolving the said loop, said means consisting of a pinion on the shank of the revoluble loop, a toothed sector mounted to turn on a horizontal axis at a side of the handle member and meshing with the said pinion, and a lever handle rigid with the sector, said handle when the mop is in the normal position for mopping, being disposed in a forward direction to overlap the frame and lie close to the latter near the rear of the same, said presser frame having pivotal connection with the handle member between the center of gravity of the frame and its rear end to cause said frame to rock on its pivot when the mop is lifted from a floor, whereby to contact at its rear end with the front end of said lever and tilt the said front end upwardly, the sector being disposed at the under side of the lever, and an upward and rearward throw of the lever away from the frame serving to give a twisting movement to the revoluble loop.

5. In a mop and wringer, a handle member, a presser frame, a mop loop on the forward end of the frame, a rear mop loop mounted to revolve, a mop cloth on said loops and means for revolving the second loop, said means comprising a pinion on the revoluble loop, a toothed element mounted at the side of the handle member to turn on a substantially horizontal axis, and meshing with the said pinion, and a lever rigid with the said toothed element, said lever when the mop is in the normal position extending forwardly from the toothed element beyond the rear loop and above the presser frame and lying close to said frame, said lever being movable upwardly and rearwardly toward the handle, from its position over the presser frame to turn the toothed element and pinion, a movement of the lever from the front position to a position adjacent to the handle serving to effect a wringing of the mop cloth.

[Claims 6 to 8 not printed in the Gazette.]

1,194,917. ANTIFRICTION-BEARING. WILLIAM HAMILTON WRIGHT, Port Dover, Ontario, Canada, assignor to Mary Elizabeth Wright, Port Dover, Ontario, Canada. Filed May 29, 1914. Serial No. 841,839. (Cl. 64—39.)

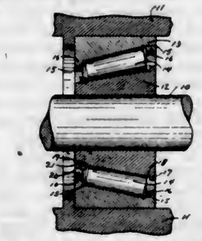


1. An anti-friction bearing comprising an inner bearing cone and an outer bearing cone, rollers disposed between said bearing cones, one of said bearing cones being provided with an annular groove, and a solid retainer ring contracted tightly upon the bottom of the groove and rigidly held in the groove against rotation and lateral movement.

2. An anti-friction bearing comprising an inner bearing cone and an outer bearing cone, rollers disposed between said bearing cones, one of said bearing cones being provided with an annular groove, and a solid retainer ring provided with an inwardly projecting lip, said retainer ring contracted tightly upon the bottom and sides of the groove and being rigidly held in the groove against rotation and lateral movement.

3. An anti-friction bearing comprising an inner bearing cone and an outer bearing cone, rollers disposed between said bearing cones, said inner bearing cone being provided with an annular groove at each end thereof, and a solid retainer ring contracted tightly upon the bottom of the groove and being rigidly held in the groove against rotation and lateral movement.

1,194,918. ANTIFRICTION-BEARING. WILLIAM HAMILTON WRIGHT, Port Dover, Ontario, Canada, assignor to Mary Elizabeth Wright, Port Dover, Ontario, Canada. Filed Sept. 15, 1915. Serial No. 50,799. (Cl. 64—39.)



1. An anti-friction bearing comprising an inner bearing cone and an outer bearing cone, rollers disposed between said bearing cones, said inner bearing cone being provided with an annular groove, and a solid lock shoulder ring contracted tightly upon the bottom of the groove and being rigidly held in the groove against rotation and lateral movement.

2. An anti-friction bearing comprising an inner bearing cone and an outer bearing cone, rollers disposed between said bearing cones, said inner bearing cone being provided at one end with an outwardly extending shoulder and at the other end with an annular groove, a solid lock shoulder ring contracted tightly upon the bottom of the groove and being rigidly held in the groove against rotation and lateral movement, and said outer bearing cone being provided at each end with an inwardly extending shoulder.

3. An anti-friction bearing comprising an inner bearing cone and an outer bearing cone, rollers disposed between said bearing cones, said outer bearing cone having an inner diameter at its larger end which is substantially the same as the larger diameter of its bearing surface, a screw-threaded shoulder screwed into the larger end of said cone, the smaller end of said inner bearing cone being provided with an annular groove, and a lock shoulder ring, having an inner diameter substantially the same as the diameter of the groove, shrunk into said groove.

4. An anti-friction bearing comprising an inner bearing cone and an outer bearing cone, rollers disposed between said bearing cones, said outer bearing cone having an inner diameter at its larger end which is substantially the same as the larger diameter of its bearing surface, a screw-threaded shoulder screwed into the larger end of said cone, the smaller end of said inner bearing cone being provided with an annular groove, a lock shoulder ring, having an inner diameter substantially the same as the diameter of the groove, shrunk into said groove, and said outer bearing ring being provided at its smaller end with an inwardly exteuding shoulder.

1,194,919. APPARATUS FOR CALCULATING PHOTOGRAPHIC EXPOSURES. GEORGE FREDERICK WYNNE, Minera, near Wrexham, Wales. Filed Mar. 3, 1915. Serial No. 11,930. (Cl. 95—10.)



1. An apparatus for calculating photographic exposures, comprising a case composed of two dished halves hinged together, the dished halves having inwardly extending flanges which make contact with each other when the two halves are closed together, one of such halves having calculating scales disposed within it below the level of the flange thereon, and the other of such halves having sensitized material and means for holding it in position below the level of the flange thereon, the scales and material facing in the same direction and adapted to be seen both at the same time when the case is open, and the scales facing the material when the case is closed.

2. An apparatus for calculating photographic exposures, comprising a case composed of two dished halves hinged together, the dished halves having inwardly extending flanges which contact with each other when the two halves are closed together; one half having calculating scales disposed within it below the level of the flange thereon; and the other half having sensitized material, and an apertured dished plate adapted to take under the flange thereon for holding the material therein; the scales and material facing in the same direction and both being adapted to be seen at the same time when the case is open, and the scales facing the material when the case is closed.

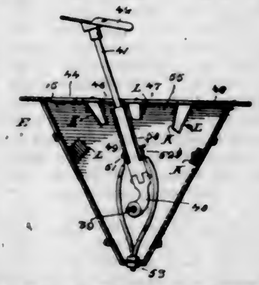
3. An apparatus for calculating photographic exposures, comprising a case composed of two dished halves hinged together, the dished halves having inwardly extending flanges which make contact with each other when the two halves are closed together; one half having calculating scales disposed within it below the level of the flange thereon; and the other half having sensitized material, and being fitted with a plate which takes under the flange on this half, and is disposed over the material, and is provided with an aperture for exposing part of the material, and is fitted with a transparent disk for closing the aperture in the plate and is also fitted with an apertured opaque disk for closing and opening the aperture in the plate; the scales and material facing in the same direction, and being adapted to be seen both at the same time when the case is open, and the scales facing the material when the case is closed.

4. An apparatus for calculating photographic exposures, comprising a case composed of two dished halves hinged together the halves having inwardly extending flanges one of such halves having calculating scales disposed below the level of the flange thereof, and the other half having the flanges thereof formed with gaps therein; an apertured dished plate formed with projections thereon and fitted within the half case provided with the gapped flange, the projections passing through the gaps and taking under the flange, the dished plate being fitted with transparent and opaque disks for covering and exposing the aperture in the plate; and sensitized material disposed in the half case with the gapped flange underneath the plate; the scales and sensitive material facing in the same direction when the case is open, and the material facing the scales when the case is closed.

5. An apparatus for calculating photographic exposures, comprising a case composed of two dished halves hinged together, the halves having inwardly extending flanges; one of such halves having calculating scales disposed below the level of the flange thereof, and the other half having the flange thereof formed with gaps therein; an apertured dished plate formed with projections thereon and fitted within the half case provided with the gapped flange, the projections passing through the gaps and taking under the flange, the dished plate being fitted with a transparent disk for covering the aperture in the plate, and with an opaque disk formed with an aperture adapted to coincide with the aperture in the plate for exposing the same and provided with division markings for indicating the relative movement of the plate; and sensitized material disposed in the half case with the gapped flange underneath the plate; the scales and sensitive material facing in the same direction when the case is open, and the material facing the scales when the case is closed.

[Claims 6 and 7 not printed in the Gazette.]

1,194,920. SIGNALING APPARATUS FOR MOTOR-CARS. FLETCHER WILMER YONGE, Tampa, Fla. Filed Nov. 11, 1914. Serial No. 871,552. (Cl. 40—70.)



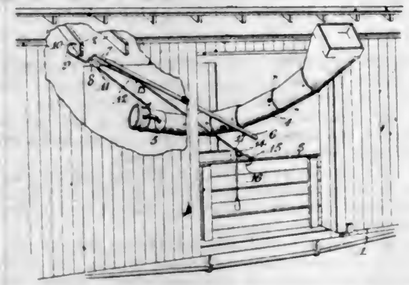
Signaling apparatus for motor cars, comprising in combination, an oscillatory signaling disk, signaling lamps, an audible alarm, lamp and alarm circuits, a series of contacts in each of said circuits arranged in couplets, each couplet including a lamp contact and an alarm contact located in spaced relation to each other, and a manually operable controller mechanically connected with said disk for turning the latter and shiftable to a plurality of positions in each of which it lies between the contacts of one couplet, the lamp and alarm contacts being so arranged with regard to the controller that by a limited movement of the latter in any of its several positions the lamp and alarm circuits may be independently operated by the controller.

1,194,921. ANTIRATTLE BEARING-PROTECTING DEVICE. WILLIAM J. ZELLER and GEORGE A. STEPHENS, Winfield, N. Y. Filed Apr. 20, 1915. Serial No. 22,689. (Cl. 74—17.)



In a device of the character described, the combination with a rod having a lateral stud, a stop carried by the stud at a point spaced from the body of the rod, a coupler member loosely mounted on the stud and a resilient member clamped upon said rod at a distance from said stud and having a portion receiving said stud which bears against said coupler member and resiliently holds the same toward the stop.

1,194,922. SPOUT-HOLDER. CHRISTIAN H. AHLFS, Clara City, Minn. Filed Apr. 29, 1916. Serial No. 94,408. (Cl. 254—135.)

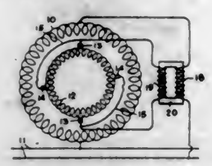


1. A device of the class described comprising a pointed hook member, a handle therefor, a spout supporting cable adjustably mounted upon the hook member, and a freely mounted cable grip adapted to be attached to a suitable support.

2. A device of the class described comprising a pointed hook member, a handle therefor, a cable adjustably mounted upon the hook member, a guide for the cable carried by the handle, a cable grip, and a pointed hook formed thereon for attaching the grip to a support.

3. A device of the class described comprising a pointed hook member, a handle therefor, a pulley carried by the hook member, a guide carried by the handle, a rope passed through the guide and over the pulley and adapted to have one end attached to the loading spout, a rope grip, and a pointed hook formed on the grip for attaching the same to a support.

1,194,923. ALTERNATING-CURRENT COMMUTATOR-MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 11, 1914. Serial No. 861,291. (Cl. 172—276.)



1. A single phase alternating current commutator motor having an inducing winding and an induced winding, a commutator connected to said induced winding, brushes bearing on said commutator, certain of said brushes being connected to form a main short-circuit about the induced winding along an axis at an angle to the magnetizing axis of the inducing winding, an inductive winding connected between certain of said brushes to form a local circuit about the induced winding along an axis in electrical quadrature to the axis of said main short-circuit, said inductive winding having a magnetic circuit designed to become magnetically saturated when a predetermined voltage exists between the brushes to which said inductive winding is connected.

2. A single phase alternating current commutator motor having an inducing winding and an induced winding, a commutator connected to said induced winding, brushes bearing on said commutator, certain of said brushes being connected to form a main short-circuit about the induced winding along an axis at an angle to the magnetizing axis of the inducing winding, a transformer having its primary winding connected in series with said inducing winding, the secondary winding of said transformer being connected between certain of said brushes to form a local circuit about the induced winding along an axis in electrical quadrature to the axis of said main short-circuit, said transformer having a magnetic circuit designed to become magnetically saturated when a predetermined voltage exists between the brushes to which the secondary winding is connected.

3. A single phase alternating current commutator motor having an inducing winding and an induced winding, a commutator connected to said induced winding, brushes bearing on said commutator, certain of said brushes being connected to form a locally short-circuited path for the current flowing in said induced winding, and an inductive winding connected between certain of said brushes and adapted to provide a local circuit about the induced winding along an axis which is interlinked with the torque producing field of the motor, said inductive winding having a magnetic circuit adapted to become magnetically saturated when a predetermined voltage exists between the brushes to which said inductive winding is connected.

4. A single phase alternating current commutator motor having an inducing winding and an induced winding, a commutator connected to said induced winding, brushes bearing on said commutator, certain of said brushes being connected to form a locally short-circuited path about the induced winding, and an inductive winding connected between certain of said brushes and having a magnetic circuit adapted to become magnetically saturated when a predetermined voltage exists between the brushes to which said inductive winding is connected.

5. A single phase alternating current commutator motor having an inducing winding and an induced winding, a commutator connected to said induced winding, brushes bearing on said commutator, certain of said brushes being connected to form a main short-circuit along one axis of said induced winding, and an inductive winding connected between certain of said brushes along an axis of said induced winding electrically in quadrature with the axis of the main short-circuit, said inductive winding having a magnetic circuit designed to become magnetically saturated when the speed of the motor is such that a predetermined voltage exists between the brushes to which said inductive winding is connected.

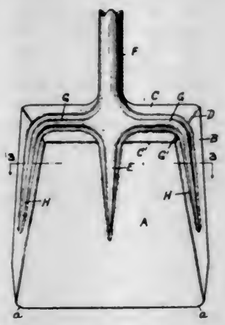
[Claims 6 to 9 not printed in the Gazette.]

1,194,924. SHOVEL. CECIL R. ANDERSON, Ben Avon, Pa. Filed Oct. 7, 1915. Serial No. 54,514. (Cl. 55—147.)

1. A shovel body having its opposite side and top portions deflected with the top deflection angularly merging with the side deflections, the deflected portions provided with strengthening ribs spaced from the outer edges thereof and extending across the junctures of said portions.

2. A shovel body having its opposite side and top portions deflected with the top deflection merging into the side deflections, said deflected portions being corrugated inwardly from their outer edges with each corrugation extending throughout a portion of the length of the top

deflection and across the juncture of the top and side deflections and into a side deflection.



3. A shovel body having the opposite side and top portions deflected with the outer ends of the top deflection merging into the side deflections and with bends defining such junctures, the top deflection formed with oppositely extending substantially horizontal corrugations spaced downwardly from its upper edge, the corrugations curved and crossing said junctures and extending downwardly into the side deflections.

4. A shovel having its body formed with top and side deflections and with a central upwardly extending frog which traverses the top deflection, the top deflection formed with oppositely extending corrugations spaced downwardly from its upper edge, the inner ends of the corrugations intersecting said frog, each corrugation extending outwardly longitudinally through the top deflection and across its juncture with the side deflection and downwardly into the latter.

5. A rectangular shovel body having a central integral upwardly extending handle socket and a frog extending downwardly from the socket into the body, the marginal top portion of the body at opposite sides of the socket deflected frontwardly and the marginal side portions of the body similarly deflected and with the side deflections merging into the top deflection, said deflections formed with corrugations spaced from the outer edges thereof and extending across the junctures of the deflections.

1,194,925. STANCHION. CHRIST O. ANDERSON, Clyde, Wis. Filed July 12, 1913. Serial No. 778,754. (Cl. 119—150.)



1. In combination with a supporting structure embodying horizontal bars, a stanchion including a frame arranged between said bars and equipped with right angled projections, right angled supporting members carried by said horizontal bars for pivotal engagement with said right angled projections carried by the frame, whereby said frame is movable pivotally on a vertical axis without interference with the horizontal bars.

2. In combination with a supporting structure embodying a pair of longitudinal extending parallel bars and a pair of vertically extending bars the ends of which are secured to the said horizontal bars, a right angled support carried by one of said horizontal bars, a right angled support carried by the opposite horizontal bar, a stanchion frame the one end of which is rectangular and the opposite end arcuate, a right angled projection carried by the rectangular end of said frame, a right angled projection carried by the arcuate end of said frame, said right angled projections being adapted for pivotal engagement with the right angled supports carried by said horizontal bars, whereby said frame is movable in a horizontal arc.

3. A stanchion including in combination a supporting structure, a frame pivotally mounted therein and movable in a horizontal arc, said frame being formed of T-iron and having the end of one side extended at right angles and reduced, the other end bent to form an arc, the opposite side of said frame hinged adjacent the arc and having a portion of the body cut away adjacent the free end thereof, said free end having an aperture for the reception of the reduced end of the frame, and a lever pivotally connected to the reduced end, and normally lying in the cut out portion parallel with the hinged side to occupy a minimum amount of space, the said lever adapted to hold the hinged side in locked position, the free end of said lever being bifurcated to engage a support to hold the frame in a stationary position when desired.

1,194,926. PLASTIC COMPOSITION FOR FLOORING. DUNCAN GEDDES ANDERSON, Glasgow, Scotland. Filed Mar. 23, 1915. Serial No. 16,420. (Cl. 106—34.)

1. In a plastic composition for flooring and the like, a mixture of substantially anhydrous gypsum and a relatively small quantity of Portland cement.

2. In a plastic composition for flooring and the like, a mixture of substantially anhydrous gypsum and a relatively small quantity of Portland cement, and a dilute solution of sodium aluminate.

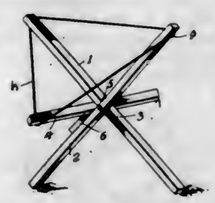
3. In a plastic composition for flooring and the like, a mixture of substantially anhydrous gypsum and a relatively small quantity of Portland cement, together with relatively light filling materials adapted to render the composition suitable for flooring purposes.

4. In a plastic composition for flooring and the like, a mixture of substantially anhydrous gypsum and a relatively small quantity of Portland cement, and a dilute solution of sodium aluminate, together with relatively light filling materials adapted to render the composition suitable for flooring purposes.

5. A plastic composition for flooring and the like comprising a mixture approximating in parts by weight substantially anhydrous gypsum 100 parts, Portland cement 15 parts, pumice 20 parts, sawdust 20 parts, and water to form a stiff paste.

[Claim 6 not printed in the Gazette.]

1,194,927. RACK FOR CURING AND DRYING HAY. ANDREW ARMSTRONG, Marietta, Ga. Filed Feb. 9, 1916. Serial No. 77,320. (Cl. 34—26.)

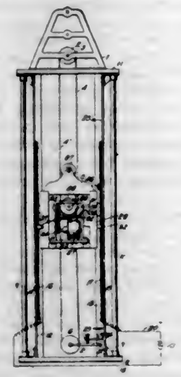


1. A hay drying rack comprising a plurality of sticks pivotally connected and providing a ground engaging tripod and a hay supporting tripod, and a wire strand connecting the members of the hay supporting tripod at the upper ends thereof and providing therewith means to hold the hay, the lengths of the wire strand being taut between the members of the tripod, and said sticks and the connecting wire strand adapted to be collapsed, substantially as set forth.

2. A hay drying rack comprising a plurality of sticks pivotally connected and providing a ground engaging tripod, and a hay supporting tripod, a member secured to one of the sticks adjacent the pivotal point thereof and providing a lock with the other members to hold the rack against collapsing, and a wire strand connecting the members of the hay supporting tripod at the upper ends thereof and providing therewith means to hold the hay, substantially as set forth.

3. A hay drying rack comprising two sticks pivotally connected together, a third stick pivotally connected to one of said sticks, the lower ends of said three sticks providing ground engaging members, a block secured to one of the sticks adjacent the pivotal point thereof adapted to engage with one of the other sticks and form a lock to hold the rack against collapsing, and a wire strand connecting the upper ends of the three sticks and providing therewith a reinforcing element and means to hold the hay, substantially as set forth.

1,194,928. CLOCK REWINDING DEVICE. CARL AUER, Fragaria, Wash., assignor of one-fourth to Frank Rueth, Washington, D. C. Filed Dec. 14, 1915. Serial No. 66,745. (Cl. 58—41.)



1. In an automatic rewinding device for clocks, a weight provided with means for connecting the same with the power chain of the clock, a driving mechanism engaging said chain so as to cause the weight to move upwardly over the chain, a motor for operating said driving mechanism, a source of current, and means for directing said source of current to said motor, said means including a switching mechanism, said switching mechanism being provided with moving members for shifting the switch arm from an open to a closed position or vice versa, and stationary stops adjacent the extreme movements of the weight for causing the actuation of said switching mechanism, whereby current from said source of current will be turned on when the motor is in its lowest position and turned off when the motor is in its highest position.

2. In a rewinding device for clocks, a weight, and means for restoring the weight to its raised or wound position, said means including a driving motor, means for connecting the motor to the chain or cable supporting the weight, a source of current for the motor, an upper and lower stationary stop and means for controlling the passage of the current to the motor, said means including a switch on the weight and two sets of operating mechanism therefor mounted on the weight, one set being set in motion by the upper stop when the same is moved to its highest position and the other set moved by the lower stop when the weight has moved to its lowest position, said switch being adapted to switch on the current when the weight is in its lowest position and switch off the current when the weight is in its highest position.

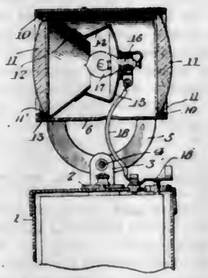
3. In an automatic rewinding device of the character described, a weight adapted to be connected with a chain or cable, means arranged on the weight engaging the cable in such a manner as to raise the weight without moving the chain or cable when the means is rotated, a motor for rotating said means, means for supplying current to said motor, a switch interposed in the circuit of said last mentioned means, oppositely moving mechanisms on the weight for opening and closing said switch, a stationary stop adjacent the top of said chain or cable for causing the actuation of one of the operating mechanisms, and a stationary stop adjacent the bottom of said chain or cable for causing the actuation of the other of said switch operating mechanisms, said switch being arranged to be opened when the weight is in its highest position and closed when the weight is in its lowest position so that said motor will act only in raising the weight.

4. In an automatic rewinding device of the character described, a weight adapted to be connected with the chain or cable of a clock, means arranged on the weight for causing the weight to travel over the chain or cable to the highest position assumed by the weight, said means including an electric motor, means for supplying current to said electric motor, a switch for turning on the current to said motor when the weight is in its lowest position and turning the current from said motor when the weight is in its highest position, means for moving said switch to a closed position, said means including a fixed stationary stop, a sliding plate, a catch engaging said sliding plate and holding the same in a predetermined position, a spring for urging said plate to a different position, a swinging arm provided with a projection mounted on said plate, means for guiding said arm so that the projection will strike said switch and move the same to a closed position, said means for moving said switch to an open position, said means comprising a fixed stop adjacent the upper end of said cable or chain, a sliding plate arranged on the weight, a catch for holding said plate against movement, means for giving the plate a tendency to move away from said catch, a swinging arm provided with a projection, said swinging arm being arranged on said plate, and means for guiding the swinging arm and projection so as to strike part of said switch and move the switch to an open position when said catch releases said sliding plate.

5. In an automatic rewinding device for clocks, a weight adapted to be connected to the cable or chain of a clock, means on the weight over which said cable or chain is adapted to be looped, said means including a rotatable power member, a gearing connected with said power member for rotating the same, an electric motor for operating said gearing, means including a switch for supplying said motor with current, said switch having operating arms projecting therefrom, means for operating one of said arms for closing said switch, said means comprising a sliding plate, a spring for causing said plate to move in a given direction, said plate having a notch arranged therein, a swinging arm mounted in said notch, said arm being provided with a projection, a guiding member for guiding said swinging arm and said projection so that the projection will strike one of the extending arms of said switch when the plate is moved under the action of said spring, whereby said switch is closed, said guiding means moving said projection and said arm away from the switch when the sliding plate is moved against the action of said spring, a catch for holding said plate in a given position when moved against the action of said spring, means on said plate for releasing said catch when the weight reaches its lowest position, and means set in motion by said weight when the same reaches the highest position for turning said switch to an open position.

[Claims 6 and 7 not printed in the Gazette.]

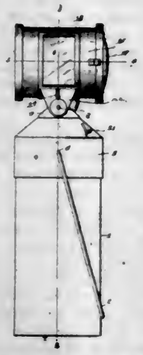
1,194,929. ELECTRIC LIGHT. JOHN M. AUSTEN and BILLIE J. LEE, Sacramento, Cal. Filed Nov. 4, 1915. Serial No. 59,657. (Cl. 240—41.)



1. A lamp comprising a casing, a lens supported thereby, a frusto-conical reflector having its larger end portion inclosing the edge portion of said lens, a concave convex reflector secured to but spaced from the smaller end of said first reflector and formed centrally with a threaded sleeve, a yieldable contact supported by but insulated from the sleeve and a bulb threaded into the sleeve with its central electrode abutting said contact.

2. A lamp comprising a casing, a lens supported thereby, a frusto-conical reflector having its larger end portion inclosing the edge portion of said lens, a concave convex reflector secured to but spaced from the smaller end of said first reflector, said concave convex reflector being of a greater diameter than the smaller end of said first reflector and formed centrally with a threaded sleeve, a yieldable contact supported by but insulated from the sleeve, a bulb threaded into the sleeve with its central electrode abutting said contact and a side glass mounted in the side of said casing.

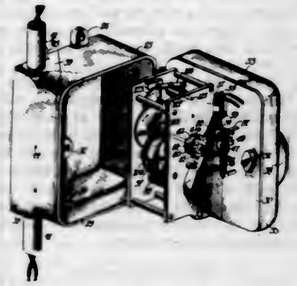
1,194,930. LAMP. JOHN M. AUSTEN, Sacramento, Cal. Filed Mar. 10, 1916. Serial No. 83,422. (Cl. 240—44.)



1. A lamp comprising a casing having guideways, a lens mounted in said casing, a reflector mounted behind said lens and provided with a centrally arranged opening, a second reflector slidably mounted in said guideways so as to move toward and away from said opening and illuminating means supported by said reflector in alinement with the opening in said reflector.

2. A lamp comprising a front lens, a glass plate mounted in one side of the casing, a reflector mounted in said casing adjacent said front lens and terminating midway of said glass plate and formed with a centrally arranged opening, a second reflector having a plate extension slidably mounted in said casing, illuminating means centrally arranged in said second reflector so as to move toward and away from the opening in said first reflector so as to vary the amount of light rays passing through said glass plate and means engaging depressions in said plate for adjustably holding said second reflector in its various positions.

1,194,931. SIGNAL-BOX. CHARLES E. AVERY, Trenton, N. J., assignor to Manhattan Electrical Supply Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 3, 1915. Serial No. 5,942. (Cl. 177—378.)



1. Means for providing a built-up operating rotor for a single signal-contact couple, comprising a plurality of operating units, each having a different number of peripheral teeth, said teeth being of similar form and spacing for each unit, in combination with means for securing a plurality of said units together in such relation that the desired number of teeth for the signal are arranged to operate in sequence upon the contact couple.

2. Means for providing a built-up operating rotor for a single signal-contact couple, comprising a plurality of operating units, each having a different number of peripheral teeth, said teeth being of similar form and spacing for each unit, in combination with means for securing a plurality of said units together in such relation that the desired number of teeth for the signal are arranged to operate in sequence and in spaced groups upon the contact couple.

3. Means for providing a built-up operating rotor for a single signal-contact couple, comprising a plurality of operating units, each having a different number of peripheral teeth, said teeth being of similar form and spacing for each unit, in combination with means for securing a plurality of said units together in such relation that the desired number of teeth for the signal are arranged to operate in sequence upon the contact couple, said means comprising interlocking teats and cups on the juxtaposed faces of the operating units.

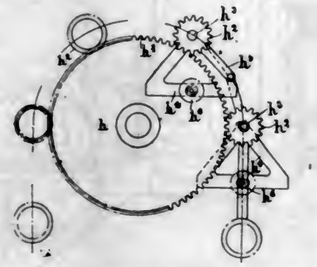
4. A signaling device having a built-up operating rotor for a single signal-contact couple, said rotor comprising a plurality of operating units each unit being provided with a single group of peripheral teeth of similar form and spacing, said units being secured together in such relation that the teeth on the respective units operate in sequence upon the contact couple to effect the desired signal number.

5. A signaling device having a built-up operating rotor for a single signal-contact couple, said rotor comprising a plurality of operating units each unit being provided with a single group of peripheral teeth of similar form and spacing, said units being secured together in such relation that the groups of peripheral teeth are spaced apart circumferentially to operate at spaced intervals upon the contact couple whereby a desired signal number comprising a plurality of digits is effected.

[Claims 6 to 32 not printed in the Gazette.]

1,194,932. CONVEYER OR ELEVATOR MORE PARTICULARLY FOR USE IN PROVING DOUGH. GEORGE SAMUEL BAKER, London, England. Filed Jan. 6, 1913. Serial No. 740,405. (Cl. 193—2.)

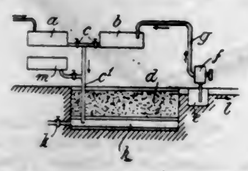
1. In a conveyer or elevator the combination of a guiding element having a flexible member passing about said guiding element, carriers in pivotal connection with said flexible member, engaging gear members having a plurality of teeth thereon arranged at the pivotal connection and having an operable engagement with said guiding element and carriers including means respectively adapted to positively position and maintain said first mentioned carrier in a horizontal plane when said carriers are traveling around the guiding element.



2. In a conveyer or elevator the combination with a rotatable guiding element having a curved surface of a flexible member passing about said guiding element, carriers in pivotal connection with said flexible members and engaging gear members having a plurality of teeth thereon arranged at the pivotal connection and having an operable engagement with said guiding element and carriers, including means respectively adapted to positively position and maintain said carriers in a horizontal plane when the carriers are traveling around the curved surface of the guiding element.

3. In a conveyer or elevator the combination with an endless conveyer comprising pivotally inter-connected elements, carriers supported by said conveyer member in pivotal relation thereto, a rotary guiding and driving element supporting said conveyer member and about which said member passes, an engaging gear having a plurality of teeth thereon in integral relation with each of said carriers, arranged at the pivotal connection of the carriers, and a toothed member having an operable engagement with said rotary guiding element and in driving relation with the toothed gear of each carrier as the latter travels around the guiding element, thereby maintaining said carrier in a horizontal plane.

1,194,933. PROCESS FOR PURIFYING LIQUIDS. THOMAS WALTER BARBER, Westminster, London, England. Filed May 11, 1916. Serial No. 96,901. (Cl. 210—18.)



1. A process for purifying waste liquors, sewage, and the like, consisting of diluting the liquor to the extent necessary to render the same suitable for purification by means of biological agencies, adding organic matter capable of serving as bacteria carriers and nutrients to the said diluted liquor, discharging from the system an amount of purified effluent substantially equivalent to the incoming foul liquor, and returning the remainder of said purified liquor to the system for diluting the incoming foul liquor, substantially as described.

2. A process of septically treating any waste liquid which contains such large amounts of ingredients injurious to the growth and development of bacteria as to render the same not readily amenable to septic treatment directly which comprises providing a volume of a diluent liquid relatively free from such injurious ingredients, adding thereto only so large a quantity of such waste liquid as is incapable of preventing bacterial growth and development, subjecting such mixed liquid to bacterial action until the desired septic treatment has been effected, thereafter adding to a portion thereof a further quantity of said waste liquid to be treated, and repeating the cycle of operations.

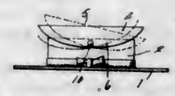
3. A process of septically treating any waste liquid which contains such large amounts of ingredients injurious to the growth and development of bacteria as to render the same not readily amenable to septic treatment directly, which comprises providing a volume of a diluent liquid relatively free from such injurious ingredients, adding thereto only so large a quantity of such waste liquid as is incapable of preventing bacterial growth and development, subjecting such mixed liquid to bacterial action until the desired septic treatment has been effected, thereafter adding to a portion thereof a further quantity of said waste liquid to be treated, subjecting at least a portion of the liquid to be returned at any desired stage of the treatment to a chemical treatment capable of reducing the quantity of such materials therein as are capable of injuriously affecting bacterial growth, and repeating the cycle of operations.

4. A process of septically treating any waste liquid which contains such large amounts of ingredients injurious to the growth and development of bacteria as to render the same not readily amenable to septic treatment directly which comprises providing a volume of a diluent liquid relatively free from such injurious ingredients, adding thereto only so large a quantity of such waste liquid as is incapable of preventing bacterial growth and development, subjecting such mixed liquid to bacterial action until the desired septic treatment has been effected, filtering the circulating liquid at any desired stage of the treatment to separate solid insoluble materials therefrom, thereafter adding to a portion thereof a further quantity of said waste liquid to be treated, and repeating the cycle of operations.

5. A process of spetically treating any waste liquid which contains such large amounts of ingredients injurious to the growth and development of bacteria as to render the same not readily amenable to septic treatment directly, which comprises providing a volume of a diluent liquid relatively free from such injurious ingredients, adding thereto only so large a quantity of such waste liquid as is incapable of preventing bacterial growth and development, adding balteria and nurient material therefor in amount sufficient to make up for any deficiency thereof, subjecting such mixed liquid to bacterial action until the desired septic treatment has been effected, thereafter adding to a portion thereof a further quantity of said waste liquid to be treated, and repeating the cycle of operations.

1,194,934. [WITHDRAWN.]

1,194,935. HAT. JOSEPH G. BELL, Gregory Landing, Mo. Filed Sept. 24, 1915. Serial No. 52,490. (Cl. 2—114.)



1. A hat comprising a brim, a crown body, and a rockable crown secured to the crown body to permit the free passage of air over the head of the wearer.

2. A hat comprising a brim, a crown body, a crown pivoted to the upper end of the crown body, said crown being spaced upwardly from the crown body to permit the free passage of air over the head of the wearer and bracing means for the crown body.

3. A hat comprising a brim, a crown body provided with diametrically opposite apertures, rivets extending through the apertures in the crown body and the crown to pivot-

ally hold the crown on the crown body, reinforcing means extending around the upper edge of the crown body and around the crown at its edge and triangular braces secured within the crown body and supporting the rivets.

1,194,936. SAW-GAGE. THOMAS BEMIS, Indianapolis, Ind. Filed May 31, 1912. Serial No. 700,712. (Cl. 143—174.)



1. A saw gage including an oscillatory rod extending from the saw position, a plurality of stops thereon, the stop nearest the saw position being fixed on said rod and the other stop or stops being loosely mounted on said rod, and a projection on said rod for engaging and actuating each loosely mounted stop as the rod is turned and such projections being located relatively to the fixed stop and to each other so as to cause the loosely mounted stops to be actuated in succession after the movement of the fixed stop.

2. A gage including an oscillatory rod extending from the saw position, a plurality of stops loosely mounted on said rod, a set screw for clamping the stop nearest the saw position on said rod when adjusted, and a collar adapted to be clamped on said rod in an adjustable position adjacent the other stop and having a lug thereon adapted to engage and cause a revoluble movement of the stop adjacent thereto after a partial revolution of the rod from the normal position.

3. A saw gage including an oscillatory rod extending from the saw position, a plurality of stops thereon, means for adjustably securing the stop nearest the saw position on said rod and the other stop or stops being loosely mounted on said rod, a projection adapted to be slidable and rotatable on said rod for engaging and actuating each loosely mounted stop as the rod is turned, and means for securing each projection in adjusted position on said rod, said projections being adjusted in position relatively to each other so as to cause the loosely mounted stops to be actuated in succession after the movement of the fixed stop.

4. A saw gage including a main stop, mans for determining the position of said main stop, and one or more preceding stops adapted to be set by said main stop.

5. A saw gage including a gage bar, a main stop slidable thereon, means coöperating with the gage bar for setting said main stop, a rod parallel with said gage bar, one or more stops carried by said rod, and means carried by said last-mentioned stops for engaging the main stop whereby the same may be set.

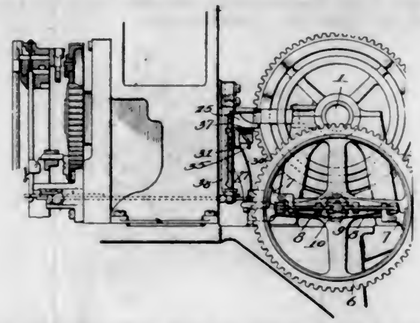
[Claims 6 to 14 not printed in the Gazette.]

1,194,937. STOP MECHANISM FOR LINOTYPE-MACHINES. WILLIAM E. BERTRAM, Brooklyn, N. Y., assignor to Intertype Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 13, 1912. Serial No. 720,293. (Cl. 74—46.)

1. In a linotype machine, the combination of a main cam shaft, a driving clutch therefor, a member carried by the cam shaft for disengaging the clutch and arresting rotation of the cam shaft, and a locking device interposed between said member and the clutch for positively locking the clutch in disengaged condition and permitting retrograde rotation of the cam shaft.

2. In a linotype machine, the combination of a main cam shaft, a driving clutch therefor, means carried by the cam shaft for disengaging the clutch and arresting rotation of the cam shaft, and automatic means independent of the cam shaft for positively holding the clutch in disengaged condition.

3. In a linotype machine, the combination of a main cam shaft, a driving clutch therefor, means carried by the cam shaft for disengaging the clutch, and a lock operated automatically by said means to positively disengage the clutch and to hold the same in disengaged condition independently of the cam shaft.

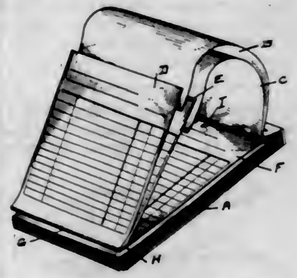


4. In a linotype machine, the combination of a main cam shaft, a driving clutch therefor having a spring for engaging it, means carried by the cam shaft for disengaging the clutch, and a device movable in opposition to the action of the clutch spring to yieldably arrest said means on the cam shaft and operative to disengage the clutch and lock the same in disengaged condition.

5. In a linotype machine, the combination of a main cam shaft, a driving clutch therefor, a member carried by the cam shaft to control the clutch, and a toggle movable by said member into a position to disengage the clutch and to lock the clutch in disengaged position.

[Claims 6 and 7 not printed in the Gazette.]

1,194,938. MANIFOLDING SALES-BOOK. WILBERT STEVENS BIRDSALL, Brooklyn, N. Y. Filed July 14, 1915. Serial No. 39,931. (Cl. 11—23.)

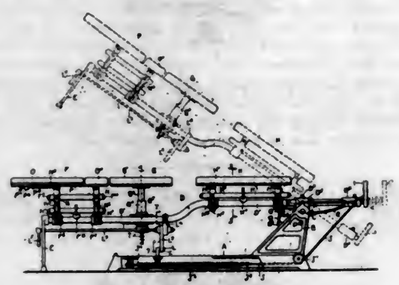


A triplicate salesbook comprising a series of sets of leaves, each set consisting of an original and duplicate formed of an integral sheet of paper folded and pasted at its fold to the free end of the third leaf which is perforated to form a stub, said stubs being fastened together, and carbon sheets attached to the pile of stubs for insertion between the leaves.

1,194,939. CHIROPRACTIC-TABLE. EDWARD BISHOP, Endicott, N. Y. Filed Sept. 28, 1915. Serial No. 53,050. (Cl. 128—16.)

1. A table of the class described, comprising a table frame, a head and chest rest having a base, cushions adjustable transversely on the base toward and from each other, a leg rest, an abdominal rest and a foot rest, the said several rests being held lengthwise adjustable on the said frame.

2. A table of the class described, provided with a table frame having tubular side beams, a head and chest rest having depending slotted arms, a carriage mounted to slide lengthwise on the said side beams, cross bars fixed on the carriage and extending through said slotted arms, and a clamping device including cam levers fulcrumed on the ends of said cross bars for adjustably connecting the said slotted arms with the said carriage to raise or lower the head rest.



3. A table of the class described provided with a head and chest rest having cushions, comprising a base, cushions mounted to slide transversely on the base, and manually controlled means connected with the cushions for moving the cushions toward or from each other to form a space between the said cushions.

4. A table of the class described, provided with a head and chest rest, comprising a base, cushions mounted to slide transversely on the said base, links pivotally connected with the said cushions and guided transversely on the said base, and a rod slidable lengthwise on the base and pivotally connected with the said links.

5. A table of the class described provided with a head and chest rest having cushions, the bottoms of which are of rigid material, a dovetail tongue extending transversely of the table and on which the cushions are mounted to slide transversely, pins engaging the bottoms of the cushions and extending through transverse slots formed in the table, links connected with the said pins and pivotally connected with each other, and a rod provided with a handle and mounted to slide lengthwise in a bearing on the underside of the table, the rod engaging the pivot of said links.

[Claims 6 to 28 not printed in the Gazette.]

1,194,940. MAGNETIC TREATMENT OF METALS. FREDERIC L. BISHOP, Pittsburgh, Pa. Filed Jan. 2, 1914. Serial No. 809,831. (Cl. 148—10.)

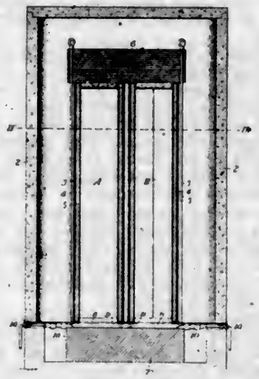
1. The herein described method of treating metal to alter its molecular structure, which consists in heating the metal above its recalescence point and subjecting it to the action of the magnetic field produced by an alternating current while being heated; substantially as described.

2. The method of treating metal to alter its molecular structure, which comprises cooling the metal from a point above its recalescence point and subjecting it to the action of a magnetic field of an alternating current while cooling; substantially as described.

3. The method of treating metal to alter its molecular structure, which consists in heating the metal and at the same time subjecting it to the action of a varying magnetic field, and utilizing the changes in the magnetic properties of the metal during the treatment to automatically control the current producing such field; substantially as described.

4. The method of treating metal to alter its molecular structure, which comprises subjecting the metal to the action of the magnetic field produced by an alternating current, and heating the metal through its recalescence point by the action of such field and while the metal is subject thereto; substantially as described.

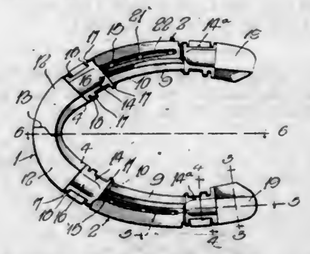
5. The method of treating metal to alter its molecular structure, which comprises subjecting the metal to the action of the magnetic field produced by an alternating current, heating the metal through its recalescence point



by the action of such field on the metal and while the metal is subject thereto, and causing the changes in the magnetic properties of the metal under treatment to automatically control the current producing said field; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,194,941. HORSESHOE. JOHN BOSCO, New York, N. Y. Filed Feb. 3, 1916. Serial No. 75,998. (Cl. 168—35.)



1. A horseshoe having substantially parallel longitudinally disposed undercut ribs at the front and rear ends of its arms on the lower side thereof, front and rear calks having undercut ribs received snugly between the aforesaid ribs and removable by movement toward the inner ends thereof, abutments on the lower sides of said arms spaced from the aforesaid calks, and calk retaining members received snugly between said abutments and calks.

2. A horse shoe having substantially parallel longitudinally disposed ribs at the front and rear ends of its arms on the lower side thereof, said ribs being undercut on their inner sides and on their inner ends, front and rear calks having undercut ribs received snugly between the first named ribs, undercut abutments on the arms of the shoe spaced from the undercut ends of said first named ribs, and calk retaining members received snugly between the latter and the abutments and having beveled portions engaging the undercuts thereof.

3. A horseshoe having a horizontally extending enlargement depending from one of its ends and formed with an undercut end disposed transversely of the shoe, said enlargement having a channel formed therein opening only through said undercut end and through the lower side of said enlargement, said channel being formed with undercut side walls, a calk having an undercut rib received snugly in said channel and terminating flush with the

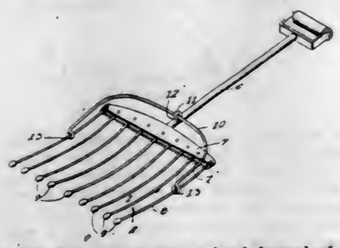
undercut end of said enlargement, an undercut abutment spaced from said end of the enlargement, and a calk retaining plate received snugly between said end and said abutment and having beveled edges engaging the undercuts thereof, said plate having an end bent laterally into engagement with the edge of the shoe to prevent removal of said plate.

4. A horseshoe having a horizontally extending enlargement depending from one of its ends and formed with an undercut end disposed transversely of the shoe, said enlargement having a channel formed therein opening only through said undercut end and through the lower side of said enlargement, said channel being formed with undercut side walls, a calk having an undercut rib received snugly in said channel and terminating flush with the undercut end of said enlargement, an undercut abutment spaced from said end of the enlargement, and a calk retaining plate received snugly between said end and said abutment and having beveled edges engaging the undercuts thereof, said plate having fingers at its ends bent laterally into engagement with opposite edges of the shoe to prevent removal of said plate.

5. A horseshoe having a horizontally extending enlargement depending from one of its ends and formed with an undercut end disposed transversely of the shoe, said enlargement having a channel formed therein opening only through said undercut end and through the lower side of said enlargement, said channel being formed with undercut side walls, a calk having an undercut rib received snugly in said channel and terminating flush with the undercut end of said enlargement, an undercut abutment spaced from said end of the enlargement, a calk retaining plate received snugly between said end and said abutment and having beveled edges engaging the undercuts thereof, fingers on the ends of said plate bent laterally into engagement with the edges of the shoe to prevent removal of said plate, and a bracing rib formed integrally with the lower side of said plate and bearing against the calk.

[Claim 6 not printed in the Gazette.]

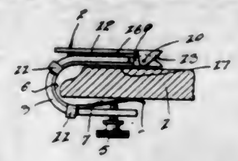
1,194,942. AGRICULTURAL IMPLEMENT. ANNA C. BRISACK, Hensonville, N. Y. Filed Mar. 22, 1915. Serial No. 16,132. (Cl. 55—28.)



In an agricultural implement, a head formed of a pair of parallel spaced plates, a plurality of tines having their inner ends positioned between and secured to said head plates, a handle secured to said head, egg-shaped enlargements formed integrally with the free ends of said tines, an eye bolt secured to said handle, a substantially U-shaped guard rail having its bight portion extending through said eye bolt, the ends of said guard rail coiled about the outermost of said tines substantially equidistant of the ends of the tines.

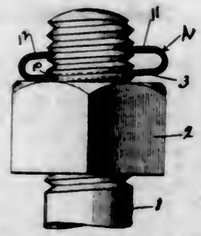
1,194,943. CLAMP. ANDREW J. BROLING, Chicago, Ill. Filed May 19, 1914. Serial No. 839,549. (Cl. 24—81.)

A clamp comprising a rigid U-shaped body including spaced parallel arms, a U-shaped spring engaged in the rigid U-shaped member and including a pair of spaced parallel members, means carried by one of the arms of the body for forcing the adjacent spring member into engagement with a support to secure the clamp thereon, the free end of the other member of the spring extending beyond the other arms of the body, upstanding ears formed on the extended end of the spring member outwardly of the adjacent end of the U-shaped body, a clamping plate, a pin pivotally securing said clamping plate to



said ears, and a U-shaped spring confined between said pin and the adjacent end of the rigid U-shaped member for yieldably holding the clamping plate in engagement with the adjacent arm of the rigid U-shaped body.

1,194,944. NUT-LOCK. JAMES HOYT BROWN, Denver, Colo. Filed Dec. 31, 1915. Serial No. 69,576. (Cl. 151—30.)

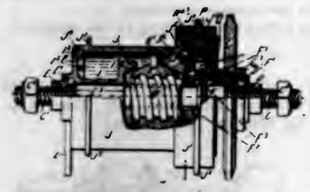


1. The combination with a threaded bolt and a nut or other body mounted thereon and having a flat upper face extending at right angles to the bolt, of a nut lock comprising a body portion having a continuous flat surface to be turned against the flat surface of the nut or the like, thus tending to move the flat surfaces into approximate parallelism with each other when the device is turned home, said nut lock body having a substantially circular non-threaded opening therein with a continuous unbroken edge located normally in a plane parallel with the flat surface of the said body, said edge being narrow enough to fit into the groove of the bolt around substantially three-quarters of its circumference the remaining quarter of said edge crossing one of the bolt threads in a diagonal direction sufficiently close to hold the other three-quarters of the edge in place within the thread groove.

2. The combination with a threaded bolt and a nut or other body mounted thereon and having a flat upper face extending at right angles to the bolt, of a nut lock comprising a body portion having a continuous flat surface to be turned against the flat surface of the nut or the like, thus tending to move said flat surfaces into approximate parallelism with each other when the device is turned home, said nut lock body having a substantially circular non-threaded opening therein with a continuous unbroken edge located normally in a plane parallel with the flat surface of said body, said edge being narrow enough to fit into the groove of the bolt around substantially three-quarters of its circumference, the remaining quarter of said edge crossing one of the bolt threads in a diagonal direction sufficiently close to hold the other three-quarters of the edge in place within the thread groove, said nut lock body having a slightly resilient arm extending therefrom and engaging the bolt thread, the tension of said arm being altered when the angle of said body portion is changed by screwing it home against the nut or other body.

3. The combination with a threaded bolt and a nut or other body mounted thereon and having a flat upper face extending at right angles to the bolt, of a nut lock comprising a body portion having a continuous flat surface to be turned against the flat surface of the nut or the like, thus tending to move the flat surfaces into approximate parallelism with each other when the device is turned home, said nut lock body having a substantially circular non-threaded opening therein with a continuous unbroken edge located normally in a plane parallel with the flat surface of said body, said edge being narrow enough to fit into the groove of the bolt around substantially three-quarters of its circumference, the remaining quarter of said edge crossing one of the bolt threads in a diagonal direction sufficiently close to hold the other three-quarters of the edge in place within the groove, said body having a plurality of slightly resilient arms extending therefrom and engaging the bolt thread, the tension of said arms being altered when the angle of said body is changed by screwing it home, the continuous unbroken edge of said opening in the nut lock body being brought down substantially to a knife edge.

1,194,945. BICYCLE-GEARING. WILLIAM GEORGE BRYAN and PERCIVAL BERNARD SHEATHER, Sydney, New South Wales, Australia. Filed Feb. 10, 1913. Serial No. 747,362. (Cl. 208—57.)



1. In a bicycle wheel-hub mechanism, in combination with a fixed axle, a hub-casing having an enlarged annular part, presenting inwardly a driving face and an annular externally presented brake face, concentric with said annular part but of smaller diameter, a disk having a face channeled in eccentric convolutions, a slide carrying disk parallel and contiguous to said channeled disk and part and provided with a face provided with radial slots, also with a tubular, externally screw-threaded extension surrounding said axle, means for turning said channeled disk forward or backward at will, slides movable radially in said radial slots and provided with lugs engaging the channeled convolutions of the other disk to permit the operation of the said slides by the latter, each of said slides carrying a drive block arranged to bear against said driving face of the hub-casing as the slide moves radially outward and a brake block arranged to bear against said brake face of the hub-casing as the slide moves radially inward, a frictionally retarded nut traveling toward or from said disks at will on said screw-threaded extension of said slide-carrying disk, a friction-face fixed against turning on said axle and arranged for contact with said nut at the end of its travel away from said disks, the said hub-casing being also provided with a friction face for contact with said nut at the end of its travel toward said disks and the latter being free to turn together when said nut is not in contact with either of said friction faces, but the slide carrying disk being held by such contact and the channeled disk being then free to turn independently for actuating said drive blocks or said brake blocks as this disk is driven forward or backward.

2. In a bicycle wheel-hub mechanism, in combination with a fixed axle, a hub-casting having an enlarged annular part presenting inwardly a driving face, and an externally presented brake face concentric with said annular part but of smaller diameter and a conoidal friction face, a disk having a face channeled in eccentric convolutions, a slide-carrying disk parallel and contiguous to said channeled disk and provided with a face having radial slots, also with an externally screw-threaded extension surrounding said axle, means for turning said channeled disk forward or backward at will, slides movable radially in said slots and provided with lugs which engage the channeled convolutions of the other disk to permit the operation of said slides by the latter, each of said slides carrying a drive block and a brake block, the former block being arranged to bear against the said drive face of the hub-casing when said slide moves radially outward and the said brake block being arranged to bear against said brake face when the said slide moves radially inward, a frictionally retarded nut having two conoidal faces presented in opposite directions and traveling toward or from said disks at will on said screw-threaded extension of the slide carrying disk, a conoidal friction face fixed against turning and arranged for contact with the corresponding face of said nut at the end of the travel of the latter away from said disks, the other conoidal face of said nut being similarly engaged by the said friction face on the hub-casing substantially as and for the purpose set forth.

3. In bicycle wheel-hub mechanism, in combination with a fixed axle, a hub-casing provided with a driving face, a brake face and an additional friction face, a pair of contiguous disks, one of which is channeled in eccentric convolutions, the other disk being radially slotted and provided with a screw-threaded tubular extension concentric with said axle, slides movable radially in said slots bearing driving blocks and brake blocks and provided with lugs, which enter the convoluted channel or channels of the other disk, in order that the latter may operate said slides, the blocks being arranged to engage said driving face of the hub-casing when the said slides move radially in one direction and the brake blocks being arranged to engage the said brake face when the said slides move radially in the other direction, means for turning said channeled disk forward or backward as desired, a nut traveling toward or from said disks at will on said screw-threaded extension of said slide-carrying disk and arranged to engage said friction face at the end of its travel toward said disks, a spring carried by said nut bearing against said hub-casing and serving to keep said nut from turning with said extension and a fixed friction face arranged for contact with said nut at the end of its travel away from said disks.

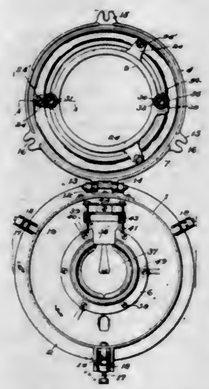
4. In bicycle wheel-hub mechanism, in combination with a fixed axle, a hub-casing provided with a driving face and a brake face, a pair of contiguous disks, one of which is channeled in eccentric convolutions, the other disk being provided with radial slots and with a screw-threaded tubular extension concentric with said axle, means for turning said channeled disk forward or backward at will, slides movable radially in said slots, provided with lugs engaging said channeled convolutions and bearing driving blocks and brake blocks for coöperation with said driving face or brake face as the slides are moved outwardly or inwardly in said slots, a frictionally retarded nut traveling on said screw-threaded tubular extension toward or from said disks, friction faces for contact with said nut at each end of its travel, to hold said slide-carrying disk against turning, a locking slide movable in one of said radial slots and engaging one of the channeled convolutions of the other disks and a fixed device arranged to be engaged by said locking slide when the latter has been moved into its innermost position, the final part of the channeled convolution engaged by said locking slide being concentric so that the channeled disk may turn briefly without affecting this slide after the innermost position has been attained.

5. In bicycle wheel-hub mechanism, in combination with a fixed axle, a hub-casing provided with a driving face, a brake face and an additional friction face, a pair of contiguous disks, one of which is channeled in eccentric convolutions, the other disk being provided with radial slots and a screw-threaded tubular extension concentric with said axle, slides movable radially in said slots and provided with lugs engaging the channeled convolutions of the other disk, also bearing driving blocks and brake blocks for coöperation with said driving face or brake face as the slides are moved outwardly or inwardly in said slots, a frictionally retarded nut traveling on said screw-threaded extension toward or from said disks, the friction face above mentioned being arranged for contact

with said nut at the end of its travel toward said disks, a sleeve in contact with said casing and adjustable on said axle longitudinally of the latter for tightening this contact, but held against turning on said axle and bearing a friction face for contact with said nut at the end of the travel of the latter away from said disks, means for adjusting this friction face toward said disks and casing and means for turning the said channeled disk backward or forward at will.

[Claim 6 not printed in the Gazette.]

1,194,946. HEADLIGHT. FRANK BUCHANAN, Syracuse, N. Y. Filed Jan. 23, 1915. Serial No. 4,047. (Cl. 240—41.)



1. A headlight comprising a lens support, and means for detachably securing the lens to the support comprising an element pivoted to the support at one side of the lens and movable in a direction crosswise of the face of the lens and having a latch at a point opposite its pivot, and holding means associated with the support and located in position to receive the latch which is movable into and out of detachable engagement therewith, substantially as and for the purpose set forth.

2. A headlight comprising a casing, a lens, and means for supporting the lens including a frame element having an annular face, a ring opposed to the annular face, the lens having its margin interposed between the ring and the annular face, and the ring being pivoted to the frame element by a pivot extending transversely of the frame element whereby the ring moves about its pivot in a direction parallel to said annular face, and securing means for the ring including a holding part associated with the frame element and a latch associated with the ring, substantially as and for the purpose described.

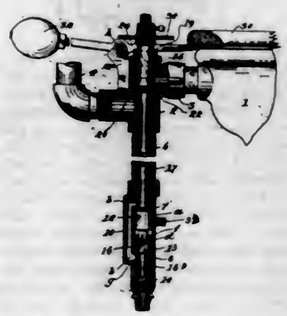
3. A headlight comprising a casing, a lens, and means for supporting the lens comprising a frame element, a ring opposed to the frame element, the lens having a marginal flange extending between the frame element and the ring, and securing means having a part thereof extending through the ring into the support across the edge of said margin, a part of said securing means being a latch having an open ended slot and another part of said securing means having a pin associated with the support and extending through the slot when the ring is in its operative position, the pin having spring means associated therewith and co-acting with the latch to yieldingly press the ring toward the support, and the spring means being operable to relieve the latch of the tension of the spring means, substantially as and for the purpose specified.

4. A headlight comprising a casing, a lens, and means supporting the lens comprising a frame element, having an opening in which the lens is mounted, a ring opposed to the frame element, the lens having a marginal flange extending between the frame element and the ring, and spring means acting on the ring to press the same toward the frame element, the spring means including a pin extending transversely through the ring and into the frame element and having a head at its outer end, a cup slidably mounted on the pin and pressing against the ring, and a spring located in the cup and pressing at one end against the head and at its other end against the bottom of the cup, substantially as and for the purpose set forth.

5. A headlight comprising a casing, a lens, and means for supporting the lens comprising a frame element having an opening in which the lens is mounted, a ring opposed to the frame element, the lens having a marginal flange extending between the frame element and the ring, and spring means acting on the ring to press the same toward the frame element, the spring means comprising a pin extending transversely through the ring and into the frame element, the pin having a head at its outer end, a sleeve encircling the pin and abutting against the head at one end and being secured at its other end to the ring, a cup encircling the sleeve and being open at its outer end, and a spring encircling the sleeve within the cup and bearing at its outer end against the head and at its inner end against the bottom of the cup, substantially as and for the purpose described.

[Claims 6 to 11 not printed in the Gazette.]

1,194,947. NON-FREEZING WATER-CLOSET. GEORGE W. BUMGARNER, Baltimore, Md. Filed Aug. 14, 1914. Serial No. 856,714. (Cl. 4—28.)



1. In a water closet apparatus, a bowl, a shell which is open to the bowl and provided with a nozzle leading to a flushing tank, an annular valve seat and a valve therefor in the shell situated above the said nozzle, a valve chamber adapted for the admission thereto of service water, the same having a drain aperture; an annular detachable service water valve seat which is screwed into the valve chamber, the same being provided with an upwardly extending sleeve of polygonal cross-section, a piston in the chamber to control the drain aperture, and an upwardly closing service water valve having a stem which connects it with the piston, the portion of the said stem which is within the polygonal sleeve being polygonal in order that in its rotation it will screw or unscrew the valve seat into or from the chamber, combined with a rod which unites the piston with the valve in the shell, and serves for turning the same, substantially as, and for the purpose specified.

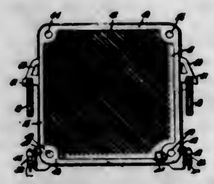
2. In a water closet apparatus, flushing mechanism including a pipe, a water supply in communication with one end thereof, a valve stem, an upwardly closing valve mounted thereon and controlling said water supply, a bushing furnishing a seat for said valve and threaded in said pipe, a bowl and a reservoir, a second valve on said stem for governing the bowl connection, and means on said stem and for engagement with said bushing to unscrew the latter.

1,194,948. POISON-INDICATOR. JAMES BURCH, McKeesport, Pa. Filed Sept. 1, 1915. Serial No. 48,507. (Cl. 215—118.)



In combination a stopper for bottles, a poison indicator formed of a single piece of material and comprising a ring having its outer peripheral edge serrated, a bridge piece extending diametrically of the ring and having its medial portion enlarged, the edges of the enlarged portion being concentric with said ring and a pin extending through the axial center of said enlarged portion and into said stopper.

1,194,949. FILTER. CHARLES D. BURCHENAL, New York, N. Y. Filed Mar. 10, 1916. Serial No. 83,280. (Cl. 210—13.)



1. A filter, comprising alternating cells and plates and filtering mediums between them, the cells and plates being provided with a longitudinal supply passage opening into all the cells, and the cells and plates being provided at opposite sides with longitudinal outlet passages, each plate being connected at one face with the outlet passage on one side of the filter and each plate having its other face connected with the outlet passage on the other side of the filter.

2. A filter, comprising alternating cells and plates and filtering mediums between them, the cells and plates being provided with a longitudinal supply passage opening into all the cells and the cells and plates being provided at opposite sides with longitudinal outlet passages, each plate being connected at one face with the outlet passage on one side of the filter and each plate having its other face connected with the outlet passage on the other side of the filter, and a valve in each connection between a face of a plate and the corresponding outlet passage to permit of closing such face to the outlet passage.

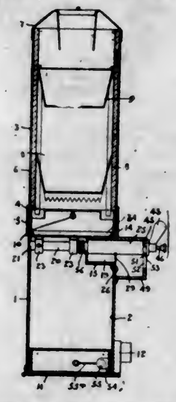
3. A filter, comprising alternating cells and plates and filtering mediums between them, the cells and plates being provided with a longitudinal supply passage opening into all the cells and the cells and plates being provided at opposite sides with longitudinal outlet passages, and exterior connections at opposite sides of the filter and of which a connection at one side of the filter connects the outlet passage at this side of the filter with one face of a corresponding plate, and a connection at the other side of the filter connects the outlet passage at this other side of the filter with the other face of the same plate.

4. A filter, comprising alternating cells and plates and filtering mediums between them, the cells and plates being provided with a longitudinal supply passage opening into all the cells and the cells and plates being provided at opposite sides with longitudinal outlet passages, and exterior connections at opposite sides of the filter and of which a connection at one side of the filter connects the outlet passage at this side of the filter with one face of a corresponding plate, and a connection at the other side of the filter connects the outlet passage at this other side of the filter with the other face of the same plate, each of the said connections having a sight glass and a valve.

5. A filter provided with a plate having ribs on both faces, longitudinally extending outlet passages formed in the plate at the sides thereof, and transversely extending outlet openings, of which one leads from one face of the plate and is connected with the adjacent outlet passage and the other outlet opening leads from the other face of the plate and connects with the other outlet passage.

[Claims 6 to 11 not printed in the Gazette.]

1,194,950. FARE-BOX. AUBREY A. BURROWS, Toronto, Ontario, Canada, assignor to Coleman Fare Box Co., Limited, Toronto, Canada, a Corporation. Filed May 13, 1915. Serial No. 27,794. (Cl. 232—15.)



1. A farebox, comprising, an outer casing, a removable cash box arranged within said casing and having a locking cover, forming a dumping platform to receive the fares, and means arranged in the outer casing adapted to unlock and operate the cover of said cash box.

2. A farebox, comprising, an outer casing, a removable cash box arranged within said casing and having a pivotal locking cover forming a dumping platform to receive the fares, and a key member adjustably and irremovably secured in said casing adapted to secure the cash box within the casing and unlock the cover and to operate said cover to deposit the fares in the box.

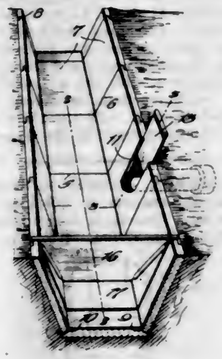
3. A farebox, comprising, an outer casing, a removable cash box arranged within said casing, a pivotal cover closing said cash box, means for automatically locking said cover when closed, a key member secured in said casing adapted to unlock said pivotal cover and means connected with said key member and extending beyond the outer casing adapted to be operated to swing said pivotal cover.

4. A farebox, comprising, an outer casing having transparent sides in the upper portion, a cash box removably secured in the lower portion and having its top visible through the transparent sides of said casing, a pivotal cover closing the top of said cash box, means extending from said casing adapted to swing said cover to deposit the fares in the cash box, and means for locking said pivotal cover in its closed position upon withdrawing the cash box.

5. A farebox, comprising, an outer casing, a removable cash box arranged within said casing, a cover pivotally arranged to close the top of said cash box, a rotatable lock member connected to said pivotal cover, and a rotatable key member engaging said rotatable lock member when the cash box is in place within the outer casing, said rotatable key member being adapted to be withdrawn from said lock member prior to the removal of the cash box.

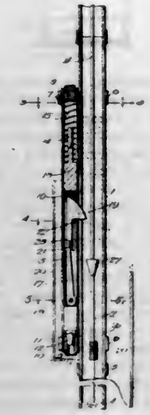
[Claims 6 to 14 not printed in the Gazette.]

1,194,951. IRRIGATING-DITCH. DOUGLAS H. BURTIS, Phoenix, Ariz. Filed Feb. 15, 1916. Serial No. 78,495. (Cl. 61—5.)



In combination, a sectional ditch lining, a metallic check gate of substantially triangular formation in cross section and including a base having a depending flange mounted between adjacent sections of said lining, and reinforcing sides for said gate engaging other sections of the lining.

1,194,952. TUBING-BLEEDER. GROVER C. BUSHONG, Maricopa, Cal. Filed Nov. 24, 1915. Serial No. 63,196. (Cl. 103—60.)



1. In combination with the pump casing and the pump rod, of an auxiliary casing clamped to the pump casing, said casings having registering longitudinally extending passages forming a communication between the casings, a valve seat threaded into the lower end of the auxiliary casing and having a tapering bore, a stem having guided movement in the auxiliary casing and provided with a tapering valve at its lower end for coöperating with the seat, a spring arranged between the stem and the upper end of the auxiliary casing and normally holding the valve on its seat, a latch member pivoted at its lower end to the stem and having a head at its upper end extending through the registering passages into the well casing, a spring pressing the upper end of the stem toward the well casing, said auxiliary casing having a cross pin for limiting the inward swinging movement of the upper end of the latch member, and for limiting the vertical movement of the stem, said stem having a vertical slot through which the cross pin extends, and the latch member having a shoulder for engaging over the cross pin when the valve is unseated to hold the valve open, and a cam sleeve on the pump rod, said sleeve and head having coöperating parallel surfaces perpendicular to the pump rod for engagement when the sleeve moves upward to lift the latch member and surfaces inclined to the axis of the rod for moving the latch member outwardly when the sleeve moves downwardly, said pump rod being sectional below the sleeve, and a union connecting the sections, said sections having threaded engagement with the union, and the engagement between the upper section and the union being a left hand thread.

2. In combination with the pump casing and the pump rod, of an auxiliary casing clamped to the pump casing, said casings having registering longitudinally extending passages forming a communication between the casings, a valve seat threaded into the lower end of the auxiliary casing and having a tapering bore, a stem having guided movement in the auxiliary casing and provided with a tapering valve at its lower end for coöperating with the seat, a spring arranged between the stem and the upper end of the auxiliary casing and normally holding the valve on its seat, a latch member pivoted at its lower end to the stem and having a head at its upper end extending through the registering passages into the well casing, a spring pressing the upper end of the stem toward the well casing, said auxiliary casing having a cross pin for limiting the inward swinging movement of the upper end of the latch member, and for limiting the vertical movement of the stem, said stem having a vertical slot through which the cross pin extends and the latch member having a shoulder for engaging over the cross pin when the valve is unseated to hold the valve open, and means in connection with the pump rod for engaging the head and lifting the stem when the rod is moved upward beyond a predetermined distance and for engaging the head and moving the latch member outward when the rod moves downward, said pump rod being sectional, and a union connecting the sections and having a left hand thread for engagement with one of the sections.

3. In combination with the pump casing and the pump rod, an auxiliary casing secured to the pump casing near the lower end thereof, said casings having registering longitudinally extending passages forming a communication between the casings, said auxiliary casing having an outlet port at its lower end, a stem fitting the auxiliary casing and movable vertically therein, and having a valve for coöperating with the port, a spring normally pressing the stem downward to close the valve, the pump rod being divided into sections near the auxiliary casing and below the same, a union connecting the sections, the upper section having a threaded engagement with the union, and the said threaded engagement being a left hand thread, a latch in connection with the stem, a spring normally pressing the latch through the passages into the pump casing, and means on the upper section for engaging the latch when the said upper section is moved beyond a predetermined distance to lift the stem to open the valve, said means and the latch having cam surfaces for moving the latch outward when the upper section of the pump rod moves downward.

4. In combination with the pump casing and the pump rod, an auxiliary casing secured to the pump casing near the lower end thereof, said casings having registering longitudinally extending passages forming a communication between the casings, said auxiliary casing having an outlet at its lower end, a stem fitting the auxiliary casing and movable vertically therein, and having a valve for coöperating with the port, a spring normally pressing the stem downward to close the valve, the pump rod being divided into sections near the auxiliary casing and below the same, a union connecting the sections, the upper section having a threaded engagement with the union, and the said threaded engagement being a left hand thread, said stem and the upper section of the pump rod having interengaging means for lifting the stem to open the valve when the upper section is moved above a predetermined height.

5. In combination with the pump casing and the pump rod, an auxiliary casing secured to the pump casing near the lower end thereof, said casings having registering longitudinally extending passages forming a communication between the casings, said auxiliary casing having an outlet port at its lower end, a stem fitting the auxiliary casing and movable vertically therein, and having a valve for coöperating with the port, a spring normally pressing the stem downward to close the valve, the pump rod being divided into sections near the auxiliary casing and below the same, a union connecting the sections, the upper section having a threaded engagement with the union, and the said threaded engagement being a left hand thread, a latch in connection with the stem, a spring normally pressing the latch through the passages into the pump casing, and means on the upper section for engaging the latch when the said upper section is moved beyond a predetermined distance to lift the stem to open the valve.

[Claims 6 to 9 not printed in the Gazette.]

1,194,953. GLOBE DRAFT-SHIELD. SILAS BYRD, Chilton, Tex. Filed Nov. 30, 1915. Serial No. 64,844. (Cl. 240—95.)



1. A device of the class described comprising a hollow frusto-conical body, an annular split flange carried thereby, adjustable means connecting the ends of said flange for drawing the latter together thereby constricting said flange, and means for preventing top draft into the globe.

2. A device of the class described comprising a hollow frusto-conical body, an annular split flange carried thereby, a yieldable connection between the opposite ends of said flange, means for adjusting the tension of said connection, and means for preventing top draft into the globe.

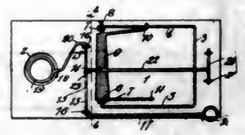
3. A device of the class described comprising a hollow frusto-conical body, an annular split flange carried thereby, means for supporting said body upon the globe, and limiting the downward movement of the body thereon, a yieldable connection between the opposite ends of said flange, means for adjusting the tension of said connection, and means for preventing the top draft into the globe.

4. A device of the class described comprising a hollow frusto-conical body, an annular split flange carried thereby, a lug carried by the opposite ends of said flange, a spring having one end terminally secured to one of said lugs, a bolt secured to the opposite terminal of said spring and adjustably associated with the other of said lugs whereby to constrict said flange, and means for preventing top draft into the globe.

1,194,954. IMPALEMENT-TRAP. CLIFFORD H. CASEY, Minneapolis, Minn. Filed Feb. 9, 1916. Serial No. 77,270. (Cl. 43—21.)

1. The combination with a trap having a pivoted impalement jaw and a holding member for said jaw, of a catch member formed of a single strand of wire having a transverse bearing portion offset to provide a portion for engagement with the holding member, the opposite extremities of said strand being arranged in right-angular relation to said bearing portion, and formed to provide a bait holder and setting arm respectively.

2. In a trap, a gripping jaw, a holding arm therefor, said arm being pivoted whereby to prevent its lateral displacement, holding and tripping means for the trap



formed of a strand of wire having a setting arm and a bait holder on the extremities thereof, and a catch member formed on the intermediate portion of the strand for engagement with the holding arm to set the trap.

1,194,955. SHOE. GEORGE CASHMORE, Alameda, Cal. Filed May 16, 1916. Serial No. 97,868. (Cl. 36—50.)



1. A shoe having the customary front opening and fastening means therefor, said shoe having an auxiliary opening in front and rear, and fastening means for the auxiliary openings, including means for releasing simultaneously the fastening means of the front and rear auxiliary openings by a pull on the last mentioned means.

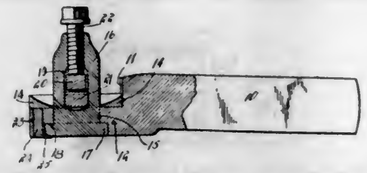
2. A shoe having the customary front opening and fastening means therefor, said shoe having an auxiliary front opening extending along the customary front opening and a rear opening, eyelets at the front and rear auxiliary openings, a member along said auxiliary openings, and a lace engaging the eyelets and looping about the said member, said loops being so formed that the said member may be pulled out of the loops permitting the loops to slip through the eyelets.

3. A shoe having the customary front opening and fastening means therefor, said shoe having an auxiliary front opening extending along the customary opening and a rear auxiliary opening, eyelets at the edges of the auxiliary openings, a cord over the eyelets on one side of the auxiliary openings, a portion of said cord extending along the top of the shoe and constituting a grip, and a lace threaded through the eyelets and looped over the cord so that said cord may be pulled out through the loops permitting the loops to slip through the eyelets over which the cord lies, whereby the portion of the shoe between the auxiliary openings is freed, substantially as and for the purpose set forth.

1,194,956. TOOL-HOLDER. JAMES CHISHOLM, Lyons, Colo. Filed Apr. 4, 1916. Serial No. 88,886. (Cl. 29—98.)

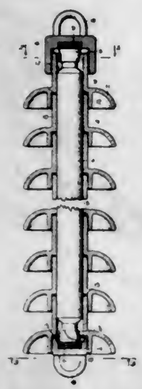
A tool holder comprising an arm having a horizontally disposed and circular head on one end, a tool post disposed vertically through and rotatable in the head, said post having a flanged head on the lower end which is countersunk into the lower face of the first-named head, an opening being formed vertically in the first-named head, and a

pin secured in said opening and having a head extending beneath the head of the post whereby the post is prevented



from downward movement while at the same time it is permitted free rotary movement within the head of the holder.

1,194,957. INSULATOR. HARRY HAMILTON COCHRANE, Butte, Mont. Filed Apr. 21, 1915. Serial No. 22,831. (Cl. 173—318.)



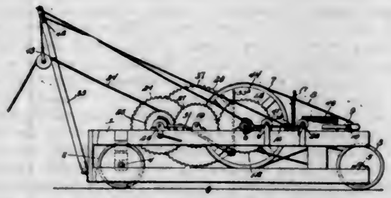
1. An insulator comprising an insulator rod, metallic cups crimped to the ends of the rod, tubular insulating sections engaging the rod, metallic caps in threaded engagement with the cups, insulating gaskets intermediate the tubular sections, and means cementing the sections to one another and to the caps, substantially as and for the purpose set forth.

2. In an insulator, a wooden rod impregnated with an insulating compound and forming the core, tubular insulating sections fitting snugly on to the rod, each of said sections having a petticoat and an annular collar within the petticoat adapted to accommodate the end of the succeeding section, an insulating gasket within the annular collar, metallic cups crimped to the ends of the rod, metallic caps in threaded engagement with the cups and in engagement with the adjacent tubular sections, and means sealing the connection between the engaging sections and the sections engaging the caps.

1,194,958. LAND-CLEARING MACHINE. ROBERT H. COLLAR, Northome, Minn. Filed June 5, 1914. Serial No. 843,247. (Cl. 212—39.)

1. In a machine of the character specified, the combination of a drum, means for imparting movement thereto, a cable adapted to wind upon such drum, a sheave pulley for such cable to pass over, a crane supporting the sheave pulley, and means for adjusting the outer end of the crane up or down or laterally to move the sheave pulley into the required position.

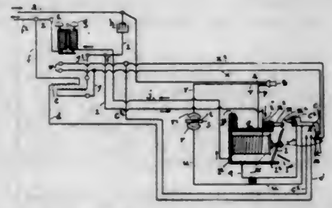
2. In a machine of the character described, the combination of a drum, means for imparting movement thereto, a cable adapted to wind on such drum, a pulley over which said cable is guided, a second cable supporting the pulley, a windlass with which the second cable is connected, a pulley over which the second cable is guided, and a crane supporting the last mentioned pulley.



3. In a machine of the character described, the combination of a drum, means for imparting movement thereto, a cable adapted to wind on such drum, a pulley over which said cable is guided, a second cable supporting the pulley, a windlass with which the second cable is connected, a pulley over which the second cable is guided, and a crane supporting the last mentioned pulley, in combination with ropes terminally connected at one end with opposite sides of the crane, and windlasses on which said ropes are independently wound to provide for lateral adjustment of the crane.

4. In a machine of the character described, the combination of a drum, means for imparting movement thereto, a cable adapted to wind on such drum, a pulley over which said cable is guided, a second cable supporting the pulley, a windlass with which the second cable is connected, a pulley over which the second cable is guided, and a crane supporting the last mentioned pulley, in combination with ropes terminally connected at one end with opposite sides of the crane, and windlasses on which said ropes are independently wound to provide for lateral adjustment of the crane, and an independent windlass and rope, the latter being terminally connected with the top of the crane to effect vertical adjustment thereof.

1,194,959. TELEPHONE INSTRUMENT. ARTHUR LLEWELLYN COTTON, Brunswick, and JOHN STANLEY WICKING, Oakleigh, Victoria, Australia, assignors of one-third to George Garibaldi Turri, Melbourne, Australia. Filed May 10, 1915. Serial No. 27,178. (Cl. 179—81.)



1. A telephone instrument including a receiver and a transmitter in circuit with lead-in and lead-out line conductors, the transmitting circuit containing a circuit controller normally held open, but operable from exchange to close said transmitter circuit, means mechanically operating to positively lock said controller immediately upon its being moved to its closed position, and means actuated to release said locking means, for restoring said normally open transmitter circuit, as desired.

2. A telephone instrument including a receiver and a transmitter in circuit with lead-in and lead-out line conductors, the transmitting circuit containing a unitary operating circuit controller element, normally maintained open, means for closing said controller element from exchange, consisting of a circuit traversing the winding of a suitable electro-magnet, means independent of said electro-magnet for positively locking said element against displacement immediately upon its having been moved to its closed position, and means for releasing said locking means.

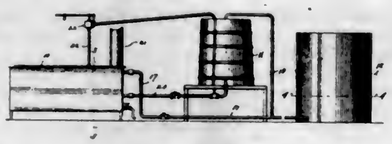
3. A telephone instrument including a receiver and a transmitter in circuit with lead-in and lead-out line conductors, the transmitter circuit containing a circuit controller normally held open, a ringing circuit independent of connections through the receiver or transmitter circuits, coöperating means actuating said controller, through said ringing circuit, to close said controller and transmitter circuit upon the first signaling impulse, means simultaneously operated to automatically and positively lock said controller when so actuated, and means for releasing said positive locking means.

4. A telephone instrument including a receiver and a transmitter in circuit with lead-in and lead-out line conductors, an electro-magnetic device, the windings of which are never directly or indirectly in circuit with the speaking lines of the instrument, and the armature of which functions as a circuit controller normally maintaining said transmitter circuit open, a ringing circuit traversing the winding of said electro-magnetic device, whereby said controller is actuated by the first ringing impulse current, and closes said transmitter circuit, means for positively holding said controller closed, independently of said electro-magnetic device, for setting the instrument for instant conversation, and means for releasing said controller, permitting same to return to its normal open position as desired.

5. A telephone instrument including a lead-in and a lead-out line conductor, a receiver in circuit with said conductors, a transmitter in line with one of said conductors, a transmitting circuit interrupter, comprising a pair of members insulated from each other and in respective electrical connection with said transmitter and the other of said line conductors, a controller element movably supported by one of said members in a position normally out of engagement with the other of said members, and locking means carried by the other said member and adapted to be automatically engaged by said controller element and positively hold the same against displacement when operated to close the transmitter circuit, means for actuating said controller element from exchange to close said transmitter circuit, and means for releasing said locking means as desired.

[Claims 6 to 12 not printed in the Gazette.]

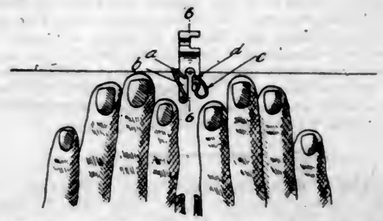
1,194,960. HEATING DEVICE. WILLIAM R. COVAN, New Lexington, Ohio. Filed Jan. 5, 1916. Serial No. 70,515. (Cl. 126—371.)



1. A water heating system for oil tanks comprising in combination, a water heater, an oil tank and a water tank, a coil in the bottom of said oil tank, a water reservoir in said heater, said reservoir subdividing the heater into upper and lower chambers, a heating element in the lower chamber, a coil in the upper chamber connected to said reservoir and the coil in the oil tank, and connections between said oil tank coil and said water tank and said reservoir and the water tank.

2. A water heating system for oil tanks, comprising in combination, a water heater, an oil tank and a water tank, a coil in the bottom of said oil tank, a water reservoir in said heater, a heating coil also in said heater and overlying said reservoir, said coil being connected to the latter, means connecting the outlet end of said coil with the coil in said water tank, means connecting the bottom of said water tank with said reservoir, and means connecting the outlet end of the oil tank coil with the top of said water tank.

1,194,961. GUARD FOR SEWING-MACHINES. WILLIAM CRANAGE, Walsall, England, assignor to John Shannon and Son, Limited, Walsall, county of Stafford, England. Filed June 1, 1915. Serial No. 31,464. (Cl. 112—29.)



1. A guard for sewing machines comprising a presser foot, provided with a plurality of toes, a needle path between said toes, a bow of wire with its extremities secured in the one toe of the presser foot on one side of the needle slot, and a second bow secured similarly to the other toe on the other side of the presser foot, both bows being situated in planes slightly inclined to the vertical and oppositely to each other and diverging from the front of the foot.

2. A guard for sewing machines comprising a presser foot having a plurality of toes with a needle path between them, a guard, upon said presser foot comprising two wire bows secured one upon each toe adjacent one another, and being situated in planes slightly inclined to the vertical and being near to each other at the front and diverging toward the rear to deflect the fingers of an operator to the sides of the needle path.

1,194,962. MECHANICAL DRIVE-BELT. JOHN CROWE, St. Joseph, Mo., assignor to Aniser Manufacturing Company, St. Joseph, Mo., a Corporation of Missouri. Filed May 1, 1916. Serial No. 94,718. (Cl. 74—64.)



1. A belt comprising a plurality of links each formed of a length of wire bent to rectangular shape, intermediate links connecting the first mentioned links and formed of strips of metal having their ends turned over the opposed sides of adjacent of said first links, and leather blocks placed one against each of the intermediate links, the ends of the last said links being buried in the blocks whereby to anchor the latter in position.

2. A belt comprising a plurality of links, alternate links being formed of strips of metal having their ends turned over and returned toward each other, and traction blocks placed against the alternate links, the ends of said alternate links being buried in the traction blocks, for anchoring the latter in place.

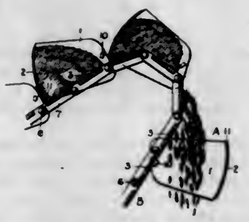
3. A flexible belt comprising a plurality of links, alternate links having their end portions turned over and returned toward each other, and blocks engaged each by the end portions of one of the alternate links.

4. A flexible belt having a plurality of alternating open and closed links and traction blocks carried by the closed links and extending at their ends beyond the lateral edges of the belt.

5. A belt comprising a plurality of links formed of wire lengths, the ends of the lengths being turned inward in convergent relation, intermediate links connecting the first mentioned links and formed of strips of metal having their ends turned over the opposite sides of the adjacent of said first links in such manner that the inturned ends of the first mentioned links are engaged by the intermediate links whereby elasticity is imparted to the belt.

[Claims 6 and 7 not printed in the Gazette.]

1,194,963. MEADOW-TRENCHING MACHINE. FRANK B. CURRIER, Elizabeth, N. J. Filed Mar. 5, 1915. Serial No. 12,252. (Cl. 37—24.)



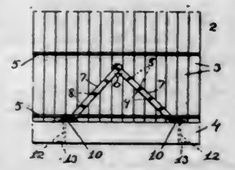
1. In a machine of the class described, the combination of an endless conveyer including a series of transverse slats hingedly connected together, a series of buckets hingedly connected at their forward edges to the conveyer and each bucket being associated with a plurality of slats, whereby the latter form a bottom for holding material as the conveyer moves upwardly, and means on each bucket whereby the latter swings forwardly and downwardly at the point where the lower flight of the conveyer begins, whereby the bucket frees itself from the material.

2. An endless conveyer composed of hingedly connected slats extending transversely to the length of the conveyer, buckets opened at the front and top and bottom and having only their front portions hingedly connected with the conveyer, whereby the slats form the bottoms of the buckets to support the weight of the material on the upper flight of the conveyer, and stop means for the buckets arranged to permit the latter to swing forwardly and downwardly and engage the conveyer to support the buckets in outstanding position with respect to the downward flight of the conveyer.

3. An endless conveyer composed of hingedly connected slats extending transversely to the length of the conveyer, buckets opened at the front and top and bottom and having only their front portions hingedly connected with the conveyer, whereby the slats form the bottom of the buckets to support the weight of the material on the upper flight of the conveyer, and stop means for the buckets arranged to permit the latter to swing forwardly and downwardly and engage the conveyer to support the buckets in outstanding position with respect to the downward flight of the conveyer, each bucket being of such size as to embrace a plurality of slats of the conveyer, whereby the slats arch upwardly into the buckets where the upper flight merges into the lower flight, to thereby loosen the material in the bucket preparatory to the outward and downward swing of the buckets.

1,194,964. SILO-ANCHOR. WILLIAM C. CURRY, Louisville, Ky., assignor of one-half to Alfred Struck Company, Louisville, Ky., a Corporation of Kentucky. Filed July 26, 1915. Serial No. 41,950. (Cl. 217—4.)

1. The combination with a silo having wooden staves and a concrete foundation, of a V-form anchor having oblique converging intersecting arcuate branches concentric with the silo wall, terminating substantially at their intersection and provided with perforations at intervals, securing means engaging said perforations and connecting the branches with said staves, and base locking means set in said foundation and engaging the lower ends of said branches.



2. The combination with a silo having wooden staves and a concrete foundation, of an inverted V-form anchor having oblique upwardly converging intersecting arcuate branches concentric with the silo wall, terminating substantially at their intersection and provided with perforations at intervals, securing means engaging said perforations, connecting said branches with said staves and connecting the branches together, and base locking bolts engaging the lower ends of said branches and having horizontally offset lower ends set in said foundation.

3. The combination with a silo having wooden staves and a concrete foundation, of a V-form anchor consisting of converging intersecting arcuate metal straps concentric with the silo wall and terminating substantially at their intersection, said straps having perforations at intervals and horizontally bent lower ends bearing against the top of said foundation; securing means engaging said perforations, connecting the straps with said staves and connecting said straps together, and base locking means engaging said lower ends of the straps and set in said foundation.

4. The combination with a silo having wooden staves and a concrete foundation, of an inverted V-form anchor consisting of upwardly converging intersecting arcuate metal straps concentric with the silo wall, terminating substantially at their intersection, said straps having perforations at intervals and horizontally bent lower ends bearing against the top of said foundation, securing means engaging said perforations, connecting the straps with successive staves and connecting the straps together, and base bolts engaging the lower ends of said straps and having horizontally offset lower ends set in said foundation.

1,194,965. FLUSHING DEVICE. CHARLES W. DARROW, Glenwood Springs, Colo. Filed Dec. 17, 1915. Serial No. 67,386. (Cl. 137—93.)



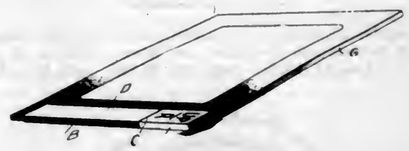
1. A flushing device including a casing, a packing nut mounted upon said casing and provided with an upwardly extending sleeve, a main valve located in the casing and having a push rod projecting through the casing, packing nut and sleeve of the latter and having its upper extremity threaded, a knob provided with a depending projection interiorly recessed, the walls of said recess being threaded to receive the upper extremity of the push rod, said projection normally extending into the sleeve of the packing nut, and a spiral spring surrounding said projection and push rod, its lower extremity engaging in a recess in the base of the chamber formed by said sleeve and its upper extremity adapted to engage in any one of a series of recesses in the said knob, for the purpose set forth.

2. A flushing device comprising a casing having a water chamber, an inlet, an outlet, the device having a port intermediate the inlet and outlet, a main valve for closing said port, said valve being in the form of a disk having a central opening forming communication between the inlet and outlet of the chamber, a packing nut mounted upon the casing and provided with an upwardly extending sleeve, a push rod extending into the casing through said sleeve and an opening in said nut and also projecting above the sleeve, the push rod having a valve upon its inner extremity formed integral therewith and adapted to normally close the opening in the main valve, a knob having a depending projection provided with a threaded recess to receive the exposed extremity of the push rod, said projection normally extending slightly into the said sleeve, a spiral spring surrounding the projection and push rod, its lower extremity entering a recess in the base of the chamber formed by the sleeve and its upper extremity adapted to engage in any one of a series of recesses formed in the knob, said spring normally acting through the auxiliary valve to return said auxiliary and main valves to their seats.

3. A flushing device comprising a casing having a water chamber, an inlet, an outlet, the device having a port intermediate the inlet and outlet, a main valve for closing said port, said valve being in the form of a disk having a central opening forming communication between the inlet and outlet of the chamber, a perforated cup inserted in said disk directly below said opening, a packing nut mounted upon the casing and provided with an upwardly extending sleeve, a push rod extending into the casing through said sleeve and an opening in said nut and also projecting above the sleeve, the push rod having a valve upon its inner extremity formed integral therewith and adapted to normally close the opening in the main valve, a knob having a depending projection provided with a threaded recess to receive the exposed extremity of the push rod, said projection normally extending slightly into the said sleeve, a spiral spring surrounding the projection and push rod, its lower extremity entering a recess in the base of the chamber formed by the sleeve and its upper extremity adapted to engage in any one of a series of recesses formed in the knob whereby the latter is locked against change of adjustment, said spring normally acting through the auxiliary valve to return said auxiliary and main valves to their seats.

4. A flushing device comprising a casing having a water chamber provided with an inlet, an outlet, and an intermediate port, a main valve for closing said port, said valve being in the form of a disk having a central opening forming communication between the inlet and outlet of the chamber independently of the said port, a push rod extending into the casing and projecting beyond the same, a valve applied to its inner extremity and adapted to close the opening in the main valve, a knob threaded on the exposed extremity of the push rod, a spiral spring surrounding the rod on the outside of the casing and normally acting through the auxiliary valve to return said auxiliary valve and the main valve to their seats, and hold the same in said position, the knob having a series of openings into any one of which the upper extremity of the spring may extend, the bearing which the lower extremity of the spring engages being provided with a single recess adapted to receive the adjacent extremity of the spring, whereby the knob is locked against change of adjustment, substantially as described.

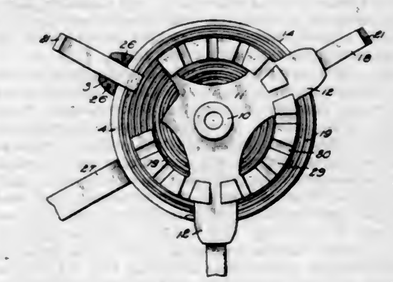
1,194,966. INDICATING-LABEL FOR LANTERN-SLIDES. ROY FRANCIS DAVIS, Chicago, Ill. Filed July 29, 1913. Serial No. 781,868. (Cl. 11—15.)



1. An indicating label for lantern slides having a transverse division stripe adjacent one end forming an indicating field at said end extending transversely across the label, and a longitudinal division stripe extending from said transverse stripe to the opposite end of the label and forming indicating fields at opposite sides of said longitudinal stripe, and an indicating mark in said transverse field at one corner of the label.

2. A rectangular label for lantern slides having a longitudinal stripe thereon contrasting in color with that of the face of the label, the said stripe extending from one end of the label and terminating short of the other end to form an indicating field at said end, and indicating fields at the opposite sides of the stripe, the said label being adapted to be folded and secured to opposite faces of the slide at one edge, with the stripe and the part of the indicating field in line with the end of the stripe showing at said edge, and an indicating mark in the portion of said field secured to one of the faces of the slide, the said indicating mark being in one corner of the label.

1,194,967. PNEUMATIC-TIRE-BUILDING APPARATUS. PETER DE MATTIA and BARTHOLD DE MATTIA, Clifton, N. J. Filed Sept. 23, 1915. Serial No. 52,177. (Cl. 154—9.)

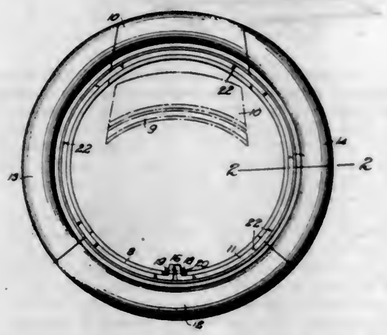


1. An apparatus as characterized comprising a rotary support, said support embodying a bracket arm; a rotary plate pivotally mounted on said arm and having guide members disposed radially thereto; a plurality of expansion bars slidably mounted on said plate in engagement with said guide members; a key plate superposed on said rotary plate, said key plate having a spiral member operatively engaging all of said bars for moving the same to and from the center of said rotary plate as said plate is rotated; and means mounted on said rotary plate for locking said bars in adjusted position.

2. An apparatus as characterized comprising, a rotary support, said support embodying a bracket arm; a rotary plate pivotally mounted on said arm and having guide members disposed radially thereto; a plurality of expansion bars slidably mounted on said plate in engagement with said guide members; a key plate superposed on said rotary plate, said key plate having a spiral member operatively engaging all of said bars for moving the same to and from the center of said rotary plate as said plate is rotated; and means mounted on said rotary plate for locking said bars in adjusted position, said means embody-

ing a plurality of caps fitting said guide members and clamping said bars on said rotary plate, and screw-threaded devices for forcing said caps in engagement with said bars.

1,194,968. PNEUMATIC-TIRE-BUILDING CORE. PETER DE MATTIA and BARTHOLD DE MATTIA, Clifton, N. J. Filed Oct. 19, 1915. Serial No. 56,725. (Cl. 18—45.)

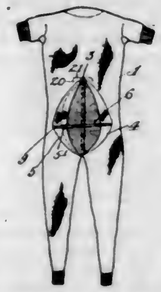


1. An apparatus as characterized, comprising a plurality of matched core sections, one of said sections being a key-section provided with outwardly-converging wedging ends, said sections forming an inwardly-extending base flange, said base flange provided with an annular channel having a straight side for alining said sections and an inclined side for adjusting said sections; a split ring shaped in cross section in correspondence with said channel; a plurality of brackets, each connected with one of the ends of said ring, said brackets being operatively united to form a rocking connection; and means engaging the said brackets intermediate said ring and the rocking connection of said brackets for rocking said brackets on their connection for contracting said ring.

2. An apparatus as characterized, comprising a plurality of matched core sections, one of said sections being a key-section provided with outwardly-converging wedging ends, said sections forming an inwardly-extending base flange, said base flange provided with an annular channel having a straight side for alining said sections and an inclined side for adjusting said sections; a split ring shaped in cross section in correspondence with said channel; a plurality of brackets, each connected with one of the ends of said ring, said brackets being operatively united to form a rocking connection; and means engaging the said brackets intermediate said ring and the rocking connection of said brackets for rocking said brackets on their connection to contract said ring, said means embodying alined perforations formed in said brackets, a bolt extending through said perforations, and a nut engaging said bolt.

3. An apparatus as characterized, comprising a plurality of matched core sections, one of said sections being a key-section provided with outwardly converging wedging ends, said sections forming an inwardly-extending base flange, said base flange provided with an annular channel having a straight side for alining said sections and an inclined side for adjusting said sections, said sections having a series of perforations opening into said channel; a split ring shaped in cross section in correspondence with said channel; a plurality of brackets, each connected with one of the ends of said ring, said brackets being operatively united to form a rocking connection; and means engaging the said brackets intermediate said ring and the rocking connection of said brackets for rocking said brackets on their connection to contract said ring, said means embodying alined perforations formed in said brackets, a bolt extending through said perforations, and a nut engaging said bolt.

1,194,969. GARMENT. GEORGE E. DICKSON, Chicago, Ill. Filed Nov. 25, 1914. Serial No. 874,026. (Cl. 2—144.)



1. A garment having a slit seat, overlapping flap portions for closing same and means connecting the flap portions and operating, when one flap is moved in one direction, to move the other in the opposite direction.

2. A garment having a slit seat, flap portions secured to the body of the garment and positioned to overlap and close the slit, means connecting the flap portions whereby movement of one flap in one direction moves the other flap in the opposite direction, and means for fastening one of the flaps in closed position.

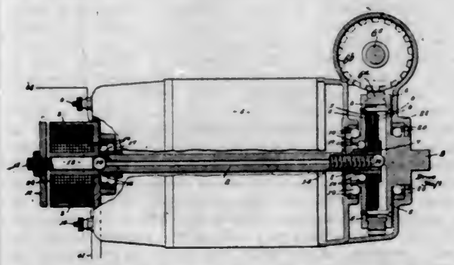
3. A garment having a slit seat, overlapping flap portions positioned to close the slit, means connecting the flaps whereby movement of one flap in one direction moves the other flap in the opposite direction and operating to hold one of the flaps in closed position when the other is secured in closed position.

4. A garment having a slit seat, overlapping flap portions closing same, means tying the flaps together and operating to move one flap in a direction opposite to that in which the other is moved, a fastening device on the body of the garment and means on one of the flaps for coacting therewith to hold the flap in closed position, the end of said tying means forming a reinforcement for the flap where it coacts with said fastening device on the body portion.

5. A garment having a slit seat therein, flap portions secured to the body portion and adapted to overlap to close the slit, an eye secured to the inner side of the body portion of the garment adjacent one of the flaps, a tie band threaded therethrough and having its end portions attached respectively to the edge portions of respective flaps.

[Claims 6 to 16 not printed in the Gazette.]

1,194,970. AUTOMATIC CONTROLLING SYSTEM FOR ELECTRIC GENERATORS. ALBERT E. DOMAN, Elbridge, N. Y., assignor to Dyneto Electric Co., Elbridge, N. Y. Filed Jan. 11, 1911. Serial No. 602,089. (Cl. 171—231.)

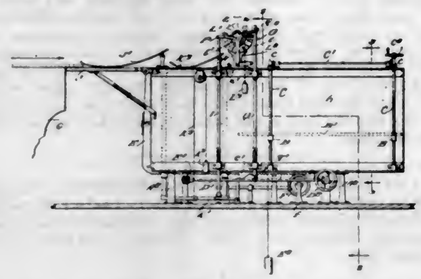


1. The combination of an electric generator including an armature shaft, a driving element, a friction clutch interposed between the driving element and the shaft, the clutch including a shiftable part, and governing means for controlling the operation of the friction including an electromagnetic coil connected across the terminals of the generator, an armature arranged to be acted upon by the field of said coil, means for transmitting the movement of the armature to the shiftable member of the clutch, a second electromagnetic coil arranged to act in opposition to the first coil, a storage battery and a load circuit adapted to be supplied by said generator, the load circuit being connected to the terminals of the generator through said second mentioned coil, and the storage battery being connected to the terminals of the generator independent of said coil, and an automatic cut out switch in the storage battery circuit.

2. The combination with a generator comprising an armature shaft shiftable axially, a driving element arranged coaxially with one end of the shaft, a friction clutch interposed between the driving element and the shaft and arranged coaxially with the shaft, the clutch comprising a part carried by the shaft and shiftable axially therewith, electromagnetic means at the other end of the shaft and coacting with the contiguous end thereof and including a coil connected in the circuit with the generator and an armature, and a rod connected to the armature and arranged coaxially with the shaft, substantially as and for the purpose described.

3. The combination with a dynamo including an axially shiftable armature shaft, a driving element arranged coaxially with the shaft and opposed to one end thereof, and comprising a hollow casing rotatable with the driving element and inclosing the opposing end of the shaft, a friction clutch interposed between the driving element and the shaft and including a set of disks carried by and rotatable with the casing, and a series of disks carried by and rotatable with the shaft and movable axially therewith, the latter disks intereaving with the first-mentioned disks, a spring arranged axially with the shaft and interposed between said shaft and the opposing end of the driving element, electromagnetic means including a coil connected in circuit with the dynamo and an armature, and connections between the armature and the shaft whereby the movement of the armature is transmitted to the shaft, substantially as and for the purpose set forth.

1,194,971. BOX-SHOOK-COUNTING MACHINE. EDWARD P. DUNBAR, Seattle, Wash. Filed Jan. 5, 1915. Serial No. 575. (Cl. 214—1.)



1. In a box shook counting machine of the character described, the combination of a frame including vertical parallel side walls, a vertically movable receiving table between the said side walls at their receiving end and upon which the shooks are received in superposed relation to form a bundle, a retaining board between said side walls adjacent their opposite ends, means for adjustably supporting the retaining board, ejecting arms movable between the side walls and the receiving table to eject the bundle of shooks from the receiving table upon the retaining board, a main shaft having geared connections with the said ejecting arms, a clutch controlling the shaft, adjustable means automatically controlled by the number of shooks on the receiving table for engaging the clutch, and releasing means automatically actuated to permit the parts to return to normal position after each operation, all substantially as described.

2. In a box shook counting machine, the combination of a vertically depressible receiving table upon which the shooks are successively received in superposed relation, a counting mechanism including an actuating arm arranged in the path of movement of each of the shooks onto the receiving table, means for discharging the bundle of shooks of desired number from the receiving table, automatically controlled by the said counting mechanism, and means for resetting the operating parts after each operation thereof, all substantially as described.

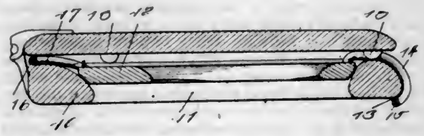
3. In a box shook counting machine, the combination of a vertically depressible table upon which the shooks are successively received in superposed relation to form a bundle thereon, means for depressing the table upon the reception of each of the shooks, means for registering the numbers of shooks received, clutch controlled means for automatically discharging a bundle from the receiving table, actuated by the said registering mechanism, and releasing means controlled by the said discharging means for permitting the parts to return to normal position after each operation, all substantially as described.

4. In a box shook counting machine, the combination of a vertically depressible receiving table, onto which the box shooks may be fed in superposed relation to form a bundle, means for depressing the table as each shook is received thereon, means for automatically discharging the bundle from the receiving table when a predetermined number of shooks have accumulated thereon including ejecting members movable at opposite sides of the table, a retaining board onto which the shooks are discharged from the receiving table, and means whereby to adjustably support the retaining board in the plane of the receiving table when the bundle is transferred, all for the purpose described.

5. In a box shook counting machine of the character described, the combination of a vertically depressible receiving table onto which the shooks are successively fed in superposed relation, means for depressing the said table as each shook is received thereon, a pair of ejecting arms movable along opposite sides of the receiving table and provided with lower horizontally extending rack bars, a driven shaft having gears engaging the rack bar, a clutch controlling the shaft, means for automatically engaging the clutch when a predetermined number of shooks have been piled on the receiving table, whereby to move the ejecting arms and discharging the shooks in a bundle, and means for automatically releasing the clutch and returning the parts to normal position after each discharging operation.

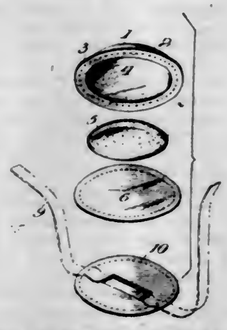
[Claims 6 and 7 not printed in the Gazette.]

1,194,972. AUXILIARY TOILET-SEAT. STEPHEN WILLIAM DUNN, Milwaukee, Wis. Filed July 7, 1914. Serial No. 849,540. (Cl. 4—18.)



An auxiliary seat for a toilet seat comprising a seat ring, of a size and shape to fit within the opening of the toilet seat, a forwardly extending and downwardly and inwardly curved yoke member secured to the forward end of the ring for embracing engagement with the forward portion of the main seat, and a horizontally disposed and rearwardly extending yoke carried by the rear portion of the auxiliary seat ring for supporting engagement on the rear portion of the toilet seat.

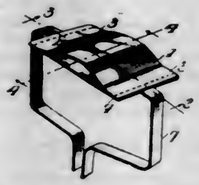
1,194,973. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 8, 1915. Serial No. 54,873. (Cl. 246—20.)



1. An improved railway torpedo comprising a two-part case, an explosive within the case, the case having a laterally extending annular flange, and a disk applied to the case, the two-part case and disk united by sewing only, the disk having openings to receive a rail-engaging strap, and a rail-engaging strap passing through the said openings.

2. An improved railway torpedo comprising a two-part case having an annular flange, an explosive within the case, a disk applied to the bottom of the case, the flange of the two-part case and the disk united by sewing only, the disk having openings located between the sewing and the center of the disk, and a rail-engaging strap passing through the openings of the disk.

1,194,974. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 8, 1915. Serial No. 54,876. (Cl. 246—20.)



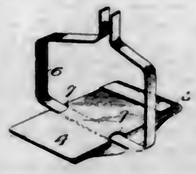
1. An improved railway signal torpedo comprising a tubular case composed of layers of fibrous material, an explosive compound within the case, the ends of the case flattened and sewed together, the outer layer of the case having openings, and a rail-engaging member passing through the openings and under the outer layer of the case.

2. An improved railway signal torpedo comprising a tubular case composed of a plurality of layers of fibrous material cemented together, an explosive compound within the case, the ends of the case flattened and sewed together at points beyond the explosive, the outer layer of the tube having notches or openings extending to the ends of the case, and a rail-engaging strap passing through the said openings and under the outer layer of the case.

3. An improved railway signal torpedo comprising a tubular case composed of several layers of fibrous material, an explosive compound within the case, one or more of the outer layers of the case having notches starting at points located between the ends and the center of the case and extending to the ends of the case, the ends of the case flattened, and stitching extending across the flattened ends at points between the inner ends of the notches and the ends of the case, and uniting the flattened ends of the case from side to side of the torpedo.

4. The method of making a fibrous tube for torpedoes with notches in one or more of the outer layers of the tube which extend from the ends of the case to points between the ends and center of the case, which consists in providing a sheet of paper and forming therein openings adjacent one edge, rolling and cementing the sheet into a tube and severing the tube transversely at points extending approximately through the center of the said openings.

1,194,975. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 8, 1915. Serial No. 54,877. (Cl. 246—20.)



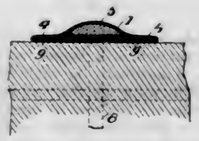
1. An improved railway signal torpedo comprising a plastic tablet explosive rolled in a sheet of cemented paper with a short and a long flattened end, the long flattened end turned under the bottom of the torpedo case and cemented thereto, a railway strap held by the said folded end and the shorter extended end folded inward over the first said end and cemented thereto.

2. An improved railway signal torpedo comprising a plastic tablet explosive rolled in a sheet of cemented paper to a tubular form with a long and a short flattened ends, the long end folded inwardly under the bottom of the torpedo, and of a length about equal to the length of the torpedo, a rail-engaging strap held to the torpedo by the said long folded end the short flattened end being folded under the bottom of the long folded end and cemented thereto.

3. An improved railway signal torpedo comprising a plastic tablet explosive, rolled in a sheet of cemented paper with a long and a short flattened end, the long flattened end turned inwardly under the bottom of the case, and of a length about equal to the bottom of the case, the long end having a strap receiving opening, a strap passing through the said opening, the short flattened end folded in under the bottom of the long end and cemented thereto.

4. An improved railway signal torpedo comprising a plastic tablet explosive rolled in a sheet of cemented paper with projecting flattened ends, the flattened ends doubled under the body of the torpedo and one end lapped over the other, the flaps cemented to each other and to the body of the torpedo, and a rail-engaging strap held by one of the said flaps.

1,194,976. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 8, 1915. Serial No. 54,878. (Cl. 246—20.)

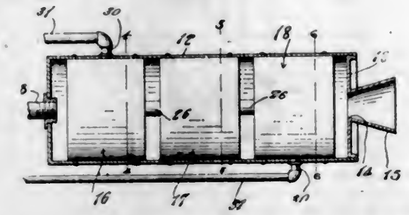


1. An improved torpedo comprising a tubular explosive containing case having projecting flattened ends, a strap holding plate at the bottom of the case, the flattened ends of the case turned around the ends of the plate and cemented thereto for holding it in position.

2. An improved railway signal torpedo comprising a plastic explosive tablet rolled in a sheet of fibrous material with extended tubular flattened ends, a strap holding plate at the bottom of the case, the flattened ends of the case turned around the ends of the plate and cemented thereto for holding it in position.

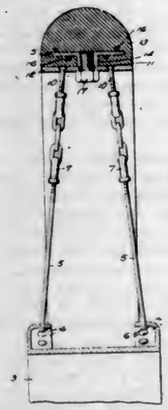
3. An improved railway torpedo comprising a plastic explosive tablet rolled in a sheet of paper with extended flattened ends, a strap holding plate having strap openings, a strap passed through the said openings, the said plate applied to the bottom of the torpedo case, and the flattened ends of the case turned under and cemented to and holding the said plate in position.

1,194,977. VEHICLE-HEATER. WALTER T. EDWARDS, Minot, N. D. Filed Nov. 21, 1914. Serial No. 873,376. (Cl. 257—16.)



A heater for motor vehicles of the class described including a cylindrical shell having both ends closed, said closed ends provided with central openings, a funnel shaped member positioned in one of said openings forming an outlet, said cylindrical shell being connected to the exhaust pipe of an engine of a vehicle through the openings in its opposite end, a plurality of annular drums located in said shell at relatively spaced distance apart, said drums being in communication with each other, each of said drums being provided with a plurality of flues, the flues varying in size from the inlet to the outlet, said drums forming heaters and baffle plates for the hot gases, passing therethrough, and a return pipe connected to said shell at one end and an outlet pipe at the opposite end, and for the purpose specified.

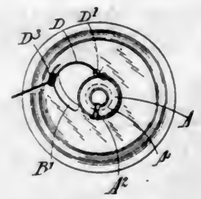
1,194,978. VEHICLE-WHEEL. CHARLES F. ERICKSON, New York, N. Y. Filed July 1, 1915. Serial No. 37,480. (Cl. 152—29.)



1. In a vehicle wheel, a hub, a steel band forming the resilient rim, spokes connecting the hub to the rim, each of said spokes comprising two solid wire sections, one secured to the hub and the other to the rim, each of said sections having a threaded end, a socket threaded on to the end of each section having an eye at its end and an open link engaging the eyes of the sockets, and a shoe engaging the rim.

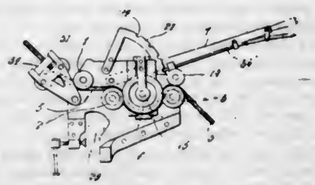
2. A vehicle wheel, comprising a hub having a flange at each end, a steel band forming a resilient rim, a shoe secured on the rim, and a plurality of spokes connecting each flange of the hub with the resilient rim at each side of the center of width thereof, the spokes crossing each other and each consisting of two wire sections of unequal length and having threaded ends, a pair of threaded sockets screwing onto the spoke sections, and an open link loosely engaging and connecting the sockets.

1,194,979. RIBBON-FEED MECHANISM FOR TYPEWRITERS. HERBERT ETHERIDGE, Wimbledon Park, England, assignor to The Bar-Lock Typewriter Company, Limited, London, England. Filed July 28, 1914. Serial No. 853,764. (Cl. 242—74.)



An interchangeable ribbon spool for typewriters, having a hub and a plurality of flanges, each flange having a curved slot therein, a ribbon reversing arm hinged at the hub of the spool and arranged to freely swing about an axis parallel with the axis of the hub, a hook on the end of said arm adapted to receive the end of the ribbon, and ears on said arm extending through the slots in the flanges, substantially as described.

1,194,980. CLUTCH FOR CONTROLLING AND GRIPPING ROPES. THOMAS PETER EUSTEGE, Wellington, New Zealand, assignor of one-half to Jonathan Jones, Wellington, New Zealand. Filed May 1, 1916. Serial No. 94,800. (Cl. 114—199.)



1. An improved clutch for controlling and gripping ropes and the like wherein a rope passes around pulleys, a movable pulley or pulleys engaging with said first pulleys whereby the hug upon the rope is increased or diminished in order to control the travel of the rope, substantially as set forth.

2. An improved clutch for controlling and gripping ropes and the like, characterized by pulleys having brake surfaces upon their peripheries and so arranged that the respective brake surfaces may be brought into contact in order to diminish the speed and to grip the rope, substantially as set forth.

3. An improved clutch for controlling and gripping ropes characterized by one set of grooved pulleys having brake surfaces, a movable pulley or pulleys having brake surfaces and so arranged as to move toward the first set of pulleys in order to increase the hug on the rope and to bring the brake surface or surfaces thereof into contact

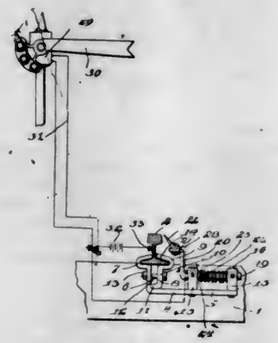
with the brake surfaces of the first set of pulleys, substantially as set forth.

4. An improved clutch for controlling and gripping ropes comprising grooved pulleys having brake surfaces, a grooved pulley having a brake surfaced upon its periphery adapted to engage the brake surfaces upon the first two pulleys and operable toward said pulleys, a brake wheel movable with said pulleys, a brake block adapted to engage with said brake wheel when said grooved pulley is in its lowest position, and means for operating the said pulley and brake wheel, substantially as set forth.

5. In a clutch of the kind described, pulleys pivoted upon the frame of the machine having internal brake surfaces arranged circumferentially upon their peripheries and a movable pulley or pulleys having an external corresponding brake surface arranged circumferentially upon the periphery thereof and adapted to engage the brake surface on the first mentioned brake pulleys, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,194,981. ELECTRIC RAILWAY-SIGNAL. HENRY J. FAUBEL and WILLIAM ROACH, Alliance, Ohio. Filed June 25, 1915. Serial No. 36,377. (Cl. 246—35.)



1. The combination with a rail supported upon ties, and brackets insulated from the rails and ties, of longitudinally movable spring pressed rods in the brackets, and an angular contact bar secured to the rods and sustained longitudinally of and spaced from the rail.

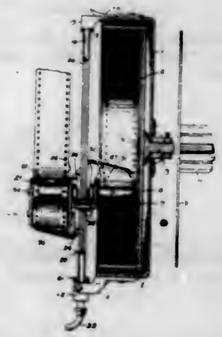
2. The combination with a rail supported upon ties, and brackets insulated from the rail and ties, of removable rods arranged for slidable movement in the brackets, means for limiting the sliding of the said rods, and an angular contact bar secured to the rods and retained thereby in spaced relation to the rail.

3. The combination with a rail supported upon ties, and brackets insulated from the rail and ties, of rods arranged for slidable movement in the brackets, means for removably retaining the rods in the brackets, springs for sliding the rods in one direction and toward the rail, means for regulating the tension of the springs and the sliding movement of the rods, and an angular contact bar secured to the rods and sustained thereby in a spaced relation to the rail.

4. The combination with a rail supported upon ties, and brackets insulated from the rail and ties, spaced arms upon the brackets, of longitudinally movable rods journaled in the said arms, means for removably sustaining said rods in the said journals, springs for moving the rods in one direction and toward the rail, means for regulating the tension of the spring and the said sliding movement of the rods, and an angular contact bar secured to the rods and sustained longitudinally of but spaced from the rail.

5. The combination with a rail, of a longitudinally extending contact bar disposed adjacent the rail, said contact bar having its inner edge pointed and disposed opposite the head of the rail, supports, spring pressed rods slidable in the said supports, means for removably securing the said rods upon the supports, means for adjusting the tension of the springs to regulate the sliding movement of the rods, and said contact bar being secured to said rods.

1,194,982. FILM-WINDING DEVICE FOR KINETOSCOPES. CLARENCE C. FAY and ARTHUR W. FAY, Superior, Wis. Filed Mar. 9, 1916. Serial No. 83,057. (Cl. 88—18.7.)



1. The combination with a kinetoscope having film feeding means, of film winding means, comprising a suitable holder, a receiver disk within the holder, a shaft extending diametrically across the holder, a traction roller on one side of the shaft, receiving power therefrom, extending within the holder and revolving same by engagement with the film therein, a spool on the opposite side of the shaft driven thereby and feeding the film to the traction roller and means for operating the shaft spool and roller in unison.

2. A film winding device for kinetoscopes, comprising a magazine, a revoluble holder within the magazine, a receiver disk within the holder, a vertically disposed shaft extending diametrically across the face of the holder, pivotally attached to the lower edge of the magazine and removably attached to the upper edge thereof, means operated by the shaft for forcibly engaging the film and coiling it within the receiver, and means at the pivotal end of the shaft for revolving same.

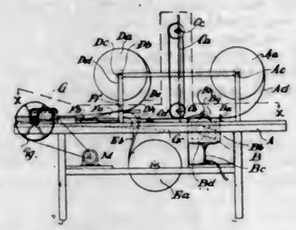
3. A film winding device of the character described, comprising in combination a magazine, a holder, a receiver disk, a revoluble splined shaft, pivotally carried by the magazine, a reciprocal carriage carried by the shaft, a feeding spool in the carriage on one side of the shaft, a traction roller in the carriage on the opposite side of the shaft, and means for operating the shaft, spool and roller in unison.

4. In a film feeding device of the character described, the combination with a magazine, a holder and film receiving means, of a vertically disposed splined shaft carried in a rack upon the magazine, a reciprocal carriage carried by the rack and about the shaft, and means whereby a film is engaged on one side of the rack and by spiral convolutions fed to the holder on the opposite side of the rack and means for revolving the shaft at one end thereof.

5. In a film feeding device of the character described, the combination with a magazine, a holder and film receiving means, of a vertically disposed splined shaft, carried in a rack pivoted upon the magazine, a reciprocal carriage mounted within the rack, two revoluble film engaging members carried by the carriage, one on either side of the shaft, operated thereby and in line with each other and means at the pivoted end of the rack and connected with the shaft for imparting motion thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,194,983. AUTOMATIC PAD-MAKING MACHINE. ROBERT H. FENN, Suffern, N. Y. Filed Feb. 10, 1913. Serial No. 747,512. (Cl. 154—29.)



1. In a pad making machine a folder comprising a converging tube flexibly supported at its larger end, and a larger fixed tube encircling its smaller end.

2. In a pad making machine a folder comprising a converging tube flexibly supported at its larger end, and a larger fixed tube encircling its smaller end, a slotted guide over the large end of said converging tube and a downwardly projecting flange from each side of said converging tube forming a shallow channel.

3. In a pad making machine a folder comprising a converging tube flexibly supported at its larger end and a fixed tube of similar cross-section encircling its smaller end; a portion of said smaller end of said converging tube being provided with a flat bottom making a half oval cross section; side walls of portion of inner tube having flat bottom being prolonged downwardly to form a shallow channel, and a slotted guide over larger end of said converging tube.

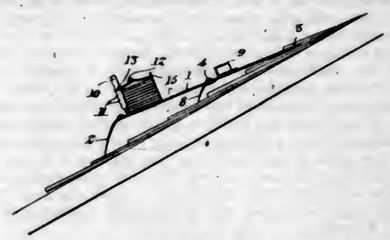
4. In a pad making machine a folder comprising a converging tube, the smaller end provided with a flat bottom and joining a tube of similar cross-section with parallel sides, a larger tube of similar cross-section encircling a portion of the tube having parallel sides, said encircling tube provided with a flared end toward large end of said converging tube; an extension of the side walls of said parallel tube downwardly to form a shallow channel, a lip extending inwardly from each of said side walls of said channel; a tongue joining the side walls of said channel and being an extension of said lips, said tongue extending toward and closely approaching said outer encircling tube.

5. In a pad making machine a folder comprising a converging tube, the smaller end provided with a flat bottom and joining a tube of similar cross section with paralel sides, a larger tube of similar cross-section encircling a portion of the tube having parallel sides, said encircling tube provided with a flared end toward large end of said converging tube; an extension of the side walls of said parallel tube downwardly to form a shallow channel, a lip extending inwardly from each of said side walls of said channel; together with a tongue joining the side walls of said channel and being an extension of said lips, said tongue extending toward and closely approaching said outer encircling tube and a spring fastened to said converging tube, the end of same projecting upwardly through a slot in said tongue and adapted to press a passing cardboard strip upwardly closely against the under side of said parallel portion of said inner tube.

[Claims 6 to 20 not printed in the Gazette.]

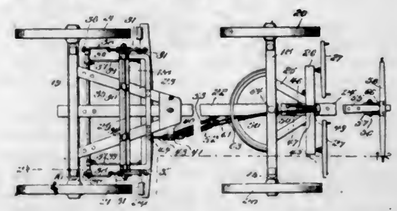
1,194,984. SHINGLING-SCAFFOLD. JOSEPH FIEHLER, Potter, Nebr. Filed Jan. 24, 1916. Serial No. 73,933. (Cl. 20—86.)

In a shingle bracket, longitudinal bars spaced apart in parallelism and each having one end formed with a down-turned prong and the other end formed with a prong, transverse bars interconnecting the first-mentioned bars to hold the same properly spaced apart, brackets on the first-mentioned bars adjacent to the last-mentioned ends thereof adapted to support the scaffold, and down-turned prongs secured to the lower edges of said bars below said brackets and coöperating with the first-mentioned down-turned prongs, uprights secured to said longitudinal bars adjacent to the first-mentioned pronged ends thereof, and



a retaining element carried by said uprights and coöperating with the longitudinal bars to hold a bunch of shingles upon the holder.

1,194,985. AUTOMATIC BRAKE MECHANISM. LAWRENCE F. FIESER, Vogt, Mo. Filed Mar. 14, 1916. Serial No. 84,227. (Cl. 21—9.)



1. In an automatic brake device, a brake beam, and means for swingingly supporting said beam for positive movement toward and from the hind wheels of a running gear, in combination with a T-lever having upwardly, downwardly and rearwardly extending arms, a link connecting the rearwardly extending arm with the brake beam, flexible elements connected with the upwardly and downwardly extending arms of the T-lever, and movable team-controlled elements with which the flexible elements are connected to rock the T-lever in opposite directions by the pulling and the checking movement of the team.

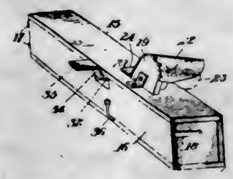
2. In a brake device, a brake beam having wheel engaging shoes, means including bell cranks supporting said brake beam for positive movement toward and from the wheels to be engaged thereby, a T-lever having a rearwardly extending arm, a link connecting said arm with the brake beam, a flexible element connected with an upwardly extending arm of the T-lever, said flexible element including a coiled spring, a coiled spring exerting tension on another arm of the T-lever to maintain the flexible element under tension, a flexible element connected with the last mentioned arm of the T-lever, and team-actuated movably supported elements with which the flexible elements are connected to effect rocking movement of the T-lever by the pulling and checking action of the team, respectively.

3. In a brake device, a brake beam supported for swinging movement toward and from the wheels to be engaged thereby, a T-lever having upwardly, downwardly and rearwardly extending arms, a link connecting the rearwardly extending arm with the brake beam, spring means engaging the T-lever and exerting constant strain thereon in one direction, team-operated means for actuating the lever against the tension of the spring to release the brake, and team-operated means for actuating the lever in the direction in which it is actuated by the spring for the purpose of positively setting the brake.

4. A running gear including front and rear axles and wheels, a reach, hounds, a tongue, doubletree and neck yoke, a brake beam swingingly supported adjacent to the rear wheels, supporting means for the brake beam includ-

ing bell-cranks by the rocking of which the brake beam will be positively moved toward and from the hind wheels, a T-lever having upwardly, downwardly and rearwardly extending arms, a link connecting the rearwardly extending arm with the brake beam, means for supporting the doubletree for longitudinal sliding movement with respect to the tongue, a suitably guided flexible element connecting the doubletree with the upwardly extending arm of the T-lever, said flexible element including a spring, a second spring connecting the downwardly extending arm of the T-lever with the reach to maintain the flexible element constantly taut, a bifurcated lever fulcrumed on the tongue in the path of the neck yoke and having a downwardly extending arm, and a second suitably guided flexible element connecting the downwardly extending arm of the bifurcated lever with the downwardly extending arm of the T-lever.

1,194,986. ILLUMINATING DEVICE. DANIEL T. FINKBEINER, Freeport, Pa. Filed May 24, 1916. Serial No. 99,665. (Cl. 240—2.)



1. An illuminating device of the character described comprising a casing shaped to be placed within the cabinet of a sound reproducing machine, a lamp attached to the exterior of the top wall of said casing and projecting rearwardly thereof, means within the casing for supplying electricity to the lamp, and a switch within the casing for controlling the circuit to the lamp, said switch having an arm projected through a wall of the casing and positioned to be engaged by a movable element of said cabinet.

2. An illuminating device of the character described comprising a casing shaped to be placed within the cabinet of a sound reproducing machine, a lamp atached to the exterior of the top wall of said casing and projecting transversely thereof, means within the casing for supplying electricity to the lamp, and a switch within the casing for controlling the circuit to the lamp, said switch having a resilient arm projected through a wall of the casing and provided with an offset portion positioned to be engaged by a movable element of said cabinet, the resiliency of said arm acting to maintain a closed circuit at the switch contacts.

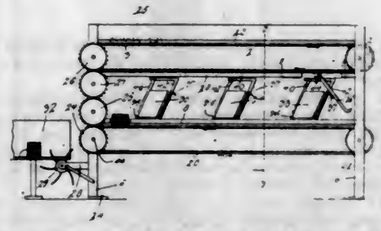
3. An illuminating device of the character described comprising a casing shaped to be placed within the cabinet of a sound reproducing machine, an upstanding supporting wall attached to the exterior of the top wall of said casing and extending longitudinally thereof, a lamp supported by said supporting wall, means within the casing for supplying electricity to said lamp, and a switch within the casing having an arm projected through one of the walls thereof, said switch controlling the circuit to said lamp.

4. An illuminating device of the character described comprising a casing shaped to be placed within the cabinet of a sound reproducing machine, an upstanding supporting wall attached to the exterior of the top wall of said casing and extending longitudinally thereof, a lamp attached to said supporting wall, a hood also attached to said supporting wall and covering said lamp, means within the casing for supplying electricity to the lamp, and a switch within the casing for controlling the circuit to the lamp, said switch having an arm projected through one wall of the casing.

5. An illuminating device of the character described comprising a casing shaped to be placed within the cabinet of a sound reproducing machine, a supporting wall attached to the exterior of said casing, a lamp attached to said supporting wall, a hood also attached to said supporting wall and extending over said lamp, said hood being provided with a flange attached to the contiguous wall of said casing, means within the casing for supplying electricity to the lamp, and a switch within the casing for controlling the circuit to the lamp, said switch having an arm projected through one wall of said casing.

[Claim 6 not printed in the Gazette.]

1,194,987. SIGNATURE-GATHERING MACHINE. HENRY L. FISHER, Richmond, Va. Filed Apr. 16, 1913. Serial No. 761,517. (Cl. 11—25.)



1. A signature gatherer including a main supporting frame, an upper and lower apron supported therein and mounted in parallel spaced relation to each other, a plurality of removably mounted signature boxes arranged between the aprons, a plurality of separator arms hingedly secured to the upper apron, the free ends of said separator arms adapted to engage the top signature of each pile in succession and remove the signature from its box, means for disengaging the signatures from said separator arms subsequent to their withdrawal from said signature boxes and causing them to be dropped upon the lower of said aprons, means for rotating said aprons, a receiving trough disposed adjacent one terminal of the lowermost apron and means for conveying the signatures from the lower apron to said receiving trough.

2. A signature gathering machine including a main supporting frame, a pair of rotating aprons mounted therein and in parallel spaced relation to each other, means for rotating said aprons, a plurality of signature boxes removably arranged in said main frame and disposed between said aprons, separator arms hingedly secured to said upper apron, the free terminals of said arms adapted to engage and remove the top signature of each pile in succession during the rotation of said upper apron, means for guiding the signature arms into operative position in said signature boxes, means automatically operated by said upper apron for removing the signatures from said separator arms and causing them to be dropped on said lower apron, a receiving trough disposed adjacent one terminal of the lower apron and means for conveying the signatures from the lower apron to said receiving trough.

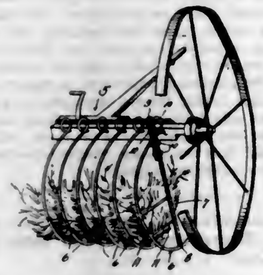
3. A signature gathering machine including a main supporting frame, a pair of rotating aprons mounted in said frame and in spaced superposed relation to each other, means for rotating said aprons, a plurality of separator arms arranged in pairs on said upper apron, a plurality of signature boxes mounted on said frame between said apron, guide members carried by said signature boxes for deflecting the separator arms upwardly and directing them into operative position, means to disengage the signatures from the separator arms and for causing them to be dropped upon the lower apron, said means including a pivotally mounted stripper arm and means carried by said upper apron for automatically lifting said stripper arms and releasing them after the operation of said separator arms.

4. A signature gathering machine including a main supporting frame, an upper and lower apron rotatably mounted within said frame, means for rotating said aprons, a plurality of signature boxes disposed between said aprons and removably mounted in said frame, a plurality of separator arms hingedly secured in pairs to said upper apron, said arms each consisting of a body portion having its lower terminal arcuately bent and bifurcated to produce tines, a plurality of pins carried by said tines, guide members carried by each of said signature boxes, a receiving trough disposed adjacent one end of said lower apron, the free terminals of said separator arms adapted to engage the top signature of each pile in succession and remove the signature from said boxes, means for removing the signatures from said separator arms and causing them to be dropped upon said lower apron and means for conveying the signatures from said lower apron into said receiving trough.

5. A signature-gathering machine including a main supporting frame, a pair of rotating aprons mounted in said frame and in parallel spaced relation to each other, means for rotating said aprons, a plurality of signature boxes removably mounted in said frame, a plurality of separator arms hingedly connected with the uppermost of said aprons, the free ends of said separator arms adapted to engage the top signature of each pile in succession and remove the signatures from the boxes and causing them to be dropped on said lower apron, a receiving trough disposed adjacent one terminal of said lower apron within the frame, means for conveying the signatures from said lower apron into said receiving trough comprising a pair of hub members, a rotatable shaft for said hub members, said shaft being operatively connected to the driving means for said aprons, and a plurality of radially extending arcuate fingers carried by each of said hub members.

[Claims 6 to 10 not printed in the Gazette.]

1,194,988. HAY-RAKE TOOTH. HENRY FLAKUS, Elyria, Nebr. Filed Feb. 2, 1916. Serial No. 75,759. (Cl. 56—69.)

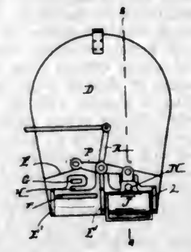


1. In a device of the class described, the combination with the curved end teeth of a rake, rods rigidly secured at one end adjacent the points of the teeth and extending therefrom to engage over and inclose the opposite ends of said teeth, means for adjusting the last named ends of said teeth relative to said rods, and bars connecting said rods and said teeth intermediate the length of the latter, substantially as described.

2. In combination with the arcuate end tooth of a rake, a rod rigidly secured at one end adjacent said tooth end and extending in a straight line across to the opposite end of said tooth, the said rod being flattened adjacent its free end and bent to form a loop engaging over said tooth, the said flattened portions being provided with spaced alined openings, bolts extending through said openings to be engaged by said tooth, and bars connecting said tooth and rod inwardly from their ends, substantially as described.

1,194,989. COMBINED MILKING-MACHINE RELEASER AND PULSATOR. THOMAS NOTON FLETCHER, Hamilton, New Zealand. Filed Dec. 8, 1915. Serial No. 65,709. (Cl. 31—97.)

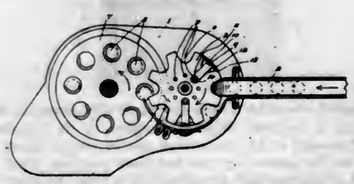
1. In a releaser of the class herein described a receiving vessel, a discharging vessel mounted and reciprocating upon said receiving vessel, a connection entering the upper end of the discharging vessel and the discharging vessel having an opening adapted to alternately connect with the receiving vessel and the outside, such opening being positioned below the vacuum and air connection, substantially as and for the purposes specified.



2. An apparatus of the class herein described, comprising a reciprocally moving discharging vessel and a milk receiver upon which such vessel is mounted, the milk receiver being constructed with a milk port near its bottom and with a vacuum port connected to a point in the receiver near its top, and also with an air groove on its outside face positioned between such ports, and the discharging vessel being constructed with an inside surface adapted to move over the ports of the receiver and which surface is provided with a lower milk port adapted at one limit of the vessel's travel to coincide with the milk port of the receiver and at the other limit of its movement to be uncovered, and with an upper vacuum-air port adapted at the first limit of movement of the vessel to coincide with the vacuum port of the receiver and at the other limit of such movement to coincide with the air groove in the receiver's surface, substantially as and for the purposes specified.

3. Apparatus for the purposes herein described consisting in the combination with a milk receiver connected respectively with a milk main and with a vacuum source, of a cover for such receiver constructed with a valve face on its outer surface which valve face is formed with a milk port near its bottom end, with a vacuum port and with an air groove positioned between such ports, and a discharging vessel mounted to reciprocate on such valve face and formed on its inner face with a lower milk port adapted on the movements of the vessel to alternately connect with the milk port of the receiver and to be uncovered, and with an upper vacuum air port adapted in the vessel's movement to alternately connect with the vacuum port of the receiver and the air groove therein, such vacuum air port communicating with a tube that is also in communication with the upper part of the discharging vessel, substantially as specified.

1,194,990. CONVEYER FOR BOTTLES AND THE LIKE. JOHN J. GAYNOR, Indianapolis, Ind. Filed Mar. 13, 1916. Serial No. 83,934. (Cl. 193—1.)



1. The combination with a conveyer of a star conveyer wheel provided with article receiving recesses at the periphery thereof, to receive articles from said conveyer in said recesses, a series of pins or studs on said star conveyer wheel agreeing in number with the said recesses in said wheel, a recess blocking device including a flat body portion provided at one end with an upstanding aper-

tured boss for connection with any of said pins or studs on said wheel and at the other end a depending recess blocking element having its vertical edges shaped to conform to the walls of any of said recesses in said wheel, said depending recess blocking element being formed on an arc to agree with the circumference of said star conveyer wheel, substantially as described.

2. The combination with a conveyer of a star conveyer wheel provided with article receiving recesses at the periphery thereof, to receive articles from said conveyer in said recesses, a series of pins or studs on said star conveyer wheel agreeing in number with the said recesses in said wheel, a recess blocking device including a flat body portion provided at one end with an upstanding apertured boss for connection with any of said pins or studs on said wheel and at the other end a depending recess blocking element having its vertical edges shaped to conform to the walls of any of said recesses in said wheel.

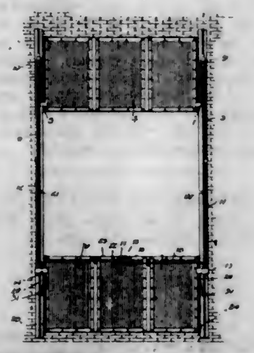
3. The combination with a conveyer of a star conveyer wheel provided with article receiving recesses at the periphery thereof, to receive articles from said conveyer in said recesses, a series of pins or studs on said star conveyer wheel agreeing in number with the said recesses in said wheel, a recess blocking device including a flat body portion provided at one end with an upstanding apertured boss for connection with any of said pins or studs on said wheel and at the other end a depending recess blocking element.

4. The combination with a conveyer of a star conveyer wheel provided with article receiving pockets at the periphery thereof to receive articles from said conveyer, a recess blocking element for said star conveyer wheel and means for attachment of said recess blocking element on said star conveyer wheel.

5. The combination with a star conveyer wheel having recesses in its periphery for the reception of articles, of a recess blocking element and means for removably attaching the same to said star conveyer wheel.

[Claims 6 and 7 not printed in the Gazette.]

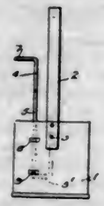
1,194,991. MEANS FOR CHECKING THE SPEED OF DOORS. WAINWRIGHT B. GERVAIS, Chicago, Ill., assignor to Variety Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 24, 1914. Serial No. 814,081. (Cl. 16—6.)



1. A speed-checking device for vertically movable doors comprising a resilient member adapted to lie lengthwise of the side edge of the door, one end of which member is secured to the guide-way for the door and the other end of which abuts against an adjusting screw threaded into said guide-way, and a lug projecting from the side edge of the door, said lug engaging and passing over said resilient member when the door is being raised or lowered.

2. In combination a vertically movable door, an angle bar secured to the vertical edge of said door, said angle bar having one leg projecting substantially in the plane of the door, a vertical stationary angle bar having one leg overlapping and lying substantially parallel to the leg of said first angle bar, said angle bars forming an open channel between them, a projection secured to one of said angle bars and an adjustable bowed spring secured to said other angle bar, said parts having relative movement with respect to each other so that the spring and the projection will be engaged as the door moves toward the limit of its movement in closing to check the speed of movement thereof and will be disengaged when the door reaches the closed position.

1,194,992. GARDEN-TOOL. HENRY ADOLPHUS GIBSON, Winnipeg, Manitoba, Canada, assignor to Gladys Una Muriel Gibson, Winnipeg, Canada. Filed July 10, 1915. Serial No. 39,125. (Cl. 47—37.)

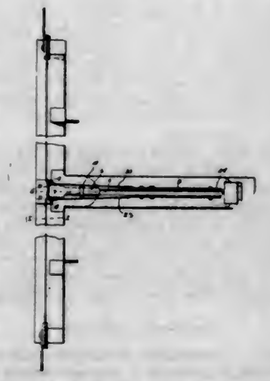


1. A device for placing a protective wrapper around a plant comprising, a holder for the wrapper, an adjustable catch piece, and foot pieces carried by said catch piece for engaging the wrapper, said catch piece being longer than the holder whereby the foot pieces may be projected below the holder.

2. A device for placing a protective wrapper around a plant comprising, a holder for the wrapper, an adjustable catch piece, a hand piece on said piece, and foot pieces carried by said catch piece for engaging the wrapper, said catch piece being longer than the holder whereby the foot pieces may be projected below the holder.

3. A device for placing a protective wrapper around a plant comprising a holder for the wrapper, an adjustable catch piece, and angularly bent foot pieces, carried by said catch piece for engaging the wrapper, said catch piece being longer than the holder whereby the foot pieces may be projected below the holder.

1,194,993. GATE-OPENING ATTACHMENT. JOHN J. GOCHENOUR, Maurertown, Va. Filed Sept. 2, 1915. Serial No. 48,689. (Cl. 39—36.)



1. An opening attachment for gates comprising a head, a forwardly extending member carried by the head, a downwardly extending member carried by the head and lying at right angles to the forwardly extending member, the adjacent faces of the two members being channeled to receive a gate frame, detachable yokes engaged with the members and arranged for engagement around a gate frame to hold the members thereto, and operating mechanism carried by the head.

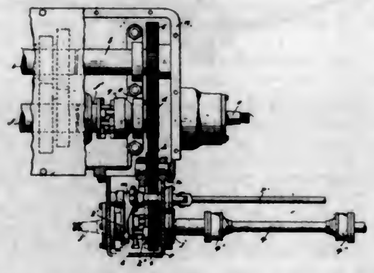
2. A gate opening attachment comprising a body including two members extending at right angles to each other and channeled at their adjacent faces to receive a gate frame, said channels meeting at a sharp angle, operating mechanism carried by the body, and means for attaching the body to a gate frame, said attaching means including an element adapted to form a hinge eye.

3. In a gate operating mechanism, the combination with a head adapted for attachment to a gate, said head having V-shaped recesses in its rearward face, of V-shaped levers mounted one in each recess and projecting at their major ends beyond the head, an arm for one of the levers, pivoted to one corner thereof and extending along the rear face of the lever, a second arm for the other lever pivoted to the opposite corner of said lever and extending along the rear face thereof, and means carried by the pivoted ends of the arms for the attachment of latch cords thereto, the free ends of the levers being adapted to receive the pull cords of the gate.

4. The combination with a farm gate, of an opening attachment therefor, said attachment comprising a body including two members extending at right angles to each other, said members being channeled to receive the gate frame, yokes engaged around the gate frame and around the members, cross pieces engaged with the ends of the yokes, one of said cross pieces carrying a flange provided with a hinge eye, and operating mechanism carried by the body.

5. An opening attachment for gates comprising a head, a forwardly extending member carried by the head, a downwardly extending member carried by the head at the forward end of the head and lying at right angles to the forwardly extending member, the adjacent faces of the two members being channeled to receive the corner of a gate frame, said head having V-shaped recesses in its rearward face at different elevations, V-shaped levers mounted one in each of the recesses and projecting at thier major ends beyond the rearward face of the head, each of said levers having an outwardly and rearwardly extending finger at one rear corner, said fingers being located oppositely with respect to each other, an arm pivoted to each of the fingers and arranged for movement to rest against the rearward face of its respective lever, and yokes pivotally connected with the attached ends of the arms for the reception of latch cords, the free ends of the arms being adapted for the attachment of pull cords thereto.

1,194,994. AUXILIARY DRIVING MECHANISM. BENJAMIN A. GRAMM, Lima, Ohio. Filed Feb. 12, 1916. Serial No. 77,831. (Cl. 74—59.)



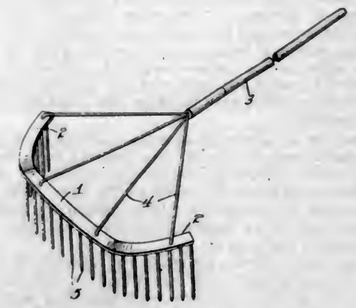
1. The combination of a main driving shaft; an automobile transmission shaft arranged to be driven thereby; a power-transmitting device by which said shafts are thrown into and out of operative connection with each other; an auxiliary driving mechanism driven by said main driving shaft; an auxiliary driving shaft arranged to be driven by said auxiliary driving mechanism; and means independent of said power-transmitting device for connecting said auxiliary driving shaft with and disconnecting the same from said auxiliary driving mechanism while said main driving shaft is in driving connection with said transmission shaft.

2. The combination of a main driving shaft; an automobile transmission shaft arranged to be driven thereby; a power-transmitting device by which said shafts are thrown into and out of connection; a transmission case within which said transmission shaft is housed; an auxiliary driving mechanism driven by said main shaft; a housing for said auxiliary driving mechanism, said housing being carried by said transmission case; an auxiliary driving shaft arranged to be driven by said auxiliary driving mechanism; and means independent of said power-transmitting device for connecting said auxiliary driving shaft with and disconnecting the same from said auxiliary driving mechanism, while said main driving shaft is in driving connection with said transmission shaft.

3. The combination of a main driving shaft; an automobile transmission shaft arranged to be driven thereby; a power-transmitting device by which said shafts are thrown into and out of connection; an auxiliary driving shaft; an idler-gear arranged to be driven by said main driving shaft; and means independent of said power-transmitting device for connecting said auxiliary driving shaft with and disconnecting the same from said idler-gear, while said main driving shaft is in driving connection with said transmission shaft.

4. The combination of a main driving shaft; an automobile transmission shaft arranged to be driven thereby; a power-transmitting device by which said shafts are thrown into and out of connection; a transmission case within which said transmission shaft is housed; an idler-gear arranged to be driven by said main driving shaft; a housing for said idler gear, said housing being carried by said transmission case; an auxiliary driving shaft; a slidable clutch member keyed to the latter; and a shifter for throwing said clutch member into and out of clutching engagement with said idler gear, while said main driving shaft is in driving connection with said transmission shaft.

1,194,995. RAKE. ELLA M. GREEN, Pampa, Tex. Filed Dec. 14, 1914. Serial No. 877,208. (Cl. 55—10.)



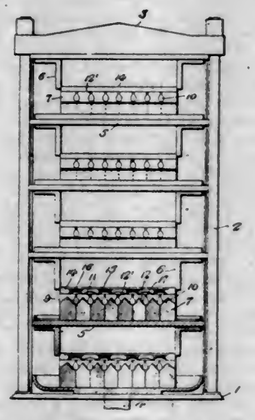
1. A rake comprising a handle, a bar having laterally curved and upwardly bent ends, a plurality of teeth secured to said bar and varying in length in proportion to the upward bend of the ends of said bar.

2. A rake comprising a bar, having a straight portion and rearwardly curved and upwardly bent end extensions, a plurality of teeth equally spaced and secured to said bar, the teeth on the straight portion being of the same length and the teeth of the upwardly bent extensions being proportionately increased in length in proportion to the bend of the extensions.

3. A rake comprising a handle, a bar connected to said handle, having laterally rearwardly curved ends, said ends being also bent upwardly to a height greater than the straight portion of said bar, a plurality of teeth secured

to and equally spaced along the under face of said bar and said extensions, said teeth varying in length in proportion to the varying bend of the ends of said bar, the free end of each tooth being in the same plane with the other teeth.

1,194,996. MAT FOR COMPRESSION-BOXES. MICHAEL B. GREEN, Memphis, Tenn. Filed Apr. 4, 1916. Serial No. 88,902. (Cl. 100—54.)



1. A mat for oil presses comprising a plurality of bars constructed to produce oil discharge channels below the surface and between the lateral faces thereof, and having transverse surface slots extending across the faces of said bars and communicating with said channels, said slots having sloping bottom walls extending to the channels.

2. A mat for oil presses comprising a plurality of bars having grooves in the opposite faces thereof forming longitudinal channels, and transverse slots opening through their faces and communicating with the channels, said slots having their bottom walls arranged to slope toward the respective lateral grooves.

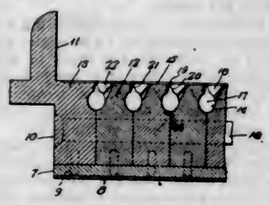
3. A mat for oil presses comprising a plurality of bars constructed to produce oil discharge channels between their meeting faces, said bars having transverse slots communicating with said channels, the bottom walls of the respective slots having surfaces sloping in opposite directions toward adjacent channels, and the meeting faces of the bars being provided with passages also communicating with the channels.

4. A mat for oil presses comprising a plurality of bars having longitudinal grooves in their meeting faces forming oil discharge channels, and having transverse slots intersecting the grooves, the walls of the slots being arranged to slope in opposite directions toward the respective grooves and being highest at a point substantially midway between the grooves.

5. A mat for oil presses comprising a plurality of bars provided with grooves in their opposite faces forming oil channels, and having transverse slots extending entirely across the bars and communicating with adjacent channels, the bottom walls of the channels being V-shaped to provide surfaces sloping in opposite directions, and the meeting faces of the bars being formed to provide flaring passages communicating with the channels.

1,194,997. OIL-PRESS. MICHAEL B. GREEN, Memphis, Tenn. Filed Apr. 4, 1916. Serial No. 88,903. (Cl. 100—54.)

1. A mat for oil presses comprising bars having grooves in their meeting faces forming oil discharge channels, cut-away portions along the margins of their meeting edges forming longitudinal drain passages communicating with the channels, transverse slots opening through their surfaces and lateral faces and communicating with the channels, and conical passages leading upwardly from the channels and intersecting said slots.



2. A mat for oil presses comprising bars having discharge channels below their surfaces and transverse slots intersecting said channels, and also having conical passages leading at an angle from the walls of the channels and intersecting said slots at points spaced from the lateral faces of the bars.

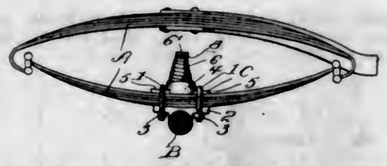
3. A mat for oil presses comprising bars having grooves in their meeting faces forming oil discharge channels, slots opening through their upper surfaces and side edges and communicating with said channels, cut away portions along the margins of their meeting edges forming passages communicating with the channels, and notches or recesses formed in the walls of said marginal portions.

4. A mat for oil presses comprising bars having grooves forming discharge channels below their surfaces, transverse slots intersecting said channels, and conical passages extending upwardly and inwardly at an angle from the inner walls of the channels and intersecting the slots at points inward from the lateral faces of the bars.

5. A mat for oil presses comprising bars having grooves in the meeting faces thereof forming oil discharge channels, cut-away portions along the margins of their meeting edges above the channels providing longitudinal drain passages communicating with said channels, transverse slots opening through the surface and lateral faces of the bars and communicating with said longitudinal drain passages and channels, and conical passages extending at an upward and inward angle from the inner walls of the channels and intersecting said transverse slots at points inward from the lateral faces of the bars.

[Claim 6 not printed in the Gazette.]

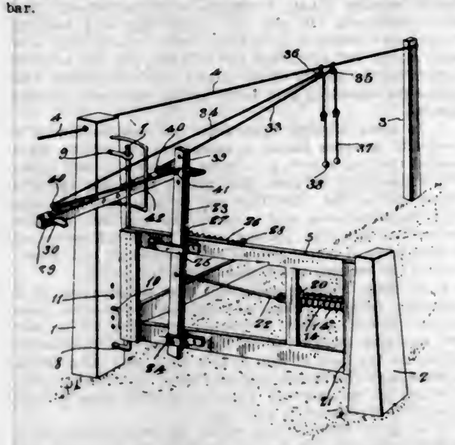
1,194,998. SHOCK-ABSORBER. LOWELL HOBART GRISELL, Balbec, Ind. Filed May 8, 1915. Serial No. 26,859. (Cl. 267—19.)



A shock absorber for the purpose specified, comprising a base embodying an elliptical cup, means for securing said cup to a vehicle spring so that the major axis of the cup will extend transversely of the vehicle spring, a cone-shaped circumvolute shock absorbing spring elliptical in cross section having the terminal convolution at the larger end thereof seated in said cup, and an elliptical impact cup provided with a shank secured to the extremity of the terminal convolution at the smaller end of said spring.

1,194,999. GATE-OPERATING MEANS. JOHN H. GROVE, Moorcroft, Wyo., assignor of one-half to Leroy Salisbury, Upton, Wyo. Filed June 4, 1915. Serial No. 32,147. (Cl. 39—37.)

1. In combination with a swinging gate having a longitudinally movable latch bar; an operating bar pivotally mounted on the gate, and extending upwardly therefrom, and connected to said latch bar to operate the latter; a spring engaging the operating bar normally holding the latch bar in locking position; catches at the sides of the gate to engage the operating bar when the gate is opened in either direction, and means to actuate said operating bar.



2. In combination with a swinging gate having a longitudinally movable latch bar; an operating bar pivotally mounted on the gate extending upwardly therefrom, and connected to said latch bar to operate the latter; a spring engaging the operating bar normally holding the latch bar in locking position; catches at the sides of the gate to engage the operating bar when the gate is opened in either direction; and means to actuate said operating bar and comprising operating cords extending from opposite sides of the gateway.

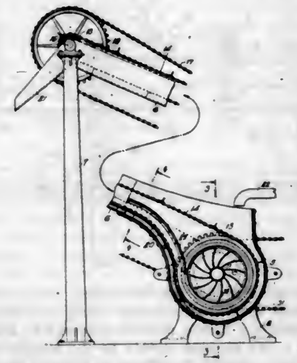
3. In combination with a swinging gate having a longitudinally movable latch bar, an operating bar pivotally mounted on the gate extending upwardly therefrom, and connected to said latch bar to operate the latter, a spring engaging the operating bar for normally holding the latch bar in locking position, catches at the sides of the gate to engage the operating bar when the gate is opened in either direction, a post, an arm secured to and at right angles to said post, guides on said arm, operating cords extending through said guides, and secured to said operating lever, whereby said latch can be released and the gate swung open.

1,195,000. FILTER. RICARDO LABRADOR Y GUIJARRO, Habana, Cuba. Filed Nov. 5, 1915. Serial No. 59,762. (Cl. 210—25.)

1. In a filter, a tank, a revoluble filtering drum, means for revolving the drum, means for creating a vacuum in the axial part of the drum, vanes in the drum for facilitating the flow of liquid from the periphery of the drum to the axial part thereof, a trough rising from the tank, a conveyer mounted to move in the tank and trough for raising the solid particles from the tank to the upper end of the trough, and means for actuating the conveyer operable by the means for rotating the drum.

2. In a filter, a tank, a revoluble filtering drum, means for revolving the drum, means for creating a vacuum in the axial part of the drum, vanes in the drum for facilitating the flow of liquid from the periphery to the axial part of the drum, a baffle plate for preventing the rotation of the mass to be filtered within the tank, one edge of said plate being substantially tangent to the lateral surface of the filtering drum, a trough rising from the tank, and a conveyer moving in the tank and trough for raising the solid particles from the tank to the upper end of the trough.

3. In a filter, a cylindrical tank, a revoluble filtering cylinder in the tank and co-axial therewith, a hollow shaft for said tank having perforations within the drum, means for revolving the shaft, means for creating a vacuum within the hollow shaft, vanes in the drum for facilitating the flow of liquid from the periphery of the drum to the perforations in the hollow shaft, a trough rising from the tank, a conveyer mounted to move in the tank and trough and about the filtering drum, said conveyer having means adapted to move along the lateral surface of the tank and the bottom of the trough, whereby the solid particles in the tank are moved to the upper end of the trough, and a baffle plate within said tank.



4. In a filter, a cylindrical tank having inwardly-directed collars from the end walls of the tank, a filtering drum located between said end collars, a hollow shaft maintaining said drum co-axial with the tank, said hollow shaft having perforations within the drum, means for rotating the shaft, means for creating a vacuum in the hollow of the shaft, vanes for facilitating the flow of liquid from the periphery of the drum to the hollow shaft, a rising trough from the tank, a shaft rotatably mounted at the upper end of the trough, toothed wheels rotatably mounted on the collars in the tank, toothed pinions mounted on the shaft at the upper end of the trough, a conveyer engaging said toothed wheels and pinions, means for transmitting motion to the shaft at the upper end of the trough from the hollow shaft, said conveyer having scraping members, and a baffle plate within the tank having one edge thereof disposed tangentially to the lateral surface of the filtering drum, said trough having a chute at its upper end wherethrough the solid particles raised by the conveyer from the tank are discharged.

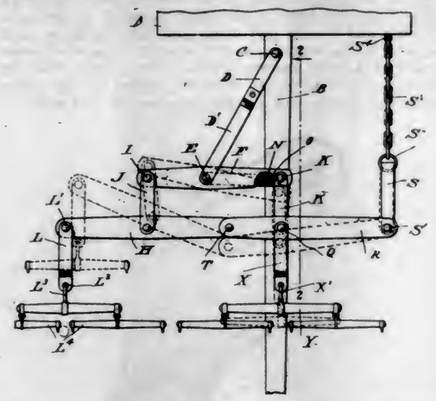
5. In a filter, a tank, a revoluble filtering drum within, means for revolving the drum, means for creating a vacuum in the axial part of the drum whereby the liquid to be filtered is drawn through the periphery of the filtering drum to the axial part thereof, a trough rising from the tank, a conveyer mounted to move about the drum in the tank and in the trough for raising the solid particles from the tank to the upper end of the trough, and means located between the conveyer adjacent the drum for breaking up the rotary movement of the liquid to be filtered.

[Claim 6 not printed in the Gazette.]

1,195,001. FOUR-HORSE EVENER. GULLIK O. GULLIKSON, Fargo, N. D. Filed Dec. 8, 1915. Serial No. 65,799. (Cl. 21—76.)

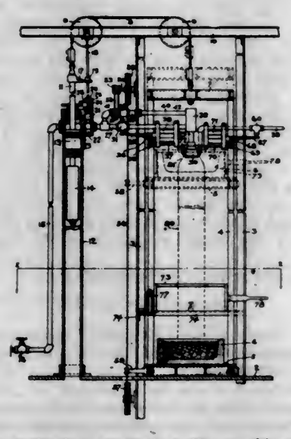
1. A four-horse evener for harvesters, etc., comprising, in combination with the harvester frame and tongue rigidly held thereto, a forked member fastened at one end to the tongue, a bar secured rigidly to the tongue and projecting at right angles therefrom, a pivotal pin passing through said bar and arms of the forked member, a draft

bar pivoted eccentrically upon said pin, other draft bars pivotally connected together at their ends and having pivotal link connections with said eccentrically pivoted draft bar, eveners having pivotal link connections with said pivotally connected draft bars, and connections between one of the latter and the frame of the harvester.



2. A four-horse evener for harvesters, etc., comprising, in combination with the harvester frame and tongue rigidly held thereto, a forked member fastened at one end to the tongue, a bar secured rigidly to the tongue and projecting at right angles therefrom, a pivotal pin passing through said bar and arms of the forked member, a draft bar pivoted eccentrically upon said pin, other draft bars pivotally connected together at their ends and having pivotal link connections with said eccentrically pivoted draft bar, eveners having pivotal link connections with said pivotally connected draft bars, a bar bent upon itself and pivotally connected to the end of one of said draft bars which are pivoted together at their inner ends, and a chain connecting the bar thus bent upon itself to the frame of the harvester.

1,195,002. GLASS-BLOWING APPARATUS. WARREN D. GUMPP, Arnold, and FERNAND M. FRANCART and GEORGE C. DEBAT, Springdale, Pa. Filed Aug. 11, 1915. Serial No. 45,011. (Cl. 49—17.1.)



1. In glass blowing apparatus, the combination of a vertically moving frame, a receptacle for molten glass carried thereby, a bait, a cylinder, a piston in said cylinder, connections between said piston and said vertically movable frame, means for admitting air to said cylinder, and means operated by the movement of said piston to admit the exhaust from said cylinder into said bait.

2. In glass blowing apparatus, the combination of a vertically movable frame, a receptacle for molten glass carried thereby, a bait, a cylinder, a piston in said cylinder, connections between said piston and said movable frame, pipe connections between said cylinder and said bait, means for admitting air to said cylinder, a valve controlling the supply of air to said pipe connections, and means for operating said valve by the movement of said piston.

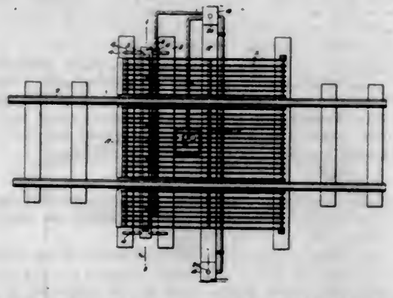
3. In glass blowing apparatus, the combination of a vertically movable frame, a receptacle for molten glass carried thereby, a bait, a cylinder, a piston in said cylinder, connections between said piston and said movable frame, means for admitting air to said cylinder, pipe connections between said cylinder and said bait, a valve controlling said pipe connections, a piston-rod connected to said valve, a tappet-arm on said piston-rod, and collars on said rod between which said tappet arm moves.

4. In glass blowing apparatus, the combination of a vertically movable frame, a receptacle for molten glass carried thereby, a bait, means for supplying air to said bait, a valve controlling said air supply, a thermostat subject to the heat of said molten glass, and connections between said thermostat and said valve for opening same to admit air to said bait when the molten glass in said receptacle is engaged by said bait.

5. In glass blowing apparatus, the combination of a vertically movable frame, a receptacle for molten glass carried thereby, a bait, means for raising said frame to bring said molten glass in contact with said bait, means for supplying air to said bait, a valve controlling said air supply, a thermostat exposed to the heat from said receptacle when raised, and connections between said thermostat and said valve to open the same.

[Claims 6 to 11 not printed in the Gazette.]

1,195,003. CATTLE-GUARD. ARTHUR GWYNN, Lucerne, Wyo. Filed Oct. 13, 1915. Serial No. 55,696. (Cl. 177—311.)

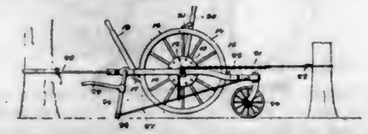


1. A cattle guard arranged upon a railway track, spring means for retaining the guard elevated above the ties for the track, means upon the guard and contacting with the rails for limiting the upward movement of the guard, an alarm, and means between the guard and said alarm for sounding the latter when the guard is depressed.

2. A cattle guard adapted to be arranged between and to the opposite sides of the rails of a railroad, said guard including longitudinally extending bars, transverse plates connecting the bars, means, comprising springs, for elevating one end of the guard to bring the bars thereof above the level of the track, means, including certain of the connecting bars contacting with the base flange of the rails for limiting said movement of the guard, visible and audible alarms arranged below the guard, and means upon the guard engaging with said alarms to sound the same when the guard is depressed.

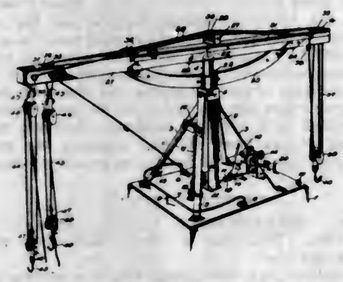
3. A cattle guard for railway tracks comprising longitudinally arranged spaced bars arranged between and to the opposite sides of the rails of the track and transverse plates connecting the bars, said plates being arranged below the rails, spring means engaging with the plates for forcing the same into contact with the flanges of the rails, a contact plate arranged below one of the aforementioned plates, contact members projecting from the plates, contact members upon one of the first mentioned plates arranged above the last mentioned contact members, sleeves surrounding the said last mentioned contact members and engaging with the first mentioned contact members, and said contact members being arranged in an electric circuit, a battery, a bell, a horn and a flash light.

1,195,004. STUMP-PULLER. WILFORD C. HAMMER, Scotts Mills, Oreg. Filed Dec. 14, 1915. Serial No. 66,787. (Cl. 254—166.)



A machine of the class described comprising a wheeled frame embodying spaced parallel beams connected at their opposite ends, a relatively large ratchet wheel journaled between said beams, a relatively small sprocket carried by said wheel, a chain adapted to be moved over the sprocket and associated therewith, a lever pivoted on the frame rearwardly of said wheel, a pair of spring pressed pawls associated with the lever and alternately operating to rotate said wheel in one direction when the lever is oscillated, a pawl pivoted on the frame in advance of said wheel and operating to prevent retrograde movement thereof, a second lever pivoted on the frame at one side of the wheel and projecting thereabove, and a pawl associated with the lever to rotate said wheel when said lever is operated prior to the operation of the first mentioned lever as described.

1,195,005. PORTABLE DERRICK. JENS HANSEN, Fairmont, Minn. Filed Feb. 12, 1916. Serial No. 77,930. (Cl. 212—61.)



1. A portable lifting machine including a base, a standard rising therefrom, a beam rotatably mounted on the standard, a holding member carried by the base and including an elongated bar, and a connector carried by the beam to slidably engage the bar, said connector comprising spaced sheave blocks, and the cable coöperating therewith to adjust the sheave blocks for varying the length of the connector.

2. A portable lifting machine including a base, a standard rising therefrom, a beam rotatably mounted on the standard, a holding member carried by the base and including an elongated bar, and a connector carried by the beam to slidably engage the bar, said connector comprising spaced sheave blocks, and the cable coöperating therewith to adjust the sheave blocks for varying the length of the connector, and a main lifting cable operative through the beam and standard.

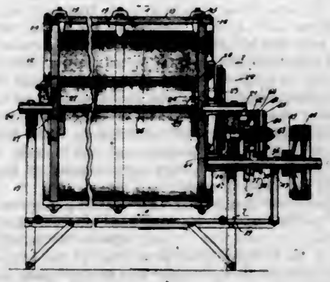
3. A portable lifting machine including a base, a standard rising therefrom, a beam rotatably mounted on the standard, a holding member carried by the base and including an elongated bar, and a connector carried by the beam to slidably engage the bar, said connector comprising spaced sheave blocks, and the cable coöperating therewith to adjust the sheave blocks for varying the length of the connector, and a main lifting cable operative through the beam and standard, means carried by the base to operate the main lifting cable.

4. A portable lifting machine including a base, a standard rising therefrom, a beam rotatably mounted on the standard, a holding member carried by the base and including an elongated bar, and a connector carried by the beam to slidably engage the bar, said connector comprising spaced sheave blocks, and the cable coöperating therewith to adjust the sheave blocks for varying the length of the connector, and a main lifting cable operative through the beam and standard, means carried by the base to operate the main lifting cable, and a brake carried by the base to receive the main lifting cable.

5. A portable lifting machine including a base, a standard rising therefrom, a beam rotatably mounted on the standard, a holding member carried by the base and including an elongated bar, and a connector carried by the beam to slidably engage the bar, said connector comprising spaced sheave blocks, and the cable coöperating therewith to adjust the sheave blocks for varying the length of the connector, and a main lifting cable passing through the respective ends of the beam, and terminally secured to one end of the beam, the opposite end of the cable passing through and beyond the main standard.

[Claim 6 not printed in the Gazette.]

1,195,006. BUTTER-MAKING MACHINE. PAUL HANSON, Wild Horse, Colo. Filed Sept. 8, 1913. Serial No. 788,576. (Cl. 31—25.)



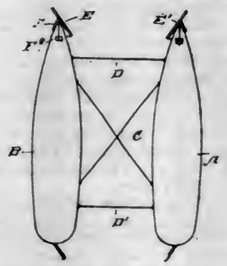
1. A butter making machine comprising a rotatable receptacle, an externally toothed bearing spider at one end, an internally and externally toothed member, a butter working roller, a gear connected to the butter working roller and in engagement with the internal teeth of said member, and means to drive the bearing spider and the said member simultaneously in opposite directions.

2. A butter making machine comprising a rotatable receptacle, an externally toothed bearing spider at one end, an internally and externally toothed member, a butter working roller, a gear connected to the butter working roller and in engagement with the internal teeth of said member, a driving gear in engagement with said bearing spider having teeth of greater width than the teeth of the spider, and a second gear to form driving engagement between the first named gear and the external teeth of said member.

3. A butter making machine comprising a rotatable receptacle, an externally toothed bearing spider at one end, an internally and externally toothed member, a butter working roller, a gear connected to the butter working roller and in engagement with the internal teeth of said

member, a driving gear in engagement with said bearing spider having teeth of greater width than the teeth of the spider, and an eccentrically mounted gear movable into and out of driving engagement with the first named gear and the external teeth of the said member.

1,195,007. METHOD OF AND MEANS FOR CONNECTING AND MAINTAINING VESSELS IN BROADSIDE RELATION. HENRY J. HARRIS, Youngstown, Ohio. Filed Nov. 19, 1915. Serial No. 62,357. (Cl. 114—235.)



1. A method of connecting and maintaining two moving vessels in broadside relation, and transmitting pulling power from at least one of the vessels to the other, which consists in establishing a draft line at an angle between points in advance of the transverse center of one vessel and in rear of the transverse center of the other vessel, establishing resistances between the bow and stern portions of the vessels against a predetermined lateral separation, and also establishing a resistance at the bow and stern of at least one of the vessels to resist lateral motion of said vessel with respect to the line of travel of the other vessel.

2. A method of connecting and maintaining two moving bodies in broadside relation and transmitting pulling power from each of said vessels to the other, which consists in establishing diagonal draft lines at a crossing angle between points in advance of the transverse center of each vessel and in rear of the transverse center of the other vessel, establishing resistances between the bow and stern portions of the vessels against more than a predetermined lateral separation, and also establishing water resistances at the bow and stern portions of the vessels to resist lateral motion of each vessel with respect to the line of travel of the other vessel.

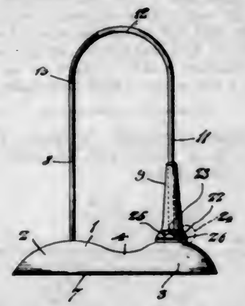
3. Means for connecting and maintaining two moving vessels in broadside relation and transmitting pulling power from at least one of said vessels to the other, comprising a draft connection extending at an angle from a point in advance of the center line of the vessel to a point in rear of the center line of the other vessel, transverse resistance elements between the bow and stern portions of the respective vessels, and bow and stern resistance devices upon at least one of said vessels.

4. Means for connecting and maintaining two moving vessels in broadside relation and transmitting pulling power from a vessel to another, comprising a draft connection extending at an angle from a point in advance of the center line of one vessel to a point in rear of the center line of the other vessel, transverse resistance elements between the bow and stern portions of the respective vessels, bow and stern resistance devices upon at least one of said vessels, and a means for raising and lowering the said bow resistance device.

5. Means for connecting and maintaining two moving bodies in broadside relation and transmitting pulling power from each of said vessels to the other, comprising draft lines extending diagonally at a crossing angle between points in advance of the transverse center of each vessel and in rear of the transverse center of the other vessel, transverse resistance lines between the bow and stern portions of the vessels, and bow and stern resistance devices upon the vessels operating under the pressure of the water to hold the vessels spaced apart to the extent allowed by said transverse resistance lines.

[Claim 6 not printed in the Gazette.]

1,195,008. BILL-FILE. LEVI R. HASLETT, Windsor, Vt. Filed Aug. 19, 1915. Serial No. 46,302. (Cl. 129—10.)



1. A bill file including a base, a fixed rod, a tubular extension projecting upwardly from the base and having a horizontal slot provided with opposite notches, a movable rod mounted in the tubular extension and provided with an operating arm extending through the said slot, said movable rod being also provided with a connecting arm for engaging the fixed rod, and a spring connected with the movable rod for yieldably holding the same in engagement with the fixed rod, the operating arm being out of engagement with the bottom of the notch when the connecting arm is in engagement with the fixed rod or member.

2. A bill file including a fixed rod having a tapered upper end and provided thereat with opposite grooves and a movable rod having a connecting arm provided with a forked terminal straddling the tapered end of the fixed rod and engaging the grooves thereof.

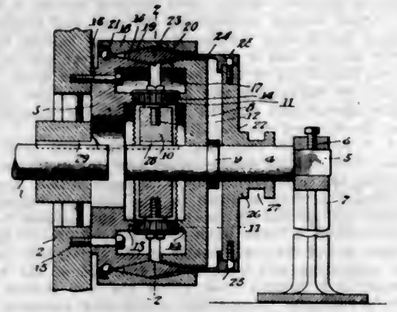
3. A bill file including a fixed rod having a tapered upper end and provided thereat with opposite grooves and a movable rod having a connecting arm provided with a forked terminal straddling the tapered end of the fixed rod and engaging the grooves thereof, the grooves of the fixed rod being transversely concaved to present concaved faces to the forked portion of the arm and the prongs formed by the fork being rounded at their inner faces.

4. A bill file including a fixed rod having a tapered upper terminal and provided with opposite grooves forming side portions of unequal widths, the wider side portion constituting a stop and a movable rod having a connecting arm provided with a forked terminal straddling the tapered end of the fixed rod and engaging the grooves thereof and limited in its lateral movement by the said stop.

1,195,009. REVERSE-GEAR. NATHAN HASLEY, Newport, Ohio. Filed Jan. 4, 1916. Serial No. 70,276. (Cl. 74—59.)

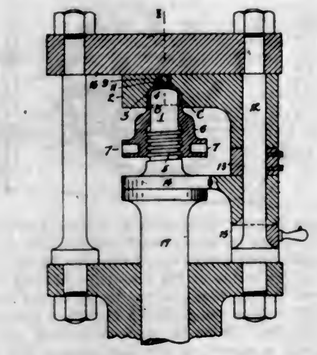
1. In reverse gear, the combination of a driving shaft, a stationary shaft, a driving gear fast on the driving shaft and embodying a clutch face, a driven gear loose on the stationary shaft and provided with a clutch face, a pinion support fast on the stationary shaft, bevel pinions on said support meshing with the aforesaid driving and driven gears, a driven member surrounding the clutch faces of said gears and provided with clutch faces, and a shiftable clutch member arranged to clutch the driven member to either the driving gear or the driven gear.

2. In reverse gear, the combination of a driving shaft, a stationary shaft, a driving gear fast on the driving shaft and embodying a clutch face, a driven gear loose on the stationary shaft and provided with a clutch face, a pinion support fast on the stationary shaft, bevel pinions on said support meshing with the aforesaid driving and driven gears, a driven member surrounding the clutch faces of said gears and provided with clutch faces, a plurality of clutch members arranged to clutch the driven member either to the driving gear or the driven gear, and a clutch shifting member for simultaneously operating said clutch members.



3. In reverse gear, the combination of a driving shaft, a stationary shaft, a driving gear fast on the driving shaft and embodying a clutch face, a driven gear loose on the stationary shaft and provided with a clutch face, a pinion support fast on the stationary shaft, bevel pinions on said support meshing with the aforesaid driving and driven gears, a driven member surrounding the clutch faces of said gears and provided with clutch faces, a plurality of clutch members arranged to clutch the driven member either to the driving gear or the driven gear, and a clutch shifting member for simultaneously operating said clutch members, said clutch shifting member being loose and slidable on the stationary shaft.

1,195,010. METAL-CASTING APPARATUS. ALBERT EDWARD HASSALL, Footscray, Victoria, Australia, assignor to himself and The Colonial Ammunition Company Limited, Footscray, Victoria, Australia. Filed Sept. 14, 1915. Serial No. 50,669. (Cl. 22—6.)



1. An apparatus of the class described comprising, a mold block into which molten metal is poured, a plunger adapted to enter said mold for compressing said metal, a collar encircling said plunger and adjustable thereon, said collar being adapted to enter said mold together with said plunger to form one wall of the mold.

2. An apparatus of the class described comprising, a mold block into which molten metal is poured, a plunger for compressing said metal, a collar adjustably threaded on said plunger, the upper end of said plunger and collar being adapted to enter said mold and form one wall thereof.

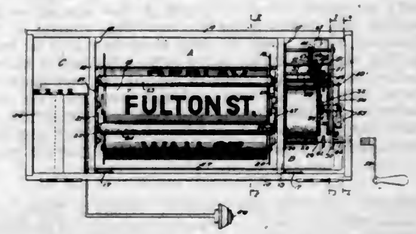
3. An apparatus of the class described comprising, a mold block, a capping block formed with an inlet through which the molten metal is poured into said mold block and slidably mounted in the latter so that the inflow of metal into the mold block may be cut off, said capping block being adapted to form one wall of said mold, a plunger for compressing the metal in the mold, and a collar adjustable on said plunger, said plunger and collar being adapted to enter said mold and form another wall thereof.

4. An apparatus of the class described comprising, a frame including a machine head, a mold block pivotally mounted on the frame and adapted to move in position to bear against said head, a plunger pivotally and slidably mounted on said frame and adapted to be moved into said mold block for compressing the metal therein, and a ram mounted on the frame for actuating said plunger.

5. An apparatus of the class described comprising, a frame including a machine head, a mold block pivotally mounted on said frame and movable relative to said machine head, said mold block being adapted to engage with said head, a plunger mounted on said frame and slidable to move into said mold block for compressing the metal therein, said plunger having a pivotal movement corresponding to the movement of said mold block, and a ram for actuating said plunger to compress the metal.

[Claim 6 not printed in the Gazette.]

1,195,011. STATION-INDICATOR. FRANK HEALY, Petrolia, Ontario, Canada. Filed Apr. 22, 1915. Serial No. 23,076. (Cl. 40—54.)



1. In a station indicator, the combination of a pair of rollers, a station belt winding on and off said rollers, means for operating one of the rollers to rewind the belt, a shaft, a spring having one end secured to the shaft to wind thereon, a second shaft operatively connected with the other roller, gearing between the said shafts, controlling mechanism, whereby the first shaft may be turned to rewind the spring when the roller upon which the station belt rewinds, is operated, and electrical means under the control of the conductor for rendering the controlling mechanism inactive.

2. In a station indicator, the combination of a pair of rollers, a station belt winding on and off said rollers, means for operating one of the said rollers to rewind the belt, a shaft, two gear wheels loosely mounted on the shaft, a pawl and ratchet mechanism for connecting one of the gear wheels with the shaft, a spring secured to the shaft to wind thereon, a second shaft having one end operatively connected with the other roller, a pinion on the second shaft and meshing with the gear wheels of the first shaft, and controlling mechanism for permitting the first shaft to be turned to wind the spring when the station belt is being rewound, said controlling mechanism including a member adapted to engage and lock the loose gear wheel when the controlling mechanism is in operative position.

3. In a station indicator, a pair of rollers, a station belt winding on and off said rollers, means for operating one of the rollers to wind the belt, a shaft, two gear wheels loosely mounted on the shaft, one of the gear wheels being provided with notches between its teeth, a pawl and ratchet mechanism for connecting the other gear wheel with the shaft, a spring secured to the shaft to wind thereon, a second shaft having one end operatively connected with the other roller, a pinion on the

second shaft and meshing with the said loose gear-wheels, a train of gearing operated from said second shaft, one of the gears of which is provided with stop pins and the shaft of another gear carries a cam, a rock shaft having four arms, one of which engages the notches of the loose gear wheel, the second one engages the cam, and the third one engages the stop pins, and an electromagnet, the armature of which engages the fourth arm of the rock shaft when the magnet is energized to rock said shaft to disengage the other arms.

4. In a device of the character set forth, the combination with a plurality of parallel rollers and a station name belt acting thereover, of a motor device to actuate said rollers and belt, said motor device including a main spring, means to secure one end of the spring in fixed position, a shaft to which the other end of the spring is connected, a ratchet wheel secured to the shaft, a pair of spaced gear wheels mounted loosely upon the shaft on opposite sides of the ratchet wheel, a pawl carried by one of the gears and engaging normally with the ratchet wheel, a long working pinion meshing with both of said gears and detachably connected to one of said rollers, a train of speed gearing driven from the pinion and terminating in a speed governor fan, controlling devices for the gearing comprising a rock shaft having a downwardly projecting arm and a plurality of other arms extending upwardly and laterally at one side of the vertical plane of said arm and shaft, one of said plurality of arms cooperating with one of the large gears, a circular cam wheel having notches coöperating with the second arm, and a pin wheel coöperating with the last arm in normal position, and means under the immediate control of the conductor acting upon the first mentioned arm to cause the rock shaft to lift all of the other arms out of normal position to allow the motor to operate the belt from one station name to the next at which time the last mentioned arm of the plurality will engage a pin of the pin wheel and the second arm of the plurality will drop into one of the cam wheel notches, substantially as set forth.

1,195,012. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed June 12, 1914. Serial No. 844,672. (Cl. 45—2.)



1. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, and a series of hinged holders mounted in the case and having its hinged end pivoted intermediate the end holders to the cover section.

2. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, and a series of hinged holders mounted in the case and having its hinged end pivoted intermediate the end holders to the cover section, with means in the base section for supporting and guiding the free ends of the holders upward and forward from within the base section over the forward rim thereof.

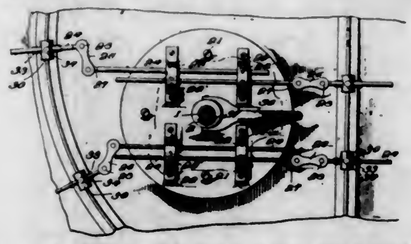
3. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a series of hinged holders mounted in the case and having its hinged end pivoted intermediate the end holders to the cover section, and a frame having its rear end pivoted to the hinged end of the lower holder of the series, with means for supporting and guiding the free end of the frame upward and forward from within the base section over the forward rim thereof.

4. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a series of hinged holders mounted in the case and having its hinged end pivoted intermediate the end holders to the cover section, a frame having its rear end pivoted to the hinged end of the lower holder of the series, with means for supporting and guiding the free end of the frame upward and forward from within the base section over the forward rim thereof, and contracting swinging connections between the hinged end of the frame and the cover section of the case.

5. A filing case including similar base and cover sections with guiding hinge connections for swinging and shifting the cover section upon the base section, a series of hinged holders mounted in the case and having its hinged end pivoted intermediate the end holders to the cover section, with means in the base section for supporting and guiding the free ends of the holders upward and forward from within the base section over the forward rim thereof, and swinging contracting connections between the hinged end of the lower holder of the series and the cover section of the case.

[Claims 6 to 12 not printed in the Gazette.]

1,195,013. LEAK-STOPPER FOR SHIPS. WILLIAM F. HIGGBY, Cambridge, Md. Filed Mar. 29, 1916. Serial No. 87,438. (Cl. 114—228.)



1. A leak stopper comprising a carrier, and a movable follower mounted on said carrier and movable in and out on the carrier, and means carried by the follower and attachable to the inside of the vessel for holding the packing between the follower and the inside of the vessel.

2. A leak stopper comprising a carrier, a stationary expansible member carried on one end thereof, and a movable follower mounted on the said carrier and movable toward and away from the expansible member, and attachable extensions carried by the follower for enlarging the size thereof.

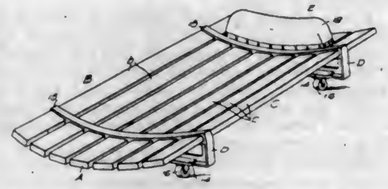
3. A leak stopper comprising a carrier, a stationary expansible member carried on one end thereof, the said expansible member comprising a body portion, folding arms mounted on the body portion and resilient means for normally holding the said folding arms at substantially right angles to the carrier, and a movable follower mounted on the said carrier and movable toward and away from the expansible member.

4. A leak stopper comprising a carrier, a stationary expansible member carried on one end thereof, said member comprising a body portion, arms pivotally connected to said body portion, resilient means for normally holding the said arms at right angles to the carrier, said arms provided with a stop for limiting their movement under the tension of the resilient means, and a movable follower mounted on the said carrier and movable toward and away from the expansible member.

5. A leak stopper comprising a carrier, a stationary expansible member carried on one end thereof, and a movable follower mounted on the said carrier and movable toward and away from the expansible member, the said follower comprising a body portion arranged at right angles to the carrier, guide ways carried by one face of the said body portion and extension arms adjustably mounted within the said guide-ways.

[Claims 6 and 7 not printed in the Gazette.]

1,195,014. COLLAPSIBLE, FOLDABLE CRAWLER FOR AUTOMOBILES. GUSTAVE EMIL HILD, Lyndhurst, N. J. Filed June 18, 1915. Serial No. 34,828. (Cl. 5—9.)



1. In a device of the character set forth, the combination of a bed comprising a plurality of sections permanently hinged together and comprising a plurality of spaced slats arranged parallel to the axes of the hinges, and a pair of rigid frames each comprising a bracket having a series of holes formed longitudinally therethrough adapted to slide over the ends of the slats aforesaid and thereby hold the sections from movement around the axes of the hinges, and a pair of casters carried by the base portion of each bracket.

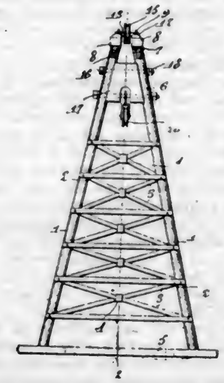
2. In a crawler of the character set forth, the combination of a bed comprising a plurality of longitudinal sections including longitudinal parallel spaced slats and means pivotally connecting the sections permanently together for folding movement around axes parallel to the slats, the slats having free ends projecting longitudinally beyond the region of the hinges, rigid means adapted to slip over said free ends of the slats to points adjacent the hinges and extending transversely of the bed and embracing the slats aforesaid to hold the bed in operative position, and a series of wheels carried by said rigid means for supporting the same and the bed upon the ground.

3. In a crawler, the combination of a slat, a pair of wings hinged upon the opposite edges of said slat, said wings being of the same length as the slat and adapted to fold around the axes of the hinges toward each other, rigid members coöperating transversely with the slat and wings to hold the same in open operative position, said rigid means being adapted to lie in the space between the wings when folded, and a series of casters carried by said rigid means.

4. In an automobile crawler, the combination of a bed comprising a central longitudinal slat and a pair of wings hinged to the opposite edges of the slat and foldable around the axes of the hinges toward each other on one side of the slat, a pair of rigid members coöperating transversely of the bed, each rigid member comprising a bracket embracing one end portion of said slat and wings holding the same in definite open position, and a series of rollers carried by said brackets.

5. In an automobile crawler, the combination of a longitudinal slat and pairs of hinges, portions of each pair of hinges being connected to the slat, the other portions of each pair constituting flexible straps extending oppositely from each other, a pair of wings on opposite sides of the slat, each wing comprising a plurality of spaced members secured permanently and individually to said flexible straps, a pair of rigid transverse members cooperating with the slat and wings to hold the same in definite operative position, each rigid member having a series of longitudinal openings embracing said slat and spaced members and arranged in an arc of a circle, and a series of rollers carried by said transverse members.

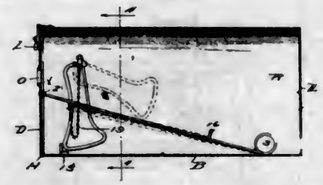
1,195,015. STEEL DERRICK. JESSE F. HILLIARD and FAYETTE JONES, Aiken, Pa. Filed Apr. 5, 1916. Serial No. 89,149. (Cl. 254—139.)



1. A derrick comprising hollow uprights, supports having extensions detachably mounted in the uprights, bearings detachably mounted in the supports, a pulley mounted in the bearings, and a pulley supporting block mounted between the uprights directly below said first pulley.

2. A derrick comprising hollow uprights, supports detachably mounted upon the upper ends of said uprights, bearing blocks seated within said supports, a pulley including an axle mounted on the bearing blocks, and U bolts passing around the axle of the pulley and through said blocks and supports.

1,195,016. LETTER-BOX. EVAN B. HILLMAN, Tacoma, Wash. Filed June 15, 1915. Serial No. 34,288. (Cl. 232—34.)



1. In a letter box, the combination with a receptacle, a door at its front end provided with a letter-opening and hinged at its lower edge to said receptacle, and a signal; of a false bottom having its front end pivoted to the door just beneath said opening, a shaft journaled across the body and having one end connected with said signal, a tongue fixed to the shaft and hanging normally across said opening, a crank in said shaft, and connections between the false bottom and crank for turning the shaft when the door is opened.

2. In a letter box, the combination with a receptacle, a door provided with a letter-opening and hinged at its lower edge to the front end of said receptacle, and a signal; of a false bottom having its front end pivoted to the door above its hinge and its body provided with a longitudinal slot, a shaft journaled across the body and

having one end connected with said signal, a tongue fixed to the shaft and hanging normally across said opening and through the slot in the false bottom, a stop on the bottom of the receptacle with which said tongue normally contacts, connections between the false bottom and shaft for turning the latter to raise the tongue when the false bottom is depressed.

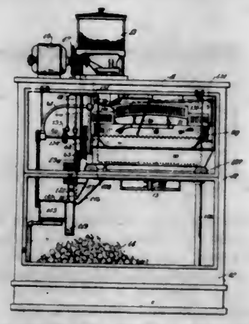
3. In a letter box, the combination with a receptacle, a door at its front end provided with a letter-opening and hinged at its lower edge to said receptacle, and a signal; of a false bottom having its front end pivoted to the door just beneath said opening, a shaft journaled across the body and having one end connected with said signal, a tongue fixed to the shaft and hanging normally across said opening, a crank in said shaft, and a flexible member connecting said crank with a point on the false bottom near one side of the latter and near its pivoted connection with said door, for the purpose set forth.

4. In a letter box, the combination with a receptacle, a door at its front end provided with a letter-opening and hinged at its lower edge to said receptacle, and a signal; of a false bottom comprising side arms pivoted at their front ends to said door beneath its opening, a grate having an upstanding ledge at its rear end and stops at its front end underlying said arms, its side bars paralleling such arms, and spring connections between the arms and bars respectively; a tongue pivotally supported within the receptacle and hanging normally across the letter-opening and through the grate, connections between the front end of the grate and the tongue for raising the tongue when the grate is depressed to its limit, and means for moving the signal by the elevation of the tongue.

5. In a letter box, the combination with a receptacle, a door at its front end provided with a letter-opening and hinged at its lower edge to said receptacle, and a signal; of a false bottom, comprising side arms pivoted at their front ends to said door beneath its opening, a grate having stops at its front end underlying said arms, its side bars paralleling such arms, and spring coils integrally uniting the rear ends of the arms and bars respectively; a tongue pivotally supported within the receptacle and hanging normally across the letter-opening and through the grate, means for raising the tongue when the grate is depressed to its limit, and means for moving the signal by the elevation of the tongue.

[Claims 6 to 9 not printed in the Gazette.]

1,195,017. POPCORN-MACHINE. JAMES I. HOLCOMB and JACOB F. HOKE, Jr., Indianapolis, Ind. Filed Dec. 28, 1914. Serial No. 879,396. (Cl. 53—4.)



1. In a corn popping machine, a rotary popping plate, means for feeding thereto the corn to be popped, means for regulating the feed of the popcorn to said popping means, and pivoted means on the margin of said popping plate for engaging and operating said feed regulating means.

2. In a corn popping machine, rotary popping means, means for feeding thereto the corn to be popped, means for regulating the feed of the popcorn to said popping means, and fingers pivoted to said popping means so that they can be moved into position to engage and actuate said feeding means.

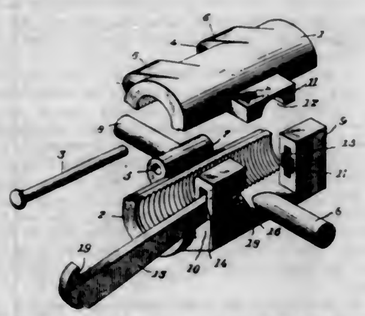
3. In a corn popping machine, rotary popping means, means for feeding thereto the corn to be popped, means for regulating the operation of said feeding means having an arm projecting down beside the periphery of the popping plate, and fingers pivoted in the horizontal position to the periphery of said popping plate adapted when turned radially outward to engage said arm and operate the feeding mechanism and when turned inwardly against the periphery of the popping plate, to not engage said feed operating arm.

4. In a corn popping machine, rotary popping means divided into compartments, means for feeding the corn to be popped into one compartment at a time, means for controlling said feeding means having an arm extending down beside the periphery of the popping means, and a finger pivotally mounted on the periphery of said popping means opposite each compartment and adapted to be adjusted into and out of position to engage said arm, whereby the corn to be popped may be fed only to such compartments as desired.

5. A corn popping machine including a rotary popping plate, a cover thereon divided into compartments, a feeding chute adapted to discharge corn into one compartment at a time, means for controlling said feeding chute having an arm extending beside the popping plate, and a finger pivoted to the periphery of said popping plate opposite each of said compartments and arranged to be moved into position for engaging said arm.

[Claims 6 to 9 not printed in the Gazette.]

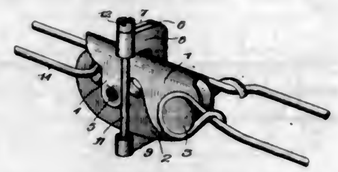
1,195,018. FASTENER FOR SECTIONAL COAL-AUGER NUTS. CORNELIUS E. HOLT, Washingtonville, and PROVEST R. RAUCH, Leetonia, Ohio, assignors to The Leetonia Tool Company, Leetonia, Ohio, a Corporation of Ohio. Filed May 12, 1916. Serial No. 97,072. (Cl. 255—46.)



1. In a device of the character described, the combination of hinged sections, one of the hinged sections provided with trunnions, their axes located in the same plane as the axis of the hinged sections, said section provided with spaced flanges, said space flanges provided with slots, one of the flanges provided with grooves upon opposite sides of its slot, the other section provided with a flange adapted to be located between the spaced flanges, a wedge shaped key adapted for longitudinal movement through the slots in the flanges said key provided with a cross pin.

2. In a device of the character described, the combination of hinged sections, one of the hinged sections provided with trunnions, their axes located in the same plane as the axis of the hinged sections, said section provided with spaced flanges said flanges provided with slots, one of the flanges provided with grooves upon opposite sides of its slot, the other section provided with a flange adapted to be located between the spaced flanges, a wedge shaped key provided with a cross pin, said wedge shaped key adapted for longitudinal movement through the slots of the flanges, and one of the flanges provided with a cut out portion adapted to receive the cross pin.

1,195,019. CLAMPING DEVICE FOR TIRE-CHAINS. CARL A. HUBER, Rochester, N. Y. Filed Feb. 5, 1915. Serial No. 6,379. (Cl. 24—241.)

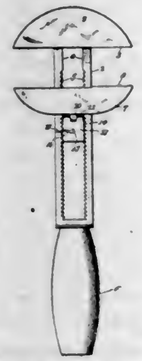


1. A clamping device for tire chains including a yoke consisting of a metal blank bent upon itself to form opposite yieldable portions defining an opening, and a pin adapted to be inserted within the opening in threaded engagement with said portions whereby to spread the same and to be clamped by the action of the yieldable portions tending to assume their normal position.

2. A clamping device for tire chains including a yoke consisting of a metal blank bent upon itself and forming a base of two yieldable adjacent portions, the arms of the yoke being looped and affording openings, and a pin engageable in said openings, the pin having threaded engagement with one of the arms and adapted to spread said yieldable adjacent portions when screwed into the threaded arm.

3. A clamping device for tire chains including a yoke consisting of a metal blank bent upon itself and forming a base of two yieldable portions spaced from each other, the arms of the yoke being looped and affording openings, a pin having a head thereon and a threaded portion adjacent to the head, the pin being engageable in said openings, and its threaded portion having threaded engagement with the corresponding arm of the yoke and adapted to spread said yieldable portion when screwed into the threaded arm.

1,195,020. WRENCH. GEORGE W. HUGHEY, Springfield, Mo. Filed Nov. 30, 1915. Serial No. 64,322. (Cl. 81—184.)

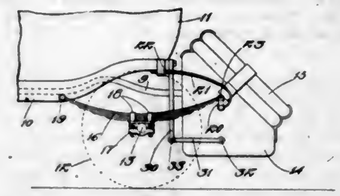


1. A wrench having a rigid jaw provided with a longitudinally slotted shank, a sliding jaw carried by the shank, a swinging block carried by the jaw adapted to be brought to engage with the inner edges of the slotted shank, and a pivoted latch carried by the block and adapted to be moved to engage with the slotted shank to hold the block in the slot of the shank.

2. A wrench having a rigid jaw provided with a longitudinally slotted shank forming the same with spaced bars, the inner edges of which are toothed and the distance between the teeth is greater at the ends of the teeth than at the central portions of the teeth, a sliding jaw carried by the wrench, a pivoted block on the jaw, said block having its edges toothed to engage with the teeth of the bars, a latch for the block comprising a member passing transversely through an opening in the block and having its ends provided with spring arms of a length to engage with the shank at the opposite sides of its slots, and one of said spring arms being provided with a handle.

3. A wrench having a rigid jaw provided with a longitudinally slotted shank, the inner edges of which are provided with rounded teeth and the distance between the teeth is greater at the ends thereof than at the central portion, a sliding jaw carried by the shank, a pivoted block for the jaw, said block having its ends formed with teeth to engage with the teeth of the slotted shank, and a latch member upon the block, operable from either side thereof to lock the block upon the shank.

1,195,021. VEHICLE SPRING SUSPENSION. HENRY WEBB HYDE, Boston, Mass. Filed Apr. 24, 1916. Serial No. 93,117. (Cl. 267—1.)



1. In a device of the character described, the combination of a body, an axle, a plurality of springs supporting said body on said axle and a weight secured to said springs at an intermediate point between said body and said axle, said weight being free to move independently of said body and axle.

2. In a device of the character described, the combination of a body, an axle, a weight movable relatively to said body and axle, a spring on said axle which supports said body at one side of said axle and supports said weight at the other side of said axle, said parts being arranged to cause said weight to have greater vibrations than said body, and a second spring connecting said body to said weight.

3. In a device of the character described, the combination of a body, a weight mounted to move relatively to the body, a spring supporting both said weight and said body, a support for said spring, and a second spring supported by said first spring and connected with said body.

4. In a device of the character described, the combination of a body, a weight mounted to move relatively to the said body, a pair of springs at the junction of which said weight is located, both of said springs being connected with the body and the weight, and a support for one of said springs.

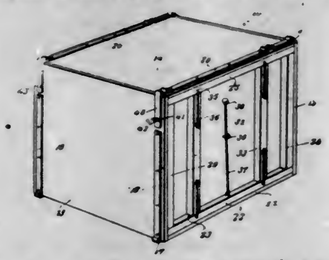
5. In a device of the character described, a body, an axle, a spring resting on said axle and supporting said body at one end, a weight mounted to be capable of movement relatively to said body and resting on the opposite end of said spring from that on which said body rests, and a second spring connecting said weight to said body.

[Claims 6 to 8 not printed in the Gazette.]

1,195,022. FOLDING BOX. LEEANDER T. JACKS and THOMAS W. BUSTIN, Pheba, Miss. Filed Dec. 19, 1913. Serial No. 807,717. (Cl. 217—15.)

A box comprising hinged end and side walls, a top member and a bottom member each having secured to its inner surface at each end a strip arranged to engage the outer surfaces of said end walls, uprights secured to said end walls and each having its extremities reduced, one reduced extremity passing through a recess in the strip attached to said top member and an opening in said top member and the remaining extremity passing through a recess in a strip attached to said bottom member and an

opening in said bottom member, and a pair of hooks pivotally attached to each upright, each hook having a right



angular extremity passing through a strip and engaging a reduced end of its associated uprights.

1,195,023. MARIONETTE BASE-BALL PERFORMANCE. THOMAS H. JACKSON, Scranton, Pa. Filed Mar. 30, 1916. Serial No. 87,816. (Cl. 235—1.)



1. In a miniature theatrical performance, the combination with a slotted platform; of a marionette figure above the platform, and means projecting through a slot for inflating it and for moving it at will from a position beneath the platform.

2. In a marionette baseball performance, the combination with a platform bearing the field; of a ball, means for inflating it at will, and means for moving it to simulate its travel during the game.

3. In a marionette baseball performance, the combination with a platform bearing the field and having slots in it; of an inflatable ball above the platform, a bulb beneath the platform, a conduit connecting the ball and bulb, and a guard surrounding the conduit where it passes through a slot.

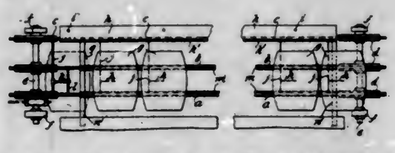
4. In a marionette baseball performance, the combination with a platform bearing the field; of an inflatable ball, a handle, a bulb carried by the handle, and a conduit connecting the bulb and ball, for the purpose set forth.

5. In a marionette baseball performance, the combination with a platform bearing the field and having openings through it; of a marionette figure including an inflatable ball, and means projecting through said openings for moving the figure and for inflating and deflating the ball to simulate features of the game.

[Claims 6 to 13 not printed in the Gazette.]

1,195,024. APPARATUS FOR DRYING BARRELS AND OTHER RECEPTACLES. WILLIAM ROBERT JEFFREYS, Grangemouth, Scotland. Filed Nov. 17, 1915. Serial No. 62,057. (Cl. 34—12.)

1. A steaming and drying apparatus as set forth characterized by an endless conveyer combining an endless slide valve, a steam or air chamber through which the slide valve passes and pipe connections from the slide valve for conveying steam or air to the article to be steamed or dried, substantially as and for the purposes described.



2. A steaming and drying apparatus as set forth characterized by an endless conveyer combining an endless slide valve, a steam or air chamber formed in sections through which the slide valve passes and pipe connections from the slide valve for conveying steam or air to the article to be steamed or dried, substantially as and for the purposes described.

3. An improved apparatus for steaming and drying barrels and the like comprising an endless conveyer formed of two chain-like members and a third linked member forming a continuous slide valve, the whole braced together and passing over wheels or drums at each end of the conveyer, a steam or air chamber through which the slide valve passes and transverse pipes connecting the slide valve with the conveyer chains and right-angled upwardly projecting pipes connected with the transverse pipes designed to enter and convey steam or aid to the article to be steamed or dried, substantially as and for the purpose specified.

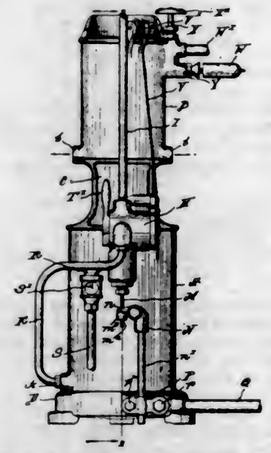
4. An improved apparatus for steaming and drying barrels and the like comprising three linked members braced together and forming a conveyer and endless slide valve, hexagonal toothed wheels for supporting the conveyer at each end, a steam or air chamber having a longitudinal opening against which the endless slide valve is held, adjustable guiding plates for holding the slide valve in position, transverse pipes having right-angled upwardly extending pipes for the passage of the steam or air and channeled irons for supporting the upper traveling surface of the conveyer; the whole constructed, arranged and operating substantially as herein described and shown with reference to the accompanying drawings.

1,195,025. FORCE-FEED LUBRICATOR. SAMUEL M. JENKINS, Louisville, Ky., assignor to The Jenkins Graphite Lubricating Company, Louisville, Ky., a Corporation of Kentucky. Filed Apr. 11, 1916. Serial No. 90,443. (Cl. 184—40.)

1. A force feed lubricator comprising a fluid pressure cylinder and a grease cylinder connected thereto, and in alinement therewith, a common piston rod for both of said cylinders, a piston on said rod mounted in said fluid pressure cylinder, and also a piston on said rod mounted in said grease cylinder, means including a three-way valve for supplying fluid under pressure to said fluid pressure cylinder at either side of its piston, means for limiting the flow of fluid from said fluid pressure cylinder, and means for carrying off the grease from said grease cylinder, substantially as described.

2. A force feed lubricator comprising a fluid pressure cylinder and a grease cylinder connected thereto, and in alinement therewith, a common piston rod for both of said cylinders, a piston on said rod mounted in said fluid pressure cylinder, and also a piston on said rod mounted in said grease cylinder, a pipe connected to a source of steam supply for supplying fluid under pressure to said fluid pressure cylinder, a three-way valve connected to said pipe for supplying fluid pressure at either side of the piston in said fluid pressure cylinder, means for limiting the flow of fluid from said fluid pressure cylinder, and means for carrying off the grease from said grease cylinder, substantially as described.

3. A force-feed lubricator comprising a fluid pressure cylinder and a grease cylinder connected thereto, and in alinement therewith, a common piston rod for both of said cylinders, a piston on said rod mounted in said fluid pressure cylinder, and also a piston on said rod mounted in said grease cylinder, means for supplying fluid under pressure to said fluid pressure cylinder at either side of its piston, a needle valve intermittently operated by some moving part of the engine, for limiting the flow of fluid from said fluid pressure cylinder, and means for carrying off the grease from said grease cylinder, substantially as described.

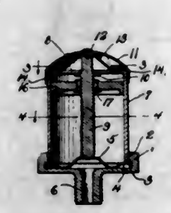


4. A force feed lubricator comprising a fluid pressure cylinder and a grease cylinder connected thereto, and in alinement therewith, a common piston rod for both of said cylinders, a piston on said rod mounted in said fluid pressure cylinder, and also a piston on said rod mounted in said grease cylinder, means including a three-way valve for supplying fluid under pressure to said fluid pressure cylinder at either side of its piston, a needle valve intermittently operated by some moving part of the engine for limiting the flow of fluid from said fluid pressure cylinder, and means for carrying off the grease from sid grease cylinder, substantially as described.

5. A force feed lubricator comprising a fluid pressure cylinder and a grease cylinder connected thereto, and in alinement therewith, a common piston rod for both of said cylinders, a piston on said rod mounted in said fluid pressure cylinder, and also a piston on said rod mounted in said grease cylinder, a pipe connected to a source of steam supply for supplying fluid under pressure to said fluid pressure cylinder, at either side of its piston, a needle valve intermittently operated by some moving part of the engine for limiting the flow of fluid from said fluid pressure cylinder, and means for carrying off the grease from said grease cylinder, substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

1,195,026. GREASE-CUP. GEORGE E. JOHNSON, Worcester, Mass. Filed Apr. 29, 1916. Serial No. 94,425. (Cl. 184—38.)



1. A grease cup including a casing, grease ejecting means mounted within the casing, a cap rotatably mounted upon the casing and carried at one end thereof, and means carried within the cap and contacting with the casing for predetermining the rotary movement of the cap.

2. A grease cup including a casing, grease ejecting means mounted within the casing, the end of said casing being provided with a plurality of recesses, a cap mounted upon one end of the casing, and means carried by the cap and adapted to integrally engage the recesses in said casing for limiting the rotary movement of said cap.

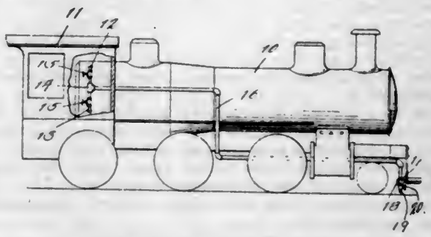
3. A grease cup including a casing, an adjusting screw mounted within said casing, means operated by said adjusting screw and arranged within the casing for ejecting the contents of the casing, a cap screwed to one end of said adjusting screw and provided with depending flanges for engaging said casing, and means mounted within the cap and engaging the end of the casing for regulating the rotary movement of the cap.

4. A grease cup including a casing, a base provided with interior screw threads adapted to receive the end of said casing, an adjusting screw mounted within the casing, resilient means engaging the end of said adjusting screw and disposed within a recess provided in said base, a flat spring carried by the opposite end of said adjusting screw, the ends of said spring being provided with lugs and engaging means for rotating said screw.

5. A grease cup including a casing, cylindrical casing having one of its ends closed, the closed end of said cylinder being provided with a plurality of radially disposed recesses, an adjusting screw mounted within the casing, a piston slidably arranged within the casing and threadedly engaged with said adjusting screw, a flange integrally formed with said adjusting screw and contacting with the closed end of said casing, a cap rotatably mounted on one end of said casing and screwed to said adjusting screw and a flat spring connected with said adjusting screw and arranged within said cap, the ends of said flat spring adapted to intermediately engage the said recesses.

[Claims 6 and 7 not printed in the Gazette.]

1,195,027. GRASS AND WEED DESTROYER. GEORGE G. JONES, Larue, Pa. Filed June 21, 1916. Serial No. 104,961. (Cl. 104—58.)

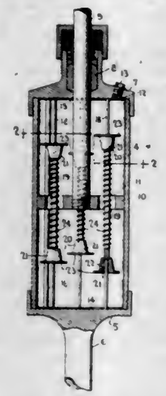


The combination with a locomotive boiler, of a pipe leading from the steam space of the boiler, a second pipe leading from the water space of said boiler, a T-fitting to the ends of which said pipes are connected, a valve in each of said pipes to afford independent water and steam control, a third pipe leading from the side of the T to the front of the engine, said third pipe being extended transversely across the engine beneath the front bumper and closed at its end, a series of spaced nozzles depending from the transversely extending portion of the third pipe and terminating in downwardly opening ends, and a valve for each of said nozzles.

1,195,028. DASH-POT. JOHN JOYCE, Oswego, N. Y. Filed Aug. 9, 1915. Serial No. 44,575. (Cl. 74—69.)

1. In a device of the character set forth, the combination with a cylinder member, of a piston member operating therein and having a port for permitting the passage of a fluid from one side to the other, a valve support, and a valve movably mounted on the support for controlling the port, said piston member being movable into and out of

engagement with the valve and thereby causing its automatic movement therewith on the support.



2. In a device of the character set forth, the combination with a cylinder member, of a piston member operating therein and having a port for permitting the passage of fluid from one side to the other, and movable valves located on opposite sides of the piston member and adapted to close the port when said piston member moves a predetermined distance in either direction, said piston engaging and moving the valve with it.

3. In a device of the character set forth, the combination with a cylinder member, of a piston member operating therein and having a port for permitting the passage of a fluid from one side to the other, a valve support extending through the port, and a valve movably mounted on the support and arranged to control said port when the piston member moves to a predetermined position, said valve being engaged and moved by the piston.

4. In a device of the character set forth, the combination with a cylinder member, of a piston member operating therein and having a port for permitting the passage of a fluid from one side to the other, a fixed valve supporting stem extending through the port, and a valve slidably and yieldingly mounted on the stem and arranged to close said port when the piston member moves into engagement therewith.

5. In a device of the character set forth, the combination with a cylinder member, of a piston member operating therein and having a port for permitting the passage of a fluid from one side to the other, a valve support extending through the port, and valves movably mounted on the support on opposite sides of the piston member, and engaged and moved thereby.

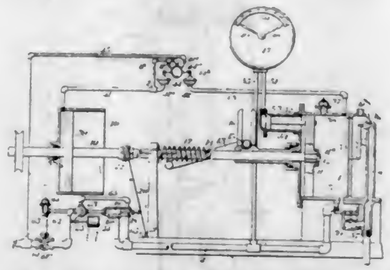
[Claims 6 to 12 not printed in the Gazette.]

1,195,029. TRAIN-CONTROL APPARATUS. RAYMOND M. KAUFMANN, Pittsburgh, and THOMAS M. FREEBLE, Rochester, Pa. Filed Apr. 14, 1915. Serial No. 21,307. (Cl. 246—58.)

1. Train control apparatus, comprising a pressure chamber, means arranged to be operated by a predetermined pressure in said chamber to control the speed of the train, means normally controlled by the speed of the train and working in said chamber to affect the pressure therein, and means for admitting pressure to said chamber controlled by track conditions and also by the speed of the train under such conditions, substantially as described.

2. Train control apparatus, comprising a pressure chamber, means operated by pressure in said chamber to control the speed of the train, a piston in said chamber, means for moving said piston in accordance with the actual speed of the train, and means operative under predetermined conditions and controlled by the speed of the train for admitting pressure to said chamber, substantially as described.

3. Train control apparatus, comprising a pressure chamber, means operated by pressure in said chamber to control the speed of the train, a piston in said chamber, means for moving said piston in accordance with the actual speed of the train, and means operative under predetermined conditions and controlled by the speed of the train for admitting pressure to said chamber, together with means for maintaining at all times a minimum pressure in said chamber, substantially as described.

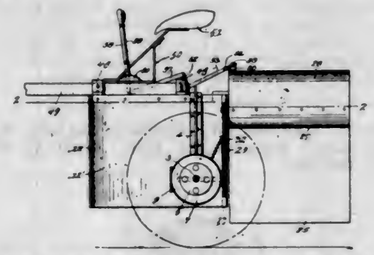


4. Train control apparatus, comprising a pressure chamber, means operated by pressure in said chamber to control the speed of the train, a piston in said chamber, means for moving said piston in accordance with the actual speed of the train, and means operative under predetermined conditions and controlled by the speed of the train for admitting pressure to said chamber, and means for maintaining at all times a minimum pressure in said chamber, together with means for effecting the automatic operation of the speed control device if the pressure in said chamber falls below such minimum, substantially as described.

5. Train control apparatus, comprising a pressure chamber, means operated by pressure in said chamber to control the speed of the train, a piston in said chamber, means for moving said piston in accordance with the actual speed of the train, and means operative under predetermined conditions and controlled by the speed of the train for admitting pressure to said chamber, together with means for properly decreasing the pressure in said chamber upon backward movement of the train, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,195,030. COTTON-PICKER. NEWTON KEELING, Maumee, Ark., assignor of one-half to John H. Robinson, Maumee, Ark. Filed Apr. 16, 1913. Serial No. 761,541. (Cl. 56—6.)



1. In a cotton harvester, the combination with a carriage comprising an arched axle, converging guide plates secured to the legs of said arched axle and wheels supporting the carriage, of a picker frame vertically adjustable with relation to said carriage and positioned at the rear end thereof, and means to hold said frame in various adjusted positions.

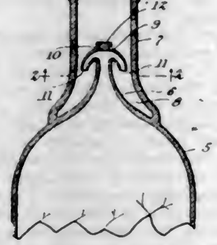
2. A cotton harvester comprising the combination with a carriage comprising an arched axle, wheels supporting said axle, converging guide plates on said axle, guides at the rear ends of said plates, of a picker frame vertically adjustable on said guides and means to hold said picker frame in its various adjusted positions.

3. In a cotton harvester, the combination with a carriage comprising an arched axle, wheels supporting the axle, converging guide plates secured to the vertical arms of said axle, guides at the rear ends of said guide plates, of a picker frame vertically adjustable on said guides, picker belts in said frame, means driven from the supporting wheels to drive the picker belt and means to adjust the picker frame vertically on the carriage.

4. In a cotton harvester, the combination with a carriage, wheels supporting said carriage, of a picker frame vertically adjustable at the rear end of the carriage, picker belts in said frame, means connected to the wheels and to the picker belts to drive the same upon rotation of the wheels, and a train of levers carried by the carriage to vertically adjust the picker frame with relation to the carriage.

5. A cotton harvester comprising an arched axle, wheels journaled upon the axle, a picker frame located wholly in the rear of the axle, means by which the picker frame may be adjusted vertically with relation to the axle, picker mechanism carried by the frame, means for operating the picker mechanism, and guide plates located within the arch of the axle and extending forwardly and rearwardly beyond the axle, the rear ends of said plates being associated with the frame to direct the cotton plants to said mechanism.

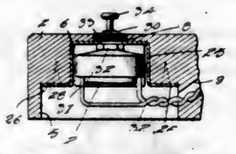
1,195,031. NON-REFILLABLE BOTTLE. FRANK KRUCHOSKI, Chisholm, Minn. Filed Aug. 4, 1915. Serial No. 43,644. (Cl. 215—77.)



A bottle including a long neck, a relatively short neck disposed within the long neck in spaced relation thereto, an overhanging substantially semicircular outlet branch formed on said short neck, the free ends of said branch being disposed in the space between the said necks, said branch having a central opening disposed in alinement with the bore of said short neck and through which the bottle is initially filled, and means for sealing said opening subsequent to the filling of said bottle.

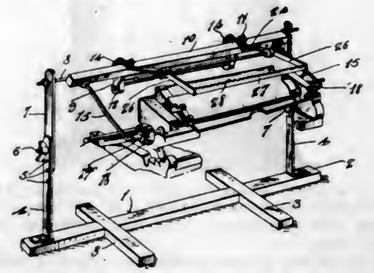
1,195,032. PORTABLE ELECTRIC LAMP. EDWIN W. LAMB, Lansing, Mich. Filed Feb. 26, 1916. Serial No. 80,682. (Cl. 240—81.)

In a lamp of the class described, a base having a recess near its forward edge extending upwardly from its lower face, a reduced recess extending upwardly from the first mentioned recess to a point near the upper side of the base, shoulders formed at the juncture of the recesses, the base also having an opening extending through the top and communicating with the reduced recess, said opening being arranged centrally of the recess, a hood comprising a body, side walls formed on the body, the body also having a central aperture therein alining with the aperture in the upper end of the reduced recess, flanges on the lower ends of the walls for engaging the shoulders, screws adapted to pass through the flanges to hold said hood in place, a switch, a reduced neck on the switch



adapted to extend through the aperture in the hood and lock nuts for engaging opposite sides of the hood immediately adjacent the aperture to hold the switch in place.

1,195,033. TYPE-WRITER ATTACHMENT. JOHN H. LA MOY, Glens Falls, N. Y., assignor of one-half to Beecher W. Sprague, Glens Falls, N. Y. Filed Nov. 6, 1915. Serial No. 60,001. (Cl. 197—133.)



1. In a typewriter attachment, a base, standards extending upwardly from the base, a supporting bar extending between the standards, a carriage slidable on the supporting bar, arms extending forwardly and upwardly from the carriage, a paper roll support at the ends of the arms, bars extending forwardly from the arms, a severing bar extending between the last named bars and means connecting the carriage to a typewriter carriage for simultaneous movement therewith.

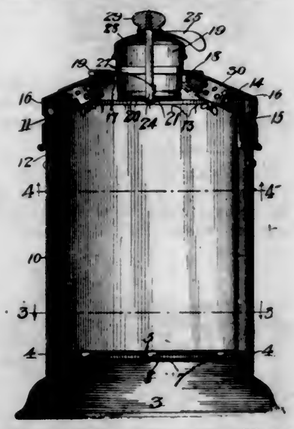
2. In a typewriter attachment comprising a base, standards at opposite ends of the base, a bar extending between the standards, a carriage slidable on said bar, said carriage consisting of a main supporting bar, arms extending downwardly and rearwardly from the main supporting bar, blocks at the rear ends of the arms, rollers carried by the blocks and being rotatable on the supporting bar and means on the bar of the carriage for attaching the same to the carriage of a typewriter, and means on the bar of the carriage for supporting a roll of paper and severing the paper into sheets.

3. A typewriter attachment comprising a base, standards extending upwardly from the base at opposite ends, a horizontal guide bar extending between the standards, rollers movable on said guide bar, blocks supported by said rollers, a carriage, said carriage comprising a supporting bar, arms extending downwardly and rearwardly from said supporting bar and pivotally connected to the blocks, arms extending downwardly and forwardly from the supporting bar and connected to a typewriter carriage, rods extending upwardly and forwardly from the supporting bar, a paper roll support at the outer ends of the rods and means extending forwardly from the outer ends of the rods to sever the paper after it has been written upon.

4. A typewriter attachment including a horizontal supporting bar, a carriage bar slidable on the supporting bar, arms extending forwardly and downwardly from the carriage bar, means at the ends of the arms to attach the device to the carriage of a typewriter, supporting arms extending forwardly from the carriage bar a paper roll support extending between the arms and a paper severing

device secured to the ends of the arms, the paper roll support and severing device being positioned in a plane above the carriage of the typewriter.

1,195,034. SANITARY GARBAGE-RECEIVER. ANTHONY EDWARD LANG, Buffalo, N. Y. Filed Sept. 16, 1915. Serial No. 51,005. (Cl. 220—115.)



1. A sanitary garbage receiver comprising a casing, a false perforated bottom spaced from the bottom of the casing, and a destroyable receptacle supported on said false bottom.

2. A sanitary garbage receiver comprising a perforated casing, a false perforated bottom in said casing, and a destroyable receptacle supported on said false bottom and having its walls spaced from the walls of the casing.

3. A sanitary garbage receiver comprising a casing, a false perforated bottom in said casing, and a destroyable receptacle supported on said false bottom and having its walls spaced from the walls of the casing.

4. A sanitary garbage receiver comprising a casing having a removable top and a perforated false bottom, and a destroyable receptacle supported on said false bottom and having its walls spaced from the walls of the casing, the top edge of the receptacle being spaced from the top of the casing for the purpose described.

5. A sanitary garbage receiver having a germicide receptacle associated with its upper portion, the bottom of said receptacle having an opening through which some of the germicide may drop to the garbage receiver, a closure for said opening, and means to agitate the germicide in the receptacle, for the purpose described.

[Claims 6 to 11 not printed in the Gazette.]

1,195,035. BOAT-HULL. JOHN ELLIOT LANGSTAFF, New York, N. Y. Filed Mar. 20, 1916. Serial No. 85,413. (Cl. 115—39.)



1. A boat hull having a bottom, upwardly diverging side walls and a well depending from said bottom, said well having rearwardly converging side channels.

2. A boat hull having a bottom, upwardly diverging side walls and a well depending from said bottom, said well having an upwardly and forwardly extended bottom channel.

3. A boat hull having a bottom, upwardly diverging side walls and a well depending from said bottom, said well having rearwardly converging side channels and an upwardly and forwardly extended bottom channel.

4. A boat hull having a bottom, upwardly diverging side walls, a well depending from said bottom, and a bow having upwardly diverging side walls and an upwardly inclined bottom.

5. A boat hull having a bottom, upwardly diverging side walls and a well depending from said bottom, said well having rearwardly converging sides and an extended bottom to form side channels.

[Claims 6 to 8 not printed in the Gazette.]

1,195,036. ELASTIC FABRIC. CHARLES A. LAPWORTH West Bridgewater, Mass., assignor to The Lapworth Webbing Company, Brockton, Mass. Filed Oct. 18 1915. Serial No. 56,423. (Cl. 139—70.)



1. An elastic fabric having reversely twilled portions on the face thereof, in opposite sides of each elastic warp, said twilled portions extending diagonally between adjacent elastic warps to produce a wave-like design extending transversely of the fabric.

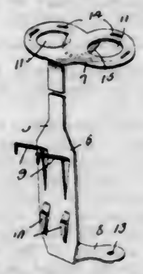
2. An elastic fabric having twilled portions on the face thereof forming a wave-like design extending transversely of the fabric, said design having its anticlinal and synclinal axes disposed substantially co-incident with the elastic warps.

3. A double elastic fabric having a plain back and selvage, and woven to produce a wave-like design extending transversely of the fabric, said design having its anticlinal and synclinal axes disposed substantially over adjacent elastic warps.

4. In an elastic fabric woven in eight-time motion, a design having alternating crests and troughs extending across the fabric in one direction, and having elastic warps extending through the fabric at substantially right angles to the design, said elastic warps passing through the crests and troughs respectively of said design.

5. In an elastic fabric, a plurality of elastic warps, a design having a main body thereof extending transversely of the fabric at substantially right angles to said elastic warps, said design being composed of a plurality of units or twilled portions each of which is formed between adjacent elastic warps, the continuity of said twilled portions in a given direction on a given line terminating with the adjacent elastic warps between which it is formed.

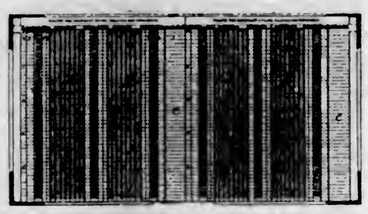
1,195,037. ATTACHMENT FOR LANTERNS. LEE D. LA REICE, Havre, Mont. Filed Sept. 10, 1915. Serial No. 50,024. (Cl. 206—16.)



1. A torpedo and fusee holder for attachment to lanterns comprising a body having upper and lower forwardly projecting fusee and torpedo supporting portions, a pair of vertically disposed spaced clasps upon the lower portion of said body to engage the intermediate horizontal ring member of the frame of a lantern, and a pair of spaced engaging members upon said body portion above said clasps, said engaging members extending at an upward and outward angle from the rear face of said body portion so as to extend beneath the inclined hood of the top piece of the lantern and provided with down-turned portions to engage the upper horizontal ring of the lantern frame, whereby the device is adapted to be supported in position upon a lantern frame and to be held by the hood against accidental displacement, substantially as described.

2. A torpedo and fusee holder for attachment to lanterns comprising a body having upper and lower forwardly projecting fusee and torpedo supporting portions, said upper portion having a pair of spaced torpedo receiving openings therein, a spring member upon the upper supporting portion for engaging and clamping the fusees in position, and means upon the body portion for attaching the same to the frame of a lantern.

1,195,038. RECORD-BOOK. WALTER I. LEATHERLAND, Alexandria, Va., assignor of one-half to James S. Francis, Richmond, Va. Filed June 2, 1914. Serial No. 842,505. (Cl. 11—7.)

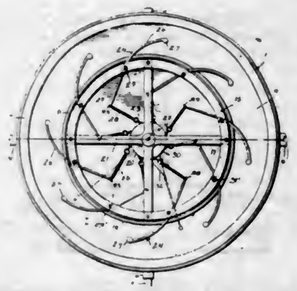


1. A record book for use in recording the movements of railway equipment in the yards of railway systems comprising sheets divided into a series of vertical spaces each of which spaces contains a column for the number of the car with the final terminal shown in connection with successive "third" terminals, another column for the initials of the company to which the car belongs, another column for the initials of the company from which the car was originally received, another column for the "class" of car, and several columns for recording the "received" and "forwarded" movement of each car, each sheet also containing other vertical spaces divided into columns, one of which is adapted to contain the car number, another the initials of the company owning the car, another the file number containing information concerning the car, another for special notations, said several columns of said several sheets being appropriately designated, and another sheet interposed at the end of each series of ten of the main sheets containing appropriately arranged and designated spaces for "overflow" memoranda concerning any car of any number on the ten preceding pages, all substantially as set forth.

2. A record book for use in recording the equipment handled in railway yards consisting of sheets divided into columns appropriately designated and arranged for recording the movements of cars by numbers, each sheet containing ten successive "third" terminals, each eleventh sheet of the book being an overflow sheet containing appropriately arranged spaces for recording "overflow" memoranda concerning any car of any number in the ten preceding sheets, said overflow sheet having a section adapted to receive overflow memoranda as a continuation of any of the ten sections of each of the ten preceding sheets, substantially as set forth.

3. A railway equipment record book for use in railway yards comprising a series of sections each having a series of sheets with columns and divisions appropriately designated and arranged for containing a record of "received" and "forwarded" movement of cars, a record of the company from which the car was received originally, a record of the files containing information concerning the cars by numbers, a sheet interspaced at regular intervals at the end of each of said sections also appropriately designated and arranged for receiving "overflow" information of like character from the several spaces of each of the several sheets of the section immediately preceding and other sheets appropriately designated and arranged for receiving other record of the equipment within the yard, whereby a complete yard record may be comprised in a single book, all substantially as set forth.

1,195,039. WASHING-MACHINE. ARISTIDE L. LE BLANC, New Orleans, La. Filed Aug. 24, 1915. Serial No. 47,077. (Cl. 68—16.)



1. In combination, a tub, a rubber-carrying drum rotatably mounted within the tub, rubbers carried by the drum, means to yieldably hold the rubbers under pressure angularly with relation to the drum and means to simultaneously adjust the angular relation and pressure of the rubbers.

2. In combination, a tub, a rotary rubber-carrying drum mounted within the tub, rubbers pivoted to the drum, and adapted to press outwardly toward the side of the tub, a tension drum rotatably mounted with relation to the rubber-carrying drum, and resilient means connecting the tension drum with the rubbers, whereby upon movement of the tension drum with relation to the rubber-carrying drum the pressure of the rubbers may be adjusted.

3. In combination, a tub, a rubber-carrying drum rotatable within the tub, yieldable outwardly pressing rubbers pivoted in the rubber-carrying drum, a tension drum rotatable within the rubber-carrying drum, means to hold the tension drum in various positions with ir the rubber-carrying drum, and spring means connecting the rubbers with the tension drum, whereby upon movement of the tension drum with relation to the rubber-carrying from the angular relation and pressure of the rubbers with the side of the tub may be adjusted.

4. In combination, a tub, rings within the tub, netting supported on the rings and spaced from the side walls of the tub, a rubber-carrying drum rotatable within the tub and concentric with relation to the rings, rubbers on the rubber-carrying drum, and means to adjust the angular relation of the rubbers with the drum.

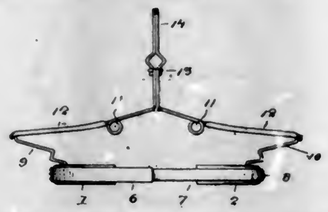
5. In combination, a tub, rings within the tub, netting secured to the rings and spaced from the side wall of the tub, an inwardly extending annular flange on the lowermost ring, radial arms extending inwardly from the ring and supporting the flange, a rubber-carrying drum concentrically mounted with relation to the rings, rubbers extending outwardly from the rubber-carrying drum and into close proximity to the netting supported on the rings, the space between the netting on the rings and the rubber-carrying drum providing a washing chamber, a tension drum rotatably mounted within the rubber-carrying drum, means to hold the tension drum in various positions with relation to the rubber-carrying drum, and means connecting the rubbers with the tension drum to hold the same at various angular positions with relation to said rubber-carrying drum.

1,195,040. PRODUCT RESEMBLING CELLULOID AND PROCESS FOR PRODUCING THE SAME. LEONHARD LEDERER, Sulzbach, Germany. Filed May 2, 1907, Serial No. 371,533. Renewed July 1, 191[illegible] Serial No. 107,150. (Cl. 106—37.)

1. The herein described improvement in the manufacture of products resembling celluloid, which consists in dissolving nitrocellulose and a chloral-compound without camphor in a suitable solvent and then causing the solvent to evaporate.

2. The herein described improvement in the manufacture of products resembling celluloid, which consists in dissolving nitrocellulose and chloral-hydrate devoid of camphor in a suitable solvent and then causing the solvent to evaporate.

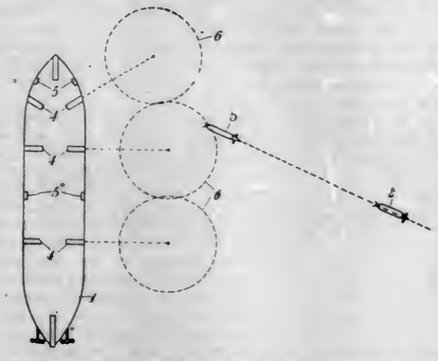
1,195,041. COMBINED SKIRT AND COAT HANGER. CARL R. LENDLE, Chicago, Ill. Filed Aug. 7, 1915. Serial No. 44,212. (Cl. 211—13.)



1. A combined skirt and coat hanger comprising a pair of semi-oval heads, a screw connecting said members and having right and left threads for causing a simultaneous separation or approach of said members, substantially U-shaped guiding members carried by the heads and having their terminals arranged to interengage for guiding the heads and preventing rotation thereof with the screw, coat supporting shoulder pieces carried by the supporting device and a supporting hook pivoted on the supporting devices.

2. A combined coat and skirt hanger comprising a pair of semi-oval members, means for adjusting said members toward and away from each other, a coat support comprising a single length of resilient material having its opposite ends secured to said members, a suspension hook associated with said coat support, and a resilient coil formed in said support between said hook and the said members to permit of the adjustment of the latter.

1,195,042. MEANS FOR PREVENTING ATTACKS OF TORPEDOES AND THE LIKE. KARL OSKAR LEON, Stockholm, Sweden. Filed Jan. 31, 1916. Serial No. 75,261. (Cl. 114—20.)



1. Means for preventing attacks of torpedoes or the like, consisting in devices arranged on the object attacked to eject explosive charges into the water and so placed and directed, that the ranges of explosion effected by the different devices touch or intersect one another, substantially as and for the purpose set forth.

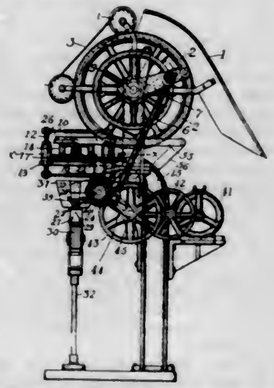
2. In means for preventing attacks of torpedoes or the like, the combination of devices arranged on the object attacked to eject explosive charges into the water, means for discharging said devices, and sound-receivers placed on the object attacked and arranged to actuate, on account of the sound of the approaching torpedo, the said discharging means, substantially as and for the purpose set forth.

3. In means for preventing attacks of torpedoes or the like, the combination of devices arranged on the object attacked to eject explosive charges into the water, means for discharging said devices, sound receivers placed on the object attacked and arranged to actuate, on account of the sound of the approaching torpedo the said discharging means, and relays connecting electrically said sound receivers and said discharging means, substantially as and for the purpose set forth.

4. In means for preventing attacks of torpedoes or the like, the combination of devices arranged on the object attacked to eject explosive charges into the water, and distance-igniting devices placed in said charges and arranged to cause the charges to explode at suitable distances, substantially as and for the purpose set forth.

5. In means for preventing attacks of torpedoes or the like, the combination of devices arranged on the object to be defended and adapted to eject explosive charges into the water, and time-igniting devices placed in said charges and several so timed so as to ignite simultaneously, substantially as and for the purpose set forth.

1,195,043. SAUSAGE-LINKING MACHINE. JOHN A. LIDBACK, Portland, Me., assignor, by mesne assignments, of one-eighth to George H. Lidback, individually; George H. Lidback, Portland, Me., administrator of said John A. Lidback, deceased. Filed Nov. 3, 1913. Serial No. 798,794. (Cl. 17—6.)



1. In a machine for linking sausages, the combination of a feeding device for feeding the stuffed casing, two sets of grippers for forming contracted joints in the casing, said grippers being spaced apart the length of one sausage, a twisting ring between said sets of grippers through which the sausages pass, pivoted holding arms carried by said ring and spaced far enough from said grippers to embrace the uncontracted body of the sausage and means for rotating said ring.

2. In a machine for linking sausages, the combination of a feeding device for feeding the stuffed casings, two sets of grippers for forming contracted joints in the casing, said grippers being spaced apart the length of one sausage, a twisting ring between said sets of grippers through which the sausages pass, pivoted holding arms carried by said ring and spaced far enough from said grippers to embrace the uncontracted body of the sausage, means for rotating said twisting ring and means for opening and closing said arms.

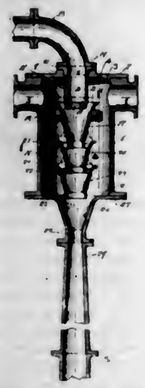
3. In a machine for linking sausages, the combination of a feeding device for feeding the stuffed casings, two sets of grippers for forming contracted joints in the casing, said grippers being spaced apart the length of one sausage, a twisting ring between said sets of grippers through which the sausages pass, pivoted holding arms carried by said ring and spaced far enough from said grippers to embrace the uncontracted body of the sausage, means for rotating said twisting ring and means for opening and closing said arms while the twisting ring is in motion.

4. In a machine for linking sausages, the combination of a feeding device for feeding the stuffed casings, two sets of grippers for forming contracted joints in the casing, said grippers being spaced apart the length of one sausage, a twisting ring between said sets of grippers through which the sausages pass, pivoted holding arms carried by said ring and spaced far enough from said grippers to embrace the uncontracted body of the sausage, said holding arms being formed to close by centrifugal force when the twisting ring is in motion, means for rotating said twisting ring and means for positively opening said holding arms while the twisting ring is in motion.

5. In a machine for linking sausages, the combination of a feeding device for feeding the stuffed casing, two sets of grippers for forming contracted joints in said casing, said grippers being spaced apart the length of one sausage, a twisting ring between said sets of grippers through which the sausages pass, pivoted holding arms carried by said ring for embracing the body of the sausage, said arms having weighted projections positioned to be thrown outwardly to close the arms by centrifugal force and means for positively forcing said projections inwardly to open the arms.

[Claims 6 to 17 not printed in the Gazette.]

1,195,044. APPARATUS FOR THE GASEOUS TREATMENT OF SACCHARINE JUICES. NELSON A. LOCKWOOD, Ogden, Utah. Filed Feb. 9, 1916. Serial No. 77,284. (Cl. 127—1.)



1. In apparatus for treating saccharine juices, including a receiving receptacle having a suitable outlet and provided with an inlet for a treating gas, in combination with a juice injector, projecting within said receptacle and having a nozzle discharge so formed as to direct the injected juice within said receptacle in the form of a wall of juice having an open central zone, substantially as described.

2. In apparatus for treating saccharine juices, including a receiving receptacle having a suitable outlet and provided with an inlet for a treating gas, in combination with a juice injector, projecting within said receptacle and provided with a nozzle end having a plurality of jet orifices, functioning substantially as described.

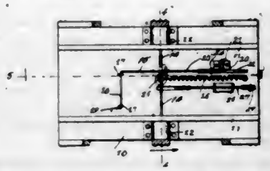
3. In apparatus for treating saccharine juices, including a receiving receptacle having a suitable outlet and provided with an inlet for a treating gas, in combination with a juice injector, projecting within said receptacle and provided with a nozzle end having a plurality of tapering jet orifices functioning substantially as described.

4. In apparatus for treating saccharine juices, including a receiving receptacle having a suitable outlet and provided with an inlet for a treating gas, in combination with a juice injector, projecting within said receptacle and provided with a nozzle end having a plurality of circularly disposed jet orifices, for directing the injected juice into said receptacle in the form of a wall of jets having a central open zone, substantially as described.

5. In apparatus for treating saccharine juices, including a closed receptacle, forming a gas chamber, provided with an inlet for a treating gas, in combination with means for receiving and conveying the incoming juice and treating gas through and from said receptacle, including as an element a hollow truncated inverted cone, suitably mounted in said receptacle, and a juice injector directly discharging into said hollow cone, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,195,045. CAR-LOCK FOR MINE-CAGES. WILLIAM A. LUBOLD, Gratz, Pa. Filed Aug. 31, 1914. Serial No. 859,480. (Cl. 189—97.)

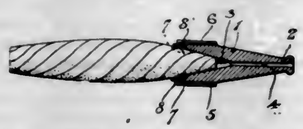


The combination with a mine cage having rails thereon, of chock blocks mounted for movement into and out of position to extend across the rails, links pivoted to the blocks at their outer ends and pivotally connected at their inner ends, a spring secured to the cage and connected with the links at their point of pivotal connection and arranged to hold the links yieldably at an angle to each other with the blocks across the rails, a lever pivoted upon the cage at the side of the links in the direction of their movement under the action of the spring, said lever having a portion arranged to engage one of the links at a point to hold it against movement by the spring, said lever being movable upon its pivot for disengagement of the lever from the link, a second lever pivoted upon the cage for vertical movement at the opposite side of the links from the first named lever and having a portion engaged with the first lever for movement of the first lever vertically by the second lever, upwardly projecting portions carried by the levers for movement of said levers vertically when the upwardly projecting portions are moved toward the horizontal, a member slidably mounted on the cage in position for engagement of one of the links adjacent to its inner end for movement of the links against action of the spring, and means projecting below the cage for moving the slidably mounted member.

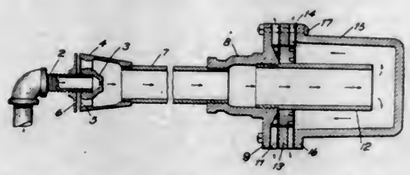
1,195,046. CIGAR-HOLDER. MELVIN H. LUCAS and DENNIS B. KELLY, Portland, Oreg. Filed Jan. 30, 1915. Serial No. 5,269. (Cl. 131—10.)

The combination with a cigar holder having a cigar receiving socket in one end, and oppositely alined openings formed in the sides thereof and communicating with the socket, said openings being inclined inwardly toward the opposite end of said holder, of a band slidably mounted upon the holder and oppositely alined cigar retaining hooks, said hooks having relatively straight shanks of spring metal formed integral with the band and being dis-

posed to engage the sides of the holder, the bills of the hooks being turned inwardly and pointed, said bills being disposed within the openings, in the holder, thereby limiting the movement of the band in one direction, the formation of the openings serving to facilitate the removal of the bills from engagement with a cigar when the band is pushed outwardly.



1,195,047. GAS-BURNER. CHARLES LUDLOW, Norwood, Ohio, and JOHN KEOWN, Newport, Ky. Filed Feb. 9, 1916. Serial No. 77,249. (Cl. 158—108.)

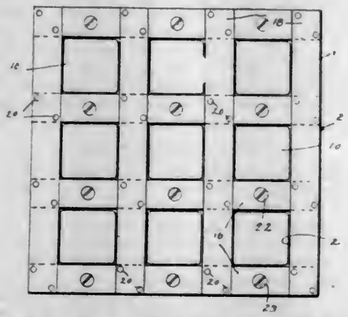


1. A gas burner having a cylindrical shell, a series of gas outlets around the base of the shell, a pipe extending into said shell and extending substantially to the top thereof, a supply pipe leading into such pipe of less diameter than such pipe, and means for supplying air to said supply pipe, said pipes extending in a straight line into the shell from said air supply point, for the purpose described.

2. In a gas burner, a base piece having notches therein, a pipe affixed to each end of the base piece, a plate having notches in its upper end set on the base piece, a cylindrical shell having a flange to set on the notched plate, one of said pipes from the base piece extending up into the shell, and said shell forming with said notched members a preheating burner with the two series of jet holes around the burner base.

3. In a gas burner, a cylindrical shell, a gas inlet tube extending into said shell, and a double series of separated jet openings about the base of said shell, the upper of said series being of smaller diameter than the lower, whereby the burning gas will form a deep body of flame around the shell.

1,195,048. VAULT-LIGHT. CARL V. LUNDIN, San Francisco, Cal. Filed Mar. 3, 1916. Serial No. 81,932. (Cl. 94—7.)

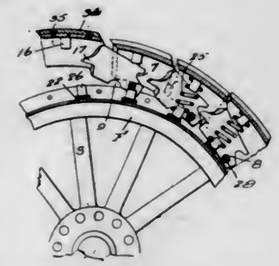


1. A vault light comprising a frame having an upper and lower section, each of the sections being formed of intersecting strips, glass bodies mounted on certain of the strips forming the lower section of the frame and having portions extending into the spaces between the strips forming the upper section of the frame, said glass body having the upper sides provided with grooves, and fastening means extending through the upper and lower sides of the frame and engaging the glass bodies.

2. A vault light comprising a frame having an upper and lower section, each being formed of intersecting strips, the strips forming the upper and lower sections having alined openings therein, glass bodies mounted on the strips forming the lower section and having portions extending into the spaces between the strips forming the upper section, the said glass bodies having cut-out portions therein registering with the openings in the strip in the upper and lower sections, and bolts extending through the openings in the strips and through the cut-out portions in the glass body, and nuts turned on the bolts.

3. In a vault light, the combination with a frame formed of an upper and lower section consisting of intersecting strips, of a plurality of transparent bodies mounted on the strips forming the lower section and having their upper sides provided with reduced portions extending into the spaces between the strips forming the upper section, the said upper sides of the transparent bodies having grooves therein, and flexible elements overlying the grooves and interposed between the upper sides of the glass bodies and the strips forming the upper section of the frame.

1,195,049. SECTIONAL SPRING-TIRE. JOHN HENRY LYNN, Coplay, Pa. Filed Mar. 8, 1916. Serial No. 82,965. (Cl. 152—8.)



1. In a sectional tire, the combination with a base having outturned edges, bolts connecting the latter at intervals, and studs in the base alternated with said bolts; of sections overlapping each other and each comprising a smaller male member pivoted on one of said bolts between the outturned edges of the base and open at its top, and a larger female member arched to overlie the male member of the next adjacent section and with its edges overlying those of the base, means loosely connecting the meeting ends of the male members, a stud in the arch of each female member, opposite one of the studs in the base, and an expansive spring connecting said studs.

2. In a sectional tire, the combination with a base including spaced rings lying in parallelism, cross bars connecting them at intervals, and bolts connecting them between the cross bars; of sections whereof each comprises a male member having its sides standing between said rings and pivoted on one of said bolts and its inner edges notched to pass over the adjacent cross bar, the top of this member being open, and an arched female member integral with one end of the male member with its inner edges adapted to contact with the outer edges of said rings, an expansive spring between each cross bar and the overlying female member, and means for loosely connecting the contiguous ends of the male members.

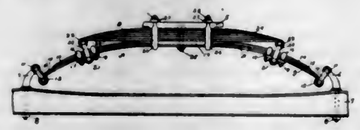
3. In a sectional tire, the combination with a base including spaced rings lying in parallelism, cross bars connecting them at intervals, and bolts connecting them between the cross bars; of sections whereof each comprises a male member having its sides standing between said rings and pivoted on one of said bolts and its inner edges notched to pass over the adjacent cross bar, the top of this member being open, and an arched female member integral with one end of the male member with its inner edges adapted to contact with the outer edges of said rings, the sides of the female member forming internal shoulders at their points of juncture with the sides of its male member, tongues projecting from said shoulders into the female member, the remote end of the male member having notches in its sides for loosely receiving such tongues of the next section, and an expansive spring between the arch of the female member and the underlying cross bar of the base.

4. In a sectional tire, the combination with a channeled base adapted for attachment to the wheel rim; of a series of arched sections, each comprising a male member whose sides pass between those of the base and are pivoted at their rear ends therein and notched above said pivots, the upper edges of said sides being connected at the rear end and otherwise open, and an arched female member whose sides are integrally united with the front ends of the sides of the male member to produce internal shoulders, tongues projecting forward from said shoulders and adapted to loosely engage the notches of the section next adjacent, and an expansive spring between the arch of the female member and the base.

5. In a sectional tire, the combination with a base having outturned edges, and bolts connecting the latter at intervals; of sections overlapping each other and each comprising a smaller male member pivoted on one of said bolts and a larger female member arched to overlie the male member of the next adjacent section, means loosely connecting the meeting ends of the male members, and an expansive spring between the arch of the female member and the base.

[Claim 6 not printed in the Gazette.]

1,195,050. SPRING FOR VEHICLES. JOHN A. MCANULTY, Indianapolis, Ind. Filed Aug. 2, 1915. Serial No. 43,290. (Cl. 267—27.



1. The combination with a vehicle including an axle, and an upwardly extending bracket on each end thereof, of a spring construction having a master leaf pivotally secured at each end thereof to said brackets, a series of leaves built upon said master leaf on each side of the center thereof, for adding strength thereto, a central fulcrum spring fulcrumed at its ends to said master leaf, and means for securing the body of the vehicle to the central portion of said fulcrum spring and master leaf.

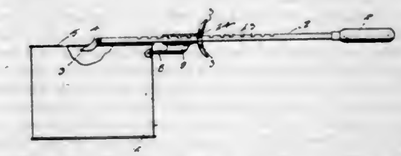
2. The combination with a vehicle including an axle, and an upwardly extending bracket on each end thereof, of a spring construction having a master leaf pivoted at its ends to said brackets, two series of leaves built upon each side of the center of said master leaf, a fulcrum spring above said master leaf, and pivoted at its ends thereto, and means for securing the body of the vehicle to said fulcrum spring and master leaf.

3. The combination with a vehicle including an axle, and an upwardly extending bracket on each end thereof, of a spring construction having a master leaf extending the full length of said axle, links for pivotally connecting said leaf to said brackets, two series of leaves secured to said master leaf on each side of the center thereof, a fulcrum spring, links having one end pivoted to each end of said fulcrum spring and the other end pivoted to said master leaf, and means for securing the body of the vehicle to said fulcrum spring and master leaf.

4. The combination with a vehicle including an axle, and an upwardly extending bracket on each end thereof, of a spring construction having a master leaf hinged at each end to said brackets, a plurality of leaves clamped to said master leaf on each side of the center thereof for adding strength thereto, a central fulcrum spring, hinged means for connecting the ends of the fulcrum spring to the end portions of said master leaf, and clamping means for connecting said fulcrum spring and master leaf centrally with the body member of the vehicle.

5. The combination with a vehicle including an axle, and an upwardly extending bracket on each end thereof, of a spring construction having lever and fulcrum springs, clamping means for connecting the central part of the fulcrum spring with the central part of the lever springs, links connecting the outward ends of the fulcrum spring with the end portions of said lever springs, links for connecting the ends of said lever springs to said brackets, and means for securing the vehicle body member to the central portion of said springs.

1,195,051. CAN-OPENER. MARK MCCUNE, Pomeroy, Ohio. Filed Feb. 29, 1916. Serial No. 81,189. (Cl. 30—3.)



1. A can opener of the class described including a lever having means for pivotally connecting it to the top of a can at the center thereof, said lever being provided in one of its faces with a series of transverse grooves, a sleeve slidable on the lever and provided with a depending blade arranged to pierce the wall of a can below the top thereof, and a guard having an opening receiving the lever and located at the rear end of the sleeve, said guard being provided with a lug for engaging the grooves to lock the sleeve against rearward movement.

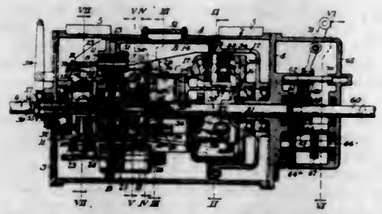
2. A can opener of the class described including a lever provided with a tapering extension adapted to pierce the top of a can at the center thereof to form a pivot for the lever, said lever being provided in one of its faces with a series of transverse grooves, a sleeve slidable on the lever and provided with a depending blade and having an approximately horizontal cutting portion disposed in substantial parallelism with the lever and spaced therefrom so as to pierce the wall of the can below the top of the same and a guard having an opening receiving the lever and located at the rear end of the sleeve, said guard being provided with means for engaging the grooves to lock the sleeve against rearward movement.

1,195,052. VARIABLE-SPEED MECHANISM. JAMES MCELWAIN, Wheeling, W. Va., assignor to Samuel P. Norton and Arthur G. Hubbard, trustees, Wheeling, W. Va. Filed Nov. 23, 1915. Serial No. 62,961. (Cl. 74—64.

1. Variable speed transmission gearing, comprising a driving shaft, a driven shaft, differential gearing connecting the two shafts, a pump mounted on the driving shaft and adapted to rotate about the axis thereof, a motor mounted on the driven shaft and adapted to rotate about the axis thereof, and pressure transmitting connections between the pump and the motor; substantially as described.

2. Variable speed transmission gearing, comprising a driving shaft, a driven shaft, differential gearing connecting the two shafts, a pump mounted on the driving shaft and adapted to rotate about the axis thereof, a motor mounted on the driven shaft and adapted to rotate about the axis thereof, and pressure transmitting connections

between the pump and the motor, the pump and motor forming a variable clutch connection between the differential gear elements and the driving and driven shafts respectively; substantially as described.



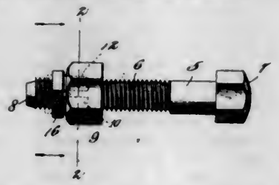
3. Variable speed transmission gearing, comprising a driving shaft, a driven shaft, differential gearing connecting the two shafts, a pump connected to the driving shaft, a motor connected to the driven shaft, and pressure transmitting connections between the pump and the motor, together with valve mechanism for the motor controlled by the rotation of the driven shaft; substantially as described.

4. Variable speed transmission gearing, comprising a driving shaft, a driven shaft, differential gearing connecting the two shafts, a pump connected to the driving shaft, a motor connected to the driven shaft, pressure transmitting connections between the pump and motor, and a relief valve in said connections; substantially as described.

5. Variable speed transmission gearing, comprising a driving shaft, a driven shaft, differential gearing connecting the two shafts, a pump connected to the driving shaft, a motor connected to the driven shaft, pressure transmitting connections between the pump and motor, and a control valve in said connections for permitting pressure to escape to the atmosphere; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,195,053. LOCK-NUT. EDWARD MCGRADY, Salem, W. Va. Filed Dec. 28, 1914. Serial No. 879,358. (Cl. 151—19.)

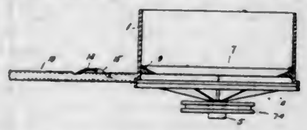


1. A lock nut comprising a bolt having one end reduced and tapered, a nut having a threaded bore receiving said bolt and having one end thereof enlarged, a segmental nut disposed between the enlarged portion of said bore and said bolt having the inner face or bore screw-threaded, and means adapted to be inserted between the segments of the segmental nut to spread or expand the latter and permit removal of the first-mentioned nut.

2. A lock nut comprising a bolt, a nut having a bore receiving said bolt, said bore being enlarged at one end, an inwardly directed projection on the wall of the enlarged portion of said bore, and a nut including a plurality of independent segments disposed between the wall of the enlarged portion of said bore and said bolt having their inner faces screwthreaded, and means for retaining several of the segments of said nut in spaced relation to permit the removal of said nut.

1,195,054. MEANS FOR THE SORTING AND DELIVERY OF METAL CONTAINERS. MATTHEW ALEXANDER MCLEOD, Wellington, New Zealand. Filed July 15, 1914. Serial No. 851,119. (Cl. 113—113.)

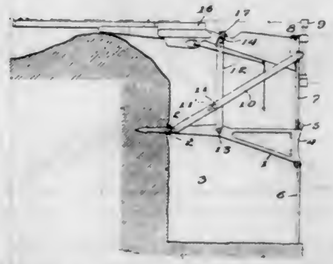
1. Means for the purpose described, consisting of a fixed circular hopper having a rotating bottom, a passageway and conveyer extending tangentially from the side of the hopper immediately above the rotating bottom, an opening in the bottom of such conveyer having a tongue extending from its upper edge for a portion of its length situated in the central line of the opening, and a spring plate overlying such tongue, substantially as specified.



2. In means for the purpose described, a conveyer down which the containers are fed in a row, an opening formed in the bottom of such conveyer, a tongue extending centrally downward for a portion of the length of the opening, and a spring pressure plate overlying such opening, substantially as specified.

3. Means for the purpose described, consisting of a fixed circular hopper having a rotating bottom, a passage-way extending tangentially from the side of the hopper at a point immediately above the rotating bottom, a flange extending inward from the side of the hopper and having its lower edge positioned above the rotating bottom slightly more than the height of the containers to be delivered, and an inclined conveyer extending from the said passageway, an opening in the bottom of such conveyer having a tongue extending centrally from its upper edge for a portion of its length, and a spring plate overlying such edge, substantially as specified.

1,195,055. TRENCH-GUN SUPPORT. HENRY J. MCNEAL, Wheatley, Ky. Filed Apr. 14, 1916. Serial No. 91,180. (Cl. 42—94.)



1. A support for guns comprising an anchor member having a projection adapted to be embedded in the vertical wall of a trench, a swinging support for a gun mounted on said anchor member, and means adapted when the gun is held elevated by said support for engagement with the gun to prevent upward movement thereof.

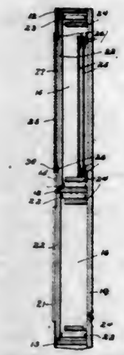
2. A device of the character described comprising an anchor member having an earth engaging spur at one end thereof, a swinging carrier mounted on said anchor member and having means for engagement with a gun, and an upright provided with a socket to receive the butt of the gun when in elevated position.

3. A device of the character described comprising an anchor member having an embedding spur projecting from one end thereof, a swinging carrier pivoted to said anchor member, a shackle on said carrier to engage the stock of a gun, and an upright on the carrier provided with a holder to receive the butt of the gun.

4. A device of the character described comprising an anchor member having an embedding projection at one end thereof, an upright provided with a gun butt receiving socket at the opposite end of said anchor member, a brace extending between the anchor member and socket, a swinging support carried by the anchor member and having a connecting member to engage the stock of a gun, and a stop upon the brace for limiting the forward swinging movement of said carrier.

5. A device of the character described comprising an anchor member having an embedding projection at one end thereof, a depending support at the opposite end of said anchor member, an upright rising from the latter-named end of the anchor member and carrying a butt receiving socket at its upper end, a bracing element connecting said upright with the anchor member, and a swinging support carried by the anchor member and provided with a pivoted shackle to engage the stock of a gun.

1,195,056. CHANGEABLE EXHIBITOR. EUGENE OGDEN MAN and CHARLES HENRY QUIST, Denver, Colo. Filed July 16, 1914. Serial No. 851,370. (Cl. 40—65.)



1. A placard holder comprising a receptacle, a spring actuated follower in said receptacle, and a plurality of placards positioned behind said follower, movable to positions in front of the latter and secured against removal from said receptacle.

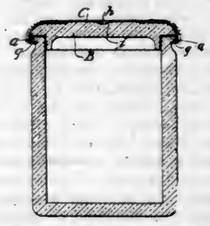
2. A placard holder comprising a receptacle, strips secured to the front face of said receptacle, a spring actuated follower in said receptacle normally engaged with the rear faces of said strips, and a plurality of placards secured against removal from said receptacle and movable to positions in front of or behind said follower.

3. A placard holder comprising a receptacle, strips secured to the front of said receptacle and extending rearwardly thereof, a spring actuated follower in said receptacle normally engaged against the rear faces of said strips, a plurality of placards in said receptacle movable to positions in front of or behind said follower, and means for securing said placards against removal from said receptacle including ears carried by said placards adapted to engage the rearwardly extending portions of said strips.

4. A placard holder comprising a receptacle, strips secured to the front of said receptacle, a spring actuated follower in said receptacle normally engaged against the rear faces of said strips, a plurality of placards in said receptacle movable to positions in front of or behind said follower, laterally projecting ears on said placards to prevent the removal of the latter from said receptacle, and strips secured to the rear faces of said placards adapted to coöperate with the first mentioned strips to guide said placards in position in front of said followers.

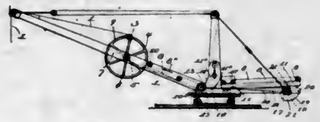
1,195,057. CLOSURE FOR JARS. GEORGE E. MANSFIELD, Jr., Springfield, Mass. Filed Mar. 29, 1916. Serial No. 87,480. (Cl. 215—93.)

1. A jar having, at the periphery of its mouth portion, a plurality of cam lugs, all downwardly inclining or expanding in the same direction around the said mouth portion, a closing cap for the jar having a plurality of peripheral cam shaped or eccentric surfaces, radially expanding in a direction the reverse of the direction of expansion of the lugs, and a yoke consisting of portions adapted to overlie the cap, and downwardly and inwardly turned portions, the downwardly turned portions essentially being resilient and adapted by the impingement thereof against the cam surfaces of the cap to be displaced radially outwardly for the disengagement of the yoke from the cam lugs.



2. A jar having, at the periphery of its mouth portion, a plurality of cam lugs, all downwardly inclining or expanding in the same direction around the said mouth portion, a closing cap for the jar having a plurality of peripheral cam shaped or eccentric surfaces, radially expanding in a direction the reverse of the direction of expansion of the lugs, and having shoulders at the junction of the prominent portions of the one cam with the contracted portion of the next cam, and a yoke consisting of portions adapted to overlie the cap, and resilient downwardly turned portions, and inwardly turned portions for engagement under the cam lugs, the resilient downwardly turned portions being adapted by the impingement thereof against the cam surfaces of the cap to be displaced radially outwardly for the disengagement of their inturned extremities from the cam lugs.

1,195,058. APPARATUS FOR AUTOMATICALLY BALANCING CRANES. PETER JOHN MARFELL, Dunedin, New Zealand. Filed Sept. 2, 1915. Serial No. 48,744. (Cl. 212—49.)



1. A crane comprising, in combination, a frame, a hoisting boom pivoted to the frame, a counter weight movable on the frame, an actuating member for the counter weight mounted on said hoisting boom, and a hoisting line supported from the hoisting boom and having connection with said actuating member for moving said counter weight when a load is on said hoisting line.

2. A crane comprising, in combination, a frame, a hoisting boom pivoted to the frame, an adjustable support on the frame, a counter weight movable on said support, means for raising and lowering said boom, means for automatically varying the inclination of the support according to the position of said boom, an actuating member for the counter weight mounted on the hoisting boom, and a hoisting line supported on said hoisting boom and having connection with said actuating member for moving said counter weight when a load is on said hoisting line.

3. In a hoisting crane, and in combination, a hoisting line for the crane, a movable counter weight for balancing said crane when the hoisting line is subjected to a load, and an operating member for said counter weight and having connection with said hoisting line for interrupting the straight alinement of the latter when not under a load, said operating member being actuated to operate said counter-balancing weight when the hoisting line is placed under a load.

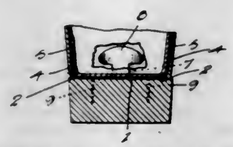
4. The combination with a hoisting line of a hoisting crane, of a movable member supported on the crane and connected with the hoisting line, and a counter-balancing

weight for the crane having a connection with said member and normally operating said member to retain a portion of the hoisting line diverted from a straight line, said member being actuated by said hoisting line to move said counter-balancing weight when a load is on said hoisting line.

5. In a derrick, a supporting frame, a hoisting boom on said frame, a wheel journaled on said hoisting boom, a windlass on the derrick frame, a pulley mounted on and adjacent the periphery of said wheel, a pulley on the axis of said wheel, a counter-balancing weight mounted on the derrick frame and adapted to be automatically adjusted thereon, connecting means secured to said weight and to the periphery of said wheel, and a hoisting line extending over the end of said hoisting boom and adapted to be wound on said windlass, said hoisting line passing over the pulleys of said wheel at a point intermediate the end of said hoisting boom and said windlass.

[Claims 6 and 7 not printed in the Gazette.]

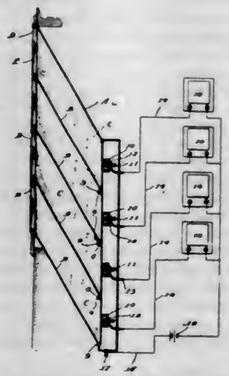
1,195,059. HEEL-BRACE. ELISHA E. A. MARTIN, Union City, Tenn., assignor to Boone D. Coulter, Union City, Tenn. Filed Nov. 15, 1915. Serial No. 61,566. (Cl. 36—68.)



1. A device of the class described comprising a body, laterally extending arms on the body, upturned extensions on the arms, heads at the ends of the upturned extensions forming braces to prevent the breaking of the counter of the shoe, a rearwardly extending arm on the body, upturned extensions on the rearwardly extending arms, a head on the extension preventing the heel from breaking and means to attach the device firmly in place in a shoe.

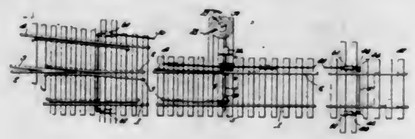
2. A device of the class described comprising a body, laterally extending arms on the body, a rearwardly extending arm on the body, upturned extensions on the arms, heads at the upper ends of the upturned extensions, for reinforcing the shoe and preventing the breaking of the counter and downturned spurs laterally of the body and adjacent the lateral arms to hold the whole in place.

1,195,060. MAIL-BOX ALARM. JAMES G. MENOW and HARRY MEYER, Santa Rosa, Cal., assignors to National Electric Mail Box Alarm Company, Santa Rosa, Cal., a Corporation. Filed Apr. 26, 1915. Serial No. 24,018. (Cl. 200—29.)



In a mail box circuit closer, a body formed with an inclined compartment for receiving mail matter, a gravity member providing a back for said compartment and having a conducting portion adapted for connection in a normally open electric circuit, a contact adapted to be arranged in said circuit and engaged by the conductor part of the member for closing the circuit when said member is actuated by mail matter deposited in the compartment, and an inturned free edge formed on the member to provide a stop at the lowermost point of said compartment for the mail matter deposited within the compartment.

1,195,061. AUTOMATIC RAILWAY-SWITCH. ROBERT E. MERRELL, Spartanburg, S. C. Filed Oct. 28, 1915. Serial No. 58,393. (Cl. 104—23.)



1. The combination with a railway switch including switch points, of a manually operable and a train operable mechanism operatively connected to the switch points, the manually operable mechanism including a movable member continually connected with the switch points, a manually operable member engageable with the movable member to move it for throwing the switch points, and means for locking the manually operable member either in or out of engagement with the movable member.

2. The combination with a railway switch including switch points, of a switch stand and a train operable mechanism operatively connected with the switch points, the switch stand embodying a shaft connected to the switch points, and a hand lever mounted for rotation and for movement into and out of engagement with said shaft.

3. The combination with a railway switch including switch points, of a switch stand and a train operable mechanism operatively connected with the switch points, the switch stand embodying a shaft connected to the switch points, a hand lever mounted for rotation and for movement into and out of engagement with said shaft, and means for locking said lever either in or out of engagement with said shaft.

4. The combination with a railway switch including switch points, of a switch stand and a train operable mechanism operatively connected to the switch points, said stand embodying a frame, a rotatable shaft assembled with the frame and operatively connected with the switch points, a rotatable member carried by the frame, a lever fulcrumed to said rotatable member to swing into and out of engagement with said shaft, and means for locking said rotatable member to the frame and for locking said lever, either in or out of engagement with said shaft.

5. The combination with a railway switch, of a switch stand and a train operable mechanism operatively connected to the switch, said switch stand embodying a frame, a rotatable shaft operatively connected with the switch and having a non-circular portion, a rotatable member carried by the frame and having a slot, a hand lever fulcrumed to said rotatable member and having a non-circular portion engageable with the non-circular portion of said shaft, the lever having a slot coöperable with the aforesaid slot, and a keeper pivoted to the frame and adapted to be swung into said slots, said keeper having apertures for the engagement of a padlock whereby the rotatable member can be locked to the frame and the lever can be locked either in or out of engagement with the shaft.

[Claim 6 not printed in the Gazette.]

1,195,062. EXPOSURE-INDICATOR FOR CAMERAS. JOHN G. MILES, Montevideo, Uruguay. Filed Jan. 5, 1916. Serial No. 70,433. (Cl. 95—71.)

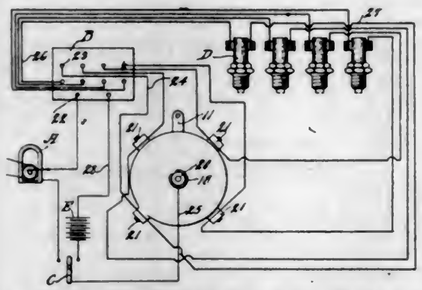
1. The combination of a camera having means for receiving a plate holder, with a plate holder insertible in the said means, an indicator on the plate holder including a movable element, a member projecting from the said element and from the side of the holder, and an abutment on the camera engageable by the said member before the plate holder is fully inserted, whereby the insertion of the plate holder moves an indicating element to exposing position.



2. A camera plate holder divided into sections, an exposure indicator for each section, said indicator comprising an element movably mounted on the side of the holder, a member projecting from the said element and beyond the side of the holder to engage a part carried by the camera, whereby the element is moved automatically to exposure-indicating position as the plate holder is affixed to the camera.

3. A camera plate holder, an exposure indicator in the form of a slide movably mounted on one side of the holder, a retaining plate overlying the slide and having an opening through which a portion of the slide is visible, and a member extending from the slide adapted to engage a fixed part of a camera, whereby the slide is moved to exposure-indicating position upon the insertion of the plate holder in the camera.

1,195,063. IGNITION SYSTEM. ALBERT L. MOELLER, Mishicott, Wis. Filed June 8, 1915. Serial No. 32,879. (Cl. 123—167.)



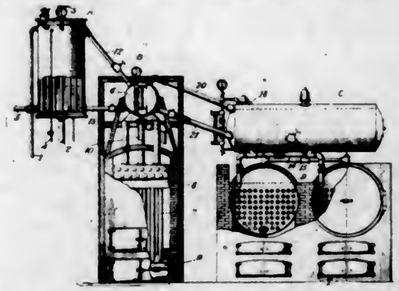
1. The combination with a rotative element, of a commutator comprising a casing, a supporting member in said casing fixed to the rotative element for rotation therewith and insulated therefrom, a contact making and breaking member carried by said supporting member, a circuit closing contact carried by said casing, extension means connected to the supporting member and projecting from the casing, to form a bearing therefor and a circuit terminal rosely carried by the exterior projection of said extension means.

2. The combination with a rotative element, of a commutator comprising a movable casing having a bearing at one side on said rotative element, a supporting member in the casing fixed to the rotative element for rotation therewith, a plurality of circuit closing contacts carried by said casing, a contact making element carried by the rotatable support, a circuit terminal arranged exterior to the casing in axial alinement with the rotative element, and means on which said terminal is journaled and operatively connecting the terminal with the rotatable support aforesaid whereby said terminal is common to all of said circuit closing contacts.

3. The combination with a rotative element, of a commutator comprising a movable casing, a supporting member in the casing fixed to the rotative element for rotation therewith, a plurality of circuit closing contacts carried by said casing, a contact making element carried by the rotatable support, a circuit terminal arranged exterior to the casing and relatively stationary with respect thereto, means operatively connecting the terminal with the rotatable support aforesaid whereby said terminal is common to all of said circuit closing contacts, and a bearing member for the casing on said last-mentioned means and insulating said means from the casing.

4. The combination with a rotative element, of a commutator comprising a casing having an opening therein, a supporting disk carried by said rotative element for rotation therewith, means locking said disk on said rotative element, a commutator arm pivotally carried by the disk, circuit closing contacts arranged in the casing and with which the commutator arm coacts, an extension bracket projecting laterally from the disk and extending through the opening aforesaid to a point exterior of the casing a journal member in the opening for said extension, a circuit terminal member loosely mounted upon the exterior portion of the extension, and means insulating the disk and extension from the rotative element.

1,195,064. STEAM-GENERATOR. WALTER A. MOFFAT, Denver, Colo., assignor to The Improved Boiler Feed Company, Denver, Colo., a Corporation of Colorado. Filed June 1, 1909. Serial No. 499,315. (Cl. 122—1.)



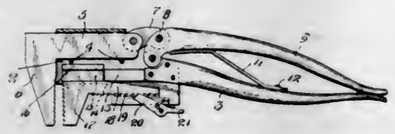
1. A steam generator consisting of a steam storage reservoir, a multiple flue boiler, pipes connecting the bottom of said storage reservoir and extending down into said multiple flue boiler below its steam space, a steam conveying pipe connecting the upper end of said boiler and the upper end of said storage reservoir, a second hot water circulating boiler, circulating pipes in said hot water circulating boiler, a drum to which said circulating pipes are connected, means for cutting off communication between the steam spaces in said multiple flue boiler and said reservoir, a valve controlled pipe leading from the lower end of said drum to the lower end of said reservoir, a preliminary water heater extending above said drum, a valve controlled pipe connecting the lower end of said preliminary heater and the lower end of said drum, and a valve controlled pipe connecting the upper end of said preliminary heater and the upper end of said drum.

2. In a device of the kind described, in combination a hot water circulating heater, a steam generating heater, a steam storage reservoir connected to said steam generating heater, means for passing hot water from said first named heater directly through said reservoir and into said steam generating heater, means for preheating feed water, and means for supplying said preheated feed water into said hot water circulating heater.

3. In a device of the kind described, in combination, a slow water heating boiler, a relatively quicker water heating boiler, said boilers being out of direct communication, a water preheater communicating with said slow

water heating boiler, a steam reservoir, means for establishing a steam circuit from preheater to slow water heating boiler and from the latter to said reservoir, means whereby hot water from said first named boiler may displace steam in said reservoir, means of steam communication between said reservoir and said second named boiler, and means of feeding the hot water conducted into said reservoir into said second named boiler below its steam space.

1,195,065. WRENCH. HERBERT W. MONNOW, Loysville, Pa. Filed May 3, 1916. Serial No. 95,228. (Cl. 81—84.)



1. In a wrench, a carriage having a handle, a jaw having its shank arranged within the carriage, a lever pivoted to the carriage, link members pivoted to the lever and the shank of the jaw, a spring between the handle and lever for normally swinging the lever away from the handle, and a second jaw member adjustably associated with the carriage.

2. In a wrench, a substantially U-shaped carriage, a handle arranged between the sides of the carriage and secured thereto, pins connecting the sides of the carriage, a jaw having a shank arranged within the carriage and bearing upon the pins, a lever pivotally connected with the carriage, a link connection between the lever and the shank of the jaw, spring means between the handle and the lever for normally swinging the lever away from the handle, and a second and slidable jaw adjustably associated with the carriage.

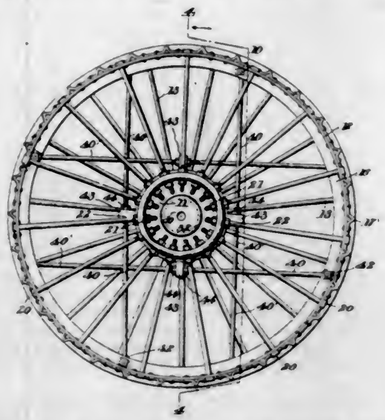
3. In a wrench, the combination with a carriage having a handle, a jaw having an angular shank which is arranged within the carriage and slidable on bearing members in said carriage, a pivoted lever, a link connection between the lever and the shank, spring means upon the handle and contacting with the lever for normally swinging the lever away from the handle, a second jaw having a grooved head received in bearings in the carriage, said second jaw having an angular shank provided with teeth, and a spring pressed dog carried by the carriage and engaging with said teeth.

1,195,066. TRACTION-WHEEL. RUDOLPH B. MORTON, Cleveland, Ohio. Filed May 1, 1912. Serial No. 694,377. (Cl. 21—207.)

1. A traction wheel comprising a hub provided with annular flanges at its ends, a rim formed of spaced apart annular rings connected by transversely arranged cleats, spokes arranged in sets, each connecting a flange of the hub with the correspondingly positioned rings of said rim, and pulling rods connected at their outer ends with said rings, their inner ends being attached to the hub in a line between the sets of spokes.

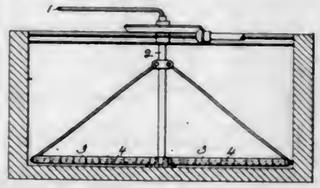
2. A traction wheel comprising a hub provided with annular flanges at its ends, a rim formed of spaced apart annular rings of angle iron having transverse tread portions connected by transversely arranged plates, and provided with flanges extending inwardly toward the hub, spokes arranged in sets each connecting a flange of the hub with the transverse flange of the correspondingly positioned ring of the rim, and pulling rods connected at their outer ends with the inwardly extending flanges of said rings, their inner ends being attached to the hub in a line between the sets of spokes.

3. A traction wheel comprising a hub provided with annular flanges at its ends, a rim formed of spaced apart annular rings connected by transversely arranged cleats, spokes arranged in sets, each connecting a flange of the hub with the correspondingly positioned rings of said rim, and pulling rods connected at their outer ends with said rings, their inner ends being attached to the hub in a line between the spokes, the outer ends of alternate pull rods being connected to opposite rings of said rim.



4. A traction wheel comprising a hub provided with annular flanges at its ends, a rim formed of spaced apart annular rings of angle iron having transverse tread portions connected by transversely arranged plates, and provided with flanges extending inwardly toward the hub, spokes arranged in sets each connecting a flange of the hub with the transverse flange of the correspondingly positioned ring of the rim, and pulling rods having loop portions at their outer ends attached to the inner faces of the inwardly extended flanges, the inner ends of said rods being attached to the hub in a line between the sets of spokes.

1,195,067. APPARATUS FOR INTRODUCING GASES INTO INTIMATE CONTACT WITH LIQUID SEWAGE. GEORGE WILLIAM MOTTRAM, Deepcar, near Sheffield, England. Filed Feb. 17, 1916. Serial No. 79,000. (Cl. 210—1.)

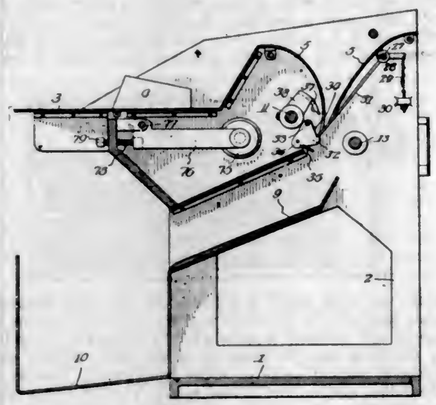


1. The combination, with a tank for sewage, of an air supply pipe supported in the lower part of the tank and provided with outlet holes, a tubular casing of porous material through which air can pass inclosing the said pipe, and means for moving the air pipe and its casing over the bottom of the tank.

2. The combination, with a tank for sewage, of a vertical air supply pipe journaled in the tank, branch air supply pipes connected to the said pipe and projecting laterally from its lower part and provided with a multiplicity of extremely small air outlets, and means for revolving the said pipes.

3. The combination, with a tank for sewage, of a vertical air supply pipe provided with laterally projecting branch pipes arranged in the lower part of the tank and provided with outlet holes, tubular casings of porous material through which air can pass inclosing the said branch pipes, and means for revolving the said pipes.

1,195,068. CHECK-INDORSING MACHINE. WILLIAM W. MOWRY, St. Louis, Mo. Filed Dec. 9, 1912. Serial No. 735,639. (Cl. 101—126.)



1. In a machine of the character described, the combination with a printing couple comprising a continuously-rotating printing member and a bed-member normally at rest out of operative relation to said printing member, of feed rolls for feeding a sheet of paper to said printing couple, means revolving with said printing member and operating in timed relation thereto for advancing a sheet of paper to said feed rolls, and means, actuated by the advance of the sheet of paper, for moving said bed-member into operative relation with said printing member.

2. In a machine of the character described, the combination of a printing couple comprising a continuously-rotating printing cylinder and a rotatable bed-cylinder normally at rest out of operative relation to said printing cylinder, yielding restraining means normally preventing the advance of sheets of paper to said printing couple, means operating in timed relation to the rotation of said printing cylinder for causing said restraining means to yield to permit of the advance of a sheet, and means, actuated by the yielding of said restraining means, for moving said bed-cylinder into operative relation to said printing cylinder.

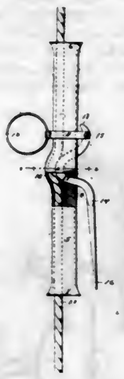
3. In combination, a printing couple comprising a pair of rolls between which sheets of paper may be advanced, means yieldingly mounted to prevent said advance, a lock for preventing the yielding of said means, said lock being periodically rendered inoperative by a continuously rotating driving element, and means for forcibly advancing said sheets past said yielding means during the intervals when said lock is inoperative.

4. In a check-indorsing machine, a printing couple comprising a printing cylinder and a bed cylinder, an eccentrically mounted roll on which said bed cylinder is mounted, said cylinders being normally out of contact with each other, means for rotating said roll to bring said cylinders into contact, feed rolls for advancing a check to said printing couple, and yielding devices controlled by the advance of said check to said feed rolls for permitting the operation of said means.

5. In a machine for imprinting indorsements on checks, a printing roll and a bed roll, said bed roll being mounted on an eccentric cylinder, a spring which tends to rotate said cylinder and move said rolls into contact with each other, means for holding said cylinder in normal position against the action of said spring, and a latch for releasing said means, said latch being operated by the advance of a check toward said rolls.

[Claims 6 and 7 not printed in the Gazette.]

1,195,069. FIRE-ESCAPE. JOHN A. MYERS, Greeley, Colo. Filed Apr. 13, 1916. Serial No. 90,886. (Cl. 227—29.)



1. A device of the character described, comprising a body portion, a cable passing therethrough and a lever pivotally supported upon said body portion and having formed in its length a resilient goose neck portion which bears against said cable.

2. A device of the character described, comprising a tubular body portion which is oval in cross section, a cable passing therethrough, a lever pivotally supported upon said body and having a resilient goose neck portion intermediate its length which is arranged to press upon said cable.

3. A device of the character described, comprising a tubular body portion, a lever pivotally supported thereupon, said lever having a resilient goose neck intermediate its length and said body portion having an off-set opposite said lever, said goose neck being arranged to grip a cable between itself and said off-set portion of the body.

4. A device of the character described, comprising a tubular body portion, a clamp, a body supporting member carried by said clamp, a lever, a bolt passing through said clamp and through said lever and serving to secure the clamp to the body portion and to pivot the lever, said lever having a portion arranged to project into said body portion to bind a cable between itself and said body portion, said lever comprising a part extending beyond said bolt which constitutes a stop to limit the swinging movement of said lever away from said body.

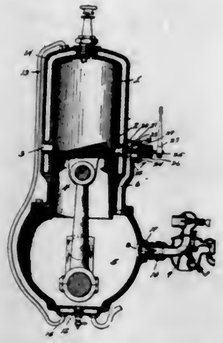
5. A device of the character described, comprising a tubular body portion having its ends flared, a body supporting element supported from said body portion, said body portion being open at one side and having opposed parallel walls at said open portion and a lever pivoted with relation to said body portion and having a resilient goose neck extension projecting into said body portion and being of such dimensions as to fill the space between said walls.

[Claim 6 not printed in the Gazette.]

1,195,070. INTERNAL-COMBUSTION ENGINE. VICTOR E. NELSON, Detroit, Mich., assignor of forty-nine one-hundredths to Alfred T. Harrow, Detroit, Mich. Filed Feb. 29, 1912. Serial No. 680,633. (Cl. 123—73.)

1. In an internal combustion engine, a cylinder provided with inlet and exhaust ports, a piston therein, a chamber into which the explosive mixture is introduced, a source of supply of said mixture un-alterable in the volume it is capable of supplying and arranged to drain into said chamber, means for maintaining the mixture in the chamber in a gaseous state, a passageway connecting said chamber with the inlet port of the cylinder, and a valve controlling said passageway.

2. In an internal combustion engine, a cylinder provided with inlet and exhaust ports, a piston therein, a chamber into which the explosive mixture is introduced, a source of supply of said mixture un-alterable in the volume it is capable of supplying and arranged to drain into said chamber, means for maintaining the mixture in the chamber in a gaseous state, means whereby the mixture may be introduced into the explosion chamber, and means for altering the volume of mixture so introduced.



3. In an internal combustion engine, a cylinder provided with inlet and exhaust ports, a piston therein adapted to open and close said ports, a compression chamber into which the explosive mixture is introduced by the movement of the piston, a source of supply of said mixture substantially un-alterable in the volume it is capable of supplying and arranged to drain into said chamber, a passageway between the compression chamber and said inlet port, a valve controlling said passageway, means for maintaining the mixture in a gaseous state in the compression chamber.

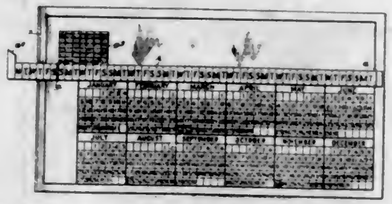
4. In an internal combustion engine, a cylinder provided with inlet and exhaust ports, a reciprocating piston therein, a chamber into which the explosive mixture is alternately introduced and compressed by the movement of the piston, said movement of the piston also opening and closing the ports in the cylinder, means for maintaining the mixture in the chamber in a gaseous state, means whereby the mixture may be introduced into the explosion chamber, means for altering the volume of mixture so introduced, and means whereby the pressure of the mixture at the time of said introduction is always uniform.

5. In an internal combustion engine, a cylinder provided with inlet and exhaust ports, a piston therein, a chamber, means for supplying the chamber with a uniform gaseous mixture, means for maintaining the mixture in the chamber in a gaseous state, means whereby the explosive mixture may be introduced into the explosion chamber, means for altering the volume of the mixture so introduced, and means whereby the pressure of the mixture at the time of said introduction is always uniform.

[Claims 6 to 8 not printed in the Gazette.]

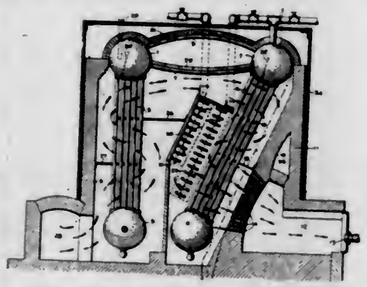
1,195,071. PERPETUAL CALENDAR. THOMAS J. NOLAN, Albany, N. Y. Filed Jan. 14, 1913. Serial No. 742,012. (Cl. 40—109.)

A combination Julian and Gregorian calendar consisting of a base-board, said base-board being inscribed with two longitudinal series of particularized calendar months, the first series consisting of the months designated from January to June, and the second series designated from July to December and having its successive calendar months registering with those of the first series, each of said calendar months having seven columns, an elongated slide, guide members for said slide adapted to support it longitudinally with relation to said calendar months, said slide being inscribed in separate columns with a plurality of series of week days designated in regular order, said series being in excess of the number of calendar months in either series of calendar months, each of said slide series having its columns registering with the seven columns of one of said calendar months, a plate carried by said slide having inscribed in seven columns fractional divisions of a century, the seven columns of said plate registering with a similar number of columns on said



slide, the extra series of columns on said slide adapted, when said slide is shifted to register with the columns of one of said calendar months whereby to change the order of the week days checking up in the slide columns and calendar columns so as to adapt said calendar months to the Julian system, one of said members serving as a stop to limit the movement of said plate and slide in one direction.

1,195,072. GAS-FIRED STEAM-BOILER. KARL A. NORRMAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 3, 1914. Serial No. 810,170. (Cl. 122—301.)



1. A steam boiler comprising groups of vertical tubes and inclined tubes, drums connected to the ends of each group, tubes connecting the upper drums, baffles in said upper drums, means for feeding water to the upper drum of the vertical group, a combustion chamber, and substantially horizontal baffle plates associated with each group of tubes for causing the hot products of combustion to traverse first the inclined tubes and then the vertical tubes in a serpentine course.

2. A steam boiler comprising groups of vertical tubes and inclined tubes, drums connected to the ends of each group, tubes connecting the upper drums, baffles in said upper drums, means for feeding water to the upper drum of the vertical group, a combustion chamber, and substantially horizontal baffle plates associated with each group of tubes for causing the hot products of combustion to traverse first the inclined tubes and then the vertical tubes in a serpentine course and in an upward direction over the inclined tubes, and in a downward direction over the vertical tubes.

3. A steam boiler comprising groups of vertical tubes and inclined tubes, drums connected to the ends of each group, tubes connecting the upper drums, baffles in said upper drums, means for feeding water to the upper drum of the vertical group, a combustion chamber, and substantially horizontal baffle plates associated with each group of tubes for causing the hot products of combustion to traverse first the inclined tubes and then the vertical tubes in a serpentine course beginning at the lowest portion of the inclined tubes.

4. A steam boiler comprising groups of vertical tubes and inclined tubes, drums connected to the ends of each group, tubes connecting the upper drums, baffles in said upper drums, means for feeding water to the upper drum of the vertical group, a combustion chamber, baffle plates causing the hot products of combustion to traverse first the inclined tubes and then the vertical tubes in a serpentine course, a partition extending up between the two groups of tubes to meet one of the baffle plates of the inclined group, and superheating coils located in the chamber thus formed.

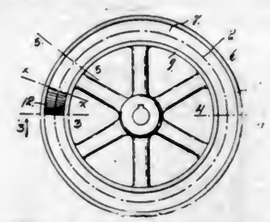
5. A steam boiler comprising groups of vertical tubes and inclined tubes, drums connected to the ends of each group, tubes connecting the upper drums, baffles in said upper drums, means for feeding water to the upper drum of the vertical group, a combustion chamber, baffle plates causing the hot products of combustion to traverse first the inclined tubes and then the vertical tubes in a serpentine course, a partition extending up between the two groups of tubes to meet one of the baffle plates of the inclined group, superheating coils located in the chamber thus formed, a casing in which the boiler is set, and headers for said superheating coils arranged outside of said casing.

1,195,073. SCREEN. LOUIS NUSSBAUM, Jr., Crowley, La. Filed Sept. 1, 1914. Serial No. 859,660. (Cl. 166—7.)

A well screen comprising a head having an axial bore, an apertured screen externally connected with the head, a pointed bottom piece connected with the screen pipe, the top face of said bottom piece being dished or cupped and provided with an axially disposed conical projection rising from the bottom of the cupped portion, screen material surrounding the screen pipe, and an internal pipe threaded into the axial bore of the head, extending downwardly within the screen pipe and terminating a short distance above the upwardly extending conical projection of the bottom member.

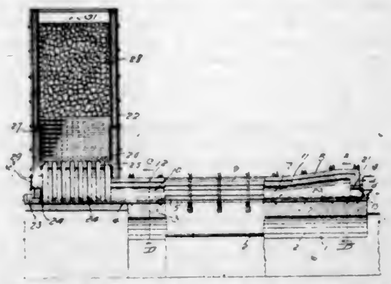
1,195,074. COUNTERBALANCED WHEEL. ULRICH OHLSEN, Denver, Colo., assignor of one-half to Martin Mortensen, Denver, Colo. Filed Aug. 4, 1913. Serial No. 782,767. (Cl. 74—6.)

A wheel having a rim area constituting a circular wedge whose opposite sides are equally and uniformly inclined without interruption throughout their entire length, with the exception of a short part between the thickest and thinnest parts of the rim, which is abruptly beveled on opposite sides to form equal oblique angles with the meeting gradually inclined surfaces of the body of the wedge, the said rim area being bounded at its inner and outer circumferences by flanges, each of which is of uniform width through its entire length, and a space left between said flanges on opposite sides of the rim area, said



space varying in depth without interruption, substantially throughout the circumference of the wheel.

1,195,075. METHOD OF AND APPARATUS FOR CONCENTRATING ACIDS. THOMAS CLIFFORD OLIVER, Charlotte, N. C., assignor to Chemical Construction Company, Charlotte, N. C. Filed Mar. 22, 1916. Serial No. 85,933. (Cl. 23—1.)



1. The herein described method of concentrating acid which consists in subjecting a relatively deep substantially static body of acid to the action of an overlying current of hot gases and directing air through the heated acid to agitate it.

2. The herein described method of concentrating acid, which consists in directing hot gases over a relatively deep substantially static body of acid and of forcing air through the acid to agitate it and present all portions of the acid to the action of the heat.

3. The herein described method of concentrating acid, which consists in subjecting a relatively deep substantially static body of acid to heat which increases from one end to the other of said body and in forcing air through the acid where subjected to the greatest degree of heat.

4. The herein described method of concentrating acid, which consists in directing hot gases over a relatively deep substantially static body of acid and thence upwardly between pieces of impervious material, and directing acid downwardly between said pieces of material and into said body, thereby to subject the acid to an increasing degree of heat.

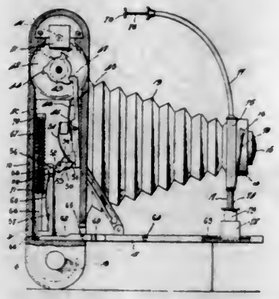
5. The herein described method of concentrating acid, which consists in directing hot gases over a relatively deep substantially static body of acid and thence upwardly between pieces of impervious material, directing acid downwardly through said material and into said body, thereby to subject the acid to an increasing degree of heat, and then directing jets of air through the body of acid to agitate the acid and bring all portions thereof into direct contact with the hot gases thereabove.

[Claims 6 to 13 not printed in the Gazette.]

1,195,076. CAMERA. PERCY C. OSTEEN, Anderson, S. C. Filed Dec. 24, 1915. Serial No. 68,576. (Cl. 95—31.)

1. In a camera, a body, a hinged front for said body, a film-receiving spool rotatably mounted in said body, means

normally tending to rotate said spool, means to lock said spool against rotation, and means carried partly by said body and partly by said hinged front for releasing said locking means, and permitting closing of said hinged front.



2. In a camera, a body, a hinged front therefor, a shutter supported on said hinged front, a film-receiving spool rotatably mounted in said body, means normally tending to rotate said spool, means to lock said spool against rotation, means for releasing said locking means, and foldable means carried partly by said body and partly by said hinged front connecting said releasing means with said shutter for actuating the latter.

3. In a camera, a body, a film-receiving spool rotatably mounted in said body, a spring arranged within said spool and secured at one end to the latter, means for connecting the opposite end of said spring with said spool or said camera body, a rod carried by said connecting means, a spool-supporting shaft movable longitudinally in said body, extending exteriorly of the latter and movable inwardly into engagement with said rod for actuating the latter together with said connecting means.

4. In a camera, a body, a film-receiving spool rotatably mounted in said body, a spring arranged in said spool and connected at one end to the latter, means for connecting the opposite end of said spring with said spool or said camera body, a rod carried by said connecting means, a spool-supporting shaft movable longitudinally of said body, extending exteriorly of the latter and adapted to engage and actuate said rod and connecting means, and means for locking said shaft and rod in inwardly extended position.

5. In a camera, a body, a film-receiving spool rotatably mounted in said body, a spring arranged in said spool and connected at one end to the latter, means for connecting the opposite end of said spring with said spool or said camera body, and means operable exteriorly of said body for moving said connecting means from one position to another.

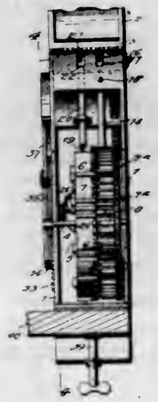
[Claims 6 and 7 not printed in the Gazette.]

1,195,077. RHYTHMOMETER. WILLIAM B. PARKINSON, Le Mars, Iowa. Filed Nov. 6, 1915. Serial No. 59,939. (Cl. 35—12.)

1. In a device for measuring rhythm, a pawl, a wheel having a plurality of independently movable teeth, each of said teeth being arranged to be moved in the path of the pawl, a plurality of cam members disposed on the face of the wheel, an adjustable sounding member, and means for adjusting the position of the sounding member to bring the latter into operative relation with a predetermined number of cams.

2. In a device for measuring rhythm, a pawl, a ratchet wheel having a plurality of hinged teeth, each tooth being independently movable into and out of the path of the pawl, a gear secured to said ratchet, and a plurality of driving gears of varying sizes arranged to mesh with said first mentioned gear, the shafts of said driving gears being prolonged, and a crank handle arranged to fit any of said prolonged shafts.

3. In a device for measuring rhythm, a pawl, a wheel having a plurality of independently movable teeth, each of said teeth being arranged to be moved into the path of the pawl, a plurality of sets of cam members disposed on the face of the wheel, a pivoted arm, a bell carried thereby, a clapper for said bell arranged to be engaged by said cams, and means for adjusting the position of the arm to bring the clapper into operative relation with a pre-determined set of cams.

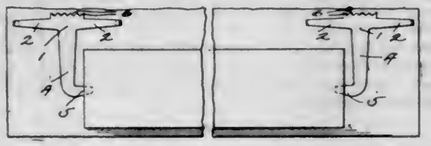


4. In a device for measuring rhythm, a shaft, a ratchet wheel mounted thereon and having a plurality of teeth, each tooth being independently movable into and out of engagement with the pawl, a hand or pointer on the shaft of said ratchet wheel, and a chart disposed adjacent to the pointer for indicating the rhythm sounded by the passage of the pawl over the teeth of the ratchet wheel.

5. In a device for measuring rhythm, a casing, a pawl disposed within the casing, a ratchet wheel having a plurality of teeth, each tooth being independently movable into or out of the path of the pawl, a crank handle for driving said ratchet wheel, and a plurality of sets of power transmitting devices for transmitting a given movement of the crank handle to the ratchet wheel so as to produce various speeds of the ratchet wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,195,078. COMBINED BENCH STOP AND DOG. GEORGE O. PARMELEE, Wakefield, Mich. Filed May 17, 1916. Serial No. 98,085. (Cl. 144—308.)



A combination bench stop and dog consisting of a body, arms extending from the opposite ends of said body and terminating in feet for engaging a working surface, a lever arm also extending from said body and terminating in a right angular projected dog head for engaging a piece of work, said feet and said dog head providing widely separated triangularly arranged points of engagement, and a set of stop teeth formed upon the side of said body opposite said lever arm whereby said dog head may coöperate with said feet to brace said body when said stop teeth are engaged by a piece of work.

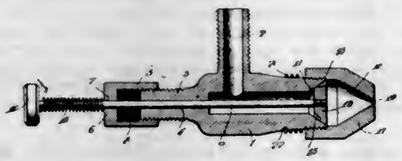
1,195,079. ELECTRICAL CONNECTOR-CLIP. JOHANN G. PETERSON, Jersey City, N. J., assignor to Manhattan Electrical Supply Company, New York, N. Y., a Corporation of New Jersey. Filed May 6, 1914. Serial No. 836,777. (Cl. 173—269.)



1. The herein described electrical connecting clip, comprising a pair of overlapping plates having apertures adapted to be brought into register, a shank, and a pair of spring arms extending between the shank and the overlapping plates and attached to the edges of the latter on opposite sides of, but adjacent, the extended axis of the shank when the apertures of the plates are in register, said spring arms forming finger grips and serving to normally maintain said plates with their apertures out of register.

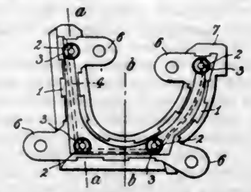
2. The herein described electrical connecting clip, comprising a pair of overlapping plates having apertures adapted to be brought into register, a shank, and a pair of spring arms diverging from the shank and having at their outer ends recurved portions attached to the gripping plates on opposite sides of, but adjacent, the extended axis of the shank when the apertures of the plates are in register, said spring arms forming finger grips and serving to normally maintain said plates with their apertures out of register.

1,195,080. SPRAYING-NOZZLE. WARD D. PETTIT, Brownville, N. Y. Filed Nov. 26, 1912. Serial No. 733,648. (Cl. 137—86.)



In a device of the class described, in combination a housing, said housing at one end being formed with a longitudinal rod receiving channel, and at its opposite end with a longitudinal bore of greater diameter than and communicating with said rod receiving channel, said bore being flared at its outer end to form a conical valve seat, a rod passing through said channel and bore respectively, a frusto-conical valve adapted to extend into said conical seat with its outer face flush with the adjacent edge of the housing, said rod being secured to said valve, said rod projecting beyond the opposite end of said housing, a spring coiled around the projecting end of said rod, a knob secured to said rod and forming an abutment for said spring, said valve being formed with peripheral channels communicating with said bore, a jet head consisting of an inner cylindrical portion threaded upon the housing and having its inner surface extending in advance of said valve when in closed position, said jet head being contracted in diameter toward its outer end to form a conical spraying tube, the base of said conical portion limiting the movement of the valve from its seat and a supply pipe connected to said housing and communicating with said bore.

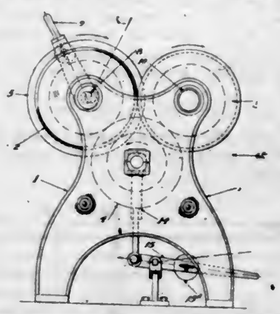
1,195,081. CONCRETE CONDUIT. PERCY PICKERING, Bradford, England. Filed Nov. 6, 1915. Serial No. 60,060. (Cl. 72—51.)



1. A concrete conduit comprising end plates open at their upper ends and provided with inwardly projecting perforated lugs and lower outwardly projecting lugs, rods extending through perforations in the end plates to tie same together, the outer face of each plate having a depression, the inner and outer edges of the plates having notches, and concrete extending from the outer face of one plate to the outer face of the opposite plate, the concrete engaging in the notches and embracing the rods forming an anchor to hold the structure together.

2. A concrete conduit comprising end plates open at their upper ends and provided with inwardly and outwardly projecting perforated lugs, each end plate having an inwardly projecting flange extending around its inner face, the inner and outer edges of the end plates having notches, rods connecting the adjacent end plates, and a concrete body extending from one plate to the other and anchored in the notches and on the flanges and inclosing the rods, the outer ends of the concrete being flush with the outer faces of the plates.

1,195,082. FORWARD AND REVERSE FRICTION-GEARING. WILLIAM PLAYER, Edgbaston, and WILLIAM BRACE, Smethwick, Birmingham, England. Filed Nov. 11, 1914. Serial No. 871,571. (Cl. 74—26.)



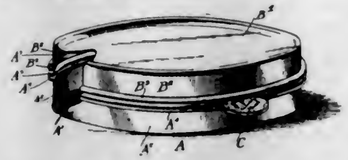
1. A metal winder including three friction rolls, the first and second being of similar formation and having grooved peripheries adapted to engage each other when the direct drive is being transmitted from one roll to the other; driving means in conjunction with the first roll; the third roll having a conical periphery adapted to engage with a correspondingly shaped groove in the first and second rolls; and means whereby the third friction roll may be moved into engagement with the other two rolls to drive the second roll indirectly.

2. A metal winder including three friction rolls, the first and second being of similar formation and having V grooved peripheries adapted to engage each other when the direct drive is being transmitted from one roll to the other, driving means in conjunction with the first roll; the third roll having a conical periphery adapted to engage with a correspondingly shaped V groove in the first and second rolls; and means whereby the third friction roll may be moved into engagement with the other two rolls to drive the second roll indirectly.

3. A metal winder including three friction rolls, two of which are of similar formation and are provided with a series of minor grooves and with a major groove; the third roll being provided with means whereby it may be brought into engagement with the first two rolls and having a conical periphery adapted to engage with the major groove in the said two rolls.

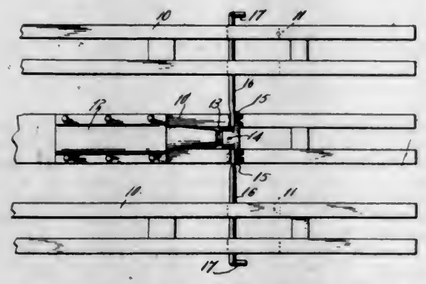
4. In a device of the character described in combination, three rolls, minor corrugations and one major corrugation upon two of said rolls, and a V-ridge upon the third of said rolls cooperating with the major corrugations of the first two rolls, means for regulating the speed of rotation of the first rolls by varying the frictional engagement between the corrugations of said rolls, and means for engaging and disengaging said ridge from the major corrugations, substantially as described.

1,195,083. METALLIC CONTAINER. JAMES E. PRESCOTT, Passaic, N. J. Filed Aug. 6, 1913. Serial No. 783,270. (Cl. 220—6.)



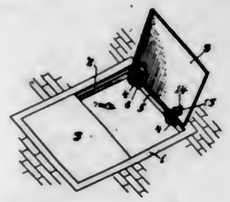
A sheet metal container, comprising a body provided at its side between the top and bottom portions thereof with an outwardly-extending annular bead, the said top portion of the side being in the form of a frustum of a cone, a cover having a depending flange terminating at its lower edge in an outwardly-extending annular tubular bead, the interior diameter of the said flange bead corresponding approximately to the exterior diameter of the said conical body portion at a level a distance above the said body bead to provide a seating contact for the cover bead and to provide an unobstructed prying space between the said body bead and the said cover bead at the time the cover is firmly seated on the said conical body portion, and an integral minute ridge on the said conical upper body portion immediately below the said seating contact.

1,195,084. RAILWAY-BRAKE APPLIANCE. JOHN PRICE, Tyler, Tex. Filed Nov. 17, 1915. Serial No. 61,955. (Cl. 188—9.)



The combination with the longitudinally slotted sills of a railway car and a brake piston rod mounted therebetween, of a member including a centrally socketed boss portion and oppositely extending arm portions secured to one end of the piston rod, and arms secured to the ends of the first named arms and disposed through the slots of the sills for longitudinal slidable movement, said sills being properly marked to be traversed by the ends of the last named arms and thereby indicate the position of the piston rod.

1,195,085. HINGE. JOHN E. RABER, Canton, Ohio. Filed Apr. 29, 1916. Serial No. 94,342. (Cl. 16—106.)



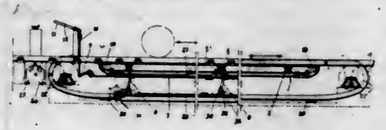
1. A hinge adapted to be used upon a door, comprising spaced ears attached to the door frame, and disposed outwardly therefrom a pin connecting said spaced ears, a curved member connected to the door, said curved member provided with a curved slot, said pin being located through the slot in said curved member and a projection formed upon said curved member and adapted to contact with the under surface of the door frame when the door is in the closed position.

2. A hinge adapted to be used upon a door, comprising spaced ears attached to the door frame, a pin connecting said spaced ears, a curved member connected to the door, said curved member provided with a curved slot, said pin being located through the slot in said curved member and a lubricator container connected to the frame and adapted to receive said curved member when the door is in the closed position.

3. A hinge adapted to be used upon a door, comprising attaching plates connected to the door frame, spaced ears provided upon each of said attaching plates, a pin connecting each pair of spaced ears and a lubricating receptacle provided upon each of said attaching plates, curved members connected to the door, said curved members provided with curved slots, said pins being located through the slots in said curved members, said curved members being arranged to be located within said lubricator receptacles when the door is in the closed position.

4. A hinge adapted to be used upon a door, comprising spaced ears attached to the door frame, a pin connecting said spaced ears and a curved member connected to the door, said curved member provided with a curved slot, said pin being located through the slot in said curved member, said curved slot being so shaped that when the door is closed the curved member will ride upon said pin bringing the hinge edge of the door into snug engagement with the door frame.

1,195,086. RAIL-BRAKE FOR RAILROAD-CARS. ERNST RAMMELSBERG, Dortmund, Germany, assignor to the Firm of Both & Tilmann, Gesellschaft mit beschränkter Haftung, Dortmund, Germany. Filed May 22, 1915. Serial No. 29,818. (Cl. 188—24.)



1. Rail brake for railroad cars consisting of brake chains, disposed in the track and adapted to be pressed against the face of the car wheels, and means for moving said brake chains parallel to said track and in a direction opposite to that in which the car is running.

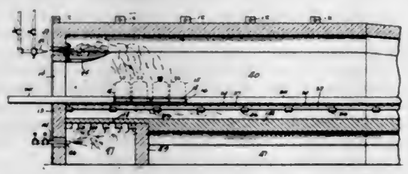
2. Rail brake, for railroad cars consisting of brake chains, disposed in the track and adapted to be pressed against the face of the car wheels, means for moving said brake chains parallel to said track and in a direction opposite to that in which the car is running, a frame over which said brake chains are moving, toggle levers supporting said frame, an operating lever, and means for operatively connecting said toggle levers with said operating lever.

3. Rail brake for railroad cars consisting of brake chains, disposed in the track and adapted to be pressed against the face of the car wheels, means for moving said brake chains parallel to said track and in a direction opposite to that in which the car is running, a frame supporting said brake chains, toggle levers for raising and lowering said frame, and a roller band interposed between said brake chains and frame for reducing the friction between said chains and frame.

4. Rail brake for railroad cars consisting of brake chains disposed in the track, chain links forming said chains, and brake blocks exchangeably fitted into said links, a tongue and groove connection between said blocks, means for pressing said brake chains with the brake blocks against the face of the car wheels, means for moving said brake chains parallel to said track and in a direction opposite to that in which the car is running, a frame supporting said brake chains, toggles for raising and lowering said frame and a roller band interposed between said brake chains and said frame for reducing the friction between both, substantially as described.

5. Rail brakes for railroad cars consisting of brake chains disposed in the track, links forming said brake chains and brake blocks exchangeably fitted into said links, a tongue and groove connection between said blocks, means for pressing said brake chains and the brake blocks against the face of the car wheels, means for moving said brake chains parallel to said track and in a direction opposite to that in which the car is running, a frame supporting said brake chains, a roller band interposed between said brake chains and said frame, toggles for raising and lowering said frame, coupled wedges supporting said toggles, bearings for said wedges, and means for displacing said wedges simultaneously and evenly within their bearings, substantially as described.

1,195,087. LEER. JOHN RAU, Indianapolis, Ind. Continuation of application Serial No. 871,900, filed Nov. 13, 1914. This application filed Feb. 12, 1916. Serial No. 78,009. (Cl. 49—47.)



1. A leer including a longitudinally extending heating chamber with openings located at intervals in the bottom thereof, a perforated conveyer for the glassware movable longitudinally along said heating chamber, means for supplying heat to the front end of said chamber, and a flue near the rear end of the leer arranged to draw the heated gases longitudinally of said heating chamber and downward between and through the conveyer and out through the openings in the bottom of the heating chamber.

2. A leer including a longitudinally extending heating chamber, a perforated conveyer for the glassware movable longitudinally along the lower portion of the heating chamber, means for supplying heat to the heating chamber, a flue chamber extending longitudinally beneath said heating chamber and separated therefrom by a partition, a flue at the rear end of the flue chamber, and openings located at intervals in said partition in the bottom of the heating chamber through which the heated gases pass downward between the glassware and through the conveyer and out through said flue chamber.

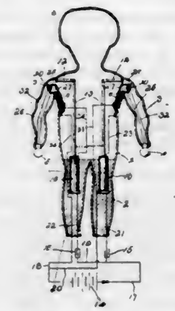
3. A leer including a longitudinally extending heating chamber, means for supplying heat to the front end of said heating chamber, a perforated conveyer for the glassware movable longitudinally along the lower portion of the heating chamber, a flue chamber extending longitudinally beneath said heating chamber and separated therefrom by a partition, and openings located at intervals in said partition in the bottom of the heating chamber to the rear of the front portion thereof through which the heated gases pass downward between the glassware and through the conveyer and out through said flue chamber.

4. A leer including a heating chamber, means for conveying the glassware longitudinally along the lower portion of said chamber, means for introducing heat into the front upper end of said chamber, and a flue chamber located below and in communication at intervals with the rear portion of said heating chamber.

5. A leer including a heating chamber, means for conveying the glassware longitudinally along the lower portion of said chamber, means for heating the front end of said chamber, a chimney located near the other end of the leer, and a flue chamber below the rear portion of said heating chamber and in communication therewith at intervals and leading to said chimney.

[Claims 6 to 9 not printed in the Gazette.]

1,195,088. DIRECTION-INDICATOR. CLAUD A. REESE, Bowling Green, Fla. Filed Jan. 29, 1915. Serial No. 5,061. (Cl. 177—337.)



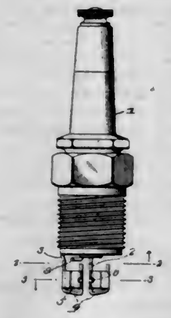
1. In a direction indicator, the combination with a hollow body to be secured to a vehicle of arms hinged to the body, means to move the arms into and out of signaling position, means to hingedly secure the arms to the body comprising hinge leaves secured within the body and extending into the arms, said arms and body being hollow, ears carried by the portions of the leaves that extend into the arms, hinge pins inserted through the arms and ears, an electrical circuit, electric lamps carried at the outer ends of the arms and connected in the circuit, and means carried by the hinge leaves and hinge pins to establish electrical connection between the lamps and circuit.

2. In a direction indicator comprising a hollow body to be attached to a vehicle, said body being provided with openings therein, a pair of elongated hinged leaves secured within said body adjacent said opening, outwardly converging arms secured to said hinge leaves and extending exteriorly of said body, said arms bent to form ears on the outer end thereof, arms provided within adapted to pass through said ears and hingedly support said arms to the body, illuminating means carried at the outer end of each of the arms, an electrical circuit, solenoids mounted within the hollow body and operably connected with the circuit, rods rigidly secured to the arms and extending inwardly into the hollow body and links operably connected with the solenoids and the arms whereby when the solenoids are energized, the arms will be moved into extended position.

1,195,089. SPARK-PLUG. OTTO RICKMEYER, Milwaukee, Wis. Filed Dec. 1, 1915. Serial No. 64,511. (Cl. 123—169.)

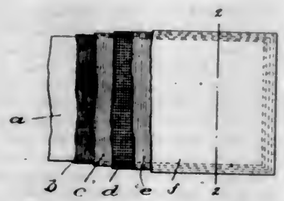
A spark plug having a power electrode and a ground electrode, the terminals of said electrodes being bent into

U-forms, a metallic cleaner consisting of a triangular body formed upon its apex with a transverse groove adapted to fit around in slidable and swivelable relation the bent terminal of each electrode, said triangular body being formed upon its base side with an arcuate surface adapted to contact the main stem of the single electrode, and a pair of stop flanges formed integrally upon the



opposite edges of said triangular body between the limits of which said body may move, said triangular body being also formed with a transverse groove intersecting the first named groove to divide the apex of said body into a plurality of scrapers, and a spring arm secured upon the spark plug and projecting in the path of movement of one of said triangular bodies so as to be tensioned to cause a rebound of the body.

1,195,090. PROTECTED METAL ARTICLE AND PROCESS OF MAKING SAME. HAROLD H. ROBERTSON, Sewickley, Pa., assignor to Asbestos Protected Metal Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 3, 1916. Serial No. 101,635. (Cl. 154—41.)



1. An improved article of manufacture comprising a metal article provided with a coating of lacquer applied to the metal article, and a coating or layer of asphalt applied to the coating of lacquer.

2. An improved article of manufacture, comprising a metal article provided with a coating of lacquer capable of resisting a relatively high temperature, and a coating of asphalt applied to the coating of lacquer.

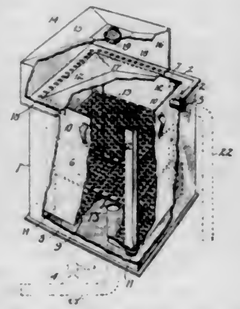
3. An improved article of manufacture comprising a metal article provided with a coating of lacquer applied to the metal article, a coating or layer of asphalt applied to the coating of lacquer, and a protective layer of fibrous material affixed to the said asphalt coating.

4. An improved article of manufacture comprising a metal article provided with a coating of lacquer applied to the metal article, a coating or layer of asphalt applied to the coating of lacquer, and a protective layer of fibrous material saturated with asphalt and affixed to said asphalt coating.

5. An improved article of manufacture comprising a metal article provided with a coating of lacquer applied to the metal article, a coating or layer of asphalt applied to the coating of lacquer, a protective layer of fibrous material saturated with asphalt and affixed to said asphalt coating, and a surface coating applied to the external surface of the saturated fibrous layers to seal the volatile constituents of the saturating material of said fibrous layers and to bind the fibrous layers to the metal article.

[Claims 6 to 8 not printed in the Gazette.]

1,195,091. METHOD OF STERILIZING OR PASTEURIZING MILK IN BOTTLES. CHARLES O. ROBINSON, Frederick, Md.; Effie S. Robinson administratrix of said Charles O. Robinson, deceased. Original application filed Nov. 22, 1913, Serial No. 802,467. Divided and this application filed Feb. 27, 1914. Serial No. 821,502. (Cl. 99—15.)

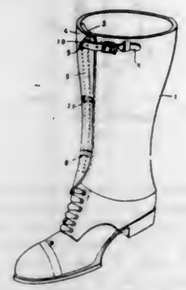


The method of pasteurizing milk and similar substances which comprises the following steps: (*a*) placing the milk in a container which will conduct heat; (*b*) immersing the container in a relatively cool fluid, surrounded by a separate concentric outer body of fluid communicating with the first body at the bottom only; (*c*) applying heat to the first body of fluid beneath the container so as to set up a gradual rising current of warm fluid until a temperature is reached sufficiently high to secure pasteurization; (*d*) maintaining said temperature in the liquid bodies for a predetermined time; (*e*) cutting off the supply of heat and producing a gradual flow of relatively cool fluid into the outer concentric body of heated fluid; and (*f*) draining off the surplus heated fluid from the top of the inner body, whereby the cooling fluid introduced is gradually heated as it descends into the outer concentric body, until it has abstracted sufficient heat therefrom to produce a gradual effect in the inner body, said cooling effect continuing with perfect uniformity throughout the inner body of fluid, until the lowest desired temperature is reached.

1,195,092. LEGGING. MORRIS ROSENWASSER, New York, N. Y. Filed Dec. 8, 1909, Serial No. 532,040. Renewed Jan. 10, 1916. Serial No. 71,379. (Cl. 36—2.)

1. The combination in a legging having overlapping, longitudinally extending flaps, of a fastening strap for said flaps attached by its lower end to the inner flap at a point covered and concealed by the outer flap, and extending straight from said point of attaching entirely between and concealed by said flaps, through fastening means on the inner surface of the outer flap adjacent said point of attachment, and to a point adjacent the upper ends of said flaps, and extending thence through the outer flap across the outer surface thereof, and into adjustable engagement with the inner flap.

2. The combination in a legging having overlapping, longitudinally extending flaps, of a fastening strap for said flaps attached by its lower end to the inner flap at a point covered and concealed by the outer flap, and extending straight from said point of attaching entirely between and concealed by said flaps, through fastening means on the inner surface of the outer flap adjacent said point of attachment, and to a point adjacent the upper ends of said flaps, and extending thence through the outer flap across the outer surface thereof, and into adjustable engagement with the inner flap, the intermediate concealed portion of the fastening strap being under tension and having a bent to bow the outer flap, and means fixed to the intermediate portion of said outer flap detachably engaging the intermediate concealed tensioned portion of said fastening strap, adapted for preventing such bowing.



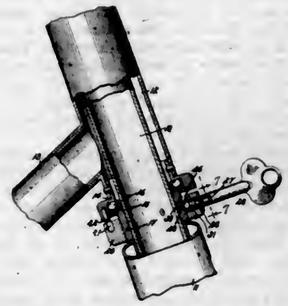
3. The combination in a legging having overlapping, longitudinally extending flaps, of a fastening strap for said flaps attached by its lower end to the inner flap at a point covered and concealed by the outer flap, and extending straight from said point of attaching entirely between and concealed by said flaps, and to a point adjacent the upper ends of said flaps, and extending thence through the outer flap across the outer surface thereof, and into adjustable engagement with the inner flap, said outer flap having a loop formed on its inner surface arranged in close proximity to the point of attachment of said strap to the inner flap, and said fastening strap being threaded through said loop as it leaves said point of attachment, so as to hold the outer flap close against the outer surface of the inner flap.

4. The combination in a legging having overlapping, longitudinally extending flaps, of a fastening strap for said flaps attached by its lower end to the inner flap at a point covered and concealed by the outer flap, and extending straight from said point of attaching entirely between and concealed by said flaps, and to a point adjacent the upper ends of said flaps, and extending thence through the outer flap across the outer surface thereof, and into adjustable engagement with the inner flap, said outer flap having a loop formed on its inner surface arranged in close proximity to the point of attachment of said strap to the inner flap, said fastening strap being threaded through said loop as it leaves said point of attachment, so as to hold the outer flap close against the outer surface of the inner flap, the intermediate concealed portion of the fastening strap being under tension and having a bent to bow the outer flap, and a longitudinally disposed reinforcing member extending between the ends of said outer flap concealed within the material thereof and adapted to prevent such bowing.

5. The combination, in a legging having longitudinally extending juxtaposed edge portions movable longitudinally relatively to each other, of a fastening strap having an engagement with a relatively lower portion of one of said edge portions and having an engagement with a relatively upper portion of the other of said edge portions, the intermediate portion of said fastening strap being substantially straight, the engagement with one of said edge portions being fixed, and the engagement with the other of said edge portions being adjustable to alter the length of the stright portion of the fastening strap for moving said edge portions longitudinally relatively to each other, and said fastening strap having a part adjacent its point of attachment to one of said edge portions slidably engaging an eye formed in the outer edge portion.

[Claims 6 to 9 not printed in the Gazette.]

1,195,093. LOCKING DEVICE. PHILIP A. ROSENTHAL, New York, N. Y. Filed May 1, 1916. Serial No. 94,621. (Cl. 70—90.)



1. A locking device for the steering mechanism of bicycles, motor cycles and other machines, comprising interlocking members, of which one is fixed on the steering head and the other is slidable up and down on the steering post, the said movable member when in lowermost position being out of locking engagement with the said fixed member, means to constrain the movable member to turn with the steering post and a key-controlled spindle mounted to turn in the said movable member and provided wtih an eccentric pin engaging a slot in the steering post.

2. A locking device for the steering mechanism of bicycles, motor cycles and other machines, compriaing interlocking members, one of the said members being fixed on the steering head and the other being movable and having a polygonal bore, a polygonal collar secured to the steering post and on which slides the said movable member, the said collar having a sidewise extending slot, and a key-controlled spindle mounted to turn in the said movable member and provided at its inner end with an eccentric pin engaging the said slot.

3. A locking device for the steering mechanism of bicycles, motor cycles and other machines, comprising interlocking members, one of the said members being in the form of spaced pins arranged in a circle and depending from the under side of the steering head, and the other member being in the form of a sleeve having a series of apertures arranged in a circle and adapted to be engaged by the said pins, the said sleeve having a polygonal bore slidably fitting on a polygonal portion of the steering post, the sleeve having a sidewise extending slot, and a key-controlled spindle mounted to turn in the said sleeve and provided at its inner end with an eccentric pin engaging the said slot.

1,195,094. NECKTIE-FASTENER. CHARLES RUBEN, Pittsburgh, Pa. Filed Oct. 28, 1915. Serial No. 58,353. (Cl. 24—49.)



1. A fastener for bow ties comprising a retaining member formed of resilient material and including a bow-shaped portion, a pair of inwardly extending clamping arms projecting from each terminus of said bow-shaped portion, a pair of outwardly extending clamping arms each projecting from the inner terminus of an inwardly extending arm, said outwardly extending arms arranged against said inwardly extending arms, and jackets mounted upon said outwardly extending arms and projecting beyond each outer terminus of an inwardly projecting arm.

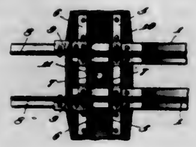
2. A fastener for bow ties comprising a retaining member formed of resilient material and including a bow-shaped portion, a pair of inwardly extending clamping arms projecting from each terminus of said bow-shaped portion, a pair of outwardly extending clamping arms each projecting from the inner terminus of an inwardly extending arm, said outwardly extending arms arranged against said inwardly extending arms, and jackets mounted upon said outwardly extending arms and projecting beyond each outer terminus of an inwardly projecting arm, said outer extending arms of less length than said inwardly extending arms.

3. A fastener for bow ties comprising a retaining member formed of resilient material and including a bow-shaped portion, a pair of inwardly extending clamping arms projecting from each terminus of said bow-shaped portion, a pair of outwardly extending clamping arms each projecting from the inner terminus of an inwardly extending arm, said outwardly extending arms arranged against said inwardly extending arms, and jackets mounted upon said outwardly extending arms and projecting beyond each outer terminus of an inwardly projecting arm, said jackets of a greater width than said outwardly extending arms and projecting beyond the outer terminus of each of said inwardly extending arms.

4. A fastener for bow ties comprising a retaining member formed of resilient material and including a bow-shaped portion, a pair of inwardly extending clamping arms projecting from each terminus of said bow-shaped portion, a pair of outwardly extending clamping arms each projecting from the inner terminus of an inwardly extending arm, said outwardly extending arms arranged against said inwardly extending arms, and jackets mounted upon said outwardly extending arms and projecting beyond each outer terminus of an inwardly projecting arm, the arms of each pair of clamping arms extending in opposite directions with respect to each other.

1,195,095. [WITHDRAWN.]

1,195,096. CAR CONSTRUCTION. RALPH V. SAGE, Columbus, Ohio, assignor to Cambria Steel Company, a Corporation of Pennsylvania. Filed Oct. 6, 1914. Serial No. 865,234. (Cl. 105—76.)



1. A car underframe comprising a center sill, a draft sill and bolster members, said center sill members and draft sill members being alined at their junction, said bolster members bent at their inner ends to form splice-plates at the union of the center sill and draft sill.

2. A car underframe comprising center sills, draft sills and bolster members, said bolster members bent at their inner ends and secured to the external surfaces of the center sill and draft sill members, thereby forming splice-plates for the union of the center sills and draft sills.

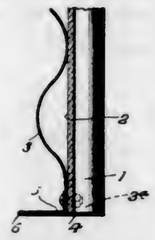
3. A car underframe comprising a center sill, a draft sill and bolster members, a splice-plate integral with one of the bolster members and secured to the external surfaces of the center sill and draft sill members.

4. A car underframe comprising a center sill, a draft sill and bolster members, center sill and draft sill in alinement at their junction and splice-plates each integral with a bolster member.

5. In a car underframe, a center sill member alined with a draft sill member at their junction, a bolster member having integral splice portions secured to the external surfaces of the center sill and draft sill members.

[Claims 6 to 8 not printed in the Gazette.]

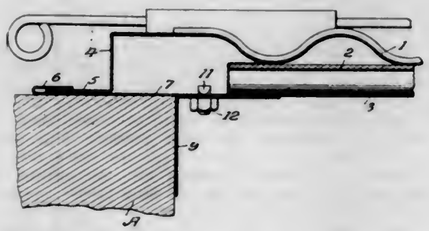
1,195,097. FLUE-STOPPER FOR FIREPROOF DOORS AND SHUTTERS. FELIX L. SAINO, Memphis, Tenn. Filed May 27, 1915. Serial No. 30,833. (Cl. 189—46.)



1. The combination of a fire-proof door or shutter comprising adjacent sheet metal walls arranged to form a flue between them, of a draft stopper consisting of an angle plate secured by one flange to the face of the door near each end and with its other flange extending each way from said face, in one direction to cover the space between the two walls of the door and in the other direction to cover the space between the door and the adjacent wall of the building, substantially as set forth.

2. The combination with a fire-proof door or shutter comprising adjacent sheet metal walls adapted to form a flue between them when separated, the lower edge of one of said walls being bent laterally to one side thereof and said bent portion folded upon itself and disposed transversely to the opposite side of the wall and closely overlying the space between said walls, said laterally disposed plate providing a draft stopper for the flue formed between said walls when the same are separated, substantially as set forth.

1,195,098. DRAFT-PLATE FOR FIREPROOF DOORS OR SHUTTERS. FELIX L. SAINO, Memphis, Tenn. Filed June 9, 1915. Serial No. 33,149. (Cl. 189—46.)



The combination with a hingedly mounted fire-proof door or shutter constructed with an integrally formed boxing along the hinged edge thereof, said boxing comprising a sheet metal plane strip disposed against the outer surface of the door or window opening and projecting across the door or window opening within the plane of said surface for an appreciable distance, of a draft plate comprising a plurality of sheet metal strips of angle cross section having slots formed therein, and bolts fitting through said slots and adjustably securing said strips to the inner surface of said boxing strip portion, said draft plate adapted to fit closely within the corner provided by said boxing strip and the adpacent wall surface of the door or window opening and thereby overlie and effectively close the space between said wall and the door or shutter against the passage of air drafts, substantially as set forth.

1,195,099. METHOD FOR THE PRODUCTION OF SOLID GELATINOUS SUBSTANCES. EDUARD SALM, Berlin, Germany, assignor to Aktiengesellschaft für chemische Produkte vormals H. Scheidemandel, Berlin, Germany, a Corporation of Germany. Filed Feb. 15, 1916. Serial No. 78,530. (Cl. 252.)

1. A method for the production of solid gelatinous substances in a divided condition, consisting in bringing such gelatinous material, when in liquid state, into contact with a non-volatile oil.

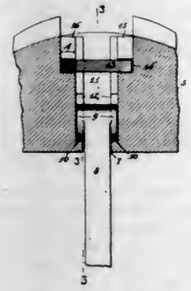
2. A method for the production of solid gelatinous substances in a divided condition, consisting in bringing such gelatinous material, when in liquid state, into contact with a non-volatile oil, having a specific gravity of 0, 8—1, 2.

3. A method for the production of solid gelatinous substances in a divided form, consisting in bringing the gelatinous material, when in liquid state, into contact with a non-volatile oil and removing the globules of glue by a mechanical device as they are formed.

4. A method for the production of solid gelatinous substances in a divided condition, consisting in bringing such gelatinous material, when in liquid state, into contact with a non-volatile oil, and washing same by benzene or the like.

5. A method for the production of solid gelatinous substances in a divided form, consisting in bringing the gelatinous material, when in liquid state, into contact with a non-volatile oil and removing the globules of glue by a mechanical device as they are formed, whereupon they are washed by benzene or the like recovering the washing medium and drying the globules in a warm room.

1,195,100. ANCHOR. WILLIAM D. SARGENT, West Orange, N. J. Filed Mar. 25, 1916. Serial No. 86,552. (Cl. 114—208.)

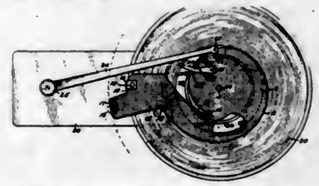


1. An anchor comprising a head with communicating shank-receiving slot and lug-receiving orifice, a shank with supporting lugs, said lugs positioned within said lug-receiving orifice, the side walls of said orifice provided with downwardly enlarging recesses of substantially uniform depth throughout, and a substantially rectangular key located within said recesses, with the broad flat side thereof adjacent the lugs of said shank.

2. An anchor comprising a head with communicating shank-receiving slot and lug-receiving orifice, a shank with supporting lugs, said lugs positioned within said lug-receiving orifice, the side walls of said orifice provided with downwardly enlarging recesses of substantially uniform depth throughout, and a substantially rectangular key located within said recesses, with the broad flat side thereof adjacent the lugs of said shank, said lugs and the bottom walls of said lug-receiving orifice of substantially elliptical contour.

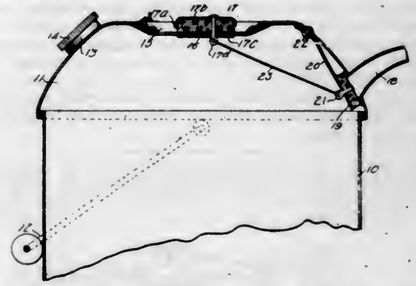
3. An anchor comprising a head with communicating shank-receiving slot and lug-receiving orifices, a shank with supporting lugs, said lugs positioned within said lug-receiving orifice, the side walls of said orifice provided with downwardly enlarging recesses of substantially uniform depth throughout, and a substantially rectangular key located within said recesses, with the broad flat side thereof adjacent the lugs of said shank, said key rigidly secured to the walls of said recesses.

1,195,101. APPARATUS FOR CUTTING GROOVES IN RECORD-DISKS. ROBERT SCHIFFMAN, Toledo, Ohio. Filed Apr. 23, 1915. Serial No. 23,356. (Cl. 33—27.)



An apparatus as characterized comprising a plate having a spirally curved marking edge; means for adjustably holding said plate upon a talking machine record disk, the marking edge of said plate intersecting the innermost convolution of the record groove on said disk, said means embodying a perforation concentric with the axis of said marking edge, and a lateral extension of said plate, said extension exceeding in length the radius of the record disk; a swinging arm pivotally mounted beyond the area occupied by said record disk; means disposed at the free end of said arm for holding a cutting stylus; a cutting stylus held by said means in operative relation to a record disk; a stylus engaging arm adjustably mounted on said plate and extending beyond the marking edge thereof, said arm being adapted for forming angles with said plate at different points on said edge, said angles being variously distant from said perforation; and means for holding said arm in adjusted position.

1,195,102. OIL-CAN VALVE. WILLIAM AUGUST SCHMIDT, Salem, S. D. Filed May 28, 1915. Serial No. 30,869. (Cl. 221—15.)



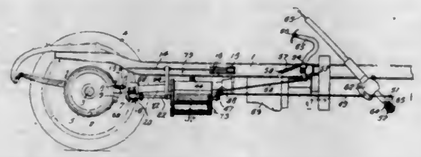
1. The combination with an oil can having a top with a vent hole therethrough and having a pour-out nozzle, of a closure for said vent comprising an upper cap, an inner plate, a packing member between the cap and the can top, and a pin passing through the cap, packing member and plate holding these parts in definite position, said pin passing through the vent and serving to limit the sliding movement of the closure, a valve for the nozzle, a flat spring connected to the valve and serving to automatically seat the valve to close the nozzle, and a link extending directly from the valve to the closure pin whereby when the closure is opened the valve will be drawn open against the force of said spring.

2. The combination of an oil can having a spout and provided in its top with a depression having a vent opening in its bottom, a spring having one end secured to the can and carrying at its free end a valve for closing the spout, a closure mounted to slide in the depression of the can top over the opening thereof and provided with a member extending through the opening in the bottom of

the depression, whereby to guide and limit the sliding movement of said closure, and a link connecting the inner end of the guiding member of the closure with the valve.

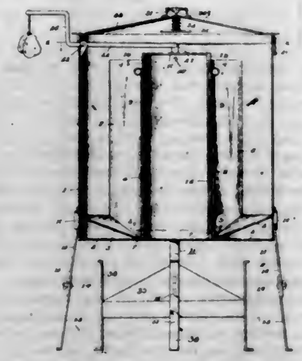
3. The combination of an oil can having a spout provided with a vent opening in its top, a valve for closing the spout, a spring having one end secured to the can, a bolt for securing the spring to the valve, said bolt having an eye at its inner end, a closure mounted to slide on the top of the can over the vent opening thereof, said closure comprising members arranged on the outer and inner faces of the top of the can and a bolt securing the said members together, the bolt passing through the opening in the top of the can and having an eye at its inner end, and a link secured to the valve and to the eyes of the said bolts.

1,195,103. AIR-BRAKE. RAY SCOGGIN, Eugene, Oreg. Filed July 7, 1914. Serial No. 849,403. (Cl. 188—5.)



In a vehicle provided with brake mechanism and with means for operating the same, a casing comprising a main storage compartment and a lateral cylindrical compartment at each side of the central compartment, a piston in each of the last-named compartments, a rod connected with each piston, the rods extending through adjacent ends of the compartments, the said end of each compartment having a port, one of the rods being connected with the brake operating mechanism, a spring for moving the piston away from the brake operating mechanism, the other rod being connected with means driven by the motor of the vehicle for reciprocating the said piston, a connection between the last-named compartment and the central storage compartment at the opposite end from the port, a check valve in the said connection, a connection between the other compartment and the central storage compartment at the said last-named end, a valve in the said connection, an exhaust valve in the said last-named cylindrical compartment at the said last-named end, and manually controlled mechanism for operating each of the last-named valves.

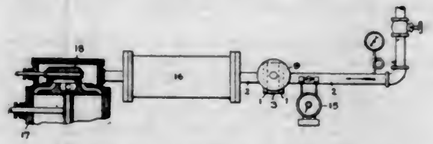
1,195,104. POULTRY-FEEDER. JOHN D. SEAMANS, Greenville, Tex. Filed Apr. 17, 1916. Serial No. 91,695. (Cl. 119—70.)



1. In a poultry feeder, a body having a funnel shaped bottom, a tubular wall in the central portion of the body open at the lower end and having a feed discharge opening, a cylindrical valve arranged for vertical movement in said vertical wall to cover and uncover said feed discharge opening, a lever mounted at one side of the body and having fork arms at its inner end connected to the upper end of said valve, said valve counterbalancing said lever, a cover for the body, a buffer spring depending from the cover and a buffer disk carried by said spring and arranged above the valve and cleared by the fork arm of the lever when the valve is raised so that said disk is adapted to bear downwardly on the valve.

2. In combination with a poultry feeder to drop feed, a combined spreader and collector comprising a hollow conical member open at the base and supporting legs to support said member above the ground with either its conical or open side uppermost.

1,195,105. METERING FLUIDS WHICH HAVE AN INTERMITTENT FLOW. LUCIAN A. SHELDON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 9, 1914. Serial No. 865,834. (Cl. 73—167.)



1. The combination with a conduit having means connected therewith which produces an intermittent flow of fluid therethrough, of a flow meter for metering the fluid, a reducing valve between said flow meter and said means, and a receiver between the reducing valve and said means, said receiver having a fixed volumetric capacity.

2. Means for metering an intermittent flow of fluid in a conduit, comprising the combination with said conduit of a device taking fluid from said conduit intermittently, a flow meter, a reducing valve in said conduit between said meter and said device and causing a drop in pressure and a consequent increase in volume sufficient to furnish fluid enough for one admission, and a receiver of fixed capacity between said valve and said device said capacity being sufficient to accommodate said increased volume of fluid.

3. Means for metering an intermittent flow of fluid in a conduit, comprising the combination with said conduit, of a device causing variations in the volume of fluid flowing in said conduit, a flow meter, an automatic reducing valve causing a drop in pressure between said meter and said device, and a receiver of fixed capacity between said valve and said device large enough to store the increased volume of fluid due to the drop in pressure.

4. Means for metering an intermittent flow of fluid in a conduit, comprising a device taking a given volume of fluid intermittently, a flow meter, an automatic reducing valve between said meter and said device effecting a drop in pressure and an increase of volume of said fluid, and a receiver of fixed capacity between said valve and said device large enough to store the increased volume of the fluid in the intervals when the device is not taking fluid.

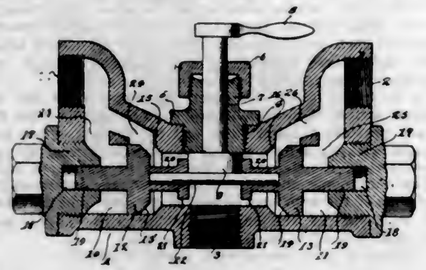
5. The combination with a conduit for fluids, of means causing an intermittent flow of said fluid, a meter for measuring the flow, a receiver, and a reducing valve between the meter and the receiver, comprising a casting having a passage for the fluid, a butterfly valve in said passage, and a weighted arm on the spindle of said valve.

[Claims 6 to 8 not printed in the Gazette.]

1,195,106. AUTOMATIC CYLINDER-COCK. GEORGE SHELTON, Paducah, Ky. Filed July 7, 1915. Serial No. 38,458. (Cl. 137—32.)

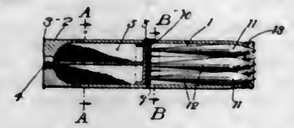
An automatic cylinder cock of the character specified, comprising a body having two inlets and a single outlet, said body being recessed to provide a pair of opposed

valve chambers each having a valve seat, a valve mounted in each of said chambers, a pin connecting said valves, whereby one valve is adapted to actuate the other valve and cause both valves to move simultaneously in the same direction, each of the inlets being bifurcated to provide branches leading to opposite sides of the valve body



working in the adjacent valve chamber, valve guiding stems extending from the rear faces of the valve bodies, and plugs threaded into the outer end walls of the valve chambers and formed with guide ways in which said valve stems are slidable, said plugs providing for the insertion and removal of the connected valves.

1,195,107. GUN-CARTRIDGE. J ED SHERIFF, Stamford, Conn. Filed Aug. 14, 1915. Serial No. 45,514. (Cl. 102—15.)



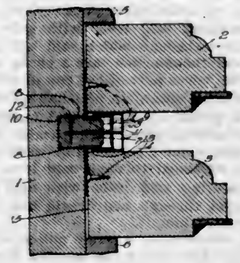
1. A gun cartridge comprising a shell having a powder chamber therein, a plurality of arrow-like torpedo-shaped missiles in the shell, the said missiles being arranged in the shell with their axes parallel to each other, and a wad of hard material between the chamber and the missiles, whereby the missiles will all be properly ejected upon the firing of the shell and the wad will not become fixed to the rear ends of the missiles.

2. A gun cartridge comprising a shell having a powder chamber of fixed volume therein, a plurality of arrow-like torpedo-shaped missiles in the shell, the said missiles being arranged in the shell with their axes parallel to each other, and a wad of hard material between the chamber and the missiles, whereby the missiles will all be properly ejected upon the firing of the shell and the wad will not become fixed to the rear ends of the missiles.

3. A gun cartridge comprising a shell having a powder chamber therein, a plurality of arrow-like torpedo-shaped missiles in the shell, the said missiles being arranged in the shell with their axes parallel to each other, means for holding the missiles in said parallel arrangement, and a wad of hard material between the chamber and the missiles, whereby the missiles will all be properly ejected upon the firing of the shell and the wad will not become fixed to the rear ends of the missiles.

4. A gun cartridge comprising a shell having a powder chamber therein, a plurality of arrow-like torpedo-shaped missiles in the shell, the said missiles being arranged in the shell with their axes parallel to each other, means located within and between the rear ends of the missiles for holding them in said parallel arrangement, and a wad of hard material between the chamber and the missiles, whereby the missiles will all be properly ejected upon the firing of the shell and the wad will not become fixed to the rear ends of the missiles.

1,195,108. METAL WEATHER-STRIP. CHARLES A. SHOGREN, Chicago, Ill. Filed Apr. 3, 1915. Serial No. 18,871. (Cl. 20—69.)



1. A parting bead consisting of a wooden strip having a slot therein, a T-shaped sheet metal strip comprising a web and a top consisting of two outer flanges, the web being seated in said slot and the extremities of the top or outer flanges being bent back so that the web and each top or outer flange and its corresponding rebent extremity forms a channel.

2. A parting bead consisting of a supporting element, a web secured thereto and projecting therefrom, and oppositely extending flanges at the extremity of said web, said flanges being bent toward said supporting element, so as to form with said web a pair of parallel inclosures.

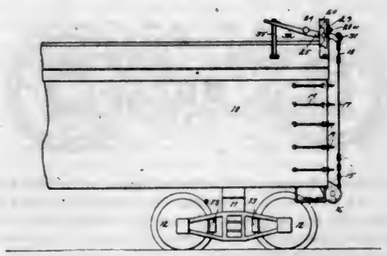
3. Sheet metal weather stripping comprising sheet metal channels carried by the parting bead and sheet metal Z bars carried by the sashes, said Z bars fitting between parallel portions of said channels and parting bead and closely confined therein without binding whereby movement of the sashes backward and forward is limited, but free play sidewise as well as up and down sliding movement is permitted.

4. A parting bead consisting of a wooden strip having a slot therein and a pair of sheet metal channels each having a flange secured within said slot.

5. A parting strip comprising a body portion arranged to fit within the usual window sash groove, an extension of reduced width and a pair of sheet metal channels secured each by one flange within a central slot in said parting strip and having the other flange substantially in the plane of the sides of said parting strip.

[Claims 6 to 9 not printed in the Gazette.]

1,195,109. LEVER-BRAKE FOR CARS. WILLIAM M. SHOLLEY, Des Moines, Iowa, assignor of forty-nine one-hundredths to David C. La Vine, Des Moines, Iowa. Filed Nov. 26, 1915. Serial No. 63,504. (Cl. 188—40.)



1. In a brake mechanism for cars, the combination of a car with a chain, a guide pulley therefor at the lower end of the car, a fulcrum suitably attached to car, a lever designed to operate on said fulcrum, means for operatively connecting said lever with said chain, said lever having a slot through which the fulcrum extends.

2. In a brake mechanism for cars a chain, a guide pulley therefor at the lower part of one end of the car, a pair

of upright members designed to be mounted on the upper end of a car, in parallel position, said upright members having parallel vertical slots with parallel downwardly inclined extensions, a lever mounted between said upright members, a bolt extended through said lever, means for operatively connecting said lever with said chain, said lever having a slot through which said bolt is extended.

3. In a brake mechanism for cars a chain, a guide pulley therefor at the lower part of the end of the car, a pair of upright members designed to be mounted on the upper end of a car, in parallel position, said upright members having parallel vertical slots with parallel downwardly inclined extensions, a lever mounted between said upright members, a bolt extended through said lever, means for operatively connecting said lever with said chain, said lever having a slot through which said bolt is extended, and having a jointed handle.

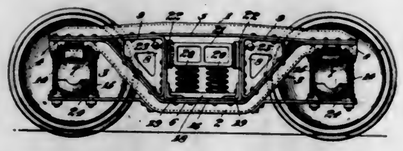
4. In a brake mechanism, a guide pulley adapted to be mounted on a car near the lower portion thereof at the end of car, a chain extended over said guide pulley, a lever designed to be mounted on the top of the car whereby said chain may be operated from top of car and a lever mounted on the end of the car operatively connected with said chain whereby said chain may be operated from the stirrup in both cases operating the brakes, one of said levers having a slot through which its fulcrum extends.

1,195,110. DEVICE FOR HOLDING SHEET-MUSIC. ROMANOS S. SIMHAN, Birmingham, Ala. Filed Dec. 8, 1915. Serial No. 65,791. (Cl. 45—61.)



A sheet music holder comprising outside covers placed edge to edge and pivoted at their meeting edges for swinging movement, frames on the inner surfaces of said covers respectively adapted to hold the outside sheets of a musical composition upon said outside covers and having the outer edges thereof pivoted to the outer edges of said covers, a frame hinged to the inner edge of one of the first-mentioned frames and capable of swinging movement, a frame coöperating with the last-mentioned frame to hold the central sheet of a musical composition and having the outer edge thereof pivoted to the outer edge of the last-named frame, and means for holding the first-mentioned frames in engagement with the respective covers and the last-mentioned frames connected to each other.

1,195,111. TRUCK-FRAME. EDWIN E. SLICK, Westmont borough, Pa. Filed June 20, 1916. Serial No. 104,661. (Cl. 105—243.)



1. A truck frame comprising an upper arch bar and a lower arch bar, both of trough section with integral outstanding flanges spaced apart at their intermediate portions with their outstanding flanges contiguous at the end portions and secured together.

2. A truck frame comprising an upper arch bar and a lower arch bar, both of trough section with outstanding flanges, the outstanding flanges being adjacent and secured directly together at their end portions.

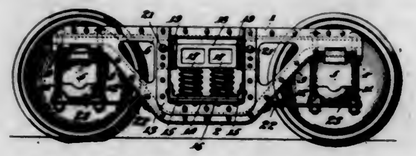
3. A truck frame comprising an upper arch bar comprising a trough section with flanges projecting outwardly from the lower portions thereof, a lower arch bar composed of a similar section with its outstanding flanges at the upper portions thereof, the arch bars being spaced apart at their intermediate portions and with their end portions adjacent and secured directly together by means of their contiguous outstanding flanges.

4. A truck frame comprising an upper arch bar comprising a trough section with flanges projecting outwardly from the lower portion thereof, a lower arch bar composed of a similar section with its outstanding flanges at the upper portion thereof, the arch bars being spaced apart at their intermediate portions with their ends adjacent and secured together by rivets passing through the contiguous outstanding flanges.

5. A truck frame comprising an upper arch bar of trough section with flanges projecting outwardly from its lower portion, a lower arch bar of similar section arranged with its flanges projecting outwardly from its upper portion, the flanges at the ends of both arch bars being contiguous and secured together, the intermediate portions of the arch bars being spaced apart and provided on each side of the bolster opening with flanged diaphragms secured to the arch-bar flanges.

[Claims 6 to 11 not printed in the Gazette.]

1,195,112. CAR-TRUCK. EDWIN E. SLICK, Westmont borough, Pa. Filed June 20, 1916. Serial No. 104,662. (Cl. 105—243.)



1. A truck frame comprising an upper arch bar and a lower arch bar, both of trough section, with their flanges projecting upwardly, spaced apart at their intermediate portions and closer together at their end portions, and an integral side plate secured on each side to the flanges of said arch bars.

2. A truck frame comprising an upper arch bar and a lower arch bar of trough section, the intermediate portion of the lower arch bar being spaced apart from the upper arch bar and provided with inclined portions extending upwardly toward the upper arch bar, and with horizontal end portions adjacent thereto, an integral side plate secured on each side of the frame to the upwardly projecting flanges of the arch bars, said side plates being each provided with a central opening and around which is secured an integral bent angle forming column guides and support for the spring seat.

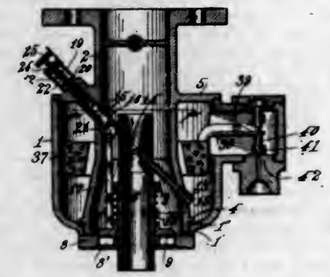
3. A truck frame comprising an upper arch bar and a lower arch bar of channel section with their flanges extending upwardly, an integral side plate secured on each side of the frame to the flanges aforesaid, a bolster opening in said side plates, a column guide and a spring-seat support comprising an integral bent angle having a lower seat portion and two upwardly-extending portions secured to each of the side plates, bolster guides secured to the upper portions of said angles and side plates and projecting inwardly therefrom.

4. A truck frame comprising an upper arch bar and a lower arch bar of trough section, with their flanges projecting upwardly, an integral side plate, having a bolster opening, secured on each side of said frame to the flanges aforesaid, bolster guides comprising channel sections secured to and between the upper portions of said side plates and projecting inwardly of the opening.

5. A truck frame comprising a pair of upper and lower arch bars, a pair of side plates secured to the opposite sides thereof and provided with a bolster opening therein, a bolster guide comprising a trough section secured to and between the upper portions of the side plates, projecting within the bolster opening and provided with a reinforcing plate of shallow channel form.

[Claims 6 to 14 not printed in the Gazette.]

1,195,113. CARBURETER. CHARLES D. SMITH, Dayton, Ohio, assignor of one-half to Louis Morner, Dayton, Ohio. Filed May 19, 1915. Serial No. 29,070. (Cl. 48—154.1.)



1. In a carbureter, the combination with an outer shell, an inner tubular member mounted therein, a Venturi tube mounted in said inner tubular member, of a needle-valve and nozzle coöperating therewith and arranged obliquely in the contracted portion of said Venturi tube, said needle-valve having a stud, a sleeve having a helical slot cooperating with said stud, said sleeve inclosing said needle-valve, an air valve, and means arranged between the said air valve and the needle-valve within said sleeve whereby said needle-valve is given movement corresponding to the extent of the opening of said air valve, substantially as specified.

2. In a carbureter, the combination with an outer shell, an inner tubular member supported thereon forming a gasolene chamber, a Venturi tube mounted in said inner tubular member and forming a primary air inlet, and a supplementary air valve, of a needle-valve and a nozzle coöperating therewith and arranged obliquely in the upper portion of said Venturi tube, a sleeve inclosing said needle-valve and having a helical groove therein, a stud projecting from said needle-valve through the slot in said sleeve, and an arm extending from said supplementary air valve and adapted to engage said stud when said air valve opens, whereby the position of the needle-valve relative to the nozzle is varied according to the extent of opening of the air valve, substantially as specified.

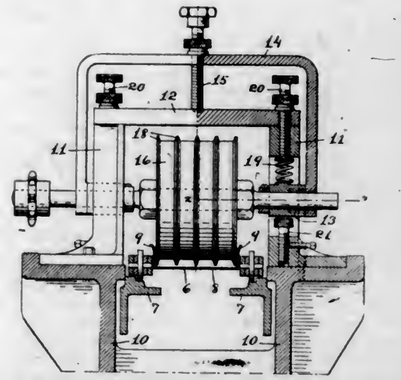
3. In a carbureter, the combination with an outer shell, and an inner tubular member supported therein, of a Venturi tube forming a primary air inlet, an inlet tube supported in said inner tubular member and extending obliquely into said Venturi tube, a needle-valve and a nozzle coöperating therewith and extending obliquely into said Venturi tube and coöperating with said inlet-tube in admitting gasolene, a sleeve inclosing said needle-valve having a helical groove, a stud secured to said needle-valve and projecting through said helical groove, a supplementary air valve on the lower portion of said Venturi tube, means for adjusting said sleeve to vary the relative positions of said stud and slot, and a member extending from said air valve in a position to engage said stud whereby the needle valve is moved to a position to choke the feed of gasolene by the admission of the increased quantity of air at such time, substantially as specified.

4. In a carbureter, the combination with an outer shell, and an inner tubular member mounted therein and forming a gasolene chamber, of a Venturi tube mounted in said inner tubular member and forming an air inlet, an inlet tube supported in said inner tube and forming an inlet from the gasolene chamber to the Venturi tube, a needle-valve and a nozzle coöperating therewith and mounted in said Venturi tube and coöperating with said inlet tube, a sleeve inclosing said needle-valve having a helical slot therein, a stud secured to said needle-valve and projecting through said helical slot, means for adjusting the relative positions of said stud and helical slot, a supplemental air valve, an arm thereon adapted to engage said stud when the air valve rises from its seat, and means for adjusting said sleeve whereby the amount of movement given the needle-valve through the engagement of the stud thereof may be varied, substantially as specified.

5. In a carbureter, the combination with an outer shell, and an inner tubular member forming a gasolene chamber, of a Venturi tube, an inlet tube mounted obliquely in said Venturi tube and communicating with said gasolene chamber, an oblique needle-valve and a nozzle coöperating therewith and mounted in said Venturi tube and coöperating with said inlet tube in admitting gasolene, a sleeve inclosing said needle-valve having a helical groove, a stud secured to said needle-valve and penetrating said helical slot, a screw for setting the initial position of said stud in said slot, an air valve, means thereon engaging said stud and moving said needle-valve relative to the nozzle whereby said needle-valve is opened in proportion to the air admitted through said valve, and an adjusting gear engaging said sleeve whereby said sleeve is adjustable to vary the relative position of said helical slot, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,195,114. MEANS FOR MANUFACTURING FILAMENTOUS BISCUIT. CHARLES E. SMITH, Niagara Falls, N. Y., assignor to The Shredded Wheat Company, Niagara Falls, N. Y. Filed Jan. 23, 1912. Serial No. 672,893. (Cl. 107—2.)



1. In a machine of the class described, a support, a yieldable frame having an adjustable device bearing upon said support and capable of being lifted and separated therefrom under strain, and a creasing roller having bearings in said frame and yieldable therewith.

2. In a machine of the class described, a support, a yieldable frame having an adjustable device bearing upon said support and capable of being lifted and separated therefrom under strain, a creasing roller having bearings in said frame and yieldable therewith, and adjustable means underlying said bearings for limiting the downward movement of said frame and of said roller.

3. In a machine of the class described, a support, a yieldable frame having an adjustable device bearing upon said support, a creasing roller having bearings in said frame and yieldable therewith, springs interposed between said bearings and said support, and means for adjusting the tension of said springs.

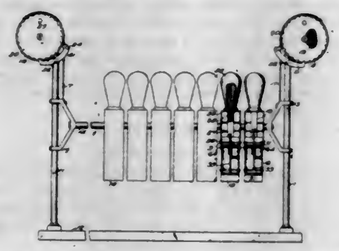
4. In a machine of the class described, a support, a yieldable frame, an adjustable screw threaded in the central portion of said frame and having a bearing upon said support capable of being lifted and separated therefrom under strain, a creasing roller having bearings in said frame and yieldable therewith, springs interposed between said bearings and said support, and means for adjusting the tension of said springs.

5. In a machine of the class described, a support, a yieldable frame, an adjustable screw threaded in the central portion of said frame, having a bearing upon said

support capable of being lifted and separated therefrom under strain, a creasing roller having bearings in said frame, springs interposed between said bearings and said support, screws upon said support for adjusting the tension of said springs, and screws underlying said bearings for limiting the downward movement of said frame and of said roller.

[Claim 6 not printed in the Gazette.]

1,195,115. MACHINE FOR AFFIXING AND CANCELING STAMPS. FLOYD SMITH, Douglas, Ariz. Filed July 28, 1915. Serial No. 42,297. (Cl. 216—22.)



1. A machine of the character described, including postage stamp supply means, a canceling stamp mounted to vertically reciprocate to and from the path of travel of the postage stamp from the supply means, an inking pad above the canceling stamp, a carrier movable transversely of the movement of the canceling stamp to and from a position to receive a postage stamp from the supply means, and a depressible operating device arranged to actuate the canceling stamp between the ink pad and the path of travel of the postage stamp, the said operating device being connected with the said carrier to actuate the same intermittently with the canceling stamp.

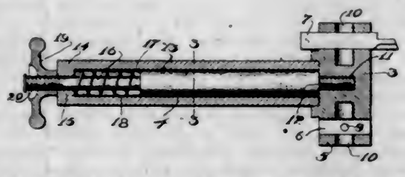
2. In a machine of the character described, a stamp supply means, a vertically reciprocating stamp affixing device, a stamp carrier reciprocating transversely of the movement of the affixing device to and from a position to receive a stamp from the supply means, a depressible operating device carrying the said affixing device, and a lever connected at the lower end with the carrier, fulcrumed at the upper end to rock in a vertical plane toward and from the stamp affixing device, said lever having a slot ranging lengthwise thereof, the slot presenting a portion oblique to the general direction of the lever and a lower portion parallel to the general direction of the lever, there being a member on the operating device moving in said slot to actuate the lever by engagement therewith at the oblique portion of the slot, said member moving freely along the lever at the parallel portion of the slot without affecting the lever.

3. A stamp applying machine including a stamp supply means, a stamp affixing device mounted to vertically reciprocate to and from the path of movement of a stamp from the supply means, a carrier mounted to reciprocate transversely to and from a position beneath the affixing device to receive a stamp from the supply means and position it beneath the said affixing device, a depressible operating device carrying said affixing device, a lever connected with the carrier and fulcrumed on a relatively fixed support to rock in a vertical plane, a member movable with the operating device and so engaging said lever as to rock the same to and fro while the affixing device is nearing and leaving its raised position, a vertically reciprocating moistener, means controlled by the operating device to raise the moistener to the path of movement of a stamp by the carrier and release the moistener to permit it to move downwardly, a vertically reciprocating knife, spring means to depress the knife and means controlled by the operating device to raise the knife and then release it for the spring means to act.

4. In a machine of the character described, a stamp supply means, a vertically reciprocating stamp affixing device, a stamp carrier reciprocating transversely of the movement of the affixing device to and from a position to receive a stamp from the supply means, a depressible operating device carrying the said affixing device, a lever connected at the lower end with the carrier, fulcrumed at the upper end to rock in a vertical plane toward and from the stamp affixing device, said lever having a slot ranging lengthwise thereof, the slot presenting a portion oblique to the general direction of the lever and a lower portion parallel to the general direction of the lever, there being a member on the operating device moving in said slot to actuate the lever by engagement therewith at the oblique portion of the slot, said member moving freely along the lever at the parallel portion of the slot without affecting the lever, a vertically reciprocating moistener, a bell crank lever one arm of which carries said moistener, a lever controlled by the operating device and engageable with the other arm of the bell crank lever to raise the moistener and to release the moistener and permit it to move downward, a vertically reciprocating knife, spring means to depress said knife, a second bell crank lever on one arm of which said knife is suspended, a knife-controlling lever actuated by the operating device and engageable with the other arm of the second bell crank lever, a spring catch to engage the said other arm of the second bell crank lever, and means on the knife-controlling lever to release the said spring catch and permit the said spring means to depress the knife.

5. A stamp applying machine including a stamp supply means, a vertically reciprocating stamp affixing device movable to and from the path of travel of a stamp from the supply means, a carrier movable to and from a position to receive a stamp from the supply means and adapted to locate a stamp beneath the affixing device, a depressible operating device carrying the said stamp affixing device, means to actuate said carrier by the said operating device, a resilient jaw on the carrier to grip a stamp to cause it to move with the carrier, a jaw lifting device including a lever, and a pivoted trip engageable by the said lever in a forward movement thereof to rock the trip into a position to be engaged by the operative device, said operating device serving to give a reverse movement to the trip for rocking said lever and opening the jaw, there being means to engage said lever and to permit the jaw to close after a stamp has entered beneath the jaw.

1,195,116. MULTIPLE-TOOL HOLDER. HENRY SMITH, Bridgeport, Conn. Filed June 26, 1915. Serial No. 36,461. (Cl. 29—49.)



1. A multiple tool holder of the class described including an adjustable tool head provided with means for holding a plurality of tools and having a polygonal socket in its rear face, said tool head being also provided with a threaded opening extending inwardly from the said socket and terminating short of the front face of the tool head, a rod having front and rear reduced ends provided with screw threads, the front threaded portion of the rod engaging the threaded opening of the tool head and the shoulder formed by reducing the front end of the rod abutting against the said tool head, a hollow polygonal shank arranged on the rod and having its front end engaged with the polygonal socket and a screw mounted on the rear threaded end of the rod and engaging the rear end of the said shank.

2. A multiple tool holder of the class described including a tool head provided with means for holding a plurality of tools and having a polygonal socket in its rear face, said tool head being also provided with a threaded opening extending from the said socket, a rod having reduced front and rear portions forming shoulders and provided with screw threads, the front threaded portion of the rod engaging the said threaded opening of the tool head and the front shoulder fitting against the tool head at the said recess, a hollow polygonal shank arranged on the rod and having its front end detachably engaged with the polygonal socket, a nut mounted on the threaded rear portion of the rod and engaging the rear end of the shank and a coiled spring located within the hollow shank and interposed between the rear end of the same and the shoulder formed by the reduced rear portion of the rod.

1,195,117. DEVICE FOR REMOVING WRINKLES FROM THE FACE. MARGARETE SPELLERBERG, Berlin-Friedenau, Germany. Filed Mar. 14, 1913, Serial No. 754,267. Renewed Mar. 15, 1916. Serial No. 84,451. (Cl. 128—3.)



1. In a wrinkle removing device, a plaster, a band connected with said plaster and a comb connected with the band so as to hold the band in place when inserted in the coiffure.

2. In a wrinkle removing device, a plaster comprising an elastic tissue with elastic threads in the direction of the tension and wire threads in a direction at right angles thereto, and a band connected with said plaster.

3. In a wrinkle removing device, a plaster comprising a velvet tissue having elastic threads in the direction of the tension and wire threads in a direction at right angles thereto, the pile of the velvet tissue being made from hair, and a band connected with said plaster.

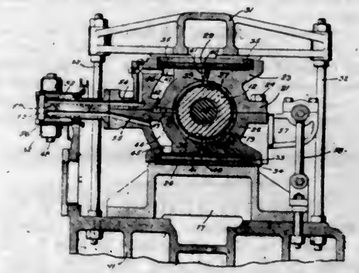
1,195,118. PROCESS OF MAKING HARD-RUBBER ARTICLES. HARRY WEIDA, Highland Park, N. J., assignor to The India Rubber Company, a Corporation of New Jersey. Filed Aug. 10, 1915. Serial No. 44,681. (Cl. 18—55.)

1. The process of making rubber articles consisting of shaping the material upon a core within a metallic foil envelop having the configuration of the article to be formed, and subsequently vulcanizing the article supported upon the interior by said core and upon the exterior by said envelop.

2. The process of making rubber articles consisting of forcing the material into the space between a plunger-like core and a metallic foil casing rigidly confined from the outside, and subsequently vulcanizing the material while supported upon said core, and confined upon the outside by said casing.

1,195,119. REDUCTION-GEARING. GEORGE WESTINGHOUSE, Pittsburgh, Pa., assignor to The Westinghouse Gear and Dynamometer Company, a Corporation of Pennsylvania. Filed June 16, 1911. Serial No. 633,458. (Cl. 74—7.)

1. The combination with a pair of coöperating gears, one of which is fluid supported, of a bearing for one of said gears, and means for utilizing said bearing as a pump for supplying said fluid.



2. The combination with a pair of coöperating gears, of fluid supporting means for one of said gears, a bearing for one of said gears, and connections whereby said bearing is utilized for pumping the fluid for said supporting means.

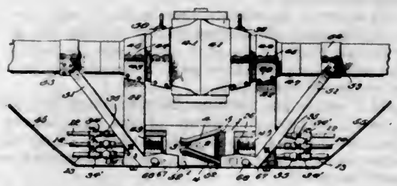
3. The combination with a pair of coöperating gears, of a mounting frame for one of said gears, a fluid support for said frame, a bearing in said frame for said gear, and connections whereby said bearing is utilized as a pump for supplying fluid for said support.

4. The combination with a pair of coöperating gears, of a mounting frame for one of said gears, supporting devices for said mounting frame each of which comprises a cylinder and a piston, a bearing in said frame for said gear and connections from said bearing to at least one of said cylinders arranged so that said bearing is caused to supply said cylinder with oil under pressure.

5. The combination with a pair of coöperating gears, of a mounting frame for one of said gears, bearings in said frame for said gear, supporting devices for said frame each of which comprises a cylinder and a piston therein; means for supplying said bearings with oil and connections between said cylinders so arranged that said bearings are caused to force oil under pressure into said cylinders.

[Claims 6 to 43 not printed in the Gazette.]

1,195,120. AUTOMATIC TRAIN-PIPE COUPLING. WALTER C. WHITE, Los Angeles, Cal., assignor to International Couplers Company, Los Angeles, Cal., a Corporation of California. Filed June 25, 1912, Serial No. 705,818. Renewed Oct. 28, 1915. Serial No. 58,511. (Cl. 188—13.)



1. In a train-pipe coupling, the combination of a hanger, a pipe carrier slidably mounted in the said hanger, and a coupler head supported by the hanger and connected with the said pipe carrier.

2. In a train-pipe coupling, the combination of a hanger, a vertically movable carrier mounted therein, train-pipes loosely fitted in the said carrier, and a coupler head connected with said pipes and supported by the hanger and loosely connected with the carrier.

3. In a train-pipe coupling, the combination with a hanger, of a pipe carrier vertically movable therein, and a coupler head supported by the hanger and having a pin and slot connection with the carrier.

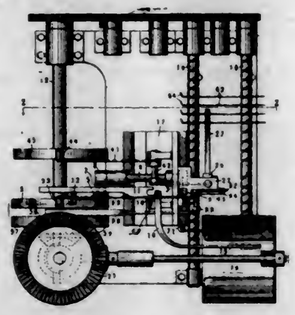
4. In a train-pipe coupler, the combination with a hanger, of a carrier vertically movable therein, a coupler

head supported by the hanger and having rearwardly extending arms provided near their ends with longitudinal slots, and securing devices inserted through said slots into the carrier.

5. In a train-pipe coupling, the combination of a hanger comprising side bars having grooves in their inner faces, a carrier mounted between said side bars and provided with grooves co-acting with the grooves in the side bars, anti-friction devices fitted in said grooves, and a train-pipe coupler head supported by the hanger and loosely connected to the said carrier.

[Claims 6 to 20 not printed in the Gazette.]

1,195,121. SAFETY-PIN MACHINE. PETER E. WIBERG, Glen Ridge, N. J., assignor of one-half to Ludwig Littauer, Yonkers, N. Y., and one-half to Axel V. Beeken, Bloomfield, N. J. Filed June 25, 1909, Serial No. 504,215. Renewed Nov. 5, 1915. Serial No. 59,890. (Cl. 163—7.)



1. In a safety pin machine, the combination with die mechanism for assembling the points, centers, and heads of the pins, of means for feeding the points, centers, and heads in proper relation to be acted upon by the die mechanism.

2. In a safety pin machine, the combination with die mechanism for assembling the centers, points, and heads of the pins, of means for simultaneously feeding the points, centers, and heads to the die mechanism.

3. In a safety pin machine, the combination with die mechanism for assembling the points, centers, and heads of the pins, of means for simultaneously feeding the points, centers, and heads to the die mechanism adapted to arrange such parts in proper relation to be acted upon by the die mechanism.

4. In a safety pin machine, means for forming the centers of the pins, die mechanism for uniting the points, centers, and heads of the pins, and means for feeding the points, centers, and heads so as to be simultaneously acted upon by the die mechanism.

5. In a safety pin machine, die mechanism for uniting the heads, centers, and points of the pins, means for feeding the points to the die mechanism, and means for feeding the heads and centers to the die mechanism so as to meet the points.

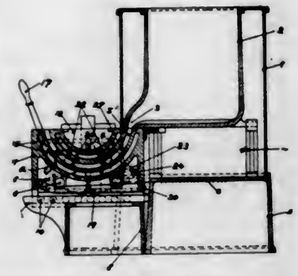
[Claims 6 to 21 not printed in the Gazette.]

1,195,122. STEERING REACH-ROD. ABRAM D. WILT, Jr., Detroit, Mich. Filed Apr. 27, 1910. Serial No. 557,969. (Cl. 74—48.)



A connection comprising a ball arm, a tubular rod formed with an enlarged aperture therein to permit socketing of the ball and with an extended slot for the laterally shifting ball arm; a retaining block located within the tube and bearing against the ball; a spring adjacent said block for yieldingly holding the ball arm in place; an adjustable plug threaded in the tube at its outer end but separated from the adjacent retaining block by the spring and by intervening free space, and a projection on said plug extending toward said block, said block having a projection extending toward the projection on the aforesaid plug to an extent to abut against said projection on said plug upon breakage of the intervening spring sufficiently to cause the block to overlap said enlarged aperture, thereby preventing the ball from retraction therethrough.

1,195,123. MACHINE FOR CASTING STEREOTYPE-PLATES. CARL WINKLER, Berne, Switzerland. Filed Apr. 5, 1915. Serial No. 19,405. (Cl. 22—2.)



1. A machine for casting stereotype plates, comprising in combination, a fixed crucible having a slot shaped outlet, a mold comprising a shell and a core movable into and out of the shell, the mold having an inlet opening, a horizontal support on which the mold is mounted to slide, means for moving the mold to and from the crucible, the said outlet and inlet being caused to coincide, when the mold is moved toward the crucible, means for controlling the outlet of the crucible, and means for retaining and releasing the core and controlled by the movement of the mold.

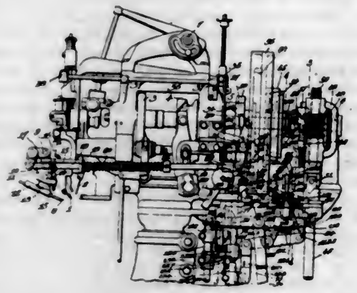
2. A machine for casting stereotype plates comprising in combination a crucible having a slot shaped outlet, a mold having an inlet opening, means for moving the mold to and from the crucible, the said outlet and inlet being caused to coincide when the mold is moved toward the crucible, and a horizontal plate projecting from one side of the mold and below the outlet of the crucible, said plate adapted to close the outlet upon movement of the mold away from the crucible, as and for the purpose specified.

3. A machine for casting stereotype plates, comprising in combination a fixed crucible having a slot-shaped outlet, a mold including a shell and a core movable into and out of the shell, the said mold having an inlet opening adapted to coincide with said outlet, a support provided with rollers on which the mold is mounted to slide, means for moving the mold toward or from the crucible, the said outlet and inlet being caused to coincide with each other when the mold is moved toward the crucible, and means for retaining and releasing the core controlled by the movement of the mold toward and from the crucible.

4. In a machine for casting stereotype plates, a crucible having a slot-shaped outlet, a mold including a shell and a core movable into and out of the shell, the mold having an inlet opening, rollers on which the mold is supported, a lever mechanism for moving the mold on said rollers toward and from the crucible, the said outlet and inlet being caused to coincide when the mold is moved toward the crucible, means for closing the said outlet when the mold is moved away from the crucible, and means controlled by the movement of the mold toward and from the crucible for retaining and releasing the core.

5. In a machine for casting stereotype plates, a shell, a crucible disposed therein and having an elongated outlet for the molten metal, a base carrying said shell and supporting said crucible, a mold incinding a shell and a core movable into and out of the shell, the mold having an inlet opening, a base fixed to the first mentioned base and on which the said mold rests, means for moving the mold on said base toward and from the crucible, the said outlet and inlet being caused to coincide when the mold is moved toward the crucible, means for engaging the core when the mold is moved toward the crucible to keep the same in the shell, the said means being controlled by the movement of the mold, and means for controlling the communication between the crucible and the mold.

1,195,124. LASTING-MACHINE. ERASTUS E. WINKLEY, Lynn, Mass. Filed Mar. 26, 1914. Serial No. 827,317. (Cl. 12—2.)



1. A lasting machine, having, in combination, pincers, operating mechanism therefor, a hold down below the pincers to position the shoe for the operation of the pincers and prevent its being raised when operated on by the pincers, means for actuating the pincer operating mechanism, and mechanism independent of said means for raising the hold down, whereby the operative position of the hold down may be altered prior to the actuation of the pincers.

2. A lasting machine, having, in combination, pincers, operating mechanism therefor, a hold down below the pincers to position the shoe for the operation of the pincers, means for actuating the pincer operating mechanism, and mechanism independent of said means for imparting a combined upward and outward movement to the hold down relatively to the pincers, whereby the operative position of the hold down may be altered prior to the actuation of the pincers.

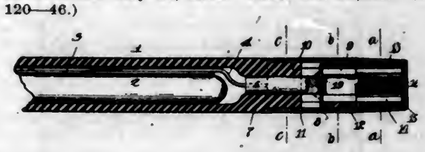
3. A lasting machine, having, in combination, pincers, operating mechanism therefor, a hold down below the pincers to position the shoe for the operation of the pincers, means for actuating the pincer operating mechanism, a train of mechanism constructed and arranged to raise the hold down prior to the operation of said means for actuating the pincers, and means to lower said hold down from its raised position during the operation of the pincers.

4. A lasting machine, having, in combination, pincers, operating mechanism therefor, a hold down below the pincers to position the shoe for the operation of the pincers, means for actuating the pincer operating mechanism, independent mechanism constructed and arranged to raise the hold down and change its operative position prior to the operation of the pincers, and a cam for engaging said independent mechanism and reversing its operation to lower said hold down from its raised position during the operation of the pincers.

5. A lasting machine, having, in combination, pincers, a hold down to prevent the shoe being raised when operated on by the pincers, a spring for raising the hold down to place it in a different operative position relatively to pincers, and a cam for thereafter lowering the hold down from its raised position.

[Claims 6 to 26 not printed in the Gazette.]

1,195,125. FOUNTAIN-PEN. ERNEST WINNE, New York, N. Y. Filed May 29, 1915. Serial No. 31,146. (Cl. 120—46.)



1. In an automatic filling fountain pen, the combination with a barrel and a compressible reservoir in the same, of means for compressing said reservoir, comprising a plunger, guided to move lengthwise, means for holding the plunger against rotary movement, a rotary sleeve provided with internal cams to act on said plunger and means secured on the barrel adjacent to the cam sleeve, to prevent longitudinal movement of the latter, substantially as set forth.

2. In an automatically filling fountain pen, the combination with a barrel and compressible reservoir in the same, of means for compressing the reservoir comprising a plunger guided to move lengthwise, a sleeve provided with internal cams to act on the plunger, a sleeve abutting the cam sleeve to prevent longitudinal movement of the latter and means for preventing said last mentioned sleeve from turning and means for preventing said sleeve from moving longitudinally, substantially as set forth.

3. In an automatically filling fountain pen, the combination with a barrel and compressible reservoir in the same, of means for compressing the reservoir comprising a plunger guided to move lengthwise, a sleeve provided with internal cams to act on the plunger, a sleeve resting against the outer end of the cam sleeve to prevent the latter from moving longitudinally, means for preventing said sleeve from turning and an end piece to prevent said sleeve from moving longitudinally, which end piece has a screw stem, screwed into the outer end of the barrel, substantially as set forth.

4. In an automatically filling fountain pen, the combination with a barrel and a compressible ink reservoir in the same, of means for compressing the reservoir comprising a plunger guided to move longitudinally, two opposite projections laterally extending from said plunger, the barrel having longitudinal grooves in which said projections can slide, a cam sleeve provided with internal cams to bear against said projections, and means for preventing the cam sleeve from moving lengthwise, substantially as set forth.

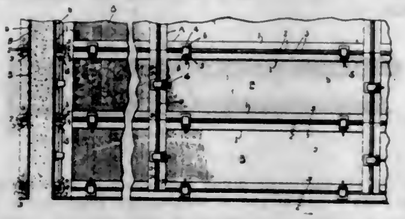
5. In an automatically filling fountain pen, the combination with a barrel and a compressible ink reservoir in the same, of means for compressing the reservoir comprising a plunger guided to move longitudinally, two opposite lateral projections on said plunger, the barrel having longitudinal grooves in which said projections can slide, a sleeve mounted on the barrel at the location of said lateral projections, a metal cam sleeve inserted into said sleeve and secured therein against longitudinal movement, the cam edges of the cam sleeve bearing against the said projections, and means for preventing the sleeve in which the cam is provided from moving lengthwise, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,195,126. MOLD FOR CONCRETE STRUCTURES. CHARLES H. WITTHOEFFT, St. Louis, Mo. Filed Apr. 26, 1912. Serial No. 693,408. (Cl. 25—131.)

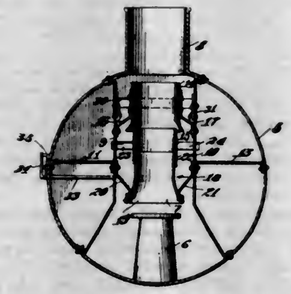
In a mold of the character described mold plates provided with right-angle bars at their margins, the inner faces of said mold plates being flush with each other and

the angle-bars being provided with flanges which extend outwardly from the edges of the mold plates, each outturned flange having a central longitudinal aligning rib on its exposed face at a point between the inner and outer margins of said face, each outturned flange also having parallel clamp-receiving seats at opposite sides of said central longitudinal aligning rib, and clamps fitted to said



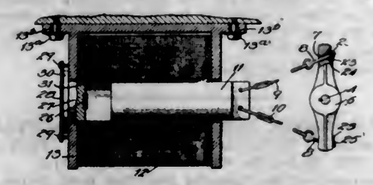
parallel seats, each of said clamps comprising a pair of clamp members movable away from each other so as to pass over said aligning ribs and movable toward each other to engage said aligning ribs and the parallel seats on opposite sides thereof, and each of said clamp members having a groove for the reception of one of said aligning ribs.

1,195,127. DRAFT-PRODUCING APPARATUS. FRANK A. ALLINGER, Los Angeles, Cal., assignor of one-third to Christ Volz and one-third to W. A. Keith, Los Angeles, Cal. Filed May 10, 1915. Serial No. 26,938. (Cl. 110—152.)



The combination of a smoke-stack, a petticoat pipe fixedly disposed below and spaced from said smoke-stack to provide an opening therebetween, a second petticoat pipe disposed below and spaced from said first mentioned petticoat pipe, a third pipe slidably disposed on the second mentioned petticoat pipe to provide an adjustable opening between it and the first mentioned petticoat pipe, linkage to adjust the position of a slidable pipe, and an exhaust nozzle disposed below said second petticoat pipe.

1,195,128. SAFETY CONTROL SYSTEM FOR ELEVATORS. JOHN C. A. ANDERSON, Chicago, Ill. Filed July 11, 1914. Serial No. 850,428. (Cl. 187—48.)



1. A system of the character described comprising an elevator car, a control lever, a door for permitting access to said car, an electromagnetic device having a core and tension members controlled by said door when in an open position to restore or hold said lever in its neutral position, a stop to limit the movement of said core, and means to adjust said tension members to change the neutral position of the lever to thereby prevent creeping of the car whereby said lever is permitted a lost motion movement due to the adjustment of said tension members and the stop for said core.

2. A system of the character described comprising an elevator car, a control lever, a door for permitting access to said car, an electromagnetic device having a core and pivoted tension members controlled by said door when in an open position to restore or hold said lever in its neutral position, a stop to limit the movement of said core, and means to adjust said tension member to change the neutral position of the lever to thereby prevent creeping of the car, whereby said lever is permitted a lost motion movement due to the adjustment of said tension members and the stop for said core.

3. A system of the character described comprising an elevator car, a control lever, a door for permitting access to said car, an electromagnetic device having a core and flexible tension members controlled by said door when in an open position to restore or hold said lever in its neutral position, a stop to limit the movement of said core, and means to adjust said tension members to change the neutral position of the lever to thereby prevent creeping of the car, whereby said lever is permitted a lost motion movement due to the adjustment of said tension members and the stop for said core.

4. A system of the character described comprising an elevator car, a control lever, a door for permitting access to said car, an electromagnetic device having flexible tension members controlled by said door when in an open position to restrore or hold said lever in its neutral position, and means to adjust said tension members to change the neutral position of the lever to thereby prevent creeping of the car, said means including a tension member support, a socket therefor, and means to adjust the relation of said tension members with their coöperating support.

5. A system of the character described comprising an elevator car, a control lever, a door for permitting access to said car, an electromagnetic device having flexible tension members controlled by said door when in an open position to restore or hold said lever in its neutral position, and means to adjust said tension members to change the neutral position of the lever to thereby prevent creeping of the car, said means including a tension member support, a socket therefor, and means to adjust the relation of said tension members with their coöperating support, said device including a solenoid, a plunger, a fixed core for said solenoid, and an insulating stop for said plunger mounted on said fixed core.

[Claim 6 not printed in the Gazette.]

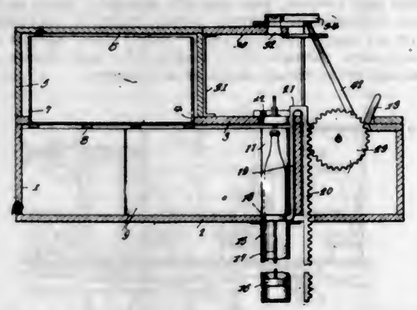
1,195,129. DELIVERY-CABINET. JAMES ALFRED BAIN, Altoona, Ala. Filed Dec. 23, 1914. Serial No. 878,796. (Cl. 211—8.)

1. The combination, of a delivery cabinet for bottled goods, and a mechanism to remove the bottle-tops during delivery.

2. In a delivery cabinet for bottles, a means to horizontally feed the bottled goods, a means to deliver the bottled goods into a position for individual extraction, a means to engage with and elevate the bottled goods to a position without the cabinet, and a means disposed in the path of the thus elevated bottles to remove the bottle caps therefrom.

3. In a delivery cabinet for bottles, guide ways within which the bottles are arranged, a single extracting mechanism, means to advance the bottles within each guide way, means to move the bottles subsequent to advancement into engaging proximity with the extracting mechanism, means to vertically move the extracting mechanism with a single bottle thereon, and means to cushion the

extracting mechanism in returning to its normal position subsequent to an extracting operation.

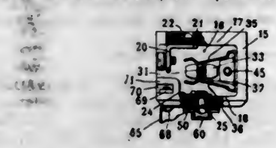


4. In a delivery cabinet for bottled goods, partitions dividing the cabinet into a plurality of parallel horizontally feeding guide ways, an individual means operating in each guide way to advance the bottled goods contained therein, a means mounted to operate transversely of the several guide ways to deliver the advanced bottles into a position for subsequent extraction, and a means operable to engage with and elevate the thus delivered goods to a position without the cabinet.

5. In a delivery cabinet for bottled goods, a means operable to deliver the goods individually into a position permitting subsequent extraction, a platform movable to elevate the goods from a position within to a position without the cabinet, operating mechanism including a gear and ratchet to move said platform, and a means to cushion the return movement thereof.

[Claims 6 to 14 not printed in the Gazette.]

1,195,130. ELECTRIC SWITCH. FREDERIC BARR, New York, N. Y.; The Equitable Trust Company of New York, New York, N. Y., a Corporation of New York, executor of said Frederic Barr, deceased. Filed June 3, 1914. Serial No. 842,570. (Cl. 173—351.)



1. In an electric switch, an insulating base having a recess in one side thereof forming an open-sided switch chamber and flanges at the top and bottom of said recess, a circuit terminal having an angularly projecting foot portion secured to the top flange and extending within the switch chamber, a contact secured to the bottom flange and disposed within the switch chamber substantially opposite the foot of the circuit terminal, a key spindle journaled in the base and extending through the intermediate portion of the switch chamber, a conducting cam on the spindle and spring pressed contact arms disposed above and below the spindle respectively and arranged to be forced by the cam upwardly into engagement with the foot of the circuit terminal and downwardly into engagement with the lower contact, said spring pressed arms being adapted to break the circuit at two points with the cam in parallel across the break.

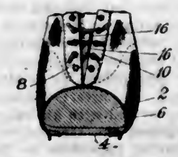
2. In an electric switch, an insulating base having a recess in one side thereof forming an open-sided switch chamber and flanges at the top and bottom of said recess, a circuit terminal having a foot portion secured to the top flange and disposed within the switch chamber, a contact secured to the bottom flange and disposed within the switch chamber substantially opposite the foot of the circuit terminal, a key spindle journaled in the base and extending through the intermediate portion of the switch chamber, a cam on the spindle, and a yoke-shaped member located in the switch chamber at one side of the spindle having a base portion secured to the insulating base and spring contact arms disposed respectively above and below the cam in position to be forced by said cam upwardly into engagement with the foot of the circuit terminal and downwardly into engagement with the lower contact.

3. In an electric switch, an insulating base provided with a switch chamber, a circuit terminal having a contact part extending into the upper portion of said chamber, a contact disposed in the lower portion of the chamber, a key spindle passing through the intermediate portion of the switch chamber, a conductive cam on the spindle within the chamber, a spring arm extending above the cam into position to be forced thereby up into engagement with the contact part of the circuit terminal, a spring contact having a base portion disposed beneath the lower contact and an introverted spring arm disposed above said contact in position to be forced by the cam down into engagement with the contact, insulation between the lower contact and the base portion of the spring contact, and a securing screw passed up through the bottom of the insulating base and through the insulation into engagement with the lower contact.

4. In an electric switch, an insulating base having spaced apart top and bottom parts, a circuit terminal having an angularly projecting foot portion secured to the underside of the top part, a lower contact secured to the bottom part and disposed substantially opposite the foot of the circuit terminal, a center lamp contact connected to said lower contact, a key spindle journaled in the base between the angular foot of the circuit terminal and the lower contact, a cam on the spindle, spring-pressed contact arms disposed above and below the spindle respectively and arranged to be forced by the cam upwardly into engagement with the foot of the circuit terminal and downwardly into engagement with the lower contact, said spring pressed arms being adapted to break the circuit at two points with the cam in parallel across the break, a screw shell lamp contact on the base, and a circuit terminal on the base connected to said screw shell contact.

5. In an electric switch, the combination of an insulating base, an upper circuit terminal mounted on the base having a laterally extending contact portion, a lower relatively stationary contact secured on the base opposite the contact portion of the upper circuit terminal, a key spindle journaled in the insulating base intermediate the lower stationary contact and the upper contact portion of the terminal, a cam on the spindle, a yoke-shaped member at one side of the spindle having a base portion and spring contact arms disposed respectively above and below the cam in position to be forced by the cam upwardly into engagement with the contact portion of the terminal and downwardly into engagement with the lower contact, a bracket engaging said base portion and provided with a screw seat, and a securing screw passed through the back of the insulating base into engagement with said screw seat to thereby secure the yoke-shaped member on the base at the side of the spindle.

1,195,131. LACER. MICHAEL F. BROGAN, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 11, 1915. Serial No. 44,946. (Cl. 12—113.)



1. A detachable fastener for shoe uppers comprising a bar constructed and arranged to extend transversely of a shoe upper between its lacing edges, said bar, when applied from one face of the upper, having spaced abut-

ments arranged to engage opposite sides of the upper to provide one limit of separation for the lacing edges and having spaced abutments arranged, when the bar is applied from the opposite face of the upper, to engage opposite sides of the upper to provide a different limit of separation for the lacing edges.

2. A detachable fastener for shoe uppers comprising a bar constructed and arranged to extend transversely of a shoe upper between its lacing edges with its opposite ends extending through opposite lacing apertures to engage the upper, said bar when both of its ends are inserted through lacing apertures from the inside face of the upper, having spaced abutments arranged to engage the opposite sides of the upper to provide a maximum limit of separation between the lacing edges, and having spaced abutments arranged, when one of the ends of the bar is inserted from the outside face of the upper, to engage the opposite sides of the upper to provide less separation between the lacing edges.

3. A detachable fastener for shoe uppers comprising a bar constructed and arranged to extend transversely of a shoe upper between its lacing edges and to extend through lacing apertures at opposite sides, said bar adjacent to its opposite ends having abutments arranged, when said ends are inserted through their eyelets from the same face of the upper, to engage the upper and provide one limit of spacing between the lacing edges, said bar having also a third abutment positioned adjacent to one of the end abutments and arranged, in coöperation with the other end abutment when said end of the bar is inserted through the opposite face of the upper, to engage the upper to provide a different limit of spacing between the eyeleted edges.

4. A detachable fastener for shoe uppers, comprising a bar constructed and arranged to extend transversely of a shoe upper between its lacing edges with its ends both inserted through opposite lacing apertures from the same face of the upper, said bar having abutments adjacent to its ends adapted to extend through the lacing apertures to engage the upper and provide one limit of spacing between its lacing edges, said bar also having an additional abutment to engage the upper when said bar is inserted from the opposite face of the upper to provide a different limit of spacing between the lacing edges.

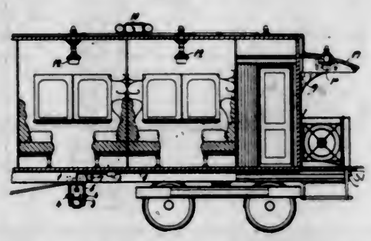
5. A detachable fastener for shoe uppers, comprising a bar constructed and arranged to extend transversely of a shoe upper between its lacing edges with its ends both inserted through opposite lacing apertures from the same face of the upper, said bar having shoulder abutments at or adjacent to its ends adapted to extend through the lacing apertures to engage the upper and provide one limit to the spacing between the lacing edges, said bar also having an additional abutment adjacent to and laterally offset from one of said end abutments and arranged, in coöperation with the other end abutment to engage the upper and provide a different limit of spacing between the lacing edges when the bar is inserted through a lacing aperture from the opposite face of the upper.

[Claims 6 to 13 not printed in the Gazette.]

1,195,132. GAS-DISTRIBUTING SYSTEM FOR RAILWAY-CARRIAGES. GUSTAF DALÉN, Stockholm, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Stockholm, Sweden. Filed Feb. 27, 1913. Serial No. 751,062. (Cl. 48—191.)

1. In an incandescent gas lighting system for railway carriages, the combination of a receiver for compressed gas, rich in carbon, carried by the carriage, an apparatus connected with said receiver for automatically mixing gas and air in correct proportions to produce a completely combustible mixture, an invert incandescent lighting burner, which is unprovided with air supply openings and a conduit closed against the atmosphere throughout its length from said mixing apparatus to the burner mouth of said burner.

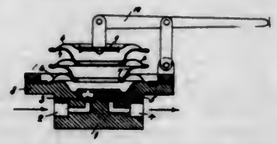
2. In an incandescent gas lighting system for railway carriages, the combination of a receiver for compressed gas, rich in carbon, carried by the carriage, connected with an automatic apparatus to produce a completely combustible mixture of gas and air, supplied with gas from said receiver, and with air through a filter, an invert incandescent lighting burner which is unprovided with air supply openings and a conduit closed against the atmosphere throughout its length from said mixing apparatus to the burner mouth of said burner.



3. In an incandescent gas lighting system for railway carriages the combination of a receiver for compressed gas, rich in carbon, mounted transversely below the carriage in a support, trunnions upon which said support is movable, an apparatus connected with said receiver for automatically mixing gas and air in correct proportions to produce a completely combustible mixture, an invert incandescent light burner which is unprovided with air supply openings, and a conduit closed against the atmosphere throughout its length, connecting said apparatus to the mouth of said burner.

4. In an incandescent gas lighting system for railway carriages the combination of a receiver for compressed gas, rich in carbon, mounted on the carriage, an apparatus placed on the roof of the carriage for automatically mixing gas and air in correct proportions to produce a completely combustible mixture, a conduit, closed against the atmosphere, connecting said receiver with said apparatus, branches on the roof of the carriage, extending from said conduit an invert incandescent burner which is unprovided with air supply openings for each branch, said branches being closed against the atmosphere throughout their lengths to the mouth of the burners of said incandescent lamps, and means for making said branches yielding.

1,195,133. MULTIPLE DIAPHRAGM. GUSTAF DALÉN, Skärsätra, Lidingön, Stockholm, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Stockholm, Sweden. Filed Nov. 11, 1914. Serial No. 871,448. (Cl. 60—2.)



1. A multiple diaphragm, comprising a ring, made of a flexible material, and a ring made of an inflexible material, said rings being connected with one another at one of their edges.

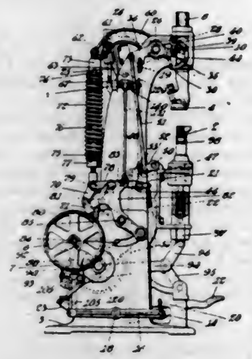
2. A multiple diaphragm, comprising a ring, made of a flexible material, and a ring made of an inflexible material and bent to the form, which the flexible ring occupies when pressure is prevailing in the diaphragm casing.

3. A multiple diaphragm, comprising a ring, made of a flexible material, and a ring, made of an inflexible material and secured to one edge of the flexible ring by bending its edge around the edge of said latter ring.

4. A multiple diaphragm, comprising rings, made of a flexible material, alternating with rings, made of an inflexible material, said rings being connected with one another at their inner and outer edges.

5. A multiple diaphragm, comprising a series of rings, connected with one another at their inner and outer edges, every other ring being made of a flexible material, and every other ring being made of an inflexible material.

1,195,134. MACHINE FOR OPERATING ON HEELS. JOSEPH GOULDBOURN, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 25, 1912. Serial No. 722,270. (Cl. 1—32.)



1. A machine of the class described having, in combination, reciprocatory tools, work pressing members for holding the work while being operated upon by the tools, comprising oppositely disposed presser members, means for moving one of said members into preliminary engagement with the work, power operated means for subsequently moving one of said members in a yielding manner to apply uniform pressure to the work irrespective of its thickness, and means for automatically locking the member last moved in position of pressure.

2. A machine of the class described having, in combination, mannally operated means for measuring the work, mechanically operated means for applying pressure thereto, locking mechanism for maintaining the pressure arranged to be operated by power after pressure has been applied to the work, and a gang of tools arranged to operate upon the work while held under pressure.

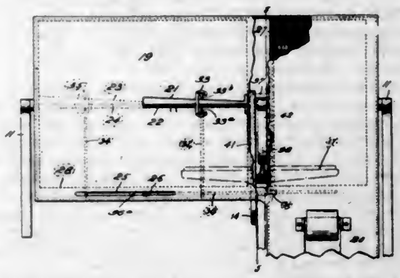
3. A machine in the class described having, in combination, reciprocatory tools for operating on the work, work pressing members, means for measuring the work between the members, mechanically operated means for moving one of the pressing members independently of the tools after the measuring operation to apply pressure to the work, and locking mechanism arranged to be operated by power after the pressure has been applied for maintaining the work under pressure.

4. A machine of the class described having, in combination, a die plate, tools arranged to reciprocate through the die plate, a presser member movable relatively to the die plate, means for measuring the work between the presser member and die plate, power operated means for moving the presser member toward the die plate after the measuring operation, and mechanically actuated locking mechanism arranged to lock the presser member in position of pressure.

5. A machine of the class described, having, in combination, work pressing members, a gang of tools associated therewith, locking mechanism, a power driven actuator, and a single manually operated device for first moving one of the pressing members to measure the work and then for rendering the actuator effective to move said pressing member further to apply pressure to the work and also to operate the locking mechanism to hold the pressure so applied.

[Claims 6 to 36 not printed in the Gazette.]

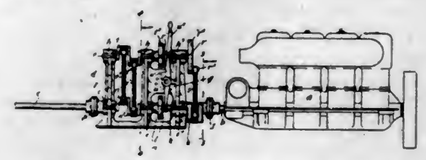
1,195,135. COMBINED COMPUTING AND INDICATING SCALE. FRANCIS M. GREENUP, St. Louis, Mo., assignor, by mesne assignments, of one-half to Harry A. Jackson, St. Louis, Mo. Filed Apr. 21, 1913. Serial No. 762,544. (Cl. 235—87.)



1. In a computing scale, a housing provided in its front and rear walls with horizontally disposed slots which are offset with respect to each other, graduated scales on said housing adjacent to said slots, a cylinder mounted for rotation within the housing, the surface of which cylinder is provided with two similar sets of indicating characters, arms arranged within the housing, the ends of which arms project through the slots, pointers on the ends of said arms adjacent to said slots, and means operable from the exterior of the housing for simultaneously and correspondingly moving said arms and pointers.

2. In a combined computing and indicating scale, the combination with weighing mechanism, of a rotatably mounted cylinder which is adapted to be actuated by said weighing mechanism and provided on its surface with two similar sets of chart indications, a housing inclosing said cylinder and provided in its front and rear walls with horizontally disposed slots which are offset with respect to each other so that the indications on the cylinder are simultaneously readable from both sides of said cylinder, a graduated scale on the exterior of the housing adjacent to each opening, a rod arranged for sliding movement through the lower portion of the housing, arms carried by said rod, which arms project through the slots in the housing, pointers carried by the outer ends of said arms, a handle connected to the rod and extending through a slot formed in the housing, and there being notches formed along the lower edge of the last mentioned slot, which notches are adapted to receive the handle to maintain the same in adjusted positions.

1,195,136. REVERSING-GEAR MECHANISM. RUDOLF E. HENRICI, Ridgefield, Wash. Filed Nov. 12, 1915. Serial No. 61,168. (Cl. 74—59.)



1. In a reversing gear mechanism the combination of a driving shaft and a driven shaft, a divided shaft located between and having its ends connected with the adjacent ends of said driving and driven shafts, an auxiliary divided shaft located in parallelism with the first mentioned divided shaft, clutches adapted to engage the adjacent ends of the divided shaft members, a reversing connection between corresponding sections of the two divided shafts, a direct connection between the other sections of said divided shafts, and means for operating the friction clutches oppositely in synchronism.

2. In a reversing gear mechanism the combination of a driving shaft and a driven shaft, a divided shaft located between and having its ends connected with the adjacent ends of said driving and driven shafts, an auxiliary divided shaft located in parallelism with the first mentioned divided shaft, clutches adapted to engage the adjacent ends of the divided shaft members, a reversing crank connection between corresponding sections of the two divided shafts, a direct connection between the other sections of said divided shafts, and means for operating the friction clutches oppositely in synchronism.

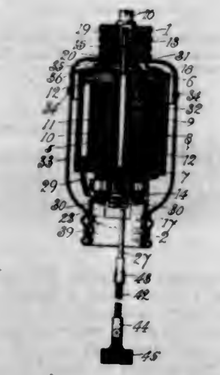
3. In a reversing gear mechanism the combination of a driving shaft and a driven shaft, a divided shaft located between and having its ends connected with the adjacent ends of said driving and driven shafts, an auxiliary divided shaft located in parallelism with the first mentioned divided shaft, clutches adapted to engage the adjacent ends of the divided shaft members, a reversing crank connection between corresponding sections of the two divided shafts, a direct crank connection between the other sections of said divided shafts, and means for operating the friction clutches oppositely in synchronism.

4. In a reversing gear mechanism the combination of a driving shaft and a driven shaft, a divided shaft located between and having its ends connected with the adjacent ends of said driving and driven shafts, an auxiliary divided shaft located in parallelism with the first mentioned divided shaft, clutches adapted to engage the adjacent ends of the divided shaft members, a reversing connection between corresponding sections of the two divided shafts, a direct crank connection between the other sections of said divided shafts, and means for operating the friction clutches oppositely in synchronism.

5. In a reversing gear mechanism the combination of a driving shaft and a driven shaft, a divided crank shaft located between and having its ends connected with the adjacent ends of said driving and driven shafts, an auxiliary divided crank shaft located in parallelism with the first mentioned divided shaft, friction clutches adapted to engage the adjacent ends of the divided shaft members, a reversing crank connection between corresponding sections of the two divided shafts, a direct crank connection between the other sections of said divided shafts, and means for operating the friction clutches oppositely in synchronism.

[Claims 6 and 7 not printed in the Gazette.]

1,195,137. LIGHT-DIMMING MECHANISM. ALFRED HERZ, Chicago, Ill., assignor of one-half to Edmund O. Schweitzer, Chicago, Ill. Filed Mar. 18, 1915. Serial No. 15,278. (Cl. 219—49.)



1. In a device of the class described, an inductance coil comprising a magnetic core, a plug and a socket mounted on said core, a winding inclosing said core, said winding connecting said plug and said socket, and a switch for switching said winding into and out of circuit with said socket.

2. In combination, a magnetic spool, a plug and a socket mounted on the ends of said spool, an inductive winding mounted on said spool, said winding connecting said plug and said socket, a switch for switching said winding into and out of circuit with said socket, and a shell inclosing said spool, said inductance coil and said socket.

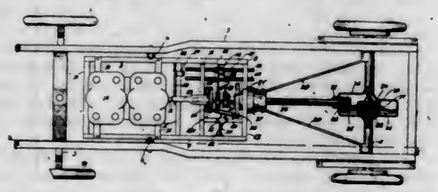
3. In combination, a magnetic spool, a plug and a socket mounted on the ends of said spool, an inductive winding on said spool, said winding connecting said plug and socket, and a switch for short circuiting said inductive winding.

4. In combination a magnetic spool, a plug and a socket mounted on the heads of said spool, said plug and said socket having each a threaded shell, a bolt forming a common contact for said plug and said socket and passing through said spool, a winding mounted on said spool and connecting the threaded shells, and a switch for switching the winding into and out of circuit.

5. In combination a magnetic spool, a plug and a socket mounted on the head of said spool, said plug and socket having threaded shells, a bolt forming a common contact for said plug and for said socket, said bolt passing through said spool, a winding connecting the threaded shells, said winding being disposed on said spool, a switch for switching the winding into and out of circuit, and a casing inclosing said spool and said socket.

[Claims 6 to 17 not printed in the Gazette.]

1,195,138. TRANSMISSION MECHANISM. HULBERT HINKEL, Oakland, Cal. Filed Mar. 20, 1913. Serial No. 755,682. (Cl. 74—59.)

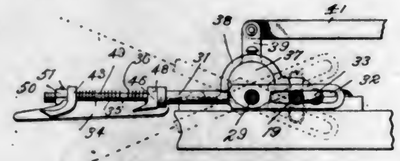


1. A transmission mechanism comprising in combination a driving shaft, a two-speed bevel gear, a hollow driven shaft, a driven shaft therein, bevel gears secured to one end of said driven shafts and adapted to engage said two-speed bevel gear, clutch members secured to the other end of each of said driven shafts, clutch members slidably and non-rotatably mounted on said driving shaft, disks adapted to be locked to said driving shaft by said clutch members one at a time, means co-acting with said disks serving to actuate one of said driven shafts.

2. A transmission mechanism comprising in combination a driving shaft, a pair of driven shafts normally out of engagement with said driving shaft, said driven shafts contained one within the other, bevel gears secured to one end of each of said driven shafts, a disk having two sets of annular bevel teeth formed on the face thereof adapted to operatively engage said driven bevel gears, clutching elements secured to the other end of said driven shafts, a disk and clutching elements slidably and non-rotatably mounted on said driving shaft, a disk formed on said hollow driven shaft adjacent said clutching elements, and means intermediate said disks normally out of engagement adapted to co-act to drive one of said driven shafts.

1,195,139. FLYING-MACHINE. RICHARD R. JAMES, Brooklyn, N. Y. Filed July 27, 1912. Serial No. 711,843. (Cl. 244—17.)

1. In a flying machine, a plurality of fixed sleeves coaxially mounted with respect to a line extending transversely across said machine, eccentrics journaled in said sleeves, a shaft carried by said eccentrics, means for oscillating said eccentrics to adjust the position of said shaft, a wing bar mounted on said shaft, a propelling wing carried by said wing bar, and means for oscillating said wing bar.



2. In a flying machine, the combination with a shaft, of an oscillatable wing-supporting bar carried thereby an air displacing wing carried by said bar and means for shifting the position of said shaft said means comprising an eccentric mounting for said shaft.

3. In a flying machine, the combination with an eccentric, of a shaft projecting from said eccentric, and a wing operating bar mounted on said shaft.

4. In a flying machine, the combination with an eccentric, of a shaft carried by said eccentric, a rock bar mounted intermediately of its ends on said shaft, a propelling wing carried by one end of said rock bar, and driving means operatably connected to the other end of said rock bar, said eccentric being adapted to change the line of action of said propelling wing.

5. In a flying machine, a wing bar, a shaft about which said wing bar is oscillatable, means for moving said shaft into successive parallel positions, wing sections journaled on the outer end of said wing bar, said sections being provided with hub portions with shoulders adapted to be brought into rigid abutment with each other during the movement of said wing bar in one direction, and means yieldably retaining said shoulders in abutment to permit their collapse when the wing bar is moved in the opposite direction.

[Claims 6 to 15 not printed in the Gazette.]

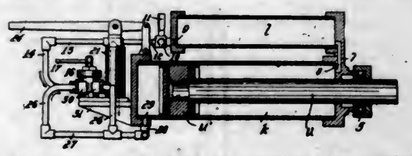
1,195,140. PROCESS OF PRODUCING COLORED LIME. GEORGE S. KECK, Springfield, Ohio. Filed Aug. 28, 1913. Serial No. 787,219. (Cl. 106—24.)

1. The process of producing uniformly colored hydrated lime consisting in uniformly disseminating coloring matter throughout a body of water, adding only enough of such water to unhydrated lime to hydrate the lime and leave it in the form of a dry powder, and thoroughly mixing the lime and water during hydration.

2. The process of producing uniformly colored hydrated lime consisting in placing together in a hydrator the lime to be hydrated, and only enough water to hydrate the lime and leave it in the form of dry powder and enough coloring matter to produce the desired color, and thoroughly mixing the same to cause the water to combine with the lime, to uniformly incorporate the coloring matter with the lime and to cause the colored lime to be dried in the form of a powder by the heat generated in the hydrator by the mixture of the lime and water.

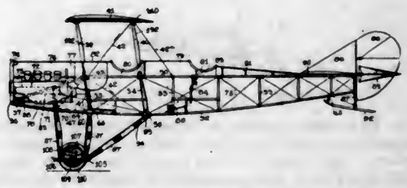
1,195,141. PORTABLE RECIPROCABLE HYDRAULIC POWER DEVICE. FRANK E. KENNEY, Portland, Oreg., assignor of five-eighths to Daniel W. Hoelbing, Portland, Oreg. Filed Feb. 23, 1915. Serial No. 10,162. (Cl. 138—2.)

1. In a device of the character described, the combination of a cylinder and piston therein and a piston rod projecting through one end of the cylinder, a compensating chamber, a duct connecting that end of the cylinder through which the piston rod extends with said compensating chamber; a fluid inlet for the compensating chamber, a valve in such inlet preventing the outflow of fluid; a force-pump, ducts connecting the latter with the compensating chamber and the other end of the cylinder, an adjustable valve controlling the admission of fluid through said ducts, and check valves in the latter.



2. In a device of the character described, the combination of a cylinder and piston therein and a piston rod projecting through one end of the cylinder, a compensating chamber, a duct connecting that end of the cylinder through which the piston rod extends with said compensating chamber; a fluid inlet for the compensating chamber, a valve in such inlet preventing the outflow of fluid; a force-pump, ducts connecting the latter with the compensating chamber and the other end of the cylinder, a four-way adjustable valve controlling the admission of fluid through said ducts, and check valves in the latter.

1,195,142. FUSELAGE FOR AEROPLANES. HENRY KLECKLER, Buffalo, N. Y., assignor to Curtiss Aeroplane & Motor Corporation, Buffalo, N. Y., a Corporation of New York. Filed Sept. 21, 1915. Serial No. 51,775. (Cl. 244—14.)



1. In an aeroplane, a fuselage, posts defining a certain section of said fuselage, and means individually tying each of such ordinary aeroplane elements as supporting surfaces, running gear, and the power plant, directly and commonly to said fuselage section.

2. In an aeroplane, wing posts, a power plant, supporting surfaces, running gear, means connecting said power plant to certain of said posts, and means individually connecting said surfaces and gear to each of said posts.

3. In an aeroplane, wing posts, supporting surfaces, posts connecting the surfaces to said wing posts, a power plant, means connecting the power plant to said wing posts, intermediate bracing means for the said connecting means, running gear, and means connecting the running gear separately to each wing post and each of said bracing means.

4. In an aeroplane fuselage, posts, aerial surfaces supported above and below said posts and stays connected to separate surfaces and commonly united upon respective posts to form a draft yoke between the latter and said surfaces.

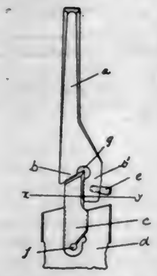
5. In an aeroplane fuselage, posts, aerial surfaces supported above and below said posts and stays connected to the rear edges of said surfaces and converging forwardly to an intermediate anchorage upon respective posts, to form a draft yoke between the latter and said surfaces.

[Claims 6 to 51 not printed in the Gazette.]

1,195,143. SAW-TOOTH TOOL FOR INSERTING AND REMOVING SEPARABLE TEETH OF SAWS. HIRAM B. MCDONALD, Fitchburg, Mass., assignor to Simonds Manufacturing Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed June 25, 1915. Serial No. 36,287. (Cl. 29—84.)

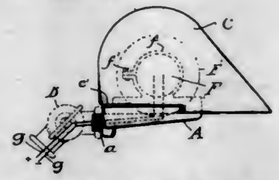
A drift or tool for inserting detachable teeth of saws, consisting of a metal bar, provided at one end with a surface to receive percussive blows and at the other end with grooved jaws adapted to bear upon the beveled faces of the

end and front-side portions of the cutting end of the tooth, and an enlarged opening at the angle of intersection of the



bearing faces of the grooved jaws, to receive the point of the tooth.

1,195,144. LAMP-FIXTURE. HARRISON D. MCFADDIN, East Orange, N. J. Filed Oct. 27, 1914. Serial No. 868,827. (Cl. 240—73.)



1. In a lamp bracket, a channeled supporting member adapted to conform to, and house, the lower edge of a reflector, the channel of the supporting member being of such depth as to leave a conduit intermediate the edge of the reflector and the base of the channel, a lamp socket mounted on the supporting member, and electric wires passing through the conduit intermediate the bottom of the channel and the edge of the reflector and in communication with the lamp socket, whereby said wires are concealed from view.

2. In a lamp bracket, a channeled supporting member adapted to support a reflector, a lamp socket mounted on said supporting member, and electric wires housed within the channel of the supporting member and having connection with the lamp socket.

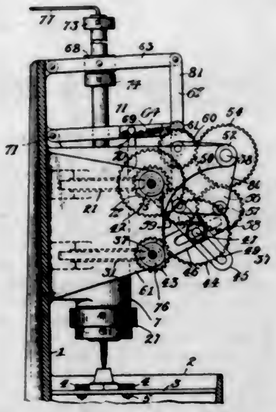
3. In a lamp bracket, a channeled supporting member adapted to support a reflector, the lower edge of which reflector is adapted to enter the channel in the supporting member, and electric wires also positioned in the channel of the supporting member and concealed from view when the reflector is in place.

4. In a lamp bracket, a channeled supporting member shaped to conform to, and house, the edge of a reflector, the supporting member being so constructed that the edge of said reflector extends into the channel thereof, the reflector being supported on the upper edge of the channeled member whereby a conduit is left intermediate the edge of the reflector and the base of the channel, a lamp socket, and electric wires extending through said conduit and communicating with the lamp socket.

5. In a lamp bracket, a channeled supporting member shaped to conform to, and house, the edge of a reflector, the channel of the supporting member being of such depth as to leave a conduit intermediate the edge of said reflector and the base of the channel when the reflector is properly seated therein, a lamp socket mounted on the supporting member, and electric wires passing through the conduit intermediate the bottom of the channel and the edge of the reflector and secured to the lamp socket whereby said wires are maintained in concealed position and the reflector may be removed without interfering with said wires.

[Claims 6 to 11 not printed in the Gazette.]

1,195,145. TOOL FOR CUTTING LOCK-NUTS. ALBERTUS B. MATTINGLY, New York, N. Y., assignor, by mesne assignments, to National Positive Lock Nut Co., Inc., a Corporation of New York. Filed Dec. 31, 1914. Serial No. 879,864. (Cl. 10—89.)



1. In a double threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation therein, means for advancing the casing, a spindle rotatably carried by the casing but caused to advance therewith, a tap carried by the lower end of the spindle, and an annular tap also carried by the spindle and surrounding the said tap to operate on the blank simultaneously therewith.

2. In a double threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation therein, a spindle rotatably carried by the casing but caused to advance therewith, a tap carried by the lower end of the spindle, an annular tap also carried by the spindle and surrounding said tap to operate on the blank simultaneously therewith, driving means for rotating the spindle, and means connected with the driving means for advancing the casing.

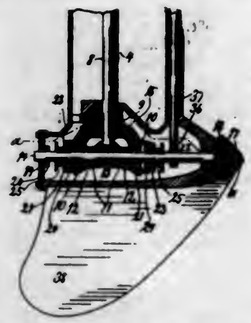
3. In a double threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation therein, means for advancing the casing, a spindle rotatably carried by the casing but caused to advance therewith, a tap carried by the lower end of the spindle, an annular tapered tap adapted to cut a tapered thread and carried by the spindle and surrounding said tap to operate on the blank simultaneously therewith.

4. In a double threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation therein, means for advancing the casing, a spindle rotatably carried by the casing but caused to advance therewith, a tap carried by the lower end of the spindle, and an annular tap adapted to cut a tapered thread and carried by the spindle and surrounding said tap to operate on the blank simultaneously therewith, the spindle having a thrust bearing in the casing.

5. In a threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation, a spindle rotatably carried by the casing but caused to advance therewith, a head on the lower end of the casing, a head on the spindle having a thrust bearing in said head, an annular tap adapted to cut a tapered thread carried by the spindle head, a tap carried by the spindle and extending through the annular tap to engage a blank simultaneously therewith, a worm wheel secured to the spindle, a worm engaging the worm wheel to rotate the spindle, said casing being threaded externally, a worm wheel in the frame having a threaded bore engaging the threaded casing to advance the casing, a worm engaging the last mentioned worm wheel, and driving means for rotating both said worms.

[Claims 6 to 14 not printed in the Gazette.]

1,195,146. MOTOR-BOAT DRIVING-GEAR. ANDREW B. MILLER, Baldwin, Wis., assignor of one-fourth to Rasmus Johnson, one-fourth to Horace C. Nelson, and one-fourth to Edward Christensen, Baldwin, Wis. Filed Mar. 29, 1916. Serial No. 87,615. (Cl. 115—18.)



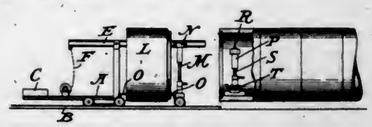
1. In a motorboat driving gear, a frame adapted to be secured to the rear end of the boat and extend down into the water, an engine in the upper end of the frame and having its shaft extending into the lower end thereof, a driving bevel gear fixed on said lower end, a propeller having a shaft journaled in substantially horizontal position in the lower end of the frame, a sleeve upon the propeller shaft, two bevel gears retained to rotate one upon each end of the sleeve and permanently meshing with the bevel gear on the engine shaft; said two bevel gears having each in its hub a friction clutch member, two friction clutch members slidably keyed on the propeller shaft, a shaft extending upwardly through the frame and having at its lower end an eccentric and at its upper end a lateral handle, a shifter operated by said eccentric and engaging the slidable clutch members to throw them both out of, or either of them into contact with the adjacent clutch member of the bevel gears on the sleeve, and means for holding the handle in either of said three positions.

2. In a motorboat driving gear, a frame adapted to be secured to the rear end of the boat and extend down into the water, an engine in the upper end of the frame and having its shaft extending into the lower end thereof, a driving bevel gear fixed on said lower end, a propeller having a shaft journaled in substantially horizontal position in the lower end of the frame, a sleeve upon the propeller shaft, two bevel gears retained to rotate one upon each end of the sleeve and permanently meshing with the bevel gear on the engine shaft, said two bevel gears having each in its hub a friction clutch member, two friction clutch members slidably keyed on the propeller shaft, a shaft extending upwardly through the frame and having at its lower end an eccentric and at its upper end a lateral handle, a shifter operated by siad eccentric and engaging the slidable clutch members to throw them both out of, or either of them into contact with the adjacent clutch member of the bevel gears on the sleeve, and means for holding the handle in either of said three positions, said sleeve having at its middle an upward bearing for the lower end of the engine shaft, whereby the shaft is steadied and the sleeve and its gears held against endwise pressure by the clutches.

3. In a motor boat driving gear, a frame adapted to be secured to the rear end of the boat and extend down into the water, an engine in the upper end of the frame and having its shaft extending into the lower end thereof, a driving bevel gear fixed on said lower end, a propeller having a shaft journaled in substantially horizontal position in the lower end of the frame, a sleeve upon the propeller shaft, two bevel gears retained to rotate one upon each end of the sleeve and permanently meshing with the bevel gear on the engine shaft said two bevel gears having each in its hub a friction clutch member, two friction clutch members slidably keyed on the propeller shaft, a shaft extending upwardly through the frame and having at its lower end an eccentric and at its upper end a lateral handle, a shifter operated by said eccentric and engaging the slidable clutch members to throw them both out of or either of them into contact with the adjacent clutch member of the bevel gears on the sleeve, and means for holding the handle in either of said three positions, said frame having a bearing to support and guide the shifter bar in its movement parallel to the propeller shaft.

4. In a motorboat driving gear, a frame adapted to be secured to the rear end of the boat and extend down into the water, an engine in the upper end of the frame and having its shaft extending into the lower end thereof, a driving bevel gear fixed on said lower end, a propeller having a shaft journaled in substantially horizontal position in the lower end of the frame, a sleeve upon the propeller shaft, two bevel gears retained to rotate one upon each end of the sleeve and permanently meshing with the bevel gear on the engine shaft said two bevel gears having each in its hub a friction clutch member, two friction clutch members slidably keyed on the propeller shaft, a shaft extending upwardly through the frame and having at its lower end an eccentric and at its upper end a lateral handle, a shifter operated by said eccentric and engaging the slidable clutch members to throw them both out of or either of them into contact with the adjacent clutch member of the bevel gears on the sleeve, and means for holding the handle in either of said three positions, said frame having a bearing to support and guide the shifter bar in its movement parallel to the propeller shaft, and said eccentric shaft having its lower end journaled in said bearing.

1,195,147. METHOD OF LAYING SECTIONAL PIPES. JOHN C. MITCHELL, Ampere, N. J. Filed May 6, 1915. Serial No. 26,231. (Cl. 37—53.)



1. An apparatus for transporting and laying large pipe sections, comprising, in combination, three coöperating elements, a truck and horizontal beam supported thereon to be threaded through a pipe section, a truck with a longitudinally adjustable support for the forward end of the beam, and a longitudinally adjustable support adapted to be placed in a laid section of pipe and to take up the weight of the forward end of the beam when the latter is introduced into said laid section.

2. In an apparatus of the kind described, the combination with a truck, a horizontal beam pivotally supported thereon, and means for tilting the beam, of a longitudinally adjustable traveling support for the forward end of said beam, adapted to travel along said beam and to be forced into a pipe section supported by the beam when sufficiently reduced in length, whereby a pipe section on the beam may be forced into intimate engagement with a laid section.

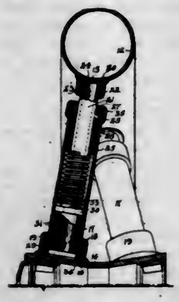
3. In an apparatus of the kind described, the combination with a truck, a horizontal beam pivotally supported thereon, and means for tilting the beam, of a saddle connected to the beam by a universal joint, a truck having a longitudinally adjustable support for engaging with the beam, and adapted to be forced back into a pipe section on the saddle when sufficiently shortened, whereby a pipe section on the beam may be brought into intimate engagement with the end of a laid section.

4. The combination with a truck having a horizontal beam adapted to carry a pipe section, of a longitudinally adjustable support adapted to be set in the end of a laid pipe section to receive and support the end of the beam when a new section is brought thereon into engagement with the laid section.

5. The combination with a truck having a horizontal beam adapted to carry a pipe section, of a longitudinally and laterally adjustable support adapted to be set in the end of a laid pipe section to receive and support the end of the beam when a new section is brought thereon into engagement with the laid section, and to facilitate the alinement of such new section.

[Claim 6 not printed in the Gazette.]

1,195,148. PNEUMATIC WHEEL. WALTER THOMAS NEWMAN, Vancouver, British Columbia, Canada. Filed Dec. 30, 1910, Serial No. 600,060. Renewed Nov. 10, 1915. Serial No. 60,799. (Cl. 152—28.)



1. A resilient wheel comprising a hub, a tubular rim of practically rigid construction constituting an annular air reservoir adapted to hold air under pressure, and movable relatively to the hub, and telescopic spokes connecting the hub and rim and composed of chambered members attached to one of said parts and piston members attached to the other part and having an air tight sliding fit in the chambered members, means being provided for the passage of air from the rim to the inner portions of the spokes and from the spokes to the rim whereby the air at the inner ends of the spoke cushions and is caused to yieldingly support the rim through the spoke members attached thereto.

2. A resilient wheel comprising a hub, a tubular rim of practically rigid construction constituting an annular air reservoir adapted to hold air under pressure, and movable relatively to the hub, and telescopic spokes connecting the hub and rim and composed of inner members attached to the hub and formed as cylinders, and outer members attached to the rim and formed as pistons having an air tight sliding fit in the inner members, means being provided for the passage of air from the rim to the inner ends of the inner members and from said inner ends to the rim, whereby compressed air contained in the rim and spokes is caused to yieldingly support the outer spoke members and the rim.

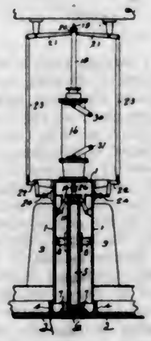
3. A resilient wheel comprising a hub, a tubular rim of practically rigid construction constituting an annular air reservoir adapted to hold air under pressure, and movable relatively to the hub, and telescopic spokes connecting the hub and rim and composed of chambered members attached to one of said parts and piston members attached to the other part and having an air tight sliding fit in the chambered members, means being provided for the passage of air from the rim to the inner portions of the spokes and from the spokes to the rim, whereby the air at the inner ends of the spoke is caused to yieldingly support the rim through the spoke members attached thereto, the spokes being arranged in two oppositely dished series.

4. A resilient wheel comprising a hub, a tubular rim of practically rigid construction constituting an annular air reservoir adapted to hold air under pressure, and movable relatively to the hub, and telescopic spokes connecting the hub and rim, each spoke being composed of a cylinder member rigidly attached to the hub, a piston member rigidly attached to the rim having an air tight sliding fit in the cylinder member, and an air passage communicating with the rim and with the inner end of the cylinder member, whereby compressed air is permitted to flow between the rim and the inner end of the cylinder member to cushion the piston members and rim.

5. A resilient wheel comprising a hub, a tubular rim of practically rigid construction constituting an annular air reservoir adapted to hold air under pressure, and movable relatively to the hub, outwardly projecting coupling parts attached to the hub, inwardly projecting coupling parts attached to the rim, cylindrical spoke members detachably secured to the coupling parts on the hub, piston spoke members detachably secured to the coupling parts on the rim, each piston member having an air tight sliding fit in the cylinder member and an air passage communicating with the rim and with the inner end of the cylinder member.

[Claims 6 to 9 not printed in the Gazette.]

1,195,149. SHIP-BRAKE. JAMES C. OLLARD, Tacoma, Wash. Filed Mar. 25, 1915. Serial No. 16,825. (Cl. 114—145.)



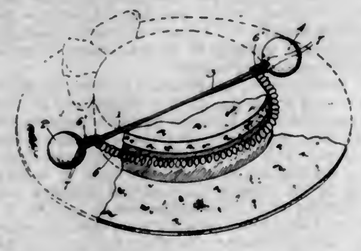
1. In a ship brake, the combination with a ship having an opening below the water level thereof; a box within the ship and surrounding said opening; a brake body within the box and normally closing said opening; means for locking said brake body in said closing position; means for forcing said brake body to extend out of said opening and into the water; and means operated by said forcing means and engaging said locking means whereby said locking means is removed before said forcing means engages said brake body.

2. In a ship brake, the combination with a ship having an opening below the water level thereof; a box within the ship and surrounding said opening; a brake body within the box and substantially smaller than the box and adapted to extend partially therefrom or to be withdrawn thereinto; a foot forming the lower edge of said brake body and larger than the brake body and fitting the opening when said brake body is withdrawn into the box; means for controlling the position of said brake body; and antifriction means between the box and the brake body for guiding the brake body therein.

1,195,150. HAT-PIN. LILLIAN B. PETERS, Pasadena, Cal. Filed Mar. 24, 1913, Serial No. 756,603. Renewed Nov. 5, 1915. Serial No. 59,887. (Cl. 24—155.)

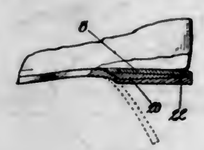
1. A hat pin comprising two pin members, a head on each of said pin members, a spring connecting the heads of said pin members adapted to extend around the crown of the hat and draw the pin members inwardly, and said pin members being adapted to be inserted completely through the coils of the spring when the pin is not in use.

2. A hat pin comprising two pin members, a head on each of said pin members, a spring connecting the heads of said pin members adapted to extend around the crown of the hat and draw the pin members inwardly, each of



said pin members adapted to be projected through a predetermined number of coils at one end of the spring to adjust the tension of the spring around the crown of the hat.

1,195,151. SHOE. ADAM H. PAENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Feb. 5, 1912, Serial No. 675,594. Patent No. 1,050,040, dated Jan. 7, 1913. Divided and this application filed Aug. 10, 1912. Serial No. 714,443. (Cl. 36—27.)



A shoe comprising, in combination, a sole provided at the heel end with a recess having its greatest depth near its front end, said heel end being of increasing thickness from the forward end of the recess to the rear thereof, a heel seat piece abutting at its front end against the front wall of said recess, said heel seat piece having its upper surface substantially flush with that of the sole, an upper secured to the sole and to said heel seat piece upon the inside of the shoe, and an underwedge thicker at its front end than at its rear end located between said heel seat piece and the bottom of said recess, the combined thickness of said underwedge and said heel seat piece being so proportioned to the arch of the last and to the varying depth of the recess as to make the tread face of the heel end of the sole substantially level.

1,195,152. ALFALFA EXTRACT. MARK C. RICH, Bellefourche, S. D., assignor, by mesne assignments, to The American Alfalfa Products Co., Denver, Colo., a Corporation of Colorado. Filed May 15, 1915. Serial No. 28,268. (Cl. 99—11.)

1. An alfalfa extract containing an infusion of alfalfa from which the secretions and impurities adhering thereto have been removed.

2. An alfalfa extract containing an infusion of alfalfa from which the woolly hair, secretions and impurities adhering thereto have been removed.

3. An alfalfa extract containing an infusion of alfalfa which is naturally free of woody fiber and from which the secretions and impurities have been removed.

4. An alfalfa extract, containing an infusion of alfalfa which is naturally free of woody fiber and from which the woolly hairs, secretions and impurities have been removed.

5. A concentrated alfalfa extract containing a filtered infusion of alfalfa and alcohol.

[Claims 6 to 8 not printed in the Gazette.]

1,195,153. ALFALFA PRODUCT. MARK C. RICH, Bellefourche, S. D., assignor, by mesne assignments, to The American Alfalfa Products Co., Denver, Colo., a Corporation of Colorado. Filed May 15, 1915. Serial No. 28,269. (Cl. 99—11.)

1. That improvement in the manufacture of alfalfa products for human consumption, which consists in cutting alfalfa before it has become woody and fibrous and then washing it.

2. That improvement in the manufacture of alfalfa products for human consumption, which consists in cutting alfalfa before it has become woody and fibrous, then washing it and then subjecting the alfalfa to artificial heat to prevent bleaching.

3. That improvement in the manufacture of alfalfa products for human consumption, which consists in cutting alfalfa before it has become woody and fibrous and then removing the woolly hair, dried secretions and adhering impurities therefrom.

4. That improvement in the manufacture of alfalfa products for human consumption, which consists in cutting alfalfa before it has become woody and fibrous, then removing the woolly hair, dried secretions and adhering impurities therefrom and then subjecting the alfalfa to artificial heat to prevent bleaching.

5. That improvement in the manufacture of alfalfa products for human consumption, which consists in cutting alfalfa before it has become woody and fibrous, then washing it and then grinding it into flour.

[Claims 6 to 9 not printed in the Gazette.]

1,195,154. ALFALFA PRODUCTS. MARK C. RICH, Bellefourche, S. D., assignor, by mesne assignments, to The American Alfalfa Products Co., Denver, Colo., a Corporation of Colorado. Filed May 17, 1915. Serial No. 28,576. (Cl. 99—11.)

1. That improvement which consists in mixing alfalfa which is naturally free from woody fiber with a saccharine material, heating the mixture sufficiently to caramelize said material, and then making an extract from the product.

2. That improvement which consists in mixing alfalfa which is naturally free from woody fiber with a saccharine material, heating the mixture sufficiently to caramelize said material and then boiling the caramelized product.

3. That improvement which consists in mixing alfalfa which is naturally free from woody fiber with a saccharine material, heating the mixture sufficiently to caramelize said material, and then making an extract from the product and mixing the extract with gelatin.

4. That improvement which consists in mixing alfalfa which is naturally free from woody fiber with a saccharine material, heating the mixture sufficiently to caramelize said material, then making an extract of the product and then concentrating the product by evaporation.

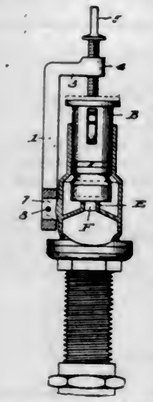
5. That improvement which consists in mixing alfalfa which is naturally free from woody fiber and which has been washed to remove the dry secretions and impurities therefrom with a saccharine material, heating the mixture sufficiently to caramelize said material, and then making an extract from the caramelized product.

[Claims 6 to 8 not printed in the Gazette.]

1,195,155. AUTOMATIC VALVE. JOHN H. ROSS, Kansas City, Mo. Filed Oct. 18, 1915. Serial No. 56,523. (Cl. 137—104.)

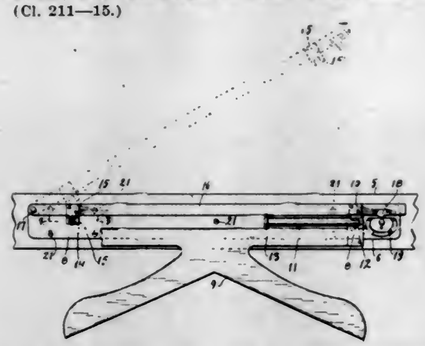
In combination with an automatic valve, an arm bent at right-angles at its upper end and terminating in an enlarged lower end with an opening therethrough, a lug

on the valve case to fit into said opening and support the arm, and an adjustable member threaded through the



upper portion of the arm and arranged in the path of the valve plug to limit the opening movement thereof.

1,195,156. CLOSET-FIXTURE. GEORGE HENRY WHEARY, Racine, Wis. Filed Mar. 20, 1915. Serial No. 15,849. (Cl. 211—15.)



1. A closet fixture, comprising a securing member having means for connecting it to a support, a garment hanger track member removably connected to the securing member and projecting horizontally outwardly therefrom and having a stop means on its outer end, means for preventing the surreptitious removal of the track member from the securing member, and garment hangers slidably mounted on the track member.

2. A closet fixture, comprising a securing member having means for connecting it to a support, a garment hanger track member removably connected to the securing member and projecting horizontally outwardly therefrom and having a stop means on its outer end, locking means for preventing the surreptitious removal of the track member from the securing member and the securing member from its support and garment hangers slidably mounted on the track member and locked thereto by the locking means.

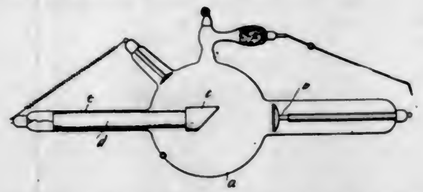
3. A closet fixture, comprising a securing member having means for connecting it to a support, a garment hanger track member revolubly connected to the securing member and projecting horizontally outwardly therefrom and having a stop means on its outer end, locking means for locking the track member against rotation and for preventing the surreptitious removal of the securing member from its support, and garment hangers slidably mounted on the track member and locked thereto by the locking means.

4. A closet fixture, comprising a securing member having means for connecting it to a support, a horizontally extending garment hanger track member having a threaded engagement with the securing member and a stop means on its outer end, said track member also having a flattened portion adjacent its connection with the securing member, a locking member engaging the flattened portion of the track member to prevent its rotation, and garment hangers slidably mounted on the track member and locked thereto by the locking member.

5. A closet fixture, comprising a securing member having means for connecting it to a support, spaced horizontally extending track members having a threaded engagement at their inner ends with the securing member and provided with stop means at their outer ends, said track members having flattened side portions, a locking bar mounted on the securing member and engaging the flattened portions of the track members to prevent the unthreading of said track members from said securing member, and garment hangers provided with openings through which the track members extend, said openings being of less diameter than the width of the stop means of the track members, said hangers being locked on said track members by the lock bar.

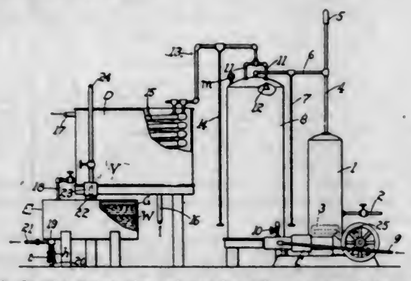
[Claim 6 not printed in the Gazette.]

1,195,157. X-RAY TUBE. PHILIP A. FARRELLY, Chicago, Ill., assignor to Green & Bauer Inc., Hartford, Conn., a Corporation of Connecticut. Filed Oct. 28, 1915. Serial No. 58,372. (Cl. 250—35.)



In an X-ray tube, an anode stem apertured near its outer end and provided at the apertures with inturned tubular walls, and projections from the material of the anode neck of the tube extending into said apertures and bearing against said tubular walls to secure said stem in place.

1,195,158. PROCESS OF EXTRACTING GASOLENE FROM NATURAL GAS. JOSEPH P. FOUCART, Muskogee, Okla. Filed May 11, 1914. Serial No. 837,819. (Cl. 196—25.)



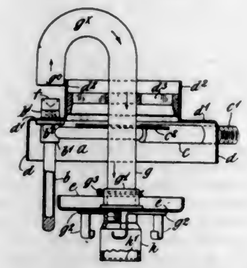
1. In the extraction of gasolene from natural gas, the process of subjecting a charge of said gas to direct contact with steam, whereby the components thereof not in a vapor state are vaporized, cooling the combined vapors of gas and steam to the point of condensation, and separating the liquids thus condensed.

2. In the extraction of gasolene from natural gas, the process of subjecting a charge of said gas to direct contact with steam under pressure, whereby the components of the gas not in a vapor state are vaporized, effecting a condensation of the vapors and steam by cooling, conducting the liquids to a suitable settling tank, and removing the respective liquids from said tank.

3. In the extraction of gasolene from natural gas, the process of maintaining a body of steam in a suitable receptacle under pressure, discharging the gas into said steam under a pressure differential sufficient to cause the gas to penetrate the body of steam, thereby vaporizing the liquid components of the gas, conducting the mixture of vapor and steam to a suitable condenser, conducting the condensed liquids to a suitable settling tank, then separately drawing off the liquids from said tank.

4. In the extraction of gasolene from natural gas, the process of confining a body of steam in a suitable container at a pressure of substantially twenty pounds to the square inch, discharging into said container, the gas under a superior pressure at one end of the container, conducting the vaporized condensable components of the gas, and the steam out of the container from the opposite end thereof, introducing fresh charges of steam and gas into the container during the abstraction of the vapors and steam from the container, leading the vapors and steam to a suitable condenser, conducting the condensed vapors and steam to a suitable tank, wherein the liquids become separated, and finally, drawing off the separated liquids and removing the lean gas from above the gasolene floating on the water in the tank.

1,195,159. OIL-VAPOR BURNER. EDGAR LANGLEY RANDALL, South Hampstead, London, England, assignor of three-fourths to Oliver Prescott Macfarlane, London, England. Filed Feb. 17, 1915. Serial No. 8,823. (Cl. 67—50.)



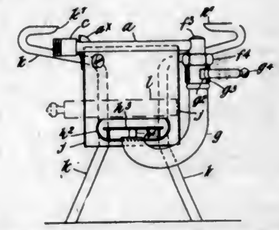
1. In a vapor burner, the combination of a straight horizontal vaporizer tube, a straight filter tube in line therewith and leading directly into the same, a baffle plate secured near the joint of said filter and vaporizer tubes, in metallic contact therewith, an arch-shaped mixing tube the longer limb of which passes down through said baffle plate, and an inverted burner on the lower end of said mixing tube, substantially as described.

2. In a vapor burner for incandescent lighting, the combination of a straight horizontal vaporizer, a filter tube leading into the same, an inverted burner-head below the same, a straight vertical tube or auxiliary vaporizer reaching down to near the burner-head, an inclosing shell forming a funnel and serving to carry the aforesaid parts, and a heat-collecting baffle-plate on the main or horizontal vaporizer tube secured to the said filter tube, substantially as described.

3. In a vapor burner, the combination of a vaporizer tube, a filter-tube and heater leading into the same, a wick-pan for starting the action, a depending auxiliary heater extending below said wick-pan, a baffle-plate secured to said filter-tube which latter reaches nearly to a central opening in the baffle-plate so as to be heated by the flame and hot gases, an inclosing shell forming a funnel and carrying the aforesaid parts, an arch-shaped mixing tube extending down through the baffle and carrying the burner head, and means for forcing oil into the burner through the aforesaid filter-tube, substantially as described.

4. In a vapor burner, the combination of a plain straight vaporizer tube, a mixing tube arched over at its upper end, a funnel or casing having a contracted neck outside the top of which lies the mouth of the mixing tube, a burner proper or burner-head screwed on to the lower end of the mixing tube, a flanged thimble or collar arranged above the burner, a wick-pan and mantle-carrier held between said collar and burner-head, and an auxiliary vaporizer extending downward from the main vaporizer beyond the wick-pan, substantially as described.

1,195,160. VAPOR-BURNER FOR STOVES. EDGAR LANGLEY RANDALL, South Hampstead, London, England, assignor of three-fourths to Oliver Prescott Macfarlane, London, England. Filed Feb. 17, 1915. Serial No. 8,824. (Cl. 158—65.)



1. In a vapor burner for paraffin, alcohol or other liquid fuel, the combination of a straight vaporizing tube, a metal casing open at its top and bottom, the upper part of which supports the said vaporizing tube, a plain vertical mixing tube having a U-shaped lower extremity, and a burner supported at the bottom of the casing by the upwardly-turned lower end of such mixing tube, substantially as described.

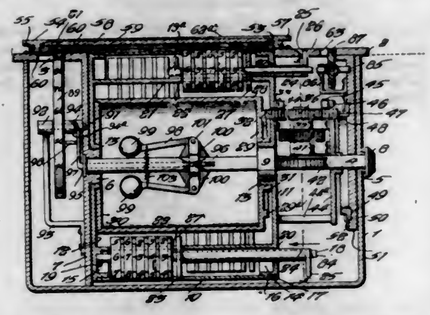
2. In a vapor burner for paraffin, alcohol or other liquid fuel, the combination of a straight vaporizing tube, a filter device arranged to be highly heated and placed directly in line therewith at one end thereof, a downwardly-directed nipple at the other end thereof, a mixing tube having a U-shaped curved lower extremity, a regulator for the air-inlets of the mixing tube, and a metal casing distinct from the mixing tube and completely open at the top and bottom, substantially as described.

3. In a vapor burner for paraffin, alcohol or other liquid fuel, the combination of an outer casing, a plain straight tube extending across the top of said casing, a filter adapted to be highly heated at one end of said tube and contained in one end of said tube, a vapor nipple at the other end of said tube, an air and vapor mixing tube having a U-shaped lower extremity, such tube being supported by and depending from the nipple, and a burner carried at the bottom of the casing directly on the upturned end of the U-shaped part of the mixing tube, substantially as described.

1,195,161. METER. MARVIN SMITHEY, Lawrenceville, Va. Filed Dec. 11, 1915. Serial No. 66,288. (Cl. 235—95.)

1. A device of the character specified, comprising a driving shaft adapted to be connected with a wheel of the vehicle, a cylindrical support journaled on the shaft, a plurality of series of odometers carried by the support, the series being at the opposite ends of the support and the members of one series alternating with the members of the other series, a drum journaled on the shaft within the support and having a driving connection between the shaft and the drum for rotating the drum, mechanism in connection with the drum at each series of odometers for operating the odometers in succession, a connection between the driving shaft and the cylindrical support for rotating the said support to bring the odometers in suc-

cession into reading position, and manually operated means for rotating the said support to bring any predetermined odometer into reading position, said means comprising a ring mounted to rotate and connected with the support to move the support at the same speed as the ring, said ring having identifying labels on its periphery for the several odometers, and a casing inclosing the support and the operating mechanism and having reading openings for the odometers extending diametrically of the ring, the ring being mounted to rotate on the casing, and said casing having an indicator for coöperating with the ring to indicate the particular odometer at reading position.



2. A device of the character specified, comprising a driving shaft adapted to be connected with a wheel of a vehicle, a cylindrical support journaled on the shaft, a plurality of series of odometers carried by the support, the series being at the opposite ends of the support and the members of one series alternating with the members of the other series, a drum journaled on the shaft within the support and having a driving connection between the shaft and the drum for rotating the drum, mechanism in connection with the drum at each series of odometers for operating the odometers in succession, a connection between the driving shaft and the cylindrical support for rotating the said support to bring the odometers in succession into reading position, and manually operated means for rotating the said support to bring any predetermined odometer into reading position.

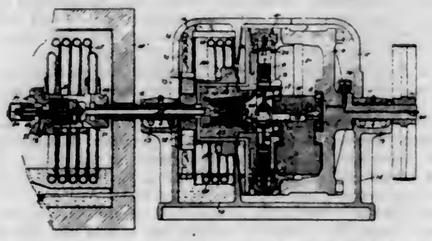
3. A device of the character specified, comprising a driving shaft adapted to be connected with a wheel of a vehicle, a cylindrical support journaled on the shaft, a series of odometers carried by the support, a drum journaled on the shaft within the support and having a driving connection between the shaft and the drum for rotating the drum, mechanism in connection with the drum for operating the odometers in succession, and a connection between the driving shaft and the cylindrical support for rotating the said support to bring the odometers in succession into reading position.

4. A device of the character specified, comprising a driving shaft adapted to be connected with the wheel of a vehicle, a support journaled on the shaft, a series of odometers carried by the support, means journaled on the shaft within the support for operating the odometers in succession, a driving connection between the said means and the shaft, a casing having a reading opening for the odometers and a driving connection between the shaft and the support for bringing the odometers in succession into reading position.

5. A device of the character specified, comprising a driving shaft adapted to be connected with the wheel of a vehicle, a support journaled on the shaft, a series of odometers carried by the support, means journaled on the shaft within the support, for operating the odometers in succession, a driving connection between the said means and the shaft, a casing having a reading opening for the odometers, a driving connection between the shaft and the support for bringing the odometers in succession into reading position, manually operated means for bringing the odometers in succession into reading position, said means comprising a ring mounted to rotate and having a driving connection with the support, and having identifying labels identified with the odometers, and a fixed indicator coöperating with the ring.

[Claims 6 to 18 not printed in the Gazette.]

1,195,162. REFRIGERATING-MACHINE. WILLIAM S. STAIR, New York, N. Y. Filed Apr. 14, 1915. Serial No. 21,275. (Cl. 62—115.)



1. A rotary refrigerating machine comprising a compressor, means for supplying lubricant to the compressor, a condenser associated with the compressor, and means, interposed between the compressor and condenser for eliminating liquid lubricant from the compressed vapors of refrigerant delivered by the compressor to the condenser.

2. A rotary refrigerating machine, comprising a shell mounted to rotate, a compressor associated with the shell, means within the shell for supplying lubricant to the moving parts, a condenser associated with the shell, and means interposed between the compressor and the condenser for eliminating liquid lubricant present in the compressed gases flowing from the compressor to the condenser.

3. In a rotary refrigerating machine, a revoluble shell, a compressor, means located within the shell for supplying lubricant to the moving parts, said compressor being adapted to deliver the compressed refrigerant vapors into the shell, means associated with the shell for directing the compressed vapor from the periphery of the shell toward the center thereof whereby the liquid lubricant present in the compressed vapors flowing toward the axis is forced toward the periphery of the shell, and means for returning the lubricant from the periphery of the shell to the means for supplying the lubricant to the moving parts.

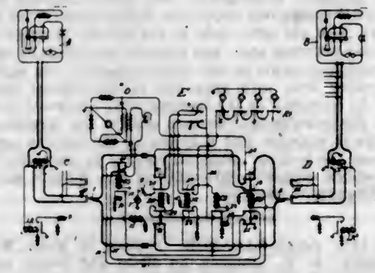
4. In a rotary refrigerating machine, a revoluble condenser, a screen inclosing the condenser and mounted to rotate therewith, said screen and condenser adapted to be immersed in water, a dripping chamber substantially encompassing said screen, and a fan for supplying air through the dripping chamber, substantially as and for the purpose set forth.

5. In a rotary refrigerating machine, a revoluble condenser partly immersed, a dripping chamber surrounding the some and adapted to receive the water from the revoluble condenser, and means for forcing air through the dripping chamber.

[Claims 6 to 33 not printed in the Gazette.]

1,195,163. CONVERTIBLE RINGING CONTROL FOR TELEPHONE SYSTEMS. GEORGE D. WOLF, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 20, 1913. Serial No. 790,814. (Cl. 179—58.)

1. A telephone system comprising a called telephone line, an operator's link circuit connected thereto, a ringing key, ringing control relays, a source of ringing current, circuit connections for said key and relays whereby when said key is operated an automatic and intermittent application of ringing current to the called line is effected, and a single pole manually controlled switch for changing said circuit connections whereby the automatic and intermittent control is removed and an application of ringing current to the said called line from said source of current is positively effected by each operation of said ringing key.



2. A telephone system comprising telephone lines, operator's link circuits for connection thereto, a ringing key for each of said circuits, ringing control relays for each of said circuits, a source of ringing current, circuit connections for each of said keys and associated relays whereby when a key is operated an automatic intermittent application of ringing current to a connected called line is established, and a single pole manually controlled switch common to said link circuits for changing said circuit connections whereby the automatic intermittent control is removed and an application of ringing current to a connected called line is positively effected by each operation of a key.

3. A telephone system comprising telephone lines, an operator's link circuit for connection thereto, a ringing key, ringing control relays, a source of ringing current, circuit connections for said key and relays whereby when said key is operated an automatic intermittent application of ringing current to a connected called line is established, and a single pole manually controlled switch for varying said circuit connections to remove said automatic intermittent control and whereby an application of ringing current is positively effected by each operation of said key.

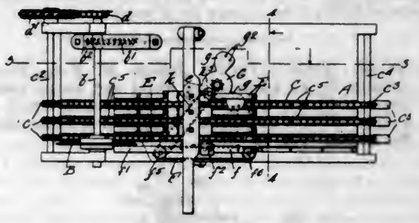
4. A telephone system comprising telephone lines, operators' link circuits for connection thereto, a ringing key and ringing control relays for each of said link circuits, a source of ringing current, circuit connections for each key and associated relays whereby when one of said keys is operated an automatic intermittent application of ringing current to a connected called line is established, a single pole manually controlled switch common to said link circuits for varying said circuit connections to remove said automatic intermittent control and whereby an application of ringing current is positively effected by each operation of one of said keys.

5. A telephone system comprising a called telephone line, an operator's link circuit connected thereto, a ringing key, interrupter and disconnect relays, an interrupter adapted to be placed in circuit relation with the interrupter relay by an energization of said disconnect relay, circuit connections whereby an operation of said ringing key will energize said relays to periodically apply ringing current to the called line, and a manually operable switch for disconnecting said interrupter to place said relays under manual control of said ringing key.

[Claims 6 to 14 not printed in the Gazette.]

1,195,164. CORN-HUSKING MACHINE. JOHN B. ZIMMERMAN, Buffalo, N. Y., assignor to Invincible Grain Cleaner Company, Silver Creek, N. Y. Filed June 12, 1915. Serial No. 33,723. (Cl. 146—11.)

1. The combination of a butt cutter, a traveling conveyer for moving ears of corn to the butt cutter, a gage for the ears, and an ear placing device which is mounted to swing in a plane above and substantially parallel with the plane of movement of the conveyer and which has a part which engages the ears of corn and swings in a path intersecting the path of movement of the ears for moving the ears transversely of the conveyer over against the gage.



2. The combination of a butt cutter, a traveling conveyer for moving the ears of corn to the butt cutter, a gage for the ears, and an ear placing device which is mounted to move in a plane above and substantially parallel with the plane of movement of the conveyer and below the ears of corn and which has a part that engages the ears at their undersides and moves in a path intersecting the path of movement of the ears for moving the ears over against the gage.

3. The combination of a butt cutter, a traveling conveyer for moving ears of corn to said butt cutter, a gage for the ears, and an ear placing device which is mounted independently of the conveyer to move in a plane substantially parallel to the plane of movement of the conveyer and between the conveyer and the ears of corn to engage the ears of corn at their undersides and move them transversely of the line of travel of the conveyer over against the gage.

4. The combination of a butt cutter, a traveling conveyer having lugs for moving ears of corn to the butt cutter, a gage at one side of said conveyer, and an ear placing device past which the conveyer travels and which is mounted to swing in an arc intersecting the path of movement of the ears by the conveyer and into and out of a position between the lugs of the conveyer to move the ears of corn transversely of the line of travel of the conveyer over against the gage.

5. The combination of a butt cutter, a traveling conveyer having lugs for moving ears of corn to said butt cutter, a gage at one side of said conveyer, and a rotary positioning device having arms arranged to move in between the lugs of the conveyer beneath the ears of corn, said arms having upward projections adapted to engage the ears of corn and move them transversely of the conveyer against said gage.

[Claims 6 to 15 not printed in the Gazette.]

1,195,165. NUT AND BOLT LOCK. FRANK E. BAKER, Syracuse, N. Y., assignor of one-third to Earl C. Devendorf, Syracuse, N. Y. Filed Mar. 28, 1916. Serial No. 87,205. (Cl. 151—6.)



1. A nut or bolt-head having an annular groove to receive a locking member, portions of said nut or head beyond the base of the groove being deflected partially across such groove to retain the locking member.

2. A nut or bolt-head having a circumferential groove, and lips extending transversely of the groove to retain a locking member in such groove.

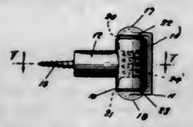
3. An angular nut or bolt-head having a circumferential groove, and lips at the angles projecting partly across such groove to retain a locking member therein.

4. A nut or bolt-head having a circumferential groove nearer to its outer end than to its inner end, portions of

the outer end having lips projecting partially across the groove to retain a locking member therein.

5. A nut or bolt-head having a radially projecting flange provided with a lip standing out from the main body to form an intervening passage for a locking member.

1,195,166. STOP-CATCH. JOSEPH M. KARL, Roslyn Heights, N. Y., assignor, by direct and mesne assignments, to Roslyn Specialty Company, Inc., Roslyn, N. Y., a Corporation of New York. Filed Nov. 9, 1915. Serial No. 60,484. (Cl. 16—78.)



1. In a stop-catch of the character described, a tubular member adapted to be secured on a support to which is hinged a door or the like, a complemental member adapted to be fastened on the door, the said complemental member having two spaced recesses for registration with the open ends of the tubular member when the door is swung open, and two yieldingly movable locking elements in the tubular member, one partially protruding from each open end of the tubular member so as to be seated in the recesses of the recessed member when the recesses and the open ends of the tubular member are in register, for the purpose specified.

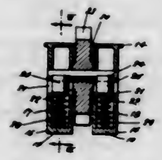
2. In a stop-catch of the character described, a tubular member having a projecting arm adapted to be secured on a support to which is hinged a door or the like so that the tubular member will be spaced from the support, a complemental member adapted to be fastened on the door, the said complemental member having two spaced extensions to accommodate the tubular member therebetween, and the extensions having recesses for registration with the open ends of the tubular member when the door is swung open, and two yieldingly movable locking elements in the tubular member, one partially protruding from each open end of the tubular member so as to be seated in the recesses of the recessed member when the recesses and the open ends of the tubular member are in register, for the purpose specified.

3. In a stop-catch of the character described, a tubular member adapted to be secured on a support to which is hinged a door or the like, a complemental member adapted to be fastened on the door, the said complemental member having two spaced recesses for registration with the open ends of the tubular member when the door is swung open, and two yieldingly movable substantially spherical locking elements in the tubular member, one partially protruding from each open end of the tubular member so as to be seated in the recesses of the recessed member when the recesses and the open ends of the tubular member are in register, for the purpose specified.

4. In a stop-catch of the character described, a tubular member adapted to be secured on a support to which is hinged a door, or the like, a complemental member adapted to be fastened on the door, the said complemental member having two spaced recesses for registration with the open ends of the tubular member when the door is swung open, two movable substantially spherical locking elements in the tubular member, one partially protruding from each open end of the tubular member so as to be seated in the recesses of the recessed member when the recesses and the open ends of the tubular member are in register, and a spring in the tubular member between the locking elements, serving to normally force the locking elements outwardly of the tubular member, for the purpose specified.

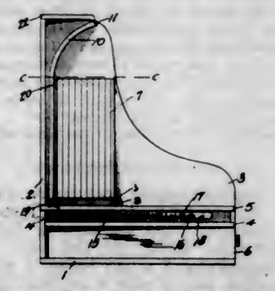
5. In a stop-catch of the character described, a tubular member having an angularly projecting arm with means to secure the arm on a support to which is hinged a door, or the like so that the tubular member will be spaced from the support, a complemental member adapted to be fastened on the door the said complemental member being substantially U-shaped to provide two spaced extensions to freely accommodate the tubular member therebetween, and the two extensions having recesses for registration with the open ends of the tubular member when the door is swung open, two movable substantially spherical locking elements in the tubular member, one partially protruding from each open end of the tubular member so as to be seated in the recesses of the recessed member when the recesses and the open ends of the tubular member are in register, and a spring in the tubular member between the locking elements, serving to normally force the locking elements outwardly of the tubular member, for the purpose specified.

1,195,167. SASH-BALANCE. JOSEPH M. KARL, Roslyn Heights, N. Y., assignor, by direct and mesne assignments, to Roslyn Specialty Company, Inc., Roslyn, N. Y., a Corporation of New York. Filed Dec. 7, 1915. Serial No. 65,573. (Cl. 16—19.)



In a sash balance, a supporting member composed of an apertured plate and two spaced hollow casings extending therefrom, said casings having registering openings transversely therethrough, and the said supporting member being adapted to be arranged on the frame of a window so that its apertured plate will be opposed to a rack mounted on an edge of the sash of the window, a shaft movably rotatable in the apertures of the casings, a toothed wheel on the shaft between the casings, and disposed through the aperture of the front plate for normally meshing with the rack, a pair of blocks one movable in each of the casings, and frictionally engaging the shaft of the wheel, and two springs one in each of the casings, and contacting with the block therein, said springs normally serving to force the blocks in frictional engagement with the shaft of the wheel for checking the rotation of the wheel to yieldingly hold the sash against movement when free of pressure other than the strain of its own weight.

1,195,168. FILING APPLIANCE. FRANK E. LIVERANCE, Jr., Grand Rapids, Mich., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914.) Alliance, Ohio, a Corporation of Ohio. Filed July 2, 1913. Serial No. 777,080. (Cl. 45—2.)



1. In a filing appliance, a case, a series of leaves mounted in the case to swing from vertical to horizontal positions in the case and vice versa, a follower pivoted a distance beyond the free ends of the leaves extending along and engaging with a leaf of the leaf pack, and means forcing the follower into engagement with the said leaf.

2. In a filing appliance, a casing, a series of leaves mounted in the casing to swing from a vertical to a horizontal position and vice versa, a follower pivoted to the casing beyond the free ends of the leaves, and extending along and engaging with a leaf, means to force the follower into engagement with the said leaf and means to vary the force acting on the follower.

3. In a filing appliance, a casing, a series of leaves mounted in the casing to swing from a vertical to a horizontal position and vice versa, a follower pivoted to the casing beyond the free ends of the leaves and engaging with a leaf of the leaf pack, means forcing said follower against said leaf, and means to cause the force to lessen in intensity as one or more of the leaves are operated to horizontal position.

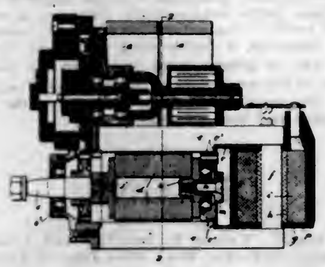
4. In a filing appliance, a case, a series of leaves mounted in the casing to swing from vertical to horizontal position in the case and vice versa, and a follower pivoted above and in front of the rear leaf of the series to the case and extending back of the leaves.

5. In a filing appliance, a case, a series of leaves mounted in the case to swing from vertical to horizontal position in the case and vice versa, a follower located back of the leaves and having its upper portion curved forwardly above the upper ends of the leaves, means pivoting the upper end of the follower to the case and means operating the follower into engagement with the rear leaf, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

REISSUES.

14,181. MAGNETO-ELECTRIC MACHINE. JAMES B. FRAWLEY, Pittsfield, Mass., assignor, by mesne assignments, to Berkshire Magneto Company, Pittsfield, Mass. Filed Mar. 23, 1916. Serial No. 86,321. Original No. 1,160,995, dated Nov. 16, 1915, Serial No. 674,520. (Cl. 171—209.)



1. A magneto electric machine of the inductor alternator type, in combination, a field magnet, a pair of core-pieces, non-magnetic means to support the same, inductor members to convey the magnetic flux from the field magnets to the core-pieces, said core-pieces having projecting ends, an induction coil located between said ends, a casing located between the core-pieces, means to electrically insulate the casing from the core-pieces, whereby the eddy currents that may be generated in the casing will be prevented from flowing in a closed electric circuit interlinking the core pieces and opposing the flow of flux from the permanent field through the core-pieces, as described.

2. A magneto electric machine of the type described, in combination, permanent magnets to produce a constant field, core pieces to receive the flux from the permanent magnets, an induction coil arranged between the ends of the core-pieces, inductor means to directly and alternately convey the flux from the constant field to the core-pieces, a casing located between the core-pieces, means to prevent the flow of eddy currents in a circuit comprising the said casing, whereby the demagnetizing effects due to such eddy currents in the casing are prevented.

3. The combination, in a magneto electric machine, of a rotatable inductor member, permanent magnets, pole pieces secured thereto, core-pieces angularly spaced from the pole-pieces, holders therefor, an induction coil having its core located between the ends of the core pieces, an interrupter or circuit breaker casing located between the core-pieces, means for insulating said casing, thereby preventing the flow through said casing of eddy currents induced therein whereby the magnetic flux in the core-pieces is not opposed thereby.

4. A magneto electric machine of the inductor alternator type, in combination, a field magnet, core-pieces, non-magnetic means to support the same, inductor members to convey the magnetic flux from the field magnets to the core pieces, said core-pieces having projecting ends, an induction coil located between said ends, a casing located between the core-pieces, means to electrically insulate the casing and said supporting means from the core-pieces, whereby the electric currents that may be generated in the casing and adjacent metal parts of the machine will be prevented from flowing in a closed electric circuit interlinking the core pieces and opposing the flow of flux from the permanent field through the core-pieces, as described.

5. A magneto electric machine of the type described, in combination, magnets to produce a constant field, core-pieces to receive the flux from the magnets, an induction coil arranged between the core pieces, inductor means to directly and alternately convey the flux from the magnets to the core-pieces, a casing located between the core-pieces, means to prevent the flow of eddy currents in a circuit comprising said casing, whereby the demagnetizing effect, due to such currents in the casing is prevented.

6. The combination, in a magneto-electric machine, of a a rotatable inductor, permanent magnets, pole-pieces, secured thereto, holders therefor, an induction coil having its core located between the core pieces, a casing located between the core-pieces, means for electrically insulating said casing or box, whereby the electric currents that are generated in said casing may be prevented from forming a closed circuit including said casing, as described, and the magnetic flux in the core-pieces is not opposed thereby.

7. A magneto electric machine of the type described comprising, in combination, magnets for producing a magnetic field, cores for receiving the flux from said magnets, an induction coil located to receive the flux from the cores, inductors to directly and alternately convey the flux from the magnets to the cores, casings to support the inductors, the innermost one of said casings being located between the cores, means for insulating the innermost one of said casings from the cores for preventing the interlinking of electric currents between the innermost casing, the cores and the adjacent metal parts of the machine, whereby the efficiency of the machine is increased, as described.

14,182. REINFORCING-BAR. GEORGE E. VANDENBURGH, San Francisco, Cal. Filed July 1, 1916. Serial No. 107,203. Original No. 841,741, dated Jan. 22, 1907, Serial No. 315,959. (Cl. 72—112.)



1. A concrete reinforcing consisting of a bar having a plurality of integral spurs, and a spiral coil permanently secured thereto by having the spurs bent down on the several coils, the coils extending beyond and free of the bar at the opposite side therefrom to the securing point.

2. A concrete reinforcing consisting of a bar having integral means to secure a coil thereto, and a spiral coil permanently secured to the bar in each convolution and extended beyond and free of said bar at the opposite side therefrom to the securing point.

3. A reinforcing-bar provided upon one edge with a series of kerfs each having an integral overlapping spur, and a coil disposed in said kerfs, each convolution thereof being retained beneath one of said spurs.

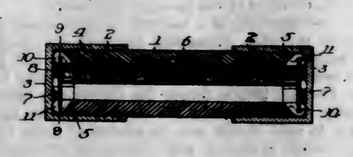
4. In a reinforcing-bar, a spiral coil permanently secured thereto by spurs bearing on each convolution thereof and extended beyond and free of said bar at the opposite side therefrom to the securing-point, said coils being deflected in opposite directions from the center of the bar toward the ends thereof.

5. A reinforcing-bar provided upon one edge with a series of kerfs disposed diagonally to the length of the bar each having an overlapping integral spur projected toward the center of the bar, and a coil disposed in said kerfs and retained beneath said spurs.

6. A reinforcing-bar provided with a spirally-disposed coil secured thereto and extended free of said bar, and a secondary spirally-disposed coiled strand secured to the bar and extending in the opposite direction to the first mentioned coil.

7. A reinforcing-bar provided at opposite sides of its center with spiral coils secured thereto and deflected in opposite directions from the center of the bar, and a secondary spiral coil secured to the bar and extended in the opposite direction to the first-mentioned coil throughout the length thereof.

14,183. SAFETY-FUSE. HARRY A. YATES, New York, N. Y., assignor to Economy Fuse & Manufacturing Company, Chicago, Ill., a Corporation of New York. Filed Apr. 5, 1916. Serial No. 89,200. Original No. 1,028,173, dated June 4, 1912, Serial No. 637,881. (Cl. 175—273.)



1. In an inclosed fuse, the combination of an inclosing casing, terminals carried by said casing, and a fusible element extending through said casing and between said terminals, said element being provided with a plurality of portions substantially more readily fusible than the rest of said element upon passage of an electric current therethrough, whereby on the blowing of said fuse said element will melt at said more readily fusible portions and an intermediate portion of said element between said more readily fusible portions will be separated from the rest of said element without melting said intermediate portion.

2. In an inclosed fuse, the combination of a casing, a pair of terminals carried by said casing, and a fusible element extending through said casing and between said terminals, said element being provided with a plurality of portions of relatively small cross-sectional area, whereby on blowing of said fuse said element will melt at said portions of relatively small cross-sectional area and an intermediate portion of said element between said portions of relatively small cross-sectional area will be separated from the rest of the element without melting said intermediate portion.

3. In an inclosed fuse, the combination of a casing, terminals at the ends of said casing, and a fusible element extending through said casing and between said terminals, said element comprising a plurality of segments of relatively great current-carrying capacity connected by a plurality of portions of relatively low current-carrying capacity, whereby on blowing of said fuse said element will be melted at said portions of said relatively low current-carrying capacity and an intermediate segment between said portions of relatively low current-carrying capacity will be separated from the rest of said element without melting said segment.

4. A safety fuse comprising a casing and a fusible element contained therein, said element having a main fusible portion, fusible head segments at each end of said main fusible portion, and fusible connections between the head segments and the main fusible portion, the combined current carrying capacity of said connections being less than the current carrying capacity of the main fusible portion.

5. A safety fuse comprising a casing, and a fusible element contained therein, the latter comprising fusible head members each formed of connected segments, and a fusible member connecting the head members.

6. A safety fuse comprising a casing, and a fusible element therein, said element comprising a plurality of head members each head member being formed of separated segments, a fusible spider connecting the segments of each head, and a fusible strip connecting the spiders.

7. A safety fuse comprising a casing, a fusible ring located adjacent to each end of the casing, and a fusible connection extending between the rings, said ring being adapted to be ruptured upon the operation of the fuse, substantially as described.

8. A safety fuse comprising a casing, a fusible ring formed of a series of segments, a fusible spider connecting the segments, and a fusible strip connected to the spider.

9. A safety fuse comprising a casing, having inwardly beveled ends, a fusible ring at each end of the casing and having a beveled surface corresponding to the adjacent beveled end of the casing, a fusible connection extending between the rings, and conducting caps at the ends of the casing.

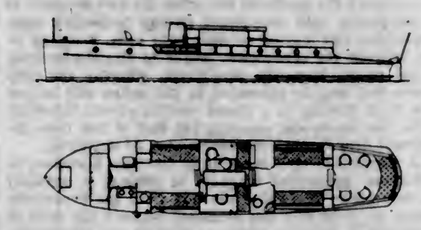
10. A safety fuse comprising a casing formed of sections of insulating material, a plurality of fusible rings spaced apart within the casing, each ring being formed of segmental members, a fusible spider frame connecting the segmental members, a fusible strip connecting the spiders, and conducting caps for the ends of the casing and engaging said rings.

11. A safety fuse comprising a casing, a fusible strip therein, a fusible spider formed of a series of arms radiating from the strip, cross arms at the ends of the radiating arms, fusible segments connected at the cross arms, and conducting caps for the ends of the casing and engaging said segments.

12. A safety fuse comprising a casing formed of assembled sections, fusible head members formed of a series of connected sections, connections between the segments of the head members, a fusible strip connecting the head members and of greater cross area than the combined cross area of the connections of the segments of each head member, and conducting caps for the ends of the casing and engaging said head members.

DESIGNS.

49,504. BOAT. WALTER D. BEAUVAIS and JUDSON H. BOUGHTON, Milwaukee, Wis. Filed June 10, 1916. Serial No. 103,041. Term of patent 7 years.



The ornametal design for a boat as shown.

49,505. PLATE OR SIMILAR ARTICLE. ANDRÉ BEYRAND, Limoges, France, assignor to Herman C. Kupper, New York, N. Y. Filed June 9, 1916. Serial No. 102,775. Term of patent 7 years.



The ornamental design for a plate or similar article as shown.

49,506. PLATE OR SIMILAR ARTICLE. ANDRÉ BEYRAND, Limoges, France, assignor to Herman C. Kupper, New York, N. Y. Filed June 9, 1916. Serial No. 102,776. Term of patent 7 years.



The ornamental design for a plate or similar article as shown.

49,507. PLATE OR SIMILAR ARTICLE. ANDRÉ BEYRAND, Limoges, France, assignor to Herman C. Kupper, New York, N. Y. Filed June 9, 1916. Serial No. 102,777. Term of patent 7 years.



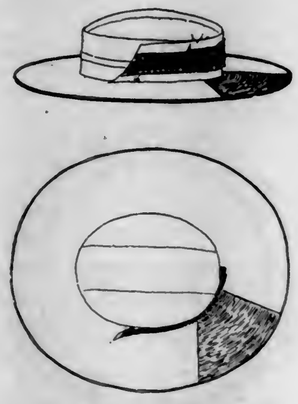
The ornamental design for a plate or similar article as shown.

49,508. PLATE OR SIMILAR ARTICLE. ANDRÉ BEYRAND, Limoges, France, assignor to Herman C. Kupper, New York, N. Y. Filed June 9, 1916. Serial No. 102,778. Term of patent 7 years.



The ornamental design for a plate or similar article as shown.

49,509. HAT. MATILDA COOK, Chicago, Ill., assignor to Gage Brothers & Co., Chicago, Ill., a Corporation of Illinois. Filed May 18, 1916. Serial No. 98,465. Term of patent 3½ years.



The ornamental design for a hat as shown.

49,510. SIGN. GEORGE E. FULLER, Chicago, Ill. Filed June 19, 1916. Serial No. 104,620. Term of patent 7 years.

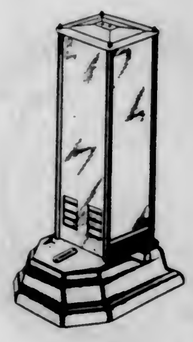
The ornamental design for a sign, as shown.

49,511. CHAIR. JOHN GOSTOMSKI, Pittsburgh, Pa. Filed Apr. 29, 1916. Serial No. 94,501. Term of patent 7 years.



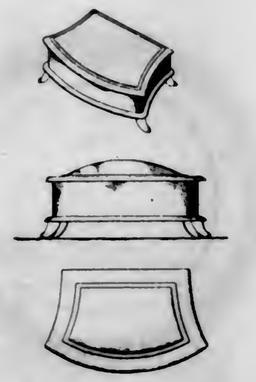
The ornamental design for a chair, as shown.

49,512. VENDING-MACHINE CASING. MILTON O. GRISWOLD, Rock Island, Ill. Filed May 31, 1916. Serial No. 100,976. Term of patent 7 years.



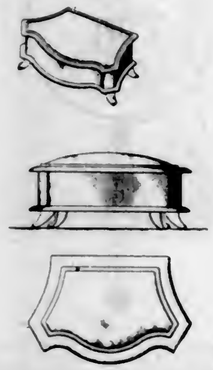
The ornamental design for a vending machine casing, as shown.

49,513. JEWEL-CASE. EDMUND P. HADLEY and CROFTON C. HOLDEN, Leominster, Mass. Filed June 19, 1916. Serial No. 104,622. Term of patent 3½ years.



The ornamental design for a jewel case as shown.

49,514. JEWEL-CASE. EDMUND P. HADLEY and CROFTON C. HOLDEN, Leominster, Mass. Filed June 19, 1916. Serial No. 104,623. Term of patent 3½ years.



The ornamental design for a jewel case as shown.

49,515. CANDY OR MEDICATED TABLET OR THE LIKE. JAMES HARRIS, Wyoming, Ohio, assignor to The Aromint Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 3, 1916. Serial No. 101,619. Term of patent 14 years.



The ornamental design for candy or medicated tablet or the like, substantially as shown.

49,516. PAIR OF CUFF-LINKS. IRVING HEIDELSHEIMER, New York, N. Y. Filed June 16, 1916. Serial No. 104,123. Term of patent 3½ years.



The ornamental design for a pair of cuff links, as shown.

49,517. PAIR OF CUFF-LINKS. IRVING HEIDELSHEIMER, New York, N. Y. Filed June 16, 1916. Serial No. 104,124. Term of patent 3½ years.



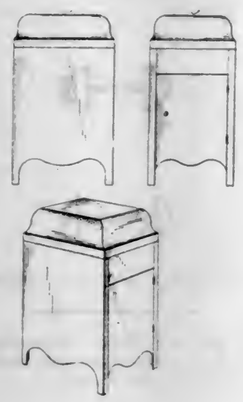
The ornamental design for a pair of cuff links, as shown.

49,518. VASE AND CANDLE-LAMP. GUSTAVE A. HENCKEL, New York, N. Y. Filed Mar. 18, 1914. Serial No. 825,704. Term of patent 14 years.



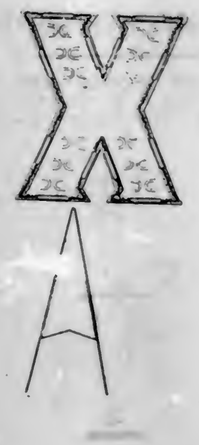
The ornamental design for a vase and candle lamp as shown.

49,519. CABINET FOR TALKING-MACHINES. PERCY A. HORSWELL, Cleveland, Ohio, assignor to The Carola Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 15, 1916. Serial No. 84,499. Term of patent 7 years.



The ornamental design for a cabinet for talking machines, substantially as shown.

49,520. DISPLAY-STAND. ADALBERT JOSEPHSON, New York, N. Y. Filed June 20, 1916. Serial No. 104,825. Term of patent 7 years.



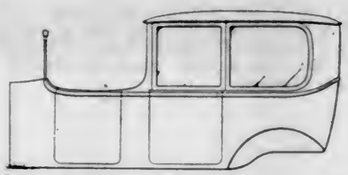
The ornamental design for a display stand, as shown.

49,521. VEHICLE-WHEEL. JOHN KUNST, New York, N. Y. Filed Apr. 20, 1916. Serial No. 92,562. Term of patent 7 years.



The ornamental design for a vehicle wheel, as shown.

49,522. VEHICLE-BODY. HERMAN C. MAISE, Springfield, Mass., assignor to Springfield Body Corporation of New York, Springfield, Mass., a Corporation of New York. Filed June 27, 1916. Serial No. 106,268. Term of patent 14 years.



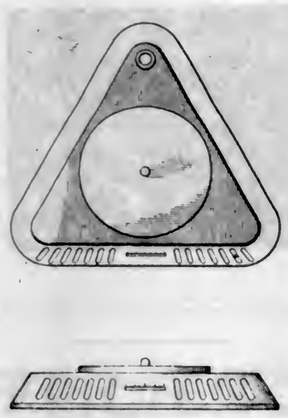
The ornamental design for a vehicle body as shown.

49,523. CLUSTER ELECTRIC-LAMP SOCKET. THOMAS O'DONNELL, Ironwood, Mich. Filed Dec. 1, 1914. Serial No. 875,029. Term of patent 14 years.



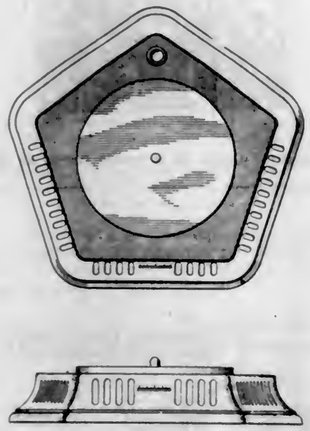
The ornamental design for a cluster electric lamp socket as shown.

49,524. PHONOGRAPH-BODY. FRANK A. ROSS, Wilmette, Ill., assignor to Stewart Phonograph Corporation, Chicago, Ill., a Corporation of Illinois. Filed June 8, 1916. Serial No. 102,595. Term of patent 3½ years.



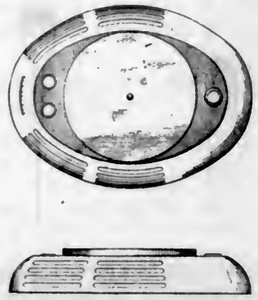
The ornamental design for a phonograph body, as shown.

49,525. PHONOGRAPH-BODY. FRANK A. ROSS, Wilmette, Ill., assignor to Stewart Phonograph Corporation, Chicago, Ill., a Corporation of Illinois. Filed June 8, 1916. Serial No. 102,596. Term of patent 3½ years.



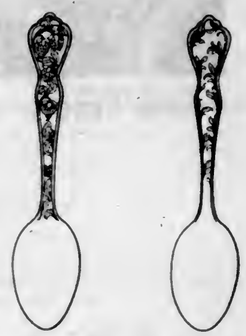
The ornamental design for a phonograph body, as shown.

49,526. PHONOGRAPH-BODY. FRANK A. ROSS, Wilmette, Ill., assignor to Stewart Phonograph Corporation, Chicago, Ill., a Corporation of Illinois. Filed June 8, 1916. Serial No. 102,597. Term of patent 3½ years.



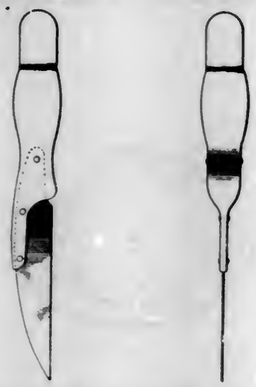
The ornamental design for a phonograph body, as shown.

49,527. SPOON. ALBERT F. SAUNDERS, Syracuse, N. Y., assignor to T. N. Benedict Mfg. Co., East Syracuse, N. Y. Filed Nov. 30, 1915. Serial No. 64,363. Term of patent 3½ years.



The ornamental design for a spoon as shown.

49,528. PARING-KNIFE. FRANCIS A. STEVENS, Silver Lane, Conn. Filed May 16, 1916. Serial No. 97,946. Term of patent 3½ years.



The ornamental design for a paring knife as shown.

49,529. TEXTILE FABRIC. MAX WALBRECHT, West Hoboken, N. J., assignor to Collins & Aikman Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 9, 1916. Serial No. 102,772. Term of patent 7 years.



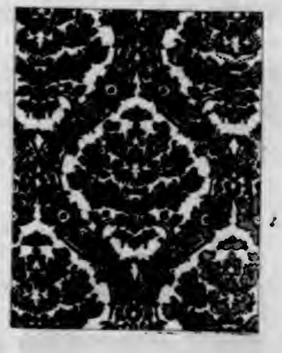
The ornamental design for a textile fabric, as shown.

49,530. TEXTILE FABRIC. MAX WALBRECHT, West Hoboken, N. J., assignor to Collins & Aikman Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 9, 1916. Serial No. 102,773. Term of patent 7 years.



The ornamental design for a textile fabric, as shown.

49,531. TEXTILE FABRIC. MAX WALBRECHT, West Hoboken, N. J., assignor to Collins & Aikman Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 9, 1916. Serial No. 102,774. Term of patent 7 years.



The ornamental design for a textile fabric, as shown.

TRADE-MARKS

PUBLISHED AUGUST 15, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 64,341. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) IMPERIAL RUBBER CO., New York, N. Y. Filed June 24, 1912.

EFFICIENCY

Particular description of goods.—Cotton and Rubber Lined Hose, Linen Hose, Rubber Hose, Rubber and Fabric Hose, Rubber Tubing, Rubber, Cotton, and Leather Belting, Rubber Gaskets, Rubber Valves, and Machinery Packing in Sheet, Spiral, and Ring Form, Composed of Rubber, Rubber and Metal, Rubber and Asbestos, Rubber and Cloth, Rubber and Fiber, and Rubber and Flax.

Claims use since June 1, 1812.

Ser. No. 71,807. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y., (now by change of name The Barrett Company, a Corporation of West Virginia.) Filed July 17, 1913.

TYLIKE

Particular description of goods.—Felt Shingles Either in Rolls, Sheets, or Shingles, in Which the Waterproof Agent is Tar or Asphalt.

Claims use since on or about July 1, 1913.

Ser. No. 75,762. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. HELLER & Co., Chicago, Ill. Filed Feb. 7, 1914. Under ten-year proviso.



Particular description of goods.—Colors for Food.

Claims use since December, 1894.

Ser. No. 77,009. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VETTE & ZUNCKER, Chicago, Ill. Filed Mar. 27, 1914.



The word "Brand" is hereby disclaimed as constituting any part of the trade-mark as shown.

Particular description of goods.—Potted Meat Products and Cereals; Canned Vienna-Style Sausage, Canned Southern-Style Hash; Canned Roast Beef; Canned Corned Beef, Lunch-Tongue, Hamburger Steak and Onions, Sausage, Corned-Beef Hash, and Tripe with Milk, Hams, Bacon, and Lard.

Claims use since Jan. 6, 1914.

Ser. No. 79,119. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL RUBBER COMPANY, St. Louis, Mo. Filed June 15, 1914.

Narco

Particular description of goods.—Waterproofing Compositions for Inner Tubes, Patches, and Rubber Repair Stock Generally.

Claims use since about April, 1912.

Ser. No. 81,520. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MOREY MERCANTILE COMPANY, Denver, Colo. Filed Sept. 28, 1914.

SOLITAIRE

Particular description of goods.—Jelly-Powders, Chocolate, Cocoanut, Canned Fish, Eggs, Soups, Barley, Rolled Oats, Tapioca, Sago, Pancake-Flour, Buckwheat and Wheat Flour Compound, Hominy-Grits, Pearl-Hominy,

Corn Flakes, Cereal Coffee, Clam Juice, Canned Shrimps, Powdered Sugar, Cocoa, Chewing-Gum, Crackers, Sauces—Namely, Worcestershire, Tabasco—Cheese, Horse-Radish, Condensed Milk, Cornmeal, Butter, Wheat-Flour, Package Cane-Sugar, Canned Peeled Green Chilli, Canned Crab-Meat, and Maple-Sugar.

Claims use since Aug. 7, 1914.

Ser. No. 84,651. (CLASS 39. CLOTHING.) DELPARK, INC., New York, N. Y. Filed Feb. 20, 1915.

HALF-BACK

Particular description of goods.—Athletic Underwear, Union Suits, and Pajamas Made of Textile Material.

Claims use since Aug. 1, 1913.

Ser. No. 85,312. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KUBRLE PACKING COMPANY, Baltimore, Md. Filed Mar. 22, 1915. Under ten-year proviso.

AMERICAN BRAND

Consisting of the words "American Brand."

Particular description of goods.—Hams, Bacon, Lard, and Lard Compound.

Claims use since 1891.

Ser. No. 86,418. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ASSOCIATED MANUFACTURERS COMPANY, Waterloo, Iowa. Filed May 6, 1915.

INDIAN HOLD

Particular description of goods.—Metallic End Connections for Pulley-Belts.

Claims use since on or about Jan. 1, 1914.

Ser. No. 86,651. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed May 15, 1915.

ONEIDA COMMUNITY
PAR PLATE

No claim being made to the word "Plate," which forms no part of this trade-mark.

Particular description of goods.—Tableware and Flat-Ware of Precious-Metal-Plated Ware.

Claims use since on or before Mar. 11, 1915.

Ser. No. 86,782. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LION TRACTOR COMPANY, Minneapolis, Minn. Filed May 20, 1915.

LION TRACTOR
KING OF THE FARM

No claim being made to the word "Tractor."

Particular description of goods.—Traction-Engines.

Claims use since about Oct. 20, 1914.

Ser. No. 87,349. (CLASS 12. CONSTRUCTION MATERIALS.) NORTHWESTERN EXPANDED METAL COMPANY, Chicago, Ill. Filed June 16, 1915.

CHANELATH

Particular description of goods.—Expanded-Metal Lathing.

Claims use since on or about Apr. 1, 1915.

Ser. No. 87,795. (CLASS 39. CLOTHING.) THE M. SAHLIN CORSET COMPANY, Chicago, Ill. Filed July 6, 1915.

Solidkumfect

Particular description of goods.—Corsets.

Claims use since June 7, 1915.

Ser. No. 88,296. (CLASS 38. PRINTS AND PUBLICATIONS.) AMALGAMATED MEAT CUTTERS AND BUTCHER WORKMEN OF NORTH AMERICA, Syracuse, N. Y. Filed July 30, 1915.



Particular description of goods.—Printed Books, Pamphlets, and Circulars Used Between the Different Units of the Association for the Furtherance of Its Objects.

Claims use since Jan. 26, 1897.

Ser. No. 89,648. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHERER-GILLETT COMPANY, Chicago, Ill. Filed Oct. 4, 1915.



Consisting of a red ground, a white ring thereupon, and a red and a blue semicircle within the white ring, together with the word "Advance" in white with a blue border, the ring being bounded by a blue border.

Particular description of goods.—Bluing, Ammonia, Baking-Powder, Soda or Saleratus, Cream-Tartar, Gloss-Starch.

Claims use since July 15, 1915.

Ser. No. 90,076. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. W. CORMICAN, Casey, Ill. Filed Oct. 25, 1915.



Particular description of goods.—Kidney Medicine.

Claims use since Sept. 15, 1915.

Ser. No. 90,571. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) H. C. WHITE CO., North Bennington, Vt. Filed Nov. 10, 1915.

KIDDIE-KAR

Particular description of goods.—Three-Wheeled Velocipede for the Use of Children.

Claims use since Aug. 1, 1915.

Ser. No. 90,593. (CLASS 38. PRINTS AND PUBLICATIONS.) BROTHERHOOD RAILROAD SIGNALMEN OF AMERICA, La Salette, Ontario, Canada, and Mansfield, Mass. Filed Nov. 12, 1915.

The
Brotherhood Railroad
Signalmen of America



Particular description of goods.—Printed Books, Pamphlets, and Circulars Used Between the Different Units of the Association for the Furtherance of Its Objects.

Claims use since 1901.

Ser. No. 91,982½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOLDEN GRAIN MILLING COMPANY, East St. Louis, Ill. Filed Jan. 6, 1916.

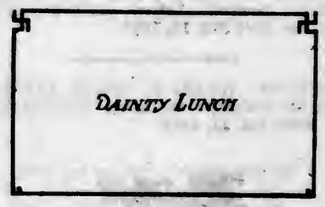


Consisting of the name "Ben Hur" in connection with the design shown.

Particular description of goods.—Prepared Stock Food.

Claims use since on or about Dec. 1, 1915.

Ser. No. 92,068. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PETER-KERN COMPANY, Knoxville, Tenn. Filed Jan. 11, 1916.



No claim being made to the words "Dainty Lunch" apart from the mark as shown.

Particular description of goods.—Candies, Cakes, Bread, and Crackers.

Claims use since April, 1914.

Ser. No. 92,177. (CLASS 38. PRINTS AND PUBLICATIONS.) ALLIED PRINTING TRADES COUNCIL, Washington, D. C. Filed Jan. 17, 1916.



No claim being made to the words "Union Label Washington, D. C." apart from the matter shown.

Particular description of goods.—Printed Books, Pamphlets, and Circulars Used Between the Different Units of the Association for the Furtherance of Its Objects.

Claims use since Feb. 17, 1896.

Ser. No. 92,314. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WASHBURN-CROSBY CO., Minneapolis, Minn. Filed Jan. 21. 1916.



No claim being made to the exclusive use of the words "Farinha De Trigo Superior E. Unidos Da America Do Norte Flour" and "Trade-Mark" apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.

Claims use since Dec. 1, 1915.

Ser. No. 92,381. (CLASS 37. PAPER AND STATIONERY.) E. CANTELO WHITE, Chicago, Ill. Filed Jan. 24. 1916.

BUDGET

Particular description of goods.—Bank-Checks, Warrants, Drafts, Index-Sheets, Ledger-Sheets, Statements, Check-Books, Remittance-Letters, and Notices of Credit.

Claims use since Jan. 19, 1916.

Ser. No. 92,769. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHADDOCK & COMPANY, Fresno, Cal. Filed Feb. 11, 1916.



Particular description of goods.—Dried Fruits.

Claims use since June 1, 1915.

Ser. No. 92,944. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) LACONIA TRUCK CO., Laconia, N. H. Filed Feb. 18, 1916.

P·B·B

Particular description of goods.—Motor-Trucks.

Claims use since Feb. 3, 1916.

Ser. No. 92,960. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) C. A. WILLEY COMPANY, New York and Long Island City, N. Y. Filed Feb. 18, 1916. Under ten-year proviso.

WILLEY'S
"FILUP"

Particular description of goods.—Fillers.

Claims use since 1890.

Ser. No. 93,022. (CLASS 37. PAPER AND STATIONERY.) RAYMOND A. MERRILL, New York, N. Y. Filed Feb. 21, 1916.



The word "Envelope" and the expression "Made in U. S. A." not being claimed herein.

Particular description of goods.—Envelops.

Claims use since about Jan. 15, 1916.

Ser. No. 93,037. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. & H. ALDRED, Derby, England. Filed Feb. 23, 1916.

CONCENTROL

Particular description of goods.—Preparations for Preserving and Staining Wood and Arresting Decay Therein.

Claims use since May, 1915.

Ser. No. 93,124. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KANSAS MILLING COMPANY, Wichita, Kans. Filed Feb. 26, 1916.

IMPERATOR

Particular description of goods.—Wheat-Flour.

Claims use since Jan. 6, 1916.

Ser. No. 93,188. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed Feb. 29, 1916.

ONEIDA COMMUNITY
DIAMOND PLATE

No claim being made to the word "Plate," which forms no part of this trade-mark.

Particular description of goods.—Tableware and Flat-Ware of Precious-Metal-Plated Ware.

Claims use since on or before Feb. 8, 1916.

Ser. No. 93,189. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed Feb. 29, 1916.

ONEIDA COMMUNITY
SERVICE PLATE

No claim being made to the word "Plate," which forms no part of this trade-mark.

Particular description of goods.—Tableware and Flat-Ware of Precious-Metal-Plated Ware.

Claims use since on or before Feb. 8, 1916.

Ser. No. 93,596. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM BANKS, York, England. Filed Mar. 17, 1916.



Particular description of goods.—Hams and Bacon.

Claims use since October, 1893.

Ser. No. 93,783. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) F. T. LORD POLISH COMPANY, Cambridge, Mass. Filed Mar. 21, 1916.

LORD'S
NUBLAC

No exclusive claim being made for the words "Lords" and "Nu-Blac" apart from the mark shown in the drawing.

Particular description of goods.—Stove-Polish.

Claims use since Apr. 1, 1912.

Ser. No. 93,888. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) BANDEROB-CHASE COMPANY, Oshkosh, Wis. Filed Mar. 27, 1916.

WASHKOSH

Particular description of goods.—Washing-Machines for Laundry Purposes.

Claims use since Jan. 20, 1916.

Ser. No. 93,926. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) W. BERSHTEIN, Philadelphia, Pa. Filed Mar. 28, 1916.



Particular description of goods.—Liniments.

Claims use since February, 1916.

Ser. No. 94,007. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE H. B. CLAFLIN CORPORATION, New York, N. Y. Filed Mar. 31, 1916.



Comprising the words "Kiddie Braid," no claim being made to the exclusive use of the word "Braid" apart from the mark as shown in the drawing.

Particular description of goods.—Fancy Braids, Feather-Stitching, Embroideries, and Edgings.

Claims use since Oct. 1, 1915.

Ser. No. 94,039. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROSARIO PUSATERI, Lockport, N. Y. Filed Apr. 1, 1916.

LOCK CITY
BRAND

No claim being made to the word "Brand."

Particular description of goods.—Canned Vegetables Including Tomatoes.

Claims use since the 1st day of September, 1911.

Ser. No. 94,130. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Apr. 4, 1916. Under ten-year proviso.

COLBY

Particular description of goods.—Clothes-Wringers and Parts Thereof.

Claims use since some time prior to 1889.

Ser. No. 94,221. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ZUCCA OLIVE OIL CO., New York, N. Y. Filed Apr. 6, 1916.



The mark being shown in white characters upon a blue background, no claim, however, being made to any of the words "Contents One Quart Pure Italian Olive Oil For Medicinal And Table Use, Imported And Packed By, New York."

Particular description of goods.—Olive-Oil.

Claims use since Dec. 2, 1915.

Ser. No. 94,261. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KORNFALFA FEED MILLING COMPANY, Kansas City, Mo. Filed Apr. 7, 1916.



No claim being made to the word "Tik-Eradi-Kator" apart from the mark shown.

Particular description of goods.—A Tonic and Blood-Purifier for Animals.

Claims use since on or about the 1st day of October, 1915.

Ser. No. 94,247. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) BARKER BROS., Los Angeles, Cal. Filed Apr. 8, 1916.

Barkerola

Particular description of goods.—Talking-Machines.

Claims use since the 1st day of November, 1915.

Ser. No. 94,537. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAFFNER'S STAR BAKERY, Fort Wayne, Ind. Filed Apr. 19, 1916.

Hol-Tay-To

Particular description of goods.—Bread.

Claims use since Jan. 31, 1916.

Ser. No. 94,620. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. D. LEE MERCANTILE CO., Salina, Kans., and Kansas City, Mo. Filed Apr. 21, 1916.



Particular description of goods.—Coffee, Tea, Seeded Raisins, Dried Currants, Evaporated Raspberries, Sardines, Canned Salmon, Canned Oysters, Canned Tuna-Fish, Vienna-Style Sausage, Canned Sliced Beef, Potted Meats, Pepper, Ginger, Allspice, Cinnamon, Cloves, Mustard, Sage, Celery-Salt, Food-Flavoring Extracts, Sago, Tapioca, Barley, Alimentary Pastes, Peanut-Butter, Fruit Jelly, Chocolate, Cocoa, Fruit Preserves, Fruit Jams, Canned Milk, Honey, Prepared Mustard, Tomato Catsup, Pickles, Vinegar, Olives, Table-Syrup, Canned Fruits, Canned Berries, Canned Pork and Beans, Canned Vegetables, Canned Hominy, Canned Sauer-Kraut, Rolled Oats, and Canned Apple-Butter.

Claims use since March, 1891.

Ser. No. 94,653. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) M. PIOWATY & SONS, Chicago, Ill. Filed Apr. 22, 1916.



No claim being made either to the representation of a blue tag or the word "Bananas" apart from the mark shown on the drawing, said drawing being lined for blue.

Particular description of goods.—Bananas.

Claims use since May 1, 1915.

Ser. No. 94,703. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COAST-WIDE CHEMICAL COMPANY, INCORPORATED, New York, N. Y. Filed Apr. 25, 1916.

BUG-RID

"Bug-" being printed in black and "Rid" in red.

Particular description of goods.—An Insecticide.

Claims use since Nov. 15, 1910.

Ser. No. 94,719. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ASHLAND SUPPLY HOUSE, Chicago, Ill. Filed Apr. 26, 1916.



No claim being made to the words "Make Man Tablets" apart from the mark shown on the drawing.

Particular description of goods.—A Tonic Medicine.

Claims use since June, 1909.

Ser. No. 94,722. (CLASS 38. PRINTS AND PUBLICATIONS.) MILLER FREEMAN, Seattle, Wash. Filed Apr. 26, 1916.

MOTORSHIP

Particular description of goods.—A Monthly Publication.

Claims use since Apr. 1, 1916.

Ser. No. 94,748. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HART & BRO. CO., Wilmington, Del. Filed Apr. 27, 1916.



Consisting of a red heart.

Particular description of goods.—Ham, Bacon, Lard, and Sausage.

Claims use since January, 1857.

Ser. No. 94,767. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLINCHFIELD PRODUCTS CORPORATION, Johnson City, Tenn., and New York, N. Y. Filed Apr. 28, 1916.

cLINCHCo

Particular description of goods.—Barium Carbonate, Barium Sulfid, Barium Chlorid, Blanc Fixe, Barium Nitrate, Barium Peroxid, Barium Hydrate, Sodium Sulfid, Lithopone, Peroxid of Hydrogen, Soda-Ash, Caustic Soda, Muriatic Acid.

Claims use since Mar. 25, 1916.

Ser. No. 94,817. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) (Mrs.) JOHN W. COVINGTON, Indianapolis, Ind. Filed May 1, 1916.

PERO

Particular description of goods.—Hair-Grower.

Claims use since August, 1908.

Ser. No. 94,913. (CLASS 37. PAPER AND STATIONERY.) BROWNVILLE PAPER CO., Brownville, N. Y. Filed May 5, 1916.

SEA FOAM BRAND

No claim is made to the word "Brand" apart from the mark shown.

Particular description of goods.—Type-Writing Paper Which is Not Coated, but May be Used for Manifold-Copying Purposes. The Paper is Light-Weight Bond Suitable for Interdepartment Purposes and any other Uses That Light-Weight Bond-Papers are or Can be Used, and It is Known Under the Commercial Name of Light-Weight Manifold-Paper and Light-Weight Bond-Paper for General Office and Business Use.

Claims use since May 1, 1913.

Ser. No. 94,927. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE STEINAU CO., Louisville, Ky. Filed May 5, 1916.

THESCo

Particular description of goods.—Non-Electrical Advertising-Signs.

Claims use since May 1, 1916.

Ser. No. 95,081. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE S. MALES, New York, N. Y. Filed May 11, 1916.

FRESH LAID EGGS
G.M
MILDEN FARM

No claim being made to the words "Fresh Laid Eggs," letters "G. M." lined for color red.

Particular description of goods.—Eggs.

Claims use since the year 1906.

Ser. No. 95,095. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CLIFFORD L. ALLEN, Kansas City, Mo. Filed May 12, 1916.



No claim is made to the words "N' Odor Soap" apart from the mark shown in the drawing.

Particular description of goods.—Cakes of Soap.

Claims use since Apr. 20, 1916.

Ser. No. 95,182. (CLASS 39. CLOTHING.) STERN PRAGLIN CO., New York, N. Y. Filed May 16, 1916.

S. P. CO.

Particular description of goods.—Underwaists.

Claims use since Oct. 18, 1911.

Ser. No. 95,312. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) SOUND REPRODUCTION COMPANY, INC., New York, N. Y. Filed May 20, 1916.



The words "New York, U. S. A. Makers under Pats. Pending Nov. 24, '14 & May 11, '15" being disclaimed, also the representation of the talking-machine.

Particular description of goods.—Phonographs.

Claims use since May 1, 1916.

Ser. No. 95,316. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRED WOLFERMAN GOOD THINGS TO EAT CO., Kansas City, Mo. Filed May 20, 1916.



Particular description of goods.—Candy.

Claims use since Apr. 16, 1916.

Ser. No. 95,335. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. S. HOROVITZ CHEM. CO. INC., New York, N. Y. Filed May 22, 1916.

COMATIN

Particular description of goods.—Preparations for the Treatment of Tuberculosis of Human Beings.

Claims use since Apr. 15, 1916.

Ser. No. 95,343. (CLASS 15. OILS AND GREASES.) PALM OIL CO., Mobile, Ala. Filed May 22, 1916.

RELIEF

Particular description of goods.—Axle-Grease and Oils and Similar Lubricating Materials.

Claims use since about Feb. 1, 1915.

Ser. No. 95,367. (CLASS 37. PAPER AND STATIONERY.) C. B. HEWITT & BROTHERS, New York, N. Y. Filed May 23, 1916.

PAT <ABC> TERN BOARD

No claim being made to the words "Pattern Board" apart from the mark as shown.

Particular description of goods.—Paper-Board for Making Shoe-Patterns and the Like.

Claims use since 1880.

Ser. No. 95,438. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) CHAMPION CORK M'F'G. CO. INC., New York, N. Y. Filed May 26, 1916.

CHAMPCO

Particular description of goods.—Cork Gaskets for Use in Vessel-Closures.

Claims use since May 15, 1916.

Ser. No. 95,481. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. E. RITTY CANNING CO., Dayton, Ohio. Filed May 27, 1916.

Yah-pep-a DINNER

No claim is made to the word "Dinner" apart from the mark shown in the drawing.

Particular description of goods.—A Canned Meat and Vegetable Dinner.

Claims use since Apr. 1, 1916.

Ser. No. 95,499. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELLS-ABBOTT-NIEMAN CO., Schuyler, Nebr. Filed May 27, 1916.



Particular description of goods.—Wheat-Flour.

Claims use since about January, 1916.

Ser. No. 95,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELLS-ABBOTT-NIEMAN CO., Schuyler, Nebr. Filed May 27, 1916.

Culmination

Particular description of goods.—Wheat-Flour.

Claims use since about January, 1916.

Ser. No. 95,502. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELLS-ABBOTT-NIEMAN CO., Schuyler, Nebr. Filed May 27, 1916.

FOUNDATION

Particular description of goods.—Wheat-Flour.

Claims use since about January, 1916.

Ser. No. 95,503. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELLS-ABBOTT-NIEMAN CO., Schuyler, Nebr. Filed May 27, 1916.

INSPIRATION

Particular description of goods.—Wheat-Flour.

Claims use since about January, 1916.

Ser. No. 95,517. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARY C. W. FOOTE, Wayne, Pa. Filed May 29, 1916.



The words "Purity Food Company" being disclaimed.

Particular description of goods.—Potato Chips, Canned Soups and Vegetables, and Cake.

Claims use since Apr. 15, 1916.

Ser. No. 95,541. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BRITISH AMERICAN CHEMICAL CO. INC., New York, N. Y. Filed May 31, 1916.

KEPHIRIN

The word "Kephirin" printed in bold block type.

Particular description of goods.—Derivatives of Salicylic Acid.

Claims use since Apr. 1, 1916.

Ser. No. 95,553. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) CHARLES KELLER & CO., New York, N. Y. Filed May 31, 1916.

CK

Particular description of goods.—Brooches, Scarf-Pins, Cuff-Buttons, Hat-Pins, Necklace-Chains, Watch-Chains, Sautoir-Chains, Lavallière-Chains, Finger-Rings, Fobs, Bar-Pins, Bracelets, Emblem-Rings, Emblem Cuff-Buttons, Emblem-Pins, Emblem Lapel-Buttons, Emblem-Lockets, Said Emblem Goods Being Made of or Plated with Precious Metal; Lockets, Necklaces, and Lavallières.

Claims use since 1901.

Ser. No. 95,570. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN BISCUIT CO., San Francisco, Cal. Filed June 1, 1916.

BUSTER BROWN

Particular description of goods.—Cakes, Crackers, and Biscuit.

Claims use since Jan. 8, 1911.

Ser. No. 95,603. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) TMCO MFG. CO. INC., New York, N. Y. Filed June 2, 1916.

HYLITE

Particular description of goods.—Disinfecting-Paint.

Claims use since about the 15th day of June, 1913.

Ser. No. 95,741. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE WILCOX & WHITE COMPANY, Meriden, Conn. Filed June 8, 1916.

SUPREMA

Particular description of goods.—Mechanical Music-Playing Instruments and Music-Sheets Therefor.

Claims use since on or about Apr. 15, 1916.

Ser. No. 95,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BAST FOGARTY MILLING COMPANY, Des Moines, Iowa. Filed June 9, 1916.

FOGARTY'S



WHITE ROYAL

The words "Superfine—From Choicest Hard Wheat" appearing in the drawing and on the specimens are hereby disclaimed.

Particular description of goods.—Wheat-Flour.

Claims use since Jan. 1, 1915.

Ser. No. 95,763. (CLASS 38. PRINTS AND PUBLICATIONS.) SOCIETY OF MODERN ART, INC., New York, N. Y. Filed June 9, 1916.

M A C

MODERN ART COLLECTOR

Particular description of goods.—A Magazine of Modern Art Published Monthly.
Claims use since Oct. 1, 1915.

Ser. No. 95,808. (CLASS 43. THREAD AND YARN.) ANDREW ADIE, Newton and Boston, Mass. Filed June 12, 1916.

CYGNET

Particular description of goods.—Worsted Yarn.
Claims use since Feb. 15, 1916.

Ser. No. 95,810. (CLASS 12. CONSTRUCTION MATERIALS.) THE BARRETT COMPANY, New York, N. Y. Filed June 12, 1916.

NOX-AER-LEEK

Particular description of goods.—Bituminous Materials for Boiler-Settings.
Claims use since on or about the 1st of July, 1915.

Ser. No. 95,816. (CLASS 33. GLASSWARE.) H. C. FRY GLASS COMPANY, Rochester, Pa. Filed June 12, 1916.

FRY

No claim is here made to the name "Fry" apart from the mark shown in the drawing.
Particular description of goods.—Glass Beakers and Flasks, Commonly Spoken of as Chemical Ware.
Claims use since May 5, 1916.

Ser. No. 95,841. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE BARRETT COMPANY, New York, N. Y. Filed June 13, 1916.

ECONOMITE

Particular description of goods.—Foundry Facing and Core Compound.
Claims use since on or about the 1st day of June, 1916.

Ser. No. 95,854. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING COMPANY, Richmond, Va. Filed June 13, 1916.

Particular description of goods.—Toilet-Paper.
Claims use since May, 1912.

Ser. No. 95,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MINNEHAHA CANDY CO., Sioux Falls, S. D. Filed June 15, 1916.

MINNEHAHA MAID

Particular description of goods.—Candy.
Claims use since April, 1916.

Ser. No. 95,904. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FRANK M. SCHAEFER, Chicago, Ill. Filed June 15, 1916.

KITCHENMAID

Particular description of goods.—Dish-Washing Machines and Dish-Washing-Machine Parts.
Claims use since on or about the 15th day of November, 1914.

Ser. No. 95,963. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEREMIAH B. FENTON, Freeport, Ill. Filed June 19, 1916.

"MARVEL"

Particular description of goods.—A Liniment to be Used for Sprains, Bruises, Muscular Rheumatism, Lumbago, Swollen Glands, Neuralgia, Headache, and Sciatica.
Claims use since May 25, 1916.

Ser. No. 95,965. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GORDON, SEWALL & CO. INC., Houston, Tex. Filed June 19, 1916.

LARRAPIN

Particular description of goods.—A Syrup Used for a Food.
Claims use since Mar. 1, 1916.

Ser. No. 95,990. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ABILENE FLOUR MILLS CO., Abilene, Kans. Filed June 20, 1916.

PLA-SAFE

Particular description of goods.—Wheat-Flour.
Claims use since the 21st day of January, 1915.

Ser. No. 95,994. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BRITISH DRUG HOUSES, LIMITED, London, England. Filed June 20, 1916.

FERRIVINE

Particular description of goods.—An Injection for Venereal Diseases.
Claims use since January, 1916.

Ser. No. 96,023. (CLASS 43. THREAD AND YARN.) PAN-AMERICAN TRADING COMPANY, New York, N. Y. Filed June 21, 1916.

PAN-AMERICAN

Particular description of goods.—Spool-Cotton—i. e., Cotton Thread Wound on Spools.
Claims use since about April, 1916.

Ser. No. 96,025. (CLASS 39. CLOTHING.) ROSENAU BROTHERS, Philadelphia, Pa. Filed June 21, 1916.

Cinderella

Particular description of goods.—Children's Dresses.
Claims use since Jan. 1, 1915.

Ser. No. 96,028. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) A. STEINHARDT & BRO., New York, N. Y. Filed June 21, 1916.



Consisting of the conventionalized representation of a porcupine.
Particular description of goods.—Bristle, Hair, and Corn-Straw Brooms, Brushes, and Dusters.
Claims use since Jan. 3, 1898.

Ser. No. 96,029. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. MARY'S MILL COMPANY, St. Marys, Mo. Filed June 21, 1916.

TOKAY



Particular description of goods.—Wheat-Flour.
Claims use since about Aug. 10, 1915.

Ser. No. 96,030. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. MARY'S MILL COMPANY, St. Marys, Mo. Filed June 21, 1916.

FERN LEAF

Particular description of goods.—Wheat-Flour.
Claims use since about Oct. 10, 1902.

Ser. No. 96,031. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. MARY'S MILL COMPANY, St. Marys, Mo. Filed June 21, 1916.

TREATY



Particular description of goods.—Wheat-Flour.
Claims use since about Aug. 10, 1915.

Ser. No. 96,032. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. MARY'S MILL COMPANY, St. Marys, Mo. Filed June 21, 1916.

Grouse



Particular description of goods.—Self-Rising Flour.
Claims use since about Aug. 10, 1915.

Ser. No. 96,033. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. MARY'S MILL COMPANY, St. Marys, Mo. Filed June 21, 1916.



COLLIE

Particular description of goods.—Self-Rising Flour.
Claims use since about Aug. 10, 1915.

Ser. No. 96,034. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. MARY'S MILL COMPANY, St. Marys, Mo. Filed June 21, 1916.



Particular description of goods.—Self-Rising Flour.
Claims use since about Dec. 9, 1912.

Ser. No. 96,035. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ST. MARY'S MILL COMPANY, St. Marys, Mo. Filed June 21, 1916.



Particular description of goods.—Self-Rising Flour.
Claims use since about Dec. 9, 1912.

Ser. No. No. 96,045. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) CHARLES M. BLUDAU, Milwaukee, Wis. Filed June 22, 1916.



Particular description of goods.—Arch-Supports.
Claims use since June 15, 1914.

Ser. No. 96,055. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) HALL-BORCHERT DRESS FORM CO., New York, N. Y. Filed June 22, 1916.

EMPRESS

Particular description of goods.—Dress-Forms.
Claims use since September, 1912.

Ser. No. 96,056. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) HALL-BORCHERT DRESS FORM CO., New York, N. Y. Filed June 22, 1916.

QUEEN

Particular description of goods.—Dress-Forms.
Claims use since September, 1913.

Ser. No. 96,062. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. PFEIFFER MANUFACTURING COMPANY, St. Louis, Mo. Filed June 22, 1916.

RID-IT

Particular description of goods.—A Medicinal Preparation for the Relief of Gleety and Gonorrheal Conditions and Analogous Disorders.
Claims use since September, 1910.

Ser. No. 96,064. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. PFEIFFER MANUFACTURING COMPANY, St. Louis, Mo. Filed June 22, 1916.



No claim being made to the words "Pfeiffers Little Pills" apart from the mark shown in the drawing.
Particular description of goods.—A Medicinal Preparation for the Relief of Constipation, Billiousness, Costiveness and Analogous Disorders.
Claims use since Septem'er, 1910.

Ser. No. 96,072. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed June 22, 1916.



Particular description of goods.—Tooth-Powder, Face-Powder, Dental Cream, Talcum Powder, and Toilet Waters.
Claims use since about the month of April, 1913.

Ser. No. 96,106. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GEORGE W. FRÄKER, Excelsior Springs, Mo. Filed June 24, 1916.



Particular description of goods.—Soft Drinks Dispensed at Soda-Fountains.
Claims use since May 6, 1916.

Ser. No. 96,116. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERMAN E. STÜRCKE, Brooklyn, N. Y. Filed June 24, 1916.



Particular description of goods.—Liquefied Carbonic Acid.
Claims use since April, 1901.

Ser. No. 96,128. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) AUTO SUPPLY MANUFACTURING CO., Eau Claire, Wis. Filed June 26, 1916.



Particular description of goods.—Tire-Patches.
Claims use since June 15, 1916.

Ser. No. 96,130. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H. Filed June 26, 1916.

ACA
ACA

Particular description of goods.—Cotton Piece Goods and Cotton Flannels.
Claims use since the year 1836.

Ser. No. 96,137. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CADICK MILLING COMPANY, Grandview, Ind. Filed June 26, 1916.

Big Dollar

Particular description of goods.—Wheat-Flour.
Claims use since June 10, 1916.

Ser. No. 96,139. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK CHAPMAN, Providence, R. I. Filed June 26, 1916.



Particular description of goods.—A Preparation to Stop Leaks in Automobile-Radiators.
Claims use since Jan. 1, 1916.

Ser. No. 96,143. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) MANUEL GOMEZ, Habana, Cuba. Filed June 26, 1916.



The portrait shown being that of an Indian chief named Hatuey, now deceased, who resided in the Island of Cuba at the time of its discovery, and no claim being made to the exclusive right to the use of the word "Ron" apart from the mark shown in the drawing.

Particular description of goods.—Rum.

Claims use since Jan. 1, 1914.

Ser. No. 96,149. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo. Filed June 26, 1916.

Advocate

Particular description of goods.—Cakes of the Kind Known as Cookies.

Claims use since about May 24, 1916.

Ser. No. 96,151. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MANVILLE COMPANY, Providence, R. I. Filed June 26, 1916.

Linfeel

The word "Linfeel."

Particular description of goods.—Cotton, Woolen, and Mixed Piece Goods.

Claims use since June 1, 1913.

Ser. No. 96,159. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE E. L. PATCH CO., Boston, Mass. Filed June 26, 1916.



The portrait shown being that of Edgar L. Patch, 2d.

Particular description of goods.—Sugar of Milk.

Claims use since July, 1915.

Ser. No. 96,171. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed June 26, 1916.

WHITE DIAMOND

Particular description of goods.—Enameled Metal Ware.

Claims use for the past ten years.

Ser. No. 96,173. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ESSIE BONNER SHOWERS, Louisville, Ky. Filed June 26, 1916.

E. B. S. DISINFECTANT

The trade-mark comprises a single line of lettering consisting of the letters "E. B. S." and the word "Disinfectant," with a double-headed cross pendent from each end of the line, said mark being printed in black. The exclusive use of the word "Disinfectant" is not claimed except in connection with the rest of the mark.

Particular description of goods.—Disinfectants.

Claims use since about January, 1912.

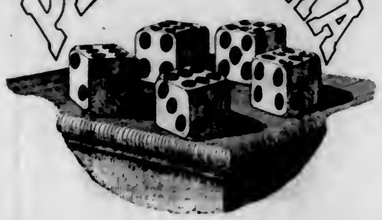
Ser. No. 96,176. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ELGIN NATIONAL WATCH COMPANY, Chicago, Ill. Filed June 27, 1916.

Strand

Particular description of goods.—Watches and Watch-Movements.

Claims use since Apr. 3, 1916.

Ser. No. 96,178. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLT & COMPANY, New York, N. Y. Filed June 27, 1916.



Particular description of goods.—Wheat-Flour.

Claims use since May 26, 1916.

Ser. No. 96,183. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES O. POLLOCK, Wichita, Kans. Filed June 27, 1916.

FLY-GO

Particular description of goods.—An Insecticide.

Claims use since June 1, 1916.

Ser. No. 96,186. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCOTCH-TONE REMEDY CO., Oklahoma, Okla. Filed June 27, 1916.

Scotch Tone
O-DO-TONE

Particular description of goods.—Deodorizing Preparations.

Claims use since on or about July 1, 1914.

Ser. No. 96,194. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BERNARD COLLE, New York, N. Y. Filed June 28, 1916.



The words "Hager Formula" not being a part thereof.

Particular description of goods.—Artificial Seltzer.

Claims use since June 1, 1916.

Ser. No. 96,206. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KALI MFG. CO., Philadelphia, Pa. Filed June 28, 1916.

SULPHANTINE

Particular description of goods.—A Chemical Compound Used to Prevent the Deteriorating Effects of Sulfid of Soda by Rendering it Inert Wherever Sulfid of Soda May be Used in Connection with Textile Fabrics, Leather, Metals, or Any other Purpose.

Claims use since July 1, 1915.

Ser. No. 96,227. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ABRAHAM FREEDA, New York, N. Y. Filed June 29, 1916.

UNG. GUAIOL

Comprising the words "Ung. Guaiol."

Particular description of goods.—Ointments.

Claims use since Jan. 1, 1915.

Ser. No. 96,230. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM E. HEATH, Baltimore, Md. Filed June 29, 1916.

BOUDOIR

Particular description of goods.—Toilet Creams and Dental Paste.

Claims use since about the year 1910.

Ser. No. 96,234. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE L. MILLER, New Orleans, La. Filed June 29, 1916.

PRESTO

Particular description of goods.—Face-Cream.

Claims use since November, 1911.

Ser. No. 96,251. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE INTRAVENOUS PRODUCTS COMPANY, Denver, Colo. Filed June 30, 1916.

KAOLIZE

The said trade-mark being the word "Kaolize."

Particular description of goods.—A Preparation to be Used as a Bacterial Absorptive, Antiseptic, Disinfectant, and Surgical Dressing.

Claims use since Apr. 1, 1916.

Ser. No. 96,261. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WOLFF-WILSON DRUG CO., St. Louis, Mo. Filed June 30, 1916.

RID-O-DOR

Particular description of goods.—Deodorizing-Creams and Deodorizing Liquids.

Claims use since May 25, 1916.

Ser. No. 96,275. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM P. MULLIKIN, Albion, Ind. Filed July 1, 1916

W.P.M.

Particular description of goods.—A Preparation for the Treatment of Cancer.

Claims use since June 10, 1916.

Ser. No. 96,291. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE FAULTLESS RUBBER CO., Ashland, Ohio. Filed July 3, 1916.

Reliance
De Luxe

No claim being made to the words "De Luxe" apart from the mark shown in the drawing.

Particular description of goods.—Water-Bottles, Fountain-Syringes, and Combination Water-Bottles and Fountain-Syringes.

Claims use since May 2, 1916.

Ser. No. 96,294. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES F. GAFFNEY, Cleveland, Ohio. Filed July 3, 1916.

HAROFOAM

Particular description of goods.—A Hair-Tonic.
Claims use since Mar. 1, 1916.

Ser. No. 96,296. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE INTRAVENOUS PRODUCTS COMPANY, Denver, Colo. Filed July 3, 1916.

CREOFORM

The said mark being the word "Creoform."
Particular description of goods.—A Preparation to be Used as an External Antiseptic and Disinfectant.
Claims use since May 1, 1916.

Ser. No. 96,312. (CLASS 38. PRINTS AND PUBLICATIONS.) THE ANGUS COMPANY, New York, N. Y. Filed July 5, 1916.

THE
AMERICAN
ANNUAL
GOLF GUIDE

Particular description of goods.—A Book to be Issued Yearly Relating to Golf.
Claims use since October, 1915.

Ser. No. 96,328. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELMER H. JACKSON, Seattle, Wash. Filed July 5, 1916.

PIE-FLAKES

Particular description of goods.—Prepared Pastry-Flour.
Claims use since Dec. 1, 1914.

Ser. No. 96,335. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HENRY STEERS SAND & GRAVEL CO. INC., New York, N. Y. Filed July 5, 1916.

STEERCO

Particular description of goods.—Ready-Mixed Gravel and Sand.
Claims use since June 29, 1916.

Ser. No. 96,348. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSOLIDATED POULTRY & EGG CO., Omaha, Nebr. Filed July 6, 1916.

Copeco

Particular description of goods.—Butter, Eggs, and Poultry.
Claims use since Apr. 1, 1916.

Ser. No. 96,354. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE FRIEDHOFFER, New York, N. Y. Filed July 6, 1916.

Particular description of goods.—A Developing Agent for Photographs and Photographic Films.
Claims use since May 10, 1916.

Ser. No. 96,358. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLORENCE N. LEWIS, New York, N. Y. Filed July 6, 1916.

AMORETTA

Particular description of goods.—Face and Massage Creams.
Claims use since Feb. 1, 1915.

Ser. No. 96,359. (CLASS 37. PAPER AND STATIONERY.) WILLIAM MANN COMPANY, Philadelphia, Pa. Filed July 6, 1916.

MANN

Particular description of goods.—Blank Books, Copying-Books, Memorandum-Books, Paper-Binders, Loose-Leaf Binders and Devices, Writing-Paper, Type-Writing Paper, Printing-Paper, Blank-Book Paper, Copying-Paper, Manifolding-Paper, Ledger-Paper, Bond-Paper, Paper Tablets and Stenographers' Paper Books, Blotter Baths and Papers, Bill-Straps, Bank-Notes, Drafts, and Receipts; Dustproof Paper-Files, Card-Index Cases, Card-Index Cards, Filing-Index Cases, Arch-Files, Steel Pens of All Kinds, Fountain-Pens and Parts Thereof, Penholders, Lead-Pencils, Rubber Erasers, Paper Fasteners and Clips, Desk-Pads, and Rubber Bands.
Claims use since Aug. 1, 1915.

Ser. No. 96,368. (CLASS 38. PRINTS AND PUBLICATIONS.) ARTHUR W. SUTTON, New York, N. Y. Filed July 6, 1916.

Saucy Stories

Comprising the words "Saucy Stories."
Particular description of goods.—A Monthly Magazine.
Claims use since June 6, 1916.

Ser. No. 96,371. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY TETLOW CO., Philadelphia, Pa. Filed July 6, 1916.

Sweet Sixteen

The trade-mark which consists of the words or phrase "Sweet Sixteen."
Particular description of goods.—Face-Powders, Toilet Powders, Talcum Powders, Perfumes, Rouges, and Cold-Cream.
Claims use since 1884 on face or complexion powders, and on toilet powders, talcum powders, perfumes, rouges, and cold-creams since about June 12, 1916.

Ser. No. 96,397. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SIDNEY BLUMENTHAL & COMPANY, New York, N. Y. Filed July 7, 1916.

Butifur

Particular description of goods.—Plushes in Pieces.
Claims use since the 21st day of June, 1916.

Ser. No. 96,399. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CRUSELLAS Y CA., Habana, Cuba. Filed July 7, 1916.

A LA FLORA CUBANA

Particular description of goods.—Hair-Tonic.
Claims use since Sept. 1, 1915.

Ser. No. 96,428. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FEDERATED MILLS COMPANY, Morganville, Kans. Filed July 8, 1916.

EVERMORE

Particular description of goods.—Wheat-Flour.
Claims use since February, 1911.

Ser. No. 96,467. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE LORIMER-HICKS M'F'G CO., Troy, Ohio. Filed July 10, 1916.

The Lorophone

Particular description of goods.—Talking-Machines.
Claims use since Sept. 15, 1915.

Ser. No. 96,476. (CLASS 48. MALT EXTRACTS AND LIQUORS.) FRANK H. SETTELE, Baltimore, Md. Filed July 10, 1916.

NULO

Particular description of goods.—A Non-Intoxicating Malt Beverage.
Claims use since about May 15, 1915.

Ser. No. 96,484. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) BENJAMIN F. CALLEY, Denver, Colo. Filed July 10, 1916.

Particular description of goods.—Syringes, Clinical Thermometers, Catheters, and Surgical Needles.
Claims use since June 2, 1916.

Ser. No. 96,521. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE JAMES CLARK DISTILLING CO., Cumberland, Md. Filed July 12, 1916. Under ten-year proviso.

BRADDOCK

Comprising the word "Braddock."
Particular description of goods.—Pure Rye and Barley Malt Whiskies.
Claims use since Oct. 23, 1883.

Ser. No. 96,538. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) A. JAMES BRUNI, New York, N. Y. Filed July 13, 1916.

National

Particular description of goods.—Vermuth.
Claims use since about May 1, 1915.

Ser. No. 96,560. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FEATHERSTON PRODUCTS COMPANY, Portland, Oreg. Filed July 14, 1916.

O.V.B.

Particular description of goods.—Loganberry-Juice, Grape-Juice, and Fruit-Juice.
Claims use since Mar. 10, 1916.

Ser. No. 96,561. (CLASS 11. INKS AND INKING MATERIALS.) THE GENERAL ECLIPSE COMPANY, Danielson, Conn. Filed July 14, 1916.



Particular description of goods.—Ink in Tablet Form.
Claims use since May 1, 1915.

Ser. No. 96,565. (CLASS 48. MALT EXTRACTS AND LIQUORS.) LEWIS L. METZGER CO., St. Paul, Minn. Filed July 14, 1916.

EQUITY

Particular description of goods.—Beer.
Claims use since 1915.

Ser. No. 96,566. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LEWIS L. METZGER CO., St. Paul, Minn. Filed July 14, 1916.

EQUITY

Particular description of goods.—Whisky.
Claims use since 1915.

Ser. No. 96,657. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 19, 1916.

MURENA

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Aug. 3, 1908.

Ser. No. 96,658. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 19, 1916.

VOLUNTEER

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Nov. 23, 1887.

Ser. No. 96,676. (CLASS 37. PAPER AND STATIONERY.) THE PEERLESS MFG. CO., Norristown, Pa. Filed July 19, 1916.

Crashlin

Particular description of goods.—Toilet-Paper.
Claims use since July 1, 1916.

Ser. No. 96,684. (CLASS 47. WINES.) BROTHERHOOD WINE COMPANY, Washingtonville, N. Y. Filed July 20, 1916.

MERSONET

Particular description of goods.—Wine.
Claims use since May 16, 1916.

Ser. No. 96,692. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) I. C. HERMAN, New York, N. Y. Filed July 20, 1916.



Particular description of goods.—Handkerchiefs.
Claims use since Jan. 2, 1916.

Ser. No. 96,762. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROBERT REIS & CO., New York, N. Y. Filed July 22, 1916. Under ten-year proviso.

REIS

Particular description of goods.—Handkerchiefs.
Claims use since 1888.

Ser. No. 96,772. (CLASS 37. PAPER AND STATIONERY.) THE UNITED JEWELERS INC., New York, N. Y. Filed July 22, 1916.

HALLMARK

Particular description of goods.—Fountain-Pens and the Parts Thereof.
Claims use since July 7, 1916.

Ser. No. 96,817. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) JAMES MANOIL COMPANY, INC., New York, N. Y. Filed July 25, 1916.

The Manophone

Particular description of goods.—Phonographs.
Claims use since July 15, 1916.

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 15, 1916.

111,919. EFFERVESCENT SALTS USED FOR MEDICINAL PURPOSES. ALPINE EFFERVESCENT CO., New York, N. Y.
Filed March 28, 1916. Serial No. 93,924. PUBLISHED JUNE 6, 1916.

111,920. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,815. PUBLISHED MAY 30, 1916.

111,921. BREAD. ATLAS BREAD FACTORY, Milwaukee, Wis.
Filed December 20, 1915. Serial No. 91,594. PUBLISHED MAY 23, 1916.

111,922. CLEANING COMPOUND FOR CLOTH. DAVID M. BAKER, Indianapolis, Ind.
Filed November 2, 1914. Serial No. 82,321. PUBLISHED MAY 16, 1916.

111,923. CERTAIN NAMED METALS AND METAL CASTINGS AND FORGINGS. GEO. BARNSLEY & SONS, Sheffield, England.
Filed May 2, 1916. Serial No. 94,851. PUBLISHED JUNE 6, 1916.

111,924. ORANGES AND LEMONS. BRADBURY ESTATE COMPANY, Los Angeles, Cal.
Filed April 10, 1916. Serial No. 94,279. PUBLISHED MAY 16, 1916.

111,925. CERTAIN NAMED GAMES AND TOYS. THORNTON W. BURGESS, Springfield, Mass.
Filed April 15, 1915. Serial No. 85,960. PUBLISHED MAY 23, 1916.

111,926. CLEAR-HAVANA CIGARS. CORRAL WODISKA Y CA., Tampa, Fla.
Filed June 18, 1915. Serial No. 87,383. PUBLISHED MAY 23, 1916.

111,927. HOSIERY. W. B. DAVIS & SON INC., Fort Payne, Ala.
Filed May 4, 1916. Serial No. 94,896. PUBLISHED JUNE 6, 1916.

111,928. ATTACHABLE AND DETACHABLE HEELS FOR SHOES. WALTER L. DAY, Westfield, N. J.
Filed March 24, 1916. Serial No. 93,834. PUBLISHED MAY 30, 1916.

111,929. COMPOSITIONS FOR FINISHING TEXTILE FABRICS. ARTHUR EICHENGRÜN, Berlin, Germany.
Filed April 11, 1912. Serial No. 62,841. PUBLISHED JUNE 6, 1916.

111,930. EGGS. GEO. R. ELDRIDGE CO., Detroit, Mich.
Filed March 30, 1916. Serial No. 93,990. PUBLISHED MAY 23, 1916.

111,931. CERTAIN NAMED ELECTRICAL APPARATUS AND MACHINES. THE EMERSON ELECTRIC MANUFACTURING COMPANY, St. Louis, Mo.
Filed March 18, 1916. Serial No. 93,643. PUBLISHED MAY 30, 1916.

111,932. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES OR DISABILITIES. EXCELSIOR SPECIALTY CO., Buffalo, N. Y.
Filed March 20, 1916. Serial No. 93,696. PUBLISHED MAY 16, 1916.

111,933. FOOD SYRUP. JAS. T. FERGUSON, Lynchburg, Va.
Filed September 1, 1914. Serial No. 80,922. PUBLISHED JANUARY 5, 1915.

111,934. DUSTING-CLOTH OR DUST-ABSORBING APPLIANCE. HARRY D. FREEMAN, Colorado Springs, Colo.
Filed March 28, 1916. Serial No. 93,934. PUBLISHED MAY 23, 1916.

111,935. METAL POSTS. FUNK BROTHERS MANUFACTURING COMPANY, Chicago Heights, Ill.
Filed April 5, 1916. Serial No. 94,165. PUBLISHED MAY 23, 1916.

111,936. WHEAT-FLOUR. ARTHUR T. GALLOWAY, Oakdale, Nebr.
Filed February 10, 1916. Serial No. 92,750. PUBLISHED MAY 23, 1916.

111,937. PREPARED PLASTIC MATERIAL FOR LAYING AND RESURFACING ROOFS. THE GARLAND COMPANY, Cleveland, Ohio.
Filed June 14, 1915. Serial No. 87,289. PUBLISHED MAY 30, 1916.

111,938. CANNED FRUITS. GRIFFITH-DURNEY COMPANY, San Francisco, Cal.
Filed March 1, 1916. Serial No. 93,205. PUBLISHED MAY 23, 1916.

111,939. CANNED FRUITS. GRIFFITH-DURNEY COMPANY, San Francisco, Cal.
Filed March 1, 1916. Serial No. 93,207. PUBLISHED MAY 23, 1916.

111,940. BOTTLE-SEALS. FERDINAND GUTMANN & Co., New York, N. Y.
Filed March 23, 1916. Serial No. 93,793. PUBLISHED MAY 23, 1916.

111,941. OLIVE-OIL CONTAINED IN CAPSULES. DAVID A. HARRISON, Los Angeles, Cal.
Filed January 3, 1916. Serial No. 91,873. PUBLISHED MAY 23, 1916.

111,942. GLOVES AND HOSIERY. E. HEIDHUES & Co., Chicago, Ill.
Filed May 6, 1916. Serial No. 94,951. PUBLISHED JUNE 6, 1916.

111,943. SPARK-PLUGS. HILL INSULATING & MFG. CORP., New York, N. Y.
Filed April 22, 1916. Serial No. 94,641. PUBLISHED JUNE 6, 1916.

111,944. SYSTEMS OF TRANSMITTING WAVES BY ELECTRICITY. JOSEPH E. B. HOLLADAY, Suffolk, Va.
Filed May 18, 1916. Serial No. 95,217. PUBLISHED JUNE 6, 1916.

111,945. MINERAL WATER. D. F. HOLLOPETER, Factoryville, Pa.
Filed April 25, 1916. Serial No. 94,707. PUBLISHED MAY 30, 1916.

111,946. INCANDESCENT ELECTRIC LAMPS. INDEPENDENT LAMP & WIRE COMPANY, INC., Weehawken, N. J., and New York, N. Y.
Filed May 17, 1916. Serial No. 95,204. PUBLISHED JUNE 6, 1916.

111,947. MECHANICAL STARTING DEVICES FOR ENGINES. JIFFY STARTER COMPANY, INCORPORATED, Detroit, Mich.
Filed April 24, 1916. Serial No. 94,674. PUBLISHED MAY 30, 1916.

111,948. CERTAIN PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. J. BAILEY JOHNSON, Pittsburgh, Pa.
Filed March 11, 1916. Serial No. 93,459. PUBLISHED MAY 16, 1916.

111,949. PLASTER AND CEMENT. KIESELGUHR COMPANY OF AMERICA, Los Angeles, Cal.
Filed November 27, 1915. Serial No. 90,974. PUBLISHED APRIL 11, 1916.

111,950. CEREAL BREAKFAST FOOD. THE KROGER GROCERY AND BAKING CO., Cincinnati, Ohio.
Filed November 22, 1915. Serial No. 90,833. PUBLISHED MARCH 28, 1916.

111,951. CERTAIN NAMED HARDWARE SUPPLIES. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed April 24, 1916. Serial No. 94,676. PUBLISHED JUNE 6, 1916.

111,952. CERTAIN NAMED ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed April 24, 1916. Serial No. 94,677. PUBLISHED JUNE 6, 1916.

111,953. CANNED VEGETABLES. LANGE CANNING CO., INC., Eau Claire, Wis.
Filed December 21, 1915. Serial No. 91,650. PUBLISHED MAY 23, 1916.

111,954. CALCULATING-MACHINES. ARTHUR W. LAWRENCE, New York, N. Y.
Filed March 21, 1916. Serial No. 93,741. PUBLISHED JUNE 6, 1916.

111,955. MEDICAL PREPARATIONS FOR THE TREATMENT OF CERTAIN NAMED DISEASES AND AILMENTS. JOHN L. MARLOW, Monroe, Ga.
Filed December 22, 1915. Serial No. 91,692. PUBLISHED MAY 30, 1916.

111,956. GOPHER, SQUIRREL, AND PRAIRIE-DOG POISON. MICKELSON-SHAPIRO COMPANY, Minneapolis, Minn.
Filed April 12, 1915. Serial No. 85,903. PUBLISHED MAY 23, 1916.

111,957. HOSIERY. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed February 25, 1916. Serial No. 93,103. PUBLISHED MAY 30, 1916.

111,958. LADIES', MISSES', JUNIORS', AND CHILDREN'S DRESSES. JOS. A. MORRIS & CO., INC., New York, N. Y.
Filed April 27, 1916. Serial No. 94,752. PUBLISHED JUNE 6, 1916.

111,959. MAGAZINE ISSUED MONTHLY. THE MOTOR MECHANICS COMPANY, Cleveland, Ohio.
Filed November 8, 1915. Serial No. 90,517. PUBLISHED MAY 23, 1916.

111,960. TOYS AND DOLLS. NEW TOY MANUFACTURING CO., New York, N. Y.
Filed April 23, 1915. Serial No. 86,149. PUBLISHED MAY 30, 1916.

111,961. COTTON PIECE GOODS. THE NIGHTINGALE-MORSE MILLS, INCORPORATED, Putnam, Conn.
Filed April 20, 1916. Serial No. 94,579. PUBLISHED JUNE 6, 1916.

111,962. UNDERWEAR UNION SUITS. OPPENHEIM, OBERNDORF & CO. INC., Baltimore, Md.
Filed April 21, 1916. Serial No. 94,597. PUBLISHED JUNE 6, 1916.

111,963. SALT. PACIFIC COAST SALT CO., San Francisco, Cal.
Filed March 13, 1916. Serial No. 93,507. PUBLISHED MAY 16, 1916.

111,964. WATER PURIFYING AND TREATING MATERIALS. THE PERMUTIT COMPANY, New York, N. Y.
Filed March 28, 1916. Serial No. 93,942. PUBLISHED JUNE 6, 1916.

111,965. WATER PURIFYING AND TREATING MATERIALS. THE PERMUTIT COMPANY, New York, N. Y.
Filed March 28, 1916. Serial No. 93,943. PUBLISHED JUNE 6, 1916.

111,966. WATER PURIFYING AND TREATING MATERIALS. THE PERMUTIT COMPANY, New York, N. Y.
Filed March 28, 1916. Serial No. 93,944. PUBLISHED JUNE 6, 1916.

111,967. WATER PURIFYING AND TREATING MATERIALS. THE PERMUTIT COMPANY, New York, N. Y.
Filed March 28, 1916. Serial No. 93,945. PUBLISHED JUNE 6, 1916.

111,968. EGGS. PLANKINTON PACKING COMPANY, Milwaukee, Wis.
Filed March 16, 1916. Serial No. 93,581. PUBLISHED MAY 23, 1916.

111,969. CHILDREN'S UNDERWAISTS. THE R. & J. WAIST CO., New London, Conn.
Filed December 1, 1915. Serial No. 91,082. PUBLISHED MAY 30, 1916.

111,970. CANNED VEGETABLES. REEDSBURG CANNING COMPANY, Reedsburg, Wis.
Filed June 23, 1915. Serial No. 87,538. PUBLISHED MAY 23, 1916.

111,971. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. RICHARDS & CONOVER HARDWARE COMPANY, Kansas City, Mo.
Filed November 5, 1915. Serial No. 90,441. PUBLISHED MAY 23, 1916.

111,972. HOSIERY, KNIT UNDERWEAR, SWEATERS, AND GLOVES. SANGER BROTHERS, New York, N. Y., and Dallas and Waco, Tex.
Filed April 19, 1916. Serial No. 94,554. PUBLISHED MAY 30, 1916.

111,973. COLLARS, SHIRTS, KNIT UNDERWEAR, AND GLOVES. SANGER BROTHERS, New York, N. Y., and Dallas and Waco, Tex.
Filed April 19, 1916. Serial No. 94,555. PUBLISHED MAY 30, 1916.

111,974. CERTAIN NAMED DENTAL, MEDICAL, AND SURGICAL APPLIANCES. SCHEIDEL-WESTERN X-RAY COMPANY, Chicago, Ill.
Filed January 17, 1916. Serial No. 92,204. PUBLISHED MAY 30, 1916.

111,975. GOLF-BALLS. SCHMELZER ARMS CO., Kansas City, Mo.
Filed April 18, 1916. Serial No. 94,516. PUBLISHED MAY 30, 1916.

111,976. CERTAIN NAMED MEDICAL AND SURGICAL APPLIANCES. THE SCHOLL MANUFACTURING COMPANY, Chicago, Ill.
Filed November 29, 1915. Serial No. 91,022. PUBLISHED MAY 30, 1916.

111,977. TRUNKS, SUITCASES, AND TRAVELING-BAGS. THE SHWAYDER TRUNK MFG. COMPANY, Denver, Colo.
Filed April 8, 1916. Serial No. 94,269. PUBLISHED MAY 30, 1916.

111,978. HOSIERY, KNIT UNDERWEAR, AND SWEATERS. SHAW STOCKING COMPANY, Lowell, Mass.
Filed April 19, 1916. Serial No. 94,550. PUBLISHED MAY 30, 1916.

111,979. SOLDERS. SO-LUMINUM MANUFACTURING AND ENGINEERING CO., INC., New York, N. Y.
Filed April 12, 1916. Serial No. 94,362. PUBLISHED JUNE 6, 1916.

111,980. FINISH FOR VARNISHED SURFACES. STANDARD VARNISH WORKS, Chicago, Ill.
Filed April 20, 1916. Serial No. 94,588. PUBLISHED JUNE 6, 1916.

111,981. ELECTRIC WATER-HEATERS AND HIGH-FREQUENCY DEVICES. THE STERLING CORPORATION, Cleveland, Ohio.
Filed April 7, 1916. Serial No. 94,237. PUBLISHED MAY 23, 1916.

111,982. LUBRICATING, ILLUMINATING, AND FUEL OILS. SUTTON, ASPINWALL & CO., INC., New York, N. Y.
Filed December 28, 1915. Serial No. 91,807. PUBLISHED JUNE 6, 1916.

111,983. BABBITT METAL. SYRACUSE SMELTING WORKS, Brooklyn, N. Y.
Filed September 27, 1915. Serial No. 89,496. PUBLISHED MAY 23, 1916.

111,984. WASH-SKIRTS, MIDDY-SUITS, AND MIDDY-BLOUSES. TEXTILE PRODUCTS CO. INC., Portsmouth, Va.
Filed March 22, 1916. Serial No. 93,779. PUBLISHED JUNE 6, 1916.

111,985. FERTILIZER. UNION MEAT COMPANY, North Portland, Oreg.
Filed January 27, 1916. Serial No. 92,456. PUBLISHED MAY 30, 1916.

111,986. FERTILIZER. UNION MEAT COMPANY, North Portland, Oreg.
Filed January 28, 1916. Serial No. 92,485. PUBLISHED MAY 30, 1916.

111,987. CERTAIN NAMED CLOTHING. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed April 23, 1915. Serial No. 86,169. PUBLISHED JUNE 6, 1916.

111,988. CERTAIN GASOLENE-ENGINE ATTACHMENTS FOR INTRODUCING LIQUID INTO THE ENGINE FOR REMOVING CARBON. UTILITY PRODUCTS CO., New York, N. Y.
Filed April 5, 1916. Serial No. 94,179. PUBLISHED JUNE 6, 1916.

111,989. HACKS AND SCHOOL-CARS. WAYNE WORKS, Richmond, Ind.
Filed April 3, 1916. Serial No. 94,094. PUBLISHED MAY 30, 1916.

111,990. SPARK-PLUGS FOR INTERNAL-COMBUSTION ENGINE. WOLVERINE SPARK PLUG COMPANY, INC., New York, N. Y., and Detroit, Mich.
Filed April 27, 1916. Serial No. 94,761. PUBLISHED MAY 23, 1916.

111,991. COFFEE. ACME COFFEE CO., Fort Worth, Tex.
Filed April 3, 1916. Serial No. 94,050. PUBLISHED MAY 30, 1916.

111,992. FERTILIZER. THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed April 19, 1916. Serial No. 94,522. PUBLISHED JUNE 6, 1916.

111,993. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed March 24, 1916. Serial No. 93,820. PUBLISHED MAY 30, 1916.

111,994. TOILET POWDER, SACHET-POWDER, TOILET WATER, BRILLIANTINE, AND PERFUME, ROUGE, AND FACE-CREAM. A. BOURJOIS & CO., INC., New York, N. Y.
Filed September 17, 1915. Serial No. 89,259. PUBLISHED JUNE 6, 1916.

111,995. CERTAIN NAMED HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES. CALIFORNIA CORRUGATED CULVERT CO., Oakland and Berkeley, Cal.
Filed March 28, 1916. Serial No. 93,930. PUBLISHED MAY 30, 1916.

111,996. PARTIALLY COOKED AND PREPARED POTATOES. CONDENSED FOOD COMPANY, Philadelphia, Pa.
Filed April 29, 1916. Serial No. 94,785. PUBLISHED JUNE 6, 1916.

111,997. PARTIALLY COOKED AND PREPARED POTATOES. CONDENSED FOOD COMPANY, Philadelphia, Pa.
Filed April 29, 1916. Serial No. 94,787. PUBLISHED JUNE 6, 1916.

111,998. GREASES FOR UNDER-WATER LUBRICANTS. CREW LEVICK COMPANY, Philadelphia, Pa.
Filed April 25, 1916. Serial No. 94,701. PUBLISHED JUNE 6, 1916.

111,999. ELECTRIC IGNITION APPARATUS. THE DETROIT ENGINEERING PRODUCTS COMPANY, Detroit, Mich.
Filed May 1, 1916. Serial No. 94,818. PUBLISHED JUNE 6, 1916.

112,000. ELECTRIC SWITCHES. DICKINSON MANUFACTURING COMPANY, Springfield, Mass.
Filed May 10, 1916. Serial No. 95,032. PUBLISHED JUNE 6, 1916.

112,001. MOPS. DUSKIL MOP COMPANY, Paducah, Ky.
Filed April 7, 1916. Serial No. 94,227. PUBLISHED JUNE 6, 1916.

112,002. CHILLI MIXTURE. W. A. DYE, Wichita, Kans.
Filed March 28, 1916. Serial No. 93,932. PUBLISHED JUNE 6, 1916.

112,003. METAL-POLISH. JOSEPH F. GEORGE, Southbridge, Mass.
Filed April 30, 1915. Serial No. 86,289. PUBLISHED JUNE 6, 1916.

112,004. CERTAIN DRESSED AND UNDRESSED LUMBER, ALSO MANUFACTURED SAWMILL AND PLANING-MILL PRODUCTS. HEINEMAN LUMBER COMPANY OF HEINEMAN, WIS., Merrill, Wis.
Filed February 28, 1916. Serial No. 93,141. PUBLISHED MAY 30, 1916.

112,005. JOB LOTS OF BRASS, BRONZE, AND ALUMINUM CASTINGS. KELLY BRASS WORKS, Chicago, Ill.
Filed March 10, 1916. Serial No. 93,434. PUBLISHED JUNE 6, 1916.

112,006. ROACH AND VERMIN POISON. KILMOR PASTE COMPANY (a Firm), Holyoke, Mass.
Filed September 8, 1915. Serial No. 89,100. PUBLISHED JUNE 6, 1916.

112,007. DISH-WASHING MACHINES. KITCHEN SERVICE CO., Chicago, Ill.
Filed May 6, 1916. Serial No. 94,953. PUBLISHED JUNE 6, 1916.

112,008. PREPARATION FOR TREATMENT OF CERTAIN NAMED DISEASES. GEORGE F. KOGA, Salt Lake City, Utah.
Filed February 9, 1916. Serial No. 92,734. PUBLISHED APRIL 18, 1916.

112,009. TIMBER-KILLER PREPARATION. JAMES E. LEWIS, Eupora, Miss.
Filed April 18, 1916. Serial No. 94,503. PUBLISHED JUNE 6, 1916.

112,010. HOISTS. LINK-BELT COMPANY, Chicago, Ill.; Philadelphia, Pa., and Indianapolis, Ind.
Filed May 1, 1915. Serial No. 86,324. PUBLISHED JUNE 6, 1916.

112,011. LINIMENT TO BE USED AS A TREATMENT FOR RHEUMATISM, HEADACHE, AND SPRAINS. ARTHUR W. LITHGOW, Lawrence, Mass.
Filed April 15, 1916. Serial No. 94,447. PUBLISHED JUNE 6, 1916.

112,012. PERFUME, TOILET WATER, FACE-POWDER, AND TALCUM POWDER. HERMAN C. G. LUYTIES, St. Louis, Mo.
Filed March 29, 1916. Serial No. 93,970. PUBLISHED JUNE 6, 1916.

112,013. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. THE MAY DEPARTMENT STORES COMPANY, New York, N. Y.
Filed February 5, 1916. Serial No. 92,671. PUBLISHED APRIL 25, 1916.

112,014. HUMIDORS FOR CIGARS. ALAN R. MCNEIL, Mishawaka, Ind.
Filed March 31, 1916. Serial No. 94,017. PUBLISHED JUNE 6, 1916.

112,015. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. MELBA MANUFACTURING COMPANY, Chicago, Ill.
Filed October 15, 1915. Serial No. 89,864. PUBLISHED JUNE 6, 1916.

112,016. MACHINE-BEARINGS. NORMAN MELLOR, Philadelphia, Pa.
Filed April 25, 1916. Serial No. 94,711. PUBLISHED JUNE 6, 1916.

112,017. EXTRACT OF DRUGS USED IN THE EXTERNAL AND INTERNAL TREATMENT OF SEPTIC CONDITIONS. THE WILLIAM S. MERRELL CHEMICAL COMPANY, Cincinnati, Ohio.
Filed March 27, 1916. Serial No. 93,915. PUBLISHED JUNE 6, 1916.

112,018. GOLD-SOLDER AND SILVER-SOLDER FOR USE IN THE MANUFACTURE AND REPAIRING OF JEWELRY. F. H. NOBLE & COMPANY, Chicago, Ill.
Filed February 8, 1916. Serial No. 92,710. PUBLISHED JUNE 6, 1916.

112,019. TRACTORS. PARRETT TRACTOR COMPANY, Chicago, Ill.
Filed April 20, 1916. Serial No. 94,583. PUBLISHED JUNE 6, 1916.

112,020. CERTAIN NAMED ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES. PYLE NATIONAL ELECTRIC HEADLIGHT COMPANY, Chicago, Ill.
Filed April 15, 1916. Serial No. 94,452. PUBLISHED JUNE 6, 1916.

112,021. CERTAIN NAMED MACHINERY AND TOOLS AND PARTS THEREOF. PYLE NATIONAL ELECTRIC HEADLIGHT COMPANY, Chicago, Ill.
Filed April 15, 1916. Serial No. 94,453. PUBLISHED JUNE 6, 1916.

112,022. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. JOSEPH PHILLIPS COMPANY, Cleveland, Ohio.
Filed November 26, 1915. Serial No. 90,949. PUBLISHED MAY 23, 1916.

112,023. DEVELOPING COMPOUND. PHOTO-CHEMICAL CO., INC., New York, N. Y.
Filed March 28, 1916. Serial No. 93,941. PUBLISHED JUNE 6, 1916.

112,024. COTTON PIECE GOODS. RAFAEL DEL CASTILLO & CO., New York, N. Y.
Filed December 18, 1915. Serial No. 91,581. PUBLISHED JUNE 6, 1916.

112,025. COTTON PIECE GOODS, MERCERIZED COTTON PIECE GOODS, AND COTTON AND SILK PIECE GOODS. RAFAEL DEL CASTILLO & CO., New York, N. Y.
Filed December 18, 1915. Serial No. 91,582. PUBLISHED JUNE 6, 1916.

112,026. SPECIAL-PROCESS METAL IN INGOTS, CASTINGS, OR FORGINGS. RALPH E. RICH, Chicago, Ill.
Filed April 29, 1916. Serial No. 94,807. PUBLISHED JUNE 6, 1916.

112,027. CHEMICAL PREPARATION FOR CLEANING FILTER MASSE. ANNA SCHULZ, New York, N. Y.
Filed June 30, 1915. Serial No. 87,671. PUBLISHED JUNE 6, 1916.

112,028. CANNED SAUER-KRAUT, VEGETABLES, FRUITS, AND HOMINY. THE SEARS & NICHOLS CO., Chillicothe, Ohio.
Filed September 8, 1914. Serial No. 81,094. PUBLISHED MARCH 9, 1915.

112,029. PANTS OR TROUSERS. SIEGFRIED-MALTZ PANTS MANUFACTURING COMPANY, St. Louis, Mo.
Filed May 12, 1916. Serial No. 95,114. PUBLISHED JUNE 6, 1916.

112,030. OVERALLS, JACKETS, AND MACKINAWS. STAHL-URBAN AND CO., Terre Haute, Ind.
Filed April 21, 1916. Serial No. 94,633. PUBLISHED JUNE 6, 1916.

112,031. OXALIC-ACID SUBSTITUTE AND DYES. TRICO CHEMICAL CO. INC., Buffalo, N. Y.
Filed April 17, 1916. Serial No. 94,491. PUBLISHED JUNE 6, 1916.

112,032. CARBON BRUSHES AND GRAPHITE BRUSHES FOR USE ON ELECTRIC MOTORS AND GENERATORS. THE UNITED STATES GRAPHITE CO., Saginaw, Mich.
Filed May 12, 1916. Serial No. 95,115. PUBLISHED JUNE 6, 1916.

112,033. CERTAIN NAMED MACHINERY AND PARTS THEREOF. THE VAILE-KIMES CO., Dayton, Ohio.
Filed February 17, 1916. Serial No. 92,929. PUBLISHED JUNE 6, 1916.

112,034. CERTAIN NAMED MACHINERY AND PARTS THEREOF. THE VAILE-KIMES CO., Dayton, Ohio.
Filed February 17, 1916. Serial No. 92,930. PUBLISHED JUNE 6, 1916.

112,035. PNEUMATIC WATER-SUPPLY SYSTEMS—NAMELY, COMBINED BY-PASS AND CHECK VALVES. THE VAILE-KIMES CO., Dayton, Ohio.
Filed March 15, 1916. Serial No. 93,564. PUBLISHED JUNE 6, 1916.

LABELS

REGISTERED AUGUST 15, 1916.

19,519.—*Title:* "WESTERN BEAUTY." (For Canned Salmon.) AMERICAN PACKING CO., Everett, Wash. Filed July 13, 1916.

19,520.—*Title:* "CAPITOL IDEA." (For Coffee.) CAPITOL COFFEE CO., Baton Rouge, La. Filed March 24, 1916.

19,521.—*Title:* "OLD CHIEF." (For Whisky.) FRANKFORT DISTILLING & IMPORTING COMPANY, Kansas City, Mo. Filed May 4, 1916.

19,522.—*Title:* "LIBERTY BELL BRAND." (For Canned Tomatoes.) R. GERBER & CO., Chicago, Ill. Filed May 10, 1916.

19,523.—*Title:* "PINK QUEENS." (For Cantaloups.) STEPHEN A. GERRARD, Cincinnati, Ohio. Filed July 22, 1916.

19,524.—*Title:* "AMERICAN BEAUTY." (For Cantaloups.) STEPHEN A. GERRARD, Cincinnati, Ohio. Filed July 22, 1916.

19,525.—*Title:* "JONES." (For Loganberry-Juice.) JONES BROS. & CO., INC., Portland, Oreg. Filed July 17, 1916.

19,526.—*Title:* "YOUGHURT." (For Cottage-Cheese.) KNUDSEN'S LABORATORY, Los Angeles, Cal. Filed April 26, 1916.

19,527.—*Title:* "MANVILLE CURTAIN SWISS." (For Textile Fabrics.) MANVILLE COMPANY, Providence, R. I. Filed June 26, 1916.

19,528.—*Title:* "SPLENDOR." (For Macaroni.) P. PASTENE & CO., INC., Boston, Mass. Filed June 15, 1916.

19,529.—*Title:* "DOUBLE BOCK." (For Malt Liquor.) THE ROYAL BREWING COMPANY, Kansas City, Mo. Filed May 4, 1916.

19,530.—*Title:* "GREAT NORTHERN." (For Cigars.) L. N. SCHULNER CIGAR CO., Watertown, S. D. Filed July 10, 1916.

19,531.—*Title:* "SUPERIOR HAND PASTE." (For Cleaning-Pastes.) SUPERIOR HAND PASTE CO., San Francisco, Cal. Filed July 18, 1916.

19,532.—*Title:* "CANTALOUPES." (For Three-Melon-Brand Cantaloups.) C. H. WEAVER & CO., Chicago, Ill. Filed July 6, 1916.

19,533.—*Title:* "HONEY DEW." (For Melons.) C. H. WEAVER & CO., Chicago, Ill. Filed July 6, 1916.

19,534.—*Title:* "OSAGE GEM CANTALOUPES." (For Cantaloups.) C. H. WEAVER & CO., Chicago, Ill. Filed July 6, 1916.

19,535.—*Title:* "JUMBO CANTALOUPES." (For Cantaloups.) C. H. WEAVER & CO., Chicago, Ill. Filed July 6, 1916.

19,536.—*Title:* "CAPE FEAR." (For Hosiery.) THE WILMINGTON HOSIERY MILLS, INC., Wilmington, N. C. Filed July 13, 1916.

19,537.—*Title:* "CHEK." (For a Medicinal Preparation.) WOODARD, CLARKE & CO., Portland, Oreg. Filed May 27, 1916.

PRINTS

REGISTERED AUGUST 15, 1916.

4,436.—*Title:* "MEASUREMENT CHARTS." (For Automobile-Tops.) ALBERT W. CONNOR, Covington, Ky. Filed June 14, 1916.

4,437.—*Title:* "EARLY TIMES." (For Whisky.) EARLY TIMES DISTILLERY COMPANY, INC., Early Times, Ky. Filed March 21, 1916.

4,438.—*Title:* "FRANCO." (For Flash-Lights.) THE INTERSTATE ELECTRIC NOVELTY CO., Brooklyn, N. Y. Filed July 14, 1916.

4,439.—*Title:* "FRANCO." (For Flash-Lights.) THE INTERSTATE ELECTRIC NOVELTY CO., Brooklyn, N. Y. Filed July 14, 1916.

4,440.—*Title:* "U S RUBBER SYSTEM." (For Wearing-Apparel and Rubber Products.) UNITED STATES RUBBER COMPANY, New Brunswick, N. J. Filed July 18, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE FERGUSON.

Decided November 2, 1915.

PRACTICE—DEFINITE AND COMPLETE ACTION.

In objecting to a substitute drawing on the ground of new matter it should be pointed out clearly in what the new matter consists. At the same time complete action should be given on the claims with respect to both prior art and the question of new matter.

ON PETITION.

STEAM AND HOT-WATER HEATING SYSTEMS.

Mr. George Jones Ferguson pro se.

NEWTON, *First Assistant Commissioner:*

This is a petition requesting that the Examiner be required to state explicitly wherein the substitute drawing filed April 13, 1911, involves new matter.

In the Office letter of May 16, 1911, the Examiner states:

> The drawing discloses substantial changes in Figs. 6, 7, 8 and 11, while Fig. 12' is wholly new.

The letter, however, does not point out wherein Figs. 6, 7, 8, and 11 are substantially changed with respect to the corresponding figures of the original drawing except inferentially in the objection to amendatory matter respecting Fig. 11 at the top of page 2 of the same letter. The letter also is somewhat general with respect to Fig. 12'.

I think the applicant should be informed more in detail just what constitutes the new matter in the figures of the drawing above specified.

I note that the Office letter of October 18, 1915, in treating the claims does not refer to the prior art and does not state whether the claims involve new matter or not.

If the claims can be understood, they should be treated upon the merits both with respect to the prior art and the question of new matter.

The Examiner is accordingly directed to write a supplemental letter in the case pointing out in detail wherein the figures of the drawing above referred to involve new matter and also treating the claims with respect to the prior art and new matter if new matter is involved in any of the claims.

To the extent indicated the petition is granted.

EX PARTE BURKHART.

Decided January 18, 1916.

PATENTABILITY—COMBINATION OF REFERENCES.

A shoe-dressing apparatus having two movable sprayers and a stationary dropper for applying the dressing directly to the shoe *Held* patentable over a reference showing two movable appliers operating on the brushes, but no stationary applier, and a reference showing stationary appliers.

APPEAL from Examiners-in-Chief.

SHOE-DRESSING-APPLYING MACHINE.

Messrs. Mason, Fenwick & Lawrence for Burkhart.

NEWTON, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the Primary Examiner in his final rejection of the following claims: *

> 1. In a shoe dressing applying mechanism, a stationary applier; a movable applier; and means connected with the movable applier adapted to actuate the stationary applier.
>
> 2. In a shoe dressing applying mechanism, a stationary applier; a moving part; an applier carried by the moving part; and means to actuate the stationary applier from the moving part.
>
> 3. In a shoe dressing applying mechanism, a gravity feed; a projecting feed; a moving part; and means to transmit actuating motion simultaneously from the moving part to the feeds.
>
> 4. In a shoe dressing applying mechanism; an applier; a second applier movable relative to the first mentioned applier; means to move the second mentioned applier; and means to transmit motion from the movable applier to actuate the first mentioned applier.

The references are: Norton, 496,437, May 2, 1893; Hammond, 879,541, February 18, 1908.

The appealed claims cover a shoe-dressing apparatus in which the dressing is applied by two sprayers, one on either side of the shoe, both of which move back and forth with the shoe in the dressing operation, and a stationary applier for dropping the dressing composition on the top of the shoe.

The Norton device shows appliers which instead of spraying the dressing composition onto the shoe apply it to the brushes O, Figure 1, and as the brushes move the appliers also move with them; but Norton shows no "stationary applier" as distinguished from a movable applier, as called for by claim 1, nor has he anything to answer the further terms of this claim—

> means connected with the movable applier adapted to actuate the stationary applier.

* This application has eventuated into Patent No. 1,181,886.

Hammond shows two stationary appliers; but it is not apparent how Hammond's stationary appliers could be used with Norton's movable brushes. Much less is it apparent how Hammond could use a stationary applier and a movable applier or why he should provide means for connecting the movable applier to actuate the stationary applier. In other words, claim 1 contains sufficient limitations to characterize a materially different apparatus from what is shown either in Hammond or Norton, or both combined, and sets forth features which are not suggested by either Hammond or Norton.

Claims 2 and 4 distinguish from the references as well as claim 1.

Claim 3 is still more limited to the "gravity feed" and the "projecting feed."

The appealed claims clearly differentiate from the references and may be allowed.

The decision of the Examiners-in-Chief is reversed.

Adverse Decisions in Interference.

PATENT NO. 949,836.

On July 10, 1916, a decision was rendered that James L. McQuarrie and Edward B. Craft were not the first inventors of the subject-matter covered by claims 1 and 3 of their Patent No. 949,836, subject, "Selectors," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,081,368.

On July 10, 1916, a decision was rendered that Edward B. Craft and Amos F. Dixon were not the first inventors of the subject-matter covered by claims 1, 2, 4, 5, and 7 of their Patent No. 1,081,368, subject, "Selector mechanism," and no appeal having been taken within the time allowed such decision has become final.

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 25, 1916.

Allen S. Rand and George Bell, their assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of The Wallace Maxwell Co., of 416½ University street, Seattle, Wash., to effect the cancelation of the trade-mark registration of Allen S. Rand and George Bell, of Cincinnati, Ohio, and Peoria, Ill., respectively, registered August 15, 1893, No. 25,485, and the notice of such proceeding sent by registered mail to said Rand and Bell to the said addresses having been returned by the post-office undeliverable, notice is hereby given that unless said Rand and Bell, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 10, 1916.

Bentley & Olmsted Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Leonard & Barrows, Middleboro, Mass., for registration of a trade-mark and trade-mark registered December 10, 1907, No. 66,495, to Bentley & Olmsted Company, 300–302 Court avenue, Des Moines, Iowa, and the Office having failed to secure proper service on said Bentley & Olmsted Company, notice is hereby given that unless said Bentley & Olmsted Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 22, 1916.

Plate & Clark Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Oneida Knitting Company, of Second street and Allegheny avenue, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered April 2, 1907, No. 61,714, to Plate & Clark Co., of 31 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Plate & Clark Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Plate & Clark Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 22, 1916.

W. G. Hitchcock & Co., their assigns or legal representatives, take notice:

An interference having been filed by this Office between the application of Belding Bros. & Co., of 902 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered July 5, 1892, No. 21,415 to W. G. Hitchcock & Co., of 453 Broome street, New York, N. Y., and a notice of such declaration sent by registered mail to said W. G. Hitchcock & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said W. G. Hitchcock & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 21, 1916.

Henry Newell Palmer, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Louis H. Schaarschmidt, of Limbach, Germany, for registration of a trade-mark and trade-mark registered July 28, 1908, No. 70,111, to Henry Newell Palmer, of 170 Fifth avenue, New York, N. Y., and the registry return-receipt for the notice of such declaration sent to Henry Newell Palmer having been returned signed by Mrs. H. N. Palmer, and Mrs. H. N. Palmer having failed to file evidence of her right to intervene on behalf of Henry Newell Palmer within the time allowed for that purpose, notice is hereby given that unless said Henry Newell Palmer, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 21, 1916.

Allen Ainslie, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Samuel S. Dworkin, 151–153 St. Ann's avenue, corner of Thirteenth street, New York, N. Y., for registration of a trade-mark and trade-mark registered June 27, 1899, No. 33,148, to Allen Ainslie, 220 Broadway, New York, N. Y., and a notice of such declaration sent by registered mail to said Ainslie at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Ainslie, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 229—No. 4. TUESDAY, AUGUST 22, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 22, 1916	941
ADVERSE DECISIONS IN INTERFERENCE	941
BRIEFS IN APPEALED CASES	941
APPLICATIONS UNDER EXAMINATION	942
PATENTS GRANTED	943
REISSUES	1225
DESIGNS	1227
TRADE-MARKS—REGISTRATION APPLIED FOR	1233
TRADE-MARK REGISTRATIONS GRANTED	1247
TRADE-MARK REGISTRATIONS RENEWED	1253
LABELS AND PRINTS	1254
COMMISSIONER'S DECISIONS—	
Ex parte Fisher	1255
INTERFERENCE NOTICES	1256

ISSUE OF AUGUST 22, 1916.

Patents	787	No. 1,195,169 to No. 1,195,955, inclusive.
Designs	25	No. 49,632 to No. 49,656, inclusive.
Trade-Marks	205	No. 112,036 to No. 112,240, inclusive.
Labels	5	No. 19,538 to No. 19,542, inclusive.
Prints	3	No. 4,441 to No. 4,443, inclusive.
Reissues	2	No. 14,184 to No. 14,185, inclusive.
Total	1027	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	1	North Carolina	2	.....
Arizona	2	.....	North Dakota	2	.....
Arkansas	1	.....	Ohio	51	18
California	49	5	Oklahoma	2	1
Colorado	9	.....	Oregon	8	1
Connecticut	16	3	Pennsylvania	76	12
Delaware	2	.....	Rhode Island	6	.....
Florida	4	1	South Carolina	3	.....
Georgia	5	5	South Dakota	3	1
Idaho	2	1	Tennessee	7	2
Illinois	87	16	Texas	10	2
Indiana	16	5	Utah	1	.....
Iowa	12	2	Vermont	.....	1
Kansas	16	2	Virginia	10	3
Kentucky	5	.....	Washington	13	1
Louisiana	2	.....	West Virginia	1	.....
Maine	2	4	Wisconsin	22	4
Maryland	12	7	Wyoming	1	.....
Massachusetts	53	11			
Michigan	34	6	Alaska, District of	.....	.....
Minnesota	10	3	Canal Zone	1	.....
Mississippi	.....	.....	District of Columbia	7	5
Missouri	17	9	Hawaii Territory	.....	.....
Montana	9	.....	Philippine Islands	.....	.....
Nebraska	3	2	Porto Rico	1	.....
Nevada	2	.....	U. S. Army	1	.....
New Hampshire	1	1	U. S. Navy	.....	.....
New Jersey	28	10			
New Mexico	.....	.....	Total to residents of the United States.	757	203
New York	124	55			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	.....	.....
Belgium	1	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	2	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	13	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	1	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	2	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
England	12	4	Spain	.....	.....
Finland	.....	.....	Sweden	3	1
France	5	2	Switzerland	.....	1
Germany	10	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Wales	1	.....
Ireland	.....	.....			
Italy	2	1			
Japan	1	.....	Total to residents of foreign countries	55	9
Mexico	1	.....			

Adverse Decisions in Interference.

PATENT NO. 1,074,789.

On July 20, 1916, a decision was rendered that Michael J. Green was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, and 5 of his Patent No. 1,074,789, subject, "Gas-heating appliances," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,143,223.

On July 19, 1916, a decision was rendered that Eleazar Parmly, Jr., was not the first inventor of the subject-matter covered by claims 1, 12, and 13 of his Patent No. 1,143,223, subject, "Tabulating, back-spacing, key-connecting, and color-selecting mechanism," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,171,030.

On July 22, 1916, a decision was rendered that Joseph Finberg was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 1,171,030, subject, "Finger-rings," and no appeal having been taken within the time allowed such decision has become final.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business August 19, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications waiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	June 23	June 26	370
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Mar. 1	May 1	627
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	July 27	July 14	75
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	June 7	July 28	275
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 20	July 10	275
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 13	July 13	284
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Mar. 2	May 23	624
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 16	July 1	1281
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Mar. 9	June 5	483
235	10. Carriages and Wagons; Spring Devices	Mar. 8	July 17	863
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	June 16	Aug. 7	105
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Feb. 10	June 19	701
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Apr. 26	July 27	433
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 1	June 14	320
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	June 20	July 26	267
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Feb. 7	June 5	560
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Apr. 11	July 3	296
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 28	July 19	117
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces	June 29	July 14	169
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	July 24	July 14	256
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 1	July 12	333
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 29	June 12	424
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Mar. 13	Apr. 3	457
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Feb. 5	June 8	456
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers.	July 5	July 14	206
106	26. Electricity, Generation; Motive Power	Feb. 2	June 7	631
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	July 10	July 22	254
65	28. Internal-Combustion Engines	Apr. 3	June 7	549
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Apr. 11	July 5	392
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	May 29	July 22	319
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 21	July 3	542
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels: Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Feb. 9	June 17	652
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 27	July 3	387
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Mar. 6	May 1	424
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Apr. 1	July 20	538
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Apr. 11	June 27	881
107	37. Electric Lamps; Electricity, Conduits; Electricity, General Applications	Feb. 10	June 26	736
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	June 17	June 29	213
321	39. Water Distribution	Mar. 10	June 22	409
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 17	July 18	717
125	41. Railway Draft Appliances; Resilient Tires and Wheels	May 2	July 1	419
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Jan. 3	Apr. 26	618
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	July 1	June 22	154
	Oldest new case, Jan. 3; oldest amended, Apr. 3.			
	Total number of applications awaiting action			19,092
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 10	Aug. 2	711
	Designs	July 12	July 1	234
	Labels and Prints	Aug. 5	July 27	61

PATENTS

GRANTED AUGUST 22, 1916.

1,195,169. UNDERTAKER'S INSTRUMENT. MARVIN E. ADCOCK, Fresno, Cal. Filed Oct. 20, 1915. Serial No. 56,904. (Cl. 128—28.)



1. In a device of the class described, the combination with a shank having a hook shaped member on one end thereof, of a knife blade slidably mounted in said shank and movable through an opening in the hook shaped member and means for securing the blade in a plurality of positions.

2. In a device of the class described, the combination with a shank having a hook shaped member on one end thereof in the end of which a hole is formed, of a knife mounted in said shank and bridging the space between the shank and the bill of the hook, the cutting edge of the blade being arranged on one side thereof.

3. In a device of the class described, a shank having a hook shaped member on one end thereof adapted to carry a piece of thread so that the latter may be passed about a blood vessel in a body, and a blade adjustably mounted in said shank, the said blade being movable so that its end will project through and beyond the bill of the hook or so that the end may be located in an opening in the said bill.

4. In a device of the class described, the combination with a body portion having a hook on one end thereof, of a knife adjustably mounted on the body portion and adapted to extend from the body portion to close the hook in such manner that the cutting edge of the knife will be exposed at the open side of the hook.

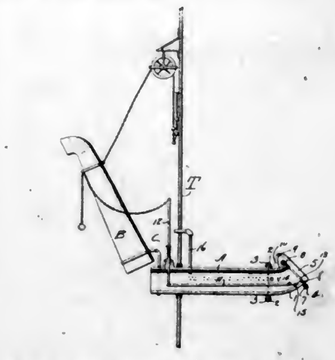
5. In a device of the class described, the combination with a body portion having a hook on one end thereof, of a knife adjustably mounted in the body portion and including a shank and a blade, the said blade being movable to close the hook at which time the shank will be located in the body portion and the blade being also movable to extend through and beyond the bill of the hook, at which time the shank will close the hook.

[Claim 6 not printed in the Gazette.]

1,195,170. VALVE FOR WATER-TANKS. CHARLES W. ARNDT, Hutchinson, Kans. Filed Aug. 25, 1915. Serial No. 47,307. (Cl. 137—21.)

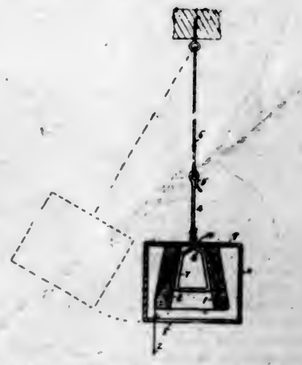
1. In a valve device for water tanks, the combination with a tank having a horizontal discharge pipe located therein, and an actuating lever operable in the discharge pipe, of a segmental valve casing secured to the inner end of said pipe, said segmental casing having a valve seat at its open end obliquely disposed with respect to the discharge pipe, forked guide means carried by the inner face of said valve casing, a valve head hinged externally of the valve casing at one side of the valve seat, and a rigid curved guide projection carried by the under side of the valve head opposite the hinging point thereof, said projection being pivotally connected to the actuating rod and slidable in the forked guide means on the valve casing.

2. In a valve device for water tanks, the combination with a tank having a horizontal discharge pipe located therein, and an actuating lever operable in said pipe, of a segmental valve casing also located within the tank and having one end secured to the discharge pipe and the other end providing a valve seat, spaced upstanding guide lugs carried by the inner face of said casing, an exterior hinge standard projecting upwardly from said casing, and a valve head hinged to said standard and having a rigid guide projection pivotally connected with the actuating rod and slidably engaging with the guide lugs on the interior of the valve casing.



3. In a valve device for water tanks, the combination with a tank having a horizontal discharge pipe projecting into the interior of the tank and having an exterior discharge end, and an actuating lever operable within said pipe, of a segmental valve casing secured to the end of the discharge pipe within the tank and having a valve seat, upstanding guide lugs carried by the inner face of the valve casing, an upstanding hinge standard carried by the exterior of the valve casing, a valve head having a hinged connection with said standard, and a rigid guide arm carried by the under face of said valve head and pivotally connected with said actuating lever, said rigid guide arm slidably engaging the lugs on the valve casing.

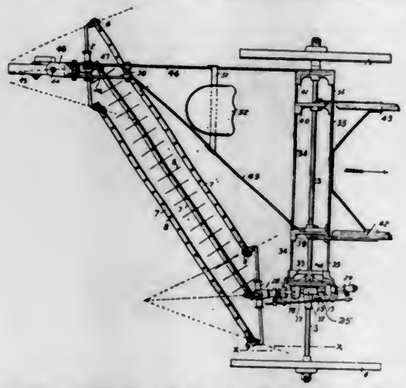
1,195,171. ADVERTISING DEVICE. HARRY R. BACON and EDWARD T. MALLOY, Hamilton, Ohio. Filed Jan. 29, 1915. Serial No. 5,053. (Cl. 242—141.)



The combination with a ball of twine in form the frustum of a cone, and a tapered hollow core therein

formed with open ends, of a tapered wire support adapted to be removably secured within the core and formed with a vertically extended portion terminating in a hook, a torsionally movable member adapted to detachably engage with said hook for suspending the support with the ball from a fixed point, and a hood supported on the ball, and adapted to the display of advertising matter exposed thereon, whereby alternating rotative motion of the ball with the hood may continue automatically for a time after being started by a pull on the free end of the cord, for the purposes specified.

1,195,172. SIDE-DELIVERY RAKE. JOSEPH BAMFORD and CYRIL JOSEPH BAMFORD, Uttoxeter, England. Filed Oct. 10, 1913. Serial No. 794,363. (Cl. 56—3.)



1. In a side delivery rake of the type having two reels arranged eccentrically to each other and revolubly connected by tine bars having pendent tines, the combination of pins or bearings on each reel oppositely inclined to the axes of the reels whereby the tine bars and pendent tines are caused to rock or swing during rotation.

2. In a side delivery rake of the type having two reels arranged eccentrically to each other and revolubly connected by tine bars having pendent tines, the combination of pins or bearings on each reel oppositely inclined to the axes of the reels and mechanism for driving the reels at the same speed from the road axle.

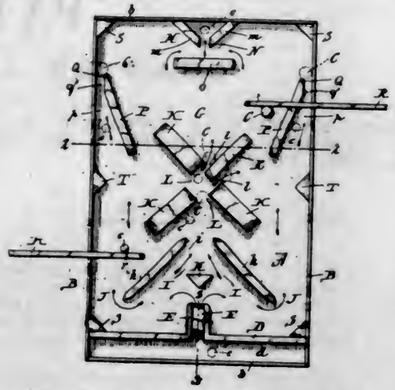
3. In a side delivery rake of the type having two reels arranged eccentrically to each other and revolubly connected by tine bars having pendent tines, the combination of pins or bearings on said reels oppositely inclined to the axes of the reels, said pins or bearings connecting the tine bars and reels, said inclined pins being located in eyes or bearings, said eyes or bearings having a stem thereon adapted to turn on said inclined pins, said stems being located in holes in the tine bars and in bearing blocks secured to the tine bars.

4. In a side delivery rake of the type having two reels arranged eccentrically to each other and revolubly connected by tine bars having pendent tines, the combination of bevel wheels having skew teeth, said bevel wheels being mounted on the road axle and gearing with bevel pinions having skew teeth mounted on the reel or spider axle which is disposed above the road axle.

5. In a side delivery rake of the type having two reels arranged eccentrically to each other and revolubly connected by tine bars having pendent tines, the combination of gearing for driving the reel or spider axle from the road axle comprising two skew bevel wheels of different diameters fixed on the road axle, two skew bevel pinions gearing with said bevel wheels, said bevel pinions being mounted on the reel or spider axle, mechanism whereby one or other of said skew bevel pinions can be caused to engage with and be driven by one or other of the bevel wheels to rotate the reel axle.

[Claims 6 to 12 not printed in the Gazette.]

1,195,173. GAME-BOARD. FRANK H. BEAMER and GEORGE W. BUSWELL, Buffalo, and WALTER O. KEITER, Lockport, N. Y. Filed June 28, 1915. Serial No. 36,732. (Cl. 46—61.)



1. A game board having a starting point and a goal at opposite ends thereof, a plurality of obstructions between said starting point and said goal, said obstructions forming passages of different sizes, and a pair of spherical elements adapted to be moved about on the board and be passed through said passages, said spherical elements being of different sizes and only one being capable of passing through all of said passages.

2. A game board having a starting point, a goal, a playing field between said starting point and goal provided with numerous obstructions and passages between and around said obstructions, said passages being of different sizes, and a pair of balls adapted to be moved about on said playing field and through the passages thereon, said balls being of different sizes so that one of the balls is prevented from being passed through the smaller passages.

3. A game board comprising a board serving as a playing field, a curb wall surrounding said board, a transversely-disposed wall near one end of said board forming a pocket, a passage having an inclined bottom leading from said pocket to the playing field, a goal at the opposite end of the board in line with said inclined bottom, a guard in advance of said goal, and raised obstructions forming passages through which playing elements are adapted to be passed.

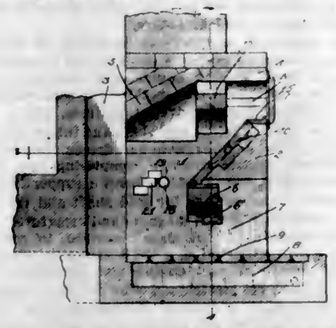
4. A game board comprising a curb wall surrounding said board, a starting point at one end of the board, a goal at the opposite end of the board, a series of radially-disposed obstructions arranged centrally on the board, other obstructions surrounding said radially-disposed obstructions, and a pair of balls adapted to be moved about on said board between and around said obstructions, one of said balls being adapted to be moved from the starting point to the goal and the other being adapted to be moved to meet and come in contact with the first-mentioned ball.

5. A game board comprising a board, a curb wall surrounding the board, a transverse partition near one end of the board having a passage therethrough, a triangular obstruction forward of and in line with said passage, flanking obstructions at opposite sides of said triangular obstruction, a goal at the opposite end of said board, and a plurality of obstructions forming passages and positioned between said flanking obstructions and said goal.

[Claims 6 to 11 not printed in the Gazette.]

1,195,174. FIRE-BOX. PAUL BEER, Des Moines, Iowa. Filed Sept. 14, 1914. Serial No. 861,602. (Cl. 110—85.)

1. A grateless fire box having a combustion chamber for the fuel, an underdraft opening communicating therewith, an inclined fuel table leading to the combustion chamber, a baffle arch above the fuel table, a top draft opening through the said baffle arch and means to control the flow of air through said top draft opening.



2. A grateless fire box comprising a combustion chamber for the fuel, a passage therefrom for the flow of the products of combustion, an automatic fuel feeding device comprising an inclined fuel table, ports for permitting the flow of air to the fuel from underneath the inclined fuel table from the top and from the sides respectively, and means to control the flow of air through said ports, whereby the combustion of the fuel may be accurately controlled.

3. In a grateless fire-box, a combustion chamber, an inclined fuel table for fuel, an air inlet port below said fuel table, a passage for air communicating with said combustion chamber above said inlet port but below the top of the fuel on the fuel table, and means to control said inlet port.

4. A coal consumer comprising a grateless fire box having an ash pit opening at its bottom, a hooded mouth for the fuel above the ash pit opening, an inclined fuel table leading from said hooded mouth to the interior of the fire box, the upper portion of said fire box comprising a combustion chamber, and said fire box having an overdraft opening leading directly from its mouth into said combustion chamber whereby ignition will be completely effected in the fire-box and before the heated gases or combustion products pass up the flue.

5. The combination with a fire box having an ash pit opening and a mouth for the reception of fuel, of an inclined fuel table leading from the hooded mouth and extending downward substantially on a 45 degree angle, a baffle arch positioned within the fire-box over the fuel table and adapted to radiate heat thereto to devolatilize the fuel thereon, said baffle arch having an overdraft opening formed therein communicating to the combustion chamber.

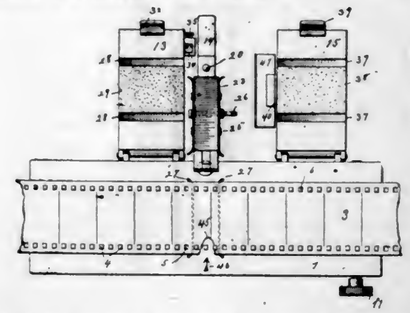
[Claims 6 to 8 not printed in the Gazette.]

1,195,175. APPARATUS FOR REPAIRING MOTION-PICTURE FILMS. EDMUND M. BENDHEIM, New York, N. Y. Filed Mar. 3, 1916. Serial No. 81,775. (Cl. 154—42.)

1. A film repairing apparatus, comprising a table adapted to support a film, a plurality of pins projecting therefrom and adapted to engage the film apertures, a cutter head hingedly secured to the table, and means for effecting a vertical reciprocative movement of said cutter head across said table.

2. A film repairing apparatus, comprising a table adapted to support a film, a plurality of pins projecting therefrom and adapted to engage the film apertures, a cutter head operably secured to the table, means for effecting a vertical reciprocative movement of said cutter head across said table, and a pair of spaced cutting blades carried by the cutter head, said blades having outwardly curved ends.

3. A film repairing apparatus, comprising a table adapted to support a film, a plurality of pins projecting therefrom and adapted to engage the film apertures, a cutter head operably secured to the table, means for effecting a vertical reciprocative movement of said cutter head across said table, a pair of spaced cutting blades carried by the cutter head, said blades having outwardly curved ends, and a pair of correspondingly shaped grooves in the table, adapted to be engaged by said blades.



4. A film repairing apparatus, comprising a fixed table adapted to support a film, said table being provided with two rows of apertures, a vertically movable member located below the table, two rows of film engaging pins carried by said member and adapted to be projected through said apertures, whereby said film is adapted to be locked to said table, and means for severing the film.

5. A film repairing apparatus comprising a table adapted to support a film, a series of pins projecting therefrom and adapted to engage the film apertures, a clamp adapted to be projected across the table, said clamp being provided with an upper groove, a slide movable within said groove, an arm extending sidewise from the slide, and a scraper secured to said arm.

[Claims 6 to 8 not printed in the Gazette.]

1,195,176. PROCESS OF PICKLING AND CURING HAMS AND OTHER MEATS. ALONZO NEWTON BENN, Chicago, Ill. Filed Nov. 15, 1915. Serial No. 61,556. (Cl. 99—1.)



A process of curing hams and other meats, which consists in lifting the skin, removing the surplus fat and bruised parts, replacing the skin, then inclosing the hams in stockinets and then pickling and curing the hams while within the stockinets.

1,195,177. MUSICAL INSTRUMENT. LAWRENCE G. BERGERON, Lakewood, and ROBERT B. BREWER, Cleveland, Ohio. Filed Aug. 8, 1914. Serial No. 855,868. (Cl. 177—7.)

1. A percussion device for the purpose described comprising a solenoid, an armature movably supported therein, and a striking member loosely mounted upon one end of said armature and separable therefrom in the striking operation.

2. A percussion device for the purpose described comprising a solenoid, an armature movably supported therein, and a striking member loosely mounted at one end of said armature, said armature being arranged for movement only within narrow limits and said striking member being arranged for movement between wider limits.

3. A percussion device for the purpose described comprising a solenoid, an armature movably supported there-

in, and a striking member loosely mounted upon one end of said armature and separable therefrom in the striking operation, said armature being normally maintained at one end of said solenoid and said striking member being arranged at the opposite end of said solenoid from the end at which said armature is normally maintained.

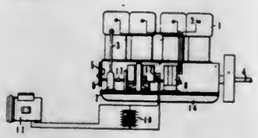


4. A percussion device for the purpose described comprising a solenoid, means for supporting said solenoid in upright position, an armature loosely supported within said solenoid and arranged for vertical movement, means normally supporting said armature at a point below the top of said solenoid, and a striking member loosely mounted upon the upper end of said armature and separable therefrom in the striking operation.

5. A percussion device for the purpose described comprising a solenoid, means for supporting said solenoid in upright position, a guide member projecting above said solenoid, a striking member movable with respect to said guide member, and an armature within said solenoid and movable along the axis thereof, said striking member being arranged to rest loosely against said armature and separable therefrom in the striking operation.

[Claims 6 to 12 not printed in the Gazette.]

1,195,178. ELECTRICAL SYSTEM FOR AUTOMOBILES. JOSEPH BIJUR, New York, N. Y., assignor to Bijur Motor Lighting Company, New York, N. Y., a Corporation of New York. Filed Feb. 2, 1911. Serial No. 606,123. (Cl. 171—315.)



1. In apparatus of the class described, in combination with an automobile engine, a shaft driven by gearing from the crank-shaft of said engine and extending adjacent thereto, a magneto electric machine for said engine at the end of said shaft and driven therefrom, a dynamo electric machine adjacent said shaft and interposed between said gearing and said magneto and driven from said shaft, and couplings formed in said shaft at each end of said dynamo electric machine.

2. In apparatus of the class described, in combination with an automobile engine, a shaft driven by gearing from the crank-shaft of said engine and extending adjacent thereto, a magneto electric machine for said engine at the end of said shaft and driven therefrom, and a dynamo electric machine adjacent said shaft and interposed between said gearing and said magneto and driven from said shaft, said dynamo electric machine comprising two relatively detachable parts fitted about said shaft, one of which forms a supporting bed and the other of which comprises the field magnets and armature.

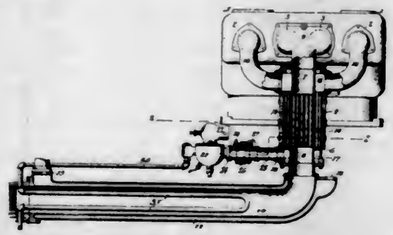
3. In apparatus of the class described, in combination with an automobile engine, a shaft driven by gearing from the crank-shaft of said engine and extending adjacent thereto, a magneto electric machine for said engine at the end of said shaft and driven therefrom, and a dynamo electric machine adjacent said shaft and interposed between said gearing and said magneto and driven from said shaft, said dynamo electric machine comprising two relatively detachable parts, one of which forms a supporting bed and is provided with bearings for said shaft and the other of which comprises the field magnets and armature.

4. In apparatus of the class described, in combination with an automobile engine, a shaft driven by gearing from the crank-shaft of said engine and extending adjacent thereto, a magneto electric machine for said engine at one end of said shaft, a dynamo electric machine interposed between said gearing and said magneto and through which said shaft passes, and means adapted to drive said dynamo electric machine from said shaft.

5. In apparatus of the class described, in combination with an automobile engine, a shaft driven by gearing from the crank-shaft of said engine and extending adjacent thereto, a magneto electric machine for said engine at the end of said shaft and driven therefrom, a dynamo electric machine adjacent said shaft and interposed between said gearing and said magneto, a gear upon said shaft, said dynamo electric machine comprising a supporting bed upon which said shaft is mounted and a generating portion removably secured to said bed, a gear connected with the armature shaft and positioned to mesh with said first gear as said generating portion is placed in position upon said bed, and a casing through which said first shaft passes removably held in position to inclose said gears.

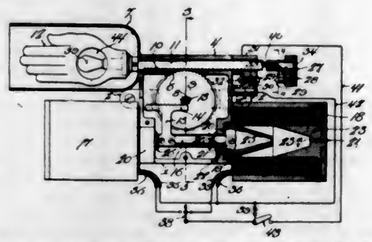
[Claims 6 to 10 not printed in the Gazette.]

1,195,179. HEATING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM E. BLAIR and FRANK J. BLAIR, Buffalo, N. Y., assignors to Buffalo Gasolene Motor Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 13, 1913. Serial No. 794,783. (Cl. 48—148.)



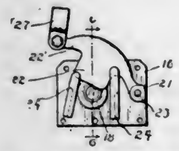
A heating device for an explosion engine comprising a conduit provided with an enlarged heating chamber having a wall and heads at the opposite ends of said wall and reduced tubular necks arranged on the central parts of said heads, one of said necks being adapted to be connected with the exhaust pipe of the engine while the other neck is adapted to communicate with the atmosphere, a plurality of heating tubes arranged within said heating chamber and connected with the heads thereof between its necks and wall so that the interior of said tubes open into the space outside of the heating chamber, a delivery manifold chamber which surrounds one of said necks and is adapted to connect with the fuel inlet of the engine and into which one end of the plurality of heating tubes open, and a receiving manifold chamber which surrounds the other neck and is adapted to connect with a fuel supply and into which the other ends of said tubes open.

1,195,180. VEHICLE SIGNAL APPARATUS. BORNETT L. BOSHOFF, Milwaukee, Wis. Filed Aug. 28, 1915. Serial No. 47,813. (Cl. 177—329.)



A signal apparatus for vehicles comprising a casing, opposed magnets carried by the casing, bearings at adjacent ends of said magnets, a bar slidable in said bearings, armatures at the ends of the bar, an intermediate lateral arm on the bar, springs on the bar between the arm and bearings and movable signal member and an operative connection between the arm and signal member for moving the latter.

1,195,181. TANK-DRAINING MECHANISM. WILLIAM A. BOUSELL, Chicago, Ill. Filed Aug. 26, 1914. Serial No. 858,664. (Cl. 137—5.)

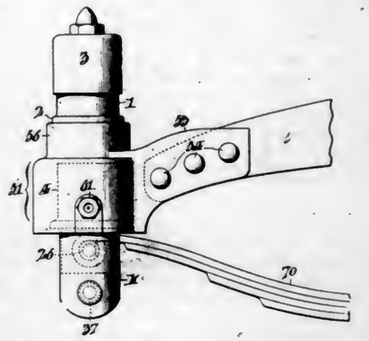


1. In combination, a base member having an opening therethrough and an annular groove around the opening and extending from the face of said base inwardly of the latter with the inner portion of the groove larger in diameter than the portion thereof adjacent the outer face of the base; an annular valve seat of yielding material in and substantially fitting said annular groove, the outer face of the valve seat extending above the face of said base; guides disposed at angles to the base; and a valve pivoted to said base at one side of said opening and adapted to swing over said opening and between the annular valve seat and said guides to close the opening in the valve seat.

2. In combination, a base member having an opening therethrough and an annular groove around said opening; an annular valve seat securely held in said groove and extending above said base; a guide disposed at an angle to the base; and a wedge-shaped valve pivoted to the base at one side of said opening and adapted to move between the guide and valve, said angular guide pressing the valve against said seat and compressing the latter to form a fluid-tight joint.

1,195,182. SHOCK-ABSORBER. CARL P. C. BRETSCHNEIDER, Philadelphia, Pa. Filed Nov. 1, 1915. Serial No. 58,952. (Cl. 267—19.)

1. In a shock-absorber, the combination of a casing having a cylindrical interior periphery and provided with uprights having an internal cylindrical surface; a cap member having a wall with an external cylindrical surface adapted to fit snugly within the casing, said cap member being provided with uprights having an external cylindrical surface adapted to fit snugly within the uprights of the casing; a spring arranged within the chamber formed by the casing and the cap member; a bridge-piece provided with walls having an external cylindrical surface adapted to fit between the uprights of the casing; a transverse pin extending between the uprights of the cap and adapted to be connected with an external supporting member; a transverse pin extending through the bridge-piece and the uprights of the casing, whereby the bridge-piece is attached to the casing; a socket-piece with a generally cylindrical internal cavity of different diameters, adapted to snugly receive the enlarged end portion of the casing and the portion of less external diameter adjacent thereto; and means whereby said casing may be secured within the socket-piece, substantially as set forth.

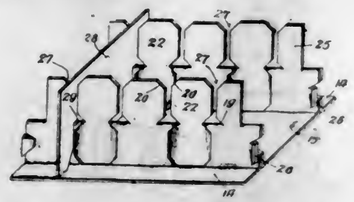


2. In a shock-absorber, the combination of a casing having a cylindrical interior periphery and provided with uprights having an internal cylindrical surface, said casing having an open end and a closed end, and a generally cylindrical external surface of different diameters at different longitudinal regions, the largest diameter being adjacent to the open end of the casing; a cap member having a wall with an external cylindrical surface adapted to fit snugly within the casing, said cap member being provided with uprights having an external cylindrical surface adapted to fit snugly within the uprights of the casing; a spring arranged within the chamber formed by the casing and the cap member; a bridge-piece provided with walls having an external cylindrical surface adapted to fit between the uprights of the casing; a transverse pin extending between the uprights of the cap and adapted to be connected with an external supporting member; a transverse pin extending through the bridge-piece and the uprights of the casing, whereby the bridge-piece is attached to the casing; a socket-piece with a generally cylindrical internal cavity of different diameters, adapted to snugly receive the enlarged end portion of the casing and the portion of less external diameter adjacent thereto; and means whereby said casing may be secured within the socket-piece, substantially as set forth.

3. In a shock-absorber, the combination of a casing having a cylindrical interior periphery and provided with uprights having an internal cylindrical surface, a cap member having a wall with an external cylindrical surface adapted to fit snugly within the casing, said cap member being provided with uprights having an external cylindrical surface adapted to fit snugly within the uprights of the casing; a spring arranged within the chamber formed by the casing with the cap member; a bridge-piece provided with walls having an external cylindrical surface adapted to fit between the uprights of the casing; a transverse pin extending between the uprights of the cap and adapted to be connected with an external supporting member; a transverse pin extending through the bridge-piece and the uprights of the casing, whereby the bridge-piece is attached to the casing; a socket piece adapted to fit snugly over the casing; and means whereby said casing is secured to said socket piece.

4. In a shock-absorber, the combination of a casing having an internal cylindrical surface of different diameters at different longitudinal regions, a cap member having an external cylindrical surface adapted to fit snugly within one portion of the casing, and provided with uprights having an external cylindrical surface adapted to fit snugly within another portion of the casing, means for connecting an external supporting member to said casing, a pin bridging said uprights and means for connecting an external supporting member to said pin.

1,195,183. CRATE-SEPARATOR. HOWARD J. BROWN and FRANK B. DAVIDSON, Marseilles, Ill., assignors to Howe and Davidson Company, Marseilles, Ill., a Corporation of New Jersey. Filed May 15, 1916. Serial No. 97,467. (Cl. 217—31.)



1. A partition strip, comprising a blank of sheet material and provided with tongues projecting from a margin thereof and spaced apart to form a locking notch, one of said tongues being cut from the material of the blank and folded into alinement with the other of said tongues.

2. A partition strip, comprising a blank of sheet material folded to provide two sections, each section being provided with a tongue cut from the opposite section, said tongues projecting from the margin formed by the line of fold and spaced apart to form a locking notch.

3. A partition strip, comprising a blank of sheet material folded along a score line and provided with tongues each cut from the material on the opposite side of said score line, said tongues being provided with corresponding transverse edges arranged in spaced relation and forming the margins of a locking notch, when said tongues are brought substantially into the same plane in the folding of said blank.

4. A partition strip formed from a blank of sheet material, having a plurality of tongues cut from said blank and arranged in staggered relation along, and alternately disposed on opposite sides of, a longitudinal score line, said tongues being spaced apart laterally to form a series of notches therebetween, when said strip is folded upon itself along said score line.

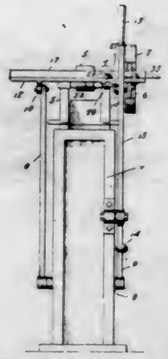
5. A partition strip, comprising a blank of sheet material provided with tongues cut from the material in staggered and spaced relation on opposite sides of a score line, said tongues being brought into alinement and forming between them a series of transverse notches when the blank is folded upon itself along said score line, the base portions of said tongues being decreased to provide an added amount of material intermediate said base portions of said tongues.

[Claims 6 to 12 not printed in the Gazette.]

1,195,184. STEEL-CUTTING MACHINE. ROSCO ELLSWORTH COLTON, Easthampton, Mass., assignor to Walter W. Slack, Springfield, Mass. Filed Aug. 27, 1908, Serial No. 450,479. Renewed Mar. 29, 1911. Serial No. 617,737. (Cl. 29—69.)

1. In a machine of the character described, a suitably driven cutting wheel, a work holding table having formed therein transversely disposed slots, a longitudinally disposed clamp engaging rib formed on the upper side of said table, a work clamping head slidably mounted on the table over said slot, means to secure said head in sliding engagement with the table, an operating plate mounted on the lower side of the table and connected to said clamping head, a cam clamping lever operatively connected to said plate whereby the latter is actuated to draw the cam head into forcible engagement with the work to be clamped, and a retracting spring adapted to be engaged with said clamping head whereby the same is retracted to an inoperative position when released by said clamping lever.

2. A steel-cutting machine comprising a base, a rotary cutter supported by said base, a work-holding table, means for securing work pieces thereon, table-supporting arms pivoted to the base and carrying the table, and an operating arm engaged with one of said supporting arms at a point nearer to its pivot than to its point of connection with the table.

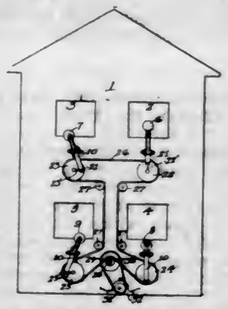


3. In a machine of the character described, a suitably operated cutting member, a standard on which the same is mounted, a work-carrying table, separated, relatively springy arms pivotally connected to the standard and supporting the table in a manner such as to permit movement thereof toward and from the cutting member, and means connected with one of said arms for so moving the table.

4. In a machine of the character described, a suitably operated cutting member, a standard on which the same is mounted, a work-carrying table, arms pivotally connected to the standard and supporting the table in a manner such as to permit movement thereof toward and from the cutting member, and means for so moving the table, connected with one of said arms at a point remote from the connection of the arm with the table, said arms being relatively long and thin so as to spring when the work is brought suddenly against the cutting member.

5. In a machine of the character described, a cutting wheel, a work-holding table having a supporting surface and a work-engaging rib, a complemental work-gripping clamp arranged to move toward and from said rib, a cam lever arranged to bear against the rib on the opposite side thereof from said clamp, and a connection between said cam lever and clamp extending below the rib and below the work-supporting surface of the table.

1,195,185. AMUSEMENT DEVICE. BENNIE C. CORBETT, Canon City, Colo., assignor to Ell Bridge Company, Roodhouse, Ill. Filed Apr. 12, 1913, Serial No. 760,818. Renewed Jan. 17, 1916. Serial No. 72,647. (Cl. 124—16.)



1. A moving target apparatus comprising in combination, a target shield wall provided with openings therein, hinged targets on one side of said wall adapted to be moved or deflected on their hinges when struck by a projectile passing through one of said openings, mechanism for moving said targets from exposed to concealed positions relative to said openings, and devices movable with said targets for restoring deflected or struck targets into their normal positions upon movement of said targets into concealed positions, substantially as described.

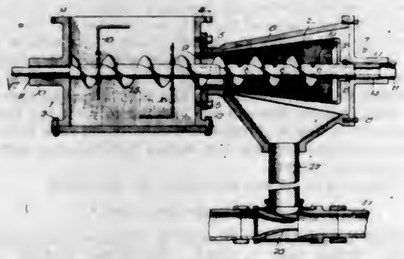
2. A moving target apparatus comprising in combination, a target shield provided with openings therein, targets on one side of said shield, oscillatable guides for said targets, and mechanism for oscillating and reciprocating said targets in said guides to effect movement of said targets into and out of exposed positions with respect to said openings, substantially as described.

3. In a target structure, a shield provided with an opening, a guide, a fixed pivot movably supporting said guide, a target movably supported in said movable guide and means for actuating said target to shift the same into exposed and concealed positions with respect to said opening, substantially as described.

4. In a moving target, a fixed shield provided with an opening, a target, a movable guide for said target, and rotary means connected with said target for shifting the same in its guide into exposed and concealed positions with respect to said opening, substantially as described.

5. In a target structure, a shield provided with an opening, a target, a movably supported guide for supporting said target during movement thereof, and means for actuating said target to shift the same into concealed and exposed positions with respect to said opening, substantially as described.

1,195,186. APPARATUS FOR CONTROLLING AND CONVEYING PULVERIZED FUEL. JAY G. COUTANT, Chicago, Ill., assignor to The Railway Materials Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 31, 1914. Serial No. 859,355. (Cl. 110—104.)



1. In a controller for conveying finely pulverized fuel to a burner therefor, the combination of a fuel chamber, means extending from said chamber to continuously convey fuel therefrom, a rotary frusto-conical screen surrounding the extension of said conveying means outside said chamber to receive and separate the fuel particles, whereby they are uniformly mixed with a gaseous medium and to retain the coarser particles, and means to convey the mixture to said burner.

2. In a controller for conveying finely pulverized fuel to a burner therefor, the combination of a fuel chamber, means extending from said chamber to continuously convey fuel therefrom, a rotatable screen surrounding said conveying means outside said chamber to receive said fuel from said conveying means and to separate the fuel particles, whereby they are uniformly mixed with a gaseous medium, means for closing the end of said screen opposite said conveying means, and means for conveying the mixture to said burner.

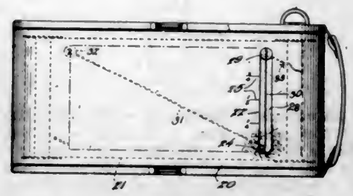
3. In a controller for feeding finely pulverized solid fuel to a burner therefor, the combination of a fuel chamber, means for continuously conveying fuel from said chamber, a rotary screen for separating fuel particles, means within the screen for supplying and mixing a gaseous medium with said particles to form a fuel cloud, and means for conveying said fuel cloud to said burner.

4. In a controller for feeding finely pulverized solid fuel to a burner therefor, the combination of a fuel chamber, means for continuously conveying fuel from said chamber, a rotary frusto-conical screen for separating fuel particles, means within the screen for supplying and mixing a gaseous medium with said particles to form a fuel cloud, and means for conveying said fuel cloud to said burner.

5. In a controller for feeding finely pulverized solid fuel to a burner therefor, the combination of a fuel chamber, a screw conveyer extending from said chamber for continuously conveying fuel therefrom, means surrounding said conveyer outside said chamber for separating the fuel particles, means within said separating means for supplying a gaseous medium to said particles to form a fuel cloud, and means for conveying said fuel cloud to said burner.

[Claims 6 to 12 not printed in the Gazette.]

1,195,187. FILM-CAMERA. HERMAN G. CUTHBERT, Newark, N. J. Filed July 8, 1915. Serial No. 38,726. (Cl. 95—31.)



1. The invention including a web to be reeled, a housing element therefor including a portion lying closely thereagainst and having an observation opening therethrough of elongated form extending across the major part of the width of the web, and a diagonal index means on the web arranged with relation to the observation opening to intersect the same and under reeling of the web to intersect the window at points having a distinct relation to the positions of the web.

2. A device including a housing, a web to be reeled, an observation opening being formed in the housing extending across the width of the web closely thereadjacent, a scale marked beside the opening, and diagonal index means on the web arranged to intersect the opening at progressively varied points under reeling of the web and having a peculiar angle to the longitudinal medial line of the web related to said scale.

3. Means for constantly indicating the number of a film section in course of reeling and the length of film wound at any time, comprising a housing element, a web, means to guide the web thereadjacent in a fixed path, an elongated observation opening being formed in the housing element extending across the path of the web, diagonal elements on the web constructed to indicate by the point of their intersection with the opening the position of the web, individual indices adjacent respective film sections spaced progressively increased distances from one side of the web, and a scale beside the opening coördinated with the said indices to indicate the significance of registered indices.

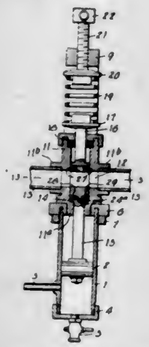
4. Means to constantly indicate the number of a film section being wound and the position of the film, comprising a housing element, a web to be reeled, an elongated observation opening being formed in the housing element extending across the path of the web, individual ordinal indices on the web positioned to register with said opening as respective film sections are positioned for exposure, and diagonal series of repeated ordinals on the web corresponding to adjacent respective sections.

5. In a device of the character indicated a housing element, a web, means to guide the web in a fixed path closely adjacent the housing element, an observation opening being formed in the housing element, a sight element asso-

ciated therewith extending across the path of the web, and index elements on the web constructed to co-act with the sight element.

[Claims 6 to 14 not printed in the Gazette.]

1,195,188. AUTOMATIC OIL-SUPPLY VALVE. PAUL DAFFERN, Robert Lee, Tex. Filed Feb. 15, 1916. Serial No. 78,430. (Cl. 236—6.)



1. An automatic liquid fuel supply valve, including a liquid fuel supply pipe, a cylinder, a piston mounted within the cylinder, a valve casing interposed in the length of the liquid fuel supply pipe and mounted upon the cylinder, a frame slidably mounted within the valve casing and connected to the piston so as to be moved thereby, yielding means opposing this movement of the frame, an apertured valve block fitted within the frame and having rabbeted edges, packing fitted within the said rabbeted edges, and yielding means for holding the packing in operative position, the movements of the apertured valve block serving to control the flow of liquid through the valve casing.

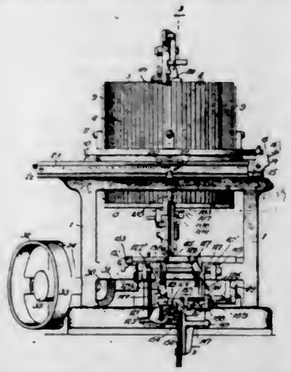
2. An automatic liquid fuel supply valve, including a liquid fuel supply pipe, a cylinder, a piston mounted within the cylinder, a valve casing interposed in the length of the liquid fuel supply pipe and mounted upon the cylinder, a frame slidably mounted within the valve casing and connected to the piston so as to be moved in one direction thereby, yielding means opposing this movement of the frame, a valve block fitted removably within the frame and formed with an aperture for controlling the flow of liquid through the valve casing as the frame and valve block are moved back and forth, said valve block being provided with rabbeted edges and having notches in the sides thereof, packing arranged within the rabbeted edges, and springs arranged within the notches for holding the packing yieldably in operative position on opposite sides of the block.

1,195,189. TYPE SETTING AND DISTRIBUTING MACHINE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 16, 1911. Serial No. 602,831. (Cl. 101—130.)

1. The combination of a stationary cylindrical magazine carrying a plurality of stacks of type on its periphery, ejector mechanism mounted to revolve adjacent to one end of said magazine and comprising an ejector located within the circle of type carried by said magazine, and independent means for rotating and for actuating said ejector to discharge a type radially outward from the magazine.

2. The combination of a magazine having a plurality of stacks of type on its periphery, ejector mechanism at one end of the magazine and comprising an ejector mounted to rotate within the circle of type on the magazine and to slide radially to discharge a type outward from the magazine, and independent means for rotating and sliding said ejector.

3. The combination of a stationary cylindrical magazine having a plurality of stacks of type on its periphery, an ejector rotatably mounted within the circle of the magazine and adapted to be registered with any one of the stacks of type, and independent means for rotating said ejector and for sliding it to push a type radially outward from the stack with which it is registered.



4. The combination of a stationary cylindrical magazine having a plurality of stacks of type on its periphery, an ejector mounted within said magazine and adapted to rotate on the axial center thereof to be registered with any one of said stacks and to slide radially within the circle of said type to eject a type radially outward from the stack with which it is registered and independent means for rotating and for sliding said ejector.

5. The combination of a stationary cylindrical magazine mounted endwise and having a bottom rim to support a plurality of stacks of type on the periphery of the magazine and also having an opening back of the bottom type in each stack, an ejector mounted within said magazine and adapted to rotate on the axial center thereof and adapted to be registered with any of said bottom type and to slide radially through the opening to eject the bottom type with which it is registered radially outward from the magazine, and independent means for rotating and for sliding said ejector.

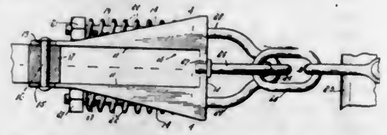
[Claims 6 to 55 not printed in the Gazette.]

1,195,190. DUSTER. OLIVER W. DUNLAP, Bloomington, Ill. Filed June 1, 1915. Serial No. 31,545. (Cl. 15—28.)



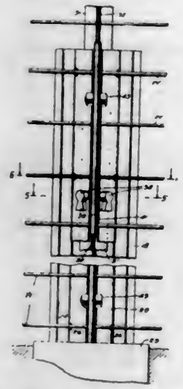
A duster comprising a plurality of spaced parallel fingers composed of twisted wire and meeting at their inner ends at a central point, a handle secured to said inner ends, and transversely disposed strands of dusting material radiating from said fingers and covering the latter throughout their lengths, said strands being secured between the twisted wire of said fingers, the latter having free disconnected outer ends bent upon themselves, thus providing rounded terminals for said fingers to prevent marring of articles being dusted, and at the same time increasing the density of the strands at the outer ends of said fingers.

1,195,191. SAFETY-CLEVIS. PETER DYKSHORN and GERRIT DEN BESTEN, Corsica, S. D. Filed Jan. 25, 1915, Serial No. 4,314. Renewed Jan. 28, 1916. Serial No. 74,858. (Cl. 21—75.)



A safety clevis comprising a substantially U-shaped casting including parallel legs and a connecting bight portion, said legs being each formed with a longitudinal channel registering with an opening formed in said bight portion, a U-shaped clevis bolt engaged through said openings and slidable in said channels, nuts adjustably engaging the ends of said bolt, compressible springs encircling said bolt between the nuts and said bight portion, an arm pivotally connected to said bolt, a link releasably engaged with said arm for connection with a draft element, and a keeper fixed to said bight portion for engagement with the free end of said arm.

1,195,192. METAL FENCE-POST. JOHN M. FELLOWS, Kokomo, Ind. Filed June 30, 1915, Serial No. 37,216. Renewed July 11, 1916. Serial No. 108,721. (Cl. 189—26.)



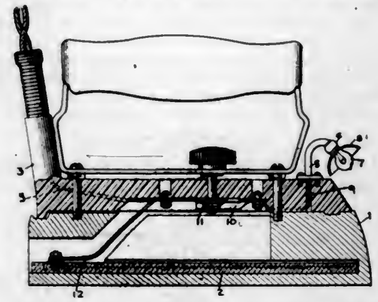
1. A fence post construction comprising a series of webs connected each to each in obtuse angles, a pair of guide members secured to the front faces of the intermediate webs and forming an L-shaped guideway along the central angle of the post, an extension post member slidable longitudinally along said guideway, and means to secure the extension post member in any desired position lengthwise of the post.

2. The herein described fence post construction comprising a main rigid post member, guide members secured thereto in spaced relation to each other and forming a guideway between them and the post member, an extension member slidable along said guideway and including a rib extending substantially at a right angle to the main post member, and means to lock the extension member to the main post member.

3. The herein described fence post comprising a main rigid member of angle construction, means connected longitudinally to the main member forming a guideway, an extension member adjustable longitudinally of the main member along said guideway to vary the effective length of the post, and means extending transversely through said extension member and main member to lock the extension member in adjusted position.

4. In a fence post, the combination of a main rigid angle member having a plurality of key-hole slots formed transversely therethrough, means secured to one side of the rigid member forming a guideway vertically of the rigid member and also having key-hole slots registering with those aforesaid, an angular extension member slidably fitted in said guideway and having a series of vertically spaced slots adapted to register with those of the rigid member, and a plurality of locking keys adapted to pass through the key-hole slots of the rigid member and those of the extension registering therewith, substantially as set forth.

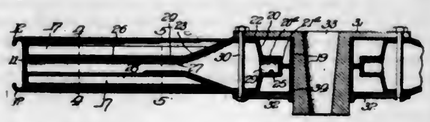
1,195,193. SAD-IRON. ANDREW FEYES, Pittsburgh, Pa., assignor to Pittsburgh Electrical Specialties Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 23, 1914. Serial No. 840,518. (Cl. 219—25.)



1. In an electric sad iron, a standard secured to the outer wall of the iron adjacent to the point thereof, a lamp on the standard, a reflector for the lamp, and means for including the lamp in the sad iron circuit.

2. The combination with an electrically heated sad iron, a circuit therefor, a lamp in the circuit, a circuit closer for synchronously energizing the lamp and the heating element, and a support for said lamp adjacent to the point of the iron and extending above the same.

1,195,194. VEHICLE-WHEEL. GEORGE H. FORSYTH, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 28, 1913. Serial No. 803,464. (Cl. 21—69.)



1. In a pressed metal wheel, a hollow shell divided in a medial plane of the wheel and comprising a hub portion and spoke and felly portions, a hollow sheet metal reinforcing shell within the hub portion, and inner spokes disposed within and extending throughout the length of the first mentioned spokes, and means for securing together the halves of the divided spokes, substantially as described.

2. In a pressed metal wheel, a hollow shell divided in a medial plane of the wheel and comprising a hub portion and spoke and felly portions formed integral therewith, a hollow sheet metal reinforcing shell within the hub portion and having tubular portions projecting into the spokes, and inner tubular spokes disposed within and ex-

tending throughout the length of the first mentioned spokes, and means for securing together the halves of the divided spokes, substantially as described.

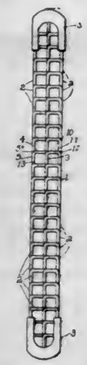
3. In a pressed metal wheel, a hollow shell divided in a medial plane of the wheel and comprising a hub portion and spoke and felly portions integral therewith, a hollow sheet metal similarly divided reinforcing shell within the hub portion and having tubular portions projecting into the spokes, and means for securing together the halves of the divided spokes, substantially as described.

4. In a pressed metal wheel, a hollow shell divided in a medial plane of the wheel comprising a hub portion, and spoke and felly portions formed integral therewith, a hollow sheet metal similarly divided reinforcing shell within the hub portion and provided with radially opening sockets, inner tubular spokes disposed between the two halves of the divided spokes and having their inner ends seated in the sockets, and means for securing together the halves of the divided spokes, substantially as described.

5. In a pressed metal wheel, a hollow shell divided in a medial plane of the wheel and comprising a hub portion, and spoke and felly portions formed integral therewith, a hollow sheet metal similarly divided reinforcing shell within the hub portion and provided with radially opening sockets, inner tubular spokes disposed between the two halves of the divided spokes and having their inner ends seated in the sockets, and interiorly arranged means for securing together the halves of the divided spokes, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,195,195. GARMENT-STAY. CHARLES ALFRED FOULGER, London, Ontario, Canada. Filed Mar. 8, 1915. Serial No. 13,077. (Cl. 2—76.)

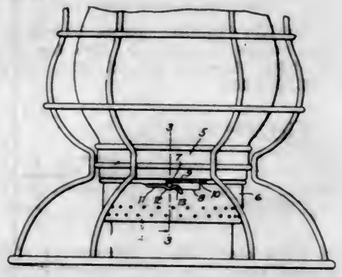


1. A garment stay formed from a continuous strand of wire comprising a plurality of sections, each section consisting of horizontal and vertical rods for forming squares adapted to be arranged in two columns, the lower horizontal rod of each square being overlapped by the upper rod of the square directly below it and all of said squares being arranged contiguous.

2. A garment stay consisting of a single strand of wire comprising a plurality of sections and each section being divided into two squares, a horizontal rod dividing each section, said horizontal rods lying parallel with each other in the same plane, each block having a horizontal rod and the last said horizontal rods adapted to rest upon each side adjacent each end of the first mentioned horizontal rods and vertical rods connecting said horizontal rods but extending at an angle with respect to the stay and said horizontal rods for the purpose set forth.

3. A garment stay composed of two parallel rows of contiguous, overlapping, and connected square loops, said square loops each comprising vertical and horizontal members and the horizontal members being so arranged as to give the maximum of torsion when the stay is flexed.

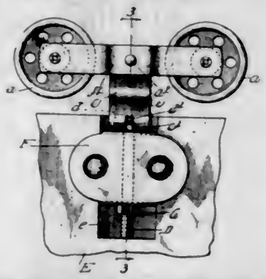
1,195,196. BAYONET-JOINT. WILLIAM B. FRANKENSTEIN, Rochester, N. Y., assignor to Pritchard Stamping Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 8, 1915. Serial No. 54,899. (Cl. 240—50.)



1. In a bayonet-joint, the combination of an inner member provided with radial projections; an outer member, of sheet-metal, having elongated recesses at its upper margin to receive said projections; and a wire rolled in the upper edge of the outer member extending over the recesses therein so as to coöperate with said projections, and outwardly bent to permit the wire to be positioned above said projections.

2. In a bayonet-joint, the combination of an inner member provided with radial projections; an outer member, of sheet-metal, recessed at its upper margin to receive said projections; and a wire rolled in the upper edge of the outer member and crossing the recesses therein so as to coöperate with said projections, one end of the wire being formed into a spring-catch to coöperate with one of the projections and prevent accidental rotation of the joint-members.

1,195,197. DOOR-HANGER. PETER FRANTZ, Sterling, Ill., assignor to Frantz Manufacturing Co., Sterling, Ill., a Corporation of Illinois. Filed Jan. 21, 1915. Serial No. 3,463. (Cl. 16—90.)



1. A door hanger comprising a wheeled body arranged to travel on a track for supporting the door, having a hinge formed with a stop to limit the hinge motion in one direction, adjusting means inside of the door to raise and lower the latter relative to said hinge and body, and a connection entirely inside of said track to support the hinge on said body, said means including a vertical bolt, a door-supporting member movable up and down on said bolt, and a nut screwed on said bolt to engage the bottom of said member.

2. A door hanger comprising a wheeled body arranged to travel on a track for supporting the door, having a hinge formed with a stop to limit the hinge motion in one direction, adjusting means inside of the door to raise and lower the latter relative to said hinge and body, and a connection entirely inside of said track to support the hinge on said body, said means including a vertical bolt extending downward into the door between the inner and outer sides thereof, and a nut on the lower end of said bolt to raise and lower the door.

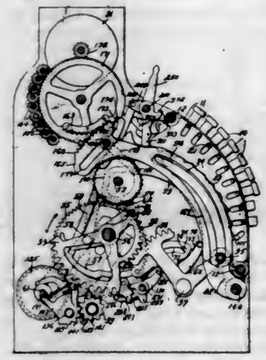
3. A door hanger comprising a wheeled body arranged to travel on a track for supporting the door, and adjusting means inside of the door to raise and lower the latter relative to said body, said means including a bolt extending downward into the door, a bracket plate slidable on said bolt and formed with top and bottom ears embedded in the door, bolts inserted through the door and plate at opposite sides of said bolt to hold the plate in place, and a nut screwed upon the lower end of said bolt to engage the bottom ear of said plate, said door having recesses for the upper and lower ends of said supporting bolt.

4. A door-hanger comprising a wheeled body arranged to travel on a track to support the door, and a hinge connection between the door and said body, said connection including a bolt secured to the door, a slotted bearing depending from said body, a pintle resting horizontally in said bearing, said pintle forming the head of said bolt, and said head having a shoulder extending into said slot to engage the end thereof and thereby limit the hinge motion in one direction.

5. A door-hanger comprising a wheeled body arranged to travel on a track to support the door, and a hinge connection between the door and said body, said connection including a bolt secured to the door, a slotted bearing depending from said body, a pintle resting horizontally in said bearing, said pintle forming the head of said bolt, and said head having a shoulder extending into said slot to engage the end thereof and thereby limit the hinge motion in one direction, said pintle being directly below the wheel-tread, and said shoulder being inside of said pintle.

[Claims 6 and 7 not printed in the Gazette.]

1,195,198. DIFFERENTIAL MECHANISM FOR ACCOUNTING-MACHINES. FREDERICK L. FULLER, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Oct. 1, 1913. Serial No. 792,869. (Cl. 235—2.)



1. In a machine of the class described, the combination with an accounting device; of a pivoted gear element for actuating said accounting device; an arm pivoted concentric with said gear element and carrying pivoted thereto a second gear element engaging said first mentioned gear element; a roller on said second gear element; and an arm adapted to be positioned to be engaged by and thereby differentially position said roller and said gear elements with respect to their pivots.

2. In a machine of the class described, the combination with an accounting device; of a pivoted gear element for actuating said accounting device; an arm pivoted concentric with said gear element and carrying pivoted thereto a second gear element engaging said first mentioned gear element; a roller on said second gear element; an arm adapted to be positioned differentially and thereby differentially position said gear elements with respect to their pivots; a latch device carried by said first arm for differentially positioning said second arm; and manipulative means for rendering said latch device inoperative for said purpose at different points of movement of said first arm.

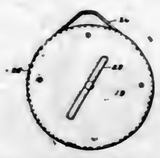
3. In a machine of the class described, the combination with an accounting device; of a driving member therefor having an invariable movement; a pivoted angularly adjustable element for effecting differential rotation of said member; and manipulative means controlling the adjustment of said element.

4. In a machine of the class described, the combination with an accounting device; of an actuator therefor having an invariable movement; a pivoted angularly adjustable element for effecting differential rotation of said actuator, and means for latching said element in adjusted position.

5. In a machine of the class described, the combination with an accounting element, of a bodily movable and rotating element, having connections for driving the accounting device by its movements; a latch permitting but slight rotation of said element; and manipulative means controlling the operation of said latch.

[Claims 6 to 81 not printed in the Gazette.]

1,195,199. ROTARY STAMPING DEVICE. KENNETH C. FULLERTON and EDWARD S. HUNT, Otis Orchards, Wash. Filed Mar. 6, 1915. Serial No. 12,660. (Cl. 101—62.)



1. A stamping device of the character described, comprising a handle, a shaft, a drum rotatably mounted on the shaft and having an opening in the side thereof, a ribbon carrying letters and mounted upon the periphery of the drum and means on said handle for locking the drum as against rotation and for releasing the same again to rotation, such means comprising a spring secured to said handle and having a projection thereon adapted to normally engage the opening in the side of the drum and to be manually released therefrom.

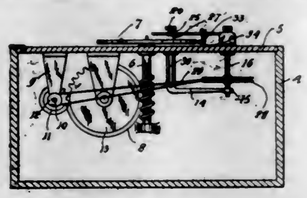
2. A stamping device of the character described, comprising a handle, a shaft connected therewith, a drum rotatably mounted on said shaft and having an opening in the side thereof, a roller mounted within said drum, openings in the periphery of the drum adjacent to said roller with a segment of the periphery of the drum between said openings and a ribbon carrying letters mounted on said roller and extending through said openings and over the surface of said segment, together with means on said handle for locking the drum as against rotation and releasing the same again to rotation, such means comprising a spring secured to said handle and having a projection thereon adapted to normally engage the opening in the side of the drum and to be manually released therefrom.

3. A stamping device of the character described comprising a handle, a shaft connected therewith, a pair of drums, one of less diameter than the other, rotatably mounted on said shaft, a ribbon carrying lettering or figures mounted on the periphery of each of said drums and means on the drum having the greater diameter for elevating the ribbon on the drum of the less diameter to a position horizontal with the ribbon on the drum having a greater diameter.

1,195,200. STOPPING DEVICE FOR GRAPHOPHONES. ANDREW GANTZ, Willock, Pa. Filed June 24, 1914. Serial No. 847,080. (Cl. 74—46.)

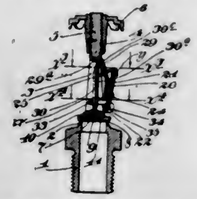
A stop attachment for graphophone disks comprising a shaft adapted to be rotated when the motor is in opera-

tion, guides projecting from each side of said shaft, a sliding member mounted on said guides, a flexible member secured to said shaft and said sliding member and adapted to wind around said shaft whereby to draw said sliding



member toward said shaft, and a stop member having a horizontal leg secured at the bottom thereof and in the path of said sliding member, said leg being adapted to be forced against a record disk when said sliding member bears against the top of said stop member.

1,195,201. AUTOMATIC SPRINKLER-HEAD. CHARLES B. GARRETT, Cincinnati, Ohio, assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 27, 1913. Serial No. 744,453. (Cl. 169—5.)



1. A toggle acting strut for automatic sprinklers, comprising a compression member, a lever fulcrumed on said compression member, a two-part link having its sections united by fusible solder, one of the sections thereof being interlocked to said lever, and a strut lock connecting said compression member to the other member of said link.

2. A toggle acting strut for automatic sprinklers, comprising a compression member, a lever fulcrumed on said compression member, a two-part link having its sections united by fusible solder, one of the sections thereof being interlocked to said lever, and a strut lock connecting said compression member to the other member of said link, the interlocking connection between said link and lever being flexible, so as to relieve said lever of torsional strains.

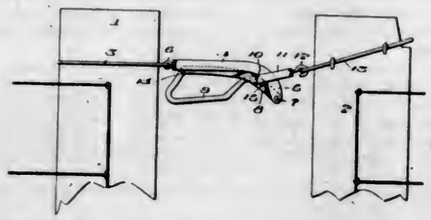
3. In an automatic sprinkler, the combination with a cap normally closing the discharge orifice thereof and an abutment overlying said cap, of a toggle acting strut comprising a compression member pressing on said cap, a lever fulcrumed on said compression member and seated against said abutment, a two-part link having its sections united by fusible solder, one section thereof being interlocked to said lever, and a lock connecting the other section of said link to said compression member.

4. In an automatic sprinkler, the combination with a cap normally closing the discharge orifice thereof and an abutment overlying said cap, of a toggle acting strut comprising a compression member pressing on said cap, a lever fulcrumed on said compression member and seated against said abutment, a two-part link having its sections united by fusible solder, one section thereof being interlocked to said lever, and a lock connecting the other section of said link to said compression member, the interlocking connection between said link and lever being flexible so as to relieve said lever of torsional strains.

5. In an automatic sprinkler, a collapsible toggle acting strut comprising a compression member, a lever fulcrumed on said compression member, a two-part link having its sections united by fusible solder, one section of said link having a slotted flange through which the said lever is passed, the lower end of the said lever bearing against the said section, and a lock connecting the other section of said link to said compression member.

[Claim 6 not printed in the Gazette.]

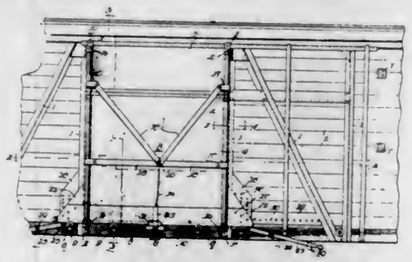
1,195,202. GATE-FASTENER. JESSE M. GILBERT, Paradise, Kans. Filed Dec. 27, 1915. Serial No. 68,723. (Cl. 70—121.)



1. A device for the purpose described, comprising a body having a deflected portion at one end, a lever pivoted to said deflected portion of the body and having a portion arranged to bring-up against the body, and a link pivoted to the lever back of the deflected portion of the body.

2. A device for the purpose described, comprising a loop-shaped body having deflected end arms, a lever pivoted to said arms and having a hand loop and also having a portion adapted to bring-up against the body, and a bail-shaped link arranged to straddle the deflected arms of the body and pivoted to the lever, back of said deflected arms.

1,195,203. CAR-DOOR. WILLIS E. GILLETT, Whiting, Ind. Filed Aug. 7, 1915. Serial No. 44,183. (Cl. 20—27.)



1. A closure for cars and the like, comprising a frame, upper and lower members slidably supported on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, independent eccentric means mounted on each of said shafts and adapted to independently engage and clamp said members against said frame, means on said upper member coöperating with said lower member to prevent lifting thereof until said upper member has been moved laterally, and a pair of levers pivotally mounted on said frame for lifting said lower member when released from said upper member.

2. A closure for cars and the like comprising a frame, upper and lower members slidably supported on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, independent eccentric means mounted on each of said shafts, levers for operating said eccentric means to cause the latter to independently engage and clamp said members against said frame, means on said upper member coöperating with said lower member to prevent lifting thereof until said upper member has been moved laterally, a pair of levers pivotally mounted on said frame for lifting said lower member when released from said upper member, lateral extensions on said lower member, each having a plurality of openings therein, and plates secured to said frame provided with corresponding openings to be engaged by a lever inserted through the openings in said extensions.

3. A closure for cars and the like comprising a frame, upper and lower members slidably mounted on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame at either side thereof and independent eccentric means mounted on each of said shafts and adapted to engage and clamp the respective members against said frame, and means pivotally mounted on said frame to move said lower member vertically when said eccentric means are released and said upper member has been moved laterally, outward displacement of said lower member being limited by said shafts.

4. A closure for cars and the like comprising a frame, a pair of independent members slidably supported on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, and independent eccentric means mounted on each of said shafts and adapted to respectively engage and clamp said members against said frame.

5. A closure for cars and the like comprising a frame, a pair of independent members slidably mounted one above the other on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, independent eccentric means mounted on said shafts, levers for operating said eccentric means to clamp said members against said frame, lateral extensions on said lower member, each having a plurality of openings therein, and plates secured to said frame provided with corresponding openings to be engaged by a lever inserted through the openings in said extensions.

1,195,204. METHOD OF TRIMMING RUBBER ARTICLES. FREDERICK J. GLEASON, Walpole, Mass., assignor to Standard Woven Fabric Company, Framingham, Mass., a Corporation of Massachusetts. Filed Apr. 23, 1915. Serial No. 23,491. (Cl. 18—50.)

1. That improvement in the method of shaping rubber articles which consists in cutting away the surplus material while the article is hot enough to be brittle.

2. That improvement in the method of trimming rubber articles which consists in cutting away the surplus material before the article has cooled, following the molding operation, sufficiently to become elastic.

3. That improvement in the method of shaping rubber articles which consists in removing the surplus material by abrasion while the article is hot enough to be brittle.

4. That improvement in the method of trimming rubber articles which consists in cutting away the surplus material while the article is in the mold in which it has been vulcanized and before the article has cooled sufficiently to become elastic, and utilizing the mold as a guide for the cutting operation.

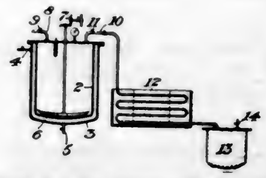
5. That improvement in the method of trimming rubber articles which consists in holding the article in a part of the mold in which it has been vulcanized and which can be used as a templet, removing the surplus material by abrasion while so utilizing the mold and performing this operation while the rubber is hot enough to cut readily.

1,195,205. PROCESS OF MANUFACTURING ANHYDRIDS OF FATTY ACIDS. KARL GOLDSCHMIDT and FRITZ SPITZER, Essen-on-the-Ruhr, Germany, assignors, by mesne assignments, to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Oct. 29, 1909. Serial No. 525,266. (Cl. 23—24.)

1. A process for the production of fatty acid anhydrids, which consists in mixing a fatty acid salt with sulfur, and treating the mixture at a low temperature with chlorin.

2. A process for the production of fatty acid anhydrids, which consists in mixing a fatty acid salt with sulfur, both being in a dry state, and treating the mixture at a low temperature with dry chlorin.

3. A process for the production of acetic anhydrid, which consists in mixing an acetate with sulfur, both being in a dry state, and treating the mixture at a low temperature with dry chlorin.

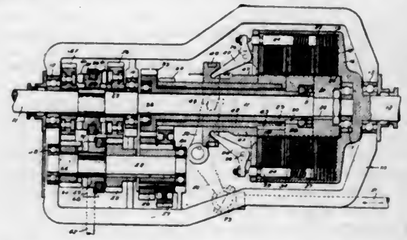


4. A process for the production of acetic anhydrid which consists in mixing sodium acetate and sulfur, both being in a dry state, and treating the mixture at a low temperature with chlorin.

5. A process for the production of fatty acid anhydrids, which consists in mixing a fatty acid salt with sulfur, treating the mixture at a low temperature with chlorin, and stirring said mixture while it is under treatment.

[Claims 6 to 11 not printed in the Gazette.]

1,195,206. SPEED-CHANGE GEARING. LELAND F. GOODSPEED, Milwaukee, Wis., assignor to Henry Herman Westinghouse, New York, N. Y. Filed June 1, 1910. Serial No. 564,381. (Cl. 74—59.)



1. The combination of a driving element, a driven element, a set of continually meshing speed change gears, a composite multiple disk clutch device for controlling the operation of said set of gears and for connecting said driving and driven elements, and a single actuating device arranged to successively operate or set the different portions of said clutch device.

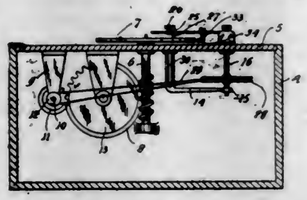
2. The combination of a driving element, a driven element, a set of speed change gears, a composite multiple disk friction clutch device for controlling the operation of said set of gears and for connecting said driving and driven elements and a single actuating device arranged to successively operate or set different portions of said clutch device.

3. The combination of a driving element, a driven element, a set of speed change gears provided with overrunning devices, a composite clutch device for controlling the operation of said set of gears consisting of a plurality of independent superposed multiple disk clutches and a single actuating device arranged to successively operate said clutches.

4. The combination of a driving element, a driven element, continually meshing speed change gears, a plurality of independent superposed multiple disk friction clutches for controlling the operation of said speed change gears and for connecting said driving and driven elements through said gears and means for successively operating said clutches.

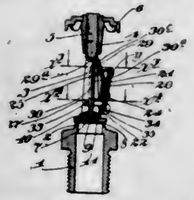
5. The combination of a driving element, a driven element, a multiple disk friction clutch device for directly connecting said elements, a set of speed change gears, a composite multiple disk friction clutch device superposed on said other clutch device for controlling the operation

tion, guides projecting from each side of said shaft, a sliding member mounted on said guides, a flexible member secured to said shaft and said sliding member and adapted to wind around said shaft whereby to draw said sliding



member toward said shaft, and a stop member having a horizontal leg secured at the bottom thereof and in the path of said sliding member, said leg being adapted to be forced against a record disk when said sliding member bears against the top of said stop member.

1,195,201. AUTOMATIC SPRINKLER-HEAD. CHARLES B. GARRETT, Cincinnati, Ohio, assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 27, 1913. Serial No. 744,453. (Cl. 169—5.)



1. A toggle acting strut for automatic sprinklers, comprising a compression member, a lever fulcrumed on said compression member, a two-part link having its sections united by fusible solder, one of the sections thereof being interlocked to said lever, and a strut lock connecting said compression member to the other member of said link.

2. A toggle acting strut for automatic sprinklers, comprising a compression member, a lever fulcrumed on said compression member, a two-part link having its sections united by fusible solder, one of the sections thereof being interlocked to said lever, and a strut lock connecting said compression member to the other member of said link, the interlocking connection between said link and lever being flexible, so as to relieve said lever of torsional strains.

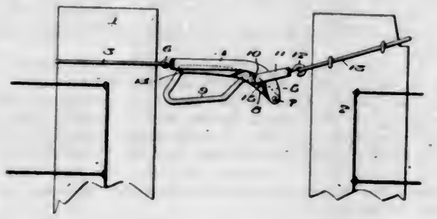
3. In an automatic sprinkler, the combination with a cap normally closing the discharge orifice thereof and an abutment overlying said cap, of a toggle acting strut comprising a compression member pressing on said cap, a lever fulcrumed on said compression member and seated against said abutment, a two-part link having its sections united by fusible solder, one section thereof being interlocked to said lever, and a lock connecting the other section of said link to said compression member.

4. In an automatic sprinkler, the combination with a cap normally closing the discharge orifice thereof and an abutment overlying said cap, of a toggle acting strut comprising a compression member pressing on said cap, a lever fulcrumed on said compression member and seated against said abutment, a two-part link having its sections united by fusible solder, one section thereof being interlocked to said lever, and a lock connecting the other section of said link to said compression member, the interlocking connection between said link and lever being flexible so as to relieve said lever of torsional strains.

5. In an automatic sprinkler, a collapsible toggle acting strut comprising a compression member, a lever fulcrumed on said compression member, a two-part link having its sections united by fusible solder, one section of said link having a slotted flange through which the said lever is passed, the lower end of the said lever bearing against the said section, and a lock connecting the other section of said link to said compression member.

[Claim 6 not printed in the Gazette.]

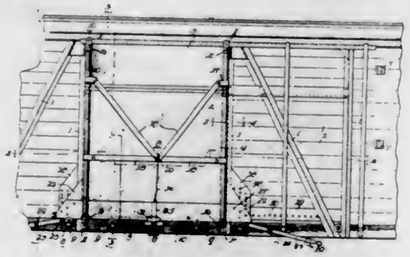
1,195,202. GATE-FASTENER. JESSE M. GILBERT, Paradise, Kans. Filed Dec. 27, 1915. Serial No. 68,723. (Cl. 70—121.)



1. A device for the purpose described, comprising a body having a deflected portion at one end, a lever pivoted to said deflected portion of the body and having a portion arranged to bring-up against the body, and a link pivoted to the lever back of the deflected portion of the body.

2. A device for the purpose described, comprising a loop-shaped body having deflected end arms, a lever pivoted to said arms and having a hand loop and also having a portion adapted to bring-up against the body, and a bail-shaped link arranged to straddle the deflected arms of the body and pivoted to the lever, back of said deflected arms.

1,195,203. CAR-DOOR. WILLIS E. GILLETT, Whiting, Ind. Filed Aug. 7, 1915. Serial No. 44,183. (Cl. 20—27.)



1. A closure for cars and the like, comprising a frame, upper and lower members slidably supported on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, independent eccentric means mounted on each of said shafts and adapted to independently engage and clamp said members against said frame, means on said upper member coöperating with said lower member to prevent lifting thereof until said upper member has been moved laterally, and a pair of levers pivotally mounted on said frame for lifting said lower member when released from said upper member.

2. A closure for cars and the like comprising a frame, upper and lower members slidably supported on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, independent eccentric means mounted on each of said shafts, levers for operating said eccentric means to cause the latter to independently engage and clamp said members against said frame, means on said upper member coöperating with said lower member to prevent lifting thereof until said upper member has been moved laterally, a pair of levers pivotally mounted on said frame for lifting said lower member when released

from said upper member, lateral extensions on said lower member, each having a plurality of openings therein, and plates secured to said frame provided with corresponding openings to be engaged by a lever inserted through the openings in said extensions.

3. A closure for cars and the like comprising a frame, upper and lower members slidably mounted on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame at either side thereof and independent eccentric means mounted on each of said shafts and adapted to engage and clamp the respective members against said frame, and means pivotally mounted on said frame to move said lower member vertically when said eccentric means are released and said upper member has been moved laterally, outward displacement of said lower member being limited by said shafts.

4. A closure for cars and the like comprising a frame, a pair of independent members slidably supported on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, and independent eccentric means mounted on each of said shafts and adapted to respectively engage and clamp said members against said frame.

5. A closure for cars and the like comprising a frame, a pair of independent members slidably mounted one above the other on said frame and each adapted to move laterally, a pair of shafts fixedly secured to said frame, independent eccentric means mounted on said shafts, levers for operating said eccentric means to clamp said members against said frame, lateral extensions on said lower member, each having a plurality of openings therein, and plates secured to said frame provided with corresponding openings to be engaged by a lever inserted through the openings in said extensions.

1,195,204. METHOD OF TRIMMING RUBBER ARTICLES. FREDERICK J. GLEASON, Walpole, Mass., assignor to Standard Woven Fabric Company, Framingham, Mass., a Corporation of Massachusetts. Filed Apr. 23, 1915. Serial No. 23,491. (Cl. 18—50.)

1. That improvement in the method of shaping rubber articles which consists in cutting away the surplus material while the article is hot enough to be brittle.

2. That improvement in the method of trimming rubber articles which consists in cutting away the surplus material before the article has cooled, following the molding operation, sufficiently to become elastic.

3. That improvement in the method of shaping rubber articles which consists in removing the surplus material by abrasion while the article is hot enough to be brittle.

4. That improvement in the method of trimming rubber articles which consists in cutting away the surplus material while the article is in the mold in which it has been vulcanized and before the article has cooled sufficiently to become elastic, and utilizing the mold as a guide for the cutting operation.

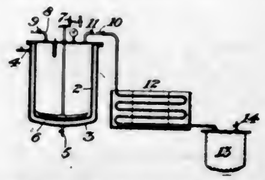
5. That improvement in the method of trimming rubber articles which consists in holding the article in a part of the mold in which it has been vulcanized and which can be used as a templet, removing the surplus material by abrasion while so utilizing the mold and performing this operation while the rubber is hot enough to cut readily.

1,195,205. PROCESS OF MANUFACTURING ANHYDRIDS OF FATTY ACIDS. KARL GOLDSCHMIDT and FRITZ SPITZER, Essen-on-the-Ruhr, Germany, assignors, by mesne assignments, to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Oct. 29, 1909. Serial No. 525,266. (Cl. 23—24.)

1. A process for the production of fatty acid anhydrids, which consists in mixing a fatty acid salt with sulfur, and treating the mixture at a low temperature with chlorin.

2. A process for the production of fatty acid anhydrids, which consists in mixing a fatty acid salt with sulfur, both being in a dry state, and treating the mixture at a low temperature with dry chlorin.

3. A process for the production of acetic anhydrid, which consists in mixing an acetate with sulfur, both being in a dry state, and treating the mixture at a low temperature with dry chlorin.

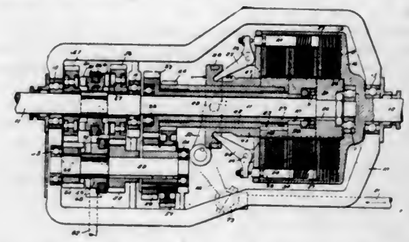


4. A process for the production of acetic anhydrid which consists in mixing sodium acetate and sulfur, both being in a dry state, and treating the mixture at a low temperature with chlorin.

5. A process for the production of fatty acid anhydrids, which consists in mixing a fatty acid salt with sulfur, treating the mixture at a low temperature with chlorin, and stirring said mixture while it is under treatment.

[Claims 6 to 11 not printed in the Gazette.]

1,195,206. SPEED-CHANGE GEARING. LELAND F. GOODSPEED, Milwaukee, Wis., assignor to Henry Herman Westinghouse, New York, N. Y. Filed June 1, 1910. Serial No. 564,381. (Cl. 74—59.)



1. The combination of a driving element, a driven element, a set of continually meshing speed change gears, a composite multiple disk clutch device for controlling the operation of said set of gears and for connecting said driving and driven elements, and a single actuating device arranged to successively operate or set the different portions of said clutch device.

2. The combination of a driving element, a driven element, a set of speed change gears, a composite multiple disk friction clutch device for controlling the operation of said set of gears and for connecting said driving and driven elements and a single actuating device arranged to successively operate or set different portions of said clutch device.

3. The combination of a driving element, a driven element, a set of speed change gears provided with overrunning devices, a composite clutch device for controlling the operation of said set of gears consisting of a plurality of independent superposed multiple disk clutches and a single actuating device arranged to successively operate said clutches.

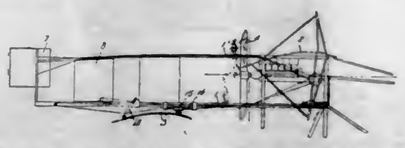
4. The combination of a driving element, a driven element, continually meshing speed change gears, a plurality of independent superposed multiple disk friction clutches for controlling the operation of said speed change gears and for connecting said driving and driven elements through said gears and means for successively operating said clutches.

5. The combination of a driving element, a driven element, a multiple disk friction clutch device for directly connecting said elements, a set of speed change gears, a composite multiple disk friction clutch device superposed on said other clutch device for controlling the operation

of said speed change gears and for connecting said driving and driven elements through said gears and a single actuating device arranged to successively operate or set all of said clutch devices.

[Claims 6 to 20 not printed in the Gazette.]

1,195,207. AEROPLANE. RUDOLPH R. GRANT, Norfolk, Va. Filed Oct. 27, 1913. Serial No. 797,603. (Cl. 244—29.)



1. An aeroplane in which at speed of normal horizontal flight, the center of gravity is in front of the center of lifting effort and is in the rear thereof at excessive speeds above the same.

2. An aeroplane in which the center of gravity is in front of the center of lifting effort at speed of normal horizontal flight, and is in the rear thereof at speeds in excess thereof.

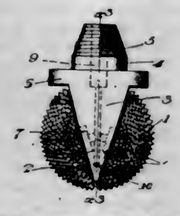
3. An aeroplane in which the center of gravity and center of drift pressure are maintained co-incident under varying conditions of flight, and a propeller located substantially at such co-incident point.

4. In an aeroplane in which the center of gravity and center of drift pressure are maintained co-incident under varying conditions of flight, and in which the center of lifting effort is maintained in the line of thrust under varying conditions of flight, a propeller located substantially at the center of gravity and drift pressure.

5. An aeroplane in which the center of gravity and center of drift pressure are maintained co-incident under varying conditions of the flight, and in which the center of gravity is in front of the center of lifting effort at normal speed of horizontal flight, and is in the rear thereof at speeds in excess thereto, a propeller located substantially at the center of gravity.

[Claims 6 to 9 not printed in the Gazette.]

1,195,208. ROTARY DRILL. THOMAS J. GRIFFIN, Los Angeles, Cal., assignor, by mesne assignments, to Sharp-Hughes Tool Company, Houston, Tex., a Corporation of Texas. Filed Sept. 27, 1913. Serial No. 792,151. (Cl. 255—71.)



1. A rotary drill having a pair of cutting members, each of which is bounded by a single plane surface arranged at an angle to the vertical axis of the drill, and a single convexed surface, the convexed surfaces of said members being studded with numerous conical cutting projections.

2. In a rotary drill, a supporting means, and a pair of cutters rotatably mounted on said supporting means and being of such form that together they form substantially a sphere, each of said cutters being bounded by a single plane surface and a single convexed cutting surface.

3. A rotary drill comprising supporting means having a substantially wedge-shaped tongue, and a pair of cutters secured to said tongue on opposite sides thereof, each of said cutters being bounded by a convexed surface that is closely studded with radially-disposed cutting spikes and a plane surface that lies substantially parallel to one side of said tongue.

4. A rotary drill comprising supporting means formed with a substantially wedge-shaped tongue having bearing recesses in opposite sides thereof, and a pair of cutters, each having a hub mounted in a recess of the tongue, each cutter being bounded by a convexed face that is closely studded with projecting spikes and an angularly-disposed plane surface on which said hub is formed.

5. A rotary drill, comprising a head provided at its lower end with a substantially wedge-shaped portion having recesses formed in the opposite side faces thereof, two oppositely-inclined cutters rotatably mounted on the side faces of said portion and being of such form that together they form substantially a sphere, and hubs on said cutters that fit in said recesses.

1,195,209. ROTARY DRILL. THOMAS J. GRIFFIN, Los Angeles, Cal., assignor, by mesne assignments, to Sharp-Hughes Tool Company, Houston, Tex., a Corporation of Texas. Original application filed June 11, 1913, Serial No. 773,031. Divided and this application filed Feb. 25, 1915. Serial No. 10,488. (Cl. 255—71.)



1. A drill composed of a head and two vertically-disposed cutters arranged on said head in approximately parallel relation to each other and spaced apart, the axis of one of said cutters being offset or staggered slightly with relation to the axis of the other cutter so that the rear edges of the cutters will not drag against the side wall of the hole and each cutter being arranged substantially midway the center axis of the head and the outside of the head.

2. A drill composed of a head and two substantially disk-shaped cutters housed in the head and arranged in an upright position and offset with relation to each other at points approximately midway the vertical axis and the outside of the head portions of each cutter projecting laterally from the head so as to remove the material from the side wall of the hole.

3. A drill composed of a head provided with a single center bearing and two side bearings, and two substantially vertically-disposed cutters housed in said head and rotatably mounted on shafts whose inner and outer portions are supported by said center and side bearings, said cutters having portions that project laterally from the head and remove the material from the side wall of the hole.

4. A drill composed of a head, and two rotatable cutters on said head whose axes of rotation are disposed at right angles to the axis of rotation of the drill head, said cutters being arranged in parallel relation to each other, with the axis of one cutter offset or staggered slightly with relation to the axis of the other cutter and each cutter being located substantially midway the vertical axis of the head and the outside of the head.

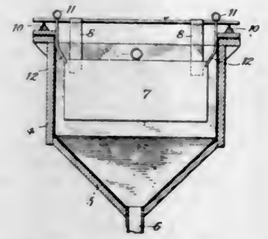
5. A rotary boring drill composed of a head provided at its lower end with two parallel pockets that extend transversely through the head at points substantially midway the vertical axis and the outside face of the head, and two vertically-disposed, toothed cutters arranged in said pockets in parallel relation to each other and in such a manner that they scrape off the material at the side wall of the hole.

1,195,210. HORSESHOE. FLOYD B. GROFF and FAYETTE GROFF, St. Johnsville, N. Y. Filed June 9, 1913. Serial No. 772,608. (Cl. 168—35.)



A horse-shoe equipped with heel and toe calks, said calks having stepped formations at their upper ends, said stepped formations, each forming a dovetailed tenon, itself extended into a relatively reduced rectangular top step, said horse-shoe being provided with corresponding sockets for the reception of said dovetailed tenons and their rectangular extensions or steps, said top steps being adapted to be driven into place and providing for the retention of said calks in place.

1,195,211. ELECTROLYTIC PROCESS FOR THE EXTRACTION OF COBALT OXIDS. KENNETH S. GUITERMAN, New York, N. Y. Filed Aug. 26, 1915. Serial No. 47,427. (Cl. 204—9.)



1. In the art of obtaining cobalt oxids from a solution containing a soluble cobalt salt, the process which consists in subjecting the solution to an electrolytic action in the presence of a soluble chlorid, passing the solution in a downwardly directioned current at a speed permitting the retention of the chlorin gas liberated in the solution thereby to form a hypochlorite and permitting the hypochlorite so formed to react on the solution of cobalt in the presence of an agent capable of preventing the formation of any free acid in the solution.

2. In the art of electrolytically extracting cobalt oxids from solutions containing a soluble chlorid and soluble cobalt salt, the process which consists in causing a current of the electrolytic solution to pass across the anode electrode in a direction and at a velocity to retain in the solution any chlorin gas generated adjacent the electrode by the electrolytic treatment of the solution.

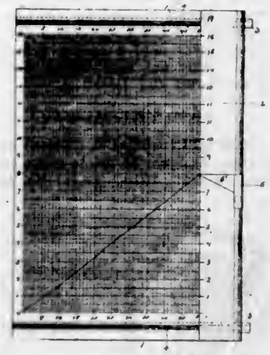
3. In the art of electrolytically extracting cobalt oxids from solutions containing a soluble cobalt salt, the process which consists in subjecting the solution to an electrolytic action in the presence of a coacting chlorin-forming-agent and causing all of the free chlorin so formed to react chemically upon the solution.

4. In the art of electrolytically extracting cobalt oxids from solutions containing a cobalt salt and a soluble chlorid, the process which consists in directing the solution downwardly past the anode electrode and in the presence of an agent, designed to neutralize any acid which may be formed adjacent the anode.

5. In the art of forming cobalt oxids from solution containing cobalt and nickel salts, the process which consists in subjecting the solution to an electrolytic action in the presence of a basic neutralizing agent and in the presence of free chlorin gas retained in the solution.

[Claims 6 to 11 not printed in the Gazette.]

1,195,212. PROPORTION-CALCULATOR. ROBERT G. HALL, Portland, Oreg. Filed June 12, 1914. Serial No. 844,737. (Cl. 235—61.)



1. A device of the character referred to, comprising in combination, a chart having graduated rulings running in opposite directions at right angles to each other across said chart, an indicator attached at both ends and stretched across said chart in intersecting relationship with the graduated rulings thereof, movable means to which one end of said indicator is attached, said movable means being movable in opposite directions from one side of said chart to the other and from one end thereof to the other, and means for keeping said indicator stretched during any adjustment thereof to different angles, said means having a capacity equal to the extreme movements of the movable end of the indicator from one side of the chart to the other, or from one end thereof to the other.

2. A device of the character referred to, comprising in combination, a chart having graduated rulings running in opposite directions at right angles to each other across said chart, an indicator attached at both ends and stretched across said chart in intersecting relationship with the graduated rulings thereof, one end of said indicator having a fixed position relative to said graduated rulings, movable means to which one end of said indicator is attached, said movable means being movable in opposite directions from one side of said chart to the other and from one end thereof to the other, and means for keeping said indicator stretched during any adjustment thereof to different angles, said means having a capacity equal to the extreme movements of the movable end of the indicator from one side of the chart to the other, or from one end thereof to the other.

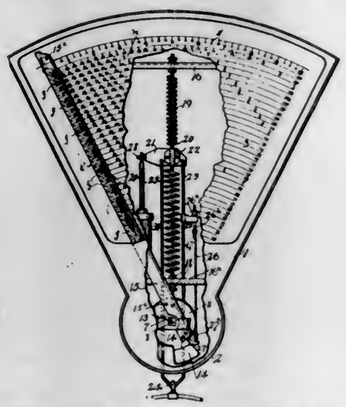
3. In combination, a chart, a rule or scale member slidably mounted thereon to be moved laterally there-across from one side to the other, a gage member slidably mounted upon said rule or scale member and movable longitudinally thereof, an indicator thread extending from a fixed position on said chart and attached to said gage member, and means for keeping said indicator thread stretched and at the same time permitting it to be moved with said gage member and said rule or scale member to any position over the face of said chart in all directions.

4. A proportion calculator comprising in combination a chart, consisting of graduation marks running in opposite directions, an indicator thread extended from a zero point on said chart across the face thereof and adjustable to the point of intersection of any two of said marks,

means for automatically winding up and letting out said indicator thread in its adjustments and an adjustable gage member to which one end of said thread is attached, said adjustable gage member being slidably connected with said chart and movable over the face thereof in all directions for the purpose indicated.

5. A device of the character referred to, comprising in combination, a chart having two series of graduated parallel rulings intersecting each other at right angles, an adjustable member extending across the face of said chart parallel with one set of said rulings, said member being adjustable laterally across said chart from one side thereof to the other, a gage member mounted thereupon and adjustable longitudinally thereof, an indicator thread from said gage member and extended across the face of said chart to a fixed point, and a spring actuated spool for taking up and letting out said thread for adjustments, substantially as shown and described.

1,195,213. COMPUTING-SCALE. HENRY S. HALLWOOD, Columbus, Ohio, assignor to Annie Hallwood, Columbus, Ohio. Filed July 25, 1910. Serial No. 573,805. (Cl. 73—104.)



1. In a computing scale, the combination, with a chart having a plurality of concentric lines thereon providing arcuate spaces, each space having graduations and numerals thereon indicating total values of commodities at different prices per unit, of an indicator movable across said chart and having corresponding arcuate spaces and a reading line thereon, each space on said indicator being provided with a numeral indicating price per unit value, said numerals being located at a distance from the reading line of said indicator and each space on the indicator having a line extending from the numeral thereon toward the reading line of the indicator, the outer ends of said indicator lines being arranged to point toward the corresponding graduations on the arcuate spaces of the chart.

2. In a computing scale, the combination of a chart and an indicator, the chart being provided with a plurality of arcuate spaces thereon, each space being provided with graduations and numerals indicating total values and the indicator being provided with a reading line and with similarly arranged arcuate spaces each provided with a price numeral, the price numerals being remote from the reading line of the indicator and each space having a leader extending from the numeral thereon toward the reading line of the indicator and in a direction to indicate the graduations on the chart corresponding to such numeral.

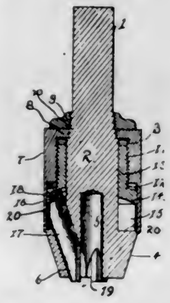
3. In a scale, the combination with a chart having concentric series of graduations thereon, of an index hand cooperating with said chart, said index hand having a transparent portion at one side thereof and an opaque portion at the opposite side thereof, the transparent side of the hand being provided with a reading line arranged to intersect the graduations of the chart and having its opaque side provided with a series of price numerals corresponding to the graduations on the chart, and a leader extending from each numeral toward the reading line on the index hand and arranged to direct the eye of the operator to the proper graduations on the chart.

4. In a scale, the combination, with a chart having concentric series of computation graduations, of an index hand coöperating with said chart, said index hand having a transparent member provided with a reading line and having a series of price numerals each corresponding to a series of graduations on the chart, and means between the reading line and each figure on the index hand for directing the line of sight to the correct graduations on the chart.

5. In a scale, the combination, with a chart having series of graduations thereon, of an index hand coöperating with said chart, said hand having a transparent member provided with a reading line arranged to intersect the graduations on the chart and also having a series of numerals remote from the reading line and corresponding each to a series of graduations on the chart, and means extending between each numeral and the reading line for preventing the reading of the wrong series of graduations on the chart.

[Claims 6 to 19 not printed in the Gazette.]

1,195,214. CHUCK. OSCAR D. HAPGOOD, Greenfield, Mass., assignor to Goodell-Pratt Company, Greenfield, Mass., a Corporation of Massachusetts. Filed Mar. 29, 1916. Serial No. 87,398. (Cl. 29—117.)



1. A chuck comprising the combination of a shank having a head provided with a plurality of converging guideways, a plurality of jaws disposed in the guideways, means for applying power to the jaws parallel to their axes and means for rotatably securing the actuating means on the shank.

2. A chuck comprising the combination of a shank having a head provided with a plurality of converging guideways, a plurality of jaws disposed in the guideways, means for applying power to the jaws parallel to their axes, and adjustable means for rotatably securing the actuating means on the shank.

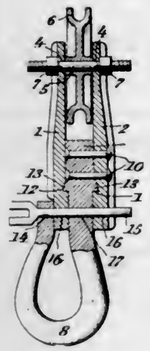
3. A chuck comprising the combination of a shank having a head provided with a plurality of converging guideways and two annular shoulders formed on the shank, a plurality of jaws disposed in the guideways, means for applying power to the jaws parallel to their axes, a screw-threaded securing member disposed on the shank adjacent the actuating means, said actuating means being provided with a flange disposed on one of said shoulders and the securing member being disposed on the other of said shoulders.

4. A chuck comprising the combination of a shank having a head provided with a plurality of converging jaw guideways and a central bore, a follower disposed on the head and provided with a plurality of slots arranged at less than a right angle to the shank, means for actuating the follower longitudinally of the shank and a plurality of jaws slidably disposed in the guideways and having their upper ends disposed in the slots.

5. A chuck comprising the combination of a shank having a head provided with a plurality of converging jaw guideways and a central bore, a follower disposed on the head and provided with a plurality of dovetail slots arranged at less than a right angle to the shank, means for actuating the follower longitudinally of the shank and a plurality of jaws slidably disposed in the guideways and having their upper ends dovetailed and disposed in the slots.

[Claims 6 to 10 not printed in the Gazette.]

1,195,215. PULLEY. GEORGE D. HARDING, Marshfield, Oreg. Filed Mar. 31, 1916. Serial No. 88,082. (Cl. 254—194.)



1. In a snatch block, the combination with a stationary and a pivoted shell-section of the block, of a hook having its shank secured to the stationary shell-section and provided with tongues, each of said shell-sections having grooves into which said tongues are adapted to be received.

2. In a snatch block, the combination with a stationary and a pivoted shell-section of the block, of a hook having a shank mounted between the shell-sections and provided with tongues on each of its sides, said shell-sections provided with grooves adapted to receive said tongues.

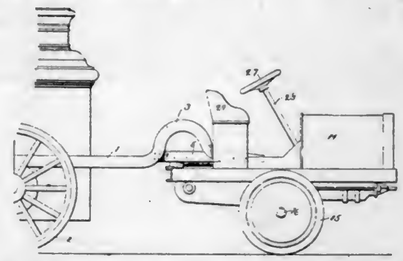
3. In a snatch block, the combination with a stationary and a pivoted shell-section, of a hook having its shank secured to the stationary shell-section and provided with an aperture, said shell-sections provided with apertures adapted to aline with the aperture in the shank of said hook, the end of said hook also being provided with an aperture adapted to register with the apertures in said shell-sections and in the shank of said hook, and a locking pin mounted in said apertures.

4. In a snatch block, the combination with a stationary and a pivoted shell-section of the block, of a hook having its shank secured to the stationary shell-section and provided with tongues, each of said shell-sections having grooves into which said tongues are received, the end of said hook provided with an aperture and the ends of said sections also provided with apertures adapted to aline with the said aperture in the end of said hook, the shank of said hook also provided with an aperture adapted to aline with the apertures in said sections, and a locking pin mounted in said apertures.

5. In a snatch block, the combination with the stationary and a pivoted shell-section of the block, and a hook having its shank disposed between said shell-sections, the inner faces of each of said shell-sections being provided with arcuate grooves, rivets extended through said shank and fastened to one of said shell-sections, tongues integrally formed with said shank and extending into said grooves.

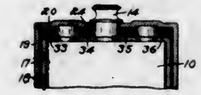
[Claims 6 to 9 not printed in the Gazette.]

1,195,216. TRACTOR-DRAWN AUTOMOBILE. WILLIAM GUY HAWLEY, Elmira, N. Y., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y., a Corporation of New York. Filed Apr. 5, 1915. Serial No. 19,269. (Cl. 21—90.)



In an automobile, the combination with a main body frame provided with a forwardly extending portion, of a two-wheel tractor provided with a frame extending in opposite directions from the wheel axis, an engine mounted on said tractor frame, on one side of said wheel axis, and means on the other side of said wheel axis for coupling said tractor frame to said forwardly extending portion of the main body frame, said coupling means being adapted to permit relative lateral oscillations between said tractor frame and main body frame and to prevent relative oscillation therebetween in a direction longitudinal of the main body frame.

1,195,217. REINFORCED BATTERY-JAR. ELLSWORTH A. HAWTHORNE and JOHN H. GEORGE, Bridgeport, Conn.; said George assignor to said Hawthorne. Filed July 3, 1914. Serial No. 848,878. (Cl. 204—53.)



1. The combination with a battery jar of a covering inclosing said jar and having side and bottom walls, flaps carried by the side walls each of substantially the same size as the top of the jar, a cover for the jar the flaps overlying the cover and one another, the cover and flaps having registering apertures for the passage of the battery terminals.

2. The combination with a battery jar of a textile reinforcement inclosing the bottom and sides of the jar and united therewith, the reinforcement carrying flaps adapted to overlie the top of the jar.

3. A battery container comprising an inner shell or jar proper, a reinforcement surrounding the same and an outer shell or covering surrounding the reinforcement, the layers mentioned being intimately united, one of the walls of the container being reinforced by a plurality of independent laminæ of reinforcing material, each lamination being an extension of the reinforcing material in other walls.

4. A battery jar of caoutchouc-like material reinforced by fibrous textile intimately connected to and united therewith.

5. A battery jar of caoutchouc-like material, a fibrous textile reinforcement united therewith, a cover for the jar and extensions of the reinforcement securing the cover.

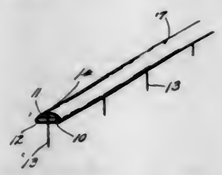
[Claims 6 to 8 not printed in the Gazette.]

1,195,218. MOLDING. GEORGE A. HAZELWORTH, Indianapolis, Ind., assignor to Indianapolis Saddlery Company, Indianapolis, Ind., a Corporation of Indiana. Filed Apr. 26, 1916. Serial No. 93,770. (Cl. 155—43.)

1. An upholstery molding, comprising a plurality of leather core strips, a cover strip of leather extending over

the top core strip around the edges of the core strips and under the bottom core strip, and a series of attaching tacks having their heads located between the core strips and their shanks extending through the lower core strip.

2. An upholstery molding, comprising a plurality of core strips of flexible material, a cover strip of leather extending over the top core strip and around the edges of the core strips and under the bottom core strip, and a series of attaching tacks having their heads located between the core strips and their shanks extending through the lower core strips.



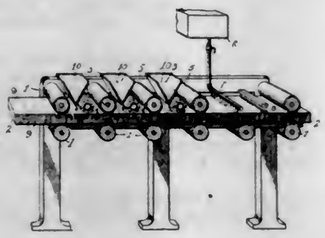
3. An upholstery molding, comprising a plurality of leather core strips, a cover strip of flexible material extending over the top core strip and around the edges of the core strips and under the bottom core strip, and a series of attaching tacks having their heads located between the core strips and their shanks extending through the lower core strip.

4. An upholstery molding, comprising a plurality of core strips of flexible material, a cover strip of flexible material extending over the top core strip and around the edges of the core strips and under the bottom core strip, and a series of attaching tacks having their heads located between the core strips and their shanks extending through the lower core strip.

5. An upholstery molding, comprising two superposed leather core strips, a series of attaching tacks having their heads located between said two core strips and their shanks projecting through the lower core strip, and a leather cover strip extending over the upper core strip and being folded around the edges of the core strips and projecting under the lower core strip toward the series of attaching tacks, so that the edges of said cover strip are below the lower core strip.

[Claims 6 and 7 not printed in the Gazette.]

1,195,219. METHOD OF FILLING WOOD. ALBERT R. HEDSTROM, Jamestown, N. Y. Filed Nov. 29, 1915. Serial No. 63,982. (Cl. 91—68.)



1. The process of filling interstices in the surface of wood which consists in spreading dry powdered plaster Paris over the wood and rolling said dry powdered plaster Paris into the interstices in said wood and moistening the rolled plaster Paris with an adhesive liquid and scraping the moistened plaster Paris level with the surface of the wood.

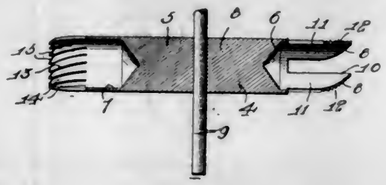
2. The process of filling interstices in the surface of wood which consists in spreading dry powdered plaster Paris over the wood and rolling said dry powdered plaster Paris into the interstices in said wood with a roller having a soft peripheral surface and moistening the rolled plaster Paris with a liquid and scraping the moistened plaster Paris level with the surface of the wood.

3. The process of filling interstices in the surface of wood which consists in spreading dry plaster Paris over the surface of the wood and rolling said dry plaster Paris into the interstices in said wood with a soft rubber covered roller and moistening the rolled surface with liquid and scraping the moistened plaster Paris level with the surface of the wood.

4. The process of filling interstices in the surface of wood which consists in spreading dry plaster Paris over the surface of the wood and rolling said dry plaster Paris into the interstices in said wood with a roller covered with soft rubber and moistening the rolled surface with glue water and scraping the moistened plaster Paris level with the surface of the wood.

5. The process of filling interstices in the surface of wood which consists of a plurality of coats of dry evenly spread powdered plaster Paris, each of said coats separately rolled into the worm holes or interstices of the wood, said coated surface sprayed with glue water colored the same as the wood, and the moistened plaster Paris scraped even with the surface of the wood.

1,195,220. PACKING-EXTRACTOR. CHARLES L. HENDREN, Wichita, Kans. Filed Sept. 27, 1915. Serial No. 52,915. (Cl. 81—3.)



1. In a packing extractor for boiler tube bearings and the like, a body having means for imparting rotation thereto and recessed at one end to present a tubular extension, said extension being externally threaded and slotted longitudinally to form an annular series of blades adapted to penetrate, disintegrate and withdraw the packing surrounding the tube.

2. A tool for extracting the packing surrounding boiler tubes and the like in their bearings, having a body adapted for rotation; said body being recessed at one end to present a tubular extension adapted to fit freely over the end of the tube, and externally threaded and slotted to form an annular series of blades designed to penetrate, disintegrate and withdraw the packing from the space around the tube.

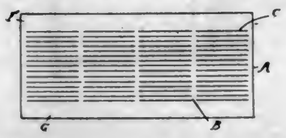
3. A tool for extracting the packing surrounding boiler tubes and the like in their bearings, having a body for rotation; said body being recessed at one end to present a tubular extension adapted to fit freely over the end of the tube, and externally threaded and slotted to form an annular series of blades designed to penetrate, disintegrate and withdraw the packing from the space around the tube, said body being provided at its opposite end with a tubular extension formed as a series of spirally inclined and pointed teeth adapted to withdraw the disintegrated packing from around the tube.

4. In a packing extractor for boiler tube bearings and the like, a body recessed at one end to present a tubular extension, said extension being slotted longitudinally to form an annular series of blades designed to penetrate, disintegrate and withdraw the packing surrounding the tube by rotation of said body.

5. In a packing extractor for boiler tube bearings and the like, a body equipped at one end with a means to penetrate, disintegrate and withdraw the packing surrounding said tube, and at its opposite end with a tubular extension and a series of spirally inclined and pointed teeth adapted to withdraw the disintegrated packing from around said tube.

[Claims 6 and 7 not printed in the Gazette.]

1,195,221. METHOD OF FORMING EXPANDED SHEET METAL. HENRY C. HERR, Pittsburgh, Pa., assignor, by mesne assignments, to South Side Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 6, 1912. Serial No. 669,880. (Cl. 164—6.6.)



1. The method of expanding sheet metal, which consists in laterally expanding the sheet, and elongating the strands thereof successively through a series of operations to maintain a constant length of sheet.

2. The method of expanding sheet metal, which consists in laterally drawing the edges of the stranded section apart, and elongating the strands successively through a series of operations to maintain a constant length of sheet.

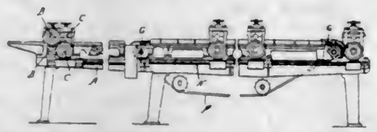
3. The method of expanding sheet metal, which consists in forming adjacent stranded and unaltered portions successively through a series of gradual operations, in elongating the stranded portion, and in separating the opposite edges thereof to laterally expand said portion and to maintain the longitudinal dimension thereof the same as the unaltered portion.

4. The method of expanding metal, which consists in forming the sheet with alternate stranded and unaltered parallel portions, and in successively through a series of gradual operations laterally separating said unaltered portions and longitudinally expanding said stranded portions to maintain a constant length of sheet.

5. The method of expanding sheet metal, which consists in forming a sheet with a central stranded portion and parallel marginal unaltered portions, and successively through a series of gradual operations in drawing said marginal portions laterally apart and elongating said stranded portion to maintain a constant length of sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,195,222. MACHINE FOR FORMING EXPANDED METAL. HENRY C. HERR, Pittsburgh, Pa., assignor, by mesne assignments, to South Side Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 6, 1912. Serial No. 669,881. (Cl. 164—6.6.)



1. In a machine for expanding metal, the combination with means for progressively laterally expanding a stranded sheet, of means operating successively during the progressive expansion for elongating the strands of said sheet to compensate for angular movement thereof without contraction in length of the blank.

2. In a machine for expanding metal, the combination with means for stranding a sheet leaving portions thereof unstranded, of means for laterally expanding the stranded portion of the sheet during the longitudinal movement thereof, and means operating upon the strands during their longitudinal movement to elongate the same and compensate for the angular movement thereof.

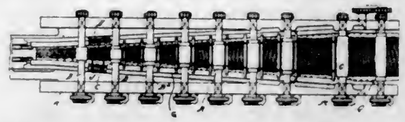
3. In a machine for expanding metal, the combination with means for advancing a stranded sheet, of means operating during the advance of said sheet to laterally expand the same, and a series of drawing rolls successively operating upon the strands of the sheet prior to the combination of the expansion to elongate the same and compensate for their angular movement.

4. In a machine for expanding metal, the combination with means for advancing a stranded sheet, of means for laterally expanding said sheet in the same plane during the longitudinal advance, and a series of drawing rolls of progressively increasing length operating upon the strands prior to the completion of the expansion to elongate the same and to compensate for the angular movement thereof.

5. In a machine for expanding metal, the combination of a pair of divergently moving carriers, a series of grippers on said carriers for successively engaging with the opposite margins of a stranded sheet to simultaneously longitudinally feed and laterally expand the same, and a series of drawing rolls successively operating upon the strands intermediate said grippers to elongate the same and compensate for the angular movement thereof.

[Claims 6 to 15 not printed in the Gazette.]

1,195,223. MACHINE FOR EXPANDING SHEET METAL. HENRY C. HERR, Pittsburgh, Pa., assignor, by mesne assignments, to South Side Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 29, 1913. Serial No. 787,389. (Cl. 164—6.6.)



1. A machine for expanding sheet metal, comprising constantly-operating means for laterally expanding a stranded sheet, and coacting means for confining the expansion to different portions of the sheet.

2. A machine for expanding sheet metal, comprising means for constantly drawing apart opposite edges of a stranded sheet, and coacting means for distributing the expansion differentially throughout the sheet.

3. A machine for expanding sheet metal, comprising means for constantly drawing apart opposite edges of a stranded sheet, and coacting means for distributing the expansion successively between different portions of said stranded sheet.

4. A machine for expanding sheet metal, comprising means for constantly drawing apart opposite edges of a stranded sheet, coacting means for successively limiting the expansion to a central portion of said sheet, and means for successively rolling said center portion to elongate the strands thereof and to distribute the lateral expansion to the outer portions of said sheet.

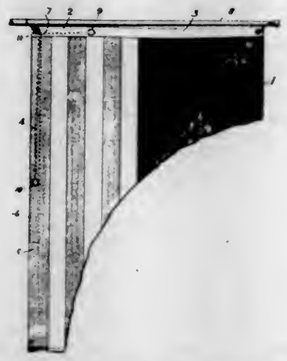
5. A machine for expanding sheet metal, comprising means for constantly drawing apart opposite edges of the stranded sheet, interrupted guides engaging a line of strands in said sheet to limit the expansion on one side thereof, and means intermediate said guides for elongating the strands of the expanded portion.

[Claims 6 to 16 not printed in the Gazette.]

1,195,224. FLAG. GEORGE F. HOFFMAN, Philadelphia, Pa. Filed Mar. 20, 1915. Serial No. 15,894. (Cl. 116—12.)

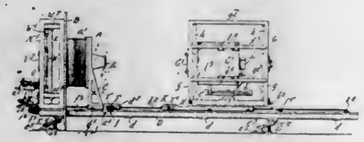
1. In a flag the combination with the body thereof of a frame arranged at the lower inner corner of the flag and within the margin thereof and attached to the body and consisting of angularly disposed and relatively immovable arms of which one extends partway across and the other extends partway lengthwise of the body, and said frame carried wholly by the flag.

2. The combination of a flag and a frame attached thereto and carried wholly thereby and consisting of two



rigidly connected arms disposed marginally at the lower inner corner of the flag and shorter than the edges thereof.

1,195,225. PHOTOGRAPHIC APPARATUS. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Filed Oct. 9, 1914. Serial No. 865,838. (Cl. 88—24.)



1. The combination of a photographic projecting device, a holder for a sensitized surface, and a subject holder which is provided on different sides thereof with independent holding means for a plurality of subjects and is movably mounted and adapted to be moved to place any one of said subjects in operative relation with said projecting device.

2. The combination of a photographic projecting device, a holder for a sensitized surface, and a subject holder which is provided on different sides thereof with holding means for a plurality of subjects and is rotatably mounted and adapted to be turned to place any one of said subjects in operative relation with said projecting device.

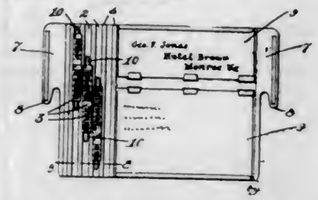
3. The combination of a photographic projecting device, a holder for a sensitized surface, and a subject holder which is provided on different sides thereof with independent holding means for a plurality of subjects and is movably mounted and adapted to be moved to place any one of said subjects in position facing said projecting device, said subject holder and projecting device being relatively adjustable for determining the size of the reproduction of the subject.

4. The combination of a photographic projecting device, a holder for a sensitized surface, a subject holder which is provided on different sides thereof with holding means for a plurality of subjects, and a carriage which is adjustable relative to said projecting device and on which said subject holder is rotatably mounted and adapted to be turned to place any one of said subjects in operative relation with said projecting device.

5. The combination of a photographic projecting device, a holder for a sensitized surface, and a subject holder comprising a frame mounted to turn about a vertical axis and means for holding a subject on each of a plurality of upright sides of said holder frame, said holder frame being adapted to be turned to place any one of said subjects in a plane at right angles to the optical axis of said projecting device.

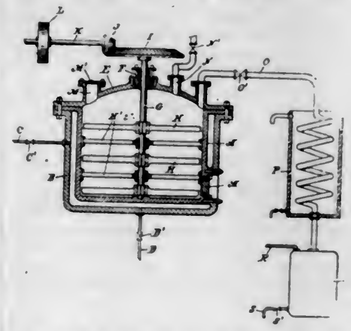
[Claims 6 to 26 not printed in the Gazette.]

1,195,226. TYPE-PLATE FOR PRINTING-MACHINES. DAVIDD C. HUGHES, Chicago, Ill., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 6, 1910. Serial No. 580,546. (Cl. 101—169.)



A sheet metal type holder constructed to provide a channel adapted to receive a plurality of alined individual type, and means to secure said type against movement longitudinally of said channel comprising integral beads struck up from the bottom of said type channel intermediate of the outside ends thereof and having flat edges abutting the sides of the type at the ends of the line of individual type.

1,195,227. MANUFACTURE OF ORGANIC-ACID ANHYDRIDS. FREDRIK W. JAHN, New York, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Mar. 27, 1909. Serial No. 486,271. (Cl. 23—24.)



1. The process of making an organic acid anhydrid which consists in bringing about a reaction between a salt of an organic acid, a halogen and a non-gaseous substance containing oxidizable sulfur.

2. The process of making an organic acid anhydrid which consists in bringing about a reaction between a salt of an organic acid, a halogen and a solid substance containing oxidizable sulfur.

3. The process of making an organic acid anhydrid which consists in bringing about a reaction between a salt of an organic acid, chlorin and a solid substance containing oxidizable sulfur.

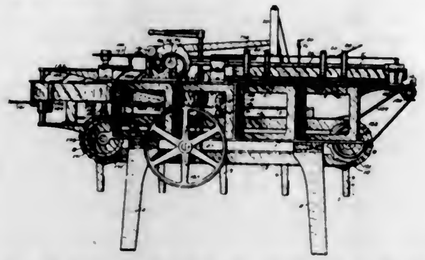
4. The process of making acetic anhydrid which consists in bringing about a reaction between a salt of acetic acid, chlorin and a solid substance containing oxidizable sulfur.

5. The process of making acetic anhydrid which consists in bringing about a reaction between a salt of acetic acid, chlorin and sodium metabisulfite.

[Claims 6 to 13 not printed in the Gazette.]

1,195,228. WRAPPING-MACHINE. HARRY L. JOHNSON, Battle Creek, Mich., assignor to Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich. Filed Jan. 2, 1914. Serial No. 810,005. (Cl. 93—2.)

1. In a wrapping machine, the combination of an article feed conveyer comprising a feed way, coacting article feed belts disposed with their rear ends extending beyond the way, there being a delivery opening at the rear end of said way, a supporting plate for the inner reach of one of said feed belts, a series of supporting springs for the inner reach of the other of said feed belts, said springs being mounted on independently adjustable supports, a wrapping conveyer way below said delivery opening, a paper feed way disposed transversely below said feed belts at each side of the said delivery opening, paper feed belts disposed below said article feed belts to carry the paper across said delivery opening, and a feed plunger adapted to deliver the articles carrying the wrapping sheet therewith, said plunger being provided with an upwardly projecting guard plate on its front edge, an article stop disposed in front of said plunger, and a catch for said stop arranged to be released by said plunger.



2. In a wrapping machine, the combination of an article feed conveyer comprising a feed way, coacting article feed belts disposed with their rear ends extending beyond the way, there being a delivery opening at the rear end of said way, a supporting plate for the inner reach of one of said feed belts, a series of supporting springs for the inner reach of the other of said feed belts, said springs being mounted on independently adjustable supports, a wrapping conveyer way below said delivery opening, a paper feed way disposed transversely below said feed belts at each side of the said delivery opening, paper feed belts disposed below said article feed belts to carry the paper across said delivery opening, and a feed plunger adapted to deliver the articles carrying the wrapping sheet therewith.

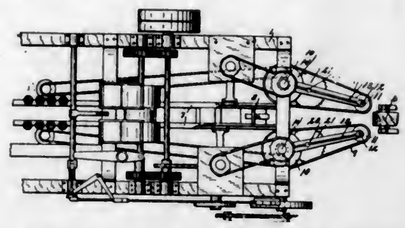
3. In a wrapping machine, the combination of an article feed conveyer comprising a feed way, coacting article feed belts disposed with their rear ends extending beyond the way, there being a delivery opening at the rear end of said way, a wrapping conveyer way below said delivery opening, a paper feed way disposed transversely below said feed belts at each side of the said delivery opening, paper feed belts disposed below said article feed belts to carry the paper across said delivery opening, a feed plunger adapted to deliver the articles from said feed belts through said delivery opening carrying the wrapping sheet therewith, said plunger being provided with an upwardly projecting guard plate on its front edge, an article stop disposed in front of said plunger, and a catch for said stop arranged to be released by said plunger.

4. In a wrapping machine, the combination of an article feed conveyer comprising a feed way, coacting article feed belts disposed with their rear ends extending beyond the way, there being a delivery opening at the rear end of said way, a wrapping conveyer way below said delivery opening, a paper feed way disposed transversely below said feed belts at each side of the said delivery opening, paper feed belts disposed below said article feed belts to carry the paper across said delivery opening, a feed plunger adapted to deliver the articles from said feed belts through said delivery opening carrying the wrapping sheet therewith.

5. In a wrapping machine, the combination of an article feed conveyer comprising a feed way, coacting article feed belts disposed with their rear ends extending beyond the way, there being a delivery opening at the rear end of said way, a series of supporting springs for the inner reach of one of said feed belts, a wrapping conveyer way below said delivery opening, means for feeding paper across said opening below said article feed belts, a feed plunger adapted to deliver the articles from said feed belts through said delivery opening carrying the wrapping sheets therewith, an article stop disposed in front of said plunger, and a catch for said stop arranged to be released by said plunger.

[Claims 6 to 31 not printed in the Gazette.]

1,195,229. CARTON-SEALING MACHINE. HARRY L. JOHNSON, Battle Creek, Mich., assignor to Johnson Automatic Sealer Company, Limited, Battle Creek, Mich. Original application filed Aug. 1, 1912, Serial No. 716,178. Divided and this application filed Apr. 18, 1914. Serial No. 832,699. (Cl. 193—4.)



1. In a structure of the class described, the combination with the conveyer, a discharge means comprising belts arranged in opposed pairs at the sides of the conveyer, vertical shafts arranged one at each side of the conveyer, swinging frames mounted on said vertical shafts, pulley shafts on said swinging frames, pulleys for said belts mounted on said vertical shafts and said shafts carried by said swinging frames, cam shafts carried by said swinging frames, gears connecting said cam shafts to said vertical shafts, cams on said cam shafts, members coacting with said cams to swing said frames as the cams are revolved, belt supports comprising belt engaging bars and supporting bars therefor mounted at their outer ends on said pulley shafts carried by said swinging frames, and cams on said gears on said cam shafts arranged to act on said belt supports; all coacting for the purpose specified.

2. In a structure of the class described, the combination with the conveyer, a discharge means comprising belts arranged in opposed pairs at the sides of the conveyer, vertical shafts arranged one at each side of the conveyer, swinging frames mounted on said vertical shafts, pulley shafts on said swinging frames, pulleys for said belts mounted on said vertical shafts and said shafts carried by said swinging frames, cam shafts carried by said swinging frames, gears connecting said cam shafts to said vertical shafts, cams on said cam shafts, and members coacting with said cams to swing said frames as the cams are revolved, all coacting for the purpose specified.

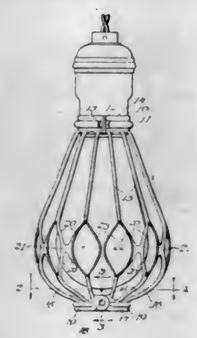
3. In a structure of the class described, the combination with the conveyer, a discharge means comprising opposed belts, driven shafts, swinging frames mounted on said driven shafts, pulley shafts on said swinging frames, pulleys for said belts mounted on said driven shafts and said shafts carried by said swinging frames, cams for said swinging frames geared to said driven shafts, belt supports comprising belt engaging members and supports therefor mounted at their outer ends on said pulley shafts carried by said swinging frames, and cams arranged to act on said belt supports, all coacting for the purpose specified.

4. In a structure of the class described, the combination with the conveyer, a discharge means comprising opposed belts, driven shafts, swinging frames mounted on said driven shafts, pulley shafts on said swinging frames, pulleys for said belts mounted on said driven shafts and said shafts carried by said swinging frames, and cams for said swinging frames geared to said driven shafts, all coacting for the purpose specified.

5. In a structure of the class described, the combination with the conveyer, discharging means comprising opposed belts, swinging supporting frames therefor whereby the belts are swung to and from engaging position, means for actuating said frames, opposed supports over which said belts travel, and means for swinging said supports toward each other to bring the belts into engaging position.

[Claims 6 to 8 not printed in the Gazette.]

1,195,230. LAMP-GUARD. OTTO JOHNSON, La Grange, Ill., assignor to Flexible Steel Lacing Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 6, 1912. Serial No. 713,636. (Cl. 240—102.)



1. In a lamp guard, a pair of complementary unitary guard-sections adapted to inclose a lamp between them, each of said guard-sections having at its lower end a half-ring having an opening adjacent one extremity and an eyelet adjacent the other extremity, the eyelet of each half-ring being passed through the opening of the other, whereby a hinged connection is effected at the lower ends of said guard-sections, and means for releasably securing said sections together at their upper ends so as to be capable of embracing a support between them.

2. In a lamp guard, a pair of complementary unitary guard-sections hinged together at their lower ends, and adapted to inclose a lamp between them, each of said guard-sections having at its upper end a half-collar having an opening adjacent one extremity and a threaded eyelet adjacent the other extremity, the eyelet of one half-collar being arranged to register with the opening of the other, and screws passing through said openings and entering said eyelets, thereby releasably securing said sections together so as to be capable of embracing a support between them.

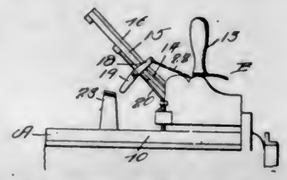
3. A lamp guard comprising a plurality of ribs secured together at their upper and lower ends so as to extend longitudinally of the lamp and inclose the same, said ribs being disposed edgewise in planes extending radially from the axis of the lamp and being formed of sheet metal doubled upon itself, and means for connecting said ribs together intermediate their ends.

4. A lamp guard comprising a plurality of ribs secured together at their upper and lower ends so as to extend longitudinally of the lamp and inclose the same, said ribs being disposed edgewise in planes extending radially from the axis of the lamp and being formed of sheet metal doubled upon itself, and metallic members, integral with said ribs, for connecting the latter together intermediate their ends.

5. A lamp guard comprising a plurality of ribs secured together at their upper and lower ends so as to extend longitudinally of the lamp and inclose the same, said ribs being disposed edgewise in planes extending radially from the axis of the lamp and being formed of sheet metal doubled upon itself, and metallic members, integral with said ribs and disposed flatwise in a plane extending circumferentially of the lamp, for connecting said ribs together intermediate their ends.

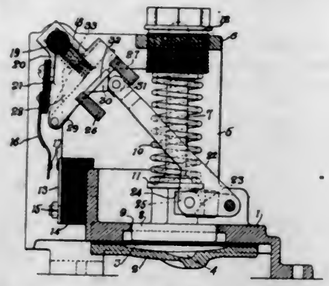
[Claims 6 to 10 not printed in the Gazette.]

1,195,231. FEEDING DEVICE FOR DUPLICATING-MACHINES. RUSSELL G. JONES, Chicago, Ill. Filed Mar. 15, 1913. Serial No. 754,408. (Cl. 101—38.)



In a copying machine, the combination of a body, a carriage mounted on the body for movement across the duplicating surface of the machine, a guide roller mounted on the carriage, an impression roller mounted on the carriage for bodily swinging movement toward and away from the guide roller, a paper feed board supported upon the carriage in position to deliver sheets between the impression and guide rollers, movable means adapted in one position to secure the sheets upon the board against movement under the influence of gravity and to release said sheets to said influence in another position, means operated at the termination of the movement of the carriage in one direction to dispose the first named means in releasing position, and means operated during the movement of the carriage in the opposite direction to dispose the first named means in holding position with respect to the sheets upon the board.

1,195,232. AUTOMATIC CUT-OUT FOR ELECTRIC MOTORS. HUGH W. KIMES, Dayton, Ohio, assignor to The Valle-Kimes Company, Dayton, Ohio, a Corporation of Ohio. Filed June 16, 1915. Serial No. 34,494. (Cl. 175—308.)



1. In a device of the character described, contact members, one of which is movable, an actuating device for said movable contact member comprising a movable member and a spring-controlled part provided with converging surfaces constituting cams, and a controlling device comprising a pivoted lever arranged to move from one cam surface to the other across the converging ends thereof, said spring normally exerting a force to move said part toward the lever, whereby the movement of the lever from one surface to the other first tensions the spring and then causes the part to exert a cam action against the lever to actuate the movable member.

2. In a device of the character described, fixed and movable contact members, an actuating device for said movable contact member comprising a movable member and a spring controlled part mounted thereon and provided with converging surfaces constituting cams, a pivoted controlling lever arranged to move from one cam surface to the other across the converging ends thereof, said spring normally exerting a force to move said part toward the controlling lever, whereby the movement of the latter from one surface to the other first tensions the spring and then causes the part to exert a cam action against the controlling lever to actuate the movable member, and stops to definitely limit the movement of the controlling lever in both directions.

3. In a device of the character described, contact members, one of which is movable, an actuating device for said movable contact member comprising a movable member and a spring-controlled pivoted part provided with converging surfaces constituting cams, and a controlling device comprising a pivoted lever arranged to move from one cam surface to the other across the converging ends thereof, said spring normally exerting a force to move said part toward the lever, whereby the movement of the lever from one surface to the other first tensions the spring and then causes the part to exert a cam action against the lever to actuate the movable member.

4. In a device of the character described, contact members, one of which is movable, a pivoted actuating device for said movable contact member, a pivoted controlling device comprising a lever having an end extending toward said actuating device, said actuating device comprising a part having cam surfaces converging to an edge adjacent a line drawn through the said pivots and in contact with the end of said lever, and a spring arranged to normally exert a force lengthwise of said line and thereby pressing said part against the end of said lever, the arrangement being such that when the said lever is initially moved it will move said part, thereby compressing the spring, and then the said part will exert a cam action against the said controlling lever, thereby shifting the actuating device.

5. In a device of the character described, contact members, one of which is movable, an actuating device for such movable contact member comprising a spring-actuated part moving said actuating device, a controlling device arranged to engage different portions of said spring-actuated part, and stops on opposite sides of said actuating device and said controlling device limiting the movement thereof in both directions to hold said actuating device against movement during the engagement of said controlling device with one portion of said part and to hold said controlling device against movement during its engagement with the other portion of said part.

[Claims 6 to 14 not printed in the Gazette.]

1,195,233. ROLLER ATTACHMENT FOR SLEDS. HANS H. KOLLNER, Chicago, Ill. Filed May 6, 1915, Serial No. 26,240. Renewed Jan. 12, 1916. Serial No. 71,808. (Cl. 21—96.)

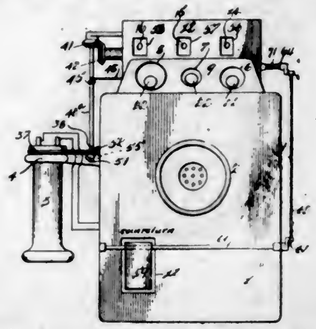


1. In a sled, axles pivotally connected to the sled runners, rollers carried by said axles, a pitman, links connecting said pitman and axles, a handle formed with a head and means slidably arranged in said head and operatively connected to said pitman for actuating the same whereby said rollers may be swung above or below the level of the sled runners.

2. In a sled, axles pivotally connected to the sled runners, rollers carried by said axles, a pitman, links connecting said pitman and axles, a handle formed with a head, a stationary grip carried by said head, a sliding grip carried by said head and means connecting said sliding grip and the aforesaid pitman whereby the latter member may be actuated to swing said rollers above or below the level of the sled runners.

3. In a sled, axles pivotally connected to the sled runners, rollers carried by said axles, a pitman, links connecting said pitman and axles, a tubular handle formed with a grooved head, a stationary grip carried by said head, a sliding grip arranged in the grooved portion of said head and rod connection between said sliding grip and the aforesaid pitman.

1,195,234. COIN-REGISTERING DEVICE FOR TELEPHONES. HERMAN KRAMER, New York, N. Y. Filed Feb. 21, 1916. Serial No. 79,579. (Cl. 235—91.)



1. In combination with a pay-station telephone having coin chutes, a registering device consisting of a plurality of numeral carriers, means to operate same independently of each other, means controlled by the insertion of a coin to set said operating mechanism, and means controlled by the telephone receiver to cause said carrier operating device to actuate when said receiver is removed from its hook.

2. In combination with a pay-station telephone having a hook for the receiver, and a coin chute, a registering device consisting of a numeral carrier adjacent said chute, means to operate said registering device controlled by the depositing of a coin, and an auxiliary receiver-hook to engage the telephone-receiver arranged to control the operation of the numeral-carrier operating means when said receiver is moved therefrom.

3. In combination with a pay-station telephone having a chute for a five-cent coin, a chute for a ten-cent coin, and a chute for a twenty-five cent coin, a carrier adjacent each of said chutes having numerals to indicate the amount deposited in its corresponding chute, means adjacent each chute, operable by the action of depositing a coin, to advance said carriers step by step, and means connected with the receiver to operate the advancing mechanism for the five-cent carrier when the receiver is taken off the hook, said means being arranged to operate the advancing mechanism for any one of the carriers, in the event of the depositing of an additional coin, when said receiver is placed upon the hook.

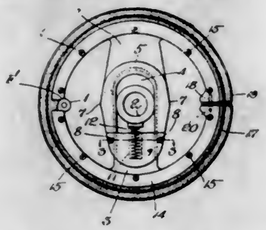
4. In combination with a pay-station telephone having coin chutes, a numeral carrier for each chute, a slide for each carrier projecting into a corresponding chute, said slides being operable in one direction by the insertion of a coin, means to lock each carrier after having been operated, a ratchet carried by each numeral carrier, a pawl carried by each slide to engage a ratchet on a corresponding numeral carrier, a single means to release a locked slide when the receiver is taken off the hook, and means to actuate the released carrier.

5. In combination with a pay-station telephone having coin chutes, a numeral carrier for each chute, a slide for each carrier projecting into a corresponding chute, said slides being operable in one direction by the insertion of a coin, means to lock each carrier after having been operated, a ratchet carried by each numeral carrier, a pawl carried by each slide to engage a ratchet on a corresponding numeral carrier, a device to release the locking mechanism for the slides, means to operate said releasing mechanism, and means controlled by the receiver to operate the releas-

ing mechanism operating device both when the receiver is taken off its hook and also when it is placed upon said hook after a conversation has ceased.

[Claims 6 to 12 not printed in the Gazette.]

1,195,235. BUFFING-WHEEL. ALBERT L. KRAUS, Peabody, Mass., assignor to himself, and Edward L. Millett, Beverly, Mass., Copartners doing business under the firm-name of Kraus Millett & Company, Peabody, Mass. Original application filed Oct. 26, 1915, Serial No. 58,029. Divided and this application filed Dec. 30, 1915. Serial No. 69,476. (Cl. 51—1.)



1. A buffing wheel comprising a hub, a felly formed in two sections, a pivotal connection between said sections, a spoke and a spring between said hub and said spoke, yieldingly to hold said sections in closed position.

2. A buffing wheel comprising a hub, a felly formed in two sections, a pivotal connection between said sections, a spoke having forks extending on opposite sides of said hub, a cap on said fork, and a spring between said cap and said hub yieldingly to hold said sections in closed position.

3. A buffing wheel comprising a hub, a felly formed in two sections, a pivotal connection between said sections, a spoke secured to one of said sections and having forks extending on opposite sides of said hub, a cap on said forks having a slot, a spoke secured to said hub and the other of said sections and passing through said slot, and a spring between said cap and said hub yieldingly to hold said sections in closed position.

4. A buffing wheel comprising a hub, a felly formed in two sections, a pivotal connection between said sections, a spoke secured to one of said sections and having forks extending on opposite sides of said hub, a cap on said forks having a slot, a spoke secured to said hub and the other of said sections and passing through said slot and said cap having a pair of sockets on opposite sides of said slot, and springs in said sockets engaging said hub adapted yieldingly to hold said sections in closed position.

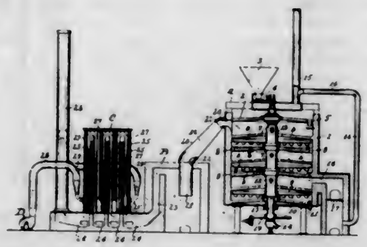
5. A buffing wheel comprising a hub, a felly formed in two sections, a pivotal connection between said sections, rims on said felly, one at least being removably secured thereto and each of said rims having a circumferential rib, a strip support having grooves secured between said rims with said ribs in said grooves, and means yieldingly to hold said sections in closed position.

[Claims 6 and 7 not printed in the Gazette.]

1,195,236. APPARATUS FOR RECOVERING QUICK-SILVER FROM ITS ORE. WILLIAM H. LANDERS, New Almaden, Cal., assignor of one-half to Pacific Foundry Company, San Francisco, Cal., a Corporation of California. Filed Mar. 29, 1916. Serial No. 87,618. (Cl. 266—17.)

1. An apparatus of the character described, comprising a roasting furnace; a dust-settler with which the gas outlet from said furnace communicates; a condenser with which the dust-settler communicates; a stack to which the uncondensed gases from the condenser are delivered; means for subjecting the condenser to a cooling medium; and means for conducting the said medium with its absorbed heat, after it leaves the condenser, into the stack, to increase the draft through the apparatus.

2. An apparatus of the character described, comprising a roasting furnace; a dust-settler communicating with and adapted to receive the heated gases from said furnace; means for conserving the heat of the gases within the settler to prevent condensation therein; a condenser with which the dust-settler communicates; and a stack to which the uncondensed gases from the condenser are delivered.



3. An apparatus of the character described, comprising a roasting furnace; a dust-settler communicating with and adapted to receive the heated gases from said furnace; means for conserving the heat of the gases within the settler to prevent condensation therein; a condenser with which the dust-settler communicates; a stack to which the uncondensed gases from the condenser are delivered; means for subjecting the condenser to a cooling medium; and means for conducting the said medium with its absorbed heat, after it leaves the condenser, into the stack, to increase the draft through the apparatus.

4. An apparatus of the character described, comprising a roasting furnace having a gas outlet; a dust-settler into which the gas outlet of the roasting furnace leads downward, said settler having dimensions relatively to said gas outlet adapting it to reduce the velocity of the gases passing through it and said settler having an outlet passage leading from its upper portion; means for conserving the heat of the gases within the settler to prevent condensation therein; a condenser with which the dust-settler outlet passage communicates; and a stack to which the uncondensed gases from the condenser are delivered.

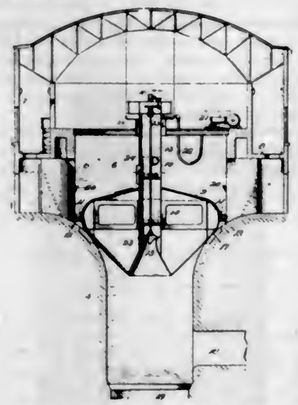
5. An apparatus of the character described, comprising a roasting furnace having a gas outlet; a dust-settler into which the gas outlet of the roasting furnace leads downward, said settler having dimensions relatively to said gas outlet adapting it to reduce the velocity of the gases passing through it and said settler having an outlet passage leading from its upper portion; means for conserving the heat of the gases within the settler to prevent condensation therein; a condenser with which the dust-settler outlet passage communicates; a stack to which the uncondensed gases from the condenser are delivered; means for subjecting the condenser to a cooling medium; and means for conducting the said medium with its absorbed heat, after it leaves the condenser, into the stack, to increase the draft through the apparatus.

[Claims 6 and 7 not printed in the Gazette.]

1,195,237. HYDRAULIC VALVE. CHESTER W. LARNER, Cleveland, Ohio. Filed Mar. 5, 1914. Serial No. 822,565. (Cl. 137—4.)

1. A valve and its seat, said valve consisting of a buoyant shell adapted to the seat and having an upwardly directed communicating hollow stem closed at its top, and means operatively connected with the stem for supplying it with fluid pressure.

2. A valve and its seat, said valve consisting of a buoyant shell adapted to the seat and having an upwardly directed communicating hollow stem closed at its top, means operatively connected with the stem for supplying it with fluid pressure, and a valve-way including means for engaging the shell to hold it away from its seat in the event of leakage of pressure.



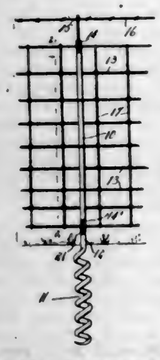
3. The combination of a forebay, a penstock having a valve-seat, a valve adapted to be seated in response to the application of internal weight or pressure and to be unseated upon the removal of said weight, said valve consisting of a shell adapted to the seat and having a communicating upwardly directed hollow stem which is sealed at the top, and means operatively connected with the stem for supplying or relieving pressure.

4. The combination of a forebay, a penstock having a valve seat, a valve adapted to be seated in response to the application of internal weight or pressure and to be unseated upon the removal of said weight, said valve consisting of a shell adapted to the seat and having a communicating upwardly directed hollow stem which is sealed at its top, a gate house having means coöperating with the stem for centering the valve, and fluid connections operatively disposed with respect to said stem.

5. The combination of a forebay, a penstock opening vertically therein and having a valve-seat, a gate house having a valve-way, and a valve adapted to said seat and having a vertical range of movement in said valve-way and having a chambered part open on the penstock side, a hollow stem extending upwardly from the valve and communicating with the chambered part thereof, and a flexible connection for supplying pressure to the stem.

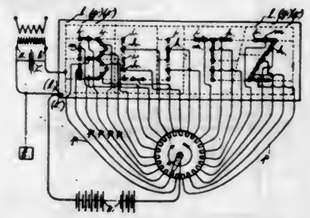
[Claims 6 to 10 not printed in the Gazette.]

1,195,238. FENCE AND POST. LLOYD A. LARSON, Dwight, N. D. Filed Feb. 8, 1915. Serial No. 6,799. (Cl. 256—57.)



The combination with a fence post having reduced portions at the top and bottom; of a woven wire fence including line and stay wires, said line wires being arranged alternately on opposite sides of the post and the post being located intermediate a pair of said stay wires, said fence being located between the reduced portions of the post, retaining wires wrapped around said reduced portions and twisted around the upper and lower line wires of the fence.

1,195,239. ELECTRICAL-DISPLAY APPARATUS. ANTON LASZLO, Charlottenburg, Germany. Filed Mar. 7, 1912. Serial No. 682,287. (Cl. 177—348.)



1. The combination with a series of permanently separated spark gap terminals arranged in desired form, of means for producing high potential oscillating spark discharges across said gaps one after another and repeating said discharges within in an interval such that said entire form is illuminated within the time of fatigue of the human eye.

2. The combination with a plurality of pairs of permanently separated spark discharging terminals arranged to produce designs, of a source of high potential alternating current, and means for controlling the supply of current to selected pairs of said terminals to cause the spark discharges between said terminals to outline said designs.

3. The combination with a source of high tension voltage, of a plurality of spark discharging terminals arranged in multiple to form a continuous line of permanent spark gaps, and means for controlling the connections of said source to cause oscillating spark discharges across said gaps in predetermined order to produce the effect of a continuous linear spark.

4. The combination with a plurality of spark discharging terminals arranged to form a continuous line of spark gaps, of means for casting high potential oscillating spark discharges across said gaps in predetermined order and repeating said discharges at intervals less than the time of fatigue of the human eye, said means comprising electrostatic capacity in parallel across said gaps.

5. The combination with a source of high potential oscillating current, of a linear series of spark discharging terminals, and means for controlling the supply of current from said source to said terminals in predetermined order such that said terminals discharge sparks to the adjacent terminal or terminals so as to produce the effect of a continuous linear spark.

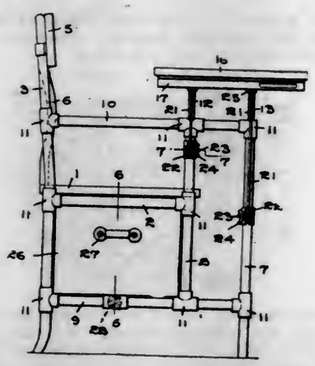
[Claims 6 to 10 not printed in the Gazette.]

1,195,240. COMBINATION DESK-CHAIR. CHARLES IRWIN LATTIG, Glenside, Pa., assignor to Lattig, Shimer Mfg. Co., Bethlehem, Pa. Filed Apr. 5, 1915. Serial No. 19,335. (Cl. 155—34.)

1. The combination with a chair having vertically adjustable posts at one side, horizontal rods supported by the posts, a desk mounted to slide on the rods, and a toggle lever connecting the rods, substantially as described.

2. The combination with a chair having vertically adjustable posts at one side, horizontal rods supported by the posts, a desk mounted to slide on the rods, a toggle lever connecting the rods, and said toggle lever having fixed pivotal connection with each rod and having sliding pivotal connection with each rod, substantially as described.

3. The combination with a chair having vertically adjustable posts at one side, horizontal rods supported by the posts, a desk mounted to slide on the rods, a toggle lever connecting the rods, each rod having two sleeves thereon, one of each pair being mounted to slide on the rod, and said toggle lever pivotally connected to the four sleeves, substantially as described.

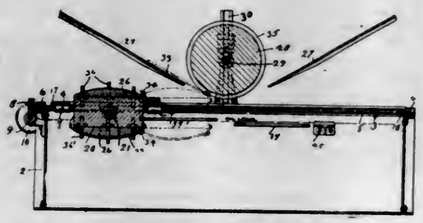


4. The combination with a chair having vertical tubular guides, posts telescoping in the guides, horizontal rods supported by the posts, a desk mounted to slide on the rods, devices connected to the rods and adjustably secured to the tubular guides, and a toggle lever connecting the rods, said toggle lever at one end movably connected to the rods, substantially as described.

5. The combination with a chair having vertical tubular guides, posts telescoping in the guides, horizontal rods supported by the posts, a desk mounted to slide on the rods, clamps adjustable on the tubular guides, links connecting the clamps with the rods, and a toggle lever connecting the rods, said toggle lever at one end movably connected to the rods, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,195,241. SPRING-CAMBERING MACHINE. ZENAS B. LEONARD, Cleveland, Ohio. Filed Oct. 11, 1915. Serial No. 55,317. (Cl. 153—48.)



1. In a spring cambering machine, a horizontally reciprocable carriage, a camber die mounted upon said carriage, and a pressure-applying roller in the path of said die adapted to retire relatively thereto to produce a cambered plate by a rolling movement.

2. In a spring cambering machine, a reciprocable carriage having an oscillatory member thereon provided with a plural number of camber dies, a pressure-applying device in the path of said dies, and means to oscillate said member to bring said dies successively in co-acting relations with said pressure-applying device during reciprocable movements of said carriage.

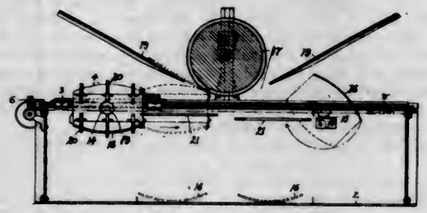
3. In a spring cambering machine, an oscillatory member having a plurality of camber dies mounted thereon, a pressure-applying roller, means to oscillate said member to place said dies separately in position to co-act with said roller, and means to carry said member past said roller.

4. In a spring cambering machine, an oscillatory member having camber dies on opposite sides thereof, a movable carrier for said member, a pressure-applying roller in the path of said dies, means to oscillate said member at intervals, and means beneath said oscillatory member adapted to receive the cambered product.

5. A cambering apparatus, comprising an invertible mounting having camber dies and stock-gripping devices thereon, a pressure-applying roller in co-acting relations with said mounting and dies, means to carry said mounting in opposite directions alternately beneath said roller, and means to invert said mounting and dies after passing said roller.

[Claims 6 to 13 not printed in the Gazette.]

1,195,242. CAMBERING AND QUENCHING APPARATUS. ZENAS B. LEONARD, Cleveland, Ohio. Original application filed Oct. 11, 1915, Serial No. 55,317. Divided and this application filed Mar. 27, 1916. Serial No. 86,885. (Cl. 266—6.)



1. In a cambering and quenching apparatus, a receptacle for a quenching liquid, means to camber a strip of metal mounted to turn relatively to said receptacle, and means mounted on said turning means to hold the cambered strip to the camber given with its greatest length disposed on lines in the direction of the arc movement of the cambering means.

2. In a cambering and quenching apparatus, a liquid receptacle and a set of cambering elements thereon to camber a metal strip in the direction of its greatest length, means to enter the cambered strip end foremost into the liquid within said receptacle and means to convey the submerged strip horizontally through the liquid to hasten the quenching action.

3. In a cambering and quenching apparatus, an oscillatory camber die, a pressure-applying member to co-act with said die to camber a narrow strip of metal, means mounted on said die to clamp the cambered strip at intervals thereupon with its greatest length disposed in the direction of the oscillatory movement of the die, and a liquid receptacle adapted to receive the cambered strip end foremost upon oscillatory movements of said die.

4. In a cambering and quenching apparatus, an oscillatory member having camber dies on opposite sides thereof, a movable carrier for said member, a pressure-applying device in the path of said dies, means to oscillate said member at intervals, and a receptacle beneath said oscillatory member containing a quenching liquid in which the inverted die and the cambered product is immersed during the movement of said carrier.

5. In a cambering and quenching apparatus, a tank containing a quenching fluid, an invertible member within said tank having camber dies on opposite sides thereof, means to invert said member at intervals to project said dies and the cambered product into said fluid, a pressure-applying device to co-act with said dies in cambering a blank, and means to hold the cambered product on the inverted die and submerged in the quenching liquid while a blank is being cambered.

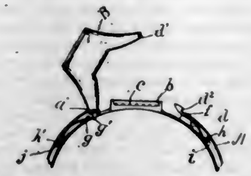
[Claims 6 to 14 not printed in the Gazette.]

1,195,243. VACUUM MILK-CAN. ST. VRAIN LE SIEUR, New Athens, Ill., assignor to The Le Sieur Vacuum Can Manufacturing Company, East St. Louis, Ill., a Corporation of Illinois. Filed Oct. 28, 1912. Serial No. 728,116. (Cl. 220—138.)



In a vacuum milk can, the combination of vacuum-retaining outer and inner cans separated by a space from which the air is to be exhausted, conical-breasts for said cans, a vacuum-containing cover constructed to be clamped and hermetically sealed in position upon the upper end of said inner and outer cans, combined strengthening and clamping brackets fixed in a vertical position upon the upper portion of said outer can and adapted to strengthen the same and to assist in hermetically sealing the said cover, and locking levers pivotally connected to said cover and to said clamping and strengthening brackets to clamp and lock the cover in place.

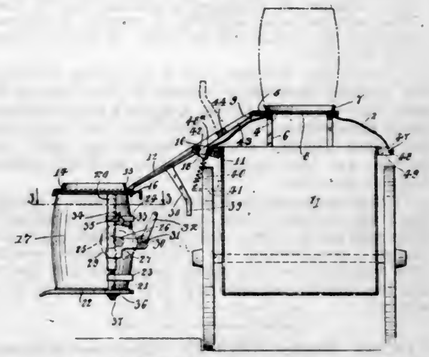
1,195,244. FINGER-RING. NATHAN LIDZBARSKY, Brooklyn, N. Y. Filed Feb. 25, 1916. Serial No. 80,348. (Cl. 63—15.)



A finger ring having a hollow shank, a seat for a miniature located on the upper portion of the shank, a head in the form of a cap provided with a jewel setting, the cap being hinged at one end to the shank and the marginal edges of the cap being adapted to rest upon the outer edges of the seat when the cap is closed, the shank of the ring provided with a spring snap-catch to engage with the opposite end of the cap and hold it in position when closed, and a lifting spring arranged and operated to raise the cap automatically when the snap-catch is pressed, the bodies of the lifting spring and the spring of the snap-catch being wholly inclosed within the hollow shank of the ring, and means for holding the said springs removably in position.

1,195,245. SEALING DEVICE FOR COLLECTING-WAGONS. CLARENCE M. LOWES and FRANCIS D. AMMEN, Flushing, N. Y.; said Ammen assignor to said Lowes. Filed Apr. 3, 1914. Serial No. 829,296. (Cl. 214—1.)

1. In a sealing apparatus for a wagon for collecting from receptacles, the combination of a cover for the wagon having a receiving opening therein, a movable closure for said opening, a receptacle cover, an arm carrying said receptacle cover and pivotally supported at the side of the wagon so as to swing up in a substantially vertical plane and hold said receptacle cover in an inverted position over the wagon, said receptacle cover constructed to rest upon and engage the upper end of the receptacle, means for engaging the bottom of the receptacle to clamp the receptacle against the receptacle cover and connected with said receptacle cover so as to swing up with the receptacle cover and said arm to hold the receptacle inverted over the wagon, said receptacle cover having a closure movable to permit the evacuation of the said receptacle into the wagon.



2. In a sealing apparatus for a wagon for collecting from receptacles, the combination of a cover for the wagon having a receiving opening therein, a movable closure for said opening, a receptacle cover, an arm carrying said receptacle cover and pivotally supported at the side of the wagon so as to swing in a substantially vertical plane and hold said receptacle cover in an inverted position over the wagon, said receptacle cover constructed to rest upon and engage the upper end of the receptacle, means for engaging the bottom of the receptacle and for elevating the receptacle to clamp the receptacle against the receptacle cover and connected with said receptacle so as to swing up with the receptacle cover and said arm to hold the receptacle inverted over the wagon, said receptacle cover having a closure movable to permit the evacuation of the said receptacle into the wagon.

3. In a sealing apparatus for a wagon for collecting from receptacles, the combination of a cover for the wagon having a receiving opening therein, a movable closure for said opening, a receptacle cover, a lifting arm carrying said receptacle cover and pivotally supported at the side of the wagon so as to swing up in a substantially vertical plane and hold said receptacle cover in an inverted position over the wagon, said receptacle cover constructed to rest upon and engage the upper end of the receptacle, means for engaging the bottom of the receptacle to clamp the receptacle against the receptacle cover and connected with said receptacle cover so as to swing up with the receptacle cover and said arm to hold the receptacle inverted over the wagon, said receptacle cover having a closure movable to permit the evacuation of the said receptacle into the wagon, and a downwardly projecting arm on the lifting arm forming a lever for swinging up the lifting arm.

4. In a sealing apparatus for a collecting wagon in combination, a loose flexible cover having an opening therein and having its edges fixed at the sides of the wagon, a frame about said opening, means for supporting said frame and permitting the shifting of said frame and the adjacent portion of said cover, and means for guiding a receptacle to dump the same through said opening.

5. In a sealing apparatus for a collecting wagon for collecting from receptacles, the combination of a cover of flexible material, having an opening therein, a frame mounted in said cover at said opening, means for support-

ing and guiding said frame to move longitudinally of the wagon, a movable closure for said opening mounted in said frame, means including a base for engaging the lower end of the receptacle and mounted to swing up over the wagon to guide a receptacle from a point at the ground near the wagon into a dumping position over said frame, and a closure for the receptacle adapted to be removed after the receptacle is alined with the opening.

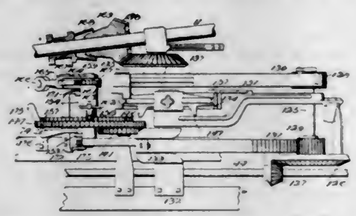
[Claims 6 to 10 not printed in the Gazette.]

1,195,246. METHOD OF TREATING SHARPENING-STONES OR HONES. FRANK MCCORMICK, Magnolia, Ill., assignor of forty-five one-hundredths to Lewis Wolf and ten one-hundredths to William H. Johnson, McNabb, Ill. Filed Apr. 26, 1915. Serial No. 24,068. (Cl. 51—16.)

1. The herein described method of treating a sharpening stone or hone which consists in first treating the same with warm lather; then applying a coat of abrasive metal thereto; then treating the same with warm vaseline; then applying powdered pumice and emery dust thereto; and then heating the same until dry, substantially as described.

2. The herein described method of treating a sharpening stone or hone which consists in first treating the same with warm lather; then rubbing a piece of soft steel thereon; then treating the same with warm vaseline; then applying powdered pumice and emery dust thereto; and then heating the same until dry, substantially as described.

1,195,247. TIMING-GEARING. ALEXANDER MCCREERY, Hiawatha, Kans. Original application filed May 25, 1915, Serial No. 30,404. Divided and this application filed Sept. 22, 1915. Serial No. 51,957. (Cl. 74—46.)



1. A steering mechanism comprising shiftable gearing under control of the operator to admit of steering either to the right or to the left, an operating gear having the shiftable members connected thereto for operation, a power actuated member, and connecting gearing between the power actuated member and the operating gear including a timing mechanism for determining the degree of steering.

2. In steering mechanism, an operating gear, a timing gear, coöperating gears and stops between the timing gear and operating gear, and setting means for the timing gear under control of the operator including an axially movable and rotative member.

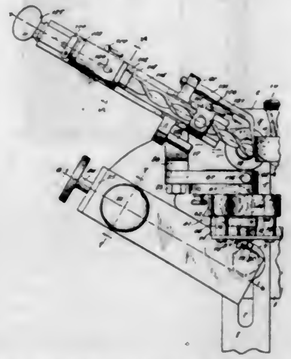
3. In steering mechanism, an operating gear, a timing gear, coöperating gears and stops between the timing gear and operating gear, setting means for the timing gear under control of the operator including an axially movable and rotative member, and an operating member movable longitudinally and pivotally and having engagement with the axially movable and rotative member for imparting the two movements thereto.

4. In steering mechanism, an operating gear, a timing gear, connecting means between the operating and timing gears, a setting mechanism for the timing gear including a gear element mounted to receive longitudinal and rotative movement, and a rack bar having engagement with the gear element and mounted to receive a pivotal and a longitudinal movement whereby said gear element may be moved longitudinally and rotatively.

5. In steering mechanism, an operating gear, a timing gear, connecting means between the two gears, a finger adjustable with reference to the timing gear and adapted to impart a slight movement to the operating gear at a certain stage in the operation of the steering mechanism, a gear element mounted to receive a longitudinal and a rotary movement and adapted to disengage the finger from the timing gear and further adjustment thereof, a rack bar engaging the gear element and adapted to move the same longitudinally and rotatively, and means for holding the gear element when moved away from the said finger.

[Claims 6 to 10 not printed in the Gazette.]

1,195,248. TOOL-GRINDING ATTACHMENT. BONNIE L. MALLORY, Cleveland, Ohio. Filed Oct. 16, 1914. Serial No. 866,932. (Cl. 51—7.)



1. In a tool grinding attachment for abrading devices, the combination of a member movable toward and away from the abrading surface, a tool support pivotally connected therewith, a link, a pivotal support for one end of the link which is adjustable transversely of the direction of movement of the first mentioned member, and connections between the tool support and the free end of said link whereby the oscillation of the support will cause said link to move the first mentioned member.

2. In a tool grinding attachment for abrading devices, the combination of a member movable toward and away from the abrading surface, a rock shaft supported by said member, a tool carrier angularly fixed with respect to the rock shaft, a link rigid with the aforesaid rock shaft, a second link that is pivoted to the free end of the former link, and a pivotal support for the opposite end of the latter link which is adjustable transversely of the direction of movement of the aforesaid member whereby the oscillation of the tool carrier will cause said links to move the member.

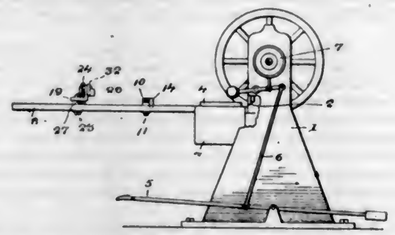
3. In a tool grinding attachment for abrading devices, the combination of a member movable toward and away from the abrading surface, a rock shaft carried thereby, an arm rigid with said rock shaft, a supporting member carried by the arm, a tool support carried by the supporting member, a link rigid with the aforesaid rock shaft and extending therefrom in the direction of the aforesaid arm, a second link having one of its ends pivoted to the free end of the first mentioned link, and a pivotal support for the opposite end of the second link that is adjustable transversely of the direction of movement of the first mentioned member.

4. In a tool grinding attachment for abrading devices, the combination of a member having a guideway, a slide movable therewith toward and away from the abrading surface, a rock shaft supported by said slide, a supporting member rigid with said rock shaft, a tool support carried by the supporting member, a link rigid with the aforesaid rock shaft, a second link that is pivoted to the free end of the former link, and a pivotal support for the opposite end of the latter link which is adjustable transversely of the direction of movement of the aforesaid slide.

5. In a tool grinding attachment for abrading devices, the combination of a stationary member having a guideway, a plate that is stationary with respect to said member and having a slot which is oblique to the longitudinal axis of the guideway, a slide movable within the guideway toward and away from the abrading surface, a tool supporting member pivoted to the slide, a pivot that is adjustable within the slot of the aforesaid plate, a link having one of its ends fulcrumed upon the pivot, and connections between the free end of the link and the aforesaid tool supporting member whereby the oscillation of said member will effect a movement of the slide.

[Claims 6 to 20 not printed in the Gazette.]

1,195,249. SHEARING-GUIDE. JAMES E. MATTHEWS, Sharon, Pa. Filed Feb. 8, 1916. Serial No. 76,994. (Cl. 164—59.)



1. Shearing guides for a shearing machine comprising front and rear bars, means for adjustably securing the bars to the machine and sheet abutments adjustably mounted upon the bars.

2. Shearing guides for a shearing machine comprising front and rear bars, means for adjustably securing the bars to the machine, sheet abutments adjustably mounted upon the said bars, the abutments upon the forward bars having depending portions which extend below the upper surfaces of the bar supporting portions of the machine.

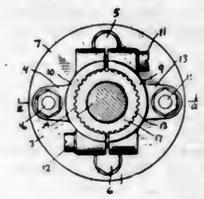
3. Shearing guides for a shearing machine comprising arms, front and rear bars mounted thereon, means for adjustably securing the bars to the arms, sheet abutments mounted upon the rear bar, blocks mounted upon the forward bar, the said blocks being provided at their forward portions with depending parts which extend below the upper surfaces of the arms of the machine.

4. Shearing guides for a shearing machine comprising arms, front and rear bars mounted thereon, means for adjustably securing the bars to the arms, sheet abutments mounted upon the forward bar, rests adjustably mounted upon the rear bar and provided at their upper edges with recesses having rear walls parallel with the forward surfaces of the rests, a guard mounted upon the rear bar, means for adjusting the guard vertically and an extension plate adapted to be applied to the rear bar and secured between the rests and the forward surface of the said rear bar.

1,195,250. MAGNETO-COUPLING. ARTHUR F. MILBRATH, Milwaukee, Wis., assignor to Wisconsin Motor Manufacturing Company, a Corporation of Wisconsin. Filed Aug. 7, 1915. Serial No. 44,317. (Cl. 64—13.)

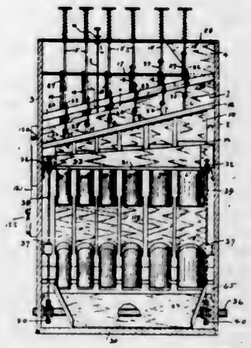
1. An adjustable magneto coupling comprising in combination a leather disk, a yoke member secured thereto, clutch members secured to each other and secured to said leather disk in a line at substantially right angles with said yoke member, a driving shaft provided with a circumferentially toothed member, the clutch members being provided with teeth adapted to engage with said circumferentially toothed member and being separable from each other radially of said circumferentially toothed member.

2. An adjustable magneto coupling comprising in combination a leather disk, a yoke member secured thereto, clutch members secured to said leather disk in a line at substantially right angles to said yoke member, a driving shaft provided with a circumferentially toothed member, said clutch members being each provided with a plurality of teeth adapted to engage within the spaces between the



teeth on said circumferentially toothed member, the teeth on each clutch member being so shaped that the clutch members can be engaged with the circumferentially toothed member or disengaged therefrom by radial movements with respect thereto.

1,195,251. COIN-CHANGING AND REGISTERING APPARATUS. PEARL L. MONICAL, Omaha, Nebr. Filed Dec. 20, 1915. Serial No. 67,722. (Cl. 133—2.)



1. In mechanism for the purpose described, an inclined coin chute arranged longitudinally as sections having heights corresponding substantially to coins of different diameters and having a width less than the diameters of the coins, each being provided with an aperture in its bottom, a plurality of upright tubular receptacles for containing coins disposed below and in a plane adjacent to the plane of the coin chute, a conducting block, resiliently mounted plunger bars disposed substantially parallel with the conducting block, a plurality of gates adapted to normally cover the apertures of the coin chute, means for coincidently removing a gate from the aperture of a coin chute and moving a coin to permit it to be interposed between a plunger bar and conducting block by passing through the aperture of the coin chute, means for controlling the movements of the conducting block and plunger bar for moving the interposed coin for the deposit thereof in a tubular receptacle, and means connected with the plunger bar for moving the coins from the tubular receptacles.

2. In mechanism for the purpose described, an inclined coin chute arranged in sections for containing coins of different diameters, each section being provided with an aperture in its bottom, upright tubular receptacles for containing coins each being disposed below and adjacent to a section of the coin chute, a conducting block provided on one of its sides with a plurality of prongs and disposed in a horizontal plane intermediate the coin chute and said receptacles, resiliently mounted plunger bars each being disposed substantially parallel with and in a plane inter-

mediate two of the prongs of the conducting block, a plurality of gates adapted to normally cover the apertures of the bottoms of said sections, a horizontal shaft, a plurality of levers mounted on said shaft and disposed adjacent to said chute each being connected with a gate and provided with a projection having a part normally disposed in a section of the chute, means for coincidently moving a lever for removing a gate from the aperture of a section and for moving a coin to permit it to be interposed between the end of a plunger and the ends of two adjacent prongs of the conducting block by passing through the aperture of said section, and means for moving the interposed coin for the deposit thereof in a tubular receptacle.

3. In mechanism for the purpose described, a coin chute for a deposit therein of coins of different diameters and having a width less than the diameters of the coins and provided with apertures in its bottom, a plurality of upright, tubular receptacles for containing coins of greater and lesser diameters disposed below and in a plane adjacent to the plane of the coin chute, a conducting block, plunger bars disposed substantially parallel with the conducting block, a plurality of gates adapted to normally cover the apertures of the coin chute, means for coincidently removing a gate from the aperture of a coin chute and moving a coin to permit it to be interposed between a plunger bar and conducting block by passing through the aperture of the coin chute, means for controlling the movements of the conducting block and plunger bar for moving the interposed coin for the deposit thereof in a tubular receptacle, push plates disposed adjacent to the bottoms of the tubular receptacles, and a plurality of levers movable by the plunger bar for actuating the push plates to move the coins from the tubular receptacles.

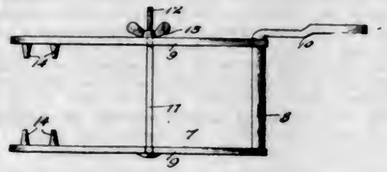
4. In mechanism for the purpose described, a coin chute for a deposit therein of coins of greater and lesser diameters, a plurality of upright tubular receptacles for containing coins of greater and lesser diameters disposed below and in a plane adjacent to the plane of the coin chute, a conducting block, plunger bars disposed substantially parallel with the conducting block, means for moving a coin from the coin chute to permit it to be interposed between a plunger bar and conducting block, means for controlling the movements of the conducting block and plunger bar for moving the interposed coin for the deposit thereof in a tubular receptacle, push plates disposed adjacent to the lower ends of the tubular receptacles, a plurality of levers movable by the plunger bar for actuating the push plates to move the coins from the tubular receptacles, rock levers arranged to be actuated by the movement of the levers, and a plurality of disks movable by the rock levers for numerically indicating the coins which are moved from said tubular receptacles.

5. In mechanism for the purpose described, an inclined chute arranged longitudinally as sections having heights corresponding substantially to coins of different diameters and having a width less than the diameters of the coins, each being provided with an aperture in its bottom, a plurality of upright tubular receptacles for containing coins disposed below the coin chute, a conducting block, a plurality of plunger bars, means for moving a coin through the aperture of the coin chute to permit it to be interposed between a plunger bar and conducting block, said conducting block being movable for moving the plunger bar and the interposed coin to permit a deposit of said coin in a tubular receptacle, means connected with the plunger bar for moving the coins from the tubular receptacles, an actuating rod movable with the conducting block, a pull-rod movable by the actuating rod, and a plurality of indicating-disks arranged for rotation by the movements of the pull-rod.

[Claims 6 to 8 not printed in the Gazette.]

1,195,252. RIM-TOOL. FREDELLIA H. MOYER, Cleveland, Ohio, assignor to General Rim Company, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1915. Serial No. 18,326. (Cl. 157—1.)

1. A relaxing device of the character described for the ends of a split rim, comprising rigid side bars and a connecting bar at one end, means mounted in said bars for moving the ends toward each other, and means mounted in opposed ends of said arms adapted to engage apertures in opposite extremities and opposite sides of a demountable rim for relaxing the same, and returning the same to place.

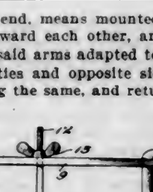


2. A relaxing device of the character described comprising parallel side bars and a cross bar, connecting the side bars at one end, means mounted in said bars for moving their free extremities toward each other, and spaced pairs of inwardly pointing lugs mounted in the ends of said arms.

3. A relaxing device for the split ends of a detachable rim of the character described comprising a cross head and two bars longitudinally extending therefrom, a bolt mounted in one of said arms and projecting through the other of said arms, a thumb screw operative on said bolt engaging one of said arms, said bolt and screw being adapted to adjust the distance between the extremities of said bars and a pair of lugs mounted in the end of each of said arms adapted to engage apertures adjacent to the split in said detachable rim.

4. A relaxing device for a split clencher rim, comprising a cross head having a laterally projecting integral handle and two spaced bars longitudinally extending therefrom, a bolt mounted in one of said arms and projecting through the other of said arms, a thumb nut operative on said bolt engaging one of said arms adapted to adjust said arms relatively to the width of the rim, spaced pairs of lugs mounted on the respective ends of said arms on the inner sides thereof, and adapted to engage apertures adjacent to the split in said clencher rim and to press the clencher bead of the pneumatic shoe from beneath the flanges on said rim, the position of said lever when actuated to break said rim and the split thereof being adapted to hold said rim in an unlocked position.

1,195,253. VALVE. ERIC A. NASLUND, Dunkirk, N. Y. Filed June 23, 1913. Serial No. 775,310. (Cl. 137—4.)

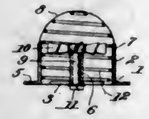


1. A valve comprising a valve-casing having a flaring valve-seat and having its interior of different diameters at opposite sides of said valve-seat, and a valve comprising two rigid members of different diameters spaced apart and a seating-member of larger diameter than the smaller of said rigid members held between said rigid members, said valve closing against the pressure of water passing through said casing and in its closing movement being adapted to cause the smaller rigid member to at least partly enter the smaller interior portion of said casing and the exposed angle of said seating-member to bear against said valve-seat after the initial entrance movement of said smaller rigid member into said smaller interior portion of the casing, said smaller rigid member serving as a shearing element to shear foreign matter that may lodge within the casing at the point at which said member enters the smaller interior portion of the casing.

2. The combination of a valve-casing having a cylindrical portion, a flaring outlet portion, a flaring valve seat joining the walls of said outlet portion with said cylindrical portion and guide webs in said flaring outlet portion extending from the outer end of the latter to said valve seat, said guide webs having parallel guide edges and being separated by water passages, a valve rod in said casing, a valve secured to said valve rod and comprising a rigid cylindrical member adapted to enter said cylindrical portion, a yielding seating member adapted to close against said valve seat after the initial entrance movement of said rigid cylindrical member in the cylindrical portion of said casing, and a second rigid member between which and said first-mentioned rigid member said seating member is clamped, said second rigid member and said seating member being of the same diameter and both in contact at their parallel edges with said guide webs and said first-mentioned cylindrical member serving to relieve said seating member of pressure when the latter closely approaches its seat.

3. The combination of a valve casing having a cylindrical portion, an enlarged outlet portion and a flaring valve seat joining the walls of said enlarged outlet portion with said cylindrical portion, a valve within said casing comprising a rigid cylindrical member adapted to enter said cylindrical portion, a yielding seating member adapted to close against said valve seat after the initial entrance movement of said rigid cylindrical member into the cylindrical portion of said casing, and a second rigid member between which and said first-mentioned rigid member said seating member is clamped, said first-mentioned rigid member serving to relieve said seating member of pressure when the latter approaches its seat.

1,195,254. FUEL-MIXING DEVICE FOR INTERNAL-COMBUSTION ENGINES. ARTHUR H. NEWTON, New York, N. Y. Filed Mar. 1, 1916. Serial No. 81,506. (Cl. 48—180.)

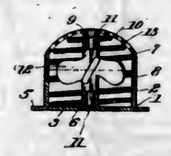


1. A fuel-mixing device for internal combustion engines, comprising a casing having an annular upright portion for insertion in the intake-pipe of the engine and a flanged, apertured support forming the bottom of the device; a central bearing in said support; a rotatable spindle journaled in said bearing; blades on said spindle; a dome-shaped screen cap secured along its lower edge to said casing; and a wire coil within the cap and casing and lying thereagainst.

2. A fuel-mixing device for internal combustion engines, comprising a casing having an annular upright portion for insertion in the intake pipe of the engine and a flanged, apertured support forming the bottom of the device; a central bearing in said support; a rotatable spindle journaled in said bearing; blades on said spindle; a substantially hemispherical screen cap having a flush connection along its equatorial line with said casing; and a wire coil within the cap and casing and lying thereagainst.

3. A fuel-mixing device for internal combustion engines, comprising a casting having an annular upright portion for insertion in the intake-pipe of the engine, a flanged, apertured support forming the bottom of the device and a central bearing in said support; a rotatable spindle journaled in said bearing; blades on said spindle; a substantially hemispherical screen cap having a flush connection along its equatorial line with said casting; and a wire coil within the cap and casting and lying thereagainst.

1,195,255. FUEL-MIXING DEVICE FOR INTERNAL-COMBUSTION ENGINES. ARTHUR H. NEWTON, New York, N. Y. Filed Mar. 1, 1916. Serial No. 81,507. (Cl. 48—180.)

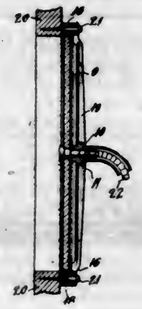


1. A fuel-mixing device for internal combustion engines, comprising a shell having an annular upright portion for insertion in the intake-pipe of the engine and a flanged, apertured support forming the bottom of the device; a central bearing in said support; a perforated cap for said shell having a flush connection therewith; a central bearing in said cap; a rotatable spindle journaled at its ends in said bearings; blades on said spindle; and a wire coil within the cap and shell and lying thereagainst.

2. A fuel-mixing device for internal combustion engines, comprising a shell having an annular upright portion for insertion in the intake-pipe of the engine and a flanged, apertured support forming the bottom of the device; a central bearing in said support; a dome-shaped cap for said shell having a flush connection therewith and provided with rows of perforations decreasing in diameter from the outer edge of the cap to its center; a central bearing in said cap; a rotatable spindle journaled at its ends in said bearings; blades on said spindle; and a wire coil within the cap and shell and lying thereagainst.

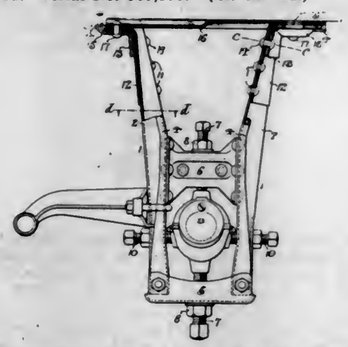
3. A fuel-mixing device for internal combustion engines, comprising a casting having an annular upright portion for insertion in the intake-pipe of the engine, a flanged spider forming the bottom of the device, and a central bearing on said spider; a second casting forming a cap for the device, having a flush, detachable connection with the first casting and provided with a central bearing; a rotatable spindle journaled at its ends in said bearings; blades on said spindle; and a wire coil within the castings and lying thereagainst when assembled.

1,195,256. DEVICE FOR MAINTAINING THE TRANSPARENCY OF TRANSPARENT MEDIUMS. OTTO HEINRICH NONNENBRUCH, New Rochelle, N. Y. Filed Oct. 6, 1915. Serial No. 54,354. (Cl. 20—40.5.)



The process of preserving the transparency of a vision shield which consists in rotating the transparent shield in its own plane with sufficient speed to prevent by centrifugal force the accumulation thereon of impinging particles.

1,195,257. SHAFT-HANGER. GEORGE C. NOROS, Philadelphia, Pa., assignor to Standard Pressed Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 14, 1910, Serial No. 549,304. Renewed Sept. 25, 1914. Serial No. 863,553. (Cl. 64—14.)



1. The combination with a shaft hanger element of pressed sheet metal comprising a leg and a foot thereof, of reinforcing means made of pressed sheet metal and disposed at the point of junction between said leg and foot, said reinforcing means following the contour of said leg and foot and contacting therewith throughout its length and being additionally reinforced by a rib formation in the leg and foot and the reinforcing means.

2. In a shaft hanger of pressed sheet metal, the combination with a leg and a foot thereof, of reinforcing means comprising a plurality of similarly shaped plates disposed at the point of junction between the leg and foot, said reinforcing plates following the contour of said leg and foot and contacting therewith throughout its length and being additionally reinforced by a rib formation in the leg and foot and the reinforcing plates.

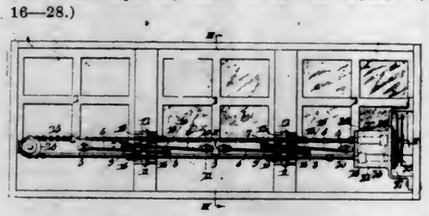
3. In a shaft hanger, a leg and foot integrally connected, said members having continuous beaded edges, and a reinforcing plate at the junction of said foot and leg confined in place by said beaded edges.

4. In a shaft hanger, a leg and foot integrally connected, said members having continuous beaded edges, and a plurality of reinforcing plates at the junction of said foot and leg confined in place by said beaded edges.

5. In a shaft hanger of pressed sheet metal, the combination of a leg, a foot, said leg having rolled edges, reinforcing means at the junction of the foot and leg engaged and retained by said rolled edges, and means for securing said parts in rigid relationship.

[Claims 6 to 30 not printed in the Gazette.]

1,195,258. WINDOW-OPERATING DEVICE. THEODORE F. OECHSLE and ALBERT S. BANCROFT, Philadelphia, Pa. Filed Sept. 30, 1915. Serial No. 53,212. (Cl. 16—28.)



1. The combination with a pivoted closure, and its support, of a longitudinally movable operating rod; a toothed rack carried thereby; an arm provided with a geared pinion intermeshing therewith and a link pivoted to said arm and also to the member to be operated, a shifting screw attached to one end of said operating rod and means for rotating said shifting screw.

2. The combination with a pivoted closure and its support, of a longitudinally movable operating rod; a rack carried thereby; a bracket attached to said support; an arm provided with a geared pinion at one end, pivoted in said bracket; said pinion intermeshing with said rack in such a way that the racks are on the side of the pinion toward the closure; and a link pivoted at one end to said closure and at the other to the arm.

3. The combination with a pivoted closure and its support; of a pair of longitudinally movable operating rods; a toothed rack carried by each rod; an arm with a geared pinion intermeshing with each rack, said arms being mounted on a single pivot and adapted to swing outwardly or inwardly when rotated in opposite directions; links pivoted to said arms and to said closure; and means whereby longitudinal motion transmitted to one rod causes the other rod to move longitudinally in the opposite direction, with consequent opposed rotation of said pinions, whereby both arms move outwardly or inwardly.

4. The combination of a series of pivoted closures and their supports; supporting means attached to said supports; arms provided with pinions at one end pivoted therein, in upper and lower opposed relation; links pivoted to said arms and to said sashes; upper and lower operating rods, toothed racks carried thereby, intermeshing with the upper and lower pinions respectively, and means for causing the operating rods to move in opposite directions, whereby the upper pinions and arms will all move outwardly or inwardly in one direction, and the lower pinions and arms will all move outwardly or inwardly in the opposite direction.

5. In a sash operating mechanism, a movable operating rod provided with toothed racks, operating arms provided with geared pinions, intermeshing therewith, said racks comprising upper and lower plates attached above and below said operating shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,195,259. SAFETY-RAZOR. WILLIAM EDMUND O'REILLY, London, England. Filed Nov. 10, 1915. Serial No. 60,783. (Cl. 30—12.)



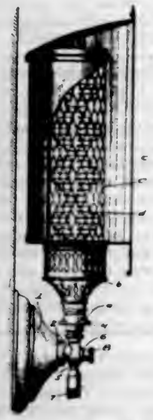
1. In a razor in combination, a razor-blade; a blade-holder, a handle comprising a hollow-body of rectangular cross sectional outline, closed at the upper end and adapted to contain the blade-holder; a removable closure for the lower end of said hollow body-handle; said handle having securing channels upon opposite sides adjacent the upper end; and projections upon the holder designed to slidingly and removably engage said channels; the projection upon one side being lower than that upon the other, whereby the holder is inclined with respect to the axial line of the handle.

2. In a razor in combination, a razor-blade; a blade-holder; a handle comprising a hollow-body of rectangular cross sectional outline, closed at the upper end and adapted to contain the holder; a removable closure for the lower end of said hollow-body-handle; such handle having channels upon opposite sides adjacent the upper end; and inturned extensions upon opposite sides of the holder forming projections to engage the channels upon the opposite sides of the holder, the projection upon one side being lower than that upon the other whereby the holder is inclined with respect to the longitudinal axis of the handle.

1,195,260. GAS-HEATER. TRUMAN G. PALMER, Chicago, Ill. Filed Dec. 20, 1915. Serial No. 67,791. (Cl. 126—248.)

1. The combination with a gas heater, of a base provided with a three-way connection, one part of which

serves as a means of connection for a gas supply conduit and either of the other two parts serving as a means of connection for the heater, one of said two parts being adapted to removably support the heater in an upright position when the base is horizontally disposed and the other of said two parts being adapted to removably support the heater in an upright position when the base is vertically disposed.



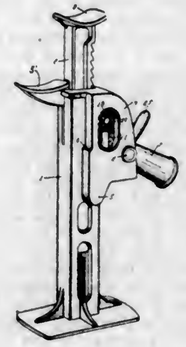
2. The combination with a gas heater, of a base provided with a three-way connection having interior gas passages, one part of said three-way connection being adapted to be connected with a gas supply conduit and either of the other two parts serving as a means of connection for the heater, one of said two parts being adapted to removably support the heater in an upright position when the base is horizontally disposed and the other of said two parts being adapted to removably support the heater in an upright position when the base is vertically disposed, and means for closing the passage in that part of the three-way connection not being utilized for supporting the heater.

3. The combination with a gas heater, of a base provided with a three-way connection having two parts that project horizontally and a third part that projects vertically when the base is horizontally disposed, one of such horizontally projecting parts serving as a means of connection for a gas supply conduit and the remaining horizontally projecting part and the vertically projecting part serving as separate means of connection for the heater when the base is vertically disposed and horizontally disposed respectively.

4. The combination with a gas heater, of a base adapted to be supported upon a horizontal surface, means whereby the base may be supported from a vertical surface, a multi-part connection associated with the base, one part of which is designed to removably support the heater in an upright position when the base is horizontally disposed and another part of which is designed to removably support the heater in an upright position when the base is vertically disposed, and means associated with said connection for supplying gas to the heater in either position of the base.

1,195,261. LIFTING-JACK. WALTER H. PARKIN, Niles, Mich., assignor to National Standard Company, Niles, Mich. Filed Mar. 13, 1915. Serial No. 14,204. (Cl. 254—111.)

1. In a lifting jack, the combination of a rack bar, a standard having a slideway for said rack bar and a housing with a downwardly offset recess at one side of the rack bar, there being a groove in the rear wall of the recess and a shoulder at the upper end thereof, the lower end of the recess being rounded, a lever slotted at its inner end, a pivot for said lever arranged through its slotted end and through said housing, a pair of pawls having laterally projecting pins arranged in the slot of said lever, one of said pawls being arranged on the lever pivot and the other on a pivot disposed on the lever at the inner side of its pivot, coiled springs arranged on said pivots at one side of the pawls and within the lever slot, one end of the springs being engaged with the pawls and the other ends having extensions engaging the lever, a reversing member mounted on said lever pivot at the side of the lever to engage said pins on said pawls, the inner end of the lever being offset toward the pawls and grooved, and a U-shaped spring arranged in said recess with its bight resting in the bottom thereof and with its rear arm below said shoulder and engaging said groove in the rear wall of the recess, its front arm being engaged with the groove in the end of said reversing member and yieldingly supporting it in operative position to coact with said pawls when its inner end is above the horizontal plane of its pivot and holding it in inoperative position when its inner end is below such plane.



2. In a lifting jack, the combination of a rack bar, a standard having a slideway for said rack bar and a housing with a downwardly offset recess at one side of the rack bar, a lever slotted at its inner end, a pivot for said lever arranged through its slotted end and through said housing, a pair of pawls arranged in the slot of said lever, one of said pawls being arranged on the lever pivot and the other on a pivot disposed on the lever at the inner side of its pivot, coiled springs arranged on said pivots at one side of the pawls and within the lever slot, one end of the springs being engaged with the pawls and the other ends having extensions engaging the lever, a reversing member mounted on said lever pivot at the side of the lever to coact with said pawls, and a U-shaped spring arranged in said recess with its bight resting in the bottom thereof and with its rear arm engaging the rear wall of the recess, said reversing member being slidably engaged with the free arm of said spring so that it is actuated thereby to coact with said pawls when its end engaged with said spring is swung to a position at one side of its pivot and is held in inoperative position by said spring when its end engaged therewith is swung to the opposite side of its pivot.

3. In a lifting jack, the combination of a rack bar, a standard having a slideway for said rack bar and a housing with a downwardly offset recess at one side of the rack bar, there being a groove in the rear wall of the recess and a shoulder at the upper end thereof, the lower end of the recess being rounded, a lever slotted at its inner end, a pivot for said lever arranged through its slotted end and through said housing, a pair of pawls having laterally projecting pins arranged in the slot of said lever, one of said pawls being arranged on the lever pivot and the other on a pivot disposed on the lever at the inner side of its pivot, springs for holding said pawls yieldingly in engagement with said rack bar, a reversing member mounted on said lever pivot at the side of the lever to en-

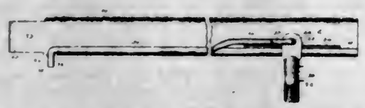
gage said pins on said pawls, the inner end of the lever being offset toward the pawls and grooved, and a U-shaped spring arranged in said recess with its bight resting in the bottom thereof and with its rear arm below said shoulder and engaging said groove in the rear wall of the recess, its front arm being engaged with the groove in the end of said reversing member actuating the reversing member when in one position and holding it in inoperative position when in another position.

4. In a lifting jack, the combination of a rack bar, a standard having a slideway for said rack bar and a housing with a downwardly offset recess at one side of the rack bar, a lever slotted at its inner end, a pivot for said lever arranged through its slotted end and through said housing, a pair of pawls arranged in the slot of said lever, one of said pawls being arranged on the lever pivot and the other on a pivot disposed on the lever at the inner side of its pivot, springs for holding said pawls yieldingly in engagement with said rack bar, a reversing member mounted on said lever pivot at the side of the lever to coact with said pawls, and a U-shaped spring arranged in said recess with its bight resting in the bottom thereof and with its rear arm engaging the rear wall of the recess, said reversing member being slidably engaged with the free arm of said spring so that it is actuated thereby to coact with said pawls when its end engaged with said spring is swung to a position at one side of its pivot and is held in inoperative position by said spring when its end engaged therewith is swung to the opposite side of its pivot.

5. In a lifting jack, the combination of a rack bar, a standard having a slideway for said rack bar and a housing with a downwardly offset recess at one side, a lever slotted at its inner end, a pivot for said lever arranged through its slotted end and through said housing, a pair of pawls arranged in the slot of said lever, one of said pawls being arranged on the lever pivot and the other on a pivot disposed on the lever at the inner side of its pivot, springs for holding said pawls yieldingly in engagement with said rack bar, a reversing member pivotally mounted on the lever pivot to alternately engage said pawls, and a U-shaped actuating spring therefor arranged with its bight resting in said recess and with one arm free, said reversing member being slidably engaged with the free arm of said spring so that it is actuated thereby to coact with said pawls when its end engaged with said spring is swung to a position at one side of its pivot and is held in inoperative position by said spring when its end engaged therewith is swung to the opposite side of its pivot.

[Claims 6 and 7 not printed in the Gazette.]

1,195,262. LAMP-SUPPORTING-TROLLEY STRUCTURE. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 15, 1915. Serial No. 56,006. (Cl. 240—63.)



1. In a lamp supporting structure the combination of a boom structure having a longitudinal trackway, a trolley for riding on said trackway and having a slot, a lamp supporting member extending upwardly through said slot and having an opening therethrough above the trolley, a rod projecting at its outer end through said opening to thus secure the lamp supporting member to the trolley, said rod extending to the inner end of said boom structure to be manipulated to effect shifting of the trolley on the track.

2. In a trolley arm structure, the combination of a boom of inverted U-shaped cross section with its edge sections turned inwardly to form a trackway, a trolley in the form of a length of channel bar having the ends of its limbs engaging said trackway to ride thereon, and a lamp support extending from said trolley downwardly through the trackway.

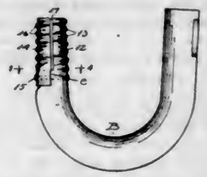
3. In a trolley arm structure, the combination of a boom of inverted U-shaped cross section with its edge sections turned inwardly to form a trackway, a length of channel bar riding with its limbs on said trackway and forming a trolley, the top of said trolley having an opening, a lamp supporting hanger extending upwardly through said opening, a rod within the boom interlocked with said hanger to suspend it from the trolley, and means at the inner end of said boom for locking said rod to thereby lock the trolley against displacement.

4. In a trolley arm structure, the combination of a boom having a trackway at its interior, a trolley slidable on said trackway, a lamp hanger extending upwardly through said trolley and having an opening above the trolley, a shifting rod looped at its outer end through said opening to thereby secure the hanger to the trolley, and means for locking the inner end of said rod to the boom to prevent displacement of said trolley.

5. In a trolley arm structure, the combination of a hollow boom having a trackway at its interior, a trolley ridable on said trackway, a shifting rod pivoted at its outer end to said trolley, and a locking slot at the inner end of said boom for receiving the inner end of said rod to lock the rod and thereby the trolley against displacement.

[Claims 6 and 7 not printed in the Gazette.]

1,195,263. INSULATOR-SUPPORT. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 5, 1916. Serial No. 76,304. (Cl. 173—321.)



1. An insulator support comprising a bracket member formed up entire from a single piece of sheet metal, the end of said bracket member being threaded to form one side of a thimble structure, the remainder of said thimble structure being formed up integral from a piece of sheet metal and secured to the bracket member.

2. An insulator support comprising a bracket member and a thimble structure, said thimble structure being of circular cross-section throughout, part of said thimble structure being integral with the bracket member and the other part being a separate piece and secured to the bracket member.

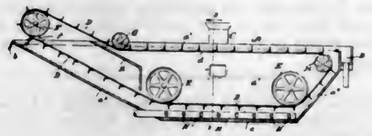
3. In an insulator support, a bracket member formed up entire from a single piece of comparatively heavy sheet metal, the end of said bracket member being of arcuate cross-section and threaded to form part of the thimble structure, said bracket member below said threaded end being of circular cross-section, and a thimble part formed entire from a single piece of thinner sheet metal secured to said bracket member at its circular cross-section and forming with the threaded bracket end a thimble structure of circular cross-section throughout.

4. In an insulator support, a bracket member formed up entire from a single piece of comparatively heavy sheet metal, the end of said bracket member being of arcuate cross-section and threaded to form part of the thimble structure, said bracket member below said threaded end being of circular cross-section, and a thimble part formed entire from a single piece of thinner sheet metal secured to said bracket member at its circular cross-section and forming with the threaded bracket end a thimble structure of circular cross-section throughout, the longitudinal edges of said thimble structure parts being separated a distance to permit radial yield of the structure when an insulator is applied.

5. An insulator support comprising a bracket member and a thimble structure, said bracket member being formed up entire from a single piece of comparatively heavy sheet metal and being of arch shaped cross-section, the end of said bracket member being of arcuate cross-section and threaded to form part of the thimble structure, the section of the bracket member below said threaded end being of circular cross-section to form a cylindrical seat, and a thimble structure part formed up entire from comparatively thin sheet metal and secured to said seat to form with said bracket member threaded end the complete thimble structure of circular cross-section throughout.

[Claims 6 and 7 not printed in the Gazette.]

1,195,264. METHOD OF AND APPARATUS FOR SEPARATING RUBBER SUBSTANCES OF DIFFERENT DENSITIES. THOMAS J. PENNINGTON, Chicago, Ill. Filed Apr. 28, 1916. Serial No. 94,104. (Cl. 83—85.)



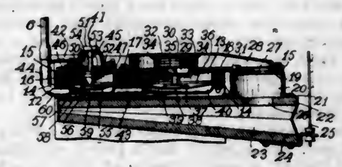
1. A process of separating rubber-containing material, consisting in delivering to a settling bath having a surface layer of an oily viscous substance a liquid-pulp containing disintegrated rubber compounds of different specific gravities, gently agitating the bath by gaseous fluid currents and thereby bringing the lighter rubber compounds into contact with the surface film and retaining them there, permitting the heavier compounds to settle, and separately removing the so separated compounds.

2. A process of separating rubber-containing material, consisting in maintaining on a settling bath a surface layer of an oily viscous substance, delivering to the settling bath a liquid pulp containing disintegrated rubber compounds of different specific gravities, gently agitating the bath by gaseous fluid currents and thereby bringing the lighter rubber compounds into contact with the surface film and retaining them there, permitting the heavier rubber compounds to settle, and separately removing the so separated compounds.

3. The process of separating rubber-containing material, consisting in mixing a liquid pulp containing disintegrated rubber compounds of different specific gravities with an oily viscous substance, delivering the mixture to a settling bath having a surface layer of such oily viscous substance, gently agitating the bath by gaseous fluid currents and thereby bringing the lighter rubber compounds into contact with the surface film and retaining them there, permitting the heavier compounds to settle and separately removing the so separated compounds.

4. The apparatus herein described for separating substances of different specific gravities, comprising a settling vessel having at one end a launder receiving the overflow from said vessel and at the opposite end an overflow for the settled material, a flight conveyer mounted and guided in said settling vessel, one portion of which moves straight across the lower portion of the vessel to collect the settled material, another portion of which moves upwardly and outwardly to convey the settled material to a point above the liquid level to discharge it, and another portion of which conveyer extends straight across the vessel near the liquid level therein and delivers the floating material on the bath to the overflow launder, air supply pipes in the lower portion of the vessel to produce agitation in the bath, and a baffle interposed between the discharge portion of the vessel and the agitation zone thereof and which prevents the liquid from flowing from the surface of the vessel toward the discharge portion thereof and confines the material floating on the bath to the settling and agitation part of the bath.

1,195,265. PIANO-PLAYER. CLAUS E. PETERSON, Worcester, Mass. Filed May 5, 1911. Serial No. 625,182. (Cl. 84—178.)



1. In a piano player, a horizontal wind trunk, consisting of longitudinal bars and plates attached to said bars inclosing separate vacuum chambers, means for exhausting the air from said chambers, and two independent means of communication between one of said vacuum chambers and said air exhausting means.

2. In a piano player, a series of horizontal wind trunks consisting of longitudinal bars and plates attached to said bars inclosing parallel separate vacuum chambers, with primary, secondary and motor pneumatics attached to the outside of said plates and communicating with said chambers.

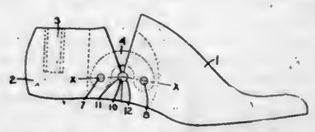
3. In a piano player, a series of horizontal wind trunks each consisting of longitudinal bars and plates attached to said bars inclosing two separate vacuum chambers, a vertical chamber communicating with one end of one of said chambers in each of said trunks, a vertical chamber communicating with the opposite ends of said vacuum chambers, means for exhausting the air from said vertical chambers and independent valve controlled passages connecting said vertical chambers with said exhausting means.

4. In a piano player, a wind trunk containing a vacuum chamber, a series of motor bellows having valve controlled communication with said vacuum chamber, means for exhausting air from said vacuum chamber, and independent valve controlled passages between the opposite ends of said vacuum chamber and said air exhausting mechanism.

5. In a piano player, a horizontal longitudinal vacuum chamber having an opening in its upper wall, an inverted cup having a flanged edge, a disk fitting in and held by said flanged edge covering said opening and forming a valve seat, an opening in said inverted cup leading to the outer air and having a valve seat, valves for said valve seats having a common valve stem, and means for actuating said valve stem to alternately open and close said valves.

[Claims 6 to 12 not printed in the Gazette.]

1,195,266. HINGED LAST. OTTO A. PETERSON, Stoughton, Mass., assignor of one-half to George E. Belcher, Stoughton, Mass. Filed Mar. 3, 1915. Serial No. 11,865. (Cl. 12—136.)



1. In a hinge last, the combination with a fore part, of a heel part capable of having a swinging movement relative to the fore part and a resilient connecting member connected to both parts of the last and shaped to hold them yieldingly in either their extended or collapsed position.

2. In a hinge last, the combination with a fore part and a heel part, of connecting means comprising means constituting a fulcrum about which the heel part turns and a longitudinally resilient connecting member connected to both the heel part and the fore part of the last at points which are in a line at one side of the axis of movement of

the heel part when the last is extended and at the other side of said axis when the last is collapsed.

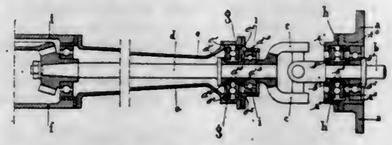
3. In a hinge last, the combination with a fore part and a heel part, one of which has a groove extending transversely thereof, of means associated with the other part and occupying said groove and constituting a fulcrum about which the heel part turns, and a longitudinally resilient connecting member secured to both the heel part and the fore part and shaped to hold the last yieldingly either extended or collapsed.

4. In a hinge last, the combination with a fore part and a heel part, one of which has a groove extending transversely thereof, of means associated with the other part and occupying said groove and constituting a fulcrum about which the heel part turns, and a resilient connecting member connected to both the heel and the fore part at points which are in a line at one side of the fulcrum when the last is extended and at the other side of said fulcrum when the last is collapsed.

5. In a hinge last, the combination with a heel part and a forepart, each having a transverse groove and a slot, of a fulcrum pin occupying said grooves, and a U-shaped resilient connecting member received in said slots and connected at its ends to the heel part and fore part, respectively, at points which are in a line at one side of the center of the fulcrum pin when the last is extended and at the other side when the last is collapsed.

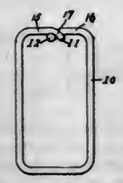
[Claims 6 and 7 not printed in the Gazette.]

1,195,267. CONNECTION BETWEEN REAR AXLE AND CHASSIS. LOUIS RAVEL, Boulogne-sur-Seine, France. Filed Apr. 30, 1914, Serial No. 835,520. Renewed May 12, 1916. Serial No. 97,183. (Cl. 21—90.)



In a motor vehicle, the combination with a rear axle housing, a propeller shaft, a transmission drive shaft, and a universal joint intermediate said shafts, of a housing inclosing the propeller shaft and fixedly secured to the rear axle housing, a thrust bearing arranged at the forward end of the said propeller shaft housing and receiving the thrusts of the latter, and a thrust bearing arranged to receive the thrusts imparted thereto from the propeller shaft through the universal joint, and transmit same to the transmission gear case.

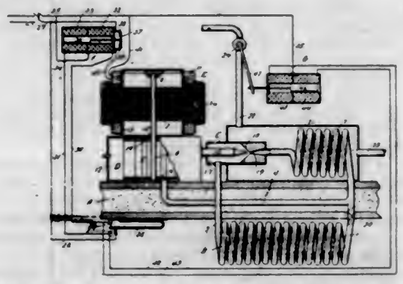
1,195,268. LINK. CHARLES C. RIEFSNYDER, Des Moines, Iowa, assignor of one-half to John McCray, Des Moines, Iowa. Filed Feb. 13, 1914. Serial No. 818,554. (Cl. 40—26.)



1. As an improved article of manufacture, a link formed of a single length of round spring wire bent into substantially rectangular form, straight end portions of the wire being in a common plane longitudinally to form one end of the rectangle, said straight end portions of the wire terminating in hooks midway of said end of the rectangle, said hooks being joined to the straight end portions by integral inclined portions, one hook describing one-half of a circle having an internal diameter equal to the diameter of the wire and adapted to embrace one straight end portion of the wire adjacent the other hook, said other hook describing one-fourth of a circle of the same radius and adapted to engage the first straight end portion of the wire adjacent the first hook, the radii of said hooks being in parallel planes at right angles to the plane common to the straight body portions.

2. As an improved article of manufacture, a link formed of a single length of round spring wire bent into substantially rectangular form, straight end portions of the wire being in a common plane longitudinally to form one end of the rectangle, said straight end portions of the wire terminating in hooks midway of said end of the rectangle, said hooks being joined to the straight end portions by integral inclined portions crossing each other at right angles, one hook describing one-half of a circle having an internal diameter equal to the diameter of the wire and adapted to embrace one straight end portion of the wire adjacent the other hook, said other hook describing one-fourth of a circle of the same diameter and adapted to engage the straight end portion of the wire adjacent the first hook, the radii of said hooks being in parallel planes at right angles to the plane common to the straight body portions.

1,195,269. REFRIGERATING-MACHINE. JAMES D. ROSS, Seattle, Wash. Filed Sept. 6, 1913. Serial No. 788,390. (Cl. 62—115.)



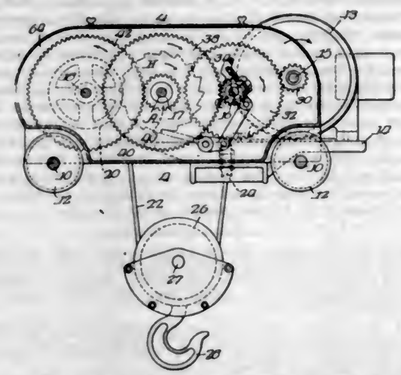
1. A refrigerating machine comprising a condensing coil, an expansion coil, an expansion means between the coils for causing the refrigerant to expand, in entering the expansion coil, a pump having its suction side connected between the said means and condensing coil, an aspirator between the delivery side of the pump and the condensing coil, and a connection between the expansion coil and aspirator whereby the latter draws off the expanded gas from the former.

2. A refrigerating machine comprising a condensing coil, an expansion coil into which refrigerant from the condensing coil expands, a rotary pump connected with both coils, and an aspirator connected with the discharge end of the expansion coil and receiving end of the condensing coil, and also connected with the pump, whereby the fluid discharged from the latter will draw the expanded gas from the expansion coil.

1,195,270. HOISTING MECHANISM. FRED A. RUNDLE, Harvey, Ill. Filed Mar. 15, 1915. Serial No. 14,589. (Cl. 74—7.)

1. A clutch device comprising a shaft having a stationary flange thereon, a member loose on the shaft to be clamped to the flange and a wheel having its hub screw threaded directly upon the shaft movable into and out of engagement with said last mentioned member and means for moving said wheel for the purposes set forth.

2. A clutch device comprising a shaft having a stationary flange thereon, a member loose on the shaft to be clamped to the flange, a wheel having its hub screw threaded directly upon the shaft to move into and out of engagement with said last mentioned member, means for moving said wheel and means limiting the amount of movement on said shaft away from said flange for the purposes set forth.



3. In a device of the class described, the combination of two parallel shafts, gearing uniting said shafts, a ratchet wheel on one of said shafts, a ratchet dog pivoted independently of both of said shafts engageable with said ratchet wheel to stop it and its shaft, a collar rotatably but frictionally engaging the second shaft and a connection between said collar and the ratchet dog, the wheel, collar and connecting parts mentioned being in substantially the same plane transverse to the shafts for the purposes set forth.

4. In a device of the class described, the combination of two parallel shafts, intermeshing gears of different sizes on the two shafts, a ratchet wheel on one of said shafts, a ratchet dog pivoted at a point outside the axis of said shafts engageable with said ratchet wheel to stop it and its shaft, a collar rotatably but frictionally engaging the second shaft and a connection between said collar and the ratchet dog, the wheel, collar and connecting parts mentioned being in substantially the same plane transverse to the shafts for the purposes set forth.

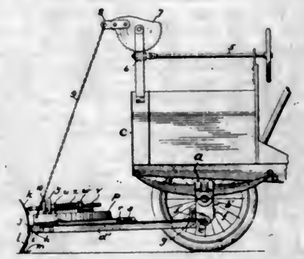
5. In a device of the class described, the combination of two parallel shafts, intermeshing gears of different sizes on the two shafts, a ratchet wheel on one of said shafts carrying the larger of said gears, a ratchet dog pivoted at a point outside the axis of said shafts engageable with said ratchet wheel to stop it and its shaft, a collar on the second shaft rotatably but frictionally engaging the second shaft and a connection between said collar and the ratchet dog, the wheel, collar and connecting parts mentioned being in substantially the same plane transverse to the shafts for the purposes set forth.

[Claim 6 not printed in the Gazette.]

1,195,271. SNOW-PLOW. WILLIAM T. RUTH, Kennett Square, Pa., assignor to American Road Machinery Company, Inc., Kennett Square, Pa., a Corporation of Delaware. Filed Mar. 4, 1916. Serial No. 82,024. (Cl. 37—49.)

1. In a snow plow, the combination with a vehicle and supporting means thereon, of a scraper bar, a frame supporting the bar and pivotally supported from the supporting means on a horizontal axis, and a laterally extending tension bar one part of which is in fixed relation to the supporting means and another part of which is in fixed relation to said frame.

2. In a snow plow, the combination with a vehicle and supporting means thereon, of a scraper bar, a frame supporting the bar and pivotally supported from the supporting means on a horizontal axis, and a laterally extending tension bar one part of which is in fixed relation to the supporting means and another part of which is in fixed relation to said frame, said tension bar being arranged so as to be free of tension when the front of the scraper bar frame is lifted to a definite height, whereby the fall of the front end of the scraper bar frame due to its weight throws the bar into tension, thereby assisting in the lifting of the scraper bar frame.



3. In a snow plow, the combination with a vehicle and supporting means thereon, of a frame comprising arms diverging rearwardly, the rearward ends of the arms being pivotally supported from said supporting means, a scraper bar carried at the front of the frame, and a tension bar extending between the rear ends of said arms, one end of the bar being in fixed relation to one arm and the other end of the bar being in fixed relation to said supporting means.

4. In a snow plow, the combination with a vehicle and supporting means thereon, of a frame pivotally supported on a horizontal axis from the supporting means, a tension device connected with the supporting means and said frame and tending to swing said scraper upward, a scraper bar arranged to swing on said frame on both a vertical axis and a horizontal axis, a second frame attached to the scraper bar on a horizontal axis, an adjustable tension device mounted on the last named frame and pivotally attached to the scraper bar and adapted to yield to permit the lower edge of the scraper bar to move rearwardly when encountering an obstruction, and coöperating devices on the two frames adapted to operate to lock the second frame and the scraper bar from swinging on a vertical axis away from the position to which they are adjusted.

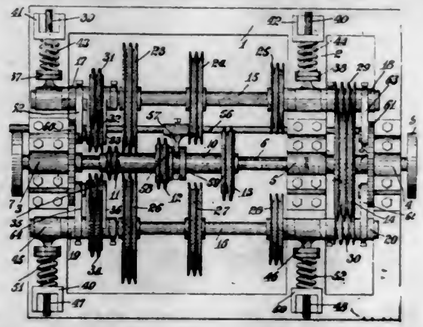
5. In a snow plow, the combination with supporting means, of a scraper blade, a scraper frame supporting the blade and swingable on a horizontal axis on said supporting means, a tension device extending lengthwise of said axis and connected with the scraper frame and supporting means and tending to lift the frame, and a second tension device connected with the blade and tending to hold the working edge of the blade forward but adapted to yield to permit the blade to swing in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

1,195,272. VARIABLE-SPEED-TRANSMISSION MECHANISM. FERDINAND S. RUTTMANN, New York, N. Y. Filed June 2, 1914. Serial No. 842,383. (Cl. 74—26.)

1. A variable speed transmission mechanism embodying therein a power shaft comprising a driving section and a driven section, a counter shaft, a plurality of friction members of different diameters upon one section of said power shaft, a plurality of friction members of different diameters upon said counter shaft, said members respectively being adapted to coöperate with one of said first named friction members, selectively operating means whereby any of the coöperating friction members upon said power shaft and said countershaft may be brought into the operative relation with each other, springs acting upon said countershaft whereby a predetermined constant co-efficient of friction is created when said friction members are in the operative relation and wear upon said members is compensated for, means whereby said friction members may be separated against the tension of said springs and coöperating members carried by said countershaft and the section of said power shaft other than that carrying said friction members whereby power is trans-

mitted from the driving section of said shaft to the driven section thereof through said countershaft.



2. A variable speed transmission mechanism embodying therein a power shaft embodying therein a driving section and a driven section, a countershaft, a plurality of friction members of different diameters upon one section of said power shaft, a plurality of friction members of different diameters upon said countershaft, said members respectively being adapted to coöperate with one of said first named friction members, selectively operating means whereby any of the coöperating friction members upon said power shaft and said countershaft may be brought into operative relation with each other, coöperating members carried by said counter shaft and by the other section of said power shaft whereby power is transmitted from the former to the latter, means normally tending to force said coöperating members into engagement with each other, and means whereby said members may be separated in opposition to said last named means.

3. A variable speed transmission mechanism embodying therein a power shaft embodying therein a driving section and a driven section, a countershaft, a plurality of friction members of different diameters upon one section of said power shaft, a plurality of friction members of different diameters upon said countershaft, said members respectively being adapted to coöperate with one of said first named friction members, selectively operative means whereby any of the coöperating friction members upon said power shaft and said countershaft may be brought into operative relation with each other, coöperating members carried by said countershaft and by the other section of said power shaft whereby power is transmitted from the former to the latter, means normally tending to force said coöperating members into engagement with each other, and a compound leverage system whereby said members may be separated in opposition to said last named means.

4. A variable speed transmission mechanism embodying therein a power shaft embodying therein a driving section and a driven section, a countershaft, a plurality of friction members of different diameters upon one section of said power shaft, a plurality of friction members of different diameters upon said countershaft, said members respectively being adapted to coöperate with one of said first named friction members, selectively operative means whereby any of the coöperating friction members upon said power shaft and said countershaft may be brought into operative relation with each other, coöperating members carried by said countershaft and by the other section of said power shaft whereby power is transmitted from the former to the latter, means normally tending to force said coöperating members into engagement with each other, toggle levers acting upon said countershaft, and a lever system actuating said toggle levers whereby said members may be separated in opposition to said last named means.

5. A variable speed transmission mechanism embodying therein a power shaft embodying therein a driving section and a driven section, an oscillatory countershaft, a plurality of friction members of different diameters upon one section of said power shaft, a plurality of friction members of different diameters upon said countershaft, said members respectively being adapted to coöperate with one of said first named friction members, selectively operative means whereby any of the coöperating friction members upon said power shaft and said countershaft may be brought into operative relation with each other, means whereby said countershaft may be oscillated comprising an oscillatory crank, a pitman transmitting movement from said crank to said countershaft, means actuating said crank and springs acting in opposition to said last named means, and coöperating members carried by said countershaft and by the other section of said power shaft whereby power is transmitted from the former to the latter.

[Claims 6 to 11 not printed in the Gazette.]

1,195,273. STREET-PAVEMENT AND THE METHOD OF CONSTRUCTING THE SAME. JOSEPH SCHEERER, San Francisco, Cal. Filed Sept. 15, 1913. Serial No. 789,908. (Cl. 94—1.)

1. In a street pavement, an asphaltic mineral structure composed of crushed hard rock, lime stone, an oil absorbing stone and an asphaltic binder.

2. In a street pavement, an asphaltic mineral structure composed of crushed hard rock, lime stone, pumice stone and an asphaltic binder.

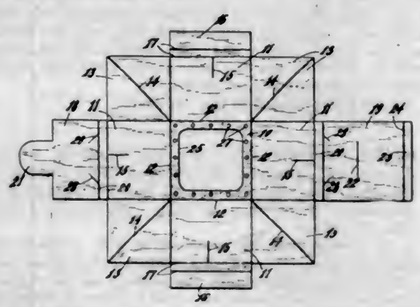
3. A street pavement comprising a rigid foundation, a coating of asphalt on said foundation, a coating of asphalt mixture consisting of asphalt, ground lime stone, ground oil absorbing stone and an asphaltic binder on said asphalt coating, and a layer of mineral aggregate of small sizes and free from clay on said asphalt mixture, the aggregate being rolled to force the asphalt upward into the interstices of the aggregate.

4. In a street pavement, a wearing surface containing crushed lime stone, pumice stone and a binder.

5. The method of constructing a wearing surface on a road foundation which consists in applying a coat of hot liquid asphalt, then applying a coat of a hot liquid asphalt mixture consisting of asphalt, ground lime stone, ground oil absorbing stone and an asphaltic binder, then applying a layer of hot crushed mineral aggregate and then rolling the mass with a hot roller.

[Claims 6 to 8 not printed in the Gazette.]

1,195,274. SANITARY DISPLAY-BOX. IRVINO E. SCHIEK, Rhinelander, Wis. Filed Jan. 10, 1916. Serial No. 71,147. (Cl. 229—16.)



1. A sanitary shipping box formed of a single paper blank comprising a central top panel with side panels adjoining its edges along fold lines, corner folds between the adjacent side panels adapted to be doubled upon themselves along fold lines leading from the corners of the top panel with their pointed ends passed through slits in the side panels, and interlocking flaps at the ends of the side panels uniting therewith along spaced double fold lines to fold within the box and form a raised bottom therefor with the lower edges of the side panels and the portions between the spaced double fold lines forming extension flanges around the bottom of the box, said extension flanges containing the double corner folds to be stiffened and strengthened thereby.

2. A paper shipping box having reinforced spacing extensions beneath a raised bottom, comprising a single paper blank with a generally rectangular central portion divided by horizontal and vertical parallel fold lines into nine rectangular panels, the central one constituting the top panel and the four panels adjoining the edges thereof constituting the side panels, and the panels between the edges of the side panels constituting corner folds adapted to be doubled upon themselves along diagonal fold lines extending from the corners of the top panel and adapted when folded together to be passed through slits in the side panels, and interlocking flaps at the ends of the side panels united therewith along spaced double fold lines to fold within the box and form a raised bottom therefor, the extension formed between the lower edges of the side panels and the portions between the double fold lines containing the edges of the corner folds for giving strength and rigidity thereto.

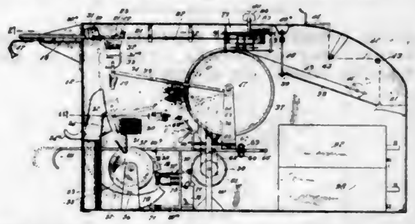
3. A paper shipping box, comprising a single blank forming a top panel, side panels uniting with the edges thereof along fold lines, corner folds between the edges of adjacent side panels and adapted to be folded together to form triangular braces at the corners of the box and to have their free ends passed through slits in the side panels, and interlocking flaps on the ends of the side panels uniting therewith along spaced double fold lines, the pair of flaps of opposite side panels adapted to fold together, one having an extension flap adapted to fold into the crease between the other and its side panel and also having a slit to receive a tongue of the other, and the other pair of flaps adapted to have their corners inserted through slits of the first mentioned pair of flaps to form the box bottom therewith, said box bottom being raised above the level of the lower edges of the side panels and the lower edges of the corner folds by reason of the space between the fold lines of the flaps.

4. A sanitary display shipping box for berries and the like, comprising a paper box of a single sheet blank forming a top panel having an inspection opening therethrough, side panels united with the edges of the top panel along fold lines, corner folds between the side panels and united therewith along fold lines and adapted to fold together within the box and have their free ends inserted through slits in the side panels, interlocking sealing flaps on the ends of the side panels united therewith along spaced double fold lines to form a sealing head within the box and spaced above the lower edges of the side panels and the lower edges of the corner folds, and a transparent covering for the inspection opening of the top panel.

5. A sanitary display shipping box for berries or the like, comprising a paper box of a single sheet blank forming a top panel with a display opening therethrough, side panels uniting with the edges of the top panel along fold lines, corner folds uniting with the side panels along fold lines and adapted to be folded together within the box and have their free ends passed through slits in the side panels, interlocking sealing flaps at the edges of the side panels uniting therewith along spaced double fold lines, one pair of opposite sealing flaps being provided with a tongue on the edge of one fitting in a slit of the other and an extension flap on said other to fit in the crease between the first mentioned flap and its side panel and the other pair of sealing flaps adapted to have their corners inserted through slits in the first mentioned pair of sealing flaps, the interlocking and sealing flaps forming a head for the box above the lower edges of the side panels and the lower edges of the corner flaps, and a transparent covering for the inspection opening of the top panel.

1,195,275. COIN DEPOSITING AND RECORDING DEVICE. JOHN L. SCHMIDT, Indianapolis, Ind. Filed Apr. 16, 1913. Serial No. 761,566. (Cl. 194—97.)

1. A device of the class described, comprising a casing, one or more coin-receiving slides whereby the coin is introduced into said casing, means arranged along the path of said slide and adapted to be affected by the thickness and diameter of the coin whereby the extent of operation of the slide is determined, tripping mechanism adapted to be affected by the slide when it reaches the innermost point of its movement whereby an electrical circuit is established for a predetermined period, means arranged in the path of the introduced coin and adapted to be affected by the weight thereof, electrically controlled means adapted to be effective through positioning of the last-mentioned means at a predetermined period whereby depositing of the coin is controlled, and means arranged beyond the electrically controlled means and in the path of the second-mentioned means whereby the latter is controlled when it has moved beyond the electrically controlled means so as to discharge the coin therefrom.



2. A device of the class described, comprising a casing provided with a coin receptacle or chamber, one or more coin-receiving slides whereby the coin is introduced into the casing, means arranged along the path of the slide and adapted to be affected by the thickness and the diameter of the coin whereby the extent of movement of the slide is determined, tripping mechanism adapted to be affected by the slide when it reaches the innermost point of its movement whereby an electrical circuit is established for a predetermined period, means arranged in the path of the introduced coin and adapted to be affected by the weight thereof so as to be oscillated thereby, and mechanism arranged along the path of said last mentioned means and in said electrical circuit whereby said last mentioned means is controlled when it reaches a predetermined point in its movement during said predetermined period and the depositing of the coin determined.

3. In a coin-depositing device of the class described, a casing provided with a coin-receiving chamber, one or more coin-receiving slides whereby the coin is introduced into the casing, said slides being provided with protruding portions, and spring controlled means arranged to slide transversely of the slides and normally extending into the path of said protruding portions, said means comprising a portion normally extending into the path of the protruding portions of the slides and a revoluble portion mounted on the first mentioned portion and adapted to be engaged by the edge of a horizontally disposed coin, whereby said means is moved laterally of the coin-receiving slides and complete inward movement of the slides permitted.

4. A device of the class described, comprising a casing, one or more coin-receiving slides whereby the coin is introduced into the casing, said slides being provided with protruding portions, spring-controlled means arranged transversely of the slides and normally extending into the path of said protruding portions, said means comprising a portion normally extending into the path of the protruding portions of the slides and a revoluble portion mounted on the first mentioned portion and adapted to be engaged by the edge of a proper horizontally disposed coin whereby said means is forced in a transverse direction and complete inward movement of the slides permitted, and means mounted above said slides and adapted to engage with the edge of a coin of improper thickness or with the edge of the coin-receiving socket of the slides.

5. A device of the class described, comprising a casing, one or more coin-receiving slides whereby the coin is introduced into the casing, said slides being provided with pro-

truding portions, spring-controlled means arranged transversely of the slides and normally extending into the path of said protruding portions, said means comprising a portion normally extending into the path of the protruding portions of the slides and a revoluble portion mounted on the first mentioned portion and adapted to be engaged by the edge of a proper horizontally disposed coin whereby said means is forced in a transverse direction and complete inward movement of the slides permitted, and means mounted so as to engage with the upper surface of the coin-introducing slides, said means comprising a pawl arranged to engage with the edge of a coin of improper thickness or with the edge of the coin-receiving socket in said slides whereby further inward travel of the slides will be prevented.

[Claims 6 to 15 not printed in the Gazette.]

1,195,276. ADVERTISING NOVELTY. HERVEY JACOB SEAMAN, Charlottesville, Va. Filed Jan. 11, 1916. Serial No. 71,535. (Cl. 40—125.)

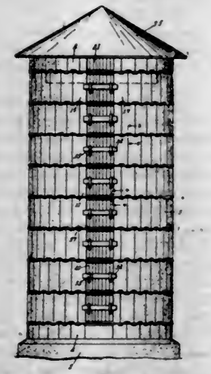


1. An advertising novelty embodying an elongated member, and an elongated doubled advertising tag having its fold line between its ends, the halves of said tag being pasted together and to one terminal of said member, the fold of said tag being adjacent to the end of said member, said member being disposed longitudinally between the edges of the tag and said tag providing a finger piece composed of opposite wings.

2. An advertising novelty embodying an elongated member, and a doubled tag pasted together and upon one terminal of said member, said tag having an opening at its fold line providing notches to prevent puckering, said tag providing a finger piece composed of opposite wings.

3. An advertising novelty embodying an elongated member, and an elongated doubled advertising tag having its fold line between its ends, the halves of said tag being pasted together and to one terminal of said member, said member being disposed between the edges of the tag, said tag having an opening at its fold line forming notches to prevent puckering, and said member extending to said notches.

1,195,277. CYLINDRICAL WALL STRUCTURE, SUCH AS A SILO. DELBERT A. SECOR, Cassopolis, Mich., assignor of one-half to John Schmidt, Dowagiac, Mich. Filed Oct. 18, 1915. Serial No. 56,530. (Cl. 72—6.)



1. A cylindrical wall structure of the class described comprising wall blocks having spaced interlock projections at each end, said blocks being laid in courses to break end joints with the blocks of adjacent courses and with their interlock projections interlocked with an interlock projection of each block of the adjacent courses with which they abut, casing blocks laid in alternate courses of said wall blocks and having door openings therein, said casing blocks having end interlock projections adjacent their side edges, jamb blocks laid in said wall courses alternately with said casing blocks and having spaced interlock projections at each end interlocked with interlock projections of said casing blocks and wall blocks abutting said casing blocks, the horizontal members of said casing blocks constituting cross members between the ends of said jamb blocks, and encircling hoops disposed across the said interlock projections of said blocks and across the horizontal pieces of said casing blocks.

2. A wall structure of the class described comprising wall blocks having spaced interlock projections at each end, said blocks being laid in courses to break end joints with the blocks of adjacent courses and with their interlock projections interlocked with an interlock projection of each block of the adjacent courses with which they abut, casing blocks laid in alternate courses of said wall blocks and having door openings therein, said casing blocks having end interlock projections adjacent their side edges, jamb blocks laid in said wall courses alternately with said casing blocks and having spaced interlock projections at each end interlocked with interlock projections of said casing blocks and end wall blocks abutting said casing blocks, the horizontal members of said casing blocks constituting cross members between the ends of said jamb blocks.

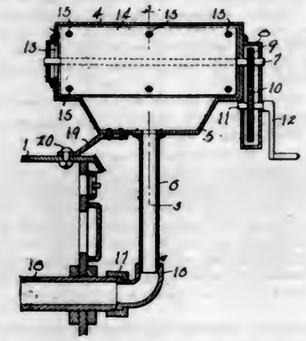
3. A cylindrical wall structure of the class described comprising a series of courses of blocks having interlocking ends and sides in combination with frame-like door casing blocks laid in alternating courses in said wall, said casing blocks having door openings therein, the spaces between the casing blocks also constituting door openings, the ends of said casing blocks being shouldered to abut with the ends of blocks of the adjacent courses, and encircling hoops disposed across the interlocking ends of said courses of said blocks and the ends of said casing blocks.

4. A cylindrical wall structure of the class described comprising a series of courses of blocks having interlocking ends in combination with frame-like door casing blocks laid in alternating courses in said wall, said casing blocks having door openings therein, the spaces between the casing blocks also constituting door openings, the ends of said casing blocks being shouldered to abut with the ends of blocks of the adjacent courses, and encircling hoops disposed across the interlocking ends of said courses of said blocks and the ends of said casing blocks.

1,195,278. STOVE-BLOWER. FRANK SHADLEY, Hebron, Ind. Filed July 31, 1915. Serial No. 42,999. (Cl. 230—11.)

1. A stove blower, including a fan casing, a rotary fan mounted within the fan casing, gearing upon the casing for driving the fan, an air pipe projecting downwardly from the fan casing, a coupling member at the end of the air pipe, a bracket mounted to swing in a horizontal plane and having the fan casing mounted upon the swinging end thereof, and a fixed pipe adapted to be engaged by the before mentioned coupling member at the end of the air pipe when the casing is swung into operative position, the casing being adapted to be swung into an out of the way position when not in use.

2. A blower, including a cylindrical fan casing having an air inlet opening in one end thereof, a gear casing applied to the opposite end thereof, a fan shaft extending through the fan casing and projecting into the gear casing, a pinion applied to the fan shaft, a gear wheel mounted within the gear casing and meshing with the pinion, a crank shaft for turning the gear wheel, fan blades upon the fan shaft, an air chamber at the bottom of the fan casing, an air pipe projecting downwardly from the air chamber, a coupling member at the end of the air pipe, a fixed pipe adapted to be detachably engaged by the coupling member of the air pipe when the fan is in operative position, and a supporting bracket mounted to swing in



a horizontal plane and having the fan casing mounted upon the swinging end thereof so that the fan casing can be swung into an out of the way position when the device is not in use.

1,195,279. PISTON PACKING-RING. DEARELL D. SHIERK, Rockford, Ill. Filed May 1, 1916. Serial No. 94,688. (Cl. 121—108.)



1. A piston ring comprising a split ring, the end portions of which are undercut at both sides of the ring concentric with the outer periphery of the ring and shaped to provide longitudinally projecting ends disposed centrally between said undercut side portions and cut away on their peripheral faces, and a joint member having spaced sides joined by a cross portion located in the peripheral cutaways of the ends of the rings, the opposite ends of said sides fitting into said undercut sides and conforming to the curved walls thereof so that the joint member is maintained through its coöperative engagement with the ends of the ring against radial displacement with respect thereto as the said ends are moved relatively upon expansion of the ring.

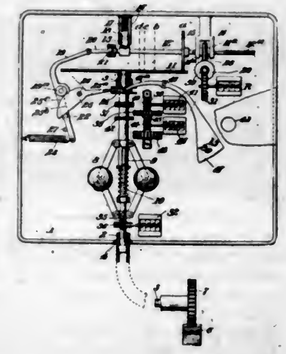
2. A piston ring comprising a split ring, the ends of which are shaped to provide contrally disposed longitudinal tongues and are undercut from the neck of the tongues away therefrom at both sides of the ring, the ends of the tongues being cut away on their peripheral faces, and a joint member fitting over the said peripheral cutaways of the ends of the tongues and having sides shaped to fit against the sides of the tongues and extend beneath the said undercut portions at the sides of the ring.

3. A piston ring comprising a split ring, the ends of which are centrally reduced in width and cut away on their peripheral faces, and are longitudinally undercut on both sides of the ring from said reduced ends, and a joint member having spaced sides fitting beneath said undercut side portions and against the sides of said reduced ends, said sides being centrally joined by a cross portion fitting in said peripheral cut away of the ends.

4. A piston ring, comprising a split ring having centrally reduced ends cut away on their peripheral faces, the ends of the ring being undercut on both sides from said reduced ends, and a joint member extending across the outer side of said peripheral cut aways of the ends of the ring and having spaced sides, the opposite ends of which extend beneath the undercut walls of the ring, whereby the joint member is held against radial displacement with respect to the ring by its central and end engagement with opposed faces of the ring.

5. As an article of manufacture, a joint member for piston rings comprising an arcuate body portion adapted to conform to the curvature of the ring, a cross portion located centrally thereof, extensions of greater thickness than said cross-section on opposite sides thereof, and having substantially the same thickness as the ring, and adapted to form a peripheral continuation of said ring when in assembled relation, and end portions carried by said extensions and having their outer peripheral faces cut away.

1,195,280. SPEED AND RUNNING-TIME INDICATOR. RALPH SHIPMAN, Sunbury, Pa. Filed Nov. 1, 1912. Serial No. 729,034. (Cl. 235—95.)



1. Means for indicating the running time of a machine comprising a driving member and means for rotating the same at a speed proportional to the speed of the machine, a driven member in rolling engagement with the driving member, means responsive to variations in the machine speed for adjusting one of said members with relation to the axis of the other member so as to maintain the driven member at a constant speed, and an indicator operatively connected to the driven member.

2. Means for indicating the running time of a machine comprising a driving member and means for rotating the same at a speed proportional to the speed of the machine, a driven member in rolling engagement with the driving member, means responsive to variations in the machine speed for moving the driven member toward and from the axis of the driving member and an indicator operatively connected to the driven member.

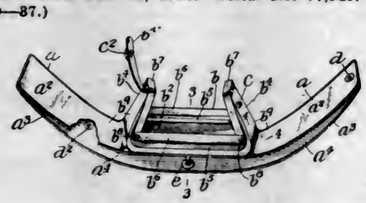
3. Means for indicating the running time of a machine comprising a driving member and means for rotating the same at a speed proportional to the speed of the machine, a driven member in rolling engagement with the driving member, means responsive to variations in the machine speed for moving the driven member toward and from the axis of the driving member, an indicator and reduction gearing connecting said driven member with the indicator.

4. Means for indicating the running time of a machine comprising a driving disk and means for rotating the same at a speed proportional to the speed of the machine, a driven disk in rolling engagement with a side of the driving disk, means, responsive to variations in the machine speed for moving the driven disk toward and from the axis of the driven disk, and an indicator operatively connected to the driven disk.

5. Means for indicating the running time of a machine comprising a shaft and means for driving the same at a speed proportional to the speed of the machine, a driving disk on said shaft, a driven disk in rolling engagement with the driving disk, a centrifugal governor on said shaft, connections between said governor and the driven disk for shifting the position of said driven disk, and an indicator operatively connected to the driven disk.

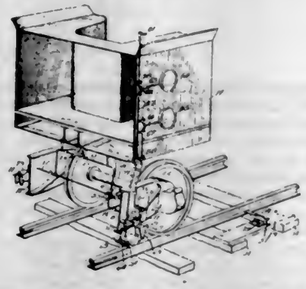
[Claims 6 to 11 not printed in the Gazette.]

1,195,281. COMBINATION BILL-FOLDER AND CHANGE-HOLDER. NATHAN SIMMONS, New York, N. Y. Filed Feb. 12, 1916. Serial No. 77,949. (Cl. 150—87.)



A combination device of the class described, comprising an oblong bill folder one side edge portion of which is open, and a change holder which is oblong and rectangular in form and which is secured centrally of one side of the folder and which comprises a body portion of flexible material, a framework consisting of parallel side members and yoke-shaped end members pivoted to said side members, the end portions of the folder projecting beyond the ends of the change holder, and the end members of the change holder being adapted to be closed and secured and the end portions of the folder being adapted to be folded over the change holder and secured.

1,195,282. RAILWAY SAFETY DEVICE. AMOS HOFFMAN SIMMS, Chicago, Ill. Filed Sept. 27, 1913. Serial No. 792,198. (Cl. 246—59.)



1. A safety device for railway trains comprising a member positioned adjacent the track and adapted to assume a plurality of operative positions, means carried by the train and positioned to engage said member when the latter is in one position to stop the train, and means carried by the train to engage said member when the latter is in a second position to reduce the speed of the train, said last mentioned means only being positioned to permit readjustment thereof after it has engaged said member without requiring the trainmen to leave the train.

2. A safety device for railway trains comprising a pair of valves connected with the air-brake system of the train, and a member disposed adjacent the track and adapted to be disposed in position to open one or both of said valves, the opening of one of said valves slowing the train and the opening of the other stopping it.

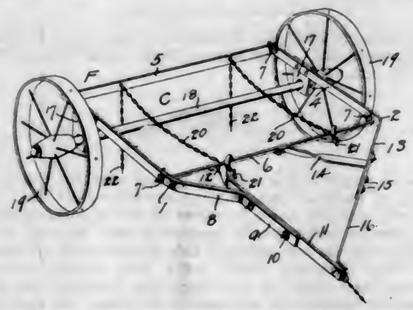
3. A safety device for railway trains, comprising a member positioned adjacent the track and normally biased to operative position, manually operable means whereby said member may be retained in inoperative position and allowed to assume a plurality of operative positions, means carried by the train for reducing the speed thereof, separate controlling means therefor, and means adapted to cooperate with said member when in operative position to selectively actuate said controlling means, whereby the amount of speed reduction depends on the operative position assumed by said member.

4. A safety device for railway trains, comprising a member positioned adjacent the track and normally biased to operative position, means connected to a signaling system, whereby said member may be retained in inoperative position when the signal is clear and allowed to assume a plurality of operative positions corresponding to the caution and danger positions of said signal, means carried by the train for reducing the speed thereof, separate controlling means therefor, and means adapted to coöperate with said member when in operative position to selectively actuate said controlling means, whereby the amount of speed reduction depends on the operative position assumed by said member.

5. A safety device for railway trains, comprising a member adjacent the track, operating in harmony with a signaling system, said member being adapted to assume a plurality of operative positions, one corresponding to the stop signal and another to the caution signal, means carried by the train to engage said member when the latter is in one position to stop the train, means carried by the train to engage said member when the latter is in the second position, to reduce the speed of the train, and means for permanently indicating the number and nature of the operations of the train stop and speed-reducing means.

[Claims 6 and 7 not printed in the Gazette.]

1,195,283. TRANSPORT. HANS SKREBERG, Big Bend township, Chippewa county, Minn. Filed Nov. 5, 1915. Serial No. 59,874. (Cl. 21—65.)



1. A knock-down truck comprising a wheeled axle and a separable metallic frame supported on said axle and including a rectangular supporting cradle, journal members carried by said frame and bearing on the axle and a draw bar also carried by said frame and offset from the center of the side of said frame by which it is carried.

2. A knock-down truck comprising a wheeled axle and a separable metallic frame supported on said axle and including opposite side bars, cross frame members detachably connected with said side bars, journal members carried by said side frame bars and bearing on said axle, and draw bar means carried by one of the cross frame members and also connected with said side frame members, said bar also being located at one side of the short axis of said frame.

3. A knock-down truck, comprising a wheeled axle and a separable metallic framework supported on said axle between the wheels, and a draw bar carried by said frame and located at one side of the axis of said frame which is at right angles to the wheeled axle.

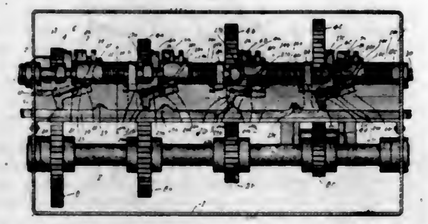
4. A knock-down truck, comprising a wheeled axle and a separable metallic frame supported on said axle and including opposite frame bars having angled extensions at their forward ends, cross frame bars detachably connecting the side bars, and a draw bar secured to one of the cross bars and connected to the angled extensions of the side bars.

5. A knock-down truck, comprising a wheeled axle and a separable metallic framework supported on said axle, said framework including opposite side bars having angled extensions at their forward ends, front and rear cross bars coöperating with the side bars to form a cradle, a drawbar connected with said front cross bar and connecting

with one of said side bars, and a connector bar between the front end of the draw-bar and the angled extension of the other frame bar.

[Claim 6 not printed in the Gazette.]

1,195,284. TRANSMISSION-GEARING FOR MOTOR-VEHICLES. EARL W. SMITH and EUGENE V. SMITH, Sacramento, Cal. Filed Oct. 18, 1915. Serial No. 56,351. (Cl. 74—58.)



1. The combination with a plurality of sets of transmission elements, each set comprising a driving member and a driven member arranged to be carried into driving relation with each other, tripping members each arranged for engagement with one member of each set to normally hold it out of driving relation with its corresponding member, means for setting one of said tripping members ready to be released from such engagement, means for moving all the other tripping members into engaging position and simultaneously releasing the set member, and means for driving the released set of transmission elements into driving relation with each other, as described.

2. The combination with a driving shaft and a driven shaft and a clutch rod, of transmission elements interposed between the driving shaft and the driven shaft, means normally holding the transmission elements out of driving relation with each other, means for setting the holding means ready to be released upon the actuation of the clutch rod, means for releasing the holding means upon the said actuation of the clutch rod, and means for moving the elements into driving relation with each other when so released, as described.

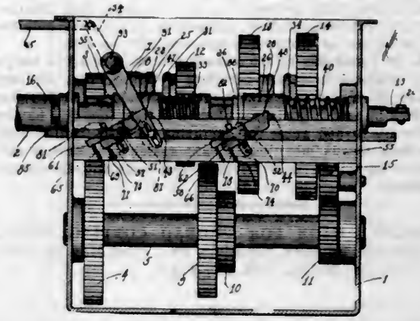
3. The combination with a rotatable shaft, of a member rotatable with the shaft, a member slidable on the shaft and arranged to be brought into driving relation with the rotatable member, a spring pressed member engaged with the slidable member to carry it into engagement with the rotatable member, a tripping member normally engaging the spring pressed member to hold the slidable member from engagement with the rotatable member, and a slidable member arranged to be brought into engagement with the tripping member to disengage it from the spring pressed member, as described.

4. The combination with a rotatable shaft, of a member rotatable with the shaft, a member slidable on the shaft and arranged to be brought into driving relation with the rotatable member, a spring pressed member engaged with the slidable member to carry it into engagement with the rotatable member, a tripping member normally engaging the spring pressed member to hold the slidable member from engagement with the rotatable member, a slidable member arranged to be brought into engagement with the tripping member to disengage it from the spring pressed member, and independent means for returning the spring pressed member into engagement with the tripping member, as described.

5. The combination with a set of transmission elements arranged to be brought into driving relation with each other, of a spring pressed member engaging one element, a pivoted trip member normally blocking the path of the spring pressed member to hold the elements out of driving relation with each other, a member engageable with the trip to set it ready to be disengaged from the spring pressed member, a member movable against the spring pressed member to disengage it from the trip, and means for moving the trip out of the path of the spring pressed member when so disengaged to allow the spring pressed member to be moved to place the transmission elements in driving relation with each other, as described.

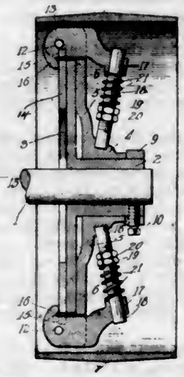
[Claims 6 to 12 not printed in the Gazette.]

1,195,285. TRANSMISSION-GEARING FOR MOTOR-VEHICLES. EARL W. SMITH and EUGENE V. SMITH, Sacramento, Cal. Filed Jan. 3, 1916. Serial No. 69,772. (Cl. 74—58.)



The combination with a driving and driven transmission element, of a sliding member connected with one element and arranged to be moved to place said elements in driving relation with each other, a dog pivotally mounted independently of said sliding member and normally engaging same to hold said elements out of driving relation with each other, a shoulder on said dog, a spring pulled lever pivoted on said dog and engageable with said shoulder, a spring pulled pin projecting through the shoulder and engaging said lever, and means for engaging said lever to move it on its pivotal point, as described.

1,195,286. GOVERNOR. HOWARD F. SNYDER, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a Corporation of Iowa. Original application filed Sept. 6, 1912, Serial No. 718,865. Divided and this application filed Jan. 16, 1915. Serial No. 2,536. (Cl. 74—29.)



1. In apparatus of the class described, a driving shaft, a power regulator thereon comprising a belt pulley on said shaft, a friction device inside said belt pulley and adapted to limit the power applied thereby to the shaft, said device comprising friction disks, one whereof moves with the pulley and the other with the shaft, weight operated

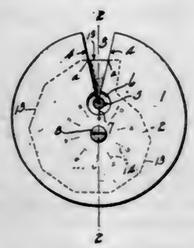
means and resilient means acting against said operative means for controlling the pressure between said friction disks.

2. In apparatus of the class described, a shaft, a hub having a disk thereon fixed upon the shaft, a spider freely revoluble on said hub, a pulley connected to said spider, a friction disk carried by said spider and means including levers for causing said friction disk to be forced against said first mentioned disk.

3. In apparatus of the class described, a shaft, a pulley on said shaft, a friction disk carried by said pulley, means comprising levers and resilient means acting on said levers for putting pressure on said friction disk, another friction disk on said shaft, adjustable means for regulating the pressure on said first mentioned friction disk.

4. In apparatus of the class described, a shaft, a hub, a disk thereon, a spider carrying a pulley, lugs on said spider overlying said first mentioned disk, a friction disk carried by said lugs, levers pivoted in said lugs and having inwardly turned noses for operating on said friction disk, resilient means mounted in said spider for causing said levers to act on said friction disk substantially as described.

1,195,287. GAGE FOR THREAD-CUTTING TOOLS. LOUIS H. SOISSON, Scottdale, Pa. Filed May 24, 1915. Serial No. 30,128. (Cl. 33—174.)



1. A gage for sizing thread cutting tools comprising a main gage member having a permanently open notch in its edge the walls of the notch converging as the depth increases, and a relatively adjustable member carried by the said main gage member and provided with a plurality of tool abutment faces at variable distances from the point of support of the adjustable member, said faces being adapted to be separately positioned across the notch to form the bottom thereof.

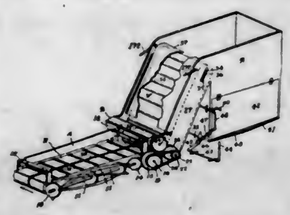
2. A gage for sizing thread cutting tools comprising a main gage member having a notch, and means eccentrically pivoted to said main gage member and having a plurality of flat pitch determining faces for varying the depth of said notch.

3. A gage for sizing thread cutting tools comprising a main gage member having a V-notch, and means pivotally connected to said main gage member having a plurality of flat pitch determining faces, said faces being arranged successively at different distances from the point of pivotal connection of said means with the main gage member to vary the depth of said V-notch.

4. A gage for sizing thread cutting tools comprising a main gage disk having a V-notch, and a pitch disk pivotally carried by said gage disk and having in its periphery a plurality of flat pitch faces coöperating with said V-notch.

5. A gage for sizing thread cutting tools comprising a main gage disk having a V-notch, said notch having a sight opening at its apex and a fixed mark for indicating its center, a pitch disk eccentrically pivoted to said gage disk and having a plurality of flat pitch determining faces coöperating with said V-notch to vary the depth thereof, and also having marks adapted to register with said fixed mark indicating the center of the V-notch, and means for holding the disks together.

1,195,288. GRASS CATCHING AND HANDLING DEVICE FOR LAWN-MOWERS. THOMAS SPENCER, Pueblo, Colo., assignor of one-half to W. C. Darby, Pueblo, Colo. Filed June 28, 1915. Serial No. 36,604. (Cl. 56—114.)



1. In combination, a mowing machine, means for delivering the severed grass in front of the knives thereof, and conveying means located in front of the knives and operating in a transverse and then substantially vertical direction.

2. In combination, a mowing machine, means for delivering the severed grass in front of the knives thereof, conveying means located in front of the knives and operating in a transverse and then substantially vertical direction, and a receptacle disposed at one side of the mowing machine and into which said vertically operating portion of said conveying means is adapted to discharge.

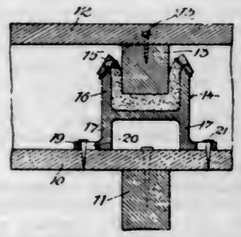
3. In combination, a mower comprising a rotating knife, an apron inclosing said knife through a part of the circle of its rotation and so disposed as to direct the severed grass in a forward direction, conveying means operating in a transverse and then substantially vertical direction, and a receptacle carried by the mowing machine at one side thereof, into which receptacle said vertically operating portion of said conveying means is adapted to discharge.

4. In combination, a mower comprising a rotating knife, an apron partially surrounding said knife and disposed to the rear and above the knife, said apron directing the severed grass in a forward direction, conveying means operating in a transverse and then substantially vertical direction, and a receptacle carried by the mowing machine at one side thereof into which receptacle said vertically operating portion of said conveying means is adapted to discharge.

5. In combination, a mower comprising a rotating knife, an apron partially surrounding said knife and disposed to the rear and above the knife, and conveying means located in front of the knife and operating in a transverse and then substantially vertical direction.

[Claims 6 to 9 not printed in the Gazette.]

1,195,289. FLOOR CONSTRUCTION. CHARLES WHITNEY STEVENS, Chicago, Ill. Filed Feb. 17, 1916. Serial No. 78,923. (Cl. 20—6.)



1. In a building floor construction, the combination with a lower floor, of rigid supports arranged in rows on said lower floor, and having their supporting surfaces elevated well above the floor line, said supports being suitably spaced apart in said rows, and said rows being similarly spaced apart, a sound-insulating pad carried well above the lower floor on the supporting surface of each of said supports, nailing strips carried by said rows of supports and resting on said sound-insulating pads but otherwise out of contact with said supports, the lower edges of said nailing strips being supported at all times well above the lower floor and providing ample clearance above the gas, water, electric and other conduits laid on said lower floor, and an upper floor laid on and secured to said nailing strips, the space between said floors and beneath said nailing strips being comparatively deep.

2. In a building floor construction, the combination with a lower floor, of rigid supporting chairs arranged in rows on said lower floor and suitably spaced apart in said rows, said chairs having their supporting surfaces elevated well above the lower floor and side members extending above said supporting surfaces, a sound-insulating pad carried by each of said chairs and lining the seat and side members of the same, nailing strips carried by said rows of chairs and resting on the felt pads at the bottom and embraced by the side members of the felt pads and chairs, the lower edges of said nailing strips being at all times supported well above the lower floor and providing ample clearance above the gas, water, electric and other conduits laid on said lower floor, and an upper floor laid on and secured to said nailing strips.

3. In a building floor construction, the combination with a lower floor, of rigid supporting chairs arranged in spaced relation in rows on said lower floors, said chairs having their seats well above the surface of the lower floor and side members extending above said seats, a sound-insulating pad carried by each said chair and fitting and lining the seat and side members thereof, means for securing said insulating pads in place in said chairs, nailing strips carried by said rows of chairs, said nailing strips resting on the seats of the chairs and embraced by the side members thereof with the insulating pad interposed, whereby the nailing strips are out of contact with the chairs except through said pads, the lower edges of the nailing strips being supported well above the lower floor and providing ample clearance above the water, gas and electric conduits laid on the lower floor, and an upper floor laid on said nailing strips and secured thereto.

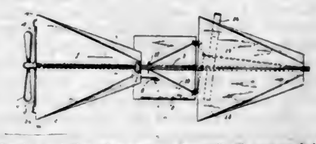
4. In a building construction, the combination with a lower floor, of a partition-wall comprising a floor plate and studding secured to and carried thereby, rigid supports for said floor plate placed at frequent intervals throughout the length thereof and having their supporting surfaces well above the lower floor and carrying said floor plate in an elevated position well above the lower floor, sound-insulating pads carried by said supports beneath the said partition floor plate on which said floor plate rests, said floor plate being otherwise out of contact with the said supports and said lower floor except through said pads, said floor plate having its lower surface elevated above and out of contact with gas, water, electric conduits, etc., laid on the lower floor.

5. In a floor construction, supports for the nailing strips of the upper floor or partitions to elevate said strips above the pipes, conduits and other obstacles on the lower floor and insulate the two floors against sound transmission, each such support comprising a rigid chair having a base portion resting on said lower floor, an elevated seat for carrying the nailing strips, and side members extending above the seat portion and embracing the sides of the nailing strip, and a sound-insulating pad lining said seat and side members and fitting between them and the nailing strip, whereby the nailing strip is out of contact and not otherwise connected with the said chairs except through said pads and is carried above the pipes, conduits, etc., on the lower floor.

[Claims 6 to 9 not printed in the Gazette.]

1,195,290. FLYING-MACHINE. GEORGE C. ST. LOUIS, Fresno, Cal. Filed Oct. 9, 1915. Serial No. 54,943. (Cl. 244—14.)

1. A device of the character described comprising a main support and a plurality of boxes mounted on the support, which boxes have a greater cross sectional area at their front end than at their rear end, and means for driving air pressure through said boxes, as described.

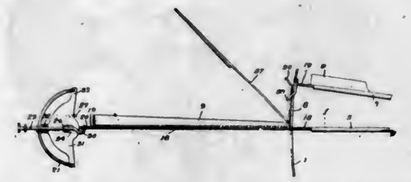


2. A device of the character described comprising a support, a plurality of boxes arranged for hinged movement on the front end of said support, such boxes having a greater cross sectional area at their front end than at their rear end, another set of boxes of similar structure to the first set, fixed at the rear of said support at a spaced distance from said first boxes, and means for driving air pressure through said boxes, as described.

3. A device of the character described comprising a support, a plurality of boxes mounted on one end of said support, such boxes being of greater cross sectional area at their front than at their rear, another set of boxes of similar structure fixed at the rear of said support and at a spaced distance from said first boxes, the division wall between two of said last named boxes being hinged and movable to act as a rudder for the machine, as described.

4. A device of the character described comprising a main support, a plate fixed rigidly to said support, a platform suspended from said plate to a point below the center of gravity of the device, a plurality of boxes hinged to the support, such plate forming a division wall for said boxes, means mounted on the platform and operable to move the boxes on their hinges, and another set of boxes fixed to said support at the rear of the first-named boxes, as described.

1,195,291. ACCOUNT-FILE. JOSEPH STUBBERS, Cincinnati, Ohio. Filed July 6, 1915. Serial No. 38,123. (Cl. 45—3.)



1. A rotary account-file comprising within its mechanism, a shaft, a hub thereon, spokes arranged in radial relation to the hub and adapted for telescopic connection with account-holding trays, and solder disposed around the hub in disk form between the inner ends of the spokes and unifying the spokes with the hub and with each other, combined substantially as set forth.

2. A rotary account-file comprising within its mechanism, a shaft, a hub thereon, spokes arranged in radial relation to the hub and adapted for telescopic connection with account-holding trays, means for securing the inner ends of the spokes to each other and to the hub, and rings disposed against the sides of the spokes outwardly of their inner ends and soldered thereto, combined substantially as set forth.

3. A rotary account-file comprising, a circular casing provided with a wicket and with an interior account wheel carrying trays to be brought selectively opposite said wicket and be moved outwardly therethrough, and a base provided with a concave seat engaging said casing and supporting the casing and permitting it to be moved angularly, combined substantially as set forth.

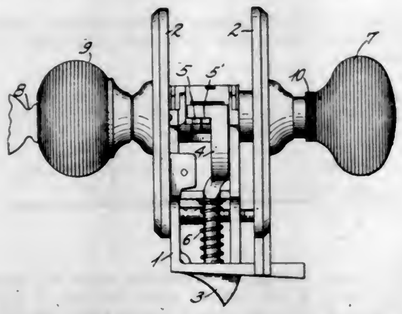
4. A rotary account file comprising, a casing having a wicket, a wheel disposed within the casing and having spokes, an account tray telescopically connected with each

spoke of the wheel and adapted for outward movement through the wicket when a selected tray is brought opposite the wicket, extracting mechanism supported by the casing at the outside of the wicket and adapted to draw through the wicket such selected tray as may have been brought opposite the wicket by the rotation of the wheel carrying the trays, a locking device carried by the extracting mechanism entirely independent of the wheel and the trays carried by the wheel and serving to normally lock the extracting mechanism against withdrawal from the casing, and means carried by the extracting mechanism for automatically disengaging such locking device when the extracting mechanism is connected with a selected tray, combined substantially as set forth.

5. A rotary account-file comprising, a casing having a wicket, a wheel disposed within the casing and having spokes, an account tray telescopically connected with each spoke of the wheel and adapted for outward movement through the wicket in the casing when a selected tray is brought opposite the wicket, extracting mechanism carried by the casing exterior to the wicket and adapted to engage and move through the wicket such selected tray as may have been brought opposite the wicket, a locking device carried by the extracting mechanism and adapted to lock the extracting mechanism to a selected tray when the extracting mechanism and such tray are withdrawn from the casing, and means carried by the casing and extracting mechanism to permit the unlocking of the extracting mechanism from the tray when the extracting mechanism has pushed the tray into the casing, combined substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

1,195,292. LOCK. ERNEST L. TEICH, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 24, 1916. Serial No. 86,392. (Cl. 70—91.)



1. In combination, a latch, a latch frame therefor, an outside knob and roll-back for retracting said latch, a detent accessible from the same side as said knob for holding said knob from rotation relative to said frame so that it cannot actuate said roll-back, said detent when in holding position engaging both said knob and a stationary portion connected to said latch frame, and means normally tending to force said detent member into engagement with said frame, said detent being manually operable from the outside of the door, and an inside knob rotatable independently of said outside knob for retracting said latch.

2. In combination, a latch frame therefor, a knob and roll-back for retracting said latch, a detent carried by said knob for holding said knob from rotation relative to said frame, said detent when in holding position engaging both said knob and a stationary portion connected to said latch frame, and means normally tending to force said detent into engagement with said frame, said detent forming a sleeve surrounding the spindle of said knob.

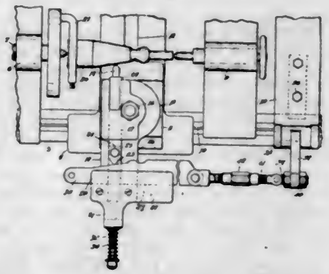
3. In combination, a latch, a latch frame therefor, a knob and roll-back for retracting said latch, a detent carried by said knob for holding said knob from rotation relative to said frame, said detent when in holding position engaging both said knob and a stationary portion connected to said latch frame, and means normally tending to force said detent into engagement with said frame, said detent forming a sleeve surrounding the spindle of said knob, said knob having a recess partially receiving said sleeve.

4. In combination, a latch, a latch frame therefor, an outside knob and roll-back for retracting said latch, a detent carried by said knob for holding said knob from rotation relative to said frame, said detent when in holding position engaging both said knob and a stationary portion connected to said latch frame, means normally tending to force said detent into engagement with said frame, and additional means for dogging said knob so that it cannot retract said latch, said additional means being inaccessible from the outside when the latch is attached to a door.

5. In combination, a latch, a latch frame therefor, an outside knob and roll-back for retracting said latch, a detent carried by said knob for holding said knob from rotation relative to said frame, said detent when in holding position engaging both said knob and a stationary portion connected to said latch frame, means for normally tending to force said detent into engagement with said frame, additional means for dogging said knob so that it cannot retract said latch, said additional means being inaccessible from the outside when said latch is attached to a door, and key-controlled means for retracting said latch bolt from the outside independently of the position of said detent.

[Claims 6 and 7 not printed in the Gazette.]

1,195,293. ATTACHMENT FOR LATHES. HARRY P. TOWNSEND, Hartford, Conn. Filed June 4, 1913. Serial No. 771,683. (Cl. 82—14.)



1. In combination with the cross slide of a lathe having means for placing it in different positions toward and away from the axis of the lathe spindle, said slide having a groove arranged in parallel relation with the axis of the lathe spindle, a tool holder having a headed fastening member located in said groove, a tool movably mounted in the tool holder, a templet supported in contact with said tool, and means for holding the templet against movement.

2. A work holder, a movably mounted tool holder having a templet recess with a projecting lip forming a wall thereof, a tool freely movable in said tool holder and extending into said recess, a templet located in said recess under said lip and against said tool, and means for holding the templet against movement.

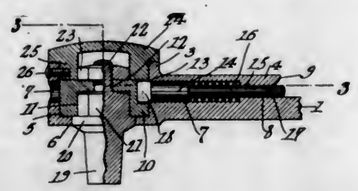
3. A work holder, a movably mounted tool holder having a shelf at its rear end, an opening extending through the tool holder and forming a groove in said shelf, a tool located in said opening, a cap secured to said shelf forming a templet recess, a templet located in said recess against said tool, and means for holding the templet against movement.

4. A work holder, a movably mounted tool holder having a shelf with an opening through said tool holder and forming a groove in said shelf, a tool movably mounted in said opening, a cap secured to the shelf and forming a templet recess, an arm projecting from said cap, an extension from said tool projecting through said arm, a spring interposed between said extension and said arm to force the tool away from the work, a templet supported in said recess, and means for holding the templet against movement.

5. In combination in a forming attachment for lathes, a movably mounted tool holder and pivotally supported for movement during the cutting operation, a tool freely movable in said holder, a templet resting on said holder and secured by a pivot arranged to permit the templet to move toward and from the axis of the lathe spindle, whereby a cross adjustment of the cross slide may be obtained, a base secured to the lathe, an arm pivotally mounted on the base, and a connection between said templet and arm to hold the templet against movement.

[Claims 6 to 14 not printed in the Gazette.]

1,195,294. RATCHET-WRENCH. JOHN E. TRUBEY, Forsyth, Mont. Filed Mar. 3, 1916. Serial No. 81,899. (Cl. 81—60.)



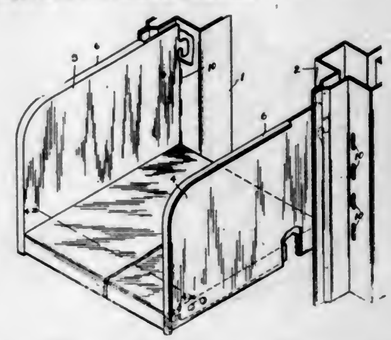
1. A ratchet wrench embodying a handle having a socket and an opening at the bottom of said socket, a cap attached and closing said socket, a ratchet wheel rotatable in said socket between the bottom thereof and the cap, a pawl carried by the handle and coöperable with said ratchet wheel, a member within said opening having a portion extending through the ratchet wheel, and a retaining member engaged with said portion to hold it assembled with the ratchet wheel and concealed by said cap.

2. A ratchet wrench embodying a handle having a socket and an opening at the bottom of said socket, a ratchet wheel rotatable in said socket and having a non-circular socket adjacent said opening and an aperture extending from the non-circular socket to the opposite side of the ratchet wheel, a pawl carried by the handle coöperable with the ratchet wheel, a member having a non-circular boss fitted in said non-circular socket, said boss having a stem projecting through said aperture, a retaining member engaging said stem and seating against that side of the ratchet wheel opposite the socket thereof, and a cap closing the first mentioned socket and concealing said retaining member.

1,195,295. BRACKET AND SHELF FOR LIBRARY-STACKS. PAUL GARFIELD TURNER, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Apr. 3, 1914. Serial No. 826,291. (Cl. 248—19.)

1. In a library shelf, the combination of two brackets, flanges thereon forming a channel at the bottom of each of said brackets, slots through one of the sides of each of said channels, a shelf having a flange on each side thereof engaging said channels on said brackets, spring lugs on said flanges of said shelf to snap into said slots to hold and lock said shelf between said brackets, the flanges on the shelf moving transversely into engagement with the channels.

2. In a library shelf the combination of two brackets, flanges forming a channel on each of said brackets at the bottom thereof, openings in said flanges, a shelf having flanges on two sides thereof engaging said channels, lugs struck up on each of said flanges of said shelf, said lugs being pressed back during the insertion of said flanges into said channels and being adapted to spring back into said openings in said channels to prevent said shelf from disengaging itself from said brackets.



3. In a library shelf construction, the combination of uprights having openings therein, brackets each having a downwardly extending hook formed integral therewith on the rear side near the top thereof to engage in an opening in said upright to support the bracket, the back of said bracket immediately in front of said hook being cut away and out of line with the back of said bracket to prevent said hook from clamping itself on said upright, said cut away portion permitting the top of said bracket to rock into said stack, permitting the hook to be readily disengaged from the stack.

4. In a library shelf construction, the combination of uprights, openings in each of said uprights, brackets each having a downwardly extending hook formed integral therewith on the rear side near the top thereof to engage in the openings in said uprights to support the bracket, the edge of the bracket opposite the lower end of said hook being upwardly inclined away from said hook, leaving a recess between the rear edge of said hook and said bracket with a curved fillet at the top connecting said bracket and hook, a shelf supported between adjacent brackets, means for locking said shelf to said brackets.

5. In a library shelf construction the combination of uprights, openings in each of said uprights, brackets each having a downwardly extending hook formed integral therewith on the rear side near the top thereof, the edge of said bracket opposite the lower end of said hook being upwardly inclined away from said hook, the inner edge of the hook being slightly projected beyond the rear edge of the bracket, said hook being shaped so as to engage in the opening in said upright and draw the top of the bracket firmly against the upright.

[Claim 6 not printed in the Gazette.]

1,195,296. GREASE-CUP. LOUIS N. VINCENT, Prescott, Ariz., assignor of one-fourth to Charles H. Prescott and one-fourth to George W. Sommer, Spokane, Wash. Filed Mar. 30, 1916. Serial No. 87,696. (Cl. 184—46.)

1. In a grease cup, a grease receptacle, a follower having a stem, a sleeve removably mounted on said stem, and a weight reciprocably mounted on said sleeve.

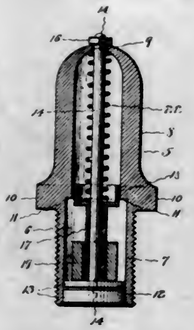
2. In a grease cup, a grease receptacle, a follower having a stem, a sleeve mounted on said stem and a weight reciprocably mounted on said sleeve.

3. In a grease cup, a grease receptacle, a follower having a stem, a sleeve mounted on said stem, a weight reciprocably mounted on said sleeve and means for limiting the movement of the weight.

4. In a grease cup, a grease receptacle, a follower having a stem, a sleeve mounted on said stem, a weight reciprocably mounted on said sleeve and a cup slidably mounted on the stem of the follower.

5. In a grease cup, a grease receptacle, a follower hav-

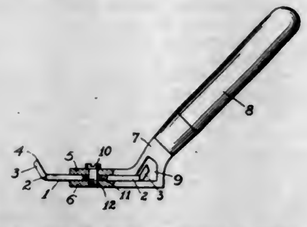
ing a stem, a sleeve mounted on said stem, a weight reciprocably mounted on said sleeve and means mounted on the



stem of the follower for limiting the movement of the weight.

[Claims 6 to 14 not printed in the Gazette.]

1,195,297. MORTAR-JOINT SCRAPER. FRANK J. VLCHEK, Cleveland, Ohio. Filed Feb. 21, 1916. Serial No. 79,495. (Cl. 72—138.)



1. A mortar joint scraper comprising a blade of plate material, scraper fingers projecting from the edges of the blade, and a handle supporting the blade whereby the blade takes a vertical position with relation to the face of a wall and the edges of the blade serve as scrapers and guides, substantially as described.

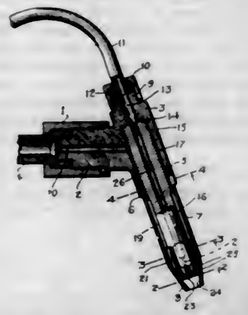
2. A mortar joint scraper comprising a blade having a plurality of edges, scraper fingers projecting from the edges of the blade, the scraper fingers being arranged at an angle with relation to the blade, a handle for supporting the blade, and the handle extending at an angle with relation to the blade and at the same side thereof as the scraper fingers, substantially as described.

3. A mortar joint scraper comprising a blade having a plurality of edges, scraper fingers projecting from the edges of the blade, the scraper fingers being of different widths and lengths, a handle, the blade being rotatably supported by the handle whereby the blade may be turned to bring any one of said fingers into working position, and means for clamping the blade to the handle in a set position, substantially as described.

4. A mortar joint scraper comprising a blade having a plurality of edges, scraper fingers projecting at an angle from the edges of the blade, a handle for supporting the blade, means for clamping the blade to the handle in an adjusted position, and the handle being arranged at an angle with relation to the blade, substantially as described.

5. A mortar joint scraper comprising a blade having a plurality of edges, scraper fingers projecting at an angle from the edges of the blade, clamping arms for holding the blade, a shank formed integrally with the clamping arms and extending at an angle therefrom, a handle fixed to the shank, the shank being provided with a recess for accommodating said scraper fingers, and a set screw passing through one of the clamping arms and the blade and being threaded in the other clamping arm, substantially as described.

1,195,298. CUTTING-TORCH. RUDOLPH VUILLEUMIER, New Rochelle, N. Y., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Dec. 12, 1913. Serial No. 806,162. (Cl. 158—27.4.)



1. A cutting-torch comprising a head having a tip secured thereto, said head having a chamber and a plurality of passages leading thereto for the admission of different gases, the tip being provided with a circumferential circuitous passage communicating with one of said passages, and with an independent passage formed in continuity with another of said passages.

2. A tip for cutting-torches comprising a body-portion, a sheath encircling the same, means between the two providing a circuitous passage for gas, and the body-portion having an independent passage for gas, said body-portion, at its lower end, terminating a short distance within the terminal end of the sheath, whereby a combustion-chamber is provided at the executive end of the tip.

3. A tip for cutting-torches comprising a body-portion, a sheath surrounding the same, the body-portion being provided with a central, longitudinal passage and with a circumferential, spiral passage, the executive end of the tip being provided with a chamber with which both said passages communicate.

4. A tip for cutting-torches having a central gas-passage, and a spiral passage surrounding the central passage, and also having a plurality of longitudinal passages intersecting the spiral passage, said tip having at its executive end a combustion-chamber.

5. A cutting-torch comprising a head having a shank extending therefrom, said head having a chamber therein and a passage leading to said chamber and said shank having a passage communicating with said chamber; a tip removably secured to the head within said chamber and having a plurality of passages communicating with the passage through the shank, said tip also having a central passage formed in continuity with the passage extending through the head; and independent means for supplying gas to the head-passage and to the shank-passage.

[Claims 6 to 9 not printed in the Gazette.]

1,195,299. WATERPROOF WRIST-WATCH PROTECTOR. LOUIS E. F. WACHTER, New York, N. Y. Filed June 1, 1915. Serial No. 31,399. (Cl. 224—4.)

1. A waterproof wrist watch holder comprising an integral center portion to encompass the back and sides of a watch leaving a portion of the face visible, oppositely extending prolongations of said center portion to surround the wrist, and a pocket portion to surround the head portion of the watch integral with the center portion and one of said oppositely extending prolongations, for the purpose described.

2. A waterproof wrist watch holder comprising an expansible shell with integral back and head portion, and a prolongation on the back of the shell and under said head portion extending in the form of a band.



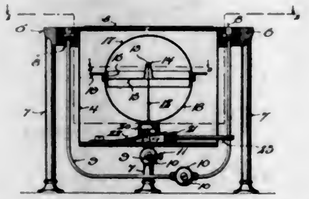
3. A wrist watch holder comprising an expansible shell having a head portion, an integral back and a central open portion on the face, adapted to inclose a watch, and a reinforced extension of the back of the shell forming a base for the head portion and extending on the back of the shell in the opposite direction from the head portion forming a strap.

4. An article of the character described, comprising an expansible shell with integral back having a head portion integral with the shell, an integral face portion having a central opening and a strap portion merging with the sides and head portion of said shell, supporting said head portion.

5. An article of the character described, comprising an expansible shell with integral back having a head portion contiguous therewith, a central face opening, reëntrant back and front portions, and a strap portion merging with the back of said shell extending in opposite directions, one part supporting the head portion and both parts forming the wrist strap.

[Claims 6 to 9 not printed in the Gazette.]

1,195,300. COMPASS. HERMANN WAGNER, Waterloo, Wis. Filed Jan. 15, 1914. Serial No. 812,222. (Cl. 33—225.)



1. A compass of the kind described of which the magnetic element thereof is in the form of a one piece magnetized ring having its inner surface provided with a card seat, and an index card adjustably engaging the seat.

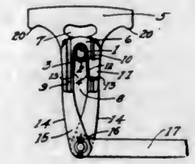
2. A compass of the kind specified of which the magnetic element thereof is in the form of a one piece steel ring, a circular index-card in rotatably adjustable connection with the ring, a vertical pivot upon which the adjusted card has central bearing to turn in a horizontal plane, and an under hemispherical shell of magnetiferous material in detachable connection with said ring to turn therewith, the shell being provided with a polar aperture through which said pivot extends.

3. A compass of the kind specified of which the magnetic element thereof is in the form of a one piece steel ring, a circular index-card in rotatably adjustable connection with the ring, a vertical pivot upon which the adjusted card has central bearing to turn in a horizontal plane, upper and lower hemispherical shells of magnetiferous material in detachable connection with said ring to turn therewith, the lower shell being provided with a polar aperture through which said pivot extends; and another circular and horizontal index-card in rotatably adjustable connection with the upper shell outside of the same.

4. A compass of the kind specified of which the magnetic element thereof is in the form of a one piece steel ring, said ring having its inner surface provided with a bead forming a card seat, a circular index-card in rotatably adjustable connection with the seat of the ring, a vertical pivot upon which the adjusted card has central bearing to turn in a horizontal plane, and means by which to provide for a separation of the bearing from the pivot.

5. A compass of the kind specified of which the magnetic element thereof is in the form of a one piece steel ring, said ring having its inner surface provided with a bead forming a card seat, an index-card in rotatably adjustable connection with the seat of the ring, and a vertical pivot upon which the adjusted card has central bearing to turn in a horizontal plane, a gimbal hung casing for the compass, and means for balancing the casing and a ring of the gimbal joint.

1,195,301. SECTIONAL GRATE-BAR. CALVIN R. WAID, Birmingham, Ala. Filed Mar. 22, 1915. Serial No. 16,198. (Cl. 126—180.)



1. A rocking grate bar formed of a supporting member, a plurality of segments with abutting bases which have each a slot opening through the bottom end thereof to adapt them to straddle said supporting member, and spring retaining means carried by said supporting element and adapted to lock the segment bases thereon, substantially as described.

2. A rocking grate bar comprising a series of units, each unit comprising a fire head and a base, there being a bottom opening slot provided in said bases, a shaft forming the axis of the bar and having flattened sides adapted to be received in said slots to support the units, and relatively adjustable end means on the shaft to clamp the units in assembled position on said shaft, substantially as described.

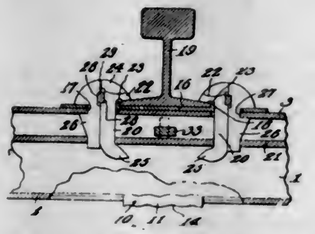
3. A rocking grate bar comprising a tubular shaft having rounded threaded ends and an intermediate flattened portion formed by flattening its opposite sides, a series of fire supporting units having slotted bases adapted to straddle the flattened portion of the tubular shaft, and sleeves threaded on the ends of the shaft and forming end stops between which said segments are held in position thereon.

4. A rocking grate bar comprising a tubular shaft having rounded bearing ends which are threaded and an intermediate flattened portion formed by flattening its opposite sides, a series of fire supporting units having slotted bases adapted to straddle the flattened portion of the tubular shaft, interlocking parts on said bases to hold them in alinement, and sleeves threaded on the ends of the shaft and forming end stops between which said segments are held in interlocked position thereon.

5. A grate bar comprising a series of units, each unit comprising a fire head and a widened base formed integrally, there being a vertical transverse slot in the base which opens through the bottom thereof, a U-shaped spring plate adapted to be received in said slot, alining shoulders in the walls of the slots in said units with which said plate engages, and a shaft support for said saddle plate, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,195,302. RAILROAD-TIE. EDWARD H. WALKER, Somerset, Pa. Filed Feb. 3, 1914. Serial No. 816,254. (Cl. 238—5.)



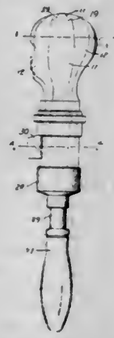
1. In a railroad tie, a body having an opening; a rail holding fastener movable transversely in the opening; a wedge engaging the fastener to move the fastener transversely; and an abutment for the wedge; the fastener having a bendable end extended laterally and engaged beneath a portion of the body to hold the fastener against upward movement.

2. In a railroad tie, a body; a pair of fasteners one of which is interlocked with the body, the other of which is a rail holding fastener and is adjustable both horizontally and vertically, means engaging both fasteners for moving the rail holding fastener horizontally, the rail holding fastener being provided with a bendable end which is extended laterally and is engaged beneath a portion of the body to retain the rail holding fastener against upward movement.

3. In a device of the class described, a tie having upper and lower flanges provided with openings; a tie plate resting on the tie and having openings alined with the openings in the flanges; a rail on the tie plate; pairs of fasteners passing through all of the openings, one fastener of each pair being engaged with one flange against vertical movement, and one fastener of each pair engaging the rail; and means interposed between the fasteners of each pair for producing relative movement therebetween.

4. In a rail fastening means, a tie including a body having an opening; a tie plate resting on the tie and provided with an upstanding flange; a rail resting on the tie plate and engaged by the flange; a fastener located in the opening and including a laterally extended head engaging the rail, the head being cut away in its lower edge to clear the flange; a wedge coöperating with the fastener to force the fastener downwardly; and a fixed abutment with which the wedge engages.

1,195,303. COLLAPSIBLE CORE FOR MOLDING DOLLS' HEADS. LEON WEISS, New York, N. Y. Filed Oct. 9, 1915. Serial No. 55,120. (Cl. 18—45.)



1. A core for molding dolls' heads and similar articles comprising a central post, a plurality of core sections attached at the upper ends thereof, centering and interlocking means on the post engaging with the bottom of the core sections, and means for holding the core sections against said centering and interlocking means.

2. A core for molding dolls' heads and similar articles comprising a central post, a plurality of core sections attached at the upper ends thereof, a plurality of pins projecting from the central post, there being recesses formed at the bottoms of the core sections to engage said pins, and means movable on the post for holding the bottoms of the core sections in engagement with the pins.

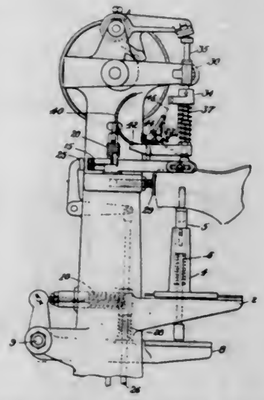
3. A core for molding dolls' heads and similar articles comprising a central post, a plurality of core sections attached at the upper ends thereof, a plurality of pins and centering wedges projecting from the central post, there being recesses formed at the bottoms of the core sections to engage said pins, and means movable on the post for holding the bottoms of the core sections in engagement with the pins.

4. A core for molding dolls' heads comprising a hollow central post, a block closing the top of the post formed with recesses, a plurality of core sections having dovetail portions at the upper ends thereof engaging the recesses, and means for securing the bottom of the sections against the post.

5. A core for molding dolls' heads comprising a central post, a plurality of major core sections having interlocking engagement with the top of the post, a plurality of minor core sections interlocking with the major core sections, and means for securing the bottoms of the core sections to the post.

[Claims 6 to 9 not printed in the Gazette.]

1,195,304. WELT-BUTT-TACKING MACHINE. SAMUEL J. WENTWORTH, Newport, Ky., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 1, 1913. Serial No. 764,882. (Cl. 12—67.)



1. A machine of the class described having, in combination, upper tightening devices to engage opposite sides of a lasted shoe in the welt crease, actuating means normally forcing said devices into upper tightening position, manual means for overcoming the force of said actuating means and separating said devices while a shoe is inserted and governing the approach of said devices into upper tightening relation to the shoe and means additional to said devices for guiding the operator in presenting the shoe with its welt crease in the plane of approach of said devices.

2. A machine of the class described having, in combination, upper tightening devices to engage opposite sides of a welted shoe in the welt crease, actuating means normally forcing said devices into upper tightening position, manual means for overcoming the force of said actuating means and separating said devices while a shoe is inserted and governing the approach of said devices into upper tightening relation to the shoe and means additional to said devices for guiding the operator in presenting the shoe with its welt crease in the plane of approach of said devices, said machine being constructed and arranged to permit the shoe to be laterally vibrated angularly while the tightening devices are pressing it to produce increased tightening effect.

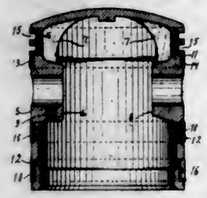
3. A machine of the class described having, in combination, upper tightening arms bearing welt crease engaging blades and movable about axes substantially perpendicular to the plane of the shoe bottom, extensions formed on said arms in the rear of said axes, yielding means normally holding the arms with the blades in upper tightening relation, and an actuator arranged to contact with said extensions and to be operated by bodily force of the workman to move said arms reversely for the introduction of the shoe between said blades and to control the movement of said blades into crease engaging position, substantially as described.

4. A machine of the class described having, in combination, upper tightening devices to engage opposite sides of a lasted shoe in the welt crease, a back stop for the shoe, carrier levers for swinging said devices inwardly together toward the shoe positioned against said back stop, and means for holding said devices in different positions of adjustment on said carriers to adapt them for different lengths of shoes.

5. A machine of the class described having, in combination, upper tightening devices to engage opposite sides of a welted shoe in the welt crease, actuating means normally forcing said devices into upper tightening position, manual means for overcoming the force of said actuating means and separating said devices while a shoe is inserted and governing the approach of said devices into upper tightening relation to the shoe, tackers suspended from above the shoe in fixed relation to the tightening devices laterally of the shoe and moved into positions over the shoe welt by the upper tightening devices and power driving mechanism for said tackers arranged to be set into operation by the workman after he has tightened the upper by the use of said devices.

[Claims 6 to 22 not printed in the Gazette.]

1,195,305. PISTON CONSTRUCTION. CONRAD WERRA, Waukesha, Wis. Filed June 18, 1914. Serial No. 845,774. (Cl. 74—85.)



1. A piston construction, comprising a body portion formed of a light weight metal, and a series of unbroken bearing rings surrounding said body portion and spaced therefrom, said bearing rings being formed of a metal of greater weight than the weight of the metal of the body portion.

2. A piston construction, comprising a plurality of unbroken bearing rings, and a body portion cast within the rings and spaced therefrom, said body portion being formed of a metal of less weight than the weight of the metal of the bearing rings.

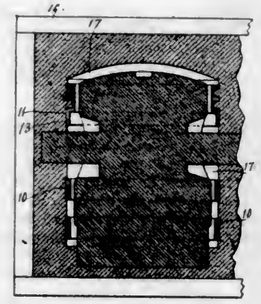
3. A piston construction, comprising a body portion formed of a light weight material and provided with a plurality of annular grooves, and unbroken bearing rings surrounding said body portion and extending into said grooves and spaced from said body portion, the outer diameter of the bearing rings being greater than the outer diameter of the body portion.

4. A piston construction, comprising a body portion formed of light weight material and provided with a plurality of annular grooves, and unbroken bearing rings surrounding said body portion and entering the grooves and spaced from said body portion, the outer diameter of the bearing rings being greater than the outer diameter of the body portion, one of said bearing rings provided with an annular packing ring groove.

5. A piston construction, comprising a body portion formed of light weight material and provided with a plurality of annular grooves, and unbroken bearing rings surrounding said body portion and extending into said grooves and spaced from said body portion, the grooved portions being of a diameter to permit greater expansion of the body portion than the bearing rings.

[Claims 6 to 14 not printed in the Gazette.]

1,195,306. METHOD OF CONSTRUCTING PISTONS. CONRAD WERRA, Waukesha, Wis. Original application filed June 18, 1914, Serial No. 845,774. Divided and this application filed Sept. 25, 1914. Serial No. 863,482. (Cl. 22—203.)



1. The method of constructing pistons of two metals of different degrees of coefficient of expansion, consisting of finishing the portion of lesser expansibility and casting a portion of greater expansibility within the portion of lesser expansibility and in engagement therewith and permitting the contraction of the cooling cast metal to withdraw radially therefrom to provide spaces for the expansion of said portion of greater expansibility.

2. A method of constructing pistons of two metals of different degrees of coefficient of expansion, consisting of finishing a bearing ring of lesser expansibility and casting a piston shell of metal of greater expansibility within the ring and in engagement with the inner and portions of the edge surfaces of said ring and permitting the contraction of the cooling shell to withdraw radially from the inner surface of the ring to provide a space for permitting the expansion of the shell.

3. A method of constructing pistons of two metals of different degrees of coefficient of expansion, consisting of placing a plurality of unbroken bearing rings of lesser expansibility in spaced relation within a mold and casting a piston shell of metal of greater expansibility within the rings and in engagement with the inner and portions of the edge surfaces of said rings and permitting the contraction of the cooling shell to withdraw radially from the inner surface of the rings to provide spaces between the inner peripheries of the rings and the shell for permitting radial expansion of the shell.

4. A method of constructing pistons of two metals of different degrees of coefficient of expansion, consisting of placing a plurality of unbroken bearing rings of lesser expansibility in spaced relation within a mold and casting a piston shell of metal of greater expansibility within the rings and in engagement with the inner and portions of the edge surfaces of said rings and permitting the contraction of the cooling shell to withdraw radially from the inner surface of the rings to provide spaces between the

inner peripheries of the rings and the shell for permitting radial expansion of the shell, said bearing rings having approximately parallel edge faces which are engaged by portions of the shell and one of the said rings having an annular recess for receiving a split packing ring.

5. A method of constructing pistons of dissimilar metals, which consists in placing bearing rings in a mold, then pouring a dissimilar molten metal into the mold to form a piston shell which partly surrounds the bearing rings and non-adherently holds them in position, the metal of the piston shell having a greater coefficient of expansion than the rings and withdrawing radially therefrom in cooling to provide space to permit of the greater expansibility of said piston shell.

[Claims 6 and 7 not printed in the Gazette.]

1,195,307. AUTOMATIC-RELOADING RIFLE. CHARLES S. WHEATLEY, Needham Heights, Mass. Filed Nov. 8, 1915. Serial No. 60,302. (Cl. 42—3.)



1. In an automatic firearm, a barrel, extracting and reloading means at the breech thereof, a forwardly shiftable tubular gas trapping member in advance of the muzzle of the barrel and alined therewith, said member having a pocket opening through its outer side, a rod lying substantially parallel to the barrel and having connection with the extracting and reloading means, a lug projecting from the front end of said rod into the aforesaid pocket, and lock means for normally preventing removal of said lug.

2. In an automatic firearm, a barrel, extracting and reloading means at the breech thereof, a tubular guide alined with and carried by the muzzle of the barrel, a tubular forwardly shiftable gas trapping member slidable in the guide and projecting forwardly therefrom to provide means for the attachment of a bayonet, and connecting means between said member and the extracting and reloading means.

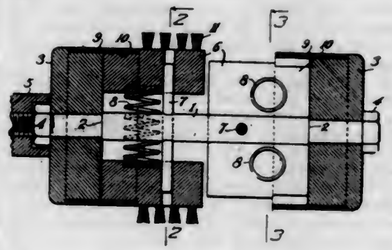
3. In an automatic firearm, a barrel, extracting and reloading means at the breech thereof, a tubular guide alined with and carried by the muzzle of the barrel, and having a longitudinal slot, a tubular forwardly shiftable gas trapping member slidable in the guide, a rod substantially parallel to the barrel having connection with the extracting and reloading means, and a projection extending from the front end of the rod through the slot and having connection with the aforesaid member.

4. In an automatic firearm, a barrel, extracting and reloading means at the breech thereof, a tubular guide alined with and carried by the muzzle of the barrel and having a longitudinal slot, a tubular forwardly shiftable gas trapping member slidable in the guide, a rod substantially parallel to the barrel having connection with the extracting and reloading means, a projection extending from the front end of the rod through the slot, and a detachable connection between said projection and the aforesaid member.

5. In an automatic reloading gun, a barrel, a member at the muzzle thereof shifted forwardly by the escape of gases from said barrel, a rod extending rearwardly from said member, a guideway extending rearwardly from the open breech of the barrel, a breech bolt shiftable forwardly and rearwardly in said guideway and adapted to actuate extracting and reloading means, a cam for retracting the bolt when shifted, said cam having connection with the rear end of the aforesaid rod, and spring means for returning all parts to normal position.

[Claims 6 to 11 not printed in the Gazette.]

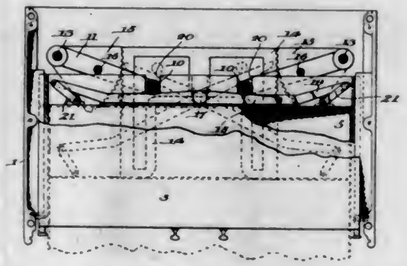
1,195,308. TUBE-CLEANER. JOHNSON H. WHIDDEN, Somerville, Mass. Filed Nov. 9, 1914. Serial No. 870,955. (Cl. 83—64.)



1. A central shaft, two pairs of oppositely disposed, automatically collapsible brush segments arranged about said shaft so that each pair shall be tandem to the other; means for preventing rotation of said segments with respect to said shaft and so positioned that each pair is arranged at right angles to the other; and means for preventing longitudinal movement of said segments with respect to said shaft.

2. A central shaft, two pairs of oppositely disposed, automatically collapsible brush segments arranged tandem about said shaft, each of said segments occupying more than one quarter of the circumference; means for preventing rotation of said segments with respect to said shaft and each other, said means being adapted to prevent longitudinal movement of said segments with respect to said shaft.

1,195,309. FILING-CABINET. GEORGE WHITE, Jersey City, N. J., assignor, by mesne assignments, to Automatic Book-Keeping Register Company, a Corporation of Delaware. Original application filed June 16, 1910, Serial No. 567,128. Patent No. 1,114,085, dated Oct. 20, 1914. Divided and this application filed Dec. 2, 1913. Serial No. 804,159. (Cl. 45—2.)



1. In a filing cabinet, a casing, filing devices mounted therein, a vibratory member, a latch member adapted to control the movement of said vibratory member, and means carried by said filing devices and coöperating with said vibratory member whereby the actuation of said vibratory member in one direction will permit said filing devices to be opened, and its actuation in the other direction will close said filing devices.

2. In a filing cabinet, a casing, filing devices mounted therein, means securing said devices in said casing while permitting a limited movement thereof, a vibratory member, a latch member adapted to control the movement of said vibratory member, and means carried by said filing devices and coöperating with said vibratory member whereby the actuation of said vibratory member in one direction will permit said filing devices to be opened, and its actuation in the other direction will close said filing devices.

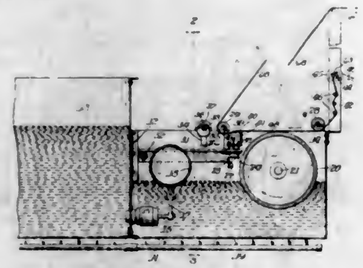
3. In a filing cabinet, a casing, a drawer slidably mounted therein, a lever pivoted to said casing, means whereby one arm of said lever is connected to said drawer to compensate for the pivotal movement of said lever, and the other arm of said lever being adapted to be projected beyond said casing, and a vibratory member adapted to engage said last mentioned lever arm, whereby the actuation of said member in one direction will permit said drawer to be opened, and its actuation in the other direction will close said drawer.

4. In a filing cabinet, a casing, a drawer slidably mounted therein, a lever pivoted to said casing, means whereby one arm of said lever is connected to said drawer to compensate for the pivotal movement of said lever, and the other arm of said lever being adapted to be projected beyond said casing, a reciprocatory rack frame, a segmental rack meshing therewith, an arm actuated by said segmental rack, a rod adapted to engage the short arm of said lever carried by said arm, whereby the movement of said frame in one direction will permit said drawer to be opened and its movement in the other direction will close said drawer, and means whereby said frame may be locked against movement.

5. In a filing cabinet, a plurality of superposed separable casings, a plurality of sliding drawers in each of said casings, means connecting each of said drawers to its casing, said means permitting limited movement of the drawer relative to its casing, means operative upon said last named means whereby any open drawer may be closed and all said drawers may be simultaneously locked in the closed position, and means securing said casings relative to each other.

[Claims 6 and 7 not printed in the Gazette.]

1,195,310. MACHINE FOR COATING FABRICS. JOHN F. WHITE and LABRON B. ROSS, Chicago, Ill.; said Ross assignor to said White. Filed Apr. 27, 1914, Serial No. 834,696. Renewed June 26, 1916. Serial No. 106,060. (Cl. 91—33.)

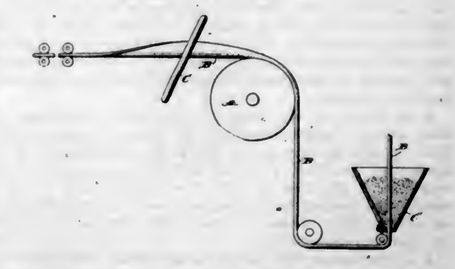


1. In a machine for coating fabrics, the combination of a tank adapted to contain the coating composition and including a coating compartment, a coating roll arranged to dip within the composition in said compartment, means to guide a web of fabric in contact with the surface of the roll and comprising a pair of guide rolls, one adjustable in a direction transverse to the path of travel of the fabric, a scraper arranged to contact with the coated side of the fabric, means to adjust the relation of the scraper to the fabric, and means for adjusting the guide roll comprising a pivoted mounting therefor, and a cam acting on the pivoted mounting and under the control of the operator, substantially as described.

2. In a machine for coating fabrics, the combination of a tank adapted to contain the coating composition and including a coating compartment, a coating roll arranged to dip within the composition in said compartment, means to guide a web of fabric in contact with the surface of the roll, a pair of guide rolls one journaled in a fixed bearing and one adjustable in a direction transverse to the path of travel of the fabric, a scraper arranged to contact with the coated side of the fabric, means to adjust the relation of the scraper to the fabric, and means for adjusting the guide roll comprising a frame pivoted to a suitable support and having the guide roll mounted thereon near its free end, an eccentric having its strap connected to the frame, and manually operable means to angularly adjust the eccentric, substantially as described.

3. In a machine for coating fabrics, the combination of a tank adapted to contain the coating composition and including a coating compartment, a coating roll arranged to dip within the composition in said compartment, means to guide a web of fabric in contact with the surface of the roll, a pair of guide rolls one journaled in a fixed bearing and one adjustable in a direction transverse to the path of travel of the fabric, a scraper arranged to contact with the coated side of the fabric, means to adjust the relation of the scraper to the fabric, means for adjusting the guide roll comprising a frame pivoted to a suitable support and having the guide roll mounted thereon near its free end, an eccentric having its strap connected to the frame, and manually operable means to angularly adjust the eccentric, a fabric scraper comprising an angle bar extending transversely of the fabric adjacent the coated side thereof, and means to rock the scraper bar comprising set screws disposed upon opposite sides of its axis whereby to adjust the relation of the scraping edge to the fabric, a roll scraper comprising an angle bar eccentrically mounted upon a shaft parallel to the roll axis, and means to angularly adjust and retain the bar in adjusted position to vary the relation of its scraping edge to the roll periphery, substantially as described.

1,195,311. BAG FOR CONTAINING CEMENT AND METHOD OF MAKING SAME. JOHN F. WHITE, Chicago, Ill. Filed Apr. 17, 1916. Serial No. 91,678. (Cl. 154—46.)



1. The art of producing water-repellent bag material consisting in applying to the surface of woven fabric a water-proofing tacky substance of a hydrocarbon nature, turning the edge of the fabric over onto the adjacent tacky surface of the body of the same, causing the turned-over edge to be tightly drawn onto the surface, and subsequently coating the surface with powdered substance.

2. The art of producing a bag making fabric consisting in applying to one surface of the fabric a hydrocarbon substance having an asphaltum base, and turning the edge of the fabric over onto the adjacent treated surface of the body thereof and tightly forcing the turned-over edge onto the body, and applying to the treated surface a powdered substance.

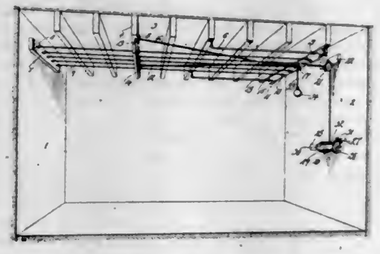
3. The art of hemming the edge of fabric having a water repellent adhesive surface coating, consisting in folding the edge of the fabric over onto the adjacent treated surface thereof and by pressure exerted lengthwise of the fabric to set the said overturned edge tightly onto the treated face of the fabric.

4. A cement bag having its inner surface coated with a water-repellent substance, and the edge of the open part thereof being turned down onto the adjacent part of the body to form a hem and held in its turned-down position by the treating substance, substantially as described.

5. A cement bag having its inner surface coated with a water-repellent substance, and the edge of the open part thereof being turned down onto the adjacent part of the body to form a hem and held in its turned-down position

by the treating substance, the inner surface of the bag being coated with a powdered substance, substantially as described.

1,195,312. CLOTHES-LINE SUPPORT. WILLIAM WHITE, Philadelphia, Pa. Filed June 13, 1916. Serial No. 103,382. (Cl. 68—12.)



1. A device of the character described, comprising a fixed support, a movable support, a series of lines each having one end secured to the rigid support and the other end secured to the movable support, means for moving said movable support to stretch or permit slack in said lines, and a prop operative simultaneously with said latter means to engage and furnish an additional support for said lines, substantially as described.

2. A device of the character described, comprising a fixed support, a movable support, a series of lines each having one end secured to the rigid support and the other end secured to the movable support, means for moving said movable support to stretch or permit slack in said lines, and a plurality of props coupled together and being operative simultaneously with said latter means to engage and furnish an additional support for said lines, substantially as described.

3. A device of the character described, comprising a fixed support, longitudinal guiding means, a member slidable on said guiding means extending substantially in a horizontal direction, a clothes line having opposite ends respectively attached to said fixed support and to said member, and means for sliding said member longitudinally on said guiding means to stretch the clothes line, substantially as described.

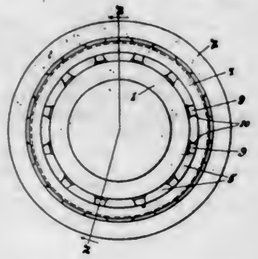
4. A device of the character described, comprising a fixed support, longitudinal guiding means, a member slidable on said guiding means, a clothes line having opposite ends respectively attached to said fixed support and to said member, means for sliding said member longitudinally on said guiding means to stretch the clothes line, and a prop beam located below said clothes line and movable simultaneously with said member and into engagement with the lower portion of said line to form additional supporting means for said line, substantially as described.

5. The combination with a super support, of a fixed support, fixed longitudinal guiding members on said super support, a beam slidable on said members, a clothes line having its opposite ends secured relatively to the fixed support and to the slidable beam, means for sliding said beam longitudinally on said members to stretch said clothes line, a beam prop located below said clothes line and operatively connected to said means whereby a movement of the latter to stretch the line also moves the prop beam into engagement with the lower portion of the clothes line and furnishes additional support for the latter, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

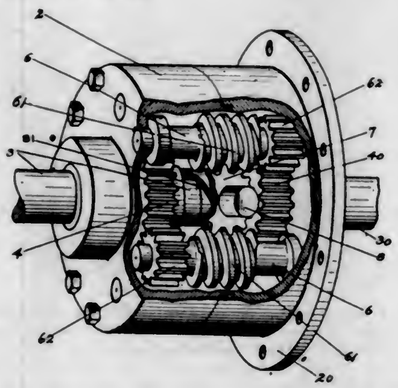
1,195,313. BALL-BEARING. ARTHUR K. WHITMER, Canton, Ohio, assignor of one-half to Walter W. Hoenecke, Canton, Ohio. Filed Sept. 25, 1914. Serial No. 863,466. (Cl. 64—59.)

A ball bearing cage comprising an annular sheet metal member provided with a plurality of laterally disposed elongated apertures, each aperture being formed half-round at each extremity, each side edge of each aperture intermediate the half-round portions thereof comprising two equal arcs, the dividing strip thus left between each adjacent pair of apertures being bent inwardly adjacent each edge of the annular member upon a peripheral line passing through the centers of said half-round portions of the apertures, said strip being folded upon itself



through the center thereof, thus bringing the two half-round portions of each aperture together forming a circular aperture adapted to accommodate a ball, said aperture being of less diameter than the ball adapted to be retained therein, each of said dividing strips forming a partition plate provided with curved edges adapted to conform to the contour of the ball, and an inwardly disposed, annular flange provided around each edge of said annular member.

1,195,314. DIFFERENTIAL GEARING. ALFRED O. WILLIAMS, Detroit, Mich. Filed July 26, 1915. Serial No. 42,025. (Cl. 74—34.)



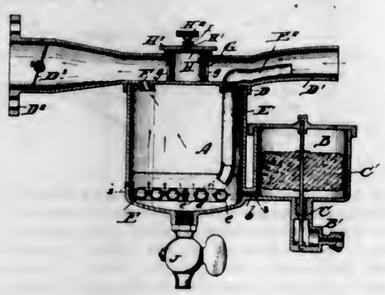
1. In a differential gearing, the combination of a casing, a pair of axially alined driven members rotatably journaled therein, a gear wheel mounted on the inner end of each of said driven members, a spider member engaging with its apertured central portion about the meeting ends of said driven members and with its arms extending radially toward the wall of the casing, a plurality of worms journaled in said casing in parallel relation to the axis of said driven members, said worms being arranged in pairs with each member thereof in operative engagement with a different gear wheel, irreversible worm gear wheels rotatably supported on the arms of said spider member in axially perpendicular position to said driven members and said worms, with whose teeth the threads of certain of said worms engage, and a power shaft operatively connected with said casing.

2. In a differential gearing, the combination of a casing member, a pair of axially alined traction axles journaled

therein, gear wheels mounted on the adjacent ends of said traction axles, a plurality of worm members journaled in said casing coaxially with respect to said axles and radially equidistant therefrom, each worm member being operatively connected with one or the other of said gear wheels on the traction axles, a spider engaging about the adjacent ends of said traction axles in a plane perpendicular to the axis thereof, and irreversible detent worm gears each mounted on said spider in position to be engaged at diametrically opposite peripheral points by a pair of worms having diverse traction axle connections, being incapable of transmitting to either of its worms the rotative movement of the other.

3. A differential gearing, having, in combination with a pair of coaxially arranged driven axles, a casing member wherein their meeting ends are rotatably journaled, a spider member engaging about the meeting ends of said driven axles with its radially extending arms lying in a plane perpendicular to the axis of said driven axles, a plurality of worms rotatably mounted in said casing at equal radial distances about the meeting ends of said driven axles, half of said worms being operatively connected with one of said driven axles and the other half being similarly connected with the other of said driven axles, and an irreversible detent worm gear mounted on each of said spider arms in position to be engaged by a pair of said worms, each one operatively connected with a different driven axle at diametrically opposite peripheral points, whereby the rotative actuation communicated to it by either of its worms singularly is halted.

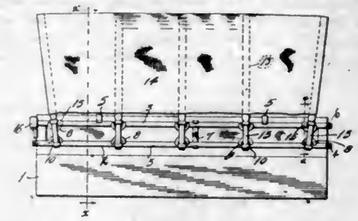
1,195,315. CARBURETER. ROBERT T. WILLIAMS, Detroit, Mich., assignor to R. T. W. Auto Accessory Co., Detroit, Mich., a Corporation of Michigan. Filed Mar. 8, 1915. Serial No. 12,715. (Cl. 48—166.)



A carbureter including a casing having a fuel chamber, a removable cover for said chamber, a pipe integral with said cover, a valve in said pipe, means connected to the valve for indicating the degree of opening thereof, a coil in the chamber provided with perforations and located below the level of the liquid in the chamber, means for directing a quantity of air through said coil out through the perforations therein, up through the liquid in the fuel chamber and into the outlet end of said pipe, means for directing a quantity of air directly through said pipe and through the said valve there commingling with the air discharged through the coil, and means for operating the aforesaid valve to regulate the quantity of air passed therethrough.

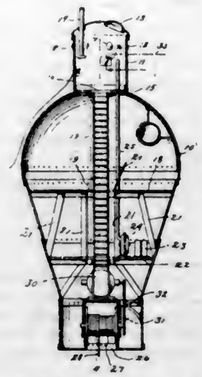
1,195,316. WAGON-COVER. PLENNY V. WOMACK, Olney, Tex. Filed May 13, 1915. Serial No. 27,790. (Cl. 21—62.)

A wagon cover comprising in combination, a pair of side supporting members each comprising a pair of superposed bars, shoes disposed between the bars and having at their upper and lower ends spaced lugs recessed to straddle the edges of the bars on which the shoes slide, keepers each having loops for receiving bows, a keeper being centrally pivoted to the center of each shoe, bows having



their ends fitting in the loops of the keepers, and a wagon sheet fitting on the bows.

1,195,317. OBSERVATION-BUOY AND FIRE CONTROL FOR FLOATING MINES. CHARLES H. WOODS, Springfield, Mass. Filed Apr. 12, 1915. Serial No. 20,812. (Cl. 102—3.)



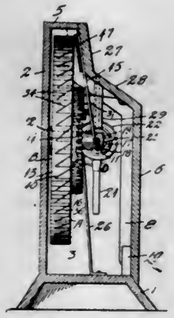
An observation float comprising a hollow body, the lower end of said body being provided with a downwardly opening well, a winding drum having its shaft extending through the walls of the well and into the body, a cable windable on the drum and having an anchor fixed to its free end, a motor in the body having connection with one of the ends of the drum shaft for winding the cable on the drum whereby the float can be submerged.

1,195,318. STAMP-VENDING MACHINE. CHARLES H. WOODWARD, Dallas, Tex. Filed May 8, 1915. Serial No. 26,687. (Cl. 211—8.)

1. In a postage stamp vending machine, the combination of a vertical housing having an inclined slot disposed to deliver postage stamps, and a revoluble carrier mounted in the housing having a plurality of radial stamp pockets in its side disposed to pass in close proximity to the slot, each pocket being so constructed as to hold its stamp at an inclination to the vertical and transverse axes of the carrier, whereby said stamp is presented to the slot of the housing with its advance side substantially parallel to said slot.

2. The combination in a postage stamp vending machine, of a casing having a vertical stamp delivery slot disposed at an acute angle to the perpendicular, a guide plate mounted in the casing, and a vertical revoluble stamp carrier having a plurality of stamp pockets so constructed as to receive and present stamps at an angle to both the transverse and vertical axes of the carrier, said pockets presenting the stamps so that each stamp presents in advance one corner to the guide plate, whereby said stamp is curved forward and presented to the casing slot parallel thereto.

3. A stamp carrier for stamp vending machines comprising two members, one of said members having radial fingers with angular faces and the other member having recesses corresponding in shape to the fingers and receiving the latter, the said recesses being proportioned so that a stamp pocket is provided on one side of each finger.

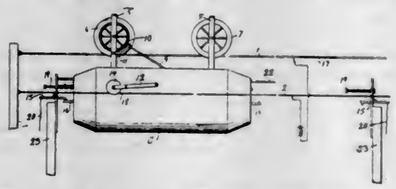


4. A stamp carrier for stamp vending machines comprising two members, one of said members having radial fingers with angular faces and the other member having recesses corresponding in shape to the fingers and receiving the latter, the said recesses being proportioned so that a stamp pocket is provided on one side of each finger, and one of said members having provision for imparting rotation to the carrier.

5. The combination in a postage stamp vending machine, of a casing having a front wall provided with an inclined stamp delivery slot, a vertical revoluble stamp carrying disk mounted in the casing and having its upper portion in juxtaposition to the slot of the front wall of the casing, said disk having a plurality of stamp pockets in one side disposed at an angle to the radii of the disk and so constructed as to present stamps from the side of the carrier at an angle to said side less than a right angle and in harmony with the inclination of the slot of the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,195,319. CARRIER. HENRY WULBERS, White, S. D. Filed Feb. 9, 1916. Serial No. 77,353. (Cl. 104—146.)

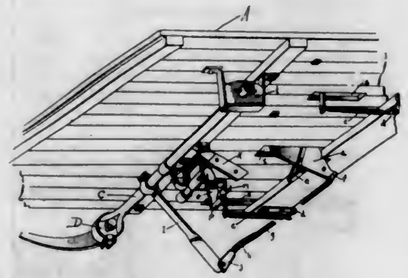


1. In combination with separated trackways in communication with a source of electrical energy, a carrier, a horizontally disposed partition extending longitudinally of the carrier and dividing the same into a lower compartment and an upper compartment, supporting wheels for the carrier constantly traveling on one of the trackways, an electric motor positioned within the upper compartment and operatively engaged with the wheels, a trolley rotatably supported by a side wall of the upper compartment and arranged exteriorly of the carrier and constantly traveling on the second trackway, and an electrical connection between the motor and said trolley.

2. In combination with separated trackways in communication with a source of electrical energy, a carrier, a horizontally disposed partition extending longitudinally of the carrier and dividing the same into a lower compartment and an upper compartment, supporting wheels for the carrier constantly traveling on one of the trackways, an electric motor positioned within the upper compartment and operatively connected with the wheels, a trolley constantly traveling on the second trackway, an electrical connection between the motor and said trolley, and automatic means supported independently of the carrier for imparting an initial impulse to the carrier, said means coacting with an end of the carrier at a point in alinement with the partition therein.

3. A device of the character described comprising a track, a spaced conducting wire, a carrier adapted to be suspended from the track by the wheel elements, buffing means, and locking members to coöperate with one end of the carrier when the carrier is at either end of its travel, said track having an insulated section a predetermined distance from one of its ends, said conducting wire having an insulated section, the insulated sections being disposed at opposite ends, a source of electrical energy connected to the track and wire intermediate of the insulated sections, a trolley mounted on the carrier to convey current between the track and wire to an electrical motor, said motor driving a wheel element for propelling a carrier, said insulated sections operating to automatically cut off the electric current from the motor a predetermined distance from the ends of the carrier travel and when the locking members are disengaged, the buffing means serve to propel the carrier over the insulated section.

1,195,320. CORN-BINDER. WILLIAM ZICKEFOOSE, Clements, Kans. Filed Nov. 6, 1915. Serial No. 59,940. (Cl. 56—126.)



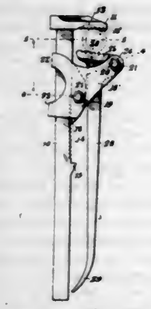
1. In a corn binder, a hinged gate on its bundle deck for holding the bundles straight and the contents of the bundles compact while being gathered and arranged for binding, a shaft connected to take motion from the needle shaft of the corn binder, a latch, means by which the said latch is actuated when the needle shaft is moved, shaft actuated mechanism for lowering the hinged gate to allqw the bundle to be thrown by the bundle deck when it is bound and means on the hinged gate engaged by the latch for holding the door.

2. The combination of a hinged gate on the table of a corn binder, a flange depending from the said gate, a shaft taking motion from the shaft of a needle of a corn binder, mechanism connected to the said flange for oscillating the said gate, means for holding the door in one position, and means operated by the needle shaft for actuating the door holding means to release the said door.

3. In a corn binder, the combination of a hinged gate on a bundle table, a shaft connected with a needle shaft of a corn binder, an arm oscillated by the movement of the first mentioned shaft, a connection between the said arm and the said gate whereby the gate is oscillated from a vertical to a horizontal position, means for holding the door in one position, and means operated by the needle shaft for actuating the door holding means to release the said door.

4. In a corn binder, the combination of a hinged gate on a bundle table, a shaft connected with a needle shaft of a corn binder, an arm oscillated by the movement of the first mentioned shaft, a connection between the said arm and the said gate whereby the gate is oscillated from a vertical to a horizontal position, and mechanism for holding the gate in horizontal position and means for tripping the gate holding means.

1,195,321. WRENCH OR NUTCRACKER. JACOB ZIEGLER, Coffeyville, Kans., assignor of one-half to Robert K. Davis, Coffeyville, Kans. Filed Dec. 21, 1915. Serial No. 68,029. (Cl. 81—78.)



1. A tool of the class described comprising a shank having a fixed jaw on its upper end and a rack bar on its inner side, a head slidable on the shank and having an integral pawl for engagement with said rack bar, and having ears projecting outwardly beyond the pawl, and a movable jaw carried by the head and having an outwardly extending lug pivotally engaging between the ends of the ears, the movable jaw also having a hand lever integral therewith adapted to swing with the jaw about the pivot of the lug, and adapted to contract the jaws against an article, and rock said head into interlocking engagement with the rack bar upon the inward swinging movement of the hand lever.

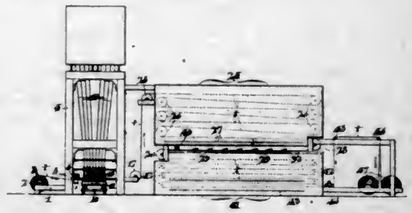
2. A tool of the class described comprising a shank having a rack bar in its inner edge and a fixed head on its outer end, a head mounted to slide on said shank and comprising a pair of opposed plates, one of said plates having a vertically arranged inwardly extending web terminating at its lower end in an inturned pawl for engagement with said rack bar, said plates having registering inturned flanges constituting straps for loose engagement about the shank to admit the rocking of the head thereon, a movable jaw arranged above the head and having an outwardly extending lug fitting between the outer ends of said head plates and having a depending hand lever extending downwardly between the plates, and securing bolts passing through said head plates to secure the same together about the shank, one of said securing bolts passing through the outer ends of the head plates and through said lug to pivotally hold the movable jaw and its hand lever to the head.

3. A wrench or nut cracker having a shank with a rack bar in one edge and a fixed jaw, a head slidable on the shank and having a pawl therein for engagement with said rack bar, and a movable jaw pivoted upon the outer end of the head and extending inwardly therefrom, the movable jaw having a depending hand lever adapted to be actuated to swing the movable jaw upwardly toward the fixed jaw for compressing an object therebetween, and to cant the head on the shank whereby to engage the pawl with said rack bar and prevent the jaws from spreading.

4. A tool as specified comprising a shank having a row of upwardly directed ratchet teeth in one edge and having a fixed jaw, a head having upper and lower straps for engagement about the shank to hold the head thereto, and having a beveled projection at its lower end adapted for engagement with said ratchet teeth when the head is swung downwardly upon the shank to engage the upper strap therewith and space the lower strap from the shank, a movable jaw pivoted in the outer end of the head and extending inwardly therefrom into alinement with the fixed jaw, and a lever carried by said movable jaw for swinging the same about its pivot point to advance the movable jaw toward the fixed jaw, whereby to compress an article between the jaws and to subsequently swing the outer end of the head downwardly, and tilt the head into position to interlock the projection with said ratchet teeth.

5. A tool of the class described comprising a shank having a fixed jaw at one end and a rack bar on its inner side, a head slidable on the shank and having a rigid pawl at the end remote from the fixed jaw for engagement with the rack bar, and a movable jaw pivotally connected to the outer side of the head and movable between the pivot point and the shank, and having a hand lever integral therewith, and adapted to swing the jaw about the pivot thereof, so as to cause the movable jaw to approach and recede from the fixed jaw, said hand lever being utilized to move the head along the shank, the movement of the hand lever inwardly toward the shank serving to throw the pawl into engagement with the rack bar and hold the head from slidable movement.

1,195,322. WARP-PRINTING MACHINE. JOHN ZIMMERMANN, Philadelphia, Pa. Filed Sept. 1, 1915. Serial No. 48,377. (Cl. 101—27.)



1. A warp thread printing machine, including in combination a printing roll having a continuous printing surface, means for supporting coloring matter in contact with the lower surface of the printing roll, means for evenly distributing said coloring matter on the surface of said roll, means for guiding a plurality of warp threads in a path normally above the printing roll and pattern controlled impression members for causing the warp threads to contact with the printing roll.

2. A warp thread printing machine, including in combination a series of printing rolls, a color box for each roll, means for supporting the rolls whereby the same are partly immersed in the coloring matter, a device coöperating with each printing roll for evenly distributing the coloring matter on the upper surface of the roll, means for guiding a plurality of warp threads in a path normally above the printing rolls, said threads extending transversely across the same and pattern controlled impression members for causing the warp threads to contact with any one of the printing rolls.

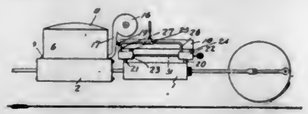
3. A warp thread printing machine, including in combination, a printing roll having a continuous printing surface, means for supporting coloring matter in contact with the lower part of said printing roll, a distributing device including a member extending lengthwise of the roll and having means for holding said member spaced from the surface thereof, means for guiding a plurality of warp threads in a path normally above the printing roll, and pattern controlled devices for causing said threads to contact with the printing roll.

4. A warp thread printing machine, including in combination a printing roll having a continuous printing surface, a color box for said roll, means for supporting the roll so that the lower part thereof only is immersed in the coloring matter, a distributing device including a member extending lengthwise of the roll, transverse ribs mounted on the lower face of said member and adapted to engage the roll and hold said member a predetermined distance from the surface of the roll, means for guiding a plurality of warp threads in a path normally above the printing roll and pattern controlled devices for causing said threads to contact with the printing roll.

5. A warp thread machine including in combination a plurality of printing rolls arranged side by side, a color box for each roll, means for supporting the rolls whereby each is partly immersed in the coloring matter in its respective box, means for connecting the printing rolls whereby they are simultaneously rotated, a distributing device for each roll, said distributing device including a member extending from end to end of the roll and having ribs on its lower surface engaging the surface of the roll whereby said member is held a predetermined distance from the surface of the roll, means for guiding a plurality of warp threads transversely across the rolls in paths normally above said roll and pattern controlled devices for causing said threads to contact with any one of said rolls.

[Claims 6 to 11 not printed in the Gazette.]

1,195,323. ENGINE. WILLIAM ALEXANDER ALLAN, Stouffville, Ontario, Canada. Filed May 18, 1916. Serial No. 98,334. (Cl. 60—4.)

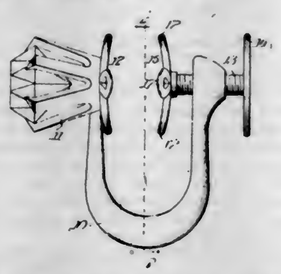


1. The combination with an engine cylinder provided with the usual exhaust, of an exhaust reservoir, a jet pipe leading therefrom, a compressed air reservoir, a pipe leading therefrom into which the exhaust jet leads, and a turbine into the casing of which the exhaust pipe enters.

2. In an engine, the combination with the engine cylinder provided with the usual exhaust, an air compressor cylinder operating in unison with the engine cylinder, a compressed air reservoir, ducts for carrying the compressed air from the compressor cylinder into the reservoir, a turbine duct leading from the turbine casing to the compressed air reservoir, an exhaust steam reservoir, and a jet pipe leading from the exhaust steam reservoir into the pipe leading into the turbine casing.

3. The combination with an engine exhaust duct, of a turbine provided with a suitable casing, of a duct leading into the casing into which the exhaust pipe extends, and means for supplying the duct with compressed air.

1,195,324. CLAMP FOR EAR ORNAMENTS. BENJAMIN C. ALLEN, Chicago, Ill. Filed May 6, 1916. Serial No. 95,826. (Cl. 63—14.)



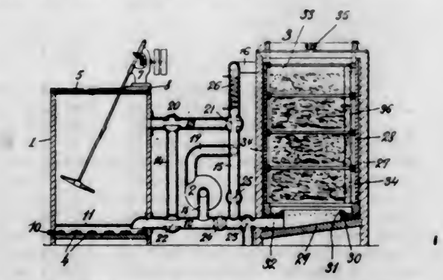
1. An ear-engaging clamping member for an ear ornament clamp, said member being substantially flat and disk-shaped and having a plurality of substantially radial projections for engaging the ear, said projections being spaced apart and terminating free whereby the ends of the projections may impinge against the ear and the integument of the ear may be crowded between adjacent of said projections.

2. An ear-engaging clamping member for an ear ornament clamp, said member being substantially disk-shaped and having a plurality of interiorly-open loops spaced from the center of the member and formed to provide a plurality of relatively long and narrow surfaces for engaging the ear.

3. An ear-engaging clamping member for an ear-ornament clamp, said member being substantially disk-shaped and having an outer circumferential periphery composed of a plurality of ear-contacting projections extending outward from the central portion of the member and so arranged that substantially V-shaped spaces occur between adjacent of said projections, said projections being adapted to impinge against the ear, said spaces being relatively narrow at portions thereof respectively whereby the integument of the ear may be crowded therein when said member is clamped upon the ear.

4. An ear-engaging clamping member for an ear ornament clamp, said member being substantially disk-shaped and comprising a plurality of interiorly open loops for engaging the ear, said loops extending outward from the central portion of the member and being spaced apart whereby a plurality of substantially V-shaped spaces occur between adjacent of said loops, said spaces being relatively narrow at portions thereof respectively whereby the integument of the ear may be crowded therein when the member is clamped upon the ear, said loops terminating free whereby the ends thereof at the greatest distance from the central portion of the member may impinge against the ear.

1,195,325. BLEACHING PROCESS. HANNS R. ANDERS and MAXIMILIAN E. U. SCHOEDLER, Perth Amboy, N. J., assignors to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Mar. 30, 1912. Serial No. 687,426. (Cl. 8—2.)



1. In a process of bleaching goods by means of bleaching liquors, arranging the container in a horizontal position, filling the goods into the same, separating the goods into groups, separately supporting each group against vertical displacement when the container is brought into an upright position, bringing said container into an upright position, inserting said container into the vat, pumping the bleaching liquors through the goods first in one direction, then reversing the direction of the bleaching liquors and finally finishing the goods as desired.

2. In a process of bleaching goods by means of bleaching liquors, arranging the container in a horizontal position, filling the goods into the same, separating the goods into groups, separately supporting each group against vertical displacement when the container is brought into an upright position, bringing said container into an upright position, inserting said container into the vat, pumping the bleaching liquors through the goods first in one direction, then reversing the direction of the bleaching liquors, maintaining the alternate reversing of the direction of the bleaching liquors until the desired result is obtained, and finally finishing the goods as desired.

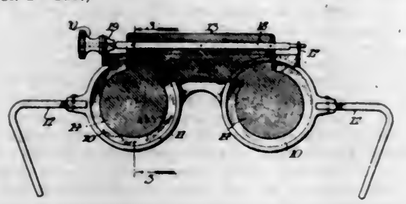
3. In a process of bleaching goods by means of bleaching liquors, arranging the container in a horizontal position, filling the entire width and depth of the container with the goods, separating the goods into groups, separately supporting each group against vertical displacement when the container is brought into an upright position, bringing said container into an upright position, inserting said container into the vat, pumping the bleaching liquors through the goods and finally finishing the goods as desired.

4. In a process of bleaching goods by means of bleaching liquors, arranging the container in a horizontal position, filling the entire width and depth of the container with the goods, separating the goods into groups, separately supporting each group against vertical displacement when the container is brought into an upright position, bringing the container into an upright position, inserting the container into the vat, pumping the bleaching liquors through the goods first in one direction, then reversing the direction of the bleaching liquors, maintaining the alternate reversing of the direction of the bleaching liquors until the desired result is obtained, and finally finishing the goods as desired.

5. In a process of bleaching goods by means of bleaching liquors, arranging the container in a horizontal position, filling the entire width and depth of the container with the goods in skeins, confining limited amounts of goods in adjacent blocks, bringing the container into an upright position, inserting said container into the vat, pumping the bleaching liquors through the goods first in one direction, then reversing the direction of the bleaching liquors, maintaining the alternate reversing of the direction of the bleaching liquors until the desired result is obtained, and finally finishing the goods as desired.

[Claim 6 not printed in the Gazette.]

1,195,326. EYEGLASSES. GEORGE A. ARNOLD, Boston, Mass., assignor of one-half to Frederick C. Hersee, Boston, Mass. Filed Oct. 16, 1915. Serial No. 56,197. (Cl. 2—149.)



1. The combination with a pair of eye-glasses including lenses, of a clamp adapted to detachably engage with the latter, a pivot rod having its axis in a plane substantially parallel to the plane of said lenses and supported by said clamp, and an eye-shade carried by said pivot rod.

2. The combination with a pair of eye-glasses, of a substantially U-shaped clamp adapted to frictionally engage with said eye-glasses and be retained thereon along a line substantially tangent to the upper edges of the lenses of said eye-glasses, and an eye-shade pivotally connected to said clamp.

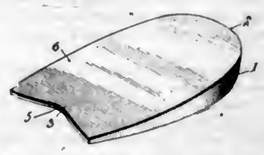
3. The combination with a pair of eye-glasses, of a substantially U-shaped clamp adapted to frictionally engage with said eye-glasses and be retained thereon along a line substantially tangent to the upper edges of the lenses of said eye-glasses, and a transparent member pivotally connected to said clamp and movable into and out of the line of vision of the eye-glasses.

4. The combination with a pair of eye-glasses, of a clamping member adapted to frictionally engage with and be retained by said eye-glasses along a line substantially tangent to the lenses above the latter, a pivot rod carried by said clamping member and substantially parallel thereto, and an eye-shade carried by said pivot rod.

5. In combination, a substantially channel-shaped member adapted to receive portions of the frame of a pair of eye-glasses between the side flanges thereof and having outwardly extending lugs or ears at its ends, a pivot rod supported in said lugs or ears, and eye-pieces carried by said pivot rod.

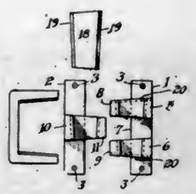
[Claims 6 to 12 not printed in the Gazette.]

1,195,327. INSIDE HEEL-CUSHION. JAMES W. ARROWSMITH, Morristown, N. J. Filed May 28, 1914. Serial No. 841,521. (Cl. 36—37.)



An inside heel cushion for foot coverings, comprising a block of sponge rubber of a size and shape to lodge in the heel portion of the foot covering and tapering in thickness toward the toe portion of the foot covering, said block having the surface designed to receive the heel of the wearer provided with a skin or rind integral with the block and extending about the margins of the block to the bottom surface thereof, and said bottom surface being composed of a multitude of freely exposed interstices of the sponge rubber to engage the insole of the foot covering, whereby the numerous air cups thus formed cause tenacious adherence of the cushion to the insole of the foot covering under the weight of the wearer to thereby prevent slipping of the cushion and avoiding the use of fastening means for such purpose, and the skin or rind interposing as a moisture proof medium integral with the block between the sponge portion of the block and the heel of the wearer.

1,195,328. LOCK. EUGENE V. BARTHMAIER, Norristown, Pa. Filed Nov. 1, 1915. Serial No. 59,045. (Cl. 70—102.)



1. In a lock, in combination, two members having their adjacent edges in substantially parallel relation and in close proximity to each other and said members having projections extending in opposite directions from said edges, said projections being interlocked and in contact with each other when the said members are in operative relation with respect to each other, the said projections having openings extending transversely thereof and a key for engaging the said openings for holding the said projections in locked relation to each other.

2. In a lock, in combination, base members one of which is provided with two tapered projections extending in the same direction therefrom and the other one of which is provided with a tapered projection which projects into the space between the first-mentioned projections when the said members are placed in operative relation with respect to each other and the said projections each being provided with tapered grooves extending transversely thereof which are adapted to register when the said base members are in opposite relation to each other and a locking key adapted to fit within the said grooves and hold the said projections and the said members in locked relation with respect to each other.

3. In a lock, in combination, two members adapted to be secured together with opposing edges in adjacent relation to each other, one of said members having tapered projections extending from its inner edge, which projections are separated from each other and said member being provided with a transversely extending tapered notch the edges of which constitute continuations of the opposing edges of said projections, and the other of said members having a projection situated laterally of its

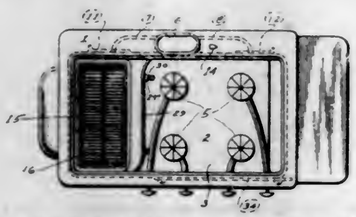
plane and adapted to extend between the first-named projections and into said notch when the said members are placed in position with their edges in adjacent relation to each other, the projections from each member at such time overlying the other member and a locking key for engaging said projections to hold the same in interlocked relation.

4. In a lock, in combination, two members having their adjacent opposing edges in parallel relation to each other, said members having tapered projections extending in opposite directions from said opposing edges and each of said members having thickened tapered portions in alinement with said projections, the projections of one member overlying the other member when the said projections are interlocked, and means for holding the said projections in interlocked relation.

5. In a lock, in combination, two members having their adjacent opposing edges in parallel relation to each other, said members having tapered projections extending in opposite directions from said opposing edges and each of said members having thickened tapered portions in alinement with said projections, the projections of one member overlying the other member when the said projections are interlocked, the said projections each having a tapered undercut notch which notches are adapted to register when said projections are in interlocked relation, and a key in engagement with said notches for holding the said projections in interlocked relation.

[Claims 6 and 7 not printed in the Gazette.]

1,195,329. STOVE. EDWIN D. BAXTER, Mansfield, Ohio, assignor to The Baxter Stove Company, Mansfield, Ohio, a Corporation of Ohio. Filed Feb. 6, 1915. Serial No. 6,431. (Cl. 126—36.)



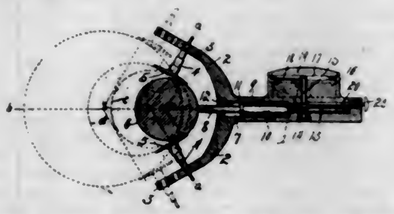
1. In a stove having an oven the bottom of which is provided with a cut out portion, a heat passage below the oven, and a flue having an opening leading into said passage, a burner carrier removably engaged in said cut-out portion, and an imperforate plate for closing said cut out portion when the carrier is removed, said plate having a depending heat deflecting strip which extends across the heat passage beneath the oven and is disposed to the rear of the flue opening and is adapted to have an end thereof engage a side wall of the heat passage.

2. In a stove having an oven and a heat passage thereabove, a heat deflector having its lower longitudinal free edge seated upon the top of the oven and having outwardly extending lugs which also seat upon the oven top, a series of pivoted cam latches pivoted to the oven top and engageable with said lugs to removably sustain the deflector in position.

3. In a stove having an oven with heat passages above and below same, a flue having a lower opening leading into the lower passage, said flue having an upper opening leading into the upper passage, means to control said upper flue opening, a pair of lateral chambers on opposite sides of the flue communicating therewith and with the upper passage, and means to independently control the communications of said lateral chambers with the upper passage.

4. In a stove having an oven with heat passages above and below same, a flue having a lower opening leading into the lower passage, said flue having an upper opening leading into the upper passage, means to control said upper flue opening, a pair of lateral chambers on opposite sides of the flue communicating therewith and with the upper passage, means to independently control the communications of said lateral chambers with the upper passage, and a removable deflector in the upper heat passage adapted to extend entirely thereacross and to enable the heat to enter one of said chambers and therethrough enter the flue.

1,195,330. MICROMETER. RALPH L. BINNEY, Toledo, Ohio, assignor of one-half to David J. Welsh, Toledo, Ohio. Filed June 26, 1915. Serial No. 36,497. (Cl. 33—178.)



1. In a tool of the class described a forked holder, work contacting parts adjustably carried by the fork arms of said holder and having work coacting surfaces disposed in intersecting planes which diverge outwardly with respect to the fork crotch, said surfaces serving to limit the movement of a work piece therebetween, and means operated by contact of the work therewith when placed between said contacting parts whereby to indicate the diameter of the work.

2. In a tool of the class described, a forked body, work contacting parts carried by the fork arms of said body for adjustment lengthwise thereof and in position to permit a limited insertion of a work piece therebetween and means operable to indicate the diameter of the work piece when inserted a maximum extent between said parts.

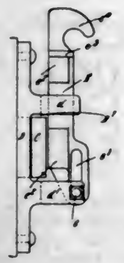
3. In a tool of the class described, a body having one end forked with each arm of the fork provided with an opening, the axial line of which intersects with the axial line of the opening in the other arm at a point falling on a line bisecting the fork, work contacting parts removably inserted in said openings and having their faces disposed in intersecting planes which are at right angles to the axes of the respective openings, and means carried by said body and operable to indicate the diameter of a work piece when inserted a maximum extent between said contact parts.

4. In a tool of the class described, a holder having a circular set of graduations, and having one end forked, a shaft journaled in the holder in concentric relation to said graduations, an index finger carried by the shaft and registering with said graduations, a plunger mounted for yielding movements in one direction by said holder and projecting into the crotch of said fork, said plunger and shaft having rack and pinion parts whereby a longitudinal movement of the plunger imparts rotation to said shaft, and work contacting parts removably carried by the forked end of said holder, one at each side of the line of movement of said plunger, said contacting parts serving to limit the movement of a work piece within the crotch of the holder.

5. In a tool of the class described, a holder having a forked end with each arm of the fork provided with a series of openings spaced lengthwise thereof, which openings vary in size, a contact part for each arm having a stem for insertion at varying depths within different openings of the series, one of said contact parts being provided for each arm and coöperating with the other contact part to limit the insertion of a work piece within the fork of said holder, and means with which a work piece has contact when inserted between said contact parts and operable by such contact to indicate the diameter of the work piece.

[Claims 6 to 8 not printed in the Gazette.]

1,195,331. FASTENING DEVICE FOR USE WITH DOORS AND THE LIKE. JAMES BLAKE, Darlington, England. Filed Nov. 10, 1914. Serial No. 871,424. (Cl. 70—83.)



1. A door fastening device consisting in the combination of a lug having an open ended slot of varying width, a bolt, means for supporting the bolt so as to allow it to turn and slide, an enlargement on said bolt near its free end adapted to engage with the slot in said lug, and a portion appertaining to the door adapted to lie between the base of the lug and the bolt.

2. A door fastening device consisting in the combination of a plurality of lugs with a gap between them, one of said lugs having in it an open ended slot of varying width, a hinged and sliding bolt adapted to bridge the gap between the lugs, an enlargement on said bolt adapted to engage with the slot in the slotted lug and a portion appertaining to the door adapted to lie in the gap between the lugs bridged by the bolt.

3. A door fastening device consisting in the combination of two lugs with a gap between them each having an open ended slot of varying width, a hinged and sliding bolt adapted to bridge the gap between the lugs, enlargements on said bolt adapted to engage with the slots in the lugs and a portion appertaining to the door adapted to lie in the gap between the lugs bridged by the bolt.

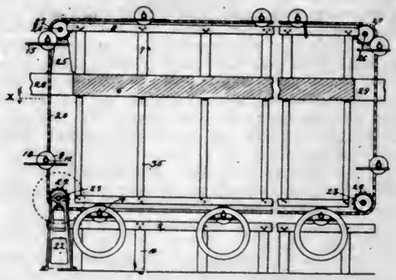
4. A door fastening device consisting in the combination of two lugs with a gap between them each having an open ended slot of varying width, a bolt adapted to bridge the gap between the lugs, a hinge pin carried by one of the lugs and extending through a slot in the adjacent end of the bolt so that it is capable of hinging and sliding movement, enlargements on said bolt adapted to engage with the slots in said lugs, a portion appertaining to the door adapted to lie in the gap between the lugs bridged by the bolt, and a shoulder on the bolt adapted to rest against one of the lugs when said bolt is in its locking position.

5. A door fastening device consisting in the combination of two lugs with a gap between them each having an open ended slot of varying width, a bolt adapted to bridge the gap between the lugs, a hinge pin connected to one of said lugs and extending through a slot in the adjacent end of the bolt so that the latter is capable of hinging and sliding movement, enlargements on said bolt adapted to engage with the slots in said lugs, a portion appertaining to the door adapted to lie in the gap bridged by the bolt, and a shoulder on the bolt adapted to rest against one of the lugs when said bolt is in its locking position.

[Claim 6 not printed in the Gazette.]

1,195,332. CONVEYER FOR CORES. LOUIS J. BOGNAR, Akron, Ohio. Filed Apr. 24, 1915. Serial No. 23,650. (Cl. 193—2.)

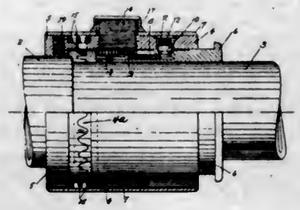
1. A conveyer of the type described comprising a pair of rails constituting a track, a second pair of rails constituting a second track positioned above and in vertical alinement with the rails of the first track, sprocket wheels at both ends of both tracks, a carriage adapted to run on said tracks, said carriage comprising a pair of grooved wheels running on said rails and an axle, a core-holding member positioned on the end of said axle, means carried by said member for holding a core mounted on said member in a plane at right angles to said axle, a sprocket chain running on said sprocket wheels and having connection with said carriage for shifting the position of the latter, and means for moving said sprocket chain and carriage.



2. A conveyer of the class described comprising a pair of rails constituting a track, a carriage adapted to run on said track, said carriage comprising a pair of wheels arranged to run on said rails, an axle for said wheels, a sprocket-chain moving longitudinally of said track for shifting the position of said carriage, a sleeve constituting a tire-making-core-carrying member mounted on the end of said axle and a cross bar on said sleeve positioned near the inner end thereof and adapted to engage the sides of said core for holding it in a plane at right angles to said axle.

3. A conveyer of the class described comprising a pair of rails constituting a track, a carriage adapted to run on said track, said carriage comprising a pair of wheels arranged to run on said rails, an axle for said wheels, a sprocket chain moving longitudinally of said track for shifting the position of said carriage, a sleeve provided with an outwardly-projecting core-engaging bar mounted on the end of said axle, the portion of the sleeve unoccupied by said bar constituting a seat for a tire-making-core.

1,195,333. STEERING-WHEEL LOCK FOR AUTOMOBILES. JUNIUS A. BOWDEN, Los Angeles, Cal. Filed Feb. 23, 1916. Serial No. 79,959. (Cl. 70—90.)



1. In a device for locking the steering wheel of an automobile, in combination with the fixed housing of a steering rod, a clutch part associated with the steering wheel, an annular member rigidly secured upon said housing near the hub of the steering wheel, a sleeve adapted to slide upon said member and supported thereon, connecting chambers formed between said member and sleeve, said sleeve having a clutch portion at one end, means adapted to connect the clutch part associated with the wheel and the clutch portion of the sleeve, a locking disk and an unlocking member in said chambers, said locking disk adapted to automatically interlock the sleeve and said annular

member when the clutch portion of the sleeve and the clutch part associated with the wheel are connected, other means adapted to operate said unlocking member and locking disk whereby the sleeve may be unlocked from said annular member to give free movement of the steering wheel.

2. In a device for locking the steering wheel of an automobile, in combination with the fixed housing of a steering rod, an annular member rigidly secured upon said housing near the hub of the steering wheel, a sleeve adapted to slide upon said member and supported thereon, connecting chambers formed between said member and sleeve, said sleeve having a clutch portion at one end, a clutch on the hub of the steering wheel, means adapted to connect the clutch on the hub of the wheel and the clutch portion of the sleeve, a locking disk and an unlocking member in said chambers, said locking disk adapted to automatically interlock the sleeve and annular member when the clutch portion of the sleeve and the clutch on the hub of the wheel are connected, key operable means installed in said sleeve adapted to operate said unlocking member and locking disk whereby the sleeve may be unlocked from said annular member to give free movement of the steering wheel.

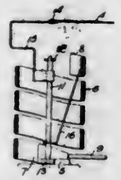
3. In a device for locking the steering wheel of an automobile, in combination with a fixed housing of the steering rod, an annular member rigidly secured upon the outside of said housing near the hub of the steering wheel, a sleeve slidably engaging the outside of said member, said sleeve having a clutch portion at one end, a clutch part on the hub of the steering wheel, an internal pocket formed in said sleeve, a locking disk in said pocket, a recess formed in said member, an unlocking member in said recess, means adapted to connect said recess with said pocket, internal guide means arranged between said annular member and sleeve whereby the recess and pocket are held in alinement with each other and whereby the sleeve is prevented from rotation on the annular member, said sleeve adapted to slide upon the outside of said member toward said hub and unite the clutch part of the hub with the clutch portion of the sleeve into mesh, said locking disk adapted to automatically interlock the sleeve and annular member together when the clutch portion of the sleeve and the clutch part of the hub are in mesh and prevent the steering wheel from rotation, other means carried by the sleeve and associated with said unlocking member adapted to shift the locking disk to an unlocked position and release the clutch on the hub with the clutch portion of the sleeve.

4. In a locking device of the character described, comprising a sleeve with a clutch portion at one end, an annular member, the sleeve slidably engaging the outside of said member, a key operable lock carried by said sleeve, a steering wheel having a clutch portion, means for meshing the clutch portion of the sleeve with the clutch portion of the wheel, means forming an inner pocket in said sleeve, a recess in said annular member, a locking disk in said pocket, a member in said recess adapted to be moved by said lock beneath said locking disk and lift the disk from said recess into said pocket whereby the clutch portion of the sleeve and clutch portion of the wheel may be separated.

5. In a locking device of the character described, comprising a slidable sleeve having teeth formed on one end, an annular shoulder formed on the exterior of said sleeve near the base of the teeth, a key operable lock carried by said sleeve, an annular member having teeth formed on one end, an annular shoulder formed on the exterior of said member near the base of the teeth, a spring engaging the shoulder of the sleeve and shoulder of the annular member, said spring surrounding the teeth of said member and teeth of the sleeve, means adapted to mesh the teeth of the member and teeth of the sleeve, means adapted to lock the sleeve to said member when said teeth are in mesh, said spring adapted to hold the teeth of said member and the teeth of the sleeve apart when not in mesh and prevent the teeth meshing accidentally.

[Claims 6 to 13 not printed in the Gazette.]

1,195,334. MEASURING OR CONTROLLING INSTRUMENT. EDGAR H. BRISTOL, Foxboro, Mass., assignor to The Industrial Instrument Company, Foxboro, Mass., a Corporation of Connecticut. Filed Jan. 26, 1912. Serial No. 673,525. (Cl. 73—109.)



1. An instrument of the class described having, in combination, a coiled responsive element having one end fixed and the other end movable, a shaft disposed in a substantially central position within the coil of said element, a radially flexible but circumferentially rigid connection secured at one end to said shaft and at its other end to the movable portion of the responsive element, and an index carried by said shaft.

2. An instrument of the class described having, in combination, a helical responsive element fixed at one end and having its other end movable, a shaft coaxially disposed within the helix of said element, a radially flexible but circumferentially rigid connection secured at one end to said shaft, extending obliquely thereto and fixed at its other end to the movable portion of said element, and an index carried by said shaft.

3. An instrument of the class described having, in combination, a helical responsive element fixed at one end and having its other end movable, a shaft coaxially disposed within the helix of said element, a radially flexible but circumferentially rigid connection consisting of a flat strip having the greater dimension of its cross-section tangentially disposed, one end of said strip being secured to said shaft, and the other to the movable portion of said element, and an index carried by said shaft.

4. An instrument of the class described having, in combination, a coiled responsive element having one end fixed and the other end movable, a shaft disposed in a substantially central position within the coil of said element, a radially flexible but circumferentially rigid connection secured at one end to said shaft and at its other end to the movable portion of said element, an index carried by said shaft, a support outside the coil or coils of said element for the fixed end of said element, and arms extending laterally from said support and provided with bearings for opposite ends of the shaft.

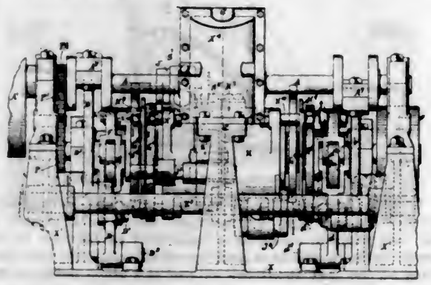
5. An instrument of the class described having, in combination, a coiled responsive element having one end fixed and the other end movable, a shaft disposed in a substantially central position within the coil of said element, a circumferentially rigid driving connection between said shaft and the movable portion of said element, said connection having provision automatically to yield radially during the operation of the instrument, and an index carried by said shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,195,335. POWER TRANSMISSION. ARTHUR BROCK, Jr., and AUGUST J. MOTTLAU, Philadelphia, Pa., assignors to Mottlau Transmission, Incorporated, New York, N. Y., a Corporation of New York. Filed Dec. 28, 1914. Serial No. 879,259. (Cl. 74—53.)

1. The combination with an oscillatory driving element, of a driven shaft element, and means for alternately clamping said oscillating element to, and releasing it from said driven shaft element comprising coöperating piston and cylinder parts both of which share in the general movements of one of said elements and provisions for causing fluid pressure changes to take place in said cylinder in timed relation to the movements of said oscillatory element.

2. In combination, an oscillatory driving element, a driven shaft element, and means for alternately clamping said oscillatory element to, and releasing it from said driven shaft element comprising a cylinder and a piston working therein both of which share in the general movements of one of said elements but move relatively to one another when said elements move relatively to one another and a valve means operating in timed relation with the movements of said oscillating element for intermittently trapping liquid in said cylinder whereby the piston is held against movement therein.



3. The combination with driving and driven shafts of an oscillatory element, means connecting said element to the driving shaft whereby said element is oscillated by the shaft, said means being adjustable to permit of variations in the amplitude of the oscillatory movement given said element, and means for alternately clamping said element to and releasing it from said driven shaft comprising a cylinder and a piston working therein both piston and cylinder sharing in the general rotative movements of said driven shaft but moving relatively to one another when said element moves relatively to said driven shaft, and valve means operating in timed relation with the movements of the driving shaft for intermittently trapping liquid in said cylinder.

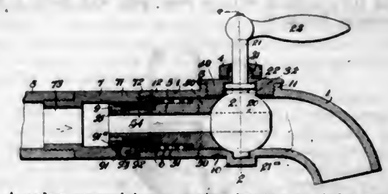
4. In combination, a driven shaft, a driving member mounted to oscillate about the axis of rotation of said shaft, a part engaged by said member and moved thereby relatively to the driven shaft on movements of said member relative to said shaft and means for intermittently locking said member to said shaft comprising a coöperating piston and cylinder, one of which is connected to said driven shaft and the other to said part and valve mechanism operated in timed relation to the movements of said member for intermittently trapping a fluid in and releasing it from said cylinder.

5. In combination, a driven shaft, an oscillating cam mounted on said shaft to turn relative thereto about an axis coincident with the axis of rotation of the shaft and formed with a cam surface eccentric to said axis, a rocker pivotally mounted on said driven shaft and engaging said cam surface and moved thereby angularly about its pivotal connection to said shaft on relative angular movements of said cam and shaft, and means for intermittently holding said rocker against movement relative to said shaft.

[Claims 6 to 14 not printed in the Gazette.]

1,195,336. VALVE. LAWRENCE EMERY CANNING, Pittsburgh, Pa. Filed Sept. 17, 1915. Serial No. 51,204. (Cl. 137—7.)

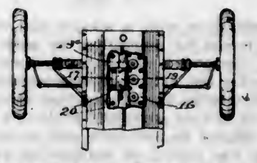
1. In a valve of the character described, a casing having a straightway fluid passage, a rotatable valve in said passage, a movable valve seat having a fluid passage and including a head that seats against the rotatable valve, a shouldered reduced portion and a stem having a threaded end; a coil spring seated on the said reduced portion, an elastic washer mounted on the stem and engaging the coil spring to hold it up against the shoulder of the reduced portion of the valve seat, and a clamp nut on the thread of the valve seat stem, said nut holding the elastic washer in place.



2. A valve comprising a casing having an inlet and an outlet, a ball valve in the casing between the said inlet and outlet, a valve seat having a fluid passage movably mounted within the inlet end of the casing and having a shouldered portion and a stem having a threaded end, a coil spring mounted on the said shouldered portion that tends to force the valve seat up against the ball valve, an elastic washer including a cup shaped end that receives the impact of the outflowing fluid, the said washer being mounted on the valve seat stem and engaging the coil spring, and a lock nut on the valve stem for holding the parts of the valve seat to their operative position.

3. A valve comprising a casing having an inlet and an outlet, a ball valve in the casing between the said inlet and outlet, a valve seat having a fluid passage movably mounted within the inlet end of the casing and having a shouldered portion and a stem having a threaded end, a coil spring mounted on the said shouldered portion that tends to force the valve seat up against the ball valve, an elastic washer including a cup shaped end that receives the impact of the outflowing fluid, the said washer being mounted on the valve seat stem and engaging the coil spring, a lock nut on the valve stem for holding the parts of the valve seat to their operative position, the said stem of the valve seat extending beyond the inlet end of the valve seat, and a pipe coupling that incases the said extended end and engages the inlet end of the valve casing.

1,195,337. TIRE-VULCANIZING ATTACHMENT FOR AUTOMOBILES. RAY CANNON and STANLEY GRAY, Paisley, Oreg. Filed Aug. 10, 1915. Serial No. 44,715. (Cl. 18—18.)

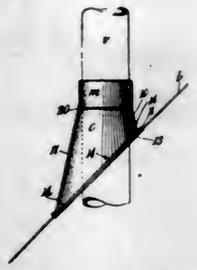


A vulcanizing attachment for vehicle motor engines, comprising a solid block adapted to be permanently fixed to and carried by a heated portion of the engine in vulcanizing position, said block having a flat top forming the outer face of the block top, and a concaved inner face, the side wall of the block having an inner concaved face, a flange projecting from the lower end of the wall, the inner face of the top and of the wall being beveled lengthwise the block, a clamping plate fitting said top face, and means for securing the plate.

1,195,338. ROOF-JOINT. ALLEN JESSUP CHURCHILL, Portland, Oreg. Filed Sept. 27, 1915. Serial No. 52,806. (Cl. 108—26.)

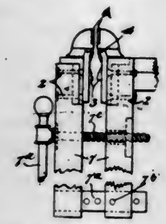
1. In a roof joint, the combination of a section of thin, sheet-metal in the form of a truncated cone flanged at its base, a flanged ring of metal fixed to the base of said cone section adapted to impart rigidity thereto, a perforated base of metal clamped between said ring flange and said cone flange, and a flexible section of soft sheet metal in the form of a truncated cone fixedly united to the first-

named cone section so as to present its base at the top or free edge of the unitary structure, and adapted to be forced into contact with a vent pipe and form a long, impervious junction.



2. In a roof joint, the combination of a section of thin, sheet-metal, in the form of a truncated cone flanged at its base, a rigid, flanged ring, fixed to the cone base; a perforated base of sheet-metal, its inner edge located between the ring flange and the cone flange, and a soft, thin, sheet-metal truncated cone having its apex fixedly united to the apex of the first-named cone section and its base free, said cone section adapted to form a long junction with the vent pipe.

1,195,339. BENCH-VISE. JOHN W. CODDING and FRANK H. PUTNAM, Spokane, Wash. Filed July 30, 1914. Serial No. 854,088. (Cl. 81—23.)

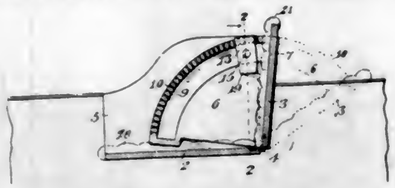


1. In combination with a wooden vise comprising opposite legs, means for connecting the lower ends of said legs, and a clamping screw transfixing one leg and engaging the other leg; of a socket member attached to each vise leg, said member having a vertical dove-tailed slot in its outer face and an outwardly projecting flange on its upper end adapted to rest upon and protect the top of the leg, and also having an outstanding vertical rib on its back opposite the slot, said rib engaging a corresponding slot in the related leg; and detachable interchangeable jaw members each having a shank adapted to engage the vertical slot in the related socket member, substantially as described.

2. In combination with a wooden vise comprising opposite legs, means for adjustably connecting the lower ends of said legs, and a clamping screw transfixing one leg and engaging the other leg; of a socket member attached to the inner face of each vise leg above the screw, said member having a vertical dove-tailed slot in its outer case and an outwardly projecting flange adapted to rest upon the top of the leg, and also having an outstanding rib on its back opposite the slot, said rib engaging a corresponding slot in the related leg; and detachable jaw members each having a shank adapted to engage the related socket member, said jaw members being interchangeable, substantially as described.

3. In combination with a wooden vise comprising opposite legs, means for connecting the lower ends of said legs, and a clamping screw transfixing one leg and engaging the other leg; of a socket member attached to the upper end and inner face of each vise leg above the screw, detachable jaw members each having a shank adapted to engage the related socket member, and having a slot in their shanks below their heads; and auxiliary clamping members attached to the shanks of the jaw members in said slots, and below the heads of said jaw members, substantially as described.

1,195,340. ADJUSTABLE SEAT FOR AUTOMOBILES. JOHN V. DEDRICK, Weimar, Tex. Filed Feb. 18, 1915. Serial No. 9,148. (Cl. 21—43.)



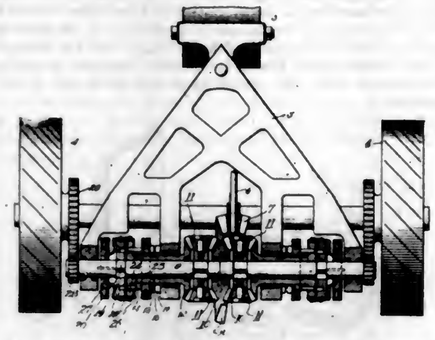
1. Adjusting means for an automobile seat having relatively fixed seat and side portions and a back hinged to the seat portion, comprising segmental plates fast to opposite ends of the back and movable along the side portions of the seat about the axis of the hinge between the seat and back portion, each of said plates being formed with a slot curved about the axis of the hinge and close to the outer edge of the plate with the latter provided with a curved series of notches between the slot and said outer edge of the plate, a clamp screw mounted on each side of the seat and projecting through the slot in the corresponding segmental plate, and a nut for each clamp screw provided with an intermediate lug of non-circular shape entering the slot in the plate and having extensions on opposite sides of the lug, one of the extensions being formed with projections fitting the notches in the plate and the other extension being smooth and engaging the plate on the side of the slot toward the axis of the hinge.

2. Adjusting means for an automobile seat having seat and side portions in substantially fixed relation one to the other and a back hinged to the seat portion, comprising segmental plates fast to the ends of the back portion and each provided with a flange at one radial edge by which the plate is secured to the corresponding end of the back of the seat, each plate having a curved edge described about the axis of the hinge of the seat back and a curved slot adjacent to said curved edge and between the curved slot and the curved edge provided with a curved series of notches, an elongated nut having a central lug projecting through the slot in the plate with extensions on opposite sides of the lug, one of which extensions is provided with projections adapted to the notches in the plate and the other extension projecting over the plate on the side of the slot remote from the projections, and a screw provided with a manipulating means and carried by the respective side of the seat, said screw extending through the side of the seat with the manipulating means outward and with the threaded portion of the screw entering the nut.

1,195,341. STEERING MEANS FOR TRACTORS. WILLIAM F. DOYLE, Reedsburg, Wis., assignor of one-half to Edward G. Stolte, Reedsburg, Wis.; Florence P. Stolte executrix of said Edward G. Stolte, deceased. Filed June 4, 1914. Serial No. 842,973. (Cl. 21—114.)

1. In steering means for a tractor, the combination with a pair of traction wheels and a source of power carried by the tractor, of independent positive clutch connections between said power and each wheel, and variable clutch connections between the power and each wheel, said variable clutch connections being independent of each other and of said positive clutch connections.

2. In steering means for a tractor, the combination with a pair of traction wheels, and a source of power, of means for connecting the power to either wheel to drive the same at full speed, selective means for positively connecting the power to either wheel to drive the same at half speed, means for connecting the power to either wheel to drive the same at variable speeds and means for disconnecting the same, the conditions with regard to one wheel being independent of conditions regarding the other.



3. In steering means for a tractor, the combination with a divided shaft, of a sleeve on each section of said shaft in operative connection with the power of the tractor, means for locking said sleeves to their corresponding shaft sections and a variable clutch connection between said sleeves and their corresponding shaft sections.

4. In steering means for a tractor, the combination with a divided shaft, of a sleeve on each section of said shaft in operative connection with the power of the tractor, means for clutching said sleeves and their corresponding shaft sections, means for locking said sleeves against rotation, and means whereby said shaft sections are caused to rotate at a reduced speed when said sleeves are so locked.

5. In steering means for a tractor, the combination with a divided shaft, of a sleeve on each section of said shaft in operative connection with the power of the tractor, means for locking either of said sleeves, independently of the other, to the corresponding shaft section, and independent variable clutch connections between each sleeve and its shaft section.

[Claims 6 to 9 not printed in the Gazette.]

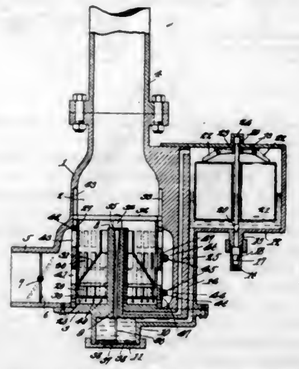
1,195,342. SURVEYING APPARATUS. WALTER G. DUCKLOW, Chicago, Ill., assignor of one-half to W. J. Lang and W. B. Brady, Chicago, Ill. Filed Apr. 19, 1915. Serial No. 22,340. (Cl. 33—74.)



1. A leveling staff for setting grade stakes at points of different level on the desired predetermined cross section of a roadbed or analogous work, said staff being of suitable length to be used with an established sighting line and having an adjustable extension provided with a series of vertical scales, each of said scales calculated for a previously determined profile and having graduations thereon according to the differences in the desired levels of the separate stakes in a particular cross section and indicating the amount of extension.

2. A leveling staff for setting stakes at points of different level on a plurality of different predetermined cross sectional profiles of a roadbed or analogous work, said staff to be used in connection with means for establishing a horizontal sighting line and provided with an extension adjustable for and indicating different heights of crown or rise of the center of the road whereby the staff may be set for a given height of crown or rise, and a second adjustable extension having a series of scales, each for a roadway having a specific amount of crown or rise and each scale having a set of graduations, the spacing thereof corresponding with the differences of level between adjacent stakes of the cross section for said crown or rise.

1,195,343. VACUUM-CARBURETER. WILLIAM JOHN EN EARL, Monte Vista, Colo., assignor to The Vacuum Carburetor Company, Monte Vista, Colo. Filed Oct. 23, 1915. Serial No. 57,571. (Cl. 48—154.1.)



1. A carbureter embodying an upright casing having an atomizing chamber, an upwardly projecting fuel nozzle therein, and an outstanding elevated fuel reservoir at one side wall, said side wall having a pair of vertical passages, one communicating with the lower portion of the reservoir and the other communicating with the upper portion of said reservoir, said nozzle having a pair of passages extending from the upper end of the nozzle to its lower end, and the bottom of the casing having passages connecting the respective first mentioned and second mentioned passages, a float controlled inlet means for said reservoir to maintain the fuel level above the nozzle, a valve seatable upon the upper end of the nozzle to close the respective passage which communicates with the lower portion of the reservoir, and means connected to said valve and disposed within the atomizing chamber whereby the air suction unseats the valve.

2. In a carbureter, a fuel nozzle, a slidable sleeve having an air tube therein coöperating with said nozzle, said sleeve having ports below said tube, and a damper snugly surrounding said sleeve and having ports above the aforesaid ports and with which they register when said tube is moved by the suction.

3. In a carbureter, a fuel nozzle, a slidable sleeve having an air tube therein surrounding said nozzle, said sleeve having ports above and below said tube, and damper means snugly embracing said sleeve, and having ports above the aforesaid ports and with which they register when said tube is raised.

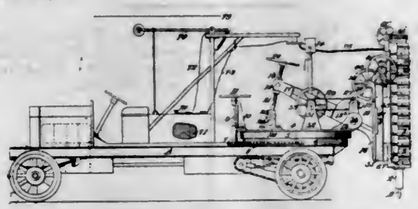
4. In a carbureter, an upstanding fuel nozzle, a vertically slidable sleeve, an inverted funnel-shaped air tube

having its rim attached to said sleeve and having its smaller portion surrounding said nozzle, said sleeve having ports above and below the rim of said tube, and damper means snugly embracing said sleeve and having upper and lower ports above the respective aforesaid ports and with which they are adapted to register when said sleeve is raised, the lower ports of the damper means and sleeve registering before the others.

5. In a carbureter, a fuel nozzle, a slidable sleeve having an air tube therein coöperating with said nozzle, said sleeve having an annular series of ports below said tube, and a rotatable rim snugly embracing said sleeve and having an annular series of ports above the aforesaid ports and with which they register when said sleeve is raised.

[Claims 6 to 8 not printed in the Gazette.]

1,195,344. ROAD-WORKING MACHINE. ADOLPH F. FELLER, Berkeley, and PARLEY P. MUSSER, Oakland, Cal. Filed Nov. 2, 1914. Serial No. 869,781. (Cl. 94—4.)



1. In a road working machine, the combination with a truck having a rotatable platform mounted thereon, of an impact tool supported thereby, means for adjusting said tool vertically, and means for rotating the tool.

2. In a road working machine, the combination with a truck having a rotatable platform mounted thereon, of an impact tool supported thereby, means for adjusting said tool vertically, means for adjusting it laterally, means for adjusting it transversely on the platform, and means for rotating the tool.

3. In a road working machine, the combination with a truck having a rotatable platform mounted thereon, of an impact tool supported thereby, means for adjusting said tool vertically, means for adjusting it laterally, means for adjusting it transversely on the platform, and means for adjusting the tool laterally at right angles to the first-named lateral adjusting means.

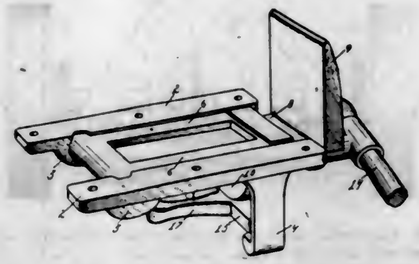
4. In a road working machine, the combination with a truck having a rotatable platform mounted thereon, of an impact tool supported thereby, means for adjusting said tool vertically, a cross-head in which the tool is mounted, a face plate, a secondary plate pivotally mounted on the face plate, guide members on the secondary plate in which the cross-head is mounted, and means for raising or lowering said cross-head vertically in said guide members.

5. In a road working machine, the combination with a truck having a rotatable platform mounted thereon, of an impact tool supported thereby, means for adjusting said tool vertically, a cross-head in which the tool is mounted, a face plate, a secondary plate pivotally mounted on the face plate, guide members on the secondary plate in which the cross-head is mounted, means for adjusting the secondary plate laterally with relation to the face plate, and means for adjusting or moving the face plate with connected secondary plate, cross-head and tool transversely of the platform.

[Claims 6 to 20 not printed in the Gazette.]

1,195,345. BENCH-VISE. DANIEL F. FERNEY, Grand Rapids, Mich., assignor to Grand Rapids School Equipment Co., Grand Rapids, Mich. Filed Jan. 14, 1916. Serial No. 72,122. (Cl. 81—17.)

1. In a vise, the combination with a bench, of a support comprising a pair of members mounted on the under side of said bench and having opposed bearings at their rear ends and opposed depending keepers at their front ends, a jaw frame journaled in said bearings and having a jaw slide-way therein and a nut, a jaw having a slide disposed in said way, a jaw adjusting screw rotatably connected to said jaw to coact with said nut, and a latch bar pivotally mounted on said jaw frame to coact with said keepers when said frame is in its erected position whereby the jaw is supported in a coacting relation to the edge of the bench with its upper end projecting above the surface of the bench, said jaw frame being adapted to swing downwardly below the bench when the latch bar is disengaged.



2. In a vise, the combination of a support comprising a pair of members adapted to be mounted on the under side of a bench and having opposed bearings at their rear ends and opposed depending keepers at their front ends, a jaw frame journaled in said bearings and having a jaw slide-way therein and a nut, a jaw having a slide disposed in said way, a jaw adjusting screw rotatably connected to said jaw to coact with said nut, and a latch bar pivotally mounted on said jaw frame to coact with said keepers when said frame is in its erected position.

3. In a vise, the combination with a bench, of a support mounted on the under side of said bench and provided with a keeper, a jaw frame pivotally mounted on said support and having a jaw slide-way therein and a nut, a jaw having a slide disposed in said way, a jaw adjusting screw rotatably connected to said jaw to coact with said nut, and a latch bar pivotally mounted on said jaw frame to coact with said keeper when said frame is in its erected position whereby the jaw is supported in a coacting relation to the edge of the bench with its upper end projecting above the surface of the bench, said jaw frame being adapted to swing downwardly below the bench when the latch is disengaged.

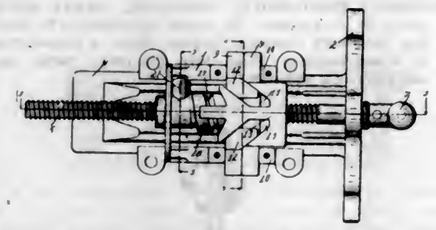
4. In a vise, the combination of a support adapted to be mounted on the under side of a bench and provided with a keeper, a jaw frame pivotally mounted on said support and having a jaw slide way therein and a nut, a jaw having a slide disposed in said way, a jaw adjusting screw rotatably connected to said jaw to coact with said nut, and a latch bar pivotally mounted on said jaw frame to coact with said keeper when said frame is in its erected position.

5. In a vise, the combination with a bench, of a support mounted on the under side of said bench, a jaw frame pivotally mounted on said support, and a jaw adjustably mounted on said jaw frame, said jaw frame being adapted to be swung to operative position to support the jaw at the side of the bench or to be swung to inoperative position below the bench.

[Claim 6 not printed in the Gazette.]

1,195,346. VISE. DANIEL F. FERNEY, Grand Rapids, Mich., assignor to Grand Rapids School Equipment Co., Grand Rapids, Mich. Filed Jan. 14, 1916. Serial No. 72,123. (Cl. 81—36.)

1. In a vise, the combination with a supporting frame, of a jaw slidably mounted in said frame, a jaw-adjusting screw rotatably connected to said jaw, a pair of oppositely disposed split-nut members provided with bar-like slides disposed side by side for movement transversely of the screw, said slides having lugs thereon, a plate-like shifting member disposed below said slides for adjustment transversely thereof and having oppositely disposed inclined slots coacting with said lugs on said slides; whereby, when the shifting member is actuated, said nut members are actuated to engage or disengage the screw, said shifting member having a lug thereon, an actuating member rotatably mounted on said screw and having a spiral groove therein coacting with said lug on said shifting member, whereby, when the actuating member is rotated, said shifting member is actuated, a friction block carried by said actuating member and coacting with said screw, a spring for said friction block, and stops for limiting the rotative movement of said actuating member on said screw.



2. In a vise, the combination with a supporting frame, of a jaw slidably mounted in said frame, a jaw adjusting screw rotatably connected to said jaw, a pair of oppositely disposed split-nut members provided with bar-like slides disposed side by side for movement transversely of the screw, said slides having lugs thereon, a plate-like shifting member mounted for adjustment transversely of said slides and having oppositely disposed inclined slots coacting with said lugs on said slides, whereby, when the shifting member is actuated, said nut members are actuated to engage or disengage the screw, said shifting member having a lug thereon, an actuating member rotatably mounted on said screw and having frictional connection therewith, said actuating member having a spiral groove therein coacting with said lug on said shifting member, whereby, when the actuating member is rotated said shifting member is actuated, and means for limiting the rotative movement of said actuating member on said screw.

3. In a vise, the combination with a supporting frame, of a jaw slidably mounted in said frame, a jaw adjusting screw rotatably connected to said jaw, a pair of oppositely disposed split-nut members supported for sliding adjustment transversely of said screw and having lugs thereon, a shifting member mounted for adjustment transversely of said split-nut members and having oppositely disposed inclined slots coacting with said lugs thereon, whereby, when the shifting member is actuated said nut members are actuated to engage or disengage the screw, said shifting member having a lug thereon, an actuating member rotatably mounted on said screw and having a spiral groove therein coacting with said lug on said shifting member, whereby, when the actuating member is rotated, said shifting member is actuated, a friction means carried by said actuating member and coacting with said screw, and means for limiting the rotative movement of said actuating member on said screw.

4. In a vise, the combination with a supporting frame, of a jaw slidably mounted in said frame, a jaw-adjusting screw rotatably connected to said jaw, a pair of oppositely disposed split-nut members provided with bar-like slides disposed side by side for movement transversely of the screw, said slides having lugs thereon, a plate-like shifting member mounted for adjustment transversely of said slides and having oppositely disposed inclined slots coacting with said lugs on said slides, whereby, when the shifting member is actuated, said nut members are actuated to engage or disengage the screw, an actuating member rotatably mounted on said screw having frictional engagement therewith, said actuating member having operative connection with said actuating member, so that when the actuating member is rotated, said shifting member is actuated, and means for limiting the rotative movement of said actuating member on said screw.

5. In a vise, the combination with a supporting frame, of a jaw slidably mounted in said frame, a jaw adjusting screw rotatably connected to said jaw, a pair of oppositely disposed split-nut members supported for sliding adjustment transversely of said screw and having lugs thereon, a shifting member mounted for adjustment transversely of said split-nut members and having oppositely disposed inclined slots coacting with said lugs thereon whereby, when the shifting member is actuated, said nut members are actuated to engage or disengage the screw, said shifting member having a lug thereon, and an actuating member rotatably mounted on said screw and having frictional connection therewith, said actuating member having a spiral groove therein coacting with said lug on said shifting member whereby when the actuating member is rotated in opposite directions by said screw said shifting member is reciprocated.

[Claims 6 to 8 not printed in the Gazette.]

1,195,347. CULTIVATOR-YOKE. CHARLES FLAMBO, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed June 26, 1914. Serial No. 847,456. (Cl. 97—35.)



A connecting yoke for cultivators, comprising two legs pivoted together at their upper ends on a horizontal fore and aft axis and adapted to be operatively connected at their lower ends with the cultivator beams, an arm pivoted to one of said legs on a horizontal fore and aft axis below the first mentioned axis, and intersecting and guided on the other leg, said arm being provided with teeth on its upper edge, a bracket plate fixed to the last mentioned leg and extending forwardly therefrom, and a gravitating locking latch pivoted to the forward end of said bracket plate and extending rearwardly above the said arm to the opposite side of the leg, in position to automatically engage between the teeth on the arm, said arm and latch being disposed wholly below the upper connected ends of the legs.

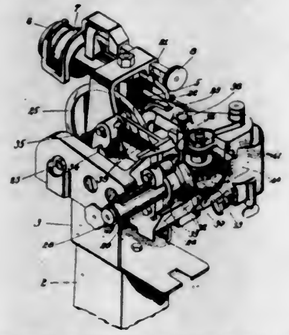
1,195,348. BLACKING-MACHINE. FREDERICK M. FURNER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 2, 1913. Serial No. 777,112. (Cl. 12—31.)

1. In a machine of the class described, the combination of a driven blacking applying brush, means for supplying blacking thereto, and a comb arranged to engage and straighten out the bristles of the applying brush substantially throughout its body portion.

2. In a machine of the class described, the combination of a driven blacking applying brush, means for supplying blacking thereto, and a driven comb arranged to engage and straighten out the bristles of the applying brush substantially throughout its body portion.

3. In a machine of the class described, the combination of a rotary blacking applying brush, means for supplying blacking to said brush, and a comb mounted in peripheral

engagement with the applying brush and arranged to rotate in an opposite direction to the said brush for straightening out the bristles of the brush.

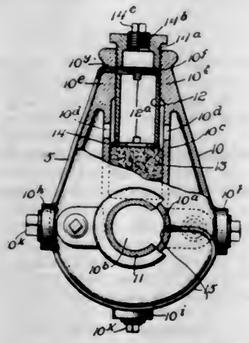


4. In a machine of the class described, the combination of a rotary blacking applying brush, means for supplying blacking to said brush, and a comb mounted in peripheral engagement with the applying brush and arranged to rotate in an opposite direction to and at a greater speed than the applying brush for straightening out the bristles of said brush.

5. In a machine of the class described, the combination of a rotary blacking applying brush, means for supplying blacking thereto, and driven means arranged to comb the blacking applying brush to straighten out the bristles thereof.

[Claims 6 to 18 not printed in the Gazette.]

1,195,349. LUBRICATOR. PHILETUS W. GATES, Chicago, Ill., assignor to Hanna Engineering Works, a Corporation of Illinois. Filed Apr. 19, 1915. Serial No. 22,478. (Cl. 184—59.)



1. A lubricator comprising a lubricant containing chamber and constructed and arranged to be attached to a fluid line in any position, said lubricator being provided with a duct leading directly from said chamber to said line, and means to normally prevent flow of lubricant from said chamber to said line, said means being operable to permit such flow upon flow of fluid through said line, said lubricator being provided with a duct leading from said fluid line to said lubricant chamber and arranged to transmit the pressure of said fluid line to said lubricant chamber in any position of said lubricator.

2. A lubricator comprising a lubricant containing chamber and arranged to be attached to a fluid line, said lubricator being provided with a duct leading from said chamber to said line, and means to normally prevent flow of lubricant from said chamber to said line, said means being operable to permit such flow upon flow of fluid through said line, said lubricator being provided with a duct leading from said fluid line to said lubricant chamber, said duct being constructed and arranged to present a portion thereof higher than the level of the lubricant in said chamber in all operative positions of said lubricator.

3. In combination with a lubricator having a duct arranged to permit flow of fluid therethrough, a lubricant containing chamber, a duct leading from said chamber to said first named duct, means to normally prevent flow of lubricant from said chamber to said first named duct save upon flow of fluid through the latter, and means to maintain the pressure in said chamber above the level of said lubricant substantially equal to that obtaining in said first named duct in any position of said lubricator.

1,195,350. PUMP-DRILL. GEORGE H. GILMAN, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed July 25, 1911. Serial No. 640,475. (Cl. 255—49.)



1. In a rock drill the combination with a drill steel, a reciprocatory piston and piston rod, a chuck for connecting in axial alinement said piston rod and said drill steel to transmit the reciprocatory movement of said piston rod to said drill steel, an axial conduit extending from the cutting end of said drill steel to said chuck, a piston conduit adjacent said chuck having a lateral discharge opening above said chuck, and a valve in said axial conduit for utilization of the reciprocatory movement of said drill steel to cause upward flow of fluid through said axial conduit and said piston conduit to said lateral discharge opening above said chuck.

2. In a rock drill the combination with a drill steel, a reciprocatory piston and piston rod, a chuck for connecting in axial alinement said piston rod and said drill steel to transmit the reciprocatory movement of said piston rod to said drill steel, an axial conduit extending from the cutting end of said drill steel to said chuck, a piston conduit adjacent said chuck having a downwardly discharging lateral discharge opening above said chuck, and a valve in said axial conduit for utilization of the reciprocatory movement of said drill steel to cause upward flow of fluid through said axial conduit and said piston conduit to said lateral discharge opening above said chuck.

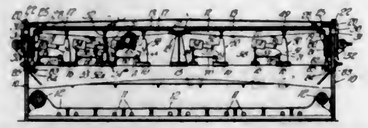
3. In a rock drill the combination with a reciprocatory piston and piston rod, of a drill steel comprising a shank portion, a separable bit, a longitudinal aperture in said shank portion and said bit, a valve operatively interposed in said aperture and removable by separation of said shank portion from said bit, a chuck to connect said piston rod and said shank portion, and an aperture through said chuck connecting with said longitudinal aperture and permitting the discharge of fluid from said longitudinal aperture at a point above the lower extremity of said chuck.

4. A rock drill having a drill tool provided with a piston and piston rod, a cutter, a rigid connection between the cutter and the piston rod with which the said cutter has threaded engagement, a valve controlled passage in said cutter and connection, and a sleeve encircling said cutter and connection and having a locking device for locking said cutter to said connection.

5. A rock drill having a drill tool provided with a piston and piston rod, a cutter, a rigid connection between the cutter and the piston rod with which the said cutter has threaded engagement, a valve controlled passage in said cutter and connection, and a locking bushing encircling the terminal portions of said connection and cutter, and having lateral engaging means for locking said cutter to said connections.

[Claims 6 to 12 not printed in the Gazette.]

1,195,351. SILVERING-TABLE. GEORGE GLAUDEL, Los Angeles, Cal. Filed Apr. 12, 1916. Serial No. 90,600. (Cl. 91—12.4.)



1. In combination with a silvering table, a vertical plate supporting plunger, yielding means for moving said plunger upwardly, means for moving said plunger downwardly, and means for frictionally engaging the plunger to hold it in any set position as regards its vertical movement.

2. In combination with a silvering table, a vertical plate supporting plunger, yielding means for moving said plunger upwardly, means for moving said plunger downwardly, and means for frictionally gripping the plunger to hold it in any set position as regards its vertical movement.

3. In combination with a silvering table, a vertical plate supporting plunger, yielding means for moving said plunger upwardly, means for moving said plunger downwardly, and means coöperating with the last mentioned means for frictionally engaging the plunger to hold it in any set position as regards its vertical movement.

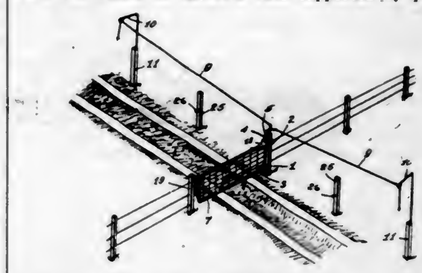
4. In combination with a silvering table, a vertical plate supporting plunger, yielding means for moving said plunger downwardly, and means for holding the plunger in any set position as regards its vertical movement, said means embodying a clamp encircling the plunger, and means coöperating with the means for moving the plunger downwardly to compress the clamp about the plunger.

5. In combination with a silvering table, a vertical plate supporting plunger, means including a weight for normally moving the plunger upwardly, means including a horizontally movable wedge for lifting the weight and for moving the plunger downwardly, and means coöperating with the horizontally movable wedge for frictionally engaging the plunger at any set position to hold it against vertical movement.

[Claims 6 to 10 not printed in the Gazette.]

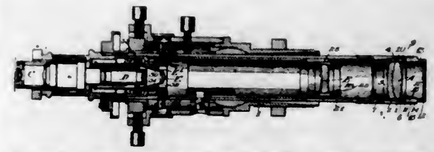
1,195,352. GATE. JOHN O. GOETTEL, Seattle, Wash. Filed Oct. 5, 1915. Serial No. 54,277. (Cl. 39—32.)

A gate of the class described comprising a frame structure, a supporting post for said gate provided with rigid upper and lower members having apertures therein, a vertical rod extending within said apertures and sustained movably thereby, the upper portion of said rod turned backwardly at right angles to its base and terminating in outwardly projecting prongs, said frame structure adapted to be pivotally attached to said rod, and means for sustaining the frame upon said rod, a transverse curved arm rigidly attached to said rod, a bracket located intermediate said arm and said frame structure and longitudinally movable upon the latter, said bracket provided with a shoulder at one end adapted to be engaged by the ends of said curved arm, a spring attached to the forward end of said gate and connecting with said bracket, posts provided with latches for engaging said spring when the gate is in its opened and closed position, and lines connecting with the prongs of said rod and extended to a distance over the center of the road and supported by post on



both sides of said gate whereby the rod can be caused to transmit pressure through said arm to bear against the shoulder of said bracket and actuate said spring to open and close said gate substantially as described.

1,195,353. BORESIGHT. ALBERT GREBE, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 11, 1913. Serial No. 806,068. (Cl. 88—32.)



1. The combination with a tubular member having a seating surface formed therein and spaced from the end of the member and a mounting member fitting said surface and having a portion provided with screw threads, of an extractor for withdrawing the mounting member arranged to bear against the end of the seat member and having a portion adapted to extend within said seat member and provided with screw threads which coöperate with those of the mounting member to impart a relative longitudinal movement thereto.

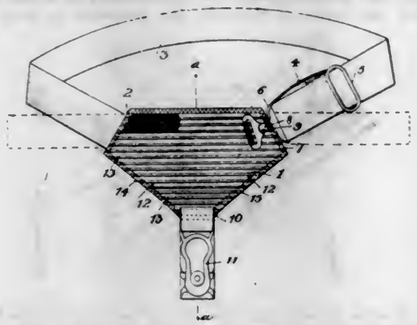
2. The combination with a tubular member having a threaded end and provided with a seating surface spaced from the end beyond said threads, of a mounting member fitting within said surface and having a threaded portion, a collar having a threaded portion by means of which it may be secured on the seat member and provided with a second threaded portion which, when the collar is reversed, is adapted to coöperate with the threads of the mounting member and a bearing flange on the collar adapted to engage the outer end of the seat member when said collar is in the last mentioned position.

3. The combination with a tubular member having an interior threaded end and a seating surface spaced from the end beyond said threads, of a mounting ring engaging said surface having an exteriorly threaded outer end, of a collar having interior and exterior threaded portions at its two ends adapted to coöperate alternately with the threads on the tubular member and ring and a flange on the collar adapted to engage the edge of the tubular member when one of its threaded portions engages the threads of said mounting ring.

1,195,354. GARTER OR HOSE-SUPPORTER. RALPH K. GUINZBURG, New York, N. Y., assignor to I. B. Kleinert Rubber Company, New York, N. Y., a Corporation of New York. Filed Oct. 28, 1915. Serial No. 58,305. (Cl. 241—6.)

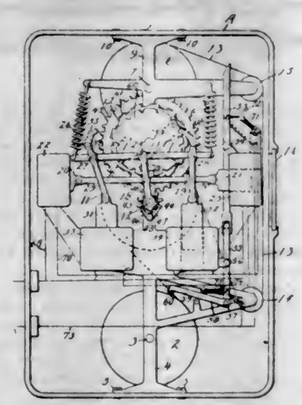
1. A garter comprising a substantially flat elastic pad with a clasp depending from its lower end, said pad being

distensible in all directions except in the direction of the length of the clasp and a leg band secured to said pad.



2. A garter comprising a substantially flat, imperforate, substantially triangular pad having an attaching clasp depending from its lower end, said pad being distensible in all directions except in the direction of the length of the clasp and an inelastic leg band secured to said pad adjacent the upper end of said pad.

1,195,355. INDICATING APPARATUS. CHARLES GUSTAFSON, St. Paul, Minn. Filed Apr. 23, 1915. Serial No. 23,433. (Cl. 40—59.)



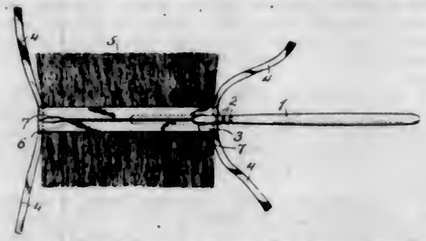
1. In apparatus of the character described, indicating means, means for operating the same including a ratchet, a lever arm carrying a dog on one end to engage with the ratchet for rotating the latter, a magnet having its armature directly connected to the opposite end of the lever arm for reciprocating it, a swinging support to which the lever arm is pivoted between its ends, and magnetic means operable to swing the support for rendering the dog inoperative.

2. In an indicating apparatus of the character described, an indicating sheet, means supporting the same for movement, a power roll for operating the sheet, a shaft supporting the roll, a pair of electro-magnetic devices having armatures, a bar connecting the armatures to be reciprocated thereby, an arm pivoted to the shaft and the bar, means for driving the power roll including a rotatable ratchet, a bar pivoted to the arm at one end, a spring supporting the other end of the last bar, a dog supported by the last bar for engaging with the ratchet, a magnet having its armature connected with the last bar for actuating the dog, and means for energizing the magnet and electro-magnetic devices.

3. In an apparatus of the character described, an indicating sheet, means supporting the same for movement, a power roll for operating the sheet, a shaft supporting the roll, a ratchet on the shaft, a pawl adapted for engaging the ratchet, an arm arranged to disengage the pawl from the ratchet, means for driving the power roll including a ratchet, a dog reciprocally supported for engaging with and operating the last ratchet and operatively connected with the arm, and means for rocking the arm to thereby render the dog and pawl inoperative.

4. In an apparatus of the character described, indicating means, a power roll having a ratchet part, a pawl arranged to engage the ratchet part for holding the latter against reverse rotation, means for rotating the power roll including a ratchet, an arm pivoted between its ends and having one end disposed to disengage the pawl from the ratchet part, a bar pivoted at its inner end to the opposite end portion of the arm, a spring supporting the other end of the bar, a pivoted dog supported by the bar for engaging and operating the ratchet, electro-magnetic means for moving the dog against the action of the spring, and other means connected to the arm for swinging the same to render the dog inoperative.

1,195,356. DUSTER. JOHN HEDLUND, Kansas City, Mo. Filed June 1, 1915. Serial No. 31,430. (Cl. 15—28.)



1. A duster comprising a handle, and a flexible head having a shag and adapted to be doubled upon itself and provided with a longitudinal pocket having a mouth at one end adapted to receive and fit said handle, each end of the head having securing means for attaching said ends to the handle when the head has been doubled upon itself and the handle inserted into the pocket.

2. A duster comprising a handle, and a flexible head having a shag and adapted to be doubled upon itself and provided with a longitudinal pocket extending the full length of the head and having at each end a mouth adapted to receive and fit the handle, each end of the head having securing means for attaching the ends to the handle when the handle has been inserted through one of said mouths into the pocket and the head has been doubled upon itself.

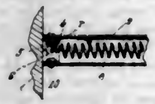
3. A duster comprising a handle, and a flexible head having a shag and adapted to be doubled upon itself and provided with a longitudinal pocket having a mouth at one end adapted to receive and fit the handle, each end of the head being provided with two flexible securing devices adapted to encircle the handle and to be tied to each other for securing the head of the handle when the head has been doubled upon itself and the handle inserted into said pocket.

4. A duster comprising a handle, and a flexible head having a shag and adapted to be doubled upon itself and provided with a longitudinal pocket extending the full length of the head and provided at each end with a mouth adapted to receive and fit the handle, each end of the head having two flexible securing devices adapted to be tied together and to encircle the handle for securing the head to the handle when the handle has been inserted into the pocket through one of said mouths and the head doubled upon itself.

5. A duster comprising a handle having an annular peripheral groove, and a flexible head having a shag and adapted to be doubled upon itself and provided with a longitudinal pocket having a mouth adapted to receive and fit said handle, each end of the head having two flexible securing devices adapted to be tied together and to encircle the handle, one pair of said securing devices being adapted to be located in said groove when the handle is inserted in the pocket and the head has been doubled upon itself.

[Claims 6 and 7 not printed in the Gazette.]

1,195,357. EXTENSIBLE SLEEVE-FASTENER. ERNEST A. HOOT, Spokane, Wash. Filed Oct. 20, 1915. Serial No. 56,896. (Cl. 24—102.)

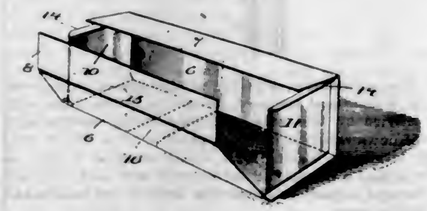


1. In a sleeve fastening, a pair of buttons, a spiral spring connected with said buttons and constructed to contract to a neutral position with its convolutions in abutting relation to hold said buttons in normally contracted relation to permit said buttons to be spread apart from each other, and an elastic sleeve covering said spring and secured at its ends to said buttons to inclose said spring either under tension or contraction, said sleeve having a maximum elastic length greater than the maximum elastic length of the spring, substantially as described.

2. In a sleeve fastener, a pair of buttons, a spiral spring connected with said buttons and constructed to contract to a neutral position with its convolutions in abutting relation to hold said buttons in normally contracted relation or permit said buttons to be spread apart from each other, and each button being provided with a housing inclosing the point of connection of the spiral spring to said button, and a sleeve structure covering said spring and telescopically fitted on said housing and being retained by a spring collar forcing the sleeve into a groove provided on the housing, said sleeve having a maximum elastic length greater than the elastic length of the spring, substantially as described.

3. In a sleeve fastener, a pair of buttons, a spiral spring connected with said buttons, each button being provided with means for housing the points of connection of the spring with the button, and an elastic sleeve covering said spring and having its ends supported over said housing, and a spring band provided to securely engage the two parts in fixed relation thereto, substantially as described.

1,195,358. RECEPTACLE. GEORGE F. HULLINGS, Washington, D. C., assignor to David Pelton Moore, Washington, D. C. Filed Aug. 11, 1913. Serial No. 784,228. (Cl. 229—16.)



1. A receptacle formed from a blank having continuous edges and foldable along lines spaced relatively to form an open ended container; end sections forming a portion of said blank and foldable outwardly therefrom to form closures for the open ends; and means for securing the end sections in closed position.

2. A receptacle formed from a blank having continuous edges and foldable to form an open ended container; end sections cut from a portion of said blank and foldable outwardly therefrom to form closures for the open ends; and means for securing said end sections to a portion of said blank when folded thereon.

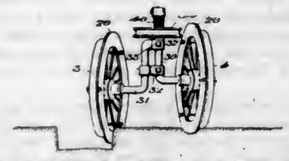
3. A receptacle formed from a blank having continuous edges and foldable along lines spaced relatively to form top, bottom, and side sections; end portions forming a part of certain of said sections and foldable outwardly therefrom; and means for securing said end portions to certain of said sections when folded thereon.

4. A receptacle formed from a blank having continuous edges and foldable along lines spaced relatively to form top, side, and bottom sections; end portions cut from certain of said sections and foldable outwardly therefrom to form end closures; and means for securing said end closures to certain of said sections when encompassed thereby.

5. A receptacle formed from a blank having continuous edges and foldable along lines spaced relatively to form top, side and bottom sections; end portions cut from said top section and foldable outwardly therefrom to form end closures; a side bracing element forming a portion of said top section and joining said side sections; and means for securing said end closures to certain of said sections.

[Claims 6 to 18 not printed in the Gazette.]

1,195,359. STEERING-WHEEL FOR TRACTOR AGRICULTURAL MACHINES. CLARENCE W. JACKSON, Dunkirk, Mont., assignor of fifty-five one-hundredths to David F. Mains and twenty-two and one-half one-hundredths to Alvin D. Rieder, Valier, Mont. Filed May 3, 1915. Serial No. 25,598. (Cl. 97—81.)



1. In an agricultural machine or tractor, the combination with a frame, of rear traction wheels, front steering and guide wheels, a standard supporting said frame and having a spindle on which one of said wheels is mounted, said spindle being adapted to turn, a bracket having a spindle on which the other steering or guiding wheel is mounted, said bracket being vertically adjustable and rotatably mounted on said standard, and means for securing said bracket at different heights and different positions of lateral adjustment on said standard.

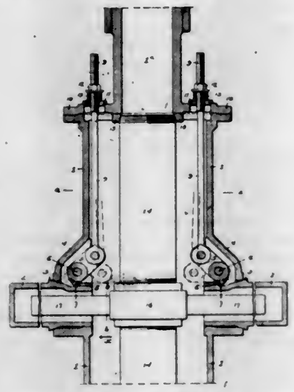
2. In an agricultural machine or tractor, the combination with rear traction wheels, of a frame, a steering standard rotatably mounted on the frame, means for turning said standard at will to effect steering, a steering and guiding wheel carried by said standard, a bracket rotatably mounted on said standard and also vertically slidable thereon, means for securing said bracket to said standard to dispose the bracket in different desired vertical and lateral positions, and a guiding and steering wheel mounted on said bracket.

1,195,360. SECURING RABBLE-ARMS TO SHAFTS. LOUIS R. KELLEY, Philadelphia, Pa., assignor to The Furnace Patent Company, Greenwich Point, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 13, 1914. Serial No. 866,422. Renewed Jan. 20, 1916. Serial No. 73,180. (Cl. 75—143.)

1. The combination of the rabble-arm-carrying shaft of a furnace with a projecting rabble arm whose inner end projects into the shaft, arm-securing devices located on the inside of the shaft and engaging that portion of the rabble arm which projects into the shaft, and means whereby said securing devices are operable from the outside of the shaft.

2. The combination of the rabble-arm-carrying shaft of the furnace, a rabble arm projecting therefrom, a securing device therefor located on the inside of the shaft, and means for exerting a yielding pressure upon said securing device which tends to constantly tighten the same.

3. The combination of the rabble-arm-carrying shaft, a projecting rabble arm seated thereon, and a tightening device for said arm having as elements a rod, a projection on the shaft through which said rod passes, and means above said projection for acting upon the rod to tighten the clamping device.

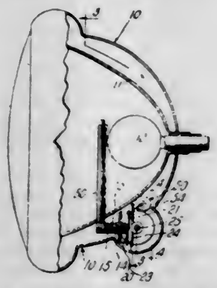


4. The combination of the rabble-arm-carrying shaft, a rabble arm seated on and projecting therefrom, and a tightening device for said rabble arm having, as elements, a projection on the shaft, a rod passing through said projection and through a washer seated thereon, and a nut adapted to a threaded portion of said rod beyond said washer.

5. The combination of a rabble-arm-carrying shaft, a rabble arm seated on and projecting from said shaft, and a tightening device for said arm having, as elements, a projection on the shaft, a rod passing through said projection and through a washer seated thereon, a nut adapted to a threaded portion of the rod beyond said washer, and a spring interposed between said nut and washer.

[Claims 6 and 7 not printed in the Gazette.]

1,195,361. HEADLIGHT. WILLIAM HARRISON KELSO, Los Angeles, Cal. Filed Aug. 21, 1915. Serial No. 46,614. (Cl. 240—45.)



1. In combination with a lamp and a reflector behind and extending forwardly around the same, the reflector being slotted with opposite vertical slots forward of the lamp, a pair of deflector members pivoted on horizontal longitudinal axes and lying normally exterior of the reflector on opposite sides at the slots therein, and means to move said deflector members inwardly toward each other through the slots and across the reflector in front of the lamp.

2. In combination with a lamp and a reflector behind and extending forwardly around the lamp, the reflector being slotted with opposite vertical slots forward of the lamp, a horizontal shaft arranged on a central longitudinal line exterior of the reflector, a pair of deflector members mounted on said shaft to move independently of each other and normally lying exterior of the reflector opposite the slots therein, and means to move said deflector members inwardly toward each other through said slots across the reflector in front of the lamp.

3. In combination with a reflector of the class described, having opposite vertical slots on opposite sides, a pair of deflector members lying normally exterior of the reflector on opposite sides thereof opposite said slots, and means to move said members inwardly toward each other through the slots and across the reflector to meet each other, said members being formed so as to form a continuous deflector across a part of the reflector.

4. In combination with a reflector of the class described, having opposite vertical slots in opposite sides, a horizontal shaft arranged on a central longitudinal line exterior of the reflector, a pair of deflector members mounted on said shaft to move independently of each other and normally lying exterior of the reflector opposite the slots therein, each of said members having a straight forward radial edge and a curved rear edge so that when they are moved inwardly to meet each other their straight edges meet and their curved edges conform to the curvature of the reflector, and means to simultaneously move said members inwardly through the slots and across the reflector toward each other.

5. In combination with a reflector of the class described, having opposite vertical slots in opposite sides, a horizontal shaft arranged on a central longitudinal line exterior of the reflector, a pair of deflector members mounted on said shaft to move independently of each other and normally lying exterior of the reflector opposite the slots therein, each of said members having a straight forward radial edge and a curved rear edge so that when they are moved inwardly to meet each other their straight edges meet and their curved edges conform to the curvature of the reflector, each of said deflector members embodying a plurality of parts in the form of vanes foldable on each other, and means to simultaneously move said members inwardly through the slots and across the reflector toward each other.

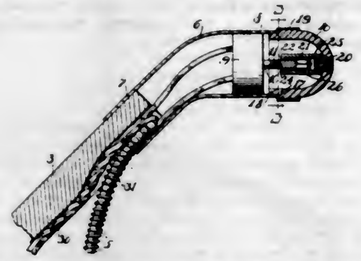
1,195,362. WINDOW-WIPER. JOSEPH H. KING, Oakland, Cal. Filed Dec. 29, 1914. Serial No. 879,457. (Cl. 15—59.)



1. The combination with the wind shield of an automobile, of a guide rod mounted thereon, a spring frame slidably carried by said guide rod, said frame comprising a pair of downwardly extending spring arms, a coil in said frame forming a bearing for a sleeve mounted to slide on said rod, and a handle formed integral with said coil, said coil forming a resilient connection between the handle and the spring arms.

2. The combination with the wind shield of an automobile, of a guide rod mounted thereon, a spring frame slidably carried by said guide rod, said frame comprising a pair of downwardly extending spring arms, a cleaner pivotally mounted between said arms, a coil in said frame forming a bearing for a sleeve mounted to slide on said rod, and a handle formed integral with said coil, said coil forming a resilient connection between the handle and cleaner for yieldingly holding the cleaner in contact with the wind shield.

1,195,363. HANDLE-SWITCH FOR SUCTION-CLEANERS. JAMES B. KIRBY, Cleveland, Ohio. Filed Nov. 27, 1914. Serial No. 874,318. (Cl. 175—389.)



1. A switch casing for cleaner handles comprising a hollow shell having its end portions disposed at an angle to each other, one of said portions being adapted to receive the end of the handle and the other having a rotatable cap fitted to the end thereof, and switch mechanism in said casing and operatively connected to said cap.

2. In a cleaner, a switch casing comprising a hollow shell having angularly related portions one of which is adapted to receive the cleaner handle and the other the switch mechanism, the latter portion having a shouldered circular end, a cap fitted to said second portion and having a shouldered circular end facing the end of said casing, said cap having an offset portion fitting against the wall of said casing and means for securing said cap operatively to the switch mechanism.

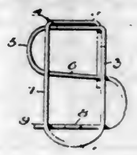
3. In a cleaner, a switch casing comprising a hollow shell having angularly related portions one of which is adapted to receive the cleaner handle and the other the switch mechanism, switch mechanism in said last portion and having an axial threaded stud, a cap fitted to the end of said shell, a hollow barrel within said cap, a threaded connector non-rotatably mounted within said barrel but freely movable therealong, and a resilient member between said connector and the end of said barrel, said connector being screwed to the end of said stud.

4. In an electrically operated cleaner, a switch casing comprising a hollow shell having one end secured to the cleaner handle and the other end portion disposed at an angle thereto so as to be substantially horizontal during the normal use of the cleaner, switch mechanism in the last named portion of the shell and having an axial threaded stud, and a rotatable cap fitted to the end of said shell and having a portion adjacent to said shell of larger diameter than said shell and exteriorly roughened.

5. In a device of the character described, the combination, with an operating handle, of a switch casing comprising a hollow shell and having one end secured to said handle, switch mechanism in said shell and having a rotatable stud axial with the other end thereof, and a rotatable cap having a cylindrical portion overlapping the end of said shell and having a convex terminal portion forming a rounded continuation of said shell, said cap being operatively connected to said stud and having its portion adjacent to said shell of greater diameter than said shell and exteriorly roughened.

1,195,364. PAPER-CLIP. WILLIAM L. FRANK, Wapakoneta, Ohio. Filed Nov. 3, 1913. Serial No. 798,952. (Cl. 24—261.)

1. A clasp made of a single length of spring wire bent to form the letter U, from the upper end of one stem of which is continued at right angles a straight top portion from which is continued a portion bent into the letter S, the height of the letter S being less than the length of the U-shaped portion but wider, whereby the curved portions of said letter S extend beyond said stem portions of said U-shaped member, the bottom portion of said S-shaped member having an outwardly directed hump held within the bight portion of said U-shaped member, the other stem of said U-shaped member being continued in a top portion extending above and parallel to said first mentioned top portion and ending in the straight side stem held parallel to said first mentioned stem the end of said side stem extending beyond and resting against the central portion of said S-shaped member.



2. A clasp made of a single length of spring wire bent to form the letter U, from the upper end of one stem of which is continued at right angles a straight top portion from which is continued a portion bent into the letter S, the height of the letter S being less than the length of the U-shaped portion but wider, whereby the curved portions of said letter S extend beyond said stem portion of said U-shaped member, the other stem of said U-shaped member being continued in a top portion extending above and parallel to said first mentioned top portion and ending in the straight side stem held parallel to said first mentioned stem the end of said side stem extending beyond and resting against the central portion of said S-shaped member.

1,195,365. LIFE-PRESERVING GARMENT. JOHN KREM, Philadelphia, Pa. Filed Oct. 12, 1912. Serial No. 725,541. (Cl. 9—20.)

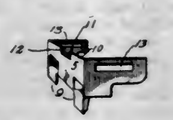


1. A life preserving garment composed of water proof material having a flexible and water proof neck band secured thereto at one end thereof and having a free end adapted to be wound around the wearer's neck and substantially held thereto by means of a ring, a wrist band secured at one end thereof to each of the sleeves of said garment and composed of the same material as said neck band and adapted to be wound around each wrist of the wearer and substantially held thereto by means of a second ring, a flexible bag secured to the inside of said garment and adapted to be inflated through the medium of a bulb, a series of pockets secured to the outside of said garment for the wearer's convenience, a weight substantially secured to the lower end of each leg of said garment, and a suitable means adapted to be hung on the belt of said garment as a means to be used by the wearer for propelling himself to safety as and for the purpose set forth.

2. A life preserving garment composed of water proof material having a flexible and water proof neck band secured thereto at one end thereof and having a free end adapted to be wound around the wearer's neck and substantially held thereto by means of a ring, a wrist band secured at one end thereof to each of the sleeves of said garment and composed of the same material as said neck band and adapted to be wound around each wrist of the

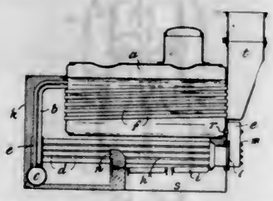
wearer and substantially held thereto by means of a second ring, a means for access to said garment comprising a central front opening provided with means to increase or decrease the capacity of said garment, a flexible bag secured to the inside of said garment and adapted to be inflated through the medium of a bulb, a series of pockets secured to the outside of said garment for the wearer's convenience, a weight substantially secured to the lower end of each leg of said garment, a means provided on each of said legs for lengthening or shortening the same, and a suitable means adapted to be hung on the belt of said garment as a means to be used by the wearer for propelling himself to safety as and for the purpose set forth.

1,195,366. HORSESHOE. EDWARD KROGSRUD, New York, N. Y. Filed May 24, 1916. Serial No. 99,659. (Cl. 168—30.)



A horse-shoe device comprising in combination, a horse-shoe having concaved lips on the upper side thereof, a toe mounted at the front and on the underside of the shoe and out of alinement with the lips, a pair of integral prongs on the rear portions of the shoe ends, an attachment having slots adapted to permit the movement of the prongs therethrough, means on the attachment adapted to reinforce and butt against the prongs, and means for holding the attachment on the shoe and the shoe to the hoof.

1,195,367. FIRE AND WATER TUBE BOILER. ILIAS LADISHENSKY, Kieff, Russia. Filed Apr. 7, 1916. Serial No. 89,670. (Cl. 122—194.)

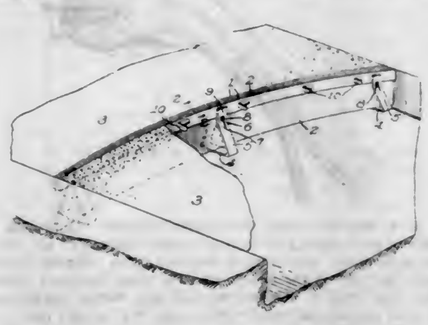


In a steam boiler the combination of a main shell, fire tubes passing therethrough, a flue or uptake at the front end of said shell, a furnace beneath the same and from which the gases of combustion are adapted to pass to the rear ends of said fire tubes, substantially horizontal water pipes located below the shell and extending through said furnace from the front to the rear of the boiler, a front chamber arranged outside the boiler at the front end thereof said chamber being in communication with the lower part of the shell and with the said water pipes, a rear chamber arranged inside the boiler at the rear end thereof and in communication with the said water pipes, a mud collector arranged below said rear chamber and in communication therewith, and pipes for connecting said rear chamber and said mud collector to the rear of the shell adjacent the water level therein.

1,195,368. EXPANSION-JOINT FOR CONCRETE PAVEMENTS OR THE LIKE. EDWARD M. LAING, Highland Park, Ill. Filed Apr. 10, 1914. Serial No. 830,920. (Cl. 94—1.)

1. In an expansion joint for concrete sections, the combination of two protection plates for adjacent sections of concrete, resilient material held between said plates, and yielding clamping jaws upon opposite sides of said plates, said jaws extending downwardly from said plates and forming supports therefor.

2. In an expansion joint for concrete sections, the combination of two protection plates for adjacent sections of concrete, resilient material held between said plates, and clamps for yieldingly clamping said plates, each of said clamps comprising a pair of jaws, flexible tongues struck from said jaws, and a bolt connecting the ends of said tongues.



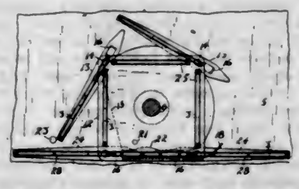
3. In an expansion joint, the combination of a flexible clamp and support comprising a base, portions extending upward from said base to provide clamping jaws, other portions extending upward from said base between said jaws to provide supports with protection plates held between said jaws and supported by said supports and compressible material between said plates.

4. In an expansion joint, the combination with clamping supports each including parallel clamping jaws, flexible tongues struck from said jaws, and bolts connecting the ends of the tongues in pairs; of two protecting plates and interposed resilient material held between said clamping jaws.

5. In an expansion joint, the combination with a combined flexible clamp and support comprising a base, two upwardly extending arms having their upper ends approximately parallel with each other to form clamping jaws, and means for yieldingly connecting said arms together; of two protection plates and a sheet of interposed resilient material clamped between said jaws.

[Claim 6 not printed in the Gazette.]

1,195,369. CHANGEABLE SIGN. JAMES H. LA PEARL, San Francisco, Cal. Filed Sept. 16, 1915. Serial No. 51,006. (Cl. 40—35.)



1. The combination of parallel bearing plates having fixed between them cam bodies, a vertical shaft rotatable between said bearing plates, angular end plates secured to said shaft, means for rotating the shaft and end plates, a series of carriers pivoted on each end plate to swing in planes parallel therewith and between the end plate and the adjacent bearing plate, said pivots being at equal distances around said end plate, and sign sections carried by said carriers, a guide pin extending from each carrier in the direction away from the plate upon which it is pivoted, a wall on the bearing plate forming with the cam a groove to receive said guide pin, said groove extending nearer to the shaft than the pivots of the carriers, a fixed stop, between the bearing plate and the end plate and adapted to be impinged upon by the forward part of the carrier to arrest the same in the rotation of the carrier, the edge of said cam body extending rearwardly from the forward end of said cam groove nearer to the shaft than said forward end, and a fixed stop arranged to be impinged upon by the part of the carrier remote from the guide pin to arrest the latter part while the remainder of the carrier moves onward.

2. The combination of parallel bearing plates having fixed between them cam bodies, a vertical shaft rotatable between said bearing plates, angular end plates secured to said shaft, means for rotating the shaft and end plates, a series of carriers pivoted on each end plate to swing in planes parallel therewith and between the end plate and the adjacent bearing plate, said pivots being at equal distances around said end plate, and sign sections carried by said carriers, a guide pin extending from each carrier in the direction away from the plate upon which it is pivoted, a wall on the bearing plate forming with the cam a groove to receive said guide pin, said groove extending nearer to the shaft than the pivots of the carriers, a fixed stop, between the bearing plate and the end plate and adapted to be impinged upon by the forward part of the carrier to arrest the same in the rotation of the carrier, the edge of said cam body extending rearwardly from the forward end of said cam groove nearer to the shaft than said forward end, and a fixed stop arranged to be impinged upon by the part of the carrier remote from the guide pin to arrest the latter part while the remainder of the carrier moves onward, each sign section having a shoulder adapted to abut against the adjacent end plate on the side of the pivot of the carrier opposite to its pin after the carrier leaves said latter stop to press the forward end of the carrier against the cam body, the remainder of said cam body being rounded, to give the guide pin into said groove.

3. In a sign, the combination of a series of rotatably mounted prisms having parallel longitudinal axes, carriers pivotally supported at corners of the prisms to rotate in planes perpendicular to the axes of the prisms, each carrier having a pin extending therefrom, a cam groove into which said pin enters for guiding the carrier, the path of the pivot of the carrier crossing the direction of the cam groove, whereby the carrier is turned by the rotation of the prism, and a stud against which a portion of the carrier abuts to further turn the carrier in front of the pin and pivot in the rotation of the prism.

4. In a sign, the combination of a series of rotatably mounted prisms having parallel longitudinal axes, slotted carriers pivoted at the corners of the prisms to swing in planes perpendicular to the axes thereof, sign sections removably supported by said carriers, means for intermittently rotating the prisms, means for guiding the carriers in the rotation of the prisms to bring said carriers into alinement with each other at one point in their rotation, and sign sections having their ends reduced in width to form shoulders, said reduced portions being received in said slots.

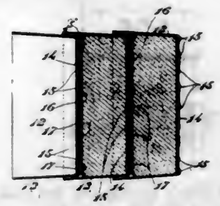
5. In a sign, the combination of a series of rotatably mounted prisms having parallel longitudinal axes, and means for synchronously and intermittently rotating said prisms, comprising a motor, a shaft rotated thereby, a segment gear carried by said shaft, and a gear wheel operatively connected to said prism and adapted to be engaged by said segment gear, and means for increasing the power of the motor when the segment gear comes into engagement with the gear wheel and for decreasing it when it is disengaged therefrom.

[Claims 6 to 8 not printed in the Gazette.]

1,195,370. CHEESE-HOOP AND FOLLOWER. PETER LARSEN, Cattaraugus, N. Y. Filed Nov. 13, 1915. Serial No. 61,306. (Cl. 31—21.)

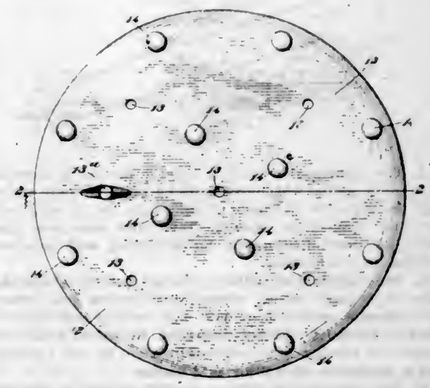
1. A cheese hoop having a closed end or bottom provided with perforations and with spacing projections on its outer or lower face, combined with a one-piece plain-surfaced, perforated, metallic follower closely fitting the open top part of the cheese hoop.

2. A cheese hoop having a closed end or bottom provided on its outer or lower face with perforations and with spot-welded disks or buttons serving as spacing projections, combined with a one-piece, plain-surfaced, perforated, metallic follower closely fitting the open top part of the cheese hoop.



3. A one-piece cheese hoop follower consisting of a plain perforated, sheet-metal disk having a slightly inturned or down-turned, integral peripheral edge, giving the follower a slightly dishing form.

1,195,371. CHEESE-HOOP FOLLOWER. PETER LARSEN, Cattaraugus, N. Y. Filed Dec. 16, 1915. Serial No. 67,160. (Cl. 31—21.)



1. A one-piece cheese hoop follower consisting of a perforated disk of sheet metal having permanently attached, spot-welded projections or buttons on one face thereof, and having a plain or smooth opposite face.

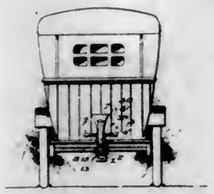
2. A one-piece cheese hoop follower consisting of a perforated disk of sheet metal having permanently attached projections or buttons on one face thereof, and having a plain or smooth opposite face.

3. A one-piece cheese hoop follower consisting of a perforated disk of sheet metal having permanently attached projections or buttons on one face thereof, and having a plain or smooth opposite face, the periphery or outer edge of said follower being slightly bent inward away from the face having said projections or buttons, thus giving the follower a slightly dishing form which will have a tendency to crowd the curd inward.

1,195,372. SIGNAL-LIGHT FOR AUTOMOBILES. GEORGE LOGAN, Washington, D. C. Filed July 13, 1915. Serial No. 39,609. (Cl. 116—31.)

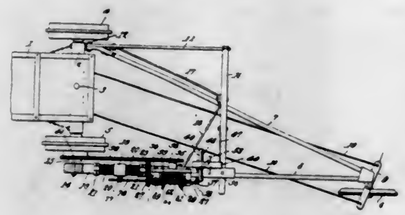
In a signal for automobiles, the combination with a stationary lamp, of a rockably mounted semaphore carrier and lamp housing receiving said lamp and provided with an opening, an elongated tubular transparent semaphore seated against the carrier and arranged to receive light from said lamp through said opening, said semaphore having a collar, a shell surrounding the base of the tubular

semaphore and engaging the collar, fastenings detachably connecting the shell to said semaphore carrier, a collar en-



gaged with the tubular semaphore, and coil springs connecting the collar to the aforesaid shell.

1,195,373. AUTOMATIC ADJUSTING MECHANISM FOR TRACTOR-GUIDES. GUY C. LONG, Timber Lake, S. D. Filed Jan. 24, 1916. Serial No. 73,976. (Cl. 97—81.)



1. The combination with a tractor having a steering axle, of a guide wheel, connections between said wheel and the opposite terminals of said axle, one of said connections comprising slidably connected members, and pendulum controlled means for adjusting said members relative to one another.

2. The combination with a tractor having a steering axle, of a guide wheel, connections between said wheel and opposite terminals of said axle, one of said connections comprising slidably connected members, actuating means for moving said members relative to one another, and a pendulum controlling said means.

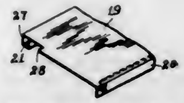
3. The combination with a tractor having a steering axle, of a guide wheel, connections between said wheel and the opposite terminals of said axle, one of said connections comprising slidably connected members, actuating means operable for moving said members in either direction relative to one another, and a transversely swingable pendulum operatively connected to said means to bring the same into operation for moving said members in one direction or the other relative to one another according to the direction in which the pendulum swings.

4. The combination with a tractor having a steering axle, of a guide wheel, connections between said wheel and the opposite terminals of said axle, one of said connections comprising slidably connected members, means between said members for moving them relative to one another, actuating means, means for connecting the aforesaid means, and a transversely swingable pendulum controlling the third mentioned means.

5. The combination with a tractor having a steering axle, of a guide wheel, connections between said wheel and the opposite terminals of said axle, one of said connections comprising slidably connected members, means between said members for moving them relative to one another, actuating means, means for connecting the aforesaid means, a transversely swingable pendulum controlling the third mentioned means, and means operated when said members are moved relative to one another for moving the third mentioned means opposite to the direction in which it is moved by the pendulum.

[Claims 6 to 9 not printed in the Gazette.]

1,195,374. LIBRARY-STACK CONSTRUCTION. WARREN B. LOOK, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Aug. 10, 1914. Serial No. 856,048. (Cl. 211—27.)



1. An upright support comprising a channel having a wide flange on each side thereof, each of said flanges having two parallel surfaces, two of said channels being combined to form a cross shaped channel, said channels having the outer flanges thereof partly cut away at the ends thereof, a bar inserted between the inner flanges of consecutive sections and being overlapped thereby.

2. An upright support comprising a series of cross shaped hollow channels arranged one on top of another in series with their ends in direct abutment and their hollow spaces in alinement, a bar nested in and extending across the abutting ends of two of said channels, said bar interlocking with and holding said channels in line with each other and being supported thereby, a second bar extending transversely through said first named bar and interlocked with the channels above and below said first bar.

3. An upright support comprising a series of cross shaped hollow channels arranged one on top of another in series with their ends in direct abutment and their hollow spaces in alinement, a bar nested in and extending across the abutting ends of two of said channels, said bar interlocking with and holding said channels in line with each other and being supported thereby, a second bar extending transversely through said first named bar and interlocked with the channels above and below said first bar, sleeves on said second bar, the ends of said sleeves abutting against two consecutive ones of the first named bars.

4. An upright support comprising a channel having a wide flange on each side thereof, each of said flanges having two parallel surfaces, two of said channels being combined to form a cross shaped channel, said channels having the outer flanges thereof partly cut away at the ends thereof, a bar inserted between the inner flanges of consecutive sections and being overlapped thereby, channels having narrow flanges thereon fastened to said first named channels and extending transversely thereto.

5. An upright support comprising a channel having a wide flange on each side thereof, each of said flanges having two parallel surfaces, two of said channels being combined to form a cross shaped channel, said channels having the outer flanges thereof partly cut away at the ends thereof, a bar inserted between the inner flanges of consecutive sections and being overlapped thereby, channels having narrow flanges thereon fastened to said first named channels and extending transversely thereto, slots in said channels, shelves adapted to engage with said slots.

[Claims 6 to 12 not printed in the Gazette.]

1,195,375. VIBRATING SIGN. CLARENCE C. LOTT, New York, N. Y. Filed Aug. 3, 1915. Serial No. 43,356. (Cl. 40—139.)

1. A sign of the character described having a plurality of slides bearing characters, means for reciprocating said slides, and antifriction bearings between the adjacent edges of the slides.

2. A sign of the character described having a plurality of slides bearing characters, a frame including side portions of channel form inclosing the ends of the slides, means in the channel for reciprocating the slides, and angle bars secured to the margins of the channel and extending in near to the faces of the slides.

3. A sign of the character described having a plurality of slides bearing characters, a frame including side portions of channel form inclosing the ends of the slides, loops attached to the slides and arranged in the channel, a spiral shaft engaging said loops for reciprocating the slides, and means for driving said shaft.

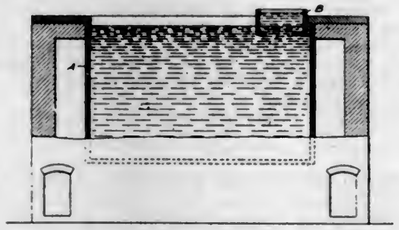


4. A sign of the character described having a plurality of slides bearing characters, a frame including side portions of channel form inclosing the ends of the slides, loops attached to the slides and arranged in the channel, a spiral shaft engaging said loops for reciprocating the slides, and a motor having driving connection with said shaft and supported on the frame of the sign.

5. A sign of the character described having a plurality of slides bearing characters, a frame including side portions of channel form inclosing the ends of the slides, loops attached to the slides and arranged in the channel, a shaft engaging said loops for reciprocating the slides, and guides in the channel for retaining the slides in proper alinement during reciprocation.

[Claim 6 not printed in the Gazette.]

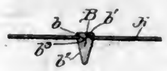
1,195,376. PROCESS FOR LEAD-PLATING METALS. JOHN CALHOUN MCCLINTOCK and ROBERT JAY SHOEMAKER, Topeka, Kans. Filed June 26, 1915. Serial No. 36,466. (Cl. 91—70.3.)



1. A lead-plating process for metals, consisting in cleaning the surface of the metal with an acid, immersing the metal so cleaned, and while it is covered with the acid film, into a molten flux, maintaining the metal immersed until the temperature thereof rises to that of the molten flux, then dipping the metal into a bath of molten lead, which bath is at a temperature substantially that of the flux.

2. A lead-plating process for metals, consisting in submerging the metals in hydrochloric acid to remove all oxids therefrom, then immersing the metal, while it is covered by a film of acid, into molten flux of zinc chlorid supported by a molten lead bath, the temperature of the bath being maintained between 640 and 680° Fahrenheit, maintaining the metal in the flux until its temperature is that of the flux, then lowering the metal into the lead below the flux and extracting the metal from the bath where its surface is clear of the flux.

1,195,377. LABEL. WILSON P. MACDONALD, Montreal, Quebec, Canada, assignor, by mesne assignments, to General Baking Company, New York, N. Y., a Corporation of New York. Filed Feb. 19, 1910. Serial No. 544,828. (Cl. 40—25.)



As a new article of manufacture, a label for pastry or the like comprising an integral wooden spike with an annular groove near one end, and a label card comprising an integral member having a thickness approximating the width of the groove and an opening corresponding to the diameter of the spike at the base wall of the groove, the spike being tapered throughout the full length thereof beyond the rear surface of the label card, whereby to permit said spike to be forced into the material throughout its full length to bind the card in immovable position on the surface of such material to be labeled.

1,195,378. MAIL-BOX. JOSEPH J. MASON, Rochester, N. Y. Filed Feb. 16, 1916. Serial No. 78,601. (Cl. 232—19.)



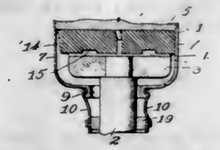
1. A mail box comprising relatively movable back and front walls, and flanges secured to the back and front walls having inclined upper surfaces which coöperate to form a substantially V-shaped bottom when the box is closed.

2. A mail box comprising a housing consisting of back, side and top walls, a body portion consisting of front and side walls which latter are pivotally arranged between the side walls of the housing, and flanges secured to the back and front walls having inclined upper surfaces that coöperate to form a substantially V-shaped bottom when the box is closed.

3. A mail box comprising a housing consisting of back and top walls, side walls connecting said top and back walls, a body portion pivotally mounted between said side walls of the housing and comprising front and side walls which latter are provided with rear edges that incline forwardly and upwardly at their upper portions when the body portion is closed, forming cutaway portions which permit the body portion to swing to open the box, while said inclined upper portions act to limit the opening movement of the body portion by their engagement with the back wall.

4. A mail box comprising a housing consisting of back and top walls, side walls connecting said top and back walls, a body portion pivotally mounted between said side walls of the housing and comprising front and side walls, which latter are provided with rear edges that incline forwardly and upwardly at their upper portions when the body portion is closed, forming cutaway portions which permit the body portion to swing to open the box, while said inclined upper portions act to limit the opening movement of the body portion by their engagement with the back wall, and flanges secured to the back and front walls having inclined upper surfaces that coöperate to form a substantially V-shaped bottom when the box is closed.

1,195,379. RESILIENT WHEEL. FRANCIS MEAD, Chicago, Ill. Filed Oct. 7, 1915. Serial No. 54,478. (Cl. 152—36.)



1. In a vehicle wheel, the combination with inner and outer rims having radially disposed projections secured alternately to the inner and outer rims and extending partly across the space therebetween, of resilient members disposed in said space and respectively abutting at their ends against consecutive projections and projecting laterally beyond one of said rims, and side flanges carried by the outer of said rims out of contact with the aforesaid rim, said flanges laterally respectively engaging the projecting portions of the resilient members.

2. In a vehicle wheel, the combination with an inner and an outer rim, of side flanges on one of the rims radially overlapping but laterally spaced from the other rim, a central annular web on the last named rim projecting toward the rim carrying the flanges, and a pair of resilient members disposed between said rims, each of said members bearing against said web and having an integral portion projecting laterally beyond the rim having the web, said integral portion normally contacting with one of the side flanges but adapted to be moved out of its said contacting relation by a relative lateral movement of the rims in one direction.

3. In a vehicle wheel, the combination with inner and outer rims equipped with radially disposed projections secured alternately to the inner and outer rims and extending partly across the space therebetween, of resilient members disposed in said space and respectively abutting at their ends against consecutive projections, each of said members comprising a normally rectilinear prismatic cushion having one longitudinal face thereof longer than the opposite face.

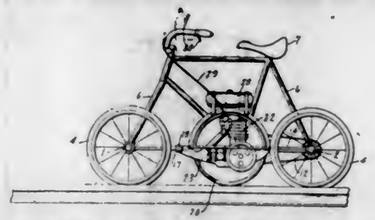
4. In a vehicle wheel, the combination with relatively movable inner and outer rims separated by an annular space, of a plurality of radially ended resilient elements disposed in annular formation in said space and each bent from a normally rectilinear prismatic form; the outer and inner faces of each element being respectively substantially equally extended and compressed during the bending, and the outer face being normally longer than the inner face so as to compensate for the difference in the lengths of the arcs in which said faces are curved.

5. In a vehicle wheel, the combination with relatively movable inner and outer rims, of side flanges carried by one of said rims and radially overlapping the other thereof, cushioning elements disposed in the annular space between said rims and side flanges, said elements being arranged substantially in two rings encircling the inner rim and disposed laterally of each other, spacer means carried by one of the rims for spacing the elements comprising the two rings, and auxiliary means associated with the last named rim and the elements of each ring for preventing a relative lateral sliding thereof in one direction.

[Claims 6 to 8 not printed in the Gazette.]

1,195,380. DRIVING ATTACHMENT FOR CARS. HENRY MILLER, Milwaukee, Wis., assignor to A. O. Smith Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed July 26, 1915. Serial No. 41,844. (Cl. 105—248.)

1. The combination with a railway car, of an auxiliary frame rod connecting the front and rear supporting axles thereof, a bracket secured to said frame rod, a motor frame pivotally connected with said bracket, a motor carried by said frame, a traction wheel supporting the motor and frame and operatively connected to be driven by said motor, said traction wheel being adjusted for operation in registry with the track along which said car travels.



2. A railway car having a frame provided with supporting wheels and connections for driving the same manually, in combination with an auxiliary traction wheel, a motor carried thereby and operatively connected to drive the same, a pushing arm pivotally connecting the traction wheel with the car frame and adapted to support said traction wheel in registry with one of the track rails along which said car travels, a laterally projecting rest on the car frame, and a coöperating projection normally supported by the traction wheel slightly above said rest and adapted to engage the rest when the car is lifted from the track to prevent the traction wheel from dropping materially below the supporting wheels.

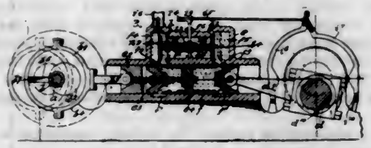
3. The combination with a railway car, of a motor carrying traction wheel adapted to drive said car, means for supporting the traction wheel out of driving relation to said car, and means for operating said car manually when the traction wheel is so supported.

4. The combination with a car having front and rear supporting axles, of a frame rod connecting said axles, a bracket secured to the frame rod, a motor having a frame pivotally connected with said bracket, and an auxiliary traction wheel operatively connected with the motor to be driven therefrom and adapted to support the motor frame and motor, means for operating the car manually, and means for relieving the car of the resistance of the motor and auxiliary traction wheel during manual operation of the car.

5. The combination with a car having front and rear supporting axles, of a frame rod connecting said axles, a bracket secured to the frame rod, a motor having a frame pivotally connected with said bracket, and an auxiliary traction wheel operatively connected with the motor to be driven therefrom and adapted to support the motor frame and motor, said traction wheel being independent of the supporting wheels of the vehicle, and said supporting wheels adapted to drive the car independently of the auxiliary traction wheel.

[Claims 6 to 10 not printed in the Gazette.]

1,195,381. MECHANICAL MOVEMENT. RICHARD S. M. MITCHELL, East Orange, N. J., assignor, by mesne assignments, to Mottlau Transmission, Incorporated, a Corporation of New York. Filed Oct. 30, 1913. Serial No. 798,190. (Cl. 74—14.)



1. The combination of a driving element, a driven element, means including a fluid for transmitting motion from one to the other, and external means for sealing said fluid in either of two positions to correspondingly affect the direction of movement of said driven element.

2. The combination of a driving element, a driven element, means including a fluid for transmitting motion from one to the other, and external means for varying the direction of flow of said fluid to vary the direction of movement of said driven element.

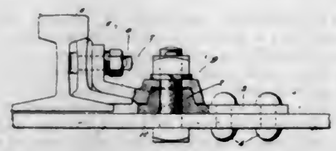
3. The combination of a driving element, a driven element, means including a fluid for transmitting motion from one to the other by impulses, and external means for varying the direction of flow of said fluid to vary the direction of movement of said driven element.

4. The combination of a driving element, a driven element, means including a fluid for transmitting motion from one to the other in one direction, and external means for reversing the direction of movement of said driven element at stated periods.

5. The combination of a driven element, a driven element, means including a fluid for transmitting motion from one to the other in one direction, and automatic means for reversing the direction of movement of said driven element at stated periods.

[Claims 6 to 23 not printed in the Gazette.]

1,195,382. SWITCH-ROD. JAMES C. MOCK, Detroit, Mich. Filed Nov. 23, 1914. Serial No. 873,623. (Cl. 104—96.)



1. In a device of the class described, a switch rod, a plate secured to said rod and having an upwardly projecting stud, a switch point clip having a socket in its lower side fitting over said stud, and a bolt holding said parts in assembled position, whereby horizontally acting forces are transmitted from said clip to said rod through the coacting surfaces of said stud and socket.

2. In a device of the class described, a switch rod, a plate secured to said rod, a switch point clip, one of said last-named parts being provided with a socket, a stud upon the other of said last-named parts, said stud being seated in said socket, and a bolt holding the parts in assembled relation, whereby horizontally acting forces are transmitted from said clip to said rod through the coacting surfaces of said stud and socket.

3. In a device of the class described, a switch rod, a plate secured to said rod, a switch point clip, and a bolt holding said parts in assembled relation, said plate and clip having coacting upwardly extending arcuate surfaces through which horizontally acting forces are transmitted from the clip to the rod.

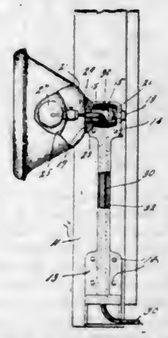
4. In a device of the class described, a switch rod, a plate secured to said rod and having an upwardly projecting stud, a switch point clip carrying a part adapted to fit over and engage said stud, and a bolt holding the parts in assembled position, whereby horizontally acting forces are transmitted from the clip to the rod through the coacting surfaces of said stud and the part carried by said clip.

1,195,383. AUTOMOBILE-HEADLIGHT AND MOUNTING THEREFOR. JOHN C. MOORE, Connersville, Ind. Filed Aug. 25, 1915. Serial No. 47,346. (Cl. 240—7.)

1. In combination, an automobile radiator frame, a headlight bracket extending vertically along the side of such frame and rigidly attached thereto, said bracket having a short lateral arm in its upper end, and a forwardly projecting headlight mounted on the outer end of said short arm.

2. In combination, an automobile radiator frame, a headlight bracket extending vertically along the side of such frame and rigidly attached thereto, and a headlight mounted in the upper end of said bracket.

3. In combination, a headlight bracket rigidly fastened to the side of an automobile radiator frame, said bracket being provided with a forwardly directed opening through it and also being provided with a wire channel extending along its body and communicating with said opening, a hollow bolt in said opening, said bolt having a lateral opening in its shank to provide a connection between its interior and said wire channel, and a headlight having a casing provided at its rear with a hole through which the shank of said bolt extends, said hole being larger than said shank and the head of the bolt being within said casing, so that the tightening of the bolt clamps the headlight casing between the bolt head and the front face of the bracket.



4. In combination, a headlight bracket, said bracket being provided with a forwardly directed opening through it and also being provided with a wire channel extending along its body and communicating with said opening, a hollow bolt in said opening, said bolt having a lateral opening in its shank to provide a connection between its interior and said wire channel and also having its head coöperating with the front face of the bracket to form a clamp for a headlight.

5. In combination, a headlight support, said support being provided with a forwardly directed opening through it, a bolt in said opening, and a headlight having a casing provided at its rear with a hole through which the shank of said bolt extends, said hole being materially larger than said shank and the head of the bolt being within said casing, so that the tightening of the bolt clamps the headlight casing between the bolt head and the front face of the support and the loosening of the bolt permits adjustment of the headlight.

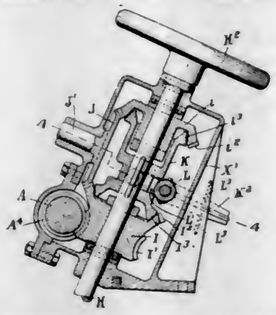
[Claims 6 to 9 not printed in the Gazette.]

1,195,384. MECHANICAL MOVEMENT. AUGUST J. MOTTLAU, Philadelphia, Pa., assignor to Mottlau Transmission Incorporated, New York, N. Y., a Corporation of New York. Filed Aug. 5, 1914. Serial No. 855,124. (Cl. 74—14.)

1. In a mechanical movement, the combination of a reciprocating member, an adjustable element, a pair of links pivotally connected one to the first mentioned member and the other to the second mentioned member and each to the other with the axis of the common pivotal connection of the two links at the same distance from the axes of the other two pivotal connections to the links, and a power transmitting connection to the connected ends of said links, said element being adjustable to move the axis of its pivotal connection to one of said links transversely to the path of movement of the axis of the pivotal connection of the other link to said member.

2. In a mechanical movement, the combination of a reciprocating member, an adjustable element, a pair of links pivotally connected one to the first mentioned member and the other to the second mentioned member and each to the other with the axis of the common pivotal connection of the two links at the same distance from the axes of the other two pivotal connections to the links, a power trans-

mitting connection to the connected ends of said links and means for holding said elements in different adjustments in which the axis of the pivotal connection thereto of one of said links is at different sides of, and at different distances from the path of movement of the axis of the pivotal connection of the other link to said member.



3. In a mechanical movement, a crank shaft, a rocking element, a reciprocating member, a pair of links pivotally connected one to said rocking element and the other to said member and each to the other with the axis of the common pivotal connection of the two links at the same distance from the axes of the other two pivotal connections to the links, a connecting rod connecting the connected ends of the two links to the crank shaft, said rocking element being adapted when oscillated to move the axis of its pivotal connection to one of said links transversely to the path of movement of the pivotal connection between the other link and said member as the latter reciprocates, and means for oscillating said rocking element.

4. In a mechanical movement, a crank shaft, an adjustable element, a reciprocating member, a pair of links pivotally connected one to said element and the other to said member and each to the other with the axis of the common pivotal connection of the two links at the same distance from the axes of the other two pivotal connections to the links, a connecting rod connecting the connected ends of the two links to the crank shaft, and means for adjusting said element to move the axis of its pivotal connection to one of said links transversely to the path of movement of the pivotal connection between the other link and said member as the latter reciprocates.

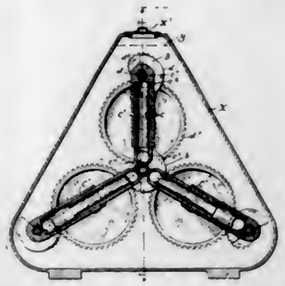
5. In a mechanical movement, a crank shaft, an adjustable element, a reciprocating member, a pair of links pivotally connected one to said element and the other to said member and each to the other with the axis of the common pivotal connection of the two links at the same distance from the axes of the other two pivotal connections to the links, a connecting rod connecting the connected ends of the two links to the crank shaft, and means for adjusting said element to move the axis of its pivotal connection to one of said links from one side to the other of the path of movement of the pivotal connection between the other link and said member as the latter reciprocates.

[Claims 6 and 7 not printed in the Gazette.]

1,195,385. MECHANICAL MOVEMENT. AUGUST J. MOTTLAU, Philadelphia, Pa., assignor to Mottlau Transmission, Incorporated, New York, N. Y., a Corporation of New York. Continuation of application Serial No. 634,564, filed June 21, 1911. This application filed Dec. 28, 1914. Serial No. 879,249. (Cl. 192—18.)

1. In a mechanical movement, a member adapted to be reciprocated, means for varying its extent of reciprocating movement, a rotary member driven thereby, and means for varying the length of said reciprocating member during each complete stroke thereof.

2. In a mechanical movement, a member adapted to be reciprocated, means for varying its extent of reciprocating movement, a rotary member driven thereby, means for varying the length of said reciprocating member during each complete stroke thereof, and means adapted to resist variations during a working portion of each complete stroke.



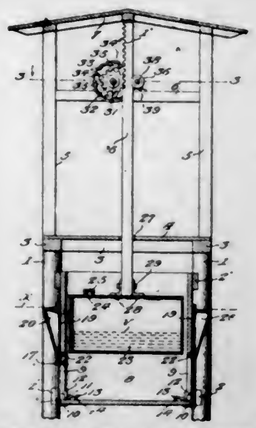
3. In a mechanical movement, a driving member, an adjustable crank connected thereto, a member connected to said crank and adapted to be reciprocated, a rotary member driven thereby, and means for varying the length of said reciprocating member during each complete stroke thereof.

4. In a mechanical movement, a driving member, a driven member, a hollow extensible connecting rod comprising two relatively adjustable members and provided with ports in each member, a valve for periodically closing one of said ports and a valve for closing the port in the other member for a working stroke, connections between said connecting rod and said driving and driven members, and means for adjusting one of said connections.

5. In a mechanical movement, a driving member, a driven member, a hollow extensible connecting rod provided with ports and valves for periodically closing same, and connections between each end of said connecting rod and said driving and driven members, one of said connections being adjustable.

[Claims 6 to 74 not printed in the Gazette.]

1,195,386. TIDAL MOTOR. DANIEL MOULD, Ulsterville, N. Y. Filed Dec. 1, 1911. Serial No. 663,336. (Cl. 253—9.)



1. In combination, a caisson, a gate within said caisson, a detent to hold said gate in locked condition, a float secured to said gate to raise the same, a float within said caisson, a rack bar extending from said float, a shaft revolubly secured above said float, and a gear wheel in pawl and ratchet engagement with the shaft and meshing with said rack bar, said float arranged to contact with said detent to release said gate, as and for the purpose set forth.

2. The combination in a device of the character described, of a caisson, a gate within said caisson, a detent to hold said gate in locked condition, a float secured to said gate to raise the same, a stop limiting the upward movement of said gate, a float within said caisson, said detent being located within the path of said float, a rack bar extending from said float, a shaft revolubly secured above said float, and a gear wheel in pawl and ratchet engagement with said shaft and meshing with said rack bar, all arranged substantially as and for the purpose set forth.

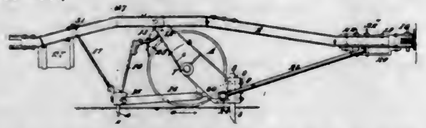
3. The combination in a device of the character described, of a caisson, a gate within said caisson, a detent to hold said gate in a locked condition, a float secured to said gate to raise the same, a stop limiting the upward movement of said gate and arranged for co-action with said detent, a float within said caisson having an intake opening, a cap closing said opening, a rack bar extending from said float, a shaft revolubly secured above said float, and a gear wheel in pawl and ratchet engagement with said shaft and meshing with said rack bar, said float arranged to contact with said detent to release said gate, as and for the purpose set forth.

4. The combination in a tidal motor of the following instrumentalities to wit, a caisson having openings near the lower end, the bottom of said caisson reaching the low water mark, said caisson extending above high water mark, flanges skirting the vertical and lower edges of said openings, gates slidably held to said caisson by means of said flanges, a float secured to each gate, a shoulder serving as a stop secured to each gate, oppositely positioned detents secured to the bottom of said caisson, one detent arranged for co-action with each of said shoulders, a spring to normally force said detents in one direction, a float within said caisson, said detents being located within the path of said float, a rack bar extending upward from said float, a suitably positioned drive shaft, a gear wheel loosely held to said drive shaft, a disk keyed to said drive shaft adjacent to said gear, and a spring actuated pawl carried by said disk and engaging said gear, said rack bar meshing with said gear.

5. The combination in a tidal motor of the following instrumentalities to wit, a caisson having openings near the lower end, the bottom of said caisson reaching the low water mark, said caisson extending above high water mark, said caisson being provided with flanges skirting the vertical and lower edges of said openings, gates slidably held to said caisson by means of said flanges, a float secured to each gate, a shoulder serving as a stop secured to each gate, oppositely positioned detents secured to the bottom of said caisson one detent arranged for co-action with each of said shoulders, a spring to normally force said detents in one direction, a float within said caisson, said detents being located within the path of said float, a rack bar extending upward from said float, a suitably positioned drive shaft, a gear wheel loosely held to said drive shaft, a disk keyed to said drive shaft adjacent to said gear, a spring actuated pawl carried by said disk and engaging said gear, said rack bar meshing with said gear, and means to hold said rack bar to said gear.

[Claims 6 to 9 not printed in the Gazette.]

1,195,387. SCARIFIER. FRANKLIN T. MOYER, Napa, Cal. Filed Oct. 26, 1915. Serial No. 57,963. (Cl. 37—50.)



1. In a road sacrifier, the combination of a roller, a pair of arms pivotally mounted on the roller, a frame pivotally supported on the upper ends of said arms, a cross-bar connecting the lower ends of said arms in front of the roller, a plurality of tines secured on the cross-bar, a draw-bar connecting the cross-bar with the forward end of the frame, a second cross-bar positioned rearwardly of the roller, a plurality of tines secured on the second cross-bar, links connecting said second cross-bar with the arms and connected cross-bar from the frame.

2. In a road scarifier, the combination of a roller, a pair of arms pivotally mounted on the roller, a frame pivotally supported on the upper ends of said arms, a cross-bar connecting the lower ends of said arms in front of the roller, a plurality of tines secured on the cross-bar, a draw-bar connecting the cross-bar with the forward end of the frame, a second cross-bar positioned rearwardly of the roller, a plurality of tines secured on the second cross-bar, links connecting said second cross-bar with the arms, and a chain for suspending said links and connected cross-bar from the frame.

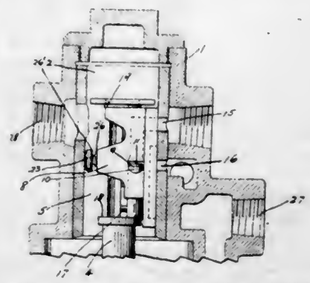
3. In a road scarifier, the combination of a roller, a pair of arms pivotally mounted on the roller, a frame pivotally supported on the upper ends of said arms, a cross-bar connecting the lower ends of said arms in front of the roller, a plurality of tines secured on the cross-bar, a draw-bar connecting the cross-bar with the forward end of the frame, a second cross-bar positioned rearwardly of the roller, a plurality of tines secured on the second cross-bar, links connecting said second cross-bar with the arms, means for suspending said links and connected cross-bar from the frame, and means for adjustably securing the draw-bar to the frame.

4. In a road scarifier, the combination of a roller, a pair of arms pivotally mounted on the roller, a frame pivotally supported on the upper ends of said arms, a cross-bar connecting the lower ends of said arms in front of the roller, a plurality of tines secured on the cross-bar, a draw-bar connecting the cross-bar with the forward end of the frame, a second cross-bar positioned rearwardly of the roller, a plurality of tines secured on the second cross-bar, links connecting said second cross-bar with the arms, a chain for suspending said links and connected second cross-bar from the frame, and means for adjustably securing the draw bar to the frame.

5. In a road scarifier, the combination of a roller, a pair of arms positioned one on each side of the roller, a shaft extending through the roller and the arms to support the arms and to permit a pivotal movement of the arms with relation to the roller, a shaft extending through the upper ends of the arms and connecting the same, a frame pivotally mounted at its rear end on said shaft, a cross bar connecting the lower ends of the arms, a plurality of tines secured on the cross-bar, and a draw-bar connecting the cross-bar with the forward end of the frame.

[Claims 6 and 7 not printed in the Gazette.]

1,195,388. TRIPLE VALVE. JOHN P. MURPHY, Charleston, S. C. Filed July 13, 1915. Serial No. 39,545. (Cl. 188—15.)



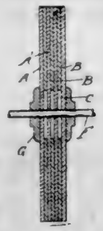
1. A triple valve, including a chamber therein, a valve including a piston and stem disposed in said chamber, a bifurcated slide straddling the said stem, said stem being.

provided with a transverse perforation, a headed pin arranged in said perforation and guided thereby and having its head in engagement with the wall of said chamber, a slide disposed under said headed pin, a coil spring disposed on said headed pin and having one end in engagement with said last mentioned slide and its other end in engagement with said pin to force the said pin and said last mentioned slide oppositely to securely maintain the first mentioned slide in intimate contact with the flat bottom of said longitudinal channel, the said first mentioned slide and the last mentioned slide being capable of relative movement, substantially as described.

2. A triple valve, including a slide feed valve having a chamber provided with a longitudinal channel, a valve including a piston and stem in said chamber, said chamber being provided with ports, two of which enter the same in said longitudinal channel, a bifurcated slide mounted on said stem and operable in said longitudinal channel to command one of the ports therein, the said slide being provided with a port adapted to register with one of said ports in said channel, means connected to and operable by said stem to open and close said port in said slide, the said slide being provided with a longitudinal chamber to effect communication between said ports in said casing, the stem being provided with a transverse perforation, a pin in said perforation and guided thereby and having its outer end in engagement with the wall of said chamber, a spring disposed on said pin in said perforation and in engagement with said slide to force the said pin and slide in opposite direction to effectually maintain the said slide in intimate contact with the bottom of said longitudinal channel.

3. A triple valve, including a slide feed valve having a chamber provided with a longitudinal channel, ports entering said channel, a valve including a piston and stem operable within said chamber, a slide mounted on said stem and movable relatively to the same and operable within said longitudinal channel, said slide being provided with a port adapted to register with one of said ports entering said channel and provided with means for effecting communication between both of said ports entering said channel, means connected to and operable by movement of said stem to open and close said port in said slide, a pin disposed in said stem and having one end in engagement with the wall of said chamber, a spring on said pin in said stem to effectually maintain the said slide in intimate contact with the bottom of said longitudinal channel.

1,195,389. BUFFING OR POLISHING WHEEL. CARL B. NEHLS, Detroit, Mich., assignor to Felt-Sub Polishing Wheel Company, Detroit, Mich., a Partnership consisting of Edward Gesser, Barney Nehls, Frank Shields, and Carl B. Nehls. Filed Sept. 9, 1915. Serial No. 49,705. (Cl. 51—1.)

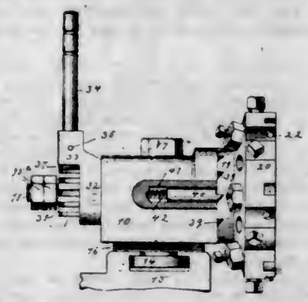


1. A buffing-wheel, comprising a body formed of a series of fabric disks of substantially uniform diameter, forming a continuous cylindrical surface, portions of said disks being cut-way to increase the resiliency.

2. A buffing-wheel, comprising a series of fabric disks alternately imperforate and partially cut-away, and forming a continuous cylindrical surface.

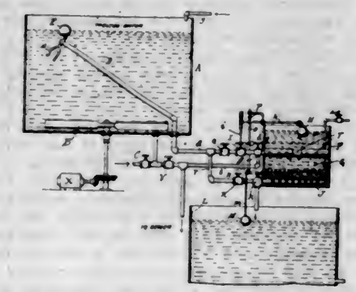
3. A buffing-wheel, comprising a body formed of a series of fabric disks forming a continuous cylindrical surface, the peripheral portions of all of said disks being imperforate, and portions of alternate disks within the periphery being cut-away.

1,195,390. TURRET TOOL-POST FOR ENGINE-LATHES. HERMANN NEWMANN, New York, N. Y. Filed May 3, 1916. Serial No. 95,021. (Cl. 29—48.)



A turret tool post, comprising a block, a horizontal spindle journaled therein, a cutter head carried by the spindle, a vertical screw bolt extending through the block sidewise of the spindle, a headed nut carried by the bolt, and a threaded sleeve engaging the block and encompassing the nut.

1,195,391. WATER-PURIFYING APPARATUS. MARTIN F. NEWMAN, Oakmont, Pa., assignor to Wm. B. Scaife & Sons Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 12, 1916. Serial No. 96,958. (Cl. 210—1.)



1. In water purifying apparatus the combination with a treatment and settling tank, a filter and a purified water reservoir, of a float-operated valve controlling the inflow to the filter by the level therein, a float-operated valve controlling the outflow from the filter by the level in the purified water reservoir, and means to wash the filter by reverse flow from the treatment and settling tank.

2. In water purifying apparatus the combination with a treatment tank, a filter and a purified water reservoir, of a float-operated valve controlling the inflow to the filter by the level therein, and a float-operated valve controlling the outflow from the filter by the level in the reservoir, the float operating the inlet valve being provided with devices for also closing the outlet valve at a regulated minimum of the level in the filter.

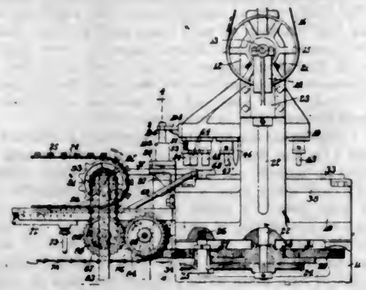
3. In water purifying apparatus the combination with a tank of treated and settled water and a gravity filter, of a system of reversing pipes and valves arranged to cause flow of treated water through the filter in reversed direction for washing, and an outlet valve for the filter provided with devices to close it by the fall of level in the filter, substantially as described.

4. In water purifying apparatus, the combination with an elevated tank of treated water, a filter and a receiving reservoir, of a float-operated valve controlling the outflow from the filter by the reservoir level, a float-operated valve controlling the inlet to the filter from the treated water tank, and means for reversing the flow of treated water through the filter, substantially as described.

5. In water purifying apparatus, a filter with a feeding and emptying system of pipes and valves, comprising a float-operated inlet valve and a float-operated outlet valve, and connections between them to control the level and automatically prevent the filter from entirely emptying of water under any condition.

[Claims 6 and 7 not printed in the Gazette.]

1,195,392. MACHINE FOR MAKING BOTTLE-CAPS. GEORGE M. C. NIELSEN, Millis, Mass., assignor to United Cork & Seal Co., Millis, Mass., a Corporation of Maine. Filed Apr. 28, 1909. Serial No. 493,051. (Cl. 113—80.)



1. In an apparatus of the class described, the combination of a support provided with a pocket adapted to receive a flanged bottle cap containing a layer of cork; means for forcing into the face of said layer of cork a metal plate, the outer edge of which is removed from the inner wall of said flange; and mechanism for moving said support and forcing means relative to each other and positioning them in axial alinement during the insertion of said metal plate.

2. In an apparatus of the class described, the combination of a support provided with a pocket adapted to receive a flanged bottle cap containing a layer of cork; means for forcing into the face of said layer of cork a flanged metal plate, the outer wall of which is separated from the inner wall of the flange on said cap; and mechanism for moving said support and forcing means relative to each other and positioning them in axial alinement during the insertion of said metal plate.

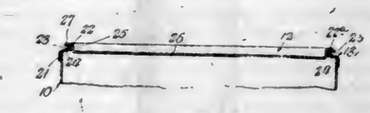
3. In an apparatus of the class described, the combination of a support provided with a pocket adapted to receive a flanged bottle cap containing a layer of cork; means for forcing into the center of the face of said layer of cork a metal plate of less diameter than said cap, the outer edge of which is separated from the flange of said cap; and mechanism for moving said support and forcing means relative to each other and positioning them in axial alinement during the insertion of said metal plate.

4. In an apparatus of the class described, the combination of a support provided with a pocket adapted to receive a bottle cap containing a layer of cork; means for forming a circular flanged metal plate; means for positioning said plate with its center centrally disposed relative to said bottle cap and means for forcing the flange of said plate into said cork.

5. In an apparatus of the class described, the combination of a movable support provided with a pocket adapted to receive a bottle cap containing a layer of cork; mechanism for forming a flange upon a circular metal plate; means for positioning said cap beneath said flanged plate with their centers opposite each other; and means for forcing said flange into said cork.

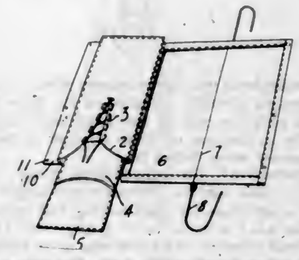
[Claims 6 to 40 not printed in the Gazette.]

1,195,393. FRICTION-LID CAN. JOHN H. O'SHEA and CHARLES H. FENTON, Chicago, Ill., assignors to The N. K. Fairbank Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 5, 1915. Serial No. 12,260. (Cl. 220—76.)



A can of the kind described, comprising in combination with a body open at the top, a friction-lid-retaining ring comprising a tubular ring embracing the open top of the can body and attached thereto, a second duplex, tubular ring spaced radially within and being substantially parallel to the first named ring, said second ring being finished to provide a smooth, rounded top edge by bending the metal outwardly and down upon itself, and an annular web connecting the inner and outer rings, said web being inclined outwardly from the body of the can toward the inner ring, and a saucer shaped tubular lid adapted to engage within the inner ring and being provided with a radial flange adapted to close upon the top edge of the said inner ring.

1,195,394. COMBINED SLEEPING-BAG AND SHELTER. ANTOINE DE LOTBINIERE PANET, Toronto, Ontario, Canada. Filed Sept. 27, 1915. Serial No. 52,897. (Cl. 5—5.)



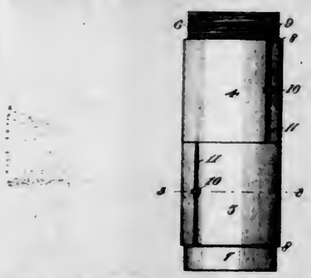
1. In a sleeping bag, the combination with the bag body having a bag-like portion extending from the lower edge of the mouth of the bag body, a fabric portion extending from one longitudinal edge of the bag body, means for supporting the fabric extension in an inverted V-form over the bag body, means for detachably securing the outer free end of the fabric portion to the opposite longitudinal edge of the bag body, and a flap normally forming a cover for the bag extension and adapted to be secured to the inverted V fabric portion when desired.

2. In a sleeping bag, the combination with the bag body having a bag-like portion secured to the upper face and extending from the lower edge of the mouth of the bag body, a fabric portion extending from one longitudinal edge of the bag body, means for supporting the fabric portion in an inverted V form over the bag body, means for detachably securing the outer free end of the fabric portion to the opposite longitudinal edge of the bag body, and a flap extending from the lower edge of the mouth of the bag-like portion for simultaneously forming a closure for the mouth of the bag-like portion and a closure for the corresponding end of the inverted V portion.

1,195,395. PUMP-PLUNGER. ARCHIBALD E. PRESTON, Fillmore, Cal. Filed Apr. 28, 1915. Serial No. 24,458. (Cl. 103—63.)

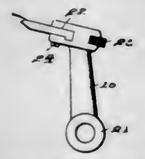
A pump plunger comprising a cylinder, an expansible sleeve surrounding the cylinder, means for holding the sleeve on the cylinder, a pair of outwardly extending pins fixed on the sleeve in offset relation, and a pair of split expansible sleeves encircling the first sleeve, each sleeve

of said pair having opposing recesses in the walls of its split to form a circumferential slot for freely receiving



one of said pins whereby limited sliding movement between the inner and outer sleeves is obtained.

1,195,396. CUTTER-HEAD. HENRY A. RECEN, Denver, Colo., assignor to The Hercules Tunnel Machine and Development Company, a Corporation of Colorado. Filed July 29, 1913. Serial No. 781,797. (Cl. 125—14.)



1. A cutter-head for tunneling-machines composed of disks, hammers pivotally mounted on the disks in a circle concentric with the axes of the disks, each hammer having a buffer in position to strike the hub of the next following hammer when it flies back.

2. A cutter-head for tunneling-machines comprising disks, each disk having alternately-arranged holes of large and small diameter, pins having two diameters and a head, the head adapted to fit a large hole of one disk and the small diameter the small hole of an adjacent disk, and hammers mounted on the large diameter of each pin.

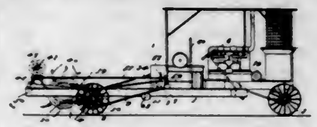
3. A cutter-head for tunneling machines comprising disks, each disk having alternately-arranged holes of large and small diameter, pins having two diameters and a head, the head adapted to fit a large hole of one disk and the small diameter the small hole of an adjacent disk, means for preventing the pins from turning, means for retaining the pins removably in said holes, and hammers mounted on the large diameter of each pin.

4. The combination with a suitable support, shafts journaled therein at an angle to each other, the inner ends of said shafts connected together, disks keyed on the shafts and carrying hammer-heads, certain of said disks removable from the outer ends of the shafts.

5. The combination with a suitable support, shafts journaled therein at an angle to each other, a flexible connection between the shafts, disks keyed on the shafts, hammers pivotally connected to said disk, certain of said disks removable from the outer ends of the shafts.

1,195,397. LAND-BREAKING PLOW. ARTHUR REED, Fort Worth, Tex., assignor to Bennett W. Reed, Fort Worth, Tex. Filed Nov. 18, 1912. Serial No. 731,951. (Cl. 97—72.)

1. A land breaking machine comprising a wheeled frame and a motor carried thereby, a main axle in two parts journaled on said frame, a drum frame adjustably mounted in said wheeled frame and consisting of two side beams and a cross-beam at the rear end connecting said side beams and the front ends of said beams bearing against the bearings of said main axle, making a pivotal bearing, a drum shaft journaled in said drum frame, two series of drums independent of each other loosely mounted on said drum shaft and plows rigid with each drum, and gearing for driving each series of said drums from each part of the main axle and said gearing being adapted to hold said drum frame in operative relation.



2. A land breaking machine comprising a wheeled frame, a main axle in two parts journaled in said frame, means for driving said axle, a drum frame adjustably mounted in said wheeled frame and consisting of two side beams and a cross-beam connecting the rear ends of said beams and the front ends of said frames being concaved and engaging the bearings of said main axle thereby forming a pivotal bearing for the drum frame, a drum shaft journaled in said drum frame and provided with land breaking plows, and gearing for driving said drums from each part of said main axle and for holding said drum frame in operative relation to said main axle.

3. A land breaking machine comprising a wheeled frame, a main axle and bearings therefor attached to said frame, supporting wheels carrying said main axle, means for driving said main axle, a drum frame adjustably mounted in said frame, a drum shaft journaled in said main frame and consisting of two side beams and a cross beam connecting said side beams at the rear ends of said side beams having the front ends concave and engaging the bearings of said main axle, slidable bearings in said drum frame for said drum shaft, drums on said drum shaft provided with land breaking plows, and gearing for driving said drums from the main shaft and for supporting said drum frame in operative position.

4. A land breaking machine comprising a wheeled frame, a main axle in two parts and bearings therefor attached to said frame, means for driving the two parts of said main axle independently of each other, a drum frame within said main frame, a drum shaft and bearings therefor slidably mounted in said drum frame, means for varying the position of said bearings in said drum frame, a drum shaft journaled in said bearings, drums provided with land breaking plows, and loosely mounted on said drum shaft, and gearing for driving said drums from the main axle and for holding said drum frame in operative position.

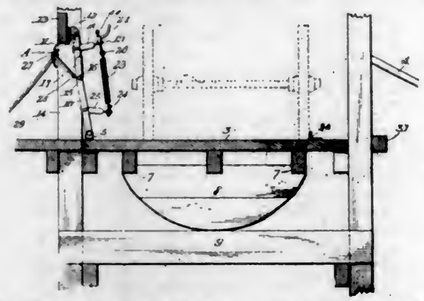
5. A land breaking machine comprising a wheeled frame, a main axle in two parts and bearings therefor attached to said frame, means for driving the two parts of said axle independently of each other, a drum shaft and bearings therefor, two series of drums mounted on said drum shaft and each series having interlocking hubs, the adjacent hubs of the two series being smooth and bearing against each other to hold the two series in place, plows rigid in said drums, and means for driving each series of drums from each part of said axle independently of the other.

[Claims 6 to 10 not printed in the Gazette.]

1,195,398. LOCKING MECHANISM FOR THE DUMPING-PLATFORMS OF SUGAR-BEET-LOADING STRUCTURES. MACK S. RICHESON, Orchard, Colo. Filed Dec. 27, 1915. Serial No. 68,857. (Cl. 214—11.)

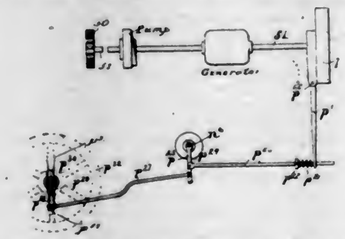
1. The combination with a supporting structure, and a rocker supported platform mounted thereon, of a toggle latch, the ends of which are pivotally connected respectively to one side portion of said platform and to said supporting structure, arms extending at right angles from the members of said toggle latch, a contraction spring connected at its ends to said arms, and means mounted on the supporting structure for breaking the joint in said toggle latch, thereby to permit tilting of the platform.

2. The combination with a supporting structure and a rocker platform supported thereon, of a vertically disposed toggle latch hinged at one end to one side of the platform, and at its other end to said supporting structure, a stop on one member of said toggle latch which engages the other member thereof to hold said latch in a locked position, an arm extending at right angles from each member of the toggle latch, a contraction spring connecting said arms, and a lever hinged to said supporting structure for breaking the joint in said toggle latch thereby to permit tilting of the platform.



3. The combination with a supporting structure and a rocker platform mounted thereon, of a toggle latch connecting one side of said platform and said supporting structure, one member of said latch having a channel form or stop which extends beyond the joint of said latch and engages the other member thereof to hold the latch in locked position, arms extending at right angles from said latch members in the direction of their unlocking movement, a tension device on one of said arms, a contraction spring connected at one end to said tension device and at its other end to the opposite arm, and a lever mounted on the supporting structure for breaking the joint in said latch thereby to permit tilting of the platform.

1,195,399. CONTROLLING MEANS FOR EXPLOSION-ENGINES. ANDREW L. RIKER, Short Hills, N. J., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed July 16, 1902. Serial No. 115,841. (Cl. 123—98.)



1. An engine having throttling means, a speed-responsive device having a yieldable connection with said throttling means, and additional controlling means connected with said throttling means through an unyielding connection.

2. An engine having throttling means for governing the supply of motive fluid to the engine, controlling means therefor responsive to the speed variations of the engine, and additional means for varying and maintaining a given engine supply irrespective of the engine speed and either in excess of or less than the supply assigned by the speed-responsive means.

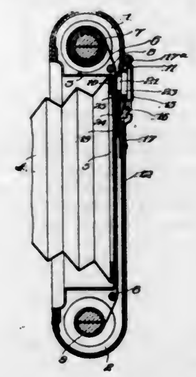
3. An engine having motive fluid supply means, a throttling device provided with an actuating arm p^{26}, means responsive to the engine speed having a yielding connection with said arm for normally regulating the motive fluid supply, and auxiliary means also connected with said actuating arm to move it to different positions for exclusively controlling said throttling device and maintaining a constant motive fluid supply while in any of said positions.

4. An internal combustion engine having ignition means, the throttle, n^5, a governor having weights, p^4, and connections between the same and said throttle for governing the same by the speed of said engine, said connections including a lever p^{15}, a rod or link p^{26} and the intermediate spring p^{31}, and means comprising a rod p^{27} for independently controlling said throttle.

5. In an internal combustion engine, the combination of ignition means, fuel admission means, a throttling device therefor, a governor responsive to the speed of the engine for actuating said throttling device, and means including a coil spring interposed between said governor and throttling device that by its compression, effected through the action of said governor, imparts throttle closing movement to said throttling device and means independent of said spring for imparting opening movement to said device.

[Claim 6 not printed in the Gazette.]

1,195,400. PHOTOGRAPHIC CAMERA. JOHN A. ROBERTSON and WILLIAM A. RIDDELL, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 23, 1915. Serial No. 63,005. (Cl. 95—1.1.)



1. The combination with a camera wall having an opening therein adapted to permit marking the sensitive material and a clamping member for the latter on the inner side of the wall adjacent to the opening, of a cover for said opening pivoted to the wall and operatively connected to the clamping member to move the latter to operative position when the cover is opened.

2. The combination with a camera wall having an opening therein adapted to permit marking the sensitive material and a clamping member for the latter on the inner side of the wall adjacent to the opening, of a cover for said opening pivoted to the wall and having a cam portion slidably engaging the clamping member to move the latter to operative position when the cover is opened.

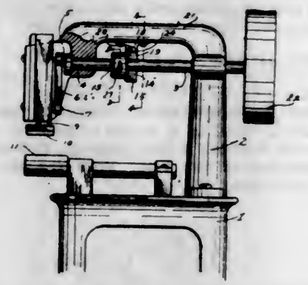
3. The combination with a camera wall having an opening therein adapted to permit marking the sensitive material and a clamping member for the latter on the inner side of the wall adjacent to the opening, of a cover for said opening pivoted to the wall and retained in either open or closed position by the clamping member.

4. The combination with a camera wall having an opening therein adapted to permit marking the sensitive material and a cover for said opening pivoted to the wall, of a spring clamping member for the sensitive material on the inner side of the wall moved to operative position

by opening the cover and acting upon the latter to maintain it in open and closed positions.

5. The combination with a camera wall having an opening therein adapted to permit marking the sensitive material and a spring clamping member for the latter on the inner side of the wall adjacent to the opening, of a cover for said opening pivoted to the wall and having a cam portion slidably engaging the spring clamping member to move it to operative position when the cover is opened, said cam portion being adapted to move across the center of movement of the cover and to hold the latter in either open or closed position through the pressure of the spring clamping member thereon.

1,195,401. SAFETY DEVICE FOR STAYING-MACHINES. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Aug. 10, 1914. Serial No. 855,970. (Cl. 164—107.)



1. The combination with a reciprocating work-performing element and a rotary shaft from which said element is actuated, of a power-transmitting device interposed in the length of said shaft, and means controlling the operation of said device and operable thereon in timed relation with the movement of the work-performing element to automatically render said device ineffective for transmitting working power during a part of the operative stroke of the work-performing element and to automatically render said device effective for transmitting working power just prior to the engagement of the work by the work-performing element and when the path of the work-performing element is free.

2. The combination with a reciprocating work-performing element and a rotary shaft from which said element is actuated, of a power-transmitting device interposed in the length of said shaft, means operable thereon in timed relation with the movement of the work-performing element to automatically render the same ineffective for transmitting working power during a part of the working stroke of the work-performing element, and means operable upon said device just prior to the engagement of the work by the work-performing element to automatically render said device effective for transmitting power when the path of the work-performing element is free.

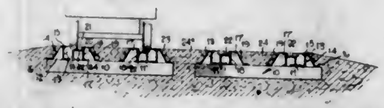
3. The combination with a reciprocating work-performing element and a rotary shaft from which said element is actuated, of a power-transmitting device interposed in the length of said shaft, and means controlling the operation of said device and automatically operable in timed relation with the movement of the work-performing element to render said device operative and inoperative for transmitting working power.

4. The combination with a reciprocating work-performing element and a rotary shaft from which said element is actuated, of a power transmitting device interposed in the length of said shaft, and means comprising a cam controlling the operation of said device and operable thereon in timed relation with the movement of the work-performing element to render the same ineffective for transmitting working power during a part of the working stroke of the work-performing element, and means operable upon said device just prior to the engagement of the work by the work-performing element to automatically render said device effective for transmitting working power when the path of the work-performing element is free.

5. The combination with a work-performing element, of a rotary shaft to actuate the same, said shaft being divided into a plurality of parts, a coupling member for operatively connecting said parts, and means comprising a cam operable upon said coupling member in timed relation with the movement of the work-performing element to automatically render said coupling member ineffective during a part of the working stroke of the work-performing element and to automatically render the coupling member effective just prior to the engagement of the work by the work-performing element and when the path of the work-performing element is free.

[Claims 6 to 12 not printed in the Gazette.]

1,195,402. RAILROAD-CROSSING. HARRY RUST, North Judson, Ind. Filed June 3, 1916. Serial No. 101,530. (Cl. 104—14.)



1. A crossing structure for railway tracks including sheet metal boxes or shells disposed on each side of each rail of the track and spiked to the ties, the top walls of the boxes being level with the top of the track, said boxes including longitudinally extending vertically disposed supporting members resting upon the ties and disposed inward of the inner edges of the boxes, the inner edges of said boxes being separated from the rails.

2. A crossing structure for railway tracks including sheet metal boxes or shells disposed on each side of each rail of the track and spiked to the ties, said sheet metal boxes being formed in longitudinal sections, the sections being abutted against each other, the top walls of the boxes being level with the top of the track, longitudinally extending beams forming part of the boxes and supporting the same, end plates disposed between each pair of rails and abutted against the adjacent ends of the boxes, and a filling disposed between the end plates and between the adjacent boxes.

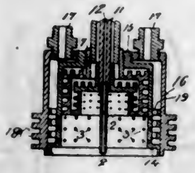
3. A crossing structure for railway tracks including beams disposed parallel to and outward of the rails in the track, outer upwardly inclined plates attached at their outer edges to the ties and extending over tops of the beams and attached thereto and extending nearly to the rails, parallel longitudinally extending beams disposed inward of the rails, plates spiked to the ties inward of the beams, and extending upward, then horizontally and attached to the upper ends of the beams, then extending downward and laterally to a point beneath the head of the respective rails to thereby provide a flange space, end plates attached to said boxes so formed and extending downward and outward, and filling disposed below the roadbed and extending upward to the tops of the boxes.

1,195,403. COMPRESSED GAS AND AIR BURNER. ALEXANDER K. SCHAAP, New York, N. Y., assignor to Schaap Automobile Company, New York, N. Y., a Corporation of New York. Filed June 16, 1915. Serial No. 34,363. (Cl. 158—27.4.)

1. A single burner provided with means for projecting gaseous and mixed fuel in the direction of its axis and additional means for projecting ignited gaseous and mixed fuel toward the first means above mentioned.

2. A single burner provided with means for projecting gaseous and mixed fuel in the direction of its axis and additional means for projecting ignited gaseous and mixed fuel radially toward the axis.

3. A single burner with means for projecting gaseous and mixed fuel in the direction of its axis and additional means for projecting ignited gaseous and mixed fuel toward the first means above mentioned at pressure lower than the pressure of the fuel flowing in the direction of the axis.

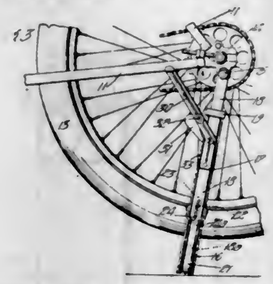


4. A single burner provided with means for projecting gaseous and mixed fuel in the direction of its axis and additional means for projecting the same kind of ignited fuel radially at a reduced pressure toward this axis.

5. In a burner, a central part with means for projecting mixed fuel in the direction of the axis of the burner and a surrounding nozzle with flame perforations therein adapted to cause the flow of gaseous and mixed fuel in the direction of the first means above mentioned of the burner whereby an intensely hot flame may be formed at and immediately about the axis.

[Claims 6 and 7 not printed in the Gazette.]

1,195,404. MOTOR-CYCLE STAND. HARRY T. SCOTT, Los Angeles, Cal. Filed July 27, 1914. Serial No. 853,294. (Cl. 208—75.)



1. A supporting stand, comprising a pair of spaced uprights, members slidably mounted on said uprights and adapted to be pivotally attached to a motor-cycle or the like, and ratchet means between each upright and its corresponding sliding member acting to prevent the sliding member from moving downwardly on the upright, each sliding member being free to independently move upwardly on its upright, said ratchet means including a gravity operated pawl adapted to be thrown by gravity to operative position when the uprights and sliding members are substantially vertical and to be thrown by gravity to inoperative position when the sliding members are horizontal.

2. In combination with a motor-cycle or the like, a stand comprising a lower ground member having a pair of uprights one on each side of the motor-cycle, a pair of members slidable on the uprights and pivotally attached to the motor-cycle, and ratchet means for independently preventing the downward movement of each sliding member on its corresponding upright, each sliding member being free to independently move upwardly on its upright, said ratchet means including a gravity operated pawl adapted to be thrown to operative position when the uprights and slidable members are substantially vertical and to be thrown by gravity to inoperative position when the sliding members are horizontal.

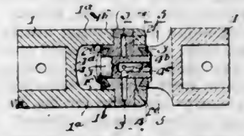
3. In combination with a motor-cycle or the like, a stand comprising a pair of uprights one on each side of the motor-cycle, a pair of members slidable on the uprights and pivotally attached to the motor-cycle, means for independently preventing the downward movement of each sliding member on its corresponding upright, and means to normally hold the upright members away from the pivotal points of attachment of the sliding members to the motor-cycle.

4. In combination with a motor-cycle or the like, a stand comprising a ground member including a U-shaped frame, two members slidable on the sides of the U-shaped frame and pivotally attached to the motor-cycle or the like on opposite sides thereof, and independent ratchet devices acting between each of the slidable members and the corresponding side of the U-shaped frame to independently prevent downward movement of the sliding members on the frame, the sliding members being free to move independently upwardly on the frame, said ratchet devices including pawls adapted to be thrown by gravity into and out of operative position.

5. In combination with a motor-cycle or the like, a stand comprising a ground member including a U-shaped frame, two members slidable one on each side of the U-shaped frame and pivotally attached to the motor-cycle or the like on opposite sides thereof, ratchet teeth on each of the sides of the U-shaped frame, and pawls one on each slidable member adapted to engage the corresponding ratchet teeth, said pawls being weighted so that when the stand is in a horizontal position extending rearwardly from the motor-cycle they will not engage the teeth and so that when the stand is in a substantially vertical position they will engage the teeth.

[Claims 6 to 12 not printed in the Gazette.]

1,195,405. UNIVERSAL JOINT. ROBERT F. SCOTT, Philadelphia, Pa., assignor to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1916. Serial No. 73,146 (Cl. 74—19.)



1. In a universal joint, a body consisting wholly of segments joined on inclined surfaces, said segments having trunnions fixed thereto, and means for clamping said segments together.

2. In a universal joint, a body comprising segments joined on inclined surfaces, said segments having inclined surfaces transverse to said surfaces first named, and means engaging said inclined surfaces second named to clamp said segments together on said inclined surfaces first named, in combination with forks and means for connecting said forks in movable relation with said body.

3. In a universal joint, a pair of yokes having bearings in the furcations thereof, a body comprising segments provided with pinties journaled in said bearings, and means for clamping said segments together.

4. In a universal joint, a pair of yokes having bearings in the furcations thereof, a body comprising channeled segments having inclined engaging surfaces, rings engaging the channels of said segments to bind them together, and means for holding said rings.

5. In a universal joint, a pair of yokes, a body comprising channeled segments having inclined engaging surfaces, means engaging the channels of said segments to bind them together, a device for holding said means, and trunnions connecting said segments and the furcations of said yokes.

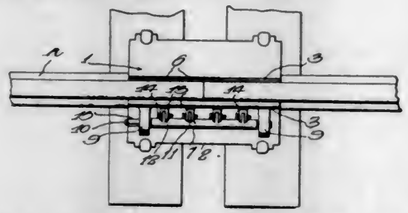
[Claims 6 to 9 not printed in the Gazette.]

1,195,406. RAIL-JOINT. WILLIAM SCOTT, Warrior, Ala. Filed Feb. 1, 1916. Serial No. 75,525. (Cl. 239—6.)

1. In combination with the meeting ends of a pair of rails; of a chair having a plurality of openings alined with the openings in the rails, locking pins slidable through

said openings, a rock shaft rotatably mounted on said chair, and a pivotal connection between said rock shaft and the pins, whereby the same may be thrown into or out of engagement with said openings in the rails.

2. In combination with the meeting ends of a pair of rails; of a chair having a plurality of openings alined with the openings in the rails, locking pins slidable through said openings, bifurcated heads on one end of said pins, a rock shaft rotatably mounted on said chair, apertured lugs on said shaft for pivotal engagement with said bifurcated heads, and a keeper for engagement with one end of said shaft to prevent rotation thereof.



3. In combination with the meeting ends of a pair of rails; of a chair having a plurality of openings alined with the openings in the rails, locking pins slidable through said openings, a rock shaft rotatably mounted on said chair, one end thereof being adapted to move laterally, a keeper adjacent one end of the shaft to receive the laterally movable end to prevent rotation thereof, and a pivotal connection between said rock shaft and the pins, whereby the same may be thrown into or out of engagement with said rails.

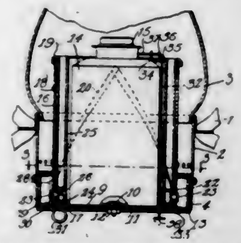
4. In combination with the meeting ends of a pair of rails; of a chair having a plurality of openings alined with the openings in the rails, locking pins slidable through said openings, a rock shaft having one end provided with flat faces, a pair of spaced apart ears on one side of said chair, said ears having openings to rotatably receive said rock shaft, one of said openings communicating with a slot to normally receive the flattened end of the shaft to prevent rotation thereof, and a pivotal connection between said shaft and the pins, said flattened end of said shaft being movable from said slot to allow rotation thereof to shift said pins.

5. In combination with the meeting ends of a pair of rails; of a chair comprising a pair of fish plates to embrace the web and the base of a rail, a base plate connected therewith, said fish plates having a plurality of openings alined with the openings in the rails, locking pins slidable in said openings, bifurcated heads on one end of said pins, a rock shaft having one end provided with flat parallel faces, apertured lugs projecting from said shaft and disposed between the furcations of said heads and pivotally connected therewith, a pair of spaced apart ears on one side of said chair, said ears having openings to rotatably receive said rock shaft, one of said openings in the ears having a slot with parallel walls communicating therewith, the flat end of said shaft being normally disposed in said slot to prevent rotation thereof, said flattened end being movable out of said slot to allow rotation of the shaft.

1,195,407. SIGNAL-LANTERN. EUGENE ALEXANDER SIMPSON, Morristown, Tenn., assignor of one-half to Charles Hicks and Alfred J. Teter, Chattanooga, Tenn. Filed Dec. 23, 1915. Serial No. 68,366. (Cl. 240—39.)

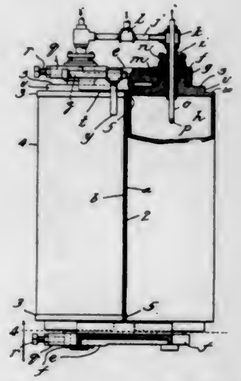
1. The combination with a pair of concentric sleeves provided with oppositely extending diagonally arranged slots and a shade carriage operable thereby, of a base stationarily carrying one of said sleeves and having a shoulder formed thereon, and a plate on said base for peripheral engagement with said shoulder, said plate being operatively connected with the other of said sleeves to insure even movement of the second sleeve when in operation.

2. The combination with a base having a pair of relatively movable sleeves thereon provided with oppositely extending diagonal slots and operating means therefor, of a shade carriage comprising a channel-shaped ring



having one peripheral wall thereof extended to provide a base flange for supporting a shade, and a pair of pins extending from said ring at diametrically opposite points for engagement with the slots in the sleeves for the purpose specified.

1,195,408. SEALED-EDGED LAMINATED SHEET AND PROCESS OF MAKING THE SAME. GEORGE H. SMITH, Milwaukee, Wis., assignor to H. W. Johns-Manville Company, Milwaukee, Wis., a Corporation of New York. Filed Sept. 23, 1914. Serial No. 863,080. (Cl. 154—40.)



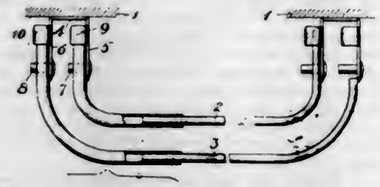
1. The process of making sealed-edged sheets formed of a plurality of united layers of sheet material, which consists in introducing adhesive material in plastic condition between the layers to be united, and compressing the layers together and the longitudinal margins of said layers into contact and sealed engagement with each other by applying pressure thereto progressively from end to end thereof, the degree of pressure to which the longitudinal marginal portions of the layers are subjected being in excess of the degree of pressure to which the portions of the layers located intermediate said longitudinal marginal portions are subjected, substantially as described.

2. The process of making sealed-edged sheets comprising a plurality of layers of sheet material, which consists in introducing adhesive material in plastic condition between the layers to be united, compressing the layers together and embedding the lateral marginal edge of one of said layers in and in sealed contact with the corresponding lateral margin of the other layer on each side of the longitudinal center of the connected layers and simultaneously subjecting the layers and the adhesive material located between the layers to a degree of heat sufficient to maintain the adhesive material in plastic condition during compression, substantially as described.

3. A sealed-edged sheet, consisting of a plurality of layers of fibrous material, and an intermediate layer of adhesive material between and adhesively uniting said layers of sheet material, said layers of sheet material having sealed longitudinal edge portions which are more compact than the portion of the layers of sheet material located intermediate the sealed edges, said relatively more compact longitudinal edge portions being in contact and sealed engagement with each other throughout the length of the sheet.

4. A sealed-edged sheet consisting of a plurality of layers of fibrous material, and an intermediate layer of adhesive material between and adapted to adhesively unite the same, said layers of fibrous material comprising a layer having a side marginal portion which projects laterally beyond the corresponding side edge of the next adjacent layer, and said side edge of said last mentioned layer being embedded in and in sealed engagement with the adjacent marginal portion of said first mentioned layer, the sealed-edged portions being more compact than the remaining portions of the layers.

1,195,409. CURTAIN-ROD-BRACKET CONNECTION. GEORGE T. S. SPOKES, Wallingford, Conn., assignor to H. L. Judd Company, New York, N. Y., a Corporation of New York. Filed May 24, 1916. Serial No. 99,689. (Cl. 156—22.)



1. In a curtain rod bracket, a base having a rod carrying arm, a laterally projecting pivot carried thereby and a laterally projecting rod support carried thereby but at a different distance from the base than said pivot, said pivot and lateral support coöperating to engage and hold a rod.

2. In a curtain rod bracket, a base having a rod carrying arm, a laterally projecting pivot carried thereby and a laterally projecting rod support carried thereby but at a different distance from the base than said pivot, said pivot and lateral support coöperating to engage and hold a rod, one of said parts being arranged to frictionally engage with said rod.

3. In a curtain rod bracket, a base having a rod carrying arm, a laterally projecting pivot carried thereby and a laterally projecting rod support carried thereby but at a different distance from the base than said pivot, said pivot and lateral support coöperating to engage and hold a rod, said laterally projecting support having a spring clip portion.

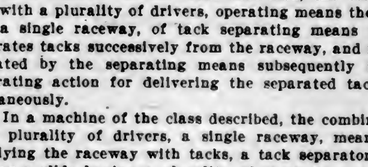
4. In a curtain rod bracket, a base, a rod carrying arm, a laterally projecting pivot integrally formed therewith, a laterally projecting rod support carried by said arm at a different distance from the base than said pivot and on the same side of said arm with said pivot.

5. In a curtain rod bracket, a base, a rod carrying arm, a pivot projecting laterally from said arm, an integral rod support on said arm arranged at a different distance from said base than said pivot.

[Claims 6 to 12 not printed in the Gazette.]

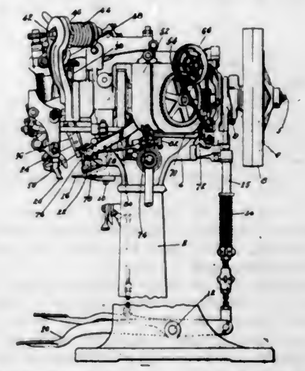
1,195,410. SLED-KNUCKLE. RAYMOND E. STEVENS, Steamburg, N. Y., assignor of one-half to Leroy R. Stevens, Steamburg, N. Y. Filed Mar. 30, 1915, Serial No. 18,171. Renewed July 6, 1916. Serial No. 107,879. (Cl. 21—48.)

The combination with the bunk and runner of a sled, of a vertically disposed lug carried by the runner and provided with a transverse opening, a rectangular open-bottomed box secured to the bunk and receiving the lug therein, said box having transverse openings alining with the opening of the lug, a pivot bolt passing through the box and lug, the opening of the lug being greater in di-



ameter than the openings of the box, the lower edge portion of the box being curved in the form of rockers and bearing on the sides of the lug member, said lug being tapered fore and aft whereby the runner is permitted lateral swinging movement and by means of the pin and opening connection a fore and aft rocking motion.

1,195,411. SHOE-MACHINE. WILLIAM C. STEWART, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 12, 1913. Serial No. 806,315. (Cl. 1—18.)



1. In a machine of the class described, the combination of tack holding means provided with a plurality of tack pockets, a plurality of drivers, a single raceway, means operating by movement in one direction to separate a plurality of loose tacks from the raceway, and additional means to deliver the separated tacks individually from the separating means to the tack pockets.

2. In a machine of the class described, the combination with a plurality of drivers, operating means therefor, and a single raceway, of tack separating means which separates tacks successively from the raceway, and means operated by the separating means subsequently to its separating action for delivering the separated tacks simultaneously.

3. In a machine of the class described, the combination of a plurality of drivers, a single raceway, means for supplying the raceway with tacks, a tack separator comprising a slide having a plurality of recesses, means for reciprocating the separator slide across the raceway to fill the recesses with tacks, and means for delivering the tacks to the drivers from said recesses.

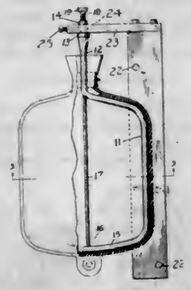
4. In a machine of the class described, the combination of a raceway, a separator adapted to separate successively a plurality of tacks from the raceway, an ejector adapted to eject tacks from the separator simultaneously, an actuator bar, and means for transmitting movement from the actuator bar first to the separator to separate the tacks and then to the ejector to eject the tacks.

5. In a machine of the class described, the combination with a plurality of drivers, of a raceway, a separator having a plurality of recesses adapted to register in turn

with the mouth of the raceway, means for reciprocating the separator across the mouth of the raceway, tack receiving means having a plurality of tack throats, ejecting fingers adapted to pass through the recesses in the separator and engage the stems of the tacks and move into register with the walls of the tack throats, and an ejector plate arranged to engage the heads of the tacks to push them over the tack throats.

[Claims 6 to 14 not printed in the Gazette.]

1,195,412. MOLD FOR MAKING HOLLOW RUBBER ARTICLES. EDWIN L. STIMSON, Cleveland, Ohio, assignor to The Mechanical Rubber Co., a Corporation of New Jersey. Filed Nov. 11, 1915. Serial No. 60,971. (Cl. 18—45.)



1. A molding core for hollow rubber articles, comprising a resilient rod forming a frame shaped to conform to the interior of said articles, and a removable strut for fixing the ends of said frame relatively when within said articles.

2. A molding core for hollow rubber articles, comprising a resilient bow-shaped frame, a removable strut adapted to expand the ends of said frame, and means for holding said strut adjustably in position.

3. A molding core for hollow rubber articles, comprising a resilient bow-shaped frame having a straight portion with an opening therethrough, a rod adapted to pass through said opening and to span the space between the ends of said frame, and means for fixing said rod in position within said opening.

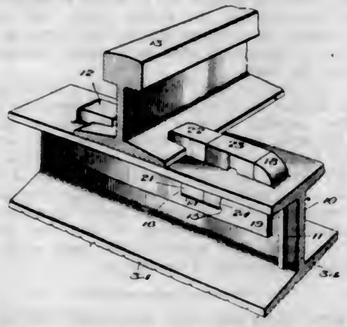
4. A molding core for hollow rubber articles, comprising a resilient rod forming a bow-shaped frame, a tubular straight portion at one end thereof having internal screw-threads, and a straight rod adapted to pass through said tubular portion and span the space between the ends of said frame and having a screw-threaded portion adapted to engage said internal screw threads and to expand said frame.

1,195,413. TIE AND RAIL-FASTENER. THOMAS W. STROOP and SAMUEL N. STROOP, Pittsburgh, Pa. Filed Nov. 1, 1915. Serial No. 59,006. (Cl. 238—5.)

1. A metallic tie having a recess, a clamping member adapted to engage the rail and extending into said recess, and a key member having a leg engaging in said recess and retaining said clamping member in place, said key member also having a lug engaging in a second recess in said tie to retain said key member against accidental displacement.

2. A metallic tie having an inclined recess, a removable clamping member adapted to engage the rail, a key member adapted to engage and hold the clamping member in place, and a lug on said key member adapted to be forced into said inclined recess on said metallic tie to prevent accidental displacement of the key member.

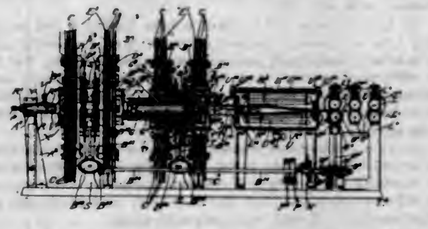
3. A metallic tie having a recess with an inclined wall and a second recess inclined away from the rail adjacent said first recess, a removable clamping member engaging in said first recess, and a key member having a leg with a beveled edge corresponding to said inclined wall and engaging thereagainst, said key member also having a lug adapted to be forced into said inclined recess and a cut away portion between said leg and lug to permit the insertion of a suitable tool therebetween to permit removal of the key member.



4. A metallic tie adapted to receive the ends of rails where they join and having an integral fish-plate engaging the rails and also having a recess with one wall thereof inclined downwardly and toward the rail, and a second recess inclined downwardly and from the rail, a clamping member having a rail engaging fish-plate and a vertical portion adapted to be inserted into the first recess, a key member having a leg adapted to be inserted against said clamp in said recess and having a beveled edge working against said inclined wall of said recess to wedge the key member against the clamping member, and a lug on said key member engaging in said second inclined recess and adapted to be bent over therein to prevent accidental withdrawal of the key member.

5. A metallic tie having longitudinal reinforcing ribs where the rail rests upon the tie, recesses in said tie at said ribs, a clamping member adapted to be inserted in one of said recesses and a key member having a leg engaging against said clamping member and a lug engaging in the other recess.

1,195,414. APPARATUS FOR TREATING TUBULAR FABRIC. LAWRENCE A. SUBERS, Cleveland, Ohio. Original application filed June 18, 1912, Serial No. 704,409. Divided and this application filed Mar. 5, 1913. Serial No. 752,024. (Cl. 91—44.)



1. In a fabric-forming machine, a hollow mandrel fixed at one end and formed in outer and inner portions, each portion provided with openings therethrough, a pipe extending through the inner portion and into the outer portion for supplying fluid coating material to the outer portion, and a pipe communicating with the inner portion for supplying compressed air thereto, the outer extremity of the outer portion being flattened, substantially as and for the purpose set forth.

2. In a fabric making machine, the combination with a mandrel and a combined vacuum and drying chamber, inclosing a portion of said mandrel, of resilient air excluding gates in one wall of said chamber, through which said mandrel and fabric thereon pass.

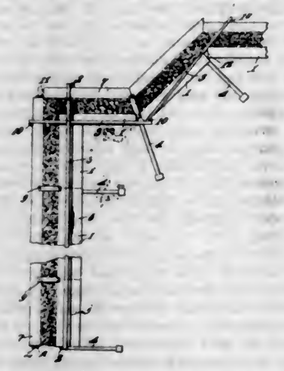
3. In a fabric making machine, the combination with a vacuum chamber having openings in its walls, of a mandrel upon which said fabric is wound, said mandrel having an outer extremity passing into said vacuum chamber through one of said openings, and movable and spring pressed gates encircling said opening and adapted to exclude air from said chamber.

4. In combination, in a fabric making machine, a mandrel fixed at one end, a vacuum chamber having an opening through which the forward extremity of the mandrel extends, a series of gates encircling the mandrel, in said opening, and means for controlling the pressure upon said gates.

5. An apparatus for treating tubular fabric comprising in combination, a hollow mandrel fixed at one end and formed in inner and outer portions, each of said portions being provided with openings therethrough, means for supplying compressed air to the inner portion, and means for supplying the outer portion with an impregnating liquid.

[Claims 6 and 7 not printed in the Gazette.]

1,195,415. WALL-MOLD. JOSEPH N. SZABO, Throop, Pa. Filed Nov. 6, 1913. Serial No. 799,553. (Cl. 25—131.)

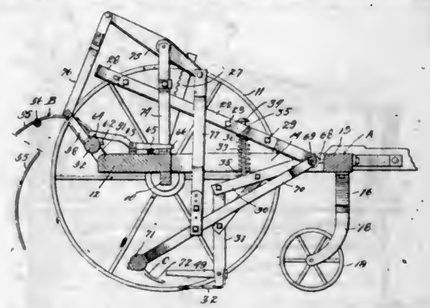


A mold for building walls, including units piled to form stacks constituting outer and inner forms, the stacks forming the outer form being disposed at an angle to each other, and the stacks forming the inner form being disposed at an angle to each other, ground engaging stakes at the ends of the stacks of the outer form and constituting abutments for the units constituting said stacks, means for securing said stakes to the ends of the units, and tie devices extended longitudinally along the stacks of the inner form and transversely across the stacks of the outer form, said devices being secured to the stacks of the inner form, and ground engaging stakes in contact with the outer sides of the stacks of the outer form and secured to said tie devices.

1,195,416. BEAN-HARVESTER. JOHN P. THURBER, Delrio, Wash., assignor of one-third to George R. Weeks and one-third to George S. Belknap, Delrio, Wash. Filed Sept. 2, 1915. Serial No. 48,681. (Cl. 56—1.)

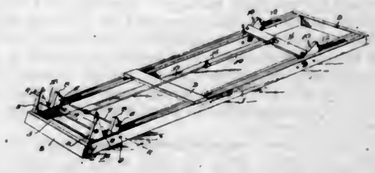
1. In a bean harvesting machine, the combination with a wheeled frame, a cutting device depending from the frame, a rake pivotally mounted on the frame at the rear of the cutting device, a second rake pivotally mounted on the frame and disposed between the first rake and the cutting device, and means operable to simultaneously pivot said rakes in opposing directions.

2. In a bean harvesting machine, the combination with a wheeled frame, a cutting device depending from the frame, a rake pivotally mounted on the frame at the rear of the cutting device, a second rake pivotally mounted on the frame and disposed between the first rake and the cutting device, a bracket on the frame, a two arm lever pivoted on the bracket, connections between the ends of said lever and respective rakes whereby the rocking of the



lever will pivot said rakes in opposite directions, and means for pivoting the first named rake.

1,195,417. AUTOMOBILE-JACK. ERNEST C. TOWNLEY, Allenville, Ill. Filed July 28, 1915. Serial No. 42,461. (Cl. 254—89.)



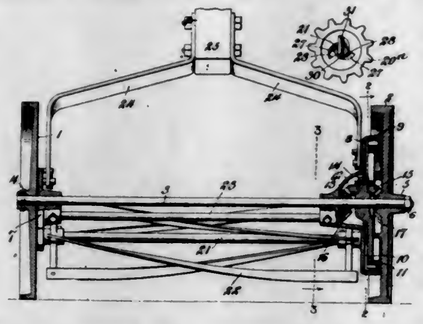
1. A vehicle jack comprising a base, front and rear lifting members pivoted at their lower ends to the base, a tie rod connecting the front lifting members near their free ends, means for connecting the front and rear lifting members, stops secured rigidly to and rising from the base immediately adjacent the front lifting members in the same planes with and in advance of the same, catch devices pivoted respectively relative to said stops in position to engage the tie rod adjacent to the front lifting members, and a combined connecting and operating bar extending between the catch devices.

2. A vehicle jack comprising a base, front and rear lifting members pivoted at their lower ends, a tie rod connecting the front lifting members near their free ends, means for connecting the front and rear lifting members, stops secured rigidly to and rising from the base immediately adjacent the front lifting members in the same plane with and in advance of the same, buffer devices carried by the stops, catch devices pivoted respectively relative to said stops in position to engage said tie rods adjacent the front lifting members and hold the lifting members strained against the buffers, and a combined connecting and operating bar extending between the catch devices.

1,195,418. LAWN-MOWER. CHARLES E. TOWNSEND, Billings, Mont. Filed Sept. 22, 1915. Serial No. 52,027. (Cl. 56—19.)

1. A lawn mower comprising two drive wheels, an axle upon which the drive wheels are mounted, one drive wheel being rigidly secured to the axle and the other drive wheel being connected to the axle by differential gearing with one member of the differential gearing rigidly fast to the second-named drive wheel, a casing carried by the axle in inclosing relation to the differential gearing, a side plate carried by the axle adjacent to the first-named drive wheel and traversed by the axle, a cutter journaled in the casing and in the side plate, driving connections between the cutter and the differential gearing, a girth

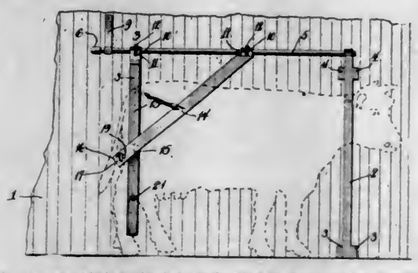
rod connecting the side plate and casing, and a handle connected to the side plate and casing.



2. A lawn mower comprising two drive wheels, an axle to which one drive wheel is fixed with the other drive wheel loosely mounted on the axle and having a pinion formed on its hub, a gear wheel mounted on the axle adjacent to the second-named drive wheel and carrying a pinion meshing with the first-named pinion, another pinion on the axle on the side of the gear wheel remote from the second-named drive wheel and meshing with the second-named pinion, a casing mounted on the axle and inclosing the gear wheel and pinions, a side plate mounted on the axle adjacent to the first-named gear wheel, a girth rod connecting the side plate and casing, a cutter journaled in the side plate and casing, respectively, and gearing connections between the gear wheel and cutter and inclosed in the casing.

3. A lawn mower comprising two drive wheels, an axle to which one drive wheel is fixed with the other drive wheel loosely mounted on the axle and having a pinion formed on its hub, a gear wheel mounted on the axle adjacent to the second-named drive wheel and carrying a pinion meshing with the first-named pinion, another pinion on the axle on the side of the gear wheel remote from the second-named drive wheel and meshing with the second-named pinion, a casing mounted on the axle and inclosing the gear wheel and pinions, a side plate mounted on the axle adjacent to the first-named gear wheel, a girth rod connecting the side plate and casing, a cutter journaled in the side plate and casing, respectively, and gearing connections between the gear wheel and cutter and inclosed in the casing, said gearing connections including a one-way clutch structure.

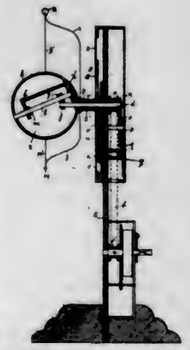
1,195,419. RESTRAINING DEVICE. CHARLES R. TRIM, Ord, Nebr. Filed May 10, 1916. Serial No. 96,672. (Cl. 119—98.)



1. A restraining device including a supporting upright mounted in spaced relation to the wall of a building, transversely extending spacing bars connecting said upright to the wall of a building at the top and lower ends thereof, a supporting rod having one end mounted on the top of said upright and extending longitudinally in spaced relation to the wall of the building, said rod being provided with a right angle elbow at its opposite end, a shorter supporting rod having one end secured to the building and extending transversely for securing its opposite end in said elbow, said supporting rod also provided with a brace bar having one end secured to said supporting rod and its opposite end connected to the wall of the building, the said supporting rod being disposed at a height slightly above the height of an ordinary domestic animal, a swinging arm having its upper end provided with a suspension loop through which said supporting rod is extended for permitting a swinging movement of said swinging arm, and a restraining bar carried by said swinging arm and adapted to be thrust between the spaced apart hind legs of an animal, the free end of said restraining bar contacting with the wall of the building when in operative position.

2. A restraining device including a supporting upright mounted in spaced relation to the wall of a building, transversely extending spacing bars connecting said upright to the wall of a building at the top and lower ends thereof, a supporting rod having one end mounted on the top of said upright and extending longitudinally in spaced relation to the wall of the building, said rod being provided with a right angle elbow at its opposite end, a shorter supporting rod having one end secured to the building and extending transversely for securing its opposite end in said elbow, said supporting rod also provided with a brace bar having one end secured to said supporting rod and its opposite end connected to the wall of the building, the said supporting rod being disposed at a height slightly above the height of an ordinary domestic animal, a swinging arm having its upper end provided with a suspension loop through which said supporting rod is extended for permitting a swinging movement of said swinging arm, a restraining bar carried by said swinging arm and adapted to be thrust between the spaced apart hind legs of an animal, the free end of said restraining bar contacting with the wall of the building when in operative position, an angularly disposed brace bar having one end provided with a second suspension loop and adapted to receive the said supporting rod, the lower end of said brace bar being secured to said swinging arm, a locking bar pivotally mounted on the wall of the building, the terminal of said brace bar being provided with an opening for the reception of one end of said locking bar, said locking bar being disposed rearwardly of and elevated above said restraining bar for contacting with the hind legs of the animal when said swinging arm is placed in operative position.

1,195,420. MODEL OF THE SOLAR SYSTEM. HIKOICHI TSURU, Fukuoka-ken, Japan. Filed Apr. 6, 1915. Serial No. 19,537. (Cl. 35—3.)



1. A model of the solar system comprising a stationary frame, a terrestrial globe formed in two parts one of which is fixed to said frame and the other rotatable on said fixed part, a shaft fixed at one end to said rotatable part and rotatably engaging the fixed part at the other end, a bevel gear on said shaft, a second shaft mounted on said frame at an angle of about 23.5 degrees to the first-mentioned shaft, a bevel wheel on said second shaft engaging the other bevel wheel, and means for rotating said second shaft.

2. A model of the solar system comprising a stationary frame, a terrestrial globe formed in two parts one of which is fixed to said frame and the other rotatable on said fixed part, a shaft fixed at one end to said rotatable part and rotatably engaging the fixed part at the other end, an arm extending from said fixed part and provided with a bearing portion for said shaft, a bevel gear on said shaft, a second shaft mounted on said frame at an angle of about 23.5 degrees to the first-mentioned shaft, a bevel wheel on said second shaft engaging the other bevel wheel, and means for rotating said second shaft.

3. A model of the solar system comprising a stationary frame, a terrestrial globe formed in two parts one of which is fixed to said frame and the other rotatable on said fixed part, a shaft fixed at one end to said rotatable part and rotatably engaging the fixed part at the other end, a bevel gear on said shaft, a second shaft mounted on said frame at an angle of about 23.5 degrees to the first-mentioned shaft, a bevel wheel on said second shaft engaging the other bevel wheel, a sleeve surrounding said second shaft and carrying a member representing the sun, another sleeve surrounding said second shaft and carrying a member representing the moon, and means for rotating the second shaft and the said sleeves at the relative speeds of about

1, $\frac{27}{28}$, and $\frac{1}{28}$.

1,195,421. METHOD OF MAKING ACID AND INSOLUBLE METALLIC COMPOUNDS. GEORGE D. VAN ARSDALE, New York, N. Y. Filed June 25, 1914. Serial No. 847,349. (Cl. 75—18.)

1. The method of precipitating a metal from a solution of a salt of such metal, which consists in treating the solution with sulfur dioxid and bringing the solution so treated into contact with a metal in metallic form.

2. The method of precipitating a metal from a solution of one of its salts, which consists in treating the solution with sulfur dioxid and bringing the solution so treated into contact with metallic iron.

3. The method of precipitating copper from a solution of one of its salts and of forming free acid, which consists in treating the copper solution with sulfur dioxid and in bringing the solution so treated into the presence of a metal in metallic form.

4. The method of precipitating copper from a solution of a salt of copper, which consists in treating the solution with sulfur dioxid and bringing the solution so treated into contact with metallic iron.

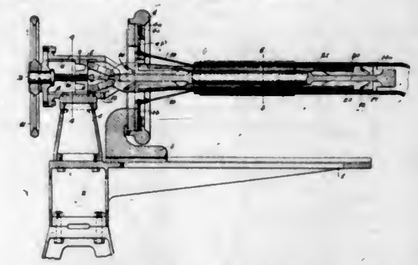
5. The method of precipitating copper from a copper chlorid solution, which consists in treating the solution with sulfur dioxid and bringing the solution so treated into contact with a metal in metallic form.

[Claims 6 to 8 not printed in the Gazette.]

1,195,422. MACHINE FOR PREPARING TUBES FOR SPLICING. EUGENE VAN NOTE, New York, N. Y. Filed Dec. 3, 1914. Serial No. 875,226. (Cl. 154—5.)

1. In a machine for preparing tubes for splicing, a substantially non-flexible mandrel comprising a cylinder having a longitudinal slot therein for the purpose of passing flexible tubes through said slot and into and out of said cylinder, and recesses in one end of said cylinder for the purpose of facilitating the handling of tubes thereon.

2. In a machine for preparing tubes for splicing, a tube supporting rod, vanes radially operating therein, flexible bands connected near one end of said rod or vanes, band plates, means for connecting said bands thereto, adjusting mechanism in a slidable cross-head to radially adjust said band plates, a slidable cross-head, toggle connections between said vanes and an adjustable slide, an adjustable slide, means for holding said slide against revolving action, a casing in which said slide is adapted to be reciprocated, and means for reciprocating said slide.



3. In a machine for preparing tubes for splicing, a stationary supporting rod having recesses, vanes slidably mounted in said recesses and longitudinally slidable means for actuating said vanes.

4. In a machine for preparing tubes for splicing, a stationary supporting rod having a recess, a vane slidably mounted in said recess, longitudinally slidable means for actuating said vane, and a flange portion extending laterally from the outer longitudinal end of said vane.

5. In a machine for preparing tubes for splicing, a supporting rod, a slidable cross-head mounted concentrically on said rod for movement axially of the latter, and a plurality of flexible bands connecting said slidable cross-head with said supporting rod, said slidable cross-head being adapted to act on said flexible bands to turn back material on said supporting rod.

[Claims 6 to 8 not printed in the Gazette.]

1,195,423. WEDGE. ANDREW MCK. WATERS, San Francisco, Cal. Filed Dec. 17, 1914. Serial No. 877,818. (Cl. 254—104.)

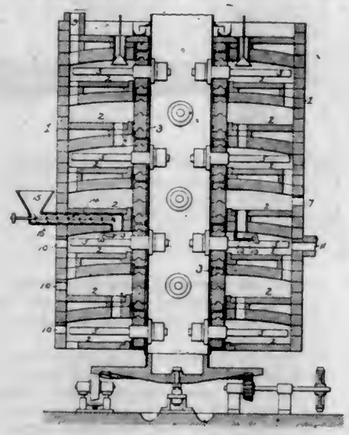


A wedge having a tapered body with a flat top, the body being formed with a tapered socket in the thick end opening on said flat top, and a taper pin removably engaging said socket, the flat top extending a considerable distance from the pin on all sides thereof and presenting a squared shoulder adapted for engagement with an auxiliary driving member.

1,195,424. FURNACE. UTLEY WEDGE, Ardmore, Pa., assignor to The Furnace Patent Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1910, Serial No. 539,134. Renewed Jan. 20, 1916. Serial No. 73,210. (Cl. 75—143.)

1. A roasting or like furnace having primary and secondary heating members, means for preventing flow of gas from one heating member to the other, means for effecting the discharge of gas from each member independently

of the other and a mechanical conveyer for delivering a regulated supply of reagent to the material under treatment in the secondary heating member of the furnace.



2. A roasting or like furnace having a plurality of superposed hearths, one of the hearths in the upper portion of the furnace being chambered, means for admitting air to said chamber, and means for conveying the air heated in its passage through said chamber to a treating chamber in the lower portion of the furnace.

3. A roasting or like furnace having a plurality of superposed hearths and presenting primary and secondary members communicating with one another through a passage sealed against the flow of gas, means for stirring or agitating and feeding forward the material contained in each member of the furnace, and means for feeding a reagent to the material in the secondary member of the furnace.

4. A roasting or like furnace having primary and secondary heating members communicating with each other through a passage sealed against the flow of gas, means for stirring or agitating and feeding forward the material contained in each heating member of the furnace, a mechanical conveyer for delivering a regulated supply of a reagent to the material traversing the secondary heating member of the furnace, and means for supplying air to and removing gas from each heating member of the furnace independently.

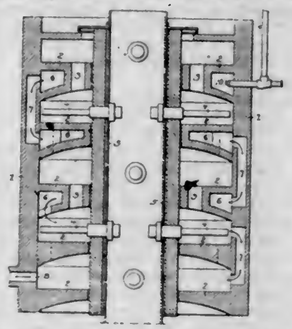
5. A roasting or like furnace having primary and secondary members, means for directly heating the primary member, means for muffle heating said secondary member, and means for supplying a reagent to the material which is being treated in the secondary member of the furnace.

[Claims 6 to 16 not printed in the Gazette.]

1,195,425. METALLURGICAL FURNACE. UTLEY WEDGE, Ardmore, Pa., assignor to The Furnace Patent Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 24, 1911, Serial No. 635,193. Renewed Jan. 20, 1916. Serial No. 73,211. (Cl. 75—143.)

1. A metallurgical furnace having superposed treating hearths, means for feeding the material over said hearths in a descending series, heating chambers combined with a plurality of said treating chambers so as to convert the latter into muffles, and means for introducing products of combustion into an upper heating chamber and causing said products of combustion to flow through said heating chambers in a descending series.

2. The combination, in a metallurgical furnace, of a series of superposed hearths, means for causing the material under treatment to pass over said hearths in a descending series, a heating chamber combined with an upper hearth so as to muffle the treating chamber above said hearth, and means for supplying products of combustion to said heating chamber and causing said products of combustion to pass downwardly from said heating chamber and into a treating chamber or chambers below the same.

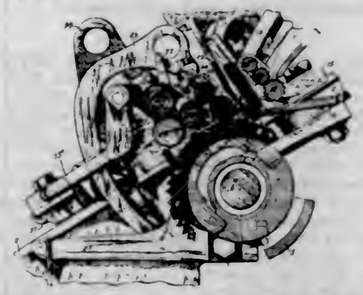


3. A metallurgical furnace having superposed hearths and means for causing the material under treatment to pass over said hearths in a descending series, heating chambers combined with an upper series of hearths of the furnace so as to muffle the treating chambers above said hearths, and means for supplying products of combustion to an upper heating chamber or chambers and causing said products of combustion to pass downwardly through a heating chamber or chambers below the same.

4. A metallurgical furnace having superposed hearths and means for causing the material under treatment to pass over said hearths in a descending series, heating chambers combined with an upper series of hearths of the furnace so as to muffle the treating chambers above said hearths, and means for supplying products of combustion to an upper heating chamber or chambers and causing said products of combustion to pass downwardly through a heating chamber or chambers below the same, and thence directly into a treating chamber or chambers in the lower portion of the furnace.

5. A metallurgical furnace having superposed hearths, means for moving the material under treatment over said hearths in a descending series, means for supplying, to an upper chamber of the furnace, products of combustion derived from an outside source, passages independent of those for the descent of the material from hearth to hearth of the furnace, and means whereby the products of combustion separately supplied to the upper chamber of the furnace are caused to pass from said upper chamber through said independent passages and in succession through chambers of the furnace below that to which the products of combustion are originally supplied.

1,195,426. HEILMAN COMBER. GEORGE M. WHITIN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed June 18, 1913. Serial No. 774,284. (Cl. 19—6.)



1. In a Heilman type comber, the combination with the feed and nipper mechanism, a top comb and a comb cylinder having a detaching segment thereon, of a segment-engaging detaching roll, fixed bearings holding the latter close in front of the top comb, and a pair of piecing rolls in front of said detaching roll coöperating directly with the segment to remove the tufts therefrom and adapted to piece the same together.

2. In a Heilman type comber, the combination with the feed and nipper mechanism, a top comb in front of the latter and a rotary comb cylinder opposed to the top comb having combing and detaching segments thereon, of a small segment-engaging detaching roll, end bearings therefor supporting said roll in front of the top comb, a presser roll superposed upon said small roll and preventing flexure thereof, and a pair of piecing rolls in front of said detaching and presser rolls deflecting and receiving the detached tufts directly from the segment and adapted to form a continuous lap thereof.

3. In a Heilman type comber, the combination of a rotary comb cylinder having a detaching segment, means that are stationary with respect to such cylinder for holding a fringe of lap in engagement therewith, a detaching roll mounted in front of the said means to nip the fringe against the segment, and a pair of piecing rolls mounted in front of the said detaching roll operating independently of said detaching roll to deflect and receive the detached tufts from the segment and piece the same together.

4. In a Heilman type comber, the combination of a top comb, a rotary comb cylinder having a detaching segment, stationary means for holding the fringe of lap in engagement with the cylinder, a small-diameter segment-engaging detaching roll mounted in front of the top comb and adapted to detach and draw the cylinder-combed tuft through the top comb, means for imparting nipping pressure to said small roll without flexing the same, and a pair of piecing rolls in front of the said detaching roll, correlated with the segment to deflect and remove detached tufts from the segment and adapted to piece the same together.

5. In a Heilman type comber, the combination of feeding and nipping means for a cotton lap, a rotary comb cylinder having a segment, a segment-engaging detaching roll adapted to detach the tuft, an independent roll out of contact with said detaching roll adapted to turn the end of the tuft away from the segment, and means coöperating with said latter roll to piece the tufts together.

[Claims 6 to 36 not printed in the Gazette.]

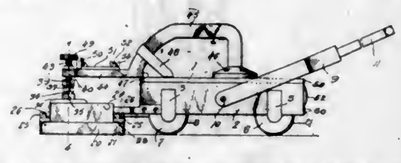
1,195,427. CHEMICAL-FEEDING FILTER. GEORGE H. WIDNER, Des Moines, Iowa, assignor to Des Moines Refining Company, Des Moines, Iowa, a Corporation of Iowa. Filed May 20, 1916. Serial No. 98,992. (Cl. 210—1.)



1. A filter comprising a receptacle, a perforated plate spanning said receptacle and adapted to support a water softening mineral and a pipe construction disposed beneath said perforated plate and consisting of a plurality of connected horizontally disposed arms that are transversely slotted as and for the purpose set forth.

2. A filter comprising a receptacle, a perforated plate spanning said receptacle, a body of water softening material upon said plate, means for conducting water from said receptacle after it passes through the water softening material and a water distributer for supplying water gently to all portions of the underside of the perforated plate, said distributer comprising a plurality of horizontal and connected pipes which are transversely slotted across their sides that are disposed away from said perforated plate.

1,195,428. SANDPAPERING-MACHINE. BERT W. WILLIAMS, Farwell, Mich., assignor of one-half to Viola Ritter, Clare, Mich. Filed Mar. 20, 1916. Serial No. 85,455. (Cl. 51—13.)



1. A sand papering machine comprising a wheeled member, guide members mounted upon said wheeled member, a sand paper carrying block mounted for movement upon said guide members, means by which the wheeled member may be drawn over a surface to be treated, means for causing a reciprocating movement of said block upon movement of the first-mentioned member over said surface to be treated, and pressure exerting means carried by said first-mentioned member to retain said block in proper position with respect to the surface to be treated.

2. A sand papering machine comprising a wheeled member, a movable member, guide members mounted upon said movable member, a block, means for securing a surface treating member to said block, guide sleeves mounted upon said block, said guide members being engaged in said guide sleeves, means for causing reciprocating movement of said block upon movement of the movable member, and means carried by said movable member for exerting a pressure upon the upper face of said block.

3. A sand papering machine comprising a movable member, guide members carried by said movable member, a block mounted upon said guide members, means for causing reciprocating movement of said block upon said guide members during movement of said movable member, means for securing a surface treating member to said block, an arm mounted upon said movable member, adjustable pressure regulating means carried by said arm for exerting a pressure upon said block, and means for locking the pressure exerting means in adjusted position.

4. A sand-papering machine comprising a wheeled member, a movable member, and guide members mounted upon said movable member, a movable block, a surface-treating member, means for securing said surface-treating member to said block, means for inclosing and supporting said guide members, said guide members being connected with said block, means for reciprocating said movable member, and means carried by said movable member for exerting a pressure upon the upper face of said block.

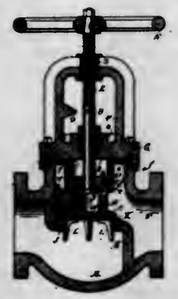
5. A sand-papering machine comprising a movable member, guide members carried by said movable members, a block mounted upon said guide members, means for reciprocating said block upon said guide members, means for securing a surface-treating member to said block, and adjustable pressure-exerting means carried by said movable member and engaged with said block.

[Claims 6 to 10 not printed in the Gazette.]

1,195,429. COMBINED STOP AND CHECK VALVE. JOHN ACTON, New York, N. Y. Filed July 1, 1909. Serial No. 505,319. (Cl. 137—4.)

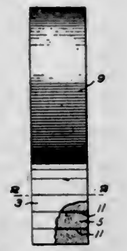
1. The combination with a casing having chambers, a flanged sleeve centered in the casing, webs formed on the exterior of said sleeve and fitting around the interior surface of the casing, a valve seat disposed between the chambers, a valve having a cylindrical portion, the said

cylindrical portion having packing rings fastened thereupon and forming therewith a piston, the said piston operating in said sleeve the interior of which communicates with one of said chambers, a cap for the casing, a stem operating through said cap and having a headed end extending into the cylindrical piston to permit relative movements of the valve and stem.



2. The combination with a casing having chambers, a seat disposed between said chambers, a valve coöperating with said seat, a cap for the casing, said cap having an extended under surface fitted into and centered by the casing, a valve stem, a yoke carried by the cap and through which the stem works, lost motion connection between the stem and valve whereby the valve may be operated manually by the stem or automatically independently of the stem, means for cushioning the automatic movement of the valve and indicating means on the stem for indicating the position of the stem to permit the automatic action of the valve.

1,195,430. REINFORCED TAPE. EDWARD H. ANGIER, Framingham, Mass. Filed Oct. 21, 1914. Serial No. 867,886. (Cl. 229—49.)



1. A reinforcing tape for box corners and other purposes comprising a plurality of narrow ribbon-like layers of paper, an adhesive layer between and securing said paper layers together, and short threads embedded in said adhesive layer and extending transversely to the length of the tape.

2. A reinforcing tape for box corners and other purposes comprising a plurality of narrow ribbon-like layers of paper, an adhesive layer between and securing said layers together, short threads in said adhesive and extending transversely to the length of the tape, and a gum coating on the outer surface of one of said paper layers.

3. A reinforcing tape for box corners and other purposes comprising a plurality of narrow ribbon-like layers of paper, an adhesive layer between and securing said layers together, and short threads spaced at intervals transversely to the length of the tape.

4. A reinforcing tape for box corners and other purposes comprising a plurality of narrow ribbon-like layers of paper of indefinite length, an adhesive layer between and securing said layers together, and short threads extending substantially perpendicularly to the length of the tape.

5. A reinforcing tape for box corners and other purposes comprising a narrow ribbon-like layer, an adhesive layer, and a multiplicity of short threads extending transversely to the length of the tape.

[Claims 6 to 11 not printed in the Gazette.]

1,195,431. METHOD OF PRODUCING PYROXYLIN COMPOSITIONS. CHARLES ELWOOD ARNOLD, Wilmington, Del., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Feb. 3, 1915. Serial No. 5,848. (Cl. 134—79.)

1. The process which comprises producing a jelly by tumbling celluloid scrap with a solvent of celluloid in a tumbling drum turning at substantially the rate adapted to give a maximum flow of the jelly, which is about two revolutions per minute.

2. The process which comprises producing a jelly by tumbling about 150 parts of celluloid scrap with about 200 parts of a solvent of celluloid in a tumbling drum turning at substantially the rate adapted to give a maximum flow of the jelly, which is about two revolutions per minute.

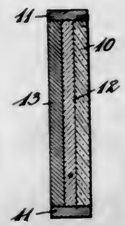
3. The process which comprises producing a jelly by tumbling about 150 parts of celluloid scrap with about 200 parts of a solvent of celluloid in a tumbling drum turning at substantially the rate adapted to give a maximum flow of the jelly, which is about two revolutions per minute.

4. The process which comprises producing a jelly by tumbling celluloid scrap with a volatile solvent of celluloid in a tumbling drum turning at substantially the rate adapted to give a maximum flow of the jelly, which is about two revolutions per minute.

5. The process which comprises producing a jelly by tumbling about 150 parts of celluloid scrap with about 200 parts of a volatile solvent of celluloid in a tumbling drum turning at substantially the minimum rate adapted to give a constant flow of the jelly, which is about two revolutions per minute.

[Claims 6 to 13 not printed in the Gazette.]

1,195,432. SENSITIVE PLATE FOR RÖNTGEN PHOTOGRAPHY AND PROCESS OF MAKING THE SAME. HANS ARNOLD, Charlottenburg, and MAX LEVY-DORN, Berlin, Germany. Filed Mar. 1, 1915. Serial No. 11,179. (Cl. 95—8.)



1. The herein described method of preparing highly sensitive photographic plates impenetrable by Röntgen rays and rays from radio-active substances, which method consists in applying to a support light sensitive substances, and ray absorbing substances in a colloidal state, substantially as described.

2. The herein described method of preparing photographic plates of the character specified, which method consists in applying to a support a layer of ray absorbing emulsion in a colloidal state, and superimposing on said layer a second layer of a light sensitive emulsion.

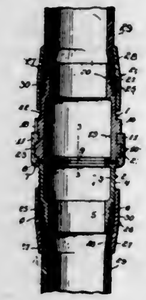
3. The herein described method of preparing photographic plates of the character specified, which method consists in applying to a support a layer of ray absorbing emulsion in a colloidal state, and superimposing on said layer a second layer comprising an emulsion containing light sensitive substance and ray absorbing substance.

4. A photographic plate for the purpose specified, comprising a support having thereon a light sensitive substance and a ray absorbing substance in a colloidal state.

5. A photographic plate for the purpose specified, comprising a support, a layer of ray absorbing substance in a colloidal state on said support, and a second layer of light sensitive substance superimposed on said first layer.

[Claim 6 not printed in the Gazette.]

1,195,433. HOSE-COUPLING. DE WITT C. BAILEY, Nichols, Fla. Original application filed Apr. 27, 1912, Serial No. 693,678. Divided and this application filed Oct. 26, 1912. Serial No. 727,866. (Cl. 137—28.)



The combination with a hose, of a coupling member having a tapered exteriorly threaded end inserted in the hose and having a cylindrical exteriorly threaded portion integral with and directly adjacent to the tapered portion, there being more threads to the inch on the cylindrical portion than on the tapered portion and a clamping member including a cylindrical interiorly threaded portion engaged with the threads of the cylindrical portion of the first member and a tapered portion threaded interiorly, the tapered portion of the two members engaging respectively the inner and outer faces of the hose.

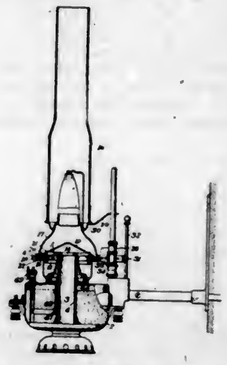
1,195,434. JUG TOP OR COVER. CHARLES S. BARON, Tiffin, Ohio. Filed Jan. 2, 1912. Serial No. 668,932. (Cl. 65—31.)



In a cap or cover of the class described, the combination of a segment shaped jar engaging band, having intermediate its ends an outwardly projecting offset from the top edge and lying in the plane of the top edge, and hinge-forming ears bent at right angles from the opposite edges of said offset and projecting alongside of and overlying the band, said band having a longitudinally extending bead formed by offsetting the metal of the band, and a lid pivoted to said hinge-forming ears.

1,195,435. INCANDESCENT OIL-LAMP. FREDERICK A. BAYNES, Gloucester City, N. J. Filed June 23, 1913. Serial No. 775,254. (Cl. 67—38.)

1. A burner, comprising inner and outer wick tubes adapted to receive a wick between them, and a generator screen arranged over the tubes, the inner wick tube being enlarged at its upper end and arranged to expand the wick, the upper end of the outer wick tube being spaced a sufficient distance to avoid compressing the wick between the enlarged upper end of the inner wick tube and the outer wick tube; substantially as described.



2. A burner, comprising inner and outer wick tubes adapted to receive a wick between them, the space between said tubes being greater than the thickness of the wick to provide space between the wick and the tubes, a generator screen arranged over the tubes, the inner wick tube being enlarged at its outer end portion to expand the upper end of the wick and prevent the wick from hugging the inner tube below the enlarged portion, and the outer wick tube terminating at a lower level than the inner wick tube.

3. In a vapor generator burner, a dome extending above the wick and having a bottom with a hole to receive a screen support, a screen support mounted in said hole, a screen connected to said support, and devices for spacing the screen support from the dome to prevent conduction of heat from the screen support to the dome and thereby maintain a uniform temperature of the screen; substantially as described.

4. In a vapor generator, a dome having a bottom with a central hole, an annular flange on said bottom, a removable generator screen holder within said hole, a generator screen secured to said holder, said holder having a horizontal step portion, vertical ribs on said holder above the step portion engaging the annular ring on the dome, and horizontal projections on the step portion for engaging the bottom of the flange on the dome, said projections being arranged to prevent the body of the holder from engaging the dome and thereby avoid the conduction of heat from the generator screen to the dome to maintain a uniform temperature of the screen; substantially as described.

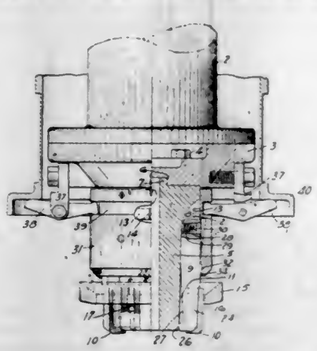
5. In a vapor generator burner, a dome having a bottom with a hole, an annular flange on said bottom, a generator screen carrier removably secured in the hole, and vertical and horizontal ridges to centralize the annular flange and to level the screen holder with a small amount of contact between it and the flange to prevent conduction of heat from the screen holder to the dome and thereby maintain a uniform temperature of the screen, and frictional spring devices on the screen holder to retain it in position in the dome.

[Claims 6 to 15 not printed in the Gazette.]

1,195,436. COLLAPSING TAP. OSCAR W. BERG, Kewanee, Ill., assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 10, 1916. Serial No. 96,569. (Cl. 10—143.)

1. A collapsing tap comprising a tap body having a plurality of slots on the periphery thereof, chasers mounted in said slots to move lengthwise on and also relatively to said tap body, said chasers being adapted to rock in said slots in collapsing, means for holding the chasers in expanded position on the tap body, yielding means for rocking and thereby moving the chasers into collapsed position on said tap body, a trip ring adjustably secured on the tap

body for causing movement of the chasers relative to the tap body in collapsing the chasers at the completion of the thread cutting operations, a sliding sleeve on the tap body to which said chasers are pivotally secured, a lever mechanism pivoted on the said tap body and having one end thereof operatively connected to said sleeve, and means connected to said lever mechanism for automatically retracting the sleeve on the tap body during backward movement of the tap body to thereby move the collapsed chasers into thread cutting position on said tap body.



2. A collapsing tap comprising a rotatable tap body, said tap body having a plurality of lengthwise parallel slots on the periphery thereof, chasers pivotally secured in said slots and adapted to move forwardly lengthwise with the tap body during the thread cutting operations, said chasers being arranged to move lengthwise relatively to the tap body into collapsed position, means for rocking the pivoted chasers when in collapsing position, said rocking means being arranged to hold the chasers in collapsed position during part of the rearward movement of the tap body, and means for moving the collapsed chasers backwardly relative to the tap body into thread cutting position in said rearward movement of said tap body.

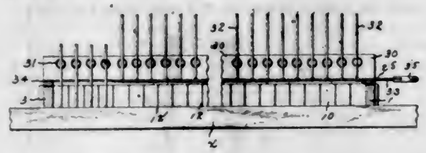
3. A collapsing tap comprising a positively rotated lengthwise movable tap body, said tap body having a plurality of slots in the periphery thereof, collapsing cases mounted in said slots and arranged to move lengthwise with and also relative to the tap body, said cases having removable chasers adjustably secured thereon, a sliding sleeve on the tap body to which the cases are pivotally secured, a lever mechanism on the tap body pivotally connected to said sleeve, and means coacting with said lever mechanism for actuating said sleeve and retracting the cases on the tap body in moving the collapsed chasers into the thread cutting position during rearward movement of the tap body.

4. A collapsing tap comprising a rotary and lengthwise movable tap body, said tap body having a plurality of slots in the periphery thereof, chasers movably mounted in said slots, a sliding sleeve on the tap body arranged to move the chasers relative to the tap body, a lever mechanism on the tap body operatively connected to said sleeve, means operatively engaging said lever mechanism for actuating the sleeve to move the chasers rearwardly in said slots, and means adjustably secured on said tap body arranged to limit the forward movement of the tap body and cause a relative forward movement of the chasers into collapsed position on said tap body.

5. A collapsing tap comprising a rotary and lengthwise movable tap body, said tap body having a plurality of slots in the periphery thereof, chasers movably mounted in said slots, a sliding sleeve on the tap body arranged to move the chasers relative to the tap body, a lever mechanism on the tap body operatively connected to said sleeve, means operatively engaging said lever mechanism for actuating the sleeve to move the chasers rearwardly in said slots, means adjustably secured on said tap body arranged to limit the forward movement of the tap body and cause a relative forward movement of the chasers into collapsed position on said tap body, and yielding means for holding the chasers in collapsed position at the beginning of the rearward movement of the tap body.

[Claims 6 to 8 not printed in the Gazette.]

1,195,437. CANDY-MAKING MACHINERY. SAMUEL H. BORN, San Francisco, Cal., assignor to Philip J. Jacoby, Samuel Jacoby, and Israel F. Morris, doing business under the firm-name of Morris Mercantile Company, San Francisco, Cal. Filed Apr. 14, 1915. Serial No. 21,243. (Cl. 107—8.)



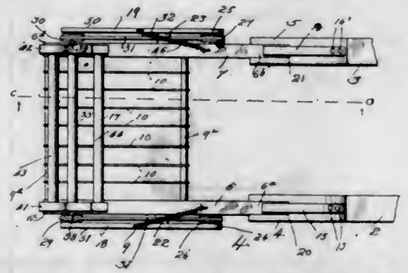
1. A cellulated candy mold; means for supporting above and releasing sticks in alinement with the cells in said mold.

2. A cellulated candy mold; means for holding sticks in alinement above the cells in said mold; and a slidable apron beneath said stick holding means.

3. A candy machine including a molding flask; a cellulated mold within said flask; a stick rack above said flask having stick holding means coinciding with the cells of said mold; and an apron between said rack and said frame.

4. A candy machine including a molding flask; a cellulated mold within said flask; a rack above said flask and having stick holders coinciding with the cells of said mold and an apron slidable between said stick holders and said mold.

1,195,438. FENDER. ALEXANDER M. BURTON, Pittsburgh, Pa. Filed Apr. 18, 1913. Serial No. 762,063. (Cl. 105—268.)



1. The described device consisting of a platform and a rotatable member mounted thereover, means whereby said platform may be held normally suspended and means whereby said platform may be caused to drop into contact with a roadbed, said platform having side arms with openings therein and carriers pivotally mounted in said openings and said rotatable member being mounted on said carriers.

2. The described device consisting of a platform and a rotatable member mounted thereover, means whereby said platform may be held normally suspended and means whereby said platform may be caused to drop into contact with a roadbed, said platform having side arms with openings therein and carriers pivotally mounted in said openings, said rotatable member being mounted on said carriers, a shaft for said member, pulleys on said shaft and means for rotating said pulleys.

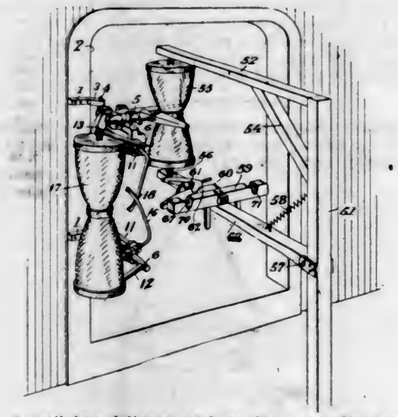
3. The described device consisting of a platform and a rotatable member mounted thereover, means whereby said platform may be held normally suspended and means whereby said platform may be caused to drop into contact with a roadbed, said platform having side arms with openings therein and carriers pivotally mounted in said openings, said rotatable member being mounted on said carriers, a shaft for said member, pulleys on said shaft and means for rotating said pulleys, said means consisting of belts.

4. The described device consisting of a platform and a rotatable member mounted thereover, means whereby said platform may be held normally suspended and means whereby said platform may be caused to drop into contact with a roadbed, said platform having side arms with openings therein and carriers pivotally mounted in said openings, said rotatable member being mounted on said carriers, a shaft for said member, pulleys on said shaft and means for rotating said pulleys, said means consisting of belts, wheels on the lower ends of said carriers and pulleys on said wheels whereby said belts are operated.

5. The described device consisting of a platform and a rotatable member mounted thereover, means whereby said platform may be held normally suspended and means whereby said platform may be caused to drop into contact with a roadbed, said platform having side arms with openings therein and carriers pivotally mounted in said openings, said rotatable member being mounted on said carriers, a shaft for said member, pulleys on said shaft and means for rotating said pulleys, said means consisting of belts, wheels on the lower ends of said carriers and pulleys on said wheels whereby said belts are operated and means for preventing the rotation of said member.

[Claims 6 and 7 not printed in the Gazette.]

1,195,439. MAIL CATCHER AND DELIVERER. GRANT BURTON, Stapleton, Ala. Filed May 6, 1916. Serial No. 95,885. (Cl. 258—16.)



1. A mail bag deliverer and receiver comprising mail bag supporting members, crossed latch arms connected with said mail bag supporting members, means for retaining said mail bag supporting members in normal position, and means for separating said crossed latch arms to release said mail bag supporting members.

2. A mail bag deliverer and receiver comprising rotary members, mail bag supporting members carried by said rotary members, means for locking said rotary members in normal position, crossed latch arms connected with said rotary members, and means to swing said crossed latch arms in opposite direction to release said rotary members.

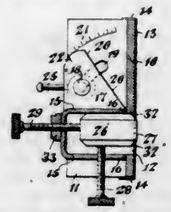
3. A mail bag deliverer and receiver comprising supporting means adapted to be mounted upon a car, rotary members mounted in said supporting means in spaced relation, diverging mail bag supporting arms carried by said rotary members, means for preventing rotation of such rotary members, and crossed latch arms adapted to be separated to release said rotary members.

4. A mail bag deliverer and receiver comprising a supporting frame, rotary members mounted in said supporting frame, mail bag supporting arms carried by said rotary members, a second set of rotary members, crossed latch members carried by the second mentioned set of rotary members, means carried by the first mentioned and second mentioned rotary members to prevent independent rotation of the first mentioned rotary members, means for normally retaining the second mentioned rotary members against rotation, and means for separating said crossed latch members to release said second set of rotary members and permit rotation of said first mentioned rotary members.

5. A mail bag deliverer and receiver comprising a pair of turn shafts, means for supporting said turn shafts, means for locking said turn shafts against rotation, mail bag supporting means carried by said turn shafts, a second pair of turn shafts mounted in said supporting means, latch members mounted on said second pair of turn shafts and adapted for engagement with a stationary object to cause rotation of said second mentioned turn shafts, and means carried by said second mentioned turn shafts for releasing said first mentioned turn shafts.

[Claims 6 to 18 not printed in the Gazette.]

1,195,440. DEVICE FOR HOLDING ANVILS FOR TRUING. SAMUEL J. CAMPBELL, Cheboygan, Mich. Filed Mar. 13, 1916. Serial No. 83,902. (Cl. 51—12.)



1. A device for holding anvils while truing the same, comprising a base member having a flat gage plate thereon with an anvil receiving opening therethrough, and an anvil holder adjustably mounted on the base member at the inner side of the gage plate and at the side of the opening to project variously formed active anvil faces at the desired angle through said opening.

2. A device for holding anvils while truing the same comprising a base member having a gage plate provided with an opening therethrough, a holder on the base member to receive an anvil, gripping means in the holder to secure the anvil therein, said holder being adjustable on the base member into various angles against the gage plate and said gripping means being adjustable, whereby the anvil may be held at the required angle, and may be projected through said opening to dispose the active face of the anvil substantially in the plane of the outer face of the gage plate.

3. A device for holding anvils while truing the same comprising a base member with a gage plate, an anvil holder on the base member, and advancing means for engagement with the anvil in the holder to project the same from the holder into the plane of the gage plate.

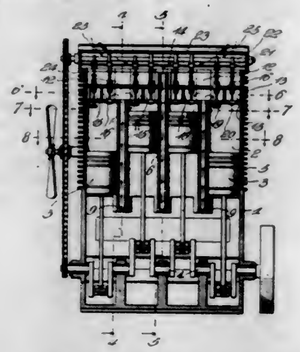
4. A device for holding anvils while truing the same comprising a base member having a gage plate, a holder adjustably mounted on the base member and having a longitudinal guiding inner face, means to hold the anvil against the guiding face, and means for advancing the anvil along the guiding face to project the same beyond the gage plate.

5. A device for holding anvils while truing the same, comprising a base member provided with a gage plate having an anvil receiving opening therein, a holder adjustably mounted on the base member, a clamp engaging the holder and the base member to secure the holder to the

base member when the holder is adjusted, and means in the holder for rigidly binding an anvil therein, said means being adjustable to accommodate anvils of different sizes and to project the anvil therein into said opening to retain the active face of the anvil substantially in the outer face of the gage plate.

[Claims 6 to 10 not printed in the Gazette.]

1,195,441. INTERNAL-COMBUSTION ENGINE. JOSEPH VICTOR CARON, Haverhill, Mass. Filed Aug. 23, 1915. Serial No. 46,907. (Cl. 123—59.)



1. The combination with an internal combustion engine including a pair of parallel cylinders, of a carbureter, an air intake port leading between said cylinders to said carbureter and continuing throughout the length of said cylinders, and a pair of outlet ports leading from the carbureter and extending one throughout the length of each cylinder at points remote from the other port.

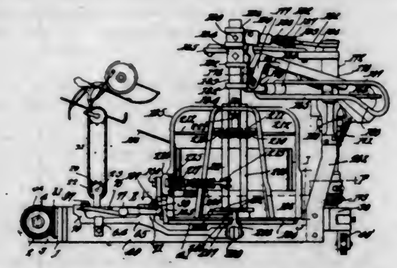
2. The combination with an internal combustion engine including a pair of parallel cylinders, of a carbureter, an air intake port leading between said cylinders to said carbureter and continuing throughout the length of said cylinders, a pair of outlet ports leading from the carbureter and extending one throughout the length of each cylinder at points spaced from the outer port, all of said ports being open at the outer ends of the cylinders, a hollow cylinder head secured over said outer ends of the cylinders and into which the outlet ports deliver, and a port extension in the head between the aforesaid outlet ports and registering with the intake port.

3. The combination with an internal combustion engine including a pair of parallel cylinders and a crank case at the inner end thereof, of a laterally extending boss formed integrally with said crank case adjacent its connection with the cylinders, a carbureter secured to said boss and having adjacent its lower end a fresh air inlet and at its upper end a mixture outlet, an air intake port leading between two cylinders and through the boss to the air inlet of the carbureter, said port extending throughout the length of said cylinders, and a pair of outlet ports leading from the outlet of the carbureter through the boss and throughout the length of said cylinders at points remote from the intake port.

1,195,442. MACHINE FOR SHOCKING GRAIN. CHARLES CISSNER, Starkweather, N. D. Filed Feb. 4, 1915. Serial No. 6,114. (Cl. 56—121.)

1. In a grain shocker, a bundle receiver, a shock former normally positioned in front thereof, and means controlled by the delivery of bundles to the receiver, for automatically tilting said receiver after a plurality of bundles have been discharged thereinto, thereby to deliver the bundles on end into the shock former.

2. In a grain shocker, a forwardly tiltable bundle receiver, a shock former normally positioned in front thereof to receive bundles therefrom, and means controlled by the delivery of bundles to the receiver for automatically tilting said receiver after a plurality of bundles have been discharged thereinto.



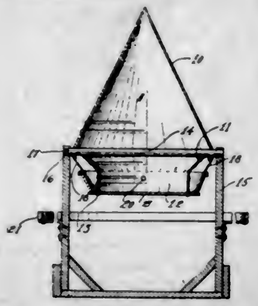
3. In a grain shocker, a shock former, a tiltable bundle receiver in rear thereof and adapted to deliver bundles on end into the former, and means controlled by the delivery of bundles to the receiver for automatically tilting said receiver to delivering position after a plurality of bundles have been discharged thereinto.

4. In a grain shocker, a shock former, a bundle receiver in rear of the former, means controlled by the delivery of bundles to the receiver for automatically tilting said receiver to deliver bundles on end into the former after a plurality of bundles have been discharged into the receiver, and transversely extending means within the receiver for engaging the bundles to prevent slipping during their discharge.

5. In a grain shocker, a shock former, a bundle receiver in rear of the former, means controlled by the delivery of bundles to the receiver for automatically tilting said receiver to deliver bundles on end into the former after a plurality of bundles have been discharged into the receiver, and transversely extending means within the receiver for engaging the bundles to prevent slipping during their discharge, said means being toothed.

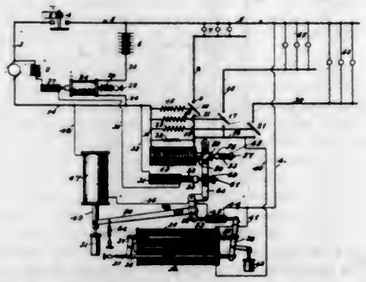
[Claims 6 to 55 not printed in the Gazette.]

1,195,443. POULTRY WATER-FOUNTAIN. EDWIN A. COLLIS, Viola, Del. Filed May 28, 1914. Serial No. 841,547. (Cl. 119—77.)



A drinking fountain comprising spaced uprights, a transverse bar pivotally mounted at the upper ends of the uprights, a water container carried by the bar between the uprights for swinging movement with the bar, said container having an open and a closed end, a pan disposed over the open end of the container with its flange surrounding a portion of the container and lying in spaced relation thereto, said container having openings therein within the inclosure of the flange of the pan, attaching members carried by the bar and removably engaged with the pan and arranged to hold the pan in position upon the container, and a perch secured to the uprights in position to surround the space below the container when the latter is disposed with the pan directed downwardly, said perch lying out of the path of movement as to all portions of the container during the swinging movement of the latter with the bar.

1,195,444. SYSTEM OF ELECTRICAL DISTRIBUTION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Oct. 1, 1909. Serial No. 520,493. (Cl. 171—313.)



1. The combination with a generator, a storage battery and translating devices adapted to be operated thereby, of a regulator for the translating devices and a regulator for the generator operated by the potential difference across the translating devices.

2. The combination with a generator, a storage battery and a translation circuit, of means for regulating the voltage of the generator and means coöperating therewith to regulate the translation circuit operated by the potential difference across the translation circuit.

3. The combination with a generator, a storage battery and a work circuit, means for regulating the potential across the work circuit and for maintaining a predetermined potential difference between the generator and the work circuit, and means coöperating with the said regulator to control the generator both previous and subsequent to the operation of the said regulating means.

4. The combination with a generator, a storage battery and a work circuit, of a regulator for the work circuit, a regulator for the generator and means whereby the voltage across the lamp circuit operates said regulators.

5. A system of electrical distribution comprehending a generator, a storage battery and a work circuit, combined with means for regulating the generator, means in series with the work circuit capable of altering the voltage thereof, means responsive to changes in voltage of the work circuit for operating said voltage altering means in such manner as to hold the voltage across the translating circuit substantially constant throughout certain changes in generator voltage, and means coöperating with the first means whereby said operating means regulates the generator voltage.

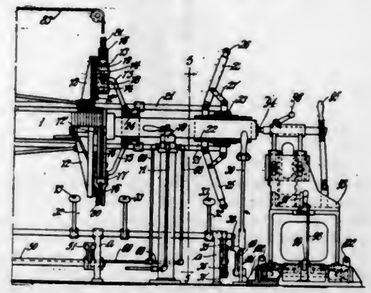
[Claims 6 to 9 not printed in the Gazette.]

1,195,445. COMBINED CROSS-TIE AND RAIL-CHAIR. MICHAEL CZAP, Pleasant City, Ohio. Filed Mar. 16, 1916. Serial No. 84,540. (Cl. 238—5.)



A cross-tie including a base having a chair, a rigid abutment on the chair head at each side thereof, the abutments being spaced to receive the rail base therebetween and to overhang said rail base, the chair head having a pair of openings on each side thereof and adjacent the respective ends of the abutments, a clamp in each opening engageable with the side edges of the rail base, and also with the upper face of the rail base and the under face of the chair head, and a key also arranged in each opening and engaged with the clamp whereby upon inner movement of the clamps on either side of the rail the latter will be caused to have its other side edge engaged with the abutment adjacent said other side edge of the rail and its movement arrested thereby.

1,195,446. SEAM-WELDING APPARATUS. HENDERSON G. DAVIS, West Springfield, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a Corporation of Massachusetts. Filed June 24, 1915. Serial No. 36,145. (Cl. 113—59.)



1. A welding apparatus, comprising, a rotatable member, adjustable devices adapted to temporarily receive and exteriorly support two or more tubular sections in approximate concentric relation with said member, expansible gripping means on said member adapted to engage the interior of said sections and remove the latter from said adjustable devices, and mechanism to rotate said member and thus the sections.

2. A welding apparatus, comprising, a rotatable member, a series of adjustable devices adapted to temporarily support the exterior of two or more tubular sections to be welded in approximate concentric relation with said member, expansible gripping mechanism on said member engageable with the interior of said sections and adapted to support the sections in true concentric relation with said member, said mechanism including means to expand and circumferentially aline the abutting edges of the sections to be welded, and means to rotate said member and thus the sections.

3. A metal working apparatus, comprising, means to receive and hold two tubular shells, mechanism to expand said shells into concentric position one to the other with their adjacent edges held slightly apart, said mechanism including expansible gripping means to engage inside of and slightly back from the adjacent edges of the shells so that the latter are freely exposed on both sides, and means to rotate said gripping means with the shells thereon.

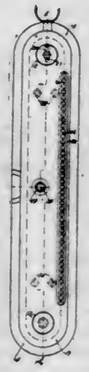
4. A metal working apparatus, comprising, a supporting arm, two or more holding means thereon, each comprising a circular series of holding arms of equal radius with reference to the supporting arm, mechanism to move said arms in and out, whereby said radius is decreased and increased, means to rotate said holding means, and supplementary devices to support open ended tubular shells while they are slipped over said supporting arms, all constructed and arranged so that tubular shells may be fed over the supporting arms, the latter expanded to grip said shells and bring them to concentric position and said devices withdrawn to leave the shells properly lined up and held by said arms.

5. A welding apparatus, comprising, a supporting framework, devices thereon to receive two or more tubular sections to be joined in welding, said devices including means to line said sections into concentric position one

with another with their adjacent ends positioned for welding, and spacing means removably positioned between said ends, a heat applying means, and mechanism to rotate said devices and thus the sections and said last named means one relatively to the other, whereby the adjacent ends are joined in a welded seam and to withdraw said spacing means from between the adjacent ends as the welding of the seam takes place.

[Claims 6 to 13 not printed in the Gazette.]

1,195,447. FILM-WINDER. KARL RICHARD DIETERLE, Los Angeles, Cal. Filed July 29, 1915. Serial No. 42,496. (Cl. 242—70.)



1. A film winder for cameras, comprising a casing member having a slot, an endless flexible member exposed at said slot for manual operation and provided with finger-holds distributed throughout its length, and film winding means connected to be operated by said flexible member.

2. A film winder for cameras, comprising rotatable members adapted to wind the film, an endless flexible member mounted to rotate one of said rotatable members and provided with finger-holds distributed throughout its length, and inclosing means having a slot exposing the finger-holds of a portion of said endless flexible member for manual operation thereof.

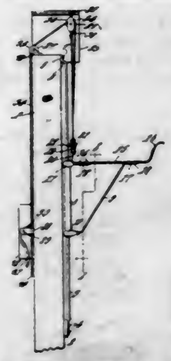
3. A film winder for cameras, comprising rotatable members adapted to engage the film rolls to wind the film and provided with independent handle means, wheels rotatably mounted on said rotatable members, one of said wheels having a clutch connection with the rotatable member on which it is mounted, an endless flexible member mounted on said wheels and provided with finger-holds distributed throughout its length, and a casing member inclosing said wheels and provided with a slot exposing the finger-holds of a portion of said flexible member for manual operation thereof.

4. In combination with a film roll of a camera, a sprocket wheel connected to operate said roll, and an endless flexible member mounted on said sprocket wheel and having projections distributed throughout its length, said projections being adapted to engage the sprocket wheel and constituting finger-holds, said endless flexible member having a portion exposed for manual operation.

5. As an attachment for cameras, a casing member provided with means for attachment to a camera, a shaft mounted in said casing member and provided with means for engaging one of the film rolls of the camera, a wheel mounted on and connected to said shaft, a second wheel mounted on said casing member, and a flexible member mounted on said wheels to operate the first named wheel and provided with finger-holds distributed throughout its length, said casing member having a slot exposing a portion of said flexible member for manual operation thereof.

[Claims 6 and 7 not printed in the Gazette.]

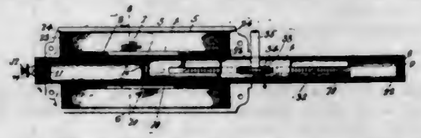
1,195,448. ADJUSTABLE HARNESS-BRACKET. JOSEPH J. DOLECHEK, Ellsworth, Kans. Filed Apr. 27, 1915. Serial No. 24,274. (Cl. 211—15.)



1. In a device of the class described, a supporting means; a pulley block carried by the supporting means; a track on the supporting means; a bracket mounted to slide vertically on the track and to rock laterally thereon; a flexible element; a sheave on the bracket, the sheave being disposed eccentrically with respect to the track, and the flexible element being trained through the pulley block and around the sheave; means for securing one end of the flexible element permanently; and means for securing the other end of the flexible element detachably, the bracket being adapted to swing laterally thereby to bind a portion of the flexible element between the sheave and the support to hold the bracket in an adjusted position while the flexible element is being engaged with the means for holding the flexible element detachably.

2. In a device of the class described, a support; an arched casing assembled with the upper end of the support; a pulley block carried by the crown of the casing; a wheel carried by the top of the support and located adjacent the rear face of the support; a track carried by the forward face of the support; a bracket mounted to slide on the track; a sheave carried by the bracket and located below the casing; a flexible element trained through the sheave, one end of the flexible element being fixed, the other end of the flexible element being trained through the pulley block and across the wheel; and means for holding the last specified end of the flexible element.

1,195,449. SOLENOID. CHARLES S. DU BELLE, Williamsport, Pa. Original application filed June 8, 1909, Serial No. 500,817. Divided and this application filed Mar. 29, 1910. Serial No. 552,280. (Cl. 175—341.)



1. A solenoid having a tube for the reciprocatory core which is provided with an end closure and with apertures spaced from said closure, leaving the tube imperforate for a part of its length, and a chamber external to said tube communicating with the atmosphere and with the interior of the tube through said apertures, for the purpose described.

2. A solenoid having a tube for the reciprocation of the core or armature and provided with an air space around said tube in communication with the atmosphere, said tube having an end closure and provided with a series of ports spaced at different distances therefrom, substantially as and for the purpose described.

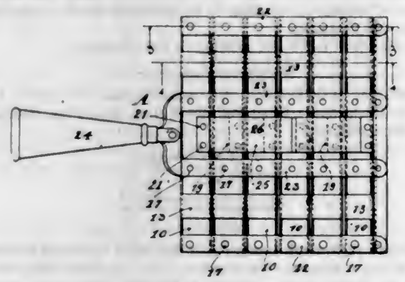
3. A solenoid having a tube for the reciprocation of the core or armature and provided with an air space around said tube in communication with the atmosphere, said tube having an end closure provided with a restricted air passage, and the tube being provided with an air port or ports spaced from said closure and for establishing communication with said air space.

4. A solenoid having a central tube provided with a closure at one end and with perforations spaced therefrom, a sleeve encircling said tube and providing therebetween an air space in communication with the atmosphere and adapted to communicate with the interior of the tube through said perforations, and a core or armature working in and whose head fits said tube.

5. In combination with a solenoid having a reciprocating core, a tube of non-magnetic material in which said core is fitted, said tube having a series of perforations therein communicating with an air-space around the tube a closure for the end of the tube spaced from said perforations to provide an air-cushion, said closure consisting of a plug having an opening therethrough and an exteriorly threaded bolt screwed into said opening and slitted longitudinally to provide an air passage, together with a lock-nut on said threaded bolt having a transverse slit or air-passage in communication with the slit in said bolt, whereby the latter may be adjusted and locked in different positions for regulating the admission of air.

[Claims 6 to 14 not printed in the Gazette.]

1,195,450. CURRYCOMB. HENRY LARSON DUXSTAD, Cambridge, Wis. Filed May 19, 1916. Serial No. 98,687. (Cl. 119—88.)



1. A curry comb, including a plurality of duplicate units, each of said units comprising a currying blade, a scraping blade, said scraping blade being integrally formed with said currying blade, means connecting said currying blades, and means connecting said scraper blades.

2. A curry comb, including a plurality of duplicate units, each of said units having a currying blade, and integrally formed therewith a scraper blade, said scraper blade contacting with a currying blade of an adjacent unit, means connecting said currying blades, and other means connecting said scraper blades.

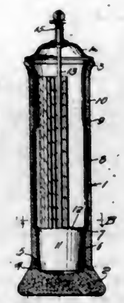
3. A curry comb, including a plurality of duplicate units, each of said units having a currying blade, and integrally formed therewith a scraper blade, said scraper blade contacting with a currying blade of an adjacent unit, means connecting said currying blades, other means connecting said scraper blades, and means for depressing said scraper blades.

4. A curry comb, including a plurality of duplicate units, each of said units having a currying blade and a scraper blade, resilient members connecting the blades of individual units, means connecting the currying blades of said units, and other means independently connecting the scraper blades of said units.

5. A curry comb, including a plurality of duplicate units, each of said units having a currying blade and a scraper blade, resilient members connecting the blades of individual units, means connecting the currying blades of said units, other means independently connecting the scraper blades of said units, and means for depressing said scraper blades.

[Claims 6 to 8 not printed in the Gazette.]

1,195,451. STRAW-DISPENSER. WILLIAM J. EISENHART, Baltimore, Md. Filed Mar. 10, 1916. Serial No. 83,355. (Cl. 211—8.)



1. A straw dispensing device including a container, a straw carrying cup removably mounted in the container, the wall of the cup constituting means for supporting the straws in the cup in upwardly extended positions, a central stem projecting from the cup, and a cap fixedly connected to the stem and constituting a closure for the container when the cup is seated in the container.

2. The combination with a cup, a central stem projecting therefrom, and a cap carried by the stem, the wall of the cup and the stem coöperating to hold straws in the cup and along upwardly diverging lines, of a container having a recess in the bottom thereof, said cup and stem being removably mounted in the container and the bottom of the cup being normally positioned in the recess, said cap constituting a closure for the container when the cup is seated in the recess.

3. A straw dispenser including a cup, a stem extending from the center thereof, a cap carried by the stem, the wall of the cup and the stem coöperating to hold straws in the cup and along upwardly diverging lines, a container for the reception of the cup and stem, said cup and stem being removable from the container, the cap constituting a closure for the container when the cup is seated within the container.

4. A straw dispenser including a cup, a stem extending from the center thereof, a cap carried by the stem, said cup and stem coöperating to hold straws along upwardly diverging lines, a container for the reception of the cup and stem, said cup and stem being removable from the container, the cap constituting a closure for the container when the cup is seated within the container, said container having an enlarged base constituting a weight, there being a recess in the base for the reception of the cup, the internal diameter of the container being increased at intermediate points to reduce friction during the relative movement of the cup and container.

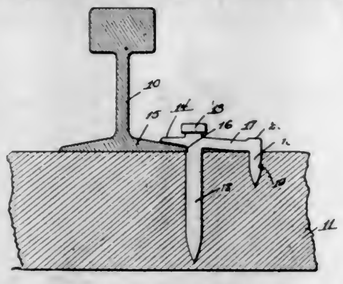
5. A straw dispensing device including a container, a straw holder removably mounted within the container, a stem, and a cap carried by the stem and constituting a closure for the container when the straw holder is seated in the container, said straw holder having its wall of sufficient height to support the straws along upwardly diverging lines when the holder is removed from the container.

[Claim 6 not printed in the Gazette.]

1,195,452. RAILROAD-SPIKE. LEONARD E. ERICKSON, Blue Earth, Minn. Filed June 5, 1915. Serial No. 32,449. (Cl. 85—29.)

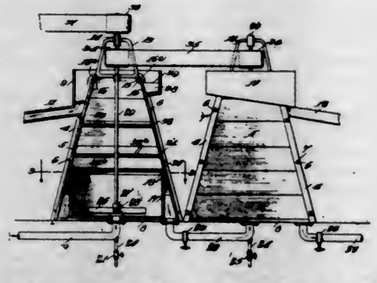
In combination with a rail and a tie, a spike having a shank to penetrate the tie, a lip integral with said shank

to engage the rail, said shank being provided with a shallow pocket subjacent the lip to receive the adjacent edge of the base flange of the rail and maintain the spike and rail against relative movement, an arm integral with and extending laterally from said shank, means integral with said arm, depending therefrom and engaging the tie, a head integral with said shank disposed above and in



spaced relation to said arm, and a raised portion integral with said arm in spaced relation to said head; whereby a tool may be engaged with said head and operated with said raised portion as a fulcrum to effect disengagement of the base flange of the rail and the shallow pocket of the shank prior to the withdrawing operation of the entire spike.

1,195,453. ORE-CONCENTRATOR. WILLIAM FAGERGREN, Salt Lake City, Utah, and WILLIAM D. GREEN, Butte, Mont., assignors, by mesne assignments, to Metals Recovery Company, a Corporation of Maine. Filed Aug. 12, 1913. Serial No. 784,336. (Cl. 83—85.)



1. In an ore concentrator, the combination of a tank, a receptacle located within said tank and provided with a wall having a continuous edge from which ore materials may be discharged, means for introducing within said tank and within said vessel ore pulp or the like, means for admitting air into said receptacle, a dasher located within said receptacle for the purpose of agitating said ore pulp and said air, a plurality of baffle floors located at different successive levels within said tank and provided with openings, and means for discharging gangue and water overflowing from said receptacle within said tank and means for discharging concentrates from the top of said tank.

2. In an ore concentrator, the combination of a tank provided with an upper edge, a tub located within the bottom portion of said tank and provided with an upper edge, a plurality of baffle floors provided with openings located within said tank and disposed at different successive levels above said tub, a revoluble shaft extending through said tank and said floors and into said tub, a dasher located within said tub and mounted upon said shaft, means for turning said shaft, a pipe for discharging air into the bottom of said tub, and means for admitting into the bottom of said tub a supply of ore pulp to be operated upon by said air and said dasher.

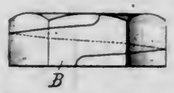
3. In an ore concentrator, the combination of a tank, means for introducing into the lower portion thereof a supply of ore pulp, means for introducing air into the lower portion of said tank, a dasher for agitating said ore pulp and the air supplied thereto, a plurality of baffle floors located at different levels above the bottom of said tank and provided with openings, the openings in one baffle floor extending in different angular directions to the openings in another baffle floor, and means for discharging air floated particles of ore passing upwardly through said openings.

4. In an ore concentrator, the combination of a tank, a receptacle located within said tank and over the upper portion of which ore materials may be discharged, means for introducing within said tank and within said receptacle the ore pulp or the like, means for admitting air into said receptacle, means within said receptacle for agitating the ore pulp and said air, a plurality of baffle floors located at different levels within said tank and provided with openings, means for discharging the gangue and water overflowing from said receptacle within said tank, and means for discharging the concentrates from the upper portion of said tank.

5. In an ore concentrator, the combination of a tank, a receptacle located within the bottom portion thereof, and over the top edge of which the gangue and water will overflow, a plurality of baffle floors provided with openings within said tank and disposed at different successive levels above said receptacle, a shaft extending through said tank and said floors and into said receptacle, an agitator located within said receptacle, and mounted upon said shaft, means for rotating said shaft, a pipe for discharging air into the lower portion of said receptacle, and means for admitting into the lower portion of said receptacle a supply of ore pulp to be operated upon by said air and said agitator.

[Claims 6 to 16 not printed in the Gazette.]

1,195,454. LOCK-NUT. CHARLES NICHOLAS FAUBEL, Little Rock, Ark. Filed Feb. 29, 1912. Serial No. 680,628. (Cl. 151—21.)



B

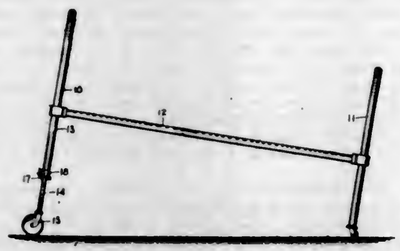
A nut lock comprising a bolt having a threaded portion of uniform diameter throughout and a radially expansible nut of spiral form having a tapered bore with screw threads of the same pitch as those of the bolt, the threaded portion of the bolt being of the same diameter as the entrance end of said bore but larger than the other end thereof; said nut being split radially so as to form a coil having a comparatively thick intermediate portion and gradually diminishing in width to the terminals of the coil which end abruptly and about shoulders or abutments on said intermediate portion, whereby strength and rigidity are combined with sufficient resiliency to permit the nut to expand radially while preventing lateral expansion thereof and adapt it to firmly grip the bolt and interlock therewith, substantially as described.

1,195,455. RAVELING PICK-UP. EDMUND J. FEENY, Muncie, Ind., assignor to The Feeny Manufacturing Company, Muncie, Ind., a Corporation of Indiana. Filed June 8, 1914. Serial No. 843,637. (Cl. 15—60.)



In combination, a rotatable brush having a projecting flattened shaft end, and a frame provided with a notch for receiving such shaft end, said notch having a portion which is wide enough to receive said shaft end and narrow enough to prevent turning of such shaft end therein and another portion which is wide enough both to receive such end and to allow it to turn therein.

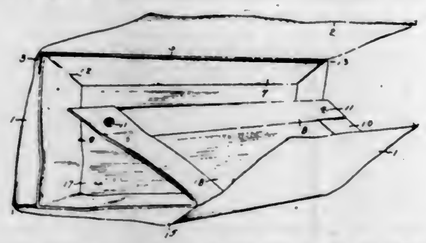
1,195,456. BEDSTEAD-JACK. OGDEN D. FOSBURGH, St. Joseph, Mo. Filed Feb. 24, 1915. Serial No. 10,221. (Cl. 5—41.)



1. In a bedstead jack, a clamp sleeve adapted to be secured to a bedstead leg, an extensible leg slidable in the said sleeve, the said extension leg having a longitudinal rack, a pawl pivoted intermediate of its ends on the sleeve by a horizontal pivot and engageable at one end with the said rack, and a latch dog pivoted on the sleeve and adapted to engage the pawl to prevent movement thereof on its pivot and hold the pawl in engagement with the rack.

2. In a bedstead jack, a sleeve, means to secure the sleeve in position, an extension leg slidable in the sleeve and formed with a longitudinal rack, a pawl pivoted to the sleeve between the ends of the pawl, a spring introduced between the pawl and sleeve and tending to maintain the pawl in engagement with the rack, and a latch dog pivoted on the sleeve and engageable with the pawl to hold same against movement on its pivot.

1,195,457. POCKET-PORTFOLIO. FREDERICK B. GEE, Oakland, Cal. Filed Nov. 23, 1914. Serial No. 873,655. (Cl. 129—1.)



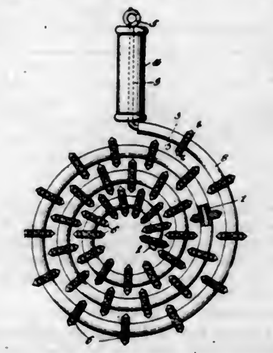
1. A portfolio including a flexible backing, and a flexible open frame having U shaped sides, attached to and foldable within said backing.

2. A portfolio including a flexible backing; a flexible open frame foldable within said backing and comprising U shaped strips joined at their ends; and a transparent flexible sheet of material secured within said frame.

1,195,458. CURRYCOMB. FRED GIESENHAUS, Muscatine, Iowa. Filed Dec. 11, 1913. Serial No. 806,020. (Cl. 119—86.)

1. In a curry-comb, a convoluted frame, and a plurality of rotatable currying members mounted thereon, substantially as described.

2. In a currycomb, a convoluted support, and a plurality of currying disks thereon, said disks being independently rotatable in a plane to which said support is at right angles.



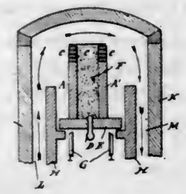
3. In a curry-comb, a convoluted supporting frame, and a plurality of toothed currying disks rotatably mounted on said frame, substantially as described.

4. In a curry-comb, a convoluted frame, a plurality of toothed currying elements independently movable thereon, and spacing elements on said frame for holding the toothed currying members in spaced relation with respect to each other, substantially as described.

5. In a curry-comb, a convoluted frame, and a plurality of toothed disk currying elements mounted on said frame in staggered relation with respect to each other, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,195,459. CEMENTATION PROCESS FOR ARMOR-PLATES EMPLOYING MIXED CEMENTATION AGENTS. FEDERICO GIOLITTI, Turin, Italy, assignor to Società Anonima Italiana Gio Ansaldo & C., Genoa, Italy. Filed Oct. 14, 1914. Serial No. 866,701. (Cl. 148—26.)

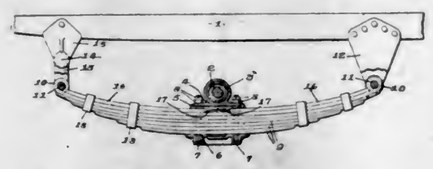


1. A process for cementing armor plates comprising arranging the plates vertically on the hearth of a furnace, filling the space intervening between the plates with a solid cementation agent and introducing a gaseous cementation agent through the hearth of the furnace into the space between the plates.

2. A process for cementing armor plates comprising arranging the plates vertically on the hearth of a furnace, connecting together the plates by means of metal plates or prisms, filling the box-like space thus formed with a solid cementation agent and introducing a current of a gaseous cementation agent through the hearth of the furnace into the space thus formed.

3. A process for cementing armor plates comprising arranging the plates vertically on the hearth of a furnace, arranging a refractory box on the upper edges of the plates, filling the box and the space between the plates with a solid cementation agent, and introducing a gaseous cementation agent through the hearth of the furnace into space between the plates.

1,195,460. LEAF-SPRING CONSTRUCTION. JACOB E. GRAMLICH, Syracuse, N. Y., assignor to Chase Motor Truck Co., Syracuse, N. Y., a Corporation of New York. Filed Dec. 5, 1914. Serial No. 875,637. (Cl. 267—33.)



1. The combination of a spring leaf having a bearing at one end a supporting bracket located at a point remote from the bearing, a strut member interposed between the bearing and the bracket and shouldering at its opposite ends against said bearing and the bracket, substantially as and for the purpose set forth.

2. The combination of a spring leaf, a supporting bracket, and a strut member interposed between the end of the main leaf and the bracket, the strut member being in the form of a leaf lying contiguous to the spring leaf, substantially as and for the purpose specified.

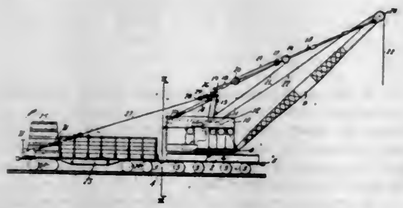
3. The combination of a spring leaf having a shoulder near one end, a supporting bracket for the spring located at a point remote from the shoulder, and a strut member in the form of a leaf lying contiguous to the spring leaf and interposed between said shoulder and the bracket, and abutting at its ends against the shoulder and the bracket, substantially as and for the purpose set forth.

4. The combination of a spring leaf having an eye near one end, a supporting bracket located at a point remote from the eye, and a strut member interposed between the eye and the bracket and abutting at its ends against said eye and the bracket, substantially as and for the purpose described.

5. The combination of a leaf spring, one of the leaves thereof having shoulders near its opposite ends, a supporting bracket for the spring located intermediate of the ends thereof, and strut members interposed between the shoulders and the bracket and abutting at their ends against the shoulders and the bracket, substantially as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,195,461. LOCOMOTIVE-CRANE. HOWARD A. GREENE, Pittsburgh, Pa. Filed May 13, 1916. Serial No. 97,265. (Cl. 212—38.)



1. In a locomotive crane, the combination of a wheeled crane body having a horizontally rotating main frame, a vertically swinging boom pivoted at one end to the main frame, an A frame having its lower end pivotally connected to said main frame, stiff legs connecting the upper end, of said A frame and the main frame, a load fall on the boom, a topping lift hoist connecting the upper end of the boom to the A frame, a tender car coupled to the crane body, a counterweight at one end of said tender car, and adjustable back stays pivotally connecting the upper end of said A frame with the counterweighted end of the tender car.

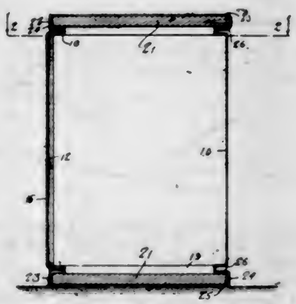
2. In a locomotive crane, the combination of a wheeled crane body, having a horizontally rotating main frame, a vertically swinging boom pivoted at one end to the main frame, an A frame pivotally connected to said main frame, a load fall on the boom, a topping lift hoist connecting the upper end of the boom to the A frame, a tender car coupled to the crane body, a counterweight at one end of said tender car, and adjustable back stays connecting the upper end of said A frame with the counterweighted end of the tender car.

3. In a locomotive crane, the combination of a wheeled crane body having a horizontally rotating main frame, a vertically swinging boom pivoted at one end to the main frame, an A frame pivotally connected to said main frame, stiff legs connecting the upper end of the A frame and main frame, a load fall on the boom, a topping lift hoist connecting the upper end of the boom to the A frame, a tender car coupled to the wheeled frame, a water tank forming a counterweight at one end of said tender car, and adjustable back stays pivotally connecting the upper end of said A frame with the counterweighted end of the tender car.

4. In a locomotive crane, the combination of a wheeled crane body having a horizontally rotating main frame, a vertically swinging boom pivoted at one end to the main frame, an A frame pivotally connected to said main frame, a load fall on the boom, a topping lift hoist connecting the upper end of the boom to the A frame, a tender car coupled to the crane body, a counterweight at one end of said tender car, and means adjustably connecting the upper end of said A frame with the counterweighted end of the tender car.

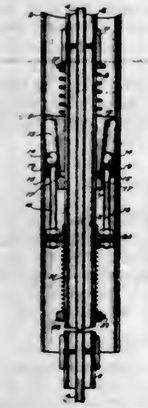
5. In a locomotive crane, the combination of a wheeled car body having a horizontally rotating main frame, a vertically swinging boom pivoted at one end to the main frame, an A frame pivotally connected to said main frame, means forming a strut pivotally connecting the upper end of said A frame and the main frame, a load fall on the boom, a topping lift hoist connecting the upper end of the boom to the A frame, a tender car coupled to the crane body, means forming a counterweight on one end of said tender car, and adjustable back stays pivotally connecting the upper end of said A frame with the counterweighted end of said tender car.

1,195,462. METAL BARREL. WILLIAM J. GRINDEN, Brooklyn, N. Y. Filed Nov. 20, 1915. Serial No. 62,572. (Cl. 220—64.)



A sheet metal barrel having its wall inwardly grooved adjacent the end of the barrel to form a substantially flat internal ledge, a wooden head resting upon said ledge and an external split locking ring of channel section having a pair of uninterrupted annular flanges one flange overlying the outer face of the head and its other flange entering said peripheral groove, together with means piercing said ring and entering the wooden head for securing said locking ring in position to retain said head.

1,195,463. SAFETY APPLIANCE. JAMES T. HALL, Coalinga, Cal., assignor of one-half to Bunting Iron Works, Coalinga, Cal., a Corporation of California. Filed Mar. 17, 1915. Serial No. 15,106. (Cl. 57—9.)



1. A safety appliance for locking a movable member against falling relative to a fixed member within which it moves, the same comprising a block carried by the movable member, a plurality of freely movable engaging devices carried by the block, means actuated by a difference in pressures of falling bodies for moving said freely movable engaging devices into locked engagement with the fixed member on a rupture of the supporting means for the movable member, and means for permitting a yielding movement upwardly of the block on the movable member on the engagement of the engaging members with the fixed member.

2. A safety appliance for locking a pump tubing against falling relative to a well casing within which it is positioned, the same comprising a block formed in its peripheral edge with a plurality of longitudinally disposed raceways increasing in depth toward one end, a friction engaging ball in each of said race-ways, a rod associated with the underside of each ball for forcing the same toward the shallow end of said race-ways, a plate connecting said rods, and a spring actuated by the difference in pressure of falling bodies for actuating said rods to move said balls into locked engagement with the well casing on a rupture in the supporting means for the pump tubing.

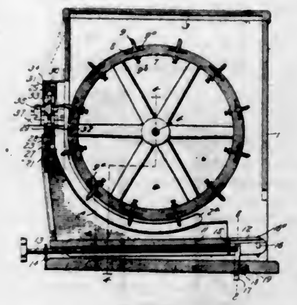
3. A safety appliance for locking a pump tubing against falling relative to a well casing within which it is positioned, the same comprising a block surrounding a section of said pump tubing and movable thereon, a collar on which said block rests, a spring under pressure for normally maintaining said block seated on said collar, said block provided on its periphery with a plurality of longitudinally disposed open faced race-ways open at one end and tapering in depth toward one end of said block, a friction ball in each of said race-ways and adapted as forced toward the shallow end thereof to project beyond the peripheral edge of said block, a plunger operating through the open end of each of said race-ways and associated with the underside of each of said balls for forcing the same toward the shallow end of said race-ways, a plate connecting said rods and surrounding said pump tubing, and a spring actuating said rods to move said balls into locked engagement with the well casing on a rupture in the supporting means for the pump tubing.

4. A safety appliance for locking a pump tubing against falling relative to a well casing within which it is positioned, the same comprising a block surrounding a section of said pump tubing and movable thereon, a seat carried by said tubing and on which said block rests, a spring for normally maintaining said block seated on said seat, a plurality of ball engaging means carried by said block and freely movable relatively thereto, and means carried by said tubing and actuated by the difference in pressures of falling bodies for actuating said ball engaging means and moving the same into locked engagement with the fixed member on a rupture in the pump tubing or the supporting means therefor.

5. A safety appliance for locking a pump tubing against falling relative to a well casing within which it is positioned, the same comprising a block carried by the tubing, and a plurality of engaging devices carried by said block, said engaging devices being mounted for independent sliding movement relative to said block and freely movable at all times, means freely movable at all times relative to said tubing for operating said engaging devices independently of the movement of said block relative to the well casing, and a spring operated by a difference in pressure of falling bodies and actuating said operating means to cause the engaging devices to move relative to said block into frictional engagement with the well casing on a rapid descent of the pump tubing relative to the casing.

[Claim 6 not printed in the Gazette.]

1,195,464. FIBER-CLEANER. ALFRED HAMBLET, North Tonawanda, N. Y. Filed Mar. 30, 1915. Serial No. 18,025. (Cl. 13—18.)



1. A machine of the kind described comprising a rotatable drum, a casing arranged adjacent the drum, means for sliding the casing, means for adjusting the casing vertically, the said casing having a wall curved to conform with the curvature of the drum, a platen supported by said casing, and a chain traveling over said platen and transverse to the drum.

2. A fiber cleaning machine comprising a casing, a drum rotatably mounted in the casing, the casing being open at the lower portion of its front and rear, and having curved slots in its sides adjacent the front, a second casing arranged in the first mentioned casing, vertically movable guideways arranged in the first casing and receiving the second casing, the second mentioned casing having an inner wall curved on the same arc as the slots, means for moving the second casing along the guideways, a rotatable drum in the first mentioned casing, the periphery of the drum having a curvature corresponding to that of the inner wall of the second casing, leaf supporting means carried by the second casing, and a chain adapted to travel over said supporting means and carry leaves from one slot to the other and across the face of the drum.

3. In a fiber cleaning machine, a rotatable drum, blades on the drum, an adjustable casing having a wall curved to conform to the curvature of the drum and adjustable with respect to the drum, a casing inclosing the drum and the adjustable casing and having curved slots on the sides in alinement with the blades of the drum, a grooved leaf support carried by the adjustable casing, and a chain, the links of which have leaf engaging teeth, the teeth also working in the groove of the leaf support, said chain conveying leaves to be acted on by the blades of the drum from one slot to the other.

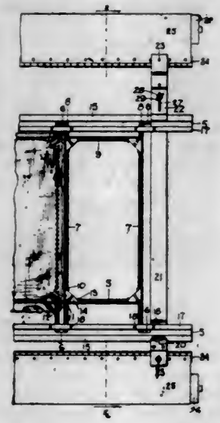
1,195,465. DENTAL INSTRUMENT. ARTHUR L. HAMILTON, Houston, Tex. Filed Nov. 13, 1915. Serial No. 61,251. (Cl. 32—10.)



1. A device of the character described including a pair of handles pivoted together, a pin detachably secured to the free end of one of said handles and slidable through an orifice in the corresponding end of the other handle and a detachable U-shaped support having depending tangs carried by said last mentioned handle end.

2. A device of the character described including a pair of handles pivoted together, a pin detachably secured to the free end of one of said handles and slidable through the corresponding end of the other handle and a detachable support having depending tangs carried by said last mentioned handle end.

1,195,466. FABRIC-FRAME FOR EMBROIDERY-MACHINES. RICHARD HAMMERLY, New York, N. Y. Filed Dec. 23, 1914. Serial No. 878,690. (Cl. 112—7.)



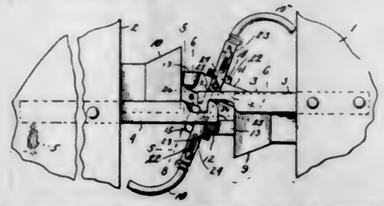
1. In a fabric frame for embroidery machines, two bars, two rollers, members secured to the bars and adapted to be wound on the rollers, a third bar disposed at an angle to the first bars and secured thereto, a fourth bar disposed substantially parallel with the said third bar and adjustable relatively to the first two bars, means for securing the fourth bar to the first two mentioned bars in adjusted position, and frames disposed between and secured to the third and fourth bars, for the purpose specified.

2. In a fabric frame for embroidery machines, two parallel bars spaced apart, two bars spaced apart connecting the first bars and secured to the latter, a plurality of frames disposed within the bars and secured to the second mentioned bars, two rollers and supporting means wound on the rollers and secured to the first mentioned bars for the purpose specified.

3. In a fabric frame for embroidery machines, two bars spaced apart, each of the bars having a series of recesses, a plurality of channel members connecting the bars with their terminals secured in the recesses, additional channeled members secured to and connecting pairs of the first channeled members, supporting means connected with the bars, and rollers spaced apart on which the supporting means are wound.

4. In a fabric frame for embroidery machines, two channeled members spaced apart, each of the channeled members having its sides nearest the other channeled member, cut at two places spaced apart, the sides of the members between the cuts being bent in the direction of each other, and an additional channeled member having its ends disposed in the cuts of the first channeled member and with its sides adjacent its ends cut, bent over and secured to the bent sides of the first channeled members between the cuts.

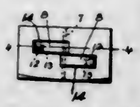
1,195,467. AUTOMATIC AIR-BRAKE-COUPLING DEVICE. EMIL SERN HANSEN and CHRISTIAN P. HANSEN, Anderson, Cal. Filed June 25, 1915. Serial No. 36,281. (Cl. 188—13.)



1. An automatic air brake coupling device comprising a plurality of slides arranged to be mounted on the adjacent ends of cars, a socket on the end of each of said slides, said sockets being arranged in offset relation, an extension on each of said sockets, said extensions being parallel with each other and inclined oppositely with relation to the slides, blocks slidably and resiliently mounted on said extensions, air pipes arranged to have the air hoses attached thereto, valves in said pipes, levers secured to the blocks to control the valves, and arms on the extensions arranged to slide within the sockets of the opposing heads to position the said levers with relation to each other.

2. An automatic air brake coupling device for cars comprising slides arranged to be resiliently attached to said cars, extensions connected to said slides, pipes resiliently and slidably mounted on said extensions in offset relation and constructed and arranged to be attached to the air hose of the cars, cushion members on the ends of said pipes, valves in said pipes, and means for moving said pipes into alinement with each other, and thereafter moving the cushions into contact with each other and to automatically open said valves.

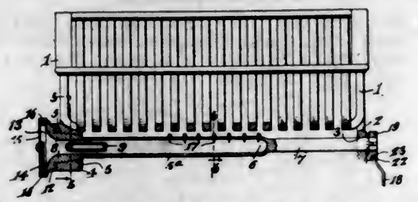
1,195,468. NUT-LOCK. CHARLES V. HERVERT, Ravenna, Nebr. Filed Feb. 24, 1914. Serial No. 820,599. (Cl. 151—25.)



In combination, a nut provided with a pair of recesses opening out through one of its faces, said recesses extending in opposite directions and having their inner ends arranged in overlapped relation, a single pivot pin carried by the nut and passing through the overlapped inner ends of the recesses, a locking element mounted in each recess and pivoted upon said pin, and a spring located between the bottom walls of the recesses and the inner sides of said locking elements.

1,195,469. FUEL-KINDLER OR PILOT FOR GRATES. CURT E. HIGGINS, Los Angeles, Cal. Filed Oct. 6, 1915. Serial No. 54,405. (Cl. 158—10.)

1. The combination with a grate, of spaced apart bearings depending from the grate, a burner tube mounted in the bearings and extending across the under side of the grate, an air valve in one end of the burner tube facing outwardly from the grate, a relatively stationary gas supply supported in one of said bearings and communicating therethrough with the burner tube, and means for turning the burner tube to control the supply of gas thereto.



2 In a device of the character set forth, a grate provided with depending plates having openings constituting bearings, a rotatable member mounted in the bearings and having a mixing chamber with jet openings, a handle for operating said member, said handle being located at one end thereof outside one of the bearings, the other end of the member being provided with a shoulder outside the other bearing, and a gas inlet and an air inlet at said end of the member.

3. In a device of the character set forth, a grate provided with depending plates having openings constituting bearings, the opening of one of the plates being straight and the opening of the other plate being tapered, a rotatable member mounted in the bearings and having a mixing chamber with jet openings, a handle for operating the said member, said handle being located at one end thereof outside one of the bearings, a spring interposed between the bearing and the handle, the other end of the member being provided with a shoulder outside the other bearing, a conical portion fitting the tapered opening of said bearing, and a gas inlet and an air inlet at said end of the member.

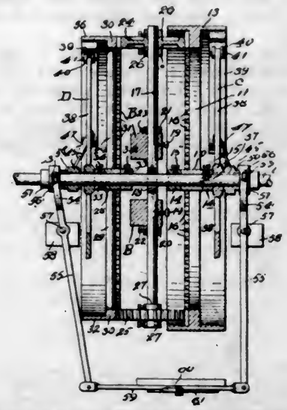
4. In a device of the character set forth, a grate provided with depending bearings, one of which is tapered and provided with a gas inlet opening in one side thereof, a rotatable burner tube mounted in said bearings and having a conical enlargement on one end to fit the tapered bearing of the grate, and having a lateral opening adapted to register with said inlet opening, said enlarged end of the burner tube also having an air inlet, and means for rotating said burner tube to control the gas supply thereto.

5. In a device of the character set forth, a grate, a rotatable burner tube hollow for a portion of its length and solid throughout the remaining portion, the hollow portion constituting a mixing chamber and being open at the outer end, bearings depending from said grate for mounting said member therebeneath, said mixing chamber having jet openings, means provided at the solid end of the burner tube for rotating the same, an air inlet valve at the open end of the mixing chamber, and means for supplying the mixing chamber with gas in advance of said air inlet valve.

[Claims 6 to 9 not printed in the Gazette.]

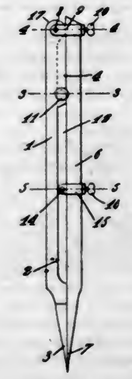
1,195,470. REVERSING-GEAR MECHANISM. ROBERT A. HOLMES, Eden, Idaho. Filed May 5, 1915. Serial No. 26,044. (Cl. 74—59.)

1. In reversing mechanism the combination with a shaft, of a pulley loosely mounted on said shaft having laterally extending flanges, a clutch wheel loosely mounted on said shaft in spaced relation to said pulley, said clutch wheel also having a lateral flange, a non-rotatable shaft arranged between said pulley and said clutch wheel, means carried by said non-rotatable shaft to cause opposite rotation of said pulley and said clutch wheel, arms fixed to said shaft in proximity to said pulley and said clutch wheel, segmental shoes pivotally connected at one end to said arms to normally be out of engagement with said flanges, collars splined to said shaft, means carried by said collars and having connection with said shoes adjacent their other end whereby upon movement of said collars said shoes may be drawn into or out of engagement with said flanges, and common means to shift said collars, as and for the purpose specified.



2. In reversing mechanism, the combination with a shaft, of a pulley loosely mounted thereon, laterally projecting flanges on said pulley, rack teeth on said pulley adjacent its perimetal edge, a non-rotatable shaft arranged adjacent said pulley, gear wheels on said shaft adjacent its respective ends in co-meshing engagement with the rack teeth of said pulley, a clutch wheel loosely mounted on said shaft, rack teeth on said clutch wheel having co-meshing engagement with said gear wheels whereby said pulley and said clutch wheel may be rotated in opposite directions, a lateral flange on said clutch wheel, collars fixed on said shaft in proximity to said pulley and said clutch wheel, oppositely projecting arms carried by said collars, segmental shoes pivotally connected adjacent one end to the outer end of said arms to be normally out of engagement with said flanges, other collars splined on said shaft and movable longitudinally with respect thereto, means connecting said last mentioned collars and said segmental shoes whereby upon movement of said last mentioned collars, one end of said segmental shoes may be moved into or out of engagement with said flanges, and common means including an operating lever to shift said last mentioned collars to cause the reversal of said pulley, as and for the purpose specified.

1,195,471. COMBINATION-TOOL. WILLIAM HOLMES, Belpre, Ohio. Filed Mar. 21, 1916. Serial No. 85,546. (Cl. 33—153.)

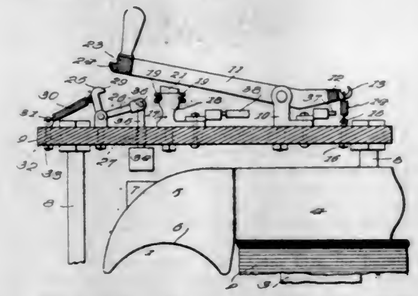


1. In a combined compass and bevel, a main leg; a link pivoted to the main leg intermediate the ends of the main

leg; a pivot means on the main leg; a pivot means on the link; an auxiliary leg longitudinally movable on the pivot means; and mechanism for holding the auxiliary leg against longitudinal movement with respect to the pivot means.

2. In a combined compass and bevel, a main leg; a loop pivoted to one end of the main leg; a link one end of which is pivoted to the main leg intermediate the ends of the main leg; a loop pivoted to the other end of the link; an auxiliary leg longitudinally adjustable in both loops; and clamping means carried by the loops and cooperating with the auxiliary leg.

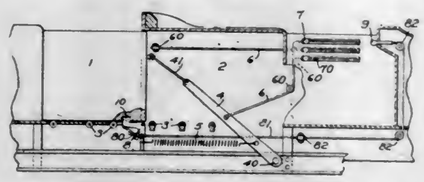
1,195,472. CUT-OUT SWITCH. ALFRED W. HOUCHIN, Kirkwood, N. J. Filed June 22, 1914, Serial No. 846,606. Renewed Feb. 1, 1916. Serial No. 75,625. (Cl. 175—272.)



1. The combination with an electric generator having a partially exposed field magnet, of a switch board adjacent thereto, a spring retracted circuit closer movably mounted on said switch board, a spring retracted catch for locking said circuit closer in operative position, and an armature carried by said catch and adapted to be attracted by said exposed portion of the magnet to lock said catch in operative position.

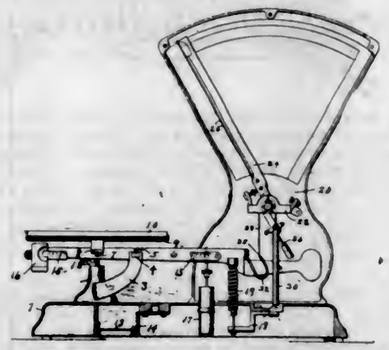
2. The combination with an electric generator having a partially exposed field magnet, of a switch board adjacent thereto and having a guide, a spring retracted circuit closer movably mounted on said switch board, a spring retracted catch for locking said circuit closer in operative position, an armature adapted to be attracted by said exposed portion of the magnet and an operating connection between said armature and said catch and movably mounted in said guide, whereby said circuit closer may be held in operative position when the field magnet is energized.

1,195,473. DOOR-OPERATING MECHANISM FOR AUTOMOBILES. CALEB JACKSON, U. S. Navy, and ERNEST W. MORGAN, Bremerton, Wash. Filed May 12, 1915. Serial No. 27,551. (Cl. 268—5.)



In an automobile having a sliding door and a recess into which said door may be retracted, an operating mechanism therefor comprising a lever movable in the plane of the door and pivoted by one end beyond the farthest limits of retraction of the door, the upper end of said lever being actuatively connected to the door, a spring secured to said lever between its ends and extending toward the entrance aperture for the door beneath the path of the door, and means for manually actuating said lever.

1,195,474. SCALE. LOUIS JAENICHEN, Detroit, Mich., assignor to The Standard Computing Scale Company, Detroit, Mich., a Corporation of Michigan. Filed July 19, 1915. Serial No. 40,548. (Cl. 73—46.)



1. In a scale, the combination of a base and a pedestal thereon, a scale lever mounted on the pedestal, a load receiver connected to one arm of the lever, a load-resisting spring connected to the other arm of the lever, a pivoted weight indicator mounted adjacent the spring, a hub connected to the indicator, a flexible band secured intermediate its ends to said hub, a counterweight secured to one end of the band, and a thermostat connecting the opposite end of the band to the lever.

2. In a scale, the combination of a base and a pedestal thereon, a scale lever pivoted intermediate its ends on the pedestal, a load receiver connected to one arm of the lever, a load-resisting spring connected to the other arm of the lever, a pivoted weight indicator mounted adjacent the arm of the lever to which the spring connects, a circular hub connected to the pointer, a flexible band secured intermediate its end to said hub, a counterweight secured to one end of the band, and a thermostat connected to said band and to the adjacent end of the lever, said thermostat being formed of two metal strips bent to horse-shoe form.

3. In a scale, the combination of a scale lever and a support therefor, a load receiver and a load-resisting spring connected to the lever, a weight indicator adjacent to one arm of the lever, a flexible band to control the operation of the weight indicator, and a horse-shoe shaped thermostat connecting the band and lever and having its arms at an angle to the lines of the lever and of the band.

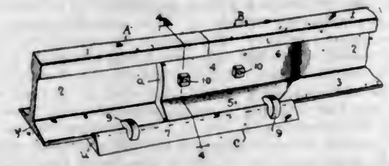
4. In a scale, the combination of a scale lever and a support therefor, a load receiver and a load-resisting spring connected to the lever, a weight indicator adjacent one arm of the lever, a horse-shoe shaped thermostat mounted on said arm of the lever, and a connector between the thermostat and the weight indicator, said thermostat being so mounted that the end of the connector will be moved diagonally to the line of the lever with changes in temperature.

5. In a scale, the combination of a scale lever and a support therefor, a weight indicator, a horse-shoe shaped thermostat having one arm so connected to said lever that the other arm will move diagonally to the line of the lever with changes of temperature, and means connecting said other arm to the weight indicator.

[Claims 6 to 10 not printed in the Gazette.]

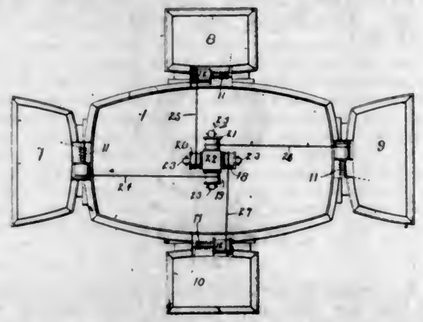
1,195,475. RAIL-JOINT. JOHN H. JOHNSON, Fay, Okla. Filed Jan. 5, 1915. Serial No. 629. (Cl. 239—8.)

A rail joint including in combination, the meeting end of two rails, each rail at its end on one side having its web enlarged, a curved fish plate having an outstanding base flange being continued from each enlargement, the upper edge of each fish plate being adapted to rest in firm contact below and against the rail head of the adjacent rail with its base flange resting upon the base of the adjacent rail end, said enlarged web portions and adjacent fish plates having registering bolt openings, bolts within said openings, whereby each rail end is connected to the



adjacent fish plate, each base flange forming a continuation and overlying a rail base portion, and a rail chair comprising a flat plate having oppositely positioned inclined flanges said flanges being adapted to engage the edges of said base flange as well as the edges of the rail, whereby each fish plate has its lower edge resting against a chair flange and its upper end against a rail head, as, and in the manner set forth.

1,195,476. AUTOMOBILE DIRECTION-INDICATOR. JOSÉ SANCHEZ JUAREZ, Mexico, Mexico. Filed Jan. 6, 1915. Serial No. 779. (Cl. 40—61.)



A direction indicator for motor vehicles including a lamp box, having its face divided into an upper, lower and central designating sections, and end designating sections, a hinged door for the upper, lower and end designating sections, a shaft for each door, a spring operated drum rigidly secured on each shaft, a central lamp supporting post, a shaft supported on each side of the lamp post, each of the shafts extending at right angles to the lamp supporting post and supporting a drum, a flexible member extending over each of the pulleys supported by the lamp post, the ends of the flexible members being wound on the drums of the doors, and a reflector positioned behind the lamp for reflecting light to all of the designating sections.

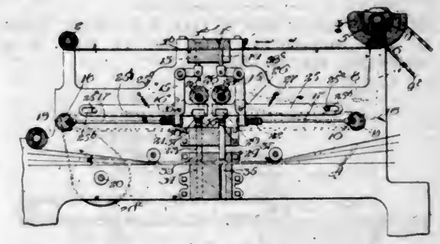
1,195,477. PUNCHING-MACHINE. PAUL BROWN KLUGH, Chicago, Ill., assignor to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 23, 1910. Serial No. 578,578. (Cl. 164—114.)

1. A machine of the class specified, having a plurality of sets of punches, one set for each note, the punches in each set being transversely displaced.

2. A machine of the class specified, having a plurality of styli adapted for use in connection with a single perforation or depression.

3. A machine of the class specified having a plurality of punches arranged for use in connection with the same perforation, and also having means for actuating one only or more than one of said punches in connection with said perforation.

4. A machine for producing records of the kind specified, having means for forming openings or perforations for the various notes at different transverse positions for the same notes.



5. A machine of the class specified having a plurality of sets of punches, one set for each note, each set having a plurality of punches, and also having mechanism by which one or more punches in each of the several sets can be operated.

[Claims 6 to 52 not printed in the Gazette.]

1,195,478. ROCK-DRILL. MOSES ARTHUR KNAPP, Oakland, Cal. Filed Sept. 5, 1911. Serial No. 647,506. (Cl. 255—36.)



1. In a rock drilling apparatus having a drilling engine of the hammer type constructed to apply percussional impulses of high frequency and in combination with a hammer and drill bit, a series of separate alined contiguous rods intermediate said hammer and said drill bit, a tube surrounding said rods and engaging said drill bit and means for rotating said tube and drill bit without subjecting the rods to torsional strain.

2. In a rock drilling apparatus having a drilling engine of the hammer type constructed to apply percussional impulses of high frequency, and in combination with its hammer and drill bit, a series of separate, alined, contiguous rods intermediate said hammer and drill bit, a jointed pipe inclosing said rod series provided with means for detaching the pipe from the drill including an aperture in the pipe with an inclined face to engage a lug on the drill bit and means for revolving the pipe.

3. In a rock drilling apparatus having a drilling engine of the hammer type and in combination with its hammer and drill bit, a series of rods intermediate said hammer and drill bit, a tube surrounding said rods and the shank of the drill bit, said tube being provided near its end with an aperture, and a lug on the shank engaging said aperture, the aperture having a bearing surface adapted to bear against the lug when the drill is rotated in one direction, the side of the aperture being inclined to the axis of the drill so that a forward movement of the drill bit causes the lug to move away from said bearing surface.

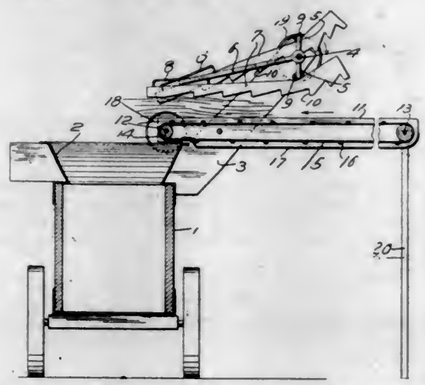
4. In a rock drilling apparatus, a drill bit adapted to extend entirely into the drill hole, a tube surrounding the shank of said drill bit, means for imparting a blow to said drill bit, means for revolving the tube and means comprising interengaging parts connecting said tube and drill bit for revolving the drill bit, said parts having inclined faces operating to minimize the friction between said tube and shank on the forward motion of the drill bit.

5. In a rock drilling apparatus having a drilling engine of the hammer type constructed to apply percussional impulses of high frequency and in combination with its hammer and drill bit, a series of separate rods alined with and intermediate the hammer and drill bit, a tube surrounding said rods and the drill bit shank, said tube being unconnected to said rods, a connection between the

tube and the shank to cause a rotation of the drill with the tube, a sleeve attached to the tube at its outer end and power operated means arranged to rotate said sleeve.

[Claims 6 to 16 not printed in the Gazette.]

1,195,479. FEEDER FOR BALING-MACHINES. ABRAM M. KOLP, Salunga, Pa. Filed Mar. 14, 1916. Serial No. 84,120. (Cl. 100—25.)



1. Feeding mechanism for baling presses and the like, including an endless conveyer, a shaft mounted for rotation thereabove and having a crank, a bail pivotally mounted on the shaft and extending over the conveyer, a feeding bar slidably connected at one end to the bail and pivotally connected adjacent its other end to the crank, one end of the bar being normally held by gravity upon the material supported by the conveyer, and means for rotating the shaft to set up a combined oscillation and reciprocation of the bar.

2. Feeding mechanism for baling presses and the like, including an endless conveyer, a shaft mounted for rotation thereabove and having a crank, a bail pivotally mounted on the shaft and extending over the conveyer, a feeding bar slidably connected at one end to the bail and pivotally connected adjacent its other end to the crank, one end of the bar being normally held by gravity upon the material supported by the conveyer, and means for rotating the shaft to set up a combined oscillation and reciprocation of the bar, said bar being toothed, the teeth being shaped to force material when moved in one direction and to drag over the material when moved in the other direction.

3. Feeding mechanism for baling presses and the like, including an endless conveyer, a crank shaft mounted for rotation thereabove, a bail pivotally connected to the crank shaft, said bail being extended toward the delivery end of the conveyer, bars pivotally connected to the respective crank on the shaft and slidably engaging the bail, each of said bars having one end portion inclined upwardly relative to the remaining portion, there being transverse teeth upon the bottom of the bar, said teeth being extended from one end to the other of the bar, and means for rotating the shaft to simultaneously slide and oscillate each of the bars thereby to force the teeth of the bars successively into the material on the conveyer and to press the engaged material in the direction of movement of the upper flight of the conveyer.

4. Feeding mechanism for baling presses and the like, including an endless conveyer, a crank shaft mounted for rotation thereabove, a bail pivotally connected to the crank shaft, said bail being extended toward the delivery end of the conveyer, bars pivotally connected to the respective cranks on the shaft and slidably engaging the bail, each of said bars having one end portion inclined upwardly relative to the remaining portion, there being transverse teeth upon the bottom of the bar, said teeth being extended from one end to the other of the bar, and means for rotating the shaft to simultaneously slide and oscillate each of the bars thereby to force the teeth of the bars successively into the material on the conveyer and to press the engaged material in the direction of movement of the upper flight of the conveyer, said bars being movable at one end beyond the delivery end of the conveyer thereby to direct delivered material downwardly from the conveyer.

5. The combination with a press box and a hopper extending upwardly therefrom, of an endless conveyer for delivering material to the hopper, a crank shaft extending transversely above the conveyer, a bail pivotally connected to the shaft and extending toward the discharge end of the conveyer, bars slidably mounted at one end upon the bail and pivotally mounted adjacent their other end upon the respective cranks, each of said bars having that end portion nearest the shaft inclined upwardly relative to the remaining portion, there being teeth upon the bottom faces of the bars and extending from one end to the other of the bars, and means for rotating the crank shaft to move the bars successively downwardly to engage the material on the conveyer and to thrust the material in the direction of movement of the upper flight of the conveyer, the slidably mounted ends of the bars bearing normally by gravity upon the material and said ends being provided to successively project beyond and downwardly relative to the discharge end of the conveyer.

1,195,480. SEPARABLE CORE FOR MAKING PNEUMATIC-TIRE CASINGS. JOHN C. LAURITZEN, Akron, Ohio. Filed May 24, 1916. Serial No. 99,650. (Cl. 18—45.)

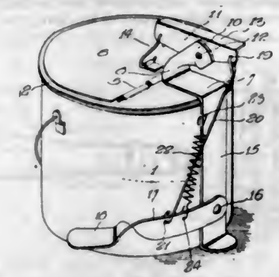


1. A separable core comprising a plurality of sections of ring form when assembled, and having inwardly extending portions forming an annular flange, said flange having on opposite sides reversely faced shoulders, a pair of clamping rings having reversely placed flanges for coacting with said shoulders, and means for clamping said rings together with the core flange therebetween.

2. A separable core comprising a plurality of sections of ring form when assembled and inwardly extending portions forming an annular flange, said flange being thickened at its inner edge and provided with an outwardly facing shoulder on one side and an inwardly facing shoulder on the other side, a pair of reversely disposed substantially L-shaped clamping rings having their flanges engaging said shoulders, and means for clamping said rings against the opposite faces of said flange.

1,195,481. CLOSURE FOR GARBAGE-RECEPTACLES AND THE LIKE. WILLIAM J. LEGAT and JOHN T. DUGAN, Pittsburgh, Pa. Filed Nov. 15, 1915. Serial No. 61,628. (Cl. 220—115.)

1. A device of the character described comprising a cover plate having an opening therein, a hinged closure for said opening, a bracket secured to said plate adjacent the hinge of said closure, a lever pivoted intermediate its ends to said bracket, a link connecting one end of said lever with said closure, a support secured to the edge of said plate and depending below the same, a foot lever pivoted at one of its ends to the lower end of said support, an additional link connecting the other end of the first mentioned lever with said foot lever at a point intermediate the ends of the latter, and a coil spring connecting the upper end of said support with said foot lever.



2. A device of the character described comprising a cover plate having means for securing the same to a receptacle and provided with an opening therein near one side thereof, a hinged closure for said opening, a strip of metal secured to the other side of said plate, a bracket extending upwardly from the inner end of said strip adjacent the hinge of said closure, a lever pivoted intermediate its ends to said bracket, a link connecting the inner end of said lever with said closure, the other end of said strip being bent around the edge of said plate and depending below the latter to form a support, a foot lever pivoted at one of its ends to the lower end of said support, an additional link connecting the outer end of the first mentioned lever and said foot lever at a point intermediate the ends of the latter, and a coil spring connecting the upper end of said support with said foot lever.

3. A device of the character described comprising a cover plate having means for securing the same to a receptacle and provided with an opening therein near its front edge, a hinged closure for said opening, a bracket secured to said plate in the rear of said opening, a lever pivoted intermediate its ends to said bracket, a link connecting the front end of said lever with said closure, a support secured to said plate and depending from the rear edge of the latter, a foot lever pivoted at one end to the lower end of said support, said lever being curved longitudinally forwardly and having its other end disposed adjacent one side of said receptacle, an additional link connecting the rear end of the first mentioned lever with said foot lever at a point intermediate the ends of the latter, and a coil spring connecting the upper end of said support with said foot lever.

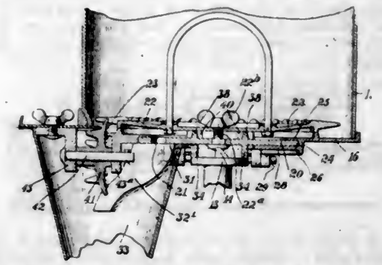
4. A device of the character described comprising a cover plate having an opening therein, a hinged closure for said opening, a bracket secured to said plate adjacent the hinge of said closure, a lever pivoted intermediate its ends to said bracket, a flange extending laterally from the upper edge of said lever to provide a handle for said plate, a support depending from said plate, a foot lever pivoted to said support, links connecting the ends of the first mentioned lever with said closure and said foot lever respectively, and spring means for retaining the latter in its normal position.

1,195,482. FASTENING DEVICE FOR WHEELS. WILLIAM V. LEWIS, Kansas City, Mo. Filed Jan. 13, 1911. Serial No. 602,470. (Cl. 74—8.)



In a device of the character described, a shaft, a bushing fitted snugly thereon and having at one end a wrench engaging head and a flange, a sleeve threaded upon said bushing and abutting against said flange, said sleeve having a shoulder, a wheel having a hub fitted upon said sleeve between said shoulder and flange, and means adjacent the wrench engaging head for engaging the shaft to prevent the rotation of said bushing relative to the shaft.

1,195,483. SEEDING-MACHINE. ALEXUS C. LINDGREN, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed July 22, 1911, Serial No. 639,893. Renewed Feb. 8, 1916. Serial No. 77,022. (Cl. 111—32.)



1. In a seeding machine, the combination of a seed can or hopper provided with an outer opening for the discharge of cotton seed and an inner opening for the discharge of corn, a rotary seed plate mounted in the hopper for discharging corn through the inner opening, a removable cotton seed discharging plate adapted to be applied over the corn discharging plate and to cover said inner opening and coöperating with said outer opening in discharging cotton therethrough, and a removable cap plate adapted to be applied directly over the corn plate when the other plate is removed, and to cover said outer opening, said cap plate being provided with a cut-off and knocker mechanism to coöperate with said inner opening.

2. In a seeding machine and in combination with a frame, a seed can or hopper pivoted near its side to said frame on a fore and aft horizontal axis to swing upwardly therefrom, and provided with a seed discharging mechanism, a horizontally arranged lifting handle pivoted directly to the hopper on a vertical axis at the side of said can opposite its pivotal connection with the frame, so that the handle may be swung from an inoperative fore and aft position, to an operative transverse position and in the said latter position can be employed to lift the can upwardly on its pivotal axis.

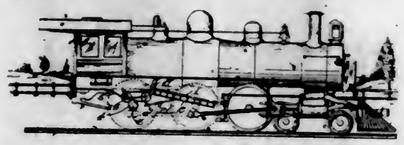
3. In a seeding machine, the combination of a seed can or hopper provided with two discharge openings different distances from the center to discharge different kinds of seed, means mounted in said can or hopper and operable to discharge seeds through either of the openings at will, a seed tube to receive the discharged seed and convey the same to the ground, and a spout arranged within said tube in position to receive the seed directly from said inner discharge opening.

4. In a seeding machine, the combination of a seed can or hopper provided with two discharge openings different distances from the center to discharge different kinds of seed, means mounted in said can or hopper and operable to discharge seeds through either of the openings at will, a seed tube to receive the discharged seed and convey the same to the ground, and a depending spout arranged within the seed tube in position to receive the seed directly from the inner discharge opening, the lower end of said spout terminating vertically or substantially so beneath the outer discharge opening.

1,195,484. LOCOMOTIVE-GRATE SHAKER. VICTOR LINDSTROM, Muskogee, Okla. Filed Sept. 16, 1914. Serial No. 862,059. (Cl. 126—169.)

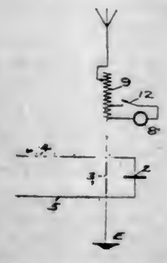
1. A grate shaker for locomotives comprising in combination with a shaking grate, a drive wheel, a shaft pro-

vided with crank arms thereon mounted at a fixed point with respect to the drive wheel, a connection running from said crank arms to said grate to cause shaking of the same as the shaft is rotated, a belt pulley on said shaft, a second shaft mounted adjacent to said drive wheel to be capable of adjusting movement with respect thereto, and to be held at all times a substantially uniform distance from said first shaft, a belt pulley on said second shaft, a belt mounted over said belt pulleys to establish driving connection between the same, means to normally hold the shaft mounted adjacent to the drive wheel in a relation that the transmission means to the grate is inoperative, and means to move said shaft to a relation to bring the belt to a gripped engagement between the drive wheel and the belt wheel mounted adjacent thereto to cause transmission of movement to shake the grate.



2. A grate shaker for locomotives comprising in combination with a shaking grate, a drive wheel, mounted in conjunction with a rotating part of the locomotive, a shaft adjustably mounted adjacent to said drive wheel capable of movement in a line radially from the turning center of said drive wheel, a power wheel mounted on said shaft, a second shaft mounted at a fixed point and provided with crank arms, a connection from said crank arms to the grate to cause shaking of the same as the second shaft is rotated, an operating wheel mounted on the second shaft, a belt mounted over the power wheel and the operating wheel, springs arranged to normally exert pressure to hold the power wheel spaced from contact with the drive wheel, and means to permit manual movement of the first mentioned shaft to engage the belt between the power wheel and the drive wheel to cause turning of the power wheel and to consequently transmit movement through the belt to the operating wheel to cause shaking of the grate.

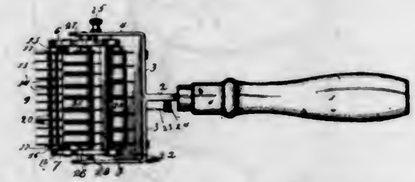
1,195,485. SPACE TELEGRAPHY. CHARLES V. LOGWOOD and CYRIL F. ELWELL, Palo Alto, Cal. Filed June 12, 1911. Serial No. 632,536. (Cl. 250—19.)



In a transmission system for space telegraphy, a source of continuous undamped oscillations, a conductor connecting one side of said source to earth, an antenna connected to the other side of said source, an inductance in circuit between the antenna and said source, a circuit adapted to shunt a portion of said inductance and a key and interrupter in said shunt circuit.

1,195,486. NOODLE-CUTTER. CHARLES LOMBARDO, Waterford, N. J. Filed Sept. 18, 1914. Serial No. 862,296. (Cl. 107—51.)

1. A noodle cutter comprising a cutter frame and its handle, a rotatively adjustable cutter head embodying end plates and a plurality of gangs of rotary cutters mounted therebetween, each gang differing in gage from the others, and means engaging an end plate of the cutter head to lock said head with a selected one of the gangs of cutters in operative position.

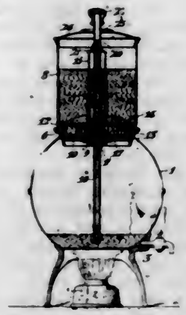


2. A noodle cutter comprising a cutter frame and its handle, an adjustable cutter head embodying a plurality of gangs of cutters, each gang differing in gage from the others, a stripper comb for each gang, and means to lock the cutter head with any one of the gangs of cutters in operative position.

3. A noodle cutter comprising a cutter frame and its handle, an adjustable cutter head embodying a plurality of gangs of cutters, each gang differing in gage from the others, a stripper comb for each gang, a stripper apron secured to the cutter frame, and means to lock the cutter head with any one of the gangs of cutters in operative position.

4. A noodle cutter comprising a cutter frame and its handle, an adjustable cutter head embodying a plurality of gangs of cutters, each gang differing in gage from the others, a stripper comb for each gang, a spring pressed stripper apron secured to the cutter frame, and means to lock the cutter head with any one of the gangs of cutters in operative position.

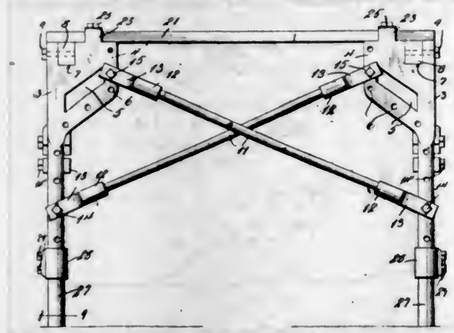
1,195,487. PERCOLATOR. PROSPER JEAN AUGUSTE MAIGNEN, Philadelphia, Pa. Filed June 12, 1908. Serial No. 438,012. (Cl. 53—3.)



1. In a percolator, the combination with a water receptacle, having an annular flange at its top; of an infusion receptacle fitted to said flange and having an orifice leading to said water receptacle; a strainer cup having a flange fitted to said orifice and an aperture in concentric relation with said flange; a valve fitted to said aperture; a tubular valve rod extending below the water level in said water receptacle and above the liquid level in said infusion receptacle; a foraminous diaphragm covering said cup; a tubular column on said diaphragm inclosing said valve rod; a removable cover for said infusion receptacle having a central aperture for said rod; and a handle on said rod above said cover.

2. In a percolator, the combination with a water receptacle; of an infusion receptacle detachably fitted upon the top of said water receptacle and having an orifice leading to the latter; a strainer cup having a flange fitted to said orifice and an aperture in concentric relation with said flange; a valve fitted to said aperture; a tubular valve rod extending below the water level in said water receptacle and above the liquid level in said infusion receptacle; a foraminous diaphragm covering said cup; a tubular column on said diaphragm, inclosing said valve rod; and a removable cover for said infusion receptacle having a central aperture for said rod.

1,195,488. SAFETY-SCAFFOLD. WILLIAM MARSHALL, Bismarck, N. D. Filed Aug. 31, 1915. Serial No. 48,240. (Cl. 20—83.)



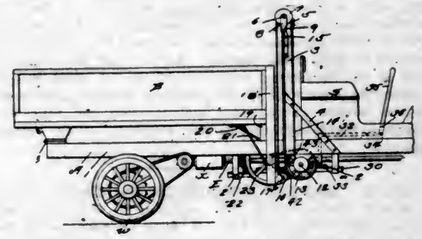
1. In a safety scaffold of the class described, the combination of a plurality of corner standards having internally threaded openings, an enlarged head formed integral upon each of said standards at its upper end, each head having an upwardly slanting lower side, said head provided with a line of internally threaded openings adjacent its inner and lower sides, brace rods having clamping yokes embracing the side portions of said standards and said heads, set screws passing through said yokes and through the openings formed in said heads of said standards, whereby said scaffold will be efficiently braced, said openings in said heads being adapted to allow the moving of the yokes engaging the heads, whereby the scaffold may be easily adjusted when desired, and said heads will allow the brace rods to be moved so as to more rigidly brace the scaffold.

2. In a safety scaffold of the class described, the combination of a plurality of corner standards, each standard provided with a head formed integral upon its upper end, each head provided with an upwardly slanting lower side, brace rods pivotally secured to said standards, means for securing the ends of said rods at adjusted positions along said slanting sides, whereby said scaffold may be efficiently braced, said slanting side permitting a great or small adjustment as desired.

3. In a safety scaffold of the class described, the combination of a plurality of vertical standards, a head formed integral upon the upper end of each standard, each head being provided with a squared notch, transversely extending end beams carried by said notches, said beams extending evenly with the upper surface of said heads, an integral lip formed upon each of said heads, each lip being provided with an overhanging portion, scaffold planking carried by said beams upon the upper portions of said heads, whereby said overhanging portions of said lips will fit upon the upper portions of the outer scaffold planking, whereby said planking will be held against lateral displacement.

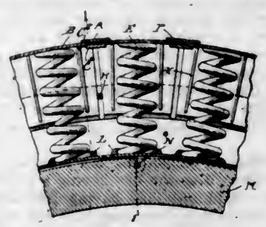
1,195,489. DUMPING-TRUCK. JOSEPH A. MARTIN, Woodlawn, Md. Filed Feb. 2, 1915. Serial No. 5,697. (Cl. 21—20.)

1. In a device of the class described, the combination with a vehicle bed having a tilting body thereon, and hoisting mechanism therefor, of a power shaft, a friction disk thereon, a shiftable counter-shaft, a friction wheel provided with a fiber tire carried by the counter-shaft, a lever for shifting one end of the counter-shaft to move the friction wheel into and out of frictional engagement with the disk on the power shaft, a sprocket on the counter-shaft, a drum shaft having a drum thereon, a sprocket mounted on the said drum shaft, a chain connecting both of said sprockets, a ratchet and pawl connected with the drum shaft to hold the latter against rotation, and an operating cable for the pawl, said hoisting mechanism having a running connection with the said drum shaft.



2. In a device of the class described, the combination with a vehicle bed having a tiltable body thereon, and lifting mechanism therefor, of a power shaft, a friction disk thereon, a shiftable counter-shaft, a friction wheel carried by the counter-shaft, a sliding bar having a bearing for receiving the movable end of the shiftable counter-shaft, a lever connected to the sliding bar to move the friction wheel into and out of frictional engagement with the disk on the power shaft, a drum shaft having a drum thereon, flexible connection between the shiftable counter-shaft and the said drum shaft, and a ratchet for the drum shaft whereby the latter may be held against rotation for the purpose set forth.

1,195,490. METAL AUTOMOBILE-TIRE. JOSEPH A. MARTIN and FRANK M. MACY, Midas, Nev. Filed June 28, 1915. Serial No. 36,855. (Cl. 152—8.)



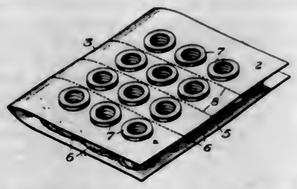
1. In a vehicle wheel tire of the class described, a relatively fixed channel member, tread members arranged in a series surrounding the channel member and each comprising a tread portion having an inwardly offset end, a band secured transversely to the said end of each tread member and extending in spaced relation to the said offset end, whereby to form a socket slidably receiving the adjacent end of the next adjacent tread member, and means housed within the said channel member and the said tread members and yieldably holding the tread members in an outward direction.

2. In a vehicle wheel tire of the class described, a relatively fixed channel member, tread members arranged in a series surrounding the channel member and each comprising a tread portion having an inwardly offset end, a band secured transversely to the said end of each tread member and extending in spaced relation to the said offset end, whereby to form a socket slidably receiving the adjacent end of the next adjacent tread member, means housed within the said channel member and the said tread members and yieldably holding the tread members in an

outward direction, and a yieldable filling within each of said sockets.

3. In a vehicle wheel tire of the class described, a relatively fixed channel member provided upon the inner face of each side wall with an annular rib, tread members arranged in a series surrounding the channel member and having each a tread portion and spaced side portions, the side portions fitting slidably between the side walls of the channel member and being each provided with a rib arranged to coöperate with the rib upon the respective side wall of the channel member whereby to limit the outward movement of the tread members, a sheet of yieldable material disposed against the outer face of each side portion of each tread member and between the tread portion of the said tread member and the rib upon the corresponding side wall of the channel member, and means housed within the channel member and the said tread members yieldably holding the members in an outward direction.

1,195,491. MANTLE HOLDER OR PACKAGE. SIDNEY MASON, Philadelphia, Pa., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Dec. 10, 1914. Serial No. 876,498. (Cl. 229—6.)



1. A package or holder for rag mantles, comprising a sheet of cardboard or the like having a plurality of openings therein, said openings having peripheral edges arranged to frictionally grip and hold the supporting ring of a mantle when said ring is inserted therethrough and thereby hold the mantles suspended from said seat; substantially as described.

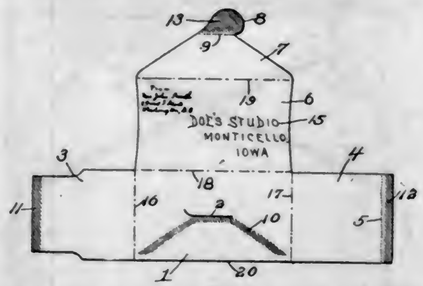
2. A holder or package for rag mantles, comprising a sheet of flexible material having a fold line, the portion of the sheet at one side of the fold line formed with a series of holes, each designed to receive a mantle socket or support, and the portion of the sheet at the other side of the fold line forming a cover for the mantle bodies, the portion of the sheet having the openings therein also having scored lines between the openings, substantially as described.

3. A package or holder for rag mantles, comprising a sheet of cardboard or the like having a plurality of openings therein, said openings having peripheral edges arranged to frictionally grip and hold the supporting ring of a mantle when said ring is inserted therethrough and thereby hold the mantle suspended from said sheet, and said holder also having a cover member adapted to be turned against the ends of the mantles suspended from said sheet, substantially as described.

4. As a new article of manufacture, a mantle package comprising a sheet of cardboard or the like having a plurality of openings therein, rag mantles having neck rings or supports frictionally engaged in said openings, and a cover member underneath the ends of said mantles and partially compressing the mantles between itself and the said sheet, substantially as described.

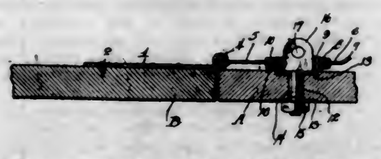
1,195,492. ENVELOP. V CHARLES MOORE, Monticello, Iowa. Filed Oct. 19, 1915. Serial No. 56,747. (Cl. 229—73.)

A reversible envelop, consisting of a blank comprising a main body portion provided with a single centrally disposed slit and a gummed surface upon one of its sides adjacent to the said slit, an elongated extension upon each of the opposite ends of said main body portion adapted to be folded upon the converse side or the reverse side of said main body portion and to overlap each other, the end of one of said extensions being provided with a gummed surface at one side thereof for securing the same to the opposite extension when desired, the end of the other of said extensions being also provided with a gummed surface at the side thereof for also securing the same to the opposite extension when desired and a perforated line adjacent its end and the gummed surface to provide for its severance thereat, a supplemental body portion extending from one side of said main body portion and having slightly concaved end edges and adapted to be folded upon said extensions and to contain the respective addresses upon the respective sides thereof, a converging flap upon the outer edge of said supplemental body portion adapted to be folded around the free edge of said main body portion and upon the side of said main body portion opposite to that of said supplemental body portion and adapted to be secured to the gummed surface of said main body portion if desired, and a knob upon the outer edge of said flap having a gummed surface upon one side thereof and adapted to be secured in said slot or to the gummed surface of said main body portion if desired, said knob also having a perforated line at its junction with said flap to provide for its severance from said flap.



1,195,493. HASP. GEORGE A. NEDROW, Monessen, Pa. Filed Feb. 8, 1916. Serial No. 77,035. (Cl. 70—83.)

1. A hasp comprising a hinged plate, a staple adapted to be rotatably mounted on a door, and means rotatably mounted on said plate for receiving said staple.



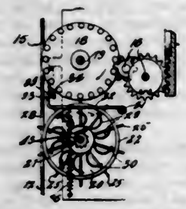
2. A hasp comprising a plate, a head hingedly mounted upon said plate and provided with a circular aperture, a rotatable disk mounted upon said head for rotation in the aperture of said head, means for securing said disk from displacement in said opening, and a rotatable staple adapted to be received by said disk.

3. A hasp comprising a plate mounted upon a door casing, a circular head hingedly mounted upon said plate and provided with an opening therein, a circular disk revolubly mounted in the opening in said circular head and provided with a longitudinal opening, flanges formed upon said disk and designed to overlap both faces of the circular plate, and a staple adapted to be inserted in said opening in said disk.

4. A hasp comprising a plate, a circular head hingedly mounted upon said plate and provided with a circular opening therein, a rotatably mounted disk provided with means adapted to overlie the edges of the opening in said head, and a staple rotatably mounted in the opening in the door and adapted to be received by an opening provided in said disk.

5. A hasp comprising a hinged plate mounted upon a door casing, and provided with a central circular aperture, a rotatably mounted disk arranged in said aperture and provided with a peripheral groove for receiving the edge of said circular aperture, said disk being provided with a transversely extending elongated opening in its center, a staple rotatably mounted in an opening in the door, said staple comprising a stud provided with screw threads, a nut screw threadedly mounted upon said stud at the opposite side of said door, the end portion of said staple being enlarged to provide a shoulder for bearing against the side of the door and elongated whereby it may be extended through the elongated aperture in said disk.

1,195,494. ALARM MECHANISM. GAYLE H. NICHOLS, Douglas, Ariz., assignor to Austin M. Godshall, Douglas, Ariz. Filed Mar. 2, 1915. Serial No. 11,546. (Cl. 235—117.)



1. In an alarm mechanism, the combination with the usual mileage wheels having a row of grooves or depressions arranged spirally around its periphery, of set wheels positioned thereunder, spokes projecting through the rims of said set wheels to contact with the rims of said mileage wheels and engage said grooves when in alinement therewith, and a circuit closer actuated when a spoke of each set wheel enters a groove in each mileage wheel.

2. In an alarm mechanism, the combination with the usual mileage wheels, set wheels positioned thereunder, spokes projecting through the rims of said set wheels in spiral courses, to enter similarly arranged grooves in said mileage wheels when both series of wheels register similarly and a circuit closer actuated thereby.

3. In an alarm mechanism, mileage wheels formed with peripheral grooves in spiral courses, a set wheel for each mileage wheel, a contact rod in circuit with an alarm, means withholding said rod from the completion of said circuit, and means projecting from each of said set wheels to enter said grooves and release first said means.

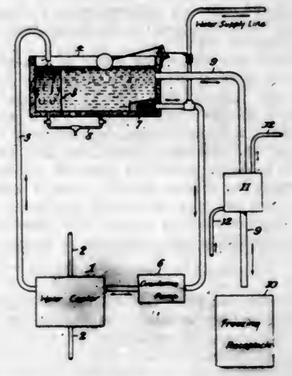
4. In an alarm mechanism, the combination with mileage wheels formed with peripheral grooves in spiral courses, of a set wheel positioned under each mileage wheel, a contact rod in circuit with an alarm, means withholding said rod from the completion of said circuit and spokes projecting through the rims of said set wheels to resiliently contact with said mileage wheels and to enter the latter with each mileage and set wheel similarly registering to complete said circuit by releasing said holding means.

5. In an alarm mechanism, mileage wheels formed with peripheral grooves in spiral courses, a set wheel for each mileage wheel, a contact rod in circuit with an alarm, arms pivoted to withhold said rod from the completion of said circuit, and spokes projecting through the rims of said set wheels to contact with said mileage wheels in spiral courses and to enter said grooves when corresponding mileage and set wheels similarly register to complete said circuit by releasing said arms.

[Claims 6 to 10 not printed in the Gazette.]

1,195,495. METHOD OF ICE MANUFACTURE. FRED OPHULS, New York, N. Y., assignor to Hill-Ophuls-Prindle Corp., New York, N. Y., a Corporation of New York. Filed Nov. 11, 1913, Serial No. 800,268. Renewed Oct. 26, 1915. Serial No. 58,070. (Cl. 62—172.)

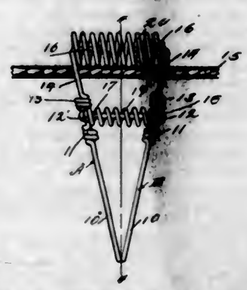
1. The method of making ice which consists in cooling water to a temperature of less than 32° F. without freezing it, thereafter permitting the formation of ice crystals therein, removing such ice crystals and a portion of the water and artificially freezing the water with the crystals therein.



2. The method of making artificial ice which consists in circulating water through a water cooler and a crystal-forming receptacle, cooling the water while passing through the cooler, to less than 32° F. without freezing, whereby it enters the receptacle at less than 32° F., inducing or permitting the formation of ice crystals in the super-cooled water in such receptacle, deflecting the crystals from the water returning to the cooler, and subjecting such crystals in water to a freezing temperature to form a solid cake of ice therefrom.

3. The method of making ice which consists in continuously circulating water through a water cooler and a crystal-forming receptacle, cooling the water passing through the cooler to below 32° F. without freezing, inducing or permitting the formation of ice crystals in the super-cooled water in the receptacle, separating the greater part of the water from such crystals for return to the cooler, adding more water to such separated water and then subjecting the said crystals in water to a freezing temperature to form a solid cake of ice therefrom.

1,195,496. CLOTHES-HOLDER. ALFRED PARKIN, Loma, Colo. Filed Mar. 16, 1916. Serial No. 84,634. (Cl. 24—252.)

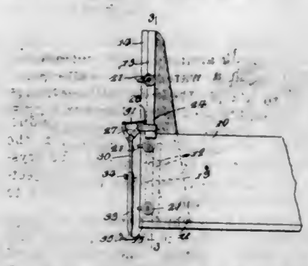


1. A clothes pin comprising a pair of members each formed from a single length of wire, and each comprising a lower triangular loop portion forming one of the jaws of the pin, an upper loop portion for the reception of a clothes line, an intermediate eye portion, twisted portions connecting the eye portion respectively with the upper and lower loop portions, inwardly extending portions carried by the upper loops, a resilient spreading element supported by the said inwardly extending portion, a bolt disposed through the eye portions of each of the members and carrying on one end an adjusting nut, and a resilient element carried by the bolt between the eye portions.

2. A clothes pin comprising a pair of jaw members, a connecting member upon which the jaw members are rockingly mounted, a helical spring disposed upon the connecting member and bearing with its ends against the jaws to hold the corresponding portions yieldably in spaced relation and means disposed between the jaw members at one side of the connecting member for holding the jaws yieldably in clamping relation.

3. A clothes pin comprising a pair of jaw members having gripping jaws at one end and having extensions at their opposite ends directed toward each other, a connection between the jaw members upon which they are rockingly mounted, a helical spring disposed upon the connecting member and bearing against the jaw members and adapted to hold corresponding portions of the jaw members yieldably in spaced relation, and a helical spring having its end portions embracing said parts of the jaw members that are directed toward each other and adapted to hold the clamping jaws yieldably in clamping relation.

1,195,497. END-GATE AND SHOVELING-BOARD. ELMER R. QUAM, Verdi, Minn. Filed Dec. 26, 1914. Serial No. 879,185. (Cl. 21—21.)



1. The combination with a wagon box provided with horizontally spaced vertical cleats at its rear extremity, of standards interposed between said cleats and extending above said box, a shoveling board pivoted to the rearmost cleats, and means hinged on the shoveling board adapted when said board is elevated to swing around the wagon box and standard and engage the same on their exterior sides to hold said board in upright position.

2. The combination with a wagon box provided with pairs of horizontally spaced cleats, of standards interposed between the cleats of each pair and extending above said box, a shoveling board pivoted to the rearmost cleats, and means carried by said board having adjustable devices for operation both upon said box and said standards for maintaining said board in an upright position.

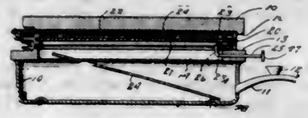
3. The combination with a wagon box provided with pairs of horizontally spaced cleats, of standards interposed between the cleats of each pair, of a shoveling board pivoted in the rearmost cleats, brackets mounted on said board, a disconnectible fastening member carried by each bracket and adapted to engage the wagon box and standards for maintaining said board in an upright position, and adjustable means movably carried by the standards and adapted to engage said brackets to support the board in extended position.

4. The combination with a wagon box provided with pairs of horizontally spaced cleats, of standards interposed between the cleats of each pair, a shoveling board pivoted to the rearmost cleats, means carried by said shoveling board for operation upon said standards and said box in maintaining said board in an upright position, and means slidable upon said standards above said box and carrying connections for the support of said board in its extended position.

5. The combination with a wagon box provided with pairs of horizontally spaced cleats, of standards interposed between the cleats of each pair and extending above said box, a shoveling board pivoted to the rearmost cleats, securing means carried by said board and operable upon said box and said standards to maintain said board in an upright position, positioning means operable upon said standards, and supporting means pivoted to said positioning means for operation upon said securing means in supporting said board in various extended positions.

[Claims 6 to 8 not printed in the Gazette.]

1,195,498. DAYLIGHT PLATE-DEVELOPING TRAY. FREDERICK D. RAMEAU, Seattle, Wash. Filed Sept. 28, 1914. Serial No. 863,958. (Cl. 95—90.)

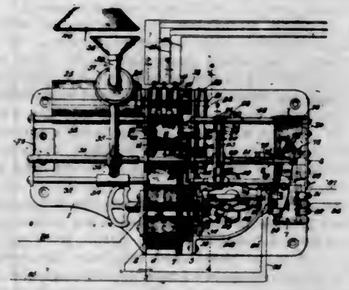


1. The combination with a photographic developing tray, of a frame disposed on the top of the tray, a clamping block disposed above the frame and adapted to coact with said frame in holding a plate holder, a lug formed integral on the lower face of the clamping block and adapted to prevent longitudinal movement in one direction of the plate holder, and means for holding and releasing the plate.

2. A photographic developing tray provided with a filling and discharge tube, a frame disposed on the top of the tray, a resiliently supported clamping block placed above the frame and adapted to coact with said frame in holding a plate holder, a lug formed integral on the lower face of the clamping block and adapted to prevent longitudinal movement in one direction of the plate holder, and means for holding and releasing the plates.

3. A photographic developing tray comprising a body member, a curved tube located at one end of the body member adapted to be used in emptying the contents of the developing tray, a funnel disposed at the top of the tube adapted to facilitate easy filling of the tray, upwardly projecting ribs formed integral with the bottom for holding the plates to be developed in spaced relation thereto, and means for holding and releasing said plates as and for the purpose set forth.

1,195,499. AUTOMATIC FIRE-ALARM. GEORGE B. RATTERMANN and WALTER W. GARRISON, Birmingham, Ala. Filed Apr. 21, 1915. Serial No. 22,929. (Cl. 179—5.)



1. An automatic fire alarm system, comprising means for producing and transmitting signals to a distance, means for actuating the signal producing means and having a constant tendency to operate, electrically controlled means for holding the actuating means against operation and responsive to fire conditions to cause the release of said actuating means, telephonographic means for reproducing a phonograph record and transmitting the reproduced sounds to a distance, and connections between the actuating means and the telephonographic means for causing the actuation of the latter with the signal producing means.

2. An electric fire alarm system comprising automatic means responsive to fire conditions for sending a signal to a distant point, and manually-operable means for causing the operation of the signal sending means independently of the portion of the latter directly responsive to fire conditions, said manually-operable means being provided with shatterable means holding it in the inactive position and located with respect to the manually operable means to be shattered by a force moving said manually operable means to the closed position.

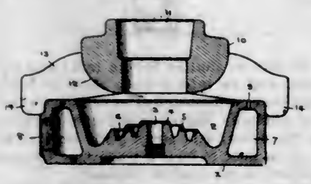
3. An electric fire alarm system, comprising means for automatically sending a signal to a distant point, means automatically responsive to fire conditions for causing the operation of the signal sending means, manually-operable means for causing the operation of the signal sending means independently of the means automatically responsive to fire conditions, shatterable means for holding the manually operable means in the inactive position and in the path of the said manually operable means to be broken by a force moving said manually operable means to the active position, and telephonographic means associated with the signal sending means and operable simultaneously therewith in response to either fire conditions or the manually operable means.

4. An automatic electric fire alarm system comprising electric means for the transmission of signals to a distance and provided with controlling means responsive to fire conditions, and normally-open circuit-closing means responsive to the first-named means at the completion of its operation for electrically short-circuiting said first-named means.

5. An electric fire alarm system comprising electrically controlled means for the production of signals at a distance, means responsive to fire conditions for controlling the first-named means, telephonographic means associated with the first-named means for transmitting information by the operation of the first-named means, manually-operable means for causing the actuation of the electrically controlled means and the telephonographic means independent of the means responsive to fire conditions, and means controlled by the first-named means for short-circuiting the signal sending means at the completion of the signal sending operation.

[Claims 6 to 16 not printed in the Gazette.]

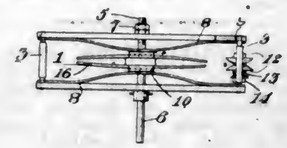
1,195,500. COMBINED OIL AND GAS BURNER. DAVID L. REESE, Los Angeles, Cal. Filed Dec. 11, 1915. Serial No. 66,301. (Cl. 158—11.)



1. A combination oil and gas burner having a central cavity therein, said burner having a port communicating with said cavity at its axial center, a rib surrounding the port and extending a distance above the floor of the cavity, a plurality of ribs concentric with the central rib and decreasing in height from the center rib to the edge of the cavity, said burner having a channel around its outer periphery for the reception of gas, the top wall of that portion of the burner over said channel having a plurality of ports therethrough through which the gas is discharged from the channel above the burner.

2. The combination with a burner, of a deflector having a central opening, the lower outer surface of the deflector being convex and uniformly curved from the central opening upwardly, supporting arms attached to the deflector, said arms having depending portions at their outer ends adapted to extend over and engage the peripheral face of the burner, the body of said deflector being formed of thick heavy material whereby, when thoroughly heated any residue of oil in the burner will be consumed by the intense heat of the deflector.

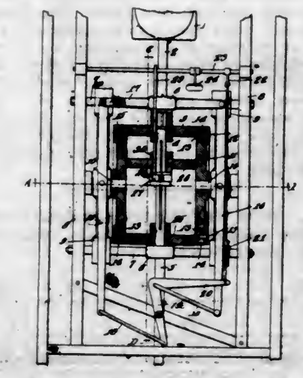
1,195,501. TATTING-SHUTTLE WINDER. ELEANOR P. ROBERTS, Linn Grove, Iowa. Filed June 17, 1915. Serial No. 34,603. (Cl. 242—52.)



1. In a device of the character described, the combination of a frame having a plurality of connecting members, a shuttle clamp comprising a pair of jaws, yieldable elements adapted to normally force said jaws toward each other, said elements having elongated slots encircling said connecting members for permitting separation of said elements, a tension device, and means extending through said elements for rotating said jaws.

2. In a device of the character described, the combination of a frame having a plurality of connecting members, a shuttle clamp comprising a pair of jaws, a pair of bow springs adapted to normally force said jaws toward each other, said springs having elongated slots encircling said connecting members, a tension device, and means extending through said springs for rotating said jaws.

1,195,502. TRANSMISSION-GEARING. NATHANIEL GUY ROBINSON, Woolstock, Iowa, assignor of one-fourth to Martin H. Hirt and one-fourth to Robert F. Hirt, Woolstock, Iowa. Filed July 27, 1914. Serial No. 853,461. (Cl. 74—26.)



1. Transmission gearing including side disks, cushioned bearing rings connected to the marginal portions of the disks and having their active faces normally flush with the active faces of the respective disks, a drive disk interposed between the rings, an idler disk interposed between said rings, said idler disk and drive disk engaging each of the rings at diametrically opposed points, a drive shaft mounted for rotation in the idler disk, and a driven disk secured to the shaft and shiftable diametrically along the side disks, said driven disk being interposed between the drive and idler disks and being out of contact with the rings.

2. Transmission gearing including side disks having annular channels, cushioned bearing rings secured in the channels and having their active faces normally flush with the active faces of the side disks, a drive disk interposed between and normally engaging the rings, an idler disk

normally engaging said rings, the drive and idler disks being located at diametrically opposed points upon the rings, a driven shaft mounted for rotation in the idler disk, a driven disk on the driven shaft and interposed between and engaging the side disks, and out of contact with the rings, and means for synchronously moving the side disks toward or from each other to clamp upon the drive, driven and idler disks irrespective of variations in the diameters thereof.

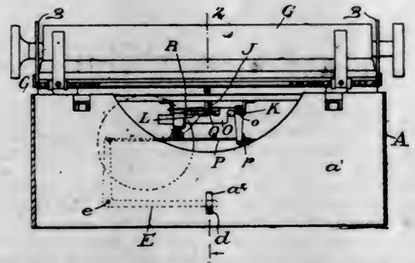
1,195,503. ADJUSTABLE SHORE. HENRY W. ROOS, Cincinnati, Ohio, and EARL R. BELL, Covington, Ky., assignors, by direct and mesne assignments, of sixty-five one-hundredths to said Roos and thirty-five one-hundredths to George W. Meyer, Cincinnati, Ohio. Filed July 20, 1914. Serial No. 851,881. (Cl. 72—79.)



1. An adjustable shore comprising a pair of relatively movable members, and a pair of clamping yokes pivoted to one of said members, said yokes being pivotally connected to each other and having engagement with opposite sides of the other of said members.

2. An adjustable shore comprising a lower member in the form of a post, an upper member movable relatively to the lower member and including a pair of legs arranged on opposite sides of said post, and a clamping yoke pivoted to each of said legs, the clamping yokes being pivotally connected to each other and engaging opposite sides of the post.

1,195,504. TYPE-WRITER ESCAPEMENT. GEORGE F. ROSE, New York, N. Y. Filed Nov. 7, 1912. Serial No. 729,930. (Cl. 197—82.)



1. In a typewriter escapement, the combination of a rotatable wheel, fixed and movable dogs in coöperative relation thereto, and means for imparting movement to said wheel, said wheel being mounted for vibratory and tiltable movement relative to said fixed dog.

2. In a typewriter escapement, the combination with a platen carriage, of a shaft operatively connected with said platen carriage, an escapement wheel rotatable with said shaft and free to vibrate independently thereof, fixed and movable dogs, and means for imparting vibratory movement to said escapement wheel.

3. In a typewriter escapement, the combination with a platen carriage, of a shaft operatively connected with said platen carriage, said shaft being square for a part of its length, an escapement wheel fitted on said square part of the shaft for rotation therewith, means for moving the escapement wheel sidewise relative to the shaft, and dogs coöperating with said escapement wheel.

4. In a typewriter escapement, the combination with a carriage, and a shaft coöperating therewith, of an escapement wheel for controlling the rotative movement of said shaft, a fixed dog in the path of said escapement wheel, a movable dog positioned to impart sidewise movement to the escapement wheel and operating to arrest said wheel when it is rotated a predetermined distance, and means for operating said movable dog.

5. In a typewriter escapement, the combination with a carriage-controlling shaft and a fixed dog, of an escapement wheel for controlling the rotative movement of said shaft, and a movable dog operable to shift said escapement wheel so as to disengage said wheel from the fixed dog, said movable dog being positioned for engagement with said escapement wheel when the latter is turned a predetermined distance.

[Claims 6 to 10 not printed in the Gazette.]

1,195,505. FIRE DOOR OR SHUTTER. FELIX LAWARNCE SAINO, Memphis, Tenn. Filed Oct. 6, 1915. Serial No. 54,387. (Cl. 189—46.)



1. A fire-door or shutter having front and rear walls of sheet metal and an intermediate sheet of refractory material, said rear wall composed of sections whose adjacent edges are normally spaced apart and slidable one relatively to the other, said edges being bent at an angle to the face of the door to form a transverse outstanding reinforcing girder on the rear of the door.

2. A fire-door or shutter having front and rear walls of sheet metal and an intermediate sheet of refractory material, said rear wall composed of sections having adjacent horizontal edges normally spaced apart and slidable one relatively to the other, said edges being bent substantially at right-angles to the plane of the rear face of the door to form a transverse reinforcing girder on the rear of the door, said edges of the sections being slidably interlocked to provide for relative expansion of the sections.

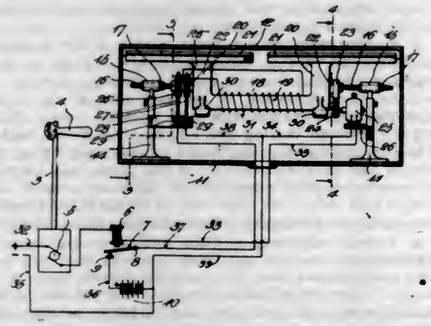
3. A fire-door or shutter having front and rear walls of sheet metal and an intermediate sheet of refractory material, said rear wall composed of sections having adjacent horizontal edges bent substantially at right-angles to the plane of the rear face of the door to form a transverse reinforcing girder of angular cross-section on the rear of the door, said edges of the sections being normally spaced apart and slidable one relatively to the other and being slidably interlocked to provide for relative expansion of the sections.

4. A fire-door or shutter having front and rear walls of sheet metal and an intermediate sheet of refractory material, said rear wall composed of sections having adjacent horizontal edges bent substantially at right-angles to the plane of the rear face of the door to form a transverse reinforcing girder on the rear of the door, said edges being normally spaced apart and slidable one relatively to the other, said edges of the sections being slidably interlocked to provide for relative expansion of the sections, a plate extending across the upper rear portion of the door and secured to the uppermost of the rear sections thereof and bent to form a hollow top rail, said plate and the upper edge of the upper rear section having their outer edges slidably interlocked, and plates extending along the sides of the rear of the door and over said reinforcing girders and having intermediate portions secured to said girders, said girders and plates having registering openings, and fastenings engaging said openings.

5. A fire-door or shutter having front and rear walls of sheet metal and an intermediate sheet of refractory material, said rear wall composed of sections having adjacent horizontal edges bent substantially at right-angles to the plane of the rear face of the door to form a transverse reinforcing girder on the rear of the door, said edges of the sections being slidably interlocked to provide for relative expansion of the sections, a plate extending across the upper rear portion of the door and secured to the uppermost of the rear sections thereof and bent to form a hollow top rail, said plate and the upper edge of the upper rear section having their outer edges slidably interlocked, plates extending along the sides of the rear of the door and over the reinforcing girders, and means for securing the plates to the girders and allowing expansion of one part thereof relatively to the other part, said means comprising slots formed in one part and fastenings passing through said slots and into the other part.

[Claims 6 to 11 not printed in the Gazette.]

1,195,506. CLOSED-CIRCUIT MAGNET. ARTHUR P. SANBORN and ROY C. WILSON, Ossining, N. Y. Filed July 22, 1915. Serial No. 41,382. (Cl. 246—58.)



1. In an electro-magnet tripping mechanism of the character described, the combination with a swivelly mounted permanent magnet disposed adjacent a track, of means for operating said magnet to horizontal and vertical positions, and additional means for increasing the magnetic strength of said permanent magnet when the latter is in a vertical position.

2. In an electro-magnet tripping mechanism of the character described, the combination with a permanent magnet disposed contiguous to a track, and a source of electrical supply; of means for actuating said magnet to operative and inoperative positions, an energizing coil carried by said magnet, and additional means for placing said coil in circuit with said source of supply when the magnet is in its operative position.

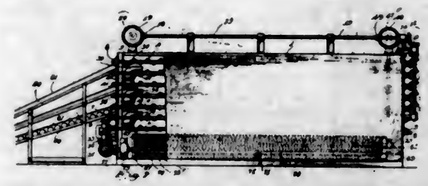
3. In an electro-magnetic tripping mechanism of the character described, the combination with a pair of standards arranged in spaced relation adjacent a track, and a permanent magnet swivelly supported by said standards; of means for actuating said magnet to horizontal and vertical positions, a source of electrical supply, an energizing coil carried by said magnet to increase the strength thereof, a pair of metallic disks carried by said magnet and connected to the extremities of the coil thereon, and a pair of contact members adapted to coöperate with said metallic disks and place said coil in circuit with said source of supply.

4. In an electro-magnetic tripping mechanism of the character described, the combination with a pair of standards disposed in spaced relation adjacent a track, and a U-shaped magnet swivelly supported by said standards and having operative and inoperative positions; of a motor, a gear carried by said motor, a quadrant gear carried by said magnet and meshing with said motor gear, means for energizing and deënergizing said motor, a coil encircling the intermediate portion of said U-shaped magnet, a source of supply, and means for placing said coil in circuit with said source of supply when the magnet is in an operative position.

5. The combination with a casing; of a U-shaped magnet swivelly mounted within the casing and having horizontal and vertical positions, means for bringing said magnet to horizontal and vertical positions, a coil disposed upon the intermediate portion of said U-shaped magnet, a source of electrical energy, and means for placing said coil in circuit with said source of electrical energy when the magnet is in a vertical position.

[Claim 6 not printed in the Gazette.]

1,195,507. COOKER. WILLIAM J. SCHAEFER, Ontario, Cal. Filed July 29, 1913. Serial No. 781,779. (Cl. 126—272.)



1. A cooker comprising a casing, means for feeding cans therethrough at a plurality of levels, and means for transferring cans from one level to another, said casing being provided with a plurality of outlets for discharging the cans at different levels, and means for closing or opening said outlets.

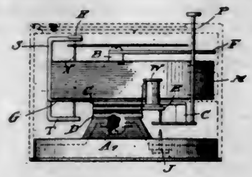
2. A cooker comprising a casing, longitudinal tracks therein, means for propelling cans along said tracks, curved guides extending from the delivery end of each track, to guide the cans to the next track, rotary means for pushing the cans along said curved guides, said casing having outlets for the cans at different levels, and means for plugging the lower outlet, comprising a member movably mounted at said outlet and provided with guide portions forming a part of one of said curved guides.

3. A cooker comprising a casing provided with an inlet and with a plurality of outlets at different levels, a track extending within the casing and adapted to receive cans at said inlet, tracks located above said first named track, at different levels, discharge chutes leading from certain of said tracks to said outlets, transfer means for transferring cans, and means for obstructing the passage of cans from said chutes, said obstructing means being movable to permit discharge of the cans.

1,195,508. COMBINED AMPERE AND VOLT METER. ALFRED SCHOELLER, Frankfort-on-the-Main, Germany. Filed Dec. 2, 1913. Serial No. 804,208. (Cl. 171—95.)

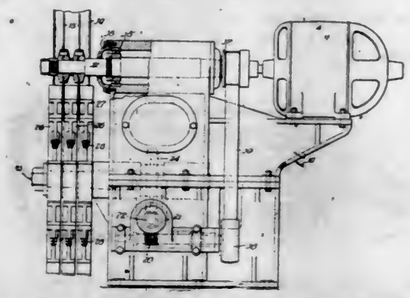
1. A combined ampere and volt meter comprising a base, a permanent magnet, a series resistance, a plate supporting said series resistance, a moving coil, a terminal piece

for said moving coil and the series resistance, a bridge-piece, and a pair of screws engaging said bridge-piece and securing said parts to the base, substantially as described.



2. A combined ampere and volt meter comprising a base, a permanent magnet, a series resistance coil, a shunt resistance coil, a plate supporting the series resistance coil, a moving system, a plate supporting the moving system, a terminal piece, a contact member, contact points for said series and shunt coils, a bridge-piece, and a pair of screws passing through said bridge-piece, the supporting plates, and the terminal piece, and securing said parts and the permanent magnet to the base, substantially as described.

1,195,509. APPARATUS FOR DIVIDING COUPLINGS. RICHARD SCHOLZ, Lorain, Ohio, assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Mar. 29, 1915. Serial No. 17,765. (Cl. 29—70.)



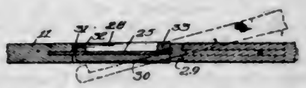
1. In apparatus of the class described the combination of a positively driven shaft having a saw thereon, a shaft below the driven shaft having a rotary turret thereon, and means connecting said shafts to revolve the turret when the driven shaft is actuated, to thereby move couplings supported on the turret into cutting engagement with the saw, said turret having a coupling holder on the periphery thereof and said coupling holder having converging coupling engaging faces whereby couplings of varying sizes are held in position on the turret.

2. In apparatus of the class described the combination of a positively driven shaft having at least one saw thereon, a shaft below the driven shaft having a rotary turret thereon, and means connecting said shaft to revolve the turret when the driven shaft is actuated, to thereby move couplings supported on the turret into cutting engagement with said saws, said turret having arms with coupling holders on the ends of the arms and said holders having converging coupling engaging faces whereby couplings of varying sizes are positioned on the turret.

3. In apparatus of the class described the combination of a motor shaft having a saw thereon, a motor for driving said shaft and saw, a turret shaft having a turret thereon below the saw, a worm wheel on the turret shaft, a worm shaft having a worm meshing with the said worm wheel, a belt connecting the worm shaft and motor shaft arranged to revolve the turret when the motor shaft is rotated, and a plurality of coupling holders on said turret, said holders having converging coupling engaging faces whereby couplings of varying sizes are held in position on the turret in moving the couplings into cutting engagement with said saw.

4. In apparatus of the class described the combination of a motor shaft having a saw thereon, a motor for driving said shaft, a turret shaft having a turret thereon, a worm wheel on the turret shaft, a worm shaft having a worm meshing with said worm wheel to rotate the turret, a belt connecting said worm shaft and motor shaft arranged to revolve the turret when the motor shaft is rotated, and a series of coupling holders removably secured on said turret, said coupling holders having converging coupling engaging faces whereby couplings of varying sizes are held in position on the turret in moving the couplings into cutting engagement with the saw.

1,195,510. BAKER'S PEEL. HENRY L. SCHROEDER, Chicago, Ill. Filed Feb. 8, 1916. Serial No. 76,913. (Cl. 107—67.)



1. A peel comprising a blade having a slot extending inwardly from its heel edge and reaching from its top side to its bottom side; a plate embedded in the heel edge of the blade substantially midway between the top and bottom sides thereof and extending through said slot; and a handle member having a portion disposed in said slot at one side of said plate and adapted when the handle member is reversed to be inserted in said slot at the other side of said plate.

2. A peel comprising a blade having a slot extending inwardly from its heel edge and reaching from its top side to its bottom side; a plate embedded in the heel edge of the blade substantially midway between the top and bottom sides thereof and extending through said slot; a handle member having a portion disposed in said slot at one side of said plate and adapted when the handle member is reversed to be inserted in said slot at the other side of said plate; and means removably securing the handle member to said plate.

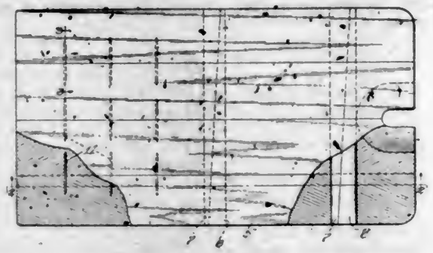
3. A peel comprising a blade having a slot disposed longitudinally thereof, extending inwardly from its heel edge and reaching from its top to its bottom surfaces; a metallic plate embedded in the heel edge of the blade, extending through said slot and disposed substantially midway between the top and bottom sides of the blade; a handle member disposed in and substantially filling the slot of the blade at one side of the plate, and adapted to be reversed with respect to the blade and extend into and fill said slot at the other side of the plate; and means detachably connecting the handle member with the plate.

4. A peel comprising a blade having a slot disposed longitudinally thereof, extending inwardly from its heel edge and reaching from its top to its bottom surfaces; a metallic plate embedded in the heel edge of the blade, extending through said slot and disposed substantially midway between the top and bottom sides of the blade; a handle member disposed in and substantially filling the slot of the blade at one side of the plate, and adapted to be reversed with respect to the blade and extend into and fill said slot at the other side of the plate; and projections on the handle member engaging said plate and adapted to lock the latter to the handle member regardless of which sides of the plate and blade are uppermost.

1,195,511. BAKER'S PEEL. HENRY L. SCHROEDER, Chicago, Ill. Filed Feb. 8, 1916. Serial No. 76,914. (Cl. 107—67.)

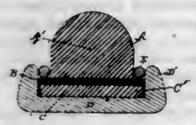
1. A baker's peel comprising a wooden blade having a perforation extending laterally therethrough substantially midway between the top and bottom sides thereof; and coöperating wedge members disposed in and substantially filling said perforation.

2. A baker's peel comprising a blade made up of a plurality of strips of material fitted together and having perforations extending edgewise through the blade and registering openings in each pair of contiguous edges of said strips, said perforations and openings being substantially



midway between the top and bottom surfaces of the blade; coöperating wedge members fitted tightly in each of the perforations; a dowel pin fitted tightly in each pair of said registering openings; and an adhesive material rigidly securing the wedge members and the dowels in the blade.

1,195,512. TIRE FOR WHEELS AND MEANS FOR RETAINING THE SAME. ELMER H. SCHWARZ, New York, N. Y. Filed June 29, 1914. Serial No. 847,856. (Cl. 152—6.)



1. A tire having a tread, base portion and side flanges made of resilient material and having a textile fabric, incorporated therewith, the main portion of which fabric is placed between the tread and base portion of the tire and extends entirely across the tire and terminates on top of the flanges, said main portion of the fabric having a number of openings therein.

2. A tire having a tread, base portion and side flanges made of resilient material and a layer of textile fabric placed between the tread and base portion and extending across the tire and over the upper surface of said flanges, the lower surface of said flanges being beveled for the purposes set forth.

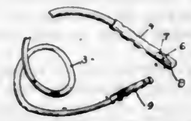
3. The combination of a vehicle wheel having a recessed rim, a tire made of resilient material located in said recess, flanges on the sides of said tire, a layer of textile fabric incorporated with said tire and covering the flanges, holding means for the tire engaging the textile fabric on the upper surface of the flanges, and cut-away portions on the lower surface of the tire below the flanges, the pressure of said holding means being exerted in a direction tending to depress the said cut-away portions into alinement with the rest of the lower surface of the tire.

4. The combination of a vehicle wheel having a rim, a tire made of resilient material mounted on said rim, flanges on the sides of said tire, holding means for the tire engaging the flanges, and beveled portions on the lower surface of the tire below the flanges, the pressure of said holding means being exerted in a direction tending to depress the said beveled portions into alinement with the rest of the lower surface of the tire.

5. A tire having a tread, base portion and side flanges made of resilient material and a fabric stiffener of substantial thickness extending entirely across the tire between the tread and base portion, the fabric extending over the side flanges and adapted to be engaged by holding means on the flanges to the end that the pressure exerted by said holding means on the fabric will be transmitted directly to the base portion of the tire to hold the same firmly against the wheel rim on which it is adapted to be mounted.

[Claims 6 to 8 not printed in the Gazette.]

1,195,513. PAPER-FASTENER. HORACE A. SEYMOURE, New York, N. Y. Filed July 21, 1913, Serial No. 780,183. Renewed Feb. 12, 1916. Serial No. 78,070. (Cl. 24—130.)



1. A book binder comprising a flexible member adapted to be threaded through preformed apertures in the book, a fastening tube secured to one end, said tube having an opening extending through the side thereof and a notch extending from said opening in the direction toward the free end of the tube and adapted to engage said flexible member to hold the same, and a tine fastened to the other end of said member and adapted to thread the flexible member through said opening.

2. A book binder comprising a flexible member adapted to be threaded through preformed apertures in the book, a fastening tube secured to one end, said tube having an opening extending through the side thereof and a notch extending from said opening in the direction toward the free end of the tube and adapted to engage said flexible member to hold the same, a tine fastened to the other end of said member and adapted to thread the flexible member through said opening, and means adjacent said opening for guiding said tine in its threading movement through said opening.

3. In a book binder, a means for temporarily engaging a flexible binding thread comprising a member having a closed substantially V-shape notch therein adapted to have said member drawn therein toward the small end of said notch to bind the member, and means for guiding said thread transversely through said notch.

4. In a book binder, a flexible member having an open ended fastener affixed to one end thereof, said fastener having also an opening in the side thereof adapted to have the other end of the member threaded therethrough from said open end said fastener having a pocket adjacent said opening adapted to contain a particle of sealing wax to hold said member in said opening.

5. A flexible member terminating in a fastening element comprising a tubular member having an opening extending through the walls thereof oppositely disposed sides of a portion of said opening being convergent.

[Claims 6 to 9 not printed in the Gazette.]

1,195,514. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 20, 1912. Serial No. 672,440. (Cl. 70—92.)

1. In a lock the combination with a latch bolt, key operated means for retracting the same, a manually operable retracting means for the bolt, night latch mechanism associated with said last named means, and other key operated means which renders the first named key operated means and said night latch mechanism inoperative; substantially as described.

2. In a lock the combination with a latch bolt and manually operable retracting means therefor at one side of the door, of night latch mechanism to dog said retracting means comprising slides projecting through the face of the lock, a slide operated by a key at the inside of the door, and means operated by said last named slide to move one of said night latch slides; substantially as described.

3. In a lock, a latch bolt, manual retracting means therefor at the outside of the door, a change key, mecha-

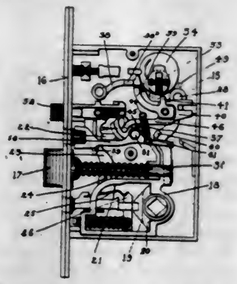
nism operable by said change key to retract said bolt from the outside of the door, a master key adapted to retract said bolt from the outside of the door, and means actuated by said master key from the inside of the door to block the retraction of said bolt by both said manual retracting means and by said change key; substantially as described.

4. In a lock, a mortise case, a cylinder lock secured thereto, a plurality of rollbacks on said cylinder lock within said case, mechanism in said case adapted to be actuated by said rollbacks, one of said rollbacks being rotatable independently of the other, and means for preventing the operation of one of said rollbacks; substantially as described.

5. In a lock, a mortise case, a cylinder lock secured therein, a plurality of rollbacks on said cylinder lock, a key to rotate all of said rollbacks simultaneously, another key to rotate one of the rollbacks individually, mechanism in the case adapted to be actuated by said rollbacks, and a blocking device adapted to be moved into the path of one of said rollbacks to prevent the rotation thereof; substantially as described.

[Claims 6 to 34 not printed in the Gazette.]

1,195,515. BOTTLING-MACHINE. PATRICK W. SHIELDS, Pittsburgh, Pa. Filed Mar. 3, 1906. Serial No. 304,006. (Cl. 226—22.)

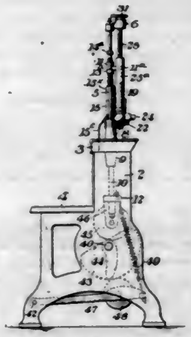


1. A bottling machine comprising a plurality of sets of bottling mechanisms fixed against lateral movement, each set including means for supporting the bottle and means for bringing the filling mechanism and bottle support into filling relation, a liquid-supply device, a normally inoperative actuator for the liquid-supply device, each bottling mechanism having a bottle-controlled means for rendering the said actuator of its own set effective independently of the other set or sets, and means for operating the sets out of time, substantially as described.

2. In a bottling machine, the combination with a plurality of sets of bottling mechanisms fixed against lateral movement, each set including a bottle support and means for bringing the filling mechanism and bottle support into filling relation, of a plurality of sources of liquid supply for different liquids, including connections controlled by the bottle in each set, whereby each bottle may be filled from said sources, and means for operating said sets out of time, substantially as described.

3. In a bottling machine, the combination with a plurality of sets of bottling mechanisms, each set including a bottle support, a filling mechanism, and a plurality of sources of liquid supply for different liquids, of a continuously operated cam shafts common to all the sets, valves for the sources of liquid supply, connections actuated by the cams on said shaft for bringing the filling mechanisms and the bottle support into and out of filling relation, and operating said valves, and means whereby the valves are inoperative except when a bottle is present on said support, said cams being differently set to operate the different sets out of time, substantially as described.

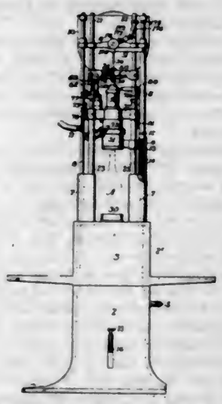
4. In a bottling machine, the combination with a plurality of sets of bottling mechanisms fixed against lateral movement, each set including means for supporting a bottle, a filling mechanism, and a plurality of sources of liquid supply for different liquids, of a continuously rotating cam shaft located below the bottle supports, valves for said sources of liquid supply, valve-actuating connections operated by the cams on the cam shaft, and means whereby said connections are inoperative except when a bottle is present on the support, substantially as described.



5. A bottling machine, comprising a plurality of sets of bottling mechanisms fixed against lateral movement, each set including means for supporting the bottle, a filling mechanism, a plurality of sources of liquid supply for different liquids, and valves for controlling said sources of supply, a continuously operating cam shaft common to all the sets of bottling mechanisms, separate connections actuated by said cam shaft for controlling the valves of each filling mechanism, and means whereby said connections are inoperative except when a bottle is present on its support, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,195,516. MACHINE FOR FILLING AND CAPPING BOTTLES. PATRICK W. SHIELDS, Pittsburgh, Pa. Filed Dec. 9, 1911, Serial No. 664,825. Renewed Dec. 2, 1914. Serial No. 875,188. (Cl. 226—28.)



1. In a machine for filling bottles, a filling head having a bottle-receiving opening, a compressible packing surrounding said opening, a pressure chamber surrounding the packing, said packing having an opening to receive the neck of a bottle therethrough, means for introducing filling liquid under pressure to said head, and a passage connecting the filling head to the chamber around the packing to cause said pressure to hold the packing in contact with a bottle by the filling pressure, substantially as described.

2. In a bottle-filling machine, a filling head having a bottom bottle-receiving opening and a compressible packing, a pressure space or chamber surrounding the packing, said packing having an opening to receive the neck of a bottle therethrough, and means for introducing filling liquid into said head and thence into the bottle, there being a passage communicating with the head and the chamber surrounding the packing to admit fluid pressure to said chamber to hold the packing in contact with the neck of the bottle by means of said fluid pressure, substantially as described.

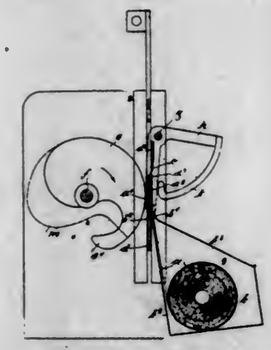
3. In a machine for filling and capping bottles, a vertically movable filling head having an air chamber into which the neck portion of the bottle can be introduced, means for sealing the neck portion of the bottle within the head, a cap-supply passage leading into the head, and automatic means operated by the vertical movement of the head for sealing the cap-supply passage against the entrance of air; substantially as described.

4. In a machine for filling and capping bottles, a vertically movable filling head having an air chamber therein, and means operated by the vertical movement of the head for sealing the chamber while the bottle is being filled, means for introducing caps into said chamber, and a bottle ejecting plunger working in said chamber; substantially as described.

5. In a machine for filling and capping bottles, a filling head having an air chamber therein, and means for sealing the chamber while the bottle is being filled, means for introducing caps into said chamber, and a bottle ejecting plunger working in said chamber, together with means whereby said chamber may be connected above the plunger with a source of pressure supply to thereby actuate the plunger; substantially as described.

[Claims 6 to 42 not printed in the Gazette.]

1,195,517. DEVICE FOR DELIVERING SUBDIVIDED STRIPS. MAX SIELAFF, Berlin, Germany. Filed Feb. 4, 1914. Serial No. 816,517. (Cl. 211—33.)



1. A machine for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a member provided with one working edge, mechanism for bending the end of the strip over the working edge of said member at that weakened part where the next severing operation is to be effected and means for withdrawing the strip from said supply roll and for bringing the bend in the strip into severing position.

2. A machine for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a reciprocatory edged member, mechanism for bending the end of the strip over the edge of said member at that weakened part where the next severing operation is to be effected and mechanism for reciprocating said member to withdraw the strip from said supply roll and to bring the bend in the strip into severing position.

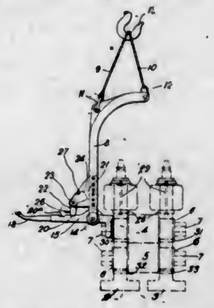
3. A machine for delivering strips divided by weakening into subdivisions, comprising a supply roll for the strip, a non-rotatable member having a single working edge mechanism whereby the end of the strip is placed over the working edge of the non-rotatable member at that weakened part where the next severing operation is to be effected and means for withdrawing the strip from the supply roll and for bringing the weakened portion of the strip into severing position.

4. A machine for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a reciprocatory edged member, mechanism for bending the end of the strip over the edge of said member at that weakened part where the next severing operation is to be effected and mechanism for reciprocating said member to withdraw the strip from said supply roll and to bring the bend in the strip into severing position and a fixed knife adapted to coöperate with said member to sever the strip at the bend.

5. A device for delivering strips divided by weakening into subdivisions comprising a supply roll for the strip, a member movable laterally against the end of the strip, a second member adapted to engage the end of the strip during the final operation of the first-mentioned member and to bend the end of the strip through nearly 180 degrees and a member adapted to fit into and engage the bend in the strip.

[Claims 6 to 8 not printed in the Gazette.]

1,195,518. ROLL-CHANGING APPARATUS. JAMES SIMPSON, HARRY E. CLAY, and WILLIAM W. CLAY, McKeesport, Pa., assignors to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 10, 1915. Serial No. 60,701. (Cl. 80—1.)



1. Roll changing apparatus comprising a bent arm having a sling whereby said arm is suspended from an overhead support, a horizontal lever pivoted on said arm having a roll engaging socket on one end and a handle on the opposite end, and a dog pivoted on said bent arm, said dog being arranged to engage and hold said lever in a plurality of roll lifting positions.

2. Roll changing apparatus comprising a bent arm having means whereby said arm is suspended from a support, a horizontal lever pivoted on said arm and having a roll engaging socket on one end thereof, and a pivoted dog to adjustably secure said lever in roll lifting position on said arm.

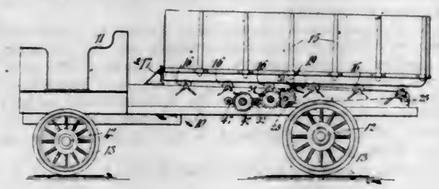
3. Roll changing apparatus comprising a bent arm having means whereby said arm is suspended from a support, a horizontal lever pivoted on said arm and having a roll engaging socket on one end thereof, a pivoted dog to adjustably secure said lever in roll lifting position on said arm, and a counterweight on the dog whereby said dog is automatically moved and held in disengaged position.

4. Roll changing apparatus comprising a bent arm having means whereby said arm is suspended from a support, a horizontal lever pivoted on said arm and having a roll engaging socket on one end thereof, teeth on one face of said lever, and a pivoted dog having teeth in one end thereof engaging with the teeth in said pivoted lever to hold said lever in a plurality of roll lifting positions.

5. Roll changing apparatus comprising a bent arm having means whereby said arm is suspended from a support, a horizontal lever pivoted on said arm and having a roll engaging socket on one end thereof, a plurality of sets of teeth in the upper surface of said horizontal lever, and a pivoted dog on the bent arm having a toothed end, said toothed end of the dog engaging the teeth in said sets of teeth to thereby hold said lever in angularly different roll lifting positions.

[Claim 6 not printed in the Gazette.]

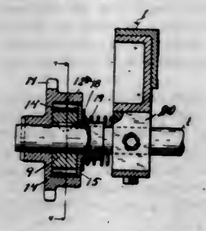
1,195,519. DUMPING MECHANISM FOR TRUCK-BODIES. HENRY M. SIOR, New York, N. Y. Filed Nov. 18, 1913. Serial No. 801,727. (Cl. 21—20.)



1. In combination, a dumping truck body, a frame therefor, means for moving the truck body longitudinally on the frame, comprising a winding drum and gears connected thereto, coöperating means for giving rearward movement to the said truck body, operating means for actuating said last named means adapted to move free of said last named means upon rearward movement of said truck body in excess of the movement imparted thereto by the said last named means and intermediate means coöperating with the said first named means for giving both forward and rearward movement to the said truck body.

2. In an improved dumping body, the combination of a frame, rollers on the frame, a body portion on the rollers, a cable or chain secured to the body, a drum for winding or unwinding the cable or chain, a train of gears for rotating the drum, a pinion in engagement with said train, adapted to give forward longitudinal motion to the body and to receive motion from the body, a gear movable by said pinion, and provided with a plurality of pawls engaging a ratchet on the shaft of the gear, and means for moving the pawls and ratchet and pinion in one direction by an operating handle to move the body rearwardly, but said pawls and ratchet being arranged to prevent movement of the operating handle in the opposite direction.

1,195,520. CLUTCH MECHANISM. FRANK A. SNIDEMAN, Kalamazoo, Mich., assignor of one-half to Fred N. Root, Kalamazoo, Mich. Filed Feb. 8, 1912. Serial No. 676,347. (Cl. 192—22.)

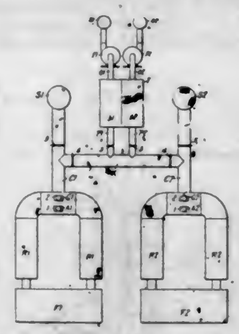


1. The combination of a driving shaft, a polygonal driving member secured to said shaft, the sides of the said member being flat, its corners being rounded, a driven member revolubly mounted on said shaft and having an annular flange thereon embracing said driving member, clutch rollers arranged on the sides of said driving member within said flange, a rotatable sleeve-like retainer slotted to receive said rollers and disposed within said driven member flange to embrace said driving member, said retainer having a projecting hub, a friction member arranged on the hub portion of said retainer in bearing engagement with its end, and a coiled spring arranged about said hub to engage said friction member, the outer end of said spring being mounted on a fixed support.

2. The combination of a driving shaft, a polygonal driving member secured to said shaft, a driven member revolubly mounted on said shaft and having an annular flange thereon embracing said driving member, clutch rollers arranged on the sides of said driving member within said flange, a rotatable sleeve-like retainer slotted to receive said rollers and disposed within said driven member flange to embrace said driving member, said retainer having a projecting hub, a friction member arranged on the hub portion of said retainer in bearing engagement with its outer end, and a coiled spring arranged about said hub to engage said friction member, the outer end of said spring being mounted on a fixed support.

3. The combination of a driving shaft, a polygonal driving member secured to said shaft, a driven member revolubly mounted on said shaft and having an annular flange thereon embracing said driving member, clutch rollers arranged on the sides of said driving member within said flange, a rotatable sleeve-like retainer slotted to receive said rollers and disposed within said driven member flange to embrace said driving member, said retainer having a projecting hub, and a friction member arranged on the hub portion of said retainer in bearing engagement with its outer end.

1,195,521. UTILIZING WASTE HEAT FROM OPEN-HEARTH FURNACES. ROBERT M. SNYDER, Wilkinsburg, Pa. Filed Dec. 27, 1915. Serial No. 68,913. (Cl. 122—7.)



1. In combination, two independent furnaces, each producing variable quantities of hot waste gases, two independent boilers, means for conducting the hot waste gases from each of said furnaces to a boiler, and cross connections between the waste gas supply means to said boilers whereby the supply of said gases to the two boilers is equalized notwithstanding fluctuations in the waste gases produced by each of said furnaces.

2. In combination, two independent furnaces, each producing variable quantities of hot waste gases, two independent boilers, means for conducting the hot waste gases from each of said furnaces to a boiler, cross connections between the waste gas supply means to said boilers whereby the supply of said gases to the two boilers is equalized notwithstanding fluctuations in the waste gases produced by each of said furnaces, and means associated with each of said boilers for drawing the waste gases therethrough.

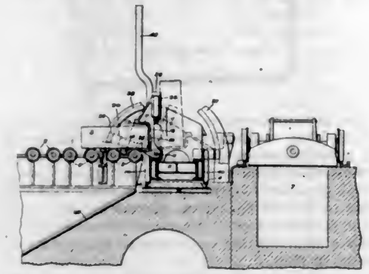
3. In combination, two open hearth furnaces, a set of regenerators for each furnace, two boilers, means for conducting the hot waste gases from each of said furnaces to a boiler, and cross connections between the waste gas supply means to said boilers whereby the supply of said gases to said two boilers is equalized notwithstanding fluctuations in the waste gases produced by said two furnaces.

4. In combination, two open hearth furnaces, a set of regenerators for each furnace, two boilers, means for conducting the hot waste gases from each of said furnaces to a boiler, cross connections between the waste gas supply means to said boilers whereby the supply of said gases to said two boilers is equalized notwithstanding fluctuations in the waste gases produced by said two furnaces, and means associated with each of said boilers for drawing the waste gases therethrough.

5. In combination, two open hearth furnaces, a set of regenerators for each furnace, two boilers, two fans of equal power for drawing the hot gases through said boilers, a conduit communicating with said two sets of regenerators, and means for conducting the hot gases from said conduit to both of said boilers.

[Claim 6 not printed in the Gazette.]

1,195,522. INGOT-DELIVERY CAR. ALBERT SODERSTROM, Homestead, Pa. Filed Mar. 6, 1915. Serial No. 12,670. (Cl. 214—1.)



1. The combination with a track, an ingot heating furnace and a feed table alongside said track, of a tilting ingot delivery car traveling upon the track between the heating furnace and feed table, said car having a transversely tilting ingot holder arranged to support the ingots in lengthwise vertical position, and adapted to tilt sidewise in transferring the ingots to the feed table, and means for tilting the holder to transfer the ingots to the feed table.

2. The combination with a track, an ingot heating furnace on one side of said track, a feed table on the opposite side of said track, of a tilting ingot delivery car traveling upon the track between said furnace and feed table, said car having a transversely tilting ingot holder arranged to support the ingots in lengthwise vertical position and adapted to tilt sidewise in transferring the ingots to the feed table, and means for tilting the holder to transfer the ingots to the feed table.

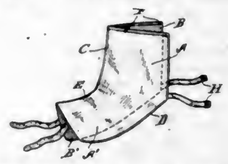
3. The combination with a track, and a plurality of ingot heating furnaces and feed tables alongside said track, of a tilting ingot delivery car traveling upon the track between the heating furnaces and feed tables, said car having a transversely tilting ingot holder arranged to support the ingots in lengthwise vertical position and adapted to tilt sidewise in transferring the ingots to the feed table, and means for selectively tilting the ingot holder to transfer ingots from the delivery car to any of the feed tables.

4. The combination with a track, and a plurality of ingot heating furnaces and feed tables alongside said track, of a tilting ingot delivery car traveling upon the track between the heating furnaces and feed tables, said car having a transversely tilting ingot holder mounted thereon and arranged to tilt sidewise to transfer an ingot to the feed table, and means at each feed table to tilt said holder, said tilting means having mechanism arranged to render the same inoperative and permit the car to pass the feed table without tilting the ingot holder.

5. The combination with a track, and a plurality of ingot heating furnaces and feed tables alongside said track, of a tilting ingot delivery car traveling upon the track between the heating furnaces and feed tables, said car having a transversely tilting ingot holder thereon arranged to support the ingots in lengthwise vertical position and adapted to tilt sidewise to transfer the ingots to the feed tables, means at each feed table adapted to tilt the holder when opposite the feed table, and a switch mechanism arranged to move and thereby permit the car to pass the feed table without tilting the ingot holder.

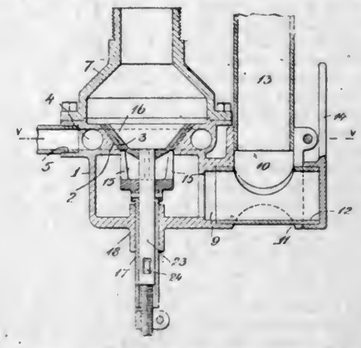
[Claims 6 to 10 not printed in the Gazette.]

1,195,523. DETACHABLE PROTECTOR FOR TROUSERS. LOUIS SONNENBERG, Richmond, Va. Filed Oct. 23, 1915. Serial No. 57,528. (Cl. 2—122.)



A detachable protector for trousers made up of two sections of material formed with a central seam and fashioned to conform to the seat of the trousers, said seam extending on a curved line to fit up in the crotch of the trousers, fastening devices for detachably securing the upper edge of the protector to the trousers, and retaining straps on the protector for securing the protector about the legs of the wearer.

1,195,524. MIXING-VALVE. ARTHUR M. STANLEY, Lynn, Mass., assignor to Hydrocarbon Converter Company, New York, N. Y., a Corporation of Delaware. Filed July 14, 1911. Serial No. 638,508. (Cl. 48—154.1.)

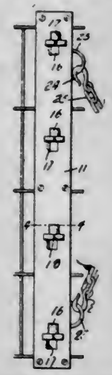


1. A mixing valve comprising in combination a valve casing having a valve seat, a main valve to seat on such valve seat and arranged to be opened by suction, means for supplying liquid to a gas current passing such valve, another valve controlling the supply of such liquid to such supply means, and operating means for such second valve arranged to close such second valve before the main valve closes, and to open such second valve after the main valve opens.

2. A mixing valve comprising in combination a valve casing having a valve seat in which is a port, a main valve arranged to seat on such valve seat and to be opened by suction, means for supplying liquid to the port of such valve seat, a second valve controlling the flow of liquid through such supply means, and operative means for said second valve after the opening of said main valve, and to close said second valve before the closing of said main valve.

3. A mixing valve comprising in combination a valve chamber having a valve seat, a main valve arranged to seat on such valve seat and having a stem, means for supplying liquid to a draft current passing such valve, a second valve controlling the flow of liquid through such supply means, such second valve having a stem, a lever engaging the stem of the main valve, spring means tending to hold said main valve closed, a second lever engaging the stem of said second valve and arranged to be engaged by the lever of said valve when the main valve opens, and spring means tending to close such second valve.

1,195,525. WIRE-STRETCHER CLAMP. MACK D. STEELE, Blacksville, W. Va., assignor of one-half to James I. Miller, Blacksville, W. Va. Filed Mar. 1, 1915. Serial No. 11,223. (Cl. 254—83.)



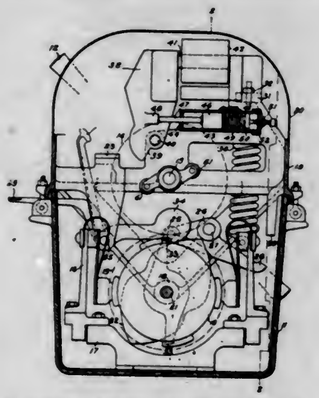
1. A wire stretcher clamp comprising a pair of rigid bars, clamping bolts carried by one of the bars and provided with flattened heads, the other bar being formed with elongated openings for the reception of the flattened heads, said heads being arranged to be turned transversely of the elongated openings, stop members disposed adjacent the elongated openings for engagement with the said heads and means carried by the other ends of the bolts for drawing the bars together for clamping engagement with a fence wire.

2. In a device of the class described, a pair of bars, the said bars being provided with openings adapted for registration, one of said bars being provided on its outer face with a plate having an opening alined with the openings in said bars, the metal adjacent said plate openings being turned outwardly adjacent the ends of said openings and on opposite sides to provide stops, the said stops being spaced apart to provide a laterally disposed slot, a bolt adapted for insertion through each of said openings in said bars, a head on each bolt adapted to lie in said slots to be engaged on opposite sides by said stops, and a nut on the opposite ends of said bolts.

1,195,526. POTENTIAL STARTER. HALFDAN A. STEEN, Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Mar. 23, 1912. Serial No. 685,718. (Cl. 175—270.)

1. In a potential starter, the combination of a movable switch member, means for holding said switch member in a certain operative position, a pivotally mounted member normally biased in one direction by its own weight and another force, a slow acting device normally opposing movement of said pivotally mounted member in said direction and being effective upon the occurrence of no-voltage circuit conditions to actuate said pivotally mounted member to render said holding means ineffective.

2. In a potential starter, the combination of a switch member, a member for holding said switch member in a certain position, a pivotally mounted member being adapted to render said holding member ineffective, and a dash-pot device a movable element of which is associated with and disconnected from said pivotally mounted member, said dash-pot device being effective upon the occurrence of low voltage circuit conditions to actuate said pivotally mounted member to render said holding means ineffective.



3. In a potential starter, the combination of a movable switch member, means for holding said switch member in one position, means for rendering said holding means ineffective comprising a member held in one position by a normal bias due to gravity and a force that varies in response to the voltage of the circuit of the switch, and means operative on the occurrence of no-voltage circuit conditions for actuating said member to render the holding means ineffective.

4. In combination, a switch member, a latch for holding said switch member in one position, means for rendering said latch ineffective, said means comprising an electromagnet having an armature normally held inactive and out of engagement with said latch and biased to an inactive position, and means for actuating said armature to engage and trip said latch on the occurrence of abnormal circuit conditions.

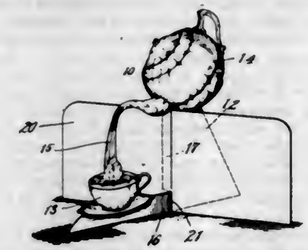
5. In combination, a movable switch member, means for holding said switch member in a certain position, an electromagnet having an armature biased to and normally held in one position, means effective on the occurrence of abnormal circuit conditions for actuating said armature to engage and trip said latch, and means for retarding said actuating means while permitting unrestricted final movement of said armature whereby the latter may deliver a hammer blow in tripping said latch.

[Claims 6 to 10 not printed in the Gazette.]

1,195,527. DISPLAY DEVICE. JULIEN STRANDERS, New York, N. Y., assignor to Harry B. Kruger, New York, N. Y. Filed Oct. 25, 1915. Serial No. 57,723. (Cl. 40—149.)

1. A folding advertising device consisting of a goods-suggestive symbol card of irregular design having an opening and comprising a rear standard on one side of said opening, a front figure on the other side of said opening and a top figure connected with said standard and with said front figure, and a word card passed through said opening and engaging said symbol card between its standard and front figure.

2. A folding advertising device consisting of a goods-suggestive symbol card of irregular design having an opening and comprising a rear standard on one side of said opening, a front figure on the other side of said opening, a top figure connected with said standard and a representative feature connecting said top figure with said front figure, and a word card passed through said opening and engaging said symbol card between its standard and front figure.

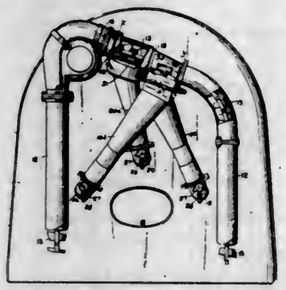


3. A folding advertising device consisting of a goods-suggestive symbol card of irregular design having an opening and comprising a rear standard on one side of said opening, a front figure on the other side of said opening, an integral web connecting said front figure with the top of said standard and an integral web connecting said front figure with the bottom of said standard, and a word card passed through said opening and engaging said symbol card between its standard and front figure.

4. A folding advertising device consisting of a goods-suggestive symbol card of irregular design having an opening and comprising a rear standard on one side of said opening, a front figure on the other side of said opening and a top figure connected with said standard and with said front figure, and a word card passed through said opening and hinged to said standard.

5. A folding advertising device consisting of a goods-suggestive symbol card of irregular design having an opening and comprising a rear standard on one side of said opening, a front figure on the other side of said opening, an integral web connecting said front figure with the top of said standard and an integral web connecting said front figure with the bottom of said standard, and a word card passed through said opening and provided with a slot engaged by said last named web.

1,195,528. MECHANICAL STOKER. CLEMENT F. STREET and NATHAN M. LOWER, Schenectady, N. Y., assignors to The Locomotive Stoker Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Oct. 2, 1911. Serial No. 652,462. (Cl. 110—104.)



1. In a mechanical stoker, the combination of a fuel supply, a plurality of separate conduits leading to different portions of the furnace, means for assorting the fuel as to size, and means for feeding the smaller pieces to one conduit of the furnace and the larger pieces to another conduit.

2. In a mechanical stoker, the combination of a plurality of separate distributers communicating at different points transversely of the furnace, conduits leading to the several distributers, a source of fuel supply delivering to the conduits, and means for assorting the fuel as to size as delivered to the respective conduits.

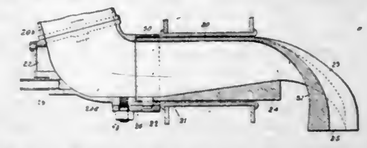
3. In a mechanical stoker, the combination of a delivery pipe, a conveyer mounted to travel in the pipe, a plurality of distributers, conduits leading downwardly from the pipe to the distributers, their receiving ends being arranged longitudinally as to the pipe, and a reticulated screen crossing the receiving end of the conduit first in order, the other conduits not having similar screens, whereby fuel passed through the pipe is delivered to the conduits in assorted sizes.

4. In a mechanical stoker, the combination of a delivery pipe, a conveyer mounted to travel in the pipe, conduits leading laterally from the pipe and arranged longitudinally thereof, and a rotatable cylindrical screen, having a plurality of differentiated sections, housed within the pipe and covering the receiving end of the conduit first in order.

5. In a mechanical stoker, the combination of a plurality of conduits for delivering fuel to different portions of the furnace, a conveyer casing for supplying fuel to said conduits successively, and a perforated screen located over the receiving end of the first conduit for assorting the fuel as to size as delivered to the successive conduits, the other conduits not having similar screens.

[Claims 6 to 12 not printed in the Gazette.]

1,195,529. DISTRIBUTER FOR MECHANICAL STOKERS. CLEMENT F. STREET and NATHAN M. LOWER, Schenectady, N. Y., assignors to The Locomotive Stoker Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Jan. 12, 1912. Serial No. 670,835. (Cl. 110—104.)



1. In a mechanical stoker, the combination with a furnace wall having an opening, of a fuel distributer comprising an elbow outside the furnace wall provided with fuel and fluid pressure connections, and having a flanged opening, a tubular shank extending through said opening and detachably connected to said flange, and a flaring distributing hood of greater width than said opening formed integrally upon the end of the shank within the firebox.

2. In a mechanical stoker, the combination with a furnace wall having an opening, of a fuel distributer comprising an elbow outside said wall and provided with fuel and fluid pressure connections, a distributing hood inside said wall and having an integral tubular shank extending through said opening, and detachable means connecting the shank with said elbow, said hood having flaring wing portions extending beyond and curved over and downward below the fuel discharge end of the shank portion.

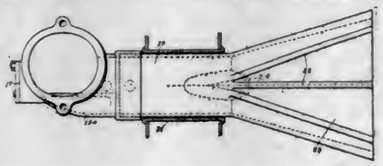
3. In a mechanical stoker, the combination with a furnace wall having a circular opening, of a fuel distributer having a tubular portion of V shaped section extending through said opening and provided with segmental ribs fitting within said opening, and a fluid nozzle discharging longitudinally through said tubular portion adjacent to the bottom thereof.

4. In a mechanical stoker, a fuel distributing device comprising an elbow formed with a V-shaped lower portion and a cylindrical flanged opening, a fluid pressure connection at the V-shaped portion, and a distributer, also formed with a V-shaped lower portion, adapted to extend through an opening in a furnace wall and provided with flanges fitting within the flanged opening of the elbow and the opening in the furnace wall.

1,195,530. FUEL-DISTRIBUTER. CLEMENT F. STREET and NATHAN M. LOWER, Schenectady, N. Y., assignors to The Locomotive Stoker Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Jan. 12, 1912. Serial No. 670,836. (Cl. 110—104.)

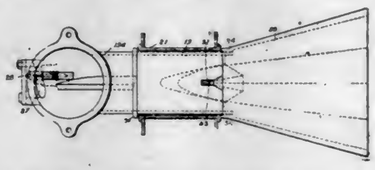
In a mechanical stoker, the combination with a furnace wall having an opening, of a fuel distributer comprising

an elbow outside the wall and provided with fuel and fluid pressure connections, a flat flaring distributing hood within the furnace and having an integral tubular shank extending through and closely fitting said opening and de-



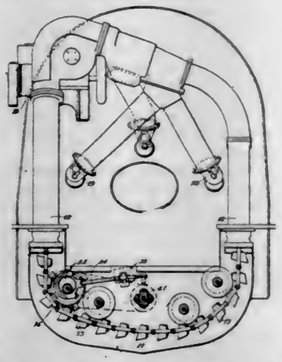
tachably connected to said elbow, said hood having diverging depending flanges, and an upwardly inclined deflector at the bottom of the discharge end of said tubular shank.

1,195,531. FUEL-DISTRIBUTER FOR FURNACES. CLEMENT F. STREET, Schenectady, N. Y., assignor to The Locomotive Stoker Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Jan. 12, 1912. Serial No. 670,858. (Cl. 110—104.)



In a mechanical stoker, the combination with a furnace wall having an opening, of an elbow outside the wall provided with fuel and fluid pressure connections and having an integral tubular shank extending through and closely fitting said opening, and a flaring distributing hood within the furnace, said hood and the end of said shank having interlocking notches and projections for detachably connecting the hood with said shank and retaining the same in position by gravity.

1,195,532. MECHANICAL STOKER FOR LOCOMOTIVES. CLEMENT F. STREET, Schenectady, N. Y., assignor to The Locomotive Stoker Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 24, 1912, Serial No. 699,359. Renewed Feb. 9, 1915. Serial No. 7,104. (Cl. 110—104.)



1. In a mechanical stoker for a locomotive and tender, the combination with a fuel bin on the tender, a fuel receptacle on the locomotive, and means for feeding fuel therefrom to the furnace, of a rigid conveyer trough pivotally connected at its forward end to said receptacle and extending at its other end beneath the fuel bin on the tender, a conveyer in said trough, a support for the rear portion of the trough, and a plate slidably mounted on said support and rigidly secured to said trough.

2. In a mechanical stoker for a locomotive and tender, the combination of a fuel bin on the tender, a fuel receptacle on the locomotive, a chain and bucket elevator for raising fuel therefrom, a sprocket wheel driven by said elevator, a conveyer trough pivotally connected at its forward end to said receptacle and extending to the space beneath the fuel bin on the tender, a conveyer screw mounted in said trough and having a bearing supported in the casing of said receptacle, and a driving connection from said sprocket wheel to the forward end of said screw shaft.

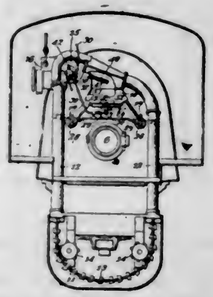
3. In a mechanical stoker for a locomotive and tender, the combination of a fuel bin on the tender, a fuel receptacle on the locomotive, a trough extending therefrom to the space beneath the fuel bin on the tender, a longitudinal reciprocatory screen located over said trough, longitudinal guides supporting said screen, a conveyer in said trough, a rod connected to said screen and extending to the locomotive, and mechanism mounted on the locomotive for reciprocating said rod and for driving the conveyer.

4. In a mechanical stoker for a locomotive and tender, the combination of a fuel bin on the tender having a longitudinal opening at the bottom thereof, a plurality of movable fuel plates arranged in line with each other for closing said opening, a vibratory screen mounted beneath said fuel plates, a conveyer trough beneath said screen, a conveyer for conducting the fuel to the locomotive, and an operating mechanism for vibrating said screen.

5. In a mechanical stoker for a locomotive and tender, the combination of a fuel bin on the tender having a longitudinal opening at the bottom thereof, a plurality of movable fuel plates arranged in line with each other for closing said opening, a vibratory screen mounted beneath said fuel plates, a conveyer trough beneath said screen, a conveyer screw having a bearing at the rear end of the trough, and another plate beyond the rear end of the screen for giving access to said bearing.

[Claims 6 to 14 not printed in the Gazette.]

1,195,533. MECHANICAL STOKER. CLEMENT F. STREET, New York, N. Y., assignor to The Locomotive Stoker Company, Wilmerding, Pa., a Corporation of Pennsylvania. Original application filed June 7, 1910, Serial No. 565,579. Divided and this application filed June 9, 1913. Serial No. 772,513. (Cl. 110—104.)



1. In a mechanical stoker of the type described, the combination with a source of fuel supply and a distributer connected thereto, of mechanism to admit fluid under pressure into said distributer periodically, a power device for driving said mechanism, and manually operable means to adjust said mechanism to vary the frequency of said admissions independently of the speed of the driving device.

2. In a mechanical stoker of the type described, the combination with a source of fuel supply and a distributer connected thereto, of power driven mechanism to admit fluid under pressure into said distributer periodically, the successive admissions being of different duration, and manually operable means to adjust said mechanism to vary the duration of the successive admissions after said adjustment.

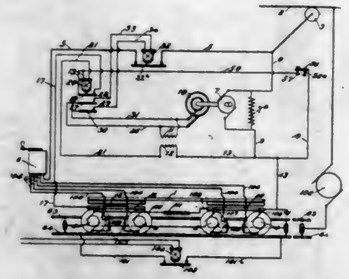
3. In a mechanical stoker, of the type described, the combination with a source of fuel supply and a distributer connected thereto, of mechanism to admit fluid under pressure into said distributer periodically, a power device for driving said mechanism, and manually operable means to adjust said mechanism to vary the frequency and duration of said admissions independently of the speed of the driving device.

4. In a mechanical stoker, the combination of a distributer, power mechanism for admitting a continuous supply of fuel to said distributer, mechanism for intermittently admitting blasts of fluid under pressure to the distributer, a power device for driving said mechanism, and means for adjusting said mechanism to vary the frequency of said blasts.

5. In a mechanical stoker in which the fuel is fed by fluid pressure, means to control the latter comprising a valve and a cam disk to operate the same, the cam surface of said disk being adjustable to vary the frequency of the operations of said valve.

[Claims 6 to 14 not printed in the Gazette.]

1,195,534. ELECTRICALLY PROPELLED AND CONTROLLED RAILWAY SYSTEM. GUY P. THURBER, Pittsburgh, Pa. Filed Oct. 24, 1912. Serial No. 727,502. (Cl. 246—58.)



1. An electrically propelled and controlled railway system comprising: a propulsion circuit passing through the train and completed through the traffic track, a normally closed train circuit having a current of a different characteristic from that of the propulsion circuit and normally completed through the traffic track, a traffic track divided by insulation, paths around the insulation for the propulsion and train circuits to permit the free passage of the propulsion current and to permit the completion of the train circuit when the train passes over the insulation, and means for rupturing the path for the train circuit around the insulation.

2. An electrically propelled and controlled railway system comprising: a propulsion circuit passing through the train and completed through the traffic track, a normally closed train circuit having a current of a different characteristic from that of the propulsion circuit and normally completed through the traffic track, a traffic track divided by insulation, a path around the insulation to permit the completion of the train circuit when the train passes over the insulation, a path around the insulation to permit the free passage of the propulsion current and having an impedance to resist the completion of the train circuit, and means for rupturing the path for the train circuit around the insulation.

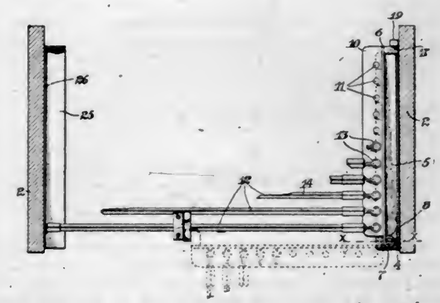
3. An electrically propelled and controlled railway system comprising: a propulsion circuit passing through the train and completed through the traffic track, a normally closed train circuit having a current of a different characteristic from that of the propulsion circuit and normally completed through the traffic track, a traffic track divided by insulation, paths around the insulation to permit the completion of the train circuit when the train passes over the insulation and to permit the passage of the propulsion current, an impedance in one of said paths which permits the passage of current having one characteristic and prevents the passage of current having a different characteristic, and means for rupturing the path for the train circuit around the insulation.

4. An electrically propelled and controlled railway system comprising: a propulsion circuit passing through the train and completed through the traffic track, a normally closed train circuit having a current of a different characteristic from that of the propulsion circuit and normally completed through the traffic track, a traffic track divided by insulation, paths around the insulation for the propulsion and train circuits to permit the free passage of the propulsion current and to permit the completion of the train circuit when the train passes over the insulation, and means for preventing the completion of the train circuit through the path for the train circuit around the insulation.

5. An electrically propelled and controlled railway system comprising: a train having two trucks insulated from each other, propulsion motors on the trucks, a propulsion circuit for said motors adapted to be completed through the traffic track, a normally closed train circuit having a current of a different characteristic from that of the propulsion current and normally completed through the traffic tracks, a traffic track divided by insulation, a path around the track insulation for the train circuit, another path around the track insulation for the propulsion circuit, having an impedance to resist the passage of the train circuit current therethrough, a path in the propulsion circuit for the propulsion current extending around the insulation which separates the two trucks from each other, and an impedance in said last-mentioned path adapted to resist the passage of the train circuit current therethrough.

[Claims 6 to 8 not printed in the Gazette.]

1,195,535. WARDROBE-TRUNK. ALFRED VAN GALE, Newark, N. J. Filed Oct. 6, 1913, Serial No. 793,635. Renewed June 6, 1916. Serial No. 102,091. (Cl. 211—16.)



1. The combination with a trunk body, of a channel bar secured to the inner face of one side of the trunk, at the top, the flanges of said channel bar projecting horizontally toward the interior of the trunk, a bracket hinged to the front end of said channel bar to fold within the channel bar, detachable garment hangers supported by said bracket, a supporting clip on the underside of the top of the trunk at the outer edge and a hook on said bracket adapted to engage said clip, substantially as set forth.

2. The combination with a trunk body, of a channel bar secured to the inner face of one side of the trunk at the top, the flanges of said channel bar projecting horizontally toward the interior of the trunk, a bracket hinged to the front end of said channel bar to fold within the channel

bar, detachable garment hangers supported by said bracket, an angle bar bracket fixed to the inner face of that side wall opposite the one to which the channel bar is attached to form a support for the free ends of the garment hangers when folded within the trunk, substantially as set forth.

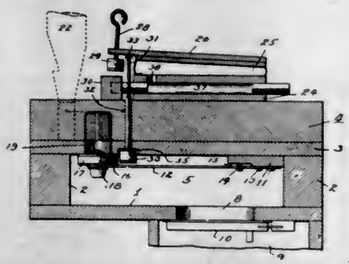
3. The combination with a trunk body, of a channel bar secured to the inner face of one side of the trunk, at the top, a bracket hinged to the front end of said channel bar to fold within the channel bar, detachable garment hangers supported by said bracket, a supporting clip on the underside of the top of the trunk having a horizontal portion, a stop at the outer end of said horizontal portion and a bevel clip at the inner end of the horizontal portion of said clip and a hook on the free end of the bracket for engagement with said clip, substantially as set forth.

4. The combination with a trunk body, of a channel bar secured to the inner face of one side of the trunk at the top, a bracket hinged to the front end of said channel bar to fold within the channel bar, detachable garment hangers supported by said bracket, a clip secured to the underside of the top of the trunk and provided with a horizontal portion, a hook on the free end of the bracket which hook has a horizontal top portion extending in the direction from the hinged end to the free end of the bracket and beyond said free end of the bracket and adapted to slide upon the said clip, substantially as set forth.

5. The combination with a trunk body, of a channel bar secured to the inner face of one side of the trunk body at the top, the flanges of said channel bar projecting horizontally toward the interior of the trunk, an angle bar bracket pivoted to the front end of said channel bar to fold within said channel bar and pins projecting upward from the flange of said bracket adjacent to the upright member of said angle bar bracket and detachable garment hangers on said pins, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,195,536. PIPE-CHEST. BURT R. VAN VALKENBURG, Oakland, Cal., assignor to American Photo Player Company, Berkeley, Cal., a Corporation of California. Filed Nov. 4, 1913, Serial No. 799,116. Renewed June 19, 1916. Serial No. 104,577. (Cl. 84—20.)



1. The combination in a musical instrument, of a pipe-chest having a passage leading therefrom, a valve for said passage having a leaf-spring section, means securing said valve at one end of its spring-section to the pipe-chest, the said valve intermediate its ends being spaced from the adjacent walls of the chest, means engaging said valve at the last referred to portion thereof for varying the degree of pressure normally exerted by the valve against the wall of said passage, and means for unseating said valve against the resistance of its spring.

2. The combination in a musical instrument, of a pipe-chest having a passage leading therefrom and containing an opening in a wall thereof, a valve in the interior of said chest for controlling said passage formed with a spring section located in the interior of said chest and secured at one end in said chest, a rod passing through a wall of said chest and adapted to engage said valve, and means for moving said rod to actuate said valve.

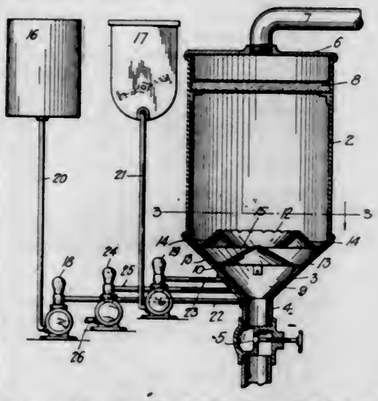
3. The combination in a musical instrument, of a pipe-chest having a passage leading therefrom, a valve controlling said passage and formed of a spring-strip, a block to which said strip is secured, adjusting means passing through said spring-strip at a point where the latter is out of contact with said block, and means for actuating said valve.

4. The combination in a musical instrument, of a pipe-chest having a passage leading therefrom, a valve controlling said passage and formed of a spring-strip, a block to which said strip is secured, adjusting means passing through said spring-strip at a point where the latter is out of contact with said block, a movable rod extending externally of said chest and adapted, when actuated, to actuate said valve, and means for actuating said rod.

5. The combination in a musical instrument, of a pipe-chest having a passage leading therefrom and containing a pressure-chamber, and a valve-controlled opening, means for supplying air under pressure through said opening into said chamber, a disk valve adapted to close said passage, a block mounted within said chest, a leaf-spring carrying said disk-valve and attached at its opposite end to said block, a pneumatic mounted on the exterior of said chest, a rod operated by the movable side of said pneumatic and passing through a wall of said chest, and adapted to engage said spring to open the disk-valve upon the deflation of the said pneumatic.

[Claims 6 to 12 not printed in the Gazette.]

1,195,537. WATER-PURIFYING APPARATUS. ALLART VAN VLOTEN, Denver, Colo. Filed June 2, 1915. Serial No. 31,666. (Cl. 210—1.)



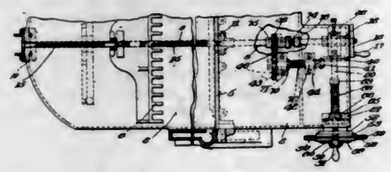
1. In apparatus for the purification of water, a precipitation tank having at its bottom, a mixing chamber and above said chamber, a hollow cone spaced from the interior surface of the tank to provide a restricted passage for the upflowing liquid, a concave annulus spaced from the interior surface of the tank above the cone, and means for introducing into the mixing chamber chemical reagents and water under treatment.

2. In apparatus for the purification of water, a precipitation tank having at its bottom, a mixing chamber and above said chamber, a hollow cone spaced from the interior surface of the tank to provide a restricted passage for the upflowing liquid, a concave annulus spaced from the interior surface of the tank and the exterior surface of the cone, and means for introducing into the mixing chamber chemical reagents and water under treatment.

3. Apparatus for the purification of water comprising a precipitation tank having in its top an outlet for pure liquid under pressure, a baffle providing a cone-shaped pocket for the retention of upwardly flowing fluid, and spaced at its edge from the inner surface of the tank, a second baffle providing an annular pocket for the retention of up-flowing fluid, above the said space, said baffles

coöperating to divide said tank into an upper or settling compartment and a shallow lower or mixing compartment communicating by a narrow passage, and devices for the supply of fluids under pressure, connected with said lower compartment at juxtaposed points whereby to effect within the compartment the intermixture of injected fluids.

1,195,538. CUTTING-MACHINE. DARIUS T. WADHAMS, Oswego, N. Y., assignor to Niel Gray, Jr., Oswego, N. Y. Filed July 14, 1914. Serial No. 850,890. (Cl. 164—59.)



1. In a paper cutting machine, the combination with the frame and a table for the work thereon, of a knife, a movable gage for advancing the work to the knife, an actuating screw therefor, an operating lever on the screw, work advancing mechanism, an actuating member therefor, coupling means to effect the coupling of the advancing mechanism and the actuating member to move together in one direction and adapted to permit an independent return movement of the actuating member, means to limit the movement of the actuating member for measuring the feed movements and means for transmitting the movement of the advancing mechanism to the actuating screw, said latter means being capable of being disengaged to permit of the screw being operated independently by its operating lever substantially as described.

2. In a paper cutting machine, the combination with the frame and a table for the work thereon, of a knife, a movable gage for advancing the work to the knife, an actuating screw therefor, an operating lever on the screw, work advancing mechanism, an actuating member therefor, coupling means to effect the coupling of the advancing mechanism and the actuating member to move together in one direction and adapted to permit an independent return movement of the actuating member, means to limit the movement of the actuating member for measuring the feed movements and gear connections for transmitting the movement of the advancing mechanism to the actuating screw with a suitably increased movement and said gearing being capable of being disengaged to permit of the screw being operated independently by its operating lever substantially as described.

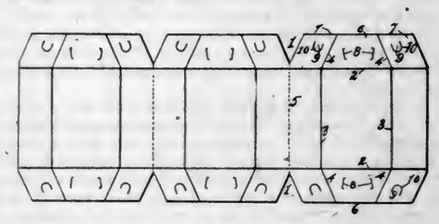
3. In a paper cutting machine, the combination with the frame and a table for the work thereon, of a knife, a movable gage for advancing the work to the knife, an actuating screw therefor, an operating lever on the screw, work advancing mechanism, an actuating member therefor, coupling means to effect the coupling of the advancing mechanism and the actuating member to move together in one direction and adapted to permit an independent return movement of the actuating member, means to limit the movement of the actuating member for measuring the feed movements and connections for transmitting the motion from the advancing mechanism to the actuating screw comprising an actuating shaft journaled at right angles to the actuating screw, a counter shaft journaled parallel to the screw, miter gears connecting the shafts, a spur gear on the counter shaft and a gear slidably keyed on the actuating screw adapted to engage the spur gear for actuating the screw by the advancing mechanism and to be shifted out of engagement to permit of independently operating the screw by its operating lever.

4. In a paper cutting machine, the combination with the frame and a table for the work thereon, of a knife, a movable gage for advancing the work to the knife, an actuating screw therefor suitably journaled, an operating lever on the screw, work advancing mechanism, an actuating member therefor, coupling means to effect the coupling of the advancing mechanism and the actuating member to move together in one direction and adapted to permit an independent return movement of the actuating member, means to limit the movement of the actuating member for measuring the feed movements, gear connections for transmitting the motion from the advancing mechanism to the gage comprising an actuating shaft journaled at right angles to the screw, a counter shaft journaled parallel to the screw, gear connections therebetween, a large gear on the counter shaft, a co-acting smaller gear slidably keyed on the actuating screw for transmitting the motion from the advancing mechanism thereto and adapted to be shifted out of engagement to permit of independently operating the screw by the operating lever, friction collars keyed on the shafts and springs arranged to produce frictional holding pressure between the collars and a stationary part substantially as described.

5. A cutting machine having a supporting frame, a suitable table for supporting the work to be cut, a knife supporting bar, a knife arranged to be supported in a plurality of positions, a backing piece therefor adapted to be interposed between the bar and the knife in a plurality of positions for solidly backing up the knife throughout its length and engaging means between the knife and the backing piece for removably clamping the backing piece in position upon securing the knife to the bar.

[Claims 6 to 9 not printed in the Gazette.]

1,195,539. PAPER-BOX-BLANK ROLL. CHESTER R. P. WALTZ, Delta, Ohio. Filed June 22, 1914. Serial No. 846,480. (Cl. 229—35.)



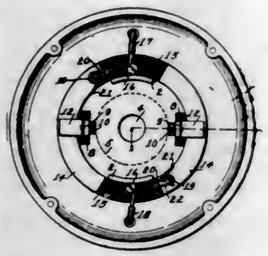
1. A strip of paper adapted to form a roll, said strip comprising a series of sections separable on transverse weakened lines, each of said sections having the cuts and weakened lines of a box-blank and having short slits and integral ears adapted to engage such slits to retain the blank in erected form.

2. As an article of manufacture, a strip of paper adapted to form a roll having a series of transverse weakened lines upon which the strip may be divided into sections, each of said sections having longitudinal and transverse weakened lines upon which the section may be erected to form a container, and means integral with said strip for retaining such section in erected form without the use of adhesives.

1,195,540. MOTOR-CONTROLLER. ROE P. WARNER, Kalamazoo, Mich., assignor of one-half to Carl C. Blankenburg, Kalamazoo, Mich. Filed Sept. 26, 1915. Serial No. 51,638. (Cl. 200—1.)

1. In a structure of the class described, the combination of an end plate for the motor frame, said end plate being provided with a shaft bearing, a ring rotatably mounted on said end plate, sleeves of insulating material slidably mounted therein, metallic sleeves carried thereby, commutator brushes carried by said metallic sleeves and brush contacts in electrical connection with said metallic sleeves, a ring of insulating material carried by said end plate, segmental contact members mounted on said ring, said brush contacts engaging said contact members, a pair of posts on said insulating ring electrically connected with a source of current, a contact arm pivotally mounted on

each of said contact members and spring pressed into engagement with one of said posts, each of said contact arms having a tail adapted to be engaged by the brush contacts to move the arms out of engagement with said posts and open the circuit, all coacting substantially as described.



2. In a structure of the class described, the combination of an end plate for the motor frame, said end plate being provided with a shaft bearing, a ring rotatably mounted on said end plate, commutator brushes carried by said ring and insulated therefrom, contacts electrically connected with said brushes and movable therewith, a ring of insulating material carried by said end plate, segmental contact members mounted on said ring, said brush contacts engaging with said segmental contact members, a pair of posts on said insulating ring electrically connected with a source of current, and a contact arm pivotally mounted on each of said contact members and spring pressed into engagement with one of said posts and having a tail adapted to be engaged by the corresponding brush contact to move the arm out of engagement with said post and open the circuit, all coacting substantially as described.

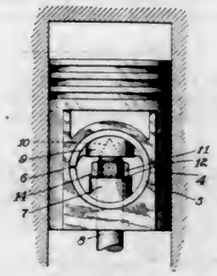
3. In a structure of the class described, the combination of an end plate, a ring rotatably mounted thereon, commutator brushes carried by said ring and insulated therefrom, a brush contact electrically connected with each of said brushes, segmental contact members carried by said end plate and insulated therefrom, each of said brush contacts engaging one of said contact members, a pair of posts carried by said end plate and insulated therefrom and electrically connected with a source of current, and a contact arm pivotally mounted on each of said contact members and spring pressed into engagement with one of said posts and having a tail adapted to be engaged by the corresponding brush contact to move the arm out of engagement with said post and open the circuit, all coacting substantially as described.

4. In a structure of the class described, the combination of an end plate, a ring rotatably mounted thereon, commutator brushes carried thereby and insulated therefrom, a brush contact electrically connected with each of said brushes, segmental contact members carried by said end plate and insulated therefrom, each of said brush contacts engaging one of said contact members, a pair of posts carried by said end plate and insulated therefrom and adapted to be electrically connected with the source of current, a switch electrically connected with each of said contact members and normally coacting with one of said posts and adapted to be opened by the corresponding brush contact to open the circuit.

5. In a motor controller, the combination of an end plate, a plurality of segmental contact members carried thereby and insulated therefrom, a ring rotatable relative to said end plate, commutator brushes carried by said ring, brush contacts connected with said brushes and engaging said contact members, connections between said contact members and the source of current, and means whereby when said brush contacts are in engagement with predetermined portions of said contact members said electrical connection is broken.

[Claim 6 not printed in the Gazette.]

1,195,541. PISTON AND PISTON-ROD CONNECTION. CHARLES WHITE, Baltimore, Md. Filed Oct. 11, 1915. Serial No. 55,312. (Cl. 74—17.)



1. In combination with a piston, a wrist pin seated therein, a piston rod extending into the wrist pin and means within the wrist pin for adjustably connecting the same with the piston rod.

2. In combination with a piston, a wrist pin seated therein, a piston rod extending into the wrist pin with its end bearing upon the inner side of the wrist pin and taking the end thrust and means for holding the wrist pin and piston rod together, substantially as described.

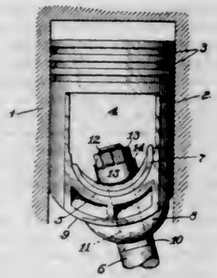
3. In combination with a piston, an expansible wrist pin seated therein, a piston rod extending into the wrist pin with its end bearing upon the inner side of the wrist pin and taking the end thrust and means for holding the wrist pin and piston rod together and for expanding said wrist pin, substantially as described.

4. In combination a piston, an expansible wrist pin seated and turnable therein, a piston rod connected with the wrist pin and turning the same in its seat, and means for expanding the wrist pin against its seat in the piston, substantially as described.

5. In combination a piston, an expansible wrist pin seated therein, a piston rod connected with the wrist pin, and means for expanding the wrist pin against its seat in the piston, said expanding means forming a connection between the piston rod and wrist pin, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,195,542. PISTON AND PISTON-ROD CONNECTION. CHARLES WHITE, Baltimore, Md. Filed Oct. 15, 1915. Serial No. 56,108. (Cl. 74—17.)



1. In combination with a piston having an opening therethrough with a curved track or way and with an exterior track or way concentric with that first mentioned, a piston rod passing through a slot in the piston and a shifting wrist connection consisting of a block within the opening of the piston bearing upon the inner curved way and a block bearing upon the outer curved way and means for connecting said blocks with the piston rod, substantially as described.

2. In combination with a piston and piston rod, said piston having an opening therethrough, a shifting wrist block and means to connect the piston rod and shifting wrist block, said means being exposed at the opening through the piston for adjustment, substantially as described.

3. In combination with a piston having an opening therethrough and having an inner curved way or track and an outer curved way or track, a shifting wrist block on each of the curved ways, the piston rod carrying said blocks and passing through a slot at the curved portion of the piston and a nut threaded on the end of the piston rod, said nut by its adjustment taking up the wear of both the inner and outer wrist blocks, substantially as described.

4. In combination with a piston, a piston rod, an inner and an outer block carried by the piston rod fitted to curved tracks or ways on the said piston, said piston rod being shouldered to position the outer block and a nut at the extreme end of the piston rod to bear on the inner shifting block, whereby the blocks may be adjusted in relation to the piston.

5. In combination with a piston having an opening therethrough with one wall of said opening curved on the arc of a circle to provide a way or track, the extreme end of said piston being formed on an arc concentric with that first mentioned, a piston rod and connecting means carried by the piston rod and moving on the inner and outer tracks, substantially as described.

1,195,543. STAFF-GUN AND PROJECTILE. CYRUS F. WICKER, Washington, D. C. Filed Sept. 2, 1915. Serial No. 48,657. (Cl. 102—26.)



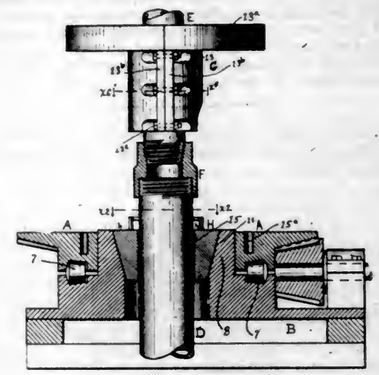
1. A projectile having a combined explosion and gun receiving cavity formed by a depending flange deformable by the explosion.

2. A projectile having a combined explosion and gun receiving cavity formed by a depending flange of tough ductile material and weakening grooves on said flange.

3. A projectile having a rigid body portion, and a combined explosion and gun receiving cavity bounded by ductile walls.

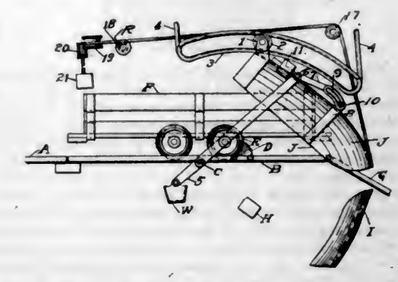
1,195,544. WELL-BORING APPARATUS. WILLIAM W. WILSON, Los Angeles, Cal. Filed May 29, 1914. Serial No. 841,735. (Cl. 255—23.)

In improvements of the character disclosed, the combination, with a rotary table, and a boring string; of means for supporting the string adapted to engage the same at any point of its length and to so support the string independently of the table; said table being provided with a base upon which the table is rotatively supported; said means for supporting the string being applied



to the string and to said base; said string supporting means consisting of slips.

1,195,545. TIPPLE. ALEXANDER H. WOOD, Petros, Tenn. Filed Apr. 7, 1915. Serial No. 19,776. (Cl. 214—11.)



1. In an apparatus of the nature described, the combination with a tilting track section adapted to receive and tilt a car, of a hood shiftable forward and backward relative to the tilting track section, and means for supporting the hood across the forward portion of the car while the latter is being tilted, substantially as described.

2. In an apparatus of the nature described, the combination with a tilting track section adapted to receive and tilt a car, of a hood shiftable forward and backward relative to the tilting track section, and means for supporting the hood across the forward portion of the car while the latter is being tilted, said means comprising arms rigid on the tilting track section, substantially as described.

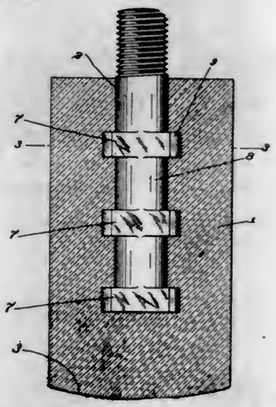
3. In an apparatus of the nature described, the combination with a tilting track section adapted to receive and tilt a car, of a hood, and means for supporting the hood across the forward portion of the car while the latter is being tilted, said means comprising rails which are stationary relative to the tilting track section, substantially as described.

4. In an apparatus of the nature described, the combination with a tilting track section adapted to receive and tilt a car, of a hood, and means for supporting the hood across the forward portion of the car while the latter is being tilted, said means comprising rails which are stationary relative to the tilting track section, substantially as described.

5. In an apparatus of the nature described, the combination with a tilting track section adapted to receive and tilt a car, and a chute located below said track section, of a hood, and means for supporting and moving said hood in a path extending upward and rearward from said chute and near the path traversed by the car while the latter is on the tilting section, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,195,546. PUMP-PISTON. GEORGE H. WRIGHTSON, Jr., Butte, Mont. Filed June 4, 1915. Serial No. 32,200. (Cl. 103—63.)



1. A pump plunger or piston consisting of a cylindrical block of vitreous material and metallic means for connecting the block to the moving parts of the pump, the metal portion and the vitreous portion being separable members and having an interlocking engagement whereby the metallic parts are covered by the vitreous material except at the rear.

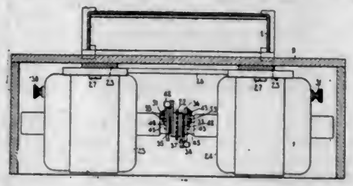
2. A pump piston composed of a cylindrical block of vitreous material having shoulders and metallic means for connecting the block to the moving parts of the pump, the metal members also having shoulders to engage those of the block and form an interlocking connection between the metal and the vitreous material, the cylindrical block being cast separately from the metal parts and having its forward and lateral surfaces, so far as they are exposed to the liquid pumped, continuous and the metal portions exposed at the rear of the piston only, so that they are not in contact with the liquid in the normal operation of the pump.

3. A pump plunger or piston consisting of a cylindrical block of vitreous material and mechanical means for connecting the block to the moving parts of the pump, the block having a slot with side chambers, and the metallic connections consisting of a rod of a diameter to enter the slot, the rod having shoulders adapted to pass through the slot, so that when the rod is turned through an angle of 90°, the shoulders enter the chambers in the slot and form a rigid connection.

4. A pump plunger or piston consisting of a cylindrical block of vitreous material and mechanical means for connecting the block to the moving parts of the pump, the block having a slot with side chambers, the slot being longitudinal and being open at the rear end of the piston only, metallic connections consisting of a rod of a diameter to enter the slot, the rod having shoulders adapted to pass through the slot, so that when the rod is turned through an angle of 90°, the shoulders enter the chambers in the slot and form a rigid connection.

5. A pump plunger or piston consisting of a cylindrical block of vitreous material and mechanical means for connecting the block to the moving parts of the pump, the block having a slot with side chambers, the slot being longitudinal and being open at the rear end of the piston only, metallic connections consisting of a rod of a diameter to enter the slot, the rod having shoulders adapted to pass through the slot, so that when the rod is turned through an angle of 90°, the shoulders enter the chambers in the slot and form a rigid connection, the excess space in the aperture being filled with cement.

1,195,547. DRIVING MECHANISM. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 22, 1914. Serial No. 813,673. (Cl. 192—1.)



1. The combination of two power shafts arranged end-to-end, a wheel having wrist pins connected therewith, and centrifugal coupling devices on said shafts, each of said coupling devices being adapted when its shaft is in motion to coöperate with one of said wrist pins to couple said shaft to said wheel.

2. The combination of two power shafts arranged end-to-end, a wheel having wrist pins connected therewith, centrifugal coupling devices on said shafts, each of said coupling devices being adapted when its shaft is in motion to coöperate with one of said wrist pins to couple said shaft to said wheel and the other wrist pin being adapted on occasion to move the other coupling device to inoperative position.

3. The combination of two power shafts arranged end-to-end, a wheel mounted on said two shafts, two dogs one pivoted on each of said shafts and each adapted when its shaft is rotated to be moved outward by centrifugal force and each having a spring which normally holds it in an inner position, and projections on said wheel for engagement by said dogs.

4. The combination of two power shafts arranged end-to-end, a wheel mounted on the adjacent ends of said shafts, and centrifugal coupling devices mounted on said shafts and each adapted when its shaft is set in motion automatically to couple that shaft to said wheel, and each of said devices being adapted automatically to disconnect its shaft from the wheel when said shaft is at rest.

5. The combination of two power shafts arranged end-to-end, a wheel mounted on the adjacent ends of said shafts, centrifugal dogs mounted on said shafts, and means connected with said wheel and adapted to coöperate with said dogs to automatically couple to said wheel whichever one of said power shafts is set in motion and to force to inoperative position the dog of the other power shaft.

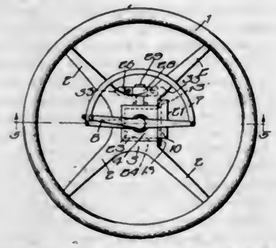
[Claims 6 to 8 not printed in the Gazette.]

1,195,548. STEERING-WHEEL. WILLIAM H. APPLEBY, Chicago, Ill. Filed Nov. 26, 1915. Serial No. 63,410. (Cl. 74—33.)

1. In combination, a steering wheel, a steering post having a steering block detachably attachable to said wheel, the wheel and the block interfitting with each other, and an obstructing element capable of being locked to the center post at a point occupied by one of the parts of the steering wheel when the latter is in acting position.

2. In a vehicle, the combination of a steering post having a steering block, a steering wheel having parts interfitting with parts of the steering block, the wheel being detachable from the block, an obstructing element and means for locking said obstructing element to the center block in position to occupy the space occupied by part of the wheel when the wheel is in position upon the block.

3. In a vehicle, the combination of a steering post, a steering block upon said post, a steering wheel fitting slidingly onto said block, locking means for preventing the wheel from sliding off of the block, and an obstructing element pivoted to the block, and adapted to interlock with said block and thereupon occupy a position occupied by part of the wheel when the wheel is in position.

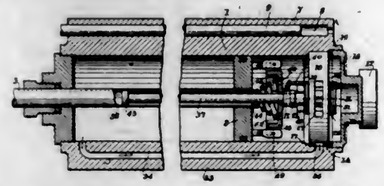


4. In a vehicle, the combination of a steering post, a steering block upon said post, a steering wheel, said block and said wheel having interfitting guides, locking means for preventing the wheel from accidentally sliding along said guides and becoming thereby dislodged from the block, an obstructor bar pivoted to said block in position to swing adjacent to the block and thereupon occupy space which is occupied by part of the wheel when the wheel is in position, and means for locking and unlocking said obstructing element.

5. In a vehicle, the combination of a steering post provided with a rectangular steering block, a steering wheel having a hub which is closed upon three sides of a rectangle and open upon the fourth side, said hub interfitting slidingly with said block upon three sides, a releasable locking bar for holding the hub in position upon the block, an obstructor bar pivoted to the block and swingable to a position along a side of the block normally occupied by one of the closed sides of the hub, and means for locking and unlocking said obstructor bar.

[Claims 6 to 9 not printed in the Gazette.]

1,195,549. RECIPROCATING MOTOR. WILLIAM H. BAKER, Meshoppen, Pa. Filed Jan. 11, 1916. Serial No. 71,503. (Cl. 121—45.)



1. The combination, with a cylinder having a by-pass communicating with opposite ends thereof, of a piston, a valve case arranged in one end of the cylinder over the opening of the by-pass at that end, said valve case having inlet and exhaust ports and a passage communicating with the by-pass, a pair of oppositely acting valves for alternately placing the inlet port in communication with the cylinder and by-pass and the exhaust port simultaneously with the by-pass and cylinder, respectively, and means for automatically reversing the valves at the end of each stroke of the piston.

2. The combination, with a cylinder having a by-pass communicating with opposite ends thereof, of a piston, a valve case arranged in one end of the cylinder over the opening of the by-pass at that end, said valve case having inlet and exhaust ports and a passage communicating with the by-pass, a pair of oppositely acting valves for alternately placing the inlet port in communication with the cylinder and by-pass and the exhaust port simultaneously with the by-pass and cylinder, respectively, a yoke connecting said valves for simultaneously moving both in the same direction, and means for automatically reversing the valves through a movement of the yoke at the end of each stroke of the piston.

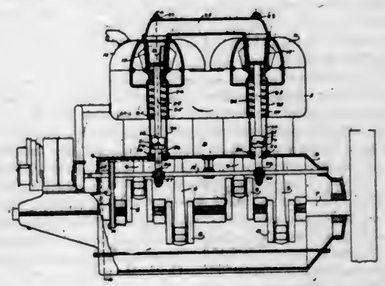
3. The combination, with a cylinder having a by-pass communicating with opposite ends thereof, of a piston, a valve case arranged in one end of the cylinder over the opening of the by-pass at that end, said valve case having inlet and exhaust ports and a passage communicating with the by-pass, a pair of oppositely acting valves for alternately placing the inlet port in communication with the cylinder and by-pass, and the exhaust port simultaneously in communication with the by-pass and cylinder, respectively, a yoke connecting said valves for simultaneously moving both in the same direction, means for automatically moving the yoke to reverse the valves at the end of each stroke of the piston, and means for cushioning said movements of the yoke.

4. The combination, with a cylinder having a by-pass communicating with opposite ends thereof, of a piston, a valve case arranged in one end of the cylinder over the opening of the by-pass at that end, said valve case having inlet and exhaust ports and a passage communicating with the by-pass, a pair of oppositely acting valves for alternately placing the inlet port in communication with the cylinder and by-pass, and the exhaust port simultaneously in communication with the by-pass and cylinder, respectively, a hollow piston rod, a headed rod arranged therein, means of connection between one end of said rod and the valves, and an abutment carried by the piston and adapted to be engaged by the other end of said headed rod for reversing the valves at the end of the outward stroke of the piston.

5. The combination, with a cylinder having a by-pass communicating with opposite ends thereof, of a piston, a valve case arranged in one end of the cylinder over the opening of the by-pass at that end, said valve case having inlet and exhaust ports and a passage communicating with the by-pass, a pair of oppositely acting valves for alternately placing the inlet port in communication with the cylinder and by-pass, and the exhaust port simultaneously in communication with the by-pass and cylinder, respectively, a hollow piston rod, a headed rod arranged therein, means of connection between one end of said rod and the valves, an abutment carried by the piston and adapted to be engaged by the other end of said headed rod for reversing the valves at the end of the outward stroke of the piston, and means connected to the valves and adapted to be engaged by the piston at the end of its inward stroke for again reversing the valves.

[Claims 6 to 9 not printed in the Gazette.]

1,195,550. INTERNAL-COMBUSTION ENGINE. CHARLES BALOUGH, Springfield, Ohio. Filed Apr. 22, 1914. Serial No. 833,633. (Cl. 123—90.)



1. The combination of a cylinder, a rotatable cone-shaped valve together with means for operating the same, a similarly shaped seat for said valve, a valve stem connected with said valve, a shaft in line with said valve stem and operatively connected therewith together with

means for operating said shaft, a spring in said shaft connected with said stem, and means carried by said shaft for adjusting the tension of said spring.

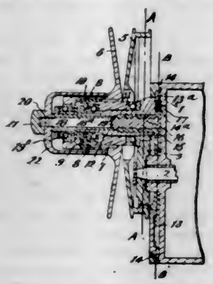
2. The combination of a cylinder, a rotatable valve, a valve stem connected with said valve, a shaft in line with said stem together with means for operating said shaft, an adjustable member on said shaft for connecting said stem thereto, and a spring-pressed cover for said connection.

3. The combination of a cylinder, a valve and valve seat, a driven shaft, and a spring-pressed connection between said driven shaft and said valve including an adjustable collar for changing the timing of said valve, substantially as described.

4. The combination of a cylinder, a valve and valve seat for same, a main driving shaft, a driven shaft connected therewith, a tension device located within the driven shaft, means for connecting said tension device to said valve, means for adjusting the tension of said tension device, and an adjustable connection between said driven shaft and said valve for changing the timing of said valve, substantially as described.

5. The combination of a cylinder, a valve and valve seat therefor, a main operating shaft, a driven shaft operatively connected with same, a spring connecting said driven shaft with said valve, a rotatable connecting member on said driven shaft, and means connecting said rotatable member with said valve whereby the valve may be timed and same may be held yieldingly in its seat.

1,195,551. SPEED-GEAR FOR MOTOR-CYCLES. ALBERT RICHARD BANNISTER, London, England. Filed Dec. 2, 1915. Serial No. 64,629. (Cl. 64—8.)



1. In a change speed gear for motor cycles, a pulley comprising a fixed member and an adjustable member, gearing connecting said pulley with a motor shaft, means for adjusting the adjustable member of the pulley comprising a screwed spindle, a nut fixed against longitudinal movement, means for rotating said nut, a member revoluble upon and moving with the screwed spindle, and a second member capable of rotation independently of the first member and connected to the sliding member of the adjustable pulley.

2. In a change speed gear for motor cycles, a pulley comprising a fixed member and an adjustable member, gearing connecting said pulley with a motor shaft, means for adjusting the adjustable member of the pulley comprising a screwed spindle, a nut fixed against longitudinal movement, means for rotating said nut, a member revoluble upon and moving with the screwed spindle, a second member capable of rotation independently of the first member connected to the adjustable member of the pulley, a cover for the second member, and a nut upon the end of the screwed spindle clamping said cover to the second movable member.

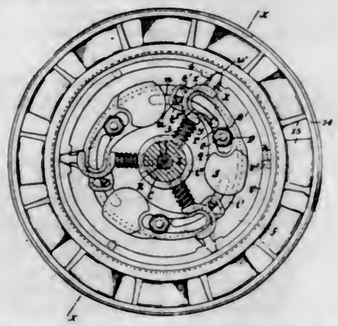
3. In a change speed gear for motor cycles, a pulley comprising a fixed member and an adjustable member, gearing connecting said pulley with a motor shaft, a screwed spindle, a swinging member carrying said spindle, a nut for said spindle, a pinion upon said nut, a fixed sector engaging said pinion, means for swinging the pulley to rotate the nut, means for holding the nut against longitudinal movement, means for holding the swinging member after adjustment, a member revoluble upon and moving with the screwed spindle, and a second member, capable of rotation independently of the first member and connected to the adjustable member of the pulley.

4. In a change speed gear for motor cycles, a pulley comprising a fixed member and an adjustable member, gearing connecting said pulley with a motor shaft, a screwed spindle, a swinging member carrying said spindle, a nut for said spindle, a pinion upon said nut, a fixed sector engaging said pinion, means for swinging the pulley to rotate the nut, means for holding the nut against longitudinal movement, means for holding the swinging member after adjustment, a member revoluble upon and moving with the screwed spindle, a second member, capable of rotation independently of the first member, connected to the adjustable member of the pulley, a cover for said second member, and a nut upon the end of the screwed member clamping said cover to said first member.

5. In a change speed gear for motor cycles, a pulley comprising a fixed member and an adjustable member, gearing connecting said pulley with a motor shaft, a screwed spindle, a nut therefor, a pinion upon said nut, a swinging member carrying the pulley, means for securing said member, a fixed sector engaging the pinion upon the nut, a bearing for the nut, a collar upon the screwed spindle, a sleeve slidably mounted upon the spindle, a collar upon said sleeve, a sleeve associated with the fixed member of the pulley, a second sleeve associated with the adjustable member of the pulley, and a connection between the latter sleeve and the sleeve upon the screwed spindle whereby the said second sleeve is caused to move longitudinally of the spindle and is independently revoluble.

[Claims 6 and 7 not printed in the Gazette.]

1,195,552. POWER-TRANSMITTING MEANS. ROBERT W. BARKER, Providence, R. I. Filed July 28, 1915. Serial No. 42,242. (Cl. 74—45.)



1. In a speed stablizing power-transmitting mechanism, the combination of concentric rotary driving and driven members, one having a part thereof movable into and out of gripping relation to the other, a fulcrumed governor device for said part engaged therewith and having a bearing surface extending crosswise of a radius from the axis of rotation of said members, and a fulcrum-affording device for the governor device engaging said surface, one of said devices being shiftable relatively to the other crosswise of said radius to change the point of contact of the fulcrum device with said surface.

2. In a speed stabilizing power-transmitting mechanism, the combination of concentric rotary driving and driven members, one having a part thereof movable into and out of gripping relation to the other, a fulcrumed governor device for said part engaged therewith and having a bearing surface extending crosswise of a radius from the axis of rotation of said members, and a fulcrum-affording device for the governor device engaging said surface, one of said devices being shiftable relatively to the other around said axis to change the point of contact of the fulcrum device with said surface.

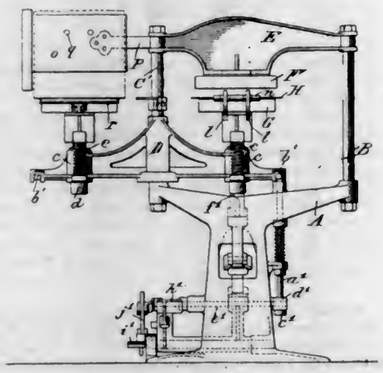
3. In a speed stabilizing power-transmitting mechanism, the combination of concentric rotary driving and driven members, one of said members having a part thereof movable into and out of and normally pressed into frictional gripping relation to the other, a fulcrumed centrifugal governor exerting counter-pressure on said part, and a fulcrum-carrier for the governor shiftable in one of said members around its axis of rotation and relatively to said governor.

4. In a speed stabilizing power-transmitting mechanism, the combination of concentric rotary driving and driven members, one of said members having a part of its structure radially movable into and out of frictional contact with the other member and spring-pressed in one radial direction, a centrifugal fulcrumed governor bearing upon said part, and a fulcrum-affording carrier for the governor shiftable around the axis of rotation of said members and having its fulcrum-portion in a different circle from that of the point of contact of the governor with said part.

5. In a speed stabilizing power-transmitting mechanism, the combination of concentric rotary driving and driven members, one having a part thereof movable into and out of gripping relation to the other and including a spring-pressed member normally acting on said part in one direction radially of the axis of rotation of said members, a fulcrumed governor device for said member pivotally engaged therewith and having a bearing surface intersecting said radius, and a fulcrum-affording device for the governor device engaging said surface and shiftable relatively to the governor device to and from the intersection of said radius and surface.

[Claims 6 and 7 not printed in the Gazette.]

1,195,553. IRONING-MACHINE. GOTTLOB BINDER, Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 27, 1914. Serial No. 853,266. (Cl. 68—9.)



1. In an ironing machine, the combination with a heated bed, of a work support, a flexible plate pivotally mounted at one end of the support substantially coextensive with the latter and adapted to entirely cover the work on the support, and means for holding the opposite end of the plate in engagement with the work support.

2. In an ironing machine, the combination with a heated bed, of a work support, a flexible plate pivotally mounted on the support substantially coextensive with the latter and adapted to entirely cover the work on the support, the free end of the plate being normally raised above the support, and means for holding said free end of the plate in engagement with the support.

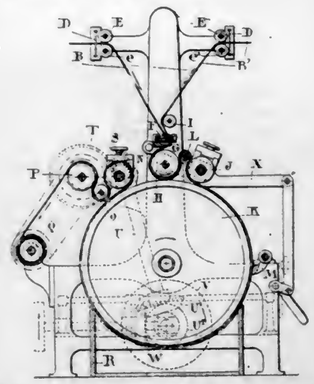
3. In an ironing machine, the combination with a heated bed, of a work support, a flexible plate pivotally mounted on the support substantially coextensive with the latter and adapted to entirely cover the work on the support, said plate being normally arched away from the support, and means for holding the plate in flattened engagement with the support.

4. In an ironing machine, the combination with a heated bed, of a work support, a flexible plate having one end mounted on the support substantially coextensive with the latter and adapted to entirely cover the work on the support, the plate being normally arched upwardly with its free end in spaced relation above the support, and means for holding the plate in flattened engagement on the work support.

5. In an ironing machine, the combination with a heated bed, of a work support, a flexible plate pivotally mounted at one end to the work support substantially coextensive with the latter and adapted to entirely cover the work on the support, and means carried by the plate at its opposite end and having engagement with the work support.

[Claims 6 and 7 not printed in the Gazette.]

1,195,554. METHOD AND APPARATUS FOR THE CONTINUOUS PRODUCTION OF WEFTLESS FABRICS. EUGÈNE BOURDIN, Lyon, France. Filed Feb. 16, 1915. Serial No. 8,602. (Cl. 91—18.)



1. The method of producing a web of weftless fabric of indefinite length, consisting in feeding two groups of warps of equal width, each comprising an equal number of threads, through means whereby the warps in one of the groups are severally interposed between the warps in the other group, applying adhesive substance to the warps, and then passing them under slight pressure around a drying cylinder.

2. A machine for producing a web of weftless fabric of indefinite length, comprising in combination means for guiding warp threads, means for tensioning said threads, means for placing said threads parallel with each other in close juxtaposition, means for applying adhesive substance to said parallel threads, means for drying said adhesive substance, and take-up means for continuously removing the web from said drying means.

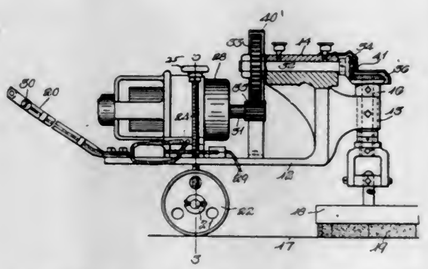
3. A machine for producing a web of weftless fabric of indefinite length, comprising in combination means for guiding warp threads, means for tensioning said threads, means for placing said threads parallel with each other in close juxtaposition, means for applying adhesive substance to one side of said parallel threads, means for drying said adhesive substance, means for applying adhesive substance to the other side of said parallel threads, means for drying the last mentioned adhesive substance, and take-up means for continuously removing the web from the last-mentioned drying means.

4. A machine for producing a web of weftless fabric of indefinite length, comprising in combination means for guiding two groups of warp threads toward each other, means whereby the threads in one of said groups are severally interposed between the threads in the other group, means for placing said threads parallel with each other in close juxtaposition, means for applying adhesive substance to said parallel threads, means for drying said adhesive substance and take-up means for continuously removing the web from said drying means.

5. A machine for producing a web of weftless fabric of indefinite length, comprising in combination means for guiding two groups of warp threads toward each other, means whereby the threads in one of said groups are severally interposed between the threads in the other group, means for placing said threads parallel with each other in close juxtaposition, means for applying adhesive substance to one side of said parallel threads, means for drying said adhesive substance, means for applying adhesive substance to the other side of said parallel threads, means for drying the last mentioned adhesive substance, and take-up means for continuously removing the web from the last-mentioned drying means.

[Claims 6 to 14 not printed in the Gazette.]

1,195,555. FLOOR GRINDING AND POLISHING MACHINE. JOHN A. CAMPBELL, Quincy, Mass. Filed June 2, 1916. Serial No. 101,272. (Cl. 51—11.)



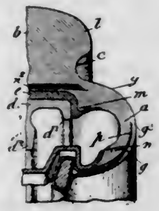
1. A machine of the character stated, comprising a body having at one end a vertical bearing and at the opposite end a controlling handle, a tool-operating shaft journaled in said bearing and having means at its lower end for flexibly engaging a rotary tool, running gear on which the body is adapted to tilt to exert downward pressure on said tool, and compensate for wear thereof, means including screw threaded portions adjustably connecting the body with the axle and permitting minute adjustments of the body toward and from the axle, a motor mounted on the body, and connections between the motor shaft and the tool-operating shaft.

2. A machine of the character stated, comprising a body having at one end a vertical bearing and at the opposite end a controlling handle, a tool-operating shaft journaled in said bearing and having means at its lower end for flexibly engaging a rotary tool, running gear on which the body is adapted to tilt to exert downward pressure on said tool, and compensate for wear thereof, twin standards journaled at their lower ends in the axle and having screw-thread connections with the body, whereby when said standards are rotated the body is adjusted toward or from the axle, the standards being manually rotatable, and the adjustments being more or less minute as may be required by the wear of the tool, a motor mounted on the body, and connections between the motor shaft and the tool-operating shaft.

3. A machine of the character stated, comprising a body having at one end a vertical bearing and at the opposite end a controlling handle, a tool-operating shaft journaled in said bearing and having means at its lower end for flexibly engaging a rotary tool, running gear including an axle and a pair of wheels on which the body is adapted to tilt to exert downward pressure on said tool, and compensate for wear thereof, adjustable connections between the axle and the body, permitting longitudinal adjustments of the body relatively to the axle to vary the distance between the rotary tool and the axle and the downward pressure of the body on the rotary tool, a motor mounted on the body, and connections between the motor shaft and the tool-operating shaft.

4. A machine of the character stated, comprising a body having at one end a vertical bearing and at the opposite end a controlling handle, a tool-operating shaft journaled in said bearing and having means at its lower end for flexibly engaging a rotary tool, running gear including an axle and a pair of wheels thereon on which the body is adapted to tilt to exert downward pressure on said tool, and compensate for wear thereof, the body being provided with longitudinal rows of screw threaded orifices, twin standards journaled at their lower ends in the axle and threaded to engage said orifices, whereby when the standards are rotated the body is adjusted toward and from the axle, each standard being transferable from one orifice to another to longitudinally adjust the body relatively to the axle, a motor mounted on said body and connections between the motor shaft and the tool-operating shaft.

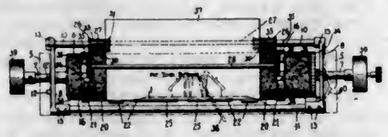
1,195,556. RESILIENT TIRE. TITO LIVIO CARBONE, Charlottenburg, Germany. Original application filed Feb. 12, 1910, Serial No. 543,525. Divided and this application filed Mar. 23, 1914. Serial No. 826,761. (Cl. 152—36.)



1. In resilient tires having normally spaced rings, a tire casing connecting the rings, having folds around the circumference of both sides of said rings, vulcanized to a permanent fold shape sharply and laterally bent away from said rings, which folds, when distorted by a relative movement of said rings with respect to each other, react simultaneously throughout the circumference to return to initial shape, said fold shape being retained under load and at all times, so that the strains in the cover are of a bending nature, said cover being made of elastic material, with spaced pieces of fabric extending from circumferentially spaced points of the tire, said spaced pieces of fabric extending into that part of the tire casing between said rings.

2. In resilient tires having normally spaced outer and inner rings separate from the tire casing, a tire casing separate from said rings and connecting the rings, said tire casing being made of material adapted to resist relative displacement of said rings with respect to each other, and being fitted over and closely around said outer ring, said cover having folds around the circumference of both sides of said rings, vulcanized to a permanent fold shape sharply and laterally bent away from said rings, which folds, when distorted by a relative movement of said rings with respect to each other react simultaneously throughout the circumference to return to initial shape, said fold shape being retained under load and at all times, so that the strains in the cover are of a bending nature, the portion of said folds occupying a substantial part of the space intermediate said rings, at circumferentially spaced zones thereof, being of greater rigidity than the zones thereof between said first mentioned zones.

1,195,557. TYPE-WRITING MACHINE. HERBERT A. CARHART, Syracuse, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed May 16, 1916. Serial No. 97,759. (Cl. 197—135.)



1. In a typewriting machine, the combination with a rotatable platen, of a work holder frictionally held on said platen so as to turn with the platen but capable of slipping on the platen, and arresting means for said work holder.

2. In a typewriting machine, the combination with a platen, of a work holder frictionally mounted on the platen so as to turn therewith but capable of being slipped on and relative to the platen, and means for limiting the rotatory motion of said work holder in two directions.

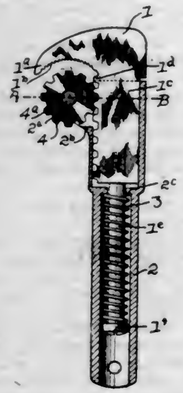
3. In a typewriting machine, the combination with a platen and platen frame, of a work holder comprising two split rings and a connecting cross bar, and clips on said cross bar, said split rings frictionally embracing said platen; and a work guiding and work-holder-arresting frame mounted on said platen frame.

4. In a typewriting machine, the combination with a platen and platen frame, of a work holder comprising two rings embracing said platen and a connecting cross bar, stops on said rings, coöperating stop devices, and a transverse work-guiding rod.

5. In a typewriting machine, the combination with a platen and a platen frame, of a work holder comprising two rings embracing said platen and a connecting cross bar, stop devices on said rings, and a coöperating frame having stops for coöperating with said stop devices and having also a work-guiding bar.

[Claims 6 to 19 not printed in the Gazette.]

1,195,558. PIPE-WRENCH. DAVID W. CHURCH, San Diego, Cal., assignor of one-half to D. F. Weaver, San Diego, Cal. Filed June 13, 1916. Serial No. 103,402. (Cl. 81—96.)

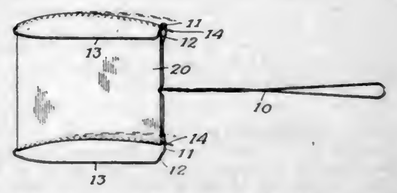


1. In a wrench, the combination of a handle member, a toothed gripping wheel revolubly mounted thereon, and a jaw slidably mounted in said handle provided with teeth adapted to be moved to a position adjacent the teeth on said revoluble gripping wheel.

2. In a wrench, the combination of a handle member, a toothed gripping wheel revolubly mounted thereon, a jaw slidably mounted in said handle provided with teeth adapted to be moved to a position adjacent the teeth on said revoluble gripping wheel and a spring connecting said slidable jaw with said handle tending to move said slidable jaw toward said gripping wheel.

3. In a wrench of the class described, the combination of a handle member provided with a rectangularly shaped recess in one end and a round recess in the opposite end, a pair of laterally extending lugs extending from the sides of said rectangularly shaped recess, a toothed gripping wheel revolubly mounted between said lugs, a slidable jaw provided with an extended portion with teeth on one side and provided with a rectangularly shaped portion adapted to fit into the rectangularly shaped recess in said handle member and provided with a plurality of notches adapted to engage with the teeth on said gripping wheel and also provided with an extended reduced round portion and a spring mounted over said extended reduced round portion and fitting against said handle member tending to hold said slidable jaw inwardly in said handle member.

1,195,559. FLY-CATCHER. JAMES E. CLARKE, Worcester, Mass. Filed Sept. 13, 1915. Serial No. 50,309. (Cl. 43—1.)



1. As an article of manufacture, a fly catcher comprising a horizontal supporting frame having a relatively movable horizontal projecting portion in a plane parallel with, and spaced a short distance from, said frame, and adapted to pass through a fly paper doubled over on itself for holding the same in position.

2. As an article of manufacture, a fly catcher comprising a frame having a movable projecting portion adapted to pass through fly paper doubled over on itself, said frame being provided with means for engaging the end thereof and holding the same against motion away from the main part of the frame.

3. As an article of manufacture, a fly catcher comprising a frame formed of wire having a free projecting portion adapted to retain a fly paper, said frame having integral projecting means for engaging the free end thereof and holding it in fixed position against motion away from the rest of the frame.

4. As an article of manufacture, a fly catcher comprising a wire frame having two ends each consisting of a supporting wire and a paper retaining wire in a plane with each other, said paper retaining wire being adapted to pass through the space between the parts of a doubled fly paper, the first named wire having projecting means integral therewith for holding the end of said paper retaining wire.

5. As an article of manufacture, a fly catcher comprising a wire frame having two ends each consisting of a supporting wire and a paper retaining wire in a plane with each other, and integrally connected, the first named wire having inwardly projecting means integral therewith for holding the end of said paper retaining wire, said ends being connected together at the center of the frame.

[Claim 6 not printed in the Gazette.]

1,195,560. MANUFACTURE OF PEROXID OF HYDROGEN. FABRICIUS COBELLIS, Philadelphia, Pa. Filed Aug. 23, 1915. Serial No. 46,808. (Cl. 204—9.)

1. The process of manufacturing peroxid of hydrogen, which consists in combining in solution ammonium persulfate and ammonium bi-sulfate, heating the solution under pressure, whereby the per-sulfate is split up with

formation of peroxid of hydrogen, and subsequently removing the peroxid of hydrogen from the solution.

2. The process of manufacturing peroxid of hydrogen, which consists in adding ammonium bi-sulfate to a solution of ammonium per-sulfate, heating the same under pressure and subsequently distilling off the peroxid of hydrogen *in vacuo*.

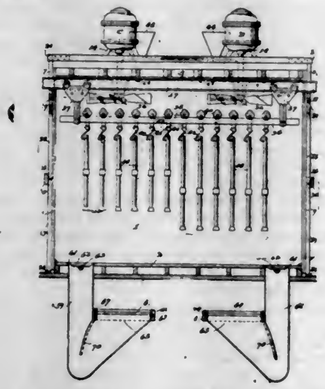
3. The process of manufacturing peroxid of hydrogen, which consists of converting ammonium sulfate into ammonium per-sulfate by electrolysis, heating the solution thus produced under pressure, whereby it is converted into peroxid of hydrogen, and ammonium sulfate, and distilling over the peroxid of hydrogen.

4. The continuous process of manufacturing peroxid of hydrogen, which consists in electrolyzing at a comparatively low temperature, a solution of ammonium sulfate, with formation of ammonium per-sulfate; raising the temperature under pressure, whereby the per-sulfate is again converted into sulfate, and peroxid of hydrogen; distilling off the peroxid of hydrogen *in vacuo;* and again electrolyzing the sulfate solution as the first step in a repetition of the process.

5. The process of manufacturing peroxid of hydrogen, which consists in combining in solution ammonium per-sulfate and ammonium bi-sulfate, raising the temperature of the same under pressure, whereby the per-sulfate is split up with formation of peroxid of hydrogen and distilling off the peroxid of hydrogen *in vacuo*, accompanied by the injection of an inert gas into the solution.

[Claim 6 not printed in the Gazette.]

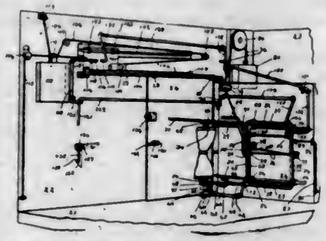
1,195,561. BRONZING-MACHINE. AUBREY W. COOK, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Feb. 17, 1912. Serial No. 678,360. (Cl. 91—59.)



1. In apparatus for bronzing metal parts such as bedstead frames, the combination of a flat-bottomed bronzing chamber substantially rectangular in cross-sectional plan, four fans of the disk type mounted on vertical axes intermediate the center and each corner of the bronzing chamber, means for feeding regulated quantities of bronzing material above the level of said fans, suitable means for supporting the metal parts within said chamber below the level of said fans, and means for independently operating said fans.

2. In apparatus for bronzing metal parts such as bedstead frames, the combination of a bronzing chamber substantially rectangular in plan, four fans of the disk type mounted on vertical axes intermediate the center and each corner of the bronzing chamber, means for feeding regulated quantities of bronzing material above the level of said fans, suitable means for supporting the metal parts within said chamber below the level of said fans, said bronzing chamber being provided at opposite sides with a pair of longitudinal settling box ports substantially rectangular in cross-section, the adjacent longitudinal edges of said longitudinal settling box ports being no higher than the floor of the chamber, settling boxes below the chamber communicating with said settling box ports and being provided with upturned screened openings of large area compared with the area of the ports, valve members closing said ports, means for independently operating said valves, and means for independently operating said fans.

1,195,562. MAIL DELIVERING AND RECEIVING DEVICE FOR RAILWAYS. WILLIAM CRIPPEN, Utica, N. Y. Filed Nov. 22, 1913. Serial No. 802,404. (Cl. 258—8.)



1. In a railway mail-handling device, the combination of a mail car having an opening in its side, a frame movable transversely of the car toward and from said opening, a carriage movable upon said frame transversely of the car, a mail-bag-handling arm projecting from said carriage and through said opening when the carriage is moved theretoward and within the car when the carriage is moved away from the opening, yielding means tensioned to move the frame toward the opening, a catch adapted to hold the frame back from the opening, a trip adapted to release said catch, yielding means tensioned to retract the carriage from the opening, a catch adapted to hold the carriage in extended position relative to said frame, and a trip for releasing said carriage catch.

2. In a railway mail-handling device, the combination of a mail car having an opening in its side, a frame movable transversely of the car toward and from said opening, a carriage movable upon said frame transversely of the car, a mail-bag-handling arm projecting from said carriage, and through said opening when the carriage is moved theretoward and within the car when the carriage is moved away from the opening, yielding means tensioned to move the frame toward the opening, a catch adapted to hold the frame back from the opening, a trip operable from without the car and adapted to release said catch, yielding means tensioned to retract the carriage from the opening, a catch adapted to hold the carriage in extended position relative to said frame, and a trip for releasing said carriage catch.

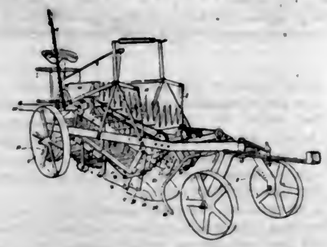
3. In a railway mail-handling device, the combination of a mail car having an opening in its side, a frame movable transversely of the car toward and from said opening, a carriage movable upon said frame transversely of the car, a mail-bag-handling arm projecting from said carriage, and through said opening when the carriage is moved theretoward and within the car when the carriage is moved away from the opening, yielding means tensioned to move the frame toward the opening, a catch adapted to hold the frame back from the opening, a trip adapted to release said catch, yielding means tensioned to retract the carriage from the opening, a catch adapted to hold the carriage in extended position relative to said frame, and a trip adapted to be operated by the received mail-bag for releasing said carriage catch.

4. In a railway mail-handling device, the combination of a mail car having an opening in its side, a frame movable transversely of the car toward and from said opening, a carriage movable upon said frame transversely of the car, a mail-bag-handling arm projecting from said carriage and through the said opening when the carriage is moved theretoward and within the car when the carriage is moved away from the opening, a yielding means tensioned to move the frame toward the opening and to move the carriage from the opening, a catch adapted to hold the frame back from the opening, a trip adapted to release said catch, a catch adapted to hold the carriage in extended position relative to said frame and a trip for releasing said carriage catch.

5. In a railway mail-handling device, the combination of a mail car having an opening in its side, a frame movable transversely of the car toward and from said opening, a carriage carried by said frame and movable relatively to said frame transversely of the car, a mail-bag-handling arm projecting from said carriage and through the said opening when the carriage is moved theretoward and within the car when the carriage is moved away from the opening, a yielding means tensioned to move the frame toward the opening and to move the carriage from the opening and adapted to be placed under tension by moving said frame inwardly from the opening, a catch adapted to hold the frame back from the opening, a trip adapted to release said catch, a catch adapted to hold the carriage in extended position relative to said frame and a trip for releasing said carriage catch.

[Claims 6 to 15 not printed in the Gazette.]

1,195,563. MACHINE FOR HARVESTING POTATOES AND LIKE ROOT CROPS. HENRY JOHN DANIELS, Brisbane, Queensland, Australia. Filed Apr. 6, 1915. Serial No. 19,512. (Cl. 55—138.)



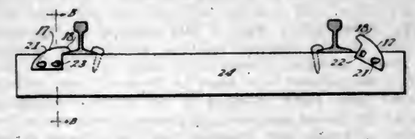
1. In a potato harvesting machine, a cradle, a digging share associated with the cradle, a vertically disposed roller journaled in bearings on the cradle, and a protecting wing provided on the digging share in advance of one of the bearings of the roller.

2. A potato harvesting machine comprising a portable frame, a cradle mounted in the frame, a digging share associated with the cradle, a potato conveyer carried by the cradle and leading from the digging share, a traveling weed carrier arranged coextensive with the said conveyer and having combs traversing the latter, cutting knives supported by the frame and operatively associated with the combs of the weed carrier to cut the weeds carried thereby, and means for operating the said conveyer and carrier.

3. A potato harvesting machine comprising a portable frame, a cradle mounted in the frame, a digging share associated with the cradle, a potato conveyer carried by the cradle and leading from the digging share, a raking device disposed in front of the digging share, a traveling weed carrier arranged coextensive with the said conveyer and having combs traversing the latter, cutting knives supported by the frame and operatively associated with the combs of the weed carrier to cut the weeds carried thereby, and means for operating the said conveyer and carrier.

1,195,564. RAIL-HOLDING MEANS. ELMER E. DAVENPORT, Chicago, Ill., assignor of one-half to Merwin R. Davenport, Baraboo, Wis. Filed May 6, 1916. Serial No. 95,795. (Cl. 238—4.)

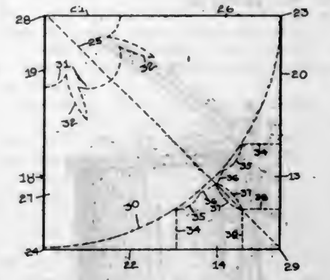
1. A rail holding member having a body part, a lug adapted to hold a rail and a tail part, said tail part having a round hole for receiving a spike and said body part having a vertically disposed slot for receiving a spike, all for the purposes herein set forth.



2. Rail holding means, comprising a member, a part on one end of said member for holding a rail, the other end of said member having a hole therein for receiving a spike about which said member may pivotally move and said member having a second hole located between said rail holding part and said first mentioned hole, adapted to receive a spike for drawing said rail holding part tightly against a rail.

3. Rail holding means comprising a member, a part on one end of said member for holding a rail, the other end of said member having a hole therein for receiving a spike about which said member may pivotally move and said member having an elongated hole adapted to receive a spike for drawing said rail holding part tightly against the rail.

1,195,565. INFANT'S GARMENT. EVA J. DAVIDSON, Chicago, Ill. Filed Sept. 7, 1915. Serial No. 49,376. (Cl. 2—60.)

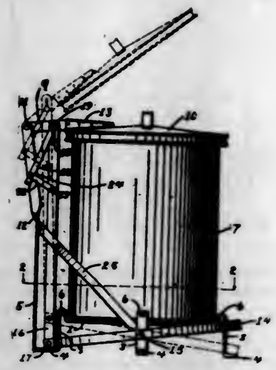


1. The method of making a garment, consisting in, first, taking a square piece of material, second, folding said square piece of material centrally and diagonally upon itself, so as to bring the edges of said material on one side of said diagonal fold line over and along side of the corresponding edges of said material on the opposite side of said diagonal fold line and thereby making the folded material triangular in shape and giving the body of the garment cut from said folded material a flared form, third, cutting from said folded material the body of the garment along lines indicating the edge of the neck opening and bottom edge of said garment and extending between two overlapping edges of the material and said diagonal fold line, and, fourth, sewing together those overlapping edges of the material that extend between the bottom edge of the garment and its neck opening.

2. The method of making a garment, consisting in, first, taking a square piece of material having two oppositely disposed selvage and raw edges, second, folding said square piece of material centrally and diagonally upon itself, so as to bring a raw edge of said material adjacent to and alongside of a selvage edge thereof, third, cutting from said folded material the body of the garment along lines indicating its neck opening and bottom edge and extending between said diagonal fold line and said overlapping raw and selvage edges, fourth, turning said selvage edge extending between the neck opening and the bottom edge of the garment over and upon said adjacent raw edge, and, fifth, sewing together said overlapping selvage and raw edges.

3. The method of making a pattern for a garment, consisting in, first, taking a square piece of material, second, folding said square piece of material centrally and diagonally upon itself, so as to bring the edges of said material on one side of said diagonal fold line over and along side of the corresponding edges of said material on the opposite side of said diagonal fold line and thereby making the folded material triangular in shape and giving the body of the garment to be made by the use of said pattern a flared form, third, marking on one of the overlapping flaps of the folded material at a distance from one of the corners to which said diagonal fold line extends a line extending between two overlapping edges of said material and said diagonal fold line and indicating one-half of the development of the neck opening of the garment to be made by the use of said pattern, fourth, taking said corner as a center and the overlapping edges extending thereto as a radius and marking on one of the flaps of the folded material an arc-shaped line extending between said overlapping edges and said diagonal fold line and indicating one-half of the development of the bottom edge of the garment to be made by the use of the pattern, and, fifth, cutting the pattern from said folded material along the lines marked thereon and indicating, respectively, the neck opening and bottom edge of the garment to be made by the use of said pattern.

1,195,566. RECEPTACLE-SUPPORT AND COVER OPERATING AND LOCKING MEANS. LINFORD J. DAVIS, Battle Creek, Mich. Filed Mar. 15, 1915. Serial No. 14,423. (Cl. 220—115.)

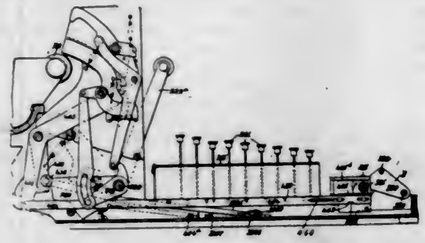


1. In a structure of the class described, the combination of a receptacle support, an upright on said support, a receptacle arranged on said support, a cover for said receptacle, a hinge arm for said cover pivotally mounted on said upright, a foot lever pivoted on the receptacle support, a longitudinally slotted lifting bar mounted on said lever, a pin on said hinge arm engaging said slot in said bar, permitting a limited movement of the bar before the cover is raised, a loop-like latch pivotally mounted on said pin to embrace said upright, said upright being provided with a notch-like keeper with which said latch engages when the cover is closed, and a link connecting said latch to said lifting bar whereby the latch is disengaged on the initial movement of the lever.

2. In a structure of the class described, the combination of a receptacle support, an upright on said support, a receptacle arranged on said support, a cover for said receptacle, a hinge arm for said cover pivotally mounted on said upright, a foot lever pivoted on the receptacle support, a longitudinally slotted lifting bar mounted on said lever, a pin on said hinge arm engaging said slot in said bar, permitting a limited movement of the bar before the cover is raised, a latch pivotally mounted on said hinge member, said upright being provided with a keeper coacting with said latch, and a link connecting said latch to said lifting bar whereby the latch is disengaged on the initial movement of the lever.

3. In a structure of the class described, the combination of a receptacle support, an upright on said support, a receptacle arranged on said support, a cover for said receptacle hinged to said upright, a foot lever pivoted on said support, a lifting bar mounted on said lever and having a lost motion connection with said cover, a latch for said cover, a keeper coacting with said latch, and a link connecting said latch to said lifting bar whereby the latch is disengaged on the initial movement of the lever.

1,195,567. CALCULATING AND RECORDING MACHINE. WILLIAM HENRY DRAUGHON, Springfield, Tenn., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 10, 1908. Serial No. 447,915. (Cl. 235—60.)



1. In a machine of the class described, the combination of a registering gear wheel, racks on opposite sides thereof and united for concurrent reciprocation, and controlling means for keeping the wheel and either rack engaged during movement of the latter in one direction and the wheel disengaged from both racks during movement in the opposite direction.

2. In a machine of the class described, the combination of a registering gear wheel, racks on opposite sides thereof and united for concurrent reciprocation, and controlling means for keeping the wheel and either rack engaged during movement of the latter in one direction and the wheel disengaged from both racks during movement in the opposite direction, with provisions for preserving engagement between either rack and the wheel during movement of the rack in both directions.

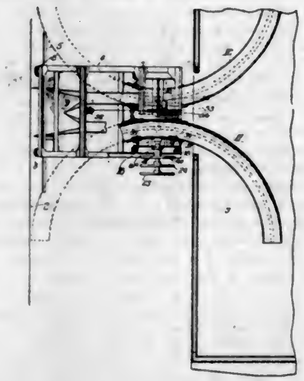
3. In a machine of the class described, the combination of a registering gear wheel, racks on opposite sides thereof and united for concurrent reciprocation, and controlling means for keeping the wheel and either rack engaged during movement of the latter in one direction and the wheel disengaged from both racks during movement in the opposite direction, with provisions for reversing the order of engagement and disengagement.

4. In a machine of the class described, the combination of a registering gear wheel, racks on opposite sides thereof and united for concurrent reciprocation, and controlling means for keeping the wheel and either rack engaged during movement of the latter in one direction and the wheel disengaged from both racks during movement in the opposite direction, with provisions for reversing the order of engagement and disengagement, and with provisions for preserving engagement between either rack and the wheel during movement of the rack in both directions.

5. In a machine of the class described, the combination of a registering gear wheel, racks on opposite sides thereof and united for concurrent reciprocation, and both normally disengaged from the wheel, and controlling means for keeping the wheel disengaged from both racks during movement thereof in one direction and engaged with either rack during movement thereof in the opposite direction.

[Claims 6 to 57 not printed in the Gazette.]

1,195,568. APPARATUS FOR LOADING CARS. ROBERT ELDER, La Grange, and THOMAS C. KENNEDY, Chicago, Ill., assignors to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 10, 1907. Serial No. 392,150. (Cl. 193—19.)



1. In apparatus for use in the loading of a car, the combination of a movable curved chute along which slides the material to be loaded, combined supporting and guiding means coöperating with the chute for supporting it in a normal plane and for guiding it in its movements, said means being outside the center of movement of the chute and substantially in the arc formed thereby, and means for bodily moving the chute in the direction of its curvature, said chute being supported solely by said supporting and guiding means.

2. In apparatus for use in the loading of a car, the combination of a movable curved chute along which slides the material to be loaded, combined supporting and guiding means coöperating with the chute for supporting it in a normal plane and for guiding it in its movements, and means coöperating directly with the bottom of the chute for bodily moving it in the direction of its curvature, said chute being supported solely by said supporting and guiding means.

3. In apparatus for use in the loading of a car, the combination of a movable curved chute along which slides the material to be loaded, opposed pairs of guides coöperating with the chute for holding it in a normal plane and for guiding it in its movements, and means for bodily moving the chute in said guide in the direction of its curvature.

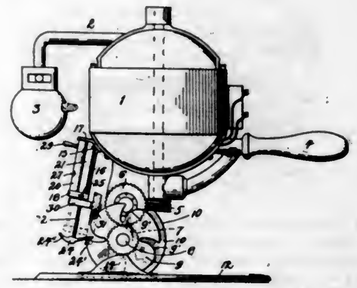
4. In apparatus for use in the loading of a car, the combination, with a main frame, a movable frame adjustable therein, a curved chute wholly supported in the latter frame and mounted to tilt therein, and means for moving the chute bodily in the direction of its curvature.

5. In apparatus for use in the loading of a car, the combination of a curved slidable chute along which slides the material to be loaded and which is open in a direction at right angles to its radius, guides above and below the chute for supporting it in a normal plane and for guiding it in its movements, and means for adjusting the position of the delivery end of the chute by movement thereof in the direction of its curvature.

[Claims 6 to 39 not printed in the Gazette.]

1,195,569. CLOTH-CUTTING MACHINE. HARRY FABIAN, Philadelphia, Pa., assignor to Peerless Belt Lacing Machine Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Oct. 24, 1913. Serial No. 796,989. Renewed Mar. 14, 1916. Serial No. 84,243. (Cl. 164—76.)

1. In a cloth cutter, a rotating cutter, operating means therefor, a guide member mounted adjacent the cutter, a rod, grinding means carried thereby and engageable with opposite sides of said cutter, said rod being slidable in said guide to bring the grinding means into grinding relation to said cutter, said rod being rotatable within said guide to bring the grinding means into grinding contact with the cutter, and means for locking the rod against sliding movement when rotated in said guide.



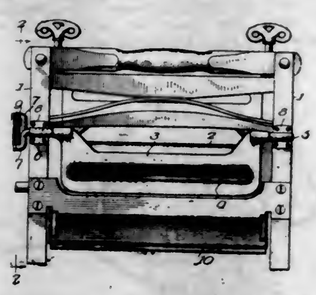
2. In a cloth cutter, a rotating cutter, operating means therefor, a tube mounted adjacent said cutter and having a longitudinal slot having a transverse extension, a rod slidably and rotatably arranged in said tube, an operating member extending from said rod and movable in said slot and its extension, and grinding means carried by said rod and movable into grinding relation and grinding contact with said cutter by the said sliding and rotating movements of said rod.

3. In a cloth cutter, a rotating cutter, operating means therefor, a tube mounted adjacent said cutter and having a longitudinal slot having a transverse extension, a rod slidably and rotatably arranged in said tube, an operating member extending from said rod and movable in said slot and its extension, and grinding means carried by said rod and movable into grinding relation and grinding contact with said cutter by the said sliding and rotating movements of said rod, and a second tube on the mounting of the first tube adjacent to the latter, a rod slidably and swingably arranged in said second tube and adapted to bear against the cloth to be cut to keep the same away from the grinding means when the latter is in grinding position.

4. In a cloth cutter, a rotating cutter, operating means therefor, a tube mounted adjacent said cutter and having a longitudinal slot having a transverse extension, a rod slidably and rotatably arranged in said tube, an operating member extending from said rod and movable in said slot and its extension, and grinding means carried by said rod and movable into grinding relation and grinding contact with said cutter by the said sliding and rotating movements of said rod, and a second tube on the mounting of the first tube adjacent to the latter, a rod slidably and swingably arranged in said tube, and a hand guard on the lower end thereof adjustable to a position adjacent the cutter and between the grinding means and the cloth to be cut.

5. In a cloth cutter, an incased motor, a cutter operated thereby, a pair of parallel tubular guides adjacent the cutter, rods slidable and rotatable in said guides, a yoke on one of said rods, a guard on the other of said rods, grinding means on the legs of said yoke and on opposite sides of the cutter, a longitudinal slot in one of said guides and having lateral extensions; a spring within said slotted guide surrounding the rod therein; a handle on said last mentioned rod movable in said slot to move the grinding means into grinding relation with the cutter, and movable into said slot extensions to move the grinding means into grinding contact with the opposite sides of the cutter and to lock the rod against sliding movement.

1,195,570. CLOTHES-WRINGER. ALVA J. FISHER, Evanston, Ill., assignor to Hurley Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 24, 1914. Serial No. 868,358. (Cl. 68—32.)



1. In combination with a clothes wringer including the rolls thereof, a guard pivoted on the wringer and having a slot registering with the bite of the rolls, and means for holding the guard either in operative or inoperative position with a yielding pressure.

2. In combination with a clothes wringer including the rolls thereof, a guard pivoted on the wringer and having a slot registering with the bite of the rolls, and spring means for pressing the guard to operative position, said guard being arranged to be swung to an inoperative position and held thereat by said spring means.

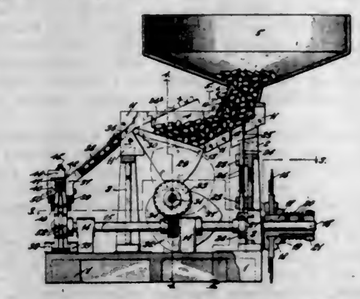
3. In combination with a clothes wringer including the rolls thereof, a guard pivoted on the wringer and having a slot registering with the bite of the rolls, said guard having a crank-arm at its pivotal axis, and a spring cooperating with said arm whereby the guard is held either in operative or inoperative position with a yielding pressure.

4. In combination with a clothes wringer including the rolls thereof, a guard pivoted on an axis at its upper end to the wringer and depending from such axis, said guard having a slot adapted, when in operative position, to register with the bite of the rolls, and means for holding the guard in said operative position with a yielding pressure.

5. In combination with a clothes wringer including the rolls thereof, guards pivoted to the wringer at their upper ends and arranged on opposite sides of the rolls, said guards being held in position with respect to the rolls with a yielding pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,195,571. MACHINE FOR FEEDING TAPERED ROLLS. JOHN F. FLAHERTY, Canton, Ohio, assignor to The Timken Roller Bearing Company, Canton, Ohio, a Corporation of Ohio. Filed Feb. 23, 1915. Serial No. 10,160. (Cl. 214—1.)



1. A mechanism for feeding tapered rolls or the like comprising a slide or other suitable means adapted to convey rolls lengthwise, a member having a flat face constituting a table arranged under the discharge end of said slide and adapted to receive one roll from said slide, a friction block having a face arranged opposite to the surface of said table and spaced therefrom a distance less than the largest diameter of said rolls and greater than the smallest diameter of said rolls, whereby said friction block frictionally engages a roll on said table at the largest diameter thereof but does not touch the other parts of said roll, a turning finger mounted to move between said table and said friction block in a direction substantially at right angles to the direction of the movement of the rolls from said slide to said table, said turning finger being comparatively narrow and moving across said table near the middle thereof, means for removing rolls from between said table and said friction block, and means for operating said turning finger and said last mentioned means successively.

2. A mechanism for feeding tapered rolls or the like comprising a slide or other suitable means having a channel therein, the bottom of said channel having a flat face constituting a table, said channel being substantially as wide as the length of a roll, means for discharging rolls upon said table, a friction block having its under face spaced from said table a distance less than the largest diameter of said rolls and greater than the smallest diameter of said rolls, whereby said friction block engages a roll on said table at the largest diameter thereof, but does not touch said roll at other points, a turning finger mounted to move between said table and said friction block longitudinally thereof, said turning finger being comparatively narrow and moving across said table near the middle thereof, means for removing rolls from between said table and said friction block, and means for operating said turning finger and said last-mentioned means successively.

3. A mechanism for feeding tapered rolls or the like comprising a member having a flat face constituting a table, means for discharging rolls upon said table to extend transversely thereof, three fingers movable longitudinally of said table and having a combined width substantially equal to the length of a roll, means for frictionally engaging a roll on said table at the largest diameter thereof, a chute extending from said table, and means for operating said fingers to advance said fingers together, then to advance said middle finger beyond the other two fingers, and then to advance said other two fingers, thereby turning and pushing a roll from said table into said chute.

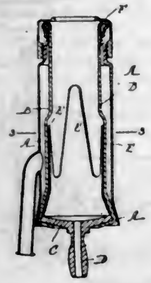
4. A mechanism for feeding tapered rolls or the like comprising a conveyer adapted to convey rolls lengthwise, a chute having a flat face at its upper end constituting a table and located opposite the discharge end of said conveyer, said conveyer and said chute being arranged in planes disposed substantially at right angles to each other, means for pressing the larger end of a roll against said table, a turning finger movable longitudinally of said chute midway between the sides thereof, said turning finger coöperating with said last-mentioned means to turn a roll on said table about its larger end as an axis, and means for pushing rolls lengthwise from said table and downwardly into said chute.

5. A mechanism for feeding tapered rolls or the like comprising a slide adapted to convey rolls lengthwise, a chute having a flat face at its upper end constituting a table and located opposite the discharge end of said slide, said slide and said chute being arranged in planes disposed substantially at right angles to each other, means for pressing the larger end of a roll against said table, and a turning finger movable longitudinally of said chute midway between the sides thereof, and coöperating with said last-mentioned means to turn a roll on said table about its larger end as an axis into said chute.

[Claims 6 to 27 not printed in the Gazette.]

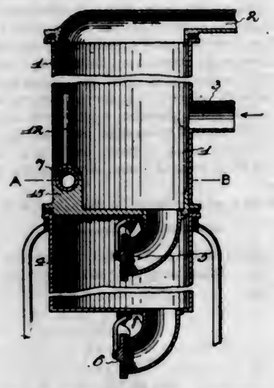
1,195,572. MILKING-MACHINE TEAT-CUP. THOMAS NOTON FLETCHER, Hamilton, New Zealand. Filed Dec. 8, 1915. Serial No. 65,710. (Cl. 31—102.)

1. In milking machine teat cups, the combination with a casing and a rubber lining or inflation fitted therein, of a cup shaped device having the milk nipple attached fitting within the bottom end of the lining and formed with three upwardly extending spring prongs arranged to lie against the inside of the lining at equal circumferential distances around it, substantially as and for the purposes herein specified.



2. In milking machine teat cups, the combination with a casing and a rubber lining or inflation fitted therein, of three spring prongs fixed at their bottom ends and extending upward inside the lining at equal circumferential distances apart, each of such prongs being shaped with sides tapering to a blunt point at its top end, substantially as and for the purposes herein specified.

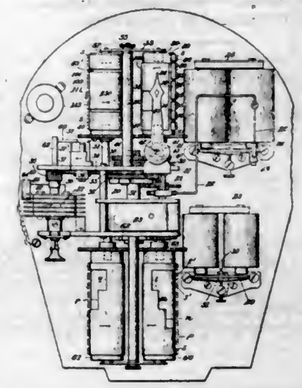
1,195,573. MILK-RELEASING APPARATUS FOR USE WITH MILKING-MACHINES. ROBERT BRUCE FORSYTH, Christchurch, New Zealand, assignor to Norman John Daysh, New York, N. Y. Filed Feb. 25, 1914. Serial No. 820,852. (Cl. 31—97.)



1. In a milk releaser of the class described, the combination of a milk receiving vacuum chamber, a pulsation chamber arranged adjacent to the vacuum chamber, a non-return connection between the vacuum and pulsation chambers, a pulsator mounted adjacent to the pulsation chamber in communication therewith, the pulsator being adapted to respond to primary pulsations produced by a primary pulsation apparatus to supply secondary pulsations to the pulsation chamber of the releaser by placing the said chamber alternately in communication with the atmosphere and with the vacuum chamber of the releaser, and a milk outlet for the pulsation chamber.

2. In a milk releaser of the class described, the combination of a milk receiving vacuum chamber, a pulsation chamber, a non-return connection between the vacuum and pulsation chambers, means for producing a pulsation in the pulsation chamber by placing the same alternately in communication with the vacuum chamber and with the atmosphere, and a milk outlet for the pulsation chamber.

1,195,574. ELECTRICAL TRANSMITTING DEVICE AND CIRCUITS THEREFOR. JOSEPH W. FROST, Washington, D. C. Filed July 13, 1911. Serial No. 638,320. (Cl. 177—369.)



1. In an electrical distinctive signal transmitting device, a motor driven clock mechanism, an electro-magnetic actuating or releasing device therefor, a shaft of said clock mechanism carrying a series of distinctive signal transmitting disks connected with one pole of a current generator and fixed to their shaft, selectively shifting contact points coöperating with the disks and connected with the opposite pole of the generator, and circuit controllers (such as thermostats), in circuit with the said actuating or releasing device, substantially as described.

2. A motor driven mechanism including an electrical signaling device, an electro-magnetic controller therefor, a normally closed circuit through the said magnet including a battery, a series of loops on either side between the battery and the magnetic controller, spring contact terminals normally in circuit with said battery and said loops, switch contact bridges normally connecting said terminals and loops in series with said battery, and normally open switch bridges for directly connecting the said spring terminals, substantially as described.

3. A motor driven mechanism including an electrical signaling device, an electro-magnetic controller therefor, a normally closed circuit through the said magnetic controller including a battery, a series of loops on either side between the battery and the magnetic controller, spring contact terminals normally in circuit with said battery and loops, switch contact bridges normally connecting said terminals and loops and in series with the battery, normally open switch bridges for directly connecting the said spring terminals, and a resistance coil constituting an electro magnet between the battery and the series of loops on one side of the battery, substantially as described.

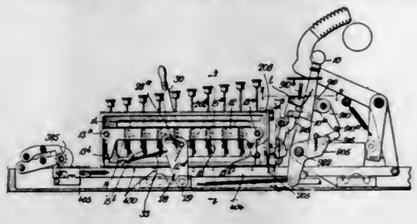
4. In an electrical signal transmitting device two or more notched disks fixed to a clock-work shaft making more than one revolution to complete a definite signal said disks connected to one pole of a current generator, a spring contact coöperating therewith connected to the opposite pole of the generator and arranged to mechanically shift from one disk to another and at right angles to the direction of movement of the disks; a suitable releasing device for starting the clock-mechanism, and apparatus at a distant station for receiving the signals therefrom, substantially as described.

5. In an electrical signal transmitting device two or more notched disks fixed to a clock-work mechanism shaft making more than one revolution to complete a definite signal said disks connected to one pole of a current generator, a spring contact coöperating therewith connected to the opposite pole of the generator and arranged to mechanically shift from one disk to another and at right angles to the direction of movement of the disks; an elec-

tro-magnetic releasing device for starting the clock mechanism and in circuit with switches (such as thermostats) located at a second station, and apparatus at a distant station for receiving the signals from the said disks and the contact spring, substantially as described.

[Claim 6 not printed in the Gazette.]

1,195,575. ADDING-MACHINE. CLYDE E. W. GARDNER, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 29, 1910. Serial No. 584,538. (Cl. 235—60.)



1. In a machine of the character described, the combination with registering wheels and actuators therefor and denominational rows of depressible keys to determine extent of movement thereof; of means for effecting depression of a key in one row under control of a previously depressed key of corresponding value in an adjacent row depressed in a preceding operation.

2. In a machine of the character described, the combination with registering wheels and actuators therefor and denominational rows of depressible keys to determine extent of movement thereof; of means for effecting depression of a key in one row under control of a previously depressed key of corresponding value in either of the two adjacent rows depressed in a preceding operation.

3. In a machine of the character described, the combination with registering wheels and actuators therefor and denominational rows of depressible keys to determine extent of movement thereof; of detent means for holding keys depressed, and means for effecting depression of a key in one row under control of a depressed key of corresponding value in an adjacent row and releasing the said depressed key.

4. In a machine of the character described, the combination with registering wheels and actuators therefor and denominational rows of depressible keys to determine extent of movement thereof; of detent means for holding keys depressed, and means for effecting depression of a key in one row under control of a depressed key of corresponding value in either adjacent row and releasing the said depressed key.

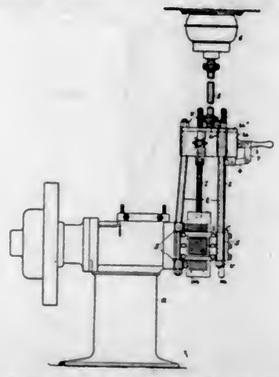
5. In a machine of the character described, the combination with registering wheels and actuators therefor and denominational rows of depressible keys to determine extent of movement thereof; of detent means for holding keys depressed, a depressible member adapted to release the detent means, and means operated by said depressible member for depressing a key of one row under control of a key of corresponding value in an adjacent row.

[Claims 6 to 21 not printed in the Gazette.]

1,195,576. RUBBER-RECLAIMING MACHINE. FREDERIC B. GARRAHAN, Paterson, N. J. Filed Jan. 25, 1916. Serial No. 74,133. (Cl. 100—48.)

1. A straining apparatus including, in combination, a straining head having a passage therethrough, means to force the material to be strained through said passage, a strainer slidable in its own plane in the head across the passage, and means, carried by said head, to shift the strainer in said plane to oppose first one and then another portion of its straining area to said passage.

2. A straining apparatus including, in combination, a straining head having a passage therethrough, means to force the material to be strained through said passage, a plurality of strainers slidable in their respective planes in the head across said passage, and means, yoking said strainers together and carried by said head, for shifting the strainers in synchrony.



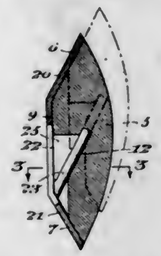
3. A straining apparatus including, in combination, a straining head having a passage therethrough, means to force the material to be strained through said passage, a strainer slidable in its own plane in the head across the passage, a framing carried by the head, and a system of moving parts carried by the framing for shifting the strainer.

4. A straining apparatus including, in combination, a straining head having a passage therethrough, means to force the material to be strained through said passage, a strainer slidable in its own plane in the head across the passage, a framing carried by the head, and a screw-and-nut connection between said strainer and framing.

5. A strainer apparatus comprising, in combination, a fixed structure including a straining head having a passage therethrough, means to force the material to be strained through said passage, a strainer slidable in its own plane in the head across said passage, and means, including a moving system of parts having a disconnective connection between two of them, for shifting the strainer in said plane.

[Claims 6 to 8 not printed in the Gazette.]

1,195,577. ARTIFICIAL TOOTH. THOMAS F. GLENN, Ardmore, Pa. Filed Aug. 31, 1915. Serial No. 48,158. (Cl. 32—9.)

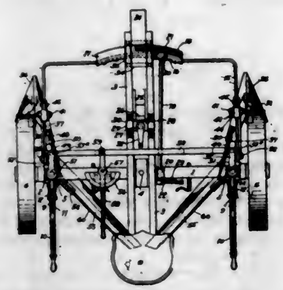


1. A tooth having its lingual face formed of relatively oblique surfaces, comprising the "ridge-lap", "shut" and "bite", and having an undercut recess, the edges of whose lingual wall are disposed in oblique relation to the "shut" surface and extend in the same general direction as the "ridge-lap."

2. In a tooth, the combination with a facing having its lingual face formed of relatively angular surfaces, including a "bite" surface, and an undercut recess in said lingual face having the edges of its lingual wall disposed in a plane oblique to the surface adjoining said "bite" surface and extending labially toward the gingival end, of a backing for said tooth having relatively angular walls conforming to the lingual face of said tooth, and having a tongue projecting into said recess and extending in the same oblique relation to the backing wall as said recess is to the lingual face of the facing.

3. A backing having relatively angular walls arranged to engage the lingual face of a tooth facing, and having a laterally undercut tongue which is arranged to engage a suitable anchor recess in said tooth facing, and which projects obliquely from said backing and in a direction tending labially toward the gingival end.

1,195,578. AGRICULTURAL MACHINE. JOHN P. GOOSSEN, Palmyra, N. Y. Filed Apr. 14, 1916. Serial No. 91,024. (Cl. 56—1.)



1. An agricultural machine, comprising a wheeled frame, a pair of converging cutters mounted on said frame, draft means on said frame adjustable laterally with relation to the line of travel of the wheels, and mechanism for adjusting the cutters to correspond with the adjustment of the draft means.

2. An agricultural machine comprising a wheeled frame, a pair of rearwardly converging cutters mounted on said frame to swing about upright axes, and mechanism for moving one cutter forwardly about its axis as the other cutter moves rearwardly about its axis.

3. An agricultural machine comprising a wheeled frame, draft means on said frame adjustable laterally with reference to the line of travel of the wheels, a pair of rearwardly converging cutters mounted on said frame to swing about upright axes, and mechanism for adjusting the cutters about their axes so that the cutters may lie at substantially the same angles to the line of draft for any adjustment of the draft means.

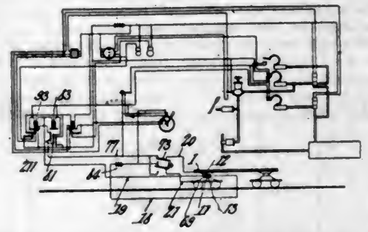
4. An agricultural machine comprising a wheeled frame, a pair of upright shafts on the frame, a pair of cutters, one supported by each shaft, said cutters extending rearwardly from the shafts in converging relation, and connections between the shafts whereby one cutter is swung forwardly and the other cutter is swung rearwardly.

5. An agricultural machine comprising a frame, upright hollow posts on the frame, wheels adjustable vertically on said posts, shafts turning in the posts, cutters secured to the shafts, and connections between the shafts for adjusting the cutters.

[Claims 6 to 11 not printed in the Gazette.]

1,195,579. DETECTOR FOR BROKEN-DOWN INSULATION. GARDNER B. GRAY, Pittsburgh, Pa., assignor, by mesne assignments, to Automatic Train Control & Signal Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Jan. 25, 1910. Serial No. 540,031. (Cl. 246—58.)

1. A detector for broken down insulation comprising a normally closed charged electric circuit including translating devices and members separated by intervening insulation and also including a conductor extending through the intervening insulation separating the insulated members and insulated thereby from said insulated members.



2. A car truck having the car member insulated electrically from the wheel members, a conducting member housed in such insulation, and a charged electric circuit normally including said conducting member and in turn including signal causing translating devices.

3. A car truck having the car member insulated electrically from the wheel members by interposed insulation, and a conductor interior to said insulation, and a normally complete electric circuit including said conductor.

4. A car truck having a center bearing plate and a bolster with interposed insulation, a conductor housed in said insulation, and a detector circuit including said conductor.

5. In car truck construction, a center bearing plate and bolster carrying the same having insulation between the plate and bolster, insulated bolts securing the center plate to its bolster, and a conducting member between the center bearing plate and the bolster and separated therefrom by the insulation, said conducting member being in electrical connection with the insulated bolts.

[Claims 6 to 9 not printed in the Gazette.]

1,195,580. HOSE-COUPLING. FREDERICK HACHMANN, St. Louis, Mo., assignor, by direct and mesne assignments, of one-fourth to Fred C. Schoenthaler, St. Louis, Mo., and one-fourth to Jacob Merz and one-fourth to George S. Haskell, Chicago, Ill. Filed June 13, 1914. Serial No. 844,995. (Cl. 137—28.)



1. A hose coupling comprising a nipple provided adjacent its ends with enlarged annular ribs adapted when the nipple is inserted into the hose sections to expand said sections at restricted points wholly remote from their meeting ends, said nipple consisting of a pair of separable sections telescopically engaged.

2. A hose coupling comprising a nipple having enlarged annular ribs adjacent its ends adapted when the nipple is inserted into the hose sections to expand the latter at points wholly remote from their meeting ends, said nipple consisting of a pair of separable sections whose meeting ends are provided, one with a taperingly expanded portion and the other with a taperingly contracted portion to enter and fit within said expanded portion for telescopically connecting said sections.

1,195,581. HOSE-COUPLING. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-fourth to Fred C. Schoenthaler, St. Louis, Mo. Filed Sept. 18, 1914. Serial No. 862,805. (Cl. 137—28.)

1. A hose mender comprising a nipple formed from a pressed metal blank expanded adjacent its ends to provide annular ribs shaped to present inner abrupt shoulders and outer faces taperingly inclined to the terminals

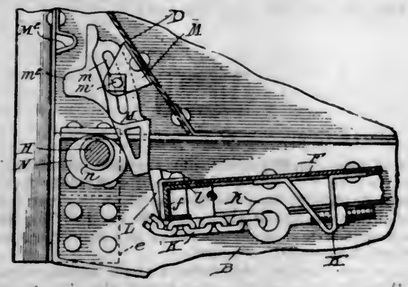
of the nipple, said ribs being adapted, when the nipple is inserted in the hose sections, to expand said sections at points remote from their meeting ends, and a pair of pressed metal sleeves adapted to be applied over the hose and having abruptly inturned end flanges disposed to apply an outward pressure against, and coact with the inner shoulders of said ribs to clamp the expanded portions of the hose, said sleeves being free from contact with the hose except at said clamping points and having pressed threads forming a yieldable connection between the sleeves adapting them to yieldingly clamp the hose.



2. A hose coupling comprising a nipple formed from a pressed metal blank expanded to provide an annular rib adjacent one end of the nipple and adapted when the latter is inserted into the hose section to expand said section at a point remote from its coupled end, a pressed metal coupling sleeve adapted to pass over the hose and having an abrupt serrated annular flange coöperating with said rib to clamp the expanded portion of the hose, and a second pressed metal coupling sleeve having threaded engagement with the first named sleeve and surrounding the hose section end.

3. A hose mender comprising a nipple formed from a pressed metal blank expanded to provide annular ribs adjacent the ends of said nipple and adapted when the latter is inserted into the hose sections to expand said sections at points remote from their meeting ends, and a pair of pressed metal coupling sleeves threaded for cooperative engagement and adapted to be applied to the hose, said sleeves having abrupt annular serrated flanges coacting respectively with said ribs to clamp the expanded portions of the hose sections.

1,195,582. DOOR-OPERATING MECHANISM FOR FREIGHT-CARS. HARRY S. HART, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Jan. 16, 1914. Serial No. 812,483. (Cl. 105—14.)



1. In a freight car, the combination with drop floor doors, of means for raising and lowering the doors, and automatic means having a path of movement substantially tangent to the arc of movement of the swinging edges of the doors for supporting the doors in incompletely closed and fully closed positions.

2. In a freight car, the combination with drop floor doors, of means for raising and lowering the doors, and means having a path of movement substantially tangent to the arc of movement of the swinging edges of the doors for supporting the doors in closed position by horizontally transmitting to the car frame the door-supporting strains.

3. In a freight car, the combination with drop floor doors, of means for raising and lowering the doors, bodily movable gravity latches, and means actuated by the door raising and lowering means for retaining said latches in position to support the doors in closed position and for permitting the movement of said latches out of door-supporting position.

4. In a freight car, the combination with drop floor doors, of means for raising and lowering the doors, movable gravity latches, and eccentrics actuated by the door-raising and lowering means for controlling said latches to support the doors in closed position or to permit the doors to drop.

5. In a freight car, the combination with a drop-floor door, of a rotary shaft adjacent the swinging edge of said door, chains connecting said shaft with the door for raising and lowering the same, a bodily movable gravity door-supporting latch, having a path of movement intermediate of the shaft and the swinging edge of the door, and means actuated by said shaft for retaining said latch in position to lock the door closed.

[Claims 6 to 15 not printed in the Gazette.]

1,195,583. TRAFFIC-DIRECTOR. FRANCIS B. HENRETTA, Roanoke, Va. Filed May 26, 1916. Serial No. 99,979. (Cl. 177—337.)



1. A traffic directing mechanism for intersecting streets embodying an electric signal at each of the four corners, and in combination therewith a primary electric circuit, two branch circuits therefrom, each embracing the signals on diagonally opposite corners, and an automatic controlling mechanism for the same whereby the flow of current in the branch circuits may be alternated so as to alternate the display of signals on diagonal corners at and during variable intervals.

2. A traffic directing mechanism for intersecting streets embodying an electric signal at each of the four corners, means for controlling said signals in diagonally opposite pairs, said means comprising an electrical circuit, a rotating drum therein, a series of bands of varying lengths thereon, movable contacts for said bands, each of which has electrical connection with a pair of said signals, the said bands and contacts being so arranged that current will be admitted to one pair of signals before being shut off from the other pair.

3. In a traffic directing device an electric circuit, a plurality of lights connected across the same, an electrically actuated mechanical signal for each light, timed means for changing said mechanical signals at variable and recurring periods, said means and said mechanical signals being actuated from the same source of electrical energy as the said lights.

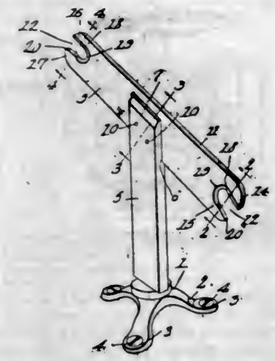
4. In a traffic directing mechanism for intersecting streets, an electric circuit, a plurality of signal lamps in the same, one located at each corner, a motor connected in multiple with the said lamps, electrically operated mechanical signals on each of the four street corners, the diagonal signals being wired in pairs and all being in multiple with the lamp signals, the said motor carrying means for alternating the flow of current between the pairs of signals.

5. In a traffic directing mechanism for intersecting streets, an electric circuit, a plurality of signal lamps in the same, one located at each corner, a motor connected in multiple with the said lamps, electrically operated mechanical signals on each of the four street corners, the diagonal signals being wired in pairs and all being in multiple with the lamp signals, the said motor carrying means for alternating the flow of current between the pairs of signals, the said signals being arranged to be displayed when current is admitted thereto and to be withdrawn when the circuit is broken.

[Claims 6 to 11 not printed in the Gazette.]

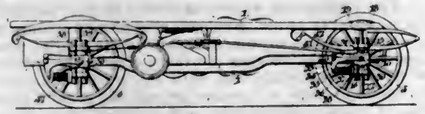
1,195,584. DEVICE FOR CUTTING TWINE. JOHN PETER HILL, Rockymount, Va. Filed Jan. 7, 1915. Serial No. 1,006. (Cl. 30—14.)

A twine cutter comprising a standard; and a bar secured intermediate its ends to the standard, the bar being provided in its ends with notches each defining a prong and an arm disposed below the prong, the lower edges of the prongs and the bases of the notches being sharpened to form cutting edges, the bar being disposed at an angle to the horizontal, thereby to dispose the cutting edges at different heights, whereby the said cutting



edges, respectively, may be made efficient for cutting wrappings on packages of different sizes, the arm forming a package-contacting guide for the prong, and the upper edge of the arm being dulled to form a package-deflecting element, the upper edge of the bar being sharpened to form a cutting edge extending from one prong to the other.

1,195,585. SHOCK-ABSORBER. WILLIAM H. HORSTMANN, Overbrook, Pa. Filed Mar. 11, 1914. Serial No. 823,839. (Cl. 21—187.)

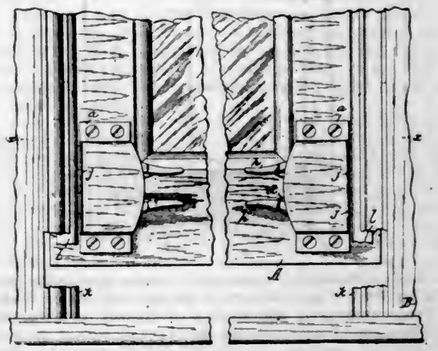


1. The combination, with a wheel and its stub-axle, of a carrier block for said stub-axle; a main axle having guide apertures arranged vertically above and below said carrier block; a guide piece connected to said carrier block, and adapted to move vertically in said guide apertures; a substantially right-angled bell crank lever, having a horizontal arm pivotally connected to the carrier block; a spring connected to the vertical arm of said lever; an abutment for said spring; a fulcrum for said lever; and a swinging carrier for said fulcrum, substantially as set forth.

2. The combination, with a wheel and its stub-axle, of a carrier block for said stub-axle; a main axle having guide apertures arranged vertically above and below said carrier block; a guide piece connected to said carrier block and adapted to move vertically in said guide apertures; a rigid bracket extending horizontally from said main axle; a substantially right-angled bell crank lever, having a bifurcated horizontal arm embracing said carrier block and pivotally connected thereto on opposite sides thereof; a spring connected to the vertical arm of said lever; an abutment for said spring; a fulcrum for said lever; and a link pivotally mounted upon said bracket and carrying said fulcrum, substantially as set forth.

1,195,586. SASH-LOCK. DANIEL HOYT, East Orange, N. J., assignor of one-half to The National Lock Washer Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 29, 1912. Serial No. 686,989. (Cl. 16—18.)

1. In a sash fastener adapted to be placed on a sash slidably arranged within a window frame, a metallic rack secured to the window frame and having corrugations on its face, a sash lock secured to the sash adjacent the metallic rack, comprising a metallic casing, an upper and lower cam lever pivoted within the casing, adapted to lock the sash, said cams having unlike bearing faces, whereby but one cam can be in locking engagement with the corrugated rack at the same time, and means to force the cams into engagement with the corrugated strip and means to unlock the sash.



2. In a sash fastener adapted to be placed on a sash slidably arranged within a window frame, a rack secured to the window frame and having corrugations on the face of the upper portion and a smooth lower portion, a sash lock secured to the sash adjacent the rack comprising a casing, an upper and lower cam lever pivoted within the casing adapted to bear against the rack to lock the sash in the raised position and also in its closed position, but acting on the smooth portion of the rack as a brake, whereby the sash may settle on the window sill and form a tight joint, means to force the cams against the rack and means to withdraw the cams from the rack.

3. In a sash fastener adapted to be placed on a sash slidably arranged within a window frame, a metallic rack secured to each side of the window frame having corrugations on its face and a guide extending above the corrugations and along its entire length, sash locks secured to the sash adjacent the metallic rack on the frame including a metallic casing formed with a projecting rib or guide extending above the plane of the casing and along its entire length to maintain the sash central in the window frame and free from contact with the side casing.

4. In a sash fastener adapted to be placed on a sash slidably arranged within a window frame, a rack secured to the frame having the upper portion corrugated and a smooth lower portion, a sash lock on the sash having an upper and lower cam lever said cam levers having unlike bearing faces to lock the sash in the raised position and also in the closed position, but acting on the smooth portion as a brake, means to force the cams against the rack and means to withdraw the same from said rack.

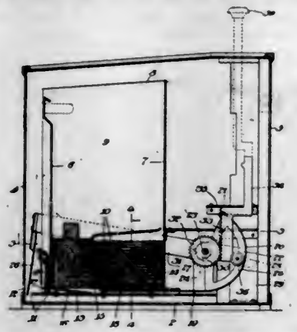
5. In a sash fastener adapted to be placed on a sash slidably arranged within a window frame, a corrugated rack on the frame having a guide along one edge thereof and extending above the corrugations, a sash lock on the sash having a guide, an upper and lower cam lever having cam engaging faces formed at an acute angle to the plane of the lever, means to force the cams against the rack and means to withdraw them from engagement.

[Claims 6 to 8 not printed in the Gazette.]

1,195,587. DISPENSING APPARATUS. OTTO JAEGER, Elkins Park, Pa., assignor, by mesne assignments, to Industrial Service Company, Philadelphia, Pa., a Corporation of Delaware. Filed June 16, 1915. Serial No. 34,356. (Cl. 211—8.)

1. In a dispensing apparatus, a casing providing a container for the articles to be dispensed and having a dis-

charge opening in the front wall thereof, an ejector plate movable within the container, guides to which said plate is slidably fitted, said plate having a flexible end portion movable through a curved path into and from said guides, and means operative to move said end portion.



2. In a dispensing apparatus, a casing providing a container for the articles to be dispensed and having a discharge opening in the front wall thereof, a horizontal ejector plate movable within the lower portion of the container and having a flexible end portion, means to guide the ejector plate, a pivoted member connected to said flexible portion and having a curved portion adapted to receive and form a bearing for said flexible portion when said member is turned, said flexible end portion being operative to push said plate when said member is moved and means operative to turn said member.

3. In a dispensing apparatus, a casing providing a container for the articles to be dispensed and having a discharge opening in the front wall thereof, a horizontal ejector plate movable within the lower portion of the container and having a flexible end portion, means to guide the ejector plate, a pivoted member connected to said flexible portion and having a curved portion adapted to receive and form a bearing for said flexible portion when said member is turned, a reciprocative plunger, and means operated by said plunger to turn said member.

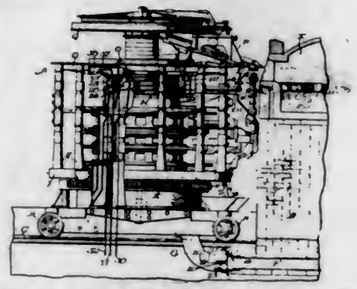
4. In a dispensing apparatus, a casing providing a container for the articles to be dispensed and having a discharge opening in the front wall thereof, a horizontal ejector plate movable within the lower portion of the container and having a flexible end portion, means to guide the ejector plate, a rotatable shaft, a member carried by said shaft and connected to said flexible portion, a gear wheel carried by said shaft, a reciprocative gear rack engaged with said gear wheel, and means operative to move said gear rack.

5. In a dispensing apparatus, a casing providing a container for the articles to be dispensed and having a discharge opening in the front wall thereof, an ejector adapted to be operated to dispense articles from the container, a rotatable shaft, means operated by the shaft for operating the ejector, a pivoted arm, a door carried by said arm and movable therewith to and from a normal position closing said opening, means operated by said shaft for moving said door, and means operative to turn said shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,195,588. AIR-CONTROL FOR AUTOMATIC MACHINERY. AUGUST KADOW, Toledo, Ohio, assignor to The Westlake Machine Company, Toledo, Ohio, a Corporation of Ohio. Original application filed July 6, 1910, Serial No. 570,621. Divided and this application filed May 19, 1911, Serial No. 628,225. Renewed Aug. 17, 1912. Serial No. 715,690. (Cl. 49—18.)

1. The combination with a plurality of superposed horizontally movable air valves, of a valve actuating device, means for causing a relative movement between said valves and said valve actuating device, whereby said valves will be intermittently actuated as required, and means whereby the relation between said valves and said actuating device may be so adjusted that said valves will be actuated at will either simultaneously or successively as required.



2. The combination with a stationary member provided with a plurality of air chambers, of means for supplying air under pressure to said chambers at differential pressures, a traveling member provided with corresponding chambers in communication with the chambers in said first-named member, and means for isolating definite quantities of compressed air from said chambers in the traveling member and controlling their flow.

3. The combination with a stationary member provided with a plurality of air chambers, of means for supplying air under pressure to said chambers at differential pressures, a traveling member provided with corresponding chambers in communication with the chambers in said first-named member, and means for isolating definite quantities of compressed air from said chambers in the traveling member and controlling their flow, said means being actuated by the relative travel between said members.

4. The combination with a stationary member provided with a plurality of air chambers, of means for supplying air under pressure to said chambers at differential pressures, a traveling member provided with corresponding chambers in communication with the chambers in said first-named member, and means for isolating definite quantities of compressed air from said chambers in the traveling member and controlling their flow, said means being adapted to permit such escape from said chambers in the traveling member either successively or simultaneously as required.

5. The combination with a stationary member provided with a plurality of air chambers, each air-chamber having a continuous outlet port, of a traveling member provided with corresponding air chambers having respectively ports in register with said first-named ports, packing interposed between said ports, one of said members being provided with a groove or chamber arranged between said packings and with an escape port leading from said groove, substantially as specified.

[Claims 6 to 18 not printed in the Gazette.]

1,195,589. CALLING DEVICE. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1911. Serial No. 668,734. (Cl. 179—90.)

1. A calling device including a setting member adapted to be advanced to a plurality of operating positions, a numbered indicating dial for the setting member, and means operated by the advance of the setting member for thereafter advancing said dial according to the operation of the setting member.

2. A calling device including a setting member having a plurality of operating positions, a numbered indicating dial for said member having a normal indicating point, and means for advancing said indicating dial according to an adjusting operation of the setting member whereby its normal point follows said setting member to its adjusted position.

3. A calling device comprising impulse mechanism, a setting member adapted to be moved to a plurality of operating positions for adjusting said mechanism, an indicating dial for said member, and mechanism for advancing said dial each time the calling device is operated, according to the actuation of said setting member and causing it to remain in such advanced position until the next operation of the device.

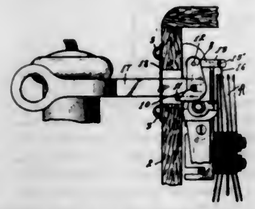


4. A calling device comprising impulse mechanism, a setting member adapted to be moved to a plurality of operating positions for adjusting said mechanism accordingly, an indicating dial for said member, and means connecting said dial and mechanism whereby said dial is advanced each time the calling device is operated, according to the actuation of said setting member and causing it to remain in such advanced position until the next operation of the device.

5. A calling device comprising impulse mechanism having different degrees of actuation, a setting member having a plurality of operating positions corresponding to the different degrees of actuation of the impulse mechanism for adjusting said mechanism, an indicating dial for said member, and means for advancing said dial each time said mechanism is operated, according to the actuation of said setting member and causing it to remain in such advanced position until the next operation of the device.

[Claims 6 to 20 not printed in the Gazette.]

1,195,590. TELEPHONE SWITCH-HOOK. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 1, 1912. Serial No. 729,114. (Cl. 179—164.)



1. A formed sheet metal switch-hook mounting frame having elongated parallel side pieces, an integral plate for connecting said side pieces through a portion thereof only whereby a portion of said side pieces extend free of connection, an attaching flange extending laterally from one of said pieces, said side pieces forming a groove adapted to receive the switch-hook at one end and a switch spring attaching member at the other end between the free ends, and means for adjustably clamping the spring attaching member between the side pieces.

2. A sheet metal switch-hook mounting frame having elongated side pieces, an integral portion connecting said side pieces through a portion thereof only, a mounting block adjustably secured between the side pieces at one end of said frame, switch springs secured at one end to said block and lying parallel thereto with their free ends adjacent the other end of said frame, a switch-hook pivotally supported by said frame at a point intermediate the free and attached ends of said springs in operative position with the free end of said switch springs and having its hook end extending horizontally from said frame, and means for operatively connecting said switch-hook and switch springs.

3. A device of the character described comprising a mounting frame, switch springs attached thereto, a controlling member having tri-angularly disposed operating points including a switch actuating support, a switch-hook catch and a pivoting support situated at a point intermediate the switch actuating support and the attached ends of the switch springs, means connecting the said switch actuating support and said switch springs, a removable switch-hook having a slotted end adapted to receive the pivoting support, and holding means for said switch-hook adapted to be engaged by said catch whereby said switch-hook is yieldingly held in operative engagement with the controlling member under tension of said switch springs.

4. A device of the character described comprising an elongated U-shaped mounting frame, a mounting member adjustably secured between parallel side pieces and at one end of said mounting frame, switch springs attached at one end to said mounting member and extending parallel with said frame with their free ends overlying the other end of said frame, a switch hook pivotally supported between the sides of said frame intermediate the free and attached ends of said springs, and means including an intermediate link mounted between the parallel sides of said mounting frame for operatively connecting said switch-hook and said contact springs.

5. A device of the character described comprising an elongated vertically positioned mounting frame, a mounting member adjustably secured between the parallel side pieces and at one end of said mounting frame, switch springs attached at one end to said mounting member and extending parallel thereto with their free ends overlying the other end of said frame, a horizontally extending switch-hook pivotally supported by said frame at a point intermediate the free and attached ends of said springs, and means including an intermediate link mounted between the parallel faces of said mounting frame for operatively connecting said contact springs at their free end with an adjacent portion of said switch hook.

1,195,591. METAL-TUBING CUTTER. ANDREW E. KAMMER, Brooklyn, N. Y. Filed Nov. 15, 1915. Serial No. 61,721. (Cl. 81—189.)

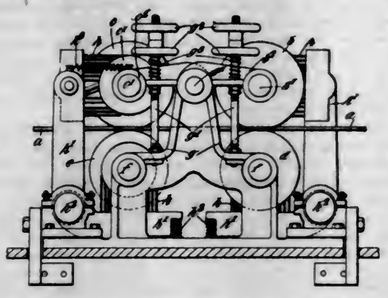


In a device for cutting metal tubing, a pair of pivoted handle members terminating the jaws, said jaws having depressions therein which coöperate to form chambers for the reception of the tubing, the said chambers being lined at one side with teeth and the walls of the chambers being inclined away from the teeth.

1,195,592. MANUFACTURE OF WHEEL-RIMS. FRANK JOHN KEEGAN, Coventry, England, assignor to The Dunlop Rubber Company, Limited, Coventry, England. Filed Apr. 30, 1913. Serial No. 764,475. (Cl. 219—10.)

1. In a method of manufacturing wheel rims having tubular edges, bending the edges of the rim or rim strip

into partially formed tubular edges each having a superposed portion which is to be welded to the main or middle part of the strip, applying mechanical pressure to the said partially formed tubular edges so as to press the superposed portions into contact with the main or middle part of the rim or rim strip, and effecting the welding of the said superposed portion to the main part of the rim or rim strip without exerting considerable mechanical pressure on said superposed portion.



2. In a method of manufacturing wheel rims having tubular edges, bending the edges to form the curved or tubular portion and an overlapping portion lying above the middle or main part of the strip, applying mechanical pressure to said curved or tubular portion to force said overlapping portion in contact with the middle part of the strip and effecting the welding of said overlapping portion to said middle part without exerting considerable mechanical pressure at that point.

3. In a method of manufacturing wheel rims having tubular edges, forming each of said edges with a curved upper portion and outer and inner walls which are perpendicular or at right angles to the middle or main part of the rim strip and bending the extremity or edge of said inner wall at right angles so as to be approximately parallel to said middle portion, applying mechanical pressure to the upper portion of the tubular edge, effecting the welding of the bent extremity of the inner wall without exerting considerable mechanical pressure on said extremity, and finally imparting the desired or final cross section to the said rim strip.

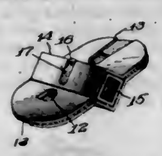
4. Apparatus for welding a rim strip having a tubular edge portion with the edge of the strip overlying the main portion of the strip, comprising means for exerting pressure on the crown of said tubular edge portion and in a direction normal to the rim strip to hold said overlying edge in contact with the main portion of the strip, and separate means for welding such overlying edge to the main portion of the strip without exerting considerable mechanical pressure at the welding point.

5. Apparatus for carrying out the hereinbefore described method, comprising in combination, a pressure device adapted to bear on a partially formed tubular edge of a rim strip, an electrical welding roll adapted to unite a portion of said tubular edge to the main portion of the rim strip arranged parallel to and coincident with said pressure roll, and means for supplying electrical current to said welding roll.

[Claims 6 to 12 not printed in the Gazette.]

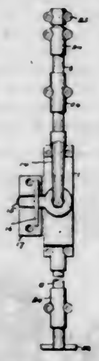
1,195,593. FUSIBLE LINK. CHARLES W. KERSTETER, Milwaukee, Wis. Filed Nov. 4, 1915. Serial No. 59,607. (Cl. 236—16.)

1. A link for automatic fire extinguishing apparatus, having in combination, a pair of similar plates, having at points intermediate of their length deflected portions which fall opposite each other and form a socket disposed transversely of the link, a rocker occupying said socket and having diametrically disposed, projecting spurs engaging the deflected portions of the plates respectively at diametrically opposite sides of the socket formed by said deflected portions, said deflected portions having notches into which said spurs project.



2. A link for sprinkler heads having in combination a pair of similar plates having at points intermediate of their lengths deflected portions, the sides of which are at an angle of 45 degrees to the end portions of the plates, so that when the plates are placed together, face to face, the grooves or depressions in their inner faces resulting from said deflections will fall opposite each other and form a square socket, a rocker of square cross sectional shape occupying said socket, and spurs projecting from opposite corners of said rocker, said deflected portions having, in their advance inclined sides, slots occupied by said spurs the meeting surfaces of the several parts being secured together by solder.

1,195,594. BOLT. MICHAEL J. KOHUT, Brooklyn, N. Y., assignor to S. H. Pomeroy Company, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 11, 1915. Serial No. 1,602. (Cl. 16—63.)

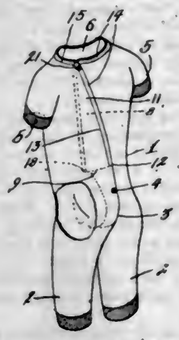


A bolt including a body member, oppositely acting bolt slides operative in the body member, manually operative means for inducing simultaneous opposite movement of the slides, a cap plate covering the slides and holding the same within the body member, said cap plate being formed with oppositely arranged elongated recesses, and projections carried by the slides and fitting said recesses whereby to limit movement of the slides in both directions.

1,195,595. UNION GARMENT. ALBERT E. LAMBERT, Albany, N. Y. Filed Oct. 16, 1914. Serial No. 867,013. (Cl. 2—144.)

1. A union undergarment having a tubular body portion provided with separate neck and crotch openings, and having a centrally offset entrance opening communicating with said neck opening at a point adjacent one shoulder and extending downward to the waist line, said entrance opening having inner and outer overlapping flaps, one integral with said body portion and the other comprising a triangular insert having one side sewed to said body portion at the other edge of said entrance opening, and having a second side sewed to said body portion along the waist line, and a single fastening device for said entrance opening sewed to the inner flap at the neck and adjacent one shoulder.

2. A garment provided with communicating neck and entrance openings, and having inner and outer flaps below said neck opening in the back of the garment, one of said flaps having a free edge extending obliquely from said neck opening downward to the waist line, the other edges of said flap being integral with the body of the garment,



and the other flap comprising a triangular piece sewed to the body along an oblique edge of said entrance opening and across the waist line, and a fastening device for said flaps at said neck opening closely adjacent one shoulder.

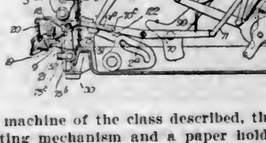
1,195,596. FEED FOR LIQUID-TREATING DEVICES. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Jan. 14, 1916. Serial No. 72,012. (Cl. 233—4.)

1. The combination with a liquid treating device, of a source of liquid supply, a centrifugal pump comprising a casing having a central inlet and a peripheral discharge and a rotary impeller, means to drive the impeller in unison with the treating device, a connection affording a passage for the liquid from the supply to the pump inlet and means to maintain constant the suction head for the pump regardless of the level of the source of supply and a connection affording a passage for the liquid from the pump outlet to the treating device, the same arranged to provide a static discharge head of such height that the delivery of liquid will begin only on the attainment by the treating device of a specific speed.

2. The combination with a liquid treating device, of a source of liquid supply, a centrifugal pump and means to maintain a uniform suction head therefor interposed between said liquid supply and the pump and through which the liquid to be treated is adapted to pass, said pump comprising a casing having a central inlet and a peripheral outlet and a rotary impeller, whereby liquid will not be conveyed to the treating device until the speed of the pump exceeds a predetermined rate, and means to drive the impeller in unison with the treating device.

3. The combination with a liquid treating device, of a source of liquid supply, a connection affording a passage for the liquid to be treated from the supply to the treating device, a centrifugal pump interposed in said connection, said pump comprising a casing having a central inlet and a peripheral discharge and a rotary impeller, means to drive the impeller in unison with the treating device, and a constant level device interposed between the source of supply and the pump and adapted to maintain constant the difference in level between the feed for the pump and the discharge level to which the liquid must be raised to supply the treating device.

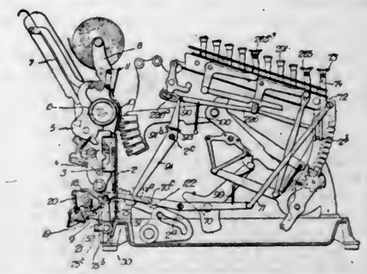
1,195,597. TOY CANNON. PAUL LUCAS, Berlin-Friedenau, Germany, assignor to the Firm of Ernst Paul Lehmann, Brandenburg-on-the-Havel, Germany. Filed Mar. 29, 1916. Serial No. 87,420. (Cl. 124—13.)



1. A toy-cannon comprising a barrel, a hopper automatically feeding projectiles into said barrel, one by one, a spring longitudinally extending within said barrel, a plunger projecting into the barrel and compressing the spring in its backward movement, a toothed wheel engaging said plunger and releasing the same during part of each turn, and a flexible traction element so combined to the axis of said toothed wheel, that a retrograde draft of said traction-element will deliver a plurality of shots.

2. A toy-cannon comprising a barrel, a hopper automatically feeding projectiles into said barrel, a spring longitudinally extending within said barrel, a plunger projecting into the barrel and compressing the spring in its backward movement, a partly toothed wheel engaging said plunger and releasing the same during part of each turn, a flexible traction-element wound on a drum, a ratchet wheel on the axis of the said partly toothed wheel, said ratchet wheel being engaged by a click of the drum, and a spring barrel including a spring for returning the drum and traction element automatically into the normal position when the traction-element has been set free.

1,195,598. ADDING AND LISTING MACHINE. CHARLES A. LUNDGREN, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 4, 1914. Serial No. 860,291. (Cl. 235—58.)



1. In a machine of the class described, the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; means for restraining said spring; a key and connections for disabling said latter means; a prime mover and connections for returning the said holder to normal position; and means for disabling said connections by said key.

2. In a machine of the class described, the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for

moving said supplemental holder into printing position; means for restraining said spring; a key and connections for disabling said latter means; a prime mover and connections for returning the said holder to normal position; and means for disabling said connections by said key with provisions for automatically reëstablishing them.

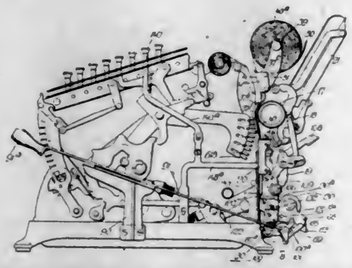
3. In a machine of the class described, the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; means for restraining said spring; a key and connections for disabling said latter means; a prime mover and connections for returning the said holder to normal position; and means for momentarily disabling said connections by said key.

4. In a machine of the class described, the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between predefined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; means for restraining said spring; a key and connections for disabling said latter means; a prime mover and connections for returning the said holder to normal position; and pass-by means for disabling said connections by said key.

5. In a machine of the class described, the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between predefined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; means for restraining said spring; a key and connections for disabling said latter means; and a prime mover and connections for returning the said holder to normal position, including a vibrating arm carrying a pawl, and a lever engaged by said pawl, the latter adapted to be displaced by said key connections.

[Claims 6 to 29 not printed in the Gazette.]

1,195,599. ADDING AND LISTING MACHINE. CHARLES A. LUNDGREN, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 4, 1914. Serial No. 860,292. (Cl. 197—132.)



1. In a machine of the class described, the combination with the printing mechanism of the machine proper, and the paper holder thereof mounted at its rear portion; of a supplemental paper holder shiftable relative to the main paper holder, and a hand lever coupled at its rear end to said supplemental holder and extending forwardly along the machine proper and having a handle at its front end.

2. In a machine of the class described, the combination with the printing mechanism of the machine proper, and the paper holder thereof mounted at its rear portion; of a supplemental paper holder shiftable relative to the main paper holder, a hand lever coupled at its rear end to said supplemental holder and extending forwardly along the machine proper and having a handle at its front end, and a friction latch for detaining the said holder in either of its two positions.

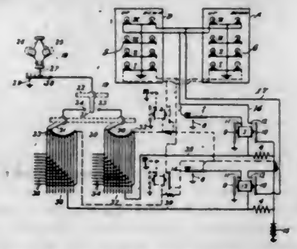
3. In a machine of the class described, the combination with the printing mechanism of the machine proper, and the paper holder thereof mounted at its rear portion and laterally shiftable; of a supplemental paper holder laterally shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; means for shifting it into printing position by the main paper holder; and a hand lever for shifting it independently thereof.

4. In a machine of the class described, the combination with the printing mechanism of the machine proper, and the paper holder thereof mounted at its rear portion and laterally shiftable; of a supplemental paper holder laterally shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; means for shifting it into printing position by the main paper holder; a spring for returning it to non-printing position; a hand lever for moving said supplemental holder into printing position independently of movement of the main paper holder; and means for disabling said spring.

5. In a machine of the class described, the combination with the printing mechanism of the machine proper, and the paper holder thereof mounted at its rear portion and laterally shiftable; of a supplemental paper holder laterally shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; means for shifting it into printing position by the main paper holder; a spring for returning it to non-printing position; a hand lever for moving said supplemental holder into printing position independently of movement of the main paper holder; and a friction latch for holding the same in such position.

[Claims 6 to 8 not printed in the Gazette.]

1,195,600. SIGNALING SYSTEM. FREDERICK P. McINTOSH, New York, N. Y., and EDGAR F. BEAUBIEN, Wilmette, Ill., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Nov. 4, 1910. Serial No. 590,679. (Cl. 177—336.)



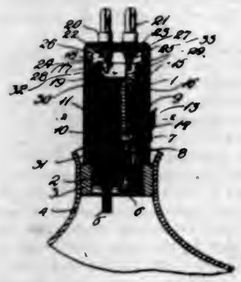
1. The combination with a movable car, of a signal for said car, a circuit controlling said signal, electromagnetic means in said circuit for maintaining said signal, and a releasing circuit including switches associated with said car and means for closing said switches upon the stopping of said car at the point designated by said signal.

2. The combination with a movable car, of a plurality of signals therefor, holding devices for said signals, releasing means comprising circuits individual to each of said holding devices, and a switch common to said releasing circuits actuated by stopping said car.

3. The combination with a movable car, of two signals for said car, independent circuits controlling said signals, an electromagnet in each of said circuits for maintaining the associated signal, a releasing means for each electromagnet comprising a circuit, a switch common to said last mentioned circuits actuated by stopping said car, and a directional switch controlled by said car also included in said circuit whereby said releasing circuits are alternately rendered effective.

4. In combination with a movable car arranged to serve a plurality of stations, an annunciator system comprising a plurality of electrically operated signals in the car, there being a signal for each direction of travel from each station; manually controlled means for each station for actuating and maintaining the signals for that station; and means for canceling each signal comprising a circuit for each signal, and switches responsive to the location, direction of movement and stopping of the car, respectively, common to said circuits.

1,195,601. WATER-HEATER. JOHN NATHAN, Los Angeles, Cal. Filed Jan. 25, 1915. Serial No. 4,360. (Cl. 219—40.)



1. A fluid heater comprising a body of insulating material having a threaded end for engagement with the threads of a container, a cap thereon carrying a plurality of binding posts, a fixed carbon electrode in and extending beyond the end of said body, a movable carbon electrode, and means to move said movable electrode.

2. A fluid heater comprising a body of insulating material, a plurality of carbon electrodes in said body, means to move one of said electrodes relatively to the other, a plurality of binding posts, and wires connecting said electrodes with said binding posts.

3. A fluid heater comprising a body of insulating material having a carbon electrode fixed therein, and a carbon electrode movable therein and relatively to said fixed electrode, and means for moving said movable electrode.

4. A fluid heater comprising a body of insulating material arranged for attachment to a water bag, a cap on said body having a plurality of binding posts, a stationary carbon electrode in said body, a carbon electrode in said body movable relatively to said stationary electrode, a cylindrical member in which said movable electrode is mounted, and means to move said member to adjust said movable electrode relatively to said stationary electrode.

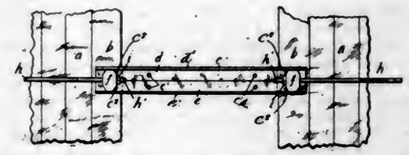
5. A combined heater and plug for water bags comprising a body of insulating material having a threaded end arranged for engagement with the threads of such bags, a carbon electrode stationarily mounted in and extending beyond the end of said body, a carbon electrode adjustably mounted in said body; means to adjust said adjustable carbon, means to lock said adjusting means against movement; a cap on said body having a plurality of binding posts, and wires connecting said electrodes with said binding posts.

[Claims 6 and 7 not printed in the Gazette.]

1,195,602. BAND FOR CIRCULAR CONTAINERS. FREDOLIEN J. OBERER, Portland, Oreg., assignor, by direct and mesne assignments, to Ironclad Silo Company, Portland, Oreg., a Corporation of Oregon. Filed Feb. 14, 1914. Serial No. 818,807. (Cl. 217—95.)

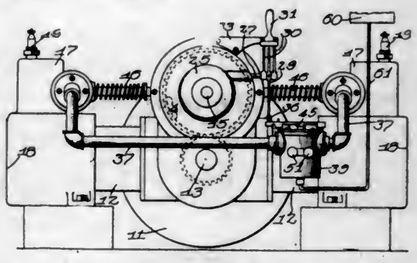
1. A band or hoop comprising a double flanged bar consisting of two parallel members, the flanges being made with bearing holes at their ends, swivel lugs made with trunnions bearing in the bearing holes of said flanges, said swivel lugs made with eyes, a band having its ends inserted through the eyes of said swivel lugs, and means for relatively shortening and lengthening the band.

2. A band or hoop comprising a double flanged bar consisting of two parallel members, the flanges being made with bearing holes at their ends, swivel lugs made with



trunnions bearing in the bearing holes of said flanges, said swivel lugs made with eyes, a band having its ends inserted through the eyes of said swivel lugs, and nuts threaded on the ends of said band.

1,195,603. COMBUSTION-ENGINE. WILLIAM L. PHILLIPS, Chicago, Ill. Filed May 15, 1912. Serial No. 697,388. (Cl. 123—98.)



1. The combination with a combustion engine having a plurality of cylinders, of an automatic carbureter having a mixing chamber provided with a separate outlet opening for each engine cylinder, a partition extending from the top of the chamber below the lower edge of the said openings, valves for each outlet opening, and means controlled by the engine in connection with the valves to operate them simultaneously in the same direction.

2. The combination with a gas engine having a plurality of cylinders, of a carbureter having a mixing chamber provided with a separate outlet opening for each engine cylinder, valves for each outlet opening, a float chamber separate tubes connected to the mixing chamber and discharging adjacent each of the said outlet openings, adjusting means for each of said tubes extending on the outside of the mixing chamber, and means in connection with the engine for operating the valves simultaneously.

3. The combination with a gas engine having a plurality of cylinders, of a carbureter having a mixing chamber provided with a separate outlet opening for each engine cylinder, valves for each outlet opening, a float chamber connected to the mixing chamber by separate tubes and discharging adjacent each of the said outlet openings, adjusting means for each of said tubes extending on the outside of the mixing chamber, set screws for said adjusting means, and means in connection with and depending upon the speed of the engine for operating the valves simultaneously.

4. The combination with an engine of the class described and comprising a rotatable shaft, collars freely mounted on said shaft, a coil spring flexibly connecting said collars, pivotally mounted members actuated by centrifugal force and operative to engage one of said collars by their movement to effect a movement of the other collar along the shaft, a bar transverse to the shaft having an arm engaged by the last named collar and an arm on the other end, a fuel mixing device for the engine having valves to control fuel supply to the engine, a lever connected to the said valves, a member connected to one end of said last named lever and to the last mentioned arm to ac-

tuate the said valves in accordance with the movement of the said centrifugal members, a hand lever pivotally mounted on said transverse bar at the outer end having a downward extension substantially as long as the downwardly extending arm at this end, and a spring connecting the extension and the said arm tending normally to oppose their separation, the said hand lever being adjustable into different fixed positions and operative in conjunction with said centrifugal members to allow a variation of and to maintain the valves of the fuel supply device substantially in a position corresponding to any fixed position of the said hand lever whereby the speed of the engine will be maintained practically constant for this position.

1,195,604. ALUMINOUS PIGMENT AND PAINT. OSCAR WARREN PICKERING, Springfield, Mass., assignor to Pickering Paint & Pigment Company, a Corporation of West Virginia. Filed Oct. 10, 1914. Serial No. 865,986. (Cl. 134—39.)

1. A new pigment comprising a flocculent metal aluminate.

2. A paint comprising a substantially water-insoluble metal aluminate and a vehicle.

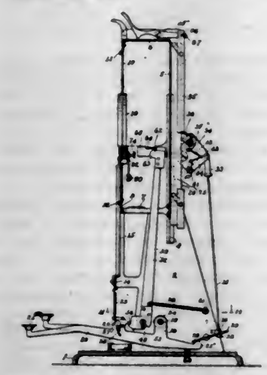
3. A paint comprising metal aluminate and an oil.

4. A paint comprising metal aluminate and a drying oil.

5. A paint comprising metal aluminate, an oil and a drier.

[Claims 6 to 24 not printed in the Gazette.]

1,195,605. SINGLE-ACTING PERFORATING-MACHINE. JAMES POWERS, New York, N. Y., assignor to Powers Accounting Machine Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 21, 1914. Serial No. 857,839. (Cl. 164—112.)



1. In an apparatus for perforating records or the like, the combination with a frame, a reciprocating card supporting carriage mounted in said frame, means therebetween for retracting the carriage in one direction, a perforating mechanism arranged on said frame to coöperate with said carriage to perforate a card carried therein, a carriage stop mechanism carried on said frame, a stop release mechanism mounted on said carriage thereby to release the same after each perforation, and actuating means by which the perforating mechanism, the retracting mechanism and carriage stop releasing mechanism are positively and simultaneously actuated.

2. In an apparatus for perforating records or the like, the combination with a frame, having key-operable levers fulcrumed in said frame; of punches operably mounted in said frame, hammers pivotally mounted in said frame for striking said punches, retracting mechanism for returning said punches, a carriage for supporting the matter to be perforated, means for drawing the carriage in one direction, and releasing mechanism for releasing said carriage to be free to be drawn after each perforation; said key-operable levers being positioned to operatively actuate said perforating mechanism, retracting mechanism and releasing mechanism simultaneously.

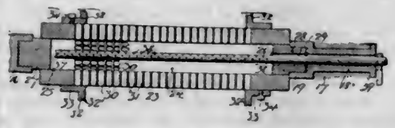
3. In an apparatus for perforating records or the like, the combination with a frame having key-operable levers fulcrumed in said frame; of punches slidably mounted in said frame, hammers for striking said punches, retracting mechanism for returning said punches, a carriage for supporting the matter to be perforated, means for drawing the carriage in one direction, and releasing mechanism for releasing said carriage to be free to be drawn after each perforation; a first universal bar positioned in said frame and operably connected to said retracting mechanism, a second universal bar positioned in said frame and operably connected to said releasing mechanism, and stops on said hammers, said levers being positioned to positively actuate said first and said second universal bars and said stops simultaneously.

4. In an apparatus for perforating records or the like, the combination with a frame having key-operable levers fulcrumed in said frame; of punches slidably mounted in said frame, hammers for striking said punches, retracting mechanism for returning said punches, a carriage for supporting the matter to be perforated, means for drawing the carriage in one direction, and releasing mechanism for releasing said carriage to be free to be drawn after each perforation; a universal bar arrangement positioned in said carriage and operably connected to said releasing mechanism and said retracting mechanism, and stops on said hammers, said levers being positioned to positively engage said universal bar arrangement and said stops simultaneously.

5. In a record perforating apparatus, the combination of a reciprocating card carrier, a plurality of punches arranged in a row extending across the path of movement of a card, a key independent of and positioned to actuate each punch, a motor connected with the carrier to move it in one direction, an engaging device for holding the carrier in position for operation of a punch, and connections between each key and engaging device by which the operation of any punch will actuate such engaging device to release the card carrier and permit it to move under the action of the motor to the next predetermined position.

[Claims 6 to 28 not printed in the Gazette.]

1,195,606. APPARATUS FOR DYEING FABRICS. HOWARD L. QUICK, New York, N. Y. Original application filed Jan. 7, 1914, Serial No. 810,757. Divided and this application filed July 30, 1914. Serial No. 854,026. (Cl. 8—17.)

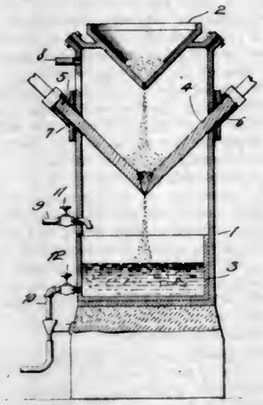


1. A machine for treating fabrics, comprising a shell for holding a roll of fabric thereon and consisting of a tubular body having a bore, and having perforations therethrough, means for admitting liquor into the bore, flanges for closing the ends of the fabric roll, said flanges having grooved surfaces for abutting against the fabric roll, for the purpose set forth, and means for revolving the shell.

2. A machine for treating fabrics, comprising a shell for holding a roll of fabric thereon and consisting of a tubular body having a bore and having perforations therethrough, means for admitting liquid to the bore, flanges for closing the ends of the fabric roll, said flanges having surfaces formed with concentric grooves, said grooved surfaces abutting against the fabric roll, and means for revolving the shell.

1,195,607. PROCESS OF SECURING METAL FROM ORES. JAMES HENRY REID, Newark, N. J. Filed Jan. 13, 1914. Serial No. 811,805. (Cl. 204—63.)

1. The process of securing metal from ore which comprises exposing the metal-containing ore to the progressive action of a substantially high melting point metal and electricity and a comparatively low melting point metal immiscible with the high melting point metal and having a superior affinity for the ore metal secured thereby and finally recovering the desired ore metal from the metal vehicle or carrier.



2. The process of securing metal from ore which comprises exposing the metal-containing ore to the progressive action of a substantially high melting point metal electrode and electricity and a comparatively low melting point metal immiscible with the high melting point metal and having a superior affinity for ore metal secured thereby and finally recovering the desired ore metal from the final metal vehicle or carrier.

3. The process of securing metal from ore, which comprises supplying ore to an electric arc between depending fusible electrically conductive materials capable of reducing the ore metal compound and seizing the ore metal, and reducing and securing the metal from the ore while falling from an upper to a lower level.

4. The process of securing metal from ore, which comprises supplying ore to an electric arc between depending fusible metal capable of reducing the ore metal compound and seizing the ore metal, and reducing and securing the metal from the ore while falling from an upper to a lower level.

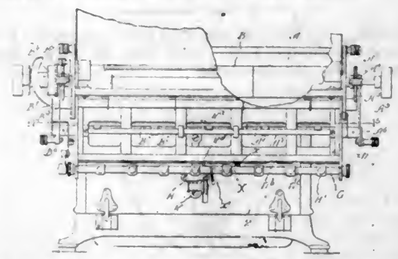
5. The process of securing metal from ore, which comprises supplying ore to an electric arc between depending iron conductors and recovering the metal of the ore associated with iron while falling from an upper to a lower level.

1,195,608. RECORDING MECHANISM. FRANK C. RINSCHE, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 13, 1912. Serial No. 714,822. (Cl. 235—58.)

1. In a machine of the character described, the combination of a laterally shiftable carriage having a sectional paper support, means applied to each section for advancing paper independently of the other section, a prime mover and connections common to the paper advancing means of both sections of the paper support, with provisions for coöperating with either to the exclusion of the other, and means for uniting the sections of the paper support at will.

2. In a machine of the character described, the combination of a laterally shiftable carriage having a sectional paper support, bails and connections for advancing the paper, an operating member common to said bails and engageable with either while disengaged from the other, and a lock for the carriage controlled by said member.

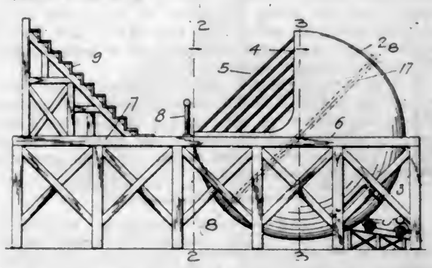
3. In a machine of the character described, the combination of a laterally shiftable carriage having a sectional paper support, bails and connections for advancing the paper, a reciprocating member engageable with either bail for operating the same independently of the other, and a carriage lock normally displaced by said member.



4. In a machine of the character described, the combination of a laterally shiftable carriage having a sectional paper support, bails and connections for advancing the paper, the bails having normally alined cross-rods, a reciprocating slide with jaws to embrace either cross-rod according to the lateral position of the carriage, and a lock-lever yieldingly impelled to engagement with the carriage and normally restrained by said slide.

5. In a machine of the character described, the combination of a laterally shiftable carriage having a sectional paper-support and lock-notches; bails and connections for advancing the paper, the bails having normally alined cross-rods; a reciprocating slide with jaws to embrace either cross-rod according to the lateral position of the carriage: and a lock-lever yieldingly impelled to engagement with the lock-notches of the carriage and normally restrained by said slide.

1,195,609. AMUSEMENT DEVICE. GEORGE H. RUMKE, Denver, Colo. Filed Dec. 22, 1915. Serial No. 68,277. (Cl. 104—14.)



1. A motordrome comprising a concave hemispheric smooth and unbroken riding surface and a runway formed above and continuous with said surface in the sphere of which it is part.

2. A motordrome comprising a concave hemispheric smooth and unbroken riding surface and a runway formed above and continuous with said surface in the plane of a great circle of the sphere of which it is part.

3. A motordrome comprising a concave hemispheric smooth and unbroken riding-surface continued at its edge to provide a runway in a great circle of the sphere of which it is a part and a runway formed in the same sphere above and continuous with said surface.

4. A motordrome comprising a concave hemispheric smooth and unbroken riding-surface continued at its edge to provide a runway in a great circle of the sphere of which it is a part and a runway formed in the plane of another great circle of the same sphere above and continuous with said surface.

5. A motordrome comprising an element having interiorly a spherical, smooth and unbroken riding surface, in the upper hemisphere of the surface a view-opening

through which said surface may be observed from an exterior point, and guide marks upon said surface to direct a rider along courses avoiding said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,195,610. GARMENT-SUPPORTER. CATHERINE E. SAUER, Rochester, N. Y. Filed Mar. 29, 1916. Serial No. 87,613. (Cl. 24—245.)



1. A garment supporter comprising a supporting member, a button and a flexible member secured at one end to the supporting member, adapted to be wrapped about the button, and having its free end detachably engaging the supporting member at a point above the button and in proximity to the secured end.

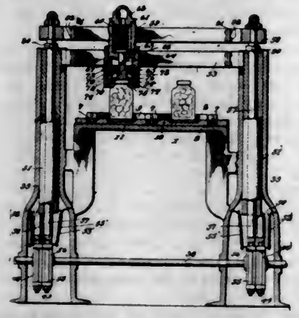
2. A garment supporter comprising a supporting plate, a hook thereon, a button flexibly suspended from the plate at one side of the hook, and a loop of greater length than the button suspender secured at one end to the plate at one side of the hook and engageable at its free end with the hook.

3. A garment supporter comprising a supporting member, a hook thereon, a button also carried by said supporting member, and a flexible member secured at one end to the supporting member formed to be wrapped about the button between its ends and adapted to interlock with said hook at its free end.

4. A garment supporter comprising a supporting member, a button flexibly suspended therefrom, a hook on the supporting member, and a flexible member of greater length than the flexible suspender of the button to be wrapped about the button, the free end of said flexible member being engageable with the hook to hold the flexible member wrapped about the button.

5. A garment supporter comprising a supporting member, a rigid button, a flexible member secured at opposite ends to the supporting member, and formed with a slip loop extending completely about the button so as to tighten automatically on the button when the strain is placed upon the flexible member.

1,195,611. JAR-CAPPING MACHINE. EDWARD D. SCHMITT, Baltimore, Md., assignor, by mesne assignments, to The American Pure Food Process Company, Baltimore, Md., a Corporation of Delaware. Filed Sept. 19, 1911. Serial No. 650,298. (Cl. 113—4.)



1. A bottle-capping machine, having in combination, a conveyer, a capping device situated in the path of movement of the conveyer, a spacing-wheel loosely-mounted on one of the conveyer-shafts, an arm secured on said shaft, an adjustable connection between said arm and the spacing wheel, whereby the conveyer may be adjusted so as to center bottles of different diameters under the capping-device, and means for imparting motion to the spacing-wheel to move the conveyer.

2. A bottle-capping machine, having in combination a conveyer, a capping-device situated in the path of movement of the conveyer, a notched spacing-wheel loosely-mounted on one of the conveyer shafts, an arm secured on said shaft, an adjustable connection between said arm and the spacing-wheel, means for imparting motion to the spacing-wheel so as to move the conveyer, and means preventing a retrograde movement of the spacing-wheel.

3. A bottle-capping machine, having in combination a conveyer, a capping-device situated in the path of movement of the conveyer, a peripherally-notched spacing-wheel mounted loosely on one of the shafts of the conveyer, an arm mounted on said shaft and adjustably connected to the spacing-wheel, a rockable arm loosely-mounted on the conveyer shaft, a spring-pressed pawl pivoted on the rockable-arm and adapted to engage the notches in the spacing-wheel, and means for imparting motion to the rockable-arm to cause the pawl to move the spacing-wheel and thereby the conveyer.

4. A bottle-capping machine, having in combination, a conveyer, a capping-device situated in the path of movement of the conveyer, a peripherally-notched spacing-wheel loosely-mounted on one of the conveyer-shafts, an arm mounted on said shaft and adjustably-connected to the spacing-wheel, a rockable-arm loosely-mounted on the conveyer-shaft and carrying a spring-pressed pawl adapted to engage the notches in the spacing-wheel, means for imparting motion to the rockable-arm to cause the pawl to actuate the spacing-wheel and thereby move the conveyer, and means for preventing a retrograde movement of the spacing-wheel.

5. A bottle-capping machine, having in combination a conveyer, a capping device situated in the path of movement of the conveyer, a spacing-wheel loosely-mounted on one of the conveyer-shafts, an arm secured on said shaft and adjustably connected to the spacing-wheel, a rockable-arm loosely-mounted on the conveyer-shaft and provided with a spring-pressed pawl adapted to engage the notches of the spacing-wheel, means for rocking said arm to cause the pawl to move the spacing-wheel step-by-step, and thereby the conveyer, an arm loosely-mounted on the conveyer-shaft and provided at its outer end with a weighted pawl, a fixed slot-fed segment adjustably connected with said arm, whereby the weighted pawl may be adjusted to correspond with the adjustment of the conveyer.

1,195,612. ACID AND WATER PROOF INK. AUGUST SCHRADER, New York, N. Y. Filed Nov. 8, 1915. Serial No. 60,421. (Cl. 134—28.)

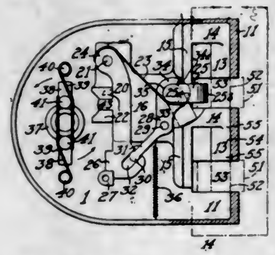
1. A writing fluid including Silesian soluble blue, nigrosin, oxalic acid, india ink and water.

2. A writing fluid including Silesian soluble blue, nigrosin, oxalic acid, india ink and water, the water constituting substantially twenty-nine thirtieths of the fluid.

3. A writing fluid including Silesian soluble blue 8 parts, nigrosin 1 part, oxalic acid .2 part, india ink, .8 part, and water 290 parts.

1,195,613. LOCK. SAMUEL SEGAL, New York, N. Y. Filed Sept. 24, 1915. Serial No. 52,331. (Cl. 70—64.)

1. A lock having locking mechanism, a casing therefor, a keeper having an ear, a bolt adaptable to move in and out of said ear to interlock said casing with said ear, said mechanism including a pawl pivoted on said bolt to maintain it out of said ear, a spring for moving said bolt into locked position, said pawl having a slot, a lever having one end engaging said slot, a detent pivoted to the other end of said lever, a spring maintaining said detent projected, and said detent being pressed by said keeper upon the closing of the door to swing said lever to release said pawl for permitting said bolt-spring to move the bolt into said ear.



2. A lock having locking mechanism, a casing therefor, a keeper having an ear, a bolt adaptable to move in and out of said ear to interlock said casing with said ear, said mechanism including a pawl pivoted on said bolt to maintain it out of said ear, a spring for moving said bolt into locked position, a lever pivoted on said bolt adaptable to swing in a plane parallel to the plane in which the bolt moves, said lever having one end thereof engaging said pawl, a detent pivoted to swing in a plane parallel to the plane in which the bolt moves, a spring maintaining said detent projected, and said detent being pressed by said keeper upon the closing of the door to swing said lever to release said pawl for permitting said bolt-spring to move the bolt into said ear.

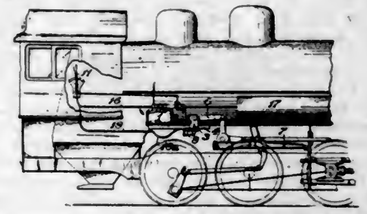
3. A lock having locking mechanism, a casing therefor, a keeper having an ear, a bolt adaptable to move in and out of said ear to interlock said casing with said ear, said mechanism including a pawl pivoted on said bolt to maintain it out of said ear, a spring for moving said bolt into locked position, a lever pivoted on said bolt having one end thereof engaging said pawl, a pivoted detent being pressed by said keeper upon the closing of the door to swing said lever to release said pawl for permitting said bolt-spring to move the bolt into said ear, means to restore said bolt to unlocked position, and said detent being rendered inoperative by said keeper without effecting the operation of said lever and pawl upon the restoring of said bolt to unlocked position to permit maintaining said bolt in unlocked state while said keeper-ear remains in proximity to the bolt.

4. A lock having locking mechanism, a casing therefor, a keeper having an ear, a bolt adaptable to move in and out of said ear to interlock said casing with said ear, said mechanism including a pawl pivoted on said bolt to maintain it out of said ear, a spring for moving said bolt into locked position, a lever pivoted on said bolt having one end thereof engaging said pawl, a pivoted detent, a spring maintaining said detent projected, said detent being pressed by said keeper upon the closing of the door to swing said lever to release said pawl for permitting said bolt-spring to move the bolt into said ear, means to restore said bolt to unlocked position, and said detent being actuated by said keeper contrary to pressure of said spring without effecting the operation of said lever and pawl upon the restoring of said bolt to unlocked position to permit maintaining said bolt in unlocked state while said keeper-ear remains in proximity to said bolt.

5. A lock having locking mechanism, a casing therefor, a keeper having an ear, a bolt adaptable to move in and out of said ear to interlock said casing with said ear, said mechanism including means to maintain said bolt out of said ear, means actuated by said keeper upon the closing of the door to release said maintaining means for permitting the bolt to move into the ear, means to restore said bolt to unlocked position, and said keeper rendering said releasing means inoperative without effecting the operation of said maintaining means upon the restoring of said bolt to unlocked position to permit maintaining the bolt in unlocked state while said keeper-ear remains in proximity to said bolt.

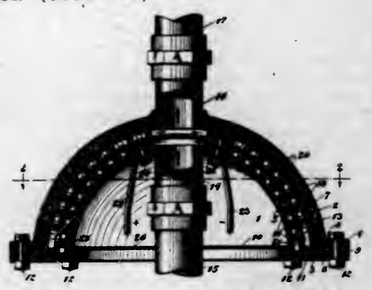
[Claims 6 to 18 not printed in the Gazette.]

1,195,614. LOCKING MECHANISM FOR VALVE-REVERSING GEARS. PATRICK SHEEDY and DANIEL P. KELLOGG, Los Angeles, Cal. Filed Apr. 18, 1916. Serial No. 91,874. (Cl. 121—98.)



The combination, with a valve reversing gear comprising a fluid pressure reversing cylinder, a cross head movable by pressure therein, and a guide on which said cross head traverses, of a locking cylinder connected to and movable with the cross head; a piston and rod working therein, a shaft journaled transversely in the cross head and having an arm coupled to the piston rod of the locking cylinder; an eccentric on said shaft; a gib fitted between the cross head and guide, in position to be subject to pressure from the eccentric; a reverse lever controlling the supply and exhaust of motive fluid to and from the reversing cylinder; a latch lever holding the reverse lever in adjusted position; and valve mechanism, connected to and operable by the latch lever, for controlling fluid pressure admission and exhaust to and from the locking cylinder.

1,195,615. ELECTRIC WATER-HEATER. MAURICE SIMON, St. Louis, Mo. Filed Dec. 7, 1915. Serial No. 65,484. (Cl. 219—39.)



1. An electric water heater comprising a case including a fluid inlet and outlet passage, an outer wall deflected downwardly from said inlet passage, an outer wall deflected downwardly from said outlet passage spaced apart from said first-named wall, a partition wall intermediate said two walls conforming to the contour thereof and having passages therethrough adjacent to the lower edge, a resistance circuit disposed in said case between said two first-named walls and said partition wall, and means for energizing said circuit, substantially as specified.

2. An electric water heater comprising a hemispherical bottom plate, an inlet passage in integral union with said bottom plate and opening at the apex thereof, a hemispherical top plate having a greater radius than said first-named plate, an outlet passing in integral union with said top plate and extending upwardly from the apex thereof, a hemispherical partition plate of a radius substantially intermediate of said first two-named plates disposed therebetween and having passages therethrough adjacent to the lower edge thereof, a resistance circuit comprising a continuous stretch of resistance wire arranged in a spiral form and wound upon said bottom plate and over said partition plate, and an electrical supply circuit for energizing said resistance circuit, substantially as specified.

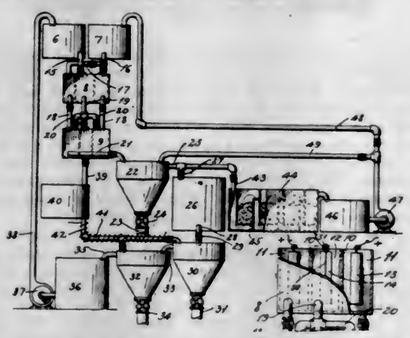
3. An electric water heater comprising a hemispherical bottom plate, an inlet passage in integral union with said bottom plate and opening at the apex thereof, a hemispherical top plate having a greater radius than said first-named plate, an outlet passage in integral union with said top plate and extending upwardly from the apex thereof, a hemispherical partition plate of a radius substantially intermediate of said first two-named plates disposed therebetween and having passages therethrough adjacent to the lower edge thereof, lugs on the upper surface of said bottom plate, lugs on the upper surface of said partition plate, a resistance circuit comprising a continuous stretch of resistance wire arranged in spiral form and wound upon said bottom plate and over said partition plate and supported by said lugs in spaced relationship, and an electrical supply circuit for energizing said resistance circuit, substantially as specified.

4. An electric water heater comprising a case formed from spaced exterior plates, a partition plate supported between said spaced plates and having passages therethrough adjacent to the edge thereof, an inlet passage entering the chamber formed between one of said exterior plates and said partition plate intermediate of said passages, an outlet passage from the chamber formed between the other of said exterior plates and said partition plate intermediate of said passages, whereby fluid entering the heater is deflected to the edges of said first-named chamber from whence it passes through said passages and flows to said outlet passage, and a stretch of resistance wire disposed in the path of flow of the fluid, substantially as specified.

5. In an electric water heater, a heating chamber, comprising a bottom plate, an inlet passage integrally formed with said bottom plate, a top plate spaced from said first-named plate, an outlet passage integrally formed with said top plate in axial alinement with said inlet passage thereby adapting the heater to be supported within a supply conduit, a partition plate interposed between the inlet passage and the outlet passage, passages through said partition plate spaced from the opening of said inlet passage thereby causing the fluid to be deflected laterally from said inlet passage before entering said outlet passage, and a stretch of coiled resistance wire disposed in the path of flow of the fluid passing through said heater, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,195,616. METHOD OF EXTRACTING METALS FROM THEIR ORES. HENRY B. SLATER, Riverside, Cal. Filed Sept. 2, 1913. Serial No. 787,598. (Cl. 204—15.)



1. The method of extracting copper from its ores which consists in subjecting the ore to the action of a solution containing alkali metal chlorid, and a metallic chlorid capable of reduction to a lower chlorid, together with hypochlorous acid, then precipitating the copper from the solution, and then subjecting the solution to the action of free chlorin in the presence of a metallic hydroxid to regenerate the solution containing hypochlorous acid together with a metallic chlorid capable of reduction to a lower chlorid for use in a cyclic manner.

2. The method of extracting copper from its ores which consists in subjecting the ore to the action of a solution of sodium chlorid and chlorid of iron treated to furnish it with oxidizing agents, including ferric chlorid, together with a compound containing oxygen and chlorin, adding a metallic hydroxid to the solution and precipitating the copper from the solution and then subjecting the solution to the action of free chlorin to regenerate the solution containing ferric chlorid together with a compound containing oxygen and chlorin for use in a cyclic manner.

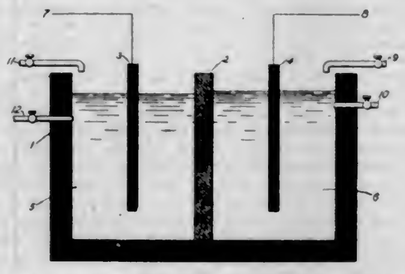
3. The method of extracting copper from its ores which consists in subjecting the ore to the action of a solution containing alkali metal chlorid, and a metallic chlorid capable of reduction to a lower chlorid, together with hypochlorous acid, then precipitating the copper from the solution, adding a metallic hydroxid to the solution and then subjecting the solution to the action of free chlorin to regenerate the solution containing hypochlorous acid and the aforesaid metallic chlorid capable of reduction to a lower chlorid.

4. The method of extracting copper from its ores which consists in dissolving the copper in a solution containing sodium chlorid and a chlorid of iron, treated to furnish it with oxidizing agents, separating the gangue from the solution, treating the solution with a soluble metallic hydroxid to separate ferric hydroxid, precipitating copper from the solution, then adding to the solution ferric hydroxid previously precipitated from the solution, and subjecting the solution to the action of free chlorin to regenerate the solution for use in a cyclic manner.

5. The method of extracting copper from its ores, which consists in dissolving the copper with a solution containing hypochlorous acid, alkali metal chlorid and ferric chlorid, separating the gangue from the solution, treating the solution with sodium hydroxid to precipitate excess of iron as ferric hydroxid, then precipitating copper from the solution and treating the remaining solution to regenerate the same for re-use of the solution in a cyclic manner.

[Claims 6 to 21 not printed in the Gazette.]

1,195,617. PROCESS OF MAKING A LEACHING SOLUTION FOR EXTRACTION OF METALS FROM THEIR ORES. HENRY BYRON SLATER, Los Angeles, Cal. Filed July 28, 1915. Serial No. 42,342. (Cl. 204—15.)

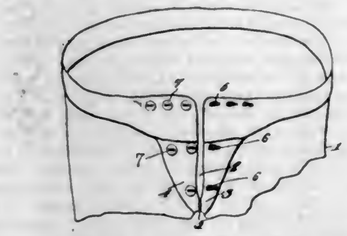


1. The process of producing a solution for extracting metals from their ores, which consists in subjecting a solution of ferrous chlorid and sodium chlorid to electrolysis in the anode compartment of an electrolytic cell, and simultaneously subjecting a solution of sodium chlorid to electrolysis in the cathode compartment of such cell, maintaining separation of said compartments by a diaphragm of sufficient permeability to enable diffusion of cathode products from the cathode compartment to the anode compartment, and continuing electrolysis after all of the ferrous chlorid has been converted to ferric chlorid, so as to produce hypochlorous acid by reaction of the chlorin set free in the anode compartment with cathode products diffusing from the cathode compartment.

2. The process of producing a leaching solution for extracting metals from their ores, which consists in subjecting a solution of ferrous chlorid and sodium chlorid to electrolysis in the anode compartment of an electrolytic cell, simultaneously subjecting a solution containing sodium chlorid to electrolysis in the cathode compartment of said cell, continuing the electrolysis until all the ferrous chlorid is converted to ferric chlorid, and then continuing the electrolysis so as to liberate a further quantity of chlorin, and controlling the products of electrolysis by maintaining a diaphragm of such permeability between the compartments as to permit sufficient passage of cathode products to the anode compartment to produce, by reaction with the free chlorin therein oxidation products to the extent desired in the leach, and further controlling the production of chlorin oxidation products by maintaining and regulating a hydrostatic head between said compartments.

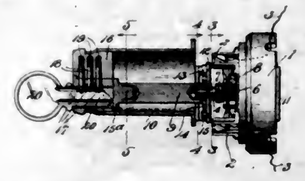
3. The process of producing a leaching solution for extracting metals from their ores, which consists in subjecting a solution of ferrous chlorid and sodium chlorid to electrolysis in the anode compartment of an electrolytic cell, simultaneously subjecting a solution containing sodium chlorid to electrolysis in the cathode compartment of said cell, continuing the electrolysis until all the ferrous chlorid is converted to ferric chlorid, and then continuing the electrolysis so as to liberate a further quantity of chlorin, and controlling the products of electrolysis by maintaining a diaphragm of such permeability between the compartments as to permit sufficient passage of cathode products to the anode compartment to produce, by reaction with the free chlorin therein, chlorin oxidation products to the extent desired in the leach, and further controlling the production of chlorin oxidation, by regulating the concentration of cathode products in the cathode compartment.

1,195,618. BIFURCATED NETHERGARMENT. CHARLES SMALLWOOD, Washington, N. C. Filed Apr. 22, 1914. Serial No. 833,719. (Cl. 2—143.)



A bifurcated nether garment having a fly opening defining a pair of closure members; one of said members having a lower buttonhole adjacent the lower end of said opening and the edge of said member, an intermediate buttonhole intermediate the ends of said opening and adjacent the edge of said member, and a series of upper buttonholes adjacent the upper end of said opening, one of said series of buttonholes being arranged adjacent the edge of said member and said series of buttonholes extending away from said opening; a lower button carried by the other closure member adjacent the lower end of said opening and the edge of said member for engagement with the lower buttonhole to close the lower end of said opening and contract the corresponding portion of the garment; a plurality of intermediate buttons carried by the second mentioned closure member intermediate the ends of said opening and extending from the edge of said member, said intermediate buttons being engageable with the intermediate buttonhole for closing the intermediate portion of said opening and for adjusting the corresponding portion of the garment; and a series of upper buttons carried by the second mentioned closure member and extending away from the edge thereof, the upper buttons being engageable with the upper buttonholes for adjusting the upper edge of the garment.

1,195,619. SWITCH-LOCK. EDWIN D. SMITH, St. Louis, Mo. Filed Oct. 9, 1914. Serial No. 865,812. (Cl. 70—46.)



1. In a device of the character described, the combination with mechanism to be set in operative and inoperative positions, of a revoluble rod operable to actuate said mechanism to its operative and inoperative positions by movement of said rod in one direction, a part connected with said rod and having an opening therein, a removable device adapted to be engaged in said opening to actuate said part and said rod and thereby said mechanism, means enabling the movement of said rod to be reversed for the purpose described while the mechanism remains stationary, and elements preventing operation of said rod by other than said removable device.

2. In a device of the character described, the combination with mechanism settable in different positions, of an actuator therefor comprising a revoluble member, a removable device for actuating said member, and means whereby said member will actuate said mechanism when operated in one direction and will move independently of said mechanism when actuated in the opposite direction.

3. In a device of the character described, the combination with mechanism to be set in different positions, of an actuator therefor comprising a revoluble member, a key, means whereby said key may be connected with or detached from said member in the starting position of said member and preventing removal of said key when said member is in other than its starting position, means whereby said member will actuate said mechanism when said member is turned in one direction and will move independently of said mechanism when operated in the reverse direction to its starting point after the mechanism has been set in the desired position.

4. In a device of the character described, the combination with mechanism to be actuated, of a rod for actuating said mechanism, a revoluble actuator for said rod, a removable key for actuating said actuator, and a ratchet and pawl device whereby said movement of said rod in one direction will operate said mechanism.

5. In a device of the character described, the combination with mechanism to be actuated, of an actuator therefor comprising a revoluble member, a removable manually operable device for controlling said member, and a ratchet and pawl device whereby movement of said member in one direction will operate said actuating device and movement of said member in the opposite direction is independent of said actuating device.

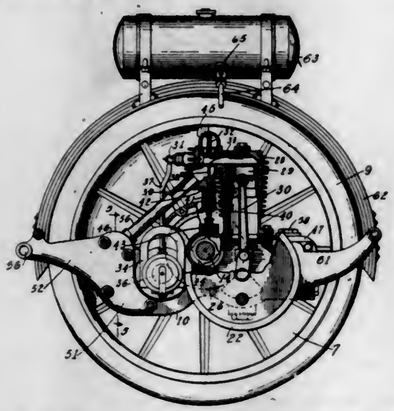
[Claims 6 to 12 not printed in the Gazette.]

1,195,620. VEHICLE-PUSHER. REUBEN STANLEY SMITH, Los Angeles, Cal., assignor to A. O. Smith Company, Milwaukee, Wis., a Corporation of Wisconsin. Original application filed Aug. 20, 1914, Serial No. 857,692. Divided and this application filed May 27, 1915. Serial No. 30,766. (Cl. 21—90.)

1. In a device of the class described the combination of a traction wheel, an axle rigidly attached to said wheel and extending from one side thereof, an internal combustion engine rotatably mounted upon said axle and supported substantially entirely thereby, an engine valve actuating cam mounted upon said axle, a crank shaft for said engine, means for operatively connecting said crank shaft and said axle, and means for connecting the frame of the engine with the frame of a vehicle.

2. A device of the class described comprising in combination a dished driving wheel, an axle for said driving

wheel fixed relatively thereto, an engine mounted on said axle and disposed in said wheel, the center of gravity of the wheel and engine being located substantially in the plane of the rim of said driving wheel, said axle constituting one of the operating shafts of said engine, a crank shaft for said engine, and means for operatively connecting the crank shaft with said axle.



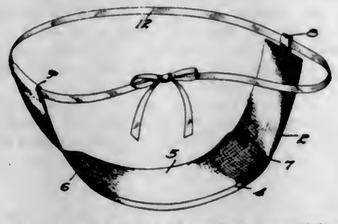
3. A device of the class described comprising in combination a driving wheel, an axle for said driving wheel, an engine mounted on said axle, said engine having a valve communicating with the engine cylinder and a crank shaft, means on said axle for causing cyclic operation of said valve, and mechanism for connecting the axle and crank shaft.

4. A device of the class described comprising in combination a driving wheel, an axle for said driving wheel, an engine mounted on said axle, said engine having an exhaust valve and a crank shaft, a cam on said axle for causing cyclic operation of said exhaust valve, mechanism connecting said axle and crank shaft, and means for mechanically connecting the engine frame with a vehicle frame whereby the thrust of the pusher wheel is transmitted to the vehicle and whereby the engine frame is held in fixed position so that the pusher wheel is driven when the engine is operated.

5. A device of the class described comprising a pusher wheel, an axle for said pusher wheel, an engine mounted on said axle and connected in driving relation thereto, said engine comprising a frame having front and rear projections, a mud guard carried by said projections, a fuel supply tank supported by said mud guard, and means for transmitting the thrust of the pusher wheel from the forward projection to the frame of a vehicle.

[Claims 6 to 9 not printed in the Gazette.]

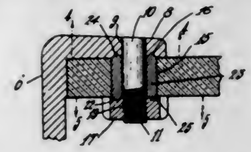
1,195,621. CATAMENIAL NAPKIN. ELIZABETH SPRAGUE, Minneapolis, Minn. Filed June 1, 1914. Serial No. 842,266. (Cl. 128—5.)



1. A device of the class described, comprising in combination a backing formed of a suitable fabric and provided with oppositely arranged flaps folded over the backing and overlapping each other, a sheet of impervious material secured to the backing on the inner face thereof, means for uniting the flaps to the backing adjacent the ends of said impervious sheet and forming the end closures of a self-closing pocket, and absorbent material in said pocket.

2. A device of the class described comprising in combination, a backing formed of a suitable fabric and provided with oppositely arranged flaps folded over the backing and overlapping each other, a sheet of impervious material secured to the backing on the inner face thereof, transverse rows of stitching extending across said flaps and backing adjacent the ends of said impervious sheet for uniting the flaps to the backing and forming the end closures of a self-closing pocket, and absorbent material in said pocket.

1,195,622. LENS-MOUNTING. FREDERICK A. STEVENS, Providence, R. I., assignor to Stevens and Company, Incorporated, a Corporation of Rhode Island. Filed Apr. 11, 1916. Serial No. 90,366. (Cl. 88—47.)



1. In eyeglasses or spectacles, the combination of a lens provided with a perforation, a bearing abutting against the edge of the lens, a strap on the bearing resting against a face of the lens, a post on the strap extending through the perforation, a cement sleeve in the perforation surrounding the post, and a nut on the post adapted to bear against the second face of the lens, said sleeve being stationary relative to the lens and nut.

2. In eyeglasses or spectacles, the combination of a lens provided with a perforation, a bearing abutting against the edge of the lens, a strap on the bearing resting against the face of the lens, a post on the strap passing through the perforation and provided with a threaded portion, a cement sleeve in the perforation surrounding the post, and a nut engaging the threaded portion of the post adapted to bear against the second face of the lens, said sleeve being stationary with relation to said lens and nut.

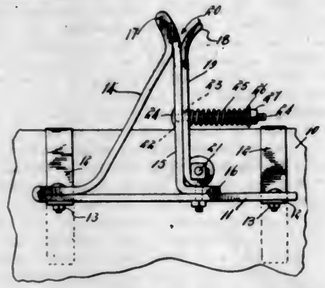
3. In eyeglasses or spectacles, the combination of a lens provided with a perforation, a bearing abutting against the edge of the lens, a strap on the bearing resting against the face of the lens and provided with cavities, a post on the strap traversing the perforation and provided with a threaded portion, a nut engaging the threaded portion of the post and bearing against the second face of the lens, and cement in the perforation surrounding the post and in the cavities of the strap and held stationary relative to the nut.

4. In eyeglasses or spectacles, the combination of a lens provided with a perforation, a bearing abutting against the edge of the lens, a strap on the bearing resting against the face of the lens, a post on the strap traversing the perforation and provided with a threaded portion, a nut engaging the threaded portion of the post bearing against the lens and provided with cavities in its bearing face, and cement in the perforation surrounding the post and in the cavities of the nut.

5. In eyeglasses or spectacles, the combination of a lens provided with a perforation, a bearing abutting against the edge of the lens, a strap on the bearing resting against the face of the lens and provided with cavities, a post on the strap traversing the perforation and provided with a threaded portion, a nut engaging the threaded portion of the post and bearing against the second face of the lens and provided with cavities in its bearing face, and cement in the perforation surrounding the post and in the cavities of the strap and of the nut.

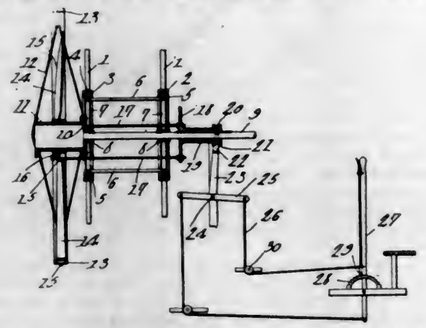
[Claims 6 and 7 not printed in the Gazette.]

1,195,623. LINE OR REIN CLAMP. PAUL R. STIBBE, Balaton, Minn. Filed Apr. 4, 1916. Serial No. 88,940. (Cl. 21—134.)



A rein holder comprising an integrally formed horizontal base portion, a vertical standard portion, an inclined brace portion, inverted U-shaped members secured to the opposite ends of the base, an eye bolt extending vertically from the lower end of the standard portion, a vertical jaw member having the lower end bifurcated and transversely apertured to straddle said eye bolt, a transverse pivot disposed through the eye bolt and bifurcated end of the jaw, a bolt carried by and extending at right angles from the intermediate portion of the standard, said jaw member being formed with an opening to receive the bolt therethrough, said bolt having an adjustable element on its other end, a resilient element disposed between the jaw member and the adjustable element of the bolt, and the upper end of the jaw member and the standard member being curved into divergent relation.

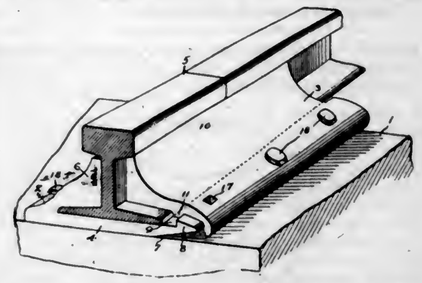
1,195,624. PROPELLER. ROE TANNER, Attica, Ohio. Filed Mar. 13, 1915. Serial No. 14,282. (Cl. 170—163.)



The combination with a structure having spaced bearing rings, and connected rings revoluble within said bearing rings, of a solid drive shaft extending through the centers of said connected rings and revoluble therewith, a propeller revoluble with said shaft and the connected rings and including radial blades movable about individual radial axes, a sleeve revoluble with and slidable upon the shaft, actuating rods fixedly connected to the sleeve and extending through the connected rings, and connections between said rods and the blades.

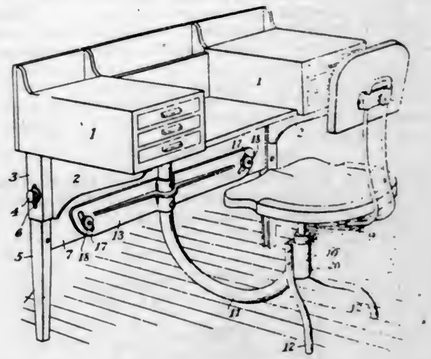
1,195,625. RAIL-CHAIR. RAY THOMPSON, Sebring, Ohio. Filed June 16, 1915. Serial No. 34,434. (Cl. 239—6.)

A rail chair including a pair of sections, one of said sections having a flange formed on its upper face and adjacent one edge, the inner face of said flange being at an angle to the longitudinal axis of said section, a rail web engaging portion formed upon the opposite edge of said section, the body of said section forming a seat for rail ends, the second section being provided with a tapered rib upon its lower face for engagement with said seat between the first-mentioned flange and the edge of the rail ends, said first section having its first-mentioned longitudinal edge tapered and curved upwardly, and a



flange formed upon the corresponding longitudinal edge of the second-mentioned section to surround said first-mentioned longitudinal edge of the first section, said second section having a rail web engaging portion, and means for securing together said sections to prevent independent longitudinal movement of the same.

1,195,626. COMBINATION DESK AND CHAIR. MARTIN THUM, Rochester, N. Y. Filed Apr. 14, 1915. Serial No. 21,461. (Cl. 155—34.)



1. The combination of a desk and a chair, each provided with means for supporting it against lateral tilting but not against tilting in a forward and rearward direction, and means connecting the desk and the chair and adapted to prevent all relative movement except relative rotation about a substantially horizontal axis.

2. A combination desk and chair, comprising a standard with two legs and a desk-top attached thereto, a chair having two legs detachably connected with the desk-standard and adapted to swing in a plane parallel with that of the legs of the latter, substantially as shown and described.

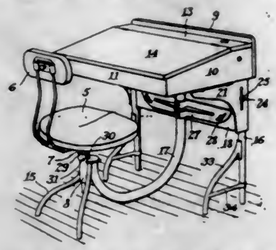
3. A combination desk and chair, comprising a desk having a standard with two legs, a chair having two legs, means for attaching the chair pivotally to the desk-standard in position in front of the desk, and means for limiting the swinging movement of the chair upon its pivot, substantially as shown and described.

4. A combination desk and chair, comprising a desk having a standard with two legs, a chair having two legs, means for attaching the chair pivotally to the desk-standard in position in front of the desk, and frictional means for resisting the swinging movement of the chair upon its pivot, substantially as shown and described.

5. The combination of a desk provided with legs located adjacent to its sides; a chair provided with two legs; and a support extending between the chair and the desk and clear of the floor-surface, the support being attached rigidly to the chair and pivoted to the desk upon a horizontal axis.

[Claim 6 not printed in the Gazette.]

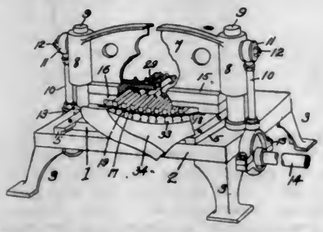
1,195,627. ADJUSTABLE AND COMBINED FURNITURE. MARTIN THUM, Rochester, N. Y. Filed Oct. 29, 1915. Serial No. 58,644. (Cl. 155—34.)



1. The combination, with a desk-body, of a bracket attached thereto at each side thereof and extending downwardly therefrom and upwardly therein, each bracket having at its forward margin an inwardly-directed flange, a support for the desk-body comprising legs and a connecting member, said legs being arranged between said brackets and their flanges, and means for adjustably securing said desk-body to its said support.

2. The combination, with a desk-body, of a support therefor comprising legs and a connecting member, said legs being formed of sheet metal bent into channel shape at their upper parts to receive the ends of said connecting member and having marginal flanges bent inwardly toward each other which enter the connecting member on each side thereof, and means for fixing said support to said desk-body.

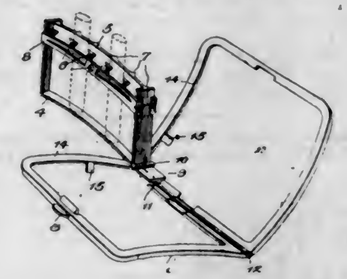
1,195,628. MACHINE FOR PUNCHING AND MARKING BUTTONED-SHOE UPPERS. JOSEPH LOTT TREHARN, Norwood, Ohio. Filed July 26, 1915. Serial No. 41,988. (Cl. 33—190.)



1. In a device of the character described, the combination of a base, a table adapted to be set in adjusted position on said base, a shoe-upper supporting-plate detachably secured in spaced-relation on the upper-face of said table, a cross-head or beam reciprocally-mounted on said base and adapted to be moved to and from vertically-spaced relation with said upper-face of the table, a series of horizontally disposed needle-armed spindles adjustably and detachably mounted along the bottom-face of said cross-head and adapted to be held in varied relation both sidewise and lengthwise to suit the line of curvature as well as the spacing apart of the buttons and the button-holes along the lapped upper and lower flies of the shoe-upper, and a plate removably secured on the cross-head beneath said spindles and having gains or notches along its fore-edge to seat the needles in the spindles when setting the latter in the alinement they are to assume for use.

2. In a device or machine of the character described, the combination of a base, a table or platen adjustably secured on said base and having a detachable shoe-upper supporting-plate mounted in spaced relation thereon, a cross-head or beam reciprocally-mounted for action on said base in relation with said table, a series of needle-armed spindles adjustably and detachably mounted along the lower face of said beam and adapted to puncture and guide-mark the upper and lower flies of the shoe-upper, a detachable-plate having along its fore-edge a series of gains or notches to seat the needles of said spindles to suit the line of curvature and the spacing apart that the buttons and button-holes shall assume in the lapped-flies of the shoe-upper, springs having tension-adjusting collars mounted at the rear ends of the spindles whereby said spindles can be readily returned to true alinement of their fore ends previous to the alinement they are to assume in use, and a resilient stripper-plate attached at its rear end to the bottom of each spindle-head and having a perforation at its fore end for the passage therethrough of the needle in the spindle whereby the upper-fly of the shoe-upper is perforated and then the lower-fly guide-marked or impressed for the making of the button-holes and the attachment of the buttons, respectively.

1,195,629. CIGARETTE-CASE. JAMES L. TUFFLEY, Attleboro, Mass., assignor to The James E. Blake Company, Attleboro, Mass., a Corporation of Rhode Island. Filed Apr. 1, 1916. Serial No. 88,189. (Cl. 206—41.)



1. In combination with a cigarette case including a hinged front and back, a member secured to the hinge pintle, a holder, a spring hinge connected to the holder and member, and flanges on the front and back for engagement with the opposed side edges of the base of the holder for automatically moving the holder into the case upon closing of the same.

2. In combination with a case having a hinged front and back, a holder in hinged connection with the case hinge, means for moving the holder out from a side of the case upon opening of the same, and flanges on the case for engagement with the holder for moving the latter into the case upon closing of the case.

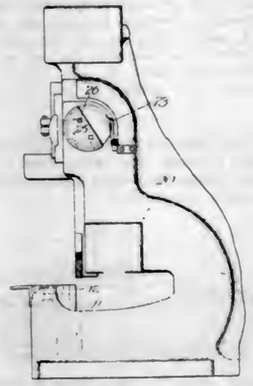
3. In combination with a case having hinged front and back, a member pivoted to the hinge pintle of the case, a holder hinged to the member at a side of the case, means for tensioning the holder so that upon opening of the case the holder will be projected out from a side of the case, and means associated with the case for automatically moving the holder into the case upon closing of the same.

4. In combination with a case having a cover, a holder formed to removably hold cigarettes, and means operating independently of the cover whereby upon opening of the latter the holder will be automatically projected out of the case.

5. In combination with a cigarette case having a cover, a normally tensioned cigarette holder held by the case and cover therewithin and means which upon release of the cover causes the holder to be bodily moved entirely without the case to allow the cigarettes to be removed therefrom.

[Claims 6 to 14 not printed in the Gazette.]

1,195,630. MAGNETIC GRIP. EDWARD H. WALSH, Chicago, Ill. Filed Mar. 29, 1916. Serial No. 87,458. (Cl. 164—47.)

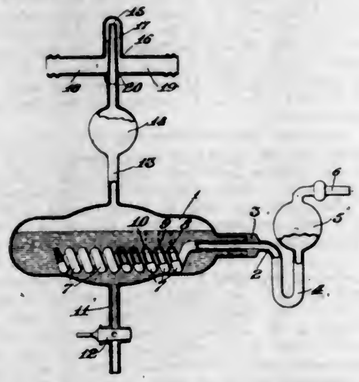


1. In a device of the class described, the combination of a bed and a movable element, a plurality of series of magnetic devices in said bed, a source of electric energy and a pair of switches connected to the main shaft of said reciprocatory element for actuating said magnetic devices during a portion only of the stroke of said shaft, substantially as described.

2. In a device of the class described, the combination of a bed and a vertically reciprocating machine element, a shaft for operating said element, a plurality of magnets mounted in said bed and a switch carried by the end of said shaft and arranged to energize said magnets once during each revolution of said shaft, substantially as described.

3. In a device of the class described, the combination of a bed, a plurality of magnets mounted in said bed, a reciprocatory element mounted above said bed, an eccentric shaft for actuating said reciprocatory element and a segmental switch member carried by said shaft and so arranged that said magnets are energized during a portion only of the rotation of said shaft, substantially as described.

1,195,631. APPARATUS FOR INDICATING THE VOLUMETRIC FLOW OF A GAS. ERNEST E. WERNER, Indianapolis, Ind. Filed Apr. 19, 1915. Serial No. 22,233. (Cl. 73—167.)



1. An apparatus for indicating the volumetric flow of a gas comprising a container having a liquid therein, and through which said liquid is visible, and provided with an outlet for gas, and a conduit submerged in said liquid at an angle to the vertical and adapted to communicate with a source of gas under pressure and having apertures located at laterally separated points.

2. An apparatus for indicating the volumetric flow of a gas comprising a container having a liquid therein, and through which said liquid is visible, and provided with an outlet for gas, and a conduit submerged in said liquid at an angle to the vertical and adapted to communicate with a source of gas under pressure and having a row of apertures in its upper side.

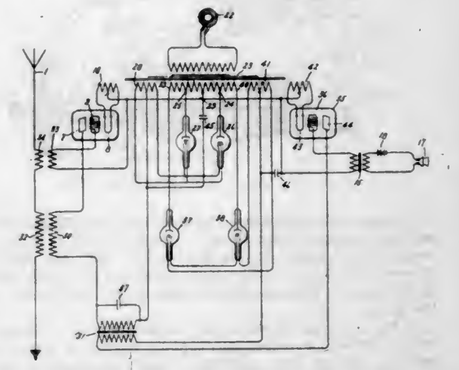
3. An apparatus for indicating the volumetric flow of a gas comprising a container having a liquid therein, and through which said liquid is visible, and provided with an outlet for gas, and a horizontally-disposed conduit submerged in the liquid of said container and adapted to communicate with a source of gas under pressure, and having a line of apertures extending lengthwise thereof.

4. An apparatus for indicating the volumetric flow of a gas comprising a submerged conduit adapted to communicate with a source of gas under pressure and presenting a symmetrical tortuous passage, each bend whereof is provided with an aperture.

5. An apparatus for indicating the volumetric flow of a gas comprising a submerged horizontally-disposed conduit adapted to communicate with a source of gas under pressure and presenting a symmetrical tortuous passage, each bend whereof is provided with an aperture.

[Claims 6 to 8 not printed in the Gazette.]

1,195,632. CIRCUIT CONNECTIONS OF ELECTRON-DISCHARGE APPARATUS. WILLIAM C. WHITE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 23, 1915. Serial No. 46,770. (Cl. 250—6.)



1. The combination with an electron discharge device comprising an evacuated envelop having therein a filamentary cathode and a coöperating anode of a source of alternating potential applied to said cathode for heating it to incandescence and external circuit connections between said cathode and anode so arranged that the average potential difference between cathode and anode at any instant is independent of the potential applied to the cathode for heating purposes.

2. The combination with an electron discharge device comprising an evacuated envelop having therein a filamentary cathode and a coöperating anode of a transformer connected to a source of alternating current and having its secondary connected to said cathode for heating it to incandescence and an external circuit connection between said anode and the central point in the secondary winding of said transformer.

3. The combination with an electron discharge device comprising an evacuated envelop having therein a filamentary cathode, a coöperating anode, and a discharge

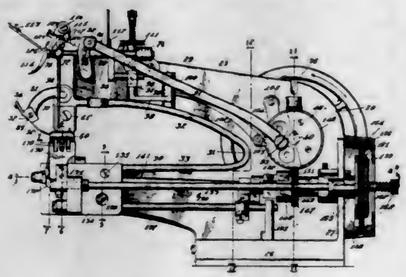
controlling grid, of a source of alternating potential applied to said cathode for heating it to incandescence and external circuit connections between said cathode and anode and between said cathode and grid so arranged that the average potential difference between cathode and anode and between cathode and grid at any instant is independent of the potential applied to the cathode for heating purposes.

4. The combination with an electron discharge device comprising an evacuated envelop having therein a filamentary cathode, a coöperating anode and a discharge controlling grid of a transformer connected to a source of alternating current and having its secondary connected to said cathode for heating it to incandescence and external circuit connections between said anode and said grid, and the central point in the secondary winding of said transformer.

5. The combination with an electron discharge device comprising an evacuated envelop having therein a filamentary cathode and a discharge controlling grid of a source of alternating potential applied to said cathode for heating it to incandescence and external circuit connections between said cathode and grid so arranged that the average potential difference between cathode and grid at any instant is independent of the potential applied to the cathode for heating purposes.

[Claim 6 not printed in the Gazette.]

1,195,633. SEWING-MACHINE FOR BLINDSTITCHING. JAMES WHITELAW, St. Louis, Mo. Filed Jan. 8, 1912. Serial No. 669,927. (Cl. 112—26.)



1. In a sewing machine, stitch forming mechanism comprising a reciprocating needle, a needle-thread take-up, a needle-thread looper having a vibrating part, and means to move the take-up in harmony with the vibrating part of the looper through a part only of the movement of the latter.

2. In a sewing machine the combination of a reciprocating needle, a looper mechanism having a vibrating part, a take-up arm, yielding connections between the take-up arm and the vibrating part of the looper, and a stop for the take-up arm arranged to prevent the take-up arm following the full course of movement of the looper part.

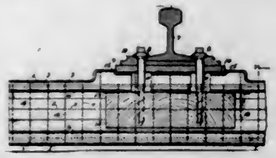
3. In a sewing machine, stitch forming mechanism comprising a reciprocating needle, a main shaft, a needle thread looper mechanism coöperating therewith actuated by said main shaft and coöperating with said needle, and a needle thread take up mechanism mounted for movements distinct from those of said needle and said looper mechanism and operated by said looper mechanism.

4. In a sewing machine, stitch-forming mechanism comprising a reciprocating needle, a vertical looper member arranged to work about said needle, a looper bar horizontally disposed and at its active end carrying said looper, a swinging yoke, means to move said yoke to move the looper bar bodily up and down and axially, means to oscillate said looper bar about its own axis, a take-up, a yielding connection between the take-up and the yoke, and a stop for the take-up arranged for preventing the same from following the full course of movement of said yoke.

5. In a sewing machine, stitch-forming mechanism comprising a reciprocating needle, a movable part arranged for a relatively long range of movement, a take-up arm, a yielding connection between the take-up arm and said movable part, and a stop for take-up arm arranged to prevent said arm from following the full course of movement of said movable part.

[Claims 6 and 7 not printed in the Gazette.]

1,195,634. CONCRETE RAILROAD CROSS-TIE. JULIUS H. G. WOLF, Oakland, Cal. Filed Sept. 5, 1911, Serial No. 647,669. Renewed Feb. 2, 1915. Serial No. 5,778. (Cl. 238—3.)



1. A railway cross tie comprising a hollow body of concrete, having polygonal outer and inner surfaces, polygonal envelops of wire netting embedded in said concrete closely adjacent respectively to said surfaces, a longitudinal open metallic reinforcement between said polygonal envelops, formed cross sectionally in the shape of a closed polygon and extending the length of the tie, and longitudinal bars embedded in the concrete within and closely adjacent respectively to the inner angles of the open metallic reinforcement, and each extending substantially the length of the tie.

2. A railway cross tie consisting of a tubular integral body of concrete having an upper inner surface of substantially uniform height the entire length of the tie, and an upper outer surface which is raised in the parts that are beneath the rail, an envelop of wire netting embedded in the concrete closely adjacent to the upper surface of the tie, both in the main depressed portion and in its elevated part beneath the rail, an envelop of wire netting embedded in the concrete closely adjacent to the inner surface, a polygonal shell of open metallic reinforcement embedded longitudinally in said concrete, and longitudinal bars extending substantially the length of the tie and embedded in the concrete within, and adjacent to, the angles of the shell.

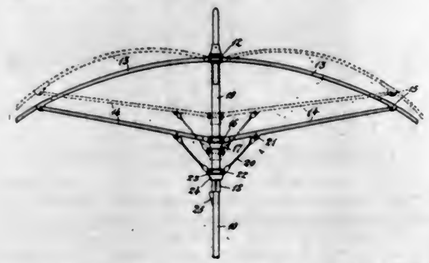
3. A railway tie consisting of a tubular integral body of concrete having an upper inner surface of substantially uniform height the entire length of the tie, and an upper outer surface which is raised in the parts that are beneath the rails, said tie being formed on its upper surface with shoulders to receive the thrust of the rail, and an envelop of wire netting embedded in the concrete closely adjacent to the upper surface of the tie both in its main depressed portion and in its elevated parts beneath the rails, and following the contour of the upper surfaces of the shoulders.

4. A railway cross tie consisting of a tubular integral body of concrete having an upper inner surface of substantially uniform height the entire length of the tie and an upper outer surface which is raised in the parts that are beneath the rail, said tie being formed on its upper surface with shoulders to receive the thrust of the rail, and an envelop of wire netting embedded in the concrete closely adjacent to the upper surface of the tie both at its main and depressed portion and in its elevated parts beneath the rail, and following the contour of the upper surfaces of the shoulders, an envelop of wire netting embedded in the concrete closely adjacent to the inner surface of the tie, a polygonal shell of open metallic reinforcement embedded longitudinally in said concrete, and longitudinal bars extending substantially the length of the tie and embedded in the concrete within, and adjacent to, the angles of the shells.

5. A railway cross tie consisting of a tubular integral body of concrete and longitudinal metallic reinforcement and wire netting embedded therein, the upper outer surface of the concrete adjacent to the rail-seat being raised to form a shoulder, the concrete having openings therethrough under the railseat to pass an attaching device for holding the rail to the tie independently of the tie structure.

[Claim 6 not printed in the Gazette.]

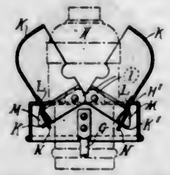
1,195,635. UMBRELLA. MAX ALTSHULER, New York, N. Y., and SAMUEL M. VINES, Westfield, N. J., assignors to Altshuler Bros., New York, N. Y., a Firm composed of Solomon Altshuler and Max Altshuler. Filed Dec. 30, 1914. Serial No. 879,635. (Cl. 135—27.)



1. In an umbrella, the combination of a rod, an upper crown upon said rod, continuous ribs attached to said upper crown, a main runner slidably mounted on said rod, an intermediate crown carried by said main runner, a sleeve forming a continuation of said main runner above said intermediate crown and with said main runner constituting a floating ferrule adapted to abut against said upper crown to limit an abnormal upward movement of said main runner, continuous main braces connected with said ribs and with said intermediate crown, an auxiliary runner slidably mounted on said main runner, auxiliary braces connected with said main braces near their inner ends and with said auxiliary runner at its upper end, and a covering material attached to said ribs at intervals throughout the length thereof.

2. In an umbrella the combination of a rod, a ferrule slidable thereon, ribs pivotally attached to said rod, main braces pivotally attached to said ribs and to said ferrule and approximately trough shaped in cross-section, an auxiliary crown slidably mounted on said ferrule, and flat auxiliary braces having one end pivotally connected with said auxiliary crown and their opposite ends twisted about the axis of said auxiliary braces to extend at approximately right angles to the major portions thereof, said twisted ends being pivoted to said main braces and extending into the troughs thereof and said major portions of said auxiliary braces being adapted to lie flat against the open mouth of said troughs in the folded condition of the umbrella.

1,195,636. ELECTRIC SHADE-HOLDER. LAURITZ W. ANDERSEN, Waterbury, Conn. Filed Jan. 13, 1916. Serial No. 71,833. (Cl. 240—114.)



1. A separable socket cover, a member to which the sections of said socket cover are connected, said member having shade supporting means connected thereto, said sections having means for engaging said member to hold the sections closed.

2. A shade carrying member, a separable socket holder connected thereto, the sections of said holder having yieldable means for engaging said member and hold said sections closed.

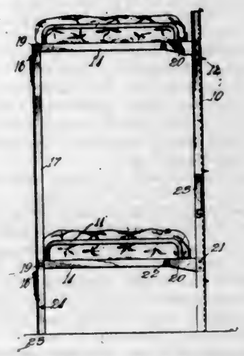
3. A shade carrying member, a pair of socket cover sections pivoted thereto and adapted to separate and receive a socket therebetween, said sections having automatic engaging means coöperating with said shade carrying member to hold said sections closed.

4. A pair of socket cover sections each having a spring member, and a shade carrying device to which said sections are pivoted, the spring member of said sections being adapted to engage said shade carrying device to hold said sections closed.

5. A device of the kind described comprising a ring, having shade supporting means connected thereto, socket cover sections pivoted to said ring and adapted to envelop a socket and locking means carried by said sections and adapted to engage said ring.

[Claim 6 not printed in the Gazette.]

1,195,637. BED. WILLIAM B. ANDERSON, Chicago, Ill., assignor to Haggard & Marcusson Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 23, 1915. Serial No. 23,275. (Cl. 5—60.)

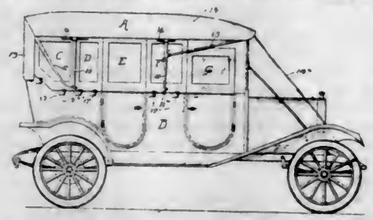


In a double deck folding bed adapted for attachment to an upright supporting surface, the combination of a pair of parallel, spaced apart vertical angle irons, each disposed with one leg flat against the support for attachment thereto, and the other leg projecting at right angles to the support, outwardly extending plates secured at two different levels to the outwardly projecting legs of the angle irons, a second pair of parallel, spaced apart vertically disposed angle irons, each disposed with one leg in the plane of its corresponding outwardly extending plates and their other legs projecting away from each other in a plane parallel to the supporting surface, upper and lower spring carrying frames comprising angle iron end members having one leg thereof lying in a vertical plane, foot and head members carried by the end members inside the planes of said plates, and means for pivotally connecting the vertical legs of the end members to the inner sides of said plates and to the inner sides of the legs of the last mentioned pair of vertical angle irons which lie in the same plane as said plates.

1,195,638. REMOVABLE WINDOW FOR VEHICLES. EDWIN A. ARMSTRONG, Highland Park, Ill.; Zuleime B. Armstrong executrix of said Edwin A. Armstrong, deceased. Filed Sept. 20, 1912. Serial No. 721,344. (Cl. 21—62.)

1. The combination with a vehicle body, and a foldable top or cover, a window sash, comprising a rigid frame,

means flexibly connecting the lower part of said sash with said vehicle body, adapted to prevent vertical movement of the sash relatively to the vehicle body, while permitting free lateral movement of the upper part of said sash relatively to said vehicle body, and means connecting the upper part of the sash with the foldable top.



2. The combination of a vehicle body and a foldable top or cover, a window sash comprising a rigid frame, means flexibly connecting the lower part of said sash with the vehicle body, adapted to prevent vertical movement of said sash relatively to said vehicle body, while permitting free lateral movement of the upper part of said sash relatively to said vehicle body, and means connecting the upper part of the sash with the foldable top, permitting free endwise movement of the foldable top relatively to said sash.

3. The combination with a vehicle body and a foldable top or cover, a window sash comprising a rigid frame, a bracket secured to said vehicle body and provided with an arm extending outwardly therefrom, means flexibly connecting the lower part of said sash with said arm, adapted to prevent vertical movement of said sash relatively to said bracket, while permitting free lateral movement of the upper part of the sash relatively to the said vehicle body, and means connecting the upper part of the sash with the foldable top.

4. The combination with a vehicle body and a foldable top or cover, a window sash comprising a rigid frame, a bracket secured to said vehicle body and provided with an arm extending outwardly therefrom, means flexibly connecting the lower part of the sash with said arm, adapted to prevent vertical movement of said sash relatively to said bracket, and means connected with the foldable top, embracing a member engaging the upper rail of the sash and permitting free endwise movement of said foldable top relatively to said sash.

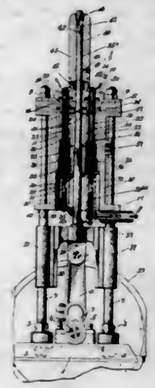
5. The combination with a vehicle body and a foldable top or cover, a window sash comprising a rigid frame, means flexibly connecting the lower part of the sash with the vehicle body, adapted to prevent vertical movement of said sash relatively to said vehicle body, while permitting free lateral movement of the upper part of said sash relatively to the vehicle body, and means providing connection for the upper part of the sash with said foldable top including a member engaging the upper part of said sash and adapted to limit the lateral movement thereof.

[Claims 6 to 18 not printed in the Gazette.]

1,195,639. ENGINE. JAMES H. AUBLE, Cincinnati, Ohio, assignor of one-half to Harry A. Barrett, Cincinnati, Ohio. Filed Nov. 12, 1913. Serial No. 800,542. (Cl. 60—39.)

1. In a steam actuated motor including among its elements, a piston and cylinder, means for injecting a small quantity of water into the cylinder, and an electric heating apparatus having a heat distributing part within the cylinder for vaporizing the water, and means for intermittently actuating said heating apparatus when the piston is substantially in its innermost position.

2. In a steam actuated motor including among its elements, a piston and cylinder, means for injecting a small quantity of water into said cylinder at each operation thereof, an electric heating means having a heat distributing portion within the cylinder, a normally open electric circuit for said heating means, and circuit controlling means operated to close the circuit by the relative movement of the piston and cylinder.



3. In a steam actuated motor including among its elements, a piston and cylinder, means for introducing a small quantity of water into the cylinder, an electric heating apparatus having a heat distributing portion within the cylinder, a normally open electric circuit for said heating apparatus, and movable contact devices for said circuit located within the cylinder and operated to close said circuit by the relative movement of the piston and cylinder.

4. In a steam actuated motor including among its elements, a piston and cylinder, means for introducing a small quantity of water into the cylinder, an electric heat applying device having a heat distributing portion within the cylinder, a normally open electric circuit for said heat applying device, and circuit controlling devices including opposed contacts carried by said piston and cylinder respectively and adapted to be brought into contact with each other to close said circuit by the relative movement of the cylinder and piston.

5. In a steam actuated motor including among its elements, a piston and cylinder, means for introducing a small quantity of water into the cylinder, an electric heat applying device having a heat distributing portion within the cylinder, a normally open electric circuit for said heat applying device, and circuit controlling devices including opposed contacts within the cylinder carried by said piston and cylinder respectively and adapted to be brought into contact with each other to momentarily close said circuit by the relative movement of the cylinder and piston, one of said contacts being yieldingly supported in relation to the part with which it is connected.

[Claims 6 to 16 not printed in the Gazette.]

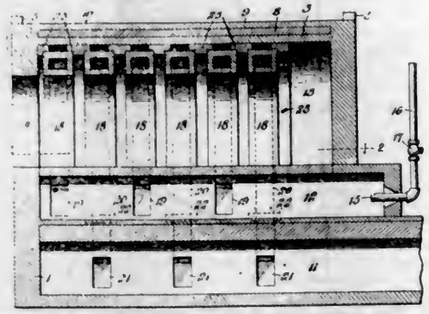
1,195,640. ANTISKIDDING DEVICE FOR VEHICLE-WHEELS. SAMUEL BARUCH, New York, N. Y. Filed Dec. 16, 1915. Serial No. 67,094. (Cl. 152—14.)



1. An anti-skidding device for vehicle wheels including a plurality of substantially U-shaped sheet metal strips, each receiving the tire, each of said strips having the tread portion thereof deformed to present outwardly and inwardly facing cup-shaped depressions.

2. An anti-skidding device for vehicle wheels, including a plurality of substantially U-shaped sheet metal strips each receiving the tire and each having the tread portion thereof deformed to present an outwardly extending annular projection, the portion of the strip encircled by said projection being displaced outwardly in respect to the adjacent body portion of the strip.

1,195,641. MUFFLE-FURNACE. GEORGE W. BATCHELL, Cincinnati, Ohio, and JAMES H. WADE, Moundsville, W. Va. Filed Mar. 18, 1916. Serial No. 85,150. (Cl. 263—41.)



1. A muffle furnace having a muffle chamber with a series of spaced flues contained within the chamber and extending in alternation up one side of said chamber, across the top thereof and down the other side of the chamber, a flue underlying the muffle chamber and communicating with all the flues on the opposite sides of the chamber, said last-named flue having means for the combustion of fuel to produce heat, and an outlet flue underneath the flue underlying the muffle chamber and communicating with all the flues extending through the chamber.

2. A muffle furnace having a muffle chamber with a series of spaced flues contained within the chamber and extending in alternation up one side of said chamber, across the top thereof and down the other side of the chamber, a flue underlying the muffle chamber and communicating with all the flues on the opposite sides of the chamber, said last-named flue having means for the combustion of fuel to produce heat, and an outlet flue underneath the flue underlying the muffle chamber and communicating with all the flues extending through the chamber, said flues extending through the muffle chamber being each provided with a valve or damper individual thereto for controlling the flow of heated products of combustion therethrough.

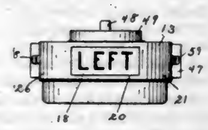
3. A muffle furnace provided with a muffle chamber, spaced heating flues wholly within the chamber where traversing it and extending up and down opposite sides of said muffle chamber and over the top thereof, a heating flue with means therein for the combustion of fuel and communicating with the uptake sides of the first-named flues, an outlet flue underlying the heating flue and communicating with the downtake sides of the first-named flues, and a valve or damper in the downtake side of each of the first-named flues and individual thereto.

4. A muffle furnace provided with a muffle chamber with heating flues contained within and traversing said chamber, and heat insulating material lodged within the walls of the muffle chamber in enveloping relation to the sides and top of the chamber.

5. A muffle furnace having a muffle chamber, a heating flue extending beneath the chamber, a series of flues inside of the chamber and spaced apart lengthwise of the series with alternate flues communicating with the respectively opposite sides of the heating flue underneath the chamber, each of the series of flues rising within the chamber along one side of said chamber, extending across the top and down the other side thereof, and an outlet flue into which all of the heating flues within the chamber discharge.

[Claims 6 to 15 not printed in the Gazette.]

1,195,642. AUTOMOBILE SIGNALING DEVICE. ISAAC BAUER, Middletown, Conn. Filed Oct. 2, 1915. Serial No. 53,778. (Cl. 40—52.)



1. An automobile signaling device comprising a controller having a series of circuit closing devices and an indicator, the said indicator comprising a fixed part, a moving part rotatively mounted on the said fixed part, having a plurality of display plates at the periphery and a corresponding number of fingers, means tending to rotate the said moving member, spring positioned stops movably mounted on the said fixed part for engaging with the said fingers, magnets for operating the said stops responsive to operation of the said circuit closing devices, and the said stops consisting of an individual stop corresponding to each of the said circuit closing devices and an extra stop, suitable for coöperating normally with its finger independently of the said circuit closing devices.

2. An automobile signaling device comprising a controller having circuit closing devices, and an indicator, the said indicator comprising a fixed member having a body plate, a shaft supported from said body plate, and a cylindrical side wall having a display opening, and a moving member, mounted on the said shaft, having a generally cylindrical peripheral wall provided with a plurality of display plates and a corresponding number of stop fingers, means tending to rotate the said moving member, stops movably mounted on the said fixed member for engaging with the said fingers, spring means for one of the said stops tending to hold the same in the engaging position and other spring means for each of the other stops tending to hold each of the said other stops in position of disengagement with its finger, magnets for each of the said stops for operating the same in opposition to the said spring means, the magnets for the said other stops being connected each to one of the said circuit closing devices, and the magnet for the said one stop being connected in circuit with the supply and connected with each of the other magnets.

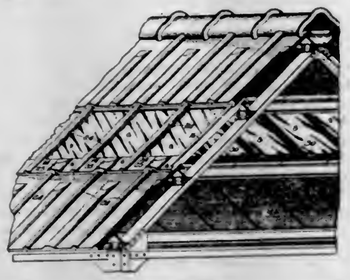
3. In combination in an automobile signaling device, a casing having a vertical shaft and a cylindrical side wall provided with an opening, a moving member mounted on the said shaft, and having a plurality of display plates, means tending to rotate the said moving member, controlling means for the said moving member comprising fingers on the said moving member and movable stops operatively mounted on the said casing, spring means for positioning each of the said movable stops, magnets for moving the said stops in opposition to the said fingers, stops and magnets corresponding in number to the said display plates, one of the said stops being operated negatively by its magnet and the other of the said stops being operated positively by their magnets, and a controller having circuit closing devices corresponding in number to the said positively operated stops.

4. An automobile signaling device comprising in combination a casing of cylindrical form having a display window in the side wall, a display member, rotatively mounted in the said casing, having a plurality of display devices for being brought into registration with the said window, motor means tending to rotate the said display member, the said display member having a plurality of fingers corresponding in number to the number of said display devices, a set of circuit closing devices comprising in number one less than the number of the said display devices, a set of spring magnet controlled stops corresponding

in number to the number of the said circuit closing devices suitable for selectively coöperating each with one of the said fingers, and a spring and magnet controlled stop for normally engaging with one of the said fingers, and operative to release its finger when each of the said circuit closing devices is operated.

5. In an automobile signaling device, a display member rotatively mounted, and having a selective finger and a normal finger, a selective stop for coöperating with the said selective finger and a normal stop for coöperating with the said normal finger, spring means tending to hold the said selective stop in disengaging position, spring means tending to hold the said normal stop in engaging position, and magnets for operating each of the said stops having their coils in series, whereby the said magnets will be simultaneously energized, and the normal stop and finger will be disengaged, and the selective stop will be moved to the engaging position.

1,195,643. CEMENT SLAB OR TILE WITH LIGHT-PANE. LEROY BAUMGARTL, Chicago, Ill., assignor to Federal Cement Tile Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 10, 1916. Serial No. 77,401. (Cl. 108—10.)

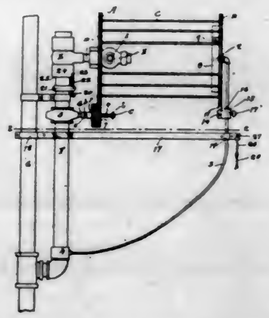


1. A slab or tile of the character set forth, comprising a relatively thin body portion of cement or the like, having an opening therethrough extending closely adjacent to the longitudinal sides, a section of translucent material confined in said opening, said body portion having reinforcing ribs along its longitudinal sides in which said translucent material is embedded, and a central reinforcing rib longitudinally disposed adjacent one of the edges, said rib being of sufficient width to provide a passage communicating with the underside of the translucent material for conducting moisture to the upper surface of an adjacent and lower slab, and having a space adjacent said passage adapted to coact with the ribs of an adjacent section.

2. A slab or tile of the character set forth, comprising a relatively thin body portion of cement or the like, having an opening therethrough extending closely adjacent to the longitudinal sides, a section of translucent material confined in said opening, said body portion having reinforcing ribs along its longitudinal sides in which said translucent material is embedded, and a central reinforcing rib longitudinally disposed adjacent one of the edges, said rib being of sufficient width to provide a passage communicating with the underside of the translucent material for conducting moisture to the upper surface of an adjacent and lower slab, and a drip cup extending transversely of the slab adjacent the lower edge of the translucent material to collect the moisture therefrom and conduct it through said passage.

3. A slab or tile of the character set forth, comprising a relatively thin body portion of cement or the like, having an opening therethrough extending closely adjacent to the longitudinal sides, a section of translucent material confined in said opening, said body portion having reinforcing ribs along its longitudinal sides in which said translucent material is embedded, and a central reinforcing rib longitudinally disposed adjacent one of the edges, said rib being of sufficient width to provide a passage communicating with the underside of the translucent material for conducting moisture to the upper surface of an adjacent and lower slab, having a space adjacent said passage adapted to coact with the ribs of an adjacent section, and a drip cup extending transversely of the slab adjacent the lower edge of the translucent material to collect the moisture therefrom and conduct it through said passage.

1,195,644. HOSE-REEL. NORMAN FREDERICK DAVID BEARD, Toronto, Ontario, Canada. Filed Aug. 6, 1915. Serial No. 44,015. (Cl. 137—81.)



1. The combination of a horizontally disposed hose reel having a circular tooth-provided rotary member; a vertically disposed conduit; means coupled to said conduit and on which said reel is mounted to rotate and by means of which water is conveyed to the hose wound on said reel; a horizontally disposed controlling valve in said conduit having its valve rod extending outside the same; a toothed wheel secured to said valve rod and having a face of greater width than the face of said rotary tooth-provided member with which it meshes; the said toothed wheel designed to be operated by said circular tooth-provided member to open said controlling valve as the reel is rotated by the pulling of the hose therefrom.

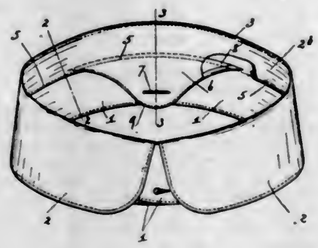
2. The combination with a hose reel having a circular tooth-provided rotary member at its inner end; a conduit; rotatable means coupled to said conduit and on which the inner end of said reel is mounted to rotate, and by means of which water is conveyed to the hose wound on the said reel; a controlling valve in said conduit having its valve rod extending outside the same; a toothed wheel secured to said valve rod and having a face of greater width than the face of said circular tooth-provided member with which it is designed to be brought into mesh; the said toothed wheel designed to be operated by said circular tooth provided member to open the said controlling valve as the reel is rotated by the pulling of the hose therefrom; a bracket mounted to turn on said conduit and on the upper end of which is journaled the outer end of said reel; a leaf spring attached at its outer end to said bracket, and secured at its inner end to a suitable support, and a fusible link whereby said leaf spring is normally coupled to a wall, the said link designed to be destroyed by a rise in temperature to permit said leaf spring to move said reel to bring said tooth-provided member into mesh with said toothed wheel.

3. The combination with a hose reel having a circular tooth-provided rotary member at its inner end; a conduit; rotatable means coupled to said conduit and on which the inner end of said reel is mounted to rotate, and by means of which water is conveyed to the hose wound on said reel; a controlling valve in said conduit having its valve rod extending outside the same; a toothed wheel secured to said valve rod and having a face of greater width than the face of said circular tooth-provided member with which it is designed to be brought into mesh; the said toothed wheel designed to be operated by said circular tooth-provided member to open the said controlling valve as the reel is rotated by the pulling of the hose therefrom; a bracket mounted to turn on said conduit and on the upper end of which is journaled the outer end of said reel; a leaf spring attached at its outer end to said bracket, and secured at its inner end to a suitable support, and a fusible link whereby said leaf spring is normally coupled to a wall, the said link designed to be destroyed by a rise in temperature to permit said leaf spring to move said reel to bring said tooth-provided member into mesh with said toothed wheel; a bracket mounted to turn on said conduit and on the upper end of which is journaled the outer end of said reel; a leaf spring attached at its outer end to said bracket, and secured at its inner end to a suitable support, and a fusible link whereby said leaf spring is normally coupled to a wall, the said link designed to be destroyed by a rise in temperature to permit said leaf spring to move said reel to bring said tooth-provided member into mesh with said toothed wheel.

4. The combination with a hose reel having a circular tooth-provided rotary member at its inner end; a conduit; rotatable means coupled to said conduit and on which the inner end of said reel is mounted to rotate, and by means of which water is conveyed to the hose wound on the said reel; a controlling valve in said conduit having its valve rod extending outside the same; a toothed wheel secured to said valve rod and having a face of greater width than the face of said circular tooth-provided member with which it is designed to be brought into mesh; the said toothed wheel designed to be operated by said circular tooth-provided member to open the said controlling valve as the reel is rotated by the pulling of the hose therefrom; a spring attached at its outer end to the outer end of said reel, and secured at its inner end to a suitable support, and fusible means whereby said spring is normally coupled to a wall, which fusible means is designed to be destroyed by a rise in temperature to permit said spring to move said reel to bring said tooth-provided member into mesh with said toothed wheel.

5. The combination of a horizontally disposed hose reel having a circular tooth-provided rotary member; a vertically disposed conduit; means coupled to said conduit and on which said reel is mounted to rotate and by means of which water is conveyed to the hose wound on said reel; a horizontally disposed controlling valve in said conduit having its valve rod extending outside the same; a toothed wheel feathered on said valve rod, so as to permit of the closing of said valve independently of the movement of said reel; means for limiting the movement of said toothed wheel on said valve rod; the face of said toothed wheel being of greater width than the face of said rotary tooth-provided member with which it meshes in order to open said controlling valve as the reel is rotated by the pulling of the hose therefrom.

1,195,645. FOLD-COLLAR. JOHN M. BRIERMEISTER, Troy, N. Y. Filed Feb. 11, 1916. Serial No. 77,571. (Cl. 2—67.)



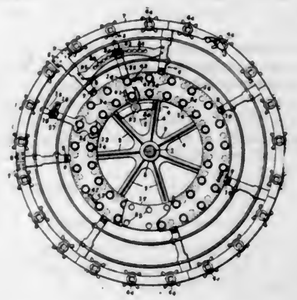
1. A fold-collar having a band and a folded-over top, said top having an integral extension of its outermost ply extended throughout its length over the top edge of the band and stitched to the inner side of the band intermediately of the height of the band, said extension having midway of its length an integral tab depending free from the band and provided with a buttonhole, said band being continuous opposite said tab.

2. A fold-collar having a band and a folded-over top, said top having an integral extension of its outermost ply extended throughout its length over the top edge of the band and stitched to the inner side of the band intermediately of the height of the band, said extension having midway of its ends an integral tab depending free from the band and provided with a buttonhole; and a facing for said tab inserted and stitched between the band and said extension.

3. A fold-collar having a band and a folded-over top, each formed of a plurality of plies, the innermost ply of the top being inserted between the band plies, the outermost ply of the top having an integral extension extending over the top edge of the band and stitched to the inner side of the band intermediately of the height of the band, said extension having midway of its ends an integral tab depending free from the band and provided with a buttonhole; and a facing for said tab inserted between the band and said extension.

4. A fold-collar having a band and a folded-over top, said top having an integral extension of its outermost ply extended throughout its length over the top edge of the band and secured by a line of stitching to the inner side of the band intermediately of the height of the band, and a tab depending below said line of stitching free from the band and provided with a buttonhole, said band being continuous opposite said tab.

1,195,646. DYEING-MACHINE. JOSEPH BENOSCH, Amsterdam, N. Y., assignor to Klauder-Weldon Dyeing Machine Company, Amsterdam, N. Y., a Corporation of New York. Filed May 11, 1914. Serial No. 837,716. (Cl. 8—19.)



1. In a dyeing machine or the like, in combination, a carrier provided with series of concentric inner and outer stick sockets, and common means to lock sticks in a plurality of the sockets of one of said series.

2. In a dyeing machine or the like, in combination, a rotatable carrier provided with inner and outer means for supporting a plurality of sticks, means to lock simultaneously all the sticks in one of said supporting means, and means to move one of said supporting means relative to the other.

3. In a dyeing machine or the like, in combination, a rotatable carrier provided with a plurality of circumferentially spaced stick sockets and independently rotatable means to lock sticks in all of said sockets simultaneously.

4. In a dyeing machine or the like, in combination, a support provided with an aperture to receive a stick, and a locking slide juxtaposed to said support and provided with an aperture to register with said support aperture.

5. In a dyeing machine or the like, in combination, an annular support provided with a series of apertured sockets to receive sticks, an annular locking slide provided with a series of openings to register with said sockets, and means to move said slide relatively to said support for closing said sockets.

[Claims 6 to 20 not printed in the Gazette.]

1,195,647. DYEING-MACHINE. JOSEPH BENOSCH, Amsterdam, N. Y., assignor to Klauder-Weldon Dyeing Machine Company, Amsterdam, N. Y., a Corporation of New York. Filed June 9, 1914. Serial No. 843,919. (Cl. 8—19.)



1. In a dyeing machine or the like, in combination, a rotary carrier comprising means adapted to support a pair of sticks oppositely disposed with respect to their ends, and a locking member yieldable to permit movement of the sticks into said supporting means.

2. In a dyeing machine or the like, in combination, a rotary carrier comprising means adapted to support a pair of sticks oppositely disposed with respect to their ends, and a locking member yieldable to permit movement of the sticks laterally into said supporting means.

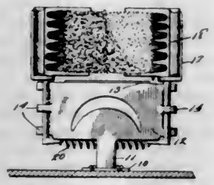
3. In a dyeing machine or the like, in combination, a rotary carrier comprising means adapted to support a pair of sticks oppositely disposed with respect to their ends, and a member adapted to coöperate with said means to lock the pair of sticks simultaneously in operative position.

4. In a dyeing machine or the like, in combination, a rotary carrier comprising means adapted to support a pair of sticks oppositely disposed with respect to their ends, a member adapted to coöperate with said means to lock the pair of sticks simultaneously in operative position, and means adapted to permit movement of the sticks into and out of said supporting means, individually or collectively.

5. In a dyeing machine or the like, in combination, a rotary carrier comprising means adapted to support a pair of sticks oppositely disposed with respect to their ends, a member adapted to coöperate with said means to lock the pair of sticks simultaneously in operative position, and means adapted to permit movement of the sticks laterally into and out of said supporting means, individually or collectively.

[Claims 6 to 15 not printed in the Gazette.]

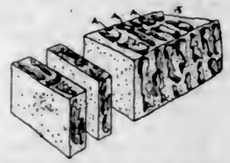
1,195,648. BOOT AND SHOE CLEANER. DAVID A. BILLINGTON, Ravenna, Ohio. Filed Jan. 6, 1915. Serial No. 844. (Cl. 15—2.)



1. In a boot and shoe cleaner, a support, a scraper carried by said support, a plurality of opposed bearing hooks at the ends of said scraper, a pair of brackets, each having a portion rotatable in said bearing hooks, an offset portion at one end thereof, a pair of brushes secured to said offset portions of said brackets, hooks at the opposite ends of said brackets from that of the formation of said offset portions and a coil spring in engagement with said hooks for normally urging said brushes carried by said offset portions of said brackets to a position so that a substantially V-shaped space is made between the same, as and for the purpose set forth.

2. In a boot and shoe cleaner, a scraper, a pair of brackets rotatably carried by said scraper, each of said brackets having an off-set portion at one end thereof, a pair of brushes secured to said off-set portions, hooks at the opposite ends of said brackets from that of the formation of said off-set portions and means in engagement with said hooks for normally urging said brushes carried by said off-set portions of said brackets to a position adapted to receive a boot or shoe therebetween.

1,195,649. METHOD OF ORNAMENTING BRICK. JOSEPH L. BUCKLEY, Davenport, Iowa. Filed Nov. 8, 1915. Serial No. 60,260. (Cl. 25—1.)



1. The method herein described of making ornamental-faced brick, consisting in continuously forming a column of the plastic clay, continuously forming upon one face of the column a series of shaving-like fragments and irregularly spacing said fragments along said face, then reuniting the fragments to said face by pressure, the pressure being sufficient to only attach the fragments to the column and not to obliterate them, thereby leaving the fragments in relief on the face of the column, and then severing the column into the desired sizes.

2. The method herein described of making ornamental-faced brick, consisting in continuously forming a column of the plastic clay, continuously producing on one face of the column a series of irregularly-shaped and irregularly-spaced shaving-like fragments, then applying sufficient pressure to the fragments to reunite them to the column, then severing the column into the desired sizes, and finally rolling said face to smooth down the edges formed during the severing of the column.

3. The method herein described of making ornamental-faced brick, consisting in continuously forming a column of the plastic clay, continuously roughening one face of the column and simultaneously producing thereon a series of irregularly-shaped and irregularly-spaced bark-like shavings, then pressing the fragments against the face from which they were formed, the pressure being sufficient to reunite the shavings to the column without destroying the bark-like configuration thereof.

4. The method herein set forth of manufacturing ornamental-faced brick, consisting in continuously forming the plastic clay into a column and continuously shaving a thin slice from one face of the column, the slice being of such thickness that it breaks up into irregular fragments by the act of severing the slice, the severed fragments being distributed at irregular distances from each other along the face of the column, and then reuniting the fragments by pressure to that face of the column from which they were severed, whereby the fragments will be in relief and the surrounding surface of the face of the column will form a roughened back-ground, and severing the column into the desired sizes.

5. The method herein described of manufacturing ornamental-faced brick, consisting in continuously forming the plastic clay into a column, continuously severing or shaving a thin slice from one face of the column and simultaneously breaking up said slice into irregularly-shaped fragments and distributing them along the surface from which they were cut, and then reuniting the fragments to the column, leaving the fragments in relief on said face, and severing the column into the desired sizes.

[Claim 6 not printed in the Gazette.]

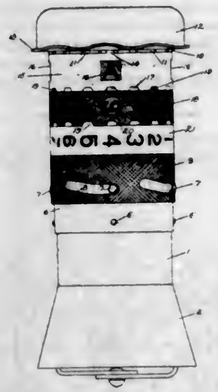
1,195,650. FORK. GRACE K. BURKE, Chicago, Ill. Filed Jan. 7, 1915. Serial No. 1,030. (Cl. 7—17.)

1. A fork of the character described, comprising a pair of tines formed on wire shank portions, an intermediate tine formed on a shank overlying said first mentioned shank portions and internested therewith, another shank portion underlying said first mentioned shank portion and internesting therewith, all the shank portions being parallel with respect to each other and connected to their tines by integral intermediate portions deflecting slightly downwardly from the shank portions, the tines projecting upwardly at a substantial angle to the intermediate connecting portions and a downwardly bent part on the underlying shank being disposed at approximately right angles to the downwardly deflected intermediate connecting portions and positioned between the ends of the said intermediate connecting portions, for the purposes described.



2. A fork of the character described, comprising a pair of tines formed on wire shank portions, an intermediate tine formed on a shank portion overlying said first mentioned shank portions and internested therewith, another shank portion underlying said first mentioned shank portion and internested therewith, the tines being connected to their shank portions by intermediate connecting portions deflected downwardly from the shank portions, the tines projecting upwardly at a substantial angle to the shank portions to provide a seat, and a downwardly bent fulcrum on the underlying shank positioned near the tines, substantially as and for the purposes described.

1,195,651. INDICATING DEVICE FOR CARRIERS. JAMES M. BURNS, Downers Grove, Ill., assignor to The Lamson Company, (formerly Lamson Consolidated Store Service Company,) Boston, Mass., a Corporation of New Jersey. Filed Sept. 13, 1912. Serial No. 720,117. (Cl. 116—49.)



1. A pneumatic despatch carrier comprising a tubular body provided with a head, in combination with an adjustable indicator mounted on said body substantially independently of said head, and mechanism carried by said body for locking said indicator against inadvertent displacement, said mechanism being substantially entirely upon the exterior of said body and said indicator being movable upon said body to effect indications while in place upon said body, said indicator being normally inseparable from the latter.

2. A pneumatic despatch carrier comprising a hollow body provided with a head in combination with an adjustable indicating ring mounted upon said body substantially independently of said head, and clamping mechanism substantially entirely upon the outside of said body for holding said ring against inadvertent displacement when set in a position determined upon.

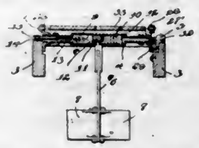
3. An indicating pneumatic despatch carrier comprising a hollow body and a plurality of indicating rings mounted thereon, one of said rings being movable independently of another, said rings having interlocking engaging parts whereby they may be held in the relationship with respect to each other desired.

4. An indicating pneumatic despatch carrier comprising a receptacle, and a plurality of rotatable indicating elements mounted thereon, said elements having interengaging parts whereby they may be held in the relationship with respect to each other desired.

5. An indicating despatch carrier comprising a receptacle, and a plurality of laterally separable indicating elements rotatably mounted thereon, said elements having inter-engaging parts whereby they may be held against rotation with respect to each other in the relationship desired.

[Claims 6 to 12 not printed in the Gazette.]

1,195,652. BOAT-PROPELLING MECHANISM. JOHN C. CALDWELL, Miami, Fla. Original application filed June 27, 1914, Serial No. 847,670. Divided and this application filed Apr. 13, 1915. Serial No. 21,056. (Cl. 115—33.)



1. A water craft comprising a floating structure, and propelling mechanism therefor comprising an oscillatory horizontal propeller shaft extending at a right angle to the path of the craft, a propeller arm perpendicular to said shaft, feathering paddles having a jointed attachment to said arm, means for oscillating said shaft, rack and pinion mechanism for turning said arm on its major axis to reverse the working position of the propeller so that the latter will drive the craft in the opposite direction, and a manually operable element remote from and connected with said rack and pinion mechanism for operating the latter.

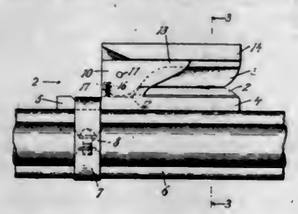
2. A water craft comprising a floating structure, and propelling mechanism therefor comprising an oscillatory propeller shaft, a propeller arm perpendicular to said shaft, feathering paddles having a jointed attachment to said arm, means for oscillating said shaft embodying a pair of operating arms fast on said propeller shaft, a pair of hand levers, two-armed direction reversing yok s pivotally supported between their ends, rods extending from said hand levers each adapted to be connected to either arm of its respective yoke, and other rods extending from yokes to the operating arms on the propeller shaft.

3. A water craft comprising a floating structure, and propelling mechanism therefor comprising an oscillatory propeller shaft, a propeller arm perpendicular to said shaft, feathering paddles having a jointed attachment to said arm, means for oscillating said shaft embodying operating arms on said propeller shaft, a pair of hand levers, pivotally mounted direction reversing yokes, rods extending from said hand levers to said yokes, and other rods extending from yokes to the operating arms on the propeller shaft, one of said rods being shiftable to opposite sides of the pivotal center of the respective yoke.

1,195,653. WIRE-CUTTING DEVICE. LAUREN A. CARLETON, Collinsville, Conn. Filed Dec. 15, 1915. Serial No. 66,926. (Cl. 42—90.)

1. A device of the class specified comprising, a base adapted for attachment to a rifle, a fixed jaw carried by said base, a movable jaw pivoted to said base, the said jaws being so disposed with respect to one another as to have their working faces in extended contact when the jaws are closed.

2. A device of the class specified comprising, a base adapted for attachment to a rifle, a fixed jaw carried by said base, a movable jaw pivoted to said base, the said jaws being so disposed with respect to one another as to have their working faces in contact substantially throughout their length when the jaws are closed.



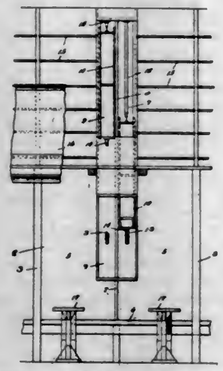
3. A device of the class specified comprising, a base adapted for attachment to a rifle, a fixed jaw carried by said base, a movable jaw pivoted to said base, the said jaws being so disposed with respect to one another as to have their working faces in extended contact when the jaws are closed, said working faces being flared away from one another at the entrance to the jaws, for the purpose set forth.

4. A device of the class specified comprising, a base adapted for attachment to a rifle, a fixed jaw carried by said base, a movable jaw pivoted to said base, the said jaws being so disposed with respect to one another as to have their working faces in extended contact when the jaws are closed and a spring yieldingly holding said jaws in closed position.

5. A device of the class specified comprising, a base adapted for attachment to a rifle, a fixed jaw carried by said base, a movable jaw pivoted to said base, the said jaws being so disposed with respect to one another as to have their working faces in extended contact when the jaws are closed and an abutment member adapted to engage the movable jaw and limit movement thereof when the jaws are closed.

[Claims 6 to 10 not printed in the Gazette.]

1,195,654. SELF-SERVICE FURNISHING FOR STORES. CHARLES C. CARPENTER, Swampscott, Mass. Filed May 15, 1916. Serial No. 97,509. (Cl. 20—1.)



1. A self-service furnishing outfit for retail stores, comprising a series of seats arranged in a row along one side of a comparatively narrow space, a narrow balcony for stock storage arranged above said seats, and substantially coextensive with the length of the row, elevators adapted for operation between the seats and the balcony, and arranged respectively at one side of each seat.

2. A self-service furnishing outfit for retail stores, comprising a series of open front booths arranged lengthwise a comparatively narrow space, seats in the booths for customers, a balcony providing stock storage space arranged above the booths, and separate elevators operating between the booths and stock storage space.

3. A self-service outfit for retail stores, comprising a series of booths arranged lengthwise and at one side of a comparatively narrow space, partitions and posts forming divisions between the booths, a balcony supported on the posts, and providing stock-storage space, seat platforms for customers in the booths, the seat platforms of each booth being divided to provide individual seats, an elevator runway leading from a point above and convenient to each seat at a point above the balcony, and an elevator in each runway to carry articles between each particular seat and the balcony storage space.

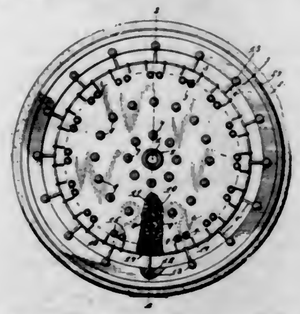
1,195,655. TREATMENT OF ALUNITE AND THE LIKE. HOWARD F. CHAPPELL, New York, N. Y., assignor to Mineral Products Corporation, New York, N. Y., a Corporation of Maine. Filed Sept. 23, 1913. Serial No. 791,288. (Cl. 23—13.)

1. The process of treating alum, alum-stone, alum-rock and alunite, which comprises submitting the same, in a reducing atmosphere, to a temperature sufficient to convert substantially all of the potassium compounds contained therein into potassium sulfate, and substantially all of the aluminum compounds into insoluble aluminum oxid and thereupon lixiviating out the potassium sulfate; substantially as described.

2. The process of treating alum, alum-stone, alum-rock and alunite, which comprises submitting the same, in the presence of a reducing atmosphere, to a temperature sufficiently high to drive off, in elemental form, the sulfur of the material treated in excess of that required for the formation of sulfate of potash, and recovering the sulfur thus driven off; substantially as described.

3. The process of treating alum, alum-stone, alum-rock and alunite, which comprises submitting the same, in the presence of a reducing atmosphere, to a temperature ranging between 650° C. and 1000° C., in the presence of a reducing atmosphere, and subliming and recovering as elemental sulfur the excess sulfur over that required for the production of potassium sulfate; substantially as described.

1,195,656. SPRING-WHEEL. SPENCER A. CHERRY, Nashville, Tenn. Filed Oct. 21, 1915. Serial No. 57,179. (Cl. 152—51.)



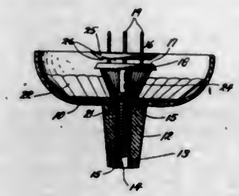
1. A wheel of the class described comprising a hub section, a rim section, spokes interposed between said rim section and hub section, a lubricating means positioned within said hub section and between said spokes for thoroughly lubricating said spokes and said hub section, resilient plugs sealing the outer edges of said hub section and interposed between said spokes and adapted to permit said spokes to move under pressure and compress said plugs, and means secured to said hub section and overhanging said plugs for retaining said plugs against accidental detachment from said hub section.

2. A wheel of the class described comprising a hub section, a rim section, spring spokes interposed between said rim section and hub section, a lubricating means positioned in said hub section and adapted to lubricate the space between the edges of said spokes and the inner face of said hub section, resilient plugs sealing the outer edges of said hub section and interposed between said spring spokes, spring links secured to said hub section and overhanging said plugs for detachably holding said plugs in engagement with said hub section, said spring links provided with inwardly projecting ends, and said hub section provided with apertures for receiving said inwardly extending ends.

3. A wheel of the class described comprising a hub section, a rim section, spring spokes interposed between said rim section and hub section, a lubricating means positioned in said hub section and adapted to lubricate the space between the edges of said spokes and the inner face of said hub section, resilient plugs sealing the outer edges of said hub section and interposed between said spring spokes, spring links secured to said hub section and overhanging said plugs for detachably holding said plugs in engagement with said hub section, said spring links provided with inwardly projecting ends, said hub section provided with apertures for receiving said inwardly extending ends, said hub section comprising a plurality of spaced plates, and means for rigidly holding said spaced plates in proper spaced relation for permitting the free operation of said spring spokes.

4. A wheel of the class described comprising a hub section, a rim section, spring spokes interposed between said rim section and hub section, a lubricating means positioned in said hub section and adapted to lubricate the space between the edges of said spokes and the inner face of said hub section, resilient plugs sealing the outer edges of said hub section and interposed between said spring spokes, spring links secured to said hub section and overhanging said plugs for detachably holding said plugs in engagement with said hub section, said spring links provided with inwardly projecting ends, said hub section provided with apertures for receiving said inwardly extending ends, said hub section comprising a plurality of spaced plates, means for rigidly holding said spaced plates in proper spaced relation for permitting the free operation of said spring spokes, and means for limiting the swinging movement of said spring spokes.

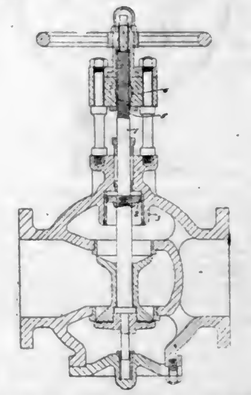
1,195,657. CANDLE-HOLDER. MORDECAI CHERSKY, Philadelphia, Pa. Filed Oct. 20, 1915. Serial No. 56,899. (Cl. 67—23.)



1. In a candle-holder the combination of a drip-pan provided with a shank having a screw-threaded socket therein, a candle-socket provided with a screw-threaded shank for engagement within said drip-pan socket, said latter shank having a shoulder, a destructible drip-pan saucer centrally apertured, a destructible cup similarly apertured, said saucer and cup being designed for a single use and being removably clamped to place between the shoulder of said screw-threaded shank and the drip-pan bottom.

2. In a candle-holder the combination of a drip-pan provided with a shank having a screw-threaded socket, a candle socket embracing a disk having upwardly extended pins and a depending shank having a shoulder, that portion of the shank below the shoulder being screw-threaded for engagement within the socket of the drip-pan shank, a destructible drip-pan saucer centrally apertured, a destructible candle-socket shank cup similarly apertured, said cup and saucer being removably clamped to place between the said shoulder and drip-pan bottom, the rim of said cup being immediately adjacent the underside of the candle-socket disk.

1,195,658. STEAM-REGULATING VALVE. DAVID COCKBURN and DONALD MACNICOLL, Cardonald, near Glasgow, Scotland. Filed Jan. 13, 1916. Serial No. 71,974. (Cl. 137—4.)



1. In a steam regulating valve, in combination, a manually rotatable valve spindle formed with a screw threaded portion, a divided nut engaging said screw-threaded portion, a piston on said spindle exposed to steam pressure when the valve is open, means for controlling the pressure on said piston, and means to disengage the nut from said threaded portion and concomitantly to actuate said controlling means to effect the closing of the valve by the pressure on said piston.

2. In a steam regulating valve, in combination, a manually rotatable screw-threaded spindle, a nut normally in engagement with, and acting to restrain axial movement of said spindle, a piston on said spindle, said piston being exposed to steam pressure on both sides when the valve is open, an escape valve to control passage of steam from one side of the piston, and means to operate the escape valve and concomitantly to disengage the nut from the spindle, substantially as and for the purpose set forth.

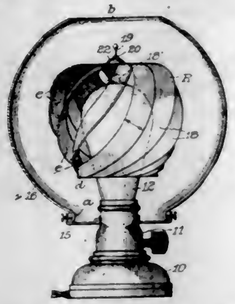
3. In a steam regulating valve, in combination, a valve spindle formed with a screw-threaded portion, a nut engaging said screw-threaded portion, a piston on said spindle exposed to steam pressure when the valve is open, means for controlling the pressure on said piston, and means to disengage the nut from said threaded portion and concomitantly to actuate said controlling means to effect the closing of the valve by the pressure on said piston.

4. In a steam regulating valve, in combination, a manually rotatable screw-threaded spindle, a piston, on said spindle, an escape valve to control the effect of steam pressure on said piston, a manually rotatable lever provided with eccentric slots and formed with a cam surface coöperating with said escape valve and a divided nut in engagement with said screw-threaded spindle and formed with studs entering said slots, substantially as and for the purpose set forth.

1,195,659. ILLUMINATED ADVERTISING DEVICE. CLARENCE W. COURT and ARTHUR V. GOLDBERG, Chicago, Ill. Filed Nov. 25, 1914. Serial No. 873,958. (Cl. 240—49.)

1. In a device of the class described, the combination with an electric light bulb secured in vertical position and having the usual tip, a bearing member detachably seat-

ing on top of the lamp and held in position thereon by the tip, a rotor pivoted on said bearing member for rotation about a vertical axis and having rotation producing vanes curving diagonally across and surrounding the bulb.



2. In a device of the class described, the combination with an electric light bulb positioned vertically with its tip extending upwardly, a bearing member having a socket for receiving the tip, a rotor comprising a central portion and rotation producing vanes extending downwardly therefrom and diagonally across the bulb, said central portion having bearing engagement with said bearing member to adapt the rotor for rotation about its vertical axis.

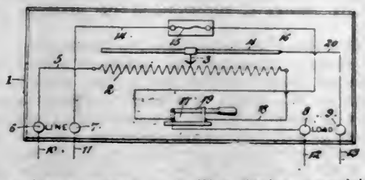
3. In a device of the class described, the combination of an electric light bulb disposed vertically with its tip extending upwardly, a detachable thimble on the tip having a bearing depression, a rotor surrounding the bulb, and a pivot pin secured to the rotor and engaging in said bearing depression whereby said rotor may rotate about the bulb on its vertical axis.

4. In a device of the class described, the combination of a hollow spherical rotor having rotation producing vanes extending diagonally from the top to the bottom thereof, an element within the rotor adapted to produce upward air currents for impinging against the vanes full length thereof, and means for pivoting the rotor for rotation about a vertical axis.

5. In a device of the class described, the combination of a hollow spherical rotor composed of rotation producing vanes extending diagonally from top to bottom thereof, said vanes being transparent, a lighting member within the rotor adapted to cause upward air currents for impinging against the vanes, and a pivotal support for the rotor.

[Claims 6 to 14 not printed in the Gazette.]

1,195,660. RHEOSTAT. HOMER L. DODGE, Iowa City, Iowa. Filed Mar. 15, 1915. Serial No. 14,537. (Cl. 171—229.)



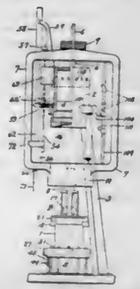
1. A unitary current controlling device comprising a base or support, line and load receiving terminals on the base, resistance means on the base connected at one end to one of the terminals on the line side of the device, a direct connection on the base from the other terminal on the line side to one of the terminals on the load side of the device, a switch between the other end of the resistance means and the direct connection between the load and line sides of the device, and means connected to the other terminal on the load side of the device and adjustable with relation to the resistance means to include more or less resistance in circuit, the switch and the last-named means being individually operable.

2. A combined voltage and current rheostat comprising a unitary structure consisting of a base or support, a resistance and means for varying it mounted on the base, means also on the base for making line and load connections to the rheostat, and means on the base for connecting the resistance at will across the means for making line connections, the means for varying the resistance and the last-named means being independently operable, whereby variations in voltage may be obtained without disturbing the connections of the rheostat for current regulation.

3. An instrument for obtaining variations in current or voltage at will, comprising a suitable base or support, a resistance and means for varying it mounted thereon, means for including the variable resistance in series between a source of current and the load, and means individual to the resistance for cutting said resistance into and out of shunt relation across the circuit at will, whereby to provide for obtaining variations of voltage when the resistance is in such shunt relation.

4. A means for obtaining variable current or variable voltage at will, comprising a single instrument having a resistance and means for varying it, said single instrument also including connecting devices for coupling the variable resistance in a circuit to be controlled, other connecting devices for coupling the resistance to a source of supply, and a switch for connecting the variable resistance across the source of supply, the switch and the means for varying the resistance being separately operable.

1,195,661. VERTICAL AIR-COMPRESSOR. KENNEDY DOUGAN, Minneapolis, Minn. Filed Jan. 16, 1909, Serial No. 472,666. Renewed Jan. 19, 1916. Serial No. 73,082. (Cl. 230—24.)



1. A direct acting vertical air-compressor, comprising a steam cylinder provided near its lower end with an admission port and valve, an automatic cutoff for said valve, and an exhaust valve, an air compressing chamber below the cylinder, a piston therein, a piston within the cylinder and connected to the piston in the chamber and suitable weights for driving the pistons downwardly.

2. A direct acting vertical air compressor, comprising a steam cylinder, an air cylinder, pistons in each working upwardly, a yoke member connecting said pistons, steam admission valves, and an automatically operated variable cut-off for the same controlled by movement of the yoke member whereby said steam is permitted to fully expand and produce its maximum efficient work in lifting the weight, air piston and connecting means, the return by gravity of such parts effecting the air-compressing function.

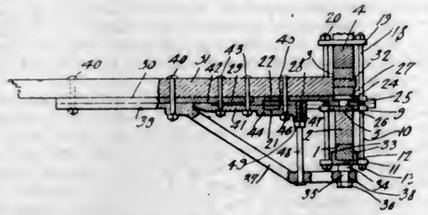
3. In a direct acting vertical air compressor, the combination with a steam admission valve, of means for governing the number of beats of the compressor per unit of time, said means comprising means for variably delaying the opening of said valve after each down stroke of the compressor.

4. In a direct acting vertical air compressor, the combination with a steam admission valve, of means for governing the number of beats of the compressor per unit of time, said means comprising means controlled by receiver pressure for variably delaying the opening of said valve after each down stroke of the compressor.

5. In a direct acting vertical air compressor, the combination with a steam admission valve, of means for governing the number of beats of the compressor per unit of time, said means comprising means for variably delaying the opening of said valve after each down stroke of the compressor, and a hand-valve for adjusting said delay.

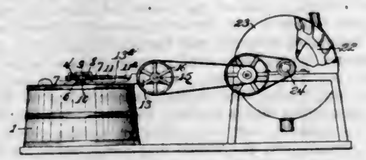
[Claims 6 to 18 not printed in the Gazette.]

1,195,662. FIFTH-WHEEL. SAMUEL O. DUEMLER, Springfield, Mo. Filed Apr. 10, 1916. Serial No. 90,198. (Cl. 21—24.)



A fifth wheel comprising a pair of plates, one having a slot, and the other having a stud journaled in said slot and provided with a head normally out of alinement with said slot to hold said plates assembled, arcuate fifth wheel members attached to said plates and bearing against one another, the upper plate having a strap projecting therefrom, a strap below said strap and adapted to be secured therewith to a reach bar, said straps having means for accommodating the fifth wheel members therebetween, a third plate below the aforesaid plates and adapted to be connected with the lowermost thereof, a brace attachable to the reach bar, the strap and third plate having interengageable means including a slot and a stud journaled in said slot, the last mentioned stud having a head to hold the third plate and brace assembled, and means for attaching the brace and second mentioned strap to steady the brace.

1,195,663. DRIVING MECHANISM FOR WASHING-MACHINES. DANIEL D. DULL, Youngstown, Ohio. Filed Mar. 24, 1916. Serial No. 86,340. (Cl. 74—50.)

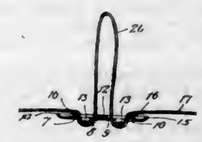


1. In driving mechanism for washing machines, a casting for mounting on the lid of a tub, said casting comprising a base and a head having bearings for the dolly-shaft formed thereon, a pinion fixed on said dolly shaft between said bearings, a reciprocatory rack-bar in operative relation with said pinion, means for guiding said rack-bar, a bracket mounted on said tub lid and overhanging the edge of the tub, a bearing formed in said bracket, a drive-shaft journaled in said bearing and disposed substantially tangential with respect to the tub, a crank carried by said shaft, and a pitman connecting said crank to said rack bar at a point intermediate the ends of the latter.

2. In driving mechanism for washing machines, a casting for mounting on the lid of a tub, said casting comprising a base and a head having bearings for the dolly-shaft formed thereon, a pinion fixed on said dolly shaft between said bearings, a reciprocatory rack-bar in operative relation with said pinion, a bracket mounted on said tub lid and overhanging the edge of the tub and having a bearing formed therein, a drive-shaft journaled in said bearing, a crank carried by said shaft, a pitman connecting said crank to said rack-bar at a point intermediate the ends of the latter, an arm carried by said rack-bar and disposed in parallel alinement with the latter, and a guideway in which said arm is received.

3. In driving mechanism for washing machines, a casting for mounting on the lid of a tub, said casting comprising a base and a head having bearings for the dolly-shaft formed thereon, a pinion fixed on said dolly shaft between said bearings, a reciprocatory rack-bar in operative relation with said pinion, means for guiding said rack-bar, a bracket mounted on said tub lid and overhanging the edge of the tub, said bracket being an integral part of said casting and jointed to said base by a connecting member which rests upon the tub lid, said bracket having a bearing formed therein, a drive-shaft journaled in said bearing, a crank carried by said shaft, and a pitman interposed between said crank and said rack-bar.

1,195,664. BUCKLE. LOUIS ECKER, Chicago, Ill. Filed June 21, 1915. Serial No. 35,367. (Cl. 24—186.)



1. A buckle containing slots spaced apart with strap-gripping surfaces adjacent the far sides of said slots and extending toward each other, but slightly deflected in a direction away from the plane of the buckle, the bars at the opposite sides of said slots being offset in the opposite direction beyond the plane of the buckle, said strap-gripping surfaces and the opposite sides of said slots being closely adjacent, to cause a strap threaded through said slots to be deflected at said slots at relatively sharp angles relative to the other portion of the strap.

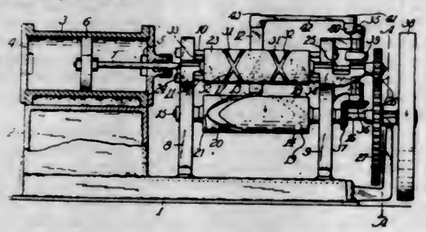
2. A buckle containing slots in its ends spaced apart, with strap-gripping surfaces adjacent the far sides of said slots and extending toward each other but slightly deflected in a direction away from the plane of the buckle, other slots in said buckle intermediate said first-named slots, the bars of the buckle separating said intermediate slots from the slots at the ends of the buckle being offset from the plane of the buckle in a direction opposite to that in which the said strap-gripping surfaces are offset, said strap-gripping surfaces and the opposite sides of said slots being closely adjacent to cause a strap threaded through said slots to be deflected at said slots at relatively sharp angles relative to the other portion of the strap.

1,195,665. POWER MECHANISM. JACOB R. ETTER, Crawfordsville, Ind. Filed June 26, 1915. Serial No. 36,524. (Cl. 74—1.)

1. Power mechanism including a reciprocatory element having a contact device, a rotary element provided with a series of tracks extending spirally in alternately reversed directions about the axis of rotation of the element to be alternately engaged by the contact device, and means connecting the elements for controlling the movement of the reciprocatory element.

2. Power mechanism including a rotary element having tracks extending longitudinally to and fro and spirally in contrary directions alternatively about the axis of rotation of the element, a reciprocatory element adapted

for movable connection alternatively with the tracks, and a movable reversing device having controlling connection with the reciprocatory element and geared to the rotary element.



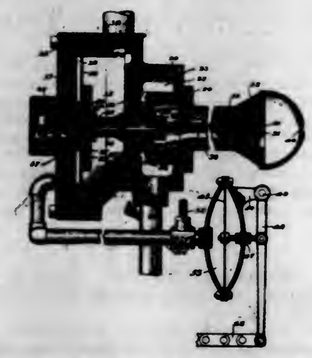
3. Power mechanism including a rotary element having tracks extending longitudinally to and fro and spirally in contrary directions alternatively about the axis of rotation of the element, a reciprocatory element adapted for movable engagement alternatively with the tracks, and means connecting the elements synchronously for controlling the movement of the reciprocatory element.

4. Power mechanism including a rotary element having a series of longitudinally extending contact portions spirally arranged about the axis of rotation of the element in alternatively reversed directions, a reciprocatory element coöperating alternatively with the contact portions for revolving the rotary element, and a rotatable reversing screw geared to the rotary element and having operative controlling connection with the reciprocatory element.

5. Power mechanism including a reciprocatory element, a rotary element provided with a plurality of tracks extending spirally about the axis of rotation of the rotary element and alternately having connection with the reciprocatory element, the tracks extending spirally in one direction on one side of the axis of rotation and in the opposite direction on the opposite side of the axis of rotation, and means geared to the rotary element having connection with the reciprocatory element for controlling the movement of the two elements synchronously.

[Claim 6 not printed in the Gazette.]

1,195,666. OIL AND DRAFT REGULATING DEVICE. THOMAS H. FERGUSON, Oakland, Cal. Filed Sept. 15, 1915. Serial No. 50,869. (Cl. 236—6.)



1. The combination with a boiler, a furnace and a plurality of dampers mounted in the furnace of a liquid fuel burner, said burner comprising a casing, having a chamber formed therein, a diaphragm valve dividing said chamber into two compartments, a second diaphragm valve, a pipe connecting one side of said diaphragm valve with one side of the first named diaphragm valve, means for charging said pipe with a fluid under pressure, means for admitting steam direct from the boiler to the casing chamber on the other side of the first named diaphragm valve to normally counteract the fluid pressure, a burner tip on the casing, a valve mounted in said tip between the chambers in the casing, and the tip, a connection between the first named diaphragm and the valve to open or close the valve, means for admitting oil to the burner, at a point where its flow, together with steam from the casing chamber, will be controlled by the valve, and means controlled by the second diaphragm valve to open and close the dampers on the furnace in unison with the valve substantially as described.

2. The combination with a boiler, of a liquid fuel burner, said burner comprising a casing having a steam chamber formed therein supplied with steam directly from the boiler, a burner tip connected with one end of the steam chamber and forming an outlet therefor, a diaphragm valve in the chamber adapted to be actuated by the steam pressure in the chamber, a valve interposed between the burner tip and the chamber directly connected with the diaphragm valve and adapted to open or close communication between the chamber and burner tip, and an oil delivering pipe connected with oil ducts formed in the casing which are adapted to be opened and closed by the valve.

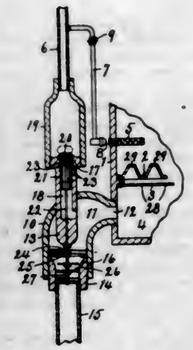
3. The combination with a boiler, of a liquid fuel burner, said burner comprising a casing having a steam chamber formed therein supplied with steam directly from the boiler, a burner tip connected with one end of the steam chamber and forming an outlet therefor, a diaphragm valve in the chamber adapted to be actuated by the steam pressure in the chamber, a valve interposed between the burner tip and the chamber directly connected with the diaphragm valve and adapted to open or close communication between the chamber and burner tip, an oil delivering pipe connected with oil ducts formed in the casing which are adapted to be opened and closed by the valve, and means for maintaining a pilot fire when the valve is closed, said means comprising a pair of ducts formed in the valve, one of said ducts forming communication between the steam chamber and the burner tip, and the other duct forming communication between one of the oil ducts and the burner tip.

4. The combination with a boiler, a furnace and a plurality of dampers mounted in the furnace, of a liquid fuel burner, said burner comprising a casing having a chamber formed therein, a diaphragm valve dividing said chamber into two compartments, a second diaphragm valve, a connection between said diaphragm valves, means for charging said connection with a fluid under pressure, means connected with the second diaphragm valve for maintaining said pressure constant, means for admitting steam directly from the boiler to the burner casing chamber on the other side of the first named diaphragm valve to counteract the fluid pressure between the diaphragm valves, a burner tip connected with one end of the steam chamber and forming an outlet therefrom, a valve interposed between the burner tip and the chamber directly connected with the diaphragm valve and adapted to open or close communication between the chamber and burner tip, means for admitting oil to the casing at a point where its flow, together with the steam from the chamber, will be controlled by the valve, and means controlled by the second diaphragm valve for opening and closing the dampers on the furnace in unison with the valve.

5. The combination with a boiler, of a liquid fuel burner, said burner comprising a casing having a steam chamber formed therein, a diaphragm valve dividing said chamber into two compartments, a second diaphragm valve, a pipe forming communication between one side of said diaphragm valve and the first diaphragm valve, means for charging said pipe with a fluid under pressure, means for maintaining said pressure constant, means for admitting steam directly from the boiler to the burner casing chamber on the other side of the first named diaphragm valve to counteract the fluid pressure between the diaphragm valves, a valve in the burner casing directly connected with the first named diaphragm valve separately controlling the escape of the steam admitted and oil from another source of supply before they are permitted to combine, and means for limiting the movement of the first named diaphragm valve.

[Claims 6 to 9 not printed in the Gazette.]

1,195,667. AIR AND GAS VALVE. ELMER F. FISHER, Springfield, Mass. Original application filed Mar. 16, 1915, Serial No. 14,838. Divided and this application filed Oct. 22, 1915. Serial No. 57,311. (Cl. 67—90.)



1. In an air and gas valve, a hollow member having an air inlet and a gas inlet which are remote from each other, and also having an air and gas outlet, said gas inlet having a valve-seat, and said air and gas outlet being located approximately intermediate of said air inlet and said valve-seat, an unattached valve for said seat, said valve being arranged to open against the gas pressure, and provided with a stem which extends into said air inlet, and a valve member on said stem in said air inlet and adapted to operate freely therein, said valve member being unattached except to said stem, and the arrangement of parts being such that air, in passing into and through the inlet therefor, impinges directly on said valve member, and moves the same with said stem and gas valve, axially, to make a passage for itself past said valve member and open said gas valve.

2. In an air and gas valve, a hollow member having an air inlet provided with an adjustable flaring member, and also having a gas inlet with a valve-seat, and an air and gas outlet located approximately intermediate of said air inlet and said valve-seat, said inlets being remote from each other, an unattached gas valve for said valve-seat, said valve being arranged to open against the gas pressure, and provided with a stem which extends into said flaring member, and a valve member on said stem in said flaring member, said valve member being unattached except to said stem, and the arrangement of parts being such that air, in passing into and through said flaring member, is regulated in volume by the position of the latter, and impinges directly on said valve member, and moves the same, with said stem and gas valve, axially, to make a passage for itself past said valve member and open said gas valve.

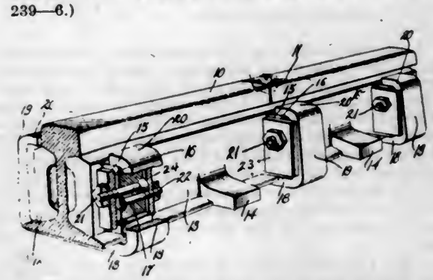
3. In an air and gas valve, a hollow member having a flaring air inlet and a gas inlet which are remote from each other, and also having an air and gas outlet, said gas inlet having a valve-seat, and said air and gas outlet being located approximately intermediate of said air inlet and said valve-seat, an unattached valve for said seat, said valve being arranged to open against the gas pressure, and provided with a stem which extends into said air inlet beyond the flaring portion thereof, a valve member on said stem in said air inlet and adapted to operate freely therein, said valve member being unattached except to said stem, and means to adjust said valve member on said stem, the arrangement of parts being such that air, in passing into and through the inlet therefor, is regulated by the position of said valve member on said stem, and impinges directly on said valve member, and moves the same, with said stem and gas valve, axially, to make a passage for itself past said valve member and open said gas valve.

4. In an air and gas valve, a hollow member having an air inlet and an air and gas outlet, a gas-inlet member provided with a valve-seat, and opening outside through said seat and inside into said hollow member, at a point remote from said air inlet, said air and gas outlet in said hollow member being located approximately intermediate of said air inlet and said valve-seat, an unattached valve for said seat, said valve being arranged to open against the gas pressure, and provided with a stem which extends through said gas-inlet member into said air inlet, a valve member on said stem in said air inlet and adapted to operate freely therein, said valve member being unattached except to said stem, and a stop on said stem in position to contact with said gas-inlet member and limit the valve-opening movement, said gas valve and valve member being moved axially, by the air in passing through the inlet therefor and impinging directly on said valve member, to make a passage for said air past said valve member and open said valve-seat.

5. In an air and gas valve, a hollow member having an air inlet and an air and gas outlet, a gas-inlet member having a passage therein and provided with a valve-seat, and opening outside through said seat and inside into said hollow member at a point remote from said air inlet, said air and gas outlet in said hollow member being located approximately intermediate of said air inlet and said valve-seat, an unattached valve for said seat, said valve being arranged to open against the gas pressure, and provided with an apertured guide to slide in said passage, and with a stem which extends through said gas-inlet member, without obstructing the gas-way through said guide and passage, into said air inlet, and a valve member on said stem in said air inlet and adapted to operate freely therein, said valve member being unattached except to said stem, and said gas valve and valve member being moved axially, by the air in passing through the inlet therefor and impinging directly on said valve member, to make a passage for said air past said valve member and open said valve-seat.

[Claim 6 not printed in the Gazette.]

1,195,668. RAIL-JOINT. EDWARD F. FITZGERALD, Warren, Pa. Filed Feb. 16, 1916. Serial No. 78,716. (Cl. 239—6.)



1. A rail joint including abutting rail ends, side bars fitting against said rails and engaging the bases, webs and under faces of the treads thereof, feet extending from said side bars at points spaced from the contacting ends of said rails, blocks extending from said side bars, certain of said blocks being positioned in alinement with the contacting rail ends and the blocks of one of said bars being provided with cutouts forming pockets, yokes extending beneath said rails, and having side arms extending upwardly and terminating in fingers engaging the upper faces of said blocks, and securing wedges fit-

ting into the pockets of said blocks and engaging said yokes to create a binding action between the side bars and said rails.

2. A rail joint comprising abutting rail ends, side bars extending along said rail ends, blocks extending from said side bars, the blocks of one of said side bars being provided with feet, yokes extending beneath said rail ends and having arms extending upwardly to engage the upper faces of said blocks, and wedges positioned in said yokes and serving to move said side bars into binding engagement with said rail ends.

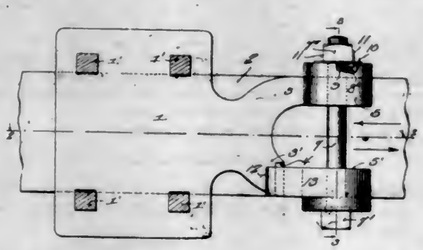
3. A rail joint comprising abutting rail ends, side bars extending along said rail ends, blocks extending from said side bars, the blocks of one of said side bars forming seats, yokes extending beneath said rail ends and engaging said blocks, and wedges fitting into said seats and engaging said yokes to move said side bars into binding engagement with said rail ends.

4. A rail joint including abutting rail ends, side bars extending along said rail ends, feet extending from said side bars for engagement by fasteners to prevent longitudinal movement of said side bars, yokes extending beneath said rail ends and engaging said side bars, and means fitting within said yokes to move said side bars into binding engagement with said rail ends.

5. A rail joint comprising abutting rail ends, side bars extending along said rail ends, means extending from said side bars and engageable by fasteners to prevent longitudinal movement of said side bars, yokes extending beneath said rail ends and engaging said side bars and means fitting within said yokes for moving said side bars into binding engagement with said rail ends.

[Claim 6 not printed in the Gazette.]

1,195,669. ANTI-RAIL-CREEPER. HARRISON D. FLEGEL and JOHN HUBENTHAL, Racine, Wis. Filed May 13, 1916. Serial No. 97,243. (Cl. 238—4.)



1. An anti-creeper for rails comprising a tie-plate having a thrust-arm and a pull-arm extending therefrom beyond the body of the tie to which the tie-plate is secured, a pair of channel gripping clips adapted to be fitted to the edges of the rail, a tie-bolt for the gripping clips, means for effecting abutting engagement with one of the clips and the thrust-arm, and means for effecting a pulling engagement between the other clip and said pull-arm, whereby the aforesaid clips are caused to exert an abnormal frictional gripping engagement or draw upon the rail flange irrespective of the direction of movement of said rail.

2. An anti-creeper for rails comprising a tie-plate having a thrust-arm and a pull-arm extending therefrom beyond the body of the tie to which the tie-plate is secured, a pair of channel gripping clips adapted to be fitted to the edges of the rail, a tie-bolt for the gripping clips, means for effecting abutting engagement with one of the clips and the thrust-arm, and jaws for interlocking engagement between the pull-arm and other clip, whereby the aforesaid clips are caused to exert an abnormal frictional gripping engagement or draw upon the rail flange irrespective of the direction of movement of said rail.

3. An anti-creeper for railway rails comprising a tie-plate for supporting the rails adapted to be secured to a tie, an arm extending from the tie-plate beyond the tie body, channeled clips fitted to the base flange of the rail, the face of one of which clips is in juxtaposition to the arm whereby it will abut the same when the rail creeps in one direction, and a clamping bolt connecting the clips crosswise of said rail base flange.

1,195,670. BUILDING BLOCK OR MEMBER. FRANZ GIRLOT, Brussels, Belgium. Filed Sept. 29, 1913. Serial No. 792,463. (Cl. 72—38.)



1. A building block or member comprising a body portion having an outer and an inner face, said body portion being provided with separate, independent projections extending laterally from the inner face, each of said projections having a plurality of both vertical and horizontal surfaces formed at predetermined points in their length, breadth and depth, and adapted to contact and interlock directly without the use of other bonds with similar projections of other blocks in opposite rows as well as with blocks in the rows above or below it, said projections being disposed symmetrically relative to the vertical plane passing through the middle line of the body portion at right-angles to the outer face.

2. A building block or member comprising a body portion having an outer and an inner face, said body portion being provided with end surfaces at right-angles to the outer face, two separated projections extending from the ends of said body portion, each forming an acute angle with the inner face of the body portion, each of said projections having a plurality of both vertical and horizontal surfaces formed at predetermined points in their length, breadth, and depth, and adapted to interlock directly without the use of other bonds with similar projections of other blocks in opposite rows as well as with blocks in the rows above or below it, said projections being disposed symmetrically relatively to the vertical plane passing through the middle line of the body portion at right-angles to the outer face, and said body portion having a thickened or reinforced portion midway of its length between said projections.

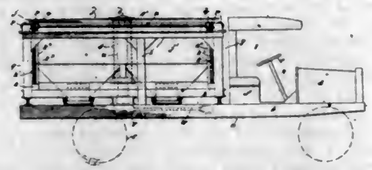
3. A building block or member comprising a body portion having an outer and an inner face, said body portion being provided with end surfaces at right-angles to the outer face of the body portion and with two separated projections extending laterally from the inner face, each of said projections being adapted to interlock directly without the use of other bonds with similar projections of other blocks in opposite rows as well as with blocks in the rows above or below it, said two projections having parallel lateral faces, and each having a plurality of both vertical and horizontal surfaces formed at predetermined points in their length, breadth and depth, each of said projections forming an acute angle with the inner face of the body portion and being disposed symmetrically relatively to the vertical plane passing through the middle line of the body portion at right-angles to the outer face.

4. A building block or member comprising a body portion, projections extending from one side of said body portion, said projections having a plurality of both vertical and horizontal surfaces formed at predetermined points in their length, breadth and depth, and adapted to interlock in a plurality of planes with similar projections on other blocks.

5. A building block or member comprising a body portion, projections extending from said body portion, said projections consisting of a plurality of parts adapted to contact and interlock in horizontal and vertical planes with the similar parts of other blocks, the vertical interlocking planes being inclined at equal and acute angles with respect to the body portion.

[Claims 6 to 8 not printed in the Gazette.]

1,195,671. WAGON-BODY-ELEVATING MECHANISM. BENJAMIN A. GRAMM, Lima, Ohio. Filed Feb. 28, 1916. Serial No. 81,046. (Cl. 21—86.)



1. A wagon-body elevating mechanism including a wagon-body member; a frame member within which said wagon-body member is movably arranged; means for raising said wagon-body member; and mechanism independent of said means for insuring that both ends of the latter move upwardly substantially simultaneously, said mechanism being arranged to transmit the movement of one end of said wagon-body member to the other end thereof and cause both ends to move at substantially the same time.

2. A wagon-body elevating mechanism including a wagon-body member; a frame member within which said wagon-body member is movably arranged; centrally-disposed means for raising said wagon-body member; and mechanism independent of said means for insuring that both ends of the latter move upwardly substantially simultaneously, said mechanism being arranged to transmit the movement of one end of said wagon-body member to the other end thereof and cause both ends to move at substantially the same time.

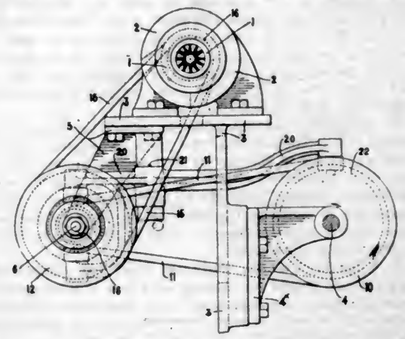
3. A wagon-body elevating mechanism including a wagon-body member; a frame member within which said wagon-body member is movably arranged; means for raising said wagon-body member; mechanism independent of said means for insuring that both ends of the latter move upwardly substantially simultaneously, said mechanism being arranged to transmit the movement of one end of said wagon-body member to the other end thereof and cause both ends to move at substantially the same time; and means for preventing swaying of the wagon-body member during the up-and-down movement of the same.

4. A wagon-body elevating mechanism including a wagon-body member; a frame member within which said wagon-body member is movably arranged; a pair of racks on each side of one of said members, the racks on the same side being arranged at opposite ends of the member; a pair of shafts arranged on opposite sides of the other of said members and extending lengthwise thereof; pinions on said shafts and in mesh with said racks; and mechanism independent of said shafts and pinions for raising said wagon-body member.

5. A wagon-body elevating mechanism, including a wagon-body member; a frame member within which said wagon-body member is movably arranged; a pair of racks on each side of one of said members, the racks on the same side being arranged at opposite ends of the member; a pair of shafts arranged on opposite sides of the other of said members and extending lengthwise thereof; pinions mounted on said shafts and in mesh with said racks; and rollers mounted on said shafts and arranged to bear against the rack-carrying member for the purposes set forth.

1,195,672. INTERMITTENT DRIVE FOR SWEETMEAT-WRAPPING MACHINES. FREDERICK GROVER, Leeds, England, assignor to The Forgrove Machinery Company Limited, Leeds, England. Filed Jan. 12, 1916. Serial No. 71,605. (Cl. 74—46.)

A driving mechanism for the ring-like carrier of sweetmeat wrapping machines, comprising in combination a stationary short shaft, a friction disk fixed on said shaft, a pulley slidably mounted on the shaft at one side of the fixed friction disk, a ring-like carrier drivably connected to said pulley, a spring adapted to press the slidable pulley up to the fixed friction disk to cause it to be normally held stationary by face contact, a constantly driven pulley slidably mounted on the shaft at the opposite side of the fixed friction disk to that of the spring-pressed pulley, and a cam-actuated mechanism adapted to cause



the constantly driven pulley to be intermittently brought into engagement with the spring-pressed pulley and remove it from engagement with the fixed friction disk and simultaneously, through face contact, impart rotary motion to the said spring-pressed pulley to cause it to drive the ring-like carrier.

1,195,673. VARNISH, LACQUER, OR THE LIKE AND PROCESS OF MAKING SAME. REINHOLD GRÜTER, Charlottenburg, Germany. Filed Nov. 15, 1913. Serial No. 801,292. (Cl. 134—79.)

1. A process for manufacturing solutions of varnishes or the like from the esters of cellulose, which consists in dissolving the said esters in a mixture of a lactic acid ester and hydrocarbons, and in the absence of large quantities of alcohol.

2. A process for manufacturing solutions of varnish or the like from the esters of cellulose, which consists in dissolving said esters in a lactic acid ester, and diluting the said solution with hydrocarbons.

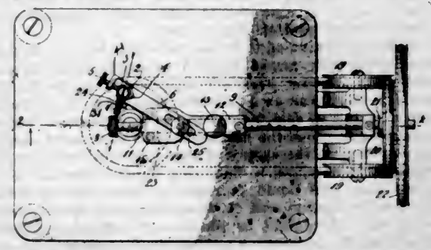
3. A process for the manufacture of solutions of varnishes or the like from the esters of cellulose, which consists in dissolving said esters in a lactic acid ester.

4. A process for the manufacture of solutions of varnishes or the like from nitrocellulose in a mixture of lactic acid ester and hydrocarbons.

5. A process for the manufacture of solutions of varnishes or the like from nitrocellulose, which consists in dissolving the nitrocellulose in a lactic acid ester.

[Claims 6 to 15 not printed in the Gazette.]

1,195,674. LEATHER-EDGE-FINISHING MACHINE. EDWARD S. HALSEY and GEORGE G. PERKINS, Lynn, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 12, 1912. Serial No. 670,801. (Cl. 69—1.)



1. A machine for finishing the edge of a leather piece comprising a support for the piece, a searing tool held

from movement in the line of feed, means for heating said tool to a temperature sufficiently high to sear or scorch the leather, and means for so guiding the piece that the tool is caused to act on the surface of the piece close to its edge.

2. A machine for finishing the edge of a leather piece, comprising a support for the piece, a tool held from movement in the line of feed arranged relatively to said support in a position to make contact with the surface of a leather piece placed between the support and the tool, and means for maintaining said tool at a temperature sufficiently high to sear the leather.

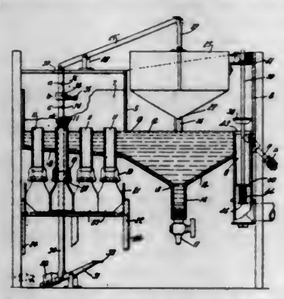
3. A machine for finishing the edge of a leather piece comprising a support for the piece, a searing tool held from movement in the line of feed, means for heating said tool to a temperature sufficiently high to sear or scorch the leather located adjacent to said support, and guiding means for the edge of the piece arranged so to locate the piece that a portion thereof close to its edge is exposed to the action of the tool.

4. A machine of the character described, comprising a searing tool, means for heating said tool to a temperature approximating incandescence, and means for holding a leather piece with a portion of the surface adjacent to an edge of the piece in contact with the tool.

5. A machine of the character described, comprising a searing tool, means for heating said tool to a temperature approximating that of incandescence, means for holding a leather piece with a portion of the surface adjacent to an edge of the piece in contact with the tool and means for feeding such piece past the tool.

[Claims 6 to 55 not printed in the Gazette.]

1,195,675. APPARATUS FOR FILLING CANS, BOTTLES, AND THE LIKE. THOMAS H. HART, Everett, Mass. Filed May 15, 1914. Serial No. 838,854. (Cl. 226—18.)



1. An apparatus of the class described having, in combination, a tank, means adapted to supply liquid to said tank, an overflow normally adapted to maintain the liquid in said tank at a predetermined level, a discharge tube arranged in said tank with its receiving end above the normal level of said liquid, means adapted to shut off the supply of liquid to said tank and close said overflow, and a liquid displacing member adapted to be moved into the liquid in said tank a predetermined distance whereby a predetermined amount of said liquid may be permitted to escape through said discharge tube.

2. An apparatus of the class described having, in combination, a tank, means adapted to supply liquid to said tank, an overflow normally adapted to maintain the liquid in said tank at a predetermined level, a discharge pipe arranged in said tank with the receiving end thereof substantially above the normal level of said liquid, means for shutting off the supply of liquid to said tank and for closing said overflow, a displacing member adapted to be moved into said liquid to raise the level thereof above the receiving end of said discharge tube, and means adapted to vary the extent to which said displacing member enters said liquid whereby a predetermined amount of said liquid may be permitted to escape through said discharge tube.

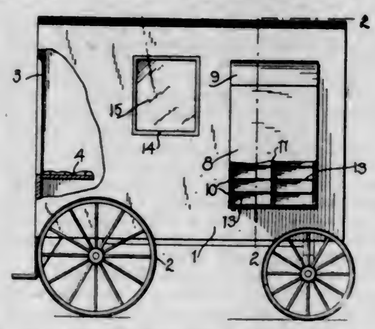
3. An apparatus of the class described having, in combination, a tank, means adapted to supply liquid to said tank, an overflow normally adapted to maintain the liquid in said tank at a predetermined level, a discharge tube arranged in said tank with the receiving end thereof above the normal level of said liquid, means adapted to shut off the supply of liquid to said tank, means to close said overflow, a displacing member, and means adapted to move said displacing member into said liquid to raise the level of said liquid a predetermined distance above the receiving end of said discharge tube.

4. An apparatus of the class described having in combination, a tank provided with a discharge orifice, means adapted to supply liquid to said tank, an overflow arranged in said tank with its receiving end substantially below the mouth of said discharge orifice, said overflow adapted to normally maintain the liquid in said tank at a predetermined level, a displacing member, means to move said displacing member into the liquid in said tank, and means actuated by the movements of said displacing member toward said liquid adapted to close said liquid supply and said overflow.

5. An apparatus of the class described having, in combination, a tank, a liquid supply pipe, an overflow pipe adapted to maintain the liquid in said tank at a predetermined level, a plurality of discharge tubes arranged in said tank with their receiving ends extending above said normal liquid level, a displacing member, means adapted to move said displacing member into said tank a predetermined distance to raise the level of said liquid, and a valve operatively connected with said displacing member adapted to be moved thereby to close said overflow and cut off the supply of liquid to said tank.

[Claim 6 not printed in the Gazette.]

1,195,676. MAIL-WAGON. BENJAMIN F. HAWKINS, Sulphur, Ky., assignor of one-third to Lewis E. Morris and one-third to Charles R. Martin, Sulphur, Ky. Filed Aug. 29, 1914. Serial No. 859,244. (Cl. 21—7.)



1. A device of the character described including a hollow body, wheeled supports therefor, one of the walls of said body being offset to afford an outstanding compartment, a vertical dividing wall positioned within the offset portion and disposed transversely thereof to divide the compartment into a plurality of chambers, the inner vertical edge of the dividing wall being provided with a plurality of longitudinally spaced open end slots, and shelves insertible within the slots of the dividing wall, the ends of the shelves being operatively engaged with the adjacent side walls of the compartment.

2. A device of the character described including a hollow body, wheeled supports therefor, one of the walls of said body being offset to afford an outstanding compartment, a vertical dividing wall positioned within the offset portion and disposed transversely thereof to divide the compartment into a plurality of chambers, the inner vertical edge of the dividing wall being provided with a plurality of longitudinally spaced open end slots, and shelves insertible within the slots of the dividing wall, the ends of the shelves being operatively engaged with the adjacent side walls of the compartment, said dividing wall having its inner vertical edge extending within the hollow body.

1,195,677. GALVANIC CELL. ALBRECHT HEIL, Frankfort-on-the-Main, Germany, assignor of one-half to Conrad Hubert and one-half to Samuel Stern, New York, N. Y. Filed Dec. 24, 1913. Serial No. 808,586. (Cl. 204—38.)

1. A galvanic cell comprising positive and negative elements, and a depolarizing mass composed of an intimate mixture of a hydrate of manganese, an oxid of a metal far removed from zinc toward the negative end of the electro-chemical series and carbon.

2. A galvanic cell comprising positive and negative elements, and a depolarizing mass composed of an intimate mixture of a hydrate of manganese, mecuric oxid and carbon.

3. A galvanic cell comprising positive and negative elements, and a depolarizing mass composed of an intimate mixture of deep black hydrate of manganese dioxid, an oxid of a metal far removed from zinc toward the negative end of the electro-chemical series and carbon.

4. A galvanic cell comprising positive and negative elements, and a depolarizing mass composed of an intimate mixture of deep black hydrate of manganese dioxid, mercuric oxid and carbon.

5. A galvanic cell comprising positive and negative elements, a depolarizing mass composed of an intimate mixture of a hydrate of manganese, an oxid of a metal far removed from zinc toward the negative end of the electro-chemical series and carbon, and an alkaline electrolyte.

[Claims 6 to 9 not printed in the Gazette.]

1,195,678. SNAP-BUTTON. SOMA HERZOG, New York, N. Y., assignor to Nu-Fastener Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 11, 1916. Serial No. 90,315. (Cl. 24—218.)



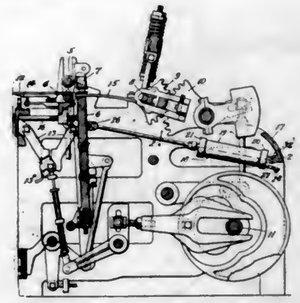
In a snap button, a female member comprising a flanged casing, an inclosed star-shaped resilient wire having a plurality of inwardly directed angular projections adapted to engage a button shank, the two end portions of the wire that form one of the star-points being disconnected from each other at the tip of said point, said end portions first converging into operative engagement with each other at a distance from said tip, and thence diverging at said tip to form a pair of outwardly directed toes that are adapted to travel along the casing-flange.

1,195,679. MACHINE FOR BACKING BOOKS. FREDERICK P. HILL, Chicago, Ill. Filed Dec. 28, 1915. Serial No. 69,054. (Cl. 11—24.)

1. In a machine for backing books, the combination with a book-feed, a movable head for working against a book back, and a second movable head operating between said feed and said book-back working head, of a shock-absorber between said last referred-to head and the machine frame and operating to cushion said head.

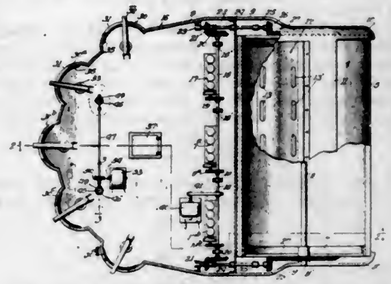
2. In a machine for backing books, the combination with a book-feed, a rocking head for working against a book back, and an oscillating head operating between said feed and rocking head, of a shock-absorber between said last referred-to head and the machine frame and operating to cushion said head.

3. In a machine for backing books, the combination with a book-feed, a rocking head for working against a book-back, and an oscillating head operating between said feed and rocking-head, of a shock-absorber comprising a movable member pivotally connected with said head and



a fixed member pivotally connected with the machine-frame, said shock-absorber operating to cushion said oscillating head.

1,195,680. ARMORED VEHICLE. ANTON J. JEHLIK, Chicago, Ill. Filed Jan. 10, 1916. Serial No. 71,151. (Cl. 89—40.)



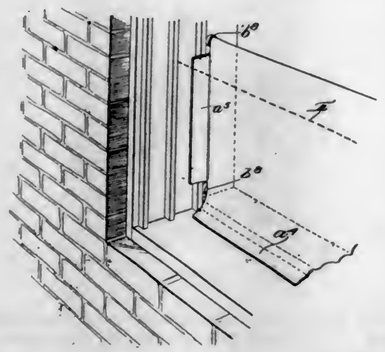
1. An armored vehicle comprising an armored wall inclosing a compartment; a driven ground engaging cylinder extending entirely across the compartment and journaled in the projecting walls thereof; an engine within the compartment to drive the cylinder; connecting driving mechanism within said protecting walls and means for changing direction of progress of said vehicle.

2. An armored vehicle comprising an armored wall inclosing a rear compartment and a look-out compartment; a driven cylinder below the look-out compartment and extending across the rear compartment and journaled in the projecting side walls thereof; an engine, within the latter compartment, to drive the cylinder; connecting driving mechanism within said protecting walls; guiding rollers under said rear compartment, and controlling means for changing direction of the progress of the said vehicle in said look-out compartment.

3. An armored vehicle comprising an armored wall, deflected at intervals to provide a series of sponsons, inclosing a compartment; a driven cylinder extending across the front of said compartment, within the end walls thereof; an engine within said compartment to drive the vehicle; steering rollers under said vehicle; a dynamo-electric machine driven by said engine and an electric motor for controlling said steering rollers.

4. An armored vehicle comprising an armored wall, deflected at intervals to provide a series of sponsons inclosing a compartment; a driven cylinder extending across the front of said compartment, within the end walls thereof, a ported compartment extending parallel with and above said cylinder and means of communication between said compartments within said protecting walls.

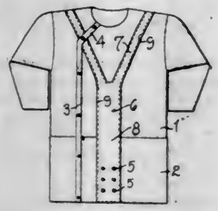
1,195,681. SHIELD FOR WINDOWS. GRACE W. JENNINGS, Medford, Mass. Filed Apr. 8, 1915. Serial No. 19,934. (Cl. 98—31.)



1. A device of the character described, comprising a flexible panel provided with means for engaging a window frame to hold the panel in position to act as a shield, said panel having loose flaps at its side edges to act, in conjunction with the sides of the window frame, as valves to prevent entrance of undesired air or rain.

2. A device of the character described, comprising a flexible panel provided with means for engaging a window frame to hold the panel in position to act as a shield, said panel having loose flaps at its side and bottom edges to act, in conjunction with the sides and sill of the window frame, as valves to prevent entrance of undesired air or rain.

1,195,682. INFANT'S APPAREL. WILLIAM K. JONES, Wichita, Kans. Filed July 8, 1915. Serial No. 38,734. (Cl. 2—41.)



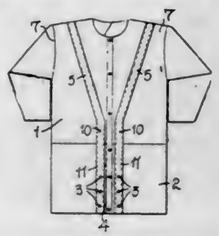
1. As a new article of manufacture, a body garment of a coat type, the major portion of the opening being to one side of the neck of the opening and with the upper extremity of said opening inclined toward the neck and in communication therewith, the skirt portion of the garment being returned to afford a double thickness, and a reinforcing strip secured to the garment extending substantially the entire length of the front and back of the garment and overlying the doubled portion of the skirt at the front and rear of the garment, the intermediate portion of the strip being longitudinally divided to permit the strip to be disposed over the shoulders of the garment at opposite sides of the neck, the front end portion of the strip being disposed to one side of the opening, the opposite end portions of the strip being provided with longitudinally spaced pairs of openings.

2. As a new article of manufacture, a body garment having its skirt portion of doubled thickness and a reinforcing strip secured to the garment and disposed over the shoulders thereof and extending substantially the entire length of the front and back of the garment, and overlying the doubled portion of the skirt at the front and rear of the garment, the intermediate portion of the strip being longitudinally divided to permit the strip to be disposed over the shoulders of the garment at opposite sides of the neck.

3. As a new article of manufacture, a body garment having its skirt portion of doubled thickness, and a reinforcing strip arranged transversely of the doubled portion and vertically of the garment and secured to the garment at the front and back thereof.

4. As a new article of manufacture, a body garment having its skirt portion of doubled thickness, and a reinforcing strip secured to the garment and disposed over a shoulder thereof and extending substantially the entire length of the front and back of the garment, and overlying the doubled portion of the skirt at the front and rear of the garment.

1,195,683. INFANT'S APPAREL. WILLIAM KETCHUM JONES, Wichita, Kans. Filed Apr. 5, 1916. Serial No. 89,243. (Cl. 2—92.)



1. As a new article of manufacture, a body garment having its skirt portion of double thickness, and reinforcing strips arranged vertically of the garment and disposed over the shoulders thereof and extending substantially the entire length of the front and back of the garment, said strips being arranged transversely of the doubled portion and being separated one from the other throughout their lengths, the extremities of the strips being provided with openings arranged in longitudinal spaced relation, the openings of one strip being substantially in horizontal alinement relative to the openings of the second strip.

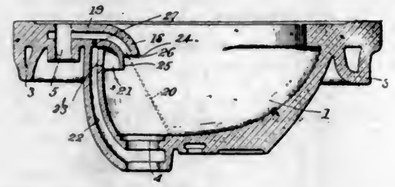
2. As a new article of manufacture, a body garment having its skirt portion of doubled thickness, and reinforcing strips arranged vertically of the garment and disposed over the shoulders thereof and extending substantially the entire length of the garment, said strips being arranged transversely of the doubled portion and being separated one from the other throughout their lengths, the intermediate portions of the strips passing over the shoulders of the garment at points midway the neck opening and the arm openings of the garment, the extremities of the strips being substantially parallel and arranged at opposite sides of the transverse centers of the front and back of the garment, said parallel extremities being provided with openings.

1,195,684. LAVATORY-BASIN. JOHN F. KELLY, Trenton, N. J., assignor to Thomas Maddock's Sons Company, Trenton, N. J., a Corporation of New Jersey. Filed Sept. 26, 1914. Serial No. 863,601. (Cl. 4—24.)

1. In a lavatory-basin, the combination of a bowl, an integral slab having a supply passage leading to said bowl, an integral overflow pipe the passage of which terminates directly beneath said supply passage and a jet or passage directly over the overflow pipe and connecting said overflow with said supply passage as and for the purpose described.

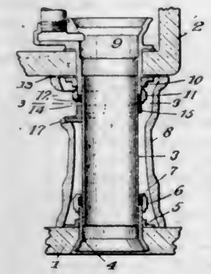
2. In a lavatory-basin, the combination of a bowl, an integral slab, an integral supply nozzle overhanging said bowl, an overflow pipe for said bowl having its passage

leading directly beneath said supply nozzle and a jet communicating direct from said supply to said overflow pas-



sage whereby upon closing the supply orifice the water will be caused to wash direct through the overflow.

1,195,685. FLUSH-PIPE HOUSING. JOHN F. KELLY, Trenton, N. J., assignor to Thomas Maddock's Sons Company, Trenton, N. J., a Corporation of New Jersey. Filed June 8, 1915. Serial No. 32,805. (Cl. 137—95.)



1. The combination with a water closet bowl, a tank therefor and a flush pipe connecting said bowl and tank, of a one-piece housing loosely surrounding and concealing said flush pipe and having an opening in the side wall through which access may be had to said flush pipe and means associated with said flush pipe and adapted to prevent turning of the housing.

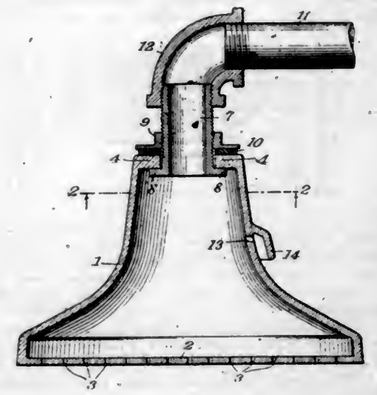
2. The combination with a water closet bowl, a tank therefor and a flush pipe connecting said bowl and tank, of a one-piece porcelain housing loosely surrounding said pipe and having an opening in the side wall through which access may be had to said pipe and projecting means secured to said pipe and adapted to engage said housing to prevent turning thereof.

3. The combination with a water closet bowl, a tank therefor and a flush pipe connecting said bowl and tank, of a one-piece porcelain housing surrounding said pipe and having an opening in the wall thereof through which access may be had to the pipe and a ring secured to said pipe and having a lug engaging a recess in an edge of said opening to prevent said housing turning.

1,195,686. VITREOUS-CHINA SHOWER-HEAD. JOHN F. KELLY, Trenton, N. J., assignor to Thomas Maddock's Sons Company, Trenton, N. J., a Corporation of New Jersey. Filed Feb. 2, 1916. Serial No. 75,659. (Cl. 137—83.)

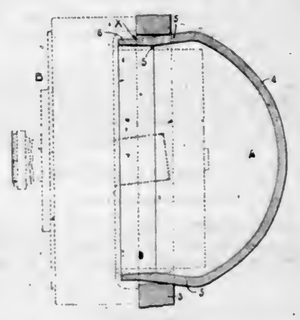
1. A shower head comprising a porcelain funnel-shaped one-piece body and perforated outlet plate, said body being provided with a vent opening through the wall thereof and an integral hood for said vent merging into the surface of the body at the top and sides but open at the bottom.

2. A shower head comprising a porcelain one-piece body and perforated outlet plate, said body being funnel-shaped and provided with an opening through the side wall forming a vent, an integral hood open at the bottom



and adapted to conceal said vent and coupling means secured to said body.

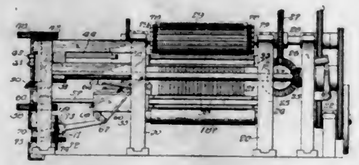
1,195,687. BOILER-PLUG. FREDERICK E. KEY, St. Louis, Mo. Filed Dec. 3, 1915. Serial No. 64,794. (Cl. 220—124.)



1. As a new article of manufacture, a hollow expansible boiler plug closed at one end and open at the opposite end to receive an expanding device, said boiler plug having a conico-cylindrical portion adapted to be forced onto the wall of the opening to which the plug is applied, the open end of the plug being adapted to enter said opening and the conico-cylindrical portion being so formed as to decrease in diameter toward the open end of the plug so that the plug may be forced onto its seat by pressure on its closed end.

2. As a new article of manufacture, a hollow boiler plug closed at its inner end and open at its outer end to receive an expanding device, said hollow plug having a conico-cylindrical portion adapted to engage the wall of the opening to which the plug is applied, said conico-cylindrical portion being so formed as to decrease in diameter toward the open outer end of the plug so that outward pressure on the closed inner end of the plug will tend to force said conico-cylindrical portion onto the wall of said opening, the open outer end of the plug being adapted to pass through said opening, and said conico-cylindrical portion being adapted to be expanded to engage the wall of the opening.

1,195,688. SEMIROTARY WIRE-FABRIC MACHINE. WILLIAM AUGUSTUS KILMER, De Kalb, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 8, 1915. Serial No. 13,022. (Cl. 140—6.)



1. In a wire fabric machine, the combination of wire weaving elements including a drum, a plurality of twisters mounted on said drum, a worm shaft for actuating each of said twisters, means for rotating said drum, and means for actuating said worm shafts, substantially as described.

2. A wire fabric machine including a drum, a plurality of twisters mounted in said drum, a worm gear for actuating said twisters, a worm shaft engaging said worm gear, means for rotating said drum and for actuating said worm shaft, substantially as described.

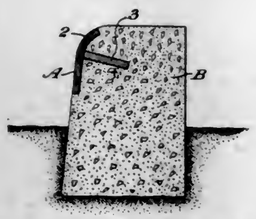
3. In a wire fabric machine, the combination of a drum, a plurality of notched bars mounted on said drum, a plurality of notched worm gears mounted in said bars, a worm shaft for actuating said gears, means for rotating said drum, and means for actuating said shaft during rotation of the drum, substantially as described.

4. In a wire fabric machine, the combination of a twister spindle, including a flat central portion and a pair of segmental side portions, each of which portions accommodates a wire, a gear fixed to said central portion, and rack-bars coöperating with said gear and adapted to cause the rotation of said twister spindle, substantially as described.

5. A twister spindle, including a hollow rod, a pinion fixed to said rod near its lower end, the upper end of said rod being squared, segments at each side of said rod at its upper end, and rack-bars engaging said pinion and adapted to cause rotation of said spindle, substantially as described.

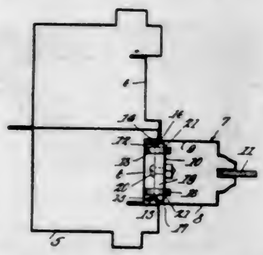
[Claims 6 to 8 not printed in the Gazette.]

1,195,689. CURB-PLATE. GEORGE A. KNEESE, South San Francisco, and ROBERT A. KLASSEN, San Francisco, Cal. Filed Oct. 25, 1915. Serial No. 57,690. (Cl. 94—2.)



A curb plate comprising, in its entirety, a metal sheet bent to provide a straight lower portion and an adjoining curved upper portion terminating in an upwardly inclined plane so that trapped air thereunder will have a continuous upward passage to the exterior; and a key member struck out horizontally from the curved upper portion at a point immediately adjoining the straight lower portion whereby said key will extend at a downward incline from the curb plate into the concrete curb in which it is embedded; said key, by being struck out from the plate at the lower part of the curved upper portion, providing an opening immediately above the straight lower portion for liberating entrapped air.

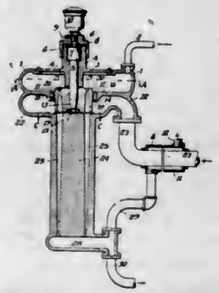
1,195,690. WINDOW-SASH. JOHN KUNZELMANN, Baltimore, Md. Filed July 1, 1915. Serial No. 37,442. (Cl. 189—72.)



1. In combination with the jambs of a window frame having guide channels, a sash slidably mounted in said channels, the stiles of said sash comprising spaced resilient sheet metal inner and outer face portions which have their outer edges bent toward each other to provide rounded shoulders on each side of the sash and which are spaced apart slightly wider than the width of said guide-channels to yieldingly engage the outer corners thereof and leaving said outer edges free from engagement with the sides of the guide-channels, and means on said sash for positioning and retaining said rounded shoulders at the outer corners of the guide-channels.

2. In combination with the jambs of a window frame having sash guide channels, a sash slidably mounted in said channels, the stiles of said sash comprising spaced sheet metal inner and outer face portions which have their outer edges bent toward each other to provide rounded shoulders which yieldingly engage the outer corners of said guide channels and leaving said outer edges free from engagement with the sides of said guide channels, and an edge strip located between said inner and outer face portions which tends to force the sides of the sash stiles outwardly and provided with resilient outstanding flanges which are attached to the rear vertical edges of the bent-in outer edges of said face portions.

1,195,691. METHOD OF AND APPARATUS FOR COMPRESSING ELASTIC FLUID. JOHN A. LAFORE, Ardmore, Pa. Filed Nov. 25, 1914. Serial No. 873,874. (Cl. 230—14.)



1. The method of compressing gas, vapor or elastic fluid, which consists in producing a succession of masses of elastic fluid diminishing in velocity and increasing in pressure, and entrapping between and carrying with said masses of elastic fluid masses of gas, vapor or elastic fluid.

2. The method of compressing gas, vapor or elastic fluid, which consists in expanding elastic fluid under pressure to increase its velocity, breaking said elastic fluid into separated masses while traveling at high velocity, progressively decreasing the velocity and increasing the pressure of said elastic fluid, and while said masses of elastic fluid are traveling at high velocity entrapping between them gas, vapor, or elastic fluid to be compressed.

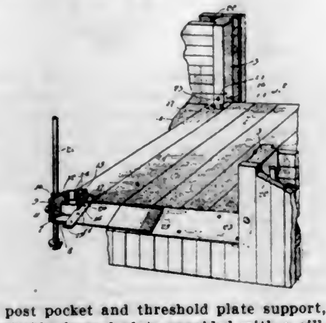
3. The method of compressing gas, vapor or elastic fluid, which consists in entrapping between successive masses of elastic fluid at high velocity masses of gas, vapor or elastic fluid to be compressed, and diminishing the velocity and increasing the pressure of the traveling masses.

4. The method of compressing gas, vapor or elastic fluid, which consists in dividing the same into separated masses, and moving said masses by elastic fluid engaging directly therewith and increasing in pressure.

5. Apparatus for compressing elastic fluid comprising a member having a passage, a source of elastic motive fluid under pressure, means for producing in said passage separated masses of said elastic motive fluid, and means for delivering elastic fluid to be compressed into said passage, said passage diminishing in cross section in the direction of passage of said motive fluid therethrough.

[Claims 6 to 19 not printed in the Gazette.]

1,195,692. CAR CONSTRUCTION. GEORGE F. LAUGHLIN, Chicago, Ill. Filed Jan. 22, 1914. Serial No. 813,671. (Cl. 105—192.)



1. A post pocket and threshold plate support, comprising a suitably formed plate provided with a sill engaging lug on the under face thereof, and suitably flanged from the upper face, and provided with bolt openings therethrough, said plate being provided with a threshold plate supporting flange at one side thereof having a shoulder at each end of the flange for engagement with the threshold plate at the edges thereof.

2. A combined post pocket and threshold plate retainer, comprising a suitably formed plate flanged at adjacent edges, and provided with means for detachably attaching a post thereto, said plate provided with a sill engaging lug upon its lower face, and with an inclined flange at one side, opposite one of said flanges and having a shoulder at each end, the angle of inclination of said inclined flange corresponding to the pitch of the ends of the floor boards.

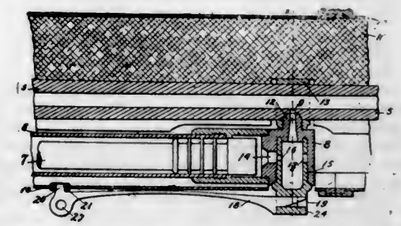
3. A combined post pocket and threshold plate retainer, comprising a suitably formed plate having an offset therein and a lug on its under face, and upwardly flanged from the top face, and provided with a plurality of bolt openings through said flanges, said plate having an inclined wing at one side provided with a shoulder at each end thereof for engagement with the threshold plate, and with screw holes therebetween.

4. A combined door post pocket and threshold plate retainer, comprising a plate having an offset therein to form two faces in substantially parallel planes, and with an inclined wing at one edge, said plate provided with a flange at said offset side adjacent said wing, and at the side opposite said wing, and provided with a lug on its under side, said flanges provided with bolt holes therethrough, the flange opposite said wing being provided with a projection having an opening therethrough substantially parallel with the flange.

5. The combination in a car construction of a post pocket, comprising a suitably formed plate having a lug on the under side thereof, and offset to overlie a portion of the car floor, with an upwardly extending flange about a portion of the upper face, said flange provided with a projection on one side having an opening therethrough, at an angle to the plate, said plate suitably flanged on the opposite edge thereof, and provided with a shoulder at the ends of said flange, a tie rod extending through the opening in said projection, and a threshold plate secured on said last mentioned flange between said shoulders.

[Claims 6 to 10 not printed in the Gazette.]

1,195,693. GAS REGULATOR AND TRAP FOR AUTOMATIC GAS-OPERATED FIREARMS. ISAAC NEWTON LEWIS, U. S. Army, assignor to The Automatic Arms Company, Buffalo, N. Y., a Corporation of New York. Filed May 10, 1916. Serial No. 96,514. (Cl. 42—3.)



1. In a gas operated gun the combination of the barrel having a lateral gas port, a gas cylinder, a gas chamber interposed in the path of the gas from the barrel to the cylinder and a cup-shaped ported plug in said chamber with its open end surrounding said port in the barrel for regulating the flow of gas to said cylinder.

2. In a gas operated gun the combination of the barrel having a lateral gas port, a gas cylinder, a gas chamber interposed in the path of the gas from the barrel to the cylinder and having a lateral outlet port at its upper end opening into said cylinder, a cup-shaped plug seated in said chamber with its open end surrounding said port in the barrel and having ports of different sizes, and means for bringing one or another of said varying ports into registry with said outlet port.

3. In a gas operated gun the combination with the barrel and gas cylinder, of a gas chamber having a pocket below the path of the gas from the barrel to the cylinder for the purpose set forth.

4. In a gas operated gun the combination with the barrel and gas cylinder, of a gas chamber having a pocket below the path of the gas from the barrel to the cylinder, and a rotary ported plug in said chamber for regulating the flow of gas.

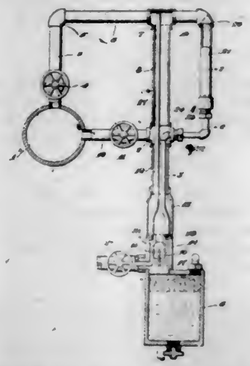
5. In a gas operated gun the combination with the barrel and gas cylinder, of a gas chamber having a pocket below the path of the gas from the barrel to the cylinder, a rotary ported plug in said chamber for regulating the flow of gas therethrough, a spring key detachably connected to said plug, and means for anchoring said key in adjusted position.

[Claims 6 and 7 not printed in the Gazette.]

1,195,694. LUBRICATOR. JOHN F. LEWIS, Philadelphia, Pa., assignor of one-half to Charles A. Baumgartner, Philadelphia, Pa. Filed Feb. 15, 1916. Serial No. 78,380. (Cl. 184—50.)

1. The combination with a steam pipe, of a lubricant reservoir, a conduit communicating with the steam pipe, a head on the reservoir having a passage communicating with the reservoir and the conduit, said passage including a sight feed chamber, a pipe communicating with the head and the conduit to convey steam through the head,

and a second pipe communicating with the conduit and with the head for conveying water of condensation to the reservoir, substantially as described.



2. The combination with a steam pipe, of a lubricant reservoir, a conduit communicating with the steam pipe, a head on the reservoir having a passage communicating with the reservoir and the conduit, said passage including a sight feed chamber, a pipe communicating with the head and the conduit to convey steam through the head, a second pipe communicating with the conduit and with the head for conveying water of condensation to the reservoir, and a valve operative to permit steam to enter said head through the first-mentioned pipe, substantially as described.

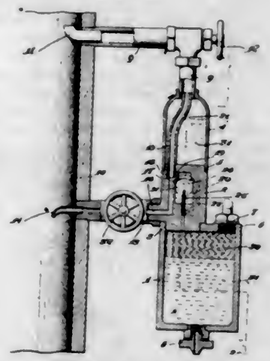
3. In a lubricator of the character described, the combination with a lubricant reservoir, a head on the reservoir, a dome on the head, a vertical pipe communicating with the dome, a main steam pipe, means connecting the top of the vertical pipe with the top of the main steam pipe, whereby steam from the latter is directed into the upper end of the vertical pipe, an outlet pipe connecting the vertical pipe between the ends of the latter with the side of the steam pipe, a combined steam and vent pipe extending to the upper portion of the vertical pipe and communicating with the head, a water pipe in the vertical pipe directing water into the head, said head having a lubricant outlet passage, and valves controlling the passage of lubricant and water through the head, substantially as described.

4. In a lubricator of the character described, the combination with a lubricant reservoir, a head on the reservoir, a dome on the head, a vertical pipe communicating with the dome, a main steam pipe, means connecting the top of the vertical pipe with the top of the main steam pipe, whereby steam from the latter is directed into the upper end of the vertical pipe, an outlet pipe connecting the vertical pipe between the ends of the latter with the side of the steam pipe, a combined steam and vent pipe extending to the upper portion of the vertical pipe and communicating with the head, a water pipe in the vertical pipe directing water into the head, said head having a lubricant outlet passage, said water pipe at its upper portion extending through the vertical pipe and located outside the same, a valve controlling the passage of steam through the head, and valves controlling the passage of lubricant and water through the head, substantially as described.

5. In a lubricator of the character described, the combination with a main steam pipe, and a lubricant reservoir in a lower plane than the steam pipe, of a vertical pipe communicating with the top of the reservoir, said vertical pipe communicating at its upper end with the steam pipe, and at one side with the steam pipe, means for maintaining a level of water in the vertical pipe, a steam pipe extending through the water in the vertical pipe, and a water pipe containing water of condensation located to one side of the vertical pipe and projecting into and down through a portion of the vertical pipe and communicating with the reservoir, substantially as described.

[Claim 6 not printed in the Gazette.]

1,195,695. LUBRICATOR. JOHN F. LEWIS, Philadelphia, Pa., assignor of one-half to Charles A. Baumgartner, Philadelphia, Pa. Filed Feb. 7, 1916. Serial No. 76,546. (Cl. 184—50.)



1. A lubricator of the character described, comprising a lubricant reservoir, a head secured to the reservoir and having a steam passage therethrough, a conduit in said head, and communicating with the top of the reservoir for directing water through the head into the top of the reservoir, and means in said head for conducting lubricant from the top of the reservoir into the steam passage, substantially as described.

2. The combination of a lubricant reservoir, a head secured to the top of the reservoir, a dome secured to the top of the head and having its bottom formed by the top of said head, a passage formed in said head communicating with the top of the reservoir and the bottom of the dome, a second passageway formed in said head, a steam inlet pipe extending through said dome, and communicating with said latter passage, and a third passage in said head communicating with the second-mentioned passage and the top of the reservoir, said steam pipe within the dome having an opening forming a passage for the water of condensation into said dome, substantially as described.

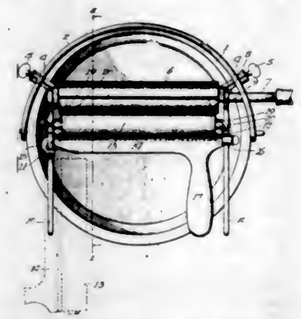
3. A lubricator of the character described, comprising a lubricant reservoir, a head on the reservoir having a steam passage therethrough, a condensing dome on the head having a steam pipe therein terminating in a nozzle, said nozzle extending into said steam passage, said steam pipe having an opening forming a drain for the water of condensation from the pipe into the dome, said head having a passage communicating with the dome and opening directly into the top of said reservoir for conducting the water from the dome to the reservoir, and means in said head for directing lubricant from the reservoir into the steam passage, substantially as described.

4. A lubricator of the character described, comprising a lubricant reservoir, a head on the reservoir having a steam passage therethrough, a condensing dome on the head including a steam pipe communicating with said passage in the head, a water conduit in said head leading from the dome and opening directly into the top of the reservoir, a conduit in said head for directing lubricant from the reservoir into the passage, and valves controlling the passage of water to the reservoir and the passage of lubricant from the reservoir, substantially as described.

5. A lubricator of the character described, comprising a lubricant reservoir, a head on the reservoir having a sight feed chamber therein, a condensing dome on the head, a steam tube extending through the condensing dome, said head having an outlet passage communicating with the end of said tube, and having a port connecting the passage adjacent the tube with the sight feed chamber, a discharge nozzle in the sight feed chamber communicating with the top of the reservoir and through which lubricant is discharged, and said head having a water passage connecting the dome with the top of the reservoir, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,195,696. MOP-WRINGER. AXEL F. LIEVENDAHL, Chicago, Ill. Filed Jan. 11, 1916. Serial No. 71,494. (Cl. 15—12.)



1. A device of the kind described, comprising a suitable frame adapted to rest upon a vessel, and be supported thereby, and provided with bearings for a roller shaft, and a roller shaft, in combination with a coöperating frame provided with an operating lever, one end of the frame formed to pivotally and rockingly engage one side of the frame, and the other end to be seated in a substantially open bearing arranged to permit the rocking of the part, said frame being provided with forwardly extending lever arms to substantially form bell-crank levers, each of said lever arms being provided with a bearing for a roller shaft, and a shaft carrying a wringer roller positioned in said bearings, substantially as described.

2. A device of the kind described, comprising a suitable frame constructed to rest upon and be supported by a suitable vessel, shaft bearings formed at the ends of said frame, a shaft arranged to be seated in the bearings and carrying a wringer roller, and means for rotating the shaft at will, in combination with a coöperating part formed at one end with a hook loosely engaging one side of the frame, and permitting a rocking movement thereof, the opposite end of the frame provided with a stub extension arranged to be seated in a suitable part in the first frame, an operating lever carried by the part, arms on each end of the part extending forwardly and downwardly terminating in open bearings for a shaft, and a shaft therefor carrying a wringer roller, whereby the free end of the frame may be lifted out of its bearing to swing away from the first roller, and readily replaced again in the first position, the lifting of the operating lever serving to separate the rollers, and the depressing of the operating lever tending to force the operating rollers toward each other.

3. In a device of the kind described, a wringer frame adapted to rest upon a suitable vessel, and provided with bearings for a roller shaft, means for rotating said roller at will, said frame being provided on one side with an opening eye forming a bearing, and on the other side with an open bearing, in combination with a coöperating part having one end detachably and rockingly engaging the open eye in the first frame, and the other end provided with a stub shaft adapted to be seated in the bearing, forwardly and downwardly extending arms on said part provided with suitable bearings for a roller shaft, a wringer roller having its shaft ends detachably supported in the bearings, and an extending operating lever, whereby the roller carried by the coöperating part, by operating the lever, may be caused to approach or recede from the first roller, or the free end of the part may be detached from the frame and the coöperating part swung about on its pivotal end, serving to separate the rollers and permit the more ready positioning of the mop between the same, substantially as described.

1,195,697. BOUNDARY-LINE MARKER. FREDERICK WAIT LORD, New York, N. Y. Filed Nov. 22, 1915. Serial No. 62,914. (Cl. 46—24.)



1. A boundary marker having a surface and a plurality of teeth formed integral therewith some of said teeth having their free ends bent inwardly and others outwardly as herein specified.

2. A boundary marker comprising a strip of flexible material having teeth formed integral therewith, said marker being adapted to be rolled as herein specified.

3. A boundary marker comprising a strip of flexible material, a plurality of teeth arranged along the edges thereof and at right angles to the plane of said marker, said teeth being adapted for independent deflection upon a greater or less angle.

4. A boundary marker comprising a strip of flexible material, a plurality of teeth arranged along the edges thereof and at right angles to the plane of said marker, some of said teeth having their free ends bent out of the plane of the right angle and all of said teeth being adapted for independent deflection upon a greater or less angle.

1,195,698. PROCESS OF CONCENTRATING CARNOTITE SANDSTONE. HERBERT N. MCCOY, Chicago, Ill. Filed Feb. 12, 1916. Serial No. 78,023. (Cl. 23—13.)

1. The herein-described process of concentrating the values in carnotite sands, which consists in subjecting the grains thereof to a process of attrition, and separating the value-bearing slimes from the denuded grains, in presence of water.

2. The herein-described process of concentrating the values in carnotite sands, which consists in subjecting the grains thereof in the form of sludge to a process of attrition, and separating the value-bearing slimes from the denuded grains.

3. The herein-described process of concentrating the radium contents of radium-bearing sands, which consists in removing the surface portions of the sand grains by attrition, and separating the radium-bearing slimes from the denuded grains, in presence of water.

4. The herein-described process of concentrating the radium contents of radium-bearing sands, which consists in subjecting the sand grains in the form of sludge to a process of attrition to remove the surface portions thereof, and separating the radium-bearing slimes from the denuded grains.

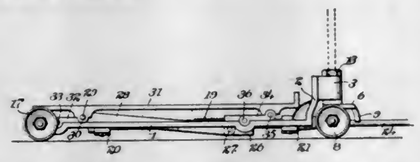
5. The herein-described process of concentrating the values in carnotite sands, which consists in mechanically separating the carnotite incrustation from the sand grains, and thereafter subjecting the denuded grains to an acid treatment for the recovery of the values from admixed carnotite.

[Claim 6 not printed in the Gazette.]

1,195,699. TRUCK. ALLAN MCKINNON, Holyoke, Mass. Filed Jan. 16, 1914. Serial No. 812,554. (Cl. 254—8.)

1. A wheel supported truck having forward steering wheels turnable about a vertical axis and a vertically movable platform, a central longitudinal screw rod, means engaging the threads of the rod and operable when the

rod is rotated for moving the platform, a draft tongue, and a universal coupling located in alinement with the turnable axis of the steering wheels and connecting the tongue with the rod.



2. In combination, in a vehicle, an adjustable platform, a draft tongue rotatable about its longitudinal axis to adjust said platform, and means on the vehicle and engageable with the tongue when moved into a vertical position to lock the tongue against turning movement and the platform in its adjusted position.

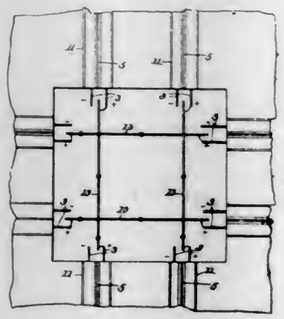
3. In combination, in a vehicle, a vertically adjustable platform, a draft tongue turnable to adjust the platform, and lock means operable through turning movement of the front wheels of the vehicle to lock the tongue against turning movement and the platform in its adjusted position.

4. In combination, in a vehicle, a vertically adjustable platform, a normally horizontal but universally movable draft tongue, a connection between the tongue and the platform, said tongue being rotatable about its longitudinal axis to adjust said platform, and means on the vehicle to engage the tongue when moved into a vertical position to lock it against turning movement and the platform in its adjusted position.

5. In a vehicle, a vehicle body, a platform movable vertically relatively to said body, a casting pivoted to the said body, said casting forming a support for the front wheels of the vehicle, a draft tongue, means actuatable through turning of the said tongue to move said platform relatively to the body, said draft tongue being movable into various positions relatively to the casting, a turning of the casting relatively to the body when the said tongue is in an upright position serving as a means whereby the said tongue is locked in such upright position and against rotation, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

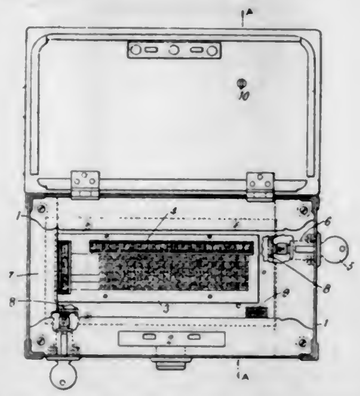
1,195,700. STREET-RAILWAY CROSSING. THOMAS C. MACALLISTER, New York, N. Y. Filed Aug. 20, 1914. Serial No. 857,787. (Cl. 191—28.)



1. A device of the character described comprising the combination with a main shoe and auxiliary shoe of a car; of main conductor rails having their ends spaced apart; of auxiliary conductor rails beneath the main conductor rails, and between the spaced ends thereof, to receive the auxiliary shoe as the main shoe passes from one main conductor rail to the adjacent main conductor rail, and means for conducting an electric current to the said main and auxiliary conductor rails.

2. A device of the character described comprising the combination with the main shoe and an auxiliary shoe depending from the same; of main conductor rails formed in sections and arranged in pairs, the sections of the main conductor rails being spaced apart, auxiliary conductor rails between the sections of the main conductor rails and in a plane lower than the plane of said main conductor rails, a feed wire, connections between the feed wire and the sections of the main conductor rails, and connections between the feed wire and the auxiliary conductor rails.

1,195,701. CODES, CIPHERS, AND THE LIKE. JAMES CRUICKSHANK HENDERSON MACBETH, London, and ALFRED JAMES JUNG, Westminster, London, England, assignors to The Wireless Press, Limited, London, England. Filed Apr. 6, 1916. Serial No. 89,456. (Cl. 35—13.)



1. In means for translating into and from cipher, the combination of a table bearing rows and columns of characters, two movable carriers each of which bears a plurality of series of characters having designating key-characters thereon, one of which carriers is arranged parallel to the rows and the other to the columns, and means for adjusting the character-carriers.

2. In means for translating into and from cipher, the combination of a table bearing rows and columns of characters, two rotatable carriers each of which bears a plurality of series of characters having designating key-characters thereon, one of which carriers is arranged parallel to the rows and the other to the columns, and means for rotating the character-carriers.

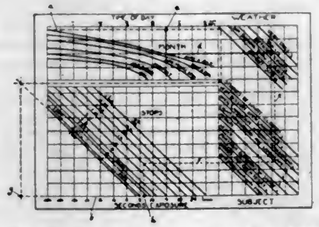
3. In means for translating into and from cipher, the combination of a table bearing rows and columns of characters, two movable carriers each of which bears a plurality of series of characters, one of which carriers is arranged parallel to the rows and the other to the columns, means for adjusting the carriers, and independently operated devices for locking each of said carriers.

4. In means for translating into and from cipher, the combination of a table bearing rows and columns of characters, two rotatable carriers each of which bears a plurality of series of characters, one of which carriers is arranged parallel to the rows and the other to the columns, and separate key-operated devices for locking each of said carriers.

5. In means for translating into and from cipher, the combination of a table bearing rows and columns of characters, two movable carriers each of which bears a plurality of series of characters and a key-character for each series, one carrier arranged parallel to the rows and the other to the columns, means for adjusting the key-characters independently of the series of characters, and means for adjusting said carriers.

[Claim 6 not printed in the Gazette.]

1,195,702. CALCULATING DEVICE. ARTHUR W. MACMILLAN, Chicago, Ill., assignor of one-half to Albert H. Graves, Chicago, Ill. Filed Feb. 6, 1915. Serial No. 6,404. (Cl. 235—61.)



1. A calculating device, comprising a sheet having marked on a portion of its area a curve, the ordinates of which represent predetermined values of a quantity, a set of guide-lines extending from said area and making an angle with said ordinates, a set of oblique, parallel cross-lines intersecting said guide-lines at an angle, said cross-lines being spaced apart proportionate to the modifying effects of predetermined values of a variable which they represent, and a third set of parallel guide-lines intersecting said first two sets of lines and spaced apart proportionate to the differences between the values of the corrected resultant quantity to be determined, the positions of said last-named lines, when referred to a suitable common scale, representing, as modified by said variable, corrected values of the original predetermined quantity.

2. A device for multiplying predetermined values of a quantity with different values of a variable quantity, comprising a chart having marked on a portion of its area, points, the distances of which from a virtual base line represent predetermined standard values of an initial quantity, a set of guide-lines extending from said area and parallel to said base line, a set of oblique parallel cross-lines intersecting said guide-lines at an angle, said cross-lines being spaced apart proportionate to the multiplying effect of the variable and according to a geometric scale, and a set of parallel guide-lines at right angles to the first set intersecting said first two sets of lines and spaced apart proportionate to the differences between the corrected values of the multiplied original quantity, the distances of said last-named lines from a base line at right angles to said first base line, when referred to a suitable geometric scale, representing, as modified by said variable, the product of the original quantities as multiplied by said variable.

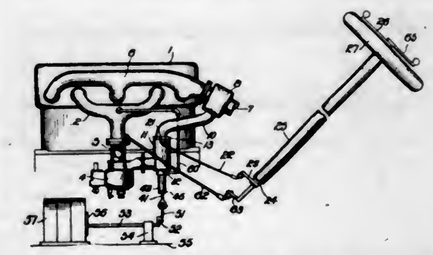
3. A graphic calculating device for determining the modifying effect of a variable upon an original predetermined quantity, comprising a sheet having inscribed on its face a set of oblique, parallel lines, spaced apart proportionate to the predetermined modifying effects on said original quantity of different values of a variable condition represented by said lines, increments of spacing representing increments of modifying effect, said oblique lines being suitably arranged to be intersected by a guide-line drawn parallel to an initial virtual base line and at a distance therefrom proportionate to a predetermined value of the initial unmodified quantity, increments of said distance representing increments in value of said quantity according to an initial scale, the distances of the points of intersection of said guide-line with the oblique lines from a second virtual base line making angles with said oblique lines and said guide-lines, representing, when referred to a suitable scale, corrected values of said original quantity as modified by the different values of said variable represented by said oblique lines.

4. A graphic calculating device for determining the modifying effect of two variables upon an original predetermined quantity, comprising a sheet having inscribed on its face a set of oblique, parallel lines, spaced apart proportionate to the predetermined modifying effects on said original quantity of different values of a variable condition represented by said lines, increments of spacing representing increments of modifying effect, said oblique lines being suitably arranged to be intersected by a guide-line drawn parallel to an initial virtual base line and at a distance therefrom proportionate to a predetermined value of the initial unmodified quantity, increments of said distance representing increments in value of said quantity according to an initial scale, the distances of the points of intersection of said guide-line with the oblique lines from a second virtual base-line, making angles with said oblique lines, representing partially corrected values of said original quantity, a second set of oblique parallel cross lines, analogous in character and functions to said first set and representing values of a second variable and arranged to be intersected by a guide-line drawn parallel to said second base line from one of said intersections, the distances of the points of intersection of said second guide-line from a third virtual base line making angles with said second guide-line and said second set of oblique lines, representing, when referred to a suitable scale, finally corrected values of said original quantity as modified by the variables represented by said sets of oblique lines.

5. A chart for determining the effect of a predetermined variable light condition upon a predetermined standard exposure period, comprising a chart having marked on a portion of its area points, ordinates to which from a virtual base line represent standard exposure periods at different times under various calendar conditions, the values of said ordinates being plotted to a suitable geometric scale whereby increments in length represent multiplying factors, a set of parallel guide-lines crossing said area parallel to said base line, a set of parallel oblique cross-lines intersecting said guide-lines and spaced apart proportionate to the multiplying effect of different values of a variable light condition represented by said cross-lines, a second set of parallel guide-lines intersecting said first two sets of lines and spaced apart proportionate to a suitable geometric scale, increments of spacing of which represent increments of multiplying power, a second set of oblique parallel cross-lines analogous in character and function to said first set and representing values of a second variable light condition, guide-lines intersecting said cross-lines and said second set of guide-lines, and spacings of which also represent multiplying factors plotted to a geometric scale, a third set of parallel oblique cross-lines intersecting said last named guide-lines and representing stop values, and a final scale representing finally corrected exposure periods plotted to a suitable geometric scale and connected by guide-lines to said last named set of parallel oblique cross-lines.

[Claims 6 and 7 not printed in the Gazette.]

1,195,703. VALVE MECHANISM FOR HYDROCARBON-MOTORS. GEORGE B. MAEGLY, Kansas City, Mo. Filed Mar. 8, 1915. Serial No. 12,761. (Cl. 123—99.)



1. The combination with a hydrocarbon motor, of a carbureter connected with the motor, a valve connected with the carbureter and operable by suction from the motor for controlling the admission of air to the carbureter, and a by-pass leading from said connection to a point in the valve, whereby suction in the by-pass will act on the valve reversely to the carbureter suction.

2. The combination with a hydrocarbon motor, of a carbureter having connection with the motor, a valve housing having a conduit leading to the carbureter, an air intake to the valve housing, a valve for controlling the air intake, means controllable by suction from the motor for retaining the valve in determined position, and a timing mechanism operable by the valve.

3. The combination with a hydrocarbon motor, of a valve controllable by suction from the motor for determining the supply of auxiliary air, and a spark timing mechanism operable by said valve.

4. The combination with a hydrocarbon motor, of a carbureter, a conduit leading from the carbureter to the motor, an air supply conduit leading to the carbureter, a valve casing interposed in said conduit, a collar in said casing having ports for passing air from the air supply conduit to the carbureter, a piston in said collar adapted for controlling the air supply, a cylinder, a stem on said valve extended into said cylinder, a piston on said stem within said cylinder, and a conduit leading from a point in the cylinder above the piston to the connection between the motor and the carbureter.

5. The combination with a hydrocarbon motor, of a fluid-actuated valve comprising a casing, a piston valve slidably mounted in the casing and adapted for movement in one direction by air pressure, and fluid-actuated means for moving said valve in the opposite direction.

[Claims 6 to 12 not printed in the Gazette.]

1,195,704. ELECTROLYTIC PROCESS FOR REMOVING OXID OR RUST. PASCAL MARINO, London, England. Filed Apr. 25, 1916. Serial No. 93,392. (Cl. 204—7.)

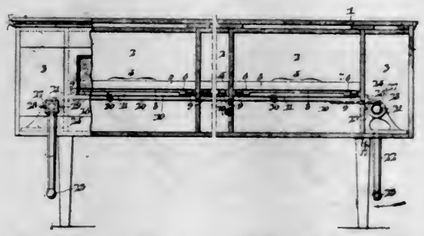
1. The process of electrolytically removing oxid from the surface of iron articles which comprises employing such articles as cathodes in an aqueous bath containing phosphoric acid.

2. The process of electrolytically removing oxid from the surface of iron articles which comprises employing such articles as cathodes in an aqueous bath containing a phosphoric acid compound and phosphoric acid.

3. The process of electrolytically removing oxid from the surface of iron articles which comprises employing such articles as cathodes in an aqueous bath of a phosphoric acid compound which contains 10 per cent. of concentrated phosphoric acid.

4. The process of electrolytically removing oxid from the surface of iron articles which comprises employing such articles as cathodes in an aqueous bath containing 10 per cent. of concentrated phosphoric acid.

1,195,705. AUTOMATIC EGG-TURNING DEVICE. PERRY S. MARTIN, Broadway, Va. Filed Feb. 10, 1915. Serial No. 7,239. (Cl. 119—44.)



1. In an incubator, the combination of a plurality of egg trays, each tray having a movable apron of pliable material for rotating the eggs; means for uniting the ends of said apron, whereby a transverse slot with rigid edges is provided; longitudinally shiftable mechanism extending beneath all of said trays; means mounted on said mechanism extending sufficiently above said mechanism to engage the edges of said slot.

2. In an incubator, the combination of a plurality of egg trays; rollers running transversely of said trays; a movable apron extending around the rollers in each tray; adjustable clasps connecting the ends of said apron with provision of a transverse slot between its two ends; rods running transversely of said apron forming rigid edges for said slot; a single longitudinal means extending beneath all of said egg trays; a plurality of catches mounted thereon, adapted to engage the edges of said slots; and means for shifting said longitudinal means.

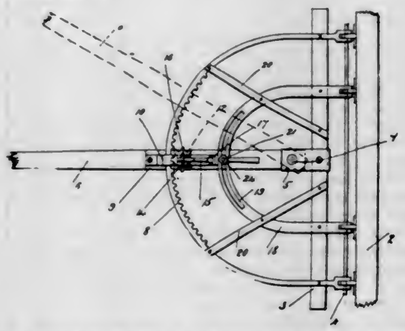
3. In an incubator, containing a plurality of egg trays, each tray having a movable apron for rotating the eggs; said slot; a single longitudinal means extending beneath each egg tray; a catch attached to said band beneath each egg tray, extending sufficiently above said band to engage said slot; selective means whereby said catches may be prevented from engaging said slots; and means for shifting said band.

4. In an incubator, the combination of a plurality of trays for supporting the eggs; movable aprons for rotating the eggs in said trays; longitudinally shiftable mechanism placed beneath said trays; a plurality of catches carried thereby, which will in one position engage said aprons and impart lateral motion thereto, and which in another position will not engage said aprons.

5. In an incubator, the combination of a plurality of trays for supporting the eggs; movable aprons for rotating the eggs in said trays; longitudinally shiftable mechanism placed beneath said trays; a plurality of catches carried thereby, adapted to engage said aprons and impart lateral motion thereto, a flexible strip mounted on each catch, whereby said catch may be prevented from engaging said aprons.

[Claims 6 and 7 not printed in the Gazette.]

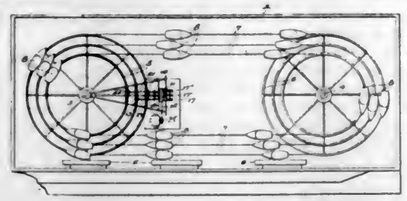
1,195,706. DRAFT ATTACHMENT. CHARLES J. MAUDLIN, Salem, Ind. Filed Feb. 1, 1916. Serial No. 75,499. (Cl. 21—137.)



In a draft attachment, a crosspiece adapted to be connected to an axle, a draft tongue pivoted to the crosspiece, a curved toothed rack secured to the crosspiece, a shaft journaled in bearings on the draft tongue, a toothed pinion secured on the said shaft and gearing into the said rack, a crank handle pivoted to the upper end portion of the said shaft, a catch for engaging with the crank handle and temporarily preventing the draft tongue from moving pivotally, a curved locking bar secured to the said crosspiece, and means for clamping the draft tongue to the locking bar.

1,195,707. AMUSEMENT DEVICE. WILLIAM E. MILLER, Providence, R. I., assignor of one-half to William H. Kendall, Providence, R. I. Filed Jan. 12, 1916. Serial No. 71,651. (Cl. 104—111.)

1. In combination with a water containing tank, a series of wheels at each end of the tank, endless cables passing around the wheels, boats affixed to the cables, a drive wheel, one of said series of said wheels having gear teeth, a drive shaft having a gear meshed with the gear teeth of one of the wheels, other shafts having gears meshed with the teeth of the respective other wheels, means to drive said other shafts from the drive shaft, clutches for each shaft, and manually controlled means for operating the clutches.



2. In combination with a water containing tank, a series of wheels at each end of the tank, endless cables carrying boats passed around the wheels, one of the series of wheels having gear teeth, a shaft for each wheel of said last named series having a gear meshing with the teeth of said wheels, a clutch for each shaft, hand control levers for each clutch, and means to drive the shafts in unison.

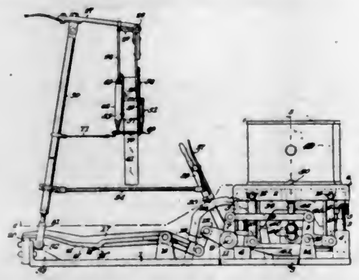
3. In combination with a water containing tank, a series of wheels at each end of the tank, the wheels of one series having gear teeth, a shaft having a gear meshed with the teeth of one wheel, other shafts having gears meshed with the respective other wheels of those having gear teeth, means to drive the first shaft, and means to drive the other shafts from the first shaft.

4. In an amusement device, two series of wheels, endless cables passing around the wheels, conveyances secured to the cables, a series of shafts one for each wheel of one of the two series of wheels, means for driving said wheels from said respective shafts, means to drive one of the shafts, means between said last named shaft and the other shafts for driving the latter from the former, and means for each shaft for rendering same operative and inoperative at will.

5. In an amusement device, two series of wheels, endless cables passing around the wheels, conveyances secured to the cables, each wheel of one of the series of wheels having gear teeth, a shaft for each of said wheels having a gear meshed with the teeth thereof, means to drive the shafts in unison, and a series of independent means one for each shaft for rendering the latter operative and inoperative at will.

[Claim 6 not printed in the Gazette.]

1,195,708. MOLDING-MACHINE. MACKINTOSH M. MORRISON, Calumet, Mich. Filed May 23, 1914. Serial No. 840,545. (Cl. 22—29.)



1. In a molding machine the combination of a base, a vertically movable molding table mounted and guided thereon, interconnected lifting levers connecting said table and base, and an overhead drive shaft having an actuating adjustable connection for vibrating said levers and successively lifting and dropping said table.

2. In a molding machine the combination of a base, a vertically movable molding table mounted thereon, bell-crank levers connecting said base and table, an operating lever connected with said bell-crank levers, an overhead shaft provided with a cam, and a wiper arranged to coöperate with the cam and having a connection with the operating lever adapted to successively lift the table.

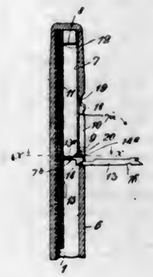
3. In a molding machine the combination of a vertically movable molding table, interconnected lifting levers connected with said table, impact stops arranged to limit the downward movement of the table, and an overhead driving cam having a detachable connection with said levers and adapted to successively lift the table and permit it to drop on said stops.

4. In a molding machine the combination of a vertically movable molding table, interconnected lifting levers connected with said table, impact stops for limiting the downward movement of the table and jolting the same, a driving connection adapted to actuate said levers for lifting and dropping the table successively, and means for varying the movement of said levers by said driving connection to vary the force of the jolts.

5. In a molding machine the combination of a vertically movable molding table, lifting mechanism connected with said table, impact stops for limiting the downward movement of the table and imparting jolts thereto, an operating lever connected with the lifting mechanism, an overhead drive shaft provided with a cam, a wiper arranged to coöperate with the cam, and a pendant rod connected with the wiper and movable into and out of operative engagement with said operating lever.

[Claims 6 to 15 not printed in the Gazette.]

1,195,709. FOUNTAIN-PEN. LUCIFER J. MOST, New York, N. Y. Filed Jan. 20, 1916. Serial No. 73,102. (Cl. 120—46.)



1. A fountain pen having the combination with a flexible ink receptacle, and a surrounding rigid holder therefor having a slot therein, of a bar for compressing said receptacle, a lever pivotally mounted in the slot for operating said bar to compress said receptacle, said lever being mounted for longitudinal sliding movement in said slot, and means to engage said lever and positively lock it against accidental pivotal movement when the lever is slid longitudinally.

2. A fountain pen having the combination with a flexible ink receptacle, and a surrounding rigid holder therefor, of compressing means for said receptacle, a lever for operating said means adapted to lie against said holder when in inoperative state and being slidable longitudinally while in inoperative state, and means to positively lock said lever against opening away from the holder when it is slid longitudinally.

3. A fountain pen having the combination with a flexible ink receptacle, and a surrounding rigid holder therefor, of a bar for compressing said receptacle, a lever for operating said bar adapted to be opened away from said holder and to be closed thereagainst, said lever sliding longitudinally when in closed state, said lever having a projection, and said holder having a rigid portion to the

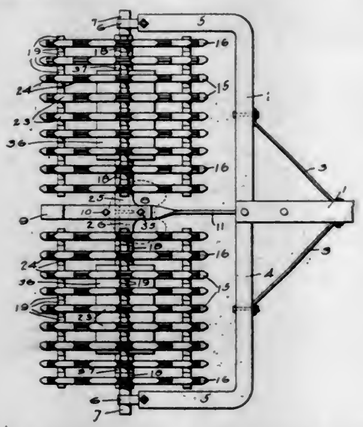
rear of which said projection slides to engage it to positively lock said lever when it is slid longitudinally.

4. A fountain pen having the combination with a flexible ink receptacle, and a surrounding rigid holder therefor, of a bar for compressing said receptacle, a projection extending from said holder transversely to said bar, said bar adapted to be guided by said projection against longitudinal movement during its operation, a lever for operating said bar adapted to be opened away from said holder and to be closed thereagainst, said lever being slidable longitudinally when in closed state, and means to positively lock said lever against opening away from the holder when it is slid longitudinally.

5. A fountain pen having the combination with a flexible ink receptacle, and a surrounding rigid holder therefor, of a bar for compressing said receptacle, a lever for operating said bar adapted to be opened away from said holder and to be closed thereagainst, said lever being slidable longitudinally when in closed state, a pin secured to said holder to aline said lever with said holder when in closed state and to guide it in its longitudinal movement, and means to positively lock said lever against opening away from the holder when it is slid longitudinally.

[Claims 6 and 7 not printed in the Gazette.]

1,195,710. SOIL MULSHER AND SUBPACKER. NORMAN T. NICHOLS, Delavan, Ill. Filed Jan. 29, 1912. Serial No. 674,101. (Cl. 55—77.)



1. In a device of the character described, a frame, a plurality of shafts connected to said frame, roller and crusher members mounted on each of said shafts, a coupling for the inner ends of said shafts, said coupling comprising a member for each shaft, each member having a lug extending therefrom, each lug being provided with a partially curved or sloped surface, the members being so positioned on the inner ends of the shafts that the partially curved or sloped surfaces are in contact and means passing through said lugs for pivotally connecting said members.

2. In a device of the character described, a frame, a plurality of shafts connected to said frame, roller and crusher members mounted on each of said shafts, a coupling for the inner ends of said shafts, said coupling comprising a member for each shaft, each member having a lug extending therefrom, each lug being provided with a partially curved or sloped surface and also having a flared or tapered opening therethrough, the members being so positioned on the inner ends of said shafts, that the partially curved or sloped surfaces contact with each other, and securing means passing through said flared or tapered openings.

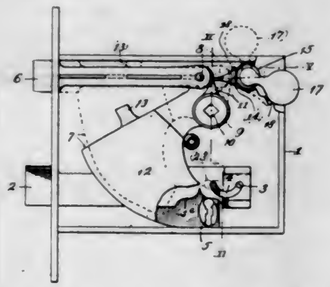
3. In a device of the character described, a frame, a plurality of shafts connected to said frame, roller and crusher members mounted on each of said shafts, a coupling for the inner ends of said shafts, said coupling comprising a member for each shaft, each member having a lug extending therefrom, each lug having a flattened circular portion having part of its surface curved or sloped, the members being so positioned on the inner ends of said shafts that the partially curved or sloped surfaces contact with each other, and means passing through said lugs for pivotally connecting said members.

4. In a device of the character described, a frame, a plurality of shafts connected to said frame, roller and crusher members mounted on each of said shafts, a coupling for the inner ends of said shafts, said coupling comprising a member for each shaft, each member having a lug extending diagonally from one end thereof, each lug having a flattened circular portion having part of its surface curved or sloped, each lug also having an outwardly tapered or flared opening therethrough, the members being so positioned on the inner ends of said shafts that the partially curved or sloped surfaces contact with each other, and a bolt passing through said flared or tapered openings.

5. In a device of the character described, a frame, a plurality of shafts connected to said frame, roller and crusher members mounted on each of said shafts, a coupling for the inner ends of said shafts, said coupling comprising a member for each shaft, each member having a lug extending therefrom, each lug being provided with a partially curved or sloped surface, the members being so positioned on the inner ends of the shafts that the partially curved or sloped surfaces are in contact and means passing through said lugs for pivotally connecting said members, so as to permit angular movement of the shafts relative to each other in both a horizontal and vertical direction, a link connecting said coupling to said frame, and means for adjusting the link so as to vary the angular relation of the shafts relative to each other.

[Claims 6 and 7 not printed in the Gazette.]

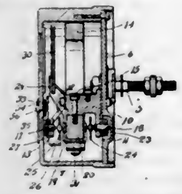
1,195,711. COMBINED LOCK AND LATCH. PETER NORDWALL, Kansas City, Kans. Filed Feb. 26, 1916. Serial No. 80,645. (Cl. 70—51.)



In a lock of the character described, a case having a key-hole therein, a pivoted element having a guard to normally close the key-hole, a latch bolt mounted in the case and pivotally-connected to said pivoted member, an element on the pivoted member to engage the back of the latch bolt to normally hold the same in outward position, and a detent adapted to engage said element and lock it against the rear end of the latch bolt.

1,195,712. ELECTRICAL MEASURING INSTRUMENT. CHARLES E. NORTON, Manchester, Conn. Filed Mar. 7, 1913. Serial No. 752,673. (Cl. 171—95.)

1. In an electrical measuring instrument, a base plate, a supporting base secured to said plate, a magnet retaining plate removably attached to said supporting base and having forked ends, a magnet supported by said supporting base and having its legs received within the forked ends of said retaining plate, and an armature mounted on said supporting means.



2. In an electrical measuring instrument, a base plate having a recess, a support removably secured to the base plate and having an arm located opposite said recess, a supporting frame projecting from the front of said supporting base and having a cross bar located opposite said recess, a stud located in said arm and projecting into said recess, an armature spindle supported at one end in said stud and at its opposite end in said cross bar, an armature supported by said spindle, and a magnet supported with said armature located between its ends.

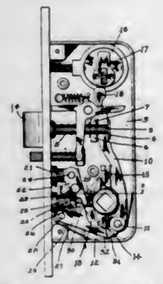
3. An electrical measuring instrument including a base plate, a supporting base removably secured to the base plate, an arm projecting from the supporting base, a frame located at the front of said supporting base and projecting obliquely therefrom and having a cross bar located opposite said arm, an armature rotatably supported on said cross bar and arm, a magnet retaining plate removably secured to said supporting base and having forked ends to support a magnet, and the magnet supported by said supporting base and having its arms located in said forked ends of the retaining plate and with its lower ends located on opposite sides of said armature.

4. In an electrical measuring instrument, a base plate, a supporting base secured to said plate, said supporting base having a frame projecting therefrom, and the whole forming a unit removably secured to the base plate, a magnet retaining plate removably attached to said supporting base and having forked ends, a magnet supported by said supporting base and having its legs received in the forked ends of said retaining plate by which it is retained in an upright position, bearings on said supporting base, an armature supported in said bearings, and an indicator connected with the armature.

5. In an electrical measuring instrument, a negative and a positive conductor, and a shunt extending between said conductors and having a gradually increased cross-sectional area between the points of its connection with said shunt.

[Claims 6 to 12 not printed in the Gazette.]

1,195,713. LOCK. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 10, 1916. Serial No. 90,156. (Cl. 70—46.)



1. In a lock, a latch bolt, inside and outside hubs, dogging mechanism for the outside hub, a lever adapted to be actuated by said hubs for retracting said bolt, key mechanism for retracting said bolt by said lever, and means to dog said dogging mechanism as long as it dogs said outside hub, said means releasable by said lever when the latter is actuated by the inside hub; substantially as described.

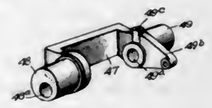
2. In a lock, a latch bolt, inside and outside hubs, stop work associated with the outside hub, and including dogging and releasing slides respectively, a lever adapted to be actuated by said hubs to retract said bolt, and means normally dogging said dogging slide against releasing movement at any time when said slide occupies its operative position, said means being operative when the door is open as well as when it is closed, and being releasable only by the actuation of said lever by the inside hub; substantially as described.

3. In a lock, a latch bolt, inside and outside hubs, means for retracting said bolt by said hubs, stop work associated with the outside hub and including dogging and releasing slides respectively, and a walking beam member interconnecting said slides, a lever for engaging said walking beam member to dog the stop work, and means for shifting said lever out of its dogging position to release the stop work; substantially as described.

4. In a lock, a latch bolt, inside and outside hubs for retracting the same, said outside hub having a notch therein, a dogging slide having a portion to engage said notch, the dogging portion of said slide being of greater width than the outside hub so that said slide will dog said hub when the hubs are interchanged to reverse the hand of the lock, and means for dogging the dogging slide against movement from its dogging position; substantially as described.

5. In a lock, a latch bolt, inside and outside hubs, a lever for retracting said bolt by means of said hubs, a dogging slide for engaging the outside hub, a releasing slide, a walking beam connecting said dogging slide with said releasing slide, and a spring pressed dogging lever for engaging said walking beam controlled by said bolt retracting lever; substantially as described.

1,195,714. BENDING-ROLLS. PAUL PARCELLS, Chicago, Ill., assignor to Geo. Whiting Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1913. Serial No. 759,936. (Cl. 153—73.)



1. In a machine of the class described, the combination of bending rolls, a swinging yoke having two trunnions, each provided with an eccentric bearing arranged on an axis parallel with the axis of the yoke to receive one end of one of the rolls, and a gear wheel for rotating such roll fixed to said end thereof within the yoke.

2. In a machine of the class described, the combination of bending rolls, a supporting frame, a swinging yoke having two trunnions mounted to rock in said frame, each trunnion being provided with an eccentric bearing arranged on a common axis parallel with the axis of the yoke to receive one end of one of the rolls, and a gear wheel for rotating such roll fixed to said end thereof within the yoke.

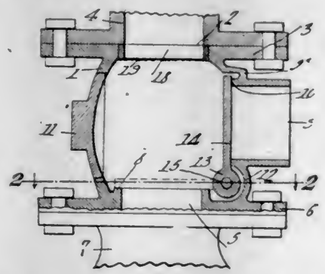
3. In a machine of the class described, the combination of bending rolls, a supporting frame, a swinging yoke having two trunnions, mounted to rock in said frame, each trunnion being provided with an eccentric bearing arranged on a common axis parallel with the axis of the yoke to receive one end of one of the rolls, a gear wheel for rotating such roll fixed to said end thereof within the yoke, and a swinging removable bearing for the other end of said roll.

4. In a machine of the class described, the combination of bending rolls, a swinging yoke arranged to oscillate upon trunnions, said trunnions having eccentric bearings

arranged on an axis parallel with the axis of the trunnions to receive one end of one of the rolls, and a weight connected with such yoke.

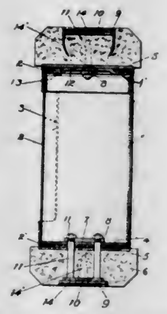
5. In a machine of the class described, the combination of a swinging bending roll and fixed bending rolls, a swinging yoke having eccentric bearings arranged on an axis parallel with the axis of the yoke for one end of the swinging roll, and means for operating the yoke comprising a rock shaft 50, rock arm 52, and a pitman 53 between the arm 52 and the yoke, the pivotal connection between said arm 52 and pitman 53 being slightly beyond dead center when the swinging roll is in operative relation to the fixed rolls to lock such swinging roll in position.

1,195,715. AIR-VALVE FOR COMBUSTION-ENGINES. EARL F. PAYNTER, Franklinville, N. Y. Filed Apr. 13, 1915. Serial No. 21,082. (Cl. 137—26.)



A valve structure embodying a casing having an inlet port, an opposite outlet port, a second inlet port between the aforesaid ports, the casing having inner annular ribs surrounding the inlet ports and providing valve seats, a removable plug opposite the second inlet port, and a transverse pocket between the adjacent portions of the valve seats, said valve seats being arranged at right angles with one another, a transverse spindle journaled through the ends of said pocket, a swinging flat valve whose opposite faces are seatable against said seats, the valve having an enlarged portion within said pocket mounted upon said spindle, and a screen fitted within the outlet port, said plug when removed giving access to the screen, valve and valve seats.

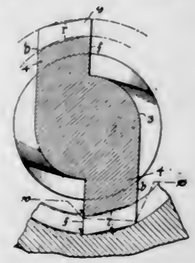
1,195,716. PNEUMATIC-DESPATCH-TUBE CARRIER. ALBERT W. PEARSALL, Lowell, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Dec. 26, 1913. Serial No. 808,741. (Cl. 243—39.)



1. A carrier comprising a shell, a buffer head of cushioning material, means including an outer clamping plate, for fastening said head and shell together, and a removable indicating plate adapted to be positioned to expose the symbol bearing surface thereof at the outer face of said buffer head, claw-like means turned in toward the axis of said shell from points adjacent the periphery of said clamping plate and pulling said indicating plate toward said clamping plate, for normally securely holding said indicating plate in position upon said buffer head, said indicating plate, however, adapted to be forcibly pried out of the said position while leaving said means for fastening said head and shell together substantially undisturbed.

2. A carrier comprising a shell, a buffer head of cushioning material, means including an outer clamping plate, for fastening said head and shell together, and a removable indicating plate adapted to be positioned to expose the symbol bearing surface thereof at the outer face of said buffer head, said plate having parts to bite into and grasp said cushioning material around and back of said clamping plate for normally securely holding said indicating plate in position upon said buffer head, said biting parts adapted to be drawn out of engagement with said material by an outward pressure upon said plate, while leaving said first mentioned means substantially undisturbed, and said clamping plate holding the cushioning material, grasped by said biting parts, against outward movement from said shell and together with said parts when said indicating plate is being removed.

1,195,717. THREAD-CUTTING TOOL. ALBERT D. PEJAUD and HUGH J. MCGIVERN, Cleveland, Ohio. Filed Feb. 21, 1914. Serial No. 820,154. (Cl. 10—141.)



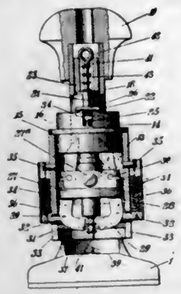
1. A cutting tool comprising a reduced body having two lands at opposite sides of the axis thereof and provided with front cutting teeth extending in opposite directions on the same radial line, and said body having circumferential portions beginning at the base of each radial face of one land and merging with the back face of the opposite land.

2. A thread cutting tool comprising a reduced elongated body having straight land portions extending outward at opposite sides at one side of the axis thereof and having front cutting faces radially of the tool, and said land portions having a series of uniformly spaced teeth at the circumference thereof comprising sections of a naturally generated thread, and the circumferential portion of said teeth and the bottom of the spaces therebetween having a portion of the stock removed to provide clearance in cutting operations.

1,195,718. PAPER-FASTENING MACHINE. GEORGE H. PEMBROKE, New Brunswick, N. J., assignor to Marcus H. Horton, Brooklyn, N. Y. Filed Dec. 31, 1912. Serial No. 739,428. (Cl. 218—15.)

1. A machine of the character described comprising a base, a casing thereon, a chuck in said casing, a fastener-supporting member loosely supported within said chuck, and means for actuating said chuck to remove a fastener from said fastener-supporting member and drive the same, substantially as specified.

2. A machine of the character described comprising a base, a casing thereon, a chuck in said casing, a separate fastener-supporting member disposed within said chuck and supported at its upper end, and means for actuating said chuck to engage a fastener at the lower end of said fastener-supporting member and drive the same, substantially as specified.



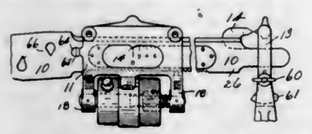
3. A machine of the character described comprising a base, a casing thereon, a chuck in said casing, a separate fastener-supporting member disposed within said chuck and supported at its upper end, and means for actuating said chuck to remove a fastener from the free end of said fastener-supporting member and drive the same, substantially as specified.

4. A machine of the character described comprising a base, a casing thereon, a chuck in said casing, a fastener-supporting rod disposed within said chuck and provided at its upper end with means for suspending the same within said chuck, and means for actuating said chuck to remove a fastener from the free end of said rod, substantially as specified.

5. A machine of the character described comprising a base, a casing thereon, a chuck in said casing, a fastener-supporting rod on said chuck provided at its upper end with means for suspending the same therein, and means for actuating said chuck to remove a fastener from the free end thereof and drive the same, substantially as specified.

[Claims 6 to 17 not printed in the Gazette.]

1,195,719. SCALE. ISADORE F. PFEIFFER, Altoona, Pa. Filed Oct. 22, 1915. Serial No. 57,316. (Cl. 73—30.)



1. A scale including a scale beam, a poise shiftable on the beam, said poise including a poise body having a pointer for reading the scale on the beam, arms depending from the body of the poise, a threaded shaft journaled in the lower ends of the arms of said poise, a rotatable weight on said threaded shaft and having means for indicating the fractional pounds registered by the pointer on the scale beam, and a handle projecting radially from said weight for operating the same.

2. A scale including a scale beam, a poise slidable on the beam, said poise comprising a poise body, a plurality of anti-friction rollers for riding on the top edge of the beam, spring pressed members for engaging the underside of the beam to hold the poise still, arms depending from the poise body, a threaded shaft journaled in said arms, a rotatable weight mounted in said threaded shaft and having means for indicating fractional parts of a pound after the poise has come to rest on the beam.

3. A scale including a scale beam, a poise slidable on the beam at one side of its fulcrum point and a balancing device carried by the beam on the other side of its fulcrum point, said balancing device including a casing, a vertically adjustable weight in said casing, an upstanding supporting member carried by said casing, and a horizontally shiftable weight mounted on said upstanding supporting member.

4. A scale including a scale beam, a poise slidable on the beam at one side of its fulcrum point, and balancing means carried by the beam on the other side of its fulcrum point, said balancing means including a casing, a weight arranged within the casing, a screw for shifting the weight longitudinally of the casing, a rack carried by the top of said casing, a weight straddling said rack, and means for shifting said latter weight along the rack.

5. A scale including a scale beam, a poise slidable on the beam at one side of its fulcrum point, and balancing means carried by the beam on the other side of its fulcrum point, said balancing means including a casing arranged in a perpendicular position, a weight holding receptacle shiftable within the casing longitudinally thereof, means carried by said casing for preventing the weight holding receptacle from rotating, a screw for shifting said receptacle, a rack carried by the upper part of said casing, a horizontally shiftable weight in straddling engagement with said rack, and an operating pinion carried by said horizontally shiftable weight.

1,195,720. PROCESS OF MAKING ACTIVE CHARCOAL POWDER. LEON PILASKI, Warsaw, Russia. Filed Aug. 7, 1913. Serial No. 783,547. (Cl. 127—2.)

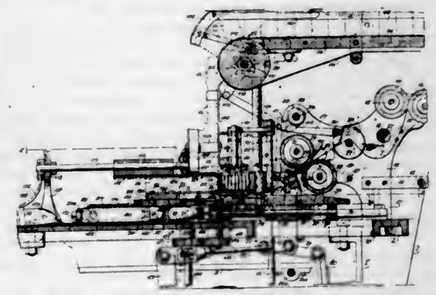
1. A process for making active charcoal powder for the purposes of cleansing and filtering, which consists in treating house and street refuse with lime for a considerable period, subjecting the mixture to dry distillation, and grinding the resulting product to charcoal powder.

2. A process for making active charcoal powder, which consists in separating from house refuse and street refuse the fine and siliciferous constituents that will pass through a sieve having substantially three millimeter apertures, separating from the coarser residue the valueless constituents, treating the remainder with burnt lime for a considerable period, and then subjecting it to dry distillation and then grinding the product to powder, substantially as described.

3. In the art of making active charcoal powder from house and kitchen refuse, those steps in the art which consist in treating said refuse with lime for a considerable period, before distillation thereof, and then distilling it.

4. In the art of making active charcoal powder from house and street refuse, those steps in the art which consist in treating the coarser and productive parts with lime for a considerable period, while permitting the access of air, and then distilling said refuse after the lime has acted thereon.

1,195,721. WRAPPING-MACHINE. NATHANIEL B. POST, Chicago, Ill., assignor to Rueckheim Bros. & Eckstein, Chicago, Ill., a Corporation of West Virginia. Filed Feb. 28, 1910. Serial No. 546,552. (Cl. 93—2.)



1. In a wrapping machine, the combination with a folding chute, of two horizontal side-folders relatively movable together and apart to open and close the entrance to said

chute, a feed mechanism and guides for delivering the separate wrappers successively onto the exposed outer faces of said side-folders when the latter are in closed position, the upper face of the folder onto which the paper is first fed being above that of the other folder, a feed-mechanism for delivering the articles to position above said side-folders, and a plunger for projecting the article and its wrapper between said side-folders when the latter are separated, substantially as described.

2. In a wrapping machine, the combination with a bed-plate, of a stationary side-folder above said bed-plate and forming therewith a horizontal folding chute, a side-folder movable to and from said stationary side-folder to open and close the entrance to said chute, a feed mechanism and guides for delivering the wrappers directly upon the exposed outer faces of said side-folders when the latter are in closed position, a stationary holder for supporting an article above said movable side-folders, a feed mechanism for successively delivering the articles to said holder, a vertically movable plunger for projecting the article from said holder and moving it together with its wrapper between said side folders and onto said bed-plate, and a horizontally reciprocating plunger for pushing the same through said chute, substantially as described.

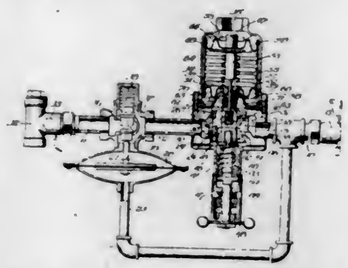
3. In a wrapping machine, the combination with a horizontal folding chute having a stationary side-folder at its upper portion, of a horizontal side-folder movable to and from said stationary side-folder to open and close the entrance to said chute, a stationary cross-bar above said movable side-folder, mechanism in rear of said cross-bar for feeding the wrappers below the same and onto the upper faces of said side-folders, a pair of stationary grip-plates for supporting an article in front of said cross-bar and above said movable side-folder, an article feed-way in front of said grip-plates, a carrier movable to and from said cross-bar for moving the articles from said feed-way to position between said grip-plates against said cross bar, a plunger for projecting the article and its wrapper from said grip-plates, between said side-folders and into line with said folding chute, and a plunger for moving the same through said chute, substantially as described.

4. In a wrapping machine, the combination with a horizontal folding chute having a stationary side-folder at its upper portion, of a horizontal side-folder movable to and from said stationary side-folder to open and close the entrance to said chute, a cross-bar above said movable side-folder, mechanism in rear of said cross-bar for feeding the wrappers below the same and over said side-folders, a pair of grip-plates for supporting an article in front of said cross-bar and above said movable side-folder, a vertical article feed-way terminating in front of said grip-plates, a carrier comprising offset horizontal plates and a connecting vertical wall arranged to alternately close the lower end of said feed chute and move the articles therefrom to said grip-plates, and vertically and horizontally movable plungers for successively projecting the articles and wrappers between said side-folders and through said chute, substantially as described.

5. In a wrapping machine, the combination with a horizontal folding chute having a stationary side-folder at its upper portion, of a horizontal side-folder movable to and from said stationary side-folder to open and close the entrance to said chute, a stationary cross-bar above said movable side-folder, mechanism in rear of said cross-bar for feeding the wrappers below the same and onto the upper faces of said side-folders, a pair of stationary grip-plates for supporting an article in front of said cross-bar and above said movable side-folder, a vertical article feed-way terminating in front of said grip-plates, a horizontal conveyer extending over the rear end of the machine for delivering the articles to the upper end of said feed-way, a carrier movable to and from said cross-bar for moving the articles rearwardly from the lower end of said feed-way to said grip-plates, and vertically and horizontally moving plungers for successively projecting the article between said side-folders and through said chute, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,195,722. THERMOSTATIC WATER-HEATER. FRED W. POWERS and MORTON O. SNEDIKER, Chicago, Ill., assignors to The Powers Regulator Company, Chicago, Ill., a Corporation of Illinois. Filed June 14, 1915. Serial No. 33,891. (Cl. 236—6.)



1. In means for heating water, the combination of a casing, a thermostatic element located in said casing, hot and cold fluid inlets to said casing, means controlled by the thermostatic element for regulating the supply of hot and cold fluid, and means for equalizing the entrance pressures of said hot and cold fluids, substantially as described.

2. In a device of the class described, the combination of a casing having hot and cold fluid inlets, a valve for regulating the amount of said fluids admitted to said casing, a thermostatic element connected to and controlling said valve, and means acted upon by said hot and cold fluids for equalizing the entrance pressures of said hot and cold fluids, substantially as described.

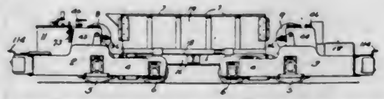
3. In a device of the class described, a casing having hot and cold fluid inlets, a thermostatic element in said casing and adapted to control the extent of opening of one of said fluid inlets, and a pressure equalizer acted upon by both said hot and said cold fluids and adapted to substantially equalize the pressures of the hot and cold fluid entering said casing, substantially as described.

4. In a water heater, the combination of a casing having hot and cold fluid inlets, a valve for controlling at least one of said inlets, a thermostat acting upon said valve, and a pressure equalizer located extraneously of said casing and in communication with the hot and cold fluid lines whereby the pressure of the hot and cold fluids entering said casings is substantially equalized, substantially as described.

5. In a water heater, the combination of a casing having hot and cold fluid inlets, a valve controlling said inlets, a rigid non-collapsible container within said casing, and a collapsible element within said container, said collapsible element being adapted to act upon said valve, and a volatile fluid within said container, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,195,723. STORAGE-BATTERY LOCOMOTIVE. CHARLES A. PRATT, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 22, 1916. Serial No. 73,568. (Cl. 105—267.)



1. A storage battery locomotive comprising three sections, a central section and two end sections pivotally connected together, the central section adapted to carry the storage battery, four wheels upon which each end section is mounted, two wheels being driving wheels, the other two wheels being undriven wheels and being smaller in diameter than the driving wheels, an electric motor on each of said end sections, means for connecting said motors with said storage battery, the ends of said central section projecting over a portion of each end section and the undriven wheels thereof, one end of each end section projecting beyond the central section.

2. A storage battery locomotive comprising three sections, a central section and two end sections pivotally connected together, the central section adapted to carry the storage battery, driving wheels connected with both end sections, a motor for driving said driving wheels the driving wheels on the end sections and the motor being outside of the boundary of the central section.

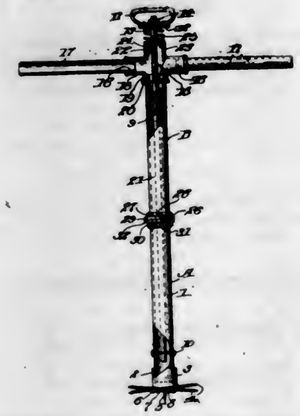
3. A storage battery locomotive comprising three sections, a central section and two end sections, pivotally connected together, the central section adapted to carry the storage battery, each end section provided with four wheels, two of the wheels being driving wheels, a motor for driving said driving wheels the other two wheels being undriven, the undriven wheels projecting under the central section, the driving wheels and the motor located beyond the central section.

4. A storage battery locomotive comprising three sections, a central section and two end sections, pivotally connected together, the central section adapted to carry the storage battery, a driving motor on one of the end sections, driving wheels on said end section operatively connected to said motor, and means for adjusting the weight on said driving wheels to the horse power of the motor, whereby, when the motor is overloaded, the driving wheels will slip and permit the motor to run so as to prevent injury thereto.

5. A storage battery locomotive comprising three sections, a central section and two end sections, the central section adapted to carry the storage battery, four wheels for each end section, two of the wheels being driving wheels, a motor for driving said driving wheels the other two wheels being smaller in diameter than the driving wheels, the ends of the central section projecting over the smaller wheels of each end section, the driving wheels of the end sections and the motor being beyond the ends of the central section.

[Claims 6 to 12 not printed in the Gazette.]

1,195,724. POST-HOLE AUGER. ORIE S. PRESTON, Effingham, Kans. Filed Oct. 26, 1915. Serial No. 57,913. (Cl. 255—70.)



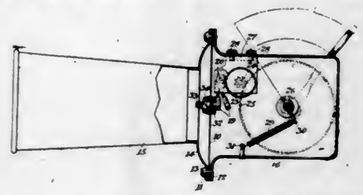
1. In an earth-boring tool, a boring section, an operating section, engaging ratchet clutch members for the said sections, a rod turnable with the boring section, and means associated with the rod and operating section to yieldingly maintain said clutch members in engagement.

2. In an earth boring tool, a boring section, an operating section, clutch means for said sections, a rod turnable with the boring section, abutment means on said rod, and a spring associated with said rod and operating section engaging said abutment means to yieldingly maintain said clutch means in engagement.

3. In an earth boring tool, a boring section, an operating section, clutch means for said sections, a rod movable with the boring section extending through the operating section, a plate on said rod, and a spring surrounding said rod intermediate said plate and the operating section to yieldingly maintain said clutch means in engagement.

4. In an earth boring tool, a boring section, an operating section, ratchet clutch members on said sections, a coupling for said operating section, a rod rising from said boring section through and beyond said operating section, means to connect said rod to the boring section to turn therewith, handle means connected to said coupling member, a spring surrounding said rod beyond the coupling and resting on the top of the coupling, and an abutment member on said rod which said spring also engages to serve to yieldingly maintain said ratchet clutch members in engagement.

1,195,725. MECHANICAL HORN. GEORGE A. PROCTOR, Watertown, Mass., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed Apr. 27, 1914. Serial No. 834,622. (Cl. 116—1.)



1. A horn including in combination a diaphragm, a toothed rotor, pivotally-supported diaphragm tapping mechanism disposed between said rotor and said diaphragm and forcibly moved toward and from said diaphragm by said rotor upon the rotation of the latter, and including two tapping heads alternately striking said diaphragm at approximately the same point adjacent to the center of the latter.

2. A horn including in combination a diaphragm, a toothed rotor, means for rotating it at high speed, and tapping mechanism pivotally supported independently of said toothed rotor and said diaphragm and including two tapping heads operating alternately against said diaphragm at closely spaced points adjacent to the center of the latter upon the rotation of said toothed rotor.

3. A horn including in combination a casing, a diaphragm, having its peripheral portion supported thereby, a toothed rotor disposed within said casing adjacent to said diaphragm, two approximately straight bars pivotally supported intermediate of their ends and disposed between said rotor and said diaphragm, one end of each bar terminating in striking relation to the center of said diaphragm, and each bar having two teeth engaging with said rotor at spaced points along the periphery of the latter, one of said teeth being disposed at the end opposite to said first-mentioned end and the other of said teeth being disposed between said pivoted support and said first-mentioned end, and means for rotating said rotor at high speed to forcibly vibrate said bars simultaneously in opposite directions whereby they strike said diaphragm alternately to vibrate the latter.

4. A horn including in combination a diaphragm, a rotor disposed adjacent to said diaphragm, two diaphragm tapping members pivotally supported intermediate of their ends between said rotor and said diaphragm, one end of each member terminating closely adjacent to the center of said diaphragm, and constituting a diaphragm tapping head, and said members each having the side thereof away from said diaphragm engaging

with the projections of said rotor, and means for rotating said rotor at high speed to force said members alternately into engagement with said diaphragm.

5. A horn including in combination a diaphragm, a rotor adjacent thereto and including a pinion and two toothed wheels rigid therewith and on opposite sides thereof, and two comparatively short bars disposed side by side and each pivotally supported intermediate of its ends, one end of each bar terminating closely adjacent to the center of said diaphragm, and constituting a diaphragm vibrating head, and each bar having two teeth engaging with its respective toothed wheel at spaced points along the periphery of the latter, one of said teeth being disposed at the end opposite to said diaphragm vibrating head, and the other of said teeth being disposed approximately midway between said pivoted support and said vibrating head, and a gear meshing with said pinion for rotating the latter.

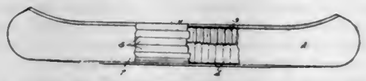
[Claims 6 to 9 not printed in the Gazette.]

1,195,726. VALVE-NECK CONSTRUCTION FOR BOTTLES. MARTIN RAJCHOK, Hamtramck, Mich. Filed Mar. 21, 1916. Serial No. 85,602. (Cl. 215—57.)



A device of the class described comprising a bottle having oppositely disposed valve receiving recesses adjacent its open end, a cylindrical neck fixedly secured to the open end thereof and having an eccentrically arranged longitudinally extending outlet opening therethrough having a flaring outlet end and further having an eccentrically arranged longitudinal bore at one side of said outlet opening communicating by means of a perforation with the interior of the bottle, a stem journaled through the said perforation, a disk valve eccentrically secured to the end of said stem within said bottle and projecting within one of the recesses when in its open position, a turn knob for said stem positioned outwardly of the neck, and resilient seating means for the said valve arranged within the said bore between the inner end thereof and the turn knob.

1,195,727. CANOE. JOSEPH RANCO, Oldtown, Me., assignor to Penobscot Canoe Company, Oldtown, Me., a Corporation of Maine. Filed Apr. 29, 1916. Serial No. 94,308. (Cl. 9—6.)



1. A canoe structure comprising a series of spaced, parallel, inner battens disposed transversely the canoe body, an intermediate series of transverse, parallel slats overlapping the said inner battens and forming an inner planking from end to end of the canoe, and longitudinally extending planking laid upon and secured to said intermediate planking.

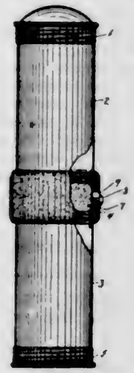
2. A canoe structure comprising a series of spaced, parallel, inner seam-covering battens disposed transversely the canoe body, an intermediate series of transverse planks overlapping the said inner battens, and longitudinally extending stiffening planks forming a sheathing laid upon and secured to said intermediate planks.

3. A canoe structure comprising a series of spaced, inside battens, an inside continuous planking consisting of a series of intermediate slats laid upon the said inner battens and fastened at their edges thereto, and an exterior planking on said intermediate slat-planking.

4. A canoe structure comprising solid deck-edges having rabbets in their divergent edges, gunwales secured at their ends to the said deck-pieces and lying in said rabbets, inner seam-covering battens secured to the adjacent surfaces of the gunwales and deck-pieces, the outer edges of the gunwales continuing in the lines of the respective edges of the deck-pieces.

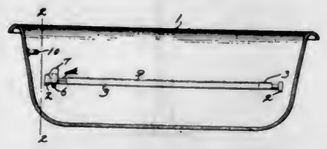
5. A canoe having a double planked wall or body superposed upon and secured upon seam-covering battens, the said double planked wall consisting of an inner series of transversely disposed planks overlapped by a series of longitudinally extending planks laid with edges abutting.

1,195,728. PORTABLE ELECTRIC LAMP. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Apr. 1, 1916. Serial No. 88,259. (Cl. 240—8.5.)



A portable electric lamp comprising an upper shell and a lower shell having their opposite ends threaded, a band for connecting the adjacent ends of the shells, a slide carried by said band and normally in contact with one shell and adapted to be moved into contact with the other shell, a cap closing the lower end of the lower shell, and a lamp-carrier secured to the upper end of the upper shell.

1,195,729. BATHING APPARATUS. FERNANDO L. REMER, Beaver Dams, N. Y. Filed Nov. 17, 1915. Serial No. 61,944. (Cl. 4—2.)



1. In a bathing apparatus of the character described, in combination, a plurality of rollers secured to the inner sides of a bath tub, a supporting member, said supporting member interposed between said rollers, means for stretching said supporting member taut, and means for keeping said supporting member in a taut state.

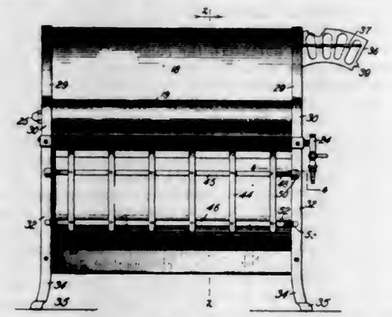
2. In a bathing apparatus of the character described, in combination, a roller secured to the inner side of a bath tub, a supporting member secured to said roller, a roller oppositely disposed with respect to said first named roller, means for securing said supporting member to said second named roller, means for stretching said supporting member taut, and means for keeping said supporting member in a taut state.

3. In a bathing apparatus, the combination of oppositely disposed fabric retention rollers, said rollers mounted upon the longer sides inside of a bath tub, a fabric interposed between said rollers, and means secured to said rollers adapted to maintain said fabric in a taut condition.

4. In a bathing apparatus, the combination of oppositely disposed fabric retention rollers mounted inside of a bath tub, a ratchet mechanism secured to the end of said rollers, a squared portion formed on said rollers adjacent said ratchet mechanism, fabric holding means formed upon said rollers, and a fabric interposed between said rollers.

5. In a bathing apparatus, in combination, a bath tub, a plurality of roller bearings mounted upon the longer sides inside of said tub, a roller mounted in said bearings on both sides of said tub, a ratchet wheel secured to one end of said roller adjacent one of said bearings, a guard member mounted on said bearing adapted to partially cover said ratchet wheel, a pawl secured to said guard adapted to coöperate with said ratchet wheel, a squared portion formed on one end of said roller adapted to receive a wrench, a plurality of pins laterally disposed upon said roller, and a body-supporting element interposed between said rollers.

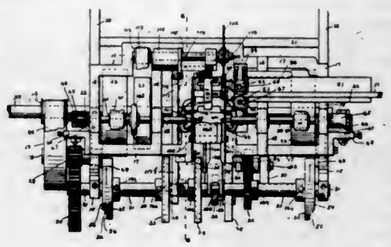
1,195,730. GAS-HEATER. GEORGE F. REZNOR, Mercer, Pa. Filed Feb. 9, 1916. Serial No. 77,168. (Cl. 126—86.)



1. A gas heater including a body having a front opening, a fender, and sockets on the body at the sides of the opening, the sockets including rigid front members forming recesses at the inner side, and plates at the inner sides of said recesses, the said fender having end members near the top adapted to be sprung toward each other and formed with terminals rockably supported in said sockets to permit upward swinging of the said fender, the said end members being resiliently engaged by said plates and adapted to be held thereby in either the raised or lowered position of the fender, the resilient portions permitting the springing of the same to engage or disengage the terminals and sockets, said fender having additional end members below the first end members adapted to rest against the front of the heater when the fender is in the lowered position.

2. A gas heater having a front opening and formed with sockets disposed toward each other at the opposite sides of the opening, and a fender, said fender having resilient end portions adapted to be sprung toward each other, the said end portions having terminals accommodated in said sockets and rockably supported therein to permit of the fender being swung upwardly, the said resilient portions of the fender permitting the springing of the same to enter the terminals in said sockets or to withdraw said terminals.

1,195,731. WOOD-TURNING MACHINE. CHARLES H. RHODES, Cold Brook, N. Y., assignor of one-half to Daniel F. Strobel, Herkimer, N. Y. Filed Oct. 28, 1915. Serial No. 58,478. (Cl. 142—17.)



1. In a wood working machine, the combination of two oppositely disposed feed rollers adapted to intermittently feed a stick of wood forward lengthwise, a platform adapted to support the projected length of said stick, an overhanging spring-tensioned holder on said platform adapted to hold the projected length of the stick on said platform, a saw adapted to advance and saw the projected length of the stick from the stick, two oppositely disposed lathe centers longitudinally movable relative to each other, guideways whereon said platform and the length of wood thereon may be moved toward said lathe centers and means to advance said platform whereby the length of wood is carried to position between the lathe centers and may be grasped endwise thereby.

2. In a wood working machine, the combination of two oppositely disposed feed rollers adapted to intermittently feed a stick of wood forward lengthwise, a platform adapted to support the projected length of said stick, an overhanging spring-tensioned holder on said platform adapted to hold the projected length of the stick on said platform, a saw adapted to advance and saw the projected length of the stick from the stick, two oppositely disposed lathe centers longitudinally movable relative to each other, guideways whereon said platform and the length of wood thereon may be moved toward said lathe centers, a pusher movably mounted between said platform and said overhanging holder and back of said length of wood and adapted to push the length of wood forward on said platform and means to advance said platform and pusher whereby the length of wood is carried to position between the lathe centers and may be grasped endwise thereby.

3. In a wood working machine, the combination of two oppositely disposed yieldingly-tensioned feed rollers adapted to intermittently feed a stick of wood forward lengthwise, a platform adapted to support the projected length of said stick, an overhanging spring-tensioned holder on said platform adapted to hold the projected length of the stick on said platform, an adjustably mounted stop engaging the end of the projected length of wood whereby the length thereof may be regulated, a saw adapted to advance and saw the projected length of the stick from the stick, two oppositely disposed lathe centers longitudinally movable relative to each other, guideways whereon said platform and the length of wood thereon may be moved toward said lathe centers and means to advance said platform whereby the length of wood is carried to position between the lathe centers and may be grasped endwise thereby.

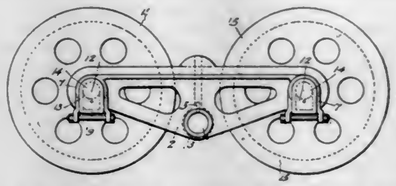
4. In a wood working machine, the combination of two oppositely disposed feed rollers adapted to intermittently feed a stick of wood forward lengthwise, a platform adapted to support the projected length of said stick, an overhanging spring-tensioned holder on said platform adapt-

ed to hold the projected length of the stick on said platform, a saw adapted to advance and saw the projected length of the stick from the stick, two oppositely disposed lathe centers longitudinally movable relative to each other, guideways whereon the said platform and the length of wood thereon may be moved toward said lathe centers, stops separate from the platform movable into position beyond the lathe centers relative to the platform, and means for advancing said platform and stops whereby the length of wood is carried to centered position between the lathe centers and may be grasped endwise thereby.

5. In a wood working machine, the combination of two oppositely disposed feed rollers adapted to intermittently feed a stick of wood forward lengthwise, a platform adapted to support the projected length of said stick, an overhanging spring-tensioned holder on said platform adapted to hold the projected length of the stick on said platform, a saw adapted to advance and saw the projected length of the stick from the stick, two oppositely disposed lathe centers longitudinally movable relative to each other, guideways whereon the said platform and the length of wood thereon may be moved toward said lathe centers, a pusher movably mounted between said platform and said overhanging holder and back of said length of wood and adapted to push the length of wood forward on said platform, stops separate from the platform and pusher movable into position beyond the lathe centers relative to the platform, and means for advancing said platform, pusher and stops whereby the length of wood is carried to centered position between the lathe centers and may be grasped endwise thereby.

[Claims 6 to 9 not printed in the Gazette.]

1,195,732. AERIAL TRUCK. BYRON C. RIBLET and ROYAL N. RIBLET, Spokane, Wash. Filed Nov. 6, 1915. Serial No. 60,141. (Cl. 104—146.)



1. In an aerial truck, oppositely arranged side frames provided with openings therein, coaxially arranged bearings mounted in said openings, and a sheave-carrying shaft mounted in said bearings and holding them in place in said side frames.

2. In an aerial truck, oppositely arranged side frames provided with openings therein, coaxially arranged bearings mounted in said openings, and a sheave-carrying shaft mounted in said bearings and holding them in place in said side frames, said bearings being axially movable inwardly from said frames when the shaft is not in position and provided with flanges to prevent outward displacement thereof.

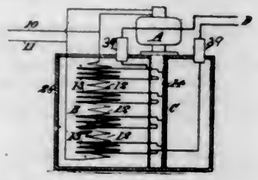
3. In an aerial truck, oppositely arranged side frames with downwardly presented notches, bearings movable into and out of position within said notches, a sheave, and a shaft for said sheave, said shaft being journaled in said bearings and holding them in position within said notches.

4. In an aerial truck, oppositely arranged side frames with downwardly presented notches, bearings movable into and out of position within said notches, a sheave, a shaft for said sheave, said shaft being journaled in said bearings and holding them in position within said notches, and means for closing the openings into said notches.

5. In an aerial truck, oppositely arranged side frames provided with a transverse connecting member intermediately of their ends, said connecting member having a suspension bearing extending therethrough, shafts journaled in the outer ends of said side frames, and sheaves mounted on said shafts for supporting said truck on a track.

[Claims 6 to 10 not printed in the Gazette.]

1,195,733. APPARATUS FOR PRODUCING UNIDIRECTIONAL ELECTRIC CURRENTS OF HIGH POTENTIAL. FRANK RIEBER, Berkeley, Cal. Filed Sept. 13, 1915. Serial No. 50,412. (Cl. 175—364.)



1. In an apparatus for producing unidirectional currents of high potential, the combination with a source of single phase alternating current supply, of means for transforming alternating current from said source simultaneously into a plurality of relatively low tension current waves and means for simultaneously delivering, in series and in one predetermined direction, substantially all portions of all of the relatively low tension waves to a common receiving circuit.

2. In an apparatus for producing unidirectional electric currents of high potential, the combination with a single phase alternating current source of supply, of a plurality of relatively low tension converting devices, a synchronous driving agency for said converters, all of said converting devices having their terminals joined operatively in series for supplying relatively high potential unidirectional waves to a common receiving circuit.

3. In an apparatus for producing unidirectional electric currents of high potential, the combination with a source of single phase alternating current supply, of a plurality of low potential transformers connected with said source of supply, a plurality of low tension converting devices, connected with said transformers and all arranged to simultaneously deliver unidirectional waves of relatively high potential to a common receiving circuit, and a synchronous driving agency for said converters.

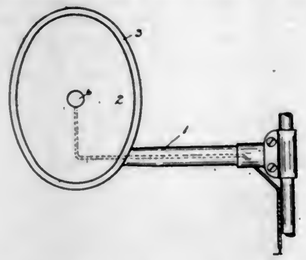
4. In an apparatus for producing unidirectional electric currents of high potential, the combination with a source of single phase alternating current supply, of a step-up transformer, having a single primary and a plurality of secondaries, and a low tension converting device for each of said secondaries operative during successive alternations of said current for delivering unidirectional current waves of relatively high potential to a common receiving circuit and a synchronous driving agency for said converters.

5. In an apparatus for producing unidirectional electric currents of high potential, the combination with a source of single phase alternating current supply, of a synchronous motor, operated by said alternating current, a transformer having its primary connected with the source of supply and comprising a plurality of secondaries, each of relatively low potential, and a metallic contact reversing switch for each of said secondaries adapted to reverse when the current waves in the secondaries have approached nearest to zero, all of said switches being connected in series and simultaneously operative for supplying relatively high potential unidirectional waves to a common receiving circuit.

[Claims 6 to 13 not printed in the Gazette.]

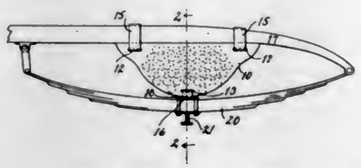
1,195,734. SIGNAL DEVICE. CARL W. RIEDEL, Saginaw, Mich. Filed Sept. 4, 1915. Serial No. 48,963. (Cl. 240—4.)

A signaling device for vehicles comprising a pair of plane mirrors arranged back to back and spaced apart, an opening through each mirror, a lamp having a socket removably received in each opening, electric conduits to



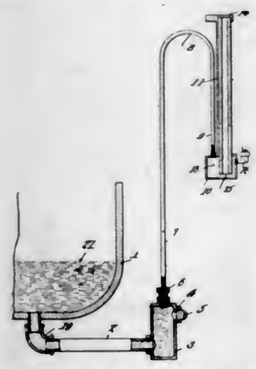
each lamp, said conduits received between said mirrors and communicating with a source of current.

1,195,735. BUMPER. FRED THOMAS ROBERTS, Trenton, N. J., assignor to The Paramount Rubber Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 30, 1914. Serial No. 869,365. (Cl. 267—25.)



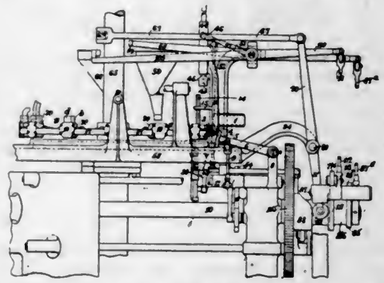
As a new article of manufacture, a bumper comprising a substantially parallel sided block of rubber having in it a large number of transverse parallel cavities, each entirely inclosed by the rubber itself, and fluid under greater pressure than the atmospheric pressure in each of said cavities.

1,195,736. INDICATOR. CHARLES ALBERT ROHM, Sayville, N. Y., assignor of one-half to Charles Ayers, Sayville, N. Y. Filed Mar. 23, 1915. Serial No. 16,524. (Cl. 73—54.)



In a device of the class described, a tank; a conduit leading from the bottom of the tank; a receptacle wherewith the conduit communicates, the receptacle having a side opening located on an approximate level with the bottom of the tank and constituting a means whereby the tank may be drained completely; a container located above the receptacle; a graduated tube communicating with the receptacle; an air pipe extended between the receptacle and the container; the container having a side opening adapted to receive liquid whereby the specific gravity of the contents of the tube and the container may be changed, the lower end of the graduated tube extending downwardly into the container to a point opposite to the opening, thereby to act as a deflector for liquid introduced into the container through said opening and to effect a distribution of the said liquid within the container; and a removable closure for the side opening in the container.

1,195,737. APPARATUS FOR FILLING BAGS OR THE LIKE. WILLIAM ROSE, Gainsborough, England. Filed Dec. 10, 1912. Serial No. 735,902. (Cl. 226—9.)



1. An apparatus for filling bags, having a rotary bag carrier, and filling means arranged concentrically therewith and comprising a filling chute, means for moving the same substantially vertically into and out of filling position with relation to a bag on said carrier, and means for rotating said chute with the carrier while in filling position and for rotating it in the opposite direction after its withdrawal from filling position.

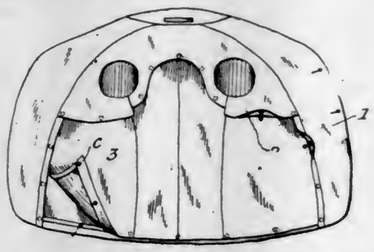
2. An apparatus for filling bags, having a bag carrier, means for imparting intermittent rotary motion thereto, and filling means arranged concentrically therewith and comprising a filling chute, means for moving the same downward into filling position with relation to a bag on said carrier while the latter is halted, means for rotating said chute with said carrier in filling position, and means for lifting said chute from filling position while halted after partial rotation, substantially as described.

3. An apparatus for filling bags, having a bag carrier for supporting a plurality of bags, means for imparting rotary motion thereto, and filling means arranged concentrically therewith and comprising a plurality of filling chutes, means for moving the same downward into filling position with relation to a plurality of bags on said carrier, means for rotating said chutes with the carrier while in filling position and means for lifting and returning the same to original position.

4. An apparatus for filling bags, having a bag carrier for supporting a plurality of bags, means for imparting intermittent rotation thereto, and filling means arranged concentrically therewith and comprising a plurality of filling chutes, means for moving the same downward into filling position with relation to a plurality of bags on said carrier while the latter is in halted position, means for rotating said chutes and carrier together in filling position and means for lifting said chutes on the halt of carrier after partial rotation and means for returning said chutes to original position.

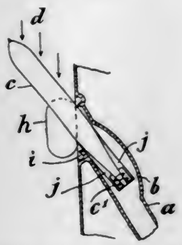
5. An apparatus for filling bags, having a rotary bag carrier, and concentrically arranged filling means for a bag carried thereby, said filling means having a filling chute, means for lowering the same into filling position, rotating the same with the carrier in filling position and then lifting it out of filling position, means for returning the thus lifted chutes to original position, in combination with a plunger working in said chute to clean the same after it has reached its lifting position, substantially as described.

1,195,738. COAT AND SIMILAR ARTICLE OF CLOTHING. WILLIAM HENRY ROSE, Baltimore, Md. Filed May 7, 1915. Serial No. 26,469. (Cl. 2—61.)



A coat provided with a permanent skeleton lining extending from the neck portion across the shoulders and to a point below the arm openings, and free from the coat at its lower edge, in combination with a lining portion extending from the lower edge of the skeleton lining to the lower edge of the coat, said lining portion provided with means at its upper lateral and bottom edges for detachably securing the same to the lower edge of the skeleton lining and the coat.

1,195,739. SHIP'S TORPEDO-TUBE. BEDRICH ROSENBAUM, Wallsend, England. Filed Oct. 28, 1914. Serial No. 868,971. (Cl. 114—238.)



1. A ship's torpedo tube having an enlargement extending for a portion of the length thereof, the enlargement being shaped so that when the tail part of the torpedo enters the same the body of the torpedo will be supported near the mouth of the tube in such manner that it can swing or turn on, or about, the place of support under the action of side pressure.

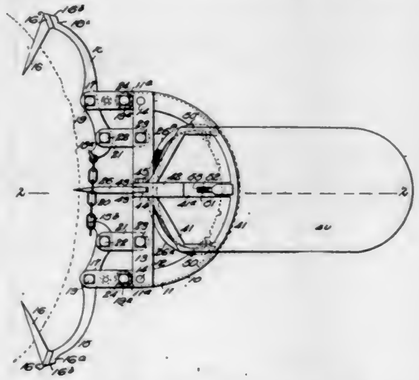
2. A ship's torpedo tube which has, at the mouth thereof, a swiveling guide ring through which the torpedo can pass the tube being enlarged in rear of the guide ring to a diameter greater than that of the largest diameter of the torpedo and then reduced to a diameter approximating to that of the torpedo.

3. A ship's torpedo tube which is cylindrical for a portion of its length and is then enlarged in a curvilinear manner, this enlargement extending from the cylindrical part to near the mouth of the torpedo tube which latter is provided with swiveling means for the guidance of the torpedo as it emerges from the tube.

1,195,740. TREE-BOARD. JOHN SAMUELSON, Portland, Oreg. Filed Jan. 12, 1916. Serial No. 71,719. (Cl. 20—84.)

1. A tree board structure including a platform, a support therefor, grabs on said support movable toward and from each other to be driven into a tree or withdrawn therefrom, a prop pivotally connected with the support and folded to a position adjacent to the grabs or at an angle thereto, and means controlled by the prop to hold the grabs against movement when the prop is in folded position.

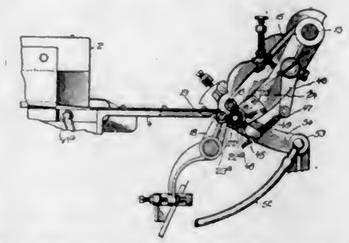
2. A tree board structure including a platform, a support therefor, grabs on said support movable toward and from each other to be driven into a tree or withdrawn therefrom, and a prop pivotally connected with the support and movable to a position adjacent to the grabs or at an angle thereto, the said prop having grab-retaining means thereon and movable therewith to and from the grabs.



3. A tree board structure including a platform, a support therefor, grabs pivotally connected with the support and adapted at one end for engagement with a tree, the opposite ends of the grabs having lugs thereon, and a prop pivoted to said support to swing to a position adjacent to the grabs, or at an angle thereto, said prop having a member movable therewith and positioned thereon to lie adjacent to the lugs of the grabs to prevent movement of the latter.

4. A tree board structure including a support, means to sustain the support on a tree, a platform connected with the support for lateral adjustment thereon, a spring pressed latch slidably carried by the platform at the underside and adapted to engage the support in different positions on the platform, and a pedal pivoted on the platform and movable therewith, said pedal being disposed at the upper side of said platform, the said latch having an upwardly projecting member, said platform having a vertical opening receiving said member, and the pedal having a depending member extending into said opening and adapted to engage the said member of the latch to release the said latch.

1,195,741. MACHINE FOR FORMING PAPER PACKAGES OR CARTONS. FREDERICK L. SATTLEY and FREDRICK N. ROSENSTENGEL, Detroit, Mich., assignors to Sattley Coin Handling Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 22, 1913. Serial No. 808,110. (Cl. 93—39.)



1. The combination with a revoluble mandrel of a guide thereabout, a pair of differentially revolving members, means for positioning a blank with its forward end between said revolving members, and means for pressing said revoluble mandrel against said differentially revolving members and the interposed blank, to produce the coiling of the latter about said mandrel and within said guide and to tighten the coil by the differential speed of said revolving members.

2. The combination with a revoluble mandrel and a guide about the same, of a pair of differentially driven rolls, means for positioning a blank with its forward portion between said rolls and its forward edge adjacent to the slower roll, and means for pressing said revoluble mandrel against said rolls and the interposed end of the blank to coil the latter about the mandrel within said guide and to tighten the coil by the drawing action of the faster roll.

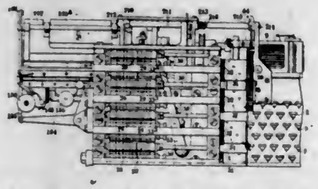
3. The combination with a revoluble mandrel of a pair of differentially driven rolls, means for positioning a blank with its forward portion between said rolls and its forward end adjacent to the slower roll, a cage surrounding said mandrel with a peripheral clearance for the latter and having cut-away portions, means for moving said mandrel to engage said differentially-driven rolls with the cut-away portions of said cage and to press said mandrel against said rolls and the interposed blank, to produce a coiling of the latter and tightening of the coil by the faster driven roll, and means for clamping said cage against the coil to prevent loosening of the same.

4. The combination with a revoluble mandrel of a pair of differentially-driven rolls, means for positioning a blank between said rolls with its forward edge adjacent to the slower roll, means for pressing said mandrel against said rolls and interposed end of the blank to coil the latter and to tighten the coil by the faster driven roll, and means for clamping the coil when wound to prevent loosening of the same.

5. The combination with a revoluble mandrel of a pair of differentially-driven rolls yieldably positioned, means for positioning a blank between said rolls with its forward end adjacent to the slower roll, and means for pressing said mandrel against said rolls and the interposed end of said blank to coil and tighten the latter.

[Claims 6 to 45 not printed in the Gazette.]

1,195,742. MACHINE FOR CASTING AND COMPOSING SEPARATE TYPE. FRANZ SCHIMMEL, Nancy, France, assignor to Société Maurice Velin & Cie., Nancy, France. Filed July 20, 1912. Serial No. 710,608. (Cl. 101—200.)



1. A machine for casting and setting types comprising a casting mold, a block having matrices on its periphery, means for constantly moving said block, means directly actuatable by hand for stopping said block when the desired matrix comes opposite the mold, a cam shaft for controlling the casting of the types and their removal from the mold, means for clutching said shaft only when the block is stopped, means for stopping the cam shaft after its has made a complete revolution and means for restarting the matrix block after the type has been cast and removed from the mold.

2. A machine for casting and setting types, comprising in combination a casting mold, a block having matrices on its periphery, means for constantly moving said block, bolts for locking said block when the desired matrix comes opposite the mold, means directly actuatable by hand for engaging with said bolts, a cam shaft for controlling the casting of the types and their removal from the mold, a clutch sleeve for clutching said shaft, a spring for pushing this sleeve in the clutching position, an engaging device (67, 155) for holding said sleeve in the unclutching position, means (44, 48, 68 and 17, 16, 87*, 156) for connecting the bolts of the block with the engaging device for the purpose of allowing said device to release the sleeve toward its clutching position at the time the bolts of the block move for locking the matrix block, a lever 63 for bringing back the sleeve to its unclutching position, a cam 69* rigidly mounted on the cam shaft for moving said lever when the cam shaft has effected a complete revolution, and a cam rigidly mounted on the cam shaft for withdrawing the bolts of the matrix block and allowing it to restart.

3. A machine for casting and setting types, comprising a casting mold for casting the types, a block having matrices arranged on its periphery according to circular rows, means for imparting to the block, a rotary movement about its axis, means for imparting to the block a reciprocating motion according to its axis and transversely to the mold, locking members for stopping the movement of said block when the required circular row of matrices comes opposite the mold, locking means for stopping the rotary motion of the block when the required matrix comes opposite the mold, a keyboard comprising a series of keys directly actuatable by hand, means in relation with each key for putting in active position those of the locking members that are adapted to stop the matrix block in the required position, a cam shaft for controlling the casting of the type and its removal from the mold, means for automatically clutching said cam shaft when the block stops, means for unclutching said shaft when it has effected a complete revolution, a cam rigidly mounted on the cam shaft for withdrawing the locking members of the block and allowing the latter to restart when a type has been cast.

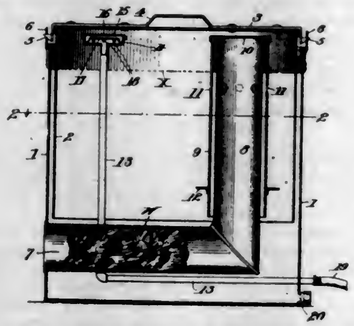
4. A machine for casting and setting types, comprising a casting mold in two movable parts for casting the types, means for adjusting the spacing apart of the two movable parts according to the thickness of the type to be cast, a prismatic block having matrices arranged on its periphery according to circular rows, means, for imparting to the block a rotary motion about its axis, means for imparting to said block a reciprocating motion along its axis and transversely to the casting mold, locking members for stopping the movement of said block when the required circular row of matrices comes opposite the mold, locking members for stopping the rotary motion of the block when the required matrix comes opposite the mold, a keyboard comprising a series of keys directly actuatable by hand, means in relation with each key for putting in the active position those of the locking members that are adapted to stop the matrix block in the required position, a cam shaft for controlling the casting of the type and its removal from the mold, means for automatically clutching said cam shaft when the block stops, means for unclutching said shaft when it has effected a complete revolution, two cams rigidly mounted on the cam shaft for withdrawing the locking members of the block and allowing the latter to restart when a type has been cast.

5. A machine for casting and setting types, comprising a casting mold in two movable parts for casting the types, a prismatic block having matrices arranged on its periphery in circular rows, means for imparting to said block a rotary motion about its axis, means for imparting to the block a reciprocating motion along its axis and transversely to the casting mold, locking members for stopping the movement of said block when the required circular row of matrices comes opposite the mold, locking members for stopping the rotary motion of the block when the required matrix comes opposite the mold, a keyboard comprising a series of keys directly actuatable by hand, means in relation with each key for putting in the active position those of the locking members that are adapted to stop the matrix block in the required position, a cam shaft for controlling the casting of the type and its removal from the mold, means for automatically clutching said shaft when the block stops, means for unclutching the shaft when it has effected a complete revolution, two cams rigidly mounted on the cam shaft for

withdrawing the locking members of the block and allowing the latter to restart when a type has been cast, a series of teeth forming a comb adapted to follow the reciprocating motion of the block, each tooth corresponding to a circular row of matrices and having a thickness corresponding to the uniform width of the types of this row for adjusting the mold opening, two projections respectively carried by the two movable parts of the mold for coöperating with the teeth of the combs, means for drawing apart the movable parts of the mold, means for pushing the mold against the matrix block when it is at rest and for engaging a tooth of the comb between the mold projections, and means for bringing together the two parts of the mold by pressing the projections against the tooth of the comb.

[Claims 6 to 12 not printed in the Gazette.]

1,195,743. SMOKE-GENERATOR. WILLIAM SIEGEL, Wilkes-Barre, Pa. Filed Oct. 29, 1915. Serial No. 58,615. (Cl. 137—77.)



1. A smoke generator comprising a water tank, a smoke chamber consisting of a bell vertically movable in said tank, a fire-box having a flue discharging into said smoke chamber at a point above the water level in said tank, a second bell inclosing the upper end of said flue and extending below the water level, and a discharge pipe communicating with said smoke chamber and provided with a check valve.

2. A smoke generator comprising a water tank, a smoke chamber consisting of a bell vertically movable in said tank, a fire-box in the lower part of said tank and opening outwardly through the side thereof, a vertically extending flue connected with said fire-box and terminating within said bell above the water level, and a vertically movable valve member in the form of a bell fitting over the upper end of said flue and dipping below the water level, and a discharge pipe communicating with said smoke chamber.

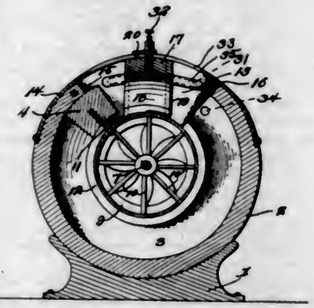
3. A smoke generator comprising a water tank, a smoke chamber consisting of a bell movable in said tank and having its lower edges below the water level, an elongated tubular fire-box disposed horizontally near but above the bottom of said tank, and below the water level therein, whereby said box is entirely surrounded by water, one end of said fire-box opening out through the side of the tank, a flue extending upwardly into said smoke chamber from the other end of said fire-box, a discharge pipe communicating with said smoke chamber, and suitable check valves controlling the flow of gases through said flue and discharge pipe.

4. A smoke generator comprising a water tank, a smoke chamber consisting of a bell movable in said tank and having its lower edges below the water level, a fire-box, a vertical flue extending upwardly from said fire-box into said smoke chamber, a discharge pipe communicating with said smoke chamber and having a check valve, and a valve controlling the flow of gases through said flue, said valve consisting of a second bell enveloping the upper part of said flue and having its lower edges permanently immersed, said bell being provided, intermediate its ends with an opening so located as to lie sometimes above and sometimes below the surface of the water.

5. A smoke-generator comprising a water tank, fire-box, and smoke chamber, said chamber being formed by a bell vertically movable in said tank, an inlet pipe connecting said fire-box and smoke chamber, and an outlet pipe, said pipes having suitable valves, whereby, when said bell is vertically reciprocated, smoke is drawn in through said inlet pipe and expelled through said outlet pipe, and a handle secured to the top of said bell by means of which it may be thus reciprocated.

[Claim 6 not printed in the Gazette.]

1,195,744. ENGINE. WILLIAM J. SMITH, Wall Lake, Iowa, and LEO LAGALI, Union, Okla. Filed June 22, 1914. Serial No. 846,583. (Cl. 123—15.)



1. The combination in a rotary internal combustion engine, of an annular cylinder and a revoluble piston, said cylinder having an enlarged chamber and an abutment therein adapted to receive the piston, means for moving said abutment and for reciprocating the same and reversing it, and inlet and outlets to said cylinder.

2. The combination in a rotary engine, of an annular cylinder and abutment chamber, an abutment, a piston in the cylinder adapted to enter said abutment, said abutment adapted to close the cylinder, and means for reciprocating and reversing said abutment as described.

3. The combination in a rotary engine, of an annular cylinder and abutment chamber, a shaft, a piston revoluble therewith, a recessed abutment in said abutment chamber to receive the piston and provided with an abutment wall, and means for reciprocating and for reversing said abutment to permit the exit of the piston.

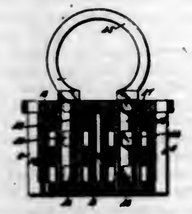
4. The combination in a rotary engine, of an annular cylinder and enlarged abutment chamber, a shaft, a hub, a piston in the cylinder, a bolt securing said piston to the hub and passed through a slot, and a reversible reciprocable abutment within the chamber recessed to receive the piston and transfer it across said abutment chamber, and means for reciprocating and reversing said abutment.

5. The combination in a rotary engine, of a casing open at the center and formed with an annular cylinder, an enlarged abutment chamber and an annular slot opening to its center, a shaft, a hub on the shaft closing said annular slot, a piston within the cylinder and a bolt securing the piston to the hub, a recessed reversible and reciprocable abutment formed with an abutment wall in the chamber, and connections between said shaft and abutment for reciprocating and reversing the abutment to shift the piston as described.

[Claims 6 to 14 not printed in the Gazette.]

1,195,745. PERMUTATION-PADLOCK. BENJAMIN SNYDER, New York, N. Y. Filed Apr. 14, 1916. Serial No. 91,051. (Cl. 70—113.)

1. A permutation padlock, comprising a frame having a base provided at its ends with posts, a top plate attached at its ends to the posts, spaced slotted sleeves arranged between the said posts and having members at their ends attached to the said base and top plate, a shackle provided on its legs with lugs and adapted to be pressed into the sleeves with the lugs projecting through the slots in the sleeves, and tumblers mounted to rotate on each sleeve and each having two concentric bores of which the larger one is engaged by the projecting ends of the lugs and the smaller one is provided in its wall with a groove adapted to register with the lugs and the slot in the corresponding sleeve.



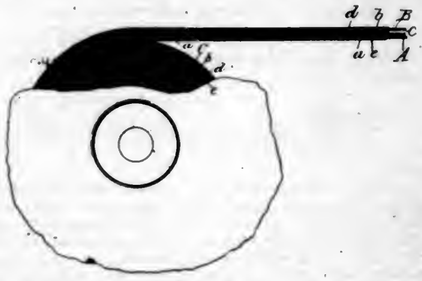
2. A permutation lock, comprising a frame having a base provided at its ends with integral posts and a top plate attached at its ends to the ends of the posts, sleeves arranged between the said posts and having oppositely arranged projecting attaching members at the ends engaging openings in the said base and top plate to connect the same with each other, each sleeve being slotted in the direction of its length, a shackle provided at its legs with lugs of which the lugs on one shackle leg extend in an opposite direction to the lugs on the other leg, the said shackle legs being adapted to engage the said sleeves with the lugs projecting through the slots in the sleeves, and a set of tumblers mounted to turn on each sleeve intermediate the said frame base and the said top plate, each tumbler having two concentric bores of which the larger one accommodates the said lugs and the smaller one is provided in its wall with a groove adapted to register with the lugs of the corresponding shackle leg and the slot of the corresponding sleeve.

3. A permutation padlock, comprising a frame having a base provided at its ends with integral posts, a top plate having reduced ends provided with openings for attachment to the ends of said posts, the said top plate having a keyhole provided with oppositely arranged recesses in its walls, a slotted sleeve arranged in the frame between the posts and having oppositely arranged attaching members at its ends, the attaching members at one end engaging spaced openings in the said base and at the other end engaging the said recesses in the walls of the keyhole in the top plate, a shackle having a leg provided with a lug, the leg being adapted to engage the sleeve with the lug projecting through the slot in the sleeve, and a tumbler mounted to turn on the said sleeve and having two concentric bores of which the larger one embraces the projecting end of the lug and the smaller one fits the sleeve and has its wall provided with a lengthwise extending groove for the passage of the projecting end of the lug.

1,195,746. PHOTOGRAPHIC-FILM CARTRIDGE. ALBERT F. SULZER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 23, 1916. Serial No. 86,155. (Cl. 95—9.)

1. A backing for photographic sensitized surfaces embodying a coated sheet and a superposed exterior covering sheet, the first mentioned sheet having an opaque coating adapted to be transferred to the exterior covering by contact produced by local pressure such as that produced by a stylus and the contacting surfaces of the covering sheet being coated with a sizing material having an affinity for the opaque covering.

2. A backing for photographic sensitized surfaces embodying an interior sheet and a superposed exterior covering sheet, both sheets being coated on their adjacent surfaces, one with a removable coating impervious to the passage of actinic light rays and the other with a sizing having an affinity for the coating material, said coatings being adapted to coöperate upon the application of pressure, as by means of a stylus, to transfer the coating along the areas of pressure onto the covering sheet.



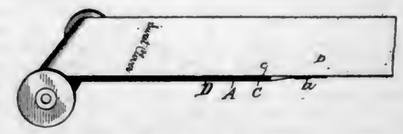
3. A backing for photographically sensitized surfaces embodying an interior coated sheet and a superposed exterior covering arranged, when the parts are rolled together, to occupy a position between the sensitized surface and the interior sheet, said covering having a coating of suitable material thereon serving to protect the sensitized surface.

4. A backing for photographically sensitized surfaces embodying an interior sheet and a superposed exterior covering having a sizing coat thereon serving to deter ingredients carried on the interior sheet from affecting the sensitized surface.

5. A backing for rolled films having photographically sensitized surfaces, embodying a coated sheet and an outer backing lying in the convolutions of the roll between the sensitized surface and the coated sheet and having a protective coating thereon.

[Claim 6 not printed in the Gazette.]

1,195,747. PHOTOGRAPHIC-FILM CARTRIDGE. ALBERT F. SULZER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 23, 1916. Serial No. 86,156. (Cl. 95—9.)



1. In a photographic film cartridge, the combination with a strip of flexible sensitized material and a strip of stencil material having a relatively opaque coating rendered light permeable by pressure when written against by means of a stylus, of a strip of waterproof material interposed between the sensitized and stencil materials, the whole being wound together for insertion in a camera or holder.

2. In a photographic film cartridge, the combination with a strip of flexible sensitized film and a sheet forming a backing for the film having a relatively opaque coating adapted to be rendered light permeable by pressure when written against by a stylus, and a strip of translucent non-absorbent material interleaved between the film and sheet, the whole being wound together.

3. A photographic film cartridge comprising a strip of flexible film having a sensitized surface, an absorbent sheet in rear of the film having a coating relatively opaque but rendered light permeable by pressure, a strip of non-absorbent material between the film and stencil sheet and a backing sheet overlying the latter.

4. In a photographic film cartridge, the combination with a strip of flexible transparent film photographically

sensitized, a translucent backing to which the film is attached at one end and a sheet interposed between said parts having an opaque coating adapted to be rendered light permeable by the pressure exerted by a stylus, of a strip of translucent waterproof paper positioned between the film and sheet.

1,195,748. BLOCK SYSTEM. ROBERT CAMM SUTPHIN, Corydon, Ky. Filed Aug. 25, 1915. Serial No. 47,218. (Cl. 246—26.)



1. In a signal system of the class described, a track divided into blocks, both rails of the track having insulated breaks opposite each other at the juncture of adjacent blocks, and both rails of a block except at the ends being continuous conductors of current, one rail at the entrance end of each block having a section insulated from the main portion of the rail, the other rail having at its entrance end an end section opposite to and of the same length as the first-mentioned section, and also having an inner section insulated at its ends from said end section and the main portion of the rail, and a conductor bridging said inner section and connecting the end section with the main portion of the rail.

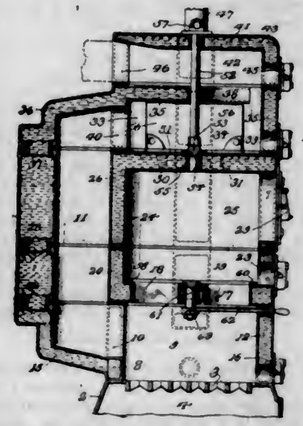
2. In a signal system of the class described, a track divided into blocks, both rails of the track having insulated breaks opposite each other at the juncture of adjacent blocks, and both rails of a block except at the ends being continuous conductors of current, one rail at the entrance end of each block having a section insulated from the main portion of the rail, the other rail having at its entrance end an end section opposite to and of the same length as the first-mentioned section, and also having an inner section insulated at its ends from said end section and the main portion of the rail, and a conductor bridging said inner section and connecting the end section with the main portion of the rail, and a conductor bridging said inner section and connecting the end section with the main portion of the rail, with a vehicle having elements insulated from each other and adapted to run on the track rails, a circuit connected with the elements and including a source of current and an electrical device, and signal means controlled by the said electrical device.

3. In a signal system of the class described, a track divided into blocks, both rails of the track having insulated breaks opposite each other at the juncture of adjacent blocks, and both rails of a block except at the ends being continuous conductors of current, one rail at the entrance end of each block having a section insulated from the main portion of the rail, the other rail having at its entrance end an end section opposite to and of the same length as the first-mentioned section, and also having an inner section insulated at its ends from said end section and the main portion of the rail, and a conductor bridging said inner section and connecting the end section with the main portion of the rail, with a vehicle having a pair of elements insulated from each other and arranged to run on the track rails, a circuit connected with the elements and including a source of current and an electro-magnet, a normally open signal circuit, and means controlled by the electro-magnet for closing the signal circuit.

4. In a signal system of the class described, a track divided into blocks, both rails of the track having insulated breaks opposite each other at the juncture of adjacent blocks, and both rails of a block except at the ends being continuous conductors of current, one rail at the entrance end of each block having a section insulated from the main portion of the rail, the other rail having at its entrance end an end section opposite to and of the same length as the first-mentioned section, and also having an inner section insulated at its ends from said end section and the main portion of the rail, and a conductor bridging said inner section and connecting the end section with the main portion of the rail, with a vehicle having elements insulated from each other and adapted to run on the track rails, a circuit connected with the elements and including a source of current, and a current responsive means, said circuit being closed while the train passes through a block, and opened when the elements are respectively at the entrance and leaving ends of adjacent blocks, and a signal means controlled by the electrical means, whereby a signal is given when a train enters a block and remains operative for a short period if the entered block be clear and for a longer period if the entered block be occupied by another train.

5. In a signal system of the class described, a track divided into blocks, both rails of the track having insulated breaks opposite each other at the juncture of adjacent blocks, and both rails of a block except at the ends being continuous conductors of current, one rail at the entrance end of each block having a section insulated from the main portion of the rail, the other rail having at its entrance end an end section opposite to and of the same length as the first-mentioned section, and also having an inner section insulated at its ends from said end section and the main portion of the rail, and a conductor bridging said inner section and connecting the end section with the main portion of the rail, with a vehicle having elements insulated from each other and adapted to run on the track rails, a circuit connected with the elements and including a source of current, and a current responsive means, said circuit being closed while the train passes through a block, and opened when the elements are respectively at the entrance and leaving ends of adjacent blocks, and a signal means controlled by the electrical means, whereby a signal is given when a train enters a block and remains operative for a short period if the entered block be clear and for a longer period if the entered block be occupied by another train, said signal means comprising a signal, a normally open circuit for the signal, and a mechanical device operated by the electrical means for opening and closing the signal circuit.

1,195,749. BOILER FOR HEATING SYSTEMS. HENRY TIELKEMEYER, St. Louis, Mo. Filed Apr. 28, 1916. Serial No. 94,194. (Cl. 122—217.)



1. A boiler of the class described consisting of a plurality of horizontally arranged superimposed hollow water sections through which a heating medium circulates, the said water sections including a central major water section having a vertical flue therein, intermediate water sections arranged above and below the said major water section, a bottom water section arranged beneath the lower intermediate water section, a top water section positioned upon the upper intermediate section, a vertical flue extending from the said bottom water section to the upper intermediate water section, an adjacent flue communicating with said flue and extending to the outside of the boiler, and means interposed between the vertical flue in the major water section and the aforesaid flues for directing the flow of the products of combustion through said boiler.

2. A boiler of the class described consisting of a plurality of horizontally arranged superimposed hollow water sections through which a heating medium circulates, the said water sections including a major water section having vertical flues therein, intermediate water sections arranged above and below the said major water sections, a bottom water section arranged beneath the lower intermediate water section, a top water section positioned upon the upper intermediate water section, a vertical flue extending from the said bottom water section to the upper intermediate water section, an adjacent flue communicating with said vertical flue and extending through the said intermediate water section and said top section to the outside of the boiler, and means interposed above the vertical flues in the major water section for opening and closing said flues for directing the flow of the products of combustion through said boiler.

3. A boiler of the class described consisting of a plurality of superimposed hollow water sections through which a heating medium circulates, the said water sections including a major water section, having a vertical flue therein, a water grate section arranged below said major water section, a vertical flue extending from beneath the said water grate section to a point above the major water section, an adjacent flue communicating with said vertical flue and extending to the outside of the boiler, and means for controlling the direction of the products of combustion through the said flues.

4. A boiler of the class described consisting of a series of superimposed hollow water sections through which a heating medium circulates, the said water sections including a major water section having a flue opening therein, a water grate section beneath said major section, a flue extending from beneath the said water grate section to a point above the flue opening in the major water section to the outside of the boiler, and means for relatively controlling the direction of the products of combustion through the aforesaid flue openings.

5. A boiler of the class described consisting of a series of superimposed hollow water sections through which a heating medium circulates, the said water sections including a major water section having oppositely arranged flue openings therein, a water grate section located beneath the said major section, an upper water section positioned above the said major water section having a plurality of flues provided therein arranged in staggered relation with regard to the aforesaid flues provided in the major water section, a flue extending from beneath the said water grate section to the outside of the boiler between the major and upper water section, and means for relatively controlling the direction of the products of combustion through the first mentioned flue openings.

[Claims 6 to 8 not printed in the Gazette.]

1,195,750. PRESSURE-GAGE. REUBEN N. TRANE, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis. Filed Jan. 25, 1916. Serial No. 74,111. (Cl. 73—109.)



1. In a pressure gage, the combination of a dial, a pointer, a pressure responsive element, a pivoted member operatively connected with the pointer to move the same, a double link pivotally mounted on the pressure responsive device and adapted to have a shiftable effective connection with the lever to change the range of movement thereof for corresponding increments of movement of the pressure responsive device, and means for yieldingly holding the lever and double link together.

2. In a pressure gage, the combination of a dial, a pointer, a pressure tube, a lever operatively connected with the pointer to move the same, and shiftable connecting means between the tube and lever, whereby the relative lengths of the arms of the latter are progressively changed with the changing of the tube.

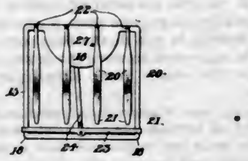
3. In a pressure gage, the combination of a dial, a pointer, a lever operatively connected with the pointer for actuating the same, a Bourdon tube, an oscillatory member on the free end of the tube and having spaced points adapted to engage with the lever both or one at a time according to the degree of pressure in the tube, and means for yieldingly holding the lever and member together.

4. In a pressure gage, the combination of a dial, a pointer, a lever operatively connected with the pointer for moving the same, a pressure tube, and means for connecting the free end of the tube at variable points with the lever as the pressure in the tube varies, said means comprising a member pivotally connected with the tube and having points adapted to contact with the lever, said points being adjustable as to the point of connection with the lever to properly relate the free end of the tube to the latter, and means for yieldingly holding the lever in contact with the member.

5. A pressure gage comprising a dial, a pointer movable thereover, a pinion connected with the pointer, a segment gear meshing with the pinion, a lever on which the segment gear is carried, said lever having seats arranged respectively at different distances from the fulcrum, a pressure tube having a free movable end, a member having spaced points, means for pivotally mounting the member on the free end of the tube in such relation to the seats of the lever that the said points of the member can engage the seat simultaneously, or one point will engage one seat while the other is disengaged from the other seat, according to the degree of pressure in the tube, and means for yieldingly holding the lever and one or both points of the member in contact.

[Claims 6 and 7 not printed in the Gazette.]

1,195,751. HAT-FASTENER. LÁSZLO TYOKAN, Utica, N. Y. Filed May 15, 1916. Serial No. 97,553. (Cl. 132—25.)



1. A hat fastener comprising a frame, resilient comb teeth carried by the said frame, a securing slide for the said teeth carried by the said frame, a plate carried by the frame, a stud journaled in said plate, a turn head upon one end of the said stud, and operative connections between the said stud and slide.

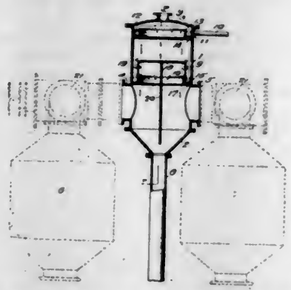
2. A hat fastener comprising an open frame, resilient comb teeth carried by the said frame with their free ends movable through the frame, a securing slide for the said teeth shiftably mounted upon the said frame, operating means for the said slide, and a turn head operatively attached to the said means.

3. A fastener for a hat comprising a frame, means for removably securing the frame to a hat, resilient comb teeth attached to one edge of the said frame by integral looped portions thereof, a locking slide shiftably carried by the said frame and having a path of movement overlying the

said teeth when the latter are in their operative positions, a stud carried by said frame and adapted to extend outwardly of a hat when the device is operatively attached thereto, an ornamental turn head upon the outer end of the said stud, a lever secured to the said stud adjacent the said frame, and a link pivotally connecting the free end of the said lever and the said link at opposite sides of the said frame.

4. A hat fastener comprising a skeleton frame, curved resilient comb teeth carried by the said frame with their free ends adapted to project through the frame when operatively arranged upon the hair of the wearer, a locking member slidably carried by the said frame and having a path of movement overlying the said teeth, an operating stud journaled in said frame, and operative connections between the said stud and locking member.

1,195,752. CONDENSER. FRANCISCO FERNANDEZ VEGA and RAMON ABARCA, San Juan, Porto Rico. Filed Dec. 29, 1915. Serial No. 69,185. (Cl. 127—18.)



1. In a vacuum evaporating system and in combination, a plurality of vacuum pans, a condenser having a body portion provided with inlets near its bottom and on opposite sides to which the vacuum pans are connected, a discharge outlet at its lower end, an outlet nipple at its top for connection with the vacuum pump and having a plurality of water troughs one near the top and one above the inlet nipples, and a baffle plate supported above the lowermost trough and between the same and the uppermost trough for deflecting the falling water from the upper trough into the lower trough, and a second baffle plate depending from the first-named plate between the inlets for preventing the vapor from either pan passing directly into the other pan.

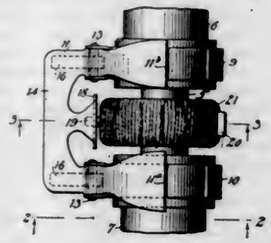
2. In a vacuum evaporating system and in combination, a plurality of vacuum pans, a condenser having inlets near its bottom to which the pans are connected, and a baffle plate supported between the inlets for preventing the passage of the vapor from either pan directly to the other pan.

3. In a vacuum evaporating system and in combination, a plurality of vacuum pans, a condenser having inlets to which the pans are connected, and a baffle plate within the condenser and between the inlets to prevent the vapor from either pan passing directly into the other pan.

1,195,753. NUT-LOCK AND SWAB. JOSEPH D. VIRUETTE, Oneonta, N. Y. Filed Apr. 6, 1916. Serial No. 89,412. (Cl. 184—24.)

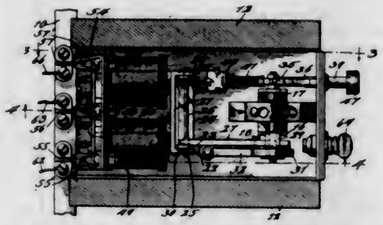
1. The combination with a reciprocating piston rod and stationary packing glands, of a nut on each gland, and a clamp consisting of two pivoted plates provided with two sets of jaws and means for holding each set of jaws in engagement with one of said nuts to prevent movement of the latter.

2. The combination with a reciprocating piston rod, stationary packing glands, and a grooved nut on each gland; of a clamp consisting of two pivotally connected plates having inwardly turned jaws engaged with the grooves of the respective nuts, a spring for maintaining said jaws in nut engaging position, a slotted member on one of said plates, a rod engaged in said slot, a spring clip secured to



said rod and encircling said piston rod, and absorbent material carried by said clip to serve as a swab for said piston rod.

1,195,754. ANNUNCIATOR. WILLIAM L. WEBER, Chicago, Ill. Filed Feb. 4, 1915. Serial No. 6,003. (Cl. 177—338.)



1. In an annunciator of the character described, the combination of an annunciator board having a plurality of supports; fixed electric contact devices associated with each support; a corresponding plurality of annunciator mechanisms removably mounted as units on said supports respectively; each of said mechanisms including a movable member bearing a series of numerals arranged in numerical succession thereon, means, including an electro-magnet, for moving said member step-by-step to bring the numerals thereon in increasing order opposite a fixed point, other means for moving said member step-by-step in the reverse direction, and electric contact devices adapted to automatically engage with said fixed contact devices when the annunciator mechanism is properly positioned on its support; a label associated with and mounted in proximity to each annunciator mechanism, a normally open circuit in which said contact devices and electro-magnet are included; and a manually operable circuit-closer in said circuit.

2. In an annunciator of the character described, the combination of an annunciator board having a plurality of supports; fixed electric contact devices associated with each support; a corresponding plurality of annunciator mechanisms removably mounted as units on said supports respectively; each of said mechanisms including a rotatable disk bearing a series of numerals arranged in numerical sequence on its periphery, means, including an electro-magnet, for turning said disk step-by-step to bring the numerals thereon in increasing order opposite a fixed point, manually operable means for turning said disk step-by-step in the reverse direction, and electric contact devices adapted to automatically engage with said fixed contact devices when the annunciator mechanism is properly positioned on its support; a label associated with and mounted in proximity to each annunciator mechanism; a normally open circuit in which said contact devices and electro-magnet are included; and a manually operable circuit closer in said circuit.

3. In an annunciator of the character described, the combination of an annunciator board having a plurality of

supports; fixed electric contact devices associated with each support; a corresponding plurality of annunciator mechanisms removably mounted as units on said supports respectively; each of said mechanisms including a rotatable disk bearing a series of numerals arranged in numerical sequence on its periphery, means, including an electro-magnet, for turning said disk step-by-step to bring the numerals thereon in increasing order opposite a fixed point, manually operable means for turning said disk step-by-step in the reverse direction, electric contact devices adapted to automatically engage with said fixed contact devices when the annunciator mechanism is properly positioned on its support, a signal lamp, and a circuit make-and-break device controlled by the turning movements of said disk; a label associated with and mounted in proximity to each annunciator mechanism; a normally open circuit in which certain of said contact devices and said electro-magnet are included; a manually operable circuit closer in said circuit; and another circuit in which other of said contact devices, said signal lamp, and said make-and-break device are included.

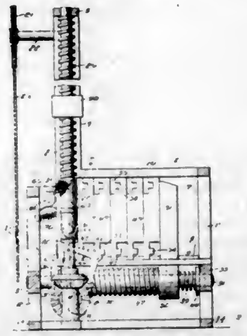
4. In an annunciator device for restaurants and the like, the combination of an annunciator board mounted in the kitchen and formed with a sight opening therein, a label designating an order to be filled located on the front of said board in proximity to said sight opening, a movable member bearing a series of numerals arranged in numerical succession and indicating the numbers of orders received mounted in rear of said sight opening, electrical means operable from the dining room for moving said member in one direction one step at each actuation to bring the numerals thereon in increasing order into view through said sight opening, a remote control for said electrical means, means operable from the kitchen for moving said member in the opposite direction to bring the numerals thereon in decreasing order into view through said sight opening while maintaining the annunciator in condition for forward operation from the remote control, a signal lamp mounted on said board in proximity to said label and sight opening, an electric circuit in which said lamp is included, and means for automatically interrupting said circuit when said order-indicating member is moved to a position indicating no order waiting to be filled.

5. In an annunciator device for restaurants and the like, the combination of an annunciator board mounted in the kitchen and formed with a sight opening therein, a label designating an order to be filled located on the front of said board in proximity to said sight opening, an annunciator disk bearing upon its periphery a series of numerals arranged in numerical sequence, said disk being rotatably mounted behind said sight opening in a manner permitting the numerals thereon to be successively brought into view through said sight opening as said disk is rotated, an electro-magnet, pawl-and-ratchet driving connections between said magnet and said disk, a normally open circuit in which said magnet is included, a circuit-closer for said circuit located in the dining-room, a slidably mounted bar located in proximity to said sight opening and operable from the kitchen, pawl-and-ratchet connections between said bar and said disk adapted to turn the latter in a direction opposite to that in which it is turned by said magnet, a signal lamp mounted in proximity to said sight opening, an electric circuit in which said lamp is included, and a circuit make-and-break device controlled by the turning movements of said disk.

1,195,755. DOOR-OPERATING MEANS. THEODORE WEFRING, Detroit, Mich. Filed Aug. 26, 1913. Serial No. 786,770. (Cl. 268—8.)

1. A door comprising a series of detachable sections, means to move one of said sections, means to successively connect the sections together for movement with the first named section in one direction, and means to successively detach the sections when the first named section moves in a reverse direction.

2. A door comprising a primary section, an operating screw to move the same, a series of secondary sections, said primary section and the first of said secondary sections having means for connecting them together, said secondary sections also having means to connect them together, and means geared to the said operating screw to successively move the secondary sections into and out of engagement with one another according to the direction of movement of the primary section.



3. The combination of a door comprising a primary section and a series of secondary sections, said primary section and the first of said secondary sections having means for connecting them together, said secondary sections also having means for connecting them together, means including a screw to move the primary section, a follower to successively move the secondary sections into position to connect the first of said secondary sections with the primary section when the latter is moved in one direction and successively connect the secondary sections together, a screw geared to the first named screw to actuate the follower, and means to successively detach the door sections when the follower is moved in a reverse direction.

4. The combination of a door comprising a primary section and a series of secondary sections, said primary section and the first of said secondary sections having means to connect them together, said secondary sections also having means to connect them together, means including a screw to move the primary section, a follower to successively move the secondary sections into engagement with one another and to connect the first of said secondary sections with the primary section when the latter is moving in one direction, a screw geared to the first named screw to actuate the follower, and means to successively detach the door sections when the follower is moved in a reverse direction, a cam operated by the first named screw, and a controller actuted by said cam and arranged to adjust the said attaching means.

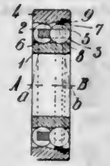
5. The combination of a door comprising a primary section and a series of secondary sections adapted to be connected and disconnected, means including a screw to move the primary section, a follower to successively move the secondary sections into engagement with one another, and one of the said secondary sections with the primary section when the latter is moving in one direction, a screw geared to the first named screw to actuate the follower, and means to successively detach the door sections when the follower is moved in the reverse direction, a cam operated by the first named screw, a controller actuated by said cam and arranged to adjust the said attaching means, and a shifting element also operated by said controller to impart initial rearward movement to the follower.

[Claim 6 not printed in the Gazette.]

1,195,756. BALL OR ROLLER BEARING. SVEN GUSTAF WINGQUIST, Gottenborg, Sweden, assignor, by mesne assignments, to S. K. F. Ball Bearing Company, Hartford, Conn., a Corporation of Connecticut. Filed July 14, 1914. Serial No. 850,886. (Cl. 64—59.)

1. A self-contained bearing including an integral outer and an integral inner bearing ring, rolling members arranged in a plurality of series between said rings, and a

swingable ring seated in said outer bearing ring and having an inner spherical track surface for one of said series of rolling members, substantially as and for the purpose set forth.



2. A self-contained bearing including an integral outer and an integral inner bearing ring, rolling members arranged in a plurality of series between said rings, and a spherical outer track ring for one of said series of rolling members seated in said outer bearing ring and arranged to be swung from a central position into an oblique position in relation thereto, substantially as and for the purpose set forth.

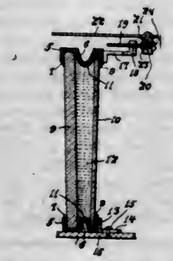
3. A self-contained bearing including an integral outer and an integral inner bearing ring, rolling members arranged in a plurality of series between said rings, a track ring for one of said series of rolling members seated in said outer bearing ring and arranged to be swung from a central position into an oblique position in relation thereto, said swingable ring having spherical outer and inner surfaces, substantially as and for the purpose set forth.

4. A self-contained bearing including an integral outer and an integral inner bearing ring, rolling members arranged in a plurality of series between said rings, the outer bearing ring forming a spherical track, and a spherical outer track ring for one of said series of rolling members seated in said outer bearing ring and arranged to be swung from a central position into an oblique position in relation thereto, substantially as and for the purpose set forth.

5. A self-contained bearing including an integral outer and an integral inner bearing ring, rolling members arranged in a plurality of series between said rings, the outer bearing ring having a spherical track, and a spherical outer track ring for one of said series of rolling members seated in said outer bearing ring and arranged to be swung from a central position into an oblique position in relation thereto, said spherical track ring forming a frustum of a sphere whose ends are unequal circles, substantially as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,195,757. SIGNALING DEVICE. JOHN A. WERTZ, Canton, Ohio. Filed Jan. 19, 1916. Serial No. 72,955. (Cl. 88—1.)



1. A signaling device comprising a sash, a reflector carried within said sash, a transparent member carried in said sash and spaced from said reflector forming a pocket between said reflector and said transparent member and a colored or sensitive liquid located within said pocket.

2. A signaling device comprising a metal sash provided with an inwardly disposed rib, intermediate the edges and parallel therewith, inwardly disposed flanges being provided around the edges of said sash, a sheet of rubber or similar material being located around the inner surface of said sash, said rubber being coated with a cement impervious to chemicals, a reflector located within said sash between said rib and one of said flanges, a lens located between said rib and the other of said flanges and a transparent colored material or sensitive chemical located between said reflector and said lens.

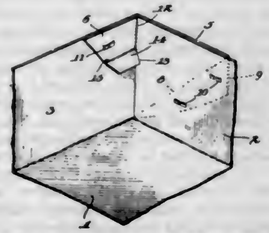
3. A signaling device comprising a metal sash provided with an inwardly disposed rib, intermediate the edges and parallel therewith, inwardly disposed flanges being provided around the edges of said sash, a sheet of rubber or similar material being located around the inner surface of said sash, said rubber being coated with a cement impervious to chemicals, a reflector located within said sash between said rib and one of said flanges, a lens located between said rib and the other of said flanges and a colored liquid or sensitive chemical located between said reflector and said lens.

4. A signaling device comprising a sash, a reflector carried within said sash, a transparent member carried within said sash and spaced from said reflector and a transparent colored material or sensitive chemical located between said reflector and said lens.

5. A signaling device comprising a plurality of sashes, a reflector carried in each sash, a transparent member carried in each sash and spaced from said reflector forming a pocket between said reflector and said transparent member, a colored liquid located within said pocket and means for providing anticlinal, radial and horizontal adjustment of said sashes.

[Claims 6 and 7 not printed in the Gazette.]

1,195,758. FOLDING BOX. JOHN J. WILSON, Chicago, Ill. Filed Dec. 7, 1915. Serial No. 65,512. (Cl. 229—32.)

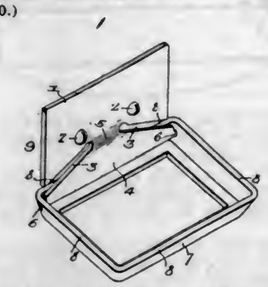


1. A folding box comprising foldable lateral walls; a flap on one of the lateral walls meeting at each corner of the box, said flap engaging against the outer side of the other wall and having its outer end secured thereto, said flap being creased for folding on a line radiating substantially from the apex of the corresponding corner of the box; and a stop-forming flap on the other wall secured to the inner side of said first mentioned wall, said stop-forming flap being readily severable from the wall carrying the same, whereby upon folding of said wall, said flap will be severed from said wall to form a stop therefor, substantially as described.

2. A folding box comprising foldable lateral walls; a flap on one of the lateral walls meeting at each corner of the box, said flap engaging against the outer side of the other wall and having its outer end secured thereto, said flap being creased for folding on a line radiating substantially from the apex of the corresponding corner of the box; and a stop-forming flap on the other wall secured to the inner side of said first mentioned wall, the line of union between said stop-forming flap and the second mentioned wall registering with the vertical corner of the box and being weakened whereby, upon inward folding of the said second mentioned wall, said flap will be severed therefrom to form a stop therefor, substantially as described.

3. A folding box comprising foldable lateral walls; a flap on one of the lateral walls meeting at each corner of the box, said flap engaging against the outer side of the other wall and having its outer end secured thereto, said flap being creased for folding on a line radiating substantially from the apex of the corresponding corner of the box; and a stop-forming flap on the other wall secured to the inner side of said first mentioned wall, the line of union between said stop-forming flap and the second mentioned wall registering with the vertical corner of the box and being weakened whereby, upon inward folding of the said second mentioned wall, said flap will be severed therefrom to form a stop therefor, substantially as described.

1,195,759. LABEL-HOLDER. CHARLES A. WRIGHT, Riverton, N. J. Filed May 1, 1915. Serial No. 25,159. (Cl. 40—10.)



1. A label holder consisting of a plate of spring material having an elongated portion connected to its body by a relatively narrow neck, means for fixing the body of said plate to a supporting structure, and a frame pivotally engaging the extremities of said elongated portion and holding it in a stressed condition either adjacent said plate or distant therefrom, said frame having a surrounding flange between the walls of which the plate is adapted to be inclosed and concealed when the frame is in a position substantially parallel with said plate.

2. The combination with a supporting structure, of a label holder consisting of a plate, headed elements holding said plate to said structure, an open faced label receiving frame mounted over said plate, and a label mounted in the frame and held forward therein by said headed members with the frame in a position adjacent the plate.

1,195,760. METALLIC FENCE-POST. JOHN B. YOUNG, Belt, Mont. Filed Mar. 20, 1914. Serial No. 826,079. (Cl. 256—55.)



In combination with a fence post having substantially thin walls provided with a longitudinally disposed slot, the said walls being provided with spaced laterally disposed recesses opening at one end into said slot from the opposite sides thereof, the said recesses being spaced throughout the length of said slot, a clamping plate having one end open at right angles thereto and reduced in width at its extremity to provide a tongue of the same width as said slot and shoulders at the base of said tongue adapted to engage in and abut the end walls of said recesses, the thickness of said plate being equal to the width of said recesses, the opposite end of said plate being curved and reduced in width to snugly engage in said slot at a point remote from the tongue end, the said plate being provided intermediate its ends with an opening disposed in alinement with said slot, and a bolt for insertion through said opening and slot.

1,195,761. SHOPPER'S CATALOGUE. HENRY B. ABEL, Valley Stream, N. Y. Filed Sept. 21, 1915. Serial No. 51,751. (Cl. 11—19.)



1. A shopper's catalogue comprising a series of leaves, each having an illustration in the nature of a group of main designs and also having associated with said main designs a number of separate designs miniature relative to the main designs and practically identical in design with corresponding main designs, and having weakened bounding line or lines, the portion or portions of the leaves carrying the miniature designs being separable along said weakened line or lines from the body of the leaf without impairing the integrity of the main designs, substantially as and for the purpose set forth.

2. The herein described catalogue leaf comprising a plurality of main designs carried permanently thereby and a corresponding plurality of leaf parts bearing designs miniature relatively to the main designs and corresponding respectively precisely to the main designs, any one or more of the leaf parts bearing the miniature designs being removable from the main portion of the leaf, and each miniature bearing part having a weakened line adapted to be opened to form a slot for the reception of other miniature bearing parts, substantially as set forth.

3. The herein described shopper's catalogue comprising leaves bearing main designs carried permanently thereby and also bearing a plurality of miniature designs corresponding to the main designs, the leaf parts bearing the miniature designs being removable from the leaf part bearing the main designs, and one of the miniature bearing parts having a weakened line formed therein adapted to be opened to form a slot, said miniature bearing parts constituting a backer, and other of the miniature bearing parts being formed of a width in the main parts corresponding substantially to the length of the said slot and having shoulders adapted to limit the movement of said main parts through said slot when a plurality of miniature bearing parts are assembled to form a group or booklet.

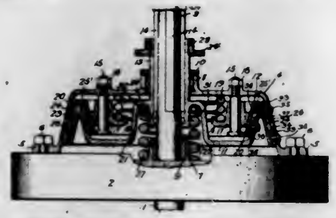
4. In a shopper's catalogue, a leaf bearing a plurality of main figures or designs and a plurality of miniatures corresponding to the main figures, the leaf parts bearing said miniatures each having one end broader than the other and formed with shoulders, and a backer member

having a transverse weakened line which when opened forms a slot to receive the narrower ends of the miniature bearing parts aforesaid, the shoulders thereof being adapted to come into contact with the backer at the ends of its slot, substantially as set forth.

5. In a device of the character set forth, a leaf bearing a plurality of different main designs, and a plurality of miniature designs and adapted to be torn apart, said miniature designs corresponding with the several main designs, and the leaf parts carrying the miniature designs being each provided with a slot extending transversely across its upper end and adapted thereby to engage with other of said parts.

[Claim 6 not printed in the Gazette.]

1,195,762. MULTIPLE-CONE CLUTCH. HARRY D. ABERNETHY, Cleveland, Ohio, assignor to Harmon H. Fulton, Cleveland, Ohio. Filed Feb. 5, 1916. Serial No. 76,379. (Cl. 192—7.)



1. A multiple cone clutch comprising a casing having an inner cone face, a friction member within said casing having an inner and an outer cone face inclined in opposite directions, a friction member yieldingly supported within and by the first named member having a peripheral cone face, all of said cone faces being in horizontal alinement when in clutched position, and means for relatively shifting the said friction members.

2. A multiple cone clutch comprising a casing having an inner cone face, a friction member within said casing having an inner and an outer cone face inclined in opposite directions, a friction member yieldingly supported within the first named member having a peripheral cone face, depending bolts secured to the casing for supporting the last named member, all of said cone faces being in horizontal alinement when in clutched position, and means for relatively shifting the said friction members.

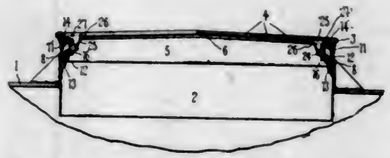
3. A multiple cone clutch comprising a casing having an inner cone face, a friction member within said casing provided at its peripheral portion with two cone faces, each face inclined in an opposite direction, a friction member yieldingly supported within the first named member having a peripheral cone face and provided with a series of inwardly extending projections, each projection having an opening therethrough, bolts carried by said casing, each bolt passing through an opening in the last named member and adapted to support said member, and means for relatively shifting the said friction members.

4. A multiple cone clutch comprising a casing having an inner cone face, a friction member within said casing provided at its peripheral portion with two cone faces, each face inclined in an opposite direction, a friction member yieldingly supported within the first named member having a peripheral cone face and provided with a series of inwardly extending projections, each projection having an opening therethrough and an upturned inner terminal, a spring resting on said projections and in contact with the upper inner surface of the casing, bolts carried by the casing for supporting the last named member, and means for relatively shifting the said friction members.

5. A multiple cone clutch comprising a casing having an inner cone face, a friction member within said casing provided at its peripheral portion with two cone faces, each face inclined in an opposite direction, a friction member yieldingly supported within the first named member having a peripheral cone face and provided with a series of inwardly extending projections, each projection having an opening therethrough and an upturned inner terminal, a spring seated on said projections and in contact with the upper inner surface of the casing, headed depending bolts secured to the casing, each bolt passing through an opening in the last named member and adapted to limit the inward movement of said member, and means for relatively shifting the said friction members.

[Claims 6 to 9 not printed in the Gazette.]

1,195,763. HATCH. RUPERT T. ANDERSON, New York, N. Y. Filed May 8, 1915. Serial No. 26,810. (Cl. 114—201.)



1. A hatch having rails along its sides, a strong-back movable along said rails, and means engaging the rails for locking the strong-back thereto.

2. A hatch having rails along its sides, a strong-back having a movable interlocked engagement with said rails, and means engaging the rails for locking the strong-back thereto.

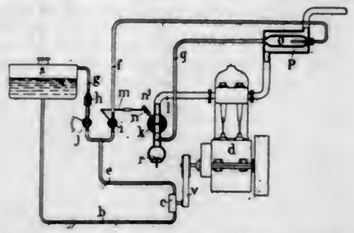
3. A hatch having track and supporting rails along its sides and a strong-back having wheels fitted to travel along the track rails, said track rails being constructed to transfer the weight of the strong-back from the wheels to the supporting rails when the strong-back is in position.

4. A hatch having track and supporting rails along its sides, a strong-back having wheels fitted to travel along the track rails, said track rails being constructed to transfer the weight of the strong-back from the wheels to the supporting rails when the strong-back is in position, and means for locking the strong-back in position.

5. A hatch having track and guide rails along its sides and a strong-back having wheels fitted to travel along the track rails, said track rails being constructed to transfer the weight of the strong-back from the wheels to the guide rails when the strong-back is in position.

[Claims 6 to 8 not printed in the Gazette.]

1,195,764. FEEDING APPARATUS FOR INTERNAL-COMBUSTION MOTORS. EMILE HENRI ARQUEMBOURG, Paris, France, assignor to Société Jules Grouvelle, H. Arquembourg & Cie., Paris, France. Filed Oct. 27, 1911. Serial No. 657,134. (Cl. 123—139.)



1. A feeding apparatus for internal combustion motors, comprising in combination, a tank containing the liquid fuel, a pump operated by the internal combustion motor and the suction of which is connected to said tank, the flow of the pump being proportional to its speed and distinctly above the maximum consumption of the motor, a carbureting apparatus, an outflow conduit leading from the pump and bifurcating in two conduits, one leading to the carbureting apparatus and the other to the tank and adapted to return to the tank the carbureting liquid not passing to the motor, and regulating means intercalated on the one hand on the pipe in which is sent the liquid driven back by the pump and leading to the carbureting apparatus and, on the other hand, on the branch pipe, said regulating means being adapted to compensate for the differences of height to which the liquid is driven back in each of said pipes and to regulate the outflow of the latter according to the quantity of air sucked by the motor whatever may be the speed and power of the said motor.

2. A feeding apparatus for internal combustion motors, comprising in combination, a tank containing the liquid fuel, a pump operated by the internal combustion motor and the suction of which is connected to said tank, the flow of the pump being proportional to its speed and distinctly above the maximum consumption of the motor, a vaporizing carbureting apparatus heated by the exhaust gases of the motor, an outflow conduit leading from the pump and bifurcating in two conduits, one leading to the carbureting apparatus and the other to the tank and adapted to return to the tank the carbureting liquid not passing to the motor, and regulating means intercalated on the one hand on the pipe in which is sent the liquid driven back by the pump and leading to the carbureting apparatus and, on the other hand, on the branch pipe said regulating means being adapted to compensate for the differences of height to which the liquid is driven back in each of said pipes and to regulate the outflow of the latter, according to the quantity of air sucked by the motor, whatever may be the speed and power of the motor, whereby the position of the valve in said outlet pipe will

3. A feeding apparatus for internal combustion motors, comprising in combination, a tank containing the liquid fuel, a pump operated by the internal combustion motor and the suction of which is connected to said tank, the flow of the pump being proportional to its speed and distinctly above the maximum consumption of the motor, a vaporizing carbureting apparatus heated by the exhaust gases of the motor and connected to the outlet pipe of the pump, a branch pipe on the outlet pipe of the pump and adapted to return to the tank the carbureting liquid not passing to the motor, a check valve arranged upon that pipe which has the less elevation for regulating the outflow of said pipes, a cock placed upon the branch pipe, a gas throttle upon the carbureted air inlet pipe, a cock upon the outlet pipe and a device by which the cock of the outlet pipe is controlled by said gas throttle.

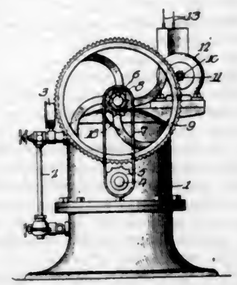
4. A feeding apparatus for internal combustion motors, comprising in combination, a tank containing the liquid fuel, a pump operated by the internal combustion motor and the suction of which is connected to said tank, the flow of the pump being proportional to its speed and distinctly above the maximum consumption of the motor, a carbureting apparatus connected to the outflow of said pump, a branch pipe on the outlet pipe of the pump and adapted to return to the tank the carbureting liquid not passing to the motor, a check valve arranged upon that pipe which has the less elevation for regulating the outflow of said pipes, a cock placed upon the branch pipe, a gas throttle upon the carbureted air inlet pipe, a cock upon the outlet pipe, and a link the length and travel of which is regulable, connecting the cock of the outlet pipe and the gas throttle.

5. In a feeding apparatus for internal combustion motors, a motor having a suction pipe, a valve in said pipe, a supply tank, a carbureter connected with the suction pipe of the motor, a pump operated by the motor and connected with the supply tank, an outlet pipe leading to the carbureter, a valve in said outlet pipe, and means whereby the position of the valve in said outlet pipe will be controlled by the position of the valve in the suction pipe of the motor.

[Claims 6 and 7 not printed in the Gazette.]

1,195,765. DRIVING MECHANISM FOR CARBONATING-MACHINES. CHARLES L. BASTIAN, Chicago, Ill. Filed Apr. 19, 1915. Serial No. 22,260. (Cl. 74—29.)

1. In an apparatus for carbonating liquids, the combination of a shaft, a gear loosely mounted on said shaft, a motor for actuating said gear, a clutch element carried by said gear, a complementary clutch element secured to said shaft and spaced from said gear longitudinally of said shaft, and a spring connected at either end of said gear and complementary clutch element respectively, whereby said clutch elements are normally separated when said gear is at rest and said gear is allowed to move through an appreciable distance before said clutch elements engage.

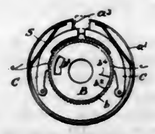


2. In an apparatus for carbonating liquids, the combination of a shaft, a driving member loosely mounted on said shaft, means for actuating said driving member, a driven member secured to said shaft and spaced laterally from said driving member, clutch elements on said driving and driven members, whereby the latter is positively actuated by the former, and resilient means secured to said members, whereby said elements are normally separated when said members are at rest and said driving member is allowed to move through an appreciable distance before said elements engage.

3. In an apparatus for carbonating liquids, the combination of a shaft, a gear loosely mounted on said shaft and provided with a hub, a motor for actuating said gear, a clutch element on said hub, a complementary clutch element secured to said shaft adjacent the hub of said gear, and a spring connected to said gear and complementary clutch element, whereby the clutch element on the hub of said gear is maintained in spaced relation with said complementary clutch element when said gear is at rest and said gear is allowed to move through an appreciable angular distance before said clutch elements engage.

4. In an apparatus for carbonating liquids, the combination of a shaft, a gear loosely mounted on said shaft and provided with a hub, a motor for actuating said gear, a clutch element on said hub, a complementary clutch element secured to said shaft adjacent the hub of said gear, a pin projecting laterally from said gear in the direction of said complementary clutch element, and a spring connected to said pin and complementary clutch element, whereby the clutch element on the hub of said gear is maintained in spaced relation with said complementary clutch element when said gear is at rest and said gear is allowed to move through an appreciable angular distance before said clutch elements engage.

1,195,766. TUMBLER MECHANISM FOR PERMUTATION-LOCKS. WILLIAM T. BENHAM, Norwood, Ohio, assignor to The Nydia Bank Lock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 4, 1915. Serial No. 65,115. (Cl. 70—53.)



1. A tumbler for permutation locks embodying a central disk provided with a toothed annulus upon its periphery; an outer annular casing composed of two simi-

lar cup-shaped elements held together by telescopic fit of their outer walls one within the other, said elements abutting at their inner edges against the periphery of the central disk at the sides of the toothed annulus; and adjustable means secured to and within the hollow casing immediately adjacent to the toothed annulus, and adapted to engage directly therewith to prevent inter-rotation.

2. The combination in a permutation lock, with the toothed central disk and annular casing of a tumbler, of a pair of clamping jaws each pivoted at one end to the casing and extending thence tangentially adjacent to the central disk at opposite sides thereof, and provided with engaging teeth at the near side; and a spring, seated against the peripheral wall of the casing and normally bearing directly upon the back of each jaw opposite its place of engagement with the toothed disk to maintain said engagement.

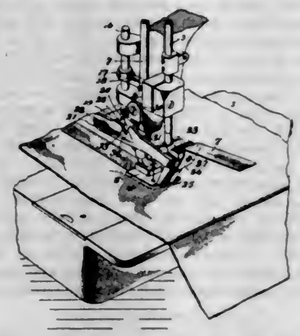
3. In a tumbler for permutation locks, the combination of the toothed central disk; the annular outer casing having a single peripheral slot; and the toothed clamping jaws arranged to register with said slot, as shown; with a single key adapted by insertion to release the clamping-jaw connection of the disk-elements, and lift the angle bar, at the same time.

4. In a tumbler such as described, the combination of the toothed disk and casing, the toothed clamping jaws pivoted in the casing at opposite sides of and adjacent to the toothed central disk and a single curved spring seated within and against the outer walls of the casing and bearing inwardly near its ends against the jaws.

5. A tumbler body for permutation locks embodying in combination a central disk having a peripheral flange of reduced width, and an external casing fitting upon the shoulders thus formed and consisting of two annular cup-shaped elements held together by telescopic fit of their outer cylindrical walls.

[Claim 6 not printed in the Gazette.]

1,195,767. TAPE-GUIDE FOR SEWING-MACHINES. JOSEPH BERGER, Jr., Utica, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 18, 1912. Serial No. 721,048. (Cl. 112—9.)



1. The combination of a presser foot, a tape guide having means for guiding a tape on to the upper face of the fabric, means for preventing the tape from being withdrawn backward through the guide, means for supporting said guide, and means for moving the guide for placing the end of the tape carried by said guide underneath the presser foot.

2. The combination of a presser foot, a tape guide having means for guiding a tape on to the upper face of the fabric, means for preventing the tape from being withdrawn backward through the guide, means for supporting said tape guide from the head of the machine, and means for moving said tape guide for inserting the end of the tape carried thereby underneath the presser foot.

3. The combination of a presser foot, a tape guide, means for placing a tension on the tape passing through said guide, means for supporting said tape guide from the head of the machine, means whereby said guide may be moved away from the presser foot, and means for moving said guide toward the presser foot to insert the tape underneath the presser foot.

4. The combination of a presser foot, a tape guide, an arm carrying said tape guide, means for pivotally connecting said arm to the head of the machine, a friction device for holding the arm in adjusted positions, a tension device carried by said guide, a stop for limiting the movement of said tape guide away from the presser foot, and a stop for positioning said tape guide relative to said presser foot.

5. The combination of a presser foot, a tape guide, located directly in front of the stitching mechanism, a tension device for the tape carried thereby, an arm pivoted to the head of the machine so as to move in a vertical plane and carrying said tape guide, a friction washer for holding the arm in adjusted positions, a stop for limiting the upward movement of the arm, and a stop for limiting the downward movement of the arm to position the tape guide relative to the presser foot.

[Claims 6 to 16 not printed in the Gazette.]

1,195,768. COMBINED REVERSING-SWITCH AND BRUSH-HOLDER FOR DYNAMO-ELECTRIC MACHINES. CARL BERGMANN, Jr., West New York, N. J., assignor to Knapp Electric and Novelty Co., New York, N. Y., a Corporation of New York. Filed Oct. 14, 1915. Serial No. 55,807. (Cl. 200—1.)



1. In a dynamo electric machine, the combination of a commutator, brushes therefor, and a reversing switch mounted between the brushes and consisting of relatively fixed contacts electrically connected with the brushes, a pair of spring contacts associated with each brush and normally separated from the contacts of the brushes, the corresponding contacts of both pairs being electrically connected together, and a device movable from a neutral open circuiting position to either of two closed circuiting positions for operating one of each pair of spring contacts in such relation as to close the circuits through the fixed contacts and brushes.

2. In a dynamo electric machine, the combination of a commutator, brushes therefor, a pair of U-shaped contact elements insulated from each other and normally separated from the brushes, and a device located between the members of the said elements for moving the right member of one element and the left member of the other element into electrical connection with the adjacent brushes, or vice versa, for changing the circuit connections.

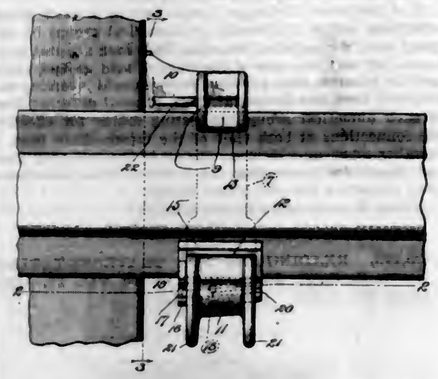
3. In a dynamo electric machine, the combination of a commutator, brushes therefor, a pair of spaced electrically connected rear contact springs, a pair of electrically connected front contact springs separated from the rear contact springs, and a reversibly rotatable cam operating simultaneously on one of the front contact springs and the opposite rear contact spring for electrically connecting such springs with the associated brushes to change the circuit connections.

4. In a dynamo electric machine, the combination of a commutator, brushes therefor, a pair of spaced electrically connected rear contact springs, a pair of electrically connected front contact springs separated from the rear contact springs, a reversibly rotatable cam operating simultaneously on one of the front contact springs and the opposite rear contact spring for electrically connecting such springs with the associated brushes to change the circuit connections, a shaft on which the cam is mounted, a handle for turning the shaft, and means for arresting the turning of the shaft when the cam is in either of its operative positions.

5. A combined reversing switch and brush device for a dynamo electric machine, comprising a supporting base of insulation, brushes fastened thereto, a pair of U-shaped contact elements having resilient members extending upwardly through the supporting base, with the elements insulated from each other by the latter, the right and left members of the elements being associated respectively with the right and left brushes, and a double lobed cam having its lobes one hundred and eighty degrees apart, whereby one lobe is adapted to electrically connect one of the members of one element with the adjacent brush and the opposite member of the other element with its adjacent brush.

[Claims 6 and 7 not printed in the Gazette.]

1,195,769. RAIL-ANTICREEPER. BENJAMIN B. BETTS, St. Louis, Mo. Filed Jan. 5, 1916. Serial No. 70,534. (Cl. 238—4.)



1. A rail anti-creeper comprising a body portion, an integral jaw at each end of the body portion, one of which jaws is designed to snugly fit one rail base flange, and the other jaw enlarged to be wholly out of contact with the opposite rail base flange, its free end overlapping the said rail base flange, a wedge for positioning between the free end of said last mentioned jaw and the inclined upper face of the rail base flange, its margin engageable in the bight of said jaw, and its body wholly out of engagement with the remainder of the bight of said jaw and body of the anti-creeper, and means carried by said anti-creeper for engagement with a fixed object on the road bed whereby any alteration in the angular relationship between said anti-creeper and the rail will tend to cause said wedge to ride upwardly over the inclined face of the rail base flange and thus produce a greater compression or clamping action to prevent the rail from creeping, and means for preventing a relative movement between said wedge and the body of the anti-creeper.

2. A rail anti-creeper comprising a body portion, an integral jaw at each end of the body portion, one of which jaws is designed to snugly fit one rail base flange, and the other jaw enlarged to be wholly out of contact with the opposite rail base flange, its free end overlapping the said rail base flange, a wedge for positioning between the free end of said last mentioned jaw and the inclined upper face of the rail base flange, its margin engageable in the bight of said jaw, and its body wholly out of engagement with the remainder of the bight of said jaw and body of the anti-creeper, means carried by said anti-creeper for engagement with a fixed object on the road bed whereby any alteration in the angular relationship between said anti-creeper and the rail will tend to cause said wedge to ride upwardly over the inclined face of the rail base flange and thus produce a greater compression or clamping action to prevent the rail from creeping, and means for preventing a relative movement between said wedge and the body of the anti-creeper.

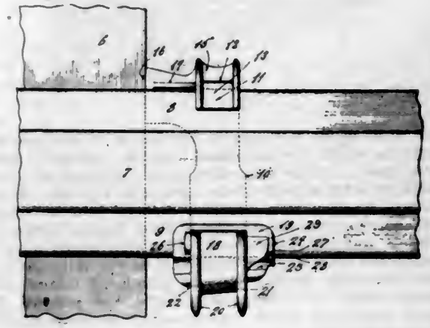
3. A device of the class described comprising a body portion, a tie engaging element carried by said body, a jaw at one end of said body arranged to snugly fit the flange of a rail base a second jaw at the other end of said body arranged in opposition to said first mentioned jaw, said second jaw being larger than the first mentioned jaw to be wholly out of engagement with a rail base flange and its bight non-parallel with the bight of the first mentioned jaw, and a wedge arranged to be rested upon a rail base flange and engage said second jaw only at its bight, and its uppermost portion whereby when in position on a rail, the jaw and said wedge will clamp the rail by a vertical compression between the body portion and the uppermost portion of said jaw.

4. A rail anti-creeper comprising opposing jaws one of which is arranged to snugly fit the base flange of a rail, the other of which is arranged to loosely fit the opposite base flange of a rail, the bights of said jaws being relatively non-parallel, an element tapering both transversely and longitudinally, arranged to be inserted between said last mentioned jaw and the base flange of a rail whereby when said element is positioned the rail will be forced laterally to cause the opposite jaw to snugly fit the rail base and the jaw co-acting with the wedge exert a clamping pressure upon the rail base.

5. A device of the class described, comprising opposite jaws and a tie engaging element, the one jaw adapted to snugly fit one base flange of a rail, the other jaw adapted to loosely fit the opposite base flange of a rail, the inner face of the last mentioned jaw being transversely arcuated and out of parallel with the minor axis of the device, and a wedging element whose one margin is arcuated to conform with the inner margin of said last mentioned jaw.

[Claims 6 and 7 not printed in the Gazette.]

1,195,770. RAIL-ANTICREEPER. BENJAMIN B. BETTS, St. Louis, Mo. Filed Mar. 6, 1916. Serial No. 82,370. (Cl. 238—4.)



1. A rail anti-creeper, comprising opposing walls for engagement with opposite margins of the rail base, one of which walls is inclined relative to the vertical, and means for moving the anti-creeper vertically relative to a rail whereby to wedge the rail base between said opposing walls.

2. A rail anti-creeper, comprising a pair of oppositely disposed walls for engagement with the side margins of a rail base, said walls being curvilinear from end to end whereby to adapt the device to different widths of rail bases, one of said walls being inclined relative to the vertical, and means for moving the device vertically relative to the rail, whereby to clamp the device to the rail between said opposing walls.

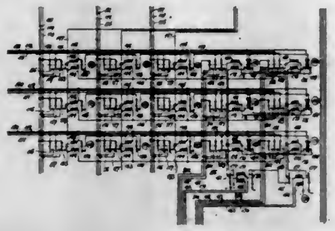
3. A rail anti-creeper, comprising opposing walls for engagement with opposite margins of the rail base, one of which walls is inclined relative to the vertical, means for moving the anti-creeper vertically relative to a rail whereby to wedge the rail base between said opposing walls, and an element arranged to engage a fixed object on the road bed.

4. A rail anti-creeper, comprising a pair of oppositely disposed walls for engagement with the side margins of a rail base, said walls being curvilinear from end to end whereby to adapt the device to different widths of rail bases, one of said walls being inclined relative to the vertical, means for moving the device vertically relative to the rail, whereby to clamp the device to the rail between said opposing walls, and an element arranged to engage a fixed object on the road bed.

5. A rail anti-creeper, comprising a body portion, an integral jaw at one end of said body portion, a vertically inclined wall arising from and integral with the body portion in opposition to the back wall of said jaw, a second jaw integrally formed with said body portion and overhanging said vertically inclined wall, and a wedge for coaction with said last mentioned jaw for moving the device both vertically and laterally relative to the rail.

[Claim 6 not printed in the Gazette.]

1,195,771. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. GOTTHILF ANSGARIUS BETULANDER, Södertörns Villastad, and NILS GUNNAR PALMGREN, Stockholm, Sweden, assignors, by direct and mesne assignments, to The Betulander Automatic Telephone Company, Limited, London, England. Original application filed Dec. 20, 1913, Serial No. 807,925. Divided and this application filed May 12, 1915. Serial No. 27,685. (Cl. 179—18.)



1. A telephone exchange system having in each group-switching section a plurality of numerical groups of outgoing lines, a number of incoming lines each adapted to be connected with any one of the lines of said groups, intermediate junction lines provided between said incoming and outgoing lines and having at their disposal different lines of each numerical group, connecting means for effecting the connections at both ends of the intermediate lines, operating circuits for said connecting means and testing relays controlling said circuits and adapted to select connecting means corresponding to an available intermediate line.

2. A telephone exchange system having in each group-switching section a plurality of numerical groups of outgoing lines, a number of incoming lines each adapted to be connected with any one of the lines of said groups, intermediate junction lines provided between said incoming and outgoing lines and having at their disposal different lines of each numerical group, connecting means for effecting the connections at both ends of the intermediate lines, operating circuits for said connecting means, testing relays controlling said circuits and adapted to select connecting means corresponding to an available intermediate line and relays for connecting the common testing relays with the test wires of any wanted numerical line group.

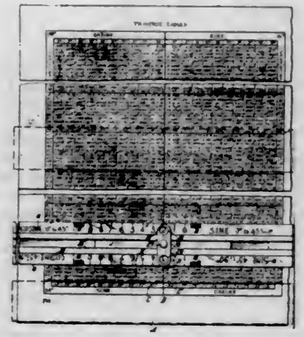
3. A telephone exchange system having in each group-switching section a plurality of numerical groups of outgoing lines, a number of incoming lines each adapted to be connected with any one of the lines of said groups, intermediate junction lines provided between said incoming and outgoing lines and having at their disposal different lines of each numerical group, connecting relays for effecting the connections at both ends of the intermediate lines, test wires allotted to the several lines, operating circuits for the connecting relays comprising wires corresponding to the various incoming lines, wires corresponding to the various intermediate lines and wires corresponding to the various outgoing lines, testing relays controlling said circuits and relays for connecting the testing relays with the test wires of the wanted numerical line group as well as with the test wires of the intermediate lines.

4. A telephone exchange system having in each group-switching section a plurality of numerical groups of outgoing lines, a number of incoming lines each adapted to be connected with any one of the lines of said groups, intermediate junction lines provided between said incoming and outgoing lines and having at their disposal different lines of each numerical group, connecting relays for effecting the connections at both ends of the intermediate lines, a plurality of common group-selectors and relays for connecting the incoming lines with the selectors.

5. A telephone exchange system having in each group-switching section a plurality of numerical groups of outgoing lines, a number of incoming lines each adapted to be connected with any one of the lines of said groups, intermediate junction lines provided between said incoming and outgoing lines and having at their disposal different lines of each numerical group, connecting means for effecting the connections at both ends of the intermediate lines, a plurality of group-selectors common to the incoming lines and means for preventing the selectors from simultaneously operating the connecting means.

[Claim 6 not printed in the Gazette.]

1,195,772. READING-KEY FOR TRAVERSE-TABLES. RALPH S. BLITZ, Butte, Mont. Filed Mar. 29, 1916. Serial No. 87,471. (Cl. 235—61.)



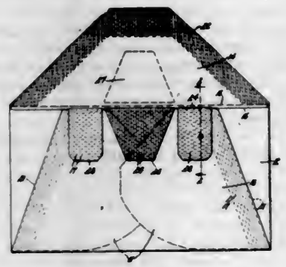
1. A reading key for traverse tables, comprising a plate provided with a column graduation having its marks spaced apart corresponding to the columns of a traverse table, and an indicator movable on the said plate and adapted to indicate on the marks of the said graduation and adapted to position the reading key on the traverse table.

2. A reading key for traverse tables, comprising a plate, a column graduation along one edge of the said plate and having consecutively numbered marks corresponding to the columns of a traverse table, legends indicating the sine 0° to 45° and the cosine of 0° to 45° and associated with the said column graduation, a second column graduation along the other edge of the plate and having consecutively numbered marks corresponding to the columns of a graduation table, legends indicating the sine of 45° to 90° and the cosine of 45° to 90° and associated with the said second column graduation, and an indicator slidable on the said plate and having means adapted to register with the said marks of both graduations and having means for positioning the reading key on the traverse tables.

3. A reading key for traverse tables, comprising a plate, a column graduation along one edge of the said plate and having consecutively numbered marks corresponding to the columns of a traverse table, legends indicating the sine 0° to 45° and the cosine of 0° to 45° and associated with the said column graduation, a second column graduation along the other edge of the plate and having consecutively numbered marks corresponding to the columns of a graduation table, legends indicating the sine of 45° to 90° and the cosine of 45° to 90° and associated with the said second column graduation, and an indicator slidable on the said plate and having apertures adapted to register with the said marks of both graduations and having pointers adapted to register with the center line of a traverse table to position the reading key on said table.

4. A reading key for traverse tables, comprising a plate, a column graduation along one edge of the said plate and having consecutively numbered marks corresponding to the columns of a traverse table, legends indicating the sine of 0° to 45° and the cosine of 0° to 45° and associated with the said column graduation, a second column graduation along the other edge of the plate and having consecutively numbered marks corresponding to the columns of a graduation table, legends indicating the sine of 45° to 90° and the cosine of 45° to 90° and associated with the said second column graduation and differently colored spots on the ends of the said column graduations, and an indicator slidable on the said plate and having means adapted to register with the said marks of both graduations and having means for positioning the reading key on the traverse table.

1,195,773. SAFETY-ENVELOP. JOSEPH BORRO, New York, N. Y. Filed Mar. 15, 1916. Serial No. 84,315. (Cl. 229—80.)



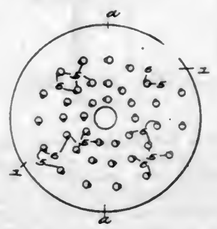
1. In a safety envelop, the combination of front and rear panels, a sealing flap formed as an extension of the front panel and foldable around a folding line over the outer surface of the rear panel, and means carried by the rear panel below said folding line of the sealing flap and gummed to adhere firmly against the inner surface of the front panel whereby the contents of the letter are held spaced from said folding line.

2. In a safety envelop, the combination of front and rear panels, a sealing flap extending from the upper edge of the front panel and foldable along a line bounding the upper edge of the front panel, the rear panel having its upper edge substantially parallel to but spaced downwardly from said folding line, and a pair of spaced tongues formed as integral parts of the rear panel and projecting from said upper edge thereof, said tongues being foldable inwardly and downwardly over the contents of the letter and gummed to adhere firmly to the inner surface of the front panel whereby said contents are held downwardly spaced from the folding line of the sealing flap.

3. In a safety envelop, the combination of front and rear panels, a sealing flap foldable from the front panel over the outer surface of the rear panel, a locking tongue formed as an integral part of the rear panel and foldable thence inwardly over the contents of the letter and gummed to stick firmly against the inner surface of the front panel, and a sealing tongue formed as another integral part of the rear panel and gummed to adhere firmly against the inner surface at the central part of the sealing flap when the latter is brought into sealing position.

4. In a safety envelop, the combination of a front panel, end flaps foldable over the front panel and overlapping each other, a rear panel foldable over the end flaps and gummed on the outside thereof, a pair of spaced locking tongues formed as integral parts of the rear panel and foldable thence inwardly over the contents of the letter and gummed to stick firmly against the inner surface of the front panel, a sealing tongue formed as another integral part of the rear panel between the locking tongues aforesaid and foldable outwardly to lie against the outer face of the rear panel, and a sealing flap carried by the front panel and foldable over the sealing tongue aforesaid and rear faces of the end flaps and rear panel, said sealing tongue being gummed to adhere to the inner face of the sealing flap.

1,195,774. CUTTING-TOOL. JOHN WILSON BROWN, Jr., Philadelphia, Pa. Filed June 10, 1914. Serial No. 844,296. (Cl. 29—105.)



1. The combination in a metal cutting tool, of a disk arranged to be rotated; a series of cutters projecting at right angles to the surface of said disk and having flat cutting edges arranged on lines parallel with lines radiating from the center and arranged at different distances from the center of rotation and so arranged in respect to each other that a cut will be progressively made.

2. The combination in means for fastening cutters to a carrier, said carrier having a tool socket of an even diameter throughout; an inclined wedge socket at an angle to the socket for the cutter; a tool arranged to fit said socket and having a flat side; a wedge adapted to enter the wedge socket and also having a flat side resting against the flat side of the cutter and arranged to hold the cutter in position in its socket; and means for adjusting the cutter longitudinally.

1,195,775. FENCE-POST. WILLIAM BRYSON, Fifield, Wis. Filed Aug. 4, 1915. Serial No. 43,562. (Cl. 256—48.)

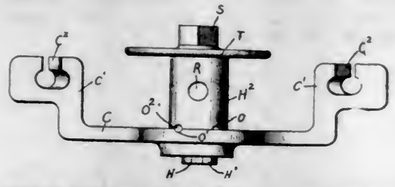
A fence post comprising two sections spaced apart with registering recesses in the sections, a clamp disposed between the sections and having terminals extending away from each other and pivoted to the sections, the clamp at a point a distance from its axis substantially the distance between the pivots and the recesses, being bent back for embracing a wire in the recesses, the end of the clamp at a second point spaced from the first point being bent outwardly, there being an orifice in a section at a distance from the recess in the said section substantially the same

as the distance between the said first and second points on the clamp, and a pin disposed in the orifice and normally



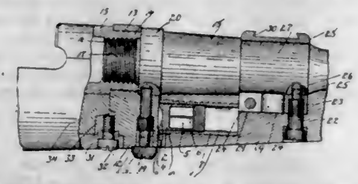
engaging the outwardly bent portion of the clamp for holding the clamp in position.

1,195,776. TAKE-UP DEVICE FOR LINE-WIRES. EDSON E. BURNHAM, Amite, La. Filed May 10, 1916. Serial No. 96,636. (Cl. 254—161.)



A take-up device for line wires, etc., comprising a plate having oppositely disposed arms with diagonal slots therein for the reception of a line wire to be taken up, said plate having a central aperture with an offset therein, a drum having a spindle end journaled in said aperture and provided with a lug adapted to pass through said offset and serving to fasten the drum to the plate, the face of the plate and said drum having grooves which are adapted to be brought into registration, and a key engaging said grooves to hold the drum from rotation.

1,195,777. TAKE-DOWN FIREARM. FRANK F. BURTON, East Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed July 3, 1916. Serial No. 107,259. (Cl. 42—15.)



1. A take-down firearm characterized by having the rear end of its forearm provided with a take-up screw mounted in a bushing located in the rear end of the forearm and adapted to engage with the forward end of the receiver for taking up wear in the connection between the same and the removable gun-barrel.

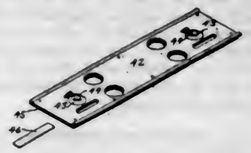
2. A take-down firearm characterized by having the rear end of its forearm provided with a take-up screw mounted in a bushing located in the rear end of the forearm and slotted to adapt it to be spread open so as to be frictionally held in place.

3. A take-down firearm characterized by having the rear end of its forearm provided with a take-up screw for co-action with the forward portion of the receiver of the arm, the said screw being cylindrical and having its forward portion chambered and longitudinally slotted to adapt it to be spread open so as to be frictionally held in place.

4. In a take-down firearm, the combination with the receiver thereof, of a gun-barrel removably secured thereto, a forearm, a bushing located in the rear end of the said forearm, and a cylindrical take-up screw mounted in the said bushing in position to have its rear face engaged with the front face of the said receiver, and slotted throughout a portion of its length to adapt it to be spread open so as to be frictionally held against rotation in the said bushing.

5. In a take-down firearm, the combination with the receiver thereof, of a gun-barrel removably secured thereto, a forearm, a forearm-lock applied to the said gun-barrel and formed with a depending lug entering the upper face of the said forearm, a bushing located in the forearm and having its forward end engaged with the said depending lug, and a cylindrical take-up screw mounted in the said bushing for engaging with the receiver to take up the wear in the connection between the gun-barrel and the receiver.

1,195,778. PANEL-BOARD FITTING. THOMAS WILLIAM BYRNE and ROBERT CHRISTOPHER LEHANE, Boston, Mass., assignors to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Feb. 9, 1914. Serial No. 817,622. (Cl. 247—13.)

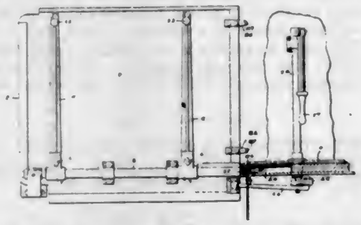


1. For use on a panel board fitting of the type described, a metallic cover plate substantially coextensive in area with the fitting which it is designed to cover, a sheet of insulation lining said plate, said plate and lining being perforated in register to permit the passage of a switch stem therethrough, and the plate being slotted adjacent said switch stem aperture to form a sight aperture for a switch indicating legend carrier adapted to be inserted between said plate and lining at the slot, substantially as described.

2. As a new article of manufacture for electric fittings of the type described, an insulating cover plate comprising a sheet of metal, substantially coextensive in area with the fitting which it is designed to cover, a sheet of insulation lining said plate, said plate and lining being perforated in register to permit the passage of fuses therethrough, together with registering apertures in the plate and lining between the opposite ends of the plate and the fuse apertures to permit the passage of switch actuating means therethrough, an aperture in the cover plate adjacent the switch stem and a legend strip insertible between said plate and lining to position beneath said aperture and on which the direction of the circuit controlled may be indicated.

1,195,779. TRAP-DOOR FOR RAILWAY-CAR PLATFORMS. EDWARD F. CHAFFEE, Syracuse, N. Y., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed Dec. 21, 1914. Serial No. 878,462. (Cl. 105—84.)

1. The combination with a railway car platform, of a trap door hinged to the platform at one side of the door opening, and slidable longitudinally of the axis of its hinge, and a slide located at the inner edge of the door to bridge the space between the platform and the door when the door is moved axially outwardly from its normal position, the door being separated from the slide during the opening and closing movement of the door about its hinge, substantially as and for the purpose described.



2. The combination with a railway car platform having a cavity at the top of the platform steps, and a trap door hinged to the platform at one side of the door opening and shiftable longitudinally of the axis of its hinge, the door having means associated therewith and movable into and out of the cavity during the axial movement of the door, the door being separated from said means during the movement of the door on its hinge, substantially as and for the purpose specified.

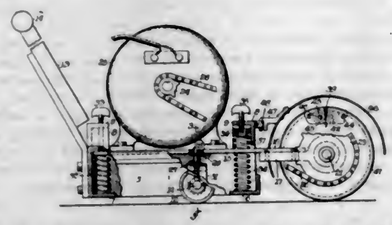
3. The combination with a railway car platform, of a trap door hinged to the platform at one side of the door opening and slidable longitudinally of the axis of its hinge and means at the inner edge of the door telescoping with the platform at the top of the steps of the platform, the door being separated from said means during the opening movement of the door on its hinge, substantially as and for the purpose set forth.

4. The combination with a railway car platform, of a trap door hinged to the platform at one side of the door opening and slidable longitudinally of the axis of its hinge, a slide located at the inner edge of the door to bridge the space between the platform and the door when the door is moved outwardly axially, and means coupling the door and the slide and acting to disconnect the door from the slide during the opening of the door on its hinge and, to connect the door and the slide as the door approaches its closed position, substantially as and for the purpose described.

5. The combination with a railway car platform, of a trap door hinged to the platform at one side of the door opening, and a slide located at the inner edge of the door and telescoping with the platform at the inner side of the door opening, the door and the slide having means moving into and out of interlocking engagement during the opening and closing of the door, substantially as and for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

1,195,780. SURFACING-MACHINE. ARTHUR E. CHAPPELL, Chicago, Ill. Filed Nov. 12, 1915. Serial No. 61,007. (Cl. 51—13.)



1. In a surfacing machine, the combination of a wheel-supported frame, a member pivotally mounted in said frame, a surfacing tool carried by said member forwardly of the frame, and means for tilting said member laterally and longitudinally on its pivot to thereby adjust the position of said tool relatively to the surface to be worked.

2. In a surfacing machine, the combination of a wheel-supported frame, a member mounted in said frame so as to be capable of tilting movement about a plurality of horizontal axes, a surfacing tool carried by said member, means for adjusting said member to vary the vertical position of said tool as a whole or either end thereof relatively to the other, and means for yieldingly holding said member in adjusted position.

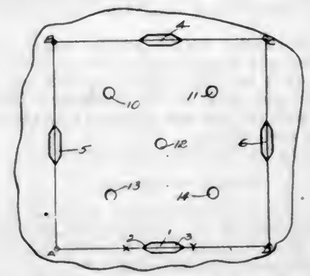
3. In a surfacing machine, the combination of a frame, a member pivotally supported therein upon a central vertically disposed pivot, a surfacing tool carried by said member, means at each corner of said frame for adjusting said member about said pivot, and springs interposed between said member and said frame.

4. In a surfacing machine, the combination of a wheel-supported base, a rigid structure movably mounted on said base, a surfacing tool and a motor carried by said structure, and driving connections between said motor and said tool, said structure and the elements carried thereby being movable with respect to said base to vary the relative elevation of the ends of the tool.

5. In a surfacing machine, the combination of a substantially rectangular frame, a member pivotally mounted within said frame, springs interposed between the lower corners of said frame and the underside of said member, and adjusting screws mounted in each corner of the frame in position to operate upon the upper surface of said member whereby said member may be tilted both endwise and sidewise on its pivot.

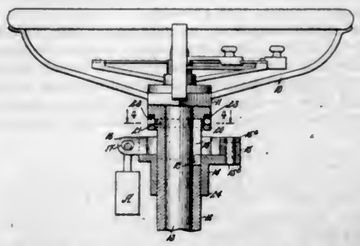
[Claims 6 to 11 not printed in the Gazette.]

1,195,781. METHOD OF CHANNELING AND SEVERING BY BLASTING. TERE A. CLARK, Chicago, Ill. Filed Sept. 16, 1915. Serial No. 51,110. (Cl. 125—20.)



The method of channeling and severing material which consists in forming a plurality of holes along the contour of the object to be severed to limit the cleavage, forming additional holes intermediate to said aforementioned holes to direct the cleavage and exerting an expansive force in said additional holes to sever the object.

1,195,782. LOCKING DEVICE FOR STEERING-WHEELS. OSCAR F. COLEMAN, El Paso, Tex. Filed Mar. 29, 1916. Serial No. 87,569. (Cl. 70—90.)



1. A locking means for steering wheels including a sleeve arranged to be slidably mounted on a steering post

for movement to and from the steering wheel while held against turning movement on the said post, a clamp on the said sleeve including a lateral swinging arm adapted to interlock with the hub of the steering wheel, and means to lock the said clamp in engagement with the hub.

2. The combination with a steering wheel and steering post having vertical slots therein, a sleeve slidable on the post and provided with members to enter said slots to be slidable therein, a clamp including a laterally swinging arm, a projection on said arm, the wheel hub having lateral recesses at different points therearound to receive said projection, and means on the swinging arm and on a relatively fixed part of the sleeve adapted to receive a lock.

3. The combination with a steering wheel and a steering post having a vertical slot adjacent to the wheel hub, a sleeve slidably fitting said post for movement to and from the hub and formed with a stud extending into the slot of the post, the said sleeve being of a length to cover the slots in the raised position of the sleeve, a clamp on said sleeve adapted to embrace the wheel hub, said clamp including side members, one of which is pivoted to swing laterally to and from the other member, said clamp members having lugs adapted to receive a lock, the said pivoted member having a projection on the inner face thereof, and the wheel hub having a recess adapted to receive said projection.

4. A locking means for steering wheels including a member having vertical slots, a sleeve having studs extending into said slots and adapted to engage a wheel hub, a fixed clamp member on the sleeve, a pivoted clamp arm on said sleeve and movable laterally toward and from the fixed member and provided with a lateral projection at the interior, said clamp members having polygonal inner faces and formed with lugs adapted to receive a lock; in combination with a steering wheel having a polygonal hub formed with recesses adapted to receive said lateral projection.

5. The combination with a steering wheel having a polygonal hub, of a clamp slidably mounted below the hub for movement to and from the latter while held against turning, the said clamp having a polygonal interior to correspond with the hub, and means to hold the clamp in engagement with the hub.

[Claims 6 to 9 not printed in the Gazette.]

1,195,783. SOUND-AMPLIFIER. WILLIAM H. CRAWFORD, Providence, R. I., assignor of one-half to Oliver Fletcher Best, Providence, R. I. Filed Apr. 17, 1915. Serial No. 21,940. (Cl. 181—0.5.)



1. A sound amplifier, comprising means for reproducing sound, a short curved tube of sound resonating material, a conical reproducer connection composed of sound resonating material between said means and curved tube, and sound deflecting leaves within the connection arranged in one longitudinal section thereof.

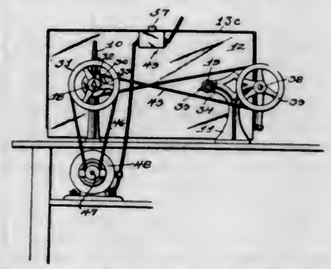
2. A sound amplifier, having means for reproducing sound and a sound amplifying horn, an intermediary conical reproducer connection transmitting sound unobstructedly in a straight path and composed of sound resonating material, and provided with sound deflecting means within the said connection arranged in one longitudinal section thereof.

1,195,784. FUEL. EDGAR L. CULVER, Austin, Tex. Filed June 26, 1915. Serial No. 36,495. (Cl. 44—1.)

1. The herein-described method of manufacturing fuel, which consists in forming a binder from a pulp of city refuse, all of which is ground fine and mixed in the presence of liquid heated to a sufficiently high degree to kill germ life therein, and adding a deodorizing agent, which is commingled with the pulp forming a binder, after which the whole mass is dried.

2. The herein-described method of manufacturing fuel, which consists in forming a binder from a pulp of city refuse, all of which is ground fine and mixed in the presence of liquid heated to a sufficiently high degree to kill germ life therein, adding a deodorizing agent, which is commingled with the pulp forming a binder, then adding carbonaceous material, after which the whole mass is dried.

1,195,785. DEVICE FOR REWINDING FILMS. HARVY BARRE CUNNINGHAM, St. Paul, Minn. Filed Jan. 27, 1913. Serial No. 744,417. (Cl. 242—55.)



1. In a device of the class described, the combination of a casing formed with an opening at one side thereof, a door for said opening, reel supports revoluble in said casing, an electric motor in operative connection with one of said supports for turning the same, a source of current electrically connected with the motor and a device adapted to normally disconnect the motor and source of current, said device being actuated by the door, when closed, to connect said motor and source of current.

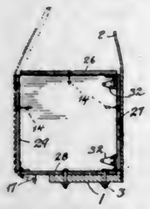
2. In a device of the class described, the combination of a casing formed with an opening at on eside, a door for said opening, standards for said casing, reel supports in said casing revolubly mounted in said standards, a motor in operative connection with one of said supports for rotating the same, a source of current electrically connected with said motor, and a switch mounted on the casing and operated by said door upon the opening and closing thereof to break and complete the motor circuit.

3. In a device of the class described, the combination of a casing formed with an opening at one side, a door for said opening, standards for said casing, reel supports in said casing revolubly mounted in said standards, a motor in operative connection with one of said supports for rotating the same, a source of current electrically connected with said motor, a switch mounted on the casing and operated by the opening and closing of the door to break and complete the motor circuit, and yielding means in operative connection with the other reel support for retarding its rotation.

4. In a device of the class described, the combination of a casing formed with an opening at one side, a door for said opening, standards for said casing, reel supports in said casing revolubly mounted in said standards, mechanism in operative connection with one of said supports for rotating the same by hand and by power, a source of current electrically connected with said motor, a switch mounted on the casing and operated by the opening and closing of the door to break and complete the motor circuit, and adjustable means in operative connection with the other reel support for retarding its rotation.

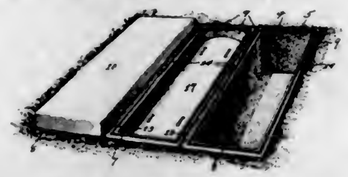
1,195,786. ATTACHMENT FOR AUTOMOBILES OR ANY OTHER DESIRED VEHICLES. JESSE BUNDY CYPERT, Frost, Tex. Filed Jan. 13, 1916. Serial No. 71,901. (Cl. 224—29.)

An attachment for automobiles, comprising a box or case consisting of top and bottom walls of the same size and similar form, similar side walls, and similar end walls, the side and end walls being hinged to the bottom to fold into position perpendicular thereto or into the same plane, and the top being hinged to one of the said walls, and hooks



on the end walls and eyes on the end and side walls for engagement by the hooks, said attachment being adapted for connection with the vehicle, and the bottom wall having loops and straps engaging the loops and adapted for connection at their upper ends to the vehicle.

1,195,787. REINFORCED-CONCRETE TOMB AND MEMORIAL. ISAAC S. DAULEY, Oneonta, N. Y. Filed Feb. 7, 1916. Serial No. 76,701. (Cl. 72—7.)



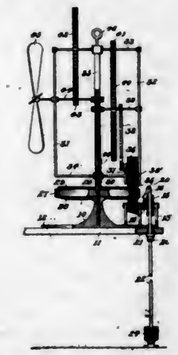
1. A resting place for human dead comprising a tomb formed of concrete providing a chamber for the reception of a burial casket or the like, said tomb structure being provided around its upper edge with a drainage channel, and a memorial tablet fitted and supported upon said upper edge, said tablet being provided along its under surface with a groove complemental to said channel whereby water tending to enter the chamber aforesaid will be received and directed into said channel.

2. A resting place for human dead comprising a tomb formed of permanent material providing a chamber for the reception of a burial casket or the like, said tomb being provided around and in its upper edge with a drainage channel, and a memorial tablet fitted and supported upon said upper edge and covering said channel, said tablet being provided along that portion thereof which coöperates with the upper edge of the tomb with means whereby water tending to enter the chamber aforesaid will be received and directed into said channel.

1,195,788. OPERATING MECHANISM FOR FANS. DANIEL DOLHAY, Leechburg, Pa. Filed Apr. 4, 1916. Serial No. 88,884. (Cl. 74—54.)

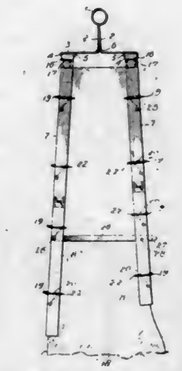
1. Driving mechanism comprising a base support, vertical standards carried thereby, a power shaft journaled in said standards, a gear loose on said shaft, a ratchet fixed to said shaft, a tensioned pawl carried by said gear adapted to engage said ratchet, a beveled pinion fixed to said shaft, a central standard fixed to said base support, a driving gear journaled on said standard, lower beveled teeth carried thereby in engagement with said pinion, a frame mounted on said central standard, means for holding said frame immovable relative to the standard, a pair of meshing pinions journaled in said frame and in mesh with said driving gear, meshing gearing carried by said frame and in communication with said meshing pinions, a shaft driven by said gearing, and a reciprocating rack bar in engagement with the loose gear on the driving shaft.

2. Driving mechanism comprising a base support, a vertical standard carried thereby, a horizontal gear journaled on said standard, a driving pinion in mesh with said gear, pawl and ratchet mechanism for driving said pinion, a reciprocating rack bar associated with the pawl and ratchet mechanism, a supporting frame mounted on said standard, a driven member carried by the frame, said



standard having circularly arranged openings therein, a spring catch carried by said spring adapted to enter said openings to prevent relative movement between the frame and standard, and driving mechanism for connecting the driven member to the horizontal gear.

1,195,789. STRETCHER. ALEXANDER DOMBROWSKY, Balboa, Canal Zone. Filed Oct. 29, 1915. Serial No. 58,069. (Cl. 223—19.)



1. A trousers stretcher and creaser substantially as herein described, comprising a plurality of pairs of clamping bars, the members of each pair being adapted to engage the side edges of the superposed legs from the bottom to near the top, a suspending bracket to which the pairs are pivoted in spaced relation, a series of resilient clamps pivotally connected with each pair of bars and arranged in spaced relation to swing outwardly into inoperative position to release the members of the pair and to swing inwardly to clamp the members together on the trousers, each bar being sectional, and a spring hinge connecting the sections of each bar to cause the lower sections to swing outwardly when released from the clamping mechanisms, and an extension bar pivoted to the lower section of one member of one pair and having an adjustable connection with the adjacent section of the adjacent member of the other pair.

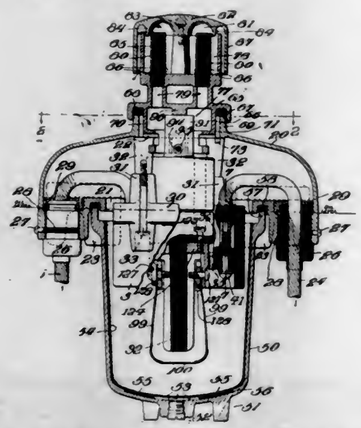
2. A trousers stretcher and creaser substantially as herein described, comprising a plurality of pairs of clamping bars, the members of each pair being adapted to engage the side edges of the superposed legs from the bot-

tom to near the top, a suspending bracket to which the pairs are pivoted in spaced relation, a series of resilient clamps pivotally connected with each pair of bars and arranged in spaced relation to swing outwardly into inoperative position to release the members of the pair and to swing inwardly to clamp the members together on the trousers, each bar being sectional, and a spring hinge connecting the sections of each bar to cause the lower sections to swing outwardly when released from the clamping mechanisms.

3. A trousers stretcher and creaser, comprising a plurality of pairs of sectional clamping bars, a common support to which the members of each pair are pivoted, said bars being spaced apart from each other to clamp the opposite side edges of the superposed legs of a pair of trousers, clamping mechanism for clamping the members of each pair together on the legs, and a spring hinge connecting the sections of each bar and mounted to swing the lower section outwardly away from the adjacent lower section.

4. A trousers stretcher and creaser comprising clamping members formed of sections, the sections at one end of the members being connected together, and the sections at the other end being free and disconnected from each other, means connecting the sections of each member and normally tending to move the free or disconnected sections laterally to facilitate placing the trousers between coacting sections of complemental clamping members, and means pressing the clamping members together to cause them to grip the trousers placed between them.

1,195,790. OIL-FUSE. LOUIS W. DOWNES and ALFRED W. FAXON, Providence, R. I.; said Faxon assignor to D & W Fuse Co., Providence, R. I., a Corporation of Rhode Island. Filed May 27, 1914. Serial No. 841,335. (Cl. 175—277.)



1. In an electric fuse structure, the combination of a casing including an upper part and a lower receptacle part detachably joined to the upper part; circuit-terminals within said casing supported from the upper part thereof; a fuse carrier supported within the casing from the upper part thereof and independent of the lower receptacle part, said carrier having terminals adapted for engagement with the circuit-terminals; and a fuse-link connected between said fuse-terminals.

2. In an electric fuse structure, the combination of a casing including an upper part and a lower receptacle part detachably joined to the upper part; circuit-terminals within said casing supported from the upper part thereof; a fuse carrier supported within the casing from the upper part thereof and independent of the lower receptacle part, said carrier having terminals adapted for engagement with the circuit-terminals; a fuse-link connected between said fuse-terminals; and an arc-suppressing liquid in said casing in contact with the fuse-link.

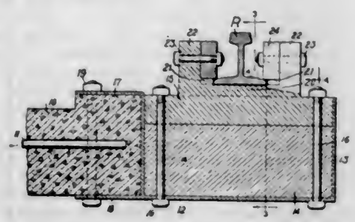
3. In an electric fuse structure, the combination of a casing including an upper part, a lower receptacle part detachably joined to the upper part, and a cover closing a top opening in the upper part; circuit-terminals within said casing supported from the upper part thereof; a fuse carrier within the casing removable therefrom through the opening closed by the cover and having terminals adapted for engagement with the circuit-terminals; and a fuse-link connected between said fuse-terminals.

4. In an electric fuse structure, the combination of a casing including an upper part and a lower receptacle part detachably joined to the upper part; circuit-terminals within said casing supported from the upper part thereof; line conductors associated with the upper casing part and joined to the circuit terminals; a fuse carrier supported within the casing from the upper part thereof and independent of the lower receptacle part, said carrier having terminals adapted for engagement with the circuit-terminals; and a fuse-link connected between said fuse-terminals.

5. In an electric fuse structure, the combination of a casing including an upper part and a lower receptacle part detachably joined to the upper part; circuit-terminals within said casing supported from the upper part thereof; line conductors entering through the wall of the upper casing part and joined to the circuit terminals; a fuse-carrier supported within the casing from the upper part thereof and independent of the lower receptacle part, said carrier having terminals adapted for engagement with the circuit-terminals; and a fuse-link connected between said fuse-terminals.

[Claims 6 to 24 not printed in the Gazette.]

1,195,791. CONCRETE RAILWAY-TIE. LEANDER DUNCAN, Butte, Mont. Filed Jan. 14, 1916. Serial No. 72,070. (Cl. 238—3.)

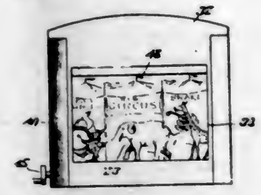


1. The herein described railway tie comprising a body portion of reinforced concrete having an enlargement at each end, a rigid metal rectangular shell detachably secured to each enlargement, said shell constituting an open-topped box, a cushion block fitted in the lower portion of said box, a pillow block fitted upon the cushion block within the upper portion of the box, means locking the pillow block and cushion block in the shell, and means to secure a rail upon the pillow block.

2. In a railway tie, the combination of a reinforced concrete body structure, a metal shell detachably secured to each end of the body, said shell comprising an open-topped box, a pillow block supported and secured in said box, said pillow block having on its upper surface a rail seat, a pair of lateral shoulders adjacent the ends of the seat and adapted to engage the side edges of the base flange of the rail, said shoulders being rounded as indicated, and a pair of clamping blocks bearing upon the upper surface of the base flange to hold the rail from tilting or upward displacement from between said shoulders.

3. The combination in a railway tie, of a reinforced concrete body having an enlargement at each end, a shell for each end of the body and having upper and lower ears embracing the adjacent enlargement, fasteners securing the shell ears to the enlarged end of the body, the main portion of the shell constituting an open-topped rectangular box, a cushion fitted in the bottom of the box, a rigid pillow block supported upon the cushion, fastening means passed upwardly through the bottom of the box, through the cushion and pillow block, securing these parts together, said pillow block having a pair of upwardly projecting lugs, that portion of the pillow block between the lugs constituting a rail seat, said lugs having transverse holes therethrough, a pair of clamping blocks fitted to the inner faces of the lugs and adapted to bind upon the top of the rail base, and removable fasteners securing the clamping blocks to the lugs, substantially as set forth.

1,195,792. TOY-STAGE CONSTRUCTION. JAMES ANDREW DUNIGAN, Albany, N. Y. Filed Mar. 17, 1916. Serial No. 84,907. (Cl. 46—40.)



1. A toy stage comprising a stage structure having a transverse guideway, and an endless belt movable in said guideway for presenting objects to be viewed, said belt being composed of folds of material adapted for holding an interposed object.

2. A toy stage comprising a stage structure having a transverse guideway, an endless belt having a portion movable through said guideway, said belt being composed of folds of material adapted for holding interposed objects to be displayed, guiding means for the belt including a wheel arranged at one side of the guideway, and means at the opposite side of the guideway for pressing the folds of the belt closed and holding the belt in contact with said wheel.

3. A stage comprising a stage structure having a transverse guideway, a belt having a portion movable through said guideway, said belt being composed of folds of material adapted to hold objects to be displayed, means for guiding the belt including a roller at one side of the guideway, and a spring pressure member at the opposite side of the guideway for maintaining the folds of the belt closed and holding the belt in contact with said roller.

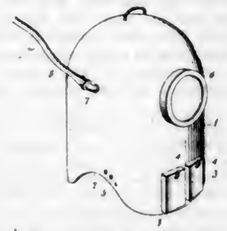
4. A toy stage comprising a stage structure having a transverse guideway, an endless display belt passing through said guideway, and composed of folds of material adapted for holding interposed objects to be displayed, a guide roller for the belt arranged at one side of the guideway and centrally of the stage structure, guide members for the belt at opposite sides of the stage, a pressure device for holding the folds of the belt closed and keeping the same in contact with said guide roller, a driving roller for the belt supported in rear of the stage structure, and means ofr transmitting motions to said drive roller.

5. A toy stage comprising a base frame including a platform and side pieces provided with guide slots, an inclosure supported by said base piece and including side walls having guide slots in alinement with the guide slots in the base and having a movable rear wall forming a door and an endless display belt mounted for movement upon the base piece and for travel through said slots.

[Claim 6 not printed in the Gazette.]

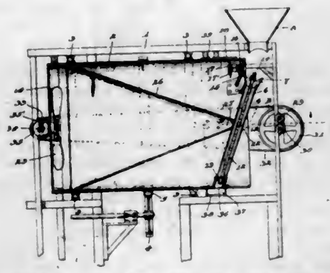
1,195,793. DIVING-HOOD. WILLIAM S. DUNN and WILLIAM F. MILLER, Miami, Fla. Filed Feb. 4, 1915. Serial No. 6,152. (Cl. 61—7.)

1. A diving hood comprising a valveless body of rigid material closed except at its lower end and having its lower end formed and shaped whereby the hood may be fitted in operative position over the diver's head and shoulders and instantly and freely removed from said position, the lower edge of the hood being curved at its sides to conform to the curvature of the shoulders of the body and the hood having adjacent its lower edge and at the front and rear thereof weight means to insure the stability of the hood upon the diver's shoulders without the positive attachment of the hood to the body and to facilitate the diver's descent through the water, the hood having a sight glass and an air inlet connection for attachment to a supply hose, and the lower portion of the hood being formed to permit the escape of air into the water.



2. A diving hood comprising a valveless body of rigid material closed except at its lower end and having its lower end formed and shaped whereby the hood may be fitted in operative position over the diver's head and shoulders and instantly and freely removed from said position, the lower edge of the hood being curved at its sides to conform to the curvature of the shoulders of the body and the hood having adjacent its lower edge and at the front and rear thereof weight means to insure the stability of the hood upon the diver's shoulders without the positive attachment of the hood to the body and to facilitate the diver's descent through the water, the hood having a sight glass and an air inlet connection for attachment to a supply hose, and the lower portion of the hood being provided with valveless air escape passages open to the water in which the hood is submerged.

1,195,794. COTTON GINNING AND SPINNING MACHINE. ROBERT EMMET DUPUY, Odell, Ill. Filed July 9, 1915. Serial No. 39,029. (Cl. 13—7.)



1. A device of the class described comprising an element through which seed cotton is adapted to pass, said element having an opening in one side thereof for the passage of lint cotton; means for rotating said element about an axis passing through said opening; and means for drawing the lint cotton through said opening away from said element, substantially as described.

2. A device of the class described comprising an element through which seed cotton is adapted to pass, said element having an opening in one side thereof for the passage of lint cotton; means for rotating said element about an axis passing through said opening; means for conveying the lint cotton through said element toward said opening; and means for drawing the lint cotton through said opening away from said element, substantially as described.

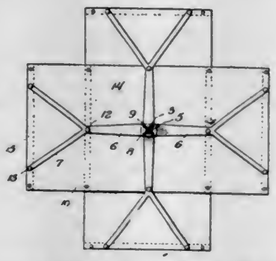
3. A device of the class described comprising an element through which seed cotton is adapted to pass, said element having an opening in one side thereof for the passage of lint cotton; means for rotating said element about a transverse axis passing centrally through said opening; and means for drawing said lint cotton through said opening away from said element in a line coincident with said axis of rotation, substantially as described.

4. A device of the class described comprising an element through which seed cotton is adapted to pass, said element having an opening in one side thereof for the passage of lint cotton; means for rotating said element about a transverse axis passing centrally through said opening; means for drawing said lint cotton through said opening away from said element in a line coincident with said axis of rotation; and means for governing the relative speeds of rotation of said element and of withdrawal of the cotton from said element, substantially as described.

5. A device of the class described comprising an element through which seed cotton is adapted to pass, said element having an opening in one side thereof for the passage of lint cotton; means for rotating said element about a transverse axis passing centrally through said opening; means for drawing said lint cotton through said opening away from said element in a line coincident with said axis of rotation; and means for directing a current of air through the interior of said element toward said opening, substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

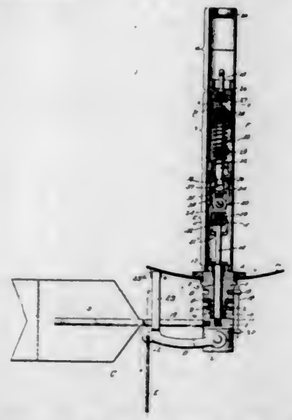
1,195,795. DISPLAY-STAND. SIMPSON B. DYER, Tulia, Tex. Filed May 6, 1913. Serial No. 765,911. (Cl. 211—24.)



In a device of the kind described in combination, a flat bottom plate arranged to provide rectangular projecting portions at right angles to one another, a base, a rigid vertical standard secured at its lower end to said base, a pair of upstanding rods of equal length secured between the ends of and along the longitudinal edge of each of said rectangular projections, the upper end of said rigid rod being threaded, a nut secured upon said threaded portion, a pair of arms crossing each other at the upper end of said rigid rod, one of said arms having a central opening through which the threaded portion projects, said mentioned arm resting upon said nut, the other arm being offset over the first arm, means engaging said rod to clamp the two arms together in crossed relation, each of said arms being provided at its outer end with diverging branch arms, a plurality of upright rods connecting said plate and each of said arms at the points where said branch arms begin to diverge therefrom, the branch arms being secured to the upstanding rods and extending entirely across said rectangular projections.

1,195,796. FIRING APPARATUS FOR SUBMARINE MINES. GIOVANNI EMANUELE ELIA, Rome, Italy. Filed July 16, 1913. Serial No. 779,294. (Cl. 102—3.)

1. In a submarine mine, the combination of a charged buoyant body adapted to be rotated by contact with a vessel, a firing mechanism therein, anchoring means, and a connecting device between the said anchoring means and body and provided with an organ securing its position, said connecting device having members secured respectively to the mine body and the anchoring means, the said members being separable from each other for a predetermined extent, and operated by a continued rotation of the body to permit the said body to rise and operate the firing mechanism.



2. In a submarine mine, the combination of a charged buoyant body, an anchoring means, a detachable coupling between the said means and body for permitting the body to rotate by contact with the vessel and to have a limited upward movement with respect to the said means after rotating a certain amount, and a firing mechanism operated by the upward movement of the said body.

3. In a submarine mine, the combination of a charged buoyant body, a firing mechanism therein, a detachable coupling on the said body and connected with the said mechanism, and anchoring means connected with that portion of the coupling that is connected with the firing mechanism, said body being rotatable with respect to the anchoring means for opening the said coupling when the body is rotated by contact with a vessel.

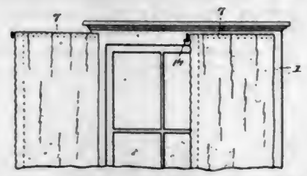
4. In a submarine mine, the combination of an anchoring means, a charge buoyant body, a coupling between the said means and body and composed of a plurality of parts capable of detachment by rotation of the body in either direction, and a firing mechanism for the said body and actuated by the opening of the coupling.

5. In a submarine mine, the combination of an anchoring means, a charged buoyant body, a coupling between the said means and body and composed of a plurality of parts capable of detachment by rotation of the body in either direction, a firing mechanism for the said body and actuated by the opening of the coupling, and a breakable device for preventing accidental opening of the coupling and breakable by the rotation of the body when in contact with a moving vessel.

[Claims 6 to 18 not printed in the Gazette.]

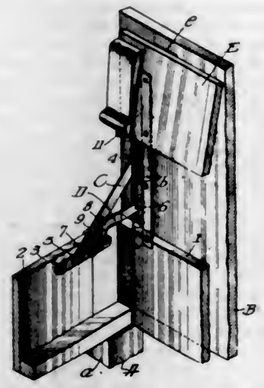
1,195,797. CURTAIN-HANGER. MINNETTE H. ENLOW, Bloomington, Ill. Filed Sept. 26, 1914. Serial No. 863,672. (Cl. 156—22.)

A curtain holder comprising a pair of brackets adapted to be secured to opposite sides of a window frame and each provided at their free ends with integrally formed spaced parallel ears, socket heads pivotally mounted between the ears and having notches therein, a flat spring secured to the forward end of the bracket and disposed in horizontal relation therewith and defined between the ears of each of said brackets, said springs having an attaching portion, one end of the attaching portion of said spring being bent angularly to provide a V-shaped keeper lying in a horizontal plane with relation to said brackets and adapted to engage with the notches of the head, and a guard formed at the opposite end of the attaching portion of the spring and extending angularly with respect to the



keeper and defined between and longitudinally of the ears at a point flush with one side each thereof for preventing the curtains from entering between the heads and springs.

1,195,798. TABLE-TOP CONSTRUCTION FOR TABLE-BEDS. PARRY E. ENNIS, Chicago, Ill., assignor to United Table Bed Company, Incorporated, Chicago, Ill., a Corporation of Virginia. Filed Dec. 13, 1915. Serial No. 66,448. (Cl. 45—31.)



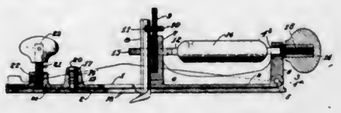
1. In a table-bed of the class described, in which the folding bed frame folds into and out of the table body, a movable top for said body, elements for connecting the top with said body, a panel carried on said top to open and close the front of said body, devices including elements disposed in alinement at opposite sides of the bed to hold the lower edge of said panel in closed position on the body, means to insure alinement of said devices during the final adjustment of said panel in closed position, and to prevent breakage of said devices and reduce strain on said elements while the table-bed is being handled or transported in closed condition, said means being mounted on the panel to engage the body.

2. In a table-bed of the class described, in which the folding bed frame folds into and out of the table body, a movable top for said body, end walls forming part of said body, cleats secured to the under side of said top, said cleats being immediately inside of said end walls when the top is down, links separately pivoted close together with their ends in the same vertical plane on each end wall, with the pivots for the short links disposed in rear of the pivots for the long links, the other ends of said links being pivoted farther apart at opposite sides of each cleat, thereby to support the top upright behind the body, and so that each cleat is between two links when the top is closed, the links inside of said cleats being relatively short and the links outside being relatively long, all of said links being horizontally disposed when the top is closed, and the short links being formed with laterally displaced elbows to avoid interference with the long links during the opening and closing of the top, each elbow overlapping a long link when the top is open.

3. In a table-bed of the class described, in which the folding bed frame folds into and out of the table body, a swinging top for said body, a front panel hinged on said top, means to support the top in raised position, end walls for said body, and cleats secured on the inner surface of said panel in position to engage said end walls and extend vertically when the top is closed, said cleats holding said end walls a fixed distance apart, and means associated with each cleat to hold the lower edge of said panel in place on the body, said cleats being inclosed between the top and panel when the top is in raised position.

4. In a table-bed of the class described, in which the folding bed frame folds into and out of the table body, a movable top for said body, cleats on the lower surface of said top, a short link pivoted on each cleat, a long link pivoted on each cleat, the links of one cleat being pivoted close together with their pivots in the same horizontal plane on one end of said body, the links of the other cleat being pivoted close together with their pivots in said plane on the other end of said body, the pivotal points of said links being farther apart on each cleat, the short links being disposed inside the long links and shaped to swing over and overlap the long links and rest on the rear edge of the body when said top is open, and the long links being disposed in position to hold the top in upright position.

1,195,799. ADJUSTABLE ROUTER. CHARLES FINK, Baltimore, Md. Filed June 30, 1914. Serial No. 848,268. (Cl. 145—10.)



1. A router plane comprising in combination plane body and sole members extending substantially parallel throughout the length of the plane, a hinged connection between said members at one end, spring-held means connecting said members near the opposite end tending to hold the members together, an adjustable cutting tool carried by said inner member and adjusting means at the forward end of the plane operating at right angles to the base of the plane for opening said members from each other, substantially as described.

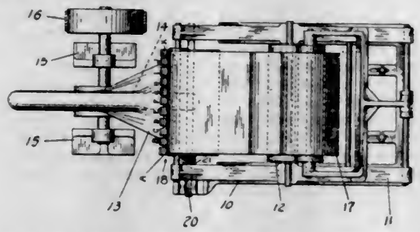
2. A router bench plane comprising in combination plane body and sole members extending substantially parallel throughout the length of the plane, a hinged connection between said members at the rearward end, spring held means connecting said members near the forward end tending to hold the members together, an adjustable cutting tool carried by said plane body member and adjusting means operating at right angles to the base of the plane for opening said members from each other, said means being located at the forward end of the plane and embodying a handle or knob adapted to serve as guiding means in the manipulation of the plane.

3. A router plane comprising in combination inner and outer sections, hinged together at one end, spring held means connecting said sections near the opposite end and tending to hold the sections together, adjustable means operating at right angles to the base of the plane for opening said sections from each other and an adjustable cutting tool carried by said inner section, substantially as described.

1,195,800. TIRE-BUILDING MACHINE. GEORGE F. FISHER, Plainfield, N. J., assignor to The Hartford Rubber Works Co., a Corporation of Connecticut. Filed June 29, 1915. Serial No. 36,933. (Cl. 154—10.)

1. A tire building machine embodying a revoluble core, a stock supply, and a stretcher drum embodying a plurality of revoluble sections, the surface speeds of which are controllable relatively to the surface speeds of corresponding portions of the core.

2. A tire building machine embodying a revoluble core, a stock supply, revoluble annuli frictionally engaging the stock on the way to the core, and means controlling the annuli to rotate at respective predetermined ratios of surface speed relatively to corresponding portions on the surface of the core.



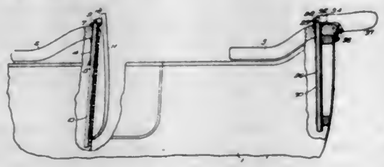
3. A tire building machine embodying a revoluble core, a stock supply, a plurality of revoluble annuli coacting in frictionally engaging the stock throughout its entire width on the way to the core, and means for effecting predetermined control of the relative rotation of the annuli.

4. A tire building machine embodying a revoluble core, a stock supply, independent revoluble annuli frictionally driven by the stock on the way to the core, and means for retarding the rotation of certain of the annuli.

5. A tire building machine embodying a revoluble core, a stock supply, a shaft, a plurality of independent revoluble annuli thereon frictionally driven by the stock on the way to the core, and interengaging disks carried by the shaft and certain of the annuli for frictionally retarding the rotation of said annuli.

[Claims 6 to 10 not printed in the Gazette.]

1,195,801. AUTOMOBILE-TOP. WALTER J. GANO, New Rochelle, N. Y. Filed Aug. 19, 1915. Serial No. 46,278. (Cl. 21—62.)

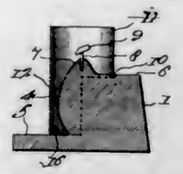


1. In an automobile top of the character described, a canopy, means for supporting the forward end thereof, means for supporting the rear end thereof, and a central support for the canopy, said central support acting as tensioning means, said central support comprising an arched member formed in parts, means for hinging said parts together, a member for hinging said parts on a standard whereby the parts may be swung together and then downwardly against said standard, a standard for supporting said arch, and an adjustable member for locking said standard in any desired vertical adjustment.

2. In an automobile top of the character described, a canopy, means for supporting the forward end thereof, means for supporting the rear end thereof, and a central support for said canopy, said central support comprising a standard, an arc-shaped member formed in parts, means for hinging said parts together, and a member for hinging said parts on said standard whereby the parts may be swung together and then downwardly against said standard.

1,195,802. CASTING APPLIANCE. JOSEPH A. GARDNER and DAVID S. GARDNER, Memphis, Tenn. Filed Oct. 22, 1915. Serial No. 57,342. (Cl. 22—97.)

1. A casting appliance including a one-piece flask comprising a combined ring and substantially semi-cylindrical ladle receiver without joint therebetween, investment material cast in said flask to provide a mold in the ring having a cavity and a sprue leading to the cavity, and a ladle in the receiver formed with an elongated trough having a bottom extending appreciably below said sprue and inclining from opposite ends downwardly toward the center to collect the molten metal in quantities therein, said trough in the ladle being in communication with the sprue leading to the mold cavity in said ring, substantially as described.



2. A casting appliance including a flask comprising a ring and a ladle-receiver, investment material contained within said ring and ladle-receiver constituting a one-piece mold and ladle without joint therebetween, said mold having a sprue leading to the mold cavity and a depression in the face thereof adjacent said ladle, said ladle having an elongated trough extending substantially throughout its length beneath the level of the lower part of said depression for receiving the metal and retaining the same in a molten state therein until brought under the influence of centrifugal action in a casting machine, substantially as described.

3. A casting appliance including a one-piece flask, comprising a ring, and a ladle-receiver extending from one end of said ring and forming an unbroken, continuous unit therewith; investment material in said flask providing a mold in the ring and a ladle in the receiver merging together to form a jointless, integral whole; said ladle being substantially semi-cylindrical and providing an elongated trough for receiving the metal and holding it therein in a molten condition; said mold having a cavity disposed at an appreciable height above the trough in said ladle, a substantially horizontally-extending sprue communicating with said cavity, and a substantially conical depression having its apex in the sprue and merging at its lower part downwardly to meet the adjacent end of the ladle trough, substantially as described.

4. A casting appliance including a flask composed of a ring and a ladle receiver adapted to contain investment material for constituting a mold and ladle, and a flange on the outer end of said ladle receiver projecting inwardly to form an abutment against which the investment material is molded, substantially as described.

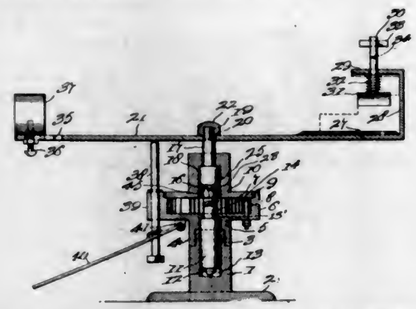
5. An improved casting appliance including a flask comprising a cylindrical ring, a ladle receiver constructed in one piece with said ring and extending from one end thereof, said ladle receiver being substantially semi-cylindrical, and a flange turned up from the outer end of said ladle receiver, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,195,803. CENTRIFUGAL CASTING-MACHINE. JOSEPH A. GARDNER and DAVID S. GARDNER, Memphis, Tenn. Filed Oct. 22, 1915. Serial No. 57,343. (Cl. 185—37.)

1. In a centrifugal casting machine, the combination of an inclosed casing, a rotatable drive shaft journaled and wholly contained within said casing, means connected to rotate said drive shaft, a stub shaft journaled within said casing and having one end projecting therebeyond, a releasable connection between said drive and stub shafts and located wholly within said casing, and an arm mounted on the outer end of said stub shaft, substantially as described.

2. In a centrifugal casting machine, the combination of an inclosed casing, a drive shaft journaled and wholly contained within said casing, a motor located wholly within said casing and connected to rotate said drive shaft, a bearing in one end of said drive shaft, a stub shaft journaled in said bearing within the casing and having one end projecting therebeyond, a releasable connection between said drive and stub shafts, and a rotary spinning element on the outer end of said stub shaft, substantially as described.



3. In an improved centrifugal casting machine, the combination of an inclosed casing, a drive shaft journaled substantially vertically and contained wholly within said casing, means in said casing connected to rotate said drive shaft, a bearing in the upper end of said drive shaft, a stub shaft journaled in said bearing within the casing and having one end projecting therebeyond, and a releasable connection between said drive and stub shafts contained wholly within said inclosed casing and including a ratchet element on one of said shafts, and a yieldable pawl on the other shaft engaging said ratchet element, substantially as described.

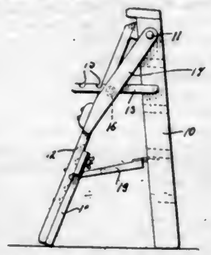
4. In a centrifugal casting machine, the combination of an inclosed casing built up of a plurality of interconnected sections providing therebetween a bearing chamber, a drive shaft journaled in said bearing chamber, means connected to drive said shaft, a stub shaft journaled within said chamber above the drive shaft and having one end thereof projecting beyond the casing, a releasable connection between said drive and stub shafts for locking the same to rotate together in one direction and permitting the continued rotation of the stub shaft when the drive shaft stops, and a rotatable element secured to said stub shaft, substantially as described.

5. In a centrifugal casting machine, the combination of an inclosed casing comprising end and intermediate sections removably joined together and providing a vertically-disposed bearing chamber therebetween, the intermediate section being enlarged to provide a housing, a motor located in said housing, a drive shaft journaled in said chamber and connected to be rotated from said motor, a stub shaft journaled in said chamber above the drive shaft and having one end projecting upwardly beyond the uppermost casing section, a releasable connection contained wholly within said casing and arranged between said stub and drive shafts for locking the same to rotate together, and a rotatable element connected to spin with the outer end of said stub shaft, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

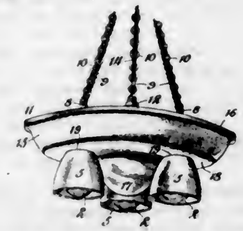
1,195,804. COMBINATION STEP-LADDER AND IRONING-BOARD. JOHN G. GARLAND, High Point, N. C., assignor of one-half to David S. Gurley and one-half to Emmett L. Crouch, High Point, N. C. Filed Sept. 22, 1915. Serial No. 52,071. (Cl. 228—32.)

A device of the character described comprising a step ladder, an ironing board having one end portion pivotally connected with the upper end portion of said step ladder, arms pivotally connected with the upper end portion of said step ladder and adapted to swing from one side of the step ladder to the other, a cross bar connecting the free ends of said arms for engaging the outer face of said ironing board, a latch strip pivotally connected with said step ladder and provided with notches, and a pin carried



by one of said arms for fitting into the notches of said latch strip.

1,195,805. ELECTRIC-LIGHT FIXTURE. RICHARD S. GIESE, Pittsburgh, Pa. Filed Apr. 8, 1916. Serial No. 89,844. (Cl. 240—78.)



1. An electric light fixture provided with shower lights each having supporting means individual thereto, and a semi-indirect lighting dish or bowl carried directly and solely by the shower lights.

2. An electric light fixture comprising a plurality of electric lamp sockets and suspension devices therefor, shades for the sockets, and a semi-indirect lighting dish having passages therethrough for the shades and resting on and supported solely by said shades.

3. An electric light fixture comprising a plurality of electric lamp sockets, shades and shade holders therefor, suspension means connected to the sockets, and a semi-indirect lighting dish having passages therethrough for the necks of the shades and resting upon and supported by the shades, said dish serving as a spreader for the sockets and shades to constitute the fixture a combined shower and semi-indirect fixture.

4. An electric light fixture provided with a plurality of electric lamp sockets, shades and shade holders therefor, suspension means connected to the sockets, and a semi-indirect lighting dish having upstanding sides, a central hollow depression, and substantially flat portions between the central depression and the sides, said flat portion having passages therethrough distributed about it for the necks of the shades, the dish resting upon and being supported by the shades, whereby the fixture constitutes a combined shower and semi-indirect lighting fixture.

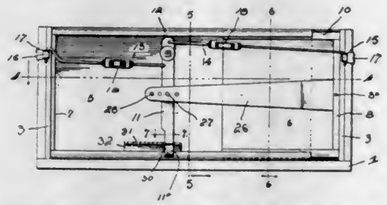
5. In an electric light fixture of the combined shower and semi-indirect type, a semi-indirect lighting dish having upstanding marginal portions, a central hollow depression, and a substantially flat portion surrounding the hollow depression and merging into the upstanding sides, the flat portion having passages therethrough distributed circumferentially about the central depression.

[Claims 6 to 9 not printed in the Gazette.]

1,195,806. END-GATE FASTENER FOR WAGON-BODIES. GLEN GILBERT, Middletown, Mo. Filed Sept. 8, 1915. Serial No. 49,580. (Cl. 21—21.)

1. The combination of an end gate composed of extensible sections adapted to fit against the sides of a

wagon body at the inner face thereof, transverse rods or members designed to be connected at their outer ends with the sides of the wagon body, an operating lever mounted on one section and connected with the other, said lever being also connected with the rods or members and arranged to move the same and the sections in opposite directions, and means for locking the lever in its adjustment.



2. The combination of an end gate composed of extensible sections adapted to fit against the sides of a wagon body at the inner face thereof, transverse rods or members designed to be connected at their outer ends with the sides of the wagon body, an operating lever mounted on one section and connected with the other, said lever being also connected with the rods or members and arranged to move the same and the sections in opposite directions, and a ratchet plate mounted on one of the sections and arranged to be engaged by the lever, the latter being maintained in such engagement by both internal and external pressure against the sides of the wagon body.

3. The combination of an end gate composed of slidably connected extensible sections adapted to engage the sides of a wagon body at the inner faces of the same, transverse rods or members designed to be connected with the sides of the wagon body, a lever fulcrumed intermediate of its ends and connected at opposite sides of the fulcrum point with the said rods or members, said lever being carried by one of the sections of the end gate, means for connecting the lever with the other section of the end gate and means for securing the lever in its adjustment.

4. The combination of an end gate composed of slidably connected extensible sections adapted to engage the sides of a wagon body at the inner faces of the same, transverse rods or members designed to be connected with the sides of the wagon body, a lever fulcrumed intermediate of its ends and connected at opposite sides of the fulcrum point with the said rods or members, said lever being carried by one of the sections of the end gate, an arm extending from the other section of the end gate and connected with the lever and means for securing the lever in its adjustment.

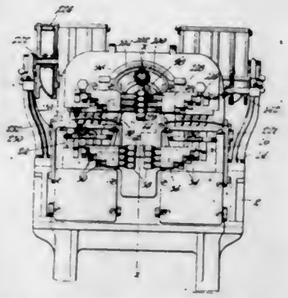
5. The combination with a wagon body provided at opposite sides with rigid hooks, of an end gate composed of extensible sections fitting against the wagon body at the inner faces of the sides, a lever fulcrumed on one of the sections, an arm extending from the other section and connected with the lever, and rods or members disposed transversely of the body and connected at their inner ends with the lever at opposite sides of the fulcrum point and provided at their outer ends with means for engaging the hooks of the body.

[Claim 6 not printed in the Gazette.]

1,195,807. FASTENER-SETTING MACHINE. PERLEY R. GLASS, Brookline, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 2, 1912. Serial No. 681,134. (Cl. 218—0.5.)

1. A machine for setting fasteners, having, in combination, oppositely disposed gangs of setting devices, a series of stationary raceways for supplying fasteners to the devices of one gang, and automatically acting mechanism for varying the spacing of the devices of one gang from the spacing of the stationary raceways.

2. A machine for setting fasteners, having, in combination, oppositely disposed gangs of setting devices, a series of stationary raceways for supplying fasteners to the setting devices of one gang, and automatically acting mechanism for varying the spacing of the setting devices of one gang from their spacing during the fastener receiving operation.



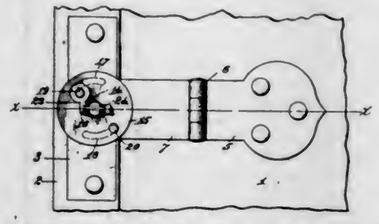
3. A machine for setting fasteners, having, in combination, two pairs of oppositely disposed gangs of setting devices, manually operated means for spacing the setting devices of one gang of each pair, and automatically acting mechanism for spacing the setting devices of each of the other gangs.

4. A machine for setting fasteners, having, in combination, a plurality of pairs of oppositely disposed gangs of setting devices, and means for simultaneously varying the spacing of the setting devices of one gang of each pair.

5. A machine for setting fasteners, having, in combination, a plurality of pairs of oppositely disposed gangs of setting devices, means for simultaneously varying the spacing of the setting devices of one gang of each pair, and automatically acting mechanism for spacing the setting devices of each of the other gangs.

[Claims 6 to 61 not printed in the Gazette.]

1,195,808. LOCK. MATO GROICH, Chicago, Ill. Original application filed Aug. 31, 1914, Serial No. 859,437. Divided and this application filed Dec. 7, 1915. Serial No. 65,465. (Cl. 70—8.)



1. A lock casing provided with a key hole, a plate rotatably mounted upon said casing adjacent said key hole with said key hole as a center and provided with a centrally disposed aperture adapted when the plate is in one position to register with said key hole and a shiftable member on said plate for securing said plate in position with said aperture out of register with said key hole.

2. A lock casing provided with a key hole in combination with a plate rotatably mounted adjacent said key hole with said key hole as a center and provided with a centrally disposed aperture adapted when in one position to register with said key hole, and a coöperating slot and shiftable pin on said casing and said plate respectively for holding the latter in position with the aperture out of register with the key hole.

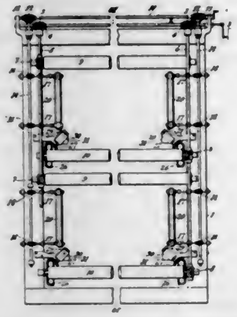
3. A lock casing provided with a key hole in combination with a plate rotatably mounted adjacent said key hole with said key hole as a center and provided with an aperture adapted when in one position to register with said key hole, said casing being provided with a slot extending in the direction of movement of said rotatable plate, said slot being provided with an off-set portion, and a pin shiftably mounted upon said plate and adapted to be moved into said off-set portion to lock said plate with the aperture out of register with the key hole, substantially as described.

4. A lock casing provided with a key hole in combination with a plate rotatably mounted adjacent said key hole with said key hole as a center and provided with an aperture adapted when in one position to register with said key hole, said casing being provided with a slot extending in the direction of movement of said rotatable plate, said slot being provided with an off-set portion, a pin shiftably mounted upon said plate and adapted to be moved into said off-set portion to lock said plate with the aperture out of register with the key hole, and a member mounted on said pin and provided with a detent adapted to engage in said aperture when said pin is in the off-set portion of said slot, substantially as described.

5. A lock casing provided with a key hole in combination with a plate shiftably mounted adjacent said key hole and provided with an aperture adapted when in one position to register with said key hole, said casing being provided with a slot extending in the direction of movement of said shiftable plate, said slot being provided with an off-set portion, a pin shiftably mounted upon said plate and adapted to be moved into said off-set portion to lock said plate with the aperture out of register with the key hole, and a resilient member mounted on said pin and provided with a detent adapted to engage in said aperture when said pin is in the off-set portion of said slot, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,195,809. SIDE-TENSIONING DEVICE FOR EMBROIDERING-MACHINES. JOSEPH A. GROEBLI, New York, N. Y. Filed June 9, 1915. Serial No. 33,003. (Cl. 112—7.)



1. The combination, in a lateral tensioning device for embroidering machines, of means for carrying and shifting the fabric, diagonally disposed edge smoothing means and means movable parallel to the line of travel of the fabric for engaging each edge of the fabric.

2. The combination, in a lateral tensioning device for embroidering machines, of means for carrying and shifting the fabric, a plurality of endless means, movable parallel to the line of travel of the fabric, and adapted severally for engaging the opposite edges of the fabric, means for giving lateral support to the said endless means, means for holding the fabric in connection therewith, and means for moving the said endless means laterally.

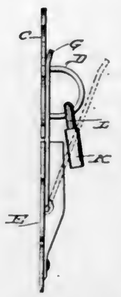
3. The combination, in a lateral tensioning device for embroidering machines, of means for carrying and shifting the fabric, a plurality of coöperating and flexible edge-engaging means movable in the direction of the travel of the fabric, rigid supporting, holding and guarding means therefor, and means for causing the edge engaging means to approach or separate from each other.

4. The combination, in a lateral tensioning device for embroidering machines, of means for carrying and shifting the fabric, a pair of opposed edge-engaging means each embracing a pin pointed belt, a rigid, channeled guide in which the belt travels and which is provided with a coöperating guard, and means for causing the edge engaging means to approach or recede from each other.

5. The combination, in a lateral tensioning device for embroidering machines, of means for carrying and shifting the fabric, a pair of opposed edge-engaging means each embracing a pin pointed belt, traveling in a rigid, channeled guide, and provided with a coöperating guard, and means embracing rack bars and pinions, for causing the edge engaging means to approach or recede from each other.

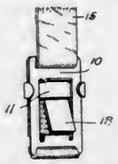
[Claims 6 to 14 not printed in the Gazette.]

1,195,810. TRUNK-CATCH. SIMON GROSSMAN, Pittsburgh, Pa. Filed Dec. 28, 1914. Serial No. 879,298. (Cl. 70—103.)



A trunk catch consisting of a plate secured to one part of the trunk, having a loop projecting therefrom to provide a handle, a plate secured to the other part of the trunk, a casing formed on said plate, a hasp pivoted in said casing and formed with an opening to fit over said handle, a spring engaging the frame of said hasp adapted to receive a locking means.

1,195,811. GARMENT-CLASP. CARL J. GUSTAVSEN, Boston, Mass., assignor, by mesne assignments, to Hamilton Clasp Company, Portland, Me., a Corporation of Maine. Filed Oct. 10, 1912, Serial No. 725,087. Renewed Jan. 19, 1916. Serial No. 73,071. (Cl. 24—260.)



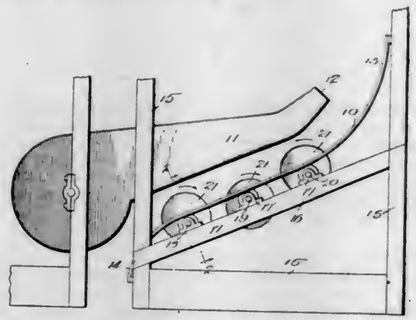
1. A clasp comprising a body having parallel side guide bars, a spring tongue between the side bars extending inwardly from one end of the body and terminating in a transverse clamping edge, a second tongue extending inwardly from the other end of the body and terminating in a transverse edge complemental to the first mentioned edge, and openings between said second tongue and said side bars, and a member extending across the spring tongue and slidingly engaged with said side bars for closing the spring tongue into clamping relation to the second tongue, whereby fabric placed between said edges will be clamped between said edges and the crumpled portions of the fabric

displaced by the movement of the sliding member will be forced into the ends of the openings adjacent the second mentioned tongue.

2. A clasp comprising a clamping plate and a sliding member mounted thereon, said plate having parallel side bars, a tongue between said bars, and a clamping edge for coöperating with the free end of said tongue, said sliding member having end portions engaging the under sides of said side bars, an intermediate portion engaging the upper side of said tongue for pressing the tongue into coöperative clamping position relatively to said edge, and offset portions each connecting one of said end portions with said intermediate portion, said offset portions being disposed between said tongue and said side bars respectively, said intermediate portion having a lip extending upwardly whereby said sliding member may be moved.

3. A clasp comprising a body having parallel side guide bars, a spring tongue extending inwardly from one end of the body and lying between said bars, a rigid tongue extending inwardly from the other end of the body and lying between said bars, said tongues being separated from said bars by openings through said body, the ends of said tongues being complemental and forming clamping edges to engage a fabric placed between them, and a sliding member crossing the face of the spring tongue and having its ends passed through said openings and slidingly engaged with said side guide bars, whereby said slide is movable to close the spring tongue and to force crumpled portions of the fabric into the ends of the openings at the sides of the rigid tongue.

1,195,812. PEANUT-STEMMER. CECIL H. HARRINGTON, Suffolk, Va., assignor to Benthall Machine Co., Suffolk, Va., a Corporation of Virginia. Filed Mar. 16, 1916. Serial No. 84,649. (Cl. 130—30.)



1. A peanut stemmer including a plurality of series of stemming saws, a shaft upon which the saws of each series are eccentrically mounted in spaced alined relation, the saws of certain of the series having their direction of greatest length from their shafts opposite to those saws of the other series, and a stationary breast plate above the several shafts having slots through which the saws of the several series partially project.

2. A peanut stemmer including a plurality of series of stemming saws, a shaft upon which the saws of each series are eccentrically mounted in spaced alined relation, the saws of certain of the series rising and falling alternately with the rise and fall of the saws of the other series, and a stationary breast plate above the several shafts having slots through which the saws of the several series project.

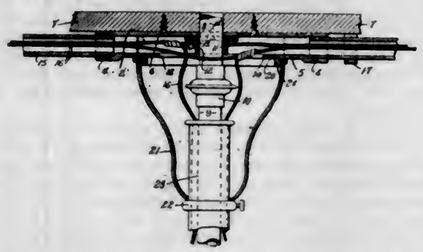
3. A peanut stemmer including a plurality of series of irregularly rising and falling saws, shafts upon which said saws are eccentrically mounted, and a stationary inclined breast plate on which the peanuts are fed having slots through which the saws partially project.

4. A peanut stemmer including a plurality of series of eccentrically mounted saws, shafts upon which said saws are mounted, and a stationary inclined breast plate on which the peanuts are fed having slots through which the saws of the several series partially project.

5. A peanut stemmer including a slotted and inclined stationary breast plate downwardly upon which the peanuts are fed, and series of stemming saws irregularly rising and falling through the slots of said breast plate.

[Claim 6 not printed in the Gazette.]

1,195,813. BRANCH BOX FOR ELECTRIC CONDUCTORS. MORTON HAVENS, Jr., Albany, and SAMUEL B. VAN RANST, Syracuse, N. Y.; said Van Ranst assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 27, 1909. Serial No. 474,469. (Cl. 247—5.)



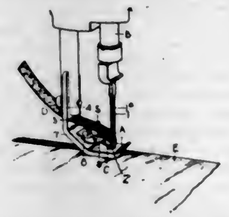
1. An electrical conduit outlet box comprising a flat bottom adapted to lie against a base or wall, said bottom having a central opening for receiving a fixture-supporting pipe passed axially through the outlet box, a side wall rising from the outer edge of the flat bottom and provided with one or more laterally projecting nipples for detachable connection with electric conduits, and a top wall depressed beneath the plane of the tops of said nipples and formed with a central opening of greater size than the first-mentioned opening for permitting the passage of said pipe and access to the interior of the fitting around the pipe, said top wall including a ring-shaped flange around the central opening having an outer supporting face for fixture-members as canopies and the like, said face being disposed throughout its entire extent in a plane substantially parallel with the outer face of the flat bottom.

2. An electrical conduit outlet box comprising a flat bottom adapted to lie against a base or wall, said bottom having a central opening for receiving a fixture-supporting pipe passed axially through the outlet box, a side wall rising from the outer edge of the flat bottom and provided with one or more laterally projecting nipples for detachable connection with electric conduits, and a top wall depressed beneath the plane of the tops of said nipples and formed with a central opening of greater size than the first-mentioned opening for permitting the passage of said pipe and access to the interior of the fitting around the pipe, said top wall including a ring-shaped flange around the central opening having an outer supporting face for fixture-members as canopies and the like, said face being disposed throughout its entire extent in a plane substantially parallel with the outer face of the flat bottom, and the inner ends of the top portions of the nipples being formed with depressed flat surfaces disposed substantially in the plane of said outer face of the top wall.

3. An electrical conduit outlet box comprising a flat bottom adapted to lie against a base or wall, said bottom having a central opening for receiving a fixture-supporting pipe passed axially through the outlet box, and said bottom having around its central opening a series of holes for the passage of means for securing the conduit outlet box to said base or wall, a side wall rising from the outer edge of the flat bottom and provided with one or more laterally projecting nipples for detachable connection with electrical conduits, and a top wall depressed beneath the plane of the tops of said nipples and formed with a central opening of greater size than the first-mentioned opening for permitting the passage of said pipe and access to said securing means and to the interior of the fitting around the pipe, said top wall including a ring-shaped flange around the central opening having an outer supporting face for fixture-members as canopies and the like, said face being disposed throughout its entire extent in a plane substantially parallel with the outer face of the flat bottom.

4. An electrical conduit outlet box comprising a flat bottom adapted to lie against a base or wall, said bottom having a central opening for receiving a fixture-supporting pipe passed axially through the outlet box, a cylindrical side wall rising from the outer edge of the flat bottom and provided with one or more radially projecting nipples for detachable connection with electrical conduits, and a top wall depressed beneath the plane of the tops of said nipples and formed with a central opening of greater size than the first-mentioned opening for permitting the passage of said pipe and access to the interior of the fitting around the pipe, said top wall including a ring-shaped flange around the central opening having an outer supporting face for fixture-members as canopies and the like, said face being disposed throughout its entire extent in a plane substantially parallel with the outer face of the flat bottom, and the inner ends of the top portions of the nipples being formed with depressed flat surfaces disposed substantially in the plane of said outer face of the top wall, substantially as described.

1,195,814. BLINDSTITCH TAPING ATTACHMENT FOR SEWING-MACHINES. JOSEPH F. HIGGINS, New York, N. Y. Filed Feb. 9, 1915. Serial No. 7,006. (Cl. 112—3.)

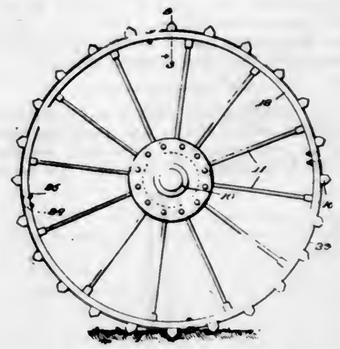


1. The combination of a presser foot having a needle opening, one or more needles adapted to move vertically into and out of the opening, a guide associated with the presser foot and through which a tape is adapted to pass, and a former associated with the presser foot and disposed between the guide and needle opening, said former having spaced curved members by which the edges of the tape are inturned, and whereby the tape lying between the former and the needle opening of the presser foot assumes approximately a tubular form, said former being so positioned with respect to the needle or needles that the needles operate within the former to penetrate the inturned edges of the tape and sew the same to a fabric.

2. The combination of a presser foot having a needle opening, a folder attachment secured to the presser foot and including a pair of oppositely disposed hollow flanges forming guide passages, the upper part of the flanges being approximately straight and the flanges curving progressively downwardly, whereby the lower ends form a flat tape into a tube, with the edges in proximity, the lower portions of the flanges being directly above the needle opening of the presser foot for guiding the folded tape into the opening, and one or more needles extending downwardly between the lower curved portions of the hollow flanges of the folder and vertically to and through the needle opening, whereby only the infolded edges of the tape may be stitched to a body fabric.

3. The combination of a presser foot having a needle opening, means on the presser foot for guiding a tape, a folder mounted on the presser foot and having a folding means located between the opening of the presser foot and the first-mentioned means, said folding means comprising a device for changing a flat tape into tubular form and maintaining the tubular portion of the tape at the needle opening vertical, and a needle or needles disposed in the said folder and adapted to pass into the needle opening of the presser foot, whereby the infolded edges of the tape may be stitched to a body fabric.

1,195,815. MUD-LUG FOR TRACTION-ENGINES. ROY M. HIGHTOWER, Meadville, Mo. Filed Jan. 15, 1916. Serial No. 72,281. (Cl. 21—215.)



1. In wheel construction, the combination with a wheel rim having transversely alined slots, of a two-part traction lug having heads adapted to project into the slots, certain heads of one of the lug members being capable of wedging engagement in the slots when such member is moved to a predetermined position and the other lug member when in place being capable of holding the first member against movement from such position, and means for securing said latter lug member in place.

2. In wheel construction, the combination with a wheel rim having a series of transversely disposed slots, of a two-part traction lug having heads adapted to project into the slots, certain heads of one of the lug members being capable of wedging engagement in the slots when such member is moved to a predetermined position and the other lug member when in place being capable of holding the first member against movement from such position, and means for securing said latter lug member in place, said means including a band secured to the outer face of the rim and seating in a notch formed in the latter lug member.

3. In wheel construction, the combination with a rim having a transverse series of slots, certain of which have their walls at one end correspondingly inclined and their corresponding side walls similarly inclined, of a traction lug member including a body adapted to rest against the rim, heads formed upon the body to seat in the slots and each having one end wall and its side walls inclined, the heads being of less length than the length of the slots, whereby they may be inserted through the wider sides of the slots and forced into the opposite ends to wedge therein, a second traction lug member having a body portion forming a continuation of the first and a head for seating in one of the slots to hold its body member in engagement with the body member of the first lug member and prevent movement of the first lug member in a direction to free its heads from wedging engagement in the slots they engage in, and means for securing the second lug member against disengagment from its slot.

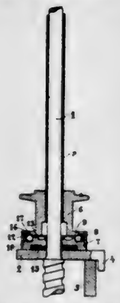
4. In wheel construction, the combination with a wheel rim having a plurality of peripherally spaced series of slots, each series of slots including a plurality of transversely spaced alined slots, of a plurality of mud lug members having heads wedging in certain of the slots of each of the series to hold their members against movement save in one direction, a plurality of locking lug members having heads seating in the other slots of each series and engaging the first lug members to hold them against move-

ment, and means for securing the locking lug members against displacement.

5. In wheel construction, the combination with a wheel rim having a plurality of peripherally spaced series of slots, each series of slots including a plurality of transversely spaced alined slots, of a plurality of mud lug members having heads wedging in certain of the slots of each of the series to hold their members against movement save in one direction, a plurality of locking lug members having heads seating in the other slots of each series and engaging the first lug members to hold them against movement, and means for securing the locking lug members against displacement, said means securing a plurality of successively spaced locking lug members.

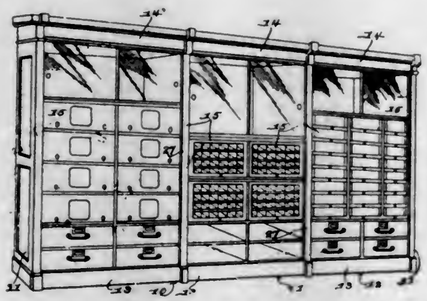
[Claims 6 to 8 not printed in the Gazette.]

1,195,816. SELF-LUBRICATING BALL-BEARING FOR SPINDLES OF SPINNING-MACHINES OR THE LIKE. JOHAN LUDVIG HOLMING, Gottenborg, Sweden. Filed Nov. 24, 1913. Serial No. 802,816. (Cl. 64—49.)



In a bearing, an annular base member having a vertical aperture and also having in its upper side a circular groove, said groove surrounding said aperture and provided with an inner wall lower than its outer wall, whereby lubricant is enabled to freely pass from the groove to the aperture, an annular cap arranged on the base member and bearing an inwardly and downwardly inclined annular flange adapted to facilitate the passage of lubricant to said groove, and a whirl arranged above the base member with its lower portion within the flange on the cap.

1,195,817. SECTIONAL DISPLAY-CABINET. WILLIAM T. HORMES, Govans, Md., assignor to Solomon Himmel, Baltimore, Md. Filed July 1, 1915. Serial No. 37,544. (Cl. 45—78.)



1. A display cabinet of the character described comprising a plurality of stacks of superposed sectional units, said stacks being arranged in alinement end for end, superposed sectional spacing members interposed between the contiguous ends of adjacent stacks and attached to the respective superposed units said spacing members being provided with means for preventing relative endwise movement of said units, and a pilaster removably attached to the spacing members of said units.

2. A display cabinet of the character described comprising a plurality of stacks of superposed sectional units, said stacks being arranged in alinement end for end, the units of one of each pair of adjacent stacks being provided at one end with spacing members movable with the units, said spacing members abutting the ends of the units of the other stack of said pair, one end of each spacing member overlapping the contiguous end of a next adjacent unit of the same stack, means for connecting the contiguous ends of adjacent stacks, and a pilaster attached to and covering the spacing members between each pair of stacks and overlapping the ends of said stacks.

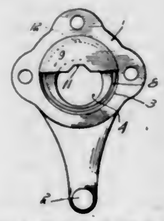
3. A display cabinet of the character described comprising a plurality of stacks of superposed sectional units, said stacks being arranged in alinement end for end, the units of one of each pair of adjacent stacks being provided at one end with spacing strips movable with the units, said spacing strips being located near the front edges of the units and abutting the ends of the units of the other stack of said pair, the lower end of each spacing strip extending below the bottom of the unit to which it belongs, the upper end terminating below the plane of the top of said unit to provide a seat for the depending end of the spacing member immediately above, means for connecting the contiguous ends of adjacent stacks and a pilaster attached to and covering said spacing members.

4. A display cabinet of the character described, comprising a plurality of stacks of superposed sectional units, said stacks being arranged in alinement end for end, sectional spacing members interposed between the contiguous ends of adjacent stacks and attached to the respective superposed units of one of said adjacent stacks, a pilaster, and complemental means carried by the units and the inner face of the pilaster for preventing vertical separation of the units, said means being shaped to be engaged by relative lateral movement of the pilaster and units.

5. In a display cabinet, a plurality of superposed sectional units forming a stack, a pilaster, complemental means carried by the units and the inner faces of the pilaster for preventing vertical separation of the units, said means being shaped to be engaged by relative lateral movement of the pilaster and units.

[Claims 6 and 7 not printed in the Gazette.]

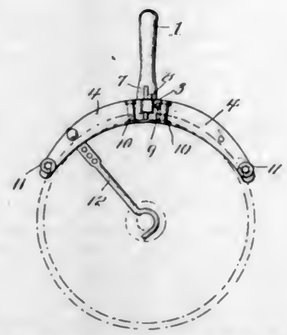
1,195,818. LATHE-DOG. WENDELL T. INGHAM, Williamsett, Mass. Filed Feb. 24, 1916. Serial No. 80,219. (Cl. 82—42.)



A lathe dog comprising a head, said head having a circular recess formed therein, the base of said recess having an eccentrically located work engaging opening formed therein, a cover plate for the recess having an opening formed therein and in registry with the first named opening, said recess having an annular groove formed in its base and eccentrically located with respect to said openings, a gripping cam mounted in the recess and having a lug carried thereby for slidably engaging the groove.

1,195,819. DISK-SHARPENER. BERNARDUS JANSEN, Friday Harbor, Wash. Filed Oct. 29, 1915. Serial No. 58,632. (Cl. 97—77.)

1. A disk sharpener comprising a handle, a bolt carried by the handle and provided with an eye, a bit located in the eye, arms pivotally mounted upon the bolt and rollers carried by the arms and engageable with the periphery of a disk.

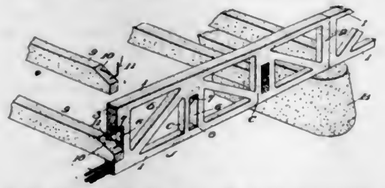


2. A disk sharpener comprising an arm, a bolt carried by the arm and provided with an eye, a bit adjustably mounted in the eye, arms pivotally mounted upon the bolt, means for securing the arms at adjusted positions with relation to each other, rollers carried by the arms and adapted to bear against the peripheral portion of a disk.

3. A disk sharpener comprising a handle, a bolt carried by the handle and provided with an eye, a bit located in the eye, arms pivotally mounted upon the handle, means for securing the arms at an adjusted position with relation to each other, rollers journaled at the inner portions of the arms and rollers journaled at the outer portions of the arms.

4. A disk sharpener comprising a handle, a bolt carried by the handle and provided with an eye, a bit secured in the eye, arms pivotally mounted upon the bolt, means for securing the arms at an adjusted position with relation to each other, rollers journaled at the inner portions of the arms, and other rollers journaled at the outer portions of the arms and provided with peripheral grooves.

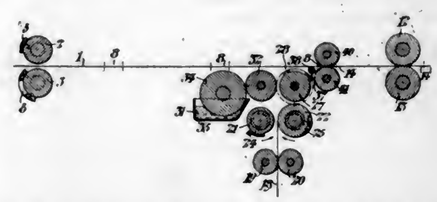
1,195,820. CONCRETE TRUSS GIRDER-BRIDGE. JOHN V. JENKINS and EDWARD J. CREIGHTON, Denver, Colo. Filed Aug. 22, 1913. Serial No. 786,127. (Cl. 72—8.)



1. A concrete truss bridge comprising preformed reinforced concrete spans, which have orifices formed therethrough at intervals, preformed beams having their outer ends beveled and adapted to be received within said orifices, the upper surfaces of which are beveled in a direction opposite to the beveled surface of the beams, mechanical means projecting outwardly from the beveled ends of the beams and adapted to be received within said orifices, and fillings molded into said orifices and embedding said metallic members, said filling practically forming a V-shaped wedge flaring outwardly from the inner edge of the girder.

2. A concrete truss girder bridge comprising preformed reinforced concrete spans which have orifices formed therethrough at intervals, preformed beams having their outer ends beveled and adapted to be received within said orifices, the upper surfaces of which are beveled in a direction opposite the beveled surfaces of the beams, mechanical means projecting outwardly from the beveled portion of the beams and adapted to be received within said orifices, floor slabs arranged upon said floor beams, said orifices subsequently filled in with concrete thereby embedding the mechanical means and assisting in securing the beams, girders and floor slab together.

1,195,821. METHOD OF MAKING OPEN-FACE ENVELOPS. ARTHUR E. PAIGE, Philadelphia, Pa. Filed Apr. 27, 1915. Serial No. 24,179. (Cl. 93—61.)



1. The method of making open face envelops which consists in progressing a web at a uniform rate while forming a series of openings therein in such spaced relation that said web may be subsequently divided to form individual envelop blanks each including one of said openings; providing separate individual patches to cover the openings in said envelop web; providing each of said separate individual patches with an imprint of adhesive material; successively presenting said adhesive patches adjacent said envelop web; successively pressing said adhesive patches upon the envelop web in registry with the openings therein; dividing said envelop web to form respective individual envelop blanks each including one of said openings, covered by one of said patches; and folding said blanks to form envelops.

2. The method of making open face envelops which consists in progressing a web at a uniform rate while forming a series of openings therein in such spaced relation that said web may be subsequently divided to form individual envelop blanks each including one of said openings; providing separate individual patches to cover the openings in said envelop web; providing each of said separate individual patches with an imprint of adhesive material; presenting said adhesive patches adjacent said envelop web; pressing said adhesive patches upon the envelop web in registry with the openings therein; dividing said envelop web to form respective individual envelop blanks each including one of said openings, covered by one of said patches; and folding said blanks to form envelops.

3. The method of making open face envelops which consists in progressing a web from which envelop blanks are to be formed; punching said web at intervals to form openings through which the addresses upon letters inclosed in the envelops may be seen; progressing a web of transparent material at a slower rate than said envelop web; cutting pieces from said transparent web, each adapted to form a cover patch for an opening in said envelop web; providing said separate patches with imprints of adhesive material; attaching said adhesive patches to said envelop web in registry with the openings therein; and severing said envelop web to form individual envelop blanks.

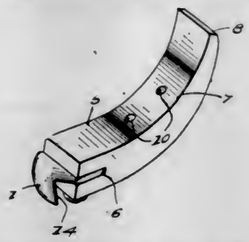
4. The method of making open face envelops which consists in progressing a web from which envelop blanks are to be formed; punching said web at intervals to form openings through which the addresses upon letters inclosed in the envelops may be seen; progressing a web of transparent material; cutting pieces from said transparent web, each adapted to form a cover patch for an opening in said envelop web; providing said separate patches with imprints of adhesive material; attaching said adhesive patches to said envelop web in registry with the openings therein; and severing said envelop web to form individual envelop blanks.

5. The method of making open face envelops which consists in progressing a web from which envelop blanks are to be formed; punching said web at intervals to form open-

ings through which the addresses upon letters inclosed in the envelops may be seen; forming separate individual patches of transparent material each adapted to cover one of the openings in said envelop web; progressing said patches at right angles to the direction of progression of said envelop web; providing each of said patches with an imprint of adhesive material; attaching said adhesive patches upon said envelop web in registry with the openings therein; and dividing said envelop web to form individual envelop blanks each including one of said openings, covered by one of said patches.

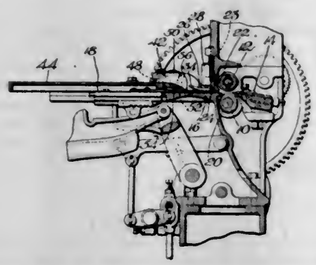
[Claims 6 and 7 not printed in the Gazette.]

1,195,822. THREAD-CUTTER. JOSEPH KINTZEL, Hutchison, Kans. Filed Sept. 29, 1914. Serial No. 864,132. (Cl. 112—33.)



A device of the class described comprising a substantially rectangular body, one end of said body provided with a central slot forming arms, one of said arms provided with a screw-threaded aperture, the opposite end of said body being tapered and curved upwardly and having spaced openings therein to receive fastening members for securing the device in position, a blade provided on one face with a recess alining with the opening in the arm of the body, and a set screw fitted in said screw-threaded aperture of the arm and engaging the recess in the face of the blade removably holding the same in place, substantially as described.

1,195,823. BLANK-FITTING MACHINE. ELMER E. LANE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 17, 1915. Serial No. 67,420. (Cl. 12—63.)



1. A blank fitting machine having, in combination, blank feeding and positioning rolls, a reciprocatory feeding means for presenting a blank to the rolls in timed relation to their operation, a table for supporting a blank, a gate above the table behind the rolls, a guide plate mounted above the table, and yieldingly mounted plungers behind the gate having fingers thereon which extend far enough toward the guide plate to flatten a blank on the table between the gate and guide plate.

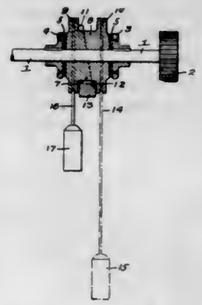
2. A blank fitting machine having, in combination, blank feeding and positioning rolls, a reciprocatory feeding means for presenting a blank to the rolls in timed relation to their operation, a table for supporting a blank, a gate above the table behind the rolls, a guide plate mounted above the table behind the gate, and yieldingly mounted plungers between the gate and guide plate having fingers which extend rearwardly and upwardly toward the guide plate to form a slot with the guide plate into which the blank may be forced by hand to flatten it on the table in the path of the feeding means.

4. A blank fitting machine having, in combination, blank feeding and positioning rolls, a reciprocatory feeding means for presenting a blank to the rolls in timed relation to their operation, a table for supporting the blank, a yieldingly mounted gate behind the rolls for holding the blank upon the table, and plungers mounted on the gate having rearwardly and upwardly extending fingers for forcing the blank under the gate as it is fed to the rolls.

5. A blank fitting machine having, in combination, blank feeding and positioning rolls, a reciprocatory feed slide for presenting a blank to the rolls in timed relation to their operation, said slide having a pushing face of greater height than the thickness of the blank, a guide plate over the feed slide, a table for supporting a blank, and spring pressed plungers having fingers extending in close proximity to the end of the guide plate for pressing the blank against the table in the path of the pushing edge of the feed slide.

[Claims 6 and 7 not printed in the Gazette.]

1,195,824. AUTOMATIC RELEASE. HARRY A. LEWIS, Norristown, Pa. Filed Mar. 9, 1916. Serial No. 83,132. (Cl. 254—173.)



1. The combination of a driving shaft; two abutments thereon; two members loose on the shaft between the abutments and having faces inclined at an angle to their axis of revolution for causing them to grip the abutments when either member turns relatively to the other; a device to be driven connected to said members; and means for preventing revolution of one of the members after it has been turned by the shaft to a predetermined extent.

2. The combination of a driving shaft; two abutments thereon; two members loose on the shaft between the abutments and having faces inclined at an angle to their axis of revolution for causing them to grip the abutments when either member turns relatively to the other; a device to be actuated connected to one of said members; and means for causing the member to be automatically released from the driving action of the shaft after said member has been driven thereby to a predetermined extent.

3. The combination of a driving shaft having abutments; a member loose on the shaft between the abutments and having a face inclined at an angle to its axis of revolution; means for causing said member to be jammed between said abutments under predetermined conditions; a device to be driven operatively connected to said member; and means for automatically releasing the member from the driving action of the shaft after said member has been turned thereby to a predetermined extent.

4. The combination of a driving shaft; two abutments thereon; two members loose on the shaft between the abutments and having coacting faces inclined at an angle to their axis of rotation for causing them to grip the abutments when either member turns relatively to the other; a device to be driven operatively connected to one of the members; and means for automatically releasing said latter member from the shaft under predetermined conditions.

5. The combination of a driving shaft; two abutments thereon; two members loose on the shaft between the abutments and having coacting faces inclined at an angle to their axis of rotation for causing them to grip the abutments when either member turns relatively to the other; a device to be driven operatively connected to one of the members; a relatively fixed structure; and means placed to coact with said fixed structure, after said latter member has been turned by the shaft to a predetermined extent, for releasing it from said shaft.

[Claims 6 to 15 not printed in the Gazette.]

1,195,825. MOCCASIN. ERNEST A. LLEWELLYN, Wilton, Me. Filed Mar. 24, 1915. Serial No. 16,627. (Cl. 36—11.)



1. A moccasin or shoe comprising a sole, a vamp including the lower part of the quarters composed of a single piece of leather, said vamp having a tip with cut away portions at each side thereof and a V-shaped cut at each side of said cut away portions drawn and sewed together, said vamp extending completely around the shoe and having the lower edges thereof drawn and secured together along a line extending from heel to toe lengthwise of the sole, and an upper together with a toe piece secured to the top edge of said vamp.

2. A moccasin or shoe comprising a sole, and a vamp including the lower part of the quarters composed of a single piece of leather cut out in U-shaped form, a portion of the outer edge of one wing thereof being straight and the corresponding portion of the outer edge of the other wing being concave, each wing having a V-cut therein at the terminal of the straight or concave edge farthest away from the free end of the wing.

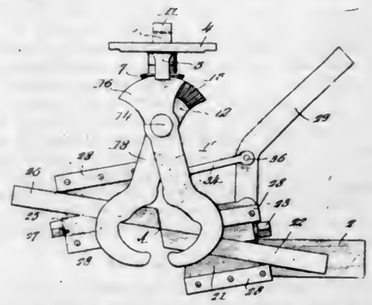
3. A blank for a moccasin or shoe vamp consisting of a single piece of leather cut out in approximately U-shaped form, one wing being substantially a counter-part of the other and each having a V-cut in the outer edge thereof, said edge being also slightly cut away at some distance from and between said V-cuts to a point about midway of the blank so as to leave at said point a rounded portion or tip, whereby said outer edge of the blank is adapted to be turned under and sewed to the sole of the shoe in such manner as to secure the edges of said wings together on a line extending lengthwise of the shoe with said tip turned under at the toe and secured to the adjacent cut-away portions or edges of said wings surrounding said tip.

4. A blank for a moccasin or shoe vamp consisting of a single piece of leather cut out in approximately U-shaped form, a portion of the outer edge of one wing being straight and the corresponding portion of the other wing being concave, each wing having a V-cut therein at the terminal of the straight or concave edge farthest away from the free end of the wing, said straight edge slanting from said V-cut toward the inner edge of the wing, each wing having the edge portion thereof at the other terminal of the straight or concave edge cut away so as to leave the wing with a heel portion of reduced width; that portion of the blank between said V-cuts having its outer edge cut away so as to leave about midway thereof a rounded part or tip, adapting the edges of said cut-away portions to be gathered around said tip and sewed thereto by bending the blank upon itself; said tip being adapted to be turned under and secured to the sole at the toe of the shoe; the edges of the V-cuts being adapted to be sewed together and the outer edges of the two wings turned under and sewed together along a line extending lengthwise of the shoe.

5. A blank for a shoe or moccasin consisting of a single piece of material of approximately U-shaped form, each wing having a V-shaped cut in its outer margin and its outer terminal cut away so as to leave a heel portion of reduced width.

[Claims 6 to 8 not printed in the Gazette.]

1,195,826. CUTTING-TOOL. WALTER LOSCH, Topton, PA. Filed Apr. 25, 1914. Serial No. 834,501. (Cl. 82—35.)



1. In a cutting tool, blades movable into and out of engaging proximity in a cutting operation, and means oscillated from a fixed axis to hold the material acted on for rotation and against radial play.

2. In a cutting tool, relatively movable jaws having a fixed axis of oscillation, each jaw being provided with a gear sector, an engaging pinion turnable to move said jaws during adjustment, said jaws being engageable with the material to be cut for holding said material against radial play, means to lock the adjusting means against movement subsequent to adjustment, and cutting means operable in proximity to the mentioned jaws.

3. In a cutting tool, a frame, relatively movable jaws having a fixed axis of oscillation upon the frame, each jaw being provided with a gear sector and engaging pinion turnable to move said jaws with the pinion, a semi-circular guiding plate on the frame, a clamp member mounted on the lever and engageable upon the plate to secure the lever and consequently the jaws against movement subsequent to adjustment, and cutting means operable in proximity to the said jaws.

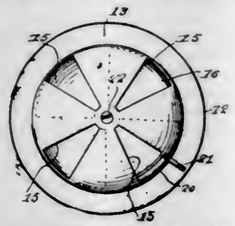
4. In a cutting tool, a frame, jaws mounted for oscillation upon the frame and movable relatively to engage the work therebetween each having a sector, a pinion engaging both sectors to oscillate the jaws, a semi-circular guiding plate formed on the frame, a lever movable with the pinion, a clamp on the lever for engaging the plate to retain said lever in its adjusted position, and cutting means operable in proximity to the said jaws.

5. A cutting tool including a frame, relatively movable jaws mounted thereon for lightly engaging the work, rela-

tively movable holding devices provided with cutting tools and adapted to move the tools across the jaw space, a lever fulcrumed to the frame, and means connecting the lever at opposite sides of its fulcrum with each of the devices.

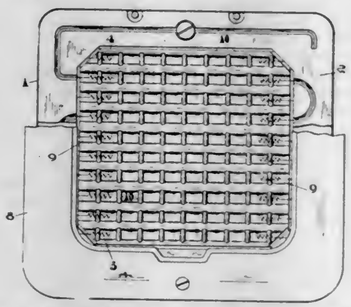
[Claims 6 to 9 not printed in the Gazette.]

1,195,827. STOPPER FOR LAVATORY-FIXTURES. GEORGE A. LUCKE, Baltimore, Md., assignor of one-third to Frederick Clement Weber, Baltimore, Md. Filed Mar. 7, 1916. Serial No. 82,738. (Cl. 4—35.)



The combination with a waste pipe and a guard mounted therein spaced from the entrance end of said waste pipe, of a stopper having a ring adapted to telescope within the entrance end of the waste pipe and provided with an annular outwardly bent flange at its upper edge, a semi-spherical shaped shell having a rim bent about the flange and fast thereto, a shutter interiorly of and correspondingly shaped to the shell for opening and closing the same, said shutter resting upon the flange, a gasket concentrically of the ring and resting against the flange to form a fluid-tight joint between the entrance end of the waste pipe and said stopper, a stem having a hook end and an opposite integrally threaded socket end, said hook end being detachably engaged with the guard, and a screw passed through the central opening in the shell and also centrally through the shutter and adjustably engaged in the internally threaded socket end of the stem, said screw having its outer free end flush with the outer surface of the shell.

1,195,828. ELECTRIC HEATING ELEMENT. LEWIS R. MCCLATCHIE, Weston, Ontario, Canada, assignor to The Moffat Stove Company of Weston, Limited, Weston, Ontario, Canada. Filed Mar. 4, 1916. Serial No. 82,214. (Cl. 219—70.)



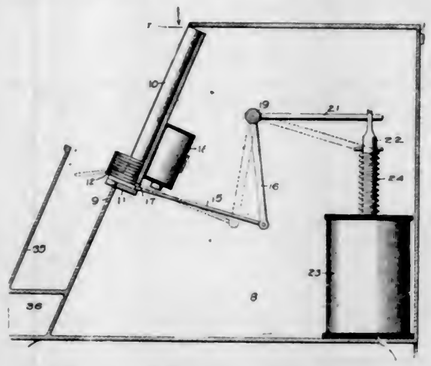
1. In an electric heating element, a support for the resistance comprising a substantially solid slab of insulating material having a plurality of grooves formed therein closed below and open above, each groove having a series of closely spaced transverse ribs formed at the bottom and raised slightly above the general level of the bottom, in combination with a helical resistance coil laid in said grooves.

2. In an electric heating element, a support for the resistance comprising a slab of insulating material having a plurality of grooves formed therein, each groove having a series of transverse ribs formed at the bottom, each rib being convex in cross section to reduce its area of contact with the resistance.

3. In an electric heating element, a support for the resistance coils comprising a slab of insulating material having a plurality of grooves formed therein, each groove having a series of transverse ribs formed at the bottom, each rib being curved substantially on an arc of a circle having a radius slightly greater than the radius of the coils of the resistance.

4. In an electric heating element, a support for the resistance coils comprising a slab of insulating material having a plurality of grooves formed therein, each groove having a series of transverse ribs formed at the bottom, each rib being curved substantially on an arc of a circle having a radius slightly greater than the radius of the coils of the resistance, and each rib being convex in cross section to reduce its area of contact with the resistance.

1,195,829. CHANGE-MAKING MACHINE. CARL MCDERMOTT, Freehold, N. J. Filed May 18, 1915. Serial No. 28,860. (Cl. 133—4.)



1. In a change-making machine, a coin receptacle having an outlet adjacent the bottom thereof wherethrough coins can be delivered, a push-bar engaging the receptacle at the bottom thereof and disposed inoperatively to the outlet, means for bringing said push-bar into the plane of the outlet, means for forcing said push-bar across the receptacle toward the outlet end thereof, and means for operating the actuating means adapted to operate the means for bringing the push-bar into the plane with the outlet before the actuating means are operated.

2. In a change making machine, a coin receptacle having under-cut grooves adjacent the bottom thereof forming an outlet from the receptacle wherethrough coins can be delivered, said receptacle having lips above the under-cut grooves adapted to lock the coin above the lowermost one within the receptacle, a push-bar engaging the receptacle at the bottom thereof and normally disposed in a different plane from the plane of the under-cut grooves, means for bringing the push-bar into the plane of the under-cut grooves, actuating means for moving the push-bar across the receptacle, and means for operating the actuating means adapted to operate the means for bringing the push-bar into the plane with the under-cut grooves before it operates the actuating means.

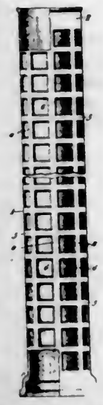
3. In a change making machine, a coin receptacle having grooves adjacent the bottom thereof forming an outlet from the receptacle wherethrough coins can be delivered, said bottom having a slot central with said grooves, a push-bar engaging the slot, means for actuating the push-bar whereby the same is moved toward the grooves forming an outlet, means for bringing the push-bar into the plane with the grooves, and means controlling the operation of the actuating means adapted to operate the means for bringing the push-bar into the plane with the grooves before the actuating means are operated.

4. In a change-making machine, a coin receptacle having an outlet wherethrough coins can be delivered, a push-bar disposed inoperatively to the coin outlet, electromagnetic means for bringing the push-bar into operative relation with the coin outlet, means for actuating the push-bar, including a solenoid, and a double switch controlling the electromagnetic means and solenoid so that the circuit to the electromagnetic means is established before the circuit of the solenoid.

5. In a change making machine, a plurality of coin receptacles each having an outlet wherethrough coins can be dispensed, a push-bar for each of the receptacles disposed inoperatively to the outlet thereof, oscillating arms each connected to a corresponding push-bar, means for oscillating said arms whereby the push-bars are actuated, means for bringing each of the push-bars into operative relation to the corresponding outlet of the receptacle, and keys, each adapted to cause the operation of a predetermined number of means for bringing the push-bars into operative relation, each of said keys also adapted to cause the operation of said means for oscillating the arms after the means for bringing the push-bars into the operative relation has been operated.

[Claims 6 to 8 not printed in the Gazette.]

1,195,830. CAST-IRON PIPE. JAMES R. MCWANE, Birmingham, Ala. Filed May 18, 1915. Serial No. 28,968. (Cl. 137—75.)



1. A one-piece cast iron pipe having end and body portions with the latter provided with external depressions forming panels with walls of less thickness than the walls of standard pipe of the same internal diameter, said panels being arranged to define on the exterior of the body portion of the pipe longitudinal ribs and inter-connecting lateral ribs, said ribs corresponding in thickness diametrically of the pipe to the thickness of the wall in standard cast iron pipe of the same internal dimensions, whereby the longitudinal rib-producing channels in the mold provide passageways for relatively thick masses of molten metal during pouring and thereby prevent the formation of cold shots and at the same time segregate impurities, and whereby the weight of the pipe is lessened over that of standard pipe of the same dimensions by the reduction in thickness of the walls of the pipe at the panel portions.

2. A one-piece cast iron pipe having end portions joined by longitudinal relatively broad ribs with interconnecting relatively broad ribs joining the longitudinal ribs, said longitudinal and connecting ribs defining panels with the end portions of the pipe and the ribs having a thickness corresponding to the thickness of wall of standard cast iron pipe of the same internal dimensions and the panel portions being of less thickness of wall than the ribs.

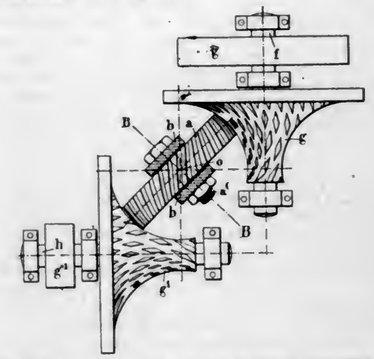
3. A one-piece cast iron pipe having spigot and bell portions of smooth exterior with longitudinal ribs disposed about the body of the pipe and connecting the end portions, and laterally extended ribs connecting the longitudinal ribs, the lateral and longitudinal ribs defining panels with the walls of the pipe at the ribs and at the spigot and bell portions of substantially equal thickness, and with the walls of the panel portions of less thickness than the first-named portions.

4. An elongated one-piece cast iron pipe having a circular series of substantially parallel longitudinal ribs on its exterior of a thickness of wall permitting the casting of the pipe in an upright mold and with thin walled portions between the ribs, whereby during the casting operation the channels in the molds in which the longitudinal ribs are formed provide passageways for relatively thick masses of molten metal segregating impurities and preventing the formation of cold shots, and also distributing the molten metal to the thin walled portions between the ribs.

5. A one-piece cast iron pipe having series of depressed portions on its exterior surface to there produce relatively thin pipe walls of less thickness than the thickness of wall of standard cast iron pipe of the same internal dimensions, those portions of the pipe walls between the depressed portions corresponding in thickness to the thickness of wall of standard cast iron pipe of the same internal dimensions and extending both longitudinally and laterally of the pipe to admit of the formation in a vertical mold of a light weight pipe substantially free from material imperfections due to cold shots or impurities.

[Claim 6 not printed in the Gazette.]

1,195,831. CHANGE-SPEED GEARING. PIERRE MARCELLOT, Paris, France. Filed Nov. 14, 1912. Serial No. 731,874. (Cl. 74—41.)



1. In a change speed gearing a pinion, provided with lozenge-shaped teeth the number of which decreases progressively from the part farthest from the axis of rotation to the part nearest said axis, a second pinion gearing with the first pinion, and means for moving the second pinion for putting it into gear with a part of the first pinion provided with a greater or lesser number of teeth.

2. In a change speed gearing, a pinion having lozenge-shaped teeth, a second pinion gearing with the first pinion, and means for moving the second pinion for putting it into gear with a part of the first pinion provided with a greater or lesser number of teeth.

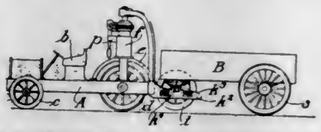
3. In a change speed gearing, a conical gear, the teeth of which are lozenge-shaped and of different sizes, said teeth decreasing in number progressively from the larger to the smaller end thereof, a pinion gearing with the said gear, and means for moving the pinion relatively to said conical gear.

4. In a change speed gear, a conical gear, the teeth of which decrease in number progressively from the larger to the smaller end thereof, a rocking support, and a pinion mounted in the support and meshing with the said conical gear.

5. In a change speed gearing, a conical gear, the teeth of which decrease in number progressively from the larger to the smaller end thereof, a rocking support, and a pinion mounted in the support with its axis of rotation at right angles to the axis about which the support rocks, said pinion meshing with the said conical gear.

[Claim 6 not printed in the Gazette.]

1,195,832. MOTOR-VEHICLE. CHARLES H. MARTIN, Worcester, Mass. Filed May 21, 1913. Serial No. 768,924. (Cl. 21—90.)



1. A tractor for trailer wagons, comprising, in combination, a frame having wheels and motor devices thereon to form an operable motor vehicle, means on the tractor constructed and arranged so that the tractor may be readily connected and disconnected with the front axle of a trailer wagon for hauling, relatively turning and backing operations with the trailer wagon, and mechanism to elevate said means operable when the tractor is stationary or moving.

2. A tractor for vehicles comprising, in combination, a frame, wheels and motor devices thereon, means for automatically engaging a trailer, and means for elevating said means, said elevating means being under the control of the operator from the seat of the tractor.

3. In combination an operable motor tractor, a separately operable trailer wagon having a front steering wheel and axle, means on the tractor operable to be readily attached and detached with said front steering axle of the trailer wagon and mechanism on the tractor to operate said means to lift the said steering axle, characterized in that the steering axle of the trailer may be connected at will to the tractor for turning movement therewith relatively to the trailer.

4. In a tractor having a rear wheel and in combination with a trailer, a support adjacent the rear wheel of the tractor, a vertically-movable member mounted on the support, an arm operable by said vertically-movable member and adapted for automatic engagement with a trailer.

5. In an apparatus of the class described including a tractor frame and a rearwardly-projecting arm adapted to grapple the trailer and provided with a cam end whereby said arm automatically grapples the trailer when the tractor is backed thereto, and means for vertically moving the arm.

[Claims 6 to 19 not printed in the Gazette.]

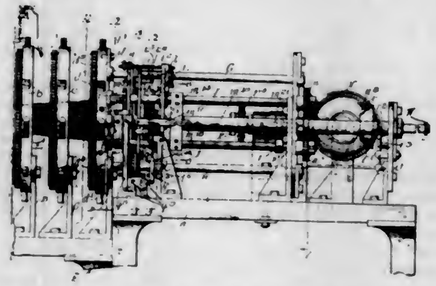
1,195,833. MACHINE FOR LOADING TRANSFERS FOR KNITTING MACHINERY. EDWARD MASLICH, St. Joseph, Mich. Filed Mar. 19, 1909. Serial No. 484,577. (Cl. 66—32.)

1. In a machine of the character disclosed, a set of points operative to deliver the loops at the edge of the end of the fabric to the quills of a transfer ring, means for causing the fabric to be stretched and drawn out a distance by movement of the transfer away from the receiving position thereof, and means for then cutting off the stretched out fabric, leaving the same on the transfer ring.

2. In a machine of the character disclosed, the combination of means for holding a removable transfer, a holder for the fabric, tapered away from the transfer, means for removing the raw edge of the end of the fabric from the holder and placing the same on the transfer, means to move the transfer backward with the uncut fabric, and means to then cut off the fabric.

3. In a machine of the character disclosed, the combination of traveling means for holding a transfer, means for placing the loops of the fabric on said transfer, and means for starting the machine by moving the transfer slightly in one direction of travel thereof.

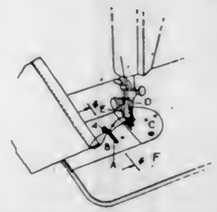
4. In a machine for the purpose described, a removable transfer ring, means for holding the transfer ring in position, a mandrel for holding the tubular fabric tapered away from said ring, mechanism for carrying the end portion of the fabric to the transfer ring, and means for moving said mechanism and transfer ring to stretch the fabric.



5. In a machine for running-on knitted web, the combination with a support for the web, of means for engaging the stitches of the web, means for moving the stitch engaging means and the web longitudinally of said support, a cutting knife for said web, disposed within the web, means for moving the knife into and out of cutting engagement with the web, and means for carrying said knife around the web.

[Claims 6 to 43 not printed in the Gazette.]

1,195,834. THREAD-CUTTING BLADE FOR SEWING-MACHINES. CHARLES DAVES MATTHEWS, New Orleans, La., assignor of one-half to Henry E. Gumbel, New Orleans, La. Filed Aug. 18, 1915. Serial No. 46,077. (Cl. 112—33.)



1. In a sewing machine, the combination of a needle and presser foot, with a plate associated therewith and having a slot, a thread cutting blade extending longitudinally of and fixed in the slot and having its bottom edge inclined downwardly and sharpened, the tip of the blade extending permanently out of the slot at one end and provided with a flat horizontal lug lying slightly above the plate to permit a thread to be engaged under the blade while preventing work from being caught on the latter, the opposite end of the blade being secured to the plate.

2. In a sewing machine, the combination of a needle and presser foot, with a member on which the work is supported, said member having a slot, and a thread cutting blade mounted in the slot, one end of the blade being disposed above the slot and formed with a flat horizontal lug to prevent the work from catching on the blade, the base end of the blade being provided with an anchoring member, and the bottom edge of the blade being inclined and sharpened, whereby the thread engaged under the blade can be cut by being drawn longitudinally of the blade.

3. A thread cutting attachment of the class described, comprising a vertical blade having a downwardly inclined bottom cutting edge, a laterally projecting anchoring member on the base end of the blade, and a flat horizontal guard member on the tip end of the blade and extending laterally therefrom and rounded for preventing the work from being caught thereon, the cutting edge inclining upwardly from the base end of the blade to the tip.

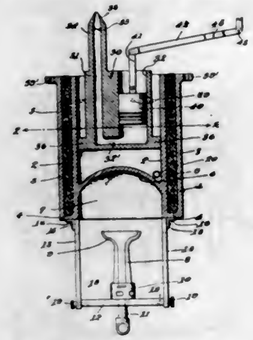
1,195,835. ADJUSTABLE BRASSIÈRE. ELIZABETH MILES, Evanston, Ill. Filed Apr. 30, 1915. Serial No. 24,941. (Cl. 2—98.)



1. A garment of the class described, laced under the arms, having adjustable arm holes, open at the front and overlapped to cover the bust, the lower portions of said overlapped portions being extended; straps secured to said extended portions; and buckles on said garment for said straps, there being slits in the lower side portions of said garment to permit the passage of said straps, substantially as described.

2. A garment of the class described comprising a rear portion and two front portions, having arm holes formed at the junctures between said portions and said portions being adjustably secured together under the arm holes by lacings; extended sides to said arm holes, said sides being provided with a plurality of button holes and buttons, the upper front portions of the front portions of the garment being extended sufficiently to overlap to cover the bust and the lower front portions being still further extended; securing straps secured to said lower extensions, there being slits in the lower side portions of the garment arranged to permit the passage of said straps; and buckles secured to said garment at the rear of said slits, substantially as described.

1,195,836. APPARATUS FOR SUPPLYING MOLTEN METAL TO MOLDS. WILLIAM MONTGOMERY, JR., and JUSTUS RIEHL, Baltimore, Md., assignors, by direct and mesne assignments, of one-half to said Montgomery and one-half to John N. McFarland, Baltimore, Md. Filed Feb. 17, 1915. Serial No. 8,845. (Cl. 22—71.)

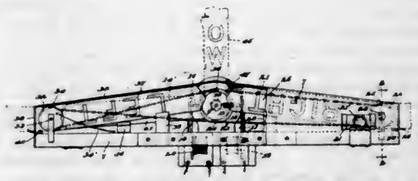


1. In an apparatus for supplying molten metal to molds, the combination, of a melting pot having spaced inner and outer walls, a web formed integral with and connecting the lower edges of said walls, diatom packed between said walls, means for supplying molten metal to a mold including a body for insertion into the pot, laterally extending wings formed upon the upper end of said body for limiting the insertion of said body into the pot, a spout formed upon and extending upwardly from said body, said body provided with a communicating well and an egress duct, said duct extending upwardly through said spout and gradually decreasing in diameter at the end of the spout, and a piston mounted within said well for forcing molten metal upwardly through said spout.

2. In an apparatus for supplying molten metal to molds, a melting pot having inner and outer spaced walls, a web formed integral with and connecting the lower ends of said walls, heat non-conducting material packed between said inner and outer walls, an arcuate web secured to the inner surfaces of said inner walls upwardly from their lower ends and forming a bottom for the melting pot, a burner for supplying heat to said pot adjustably carried thereby and positioned beneath said web, means carried by said pot for supplying the molten metal to a mold comprising a body having a well and an egress duct formed vertically therein and communicating with each other, a piston slidably mounted in said well for forcing molten metal upwardly through the egress duct upon downward movement of the piston, said egress duct having its upper end tapered inwardly.

3. In an apparatus for supplying molten metal to molds, a melting pot having inner and outer spaced walls, a web formed integral with and connecting the lower edges of said walls, heat non-conducting material packed between said inner and outer walls, an arcuate web secured to the inner surfaces of said inner walls upwardly from their lower ends and forming a bottom for the melting pot, and a drain pipe communicating with the interior of the melting pot a short distance upwardly from said arcuate wall.

1,195,837. VEHICLE-SIGNAL. FRED R. MOORE, Chicago, Ill. Filed Sept. 25, 1915. Serial No. 52,683. (Cl. 40—53.)



1. A signal comprising a casing; a motor in said casing provided with a shaft; a ratchet wheel fixed to said shaft; a swinging signal arm in said casing; a spring held pawl in said casing in operative relation with said ratchet and arranged to operatively connect said arm therewith; and electrical means for operating said pawl, substantially as described.

2. A signal comprising a casing and provided with a shaft; a ratchet wheel fixed to said shaft; a swinging signal arm in said casing; a spring held pawl in said casing in operative relation with said ratchet and arranged to operatively connect said arm therewith; and electrical means for simultaneously operating said pawl and closing a circuit through said motor, substantially as described.

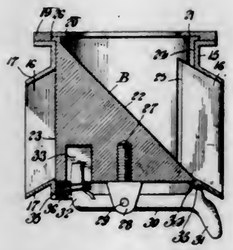
3. A signal comprising a casing; a motor in said casing and provided with a shaft; three ratchet wheels fixed to said shaft; three swinging arms in said casing; spring held pawls in said casing coöperating with said ratchets and arranged to operatively connect each of said arms with one of said ratchets; and electrical means for operating said pawls, substantially as described.

4. A signal comprising a casing; a motor in said casing and provided with a shaft; three ratchet wheels fixed to said shaft; three swinging arms in said casing; spring held pawls in said casing coöperating with said ratchets and arranged to operatively connect each of said arms with one of said ratchets; electric lights arranged to illuminate certain of said arms; circuits for said lights arranged to be closed by swinging of the corresponding arms; and an electric bell in circuit with the motor, substantially as described.

5. A signal comprising a casing; a motor in said casing provided with a shaft; three ratchet wheels fixed to said shaft; three swinging arms in said casing; spring

held pawls in said casing coöperating with said ratchet and arranged to connect each of said arms to one of said ratchets; electric lights arranged to illuminate certain of said arms; circuits for said lights arranged to be closed by swinging of the corresponding arms; an electric bell in circuit with the motor; electromagnets arranged to operate said pawls; and means for simultaneously closing the circuit through each of said electromagnets and the motor circuit, substantially as described.

1,195,838. GRAIN-VALVE. DANIEL MORGAN, Seymour, Ind. Filed Mar. 23, 1916. Serial No. 86,291. (Cl. 193—39.)



In a device of the class described, a cylindrical valve casing having radial outlets and provided at its upper edge with an outwardly extending annular flange, a collar connected with said flange and having an inwardly extending flange coöperating therewith to form an annular groove, a valve core consisting of a solid body having an inclined side face and arcuate side walls, said core being also provided with an arcuate shell having an opening adapted to register with the outlets of the valve casing, said core being provided at its upper edge with an annular flange engaging the groove formed between the flanges of the valve casing and the collar, and means connected with the valve core for rotating the same about its axis and for securing it at various adjustments, said means including a spring actuated lever pivotally connected with the solid portion of the valve core and having a downwardly extending handle and an upwardly extending lug, the valve casing being provided at its lower edge with notches for engagement with said lug.

1,195,839. EGG-BEATER. ALBERT MOSES, New York, N. Y. Filed Apr. 5, 1916. Serial No. 89,031. (Cl. 259—144.)



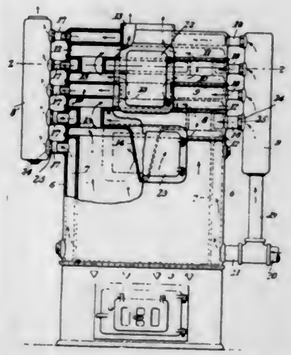
1. An egg beater comprising a plurality of bent wire loops, each loop having at the opposite ends thereof, retaining members; a holding plate for the ends of said loops, said plate providing recesses for receiving the retaining members; a cover plate for said holding plate for closing the recesses for said retaining members and for preventing the withdrawal of the same from said recesses; a handle removably attached to said holding and cover plates; and a hand grip revolubly mounted on said handle permitting the free rotation thereof in said grip.

2. An egg beater comprising a plurality of bent wire loops, each loop having at the opposite ends thereof, retaining members; a holding plate for the ends of said loops, said plate providing recesses for receiving the retaining members; a cover plate for said holding plate for closing the recesses for said retaining members and for preventing the withdrawal of the same from said recesses; a handle removably attached to said holding and cover plates; a hand grip revolubly mounted on said handle permitting the free rotation thereof in said grip; and means for retaining in service the relation of said handle to said hand grip.

3. An egg beater comprising a plurality of bent wire loops, each loop having at the opposite ends thereof, retaining members; a holding plate for the ends of said loops, said plate providing recesses for receiving the retaining members; a cover plate for said holding plate for closing the recesses for said retaining members and for preventing the withdrawal of the same from said recesses; and a handle having a screw thread for attachment to said holding plate, said handle embodying a tube having a screw thread formed internally at the end thereof, a hand grip member revolubly mounted on said tube, and a screw plug operatively engaging the internal thread at the end of said tube, and having a cap for extending over the end of said grip member for preventing the removal therefrom of said tube.

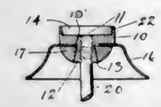
4. An egg beater comprising a plurality of bent wire loops, each loop having at the opposite ends thereof, small retaining balls; a holding plate for said loops, said plate providing a plurality of recesses, said recesses having edge passages and enlarged sockets at the inner ends of said passages for holding said balls, the wires of said loops being freely visible lengthwise through said recesses; a clamping plate for covering said recesses; and means for holding said clamping plate rigidly in position on said holding plate when in service, whereby the ends of said loops are free to move in all directions.

1,195,840. HEATER. GEORGE H. MOWE, Watertown, N. Y. Filed Apr. 28, 1916. Serial No. 94,190. (Cl. 122—218.)



In a boiler, a hollow boiler wall, boiler sections, each having an opening, the openings being arranged in staggered relation with each other, means for supporting the boiler sections in spaced relation, a return head and flow head, nipples connecting the boiler sections and the flow head and other nipples connecting the boiler sections and the return head, said nipple connections between the flow head and the boiler sections and between the latter and the return head being larger in diameter nearest the fire surface and reduced in their diameter as they recede from the fire surface but in proportion to their relative distance from the fire surface to retard the water through the boiler sections, means for supplying the return head with water, and means for providing communication between the flow head and hollow boiler wall.

1,195,841. JEWELRY COMPONENT. WILLIAM F. MOWRY, Attleboro, Mass., assignor to Merit Manufacturing Co., a Firm composed of Andrew B. Flag and William F. Mowry, Attleboro, Mass. Filed Aug. 9, 1915, Serial No. 44,488. Renewed July 18, 1916. Serial No. 110,006. (Cl. 63—20.)

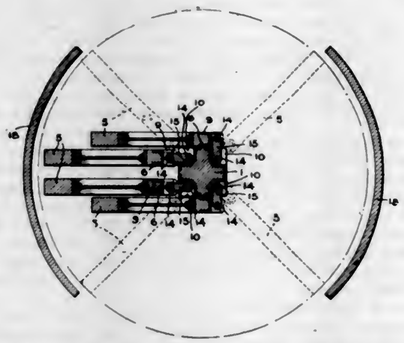


1. A jewelry component comprising a body having an integral hub provided with an opening, a stem having one end secured in said opening, a skirt member surrounding said hub and a collar swageably locked on said hub and securely binding together said hub, stem, skirt member and body.

2. A jewelry component comprising a body having a hub provided with an opening, said hub having one portion of a greater diameter than another portion, a stem having a portion fixed within said opening, a skirt member surrounding said hub and a collar swageably locked on said hub and securely binding together said hub, stem, skirt member and body.

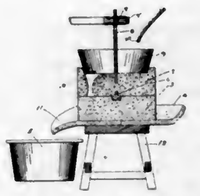
3. A jewelry component comprising a body having an integral conical hub provided with an opening, said hub having its smallest diameter at the body, a stem having a portion fixed within said opening, a skirt member surrounding said hub and a collar swageably locked on said hub and securely binding together said hub, stem, skirt member and body.

1,195,842. HINGE FOR REVOLVING DOORS. ADOLF MUEHLBEIN, Chicago, Ill. Filed Mar. 28, 1913. Serial No. 757,348. (Cl. 16—11.)



In a device of the class described, a hinge comprising two socket members and a connecting link having its ends pivotally mounted in said socket members respectively, one of said socket members having three sides open and the other socket member having two adjacent sides open and two adjacent sides closed and said closed sides forming abutments to limit the swing of said link, substantially as described.

1,195,843. BEAN-CURD AND THE PROCESS FOR MAKING SAME. KAMEKICHI MURAKAMI, Seattle, Wash. Filed Mar. 11, 1916. Serial No. 83,649. (Cl. 99—11.)



1. A process for making bean jelly which consists in soaking the beans in water, pulverizing the same, straining the skins from the bean pulp, adding water and boiling the pulp, adding lime and oil to the mass, pressing out surplus water, adding a saline solution, and again pressing until the mass is of a jelly-like consistency.

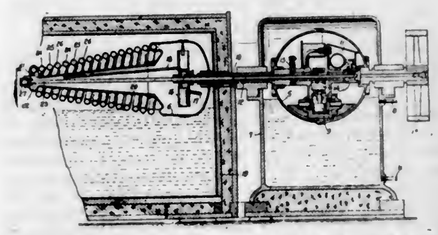
2. A process for making bean jelly which consists in soaking the beans in water, grinding them and removing the skins from the pulp, adding water to the latter and boiling, pressing the surplus water out of the mass so produced, adding a saline solution, and again pressing until the mass is of a jelly-like consistency.

3. A process for making bean jelly which consists in soaking the beans in water, grinding them and removing the skins from the pulp, adding lime and oil to the latter, and pressing out the surplus liquid until the mass is of a jelly-like consistency.

4. A process for making cubes from bean jelly which consists in first soaking the beans in water, next pulverizing the same, next straining the skins from the pulp, next adding water and boiling, next adding lime to the mass, next pressing out surplus water, next adding a saline solution to the mass, next pressing it down until the mass is of a jelly-like consistency, and finally cutting the jelly into cubes.

5. An edible product in cubical form or the like, produced from a jelly made of pulverized soy beans with the skins removed.

1,195,844. REFRIGERATING APPARATUS. THOMAS M. MYERS, New York, N. Y., assignor to Audiffren Refrigerating Machine Company, a Corporation of New Jersey. Filed Apr. 9, 1914. Serial No. 830,629. (Cl. 62—115.)



1. In an inclosed refrigerating apparatus containing a refrigerant in liquid and vapor states, a liquefying compartment, a vaporizing compartment, a coiled tube connected at one end to the vaporizing compartment, means for carrying liquid from the liquefying compartment to the other end of the tube and a collector within the vaporizing compartment; substantially as described.

2. In an inclosed refrigerating apparatus containing a refrigerant in liquid and vapor states, a liquefying compartment, a vaporizing compartment, a coiled tube in axial alinement with the vaporizing compartment and connected at its outlet end thereto, means for carrying liquid from the liquefying compartment through the vaporizing compartment and the coiled tube to the inlet end

of the tube, and a collector within the vaporizing compartment; substantially as described.

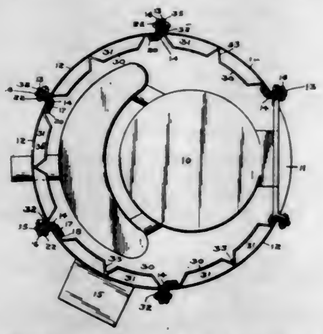
3. In an inclosed refrigerating apparatus containing a refrigerant in liquid and vapor states, a liquefying compartment, a vaporizing compartment, a coil of tubing connected at its inlet end and near its axis to the liquefying compartment and at its outlet end and near its periphery to the vaporizing compartment, the convolutions of the coil being of constant or constantly increasing diameter from its inlet end to its outlet end, and means for drawing the vaporized refrigerant from the vaporizing compartment into the liquefying compartment; substantially as described.

4. In an inclosed refrigerating apparatus containing a refrigerant in liquid and vapor states, a liquefying compartment, a vaporizing compartment, a coil of tubing connected at its outlet end and near its periphery to the vaporizing compartment, and means for conducting the liquid from the liquefying compartment into the coil of tubing near its axis, the convolutions of the coil having a constant or constantly increasing diameter from the inlet to the outlet end thereof; substantially as described.

5. In an inclosed refrigerating apparatus containing a refrigerant in liquid and vapor states, a liquefying compartment, a vaporizing compartment, a plurality of coiled tubes arranged in parallel and connected at their outlet ends to the vaporizing compartment, means for carrying liquid from the liquefying compartment to the inlet ends of said tubes and a collector within the vaporizing compartment; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,195,845. FURNACE-CASING. HARRY W. NEAL, Indianapolis, Ind., assignor of one-half to Hall Hardware Company, Indianapolis, Ind., a Corporation. Filed May 31, 1916. Serial No. 100,768. (Cl. 126—114.)

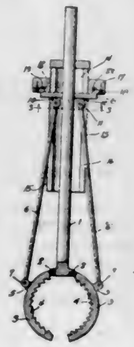


1. A furnace casing comprising a plurality of vertically disposed sections, interlocking means carried by each section for connecting said sections together, said interlocking means consisting in bending the metal along one edge of each section into an outwardly disposed rib with the free edge of the section projecting at right angles to said rib, an outwardly disposed rib formed along the opposite edge of each section, a horizontally disposed rib formed by bending the remaining free edge of the section in reverse directions to form a pocket adapted to receive the right angle projecting edge on the adjacent section and means for drawing the outwardly disposed ribs on the adjacent sections toward each other into operative position.

2. A furnace casing comprising a plurality of vertically disposed sections, interlocking means carried by each section for connecting said sections together, said interlocking means consisting in bending the metal along one edge of each section into an outwardly disposed rib with the free edge of each section projecting at right angles to said rib, an outwardly disposed rib formed along the opposite edge of each section, a horizontally disposed rib formed by bending the remaining free edge of the section in reverse directions to form a pocket adapted to receive the right angle projecting edge on the adjacent section, and means for drawing the outwardly disposed ribs on the adjacent sections toward each into operative position.

3. A furnace casing comprising a plurality of vertically disposed sections, interlocking means carried by each section for connecting said sections together, said interlocking means consisting in bending the metal along one edge of each section into an outwardly disposed rib and providing a recess for anchoring the inner wall, the free edge of the section projecting laterally of said rib, an outwardly disposed rib formed along the opposite edge, a horizontally disposed rib formed by bending the remaining free edge of the section in reverse directions to form a pocket adapted to receive the right angle projecting edge on the adjacent section, said horizontal rib standing remotely from the face of the section and providing a slot adapted to receive the free end of the inner wall, and an inner wall anchored at one end in one of the pockets in the section and providing dead-air spaces for insulating said casing against too rapid radiation of heat.

1,195,846. PIPE-WRENCH. JOHN W. NEWMAN, Bigpine, Cal. Filed Feb. 7, 1916. Serial No. 76,665. (Cl. 81—111.)



1. A pipe wrench including a rod, jaws pivotally carried by the rod, a sleeve secured to said rod and provided with longitudinally extended slots, a plate slidably mounted on said rods and having its corners projected through said slots and beyond the outside of said sleeve, means adjustably mounted on said sleeve, tongues integrally formed with said plate and arranged at the corners thereof and coöperating with said adjustable means, and a guide washer secured to said adjustable means for retaining said tongues in engagement with said adjustable means.

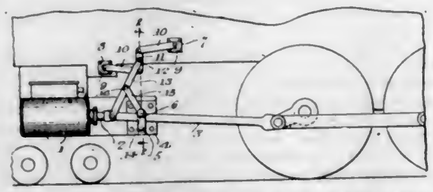
2. A pipe wrench including a rod, jaws pivotally mounted on said rod at one end thereof, a sleeve secured to and surrounding said rod, said sleeve provided with longitudinal slots, means slidably mounted upon the rod and extending through said slots, connecting rods having their ends connected to said means and to said jaws, and a nut screw threadedly mounted upon said sleeve and coöperating with said means for longitudinally moving said means on said rod.

3. A pipe wrench including a rod, laterally disposed ears formed at the terminal of the rod, jaws pivotally mounted in said ears, a sleeve secured to said rod and surrounding said rod, a nut adjustably mounted on said sleeve, said nut being provided with an annular recess, a plate slidably mounted on said rod, and means superimposed upon said plate and disposed within said annular recess for establishing a connection between said nut and said plate, and rods connecting said plate with said jaws.

4. A pipe wrench including a rod, jaws mounted upon said rod, a cylindrical sleeve secured to said rod, said sleeve being of a diameter considerably greater than the diameter of said rod whereby the inside of said sleeve will be spaced away from said rod, a parallelogram-shaped plate slidably mounted upon said sleeve, an adjusting nut arranged for longitudinal adjustment on said sleeve and provided with an annular recess on its under side, tongues carried by the said plate and extended into the recess in said nut said tongues being bent at right angles to provide shelves, and a washer divided into complementary halves and secured to said nut on its under side whereby the said shelves will contact with said washer for retaining said plate in engagement with said nut.

5. A pipe wrench including a rod, jaws mounted upon said rod, a cylindrical sleeve secured to said rod, said sleeve provided with exterior screw threads and oppositely disposed longitudinally extending slots, a parallelogram-shaped plate slidably mounted upon said rod, tongues carried by the ends of said plate, an adjusting nut arranged for longitudinal adjustment on said sleeve and provided with an annular recess for the reception of said tongues, means for retaining said tongues within said recess, and means connecting said plate with said jaws.

1,195,847. PISTON-ROD GUIDE AND SUPPORT. CARL NORBY, Ferry Point, Alberta, Canada. Filed Mar. 2, 1915. Serial No. 11,620. (Cl. 74—84.)

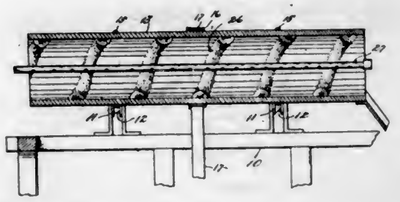


1. In a piston rod guide, the combination with a piston rod capable of rectilinear movement, of an arm, a pivotal connection between one end of said arm and said rod, means connected to the upper end of said arm and supporting the same for sliding and swinging movement, a link, a support for said link at the center of the path of movement of said rod, a pivotal connection between one end of said link and support, and a pivotal connection between the remaining end of said link and said arm whereby the weight of the piston rod will be transferred to said link in the sliding movement of said rod.

2. In a piston rod guide, the combination with a piston rod capable of rectilinear movement, of an arm, a pivotal connection between one end of said arm and rod, means connected with the other end of said arm and supporting the same at the center of the path of movement of said piston rod for sliding and swinging movement, links disposed at the opposite sides of said arm, a support for said links at the center of the path of movement of said arm and below said means, pivotal connections between the supported ends of said links and the support and pivotal connections between the remaining ends of said links and said arm whereby the links will receive the weight of the piston rod in the movement of the latter.

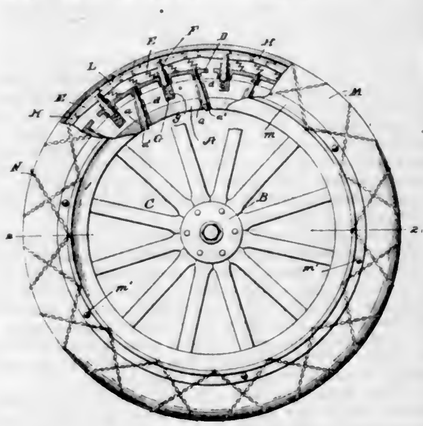
3. In a piston rod guide, the combination with a piston rod capable of rectilinear movement, of an arm, a pivotal connection between one end of said arm and the end of said piston rod, links connected to the remaining end of said arm and supporting the same at the center of the path of movement of said piston rod above the latter for sliding and swinging movement, links disposed at the opposite sides of said arm, a support for said links at the center of the path of movement of said piston rod below said first links, pivotal connections between the supported ends of said last links and said support, and pivotal connections between the remaining ends of said last links and said arm whereby the said last links will take the weight of the piston rod in the movement thereof.

1,195,848. FRUIT-CLEANING DEVICE. CHARLES OAKFORD, Plant City, Fla. Filed Jan. 11, 1915. Serial No. 1,646. (Cl. 146—14.)



In a device of the class described, the combination of a frame, a tubular member rotatably mounted in the frame, means for rotating the member, a continuous spiral brush mounted on the inner side of said member, and means for discharging a cleaning liquid into said chamber.

1,195,849. RESILIENT TIRE FOR VEHICLE-WHEELS. PETER K. OLECHNA, Schenectady, N. Y. Filed June 8, 1916. Serial No. 102,428. (Cl. 152—8)

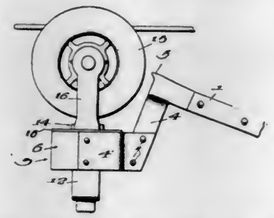


1. A vehicle wheel provided with a tire, comprising a series of segmental plates surrounding the rim of the wheel and supported thereby, a series of levers surrounding said plates, yielding supports to which the levers are pivotally connected, and springs attached to the plates and engaging the levers to yieldingly hold them and to return them to their normal positions.

2. A vehicle wheel provided with a tire, comprising a series of segmental plates surrounding the rim of the wheel and adjustably connected therewith, a series of levers surrounding the segmental plates, pins to which said levers are pivotally connected, yielding supports for said pins, flexible connections between the levers, and yielding devices for holding the levers in normal positions, and for returning them thereto.

3. A vehicle wheel provided with a tire, comprising a series of segmental plates surrounding the rim of the wheel and adjustably connected therewith, a series of levers surrounding said plates and flexibly connected with each other, radially arranged pins pivotally connected with the levers, spring sockets which receive said pins and springs attached to the plates extending over the levers and serving to yieldingly hold them in normal positions and for returning them thereto.

1,195,850. TROLLEY. JEREMIAH A. PAIGE, Boston, Mass., assignor to William F. Mooers, Milton, Mass. Filed Apr. 17, 1916. Serial No. 91,698. (Cl. 64—71.)



1. In a trolley, a head to be secured to the end of a pole, a shaft rising therefrom and rotatably mounted therein, a harp keyed to said shaft, a trolley wheel in said harp, and leaf springs disposed on opposite sides of said shaft and secured by one end to said head, the opposite sides of said shaft being flattened and engaged by said springs.

2. In a trolley, a head to be secured to the end of a pole, a shaft rising therefrom and rotatably mounted therein, a harp keyed to said shaft, a trolley wheel in said harp, a finger formed of a U-shaped member secured by its arms to said shaft, and leaf springs disposed on opposite sides of said shaft and secured by one end to said head, said springs engaging said finger to return said harp to its normal position after being rotated.

3. In a trolley, a head to be secured to the end of a pole, a shaft rising therefrom and rotatably mounted therein, the opposite sides of said shaft being flat, a finger extending from the shaft and having its sides secured to said flattened portions, a harp keyed to said shaft, a wheel in said harp, leaf springs disposed on opposite sides of said shaft and secured by one end to said head, said springs contacting with said finger, a stop, and a plate fixed to the shaft and adapted to contact with said stop to limit the rotation of said harp.

4. The combination with a trolley pole; of an arm extending therefrom, a casing having its upright wall formed from a single strip of metal bent into circular form and having its ends extended radially therefrom and secured to said arm, a bottom for said casing, a rotatably mounted trolley harp comprising a base plate forming a cover for said casing, and a pair of arms, a wheel between said arms, and means within said casing to return said harp to its normal position after being rotated.

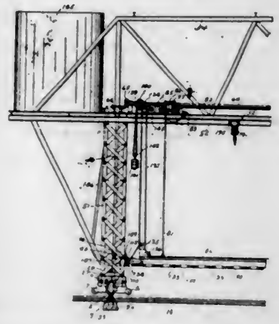
5. The combination with a trolley pole; of an arm extending therefrom, a casing having its upright wall formed from a single strip of metal bent into circular form and having its ends extended radially therefrom and secured to said arm, a bottom for said casing, a rotatably mounted trolley harp comprising a base plate forming a cover for said casing, and a pair of arms, a wheel between said arms, and angle braces secured to the opposite sides of the upright wall of said casing by one end and by their opposite ends to said arm.

[Claims 6 to 12 not printed in the Gazette.]

1,195,851. AGRICULTURAL SYSTEM AND MACHINE. THEODORE P. PAYNE, Newark, N. J. Filed Apr. 20, 1915. Serial No. 22,580. (Cl. 104—18.)

1. An agricultural machine adapted to run upon tracks disposed over a tract of tillable ground, said machine including in combination a wheel base over one track, a wheel base over another track, a rigid structure connecting said wheel bases, bolsters pivotally connected to said wheel bases, and traction wheels journaled in said bolsters.

2. An agricultural machine adapted to run upon tracks disposed over a tract of tillable ground, said machine including in combination a wheel base over one track, a wheel base over another track, a rigid structure connecting said wheel bases, bolsters pivotally connected to said wheel bases, and traction wheels journaled in said bolsters, a motor, and driving connections from said motor to said traction wheels to drive the wheels while permitting them to move vertically.



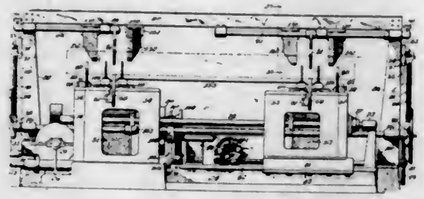
3. An agricultural machine adapted to run upon tracks disposed over a tract of tillable ground, said machine including in combination a wheel base over one track, a wheel base over another track, bolsters pivotally connected to said wheel bases, and traction wheels journaled in said bolster, a motor, and driving means comprising rigid connections from said motor to said wheel base, and flexible connections to said wheels.

4. An agricultural machine adapted to run upon tracks disposed over a tract of tillable ground, said machine including in combination a wheel base over one track, a wheel base over another track, bolsters pivotally connected to said wheel bases, traction wheels journaled in said bolsters, a motor, and driving connections from said motor to said traction wheel to drive the wheels while permitting them to move vertically, said driving connections including rigid connections from the motor to the wheel base and flexible connections to the wheels.

5. An agricultural machine adapted to run upon tracks disposed over a tract of tillable ground, said machine including in combination a wheel base over one track, a wheel base over another track, a rigid structure connecting said wheel bases, a bolster intermediately pivotally connected to the wheel base and traction wheels at either side of said pivotal connection.

[Claims 6 to 34 not printed in the Gazette.]

1,195,852. TIE-BORING MACHINE. GEORGE C. PURDY and DANIEL W. EDWARDS, Rockford, Ill., assignors to Greenlee Bros. & Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 1, 1913. Serial No. 758,171. (Cl. 144—93.)

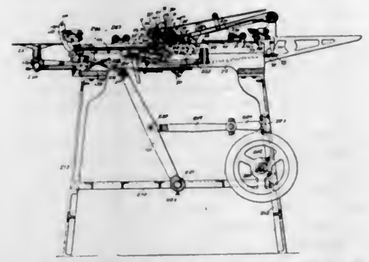


1. In a boring machine, the combination with boring tools, of jaws for centering an article relative to the boring tools, means for actuating said jaws, and compensating means for transferring movement from said actuating means to the jaws whereby the jaws have a variable degree of closing according to the width of the article being centered.

2. In a boring machine, the combination with boring tools, of means for centering articles relative to said boring tools, means for automatically actuating said centering means, and a yielding means having connection with said actuating means and adapted to compensate for the variable degree of movement of said centering means.

3. In a boring machine, the combination with boring tools, of means for centering articles relative to said boring tools, means for intermittently actuating said centering means with an unvarying degree of action and means having a connection with said actuating means and adapted to allow the action of the centering means to be varied according to the width of the article being centered.

1,195,853. PRINTING-MACHINE. FRANK H. QUADE, Jr., Fresno, Cal. Filed Aug. 2, 1913. Serial No. 782,729. (Cl. 101—4.)



1. In a printing machine, the combination of a frame, journal blocks at each side of the frame adapted to support an impression roller, one of said blocks being provided with a groove and the other block being provided with a lug having a notch cut therein, a lower feed plate having one edge fitted in the groove in the journal block and the other edge fitted in the notch in said lug, a lower feed roll below the said plate, an upper feed roll above the feed plate, and a stop finger coöperating with the feed rolls.

2. In a printing machine, the combination of a frame, journal blocks arranged at the sides of the frame and adapted to support an impression roller, one of said journal blocks being provided with a groove and the opposite journal block being provided with a lug having a notch cut therein, and a feed plate fitting at one end in the groove in the one journal block and at its other end in the notch in the said lug, said feed plate consisting of upper and lower members fitted together at both ends.

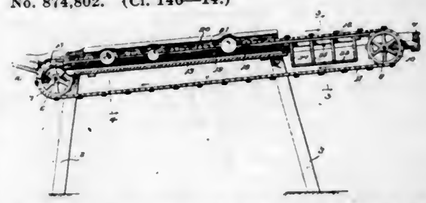
3. In a printing machine, the combination of a frame, an impression roller mounted thereon, means for feeding paper to the impression roller consisting of an upper and a lower feed plate, the lower feed plate having its lower edge turned on itself to form an underlying hooked flange, and strippers having upturned overlying hooked inner ends slidably engaging and supported by the flanged edge of the lower feed plate.

4. In a printing machine, the combination of a frame, an impression roller, means for feeding paper to the impression roller consisting of upper and lower feed plates, strippers adjustably attached to the lower feed plate and extending under and around the impression roller, and means for ejecting the paper consisting of rollers having their peripheries extending through notches in the strippers, and means acting on said rollers to yieldably hold them to the impression roller.

5. In a printing machine, the combination of printing means, a plate for guiding paper to the printing means, strippers attached to said plate and extending past the printing means, a support for the strippers beyond the printing means, means for ejecting the paper consisting of rollers carried by the strippers between said plate and said support and adapted to project above the strippers, and means carried by the strippers for yieldably holding the ejector rollers projected above the strippers.

[Claims 6 to 26 not printed in the Gazette.]

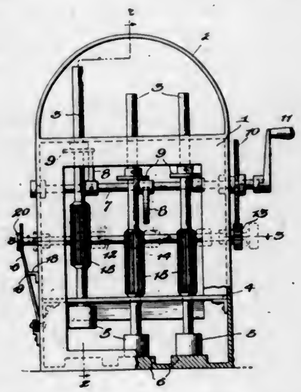
1,195,854. FRUIT-CLEANING MACHINE. EDWARD RAWSON, Portland, Oreg. Filed Nov. 30, 1914. Serial No. 874,802. (Cl. 146—14.)



1. In a fruit cleaning machine, a fixed flexible lower apron having a laciniated upper surface, an upper apron having a laciniated under surface opposing the laciniated surface of the lower apron, and a conveyer having one of its stretches passing between the said surfaces of the aprons and including transverse spaced fruit engaging slats.

2. In a fruit cleaning machine, a fixed flexible lower apron having a laciniated upper surface, a flexible upper apron having a laciniated under surface, and means operating between the said aprons for moving the fruit between the aprons in contact with both of said surfaces.

1,195,855. STAMP-MILL. RICHARD RAYCRAFT, Genoa, Nev. Filed July 29, 1915. Serial No. 42,607. (Cl. 83—57.)

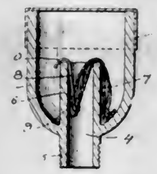


In a stamp mill, the combination of a frame, a stamp having a stem movable in said frame, means for raising said stem, means for rotating said stem, operating means connecting said raising means with said rotating means, and locking means for retaining the rotating means in operative relation with the stem; said rotating means including means for disconnecting said stem and said rotating means by the movement of said operating means, when said locking means is released.

1,195,856. AUTOMATICALLY-FEEDING OIL-CUP. FRANK B. RIVERS, Boyne City, Mich. Filed June 23, 1914. Serial No. 846,804. (Cl. 184—64.)

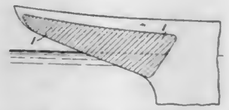
A lubricating cup comprising a cylindrical body having one end open, its opposite end being rounded and provided with a central opening, a feeding stem extending downwardly from said opening, its lower end being exteriorly screw-threaded for attaching the cup in place, a wick tube extending upwardly from the opening, its upper end terminating adjacent the center of the cylindrical body, a wick supporting member having an eye at one end and a hook at its opposite end, said hook of the supporting member secured over the upper end of the wick tube, the eye

of the same depending into said tube, a wick supported in the eye of said supporting member, the ends of said wick



terminating in the bottom of the cup, and a cover fitted over the upper open end of said cylindrical body.

1,195,857. NAVIGABLE VESSEL. ERNEST RICHARD ROYSTON, London, England. Filed June 4, 1915. Serial No. 32,247. (Cl. 114—39.)



1. A yacht or boat of rigid construction having locally at its bow portion on the rigid structure, a pneumatic structure adapted to be indented or pressed inward locally, as well as generally, by pressure due to the action of the sea or water, and normally pressed outward by air under pressure, the air being contained in closed india rubber tubes or bags between the outer locally flexible and resilient sheeting or sheathing and the rigid structure of the ship; substantially as described.

2. A yacht or boat of rigid construction having an elastic or flexible structure adapted to be indented locally, as well as generally, by the pressure of the sea or water, and resilient from within, and placed within recessed portions of the main rigid structure of the ship, so that the elastic or resilient portion does not project substantially beyond the general contour and surface of the rest of the rigid portion of the ship, which portions are of normal or the usual rigid kind; substantially as described.

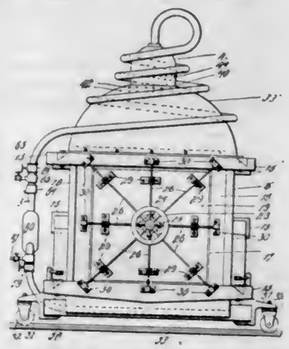
3. A yacht or boat having a pneumatic elastic and resilient portion on the outside of the rigid portion comprising a plurality of air containing tubes or bags, and a flexible skin outside the said tubes or bags; the rigid normal structure of the hull of the ship being on the inside of the said tubes or bags, and the outside skin being held and secured to the inside portion or structure at a multiplicity of points, so that the tubes or bags are retained under pressure without extending the outer skin beyond the general curvature or contour of the ship's surface, and flush with the ship's surface; substantially as described.

4. A ship or yacht having at its bow portion from a point below the gunwale to a point on each side of the keel, a recess, filled with an elastic and resilient medium, and having on the outside of same a locally indentable skin or sheath, pressed outward by the said medium, and practically flush with the general contour of the other portions of the ship; substantially as described.

1,195,858. MECHANICAL TANNING-MACHINE. CARLETON RUHE, Olean, N. Y. Filed Aug. 10, 1915. Serial No. 44,748. (Cl. 149—9.)

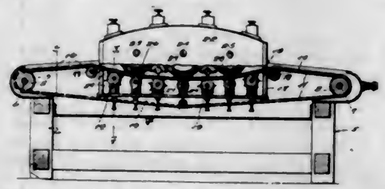
1. In a tanning machine of the character described, a casing, a partition arranged in the upper portion thereof and provided with openings, apertured cups arranged within the openings, small tubes communicating with the apertures of the cups and with the casing below the partition, and means for introducing a tanning liquid into the casing above the partition.

2. In a tanning machine of the character described, a casing having a plurality of bottoms providing a chamber therebetween, a header arranged within the chamber, draw off pipes connected with the header and leading into the lower portion of the casing at the upper bottom, a pipe connected with the header, and means to supply a tanning liquid into the upper portion of the casing.



3. In a tanning machine of the character described, an upstanding casing, a cover connected with the top of the casing and extending upwardly beyond the same, a substantially horizontal partition disposed between the casing and cover and provided upon its upper surface with a plurality of cups having their upper ends open with small tubes communicating with the interior of the cups and passing through the bottom wall of the partition, means for introducing a tanning liquid into the cover above the partition, a bottom closing the lower end of the casing, a false bottom arranged near and above the first named bottom and speced therefrom, a header disposed substantially centrally upon the first named bottom, pipes radiating from the header and having upstanding portions passing through the upper false bottom to communicate with the casing above it, a pump, a conduit connecting the intake end of the pump and the header, and a conduit connecting the outlet end of the pump with the tanning liquid supply means.

1,195,859. MACHINE FOR BRUSHING LEATHER. CARLETON RUHE, Olean, N. Y. Filed Dec. 2, 1915. Serial No. 64,756. (Cl. 149—19.)



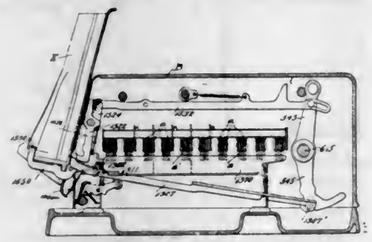
1. In a machine of the character described, a supporting structure, end rolls connected therewith, sprocket wheels arranged near the ends of the rolls and attached thereto for rotation therewith, an endless belt passed about the end rolls and having openings, sprocket chains secured to the inner side of the endless belt and engaging the sprocket wheels, rolls arranged beneath the upper portion of the endless belt and provided with prongs operating within the openings formed therein, sprocket wheels connected with the ends of the prong carrying rolls to turn therewith and engaging the sprocket chains, and rotatable brushes arranged above the upper portion of the endless belt and serving to act upon the stock or leather thereon and to hold the sprocket chains in engagement with the sprocket wheels of the prong carrying rolls.

2. In a machine of the character described, a supporting structure, a traveling support having openings formed therein, a sprocket chain extending longitudinally of the traveling support and attached thereto, rolls arranged beneath the traveling support and provided with prongs to operate within the openings formed therein, sprocket wheels connected with the ends of the rolls and engaging the sprocket chain, and brush means arranged above the traveling support to act upon the stock or leather placed thereon.

3. In a machine of the character described, a supporting structure, end rolls connected therewith, sprocket wheels connected with the opposite ends of each end roll, an endless belt passed about the end rolls and having openings formed therein, sprocket chains engaging the sprocket wheels and attached to the endless belt near its edges, prong carrying rolls arranged beneath the upper portion of the endless belt with the prongs operating within the openings of the endless belt, sprocket wheels secured to the opposite ends of the prong carrying rolls and engaging the upper portion of the sprocket chains, and rotatable brushes arranged near and above the upper portion of the endless belt.

4. In a machine of the character described, a supporting structure, end rolls connected therewith, sprocket wheels connected with the opposite ends of each end roll, an endless belt passed about the end rolls and having openings formed therein, sprocket chains engaging the sprocket wheels and attached to the endless belt near its edges, alternately arranged sets of plain and prong carrying rolls disposed beneath the upper portion of the endless belt with the prongs operating within the openings of the endless belt, sprocket wheels connected with the ends of the plain and prong carrying rolls and engaging the sprocket chains, and rotatable brushes arranged near and above the endless belt.

1,195,860. MONEY-PAYING MACHINE. GUSTAF RUNQUIST, Terre Haute, Ind., assignor to International Money Machine Company, Terre Haute, Ind. Filed Mar. 11, 1915. Serial No. 13,711. (Cl. 133—4.)



1. In combination, a coin holder, an ejector therefor, a pair of levers one of which co-acts with the ejector to shift the same whereby the number of coins ejected from the holder may be varied, a coin stop operable by the other of said levers, and an operating member movable between the levers to actuate the same in opposite directions.

2. In combination, a coin holder, a normally inoperative ejector therefor, means for causing ejecting movement of said ejector, means to render the ejector operative comprising a selecting device, means to shift the ejector whereby the number of coins ejected may be varied, a movable coin stop coöperative to prevent ejection of coins other than the one or more coins operated on by the ejector, levers for controlling the last mentioned movement of the ejector and for actuating the coin stop, and an operating member on said selecting device for actuating said levers.

3. In combination, a coin holder, a normally inoperative ejector therefor, means to impart ejecting movement to said ejector, a selecting device controlling the operativeness of the ejector, means to shift the ejector operable by said selecting device whereby to vary the number of coins acted on thereby, a coin stop for detaining from ejectment coins other than the one or more to be acted on by the ejector, and means on said selecting device operable incident to its movement for selecting the ejector to operate the coin stop and said ejector shifting means.

4. In combination, a coin holder, an ejector therefor, a lever engaging over said ejector, a pivoted coin stop in front of the coin holder, a second lever having engagement with said stop beneath the same, and means movable between the levers to cause movement of the same in opposite directions whereby to impart controlling movements to the ejector and the coin stop.

5. In replenishment signaling means for money paying machines, money holders, a signaling member, an operating member for said signaling member, a movable controlling device for maintaining the operating member inactive, ejecting mechanism associated with the holders adapted to normally operate the controlling device on each action of said mechanism, and members operable incident to exhaustion of coins from any holder to act on the controlling member to render the signal operating member operative.

[Claims 6 to 12 not printed in the Gazette.]

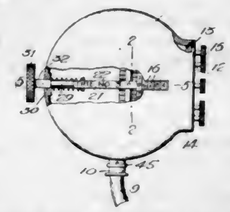
1,195,861. MANUFACTURE AND CONSTRUCTION OF COMMUTATORS. EDWARD F. SMITH, Cincinnati, Ohio, assignor to The Nell & Smith Electric Tool Co., Cincinnati, Ohio, a Corporation of Ohio. Filed July 16, 1914. Serial No. 851,389. (Cl. 200—12.)



1. The method of manufacturing commutators which consists of producing an integral cylindrical blank of metal which contains the metal for the segments and is provided with radially disposed spaces between the metal intended for said segments, of filling these spaces with insulating material and of removing the metal at the inner ends of these filled spaces so as to completely separate the segments from each other.

2. The method of manufacturing commutators which consists of producing an integral cylindrical blank of metal which contains the metal for the segments and is provided with radially disposed spaces between the metal intended for said segments, of filling these spaces with insulating material and of axially boring out said blank, the bore being of an extent to reach into the inner ends of the filled spaces so as to completely part the segments from each other.

1,195,862. AUTOMETER. MARVIN SMITHEY, Lawrenceville, Va. Filed Aug. 30, 1915. Serial No. 48,068. (Cl. 235—95.)



1. In a meter, a casing, a disk rotatably disposed within the casing, a plurality of shafts journaled at one end in the face of the disk, a series of number wheels carried by each of said shafts, each series of number wheels constituting a registering mechanism, an individual label for each registering mechanism, a central stub shaft journaled in said disk, connections between said stub shaft and

each of the first named shafts for imparting the movements of said stub shaft to said first named shafts, and means for rotating said disk to bring any one of said registering mechanisms and its associated indicator labels before said opening.

2. In a meter, a disk, a shaft journaled at the center of the disk, means for driving said shaft, a series of auxiliary shafts journaled in spaced relation on the disk at one face thereof, and extending laterally from the disk, each of said auxiliary shafts having a driving connection with the first named shaft, registering mechanism supported on each of said auxiliary shafts, a label secured to the disk and each registering device and forming an indicator for said device, a gear ring secured to the disk on one face thereof, a pinion meshing with the gear ring, a casing in which the disk is mounted and having an opening in its top for exposing said label and the registering device adjacent thereto.

3. In a meter, a disk, a shaft journaled at the axis of the disk, a series of auxiliary shafts journaled in spaced relation on the disk at one face thereof and extending laterally from the disk, each auxiliary shaft having a driving connection with the first named shaft, each auxiliary shaft supporting registering mechanism, a label secured to the disk at each registering device and forming an indicator for said device, a gear ring secured to the disk on one face thereof, a pinion meshing with the gear ring, a casing for the disk having an opening in its top for exposing any one of said labels and its associated registering device, a shaft secured to the pinion and extending outside of the casing, and having a head for permitting the shaft to be turned whereby the disk is rotated.

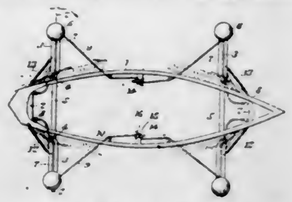
4. In a meter, a disk, a shaft journaled at the axis of the disk, a series of auxiliary shafts journaled in spaced relation on the disk at one face thereof and extending laterally from the disk, each auxiliary shaft having a driving connection with the first named shaft, each auxiliary shaft supporting registering mechanism, a label secured to the disk at each registering device and forming an indicator for said device, a gear ring secured to the disk on one face thereof, a pinion meshing with the gear ring, a casing for the disk having an opening in its top for exposing any one of said labels and its associated registering device, a shaft secured to the pinion and extending outside of the casing and having a head for permitting the shaft to be turned when the disk is rotated, and means for locking the shaft from movement.

5. In a meter, a disk, a shaft journaled at the axis of the disk, a series of auxiliary shafts journaled in spaced relation at equal distances from one another and at the same distance from the axis of the first named shaft, said auxiliary shafts being parallel with the first named shaft and being disposed on the disk at one face thereof, each auxiliary shaft having a driving connection with the first named shaft, each auxiliary shaft supporting registering mechanism, a label secured to the disk at each registering device and forming an indicator for said device, a gear ring secured to the disk on one face thereof, a pinion meshing with the gear ring, a casing for the disk having an opening in its top for exposing any one of said labels and its associated registering device, a shaft secured to the pinion and extending outside of the casing and having a head for permitting the shaft to be turned when the disk is rotated, and means for locking the shaft from movement.

1,195,863. SAFETY-BOAT. LESTER ROSELL SNOWDEN, Galesburg, Ill. Filed Dec. 1, 1915. Serial No. 64,533. (Cl. 9—3.)

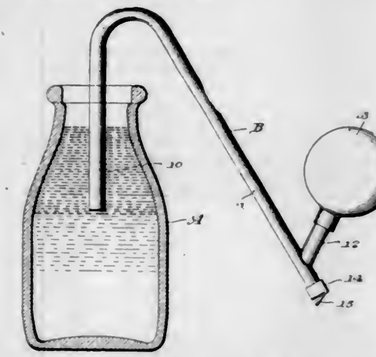
1. The combination with a boat, of wings pivotally connected thereto and adapted to swing outwardly to a position substantially perpendicular to the major axis of the boat, inflatable floats carried by the outer extremities of said arms, compressed air storage means, inflating tubes connecting said floats with the compressed air storage means, means for automatically swinging said wings to their operative position, and means for drawing said wings inwardly to a folded position.

2. The combination with a boat, of wings pivotally connected thereto and adapted to swing outwardly to a position substantially perpendicular to the major axis of the boat, inflatable floats carried by the outer extremities of said arms, compressed air storage means, inflating



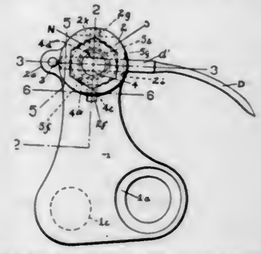
tubes connecting said floats with the compressed air storage means, means for automatically swinging the said wings to their operative position, means for drawing said wings inwardly to a folded position, and braces for sustaining said wings in their operative position.

1,195,864. SELF-CHARGING SIPHON. WILLIAM P. STARR, Philadelphia, Pa. Filed July 11, 1914. Serial No. 850,355. (Cl. 137—20.)



In combination with a siphon, a cylindrical cup completely closing the end of the longest limb of the siphon, said cup having the major portion of its bottom wall separated from the body of the cup.

1,195,865. NEEDLE-CLAMP. WILLIAM H. STEDMAN, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 10, 1913. Serial No. 805,766. (Cl. 112—37.)



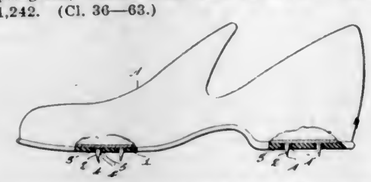
1. In a needle clamp for sewing machines, the combination of a carrier for the clamp, a clamp plate having a needle groove and a conical recess therein, a nut having a conical portion coöperating with the said conical recess in the clamp plate, a bolt coöperating with said nut and provided with a needle passage, means for maintaining a single definite position of the bolt with relation to the carrier, and means for preventing rotative movement of the clamp plate in either direction with relation to the carrier whereby the needle may be simultaneously centered and clamped.

2. In a needle clamp for sewing machines, the combination of a carrier for the clamp, a clamp plate having a needle groove and a conical recess therein, a nut having a conical portion coöperating with the said conical recess in the clamp plate, a bolt coöperating with the said nut, means for maintaining a single definite position of the bolt with relation to the carrier, and means for preventing the rotative movement of the clamp plate in either direction with relation to the carrier; whereby the needle may be simultaneously centered and clamped.

3. In a needle clamp for sewing machines, the combination of a carrier having a portion against a face of which the needle is clamped, a bolt passing through the said portion and projecting from the said face thereof, a circular head on the said bolt, the said head having a lateral integral projection on the periphery thereof, a circular recess in the carrier for receiving the head of the bolt, an indentation in the circumference of the said recess for receiving the projection on the bolt head, whereby the bolt is held against rotative movement, a grooved clamp plate encircling the bolt, a nut coöperating with the said bolt to force the clamp plate toward the face on the carrier against which the needle is clamped, means for centering the clamp plate and means for holding the same against rotative movement.

4. In a needle clamp for sewing machines, the combination of a carrier having a bore therethrough, a recess in the carrier extending across the said bore, a clamp plate having a bore therethrough, a projection on the said clamp plate extending radially with relation to the bore in the said plate, a bolt passing through the bores in the carrier and in the clamp plate respectively and having a needle passage therein and means interposed between the bolt and the clamp plate whereby the clamp plate is simultaneously centered and forced against the carrier, substantially as and for the purposes herein set forth.

1,195,866. ICE-CREEPER. CHARLES H. STEPHAN, Springfield, Ohio. Filed Feb. 29, 1916. Serial No. 81,242. (Cl. 36—63.)

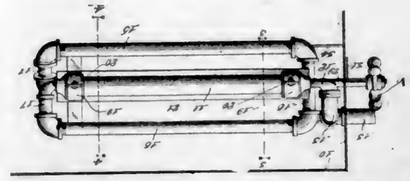


1. An ice creeping attachment for shoes comprising an outer sole formed of flexible material, an upstanding gripping flange formed on the edge of the outer sole, said flange being inclined inwardly and having its upper edge flared outwardly, and a rigid inner sole having its edges engaging said flange, and spurs formed on the bottom of the inner sole and extending through and beyond said outer sole.

2. An ice creeping attachment for shoes comprising an outer sole formed of inflexible material, and having upward extending portions adapted to contact with the edges of the tread surface of a shoe on which the device is worn, a rigid inner sole having its edges engaging the upward extending portions of the outer sole, and spurs formed on the bottom of the inner sole and extending through and beyond the outer sole.

1,195,867. FUEL VAPORIZER AND BURNER. LUSTER STILES, Jr., Brandenburg, Ky., assignor of one-half to John Henry Cain, Sr., Brandenburg, Ky. Filed Mar. 10, 1915. Serial No. 13,431. (Cl. 158—63.)

1. In a fuel vaporizing burner, an inlet for liquid fuel, a burner pipe for both liquid and vapor fuel, parallel longitudinal pipes connected with one another at one end, means for connecting the remaining end of one of said pipes with said inlet, connections between the corresponding end of the remaining pipe of said parallel pipes and the burner pipe, said burner pipe having burner openings formed therein, a rotary valve within said burner pipe and having openings adapted to register at times with the said burner openings, means for controlling said valve, means for indicating the position of said valve, and a burner tray suspended from said burner pipe.



2. In a fuel vaporizing burner, an inlet for liquid fuel, an upper pipe connected with said inlet, a parallel pipe connected with the first-mentioned pipe and in a plane slightly below the latter, a third parallel pipe connected with the second-mentioned pipe and in a plane below the latter, said second and third pipes being positioned to opposite sides of the first-mentioned pipe, a flame deflector secured beneath said first-mentioned pipe, a burner pipe directly beneath said deflector and connected with the third parallel pipe, said burner pipe having burner openings formed in its upper face, means for controlling the discharge of fuel from said burner openings, and a burner tray positioned beneath said burner pipe.

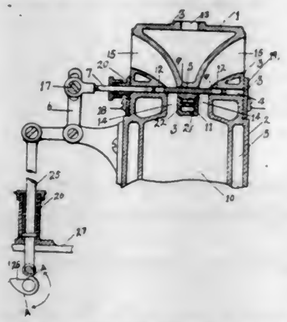
3. In a fuel vaporizing burner, a main pipe, a fuel supply pipe connected with one end of said main pipe, connected side pipes parallel with the said main pipe, one of said side pipes being connected with said main pipe, said side pipes and said main pipe being in different planes, a lower burner pipe connected with one of said side pipes, said lower burner pipe being provided with burner openings in its upper face, a tapering valve-member within said burner pipe and adapted to open one or more of said burner openings, means for controlling said valve member, means for indicating the position of said valve member, a lined burner tray beneath said burner pipe, connections between said tray and said burner pipe, a deflector, and means for securing said deflector beneath said main pipe.

4. In a fuel vaporizing burner, a plurality of longitudinal parallel pipes, means for connecting the corresponding ends of a pair of said pipes, means for connecting the opposite end of one of said pair with the corresponding end of the remaining pipe, a fuel inlet pipe connected with the opposite end of said remaining pipe, a burner pipe below said remaining pipe, means for connecting the opposite end of the other pipe of said pair with said burner pipe, said burner pipe having burner openings, a valve member having elongated transverse openings formed therein and offset with respect to one another to connect with one or more of said burner openings, means for controlling said valve member, an indicating member mounted upon said means, a burner tray beneath said burner pipe, and means for deflecting flames from said burner and directing the same toward the pair of parallel pipes to vaporize the fuel passing through the same.

5. In a fuel vaporizing burner, a fuel inlet pipe, an upper pipe connected by its forward end to said liquid fuel inlet pipe, a side pipe connected by its rear end to the rear end of said upper pipe, an opposite side pipe, means for connecting the forward ends of said side pipes, a lower burner pipe beneath said upper pipe, means for connecting the rear end of said lower burner pipe with the rear end of the second-mentioned side pipe, said lower burner pipe having burner openings formed therein, means for controlling the escape of fuel from said burner openings, a burner pan beneath said lower burner pipe, and a deflector carried by said upper pipe.

[Claims 6 to 8 not printed in the Gazette.]

1,195,868. VALVE FOR INTERNAL-COMBUSTION ENGINES. WALTER E. TAFT, Providence, R. I. Filed Mar. 1, 1915. Serial No. 11,121. (Cl. 123—75.)



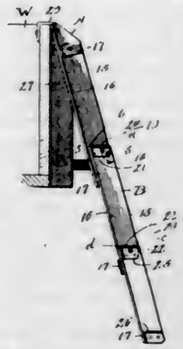
1. In an internal combustion engine, a cylinder, a removable valve chamber outside of the cylinder chamber, water chambers surrounding said valve chamber, ports for inlet and exhaust, a reciprocating valve arranged within said valve chamber whereby only the back of the valve covering the ports between the valve chamber and the cylinder chamber shall be in contact with or exposed to the hot gases, during the explosion stroke, said valve having its face outwardly, a shoe bearing against the back of the valve, a spring at the back of the shoe to force the valve to its seat, a valve stem connected to the valve, and said valve stem connected with operative means from the exterior to impart a reciprocating movement to the valve and allow the valve to remain stationary during the compression and firing stroke of the engine.

2. In an internal combustion engine, a cylinder, a removable valve chamber outside of the cylinder chamber, water chambers surrounding said valve chamber, ports for inlet and exhaust, a valve arranged within said valve chamber for reciprocating motion, a shoe bearing against the back of the valve, a spring bearing against the back of the shoe, means for causing the spring to have more or less tension to force the shoe against the back of the valve and imparting such force to the valve against its seat, a valve stem connected to the valve, said valve stem connected with operative means from the exterior to impart a reciprocating movement to the valve to register and unregister with the ports and allow the valve to remain stationary during the compression and explosion stroke of the engine.

3. In an internal combustion engine, the combination of a ported cylinder, a removable valve chamber, a valve arranged in the valve chamber, a shoe bearing upon the back of the valve, a spring bearing upon the back of the shoe, means for compressing the spring for more or less force upon the back of the shoe, a valve stem connected to the valve, said stem connected with movable parts from the exterior to give an operative reciprocating motion to the valve, said valve having ports to be brought in and out of register with the ports in the cylinder as the valve is reciprocated, said valve having its seat outwardly and remaining in a stationary position covering the ports during the compression and explosion strokes and held to its seat by the action of the spring, force of the compression or explosion upon the back of the valve and operative means for movement of the valve when released from the excess force of the compression and explosion.

1,195,869. WAGON-STEP. EDGAR TAYLOR, Demorest, Ga. Filed Jan. 12, 1916. Serial No. 71,749. (Cl. 21—55.)

1. In a device of the class described, a pair of sections each comprising side rails having laterally extending inherently resilient flanges, and a hinge member consisting of a rod extending through the side members of the respective sections, the parts being so proportioned and arranged that the flanges of the side members of one section will be located in the path of the corners of the side members of the other section when the latter is folded about the axis of the pivotal connecting member.



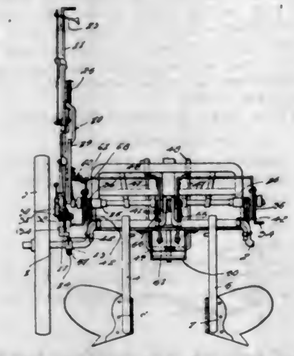
2. In a device of the class described, a pair of sections each comprising side rails having laterally extending inherently resilient flanges, and a hinge member consisting of a rod extending through the side members of the respective sections, the edges of the side members of one section being cut off obliquely near the pivotal connecting member to produce corners that will forcibly contact with the inherently resilient flanges of the side members of the other section when folded about the axis of the pivotal connecting member.

3. In a device of the class described, a plurality of sections each comprising side members having laterally extending inherently resilient flanges, and means including braces lying flatwise on the laterally extending flanges whereby the side members of the respective sections are connected and spaced apart, and pivotal members extending through the side members of the respective sections whereby said sections are hingedly connected together, the parts being so arranged and proportioned that the flanges of the side members of one section will be located in the path of the corners of the side members of the next subjacent section to be forcibly depressed thereby when the sections are folded or unfolded.

4. In a device of the class described, a plurality of sections each comprising side members having laterally extending inherently resilient flanges, and means including braces lying flatwise on the laterally extending flanges whereby the side members of the respective sections are connected and spaced apart, and pivotal members extending through the side members of the respective sections whereby said sections are hingedly connected together, the parts being so arranged and proportioned that the flanges of the side members of one section will be located in the path of the corners of the side members of the next subjacent section to be forcibly depressed thereby when the sections are folded or unfolded; some of said sections being provided with steps having downturned flanges secured on the inner faces of the side members thereof to assist in connecting and spacing said side members.

5. In a device of the class described, a plurality of sections each comprising side members having laterally extending flanges, said side members being connected and spaced apart, pivot members extending through the side members of the respective sections and whereby said sections are hingedly connected together, some of said sections being provided with steps whereby the side members thereof are also connected and spaced apart, supporting members secured externally on the side members of the topmost section, said supporting members having laterally extending flanges with terminal hooks at their upper ends, and braces whereby the lower ends of the side members of the top section are rigidly connected with and spaced from the supporting members with relation to which the said top section is thus secured in a downwardly and outwardly inclined position, each section being foldable between the side members of the section next above and the folding movement being limited by the laterally extending flanges of such side members.

1,195,870. FOOT-TRIP ATTACHMENT FOR SULKY-PLOWS. HAROLD L. TERHUNE, Deans, N. J. Filed Dec. 1, 1915. Serial No. 64,507. (Cl. 97—55.)



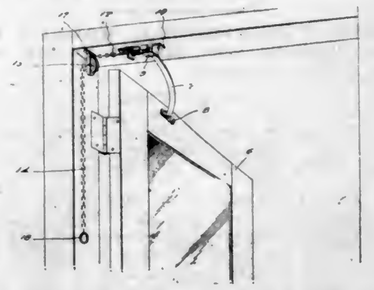
1. In a sulky plow structure, the combination with a plow controlling hand lever having a slidable dog carried thereby for engagement with a quadrant for arresting the swinging movement of said lever, a slidable bar carried by said lever and connected to said dog, of a pivotally mounted foot lever, a plurality of bars connected to said pivotally supported foot lever, a U-shaped strap connected to certain of said bars and to said slidably supported bar for sliding said slidable bar and said dog mechanism upon operation of said foot lever for moving said dog out of engagement with said quadrant to permit of the swinging movement of said lever.

2. In a sulky plow structure, the combination with a plow controlling hand lever having a slidable dog carried thereby for engagement with a quadrant for arresting the swinging movement of said lever, a slidable bar carried by said lever and connected to said dog, of a pivotally mounted foot lever, a plurality of bars connected to said pivotally supported foot lever, a U-shaped strap connected to certain of said bars and to said slidably supported bar for sliding said slidable bar and said dog mechanism upon operation of said foot lever for moving said dog out of engagement with said quadrant to permit of the swinging movement of said lever, and a spring connected to the lower end of said lever for imparting an initiative downward movement of the lever upon the sliding operation of said dog.

3. In a sulky plow structure, the combination with a plow controlling hand lever having a slidable dog carried thereby for engagement with a quadrant for arresting the swinging movement of said lever, a slidable bar carried by said lever and connected to said dog, of a pivotally mounted foot lever, a plurality of bars connected to said pivotally supported foot lever, a U-shaped strap connected to certain of said bars and to said slidably supported bar for sliding said slidable bar and said dog mechanism upon operation of said foot lever for moving said dog out of engagement with said quadrant to permit of the swinging movement of said lever, a spring connected to the lower end of said lever for imparting an initiative downward movement to the lever upon the sliding operation of said dog, and means carried by said quadrant for limiting the downward movement of said lever.

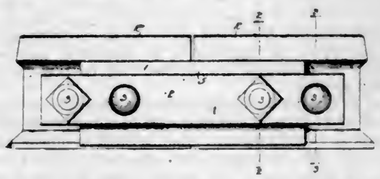
4. In a sulky plow structure, the combination, with a plow controlling hand lever having a slidable dog carried thereby for coaction with a quadrant for controlling the swinging movement of the lever, of a stop mechanism carried by said quadrant for limiting the downward swinging movement of said lever, said stop mechanism including an angle plate attached to said quadrant, and a slidable angled rod carried by said plate and adapted for projection through said quadrant for having its end positioned in the path of said lever, and a spring coiled about said rod for normally holding it in the path of said lever.

1,195,871. AUTOMATIC DOOR-STOP. CHARLES P. THOMPSON, Brockton, Mass. Filed Apr. 11, 1916. Serial No. 90,352. (Cl. 16—84.)



An automatic door stop, comprising a guide member adapted to be secured to the head of a door frame, an arcuate shaped arm adapted to be pivoted to a swinging door and slidable through the guide and having a notch near its free end, a latch pin slidable in the guide to intersect the path of movement of the arm therein for engagement in the notch, and a spring surrounding the latch pin and acting upon the guide and said pin to automatically move the latter into latching engagement in the notch in the arm, said pin being arranged in the guide parallel with its base portion and lying in the same plane with the arm.

1,195,872. RAIL-JOINT. WILLIAM P. THOMSON, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed May 24, 1915. Serial No. 30,137. (Cl. 289—9.)



1. A rail joint including, in combination, the rails, a splice bar having a reinforced head portion having a continuous bearing under the heads of both rails, and the joint bolts grouped in distinctly isolated bolting units located in areas at a distance from the rail ends, the bolts of each unit being disposed closer together than the distance between the innermost bolt of each unit and the adjacent rail end.

2. A rail joint including, in combination, the rails, a splice bar having a reinforced head portion having a continuous bearing under the heads of both rails, and the joint bolts grouped in distinctly isolated bolting units located in areas at a distance from the rail ends, the bolts of each unit being disposed closer together than the distance between the innermost bolt of each unit and the adjacent rail end thereby leaving a relatively extended unbolted area within the middle of the joint between the inner bolts of the opposite units.

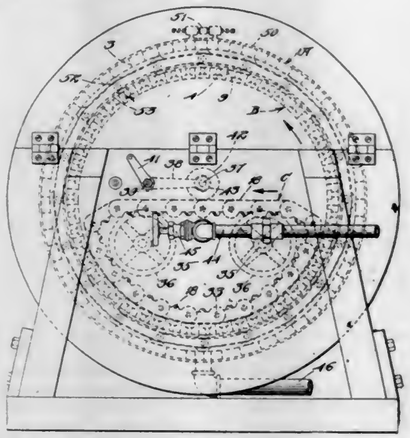
3. A rail joint including the rails, a splice bar, an outer clamping bar, and the joint bolts grouped into distinctly isolated bolting units located in bolting areas at a distance from the rail ends, certain of the bolts extending through only the clamping bar and the rails.

4. A rail joint including the rails, a splice bar, an outer clamping bar, and the joint bolts grouped into distinctly isolated bolting units located in bolting areas at a distance from the rail ends.

5. A rail joint including the rails, a splice bar, an outer clamping bar, and the joint bolts grouped into separate bolting units located in bolting areas at a distance from the rail ends leaving a relatively extended unbolted area within the middle portion of the joint:

[Claims 6 to 12 not printed in the Gazette.]

1,195,873. WASHING-MACHINE. WINFIELD S. THURLOW, Dorchester, Mass. Filed Feb. 19, 1916. Serial No. 79,257. (Cl. 68—18.)



1. In a washing machine, the combination of a rotary drum mounted on a longitudinal axis, said drum being open at one end and closed at the other end, a casing within which said drum is mounted, mechanism within said inner drum for squeezing the clothes, said casing being provided with an entrance in proximity to the open end of the drum through which the clothes may be introduced into the drum and delivered to the washing mechanism while the machine is in operation, and through which same opening the clothes may be taken out after being washed.

2. In a washing machine, the combination with a drum, of an endless carrier within said drum, said carrier being mounted in such manner that it has an upper run and an under run, the upper run being substantially horizontal, the under run of the carrier being in close proximity to the inner periphery of the drum, the drum having an entrance opening through which the clothes to be washed may be introduced and deposited upon the carrier on its upper run, said carrier being constructed and arranged to carry the clothes down and squeeze them between the under run of the carrier and the inner periphery of the drum, thence over the top run and again on the under run.

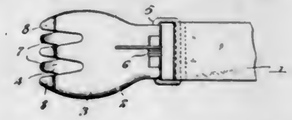
3. In a washing machine, the combination of two drums, one within the other, said inner drum being rotatable, and an endless carrier within said inner drum, said carrier consisting of slats arranged parallel with each other and pivotally connected together, and so constructed and arranged that the carrier will assume a substantially semi-cylindrical form, the curved portion conforming to the lower part of the inner drum.

4. In a washing machine, the combination of two drums, one within the other, said inner drum being rotatable and an endless carrier within said inner drum, said carrier consisting of slats arranged parallel with each other and pivotally connected together, and so constructed and arranged that the carrier will assume a substantially semi-cylindrical form, the curved portion conforming to the lower part of the inner drum, said carrier being driven by frictional engagement with the rotary drum and carrying the clothes between the carrier and the drum on the under run of the carrier.

5. In a washing machine, the combination of two drums, one within the other, said inner drum being rotatable, and an endless carrier within said inner drum, said carrier consisting of slats arranged parallel with each other and pivotally connected together, and so constructed and arranged that the carrier will assume a substantially semi-cylindrical form, the curved portion conforming to the lower part of the inner drum, said carrier being driven by frictional engagement with the rotary drum and carrying the clothes between the carrier and the drum on the under run of the carrier, and yielding pressure rolls, which squeeze the clothes against the carrier on the upper run of the carrier.

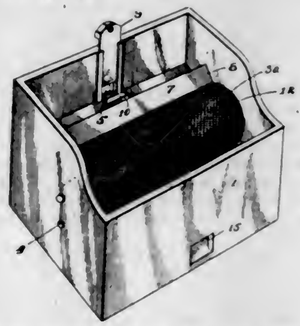
[Claims 6 to 13 not printed in the Gazette.]

1,195,874. BEDCLOTHES-HOLDER. JENNIE A. THURSTON, Winthrop, Mass. Filed Mar. 12, 1915. Serial No. 14,004. (Cl. 24—253.)



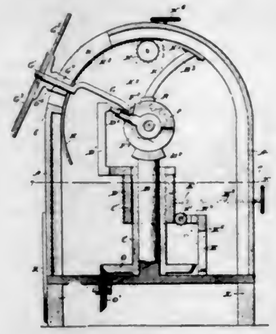
The herein described clasp comprising a pair of longitudinally curved jaws having their concave faces opposed, said jaws being pivotally connected together at one end and having at the opposite end tapered fingers arranged in staggered relation so that when the jaws are closed the fingers of the jaws cross and those of one jaw will be arranged in the spaces between the fingers of the other jaw, and a coiled spring on the pivot of the jaws and having arms arranged on the outer sides of the jaws.

1,195,875. SEPARATOR. ALBERT W. TOHMS, Iron Mountain, Mich. Filed Nov. 12, 1915. Serial No. 61,134. (Cl. 92—36.)



A separator of the character described comprising a separating chamber, a rotary screen drum arranged within said chamber, a receiving chamber arranged in advance of the drum and substantially below the horizontal center thereof, and adapted to receive the material from the periphery of the drum, said receiving chamber being provided with an outlet below the level of the top thereof, a distributing chamber arranged in rear and above the horizontal center of the drum and having an inlet at its outer side, said distributing chamber being provided with a transversely extending imperforate bar at its inner side forming a stationary dam wall having a concaved inner surface arranged to overhang a portion of the periphery of the drum and having an upper surface sloping downwardly and inwardly from its upper rear edge toward the drum, and means for controlling the supply of the material through said inlet.

1,195,876. AZIMUTH INSTRUMENT. PELOPIDAS D. TSUKALAS, South Bethlehem, Pa. Filed Jan. 9, 1913. Serial No. 741,021. (Cl. 88—25.)



1. In a device of the class described, the combination of an element adapted to rotate about a fixed axis, a slotted spherical means centered in said fixed axis and adapted to rotate about a second axis intersecting said fixed axis, a device connected to said element and also pivoted at the center of said slotted spherical means, said device being adapted to move along the slot of said spherical means as said element rotates whereby the spherical means is rotated.

2. In a device of the class described, the combination of an element adapted to rotate through a complete revolution about a fixed axis, a spherical means centered in said fixed axis and adapted to rotate about a second axis intersecting said fixed axis, a spindle connected to said spherical means and adapted to be rotated thereby, a dial and a pointer for indicating the movement of said spindle by said spherical means, and a device connecting said element to said spherical means whereby the spherical means may be rotated as said element rotates through a complete revolution.

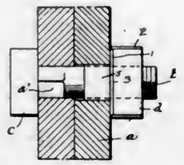
3. In an azimuth instrument, the combination of an element adapted to be rotated about a fixed axis at a uniform speed through a complete revolution in twenty-four hours and adapted to be adjusted to a predetermined declination, a slotted spherical device centered in said axis and adapted to rotate about a second axis intersecting said fixed axis and adjustable to a predetermined latitude, a spindle connected to said spherical device and adapted to rotate about said second axis, a dial, a pointer movable by said spindle and adapted to indicate the azimuth on said dial, and means having one end pivoted at the center of said spherical device and the other end connected to said element, whereby the spherical device and said spindle may be rotated by said element.

4. In an azimuth instrument, the combination of a suitable arc, a spindle movable along the arc and adapted to be set in a position corresponding to a predetermined degree of latitude and rotatable about an axis passing through the center of the arc, a spherical device rigidly connected to the spindle and mounted at the center of the arc, said spherical device having a slot therein, a member pivoted at the center of the spherical device and movable in said slot, means for rotating said pivoted member at a uniform rate whereby said spindle connected to the spherical device is rotated, and means whereby said pivoted member may be set in a position corresponding to a predetermined degree of declination.

5. In an engineering instrument, the combination of a suitable arc, an element adapted to be moved on said arc to a position corresponding to a predetermined latitude, a dial supported on said element, a spindle mounted in the element having a pointer attached thereto movable over the dial, and means adapted to rotate the spindle at a rate corresponding to the change in azimuth.

[Claims 6 to 19 not printed in the Gazette.]

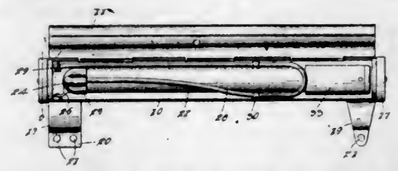
1,195,877. NUT OR BOLT LOCK. RUFUS J. TURNER, Fort McPherson, Ga. Filed Nov. 27, 1914. Serial No. 874,253. (Cl. 151—53.)



1. A bolt and nut lock comprising a body portion, said body portion having a pair of nut locking elements adapted to be bent to project beyond the outer face of said body portion, said body portion having a bolt receiving aperture, a pair of flanges on the inner face of said body portion, and an angular box or bushing carried by said flanges.

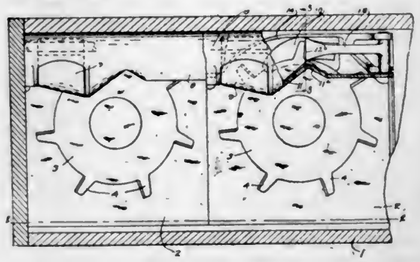
2. A bolt and nut lock comprising a rectangular body portion, a pair of nut locking elements projecting beyond the outer face of said body portion from opposite edges thereof, a pair of flanges projecting from the other edges of said body portion and lying in engagement with the inner face of said body portion, and an angular box or bushing carried by said flanges, said flanges strengthening and reinforcing the body portion.

1,195,878. PUMP AND SUPPORT THEREFOR. CZESLAW URBANSKI, Buffalo, N. Y. Filed June 17, 1914. Serial No. 845,626. (Cl. 230—27.)



In combination, a casing including a body and a cover hinged thereto, means for securing said cover in closed position, means independent of said cover for securing said body to the frame of a vehicle, a pump, a longitudinal extension on said pump, means pivotally securing said extension to said casing whereby said pump may be swung outwardly into operative position for use, a flexible tube secured to said pump, and a spring secured in said body for securing said pump and tube in position.

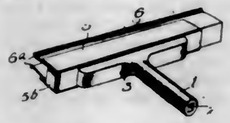
1,195,879. FERTILIZER-DISTRIBUTER. WILLARD A. VAN BRUNT, Horicon, Wis., assignor to The Van Brunt Manufacturing Company, Horicon, Wis., a Corporation of Wisconsin. Filed Oct. 2, 1914. Serial No. 864,603. (Cl. 111—34.)



In a fertilizer distributer, a hopper, a housing in said hopper having an inlet opening, said hopper having a discharge opening beneath said housing, a rotatable feed

wheel, peripheral fingers on said wheel, said fingers and portions of the web of said wheel being arranged to rotate beneath said housing, a curved wall about said discharge opening, an inclined wall on said housing extending toward said curved wall, and a swinging knocker arm in said housing with the free end thereof in line with said discharge opening and in the path of said fingers and also occupying the space between said curved and inclined walls.

1,195,880. SKATE-SHARPENER. JOHN VAN RADEN and NORMAN VAN RADEN, Melvin, Minn. Filed Apr. 3, 1916. Serial No. 88,497. (Cl. 76—83.)



1. A tool of the character described, including a T-shaped stock, an elongated jacket having the base thereof secured to the base of the T-shaped stock, said jacket being open at the top and being formed with stiff spring sides, a sharpening file, and a file receiving clip of U-shaped cross section, the edges of the clip being converged over the file to form a skate guide, and said clip being received within the jacket and forcibly gripped by the spring sides thereof so as to lock the file securely in operative position.

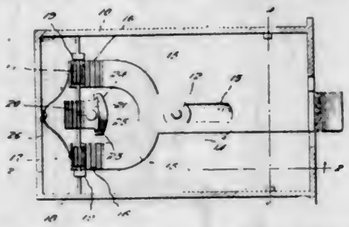
2. A tool of the character described, including a T-shaped stock, an elongated jacket having the base thereof secured to the head of the T-shaped stock, said jacket being open at the top and at one end thereof and being formed with stiff spring sides, the opposite end of the jacket being provided with a tongue which terminates short of the ends of the sides, a sharpening file, and a sheet metal clip receiving the file and having a U-shaped cross section, the sides of the clip being converged over the file to form a skate guide, and said clip being adapted to be inserted within the jacket with one end thereof in engagement with the before mentioned tongue, the sides of the jacket then forcibly engaging the clip and causing the same to securely grip the file.

3. A tool of the character described, including a T-shaped stock, an elongated jacket having the base thereof secured to the base of the T-shaped stock, said jacket being open at the top thereof and being formed with stiff spring sides, a sharpening file, a file receiving clip of U-shaped cross section, the edges of the clip being converged over the file to form a skate guide, and said clip being adapted to be inserted within the jacket with the sides of the jacket forcibly engaging the clip and causing it to securely grip the file, and means for locking the clip in position within the jacket.

4. A tool of the character described, including a T-shaped stock, an elongated jacket having the base thereof secured to the base of the T-shaped stock, said jacket being open at the top and at one end thereof and being formed with stiff spring sides, the opposite end of the jacket being provided with a tongue which carries an inwardly projecting lug at a point adjacent to the base thereof, a sharpening file, and a file receiving clip of U-shaped cross section, the edges of the clip being converged over the file to form a skate guide, said clip being adapted to be inserted within the jacket with one end thereof received under the before mentioned lug of the end tongue, the sides of the jacket then forcibly engaging the clip and causing the same to securely grip the file, and a spring tongue upon the clip for engaging the end of the jacket opposite to that provided with the tongue.

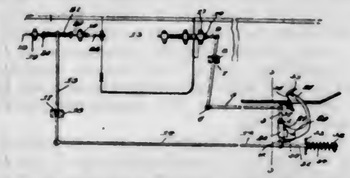
1,195,881. LATCH. YSBRAND H. VAN WETZINGA and JOHN DONKER, Grand Rapids, Mich. Filed Mar. 11, 1916. Serial No. 83,575. (Cl. 70—42.)

A latch of the character described, comprising a casing having an opening in one side, a bolt slidable in the casing and through one end thereof and having an elongated slot, a fork on the inner end of the bolt and having rack teeth on the limbs thereof, a guide carried by the casing and working in the slot to assure a straight line movement of said bolt, a shaft journaled in the casing above the fork, rack gears on the shaft, two of said gears meshing with the rack teeth on the limbs of the fork, a guide member in the casing between the limbs of the fork and



having a dove-tailed groove, a tooth rack meshing with the remaining gear and having a portion thereof correspondingly shaped with the dove-tailed groove for sliding engagement therein, a push button on the last named rack and extended exteriorly of the casing through the opening in the side thereof, and a leaf spring fixed medially thereof to the casing and having its free ends working against the limbs of the fork.

1,195,882. AUTOMATIC DOOR-RELEASER. HERBERT D. WEAR and FRANK J. MAGINNIS, Lake City, Minn., assignors of one-third to Fred J. Luth, Lake City, Minn. Filed Apr. 18, 1916. Serial No. 91,945. (Cl. 268—5.)



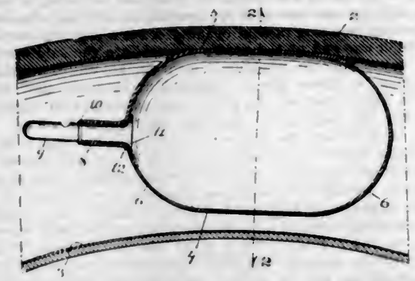
1. A door operating mechanism including a shaft, an operating member mounted thereon, rods connected to the operating member on the respective sides of the shaft, an unlatching mechanism connected to one rod, and a spring tensioning member connected to the other rod, a door swinging mechanism connected to the spring tensioning mechanism and operable solely thereby, and a pedal to engage and actuate the operating member.

2. A door operating mechanism including a shaft, an operating member mounted thereon, rods connected to the operating member on the respective sides of the shaft, an unlatching mechanism connected to one rod, and a spring tensioning member connected to the other rod, a door swinging mechanism connected to the spring tensioning mechanism and operable solely thereby, and a pedal to engage and actuate the operating member, means for returning the operating member to normal position.

1,195,883. LEAK-ALARM FOR PNEUMATIC TIRES. GEORGE W. WELLS, Amesbury, Mass., assignor to Walker-Wells Company, Amesbury, Mass., a Corporation of Massachusetts. Filed Feb. 17, 1916. Serial No. 78,942. (Cl. 116—1.)

1. A leak alarm for pneumatic tires, comprising a compressible member located within the inner tube of the tire, said member having an alarm device located within the inner tube and operable to sound the alarm upon compression of said member by deflation of the tire.

2. A leak alarm for pneumatic tires, comprising a compressible rubber bulb located within the inner tube of the tire, said bulb having an alarm device located within the inner tube and operable to sound the alarm upon compression of said bulb by deflation of the tire.

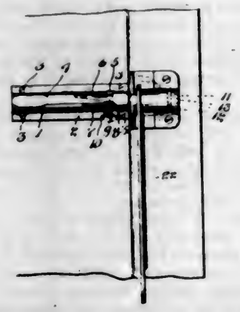


3. A leak alarm for pneumatic tires, comprising a compressible rubber bulb located within the inner tube of the tire, said bulb having an outwardly extending neck, and a detachable alarm device engaging said neck, located within the inner tube and operable to sound the alarm upon compression of said bulb by deflation of the tire.

4. A leak alarm for pneumatic tires, comprising a compressible rubber bulb located within and connected to the inner tube of the tire and of less diameter than that of said tube, said bulb having at one end an alarm device located within the inner tube and operable to sound the alarm upon compression of said bulb by deflation of the tire.

5. A leak alarm for pneumatic tires, comprising a compressible rubber bulb located within and connected to the inner tube of the tire, and of less diameter than that of said tube, said bulb having at one end an outwardly extending neck, and a detachable alarm device engaging said neck, located within the inner tube and operable to sound the alarm upon compression of said bulb by deflation of the tire.

1,195,884. DOOR AND WINDOW FASTENER. WILLIAM H. L. WELLS, San Francisco, Cal. Filed May 20, 1916. Serial No. 98,885. (Cl. 16—81.)



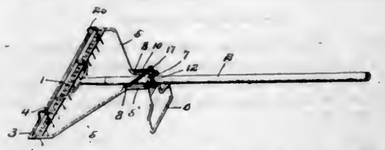
1. In a fastener of the class described, a casing having a guide element, a bolt mounted for sliding movement in the guide element, means to secure the bolt in adjusted position in combination with a keeper to receive the bolt, and a link bar pivotally mounted on the keeper, said lever bar and bolt having devices adapting the link bar to be attached to and detached from the bolt, the said keeper having a cylindrical socket portion for the reception of the bolt and the said link bar having a pivotal opening through which said cylindrical socket portion of the keeper extends.

2. In a fastener of the class described, a casing having a guide element, a bolt mounted for sliding movement in the guide element, means to secure the bolt in adjusted position in combination with a keeper to receive the bolt, and a link bar pivotally mounted on the keeper, said lever bar and bolt having devices adapting the link bar to be attached to and detached from the bolt, the said keeper having a cylindrical socket portion for the reception of the bolt and the said link bar having a pivotal opening through which said cylindrical socket portion of the keeper extends, said keeper comprising a pair of members detachably secured together and the said cylindrical socket member comprising sections with which said keeper members are respectively provided.

3. In a fastener of the class described, a casing having a guide element, a bolt mounted for sliding movement in the guide element, means to secure the bolt in adjusted position in combination with a keeper to receive the bolt, and a link bar pivotally mounted on the keeper, said lever bar and bolt having devices adapting the link bar to be attached to and detached from the bolt, the said keeper having a cylindrical socket portion for the reception of the bolt and the said link bar having a pivotal opening through which said cylindrical socket portion of the keeper extends, said keeper comprising a pair of members detachably secured together and the said cylindrical socket member comprising sections with which said keeper members are respectively provided, said sectional socket portions being provided with coengaging shoulders.

4. In a fastener of the class described, a casing having a guide element, a bolt mounted for sliding movement in the guide element, means to secure the bolt in adjusted position in combination with a keeper to receive the bolt, and a link bar pivotally mounted on the keeper, said lever bar and bolt having devices adapting the link bar to be attached to and detached from the bolt, the said keeper having a cylindrical socket portion for the reception of the bolt and the said link bar having a pivotal opening through which said cylindrical socket portion of the keeper extends, and the said keeper having a rib to bear against the link bar and prevent the latter from bending.

1,195,885. CLEANING DEVICE FOR RAKES. JOSEPH P. WELSCH, Nokomis, Ill. Filed Mar. 28, 1916. Serial No. 87,267. (Cl. 55—146.)



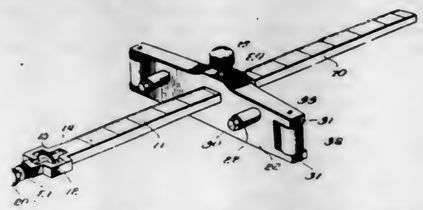
In combination with a rake having a handle, of a slotted plate receiving the teeth of the rake, inwardly extending angular arms formed at the end of the plate, said arms having their ends formed with an angular ball-shaped connecting member, a divided sleeve upon the handle having inturned teeth, means for connecting the members of the sleeve to bind the same upon the handle to force the teeth thereof into the handle, laterally extending axles upon the sleeve received in bearings in the arms, and means for securing the arms to the said axles, said sleeve including an upstanding ear, and spring members connected with the ear and to each of the arms, as and for the purpose set forth.

1,195,886. COMBINED MARKING-GAGE AND COMPASSES. GEORGE F. WHEELER, Lilydale, Saskatchewan, Canada. Filed Oct. 20, 1914. Serial No. 867,680. (Cl. 33—42.)

1. A device of the character described including a support, a rotatable marking element having a bearing in the support, and means carried by the support and providing a bearing for the marking element coacting with said first mentioned bearing, the said means being adjustable upon the support for binding the marking element between the said means and the support.

2. A device of the character described including a support, a marking element carried thereby and having a bearing in the support, and means adjustable upon the

support to provide a bearing for the marking element coacting with said first mentioned bearing for rotatably supporting the marking element at spaced points between the said bearing and the support.



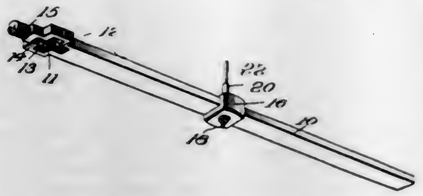
3. A device of the character described including a support, a marking element carried thereby and provided with trunnions, and a pin carried by the support and engaging one of said trunnions with the other of said trunnions engaging the support for rotatably supporting the marking element.

4. A device of the character described including a stock having an opening formed therein, a marking element rotatably mounted in said opening, said marking element including a disk having trunnions formed thereon with one of said trunnions engaging one wall of said opening, means adjustable upon the opposite wall of said opening and engaging the other trunnion of said disk, and a guide block carried by the stock and adapted to cooperate with said marking element.

5. A device of the character described including a stock, a marking element carried thereby, means adjustable upon the stock to coöperate therewith for suspending the marking element therebetween and the stock, locking means adjustable upon said first mentioned means and adapted to engage the stock for maintaining said first mentioned means in adjusted position, and a guide block carried by the stock and adapted to coöperate with said marking element.

[Claim 6 not printed in the Gazette.]

1,195,887. COMPASSES. GEORGE F. WHEELER, Lilydale, Saskatchewan, Canada. Original application filed Oct. 20, 1914, Serial No. 867,680. Divided and this application filed Sept. 9, 1915. Serial No. 49,798. (Cl. 33—27.)



1. A device of the character described including a bar, a marking element carried by the bar, a sleeve movable longitudinally upon the bar, a pivot stud connected to said sleeve, and a pin carried by the sleeve and terminating in a set screw adjustable upon the sleeve to engage the bar for holding the sleeve in fixed position with the said pin adapted to provide a handle for supporting the bar in working position co-incident with the movement of the said bar for swinging the marking element about said stud.

2. A device of the character described including a bar, a marking element carried thereby, a sleeve movable longitudinally upon the bar, a pivot stud screw threaded into said sleeve, and a pin having a reduced upper terminal and terminating in a set screw adjustable upon the sleeve to engage the bar for holding the sleeve in fixed position with the said reduced terminal of the pin adapted to provide a handle for supporting the bar in working position co-incident with the movement of the said bar to swing the marking element about the said stud.

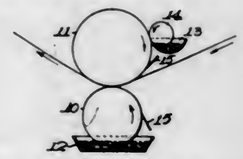
3. A device of the character described including a bar provided at one end with an opening, a marking element rotatably mounted in said opening, a set screw adjustable through one end of the bar to project into the said opening and engage the marking element for holding it against rotation, a sleeve movable longitudinally upon the bar, and a pin carried by the sleeve and adjustable to engage the bar for holding the sleeve in fixed position.

4. A device of the character described including a bar provided with an opening, a set screw adjustable through one end of the bar to project into said opening, a marking element having trunnions one engaging the bar and the other engaged by said set screw for rotatably supporting the marking element, a sleeve movable longitudinally upon the bar and provided with a pivot stud to coöperate with the marking element, and a pin adjustable upon the sleeve to engage the bar for holding the sleeve in fixed position.

5. A device of the character described including a bar, a rotatable marking element journaled at one side upon the bar, means adjustable upon the bar and providing a bearing for said marking element upon its opposite side, and a sleeve carried by the bar and provided with a pivot stud to coöperate with the said marking element.

[Claim 6 not printed in the Gazette.]

1,195,888. METHOD OF AND APPARATUS FOR SIZING PAPER. HENRY M. WHEELWRIGHT, Ware, Mass. Filed July 22, 1915. Serial No. 41,375. (Cl. 92—40.)



1. The method of sizing paper, which consists in leading the paper from a wet press, applying sizing to the surface of the paper while in the air, and thereafter drying and calendering the web.

2. The method of sizing paper, which consists in forming the web on a Fourdrinier machine, leading it through a series of wet presses, applying a size of soluble starch or starch compounds to the surface of the web in the last wet press, and thereafter subjecting it to the entire drying operation.

3. The method of sizing paper, which consists in forming the web, wet pressing it to extract part of the moisture, treating both surfaces simultaneously to a size of converted hydrolyzed starch or starch compounds coming from different sources before it is otherwise dried, and thereafter drying the web.

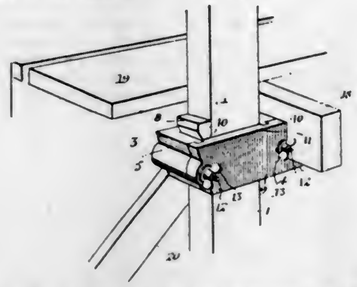
4. The method of sizing paper, which consists in applying to the previously formed web of paper after a portion of the moisture has been extracted in a wet press, feculose size by means of a press roll to the bottom of the web, and also applying feculose size by means of a press roll to the top of the web, and then drying.

5. The method of sizing paper, which consists in leading the paper through a series of wet presses, while the paper is in the last wet press applying starch size to the bottom and top press rolls of said press, and thus coating the two surfaces of the web with the size, and then leading the web to the first drier cylinder.

[Claims 6 and 7 not printed in the Gazette.]

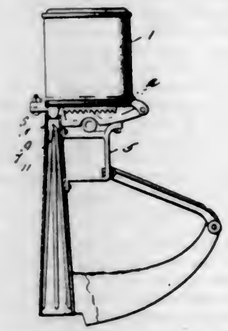
1,195,889. SCAFFOLD-CLAMP. JOHN W. WILLEFORD, Thomasville, Ga. Filed Jan. 29, 1916. Serial No. 75,123. (Cl. 20—88.)

1. The herein described means of constructing scaffolds including uprights having mitered meeting ends, a clamp having a passage receiving the ends of the uprights, a removable and adjustable side upon the clamp contacting with one of the sides of the uprights, one of the walls of the passage of the clamp having knife members, a wedge member adapted to be inserted in the passage to force the uprights into engagement with the knife members, a bracket formed with the clamp for supporting the floor sleepers, and means for removably securing the cross brace members to the clamp.



2. A clamp for the purpose set forth comprising a substantially rectangular member having a passage, one of the end walls being arranged at an inclination and the opposite end wall being provided with transverse knife members, a wedge member adapted to be received in the passage and to engage with the angular end wall thereof, a removable side for the clamp, and means for adjustably sustaining the said side upon the clamp, an angular bracket formed with the clamp, a binding element upon the bracket, and a laterally adjustable plate arranged adjacent one of the sides of the clamp.

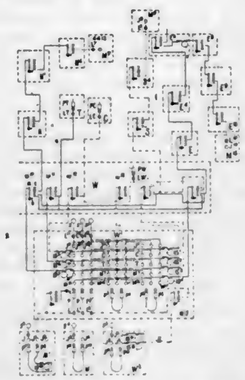
1,195,890. CORN-PLANTER ATTACHMENT. ALEXANDER WYNNE, Metropolis, Ill., assignor of one-half to Abraham Baker, Temple Hill, Ill. Filed Nov. 17, 1915. Serial No. 62,001. (Cl. 111—11.)



1. The combination with an ordinary corn planter including a grain hopper and dropping mechanism, of a delivery spout adapted for receiving the grain from said dropping mechanism and conveying it to a furrow, a web formed horizontally within said spout adjacent its upper end, a plurality of conduits extending longitudinally within said spout and having their upper ends supported by and extending through said web, a pyramidal deflector resting upon said web, said pyramidal deflector having a plurality of grooves formed in its inclined sides, said grooves communicating with the upper open ends of said conduits for guiding kernels of corn into the conduit for separate deposit into a furrow.

2. The combination with an ordinary corn planter including a grain hopper and dropping mechanism, of a delivery spout adapted for receiving the grain from said dropping mechanism and conveying it to a furrow, a web formed horizontally within said spout adjacent its upper end, a plurality of conduits extending longitudinally within said spout and having their upper ends supported by and extending through said web, a pyramidal deflector resting upon said web, said pyramidal deflector having a plurality of grooves formed in the inclined sides, said grooves communicating with the upper open ends of said conduits for guiding kernels of corn into the conduit for separate deposit into a furrow, and deflecting blocks positioned within said spout and in the corners formed by said pyramidal deflector for guiding stray grain kernels of corn into said conduit.

1,195,891. SEMI-AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. WILLIAM AITKEN and ROBERT AITKEN, London, England. Filed Dec. 23, 1914. Serial No. 878,761. (Cl. 179—27.)



1. In a telephone system, an exchange, a plurality of other exchanges, junction lines connected to said first-mentioned exchange over which connection may be made with said other exchanges, an automatic numerical switch for selecting said junction lines, a plurality of jacks whereby connection may be made with said automatic switch, each of said jacks having associated with it means for sending a particular numerical call so as to connect only with a particular junction line or lines through said automatic switch.

2. In a telephone system, a calling subscriber's line connected to one exchange, a plurality of other exchanges, a called subscriber's line connected to one of said other exchanges, an intermediate exchange through which connection is completed from said calling subscriber's line to said called subscriber's line, junction lines connecting said intermediate exchange to said other exchanges, a numerical automatic switch at said intermediate exchange, jacks at said first-mentioned exchange, a junction line leading from said jacks to said automatic switch, an automatically operated calling means associated with said jacks and arranged so that the plugging into any particular one of said jacks determines the numerical operation of said automatic switch and thereby the junction line selected leading from said intermediate exchange to the one of said other exchanges to which the called subscriber's line is connected.

3. In a telephone system, a calling subscriber's line connected to one exchange, a plurality of other exchanges, a called subscriber's line connected to one of said other exchanges, an intermediate exchange through which connection is completed from said calling subscriber's line to said called subscriber's line, junction lines connecting said intermediate exchange to said other exchanges, a numerical automatic switch at said intermediate exchange, groups of jacks at said first-mentioned exchange, groups of junction lines leading from said first-mentioned exchange to said intermediate exchange, each group of junction lines being associated with one of said groups of jacks, non-numerical automatic switches associated with

each of said groups of jacks and adapted to connect a jack plugged into with an idle junction line of the corresponding group of junction lines, automatically operated calling devices associated with said jacks and arranged so that the plugging into any particular one of said jacks determines the numerical operation of said automatic switch and thereby the junction line selected leading from said intermediate exchange to the one of said other exchanges to which the called subscriber's line is connected.

4. In a telephone system, a calling subscriber's line connected to one exchange, a plurality of other exchanges, a called subscriber's line connected to one of said other exchanges, an intermediate exchange through which connection is completed from said calling subscriber's line to said called subscriber's line, junction lines connecting said intermediate exchange to said other exchanges, a numerical automatic switch at said intermediate exchange, groups of jacks at said first-mentioned exchange, groups of junction lines leading from said first-mentioned exchange to said intermediate exchange, each group of junction lines being associated with one of said groups of jacks, the different groups of junction lines being of different gage wire, non-numerical automatic switches associated with each of said groups of jacks and adapted to connect a jack plugged into with an idle junction line of the corresponding group of junction lines, automatically operated calling devices associated with said jacks and arranged so that the plugging into any particular one of said jacks determines the numerical operation of said automatic switch and thereby the junction line selected leading from said intermediate exchange to the one of said other exchanges to which the called subscriber's line is connected.

1,195,892. ELECTRICALLY-OPERATED SWITCH. DANIEL R. ALLEN, North Augusta, S. C. Filed Aug. 7, 1914. Serial No. 855,677. (Cl. 104—12.)



1. In a switch construction, the combination with a fixed switch point and a swinging switch point, of track rails co-acting with such switch points, that track rail adjacent the fixed switch point being spaced from such point and having its inner flange thickened to provide a cam wheel engaging face.

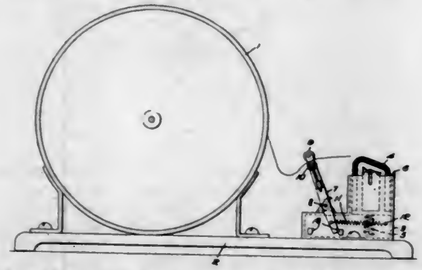
2. In a switch construction, the combination with a fixed switch point and a swinging switch point, of track rails co-acting with such switch points, that track rail adjacent the fixed switch point being spaced from such point and having its inner flange thickened to provide a cam wheel engaging face, said cam face being inclined at an angle of substantially twenty degrees to the horizontal.

3. In a switch construction, the combination with a fixed switch point and a swinging switch point, of track rails co-acting with such switch points, that track rail adjacent the fixed switch point being spaced from such point and having its inner flange thickened to provide a cam wheel engaging face, said cam face being inclined at an angle of substantially twenty degrees to the horizontal, the thickening of such rail being greatest adjacent the free end of the switch point and gradually diminishing in both directions from such point.

4. A rail section for switches and frogs including a body portion having a base flange, web and head, the web being thickened to provide cam wheel engaging faces forming continuations of each other, said faces being inclined transversely at an angle of substantially twenty degrees to the horizontal and inclined upwardly longitudinally toward each other.

5. A rail section for switches and frogs including a body portion having a base flange, web and head, the web being thickened to provide cam wheel engaging faces forming continuations of each other, said faces being inclined transversely at an angle to the horizontal and inclined longitudinally toward each other.

1,195,893. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Brookline, Mass., assignor to National Binding Machine Company, Boston, Mass., a Corporation of Maine. Original application filed Aug. 19, 1908, Serial No. 449,320. Divided and this application filed Dec. 19, 1914. Serial No. 878,151. (Cl. 91—14.5.)



1. A strip serving apparatus comprising in combination, a strip support, a moistener in the service path of the strip, a strip severing device in front of the moistening point, and a retractor positioned to engage the strip between the support and the moistener and to draw the strip longitudinally thereof away from the moistener, after the severing action.

2. A strip serving apparatus comprising in combination, a strip support, a moistener in the service path of the strip, a strip severing device in advance of the moistening point, and a retractor positioned to engage the strip between the support and the moistener and operating to draw the strip longitudinally thereof away from the moistener, after the severing action.

3. A strip serving apparatus comprising in combination, a strip support, a moistener in the service path of the strip, a strip severing device in front of the moistening point and normally shielded from the strip and a retractor positioned to engage the strip between the support and the moistener and operating to draw the strip longitudinally thereof away from the moistener upon unshielding of the severing device and the severing of the strip thereby.

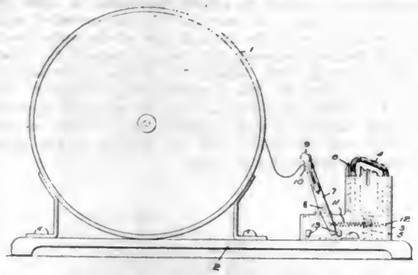
4. A strip serving apparatus comprising in combination, a strip support, a moistener in the service path of the strip, a strip severing device in front of the moistener and normally shielded from the strip, and a retractor positioned to engage the strip between the support and the moistener and operating to draw the strip longitudinally thereof away from the moistener upon unshielding of the severing device and the severing of the strip thereby.

5. A strip serving apparatus comprising in combination, a strip support, a moistener in the service path of the strip, a strip severing device in front of the moistening point, and a pivoted retractor positioned to engage the strip between the support and the moistener and to draw the strip longitudinally thereof away from the moistener after the severing action.

[Claims 6 to 9 not printed in the Gazette.]

1,195,894. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Brookline, Mass., assignor to National Binding Machine Company, Boston, Mass., a Corporation of Maine. Original application filed Aug. 19, 1908, Serial No. 449,320. Divided and this application filed Dec. 19, 1914. Serial No. 878,152. (Cl. 91—14.5.)

1. In a machine of the character described, the combination of a container for a roll of gummed tape, a moistener, a retractor intermediate the said container and the said moistener, and operating to draw the tape longitudinally thereof away from the moistener.



2. In a machine of the character described, the combination of a container for a roll of gummed tape, a moistener, a strip severing blade between the moistener and the container, and a retractor intermediate the said container and the said moistener, and operating to draw the tape longitudinally thereof away from the moistener after the severing action.

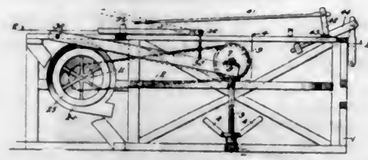
3. In a machine of the character described, a strip support, a moistener, and a retractor operating to draw the strip longitudinally from the moistener.

4. In a machine of the character described, a strip support, a moistener, a severing device, and a retractor operating to draw the strip longitudinally from the moistener.

5. In a machine of the character described, a strip support, a moistener, and a retractor intermediate the said support and the said moistener and operating to draw the strip longitudinally from the moistener.

[Claims 6 to 9 not printed in the Gazette.]

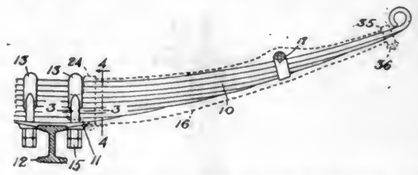
1,195,895. POWER-DISTRIBUTING MECHANISM. GUST ANDERSON, Caldwell, Idaho. Original application filed Dec. 3, 1913, Serial No. 804,273. Divided and this application filed July 30, 1914. Serial No. 854,193. (Cl. 74—26.)



1. In mechanism of the class described, the combination of a framework; a main power distributing wheel sustained therein; actuating means therefor including a driving shaft mounted on the frame, a radius frame pivotally mounted at one end on the frame and having its free end extending over the main power distributing wheel, and a driving wheel journaled on the free end of said radius frame and operatively connected to the driving shaft aforesaid; and means connected to the free end of the radius frame for shifting the driving wheel to and from a position in engagement with the main power distributing wheel.

2. In mechanism of the class described, the combination with a framework; a main power distributing wheel sustained therein, actuating means therefor including a driving shaft, a radius frame pivotally engaging the framework, and a driving wheel sustained by said radius frame and operatively connected with the driving shaft; means for moving the frame to thereby shift the driving wheel to and from the power distributing wheel consisting of a lever fulcrumed on the framework and operatively connected at one end to the free end of the radius frame; and means engageable by the lever for holding the driving wheel in its disengaged position.

1,195,896. BOOT OR CASING FOR LEAF-SPRINGS. OSCAR F. ANDERSON, Brookline, Mass. Filed Apr. 21, 1916. Serial No. 92,755. (Cl. 267—28.)



1. A boot or casing for a laminated leaf-spring, comprising a substantially tubular body member composed of flexible sheet material, and a relatively stiff anchoring clip arranged at and fastened to one end of said body member, said clip having a clencher-portion arranged to clench a portion of a spring-anchoring member, substantially as described.

2. A boot or casing for a laminated leaf-spring, comprising a substantially tubular body member composed of flexible sheet material, and a relatively stiff anchoring clip arranged at and fastened to one end of said body member, said clip having two coöperative clencher-portions arranged in opposite relation to each other in position to clench two portions of the spring-anchoring means at opposite sides of the spring, substantially as described.

3. A clip for anchoring a boot or casing upon a laminated leaf-spring, comprising a substantially U-shaped member adapted to embrace three sides of such spring near the anchoring means of the latter, and having a clencher portion arranged to embrace a portion of such anchoring means.

4. A clip for anchoring a boot or casing upon a laminated leaf-spring, comprising a substantially U-shaped member adapted to embrace three sides of such spring near the anchoring means of the latter, the two branches of said clip having clencher portions arranged to embrace such anchoring means at opposite sides of the spring.

5. A device for anchoring a boot or casing upon a laminated leaf spring, comprising a substantially U-shaped member adapted to embrace three sides of such spring near the anchoring means of the latter, and connecting means adapted to be attached to the end portions of said clip to tie said end portions to each other, said clip having a clencher portion arranged to embrace a portion of such anchoring means, and said connecting means being adapted to keep said clip in clenching position relatively to such anchoring means.

1,195,897. RIVET-CUTTING MACHINE. JESSE E. ASH, Covington, Ky., assignor of one-third to Clayton Lemon and one-third to George L. Green, Covington, Ky. Filed June 9, 1916. Serial No. 102,767. (Cl. 81—201.)

1. A machine of the class described comprising an elongated cylinder, a cup-shaped casting secured to one end of said cylinder, a tool having the shank thereof passed through said casting and projecting into the lower end of the cylinder, a fluid-actuated piston in said cylinder adapted to traverse the same and strike the shank of said tool to operate the latter, and a yieldably supported tool holder mounted in said casting and normally bearing against the adjacent end of the cylinder and encircling said tool shank to take the impact of the piston in the event of the tool shank slipping out of the lower end of the cylinder.

2. A machine of the class described comprising an elongated cylinder, a cup-shaped casting secured to one end of said cylinder, a tool having the shank thereof passed through said casting and projecting into the lower end of the cylinder, a fluid-actuated piston in said cylinder adapted to traverse the same and strike the shank of said tool to operate the latter, a sleeve-like tool holder mounted in said casting, and a spring surrounding said tool holder and holding the latter normally in engagement with the adjacent end of the cylinder whereby said

tool holder may take the impact of the piston and absorb the shock in the event of the tool shank slipping out of the lower end of the cylinder.



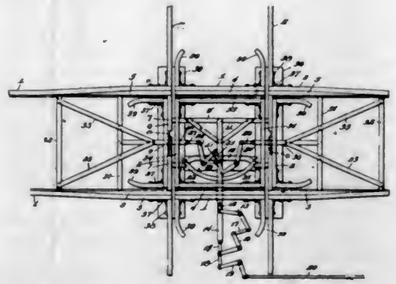
3. A machine of the class described comprising an elongated cylinder, a cup-shaped casting secured to one end of said cylinder, a tool having the shank thereof passed through said casting and projecting into the lower end of the cylinder, a fluid-actuated piston in said cylinder adapted to traverse the same and strike the shank of said tool to operate the latter, a yieldably supported tool holder mounted in said casting and normally bearing against the adjacent end of the cylinder and encircling said tool shank to take the impact of the piston in the event of the tool shank slipping out of the lower end of the cylinder, and a controlling valve on the other end of said cylinder controlling the operation of said piston.

4. A machine of the class described comprising an elongated cylinder, a cup-shaped casting secured to one end of said cylinder, a tool having the shank thereof passed through said casting and projecting into the lower end of the cylinder, a fluid-actuated piston in said cylinder adapted to traverse the same and strike the shank of said tool to operate the latter, a yieldably supported tool holder mounted in said casting and normally bearing against the adjacent end of the cylinder and encircling said tool shank to take the impact of the piston in the event of the tool shank slipping out of the lower end of the cylinder, and a controlling valve on the other end of said cylinder operable manually to establish communication between the source of supply and the upper end of the cylinder and to connect the lower end of the cylinder with the atmosphere, and to establish communication between a source of supply and the lower end of the cylinder and connect the upper end of the cylinder to the atmosphere.

1,195,898. RAILWAY-TRACK CONSTRUCTION. CALVIN W. BAGBY, Oregon City, Oreg. Filed Mar. 25, 1916. Serial No. 86,623. (Cl. 104—116.)

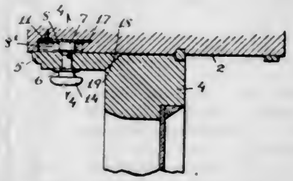
1. In a railway track crossing, the combination with the lines of rails of one trackway and the lines of rails of the intersecting trackway, of sections lying in face to face contact with the inner surfaces of the lines of rails of one trackway at the opposite sides of the intersecting trackway and capable of sliding movement to close the breaks in the rails, and rail sections slidably mounted upon the inner surfaces of the lines of rails of the other trackway and disposed between the lines of rails of the intersecting trackway and capable of sliding movement to close the breaks in the corresponding trackway.

2. In a railway track crossing, the combination with the lines of rails of one trackway and the lines of rails of the intersecting trackway, of sections lying in face to face contact with the inner surfaces of the lines of rails of one trackway at the opposite sides of the intersecting trackway and capable of sliding movement to close the breaks in the rails, rail sections slidably mounted upon the inner surfaces of the lines of rails of the other trackway and disposed between the lines of rails of the intersecting trackway and capable of sliding movement to close the breaks in the corresponding trackway, and means for sliding said rail sections in relatively opposite directions simultaneously whereby the breaks in one trackway may be closed and the breaks in the other trackway opened and vice versa.



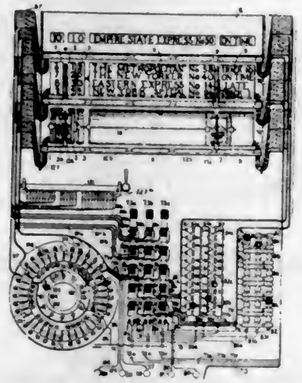
3. In a railway track crossing, the combination with the lines of rails of one trackway and the lines of rails of the intersecting trackway, of sections lying in face to face contact with the inner surfaces of the lines of rails of one trackway at the opposite sides of the intersecting trackway and capable of sliding movement to close the breaks in the rails, and rail sections slidably mounted upon the inner surfaces of the lines of rails of the other trackway and disposed between the lines of rails of the intersecting trackway and capable of sliding movement to close the breaks in the corresponding trackway, said last-mentioned rail sections being formed of sub-sections having the inner ends thereof overlapping and capable of movement in relatively opposite directions.

1,195,899. SASH-ADJUSTING MEANS. FRANCIS M. BAKER, Viroqua, Wis. Filed Apr. 17, 1916. Serial No. 91,734. (Cl. 16—29.)



In sash adjusting means, a window casing having a narrow elongated shallow recess provided with uninterrupted vertical walls intersecting the outer lateral wall of said casing, a narrow elongated stationary channel piece fitting in and of the same dimensions as those of said recess and having a back provided at one end with a longitudinal pointed securing extension engaging a seat in the end wall of the recess, side walls spaced apart from each other, and outer inturned flanges extending from said securing extension toward and terminating short of the opposite end of the channel piece, to leave an uninterrupted space between said side walls, said back having opposite said space a perforation for a securing screw, an adjustable vertical strip, a headed bolt engaging between said flanges and having a nut slidably fitting within said channel piece and capable of passing outwardly through said space, said nut and said strip having normally clamping engagement with said flanges.

1,195,900. TRAIN-BULLETIN. SAMUEL W. BALCH, Montclair, N. J. Filed Sept. 7, 1912. Serial No. 719,233. (Cl. 177—337.)



1. The combination of an indicating element, an operating mechanism, means for driving the mechanism, a magnet coil, a circuit therefor, means operated by the magnet coil for stopping the mechanism at any indicating position, contacts in the circuit for each position, means operating with the mechanism for closing the contacts, an operating board, a connection from each contact to the operating board, means at the operating board for controlling the driving means and bringing a contact connection into the coil circuit, and a signal device operated by the coil circuit at the operating board.

2. The combination of an indicating element, an operating mechanism, a motor, a friction drive between the motor and mechanism, a magnet, a circuit therefor, means operated by the magnet for stopping the mechanism at any indicating position, contacts in the circuit for each position, means operating with the mechanism for closing a contact at each position, an operating board, a connection from each contact to the operating board and means at the operating board for controlling the driving means and bringing a contact connection into the magnet circuit.

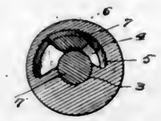
3. In an electric indicating system, an operating board bearing a plurality of indicator selecting contacts, and a group of indicator position contacts, means for closing one of the indicator selecting contacts to one side of the current source and one of the indicator position contacts to the other side of the current source, a bulletin having a plurality of indicating elements, each element having a like operating mechanism, means for driving the mechanism, a magnet coil, a circuit therefor connected with an indicator selecting contact, means operated by the magnet coil for stopping the mechanism at any indicating position, contacts in the circuit for each position connected with corresponding contacts of the other elements at the bulletin, and a connection from each of the corresponding contacts to a position contact at the operating board.

4. In an electric indicating system, an operating board having a plurality of indicator selecting contacts, a group of indicator position contacts, and means for closing one of the indicator selecting contacts to one side of the current source and one of the indicator position contacts to the other side of the current source, a bulletin having a plurality of indicating elements, each element having an indicator mechanism, means for driving the mechanism, a magnet, a circuit therefor connected with an indicator selecting contact, means operated by the magnet for stopping the mechanism at any indicating position, contacts in the circuit for each position connected with corresponding contacts of the other elements at the bulletin, and a connection from each of the corresponding contacts to a position contact at the operating board.

5. In an electric indicating system, an operating board having two or more groups of indicator position contacts, an indicator actuating contact, and means for closing a position contact in each group to the current source, an indicator unit having a motor connected to the actuating contact and two or more indicator elements each having an indicator mechanism, a driving connection with the motor by which it can be separately driven, a magnet, a circuit therefor, means operated by the magnet for stopping the mechanism at any indicating position, contacts in the circuit for each position, means operating with the mechanism for closing a contact at each position, and connections from each of the mechanically closed contacts to one of the contacts in the group of position contacts at the operating board.

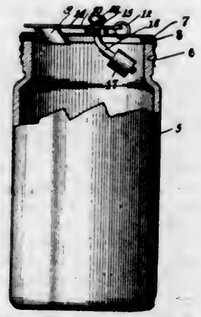
[Claims 6 to 10 not printed in the Gazette.]

1,195,901. CHUCK. ELIJAH J. BARRETT, Hoisington, Kans. Filed Oct. 13, 1915. Serial No. 55,703. (Cl. 81—53.)



The combination with a head having a central cylindrical bore and an eccentrically arranged chamber upon one side and communicating with the bore, the inner wall of the chamber at its curved side being formed with a depression, a removable cap secured to the head and having a central opening registering with the bore and an eccentric opening disposed opposite the mentioned depression in the inner wall of the chamber, and a gripping block having a rounded surface which is adapted to engage with the rounded wall of the chamber and its ends formed with rounded flanges one adapted to be received in the depression of the chamber and the other in the eccentrically arranged opening in the cap plate, and the base of the gripping block arranged adjacent the bore of the head being formed with longitudinally extending teeth.

1,195,902. SANITARY DISPENSING-RECEPTACLE. EMORY J. BENEDICT, St. Louis, Mo. Filed Nov. 2, 1915. Serial No. 59,186. (Cl. 221—62.)



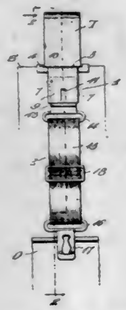
1. A cap for dispensing receptacles having formed therein two raised outlets, one forming a spout and the other a vent, a flap closure for both outlets hingedly connected to the cap, a rod connected to the flap closure and projecting through the vent outlet, and a weight connected to the rod at the opposite side of the cap to the flap closure.

2. A cap for dispensing receptacles having two outlet openings, one forming a spout and the other a vent, a flap closure for both outlets, a plurality of rings mounted in the cap and loosely connected to the flap closure to form hinging elements for the closure, a rod connected to the closure and projecting through the vent, and a weight mounted upon the rod and disposed upon the opposite side of the cap to the flap closure.

3. A cap for detachable connection with a container comprising a body having a flat top provided with a plurality of holes, a flap loosely connected with the flat top and adapted to normally close the holes and also to automatically gravitate to open position on inverting the cap, and a weighted rod connected to the flap and projecting through one of the holes to form a guiding means, the weighted portion of the rod being of a size greater than the size of the hole through which said rod works to limit the swinging movement of the flap in one direction.

4. A cap for dispensing receptacles having formed therein openings, a flap closure for both openings hingedly connected to the cap, a rod carried by the closure and working through one of the openings, and a weight mounted on the rod for effecting the swinging of the closure to open or closed positions.

1,195,903. HOLDER FOR OVERSHOES. WILLIAM C. BIGGINS and WILLIAM H. BIGGINS, Diamond, Ind. Filed Apr. 17, 1916. Serial No. 91,671. (Cl. 36—58.5.)

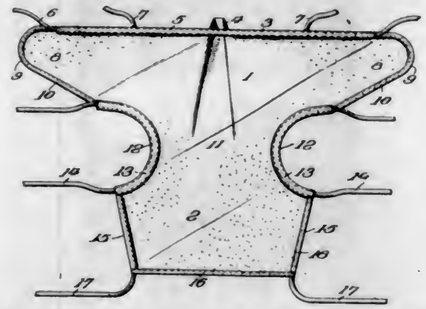


1. In a device of the class described, a hook member formed of spring metal, adapted to be disposed over the upper edge of a shoe upper and having its arms constructed and arranged to grip the inner and outer sides of said upper, said member having a longitudinally extending slot in its crown to receive the loop of the shoe, a catch member carried by one arm of said member, a flexible connection, a clasp on one end of said connection to engage the upper of an overshoe, and a catch on the other end of said connection for detachable engagement with said catch member.

2. In a device of the class described, a hook member formed of spring metal, adapted to be disposed over the upper edge of a shoe upper and having its arms constructed and arranged to grip the inner and outer side of said upper, said member having a longitudinally extending slot in its crown to receive the loop of the shoe, a wedge-shaped catch socket formed on one arm of said member, a lug extending into said socket from one wall thereof, a flexible connection, a clasp on one end of said connection to engage the upper of an overshoe, and a V-shaped catch on the other end of said connection for detachable engagement in said socket, said V-shaped catch having a recess in one arm thereof to be engaged by said lug.

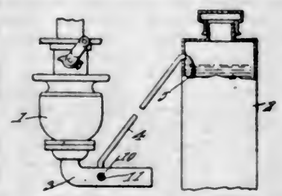
3. In a device of the class described, a combined hook and catch member comprising a plate of spring metal bent upon itself to form arms adapted to grip the inner and outer surfaces of a shoe upper, when said member is disposed over the upper edge of the shoe upper, the edge portions of one arm being bent laterally outward, a cover plate secured to said edge portions to form the outer side of a catch socket, said spring metal plate having a slot at the bend thereof adapted to receive the loop of the shoe and formed by striking up the metal of said member, said struck up portion forming the end wall of said catch socket, a lug struck inwardly from said cover plate, an adjustable connecting member, a clasp on one end of said connecting member adapted to engage the upper of an overshoe, and a V-shaped catch on the other end of said connecting member adapted to be removably disposed in said catch socket, said V-shaped catch having a recess in one portion thereof, said lug on said cover plate being adapted to engage said V-shaped catch in said recess.

1,195,904. INFANT-NAPKIN PROTECTOR. JENNIE L. BORNSTEIN, Dayton, Ohio. Filed Oct. 23, 1915. Serial No. 57,537. (Cl. 2—131.)



A napkin protector comprising a body portion having side flaps, a plurality of flexible fastening means provided on the upper edge of said body portion between the lateral ends thereof, a draw string also provided on the upper edge of said body portion, the ends of which are adapted to be united in securing the protector to the body of the wearer, an intermediate portion of said protector provided on its side edges with curved portions having draw strings, the ends of which are adapted to be united to secure said side edges around the limbs of the wearer, and a lower portion of said protector provided with flexible fastening means which are adapted to be secured to the first named flexible fastening means of the body portion when the garment is worn.

1,195,905. MOISTURE-SUPPLYING DEVICE FOR CARBURETER AIR-SUPPLY. GEORGE H. BROWN and WILLIAM A. JONES, Fair Mount, Ga. Filed Mar. 31, 1916. Serial No. 88,120. (Cl. 123—25.)



1. The combination with the radiator and carbureter of an internal combustion engine, said carbureter having an air supply pipe, of a tube having its opposite terminals extending into the radiator and said pipe, and a wick extending through said tube from within the radiator to a point within said pipe for supplying moisture to the air flowing through said pipe to the carbureter.

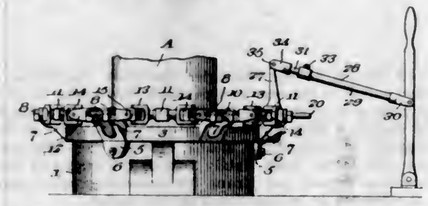
2. In a device of the character described, the combination with an air supply pipe, of a carbureter, a tube extending within said pipe, and a moisture supplying wick extending through said tube, said tube having an apertured portion for the circulation of air therethrough adjacent the wick.

3. In a device of the character described, the combination with the air supply pipe of a carbureter, of a tube extending within said pipe, and a moisture supplying wick extending through said tube, said tube having an apertured bulged portion for the circulation of air therethrough.

4. In a device of the character described, the combination with the air supply pipe of a carbureter, of a tube extending axially within said pipe, and a moisture supplying wick extending through said tube, said tube having a longitudinal series of annular bulges provided with apertures for the circulation of air.

5. In a device of the character described, the combination with the air supply pipe of a carbureter, of a tube having one terminal extending through the wall of said pipe, a second tube connected to said terminal and extending axially within said pipe toward the end thereof, a moisture supplying wick extending through said tubes, the second mentioned tube having an apertured bulged portion for the circulation of air, a set screw carried by the second mentioned tube for clamping the wick, and a sleeve extending from the second mentioned tube to one wall of said pipe and housing said screw.

1,195,906. WELL-CASING APPARATUS. JACOB S. BROWN, Los Angeles, Cal., assignor to Walter F. Eichenhofer, Los Angeles, Cal. Filed Oct. 23, 1915. Serial No. 57,538. (Cl. 24—243.)



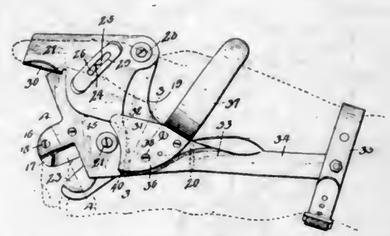
1. In an apparatus of the class described a spider having a downwardly tapered opening, a ring secured on the spider and provided with bearings, a flexible shaft arranged around the ring and mounted in said bearings, rock arms radially arranged and connected to the flexible shaft for rocking motion thereby, means to turn the shaft and impart oscillating motion to the rocking arms and segmental clutching slips arranged vertically and for radial movement in the tapered opening of the spider and connected to and operated by said rock arms.

2. In an apparatus of the class described a spider having a downwardly tapering opening, a ring secured on the spider and having pairs of radially arranged arms provided with bearings, a flexible shaft arranged around the ring and mounted in said bearings, a lever arm connected to said shaft, means to operate the lever arm and thereby rock said shaft, radially arranged rock arms attached to and operated by the shaft, and segmental clutching slips arranged for radial and vertical movement in the opening in the spider and attached to said rock arms.

3. In an apparatus of the class described a spider having a downwardly tapered opening, a ring secured on the spider and having bearing members, a flexible shaft arranged around the ring and comprising members mounted in said bearings and connecting members between the first named members, rock arms radially arranged and attached to certain of the shaft members which are mounted in the bearings for segmental clutching slips arranged for vertical and radial movement in the opening of the spider and attached to and operated by said rock arms, and an abutment in the spider arranged between two of the segmental clutching slips to prevent the clutching slips from turning.

1,195,907. FRUIT-PICKER. JACOB S. BROWN, Los Angeles, Cal., assignor to Walter F. Eichenhofer, Los Angeles, Cal. Filed Jan. 28, 1916. Serial No. 74,814. (Cl. 30—24.)

1. In a fruit picker, a base plate having a forwardly extending arm carrying a stationary cutting blade on its under face, an L-shaped plate pivoted on the under face of the base plate and having one arm provided with a cutting member coöperating with the stationary cutting blade, the other arm of said L-shaped plate being offset upwardly to lie flush with the top of the base plate, the latter being provided with a slot to receive such upwardly offset portion, a lever member fulcrumed on top of the base plate and having a diagonal slot and an upwardly extending flange forming a finger piece, a pin extending from the upwardly offset portion of the cutter carrying L-shaped plate in engagement with said slot, and a spring whereby the lever is actuated in one direction.



2. In a fruit picker, a base plate carrying a stationary cutting member, an L-shaped plate pivoted on the underside of the base plate and having an arm constituting a movable cutting member and another arm which is offset upwardly through the base plate, the latter being provided with a slot to permit rocking movement of the plate having the movable cutting member, a lever fulcrumed on top of the base plate and having a finger piece and a slot, a pin extending from the offset portion of the plate carrying the movable cutting member into said slot, a spacer and a housing plate mounted on the base plate, said spacer having a notch, and a flat spring having a head seated in said notch, the lever member being provided with an upwardly extending lug operating between the base plate and the housing plate and engaged by the spring.

3. In a fruit picker, a base plate having a stationary and a movable cutting member, an actuating lever for the movable cutting member fulcrumed on top of the base plate and having an upwardly extending lug, a spacer and a superposed housing plate mounted on the base plate, said spacer having a notch and said housing plate being extended above the upwardly extending lug of the operating lever to guide the latter, and a spring having a head seated in the notch of the spacer, said spring engaging the lug of the operating lever.

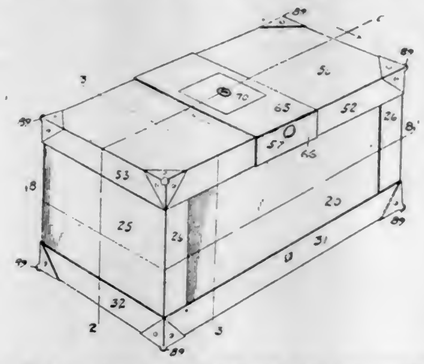
4. In a fruit picker, a base plate having a stationary and a movable cutting member, an operating lever fulcrumed on the base plate, a spacer and a superposed housing mounted on the base plate, said spacer having a hand guard and said housing plate having a hand engaging hook, both extending beyond the base plate, and an actuating spring for the operating lever connected with the spacer and confined between the base plate and the housing plate.

5. In a fruit picker, a base plate having a stationary and a movable cutting member, an operating lever fulcrumed on the base plate, a spacer and a superposed housing mounted on the base plate, said spacer having a hand guard and said housing plate having a hand engaging hook, both extending beyond the base plate, and an actuating spring for the operating lever connected with the spacer and confined between the base plate and the housing plate, the base plate being provided with a downturned abutment flange below the hand guard of the spacer.

1,195,908. KNOCKDOWN CONTAINER. ALBERT P. COCHRANE, New York, N. Y., assignor to Jane Hartley Cochrane, New York, N. Y. Filed June 21, 1913, Serial No. 774,981. Renewed Nov. 26, 1915. Serial No. 63,676. (Cl. 217—12.)

1. A container comprising separable wall sections each having an inturned flange extending around the same and provided with openings at the corners adapted to

aline with one another when the sections are set up, and fastening means passed through said alined openings.



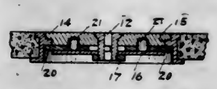
2. In a container of the class described, the combination with separable wall sections, of a top section having an opening therein, means accessible through said opening for locking the wall and top sections together, and means to close said opening including a lock having a groove in its edge opposite its bolt for engaging one edge of said opening, said bolt adapted to engage below the opposite edge of said opening.

3. In a container of the class described, the combination with separable wall sections, of a top section having an opening therein, means accessible through said opening for locking the wall and top sections together, and means to close said opening including a reversible lock having a groove in its edge opposite its bolt for engaging one edge of said opening, said bolt also having a groove in its end to engage the opposite edge of said opening, whereby said lock may be applied with either side out for the purpose specified.

4. In a container of the class described, the combination with separable wall sections, of a top section having an opening extending across the same, a separate cover section to close the opening in the top section and having an opening therein, means accessible through the opening in the top section when the cover section is removed for securing the wall sections together, means accessible through the opening in the cover section when the same is in place for securing said cover section to the wall sections, and a lock adapted to fill the opening in the cover section and prevent access to said latter securing means.

5. In a container of the class described, the combination with separable base, side, end and top sections each having a right-angularly turned flange extending around its margin, the base and top sections being of a size to fit over the other sections after the end sections have been slipped over the ends of the side sections in erecting the container, of means for fastening said sections together.

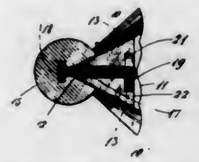
1,195,909. LOCK FOR CLOSURES. ALBERT P. COCHRANE, New York, N. Y., assignor to Jane Hartley Cochrane, New York, N. Y. Filed July 7, 1913, Serial No. 777,709. Renewed Nov. 26, 1915. Serial No. 63,675. (Cl. 70—3.)



1. In a device of the class described, the combination of a rotatable stem, a cover connected therewith, arcuately curved arms combined with said stem, a plate mounted on said stem below the cover and a pair of oppositely disposed wing members pivoted to said plate in such manner as to be actuated by said curved arms.

2. In a device of the class described, the combination of a rotatable stem, a cover connected with said stem adapted to be secured within an opening, a plate secured on said stem, oppositely disposed curved arms united with said stem and between the mentioned plates and a pair of movable members pivotally attached to said plates on opposite sides of said stem and having their interior surfaces adapted to contact with said curved arms.

1,195,910. CORNER-PIECE. ALBERT P. COCHRANE, New York, N. Y., assignor to Jane Hartley Cochrane, New York, N. Y. Filed Aug. 15, 1913, Serial No. 784,894. Renewed Nov. 22, 1915. Serial No. 62,922. (Cl. 190—37.)

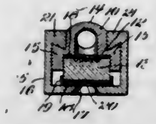


1. A device of the character described comprising a casing suited to the edge and partially enveloping the side and base of a receptacle, a buffer fitted on the outside of said casing, a filler disposable within the interior of the receptacle, a connecting means between the filler and buffer, the latter being rigidly held to the casing by said connectiug means, and means for connecting said casing to the receptacle independently of the buffer.

2. A device of the character described comprising a casing adapted to cover the corner of a receptacle, a buffer arranged exteriorly of said casing, a filler for the interior corner of the receptacle, a disengageable connecting means between said filler and buffer, the edges of said casing extending laterally beyond the buffer, and means applied to said protruding edges of the casing for securing said casing to the receptacle independently of the buffer.

3. A device of the character described comprising a casing adapted to cover the corner of a receptacle, a buffer arranged exteriorly of said casing, an interior corner filler having a recess, and a clamping means engaging said recess and said buffer, the part of said means which engages said recess being housed therein.

1,195,911. WATER-GLASS FRAME. OLEN A. COMP, Barberton, Ohio. Filed Feb. 11, 1916. Serial No. 77,760. (Cl. 73—54.)



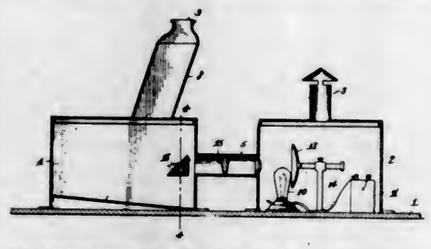
1. A water glass gage comprising a body having a glass receiving seat therein and also provided with transversely beveled and longitudinally tapered locking flanges, a housing removably fitted upon the body and having reversely beveled tapered locking flanges coöperative with the flanges on the body for the wedging and locking of the housing thereon, and a glass arranged in the seat and held therein by the housing.

2. A water glass gage comprising a body having a glass receiving seat therein and also provided with transversely beveled and longitudinally tapered locking flanges, a housing removably fitted upon the body and having reversely beveled and tapered locking flanges coöperative with the flanges on the body for the wedging and locking of the housing thereon, a glass arranged in the seat and held therein by the housing, and means disposed at opposite sides of the glass for preventing leakage through the seat about the latter.

3. A water glass gage comprising a body having a glass receiving seat therein and also provided with transversely beveled and longitudinally tapered locking flanges, a housing removably fitted upon the body and having reversely beveled and tapered locking flanges coöperative with the flanges on the body for the wedging and locking of the housing therein, a glass arranged in the seat and held therein by the housing, means disposed at opposite sides of the glass for preventing leakage through the seat about the latter, ratchet teeth formed on the body, and a spring-held latch carried by the housing and engageable with the teeth to lock the housing upon said body.

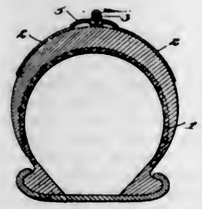
4. A water glass gage comprising a body having a glass receiving seat therein and also provided with transversely beveled and longitudinally tapered locking flanges, a housing removably fitted upon the body and having reversely beveled and tapered locking flanges coöperative with the flanges on the body for the wedging and locking of the housing therein, a glass arranged in the seat and held therein by the housing, means disposed at opposite sides of the glass for preventing leakage through the seat about the latter, ratchet teeth formed on the body, a spring-held latch carried by the housing and engageable with the teeth to lock the housing upon said body, the said housing being formed with an elongated slot longitudinally thereof to make visible the glass in the seat.

1,195,912. FRAUD-DETECTOR. WILLIAM L. CUMMINGS and LAFAYETTE W. BLANCHARD, Leavenworth, Kans. Filed Nov. 12, 1915. Serial No. 61,118. (Cl. 88—1.)



An instantaneous fraud detector of the character and for the purpose described comprising, in combination, suitable means for supporting the object to be tested, a quartz prism, means for supplying and projecting ultra-violet rays against said prism so as to be directed thereby against said object, and a fluoroscope arranged to render such light rays visible to the eye of an observer to indicate any possible imperfections in the object under test.

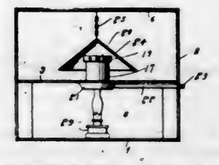
1,195,913. TIRE-ARMOR. EUGENE B. CURRY, Payson, Ill. Filed Aug. 7, 1915. Serial No. 44,265. (Cl. 152—16.)



1. A tire armor comprising a pair of annuli embracing the tire, laterally extending circumferential flanges formed on the inner edge of each of said annuli, said flanges having the confronting faces thereof contacting with each other, a split ring embracing said annuli and formed with the circumferential groove forming the bead, the groove of said bead receiving said flanges, one extremity of the bead extending beyond its adjacent end, the opposite end of said bead terminating rearwardly of its adjacent end and receiving the opposite end of the bead, lugs formed on said band at the opposite sides of said ring adjacent one end thereof, and keepers formed in the remaining end of said band and receiving said lugs.

2. A tire armor comprising two annuli embracing the trend of the tire and arranged in parallel relation to each other, each of said annuli being formed with transversely extending spaced depressions on the inner face thereof to form spaced ridges upon the outer face thereof, and a band embracing the annuli, and corrugated transversely, the corrugations being of such a size as to cause the ridges thereof to lie between the depressions on said annuli whereby circumferential movement of the band will be prevented.

1,195,914. BROODER. NEWELL E. DAILEY, Hornick, Iowa. Filed May 18, 1916. Serial No. 98,385. (Cl. 119—32.)

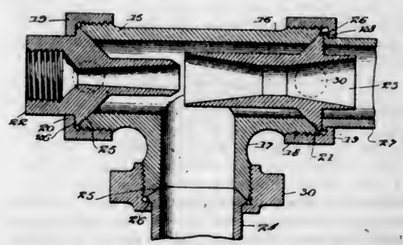


1. A brooder including a brooding chamber, a sunning compartment communicating with the brooding compartment, a hinged floor for the sunning compartment, said floor being adapted to be let down to provide a run and a door on the front end of the brooder, said door being adapted to hold the floor upwardly when in closed position.

2. A brooder including a bottom, side walls secured to the bottom, a top secured to the side walls, a back secured to the side walls top and bottom, a floor intermediate the top and bottom arranged at the rear end of the brooder, a door at the forward end of the brooder, said door being hinged to the front end in a plane parallel to the upper face of the floor, a hinged floor at the forward end of the stationary floor, the forward edge of the hinged floor resting on the upper edge of the door when the brooder is closed.

3. A brooder including a brood chamber, a lamp chamber beneath the brood chamber, a heating drum extending into the brood chamber, the lower end of the heating drum being open and disposed within the lamp chamber, a pan supported beneath the lower end of the heating drum, a fresh air pipe extending through one side of the brooder and into the pan, an apertured cap at the upper end of the heating drum to permit the passage of warm air from the drum and a conical hood suspended above the drum and having its lower edge positioned at a point substantially midway of the upper and lower ends of the drum.

1,195,915. STEAM-JET. EDWARD C. DAMROW, Fond du Lac, Wis. Filed Mar. 6, 1915. Serial No. 12,642. (Cl. 162—1.)



A device of the injector type for lifting liquids, the same consisting of a three-way casing having angularly disposed branches of equal diameter, each branch being

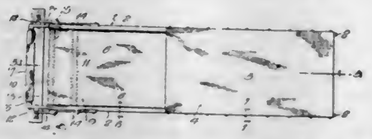
externally threaded and provided with an internally disposed beveled seat; an inlet nozzle, a discharge nozzle and a suction pipe, each externally beveled to engage one of the seats, and the inlet nozzle and the suction pipe being also each provided with an external shoulder or offset; a discharge pipe section having an external flange abutting on the shoulder of the discharge nozzle; and internally threaded sleeves engaging the branches of the casing and having flanges engaging the shoulders or offsets of the inlet nozzle and the discharge nozzle and the flange of the discharge pipe which is seated on the offset of the discharge nozzle, whereby the said inlet nozzle, the discharge nozzle and the suction and discharge pipes will be detachably and interchangeably connected with the branches of the casing.

1,195,916. TROLLEY-GUIDE. HYPOLETTE J. DAUBEN, Columbus, and OMAN L. STUMP, Marion, Ohio. Filed Feb. 10, 1915. Serial No. 7,374. (Cl. 191—37.)



A frog for the purpose set forth formed from a sheet of material comprising a flat body having side flanges which are curved outwardly from each other at the ends of the frog, said body, at its said ends being curved upwardly, the body being formed upon its inner face with a central channel extending longitudinally therewith to receive the feed wire and the upper wall provided by the channel adjacent the center of the frog being formed with spaced openings adapted to receive bolt members for a splice for the feed wire which is arranged centrally in the channel of the frog, and transverse supporting guy wires for the frog.

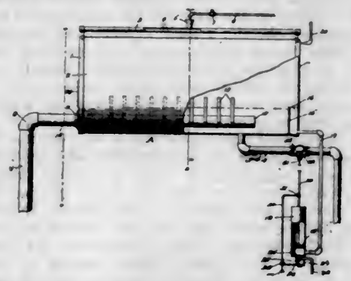
1,195,917. INVALID'S SUPPORT. WILLARD C. DAWES, Bozeman, Mont. Filed Nov. 11, 1915. Serial No. 60,865. (Cl. 5—43.)



In a device of the class described, a main frame, a flexible cover therefor, one portion thereof being removable, said removable portion being sagged, a reinforcing band below said sagged portion and connected to the side bars of said frame, an additional reinforcing band spaced inwardly from the first mentioned band, whereby a hip receiving pocket is formed, a brace bar having a depressed central portion pivotally connected at its opposite ends to the ends of the side bars of said frame adjacent the first mentioned reinforcing band, said bar being foldable beneath the main frame when the device is not in use, and means for elevating one end of said frame, said means being foldable beneath said frame.

1,195,918. STEAM CONDENSER, REBOILER, AND SKIMMER. CHARLES O. DAWSON, Chetopa, Kans., assignor of one-half to Frank H. James, Chetopa, Kans. Filed June 7, 1915. Serial No. 32,720. (Cl. 257—35.)

1. The combination of a hollow condenser body, an engine exhaust steam pipe entering said body and extending along the bottom portion thereof and terminating in a closed extremity, exhaust nozzles projecting from said steam pipe at intervals within said body and extending upwardly above the water level, a distilled water outlet pipe leading from the bottom of the body, a skimming trap having its receiving orifice on a level with the maximum water level in the condenser body, a valve controlling said outlet pipe, and means controlled by the scum for intermittently opening and closing said valve.



2. The combination of a hollow condenser body, an engine exhaust steam pipe entering said body and extending along the bottom portion thereof and terminating in a closed extremity, exhaust nozzles projecting from said steam pipe at intervals within said body and extending upwardly above the water level, a distilled water outlet pipe leading from the bottom of the body, a skimming trap having its receiving orifice on a level with the maximum water level in the condenser body, a valve controlling said outlet pipe, a cylinder arranged to receive the scum from said trap, a piston in said cylinder, and a piston rod arranged to lift said valve from its seat.

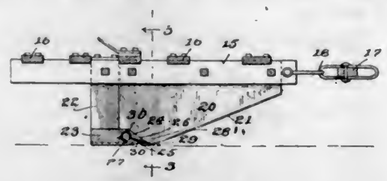
3. The combination of a hollow condenser body, an engine exhaust steam pipe entering said body and extending along the bottom portion thereof and terminating in a closed extremity, exhaust nozzles projecting from opposite sides of said steam pipe at intervals within said body and extending upwardly above the water level, a distilled water outlet pipe leading from the bottom of the body, a skimming trap having its receiving orifice on a level with the maximum water level in the condenser body, a valve controlling said outlet pipe, and means controlled by the scum for intermittently opening and closing said valve.

4. The combination of a hollow condenser body, an engine exhaust steam pipe entering said body and extending along the bottom portion thereof and terminating in a closed extremity, exhaust nozzles projecting from said steam pipe at intervals within said body and extending upwardly above the water level, a distilled water outlet pipe leading from the bottom of the body, a skimming trap having a serrated edge bordering its receiving orifice on a level with the maximum water level in the condenser body, a valve controlling said outlet pipe, and means controlled by the scum for intermittently opening and closing said valve.

5. The combination of a hollow condenser body, an engine exhaust steam pipe entering said body and extending along the bottom portion thereof and terminating in a closed extremity, exhaust nozzles projecting from said steam pipe at intervals within said body and extending upwardly above the water level, a distilled water outlet pipe leading from the bottom of the body, a skimming trap having its receiving orifice on a level with the maximum water level in the condenser body, a valve controlling said outlet pipe, a cylinder arranged to receive the scum from said trap, a piston in said cylinder, a piston rod arranged to lift said valve from its seat, an outlet valve for said cylinder, and means controlled by said piston for opening and closing the last named valve.

1,195,919. WEED-CUTTER. JAMES M. DELANEY, Manhattan, Ill. Filed Apr. 25, 1916. Serial No. 93,464. (Cl. 55—60.)

1. In a weed cutter, a frame including side members suitably spaced and connected together, vertical blades secured on the outer faces of the side members and having inclined cutting edges, brackets secured on the side members to the rearward of the vertical blades, a knife holder carried by the brackets, and a horizontal cutting blade carried by the knife holder.



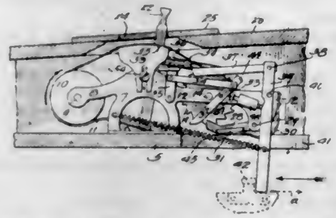
2. In a weed cutter, a frame, downwardly extending brackets connected therewith, a knife holder carried by said brackets, said holder consisting of a plate having a longitudinal bore, and a slot connecting said bore with the forward edge of the plate, and a cutting blade engaging the slot and having its rearward end bent to produce a coil occupying the bore.

3. In a weed cutter, a frame, downwardly extending brackets connected therewith, a knife holder carried by said brackets, said holder consisting of a plate having a longitudinal bore, and a slot connecting said bore with the forward edge of the plate, and a cutting blade engaging the slot and having its rearward end bent to produce a coil occupying the bore, said coil having its edge portion bent to produce a rib, and the wall of the bore being provided with a groove for engagement with said rib.

4. In a weed cutter, a frame, downwardly extending brackets connected therewith, a knife holder carried by said brackets, said holder consisting of a plate having a longitudinal bore, and a slot connecting said bore with the forward edge of the plate, and a cutting blade engaging the slot and having its rearward end bent to produce a coil occupying the bore, the top and bottom faces of the holder being beveled in the direction of the slot.

5. In a weed cutter, a frame, downwardly extending brackets connected therewith, a knife holder carried by said brackets, said holder consisting of a plate having a longitudinal bore and a slot connecting said bore with the forward edge of the plate, and a cutting blade engaging the slot and having its rearward end bent to produce a coil occupying the bore, said coil having its edge portion bent to produce a rib, and the wall of the bore being provided with a groove for engagement with said rib; the top and bottom faces of the holder being beveled in the direction of the slot to produce sharp edge portions adjacent to the top and bottom faces of the cutting blade.

1,195,920. PAPER-WINDING DEVICE. HOWARD A. DODGE, Los Angeles, Cal. Filed Apr. 6, 1914. Serial No. 829,790. (Cl. 235—5.)



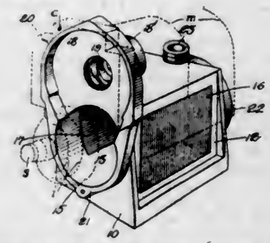
1. A paper winding device, comprising a winding roller, means for supporting a paper roll adjacent thereto, a ratchet wheel on the winding roller, a pawl engaging the ratchet wheel to retain the latter against retrograde movement, a lever adapted to be rocked in one direction by moving the drawer, a pawl on said lever adapted to engage said ratchet to rotate the latter on the movement of the lever, a means engageable with said pawls whereby they may be simultaneously held out of engagement with the ratchet wheel to permit retrograde movement of the roller comprising a lever pivoted intermediate the pawls, a second ratchet wheel on the winding roll, a hand lever, a pawl engaging said ratchet wheel provided with a slot secured to said hand lever, and a fixed pivotal pin mounted in the slot of said pawl.

2. A paper winding device, comprising a winding roller, means for supporting a paper roll adjacent thereto, a ratchet wheel on the winding roller, a pawl engaging the ratchet wheel to retain the latter against retrograde movement, a lever adapted to be rocked in one direction by movement of a drawer, a pawl on said lever adapted to engage said ratchet to rotate the latter on the return movement of the lever, a pivoted lever interposed between said pawls, a hand lever, a link connection between said hand lever and the last named pivoted lever, a second ratchet wheel on the winding roll, a hand lever, a pawl engaging said ratchet wheel provided with a slot secured to said hand lever, and a fixed pivoted pin mounted in the slot of said pawl.

3. A paper winding mechanism, comprising the combination of a supporting frame, means to support a roll of paper thereon, means for tensioning the paper roll, a winding roller, an adjustable paper support mounted intermediate said paper roll and the winding roller, ratchet wheels on the opposite ends of said roller, a pawl engaging one of said ratchet wheels, a lever on which said pawl is mounted adapted to be operated by the movement of a drawer to advance said ratchet and roller a partial revolution on reverse movement of said lever, adjustable means for limiting the reverse movement of the lever, a pawl engaging the ratchet engaged by the before mentioned pawl, means adapted to engage said pawls simultaneously to retain them out of operative engagement with the ratchet, and auxiliary means operable on the other ratchet for rotating the roller independent of the drawer actuated lever.

4. A paper-winding mechanism comprising the combination of a supporting frame, means to support a roll of paper thereon, means for tensioning the paper roll, a winding roller, an adjustable paper support mounted intermediate said paper roll and the winding roller, ratchet wheels on the opposite end of said roller, a pawl engaging one of said ratchet wheels, a lever on which said pawl is mounted adapted to be operated by the movement of a drawer to advance said ratchet and roller a partial revolution on reverse movement of said lever, a spring for effecting reverse movement of the lever, adjustable means for limiting the reverse movement of the lever, a spring-pressed pawl engaging the ratchet engaged by the beforementioned pawl, means adapted to engage said pawls simultaneously to retain them out of operative engagement with the ratchet, and auxiliary means operable on the other ratchet for rotating the roller independent of the drawer-actuated lever.

1,195,921. MAGNETO-FRAME. WILLARD E. DOW, Braintree, Mass. Filed Aug. 21, 1913. Serial No. 785,959. (Cl. 171—209.)

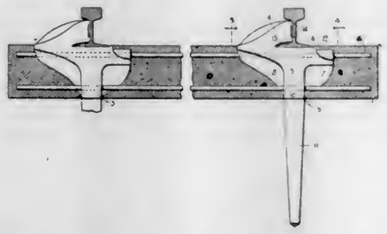


1. A magneto frame, formed as an integral unit with a longitudinal armature receiving bore and lateral recessed seats for the field magnets, there being pole shoes held by the surrounding metal to fill the space between the bottoms of said seats and said bore, and said frame being equipped with extensions at its ends integral therewith,

one of said extensions having an upwardly projecting sleeve to hold the bearing for a distributer mechanism, there being an upwardly extending shroud integral with the body of said frame and also with said sleeve to serve as a housing for the interrupter and distributer gearing, whereby it and the sleeve are mutually interbraced, and the extension at the other end being equipped to serve as a mounting and housing for the armature shaft, the slide ring and the carbon brush.

2. A magneto frame formed as an integral unit with a bore for the armature and provision for fixing a field magnet in proximity thereto, said frame having an integral upward and forward extension affording a bearing and housing for the distributer and interrupter mechanism, and having also formed in one piece therewith a rearward extension equipped to serve as a mounting and housing for the armature shaft, the slide rings and the carbon brush, said rearward extension constituting a complete closure for the rear end of the armature bore with a passage through which the armature shaft is fitted.

1,195,922. RAIL FASTENING AND TIE. GIBSON W. FAIRMAN, North Plainfield township, Somerset county, N. J. Filed Jan. 31, 1913. Serial No. 745,363. (Cl. 238—3.)



1. In a tie of the class described a concrete body and a pair of rail supports and fasteners associated with said body for supporting and holding in place a pair of rails, each of said supporting members being formed with a rail receiving socket and with a depending anchor projecting below said concrete body.

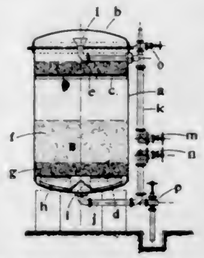
2. In a tie of the class described, a pair of rail supports and clamps, each of said rail supports and clamps comprising a body having a rail receiving socket and a depending anchoring extension, and a tie body connecting said rail supports and clamps.

3. A tie for railways comprising a body and a pair of rail supports and fasteners, each of said rail supports and fasteners comprising a body formed with a socket for receiving the base of a rail, a plurality of substantially radial flanges extending from said body for bracing and steadying the body, and a depending anchoring member.

4. In a tie and rail support and fastener of the class described, a concrete body, a plurality of reinforcing bars extending longitudinally of said body formed with a plurality of lugs extending therefrom at different angles, a pair of metallic rail supports and fasteners formed with apertures for accommodating said reinforcing bars and with slots for permitting the passage of said lugs.

5. In a tie of the class described, a pair of rail supports and fasteners for receiving and supporting in place a pair of rails, each of said supports being formed with a rail receiving socket having an anchoring member, a pair of webs extending from the bottom of the anchoring members whereby the supporting members cannot twist or turn, and a bracing member having a web, said bracing member resting against the web of said rails, a plurality of connecting bars extending from one supporting member to the other and entirely through the supporting members so as to present projections therebeyond, and a body of cement surrounding said connecting bars and said supporting members, said cement body extending from the lower edge of said first mentioned webs and to the upper edge of said socket.

1,195,923. SOFTENING OF WATER. ROBERT GANS, Berlin, Germany, assignor to J. D. Riedel Aktiengesellschaft, Berlin, Germany. Filed Aug. 5, 1911, Serial No. 642,477. Renewed Mar. 26, 1915. Serial No. 17,244. (Cl. 210—1.)



1. A water softening apparatus comprising a casing, a filter bed consisting of a layer of sand or quartz and a layer of zeolites or hydrated alumino-silicates disposed on the layer of sand or quartz, means for permitting the passage of water through the casing, means for cutting off the supply of water on the exhaustion of the zeolites, and means for passing through the casing a solution of a salt capable of regenerating the zeolites.

2. A water softening apparatus comprising a casing, a filter bed within said casing, said filter bed consisting of a layer of sand or quartz and a layer of zeolites or hydrated alumino-silicates disposed on the layer of sand or quartz, means for permitting the passage of water through the casing, means for cutting off the supply of water on the exhaustion of the zeolites and means for passing through the casing a solution of a salt capable of regenerating the zeolites and means for stirring the layer of zeolites.

3. A water softening apparatus comprising a casing, perforated plates disposed one above the other within said casing, layers of quartz or sand on said plates, a layer of zeolites or hydrated alumino-silicates disposed on the lower layer of sand, means for permitting the passage of water through the filter plate, means for cutting off the supply of water on the exhaustion of the zeolites and means for passing through the casing a solution of a salt capable of regenerating the zeolites.

4. A water softening apparatus comprising a casing, perforated plates disposed one above the other within said casing, layers of quartz or sand on said plates, a layer of zeolites or hydrated alumino-silicates disposed on the lower layer of sand, means for permitting the passage of water through the filter plate, means for cutting off the supply of water on the exhaustion of the zeolites and means for passing through the casing a solution of a salt capable of regenerating the zeolites, and means for stirring the zeolites.

5. Water softening apparatus comprising a casing, a filter bed consisting of a layer of zeolites or alumino-silicates, supporting means for said layer, means for permitting the passage of water through the casing, means for cutting off the supply of water on the exhaustion of the zeolites, means for supplying and passing into the casing a solution of a salt capable of regenerating zeolites and means connected to the lowest point of the casing for removing the salt solution so introduced.

[Claim 6 not printed in the Gazette.]

1,195,924. SEPARATOR FOR STORAGE-BATTERY PLATES. WILLIAM S. GOULD, New York, N. Y. Filed Mar. 14, 1914. Serial No. 824,605. (Cl. 204—29.)

1. A separator for storage battery plates, comprising a perforated hard rubber sheet having a flat face to be placed against the positive plate and a porous wood sheet having a flat face to be placed against the negative plate to hold the spongy material thereof in place, said wooden sheet having ribs for spacing it from the rubber sheet to provide circulation channels between the separator sheets and hold them flat against the battery plates.



2. A separator for storage battery plates comprising a perforated hard rubber sheet having a flat face to be placed against one battery plate and a porous wood sheet having a flat face to be placed against the other battery plate, said rubber sheet having reinforcing ribs for spacing it from the wooden sheet to provide circulation channels between the separator sheets and hold them flat against the battery plates.

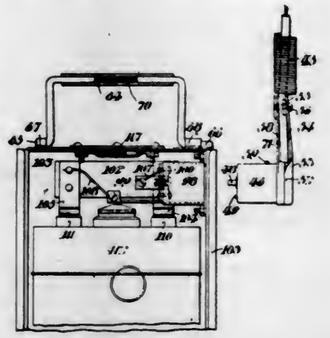
3. A separator for storage battery plates comprising a perforated hard rubber sheet placed adjacent the positive plate and a porous wood sheet having a flat face placed against the negative plate to hold the spongy material thereon in place, said rubber sheet having vertical reinforcing ribs.

4. A separator for storage battery plates comprising a porous wood sheet, having a substantially flat face adapted to be placed against the active material of one of the battery plates to hold it in place and a hard rubber sheet adapted to be interposed between the wood sheet and the other battery plate, and adapted to prevent short circuits between the plates due to their buckling and hold the wood sheet in position.

5. A separator for storage battery plates comprising a sheet of porous material pervious to the electrolyte, adapted to be placed against the active material of one of the battery plates to hold it in place and a sheet of hard insulating material having openings therein and adapted to be interposed between the sheet of porous material and the other battery plate, and adapted to prevent short circuits between the plates due to buckling.

[Claims 6 to 12 not printed in the Gazette.]

1,195,925. PORTABLE ELECTRIC-LIGHTING APPARATUS. HIRAM H. HIRSCH, Philadelphia, Pa. Filed June 19, 1912. Serial No. 704,496. (Cl. 204—53.)



1. In a portable electric lighting apparatus, a battery casing; a cylindrical plug socket in said casing having a bayonet slot notch in its perimeter and inclosing two electrical contacts; an insulating block in said casing; two spring terminals supported by said block arranged, in insulated spaced relation, to respectively electrically connect with the similarly spaced poles of a battery inserted in said casing; means electrically connecting said contacts with said terminals; a cylindrical plug fitted to said socket, having a detent aperture, means to detachably bind two flexible conductors, a removable cover plate for said binding means, and, a stud on said plug fitted to said notch and adapted to retain said plug in said casing when said plug is turned with said stud aside from said notch; a bail handle on said casing having axially alined trunnions, in bearings axially parallel with said socket above the latter, one of said trunnions being axially movable and forming a detent with a spring whereby it is pressed outward into engagement with said detent aperture of said socket, arranged to detain the latter in engagement with said casing, but retractable to release said socket; whereby said plug may be inserted and removed with respect to said socket when said stud is in registry with said notch in the casing, but is normally retained in said socket by the engagement of said detent.

2. In a portable electric lighting apparatus, a battery casing; a cylindrical plug socket in said casing having a bayonet slot notch in its perimeter and inclosing two electrical contacts; two spring terminals in said casing arranged, in insulated spaced relation, to respectively electrically connect with the similarly spaced poles of a battery inserted in said casing; means electrically connecting said contacts with said terminals; a cylindrical plug fitted to turn in said socket; a stud on said plug fitted to said notch and adapted to retain said plug in said casing when said plug is turned with said stud aside from said notch; and, a detent movable to engage and release said plug with respect to said socket; whereby said plug may be inserted and removed with respect to said socket when said stud is in registry with said notch in the casing, but is normally retained in said socket by said detent.

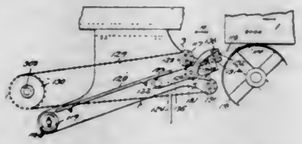
3. In a portable electric lighting apparatus, a battery casing having a cylindrical plug socket with a bayonet slot notch in its perimeter; a cylindrical plug fitted to said socket, having a stud fitted to said notch and adapted to retain said plug in said socket when said plug is turned with said stud aside from said notch, and, a detent movable to engage and release said plug with respect to said socket; whereby said plug may be inserted and removed with respect to said socket when said stud is in registry with said notch in the casing, but is normally retained in said socket by said detent.

4. In a portable electric lighting apparatus, a battery casing having a cylindrical plug socket with a bayonet slot notch in its perimeter and two electrical contacts; a cylindrical plug fitted to said socket, having means to detachably engage two flexible conductors, a removable cover plate for said connecting means, and, a stud on said plug fitted to said notch and adapted to retain said plug in said casing when said plug is turned with said stud aside from said notch; a bail handle on said casing having axially alined trunnions, in bearings axially parallel with said socket above the latter, one of said trunnions being axially movable and forming a detent with a spring whereby it is pressed outward into engagement with the detent aperture in said socket, arranged to detain the latter in engagement with said casing, but retractable to release said socket; whereby said plug may be inserted and removed with respect to said socket when said stud is in registry with said notch in the casing, but is normally retained in said socket by the engagement of said detent.

5. In a portable electric lighting apparatus, a battery casing having a cylindrical plug socket with a bayonet slot notch in its perimeter and two electrical contacts; a cylindrical plug fitted to said socket, having means to detachably engage two conductors, and, a stud on said plug fitted to said notch and adapted to retain said plug in said casing when said plug is turned with said stud aside from said notch; a bail handle on said casing having axially alined trunnions, in bearings axially parallel with said socket above the latter, one of said trunnions being axially movable and having a spring whereby it is pressed outward into engagement with the detent aperture in said socket, arranged to detain the latter in engagement with said casing, but retractable to release said socket; whereby said plug may be inserted and removed with respect to said socket when said stud is in registry with said notch in the casing, but is normally retained in said socket by the engagement of said detent.

[Claims 6 to 11 not printed in the Gazette.]

1,195,926. WEB FEEDING AND CUTTING DEVICE. CHARLES A. JUENGST, Croton Falls, N. Y. Filed Aug. 7, 1914. Serial No. 855,645. (Cl. 164—42.)



1. In a machine of the character set forth, a pair of friction rolls adapted to feed a web of material between them, a cutting device in the path of the web, and a unitary member connected to said cutting device and to one of said rolls and operable to simultaneously actuate the cutting device and separate the rolls.

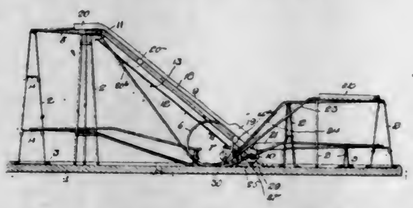
2. In a machine of the character set forth, means for feeding a web of material, means for severing the web of material, and a unitary member connected to said severing means and to said feeding means and operable to simultaneously actuate said severing means and interrupt the operation of said feeding means.

3. In a machine of the character set forth, a pair of friction rolls adapted to feed a web of material between them, a cutting member in the path of the web, and a movable member supporting one of said rolls to move it toward and away from the other roll, said movable member being in operative engagement with said cutting member.

4. In a machine of the character set forth, means for feeding a web of material, a rocking cutting member located adjacent to the path of the web, a spring device for normally holding said cutting member out of the path of the web and said feeding means in operative condition, and means for rocking said cutting member, in opposition to the spring device, to sever the web and to interrupt the operation of the feeding means in a single movement in one direction.

5. In a machine of the character set forth, rolls for feeding a web of material, a cutting member located adjacent to the path of the web, a spring device for normally holding said cutting member out of the path of the web, a movable member carrying one of said rolls and engaging said cutting member to operate said cutting member in opposition to said spring device and to separate the rolls.

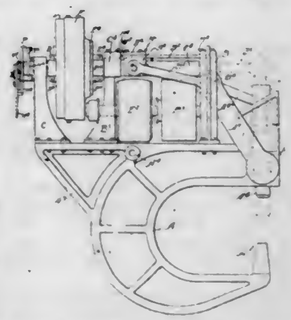
1,195,927. TOY. ARTHUR S. MCCLOY, Ingram, Pa. Filed May 6, 1914, Serial No. 836,794. Renewed July 17, 1916. Serial No. 109,819. (Cl. 46—61.)



A toy comprising tracks, a chute arranged in said tracks, an elevator operating in said chute, said track being bent over to form a "loop the loop" and a "figure-eight" and having a portion cut away to form a "leap the gap" and balls adapted to travel in said tracks and to be elevated by said conveyer.

1,195,928. ELECTRIC RIVETER. WENSEL MORAVA, Chicago, Ill. Filed Nov. 27, 1914. Serial No. 874,148. (Cl. 78—35.)

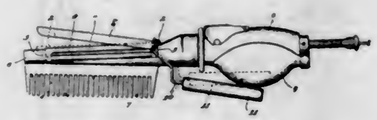
1. In an electric riveting machine a slidably mounted screw-threaded crosshead, a drive screw in engagement therewith, a plurality of electrically driven drive members constantly rotating about the screw in opposite directions, and at different velocities, clutch members mounted on and held against rotation with respect to the screw in opposition to said drive members and means for throwing one of said clutch members at a time into engagement with its adjacent drive member to rotate the drive screw.



2. In an electric riveting machine a slidably mounted screw-threaded crosshead, a drive screw in engagement therewith, a plurality of electrically driven drive members constantly rotating about the screw in opposite directions, clutch members mounted on and held against rotation with respect to the screw in opposition to said drive members and means for throwing one of said clutch members at a time into engagement with its adjacent drive member to rotate the drive screw.

3. In an electric riveting machine a slidably mounted screw-threaded crosshead, a drive screw in engagement therewith, a plurality of electrically driven drive members constantly rotating about the screw in opposite directions, and at different velocities, clutch members mounted on and held against rotation with respect to the screw in opposition to said drive members and means for throwing one of said clutch members at a time into engagement with its adjacent drive member to rotate the drive screw, said means comprising a control shaft within the screw and a connection from it to each clutch member and means independent of the rotation of the screw and drive members for moving said shaft and clutch members in unison toward and from the appropriate drive member.

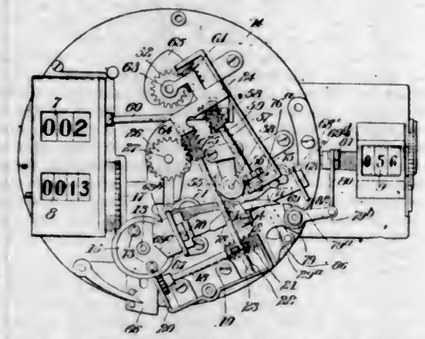
1,195,929. HAIR-WAVING DEVICE. GEORGE L. SCHEEL, Chicago, Ill. Filed Sept. 25, 1915. Serial No. 52,677. (Cl. 132—18.)



1. In a device of the class described, the combination of a heating element; a handle on said heating element; a hair engaging element in proximity with said heating element, said engaging element comprising two pivotally connected jaws; a handle for pressing one of said jaws toward the other; and a depressible air bulb on said heating element and positioned under the handle thereof adapted for engagement with said jaw handle for normally holding said jaws separated, substantially as described.

2. In a device of the class described, the combination of a heating element having a substantially cylindrical portion; a hair engaging element comprising two elongated channel formed pivotally connected members, one of said members embracing said cylindrical portion of said heating element, the other of said members being adapted to embrace said first mentioned member; a handle on said last mentioned member for rocking the same; and an air bulb on said heating element adapted for engagement with said handle to normally hold said engaging members separated, substantially as described.

1,195,930. SPEED AND RUNNING-TIME INDICATOR. RALPH SHIPMAN, Sunbury, Pa. Filed Nov. 1, 1912. Serial No. 729,083. (Cl. 235—95.)



1. A mechanism for indicating the distance traveled by a vehicle in excess of a given speed, comprising a member operating at a speed proportional to the speed of the vehicle, a register, and means controlled by said member for actuating the register only when the machine exceeds the given speed, to register distance traveled by the vehicle in excess of said given speed.

2. A mechanism for indicating the distance traveled by a machine in excess of a given speed comprising a member operating at a speed proportional to the speed of the machine, a time mechanism operated by said member, a register, means associated with the register for actuating the same, and a device, movable by said member and controlled in its position by said time mechanism, adapted to operatively engage said means when the speed of the machine exceeds a given speed.

3. A mechanism for indicating the distance traveled by a machine in excess of a given speed comprising a member operated by the machine, a time mechanism, a register, means associated with the register for actuating the same, and a device for engaging said means adapted to be operated by said member once for each unit of distance traveled by the machine, said device being controlled in its position with respect to said means by said time mechanism.

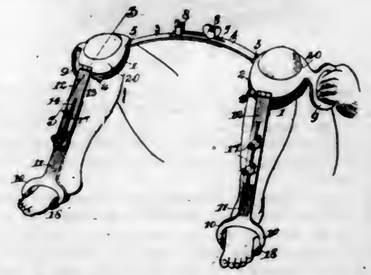
4. A mechanism for indicating the distance traveled by a machine in excess of a given speed comprising a member operated by the machine, a time mechanism, a register, means associated with the register for actuating the same, and a slide for engaging said means adapted to be operated by said member once for each unit of distance traveled by the machine, said slide being controlled in its position with respect to said means by said time mechanism.

5. A mechanism for indicating the distance traveled by a machine in excess of a given speed comprising a member operated by the machine, a register, a device associated with the register for operating the same, a slide having means for operating the register and adapted to be reciprocated by said member once for each unit of distance traveled, and time mechanism for varying the path of movement of said means with respect to said device.

[Claims 6 to 14 not printed in the Gazette.]

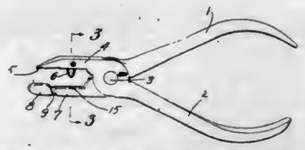
1,195,931. SURGICAL APPLIANCE. JAMES L. SOWELL, Jasper, Ala. Filed May 10, 1916. Serial No. 96,557. (Cl. 128—20.)

1. A device of the character specified, comprising ring-shaped pneumatic pads fitting over the knees, a rigid ring connected with each pad, a sectional bar connecting the rings and hinged to the rings, means for holding the sections in adjusted position, each ring having a handle or grip at the outer side thereof, stirrups provided with shanks hinged to the rings at the end remote from the stirrups, the shanks being sectional, and means for holding the sections in adjusted position.



2. A device of the character specified, comprising padded rings of rigid material adapted to fit over the knees, an arched bar connecting the rings and hinged thereto, a stirrup for each ring and having a shank hinged to the ring, the shank of the stirrups and the bar being adjustable.

1,195,932. PLIERS. EMIL J. SWANSON, Norton township, Muskegon county, Mich. Filed Nov. 9, 1912. Serial No. 730,316. (Cl. 81—3.)



1. In a pair of pliers, the combination with a jaw having a series of notches on one face, of another jaw having its outer portion enlarged so as to extend somewhat nearer to the other jaw than does the rear portion thereof, said enlarged outer portion being oval and smooth to receive upon it the article to be operated upon, there being between the said outer rounded portion of said jaw and the rear portion thereof a groove running on both sides of the jaw and assisting in holding the article to be operated upon, a prong-spreading tool having a shank that enters an opening in one of the jaws, a set screw for holding the shank in place in the opening, said tool having a shoulder fitting neatly against the jaw when the tool has been inserted in place.

2. The combination with plier jaws that are pivoted to each other, one of which is provided with a series of notches on its face, and the other of which is formed with an outer portion extending nearer to the opposite jaw than does its rear portion so as to provide an oval and rounded outer end adapted to receive upon it the article which is to be operated upon, of a prong-spreading tool having a shank, and a set screw for securing said shank to the notched jaw of the pliers, all substantially as described.

1,195,933. VAGINAL DYNAMO. JAMES B. WAGONER, deceased, late of Los Angeles, Cal., by Alma M. Wagoner, special administratrix, San Francisco, Cal. Filed Aug. 31, 1914. Serial No. 860,108. (Cl. 174—89.)

1. A vaginal dynamo comprising a central arcuate core of dielectric material; and a suitable electrode secured to each end of the core, one of the said electrodes having a concaved end.

2. A vaginal dynamo comprising a cylindrical arcuate core of dielectric material; electrodes of dissimilar metal secured to the ends of the core, one of the said electrodes

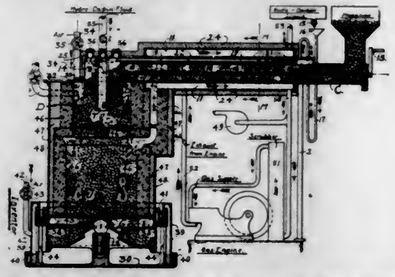
having a concaved outer end; and a suitable connection between the electrodes.



3. A vaginal dynamo comprising a cylindrical arcuate core of dielectric material; electrodes of dissimilar metal secured to the ends of the core, one of the said electrodes having a concaved outer end; a suitable connection between the electrodes; and a suitable head secured to one end of the core.

4. A vaginal dynamo comprising a cylindrical arcuate core of dielectric material; electrodes of dissimilar metals secured to the ends of the core, one of said electrodes having a concaved end; an inner, metallic connection within the core and connected to the electrodes; and a suitable head secured to one end of the core.

1,195,934. PROCESS OF GENERATING TARLESS GAS. HENNING FRIEDRICH WALLMANN, Chicago, Ill., assignor of one-half to Adelheid Wallmann, Wilhelm Roger Wallmann, and Henning Heinrich Wallmann, Chicago, Ill. Filed Dec. 17, 1912. Serial No. 737,734. (Cl. 48—208.)



1. The continuous process of gasifying which consists in, continuously moving portions of a mass of solid fuel from an inlet therefor through a distillation conduit, heating and thereby distilling fuel of said mass within said conduit, continuously separating resulting distillates from resulting residue of distillation, heating resulting separated residue to a temperature higher than that of fuel under distillation within said conduit, leading hydro-carbonaceous fluid into resulting hotter residue, thereby decomposing said fluid, separating resulting gaseous products from said hotter residue, and continuously delivering the latter after its said separating from said gaseous products, into a receptacle for solid combustible.

2. The continuous process of gasifying which consists in, continuously moving portions of a mass of solid fuel from an inlet therefor through a distillation conduit, heating and thereby distilling fuel of said mass within said conduit, continuously separating resulting distillates from resulting residue of distillation, increasing the temperature of resulting separated residue by leading into the latter a gaseous heating agent, leading hydro-carbonaceous fluid into resulting hotter residue, thereby decomposing said fluid, separating resulting gaseous products from said hotter residue, and continuously delivering the latter after its said separating from said gaseous products, into a receptacle for solid combustible.

3. The continuous process of gasifying which consists in, continuously moving portions of a mass of solid fuel from an inlet therefor through a distillation conduit, leading fluid not containing a consequential amount of air in its natural chemical character into fuel of said mass within said conduit, simultaneously heating and thereby distilling fuel of said mass within said conduit, continuously separating resulting gaseous fluid mixture from resulting residue of distillation, heating resulting separated residue to a temperature higher than that of fuel under distillation within said conduit, leading hydro-carbonaceous fluid into resulting hotter residue, thereby decomposing said hydro-carbonaceous fluid, separating resulting gaseous products from said hotter residue, and continuously delivering the latter after its said separating from said gaseous products, into a receptacle for solid combustible.

4. The continuous process of gasifying which consists in, continuously moving portions of a mass of solid fuel from an inlet therefor through a distillation conduit, heating and thereby distilling fuel of said mass within said conduit, continuously separating resulting distillates from resulting residue of distillation, heating resulting separated residue to a temperature higher than that of fuel under distillation within said conduit, leading hydro-carbonaceous fluid into resulting hotter residue, thereby decomposing said fluid, continuously separating resulting gaseous products from the latterly said residue, and consuming combustible contained in the latter by supplying air thereto after the latterly said separating.

5. The process of gasifying which consists in, moving a mass of solid fuel from inlet therefor into and through a distillation conduit, heating and thereby distilling fuel of said mass within said conduit, separating resulting distillates from resulting residue of distillation, increasing the temperature of resulting separated residue by leading into the latter a gaseous heating agent, leading hydro-carbonaceous fluid into resulting residue of increased temperature, thereby decomposing said fluid, separating resulting gaseous products from said residue of increased temperature, and consuming combustible contained in resulting separated, latterly said residue by supplying air thereto after the latterly said separating.

[Claims 6 to 12 not printed in the Gazette.]

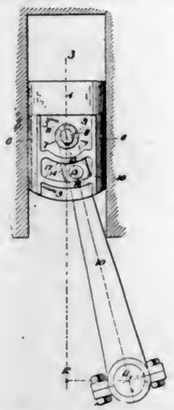
1,195,935. KNITTING-MACHINE NEEDLE. ROBERT H. WELTHALL, Philadelphia, Pa. Filed Oct. 4, 1913. Serial No. 793,347. (Cl. 66—5.)



A knitting machine needle having a butt formed by a fold in the metal of the shank extending outward from the shank, said butt being further extended by a forged or outwardly pressed blunt extension of the metal of the loop formed at its end to thereby increase the ratio of the length of the parallel side edges of the butt to the length of the central fold line for the purpose specified.

1,195,936. PISTON AND PISTON-ROD CONNECTION. CHARLES WHITE, Baltimore, Md. Filed Aug. 7, 1915, Serial No. 44,202. Renewed July 20, 1916. Serial No. 110,353. (Cl. 74—85.)

1. In combination with a piston and cylinder, a crank pin and connecting rod and a shifting wrist pin forming the connection between said connecting rod and piston, said wrist pin shifting from one side to the other of the axial line of the piston in accordance with the movement of the crank pin to one side or the other of said axial line, substantially as described.



2. In combination with a piston and cylinder, a crank with its pin and connecting rod, said connecting rod being controlled by a pivot on the piston, guide means on the piston and a wrist pin to transmit the power between the piston and the connecting rod, said wrist pin being guided by said guide means and shifting from side to side of the center line of the piston as the connecting rod assumes different angular positions in relation to said center line, substantially as described.

3. In combination with a piston and cylinder, a crank pin and connecting rod, a slot and pin connection between the connecting rod and piston to control the pivotal movement of said connecting rod and a wrist pin connection between said piston and connecting rod with a guide-way carried by the piston for the said wrist pin, substantially as described.

4. In combination with a piston and cylinder, a crank and connecting rod, a shifting wrist pin connection between the connecting rod and piston, said wrist pin moving from side to side of the axis of the piston to accord with the movement of the crank pin and controlling means to control the pivotal movement of the connecting rod in relation to the piston, substantially as described.

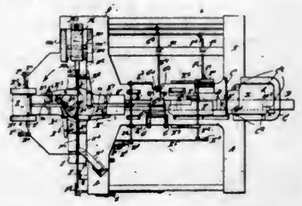
5. In combination with a piston and cylinder, a connecting rod and crank, controlling means consisting of a pin and slot or forked connection between the end of the connecting rod and the piston and a wrist pin connection intermediate the said pin and slot connection and the crank and a guide on the piston concentric with the pivot pin, said guide receiving the wrist pin to permit the same to shift from side to side of the center of the piston, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,195,937. MACHINE FOR SETTING UP CARTONS. ARTHUR J. WILLS, Brookfield, Mass., assignor to The B & R Rubber Company, North Brookfield, Mass., a Corporation of Massachusetts. Filed Mar. 27, 1914. Serial No. 827,749. (Cl. 93—44.)

1. In a machine of the kind described, a reciprocating bottom-supporting plate, a stationary angular form, and means coöperating with said plate to press a blank into said form whereby the sides of said blank will be brought to right angles with each other.

2. In a machine of the kind described, a hopper, a reciprocatory feeding mechanism, a stationary angular form located at the side of said reciprocating feeding mechanism, and means coöperating with said feeding mechanism to press a blank into said form whereby said blank will be opened up into rectangular position, said feeding mechanism forming a supporting bottom for said blank and said form.



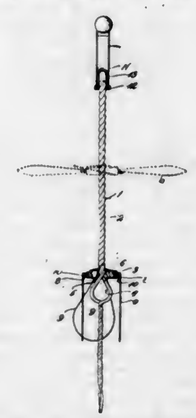
3. In a machine of the kind described, an angular form, means to open a flattened carton blank and push it in one direction into said form whereby it will become rectangular in cross section, and mechanism operable thereafter to force it in the same direction whereby it will again be flattened.

4. In a machine of the kind described, means for opening a flattened carton blank into rectangular position, and means operable thereafter to flatten said blank and then release it whereby the side walls of said blank will be turned in two operations through an angle of substantially 180° and then allowed to spring again into rectangular position, and means for closing one end of said blank to form an open carton.

5. In a machine of the kind described, means to set up a carton from a flattened blank comprising means to slip into one end of the flattened blank and lift it somewhat, means adapted to hold the lower portion of said blank during the lifting action, means operable thereafter to engage the opposite edges of the blank and press them toward each other to bring the blank into squared position, and means to close in one of the ends of the blank.

[Claims 6 to 34 not printed in the Gazette.]

1,195,938. TOY CANE. FRANK O. ANDREAS, Los Angeles, Cal., assignor of one-third to John T. Long and one-third to Eugene G. Vestal, Los Angeles, Cal. Filed Dec. 20, 1915. Serial No. 67,783. (Cl. 46—14.)

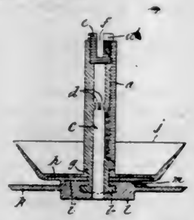


1. A toy comprising a twisted rod having a stop, a member on said rod normally resting against said stop, and provided with a plurality of swinging planes, and means to rotate said rod to cause said planes to swing outwardly and carry said member upwardly on said rod.

2. A toy comprising a cane formed of a single strand of wire bent upon itself to form two strands that are twisted together, and having an expanded portion forming a stop, a member on said rod having a plurality of swinging planes, and a handle to rotate said rod and cause said member to travel upwardly on said rod.

3. A toy comprising a flexible rod formed of a single strand of wire bent upon itself to form two strands that are intertwisted, and having an intermediate expanded portion forming a stop, a disk on said rod, a plurality of planes loosely attached to said disk, a handle attached to said rod depressible to rotate said rod and the disk thereon, whereby to cause said planes to swing outwardly and carry said disk upwardly on said rod, and means to hold said handle against dissociation from said rod.

1,195,939. VALVE ATTACHMENT OF PNEUMATIC TIRES AND THE LIKE. CHARLES EDGAR BAKER, Carmarthen, Wales. Filed Mar. 15, 1915. Serial No. 14,451. (Cl. 152—12.)



In combination with a valve stem of a seating therefor, said seating composed of india rubber having layers of canvas embedded therein, and provided with inside and outside flanges, said valve and seating being vulcanized to the valve stem to form one solid whole so that the valve stem and seating become integral parts of each other, to be fitted and cemented to an inner inflated tube of a pneumatic tire, the material of the inner tube being disposed between said inner and outer flanges.

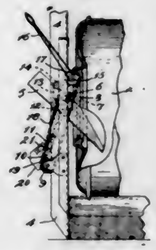
1,195,940. ADJUSTABLE SHAFT-COUPLING. NIELS A. CHRISTENSEN, Milwaukee, Wis. Filed June 1, 1911. Serial No. 630,629. (Cl. 64—13.)



1. The combination with rotary driving and driven members arranged in approximate alinement with each other, one of them being provided with a series of teeth concentric with its axis, of coupling pieces having loosely engaging cross tongues and grooves connecting them with each other and with the other member, one tongue and groove connection being transverse to the other and one of said coupling pieces being mounted and capable of angular adjustment on the toothed member, and a clamping piece adapted to be fastened to the angularly adjustable coupling piece in engagement with the toothed member.

2. The combination with rotary driving and driven members arranged in approximate axial alinement with each other, of a toothed collar fixed on one of said members, coupling pieces having loosely engaging cross tongues and grooves connecting them with each other and with the other member, one tongue and groove connection being transverse to the other and one of said coupling pieces being mounted and capable of angular adjustment on said toothed collar and having a longitudinal recess in its periphery, a toothed dog removably fitted in the peripheral recess of the angularly adjustable coupling piece, and a screw detachably securing the dog in the recess of said adjustable coupling piece, the dog being adapted when so secured, to engage with said toothed collar for holding said connected parts in the desired adjusted angular relation to each other.

1,195,941. DELIVERY-CHUTE FOR MIXING-MACHINES. SAMUEL SHAFER, Jr., Milwaukee, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 24, 1913. Serial No. 791,608. (Cl. 193—29.)



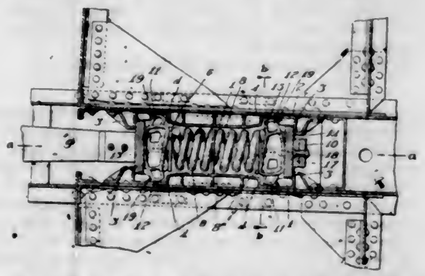
1. The combination of a delivery chute for a mixing machine, rocking arms to which the chute is pivoted, a shaft carrying rocking arms of different lengths, and links connecting respectively the shorter arm and the chute at its pivotal support, and the longer arm with the chute at a point between the pivotal support and its end.

2. The combination of a delivery chute for a mixing machine, pivoted supporting arms to which the chute is pivotally connected, a rock shaft, crank arms of different lengths carried by the rock shaft, a link connecting the shorter crank arm with the pivotal connection between the chute and one of the pivoted supporting arms, and another link connecting the longer crank arm with the chute at a point between its pivotal support and its end.

3. The combination of a delivery chute pivotally hung on movable supports, means for directing the movements of the said supports in the arcs of circles, a power shaft, means operated from the power shaft for moving the supports, thereby bodily shifting the chute, and means also operated from the power shaft for tilting the chute about the supports.

4. The combination of a pivotally supported delivery chute, arms on which the chute is supported inclining downward when the chute is tilted to deliver in one direction and upward when tilted to deliver in the opposite direction, means for shifting the said arms thereby bodily moving the chute, and means for tilting the chute in one direction when the supporting arms incline downward and in the opposite direction when they incline upward.

1,195,942. DRAFT-RIGGING FOR RAILWAY-CARS. WINFIELD H. YOST, Montreal, Quebec, Canada, assignor to Harry Stillson Hart, Chicago, Ill. Filed Jan. 7, 1911. Serial No. 601,428. (Cl. 213—64.)



1. A draft rigging having levers whose ends project beyond the line of the draw-bar with spring-mechanism interposed between them, the levers being provided at a point intermediate of their ends with abutting surfaces to prevent transverse movement of the levers relative to one another.

2. A draft rigging comprising a yoke, levers mounted within said yoke and projecting beyond the sides of the yoke, said levers being provided with correlated surfaces on their adjacent faces whereby transverse movement of the levers relative to one another is prevented, spring mechanism interposed between the levers located at opposite ends of the yoke, and a follower plate arranged intermediate of the levers and the ends of the yoke.

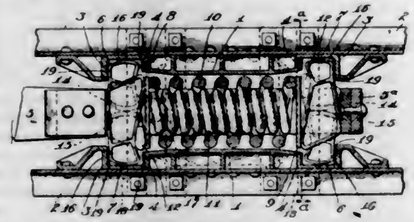
3. A draft rigging having levers projecting laterally beyond the line of the draw-bar with spring-mechanism interposed between them, the levers being provided at a point intermediate of their ends with abutting surfaces arranged to substantially describe the arc of a circle and prevent transverse movement of the levers.

4. A draft rigging comprising cheek plates provided with draft-lugs arranged in pairs at opposite ends of the cheek plates, levers arranged in pairs at opposite ends with their outer ends extending between the draft-lugs, the levers being provided with abutting surfaces intermediate of their ends whereby transverse movement of the levers relative to one another is prevented, spring-mechanism intermediate of the levers at opposite ends of the cheek plates, and means intermediate of the outer ends of the levers and one of the draft-lugs on each cheek plate whereby the levers will be forced to normal position when pressure on the draft-rigging is released.

5. A draft rigging consisting of levers whose outer ends project beyond the line of the draw-bar with spring mechanism interposed between them, said levers being provided with protruding portions at opposite ends of adjacently arranged levers, said portions having longitudinal bearing surfaces adapted to lock the adjacently arranged levers against relative movement in one direction and interlock when the levers reach a predetermined point in their relative movement in the opposite direction, and means whereby movement of the levers lengthwise of each other is prevented.

[Claims 6 to 14 not printed in the Gazette.]

1,195,943. DRAFT-RIGGING FOR RAILWAY-CARS. WINFIELD H. YOST, Montreal, Quebec, Canada, assignor to Harry Stillson Hart, Chicago, Ill. Filed Jan. 7, 1911. Serial No. 601,429. (Cl. 213—64.)



1. A draft rigging for cars having levers whose outer ends project beyond the line of the draw-bar, and spring-mechanism interposed between oppositely arranged sets of said levers, said levers being provided at a point intermediate of their ends with abutting surfaces whereby relative transverse movement of the correlated levers is prevented, the outer ends of said levers being squared to form flat bearing surfaces against the draft-lugs.

2. A draft rigging for cars, comprising cheek plates provided with draft-lugs, means secured to the draft-lugs whereby wear thereon will be prevented, levers having rounded ends to permit of free movement and flat sides adapted to extend between the lugs to provide a flat bearing against one of the lugs, while the other side of the lever extends normally at an angle to the adjacent lug about which it is adapted to rotate, and spring mechanism arranged between the levers at opposite ends of the draft rigging.

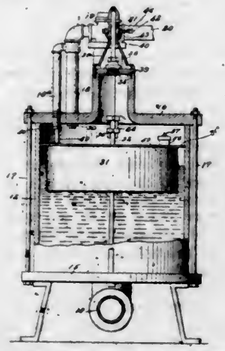
3. A draft rigging for cars consisting of draft-lugs extending substantially at right angles to the draft timbers of the car, a yoke secured to the draw-bar, levers provided with correlated surfaces intermediate of their ends about which the adjacently placed levers rotate and movement lengthwise of each other is prevented, the inner ends of the levers being formed so as to prevent relative movement beyond predetermined points in a longitudinal direction, the sides of the levers being formed so as to provide substantially flat bearing surfaces for engagement with the draft-lugs and the ends of the yoke whereby the lines of force are maintained parallel with the center line of the car, and spring mechanism interposed between said levers to provide a yielding resistance to the draw-bar.

4. A draft rigging for cars comprising draft-lugs, a draw-bar extension or yoke, levers provided with abutting surfaces to prevent relative movement in a direction lengthwise of the levers but permitting the same to rotate and having extensions arranged to engage the side of the adjacent lever, said levers being provided with flat surfaces arranged to bear against the lugs and the ends of the draw-bar extension whereby the lines of force are maintained parallel with the center line of the car.

5. In a draft rigging spring mechanism, relief levers for the mechanism, said levers being at the end of the spring mechanism, draft lugs adapted to be engaged by the levers, such lugs being arranged on the opposite side of the levers to that upon which the spring mechanism is located, abutment surfaces adapted to be engaged by the levers, such abutment surfaces being arranged on the same side of the levers as is the spring mechanism, and a bearing member between the spring mechanism and levers, such bearing member being permanently out of contact with said abutment surfaces.

[Claim 6 not printed in the Gazette.]

1,195,944. TRAP. JARARD W. LYTTON, Franklin, Va., assignor to Lytton Manufacturing Corporation, Franklin, Va., a Corporation of Virginia. Filed Mar. 15, 1915. Serial No. 14,358. (Cl. 137—101.)



1. In a steam trap the combination with a casing having an inlet and an outlet, a float movable in said casing, a source of fluid pressure, inlet means connecting said float with said source of pressure adapted to deliver pressure to the float during its movement, and an outlet connection from said float to said casing.

2. In a steam trap the combination with a casing having an inlet and an outlet, a float movable in said casing, a source of fluid pressure, inlet means connecting said float with said source of pressure adapted to deliver pressure to the float during its movement, and an adjustable inlet connection from said float to said casing.

3. In a steam trap the combination with a casing having an inlet and an outlet, a float movable in said casing, a source of fluid pressure, an inlet pipe extending from said source of pressure to said float and adapted to deliver pressure thereto during movement of the float, and an outlet valve in said float communicating with said casing.

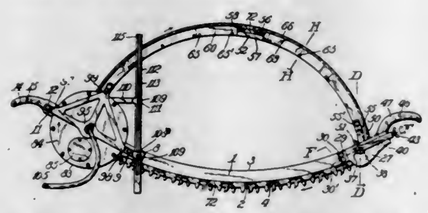
4. In a steam trap, the combination with a casing having an inlet and an outlet, a float movable in said casing,

a source of fluid pressure, an inlet pipe extending from said source of pressure to said float and adapted to deliver pressure thereto during movement of the float, and a pressure-operated outlet valve in said float communicating with said casing.

5. In a steam trap, the combination with a casing with an inlet and an outlet, a float movable in said casing, a source of fluid pressure, an inlet pipe extending from said source of pressure to said float and adapted to deliver pressure thereto during the movement of the float; a pressure-operated outlet valve in said float communicating with said casing, and an equalizing valve operable at predetermined intervals to equalize pressure between said float and casing.

[Claims 6 to 20 not printed in the Gazette.]

1,195,945. PORTABLE SAWING-MACHINE. NELSON B. MITCHELL, JOHN W. TAGGART, Sr., and ULRICH G. REDELMANN, Indianapolis, Ind. Filed July 14, 1913. Serial No. 778,931. (Cl. 143—32.)



1. A portable sawing machine frame including a head stock, a tail stock, and two segmentally curved guiding frame members reversely arranged and connected to the head stock and the tail stock, the concave edge of each member facing the concave edge of the other, two wheels in the two stocks respectively, and two handles fixed on the two stocks respectively, the frame being adapted for carrying and controlling a chain saw to be movably guided by the wheels and the convex edges of the two members.

2. A sawing machine frame including a backing blade, a head stock and a tail stock secured to the blade, a bow-shaped guide bar secured to the head stock and the tail stock, a bow-shaped guard secured to the guide bar and extending over and covering the convex edge of the bar from the head stock to the tail stock, a driving wheel in the head stock, and a guide wheel in the tail stock, for carrying and controlling a chain saw with its back slidingly guided on the convex edge of the guide bar and the backing blade and extending about the wheels and under the bow-shaped guard.

3. A portable sawing machine frame comprising a guide bar curved on a segment of a circle, the convex portion of the bar forming a saw-guide, a tail stock removably secured to one end of the guide bar, and a curved guard connected to the bar and covering the saw-guide, the guard being movable longitudinally from the bar when the tail stock is removed from the bar.

4. A portable sawing machine frame comprising two separate curved guide bars having different radii and having each a convexly curved saw-guide on its outer side, one of the bars being longer circumferentially than the other, the bars being arranged with their concave sides facing each toward the other, a head stock secured to one end of both of the guide bars, and a tail stock secured to the opposite ends of both of the guide bars.

5. In a sawing machine, the combination of a curved guide bar having a convex guide face, two curved guard plates secured to opposite sides of the guide bar and extending to an arc beyond the curved guide face, the outer edge portions of the plates having ribs on the outer sides thereof respectively, a chain saw extending along said guide face between said plates, and a cap plate having inwardly curved clasping edges embracing said ribs, the cap plate extending over said saw.

[Claims 6 to 9 not printed in the Gazette.]

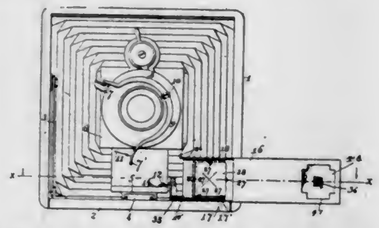
1,195,946. MARKING BIVALVES. MATTHEW C. ARMSTRONG and RICHARD ARMSTRONG, Hampton, Va. Filed Oct. 27, 1913. Serial No. 797,592. (Cl. 40—3.)



1. Means for identifying oysters consisting of a tag attached to that part of the shell on which the oyster is to be served at a point outside of the ligament or hinge of said oyster, whereby when the oyster is opened, said tag remains attached to the part to be served.

2. An improvement in the art of identifying oysters which consists in attaching a tag to that part of the shell on which the oyster is to be served at a point outside of the ligament or hinge of said oyster, whereby when the oyster is opened, said tag remains attached to the part to be served.

1,195,947. FOCUSING-CAMERA. JOSEPH BECKER, Washington, D. C. Filed July 8, 1901, Serial No. 67,469. Renewed Jan. 12, 1916. Serial No. 71,809. (Cl. 95—44.)



1. The combination with a camera, of auxiliary focusing means comprising elements for receiving distinct groups of rays from an object to be photographed, and a base upon which said elements are suitably mounted, said base being adapted to be held on the camera either in operative relation for use or in a different relation for storage.

2. The combination with a camera, of auxiliary focusing means comprising elements for receiving distinct groups of rays from an object to be photographed, and a base upon which said elements are suitably mounted, said base being adapted to be held on the camera in protruding relation for use or in non-protruding relation for storage.

3. The combination with a camera comprising a plate supporting frame and a relatively movable lens supporting frame, and a focuser also comprising relatively movable parts; of means for clamping one of said focuser parts to one of the said frames and mechanism for connecting the other focuser part with the other of said frames said mechanism being adapted to be established automatically as the parts are extended into a position of use, and conversely to be automatically disconnected when the said parts are folded for storage.

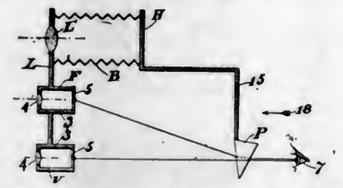
4. The combination with a camera comprising a plate or film supporting frame, and a relatively movable lens supporting frame, and a focuser also comprising relatively movable parts; of means for clamping one of said focuser parts in fixed relation to the plate or film supporting frame of the camera, the other focuser part being adapted to automatically engage with the lens supporting frame, when the said camera frames are separated for use.

5. The combination with a camera comprising a base adapted to carry a plate or film holding frame, and a lens holding frame which is adapted to be moved on said base for changing the depth of the camera; of a focuser comprising also a base and a relatively movable part; means for holding said focuser base on said camera base either in one position for use or in another position for storage;

and mechanism for mechanically connecting the said relatively movable element of the focuser with the movable lens holding frame of the camera, said mechanical connection being adapted to be automatically established as the different parts are opened up into operative relation and conversely:—automatically disconnected when the said parts are folded for storage.

[Claims 6 to 21 not printed in the Gazette.]

1,195,948. FOCUSING-CAMERA. JOSEPH BECKER, Washington, D. C. Original application filed June 15, 1901, Serial No. 64,722. Divided and this application filed May 9, 1912, Serial No. 696,197. Renewed Sept. 7, 1915. Serial No. 49,385. (Cl. 95—44.)



1. In a device for focusing the lens of a photographic camera, image producing optical elements located at the ends of a base-line and image displacing optical elements coöperating with said image producing elements, said image producing and image displacing optical elements adjustable toward each other in rectilinear direction parallel to the axis of the camera lens and adapted to produce coincident images of each distant object on proper adjusting of their distance, and means for adjusting the objective of the photographic camera with relation to the image plane of same in accordance with the adjustment of the image producing and image displacing elements of the focusing device.

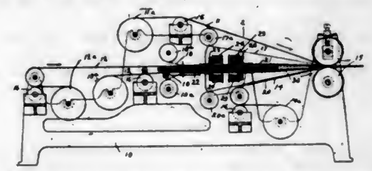
2. In a device for focusing the lens of a photographic camera, image producing optical elements located at the ends of a base-line connected to the photographic camera, image displacing optical elements coöperating with said image producing elements and connected to a part of the camera adjustable with relation to that part which is in connection with said image producing elements, said image producing elements and said image displacing optical elements movable toward each other in rectilinear direction and adapted to produce coincident images of any object the image of which is in focus in the camera.

3. The combination with a focusing camera comprising a lens support, a plate or film support, and means for varying the distance separating such supports to permit of setting the camera in focus on an object in the camera field; of an external focusing means or "focuser" adapted to form apparently registering external real or virtual images of an object-point in the camera field when the camera is in focus on such object-point, said "focuser" comprising an optical element, or elements, mounted in fixed position with relation to the said lens support and another optical element, or elements, mounted in fixed position with relation to the said plate or film support.

1,195,949. METHOD AND MACHINE FOR REINFORCING SHEET MATERIAL. MARY R. CARNEY, (now by marriage MARY R. HARRISON, Winthrop, Mass. Filed Feb. 24, 1914, Serial No. 820,451. Renewed May 11, 1915. Serial No. 27,440. (Cl. 154—1.)

1. A machine of the character described comprising means for causing a plurality of strips of sheet material to travel in the direction of their length, a strand carrier movable around one of the strips to wrap a strand spirally about it, and means for adhesively connecting said strips at a point beyond the location of the strand carrier.

2. A machine of the character described, comprising means for causing a plurality of strips of sheet material to travel in the direction of their length, a strand carrier movable around one of the strips to wrap a strand spirally about it, means for leading other strands in the direction of the length of said strips, and means for adhesively connecting said strips at a point beyond the location of the strand carrier.



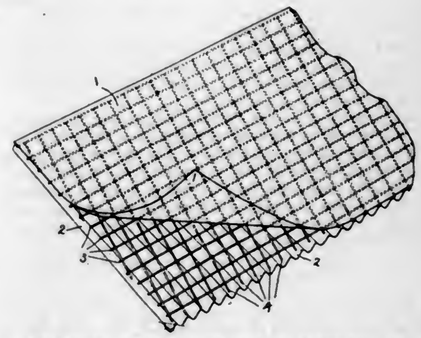
3. A machine of the character described, comprising means for causing a plurality of strips of sheet material to travel in the direction of their length, a strand carrier movable around one of the strips to wrap a strand spirally about it, means for leading other strands longitudinally, and alternately inside and outside of the path of movement of the strand carrier, and means for adhesively connecting said strips beyond the location of the strand carrier.

4. A machine of the character described, comprising means for causing a plurality of strips of sheet material to travel in the direction of their length, a strand carrier movable around one of the strips to wrap a strand spirally about it, means for uniting said strips beyond the location of the strand carrier and means for cutting the wrapped strands.

5. A machine of the character described, comprising means for causing two pairs of strips of sheet material to travel in the direction of their length, a strand carrier movable around the adjacent strips of the two pairs, means for adhesively connecting said strips at a point beyond the location of the strand carrier, and means for cutting the transverse strands.

[Claims 6 to 24 not printed in the Gazette.]

1,195,950. REINFORCED SHEET MATERIAL. MARY R. CARNEY, (now by marriage MARY R. HARRISON,) Winthrop, Mass. Filed Sept. 3, 1914. Serial No. 860,077. (Cl. 154—55.)



1. Reinforced paper having parallel edges and having longitudinal and transverse strings secured thereto, the longitudinal strings being parallel with the edges of the paper and the transverse strings being separate from each other and straight from end to end, all of said transverse strings extending across the paper oblique to the longitudinal strings and parallel with each other.

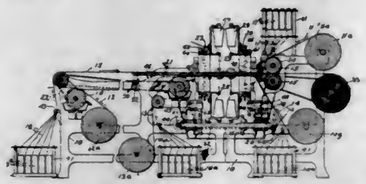
2. Reinforced paper having transverse reinforcing strings connected therewith, said strings being separate from each other, and parallel, and straight from end to end, and extending across the material on lines other than a right angle to the edges thereof, and longitudinal strings arranged alternately on opposite sides of said transverse strings.

3. Sheet material comprising corrugated paper having unwoven reinforcing strands crossing the ribs thereof at an acute angle and adhesively secured thereto.

4. Sheet material comprising corrugated paper having unwoven reinforcing strands crossing the ribs thereof in both longitudinal and transverse directions and adhesively secured thereto.

5. Reinforced sheet material comprising a flat sheet of paper and a corrugated sheet of paper with intervening longitudinal and transverse strands adhesively secured between the two sheets, the transverse stranda crossing the ribs of the corrugated sheet at an acute angle thereto.

1,195,951. MACHINE AND METHOD FOR REINFORCING SHEET MATERIAL. MARY R. HARRISON, Winthrop, Mass. Filed Apr. 17, 1916. Serial No. 91,648. (Cl. 154—1.)



1. A machine of the character described, comprising means for causing a plurality of strips of sheet material to travel in the direction of their length, means for laying strand material transversely of said strips, means whereby the angle of the strand material relatively to the strips may be varied, and means for uniting said strips with the strand material confined between them.

2. A machine of the character described comprising means for causing a plurality of strips of sheet material to travel in the direction of their length, a strand carrier movable around one of the strips to wrap a strand spirally about it, means whereby the strand may be deflected as it is carried into contact with one surface of the strip, and means for adhesively connecting said strips at a point beyond the location of the strand carrier.

3. A machine of the character described comprising means for causing a plurality of strips of sheet material to travel in the direction of their length, a strand carrier movable around one of the strips to wrap a strand spirally about it, an adjustable finger for deflecting the strand as it approaches one surface of the strip, and means for adhesively connecting said strips at a point beyond the location of the strand carrier.

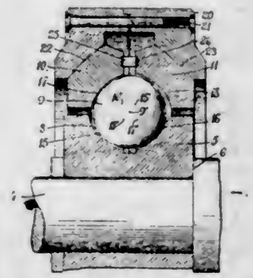
4. A machine of the character described, comprising a carrier for imparting an orbital path of movement to strand material, means for feeding sheet material through said path, a support for preventing the sheet material from being collapsed by the strand material, conveyers for preventing the strand material from binding on the support, means for positively driving said conveyers, and means for uniting the sheet material and strand material.

5. A machine of the character described, comprising a carrier for imparting an orbital path of movement to strand material, means for feeding sheet material through said path, a support for preventing the sheet material from being collapsed by the strand material, chains having portions arranged to travel along the edges of the support, means for positively driving the chains, and means for uniting the sheet material and strand material.

[Claims 6 to 14 not printed in the Gazette.]

1,195,952. BALL-BEARING. RUDOLPH H. FOX, New Britain, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 1, 1915. Serial No. 58,945. (Cl. 64—49.)

1. A single row double thrust ball bearing comprising, a thrust member having a channel in its periphery to receive the row of balls, two thrust members concentrically disposed with respect to said first thrust member at opposite sides of the channel therein, a single row of balls engaged in said channel and between said two thrust members, said first thrust member having thrust bearing surfaces at the opposite sides of the channel therein and said second thrust members having bearing surfaces diagonally opposite said thrust bearing surfaces, the diagonally opposite bearing surfaces being arranged to engage the interposed balls when the thrust is in one direction and to clear the balls when the thrust is in the opposite direction.



2. A single row double thrust ball bearing comprising a thrust member having a channel in its periphery to receive the row of balls, two thrust members concentrically disposed with respect to said first thrust member at opposite sides of the channel therein, a single row of balls engaged in said channel and between said two thrust members, said first thrust member having thrust bearing surfaces at the opposite sides of the channel therein and said second thrust members having bearing surfaces diagonally opposite said thrust bearing surfaces, the diagonally opposite bearing surfaces being arranged to engage the interposed balls when the thrust is in one direction and to clear the balls when the thrust is in the opposite direction and means for supporting which ever one of the two thrust members is free to thrust out of contact with the balls.

3. A single row double thrust unit ball bearing comprising a thrust member channeled on its periphery to receive a row of balls and provided with thrust bearing faces at opposite sides of said channel, a single row of balls in said channel and arranged to engage one or the other of said bearing faces in accordance with the direction of thrust, thrust rings at opposite sides of said row of balls surrounding the thrust member but free of engagement therewith, said thrust rings having opposed bearing faces diametrically opposite the bearing faces of the channeled thrust member to form in connection therewith ball races for the balls to take the thrust in opposite directions, a housing surrounding the thrust rings having oppositely disposed internal bearing faces engaged by the two thrust rings, and means yieldingly holding the thrust rings engaged with the internal bearing faces of the housing.

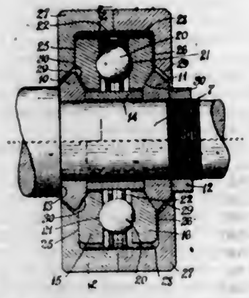
4. A single row double thrust unit ball bearing comprising a thrust member channeled on its periphery to receive a row of balls and provided with thrust bearing faces at opposite sides of said channel, a single row of balls in said channel and arranged to engage one or the other of said bearing faces in accordance with the direction of thrust, thrust rings at opposite sides of said row of balls surrounding the thrust member but free of engagement therewith, said thrust rings having opposed bearing faces diametrically opposite the bearing faces of the channeled thrust member to form in connection therewith ball races for the balls to take the thrust in opposite directions, a housing surrounding the thrust rings having oppositely disposed internal bearing faces engaged by the two thrust rings and yielding spreading means interposed between and normally forcing the two thrust rings apart.

5. A single row double thrust ball bearing comprising an inner thrust member having a channel in its periphery

to receive a row of balls, two thrust rings surrounding said thrust member and disposed at opposite sides of the channel therein, a single row of balls engaged in the channel and between the thrust rings, said inner thrust member having thrust bearing surfaces at the opposite sides of the channel therein and said thrust rings having bearing surfaces diagonally opposite said thrust bearing surfaces, the diagonally opposite bearing surfaces being arranged to engage the interposed balls when the thrust is in one direction and to clear the balls when the thrust is in the opposite direction and a housing around the thrust rings having opposed bearing surfaces to be engaged by said thrust rings.

[Claims 6 to 10 not printed in the Gazette.]

1,195,953. BALL-BEARING. RUDOLPH H. FOX, New Britain, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 3, 1915. Serial No. 64,800. (Cl. 64—49.)

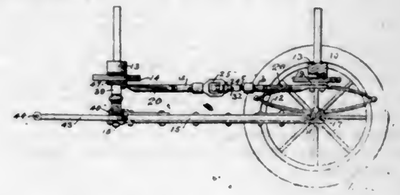


1. In a bearing of the character set forth, the combination of a relatively rotatable shaft and casing, opposed thrust shoulders on said shaft, thrust rings between said thrust shoulders and arranged to be engaged thereby at their inner peripheral portions, said thrust rings and shoulders having spherical engaging surfaces whereby said thrust rings will be centered by said thrust shoulders and a certain amount of angular adjustment between the thrust rings and shaft will be permitted, friction reducing elements between the thrust rings and a casing inclosing the thrust rings having internal abutment walls opposed to and adapted to be engaged by the outer peripheral portions of the thrust rings.

2. In a bearing of the character set forth, the combination of a relatively rotatable shaft and casing, opposed thrust shoulders on said shaft, thrust rings between said thrust shoulders having their inner peripheral portions engaged by said shoulders and provided on their opposing faces with ball races, said thrust rings and thrust shoulders having spherical engaging surfaces whereby said thrust rings may be centered in different angular relations about the shaft, said thrust rings further having bearing at their outer peripheral portions with opposite inner walls of the casing, and a single row of balls engaged in the opposed ball races of the two thrust rings carrying the thrust transmitted through the thrust rings between the thrust shoulders and diagonally opposite walls of the casing and serving by their running engagement in said ball races to center the thrust ring which is engaged with the wall of the casing in respect to the thrust ring which is rotating with the shaft.

1,195,954. SHORT-TURNING TRUCK. JAMES M. ROSS, Buffalo, N. Y. Filed Oct. 23, 1915. Serial No. 57,610. (Cl. 21—137.)

1. A vehicle reach consisting of two tubular end members, a middle section pivotally connected to one of said end members and slidably connected to the other of said end members, and a spring wholly inclosed by one of said tubular end members and exerting a pressure on both of said end members.



2. A vehicle reach consisting of two end sections and an intermediate section that consists of a plunger and pivot element which latter is connected to one of said end sections, a spring surrounding said plunger and secured against movement beyond the end thereof, said plunger extending into the other of said end sections which latter also incloses said spring, and adjusting means whereby said spring is tensioned.

3. In a vehicle, the combination of a rigid reach, a front member to which said rigid reach is pivotally connected, a rear axle to which said rigid reach is pivotally connected, a pair of springs on said rear axle, a spring on said front member, an arm, means whereby said arm is connected to the first said springs, a second arm, means connecting said second arm to the second said spring, and an intermediate element slidably connected to one of said arms and pivotally connected by a universal joint to the other of said arms.

4. In a vehicle, the combination of a rear axle, a pair of springs supported thereon, a plate on said springs, a reach member rigidly connected to said plate, a rigid reach pivotally connected to said rear axle, a spring to which said rigid reach is pivotally connected, a plate on the last said spring, a reach member on the last said plate and rigid therewith, and an intermediate reach element slidably connected to one of said reach members and connected by a universal joint to the other of said reach members.

5. A jointed reach consisting of two end sections, an intermediate section having a spring-pressed connection with one of said end sections and having a pivotal connection with the other of said end sections, and means for adjusting said pivotal connection so as to compensate for wear and to prevent rattling and shocking of the several elements of the reach.

[Claims 6 to 16 not printed in the Gazette.]

1,195,955. COMPOSITION OF MATTER FOR SOLDERING CAST-IRON, MILD STEEL, ALUMINUM, AND THE LIKE. WILLIAM A. DAY, Bellingham, Wash. Filed Mar. 8, 1916. Serial No. 82,803. (Cl. 75—1.)

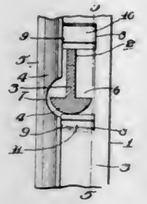
The herein-described composition of matter for soldering cast iron, mild steel, aluminum and the like, consisting of lead, one part; tin, one part; and zinc, two parts, fused together to form an alloy.

REISSUES.

14,184. JOINT FOR ROLLED METAL BARS. ERNEST W. GOODEY, Philadelphia, Pa. Filed Aug. 5, 1914. Serial No. 855,312. Original No. 1,034,440, dated Aug. 6, 1912, Serial No. 684,909. (Cl. 189—36.)

1. The combination with two bars, both bars constituting longitudinal webs and enlarged beads at one edge, one bar wider than the other and made with an opening conforming in shape to the beaded edge of the other of said bars, and having tongues adapted to be bent outwardly to receive the said last-mentioned bar, and said last-mentioned bar having a notch in its web portion to engage the web portion of the first-mentioned bar, substantially as described.

2. The combination with two bars, both bars having flat web portions and rounded beads thereon, one bar having a longitudinal bead extending beyond the rounded bead and in line with the web, said last-mentioned bar having a curved opening in its rounded bead portion, a transverse opening in its web portion extending from the rounded opening to a point removed from the edge of the web, said web having longitudinal slits forming tongues at opposite sides of the last-mentioned opening adapted to be bent to receive the other of said bars, and said last-mentioned bar having a notch in the edge of its web portion to engage the web portion of the first-mentioned bar, substantially as described.



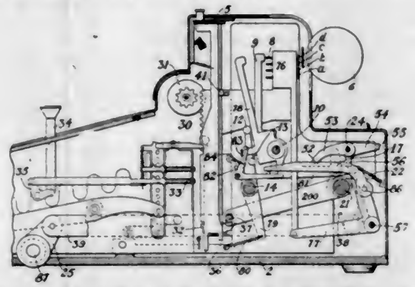
3. In metallic sash construction, the combination of cooperating T bars having arc-shaped heads, one bar having the underside of its head provided with an arc-shaped recess corresponding to the head of the other bar, also a recess in its adjacent web for receiving the web of the other bar, and having the web adjacent thereto cut and bent out of place to receive said other T bar in a position a quarter turn out of normal position, whereby when said bar is turned to normal position the arc-shaped head will seat in the arc-shaped recess, and the bent out portions of the web when forced back into position will engage the web of said other bar.

4. In metallic sash construction, the combination of cooperating T bars having arc-shaped heads, one bar having the underside of its head provided with an arc-shaped recess corresponding to the head of the other bar, also a recess in its adjacent web for receiving the web of said other bar, and having the web adjacent thereto cut and bent out of place to receive said other T bar in a position a quarter turn out of normal position, said other bar having a notch in the margin of its web for receiving a portion of the web of the first mentioned bar, whereby when said bar is turned to normal position the arc-shaped head will seat in the arc-shaped recess, and the bent out portions of the web when forced back into position will engage the web of said other bar.

5. In metallic sash construction, the combination of cooperating T bars having arc-shaped heads, one bar having a strip or projection beyond its arc-shaped surface, and in line with the web and the underside of its head provided with an arc-shaped recess corresponding to the head of the other bar, also a recess in its adjacent web for receiving the web of the other bar, and having the web adjacent thereto cut and bent out of place to receive said other T bar in a position a quarter turn out of normal position, whereby when said bar is turned to normal position the arc-shaped head will seat in the arc-shaped recess, and the bent out portion of the web when forced back into position will engage the web of said other bar.

14,185. PRINTING MECHANISM FOR ADDING-MACHINES. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, a Corporation of Delaware. Filed Apr. 16, 1915. Serial No. 21,890. Original No. 1,092,497, dated Apr. 7, 1914, Serial No. 745,893. (Cl. 235—60.)

1. In a calculating machine, the combination of a signal key, means for printing a signal, a main operating member, means for causing the signal printing means to be cocked by the movement of the operating member and to remain cocked at the conclusion of its normal movement, and means for causing the operation of the said key to effect the actuation of the printing means.



2. In a calculating machine, a signal printing member arranged to print a plurality of signals, a plurality of signal keys, one for each signal, means connecting the printing member and the key arranged to cause the depression of any of said keys to first shift the printing member and to thereupon effect the printing of the signal corresponding to the signal key depressed, a main operating member, and means for causing the operation of said main operating member to cause the signal printing means to be set to remain cocked at the conclusion of the movement of such operating member.

3. In a calculating machine, a signal member carrying a set of signal type, a hammer movable in a certain path, a set of signal keys, means connecting the keys and the carrier causing the depression of any of the keys to shift the carrier with the type corresponding to the key depressed brought to be engaged by the hammer when swung to thereby print, and which carrier is so shifted at the initial movement of the key, a main operating member for the machine, and means connecting the hammer with the operating member arranged to cause the hammer to be cocked by the normal operation of the member and to remain cocked at the end of the movement of such member.

4. In a calculating machine, a signal printing member arranged to print a plurality of signals, a hammer movable in a certain fixed path to strike the different signals in different positions of the said member to cause them to print, a bar connected with the carrying member and also with the hammer, a set of keys each arranged to connect with said bar and arranged when depressed to each cause the carrying member to be set at a different position, and to thereupon cause the hammer to be operated to print the signal corresponding to the key depressed, a main operating member for the machine, and means connecting the hammer with the operating member arranged to cause the hammer to be cocked by the normal operation of the member and to remain cocked at the end of the movement of such member.

5. In a calculating machine, a rack and type plate provided with a carrier portion, type in the carrier portion, the plate having a set of recesses corresponding in relative position to the type on the plate, a lock bar movably supported on the machine to engage the different recesses as the said plate is shifted to different printing positions, a universal bar arranged to control the movement of all the rack and type plates, means for normally holding said lock bar away from the rack and type plate, and means connected with the lock bar arranged to be engaged by the universal bar when the latter has disengaged the rack and type plates, to shift the lock bar to engage the rack and type plates at said notches.

6. In a calculating machine, a movable signal carrying member, a set of signal printing type thereon, a hammer movable in a certain path to strike the type respectively in the different positions of the carrying member, a bar supported to move endwise and also to have a lateral movement, said bar being connected with the carrier to shift the carrier when moved endwise, means connecting said bar with the hammer whereby the hammer when cocked will be tripped by the swinging of said bar, and a set of keys operatively connected with said bar to swing the bar and to control endwise movement of the bar to swing the carrier to different positions according to the key depressed.

7. In a calculating machine, a movable signal carrying member, a set of signal printing type thereon, a hammer movable in a certain path to strike the type respectively in the different positions of the carrying member, a bar supported to move endwise and also to have a lateral movement, said bar being connected with the carrier to shift the carrier when moved endwise, means connecting said bar with the hammer whereby the hammer when cocked will be tripped by the swinging of said bar, a set of keys operatively connected with said bar to swing the bar and to control endwise movement of the bar to swing the carrier to different positions according to the key depressed, an operating member on the machine, and connections between the operating member and the hammer arranged to cock the hammer in the normal operation of the machine.

8. In a calculating machine, a movable signal carrying member, a set of signal printing type thereon, a hammer movable in a certain path to strike the type respectively in the different positions of the carrying member, a bar supported to move endwise and also to have a lateral movement, said bar being connected with the carrier to shift the carrier when moved endwise, means connecting said bar with the hammer whereby the hammer when cocked will be tripped by the swinging of said bar, a set of keys operatively connected with said bar to swing the bar and to control endwise movement of the bar to swing the carrier to different positions according to the key depressed, an operating member in the machine, connections between the operating member and the hammer arranged to cock the hammer in the normal operation of the machine, and means connected with the operating member for returning said bar to normal position.

9. In a calculating machine, a movable signal printing member, a series of signal type on the member, a plurality of signal keys one for each signal, a bar mounted adjacent said keys and arranged to swing, means connecting said bar and the carrier whereby the endwise movement of the carrier will shift the type carrying member, a spring connected with the bar for moving it in this direction, an operating member on the machine, means connecting the operating member with said bar to move the bar against the force of said spring, a stop on each of the keys, an abutment on the bar arranged to engage the stop on one said key to retain the bar in normal position against the force of said spring, the bar having other abutments arranged to engage the stops on the other keys when depressed to thereby release the bar from said stop and key and permit a limited endwise movement of the bar by its spring, whereby to position the printing member, and means connecting the bar with said hammer to release the hammer when cocked by the swinging of the bar from depression of the keys.

10. In a calculating machine, a movable signal printing member, a series of signal type on the member, a plurality of signal keys one for each signal, a bar mounted adjacent said keys and arranged to swing, means connecting said bar and the carrier whereby the endwise movement of the carrier will shift the type carrying member, a spring connected with the bar for moving it in this direction, an operating member on the machine, means connecting the operating member with said bar to move the bar against the force of said spring, a stop on each of the keys, an abutment on the bar arranged to engage the stop on one said key to retain bar in normal position against the force of said spring, the bar having other abutments arranged to engage the stops on the other keys when depressed to thereby release the bar from said stop and key, and permit a limited endwise movement of the bar by its spring whereby to position the printing member, means connecting the bar with said hammer to release the hammer when cocked by the swinging of the bar from depression of the keys, and means connecting the hammer with said operating member to cause the hammer to be cocked in the normal operation of the operating member.

11. In a calculating machine, the combination of a set of type carriers, a set of hammers arranged to engage the type carriers to print, a set of actuators for the hammers, a set of triggers one for each hammer to cock the hammers, and a bar arranged to retain the triggers out of position of engagement with the hammers.

12. In a calculating machine, the combination of a set of rack and type plates, type carried by the plates, a set of hammers arranged to engage the type on the plates, a set of actuating levers for the hammers, a set of triggers for the hammers arranged to trip the hammers when the triggers are moved back and forth, the rack and type plates having means engaging the triggers in the normal position of the plates to prevent engagement between the triggers and the hammers, and a bar arranged to be shifted to engage the triggers to hold them all away from position of engagement with the hammers.

13. In a calculating machine, a movable signal carrying member, a set of signal type on the member, a hammer movable in a certain path to engage the different type upon shifting of said member, an energizer lever to advance the hammer when cocked, a trigger arranged to engage the hammer to cock the hammer against the force of its energizer lever, an operating member for the machine connected with the trigger to shift the trigger in the normal operation of the member and cock the hammer, a latch arranged to engage the hammer when cocked to hold the hammer in such position, a set of signal keys connected with said signal carrying member to shift the member upon initial movement of the keys to bring different type to a printing position according to the key depressed, and means connecting said latch with the keys to trip the latch at the latter portion of the movement of the key to release the hammer to strike the set type.

14. In a calculator, the combination with accumulating and printing means, a main operating device for said means arranged to set-up selected items upon the normal operation of such device, and special keys adapted to cause special operations of the accumulating or printing means, or of both, on operation of the main operating device, of signal printing means connected with the special keys and organized and constructed to be operated to print a signal at once upon the depression of the special key and previous to the operation of the said main operating device that effects the special operation of the machine according to the special key depressed.

15. In a calculator, the combination with accumulating and printing means, a main operating device for said means arranged to set up selected items upon the normal operation of such device, and special keys adapted to cause special operations of the accumulating or printing means, or of both, on operation of the main operating device, of signal printing means connected with the special keys and organized and constructed to be energized by and during the operation of said main operating device without at such time effecting the signal printing, said signal printing means being connected with the special printing keys to cause the signal to be printed by and during the depression of the special key, and which operation is caused by said means that is energized by the main operating device, whereby the signal printing is effected at the conclusion of the depression of the special key and previous to the operation of the said main operating device.

DESIGNS.

49,532. SOCIETY-EMBLEM. CHARLES A. BERKEY, Highland Park, Mich. Filed June 28, 1916. Serial No. 106,531. Term of patent 7 years.



The ornamental design for a society emblem as shown.

49,533. FINGER-RING, BROOCH, OR SIMILAR ARTICLE. LEE O. BISHOP, Great Falls, Mont. Filed May 27, 1916. Serial No. 100,399. Term of patent 7 years.



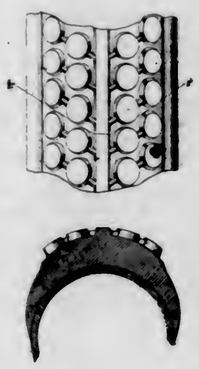
The ornamental design for a finger ring, brooch or similar article as shown.

49,534. TIRE. HERBERT S. BLYNT, Washington, D. C. Filed June 30, 1916. Serial No. 106,800. Term of patent 7 years.



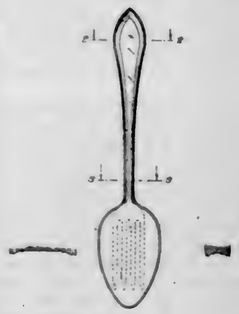
The ornamental design for a tire, as shown.

49,535. VEHICLE-TIRE. ABRAHAM H. BOYD, Aspinwall, Pa., assignor to The Porter Rubber Company, Salem, Ohio, a Corporation of Ohio. Filed May 27, 1916. Serial No. 100,400. Term of patent 3½ years.



The ornamental design for a vehicle tire, substantially as shown.

49,536. SPOON, FORK, OR SIMILAR ARTICLE. GILBERT L. CROWELL, Jr., Arlington, N. J., assignor to Dominick & Haff, New York, N. Y., a joint-stock Company. Filed Feb. 1, 1916. Serial No. 75,610. Term of patent 7 years.



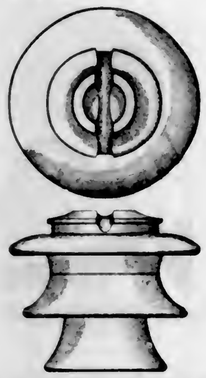
The ornamental design for a spoon, fork or similar article as shown.

49,537. BABY-BUGGY. CHARLES DOERING, Jr., Chicago, Ill., assignor to Thomas E. Barton, Washington, D. C. Filed Feb. 28, 1916. Serial No. 81,072. Term of patent 7 years.



The ornamental design for a baby buggy as shown.

49,538. INSULATOR. WALTER T. GODDARD, Hamilton, Ontario, Canada. Filed June 9, 1916. Serial No. 102,769. Term of patent 14 years.



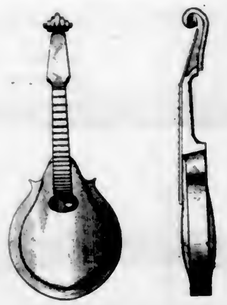
The ornamental design for an insulator, as shown.

49,539. VENDING-MACHINE CASING. JOHN K. GOODRICH, Atlanta, Ga., assignor to Robert A. Grant, Atlanta, Ga. Filed May 8, 1916. Serial No. 96,244. Term of patent 7 years.



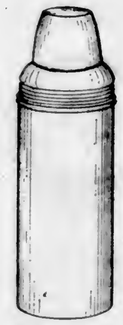
The ornamental design for a vending machine casing as shown.

49,540. STRINGED INSTRUMENT. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed June 14, 1916. Serial No. 103,696. Term of patent 3½ years.



The ornamental design for a stringed instrument, as shown.

49,541. CASE FOR VACUUM-BOTTLES. JOSEPH F. LAMB, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 19, 1915. Serial No. 3,174. Term of patent 14 years.



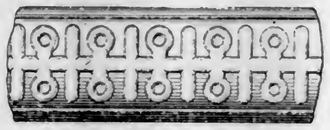
The ornamental design for a case for vacuum-bottle, as shown.

49,542. BADGE, EMBLEM, OR SIMILAR ARTICLE. BENJAMIN LEWENTHAL, New York, N. Y., assignor to Fred & Ben Lewenthal, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 8, 1916. Serial No. 90,002. Term of patent 3½ years.



The ornamental design for a badge, emblem or similar article, as shown.

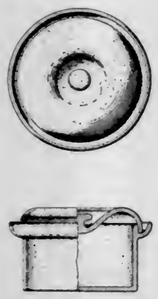
49,543. RUBBER VEHICLE-TIRE. SENECA G. LEWIS, Greensburg, Pa., assignor to Pennsylvania Rubber Company, Jeannette, Pa., a Corporation of Pennsylvania. Filed July 14, 1916. Serial No. 109,394. Term of patent 14 years.





The ornamental design for a rubber vehicle tire as shown.

49,544. COVERED DISH. CHARLES E. MAIER, Cambridge, Ohio, assignor to The Oxford Pottery Company, Cambridge, Ohio, a Corporation of Ohio. Filed Feb. 25, 1916. Serial No. 80,529. Term of patent 3½ years.



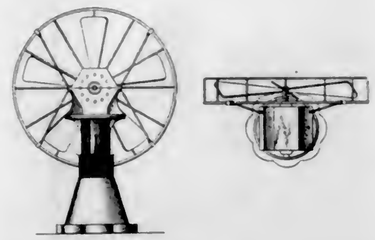
The ornamental design for a covered dish, as shown.

49,545. LIGHTING-FIXTURE. EUGENE J. MEYBERG, Los Angeles, Cal. Filed Apr. 8, 1916. Serial No. 90,009. Term of patent 3½ years.



The ornamental design for a lighting fixture as shown.

49,546. FAN AND CASING. CHARLES A. POST, Sheridan, Wyo. Filed May 29, 1916. Serial No. 100,694. Term of patent 14 years.



The ornamental design for a fan and casing as shown.

49,547. TOY, STATUETTE, IMAGE, OR EMBLEM. ALBERT C. RALEIGH, Spokane, Wash., assignor to Howard S. Clemmer, Spokane, Wash. Filed May 23, 1916. Serial No. 99,473. Term of patent 7 years.



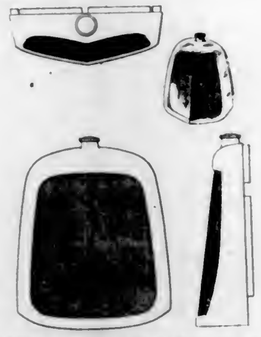
The ornamental design for a toy, statuette, image, or emblem, substantially as shown.

49,548. KNIFE-HANDLE. STEPHEN RICHARD, Jr., Southbridge, Mass. Filed June 24, 1916. Serial No. 105,749. Term of patent 14 years.



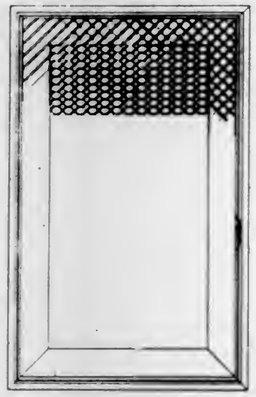
The ornamental design for a knife handle, as shown.

49,549. RADIATOR. JOHN A. SCHELL, Detroit, Mich. Filed June 26, 1916. Serial No. 106,065. Term of patent 7 years.



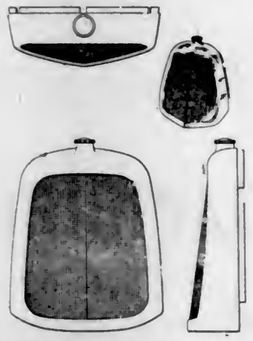
The ornamental design for a radiator, as shown.

49,550. MAT. JOHN SCHERNER, Milwaukee, Wis., assignor to Federal Rubber Manufacturing Company, Cudahy, Wis., a Corporation of Wisconsin. Filed Mar. 28, 1916. Serial No. 87,369. Term of patent 14 years.



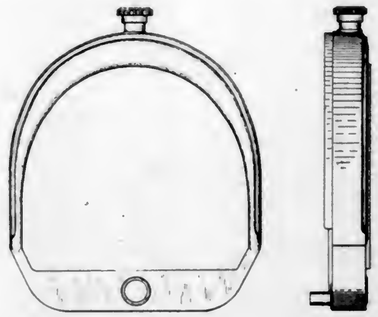
The ornamental design for a mat, as shown.

49,551. RADIATOR. JOHN A. SCHELL, Detroit, Mich. Filed June 26, 1916. Serial No. 106,066. Term of patent 7 years.



The ornamental design for a radiator, as shown.

49,552. RADIATOR-FRAME. FABIO B. SERGARDI, Lansing, Mich., assignor to Olds Motor Works, Lansing, Mich., a Corporation of Michigan. Filed May 11, 1916. Serial No. 96,932. Term of patent 3½ years.



The ornamental design for a radiator frame, substantially as shown.

49,553. PANEL-CURTAIN. CHARLES S. SHAPIRO, New York, N. Y. Filed May 31, 1916. Serial No. 100,970. Term of patent 3½ years.

The ornamental design for a panel curtain as shown.

49,554. BELT-BUCKLE. DANIELL W. SYLVESTER, Clemson College, S. C. Filed June 24, 1916. Serial No. 105,732. Term of patent 3½ years.



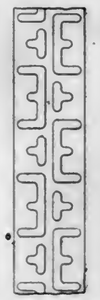
The ornamental design for a belt buckle, as shown.

49,555. PASTE-JAR. VICTOR VIVAUDOU, New York, N. Y. Filed Apr. 12, 1916. Serial No. 90,786. Term of patent 7 years.



The ornamental design for a paste jar as shown.

49,556. TIRE-TREAD. RICHARD GEORGE WOOTEN, Toronto, Ontario, Canada. Filed July 6, 1916. Serial No. 107,863. Term of patent 7 years.



The ornamental design for a tire tread, as shown.

TRADE-MARKS

PUBLISHED AUGUST 22, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provisior in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 71,150. (CLASS 39. CLOTHING.) THE B. F. GOODRICH COMPANY, New York, N. Y., and Akron, Ohio. Filed June 17, 1913.



The narrow upper band being colored red. No claim is made for the representation of a boot.

Particular description of goods.—Rubber Boots, Rubber Shoes, Rubber Shoepacks, and Rubber Shoes with Leather Tops.

Claims use since about Sept. 1, 1911.

Ser. No. 86,645. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KANSAS HARD WHEAT BREAKFASTFOOD CO., Chase, Kans. Filed May 15, 1915.

ORIGINAL

Particular description of goods.—A Breakfast Food.

Claims use since Apr. 14, 1915.

Ser. No. 86,773. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS AND PROJECTILES.) E. I. DU PONT DE NEMOURS POWDER COMPANY, Wilmington, Del. Filed May 20, 1915.

LUMP COAL

Particular description of goods.—Dynamite Used Particularly in Coal-Mining.

Claims use since Mar. 1, 1915.

Ser. No. 87,597. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) SOCIETÀ ANONIMA RICORDI & FINZI, Milan, Italy. Filed June 25, 1915.

COMPLEX

Società Anonima RICORDI & FINZI

MILANO

Consisting in the word "Complex," no exclusive claim being made to the other words shown in said drawing.

Particular description of goods.—Pianos Actionable by Keyboard and Provided with Mechanical Apparatus Combined with Rollers of Perforated Paper, to Play Also by Pedal Movement.

Claims use since November, 1913.

Ser. No. 88,047. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STANLEY J. ORLOWSKI, Chicago, Ill. Filed July 20, 1915.

LASSO



Particular description of goods.—Alcoholic Bitters, Cordials.

Claims use since July 6, 1915.

Ser. No. 88,048. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) STANLEY J. ORLOWSKI, Chicago, Ill. Filed July 20, 1915.



LASSO

Particular description of goods.—Non-Alcoholic Grape Beverage Sold as a Soft Drink and Syrup for Making the Same.
Claims use since July 6, 1915.

Ser. No. 88,416. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MANSFIELD MILLING CO., Mansfield, Ohio. Filed Aug. 4, 1915.



No claim being made to the words "Mansfield Milling Co.", "Bread Flour," "Finest Quality," and "Mansfield, Ohio" apart from the mark shown in the drawing.
Particular description of goods.—Wheat-Flour.
Claims use since June 1, 1915.

Ser. No. 88,734. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GAS ENGINE EFFICIENCY COMPANY, St. Louis, Mo. Filed Aug. 21, 1915.



No claim being made for the words "Use" and "Products" apart from the mark shown in the drawing.
Particular description of goods.—Vehicle-Body Polishes in the Form of a Liquid Compound for Cleansing and Polishing Vehicle-Bodies and Metal-Polishes in the Form of a Liquid Compound for Cleansing and Polishing Metal.
Claims use since July 13, 1915.

Ser. No. 88,781. (CLASS 39. CLOTHING.) W. T. GRANT COMPANY, New York, N. Y. Filed Aug. 24, 1915.

WEARITE

Comprising the word "Wearite."
Particular description of goods.—Hosiery.
Claims use since June 1, 1913.

Ser. No. 89,350. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS R. HINTON, Springfield, Mo. Filed Sept. 21, 1915.

SPEED-O PILE OINTMENT

No claim being made to the words "Pile Ointment."
Particular description of goods.—Pile-Ointment.
Claims use since the 1st day of March, 1914.

Ser. No. 89,432. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DIAMOND EXPANSION BOLT CO., New York, N. Y. Filed Sept. 24, 1915.



Particular description of goods.—Bolt-Anchors, Expansion-Shields, Screw-Anchors, Drills, Toggles, Shutter-Eyes, Duct-Rods, Guy-Clamps, Ground-Clamps, Safety-Straps, Crimpers, Test-Connectors, Strand-Connectors, Inserts for Concrete.
Claims use since on or about January, 1897.

Ser. No. 89,654. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES BUTLER, INC., New York, N. Y. Filed Oct. 5, 1915.

BON BON

Particular description of goods.—Bread and Cake.
Claims use since about Sept. 29, 1915.

Ser. No. 90,413. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH LICHTENSTEIN, New York, N. Y. Filed Nov. 4, 1915.

HERCULES

Particular description of goods.—Laxative Candy.
Claims use since Aug. 1, 1915.

Ser. No. 90,434. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GERBER & CO., Thoune, Switzerland. Filed Nov. 5, 1915.



No claim is made to the exclusive use of the word "Brand" and the name "Gerber" except in connection with the other features of the mark.
Particular description of goods.—Cheese.
Claims use since July 15, 1915.

Ser. No. 90,877. (CLASS 39. CLOTHING.) MANHATTAN GLOVE CO., Chicago, Ill. Filed Nov. 23, 1915.

Good Luck



No claim being made to the exclusive right to the representation of the gauntlet apart from the mark shown in the drawing.
Particular description of goods.—Gloves and Gauntlets.
Claims use since May 1, 1915.

Ser. No. 91,566. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ERNST GIDEON BEE, INC., New York, N. Y. Filed Dec. 18, 1915.



Applicant hereby disclaims the representation of the keys and the ring apart from the mark shown on the drawing.
Particular description of goods.—Key-Chains and Key-Rings Made of or Plated with Precious Metal.
Claims use since Oct. 9, 1915.

Ser. No. 92,319. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BROWN-WALES COMPANY, Boston, Mass. Filed Jan. 17, 1916.

SELAW

The word "Selaw."
Particular description of goods.—A Paste Cleansing Compound for Cleaning Metals, Paint, Woodwork, Porcelain, &c.
Claims use since June 2, 1915.

Ser. No. 92,911. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BRADFORD DYEING ASSOC. (U. S. A.), Bradford, R. I. Filed Feb. 17, 1916.

WULSYLK

Particular description of goods.—Cotton Piece Goods.
Claims use since Jan. 18, 1916.

Ser. No. 93,033. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) UTICA HEATER CO., Utica, N. Y. Filed Feb. 21, 1916.



No exclusive claim apart from the mark as a whole is made to the words "Fresh air heat means health."
Particular description of goods.—Furnaces for Heating Buildings.
Claims use since Jan. 11, 1916.

Ser. No. 93,294. (CLASS 39. CLOTHING.) BURD KNITTING MILLS CO., Philadelphia, Pa. Filed Mar. 4, 1916.

HIGHLAND LADDIE

Particular description of goods.—Hosiery.
Claims use since July, 1915.

Ser. No. 93,785. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN DRUGGISTS SYNDICATE, Long Island City, N. Y. Filed Mar. 23, 1916.

A.D.S.

Particular description of goods.—Face-Cream, Analgesic Balm, Headache and Neuralgia Preparations, Antiseptic Poultices, Antiseptic Liquid, Catarrhal Snuff, Ant-Paste, Aromatic Carcara, Arnica Salve, Infant Cough Remedies, Talcum Powder, Bay-Rum; Beef, Iron, and Wine; Saline Remedies for Bladder and Kidney Troubles, Alkaline Antiseptic Solutions for the Relief of Nasal Catarrh and Sore Throat, Tablets for the Breath, Bug-Killer, Camphor Menthol for Relieving Inflammatory Congestion, Camphor-Ice Preparations, Liniments, Carbolic Salve, Castoria, Celery and Viburnum, Charcoal Tablets, Malarial Tonics,

Chlorate-of-Potash Tablets, Cod-Liver Oil and Emulsions for Strengthening Purposes, Cold-Cream, Cold and Grippe Tablets, Colic and Diarrhea Remedies, Corn-Patches and Remedies for Corns, Cough and Croup Remedies, Hair-Pomades, Dyspepsia-Tablets, Dental Soap, Neutralizers for the Odors of Perspiration, Digestive Tablets, Effervescent Bromo, Effervescent Magnesium Citrate, Effervescent Soda Phosphate, Eye Waters and Salves, Antiseptic Remedies for Eczema, Fig-Syrup and Cascara, Fig-Syrup and Senna, Foot Tablets and Powders for Relief of Feet, Remedies for Constipation, Glycerin Suppositories, Hair-Tonics, Headache Powders and Wafers, Hepatic Salts, Effervescent and Bromo Salts, Herb Tea for Laxative Purposes, Hypophosphites Compound Syrup, Insect-Powders, Iron Tonic Bitters, Castor-Oil, Kidney Remedies, Disinfectants, Laxative Chocolate Confection, Shampoo Preparations, Liquid Court-Plaster, Larkspur Compound, Liver-Pills, Lithia Tablets, Milk Magnesia, Menthol-Inhalers, Menthol Pencils, Nail-Polish, Obesity Remedy, Tonic and Anodyne for the Relief of Menstruation, Pepsin and Pepsin Tablets, Tooth Pastes and Powders, Peroxid Hydrogen, Pile Remedies, Poison Fly-Paper and Poison Lotions, Straw-Hat Dye, Salves, Rat-Poison, Rat and Roach Pastes, Rheumatic Remedies, Russian Mineral Oil, Sarsaparilla Compound, Mosquito-Lotion, Soda-Mint and Pepsin Tablets, Soothing-Syrup, Sulfur and Cream-of-Tartar Lozenges, Soda-Mint and Charcoal Tablets, Throat-Lozenges, Witch-Hazel, Toothache Remedies, White-Pine Expectorants with Tar and Mentholates, Worm Remedies.

Claims use since Nov. 15, 1905.

Ser. No. 93,988. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEAN ORCHARD COMPANY, Indianapolis, Ind. Filed Mar. 30, 1916.

FWF
FRUIT WITH FLAVOR
TRADE MARK

The words "trade mark" and "fruit with flavor" being disclaimed. The lining of the letters of the mark is for the purpose of shading.

Particular description of goods.—Fresh Apples and Peaches.

Claims use since July, 1914.

Ser. No. 94,152. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE SCREW MACHINE PRODUCTS CORPORATION, Providence, R. I. Filed Apr. 4, 1916.

SELECT-O-PHONE

Particular description of goods.—Interior Telephones.

Claims use since Mar. 11, 1916.

Ser. No. 94,545. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE NEW JERSEY AEROPLANE COMPANY, Wilmington, Del., and Paterson, N. J. Filed Apr. 19, 1916.



No claim is made to the propeller shown apart from the mark as illustrated in the drawing.

Particular description of goods.—Aeroplanes and Aeroplane Parts.

Claims use since Apr. 3, 1916.

Ser. No. 95,004. (CLASS 37. PAPER AND STATIONERY.) BURTON BROS. & Co., New York, N. Y. Filed May 9, 1916.

Puff-Flare

Comprising the words "Puff-Flare."

Particular description of goods.—Lining-Paper for Garments.

Claims use since Feb. 17, 1916.

Ser. No. 95,111. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SOCIETE ANONYME DE TRAITEMENTS CHIMIQUES, St. Denis, France. Filed May 12, 1916.

SATCH

Particular description of goods.—Containers for Holding Radium and Radio-Active Compounds of Radium for Medical Use During Use Thereof and More Particularly Such Containers in the Form of Metal Plates, Tubes of Metal or other Materials, Metal Gauze, or the Like.

Claims use since Nov. 19, 1913.

Ser. No. 95,112. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SOCIETE ANONYME DE TRAITEMENTS CHIMIQUES, St. Denis, France. Filed May 12, 1916.



Particular description of goods.—Containers for Holding Radium and Radio-Active Compounds of Radium for Medical Use During Use Thereof and More Particularly Such Containers in the Form of Metal Plates, Tubes of Metal or other Materials, Metal Gauze, or the Like.

Claims use since Nov. 19, 1913.

Ser. No. 95,172. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) B. J. JOHNSON SOAP COMPANY, Milwaukee, Wis. Filed May 16, 1916.

PALMOLIVE

Particular description of goods.—Toilet and Shaving Soaps.

Claims use since Jan. 1, 1900.

Ser. No. 95,195. (CLASS 39. CLOTHING.) AMERICAN HOSIERY COMPANY, New Britain, Conn. Filed May 17, 1916.

MERALGO

Consisting of the word "Meralgo."

Particular description of goods.—Bathing-Suits, Hosiery, Knitted Scarfs, Knitted Coats, Knitted Vests, Pajamas, Shirts with Neckband, Shirts with Attached Collars, Sweaters, Toques, Undershirts, and Underdrawers of Knitted and Woven Material, and Union Suits of Knitted and Woven Material.

Claims use since March, 1916.

Ser. No. 95,220. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN MORRELL & Co., Ottumwa, Iowa. Filed May 18, 1916.



Particular description of goods.—Breakfast-Bacon.

Claims use since May 1, 1911.

Ser. No. 95,221. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN MORRELL & Co., Ottumwa, Iowa. Filed May 18, 1916.



No claim being made to the exclusive use of the word "Brand."

Particular description of goods.—Meat Products—Namely, Breakfast-Bacon Backs; Breakfast-Bacon; Boiled Hams; Hams; Skinned Hams, Picnics; Cooked Picnics, Cooked Boneless Hocks.

Claims use since May 1, 1911.

Ser. No. 95,222. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN MORRELL & Co., Ottumwa, Iowa. Filed May 18, 1916.

PALANE

Particular description of goods.—Meat Products—Namely, Corned Pork, Corned Beef, Cooked Shoulder, Cooked Ham, Luncheon-Meat, Lunch-Tongue, and Roast Pork-Loin.

Claims use since June 5, 1915.

Ser. No. 95,259. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) BEN-HUR MOTOR COMPANY, Cleveland Ohio. Filed May 19, 1916.



No claim being made to the exclusive use of the representation of an automobile and the words "Speed," "Form," and "Endurance" apart from the mark as shown in the drawing.

Particular description of goods.—Automobiles.

Claims use since Apr. 17, 1916.

Ser. No. 95,442. (CLASS 32. FURNITURE AND UPHOLSTERY.) ERSKINE-DANFORTH CORPORATION, New York, N. Y. Filed May 26, 1916.

DANERSK

Particular description of goods.—Bedsteads, Bookcases, Bureaus, Chairs, Other than Dental and Surgical and Wheeled Chairs, Chests, Cupboards, Day-Beds, Settees, Couches, Desks, Dressers, Mattresses, Mirrors, Knitting-Stands, Plate-Racks, Stools, Sideboards, Tables, other than Billiard, Chess, and Operating (Surgical) Tables.

Claims use since the month of April, 1915.

Ser. No. 95,463. (CLASS 39. CLOTHING.) AMERICAN HOSIERY COMPANY, New Britain, Conn. Filed May 27, 1916.

Knit Kraft

Particular description of goods.—Bathing-Suits, Hosiery, Knitted Scarfs, Knitted Coats, Knitted Vests, Pajamas, Shirts with Neckband, Shirts with Attached Collars, Sweaters, Toques, Undershirts, and Underdrawers of Knitted and Woven Material, and Union Suits of Knitted and Woven Material.

Claims use since May, 1916.

Ser. No. 95,464. (CLASS 39. CLOTHING.) AMERICAN HOSIERY COMPANY, New Britain, Conn. Filed May 27, 1916.

Kraut Knit

Particular description of goods.—Bathing-Suits, Hosiery, Knitted Scarfs, Knitted Coats, Knitted Vests, Pajamas, Shirts with Neckband, Shirts with Attached Collars, Sweaters, Toques, Undershirts, and Underdrawers of Knitted and Woven Material, and Union Suits of Knitted and Woven Material.
Claims use since May, 1916.

Ser. No. 95,474. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE KREBS PIGMENT AND CHEMICAL CO., Newport, Del. Filed May 27, 1916.



Particular description of goods.—Paints, Both Dry and Ready Mixed; Paint-Pigments in General and Particularly for Lithopone, Cadmium Yellow, Zinc Oxid, and Pigment Mixtures for Paint.
Claims use since the year of 1906.

Ser. No. 95,505. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) COCHRANE AND ELWOOD, Seattle, Wash. Filed May 24, 1916.

THE VELVET EDGER

No claim being made to the word "Edger" apart from the mark shown in the drawing.
Particular description of goods.—A Machine for Sharpening Safety-Razor Blades.
Claims use since May 20, 1916.

Ser. No. 95,593. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE HARUSSERMANN METAL M'F'G. CO., New York, N. Y. Filed June 2, 1916.

SOTOY

Particular description of goods.—Toy Sewing-Machines.
Claims use since about Jan. 10, 1916.

Ser. No. 95,631. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SHELBY C. SPARKS, Kansas City, Mo. Filed June 5, 1916.

SAFENSANE



The picture shown is a likeness of Edith M. Sparks.
Particular description of goods.—Hair Curlers, Wavers, and Crimpers.
Claims use since June 1, 1914.

Ser. No. 95,679. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LEVY & MERZBACH, New York, N. Y. Filed June 7, 1916.

Particular description of goods.—Belts for Personal Wear.
Claims use since on or about 1907.

Ser. No. 95,697. (CLASS 32. FURNITURE AND UPHOLSTERY.) CHICAGO HARDWARE FOUNDRY COMPANY, North Chicago, Ill. Filed June 8, 1916.

Sani ONYX

No claim being made to the word "Onyx" apart from the mark shown in the drawing. The trade-mark consists of the word or term "Sani," provided with an under and forwardly-extending paraph or flourish upon which is impressed the word "Onyx."
Particular description of goods.—Tables, Stands, and Stools for Hotel, Restaurant, Soda-Fountain, Drug-Store, Summer-Garden, Kitchen, Conservatory, and Domestic Uses.
Claims use since Mar. 12, 1914.

Ser. No. 95,716. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL ELECTRIC CONTROLLER COMPANY, Chicago, Ill. Filed June 8, 1916.

★ THE NATIONAL RHEOSTAT ★

No claim being made for the word "Rheostat" apart from the trade-mark shown in the drawing.
Particular description of goods.—Devices for Insertion in an Electric Circuit so That the Degree of Resistance May be Regulated or by Means of Which a Required Degree of Resistance May be Maintained.
Claims use since October, 1907.

Ser. No. 95,790. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MERCK & Co., New York, N. Y. Filed June 10, 1916.

KAL-FOS

Particular description of goods.—A Remedy for Dogs, Used Particularly as a General Tonic, as a Preventive of Rickets, and as an Anti-Acid for Matrons' Milk.
Claims use since June 3, 1916.

Ser. No. 95,813. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MELVILLE CLARK PIANO COMPANY, Chicago, Ill. Filed June 12, 1916.

APOLLOPHONE

Particular description of goods.—Phonographs.
Claims use since Mar. 1, 1916.

Ser. No. 95,836. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES WIRE MAT COMPANY, Decatur, Ill. Filed June 12, 1916.

REGAL

Particular description of goods.—Fly-Killers or Hand Devices for Killing Flies and other Insects.
Claims use since or about the 15th of May, 1916.

Ser. No. 95,883. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. DUNNE CO., Norwich, N. Y. Filed June 15, 1916.

SUPREME COURT

Particular description of goods.—Coffee, Tea, Canned Peas, Canned Corn, Canned Tomatoes, Canned Succotash, Canned Wax-Beans, Canned Salmon, Canned Spinach, Canned Pork and Beans, and Chocolate Cream Drops.
Claims use since Oct. 23, 1912.

Ser. No. 95,887. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ELECTRENE COMPANY, New York, N. Y. Filed June 15, 1916.

THE FIRE GUN

Particular description of goods.—Fire-Extinguishers.
Claims use since October, 1914.

Ser. No. 95,901. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) STANDARD OIL COMPANY, Richmond, Cal. Filed June 15, 1916.



Particular description of goods.—Ready-Mixed Paint.
Claims use since the 22d day of May, 1916.

Ser. No. 95,951. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REPETTI, New York, N. Y. Filed June 17, 1916. Under ten-year proviso.

Repetti

Particular description of goods.—Chocolates, Caramels, Hard Candy of All Kinds, and Liquid Caramel.
Claims use since on or before the year 1894.

Ser. No. 96,003. (CLASS 39. CLOTHING.) E. H. HOBWOOD & Co., Hoboken, N. J., and New York, N. Y. Filed June 20, 1916.

LITTLE BEAUTY

Particular description of goods.—Wearing-Apparel—Namely, Children's Drawers.
Claims use since Nov. 30, 1914.

Ser. No. 96,010. (CLASS 12. CONSTRUCTION MATERIALS.) PEBBLE LIME WORKS, Pebble and Pocatello, Idaho, and Salt Lake City, Utah. Filed June 20, 1916.

WHITE ELK HYDRATE

No claim being made to the word "hydrate" apart from the mark shown in the drawing.
Particular description of goods.—Hydrated Lime.
Claims use since May, 1915.

Ser. No. 96,014. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) BRIDGEPORT BRASS COMPANY, Bridgeport, Conn. Filed June 21, 1916. Under ten-year proviso.

Bridgeport

Particular description of goods.—Wastes, Overflows, Connected Wastes and Overflows, Traps, Closet-Bends, Supply-Pipes, Waste-Pipes, Sink-Plugs, Sink Connections, Pipe-Couplings, Nuts, Flanges, Chain-Stays, Refill-Tubes, Tank-Brackets, Threaded Rods, Strainers, and Vent-Tubes.
Claims use since on or about the 1st day of January, 1891.

Ser. No. 96,049. (CLASS 38. PRINTS AND PUBLICATIONS.) THOMAS A. CAWTHRA, New York, N. Y. Filed June 22, 1916.

The DECORATIVE FURNISHER



Particular description of goods.—A Monthly Publication.
Claims use since the 1st of January, 1910.

Ser. No. 96,060. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. PFEIFFER MANUFACTURING COMPANY, St. Louis, Mo. Filed June 22, 1916.



Particular description of goods.—A Medicinal Preparation for the Relief of Genito-Urinary Disorders.
Claims use since September, 1910.

Ser. No. 96,073. (CLASS 39. CLOTHING.) AMERICAN HOSIERY COMPANY, New Britain, Conn. Filed June 23, 1916.

Knities

Particular description of goods.—Bathing-Suits, Hosiery, Knitted Scarfs, Knitted Coats, Knitted Vests, Pajamas, Shirts with Neckband, Shirts with Attached Collars, Sweaters, Toques, Undershirts, and Underdrawers of Knitted and Woven Material, and Union Suits of Knitted and Woven Material.
Claims use since May, 1916.

Ser. No. 96,074. (CLASS 39. CLOTHING.) AMERICAN HOSIERY COMPANY, New Britain, Conn. Filed June 23, 1916.

Knitogs

Particular description of goods.—Bathing-Suits, Hosiery, Knitted Scarfs, Knitted Coats, Knitted Vests, Pajamas, Shirts with Neckband, Shirts with Attached Collars, Sweaters, Toques, Undershirts, and Underdrawers of Knitted and Woven Material, and Union Suits of Knitted and Woven Material.
Claims use since May, 1916.

Ser. No. 96,084. (CLASS 37. PAPER AND STATIONERY.) JOHNSTON & EGGLESTON, Buffalo, N. Y. Filed June 23, 1916.



Particular description of goods.—Toilet-Paper.
Claims use since June, 1901.

Ser. No. 96,091. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH RUSKEY, Pittston, Pa. Filed June 23, 1916.



Jos Ruskey

The portrait shown being that of myself, and the signature is the facsimile of the applicant's signature.
Particular description of goods.—A Salve.
Claims use since April, 1916.

Ser. No. 96,153. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEILL MITCHELL, Perryman, Md. Filed June 26, 1916.

"DAINTY"

Particular description of goods.—Canned Vegetables.
Claims use since 1891.

Ser. No. 96,158. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE NEUFEED COMPANY, Asheville, N. C. Filed June 26, 1916.

Neufeed

Particular description of goods.—A Preparation to Be Applied to Type-Writer Platens to Prevent Slipping of Paper and Envelops.
Claims use since June 1, 1916.

Ser. No. 96,195. (CLASS 39. CLOTHING.) BERENICE BROWN, Brookline, Mass. Filed June 28, 1916.

ARCH PRESERVER

No claim being made to the words "Arch Preserver" apart from the mark shown in the drawing.
Particular description of goods.—Leather and Canvas Boots and Shoes.
Claims use since May, 1915.

Ser. No. 96,202. (CLASS 15. OILS AND GREASES.) FISKE BROTHERS REFINING CO., New York, N. Y. Filed June 28, 1916.

FIBRECO

Comprising the word "Fibreco."
Particular description of goods.—Lubricating-Greases.
Claims use since June 13, 1916.

Ser. No. 96,213. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MARTINS BIRMINGHAM, LIMITED, Birmingham, England. Filed June 28, 1916.

PEARL

Particular description of goods.—Golf and other Playing Balls.
Claims use since August, 1908.

Ser. No. 96,214. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GIUSEPPE PANETTIERE, Lynn, Mass. Filed June 28, 1916.

WONDERFUL

Particular description of goods.—An Ointment.
Claims use since Apr. 1, 1916.

Ser. No. 96,218. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SYRACUSE SMELTING WORKS, Brooklyn, N. Y. Filed June 28, 1916. Under ten-year proviso.

ALUMINUM

Particular description of goods.—Babbitt Metal.
Claims use since Jan. 25, 1895.

Ser. No. 96,241. (CLASS 17. TOBACCO PRODUCTS.) WAY-MEADE CIGAR COMPANY, Wilmington, Del., and Philadelphia, Pa. Filed June 28, 1916.

WA-ME

Particular description of goods.—Cigars.
Claims use since May 26, 1916.

Ser. No. 96,250. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATHANIEL L. HALL, Norfolk, Va. Filed June 30, 1916.

F·O·N FRUITS of NATURE

Particular description of goods.—A Toilet Lotion for Treatment of the Skin, an Antiseptic Preparation for Treatment of the Feet to Relieve Unhealthy Conditions, a Preparation for Treatment of Corns and Calluses, Pellets for Relief of Constipation, and an Injection for Treatment of Gonorrhea.
Claims use since March, 1915.

Ser. No. 96,260. (CLASS 17. TOBACCO PRODUCTS.) JOSEPH WEINREICH, Dayton, Ohio. Filed June 30, 1916.

SEGADA

Particular description of goods.—Cigars.
Claims use since 1914.

Ser. No. 96,273. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOFT, INCORPORATED, New York, N. Y. Filed July 1, 1916.

Loft

The trade-mark being printed as the facsimile of the handwriting of Mr. George W. Loft, president of the applicant corporation.
Particular description of goods.—Candy.
Claims use since 1895.

Ser. No. 96,287. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CHICLE COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 3, 1916. Under ten-year proviso.

ADAMS'

Particular description of goods.—Chewing-Gum.
Claims use since in or about February, 1871.

Ser. No. 96,290. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PEARL J. ELLIOTT, Los Angeles, Cal. Filed July 3, 1916.

PETER RABBIT

Particular description of goods.—Dolls.
Claims use since May 10, 1916.

Ser. No. 96,297. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERSTATE COTTON OIL REFINING Co., Sherman, Tex. Filed July 3, 1916.



Particular description of goods.—Shortening.
Claims use since June 5, 1916.

Ser. No. 96,300. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES H. MULLIGAN, Rochester, N. Y. Filed July 3, 1916.

MULVOL

Particular description of goods.—An Ointment for Skin Diseases, Digestive-Tablets, and Blood-Tone Tablets.
Claims use since Apr. 19, 1916.

Ser. No. 96,301. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. F. MOOMAW CO., INC., Cloverdale, Va. Filed July 3, 1916.

PRIDE OF OUR MOTHERS

Particular description of goods.—Canned Vegetables.
Claims use since Jan. 1, 1916.

Ser. No. 96,325. (CLASS 15. OILS AND GREASES.) GASOLINE CORPORATION, New York, N. Y. Filed July 5, 1916.

GASGO

Particular description of goods.—Gasolene.
Claims use since June 14, 1916.

Ser. No. 96,330. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN T. MARSHALL, Eupora, Miss. Filed July 5, 1916.



No claim being made to the words "Timber Killer" apart from the mark shown in the drawing.
Particular description of goods.—Timber-Killer.
Claims use since July, 1915.

Ser. No. 96,333. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) HENRY SUTLIFF, San Francisco, Cal. Filed July 5, 1916.

K·C·B·

Particular description of goods.—Cigarette-Papers.
Claims use since Apr. 4, 1916.

Ser. No. 96,360. (CLASS 39. CLOTHING.) LYDIA MARTELL, The Dalles, Oreg. Filed July 6, 1916.



No claim being made to the word "Corset" apart from the mark shown in the drawing, the picture being fanciful.
Particular description of goods.—Corsets.
Claims use since Aug. 15, 1914.

Ser. No. 96,398. (CLASS 17. TOBACCO PRODUCTS.) BOBROW BROTHERS, Philadelphia, Pa. Filed July 7, 1916.

TOPIC

Particular description of goods.—Cigars.
Claims use since May 1, 1916.

Ser. No. 96,403. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE FEDERAL RUBBER COMPANY, Cudahy, Wis. Filed July 7, 1916.



Particular description of goods.—Rubber Matting.
Claims use since the month of April, 1916.

Ser. No. 96,407. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CHR. A. HANSEN, New York, N. Y. Filed July 7, 1916.

ASTRA

Particular description of goods.—Dry Colors, Red Lead, White Lead, and White Zinc.
Claims use since June 15, 1916.

Ser. No. 96,408. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CHR. A. HANSEN, New York, N. Y. Filed July 7, 1916.

ARGO

Particular description of goods.—Linseed-Oil.
Claims use since June 15, 1916.

Ser. No. 96,411. (CLASS 17. TOBACCO PRODUCTS.) LUCKETT-WAKE TOBACCO CO., Louisville, Ky. Filed July 7, 1916.



Particular description of goods.—Leaf-Tobacco.
Claims use since 1893.

Ser. No. 96,413. (CLASS 39. CLOTHING.) THE LYNAT COMPANY, Dover, Del., and Philadelphia, Pa. Filed July 7, 1916.



Particular description of goods.—Women's All-Over Aprons.
Claims use since June 15, 1916.

Ser. No. 96,423. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PEARL A. COEN, Columbus, Ohio. Filed July 8, 1916.

MAJOR JELLICO

Particular description of goods.—Coal.
Claims use since about Jan. 1, 1916.

Ser. No. 96,424. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PEARL A. COEN, Columbus, Ohio. Filed July 8, 1916.

MAMMOTH DEAN

Particular description of goods.—Coal.
Claims use since about Jan. 1, 1916.

Ser. No. 96,425. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PEARL A. COEN, Columbus, Ohio. Filed July 8, 1916.

KING SHOALS

Particular description of goods.—Coal.
Claims use since about Jan. 1, 1916.

Ser. No. 96,441. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TREMONT & SUFFOLK MILLS, Lowell, Mass. Filed July 8, 1916. Under ten-year proviso.



Particular description of goods.—Cotton Piece Goods—viz., Sheetings, Shirtings, Dress Goods, and Cotton Flannels.
Claims use since about the year 1831.

Ser. No. 96,498. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HALLOCK-DENTON CO., Newark, N. J. Filed July 11, 1916. Under ten-year proviso.

HALLOCK'S

Particular description of goods.—Flavoring Extracts for Foods.
Claims use since the year 1869.

Ser. No. 96,499. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HALLOCK-DENTON CO., Newark, N. J. Filed July 11, 1916.

LIBERTY

Particular description of goods.—Flavoring Extracts for Foods.
Claims use since November, 1899.

Ser. No. 96,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HALLOCK-DENTON CO., Newark, N. J. Filed July 11, 1916.

BONTON

Particular description of goods.—Flavoring Extracts for Foods.
Claims use since November, 1899.

Ser. No. 96,514. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA SALMON CO., Seattle, Wash. Filed July 12, 1916.

SWASTIKA

Particular description of goods.—Canned Salmon.
Claims use since June 24, 1916.

Ser. No. 96,515. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA SALMON CO., Seattle, Wash. Filed July 12, 1916.

King Pin

Particular description of goods.—Canned Salmon.
Claims use since June 24, 1916.

Ser. No. 96,516. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. COE COFFEE CO., Memphis, Tenn. Filed July 12, 1916.

SugarGlen

Particular description of goods.—Coffee.
Claims use since June 15, 1916.

Ser. No. 96,517. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. COE COFFEE CO., Memphis, Tenn. Filed July 12, 1916.

BING

Particular description of goods.—Coffee.
Claims use since June 15, 1916.

Ser. No. 96,518. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. COE COFFEE CO., Memphis, Tenn. Filed July 12, 1916.

BUNTYN

Particular description of goods.—Coffee.
Claims use since June 15, 1916.

Ser. No. 96,519. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. COE COFFEE CO., Memphis, Tenn. Filed July 12, 1916.

BECO

Particular description of goods.—Coffee.
Claims use since June 15, 1916.

Ser. No. 96,520. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. COE COFFEE CO., Memphis, Tenn. Filed July 12, 1916.

BASKET

Particular description of goods.—Coffee.
Claims use since June 15, 1916.

Ser. No. 96,530. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) STRICH & ZEIDLER, INC., New York, N. Y. Filed July 12, 1916.

Homer

Particular description of goods.—Pianos.
Claims use since May 1, 1907.

Ser. No. 96,568. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MICHAEL MCNAMARA VARNISH WORKS, Detroit, Mich. Filed July 14, 1916.

MAC-COACH

No claim being made to the word "Coach" apart from the mark shown in the drawing.
Particular description of goods.—Varnish.
Claims use since July 1, 1913.

Ser. No. 96,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BETTIE SAMPSON, San Francisco, Cal. Filed July 14, 1916.

TULARE QUEEN

Particular description of goods.—Citrus Fruits.
Claims use since June 10, 1916.

Ser. No. 96,576. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WILLIAM F. BREITENBAUGH, Philadelphia, Pa. Filed July 15, 1916.

MASTER

Particular description of goods.—Golf-Clubs.
Claims use since Apr. 12, 1915.

Ser. No. 96,626. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) DAVID M. HOLBROOK, Portland, Oreg. Filed July 17, 1916.



Particular description of goods.—Incubators and Brooders.
Claims use since June 26, 1916.

Ser. No. 96,635. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE REYNOLDS CORPORATION, Bristol, Tenn. Filed July 17, 1916.

STERI-FOAM

Particular description of goods.—Cleanser.
Claims use since Jan. 15, 1916.

Ser. No. 96,636. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) STAR CORUNDUM WHEEL CO., Detroit, Mich. Filed July 17, 1916.



Particular description of goods.—Grinding-Wheels.
Claims use since Nov. 1, 1902.

Ser. No. 96,637. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SNYDER-CHAFFEE COMPANY, Columbus, Ohio. Filed July 17, 1916.

POCKET EDITION

Particular description of goods.—Candy.
Claims use since about June 1, 1916.

Ser. No. 96,645. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CURTIS OLIVE CORPORATION, Bloomington and Los Angeles, Cal. Filed July 18, 1916.

SANDWICHOLA

Particular description of goods.—Sandwichola, a Salad Sandwich-Filling.
Claims use since Feb. 12, 1916.

Ser. No. 96,654. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHITE CITY FRUIT CO., White City, Fla. Filed July 18, 1916.

CURLEW

Comprising the word "Curlew."
Particular description of goods.—Citrus Fruits.
Claims use since Dec. 17, 1914.

Ser. No. 96,661. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) FRED M. BLANCHARD, Boston, Mass. Filed July 19, 1916.

MIDGET

Particular description of goods.—Bill-Folds.
Claims use since June 29, 1916.

Ser. No. 96,673. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) LANGENBRUNNER & Co., Cincinnati, Ohio. Filed July 19, 1916.

SHOULDER-EZE

Particular description of goods.—Collars for Horses.
Claims use since Nov. 24, 1915.

Ser. No. 96,695. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MANHATTAN VARNISH CO. INC., New York, N. Y. Filed July 20, 1916.



No claim is made to the letter "M" apart from the mark shown in the drawing.
Particular description of goods.—Varnish.
Claims use since May 5, 1916.

Ser. No. 96,722. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PATTON PAINT COMPANY, Milwaukee, Wis. Filed July 21, 1916.

ALBA-LUX

Particular description of goods.—An Oil-Paint for Interior Use.
Claims use since the 13th day of March, 1916.

Ser. No. 96,800. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) NORTHLAND SKI MANUFACTURING CO., St. Paul, Minn. Filed July 24, 1916.

Northland

Particular description of goods.—Skees and Binders Therefor, Toboggans, and Sleds.
Claims use since about the 1st day of June, 1911.

Ser. No. 96,813. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE BIGELOW VARNISH CO., Newark, N. J. Filed July 25, 1916. Under ten-year proviso.

83
JAPAN

Particular description of goods.—Japan Varnish.
Claims use since Mar. 1, 1886.

TRADE-MARK REGISTRATIONS GRANTED

AUUGUST 22, 1916.

112,036. TICKETS. AUTOMATIC TICKET SELLING & CASH REGISTER COMPANY, New York, N. Y.
Filed March 7, 1916. Serial No. 93,356. PUBLISHED JUNE 6, 1916.

112,037. PIANOS, PIANO-PLAYERS, AND PLAYER-PIANOS. BEHNING PIANO COMPANY, New York, N. Y.
Filed March 17, 1916. Serial No. 93,594. PUBLISHED JUNE 6, 1916.

112,038. TOILET-CLEANSER. CLINTON F. BENNER, Omaha, Nebr.
Filed April 24, 1916. Serial No. 94,662. PUBLISHED MAY 30, 1916.

112,039. COFFEE. THE WM. BOARDMAN & SONS CO., Hartford, Conn.
Filed April 3, 1916. Serial No. 94,059. PUBLISHED MAY 30, 1916.

112,040. ALARM-CLOCKS, CLOCKS, WATCHES, HALL-CLOCKS, AND CLOCKWORKS. GEORGE BORGFELDT & Co., New York, N. Y.
Filed April 21, 1916. Serial No. 94,603. PUBLISHED MAY 30, 1916.

112,041. INJECTION FOR VENEREAL DISEASES. THE BRITISH DRUG HOUSES, LIMITED, London, England.
Filed April 7, 1916. Serial No. 94,226. PUBLISHED JUNE 6, 1916.

112,042. COFFEE. N. LANDON BURCHELL, Washington, D. C.
Filed April 6, 1916. Serial No. 94,186. PUBLISHED MAY 30, 1916.

112,043. CANNED SALMON. COLUMBIA RIVER PACKERS ASSOCIATION. Astoria, Oreg.
Filed May 3, 1916. Serial No. 94,869. PUBLISHED JUNE 6, 1916.

112,044. VALVE MECHANISMS FOR AUTOMATIC MUSICAL INSTRUMENTS AND PLAYERS. CONSERVATORY PLAYER ACTION COMPANY, Chicago, Ill.
Filed November 3, 1915. Serial No. 90,380. PUBLISHED MAY 23, 1916.

112,045. LARD SUBSTITUTE CONSISTING OF COTTON-SEED OIL AND BEEF-FAT. THE N. K. FAIRBANK COMPANY, Union township, near Guttenberg, N. J., and Chicago, Ill.
Filed April 22, 1916. Serial No. 94,639. PUBLISHED MAY 30, 1916.

112,046. PLAYING-CARDS. ALLEN R. FELLOWS, Sioux Falls, S. D.
Filed April 12, 1916. Serial No. 94,352. PUBLISHED MAY 30, 1916.

112,047. BRONZE PAINT. FLOOD & CONKLIN CO., Newark, N. J.
Filed March 13, 1916. Serial No. 93,493. PUBLISHED JUNE 6, 1916.

112,048. HAM, BACON, SHOULDERS, AND LARD. W. S. FORBES & Co., Richmond, Va.
Filed March 2, 1916. Serial No. 93,226. PUBLISHED MAY 30, 1916.

112,049. CERTAIN NAMED HEATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS. HARTMAN FURNITURE & CARPET CO., Chicago, Ill.
Filed April 6, 1916. Serial No. 94,197. PUBLISHED JUNE 6, 1916.

112,050. OLIVE-OIL. THE HERMITAGE OLIVE OIL CO., New York, N. Y.
Filed June 11, 1915. Serial No. 87,250. PUBLISHED MAY 30, 1916.

112,051. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed April 21, 1916. Serial No. 94,612. PUBLISHED JUNE 6, 1916.

112,052. SILVER AND JEWELRY POLISH. M. KRIEGER, Milwaukee, Wis.
Filed April 10, 1916. Serial No. 94,289. PUBLISHED JUNE 6, 1916.

112,053. GRINDSTONES, POWDERS AND PASTES FOR POLISHING AND GRINDING. MAURICE LAUR, Levallois-Perret, France.
Filed May 2, 1914. Serial No. 78,180. PUBLISHED JUNE 6, 1916.

112,054. CANDY. GEORGE W. LOFT, New York, N. Y., assignor to Loft, Incorporated, a Corporation of Virginia.
Filed April 15, 1916. Serial No. 94,446. PUBLISHED MAY 30, 1916.

112,055. MALTED MILK. MANAS BROS., New York, N. Y.
Filed April 20, 1916. Serial No. 94,577. PUBLISHED MAY 30, 1916.

112,056. INK-DRIERS. THE MARTIAN CHEMICAL CO., New York, N. Y.
Filed March 23, 1916. Serial No. 93,802. PUBLISHED JUNE 6, 1916.

112,057. SALVE, (OR OINTMENT.) BERNHARD MARZOLF, Buffalo, N. Y.
Filed February 24, 1916. Serial No. 93,071. PUBLISHED JUNE 6, 1916.

112,058. SOLES AND HEELS OF RUBBER COMPOSITION. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed March 31, 1916. Serial No. 94,016. PUBLISHED MAY 30, 1916.

112,059. CERTAIN NAMED MECHANICAL RUBBER GOODS. NEW JERSEY CAR SPRING & RUBBER CO., Jersey City, N. J.
Filed March 11, 1916. Serial No. 93,467. PUBLISHED JUNE 6, 1916.

112,060. DAIRY AND STOCK FEED COMPOSED OF PALM-OIL AND FLOUR-MIDDLINGS. THE NEWSOME FEED & GRAIN COMPANY, Pittsburgh, Pa.
Filed February 28, 1916. Serial No. 93,152. PUBLISHED MAY 30, 1916.

112,061. OLIVE-OIL. O. L. E. A. OLIVICOLTORI LIGURI ESPORTATORI ASSOCIATI, Oneglia, Italy.
Filed March 21, 1916. Serial No. 93,746. PUBLISHED JUNE 6, 1916.

112,062. AUTOMOBILE-TIRE FILLER OF RESILIENT COMPOSITION, TAKING PLACE OF AIR AND INNER TUBES. PANAMA RUBBER & EQUIPMENT CO., St. Louis, Mo.
Filed March 8, 1916. Serial No. 93,396. PUBLISHED MAY 30, 1916.

112,063. TOILET-PAPER. THE PEERLESS MFG. CO., Norristown, Pa.
Filed January 14, 1916. Serial No. 92,133. PUBLISHED JUNE 6, 1916.

112,064. TOILET-PAPER. THE PEERLESS MFG. CO., Norristown, Pa.
Filed May 10, 1916. Serial No. 95,050. PUBLISHED JUNE 6, 1916.

112,065. PHONOGRAPHS AND TALKING-MACHINES. PLAYERPHONE TALKING MACHINE CO., Chicago, Ill.
Filed April 7, 1916. Serial No. 94,235. PUBLISHED JUNE 6, 1916.

112,066. CANNED FRUITS. ALFRED PUTNAM, New York, N. Y.
Filed December 18, 1915. Serial No. 91,578. PUBLISHED JUNE 6, 1916.

112,067. BLUE AND LAUNDRY ARTICLES CONTAINING BLUE. RECKITTS (U. S. A.), LTD., New Brunswick, N. J., and New York, N. Y.
Filed January 4, 1916. Serial No. 91,917. PUBLISHED JUNE 6, 1916.

112,068. HAIR-DYE. FELIX MARTIN ESPINOSA RENDON, Laredo, Tex.
Filed April 22, 1916. Serial No. 94,654. PUBLISHED JUNE 6, 1916.

112,069. ORANGES AND GRAPE-FRUIT. SAN DIMAS ORANGE GROWERS ASS'N., San Dimas, Cal.
Filed January 11, 1916. Serial No. 92,071. PUBLISHED MAY 30, 1916.

112,070. COCOA. SANDOW'S COCOA AND CHOCOLATE COMPANY LIMITED, London, England.
Filed April 13, 1914. Serial No. 77,455. PUBLISHED MAY 30, 1916.

112,071. CERTAIN CHEMICAL PRODUCTS FOR MEDICINAL, HYGIENIC, INDUSTRIAL, SCIENTIFIC, AND PHOTOGRAPHIC PURPOSES, DRUGS, AND MEDICINES. EMIL SCHELLER & CO., A. G., Zurich, Switzerland.
Filed November 24, 1914. Serial No. 82,892. PUBLISHED JUNE 6, 1916.

112,072. CERTAIN NAMED NON-ALCOHOLIC BEVERAGES. THE SCHUSTER COMPANY, Cleveland, Ohio.
Filed April 26, 1916. Serial No. 94,730. PUBLISHED JUNE 6, 1916.

112,073. ORANGES, GRAPE-FRUIT, AND TANGERINES. L. B. SKINNER, Dunedin, Fla.
Filed November 27, 1915. Serial No. 90,976. PUBLISHED MAY 30, 1916.

112,074. CARBONIZING OR CASE-HARDENING COMPOUNDS. SPRINGFIELD FACING COMPANY, Springfield, Mass.
Filed March 29, 1916. Serial No. 93,979. PUBLISHED JUNE 6, 1916.

112,075. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. FREDERICK STEARNS & CO., Detroit, Mich.
Filed March 13, 1916. Serial No. 93,513. PUBLISHED JUNE 6, 1916.

112,076. RECONSTRUCTIVE TONIC. FREDERICK STEARNS & Co., Detroit, Mich.
Filed April 20, 1916. Serial No. 94,585. PUBLISHED JUNE 6, 1916.

112,077. PEANUT-BUTTER, FLAVORING EXTRACTS FOR FOODS, AND SPICES. STONE-ORDEAN-WELLS COMPANY, Duluth, Minn.
Filed April 24, 1916. Serial No. 94,686. PUBLISHED MAY 30, 1916.

112,078. STEAM-BOILERS. PAUL A. TALBOT, New York, N. Y.
Filed August 12, 1915. Serial No. 88,582. PUBLISHED JUNE 6, 1916.

112,079. RHEUMATISM-SALVE. CHARLES TOMASEK, Chicago, Ill.
Filed March 28, 1916. Serial No. 93,946. PUBLISHED JUNE 6, 1916.

112,080. INTERNAL REMEDY FOR THE TREATMENT OF DISEASES PERTAINING TO THE KIDNEYS, LIVER, AND BLOOD. VIS VITAE MEDICINE CO., Augusta, Ga.
Filed March 1, 1916. Serial No. 93,218. PUBLISHED JUNE 6, 1916.

112,081. SPARK-PLUGS. WESTERN AUTO SUPPLY COMPANY, Kansas City, Mo.
Filed May 16, 1916. Serial No. 95,185. PUBLISHED JUNE 6, 1916.

112,082. YEAST FOOD. W. WIRT WICKES, New York, N. Y.
Filed April 14, 1916. Serial No. 94,438. PUBLISHED MAY 30, 1916.

112,083. GOLF-BALLS. WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass.
Filed April 10, 1916. Serial No. 94,300. PUBLISHED MAY 30, 1916.

112,084. GOLF-BALLS. WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass.
Filed April 10, 1916. Serial No. 94,301. PUBLISHED MAY 30, 1916.

112,085. COTTON PIECE GOODS. YORK MANUFACTURING CO., Saco, Me.
Filed April 20, 1916. Serial No. 94,593. PUBLISHED MAY 23, 1916.

112,086. SALVE FOR EXTERNAL USE. ALLEN AND WILLIAMSON, Attica, Ind.
Filed February 17, 1916. Serial No. 92,909. PUBLISHED JUNE 13, 1916.

112,087. FOUNTAIN-PENS, LOOSE-LEAF BOOKS, BOX-FILES, TABLETS, AND TOILET-PAPER. R. P. ANDREWS PAPER COMPANY, Washington, D. C.
Filed March 2, 1915. Serial No. 84,877. PUBLISHED JUNE 6, 1916.

112,088. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. THE ANTONINA DE ANNA CHEMICAL CO., Garfield, N. J.
Filed April 10, 1916. Serial No. 94,271. PUBLISHED JUNE 13, 1916.

112,089. SPARK-PLUGS AND FRICTION-TAPE. BROWNELL AUTO CO. INC., Birmingham, Ala.
Filed May 6, 1916. Serial No. 94,946. PUBLISHED JUNE 6, 1916.

112,090. CERTAIN NAMED SALT. THE CUTLER-MAGNER CO., Duluth, Minn.
Filed February 17, 1916. Serial No. 92,918. PUBLISHED JUNE 13, 1916.

112,091. METAL AND GLASS POLISH. FAUST MANUFACTURING CO., Detroit, Mich.
Filed March 23, 1916. Serial No. 93,791. PUBLISHED MAY 30, 1916.

112,092. BREATH-PURIFIERS. MURDO GIBSON, Duluth, Minn.
Filed April 3, 1916. Serial No. 94,069. PUBLISHED JUNE 6, 1916.

112,093. RUBBER HOSE. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed January 22, 1916. Serial No. 92,332. PUBLISHED MAY 16, 1916.

112,094. RUBBER HOSE. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed January 22, 1916. Serial No. 92,333. PUBLISHED MAY 16, 1916.

112,095. RUBBER HOSE. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed January 22, 1916. Serial No. 92,334. PUBLISHED MAY 16, 1916.

112,096. RUBBER HOSE. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed January 22, 1916. Serial No. 92,335. PUBLISHED MAY 16, 1916.

112,097. RUBBER HOSE. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed January 22, 1916. Serial No. 92,336. PUBLISHED MAY 16, 1916.

112,098. RUBBER-SURFACED-FABRIC BELTING. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed January 22, 1916. Serial No. 92,337. PUBLISHED MAY 16, 1916.

112,099. RUBBER HOSE. THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio.
Filed February 10, 1916. Serial No. 92,749. PUBLISHED MAY 30, 1916.

112,100. CANDY. GUTH CHOCOLATE COMPANY, Baltimore, Md.
Filed May 6, 1916. Serial No. 94,949. PUBLISHED JUNE 6, 1916.

112,101. HEMORRHOIDAL SUPPOSITORIES. MEDEOL COMPANY, New York, N. Y.
Filed March 17, 1916. Serial No. 93,606. PUBLISHED JUNE 6, 1916.

112,102. REMEDY FOR CONSTIPATION. LESLIE E. NEAPIE, Toledo, Ohio, assignor to Harry S. Thalheimer and Nathaniel C. Wright, Toledo, Ohio.
Filed November 11, 1915. Serial No. 90,585. PUBLISHED MARCH 7, 1916.

112,103. BUILDING-PAPERS, BUILDING-FELTS, AND WALL-BOARDS. PACIFIC BUILDING MATERIALS COMPANY, San Francisco, Cal.
Filed May 13, 1915. Serial No. 86,602. PUBLISHED MAY 9, 1916.

112,104. WATERPROOFED HOSPITAL-SHEETING. REID BROS., Seattle, Wash., and San Francisco, Cal.
Filed April 5, 1916. Serial No. 94,175. PUBLISHED JUNE 6, 1916.

112,105. PASTE AND LIQUID LEATHER POLISHER, REFINISHER, AND PRESERVER. ADOLPH SOMMER, Cambridge, Mass.
Filed January 8, 1916. Serial No. 92,025. PUBLISHED JUNE 6, 1916.

112,106. CIGARS. WILLIAM K. STEELE, Chicago, Ill.
Filed February 16, 1916. Serial No. 92,902. PUBLISHED APRIL 11, 1916.

112,107. CHOLERA REMEDY FOR ANIMALS. OURY J. TEBOW, Manitou, Okla.
Filed November 22, 1915. Serial No. 90,853. PUBLISHED JUNE 6, 1916.

112,108. CANDIES. WELLS CANDY CO., Chicago, Ill.
Filed April 17, 1916. Serial No. 94,492. PUBLISHED MAY 30, 1916.

112,109. MOTOR-TRUCKS. WRIGHT TRUCK ATTACHMENT CO. INC., Seattle, Wash.
Filed April 3, 1916. Serial No. 94,095. PUBLISHED MAY 23, 1916.

112,110. EXTERMINATOR FOR RATS AND OTHER RODENTS. AMERICAN SANITARY CORPORATION, Memphis, Tenn.
Filed January 15, 1916. Serial No. 92,151. PUBLISHED JUNE 13, 1916.

112,111. INSECTICIDE, ESPECIALLY A POISONOUS COMPOUND FOR ROACHES AND WATER-BUGS. AMERICAN SANITARY CORPORATION, Memphis, Tenn.
Filed January 21, 1916. Serial No. 92,280. PUBLISHED JUNE 13, 1916.

112,112. CANDY. CHOCOLATE PRODUCTS COMPANY, Baltimore, Md.
Filed April 21, 1916. Serial No. 94,607. PUBLISHED MAY 30, 1916.

112,113. TOOTH-POWDER AND TOOTH-PASTE. FRED G. COREY, Council Grove, Kans.
Filed March 24, 1916. Serial No. 93,833. PUBLISHED JUNE 13, 1916.

112,114. CANDY. THE MARTIN DAWSON COMPANY, Chicago, Ill.
Filed April 11, 1916. Serial No. 94,312. PUBLISHED JUNE 13, 1916.

112,115. MIXED FEEDS FOR HORSE, MULE, AND DAIRY USE. THE ALBERT DICKINSON COMPANY, Chicago, Ill.
Filed April 10, 1916. Serial No. 94,282. PUBLISHED JUNE 13, 1916.

112,116. CHEWING-GUM. JOHN A. DUFFY, Sioux City, Iowa.
Filed January 17, 1916. Serial No. 92,188. PUBLISHED JUNE 13, 1916.

112,117. EGG-PRESERVER. ROBERT GEORGE FLEMING, Sr., Blackfoot, Idaho.
Filed April 19, 1916. Serial No. 94,535. PUBLISHED JUNE 13, 1916.

112,118. MOTOR-TRUCKS AND AUTOMOBILES. CHARLES W. GILLETT, Chicago, Ill.
Filed April 1, 1916. Serial No. 94,035. PUBLISHED MAY 30, 1916.

112,119. SACK-COATS. GOODMAN & SUSS, Rochester, N. Y.
Filed March 3, 1916. Serial No. 93,270. PUBLISHED JUNE 13, 1916.

112,120. FIREPROOF CONSTRUCTION-BLOCKS FOR FLOORS, ROOFS, AND PARTITIONS. KEYSTONE FIREPROOFING CO., New York, N. Y.
Filed January 29, 1916. Serial No. 92,496. PUBLISHED JUNE 13, 1916.

112,121. MONOLITHIC FIREPROOF FERROCONCRETE FLOORS, ROOFS, AND PARTITIONS. KEYSTONE FIREPROOFING CO., New York, N. Y.
Filed January 29, 1916. Serial No. 92,497. PUBLISHED JUNE 13, 1916.

112,122. WATCHES. LUGERMAN & MORRISON, INC., New York, N. Y.
Filed March 7, 1916. Serial No. 93,366. PUBLISHED MAY 30, 1916.

112,123. WATCHES. LUGERMAN & MORRISON, INC., New York, N. Y.
Filed March 7, 1916. Serial No. 93,367. PUBLISHED JUNE 6, 1916.

112,124. HAIRCLOTH AND COTTON PIECE GOODS. MANHATTAN HAIR CLOTH CO., New York, N. Y.
Filed April 22, 1916. Serial No. 94,650. PUBLISHED JUNE 13, 1916.

112,125. TREATMENT FOR CORNS. VINCENT PLANTAMURA, New York, N. Y.
Filed March 7, 1916. Serial No. 93,378. PUBLISHED JUNE 13, 1916.

112,126. CONSTRUCTION TOYS. HAROLD L. POST, Appleton, Wis.
Filed April 7, 1916. Serial No. 94,234. PUBLISHED JUNE 13, 1916.

112,127. CERTAIN NAMED INFANTS' UNDER AND OUTER WEAR. MARJORIE A. WICKES, New York, N. Y.
Filed March 14, 1916. Serial No. 93,544. PUBLISHED JUNE 13, 1916.

112,128. MEN'S AND BOYS' TROUSERS AND OUTER SUITS AND WOMEN'S SKIRTS AND OUTER SUITS. THE AMERICAN GUARANTEED HOLEPROOF CLOTHIERS CO., INC., New York, N. Y.
Filed January 25, 1916. Serial No. 92,384. PUBLISHED APRIL 18, 1916.

112,129. PRETZELS, BREAD, CAKES, PIES. GEORGE H. BECKER, Baltimore, Md.
Filed March 22, 1916. Serial No. 93,755. PUBLISHED JUNE 13, 1916.

112,130. WRAPPING-PAPER. BERLIN MILLS COMPANY, Portland, Me.
Filed February 29, 1916. Serial No. 93,165. PUBLISHED MAY 23, 1916.

112,131. REMEDY FOR DISEASES OF NASAL, BRONCHIAL, AND OTHER AIR-PASSAGES. THOMAS PEARSON CAMPBELL, Jr., Los Angeles, Cal.
Filed April 12, 1916. Serial No. 94,368. PUBLISHED JUNE 6, 1916.

112,132. RICE. D. S. & H. CRAIG, INC., Philadelphia, Pa.
Filed October 20, 1913. Serial No. 73,501. PUBLISHED FEBRUARY 10, 1914.

112,133. SUSPENDERS AND GARTERS. THE C. A. EDGARTON MFG. CO., Shirley, Mass.; (change of name to President Suspender Company, a Corporation of Massachusetts,) or Shirley, Mass.
Filed September 18, 1912. Serial No. 65,841. PUBLISHED JUNE 6, 1916.

112,134. INKS AND POWDERS FOR USE IN THE PROCESS OF PRODUCING RELIEF PRINTS. EMBOSO SALES COMPANY, Washington, D. C.
Filed March 22, 1916. Serial No. 93,758. PUBLISHED JUNE 13, 1916.

112,135. LADIES' AND MISSES' CLOAKS, SUITS, DRESSES, AND SKIRTS. HAAS, STRAUSS & CO., INC., New York, N. Y.
Filed April 10, 1916. Serial No. 94,286. PUBLISHED JUNE 13, 1916.

112,136. TOILET SOAP. HOCHSCHILD, KOHN & CO., Baltimore, Md.
Filed March 9, 1915. Serial No. 85,040. PUBLISHED JUNE 1, 1915.

112,137. FERTILIZER. THE HUBBARD FERTILIZER CO., OF BALTIMORE CITY, Baltimore, Md.
Filed January 12, 1916. Serial No. 92,078. PUBLISHED FEBRUARY 22, 1916.

112,138. KERSEYS, MELTONS, THIBETS, AND CASSIMERES. JEWELL BROOK WOOLEN CO., Ludlow, Vt.
Filed March 29, 1916. Serial No. 93,964. PUBLISHED JUNE 6, 1916.

112,139. NECKLACES. JUERGENS & ANDERSEN COMPANY, Chicago, Ill.
Filed July 1, 1915. Serial No. 87,687. PUBLISHED JUNE 13, 1916.

112,140. BOOTS AND SHOES OF LEATHER, RUBBER, FELT, OR OTHER FABRIC CONSTRUCTION. GEO. E. KEITH STORES COMPANY, Brockton, Mass.
Filed January 21, 1916. Serial No. 92,291. PUBLISHED JUNE 13, 1916.

112,141. SALVE OR OINTMENT USED FOR THE RELIEF OF BURNS, CUTS, AND BRUISES. MEHROLD A. NORMAN, Chicago, Ill.
Filed February 11, 1916. Serial No. 92,783. PUBLISHED APRIL 11, 1916.

112,142. CHEESE. O. ROTH & CO., New York, N. Y.
Filed February 2, 1916. Serial No. 92,587. PUBLISHED JUNE 13, 1916.

112,143. COFFEE AND COCOA. SCOVILLE, BROWN & COMPANY, Wellsville, N. Y.
Filed April 28, 1916. Serial No. 94,779. PUBLISHED JUNE 6, 1916.

112,144. ROASTED COFFEE. STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo.
Filed January 4, 1916. Serial No. 91,919. PUBLISHED MAY 30, 1916.

112,145. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, MISSES, CHILDREN, AND INFANTS. JOHN WANAMAKER, PHILADELPHIA, Philadelphia, Pa.
Filed March 3, 1916. Serial No. 93,289. PUBLISHED JUNE 13, 1916.

112,146. CERTAIN NAMED KNITTED, NETTED, AND TEXTILE FABRICS. JOHN WANAMAKER, NEW YORK, New York, N. Y.
Filed March 22, 1916. Serial No. 93,781. PUBLISHED JUNE 13, 1916.

112,147. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. F. AHLGREN, Gefle, Sweden.
Filed January 17, 1916. Serial No. 92,179. PUBLISHED JUNE 6, 1916.

112,148. ACTIONS FOR PLAYER-PIANOS. AUTO PNEUMATIC ACTION CO., New York, N. Y.
Filed February 21, 1916. Serial No. 92,992. PUBLISHED JUNE 13, 1916.

112,149. METAL SNAP-FASTENERS USED TO FASTEN WEARING-APPAREL. AMERICAN FASTENER CO., Waterbury, Conn.
Filed April 6, 1916. Serial No. 94,184. PUBLISHED MAY 9, 1916.

112,150. WALL-PLASTERS. THE AMERICAN GYPSUM COMPANY, Port Clinton, Ohio.
Filed April 3, 1916. Serial No. 94,055. PUBLISHED MAY 9, 1916.

112,151. VARNISHES. WILLIAM T. BAKER, INC., Jersey City, N. J.
Filed March 21, 1916. Serial No. 93,735. PUBLISHED JUNE 13, 1916.

112,152. CERTAIN WEARING-APPAREL FOR MEN, WOMEN, AND CHILDREN. THE BELLE WAIST COMPANY, Boston, Mass.
Filed November 13, 1915. Serial No. 90,628. PUBLISHED MAY 16, 1916.

112,153. WRAPPING-PAPER. BERLIN MILLS COMPANY, Portland, Me.
Filed February 29, 1916. Serial No. 93,166. PUBLISHED JUNE 13, 1916.

112,154. SKIN-LOTION AND TOILET WATER. ROCCO BERNARDO, Philadelphia, Pa.
Filed February 18, 1916. Serial No. 92,935. PUBLISHED MAY 16, 1916.

112,155. FOOD FOR ANIMALS, COMPOSED OF A MIXTURE OF CEREAL MEALS AND CEREAL OILS. J. BIBBY & SONS LIMITED, Liverpool, England.
Filed March 3, 1916. Serial No. 93,259. PUBLISHED JUNE 13, 1916.

112,156. FOOD FOR ANIMALS, COMPOSED OF A MIXTURE OF CEREAL MEALS AND CEREAL OILS. J. BIBBY & SONS LIMITED, Liverpool, England.
Filed March 3, 1916. Serial No. 93,260. PUBLISHED JUNE 13, 1916.

112,157. WAISTS, MIDDY-BLOUSES, AND DRESSES. THE BIJOU WAIST CO., New York, N. Y.
Filed December 9, 1915. Serial No. 91,339. PUBLISHED MAY 2, 1916.

112,158. WAISTS, MIDDY-BLOUSES, DRESSES, SKIRTS, PETTICOATS, LADIES' COLLARS AND CUFFS, AND LADIES' HOSIERY. THE BIJOU WAIST CO., New York, N. Y.
Filed December 29, 1915. Serial No. 91,810. PUBLISHED MAY 23, 1916.

112,159. CERTAIN NAMED CLOTHING. THE BIJOU WAIST CO., New York, N. Y.
Filed January 18, 1916. Serial No. 92,212. PUBLISHED APRIL 25, 1916.

112,160. LADIES' AND MISSES' COATS. BISCHOF STERNE & STEIN, Cincinnati, Ohio.
Filed March 29, 1916. Serial No. 93,948. PUBLISHED JUNE 13, 1916.

112,161. PIANOS. BJUR BROS. CO., New York, N. Y.
Filed March 6, 1916. Serial No. 93,328. PUBLISHED APRIL 25, 1916.

112,162. DRIED MILK. BORDEN'S CONDENSED MILK COMPANY, Jersey City, N. J., and New York, N. Y.
Filed April 22, 1916. Serial No. 94,637. PUBLISHED JUNE 13, 1916.

112,163. CANDIES. THORNTON W. BURGESS, Springfield, Mass.
Filed July 1, 1915. Serial No. 87,678. PUBLISHED MAY 30, 1916.

112,164. CAKES AND CRACKERS. THORNTON W. BURGESS, Springfield, Mass.
Filed March 20, 1916. Serial No. 93,692. PUBLISHED MAY 30, 1916.

112,165. CAUSTIC SODA. BURGESS SULPHITE FIBRE CO., Berlin, N. H.
Filed February 29, 1916. Serial No. 93,163. PUBLISHED APRIL 11, 1916.

112,166. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. IRVING CHAUNCEY, New York, N. Y.
Filed February 29, 1916. Serial No. 93,167. PUBLISHED MAY 16, 1916.

112,167. PHOTOGRAPHIC DEVELOPING AND FIXING CHEMICALS. COMMERCIAL CAMERA COMPANY, Providence, R. I.
Filed June 1, 1915. Serial No. 87,009. PUBLISHED JUNE 13, 1916.

112,168. CERTAIN NAMED FOODS. CONNELLSVILLE MACARONI CO., Connellsville, Pa.
Filed February 11, 1916. Serial No. 92,795. PUBLISHED JUNE 13, 1916.

112,169. EMBLEMS OF PLATED OR PRECIOUS-METAL WARE. C. C. DARLING & CO., Providence, R. I.
Filed April 30, 1915. Serial No. 86,287. PUBLISHED MAY 23, 1916.

112,170. CHOCOLATE CONFECTIONS. DOUGLAS CANDY CO., St. Joseph, Mo.
Filed April 21, 1916. Serial No. 94,609. PUBLISHED MAY 30, 1916.

112,171. CERTAIN NAMED FOODS. THE JOHN T. DOYLE CO., New Haven, Conn.
Filed January 25, 1916. Serial No. 92,392. PUBLISHED JUNE 13, 1916.

112,172. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed May 20, 1916. Serial No. 95,300. PUBLISHED JUNE 20, 1916.

112,173. DRIED FRUITS AND LEAVES FOR A LAXATIVE FOOD. FRANK LAWRENCE EMBREE, New York, N. Y.
Filed November 29, 1915. Serial No. 91,000. PUBLISHED MAY 23, 1916.

112,174. TREATMENT FOR SLUGGISH LIVER AND CONSTIPATION AND A CORN-REMOVER. LLEWELLYN WHITING ESTES, Washington, D. C.
Filed May 9, 1916. Serial No. 95,008. PUBLISHED JUNE 6, 1916.

112,175. SHOES MADE WHOLLY OR PARTLY OF CERTAIN NAMED MATERIALS. EVERYBODY'S SHOE STORE, Washington, D. C.
Filed December 18, 1915. Serial No. 91,569. PUBLISHED MAY 9, 1916.

112,176. EXTRACT OF GASTRIC-GLAND TISSUE USED AS MEDICINAL PREPARATION INTERNALLY AND EXTERNALLY. FAIRCHILD BROS. & FOSTER, New York, N. Y.
Filed February 18, 1916. Serial No. 92,943. PUBLISHED APRIL 25, 1916.

112,177. CERTAIN NAMED GAMES, TOYS, AND SPORTING GOODS. J. ALAN FLETCHER, New York, N. Y.
Filed April 20, 1916. Serial No. 94,569. PUBLISHED JUNE 13, 1916.

112,178. BACON. W. S. FORBES & CO., Richmond, Va.
Filed March 2, 1916. Serial No. 93,228. PUBLISHED MAY 30, 1916.

112,179. TITLE OF A MAGAZINE PUBLISHED MONTHLY. W. F. FREDERICK PIANO CO., Uniontown and Pittsburgh, Pa.
Filed March 10, 1916. Serial No. 93,430. PUBLISHED APRIL 18, 1916.

112,180. CIGARETTES. SALLY FRIESLANDER, Providence, R. I.
Filed April 6, 1915. Serial No. 85,727. PUBLISHED APRIL 4, 1916.

112,181. CANDY. GILLEN & BONEY, INC., Lincoln, Nebr.
Filed April 21, 1916. Serial No. 94,611. PUBLISHED MAY 30, 1916.

112,182. MEDICINAL PLASTERS. THEODORE GILMAN, Jr., New York, N. Y.
Filed April 22, 1916. Serial No. 94,640. PUBLISHED JUNE 13, 1916.

112,183. CERTAIN NAMED CANNED PRODUCTS. GIVENS BROTHERS, Mount Sterling, Ill.
Filed January 5, 1916. Serial No. 91,935. PUBLISHED MAY 30, 1916.

112,184. ICE-CREAM. GOODMAN AMERICAN ICE CREAM CO., Chicago, Ill.
Filed April 24, 1916. Serial No. 94,670. PUBLISHED JUNE 13, 1916.

112,185. TABLETS FOR WASHING AND IRONING PURPOSES. EMIL GOODWIRTH, St. Louis, Mo.
Filed March 7, 1916. Serial No. 93,362. PUBLISHED JUNE 13, 1916.

112,186. FACE-POWDER IN CAKE FORM. HEPTAGON LABORATORIES, INC., New York, N. Y.
Filed April 12, 1916. Serial No. 94,354. PUBLISHED JUNE 13, 1916.

112,187. CITRUS FRUITS. HILLSIDE ORANGE ASSOCIATION, Lindsay, Cal.
Filed November 6, 1915. Serial No. 90,474. PUBLISHED JUNE 13, 1916.

112,188. DRY BATTERIES. HI-PO WATERPROOF BATTERY CORPORATION, Hammondsport and New York, N. Y.
Filed March 18, 1916. Serial No. 93,648. PUBLISHED APRIL 25, 1916.

112,189. ELECTRICALLY-OPERATED WASHING-MACHINES. THE HOME SPECIALTY MANUFACTURING CO., Cleveland, Ohio.
Filed April 20, 1916. Serial No. 94,573. PUBLISHED JUNE 13, 1916.

112,190. NAIL-POLISH. RICHARD HUDNUT, New York, N. Y.
Filed May 8, 1915. Serial No. 86,480. PUBLISHED JUNE 13, 1916.

112,191. FUEL COMPOUND FOR EXPLOSIVE-ENGINES. INAJIFFI FUEL COMPANY, Akron, Ohio.
Filed April 12, 1916. Serial No. 94,356. PUBLISHED JUNE 13, 1916.

112,192. CHEWING-GUM. INDEPENDENT CHEWING GUM CO., Arlington and Newark, N. J.
Filed November 11, 1915. Serial No. 90,581. PUBLISHED MAY 2, 1916.

112,193. BAKING-SODA. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed October 14, 1914. Serial No. 81,868. PUBLISHED NOVEMBER 23, 1915.

112,194. COFFEE. C. D. KENNY CO., Baltimore, Md.
Filed April 21, 1916. Serial No. 94,618. PUBLISHED MAY 30, 1916.

112,195. TALKING-MACHINES. THE KNABE BROS. COMPANY, Cincinnati, Ohio.
Filed November 29, 1915. Serial No. 91,006. PUBLISHED JUNE 6, 1916.

112,196. CANDLES. EDWARD J. KNAPP, Syracuse, N. Y.
Filed May 3, 1916. Serial No. 94,874. PUBLISHED JUNE 6, 1916.

112,197. LIQUID MEDICINE FOR WOMEN. THE KUNATH MEDICINE MFG. CO., Evansville, Ind.
Filed April 6, 1916. Serial No. 94,199. PUBLISHED JUNE 13, 1916.

112,198. SHIMS AND SHIM-STOCK. LAMINATED SHIM COMPANY, INC., New York, N. Y.
Filed March 28, 1916. Serial No. 93,937. PUBLISHED MAY 16, 1916.

112,199. SAFETY-PAPER FOR CHECKS, DRAFTS, BILLS OF EXCHANGE, PROMISSORY NOTES, AND VOUCHERS OF VALUE. GEO. LA MONTE & SON, Nutley, N. J., and New York, N. Y.
Filed April 27, 1914. Serial No. 77,783. PUBLISHED JUNE 13, 1916.

112,200. SWEETMEATS AND CHOCOLATES OF ALL KINDS AND BISCUITS. EUGÈNE LAMY, Lyon-Villeurbanne, France.
Filed January 26, 1916. Serial No. 92,414. PUBLISHED JUNE 13, 1916.

112,201. BAKING-POWDER AND BLUING. THE H. D. LEE MERCANTILE CO., Salina, Kans., and Kansas City, Mo.
Filed April 21, 1916. Serial No. 94,619. PUBLISHED JUNE 6, 1916.

112,202. BOOTS, SHOES, SANDALS, AND SLIPPERS OF LEATHER, EITHER ALONE OR IN COMBINATION WITH CLOTHS. LEE BROTHERS COMPANY, Boston and Athol, Mass.
Filed September 25, 1915. Serial No. 89,463. PUBLISHED JUNE 13, 1916.

112,203. SUPPORTS FOR TIMEPIECES FORMED OF RUBBER. SENECA G. LEWIS, Jeannette, Pa.
Filed November 26, 1915. Serial No. 90,942. PUBLISHED JUNE 6, 1916.

112,204. NON-ALCOHOLIC BEVERAGE OF MALT AND HOPS SOLD AS A SOFT DRINK. S. LIEBMANN'S SONS BREWING COMPANY, Brooklyn, N. Y.
Filed April 17, 1916. Serial No. 94,475. PUBLISHED MAY 9, 1916.

112,205. MEDICINE IN TABLET FORM FOR SCOURS IN CATTLE. WILLIAM T. MCCARTHY, Platteville, Wis.
Filed July 17, 1915. Serial No. 87,990. PUBLISHED JUNE 13, 1916.

112,206. LEATHER, RUBBER, AND CANVAS DRESSING AND PRESERVATIVE. MICHIGAN WATERPROOFING COMPANY, Grand Rapids, Mich.
Filed March 25, 1916. Serial No. 93,875. PUBLISHED JUNE 6, 1916.

112,207. HOSIERY. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed February 25, 1916. Serial No. 93,104. PUBLISHED JUNE 13, 1916.

112,208. MAIL-ORDER-HOUSE MONTHLY PERIODICAL. MONTGOMERY WARD & CO., INC., New York, N. Y., and Chicago, Ill.
Filed September 9, 1915. Serial No. 89,122. PUBLISHED DECEMBER 7, 1915.

112,209. CANDY. A. G. MORSE CO., INC., Chicago, Ill.
Filed April 21, 1916. Serial No. 94,621. PUBLISHED MAY 30, 1916.

112,210. COTTON PIECE GOODS, PARTICULARLY DUCK OR CANVAS. MOUNT VERNON-WOODBERRY MILLS, INCORPORATED, Baltimore, Md.
Filed August 25, 1915. Serial No. 88,809. PUBLISHED DECEMBER 7, 1915.

112,211. SALVES. ELIZABETH NAU, New York, N. Y.
Filed February 18, 1916. Serial No. 92,950. PUBLISHED JUNE 13, 1916.

112,212. PERIODICAL ISSUED MONTHLY. THE S. W. NOGGLE WHOLESALE AND MANUFACTURING COMPANY, Kansas City, Mo.
Filed February 16, 1916. Serial No. 92,897. PUBLISHED JUNE 6, 1916.

112,213. CRAVATS AND SCARFS. ROBERT C. PEDERSEN, Waterloo, Iowa.
Filed March 2, 1916. Serial No. 93,240. PUBLISHED JUNE 6, 1916.

112,214. PETTICOATS. PEERLESS PETTICOAT COMPANY, Boston, Mass.
Filed March 23, 1916. Serial No. 93,877. PUBLISHED JUNE 13, 1916.

112,215. HAMS, BACON, LARD, SAUSAGE, OLEOMARGARIN. EUGENE W. PENLEY, Auburn, Me.
Filed March 6, 1916. Serial No. 93,344. PUBLISHED MAY 30, 1916.

112,216. CLEANING COMPOUND IN THE NATURE OF A SOAP. PERFECTION MFG. CO., Philadelphia, Pa.
Filed February 28, 1916. Serial No. 93,154. PUBLISHED APRIL 18, 1916.

112,217. EDUCATIONAL CARD GAMES. LEROY L. PERRINE, Bedford, Ind.
Filed February 24, 1916. Serial No. 93,073. PUBLISHED APRIL 25, 1916.

112,218. INTERNAL MEDICINE WHICH IS A REMEDY FOR PILES AND CONSTIPATION. THE THOMAS W. READ MFG. CO., Cincinnati, Ohio.
Filed March 29, 1916. Serial No. 93,976. PUBLISHED JUNE 6, 1916.

112,219. STONE-CEMENT OR STONE-PUTTY. JAMES H. RHODES & COMPANY, Chicago, Ill.
Filed April 10, 1916. Serial No. 94,298. PUBLISHED JUNE 13, 1916.

112,220. HOSIERY. RICHMOND HOSIERY MILLS, Rossville, Ga.
Filed April 15, 1916. Serial No. 94,458. PUBLISHED MAY 30, 1916.

112,221. HOSIERY. RICHMOND HOSIERY MILLS, Rossville, Ga.
Filed April 15, 1916. Serial No. 94,459. PUBLISHED MAY 30, 1916.

112,222. HOSIERY. RICHMOND HOSIERY MILLS, Rossville, Ga.
Filed April 15, 1916. Serial No. 94,460. PUBLISHED MAY 30, 1916.

112,223. HOSIERY. RICHMOND HOSIERY MILLS, Rossville, Ga.
Filed April 15, 1916. Serial No. 94,461. PUBLISHED MAY 30, 1916.

112,224. PREPARATION THAT REMOVES SUPERFLUOUS HAIR FROM THE FACE OR BODY. MARGARET RUPPERT, Philadelphia, Pa.
Filed October 26, 1915. Serial No. 90,127. PUBLISHED NOVEMBER 23, 1915.

112,225. CHILDREN'S, MEN'S, AND WOMEN'S SLEEPING-GARMENTS. CHAS. SANDBERG, New York, N. Y.
Filed December 9, 1915. Serial No. 91,358. PUBLISHED APRIL 4, 1916.

112,226. MEN'S OUTER GARMENTS, INCLUDING SUITS AND OVERCOATS. J. & I. SAUL, New York, N. Y.
Filed July 28, 1915. Serial No. 88,260. PUBLISHED JANUARY 4, 1916.

112,227. TOILET-PAPER. SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y.
Filed March 20, 1916. Serial No. 93,728. PUBLISHED APRIL 11, 1916.

112,228. INTERNAL-COMBUSTION ENGINES. THE ST. MARYS OIL ENGINE COMPANY, St. Charles, Mo.
Filed April 20, 1916. Serial No. 94,586. PUBLISHED JUNE 6, 1916.

112,229. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. GEORGIOS M. STEFANIDES, Monessen, Pa.
Filed April 17, 1916. Serial No. 94,490. PUBLISHED JUNE 6, 1916.

112,230. TOOTH-BRUSHES. THE SWEEPING TOOTHBRUSH COMPANY, Gary, Ind.
Filed May 4, 1916. Serial No. 94,906. PUBLISHED JUNE 6, 1916.

112,231. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. SAMUEL TAUBER, New York, N. Y.
Filed April 6, 1916. Serial No. 94,213. PUBLISHED JUNE 6, 1916.

112,232. CARBONATED BEVERAGES AND SYRUP FOR SAME. JAMES A. TIERNEY, Weston, W. Va.
Filed March 24, 1916. Serial No. 93,859. PUBLISHED APRIL 25, 1916.

112,233. CIGARS. EMANUEL TUNIS, New York, N. Y.
Filed April 11, 1916. Serial No. 94,338. PUBLISHED MAY 16, 1916.

112,234. ADDING-MACHINES, COMBINED TYPEWRITING AND ADDING MACHINES, BEING ESSENTIALLY ADDING-MACHINES, AND PARTS THEREOF. JOHN UNDERWOOD & COMPANY, New York, N. Y.
Filed April 2, 1915. Serial No. 85,654. PUBLISHED FEBRUARY 8, 1916.

112,235. WRAPPING AND PRINTING PAPER. THE UNION PAPER AND TWINE COMPANY, Cleveland, Ohio.
Filed September 20, 1915. Serial No. 89,339. PUBLISHED JUNE 13, 1916.

112,236. CANDY. UNITED DRUG COMPANY, Boston, Mass.
Filed April 13, 1916. Serial No. 94,401. PUBLISHED JUNE 13, 1916.

112,237. GLASSWARE. THE UNITED JEWELERS, INC., New York, N. Y.
Filed February 14, 1916. Serial No. 92,848. PUBLISHED JUNE 13, 1916.

112,238. OVERSHOES OF RUBBER AND TENNIS-SHOES OF RUBBER AND FABRIC. UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y.
Filed March 1, 1916. Serial No. 93,217. PUBLISHED MAY 23, 1916.

112,239. GOLF-BALLS. THE WORTHINGTON BALL COMPANY, Elyria, Ohio.
Filed April 13, 1916. Serial No. 94,406. PUBLISHED JUNE 13, 1916.

112,240. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. WM. ZINSSER & CO. INC., New York, N. Y.
Filed March 16, 1916. Serial No. 93,591. PUBLISHED JUNE 13, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

13,529. REFINED LARD. WILLIAM H. BURNET, Chicago, Ill.; New York, N. Y.; St. Louis, Mo., and Omaha, Nebr.; The N. K. Fairbank Company, assignee.
Registered July 27, 1886. Renewed July 27, 1916.

13,817. LAUNDRY SOAP. CURTIS, DAVIS & Co., Cambridge and Boston, Mass.; Lever Brothers Company, assignee.
Registered November 23, 1886. Renewed November 23, 1916.

LABELS

REGISTERED AUGUST 22, 1916.

19,538.—*Title:* "PROGRESSIVE PLUNGE." (For Apparatus for Playing a Game.) LUCY ALDEN, Saginaw, Mich. Filed July 21, 1916.

19,539.—*Title:* "UNIVERSAL MIST." (For Automobile and Furniture Polish.) MELVIN W. ELFRING, Bensenville, Ill. Filed June 7, 1916.

19,540.—*Title:* "EMULSIO, A TREATMENT FOR CONSUMPTION." (For a Treatment for Consumption.) EMULSIO CHEMICAL CO., LTD., San Antonio, Tex. Filed July 3, 1916.

19,541.—*Title:* "PEP—A PURE TONIC BEVERAGE." (For a Non-Alcoholic Beverage.) THE ST. LOUIS BEVERAGE CO., St. Louis, Mo. Filed April 22, 1916.

19,542.—*Title:* "PEP." (For a Non-Intoxicating Cereal Beverage.) ST. LOUIS BEVERAGE COMPANY, St. Louis, Mo. Filed July 24, 1916.

PRINTS

REGISTERED AUGUST 22, 1916.

4,441.—*Title:* "PILDORITAS DE REUTER." (For a Liver-Pill.) BARCLAY & CO., New York, N. Y. Filed June 26, 1916.

4,442.—*Title:* "JABON DE REUTER." (For Soap.) BARCLAY & CO., New York, N. Y. Filed June 26, 1916.

4,443.—*Title:* "CREMA DE PERLAS DE BARRY." (For a Face-Cream.) BARCLAY & CO., New York, N. Y. Filed June 26, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE FISHER.

Decided March 24, 1916.

1. PATENTABILITY—COMPACT AND CONVENIENT ARRANGEMENT.
   Claims covering a compact and convenient arrangement of the parts of a washing-machine *Held* patentable.
2. SAME—UNPATENTABLE COMBINATION.
   Claims covering a combination of the washing elements and the wringing elements of a laundry apparatus *Held* unpatentable for want of functional coöperation or dependence.
3. SAME—SAME—SUBSTITUTION OF EQUIVALENTS.
   The substitution of one arrangement of reversing mechanism for another in a washing-machine *Held* unpatentable.
4. SAME—NON-ANALOGOUS ARTS.
   There are some devices which may be considered common to the arts because of their general applicability. (*In re Morgan*, 179 O. G., 242; 38 App. D. C., 274.)

APPEAL from Examiners-in-Chief.

MACHINE HAVING AGITATING MECHANISM.

Messrs. Rector, Hibben, Davis & Macauley for the applicant.

WHITEHEAD, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Primary Examiner finally rejecting claims 1 to 9, inclusive, of which claims 1 and 7 are illustrative: *

1. In a machine of the class described, the combination of a stationary receptacle, an agitating device therewithin, an oscillating shaft extending vertically through the bottom of the receptacle and operatively connected with said device, and mechanism including a prime mover for actuating said shaft, said mechanism being arranged below and within the lines of the receptacle; substantially as described.

7. The combination of a washing machine including a washing receptacle and an agitating device therein, a wringer mounted upon such receptacle, and operating mechanism in common for the agitating device and the wringer, comprising a main driven shaft, operating connections between such shaft and the agitating device, a second driven shaft having operating connections with the wringer, two hubs on said main shaft, a clutch arranged to coöperate with one or the other of said hubs, and driving connections between said hubs and said second shaft.

The references cited by the Examiner are: Fawkes, No. 717,372, December 30, 1902; Ekehorn, No. 891,470, June 23, 1908; Woodrow, No. 921,195, May 11, 1909; Flinchbaugh, No. 1,006,073, October 17, 1911; Zuill, No. 1,021,498, March 26, 1912.

The Examiners-in-Chief held that claims 1 to 5, inclusive, were anticipated by the prior art and that claims 6 to 9, inclusive, were properly rejected on the ground of aggregation. After the hearing on the appeal applicant's attention was called to the following patents: White, No. 714,346, November 25, 1902; Phillips, No. 950,402, February 22, 1910.

Applicant in his brief before the Examiners-in-Chief requested to be allowed to substitute for claims 1 to 5, inclusive, claims numbered 1, 2, and 3, and that request is repeated in the brief on this appeal. After the citation of the additional references a brief was filed and permission was requested to substitute claims 6, 7, and 8 in place of the correspondingly-numbered appealed claims.

As far as claims 1 to 5 are concerned, applicant's request to substitute claims 1, 2, and 3 in place thereof will be considered as a withdrawal of those claims and the presentation of the three claims in better form for appeal. The Examiners-in-Chief will therefore be affirmed as to claims 1 to 5 for that reason.

Claims 1 and 2 state that the oscillating shaft for the washing-machine extends vertically through the bottom of the receptacle and that the entire operating mechanism is supported on a plate which is detachably connected with the receptacle and arranged below and within the lines of the receptacle.

In this class of devices it is obviously desirable that the operating mechanism be arranged so that as few parts as possible project beyond the lines of the machine. Claims 1 and 2 state an arrangement by which the mechanism is compactly adjusted for driving the vertical shaft and can be easily attached to or detached from the machine. Neither the patent to Woodrow nor the patent to Zuill shows the operating mechanism supported upon a single plate. In the patent to Woodrow the entire operating mechanism is not supported on a single plate secured to the legs. In fact, part of the operating mechanism consists of the lever 15, which extends up the side of the machine, and the rack-bar 16, pivoted to the top thereof. These claims are deemed allowable.

Claim 3 includes a receptacle having an agitating

* This application has eventuated in Patent No. 1,184,088.

device therein—that is, the washing-machine, a wringer mounted on the receptacle, and means for reversing the operating connections to the wringer. This claim is not deemed allowable, since it is not seen that there is any combination between the washing-machine and the wringer. The former can be operated whether the latter is idle or being driven in one direction or the other.

Claims 6 to 9, inclusive, and also proposed claims 6, 7, and 8 are, in my opinion, not patentable over the patents to which attention was called. Appealed claim 6 is literally readable upon the Phillips patent. Proposed claim 6 differs therefrom in specifying that the second driven shaft is parallel with the main shaft. There would, in my opinion, be no invention in substituting for the reversing mechanism of the Phillips patent that shown in the patent to White. In the latter the two driven shafts are parallel and are each provided with sprocket wheels and chains therebetween and intermeshing gears.

It is argued that the patent to White is from a non-analogous art. The patent, however, discloses a reversing mechanism, and the fact that it is used with a wagon-jack does not render it non-analogous to a reversing mechanism used in a washing-machine. As stated by the court in the case of *in re Morgan*, (179 O. G., 242; 38 App. D. C., 274,) certain devices are common to all arts as a whole because they are adapted for use in many situations.

Proposed claims 7 and 8 specify that the sprocket-wheels and the two hubs are loosely mounted on the main shaft and a clutch located on that shaft is arranged to coöperate with said hubs. In the White patent the main shaft has a sprocket-wheel and a pinion fixed thereto and the second shaft carries the loose hubs and the clutch. This is deemed, however, to be an obvious reversal of parts. It is apparently immaterial whether the loosely-mounted hubs and the clutch are placed on one shaft or the other.

Claim 8 sets out the applicant's arrangement in detail; but it includes no limitation different from the claims above discussed, except that the pulley over which the belt from the motor passes is mounted on the main shaft. In the Phillips patent the pulley is mounted on a stub-shaft and is geared to the main shaft by a pinion. There would obviously be no invention in placing this pulley on the shaft 15 of Phillips.

If an amendment containing proposed claims 1 and 2 is presented within twenty days from the date hereof, the Examiner is authorized to enter it and allow the claims.

The decision of the Examiners-in-Chief is affirmed.

Interference Notices

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 16, 1916.

Recknagel & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Nineteen Hundred Washer Co., of Binghamton, N. Y., for registration of a trade-mark and trade-mark registered June 26, 1888, No. 15,643, to Recknagel & Co., of 106 Broad street, New York, N. Y., and a notice of such declaration sent by registered mail to said Recknagle & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Recknagel & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 10, 1916.

Bentley & Olmsted Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Leonard & Barrows, Middleboro, Mass., for registration of a trade-mark and trade-mark registered December 10, 1907, No. 66,495, to Bentley & Olmsted Company, 300–302 Court avenue, Des Moines, Iowa, and the Office having failed to secure proper service on said Bentley & Olmsted Company, notice is hereby given that unless said Bentley & Olmsted Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Patents Nos. 1,195,956 to 1,196,750. 1257

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 229—No. 5. TUESDAY, AUGUST 29, 1916. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF AUGUST 29, 1916	1257
AN ACT TO EXTEND TIME FOR FILING APPLICATIONS, ETC	1257
DATE OF PATENT	1257
APPLICATIONS UNDER EXAMINATION	1258
PATENTS GRANTED	1259
REISSUES	1535
DESIGNS	1539
TRADE-MARKS—REGISTRATION APPLIED FOR	1547
TRADE-MARK REGISTRATIONS GRANTED	1567
TRADE-MARK REGISTRATIONS RENEWED	1570
TRADE-MARK REGISTRATIONS CANCELED	1570
LABELS AND PRINTS	1571
COMMISSIONER'S DECISIONS—	
In re Dwiggins	1573
DECISIONS OF THE U. S. COURTS—	
Nestle and Anglo-Swiss Condensed Milk Company and Borden's Condensed Milk Company *v.* Holland Food Corporation	1573
Shull-Day Company *v.* The Levy Overall Manufacturing Company	1574
ADVERSE DECISIONS IN INTERFERENCE	1574
CHANGES IN CLASSIFICATION	1574
NOTICE OF CANCELLATION	1574
INTERFERENCE NOTICES	1574

ISSUE OF AUGUST 29, 1916.

Patents	795	No. 1,195,956 to No.	1,196,750, inclusive.
Designs	36	No. 49,557 to No.	49,592, inclusive.
Trade-Marks	105	No. 112,241 to No.	112,345, inclusive.
Labels	7	No. 19,543 to No.	19,549, inclusive.
Prints	7	No. 4,444 to No.	4,450, inclusive.
Reissues	4	No. 14,186 to No.	14,189, inclusive.
Total	954		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	7	.....	North Carolina	2	2
Arizona	.....	.....	North Dakota	4	.....
Arkansas	4	1	Ohio	61	9
California	26	4	Oklahoma	3	2
Colorado	16	.....	Oregon	9	5
Connecticut	25	.....	Pennsylvania	76	4
Delaware	2	.....	Rhode Island	6	1
Florida	2	.....	South Carolina	1	1
Georgia	2	2	South Dakota	3	.....
Idaho	1	.....	Tennessee	3	2
Illinois	82	17	Texas	13	1
Indiana	11	1	Utah	2	.....
Iowa	15	3	Vermont	.....	.....
Kansas	8	.....	Virginia	9	1
Kentucky	6	.....	Washington	16	.....
Louisiana	3	.....	West Virginia	6	1
Maine	1	2	Wisconsin	8	2
Maryland	12	2	Wyoming	1	.....
Massachusetts	49	3			
Michigan	21	4	Alaska, District of	.....	.....
Minnesota	16	.....	Canal Zone	.....	.....
Mississippi	2	2	District of Columbia	5	1
Missouri	19	5	Hawaii Territory	2	.....
Montana	2	.....	Philippine Islands	1	.....
Nebraska	10	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	.....	.....	U. S. Navy	.....	.....
New Jersey	42	4			
New Mexico	2	.....	Total to residents of the United States	753	118
New York	133	36			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	3	.....	Netherlands	.....	.....
Belgium	1	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	1	.....
Canada	12	1	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
England	21	.....	Spain	.....	.....
Finland	.....	.....	Sweden	5	.....
France	9	.....	Switzerland	2	.....
Germany	13	.....	Tasmania	1	.....
Guatemala	.....	.....	Victoria	1	.....
India	.....	.....	Wales	.....	.....
Ireland	1	.....	Total to residents of foreign countries	76	1
Italy	2	.....			
Japan	.....	.....			
Luxemburg	1	.....			

An Act to Extend Time for Filing Applications and Fees in Favor of Certain Nations.

[PUBLIC—NO. 213—64TH CONGRESS.]
[H. R. 13982.]

An act to extend temporarily the time for filing applications and fees and taking action in the United States Patent Office in favor of nations granting reciprocal rights to United States citizens.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any applicant for Letters Patent or for the registration of any trade-mark, print, or label, being within the provisions of this act, if unable on account of the existing and continuing state of war to file any application or pay any official fee or take any required action within the period now limited by law, shall be granted an extension of nine months beyond the expiration of said period.

Sec. 2. That the provisions of this act shall be limited to citizens or subjects of countries which extend substantially similar privileges to the citizens of the United States, and no extension shall be granted under this act to the citizens or subjects of any country while said country is at war with the United States.

Sec. 3. That this act shall be operative to relieve from default under existing law occurring since August first, nineteen hundred and fourteen, and before the first day of January, nineteen hundred and eighteen, and all applications and Letters Patent and registrations in the filing or prosecution whereof default has occurred for which this act grants relief shall have the same force and effect as if said default had not occurred.

Approved August 17, 1916.

Date of Patent.

RULE 207. The weekly issue closes on Thursday, and the patents of that issue bear date as of the *fourth* Tuesday thereafter. If the final fee in any application is not paid on or before Thursday, the patent will not go to issue until the following week.

APPLICATIONS UNDER EXAMINATION.

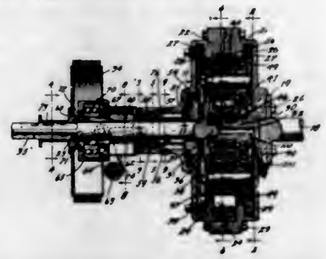
Condition at Close of Business August 26, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications waiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	June 26	July 10	382
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Mar. 11	May 1	623
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	July 31	July 14	98
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	June 7	Aug. 1	274
167	5. Bookbinding; Harvesters; Jewelry; Music	Apr. 20	June 30	275
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 13	July 13	287
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Mar. 8	May 23	663
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 16	July 1	1271
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Mar. 9	June 8	524
235	10. Carriages and Wagons; Spring Devices	Mar. 10	July 24	917
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	June 26	Aug. 9	103
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Feb. 10	June 19	692
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	May 3	July 27	427
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Parriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 4	June 22	308
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics	July 5	July 27	266
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Feb. 10	June 5	533
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	May 1	July 21	296
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 28	July 14	117
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces	Mar. 1	July 17	365
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 3	July 17	243
112	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 1	July 13	345
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 29	June 16	464
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Mar. 15	Apr. 3	476
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Feb. 11	June 15	456
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers.	July 5	July 4	223
106	26. Electricity, Generation; Motive Power	Feb. 2	June 13	685
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	July 17	July 22	267
65	28. Internal-Combustion Engines	Apr. 3	June 7	553
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Apr. 17	July 5	393
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	June 14	July 22	338
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Mar. 7	July 18	318
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Mar. 3	July 3	740
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Mar. 27	July 8	384
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Mar. 6	May 1	437
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Apr. 1	July 20	553
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Apr. 12	July 11	884
107	37. Electric Lamps; Electricity, Conduits; Electricity, General Applications	Feb. 10	June 26	757
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	June 30	July 5	237
321	39. Water Distribution	Mar. 24	June 22	413
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 3	July 20	711
125	41. Railway Draft Appliances; Resilient Tires and Wheels	May 17	July 3	433
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Jan. 17	Apr. 26	586
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	July 7	June 28	161
	Oldest new case, Jan. 17; oldest amended, Apr. 3.			
	Total number of applications awaiting action			19,478
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 10	Aug. 2	944
	Designs	July 18	July 1	228
	Labels and Prints	Aug. 16	Aug. 19	52

PATENTS

GRANTED AUGUST 29, 1916.

1,195,956. FLUID-CLUTCH. AXEL HJ. ASPROOTH and HARRY H. BENSON, Rockford, Ill. Filed Aug. 19, 1915. Serial No. 46,311. (Cl. 192—18.)



1. In a fluid clutch, the combination of a hollow rotary driving member, a rotary driven member within and circumferentially spaced from said driving member to form an annular fluid chamber, a body of liquid filling said fluid chamber, a plurality of propeller blades rotatably mounted in said driven member adapted at a point in its rotation to bisect said fluid chamber, means for rotating said propeller blades from said driving member during a relative turning movement between said driving and driven members, a plurality of valves mounted in said driving member, means for moving said valve to a position partially or wholly bisecting said fluid chamber in rear of said propeller blades, and means permitting passage of fluid between the bisected portions of the fluid chamber so as to equalize the pressures therein.

2. In a fluid clutch, the combination of a hollow rotary driving member, a rotary driven member within and circumferentially spaced from said driving member to form an annular fluid chamber, a segmental propeller blade having concave sides and arcuate ends rotatably mounted in the peripheral portion of said driven member and adapted at one or more points in its rotation to bisect said fluid chamber, means for rotating the propeller blade during and in fixed ratio to a revolution of said driving member around said driven member, and a valve mounted in said driving member adapted to be moved to a position to partially or wholly bisect said fluid chamber in rear of said propeller blade.

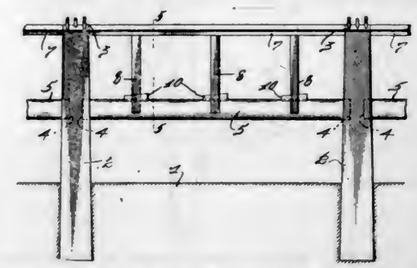
3. In a fluid clutch, the combination of a hollow rotary driving member, a rotary driven member within and circumferentially spaced from said driving member to form an annular fluid chamber, a body of liquid filling said fluid chamber, a segmental propeller blade having concave sides and arcuate ends rotatably mounted in the peripheral portion of said driven member and adapted at one or more points in its rotation to bisect said fluid chamber, a planetary gear train intermediate said driving member and said propeller blade, and a valve mounted in said driving member adapted to be moved to a position wherein it partially or wholly bisects said fluid chamber in rear of said propeller blade.

4. In a fluid clutch, the combination of a hollow rotary driving member, a rotary driven member within and circumferentially spaced from said driving member so as to form an annular fluid chamber, said members having cooperating annular flanges or the like, a plurality of propeller blades mounted in said driven member, means for causing, under a relative rotation of said members, the propeller blade to be projected across and bisect said fluid chamber, and a plurality of valves mounted in said driving member movable to a position partially or wholly bisecting said fluid chamber, said annular flanges containing ports connecting the several portions of the fluid chamber so as to equalize the fluid pressures in said bisected portions of the fluid chamber bisected by the valves.

5. In a fluid clutch, an annular fluid chamber having relatively rotatable outer and inner peripheral walls, in combination with a body of liquid filling said chamber, a plurality of valves in the outer wall adapted to be projected across said chamber, and a propeller blade mounted in and bodily carried by the inner wall and rotatable on its own axis in the plane of said chamber, said propeller blade having opposed arcuate ends and concave sides, and means for rotating said blade during relative rotation of said walls.

[Claims 6 to 12 not printed in the Gazette.]

1,195,957. CONCRETE FENCE CONSTRUCTION. GEORGE AUER, White Plains, N. Y., assignor of one-half to H. C. Merritt, Tuckahoe, N. Y. Filed Jan. 18, 1913. Serial No. 742,812. (Cl. 256—19.)



1. A fence comprising separately formed reinforced concrete posts having embedded members projecting from the tops thereof, and a reinforced concrete top rail molded in contact with the tops of said posts and completely embedding the projecting portions of the said members.

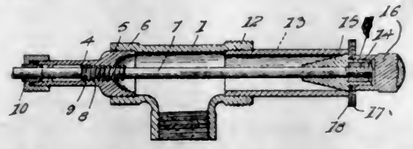
2. A fence comprising separately formed reinforced concrete posts having their reinforcements projecting from the tops thereof, said posts being also molded with recesses in their sides, separately formed reinforced concrete intermediate rail sections having their ends inserted in said recesses, and a monolithic top rail molded in contact with the tops of said posts and completely embedding the projecting portions of the post reinforcements.

3. The method of making a concrete fence which comprises casting posts separately and placing them in position, then setting up a mold extending lengthwise at the tops of the posts, and casting therein a monolithic top rail in contact with and uniting the posts.

4. The method of making a concrete fence which comprises casting posts separately with anchoring members projecting at their upper ends, erecting the posts, and casting a continuous top rail extending along the tops of the posts and embedding said anchoring members.

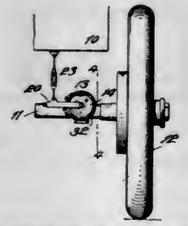
5. The method of making a concrete fence which comprises casting and erecting posts and intermediate rails, then setting up and supporting on said intermediate rails a mold extending lengthwise at the tops of the posts, and casting in said mold a continuous top rail in contact with and uniting the posts.

1,195,958. VALVE. MARTIN T. ASH, Shirley, W. Va., assignor of one-half to Tilman E. Ash, Ashley, Doddridge county, W. Va. Filed Feb. 20, 1915. Serial No. 9,620. (Cl. 137—27.)



A valve comprising a T-joint having one end adapted to be connected to a receptacle; a closure detachably connected to one end of the T-joint; a valve stem rotatably carried by said closure to extend through said T-joint; a length of pipe screw threadedly connected to said T-joint to extend into said liquid retaining receptacle; a collar removably secured to the inner end of said stem; a valve cone provided at its enlarged end with a sleeve fitted over said collar; the sleeve being exteriorly screw threaded; said valve cone tapering inwardly from the sleeve, and a washer fitted over said sleeve and one face engaging the face of the valve cone; a disk fitted over said sleeve, and engaging said washer; a nut screw threadedly fitted on said sleeve for holding said disk and washer into engagement with the base of the valve cone; the lower end of the sleeve forming a liquid tight joint at its point of engagement with the cone valve washer.

1,195,959. SHOCK-ABSORBER FOR MOTOR AND OTHER VEHICLES. WILLIAM BARDSLEY, Kearney, N. J. Filed June 19, 1915. Serial No. 34,983. (Cl. 21—105.)



1. In an automobile or other vehicle, in combination, a shock-absorber interposed between the axle and body thereof comprising a brake-drum, a brake-band thereon, a pivotally mounted two-armed lever connected at its ends with the ends of said band and one of the arms of said lever being longer than the other, and a crank-frame carrying said lever and adapted on the descent and ascent of said body to effect the rocking of said lever and a resultant differential binding of the band on said drum.

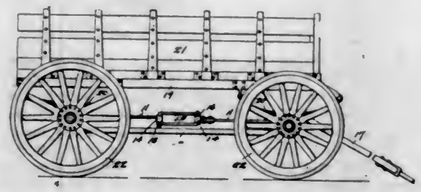
2. In an automobile or other vehicle, in combination, a shock-absorber interposed between the axle and body thereof comprising a brake-drum, a brake-band thereon, a pivotally mounted two-armed lever connected at its ends with the ends of said band and one of the arms of said lever being longer than the other, a crank-frame carrying said lever and adapted on the descent and ascent of said body to effect the rocking of said lever and a resultant differential binding of the band on said drum, and means carried by said frame for adjusting the relation of said lever and band to said drum.

3. In an automobile or other vehicle, in combination, a shock-absorber interposed between the axle and body thereof comprising a brake-drum, a brake-band thereon, a pivotally mounted two-armed lever connected at its ends with the ends of said band and one of the arms of said lever being longer than the other, and means adapted on the descent and ascent of said body to effect the rocking of said lever and a resultant differential binding of the band on said drum.

4. In an automobile or other vehicle, in combination, a shock-absorber interposed between the axle and body thereof comprising a brake-drum, a brake-band thereon, a pivotally mounted two-armed lever connected at its ends with the ends of said band and one of the arms of said lever being longer than the other, means adapted on the descent and ascent of said body to effect the rocking of said lever and a resultant differential binding of the band on said drum, and means for adjusting the relation of said lever and band to said drum.

5. In an automobile or other vehicle, in combination, a shock-absorber interposed between the axle and body thereof comprising a brake-drum, a brake-band thereon, a pivotally mounted two-armed lever connected at its ends with the ends of said band and one of the arms of said lever being longer than the other, a crank-frame carrying said lever and adapted on the descent and ascent of said body to effect the rocking of said lever and a resultant differential binding of the band on said drum, and means carried by said frame for adjusting the relation of said lever and band to said drum comprising a rod mounted in said frame on one end of which said lever is mounted and having a threaded end and nut to engage said frame.

1,195,960. TRAILMOBILE. CHARLES A. BEHLEN, Richmond, Va. Filed Dec. 28, 1915. Serial No. 69,027. (Cl. 21—137.)



1. The combination of two axles having forked ends; steering knuckles, each having a radial arm, a spindle and a standard, pivoted between the forked ends of the axles; tie rods pivotally connecting the radial arms; and two T-shaped levers each fulcrumed to an axle, pivoted to a tie rod, and the T ends flexibly connected by suitable means so the movements of one T lever will impart motion to the other lever.

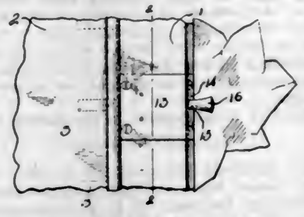
2. The combination of two axles having forked ends; steering knuckles, each having two radial arms, a spindle and a standard, pivoted between the forked ends of the axles; tie rods pivotally connecting the radial arms; and two T-shaped levers each fulcrumed to an axle, pivoted to two tie rods, and the T ends flexibly connected by suitable means.

3. The combination of two axles having forked ends; steering knuckles, each having a radial arm, a spindle and a standard, pivoted between the forked ends of the axles; tie rods pivotally connecting the radial arms; and two T-shaped levers each fulcrumed to an axle, pivoted to a tie rod, and the T ends connected by crossed rods or bars.

4. The combination of two axles having forked ends; steering knuckles, each having a radial arm, a spindle and a standard, pivoted between the forked ends of the axles; tie rods pivotally connecting the radial arms; and two T-shaped levers each fulcrumed to an axle, pivoted to a tie rod, and the T ends flexibly connected by suitable means; the axles being united by reaches located in a plane below the tops of the axles, and the T levers fulcrumed in a plane above the axles.

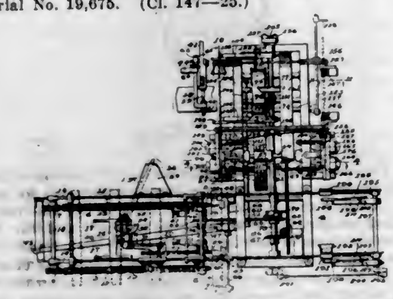
1,195,961. SASH-FASTENER. HENRY F. BENDER, Gunnison, Colo. Filed July 13, 1915. Serial No. 39,669. (Cl. 16—119.)

A window fastener, in combination with the side stile of the sash, said stile having a transverse groove formed therein, a seat engaged in said groove and having flanges carried by its side edges for engagement with the stile, one end of said seat being provided with a semi-annular flange, a plate attached to the stile for closing the groove, said plate having a flange for engaging the side of the stile, and having a perforation formed therein, a bolt slidable in the seat and perforation, said bolt having annular shoulders disposed in spaced relation, a coil spring encircling that portion of the bolt between the shoulders,



and having one end engaged with the semi-annular flange and the other end engaged with one of the shoulders, the other shoulder being adapted to engage the outer surface of the semi-annular flange said spring serving to hold the bolt in yielding engagement with the side of the window frame.

1,195,962. STAVE TONGUING AND GROOVING MACHINE. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 7, 1915. Serial No. 19,675. (Cl. 147—25.)



1. A machine of the character described comprising a cutter mechanism, a supply mechanism for feeding the staves to be cut to the machine, a support which receives the staves crosswise from said supply mechanism, a retaining device operating to prevent the staves from rebounding from said support comprising a rotary brush adapted to press the staves against said support, and a rotating arm carrying said brush, and means for transferring said staves endwise from said support to said cutter mechanism.

2. In a machine of the character described comprising means for propelling staves, and means reciprocable perpendicular to the direction of movement of said staves while on said propelling means and rotatable in a plane parallel therewith for disengaging the staves from said propelling means, reversing the staves end for end and reëngaging the same with said propelling means.

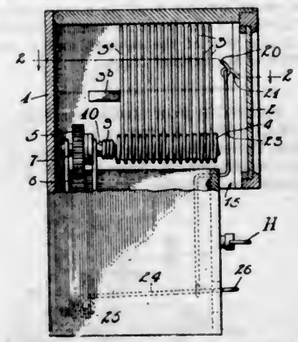
3. In a machine of the character described comprising means for propelling staves, and means for disengaging the staves from said propelling means, reversing the staves end for end and reëngaging the same with that part of the propelling means from which the staves had been disengaged.

4. In a machine of the character described comprising means for propelling staves, and means for disengaging the staves from said propelling means, reversing the staves end for end and reëngaging the same with said propelling means, comprising a carrier movable perpendicular to the line of movement of said propelling means for lifting a stave from said carrier and re-depositing the same thereon, and means for turning said carrier in a plane parallel with the plane of movement of said propelling means.

5. In a machine of the character described comprising means for propelling staves, and means for disengaging the staves from said propelling means, reversing the staves end for end and reëngaging the same with said propelling means comprising a carrier movable perpendicular to the line of movement of said propelling means for lifting a stave from said carrier and re-depositing the same thereon, and means for turning said carrier forwardly in a plane parallel with the direction of movement of said propelling means while the stave is lifted from the latter and backwardly in the same plane after the stave has been re-deposited on said propelling means.

[Claims 6 to 23 not printed in the Gazette.]

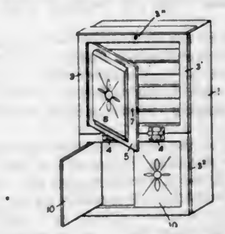
1,195,963. CARD-DELIVERING DEVICE FOR VENDING-MACHINES. EDWARD V. BODDY, Artesia, N. Mex. Filed May 3, 1915. Serial No. 25,572. (Cl. 211—8.)



1. In combination, means for intermittently advancing a series of upright cards toward an outlet opening, a rod into contact with which the cards are fed, crank means supporting said rod, manually operable connections leading from said crank means, and a spring for returning said rod to normal position.

2. In combination, means for intermittently advancing a series of upright cards toward an outlet opening, a rod into contact with which the cards are fed, crank means supporting said rod, a link extending from said crank means, a manually operable arm connected to said link, and a spring returning the crank means and the arm to normal position.

1,195,964. COMBINED CABINET AND TABLE. SAMUEL S. BRADLEY, New York, N. Y. Filed Sept. 25, 1913. Serial No. 791,768. (Cl. 45—51.)



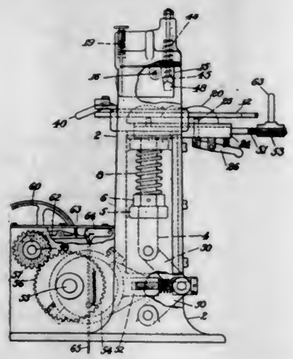
1. A cabinet having a front hinged to open to a horizontal position for use as a table, said front having a portion hinged to open laterally to give access to the interior when the front is closed, and another portion hinged to said last-named portion and adapted for use as a raised panel when in inoperative position, but which may be lowered as a support for the entire front when the latter is in horizontal position.

2. A cabinet with a door hinged to open from the top, and another door connected to the first door and hinged to open laterally, said last-named door having a raised panel hinged to its face to act as a support for the first-named door when in lowered position.

3. A cabinet having a front transversely divided into an upper and lower portion, the upper portion being hinged to open to a horizontal position for use as a table, and also having a door hinged to open laterally to give access to the interior when the upper portion of the front is closed, a panel hinged to said door to act as a support for the upper portion of the cabinet when in lowered position, means connected with the lower portion of the front for turning the whole front laterally to one side of the cabinet, and a door in said lower portion of the cabinet front.

4. A cabinet having a front transversely divided into an upper and lower portion, the upper portion being hinged to open to a horizontal position for use as a table, a raised panel hinged to said upper portion to act as a support therefor when in lowered position, means connected with the lower portion of the front for turning the whole front laterally to one side of the cabinet, and a door in said lower portion of the cabinet front.

1,195,965. MACHINE FOR MOLDING TOE PORTIONS OF SHOE-UPPERS. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 1, 1911. Serial No. 663,393. (Cl. 12—97.)



1. A machine of the class described having, in combination, means for clamping the margin of the forepart of a shoe vamp, a toe former arranged to be forced against the vamp to stretch it, and means for humping the toe part of the vamp while the vamp is being positioned to be clamped.

2. A machine of the class described having, in combination, means for clamping the margin of the forepart of a shoe vamp, and a toe former arranged to be forced against the vamp to stretch it, said machine having provision for preliminarily humping the toe part of the vamp before it is clamped.

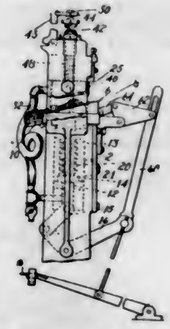
3. A machine of the class described having, in combination, means for clamping the margin of the forepart of a shoe vamp, and a toe former arranged to be forced against the vamp to stretch it, said machine having provision for supporting the toe former normally in a position partially projected into the clamp to cause the vamp to be humped over said former before the margin of the vamp is clamped.

4. A machine of the class described having, in combination, an open plate and a coöperating member adapted to clamp the margin of the forepart of a shoe vamp, a toe former normally occupying a position projected partially through the open plate to cause the vamp to be humped over said former when it is clamped, and means for operating the clamping members and the former relatively to project the former farther through the plate for stretching the vamp.

5. A machine of the class described having, in combination, a cross-head, an open clamp shaped to the contour of the forepart of a vamp, a plunger, a toe former mounted on the plunger, an open clamping plate yieldingly supported on the plunger and embracing the former, and means for operating the plunger to cause a vamp spread over the toe former to be clamped marginally against the upper clamping member and then to be stretched by the continued movement of the plunger and former while the plate yields.

[Claims 6 to 70 not printed in the Gazette.]

1,195,966. METHOD OF MAKING SHOES. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 14, 1915. Serial No. 50,630. (Cl. 12—142.)



1. The improvement in methods of making shoes which includes, as preliminary steps preparatory to lasting, confining the margin of the forepart of the vamp, effecting relative movement of the confined and the unconfined portions of said forepart in a direction transverse to the plane of the confined portion to stretch the unconfined portion and shape it to a forepart form, allowing the vamp to set until it acquires the shape of the form, and then shaping the confined marginal portion into an upstanding edge by drawing it out of the confining means against frictional resistance; and subsequently assembling the shoe upper and an innersole upon a last and then stretching and shaping to the last those portions of the upper not shaped in the preliminary operation and folding the upstanding edge inwardly over the last bottom.

2. That improvement in methods of making shoes which consists in confining the margin of the forepart of the vamp and shaping the vamp locally over the high part of the toe by pressing it at that point away from the plane of the confined portion of the margin and continuing the pressure to force other parts of the unconfined portions away from said plane and shape them to other portions of the top face of a forepart form, and finally drawing out the confined portion to form an upstanding edge.

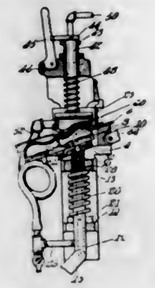
3. That improvement in methods of preparing shoe uppers for lasting which consists in molding the interior portion of the forepart of the vamp to the contour of a forepart form while holding the margin of the vamp and then shaping the marginal portion of the forepart of the vamp into an edge standing in suitable relation to the molded portion to be conveniently inserted into the grippers of a pulling-over machine.

4. That improvement in methods of preparing shoe uppers for lasting which consists in molding the interior portion of the forepart of the vamp to the contour of a forepart form while holding the margin of the vamp and then stretching the marginal portion of the forepart of the vamp widthwise substantially throughout its width.

5. That improvement in methods of preparing shoe uppers for lasting which consists in molding the interior portion of the forepart of the vamp to the contour of a forepart form while holding the margin of the vamp and then shortening the outer edge line of the marginal portion of the forepart around the toe to produce an upstanding edge.

[Claims 6 to 21 not printed in the Gazette.]

1,195,967. PRELIMINARY FORMER FOR FOREPARTS OF SHOE-UPPERS. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 10, 1912. Serial No. 714,452. (Cl. 12—97.)



1. A machine of the class described having, in combination, means for confining the margin of the forepart of a shoe vamp, a forepart former arranged to engage the unconfined portion of the vamp to stretch it, and means to apply moisture to the side of the vamp which is toward the former.

2. A machine of the class described having, in combination, means for confining the margin of the forepart of a shoe vamp, a forepart former arranged to engage the unconfined portion of the vamp to stretch it, and means to apply heat and moisture to the vamp through said former.

3. A machine of the class described having, in combination, means for confining the margin of the forepart of a shoe vamp, and a forepart former arranged to engage the unconfined portion of the vamp to stretch it, said former being constructed and arranged to conduct steam to and distribute it over the surface of the work engaged by the former.

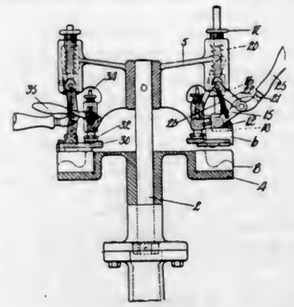
4. A machine of the class described having, in combination, means for confining the margin of the forepart of a shoe vamp, and a forepart former arranged to engage the unconfined portion of the vamp to stretch it, said former having a steam chamber and a multitude of perforations through its work engaging face, and means arranged to deliver steam through said former to heat the former and moisten the stock.

5. A machine of the class described having, in combination, means for confining the margin of the forepart of a shoe vamp, a forepart former arranged to engage the unconfined portion of the vamp to stretch it, and means operating automatically when the former is forced against the stock to apply moisture to the stock.

[Claims 6 to 90 not printed in the Gazette.]

1,195,968. MACHINE FOR FORMING THE TOES OF THE VAMPS OF BOOTS AND SHOES. JOHN H. CONNOR, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 26, 1912. Serial No. 727,909. (Cl. 12—97.)

1. In a machine for shaping the toes of boot and shoe vamps preparatory to lasting the said toes, a work support having an aperture to be overlaid by the toe of the vamp, said aperture extending through the rear end of the work support opposite the end overlaid by the tip of the toe, a device to clamp the marginal portion of the vamp around the sides and tip end only of the toe upon the work support, means for operating the clamping device to hold the vamp at the end and sides of the toe, a toe former, and means to operate the toe former to bulge the unconfined portion of the vamp into the aperture in the work support for partially forming the toe and then to draw out a portion of the confined margin at the end and sides of the toe from under the clamp and simultaneously stretch it for completing the formation of the toe.



2. In a machine for shaping the toes of boot and shoe vamps preparatory to lasting the said toes, a work support having an aperture to be overlaid by the toe of the vamp, a device to clamp the marginal portion of the vamp around the toe upon the work support, means for operating the clamping device to hold the vamp frictionally, a toe forming die, a plunger on which the die is mounted, a bearing in which the plunger can slide, a sleeve on the plunger, a spring confined between the sleeve and the bearing, and a toggle the members of which are connected with the sleeve and with the plunger respectively and one member of which is extended to form a hand lever by which the forming die can be yieldingly depressed to bulge the unconfined portion of the vamp into the aperture in the work support.

3. In a machine for shaping the toes of boot and shoe vamps preparatory to lasting the said toes, a work support having an aperture to be overlaid by the toe of the vamp; a clamp shaped to grip the margin of the toe upon the work support, a stem on which the clamp is removably attached, a bearing into which the stem extends, a collar on the stem, a stiff spring confined between the collar and the upper portion of the bearing, a lever fulcrumed to the bearing and having a cam slot, and a stud projecting from the stem through a slot in the bearing and into the cam slot whereby the clamp is raised by the lever and is depressed by the lever and the spring; a toe forming die located within the clamp and over the aperture in the work support, and means to operate said die to bulge into said aperture the portion of the vamp that is unconfined by the clamp and then finally to draw from under the clamp a portion of the vamp margin held by the clamp.

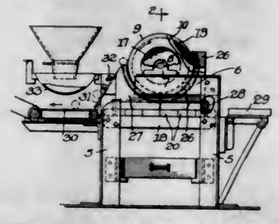
4. In a machine for shaping the toes of boot and shoe vamps preparatory to lasting the said toes, a work support having an aperture to be overlaid by the toe of the vamp; a clamping device shaped to grip the margin of the toe upon the work support, a toe former, and means to actuate the former to bulge the unconfined portion of the vamp into the aperture in the work support to stretch and shape the vamp and to draw out a portion of the margin from under the clamp; said clamping device comprising a plurality of sections and separately adjustable yielding mountings for said sections permitting the clamping pressure upon the various portions of the vamp margin to be relatively adjusted and allowing the toe former to take more stock from one portion of the margin than from another.

5. In a machine for shaping the toes of boot and shoe vamps preparatory to lasting the said toes, a work support having an aperture to be overlaid by the toe of the vamp; a clamping device shaped to grip the margin of the

toe upon the work support, a toe forming die, and means to actuate the forming die to bulge the unconfined portion of the vamp into the aperture in the work support to stretch and shape the vamp and to draw out a portion of the margin from under the clamp, said clamping device comprising toe end, toe corner and toe side sections each of which is provided with a separate and independently adjsutable spring sustaining means by which the relative forces against which the end, corner and sides of the vamp margin are drawn out by the toe forming die can be regulated.

[Claims 6 to 27 not printed in the Gazette.]

1,195,969. DOUGH-MOLDING MACHINE. JACOB BRODSKY and MAX BRODSKY, Chicago, Ill. Filed Apr. 30, 1915. Serial No. 25,088. (Cl. 107—9.)



1. A machine for the molding of dough, comprising a frame, a grooved rotatable wheel carried thereby, and separable stationary parts adapted for coöperation with said wheel and provided with surfaces corresponding to the periphery of said wheel, said frame having a groove parallel to a line tangent to said rotatable wheel, said stationary parts having base portions fitting into said groove, thus permitting said stationary parts to be slid into place in opposite directions beneath said wheel without disturbing the same.

2. The combination of a machine for molding dough comprising a frame, a shaft, a plurality of circular members on said shaft having different peripheries, a plurality of separable segmental parts coöperating with said members for effecting the molding operation, said frame having grooves parallel to a line tangent to said members, said segmental parts having base portions of the same conformation as said grooves thus permitting said segmental parts to be slid into position in opposite directions beneath said members without disturbing the same.

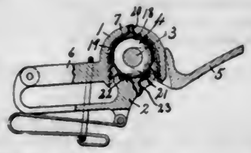
3. A machine for molding dough, comprising a frame having a groove, a rotatable circular member, said groove being parallel to a line tangent to said member, and a pair of stationary members held in said groove adjacent to said rotatable member having surfaces corresponding to a periphery of said circular member, said stationary members adapted to be slid into said groove in opposite directions so that their point of contact is beneath but away from the rotatable member.

4. A machine for molding dough comprising a frame having a groove, a rotatable circular member, said groove being parallel to a line tangent to said member, stationary segmental members held in said groove adjacent to said rotatable member and having surfaces corresponding to the periphery of said circular member, said stationary members being adapted to be slid into said groove in opposite directions so that their point of meeting is beneath but not engaging said circular member.

5. A machine for molding dough comprising a frame having a groove, a rotatable circular member, said groove being parallel to a line tangent to said member, stationary segmental members held in said groove adjacent to said rotatable member, and having surfaces corresponding to the periphery of said circular member, said stationary members adapted to be slid into said groove in opposite directions so that their point of meeting is beneath but not engaging said circular member and devices for maintaining said stationary members in such position.

[Claims 6 to 9 not printed in the Gazette.]

1,195,970. THILL-COUPLING. ALBERT E. BROWN, Poolville, N. Y. Filed Dec. 18, 1912. Serial No. 737,442. (Cl. 21—57.)

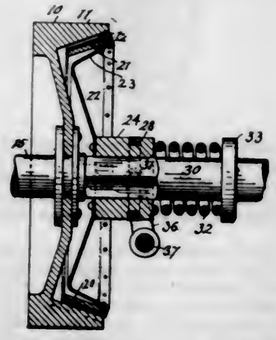


1. A packing for thill couplings comprising a fibrous body and a metal reinforcement incorporated therein.

2. A packing for thill couplings comprising a fibrous body and a woven wire reinforcement incorporated therein.

3. A packing for thill couplings comprising a fibrous body and a woven wire reinforcement incorporated therein, and having a portion thereof attached to the coupling.

1,195,971. CONE-COUPLING. ALANSON P. BRUSH, Detroit, Mich. Filed Apr. 8, 1915. Serial No. 19,859. (Cl. 192—8.)



1. In a cone coupling, the combination of two relatively rotatable parts, viz., a wheel having an annular flange the inner surface of which is in the form of a symmetrical warped cone, and a flexible cone ring lying within said flange, and means for causing said cone ring to be pressed into contact with the inner distorted conical surface of said flange.

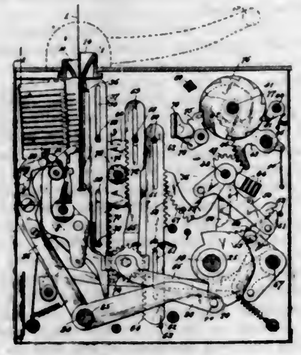
2. In a cone coupling, the combination of a wheel having an annular flange whose inner surface is in the form of a symmetrically warped cone, a flexible cone ring lying within said flange and being held unsupported except adjacent to its edge of largest diameter, a second wheel which is axially disposed with respect to the flanged wheel and is rotatable independently thereof and which enters and contacts and is rigidly connected with said cone ring adjacent the large diameter edge thereof.

1,195,972. RECORDER. JAMES WARES BRYCE, Bloomfield, N. J., assignor to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed July 19, 1911. Serial No. 639,297. (Cl. 234—43.)

1. In a time recorder adapted for use with removable cards and provided with a card slot or receptacle, a positioning finger adapted to move the card laterally and longitudinally of the card slot to cause it to register accurately in place with the end and side of the card slot.

2. In a time recorder adapted for use with removable cards and provided with a card slot or receptacle, a yielding positioning finger adapted to move the card laterally and longitudinally of the card slot to cause it to register accurately in place with the end and side of the card slot.

3. In a time recorder the combination of a removable card provided with a positioning hole, and a positioning finger adapted to enter such hole when the card is inserted in the recorder and to move the card laterally and longitudinally of the card slot to cause it to register accurately in place.

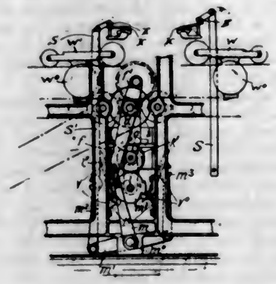


4. In a time recorder the combination of a removable card provided with a positioning hole located upon the card so that when the card is placed in position in the recorder the hole will be near the device in the recorder with which a part of the card is to co-act and a yielding positioning finger adapted to coact with the positioning hole to move the card laterally and longitudinally to bring it into accurate register in the recorder.

5. In a time recorder the combination of a removable card provided with a rounded or curved positioning hole located upon the card in such a place that when the card is in position in the recorder the hole will be near to that part of the recorder adapted to co-act with a part of the card, and a yielding positioning finger adapted to coact with the positioning hole and movable in two directions when co-acting with said hole, the positioning device being rounded or curved and relatively smaller than the positioning hole.

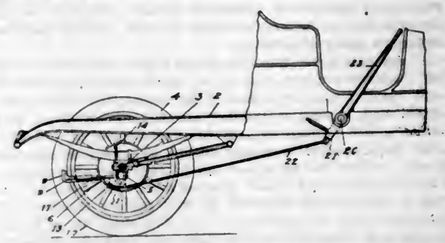
[Claims 6 to 13 not printed in the Gazette.]

1,195,973. EMBROIDERY-MACHINE. HANS BÜCHLER, Zurich, Switzerland. Filed Aug. 17, 1910, Serial No. 577,715. Renewed May 22, 1916. Serial No. 99,238. (Cl. 112—7.)



An embroidering machine comprising in combination, treadle mechanism, incoming and outgoing carriages, traverses upon said carriages, a friction disk having notches in its periphery and operatively connected with said treadle mechanism, pawls engaging said notches to check said mechanism, and means actuated or carried by the carriages for disengaging said pawls on the entering movement of the carriages, substantially as described.

1,195,974. SKID-STOP. ROBERT A. CAMPBELL, Minneapolis, Minn. Filed Nov. 14, 1912. Serial No. 731,298. (Cl. 21—8.)



1. The combination, with an axle and wheels, of a skid stop device movable to and from the road-way in a plane substantially parallel with the path of travel of the vehicle and capable of movement laterally into and out of engagement with a wheel.

2. The combination, with an axle and wheels therefor, of a skid stop device movable to and from the road-way in a plane substantially parallel with the path of travel of the vehicle and also capable of movement laterally into and out of engagement with a wheel and having a lower cutting edge to engage the road-way and inclined inwardly with respect to the plane of the wheel when in contact therewith.

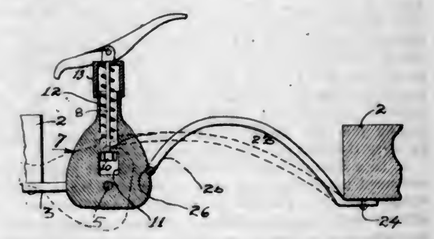
3. The combination, with an axle and wheels therefor, of a skid-stop device comprising a shoe having a shank pivotally connected with said axle and adapted to swing lengthwise of said axle from one side of its pivotal connection to the other side thereof, said shoe on the outer side of its pivotal connection contacting with the wheel tire and having a lower edge to dig into the road-way, and means for yieldingly holding said shoe in contact with said tire and road-way.

4. The combination, with an axle and wheels therefor, having pneumatic tires, of a skid stop device including pivoted shanks and shoes having surfaces to contact with the ground or pavement, said shoes having yielding connections with said shanks, means for directing said shanks and shoes outwardly to an operative position and into contact with said tires, and means for operating said shanks simultaneously.

5. The combination, with an axle and wheels therefor having pneumatic tires, of shanks having ball and socket bearings on said axle, shoes to contact with the ground or pavement, means for swinging said shanks and shoes from a normal horizontal position to a substantially upright or vertical position, and means for directing said shanks outwardly during such swinging movement.

[Claims 6 to 8 not printed in the Gazette.]

1,195,975. AUTOMATIC TRAIN-STOP. MELVIN A. CARMICHAEL, Everett, Wash. Filed Nov. 21, 1914. Serial No. 873,349. (Cl. 246—59.)



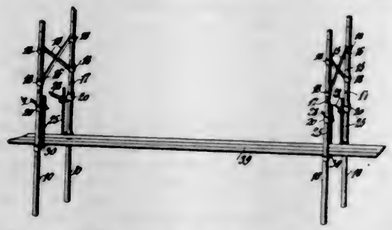
1. An automatic trip for train stops comprising bearing members secured to a tie, a crank shaft journaled in said bearing members, means for connecting said crank shaft to a signal, a tubular member mounted on said

shaft, a rod slidably mounted in said tubular member, means carried by said rod for engaging a valve of a train line, means for normally holding said rod in its outermost position, a U-shaped spring secured to a tie and adapted to engage the side of said tubular member to form a shock absorber.

2. An automatic trip for train stops comprising bearing members secured to a tie, a crank shaft journaled in said bearing members, means for connecting said crank shaft to a signal, a tubular member mounted on said shaft, a web formed in said tubular member, a rod slidable through said web and within the tubular member, a nut secured to the lower end of said rod and adapted to abut said web to limit the outward movement of the rod, a cap slidably mounted on said tubular member and provided with an aperture to receive the rod, a spring interposed between the cap and said web to normally hold said rod in its outermost position, means carried by said rod for engaging a valve of a train line, and means for absorbing the shock to said tubular member when engaged by a train.

3. An automatic trip for train stops comprising bearing members secured to a tie, a crank shaft journaled in said bearing members, means connecting said crank shaft to a signal, a tubular member mounted on said shaft, a rod slidably mounted in said tubular member, means for holding said rod in its outermost position, means for limiting the outward movement of said rod, a trip member pivoted to the upper end of said rod, said trip member provided with an enlarged portion adjacent its pivoted point, the free ends of the trip member being curved downwardly to form a curved upper edge to engage a valve of a train line and means for absorbing the shock to the tubular member when the said member is engaged by a train.

1,195,976. SCAFFOLDING DEVICE. DENISON P. CHESEBRO, New Rochelle, N. Y., assignor to American Safety Device Company, a Corporation of New York. Filed June 6, 1914. Serial No. 843,384. (Cl. 20—81.5.)

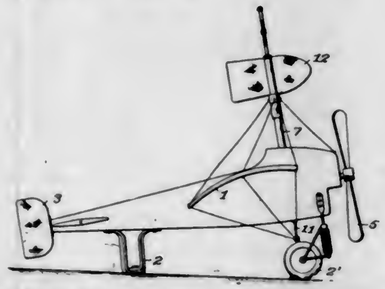


1. In a scaffolding device having adjacent pairs of posts arranged parallel to the wall of the building, a platform supporting unit adapted to be raised and lowered, comprising lower slidable sleeves, adapted to engage each of said posts, a cross-bar pivotally connected at its ends to the said lower slidable sleeves, upper slidable sleeves adapted to engage each of said posts, means for securing said sleeves at fixed points on the said sleeves, laterally extending flanges on the said upper slidable sleeves, provided with openings therethrough, threaded spindles pivotally secured at each side of said cross-rods, and extending upwardly through the said flanges of the upper slidable sleeves, and independently operable means engaging the said spindles above the said flanges adapted to move the said spindles through the said flanges.

2. In a scaffolding device having adjacent pairs of posts arranged parallel to the wall of the building, a platform supporting unit adapted to be raised and lowered, comprising lower slidable sleeves, adapted to engage each of said posts, a cross-bar pivotally connected at its ends to the said lower slidable sleeves, upper slidable sleeves adapted to engage each of said posts, means for securing said sleeves at fixed points on the said sleeves, laterally extending flanges on the said upper slidable sleeves, provided with openings therethrough, threaded spindles pivotally secured at each side of said cross-rods, and extending upwardly through the said flanges of the upper slidable sleeves, independently operable means engaging the said spindles above the said flanges adapted to move the said spindles through the said flanges, and a supporting device connected with the cross-bar, and adapted to engage one of the posts.

3. In a scaffolding device having adjacent pairs of posts arranged parallel to the wall of the building, one of said posts being provided with a series of holes therein, a platform supporting unit adapted to be raised and lowered, comprising lower slidable sleeves, adapted to engage each of said posts, a cross-bar pivotally connected at its ends to the said lower slidable sleeves, upper slidable sleeves adapted to engage each of said posts, means for securing said sleeves at fixed points on the said posts, laterally extending flanges on the said upper slidable sleeves, provided with openings therethrough, threaded spindles pivotally secured at each side of the said cross-rods, and extending upwardly through the said flanges of the upper slidable sleeves, independently operable means engaging the said spindles above the said flanges, adapted to move the said spindles through the said flanges, and a pivotally mounted weighted supporting device at one side of said cross-bar, adapted to automatically engage and be disengaged from the said openings of the post as the platform supporting unit is raised.

1,195,977. STABILIZER FOR AEROPLANES. MERRILL E. CLARK, New York, N. Y. Filed Feb. 18, 1914. Serial No. 819,356. (Cl. 244—29.)



1. In an aeroplane, a hollow mast extending perpendicularly upward above the frame work, a vane fixed to said mast, normally disposed in the axis of the line of flight of the machine, a collapsible vane adapted to lie, when distended, in a plane at right angles to the plane of the first vane, means carried within said mast for controlling the distention of said collapsible vane, and means for rotating said mast.

2. In an aeroplane, a vane normally disposed in the plane of the line of flight, a rotatable hollow mast to which said vane is fixed, a movable member within said mast, a second vane secured to said movable member and disposed at right angles to said first vane, means for admitting pressure fluid on opposite sides of said member to control the position of said second vane, a cylinder, a piston within said cylinder having a connection with said mast, and means, responsive to sidewise tipping of the machine, for admitting pressure fluid on opposite side of said piston to rotate said mast.

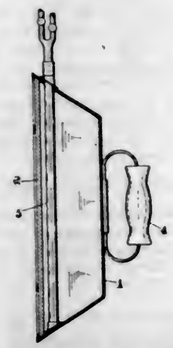
3. In an aeroplane, a pair of stabilizing vanes normally disposed in planes intersecting at right angles, automatic means for changing the angular disposition of one of said vanes with respect to the line of flight of the machine, and fluid pressure operated means for collapsing and distending the other vane.

4. In an aeroplane, a collapsible vane, a double-acting pressure operated device for causing the collapse and the distention of said vane, a valve controlling the operation

of said device, and a second valve supplementing the action of said first valve, for varying the amount of distention of said vane.

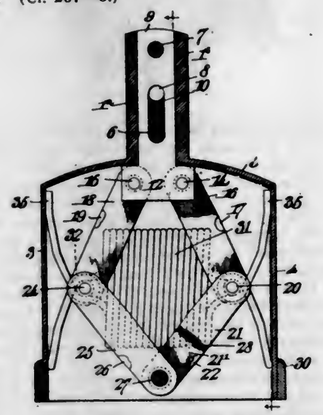
5. In an aeroplane, a collapsible vane, a double-acting pressure operated device for causing the collapse and distention of said vane, means for producing a preponderance of pressure on either side of said device to effect the complete collapse or the complete distention of said vane, and means for equalizing the pressure on opposite sides of said device when said vane is partially collapsed.

1,195,978. PROCESS OF COATING WALLS AND OTHER SURFACES. HARRY F. CLAYTON, Toronto, Ontario, Canada. Filed Nov. 5, 1915. Serial No. 59,799. (Cl. 91—72.)



A process of coating surfaces *in situ* which consists in forming thereon a coating of a finely divided fusible mineral and thereafter fusing said coating by the action of radiant heat applied briefly and progressively to the different parts of the surface from a portable source of relatively small area.

1,195,979. SHOCK-ABSORBER. AUGUSTE DACCORD, Philadelphia, Pa. Filed Mar. 28, 1916. Serial No. 87,162. (Cl. 267—3.)



1. In a device of the character described, a housing, a plunger therein, links between the housing and plunger adapted to spread apart, and means pivotally connected with said links and frictionally engaging the housing to resist and retard such spreading apart action of the links.

2. In a device of the character described, a housing, a plunger therein, links between the housing and plunger adapted to spread apart, and springs pivotally connected with said links and frictionally and slidingly engaging said housing to resist and retard the spreading apart action of the links.

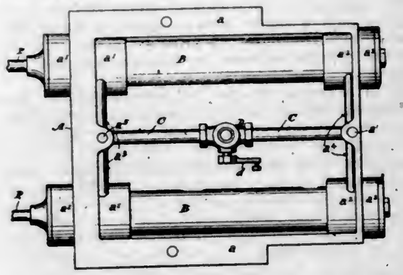
3. In a device of the character described, a housing, a plunger therein, links between the housing and plunger adapted to spread apart, and springs pivotally connected with said links and having their opposite end portions slidingly engaged with the housing to resist and retard the spreading apart action of the links.

4. In a device of the character described, a housing, a plunger therein, links between the housing and plunger adapted to spread apart, tension means between said links resisting spreading apart of the links, and springs pivotally connected with said links and frictionally and slidingly engaging said housing to resist and retard spreading apart of the links.

5. In a device of the character described, a housing, a plunger therein, links between the housing and plunger adapted to spread apart, a coil spring between said links and having its opposite ends connected therewith to resist spreading apart of the links, and springs pivotally connected with said links and arranged between said links and housing and having their opposite end portions bent toward and engaging the housing, said engaging end portions having frictional sliding engagement with the housing in a line substantially at right angles to the line of spreading action of said links.

[Claims 6 to 8 not printed in the Gazette.]

1,195,980. MOTOR. JOHN E. DAVIS, Cincinnati, Ohio. Filed May 4, 1916. Serial No. 95,407. (Cl. 121—29.)



1. In a reciprocating motor, in combination with a containing frame having parallel front and rear walls provided with opposite bosses cylindrically hollow in the same axial line, a hollow cylinder seated at its ends in said bosses, and removable plugs seated in the bosses bearing inwardly against and forming the end closures of the cylinder.

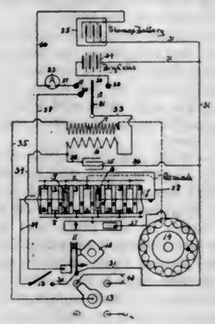
2. In a reciprocating motor of the character indicated, in combination with the containing frame with hollow bosses, said frame having passages formed therein extending into the hollow of the bosses; and plug closures of the bosses formed with corresponding passages extending to the interior of the cylinder.

3. The combination of a covering frame having front and rear walls provided with hollow bosses; connecting passages formed in the frame walls, extending through the shells of the bosses; a cylinder shell seated at its ends in the opposite bosses between the front and rear walls of the frame; screw plugs entering the bosses from the outer end, provided with extension passages and bearing at each end, respectively, of the cylinder shell; and a centrally arranged operating valve connected at each side with the frame passages.

1,195,981. ELECTRIC DISTRIBUTION WITH LOW-TENSION MAGNETOS. VICTOR DES ROCHES, Fond du Lac, Wis. Filed Feb. 14, 1916. Serial No. 78,310. (Cl. 123—148.)

1. In a system of electric distribution for internal combustion engines, the combination of a commutating recti-

fier mechanically connected to the engine and having two series of wide conductor bars separated by narrow insulated bars, a low tension magneto mechanically connected to the engine, electric circuits connecting the magneto and rectifier so that the alternating current from the magneto is rectified into a pulsating direct current, and a storage battery electrically connected to the rectifier.



2. In a system of electric distribution for internal combustion engines, the combination of a commutating rectifier mechanically connected to the engine and provided with two sets of interposed segments and insulating bars separating said segments, a low tension magneto mechanically connected to the engine, a storage battery, a pair of brushes each in contact with a segment of one of said sets and electrically connected to said storage battery, and electric circuits between the magneto and said sets of segments.

3. In a system of electrical distribution for internal combustion engines, the combination of a commutating rectifier mechanically connected to the engine and having two series of wide conductor bars separated by narrow insulated bars, a low tension magneto mechanically connected to the engine, electric circuits connecting the magneto and rectifier so that the alternating current from the magneto is rectified into a pulsating direct current, a storage battery electrically connected to the rectifier, a switch, and electric circuits between the rectifier and the storage battery adapted to be closed by said switch.

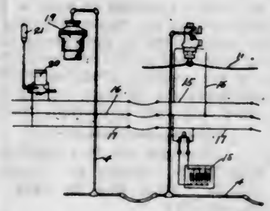
4. In a system of electric distribution with low tension magnetos, the combination with an explosion engine, and a low tension magneto, of a commutating rectifier, suitable for charging a storage battery, said battery being connected to said rectifier by a switch,—closed when ignition is turned on, opened,—when ignition is turned off; and by a second switch,—open when spark is fully retarded, closed,—when spark is advanced; thereby dispensing with any automatic cutout between rectifier and battery herein as described.

5. In a system of electric distribution for internal combustion engines, the combination of a low tension magneto mechanically connected to the engine, a rectifying commutator mechanically connected to the engine to rectify the alternating current from the magneto into a pulsating direct current suitable for charging a storage battery, a breaker-box, a secondary distributer, and a non-vibrating induction coil connected to said secondary distributer.

[Claims 6 and 7 not printed in the Gazette.]

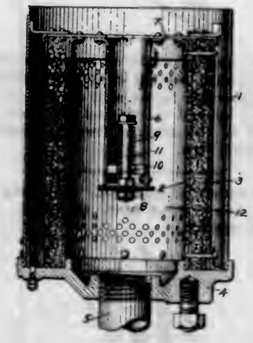
1,195,982. SIGNAL DEVICE. PATRICK H. DONOVAN, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Aug. 21, 1913. Serial No. 785,876. (Cl. 246—28.)

1. In a train signal system, the combination with a train signal pipe, a fluid-pressure-controlled signal valve device located on one vehicle of a train, a discharge valve device located on another vehicle and adapted to vent fluid from said signal valve device through the train signal pipe, of electric contacts operated by the movement of the discharge valve device for controlling an electric signal circuit.



2. In a train signal system, the combination with a train signal pipe, a fluid-pressure-controlled signal-valve device located on one vehicle of a train, a discharge valve device located on another vehicle and adapted to vent fluid from said signal valve device through the train signal pipe, of electric train wires adapted to be connected to an electric signal system and electric contacts operated by the movement of the discharge valve device for controlling the circuit through said train wires.

1,195,983. AIR-STRAINER. CLYDE C. FARMER, Chicago, Ill., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1915. Serial No. 51,829. (Cl. 98—48.)



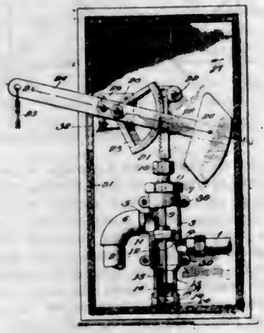
1. The combination with a fluid strainer for fluid compressors, of a by-pass for supplying fluid to the compressor in case the strainer becomes clogged.

2. The combination with a fluid strainer for a fluid compressor having a filter material through which fluid normally passes, of a valve adapted to be opened by the action of the compressor suction for supplying fluid to the compressor when the filter material becomes clogged.

3. The combination with a fluid strainer for a fluid compressor having a filter material through which fluid is normally supplied to the suction intake of the compressor, of a valve opened by atmospheric pressure under a partial vacuum created by the suction of the pump for supplying fluid to the compressor when the strainer becomes clogged.

4. The combination with a fluid strainer for a fluid compressor comprising a casing having a chamber connected to the suction intake of the compressor and means containing filter material for purifying fluid passing from the atmosphere to said chamber, of a tubular member extending into said chamber and a valve in said member subject on one side to atmospheric pressure and on the opposite side to the pressure in said chamber and adapted to be opened by atmospheric pressure during the suction stroke of the compressor when the filter material becomes clogged.

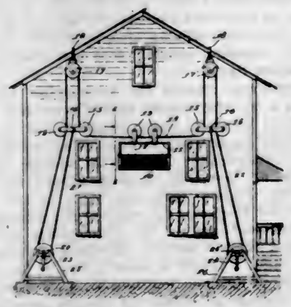
1,195,984. FLUSHING-VALVE. ALEXANDER FELEKI, New York, N. Y. Filed Apr. 19, 1915. Serial No. 22,412. (Cl. 137—93.)



1. In a device for the purpose set forth, the combination of a casing provided with an inlet and an outlet and an internal valve seat between the inlet and the outlet, the lower portion of said casing being reduced, a piston rod disposed axially in the casing and extending through the upper end thereof, a valve on said rod adapted to engage said valve seat, a retarding piston on the lower end of said rod playing in the reduced lower portion of the casing, a rack bar rigid with the upper end of the piston rod, a lever fulcrumed intermediate its ends at one side of the piston rod, and a segmental gear meshing with the rack bar and fixed to the lever with its pivot concentric with the fulcrum of the lever, the lever extending beyond the rack bar and being provided at its inner end with a counterbalance and at its outer end with an operating medium.

2. In a device for the purpose set forth, the combination of a wall plate, a casing secured thereto and having an inlet and an outlet, a piston rod disposed within the casing and extending through the upper end thereof, a valve carried by said rod and seating within the casing between the inlet and the outlet, a retarding piston carried by the lower end of said rod and playing in the lower end of the casing, a bracket secured to the wall plate above the casing, a lever fulcrumed upon said bracket and extending past the piston rod, a gear pivoted upon said bracket coincident with the fulcrum of the lever and movable with the lever, and operative connections between said gear and the piston rod.

1,195,985. FIRE-ESCAPE. JACOB W. GRANT, Hanlin Station, Pa. Filed May 26, 1915. Serial No. 30,591. (Cl. 227—12.)

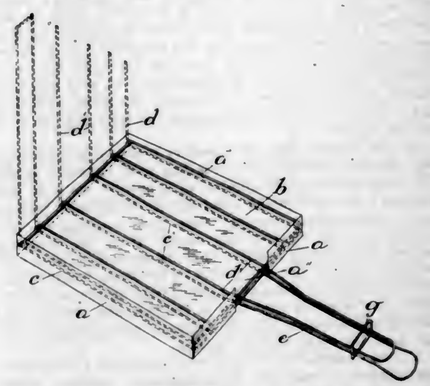


1. An apparatus of the character described comprising pulley blocks, inner and outer rollers carried by said pulley blocks, suspending means, pulleys carried by said suspending means, rotatably mounted drums, a cable extending between said pulley block and passed around the inner rollers carried thereby and being then carried upwardly around the pulleys carried by said suspending means and having its end portions carried downwardly in engagement with the outer rollers of said pulley blocks and being then wound upon said drums with its end portions connected with said pulley blocks whereby said pulley blocks may be raised and lowered by rotating said drums, and a carriage slidably mounted upon said cable between said pulley blocks.

2. A cable, a carrying member slidably mounted upon said cable, suspending means, pulleys carried by said suspending means and engaging said cable, pulley blocks slidably mounted upon said cable upon the inner and outer flights thereof, and rotatably mounted drums, the end portions of said cable being wound upon said drums and being then connected with said pulley blocks.

3. An apparatus of the character described comprising rotatably mounted drums, a cable wound upon said drums, pulley blocks connected with the ends of said cable, the outer ends of said pulley blocks being slidably connected with said cable, suspending means positioned above said pulley blocks and engaging said cable, the intermediate portion of said cable being slidably connected with the inner ends of said pulley blocks, and carrying means slidably mounted upon the intermediate section of said cable between said pulley blocks.

1,195,986. FLY-CATCHER. JOSEPH H. HARRISON, Toronto, Ontario, Canada. Filed May 18, 1914. Serial No. 839,192. (Cl. 43—1.)

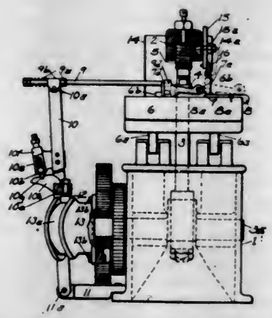


A fly catcher comprising an open frame having one side cut away, two reticulated holders within the frame between which the fly paper is placed, handles for the reticulated holders extending through the cut-away portion of the frame one of said holders being pivoted to the frame at the opposite side to the handle whereby it can be moved into open position for the removal or replacement of the fly paper or into closed position to form with the other holder a clamp for retaining the fly paper in position within the frame.

1,195,987. SAFETY-FEED FOR PRESSES. CHARLES L. HEISLER, Schenectady, N. Y. Filed Jan. 24, 1916. Serial No. 74,032. (Cl. 73—51.)

1. The combination, in a powder press, of a reciprocating member; a guard shielding said member; means for weighing pressure applied to a powder mold by said member; a reciprocating mold carrier interposed between said reciprocating member and the weighing means; means for operating the reciprocating member; means for reciprocating the carrier; automatic means for opening and closing the guard to prevent injury to an operator from

an explosion in the mold; and connections through which said automatic means is operated by the reciprocating member.



2. The combination, in a powder press, of a reciprocating member; means for actuating said member; means for weighing pressure applied to a powder mold by said member; a mold carrier interposed between said reciprocating member and the weighing means; a rotative cam interposed between the actuating means and the carrier, and adapted to automatically insert and remove the carrier and mold from between the reciprocating member and weighing means; and an oscillating cam lever coupled to the carrier and actuated by the cam.

3. The combination, in a powder press, of a reciprocating member; means for actuating said member; means for weighing pressure applied to a powder mold by said member; a reciprocating mold carrier interposed between said reciprocating member and the weighing means; means for reciprocating the carrier from the actuating means, including a rotative cam interposed between said actuating means and the carrier; a pivotally mounted cam lever actuated by the cam; and means for coupling the lever to the carrier.

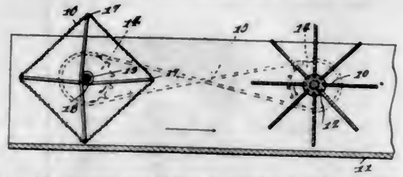
4. The combination, in a powder press, of a reciprocating member; means for actuating said member; means for weighing pressure applied to a powder mold by said member; a reciprocating mold carrier interposed between said reciprocating member and the weighing means; means for reciprocating the carrier from the actuating means, including a rotative cam interposed between said actuating means and the carrier; a pivotally mounted cam lever actuated by the cam; a safety trip on the cam lever; means for coupling said trip to the cam and carrier; and manually operable means for normally uncoupling the carrier and its reciprocating means.

5. The combination, in a powder press, of a reciprocating member; means for actuating said member; means for weighing pressure applied to a powder mold by said member; a reciprocating mold carrier interposed between said reciprocating member and the weighing means; a horizontally reciprocating coupler member disposed above the weighing means; means for transmitting motion thereto from the actuating means; and a coupler for attaching it to the carrier.

[Claims 6 to 11 not printed in the Gazette.]

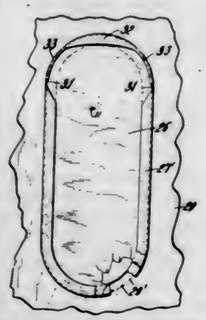
1,195,988. FISH-SCREEN. WILLIAM A. HOGE, Hillside, Colo., assignor of one-third to G. H. Alberts, Pueblo, Colo. Filed Oct. 5, 1915. Serial No. 54,192. (Cl. 61—5.)

1. A fish screen comprising a trough, a rotatable shaft extending through said trough, spoke elements rigidly connected with said shaft, each of said spoke elements being rectangular in shape and formed of resilient material, the side arms of the spoke elements being bent to provide eyes through which said shaft passes and constituting spring elements for the spokes, and a screen extending about said spoke elements and bending the spoke elements whereby the tendency of the spoke elements to return to their original position will create a binding action between the spoke elements and the screen.



2. A fish screen comprising a trough, a shaft rotatably supported from the walls of said trough, spoke elements extending from said shaft and formed of resilient wire, said spoke elements being provided with arms bent to provide eyes constituting spring elements through which said shaft passes to rigidly connect the spoke elements with the shaft, a screening extending about said spoke elements and bending the spoke elements at the eyes to cause a binding action between the spoke elements and the screening, and means for rotating said shaft.

1,195,989. AUTOMOBILE-CURTAIN. GUSTAV HOLMES, JOHN M. BOSTROM, and AXEL G. BOSTROM, Milwaukee, Wis. Filed Aug. 9, 1915. Serial No. 44,407. (Cl. 156—41.)



1. In a curtain window, the combination of a curtain member provided with a window opening, a window light having the shape of the window opening but larger than the window opening so that its edges overlap the edges of the window opening and a sheet metal frame bent to an S-shaped form in cross section to produce an outwardly opening groove receiving the edge of the window opening and to produce an inwardly opening groove receiving the edge of the window light.

2. A curtain window light frame for automobiles and the like comprising a strip of sheet metal or the like material bent to produce an outwardly opening groove to receive the edge of the window opening of the curtain and to produce an inwardly opening groove to receive the edge of the window light.

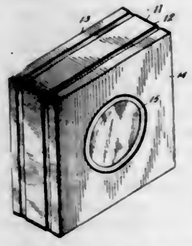
3. A windowed curtain for automobiles and the like comprising a curtain member having a window opening, a window light frame of sheet metal or the like material bent reversely upon itself to produce an outwardly opening groove receiving the edges of the window opening and to produce an inwardly opening groove receiving the edges of the window light, and barbs in the outwardly opening groove to engage the edges of the window opening.

4. A windowed curtain for automobiles and the like comprising a curtain member having a window opening, a window light, a frame of sheet metal or the like material bent reversely upon itself to form an S-shaped cross section to provide an outwardly opening groove receiving the edges of the curtain member around the window opening, and to produce an inwardly opening groove receiving the edges of the window light, spurs formed on the intermediate portion of the frame and projecting into the outwardly opening groove to engage the edges of the curtain, there being a slot in the inwardly opening grooved portion of the frame through which the window light may pass, and a locking clip secured in the outwardly opening groove of the frame by one of the spurs and adapted to be bent over the slotted portion of the frame for holding the slot closed.

5. A windowed curtain comprising a curtain member having a window opening, a window light of flexible material, a frame formed of a strip of sheet metal or the like material bent reversely upon itself to form inwardly and outwardly opening grooves receiving the edges of the window light and the edges of the curtain member around the window opening respectively, and barbs formed in the outwardly turned edges of the frame to engage the curtain member, there being notches formed in the inturned edges of the frame through which the window light may pass on being inserted in or removed from the frame.

[Claims 6 and 7 not printed in the Gazette.]

1,195,990. HONEYCOMB-SECTION. PAUL HUNTEN, deceased, late of Somerset, Colo., by Augusta Hunten, administratrix, Somerset, Colo. Filed Feb. 18, 1915. Serial No. 9,200. (Cl. 6—10.)



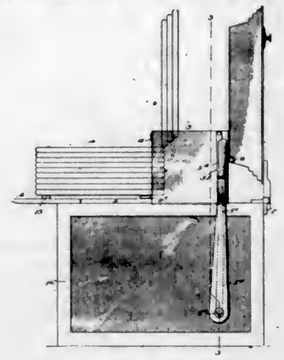
1. A sheet-metal honey-comb section comprising an open-ended rectangular body in which the filled honey-comb is adapted to be formed; and slip covers having peripheral flanges adapted to frictionally engage and tightly seal the open ends of said body and shave off any applied propolis without cutting the ends of the honey cells, the said slip covers being adapted to be forced on to the said body more or less toward the faces of the honey-comb, according to the locations of the outer ends of the honey cells.

2. A sheet metal honey-comb section comprising an open-ended rectangular body in which the filled honey-comb is adapted to be formed, said body being formed with a peripheral enlarged middle portion with edges in-set therefrom; and slip covers having peripheral flanges adapted to frictionally engage said in-set edges of the body and tightly seal the open ends of said body and shave off any applied propolis without cutting the ends of the honey cells, the said slip covers being adapted to be forced on to the said body more or less toward the faces of the honey comb, according to the locations of the outer ends of the honey cells.

1,195,991. FILING APPLIANCE. GEORGE JACOBS, Cleveland, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Feb. 21, 1911, Serial No. 609,973. Renewed Jan. 25, 1916. Serial No. 74,276. (Cl. 45—2.)

1. In a filing appliance, the combination of a casing comprising two parts, one of which is movable relative to the other, and a base and a series of frames carried by the movable part of said casing, the said base and frames being shiftable as a whole and swingable relatively to each other when the movable part of said casing has been moved in one direction.

2. In a filing appliance, the combination of a casing comprising two parts, one of which is movable relative to the other, a base and a series of frames carried by and movable with the movable part of said casing, the said base and frames being shiftable as a whole and swingable relatively to each other when the movable part of said casing has been moved in one direction, and mechanism for raising and lowering said movable part of the casing.



3. In a filing appliance, the combination of a casing comprising two parts, one of which is movable relative to the other, a series of leaves mounted on said movable part of the casing and arranged to swing relatively to each other when the movable part has been moved to one of its positions, and extensible telescoping guide means interposed between the two parts of said casing.

4. In a filing appliance, the combination of a casing comprising two parts, one of which is movable relative to the other, a base and a series of leaves mounted on said movable part of the casing and arranged to shift as a whole and to swing relatively to each other when the movable part has been moved to one of its positions, and supporting devices for said leaves permitting relative longitudinal movement of said leaves into compact arrangement when said movable part is moved into its other position.

5. In a filing appliance, the combination of a casing, having an opening in its upper end, an elevator movable into and out of said casing and adapted to support a series of leaves or frames swingable from a horizontal position to a vertical position and vice versa, mechanism for raising and lowering said elevator, and extensible telescoping guide means between the elevator and casing.

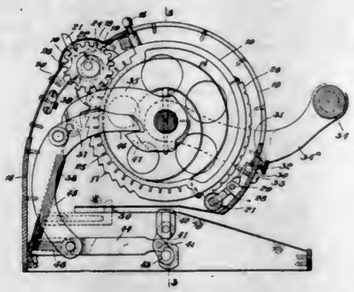
[Claims 6 to 9 not printed in the Gazette.]

1,195,992. PRINTING MECHANISM. BENJAMIN F. JOLINE, Tottenville, N. Y., assignor, by mesne assignments, to National Carbon Company, Long Island City, N. Y., a Corporation of New Jersey. Filed Nov. 4, 1912. Serial No. 729,390. (Cl. 101—57.)

1. A shaft, a printing wheel rotatably mounted thereon and yieldingly connected thereto, means by which said wheel may be rotated to move it from non-printing to printing position, means to lock said wheel in printing position, a platen arranged to be moved into printing relation with said wheel, a lever to move said platen and means to release said locking means to permit said wheel to return to non-printing position, said releasing means being arranged to be operated by said lever on the completion of its printing stroke.

2. A shaft, a plurality of printing wheels rotatably mounted thereon, and yieldingly and independently connected thereto, means by which each of said wheels may be rotated to move it from non-printing to printing position, means to locate each of said wheels in printing position, a platen arranged to be moved into printing relation with said wheels, a lever to move said platen and means to

release all of said locking means simultaneously to permit each of said wheels to return to non-printing position, said releasing means being arranged to be operated by said lever on the completion of its printing stroke.



3. A rotatably mounted printing wheel, means by which said wheel may be moved from non-printing to printing position, locking means to hold said wheel in printing position, a platen arranged to be moved into printing relation to said wheel, toggle links constructed and arranged to move said platen into and out of printing relation with said wheel while said links are moving in one direction and means to release said locking means while said platen is being moved out of printing position.

4. A plurality of rotatably mounted printing wheels, means by which each of said wheels may be moved from non-printing to printing position, locking means to hold each of said wheels in printing position, a platen arranged to be moved into printing relation to said wheels, toggle links constructed and arranged to move said platen into and out of printing relation with said wheels while said links are moving in one direction, and means to release said locking means while said platen is being moved out of printing position.

5. A plurality of rotatably mounted printing wheels, means by which each of said wheels may be moved to printing position, locking means for each wheel for holding it in printing position, means by which each wheel may be reset without affecting the other wheels already in printing position, and means to release all of said locking means simultaneously.

1,195,993. SHEET-METAL POLE. JULIUS C. KNOLL, Erie, Pa. Filed Mar. 21, 1912. Serial No. 685,180. (Cl. 189—26.)



The combination in a sheet metal pole formed by rolling up a plate of sheet metal into a tapering tube, with the edges of said plate overlapping, and with portions of said tube of smaller diameter than the remaining portions thereof, external rings around said tube at the points of the reduction of diameter of said tube, and non-collapsible members insertible within said tube immediately above said points of reduced diameter, substantially as described.

1,195,994. SHAFT FOR GOLF-CLUBS. ALLAN EDWARD LARD, Washington, D. C. Original application filed Jan. 23, 1914, Serial No. 813,926. Divided and this application filed Jan. 11, 1915. Serial No. 1,648. (Cl. 46—4.)



1. As a new article of manufacture, a golf-shaft formed from metal sufficiently light to torsion and having ∩-shaped ribs extending longitudinally thereof.

2. As a new article of manufacture, a golf-shaft formed from metal sufficiently light to admit of torsion and having ∩-shaped ribs extending longitudinally thereof, said ribs tapering toward the lower end of the shaft.

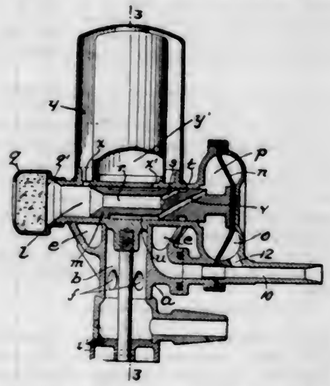
3. As a new article of manufacture, a golf-shaft comprising a tempered and relatively light steel tube having secured to its outer face, and extending longitudinally thereof, a plurality of hollow strengthening ribs.

4. As a new article of manufacture, a golf-shaft comprising a tempered steel tube the body whereof is relatively light, having secured to its outer face and extending longitudinally thereof a plurality of strengthening ribs.

5. As a new article of manufacture, a golf-shaft consisting of a central tubular member formed from relatively light metal, with a sheet of metal bent into the form of a plurality of ribs extending longitudinally of said member and connected to one another, by a plurality of ears, at spaced intervals throughout the length of the tube, said ears being connected to the tubular member.

[Claims 6 to 8 not printed in the Gazette.]

1,195,995. MILKING-MACHINE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Feb. 16, 1915. Serial No. 8,456. (Cl. 31—101.)



1. In a milking machine, a teat cup and a milk discharge therefrom, means to establish continuous suction therein and means to admit a measured volume of clean air to momentarily reduce the vacuum in the teat cup and milk discharge.

2. In a milking machine, in combination, a double chambered teat cup, a milk discharge from the inner chamber of the teat cup constantly under suction, and means, including an air inlet to the milk discharge closed against admission of air from the outer chamber of the teat cup, tending to produce pulsations in said discharge varying in amplitude directly as the flow of the milk and to vary the suction therein inversely as the flow of the milk.

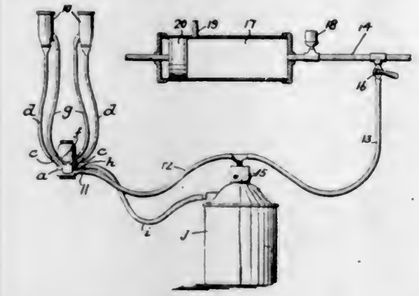
3. In a milking machine, in combination, a double chambered teat cup, a milk discharge from the inner chamber of the teat cup constantly under suction, and means exterior to the teat cup, and including an air inlet to the milk discharge closed against admission of air from the outer chamber of the teat cup, tending to vary the suction in said discharge inversely as the flow of the milk.

4. In a milking machine, in combination, a double chambered teat cup, a milk discharge from the inner chamber of the teat cup constantly under suction, and means including an air inlet to the milk discharge closed against admission of air from the outer chamber of the teat cup, tending to produce pulsations in said discharge varying in amplitude directly as the flow of the milk.

5. In a milking machine, in combination, a double chambered teat cup, a milk discharge from the inner chamber of the teat cup, non-intercommunicating passages communicating respectively with the milk discharge and with the outer teat cup chamber, means to intermittently admit air into each passage, and means to create a continuous suction in the milk passage and to intermittently rarefy the air in the passage to the outer teat cup chamber.

[Claims 6 to 34 not printed in the Gazette.]

1,195,996. MILKING-MACHINE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Feb. 16, 1915. Serial No. 8,457. (Cl. 31—101.)



1. In a milking machine, in combination, a double chambered teat cup, a pipe leading to the outer chamber of the teat cup and through which pressure fluid is admitted to and exhausted from the outer teat cup chamber to produce pulsations therein, a milk discharge, constantly under suction, from the inner chamber of the teat cup, said milk discharge being closed against admission of pressure fluid from said pipe, and means to admit pressure fluid from another source to the milk discharge at intervals corresponding to the number of said pulsations.

2. In a milking machine, in combination, a double chambered teat cup, a pipe leading to the outer chamber of the teat cup and through which pressure fluid is admitted to and exhausted from the outer teat cup chamber to produce pulsations therein, a milk discharge from the inner chamber of the teat cup constantly under and in communication with a source of suction, said milk discharge being closed against admission of pressure fluid from said pipe, and means to admit pressure fluid from another source to the milk discharge alternately with the admission of pressure fluid to the outer teat cup chamber and to exclude admission of pressure fluid to the milk discharge during the remainder of each pulsation.

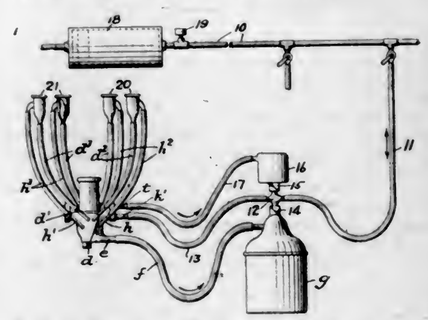
3. In a milking machine, in combination, a double chambered teat cup, a pipe leading to the outer chamber of the teat cup and through which pressure fluid is admitted to and exhausted from the outer teat cup chamber to produce pulsations therein, a milk discharge from the inner teat cup chamber constantly under suction, a source of pressure supply independent of the outer teat cup chamber, a valve adapted in its movement to alternately connect and disconnect the milk discharge with said pressure supply, and means to actuate the valve to effect such connection at intervals corresponding to the number of said pulsations.

4. In a milking machine, in combination, a double chambered teat cup, a claw having a pulsation chamber connectible to the outer teat cup chamber and to and from which pressure fluid is alternately admitted and exhausted to produce pulsations, an independent milk receiving chamber in said claw connectible with the inner teat cup chamber and adapted to be placed under continuous suction, a source of pressure fluid supply independent of the pulsation chamber, a valve adapted in its movement to alternately connect and disconnect the milk discharge with said pressure supply, and means to actuate the valve to effect such connection at intervals corresponding to the number of said pulsations.

5. In a milking machine, in combination, a double chambered teat cup, a pipe leading to the outer chamber of the teat cup and through which pressure fluid is alternately admitted and exhausted to produce pulsations therein, a milk discharge from the inner teat cup chamber, a valve, a pipe leading to the valve, and common pulsating means to maintain continuous suction in the milk discharge and to produce pulsations in the last named pipe to control the operation of the valve, said valve adapted in its movement to admit to the milk discharge pressure fluid from a source of supply independent of the outer teat cup chamber at intervals corresponding to the number of said pulsations.

[Claims 6 to 22 not printed in the Gazette.]

1,195,997. MILKING-MACHINE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Feb. 16, 1915. Serial No. 8,458. (Cl. 31—101.)



1. In a milking machine, in combination, a double chambered teat cup, a milk discharge from the inner chamber thereof constantly under suction, and means, including passages closed from intercommunication, to intermittently admit pressure fluid to the milk discharge and to alternately connect the outer teat cup chamber with pressure fluid supply and exhaust.

2. In a milking machine, in combination, a double chambered teat cup, two pipes and means to create constant suction therein, one of said pipes being connected with the inner teat cup chamber, and means, including valve mechanism and independent non-intercommunicating air ports, to connect the other pipe with the outer teat cup chamber and to intermittently admit air to the respective teat cup chambers.

3. In a milking machine, in combination, a double chambered teat cup, two pipes and means, including a common pipe, to create a continuous suction therein, one

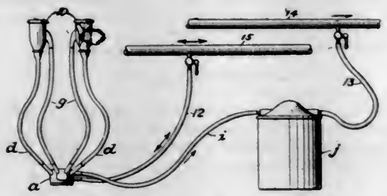
of said pipes being connected with the inner teat cup chamber, and means, including valve mechanism and independent non-intercommunicating ports, to connect the other pipe with the outer teat cup chamber and to intermittently admit air to the respective chambers.

4. In a milking machine, in combination, a double chambered teat cup, a milk discharge from the inner chamber of the teat cup constantly under suction, and means, including valve mechanism and independent non-intercommunicating passages connecting with the milk discharge and with the outer teat cup chamber, to exhaust pressure fluid from the outer teat cup chamber and to intermittently connect both the milk discharge and the outer teat cup chamber with pressure fluid.

5. In a milking machine, in combination, a double chambered teat cup, a milk discharge from the inner chamber of the teat cup, a vacuum pipe, means, including valve mechanism and independent passages communicating with the milk discharge and with the outer teat cup chamber, to intermittently connect the milk discharge and the inner teat cup chamber with pressure fluid and to intermittently connect the outer teat cup chamber with the vacuum pipe, and means to create a continuous suction in both the vacuum pipe and the milk discharge.

[Claims 6 to 37 not printed in the Gazette.]

1,195,998. MILKING-MACHINE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Mar. 30, 1915. Serial No. 17,976. (Cl. 31—101.)



1. In a milking machine, in combination, a milk pail, a double chambered teat cup, a milk discharge in constant communication with the inner teat cup chamber and with the milk pail, a vacuum line in constant communication with the milk pail whereby the latter and the milk discharge may be placed under continuous suction, a pneumatic pulsation line independent of the vacuum line in constant communication with the outer teat cup chamber, and a valve connected with, and whose operation is controlled by the pulsation in, the pulsation line, said valve operating to intermittently admit pressure fluid to the milk discharge.

2. In a milking machine, in combination, a double chambered teat cup, a milk pail, a constantly open milk discharge between the inner teat cup chamber and the milk pail, a pneumatic pulsation line in constant communication with the outer teat cup chamber, an independent vacuum line connected with the milk pail to produce a continuous partial vacuum therein, and a valve adapted to intermittently admit pressure fluid to the milk discharge, said valve having a pressure face subject to the pulsations in the pulsation line whereby its operation is controlled.

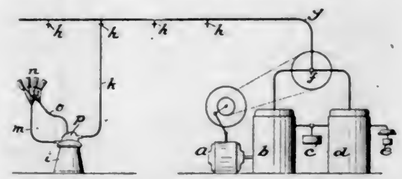
3. In a milking machine, in combination, a double chambered teat cup, a claw having a pulsation chamber communicating with the outer teat cup chamber and a milk chamber communicating with the inner teat cup chamber, a diaphragm separating the two chambers, a pneumatic pulsation line in communication with said pulsation chamber, a separate vacuum line establishing continuous suction in said milk chamber, said diaphragm being movable under the influence of said pneumatic pulsations and adapted in its movement to control the intermittent admission of pressure fluid to said milk chamber.

4. In a milking machine, in combination, a double chambered teat cup, a claw having a pulsation chamber communicating with the outer teat cup chamber and a milk chamber communicating with the inner teat cup chamber, a diaphragm separating the two chambers, a pneumatic pulsation line in communication with said pulsation chamber, a separate vacuum line establishing continuous suction in said milk chamber, said diaphragm being movable under the influence of said pneumatic pulsations, there being an air inlet to said milk chamber, said diaphragm in its movement acting as a valve to alternately open and close said inlet.

5. In a milking machine, in combination, a double chambered teat cup, a claw having a pulsation chamber communicating with the outer teat cup chamber and a milk chamber communicating with the inner teat cup chamber and with a source of continuous suction, a diaphragm separating the two chambers, and means to establish pneumatic pulsations in said pulsation chamber thereby operating the diaphragm, said diaphragm adapted in its movement to control the intermittent admission of pressure fluid to said milk chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,195,999. MILKING-MACHINE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Oct. 19, 1915. Serial No. 56,661. (Cl. 31—101.)



1. In a milking machine, in combination, a double chambered teat cup, a milk pail connected with the inner chamber of the teat cup, and means to maintain a partial vacuum in the milk pail and to create pneumatic pulsations in the outer teat cup chamber, said means including a pipe line and pneumatic mechanism to produce therein alternately a high degree and a low degree vacuum.

2. In a milking machine, in combination, a double chamber teat cup, a pipe line, means to produce therein alternately a relatively high and a relatively low partial vacuum, and a valve controllable by the vacuum waves in the pipe line and connected with the outer chamber of the teat cup and adapted to produce therein pneumatic pulsations.

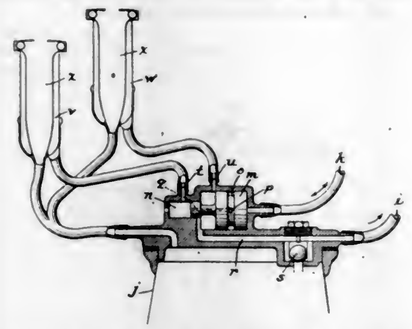
3. In a milking machine, in combination, a double chambered teat cup, a pipe line, means to produce therein alternately a relatively high and a relatively low partial vacuum, and a valve controllable by the vacuum waves in the pipe line and adapted to connect the outer chamber of the teat cup alternately with the atmosphere and a partial vacuum.

4. In a milking machine, in combination, a milk pail, a double chambered teat cup, a pipe line, means to produce therein alternately a relatively high and a relatively low partial vacuum, and means controllable by the vacuum waves in the pipe line to maintain a partial vacuum in the milk pail and to create pneumatic pulsations in the outer teat cup chamber.

5. In a milking machine, in combination, a milk pail, a double chambered teat cup, a pipe line, means to produce therein alternately a relatively high and a relatively low partial vacuum, and means controllable by the vacuum waves in the pipe line to maintain a relatively high partial vacuum in the milk pail and to connect the outer chamber of the teat cup alternately with atmosphere and with said relatively high partial vacuum.

[Claims 6 to 13 not printed in the Gazette.]

1,196,000. MILKING-MACHINE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Nov. 18, 1915. Serial No. 62,118. (Cl. 31—101.)



1. In a milking machine, the combination with two double-chambered teat cups, of a pipe line, a vacuum line, a milk discharge connecting the vacuum line and the inner teat cup chambers, means to produce pneumatic pulsations in the first line and a partial vacuum in the second line, and means controlled by said pneumatic pulsations to admit air to the inflation chamber of one cup while exhausting air from the inflation chamber of the other cup into the vacuum line independently of the milk discharge, and vice versa.

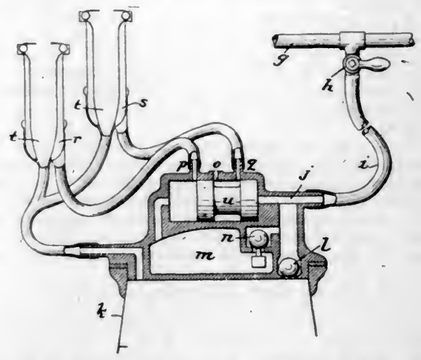
2. In a milking machine, the combination with two double-chambered teat cups, of a pulsation pipe line and a vacuum pipe line, and means to produce pneumatic pulsations in the first line and a partial vacuum in the second line, a milk discharge from the inner teat cup chambers, means connecting the milk discharge and the vacuum line, a pulsator valve connected with, and whose operation is controlled by the pulsations in, the pulsation line, and ports and passages coöperating with the valve to admit air to the outer chamber of one teat cup and exhaust air from the outer chamber of the other teat cup into the vacuum line independently of the milk discharge and alternately therewith to admit air into the outer chamber of the second teat cup and exhaust air from the outer chamber of the first teat cup into the vacuum line independently of the milk discharge.

3. In a milking machine, the combination with two double-chambered teat cups, of a pulsation pipe line and a vacuum pipe line, and means to produce pneumatic pulsations in the first line and a partial vacuum in the second line, a milk discharge from the inner teat cup chambers, a pulsator valve connected with, and whose operation is controlled by the pulsations in, the pulsation line, a check valve between the vacuum line and the milk discharge preventing flow of air from the former to the latter, and ports and passages coöperating with the pulsator valve to admit air to the outer chamber of one teat cup and at the same time exhaust air from the outer chamber of the other teat cup into the vacuum line and vice versa.

4. In a milking machine, the combination with two double-chambered teat cups, of a pulsation pipe line and a vacuum pipe line, and means to produce pneumatic pulsations in the first line and a partial vacuum in the second line, of a milk discharge from the inner teat cup chambers, a milk pail connected with the milk discharge, a check valve between the vacuum line and the pail, a pulsator valve connected with, and whose operation is controlled by the pulsations in, the pulsation line, and ports and passages coöperating with the valve to admit air to the outer chamber of one teat cup and at the same time exhaust air from the outer chamber of the other cup into the vacuum line, and vice versa.

5. In a milking machine, the combination with two double-chambered teat cups, of a pulsation pipe line and a vacuum pipe line and means to produce pneumatic pulsations in the first line and a partial vacuum in the second line, a milk pail, a milk discharge from the inner teat cup chambers to the pail, a check valve between the vacuum line and the pail, a valve comprising a cylinder of two diameters and a differential valve piston reciprocable therein, the larger end of the cylinder opening to the pulsation line and the smaller end to the atmosphere, the cylinder having two ports respectively in its larger and smaller ends, means for connecting said ports respectively with the outer chambers of the two teat cups, means to connect the larger end of the cylinder with the vacuum line, the larger end of the piston being cut away to form a surrounding annular groove, the piston having a passage from its small end to said groove.

1,196,001. MILKING-MACHINE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Nov. 18, 1915. Serial No. 62,119. (Cl. 31—101.)



1. In a milking machine, the combination with two double-chambered teat cups, of a pipe line, means to produce pneumatic pulsations therein, and means controllable by said pneumatic pulsations to communicate suction to the inner chambers of the teat cups and to create pneumatic pulsations in the outer chambers of the two teat cups alternately.

2. In a milking machine, the combination with two double-chambered teat cups, of a pipe line, means to produce pneumatic pulsations therein, and means controllable by said pneumatic pulsations to communicate suction to the inner chambers of the teat cups and to admit air to the inflation chamber of one cup while exhausting air from the inflation chamber of the other and vice versa.

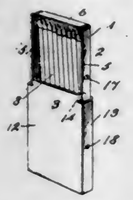
3. In a milking machine, the combination with two double chambered teat cups, of a pipe line, means to produce vacuum waves therein, and means controllable by said vacuum waves to communicate suction to the inner chambers of the teat cups and to create pneumatic pulsations in the outer chambers of the two teat cups alternately.

4. In a milking machine, the combination with two double chambered teat cups, of a pipe line, means to produce alternate high and low vacuum waves therein and to communicate suction to the inner chambers of the teat cups, a valve the operation of which is controlled by said vacuum waves, and ports and passages coöperating with said valve to communicate pneumatic pulsations to the outer chambers of the two teat cups alternately.

5. In a milking machine, the combination with two double-chambered teat cups, of a pipe line, means to produce vacuum waves therein, and means controllable by said vacuum waves to communicate suction to the inner chambers of the teat cups and to admit air to the inflation chamber of one teat cup while exhausting air from the inflation chamber of the other and vice versa.

[Claims 6 to 30 not printed in the Gazette.]

1,196,002. MATCH-HOLDER. PAUL LEO, Elizabeth, N. J. Filed Jan. 5, 1915. Serial No. 645. (Cl. 206—33.)



1. In a pocket match holder the combination of a box adapted to hold a strip of matches having a match scratching surface; and a cover on said box slidable in one direction to expose the matches for removal, and slidable in the opposite direction to expose the match scratching surface, and said cover constituting a guard for the purpose set forth.

2. In a pocket match holder the combination of a box adapted to hold a strip of matches having a match scratching surface; and a cover on said box slidable in one direction to expose the matches for removal, and slidable in the opposite direction to expose the match scratching surface, and stops limiting the sliding movements of the cover on said box.

3. In a pocket match holder the combination of a box adapted to hold a strip of matches having a match scratching surface; and a cover on said box slidable in one direction to expose the matches for removal, and slidable in the opposite direction to expose the match scratching surface, stops limiting the sliding movements of the cover on said box, and detents for normally holding said cover and box against relative movement.

4. In a pocket match holder the combination of a box adapted to hold a strip of matches having a match scratching surface, and a cover on said box slidable in one direction to expose the matches for removal, and slidable in the opposite direction to expose the match scratching surface, said cover provided with inturned portions forming stops for limiting the sliding movements of the cover on the box, and having struck-in portions forming detents for normally holding said cover and box against relative movement.

5. In a match holder the combination of a box having a pocket for retaining a strip of matches, and said pocket having an aperture therein; a strip of matches in said box fitting in the pocket, and having a scratching surface exposed through said aperture; a cover on said box, slidable in one direction to expose the matches for removal, and slidable in the opposite direction to expose the scratching surface, and said cover constituting a guard, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,196,003. BABY-CARRIER. WALLACE LIPPINCOTT, Philadelphia, Pa. Filed Aug. 24, 1915. Serial No. 47,042. (Cl. 224—6.)

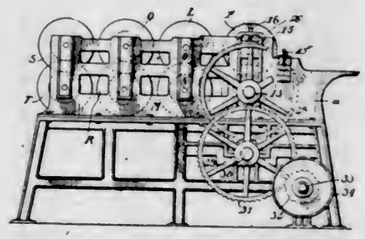
1. In a baby carrier, a supporting strap to be looped over the shoulder of a person and adapted to support the child in its lower end, a back strap secured at its ends to the sides of said supporting strap a short distance above the lower end thereof to engage and support the back of the child and form an open-front seat, a yoke secured to the back strap and adapted to pass over the shoulders and down the front of the child, and means for adjusting said yoke to children of various sizes.

2. In a baby carrier, a supporting strap adapted to be looped over the shoulder of the person carrying the child, and the lower loop of which forms a seat for the child, a back strap secured across the supporting strap above the lower end thereof and adapted to engage and support the back of the child, a retaining strap extending upwardly and forwardly from the lower end of the supporting strap for engagement with the limbs of the child to prevent the child from slipping from the supporting strap, a yoke secured at one end to the back strap for engagement over the shoulders of the child, and a single adjusting means between the free ends of the yoke and the retaining strap for adjusting the yoke and the retaining and back straps about the body of the child.



3. In a baby carrier, a supporting strap adapted for engagement with the shoulder of the person carrying the child and having a seat portion at its lower end to support the child, straps at the front and rear of the seat portion for engagement about the body of the child, and a single buckle connecting the straps for adjusting the same to children of different sizes.

1,196,004. MACHINE FOR MAKING METAL FABRIC. WILLIAM LOACH, Oshawa, Ontario, Canada, assignor to The Pedlar People Limited, Oshawa, Ontario, Canada. Original application filed Nov. 2, 1915, Serial No. 59,311. Divided and this application filed Feb. 28, 1916. Serial No. 81,053. (Cl. 164—6.5.)



1. A machine for the purpose specified comprising a plurality of pairs of corrugating dies, one die of each pair being free and the peripheries of the adjacent dies being radially separated to cause the fabric to be expanded diagonally between them.

2. A machine for the purpose specified comprising a plurality of pairs of corrugating dies, one die of each pair being free and the peripheries of the adjacent dies will be radially separated to cause the fabric to be expanded diagonally between them, and a plurality of other rotary dies adapted to form ribs in the corrugated portions of the strip.

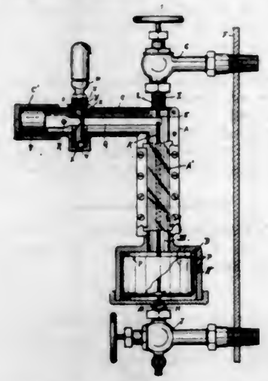
3. A machine for the purpose specified comprising a series of pairs of rollers placed side by side, the periphery of adjacent pairs of rollers being separated in a radial direction whereby the material passing through the rollers is expanded in a diagonal direction between them.

4. A machine for the purpose specified comprising a series of pairs of rollers placed side by side, the periphery of adjacent pairs of rollers being separated in a radial direction whereby the material passing through the rollers is expanded in a diagonal direction between them, one roller of each pair being free.

5. A machine for the purpose specified comprising a series of corrugated roller dies placed side by side, the peripheries of adjacent pairs of dies being separated in a radial direction whereby the material passing through the dies is expanded in a diagonal direction between them.

[Claims 6 to 14 not printed in the Gazette.]

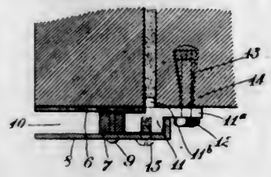
1,196,005. LOW-WATER ALARM. JOHN C. MCCARTHY, Fort Wayne, Ind. Filed Mar. 16, 1914. Serial No. 824,913. (Cl. 137—102.)



1. In apparatus of the class described, a chambered member having an enlargement at its lower end and a horizontal branch at its upper end a water glass closing that portion of the chambered member between its enlarged lower end and horizontal branch; a vertically movable rod having bearings at its respective end in the corresponding ends of the chambered member a hollow cup within the enlarged portion of the member, having one or more openings in its upper portion and having also fixed relation with the movable rod; a weighted lever pivoted in the branch of the member and having actuating connection with the movable rod; a steam operated signal having communicating means with the interior of the member; and a valve actuated by the lever for controlling the passage of steam to the signal.

2. In apparatus of the class described, a chambered member having an enlarged bottom portion and a horizontal branch at its top; a sight-glass with means in connection therewith for attachment to the member and forming the front wall thereof; a cup in the enlarged portion of the member having one or more openings in its upper portion and having a stem extending up through the vertical chamber in the member, there being provided a bearing for said stem at its lower and upper ends respectively; a steam actuated signal having communication with the chamber through the branch thereof; a valve for controlling the passage of steam to the signal from the branch; and a weighted lever pivoted in the branch and having connection with the valve and stem.

1,196,006. CHANNEL FOR FIRE-SHUTTERS. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Oct. 28, 1912. Serial No. 728,032. (Cl. 189—45.)

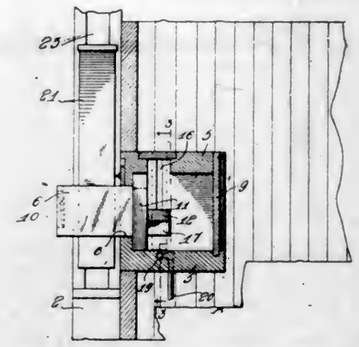


1. The combination with a channel or like member subject to longitudinal expansion by the heat of fire, of means for securing said member in position consisting of a holder embraced on two sides by portions of said channel member and means for securing said member at one point to said holder.

2. The combination with a channel or like member subject to expansion by the heat of fire, of means for securing said member consisting of a holder embraced on two sides by portions of said member, and means for securing said channel member at a fixed point so as to be expansible by adequate heat with reference to the holder.

3. The combination with a channel or like member subject to expansion by the heat of fire, said member provided with an opening, of means for securing said member consisting of a holder embraced by a portion of said member, means operable through said opening for securing the holder in position, and means for securing said member at a fixed point so as to be longitudinally expansible with reference to said holder by adequate heat.

1,196,007. CAR-DOOR LOCK. WILLIAM MCMINNIS, Elkhart, Ind. Filed Jan. 4, 1915. Serial No. 466. (Cl. 70—102.)



1. In combination with a sliding door having a grooved rear edge, of a lock means therefor comprising an abutment member movable into proximity to said rear edge of the door when closed, and a movable means fitting the groove aforesaid and engaging said abutment, substantially as described.

2. In a sliding door lock, a lock case, an abutment member movable from a position within to a position without said case, means moving automatically into locking relation with said abutment member when without said case, pneumatic means to move said locking member out of locking relation with said abutment member to provide for movement of said abutment member to a position within said case, said abutment member acting as a means whereby said locking member is held in a non-locking position, substantially as described.

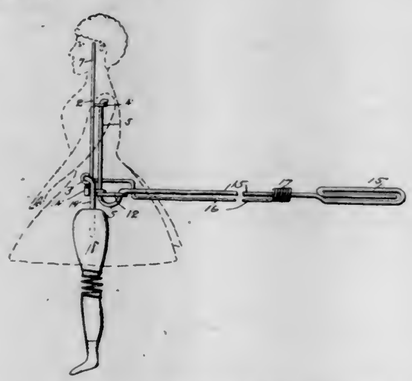
3. In a sliding door lock, a lock case, an abutment member movable from a position within to a position without said case, means engaging said abutment member and said door to act as a lock for the latter, an enlargement formed on the abutment member to limit its movement, said enlargement having recesses formed therein, a locking member within said case, projections formed on said locking member adapted for fitting engagement with the recesses aforesaid to provide for movement of said abutment member when said projections and said recesses shall have been alined, and means to aline said projections and said recesses for the purpose stated.

4. In combination with a sliding door, a lock therefor comprising a lock case, an abutment member movable from a position within to a position without said case, means to limit movement of said abutment member, means operating automatically to lock the said member in locking relation with the door, and pneumatic means to actuate said locking member and to provide for movement of said abutment member out of locking relation with the door.

5. In a door lock, a lock case, a member movable from a position within to a position without said lock case, said member when without said case being adapted for locking engagement with the door, a cylinder formed within the lock case, a piston operating within the cylinder, a locking member movable with the piston to lock and unlock said abutment member, and pneumatic means to actuate the piston.

[Claims 6 to 9 not printed in the Gazette.]

1,196,008. DANCING TOY. HORACE A. MANN, Syracuse, N. Y. Filed Feb. 3, 1915. Serial No. 5,870. (Cl. 46—40.)



1. A toy dancer, consisting of a figure composed of a plurality of movable parts including a trunk member pivotally mounted upon a slotted supporting plate, the said plate, leg members pivotally connected to the said trunk member, and engaging the slots in said supporting plate, a tossing handle attached to said supporting plate, and an operating member consisting of a connecting rod having one end movably mounted upon the said tossing handle and its other end pivotally attached to one side of the said figure whereby oscillating motions may be imparted to the figure and thence to the leg members through their engagements with the trunk member and the slots in the supporting plate.

2. In a toy dancer, the combination of a figure composed of a plurality of movable sections, a supporting plate upon which the said figure is pivotally mounted, a tossing handle attached to the said supporting plate, and an operating member consisting of a connecting rod having one end pivotally attached to the said figure and its other end movably mounted upon the said tossing handle whereby oscillatory motions may be imparted to the figure and its movable parts.

3. A toy dancer, consisting of a figure having a trunk member pivotally mounted upon a slotted supporting plate, leg members hinged to said trunk member and adapted to engage the slots in the said supporting plate, a tossing handle attached to said supporting plate, and an operating member consisting of a reciprocating rod having one end pivotally attached to the trunk member, and its other end movably mounted upon the said tossing handle whereby the said trunk member may be oscillated upon its axis and motion imparted to the leg members through their engagements with the trunk member and the slots in the supporting plate.

4. A toy dancer consisting of a figure as described, having a trunk member pivotally mounted upon a slotted supporting plate, leg members pivotally connected to the said trunk member and engaging the slots in the supporting plate, a tossing handle attached to the said supporting plate, and a connecting rod having one end pivotally connected to the said figure and the other end movably mounted upon the said tossing handle and adapted to be moved back and forth by the thumb of the hand holding the tossing handle, whereby oscillatory motions may be imparted to the figure and its movable parts.

5. A toy dancer as described having a trunk member pivotally mounted with reference to its longitudinal axis upon a slotted supporting plate, leg members having pivotal connections with the trunk member and adapted to engage the slots in the supporting plate whereby lifting and falling motions will be alternately imparted to the said leg members when the trunk member is oscillated upon its axis, a tossing handle attached to the said supporting plate, and an operating member consisting of a connecting rod having one end pivotally attached to the trunk member and its other end movably mounted upon the said tossing handle adjacent to the hand hold and adapted to be actuated by the thumb, whereby an oscillating motion will be imparted to the trunk member and its fixed appendages, and lifting and falling motions imparted to the leg members through their engagements with the trunk member and the slots in the said supporting plate.

1,196,009. FASTENING DEVICE. DAVIS MARINSKY, New York, N. Y. Filed Sept. 24, 1915. Serial No. 52,345. (Cl. 24—218.)



A garment fastener comprising a disk having a stud provided with a knob, and a socket member consisting of a back plate substantially concavo-convex in form and provided with an annular rim, the edge of which is folded inwardly upon itself and forms an annular shoulder within the socket member, a yoke-shaped locking spring removably secured in said socket member by said annular shoulder, and said back plate being also provided with a central aperture for the passage of the knob and with slots for the passage of the threads used in securing the socket member to the garment, said back plate also having inwardly depressed portions arranged between the slotted portions and the perimeter for receiving the attaching threads.

1,196,010. CONNECTING-LINK AND PROCESS OF MAKING SAME. JOSEPH MERRITT, Hartford, Conn., assignor to The Hartford Lock Ring Company, Hartford, Conn., a Corporation of Connecticut. Filed July 28, 1908, Serial No. 445,756. Renewed Feb. 3, 1916. Serial No. 76,070. (Cl. 59—35.)



1. The process of making an endless link, which consists in placing a two-ended looped core within a two-ended looped open-sided sheath, and closing the open side of the sheath around and substantially inclosing the core member, with the end joints of the respective members out of coincidence.

2. The process of forming a link, which consists in placing an open-ended ring within an open-sided enveloping sheath, and closing the open side of the enveloping sheath with substantial completeness around the ring.

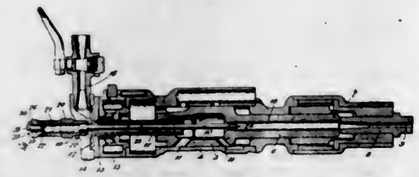
3. The process of forming an endless link, which consists in placing an open-ended ring within an open-ended and open-sided enveloping sheath, with their respective ends out of coincidence, and closing the open sides of the sheath closely and with substantial completeness around the ring.

4. The process of manufacturing endless links, which consists in forming a looped core member and a looped sheath in spiral contour, with the core member partly within the sheath, and with their respective joints out of coincidence, then deforming the spiral to a plane condition, and closing the open edges of the sheath closely and entirely around the core member.

5. The process of making endless links, which consists in forming an inner ring member and outer sheath member in spiral contour, placing the ring within the sheath with their respective joints out of coincidence, deforming the spiral into plane form, and closing the open side of the sheath with substantial completeness around the inner member.

[Claims 6 to 15 not printed in the Gazette.]

1,196,011. ROCK-DRILL. NIELS C. MICKELSON, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Apr. 26, 1915. Serial No. 24,063. (Cl. 121—20.)



1. In apparatus of the character set forth, the combination with drilling mechanism including a cylinder member and a drill operating piston therein, of means for supplying fluid under pressure to the cylinder member to actuate the piston, means for supplying cleansing fluid to a drill bit operated on by the piston, a valve controlling the cleansing fluid supply, motive fluid operated means for actuating the valve, means for supplying motive fluid to said motive fluid operated means, and means for governing the motive fluid supply to the valve actuating means independently of the supply to the cylinder member.

2. In apparatus of the character set forth, the combination with drilling mechanism including a cylinder member and a drill operating piston therein, of means for supplying cleansing fluid to a drill bit operated on by the piston, a valve controlling the cleansing fluid supply, fluid actuated means for actuating the valve, means for supplying actuating fluid to both the cylinder member and the valve actuating means, and means for controlling the supply to one of the latter independently of the other.

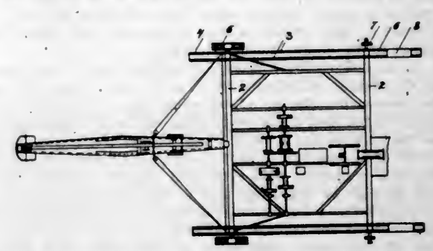
3. In apparatus of the character set forth, the combination with drilling mechanism including a cylinder member and a drill operating piston therein, of means for directing cleansing fluid to a drill bit operated on by the piston, a valve controlling the directing means, fluid actuated means for actuating the valve, means for supplying fluid under pressure to the cylinder member, the directing means and the valve actuating means, and means for controlling the supply of fluid to the valve actuating means independently of that supplied to the cleansing means and cylinder member.

4. In apparatus of the character set forth, the combination with a cylinder member and a drill operating piston therein, of means for directing cleansing fluid to a drill bit operated on by the piston, a valve for varying the fluid so directed, fluid operated means for actuating the valve, and common means connected to the cylinder member for supplying actuating fluid to the cylinder member and valve actuating means and also to the cleansing fluid directing means.

5. In apparatus of the character set forth, the combination with a cylinder member and a piston operating therein, of means for supplying fluid under pressure to the apparatus, directing a portion thereof to the cylinder member to operate the piston, and directing a portion through the piston to a drill bit operated on by the piston, and fluid actuated means for controlling the supply of cleansing fluid through said piston.

[Claims 6 to 12 not printed in the Gazette.]

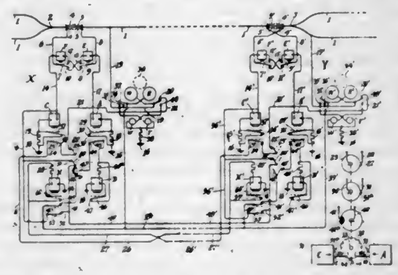
1,196,012. TRACK-HANDLING DEVICE FOR DREDGES. WILLIAM L. MILES, Saginaw, Mich. Filed Oct. 19, 1915. Serial No. 56,708. (Cl. 104—217.)



1. The combination of a dredge frame, a horizontal flanged track secured to the dredge frame and having its front and rear ends projected respectively in advance of and to the rear of the dredge frame, and a movable carriage mounted thereon, said carriage comprising wheels adapted to roll upon the lower flange of said track, a frame carried by said wheels and a table on said frame, said table disposed above the upper flange of said track.

2. The combination of a dredge frame, a horizontal track secured to the dredge frame and having its front and rear ends projected respectively in advance of and to the rear of the dredge frame, said horizontal track comprising a flanged beam, and a movable carriage mounted thereon, said carriage comprising inclined wheels adapted to roll upon the lower flanges of said track, a frame mounted on said wheels, and a table on said frame, said table disposed above and in proximity to the upper flange of said beam, for the purposes set forth.

1,196,013. ELECTRIC SIGNALING SYSTEM. CARL P. NACHOD and FREDERICK W. KULICKE, Philadelphia, Pa., assignors, by direct and mesne assignments, to Nachod Signal Company, Inc., a Corporation of New York. Filed Mar. 12, 1912. Serial No. 683,380. (Cl. 246—36.)



1. In a signaling system, a block section, a stop signal at the distant end of said block, a normally energized magnet preventing display of said stop signal, a switch at the home end of said block controlling said magnet at said distant end, means responsive to the entry of a vehicle into said block at said home end actuating said switch to deënergize said magnet, a signal clearing magnet at the distant end of said block, a signal clearing conductor through which said magnet is adapted to be energized from the opposite end of the block, and a switch controlling connection between said clearing magnet and said clearing magnet conductor held closed when said stop signal magnet is energized.

2. In a signaling system, a block section, a stop signal at the distant end of said block, a magnet therefor normally energized from the home end of said block, a switch at the home end of said block, means at the home end of said block responsive to the entry of a vehicle into said block actuating said switch to deënergize said magnet, a permissive signal at the home end, an independent conductor controlling said permissive signal and extending to the distant end of said block, and a switch at the distant end of said block closed by the release of the armature of said stop signal magnet upon deënergization thereof, the closure of said switch causing display of said permissive signal at the home end of said block.

3. In a signaling system, a block section, a stop signal at the distant end of said block, a normally energized magnet preventing display of said stop signal, a switch at the home end of said block controlling said stop signal magnet at the distant end of said block, means responsive to the entry of a vehicle into said block at the home end actuating said switch to deënergize said magnet, a signal clearing magnet at the home end of said block, independent stop signal and signal clearing magnet conductors extending between the ends of said block, means at the distant end of said block responsive to departure of a vehicle from the block at the distant end causing energization of said clearing magnet through said clearing magnet conductor, a normally energized stop signal magnet at the home end of said block, and a switch controlling connection between said clearing magnet and said clearing magnet conductor held closed by said last named normally energized stop signal magnet.

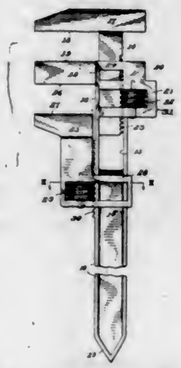
4. In a signaling system, a block section, a stop signal at the home and distant ends of said block, independent stop signal magnet conductors extending between the ends of said block, a magnet at each end of said block normally energized through one of said independent conductors from the opposite end of the block preventing display of the stop signal at the same end of the block with said magnet, a switch at the home end of said block in one of said conductors controlling the stop signal magnet at the distant end of said block, means responsive to entry of a vehicle into said block at the home end actuating said switch to deënergize the stop signal magnet at the distant end of the block, a signal clearing magnet at the home end of the block, means responsive to departure of a vehicle from the block at the distant end causing energization of said clearing magnet, a signal clearing magnet at the distant end of the block simultaneously energized with said clearing magnet at the home end of the block, a switch adapted to be actuated in one direction by said clearing magnet at the distant end of the block, means for actuating said last named switch in opposite direction, and a stop preventing movement of said last named switch when said clearing magnet at said distant end of the block is energized.

5. In a signaling system, a block section, a stop signal at the distant end of said block, a normally energized magnet preventing display of said stop signal, a switch at the home end of said block controlling said magnet at said distant end, means responsive to the entry of a vehicle into said block at said home end actuating said switch to deënergize said magnet, a permissive signal at the home end of said block, a magnet for controlling the same, a switch at the distant end closed when the stop signal is there displayed, the closure of said switch causing energization of said permissive signal magnet, whereby said permissive signal is displayed, and a switch controlled by the permissive signal at the home end, said switch opening when said permissive signal is displayed, whereby the circuit of the stop signal magnet at the distant end is opened at a second point.

[Claims 6 to 44 not printed in the Gazette.]

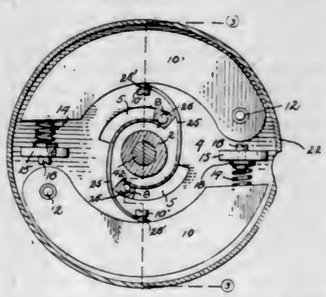
1,196,014. DOUBLE WRENCH. WLADYSLAW NAYDA, Wilmington, Del. Filed May 17, 1916. Serial No. 98,098. (Cl. 81—155.)

A wrench comprising an elongated shank having one longitudinal edge thereof provided with a projecting jaw at the end of the shank and with a toothed portion spaced from the said jaw, a central longitudinal portion of the shank, being cut-away, an inner jaw slidably mounted upon the said shank, an operating screw carried by said inner jaw in operative mesh with the said toothed sur-



face, an outer jaw provided with a tang slidably positioned within the said cut-away portion, and an operating screw in engagement with the said tang carried by the said shank, the said shank carried jaw being operatively positioned intermediate the said outer and inner jaws.

1,196,015. SPEED-REGULATING DEVICE. HARVEY A. NELSON, Dubuque, Iowa. Filed Nov. 30, 1915. Serial No. 64,238. (Cl. 74—29.)



1. In a device of the character described, a boss, a pulley mounted on the boss, a disk mounted on the boss, clutch members pivoted to the disk, a member provided with a flange, and means engaging the pulley and member for bringing the clutch members into and out of engagement with the flange on the member.

2. In a device of the character described, a boss, a disk mounted on the boss, clutch members pivoted to the disk, a member integral with the boss, a pulley mounted on the boss, and means connected to the disk and pulley for bringing the clutch members into and out of engagement with the member.

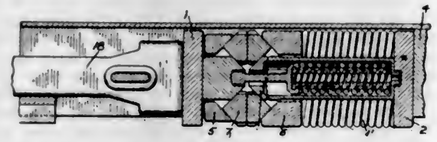
3. In a device of the character described, a boss, a pulley mounted on the boss, a disk journaled on the boss, clutch members pivoted to the disk, a member, and springs secured to the disk and clutch members for bringing the clutch members into engagement with the member.

4. In a device of the character described, a boss, a disk mounted on the boss and provided with slots, clutch members pivoted to the disk, a pulley provided with posts adapted to engage the slots in the disk, means for connecting the posts with the clutch members, a member, and means engaging the disk and the posts for bringing the clutch members into and out of engagement with the member.

5. In a device of the character described, a boss, a disk mounted on the boss and provided with slots, clutch members pivoted on the disk, a pulley mounted on the boss and provided with posts adapted to engage the slots in the disk, rods connected to the posts and clutch members, a member provided with a flange, and springs acting in conjunction with the rods for bringing the clutch members into and out of engagement with the flange on the member.

[Claims 6 and 7 not printed in the Gazette.]

1,196,016. FRICTION DRAFT-GEAR. EDWARD W. NEWELL, Pittsburgh, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1915. Serial No. 45,879. (Cl. 213—64.)



1. In a friction draft gear, the combination with friction elements having oppositely inclined friction faces, centrally disposed plunger wedges having oppositely inclined friction faces, wedge blocks having friction faces for engaging the friction faces of the friction elements and the plunger wedges, a follower plate, and a yielding resistance interposed between said follower plate and one of said friction elements, of means connected to the follower plate for limiting the movement of the other friction element.

2. In a friction draft gear, the combination with friction elements having oppositely inclined friction faces, centrally disposed plunger wedges having oppositely inclined friction faces, wedge blocks having friction faces for engaging the friction faces of the friction elements and the plunger wedges, a follower plate, and a yielding resistance interposed between said follower plate and one of said friction elements, of means for preventing relative movement of the other friction element with respect to the follower plate.

3. In a friction draft gear, the combination with friction elements having oppositely inclined friction faces, centrally disposed plunger wedges having oppositely inclined friction faces, wedge blocks having friction faces for engaging the friction faces of the friction elements and the plunger wedges, a follower plate, and a yielding resistance interposed between said follower plate and one of said friction elements, of members connected to the follower plate and projections carried by the other friction element for engaging slots in said members.

4. In a friction draft gear, the combination with friction elements having oppositely inclined friction faces, centrally disposed plunger wedges having oppositely inclined friction faces, wedge blocks having friction faces for engaging the friction faces of the friction elements and the plunger wedges, a follower plate, and a yielding resistance interposed between said follower plate and one of said friction elements, of members connected to the follower plate and projections carried by the other friction element for engaging slots in said members, the engagement of the projections in the slots being adapted to hold the draft springs under an initial compression.

5. In a friction draft gear, the combination with a front and a rear follower, front and rear friction elements each having oppositely inclined friction faces, opposed central wedges having oppositely inclined friction faces, wedge blocks having friction faces adapted to engage the friction faces of the front and rear friction elements and the central wedges, and draft springs interposed between the rear friction element and the rear follower, the front follower having engagement on opposite sides with the drawbar and one of the central wedges, of means for operatively connecting the rear follower with the front friction element.

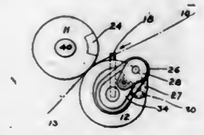
[Claims 6 to 10 not printed in the Gazette.]

1,196,017. CULTIVATOR. JOHN SHERIDAN NICHOLS, Batesville, Ark. Filed Apr. 29, 1913. Serial No. 764,372. (Cl. 97—35.)



A beam for a plow formed from a single bar of material, comprising a body being rectangular in cross-section, said body tapering toward its forward ends, an eye formed integral upon said tapering end, said body bent intermediate its ends to form a horizontally extending flat supporting face, whereby a digging means may be supported upon said face, said body then being twisted to extend in a plane at right angles to said flat face and extending slightly upwardly forming a stub handle grip portion whereby a handle may be attached thereto.

1,196,018. ENVELOP-REGISTERING MECHANISM FOR ENVELOP-MACHINES. JOHN J. O'CONNELL, Dayton, Ohio, assignor to Mercantile Corporation, Dayton, Ohio, a Corporation of New York. Filed Aug. 19, 1915. Serial No. 46,230. (Cl. 101—38.)



1. In a device of the class described, a pair of envelop feeding rolls in contact with one another and adapted to grip an envelop passing therebetween by the engagement of the rolls with the opposite sides of the envelop, a shaft axially alined with the axis of one of the rolls and adapted to rotate with said roll, a pair of pins secured to said shaft and projecting through slots in the roll, means for imparting a relative rearward rotation of said shaft and pins with respect to said roll as the pins approach the bight of the rolls to register an approaching envelop and means for imparting a relative forward rotation of said shaft and pins with respect to the roll in which the shaft is mounted when the envelop is gripped between the pair of rolls whereby the pins are displaced from the path of the emerging envelop and whereby the envelop is permitted to advance without interference.

2. In a device of the class described, a plurality of envelop feeding rolls, in combination with means for registering an envelop as it approaches the bight of said rolls comprising a pair of pins carried by a shaft in axial alinement with the axis of one of said rolls and normally rotating in unison with said rolls and means for retarding the rotation of said pins as they approach the bight of said rolls and for accelerating the rotation of said pins as they move away from the bight of said rolls.

3. In a device of the class described, in combination, a plurality of envelop feeding rolls, a plurality of register pins projecting through slots in one of said rolls and normally rotating in unison therewith, said pins projecting beyond the periphery of the roll with which they rotate in unison and extending into recesses in the coöperating rolls and means for retarding the rotating movement of the pins to cause a relative movement between the periphery of one of said rolls and the pins whereby an envelop approaching the feed rolls is accurately registered.

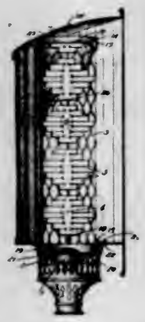
4. In a device of the class described, a pair of envelop feeding rolls, in combination with a pair of register pins

projecting through slots in one of said rolls, a shaft within and axially alined with the axis of one of said rolls, to carry the aforesaid pins, and cam means associated with said shaft to rock the said shaft and the pins thereon and thereby register an envelop as it approaches the envelop feeding rolls.

5. In a device of the class described, in combination, a pair of envelop feeding rolls, a shaft concentrically journaled in one of said rolls, a pair of pins attached thereto and projecting through slots in the roll to a point beyond the periphery thereof, means for normally maintaining the pins in the forward position of said slots, and means operable by the rotation of the rolls for retracting the pins rearward in said slots thereby causing a relative movement of the pins and the periphery of the rolls and thereby registering an envelop as it approaches the rolls.

[Claims 6 and 7 not printed in the Gazette.]

1,196,019. GAS-HEATER. TRUMAN G. PALMER, Chicago, Ill. Filed Dec. 20, 1915. Serial No. 67,790. (Cl. 126—248.)



1. A heater comprising a cylindrical heating shell, upper and lower caps for receiving the upper and lower edge portions of the shell, and a baffle axially disposed in said shell, said lower cap being open at its central portion but having a transversely-extending channel-like portion to receive the lower end of the baffle.

2. A heater comprising a cylindrical heating shell, upper and lower caps for receiving the upper and lower edge portions of the shell, a baffle axially disposed in said shell, said lower cap being opened at its central portion but having a transversely-extending portion integrally connected at each end to the cap and extending completely across said open central portion, means whereby the lower end of the baffle may be connected to said transversely-extending portion, and means whereby the upper end of the baffle may be connected with the upper cap.

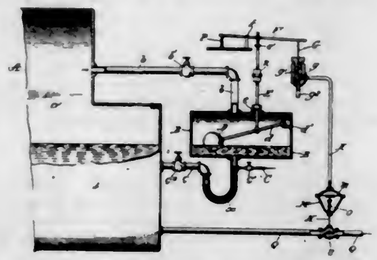
3. A heater comprising a cylindrical heating shell, upper and lower caps for receiving the upper and lower edge portions of the shell, and a baffle axially disposed in said shell, said lower cap having a circular channel-like recess for receiving the lower edge portion of the shell and having an integrally-formed transversely-extending channel-like portion for receiving the lower end of the baffle.

4. A baffle for heaters of the kind described, comprising a strip of material slitted transversely along its edges and twisted to form a plurality of radially-extending and staggered fins, a portion of the material of the baffle at the extremity of each slit being removed, for the purpose described.

5. A baffle for heaters of the kind described, comprising a strip of material slitted transversely along its edges and twisted to form a plurality of radially-extending and staggered fins, the baffle at the extremity of each slit being perforated, for the purpose described.

[Claims 6 to 14 not printed in the Gazette.]

1,196,020. EVAPORATOR. FRANK P. PATTNO and GEORGE S. WITHAM, Jr., Au Sable Forks, N. Y. Filed Nov. 29, 1915. Serial No. 64,070. (Cl. 127—9.)



1. The combination with an evaporating vessel of a float chamber connected therewith, a float in said chamber, a liquor supply for the evaporator controlled by said float, and a liquid seal interposed between the float chamber and the evaporator for preventing liquor from the evaporating vessel from passing to the float chamber.

2. The combination with an evaporator of a closed float chamber connected therewith, above and below the liquid level therein, a liquor supply for the evaporator, means operated by the float for controlling said supply, a liquid seal in the connection between the evaporator and the float chamber for preventing liquid from the evaporating vessel from passing to the float chamber, and means for maintaining the liquid seal.

3. The combination with an evaporator of a float chamber connected with the liquid space and the vapor space thereof, a mercury seal in the connection between the float chamber and the liquid space of the evaporator, a liquor supply for the evaporator, and valve mechanism operated by the float for controlling the liquor supply.

4. The combination with an evaporator of a float chamber connected therewith, a float in said chamber, a liquid supply for said evaporator, a fluid operated valve controlling said supply, a pipe for conveying to said fluid-operated valve a motive fluid the pressure of which is unaffected by variations in pressure in the evaporator, and a valve operated by the float for controlling the flow of said motive fluid.

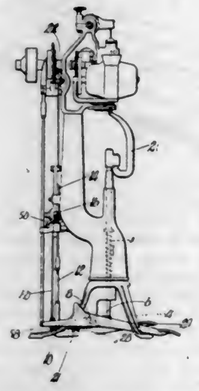
5. The combination with an evaporator of a float chamber connected therewith, a float in said chamber, a liquid supply for said evaporator, a fluid operated valve controlling said supply, a pipe for conveying to said fluid-operated valve a motive fluid the pressure of which is unaffected by variations in pressure in the evaporator, a valve operated by the float for controlling the flow of said motive fluid, and means for adjusting the connections between the float and said last mentioned valve.

[Claim 6 not printed in the Gazette.]

1,196,021. WORK-SUPPORT-CONTROLLING MECHANISM. GERALD PEGG, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 17, 1912. Serial No. 726,282. (Cl. 1—41.)

1. In a machine of the class described, a work support yieldingly pressed into work supporting position, when the machine is at rest, a spring operated lock acting automatically to lock the work support to the machine frame against movement from any work supporting position into which it may be yieldingly pressed, automatic means for intermittently depressing the work support into work feeding position, and means operated by said depressing means to release said lock in order to permit the action of said depressing means upon the work support.

2. In a machine of the class described, a work support, a spring operating to maintain it in work supporting position when the machine is at rest, spring operated means acting upon movement of the work support into work supporting position to lock the work support to the machine frame against movement toward work receiving position from any work supporting position into which it may be moved by its spring, said means being constructed to permit free movement of the work support into work supporting position, automatic means for intermittently depressing the work support to work feeding position, comprising work thickness compensating connections whereby uniform depression is obtained for varying thickness of work, and means operated by the depressing movement of said automatic means to release the locking means, said releasing means being arranged to release said lock before said work thicknesses compensating connections become operative.



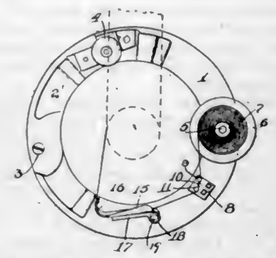
3. In a machine of the class described, the combination with a work support, means tending normally to raise it to work supporting position, automatic means to depress it to work feeding position, and manually operable means to depress it to work receiving position, of a spring operated lock acting normally to lock the work support to the machine frame against movement from any work supporting position into which it may be raised by said first-mentioned means, means connected to the manually operable means to release the lock upon the work support to permit said means to depress the work support, and means operated by the depressing movement of said automatic depressing means to release said lock to permit the action of said automatic means upon the work support.

4. In a machine of the class described, a work support, means tending normally to raise the work support into work supporting position, automatic means for intermittently depressing the work support into work feeding position, said automatic means comprising work thickness compensating connections, including a pawl and a ratchet member, whereby uniform depression may be obtained for varying thicknesses of work, spring operated self-locking means acting automatically when the machine is at rest to lock the work support to the machine frame against movement from any work supporting position into which it may be raised by said first-mentioned means, and means connected to the pawl carrier arranged to act upon said locking means to release said lock before the pawl engages the ratchet member.

5. In a machine of the class described, a work support yieldingly pressed normally into work supporting position, a spring-operated lock acting when the machine is at rest to lock the work support to the machine frame against movement from any work supporting position into which it may be yieldingly pressed, automatic means for intermittently depressing the work support into work feeding position, said means comprising a reciprocating member and a second member constantly connected to the work support and arranged to be connected to said reciprocating member after said member has begun to move, and means operated by the initial movement of said member to release said lock.

[Claims 6 to 8 not printed in the Gazette.]

1,196,022. SHUTTLE FOLDING AND GUIDING DEVICE. FRANK M. PIERCE, Chicago, Ill., assignor to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1915. Serial No. 101. (Cl. 242—6.)



1. In a device of the class described a plate bent to afford a portion parallel thereto with the edge tapered off and another portion bent thereover and flared therefrom and tapered downwardly substantially uniformly with the taper of said other portion and terminating in a curved portion.

2. A device of the class described embracing a plate, one margin of which is bent thereover and flared outwardly along the upper edge, another portion of which is bent upwardly from the lower edge beneath said first mentioned portion, and a curved portion formed integral with the end of said first mentioned bent portion.

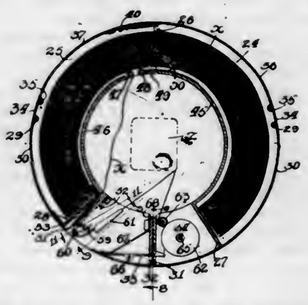
3. In a device of the class described the combination with a shuttle, of a folder plate member pivotally mounted thereon at an angle thereto.

4. In a device of the class described the combination with a shuttle, of stationary folding and creasing mechanisms adjustably mounted on the shuttle at an angle thereto.

5. In a device of the class described the combination with a shuttle, of unitary folding, guiding and creasing means adjustably secured at an angle thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,196,023. SHUTTLE. FRANK M. PIERCE and WILLIAM B. PIERCE, Chicago, Ill., assignors to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Original applications filed Aug. 11, 1910, Serial No. 576,758, and Aug. 7, 1911, Serial No. 642,685. Divided and this application filed Jan. 2, 1915. Serial No. 305. (Cl. 242—6.)



1. In a wrapping machine an annular shuttle having a compartment therein to receive folded wrapping material, and a tension device for said material on the inner side of the shuttle.

2. In a wrapping machine a chambered, rotatable shuttle having wrapping material therein in concentric folds, a folding nozzle through which the wrapping material is drawn from the inner side the folded package of wrapping material and acting to fold the wrapping material longi-

tudinally and direct it spirally around the material wrapped.

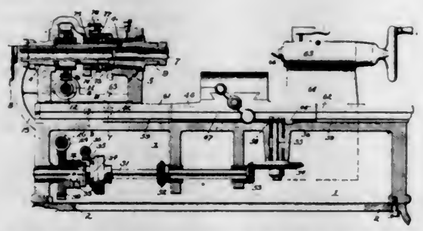
3. In a wrapping machine a rotatable annular shuttle having concentrically folded wrapping material therein discharging through the inner periphery, the shuttle thereby utilizing centrifugal force to obviate internal resistance to the feed of the wrapping material.

4. In a machine of the class described, a rotatable hollow, annular shuttle carrying folded wrapping material therein, having layers thereon arranged concentric with the axis of the shuttle.

5. In a machine of the class described, a rotatable shuttle comprising hingedly connected segments adapted to be opened to receive the article to be wrapped through the eye thereof and affording when closed a chamber to receive a package of folded wrapping material, means locking the shuttle closed, an eduction aperture for the wrapping material, and means for folding the edge of the wrapping material longitudinally during wrapping.

[Claims 6 to 25 not printed in the Gazette.]

1,196,024. LATHE. GEORGE G. PORTER and FRANK E. CABLE, Syracuse, N. Y., assignors to The Porter-Cable Machine Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 22, 1915. Serial No. 16,226. (Cl. 82—2.)



1. In a lathe, the combination of a bed; a guide-way extending outwardly from one side thereof; a tail-stock mounted on said way, the upper end of said stock overhanging the bed; and means carried by said tail-stock, adapted to draw the tail-stock into compressive clamping relation with the way, whereby distortion of the parts is prevented and alinement of the tail-stock is maintained.

2. In a lathe, the combination of a bed; a guide-way extending outwardly from and along one side thereof and formed as an integral part of the bed; a tail-stock mounted on said way; a clamping member mounted in said tail-stock and engaging one side of said way; a stem extending from said clamping member; and a nut mounted on the opposite end of said stem and bearing on the stock at a point close to the adjacent portion of the way, whereby distortion of the parts is prevented and alinement of the tail-stock maintained.

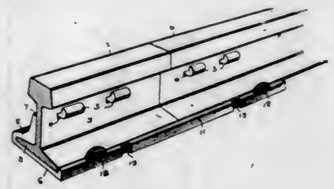
3. In a lathe, the combination of a bed; a head-stock mounted thereon and spaced away from the upper face of the bed; ways on said bed; a tool-carriage mounted on the ways; a guard plate extending outwardly from each end of the carriage, said plates being co-extensive in width of the upper face of the bed and overlying said bed and ways; and a tail-stock.

4. In a lathe, the combination of a bed; an outwardly-extending flange located upon each side of the bed adjacent one end thereof; a head-stock secured upon said flanges and spaced away at its lower side from the body of the bed; ways in the upper portion of the bed; a tool-carriage mounted on said ways; ways upon one side of the bed; a tail-stock mounted upon said last-named ways and provided with an overhanging upper end; and a guard extending outwardly from each end of the carriage, said guards being substantially coextensive of the width of the bed, and covering said bed and the carriage ways.

5. In a lathe, the combination of a bed; a head-stock secured at one end thereof and spaced away from the upper face of the bed; a tool-carriage slidably mounted upon the upper face of the bed; a guard extending outwardly from each end of the carriage, said guards being coextensive in width of the upper face of the bed, and one of said guards extending in alinement with the opening formed between the bed and the head-stock; and a tail-stock.

[Claims 6 to 14 not printed in the Gazette.]

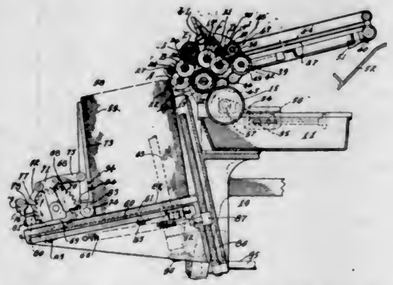
1,196,025. BOLTLESS RAIL-COUPLING. GEORGE PROBST, Sardis, Ohio. Filed May 11, 1916. Serial No. 96,835. (Cl. 239—6.)



1. In a rail coupling member, the combination with a pair of rails having slots therethrough, of a coupling member comprising a fish-plate section, a horizontal section integral therewith, a base section integral with the horizontal section, a flange integral with the base section, tongues on said flange adapted to be extended over the base of the rail, and curved fingers at the outer edge of the fish-plate section adapted to extend through said slots of the rails and interlock with the rails.

2. In a coupling member for rails, the combination with the meeting ends of a pair of rails, the webs of said rails having transversely disposed slots, the upper walls of which are rounded, of a coupling member comprising a fish-plate section, curved fingers adapted to extend through said slots and interlock with the webs of the rails, said fingers having concavities to coöperate with the rounded walls of the slots, a horizontal section integral with the fish-plate section, a base section integral with the horizontal section, and a vertically extending flange at the free edge of the base section, said horizontal section, base section and flange forming a seat for the base of the rail.

1,196,026. GLUING-MACHINE. JAMES D. REIFSNYDER, Philadelphia, Pa., and HARRY B. SMITH, Brooklyn, N. Y., assignors to Stokes & Smith Company, Summerdale, Pa., a Corporation of Pennsylvania. Filed May 17, 1915. Serial No. 28,612. (Cl. 91—50.)



1. A machine for completely coating one surface of a blank with an adhesive, comprising a member having a plurality of separated adhesive applying faces and a second member having a plurality of separated adhesive applying faces operating to guide the blank from said first named faces, and means for effecting a movement of the blank past said members in succession.

2. A machine for completely coating one surface of a blank with an adhesive, comprising a member having a plurality of separated adhesive applying faces and a second member having a plurality of separated adhesive applying faces operating to guide the blank from said first named faces, and another member having a plurality of adhesive applying faces substantially out of alinement with the faces of both of said first named members.

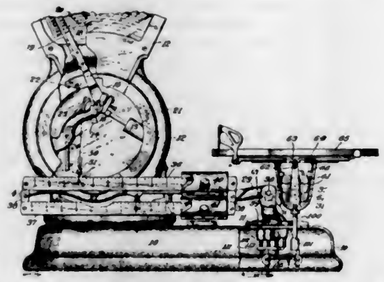
3. A machine for completely coating one surface of a blank with an adhesive, comprising a pair of rolls with glue-applying faces, said rolls arranged so that the periphery of one of said rolls projects beyond the periphery of the other of said rolls, whereby one of said rolls guides the blank from the other roll when said rolls are rotated.

4. A machine for completely coating one surface of a blank with an adhesive, comprising a pair of rolls each having collars with peripheral faces for applying the adhesive, the collars of one of said rolls disposed intermediate of the collars of the other of said rolls and means for supplying adhesive to said pair of rolls.

5. A machine for completely coating one surface of a blank with an adhesive, comprising a pair of rolls having collars with peripheral faces for applying the adhesive, the collars of one of said rolls disposed intermediate of the collars of the other of said rolls, and another roll having adhesive applying faces out of alinement with the said peripheral faces of said collars for applying an adhesive to the blank.

[Claims 6 to 30 not printed in the Gazette.]

1,196,027. SCALE. CHARLES EDWARD RIEDEL and WALTON J. BARNES, Detroit, Mich., assignors to Detroit Scale Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 4, 1915. Serial No. 59,522. (Cl. 73—104.)



1. In a scale, the combination of an indicating hand and pendulum connected thereto, of a scale beam of the first order of leverage, a scale platform on one end thereof, connections between the scale beam and pendulum, a tare beam adjacent the scale beam and attached thereto, the points of attachment of said beam being both located on said scale beam on the opposite side of the fulcrum from the scale platform, and a tare poise on said tare beam the said tare poise and tare beam by their weight and location at one side of the fulcrum being adapted to overbalance the scale beam and elevate the platform and at the same time maintain the pendulum in elevated position.

2. In a scale in combination, a main lever of the first order, a scale platform on one end of said lever, an indicating arm attached to the opposite end of the said lever, a pendulum associated with the indicating hand, a plurality of tare beams extending in the direction of the main lever and having points of attachment therewith, one point of attachment being adjacent the end of the lever which has the connection to the indicating hand and the other point of attachment being located adjacent the fulcrum but on the opposite side thereof from the scale platform whereby the entire weight of the tare beams is applied to the main lever on the opposite side of the fulcrum from the scale platform, and a plurality of tare poises on said tare beams, the weight of said poises being adapted to coöperate with the entire weight of the tare beams to overbalance the main lever, elevate the scale platform and maintain the pendulum in raised position until a load is placed on the scale.

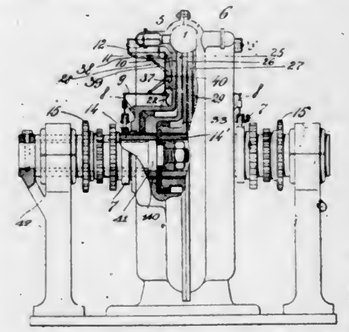
3. In a scale, in combination, a Y-shaped main scale lever of the first order, a scale platform on the Y-shaped end of said lever, indicator elements secured to the opposite end of the said lever, pendulum means associated with the indicator elements and the scale lever, and a tare beam and a poise thereon secured to said lever intermediate the indicator elements and the fulcrum of the lever, said tare beam and poise being adapted to overbalance the main scale lever and maintain the platform in elevated position; said tare beam and poise being adapted to swing the pendulum to upper position and to swing the indicator to normal zero position.

4. In a device of the class described, in combination, a scale lever comprising a Y-shaped lever having fulcrum pivots intermediate the ends of the Y arms, load supporting pivots on the ends of the arms of said lever, forwardly extending extensions from said lever at one side of the fulcrum, and tare devices connected to said extensions, said tare devices being adapted to overbalance the end of the lever supporting the load and maintain that portion of the lever elevated.

5. In a scale, the combination of a Y-shaped scale lever, a plurality of pivots on the bifurcated Y arms, one pair of said pivots forming the support for a scale platform and another pair of said pivots forming a fulcrum for the lever, said scale lever having a forwardly extending portion at the end opposite the bifurcated portions, a tare beam connecting the forwardly extending portion and one of the bifurcated arms, and a tare poise thereon coöperating with the tare beam to overbalance the main scale lever.

[Claims 6 to 17 not printed in the Gazette.]

1,196,028. ROTARY ENGINE. BERTOLD ROSEMAN-ROZEWSKI, Vienna, Austria-Hungary. Filed June 4, 1914. Serial No. 843,046. (Cl. 121—48.)



1. In a rotary motor the combination of an annular cylinder, having inlet and outlet ports for the motive fluid, located symmetrically around its circumference, three or more pistons revolving intermittently therein, each having a circular length which is an aliquot part of said cylinder, and each situated at the end of its stroke between said inlet and outlet ports, a common main motor shaft, two or more subsidiary shafts driving said main shaft, and disks mounted on said subsidiary shafts, carrying said pistons.

2. In a rotary motor the combination of an annular cylinder having inlet and outlet ports for the motive fluid located symmetrically around its circumference, valves controlling said ports, camlike operating devices common to all said valves, three or more pistons revolving intermittently therein, each having a circular length which is an aliquot part of said cylinder, and each situated at the end of its stroke between said inlet and outlet ports and means whereby said valves can be operated by said pistons independently of said cam-like devices.

1,196,029. METHOD FOR PRODUCING A TITANIUM COMPOUND. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Nov. 29, 1912. Serial No. 733,943. (Cl. 23—13.)

1. The method of treating a substance containing titanic oxid (TiO_2) and iron oxid which comprises heating said substance in presence of a reducing agent until titanic oxid is reduced to titanous oxid (Ti_2O_3); subjecting the resulting melt to the action of a bath containing sulfuric acid (H_2SO_4) in proportion sufficient to insure, as far as possible, formation, in solution, of titanous sulfate; adding about one half of one per cent., in volume, of nitric acid to the bath; and diluting and boiling it until a basic titanium sulfate is precipitated.

2. The method of treating a substance containing titanic oxid (TiO_2) and iron oxid which comprises heating said substance together with carbon until titanic oxid is reduced to titanous oxid (Ti_2O_3); subjecting the resulting melt to the action of a bath containing sulfuric acid (H_2SO_4) in proportion sufficient to insure, as far as possible, formation, in solution, of titanous sulfate; adding about one half of one per cent., in volume, of nitric acid to the bath; and diluting and boiling it until a basic titanium sulfate is precipitated.

3. The method of treating a substance containing titanic oxid (TiO_2) and iron oxid which comprises heating said substance in presence of a reducing agent until titanic oxid is reduced to titanous oxid (Ti_2O_3); subjecting the resulting melt to the action of a bath containing sulfuric acid (H_2SO_4) in proportion sufficient to insure, as far as possible, formation, in solution, of titanous sulfate; diluting and boiling the bath and increasing rapidity and completeness of resulting precipitation of basic titanium sulfate by meanwhile adding nitric acid to the bath.

4. The method of treating a substance containing titanic oxid (TiO_2) and iron oxid which comprises heating said substance together with carbon until titanic oxid is reduced to titanous oxid (Ti_2O_3); subjecting the resulting melt to the action of a bath containing sulfuric acid (H_2SO_4) in proportion sufficient to insure, as far as possible, formation, in solution, of titanous sulfate; diluting and boiling the bath and increasing rapidity and completeness of resulting precipitation of basic titanium sulfate by meanwhile adding nitric acid to the bath.

1,196,030. METHOD OF TREATING TITANIC OXID. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Mar. 10, 1915. Serial No. 13,478. (Cl. 23—13.)

1. The method of producing basic titanic sulfate which comprises, digesting a titaniferous material with sulfuric acid so as to produce titanic sulfate, dissolving the resulting mass in water, and boiling the resulting bath until the basic titanic sulfate is precipitated.

2. The method of producing basic titanic sulfate from a material containing titanic oxid (TiO_2) which comprises digesting said material at say 100° C. to 150° C. with, say, 2.5 to 2.6 parts by weight of sulfuric acid (H_2SO_4) to one part of the titanic oxid, dissolving the mass in, say, three times its volume of water, diluting the resulting bath until it contains from .5% to 3% of titanic oxid, boiling the bath until the basic titanic sulfate is precipitated, withdrawing from the bath the basic titanic sulfate, and drying it at, say, 100° C.

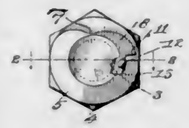
3. The method of producing basic titanic sulfate from a titaniferous-ferruginous material, which comprises digesting said material with sulfuric acid so as to produce titanic sulfate, dissolving the resulting mass in water, reducing iron constituents to ferrous state, and boiling the resulting bath until basic titanic sulfate is precipitated.

4. The method of producing basic titanic sulfate from a titaniferous-ferruginous material which comprises digesting said material with sulfuric acid so as to produce titanic sulfate, dissolving the resulting mass in water; adding thereto an oxidizing agent less in quantity than required to completely oxidize all the titanous sulfate present, and boiling the resulting bath until basic titanic sulfate is precipitated.

1,196,031. TITANIUM COMPOUND. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Feb. 10, 1916. Serial No. 77,469. (Cl. 23—13.)

As a new product, the herein described titanium compound characterized as consisting essentially of basic titanium sulfate and as rendering by analysis a preponderance of titanic oxid, less combined water than titanic oxid, and less sulfuric anhydrid than combined water.

1,196,032. NUT-LOCK. GEORGE W. RUMBALL, Jr., Beverly, Mass., assignor of one-fourth to Thomas O. Gillatt, Allston, Mass. Filed May 22, 1915. Serial No. 29,864. (Cl. 151—25.)



1. In combination with a bolt and a nut threaded thereon, a split resilient washer for removable engagement with the bolt above the nut, and a ball mounted in the washer and held in locked engagement with the bolt by the washer for preventing outward movement of the nut on the bolt.

2. In combination with a bolt and a nut threaded thereon, a split resilient washer for removable engagement with the bolt above the nut, a ball receivable within the washer adjacent one side of the slit, and a locking lug projecting from the washer on the other side of the slit for holding the ball in engagement with the bolt for preventing outward movement of the nut on the bolt.

3. In combination with a bolt and a nut threaded thereon, a split resilient washer for removable screw threaded engagement with the bolt above the nut for preventing outward movement of the nut on the bolt, and ball clutch means mounted within the washer for maintaining the washer in locked engagement with the bolt.

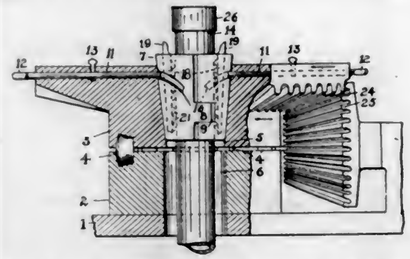
4. In combination with a bolt and a nut threaded thereon, a split washer engageable on the bolt arranged in intimate contact with the nut, a resilient portion provided on the washer, a ball receivable within the washer and held in engagement with the threads on the bolt through the medium of the resilient portion for locking the washer on the bolt and consequently preventing outward movement of the nut on the bolt.

5. In combination with a bolt and a nut threaded thereon, a split washer engageable on the bolt, the outer periphery of the washer being reduced to provide a resilient portion, the proximate ends of the washer being spaced, said washer being provided with a recess, a ball insertible within the recess when the resilient portion is moved, and a lock on the end of the resilient portion for holding the ball in biting engagement with the threads for consequently preventing outward movement of the nut on the bolt.

1,196,033. ROTARY WELL-DRILLING APPARATUS. PHILIP A. SCHMUCK, Pittsburgh, Pa. Filed Feb. 12, 1916. Serial No. 77,884. (Cl. 255—23.)

1. In a well-drilling apparatus, a rotary table having a central vertical opening, a vertical bushing therein, pipe-engaging devices, and magazines removably inserted in the bushing and removably containing the pipe-engaging devices.

2. In a well-drilling apparatus, a rotary table having a central vertical opening, a vertical bushing therein, rotatable pipe-engaging grips, and magazines removably inserted in the bushing, the said magazines each having a pocket open toward the inner side and containing a plurality of said grips superposed.



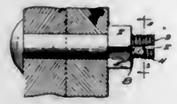
3. In a well-drilling apparatus, a rotary table having a central vertical opening, a vertical bushing therein, pipe-engaging devices, magazines removably inserted in the bushing and provided each with a pocket, and means for removably retaining the devices in each pocket.

4. In a well-drilling apparatus, a rotary table having a central vertical opening, a vertical bushing therein provided with longitudinal grooves in its internal surface, rotatable pipe-engaging grips, and magazines removably inserted in the grooves in the bushing, each magazine having a vertically arranged pocket open toward the inner side and containing one or more of the said grips.

5. In a well-drilling apparatus, a rotary table having a central vertical opening, a vertical bushing therein, pipe-engaging devices, and magazines removably inserted in the bushing, one of the magazines being composed of a plurality of vertical sections with their adjacent ends detachably connected together and each section containing means for retaining one or more of the said pipe-engaging devices.

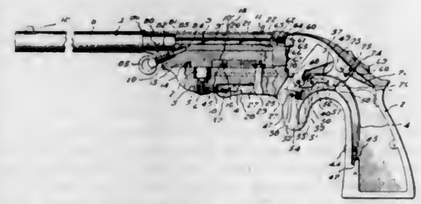
[Claims 6 to 10 not printed in the Gazette.]

1,196,034. NUT-LOCK. CHARLES F. SCHNEIDER, Ocala, Fla. Filed Nov. 12, 1914. Serial No. 871,724. (Cl. 151—31.)



A nut-lock including a split-end nut-equipped bolt having its threads mutilated to produce a reduction, and a wedge insertible into the split of said bolt, said wedge having a narrowed extension for bending into said reduction of the bolt.

1,196,035. PISTOL. ROSS SEMPLE, Washington, Pa., assignor of one-half to Florence L. Steward, Washington, Pa. Filed Oct. 3, 1914. Serial No. 864,765. (Cl. 42—12.)



1. In a pistol structure, a hollow stock, a hammer and trigger mechanism mounted in said stock, a barrel supporting projection formed integrally with the front end of said stock, a barrel carrying block mounted upon said projection, means pivotally connecting the barrel carrying block with the projection for horizontal swinging movement, a barrel positioned upon said barrel block, means mounted in the projection and engaging portions of the under face of the block for limiting outward movement of said barrel carrying block, and means extending longitudinally through the projection engaging the hammer and a cam on the pivot of the barrel carrying block for cocking said hammer upon horizontal swinging movement of said barrel carrying block.

2. In a pistol structure, a hollow stock, a barrel supporting projection formed integral with the front end of said stock, a hammer and trigger mounted in said stock, a barrel carrying block mounted upon said projection, a pivot pin extending upwardly through the projection, a collar mounted upon the under face of the barrel carrying block and mounted upon the pivot pin of the projection permitting the barrel carrying block to swing horizontally upon said projection, said collar provided in its side face with a cam recess, a cocking rod positioned longitudinally through the projection, one end engaging the recess in the collar and its opposite end engaging the hammer, whereby upon horizontal movement of the block the same will be forced rearwardly cocking said hammer, and means positioned in the under face of the block for ejecting the shell from the barrel upon horizontal swinging movement thereof, and means on the projection engaging the block whereby the horizontal movement of the block will be limited, and means in the projection engaging the block for preventing horizontal swinging movement of the same.

3. A pistol structure comprising a hollow stock, a hammer and trigger mounted in said stock, a barrel supporting projection formed integrally with the front end of said stock, a barrel carrying block mounted upon said projection, a barrel carried by said barrel carrying block, a collar secured to the under face of said block, a pivot pin extending up through the projection adjacent its forward end and pivotally journaled in said collar of the block and allowing the latter to swing horizontally thereupon, means in said projection for engaging the under face of said block for preventing horizontal swinging movement of the same, an extracting member carried by said block and means in said block for engaging the extractor for ejecting a shell upon horizontal swinging movement of said barrel carrying block, a rod slidable longitudinally through the projection one end engaging the collar and the opposite end engaging the hammer upon horizontal swinging movement of the barrel carrying block for cocking the hammer.

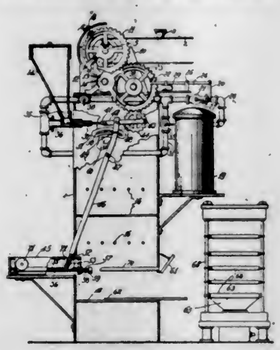
4. In a pistol structure, a hollow stock, a barrel supporting projection formed integral with the front end of said stock, a barrel carrying block mounted upon said projection and pivotally connected thereto for horizontal swinging movement, a barrel carried by said block, said barrel carrying block having a collar on its under face, a pin carried by the forward end of said projection to fit into said collar and allow the same to swing outwardly and horizontally, a hammer mounted within said stock, means in said stock for engaging said hammer for holding the same in a cocked position, a cocking rod slidable longitudinally through the barrel supporting projection one end engaging the collar and its opposite end engaging the hammer whereby upon horizontal swinging movement of said barrel the hammer will be cocked.

1,196,036. DEVICE FOR BUILDING MICA-BOARDS OR SIMILAR ARTICLES. WILLIAM HENRY SILLS, Chicago, Ill. Filed Apr. 18, 1913. Serial No. 762,016. (Cl. 154—1.)

1. In combination with means for conveying flake material in a confined space toward a support, a receptacle for compressed air and a receptacle for adhesive and means for bringing said receptacles periodically into communication with said confined space.

2. In combination with means for conveying flake material in a confined space toward a support, means for

blowing air into the confined space, a receptacle for adhesive located outside said confined space, and means for periodically bringing said receptacle and said air blowing means into communication with said space.



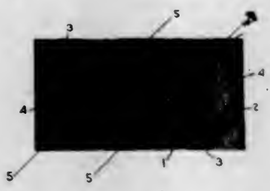
3. In combination with means for conveying flake material in a confined space toward a support, means for periodically blowing air into the confined space, a receptacle located outside said space, and means for discharging portions of the contents of the receptacle into said space together with the air.

4. In combination with means for conveying flake material in a confined space toward a support, a plurality of pipes, means for forcing air periodically into the said space through said pipes, a receptacle for adhesive, and means for periodically connecting said receptacle with said pipes.

5. In combination with means for conveying flake material in a confined space toward a support, and means for conveying periodically air charged with an adhesive into the confined space, for the purpose set forth.

[Claims 6 to 15 not printed in the Gazette.]

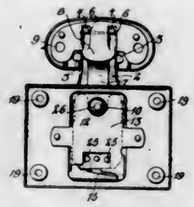
1,196,037. WOVEN FABRIC. JOHN SKINNER, Northampton, Mass. Filed May 3, 1915. Serial No. 25,397. (Cl. 139—9.)



A woven fabric comprising a sheet of warp cords, relatively small filling threads interwoven with said warp cords in parallel zones which extend diagonally of said warp cords with the warp cords floating between said zones whereby the fabric may be separated by severance along a medial line of each of said zones into strips having interwoven edge sections with floating warp cords extending therebetween and diagonally thereto which strips by reason of the relatively small size of the filling threads may be superimposed without presenting a materially greater total thickness at the edge sections than at the medial sections.

1,196,038. HASP FOR TRUNK-LOCKS. CLARENCE E. SMITH, Shelton, Conn., assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn., a Corporation of Connecticut. Filed Jan. 19, 1916. Serial No. 73,032. (Cl. 70—115.)

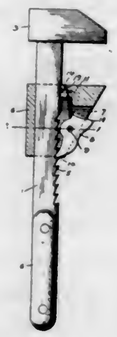
1. A hasp for sliding bolt locks comprising an apertured plate, a longitudinally apertured and transversely slotted stud projecting from the inside face of said plate and a rivet pin passed through said plate and stud, the said rivet pin having one end provided with a head which bears against the outside face of said plate and having its opposite end upset against the head of the stud.



2. A hasp for sliding bolt locks comprising an apertured plate, a longitudinally apertured and transversely recessed stud projecting from the inside face of said plate, an apertured sheet metal spring interposed between said plate and stud and a rivet pin passed through said plate, spring and stud, the said pin having one end provided with a head which bears against the outside face of said plate and having its opposite end upset against the head of said stud.

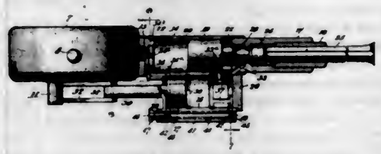
3. A hasp for sliding bolt locks comprising an apertured plate, a hollow stud having its head provided with an aperture and having its side wall recessed to form a shoulder for entering into interlocking engagement with the bolt of the lock, an apertured sheet metal spring interposed between said plate and stud, and a rivet passed through the apertures in said plate, spring and stud for fastening the same together.

1,196,039. WRENCH. LOGAN SMITH, Oakley, Ill., assignor to Eddie E. Smith, Decatur, Ill. Filed Feb. 5, 1916. Serial No. 76,434. (Cl. 81—140.)



A wrench comprising a shank, a stationary jaw on one end of said shank, a handle formed on the opposite end of said shank, said shank provided with rack teeth on one edge, a movable jaw slidably mounted upon said shank and having a recess formed in one face, a pawl mounted in said recess, its nose normally engaged with said teeth, a flat leaf spring rigidly secured by one of its ends in one wall of said movable jaw and having its opposite end extending into said recess for engagement against the inner side of said pawl to retain the nose of the latter in engagement with the teeth, and a fastening member secured in said jaw and extending through said spring to rigidly retain the latter against movement, the head of said securing member abutting said shank and preventing any outward movement of the same.

1,196,040. PULSATING APPARATUS. WILLIAM A. SMITH, Denver, Colo., assignor, by mesne assignments, to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Feb. 25, 1913. Serial No. 750,606. (Cl. 125—20.)



1. A pulsating apparatus, comprising a cylinder and a piston therein operating on a tool, a second cylinder having spaced ports communicating with the first cylinder, a motor operated solid piston in the second cylinder, and means for equalizing the pressure on opposite sides of said solid piston at each end of its stroke, said means permitting the compression of fluid in advance of the piston during its stroke.

2. A pulsating apparatus, having a cylinder member and a piston operating therein, another cylinder member and a piston operating therein, and passageways connecting the end portions of the cylinder members, one of said cylinder members having by-passes in its end portions comprising annular grooves that are spaced apart a distance greater than the thickness of the piston therein, and channels connecting said grooves.

3. A pulsating apparatus provided with cylinders having ports communicating with their corresponding ends, a solid chamber piston located in one cylinder, a solid piston located in the other cylinder, one of said cylinders having spaced annular channels in each end, and longitudinal channels connecting the same, the channels being uncovered by the piston in said cylinder at the ends of its stroke.

4. A pulsating apparatus, having a cylinder having a reduced pocket in its front end, a driven piston in the cylinder having a reduced plug movable into and out of the pocket, a chuck carried by the cylinder, a tappet located in the chuck and extending into the pocket, a check valve located in the rear end of the cylinder, another cylinder, a reciprocatory piston operating therein, spaced ports connecting the front end of the latter cylinder with the former cylinder, one of said ports opening into the pocket, the other opening into said cylinder in rear of the pocket, and spaced ports connecting the rear ends of the cylinders, one of said latter ports opening in rear of the check valve, the other in advance of the some.

5. A pulsator having communicating cylinders, pistons located in the cylinders, a by-pass conduit located longitudinally of one of the cylinders and having communication therewith, and a valve located longitudinally in said conduit for controlling the same.

[Claims 6 and 7 not printed in the Gazette.]

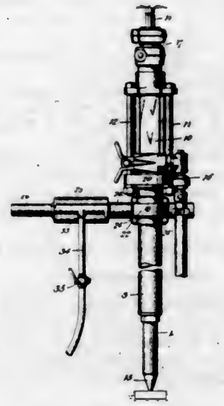
1,196,041. ROCK-DRILLING APPARATUS. WILLIAM A. SMITH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Dec. 27, 1915. Serial No. 68,794. (Cl. 255—43.)

1. The combination with drilling apparatus, of a handle therefor, and means mounted on the handle for turning the drilling apparatus.

2. The combination with drilling apparatus, of means for bodily turning the same, and a handle for holding the turning means from moving with the drilling apparatus.

3. The combination with drilling apparatus, of means for bodily oscillating the same, and a handle connected to the oscillating means for manually holding it from turning with the drilling apparatus.

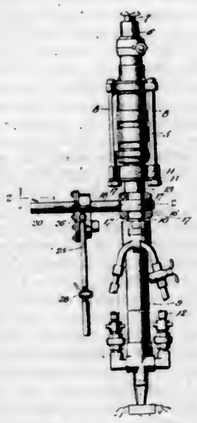
4. The combination with drilling apparatus, including a motor, of fluid operated feeding means for the drilling apparatus, and automatic means associated with the feeding means and moving with the motor for turning the latter.



5. The combination with drilling apparatus, including a motor, of fluid operated feeding means for the drilling apparatus, including slidably telescoping members, one of which is connected to the drilling motor, and power driven means mounted on said member and moving with the same and the motor for bodily turning the latter.

[Claims 6 to 21 not printed in the Gazette.]

1,196,042. ROCK-DRILLING APPARATUS. WILLIAM A. SMITH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Dec. 27, 1915. Serial No. 68,795. (Cl. 255—43.)



1. The combination with drilling apparatus, including a drilling motor, and telescoping and relatively rotatable feeding members therefor, one of which is connected to the motor, of means for completely rotating the drilling motor and the feeding member connected thereto, and means for supplying fluid under pressure to the drilling apparatus, said supply means permitting said rotation.

2. The combination with drilling apparatus, including a drilling motor, a feed cylinder, and a feed piston operating in the feed cylinder and fixed to the drilling apparatus, of means for completely rotating the feed piston and motor bodily, and means for supplying fluid under pressure to the drilling apparatus, said supply means permitting said rotation.

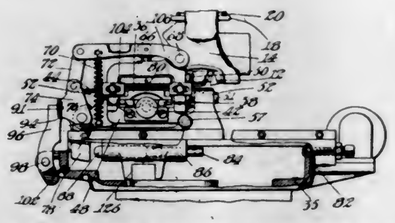
3. The combination with drilling apparatus, including a drilling motor, a feed cylinder, and a feed piston operating in the feed cylinder and fixed to the drilling motor, of means for completely rotating the feed piston and motor bodily, and means connected to the feed cylinder for supplying fluid under pressure to the drilling apparatus, said supply means permitting said rotation.

4. The combination with drilling apparatus, of means for bodily rotating the same, comprising a gear fixed to said apparatus, a rotary motor, and a worm operated by the motor and meshing with the gear.

5. The combination with drilling apparatus, of means for bodily rotating the same, comprising a gear fixed to said apparatus, and a rotary motor having a shaft disposed transversely to the drilling apparatus and geared to said gear.

[Claims 6 to 10 not printed in the Gazette.]

1,196,043. RECESSING-MACHINE. ALVAH C. SPENCER, Beverly, and ANDREW EPPLER, Lynn, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 26, 1912. Serial No. 727,914. (Cl. 69—1.)



1. A machine of the class described comprising, in combination, a cutter, a reciprocating carriage to carry the work across the field of operation of said cutter, spring operated work clamping means upon said carriage, means for automatically actuating said clamping means to permit said spring to effect the clamping of the work as the carriage starts to present the work to the cutter, and means for moving said clamping means into work releasing position against the tension of said spring after the work has been presented to the cutter.

2. In a machine of the class described, a cutter, a reciprocating carriage arranged to carry the work across the field of operation of said cutter and then to return to work receiving position, self-contained work clamping means upon said carriage, means at the initial end of the path of movement of said carriage for rendering said clamping means operative, and means at the other end of said path of movement for rendering said clamping means inoperative, whereby the work may be removed from said clamping means after the carriage has carried said work across the field of operation of the cutter, said clamping means being constructed to maintain itself in operative condition during the work carrying movement of said carriage.

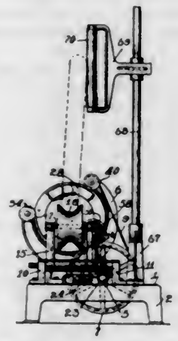
3. In a machine of the class described, a cutter, a reciprocating carriage arranged to carry the work across the field of operation of said cutter and then to return to work receiving position, self-contained work clamping means upon said carriage, means at the initial end of the path of movement of said carriage for rendering said clamping means operative, and means at the other end of said path of movement for rendering said clamping means inoperative, said clamping means being constructed to maintain itself in clamping condition during the work carrying movement of said carriage and to maintain itself in released condition during the return movement of said carriage.

4. In a machine of the class described, a cutter, a reciprocating carriage arranged to carry the work across the field of operation of said cutter and then to return to work receiving position, spring operated self-contained work clamping means upon said carriage, constructed to maintain itself either in operative condition or in inoperative condition, and means at the initial end of the path of movement of said carriage operating to hold said clamping means inoperative until said carriage begins to move but constructed to cause said clamping means to become operative when said carriage does begin its work presenting movement.

5. In a machine of the class described, a cutter, a reciprocating carriage arranged to carry the work across the field of operation of said cutter, spring-operated work clamping means upon said carriage, means at one end of the path of movement of said carriage for holding said clamping means in inoperative condition arranged to permit said clamping means to become operative as the carriage begins its work presenting movement, and means at the other end of said path of movement for moving said clamping means into work releasing position.

[Claims 6 to 10 not printed in the Gazette.]

1,196,044. WRAPPING-MACHINE. WILLIAM C. STEVENS, Akron, Ohio, assignor to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 19, 1912. Serial No. 715,745. (Cl. 242—6.)



1. A bed or table, a shaft journaled thereon having a tight and a loose pulley, a grooved supporting and driving wheel rigidly secured on the shaft and about the middle of the table, a yoked standard secured on said bed, a grooved pulley journaled on each arm thereof near its extremity and above the grooved driving wheel, a belt trained about the grooved driving wheel and one of said pulleys, an annular shuttle supported on and between the grooved driving wheel and grooved pulley and bearing against one run of the belt, grooved feed rollers journaled at each side of the shuttle and at a right angle with the axis thereof to support the annular body to be wrapped, connections for driving the same from said shaft at a less rate of speed than the rotation of the shuttle, a standard on said bed, and a roller adjustably supported thereon and adapted to support the top of the annular body when the machine is in operation.

2. In a wrapping machine of the class described an annular shuttle, grooved pulleys each engaging and acting to support said shuttle in upright position at more than two points, a belt trained about certain of said pulleys, one run thereof bearing against the shuttle to drive the same, one of said grooved pulleys acting to hold the shuttle against the belt, and independently adjustable swingingly mounted rotatable means for supporting an annular shaped article in position to be wrapped engaged through the eye of said shuttle, said means movable radially of the article for adjustment of the article.

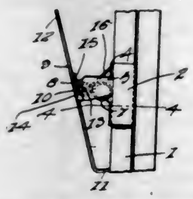
3. In a device of the class described a rotatable shuttle, paper carrying means thereon, rotatable means adapted to support said shuttle at more than two points, a belt trained about two of said rotatable means and contacting a portion of the periphery of said shuttle, means driving one of said rotatable means to rotate the shuttle, and swingingly mounted mechanisms to support an annular shaped article in position to be wrapped, adjustable radially of said article to shift the same.

4. A device of the class described comprising a main driving shaft, an annular upright shuttle driven thereby, shafts extending transversely of the main shaft, one at each side of the shuttle, an outwardly directed yoke journaled eccentrically on each of said shafts, a grooved pulley journaled at the upper end of each yoke opposite the eye of the shuttle, worms on the main driving shaft, a worm gear journaled on each of said transverse shafts intermeshing with said worms on the main shaft, driving connections between the worm gears and said grooved pulleys, and screw shafts, one at each side of the machine and engaging the respective yokes and acting to swing their grooved pulleys inwardly or outwardly to vary the adjustments of the machine as to the size of the article to be wrapped.

5. A machine of the class described embracing an annular shuttle, a grooved driving wheel and grooved pulleys engaging the periphery of said shuttle therebetween at substantially equal distances apart, a belt trained around the driving wheel and one of said pulleys and bearing against the periphery of the shuttle to drive the same, means driving the driving wheel, grooved supporting rolls for the article to be wrapped adjustably supported at each side the shuttle substantially opposite the eye thereof, means driving the same at a less rate of speed than the shuttle, and an adjustable guide rail for supporting the top of the body to be wrapped.

[Claims 6 to 16 not printed in the Gazette.]

1,196,045. ATTACHMENT FOR RULES. RAY STRIEFF, Monroe, Wis. Filed Apr. 14, 1915. Serial No. 21,282. (Cl. 24—3.)

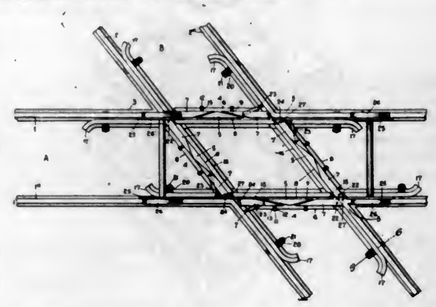


1. A rule attachment of the character described comprising a pair of side pieces, flanged at the opposite longitudinal edges of the side pieces, ears extending in spaced relation from the side pieces, a spring connecting the side pieces for retaining the latter in frictional engagement with the leg of a rule and a spring pressed clip pivoted between the ears to hold the devices in place on the garment of the wearer.

2. A rule attachment of the character described comprising a pair of side pieces, flanges at the opposite longitudinal edges of the side pieces, ears extending in spaced parallel relation from the side pieces, a spring connecting the side pieces for retaining the latter in frictional engagement with the sides of the leg of a rule, a clip having a pair of spaced parallel ears pivoted between the first-mentioned ears, a pin forming a pivot for the clip and a spring surrounding the pin, one end of said spring bearing against the clip and the other end of the spring adapted to bear against the rule.

1,196,046. RAILROAD-CROSSING. ROBERT CAMM SUTPHIN, Corydon, Ky., assignor of one-fourth to Lawrence O. Stapp and one-fourth to James E. Stapp, Corydon, Ky. Filed Aug. 24, 1915. Serial No. 47,132. (Cl. 104—116.)

1. The combination of intersecting main tracks, corner rails at the point of intersection of the main track rails, crossing rails between the corner rails, each crossing rail having longitudinally movable end sections, normally in contact with the corner rails, laterally movable guard rails normally in contact with the corner rails and crossing rails and yieldable laterally by the action of the wheel flanges, and connections between the guard rails and end sections of the crossing rails for moving the latter inwardly by the movement of the guard rails, to provide gaps for the passage of wheel flanges, while the unmoved end sections of the other crossing rails form with the corner rails continuous tread surfaces for the car wheels, a guard rail of one track being crossed by both guard rails of the crossing track, and the guard rails being recessed at the points where they cross each other, whereby all the guard rails lie in a common plane.



2. The combination of corner rails for track crossings, crossing rails between the corner rails, and each latter rail consisting of a central fixed section and longitudinally movable end sections normally in contact with the corner rails, movable guard rails located normally in contact with the inner edges of the crossing and corner rails and movable laterally, and means connecting the end sections of the crossing rails with the adjacent guard rails, whereby the latter move the end sections inwardly to permit the flanges of the car wheels to pass, a guard rail of one track being crossed by both guard rails of the crossing track, and the guard rails being recessed at the points where they cross each other, whereby all the guard rails lie in a common plane.

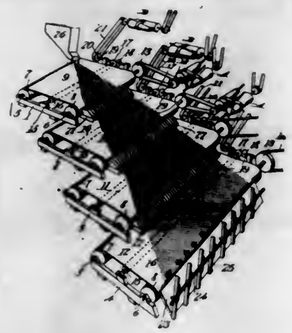
3. The combination of corner rails for track crossings, crossing rails between the corner rails and including gap-closing means, and movable guard rails having slidable overlapping joints at the points of crossing and operatively connected with the gap-closing means for moving the same to open position for permitting the passage of wheels, a guard rail of one track being crossed by both guard rails of the crossing track, and the guard rails being recessed at the points where they cross each other, whereby all the guard rails lie in a common plane.

4. The combination of a pair of opposed corner rails for a track crossing, a crossing rail extending between the vertices of the corner rails and comprising a fixed central section and longitudinally movable end sections, guard rails associated with the corner rails and movable laterally therefrom, connections between the end sections of the crossing rail and the guard rails, whereby the end sections are moved inwardly from the corner rails by the lateral movement of the guard rails, and means for slidably holding the inner ends of the outer sections with respect to the central section, while maintaining all the sections in alinement, a guard rail of one track being crossed by both guard rails of the crossing track, and the guard rails being recessed at the points where they cross each other, whereby all the guard rails lie in a common plane.

5. The combination of a pair of corner rails for an oblique track crossing, a connecting rail extending between the vertices of the corner rails, said crossing rail having longitudinally movable end sections normally in engagement with the corner rails, guard rails to which the outer ends of the said movable sections of the crossing rail are connected, a link between one of the end sections and the adjacent guard rails and means for yieldingly holding the guard rails in contact with the corner rails, whereby

the wheel flanges will move the guard sections inwardly toward each other and separate the end sections of the connecting rail from the corner rails.

1,196,047. PROCESS OF AND APPARATUS FOR SIZING OR CLASSIFYING COMMINUTED MATERIAL. HENRY M. SUTTON, WALTER L. STEELE, and EDWIN G. STEELE, Dallas, Tex. Filed Feb. 5, 1914. Serial No. 816,754. (Cl. 83—54.)



1. The process of sizing material, consisting in transporting material composed of grains of varying sizes on a series of successive supports, inclined transversely to the direction of transporting movement, and subjecting said material to gravitative impulses adapted to deviate the components of said material from the direction of transport in proportion to their respective sizes, progressively varying said gravitative impulses upon the successive supporting surfaces, and separately collecting the separated sizes of material from the last supporting surface.

2. The process of sizing material, consisting in transporting material composed of grains of varying sizes on a series of successive supports inclined transversely to the direction of transporting movement, and subjecting said material to gravitative impulses adapted to deviate the components of said material from the direction of transport in proportion to their respective sizes, progressively varying said gravitative impulses upon the successive supporting surfaces, transferring the material in its distributed condition from one support to a corresponding extent of the upper portion of a succeeding support, and separately collecting the separated sizes of material from the last supporting surface.

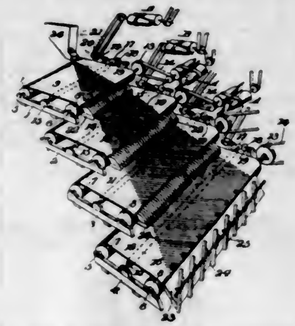
3. The process of sizing material, consisting in transporting material composed of grains of varying sizes, on a series of successive supports inclined transversely to the direction of transporting movement, and subjecting said material to undulatory vibrations adapted to cause the components of said material to deviate from the direction of transport in proportion to their respective sizes, progressively varying said undulatory vibrations upon the successive supporting surfaces, and separately collecting the separated sizes of material from the last supporting surface.

4. The process of sizing material, consisting in transporting material composed of grains of varying sizes on a series of successive continuously moving supports inclined transversely to the direction of continuous movement, subjecting said material to undulatory vibrations adapted to cause the components of said material to deviate from the direction of transport in proportion to their respective sizes, progressively varying said undulatory vibrations upon the successive supporting surfaces, progressively varying the speed of transport upon the successive supporting surfaces, and separately collecting the separate sizes of material from the last supporting surface.

5. The process of sizing material, consisting in transporting material composed of grains of varying sizes on a series of transversely inclined successive supports, and subjecting said material to undulatory vibrations and to gravitative impulses to deviate the components of said material from the direction of transport in proportion to their respective sizes, progressively varying said undulatory vibrations and gravitative impulses upon the successive supporting surfaces, and separately collecting the separated sizes of material from the last supporting surface.

[Claims 6 to 24 not printed in the Gazette.]

1,196,048. PROCESS OF AND APPARATUS FOR SIZING OR CLASSIFYING COMMINUTED MATERIAL. HENRY M. SUTTON, WALTER L. STEELE, and EDWIN G. STEELE, Dallas, Tex. Original application filed Feb. 5, 1914, Serial No. 816,754. Divided and this application filed Oct. 8, 1915. Serial No. 54,748. (Cl. 83—54.)



1. The process of sizing material, consisting in transporting material composed of grains of varying sizes on a series of successive supports, and subjecting said material to gravitative impulses adapted to deviate the components of said material from the direction of transport in proportion to their respective sizes, progressively varying the speed of transport upon the successive supporting surfaces, and separately collecting the separated sizes of material from the last supporting surface.

2. The process of sizing material, consisting in supporting and transporting material composed of grains of various sizes on a series of successive continuously moving transversely inclined supporting surfaces to cause the particles to deviate from the line of transporting movement in proportion to their respective sizes, progressively varying the speed of transport upon the successive supporting surfaces, and separately collecting the separate sizes of material from the successive supporting surfaces.

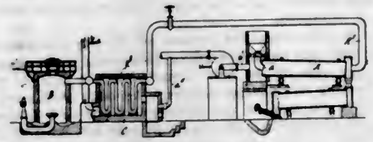
3. The process of sizing material consisting in supporting and transporting material composed of grains of varying sizes on a series of successive continuously moving supports inclined transversely to the direction of transporting movement to cause the particles to deviate from the line of transporting movement in proportion to their respective sizes, progressively varying the speed of transport upon the successive supporting surfaces, and separately collecting the separated sizes of material from the last supporting surface.

4. The process of sizing a mass of solid material consisting in progressively and continuously transporting material composed of grains of varying sizes on a series of continuously moving transversely inclined supporting surfaces, and subjecting said material to the action of gravity to cause the particles to move transversely thereon in proportion to their respective sizes, transferring said material in its distributed condition from one surface to the adjacent surface, so as to advance the material in its movement from one surface to the adjacent surface, arresting the movement of the material deposited from one surface to the adjacent surface, progressively varying the speed of transport upon the successive supporting surfaces, and separately collecting the separate sizes of material from the last supporting surface.

5. In a machine for sizing solid material, a series of continuously moving sizing surfaces arranged in line of continuous movement and inclined transversely to the direction of continuous movement, means for transferring material discharged from the end of one continuously moving surface in distributed condition to the opposite end of the adjacent surface at a higher point, means for progressively varying the speed of travel of the successive continuously moving surfaces, and means for separately collecting the separated sizes of material discharged from the last supporting surface.

[Claims 6 to 13 not printed in the Gazette.]

1,196,049. PROCESS FOR REMOVING IRON FROM TIN ORES. GÜNZEL VON RAUSCHENPLAT, Steglitz, Germany, assignor to Barilla Limited, London, England, a Corporation of Great Britain. Filed Jan. 28, 1914. Serial No. 815,029. (Cl. 75—17.)



1. The herein described process for removing iron from iron-bearing tin ores, which consists in subjecting the ore to a reducing treatment at a temperature at which the tin will remain in a form insoluble in acids, while the iron contents will be reduced to a form readily soluble in acids, and then subjecting the resulting product to treatment with acid.

2. The herein described process for removing iron from ferruginous tin ores, which consists in subjecting the material, in a condition in which the tin is present as oxid, to a reducing treatment at a temperature at which the tin will remain in a form insoluble in acids, and then subjecting the resulting product to treatment with acid.

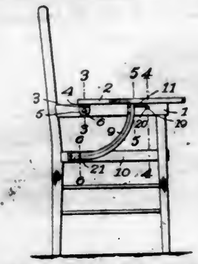
3. The herein described process for removing iron from ferruginous tin ores, which consists in subjecting the material, in a condition in which the tin is present in oxidized form, to a reducing treatment at a temperature not exceeding 500° centigrade, so as to leave the tin in a form in which it is insoluble in acids, while reducing the iron contents to a form readily soluble in acids, and then subjecting the resulting product to treatment with acid, so as to combine the iron contents with the acid while leaving the tin contents unaffected.

1,196,050. CHAIR. EDWARD G. WATKINS, Gardner, Mass., assignor to Heywood Brothers and Wakefield Company, Gardner, Mass., a Corporation of New Jersey. Filed July 3, 1913. Serial No. 777,232. (Cl. 45—82.)

1. In a chair, a tablet, a double pivotal connection between the tablet and the body of the chair, a guide carried by the side of the chair, and means carried by the tablet in alinement with one of the axes of said connection and engaging the guide to guide the tablet about the other axis of the connection.

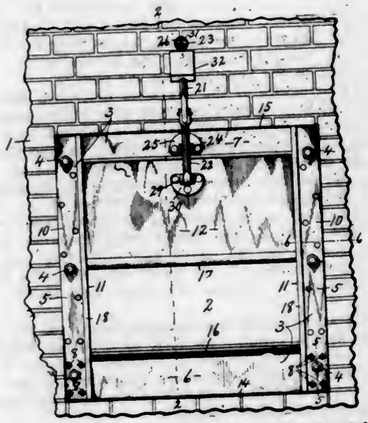
2. In a chair, an arm, a tablet pivoted to the outer face of the arm so as to lie normally across the upper face thereof, a catch at the inner face of the arm to lock the tablet in said normal position and means for releasing the catch extending from the catch to the outer face of the arm.

3. In a chair, an arm, a tablet pivoted to the outer face of the arm so as to lie normally across the upper face thereof, a catch at the inner face of the arm to lock the tablet in said normal position, the arm having an opening from the catch to the outer face of the arm, and a slidable rod in said opening for releasing the catch.



4. In a chair, an arm, a tablet, a leaf hinge having one leaf attached to the tablet and the other leaf pivoted to the arm, a guide attached to the outer face of the arm, and a projection attached to the tablet and engaging the guide, the tablet projecting beyond the axis of the hinge to strike against the side of the chair when the main portion of the tablet is turned upwardly and outwardly.

1,196,051. FIRE-SHIELD. DAVID S. WATSON, Canastota, N. Y. Filed Sept. 26, 1911. Serial No. 651,415. (Cl. 189—45.)

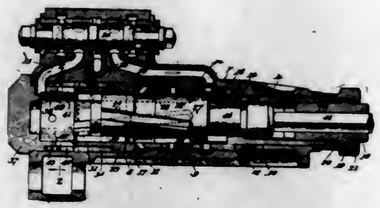


A fire shield for wall openings comprising metal frames secured to opposite faces of the wall around the opening and connected through said opening, each frame extending above the opening a distance not less than the vertical depth of such opening and provided with upright guides at opposite sides thereof, normally open gravity-closing gates slidable in their respective guides, weighted levers pivoted to the frames above their respective gates, heat destructible connections between said levers through an opening in the wall and normally holding the levers against their own weight, and links connecting the levers with their respective gates for forcibly closing the latter by the descent of the weighted levers in case said connections are destroyed by heat.

1,196,052. ROTATING MEANS FOR DRILLS. DANIEL S. WAUGH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Jan. 21, 1914. Serial No. 813,522. (Cl. 121—20.)

1. In a structure of the character described, the combination with a cylinder member, of a sleeve having a unitary tubular wall and rotatably mounted therein, a bit holding bushing in the front portion of the sleeve, a

piston body operating in the rear portion of the sleeve, and means actuated by the piston body for rotating the sleeve, and said sleeve constituting means for transmitting the rotary motion to the bit holding bushing.



2. In a structure of the character described, the combination with a cylinder member, of a sleeve rotatably mounted therein and projecting therefrom, a bit holding means located in the projecting portion of the sleeve and retaining means for the bit holding means on the projecting portion of the sleeve, a piston body operating in the rear portion of the sleeve, and means actuated by the piston body for rotating the sleeve and thereby the bit holding means.

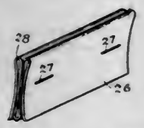
3. In a structure of the character described, the combination with a cylinder member, of a sleeve having a unitary tubular wall and rotatably mounted therein, a bit holding bushing mounted on the front end of the sleeve, a piston operating in the rear end of the sleeve, a tappet interposed between the piston and bushing and located in the sleeve, and means for rotating the sleeve, said sleeve constituting means for transmitting the rotary motion to the bushing from the piston.

4. In a structure of the character described, the combination with a cylinder member, of a sleeve rotatable in the cylinder member and having a reduced front portion projecting therefrom, a bit holding bushing fixed in the front end of the sleeve, means mounted on the projecting end of the sleeve for securing the bushing in place, a piston operating in the rear portion of the sleeve, a tappet located in the sleeve and interposed between the piston and bushing, said tappet being mounted in the reduced portion of the sleeve and projecting into the enlarged portion thereof, and means engaged by the piston for automatically rotating the sleeve and thereby the bushing.

5. In a structure of the character described, the combination with a cylinder member, of a piston operating therein and having angularly disposed keyways in its rear portion, relatively rotatable rings having key elements engaged in said keyways, and a connection between one of the rings and the chuck.

[Claims 6 to 14 not printed in the Gazette.]

1,196,053. COLLAPSIBLE OR KNOCKDOWN BOX. JOSEPH W. WEISS, Baltimore, Md., assignor to Strong-Box Company of America, a Corporation of Delaware. Filed May 31, 1913. Serial No. 770,922. (Cl. 229—49.)



1. A collapsible box formed of fibrous material having sides and end flaps extending therefrom forming closures for the ends of the box and a flexible resilient cushioning rib formed entirely of fibrous material separate from the sides and disposed adjacent to the junction of the sides and flaps, and means for attaching the cushioning ribs to the sides, all the members of the box continuing in attached relation to each other both when the box is set up or collapsed.

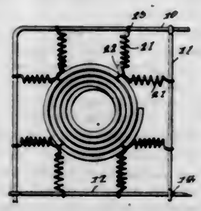
2. A collapsible box of fibrous material having sides and end flaps and a wave formed flexible resilient cushioning rib located adjacent the junction of the sides and flaps, said rib being separate from the sides and having a substantially flat outer protecting surface, and means for attaching said cushioning rib to the sides, all the members of the box continuing in attached relation to each other both when the box is set up or collapsed.

3. A collapsible box of fibrous material comprising sides and end flaps, a resilient cushioning rib comprising a wave formed member located at the exterior surface of the box adjacent to the junction of the sides and flaps, said rib being separate from the sides and having a substantially flat outer protecting surface, and means for attaching said cushioning rib to the sides, all the members of the box continuing in attached relation to each other when the box is set up or collapsed.

4. A collapsible box formed of fibrous material having side and end flaps extending therefrom forming closures for the ends of the box, and a wave formed flexible resilient cushioning rib located adjacent the edge of the box forming the junction of the sides and flaps, the waves of said rib extending lengthwise in the direction of said edge, and means for attaching said cushioning rib to the sides, all the members of the box continuing in attached relation to each other both when the box is set up or collapsed.

5. A collapsible box formed of fibrous material having side and end flaps extending therefrom forming closures for the ends of the box, a wave formed flexible resilient cushioning rib located adjacent the edge of the box forming the junction of the sides and flaps and formed continuous thereabout, the waves of said rib extending in the direction of said edge, and means for attaching said cushioning rib to the sides, all the members of the box continuing in attached relation to each other both when the box is set up or collapsed.

1,196,054. EGG-HOLDER. WILLIAM F. WENT, Colorado Springs, Colo. Filed Aug. 18, 1914. Serial No. 857,387. (Cl. 217—35.)

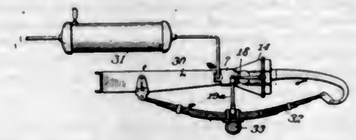


1. An egg holder comprising a frame, egg holding means, and a means for resiliently securing said egg holding means to said frame, said means comprising a plurality of pairs of connected springs, means formed at the connected ends of said springs to receive a portion of said egg receiving means and means for connecting said springs to said frame.

2. An egg holder comprising a frame, egg holding means, coil springs in connection with said frame, said coil springs arranged in pairs each spring of each pair extending at an angle to the other and an eye formed at the meeting ends of said springs of each pair to receive a portion of said egg holding means to connect said springs to the egg holding means.

1,196,055. AIR-COMPRESSOR. HENRY HERMAN WESTINGHOUSE, New York, N. Y. Filed Nov. 3, 1913. Serial No. 798,861. (Cl. 230—27.)

1. In an air compressor, the combination with a cylinder, piston and crank shaft, of a reciprocating driving mechanism having an intermediate position with the piston at the inner end of its stroke, and a movement upon both sides of said intermediate position for turning said shaft alternately in opposite directions.



2. In an air compressor, the combination with a cylinder and piston, of a segmental gear having a driving connection with said piston, the gear being at an intermediate position when the piston is at the inner end of its stroke, and means for oscillating said gear alternately in opposite directions.

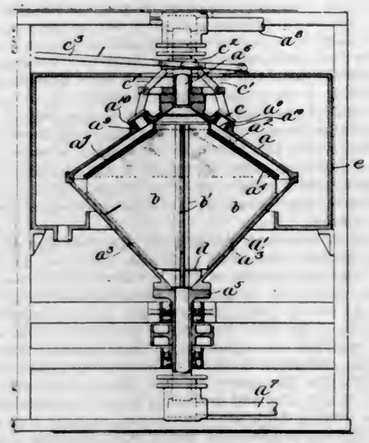
3. In an air compressor, the combination with a cylinder, piston, and crank shaft having a pinion, of a driving gear meshing with said pinion and having an intermediate position with the piston at the inner end of its stroke, and reciprocating means for actuating said gear to turn the pinion alternately in opposite directions.

4. In an air compressor, the combination with a cylinder, piston and crank shaft, of a reciprocating driving mechanism having an intermediate position with the piston at the inner end of its stroke, and a movement upon both sides of said intermediate position for turning said shaft alternately in opposite directions, and means for varying the length of the stroke of the driving mechanism.

5. In an air compressor, the combination with a cylinder, piston and crank shaft, of a reciprocating driving mechanism having an intermediate position with the piston at the inner end of its stroke, and a movement upon both sides of said intermediate position for turning said shaft alternately in opposite directions, and means governed by the pump pressure for varying the length of stroke of the driving mechanism.

[Claims 6 and 7 not printed in the Gazette.]

1,196,056. CENTRIFUGAL SEPARATOR. DAVID B. WESTON, Sharon, Mass. Filed Dec. 1, 1911, Serial No. 663,198. Renewed Jan. 19, 1916. Serial No. 73,069. (Cl. 233—20.)



1. A centrifugal separator embracing a rotary receptacle or drum comprising two substantial conical members joined together with their larger diameters in juxtaposition, means for introducing into one end of said drum the liquid to be treated, a deflector for spreading the liquid toward the circumference the opposite end of the drum being provided with outlet ports for the escape of solid matter, said ports being located in the conical wall intermediate of the axis and the periphery of the drum, substantially as described.

2. A centrifugal separator embracing in its construction a separator drum comprising opposed conical walls forming a chamber converging in opposite directions to a common central axis, means for introducing the material to be treated at one end of the drum, outlet ports for the discharge of solid constituents arranged in one conical end wall, in a plane of substantially smaller diameter than the peripheral zone of the drum, and guides secured to the interior face of the conical wall for guiding the solid matter from the peripheral zone to said discharge ports, substantially as described.

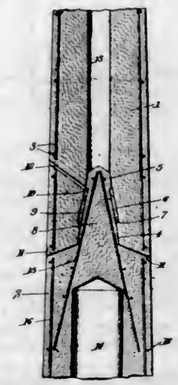
3. A centrifugal separator embracing in its construction a rotary separator drum having opposed conical end walls, means for introducing the material to be treated at one apex of the drum, vanes for accelerating the rotation of the liquid so as to press the solid constituents against the inside of the peripheral portion of the drum, means for conducting the solid matter from said peripheral portion obliquely toward the axis into communication with discharge outlets located intermediate of the axis and the periphery of the drum, substantially as described.

4. A centrifugal separator embracing in its construction a separator drum having opposed conical end walls, means for introducing the liquid to be treated at one end of the drum, outlet ports for the discharge of solid constituents arranged in the conical wall of the drum intermediate of the axis and the periphery of the drum, means for guiding the material from the peripheral portion of the drum inwardly toward said discharge outlets, and a centrally arranged outlet port for the discharge of the liquid from the drum, substantially as described.

5. A centrifugal separator embracing in its construction a drum having opposed conical end walls, means for introducing the liquid to be treated at one end of said drum, an outlet port centrally arranged in the opposite end of said drum, said drum being provided with discharge ports in one conical end wall, substantially nearer the axis of the drum than is the peripheral portion of said drum, means for guiding the solid matter from the peripheral portion inwardly to said discharge ports, and valves for controlling the discharge of material through said ports, substantially as described.

[Claim 6 not printed in the Gazette.]

1,196,057. JOINT FOR SECTIONAL COLUMNS. THOMAS I. WESTON, Columbia, S. C. Filed Feb. 4, 1915. Serial No. 6,175. (Cl. 72—82.)



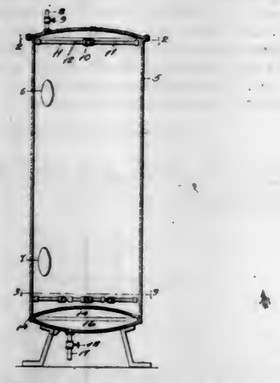
1. A column construction, comprising a pair of members, one of which has a central tapering socket and the other of which has a central tapering projection, the said projection fitting closely in said socket throughout an extended portion longitudinally of said projection at both ends, the relative sizes of the socket and projection being

such that the parts will fit together tightly just before the outer end of the socket reaches the inner end of the projection, the projection and socket being provided with a keyway between the ends of said projection, and means for supplying a filling material to said keyway to lock the parts together.

2. A reinforced concrete construction comprising a pair of members, one of which is provided with a central tapering socket and the other of which is provided with a central tapering projection fitting in said socket, reinforcing means in the body of one member around said socket and reinforcing means in the body of the other member extending up into said projection, and a filling material between said socket and projection securing the parts together.

3. A column construction, comprising a pair of members one of which has a central tapering socket and the other of which has a central tapering projection, the said projection fitting closely in said socket throughout an extended portion longitudinally of said projection at both ends, the relative sizes of the socket and projection being such that the parts will fit together tightly just before the outer end of the socket reaches the inner end of the projection, the projection and socket being provided with a keyway between the ends of said projection, the wall of the keyway in the projection tapering gradually inward toward the small inner end of the projection, and the wall of the keyway in the socket tapering gradually toward the inner end of the socket, whereby the parts will be properly centered when pushed together, and means for supplying a filling material to said keyway.

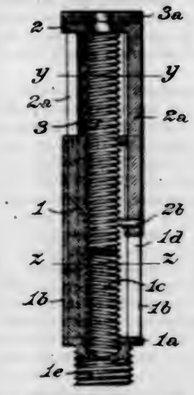
1,196,058. WATER-SOFTENING FILTER. GEORGE H. WIDNER, Des Moines, Iowa, assignor to Des Moines Refining Company, Des Moines, Iowa, a Corporation of Iowa. Filed May 23, 1916. Serial No. 99,294. (Cl. 210—1.)



1. A water softening filter comprising a receptacle, a perforated plate spanning said receptacle adjacent the bottom thereof, means for conducting softened water from the space beneath the perforated plate, a mass of water softening material upon said perforated plate and a water supply means above said mass of material, said water supply means comprising a plurality of horizontally disposed pipes extending over the major portion of the area of the receptacle and transversely slotted to provide orifices that are disposed away from the mass of water softening material.

2. A water softening filter comprising a receptacle, a perforated plate spanning said receptacle adjacent the bottom thereof, means for conducting softened water from the space beneath the perforated plate, a mass of water softening material upon said perforated plate, a water supply means above said mass of material, said water supply means comprising a plurality of horizontally disposed pipes extending over the major portion of the area of the receptacle and transversely slotted to provide orifices that are disposed away from the mass of water softening material and a plurality of horizontally disposed supply pipes located within the mass of water softening material and immediately above the perforated plate, said latter pipes being transversely slotted across their upper faces.

1,196,059. LOOSE-LEAF-BINDER POST. WILLIAM C. WILLIAMS, Baltimore, Md. Filed Sept. 28, 1915. Serial No. 53,048. (Cl. 129—13.)



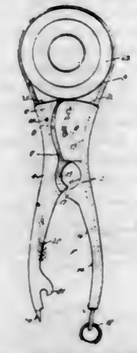
1. In a loose-leaf binder post, the combination of a lower section comprising a circular bottom plate, a cylindrical body, and a plurality of longitudinal ribs, of dovetail section, projecting from the body and corresponding peripherally with the bottom plate; an extension section comprising a top plate of the same diameter as the bottom plate of the lower section, and a plurality of longitudinal ribs corresponding peripherally with those of the bottom section and fitting in the spaces between them; and an adjusting screw journaled in the extension section and engaging a thread in the body of the lower section.

2. In a loose-leaf binder post, the combination of a lower section comprising a circular bottom plate, a cylindrical body, and a plurality of longitudinal ribs, of dovetail section, projecting from the body and corresponding peripherally with the bottom plate; an extension section comprising a top plate of the same diameter as the bottom plate of the lower section, and a plurality of longitudinal ribs corresponding peripherally with those of the bottom section and fitting in the spaces between them; and an adjusting screw journaled in the top plate of the extension and having a flat milled head fitting on said plate, said screw engaging a thread in the body of the lower section.

3. In a loose-leaf binder post, the combination of a lower section comprising a circular plate, a cylindrical body, and a plurality of ribs, of dove-tail section, projecting from the body and corresponding peripherally with the bottom plate; an extension section comprising a top plate of the same diameter as the bottom plate of the lower section; and a plurality of longitudinal ribs corresponding peripherally with those of the bottom section and fitting in the spaces between them; a stop pin fixed to one of said ribs and projecting into a longitudinal slot in the body of the lower section; and an adjusting screw journaled in the extension section and engaging a thread in the body of the lower section.

4. In a loose-leaf binder post, the combination of a lower section comprising a circular plate, a cylindrical body, and a plurality of ribs, of dove-tail section, projecting from the body and corresponding peripherally with the bottom plate; an extension section comprising a top plate of the same diameter as the bottom plate of the lower section; and a plurality of longitudinal ribs corresponding peripherally with those of the bottom section and fitting in the spaces between them; a stop pin fixed to one of said ribs and projecting into a longitudinal slot in the body of the lower section; an adjusting screw journaled in the extension section and engaging a thread in the body of the lower section; and a screw formed on or fixed to the bottom plate, permitting expansion of a binder to any extent desired by engaging said screw with the thread of a solid section post.

1,196,060. JAR-OPENER. EDWIN W. WILSON, Chicago, Ill., assignor of one-half to Edwin R. Butler, Chicago, Ill. Filed Jan. 7, 1915. Serial No. 901. (Cl. 65—26.)



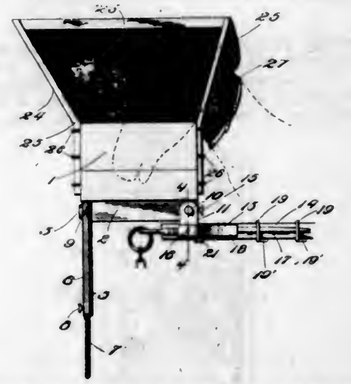
1. A device of the class described comprising a pair of lever arms pivoted together to form a pair of pincers, each arm being provided with a clamping face, and an adjustable flexible member arranged to form a loop when in operating position, having one end secured to one of the arms and its other end extending between the said clamping faces, so as to be securely held when the arms are moved to operating position, each of said arms being provided with a jar engaging face positioned between the ends of the loop.

2. A device of the class described, comprising in combination a pair of pincers, provided with a jar engaging face and having its jaws interposed between the fulcrum and the handle, and a flexible member having one end thereof secured to the pincers and its other end adapted to be grasped by the pincers to form a loop, the ends of the loop being positioned on opposite sides of the engaging face.

3. A jar opener comprising a pair of arms, pivoted together to form a pair of pincers, a clamping portion carried by one of the arms and positioned between the pivot and the handle, the other of said arms having a portion of substantially U shaped cross section arranged to contain the clamping portion of the first mentioned arm, and a flexible member having one end thereof secured to the pincers, and its other end adapted to be inserted into the U shaped arm to be grasped by the pincers to form a loop, said arms being provided with a jar engaging face, positioned between the ends of the loop.

1,196,061. FEED-BOX. JAMES KELLER WINSLOW, East St. Louis, Ill. Filed Dec. 26, 1911, Serial No. 667,614. Renewed Jan. 12, 1916. Serial No. 71,805. (Cl. 119—68.)

1. In a feed box of the character described, an attaching and supporting mechanism comprising supporting arms formed in telescopically engaged inner and outer sections, means to secure said sections together, sockets formed on the ends of the outer sections, clips to fasten the inner sections to the tongue of a vehicle, cleats secured to the bottom of the box and having on their outer ends forwardly extending cylindrical studs and near their inner ends laterally projecting studs, apertured supporting posts having eyes to receive said lateral studs, shanks on said posts to engage the sockets on said arms whereby the box is secured to the arms, set screws arranged in said posts and supporting legs pivotally attached to the studs on the outer ends of the cleats.



2. In a feed box of the character described, an attaching and supporting mechanism, comprising adjustable supporting arms secured to a vehicle pole, adjustable supporting legs pivotally connected to the box and adapted to be folded to an inoperative position, a hay rack comprising a frame having sides and ends formed of fabric, means whereby the frame is secured to the box and sleeves arranged in one side of the box and adapted to be fastened around the necks of the animals feeding from the box, thereby preventing the wasting of the feed.

3. The combination with a feed box, of studs extending from the outer face of said box, supporting legs held upon said studs, studs extending from the opposite side of said box, supporting posts upon said last mentioned studs, curved supporting arms upon said posts, an inner segmental section telescopically engaged within each of said curved arms, and means to hold said segmental sections to said curved arms.

1,196,062. WIRE-SPLICER. MARK P. WOLCOTT, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Apr. 12, 1915. Serial No. 20,665. (Cl. 173—304.)



1. A wire splicer having an open under-run groove formed by a pair of bendable lips, the groove being of a uniform width except at one end where the width rapidly decreases to zero, the lips being joined integrally to the body of the splicer at this point.

2. A wire splicer having an open under-run groove formed by a pair of bendable lips, the groove being of a uniform width except at one end where the width rapidly decreases to zero and the thickness of the lips is gradually increased.

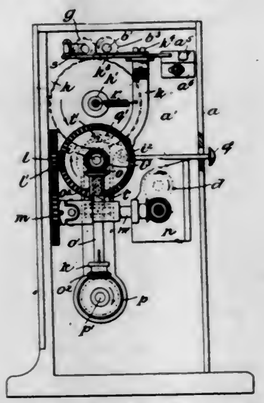
3. A wire splicer having an open under-run groove formed by a pair of bendable lips, the groove being of a uniform width from the outer end to a point adjacent the inner end where the lips rapidly converge and increase in thickness joining integrally at this point with the body of the splicer.

4. A trolley wire splicer provided with a groove formed by a pair of depending lips which increase in thickness and abruptly merge at one end of the groove so that the lips may be formed about a wire inserted in said groove.

5. A trolley wire splicer provided with a groove formed by a pair of depending lips which converge and integrally join at one end of the groove and are adapted to be formed about a wire inserted in the groove.

[Claims 6 to 14 not printed in the Gazette.]

1,196,063. AUTOMATIC LOOP-MAKER FOR MOVING-PICTURE FILMS. EARLE M. WOODEN, New York, N. Y., assignor to The Perfectograph Manufacturing Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 3, 1915. Serial No. 11,739. (Cl. 88—18.)



1. In a moving picture machine, driving mechanism for the film including upper and lower continuously operable sprockets and an intermittent feed, means to disconnect the intermittent feed momentarily from the driving mechanism, whereby continued rotation of the upper sprocket forms a loop in the film between the upper sprocket and intermittent feed, and devices to hold the lower sprocket against rotative movement with respect to the intermittent feed to make a loop in the film between it and the intermittent feed.

2. In a moving picture machine, driving mechanism for the film including upper and lower continuously moving sprockets and an intermittent feed, means under the control of the operator to disconnect the intermittent feed momentarily from the driving mechanism, and devices actuated by said last named means for permitting differential rotation between the intermittent feed and the lower sprocket to form a loop between the lower sprocket and the intermittent feed, continued rotation of the upper sprocket serving to form a loop between it and the intermittent feed.

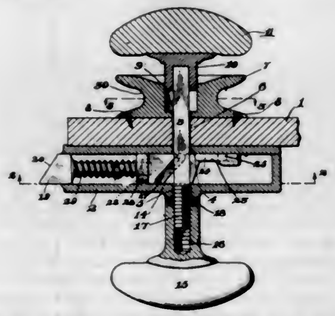
3. In a moving picture machine, driving mechanism for the film including upper and lower continuously operable sprockets and an intermittent feed, means to disconnect the intermittent feed momentarily from the driving mechanism, whereby continued rotation of the upper sprocket forms a loop in the film between the upper sprocket and the intermittent feed, devices to hold the lower sprocket against rotation with respect to the intermittent feed to permit differential movement between it and the intermittent feed to form the lower loop between the lower sprocket and the intermittent feed, and means to return automatically all of the parts to normal operating positions for the projection of the film upon the formation of the loops.

4. In a moving picture machine, driving mechanism for the film including upper and lower continuously operable sprockets and an intermittent feed, transmission devices operatively connected between the driving mechanism and the intermittent feed, an oscillating arm on which certain of said transmission devices are mounted, said arm being susceptible of oscillation by the operator to interrupt the transmission of power to the intermittent feed, rotation of the upper sprocket forming a loop in the film between it and the intermittent feed, means to return the arm to operative position, and devices to rotate the intermittent feed momentarily upon reconnection, with respect to the lower sprocket to form a loop between it and the intermittent feed.

5. In a moving picture machine, driving mechanism for the film including upper and lower continuously operable sprockets and an intermittent feed, transmission devices operatively connected between the driving mechanism and the intermittent feed, an oscillating arm on which certain of said transmission devices are mounted, said arm being susceptible of oscillation by the operator to interrupt the transmission of power to the intermittent feed, rotation of the upper sprocket forming a loop in the film between it and the intermittent feed, a latch carried by the arm to maintain it in the position referred to, means carried by the latch and adapted to coöperate with the upper sprocket to release the arm automatically upon the formation of a loop of predetermined length, means to restore the arm to its normal position, and devices to permit relative rotation between the lower sprocket and the intermittent feed upon reconnection to form a loop between it and the intermittent feed.

[Claim 6 not printed in the Gazette.]

1,196,064. LATCH. JOSEPH ZBYTNIEWSKI and BOLESLAUS TRZCINSKI, Philadelphia, Pa., and FRANK J. HEJNA, Trenton, N. J. Filed Oct. 18, 1915. Serial No. 56,383. (Cl. 70—42.)



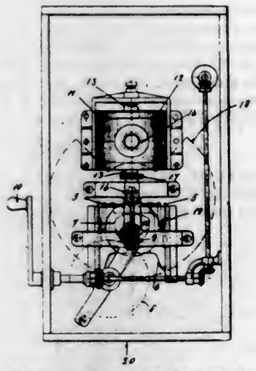
1. The combination with a case, a latch bolt movable in the case, a block secured to the latch bolt and movable in the case, a pair of lugs on the case, a plate engaging said lugs, and having an opening therein through which the latch bolt is movable, a coiled spring around the latch bolt bearing against the plate and pressing the latch bolt outwardly, a spindle movable at right angles to the block, a cam groove in the block, and a pin projecting from the spindle into the cam groove, whereby the bolt is moved by the longitudinal movement of the spindle, substantially as described.

2. The combination with a case, a latch bolt movable in the case, a block secured to the latch bolt and having a longitudinal slot therein, a guide pin fixed to the lock case and projecting into the slot, said block having a cam groove in its upper face, a spindle movable through the lock case, a pin on the spindle engaging in the groove, a plate having an opening therein through which the latch bolt moves, and a spring around the latch bolt engaging the plate normally holding the latch bolt in its outward position, substantially as described.

1,196,065. SERUM THERAPY. EMIL ABDERHALDEN Halle, Germany. Original application filed Aug. 27, 1915, Serial No. 47,692. Divided and this application filed Dec. 1, 1915. Serial No. 64,527. (Cl. 167—7.)

A method of verifying the biological relationship between an anti-cancer serum and the serum of a cancer carrier which consists in causing said anti-cancer serum to react on a portion of a supposedly related cancer-tissue, causing the serum of a cancer carrier to react on another portion of the same cancer tissue, and then determining whether or not the cleavage effects of the two sera on the cancer tissue are the same, substantially as described.

1,196,066. APPARATUS FOR TAKING CINEMATOGRAPHIC PHOTOGRAMS. FILOTEO ALBERINI, Rome, Italy. Filed Jan. 6, 1914. Serial No. 810,606. (Cl. 88—18.)



1. A moving picture camera having a rotatable lens, means for imparting a transverse bend to the film at the point of exposure thereof, and means for feeding the film.

2. A moving picture camera having means for imparting a transverse bend to the film at the point of exposure thereof, a rotatable lens adapted to rotate coincident with and parallel to the film curvature, and means for feeding the film.

3. A moving picture camera having a rotatable shutter provided with oppositely disposed alined openings, a lens in the shutter in line with the openings, means for imparting a temporary transverse curvature to the film at the point of exposure thereof, and means for feeding the film.

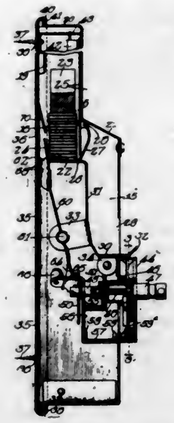
4. A moving picture camera having a rotatable lens, means for imparting a temporary transverse bend to the film at the point of exposure, and means for engaging the film to intermittently move the same comprising diverging pins for engaging the marginal perforations of the film, means for simultaneously reciprocating the pins to cause engagement and disengagement thereof with the film, and means for imparting a reciprocating movement to the pins parallel with the film to shift the film for each exposure.

5. The combination in a moving picture camera including a casing, and intermittent film feeding mechanism, of a rotatable lens, means for imparting a transverse curvature to a restricted portion of the film at the exposing point thereof, the curvature being in the form of an arc having the lens for its true center so as to bring all parts of the film surface within the focus of the lens, means for rotating the lens, and means for obstructing the passage of light to the lens when the refractive position of the lens is reversed.

[Claims 6 to 9 not printed in the Gazette.]

1,196,067. CHECK-CONTROLLED VENDING-MACHINE. ALFRED D. ANTOINE and CLARENCE C. TRAVIS, Chicago, Ill.; said Antoine assignor to said Travis. Filed Dec. 16, 1912. Serial No. 736,891. (Cl. 211—8.)

1. A machine of the character described embodying an oscillating ejector for delivering the articles, said ejector having a comparatively wide extremity, a portion of said extremity being deflected laterally to form a cam surface, a pivotally mounted actuating element, the pivot of said element being disposed transversely of the pivot of the ejector, and means connected with the said element and movable over the said cam surface for swinging the said ejector.



2. A machine of the character described embodying an oscillating ejector for delivering the articles, said ejector having a comparatively wide extremity, a portion of said extremity being deflected laterally to form a cam surface, a pivotally mounted actuating element, the pivot of said element being disposed transversely of the pivot of the ejector, means connected with the said element and movable over the said cam surface for swinging the said ejector in one direction, and means for swinging the ejector in the opposite direction.

3. A machine of the character described embodying an oscillating ejector for delivering the articles, said ejector having a comparatively wide extremity, a portion of said extremity being deflected laterally to form a cam surface, a pivotally mounted actuating element, the pivot of said element being disposed transversely of the pivot of the ejector, and means connected with the said element and movable over opposite faces of the said cam surface for swinging the ejector first in one direction and then in the opposite direction.

4. A machine of the character described embodying an oscillating ejector for delivering the articles, said ejector having a comparatively wide extremity, portions of said extremity being deflected laterally in opposite directions to form a cam surface, a pivotally mounted actuating element, the pivot of the element being disposed transversely of the pivot of the ejector, and spaced means connected with the said element and between which means the said cam surface is confined.

5. A machine of the character described embodying an oscillating ejector, one extremity of the ejector being shaped to form an extended cam surface, an actuating element movable about a pivot disposed transversely of the pivot of the ejector, and means connected with the actuating element and movable over said cam surface for shifting the latter, a portion of the opposite extremity of the ejector being shaped to form a transversely disposed laterally projecting finger.

[Claim 6 not printed in the Gazette.]

1,196,068. MACHINE FOR COATING BISCUITS AND OTHER ARTICLES WITH ICING OR SIMILAR SUBSTANCE. GEORGE SAMUEL BAKER and GEORGE RALPH BAKER, London, England. Filed May 25, 1915. Serial No. 30,417. (Cl. 91—2.)

1. In a machine of the character described, the combination of a receptacle adapted to receive coating material in bulk, a series of rollers within said receptacle posi-

tioned to be immersed in said coating material and to receive the goods to be coated on one side only, and means for rotating said rollers to feed the articles and coating material from one end of said receptacle to the other.



2. In a machine of the character described, the combination of a receptacle adapted to receive coating material in bulk, a series of rollers within said receptacle positioned to be immersed in said coating material and to receive the goods to be coated on one side only, and means for rotating said rollers to feed the articles and coating material from one end of said receptacle to the other, said receptacle being inclined downward toward the feed end of said rollers whereby the coating material is caused to return by gravity to said feed end.

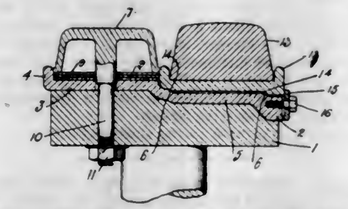
3. In a machine of the character described, the combination of a receptacle adapted to receive coating material in bulk, a series of rollers within said receptacle positioned to be immersed in said coating material and to receive the goods to be coated on one side only, means for rotating said rollers to feed the articles and coating material from one end of said receptacle to the other, a pivoted support for said receptacle, and means for angularly adjusting said support about its pivot.

4. In a machine of the character described, the combination of a receptacle adapted to receive coating material in bulk, a series of rollers within said receptacle positioned to be immersed in said coating material and to receive the goods to be coated on one side only, means for rotating said rollers to feed the articles and coating material from one end of said receptacle to the other, a reversible oscillatory delivery device positioned at the discharge end of the receptacle to engage under the articles on the rollers and convey them to a receiving member coated side upward, and an oscillatory comb member cooperating with said discharge member for positively detaching the coated articles therefrom.

5. In a machine of the character described, the combination of a receptacle adapted to receive coating material in bulk, a series of rollers within said receptacle positioned to be immersed in said coating material and to receive the goods to be coated on one side only, means for rotating said rollers to feed the articles and coating material from one end of said receptacle to the other, a reciprocatory member adapted to feed the articles to be coated to said rollers, spring means adapted to effect the return movement of said feed member and buffer means for cushioning said return movement.

[Claims 6 and 7 not printed in the Gazette.]

1,196,069. VEHICLE-TIRE. LEON F. N. BALDWIN Cranston, R. I. Filed Nov. 25, 1911. Serial No. 662,271. (Cl. 152—9.)



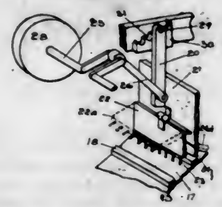
1. The combination, with a wheel-felly, of a felly-band, a series of metal blocks removably mounted on one side of said felly-band, and a rubber tire removably mounted upon the other side of said felly-band.

2. The combination with a wheel-felly of a resilient tire removably mounted thereon, a non-resilient tire removably mounted and radially adjustable thereon, and means arranged and adapted to radially adjust said non-resilient tire.

3. The combination, with a wheel-felly, of a felly-band, a series of shims removably mounted upon said felly-band, a series of metal blocks removably mounted upon said shims, means for securing said shims and blocks in position, and a rubber tire removably mounted upon said felly-band, the outer circumference of said rubber tire being greater than the outer circumference of said metal blocks.

4. The combination with a wheel-felly, of a felly-band having a raised portion and a lower portion, a series of shims removably mounted upon said raised portion, a series of metal blocks removably mounted upon said shims, a radially extending bolt for holding said blocks in position, a channel rim having a rubber tire mounted therein and secured in place upon the lower portion of said felly-band by a removable flange-ring secured in position by a series of removable bolts.

1,196,070. FEEDER FOR THRESHING-MACHINES. ADOLPH BARNEDT and CHARLES N. JENSEN, Bickleton, Wash. Filed Dec. 20, 1915. Serial No. 67,866. (Cl. 130—1.)



1. In a device for feeding grain headings in bulk to a threshing machine; a main frame; a feed table longitudinally disposed and operated within said main frame; a pivotally supported oscillating feed bar transversely disposed adjacent said feed table; a rake bar hinged to said feed bar and having rake teeth thereon adjacent said feed table; means to operate said feed table; and means to operate said feed bar.

2. In a device for feeding grain headings in bulk to a threshing machine; a main frame; a feed table longitudinally disposed and operated within said main frame; a pivotally supported oscillating feed bar transversely disposed adjacent said feed table; a bar hinged to said feed bar at the edge thereof adjacent said feed table and adapted to lie in the plane of said feed bar upon the rearward motion of same, and to swing at an angle to said feed bar upon the forward motion of same; means to operate said feed bar; and means to operate said feed table.

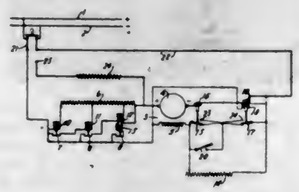
3. In a device for feeding grain headings in bulk to a threshing machine; a main frame; a feed table longitudinally disposed and operated within said frame; and a pivotally supported oscillating feed bar adjacent said feed table; in combination with means for adjusting the distance between said feed table and said feed bar.

4. In a device for feeding grain headings in bulk to a threshing machine; a main frame; a feed table longitudinally disposed and operated within said frame; a pivotally supported oscillating feed bar transversely disposed adjacent said feed table; a rake bar hinged to said feed bar and having rake teeth thereon adjacent said feed table; a bar hinged to said feed bar at the edge thereof adjacent said feed table; means to adjust the distance between said feed bar and said feed table; means to operate said feed table; and means to operate said feed bar.

5. In a device for feeding grain headings in bulk to a threshing machine; a threshing machine elevator in combination with a main frame adapted to receive said grain headings in bulk; means for feeding said bulk toward said elevator; a pivotally supported feed bar comprising a transverse member, a member hinged to the lower edge of said transverse member adjacent said feeding means, and a rake member pivotally mounted upon said transverse member adjacent said feeding means; means for operating said feed bar; and means for depositing small portions of said grain headings upon said elevator.

[Claim 6 not printed in the Gazette.]

1,196,071. MOTOR-CONTROL SYSTEM. HOWARD L. BEACH, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 29, 1914. Serial No. 847,800. (Cl. 172—288.)



1. In a motor-control system, the combination with an electric motor and a field resistor therefor, of a shunt circuit for said resistor comprising a current-limit switch and a reverse-current relay switch for controlling the functions of said current-limit switch.

2. In a motor-control system, the combination with an electric motor and a field resistor therefor, of a shunt circuit for said resistor comprising a current-limit switch and a reverse-current relay switch so connected that the actuation of one of said switches operates to reverse the function of the other.

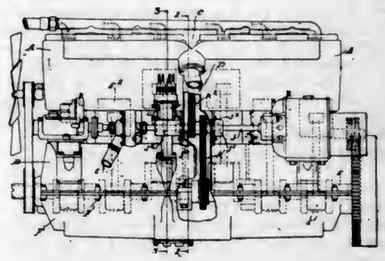
3. In a motor-control system, the combination with an electric motor having a shunt field magnet winding and a resistor in circuit with said winding, of a current-limit switch for controlling a shunt circuit for said resistor, and means comprising a double-throw reverse-current relay switch in said circuit for controlling the functions of said current-limit switch.

4. In a motor-control system, the combination with an electric motor and a field resistor therefor, of a shunt circuit for said resistor comprising a current-limit switch and a reverse-current relay switch so connected that the actuation of each of said switches operates to reverse the function of the other.

5. In a motor-control system, the combination with an electric motor having a field magnet winding, and a resistor in circuit with said winding, of a current-limit switch for controlling a shunt circuit for said resistor, and a reverse-current relay switch in the shunt circuit which operates, according to its position, to cause the current-limit switch to respectively open and close said shunt circuit when said current-limit switch is in its normal position.

1,196,072. INTERNAL-COMBUSTION ENGINE. EDWARD H. BELDEN, Pittsburgh, Pa., assignor to Belden Engineering Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 6, 1912, Serial No. 713,555. Renewed Jan. 20, 1916. Serial No. 73,185. (Cl. 123—59.)

1. In a multiple cylinder internal combustion engine, a plurality of cylinders arranged in a row and substantially parallel with each other and separated into two groups, a piston in each cylinder, a crank shaft arranged parallel with the row of cylinders and having individual crank pins operatively connected with each of said pistons, valves controlling the inlet and exhaust of the cylinders; a valve shaft arranged parallel with the row of cylinders and operatively connected with each of said valves, a counter-shaft arranged substantially parallel with the cylinders adapted to receive power from the crank shaft and distribute it to the various auxiliary mechanisms, and a driving mechanism arranged between the groups of cylinders connecting the crank shaft with the counter-shaft and connecting the counter-shaft with the valve shaft.



2. A multiple cylinder internal combustion engine having a plurality of parallel cylinders arranged in a row and separated into two groups, a piston in each of said cylinders, and a crank shaft arranged parallel with the row of cylinders and operatively connected to the pistons therein, in combination with a plurality of associated driven auxiliary mechanisms, a counter-shaft arranged substantially parallel with the crank shaft and supported on the engine in suitable bearings, a driving mechanism connecting the crank shaft with the counter-shaft and arranged substantially between the two groups of cylinders, the associated mechanisms deriving their power from and being driven by the counter-shaft, an individual valve for each of said cylinders controlling the inlet and exhaust thereof, a longitudinally arranged valve shaft supported on the engine in suitable bearings and having positive operative connection with each of said valves, and a driving mechanism arranged between the two groups of cylinders and serving to transmit power from the counter-shaft to the valve shaft.

3. In a multiple cylinder internal combustion engine a plurality of cylinders arranged in a row parallel with each other and separated longitudinally into two groups of cylinders, a piston in each of said cylinders, a crank shaft arranged substantially parallel with the row of cylinders having a crank operatively connected with each of said pistons, an individual valve for each of said cylinders, a valve shaft arranged parallel with the row of cylinders and having operative connection with each of said valves, a counter-shaft arranged substantially parallel with the crank shafts adapted to distribute power to the various auxiliary mechanisms, a chain drive arranged substantially between the two groups of cylinders adapted to transmit power from the crank shaft to the counter-shaft and from the counter-shaft to the valve shaft, and housings integral with the main body of the engine connecting the two groups of cylinders and inclosing the chain drive.

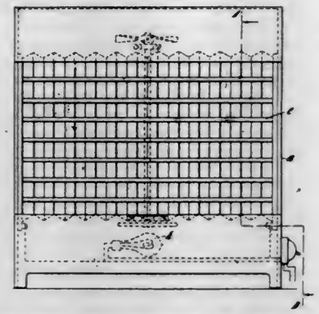
4. In a multiple cylinder internal combustion engine having a plurality of cylinders arranged in a row and parallel with each other, pistons in said cylinders, a crank shaft arranged parallel with the row of cylinders and having operative connection with each of said pistons, a constantly rotating valve controlling the inlet and exhaust of each of said cylinders, a valve shaft arranged parallel with and at one side of the row of cylinders and having positive geared connection with each of said valves, a counter-shaft carried by the engine, arranged parallel with the crank shaft and horizontally off-set from both the crank shaft and the valve shaft, and drive chains connecting the crank shaft, counter shaft and valve shaft.

5. In a multiple cylinder internal combustion engine having its cylinders arranged vertically, substantially parallel with each other and in a horizontal row, the cylinders being separated into two groups, a piston in each said cylinder, a crank shaft arranged parallel with the row of cylinders and having operative connection with each said piston, a positively operated individual

valve for each said cylinder, a valve shaft arranged parallel with the row of said cylinders and having positive operative connection with each of said valves, a countershaft also arranged parallel with the row of cylinders, associated mechanisms receiving power from said countershaft, said valve shaft and counter-shaft being arranged on opposite sides of the row of cylinders, a driving chain connecting the crank shaft to the counter-shaft and a second driving chain connecting the counter-shaft to the valve shaft, said chains being arranged between the two groups of cylinders and adapted to transmit power to the auxiliary mechanism and to the valves.

[Claims 6 and 7 not printed in the Gazette.]

1,196,073. ILLUMINATE ELECTRIC HEATER. HERBERT HENRY BERRY, London, and WILLIAM JAMES MARKHAM, Birmingham, England. Filed Feb. 16, 1916. Serial No. 78,755. (Cl. 240—10.)



1. An electric heater comprising a frame, a series of heat units, a reflector arranged adjacent to said heat units, a lamp, a perforated disk arranged between said lamp and reflector, and means for rotating said disk.

2. An electric heater comprising a frame, a series of heat units, a reflector arranged adjacent to said heat units, a lamp, a perforated disk arranged between said lamp and reflector, and means driven by the rising hot gases for rotating said disk.

3. An electric heater comprising a frame, a series of heat units, a reflector arranged adjacent to said heat units, a lamp, a shaft, a fan on said shaft, and a perforated disk on said shaft located between said lamp and reflector.

4. An electric heater comprising a frame, a series of heat units supported on said frame, a corrugated reflector on said frame, said reflector being arranged adjacent to said heat units, a lamp, a perforated disk located between said lamp and reflector and means for rotating said disk said means being actuated by the rising hot gases.

5. An electric heater comprising a frame, a reflector, a series of heat units located in proximity to said reflector, a lamp, and means whereby the light from the lamp is intermittently thrown onto the reflector.

1,196,074. MINNOW-TRAP. JOHN STURGIS BONNER, Austin, Tex., assignor of one-half to James Albert Miller, Austin, Tex. Filed Jan. 11, 1916. Serial No. 71,546. (Cl. 43—20.)

1. A trap comprising a wire meshed body having an entrance opening at one end adjacent the bottom of the body and extending transversely across the same, a closure hinged upon the opposite end of the body and adapted to be swung outwardly to gain access to the interior of the body, and a pair of bait retaining sections supported upon the bottom within the body in spaced relation to said entrance opening.

2. A minnow trap having a relatively broad inwardly contracting entrance opening, and an inverted V-shaped bait chamber mounted in the trap in slightly spaced relation from the entrance opening to deflect the minnows upwardly in the trap when passing into the trap and also when approaching the entrance opening from the inside of the trap.



3. A minnow trap having an inwardly contracting mouth in one end and at the bottom of the trap, said mouth extending across the entire width of the trap, a deflecting wall rising at a rearward inclination from the bottom in slightly spaced relation inwardly from the mouth, and a second deflecting wall hinged to the top of the first wall and normally extending downwardly and inwardly to deflect minnows upwardly in the trap as they approach the mouth from the inside of the trap, said second deflecting wall being hinged to admit the positioning of bait therebeneath and beneath said first deflecting wall.

4. A minnow trap comprising an elongated body having a flat bottom, an inwardly contracting entrance opening at one end of the body and extending transversely across the same, a bait holder having inner and outer inclined walls mounted on the bottom in said body in spaced relation inwardly from said mouth to deflect minnows, entering the trap and approaching the inlet from inside the trap, into the top of the trap, a hinged closure on the opposite end of said body, and a spring hook secured to the free end of the closure and adapted for yielding engagement in the body to hold the closure from opening.

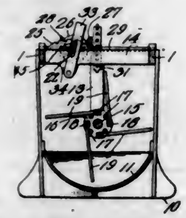
5. A minnow trap comprising a wire meshed body having an inwardly and downwardly inclined wall at its outer end terminating short of the bottom of the body to provide a relatively broad transverse entrance opening at the bottom of the body, a bait chamber secured in the bottom of the body in spaced relation from the entrance opening and having inner and outer walls inclining upwardly and toward each other, the outer wall to deflect minnows from the entrance opening upwardly into the body and the inner wall to deflect minnows upwardly into the body as they approach the entrance opening from the inside of the trap, a hinged closure on the opposite end of the trap, and a pair of spring hooks carried by the closure and adapted to be extended and engaged in the wire meshed bottom of the trap to securely hold the closure from swinging outwardly.

[Claims 6 and 7 not printed in the Gazette.]

1,196,075. POTATO-DIGGER. JOHN BORNHAUSER, Colville, Wash. Filed Mar. 7, 1916. Serial No. 82,701. (Cl. 55—56.)

1. In a potato digging machine, the combination with a supporting frame, of a shovel depending therefrom, an apron extending rearwardly from the shovel, a drum supported above the apron including a plurality of pivotally mounted radially extending fingers, means for rotating the drum in either direction and means for causing the fingers to rotate rigidly with the drum.

2. In a potato digging machine, the combination with a supporting frame, of a shovel depending therefrom, an apron extending rearwardly from the shovel and means for throwing potatoes from either side of the apron, which means include a shaft supported by the frame, spaced disks secured to the shaft, rods extending between and secured to the disks, shafts extending between and rotatably mounted in the disks, said shafts and rods being arranged alternately and a plurality of fingers extending outwardly from the shafts and adapted to bear against the adjacent rods.



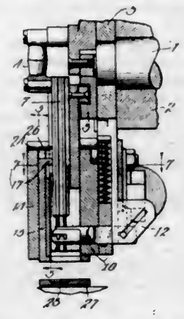
3. In a potato digging machine, the combination with a supporting frame, of a shovel depending therefrom, an apron extending rearwardly from the shovel, a drum rotatably mounted above the apron and including a pair of spaced disks, shafts extending between the disks and rotatably mounted therein, fingers mounted on the shafts and extending outwardly at right angles thereto and rods arranged on each side of each of the shafts against which the fingers are adapted to bear, said rods being arranged inwardly of the peripheries of the disks and means for rotating the drum in either direction.

1,196,076. PRESS FOR BUTTON-MAKING. JULIUS G. BREITENSTEIN, Chicago, Ill., assignor to Independent Button and Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 20, 1914. Serial No. 873,158. (Cl. 79—4.)

1. In a button making press, in combination with a bed, a post upstanding thereon; a head mounted on the post for horizontal oscillation; a die-carrying plunger mounted for reciprocation in the head; an upper die carried thereby comprising two members adapted for relative vertical movement, the bed being adapted for carrying two lower dies in position for coöperation with the upper die at two determined positions, respectively, of the latter within the range of oscillation of the head; a vertically apertured boss jutting off laterally from the post; a lower plunger mounted in said boss; a spring for upholding said lower plunger; an auxiliary plunger in the head, and means by which the die-carrying plunger reciprocates the auxiliary plunger with it, the lower plunger having a finger which extends above the movable member of the upper die for depressing said member when the oscillating head is at one of said determined positions, and which is withheld from above said die member when the head is moved to the other position, said auxiliary plunger in the head being positioned for vertical alinement with said lower plunger at the first-mentioned of said determined positions.

2. In a button-making press, in combination with a bed, a post upstanding thereon, a head mounted for oscillation about the post; a die-carrying plunger mounted for reciprocation in the head; an upper die carried by said plunger comprising two members adapted for relative vertical movement, the bed being adapted to carry two lower dies positioned thereon for coöperation with the upper die at two determined positions, respectively, of the latter in the range of oscillation of the head; a lower plunger mounted for reciprocating vertically on the bed having a finger which at one of said determined positions of the upper die extends between shoulders rigid with the two upper die members, respectively, for preventing relative yielding of said two members; an auxiliary plunger in the head positioned for overhanging said lower plunger at said last-mentioned determined position, and connections by which the die-carrying plunger reciprocates said auxiliary plunger.

1,196,077. STAPLING-MACHINE. BYRON E. BROWN, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed July 6, 1915. Serial No. 38,102. (Cl. 1—2.)



1. In combination, reciprocating stapling mechanism, and a movable compressor foot coöperating with said stapling mechanism to form a continuous presser surface substantially in a single plane for compressing the material to be stapled.

2. In a stapling machine, a staple former and a compressor foot arranged to be operated by said staple former and to move in unison with said former perpendicularly against the surface of the material to be stapled, and to coöperate with said former to permanently reduce the thickness of the material stapled.

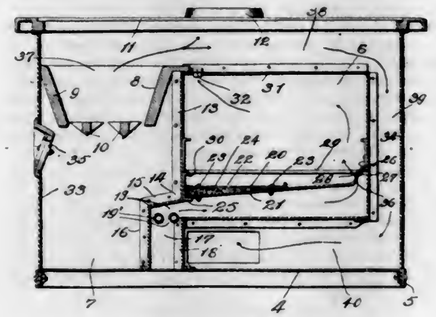
3. In a stapling machine, a staple former, a compressor foot arranged to surround the extremity of said former when said foot and former are in contact with the material being stapled, and means for connecting said compressor foot with said former for driving said foot.

4. In combination, a staple former, means for causing said former to bear upon the material to be stapled, a compressor foot arranged to surround the portion of said former which contacts with said material, during said contact, and a staple driver coöperating with said staple former and compressor foot to form a continuous presser surface for reducing the thickness of said material at and surrounding the portion stapled.

5. In a stapling machine, a reciprocating staple former, a compressor foot, and means for connecting said compressor foot with said former in such a way that said compressor foot is constrained to move in unison with said former during a part of the reciprocation thereof, the arrangement being such that said compressor foot and former are caused to bear simultaneously upon the material being stapled to reduce the thickness thereof.

[Claims 6 to 12 not printed in the Gazette.]

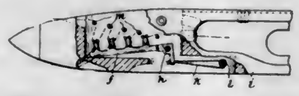
1,196,078. STOVE AND RANGE. WILLIAM ADOLPH BUSIEK and ARTHUR ADAM ROESCH, Belleville, Ill. Filed June 26, 1915. Serial No. 36,555. (Cl. 126—36.)



1. In a device of the character described, a source of heat, an oven base plate, a baffle plate, an oven shelf, said source of heat laterally sub-adjacent said baffle plate positioned at an angle to said oven base plate, so that said baffle plate at its higher extremity forms a support for said shelf.

2. In a device of the character described, two compartments, a source of heat, an oven base plate, a baffle and a shelf, said baffle slidably mounted in one of said compartments, said source of heat firmly secured in the other of said compartments, means of communication between said compartments permitting products of combustion to pass from one of said compartments against said baffle through an aperture in the other of said compartments, said baffle plate positioned at an acute angle to said oven base plate, so that said shelf is partially supported by the upper end of said baffle.

1,196,079. TENSION DEVICE. WILLIAM CANOVA, Paterson, N. J. Filed June 19, 1916. Serial No. 104,400. (Cl. 139—16.)



1. A pivoted shuttle tension device comprising two longitudinal members lying for the major part of their length parallel and in close proximity to each other and side by side and affording at one end a pivoting point and annular loops integrally connecting and projecting relatively laterally from said members at different points in the length thereof.

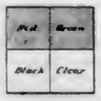
2. A pivoted shuttle tension device comprising two longitudinal semi-cylindrical members lying for the major part of their length parallel and in close proximity to each other and side by side with their concave sides inward and affording at one end a pivoting point and loops integrally connecting and projecting relatively laterally from said members at different points in the length thereof.

3. A pivoted shuttle tension device comprising two longitudinal members lying for the major part of their length parallel and in close proximity to each other and side by side and loops connecting and projecting laterally from said members at different points in the length thereof, corresponding end portions of said members being deflected away from each other and forming in the deflected portions spaced bearing points.

4. A pivoted shuttle tension device formed of sheet metal and comprising two longitudinal members lying for the major part of their length parallel to each other and side by side and affording at one end a pivoting point and loops integrally connecting and projecting relatively laterally from said members at different points in the length thereof, one of said members having an integral relatively lateral projection at one end affording a spring-attaching arm.

5. A pivoted shuttle tension device formed of sheet metal and comprising two longitudinal members lying for the major part of their length parallel to each other and side by side and affording at one end a pivoting point and loops integrally connecting and projecting relatively laterally from said members at different points in the length thereof, said members having integral relatively lateral projections at one end together bent into an eyelet and affording means to which to attach a spring.

1,196,080. PHOTOGRAPHS IN COLOR AND METHOD OF MAKING THE SAME. JOHN G. CAPSTAFF, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 21, 1914. Serial No. 862,715. (Cl. 95—2.)



1. The method of making photographs in color, which consists in preparing two photographic negative images of the subject on gelatin light sensitive films by the action of differently colored lights, said negatives being otherwise duplicates of each other, bleaching and differentially tanning the gelatin of each according to the light gradations it has recorded, subjecting each of the two films to the action of a different dye, said films having been fixed at some stage after bleaching and superposing the films with the images in register, whereby when said films are viewed by transmitted light in such superposed registering relationship, their combined color effects are made apparent.

2. The method of making photographic reproductions in colors which consists in preparing two photographic negative images of the subject on sensitized gelatin films, one through a red screen or filter and the other through a green screen or filter, said negatives being otherwise duplicates of each other, developing the images, bleaching and differentially tanning the gelatin of each according to the light gradations it has recorded, dyeing the film exposed through the green filter red and the film exposed through the red filter green, fixing the films at some stage after bleaching, and finally placing them in superposed registering relationship whereby their combined color effects may be viewed by transmitted light.

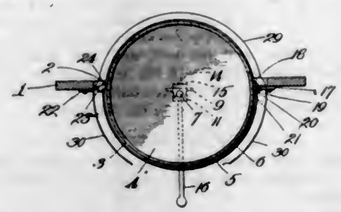
3. The method of making photographic reproductions in colors which consists in preparing two photographic negative images of the subject on gelatin light sensitive films by the action of differently colored lights, said negatives being otherwise duplicates of each other, developing the images, treating the films before they are fixed to bleach and differentially tan the gelatin of each according to the light gradations it has recorded, dyeing the films different colors appropriate to their respective tanned color values, fixing the dyes in the films and finally placing the films in superposed registering relationship whereby their combined color effects may be viewed by transmitted light.

4. The method of making photographic reproductions in colors which consists in preparing two photographic negative images of the subject on gelatin light sensitive films by the action of differently colored lights, said negatives being otherwise duplicates of each other, developing the films, bleaching and differentially tanning the gelatin of each according to the light gradations it has recorded, fixing the films, washing and drying the films, dyeing the films different colors appropriate to their respective tanned color values after such drying, fixing the dyes in the films and finally placing the films in superposed registering relationship whereby their combined color effects may be viewed by transmitted light.

5. The method of making photographic reproductions in colors which consists in preparing two photographic negative images of the subject on gelatin light sensitive films by the action of differently colored lights, said negatives being otherwise duplicates of each other, developing the films, bleaching the films in a solution composed of potassium ferricyanid, potassium bromid, potassium bichromate, acetic acid and potassium alum substantially as described, thereby tanning the gelatin of each according to the light gradation it has recorded, fixing the films, dyeing the films different colors appropriate to their respective tanned color values, fixing the dyes in the films and finally placing the films in superposed registering relationship whereby their combined color effects may be viewed by transmitted light.

[Claims 6 to 8 not printed in the Gazette.]

1,196,081. WINDOW. THOMAS CARENCE, Kansas City, Mo. Filed Dec. 30, 1915. Serial No. 69,364. (Cl. 15—59.)



1. The combination of a suitable support having an opening, a cylindrical window of transparent material closing said opening, means to clean the surface of the window, and means to effect relative movement of the window and the cleaning means to clean the former.

2. The combination of a suitable support having an opening, a cylindrical window of transparent material closing said opening, means to clean the surface of the window, and means for shielding the ends of the cylindrical window exterior of the support from snow and the like.

3. The combination of a suitable support having an opening, a cylindrical window of transparent material rotatably mounted in said opening, means to rotate the window, and means to clean its surface as it is turned.

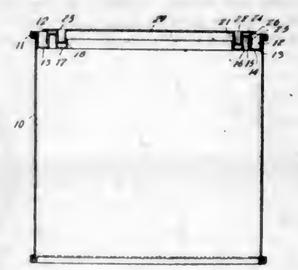
4. The combination of a suitable support having an opening, a cylindrical window of transparent material rotatably mounted in said opening, means to rotate the window, means to clean its surface as it is turned, and semi-cylindrical shields inclosing the ends of the cylindrical window exterior of the support.

5. The combination of a suitable support having an opening, a cylindrical window of transparent material rotatably mounted in said opening, a scraper bearing against the window, and means to rotate the window to effect operation of the scraper.

[Claims 6 to 9 not printed in the Gazette.]

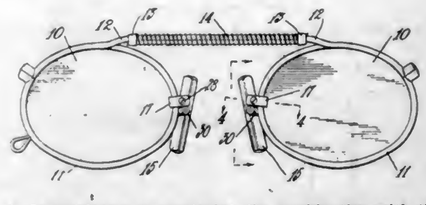
1,196,082. TRIPLE-FRICTION-SEAT WALL-CAN. EDWARD W. CARNES, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 19, 1912. Serial No. 726,594. (Cl. 220—76.)

A triple friction seat wall closure for cans, consisting of a can body formed with an inner upwardly extending and inwardly inclined flange with a free upper edge and having an outside friction seat wall, an outer wall inwardly inclined and having an outside friction seat wall, and an intermediate wall, outwardly inclined and having an inside friction seat wall; and a cover having three friction seat walls adapted to conform with said seat walls of the can body, the outer seat wall of said cover



terminating in a free bottom edge and its inner seat wall terminating at its top in a can-closing stiffening plate.

1,196,083. EYEGLASSES AND SPECTACLES. STEPHEN J. CLULEE, Attleboro, Mass. Filed Mar. 16, 1916. Serial No. 84,660. (Cl. 88—41.)



1. In eyeglasses or spectacles, the combination with the rim and the nose rest, of a clamping member attached to the exterior of the nose rest and engaging the rim, the nose-rest being pivotally mounted on said clamping member.

2. In eyeglasses or spectacles, the combination with the rim, of a clamp comprising clamping blocks embracing the rim, and a clamping screw engaging the blocks, a nose rest, and means for connecting the nose rest pivotally to one of the blocks.

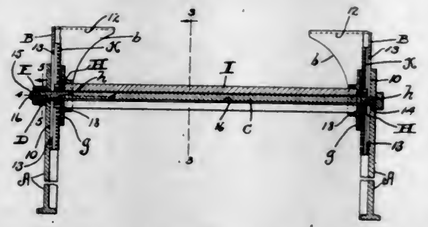
3. In eyeglasses or spectacles, the combination with a rim, of opposed members whose contiguous faces are provided at one end with grooves to form a seat for the rim, and inwardly directed fingers to grip the latter, means for clamping said members together, and a nose-rest pivotally mounted upon said clamp.

4. In eyeglasses or spectacles, a rim, a two-part clamp embracing the same and having a seat therefor, tightening means for the clamp, a nose-rest, a member fixedly secured to one member of the clamp, and means on the nose-rest receiving said member and permitting of pivotal movement of the nose-rest.

1,196,084. ADJUSTABLE SUPPORTING STRUCTURE. WILLIAM B. COGGER, Cleveland, Ohio, assignor to Theodor Kundtz, Lakewood, Ohio. Filed Feb. 23, 1915. Serial No. 9,820. (Cl. 45—111.)

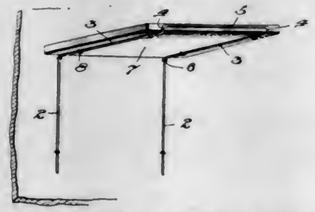
In a supporting structure, two vertically arranged laterally spaced standards each whereof is provided at its inner side with a vertically arranged slideway, two vertically adjustable spaced brackets arranged at the inner side of opposite standards respectively and having each a vertically arranged central member which engages the slideway of the adjacent standard and is provided with a vertically arranged slot, a horizontally arranged shaft extending loosely through the slots in the brackets and loosely through and supported from the standards, two spaced abutment-plates arranged vertically between the central members of the brackets and mounted on the shaft, a pinion arranged between the aforesaid member of each bracket and the adjacent abutment-plate and mounted on

and operatively connected with the shaft, and a bar extending and interposed between and supported from the abutment-plates, the central members of the brackets being provided at the same side of the shaft with vertically arranged racks meshing with the pinions, the shaft being



provided with means for clamping the standards and the brackets to the abutment-plates, and the brackets having portions which overlap the side edges of the abutment-plates in any adjustment of the brackets and are arranged to prevent rotation of the abutment-plates on the shaft.

1,196,085. WALL-BRACKET. HENRY T. COLE, New York, N. Y. Filed July 1, 1915. Serial No. 37,429. (Cl. 248—18.)



A wall bracket, formed of a continuous strand of metal and comprising vertical wall members, parallel horizontal arms extending laterally therefrom having upturned outer portions, a horizontal cross member connecting said upturned portions, a shelf horizontally supported on said arms and held thereon against the wall by the upturned end portions and cross member, which embrace the shelf at its outer edge, and means for securing said vertical members on a wall, substantially as described.

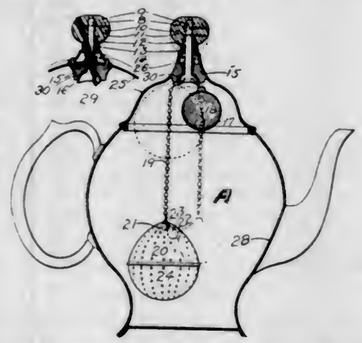
1,196,086. TEA AND COFFEE POT. IRWIN W. COX, Washington, D. C. Filed Feb. 19, 1913, Serial No. 749,529. Renewed Mar. 9, 1916. Serial No. 83,175. (Cl. 53—3.)

1. An attachment for tea pots and similar receptacles comprising a tea ball, a counterbalancing weight, a flexible chain connecting said tea ball and weight, and means for supporting and releasably clamping said chain near the top of said pot.

2. A cover attachment for tea pots and similar receptacles comprising a cover member, a tea ball, a counterbalancing weight, a flexible chain connecting said tea ball and weight, and means carried by said cover member for supporting and releasably clamping said chain.

3. A cover attachment for tea pots and similar receptacles comprising a cover having a knob, a tea ball, a counterbalancing weight, a flexible chain connecting said tea ball and weight, and means controllable by said knob for supporting and releasably clamping said chain.

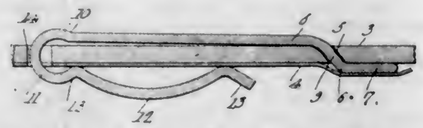
4. An attachment for tea pots and similar receptacles comprising an operating knob, attaching means for movably attaching said knob to such receptacles, a raising device arranged to permit lowering of the tea ball from said knob and tending normally when released to raise said tea ball, and said knob and attaching means being arranged normally to support and hold said tea ball in adjusted position and to permit raising of said tea ball when desired.



5. An attachment for tea pots and similar receptacles comprising a cover member, a knob for lifting said cover member, a tea ball, a raising device permitting lowering of the tea ball from said cover and tending normally when released to raise said tea ball, and said knob being arranged normally to hold said tea ball in adjusted position and to permit raising of said tea ball when desired.

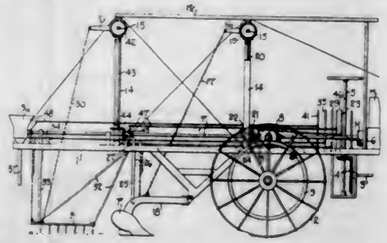
[Claims 6 to 9 not printed in the Gazette.]

1,196,087. HOLDING-CLIP. JOHN J. CRUME, Amarillo, Tex. Filed Dec. 1, 1913. Serial No. 804,067. (Cl. 24—255.)



As an article of manufacture, a clip for the purpose indicated comprising front and rear clamping and attaching arms connected by a loop, the front or clamping arm being of arcuate form to provide spaced bearing points and the rear or attaching arm being longer than the front arm and terminating in a forwardly offset and reduced bearing extremity arranged substantially in the plane of the bearing points of the front or clamping arm.

1,196,088. OPERATING MEANS FOR AGRICULTURAL MACHINES. WILLIAM H. H. DANSBERRY, La Crosse, Wis. Filed Dec. 20, 1915. Serial No. 67,828. (Cl. 74—14.)



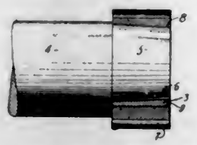
1. In combination with a frame, and a member supported by the frame and mounted for movement in a vertical path, a driven shaft supported by the frame, an upright carried by the frame, a shaft rotatably supported by the upright, a vertical shaft operatively engaged with

the last named shaft, means carried by the first named shaft adjustable into or out of engagement with the vertical shaft whereby the second named shaft is caused to rotate, a rock arm carried by the second named shaft, and a flexible connection between the rock arm and the member whereby said member is elevated upon rotation of the second named shaft under the influence of the first named shaft.

2. In combination with a frame, and a member supported by the frame and mounted for movement in a vertical path, a driven shaft supported by the frame, an upright carried by the frame, a shaft rotatably supported by the upright, a vertical shaft operatively engaged with the last named shaft, means carried by the first named shaft adjustable into or out of engagement with the vertical shaft whereby the second named shaft is caused to rotate, a rock arm carried by the second named shaft, a flexible connection between the rock arm and the member whereby said member is elevated upon rotation of the second named shaft under the influence of the first named shaft, and releasable means for maintaining the member elevated.

3. In combination with a frame, and a member supported by the frame and mounted for movement in a vertical path, a driven shaft supported by the frame, an upright carried by the frame, a shaft rotatably supported by the upright, a vertical shaft operatively engaged with the last named shaft, means carried by the first named shaft adjustable into or out of engagement with the vertical shaft whereby the second named shaft is caused to rotate, a rock arm carried by the second named shaft, a flexible connection between the rock arm and the member whereby said member is elevated upon rotation of the second named shaft under the influence of the first named shaft, said member being movable in an opposite direction by gravity, and a second flexible connection interposed between the member and the frame for limiting the downward movement of the member.

1,196,089. POWER-TRANSMITTING MEANS. RICHARD J. DEARBORN, Milburn, N. J., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 23, 1913. Serial No. 796,825. (Cl. 74—41.)



1. The combination with a power-transmitting member having an eccentrically disposed internal recess, of a shaft having a correspondingly eccentric end portion and positioning means engaging said shaft and said member to position the axes thereof substantially coincident.

2. The combination with a power-transmitting member having an eccentrically disposed internal recess, of a shaft having a correspondingly eccentric end portion and positioning means engaging said shaft and the radially thicker part of said member to position the axes thereof substantially coincident.

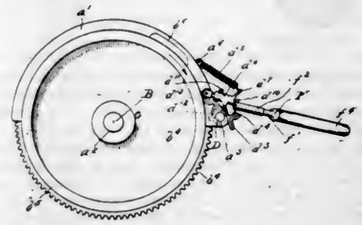
3. The combination with a shaft body having an eccentrically disposed end portion, of a power-transmitting member eccentrically recessed to engage said end portion, and means for securing said member to said portion with its axis substantially coincident with the axis of the shaft.

4. The combination with a shaft body having an eccentrically disposed end portion, of a substantially cylindrical power-transmitting member eccentrically recessed to engage said end portion, and positioning means detachably engaging the thicker part of said member and said end portion to dispose the external periphery of said member substantially concentrically with respect to said shaft body.

5. The combination with a shaft body provided with an eccentrically disposed integral end portion having a keyway located in that part of its periphery nearest to the axis of said body, of a gear member eccentrically recessed to engage said end portion and having a keyway in its radially thicker part, and a keying member frictionally engaging said keyways to dispose the external periphery of said gear substantially concentrically with respect to said shaft body.

[Claims 6 to 9 not printed in the Gazette.]

1,196,090. PRINTING-PRESS APPLIANCE. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to Charles S. Britton, Cleveland, Ohio. Filed July 26, 1913. Serial No. 781,306. (Cl. 101—111.)



1. A printing press appliance comprising the combination with a sheet conveyer, of a suction nozzle mounted adjacent and having an opening opposed thereto, one side edge of said opening being provided with a communicating surface groove oblique with reference to the direction of movement of the conveyer.

2. A printing press appliance comprising the combination of sheet conveying means, a manifold, suction means in communication therewith, a plurality of nozzles in communication with said manifold and extending toward said conveying means, the openings of said nozzles being elongated and transversely alined in opposition to the direction of movement of the sheet, said nozzles furthermore formed with a plurality of grooves intersecting the advance surface thereof and communicating with said openings respectively.

3. A printing press appliance comprising the combination of a sheet conveyer, a suction nozzle having its intake opening in operative proximity thereto, and a brush carried by said nozzle, said nozzle being provided with a groove intersecting said opening and extending toward said brush.

4. A printing press appliance comprising the combination of sheet conveying means, a nozzle having an opening opposed thereto, a brush removably attached to said nozzle and in advance of said opening with reference to the direction of movement of said sheet, said nozzle being provided intermediately of its opening and said brush with a plurality of obliquely extending surface grooves, and suction means operatively connected with said nozzle.

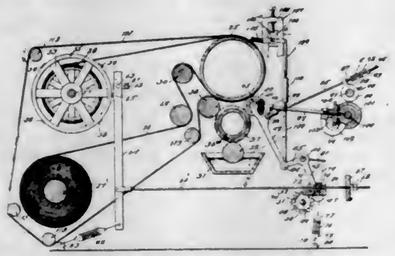
5. A printing press appliance comprising the combination of sheet conveying means, a nozzle having a transversely elongated opening opposed thereto, the advanced edge of said opening with respect to the direction of movement of the sheet being provided with a plurality of grooves in communication with the nozzle opening, and suction means in communication with the latter.

[Claims 6 to 12 not printed in the Gazette.]

1,196,091. APPARATUS FOR MANUFACTURING CARBON-PAPER. ARTHUR E. EMERY, Aurora, Ill. Filed Mar. 20, 1911. Serial No. 615,551. (Cl. 91—50.)

1. In apparatus of the character described, the combination with a roller over which the fabric operated upon is run, of a continuously rotating coating roller adapted to come into contact with the fabric, and means for intermittently holding said coating roller out of contact with said fabric.

2. In apparatus of the character described, the combination with a roller over which the fabric operated upon is run, of a continuously rotating coating roller, and means for shifting said last named roller into and out of contact with the fabric.



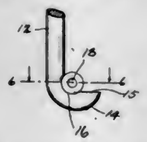
3. In apparatus of the character described, the combination with a roller over which the fabric operated is run, of a continuously rotating coating roller, means for shifting said last named roller into and out of contact with the fabric, a fountain for the coating material, a feed roll which revolves in said fountain, and a distributing roll interposed between the feed roll and the coating roller.

4. In apparatus of the character described, the combination with a roller over which the fabric operated upon is run, of a continuously rotating coating roller, means for shifting said last named roller into and out of contact with the fabric, a fountain for the coating material, a feed roll which revolves in said fountain, and a distributing roll interposed between the feed roll and the coating roller with which said coating roller remains in contact at all times.

5. In apparatus of the character described, the combination with means providing a supporting surface for the fabric operated upon, of an element which carries the coating material, means for continuously rotating said element, means for shifting said element out of contact with said fabric, and a spring mechanism for moving the same into contact therewith.

[Claims 6 to 22 not printed in the Gazette.]

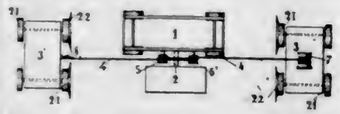
1,196,092. TEMPLE MEMBER FOR GOGGLES. HARRY EDWARD FENNO, Providence, R. I., assignor to George F. Berkander, Providence, R. I. Filed Jan. 27, 1916. Serial No. 74,705. (Cl. 88—52.)



In a spectacle, the combination with a lens frame, of a temple formed of a length of finished rod of non-metallic material of uniform size throughout its length and having one end bent substantially at a right angle to the axis of the rod, its extremity serving as a stop against the front of the frame, and a disk formed separate and having its periphery connected to said temple at the inner surface of the angle at the bend to form a pivot pad for attaching the temple to the frame, both the periphery of the disk and that of the temple being shaped to conform to each other's contour at the point of contact.

1,196,093. HAULING DEVICE. GEORGES FILTZ, Juvisy, France. Filed Dec. 22, 1911. Serial No. 667,403. (Cl. 104—92.)

1. A hauling device comprising a tractor, a cable, anchors for the ends of said cable, two pulleys on said tractor disposed in alinement one with the other, said pulleys having each a number of grooves for the reception of said cable wound around them, and being mounted at an invariable distance apart, one of said pulleys being free, while the second of said pulleys is fast, and a prime mover on said tractor for imparting movement to the second of said pulleys.



2. A hauling device comprising a tractor and an implement or body to be hauled, means of connection of the latter to the tractor, a cable passing between them, anchors for the ends of said cable, two pulleys on said tractor disposed in alinement one with the other, said pulleys having each a number of grooves for the reception of said cable wound around them, one of said pulleys being free, while the second of said pulleys is fast, and a prime mover on said tractor for imparting movement to the second of said pulleys.

3. A hauling device comprising a tractor, a cable, anchors for the ends of said cable, two pulleys on said tractor disposed in alinément one with the other, said pulleys having each a number of grooves for the reception of said cable wound around them, and being mounted at an invariable distance apart, one of said pulleys being free, while the second of said pulleys is fast, and a prime mover on said tractor for imparting movement to the second of said pulleys, and means for varying the direction of movement imparted to said pulley.

4. A hauling device comprising a tractor and an implement or body to be hauled, means of connection of the latter to the tractor, a cable passing between them, anchors for the ends of said cable, two pulleys on said tractor disposed in alinement one with the other, said pulleys having each a number of grooves for the reception of said cable wound around them, one of said pulleys being free, while the second of said pulleys is fast, and a prime mover on said tractor for imparting movement to the second of said pulleys, and means for varying the direction of movement imparted to said pulley.

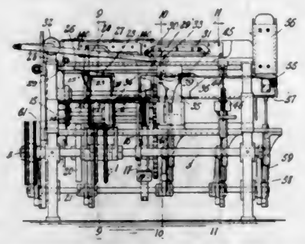
5. A hauling device comprising a tractor and an implement or body to be hauled, means of connection of the latter to the tractor, a cable passing between them, anchors for the ends of said cable, means on one of said anchors for applying tension to said cable, two pulleys on said tractor disposed in alinement one with the other, said pulleys having each a number of grooves, for the reception of said cable wound around them, one of said pulleys being free, while the second of said pulleys is fast, and a prime mover on said tractor for imparting movement to the second of said pulleys.

[Claims 6 to 12 not printed in the Gazette.]

1,196,094. CARTON-WRAPPING MACHINE. HERMANN OTTO FISCHER, Springfield, Mass., assignor to Package Machinery Company, Springfield, Mass., a Corporation of Massachusetts. Filed May 10, 1912. Serial No. 696,392. (Cl. 93—2.)

1. A wrapping machine comprising mechanism to feed articles to be wrapped therein, other mechanism to feed wrappers one for each article, together with devices to pass said wrappers one around each article in one direction and bring the edges in overlapping relation, cutting means to form a flap in each end of the wrapper extensions, together with folding devices for folding first said wrapper extensions, except the flaps, with certain portions around the ends of the article, and the remaining portions under the flaps, and then folding said flaps and underlying extensions against the other folds to form a seal for the end of the package.

2. A wrapping machine comprising feeding mechanism for articles to be wrapped, other feeding mechanism to feed wrapping material for said articles and applying adhesive thereto, together with mechanism to which said articles and wrapping material are fed for passing a portion of said material around the body of each article with extensions beyond the end thereof, and bringing the longitudinal meeting edges in overlapping relation with the adhesive therebetween, cutting means to form a flap in each end extension of the wrapper, end-folding mechanism for folding the end extensions against the article in several folds, means to apply adhesive to said flaps, and folding means to thereafter lay the flaps over all of said several folds at the ends of the article to form end seals for the package.



3. A wrapping machine comprising a folding pocket, feeding mechanism to feed a carton in line with the opening in said pocket, other feeding mechanism to feed wrapping material between said pocket and a carton, plunger mechanism operable to force said carton with the wrapping material into the pocket, whereby the carton is partially wrapped in one direction, means to move the pocket in the machine, mechanism operable on the movement of the pocket to complete the wrapping of the carton in the same direction, end-folding mechanism to complete the wrapping of the carton by folding the ends of the wrapper thereagainst comprising cutting means to form a flap in each end extension of the wrapper, folding members operable to make three folds of the end extensions at each end of the wrapper, and then fold the flap thereover, and mechanism to apply adhesive to said flap before folding it against the end folds.

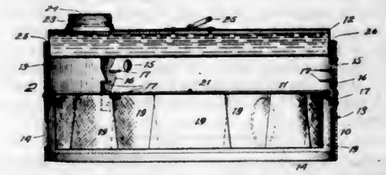
4. A wrapping machine comprising two feeding devices,—one for cartons and the other for wrapping material—folding mechanism for passing said material completely around each carton in one direction, and other folding mechanism to fold said wrapping material over the ends of said carton comprising a cutting means to cut a flap in each end of said material, folding fingers with operating means to make three folds over each end of the carton, mechanism to apply glue to each of said flaps, and further mechanism operable to fold each flap over the said end folds, whereby an end seal is formed.

5. In a wrapping machine, means for applying adhesive to a wrapper comprising a reciprocable frame, a rod yieldingly mounted therein having a part adapted to carry adhesive, an arm balanced on said rod, a stop to normally limit the movement of said frame by contact with said balanced arm, a slot in said stop, a plate against which the wrapper to receive adhesive is adapted to lie, said balanced arm being arranged to contact with said wrapper on movement of the frame to swing into registry with the slot in the stop, thereby allowing the rod to move with the frame for the purpose desired.

[Claims 6 to 26 not printed in the Gazette.]

1,196,095. CHICKEN-BROODER. VIVIAN L. FISHER, Newark, N. J., and FRANCIS J. HILL, New York, N. Y., assignors to Walter Durbrow, West New Brighton, N. Y. Filed Mar. 18, 1915. Serial No. 15,230. (Cl. 119—33.)

1. A brooder for chicks and the like comprising a body portion having a door opening in the side thereof, a "mother" within said body portion, and a removable tank forming the top of the brooder and adapted to receive hot water, said tank being composed of upper and lower substantially similar sections flanged outwardly and secured together at their adjoining edges and thereat forming a peripheral flange to engage the upper edges of said body-portion.



2. A brooder for chicks and the like comprising a body portion having a door opening in the side thereof, a "mother" within said body portion, and a removable tank forming the top of the brooder and adapted to receive hot water, said tank having a peripheral flange to engage the upper edges of said body portion and being adapted below said flange to set within said body portion, and said tank having a filling nozzle and a handle on its top and also being reversible in the upper portion of said body-portion.

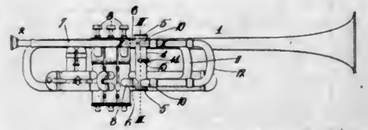
3. A brooder for chicks and the like comprising a body-portion having openings for the ingress and egress of the chicks, heating means, a "mother" and means for the vertical adjustment of the "mother," said "mother" having a top, an encompassing ring holding said top distended, dependent curtain sections and a rod extending across said top and secured at its ends to said ring, and said means of adjustment comprising a plurality of bars secured to the inner walls of said body-portion and having a plurality of inwardly extending bracket-arms at varying heights adapted to support said "mother" at said ring, said ring being recessed inwardly to pass one set of the bracket-arms and thereby facilitate the application of the "mother" to position.

1,196,096. CAMERA-CARRIAGE. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 25, 1914. Serial No. 834,310. (Cl. 95—46.)



The combination with a horizontally disposed bed provided with a groove having converging walls to form a V-shaped track opening upwardly, of a camera carriage movable on the bed and provided with a supporting roller having V-shaped or converging tread surfaces coöperating with the track, said roller being provided with a V-shaped groove on its periphery in inverse relationship to the groove of the track to leave a diamond shaped space in the angle of the track beneath the roller.

1,196,097. CORNET. WALTER A. FRENCH, Kansas City, Mo. Filed June 8, 1914. Serial No. 843,601. (Cl. 84—8.)



A cornet provided with a vertical valve casing having a sleeve C at its upper end connected to the mouth-piece tube, and a similar sleeve at its lower end connected to one of the ordinary valve casings; said first casing also having a pair of sleeves 9 and 10 at its upper end and a pair of sleeves 9 and 10 at its lower end; a U-shaped tube

connecting the sleeves 9, and a longer U-shaped tube connecting the sleeves 10; a vertical cylindrical piston fitting snugly and rotatably in the casing and provided at its ends with horizontal similarly curved cross passages 16, one being adapted to connect sleeve 6 alternately with either of the upper sleeves 9 and 10 and the other to connect simultaneously sleeve 8 with either of the lower sleeves 9 and 10, and means to turn the piston in opposite directions to make the connections mentioned between said sleeves.

1,196,098. COMPOSITION FOR COATING STENCIL-SHEETS. SYDNEY W. FUERTH, Newark, N. J., assignor to himself and Gustave W. Fuerth, Newark, N. J. Filed Nov. 30, 1915. Serial No. 64,375. (Cl. 134—1.)



1. A composition for coating stencil sheets, comprising as its principal ingredient an alcohol solution of a preparation of lac, and also comprising ingredients for softening, shortening and binding.

2. A composition for coating stencil sheets, comprising as its principal ingredient a preparation of lac in a state of dissolution, and also comprising ingredients for softening, shortening and binding.

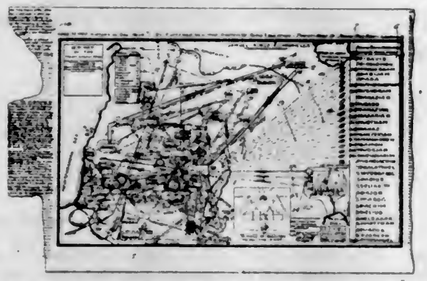
3. A composition for coating stencil sheets, comprising a solution of lac in alcohol, and comprising glycerin as a softening agent, and also comprising means for shortening and binding.

4. A composition for coating stencil sheets, comprising a solution of lac in alcohol, and comprising glycerin as a softening agent, and also comprising oleic acid for shortening the lac and to serve as a binder for the composition.

5. A composition for coating stencil sheets, comprising a solution of lac in alcohol, and comprising glycerin as a softening agent, and also comprising means for shortening and binding, and also comprising a coloring agent.

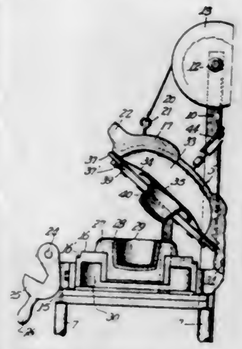
[Claims 6 to 26 not printed in the Gazette.]

1,196,099. EDUCATIONAL DEVICE. ANTONIA FREDERICK FÜTTERER, Los Angeles, Cal. Filed Oct. 28, 1912. Serial No. 728,274. (Cl. 35—6.)



An educational device to graphically represent events described in a book comprising a map having different kinds of travel lines printed thereon to indicate respectively the journeys of different people, said map having illustrative figures thereon to and from which the travel lines lead and which indicate where events occurred and reference characters associated with the illustrative figures and having reference to the part of the book where the events are described.

1,196,100. HAT-PRESS. LEO GALITZKI, Jr., Chicago, Ill., assignor to Leo Galitzki, Sr., Chicago, Ill. Filed July 29, 1915. Serial No. 42,507. (Cl. 223—31.)



In a hat press the combination of a base portion 16, having a central depression for a die and having an annular groove 16' in its boundary wall; a hinge portion 17 having a cavity 33; a diaphragm 34 overlying the cavity, and carrying a die 40; a clamping ring 37 overlying the marginal edges of the diaphragm and having an integral rim 37' which enters the groove 16' when the press is closed to provide means to hold the dies against relative lateral displacement and to prevent escape of steam or water from the interior of the press.

1,196,101. METHOD OF ABSORBING CARBON MONOXID. WILHELM GAUS, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 21, 1914. Serial No. 867,716. (Cl. 48—85.)

1. The process of absorbing carbon monoxid from gases containing it, which consists in treating the said gases in iron apparatus with a solution of cuprous chlorid containing such a proportion of ammonia that the iron of the apparatus remains practically unattacked.

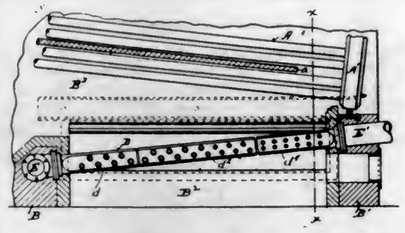
2. The process of absorbing carbon monoxid from gases containing it, which consists in treating the said gases under increased pressure in iron apparatus with a solution of cuprous chlorid containing such a proportion of ammonia that the iron of the apparatus remains practically unattacked.

3. The process of absorbing carbon monoxid from gases containing it, which consists in treating the gases in iron apparatus with a solution of cuprous chlorid containing at least 60 grams of ammonia in each liter.

4. The process of absorbing carbon monoxid from gases containing it, which consists in treating the gases under increased pressure in iron apparatus with a solution of cuprous chlorid containing at least 60 grams of ammonia in each liter.

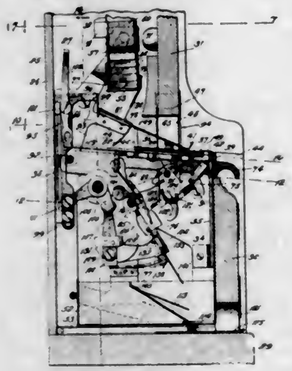
1,196,102. STEAM-SUPERHEATER. EDWARD ARTHUR GEOGHEGAN, New York, N. Y. Filed Feb. 27, 1915. Serial No. 11,036. (Cl. 122—469.)

1. In a steam superheating apparatus, a steam boiler, a fire wall, a rear wall, side walls, tube headers located in inclined positions in said side walls, with the ends thereof adjacent to said fire-wall being lower than the ends adjacent to said rear wall, and steam conveying tubes parallel with said fire-wall and connected with said inclined headers, substantially as set forth.



2. In a steam superheater, a steam boiler, a fire-wall, a rear wall, side walls, a plurality of tube-header chambers located in each of said side walls between said fire-wall and said rear wall, in parallel inclined positions, superheater tubes parallel with said fire-wall connecting the header chambers in one side wall with the header chambers in the opposite side wall, so that steam will be conducted back and forth from the header chambers at one side, to the header chambers at the other side, until it has traversed all of the chambers and tubes behind said fire-wall, substantially as described.

1,196,103. COIN-CONTROLLED VENDING-MACHINE. HARVEY GILES, Brooklyn, N. Y., assignor to Artemas Ward, New York, N. Y. Filed Apr. 24, 1916. Serial No. 93,209. (Cl. 194—91.)



1. In a coin-controlled vending machine, in combination, a general casing, a tray therein mounted to swing for holding a stack of confections, a goods-ejector to dislodge the lower piece of confection, an operating rod, means operable therefrom in connection with an introduced coin for positioning the ejector, and means operable from said rod for swinging the tray to carry the lower piece of goods therein against said ejector for dislodging said piece.

2. In a coin-controlled vending machine in combination, a general casing having a coin slot, a tray within said casing mounted to swing for holding a stack of confections, a goods ejector to dislodge the lower piece of confection, manually operative means, means operable therefrom in connection with an introduced coin for positioning the ejector and means connected with said manually operative means for swinging the tray to carry the lower piece of goods therein against said ejector for dislodging said piece.

3. In a coin-controlled vending machine, in combination, a general casing having a coin-slot, a vertically disposed tiltable tray in said casing for holding a stack of confections, a goods ejector to dislodge the lower piece of confection, manually operative means for, in connection with an introduced coin, positioning the ejector, and means connected with said manually operative means for swinging the tray to carry the lower piece of goods therein against said ejector for dislodging said piece, the means for positioning the ejector comprising a frame to receive and carry the coin, a race-plate over which said coin is carried on edge, and means in the path of the coin and connected with the goods ejector and adapted to be moved by the coin during its travel for actuating said ejector.

4. In a coin-controlled vending machine, in combination, a general casing having a coin-slot, a vertically disposed tiltable tray in said casing for holding a stack of confections, a goods ejector to dislodge the lower piece of confection, manually operative means for, in connection with an introduced coin, positioning the ejector, and means connected with said manually operative means for swinging the tray to carry the lower piece of goods therein against said ejector for dislodging said piece, the means for positioning the ejector comprising a frame to receive and carry the coin, a race-plate over which said coin is carried on edge, a bell-crank having a cam-plate in the path of the coin and to be engaged and actuated thereby, and a bell-crank to which the first-mentioned bell-crank is connected and which has one arm connected with the goods ejector for moving the same.

5. In a coin-controlled vending machine, in combination, a general casing having a coin-slot, a vertically disposed tiltable tray in said casing for holding a stack of confections, a goods ejector to dislodge the lower piece of confection, manually operative means for, in connection with an introduced coin, positioning the ejector, and means connected with said manually operative means for swinging the tray to carry the lower piece of goods therein against said ejector for dislodging said piece, the means for positioning the ejector comprising a frame to receive and carry the coin, a race-plate over which said coin is carried on edge, a bell-crank having a cam-plate in the path of the coin and to be engaged and actuated thereby, and a bell-crank to which the first-mentioned bell-crank is connected and which has one arm connected with the goods ejector for moving the same, the goods ejector being slidably mounted and free to descend by gravity upon the escape of the coin to the coin box.

[Claims 6 to 20 not printed in the Gazette.]

1,196,104. STAGE-SETTING. BENJAMIN M. GIROUX, Chicago, Ill. Filed Dec. 27, 1915. Serial No. 68,775. (Cl. 46—70.)



1. In a device of the kind described, a suitable stage setting, in combination with a substantially horizontal curtain secured to provide a fullness therein, means for agitating said curtain, and means for discharging a vapor in proximity thereto, to simulate steam and smoke, substantially as described.

2. A device of the kind described, a suitable stage setting, in combination with a substantially horizontal curtain secured to provide a fullness therein, means for agitating said curtain, parts connected to the curtain for relative free movement and adapted to be projected as the curtain is thrown upward, and means for discharging a vapor in proximity to the curtain to simulate steam and smoke proceeding therefrom.

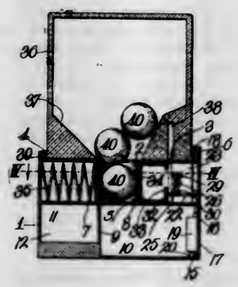
3. A device of the kind described, a suitable stage setting, in combination with a substantially horizontal curtain secured to provide a fullness therein to permit a vertical movement thereof, means for throwing light effects upon said curtain and modifying the same as desired, and means for ejecting a vapor in proximity to the curtain to simulate steam and smoke proceeding therefrom, substantially described.

4. In a device of the kind described, a suitable stage setting, in combination with a substantially horizontal curtain secured to permit a fullness therein to permit vertical action, means for vertically oscillating the curtain, suitable bodies having flexible connection with the curtain and adapted to be projected by the vertical lift thereof, means for throwing light effects upon the curtain and modifying the same as desired, and means for ejecting a vapor in proximity to the curtain to simulate steam and smoke proceeding therefrom.

5. In a device of the kind described, a substantially horizontal curtain secured to provide fullness therein, and means for vertically operating the curtain, in combination with means for throwing light effects upon the curtain, means for ejecting a vapor in proximity to the curtain, and independent means for delivering a smoke-like vapor in proximity thereto.

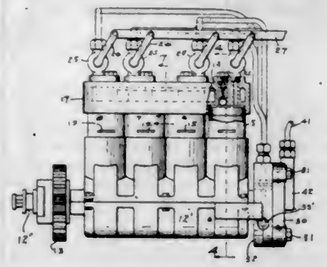
[Claims 6 to 36 not printed in the Gazette.]

1,196,105. COIN-CONTROLLED VENDING-MACHINE. CLAUD A. GROOM, Excelsior Springs, Mo. Filed Feb. 8, 1915. Serial No. 6,743. (Cl. 194—80.)



In a vending machine, a casing having a receiving opening and a receiving slot in its top, a horizontal partition dividing the casing into upper and lower chambers and provided with a discharge opening and a discharge slot, and provided also with an upright partition dividing the lower chamber into a front chamber and a rear chamber at a point between said discharge opening and discharge slot, the casing also having an opening to give access to the said rear lower chamber and having a longitudinal slot, a door closing the front end of the casing, a slide within the upper chamber of the casing and provided with a bottomless pocket to receive an object to be vended from the receiving opening, the front end of said slide terminating rearward of the vertical plane of said receiving slot and forward of the plane of said discharge slot, a slide frame in the upper chamber of the casing and provided with a cross bar forward of the vertical plane of said receiving slot and projecting through the said slot of the casing, and adapted when slid rearwardly under pressure applied on its projecting end to impart rearward sliding movement to the slide frame and when a coin is dropped into the casing through said receiving slot, to press such coin against the front end of the pocket slide and move the latter rearwardly until the pocket of the slide registers with the said discharge opening and the coin is disposed above said discharge slot, and a spring for returning the slide frame and slide pocket to initial position immediately the coin drops through said discharge slot into the front lower chamber, in combination with a magazine secured in superposed relation to the casing and communicating with the receiving openings of the latter and provided with a coin slot communicating with the receiving slot of the casing.

1,196,106. SELF-STARTER AND PUMP FOR INTERNAL-COMBUSTION ENGINES. HARRY W. HAMILTON, Indianapolis, Ind., assignor of one-third to Harold Taylor and one-third to Samuel B. Sutphin, Indianapolis, Ind. Filed Dec. 28, 1914. Serial No. 879,256. (Cl. 230—37.)



1. An apparatus of the character described, comprising a unitary pump and motor structure having a plurality of cylinders, a shaft for operating said apparatus, means for conducting compressed air into said apparatus for operating the same as a motor, a plurality of valves interposed between said cylinders and said air conducting means, means connected with said valves for opening the same to admit compressed air therethrough when operating the apparatus as a motor and for closing said valves to exclude such air therefrom when operating said apparatus as a pump.

2. An apparatus of the character described including a plurality of cylinders, pistons therein, a crank shaft common to all of said pistons, rods connecting said pistons and shaft, an air distributer associated with said apparatus and connected with said shaft, an air conduit leading from said distributer to each of said cylinders, and valves interposed between said conduits and cylinders for controlling the discharge of air thereinto to actuate said pistons and rotate said shaft.

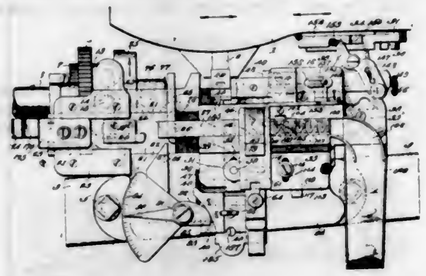
3. In an apparatus of the character described, the combination of a plurality of cylinders each having a piston therein, a shaft, rods connecting said pistons and said shaft, a driving wheel on said shaft, a clutch mechanism for rotatively engaging said wheel to said shaft, valves associated with said cylinders to conduct compressed air thereinto when opened, means for simultaneously closing said valves, and means adjacent said valves and common to all of said cylinders for conveying compressed air therefrom.

4. In an apparatus of the character described, a driving shaft, and an air distributer connected to said shaft including a slotted portion adapted to register with a conduit for conveying air thereinto and with a recessed portion for receiving air returned to said distributer from such conduit and directing the same to an outlet.

5. An apparatus of the character described, including a plurality of cylinders, pistons therein, a crank shaft common to all of said pistons, rods connecting said pistons and shaft, valves associated with each of said cylinders for controlling the flow of compressed air thereinto, an air distributer for directing compressed air into said cylinders when said valves are open for actuating the device as a motor, means for simultaneously closing said valves to prevent the passage of air thereinto and by which said device is converted into a pump, and a manifold communicating with said cylinders for conveying compressed air created by said pump to an outlet.

[Claims 6 to 8 not printed in the Gazette.]

1,196,107. TYPE-CASTING ATTACHMENT FOR LINOTYPE-MACHINES. JOHN E. HANRAHAN, Baltimore, Md. Filed Nov. 18, 1912, Serial No. 732,104. Renewed Feb. 1, 1916. Serial No. 75,628. (Cl. 199—9.)



1. In a single type casting attachment, a movable mold carriage; means adapted to be operated from parts of a linotype machine for moving said carriage into and out of casting position; and means forming a part of the mold cavity for automatically ejecting the cast type when said carriage is in its non-casting position, substantially as described.

2. In a single type casting attachment for a linotype machine the combination of a movable mold carriage; means adapted to be operated from one part of said machine for moving said carriage into its casting position; means adapted to be operated from another part of said machine for moving said carriage from its casting to its non-casting position; and sliding means operated from said second part of said machine for ejecting the cast type, substantially as described.

3. In a single type casting attachment for a linotype machine the combination of a movable mold carriage; means comprising a pivoted lever adapted to be operated from one part of said machine for moving said carriage into its casting position; means comprising a second lever adapted to be operated from another part of said machine for moving said carriage from its casting to its non-casting position; and sliding means comprising a readily detachable member operated from said second part of said machine for ejecting the cast type, substantially as described.

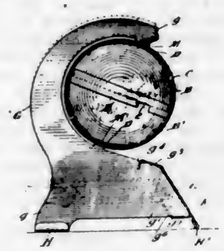
4. In a single type casting attachment for a linotype machine the combination of a movable mold carriage provided with a mold cavity; a pivoted lever adapted to be operated from the casting pot of said machine for moving said carriage from its non-casting to its casting position; a gear adapted to intermesh with a gear on said machine; a cam member; connections between said first gear and cam member; and a lever in the path of said cam member for moving said carriage from its casting to its non-casting position, substantially as described.

5. In a single type casting attachment for a linotype machine the combination of a movable mold carriage provided with a mold cavity; a pivoted lever adapted to be operated from the casting pot of said machine for moving said carriage from its non-casting to its casting position; a gear adapted to intermesh with a gear on said machine; a cam member; connections between said first gear and cam member; a lever in the path of said cam member for moving said carriage from its casting to its non-casting position; and a sliding ejector operated by said cam for forcing the cast type from said mold cavity, substantially as described.

[Claims 6 to 49 not printed in the Gazette.]

1,196,108. COMBINED GLOBE AND BANK. JERVIS R. HARBECK, Chicago, Ill., assignor to Charles W. Shonk Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 8, 1912. Serial No. 713,968. (Cl. 35—5.)

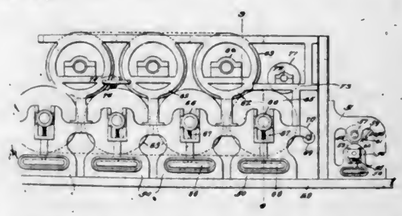
1. In a device of the character described, a tripod stand comprising a transverse front panel formed with upper and lower bent extensions, and a base member arranged in a plane extending rearward from the front panel, formed with slits in which said bent extensions are engaged, and having an arcuate arm formed with integral axial studs.



2. In a device of the character described, a tripod stand comprising a transverse front panel formed with upper and lower bent extensions, and a base member arranged in a plane extending rearward from the front panel, formed with slits in which said bent extensions are engaged, and having an arcuate arm formed with integral axial studs, and a hollow and slotted globe member mounted on said axial studs.

3. A device of the character described including, in combination: a stand having a vertical, curved arm formed of sheet metal and provided with integral studs arranged in axial alinement; and a globe having axially alined recesses therein in which said studs are adapted to be placed, the diameter of the globe being slightly greater than the distance between said studs and the sheet metal curved arm permitting the studs to be sprung into place, substantially as specified.

1,196,109. VULCANIZING-MACHINE. FRANCIS J. HEALEY and SIDNEY ROWLAND SHEPPARD, Southall, England. Filed June 28, 1915. Serial No. 36,852. (Cl. 18—6.)



1. A machine for vulcanizing a continuous webbing comprising a plurality of driven and heated drums, some of said drums being supported in adjustable bearings, a roller in advance of said drums to apply a lacquer to said webbing preparatory to its passage between the heated drums and means whereby the thickness of the film of lacquer may be regulated.

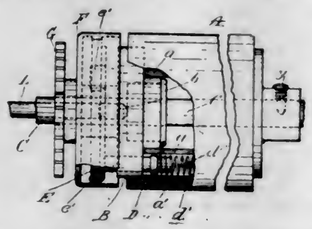
2. A machine for vulcanizing a continuous webbing, comprising a plurality of driven and heated drums to receive a continuous webbing therebetween, a roller for applying a film of lacquer to said webbing preparatory to its passage between said drums, and a powdering device disposed between some of said rollers for applying a powder to said webbing in its treatment between said drums.

3. A machine for vulcanizing a continuous webbing comprising a frame, a plurality of drums journaled in fixed bearings, a plurality of corresponding drums journaled in movable bearings, each of said drums being disposed to establish an impinging action on the two adjacent drums in the opposite row of drums, said drums being relatively adjustable to vary the thickness of an inserted web therebetween, a roller for applying lacquer to a web

before passing through said drums and a powdering device for applying powder to an inserted web during the treatment of the web in said drums.

4. A machine for vulcanizing a continuous webbing comprising a frame, a plurality of driven and heated rollers journaled in said frame in fixed bearings, a plurality of driven and heated drums journaled in said frame in movable bearings, said second mentioned drums being in staggered relation to said first mentioned drums, said frames being disposed to have their peripheries contact with and bind against a webbing passing between said drums, a lacquering roller carried by said frame in advance of said heated drums, means for varying the thickness of a film of lacquer applied to a web passing under said roller and a powdering device carried by said frame between some of said heated drums disposed to supply a powder to a web passing between said heated drums in the treatment of said web.

1,196,110. LINE-SPACING MECHANISM FOR TYPE-WRITING MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 13, 1916. Serial No. 90,867. (Cl. 197—123.)



1. Platen release mechanism for type-writing machines comprising, in combination with the platen and its shaft, a ratchet wheel and locking members for connecting the ratchet wheel with the platen having fine interlocking ridges which have their longitudinal or peripheral edges inclined relatively to each other.

2. Platen release mechanism for type-writing machines comprising, in combination with the platen and its shaft, a ratchet wheel and locking members for connecting the ratchet wheel with the platen having interlocking fine ridges which have their longitudinal edges inclined relatively to each other and have their engaging or contacting portions of the same width.

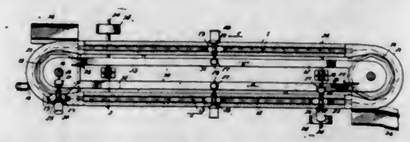
3. Platen release mechanism for type-writing machines comprising, in combination with the platen and its shaft, a ratchet wheel and locking devices for connecting the ratchet wheel with the platen shaft consisting of two members one of which is connected to rotate with the platen and the other with the ratchet wheel both of said members being provided with interlocking ridges the longitudinal edges of the ridges on one member being inclined relatively to the longitudinal edges of the ridges on the other member, the contacting or engaging portions of the ridges on one member being of the same width as the corresponding parts on the other member.

4. Platen release mechanism for type-writing machines comprising, in combination with the platen and its shaft, a cup-shaped locking member connected to rotate with the ratchet wheel and having on the inside of its rim a circular series of diminutive ridges, a flanged locking member connected to move with the platen and having ridges on said flange engaging the ridges on the cup-shaped member, the longitudinal or peripheral edges of which are set at an angle to the longitudinal edges of the ridges on the cup-shaped member.

5. Platen release mechanism for type-writing machines comprising, in combination with the platen and it shaft, a ratchet wheel loose on the platen shaft and locking members for connecting the platen with the ratchet wheel, one of which members is formed with fine ridges the longitudinal edges of which are parallel with the axis of the platen and the other of which members is formed with fine ridges the longitudinal edges of which are set at an angle to the longitudinal edges of the ridges on the first mentioned locking member, said ridges in both members being of the same width where they engage or contact with each other.

[Claim 6 not printed in the Gazette.]

1,196,111. CAN-COATING MACHINE. JOHN G. HODGSON, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 5, 1913. Serial No. 765,573. (Cl. 91—60.)



1. A coating machine of the character described including, in combination; an endless movable conveyer having a plurality of chucks bodily movable therewith and rotatably mounted thereon; and means for simultaneously axially rotating said chucks and tilting the same, said means including a movable inclined belt, substantially as specified.

2. A coating machine of the character described including, in combination: an endless conveyer; a plurality of chuck-holding brackets pivotally mounted on said conveyer, each of said brackets having a chuck rotatably mounted therein, each chuck having a spindle; weighted rollers secured to the ends of said spindles; and an inclined track over which said rollers run and by which the same are rotated and raised to thereby rotate the chucks and tilt the same, substantially as specified.

3. A coating machine of the character described including, in combination: an endless conveyer; a plurality of chuck-holding brackets pivotally mounted on said conveyer, each of said brackets having a chuck rotatably mounted therein, each chuck having a spindle; weighted rollers secured to the ends of said spindles; and an inclined track over which said rollers run and by which the same are rotated and raised to thereby rotate the chucks and tilt the same, said track comprising a movable belt, substantially as specified.

4. A coating machine of the character described, including, in combination: a rotatable article-holding member; an endless conveyer with which the axis of the article-holding member is connected; and an endless belt arranged for axially rotating said member while it is being conveyed; the said combination comprising means for tilting the article-holding member, whereby the coating is spread.

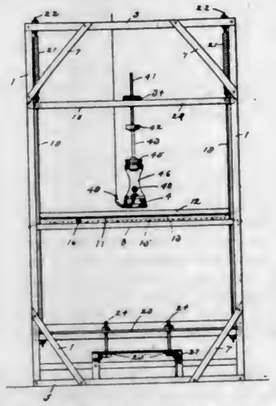
5. A coating machine of the character described including, in combination: an article holding chuck; and means for rotating said chuck simultaneously about two different axes, the speed of rotation about its individual axis being rapid and about the other axis being relatively slow, substantially as specified.

[Claims 6 to 20 not printed in the Gazette.]

1,196,112. PRESSING-MACHINE. LOUIS HOFFMAN, Duluth, Minn. Filed Apr. 15, 1916. Serial No. 91,307. (Cl. 68—9.)

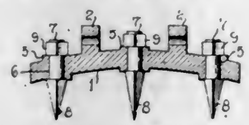
1. An ironing machine of the character described, comprising a rectangular shaped supporting frame having four vertical corner posts, a second vertically reciprocal rectangular frame carried within the supporting frame, guided at its four corners by the corner posts of the supporting frame, and suspended from the upper end of the supporting frame, means at the lower end of the supporting frame for depressing the reciprocal frame, an ironing table carried by the supporting frame and an iron suspended from the upper end of the reciprocating frame and designed to operate upon the table.

2. The combination with an ironing machine of the character described, having a supporting frame, a table and a vertically reciprocal frame carried by the supporting frame, the upper end of the reciprocal frame having opposite sides constructed of channel bars facing each other, a carriage within each channel bar, said carriages



being coöperatively united by means of a cross frame having two channel bars facing each other and carried by the carriages, a carriage within each cross frame channel bar, said carriages supporting between them a depending pressing iron for operation upon an article placed upon the table.

1,196,113. SCRAPER. ANDREW F. HOOD, Durango, Colo. Filed Oct. 27, 1915. Serial No. 58,177. (Cl. 55—3.)

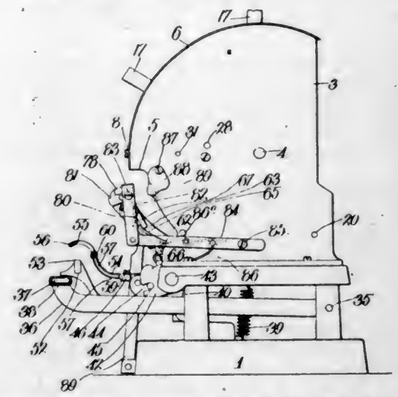


A device of the character described comprising an elongated body curved in cross section and provided on its opposite faces with the longitudinally disposed shoulders, the outer faces of which are flat, said body being provided with openings intersecting the shoulders, teeth coacting with the concave surface of the body and provided with shanks disposed through the openings of the body, and clamping means engageable with the shanks and contacting with the shoulders formed on the convex surface of the body.

1,196,114. LAUNDRY-MARKING MACHINE. THOMAS J. HUME, Kansas City, Kans. Filed Oct. 14, 1914. Serial No. 866,597. (Cl. 101—83.)

1. In a laundry marking machine, a casing, a shaft therein, a series of peripherally charactered segments journaled on the shaft, means for holding each segment at the required point of adjustment to dispose any desired group of characters thereon in the said printing line, means for collectively tripping the holding means to permit the movement of the adjusted segments to normal or inoperative position, a cushion to receive the impact of the segments in returning to said normal or inoperative position, means to withdraw the cushion from the path of the segments to permit the same to continue their movement until they reach their normal or inoperative position.

2. In a laundry marking machine, a casing, a shaft therein, a series of peripherally charactered segments journaled on the shaft, means for holding each segment elevated the required distance to dispose any desired group of characters thereof in a horizontal or printing line, means for collectively tripping the holding means to permit the elevated segments to swing downward to inoperative position, a cushion to receive the impact of the segments on their downward movement, means to withdraw the cushion from the path of the segments to permit the same to finish their downward movement, and means for arresting such continued movement.



3. In a laundry marking machine, a casing, a shaft therein, a series of peripherally charactered segments journaled on the shaft, means for holding each segment elevated the required distance to dispose any desired group of characters thereof in a horizontal or printing line, means for collectively tripping the holding means to permit the elevated segments to swing downward to inoperative position, a cushion to receive the impact of the segments on their downward movement, means to withdraw the cushion from the path of the segments to permit the same to finish their downward movement, and a rod for positively determining such continued downward movement and effecting transverse alinement below the printing line, of the topmost characters of the segments.

4. In a laundry marking machine, a casing, a shaft therein, a series of peripherally charactered segments journaled on the shaft, means for holding each segment elevated the required distance to dispose any desired group of characters thereof in a horizontal or printing line, a cushion, means to collectively trip the holding means, and a lever for disposing the cushion in the path of downward movement of the segments and actuating the tripping means.

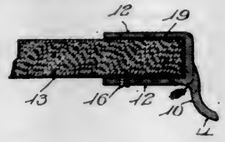
5. In a laundry marking machine, a casing, a shaft therein, a series of peripherally charactered segments journaled on the shaft, means for holding each segment elevated the required distance to dispose any desired group of characters thereof in a horizontal or printing line, a cushion, means to collectively trip the holding means, a lever for disposing the cushion in the path of downward movement of the segments and actuating the tripping means, and means to return the lever to normal position and thereby withdraw the cushion from the path of the segments, and release the tripping means.

[Claims 6 to 38 not printed in the Gazette.]

1,196,115. SPECTACLE OR EYEGLASS MOUNTING. PAUL H. JOHNSTON, Davenport, Iowa. Filed July 15, 1915. Serial No. 39,944. (Cl. 88—47.)

1. A spectacle or eye-glass mounting comprising a nose piece bridge and temple ends each having members adjacent the ends thereof, and each consisting of a plate for contacting the perimeter of a lens, lateral extensions adapted to extend upon each side of the lens, an element inserted through one of said extensions so as to impinge

against a surface of the lens, a lens, and a cementitious material disposed between the lens-contacting portion of said members and said lens.



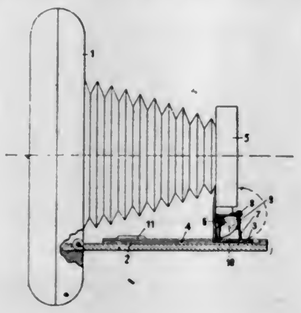
2. A spectacle or eye-glass mounting having lens holding members, each provided with a recess adapted to receive the edge of a lens, a set-screw tapped through a wall of said member and adapted to impinge against a side of a lens, a lens, and a cementitious material disposed between the lens-contacting portions of said member and said lens.

3. A spectacle or eye-glass mounting comprising a nose-piece or a bridge and temple ends each having members adjacent the ends thereof, and each consisting of a plate for contacting the perimeter of the lens, lateral extensions adapted to extend upon each side of the lens, a set-screw tapped through one of said extensions so as to impinge against a surface of the lens, a lens, the surface of said lens being roughened at the point of contact of said set-screw therewith, and a cementitious material disposed between the lens contacting portions of said members and said lens.

4. A spectacle or eye-glass mounting having lens holding members, each provided with a recess therein adapted to receive the edge of a lens, a set-screw tapped through a wall of said member and adapted to impinge against a side of a lens, a lens, the surface of said lens being roughened at the point of contact of said set-screw therewith.

5. In eyeglass construction, in combination, a lens clamp provided with a pair of spaced lugs, a lens fitted between said lugs and provided with a recess in one of its surfaces spaced from the edge of the lens and extending partially through the lens, the lug opposite said recess being provided with a projection fitting into said recess and adhesive means between the inner surfaces of said lugs and the contacting surfaces of said lens resisting movement of said lugs in a direction away from the surfaces which they contact.

1,196,116. FOLDING CAMERA. WILHELM KABELITZ, Friedenau, near Berlin, Germany, assignor to the Firm of Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed Dec. 5, 1913. Serial No. 804,944. (Cl. 95—40.)

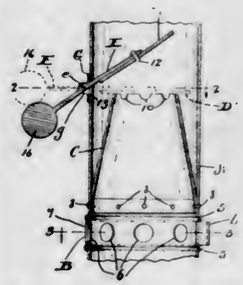


1. In a folding camera in combination with a run-way hinged to a camera casing, a carriage movable on said run-way, an objective holder hinged to said carriage, a supporting plate hinged to said objective holder for supporting said objective holder in operative position, and means on said run-way for engaging said supporting plate to permit of the folding of said runway when the objective holder has been moved into closed position.

2. In a folding camera in combination with a run-way hinged to the camera casing, a carriage movable on said run-way and an objective holder hinged to the carriage, a supporting plate hinged to the objective holder at a point substantially in front of the hinge connecting the objective holder with the carriage and adapted to bear with its free edge against a carrying member for the objective holder so as to prevent the objective holder from being folded about its joint and means provided on the run-way for automatically deflecting the hinged supporting plate from the position where it locks the objective holder on pushing the carriage and objective holder toward the casing.

3. In a folding camera in combination with a run-way hinged to the camera casing, a carriage movable on said run-way and an objective holder hinged to the carriage, a supporting plate hinged to the objective holder and adapted to lock the objective holder in operative position and abutments provided on the run-way having the form of elongated elevations extending toward the front edge of the run-way adapted to coöperate with the free edge of the supporting plate on pushing the carriage toward the camera casing and to deflect the supporting plate from the position where locking of the objective holder takes place.

1,196,117. FLUE. ADAM S. KIEFER, Cleveland, Ohio. Filed Apr. 12, 1915. Serial No. 20,669. (Cl. 236—2.)



1. In an upright flue, an upwardly tapering upright tube arranged within said flue and having its lower end snugly fitting said flue, which tube is provided at its upper end with lateral apertures, a movable cover covering the upper end of said tube in the closed position of the cover and arranged to move upwardly in opening, said cover being larger in dimensions horizontally than the upper end of the tube and enough smaller in dimensions than the internal diameter of the flue to avoid interruption of communication between the aforesaid apertures and the space over the cover in said position of the cover, and the relative arrangement of the parts being such that said apertures are wholly under the cover in the closed position of the cover.

2. In an upright flue, an upwardly tapering upright tube arranged within said flue and having its lower end snugly fitting said flue, which tube is provided at its upper end with lateral apertures, a movable imperforate cover for said tube, which cover lies on the top edge of the tube in the closed position of the cover and is arranged to move upwardly in opening, and the relative arrangement of the parts being such that said apertures are wholly under the cover in the closed position of the cover.

1,196,118. METHOD OF SOLDERING METALS. LAURENCE M. KLAUBER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 1, 1910. Serial No. 552,748. (Cl. 113—112.)

1. The method of soldering metals which consists in depositing a coating of mercury on one or both of the surfaces to be soldered and driving off the mercury by the application of molten solder thereto.

2. The method of soldering metals which consists in subjecting the surface to be soldered to a solution of a mercuric salt to form a coating of mercury thereon and then immersing the coated metal in molten solder.

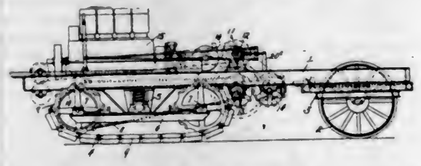
3. The method of soldering metals which consists in immersing the surface to be soldered in an acidified solution of a mercuric salt to form a coating of mercury thereon and then immersing the amalgamated metal in molten solder.

4. The method of soldering metals which consists in subjecting the surface to be soldered to a solution of mercuric chlorid to form a coating of mercury thereon and then covering the coated metal with molten solder.

5. The method of soldering aluminum which consists in subjecting the surface to be soldered to an acidified solution of mercuric chlorid to form a coating of mercury thereon and applying molten solder to the coated surface at a sufficiently high temperature to drive off the mercury.

[Claims 6 to 14 not printed in the Gazette.]

1,196,119. POWER-TRANSMITTING MECHANISM FOR TRACTION UNITS. LEO A. KRUPP, Findlay, Ohio, assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio, a Corporation of Ohio. Filed Nov. 1, 1915. Serial No. 59,033. (Cl. 21—114.)



1. In a machine of the class described, the combination with means having tractor units disposed in transversely spaced relation, and a motor, of a shaft, a differential gearing mounted thereon and having a member fixed to the shaft and a member loose thereon and provided with a hub extension, driving connection between said shaft and one of said tractor units, driving connection between said hub extension and the other of said units, and mechanism operable to drive said differential gearing and shaft as a unit and also to impart reverse driving movements in unison to said shaft and hub extension from said motor.

2. In a machine of the class described, the combination with means having tractor units at opposite sides of the machine, and a motor, of a shaft having a differential gearing mounted thereon, with one beveled gear of said gearing fixed to the shaft and the other beveled gear loosely mounted on the shaft and provided with a hub extension, driving connection between said shaft and one of said tractor units, driving connection between said hub extension and the other of said tractor units, and mechanism operable to drive said differential gearing and shaft as a unit, and also to impart reverse driving movements to said shaft and hub extension from said motor.

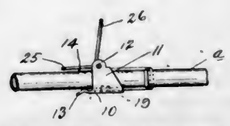
3. In a machine of the class described, the combination with a pair of tractor units disposed in transversely spaced relation, and a motor, of a shaft, a differential gearing mounted on said shaft and having one beveled gear fixed to the shaft and the other beveled gear loose on the shaft and provided with a hub extension, separate driving means connecting said shaft and said hub extension with respective tractor units, and mechanism for communicating power from said motor at one speed to said shaft and hub extension through said differential gearing and for communicating power in reverse directions to said shaft and hub extension.

4. In a machine of the class described, the combination with a pair of tractor units arranged in transversely spaced relation, and a motor, of a main shaft having driving connection with said motor, a second shaft, a differential unit mounted on said second shaft and having one bevel gear keyed to the shaft and another bevel gear loose on the shaft and provided with an extended hub sleeve, clutch controlled means for driving said differential unit from said main shaft, a third shaft, driving connection between said main and third shafts and independent clutch controlled connection between said third shaft and said second shaft and hub sleeve for driving the second shaft and hub sleeve in reverse directions when the differential gearing is disconnected from said main shaft.

5. In a machine of the class described, the combination with a pair of transversely spaced tractor units of apron wheel type, and a motor, of mechanism intermediate said motor and tractor units to communicate like or reverse driving movements to the tractor units from a continuous rotation in one direction of the motor, said mechanism having first, second and third shafts, means for communicating rotation to the first shaft from said motor, clutch controlled means embodying a differential gearing for communicating rotation from the first to the second shaft, separate means connecting the differential bevel gears in said differential gearing to the different tractor units, and clutch controlled means driven from said first shaft and in connection with the differential bevel gears of said differential gearing for driving said gears in reverse direction when the differential gearing is disconnected from direct driving connection with said first shaft.

[Claim 6 not printed in the Gazette.]

1,196,120. TUBE-CLAMP. CHARLES P. KUEHNER, Providence, R. I. Filed Mar. 29, 1916. Serial No. 87,590. (Cl. 137—6.)



1. A tube clamp comprising two opposing jaws one of which is formed of wire, the joint portion of the wire arms supporting said jaw being bent into oppositely disposed laterally extending loops through which the tube is adapted to pass for frictionally engaging the same to prevent the clamp from slipping thereon when the jaws are open, and a cam member for closing the jaws.

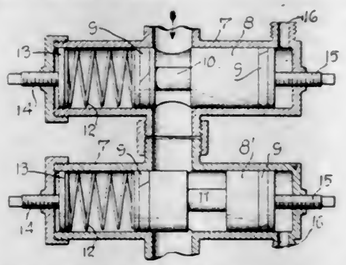
2. A tube clamp comprising a sheet metal body member having two side ears and a jaw portion, an opposite jaw member constructed of a single piece of wire bent into a double loop one end of one loop being secured to said body portion and the other extending between said ears, and a cam pivoted in said ears for closing the jaws upon the tube.

3. A tube clamp comprising a sheet metal body member having two integral side ears and a jaw portion, an opposite jaw member formed of wire having two side arms extending rearwardly between said ears and bent over and back substantially upon themselves and secured to said body member, said bend providing a joint for the jaws, and the wires at the joint being bent to form oppositely disposed laterally extending loops through which the tube is adapted to pass to frictionally engage the same, and a cam pivotally supported in said ears for closing said jaws.

1,196,121. PRESSURE-REGULATING VALVE FOR PUMPS. FRED J. LARSEN, Grand Island, Nebr. Filed Oct. 31, 1914. Serial No. 869,620. (Cl. 103—92.)

1. A pressure regulating valve for pumps including, in combination with a steam supply pipe, spaced valve cylinders connected in said supply pipe, said cylinders being adapted to be connected at one of their ends to the discharge pipe of the pump, a valve piston in each of said cylinders, springs arranged in the other ends of the cylinders co-acting with the respective pistons to yieldingly hold the same against movement under the fluid pressure admitted to the opposite end of the cylinder, said valve pistons having reduced portions at relatively oppo-

site points with respect to their ends, one of said pistons operating to close the supply upon an increase above a predetermined discharge pressure and the other piston closing the supply upon a decrease below the said predetermined discharge pressure.



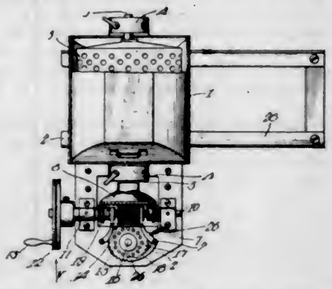
2. A pressure regulating valve for pumps including, in combination with a steam supply pipe, spaced valve cylinders connected in said supply pipe, said cylinders being adapted to be connected at one of their ends to the discharge pipe of the pump, a valve piston in each of said cylinders, springs arranged in the other ends of the cylinders co-acting with the respective pistons to yieldingly hold the same against movement under the fluid pressure admitted to the opposite end of the cylinder, said valve pistons having reduced portions at relatively opposite points with respect to their ends, one of said pistons operating to close the supply upon an increase above a predetermined discharge pressure and the other piston closing the supply upon a decrease below the said predetermined discharge pressure, and adjustable stop members mounted in the first named end of each valve cylinder to limit the movement of the piston therein under the action of said spring.

3. A pressure regulating valve for pumps including, in combination with a steam supply pipe, spaced valve cylinders connected in said pipe and extending at right angles thereto, the corresponding ends of said cylinders adapted to be connected to the discharge pipe of the pump, a valve piston in each of the cylinders, a spring arranged in the other end of each cylinder to yieldingly hold the piston against movement in one direction, means for adjusting the tension of said spring, each of said valves having a reduced portion, such reduced portions of the valves being located at relatively different points with respect to the ends of the valve and with respect to each other, one of said pistons operating to close the supply upon an increase above a predetermined discharge pressure and the other piston closing the supply upon a decrease below the said predetermined discharge pressure, and adjustable stop screws mounted in the said ends of the cylinders to limit the movement of the valve piston under the action of said springs.

1,196,122. OPERATING MECHANISM FOR WASHING-MACHINES. DANIEL LUCKWALDT, Chicago, Ill. Filed Mar. 11, 1916. Serial No. 83,508. (Cl. 74—50.)

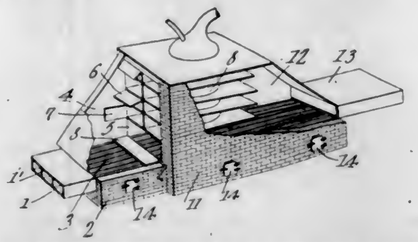
1. In a machine of the class described, a rotatable element, a faced gear wheel on said element, a transverse shaft, a worm gear wheel on said shaft, a horizontal gear wheel meshing with the worm gear wheel, two clutching gear wheels mounted for free rotation on the transverse shaft and arranged on opposite sides of the worm gear wheel, clutching means for unrotatably locking one of said clutching gear wheels at a time to the transverse shaft, a lever for shifting said clutching means into and out of clutching engagement, said horizontal gear wheel having a series of annularly arranged holes and tripping pins adapted to be fitted in said holes and to contact with the shifting lever to move the same.

2. In a machine of the class described, a rotatable element, a faced gear wheel on said element, a transverse shaft, a worm gear wheel on said shaft, a horizontal gear wheel meshing with the worm gear wheel, two clutching gear wheels mounted for free rotation on the transverse shaft and arranged on opposite sides of the worm gear wheel, clutching means for unrotatably locking one of said



clutching gear wheels at a time to the transverse shaft, a lever for shifting said clutching means into and out of clutching engagement with the gear wheels, and a spring for returning said lever and shifting the gear wheels in the opposite direction.

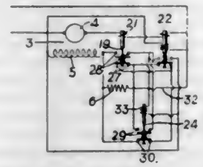
1,196,123. APPARATUS FOR UTILIZING THE HEATED FUMES FROM A SMELTER OR ORE-FURNACE. GUSTAV P. LUEDKE, Chatham, Ill. Original application filed Apr. 22, 1912, Serial No. 692,525. Divided and this application filed Mar. 16, 1914. Serial No. 824,992. (Cl. 122—234.)



1. An apparatus of the character described, including a casing having an enlarged central portion and oppositely inclined portions leading toward the bottom thereof, a grate disposed within the casing and forming a precipitant chamber therebelow, a fume directing flue entering one end of the casing at the lower inclined portion thereof and below the grate, a fume directing outlet flue disposed at the opposite end of the inclined portion of the casing above the grate, a vertically disposed reservoir mounted above the grate in the enlarged portion of the casing, said reservoir being spaced from the walls of the casing to provide a plurality of auxiliary flues, and selectively controlled dampers one for each of the latter flues.

2. An apparatus of this character, including a casing having a main chamber provided with diverging walls extending in opposite directions from the top thereof, a grate bottom for the chamber and providing a precipitant chamber therebelow, a flue having a plurality of vertical partitions opening below the grate at the inlet end of the casing, an outlet flue at the opposite end of the casing and wholly above the grate, a cylindrical vertically disposed water container mounted centrally of the casing and spaced from the walls and above the grate thereof, a vertical partition extending from the container toward the front of the casing and terminating in line with the junction of the front inclined wall thereof, a plurality of superposed longitudinally disposed partitions parallel to and above the grate and extending from one inclined wall to the other, and dampers for controlling the passages between the partitions and about the container.

1,196,124. MOTOR-CONTROL SYSTEM. WALTER O. LUM, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 3, 1913. Serial No. 793,260. (Cl. 172—288.)



1. In a control system, the combination with a motor, and a field resistor therefor, of a current-limit device for controlling said resistor and means for reversing the effects produced by the operation of said current-limit device.

2. In a control system, the combination with a motor, and a field resistor therefor, of a current-limit switch for controlling said resistor, and means comprising a reverse-current relay switch for controlling the effect of said current-limit switch.

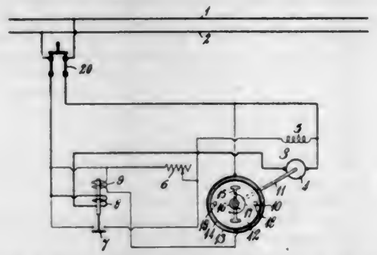
3. In a control system, the combination with a motor, and a field resistor therefor, of means for automatically controlling said field resistor comprising a switch and automatic means for controlling the effects produced by the operation of said switch.

4. In a control system, the combination with a motor, of electro-responsive means for controlling the field strength of said motor, said means comprising a plurality of switches automatically controlled by the current through the armature of said motor, and means for controlling the effects produced by the operation of one of said switches.

5. In a control system, the combination with a dynamo-electric machine and a field resistor therefor, of a current-limit switch for automatically short circuiting said resistor when said dynamo-electric machine operates as a motor and for automatically breaking the short circuit when said dynamo-electric machine operates as a generator.

[Claims 6 to 14 not printed in the Gazette.]

1,196,125. MOTOR-CONTROL SYSTEM. WALTER O. LUM, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 21, 1914. Serial No. 826,247. (Cl. 171—229.)



1. In a motor-control system, the combination with a source of current and an electric motor having a shunt field winding, of means controlled by the rate of acceleration of said motor for controlling the excitation of said field winding.

2. In a motor-control system, the combination with a source of current, and an electric motor, of an electromagnetic switch having a plurality of actuating coils for controlling the circuit conditions of said motor, said switch being arranged to operate at a predetermined current value, and means controlled by the rate of acceleration of said motor for controlling the circuit of one of said coils.

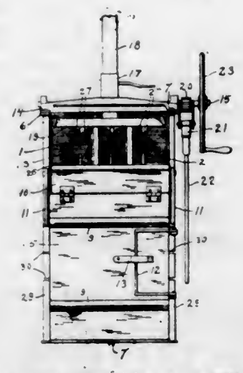
3. In a motor-control system, the combination with a source of current and an electric motor, of a switch having a plurality of actuating coils, one of said coils being in circuit with said motor, and means controlled by the rate of acceleration of said motor for controlling the connections of another of said actuating coils.

4. In a motor-control system, the combination with a source of current and an electric motor, of means for automatically controlling the rate of acceleration of said motor, said means comprising an electromagnetic switch having actuating coils that are wound to oppose each other and arranged to operate at a predetermined current value, and means controlled by the rate of acceleration of said motor for controlling the circuit of one of said coils and thereby causing said switch to operate at a second predetermined value.

5. In a motor-control system, the combination with a source of current and an electric motor, of a resistor in circuit with said motor, and means for automatically controlling said resistor, said means comprising an electromagnetic switch having a plurality of actuating coils and means controlled by the rate of acceleration of said motor for controlling the circuit of one of said coils.

[Claims 6 and 7 not printed in the Gazette.]

1,196,126. BALING-MACHINE. FRED A. LUNDAHL, Moline, Ill. Filed July 9, 1914. Serial No. 849,935. (Cl. 100—5.)



1. A baling press, comprising a receptacle formed of sheet metal side plates, provided at top and bottom with outwardly projecting flanges; a back plate formed of sheet metal provided with vertical reinforcing ribs integral therewith; a sheet metal door hinged to one of said side plates having transverse integral ribs, and provided with a pivoted upper section adapted to drop downwardly; a plate mounted on said receptacle; a rack vertically movable in said plate; a plunger on the lower end of said rack; a shaft rotatably mounted on said plate; a pinion on said shaft in mesh with said rack; a ratchet wheel on said shaft; a hand lever pivoted on said shaft and provided with a pawl adapted to engage said ratchet wheel; a hand wheel fixed on said shaft; and means for locking said rack from upward or downward movement as desired.

2. In a device of the class named a receptacle comprising a pair of side plates, provided at top and bottom with outwardly projecting flanges; a rear plate provided with vertical reinforcing ribs formed integrally therefrom; a door hingeably connected with one of said side plates, and provided with a pivoted upper section; transverse reinforcing ribs in said door; a frame pivotally attached at the free side of said door; a latch pivoted to said door and adapted to engage said frame; and reinforcing angle plates

on the outer faces of said side plates the outwardly projecting portions of said angle-plates being provided with a plurality of notches.

1,196,127. VAT DYES AND PROCESS OF MAKING THEM. ARTHUR LÜTTRINGHAUS, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 20, 1913. Serial No. 796,124. (Cl. 8—1.)

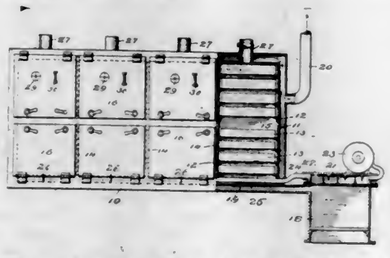
1. The process of producing coloring matters of the anthraquinone series by treating a carbazol compound with a phthalic anhydrid in the presence of sulfuric acid.

2. The process of producing a coloring matter of the anthraquinone series by heating carbazol with phthalic anhydrid in the presence of sulfuric acid.

3. The new coloring matters of the anthraquinone series being probably diphthaloyl-carbazols which can be obtained by treating a carbazol compound with a phthalic anhydrid in the presence of sulfuric acid, which coloring matters consist when dry of yellow to orange powders which give from red to violet solutions in concentrated sulfuric acid and in their sulfonated form are soluble in hot dilute sodium carbonate solution giving yellowish solutions, and dye wool yellow shades, and in the unsulfonated form are insoluble in water and in dilute acids and alkalis, but are soluble in alkaline hydrosulfite solution giving brown vats which dye cotton yellow to orange-yellow shades, which shades upon treatment with ten per cent. caustic soda solution turn dark brown, but on washing again with water regain their original color.

4. The new coloring matter of the anthraquinone series being probably diphthaloyl-carbazols which can be obtained by heating carbazol with phthalic anhydrid in the presence of concentrated sulfuric acid, which coloring matter consists when dry of a yellow powder which is insoluble in water, but is soluble in quinolin with a yellow color and in concentrated sulfuric acid with a carmine red color, and is also soluble in alkaline hydrosulfite solution giving a brown vat which dies cotton golden yellow shades, which shades upon treatment with ten per cent. caustic soda solution turn dark brown, but on washing again with water regain their original color.

1,196,128. MACHINE FOR DRYING COPRA. DAVID N. MCCHESNEY, Manila, P. I. Filed Apr. 10, 1914. Serial No. 20,588. (Cl. 34—39.)



1. The combination with a casing having a series of tray receiving compartments, of a heater, a pipe leading from the heater through all of the compartments, an air pipe leading through the compartments above the first pipe and in proximity thereto whereby to receive heat therefrom, said second pipe being provided with damper controlled openings in each of said compartments.

2. The combination with a casing having a series of tray receiving compartments, of a heater, a pipe leading from the heater through all of the compartments, an air pipe leading through the compartments above the first pipe and in proximity thereto whereby to receive heat therefrom, said second pipe being provided with damper controlled openings in each of said compartments, each of said compartments being provided with a damper controlled opening in its upper part.

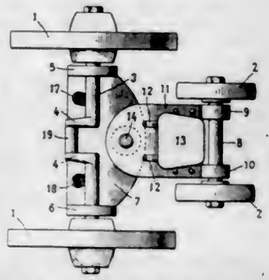
3. The combination with a casing having a series of tray receiving compartments, of a heater, a pipe leading from the heater through all of the compartments, an air pipe leading through the compartments above the first pipe and in proximity thereto whereby to receive heat therefrom, said second pipe being located above and in proximity to the first pipe in the bottoms of said compartments and being provided with a damper controlled opening in its upper parts in each compartment.

4. The combination with a casing having a series of tray receiving compartments, of a heater, a pipe leading from the heater through all of the compartments, an air pipe leading through the compartments above the first pipe and in proximity thereto whereby to receive heat therefrom, said second pipe being located above and in proximity to the first pipe in the bottoms of said compartments and being provided with a damper controlled opening in its upper parts in each compartment, each of said compartments being provided with a damper controlled opening in its upper part.

5. The combination with a casing having a series of tray receiving compartments, of a heater, a pipe leading from the heater through all of the compartments, an air pipe leading through the compartments above the first pipe and in proximity thereto whereby to receive heat therefrom, said second pipe being provided with damper controlled openings in each of said compartments, and means to force air through the second pipe.

[Claims 6 to 8 not printed in the Gazette.]

1,196,129. HAND-PROPELLED VEHICLE. THOMAS MCCORMICK, New York, N. Y. Filed Oct. 15, 1915. Serial No. 56,158. (Cl. 208—113.)

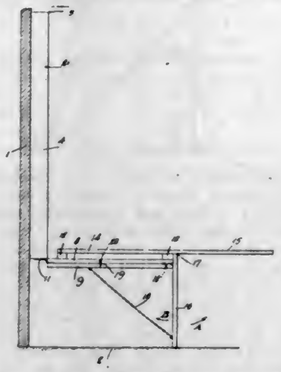


In a device of the class described, in combination, a frame or body having a shaft arranged to be rotated in bearings secured to the forward part of said frame, said shaft being provided with steering and driving wheels fixedly secured upon either end and having a crank arm intermediate said wheels, a seat forming the rear part of the body mounted upon rollers or small wheels for the support of the rider, and a pair of upright-attached footrests by the use of which the rider's feet communicate a turning movement to the steering and driving wheels, substantially as described.

1,196,130. FOLDING IRONING-BOARD. GEORGE M. MARSH, East Randolph, N. Y. Filed July 14, 1916. Serial No. 109,347. (Cl. 68—10.)

1. In a device of the class described, a cabinet; a vertically swinging closure for the cabinet, the closure comprising a lower panel hinged at its lower end to the lower end of the cabinet, and an upper panel hinged at its lower end to the upper end of the lower panel; an ironing board secured to the inner face of the lower panel and including a projecting end spaced from the upper panel; a leg located in the space between said end of the board and the upper panel and hinged at its lower end to the board; and a flexible connection between the upper end of the leg and the upper end of the upper panel.

2. In a device of the class described, a cabinet; a vertically swinging closure for the cabinet, the closure comprising a lower panel hinged at its lower end to the lower end of the cabinet, and an upper panel hinged at its lower end to the upper end of the lower panel; an ironing board secured to the inner face of the lower panel and including a projecting end spaced from the upper panel; a leg located in the space between said end of the board and the upper panel and hinged at its lower end to the board; the panels and the board being adapted to be lowered, and the upper panel being adapted to be swung beneath the lower panel, and the leg being adapted to be disposed in a depending position to form a support for both panels; and a detachable connection including a part on the lower panel, a part on the upper panel, and a part on the cabinet, the part on the upper panel being adapted to engage with the part on the lower panel when the upper panel is folded beneath the lower panel, and the part on the upper panel being adapted to engage the part on the cabinet when the panels are vertically alined to form a closure for the cabinet.

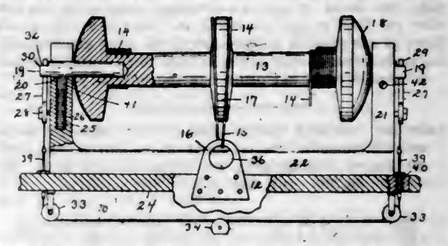


3. In a device of the class described, a cabinet; a vertically swinging closure for the cabinet, the closure comprising a lower panel hinged at its lower end to the lower end of the cabinet, and an upper panel hinged at its lower end to the upper end of the lower panel; an ironing board secured to the inner face of the lower panel and including a projecting end spaced from the upper panel; a leg located in the space between said end of the board and the upper panel and hinged at its lower end to the board; the panels and the board being adapted to be lowered, and the upper panel being adapted to be swung beneath the lower panel, and the leg being adapted to be disposed in a depending position to form a support for both panels; and a detachable connection including a part on the lower panel, a part on the upper panel, and a part on the cabinet, the part on the upper panel being adapted to engage with the part on the lower panel when the upper panel is folded beneath the lower panel, and the part on the upper panel being adapted to engage the part on the cabinet when the panels are vertically alined to form a closure for the cabinet.

1,196,131. SHIP-LOCATING DEVICE. CHARLES MAY, New Britain, Conn. Filed Jan. 19, 1916. Serial No. 73,031. (Cl. 114—16.5.)

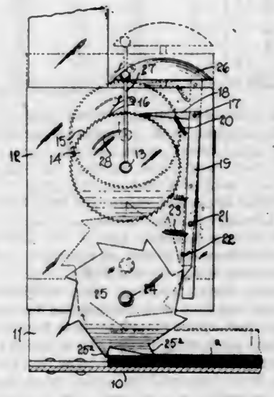
1. In a ship locating device, a frame supported from the deck of the ship having a pair of standards, the said standards having slots that are open at the upper ends, a drum having axial studs positioned in the said slots, latch devices for holding the said studs in the said slots, an eye having a relatively large opening secured to said ship, and a relatively small cord passing through the said opening, the said cord being in the form of an extended loop, extending from the said eye to the said drum and having the ends secured to the said drum.

2. In combination a ship and a set of ship locating devices, the said devices comprising each a float device detachably supported on the upper side of the deck of the ship, and having a drum provided with a cord, an eye attached to the ship and connected to the said cord, a latch device for holding the said float device in position, a tension device for releasing the said latch device, the said tension device extending through the deck, and the said



several tension devices being interconnected by a common cable, suitably to operate all of the said latch devices simultaneously.

1,196,132. MECHANISM FOR COUNTING SHEETS. HARRY R. MILLER and HARRY E. ELBERTY, New Castle, Pa. Filed Mar. 4, 1916. Serial No. 82,215. (Cl. 235—91.)



1. In a sheet counting mechanism, a member against which sheets are adapted to be disposed in superposed relation, and sheet actuated counting mechanism slidably supported with reference to the member and shifted away from said member by the disposition of successive sheets thereon.

2. In a sheet counting mechanism, a table upon which the sheets are adapted to be disposed in superposed relation, a stop against which the sheets are placed, and sheet actuated counting mechanism slidably supported for vertical movement with reference to the table and shiftable away from the table by the disposition thereon of successive sheets.

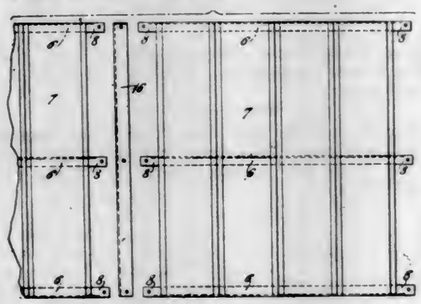
3. In a sheet counting mechanism, a table upon which sheets are adapted to be disposed in superposed relation, a stop against which the sheets are placed, a vertically movable ratchet wheel adapted to rest upon said sheets and be raised by the disposition of successive sheets on the table and to be rotated a predetermined distance by the engagement of a sheet with the teeth thereof, and registering mechanism operatively connected to the ratchet wheel.

4. In a sheet counting mechanism, a table, a vertically extending stop, a vertically movable supporting member carried upon the stop and extending over the table, a toothed wheel carried by said vertically movable member and projecting below it and disposed in the path of movement of the sheets being placed upon the table, and registering mechanism operatively connected to the toothed wheel.

5. In a sheet counting mechanism, a table, a vertically extending stop, a slide mounted upon the stop and extending over the table, a ratchet wheel mounted upon said slide, the teeth of said wheel being adapted to contact with the face of one sheet and the edge of a superposed sheet as the sheet is moved against the stop, and registering mechanism operatively connected to the ratchet wheel.

[Claims 6 to 13 not printed in the Gazette.]

1,196,133. SHEET-METAL BUILDING. MARTIN MOISTER, Philadelphia, Pa., assignor of one-half to Amos Edgar Hoover, Philadelphia, Pa. Filed May 22, 1915. Serial No. 29,720. (Cl. 189—2.)



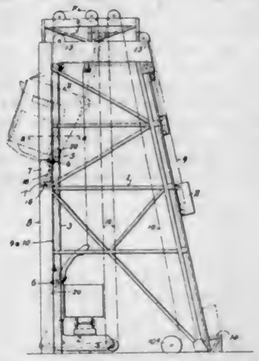
1. In a sheet metal building, the combination of a plurality of wall sections each comprising horizontally extending angle irons, sheet plates secured thereto with the ends of the irons projecting beyond the edges of the plates, and each plate having at its edge an inturned flange, an upright angle iron connected with the extending ends of the adjacent horizontal angle irons, and a coupling member having inturned flanges for sliding engagement with the flanges of plates of adjacent sections and serving to close the space therebetween.

2. In a sheet metal building, the combination of a plurality of wall sections each comprising horizontally extending angle irons, sheet plates secured thereto with the ends of the irons projecting beyond the edges of the plates, and each plate having an inturned flange at its edge, an upright angle iron connected with the extending ends of the adjacent horizontal angle irons, and a coupling member having inturned flanges for sliding engagement with the flanges of plates of adjacent sections and serving to close the space therebetween, V-shaped coupling members having flanges engaging the flanges of the plates of adjacent sections at the corners.

1,196,134. CAR-UNLOADING APPARATUS. WILL K. MONROE, Cleveland, Ohio, assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio, a Corporation. Filed Sept. 23, 1915. Serial No. 52,188. (Cl. 214—12.)

1. In a car-dumping apparatus, the combination with a cradle, guides for directing the vertical and pivotal movement of said cradle, a hoisting drum, and a cable connected therewith and with both sides of the cradle, a cable attached to the outer side of the cradle, a counterweight on said last mentioned cable, and a stop at a suitable point in the path of the counterweight to be engaged by said counterweight when the cradle has been raised to a predetermined height in said guides by the joint hoisting action of said drum and counterweight, substantially as shown and described.

2. In a car-dumping mechanism, the combination, with a tower-structure, of oppositely related guides thereon, a cradle having a vertical and a horizontal member slidably mounted in said guides, means for applying a hoisting force to said cradle upon its horizontal member, a counterweight system adapted, normally, to exert a hoisting force upon said cradle upon its vertical member, and a stop at a suitable point, in the path of the counterweight in said system, to be engaged by said counterweight in its normal course, when the cradle has been hoisted, in said guides, by said forces to a predetermined point, substantially as shown and described.



3. In a car-dumping mechanism, the combination, with a tower-structure, of oppositely related guides thereon, a cradle, having a vertical and a horizontal member, slidably mounted in said guides, a hoisting drum, and a cable connected therewith and with said horizontal member, a cable attached to said vertical member, a counterweight on said last mentioned cable, a pan-girder movably mounted on said structure, in vertical guides provided for the purpose, an adjustable stop to the descent of said counterweight in its normal course, and means, respectively, for moving said girder, at will, from one point to another in said guides, and correspondingly, moving said stop, substantially as shown and described.

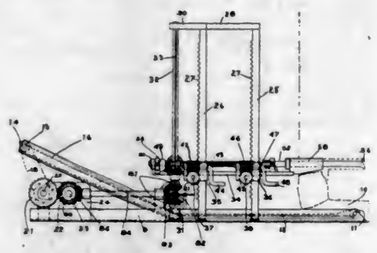
4. In a car-dumping mechanism, the combination, with a tower-structure, of oppositely related vertical guides thereon, a cradle, having a vertical and a horizontal member, movably mounted in said guides, a hoisting drum and a cable connected therewith and with said horizontal member, a cable attached to said vertical member, a counterweight on said last-mentioned cable, a movable stop, in the downward path of said counterweight, at a point to be encountered by the counterweight when the cradle has been hoisted in its guides to a predetermined point, a vertically movable pan-girder on said structure, and means for moving said girder and said stop, in unison one with the other, from one predetermined point to another, substantially as shown and described.

5. In a car-dumping mechanism, the combination, with a tower-like structure, of oppositely related vertical guides therein, a cradle, having a vertical and a horizontal member, movably mounted in said guides, a hoisting drum and a cable connected therewith and with said horizontal member, a cable attached to said vertical member, extending upwardly to and around sheaves on said structure provided for the purpose, downwardly to a counterweight movably mounted on said structure on the side thereof opposite to the cradle, a vertically adjustable pan-girder, on said structure upon the other side, a cable attached thereto, extending upwardly to and around sheaves on said structure provided for the purpose, downwardly, below said counterweight to a movable stop on said pan-girder vertically from one point to another upon the side where located, substantially as shown and described.

[Claims 6 and 7 not printed in the Gazette.]

1,196,135. EXCAVATING ATTACHMENT FOR MINING-MACHINES. JOHN H. MORGAN, Chicago, Ill., assignor to American Morgan Company, Morgan Park, Ill., a Corporation of South Dakota. Filed Aug. 6, 1910. Serial No. 575,962. (Cl. 125—14.)

1. In a mining machine, the combination with a mining tool, of means for operating the same, a wedge on said mining tool, and power means for moving said wedge longitudinally of said mining tool to break down material from the mine wall.



2. In a mining machine, the combination with a mining tool, of means for operating the same, a wedge carried by said mining tool, and automatic mechanism for striking said wedge a hammer blow to break down material from a mine wall.

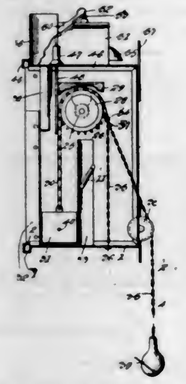
3. In a mining machine, the combination with a frame, of a conveyer capable of having its forward end portion extended into an under-cut in a mine wall, cutting mechanism, a wedge carried by said cutting mechanism, and automatic mechanism for actuating said wedge on said cutting mechanism to break down material onto said conveyer.

4. In a mining machine, the combination with a conveyer adapted to extend into an under-cut in a mine wall, of cutting mechanism above said conveyer, and wedge apparatus slidable on said cutting mechanism for breaking down material from the mine wall onto said conveyer.

5. In a mining machine, the combination with a conveyer, of a mining tool mounted above said conveyer, means for operating said mining tool, a wedge slidably mounted on said mining tool, and power mechanism for operating said wedge to break down material from the mine wall onto said conveyer.

[Claims 6 to 46 not printed in the Gazette.]

1,196,136. STREET-INDICATOR. WILLIAM MORRONE, Pittsburgh, Pa., assignor of one-half to Nicola Morrone, Pittsburgh, Pa. Filed Feb. 5, 1915. Serial No. 6,325. (Cl. 40—87.)



1. In a street indicator, a protective housing, a plurality of rollers carried by said housing, a plurality of idler rollers, carried by said housing, a flexible curtain carrying designating characters wound upon one of said rollers, and extending about said idler rollers, and wound upon the other of said rollers, said idler rollers positioned for exhibiting different sections of the front and back of said curtain, a sprocket wheel operatively connected to said first named rollers, a sprocket chain for travel about said sprocket, a flexible member connected to said sprocket chain, for pulling said sprocket chain over said sprocket and rotating said rollers for moving the curtain forward one space upon each operation of said sprocket chain, a weight carried by one end of said sprocket chain for automatically returning said sprocket chain to an operative position, a stop member carried by said housing for limiting the movement of said weight and said sprocket chain, and an alarm sounding mechanism carried by said housing and means operable by the upward movement of said weight for sounding a signal upon the movement of said weight and said curtain.

2. The combination with a street indicator embodying a movable curtain, of a signal and alarm mechanism, comprising a bell, means for striking said bell, and sounding a signal, a lever, a pin having one end engaging said lever, and means for rocking said lever for moving said bell striking means for sounding a signal upon the movement of said curtain.

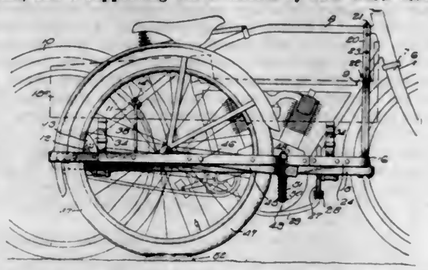
3. In a street indicator, a protective housing, a plurality of rollers carried by said housing, a plurality of idler rollers carried by said housing, a flexible curtain carrying designating characters wound upon one of said rollers, and extending about said idler rollers, and wound upon the other of said rollers, said idler rollers positioned for exhibiting different sections of the front and back of said curtain, a sprocket wheel operatively connected to said first named rollers, a sprocket chain for travel about said sprocket, a flexible member connected to said sprocket chain for pulling said sprocket chain over said sprocket and rotating said rollers for moving the curtain forward one space upon each operation of said sprocket chain, a weight carried by one end of said sprocket chain for automatically returning said sprocket chain to an operative position, the other end of said chain connected to the casing for limiting the downward movement of the weight, a stop member carried by said housing for limiting the movement of said weight and said sprocket chain in an upwardly direction, and an alarm sounding mechanism carried by said housing and means operable by the upward movement of said weight for sounding a signal upon the movement of said weight and said curtain.

4. In a street indicator, a protective housing, a plurality of rollers carried by said housing, a plurality of idler rollers carried by said housing, a flexible curtain carrying designating characters wound upon one of said rollers, and extending about said idler rollers, and wound upon the other of said rollers, said idler rollers positioned for exhibiting different sections of the front and back of said curtain, a sprocket wheel operatively connected to said first named rollers, a sprocket chain for travel about said sprocket, a flexible member connected to said sprocket chain for pulling said sprocket chain over said sprocket and rotating said rollers for moving the curtain forward one space upon each operation of said sprocket chain, a weight carried by one end of said sprocket chain for automatically returning said sprocket chain to an operative position, said housing and weight provided with alining apertures therein, a key adapted to be mounted in the aperture of said weight and extended into the aperture of the casing to hold said weight against movement to tighten the curtain upon last mentioned rollers, a stop member carried by said housing for limiting the movement of said weight and said sprocket chain, and an alarm sounding mechanism carried by said housing, and means operable by the upward movement of said weight for sounding a signal upon the movement of said weight and said curtain.

1,196,137. MOTOR-CYCLE CAR. GEORGE MORROW and MARIE J. R. MORROW, Chicago, Ill. Filed Sept. 4, 1915. Serial No. 49,012. (Cl. 208—45.)

1. In a motor cycle car, the combination of a car frame, means for connecting the same to a motor cycle, a wheel yoke connected with the said frame, a wheel fork mount-

ed within said wheel yoke and movable relatively to the same, and a supporting wheel carried by said wheel fork.



2. In a motor cycle car, a car frame, cross-bars secured to said frame, means for connecting said cross-bars to the frame of a motor cycle, a wheel yoke mounted upon said cross-bars and rigid relatively to said vehicle body, bolts carried by said wheel yoke, a wheel fork pivotally mounted upon said bolts and free to rock relatively to said wheel yoke, a wheel journaled upon said wheel fork and adapted to rest upon the ground in order to support the weight of said car frame, and a shock absorber connected with said car frame and with said wheel fork for preventing transmission of shocks from said wheel to said frame.

3. In a motor cycle car, the combination of a car frame, cross-bars connected therewith, a wheel yoke mounted upon said cross-bars, other cross-bars connected with said wheel yoke and with said vehicle frame, means for connecting all of said cross-bars to a motor cycle frame, a wheel fork pivotally connected with said wheel yoke and adapted to rock relatively to the same, a wheel journaled to one end of said wheel fork and arranged to rest upon the ground in order to support the weight of the vehicle frame and wheel yoke, a spring engaging the end of the wheel fork opposite the location of the wheel so that the axis of movement of the wheel fork relatively to the wheel yoke is located between the wheel and the spring, a rod extending through said spring and means for connecting said rod to said frame.

4. The combination with a car frame and means for connecting the same to a motor cycle frame, of a wheel yoke rigid relatively to the car frame, a wheel mounted within said wheel yoke and adapted to support the weight of the car frame and of the wheel yoke, mechanism connecting said wheel with said wheel yoke, and a shock absorber connecting said wheel yoke and said mechanism for cushioning shocks as between said wheel and said wheel yoke.

5. A device of the character described, comprising a car frame, a wheel yoke mounted thereupon, a wheel fork journaled to said wheel yoke, a wheel carried by said wheel fork, and a shock absorber connected with said wheel fork and with said car frame.

[Claims 6 to 8 not printed in the Gazette.]

1,196,138. PROCESS OF IMPREGNATING BALED FOODS. EDWARD P. MÜLLER, Chicago, Ill., assignor of one-half to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Aug. 2, 1915. Serial No. 43,702. (Cl. 99—11.)

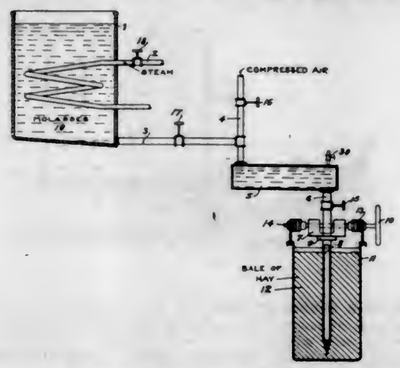
1. The process of treating edible substance which comprises, baling the edible substance, and passing into the bale impregnating material containing food values.

2. The process of treating material with edible substance having a food value which comprises, baling the material, and passing the edible substance into the bale.

3. The process of treating one edible substance with another edible substance having a food value which comprises, baling one of the substances, and passing the other substance into the bale.

4. The process of treating solid edible substance with liquid edible substance which comprises, baling the solid substance, and passing the liquid substance into the bale.

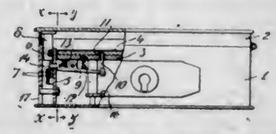
5. The process of treating solid edible substance with liquid edible substance which comprises, baling the solid



substance, and forcing the liquid substance into the bale by means of fluid under pressure.

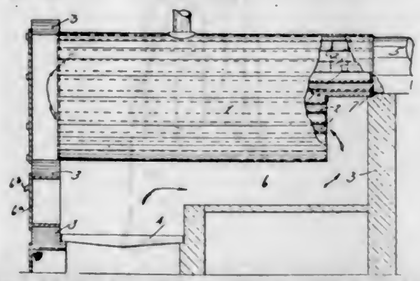
[Claims 6 to 8 not printed in the Gazette.]

1,196,139. MEANS FOR INDICATING OPENING OF THE CASES OF WATCHMEN'S CLOCKS AND THE LIKE. AUGUST F. NANZ, New York, N. Y. Filed Oct. 17, 1913. Serial No. 795,760. (Cl. 234—37.)



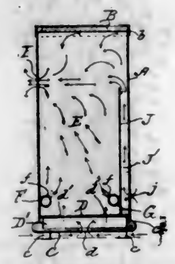
The combination with a case having a removable cover and a lock for that cover, of record-sheet carrying and operating means within that case but removable therefrom, when the case is open, and comprising record-sheet marking means adapted to be actuated by operation of said cover-lock, but physically disconnected from said cover-lock, and constructed for removal from the case with said record-sheet carrying and operating means without interference with or by said lock, said cover-lock provided with means which actuates said marking means when the lock is operated.

1,196,140. BOILER. OLLIE T. NELSON, Seattle, Wash. Filed June 9, 1914. Serial No. 843,985. (Cl. 122—75.)



The combination with a cylindrical horizontal fire tube boiler having upper and lower semi-circular and tubed rear end members, of a solid water cooled metallic baffle formed by a single semi-circular offset along a diametrical plane between said semi-circular end members at the rear end of the said boiler proper, whereby a space is left between the lower half of the rear end of said boiler and a boiler setting upon which the upper half of said rear end rests, for the purpose of allowing a free gas passage to the tubes of said boiler below the said baffle and at the same time cutting off free passage to the tubes above the said baffle.

1,196,141. ODORLESS GAS-HEATER. OREL D. ORVIS, Newark, N. J. Filed June 5, 1916. Serial No. 101,675. (Cl. 126—85.)



1. A gas heater embodying a casing provided with an air inlet at the bottom and a heat exit near the top, a transparent slab at the top of the casing for permitting the free passage of light rays, a burner within the casing, and a flue for supplying air to the casing so as to set up a circulation of relatively cool air below the transparent slab.

2. A gas heater embodying a casing provided with an air inlet and a heat exit, a burner within the casing, a transparent cover for said casing, and means for establishing below the transparent cover a circulation of relatively cool air so as to preclude cracking of said cover by the effects of the heat from said burner.

3. A gas heater embodying a casing provided with an air inlet and a heat exit, a burner within the casing, a transparent glass cover for said casing whereby the light from the burner is available for illuminating purposes, and an ascending flue the air inlet to which is separate from the similar inlet to said casing, the outlet from the flue being positioned to discharge a current of relatively cool air below the transparent cover, which air is free to mix with the gaseous products within the casing.

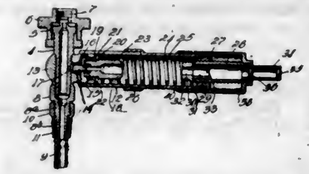
4. A gas heater embodying a casing provided at its bottom with an air inlet, burners positioned within the casing, a heat exit from the casing above the burners, a transparent slab on the casing above the heat exit, and a flue the air inlet to which is separate from the air inlet to the casing, said flue having an exit in substantially the plane of the heat exit and operating to direct the inflowing current of cool air in a direction crosswise of the casing and below the transparent cover.

5. A gas heater embodying a casing, a chambered base therefor, said base having a central air inlet, other air inlets to the chamber of the casing positioned out of register with the air inlet to the base, burners within the casing and adjacent to the second air inlets, a heat exit in the casing, and a flue the air inlet to which is separate from the aforesaid air inlets and the exit from which is substantially in the same horizontal plane as the heat exit from the casing.

[Claim 6 not printed in the Gazette.]

1,196,142. SAFETY PRESSURE-GAGE. FREDERICK A. SCHROEDER, Chicago, Ill., assignor to The Hill Pump Valve Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 23, 1915. Serial No. 23,444. (Cl. 137—53.)

1. A tire gage device comprising means for attaching said device to a valve stem, means for connecting it to a source of compressed air, and a passage between said connecting and attaching means, a cylinder, a plunger reciprocating therein having a passage therethrough, a conical valve member located in position to enter and close said passage as the plunger is moved toward it, and a passage connecting said first passage and the cylinder, said conical valve member having a portion threaded into said last passage, said threads being mutilated to provide a passage for the compressed air to the cylinder.



2. A tire gage device comprising means for attaching said device to a valve stem, means for connecting it to a source of compressed air, and a passage between said connecting and attaching means, a passage leading from said first passage, and means for controlling the escape of air through said last passage comprising a spring, adjustable means acting upon said spring for setting it for various pressures, a scale coöperating with said adjustable means for indicating the various pressures and adjustable means carried by said first adjustable means acting on said spring for securing the proper adjustment of said spring with respect to said first adjusting means so that the air will escape at the pressure indicated on said scale.

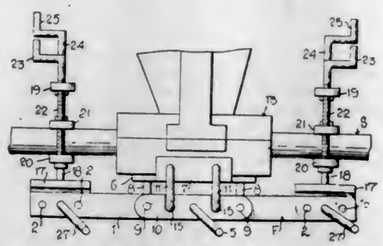
3. A tire gage device comprising means for attaching said device to a valve stem, means for connecting it to a source of compressed air, and a passage between said connecting and attaching means, a passage leading from said first passage, and means for controlling the escape of air through said last passage comprising a spring, adjustable means acting upon said spring for setting it for various pressures, a scale coöperating with said adjustable means for indicating the various pressures, and adjustable means carried by said first adjustable means acting on said spring for securing the proper adjustment of said spring with respect to said first adjusting means so that the air will escape at the pressure indicated on said scale, said first adjustable means comprising a tubular member, said other adjustable means comprising a tubular member threaded in said first tubular member, said tubular members affording a passage for the escape of the air.

4. A tire gage device comprising means for attaching said device to a valve stem, means for connecting it to a source of compressed air, and a passage between said connecting and attaching means, a passage leading from said first passage, and means for controlling the escape of air through said last passage comprising a spring, adjustable means acting upon said spring for setting it for various pressures, a scale coöperating with said adjustable means for indicating the various pressures, and adjustable means carried by said first adjustable means acting on said spring for securing the proper adjustment of said spring with respect to said first adjusting means so that the air will escape at the pressure indicated on said scale, said first adjustable means comprising a tubular member, said other adjustable means comprising a tubular member threaded in said first tubular member, said tubular members affording a passage for the escape of the air, and an air operated signal device supplied with air through said tubular members.

5. A tire gage device comprising means for attaching said device to a valve stem, means for connecting it to a source of compressed air, and a passage between said connecting and attaching means, a passage leading from said first passage, and means for controlling the escape of air through said last passage comprising a spring, adjustable means acting upon said spring for setting it for various pressures, a scale coöperating with said ad-

justable means for indicating the various pressures, and adjustable means carried by said first adjustable means acting on said spring for securing the proper adjustment of said spring with respect to said first adjusting means so that the air will escape at the pressure indicated on said scale, said first adjustable means comprising a tubular member, said other adjustable means comprising a tubular member threaded in said first tubular member, said tubular members affording a passage for the escape of the air, and an air operated signal device inserted into said first tubular member and secured thereto and supplied with air through said tubular members.

1,196,143. BABBITTING-MACHINE FOR JOURNAL-BOXES. FREDRICK L. PETERSON, Helix, Oreg. Filed May 15, 1916. Serial No. 97,678. (Cl. 22—123.)



1. A device of the character described comprising a frame, box clamps adjustably carried by the frame and movable transversely thereof, means for moving said clamps in unison but in reverse directions, and shaft engaging members carried by the frame.

2. A device of the character described comprising a frame, box clamps adjustably carried by the frame and movable transversely thereof, means for moving said clamps in unison but in reverse directions, shaft engaging members carried by the frame, and means for adjusting the shaft engaging members transversely of the frame.

3. A device of the character described comprising a frame, box clamps adjustably carried by the frame and movable transversely thereof, means for moving said clamps in unison but in reverse directions, shaft engaging members carried by the frame, and means for adjusting said shaft engaging members in a vertical path.

4. A device of the character described including a frame, box clamps, rods slidably disposed transversely of the frame and provided with upstanding goose-necks secured to the clamps, cross heads connecting adjacent ends of the rods, and means carried by the frame common to the cross heads for imparting movement to the clamps in unison but in reverse directions.

5. A device of the character described comprising a frame, box engaging means carried thereby, shaft engaging members carried by the frame, said shaft engaging members each including heads mounted for sliding movement transversely of the frame, and a shaft clamping member carried by the head.

[Claims 6 to 9 not printed in the Gazette.]

1,196,144. COMPOSITION FOR RECTIFYING AND INTENSIFYING LUMINOUS LIGHT. OSCAR WARREN PICKERING, Springfield, Mass. Filed Aug. 31, 1912. Serial No. 718,132. (Cl. 134—79.)

1. A new composition of matter comprising ultramarine, nitrocellulose, an adhesive agent and a solvent.

2. A new composition of matter comprising ultramarine, nitrocellulose, gum mastic, and a solvent.

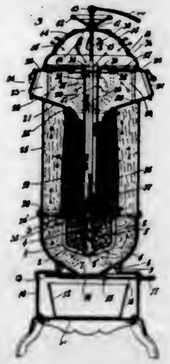
3. A new composition of matter comprising ultramarine, nitrocellulose, amyl acetate, alcohol and benzin.

4. A new composition of matter comprising ultramarine, nitrocellulose, gum mastic, amyl acetate, alcohol and benzin.

5. A new composition of matter comprising a light transmitting and wave altering substance of non-luminous nature, nitrocellulose, and an adhesive agent.

[Claim 6 not printed in the Gazette.]

1,196,145. STOVE OR FURNACE. JULIUS E. PINGUELY, Melbourne, Ky. Filed June 2, 1913. Serial No. 771,188. (Cl. 126—76.)

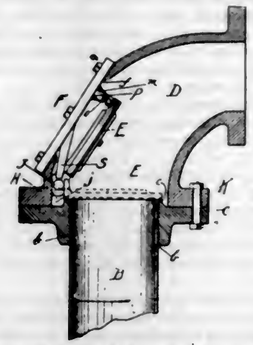


1. In a stove or furnace, an upright magazine having its lower end part open, a basket shaped grate movable up and down in and having its rim substantially in contact with the open interior of the lower end part of the magazine, a draft tube extending down through the magazine to the vicinity of said grate, and means for supporting said grate and adjusting said grate up and down in said lower end part of the magazine, said magazine receiving fuel around said draft tube to be supplied downwardly to said grate.

2. In a stove or furnace, an upright magazine, a grate adjustable up and down in fuel-confining relation with the interior of the lower part of the magazine and its rim in contact with the interior of the lower end of the magazine, a draft tube extending down through the magazine, and means for supporting said grate and adjusting said grate up and down in the lower end of the magazine, said magazine receiving fuel around said draft tube to be supplied downwardly to said grate, the parts of said magazine and said grate having said fuel-confining relation being of substantially circular cross section whereby said grate is rotatable in said magazine, and said supporting and adjusting means comprising means for rotating said grate.

1,196,146. COMBINATION ELBOW AND VALVE. JAMES PORTEOUS, Fresno, Cal. Filed Feb. 10, 1916. Serial No. 77,385. (Cl. 137—4.)

1. The combination of a suction pipe, a flange thereon, an annular valve seating on the top of such flange, a valve flap constructed to coöperate with the valve seating, said valve flap having parallel extensions from the periphery thereof, cylindrical projections from said extensions on line with each other, on a common plane with the valve flap, and at right angles to a diameter of the valve flap which if extended would pass midway between said projections, a flanged elbow constructed to fit on the suction pipe flange and having an opening therein large enough to encircle said annular seating, means for clamping said flanges together to make an air tight fit, a recess within the interior wall of said elbow, near the bottom thereof, perpendicular slots within the wall on each end of said recess, said recess and slots being open at the top, and of such size that the parallel extensions can readily move vertically in said recess, and the cylindrical projections can have a free vertical movement in the slots, an opening in the elbow large enough to admit the valve flap, a cover for such opening, and lugs depending from the cover which when the cover is assembled with the elbow, will cover the upper ends of the slots, substantially as described and for the purposes set forth.

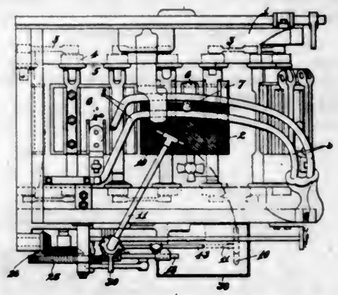


2. The combination of a suction pipe, a flange thereon, an annular valve seating on the top of such flange, a valve flap constructed to coöperate with the annular seating, extensions from the periphery of said valve flap parallel to each other, and parallel to an extension of a diameter of the valve flap which would pass midway between said extensions, said extensions terminating with cylindrical portions projecting at approximately right angles to the extensions on a plane with the valve flap and pointing in opposite directions, an elbow having a flange at the lower end constructed to fit on the suction pipe flange, and having an opening therein which will loosely encircle said annular seating, said elbow having recess, vertical slots within the wall on each side of the recess, the recess and slots being open at the top, and of such size that the extensions and cylindrical portions can readily slide vertically therein when the valve is raised, and such cylindrical portions when assembled in the slots can act as a slotted hinge open at top, an opening through the wall of the elbow on the upper side thereof of sufficient size to admit the valve, a cover for such opening, lugs depending from such cover adapted to close the upper end of the slots, and an adjustable stop constructed to stop the valve at an acute angle with the plane of the annular seating, all substantially as described.

3. The combination of a suction pipe, a flange thereon, an annular valve seating on the top of the flange, a valve flap constructed to coöperate with the annular seating, an elbow having a flange at the bottom constructed to register with the suction pipe flange, and having an opening which will loosely encircle the valve flap, vertical slots within the interior wall of the elbow, and cylindrical projections from such valve flap constructed to slide vertically within said slots, to permit said projections and slots to act as a hinge for said valve flap, and to guide the valve flap to register on the annular seating, all substantially as described.

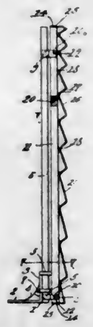
1,196,147. MACHINE FOR BAKING WAFERS AND THE LIKE. WILLIAM EDWARD PRESCOTT, London, England, assignor to Joseph Baker & Sons Limited, London, England. Filed Sept. 5, 1914. Serial No. 860,470. (Cl. 107—27.)

1. In a machine for baking wafers or the like, the combination with a series of plates or molds mounted on an endless conveyer and movable in a horizontal plane, and means for heating said plates or molds, of a feed nozzle adapted to be swung over said plates or molds in a plane parallel thereto and to a non-feeding position at one side of said plates and completely removed therefrom, a hollow arm carrying said nozzle, a vertical feed pipe operatively connected with said arm, means for oscillating said pipe about its axis to produce the swinging movements of the feed nozzle and supporting arm, a receptacle for wafer material at a lower level than said nozzle and communicating with said feed pipe, and a pump adapted to force material from said receptacle through said feed pipe to the nozzle, substantially as described.



2. In a machine for baking wafers or the like, the combination with a series of plates or molds mounted on an endless conveyer and movable in a horizontal plane, and means for heating said plates or molds, of a feed nozzle adapted to be swung over said plates or molds in a plane parallel thereto and to a non-feeding position at one side of said plates and completely removed therefrom, a hollow arm carrying said nozzle, a vertical feed pipe operatively connected with said arm, means for oscillating said pipe about its axis to produce the swinging movements of the feed nozzle and supporting arm, a receptacle for wafer material at a lower level than said nozzle and communicating with said feed pipe, a pump adapted to force material from said receptacle through said feed pipe to the nozzle, and means for rendering the action of the pump either intermittent or continuous at will, for the purpose specified.

1,196,148. PAPER-BAG RACK. LEE E. RAINBOLT, Bedford, Ind. Filed Dec. 18, 1914, Serial No. 877,908. Renewed July 7, 1916. Serial No. 108,057. (Cl. 211—2.)



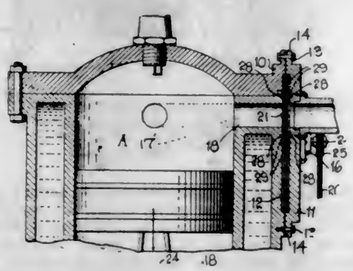
1. In a device of the class described, an upright and a back bar, one of which is provided with projecting arms, the other of which is provided with projections engaging the arms; bag holding means on the back bar; and a bracket in which the upright is vertically adjustable.

2. In a device of the class described, a bracket; an upright vertically adjustable in the bracket; means for holding the upright in adjusted positions with respect to the bracket; arms projecting from the upright and provided with notches; a back bar having projections received in the notches; and bag holding means on the back bar.

3. In a device of the class described, a bracket including a socket; an upright longitudinally adjustable in the socket and provided with openings; a pin removably inserted through a portion of the socket and adapted to be engaged in any of the openings; a bag support abutting against the pin to prevent the withdrawal thereof; and detachably interengaged elements on the upright and on

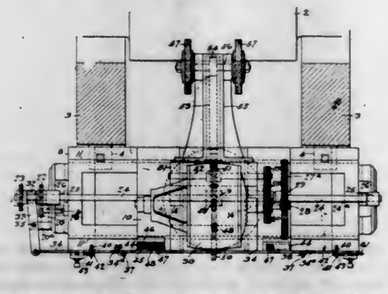
the bag support, said elements coacting to prevent longitudinal and transverse movement of the bag support, whereby the latter will be maintained in abutment with the pin.

1,196,149. ROTARY VALVE. HENRY T. RATCLIFFE, Hutchinson, Kans. Filed Jan. 10, 1916. Serial No. 71,314. (Cl. 123—190.)



A valve of the character described including oppositely disposed casing sections, each section being recessed upon its inner face to thereby provide a relatively shallow valve chamber, the sections being provided with registering inlet and exhaust ports and the inner faces of said sections having annular grooves surrounding the inlet ports and the exhaust ports, packing rings disposed in said grooves and confronting each other, a shaft entering one face of the casing, a valve disk mounted on the shaft and having a relatively elongated port adapted to successively register with the inlet and the exhaust ports, said valve disk being spaced from the inner faces of the casing sections but having gas-tight engagement with the opposed faces of the packing rings.

1,196,150. APPARATUS FOR GRINDING COLD-ROLLS. CHARLES M. REYNARD, McKeesport, Pa., assignor to McKeesport Tin Plate Company, McKeesport, Pa., a Corporation of Pennsylvania. Filed May 6, 1914. Serial No. 836,729. (Cl. 51—4.)



1. In grinding apparatus for cold rolls, the combination with the roll housings, of brackets projecting from said housings, a portable grinding machine frame supported at one side on said brackets beyond the housings and having extensible legs giving support thereto, a feed screw mounted in said frame, a longitudinally movable carriage traveling thereon and engaged by said screw, a grinding disk on said carriage, and means supported on the carriage for rotating same, and means on the carriage for rotating said feed screw, and means operated by the carriage for reversing the rotation of said feed screw.

2. In grinding apparatus for cold rolls, the combination with roll housings having suitable projecting brackets, of a portable grinding apparatus having its base plate supported at one side on said brackets, adjustable legs supporting the other side of said base plate beyond said housings, a longitudinally movable carriage traveling on said base plate, a motor supported on said carriage, a downwardly inclined frame carried on said carriage, a grinding disk mounted at the lower end of said frame, driving connections from the motor to said grinding disks, and means on the carriage for reversing the longitudinal travel of said carriage.

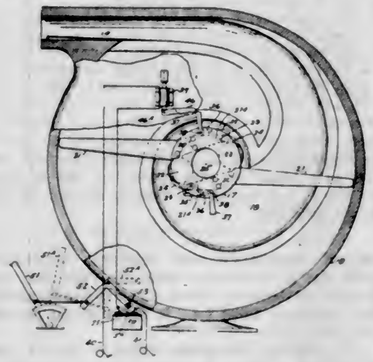
3. In grinding apparatus for cold rolls, the combination with roll housings having suitable projecting brackets, of a portable grinding apparatus having a base plate supported on said brackets, a longitudinally movable carriage traveling on said base plate, a motor supported on said carriage, a transversely movable support on said carriage carrying a downwardly inclined frame, a grinding disk mounted at the lower end of said frame, driving connections from the motor to said grinding disk, and means on the carriage for reversing the longitudinal travel of said carriage.

4. In grinding apparatus for cold rolls, the combination with roll housings having suitable projecting brackets, of a portable grinding apparatus having its base plate supported at one end on said brackets, adjustable legs supporting the other end of said base plate, a longitudinally movable carriage traveling on said base plate, a motor supported on said carriage, a transversely movable support on said carriage carrying a downwardly inclined frame, a grinding disk mounted at the lower end of said frame, driving connections from the motor to said grinding disk, and means for reversing the longitudinal travel of said carriage.

5. In apparatus for grinding cold-rolls, the combination with a suitable support of a feed-screw, means for rotating same, a longitudinally movable carriage engaging said feed-screw, a grinding disk on said carriage, means for rotating same, a clutch member on said feed-screw, a longitudinally movable rod, connections between said rod and said clutch member, a projection on said rod, said projection being in the path of said buffer.

[Claim 6 not printed in the Gazette.]

1,196,151. BALL-THROWING APPARATUS. JAY L. REYNOLDS, Spokane, Wash. Filed Oct. 12, 1915. Serial No. 55,414. (Cl. 89—10.)



1. A ball throwing apparatus comprising a casing having a passageway radiating from a central position therein outwardly and connecting with a tangentially extending barrel, parallel spring rods in said barrel to guide balls in their passage therethrough, a hub centrally and rotatably mounted in said casing, arms secured to said hub and extending outwardly across said passageway, a ball receptacle in said hub between said arms, an opening into said hub for the passage of balls therein, means for retaining balls within said hub and means for releasing balls therefrom to said passageway.

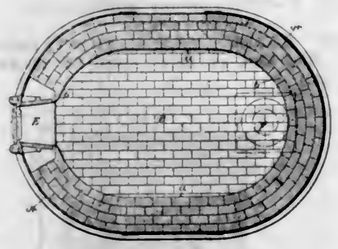
2. A ball throwing apparatus comprising a casing having a passageway radiating from a central position therein outwardly and connecting with a tangentially extending barrel, parallel spring rods in said barrel to guide balls in their passage therethrough, a hub centrally and rotatably mounted in said casing, arms secured to said hub and extending outwardly across said passageway, a ball receptacle in said hub between said arms, an opening into said hub for the passage of balls therein, pawls for normally retaining the balls within the ball receptacle in the hub and tripping means for elevating said pawls to release the balls therefrom.

3. A ball throwing apparatus comprising a casing having a passageway radiating from a central position therein outwardly and connecting with a tangentially extending barrel, a hub centrally and rotatably mounted in said casing, arms secured to said hub and extending outwardly across said passageway, a ball receptacle in said hub between said arms, an opening into said hub for the passage of balls therein, pawls for normally retaining the balls within the ball receptacle in the hub, lever connections with said pawls extending outwardly and a lever attached to the casing and electrically operated to throw the same in the path of said first named lever to trip the same and elevate the pawls to release the balls from the ball receptacle in the hub.

4. A ball throwing apparatus comprising a casing having a passageway radiating from a central position therein outwardly and connecting with a tangentially extending barrel, means for forcing a ball through said passageway into and through said barrel and parallel spring rods in said barrel adjustable to guide balls in their passage therethrough.

5. A ball throwing apparatus comprising a casing having a passageway radiating from a central position therein outwardly and connecting with a tangentially extending barrel, a hub centrally and rotatably mounted in said casing, arms secured to said hub and extending outwardly across said passageway, a ball receptacle in said hub between said arms, an opening into said hub for the passage of balls therein, pawls for normally retaining the balls within the ball receptacle in the hub, lever connections with said pawls extending outwardly and a lever attached to the casing and means for operating the same to throw the same in the path of said first named lever to trip the same and elevate the pawls to release the balls from the ball receptacle in the hub.

1,196,152. ANNEALING KILN OR OVEN. THOMAS WILLIAM RIDLEY, Middlesbrough, England. Filed Feb. 21, 1916. Serial No. 79,737. (Cl. 49—46.)



1. An oblong annealing chamber having the corners of its rear end filled to reduce the width of the kiln at its inner end.

2. An oblong annealing chamber having a middle portion formed with straight side walls and having the corners of its rear end filled to reduce the width of the kiln at its inner end.

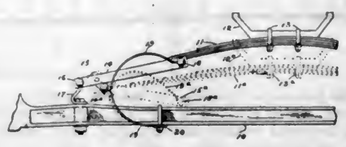
3. An oblong annealing chamber having a middle portion formed with straight side walls and an arched top wall and having the corners of its rear end filled to reduce the width of the kiln at its rear end.

4. An oblong annealing chamber having the corners of its front end filled on opposite sides of the kiln door.

5. An oblong chamber having a middle portion formed with straight side walls and having the corners at its front and rear ends filled.

[Claim 6 not printed in the Gazette.]

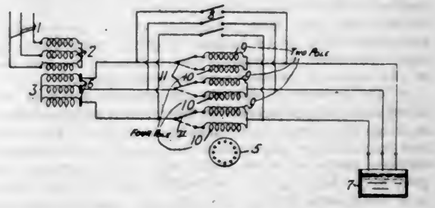
1,196,153. SPRING SUSPENSION. CLARK ROBINSON, Hillyard, Wash. Filed Jan. 17, 1916. Serial No. 72,439. (Cl. 267—17.)



1. In a vehicle, a support, a leaf-spring, a pair of levers pivoted to the support and extending inwardly toward the center of the leaf-spring and connected together thereunder, means for connecting the levers to the end of the leaf-spring, a pair of springs having their lower ends rigidly secured to the axle of the vehicle and their upper ends pivoted to said levers.

2. In a vehicle, a support, a leaf-spring, a pair of levers pivoted to the support and extending inwardly toward the center of the leaf-spring and connected together thereunder, links pivoted to said levers, means for connecting the leaf-spring to said links, a pair of springs having their lower ends rigidly secured to the axle of the vehicle and their upper ends pivoted to said levers.

1,196,154. CONTROL OF ALTERNATING-CURRENT MOTORS. EMANUEL ROSENBERG, Altrincham, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 15, 1913. Serial No. 742,247. (Cl. 172—274.)

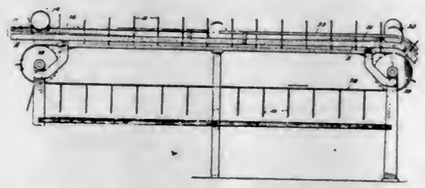


1. In combination, a plurality of mechanically coupled induction motors, a resistor connected directly to a member of one motor and through said member to a member of a second motor, and means for connecting said resistor directly to the member of said second motor.

2. In combination, two mechanically coupled induction motors, the secondary member of one motor being directly connected to the primary member of the other motor, a resistor in circuit with said primary member, and means for connecting said resistor to said secondary member either directly or through said primary member and for varying the number of poles produced by said primary winding.

3. In combination, two mechanically coupled induction motors, the primary member of one motor being wound for a plurality of numbers of poles, a switch for controlling the number of poles of said motor, and a circuit comprising the secondary member of the other motor, said switch, said primary member and a resistor in the order named and a switch for short-circuiting the said primary member.

1,196,155. PROCESS OF INTERIORLY COATING CONTAINER VESSELS. FRANKLIN RUDOLPH, Chicago, and JOHN G. HODOSON, Maywood, Ill., assignors to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 5, 1913. Serial No. 765,634. (Cl. 91—68.)



1. The process of coating the interior walls of an open ended can, which consists in first depositing a quantity of coating material within the can, and then rotating the can in an inclined position with its open end upward, and then rotating the can with its open end downward, to complete the coating of the interior and to discharge the surplus coating.

2. The process of coating the interior walls of an open ended can, which consists in first depositing a quantity of coating material, while the can is in an upright position, on the middle of the bottom of the can, thereby coating the middle portions of the said bottom, then rotating the can in an inclined position with its open end upward, to cause the coating of the marginal portions of the bottom and the coating of those portions of the side walls of the can which are remote from the open end of the can, and then rotating the can in an inclined position with its open end downward, to cause the coating of the remaining portions of the side walls of the can, and to discharge surplus coating from the bottom and sides through the open end of the can.

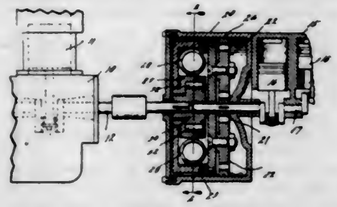
3. The process of coating the interior walls of open ended cans, which consists in moving the cans in line, successively, depositing a predetermined measured amount of coating material simultaneously on the bottom of each of a plurality of successive cans, then continuing the successive movement of the cans and at the same time inclining them with their open ends upward to complete the coating of the bottoms and to partially coat the side walls of the cans, and then continuing the movement of the successive cans in an inclined position with their open ends downward, to complete the coating of the side walls of the cans and to discharge surplus coating.

4. The process of coating the interior walls of open ended cans, which consists in first depositing quantities of fluid coating within such cans successively; then evenly and continuously rolling and conveying the cans while in inclined positions with their open ends upward; then gradually changing the inclinations of the cans during such continuous rolling, to horizontal positions and then to reversely inclined positions; and then discharging the surplus coating, during such rolling, from the open end of the can.

1,196,156. STARTING CONNECTION FOR AUTOMOBILE-ENGINES. ALBERT C. SAVIDGE, Indianapolis, Ind. Filed Aug. 20, 1914. Serial No. 857,640. (Cl. 123—179.)

1. In combination, an engine to be started, a starting motor therefor, said motor being a fluid-pressure motor having a plurality of pistons and cylinders with the power strokes of the various pistons overlapping, and a connection between said starting motor and said engine which connection includes a resilient member which may be distorted to permit the starting motor to start before the engine by a sufficient amount so that a plurality of pistons may have operated before the engine has started and also including a clutch which acts only to transmit power from the starting motor to the engine.

2. In combination, an engine to be started, a starting motor therefor, and a connection between said starting motor and said engine which connection includes a resilient member which may be distorted to permit the starting motor to start before the engine and also including a clutch which acts only to transmit power from the starting motor to the engine, said starting motor in its movement having separated points of power application and said resilient member having sufficient capacity for distortion to permit said starting motor to move from one such point of power application to another before requiring any movement of said engine.



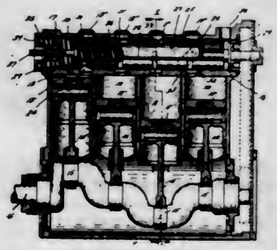
3. In combination, an engine to be started, a starting motor therefor, said motor being a fluid-pressure motor which in its movement has separated points of power application, and a connection between said starting motor and said engine which connection includes a resilient member which may be distorted to permit the starting motor to start before the engine and also including a clutch which acts only to transmit power from the starting motor to the engine, said resilient member having sufficient capacity for distortion to permit said starting motor to move from one such point of power application to another before requiring any movement of said engine.

4. In combination, an engine to be started, a starting motor therefor, said motor being a fluid-pressure motor having a plurality of pistons and cylinders with the power strokes of the various pistons overlapping, and a connection between said starting motor and said engine which connection includes a resilient member which may be distorted to permit the starting motor to start before the engine by a sufficient amount so that a plurality of pistons have operated before the engine has started.

5. In combination, an engine to be started, a starting motor therefor, and a connection between said starting motor and said engine which connection includes a resilient member which may be distorted to permit the starting motor to start before the engine, said starting motor in its movement having separated points of power application and said resilient member having sufficient capacity for distortion to permit said starting motor to move from one such point of power application to another before requiring any movement of said engine.

[Claims 6 to 12 not printed in the Gazette.]

1,196,157. MOTOR. ALBERT C. SAVIDGE, Indianapolis, Ind. Filed Sept. 26, 1914. Serial No. 863,640. (Cl. 121—23.)



1. The combination with a motor comprising a plurality of coacting motor units, a fluid-pressure-controlling device formed to control the flow of motive fluid to and from said units in regular succession when the motor is in operation, said device having parts for admitting motive fluid to a lesser number of said units at a time when the motor is operating under normal conditions and parts for admitting motive fluid to an average greater number of said units at a time when the motor is in initial operation, and means for automatically throwing said last-mentioned parts out of commission when the normal operation of the motor is established under the pressure of its motive fluid.

2. The combination with a motor comprising a plurality of motor units, of a fluid-pressure-controlling valve provided with portions for normally successively controlling inlet and exhaust from the several motor units when the motor is in normal motion, said valve also having portions for permitting inlet to two or more of said units simultaneously, said valve being shiftable to bring either the first or the last named valve portions into operation, and means for automatically shifting said valve to throw the last-mentioned inlet-controlling portions out of commission when the motor is operating under normal conditions.

3. The combination with a motor comprising a plurality of motor units, of a fluid-pressure-controlling valve provided with portions for normally successively controlling inlet and exhaust from the several motor units when the motor is in normal motion, said valve also having portions for permitting inlet to two or more of said units simultaneously, and a spring normally holding said valve in position to render the last-mentioned inlet portions of the valve in operative position, said spring yielding under the motive fluid pressure to permit the valve to shift under said pressure to throw the last-mentioned inlet-controlling portions out of commission.

4. In a motor, the combination of a plurality of cylinders, associated pistons and crank shaft, of a rotary axially movable valve controlling the flow of motive fluid to said cylinders, said valve having portions for controlling the inlet in regular succession and other portions permitting initial inflow to two or more of the cylinders.

5. In a motor, the combination of a plurality of cylinders, associated pistons and crank shaft, a head closing said cylinders and having ports communicating with the several cylinders, a ported sleeve mounted in said head and communicating with said first-mentioned ports, a rotary axially movable valve mounted in said sleeve and provided with a plurality of pairs of ports, one port of each pair being longer than the other and normally circumferentially registering with the adjacent sleeve port, and means yielding under the pressure of the motive fluid for normally holding the valve in said position and automatically bringing the shorter ports into circumferential registry with the sleeve ports after the motor is in motion.

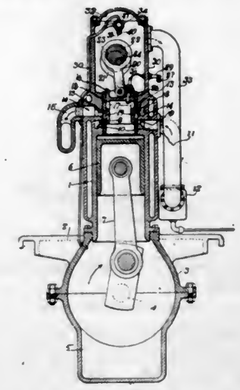
[Claims 6 to 17 not printed in the Gazette.]

1,196,158. INTERNAL-COMBUSTION ENGINE. CHARLES A. SAWTELLE, Dayton, Ohio, assignor of one-third to James Saunders and one-third to James E. Cronan. Filed Sept. 16, 1912. Serial No. 720,463. (Cl. 123—75.)

1. In an engine, a main cylinder, a main piston working in said main cylinder, a supplemental cylinder arranged in alinement with said main cylinder and communicating with a source of fluid supply and with said main cylinder, a hollow supplemental piston within said supplemental cylinder and out of engagement with said main piston, said hollow piston having that end adjacent to said main cylinder open and having a port in its circumferential wall, and a device within said supplemental cylinder having a port and coöperating with said supplemental piston to control the communication between said supplemental cylinder and said source of supply.

2. In an engine, a main cylinder, a main piston working in said main cylinder, a supplemental cylinder arranged in axial alinement with said main cylinder, communicating therewith and having inlet and exhaust ports arranged one above the other, coöperating members mounted within said supplemental cylinder and each having a single port, and means to cause the ports of both members to register simultaneously with said inlet port or with said exhaust port.

3. In an engine, a main cylinder, a main piston working in said main cylinder, a supplemental cylinder communicating with said main cylinder and having both an inlet port and an exhaust port, a hollow supplemental piston within said supplemental cylinder, out of engagement with said main piston, in open communication with said main cylinder and having a port, and a member mounted for movement relatively to said supplemental piston and having a port coöperating with the port of said supplemental piston to open and close both the inlet port and the exhaust port of said supplemental cylinder.



4. In an engine, a main cylinder, a main piston working in said main cylinder, a supplemental cylinder communicating with said main cylinder and having both an inlet port and an exhaust port, a hollow supplemental piston within said supplemental cylinder, out of engagement with said main piston, in open communication with said main cylinder and having a port, and a member movably mounted in said supplemental cylinder and having a port coöperating with the port of said supplemental piston to open and close both the inlet port and the exhaust port of said supplemental cylinder.

5. In an engine, a main cylinder, a main piston working in said main cylinder, a supplemental cylinder communicating with said main cylinder and having both an inlet port and an exhaust port, a hollow supplemental piston within said supplemental cylinder, out of engagement with said main piston, in open communication with said main cylinder and having a port, and a sleeve movably mounted in said supplemental cylinder and having a port cooperating with the port of said supplemental piston to open and close both the inlet port and the exhaust port of said supplemental cylinder.

[Claims 6 to 29 not printed in the Gazette.]

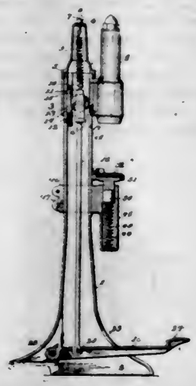
1,196,159. RACK AND PINION. EDWARD D. SCHMITT, Baltimore, Md., assignor to American Bottle Cap Company, Baltimore, Md., a Corporation of Delaware. Filed Sept. 9, 1911. Serial No. 648,559. (Cl. 74—27.)

1. In a machine, a reciprocatory member provided with a rack bar; a fixed rack-bar, a spring-restrained member, a toothed-wheel carried by said member and adapted to engage the rack-bars, and means for operating the spring-restrained member to cause the downward movement of the reciprocatory member.

2. In a machine, a reciprocatory member provided with a rack-bar; a fixed rack-bar, a spring-restrained yoke, a toothed-wheel journaled in the yoke and adapted to engage the rack-bars, and means for operating said yoke to cause the downward movement of the reciprocatory member.

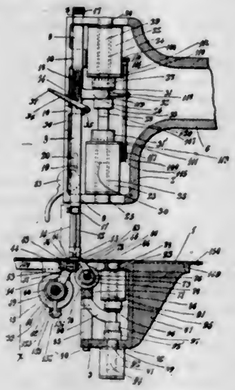
3. In a machine, a reciprocatory member provided with a rack-bar; a fixed rack-bar; a spring-restrained yoke, a toothed-wheel-journaled in the yoke and adapted

to engage the rack-bars; a rod connected with said yoke, and means for operating said rod yoke to cause the



downward movement of the same and thereby the reciprocatory member.

1,196,160. SEWING-MACHINE. FREDERICK E. SCHOOLFIELD, Covington, and JOHN C. OWEN, Bellevue, Ky. Filed June 14, 1915. Serial No. 34,029. (Cl. 172—126.)



1. In a sewing machine, a needle, electro-magnetic operating means for the needle, coöperative means to cooperate with said needle, electro-magnetic operating means for said coöperative means, means to control the supply of current to the respective electro-magnetic operating means to cause coöperation of said coöperative means with said needle, feeding means, electro-magnetic operating means for the feeding means, and means whereby the operating means for the needle and for the cooperative means control supply of current to said electro-magnetic operating means for the feeding means.

2. In a sewing machine, a needle, electro-magnetic operating means for the needle, coöperative means to cooperate with said needle, electro-magnetic operating means for said coöperative means, means to control the supply of current to the respective electro-magnetic operating means to cause coöperation of said coöperative means with said needle, feeding means, electro-magnetic operating means for the feeding means, and means whereby said operating means for said coöperative means controls supply of current to said electro-magnetic operating means for the feeding means.

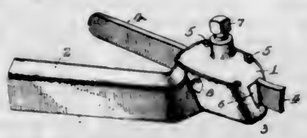
3. In a sewing machine, a needle, electro-magnetic operating means for said needle, coöperative means to cooperate with said needle, operating means for said cooperative means, means whereby the electro-magnetic operating means for said needle controls the operation of said operating means for the coöperative means, means whereby said operating means for the coöperative means controls the supply of current to said electro-magnetic operating means for the needle, to cause cooperation of said coöperative means with said needle, feeding means, electro-magnetic operating means for said feeding means, and means whereby said operating means for the needle and said operating means for the cooperative means control supply of current to said electro-magnetic operating means for the feeding means.

4. In a sewing machine, a needle, operating means for the needle, coöperative means to coöperate with said needle, electro-magnetic operating means for said cooperative means, means whereby the operating means for the needle controls the supply of current to said electro-magnetic operating means for the coöperative means, means whereby said electro-magnetic operating means for the coöperative means controls the operation of said operating means for the needle, to cause coöperation of said coöperative means with said needle, feeding means, electro-magnetic operating means for the feeding means, and means whereby said operating means for said coöperative means control supply of current to said electro-magnetic operating means for the feeding means.

5. In a sewing machine, a needle, operating means for the needle, coöperative means to coöperate with said needle, electro-magnetic operating means for said cooperative means, means whereby the operating means for the needle controls the supply of current to said electro-magnetic operating means for the coöperative means, means whereby said electro-magnetic operating means for the coöperative means controls the operation of said operating means for the needle, to cause coöperation of said coöperative means with said needle, feeding means, electro-magnetic operating means for said feeding means, and means whereby said operating means for the needle and said operating means for the coöperative means control supply of current to said electro-magnetic operating means for the feeding means.

[Claims 6 to 27 not printed in the Gazette.]

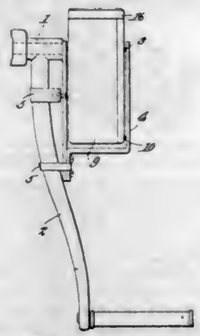
1,196,161. TOOL-HOLDER. GUSTAF SELANDER, Chicago, Ill., assignor of one-half to Albert L. Radlein, Chicago, Ill. Filed June 10, 1915. Serial No. 33,354. (Cl. 29—99.)



1. A tool holder, comprising a stock formed with a longitudinal holding orifice, the outer side wall of which is vertical and the inner side wall of which is inclined, an integrally formed holding tang having offset relation to the aforesaid inclined wall of the holding orifice, a wedge block disposed in said holding orifice and adapted to clamp a cutter blade against the outer vertical wall of said orifice, and a binding screw having engagement against the top of said wedge block.

2. A tool holder, comprising a stock formed with a longitudinal holding orifice one side wall of which is vertical and the other side wall of which is inclined, an integrally formed holding tang offset from the stock and in a plane to one side of the holding orifice thereof, a wedge block disposed in said holding orifice and adapted to clamp a cutter blade against the vertical wall of said orifice, a binding screw having bearing on the top of said wedge block, and a plurality of set-screws disposed at opposite sides of the binding screw aforesaid and adapted for engagement with the top of a cutter blade.

1,196,162. SPEEDOMETER. JOHN J. SHAFER, Mayville, Mich. Filed May 25, 1916. Serial No. 99,832. (Cl. 264—2.)



1. The combination with a revoluble shaft, of a governor, means for transmitting motion to the governor from the shaft, an indicator, and means for transmitting motion to the indicator from the governor, said means including a tiltable member, an arcuate rack movable therewith, a gear connected to the indicator and engaged by the rack, and means operated by the governor for actuating the tiltable member.

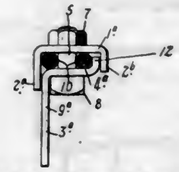
2. The combination with a revoluble shaft, of a structure bearing thereon and suspended therefrom, said shaft being revoluble independently of said structure, a centrifugal governor carried by said depending structure, means for transmitting motion to the governor from the shaft, an indicator upon said structure, and means for transmitting motion to the indicator from the governor, said means including a tiltable member, an arcuate rack movable therewith, a gear connected to the indicator and engaged by the rack, a lever actuated by the governor, and a connection between said lever and the tiltable member.

3. The combination with a revoluble shaft, of a structure bearing thereon and suspended therefrom, said shaft being revoluble independently of said structure, a centrifugal governor carried by said depending structure, means for transmitting motion to the governor from the shaft, an indicator upon said structure, and means for transmitting motion to the indicator from the governor, said means including a tiltable member, an arcuate rack movable therewith, a gear connected to the indicator and engaged by the rack, a lever actuated by the governor, and a connection between said lever and the tiltable member, said tiltable member being counterbalanced.

4. The combination with a revoluble shaft, of a structure bearing thereon and suspended therefrom, said shaft being revoluble independently of said structure, a centrifugal governor carried by said depending structure, means for transmitting motion to the governor from the shaft, an indicator upon said structure, and means for transmitting motion to the indicator from the governor, said means including a tiltable member, an arcuate rack movable therewith, a gear connected to the indicator and engaged by the rack, a lever actuated by the governor, a connection between said lever and the tiltable member, said connection being adjustable.

5. The combination with a revoluble shaft and an actuating member connected to one end portion of the shaft, of a bracket detachably secured to the actuating member, a shaft fixedly mounted in the bracket, and supported thereby in line with the first named shaft, a pendant structure carried by said fixedly mounted shaft, an indicator carried by said structure, a centrifugal governor carried by said structure, means for transmitting motion from the governor to the indicator, and means operated by the relative movement of the fixedly mounted shaft and the pendant structure for actuating the governor.

1,196,163. TERMINAL CLAMP. KARL A. SIMMON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1914. Serial No. 822,196. (Cl. 24—135.)



1. A clamping device comprising an angle member having two arms, a channel member adapted to straddle the said arms, and a bolt adapted to project through the said members and having its head restrained in position by one of the arms of the said angle member.

2. A clamping device comprising a channel member having side arms, an angle member having a plurality of arms, one of the arms being disposed in parallel relation to the middle portion of the said channel member and between the side arms thereof, and a bolt adapted to coöperate with the said angle member and the said channel member, the head of the said bolt being locked in position by an arm of the said angle member having parallel relation with the side arms of the said channel member.

3. A clamping device comprising a main member of Z-shape and a coöperating member of U-shape adapted to grip a conductor, said members being adapted to prevent lateral movement of the conductor, and a bolt for clamping the said members together and having its head restrained in one position by one of the end portions of the Z-shaped member.

4. A clamping device comprising a main member of Z-shape and a coöperating angle member adapted to grip a wire or cable, said members being adapted to prevent lateral movement of the wire or cable, and a bolt for clamping said members together and having its head restrained from turning by engagement with one of the end portions of said Z member.

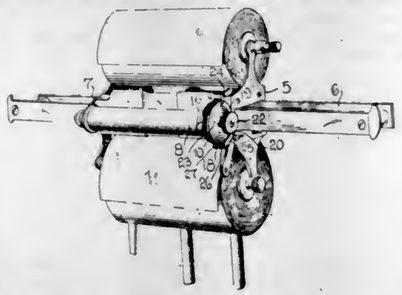
5. A clamping device comprising a channel member having parallel side arms, a coöperating Z-shaped member disposed between said arms and adapted to prevent a turning movement of said channel member, and a bolt engaging said coöperating members and having a side of its head in engagement with one arm of the said Z-shaped member to prevent turning of the bolt.

1,196,164. TYPE-WRITER ATTACHMENT. GREGOAR SMEDAL, La Crosse, Wis. Filed Nov. 6, 1915. Serial No. 60,027. (Cl. 197—134.)

1. The combination with the platen of a typewriting machine, of paper and carbon rollers supported contiguous to the platen whereby the paper and carbon sheets may be engaged under the platen, means automatically operating upon the release of the paper to reverse the rotation of the carbon roller and rewind the carbon sheet thereon, a movable stop element, means fixed on the roller shaft coacting with the stop element to actuate the same, said means carrying a stop shoulder, said element being shifted into the path of movement of said shoulder in the rewinding of the carbon sheet to stop the reverse rotation of the roller, whereby the position of the free end of the carbon sheet with respect to the platen may be predetermined.

2. The combination with the platen of a typewriting machine, of paper and carbon rollers supported contiguous to the platen whereby the paper and carbon sheets may be engaged under the platen, means automatically operating upon the release of the paper to reverse the rotation

of the carbon roller and rewind the carbon sheet thereon, a movable stop element, a disk fixed on the roller shaft and provided with a shoulder, said disk being further provided with means engaged by the stop element whereby said element is shifted into the path of movement of the shoulder to stop the rewinding of the carbon sheet.



3. The combination with the platen of a typewriting machine, of paper and carbon rollers supported contiguous to the platen whereby the paper and carbon sheets may be engaged under the platen, means automatically operating upon the release of the paper to reverse the rotation of the carbon roller and rewind the carbon sheet thereon, a movable stop element, a disk fixed on the roller shaft and provided with a shoulder, said disk being provided with a spiral groove co-acting with said stop element and having means at the end of said groove for engagement with said element to limit the rewinding of the carbon sheet.

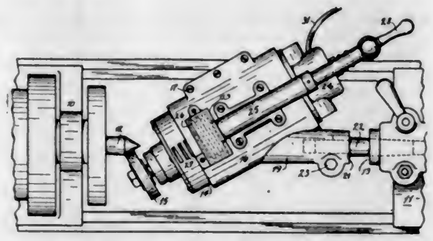
4. The combination with the platen of a typewriting machine, of paper and carbon rollers supported contiguous to the platen whereby the paper and carbon sheets may be engaged under the platen, means automatically operating upon the release of the paper to reverse the rotation of the carbon roller and rewind the carbon sheet thereon, a pivoted stop finger provided with a lug, and a disk fixed upon the roller shaft having a spiral groove in its face in which said lug is engaged, whereby the finger is shifted in the rotation of the carbon roller, said disk being also provided with a shoulder in the path of movement of which said lug is disposed in the rewinding of the carbon sheet.

5. The combination with the platen of a typewriting machine, of paper and carbon rollers supported contiguous to said platen for the engagement of the paper and carbon sheets therewith, a spring case loosely mounted upon the shaft of the carbon roller and open upon one side, a cover plate for the open side of said case fixed upon the roller shaft, a spring within said case to rewind the carbon sheet upon the roller, a fixed resilient latch member having means for adjustable engagement with the loosely mounted case, whereby said case is held against rotation with respect to the roller shaft, and means coöperating with means on the cover plate for the open side of said case to limit the rewinding of the carbon sheet upon said roller under the action of said spring.

[Claim 6 not printed in the Gazette.]

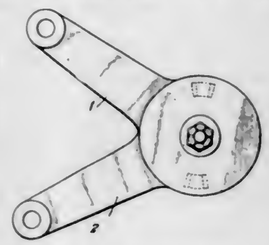
1,196,165. CENTER-GRINDER. EDWARD F. SMITH, Cincinnati, Ohio, assignor to The Neil & Smith Electric Tool Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 13, 1916. Serial No. 83,721. (Cl. 51—4.)

1. In a grinding-implement, the combination of a grinding wheel, an electric motor comprising a housing and whereby this wheel is actuated, a frame to which this housing is slidably fitted to permit adjusting movement of the motor in a direction parallel to the axis of rotation of the grinding wheel, an adjusting shaft mounted for rotation on the outside of the frame and parallel to the axis mentioned, an opening provided in the frame and opposite one end of this shaft, a worm-wheel mounted on this end and extending with its periphery through said opening in the frame, a handle on the other end of this shaft, a rack on the motor housing adapted to be engaged by the worm-wheel and means to support the frame which carries the motor.



2. In a grinding-implement, the combination of an electric motor, a grinding-wheel carried on it and actuated thereby, a frame to which this motor is slidably fitted, means to move the motor on the frame for adjusting the position of the grinding-wheel, a cylindrical boss containing a socket and projecting at an angle from the frame on which it forms an integral part and a shank fitted to be received by the socket in this boss and adapted to be seated in the socket provided for the center in the tail-stock.

1,196,166. SHOCK-PREVENTER FOR VEHICLES AND THE LIKE. FRED SMITH, Springdale, Conn. Filed Jan. 27, 1915. Serial No. 4,601. (Cl. 21—105.)

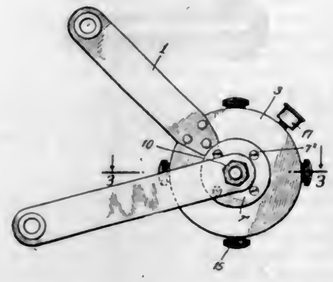


1. In a shock preventer, the combination of two arms adapted to be connected at one end of each respectively with the body and wheels of a vehicle, the other ends of the arms being provided with enlarged heads, a stub-shaft on which said heads are pivotally mounted, a plurality of wedge-shaped members on the inner faces of each of said heads, members on opposing faces being similarly spaced about the axis of said heads, with opposing members equidistant from the said axis and with the rounded apices of opposing members normally in contact, and resilient means for forcing said heads toward each other, substantially as set forth.

2. In a shock preventer, the combination of two arms adapted to be connected at one end of each respectively with the body and wheels of a vehicle, the other ends of the arms being provided with enlarged heads, a stub-shaft on which said heads are pivotally mounted, a plate on the inner side of one of said heads, pivoted on said stub-shaft, wedge-shaped members on the opposing faces of said plate and the second of said heads, equi-distant from the axis of said plate and heads, and normally contacting at their apices, adjustable devices for securing said plate to the first of said two arms in adjusted angular position, so that said wedge-shaped members will contact normally with each other at their apices, and resilient means for forcing the first head and plate and second head toward each other, substantially as set forth.

3. In a shock preventer, the combination with two arms pivotally connected at their ends respectively with the body and wheels of a vehicle, their other ends being provided with enlarged heads, of a wedge-shaped member on the inner side of one of said heads, a wedge-shaped member on the inner side of the other of said heads, said heads being pivotally connected and said wedge-shaped members being normally in contact at their apices, means for adjusting the angular position of the wedge-shaped member on one of said heads relatively to the corresponding member on the other head to insure normal contact of said members at their apices, and mechanism for holding said wedge-shaped members in contact under pressure, substantially as described.

1,196,167. SHOCK-PREVENTER. FRED SMITH, Springdale, Conn. Filed Feb. 29, 1916. Serial No. 81,091. (Cl. 21—105.)



1. In a shock preventer, the combination of a pair of arms, a body to which one arm is secured, a stub-shaft extending through the body and journaled therein, the second arm being secured to said stub-shaft, said stub-shaft having an angular portion, and spring-pressed members mounted radially in said body with tapered inner ends contacting surfaces of said angular portion, said members being adapted to normally contact said angular portion approximately at the angles thereof, when said shock preventer is in operation, substantially as set forth.

2. In a shock preventer, the combination of a pair of arms, pivotally connected at their inner ends, an angular member axially arranged with respect to said arms, secured to one of the same, abutments and guiding means secured to the other arm, movable members in said guiding means contacting said angular member, and spring means engaging said abutments and pressing said members into contact with said angular member, said members being adapted normally to contact said angular member approximately at the angles thereof, substantially set forth.

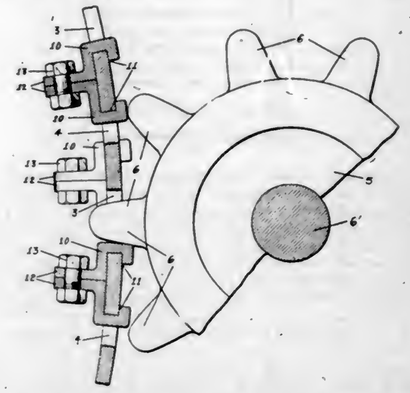
3. In a shock preventer, the combination of a pair of arms, pivotally connected at their inner ends, a member having wedge surfaces secured to one of said arms to oscillate therewith, movable members having wedge-shaped ends contacting said first member adjacent the high points thereof, guiding means for said last named members carried by the other of said arms, and spring means pressing said last-named members into contact with said first member, said arms being adapted to be secured to the body and wheels of a vehicle, substantially as set forth.

4. In a shock preventer, the combination of a pair of arms, adapted to be connected to parts having a normal relation and relative motion in opposite directions from the same, a pivotal connection between the arms, a member secured to one of the arms having a plurality of angles connecting its exterior surfaces, guiding means carried by the other of said arms, and a plurality of members having tapered ends in said guiding means, independently spring-pressed into contact with said first member, said members being arranged to retard return of said arms to normal relation after relative movement therefrom in either direction, substantially as set forth.

5. In a shock preventer, the combination of a pair of arms, a body to which one arm is secured, a stub-shaft extending through the body and having cylindrical portions on which the body is journaled, and an angular portion, the second arm having portions secured to said shaft on both sides of the body, said body having guides and abutments, movable members in said guides contacting said angular portion of the stub-shaft, one adjacent to each angle of the anguiar portion, and springs between said abutments and members for pressing said members into contact with said angular portion, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,196,168. TRACTOR DRIVING-GEARING. JUSTUS S. STEARNS, Ludington, Mich., assignor to Gile Boat & Engine Co., Ludington, Mich. Filed July 15, 1915. Serial No. 40,068. (Cl. 74—41.)



1. In a tractor driving gearing, the combination of a traction wheel comprising a rim having a series of gear tooth holes therethrough and a corresponding series of wear member holes spaced from said gear tooth holes, wear members formed of sections having facing recesses fitting the rear edges of the gear tooth holes and the front edges of the succeeding wear member holes, said sections being provided with inwardly projecting lugs perforated to receive clamping bolts, clamping bolts for detachably securing said wear members, and a driving gear disposed on the outside of said traction wheel and having spur teeth coacting with said gear tooth holes of said traction wheel rim.

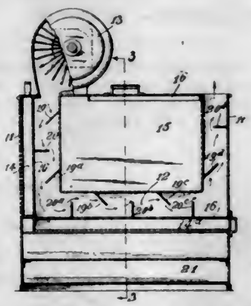
2. In a tractor driving gearing, the combination of a traction wheel comprising a rim having a series of gear tooth holes therethrough disposed in a ziz-zag relation, and a corresponding series of wear member holes spaced from said gear tooth holes, wear members having facing recesses fitting the rear edges of the gear tooth holes and the front edges of the succeeding wear member holes, and a driving gear disposed on the outside of said traction wheel and having staggered spur teeth coacting with said gear tooth holes of said traction wheel rim.

3. In a tractor driving gearing, the combination of a traction wheel comprising a rim having a series of gear tooth holes therethrough and a corresponding series of wear member holes spaced from said gear tooth holes, wear members having facing recesses fitting the rear edges of the gear tooth holes and the front edges of the succeeding wear member holes, and a driving gear disposed on the outside of said traction wheel and having spur teeth coacting with said gear tooth holes of said traction wheel rim.

4. In a tractor driving gearing, the combination of a traction wheel comprising a rim having a series of gear tooth holes therethrough and a corresponding series of

wear member holes spaced from said gear tooth holes, wear members engaged over adjacent edges of adjacent gear tooth and wear member holes, and a driving gear having spur teeth coacting with said gear tooth holes.

1,196,169. APPARATUS FOR DRYING AND COOLING OF AIR. ALBERT L. STILLMAN, Hoboken, N. J., assignor to Alliance Engineering Corporation, New York, N. Y., a Corporation of New York. Filed Mar. 22, 1916. Serial No. 85,868. (Cl. 34—1.)



1. An apparatus for dehydrating of air, comprising an air-duct, an open receptacle in the wall of the air-duct, a moisture absorbing compound in the receptacle, plates set in the air-duct in the path of the flow of the air therethrough, and reducing the cross-sectional area of the air-duct at intervals, and deflecting the flow of the air against the moisture absorbing compound in the receptacle, and means for driving the air through the air duct; substantially as herein shown and described.

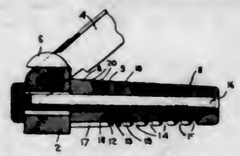
2. An apparatus for dehydrating of air, comprising an air-duct, an open receptacle partly inclosing the air-duct, a moisture absorbing compound in the receptacle, plates set up in the air-duct at an obtuse angle to its axis, opposite the receptacle; other plates, set in the air-duct over the receptacle, approximately midway between the first; both sets of plates reducing the cross-sectional area of the air-duct at intervals, and means for driving the air through the air-duct; substantially as herein shown and described.

3. An apparatus for dehydrating and cooling of air, comprising a casing, adapted to be filled with a cooling medium, an air-duct, and open receptacles partly inclosing the air-duct in the casing; a moisture absorbing compound in the receptacles, plates set up in the air-duct in the path of the flow of the air-duct, and reducing the cross-sectional area of the air-duct at intervals, and means for driving the air through the air-duct; substantially as herein shown and described.

4. An apparatus for dehydrating and cooling of air, comprising a casing, adapted to be filled with a cooling medium, an air-duct, and open receptacles set in the casing and partly inclosing the air-duct, a moisture absorbing compound in the receptacle, plates set up in the air-duct at an obtuse angle to its axis opposite the receptacles; other plates, set in the air-duct over the receptacles, approximately midway between the first; both sets of plates reducing the cross-sectional area of the air-duct at the points where they are set, and means for driving the air through the air-duct; substantially as herein shown and described.

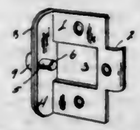
1,196,170. LOOM-TEMPLE. WALLACE I. STIMPSON, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 16, 1915. Serial No. 61,825. (Cl. 139—36.)

1. A loom temple comprising a head, a bolt extending from said head, a non-rotatable roll section having a face oblique to the axis of the bolt and mounted upon said bolt, a hub projecting from said oblique face and normal thereto, a second non-rotatable roll section mounted upon said bolt and having faces parallel to the oblique face of the first non-rotatable roll section, a hub projecting normally from one of the faces of said second section into engagement with the hub of the first section, a pair of juxtaposed roll sections, each provided with circumferential radially projecting teeth, mounted respectively on said hubs to rotate independently and means for causing said bolt to clamp said non-rotatable sections together and against said head whereby relative rotatable movement of the non-rotatable sections is prevented and said rotatable roll sections are adapted to engage the cloth along closely adjacent lines at the selvage thereof.



2. A loom temple comprising a head, a bolt extending from said head, a non-rotatable roll section having one of its faces engaging said head and the other face oblique to the axis of said bolt, a hub projecting from said face and normal thereto, a second non-rotatable roll section mounted on said bolt and having parallel faces oblique to the axis of the bolt, a hub projecting normally from one face thereof into engagement with the hub of the first non-rotatable roll section, means for causing said bolt to clamp said non-rotatable roll section together and against said head and a pair of juxtaposed frusto-conical peripherally toothed roll sections mounted respectively on the said hubs to rotate independently.

1,196,171. COMBINED STRIKER AND BUMPER FOR DOORS. JOHN FRANK STREBERGER, Detroit, Mich., assignor to Joseph N. Smith & Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 2, 1915. Serial No. 18,640. (Cl. 70—15.)



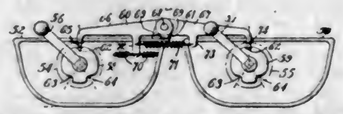
1. A striker and bumper for doors comprising an apertured striker plate, a bumper plate extending at an angle thereto at the rear edge, said bumper plate having an aperture, a plate secured at the back of the bumper plate provided with a pocket covering the aperture, a plunger in the aperture, and a spring in the pocket engaging said plunger.

2. A striker and bumper plate for doors comprising an apertured striker plate, a bumper plate extending at an angle thereto at the rear edge, said bumper plate having an aperture, a spring sustaining member at the rear of the aperture, a plunger in said aperture, said plunger having a flange greater in diameter than the aperture to prevent the plunger from passing therethrough, and a spring supported by the sustaining member and engaging the plunger.

3. A striker and bumper plate for doors comprising an apertured striker plate, a bumper plate extending at an angle thereto at the rear edge, said bumper plate having an aperture, a pocket provided at the rear of the aperture, a hollow plunger extending through the said aperture, said plunger having a flange greater in diameter than the aperture to prevent the plunger from passing therethrough, and a spring in the said pocket extending into the hollow plunger.

4. A striker and bumper for doors comprising an apertured striker plate, a bumper plate extending at an angle thereto and provided with an aperture, a sustaining member at the rear of said aperture, and a yieldable member carried by the sustaining member, said yieldable member including a portion extending through the aperture in the bumper plate adapted to engage against the door when closed.

1,196,172. CONTROL SYSTEM FOR ELECTRIC MOTORS. WILFRED SYKES, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 10, 1912. Serial No. 670,527. (Cl. 172—179.)



1. In a control system, the combination with a plurality of motors, controlling means for each motor and means for preventing the starting of the other motors during the acceleration of any one of the motors.

2. In a control system, the combination with two electric motors, a controller for each motor and interlocking means between the controllers for preventing the starting of either motor when the other motor is being accelerated.

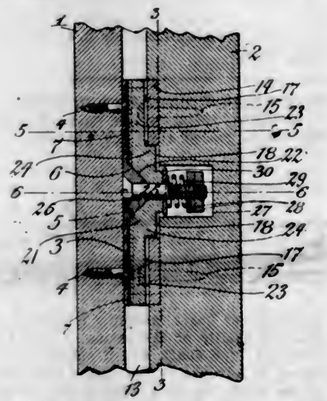
3. In a control system, the combination with two electric motors, a controller for each motor adapted to occupy a plurality of accelerating positions, an off position and a full running position, of means for preventing the adjustment of one of the controllers while the other controller occupies its accelerating position.

4. In a control system, the combination with two electric motors, a plurality of independently operated control switches for each motor and means for governing the switches of each motor, of means for preventing closing of one set of switches to accelerate one of the motors during the acceleration of the other motor.

5. In a control system, the combination with a pair of electric motors, two groups of independently operated switches adapted to close in a predetermined sequence and to accelerate the respective motors, of means for preventing the acceleration of one motor except when the first and last switches of the control switches of the other motor occupy corresponding positions.

[Claims 6 to 10 not printed in the Gazette.]

1,196,173. SASH-CENTER. CLINTON D. TABOR, New Dorp, N. Y. Filed Dec. 9, 1914. Serial No. 876,304. (Cl. 16—142.)



1. A sash center comprising two plates adapted to be attached to a sash and a frame, respectively, one of said plates having a boss, and a locking bar arranged lengthwise of the sash and extending the full length of said plates mounted to turn with the other plate but capable of moving toward and from the plate having the boss and provided with a socket which receives said boss.

2. A sash center comprising two plates adapted to be attached to a sash and a frame, respectively, one of said plates having a boss, and a locking bar arranged lengthwise of the sash and extending the full length of said plates mounted to turn with the other plate but capable of moving toward and from the plate having the boss and provided with a socket which receives said boss and means for pressing said bar yieldingly toward the plate having the boss.

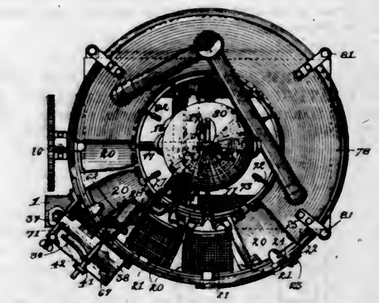
3. A sash center comprising two plates adapted to be attached to a sash and a frame, respectively, one of said plates having a conical boss, a locking bar having a conical bore, engaging with said boss, and means for yieldingly holding said locking bar in engagement with said plate having the boss.

4. A sash center comprising two plates adapted to be attached to a sash and a frame, respectively, one of said plates having a conical boss and a plurality of locking grooves arranged around said boss, a locking bar having a hub provided with a conical bore engaging with said boss, and an arm projecting laterally from said hub and engaging with said grooves, said bar being mounted on the other attaching plate to turn therewith but movable independently thereof toward and from the plate having the boss and grooves, and means for yieldingly holding said bar in engagement with said boss and grooves.

5. A sash center comprising two plates adapted to be attached to a sash and a frame, respectively, one of said plates having a conical boss and a plurality of locking grooves, and the other plate having a coupling groove, a locking bar arranged in said coupling groove and having a conical bore engaging with said boss and locking arms engaging with said locking grooves, and means for pressing said locking bar toward the plate having the boss and locking grooves.

[Claims 6 to 9 not printed in the Gazette.]

1,196,174. BATTER-BAKING MACHINE. CARL R. TAYLOR, Cleveland, Ohio, assignor to The Cream Cone Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 26, 1914. Serial No. 827,312. (Cl. 107—28.)



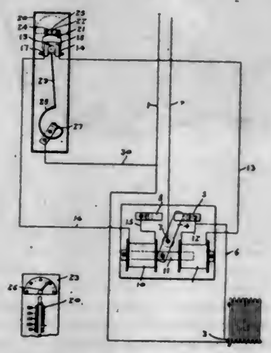
1. In a baking machine, a frame, a rotary table mounted thereon, means for rotating said table in a horizontal plane, a series of baking plates formed in pairs carried by said rotary table, a cylinder provided with intake and outlet apertures, a hollow sleeve located within said cylinder, said sleeve provided with intake and outlet apertures, a pin secured to said hollow sleeves and extended through the cylinder, a rock arm connected to said pin and means for rocking said arm in opposite directions, a piston head located within the cylinder, a piston rod connected to said piston head and extended beyond the cylinder, a plate held in fixed relation with reference to the frame, curved flanges carried by said plate, said curved flanges adapted to impart reciprocating movement to the piston rod by the lateral movement of the cylinder and means for imparting lateral movement to said cylinder.

2. In a baking machine, a frame, a rotary table mounted thereon, means for rotating said table in a horizontal plane, a series of baking plates formed in pairs carried by said rotary table, a cylinder provided with intake and outlet apertures, a hollow sleeve located within said cylinder, said sleeve provided with intake and outlet apertures, a pin secured to said hollow sleeve and extended through the cylinder, a rock arm connected to said pin and means for rocking said arm in opposite directions, a piston head located within the cylinder, a piston rod connected to said piston head and extended beyond the cylinder, a plate held in fixed relation with reference to the frame, curved flanges carried by said plate, and means for adjusting the position of said curved flanges, said curved flanges adapted to impart reciprocating movement to the piston rod during the lateral movements of the cylinder and means for imparting lateral movement to said cylinder.

3. In a baking machine of the class described, the combination with a rotary table carrying a plurality of baking plates formed in pairs, one of each of the pairs of baking plates hinged at their inner ends, means for holding the hinged baking plates in elevation during a portion of each revolution of the rotary table, a cylinder provided with inlet and outlet apertures, means for moving said cylinder in the direction of the movement of the table and in the opposite direction of said rotary movement, a hollow sleeve located within the cylinder, means for rocking the sleeve during the backward and forward movement of said cylinder, a piston located within said cylinder, and means for adjusting the movements of said piston.

4. In a baking machine, the combination with a rotary table carrying a plurality of baking plates formed in pairs, one of each of the pairs of baking plates hinged at their inner ends, a batter receiving cylinder provided with inlet and outlet apertures, a batter containing reservoir, means for feeding batter from said reservoir to said cylinder, a hollow sleeve located within said cylinder and a piston head located within said cylinder, a piston rod connected to said piston head and extended beyond the outer end of said batter receiving cylinder, said rod provided with an anti-friction roller, pivoted curved flanges adapted for contact with said anti-friction roller, said curved flanges adapted to impart reciprocating movement to the piston rod and piston head, and means for changing the position of said curved arms and means for moving the cylinder in opposite directions.

1,196,175. THERMOSTATIC CONTROL FOR ELECTRIC HEATING DEVICES. JOHN TEMPLETON and GEORGE E. HARRISON, Toronto, Ontario, Canada. Filed Mar. 6, 1916. Serial No. 82,385. (Cl. 219—20.)



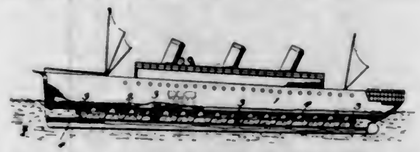
1. In a thermostatic control for electric heating devices, the combination with the main electric circuit and heating element connected therewith and a switch adapted to open and close said main circuit, of an armature operatively connected to said switch, a pair of electromagnets adapted to operate said armature to open and close said switch, a pair of shunt circuits each including one of said magnets, a thermostat forming an electric contact and arranged common to both of said shunt circuits, a member adjustably supported adjacent to said thermostat, a pair of electric contacts carried on said adjustable member and arranged one in each of said shunt circuits and adapted to be engaged by said thermostat to close the shunt circuits, and means for setting said adjustable member and the contacts carried thereby to close the shunt circuits at the desired periods.

2. In a thermostatic control for electric heating devices, the combination with the main electric circuit and heating element, of a switch arm electrically connected with one lead of the main circuit, a contact adapted to engage said arm and electrically connected to the heating element, an electro-magnet electrically connected to said switch contact, a contact adapted to engage said switch arm upon same being disengaged from the aforesaid contact, an electro-magnet electrically connected to the latter contact, an armature operatively connected to said switch arm and operated alternately by said magnets, a pair of electric contacts adjustably mounted and each electrically connected to said electro-magnets and spaced a short distance apart, and a thermostat arm extending between said latter pair of contacts and electrically connected to the lead of the main circuit connected direct to the heating element.

3. A thermostat control for electric heating devices, comprising, in combination with the heating element, a pair of electromagnets, an armature extending between said magnets, a pivotal switch operatively connected with said armature and electrically connected with one lead of the main electric circuit, a contact adapted to engage said switch arm and electrically connected with the heating element, a shunt circuit leading from said contact through one of said magnets, a second electric contact adapted to be engaged by said switch, a shunt circuit connected to said latter contact and leading through the other magnet, and a thermostatic switch arm electrically connected to the other lead of the main circuit leading direct to the heating element, said latter switch arm being adapted to close either of said shunt circuits.

4. In a thermostatic control for electric heating devices, the combination with the main electric circuit and heating element connected therewith, of a pair of electromagnets each included in a separate shunt circuit, a switch member adapted to close the main circuit to the heating element and coincidently to close the gap in the shunt circuit to one of said magnets and to be operated to break said main circuit and open said gap in said magnet shunt circuit and coincidently close a gap in the other magnet shunt circuit, an armature operated by said magnets to operate said switch, and a thermostat adapted to effect the closing of said shunt circuits alternately to operate the switch in the main circuit.

1,196,176. SPIRAL PROPELLER FOR SHIPS. JOHN J. TOBIN and FRANK J. GALLAGHER, Sayre, Pa. Filed Oct. 28, 1915. Serial No. 58,418. (Cl. 115—16.)

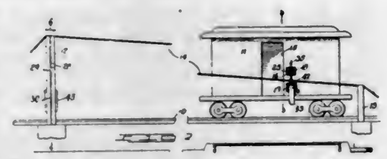


1. A propeller for boats including a tubular casing, a shaft extending axially of the casing, a spiral propeller blade carried by the shaft, and a substantially conical hood disposed in advance of the casing and free of connection of the shaft, the hood being of less diameter than the casing.

2. In ship propulsion, the combination with a ship hull, of parallel shafts extending longitudinally of the hull and projecting at their ends through the sides of the hull adjacent the bow and stern, means within the hull for independently rotating the shafts, tubular housings disposed at either side of the bow of the ship and converging forwardly toward each other, helical screw propellers mounted in each of the housings and having universal joint connections with the shafts, tubular housings mounted upon the sides of the hull adjacent the stern and converging rearwardly toward each other, helical screw propellers mounted in the latter housings and having universal joint connections with the shafts, and substantially conical hoods disposed in advance of all the housings.

3. In ship propulsion, the combination with a ship hull, of shafts extending longitudinally of the hull and projecting at their ends through the sides of the hull adjacent the bow and stern, means for driving the shafts, tubular housings disposed at either side of the bow of the ship and converging forwardly toward each other, helical screw propellers mounted in each of the housings and having universal joint connections with the shafts, tubular housings mounted upon the sides of the hull adjacent the stern and converging rearwardly toward each other, and helical screw propellers mounted in the latter housings and having universal joint connections with the shafts.

1,196,177. APPARATUS FOR RECEIVING AND DELIVERING MAIL-BAGS. WILLIAM B. TOCHER, Jamaica, N. Y. Filed Mar. 8, 1916. Serial No. 82,961. (Cl. 258—10.)



1. In an apparatus of the class described, a bag carrying and suspending device comprising a V-shaped frame the side arms of which are provided near their ends with supplemental pivoted arms adapted to fold inwardly but normally held in a horizontal position, and means for detachably supporting said device adjacent to the side of a car in a plane at right angles thereto and with the side arms directed downwardly.

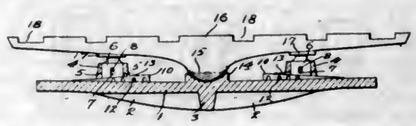
2. In an apparatus of the class described, a bag carrying and suspending device comprising a V-shaped frame, the side arms of which are provided near their ends with supplemental pivoted arms adapted to fold inwardly but normally held in a horizontal position, one of said arms being also provided with an extension from which is loosely suspended a bag holder.

3. In an apparatus of the class described, an arm connected with a movable car and adapted to swing horizontally, said arm being provided at its outer end with a fork, and a bag carrying and suspending device comprising a V-shaped frame, the side arms of which are provided near their ends with inwardly directed supplemental arms which are pivoted thereto and adapted to fold inwardly but which are normally held in a horizontal position, one of the side arms of the V-shaped frame being provided with a part adapted to be detachably inserted into said fork.

4. In an apparatus of the class described, an arm connected with a car and adapted to swing horizontally, said arm being provided at its outer end with a fork and one side thereof being provided adjacent to said end with a hook device which opens upwardly.

5. In an apparatus for delivering mail bags from a moving train to the station and from the station to the train, a cable supported longitudinally of the track at one side thereof by standards, one of which is higher than the other, an arm connected with a car adjacent to a door therein and provided with a hook device, another arm connected with the higher of said standards, and two similar bag carrying and suspending devices one of which is adapted to be detachably connected with the arm which is connected with the car and to be detached therefrom by said cable as the car passes the station and the other of said bag carrying and suspending devices being adapted to be detachably connected with the arm of said standard and to be detached therefrom by the arm connected with the car as the car passes the standard and to be supported by said hook device.

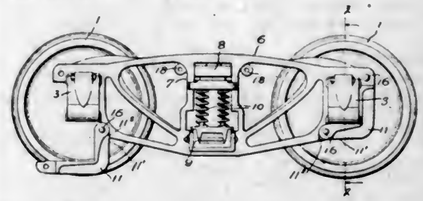
1,196,178. SIDE BEARING FOR CAR-TRUCKS. THOMAS F. TOMLINSON, Norfolk, Va. Filed May 19, 1915. Serial No. 29,180. (Cl. 105—115.)



1. A side bearing for car trucks in combination with companion bolsters, consisting of housings formed on one of said bolsters, bearing blocks movably and detachably mounted in said housings, a wedge-shaped member slidable through each housing and beneath each of the bearing blocks, to adjust the latter for positioning at all times in predetermined proximity to the bolster, whereby movement of the latter is limited, and a bolt in connection with each housing and engaged with the wedge-shaped member thereof to hold the same in a predetermined adjusted position.

2. A side bearing for car trucks, in combination with superposed companion bolsters consisting of housings formed on the lower of said bolsters adjacent the terminals of the latter, each of which is equipped with ears, a bearing block mounted in each of said housings and vertically movable therein for normal positioning in proximity to the other bolster, to limit the movement of the latter, a wedged member slidable beneath each of said bearing blocks to elevate the same, and a retaining bolt associated with each member and adapted for coöperation with said ears to hold the wedged member in a fixed position.

1,196,179. SIDE FRAME FOR CAR-TRUCKS. THOMAS F. TOMLINSON, Norfolk, Va. Filed May 19, 1915. Serial No. 29,181. (Cl. 105—243.)

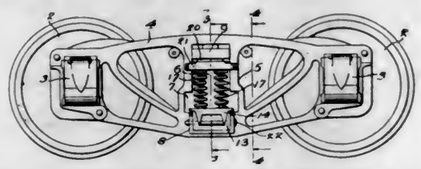


A side frame for car trucks including a body having openings adjacent its terminals to accommodate journal boxes therein, a portion of each terminal being removed to permit engagement of the journal boxes in said openings and removal of the same therefrom, the terminals of said portions being formed to engage corresponding parts of the body, each removable portion being operable on either of its ends as an axis, portions of said body lying in the path of movement of said movable portions to limit their downward movement to a plane on a parity with the base of the truck wheels, the parts of said frame which engage the upper terminals of said removable portions being depended to provide abutments for preventing casual displacement of the side frames in the event of displacement of said movable terminals.

1,196,180. CAR-TRUCK FRAME. THOMAS F. TOMLINSON, Norfolk, Va. Filed May 19, 1915. Serial No. 29,182. (Cl. 105—243.)

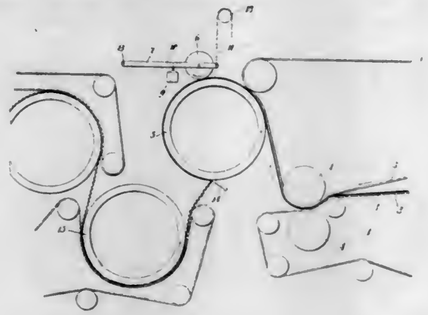
1. A truck frame including side frames, each of which has a transversely extending opening therein, the lower terminal of which is restricted, a spring plank, the ends

of which are mounted in the restricted terminals of said openings, said plank being U-shaped in cross section to provide a channel, the sides thereof being tapered, spring seats mounted in said channel and being correspondingly tapered to facilitate engagement of the seats with the plank and removal of the same therefrom, and a bolster in resilient connection with the seat.



2. A car truck frame including side frames, a spring-plank mounted in said frames, said plank being U-shaped in cross section, spring-seats mounted on the spring-planks of an inverted U-shaped configuration for complemental sliding engagement with said plank, laterally extending lugs formed on said spring-seats for engagement with the upper margins of the spring-plank, to support said seats and facilitate removal of the same from the plank, and a bolster mounted in said frame and in resilient connection with said seat, to absorb undue shock from the bolster.

1,196,181. PROCESS AND APPARATUS FOR WATER-MARKING PAPER. JOHN D. TOMPKINS, Valatie, and FREDERICK H. FULLER, Potsdam, N. Y., assignors to Tompkins-Hawley-Fuller Company, Valatie, N. Y., a Corporation of Oregon. Filed July 24, 1913. Serial No. 780,868. (Cl. 92—48.)



1. The process which comprises making a paper web, then producing water-marks in the paper web while moist and before it has been dried by the application of pressure to the web on a drying surface, thereby causing the paper to adhere to said surface, and then crimping the entire web of paper while still adhering to the drying surface.

2. The process which comprises making a paper web, then producing water-marks in the paper web while moist and before it has been dried by the application of pressure and heat to the web on a drying surface, thereby causing the paper to adhere to said surface, and then crimping the entire web of paper while still adhering to the drying surface.

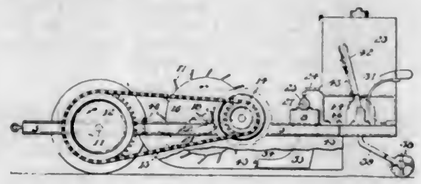
3. The process which comprises making a paper web, then producing glazed water-marks in the paper web while moist and before it has been dried by the application of pressure and heat to the web on a drying surface, thereby causing the paper to adhere to said surface, and then crimping the entire web of paper while still adhering to the drying surface.

4. The process which comprises making a paper web, pressing the same on to a drying surface, producing water-marks in the paper web while moist and before it has been dried, by the application of additional pressure upon restricted areas in said web on the drying surface, thereby causing the paper to adhere to said surface, and then crimping the entire web of paper while still adhering to the drying surface.

5. In a device of the character described, a device having a heated surface, water marking means for pressing on the same, comprising a surface having differences in its surface elevation, and a crimping device coöperating with the heated surface.

[Claims 6 to 10 not printed in the Gazette.]

1,196,182. STALK AND WEED BURNER. AMUND E. TWEIT, Gonvick, Minn. Filed Apr. 13, 1916. Serial No. 90,908. (Cl. 126—271.2.)



1. A machine of the class described comprising a supporting frame, a burner carried thereby, means for supplying fuel to the burner, means for directing the flame of the burner downwardly, and a land roller positioned forwardly of the burner and adapted to operate the flame directing means.

2. A machine of the class described comprising a supporting frame, a burner carried thereby, means for supplying fuel to the burner, means for raising and lowering the frame to vary the position of the burner relative to the ground, means for directing the flame of the burner downwardly and a land roller positioned forwardly of the burner adapted to operate the last named means.

3. A machine of the class described comprising a supporting frame, a burner carried thereby, means for feeding fuel to the burner, means for directing the flame of the burner downwardly, a land roller for supporting the forward end of the frame constituting driving means for the flame directing means, and means positioned at the rear end of the frame for raising and lowering the frame to vary the distance between the burner and ground.

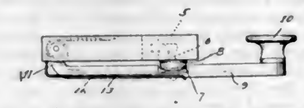
4. A machine of the class described comprising a frame, a burner carried thereby, a fan journaled in said frame forwardly of the burner, and a land roller positioned forwardly of the fan adapted to operate the fan.

5. A machine of the class described, comprising a supporting frame, a land roller journaled therein, a stub shaft journaled in said frame, sprocket and chain connections between the stub shaft and land roller, a fan wheel journaled in said frame, gear connections between said fan wheel and the stub shaft, the fan wheel being positioned rearwardly of the land roller, a burner positioned rearwardly of the fan wheel, wind-shields carried by the sides of the frame inclosing the lower side of the fan wheel and the burner, a fuel tank for supplying fuel to the burner, and rear supporting wheels carried by the frame, said wheels being adjustable to regulate the distance between the burner and the ground.

[Claims 6 to 8 not printed in the Gazette.]

1,196,183. TRACK-VALVE. BURT R. VAN VALKENBURG, Oakland, Cal., assignor to American Photo Player Company, Berkeley, Cal., a Corporation of California. Filed Nov. 4, 1913. Serial No. 799,120. (Cl. 84—160.)

1. A valve for the purpose described comprising a base, a passage therethrough, an arm pivotally mounted on said base, a valve disk loosely mounted on said arm and adapted to close said passage, means contacting with said arm to hold said valve disk against said base, said arm projecting beyond the front of the base and a finger grip on the forward end of the arm.



2. A valve for the purpose described comprising a base, a passage therethrough, an arm pivotally mounted in said base, a spherical surface on said arm in alinement with said passage, a valve disk loosely mounted on said seat, means for retaining said valve disk in contact with said base over said passage, said arm projecting beyond the front of the base and a finger grip on the forward end of the arm.

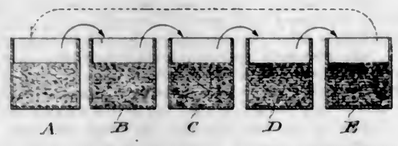
3. A valve for the purpose described comprising a base, a passage therethrough, an arm pivotally mounted in said base, a seat intermediate the length of said arm in alinement with the passage through said base, a valve disk loosely mounted on said seat, a spherical surface on one side of said disk contacting with said seat, a flat surface on the other side adapted to contact with said base and cover said passage therethrough, spring means adapted to retain said disk in contact with said base, said arm projecting beyond the front of the base and a finger grip on the forward end of the arm.

4. A valve device for the purpose described comprising in combination, a base having a plane under-surface, an arm pivotally mounted on said base, a self alining valve disk loosely mounted on said arm, and spring means for forcing said arm upwardly to bring the valve in contact with the lower face of the base, said base having a second face substantially at right angles to the lower one and having a passage substantially at right angles to the lower face, the base member having also a notch having plane faces cut therein from the side perpendicular to the lower face, and having a second passage which intersects said first mentioned passage and which is substantially at right angles to one of the faces of the notch.

5. A valve device comprising in combination, an arm, a supporting member to which said arm is pivotally connected, a valve disk carried by said arm, and a spring wire forming a loop which contacts with said arm and which is coiled about the pivot of said arm.

[Claims 6 to 8 not printed in the Gazette.]

1,196,184. PROCESS OF EXTRACTING NICOTIN FROM GREEN OR UNCURED TOBACCO. HORACE VILLIERS-STUART, Lismore, Ireland. Filed May 9, 1913. Serial No. 766,576. (Cl. 167—4.)



1. The herein described process of obtaining nicotin, consisting in subjecting green or uncured tobacco to dialysis in a liquid having a greater solvent action for the nicotin than for the crystalloids contained in such tobacco.

2. The herein described process of obtaining nicotin, consisting in subjecting green or uncured tobacco to dialysis in a liquid having a greater solvent action for the nicotin than for the crystalloids contained in such tobacco, and then recovering the nicotin alone from the resulting solution.

3. The herein described process of obtaining nicotin, consisting in subjecting green or uncured tobacco to dialysis to abstract nicotin therefrom; recovering the nicotin from the resulting solution; and reusing the remaining solution as the abstracting agent on other green or uncured tobacco.

4. The process of obtaining nicotin from tobacco, consisting in placing the tobacco in a series of compartments, the tobacco in the different compartments having a varying content of nicotin, subjecting the substantially spent leaves to the action of a liquid having a greater solvent action on the nicotin therein than on the crystalloids contained in such tobacco to completely extract nicotin therefrom, and successively acting upon the tobacco in the other compartments with such liquid in the order of the amount of nicotin contained therein in increased strength, to obtain a full concentration of the nicotin in the liquid.

5. The herein described process of obtaining nicotin, consisting in placing green or uncured tobacco in a series of compartments, subjecting the tobacco in the first compartment to dialysis in a liquid having a greater solvent action for the nicotin than for the crystalloids contained in such tobacco, the resultant solution being introduced successively to the different compartments to increase its nicotin contents; subjecting the substantially spent leaves to the action of fresh liquid, and successively acting upon the tobacco in the other compartments with such liquid in the order of the amount of nicotin contained therein in increased strength, to obtain a full concentration of the nicotin in the liquid, and continuing the process with fresh liquid until substantially all of the nicotin has been abstracted from the leaves.

[Claim 6 not printed in the Gazette.]

1,196,185. PROCESS OF PRODUCING AN IRON ALLOY RICH IN PHOSPHORUS FROM INFERIOR FINERY-SLAG. FRIEDRICH VON HOLT, Georgsmarienhütte, near Osnabrück, Germany. Filed June 26, 1916. Serial No. 105,935. (Cl. 75—45.)

1. A method of producing an iron alloy containing phosphorus from a slag, containing from one to six per cent. of phosphorus, by heating the said slag together with the charge of coal in a gas generator, the temperature being sufficiently high to cause the basic constituents of the slag to combine with the silicates of the ash of the coal.

2. A process of producing iron alloy from a slag containing phosphorus, which consists in mixing the said slag together with coal, and subjecting the coal to oxidation, the temperature being sufficiently high to cause the basic constituents of the said slag to combine with the ash of the coal.

3. A process of producing a specular iron from a slag containing manganese and phosphorus, which consists in mixing the slag with coal, and subjecting the coal to oxidation, the temperature being sufficiently high to cause the basic constituents of the slag to combine with the silicates of the ash of the coal.

4. A method of producing an iron alloy rich in phosphorus from a slag containing phosphorus, which consists in causing the basic constituents of the slag to combine with silicates under the action of heat, the temperature being sufficiently high to cause the resmelting of the said silicates.

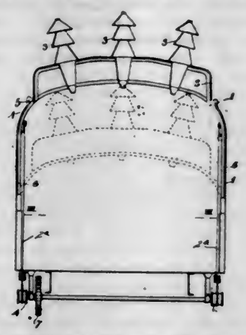
5. A method of producing a specular iron from a slag containing manganese and phosphorus which consists in causing the basic constituents of the said slag to combine with silicates under the influence of heat, the temperature being sufficiently high to cause the re-smelting of the said silicates.

1,196,186. ELECTRIC RAILWAY-VEHICLE. KALMAN VON KANDO, Vado Ligure, Italy, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 9, 1914. Serial No. 876,378. (Cl. 191—1.)

1. In an electric railway vehicle, the combination with the roof having an opening therein, of a frame mounted to move in and out of the said opening, and insulators supported on the said frame.

2. In an electric railway vehicle, the combination with the roof having an opening therein, of a frame mounted

to move vertically in and out of the said opening and adapted when in its raised position to form a part of the roof and insulators supported on said frame.



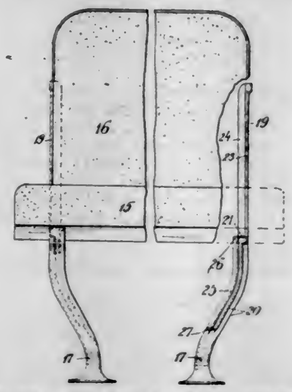
3. In an electric railway vehicle, the combination with the roof having an opening therein, of a frame mounted to move vertically in and out of the said opening, the edges of the said frame being adapted to make a substantially water-tight joint with the edges of the opening.

4. In an electric railway vehicle, the combination with the roof having an opening therein, of a frame, and means whereby the said frame can be moved vertically in and out of said opening.

5. In an electric railway vehicle, the combination with the roof having an opening therein, of a frame, means whereby the said frame can be moved vertically in and out of said opening, and insulators supported on said frame.

[Claims 6 and 7 not printed in the Gazette.]

1,196,187. CAR-SEAT. VICTOR VON SCHLEGELL, New York, N. Y., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed July 17, 1912. Serial No. 709,943. (Cl. 155—2.)

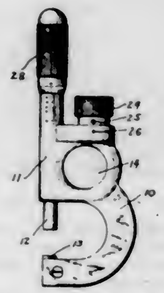


1. A car-seat comprising a support consisting of two pieces of sheet-metal pressed into form and secured together, both of said pieces being formed into a flaring portion at the lower end of the support adapted to be secured to the floor and a body-portion having an upper, inclined, cushion-supporting member, a seat cushion mounted upon the same with its end extending beyond the same, said support also having a back-supporting arm extending upwardly to the rear of the seat cushion, from the outer one of said pieces, formed integral with said piece and having a flange at its rear edge, an integral extension on the inner one of said pieces secured to the lower end of said arm, and a back-cushion secured to said arm, substantially as set forth.

2. A car seat comprising a seat cushion and a back cushion, and a support for one end of each of the same, consisting of a single piece of sheet-metal pressed into form and having a base-portion adapted to be secured to the floor, a body-portion having an inwardly extending flange at its upper edge, on which said seat-cushion is supported, and a back-supporting arm extending upwardly from the base portion and to the rear of the seat cushion, and a second sheet-metal piece secured to the base portion of said first piece, having a flange co-acting with and stiffening said body-flange of said first piece, and having an upwardly directed extension, overlapping the lower part of said back supporting arm and secured thereto to form therewith a box-section at the junction of the arm and body portion of said first piece, substantially as set forth.

3. A car seat comprising a seat cushion and a back cushion, and a support for one end of each of the same, consisting of a single piece of sheet-metal pressed into form and having a base-portion adapted to be secured to the floor, a body-portion having an inwardly extending flange at its upper edge, on which said seat-cushion is supported, and a back-supporting arm extending upwardly from the base portion and to the rear of the seat cushion, and a second sheet-metal piece secured to said first piece to stiffen the same, having a flange coacting with and contacting said body-flange of said first piece, and having a portion rising above said body-portion, overlapping the lower part of said back-supporting arm and secured thereto at its edges, to reinforce the junction of the arm and body portions of said first piece, substantially as set forth.

1,196,188. MICROMETER. JOHN WAHLBERG, New York, N. Y. Filed Oct. 29, 1913. Serial No. 798,008. (Cl. 33—164.)

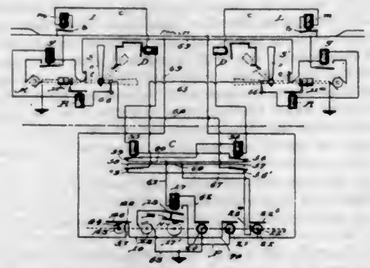


A measuring instrument comprising a threaded gaging spindle, a support with which the spindle has threaded connection, a table or support for the article to be measured, and manually operated means including gear elements coöperating with the spindle to move it toward and from the table and to hold it in any adjusted position, the parts being shaped so that the device may be held by the fingers of one hand, leaving the thumb and index finger of that hand free and in position to operate said means.

1,196,189. BLOCK-SIGNALING SYSTEM. CHARLES WALKER WARD, Lakewood, Ohio. Filed July 12, 1912. Serial No. 709,049. (Cl. 246—36.)

1. A signaling system comprising signals at the opposite ends of a block, controlling and operating circuits for the same, and a time operated master controller device intermediate the signals set in operation by either of said controlling circuits, and governing the said signals through said operating circuits, said controller having a period of complete operation greater than the period of complete operation of said signals.

2. A block signaling system comprising signals at the opposite ends of a block, operating circuits for the same, a power driven master controller device having a prolonged action containing terminals of the operating circuits and having means to connect the same to operate the signals, and means including control circuits closed respectively from the opposite ends of the block and electromagnetic devices responsive to current changes in either of said circuits, acting to initiate operation of the master controller to set the signals upon the entrance of a car to the block.



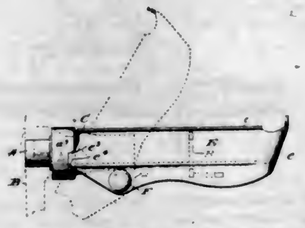
3. A block signaling system comprising signals at the opposite ends of a block, controlling and operating circuits for the same, a motor driven master controller device intermediate the signals and governing both the controlling and operating circuits therefor, said controller having a period of complete operation greater than the period of complete operation of said signals and means for setting said master controller device in operation by one of said controlling circuits upon the entrance of a car into the block.

4. A block signaling system comprising signals at the opposite ends of a block, signaling controlling, signaling setting, and signaling clearing circuits and devices, and a power driven master controller having a prolonged action governing said circuits and devices to operate the signals and means controlled by the passage of cars into and out of the block and governing said controlling circuits for setting said master controller in operation.

5. A block signaling system comprising signals at the opposite ends of a block, signal controlling and operating circuits and devices, a master controller governing said circuits and devices comprising control switches in said circuits, means for moving the switches in a predetermined order, and a constant speed motor for driving said means, and means governed by cars as they enter and leave the block to operate said motor through said controlling circuits.

[Claims 6 to 23 not printed in the Gazette.]

1,196,190. PEDAL FOR CYCLES. FRANK D. WARREN, Colorado Springs, Colo., assignor to The Cycle Supplies Company, Colorado Springs, Colo., a Corporation of Colorado. Filed Mar. 9, 1916. Serial No. 83,097. (Cl. 208—70.)



1. In a folding pedal, the combination with a spindle of a hub part, depending ears on the outer end of the hub part, stops on the hub part located rearwardly of the ears, a pedal frame having a projection for engaging the stops, and means for pivotally supporting the pedal frame on the ears.

2. In a folding pedal structure a pedal frame having an inclined outer end portion, a hub, means for pivotally supporting the pedal on the hub, and means for normally holding the pedal in service position.

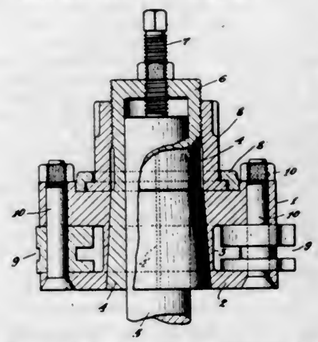
3. In a folding pedal, the combination with a hub, of a pedal frame, means for pivoting the frame to the hub at a point adjacent the outer end of the hub and below the horizontal plane of the axis thereof, a stop on the hub rearwardly of the pivoted connection, and means on the pedal frame for engaging the stop.

4. In a folding pedal, the combination with a hub having ears at its outer end and stops rearward of the ears, of a pedal frame pivotally secured to the ears and provided with a projecting part engaging the stops, a spring for normally positioning the pedal frame for service, the outer end of the pedal frame being inclined, substantially as described.

5. In a folding pedal structure, the combination with a hub having a reduced outer portion, a pedal frame, a pivotal connection between the frame and the hub located on a plane below the hub and a stop on the hub arranged to engage the pedal frame and to retain the pedal in a horizontal position.

[Claims 6 to 21 not printed in the Gazette.]

1,196,191. BUSHING. EDWARD H. WAUGH, Seattle, Wash., assignor to John W. Winningham, Seattle, Wash. Original application filed Mar. 25, 1911, Serial No. 616,967. Divided and this application filed May 19, 1913. Serial No. 768,622. (Cl. 74—8.)



1. A shaft, a body to be secured thereon, a means for securing the body upon the shaft comprising an interposed tapered and slit sleeve, one of the connected parts being complementally tapered, the sleeve having an untapered and threaded extension from the smaller end of the taper, a sleeve nut threaded upon the threaded part of the sleeve and having an outwardly projecting flange, one face of said flange having thrust engagement with a face of the outer secured body, and a flanged member removably secured to said outer secured body and engaging the outwardly facing surface of the flange of the sleeve nut.

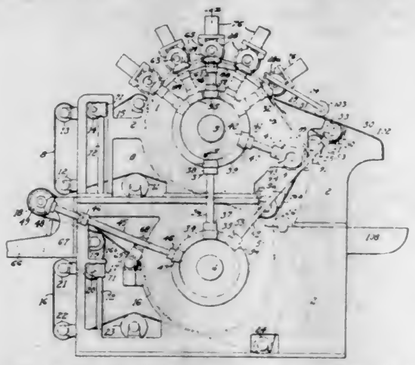
2. In combination a shaft, a body, means for securing the body upon the shaft comprising a tapered sleeve interposed between the shaft and said body, and acting to clamp the two together by axial movement of the sleeve relative to one of the other members, said body having an axially projecting flange spaced outwardly from the sleeve and interiorly threaded, a ring exteriorly threaded to screw within said flange and having an inwardly overhanging flange, and a nut member screwing upon the sleeve and having an outwardly projecting flange fitting between said flange of the ring and the face of said body.

3. In combination, a shaft, a body, means for securing the body upon the shaft comprising a sleeve fitting upon the shaft and having one end exteriorly tapered and longitudinally slit, the body having a bore tapered to conform to the tapered part of the sleeve and an axially projecting

flange concentric with and spaced outwardly from said bore, said flange being interiorly threaded, a ring nut exteriorly threaded to fit the threads of said flange and having an overhanging inwardly projecting flange, and a nut member screwing upon the projecting end of the sleeve and having a radial outwardly projecting flange fitting against the face of said body and under the overhanging flange of the ring nut.

4. In combination, a shaft, a body which it is desired to secure upon said shaft, and an interposed locking sleeve, the inner surface of the body being tapered and one end of the sleeve engaging therewith being complementally tapered and the sleeve being longitudinally slit, the sleeve having an extension from the other end which contains a threaded section, the same face of the body having an axially projecting threaded flange, a ring threading upon said flange and having an inwardly-projecting flange spaced outwardly of the face of the cutter head, and a sleeve threading upon the threaded section of the tapered sleeve and having a thrust bearing against the face of the body and against the inner face of the flange of said ring.

1,196,192. IRONING-MACHINE. FRED C. WENDELL, deceased, by Theresa S. Wendell, administratrix, New York, N. Y. Original application filed Feb. 17, 1913, Serial No. 748,941. Divided and this application filed Apr. 28, 1913. Serial No. 764,177. (Cl. 101—36.)



1. In an ironing machine, the combination with a revoluble ironing drum, and a coöperating roller, of a continuously running feed apron traveling toward said drum and roller, a fixed table in front of said apron adaptable for placing thereupon a moist fabric to be ironed, a roll operated to travel toward and away from said drum and roller partially upon said table and partially over said apron in a motion of translation together with the running apron, and said roll being adapted and operated to engage the fabric and pull it from said fixed table and spread it upon said running apron and to hold the forward portion of the fabric against said apron while traveling in a motion of translation together with the fabric and apron for preventing operator's hands coming between said drum and roller.

2. In an ironing machine, the combination with a revoluble ironing drum, and a coöperating roller, of a continuously running feed-apron traveling toward said drum and roller, a fixed table in front of said apron adaptable for placing thereupon a moist fabric to be ironed, a roll adaptable to engage the fabric, means to operate said roll to travel toward and away from said drum and roller partially over said fixed table and partially over said running apron in a motion of translation together with the running apron, and said roll being adapted and operated to pull the moist fabric from said fixed table and spread it upon said running apron and to hold the forward portion of the fabric against said apron while traveling in a motion of translation together with the fabric and the apron for preventing operator's hands coming between said drum and roller, said roll pressing the fabric to said apron while traveling away from the apron.

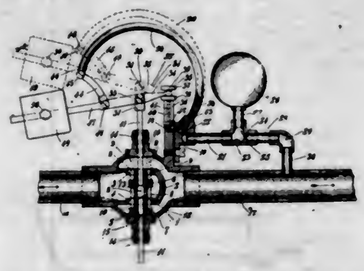
3. In an ironing machine provided with an ironing drum, and a pressure roller, means for preventing accidents to operators including the combination of a continuously running feed-apron for the drum and roller, a fixed table in front of said running apron adaptable for placing a moist fabric thereon, a roll adaptable to engage the fabric, means to operate said roll to travel forwardly and backwardly partly over said fixed table and partly over said running apron in a motion of translation together therewith, said roll being adapted and operated to pull the moist fabric from said fixed table and spread it upon said running apron and to hold the fabric against said apron while traveling in a motion of translation together with the fabric and the apron, and said roll pressing the fabric against said apron until the fabric enters between said drum and roller.

4. In an ironing machine, the combination with a revoluble drum, and a coöperating roller, of a continuously running feed apron traveling toward said drum and roller, a fixed table in front of said apron for placing thereupon a moist fabric to be ironed, a roll adaptable to engage the fabric, means to operate said roll to travel toward and away from said drum and roller partly over said fixed table and partly over said continuously running apron in a motion of translation together with the running apron, said roll being adapted and operated to pull the moist fabric from said fixed table and spread it upon said running apron and to hold the fabric against said apron while traveling in a motion of translation together with the fabric and the apron for preventing the operator's hands coming between said drum and roller, and said roll being rotated by said apron and pressing the fabric thereagainst while traveling away therefrom.

5. In an ironing machine, the combination with a revoluble ironing drum, and a coöperating roller, of a running feed-apron traveling toward said drum and roller, a fixed table in front of said apron adaptable for placing thereupon a moist fabric to be ironed, and an engaging device for the fabric actuated to travel forwardly and backwardly partly over said table and partly over said apron in a motion of translation together with the running apron to engage and spread the moist goods over said apron for preventing operator's hands coming between said drum and roller.

[Claims 6 to 8 not printed in the Gazette.]

1,196,193. PRESSURE-REGULATOR. LEE WEST, Newport, Ky., assignor of one-half to John F. Fearon, Cincinnati, Ohio. Filed Mar. 24, 1915. Serial No. 16,737. (Cl. 50—15.)



1. In a pressure-regulator, in combination, a valve body having an interior passage from one space to another, a valve to close said passage, a Bourdon tube, a fluid-conducting connection having a constriction of concentrated area leading from one of said spaces to the interior of said Bourdon tube, and operative connection from said Bourdon tube to said valve, whereby increased pressure in said Bourdon tube tends to move said valve.

2. In a pressure-regulator, in combination, a valve body having an interior passage from one space to another, a valve to close said passage, a Bourdon tube, a fluid-conducting connection having spaced-apart restricted openings, leading from one of said spaces to the interior of said Bourdon tube, and operative connection from said Bourdon tube to said valve, whereby increased pressure in said Bourdon tube tends to move said valve.

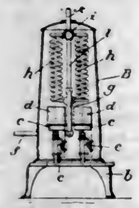
3. In a pressure-regulator, in combination, a valve body having an interior passage from one space to another, a valve to close said passage, a Bourdon tube, a fluid-conducting connection having spaced-apart constrictions of concentrated area leading from one of said spaces to the interior of said Bourdon tube, and operative connection from said Bourdon tube to said valve, whereby increased pressure in said Bourdon tube tends to move said valve.

4. In a pressure regulator, in combination, a valve body having an interior passage from one space to another, a valve to close said passage, a Bourdon tube, a fluid-conducting connection having spaced-apart restricted openings, leading from one of said spaces to the interior of said Bourdon tube, a cushioning chamber having its interior communicating with said connection between said restricted openings, and operative connection from said Bourdon tube to said valve, whereby increased pressure in said Bourdon tube tends to move said valve.

5. In a pressure-regulator, in combination, a valve body having an interior passage from one space to another, a valve to close said passage, a Bourdon tube, a fluid-conducting connection having spaced-apart constrictions of concentrated area leading from one of said spaces to the interior of said Bourdon tube, a cushioning chamber having its interior communicating with said connection between said constrictions, and operative connection from said Bourdon tube to said valve, whereby increased pressure in said Bourdon tube tends to move said valve.

[Claims 6 to 8 not printed in the Gazette.]

1,196,194. WATER-HEATER. FRED E. WHITE and FREDERICK E. HOOPER, Gardner, Mass., assignors to Central Oil & Gas Stove Company, Gardner, Mass. Filed Dec. 20, 1915. Serial No. 67,883. (Cl. 122—250.)

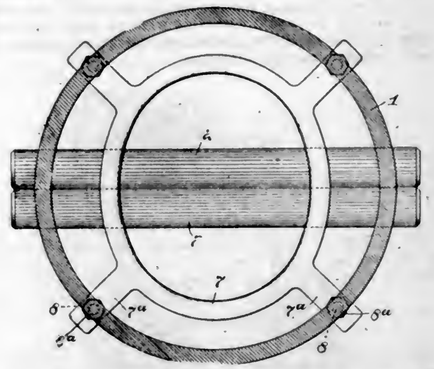


In a water heater, a casing, a pair of oil burners, a heating coil above each burner, and a flattened water supply section extending between the burners and subjected to the radiated heat therefrom, said section having connection with the coils to supply the same with water which has been preliminarily heated in said flattened section, substantially as described.

1,196,195. FABRIC-EQUALIZER FOR CIRCULAR-KNITTING MACHINES. FRANK B. WILDMAN, Norristown, Pa., assignor to Wildman M'f'g Company, a Corporation of Pennsylvania. Filed May 29, 1916. Serial No. 100,625. (Cl. 66—9.)

1. In combination with a circular knitting machine, take up means for the tubular fabric which fabric engages therewith in flat form, and equalizing means having a non-circular guiding surface on its inner side for the fabric between the needles and the take up for equalizing the take up strain throughout the circuit of the said tubular fabric, substantially as described.

2. In combination with a circular knitting machine, take up means for the tubular fabric, which fabric engages therewith in flat form, and means outside of the fabric for pressing the fabric inwardly and toward the axis of the machine and progressively nearer said axis, starting from a point substantially at right angles to the plane of the contact face of the take up means around the tube to a point substantially in said plane, substantially as described.



3. In combination with a circular knitting machine, take up means for the tubular fabric which holds it in flat form, and means having a non-circular opening or passage through which the fabric passes in substantially elliptical cross sectional form, on its way from the needles to the take-up, the major axis of said ellipse being at right angles to the plane of the flattened part of the tube engaging the take up means, substantially as described.

4. In combination with a circular knitting machine, a take up roll for the tubular fabric with which the fabric engages in flat form and equalizing means engaging the tube between the needles and the take up roll and pressing the fabric farther inward toward the axis of the machine at points substantially in the vertical plane of the contact face of the take up roll than at points substantially at right angles to the said plane.

5. In combination with a circular knitting machine, take up means with which the tubular fabric engages in flat form, and equalizing means for causing the fabric to assume non-circular form between the needles and the take up and with the parts of the fabric closer to the axis of the machine at points substantially in the vertical plane of the flat fabric at the take up than at other parts of the tube, said equalizing means being adjustable to vary the non-circular shape of the fabric to secure even tension at the needles, substantially as described.

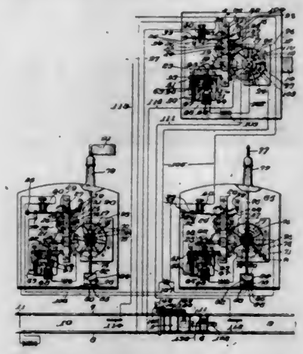
[Claims 6 to 8 not printed in the Gazette.]

1,196,196. RAILWAY SIGNAL AND STOPPING MECHANISM. FRANK C. WILLIAMS, Philadelphia, Pa., assignor to The Safety Block Signal Company, a Corporation of Delaware. Filed Aug. 18, 1911, Serial No. 644,826. Renewed Feb. 18, 1916. Serial No. 79,221. (Cl. 246—59.)

1. A railway signal and stopping device comprising a stopping member movable from a predetermined inoperative position to a predetermined operative position, means arranged to shift said member in a given direction from said inoperative position to said operative position, actuating means arranged to shift said stopping member from said operative position to said inoperative position, said stopping member being movable from said operative position in a direction opposite to said first mentioned direction, and means coöperating with said stopping member to disconnect said stopping member from said actuating member when said stopping member is shifted from said operative position in said second mentioned direction.

2. A railway signal and stopping device comprising a stopping member movable from a predetermined inoperative position to a predetermined operative position, means

arranged to shift said member in a given direction from said inoperative position to said operative position, actuating means arranged to shift said stopping member from said operative position to said inoperative position, said stopping member being movable from said operative position in a direction opposite to said first mentioned direction, and means coöperating with said stopping member to raise said stopping member and to disconnect said stopping member from said actuating member when said stopping member is shifted from said operative position in said second mentioned direction.



3. A railway signal and stopping device comprising a movable stopping member, means arranged to shift said stopping member from a predetermined inoperative position to a predetermined operative position, actuating means operative to shift said member in a given direction from said operative position to said inoperative position, and a cam and means coöperating therewith to disconnect said member from said actuating means when said member is shifted from said operative position in a direction opposite to said first mentioned direction and to a second inoperative position.

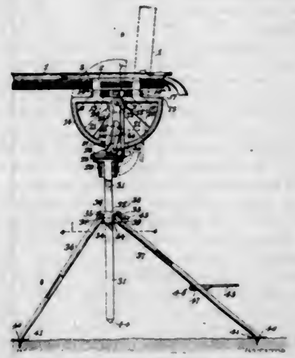
4. A railway signal and stopping device comprising a movable stopping member, means arranged to shift said stopping member from a predetermined inoperative position to a predetermined operative position, actuating means operative to shift said member in a given direction from said operative position to said inoperative position, and a cam and means coöperating therewith to disconnect said member from said actuating means when said member is shifted from said operative position in a direction opposite to said first mentioned direction and to a second inoperative position, said cam and said means coöperating therewith acting to return said stopping member from said second inoperative position to said first mentioned operative position.

5. A railway signal and stopping device comprising a movable stopping member, a gear arranged to actuate said member, a gear coöperating with said first mentioned gear to shift said member in a given direction from an operative position to an inoperative position, and means coöperating with said stopping member to disconnect said gears when said stopping member is moved from said operative position in a direction opposite to said first mentioned direction.

[Claims 6 to 8 not printed in the Gazette.]

1,196,197. MACHINE-GUN MOUNT. CLARK DAVID WITHEROW, Brookville, Pa. Filed Aug. 16, 1915. Serial No. 45,772. (Cl. 89—40.)

1. A machine gun mount, comprising a support having a substantially upright pivotal axis and provided with upstanding means thereon to one side of said pivotal axis, another pivotal support mounted on the upper end of the upstanding means upon a substantially horizontal axis and to one side of the upright axis, and means for locking the second-named pivotal support upon its axis, said means engaging said second support upon the same side of the upright axis as the horizontal axis of said second support, whereby the second-named pivotal support is movable to elevate the gun progressively to and beyond the zenith.



2. A machine gun mount, comprising a pivotal support on which the gun may be turned about an upright axis, another pivotal support participating in the turning movements of the first support and permitting movements of the gun for elevation, the pivotal axis of the second-named support being eccentric to the pivotal axis of the first-named support, and means for locking the second support on its pivotal axis and located on the same side of the upright pivotal axis as the pivotal axis of the second support, whereby said second-named support may have a range of movement to direct the gun to a point below the horizon and then moved progressively to and beyond the zenith.

3. A machine gun mount, comprising a rotatable head movable about a substantially upright axis, a support erected on the head to one side of the axis of rotation of the head, carrying means for the gun on said support and mounted thereon to move about a substantially horizontal axis, and means on the head for locking the carrying means for the gun and located on the same side of the upright pivotal axis of the head as the support erected on the latter, whereby the carrying means for the gun may be moved progressively on a substantially horizontal axis to and beyond the zenith.

4. A machine gun mount comprising a rotatable head movable about a substantially upright axis, a support erected on the head eccentric to the axis of rotation, and carrying means for the gun on said support erected on the head and movable on a substantially horizontal axis, said carrying means being provided with a device for positively locking it in different positions of adjustment about its substantially horizontal axis and said locking device being provided with means for positively holding it in a position to release the carrying means for free movement about a substantially horizontal axis.

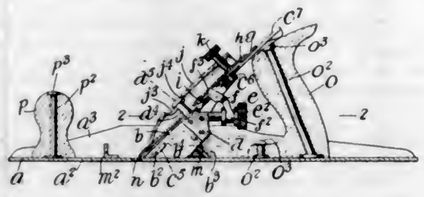
5. A machine gun mount comprising a member movable about an upright axis, a rack segment carried by said member and rockable about a substantially horizontal axis eccentric to the first-named axis and provided with means for carrying the gun, and locking means for the rack segment mounted on the first-named member and movable to lock and release the rack at will, said locking means having means for positively holding it in the position for releasing the rack.

[Claims 6 to 19 not printed in the Gazette.]

1,196,198. CARPENTER'S PLANE. GEORGE D. YOUNG, New York, N. Y. Filed Mar. 22, 1915. Serial No. 16,007. (Cl. 145—5.)

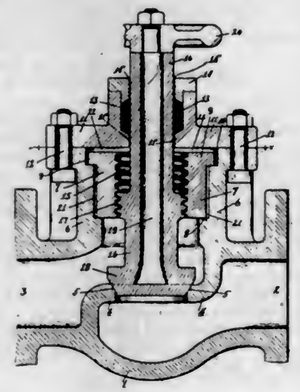
1. In a carpenter's plane, a main frame or stock, a blade supporting plate ranging upwardly and backwardly

and consisting of two similar side parts having downwardly directed inner side flanges and between which is a longitudinal slot or opening, a transverse central support placed beneath said blade supporting plate and having front and back surfaces separated by an angle of approximately ninety degrees and the apex of which is directed upwardly and cut out centrally to receive the downwardly directed side flanges of the parts of said blade supporting plate, and a block secured between said side flanges rearwardly of said support and provided with a backwardly directed screw and an upwardly and forwardly directed stud.



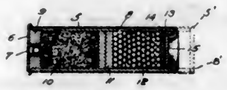
2. In a carpenter's plane, a main frame or stock comprising a main body portion consisting of a horizontal bottom plate having raised side members, a transverse central support secured in said stock and having front and back parts separated by an angle of approximately ninety degrees and the apex of which is directed upwardly and cut out centrally and transversely, a blade supporting plate mounted on said support and ranging upwardly and backwardly and consisting of two similar side members separated by a longitudinal slot or opening and having downwardly directed inner side flanges, and a block secured between said side flanges and having a backwardly directed screw and an upwardly directed stud which passes through the blade and the cap plates and on which said blade and cap plates are movable.

1,196,199. VALVE. FRANK BAIRD, Berkeley, Cal., assignor to Pacific Foundry Company, San Francisco, Cal., a Corporation of California. Filed Feb. 3, 1916. Serial No. 75,915. (Cl. 137—4.)



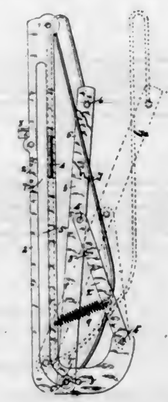
A valve comprising a shell formed with an inlet and an outlet passage and an intervening port; a nut locked in the shell against rotation on its axis, and having clearances in its seat adapting it for lateral rocking movement in all planes; a port-controlling head having a stem rigid therewith, said stem being threaded through the nut for lineal movement and adapted to rock therewith; a bonnet secured to the shell and through which the stem of the port controlling head passes with clearances providing for its rocking movement; and packing confined in the bonnet about said stem and serving as the fulcrum upon which the stem rocks.

1,196,200. CARTRIDGE. AUGUST W. BATCHER, Hoquiam, Wash. Filed Apr. 28, 1915. Serial No. 24,403. (Cl. 102—15.)



In a cartridge, the combination with a shell having a metal casing, of a wad for retaining the charges of powder and shot within the shell, said wad being formed of alternating layers of tin-foil and paper to afford a stopper which is impervious to water.

1,196,201. DISH-CONTAINER. FRANK W. BEARDSLEY, New York, N. Y., assignor to Seaboard Specialty Corporation, New York, N. Y., a Corporation of New York. Filed Oct. 4, 1912, Serial No. 723,877. Renewed Feb. 10, 1916. Serial No. 77,542. (Cl. 141—9.)



1. A dish container comprising an openwork support having an openwork retaining-rack invertibly attached thereto.

2. A dish container comprising an openwork support having an openwork retaining-rack rockably attached thereto, one of the margins of said retaining-rack being confined to a course of movement approximately parallel with said support.

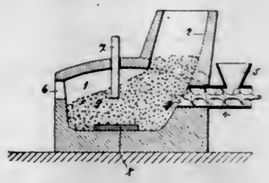
3. A dish container comprising an openwork support having an openwork retaining-rack linked thereto for a compound rocking action thereon.

4. A dish container comprising an openwork support having an openwork retaining-rack rockably attached thereto and provided with a slot-like opening, said retaining-rack having a pintle projecting freely into said opening, whereby its adjacent margin is confined to a course of movement approximately parallel with said support.

5. A dish container comprising an openwork support having an openwork retaining-rack loosely interlocked therewith and rockably mounted thereon.

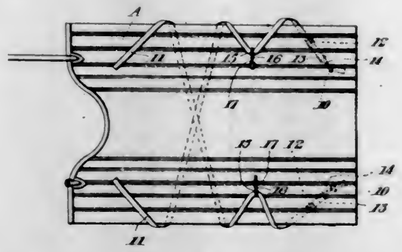
[Claims 6 to 10 not printed in the Gazette.]

1,196,202. APPARATUS FOR PREVENTING SINTERING IN ELECTRIC FURNACES. EDWARD SALOMON BERGLUND, Trollhättan, Sweden. Filed Apr. 21, 1915. Serial No. 22,782. (Cl. 204—64.)



In an electric furnace, the combination with the furnace chamber and a feed shaft having less sectional area than the sectional area of the furnace chamber and through which the main charge is fed by gravity, of means for introducing and mechanically feeding an auxiliary charge to the furnace chamber at a point directly below the opening of the feed shaft into the furnace chamber whereby motion is imparted to the charge in the furnace chamber in addition to the natural descending motion of the charge through the feed shaft.

1,196,203. HORSE-BLANKET ATTACHMENT. PERCY JAMES BORBRIDGE, Ottawa, Ontario, Canada. Filed July 22, 1915. Serial No. 41,421. (Cl. 54—79.)



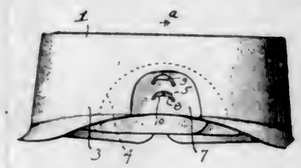
1. The combination with a horse blanket, of straps so arranged that they may be crossed under the belly of a horse and passed around the inside of the hind legs, and adjusting means for supporting the straps intermediate of their lengths.

2. The combination with a horse blanket, of straps each sewn at one end to the blanket and so arranged that they may be crossed under the belly of the horse and around the inner side of the hind legs, means for securing the free ends of the straps to the blanket, means for adjusting the lengths of the straps, and means for supporting the straps intermediate of their lengths.

3. The combination with a horse blanket, of longitudinally extending straps each rigidly secured at one end near the front end of the blanket and so arranged that they may be crossed under the belly of the horse, the free ends of the straps being designed to pass around the inner side of the hind legs, means for securing the free ends of the straps to the rear under side of the blanket, and adjustable supporting means for engaging each strap intermediate of its length and located on the opposite side of the blanket from the rigidly secured end of its respective strap.

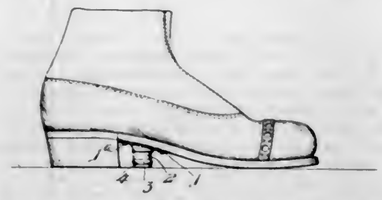
4. The combination with a horse blanket, of two similar adjustable combined belly and leg straps so arranged that they may cross each other under the belly of the horse in front of its hind legs and each embrace the hind legs and designed to wrap the blanket around the horse's belly and retain it in the desired position.

1,196,204. COLLAR. HELGE A. BORRESEN, Marquette, Mich. Filed Nov. 25, 1910. Serial No. 594,169. (Cl. 2—67.)



A collar having folded inner and outer bands, a flap provided upon the interior face of the outer band, and a button-hole in said flap, the inner band being cut away to expose the button-hole, said outer band rendering said button-hole invisible from without.

1,196,205. ARCH-SUPPORT. PETER BROADBROOKS, Batavia, N. Y. Filed Oct. 15, 1915. Serial No. 55,993. (Cl. 36—71.)



1. An arch support for shoes having a base plate adapted to be attached to the arch of the shoe in front of the heel, a hollow standard depending from said plate and a cushion within said standard adapted to provide a proper instep support, and means for expanding the cushion within the barrel to receive it therein, substantially as specified.

2. An arch support for shoes having a base plate adapted to be attached to the arch of the shoe in front of the heel, a hollow standard depending from said plate, a cushion within said standard adapted to provide a proper instep support; and a screw entering the cushion and expanding same in the standard, substantially as specified.

3. An arch support for shoes having a parti-circular base plate and cylindrical standard or barrel detachably connected therewith, and a cushion within said standard or barrel adapted to provide a proper instep support, and means for expanding the cushion within the barrel to receive it therein.

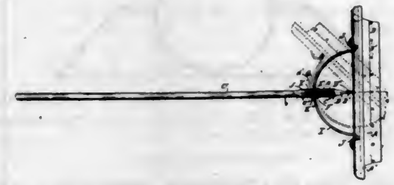
4. An arch support for shoes having a parti-circular base and a standard, an elastic cushion in the standard, a wear plate on the outer end of the cushion for preserving the same and acting as a foundation plate to take up the wear the support is subjected to, and a screw expanding the cushion in the standard and securing the wear plate to the cushion, substantially as specified.

5. An arch support for shoes having a base plate adapted to be attached to the shank of the shoe in front of the heel, a hollow standard depending from said plate, a rubber cushion within said standard and projecting therefrom adapted to provide a proper instep support, a cap on the outer end of said cushion, and a screw expanding the cushion in the standard and securing the cap to the cushion, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,196,206. SNOW-SCRAPER. MICHAEL B. BULGER and JOSEPH P. OFFERMAN, Beaver Dam, Wis. Filed May 1, 1916. Serial No. 94,588. (Cl. 37—5.)

1. A snow scraper comprising a handle, a scoop pivotally connected therewith substantially at the center of its longitudinally median line and provided with a scraping blade along its lower margin, a bail having its ends pivotally connected to the scoop and adjustably connected with the handle, and means for allowing said bail to slide transversely of the handle and also longitudinally thereof for the purpose of adjusting the scoop.



2. A snow scraper comprising the combination with a concavo-convex scoop, a handle pivotally connected to the convex face thereof substantially at the center, a curved bail having its ends pivotally connected with the scoop, a clamping member adapted to connect the middle portion of the bail with the handle, and means for slidably adjusting the clamping member longitudinally of the handle.

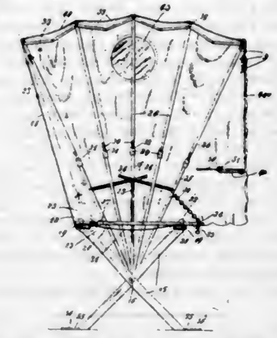
3. A snow scraper comprising the combination of a scoop, a handle having a connecting member secured to its lower end and pivotally connected with the rear face of the scoop, a curved bail having its ends pivotally connected with the scoop on opposite sides of the handle, a coupling member adapted to adjustably connect the bail with said connecting member and a clamping bolt adapted to bind the coupling member and connecting member together, said coupling member being adapted to move longitudinally of the connecting member when the clamping bolt is loosened and being also adapted to allow the bail to slide through it transversely of the handle when said bolt is loosened, substantially as described.

4. A snow scraper comprising the combination of a scoop, a handle having a connecting member secured to its lower end and pivotally connected with the rear face of the scoop, a curved bail having its ends pivotally connected with the scoop on opposite sides of the handle, a coupling member adapted to adjustably connect the bail with said connecting member and a clamping bolt adapted to bind the coupling member and connecting member together, said coupling member being adapted to move longitudinally of the connecting member when the clamping bolt is loosened and being also adapted to allow the bail to slide through it transversely of the handle when said bolt is loosened, said coupling member and connecting member being adapted for mutual interlocking engagement, substantially as described.

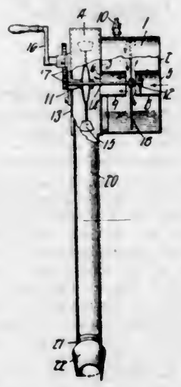
1,196,207. DISMOUNTABLE CAMP-CHAIR TENT. SALVATORE CANE, New York, N. Y. Filed Apr. 22, 1915. Serial No. 23,083. (Cl. 135—5.)

1. The combination with a canopy frame having flat crossed supports of equal length at its sides and a rod removably engaging said supports at the point of intersection thereof said rod extending through said frame, of a plurality of sectional uprights the lower section thereof being pivoted on said rod at each side of the frame, means for rigidly engaging the lower and upper sections of said uprights together, means combined with the frame for holding said uprights in a spread condition, a second spreading means at the tops of said uprights, rods removably engaging oppositely disposed uprights, and a detachable canopy exterior of said uprights, at the top, sides, and rear thereof said canopy extending to the top of said supports.

2. The combination with a canopy frame having flat crossed supports of equal length and a removable connection therebetween, of a plurality of uprights pivoted on said connection, said uprights being in two sections, a joint connecting between the sections whereby they may be held extended one above the other, means for engaging the front and rear uprights with the frame, links pivotally engaged with the upper ends of the upper sections of said uprights whereby the latter may be held divergently apart, rods connecting between said opposite uprights above said links, and a fabric covering disposed over said uprights and at the sides thereof, said covering being detachably engaged therewith.



1,196,208. ANIMAL-EXTERMINATOR. IRVING D. CHARLTON and WILLIAM T. SHAW, Pullman, Wash. Filed Jan. 12, 1916. Serial No. 71,608. (Cl. 43—5.)



1. An animal destroyer comprising a container for a liquid having a life destroying vapor, means for establishing an air-current through the container, moving means for insuring intimate contact of the air current with the liquid throughout substantially the entire cross-section of the air current, manually operated means for moving said last mentioned means, and means for directing the vapor laden air so formed into the retreat of the animal.

2. An animal destroyer comprising a container for a liquid having a life destroying vapor, means for establishing an air-current through the container, rotary means for insuring intimate contact of the air current with the liquid throughout substantially the entire cross-section of the air current, a casing coöperating with the rotary means to form a narrow arc-shaped passage for the current, and means for directing the vapor laden air so formed into the retreat of the animal.

3. An animal destroyer comprising a container for a liquid having a life destroying vapor, means for establishing an air current through the container, a rotary disk dipping into and serving to elevate the liquid into intimate contact with the air current throughout substantially the entire cross-section of the air current, means cooperating with the disk to form a narrow passage for the

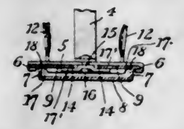
current transversely of and over the disk, and means for directing the vapor laden air so formed into the retreat of the animal.

4. An animal destroyer comprising a container for a liquid having a life destroying vapor, said container being substantially circular in cross section, means for establishing an air current through the container, a rotary disk dipping into and serving to elevate the liquid into intimate contact with the air current, the edge of said disk conforming substantially to and being spaced slightly from the interior of the container whereby the air current is deflected, and means for directing the vapor laden air so formed into the retreat of the animal.

5. An animal destroyer comprising a container for a liquid having a life destroying vapor, a perforated rotary disk dipping into the liquid and serving to elevate it above its normal level in the container, means for establishing an air current through the perforations in the disk, and means for directing the air laden with vapor thus formed into the retreat of the animal.

[Claims 6 to 10 not printed in the Gazette.]

1,196,209. PHOTOGRAPHIC CAMERA AND SIMILAR APPARATUS. EZRA C. CLARK and JOSEPH ARRUFAT, Binghamton, N. Y., assignors to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed Dec. 30, 1915. Serial No. 69,321. (Cl. 95—46.)



1. In apparatus of the class stated, the combination of a sliding part, a slideway therefor, spring actuated locking levers pivoted at one end to the sliding part, a laterally presented part upon each lever the outer edges whereof are beveled and thus adapted to enter the joint between the sliding part and the slideway and lock the sliding part thereto, and means upon the levers above the sliding part whereby the actuating spring therefor may be compressed and the locking levers withdrawn from engagement with the sliding part and slideway.

2. In apparatus of the class stated, the combination of a sliding part, a slideway therefor, locking levers pivoted at one end to the sliding part, a spring interposed between the levers which normally tends to move them outwardly, a laterally projecting part upon each lever adapted to engage the slideway and to lock the sliding part thereto, and means upon the levers whereby they may be moved inwardly against the stress of the spring, and their said locking parts removed from contact with the slideway.

3. In apparatus of the class stated, the combination of a sliding part, a slideway therefor, locking levers pivoted at one end to the sliding part, a spring interposed between the levers which normally tends to move them outwardly, a laterally projecting part upon each lever adapted to engage the slideway and to lock the sliding part thereto, means upon the levers whereby they may be moved inwardly against the stress of the spring, and their said locking parts removed from contact with the slideway, and a confiner plate which overlaps the free ends of the spring and the levers, thus assuring their proper relation to each other.

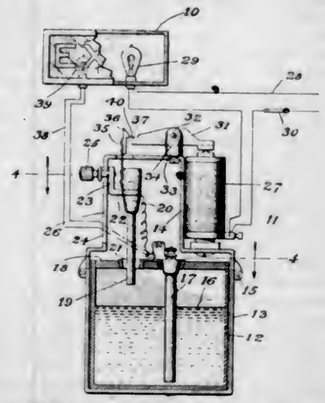
1,196,210. HOG-OILER. CHARLES A. CRUIT, Shelbyville, Ill. Filed Oct. 27, 1915. Serial No. 58,276. (Cl. 119—157.)

A hog oiler comprising a tank having downwardly inclined ends, the top of said tank having an opening formed therein, a drum arranged in the opening and having a shaft extending therethrough, bearings formed in the sides of the tank for rotatably engaging the ends of the shaft, horizontal plates slidably adjustable on the sides of the tank and having one of their ends provided with furcations for spanning the ends of the shaft to prevent



accidental disengagement thereof from the bearings, the other ends of said plates being provided with flanges to facilitate the sliding thereof.

1,196,211. SIGNAL APPARATUS. HENRY CSANYI, New York, N. Y., assignor to Maxivolt Primary Battery Co., New York, N. Y., a Corporation of New Jersey. Filed July 6, 1914. Serial No. 849,347. (Cl. 177—339.)



1. In a signaling system, a main circuit including a main signal, an auxiliary circuit including an auxiliary signal, means for holding the auxiliary circuit open prior to the closing of the main circuit, an electro-magnet independent of the holding means and controlled by the main circuit for maintaining said auxiliary circuit open while the main circuit is closed, and an armature member associated with said electro-magnet, said magnet operating to release the armature to permit the closing of the auxiliary circuit when the current in the main circuit fails.

2. In a system of the character described, a main line circuit including a lamp, an auxiliary circuit including a lamp, a local source for the auxiliary circuit consisting of a battery having one of its pole elements movable into and out of the battery cell, means for holding said pole element out of the cell, and means operating automatically upon breaking of the main line circuit for operating the said holding means to permit the battery element to enter the cell and thus complete the auxiliary circuit through its lamp.

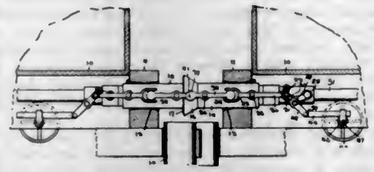
3. In a system of the character described, a main line circuit including a lamp, an auxiliary circuit including a lamp, a local source for the auxiliary circuit consisting of a battery having one of its pole elements movable into and out of the battery cell, means for holding said pole element out of the cell, and electro-magnetic means in the main circuit operating automatically upon breaking of the main line circuit for operating the said holding means to permit the battery element to enter the cell and thus complete the auxiliary circuit through its lamp.

4. In a system of the character described, a main line circuit including a lamp, an auxiliary circuit including a lamp, a local source for the auxiliary circuit consisting of a battery having one of its pole elements movable into and out of the battery cell, means for holding said pole element out of the cell, and means operating automatically upon breaking of the main line circuit for operating the said holding means to permit the battery element to enter the cell and thus complete the auxiliary circuit through its lamp.

5. In a signal system, in combination, a signal, a source of electro-motive force in circuit therewith, a second signal having an independent source of electro-motive force, a movable member, electro-magnetic means in circuit with said second signal for controlling said movable member and a second movable member controlled by said first movable member and controlling the circuit through said first signal and its source of electro-motive force.

[Claims 6 to 13 not printed in the Gazette.]

1,196,212. COUPLING FOR TRAIN-PIPES. LANDIS G. DANIELS and WILLIAM B. KIRKPATRICK, High Spire, Pa. Filed July 3, 1913. Serial No. 777,317. (Cl. 188—13.)



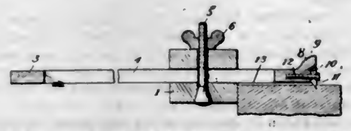
1. In a train pipe coupling, a pair of coupling members comprising means for fitting the members together in air-tight relation, a valve seat formed in each coupling member, a valve in each valve seat, having a wing adapted to be moved by a current of air through the valve seat and thereby to move the valve into closed position.

2. In a train pipe coupling, a pair of coupling members adapted to be fitted together in air-tight relation, and a rotary valve seated in each coupling member and including an element adapted to be moved into the path of an air current through the pipe and adapted to be moved by said air current for closing the valve.

3. In a train pipe coupling, a pair of coupling members adapted to be fitted together in air-tight relation, a current actuated valve fitted in each coupling member, and pivotally mounted actuating members coöperatively connected with the valves and with each other for throwing the valves into position to be actuated by a current of air passing through the pipe.

4. In a train pipe coupling, a pair of coupling members fitted together in air-tight relation, current actuated valves fitted in the coupling members, and a system of levers associated with the valves for actuating the latter, segmental disks carried by said levers adapted to engage with each other and to move the levers on their pivots while being drawn apart or joined together and to co-act with the other levers of said system for moving the valves into position to be actuated by an air current passing through the pipe and means to hold the said coupling members in operative-adjustment with the train air pipe concordant with the varying distances between the cars occasioned by the slack between the couplers when going up or down grade.

1,196,213. GAGE. WILLIAM A. DAY, Detroit, Mich. Filed Nov. 13, 1915. Serial No. 61,433. (Cl. 33—42.)



1. In a device of the class described, the combination with a scale bar having a recessed end, of a rotary marking knife seated within the recess and the outer side thereof lying flush with the end of the bar, the said knife projecting beyond the surface of the bar at one side thereof, and a pin for fastening the knife to the bar, substantially as described.

2. In a device of the class described, the combination with a scale bar having a conical seat in its end, of a rotary knife having a beveled portion seated within the conical seat in the bar, and a relatively flat outer portion lying flush with the end of the scale bar, the said knife having a continuous cutting edge and a portion thereof projecting beyond one side of the bar for engagement with the material being acted upon, and a pivot pin for securing the knife to the bar.

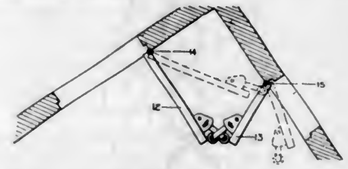
3. In a device of the class described, the combination with a scale bar having at one end an enlarged portion, the said bar being recessed at its enlarged portion, a rotary marking knife seated within the recess in the bar and lying flush with the end thereof, the said knife projecting beyond the surface of the bar at one side and a pivot pin for journaling the knife to the bar, substantially as described.

4. A device of the class described comprising a scale bar having an enlarged end provided with a recess, of a rotary marking knife having a beveled portion seated within the recess and engaging the walls thereof and a flat enlarged portion lying flush with the outer end of the scale bar, a portion of the said knife projecting beyond the surface of one side of the bar, substantially as described.

5. A device of the class described comprising a scale bar having an enlarged end provided with a conical seat, of a rotary marking knife having a beveled portion seated within the conical seat and engaging the walls thereof and having a flat outer portion lying flush with the enlarged end of the scale bar, a portion of the said knife projecting beyond the surface of one side of the bar, a pivot pin for the knife, and a gage block for supporting the scale bar, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,196,214. BUILDER'S HARDWARE. JACOB S. DETRICK, Baltimore, Md. Filed Apr. 10, 1916. Serial No. 90,085. (Cl. 16—6.)



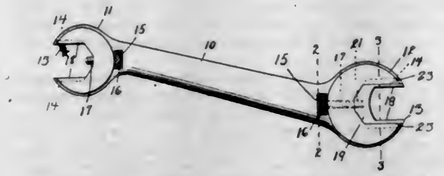
1. In builders' hardware a plurality of coöperating members in combination with a plurality of swinging bodies operating partially in a common zone whereby the coöperative member attached to one body controls the movement of the other body with respect to the body to which it is attached when in the zone of interference and is free of contact of the other body at other times.

2. In builders' hardware a plurality of coöperating members in combination with a plurality of swinging bodies operating partially in a common zone whereby the coöperative member attached to one body controls the movement of the other body to which it is attached when in the zone of interference and is free of contact of the other body at other times and means of relatively adjusting one member to the other.

3. In builders' hardware a plurality of coöperating members in combination with a plurality of swinging bodies operating partially in a common zone whereby the coöperative member attached to one body controls the movement of the other body with respect to the body to which it is attached when in the zone of interference and is free of contact of the other body at other times and means of relatively adjusting one member to the other

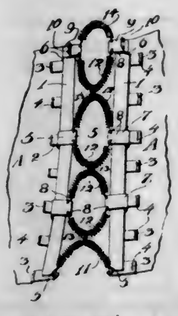
consisting of means of adjustably securing a fulcrumed arm fulcrumed in one member at a desired point of adjustment with reference to the swinging body upon which its reciprocal member is secured.

1,196,215. WRENCH. WARREN W. DOHERTY, New York, N. Y. Filed June 28, 1915. Serial No. 36,847. (Cl. 81—185.)



A wrench comprising a shank, a head on the end of the shank having an open-ended recess formed therein, said recess including parallel walls having longitudinal V-shaped grooves formed therein, a screw disposed in the inner end of the recess, the shank having a transverse opening adjacent the head, a thumb-piece carried by the screw and disposed in the said opening, and a removable jaw block of substantially U-shape and disposed within the recess, said screw engaging in the inner end of the said jaw member and longitudinal ribs formed on the outer faces of the arms of the U-member, said ribs being substantially V-shaped in cross section and having portions of their side walls arranged in parallel relation.

1,196,216. FASTENING DEVICE. THEODORE CHARLES DOREDANT and JOSEPH VICTOR HARRINGTON, New Orleans, La. Filed Apr. 17, 1916. Serial No. 91,621. (Cl. 24—207.)



1. A fastening device consisting of two guides adapted to be secured to the edges of the respective flaps of a shoe and a helical spring connecting the lower parts of said guides, in combination with U-shaped slides traveling longitudinally on the respective guides, helical springs extending across the interval between said guides and connecting said slides, wire loops connecting said springs at their middle portions in pairs in such manner that they act as a unit, and a spring connecting the upper slide on each strip and serving as a grip, the guides being cut-out at their upper parts to receive the upper slides and to form shoulders to be engaged by the lower edges of the upper slides when they are in their normal positions, and having their upper ends turned under to form stops preventing the upper slides from being pulled off the guides.

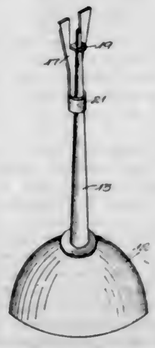
2. A fastening device consisting of two guides adapted to be secured to the respective flaps of a shoe and a resilient element connecting the lower ends of said guides, in combination with means traveling on and longitudinally of said guides, means for locking these traveling means in their uppermost positions, resilient means connecting said traveling means across the interval between said guides and means connecting said resilient means and said resilient element together in pairs to act as a unit.

3. A fastening device consisting of means adapted to be secured to the respective flaps of a shoe and an element connecting their lower ends, in combination with a series of slides traveling on each of said means, a series of resilient flexible means connecting said slides across the interval between the means first mentioned, said flexible means and said element being connected together in pairs to act as a unit and said means first mentioned being provided in each instance with a shoulder to be engaged by the upper slide of its series when said slide is in its normal position.

4. A pair of guides adapted to be attached to the flaps of a shoe and each having its upper portion cut-out to receive a slide and to form a shoulder to act as a stop, preventing the downward movement of said slide until released, and means connecting said guides near their lower ends, in combination with a series of slides traveling on each of said guides, the upper slide of each series being provided with an upset finger piece, resilient means connecting said slides across the interval between said guides, and means connecting said resilient means to act as a unit, said resilient means pulling the upper side of each series laterally inward when in its upper position so that its lower edge may engage with the shoulder of its respective guide to prevent the descent of said slide until released.

5. A pair of guides adapted to be secured to the respective flaps of a shoe and provided with shoulders near their upper ends, in combination with a series of slides traveling on each guide, and resilient means connecting said guides together and said slides together across the interval between said guides, the upper slide of each series when in its highest position engaging the shoulder of its respective guide with its lower edge.

1,196,217. COVER-LIFTER FOR OIL-CAN NOZZLES. MARTIN E. DOWNEY, Boston, Mass. Filed Jan. 18, 1916. Serial No. 72,836. (Cl. 221—33.)



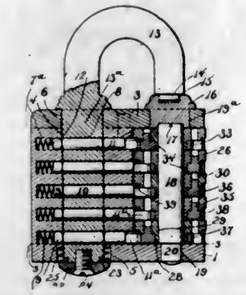
1. A cover-lifter adapted to be attached to an oil can nozzle and arranged to project forward from the outlet end of the nozzle and at one side of said end, said lifter having an unobstructed cover-engaging surface permitting the insertion of the lifter and the nozzle end into the space between an oil cup mouth and a cover displaced by the lifter.

2. A cover-lifter having nozzle-engaging means and arranged relatively to said means to project forward from the outlet end of a nozzle engaged thereby, said means including a stop member arranged to project from one side of the nozzle behind its outlet end, and to bear on the outer side of an oil cup.

3. A cover-lifter comprising an elongated body portion having a laterally projecting ear spaced from its outer end, and formed to receive an oil can nozzle, said ear being adapted to bear as a stop member on the outer side of an oil cup, and to locate the outer end of said body portion in advance of the delivering end of the nozzle.

4. A cover-lifter comprising an elongated body portion having a socket at its inner end portion adapted to embrace an oil can nozzle, and a laterally projecting ear spaced from its outer end, and formed to receive the said nozzle, said ear being adapted to bear as a stop member on the outer side of an oil cup, and to locate the outer end of said body portion in advance of the delivering end of the nozzle.

1,196,218. KEYLESS LOCK. ALFRED J. DRAPALIK, Rocky Mount, N. C., assignor of one-half to Joseph B. Hall, Rocky Mount, N. C. Filed May 2, 1916. Serial No. 94,967. (Cl. 70—19.)



1. In a combination lock, a body and a shackle having a leg rotatably mounted and endwise movable in the body, a plurality of sets of locking pins within the body and leg, permutation devices engaging certain of said pins and adapted to bring the pins into shackle leg releasing position when said devices are in a predetermined position each of said sets of locking pins including a pin of a length substantially equal to the diameter of the shackle leg and another pin for engaging said shackle leg pin and said permutation devices and a third spring actuated pin for engaging the shackle leg pin.

2. In a combination lock, a body and a shackle having a leg rotatably mounted and endwise movable in the body, a plurality of locking pins within the body and leg, permutation devices engaging certain of said pins and adapted to bring the pins into shackle leg releasing position when said devices are in a predetermined position, said permutation devices including "combination" disks, eccentrics connected with said disks and adapted to engage adjacent pins, substantially as shown and for the purposes described.

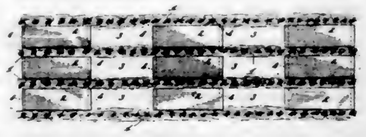
3. In a combination lock, a body and a shackle having a leg rotatably mounted and endwise movable in the body, a plurality of locking pins within the body and leg, permutation devices engaging certain of said pins and adapted to bring the pins into shackle leg releasing position when said devices are in a predetermined position, said permutation devices including "combination" disks, eccentrics connected with said disks and adapted to engage adjacent pins, spacing collars inclosing said eccentrics and extending between adjacent "combination" disks.

4. In a permutation lock, a body having a shackle leg bore, a shackle rotatably mounted and endwise movable in said bore, said shackle and said body having alining sets of pin apertures, locking pin sets in said apertures, each of said sets comprising shackle leg pins and a pair of operating pins engaging the same, permutation devices mounted in the body and coöperative with said operating pins, means for holding said operating pins in engagement with said permutation devices substantially as shown.

5. In a permutation lock, a body having a shackle leg bore, a shackle rotatably and endwise movable in said bore, said shackle and said body having alining sets of pin apertures, locking pin sets in said apertures, each of said sets comprising shackle leg pins and operating pins engaging the same, permutation devices mounted in the body and coöperative with said operating pins, means for holding said operating pins in engagement with said permutation devices, said permutation devices including a spindle carried by said body, "combination" disks rotatable on said spindle there being one disk for each set of pins, eccentrics connected to said "combination" disks to turn with the same and coöperatively engage the respective operating pins and rings located between adjacent "combination" disks to inclose the respective eccentrics substantially as shown and described.

[Claims 6 to 8 not printed in the Gazette.]

1,196,219. PROCESS FOR KILLING OR CHECKING THE GROWTH OF WEEDS. CHARLES FRANKLIN ECKART, Olaa, Hawaii. Filed Dec. 1, 1914. Serial No. 875,019. (Cl. 47—36.)

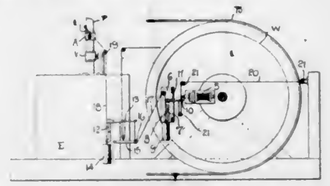


1. The process of killing or checking the growth of weeds between the rows of cultivated plants, which consists in placing a row of separate portable coverings in longitudinally spaced relation over the ground between the rows of plants and subsequently moving each of said coverings to a new position to cover an adjacent uncovered portion of the ground.

2. The process of killing or checking the growth of weeds between the rows of cultivated plants, which consists in placing a row of separate portable coverings in longitudinally spaced relation over the ground between the rows of plants so that the strips of ground between said rows will present alternate covered and uncovered portions, and after a predetermined time moving the coverings to new positions in which they cover the previously uncovered portions of the ground.

3. The process of killing or checking the growth of weeds between the rows of cultivated plants, which consists in smothering the weeds over a plurality of separate areas between the rows of plants by means of separate portable coverings and subsequently smothering the weeds over the remaining areas by moving each of the coverings longitudinally between the corresponding rows of plants to a new position.

1,196,220. ENGINE-STOP DEVICE. GEORGE W. EDWARDS, Fort Edward, N. Y. Filed Sept. 8, 1915. Serial No. 49,472. (Cl. 74—93.)



1. The combination with an engine having an emergency valve controlling the supply of motive fluid thereto, and a fly wheel belt, of gravity actuated means for operating the said valve to close the same, and a movable cable having parallel stretches for engagement by the respective edges of the fly wheel belt upon an excessive shifting movement thereof, whereby said gravity means is rendered operative to close said valve.

2. The combination with an engine having an emergency valve controlling the supply of motive fluid thereto, and a fly wheel belt, of gravity actuated means for operat-

ing the said valve to close the same, a latch element normally preventing the operation of said gravity means, and a movable cable connected to the latch element and extending adjacent to one edge of the fly wheel belt to be engaged thereby upon an excessive movement of the belt whereby the latch is operated to release the gravity means for actuation and close the emergency valve.

3. The combination with an engine having a supply pipe and an emergency control valve therein, and a fly wheel belt, of a vertically disposed, pivotally mounted lever, a gravity movable weight on one end of said lever, a cable connection between said weight and the emergency valve to operate the latter, a pivoted latch arm engaging said lever to normally hold the weight against gravity movement, and an operating cable connected to the latch and disposed contiguous to one edge of the fly wheel belt to be engaged thereby upon an excessive movement of the belt, whereby the latch is operated and the lever released to permit of the gravity movement of the weight whereby the emergency valve is closed.

4. The combination with an engine having a supply pipe and an emergency control valve therein, and a fly wheel belt, of a pivotally mounted lever, a weight attached to said lever, a pivoted latch arm engaging the lever to hold the same against movement under the gravity action of the weight, operating means connecting the weight to the emergency control valve, and an operating cable fixed at one of its ends and having parallel stretches disposed upon opposite sides of the fly wheel contiguous to the edges of the fly wheel belt, the other end of the cable being connected to said latch arm, said cable being engaged by the belt upon an excessive shifting movement thereof to move the latch arm and release the lever, whereby the control valve is closed in the gravity movement of said weight.

5. The combination with an engine including a fly wheel belt, said engine having a supply pipe and an emergency control valve therein, of means normally holding said valve open during the operation of the engine and actuated by said fly wheel belt upon a slipping movement of the belt relative to the fly wheel, whereby the valve is closed.

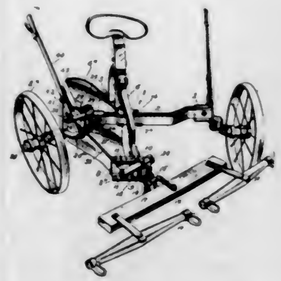
[Claims 6 and 7 not printed in the Gazette.]

1,196,221. DEVICE FOR NAILING SOLES AND HEELS TO SHOE-UPPERS. JOHN ALLEN ELLIS, Portageville, Mo. Filed Nov. 2, 1915. Serial No. 59,286. (Cl. 1—19.)



In a nailing device for shoes, an upright, a last positioned at one side of the upright and spaced therefrom, an arm carried by the upper end of the upright and extending laterally therefrom and overlying the last and having its free end provided with an opening and with an annular seat surrounding the upper end of the opening, a nail-receiving chute extending through the opening in the free end of the arm and having its upper end provided with a flange resting on the annular seat formed in the arm, an operating lever disposed above the arm and having one end pivoted to the upright, and a plunger carried by the lever and operable in the chute.

1,196,222. WHEEL-PLOW. CONRAD ESPING, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed May 26, 1915. Serial No. 30,505. (Cl. 97—73.)

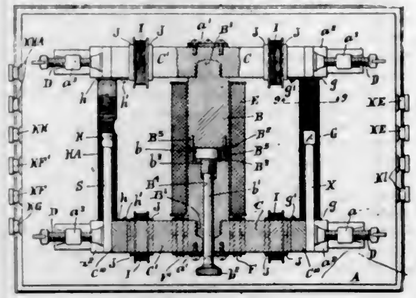


In a plow, the combination of a frame, a plow beam sustained by the frame and adjustable transversely thereof, said frame being provided at its furrow side with a vertical bearing, a segment frame provided with a downwardly inclined bearing and provided also with a vertical journal loosely mounted in said bearing on the frame, a crank axle mounted at its inner end to rock in said inclined bearing and having at its outer end a furrow wheel, a hand lever mounted loosely at its lower end on the crank axle adjacent the outer end of the inclined bearing, a link pivoted at its upper end to the hand lever and connected at its lower end to said crank axle to rock the same when the lever is actuated, a locking latch on the lever adapted to engage the segment frame, a furrow wheel actuating arm fixed at its inner end to the upper end of the journal and extending furrowward therefrom, a laterally swinging clevis mounted on the forward end of the beam and adjustable laterally relatively thereto, an actuating arm fixed to said clevis and extending furrowward therefrom, and a connecting rod jointed at its forward end to said actuating arm and adjustably connected at its rear end to said furrow wheel actuating arm.

1,196,223. METHOD OF AND APPARATUS FOR TESTING MAGNETIC OBJECTS. FRANK P. FAHY, Washington, D. C. Continuation in part of application Serial No. 721,823, filed Sept. 23, 1912. This application filed Jan. 7, 1915. Serial No. 894. (Cl. 175—183.)

1. Means for determining magnetic characteristics of a metallic object comprising in combination a stationary magnetic core shaped to provide two separate magnetic circuits each including a core portion common to both circuits and an air gap individual to each circuit, one of which is adapted to be bridged by an object to be tested, means for impressing substantially similar magnetizing forces on the two separate magnetic circuits and means for measuring the differential of the inductive effects of the flux variations in said circuits.

2. Means for determining magnetic characteristics of a metallic object comprising in combination a stationary magnetic core shaped to provide two separate magnetic circuits each including a core portion common to both circuits and an air gap individual to each circuit, one of which is adapted to be bridged by an object to be tested, a magnetizing winding for impressing similar magnetizing forces on the two separate magnetic circuits, and a winding in which an electro-motive force is created by flux variations in said core, one of said windings including one portion in inductive relation with one of said separate magnetic circuits and a second portion in inductive relation with the other of said separate magnetic circuits.



3. Means for determining magnetic characteristics of a metallic object including in combination a stationary magnetic core comprising a core body and a pair of oppositely disposed branches extending from each end thereof, whereby two separate magnetic circuits are formed each of which includes one of said branches at each end of said core body and the air gap between their outer ends, said core body being common to both circuits, a magnetizing winding for impressing substantially equal magnetizing force on the two branch circuits, and an induced current winding adapted to have an electro-motive force induced therein proportional to the differential of the flux variations in said magnetic circuits, an indicating instrument connected to the last mentioned winding, and means for minimizing the electro-motive force impressed on said instrument when one of said air gaps is bridged by the object to be tested by a definite amount to approximately compensate for the effect of the change in reluctivity in said magnetic circuit occurring when said object bridges the air gap thereof.

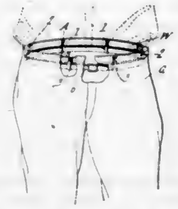
4. Means for determining magnetic characteristics of a metallic object comprising in combination a stationary magnetic core shaped to provide two separate magnetic circuits each including a core portion common to both circuits and an air gap individual to each circuit, one of which is adapted to be bridged by an object to be tested, spacers of high reluctivity adapted to be interposed between the said object and the core at the ends of the said air gap bridged by the object, means for subjecting the two magnetic circuits to the same magnetizing forces, and means for measuring the differential of the inductive effects of the flux variations in said circuits.

5. Means for comparing the magnetic characteristics of two objects comprising in combination a magnetic core shaped to provide two similar magnetic circuits each including a core portion common to both circuits and an air gap individual to each circuit, said air gaps being adapted to be bridged one by one and the other by the second of the objects to be compared, spacers of high reluctivity interposed between said objects and said core to similarly increase the reluctivity of the separate magnetic circuits, means for impressing substantially similar magnetizing forces on the two separate magnetic circuits, and means for measuring the differential of the inductive effects of the flux variations in said circuits.

[Claims 6 to 19 not printed in the Gazette.]

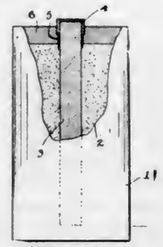
1,196,224. GARMENT-SUPPORTER. ALLISON HOWARD FLEMING, Fairmont, W. Va. Filed Nov. 28, 1914. Serial No. 874,462. (Cl. 2—143.)

The combination with a garment having an interior waistband, of fabric loops permanently secured to and depending from said waistband, a stiffening loop combined with and housed within each of the fabric loops, said stiffening loop being formed of resilient material, and being permanently connected to the waistband, and a belt slidably engaging and extending through the loops, said loops



constituting means for supporting the waistband of the garment above the plane of the belt.

1,196,225. DRY CELL. MARCUS A. FOOS, Fremont, Ohio, assignor to National Carbon Company, a Corporation of New Jersey. Original application filed Sept. 8, 1914, Serial No. 860,565. Divided and this application filed Apr. 26, 1915. Serial No. 23,807. (Cl. 204—38.)

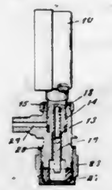


1. In electric batteries, a container, a carbon electrode therein, a seal and a coating of material on said electrode adjacent the seal, said coating being adapted to form a hermetic joint with both the carbon electrode and the seal.

2. In a dry cell, a container, a central carbon electrode therein, a pitch seal and a band of paint on a portion of the electrode adjacent the seal, said paint joining hermetically with both carbon electrode and pitch seal.

3. In electric batteries, a container, an electrode therein, a metallic cap on the electrode, a battery seal between the electrode and the container and a band of material around the electrode at the base of the cap that seals with both the electrode and said battery seal.

1,196,226. COMBINED PRESSURE-GAGE AND INFLATING DEVICE. JAMES W. FRAZIER and FRED E. HANSEN, Cleveland, Ohio. Filed Sept. 13, 1915. Serial No. 50,343. (Cl. 137—28.)



1. In a device of the kind described, the combination with a casing having a hose connection and a tire valve connection, of a gage connected to the casing, the stem of said gage being movable within the casing and adapted to open and close the hose connection, said stem carrying means for opening the tire valve as set forth.

2. In a device of the kind described, the combination with a casing having a tire valve connection at its lower

end, a hose pipe connection intermediate its ends, and a pressure gage movably connected to the upper end of said casing, said pressure gage having a stem fitting into the casing, said stem being provided with means for closing the hose connection and opening the tire valve connection when said stem of the gage is moved into the casing.

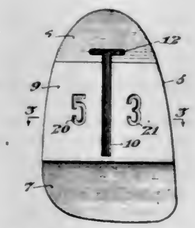
3. In a device of the character described, the combination with a casing, having a hose connection and a tire valve connection, of a pressure gage, the stem portion of said gage being movably connected to the casing, and adapted to close the hose connection and simultaneously open the tire valve, when said stem is moved into said casing.

4. In a device of the kind described the combination with a casing having a tire valve connection at its lower end, a pressure gage movably connected to the upper end of said casing, a hose pipe connection intermediate the ends of said casing, said pressure gage having a stem fitting into the casing, said stem carrying a piston adapted to close the hose connection, and a tire valve opening member carried also by said gage stem as set forth.

5. In a device of the character described the combination with a casing having a nut adjustably connected to its lower end, a metallic cup carried by said nut, an elastic ring arranged within said cup and adapted to be brought into contact with the end of the casing by the movement of the nut and cup, said casing having an upper and lower chamber and a connecting passage, a pressure gage having a stem provided with a piston arranged in the upper chamber of the casing, a perforated tube fitted into the gage stem and closed at its lower end, said closed portion resting within the connecting passage of the casing, and a hose connection leading into the upper chamber of the casing, said hose connection being adapted to be closed by the gage stem piston for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,196,227. ARTIFICIAL TOOTH. THOMAS F. GLENN, Ardmore, Pa. Filed Dec. 27, 1915. Serial No. 68,722. (Cl. 32—9.)



An artificial tooth having a depressed designating symbol disposed in the lingual surface of said tooth.

1,196,228. CLOSURE FOR BOTTLES AND THE LIKE. MAYER LEON GOLDMAN, New York, N. Y. Filed Dec. 13, 1915. Serial No. 66,543. (Cl. 215—10.)

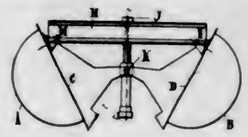


1. A vessel seal comprising a resilient, non-rupturable shell provided with a top, side walls and a continuous, radially corrugated depending flange adapted for use on a vessel with an exterior bead on the lip thereof, the internal, upper portion of the shell corresponding to the upper portion of the exterior beaded lip above its largest diameter initially substantially conforming to the shape of that portion of the lip with which it contacts and the smallest internal diameter of the shell being below the largest diameter of the lip and initially less than said lip diameter.

2. A vessel seal comprising a resilient, non-rupturable shell provided with a top, side walls and a continuous, radially corrugated depending flange, a sealing gasket therein, adapted for use on a vessel with an exterior bead on the lip thereof, the internal, upper portion of the shell corresponding to the upper portion of the exterior beaded lip above its largest diameter initially substantially conforming to the shape of that portion of the lip with which its contacts and the smallest internal diameter of the shell being below the largest diameter of the lip and initially less than said lip diameter.

3. In combination, a vessel seal comprising a resilient, non-rupturable shell provided with a top, side walls and a radially corrugated, depending flange and a vessel provided with a bead on the exterior of the lip and a flat topped ledge thereunder, the internal, upper portion of the shell corresponding to the upper portion of the exterior headed lip above its largest diameter initially substantially conforming to the shape of that portion of the lip with which it contacts and the smallest internal diameter of the shell being below the largest diameter of the lip and initially less than said lip diameter.

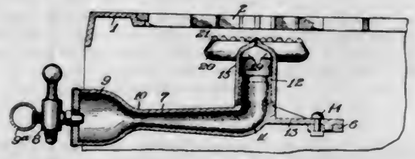
1,196,229. BARGE. LOUIS GRANGES, Agen, France. Filed May 19, 1914. Serial No. 839,511. (Cl. 114—29.)



1. A barge of the character specified, comprising a skeleton frame, water-tight caissons provided with decks disposed on either side of the longitudinal axis of said barge and having their outer edges pivoted to said skeleton frame, a vertically operating means supported on said skeleton frame and connected to the inner edges of said caissons to cause said inner edges to close together, the pivoted outer edges of said caissons being mounted for outwardly sliding movement during the closing movement of the inner edges.

2. A barge of the character specified, comprising a skeleton frame, water-tight caissons provided with decks disposed on either side of the longitudinal axis of said barge and having their outer edges pivoted and slidably mounted on said skeleton frame, pistons fixed centrally to said skeleton frame, cylinders mounted to slide vertically on said cylinders, and upstanding projections rigidly secured to said decks and having their free ends pivoted to said cylinders, whereby said outer edges of the decks will be caused to move outwardly when their inner edges are approaching each other.

1,196,230. GAS-BURNER. GEORGE W. GRAVES, Cincinnati, Ohio, assignor to The Graves Supply Co., Cincinnati, Ohio, a Corporation of Ohio. Filed May 28, 1915. Serial No. 31,040. (Cl. 158—99.)



1. The combination with a gas stove body, comprising a top and a gas tube extending beneath the top increasing in diameter toward its inner end and terminating in an upturned portion to form a gas expansion chamber, of a burner having a tubular projection on its lower side engaging said upturned portion, and means carried by the upturned portion cooperating with the tubular projection for varying the height of the burner relatively to the top of the stove.

2. A gas burner fixture for gas stoves, comprising a gas inlet pipe having an inner end provided with an upwardly opening discharge member, a burner provided with a tubular extension on its lower side engaging the upwardly opening discharge member, and means carried by said member adapted to support the tubular extension at different heights relatively to the top of the stove.

3. A gas burner outfit for gas stoves, comprising a gas inlet pipe adapted to form a permanent part of the stove having an upwardly extending discharge member provided with a plurality of shoulder portions positioned at relatively different heights upon the discharge member, and a burner connected with the discharge member and provided with means for engaging said shoulder portions whereby to support the burner at relatively different heights upon the discharge member.

4. A gas burner fixture, comprising a gas inlet member having an upwardly extending discharge portion provided with a plurality of lugs positioned at relatively different heights upon the discharge portion, and a burner connected with the discharge portion and provided with means for engaging said lugs in relatively different positions whereby to support the burner at different heights with respect to said discharge portion.

5. A gas burner fixture comprising a gas inlet member having an upwardly extending discharge portion provided with a plurality of lugs positioned at relatively different heights upon the discharge portion, and a burner connected with the discharge portion by means of a sleeve having projections thereon, the sleeve and projections each being adapted to engage one or more of said lugs whereby to position the burner at relatively different heights upon the discharge portion.

[Claim 6 not printed in the Gazette.]

1,196,231. SCRAPER. HUGO GROTZKY, Chapman, Nebr. Filed Oct. 13, 1915. Serial No. 55,666. (Cl. 37—40.)



1. In a scraper including a draft bail, a shaft mounted for oscillation and having guide slots, rods connected to said bail and operative through said slots, each of said rods having a stop adapted to engage said shaft to limit the movement of the rod in one direction, and means for oscillating said shaft to release the stops from engagement with said shaft.

2. A device of the class described comprising a shaft adapted to be mounted for rotation on a scraper and having eyes, rods adapted to be swingingly coupled to the draft bail of the scraper and movable through said eyes, each of said rods having a stop to limit the movement of the rods in one direction relative to the eyes, and means for operating said shaft to release the rods and permit the dumping of the scraper.

3. A device of the class described comprising a shaft adapted to be mounted for oscillation on a scraper and having eyes and releasing projections merging into the eyes, rods adapted to be coupled to the draft bail of the scraper and movable through said eyes, each of said rods having a stop adapted to engage one of the releasing projections to lock the rods to the eye when the shaft is disposed in one position, and means for oscillating said shaft.

4. In a device of the class described comprising bearings adapted to be attached to a scraper, a shaft mounted for rotation in said bearings and having eyes, rods adapted to be swingingly coupled to the draft bail of a scraper and movable through said eyes, each of said rods having a stop to limit the movement of the rods in one direction relative to the eyes, and means for operating said shaft to release the rods and permit the dumping of the scraper.

5. A device of the class described comprising bearings adapted to be attached to a scraper body, shaft sections mounted for rotation in said bearings and having eyes, a coupling sleeve adjustably engaged with said shaft sections and having an operating lever, rods adapted to be swingingly coupled to the draft bail of a scraper and movable through said eyes, each of said rods having a stop to limit the movement of the rods in one direction relative to the eyes, and means for operating said shaft to release the rods and permit the dumping of the scraper.

1,196,232. DEVICE FOR OPENING AND CLOSING FRUIT-JARS. ARTHUR R. GURNETT, Toronto, Ontario, Canada. Filed Apr. 27, 1915. Serial No. 24,305. (Cl. 65—26.)

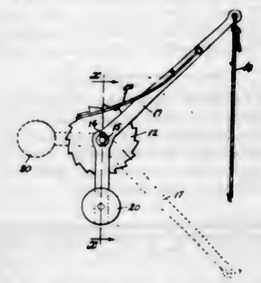


1. A device for the purpose described comprising three arc-shaped gripping members of substantially similar curvature and length pivotally connected; and handles formed integral with the outer members, the pivotal connections being so formed that each pivot may be shifted along an arc of an outer gripping member from its normal position to a position nearer the adjacent handle.

2. A device for the purpose described comprising three arc-shaped sheet metal gripping members of substantially similar curvature and length pivotally connected and each having its gripping surface serrated; handles formed integral with the outer members, the pivotal connections being so formed that each pivot may be shifted along an arc of an outer gripping member from its normal position to a position nearer the adjacent handle; and offset, inwardly projecting, guiding fingers on the outer gripping members bent up from the edges thereof.

3. A device for the purpose described comprising three arc-shaped gripping members of substantially similar curvature and length; a flattened pivot pin secured to each end of the middle member, each outer member adjacent its inner end being provided with a double key-hole slot concentric with the curve of the said member, whereby the pivoting point may be adjusted to either end of the slot; and handles formed integral with the outer ends of the outer members.

1,196,233. DETACHABLE DEVICE FOR ACTUATING AN ELECTRIC SOCKET-SWITCH. SHINKICHI HATA, Seattle, Wash. Filed Oct. 18, 1915. Serial No. 56,370. (Cl. 74—54.)



A device of the class described including a rotatable support, a ratchet wheel fixed concentrically thereto, a

weighted lever journaled on the ratchet wheel concentrically to the support and ratchet wheel, a U-shaped spring wire pawl having its ends fixed to opposite sides of the lever with the bight engaging the ratchet wheel, and pins carried by the opposite sides of the lever engaging the legs of the pawl to place the same under tension and hold the pawl in engagement with the ratchet wheel at all times during different relative positions of the ratchet wheel and pawl.

1,196,234. POLISHING-WHEEL. WILLIAM E. HEDLER, New York, N. Y. Filed May 7, 1915. Serial No. 26,636. (Cl. 51—1.)



1. A polishing wheel composed of boiled oxidized linseed oil, gum, resin and granulated cork.

2. A polishing wheel comprising boiled oxidized linseed oil, a resinous material and granulated cork.

1,196,235. POP-GUN. DAVID HEYMAN and THOMAS RAYMOND ARDEN, New York, N. Y., assignors to M. Gropper & Sons, a Copartnership consisting of Harry Gropper and Abraham S. Gropper, New York, N. Y. Filed Nov. 23, 1915. Serial No. 62,943. (Cl. 46—46.)



1. In a pop gun, the combination of a stock and barrel, a plug adapted to fit in the barrel mouth, means for discharging the plug from the barrel mouth, a cap slidably mounted at the forward end of the gun barrel and adapted to reinsert the plug in the barrel mouth after discharge of said plug, rearwardly extending rods engaging said cap, oppositely disposed plates connecting the rear ends of said rods, and an operating lever having means to engage said plates and move said cap backward and forward on the gun barrel.

2. In a pop gun, the combination of a gun barrel provided with oppositely disposed slots, a cap mounted at the forward end of said barrel, parallel rods extending rearwardly from said cap, means passing through the slots in the gun barrel and connecting the ends of said rods, and an operating lever adapted to engage said means to actuate said cap.

3. In a pop gun, the combination of a gun barrel provided with oppositely disposed slots, a cap mounted at the forward end of said barrel, rods removably engaging said cap and extending rearwardly thereof, a connection for the rear ends of said rods passing through said slots, oppositely disposed plates carried by said connection, and an operating lever having means for engaging said plates to move said cap forward or backward on the barrel.

1,196,236. RAILWAY-SIGNAL-ACTUATING MECHANISM. HENRY A. HOESCHEN and JOSEPH A. HOESCHEN, Omaha, Nebr., assignors, by direct and mesne assignments, to Hoeschen Manufacturing Company, Omaha, Nebr., a Corporation of Nebraska. Filed Aug. 19, 1913. Serial No. 785,546. (Cl. 246—35.)



1. The combination with a railway-track rail, of a beam disposed adjacent to the rail, and substantially parallel therewith, and means for securing one end of said beam to the rail, so that deflections of the rail at the point of connection of the beam therewith will cause movements of the free end of the beam relatively to that portion of the rail adjoining the same.

2. The combination with a rail forming part of a railway track, of a needle-beam disposed adjacent to the rail and extending longitudinally thereof and having one of its ends rigidly secured to the rail, whereby undulatory movements of the rail at the secured end of the needle-beam will cause oscillatory movements of the free end of the needle-beam.

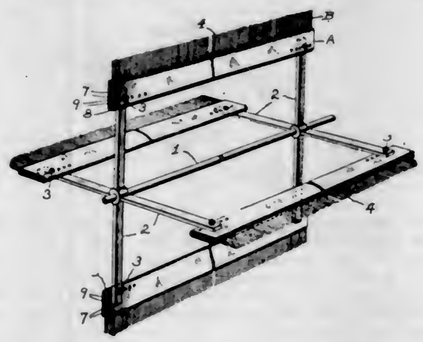
3. The combination with a railway-track rail, of a beam having a part thereof attached to the rail and a portion extending free and substantially parallel with the rail to a considerable distance from the rail-attached part, whereby slight undulations in the rail-body will cause movements of the free portion of the beam greater in extent than the undulations.

4. The combination with a railway-track rail of a rectilinear beam having a portion rigidly secured to a part of the rail and extending longitudinally thereof, so that during longitudinal bending of the rail-body into a curve including said part the beam will extend tangentially to the curve.

5. In a railway signaling mechanism, a track-rail, and a member having a part fixedly secured to a portion of the rail and another part extending adjacent to a portion of the rail remote from the first, whereby the relations of the latter parts of the member and the rail are variable by longitudinally progressing wave-motions in the rail-body, and the initial directions of said variations are in accordance with the directions of progression of the wave-motions.

[Claims 6 to 16 not printed in the Gazette.]

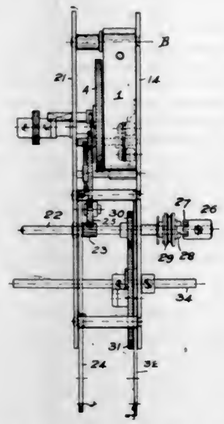
1,196,237. CLEAN-SWEEP REEL-SLAT. GUSTAF A. HOLM, Powers Lake, N. D. Filed June 3, 1916. Serial No. 101,537. (Cl. 15—37.)



1. A reel slat including a body formed of a strip of sheet metal which is doubled upon itself transversely to provide spaced and opposed side plates, the edges of the side plates being returned inwardly to provide spring jaws, and a longitudinally extending brush element received between the side plates and gripped by the spring jaws, said brush element projecting from one of the longitudinal edges of the body.

2. A reel slat including a body formed of a strip of sheet metal which is doubled upon itself transversely to provide spaced and opposed side plates, the edges of the side plates being returned inwardly to provide spring jaws, and a longitudinally extending brush element formed with a wire back having fibers doubled around the same, said brush element being received between the side plates and gripped by the spring jaws, the fibers of the brush element projecting from one of the longitudinal edges of the body.

1,196,238. MOTOR FOR STRUCTURAL TOYS. FRANK HORNBY, Liverpool, England, assignor to Meccano Limited, Liverpool, England, a Corporation of Great Britain. Filed Feb. 3, 1913. Serial No. 745,928. (Cl. 74—58.)



1. In a building model, toy or the like employing differing elements having similar regularly spaced perforations, the combination of a plate having perforations adapted by their spacing to register in any of a variety of ways with the perforations of said elements, a second plate connected with the first to form a unitary structure, and a motor mechanism mounted between said plates.

2. In a building model, toy or the like employing differing elements having similar regularly spaced perforations, the combination of a unitary structure comprising a pair of plates having perforations adapted by their spacing to register in any of a variety of ways with the perforations of said elements and a motor mechanism carried by said plates.

3. In a building model, toy or the like employing differing elements having similar regularly spaced perforations, the combination of a unitary structure comprising a pair of plates having perforations adapted by their spacing to register in any of a variety of ways with the perforations of said elements and a motor mechanism mounted between said plates.

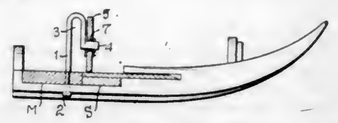
4. In a building model, toy or the like employing perforated elements, the combination of a pair of plates having perforations adapted to register with those of said elements, a driving shaft projecting through one of said plates, a motor mounted between said plates, a train of gearing between said motor and shaft, means for reversing the direction of rotation of said shaft, and a brake associated with said gearing.

5. In a building model, toy or the like employing perforated elements, the combination of a pair of plates having perforations adapted to register with those of said elements, a driving shaft projecting through one of said plates, a spring motor mounted between said plates, a train of gearing between said motor and shaft, means for reversing the direction of rotation of said shaft, and a friction brake associated with said gearing.

[Claims 6 to 16 not printed in the Gazette.]

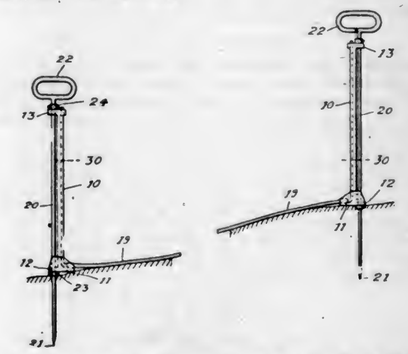
1,196,239. MOWER. WALLACE J. HOTCHKISS, Alpena, S. D. Filed June 10, 1916. Serial No. 102,986. (Cl. 56—44.)

1. In combination with a mower bar and a sickle bar mounted for reciprocation thereon, an upstanding post carried by the mower bar adjacent its inner end, the upper portion of said post being returned, the returned portion of the post being provided with a stub shaft disposed perpendicularly to the post, and a head rotatably supported by the shaft and having a rounded edge engageable with the sickle bar.



2. In combination with a mower bar and a sickle bar mounted for reciprocation thereon, an upstanding post carried by the mower bar adjacent its inner end, the upper portion of said post being returned, the returned portion of the post being provided with a stub shaft disposed perpendicularly to the post, a head rotatably supported by the shaft and having a rounded edge engageable with the sickle bar, and anti-friction means carried by the stub shaft and coacting with the head.

1,196,240. LEVELING INSTRUMENT. INGVAR HUSBY, St. Paul, Minn. Filed Aug. 12, 1914. Serial No. 856,368. (Cl. 33—209.)



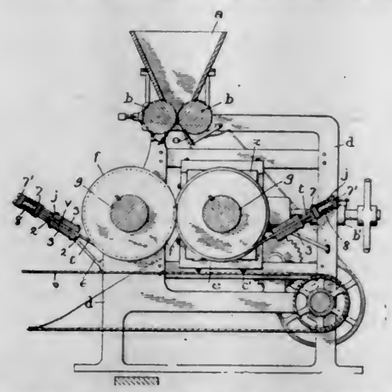
A leveling instrument comprising a pair of graduated uprights, glass tubes in said uprights, a flexible rubber connector for the glass tubes, there being water in the tubes so that the level thereof will show in the glass tube alongside said graduations, lugs at the top of said uprights extending backward from the glass tubes, feet on the bottom of said uprights extending beyond the same on all sides, holes in said lugs, corresponding holes in said feet below the holes in said lugs, pointed metallic spindles in said holes, collars with set screws on said spindles for securing the same, and hand holes on the tops of said spindles for carrying the levels and for inserting said spindles into the ground, the depth of insertion being variable through said collars.

1,196,241. ROLL-REDUCING MACHINE. JOHN E. HUTZEN, Chicago, Ill. Filed Sept. 15, 1910. Serial No. 582,265. (Cl. 83—12.)

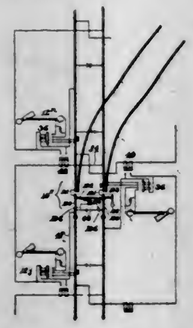
1. In a reducing roll machine, a roll having parallel-wall circumferential channels, a similar roll parallel to and coacting with the first roll, a series of independently movable discharging scrapers engaging the channels of each roll, fixed separating strips between each two scrapers, and a pressure spring device abutting the series of discharging scrapers, said spring device serving to keep the scrapers in engagement with the rolls.

2. In a reducing roll machine, a roll having a series of fine circumferential channels, a similar roll parallel to and coacting with the first roll and having circumferential channels of the same size therewith, bearing boxes for the journals of the first roll, adjusting means connected to said boxes for moving said first roll in a right line toward

or from the coacting roll, and means for vertical right line adjustment of the bearings at each end of the roll for rectifying angular variation of contact along the line of operation of the channeled surfaces of the rolls.



1,196,242. BLOCK-SIGNAL SYSTEM. URIAH S. JACKSON, Lowell, Mass., assignor of one-fourth to Edward F. Gowell, Berwick, Me., and one-fourth to Walter R. Tebbetts, Somersworth, N. H. Filed May 12, 1914. Serial No. 838,399. (Cl. 246—30.)



1. A block signal system comprising a signal held in position to indicate safety by an electric current, a switch to short circuit said current, an electro-magnet to prevent said switch from short circuiting the current, a battery connected between the rails of a block, connections between the rails of the block and the electro-magnet, a second switch to short circuit said electro-magnet, a second electro-magnet to prevent the second switch from short circuiting the first electro-magnet, and connections from the rails of another block to the second electro-magnet.

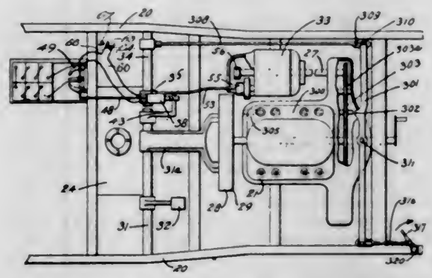
2. A block signal system for the crossing of two tracks, comprising a battery connected between the rails of the blocks adjacent the crossing and adapted to be short-circuited by a train in said blocks; and semaphores on each side of the crossing held in position to indicate safety by an electric current, and having a switch for short-circuiting said electric current, an electro-magnet to hold said switch in inoperative condition, and a switch for short-circuiting said electro-magnet and a magnet energized from said battery for holding the last named switch in inoperative condition.

3. A block signal system comprising a signal held in position to indicate safety by an electric current, a switch for short-circuiting said current, an electro-magnet connected between the rails of a block to hold the switch in inoperative position, a battery connected between the rails of said block, and arranged to be short-circuited when a train enters the block, a movable section of track in the block, and means for short-circuiting the battery when the movable section of track is out of alinement with the block.

4. A block signal system comprising a battery connected between the rails of each block, connections between the rails and a signal whereby the current from the battery maintains the signal in position to indicate safety, a movable section of track in the block, means for short-circuiting the battery when the movable section of track is moved from normal position, and means operative from a distant block for short-circuiting the battery.

5. A block signal system comprising a battery connected between the rails of each block, connections between the rails and a signal whereby the current from the battery maintains the signal in position to indicate safety, a movable section of track in the block, flexible connections between the movable tracks and the rest of the block, means for short-circuiting the battery when the movable section of track is moved from normal position, and means for short-circuiting the battery when a train enters an adjacent block.

1,196,243. ENGINE-STARTING DEVICE. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed May 23, 1912. Serial No. 699,193. (Cl. 123—182.)



1. In an engine starting device, the combination with an engine including a plurality of cylinders and their parts; of a power driven machine constituting a starting device for said engine; coupling means for coupling the engine and starting device together; compression reducing means for causing reduction in the compression of the respective cylinders, only during the compression period thereof; and means connected with said coupling means for automatically controlling the operation of said compression reducing means.

2. In an engine starting device, the combination with an engine including a plurality of cylinders and regular exhaust devices therefor; and a power driven machine constituting a starting device for said engine; coupling means for coupling the engine and starting device together; compression reducing means for causing reduction in the compression of the respective cylinders only during the compression period thereof; and means connected with said coupling means for automatically controlling the operation of said compression reducing means whereby said compression reducing means will be operated during only the compression periods of the engine but in addition to the regular operation of said exhaust devices.

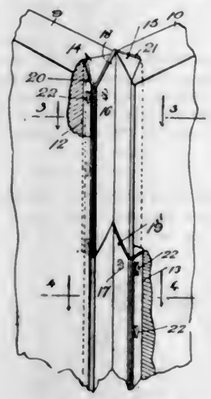
3. In an engine starting device, the combination with an engine, comprising a plurality of cylinders having exhaust valves therein; of an automatic electric starting device for said engine; coupling means for coupling the engine and starting device together; compression reducing means for opening and closing the exhaust valves in a recurring sequence alternatively during the compression and exhaust periods of the engine; and means connected with said coupling means for automatically positioning said compression reducing means, whereby the same will be operated when the starting device is operated to start the engine.

4. In an engine starting device, the combination with an engine including its cylinder parts; of means for releasing the compression in the engine cylinders; of a starting device for said engine having connections automatically operating said compression releasing means to place the same in position to operate when starting the engine; and means for causing the operation of said compression releasing means independently of the starting device.

5. In an engine starting device, the combination with an engine and its cylinder parts: of an electric starting device for said engine; means for reducing the compression within the engine cylinders and operable when the electric starting device is operating to start the engine; and means for operating said compression reducing means independent of the electric starting device to place the same in position to operate when starting the engine.

[Claims 6 to 11 not printed in the Gazette.]

1,196,244. HINGE STRUCTURE FOR SCREEN-SECTIONS. YOKICHI KINOSHITA, Boston, Mass. Filed May 12, 1916. Serial No. 97,210. (Cl. 16—11.)



1. The combination with adjacent relatively swinging members arranged edge to edge, of hinge straps connected to diagonally opposite points of said members the intermediate portions thereof passing between the opposed edges of said members, and retaining strips to secure said straps to their respectively adjacent members.

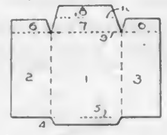
2. The combination with adjacent relatively swinging members arranged edge to edge, and having longitudinal grooves in their opposed edge surfaces, of hinge straps having their respective edges extending into one side of the groove in one of said members and the opposite side of the groove in the other of said members, and means to secure said strap edges in said grooves.

3. The combination with adjacent relatively swinging members arranged edge to edge, and having longitudinal grooves in their opposed edge surfaces, of hinge straps having their respective edges extending into one side of the groove in one of said members and the opposite side of the groove in the other of said members, and retaining strips fitted into said grooves to clamp the strap edges therein.

4. The combination with adjacent relatively swinging members arranged edge to edge and having longitudinal V-shaped grooves in their opposed edge surfaces, of correspondingly shaped retaining strips secured in said grooves, and hinge straps having their respective edges secured and clamped in said grooves by said strips, respectively, the portions of said straps intermediate their edges extending across and between the outer surfaces of said strips.

5. The combination with adjacent relatively swinging members arranged edge to edge and having longitudinal V shaped grooves in their opposed edge surfaces, of correspondingly shaped retaining strips secured in said grooves, and hinge straps having their respective edges secured and clamped in said grooves by said strips, respectively, the portions of said straps intermediate their edge extending across and between the outer surfaces of said strips, corresponding edges of adjacent hinge straps being secured at opposite sides of the same member.

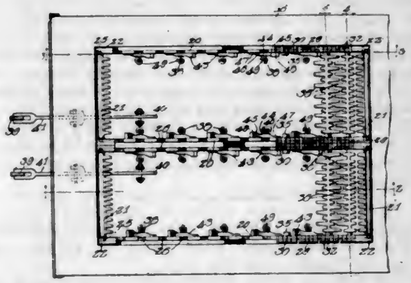
1,196,245. ENVELOP OR WRAPPER. JOHN GEO. KNUECK, Woodhaven, N. Y. Filed July 17, 1915. Serial No. 40,373. (Cl. 229—76.)



1. An envelop provided at its open end with two flaps, extending respectively from the face and back beyond the body portion of the envelop, one of said flaps being longer than the other, said longer flap being doubled upon itself and adapted to be inserted into the opening of the envelop by folding along the edge of the body portion, and the shorter flap adapted to be folded along the edge of the body portion, and inserted between the doubled sides of the longer flap.

2. An envelop provided at its open end with two flaps, extending respectively from the face and back beyond the body portion of the envelop, one of said flaps being longer than the other, said longer flap being doubled upon itself on a line of fold beyond the free edge of the shorter flap, and adapted to be inserted into the opening of the envelop by folding along the edge of the body portion, and the shorter flap adapted to be folded along the edge of the body portion, and inserted between the doubled sides of the longer flap.

1,196,246. FURNACE-GRATE. GEORGE A. KOHOUT, Chicago, Ill., assignor to Shear-Klean Grate Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 30, 1913. Serial No. 745,211. (Cl. 126—176.)



1. In a grate, the combination of grate bars, means for rocking all of said bars in the same direction and means for simultaneously shifting certain of the bars in a longitudinal direction relatively to the other bars.

2. In a grate, the combination of grate bars, means for imparting a rocking and a dumping motion to the bars, means adapted to shift certain of the bars longitudinally as they are rocked, and means for holding certain of the bars against longitudinal movement.

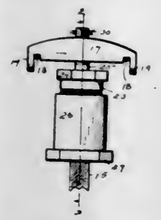
3. In a grate, the combination of grate bars having longitudinally overlapping fingers, and means for rocking all of said bars and means for simultaneously shifting certain of the bars in a longitudinal direction relatively to the other bars.

4. In a grate, the combination of grate bars, means for rocking the bars simultaneously, means for shifting certain of the bars longitudinally as they are rocked and with relation to the other bars, and then dumping all of the bars, and means for holding certain of the bars against longitudinal movement when rocked.

5. A grate embodying rocking bars, means for rocking the bars simultaneously, means adapted to shift certain of the bars longitudinally as they are rocked, and means for holding certain of the bars against longitudinal movement when rocked, the first said means embodying a cam and a coöperating element, movable relatively one with relation to the other.

[Claims 6 to 15 not printed in the Gazette.]

1,196,247. HAY-CARRIER ATTACHMENT. JOHN E. KORDICK and FRANK KORDICK, Bridgewater, Iowa. Filed Aug. 16, 1915. Serial No. 45,828. (Cl. 254—135.)



1. An attachment for hay carriers comprising a bar adapted to rest on the carrier frame and to tilt thereon, having downwardly projecting ends to engage such frame and limit endwise movement of said bar, a device for receiving and holding the end of a flexible device mounted on the said bar for rotation.

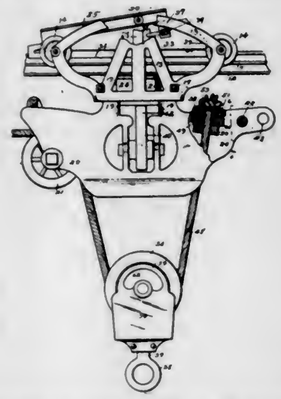
2. An attachment for hay carriers comprising a support adapted to rest on a carrier frame, and to tilt thereon, forming a part of a ball race, a device for receiving and holding the end of a flexible device, forming part of a ball race, rotatably mounted on said support, balls in said race parts, and two part linked adjustable means for limiting the movement of said support with relation to the frame on which it rests.

3. In a device of the class described, a transverse support adapted to rest on the frame members of a hay carrier and to tilt thereon, having downward projections to limit the movement of said support laterally with relation to each carrier, a bolt screwed into said support, having a head below the support with a ball race in its upper surface, a cylinder closed at its upper end, having said end slidably mounted on said bolt and forming a coacting ball race, balls in said ball races, a cylinder closed at its lower end screwed onto said first cylinder having an opening in said end, and means for locking said cylinders against relative rotation.

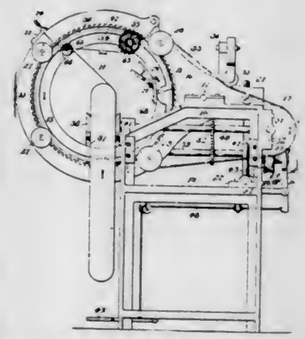
1,196,248. HAY-CARRIER. JOHN E. KORDICK and FRANK KORDICK, Bridgewater, Iowa. Filed Jan. 11, 1916. Serial No. 71,437. (Cl. 212—105.)

1. In a device of the class described, a carriage having a reciprocating member, and a pair of spaced rollers thereon, an attachment designed to be placed on a track, having a member with a pair of oppositely opening channels inclined from their lower ends upwardly, adapted to receive said rollers for raising said reciprocating member, said attachment including a pair of clamping members adapted to be secured to a track, the member having said channels formed therein having pairs of opposite downwardly extending lugs for receiving the upper portions of said clamping members, and means for securing said lugs to said clamping members.

2. In a device of the class described, a carriage having a reciprocating member with a pair of spaced rollers thereon, an attachment designed to be placed on a track, having a pair of oppositely opening channels inclined from their lower ends upwardly, adapted to receive said rollers for raising said reciprocating member, said attachment including a pair of clamping members adapted to be secured to a track, said channels having pairs of opposite downwardly extending lugs for receiving the upper portions of said clamping members, said clamping members having inclined elongated slots, bolts extended through said lugs and said slots, nuts on said bolts whereby said channels may be variably locked on said clamping members.



1,196,249. TIRE-UNWRAPPING MACHINE. JOHN KOSUTZ and JOHN BUNTA, Akron, Ohio. Filed Oct. 27, 1915. Serial No. 58,143. (Cl. 242—6.)



1. A device of the class described, comprising a pivotally mounted circular bracket having a hinged entrance closure section, the said bracket being adjustable to cause a tire to pass centrally therethrough, an annular shuttle revolubly mounted upon the said bracket and arranged concentric therewith and at one side thereof and having a hinged entrance closure portion, and a covering strip supporting means carried by the said shuttle.

2. A device of the class described, comprising a pivotally mounted circular bracket having a hinged entrance closure section, the said bracket being adjustable to cause a tire to pass centrally therethrough, an annular shuttle revolubly mounted upon the said bracket and arranged concentric therewith and at one side thereof and having a hinged entrance closure portion, tire shifting means mounted adjacent said bracket, simultaneous operating means for the said shuttle and shifting means, and supporting means for a tire cover strip carried by the said shuttle.

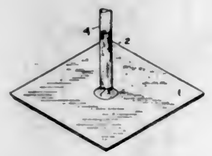
3. A device of the class described, comprising a pivotally mounted circular bracket having a closable tire entrance portion, the said bracket being adjustable to cause a tire to pass centrally therethrough, an annular shuttle rotarily mounted upon the said bracket and having the same axial line therewith and provided with a closable tire receiving opening portion, the said bracket and shuttle having the adjacent sides encircled by a rubber tire, and supporting means for a covering strip carried by the said shuttle.

4. A device of the class described, comprising a pivotally mounted circular bracket having a closable tire entrance portion, the said bracket being adjustable to cause a tire to pass centrally therethrough, an annular shuttle rotarily mounted upon the said bracket and having the same axial line therewith and provided with a closable tire receiving opening portion, the said bracket and shuttle adapted to have the adjacent sides encircled by a rubber tire, supporting means for a covering strip carried by the said shuttle, supporting drums for the tire, and simultaneously operating means for the said drums and shuttle.

5. A device of the class described, comprising a pivotally mounted circular bracket having a closable tire entrance portion, the said bracket being adjustable to cause a tire to pass centrally therethrough, an annular shuttle rotarily mounted upon the said bracket and having the same axial line therewith and provided with a closable tire receiving opening portion, the said bracket and shuttle adapted to have the adjacent sides encircled by a rubber tire, supporting means for a covering strip carried by the said shuttle, supporting drums for the tire, a power shaft, operative connections between the said shaft and shuttle, gear connections between the said shaft and drums, and a foot operated releasing clutch for the said gear connections.

[Claims 6 to 18 not printed in the Gazette.]

1,196,250. ASEPTIC APPLIANCE. ANNA O. KUHN, San Francisco, Cal. Filed July 6, 1915. Serial No. 38,139. (Cl. 128—28.)



1. An aseptic means for lining the walls of a passage in the human body comprising an aseptic sheet of comparatively thick rubber having a hole therethrough of approximately the same diameter as the passage when undergoing normal distention, and an aseptic thin rubber tube one end of which is connected to said sheet around said hole and the other end is open for the passage therethrough of an instrument, medicament, or the like.

2. An aseptic means for lining the walls of a passage in the human body comprising an aseptic sheet of comparatively thick rubber, the edge of which is free throughout its entire circumference and having a hole therethrough of approximately the same diameter as the passage when undergoing normal distention, and an aseptic thin rubber tube one end of which is connected to said sheet around said hole, and the other end is open for the passage therethrough of an instrument, medicament or the like.

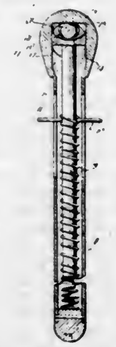
3. An aseptic appliance comprising an aseptic sheet of comparatively thick rubber having a hole therethrough, an aseptic thin rubber tube one end of which is secured to said sheet around said hole, and an aseptic rigid tube, one end of which is closed except for an elongated narrow aperture therethrough, said rubber tube extending through said aperture and within said rigid tube.

1,196,251. TIE-CLASP. OTTO JOSEPH LAUTERBACH, New Orleans, La. Filed Aug. 26, 1915. Serial No. 47,439. (Cl. 24—259.)



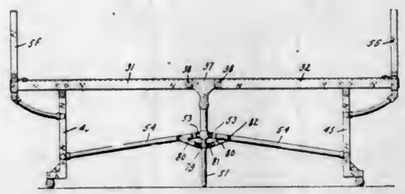
A clasp comprising a resilient metal strip bent transversely intermediate its ends to form spaced arms, one of said arms having a longitudinally extending tongue struck therefrom with its base arranged near the free end of said arm, said tongue being bent laterally inward toward the other arm into contact therewith and then bent outwardly and extended in substantially the same plane as the arm from which it is struck with its terminal bent laterally inward toward the other arm whereby the bent portion at the base of the tongue forms a combined clamping member and fulcrum to provide for the movement of the bent terminal of said tongue away from the arm with which it normally contacts when the free ends of said arms are pressed toward each other.

1,196,252. CHISEL AND PUNCH HOLDER. OLE S. LE GRAND, Rollag, Minn. Filed May 19, 1914. Serial No. 839,634. (Cl. 81—1.)



A tool holder comprising a hollow handle, a head on the handle and communicating therewith, said head having alined openings, a spring-pressed plunger-rod operating in the handle and having one end extending into the head, and a second head carried by the extended end of the plunger, each of said heads having a rib formed thereon and arranged in conforming relation for yieldably engaging a tool at diametrically opposite points when the tool is supported in the openings.

1,196,253. FOLDING COT. MORRIS LOWY, New York, N. Y. Filed Aug. 13, 1915. Serial No. 45,334. (Cl. 5—5.)



1. In a folding cot, the combination with a pair of foldable cot sections, of a short middle section pivotally connected to the inner ends thereof, said foldable cot sections folding transversely of the cot by lifting such inner ends and thereby allowing the outer ends to drop and close

toward each other, a pair of legs pivoted to each of said foldable sections, a single leg attached to said middle section, and a link connecting the legs of each foldable section with the leg of said middle section, said links being disposed substantially in the longitudinal center line of said cot.

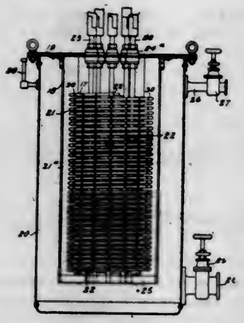
2. In a folding cot, the combination with a pair of foldable cot sections, of a short middle section pivotally connected to the inner ends thereof, said foldable cot sections folding transversely of the cot by lifting such inner ends and thereby allowing the outer ends to drop and close toward each other, a pair of legs pivoted to each of said foldable sections, a leg attached to said middle section, a link connecting the legs of each foldable section with the leg of said middle section, an end-piece fulcrumed to each foldable section, and a link pivotally connecting each end-piece with the legs of the same section.

3. In a folding cot, the combination with a pair of foldable cot sections, of a short middle section pivotally connected to the inner ends thereof, said foldable cot sections folding transversely of the cot by lifting such inner ends and thereby allowing the outer ends to drop and close toward each other, a pair of legs pivoted to each of said foldable sections, a leg attached to the center of said middle section, a link connecting the legs of each foldable section with the leg of said middle section, an end-piece fulcrumed to each foldable section, and a link pivotally connecting each end-piece with the legs of the same section.

4. In a folding cot, the combination with a pair of foldable cot sections, of a short middle section pivotally connected to the inner ends thereof, said foldable cot sections folding transversely of the cot by lifting such inner ends and thereby allowing the outer ends to drop and close toward each other, a pair of legs pivoted to each of said foldable sections, a leg attached to the center of said middle section, a link connecting the legs of each foldable section with the leg of said middle section, and means for maintaining the leg of said middle section in its vertical position during the folding operation.

5. In a folding cot, the combination with a pair of foldable cot sections, of a short middle section pivotally connected to the inner ends thereof, said foldable cot sections folding transversely of the cot by lifting such inner ends and thereby allowing the outer ends to drop and close toward each other, a pair of legs pivoted to each of said foldable sections, a single leg attached to said middle section, a link connecting the legs of each foldable section with the leg of said middle section, a sleeve slidably disposed upon the leg of said middle section, and a link connecting said sleeve with each of said first named links.

1,196,254. STARTING DEVICE FOR ELECTRIC MOTORS. BRADLEY T. MCCORMICK, Montreal, Quebec, Canada, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Feb. 21, 1912. Serial No. 679,134. (Cl. 219—48.)



1. In a rheostat, a fluid-containing tank having a cover, a frame supported by said cover, said frame comprising a plurality of angularly spaced members, a hollow resistance coil having openings and mounted on said frame, and leads extending from different portions of said resistance coil.

2. In a device of the class described, a tank, a cover therefor, a frame mounted on said cover in position to be suspended in said tank when said cover is in place thereon, a coil peripherally supported on said frame, and a plurality of terminals extending through said cover, two of said terminals being connected to the ends of said coil.

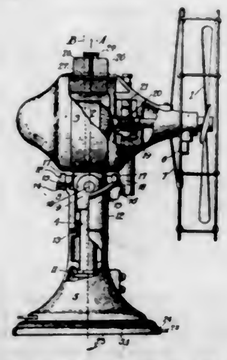
3. In a rheostat, the combination of a tank and a cover therefor, a resistance element mounted on said cover so as to be contained within said tank when said cover is in place, said resistance element comprising a coil of hollow perforated tubing, and terminal members mounted in said cover and extending into the interior of said coil and into engagement with portions thereof.

4. In a device of the class described, a tank containing fluid, a resistance element immersed in said fluid, said resistance element comprising a coil of hollow perforated tubing, means for supporting said resistance element in place in said tank comprising members engaging peripheral points of said coil, and a plurality of terminals disposed within said coil and engaging points along the periphery of said coil.

5. In a rheostat, the combination of a plurality of terminals, resistance elements between adjacent terminals, said elements consisting of sections of a coil, connections between said terminals and common points of adjacent sections, said connections being disposed within said coil, and supporting means for said coil engaging said coil along the periphery thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,196,255. OSCILLATING FAN. WILLARD M. MCEWEN, Chicago, Ill. Filed June 14, 1915. Serial No. 34,025. (Cl. 230—1.)



1. In an air circulating device, the combination of a support, rotary fan mechanism mounted to freely oscillate horizontally thereon, and mechanism for tilting said fan mechanism vertically, the center of gravity of said fan mechanism being always noncoincident with the axis of oscillation, whereby gravity will coöperate with said tilting mechanism to control the angular range of horizontal oscillation.

2. The combination of a support, a pair of members journaled on said support and capable of rotating relatively to each other, motor driven mechanism tiltably mounted on one of said members, driving mechanism connected to cause a relative rotation of said members, and coacting means on said motor driven mechanism and on the other said member adapted to tilt said motor driven mechanism transversely to the plane of rotation of said members and thereby cause the oscillation of said one member and said motor driven mechanism relative to said support, the mass of said motor driven mechanism being disposed so that the center of gravity thereof is always located at one side of the axis of oscillation of said members whereby

gravity will be caused to regulate the oscillation of said mechanism.

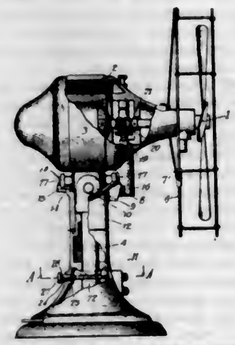
3. The combination of a support, a pair of members journaled on said support and capable of rotating relatively to each other, motor driven mechanism tiltably mounted on one of said members, driving mechanism connected to cause a relative rotation of said members, coacting means on said motor driven mechanism and on the other said member adapted to tilt said motor driven mechanism transversely to the plane of rotation of said members and thereby cause the oscillation of said one member and said motor driven mechanism relative to said support, the mass of said motor driven mechanism being disposed so that the center of gravity thereof is always located at one side of the axis of oscillation of said members whereby gravity will be caused to regulate the oscillation of said mechanism, and means adapted to change the location of the center of gravity.

4. The combination of a support, a pair of members journaled on said support and capable of rotating relatively to each other, motor driven mechanism tiltably mounted on one of said members, driving mechanism connected to cause a relative rotation of said members, and coacting means on said motor driven mechanism and on the other said member adapted to tilt said motor driven mechanism transversely to the plane of rotation of said members and thereby cause the oscillation of said one member and said motor driven mechanism relative to said support, said members being mounted on said support with the axis of rotation thereof inclined, whereby the center of gravity of said motor driven mechanism is always located at the side toward which said axis is inclined so as to regulate the oscillations of said mechanism.

5. The combination of a support, a pair of members journaled on said support and capable of rotating relatively to each other, motor driven mechanism tiltably mounted on one of said members, driving mechanism connected to cause a relative rotation of said members, coacting means on said motor driven mechanism and on the other said member adapted to tilt said motor driven mechanism transversely to the plane of rotation of said members and thereby cause the oscillation of said one member and said motor driven mechanism relative to said support, said members being mounted on said support with the axis of rotation thereof inclined, whereby the center of gravity of said motor driven mechanism is always located at the side toward which said axis is inclined so as to regulate the oscillations of said mechanism, and means for varying the inclination of said axis.

[Claims 6 to 13 not printed in the Gazette.]

1,196,256. ELECTRIC FAN. WILLARD M. MCEWEN, Chicago, Ill. Filed July 12, 1915. Serial No. 39,333. (Cl. 230—1.)



1. The combination of a support, a member rotatably mounted thereon, motor-driven mechanism tiltably mounted on said member, coacting means on said motor-driven mechanism and said support adapted to tilt said motor-driven mechanism and thereby through gyratory forces tend to cause the horizontal swinging of said member and said motor-driven mechanism, and means for holding said member and mechanism against horizontal swinging in one direction.

2. In an air-circulating device, the combination of a support, rotary fan mechanism mounted to oscillate horizontally thereon, mechanism for tilting said fan mechanism vertically and thereby through gyratory forces tend to cause the horizontal swinging thereof, and means for holding said fan mechanism against horizontal swinging in one direction.

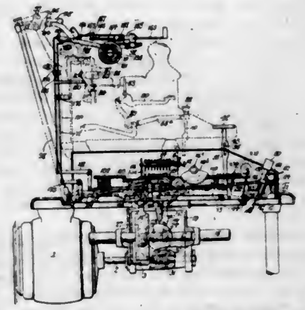
3. In an air-circulating device, the combination of a support, a shaft journaled thereon, blower mechanism tiltably mounted on said shaft, coacting means on said blower mechanism and said support adapted to tilt said blower mechanism and thereby through gyratory forces tend to cause the horizontal swinging of said shaft and blower mechanism, and ratchet and pawl mechanism coacting between said shaft and support for holding said blower mechanism against horizontal swinging in one direction.

4. In an air-circulating device, the combination of a support, a shaft journaled thereon, blower mechanism tiltably mounted on said shaft, coacting means on said blower mechanism and said support adapted to tilt said blower mechanism and thereby through gyratory forces tend to cause the horizontal swinging of said shaft and blower mechanism, a ratchet carried by said shaft, and a pawl on said support engaging said ratchet so as to hold said blower mechanism against horizontal swinging in one direction.

5. In an air-circulating device, the combination of a support, a shaft journaled thereon, blower mechanism tiltably mounted on said shaft, coacting means on said blower mechanism and said support adapted to tilt said blower mechanism and thereby through gyratory forces tend to cause the horizontal swinging of said shaft and blower mechanism, ratchet and pawl mechanism coacting between said shaft and support for holding said blower mechanism against horizontal swinging in one direction, and means for rendering said ratchet and pawl mechanism inoperative.

[Claim 6 not printed in the Gazette.]

1,196,257. COMBINED TYPE-WRITING AND COMPUTING MACHINE. HOLMES MARSHALL, Plainfield, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Oct. 18, 1911. Serial No. 655,363. (Cl. 235—59.)



1. The combination with a typewriting mechanism including a platen, of computing mechanism including an error key for clearing the computing mechanism of an erroneous portion of a calculation, and means brought in play by said error key for enabling the actuation of said platen.

2. The combination with a typewriting mechanism including a platen, of computing mechanism including an

error key for clearing the computing mechanism of an erroneous portion of a calculation, and connections between said platen and said error key for controlling certain operations of the one from the other.

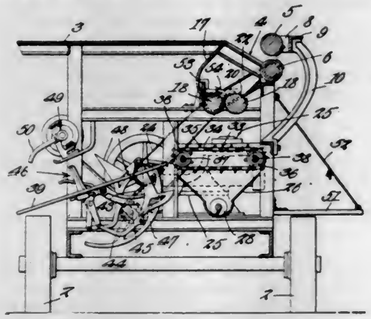
3. The combination with a typewriting mechanism including a platen, of computing mechanism including an error key for clearing the computing mechanism of an erroneous portion of a calculation, a lock connected to said platen, and connections between said error key and said lock, whereby said lock may be released by an actuation of said error key, to enable the actuation of said platen.

4. The combination with a typewriting mechanism including a platen, of computing mechanism including an error key for clearing the computing mechanism of an erroneous portion of a calculation, means brought in play by said error key for enabling the actuation of said platen, and a lock for holding said error key in its actuated position.

5. The combination with a platen, of actuating means for said platen, a lock for preventing operation of said actuating means, computing mechanism including a special key, and connections between said key and said lock, whereby said key may release said lock concomitantly with the performance of its special operation, to enable the operation of said platen by said actuating means.

[Claims 6 to 41 not printed in the Gazette.]

1,196,258. MACHINE FOR SNAPPING AND HUSKING EARS OF CORN. JOSEPH F. MAST, Millersburg, Ohio. Filed Apr. 27, 1915. Serial No. 24,285. (Cl. 130—5.)



1. A machine for snapping and husking corn, comprising snapping rolls, a table for feeding stalks sidewise from one side of the machine to the rolls, a conveyer below the table, means for directing stalks from the snapping rolls downwardly and inwardly onto the conveyer, and means for driving the conveyer to return the stalks to that side of the machine from which they were initially fed.

2. A machine of the class described comprising snapping rolls, husking rolls, a conveyer below the rolls, means for feeding stalks from one side of the machine to the snapping rolls, means for directing stalks from the snapping rolls onto the conveyer, said husking rolls constituting means for discharging husks onto the conveyer, and means for driving the conveyer to return the stalks and husks to that side of the machine from which they were initially fed.

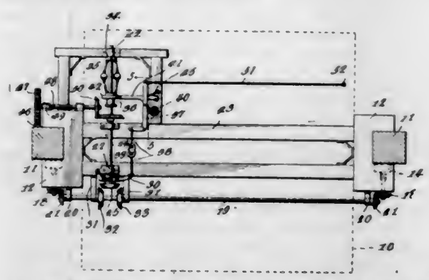
3. A machine for snapping and husking corn, including snapping rolls, a table for feeding stalks sidewise from one side of the machine to the snapping rolls, husking rolls for receiving the ears from the snapping rolls, a conveyer arranged transversely under the snapping and husking rolls, means for guiding stalks from the snapping rolls and into position on the conveyer and below the husking rolls, said husking rolls constituting means for discharging husks onto the conveyer, means for actuating the conveyer to direct the stalks and husks toward that side of the machine from which they were initially fed, and means for delivering said stalks and husks from said side of the machine.

1,196,259. PROCESS FOR THE PURIFICATION OF UNSATURATED HYDROCARBONS CONTAINING THE CONJUGATED BOND. FRANCIS EDWARD MATTHEWS, Blackheath, and EDWARD HALFORD STRANGE, London, England. Filed Mar. 16, 1915. Serial No. 14,779. (Cl. 23—24.)

1. In a process of purifying unsaturated hydrocarbons having a conjugated double bond, the step which consists in reacting thereon with sulfur dioxid in presence of a halogen-containing body serving to promote the formation of a crystallizable sulfoxid.

2. In a process of purifying isoprene, the step which consists in reacting thereon with sulfur dioxid in presence of a halogen-containing body serving to promote the formation of a crystallizable sulfoxid.

1,196,260. SAFETY DEVICE FOR ELEVATORS. FRANK W. MAYFIELD, Bloomington, Ind. Filed Dec. 11, 1915. Serial No. 66,320. (Cl. 187—90.)



1. The combination with an elevator car and fixed upright guides in the elevator shaft, of head blocks carried by said car and slidable on said guides, brake shoes operable through the head blocks for engagement with the guides, oppositely rotatable operating means for the brake shoes, a single operating shaft for said operating means, a cross shaft, disengageable driving means between said cross shaft and the first shaft, governor means on said cross shaft, and resiliently operated means controlled by said governor means for causing the operative engagement of said driving means.

2. The combination with an elevator car and upright guides in the elevator shaft, of head blocks carried by said car and slidable on said guides, brake shoes operable through the head blocks for engagement with the guides, oppositely rotatable operating means for the brake shoes, a single operating shaft for said operating means, a cross shaft, a governor carried by the cross shaft, disengageable driving means between the cross shaft and the first-mentioned shaft, resiliently actuated means for causing when released operative engagement of said driving means, and a trip mechanism controlled by the governor for releasing said actuated means.

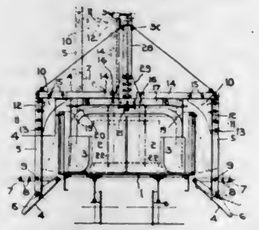
3. In a safety attachment for elevator cars, the combination with an elevator car, fixed vertical guides therefor, and a vertical rack on one of said guides, of blocks slidably engaging the guides, a brake shoe slidable within each block for frictionally engaging the guides, a bolt threaded in each block to actuate the brake-shoe, a shaft to operate the bolts, a second shaft, a gear-wheel thereon in engagement with said rack to rotate said shaft by the movement of the car, a control shaft operated by said second shaft, disengageable driving means between the control shaft and the first-mentioned shaft, resiliently actuated means for causing when released operative engagement of said driving means, and a trip mechanism controlled by the governor for releasing said resiliently actuated means when said elevator exceeds a predetermined speed.

4. In a safety attachment for elevator cars, the combination with an elevator car and upright guides therefor, of blocks slidably engaging the guides, brake shoes slidable in each block for frictional engagement with the uprights, a bolt threaded in each block, said bolts when rotated actuating the brake shoes in unison, a shaft having means thereon to rotate said bolts, a control shaft rotatable by the movement of the elevator car, governor means operable at one end of said controlling shaft, a sliding gear at the other end of said shaft forming disengaging means for imparting motion to the bolt rotating shaft, intermediate means for causing engagement of said disengageable driving means, and a trip mechanism controlled by the governor for causing the operation of said intermediate means.

5. The combination with an elevator car, and upright guides, of head blocks slidable upon the guides, brake shoes operable through the blocks to frictionally engage the guides, oppositely rotatable bolts controlling movement of the shoes, a shaft for rotating the bolts, a cross shaft, a governor carried at one end of the cross shaft, a sliding gear carried at the other end of the cross shaft for a governor-determined engagement with the first said shaft, and lever means between the governor and the sliding gear and resiliently impelled to cause an operation of the first said shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,196,261. ATTACHMENT FOR UNLOADING APPARATUS. ALFRED AYRE MELLOR, Montreal, Quebec, Canada. Filed Dec. 28, 1914. Serial No. 879,366. (Cl. 214—10.)



1. In flash boards for unloading apparatus, a frame having posts extending upwardly therefrom, and a plurality of cross and longitudinal beams, suitable supports for said frame, arms extending outwardly from the lower ends of said posts and pivotally secured at their inner ends, connecting bars pivotally joined to and supported from the outer ends of said arms, a flash board or plate pivotally joined to the lower ends of said connecting bars and a block and tackle connecting the outer ends of said arms with the upper ends of said posts for raising and lowering said arms.

2. In flash boards for unloading apparatus, a frame formed of cross and longitudinal beams and posts projecting upwardly therefrom, a frame supporting the aforesaid frame, arms extending outwardly from the lower ends of said posts and pivotally secured at their inner ends, brackets carried at the outer ends of said arms, connecting bars pivotally joined to said brackets, a flash board or plate pivotally and adjustably joined at the lower ends of said connecting bars and a block and tackle for raising and lowering said arms.

3. In flash boards for unloading apparatus, the combination with an unloading plow, of a pair of flash boards, a frame rigidly secured to the rear mold boards of said plow, a frame rigidly secured to the pilot mold boards of said plow, a frame pivotally secured to the aforesaid frames, arms extending outwardly from said pivot frame beyond each side of the plow, means for suspending said flash boards from said arms and means for raising and lowering said arms.

4. In flash boards for unloading apparatus, the combination with a plow having pilot and rear mold boards, of a plurality of flash boards or plates, a frame having uprights, cross and longitudinal bars and rigidly secured to said rear mold boards, a frame having uprights and a cross bar rigidly secured to said pilot mold boards, a frame having longitudinal and cross beams pivotally secured at its front end to said frame from the pilot, and intermediate of its length to said frame from the rear mold boards and posts extending upwardly centrally from the cross beams, a plurality of arms extending beyond the longitudinals of said pivoted frame at each side and pivotally secured at their inner ends, connecting bars extending from the outer ends of said arms and having pivotal connection therewith and adjustably supporting said flash boards or plates at their lower ends, and means extending from the upper ends of said posts to the outer end of said arms for raising and lowering the latter.

5. In flash boards for unloading apparatus, a frame having posts extending upwardly therefrom, said frame including a plurality of cross and longitudinal beams, supports for the frame, arms extending from the lower ends of said posts and pivoted at their inner ends, connecting bars pivotally joined to said arms, a flash board or plate pivotally joined to the lower ends of said connecting bars, a means for lowering said arms.

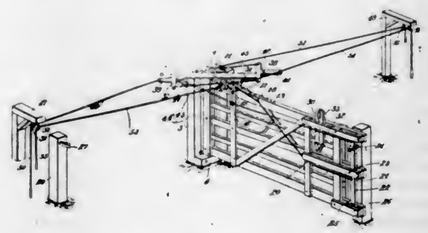
[Claims 6 and 7 not printed in the Gazette.]

1,196,262. IRONING-BOARD COVER. ELLA MELTON, St. Louis, Mo. Filed Oct. 17, 1912. Serial No. 726,312. (Cl. 68—1.)



An ironing board cover comprising a body portion, fabric loops secured to the adjacent edges of said body portion, an endless draw string engaged in said loops, said body portion, loops, and draw string forming a sleeve, said parts of said sleeve being non-removably mounted to each other when said cover is attached or detached to or from an ironing board and a fabric loop secured to one end of said body portion, said end loop providing means for closing one end of said sleeve when a portion of said draw string is engaged and drawn through said end loop.

1,196,263. FARM-GATE. GEORGE L. MILLER, Orange, Va. Filed July 1, 1915. Serial No. 37,454. (Cl. 39—31.)



1. The combination with a pivoted gate, of a bar rigidly secured across the top of the gate and arranged at an acute angle to the plane of the gate, said bar having its ends curved away from the plane of the gate in order to provide the required leverage for easily closing the gate when it has been released, tripping members mounted on the extremities of the bar and connected to turn in unison, means for unlatching the gate connected to one of said tripping members, and pairs of independent operating connections extending at each side of the gate, the connections of each pair being attached to different ones of said tripping members, whereby the gate may be opened and closed from either side.

2. The combination with a pivoted gate, of a bar rigidly secured across the top of the gate and arranged at an acute angle to the plane of the gate, said bar having its ends curved away from the plane of the gate in order to provide the required leverage for easily closing the gate when it has been released, tripping members mounted on the extremities of the bar and connected to turn in unison, one of said tripping members having an extra arm, a trip rod pivotally connected to said extra arm, a hanger pivotally hung from the gate and connected to said trip rod, connecting means extending from the hanger to the latch, whereby said latch will be withdrawn when the tripping members are first actuated, and pairs of independent connections extending at each side of the gate, the connections of each pair being attached to different ones of said tripping members whereby the gate may be opened and closed from either side.

1,196,264. ANTIFRICTION-BEARING. JOHN H. MODLER, Schweinfurt-on-the-Main, Germany. Filed Jan. 4, 1913. Serial No. 740,116. (Cl. 64—62.)



1. An anti-friction bearing having inner and outer members, and a plurality of sets of rollers between said members having their surfaces inclining toward the axis of the bearing in graduated parallel lines, said members having raceways coacting with said rollers and inclining toward said axis, one line drawn from a common point in said axis passing through each one of the raceway surfaces correspondingly on opposite sides of said rollers.

2. An anti-friction bearing having inner and outer members and a plurality of sets of rollers between said members, each set of rollers having diameters differing from the other sets, the axis of the rollers of each set coinciding, the surfaces of said rollers lying in parallel lines, said members having raceways coacting with said rollers.

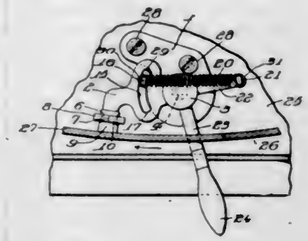
3. An anti-friction bearing having inner and outer members, and a plurality of sets of rollers between said members, each set of rollers having diameters differing from the other sets, the axes of the rollers of each set coinciding, the surfaces of said rollers lying in parallel lines, said members having raceways coacting with said rollers, the surfaces of said raceways lying in lines corresponding with the first named lines.

4. An anti-friction bearing having inner and outer members, and a plurality of sets of rollers between said members, each set of rollers having diameters different from the other sets, the axes of the rollers of each set being in a line that coincides at a point with the axis of said members, said members having raceways corresponding in distances apart substantially to the diameters of corresponding rollers of said sets, said raceways being parallel with the axis of the corresponding rollers.

5. An anti-friction bearing having inner and outer members, and a plurality of sets of rollers between said members, each set of rollers having diameters differing from the other sets, the axes of the rollers of each set being in a line that coincides at one point with the axis of said members, said members having raceways corresponding in distances apart substantially to the diameters of corresponding rollers of said sets, said raceways being parallel with the axes of the corresponding rollers, said raceways crossing lines meeting at the same point met by lines passing through the axes of the rollers and the axis of said members.

[Claims 6 to 12 not printed in the Gazette.]

1,196,265. BRAKE FOR TALKING-MACHINES. HENRY H. MURRAY, Riverton, and WILLIAM D. LA RUE, Camden, N. J., assignors to Victor Talking Machine Company, a Corporation of New Jersey. Filed Feb. 1, 1912. Serial No. 674,738. (Cl. 74—13.)



1. A brake comprising frictional means mounted to oscillate about a fixed axis, a fixed stop arranged to limit the movement of said frictional means away from an operative position, and yielding means secured to said stop and to said frictional means for holding said frictional means either in an inoperative position or in an operative position, said yielding means being normally under a tension tending to contract the same.

2. A brake comprising frictional means mounted to oscillate about a fixed axis, a fixed stop arranged to limit the movement of said frictional means away from an operative position, and yielding means secured to said stop and to said frictional means and arranged either to hold said frictional means in the inoperative position determined by said stop, or to "snap" said frictional means into and then to hold said means in an operative position, said yielding means being normally under a tension tending to contract the same.

3. A brake comprising frictional means mounted to oscillate about a fixed axis, a fixed stop arranged to limit the movement of said frictional means away from an operative position, and yielding means secured to said stop and to said frictional means and arranged either to hold said frictional means in the inoperative position determined by said stop or to "snap" said frictional means into and then to hold said means in operative position, said yielding means being arranged to act at all times in a straight line which oscillates about said stop as an axis from one side to the opposite side of the axis of oscillation of said frictional means, said yielding means being normally under a tension tending to contract the same.

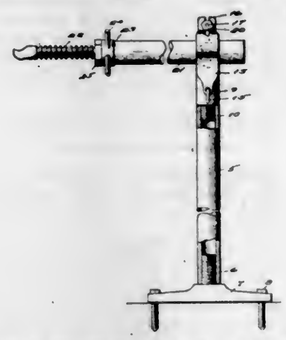
4. A brake comprising a lever mounted to oscillate about a fixed axis and provided with a slot, a fixed stop projecting through said slot to limit the movement of said lever, and yielding means connecting said lever and said stop.

5. A brake comprising a lever mounted to oscillate about a fixed axis, a fixed stop arranged to determine the inoperative position of said lever, and yielding means secured to said lever and to said stop, said yielding means being normally under tension tending to contract the same.

[Claims 6 to 18 not printed in the Gazette.]

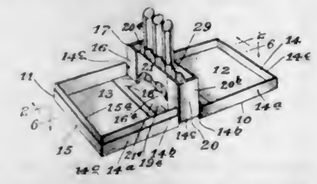
1,196,266. SUPPORT FOR DRILLS. OSCAR F. NELSON, Fort Dodge, Iowa. Filed Sept. 1, 1915. Serial No. 48,487. (Cl. 255—50.)

A support of the character described, comprising a tubular post having its lower end internally screw-threaded, an attaching extension provided with a trunnion projecting in the upper end of the tubular post and having a recess formed in one side thereof, a hasp pivotally connected with the attaching extension and having a recess disposed opposite the first named recess, a bolt connecting corresponding ends of the attaching extension and hasp, a tubular arm adapted to be arranged within the recesses, a jack-screw arranged within the outer end of the tubular arm, an operating nut carried by the jack screw, an attaching foot for the first-named tubular post, having a screw-threaded trunnion to engage within the lower end of the first named tubular part, and screws carried by the foot to



engage with a portion of the mine to anchor the foot thereto, substantially as described.

1,196,267. CONTAINER. VICTOR NIVOIS, Brooklyn, N. Y. Filed July 30, 1914. Serial No. 854,128. (Cl. 206—41.)



1. A container comprising a pair of box shells, each having a main wall and side walls projecting from the main wall, a box-like holder between said shells having a flap hingedly connected with one of said shells on one side of said holder at a point substantially in the plane of the main wall of that shell, said holder having a flap hingedly connected with the other shell on the other side of said holder and substantially in the plane of the main wall of that shell.

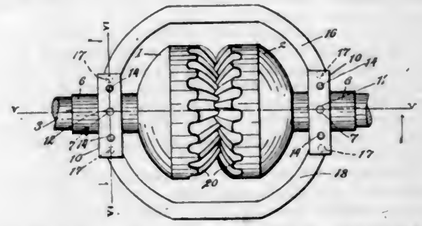
2. A container comprising a pair of box shells, a sheet adhesively secured to said box shells and constituting a hinge section connecting the shells, and a box-like holder attached to the hinge sheet.

3. A container comprising a pair of box shells, each having a main wall and side walls projecting from the main wall, a box-like holder between said shells having an open end and having a closed end, said closed end having flaps independent of said box shells extending therefrom and attached to the main walls of said box shells, said flaps constituting hinge connections for connecting said holder respectively with said shells.

4. A container comprising a pair of box shells, a sheet connecting the box shells and constituting a hinge for the same, and a box like holder secured to said hinge sheet, said holder having the opposite side walls thereof cutaway with the material formed in the cutting of the walls constituting flaps adapted to be secured to the hinge sheet to reinforce the latter.

5. A container comprising a pair of box shells each having a main wall and side walls projecting from the main wall, a holder between said shells hingedly connected with one of said shells on one side of said holder and hingedly connected with the other of said shells on the other side of said holder whereby said shells may be swung apart in opening the box to expose said holder being adapted to hold a plurality of rows of articles therein, and a keeper of wave form extending longitudinally of said holder and dividing it into two compartments one wall of which is formed by said keeper.

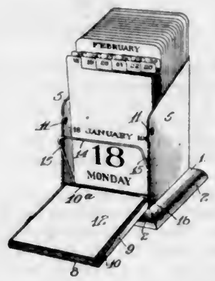
1,196,268. UNIVERSAL JOINT. ELI NOEL, Kansas City, Mo. Filed Oct. 25, 1915. Serial No. 57,722. (Cl. 74—19.)



1. In a universal joint, the combination, of oppositely disposed operatively engaged gear wheels having radially extending convex cogs or teeth and provided with individual shafts having cogs or teeth on their inner ends adapted for operative engagement, a sleeve secured on said shafts and provided with oppositely disposed pivot pins, turn-tables pivotally mounted on said sleeves, and pivotally mounted outwardly bowed yokes connected between the ends of said turn-tables and surrounding said gear wheels.

2. In a universal joint, the combination, of oppositely disposed operatively engaged gear wheels having radially extending convex cogs or teeth and provided with individual shafts having cogs or teeth on their inner ends adapted for operative engagement, turn-tables mounted on said shafts, and pivotally mounted outwardly bowed yokes connected between the ends of said turn-tables and surrounding said gear wheels.

1,196,269. MEMORANDUM-FILE. HERBERT W. OLMSTED, Rochester, N. Y., assignor to Wilson Memindex Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 10, 1915. Serial No. 13,321. (Cl. 129—16.)



1. In a memorandum file, the combination with a stationary container for cards having side, back and bottom walls, and a movable door for closing the container movable substantially to a horizontal position when the door is open, of a card support fixed at one end to the container and yieldingly engaging the closed door at the other end and adapted to limit the forward tilting of the cards when the door is opened.

2. In a memorandum file, the combination with a container for cards having side, back and bottom walls, and a hinged door for closing the container, of a card support consisting of a wire loop fastened at its ends to the container with extensions on its ends arranged to support the door and movable forwardly when the door is opened to permit a limited forward tilting of the cards, said loop being forced rearwardly when the door is closed, and retaining means for holding the door closed.

3. In a memorandum file, the combination with a container for cards open at its front, of a door for closing the front and a card support having a transverse portion extending across the open front, and side portions connected

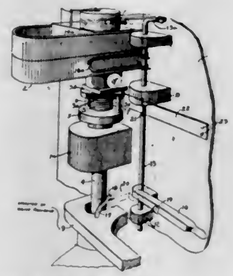
to the ends of the transverse portion and fastened at their opposite ends to the container with the extensions in supporting engagement with the door, said support being movable forwardly when the door is opened to permit the cards to tilt forwardly.

4. In a memorandum file, the combination with a container for cards having side walls, a bottom wall, and a rearwardly inclined rear wall, of a hinged door for closing the container, occupying a rearwardly inclined position when closed and means for supporting the cards in a forwardly inclined position when the door is open, said means being provided with extensions arranged to support the door.

5. In a memorandum file, the combination with a container for cards having side walls, a bottom wall, a rearwardly inclined rear wall and a hinged door for closing the container, occupying a rearwardly inclined position when closed, of a card support movable forward when the door is opened, to occupy a position permitting a forward tilting of the cards and movable rearwardly by closing the door.

[Claims 6 and 7 not printed in the Gazette.]

1,196,270. MAGNETO-DRIVE FOR INTERNAL-COMBUSTION ENGINES. JOHN A. OSTENBERG, Campbell, Cal. Filed Sept. 13, 1915. Serial No. 50,469. (Cl. 123—149.)



1. A magneto drive for internal combustion engines, comprising a yieldingly connected driving shaft and armature shaft, one or more stops positioned on said driving shaft, means secured to said armature shaft in such a position as to engage said stops, an adjustable interrupter for said arm, and governor controlled means for adjusting said interrupter.

2. A magneto drive for internal combustion engines, comprising a yieldingly connected driving shaft and armature shaft, one or more stops positioned on said driving shaft, an arm secured to said armature shaft in such a position as to engage said stops, an adjustable interrupter for said arm mounted independently of said magneto drive and in operative relation thereto, and governor controlled means for adjusting said interrupter.

3. A magneto having a timing arm, a yieldingly connected driving shaft and armature shaft, one or more stops positioned on said driving shaft, an arm secured to said armature shaft in such a position as to engage said stops, an adjustable interrupter for said arm, and governor controlled means for simultaneously adjusting said interrupter and said timing arm.

4. A magneto drive for internal combustion engines, comprising a yieldingly connected driving shaft and armature shaft, one or more stops positioned on said driving shaft, an arm secured to said armature shaft in such a position as to engage said stops, an interrupter capable of being thrown into and out of operative engagement with said arm, manually operated means for operatively positioning said interrupter and governor controlled means for automatically removing said interrupter from an operative position.

5. A magneto drive for internal combustion engines, comprising a yieldingly connected driving shaft and armature shaft, one or more stops positioned on said driving shaft, an arm secured to said armature shaft in such a position as to engage said stops, an interrupter for said arm, mounted independently of said magneto drive and having a notch formed therein to engage said arm and an outwardly turned end adapted to engage said stops, and governor controlled means adapted to remove said interrupter from engagement with said stops at a predetermined period.

[Claims 6 to 10 not printed in the Gazette.]

1,196,271. SASH-BALANCE. THEODORE L. PATRICK, Pawpaw, Ill. Filed Mar. 11, 1915. Serial No. 13,775. (Cl. 16—115.)



The combination with a window frame and sash, of a sash balancing device comprising rods disposed vertically through the sill of the frame and loosely engaging the lower rails of the sashes, means on the lower rails for retaining the rods in vertical position, springs encircling the rods below the sills and having their respective ends secured to the sill and to the lower ends of the rods, and means carried by the lower sash for engagement with the upper sash to hold the lower sash in lowered position and maintain the springs thereof under tension.

1,196,272. INSULATOR-PIN. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1912. Serial No. 737,367. (Cl. 173—321.)



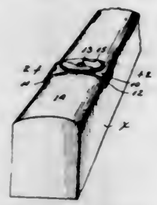
1. An insulator supporting pin structure comprising a metal truss, a bolt extending through the truss and threaded at its upper end, the upper end of the truss coöperating with the threaded end of the bolt to lock the bolt against downward movement in the truss, and an insulator supporting thimble surrounding the threaded section of the bolt and the upper end of the truss.

2. An insulator supporting pin structure comprising a hollow truss adapted to rest on a support, a bolt extending through the truss and the support on which the truss rests, the upper end of said bolt and truss having direct interlocking connection, and an insulator supporting thimble intimately surrounding the bolt and truss at the interlocking juncture.

3. An insulator supporting pin structure comprising a truss, a bolt, and a thimble for receiving the upper end of the bolt and the truss, said bolt having interlocking engagement with said truss to be held against downward movement therein independently of said thimble, said thimble when applied intimately surrounding said interlocking connection.

4. An insulator supporting pin structure comprising a vertical truss, a bolt, and a thimble for receiving the upper end of the bolt and truss, said bolt having interlocking engagement with the upper end of the truss to be held thereby against downward movement independently of the thimble, said thimble having threaded engagement with said truss.

1,196,273. CROSS-ARM SADDLE. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 6, 1916. Serial No. 89,368. (Cl. 173—321.)



1. A metal saddle plate for rounded top wooden cross-arms comprising a rounded body part for engaging with the rounded top of an arm and having downwardly extending sides for engaging with the sides of the arm to thereby strengthen the arm against splitting, the central part of the plate rounded top being raised just sufficiently to form a flat seat for the base of insulator pins, and there being a hole through the top for receiving the shanks of pins.

2. A saddle plate for rounded top wooden cross-arms pressed from a single piece of sheet metal comprising a top part rounded to fit the rounded top of an arm and having downwardly extending sides for engaging against the sides of the arm, the central portion of the plate top being deflected upwardly just sufficiently to form a flat seat for the bases of insulator pins, there being a hole at the center of the raised seat for registering with a pin hole through the arm for receiving the shanks of insulators.

1,196,274. PRODUCT AND PROCESS OF MANUFACTURING A PRODUCT HAVING THE PROPERTIES OF SOAP. GRIGORI PETROFF, Petrograd, Russia, assignor to Aktions Company "Kontakt," Petrograd, Russia. Filed July 25, 1913. Serial No. 781,170. (Cl. 87—16.)

1. A process for producing a sulfonic material having soap-like properties, which consists in mixing sulfonic acids formed by sulfonating mineral oils with an alkali and a solvent in which the sulfonic-alkali compound is readily soluble and in which unattacked portions of the mineral oil are relatively insoluble, and separating the said compound from its solvent.

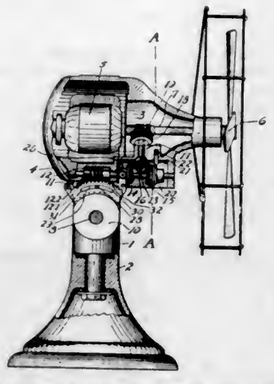
2. In a process for producing a material having soap-like properties, the steps comprising treating with an alkali and an aqueous alcohol solution, sulfonic acids formed by sulfonating mineral oils.

3. A sulfonated mineral oil sulfonic-alkali compound having soap-like properties characterized by solubility in hard water without forming a deposit.

4. A soap-like product consisting of an alkali compound of sulfonic acid formed by sulfonating mineral oils, substantially oil free, neutral and water soluble without forming deposits.

5. A material consisting of an alkaline compound of sulfonic acid formed by sulfonating mineral oil and characterized by having soap-like properties without undergoing hydrolytic decomposition in water solution.

1,196,275. AIR-CIRCULATING DEVICE. EDWIN P. PHELPS, Wilmette, Ill., assignor to Willard M. McEwen, Chicago, Ill. Filed Jan. 3, 1916. Serial No. 69,970. (Cl. 230—1.)



1. In an air circulating device, the combination of a support, a member rotatably mounted thereon, blower mechanism tiltably mounted on said member, a gear sector on said member, a gear carried by said mechanism and meshing with said gear sector, said gear being rotatably connected to said mechanism whereby said gear and rack coact to tilt said blower mechanism, and means for reversing the rotation of said gear.

2. In an air circulating device, the combination of a support, a member rotatably mounted thereon, blower mechanism tiltably mounted on said member, a gear sector on said member, a shaft journaled on said blower mechanism, a gear carried by said shaft and meshing with said gear sector, gearing connecting said shaft to be rotated by said blower mechanism whereby said gear and gear sector coact to tilt said blower mechanism, and coacting means on said gearing and said member adapted to shift said gearing for reversing the rotation of said gear.

3. In an air circulating device, the combination of a support, a member rotatably mounted thereon, blower mechanism tiltably mounted on said member, a gear sector on said member, a shaft journaled on said blower mechanism, a gear carried by said shaft and meshing with said gear sector, gearing connecting said shaft to be rotated by said blower mechanism whereby said gear and gear sector coact to tilt said blower mechanism, clutch mechanism connected to said gearing, and coacting shoulders on said clutch mechanism and said member adapted to shift said clutch mechanism for causing said gearing to alternate the direction of rotation of said gear.

4. In an air circulating device, the combination of a support, a member rotatably mounted thereon, blower mechanism tiltably mounted on said member, a gear sector formed on said member concentrically with the axis of the connection of the blower mechanism thereto, a shaft

journaled on said blower mechanism, a worm carried by said shaft and meshing with said gear sector, gearing connecting said shaft with said blower mechanism so as to be rotated thereby, and coacting means on said member and blower mechanism adapted to reverse the action of said gearing.

5. In an air circulating device, the combination of a support, a member rotatably mounted thereon, motor driven blower mechanism tiltably mounted on said member, a gear sector formed on said member concentrically with the axis of the connection of the blower mechanism thereto, a shaft journaled on said blower mechanism substantially parallel with the shaft of the motor, a worm carried by said shaft and engaging said rack, gearing for rotatably connecting said shaft with the motor, an arm connected to said gearing, and a shoulder on said member adapted to be engaged by said arm for shifting said gearing so as to reverse the driving action of said worm.

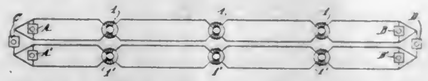
1,196,276. LIQUID COATING COMPOSITION. ALFRED R. PICKER, St. Louis, Mo., assignor to Durlacque Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 26, 1914. Serial No. 847,364. (Cl. 134—1.)

1. A composition of matter comprising Pontianak gum copal and shellac in substantially the proportions specified, dissolved in a volatile solvent thereof.

2. A composition of matter comprising the following ingredients in substantially the following proportins: Pontianak gum copal, about ninety pounds; shellac, ten pounds; alcohol, fourteen gallons; and benzol, six gallons.

3. A composition of matter comprising Pontianak gum copal and shellac dissolved in alcohol and benzol and whiting in substantially the proportions specified.

1,196,277. LOADING-COILS FOR PHANTOM CIRCUITS ON AERIAL LINES. HENNING BERNHARD MATHIAS PLEIJEL and AXEL HERMAN OLSSON, Stockholm, Sweden. Filed Apr. 27, 1914. Serial No. 834,665. (Cl. 178—46.)



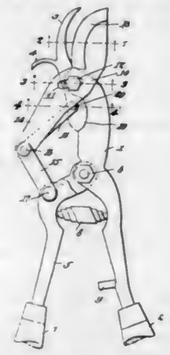
1. In an overhead duplex line loaded according to the Pupin system, wherein the main lines are loaded by double coils, induction coils wherein stray fields are produced by the currents in the duplex connection, while the main lines are, by means of said stray fields, loaded as branches of the duplex line.

2. In an overhead duplex line loaded according to the Pupin system, wherein the main lines are loaded by double coils, induction coils inclosed in non-conducting and non-hydroscopic casings and wherein stray fields are produced by the currents of the duplex connection, while the main lines are, by means of the said stray fields, loaded as branches of the duplex line.

1,196,278. PRUNING-SHEARS. ALFRED W. POOLE, Covina, Cal. Filed Jan. 8, 1916. Serial No. 71,020. (Cl. 30—11.)

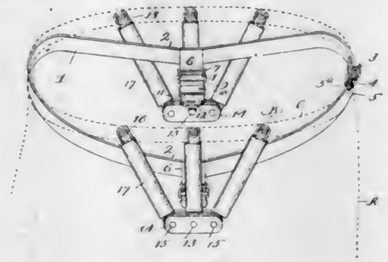
1. Shears comprising a lever having a jaw at its outer end, a second lever pivoted to the first mentioned lever remote from the jaw, a third lever crossing the first mentioned lever and slidably connected therewith adjacent said jaw, the third lever having an outer arm providing a cutter coöperating with said jaw and having an inner arm, and a pair of links pivoted to said arm, one of said links being pivoted to the second lever and the other being pivoted to the first mentioned lever adjacent the third lever.

2. Shears comprising a lever having a jaw at its outer end, a second lever pivoted to the first mentioned lever remote from the jaw, a third lever crossing the first mentioned lever adjacent said jaw and having an oblique slot between its ends, a third lever having a cutter coöperating with said jaw and having an inner arm, the first mentioned lever having an element extending through said



slot, and a pair of links pivoted to said arm, one link being connected to the second lever, and the other being pivotally connected with the first mentioned lever adjacent said element.

1,196,279. TROUSERS-SUPPORTER. JOHN H. POWERS, Kansas City, Kans. Filed Jan. 3, 1916. Serial No. 69,719. (Cl. 241—9.)



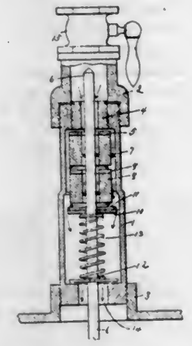
1. In a trousers supporting device, a belt to be positioned about the body of the wearer, tabs fixed to said belt, hooks carried by said tabs, other tabs having members to detachably-engage said hooks, a link adjustably-supported by each of said last-mentioned tabs, plates detachably-engaged by said links, and interchangeable supporting members attached to the plates and adapted to engage fastening members on the trousers.

2. In a trousers supporting device of the character described, a belt to be positioned about the body of the wearer and having two oppositely-disposed depressed portions, plates adjustably-secured to said depressed portions of the belt, and interchangeable supporting devices adapted to detachably-engage said plates and buttons on the trousers.

3. In a trousers supporting device of the character described, a belt to be positioned about the body of the wearer, pairs of plates, means to retain each pair of plates in spaced relation, means adjustably-connecting said plates and the belt, and interchangeable supporting devices engaging the spacing means of the plates and adapted to engage fastening devices on the trousers.

4. In a trousers supporting device, a belt to be positioned about the body of the wearer, tabs fixed to said belt, other tabs detachably-connected to the first tabs and provided with adjusting means whereby they may be taken up or let out, plates connected to the last-mentioned tabs, supporting members engaging said plates and adapted to detachably-engage buttons on the trousers, and sheaths covering said supporting members.

1,196,280. AUTOMATIC VALVE. HENRY C. PRINGLE, Fort Worth, Tex. Filed June 26, 1916. Serial No. 105,941. (Cl. 137—32.)

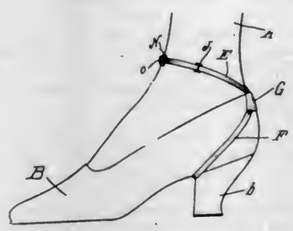


1. A valve comprising a casing, a guide stem centrally positioned therein, a perforated plug partly closing the inlet end of said casing and forming a seat, a sleeve loosely mounted on said stem, a gasket to form a seal between said sleeve and said seat, and means carried by said stem for automatically closing said sleeve and gasket on said seat.

2. A valve comprising a casing having an outlet and an inlet end, a perforated plug screwed into the inlet end of said casing, a guide stem centrally positioned in said casing and projecting through said plug, said plug forming a sealing seat, sleeves mounted in said casing and concentrically about said stem, a cup rigid with said stem, a gasket in said cup, a gasket between adjacent sleeves, a gasket between said seat and the adjacent sleeves, and yielding means normally holding said cup and said sleeves in sealing position.

3. A valve comprising a casing having an outlet and an inlet, a perforated plug screwed into the inlet end and forming a sealing seat, a guide stem centrally positioned in said casing and movable therein, a plurality of sealing elements mounted loosely on said stem and having passages therethrough for fluids, and means carried by said stem for automatically closing said sealing elements against said seat.

1,196,281. SUPPORT FOR FOOT-COVERING. WILLIAM F. QUARTERS, Providence, R. I. Filed Apr. 12, 1915. Serial No. 20,631. (Cl. 36—1.)

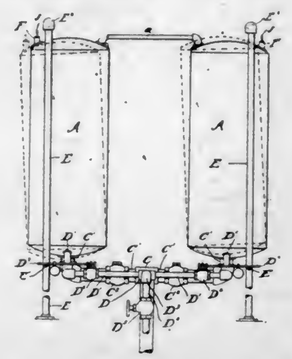


A shoe support comprising two continuous loop portions, one of said loop portions arranged to embrace a shoe heel, the second loop portion adapted to embrace an ankle, and a member slidably engaging the support intermediate the loop portions adapted to rest against the body of a shoe.

1,196,282. CLEANSING COMPOUND. ELISHA L. RADER, Seattle, Wash., assignor to Metropolitan Window Shade Company, Seattle, Wash., a Corporation of Washington. Filed Dec. 6, 1915. Serial No. 65,400. (Cl. 87—5.)

A cleansing compound consisting of a mixture of oxalic acid, sodium carbonate, and sodium sulfite in hot water in the proportions and manner as set forth.

1,196,283. STEAM-TRAP. THOMAS G. RAKESTRAW, Detroit, Mich. Continuation of application Serial No. 777,385, filed July 5, 1913. This application filed Oct. 2, 1915. Serial No. 53,858. (Cl. 137—101.)



In an apparatus of the character described, a suitable frame including spaced uprights, a pair of tilting receiving tanks connected together and supported upon trunnions that they may tilt as a single unit, each tank having a relief valve and each upright having a lateral projection extending over the respective tank, suitable pipe connections to convey water to the respective tanks, check valves controlling the delivery of water through said pipes, pipe connections leading from the tanks to a boiler, check valves controlling said last named connections, a steam pipe connection between the boiler and each of the tanks, and steam valves adapted to be automatically opened and closed to govern the alternate delivery of steam through said pipe connection with the respective tanks actuated through the tilting of the trap upon alternate delivery of the water to the respective tanks and the relief valves of the tanks being brought alternately into engagement with the respective lateral projections of said uprights to operate the relief valves.

1,196,284. ATTACHMENT FOR STEERING-GEARS. GEORGE P. RASCK and ALFRED G. RASCK, Des Moines, Iowa; said Alfred G. Rasck assignor to said George P. Rasck. Filed July 26, 1915. Serial No. 42,081. (Cl. 21—200.)



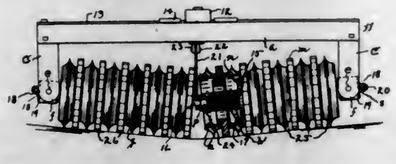
1. In a device of the class described, a support, a pivot member thereon, a pair of levers pivoted on said pivot member having forwardly extending and rearwardly extending arms, a spring secured to each of the forwardly extending arms tending to draw them together, an arm pivoted on said pivot member, means on said arm for engaging the rearwardly extending arms of the levers for

selectively moving the forwardly extending arms of the levers for increasing the tension on said spring, and means for limiting the movement of each lever in one direction.

2. In a device of the class described, a support, a pivot member thereon, a pair of levers pivoted on said pivot member, said levers being crossed and each having a forwardly and rearwardly extending arm, a spring secured to the forwardly extending arms, tending to draw them together, means for limiting the movement of said forwardly extending arms toward each other, and means adapted to be connected with the steering rod of a vehicle for moving said forwardly extending lever arms away from each other.

3. In a device of the class described, a support, a pivot member thereon, a pair of levers pivoted on said pivot member, having forwardly extending and rearwardly extending arms, means for limiting the movement of each lever in one direction, means tending to yieldingly move said levers in another direction, an arm pivoted on said pivot member, means on said arm for engaging said levers for selectively moving them for increasing the tension on said yielding means.

1,196,285. PACKING AND MULSHING IMPLEMENT. LAURITS T. RASMUSSEN, Council Bluffs, Iowa, assignor to Walker Manufacturing Company, Council Bluffs, Iowa, a Corporation of South Dakota. Filed June 28, 1915. Serial No. 36,606. (Cl. 55—47.)



1. An implement for the purpose described, comprising, in combination with a vehicle frame provided at each of its ends with a bracket, a pair of shafts flexibly connected at their inner ends, their outer ends being flexibly mounted in said brackets, a plurality of crushing elements on each shaft, a pivotally mounted link supported by the frame and flexibly connected with said shafts to permit them to move longitudinally in said brackets and to permit them to swing in a limited arc, and means to limit the longitudinal movements of the shafts in said brackets.

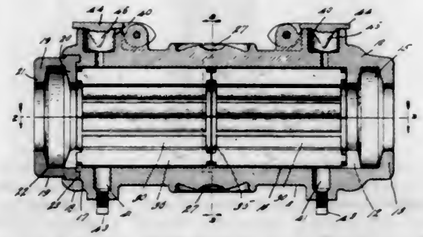
2. In an implement for the purpose described, a vehicle frame provided with brackets at its ends, a pair of bearing-heads each being mounted pivotally in a bracket to permit swinging movements substantially at right angles to the line of draft, sleeves provided with slots and mounted in the bearing-heads, a pair of shafts flexibly connected at their inner ends, each of their outer ends being disposed in a sleeve, a plurality of crushing elements circumscribing each shaft, a member engaging one of said shafts and connected with the vehicle frame for permitting coincident longitudinal and swinging movements of the shafts and for maintaining the shafts during their movements substantially at right angles to the line of draft, and means disposed in the slots of the sleeves in engagement with the shafts for limiting the longitudinal movements of said shafts in one direction.

3. An implement for the purpose described, comprising, in combination with a vehicle frame provided at each of its ends with a bracket, a shaft provided at one of its ends with a ball, a second shaft provided at one of its ends with a cylindrical housing, said shafts being disposed end to end with their outer ends flexibly mounted in said brackets, the ball at the end of the first named shaft being disposed in the cylindrical housing of the second shaft, a wheel journaled on said cylindrical housing, wheels journaled on each shaft, a link pivotally supported by the frame and flexibly connected with one of said shafts for permitting the shafts to move longitudinally while swinging in a limited arc, and means on the shafts for limiting their longitudinal movements.

1,196,286. [WITHDRAWN.]

1,196,287. [WITHDRAWN.]

1,196,288. ROLLER-BEARING. MILTON O. REEVES, DARCY E. LEWELLEN, and LENNIOUS P. EVERROAD, Columbus, Ind., assignors to Reeves Pulley Company, Columbus, Ind., a Corporation of Indiana. Filed Dec. 2, 1915. Serial No. 64,612. (Cl. 64—62.)



1. A roller bearing, comprising two mating main members provided at one end with flanges projecting inwardly toward the shaft and open at the other end so that the interior surface of such members may be formed by a drill inserted through such open end, and mating end members also provided with inwardly projecting flanges, said end members being mounted on the first two members at the open end thereof, said end members and said first two members being provided with a coöperating annular tongue and groove for relatively positioning them.

2. A roller bearing, comprising two mating main members provided at one end with flanges projecting inwardly toward the shaft and open at the other end so that the interior surface of such members may be formed by a drill inserted through such open end, and mating end members also provided with inwardly projecting flanges, said end members being mounted on the first two members at the open end thereof, said end members and said first two members being provided with a coöperating annular tongue and groove for relatively positioning them, said first two members being provided at their open end with an axially projecting annular flange extending over the end members, and the end members being provided with a shoulder over which the edge of said annular flange may be peened.

3. A roller bearing, comprising two mating main members provided at one end with flanges projecting inwardly toward the shaft and open at the other end so that the interior surface of such members may be formed by a drill inserted through such open end, and mating end members also provided with inwardly projecting flanges, said end members being mounted on the first two members at the open end thereof, said first two members being provided at their open end with an axially projecting annular flange extending over the end members, and the end members being provided with a shoulder over which the edge of said annular flange may be peened.

4. A roller bearing, comprising a plurality of tubular rollers, a cage in which the rollers are loosely carried, wires extending axially through the rollers and fastened to the cage to hold the rollers in the cage when the cage is removed, said wires being spaced from the interior surfaces of the rollers, and the rollers being slightly circumferentially movable in said cage and layers of felt surrounding such wires and located within the rollers.

5. A roller bearing, comprising a plurality of tubular rollers, a cage in which the rollers are loosely carried, wires extending axially through the rollers and fastened to the cage to hold the rollers in the cage when the cage is removed, said tubular rollers being slightly circumferentially movable in said cage and provided with transverse holes connecting their inner and outer surfaces.

[Claims 6 to 9 not printed in the Gazette.]

1,196,289. COALING AND WATERING DEVICE FOR MOVING TENDERS. WILLIAM H. RICE and JAMES T. RICE, St. Louis, Mo. Filed Dec. 5, 1912. Serial No. 735,144. (Cl. 214—1.)



1. A device of the class described comprising a loading carriage compartments located therein, a drop bottom located in one compartment, a valve located in the other compartment a trigger mechanism for releasing the drop bottom and valve simultaneously in combination with an elevated trestle work constructed over the railroad right of way, the said trestle work having a track on which the carriage travels and a second track above the wheels of the carriage and said carriage being so arranged as to be released and permitted to travel in advance of the moving train by automatic contact with the moving train, substantially as specified.

2. A device of the class described comprising an elongated structure provided with a horizontal track and a concave track a two compartment carriage mounted thereon, a set of wheels mounted on the bottom of the carriage for operating on the horizontal track, a set of wheels mounted near the upper edge of the carriage for operating on the concave track, one of the compartments provided with a hinged bottom and adapted to hold coal, the other compartment having a circular opening and adapted to hold water, a valve located in the circular opening, a valve stem attached to the valve, a lever pivotally mounted on the carriage to which the valve stem is attached, a rod attached to one end of the lever, links attached to the rod and the bottom of the coal compartment so that the valve is raised from its seat when the bottom of the coal compartment is dropped, a latch mechanism for holding the bottom of the coal compartment in closed position, a lever for releasing the latch mechanism, a projection located on the tender for operating said lever, a latch and lever mechanism for holding the carriage in starting position on the concave track, a tripping mechanism mounted on the tender for releasing the carriage and a means on the tender for holding the carriage in locked position while the same is delivering its contents into the tender, substantially as specified.

1,196,290. PROCESS OF TREATING WASTE LIQUORS FROM PULP-MILLS. ERIK LUDVIG RINMAN, Harnäs, Sweden. Filed Mar. 12, 1912. Serial No. 683,304. (Cl. 92—2.)

1. The process of treating black liquors from pulp mills so as to regenerate the sodium carbonate and recover aldehydes, ketones and alcohols which comprises dry distillation of salts of organic acids contained in the said liquors intimately mixed with a strong basic hydrate in the presence of preferably superheated steam.

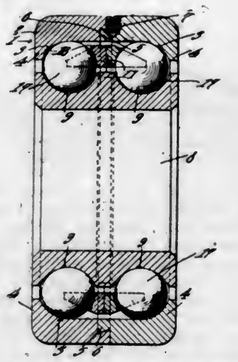
2. The process of treating black liquors from pulp mills so as to regenerate the sodium carbonate and recover aldehydes, ketones and alcohols which comprises dry distillation of salts of organic acids contained in the said liquors intimately mixed with hydrate of lime in the presence of preferably superheated steam.

1,196,291. BRASSIÈRE. JANE C. RIPLEY, Newark, N. J. Filed Feb. 19, 1916. Serial No. 79,302. (Cl. 2—73.)



A garment of the brassière type, comprising a body portion having its right and left front sections crossing each other diagonally and provided at their lower ends with left and right hose-supporters, respectively, for the purpose described.

1,196,292. BALL BEARING AND RETAINER. WILLIAM M. ROHN, Detroit, Mich., assignor to Eureka Ball Bearing Company, Rockford, Ill. Filed July 3, 1915. Serial No. 37,962. (Cl. 64—59.)

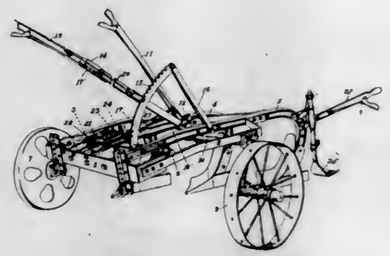


In a device of the class described, coöperating parts comprising an inner member and an outer member, one of which members includes a pair of rings located side by side, one ring being provided with a parti-circumferential dove-tailed rib and the other ring being provided with a parti-circumferential dove-tailed recess adapted to receive the rib upon relative movement between the rings, thereby to prevent a lateral separation of the rings; a set screw threaded into the recess carrying ring and engaging the rib; balls located between the inner and outer members; and an annular ball retaining means located between the inner and outer members, the lateral edges of the ball retaining means being provided with spaced ball receiving seats defining lugs, the lugs having V-shaped notches at their outer ends and spaced equally from the seats, the notches defining bendable fingers which are adapted to be circumferentially flexed simultaneously in opposite directions by a single manipulation of a tool inserted into the notch, to form retaining elements for the balls, the ball retaining means being beveled adjacent its edges to taper the fingers.

1,196,293. GANG-PLOW. MICHAEL J. RYAN, Fargo, N. D., and JOHN KIEL, Moline, Ill., assignors to Deere and Company, Moline, Ill., a Corporation of Illinois. Filed Apr. 8, 1911. Serial No. 619,849. (Cl. 97—36.)

1. A plow mechanism adapted to be drawn by a tractor, having, in combination, a main plow frame, a plurality

of diagonally arranged plow bodies rigidly connected to each other and to the frame, a front furrow wheel, a land wheel, said wheels being adapted to be relatively stationary while the frame advances and cause the raising of the frame at the front end, and simultaneously tilt upward the points of the plows and cause them to move to the surface of the ground while the frame is advancing and the wheels are relatively stationary, a vertically adjustable ground support at the rear of the bodies arranged to run in the furrow, and actuating means for forcing said support downward in relation to the frame to lift the bodies and frame and secure them in position to carry the bodies at a distance above the bottom of the support greater than the distance between them when in the furrow.



2. A plowing mechanism adapted to be drawn by a tractor, having, in combination, a main plow frame, a plurality of diagonally arranged plows rigidly connected to each other and to the frame, a front furrow wheel, a land wheel, crank arms for said wheels hinged to the forward part of said frame and normally inclined forward and downward, and adapted to permit said wheels at option to be relatively stationary while the crank arms are swinging backward and the frame is moving forward under force from the draft and moving upward under force from the wheels, the plow bodies being arranged to have their points tilted upward by the frame as it rises, whereby they are caused to rise to the surface of the ground, a vertically adjustable ground-contacting shoe or support at the rear of the plows arranged to run in the furrow, and power-applying devices for lifting the bodies on the said support beyond the normal distance from the bottom of the support, and holding the bodies in elevated position.

1,196,294. LENS-SLITTING DEVICE. ALVA L. SANDERSON, Kansas City, Mo. Filed Nov. 5, 1915. Serial No. 59,744. (Cl. 51—11.)

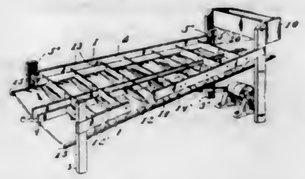


1. In an apparatus of the character described, a lens cup comprising a bottom member and an edge flange, having slots in substantial alinement with the longitudinal axis of the cup, for the purpose set forth.

2. In an apparatus of the character described, a lens cup comprising a bottom member and an edge flange, having slots in substantial alinement with the longitudinal axis of the cup, and having slots in the opposite end at one side of the major axis, for the purpose set forth.

3. In an apparatus of the character described, a lens cup comprising a bottom member and an edge flange, having slots in substantial alinement with the longitudinal axis of the cup, and having an aperture in said bottom member, for the purpose set forth.

1,196,295. CONCENTRATING-TABLE. GEORGE PETRIE SANDIE, Thessalon, Ontario, Canada. Filed Mar. 27, 1916. Serial No. 87,135. (Cl. 83—88.)



1. A concentrating table comprising a frame, a table hung within said frame, laterally extending settling boards secured on said table and having the upper surface thereof corrugated and dividing said table into a plurality of compartments and means for reciprocating said table said boards being tapered both longitudinally and transversely.

2. A concentrating table comprising, a frame, a table hung within said frame and reciprocal therein and inclined toward each side edge thereof, a partition board extending longitudinally up the center of said table, a plurality of wedge shaped settling boards secured on said table and extending from said partition to the outer side edges thereof and horizontally corrugated on their upper surface and tapered to points at their outer extremities and adjustable in relation to the incline of said table, cover plates hung from said table frame and extending over said settling boards and means for reciprocating said table.

3. A concentrating table comprising a frame, a table divided longitudinally into two sections inclined transversely toward each other and also inclined longitudinally, a plurality of transversely extending settling boards mounted on the two sections of the table and forming a plurality of pockets therewith and means for oscillating the said table.

4. A concentrating table comprising a frame, a table divided longitudinally into two sections provided at the adjacent edges with division walls, the said sections being inclined inwardly toward the said division walls and being also inclined longitudinally and tapering from the top of the table outwardly toward the bottom thereof, transversely extending bars operatively supporting the upper and lower ends of the table, resilient means connecting the bars to the frame and means for oscillating the said table.

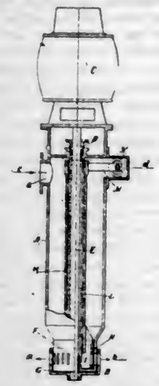
1,196,296. SIREN FOR SUBMARINE SIGNALING. FERDINAND FRIEDRICH CARL SCHENKELBERGER, Kiel, Germany. Filed July 23, 1913, Serial No. 780,706. Renewed July 20, 1916. Serial No. 110,413. (Cl. 116—18.)

1. A submarine siren adapted to be protruded from an opening in the wall of a ship, comprising in combination a stator, a rotor arranged outside of said stator, a slide valve for giving the signals arranged inside of said stator, and means for operating said rotor and said slide valve from the interior of the ship while excluding from the ship water under pressure or external water.

2. A submarine siren adapted to be protruded from an opening in the wall of a ship, comprising in combination a stator, a rotor arranged outside thereof, a standpipe within said stator, a driving shaft extending through said standpipe and operatively connected with said rotor, and a slide valve disposed within the space between the stator and said standpipe.

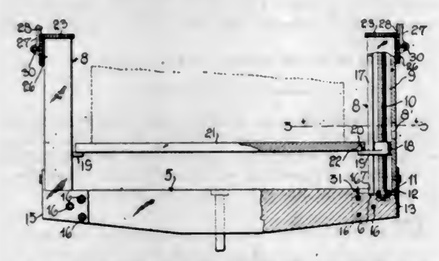
3. A submarine siren adapted to be protruded from an opening in the wall of the ship, comprising in combination a stator, a rotor disposed outside said stator, a standpipe within said stator, an operating shaft for said rotor disposed within said standpipe and passing through a bearing

normally immersed in water, and a slide valve disposed within the space between said stator and said standpipe.



4. A submarine siren adapted to be protruded from an opening in the wall of a ship, comprising in combination a casing having its outer end in the form of a stator, a standpipe within said casing forming an isolated annular fluid space, a slide valve disposed within said space, a shaft passing through said standpipe, and a rotor fixed on the projecting end of said shaft and disposed outside of said stator.

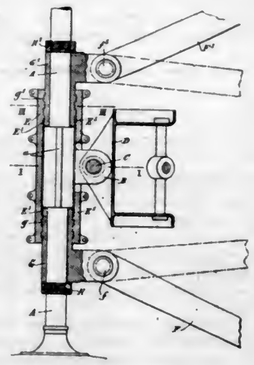
1,196,297. WAGON-BOX-ADJUSTING DEVICE. JOHN SCHUSS, Albany, Minn. Filed Nov. 6, 1915. Serial No. 60,007. (Cl. 21—20.)



1. The combination with a wagon bolster, of hollow vertical stakes, a channeled shoe fixed to each end of the bolster to which the respective stakes are fixed at their lower ends, the upper surface of the bolster adjacent to each stake being recessed, each of said stakes being provided with a slot in its inner vertical wall, adjusting screws mounted in the stakes, a sleeve threaded upon each screw and having an arm projecting outwardly through the slot in the wall of the sleeve, said arms in the lowermost positions seating in the recesses in the upper face of the bolster, the outer wall of each stake being provided with an opening for the insertion of said sleeves within the stake, a wagon body supporting bar detachably connected at its ends to the arms on said sleeves, and manually operable means for rotating the adjusting screws.

2. The combination with a wagon bolster, of vertical stakes fixed upon the opposite ends of said bolster, adjusting screws rotatably mounted in the respective stakes, each of said stakes being provided with a slot, sleeves threaded upon the screws and having arms projecting laterally through said slots each provided with an upstanding stud, a wagon box supporting bar detachably engaged at its ends upon said studs, a pinion fixed upon the upper ends of the respective adjusting screws, a gear journaled upon each of the stakes and meshing with the respective pinions, manually operable means associated with each of the gears to rotate the same and impart a rotative movement to the adjusting screws, and an operating member connecting said manually operable means to operate the same in unison whereby the sleeves are caused to travel upon the screws and elevate the wagon box.

1,196,298. FIELD-GUN CARRIAGE. EUGÈNE SCHNEIDER, Paris, France. Filed July 1, 1915. Serial No. 37,539. (Cl. 89—40.)



1. In a gun carriage, an axle, trail supporting members revolubly mounted on said axle, and a sleeve engaging said axle and said members for causing the movements of said members around the axle to have definite relations to one another, the said sleeve being fixed against angular movements around the axle.

2. In a gun carriage, an axle, trail members associated with said axle, and a sleeve-like member having sliding engagement with said axle and having screw-threaded engagement with said trail members for causing the movements of said trail members with respect to the axle to have definite relations to one another.

3. In a gun carriage, an axle, trail supporting members revolubly mounted on said axle, and a sleeve-like member embracing said axle and engaging with said supporting members for transmitting movement of one of said members to the other of said members angularly around the axle in a direction opposite to the movement of the first-mentioned member.

4. In a gun carriage, an axle, a member extending from said axle for supporting a gun cradle, trail supports revolubly mounted on said axle, and means longitudinally slidable on said axle and engaging said trail supports for transmitting motion of one of said supports to another of said supports.

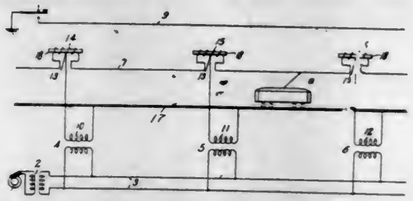
5. In a gun carriage, an axle, trail supporting members revolubly mounted on said axle, a sleeve coaxial with said axle and having movable engagement with said axle and said members for causing the movements of said members around the axle to have definite relations to one another, and a gun support carried by said axle.

[Claims 6 to 18 not printed in the Gazette.]

1,196,299. MEANS FOR MINIMIZING INDUCTIVE INTERFERENCE. CHARLES F. SCOTT, New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 2, 1915. Serial No. 168. (Cl. 171—97.)

1. Means for minimizing electromagnetic inductive disturbances between parallel conductors comprising an impedance coil connected in series with the inducing conductor, a source of alternating-current supply, and a conductor connected to an intermediate point on the impedance coil whereby one terminal only of said source is connected to said inducing conductor.

2. Means for minimizing electromagnetic inductive disturbances between parallel conductors comprising a plurality of spaced impedance coils connected in series circuit with the inducing conductor, a source of alternating-current supply, and conductors connected to intermediate points of the impedance coils whereby one terminal only of said source is connected at a plurality of points to said inducing conductor.



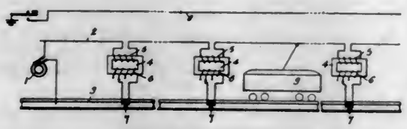
3. Means for minimizing electromagnetic inductive disturbances between parallel conductors comprising a plurality of spaced impedance coils connected in series relationship with the inducing conductor, a source of alternating-current supply, and conductors connected to midpoints on the impedance coils whereby one terminal only of said source is connected at a plurality of points to said inducing conductor.

4. Means for minimizing electromagnetic inductive disturbances between parallel conductors comprising a plurality of spaced impedance coils which are connected in series circuit with the inducing conductor, intermediate taps upon said impedance coils so spaced as to neutralize substantially the impedance of said coils when equal currents flow therefrom in opposite directions, a source of alternating-current supply, and conductors connected to said intermediate taps whereby one terminal only of said source is connected at a plurality of points to the inducing conductor.

5. Means for minimizing electromagnetic inductive disturbances between parallel conductors comprising a plurality of spaced impedance coils of normally high impedance which are connected in series circuit with the inducing conductor, an intermediate tap upon each of said impedance coils whereby the impedance thereof may be substantially lowered when equal currents flow therefrom in opposite directions, a source of alternating-current supply, and a conductor connected to each of said taps whereby one terminal only of said source may be connected to the inducing conductor.

[Claim 6 not printed in the Gazette.]

1,196,300. MEANS FOR MINIMIZING INDUCTIVE INTERFERENCE. CHARLES F. SCOTT, New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 2, 1915. Serial No. 170. (Cl. 171—97.)



1. The combination with a conductor of an independent electrical circuit, of an electrical distributing system in close proximity thereto which comprises a source of current supply, a conductor connected to one terminal thereof, a second conductor in contact with the earth connected to the other terminal thereof, and means for transferring the impedance of said second conductor to the first conductor whereby the inductive influences arising from said distributing system and impressed on said independent conductor may be substantially minimized.

2. The combination with an intelligence-transmission conductor, of an electrical distributing system in inductive relation thereto which comprises a source of current supply, a conductor insulated from the ground connected to one terminal thereof, a second conductor in contact with the earth connected to the other terminal, and means serving to confine the return current flow to said second conductor in preference to the earth whereby the inductive effects impressed upon said intelligence-transmission conductor may be substantially neutralized.

3. The combination with an intelligence-transmission conductor, of a system of electrical distribution in inductive relation thereto which comprises a source of current supply, a conductor insulated from the ground and connected to one terminal thereof, a second conductor in contact with the earth and connected to the other terminal, and means serving to transfer the impedance drop from said second conductor to the first conductor whereby the current flow through said second conductor may generate electromotive forces to neutralize those impressed on said intelligence-transmission conductor by the current flow through said first conductor.

4. The combination of an intelligence-transmission conductor, of a railway system in inductive relation thereto which comprises a source of current supply, a trolley conductor connected thereto, track rails in contact with the earth, and means serving to impress electromotive forces at intervals in the track rails whereby the inductive effects arising from the current flow in said trolley conductor may be substantially neutralized by confining the return current flow to said track rails.

5. The combination with an intelligence-transmission conductor, of a railway system in inductive relation thereto which comprises a source of current supply, a conductor connected to one terminal thereof for the transmission of power currents, a second conductor constituting a track in contact with the earth, and means to impress electromotive forces at intervals in the said second conductor to compensate for the impedance of the track whereby the current flow in said second conductor will be maintained sufficiently high to effectively neutralize the magnetic effects arising from the current flow in said first conductor.

[Claims 6 to 19 not printed in the Gazette.]

1,196,301. MEANS FOR MINIMIZING INDUCTIVE INTERFERENCE. CHARLES F. SCOTT, New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 2, 1915. Serial No. 171. (Cl. 171—97.)



1. A railway system comprising a source of current supply, a trolley conductor comprising a plurality of conducting sections, alternate sections of which are of relatively high impedance, a track, and means connected across said high-impedance sections of the trolley conductor to inductively link the trolley conductor and the track.

2. A railway system comprising a source of current supply, a trolley conductor connected thereto and constituting conducting sections of alternately high and low impedance, a track, and means connected across said high-impedance trolley conductor sections to impress electromotive forces at intervals on the track.

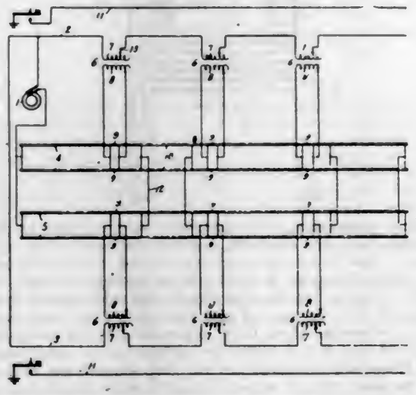
3. A railway system comprising a source of current supply, a trolley conductor connected thereto and containing conducting sections of relatively high and low impedance, said sections being alternately spaced, a track in contact with the earth, and inductive means connected across said high-impedance trolley conductor sections to confine current flow to the track in preference to the earth.

4. A system of distribution comprising a source of current supply, a conductor connected thereto and constituting conducting sections of alternately high and low impedance, a second conductor, and means connected in shunt to the high-impedance conducting sections of the first named conductor to compensate for the impedance of the second named conductor.

5. A system of distribution comprising a source of current supply, a conductor connected thereto and comprising conducting sections of alternately high and low impedance, a second conductor comprising a plurality of spaced conducting sections, and transformers serving to interlink inductively the said conductors, the primary windings of the transformers being connected in shunt to the high-impedance conducting sections of said first conductor, and the secondary windings being connected to adjacent spaced conducting sections of said second conductor.

[Claims 6 to 11 not printed in the Gazette.]

1,196,302. MEANS FOR MINIMIZING INDUCTIVE INTERFERENCE. CHARLES F. SCOTT, New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 2, 1915. Serial No. 172. (Cl. 171—97.)



1. A railway system comprising a source of current supply, a trolley conductor connected thereto, a conductor comprising a plurality of parallel tracks, spaced insulating joints correspondingly inserted in each track to form a series of rail sections insulated from one another, transformers to interlink inductively the trolley conductor with some of said tracks, and conducting bonds to electrically connect alternate rail sections of all said tracks.

2. A railway system comprising a source of current supply, a trolley conductor connected thereto, a conductor comprising a plurality of tracks, spaced insulating joints correspondingly inserted in each track to form a series of rail sections insulated from one another, transformers to inductively interlink said trolley conductor and some of said tracks, and conductors for electrically connecting in parallel relationship alternate rail sections of all said tracks.

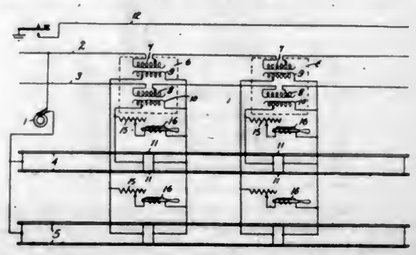
3. A railway system comprising a source of current supply, a trolley conductor connected thereto, a conductor comprising a plurality of tracks, spaced insulating joints inserted in each track to provide a series of rail sections insulated from one another, electrical connections to connect alternate rail sections of all the tracks in parallel relationship, and means to inductively interlink some of the tracks with the said trolley conductor.

4. A railway system comprising a source of current supply, a trolley conductor connected thereto, a conductor comprising a plurality of tracks, spaced insulating joints inserted in each track to provide a series of rail sections insulated from one another, electrical connections extending between alternate rail sections of all the tracks, and transformers having primary windings inserted at intervals and in series-circuit relationship with said trolley conductor and secondary windings connected in shunt to the insulating joints in some of the tracks.

5. A system of distribution comprising a source of current supply, a conductor connected to one terminal thereof, a plurality of conductors connected to the other terminal, said second conductors constituting a series of conducting sections insulated from one another, means serving to impress electromotive forces, at intervals, upon some of said second conductors, and means for connecting, in parallel relationship, certain sections of all of said second conductors.

[Claim 6 not printed in the Gazette.]

1,196,303. MEANS FOR MINIMIZING INDUCTIVE INTERFERENCE. CHARLES F. SCOTT, New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 2, 1915. Serial No. 173. (Cl. 171—97.)



1. A system of distribution comprising a source of current supply, a set of conductors connected to one terminal thereof, a second set of conductors connected to the other terminal, a plurality of spaced series transformers inductively interlinking said sets of conductors, each transformer having a single core member and primary windings inserted in series circuit relationship with said first set of conductors and secondary windings inserted in series circuit relationship with said second set of conductors, and adjustable means to proportion the return current flow in one of said sets of conductors.

2. A system of distribution comprising a source of current supply, a plurality of conductors connected to one terminal thereof, a plurality of conductors connected to the other terminal, said second conductors being provided with a plurality of correspondingly spaced insulating joints, a plurality of spaced transformers inductively interlinking all of said conductors with one another, each transformer having a single core member, primary windings upon which are inserted in series-circuit relationship with said first conductors and secondary windings upon which are connected to said second conductors across said insulating joints therein, and means to proportion, at will, the return current flow in said second conductors.

3. A railway system comprising a source of current supply, a plurality of trolley conductors connected thereto, a plurality of tracks, spaced transformers to inductively interlink all the tracks with all the trolley conductors, and means serving to proportion the current flow in each track.

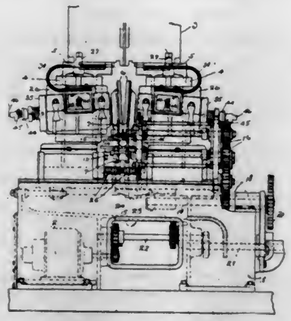
4. A railway system comprising a source of current supply, a plurality of trolley conductors connected thereto, a plurality of track circuits in contact with the earth, each of which comprises a series of conducting rail sections insulated from one another, and spaced transformers having a common core and primary windings thereon which are connected in series circuit with each trolley conductor and secondary windings which are connected to adjacent rail sections of each track.

5. A railway system comprising a source of current supply, a plurality of trolley conductors connected thereto, a plurality of tracks in contact with the earth each of which comprises a series of conducting rail sections insulated

from one another, spaced transformers having a common core and primary windings thereon which are connected in series circuit with each trolley conductor and secondary windings which are connected to adjacent rail sections of each track, and means serving to proportion the current flow in each track.

[Claims 6 to 8 not printed in the Gazette.]

1,196,304. ELECTRIC WELDING-MACHINE. FRANK L. SESSIONS, Lakewood, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 7, 1913. Serial No. 766,003. (Cl. 219—6.)



1. In mechanism of the character described, the combination of a frame comprising a base portion and two spaced standards rising above the latter; means adapted to feed work through the space between said standards; brackets vertically adjustably attached to the faces of said standards, respectively; a housing supported in each of said brackets so as to be adjustable transversely of the corresponding standard, said housing being provided with spaced bearings; a shaft journaled in the bearings in each such housing; electrode rolls carried by the inner ends of said shafts in such space between said standards; brushes having electrical contact with said shafts between said bearings; a transformer supported on but insulated from said standards, the secondary coil of said transformer having its terminals disposed adjacent to said shafts; and flexible leads connecting such transformer terminals with said brushes.

2. In mechanism of the character described, the combination of a frame comprising a base portion and two spaced standards rising above the latter; means adapted to feed work through the space between said standards; brackets vertically adjustably attached to the faces of said standards, respectively; a housing supported on each of said brackets so as to be adjustable transversely of the corresponding standard, said housing being provided with spaced bearings; a hollow shaft journaled in the bearings in each such housing; liquid supply and discharge connections with the interiors of said shafts; electrode rolls carried by the inner ends of said shafts in such space between said standards; brushes having electrical contact with said shafts between said bearings; a transformer supported on but insulated from said standards, the secondary coil of said transformer having its terminals disposed adjacent to said shafts; and flexible leads connecting such transformer terminals with said brushes.

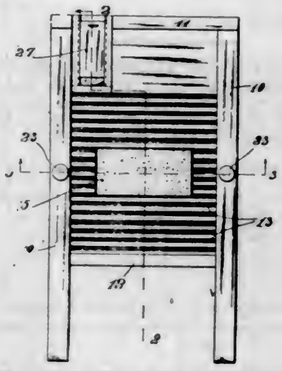
3. In mechanism of the character described, the combination with a support; of a hollow shaft rotatably mounted therein; a tube extending from one end of the said shaft to a point near the other end thereof; an electrode roll carried by and closing such latter end of said shaft; and liquid supply and discharge connections for said shaft and tube respectively at the first-named end of said shaft.

4. In mechanism of the character described the combination with a support, of a hollow shaft rotatably mounted therein; a tube extending from one end of said shaft to a point near the other end thereof; an electrode roll carried by and closing such latter end of said shaft; and means for supplying a cooling liquid to said tube and said hollow shaft.

5. In mechanism of the character described, the combination with a suitable frame; of a longitudinally extended housing endwise adjustable in said frame and provided with spaced bearings; a shaft journaled in said bearings; an electrode roll carried by one end of said shaft; and an electric contact brush pressing against said shaft between said bearings.

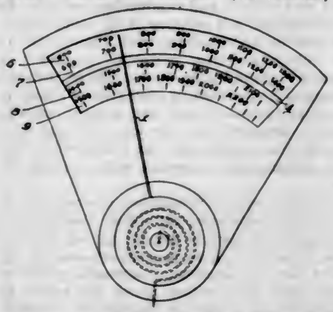
[Claims 6 to 8 not printed in the Gazette.]

1,196,305. LAUNDRY APPLIANCE. JOHN SHERIDAN, New York, N. Y. Filed Oct. 11, 1915. Serial No. 55,215. (Cl. 68—29.)



In a wash board, the combination with a frame having longitudinal side members, a corrugated scrub plate carried by said frame and having an opening through the center thereof adapted to receive a bar of soap, a single resilient support for the soap alined with said opening, rods engaged with the ends of said resilient support, said rods being screw-threaded their entire length and extended through said frames above the surface thereof, and means for the separate operation of said rods whereby the surface of the soap may be adjusted parallel with the surface of said scrub plate.

1,196,306. PYROMETER-SCALE. GLENN A. SHOOK, Urbana, Ill., assignor to Scientific Materials Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 2, 1913. Serial No. 793,058. (Cl. 73—32.)



1. A radiation pyrometer, having a scale indicating black body temperatures associated with a scale calibrated to indicate true temperatures of the body when not under black body conditions.

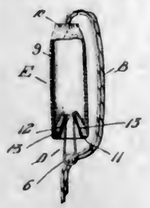
2. A total radiation pyrometer, having a scale indicating black body temperatures associated with a scale calibrated relatively to the black body scale to indicate true temperatures of the body when not under black body conditions, said scales being inscribed within arcs of circles whose center is the same as the center of movement of the pointer.

3. A total radiation pyrometer having a scale calibrated to represent true temperatures of a hot body and based upon the following formula:

$$\log. T = \log. T_0 + k$$

in which T represents the true temperature of a hot body and T_0 the black body temperature of the hot body and in which k represents a constant depending upon the material of which the body is composed.

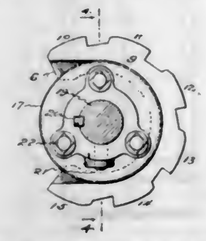
1,196,307. TAG-FASTENER. CASPER SINGERMAN, Somerville, Mass. Filed Dec. 11, 1915. Serial No. 66,277. (Cl. 40—20.)



1. A fastener of the character described, comprising male and female members, one of said members adapted for permanent connection with one end of a cord, and the other member being adapted for slidable engagement with said cord, the female member including a hollow body having an internal locking rim, the male member including a resilient U-shaped member having hook terminals for insertion within the body to automatically engage the locking rim for permanently fastening the members together.

2. The combination with a cord, of a male member formed from a single strand of resilient wire bent into substantially U-shape with an eye between its limbs to loosely receive the cord, a female member including a tubiform body having one end receiving the end of the cord which is permanently secured therein, an internal truncated conical shaped flange at the opposite end of the body to form a locking rim, and hook terminals on the limbs of the male member for insertion through the conical flange to automatically engage the same for locking the male and female members together.

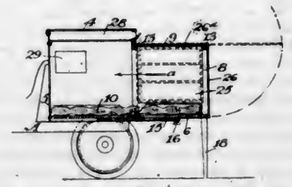
1,196,308. CAM MECHANISM FOR WOOD-SCREW MACHINES. HENRY L. SMITH, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 17, 1915. Serial No. 51,175. (Cl. 74—1.)



1. The combination in a wood-screw machine of a cam shaft, two perforated collars mounted on the shaft, a key rotarily connecting the collars with the shaft, means longitudinally fixing one of the collars on the shaft, a yoke-shaped cam having its outer edge formed with projections of successively increasing height and its inner edge extending between the outer edges of the collars, and screws passing through the collars but not through the cam for drawing the collars together and clamping the inner edge of the cam between them.

2. The combination in a wood-screw machine of a cam shaft, a collar with plain perforations rotarily and longitudinally fixed on the shaft, a collar with threaded perforations rotarily fixed but adjustable along the shaft, a yoke-shaped cam having outwardly extending perforations of successively increasing height on its outer edge and an inwardly extending annular tongue on its inner edge, said tongue lying between the outer edges of the collars, and screws passing through the plain perforations in the longitudinally fixed collar into the threaded perforations in the longitudinally adjustable collar but not through the cam for drawing the movable collar toward the fixed collar and clamping the cam tongue between them.

1,196,309. VEHICLE CAMPING ATTACHMENT. GEORGE R. STEIN, San Francisco, Cal., assignor to Gustav de Bretteville, San Francisco, Cal. Filed Sept. 15, 1915. Serial No. 50,777. (Cl. 190—2.)



1. A structure of the character described comprising a main casing, a frame adapted to be moved into and out of the casing, means for supporting the frame in its extended position, a pair of containers slidably mounted in the frame and adapted to be moved into or extended exterior of the frame, and means for supporting the containers in the extended position.

2. A structure of the character described comprising a main casing, a frame adapted to be moved into and out of the casing, means for supporting the frame in its extended position, a pair of containers slidably mounted in the frame and adapted to be moved into or extended exterior of the frame, and means carried by the frame for supporting the containers in the extended position.

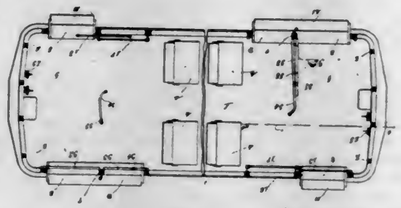
3. A structure of the character described comprising a box-shaped casing open at one end, a door hinged at its lower end to form a closure for said open end, detachable and adjustable legs adapted to support the door in an open horizontal position, a frame adapted to be moved telescope-wise into or extended exterior of the casing and supported on the table, and a pair of containers carried by the frame, said containers being slidably mounted in the frame at right angles to the sliding movement of the frame.

4. A structure of the character described, comprising a box-shaped casing open at one end, a door hinged at its lower end to form a closure for said open end, detachable and adjustable legs adapted to support the door in an open horizontal position, a frame adapted to be moved telescope-wise into or extended exterior of the casing and supported on the opened door, a pair of track members secured to the top of the sliding frame and extending cross-wise of same, and a pair of containers slidably mounted on said track members.

5. A vehicle camping attachment, including a casing having an arched top and shallow, horizontal compartments beneath said top, a main compartment with hinged closable end door, forming a horizontal extension of the case when opened, a dovetailed section of the case bottom, slidable beneath and supporting said door, and a bed extending over the door and the case bottom, and foldable in line of the door hinges when closed.

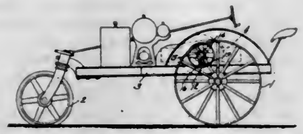
[Claim 6 not printed in the Gazette.]

1,196,310. PAY-AS-YOU-ENTER CAR. EDWARD L. STEPHENS, Los Angeles, Cal. Original application filed May 16, 1910, Serial No. 561,753. Divided and this application filed Aug. 5, 1912. Serial No. 713,469. (Cl. 105—205.)



In a car, a platform at both ends united unobstructedly with the same and extending the width of the car and on the same plane as the floor of the car, transversely disposed seats on said floor, an aisle between the inner ends of said seats, a relatively small stationary barrier secured on one of the platforms between the seat and the platform-end and in line with the aisle, a passageway at one side of the car between said seats and platform-end, a post or stanchion secured to said platform in said passage-way and between the end seat and the end of the said platform and adapted to divide such passage-way into separate passage-ways, steps at said passage-ways leading to the platform, gates adapted to open and close said passage-ways, and to be independently extended toward the stationary barrier to close the space between said post and the stationary barrier, and a passage-way through the side of the car and on the opposite platform between its end and the end seat on the same side as the double passage-way, and a gate and steps therefor.

1,196,311. STARTING-CLUTCH MECHANISM. CHARLES H. STINSON, Watertown, S. D. Filed Feb. 26, 1916. Serial No. 80,718. (Cl. 21—114.)



1. In a transmission mechanism for tractors, the combination with a motor operated driving shaft and a driven shaft, of a friction clutch for connecting the same at will, transmission gears driven from said driven shaft, a pulley normally loose on said driven shaft, and means independent of said friction clutch, operative at will, for causing said pulley to rotate with said driven shaft.

2. A transmission mechanism for tractors, comprising a motor operated driving shaft, an axially alined driven shaft, a friction clutch for connecting said two shafts at will, transmission gears operated from said driven shaft, a pulley normally loose on said driven shaft, said driven shaft, at its projected end, having means for interlocking connection with a starting crank to start the motor and a positive clutch for connecting said pulley to said driven shaft at will.

3. In a tractor, the combination with an internal combustion engine, of an engine operated driving shaft, a driven shaft axially alined therewith, a friction clutch for connecting said two shafts at will, a pulley normally loose on said driven shaft, said driven shaft, at its projected end having means for application of a starting crank to start said engine, and a positive clutch for connecting said pulley to said driven shaft.

4. The combination with a driven shaft having a hub with a projecting lock flange, and the said shaft within said hub having means for interlocking connection with a starting crank, of a pulley normally free for rotation on said hub but held against axial movements in respect thereto, and a lock plunger seat for said pulley and engageable with the lock flange of said hub, whereby at will, said pulley may be locked for rotation with said driven shaft.

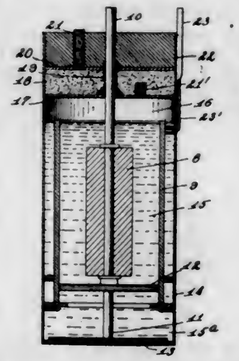
1,196,312. FLOWER-HOLDER. WILLIAM R. STUCK, Oakland, Cal. Filed Aug. 23, 1915. Serial No. 46,806. (Cl. 47—18.)



1. In a flower holder, a base ring, a foraminous plate having its edge embedded in said ring and a second foraminous plate spaced above the first named plate and with downturned edges embedded in said base ring.

2. In a flower holder, a pair of foraminous plates attached together in spaced relation and adapted to hold the lower portion of flower stems, an upwardly extending rod arranged in the openings in said plates, and fine tie wires attached to the upper end of said rod and adapted to secure the upper portion of the stems.

1,196,313. ELECTRIC CELL. WIRT TASSIN, Washington, D. C.; Herman E. Gasch, administrator of said Tassin, deceased, assignor to Kinetic Electric Company, Norfolk, Va., a Corporation of Virginia. Filed Jan. 18, 1915. Serial No. 2,914. (Cl. 204—38.)



1. In an electric cell adapted for self-circulation of electrolyte, a container, a rodlike negative element therein and a positive element substantially surrounding the same, the dimensions of said negative element and said positive element and their spacing apart being so correlated as to produce a positive circulation of electrolyte in said container, these relations in a typical small cell having a negative electrode of about two and a half inches in length being expressed by spacing away the positive element from the negative element about one-half inch between all opposing faces and dimensioning it so as to extend about half an inch above and about half an inch below the upper and lower ends of said negative element.

2. In an electric cell, a container, a rodlike negative element of cupro-cupric oxid therein and a zinc positive element substantially surrounding the same, the dimensions of said negative element and said positive element and their spacing apart being so correlated as to produce a positive circulation of electrolyte in said container, these relations in a typical small cell having a negative electrode of about two and a half inches in length being expressed by spacing away the positive element from the negative element about one-half inch between all opposing faces and dimensioning it so as to extend about half an inch above and about half an inch below the upper and lower ends of said negative element.

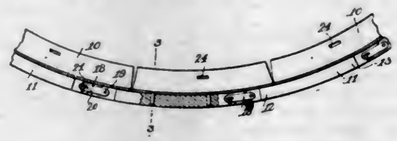
3. In an electric cell, a container, a plurality of rodlike negative elements therein and a positive element substantially surrounding each of said rodlike elements, the dimensions of said negative element and said positive element and their spacing apart being so correlated as to produce a positive circulation of electrolyte in said container, these relations in a typical small cell having a negative electrode of about two and a half inches in length being expressed by spacing away the positive element from each opposing face of each negative element about half an inch and so dimensioning said positive element as to extend about half an inch above their upper ends and about half an inch below their lower ends.

4. In an electric cell, a container, a plurality of rodlike negative elements of cupro-cupric material and a zinc positive element substantially surrounding each of said rodlike elements, the dimensions of said negative element and said positive element and their spacing apart being so correlated as to produce a positive circulation of electrolyte in said container, these relations in a typical small cell having a negative electrode of about two and a half inches in length being expressed by spacing away the positive element from each opposing face of each negative element about half an inch and so dimensioning said positive element as to extend about half an inch above their upper ends and about half an inch below their lower ends.

5. In a high amperage cell, a container, a plurality of rodlike negative elements therein and a positive element substantially surrounding each of said negative elements and having a concave face presented to each such negative electrode.

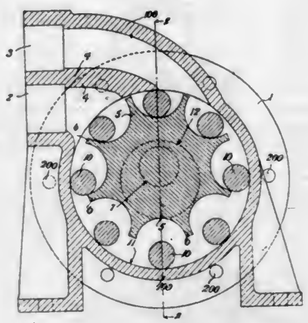
[Claims 6 to 10 not printed in the Gazette.]

1,196,314. ANTISKID TIRE-TREAD. JOHN H. THRELKELD, Chariton, Iowa. Filed Aug. 14, 1915. Serial No. 45,493. (Cl. 152—16.)



A metal tire tread for vehicles, comprising a plurality of independent sections connected together, each section embodying a casing-plate provided with a longitudinal tread rib having one end projecting beyond one edge of said plate and its opposite end terminating short of the opposite edge of said plate, the end faces of said rib being inclined to their periphery to form overlapping joints with adjacent ribs, and means for securing the ends of adjacent tread rib sections together.

1,196,315. ROTARY ENGINE. WILLIAM JOHN VINCENT, London, England. Filed Apr. 7, 1915. Serial No. 19,775. (Cl. 121—51.)



1. In combination with a casing having an outlet and an inlet, a squirrel cage rotor within the casing having cylindrical members and an interlocking eccentrically placed rotor within the first named rotor having semi-circular pockets the walls of which form continuously engaging surfaces for the cylindrical bars of the squirrel cage rotor while in interlocking engagement.

2. In combination with a casing having an outlet and an inlet, a squirrel cage rotor within the casing having cylindrical antifriction devices, bosses on the casing walls upon which the rotor is mounted, a second rotor placed within the first named rotor and mounted on a shaft passing eccentrically through the aforesaid bosses, said second rotor having semi-circular pockets in its periphery in which the cylindrical antifriction devices are located.

3. A pump or motor comprising a stationary outer casing, a squirrel cage rotor and a second rotor within it having teeth or ribs between which the bars of the squirrel cage rotor are located wherein the gaps between the teeth or ribs of the eccentrically placed rotor measure approximately twice the distance between the centers of the two rotatable members plus the thickness of the ribs or bars located in said gaps.

4. A pump or motor comprising the combination with a stationary casing having an outlet and an inlet of a squirrel cage rotor within the casing and an interlocking eccentrically placed toothed rotor within the first named rotor, the number of teeth in the toothed rotor corresponding to the number of the bars of the squirrel cage rotor.

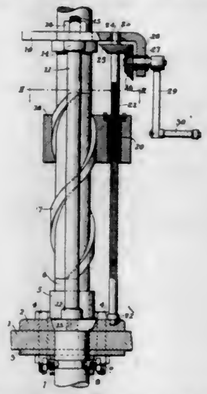
1,196,316. DAVIT. CHRISTIAAN VISSER, New York, N. Y. Filed Dec. 14, 1915. Serial No. 66,850. (Cl. 9—22.)

1. The combination with a davit having screw threads thereon, of a collar having a correspondingly threaded passage fitted around the threaded portion of the davit, means for moving said collar axially along the davit for turning the latter, and means for preventing said collar turning with the davit.

2. The combination with a davit having screw threads thereon, of a collar having a correspondingly threaded passage fitted around the threaded portion of the davit, said collar having another screw threaded passage therein, a screw shaft running through said latter passage, means for turning said shaft to move the collar axially along the davit and thus cause the latter to turn, and means for preventing said collar from turning.

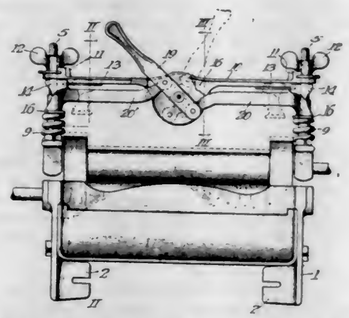
3. The combination with a davit having screw threads thereon, of a collar having a correspondingly threaded passage fitted around the threaded portion of the davit, said collar having another screw threaded passage there-

in, a screw shaft running through said latter passage, a pinion keyed on the shaft, an auxiliary shaft, a pinion on



the auxiliary shaft meshing with the pinion on the screw shaft, and a crank for turning the auxiliary shaft.

1,196,317. WRINGER. WILLIAM H. VOSS, Davenport, Iowa. Filed Oct. 14, 1915. Serial No. 55,799. (Cl. 68—32.)



1. In a wringer, a pair of rolls, a pair of standards operatively associated with the rolls, tension means, comprising coil springs bearing on the upper roll and mounted upon said standards, a cross piece connecting said standards at their upper ends and adapted to be moved downwardly thereon, a pair of blocks slidably mounted in said cross piece and adapted to be interposed between said cross piece and the upper end of said coil springs, and means for simultaneously and instantaneously withdrawing said blocks to release the wringer rolls.

2. In a wringer, a pair of standards, a pair of rolls associated therewith, tension means arranged adjacent each standard, a cross piece adjustably mounted upon said standards and release means on said cross piece and adapted to be interposed between the same and the tension means and to be instantly released.

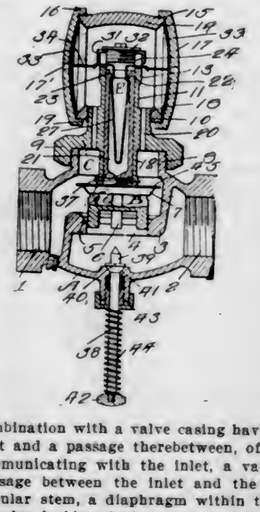
3. In a wringer, a frame, a pair of standards thereon, rolls, tension means associated with said standards, a cross bar connecting the upper ends of said standards and vertically adjustable on said standards, and instantaneously releasable means interposed between said cross bar and said tension means.

4. In a wringer, a pair of standards, a cross piece adjustably connected thereto, blocks having recesses for the accommodation of said standards and slidably mounted on said cross bar, a lever centrally mounted on said cross bar and connections from said lever to said blocks for longitudinally moving them.

5. In a wringer, a pair of standards screw-threaded at their upper ends, a cross bar having thumb nuts swiveled thereon at either end and in engagement with said threads, a wringer release device mounted on said cross bar and comprising instantaneously releasable means interposed between the same and the wringer rolls.

[Claim 6 not printed in the Gazette.]

1,196,318. AUTOMATIC SAFETY-VALVE. EDWARD B. WADDELL, Jr., Williamson, W. Va. Filed Oct. 30, 1914, Serial No. 869,451. Renewed Feb. 2, 1916. Serial No. 75,860. (Cl. 67—115.)

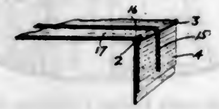


1. The combination with a valve casing having an inlet and an outlet and a passage therebetween, of a pressure chamber communicating with the inlet, a valve controlling the passage between the inlet and the outlet and having a tubular stem, a diaphragm within the pressure chamber, a valve locking device connected with the diaphragm and projecting into the tubular stem and normally held in locking engagement with the stem when the diaphragm is expanded by the pressure within the chamber and means adapted to be actuated to open the valve and move the stem into interlocking engagement with the locking device when the latter is in its locking position, the decrease of pressure in the chamber below a predetermined point causing the diaphragm to move the locking device out of engagement with the stem to release the valve.

2. The combination with a valve casing having an inlet and an outlet, and a passage therebetween, of a pressure chamber communicating with the inlet, a valve controlling the passage between the inlet and the outlet, a pair of diaphragms within the pressure chamber, a valve locking device connected with both diaphragms and normally held in locking position when the diaphragms are expanded in relatively opposite directions by the pressure within the chamber, and means adapted to be actuated to open the valve and move the latter into interlocking engagement with the locking device when the latter is in its locking position, the decrease of pressure in the chamber below a predetermined point causing the diaphragms to collapse to move the locking device to unlocking position to release the valve.

3. The combination with a valve casing having an inlet and an outlet and a passage therebetween, a pressure chamber communicating with the inlet of the valve casing, a valve controlling the passage between the inlet and the outlet of the valve casing, a tubular stem for said valve having a shoulder at its free end, a resilient locking clip extending into the stem, and a pair of oppositely acting diaphragms located within the pressure chamber and adapted to be expanded by the pressure within the chamber, a plunger operable outside the valve casing for opening said valve and moving the shoulder of the valve stem into engagement with the locking clip, said stem being held in locked position and the valve elevated when the diaphragms are expanded by the pressure of gas in the chamber, the decrease of the pressure in such chamber below a predetermined point permitting the diaphragms to contract to release the valve stem from the locking clip and allow the valve to close.

1,196,319. BOX-STAY. DAVID WEBER, Philadelphia, Pa., assignor to David Weber and Company, Philadelphia, Pa., a Copartnership. Filed Dec. 16, 1911. Serial No. 666,228. (Cl. 229—49.)



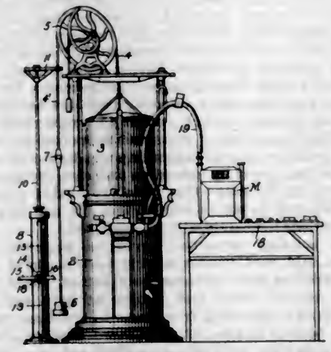
The combination with a receptacle, of a reinforcing attachment, comprising a flexible member folded upon itself, said flexible member having a tubular formation at the juncture of the resultant leaves, said tubular formation being diagonally offset from the receptacle and its closure, and having inserted therein a reinforcing core.

1,196,320. NON-BUCKLING FOLDING BOX. DAVID WEBER, Philadelphia, Pa. Filed Jan. 22, 1915. Serial No. 3,718. (Cl. 229—14.)



As an improvement in boxes, a cuff of flexible material having radial inwardly projecting reinforcing joints or ribs, the same being formed of terminals of the longitudinal portions of the sides of the cuff infolded upon each other, said infolded portions being connected and positioned at the corners of the box.

1,196,321. METER-PROVER ATTACHMENT. EDWIN C. WEISGERBER, Pittsburgh, Pa., assignor to Equitable Meter Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 6, 1916. Serial No. 70,679. (Cl. 73—51.)

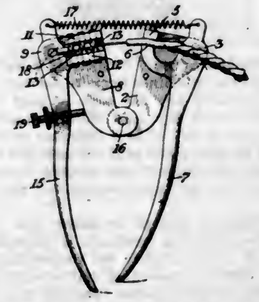


1. The combination with a meter prover dome, and a vertically movable dome supporting cord provided with a stop, of a vertically movable cord-embracing device adapted to engage said stop for elevating the dome, said device and cord being movable independently of each other excepting when raising the dome.

2. The combination with a meter prover dome, and a vertically movable dome suspending cord provided with a stop, of a fluid-pressure cylinder, means for admitting and for exhausting fluid from each end thereof, a piston and piston rod for the cylinder, and an arm projecting from the piston rod loosely embracing said cord and adapted to engage said stop for raising the dome.

3. The combination with a meter prover dome, and a vertically movable dome suspending cord provided with a stop, of a cylinder, a two-way valve having fluid pressure and exhaust connections, pipes extending from the valve to opposite ends of the cylinder with the valve adapted to admit fluid under pressure to either of said pipes and simultaneously open the other pipe to the exhaust, a piston and piston rod for the cylinder, and an arm projecting from the piston rod loosely embracing said cord and adapted to engage said stop for raising the dome.

1,196,322. WIRE-STRIPPING DEVICE. STUART G. WOOD, Brooklyn, N. Y. Filed Dec. 4, 1915. Serial No. 65,055. (Cl. 81—9.5.)



1. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, said strippers having cutting edges arranged transversely of the jaws, and means for operating said jaws.

2. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, said strippers having notched cutting edges arranged transversely of the jaws, and means for operating said jaws.

3. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, means for positioning the strands relative to the strippers, and means for operating said jaws.

4. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, said strippers having cutting edges arranged transversely of the jaws, guides adjacent the opposite ends of said strippers for positioning the strands relative thereto, and means for operating said jaws.

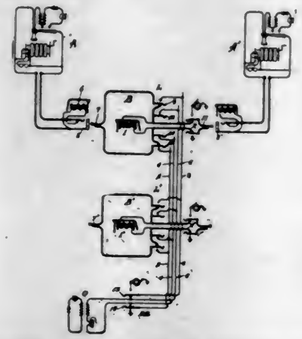
5. A device for stripping multiple-strand insulated wire, comprising a pair of pivoted jaws carrying a plurality of stripping devices arranged diagonally of the same for acting on parallel strands at different points in the length of the wire, and operating handles for said jaws.

[Claims 6 to 11 not printed in the Gazette.]

1,196,323. TELEPHONE SIGNALING SYSTEM. JOSEPH S. ALLEN, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 16, 1913. Serial No. 795,458. (Cl. 179—73.)

1. A telephone system comprising telephone lines, link circuits having terminals for uniting said lines, a listening key for each of said link circuits, a common ring back key, and circuit connections whereby the actuation of a listening key to connect an operator's telephone and said common key to connect ringing current will connect

said ringing current to one end only of the associated link circuit.



2. A telephone system comprising telephone lines, link circuits uniting said lines in pairs for conversational purposes, a listening key for each of said link circuits, a common ring-back key, and circuit connections whereby the actuation of any of said listening keys to connect an operator's telephone and said common key to connect ringing current will connect said ringing current to the calling line only of the lines connected by the associated link circuit.

3. A signaling system including link circuits having answering and calling terminals, a listening key for each of said link circuits solely for connecting the operator's telephone with its associated link circuit, a key common to said link circuits, means whereby the actuation of a listening key and the common key will connect ringing current to the answering terminal of a link circuit, and means including contacts controlled by said keys to prevent such ringing current from traversing the calling terminal of a link circuit.

4. A signaling system comprising telephone lines, link circuits having answering and calling terminals for interconnecting said lines, a listening key for each of said link circuits, solely for connecting an operator's telephone with its associated link circuit, a key common to said link circuits, means whereby the actuation of a listening key and the common key will connect ringing current to the answering terminal of the link circuit, and means to prevent such ringing current from effecting a called line at the calling terminal of a connecting link circuit.

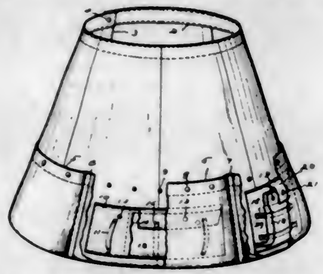
5. A signaling system comprising telephone lines, link circuits having answering and calling terminals for interconnecting said lines, a listening key for each of said link circuits, a key common to said link circuits, means whereby the actuation of a listening key and the common key will connect ringing current to the answering terminal of the link circuit, and contacts controlled by said common key for disuniting the answering and calling terminals.

[Claims 6 to 12 not printed in the Gazette.]

1,196,324. LADY'S TRAVELING-SKIRT. CORA I. ATKINS, West Hartford, Conn. Filed Mar. 18, 1916. Serial No. 85,065. (Cl. 2—42.)

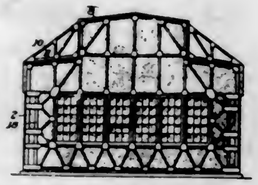
1. An underskirt having a body with a waist band at the top, an upturned protecting flap along the sides and back only of the bottom of the body, means for temporarily fastening the upper edge of the protecting flap, pockets secured to the body within the protecting flap, and means for temporarily fastening the pocket flaps.

2. An underskirt having a body with a protecting flap forming an upwardly opening pocket at the back and sides only of the bottom, means for temporarily fastening the upper edge of the protecting flap, a long pocket containing retaining straps within the middle section of said flap pocket, short pockets on both sides of the long pocket within the flap pocket, small pockets within said short pockets on one side, and means for temporarily fastening the open upper edges of said pockets within the flap pocket.



3. A lady's garment having a hanging skirt body with a waist band at the top of the skirt and an upturned protecting flap at the bottom of the skirt, means for detachably securing closed the upper edge of said protecting flap, pockets attached to the body within the protecting flap, means for temporarily fastening the upper edges of said pockets, and means secured within the pockets to the walls thereof for retaining in position articles placed in said pockets.

1,196,325. BUILDING STRUCTURE. GEORGE H. BARBOUR, Pittsburgh, Pa. Filed July 9, 1913. Serial No. 778,001. (Cl. 108—1.)



1. A roof structure comprising a metallic supporting member, said supporting member having a vertical web and a flange member at each end thereof, and a roof portion extending from said supporting member and supported on the bottom flange member of said supporting member, said roof portion having an upwardly extending end rib, the upper flange of said supporting member having a downwardly extending end member overlapping the end rib of the roof portion; substantially as described.

2. A building structure having roof trusses, some of said roof trusses having supporting members for supporting roof portions, said supporting members having vertical webs and flanges at each end of the webs, roof portions extending from truss to truss and supported on the lower flange members of said supporting members, said roof portions having upwardly extending end ribs, the upper flange members of the supporting members having downwardly extending end members overlapping the end ribs of said roof portions; substantially as described.

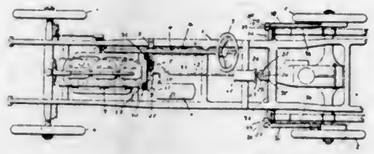
3. A building structure having a plurality of roof trusses, said roof trusses having bottom chord members for supporting roof portions, said bottom chord members having vertical webs and flanges at each end thereof, roof portions extending from truss to truss and supported on the bottom flanges of said chord members, said roof portions having upwardly extending end ribs, the upper flanges of the chord members having downwardly extending end members overlapping the end ribs of the roof portions, said trusses also having upper chord members, and other roof portions supported on the upper chord members; substantially as described.

4. A roof structure comprising an I-beam supporting member, roof portions supported on the lower flanges of the I-beam, the end of said roof portions being provided with an upwardly extending rib, and a downwardly extending flange member on the end of the top flange of the I-beam, said downwardly extending flange overlapping the rib on the roof portions; substantially as described.

5. A roof-support, comprising upper and lower truss members, one of said truss members having a vertical web and flanges at one end thereof, vertical portions connected to the ends of said flanges, tie members connected to said vertical portions of the flanges of the truss member and to the other truss member, and roof portions supported on the first mentioned truss member; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,196,326. AUTOMOBILE AIR-BRAKE. CHARLES A. BECKER, Newark, N. J. Filed Feb. 18, 1916. Serial No. 79,053. (Cl. 188—3.)



1. The combination with a motor vehicle and service and emergency brakes for the wheels thereof, of an air storage tank, a brake cylinder having a piston, means for admitting air to said cylinder from the tank and for exhausting the same, and means for operating both said service and emergency brakes from said piston at different points of its stroke.

2. The combination with a motor vehicle and service and emergency brakes for the wheels thereof, of an air storage tank, a brake cylinder having a piston, a valve for admitting air to said cylinder from the tank and for exhausting the cylinder, and means for connecting both service and emergency brakes to said piston to operate the same in proper sequence.

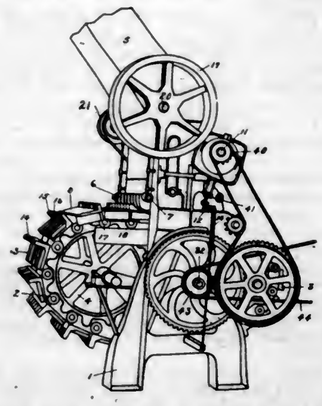
3. The combination with a motor vehicle and service and emergency brakes for the wheels thereof, of an air storage tank, a brake cylinder having a piston, a valve for admitting air to said cylinder from the tank and for exhausting the cylinder, brake levers having adjacent said piston slots substantially in alinement therewith, the slot of the emergency brake lever extending farther away from the piston than the slot of the service brake lever, and a cross pin fixed in said piston and extending into said slots.

4. The combination with a motor vehicle and service and emergency brakes for the wheels thereof, of an air storage tank, a brake cylinder having a piston with a forked end provided with a fixed cross pin, a valve for admitting air to said cylinder from the tank and for exhausting the cylinder, an emergency brake lever having its end between the arms of the said forked end of the piston, service brake levers having their ends lying on opposite sides of said forked end of the piston, all said brake lever ends being slotted in substantial alinement with the piston rod and receiving the cross pin thereof, the slot of the emergency brake lever extending farther away from the piston than the slots of the service brake levers, and brakes for the wheels of the vehicle connected to and adapted to be operated by said brake levers.

5. The combination with a motor vehicle and service and emergency brakes for the wheels thereof, of an air storage tank, a brake cylinder having a piston, a valve for admitting air to said cylinder from the tank and for exhausting the cylinder, brake levers having adjacent said piston slots substantially in alinement therewith, the slot of the emergency brake lever extending farther away from the piston than the slot of the service brake lever, a cross pin fixed in said piston and extending into said slots, and manually operable draft means connected to said brake levers at the opposite side of their fulcrum from said slotted ends.

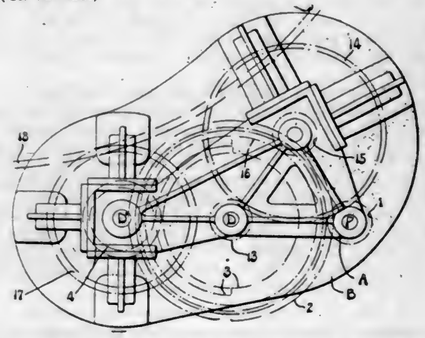
[Claims 6 to 11 not printed in the Gazette.]

1,196,327. BRICK-MACHINE. HERMAN BESSER and JESSE H. BESSER, Alpena, Mich. Filed Oct. 26, 1912. Serial No. 727,985. (Cl. 20—99.)



In a continuous-feed brick machine, a hopper, a plurality of vertically disposed parallel dividing plates located beneath the hopper, said plates pivotally mounted at their forward ends, the forward ends of said plates adapted to limited vertical movement, a conveyer comprising a plurality of L-shaped flights linked together, the vertical member of each flight formed with slots to receive the respective dividing plates, a plurality of tampers located to the rear of said hopper, said tampers being of slightly less width than the distance between successive dividing plates, a reciprocating spring-pressed smoothing bar located to the rear of the tamper, and removable pallets carried by said flights.

1,196,328. POWER-TRANSMISSION DEVICE. ELMER BRADEN, Quincy, Ill., assignor to William J. Ruff, Quincy, Ill. Filed July 27, 1914. Serial No. 853,474. (Cl. 74—46.)



1. A power transmission device comprising a drive shaft provided with a drive gear, a driven shaft, a transmission wheel adapted to occupy an operative position where it will mesh with and transmit the movement of said drive gear to said driven shaft, and a shifter for shifting said transmission wheel into and out of the path of said drive gear so as to intermittently transmit the movement of said drive gear to said drive shaft, said shifter being operable in response to movements of said drive shaft.

2. A power transmission device comprising a drive shaft, a driven shaft, a transmission member adapted to occupy an operative position where it will transmit the movement of said drive shaft to said driven shaft, a pivotally supported shifter arm for shifting said transmission

member to intermittently transmit the movement of said drive shaft to said driven shaft, and a cam operable by said drive shaft adapted to oscillate said shifter arm at regular intervals.

3. A power transmission device comprising a drive shaft, a segmental drive gear secured to said drive shaft, a driven shaft, a transmission wheel splined to said driven shaft adapted to be moved into and out of the path of said segmental drive gear, and a shifter for shifting said transmission wheel to intermittently transmit the movement of said drive shaft to said driven shaft, said shifter being operable in response to the movements of said drive shaft.

4. A power transmission device comprising a drive shaft, a driven shaft, a transmission wheel adapted to occupy an operative position where it will transmit the movement of said drive shaft to said driven shaft, a shifter for shifting said transmission wheel to intermittently transmit the movement of said drive shaft to said driven shaft, and a cam operable by said drive shaft adapted to move said shifter at regular intervals, said shifter being secured to said cam and transmission wheel so as to positively shift said transmission wheel to and from its operative position.

5. A power transmission device comprising a power shaft, a drive shaft geared to said power shaft, a cam geared to and supported by said drive shaft, said cam being driven at a lower rate of speed than said drive shaft, a drive gear secured to said drive shaft, a driven shaft, a transmission wheel splined to said driven shaft, and a shifter arm for moving said transmission wheel into and out of engagement with said drive gear, the said cam being provided with means for operating said shifter arm at regular intervals.

[Claims 6 to 12 not printed in the Gazette.]

1,196,329. PROCESS FOR DISTILLING ACETIC ACID AND THE LIKE. ADOLF BRÄUER, Grünau, near Berlin, Germany, assignor to Chemische Fabrik Grünau Landshoff & Meyer Aktiengesellschaft, Grünau, Germany. Filed Mar. 28, 1916. Serial No. 87,161. (Cl. 23—24.)

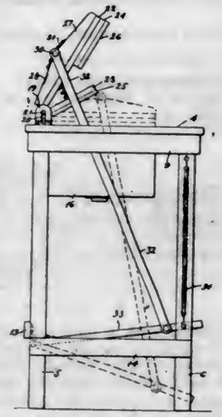
1. A process for distilling acetic acid, consisting in covering a heated rotating surface evaporator with a mixture of an acetate and sulfuric acid in a thin layer, whereupon the solid residue is scraped off after the liberation of the acetic acid vapors and the evaporation of the mass has taken place, before a new supply of the mixture is brought onto the surface of the rotating evaporator, substantially as described.

2. A process for distilling acetic acid, consisting in covering a heated drum with a mixture of an acetate and sulfuric acid in a thin layer, whereupon the solid residue is scraped off after the liberation of the acetic acid vapors and the evaporation of the mass has taken place, before a new supply of the mixture is brought onto the surface of the rotating evaporator, substantially as described.

3. The herein described process of distilling acetic acid, which consists in applying a thin layer of a mixture of an acetate and sulfuric acid to an evaporating surface, driving off the acetic acid vapors by heat and removing the solid residue from the evaporating surface.

1,196,330. PHOTOGRAPH-PRINTING MACHINE. HERBERT C. BUNTING and MAURICE P. ANDERSON, Seattle, Wash. Filed Mar. 21, 1916. Serial No. 85,733. (Cl. 95—73.)

1. In a photograph printing machine of the class described, the combination with a table having a glass covered hole extending downwardly therethrough, of brackets fastened to the top surface of said table, said brackets being provided with oblong holes extending horizontally therethrough with their longer sides in vertical planes; a pivot-rod disposed within the holes of said brackets to extend horizontally therebetween and to be movable vertically therein; two presser-boards each independently articulated to said pivot-rod and both adapted to be swung thereon to and from positions wherein their lower side surfaces engage with the top surface of the glass of said glass covered hole conjointly and wholly to obscure said glass covered hole; yielding means associated with said two presser-boards whereby they are normally maintained relatively in different angular positions whenever said presser-boards are not both engaged with the top surface of the glass of said glass covered hole; and means for moving said presser-boards to and from the top surface of the glass of said glass covered hole.



2. A photograph printing machine of the class described, which embodies a table having a glass covered hole extending downwardly therethrough; a presser-board articulated to said table and adapted to be removably disposed to obscure a portion of said glass covered hole; a second presser-board also articulated to said table and adapted to be removably disposed to obscure the remaining portion of said glass covered hole and to transmit force against said first named presser-board to press said first named presser board against the glass of said glass covered hole; and operative mechanism associated with said first named presser-board and with said table whereby said first named presser-board may be actuated forcibly to engage with the glass of said glass covered hole.

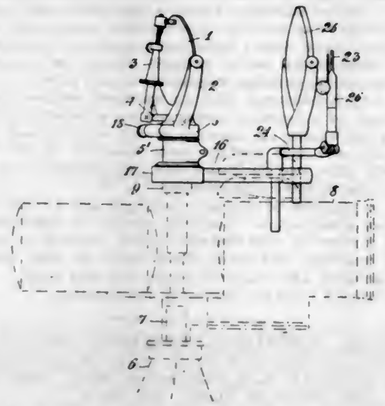
1,196,331. HELIOGRAPH OR THE LIKE. JOHN AUGUST FALE BURMAN and PAUL WILHELM LYTH, Stockholm, Sweden, assignors to Aktiebolaget Armématerial, Stockholm, Sweden, a Corporation of Sweden. Filed Sept. 29, 1914. Serial No. 864,121. (Cl. 116—22.)

1. In an apparatus of the class described, the combination of a signaling mirror, a supporting stud for said mirror, a swingable arm mounted on said stud, a duplex mirror mounted on said arm, a second arm mounted on the first mentioned arm, and a sighting cross mounted on said second arm, substantially as and for the purpose set forth.

2. In an apparatus of the class described, the combination of a signaling mirror, a supporting stud for said mirror, a socket embracing said stud, a swingable arm mounted on said socket, a duplex mirror mounted on said arm, a second arm mounted on the first mentioned arm and a sighting cross mounted on said second arm, substantially as and for the purpose set forth.

3. In an apparatus of the class described, the combination of a signaling mirror, a supporting stud for said mirror, a socket provided with a vertical and two horizontal slots embracing said stud, a swingable arm mounted on said socket, a duplex mirror mounted on said arm, a second arm mounted on the first mentioned arm and a sighting cross mounted on said second arm, substantially as and for the purpose set forth.

4. In an apparatus of the class described, the combination of a signaling mirror, a supporting stud for said mirror, a swingable arm mounted on said stud and provided with two slotted apertures, a duplex mirror provided with a stud inserted in one of said apertures, a swingable arm provided with a pivot inserted in the other aperture, and a sighting cross mounted on said arm, substantially as and for the purpose set forth.



5. In an apparatus of the class described, the combination of a signaling mirror, a supporting stud for said mirror, a swingable arm mounted on said stud, a duplex mirror mounted on said arm, a second arm mounted on the first mentioned arm, a socket on said second arm, a sighting cross provided with a stud inserted in said socket and formed with a neck, and a screw threaded into said socket so as to engage the neck of the stud for securing the same in adjusted position of the sighting cross, substantially as and for the purpose set forth.

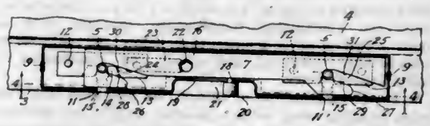
1,196,382. POST-CARD OR PICTURE HANGER. RICHARD H. CABELL, Jr., Millers, Nev. Filed Sept. 13, 1915. Serial No. 50,363. (Cl. 40—124.)



1. As a new article, a picture or card holder consisting of a pair of strips of resilient material, each having a series of stamped tongues arranged in pairs, one end of each strip having a single stamped tongue and the other end of the said strip a pair of stamped tongues that project in opposite directions lengthwise of the strip, the said tongues forming clamps for receiving cards or pictures therebetween, the single tongue at one end of one strip being adapted to interlock with one of the tongues of a pair of tongues in the adjacent end of another strip, the said pair of tongues of the said other strip being adapted to pass through the notch out of which the aforesaid single tongue is formed whereby to produce opposite clamping members for clamping the adjacent edges of a pair of picture cards.

2. As a new article, a picture card holder consisting of a plurality of strips of resilient material, each having notched ends that form tongues adapted to be bent out to produce clamps for engaging the edges of picture cards, one of the adjacent ends of a pair of strips having a single cut whereby to produce a single clamping tongue, the adjacent end of the other strip having a pair of cuts whereby to produce a pair of oppositely projected clamping tongues, one of the said pair of tongues being adapted to interlock with the single tongue on the adjacent end of the other strip, the other one of the said pair of tongues being bendable through the cut from which the aforesaid single tongue is bent, said pair of tongues forming a pair of oppositely disposed clamping members for engaging the adjacent edges of a pair of picture cards.

1,196,333. LOOSE-LEAF BINDER. FRANK E. CAUFIELD, Jr., Chicago, Ill., assignor of three-eighths to William Neil, Jr., and three-eighths to H. P. Caufield, Chicago, Ill. Filed Jan. 10, 1916. Serial No. 71,229. (Cl. 129—12.)



1. A loose-leaf binder comprising in combination, primary and secondary binding members, the former of which is provided with binding-posts, adapted to enter transversely disposed openings in the other, gripping members upon said secondary member, one of which is in operative proximity to each of said openings therein to grip said posts and means for moving the posts within said openings transversely of said secondary binding member into and out of gripping engagement with said gripping means.

2. A loose-leaf binder, comprising, in combination, primary and secondary binding members, one of which is provided with binding posts adapted to enter transversely disposed apertures in the other, bent gripping springs upon said secondary member, each having its free end projecting into the path of a binding-post and longitudinally movable actuating means upon said secondary member for engaging said posts with a wedge-like action to move them transversely of said binding member into and out of contact with said gripping springs.

3. A loose-leaf binder, comprising, in combination, primary and secondary binding members, one of which is provided with binding-posts adapted to enter transversely arranged apertures in the other, a yielding gripping member upon said secondary binding member in operative proximity to each of said apertures in said secondary binding member, means for moving said posts transversely of said secondary member into and out of gripping engagement with said gripping members and means for retaining said post moving means in either of two extreme positions.

4. A loose-leaf binder, comprising, in combination, primary and secondary binding members, binding posts rigidly attached to said primary member and adjusted to enter openings in said secondary member, said openings being arranged transversely of said member to permit a transverse movement therein of said posts, a yielding gripping member for each post the same having its free end extending past one edge of an opening to cause frictional engagement with a post when the latter is moved into contact therewith, a casing upon said secondary member and a slide within said casing, said slide having diagonally arranged contacting surfaces for engaging said posts to move them transversely of said secondary binding member in and out of engagement with said gripping members.

5. A loose-leaf binder, comprising, in combination, primary and secondary binding members, one of which is provided with binding-posts adapted to enter transversely arranged apertures in the other, a gripping member upon said secondary binding member in operative proximity to each of said openings, a casing upon said secondary member, and a slide movable longitudinally therein, said slide having post receiving apertures therein arranged at an angle to the axis thereof, the movement of said slide in

one direction serving to move said posts into gripping engagement with said gripping members and in the other to release them therefrom.

[Claims 6 to 8 not printed in the Gazette.]

1,196,334. PROCESS OF RECLAIMING RUBBER. HARRY O. CHUTE, New York, N. Y. Filed June 3, 1913. Serial No. 771,534. (Cl. 18—52.)

1. In the reclamation of rubber, the process which comprises treating scrap with dilute acid at a temperature below the vulcanizing temperature, boiling with a caustic alkali solution at a temperature below the vulcanizing temperature, removing the alkali and plasticizing in highly heated water.

2. In the reclamation of rubber, the process which comprises treating scrap with a halogen acid at a temperature below the vulcanizing temperature, treating with an alkali solution at a temperature below the vulcanizing temperature, removing the alkali and plasticizing in highly heated water.

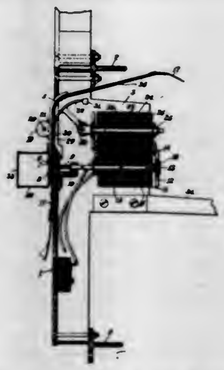
3. In the reclamation of rubber, the process which comprises treating scrap with a halogen acid in the presence of a haloid salt at a temperature below the vulcanizing temperature, treating with a caustic alkali solution at a temperature below the vulcanizing temperature, removing the alkali and plasticizing in highly heated water.

4. In the reclamation of rubber, the process which comprises treating scrap with a bath made of sulfuric acid and an excess of a solution of a soluble chlorid at a temperature below the vulcanizing temperature, treating with a caustic alkali solution at a temperature below the vulcanizing temperature, removing the alkali and plasticizing at a high temperature.

5. In the reclamation of rubber, the process which comprises treating scrap with a bath made of sulfuric acid and an excess of calcium chlorid at a temperature below the vulcanizing temperature, treating with a caustic alkali solution at a temperature below the vulcanizing temperature, removing the alkali and plasticizing at a high temperature.

[Claims 6 to 11 not printed in the Gazette.]

1,196,335. RECORDER. ALLISON A. CLOKEY, Jersey City, N. J., assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Feb. 2, 1915. Serial No. 5,657. (Cl. 234—27.5.)



1. A recorder unit for switch boards and the like comprising in combination a plate constructed for mounting on and removal from a switch board and provided with a tape guide, marking means adapted to act upon tape guided by such guide, and tape feeding means arranged to feed tape through such guide, the tape marking means and the tape feeding means supported from said plate.

2. A recorder unit for switch boards and the like comprising a plate constructed for mounting on and removal from a switch board and having a tape guide, and tape marking means and tape feeding means, projecting from the rear of said plate and both positioned and proportioned to be included within the projected lateral and longitudinal dimensions of said plate.

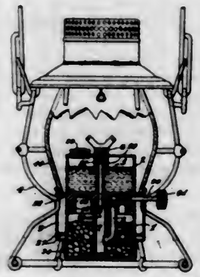
3. A recorder unit for switch boards and the like comprising a plate constructed for mounting on and removal from a switch board and having a tape guide, and having projecting from its rear tape marking means and tape feeding means, and a tape reel support, all positioned and proportioned to be included within the projected lateral and longitudinal dimensions of said plate.

4. The combination with an apertured support for a recorder, of a recorder having a plate substantially covering and closing the aperture of such support, and tape marking and tape feeding means mounted on the rear of said plate and positioned and proportioned to be inserted through the said aperture.

5. A plurality of recorders arranged side by side and having axially-alined tape-feed wheels, in combination with a rotatable tape-feed-wheel shaft, common to all of said recorders, and upon which shaft the said wheels are mounted, and means for supporting said shaft.

[Claims 6 to 29 not printed in the Gazette.]

1,196,336. ACETYLENE-GENERATOR. WILLIAM COBURN and CHARLES W. DAVIS, Seattle, Wash., assignors of one-third to Jules Maes, Seattle, Wash. Filed June 1, 1915. Serial No. 31,442. (Cl. 48—4.)

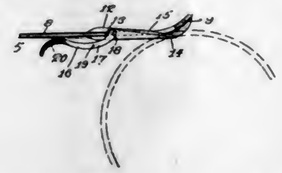


An acetylene generator comprising a cup-like carbid chamber, a water tank above said carbid chamber adapted to screw upon and close the same, a tubular gas delivery pillar extending upward through the water tank, and axially placed therein, a burner upon the upper end of said pillar, a tube secured in the bottom of said water tank and forming a downward extension of and communicating directly with the channel of said pillar, said tube projecting well within said carbid chamber, but not to the base thereof, and being open at its lower end, said tube being also provided with gas inlet openings near the upper edge of the carbid chamber and above the level of the carbid, a water delivery channel in the base of said water tank, a valve therein controlling said channel, and a second tube communicating with said water channel and extending well into said carbid chamber, said second tube communicating with said first tube well below the gas inlet openings and below the normal level of the carbid.

1,196,337. CUTTER. ADRIAN C. COOKE, Chicago, Ill., assignor to John W. Pitcher, Chicago, Ill. Filed Apr. 3, 1913. Serial No. 758,538. (Cl. 30—20.)

1. In a device of the class described, the combination with a substantially flat handle member formed with an aperture intermediate the ends, of a blade having a slit at one end adapting it to be secured to the aperture of the handle member and at right angles to the plane of the handle member, the other end of the blade being pointed and extending a slight distance from the handle member with the cutting edge on the inside of the blade and the handle member extending beyond the ends of the blade in both directions.

2. In a cutter of the class described, the combination with a substantially flat member having a concavely arched portion adjacent one end and with the aperture intermediate the ends, of a blade having a slot at one end adapting it to be connected in the aperture of the member and secured to the member thereby at right angles to the said member with the other end of the blade pointed and projecting from one side of the member adjacent the concavely arched portion but having the end of the handle extending beyond the pointed tip of the blade, the cutting edge of the blade being disposed on that side adjacent the handle member where it is protected, the depth of cut being limited by the distance of the tip of the blade from the handle member.



3. The combination with a handle member, of a blade fixed at one end intermediate the ends of the member and extending at right angles therefrom on one side of the member, a blade having a free pointed extremity spaced from the member with the cutting edge on the inside of the blade adjacent the member, and a guard pivotally mounted at the fixed end of the blade and movable over the blade against the handle member to cover the free extremity of the blade.

4. In a device of the class described, the combination with a handle member, of a separate cutting blade projecting and offset from one side thereof, and a guard therefor pivotally connected thereto and adapted to frictionally engage the blade to hold the guard yieldingly in position against the handle member and over the projecting blade.

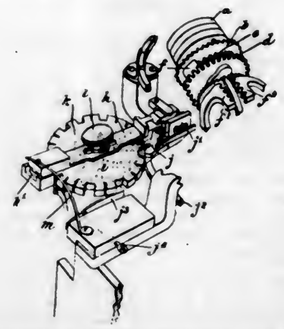
5. In a device of the class described, the combination with a handle member, of a separate blade having one end secured to the handle member intermediate the ends thereof and the other end projecting at one side of the member, and a guard pivotally mounted between the connected end of the blade and the member having a seating groove for the blade and adapted to be moved over the projecting end of the blade against the handle member.

[Claims 6 to 10 not printed in the Gazette.]

1,196,338. CRYPTOGRAPHIC MACHINE. HARRY A. CORBETT and JAMES WILLARD MORRIS, New York, N. Y., assignors to The Sinpar Company, a Corporation of New York. Filed Nov. 15, 1912. Serial No. 731,592. (Cl. 197—4.)

1. A cryptograph machine embodying therein a reciprocatory support a movable member having thereon a sequence of letters or characters rotatably mounted upon said support, selective means having a sequence of letters or characters co-inciding with those upon said movable member whereby pre-determined successive rotary movements of variable degrees may be imparted to said movable member and a reciprocatory movement is imparted to said support, means adapted to impart rotary movement to said movable member independently of said selective means, a controlling device having a plurality of irregularly arranged operative surfaces thereon whereby said last named means is made intermittently operative and operative connections between said selective means and said controlling device.

2. A cryptograph machine embodying therein a reciprocatory support a movable member having thereon a sequence of letters or characters rotatably mounted upon said support, selective means having a sequence of letters or characters co-inciding with those upon said movable member, means actuated by said selective means respectively for imparting variable pre-determined successive rotary movements to said movable member and reversing said rotary movement of said member a reciprocatory movement is imparted to said support, means adapted to impart movement to said movable member independently of said selective means before said member is brought to the first operative position thereby, a controlling device for automatically determining the operative interval of said last named means and operative connections between said selective means and said controlling device whereby the movements of said controlling device are synchronized with those of said movable member.



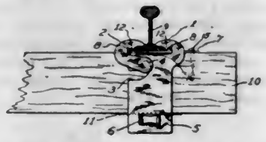
3. A cryptograph machine embodying therein a movable member having thereon two similar sequences of letters or characters, the order of the letters or characters in one sequence being the reverse of that of the other, two groups of selectively operative members, operative connections between each of said groups and said movable member whereby the actuation of one group will impart movement to said members in one direction and the actuation of the members of the other group will impart movement thereto in the other direction, means adapted to impart movement to said movable member independently of any of said selective members, a controlling device whereby said last named means is made intermittently operative and operative connections between said selective means and said controlling device.

4. A cryptograph machine embodying therein a reciprocatory support a movable member having thereon a sequence of letters or characters rotatably mounted upon said support, selective means having a sequence of letters or characters co-inciding with those upon said movable member whereby pre-determined successive rotary movements of variable degrees may be imparted to said movable member and a reciprocatory movement is imparted to said support, means adapted to impart rotary movement to said movable member independently of said selective means, a rotatable controlling device having a plurality of irregularly arranged operative surfaces thereon whereby said last named means is actuated and operative connections between said rotatable device and said selective means.

5. A cryptograph machine embodying therein a reciprocatory support a movable member having thereon a sequence of letters or characters rotatably mounted upon support, selective means having a sequence of letters or characters coinciding with those upon said movable member whereby pre-determined successive rotary movements of variable degrees may be imparted to said movable member and a reciprocatory movement is imparted to said support, means adapted to impart rotary movement to said movable member independently of said selective means, a rotatable controlling device having a plurality of irregularly arranged operative surfaces thereon whereby said last named means is actuated, operative connections between said rotatable device and said selective means and means whereby said controlling device may be shifted in relation to its actuating means to vary its operative effect.

[Claims 6 to 16 not printed in the Gazette.]

1,196,339. RAIL CLAMPING AND FASTENING DEVICE. WILLARD D. CRANNEY, Logan, Utah. Filed Dec. 19, 1913, Serial No. 807,702. Renewed Jan. 27, 1916. Serial No. 74,701. (Cl. 238—4.)



1. In a rail clamp, a pair of inverted U-shaped clamping members each adapted to straddle a tie and to engage a rail with their horizontal portions, means connecting said clamping members at a point below the lower surface of the flange of the rail, and means for drawing said clamping members in a downward direction.

2. In a rail clamp, a pair of inverted U-shaped clamping members each adapted to straddle a tie and to engage a rail with their horizontal portions, means pivotally connecting said clamping members below the lower surface of the flange of the rail, and means adapted to engage one of said clamping members and the lower surface of a tie for drawing said clamping members in a downward direction.

3. In a rail clamp, a pair of inverted U-shaped clamping members, the one of said members being provided with a pair of slots and the other with means adapted to enter said slots to lock the members together, means on said members for engaging the upper faces of the flange of a rail on opposite sides of the web thereof, and means adapted to engage one of said members and a tie for causing downward pressure on the upper surface of the flange of a rail.

4. In combination, a rail, a tie, a pair of inverted U-shaped clamping members adapted to straddle said tie and to extend a slight distance therebelow, means pivotally connecting said clamping members below the lower face of said rail flange, and a wedge passing through one of said clamping members and engaging the lower surface of the tie.

5. In combination, a rail, a tie, a channeled wear plate mounted on the tie, the distance between the channel flanges of the wear plate being slightly greater than the width of the flange of the rail, a pair of inverted U-shaped clamping members adapted to straddle said tie and one of said members adapted to extend a slight distance below said tie, said clamping members having each a horizontal portion adapted to engage the flange of the rail and a rib adapted to enter the space between the rail flange and the corresponding channel flange of the wear plate, means pivotally connecting said clamping members below the lower surface of the rail flange, and a wedge passing through one of said clamping members and engaging the lower surface of the tie.

1,196,340. RECEIVER-OPERATED SWITCH FOR TELEPHONES. HIRAM D. CURRIER, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 8, 1913. Serial No. 805,222. (Cl. 179—158.)

1. A device of the character described comprising a casing having an opening or orifice in a wall thereof, said opening being adapted to hold a telephone receiver, a plate secured to the inside of said wall and covering said opening or orifice, means for yieldingly holding the receiver in said opening against the said plate, and switch contacts operable by the removal or replacing of the receiver.

2. A device of the character described comprising a casing having an opening or orifice in the wall thereof, a plate secured to the inside of said wall and covering said opening or orifice, said opening being adapted to hold a telephone receiver, yielding members for removably holding the receiver in said opening, and switch contacts operable by the removal or replacing of the receiver.

3. A device of the character described comprising a flat wall of a casing, an orifice in said casing covered by a plate secured to the inside of said wall, contact springs supported upon the inside of said wall and having an operating element extending through a hole in said plate, and means for removably supporting a telephone receiver against the outside of said plate and in operative relation to said contact operating element.

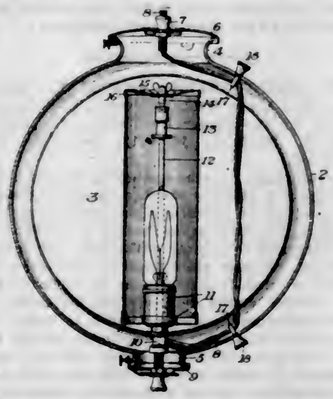


4. A device of the character described comprising a casing having an opening or orifice in the wall thereof, a plate secured to the inside of the wall, contact springs supported upon the inside of said wall and having an operating element extending through a hole in said plate, and means for removably supporting a telephone receiver against the outside of said plate with the face of its ear piece in operative relation to said contact operating element.

5. A device of the character described comprising the wall of a casing, an orifice or opening therein, a plate secured to the inside of said wall and covering said orifice or opening, means for supporting a telephone receiver against the outside of said plate so that it may be laterally removed and replaced, and contacts supported upon the inside of said wall and operable by the receiver when so laterally moved.

[Claims 6 to 9 not printed in the Gazette.]

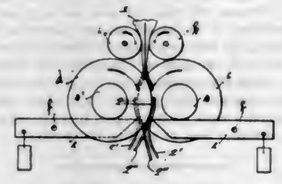
1,196,341. REVOLVING LANTERN. JOHN L. DAWES, Pittsburgh, Pa. Filed Oct. 12, 1914. Serial No. 866,186. (Cl. 240—11.)



1. A suspended revolving lantern comprising a casing having openings through the bottom and top thereof, an annular flange formed integral with the top of the casing, an annular flange formed integral with the bottom of the casing, said flanges surrounding said openings, a casing supporting plate connected to the top flange, a lamp supporting plate connected to the bottom flange, an incandescent electric bulb support connected to the bottom plate, a lamp supported thereby, electric conductors connected to the top plate and arranged to support the entire structure, said conductors extending to the lamp supported by the bottom plate, a shade supporting yoke connected to the lamp support extending laterally, then upwardly and then laterally over the center of the top of the lamp, and a shade supported on the top of said yoke; substantially as described.

2. A suspended revolving lantern comprising a casing having openings through the bottom and top thereof, an annular flange formed integral with the top of the casing, an annular flange formed integral with the bottom of the casing, said flanges surrounding said openings, a casing supporting plate connected to the top flange, a lamp supporting plate connected to the bottom flange, an incandescent electric bulb support connected to the bottom plate, a lamp supported thereby, electric conductors connected to the top plate and arranged to support the entire structure, said conductors extending to the lamp supported by the bottom plate, a shade supporting yoke connected to the lamp support extending laterally, then upwardly and then laterally over the center of the top of the lamp, a bearing on the top of said yoke, a shade supported on said bearing and adapted to rotate thereon, and a motor connected to the top of said shade adapted to be actuated by the hot air radiated from the lamp; substantially as described.

1,196,342. METHOD OF RECOVERING IRON, STEEL, AND THE LIKE FROM WASTE ENAMELED ARTICLES. ALFRED DE BACK, Essen-on-the-Ruhr, Germany, assignor, by mesne assignments, to Goldschmidt Detinning Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 12, 1910. Serial No. 591,982. (Cl. 29—81.)



1. The method of removing enamel from waste enameled articles, which consists in compressing the articles and crushing the enamel thereon and positively opening the layers of said articles to permit removal of the enamel between the layers.

2. The method of removing enamel from waste enameled articles, which consists in compressing the articles and crushing the enamel thereon, cutting said articles into portions and opening the layers of the cut portions to permit removal of the enamel between the layers.

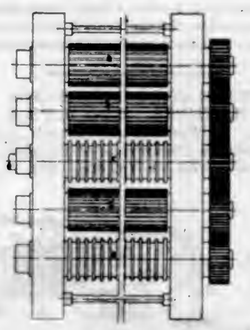
3. The method of removing enamel from waste enameled articles, which consists in compressing the articles and crushing the enamel thereon, cutting said articles into strips, and opening the strips to permit removal of the enamel on the inside of the same.

4. The method of removing enamel from waste enameled articles, which consists in rolling said articles to flatten them and crush the enamel thereon, and positively reopening the flattened articles to permit removal of the inside enamel.

5. The method of removing enamel from waste enameled articles, which consists in rolling said articles to flatten them and crush the enamel thereon, cutting the flattened articles into strips, and opening the layers of said strips to permit removal of the enamel between said layers.

1,196,343. APPARATUS FOR DISINTEGRATING METAL ARTICLES. ALFRED DE BACK, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Detinning Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 29, 1914. Serial No. 879,463. (Cl. 29—81.)

1. Apparatus for treating waste enameled articles comprising at least two pairs of rollers, one pair being capable of corrugating the articles in one direction and feeding them to the second pair and the second pair being capable of corrugating the articles in a different direction, the circumferential speed of the rollers of the second pair being greater than that of the rollers of the first pair.

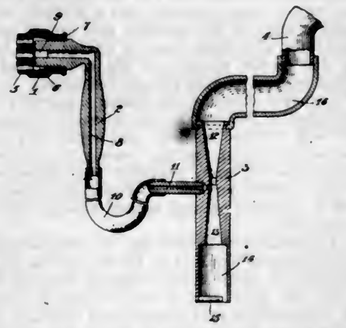


2. Apparatus for treating waste enameled articles comprising a plurality of pairs of rollers adapted to corrugate the articles in two directions, the rollers of certain pairs having a greater circumferential speed than the rollers of the preceding pair, for the purpose described.

3. Apparatus for treating waste enameled articles comprising two pairs of rollers, the rollers of the first pair being provided with circumferential corrugating means and the rollers of the second pair being provided with longitudinal corrugating means, the circumferential speed of the rollers of the second pair being greater than that of the rollers of the first pair, for the purpose described.

4. Apparatus for treating waste enameled articles comprising means for corrugating the articles in one direction, and means for corrugating the articles in a different direction and simultaneously exerting tension on the articles being discharged by the first-named means.

1,196,344. MASSAGE APPARATUS. LUIS DE FLOREZ, Short Hills, N. J. Filed Feb. 19, 1913. Serial No. 749,358. (Cl. 128—16.)



1. In a massage apparatus, a hollow flexible member having a plurality of flexible, tubular extensions, and a rigid slotted cylindrical supporting member adapted to enter and support the flexible member.

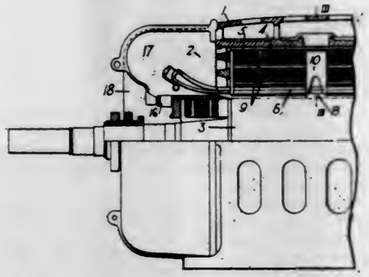
2. In a massage apparatus, a hollow flexible member having a plurality of tubular extensions formed thereon, a rigid cylindrical supporting member therefor having a passage therethrough and a slot communicating with the passage formed in the end nearest the flexible member.

3. In a vacuum massage apparatus, a hollow flexible member having a relatively large cushioning chamber therein, a support having a passage therethrough entering

said chamber and secured against further inward movement, and a plurality of tubular massaging members extending from the chamber walls.

4. In the massage apparatus, the hollow flexible member having a plurality of tubular extensions formed thereon, a rigid cylindrical supporting member therefor having a passage therethrough and a slot communicating with the passage formed in the end nearest the flexible member, and means for creating a suction therethrough.

1,196,345. VENTILATING MEANS FOR DYNAMO-ELECTRIC MACHINES. ALLAN B. FIELD, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 2, 1913. Serial No. 782,564. (Cl. 171—252.)



1. A laminated structure comprising a plurality of substantially annular sections having radial teeth, the said sections being arranged in groups, and a plurality of spacing members disposed intermediate said groups, each of said members being provided with an opening located between the teeth of adjacent end-sections.

2. A laminated structure comprising a plurality of substantially annular sections having spaced radial teeth, the said sections being arranged in groups, and a plurality of radial spacing members disposed intermediate said groups, each of said members being provided with an opening located between the teeth of adjacent end-sections.

3. A laminated structure comprising a plurality of sections arranged in groups, the end members of which are provided with recessed portions, and a plurality of spacing members disposed intermediate said groups and severally provided with projections to engage said recessed portions and further provided at one end with an opening located between certain of said projections.

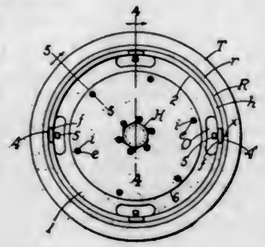
4. A laminated structure comprising a plurality of sections arranged in groups, the end members of which are provided with recessed portions, and a plurality of radially-disposed, separated, spacing members located between said groups and severally provided with projections to engage said recessed portions and further provided at one end with a V-shaped opening located between certain of said projections.

5. In a dynamo-electric machine, the combination with a core comprising a plurality of spaced sections and having a plurality of longitudinally-disposed openings extending through the same, of a plurality of spacing members disposed intermediate said sections and severally having an opening at one end adjacent to one of said longitudinal openings, thereby providing an annular passage for the circulation of a cooling medium.

[Claims 6 to 12 not printed in the Gazette.]

1,196,346. VEHICLE-WHEEL. FRED FISHER and KENNETH W. HOUSTON, Ironton, Mo.; said Fisher assignor to said Houston. Filed Jan. 31, 1916. Serial No. 75,429. (Cl. 152—7.)

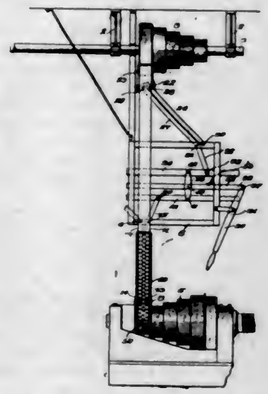
1. In a vehicle wheel, a fixed rim, a demountable rim surrounding the fixed rim, the demountable rim being provided with openings, locking plates interposed between said demountable rim and fixed rim, the latter being provided with peripheral recesses for receiving the locking-plates, suitable formations on the outer faces of the locking-plates entering the openings of the demountable rim, flanges projecting from the inner faces of the locking plates, and straddling the fixed rim, and screws operating through the fixed rim and engaging the inner faces of the locking plates.



2. In a vehicle wheel, a fixed channel rim opening outwardly, the flanges of the channel being provided with opposite marginal recesses, a series of plates received by said recesses and projecting beyond the flanges of the fixed rim, flanges on the plates engaging the outer faces of the flanges of the channel, a rim encompassing the several plates and provided with openings opposite the plates, suitable formations on the outer faces of the plates entering said openings, and screws traversing the webs of the channel and engaging the inner faces of the plates for locking the parts together.

3. In a vehicle wheel, a fixed channel rim opening outwardly, the flanges of the channel being provided with marginal recesses, a series of plates spanning the channel and resting in the recesses aforesaid, formations on the inner faces of the plates engaging the flanges of the channel, an outer rim engaged by the plates and provided with sockets opposite the plates, the latter having suitable lugs entering said sockets, and screws carried by the webs of the channel and engaging the plates.

1,196,347. BELT-SHIFTER. JOHN J. FRYNE, Rochester, N. Y. Filed Dec. 21, 1914. Serial No. 878,389. (Cl. 64—4.)



1. In combination with a stepped cone pulley, a belt operating thereon, a shifter for the belt having a device engaging the belt near the pulley, a guard for that portion of the belt in proximity to the pulley, said guard being carried with the belt-engaging device of the shifter to guard the belt as the latter operates on any step of the pulley.

2. A belt shifting mechanism for a belt operating on two stepped cone pulleys comprising two belt engaging devices for coöperating with such a belt near its two pulleys, a common operator for the belt engaging devices, and two stop devices, one for each belt engaging device, one brought into action when the belt is moved in one direction to hold its belt engaging device against movement by the operator until the other belt engaging device has shifted a portion of the belt, and the other stop device acting in the same manner when the belt is moved in the other direction.

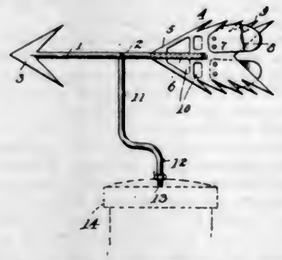
3. A belt shifting mechanism for a belt operating on two stepped cone pulleys comprising two belt engaging devices for coöperating with such a belt near its two pulleys, two stopping means each for positively holding one of the belt engaging devices against movement until the other has moved to shift a portion of the belt, and a common operator for the belt engaging devices adapted to bring one of said stopping means into action when the belt is shifted in one direction and the other of said means into action when the belt is shifted in the other direction.

4. A belt shifting mechanism for a belt operating on two stepped cone pulleys comprising two belt engaging devices for coöperating with such a belt near its two pulleys, a member connected to the belt engaging devices, an operator connected to said member between the points of connection with the belt engaging devices, and two stop devices for holding said member against movement on either side of the connection with the operator, one of said devices operating when the belt is shifted in one direction and the other when the belt is shifted in the other direction.

5. A belt shifting mechanism for a belt operating on two stepped cone pulleys comprising two belt engaging devices for coöperating with such a belt near its two pulleys, an operator common to both of such devices, a member connected to the operator and to the belt engaging devices, and two means for holding different portions of said member against movement to hold one or the other of said belt engaging devices against movement, one of said means acting when the belt is shifted in one direction and the other of said means acting when the belt is shifted in the other direction.

[Claims 6 to 26 not printed in the Gazette.]

1,196,348. ATTACHMENT FOR AUTOMOBILES. WILLIAM GIANINI, New York, N. Y. Filed Mar. 31, 1916. Serial No. 88,123. (Cl. 46—14.)



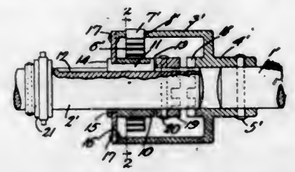
1. As a new article of manufacture, a body supported to swing about a pivot, and a tail rotatably attached to the rear end of said body, said tail having blades for engaging a current of air to rotate said tail and simultaneously hold the forward end of said body toward the direction of the air current.

2. As a new article of manufacture, an arrow having a pivotally supported shaft, a vane swiveled on the rear end of said shaft, and laterally projecting blades attached to said vane for rotating the same and for holding the point of the arrow toward the direction of the air current.

3. As a new article of manufacture, an arrow having a pivotally supported shaft, a vane swiveled on the rear end of said shaft, and laterally projecting blades attached to said vane for rotating the same and for holding the point of the arrow toward the direction of the air current, said vane having openings therethrough to facilitate the rotation thereof by said blades.

4. As a new article of manufacture, a stem having a screw threaded end and having an off-set portion constituting a crank for attaching said stem to a support, a shaft pivotally supported on said crank, a vane having a swivel connection with the rear end of said shaft and constructed to rotate upon said swivel connection, and blades attached to said vane for rotating the same upon said swivel connection.

1,196,349. YIELDABLE SHAFT-COUPLING. LEVI L. GILBERT, Boulder, Colo. Filed Dec. 13, 1915. Serial No. 66,560. (Cl. 192—9.)



1. In combination, a driving and a driven shaft, means for positively connecting said shafts whereby the driven shaft is rotated positively by the driving shaft, and spring means connected to said shafts whereby when said means is inoperative the spring means yieldably advances the driven shaft when the driving shaft is rotated.

2. In combination, alining driving and driven shafts, clutch means for positively connecting them whereby the driven shaft is rotated positively by the driving shaft, and a spring connection between the shafts whereby when the clutch means is inoperative, the spring means is operative for advancing the driven shaft yieldably when the driving shaft is rotated.

3. In combination, alining driving and driven shafts, an annular member rotatable with the driven shaft and surrounding the driving shaft, a spring connecting said member and driving shaft to be wound up when the driving shaft is rotated, and clutch means within said member for positively connecting and disconnecting the adjacent ends of said shafts.

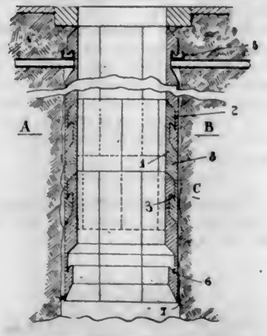
4. In combination, alining driving and driven shafts, clutch members carried by the adjacent ends thereof and adapted to be interengaged for positively connecting said shafts, and spring means independent of the clutch members and connected to said shafts whereby when the clutch members are separated, the spring means is operative to yieldably advance the driven shaft when the driving shaft is rotated.

5. In combination, alining driving and driven shafts, a cup-shaped member having a central hub fitted and secured upon the end of one of said shafts, the end of the other shaft fitting rotatably in said hub, said hub having a clutch portion, a clutch member carried by the second mentioned shaft to engage and disengage the clutch portion when the second mentioned shaft is slid relatively to the first mentioned shaft, a sleeve slidable upon the second mentioned shaft, and a spiral spring having its outer end connected to the rim of said member and having its inner end connected to said sleeve.

1,196,350. SHAFT OR WELL LINING. MARCEL GILLEAUX, Liege, Belgium. Filed Oct. 7, 1912. Serial No. 724,425. (Cl. 72—12.)

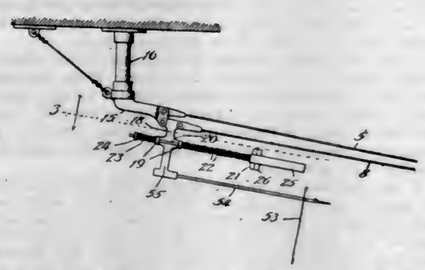
A shaft lining composed of a plurality of courses each divided into a series of lining elements by plane surfaces which are parallel to the direction of the axis of the shaft and suspended from their upper ends, said elements being provided with hooks on their inner and outer faces, the hooks on one face extending in a direction opposite

to those on the other face, said hooks having recesses at the base of their engaging faces to receive the heads of



the hooks of adjacent elements, said recesses and hooks corresponding in width.

1,196,351. FILE-CONVEYER. EMANUEL C. GIPE, Chicago, Ill., assignor, by mesne assignments, to The Rowe Ring-Point Company, Hartford, Conn., a Corporation of Connecticut. Filed July 2, 1914. Serial No. 848,640. (Cl. 186—8.)



1. A device for transmitting and delivering papers from one station to another, comprising, in combination, an elevated way, a car mounted to travel thereon, means for propelling said car, clamping means upon said car for holding a paper in position to be moved into positive contact with receiving means, receiving means located at a receiving station for entering into positive holding relation with said paper when delivered thereto and releasing means for releasing said clamping means upon the arrival of the car at said station.

2. A device of the class described, comprising an elevated way interposed between a sending and a receiving station, a car mounted to travel upon said way, means at said receiving station for arresting said car, means upon said car for holding a paper during the transit of said car from station to station, means at said receiving station for engaging said holding means to cause the release of said paper, and means at said receiving station for receiving and holding said paper.

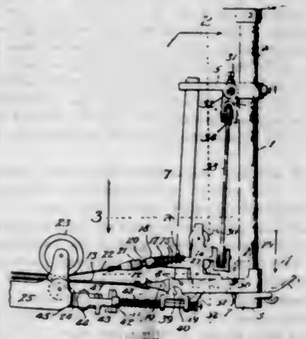
3. A device of the class described, comprising an elevated way interposed between a sending and a receiving station, a car mounted thereon, car-arresting means at said receiving station, means upon said car for holding a paper during transit, means at said receiving station for releasing said holding means by the impact of the car, and means thereat for receiving and holding said paper.

4. A device of the class described, comprising, in combination, an elevated way located between sending and receiving stations, a car mounted to travel forward and back over the same length of way, yielding means upon said car for grasping a paper during transit, holding means at said receiving station for detachably making fast to said paper while still held by said yielding grasping means and tripping means at said receiving station to release said paper and permit it to be positively held by said holding means.

5. A device of the class described, comprising an elevated way interposed between a sending and a receiving station, a car mounted upon said way, resilient means at said receiving station for arresting the progress of the car and causing it to rebound for the purpose of returning it to the sending station, yielding means releasable by the impact of the car at said receiving station for holding a paper during transit, and a spindle at said receiving station for puncturing said paper and holding the same when released by said holding means upon said car.

[Claims 6 to 13 not printed in the Gazette.]

1,196,352. STORE-SERVICE APPARATUS. EMANUEL C. GIPE, Chicago, Ill., assignor, by mesne assignments, to The Rowe Ring-Point Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 2, 1914. Serial No. 864,630. (Cl. 186—13.)



1. In a store service apparatus, the combination with a car having opposed guide surfaces, of wires stretched between said surfaces, a track member, a trolley arranged to travel thereon, means for connecting said trolley with one of said wires, operating means in operative connection with said trolley, a buffer-catch for normally engaging and holding said car, the trolley being engaged with said catch to release the same when the trolley is moved outward on said track.

2. In a store service apparatus, the combination with a car having opposed guide surfaces, of wires stretched between said surfaces, a pivoted catch tending to swing free from the car, a detent for holding the same in the path thereof and means to spread said wires operating also to release said detent.

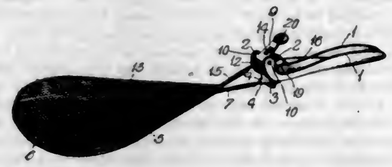
3. In a store service apparatus, the combination with a car having opposed guide surfaces, of wires stretched between said surfaces, a pivoted catch tending to swing free from the car, an upwardly extending track, a trolley adapted to travel on said track one of the said wires being attached to said trolley, the descent of said trolley acting to move said catch into the path of said car.

4. A store service propulsion device of the spread wire type comprising, in combination, a car having opposed guide surfaces, wires stretched between said surfaces, a track, a trolley adapted to travel on said track, one of the wires being connected to said trolley by means of a yoke secured to the same by a spring at either side of the track.

5. A store service propulsion device of the spread wire type comprising, in combination, a car having opposed guide surfaces, wires stretched between said surfaces, a track, a trolley adapted to travel on said track, a yoke carried by one of the wires having legs passing through perforations in said trolley and working against springs.

[Claims 6 to 8 not printed in the Gazette.]

1,196,353. FLY-CATCHER. WILFRED B. GODDARD, Detroit, Mich. Filed Nov. 4, 1915. Serial No. 59,506. (Cl. 43—1.)



1. A fly catcher comprising a handle of sheet material molded to form a hand grip for the major portion of its length and provided on the inner end with downturned spaced pivot ears, a beater frame rigidly secured to the cared end portion of the handle to extend therefrom in substantially the same plane, a sheet metal thumb piece bent between its ends and provided near the bend with pintles engaging perforations of the ears, a swinging frame corresponding in contour to the beater frame secured to the thumb piece to swing therewith, and a spring member housed within the handle and bearing outwardly against the thumb piece to normally hold the frames in contact.

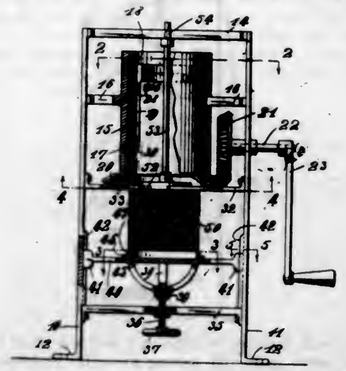
2. A fly catcher comprising a handle formed of sheet metal molded as a hollow hand grip for the major portion of its length and provided with spaced pivot ears at one end, a transverse tongue struck out of the body of the metal between the ears and bent oppositely thereto, a thumb plate bent between its ends and provided near the bend with lateral pintles engaging pivot openings of the ears between which the thumb plate swings, a fixed frame formed of a wire bent into a loop with a twisted shank, the strands of which are separated to embrace the notched margins of the handle tongue and are passed through an opening in the handle and clenched against the latter, a beater frame of corresponding form to the fixed frame having a twisted shank with spread strands interlocking with the thumb plate and engaging at the outer contiguous end portions in an aperture of the thumb plate, and a spring bar secured to and housed within the hollow grip portion of the handle to bear outwardly against the inner arm of the thumb piece and to normally hold the beater frame and thumb piece frame in contact.

3. A fly catcher comprising a handle formed of sheet metal and provided with a pair of spaced and perforated pivot ears near one end and an oppositely extending tongue provided with notched margins, a beater frame having a body covered with reticulate material and a shank of twisted strands that are spread to form a diamond loop embracing the tongue and interlocking with notched margins thereof, the inner end portions of the strands being passed through and clenched to an aperture of the handle, a thumb piece bent between its ends and provided with pintles engaging in the perforations of the ears, a spring member passing through an opening in the body of the handle and over an instruck tongue formed between the marginal portions of the handle and bearing outwardly against the inner arms of the thumb member, and a swinging frame secured to the thumb member to bear against the beater frame.

1,196,354. DISK-CUTTER. SIMON GOTTLIEB, New York, N. Y. Filed Dec. 28, 1915. Serial No. 68,995. (Cl. 164—82.)

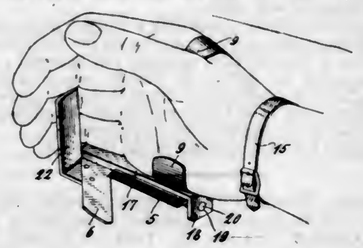
1. In a machine of the class described, the combination with a frame, an open cylinder secured therein, said cylinder being internally screw-threaded, a cross-head suited to said threads, means for rotating said cross-head whereby it is caused to move longitudinally in said cylinder, one or more knives secured in said cross-head, means for communicating rotary motion to said cross-head, and a fabric clamping press below said cylinder for holding goods to be operated upon.

2. In a machine of the class described, the combination with a frame, a cylinder vertically mounted therein, said cylinder being screw-threaded throughout, a cross-head suited to the threads, a bevel gear rotatably mounted below said cylinder, means for transmitting rotary motion to said bevel gear, connections between said gear and said cross-head whereby they are caused to rotate in unison, one or more vertical knives having cutting edges



upon their lower ends carried by said cross-head, a slide vertically operable near the bottom of said frame, means for actuation thereof, a detachable bushing carried in said slide, a clamp plate in alinement with said bushing movable through said cylinder, and means for clamping said plate in position whereby the fabrics may be tightly engaged between said disk and said bushing in condition to be operated upon by said knives.

1,196,355. MAIZE HEADER AND CUTTER. ISAAC S. GRINDSTAFF and LUKE JOHNSON, Haskell, Tex. Filed Dec. 30, 1914. Serial No. 879,714. (Cl. 30—9.)

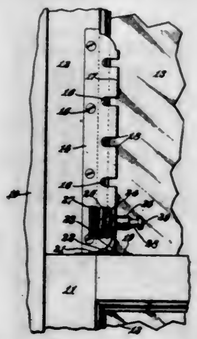


A cutting implement comprising a stationary blade, a movable blade coacting with the stationary blade, a supporting bar for the stationary blade, said bar having laterally extending portions at its extremities provided with guide apertures, a rod slidably mounted in said apertures and carrying the movable blade, means for attaching the supporting bar to the hand, and a finger piece for actuating the movable blade.

1,196,356. SASH-FASTENER. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-fourth to Fred. C. Schoenthaler and one-fourth to James B. Hollis, St. Louis, Mo. Filed Mar. 13, 1915. Serial No. 14,277. (Cl. 16—144.)

1. A sash fastener comprising a notched plate attached to the upper sash, a bolt pivoted on the lower sash and adapted to swing laterally into engagement with the notched plate to lock the sashes relatively, said bolt being adapted to ride along the edge of the plate and guide the parts into engagement, and means for moving the bolt to clamp the plate.

2. A sash fastener comprising a notched plate attached to the upper sash, said plate having an outer flange, and a bolt pivoted on the lower sash and adapted to swing laterally into engagement with the notched plate to lock the sashes relatively and to seat behind said flange, said bolt being adapted to ride along the edge of the plate and guide the parts into engagement.



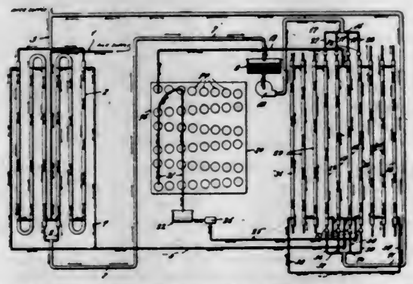
3. A sash fastener comprising a notched plate attached to the upper sash and having an outer rearwardly disposed flange, a bolt pivoted on the lower sash and provided with a head, said bolt being adapted to ride along the edge of the plate and guide the parts into engagement and to swing laterally into said notches with its head engaging the rear face of said plate, and means for moving the bolt longitudinally to clamp the plate and engage the head behind said flange.

4. A sash fastener comprising a notched plate attached to the upper sash, a carrier vertically pivoted on the lower sash and provided with a pair of sleeves having coöperative threaded engagement, and a bolt adapted for engagement with said notched plate, said bolt being connected with the outer sleeve for movement longitudinally through the medium of said sleeve.

5. A sash fastener comprising a notched plate attached to the upper sash, a carrier pivoted on the lower sash and carrying a longitudinally movable bolt adapted, through movement of the carrier, to laterally engage said plate, and a pair of coöperatively threaded sleeves mounted on the carrier, one of said sleeves being operatively connected with and for moving said bolt longitudinally.

[Claims 6 to 8 not printed in the Gazette.]

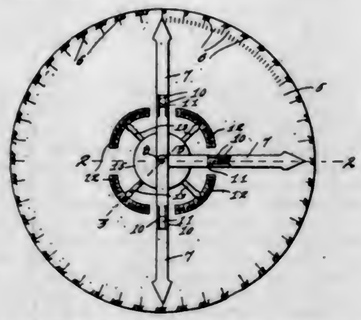
1,196,357. PROCESS OF PASTEURIZATION. FRANK A. HAINES, St. Louis, Mo., assignor of one-half to Daniel C. Kerckhoff, St. Louis, Mo. Filed Dec. 4, 1915. Serial No. 64,953. (Cl. 99—15.)



1. The herein described method of pasteurizing milk and the like, which consists in introducing the milk at a temperature of substantially forty degrees Fahrenheit in a coil heated to a temperature of approximately one hundred eighty five degrees Fahrenheit and flowing the milk through said coil whereby the milk is raised to a temperature of about one hundred sixty degrees Fahrenheit, then flowing the milk to a primary cooler and rapidly reducing its temperature to a relatively lower pasteurizing temperature and holding it at such relatively lower temperature for a relatively long time and then further cooling the milk.

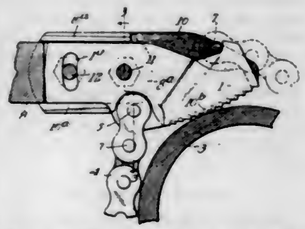
2. The herein described method of pasteurizing milk, which consists in gradually raising the temperature of the liquid to a temperature of about one hundred and fifty-five to one hundred and sixty-five degrees Fahrenheit at which temperature or not much below the milk will have been for about thirty to sixty seconds prior to its discharge to a primary cooler, then flowing the liquid to a primary cooler and rapidly reducing its temperature to about one hundred thirty eight to one hundred forty three degrees Fahrenheit, holding the liquid at said reduced temperature for approximately twenty to thirty minutes, and then further cooling the liquid.

1,196,358. GAME-COUNTER. EDWIN J. HEARST, Asheboro, N. C. Filed May 17, 1915. Serial No. 28,696. (Cl. 235—120.)



In a counter of the class described, the combination with a plate and a circular series of symbols thereon, of a plurality of pointers pivoted at a common center on the plate to swing radially with respect to said series of symbols, a symbol on each of the pointers and a plate slidably mounted on each of the corners to cover or uncover the said symbol.

1,196,359. CHAIN TONGS. ALFRED E. HOLMES, Chicago, Ill., assignor of one-half to William J. Mohr, Chicago, Ill. Filed Jan. 3, 1916. Serial No. 69,784. (Cl. 81—69.)



1. Chain tongs having a handle, an engaging dog pivoted thereto, means for limiting the amount of rotary movement of the dog relatively to the handle, and a chain anchored to the dog at one end and detachably attachable to the dog at the other end, the dog having teeth for engaging the work, and the distance between the anchoring point of the chain to the dog and the point where the dog normally engages the work being less than the distance between the point of detachable attachment of the chain to the dog and the point where the dog normally engages the work.

2. Chain tongs having a handle, an engaging dog having teeth for engaging the work, a pivot pin articulately connecting the dog to the handle, means for limiting the amount of movement of the dog relatively to the handle, a chain anchored at one end to the dog and at the other end detachably attachable thereto, the distance between the point where the chain is anchored to the dog and the point where the dog normally engages the work being less than the distance between said pin and the point where the dog normally engages the work.

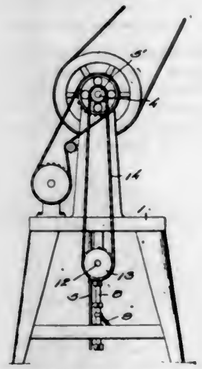
3. Chain tongs having a handle, an engaging dog pivoted thereto between its ends, a slot and pin for limiting the rotary movement of the dog relatively to the handle, a chain anchored to the front of said dog and adapted to be disconnectibly connected to the back of the dog.

4. Chain tongs having a handle, an engaging dog pivotally attached thereto, means for limiting the movement of the dog relatively to the handle, a chain coöperating with said dog, and a supplemental row of teeth fixed relatively to the handle for supplementing the gripping action of the dog upon the work.

5. Chain tongs having a handle, an engaging dog pivotedly attached thereto, means for limiting the movement of the dog relatively to the handle, a chain coöperating with said dog, and jaw plates fastened to the sides of the handle and each having a row of teeth adjacent to and slightly behind the teeth on the dog when the latter is in acting position.

[Claim 6 not printed in the Gazette.]

1,196,360. METAL-TUBE-EXTRUDING MACHINE. LEALIE E. HOOKER, Barrington, R. I. Filed Mar. 27, 1912. Serial No. 686,598. (Cl. 207—1.)



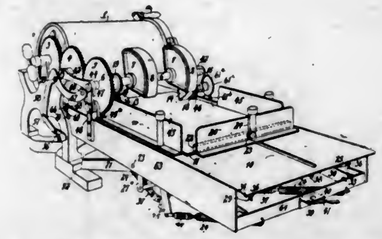
1. In a reciprocating plunger press for making metal tubes by extrusion, the combination with the plunger and die, of means located beneath or beyond the die to grasp the extruded tube and swing it laterally and a plurality of severing devices against which the tube is carried by said means.

2. In a reciprocating plunger press for making metal tubes by extrusion, the combination with the plunger and die, of means located beneath or beyond the die to grasp the extruded tube and swing it laterally, a plurality of severing devices against which the tube is carried by said means, and mechanism driven in timed relation with the plunger to actuate said means.

3. In a machine for making metal tubes, the combination with the dies, of a series of semi-circular jaws carried by an angularly movable shaft in position to receive the tube as it comes from the dies, a spring to normally hold said shaft and jaws in said position, a second shaft carrying coöperating jaws, a series of circular saws revolubly mounted between said shafts, a cam driven in timed relation with the die actuating means and arranged to act upon said second shaft to cause the jaws carried thereby to grip the tube between them and the complementary jaws and then to force the latter back and carry the tube against said saws.

4. In a machine for making metal tubes, the combination with the die and plunger, of a shaft mounted parallel with the axis of the die, half-jaws carried by said shaft in line with the die to receive the tube as it comes therefrom, a second parallel shaft carrying complementary half-jaws, a plurality of circular saws operatively mounted between said shafts, a cam arranged to act on said second shaft to clamp the tube between said jaws and then to turn both shafts to carry the tube clamped in said jaws against said saws, and means to drive said cam in timed relation with said plunger.

1,196,361. SHEET-FEEDING DEVICE. CHARLES W. HOWELL and ARTHUR E. HOWELL, Newark, N. J., assignors to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 29, 1912. Serial No. 680,689. (Cl. 101—40.)



1. In a sheet-feeding machine, the combination of a feeder constantly revolving in one direction and moving, during its normal revolution, alternately into and out of contact with the pile of sheets; a separator constantly revoluble in the opposite direction and effective, when the feeder is out of contact with the pile, to withdraw the top sheet and hold it until gripped by said feeder; and means for periodically raising said feeder bodily above the pile, independently of its normal revolving movement out of contact with said pile, to relieve the pressure between said feeder and the sheet gripped thereby.

2. In a sheet-feeding machine, the combination of a feeder constantly revolving in one direction and moving, during its normal revolution, alternately into and out of contact with the pile of sheets; a separator constantly revoluble in the opposite direction and effective, when the feeder is out of contact with the pile, to withdraw the top sheet and hold it until gripped by said feeder; a movable frame whereon said feeder is mounted; and means for periodically raising said frame bodily, to lift the feeder above the pile independently of its normal revolving movement out of contact with said pile, to relieve the pressure between said feeder and the sheet gripped thereby.

3. In a sheet-feeding machine, the combination of a feeder constantly revolving in one direction and moving, during its normal revolution, alternately into and out of contact with the pile of sheets; a separator constantly revoluble in the opposite direction and effective, when the feeder is out of contact with the pile, to withdraw the top sheet and hold it until gripped by said feeder; and means for simultaneously raising said feeder and said separator bodily above the pile at definite periods, independently of their normal revolving movement out of contact with said pile, to relieve the pressure between said feeder and the sheet gripped thereby.

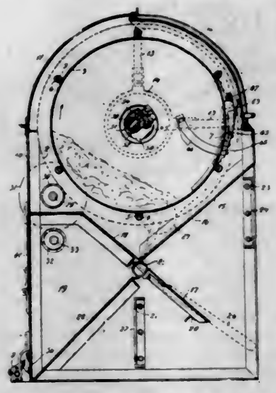
4. In a sheet-feeding machine, the combination of a feeder constantly revolving in one direction and moving, during its normal revolution, alternately into and out of contact with the pile of sheets; a separator constantly revoluble in the opposite direction and effective, when the feeder is out of contact with the pile, to withdraw the top sheet and hold it until gripped by said feeder; a

movable frame whereon said feeder is mounted; and a cam device associated with said frame for raising it bodily at definite periods, to lift the feeder above the pile independently of its normal revolving movement out of contact with said pile, to relieve the pressure between said feeder and the sheet gripped thereby.

5. In a sheet-feeding machine, the combination of a feeder segment revolving in one direction and moving, during its normal revolution, alternately into and out of contact with the pile of sheets; a separator, in the form of a contact device, revolving in the opposite direction and likewise moving, during its normal revolution, alternately into and out of contact with the pile; and means for periodically raising said feeder bodily above the pile, independently of its normal revolving movement out of contact with said pile, to relieve the pressure between the said feeder and the sheet gripped thereby.

[Claims 6 to 54 not printed in the Gazette.]

1,196,362. SAND-BLAST APPARATUS. FOSTER J. HULL, Hagerstown, Md., assignor to Thomas W. Pangborn Company, Hagerstown, Md., a Corporation of New York. Filed Oct. 7, 1912. Serial No. 724,292. (Cl. 51—12.)



1. Sand blast apparatus such as described, comprising a rotary screen drum, a blast nozzle therein, and a case inclosing said drum and having, beneath the drum, a sand receptacle, said case having an opening, opposite the side of the drum and located, in greater part, above the axis of the drum, and having a door for such opening whereby access may be obtained to the drum, said drum having in its side, and adapted to register with the opening of the case, a charging opening, and having also a door, for closing such charging opening, arranged to swing inwardly and upwardly within the drum when the opening of said drum is in registry with the opening of said case; said case provided with a sloping shelf beneath the drum, arranged to permit sand falling thereon from the drum to slide by gravity into said sand receptacle.

2. Sand blast apparatus such as described, comprising a rotary screen drum, and a case inclosing said drum and having, beneath the drum, a sand receptacle, said case having an opening, opposite the side of the drum, through which the drum may be charged, said drum having in its side, and adapted to register with the opening of the case, a charging opening, and having also a door for closing such charging opening, said door pivoted near that edge of said charging opening of the drum which is the upper edge when the said charging opening of the drum is in registry with the opening of the case, and arranged to swing inwardly and upwardly within the drum; said case provided with means beneath the drum arranged to permit sand falling from the drum to slide by gravity into said sand receptacle.

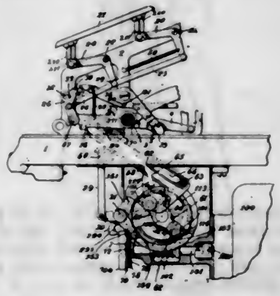
3. Sand blast apparatus such as described, comprising a rotary screen drum, and a blast nozzle therein, said drum having in its side an inwardly swinging charging door, bearing therefor and a case inclosing said drum the top of which case is cylindrical and comprises an upwardly and rearwardly swinging charging door whereby access may be obtained to the drum, and bearings for said door, mounted upon and arranged to turn about the bearings for said drum.

4. Sand blast apparatus such as described, comprising a rotary screen drum, and a case inclosing said drum, a sand receptacle, said case having an opening, opposite the side of the drum, through which the drum may be charged, said drum having in its side, and adapted to register with the opening of the case, a charging opening, and having also a door for closing such charging opening, said door pivoted near that edge of said charging opening of the drum which is the upper edge when the said charging opening of the drum is in registry with the opening of the case, and arranged to swing inwardly and upwardly within the drum, and latching mechanism for the door of the drum adapted to hold the door in either its closed or its open position; said case provided with means beneath the drum arranged to permit sand falling from the drum to slide by gravity into said sand receptacle.

5. Sand blast apparatus such as described, comprising in combination a rotary screen drum, a blast nozzle therein, a support for said drum comprising a casing inclosing the drum and having an inclined shelf adapted to receive sand escaping from the drum, said shelf having an opening through which the contents of said drum may be discharged, and a swinging shelf arranged in one position to close such opening in the inclined shelf, and in another position to form a slide down which the material discharged from the drum may pass; said drum provided with a discharge door.

[Claims 6 to 18 not printed in the Gazette.]

1,196,363. CENTRIFUGAL CONTROLLER FOR ADDING-MACHINES. JOHN PIRRONG HUNTER and HENRY KÜNTZLER, Wilkes-Barre, Pa., assignors, by direct and mesne assignments, to Adder Machine Company, a Corporation of Pennsylvania. Filed Dec. 29, 1908. Serial No. 469,758. (Cl. 192—1.)



1. The combination with a machine; a motor to drive the same; a normally idle clutch to couple the machine and motor; and an actuator to effect the operation of said clutch; of means adapted to prevent effective operation of the actuator until the motor has attained a predetermined speed, comprising a rock shaft turned by the actuator during the coupling operation; an arm turning with the shaft; and a rotary stop connected with the motor and normally interposed in the path of the arm, and adapted to be shifted by centrifugal force, out of said path.

2. The combination with a machine; a motor to drive the machine; means to couple the motor and machine; and an actuator to control said means; of means to prevent the operation of the actuator until the motor has attained a predetermined speed, comprising a revolving stop actuated from the motor and normally interposed in the path of the actuator mechanism, and adapted to be shifted by centrifugal force out of said path.

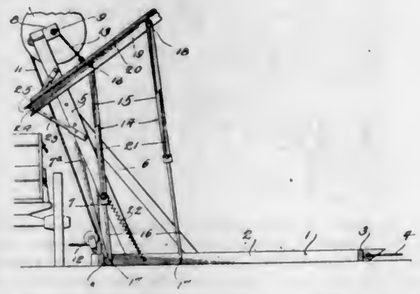
3. The combination with a clutch; and controlling means therefor; of a centrifugal device to limit the movement of said controlling means, the said device comprising a hub; radial guides secured thereto; a disk; locking members adapted to move outwardly on the guides and along the disk; and a spring secured to each locking member and the hub.

4. The combination with a clutch; and controlling means therefor; of a centrifugal device to limit the movement of said controlling means, the said device comprising a hub; radial guides secured thereto; a disk; locking members adapted to move outwardly on the guides and along the disk, the disk having slots therein, one for each locking member; a pin on each wing adapted to move in its slot; and a spring secured to each pin and the hub.

5. The combination with a clutch; and controlling means therefor; of a centrifugal device to limit the movement of said controlling means, the said device comprising a hub; radial guides secured thereto; a disk; locking members adapted to move outwardly on the guides and along the disk, the disk having slots therein, one for each locking member; a pin on each wing adapted to move in its slot; and a spring secured to each pin and the hub on that side of the disk opposite the locking members.

[Claims 6 to 34 not printed in the Gazette.]

1,196,364. WAGON-LOADING DEVICE. STANISLAUS W. HYTREK, Stuart, Nebr. Filed May 22, 1916. Serial No. 99,186. (Cl. 214—3.)

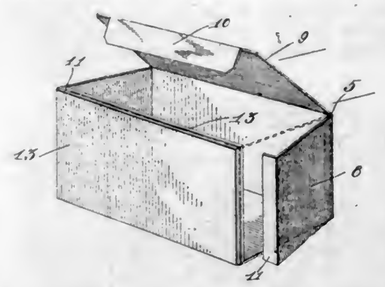


1. A loader comprising a base, a normally lowered loading platform, parallel legs pivoted at one end to the base and at their other ends to said platform, said legs being normally swung forwardly and being extensible, means for moving said platform upwardly and rearwardly, the parallel legs serving to retain said platform in a horizontal position during this operation, and means for limiting the rearward movement of said platform, said last named means serving as a fulcrum around which said platform may tilt to discharge its load, this tilting being permitted by the extensibility of the legs.

2. A loader comprising a base, a normally lowered loading platform, parallel legs pivoted at one end to the base and at their other ends to said platform, said legs being normally swung forwardly and being extensible, means for moving said platform upwardly and rearwardly, the parallel legs serving to retain said platform in a horizontal position during this operation, a pair of standards rising from the base, and coacting stop means on said standards and platform for limiting the rearward movement of the latter, said stop means serving as a fulcrum around which said platform may be tilted to discharge its load.

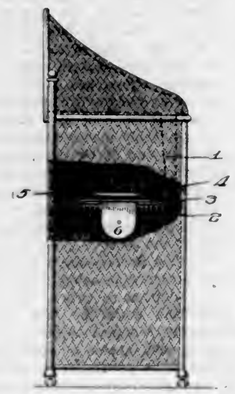
3. A loader comprising a base, a normally lowered loading platform, parallel legs pivoted at one end to said base and at their other ends to said platform, said legs being normally swung forwardly and being extensible, a pair of fixed standards rising from the rear end of the base, a winding shaft rotatably mounted on the upper ends of said standards, cable members secured at one end to said winding shaft and at their other ends to the platform between the front and rear edges of the latter, means for rotating said winding shaft whereby to move the platform upwardly and rearwardly, the legs serving to maintain said platform in a horizontal position during this operation, and coacting stop means on the standards and platform for limiting the rearward movement of the latter and holding the rear edge thereof against upward movement, whereby further winding of the cable members will tilt said platform to discharge its load.

1,196,365. BOX. GEORGE G. JENNINGS, Whitepine, Colo. Filed Aug. 11, 1914. Serial No. 856,246. (Cl. 229—33.)



A box comprising a blank of material adapted to be folded to provide a base, sides, ends and top, a tongue extending from the free longitudinal edge of said base, a side comprising a pair of independent sections engaged with said tongue, said ends and said top being extended to provide engageable portions for securement between said sections, substantially as specified.

1,196,366. NON-RESONANT MUSIC-CABINET. ALVA D. JONES, Philadelphia, Pa. Filed Nov. 27, 1915. Serial No. 63,784. (Cl. 274—2.)



1. The combination with a sound reproducing mechanism, of a cabinet made of reed and incapable of sympathetic sound vibration and inclosing the sound reproducing mechanism.

2. The combination with the reproducing mechanism of a talking machine, of a support and inclosure therefor composed of plaited or woven reed, ratan, cane, or similar elements and incapable of sympathetic sound vibration.

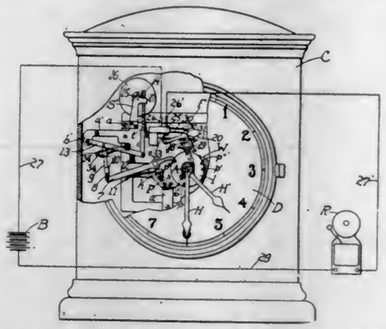
3. The combination with a talking machine, of a cabinet for said talking machine inclosing the latter and composed of reed, ratan, cane or similar elements associated in such a manner as to form a cabinet body incapable of sympathetic sound vibration.

4. The combination of a cabinet having no inherent fundamental tone, and composed of reed, ratan, cane or similar elements, and sound reproducing mechanism within the cabinet.

5. The combination of a cabinet having no fundamental tone of its own, composed of reed, cane ratan, cane or similar elements, and provided with a ledge having no fundamental tone of its own, of sound reproducing mechanism supported on said ledge.

[Claims 6 to 8 not printed in the Gazette.]

1,196,367. TIME-CLOCK. JOSEPH KAUP, St. Louis, Mo., assignor of one-fourth to S. T. McMillin, St. Louis, Mo. Filed Sept. 1, 1915. Serial No. 48,475. (Cl. 161—4.)



1. In a signal actuating device, the combination with a clock provided with an arbor, of a disk mounted on said arbor and adapted to rotate therewith, suitable formations projecting from the face of said disk, a suitable electric signal, an electric circuit, means actuated by said formations for closing the circuit at one point, and a member adjacent said disk operating to close said circuit at another point, and controlled by said formations.

2. In a signal actuating device, the combination with a clock provided with an arbor, of a disk mounted on said arbor and adapted to rotate therewith, suitable formations projecting from the face of said disk, a source of electric energy, a suitable signal, an electric circuit interposed between said source of energy and signal, means actuated by the formations on said disk for closing one part of said circuit, a rotatable member adjacent the disk adapted to be engaged by one of the formations on said disk for closing another part of said circuit, the rotatable member coöperating with the means actuated by the formations on the disk to cause the signal to respond at predetermined intervals during every other revolution of the disk, substantially as set forth.

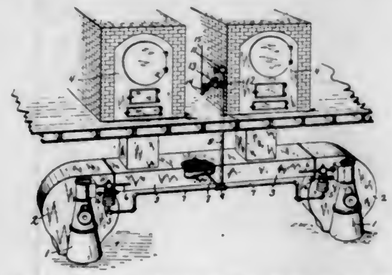
3. In a signal actuating device, the combination with a clock provided with a rotatable arbor, of a disk mounted on said arbor and adapted to rotate therewith, suitable formations projecting from the face of said disk, a source of electric energy, a signal device, an electric circuit interposed between said source of energy and signal device, a lever adapted to be oscillated by the formations on aforesaid disk, and governor-controlled means coöperating with said lever for closing the electric circuit upon an oscillation of the lever in one direction whereby said signal is made responsive.

4. In a signal actuating device, the combination with a clock provided with a rotatable arbor, of a disk mounted on said arbor and adapted to rotate therewith, suitable formations projecting from said disk, a source of electric energy, an alarm sounding device, an electric circuit interposed between said source of electric energy and said device, a lever having short and long arms mounted adjacent the disk and adapted to be engaged by the formations on said disk, links connected to the long lever arm of said lever and relatively slidable on each other, a rotatable member contiguous to the disk and adapted to be engaged by one of the formations on said disk, the aforesaid links operating to close one part of the circuit upon oscillation of the lever in one direction, and the rotatable member operating to close another part of said circuit at predetermined intervals, thereby causing the alarm to sound, substantially as set forth.

5. In a signal actuating device, the combination with a clock provided with a rotatable arbor, of a disk mounted on said arbor and adapted to rotate therewith, suitable formations projecting from said disk, a source of electric energy, an alarm sounding device, an electric circuit interposed between said source of energy and sounding device, a lever adapted to be oscillated by the formations on said disk, means coöperating with said lever for closing the electric circuit upon an oscillation of the lever in one direction, and means for maintaining said circuit closed for a certain period of time, whereby a sustained alarm is sounded.

[Claims 6 and 7 not printed in the Gazette.]

1,196,368. AIR-VALVE CONTROL. WILLARD A. KITTS, Jr., New York, N. Y. Filed Aug. 27, 1914. Serial No. 858,889. (Cl. 103—94.)



1. The method of controlling the speed of an engine driving a plus or minus pressure creating device, consisting in withdrawing a portion of the pressure created from the main body thereof and varying the withdrawn pressure by allowing a regulated communication of the same with the atmosphere, and utilizing said pressure as varied to determine the speed of the pressure creating device.

2. The method of controlling the speed of an engine driving a plus or minus pressure creating device, consisting in continuously withdrawing a portion of the pressure created from the main body thereof and varying the withdrawn portion of the pressure by allowing communication of said withdrawn pressure with the atmosphere, utilizing the result produced by the main body of pressure for automatically regulating such communication of the withdrawn pressure with the atmosphere, and utilizing said withdrawn pressure as varied to determine the speed of the pressure creating device.

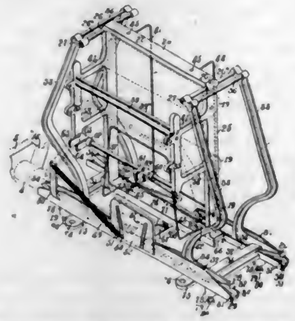
3. An air valve control comprising a main air duct, an air valve duct connected thereto, and means for controlling the pressure in the air valve duct independent of the pressure in the main air duct.

4. An air-valve control comprising a main air duct, an air-valve system having means of communication with the main air duct, and a bleeder conduit connected with said air valve system.

5. An air-valve control comprising a main air duct, an air-valve system having means of communication with the main air duct, a bleeder conduit connected with said air-valve system, and means for regulating the air passing through said bleeder conduit.

[Claims 6 to 16 not printed in the Gazette.]

1,196,369. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 15, 1913. Serial No. 742,096. (Cl. 197—133.)



1. In a typewriting machine, the combination with a traveling carriage, of a letter feeding device for said carriage, a roll holder, means tending to move said holder in the letter-feeding direction of said carriage, and a lost motion device connecting said holder and carriage for causing said holder to travel with said carriage, and permitting relative movement of the holder and carriage in either direction through a short distance only.

2. In a typewriting machine, the combination with a traveling carriage, of a letter feeding device for said carriage, a roll holder behind said carriage, a guard on said roll holder between the rolls thereon and the typewriter, and a guard behind the roll holder, said second guard hinged to be swung about a vertical axis to a position beyond the end of the roll space and thereby leave a clear space for inserting a roll in said holder.

3. In a typewriting machine, the combination with a roll-holder, of a bar on which said roll-holder travels, gravity means tending to start said roll-holder, and a spring exerting a varying pull on said roll-holder to maintain a substantially uniform tendency to move said roll-holder.

4. In a typewriting machine having a traveling carriage, the combination with a roll-holder, of means tending to move said roll-holder in a letter-feeding direction of the typewriter carriage, and a connection extending from said typewriter carriage to said roll-holder and permitting an independent movement of said roll holder a distance of substantially a letter space movement of said typewriter carriage.

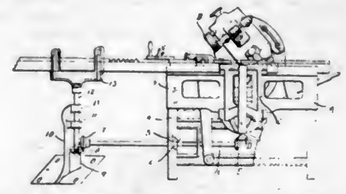
5. In a typewriting machine, the combination of a traveling carriage and an arm fast on said carriage, of a traveling roll-holder, abutments on said roll-holder between which said arm has a limited movement only, and by which the roll-holder may be positively driven in either direction, and means tending to move said roll-holder independently of said typewriter carriage.

[Claims 6 to 30 not printed in the Gazette.]

1,196,370. WORK-HOLDER. MEDERIC LAFONTAINE, Charlemagne, Quebec, Canada. Filed Jan. 7, 1916. Serial No. 70,776. (Cl. 76—78.)

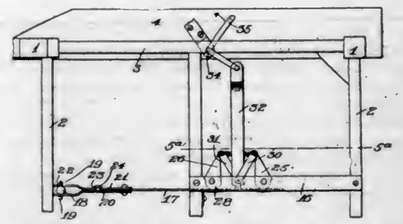
1. The combination in a band saw filing machine having a vertical adjustable work holder therein, of an adjustment having a vertically adjustable work holder arranged therein, a horizontally arranged shaft for operatively connecting said work holders, a vertical shaft operatively connected to said horizontally arranged shaft and means whereby upon the rotation of said vertical shaft the work holders may be simultaneously operated.

2. The combination in a band saw filing machine having a vertical adjustable work support therein, of an adjustment comprising a standard, a shaft vertically adjustable within said standard, a work holder carried by said shaft, a horizontally arranged shaft being operatively connected to the work holder carried by the saw filing machine, the opposite ends of said horizontally arranged shaft being operatively connected to a shaft journaled within the standard of the work holder, a vertical shaft



journaled within the band saw filing machine, means for connecting said vertical shaft with said horizontal shaft, and means whereby upon the rotation of said vertical shaft the work holders will be simultaneously raised and lowered for the purpose set forth.

1,196,371. RECLINING-CHAIR. CHARLES I. LATTIG, Rochester, N. Y., assignor to Stratton C. Langslow, Rochester, N. Y. Filed June 15, 1914. Serial No. 845,074. (Cl. 155—28.)



1. In a reclining chair, the combination with a base frame, of a back frame movable thereon, a guide attached to the base frame, an adjustable member movable in said guide in parallelism to a wall thereof, connections between said member and the back frame, a pair of locking devices pivoted on the guide and coöperating with said adjustable member to force it into engagement with the aforementioned wall, a toggle joint connecting said locking devices and acting when straightened to hold the locking devices disengaged from the adjustable member, and an operating lever connected to said toggle joint.

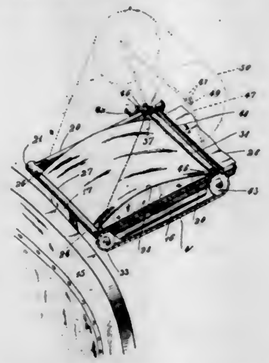
2. In a reclining chair, the combination with a base frame, of a back frame movable thereon, a guide attached to the base frame, an adjustable member movable in said guide in parallelism to a wall thereof, connections between said member and the back frame, a pair of locking devices pivoted on the guide and coöperating with said adjustable member to force it into engagement with the aforementioned wall, a toggle joint connecting said locking devices and acting when straightened to hold the locking devices disengaged from the adjustable member, a spring also connecting the locking devices, and an operating lever having connection with the toggle joint.

1,196,372. PAPER-DISPENSING APPARATUS. GIOVANNI LOMBARDO, White Plains, N. Y. Filed Sept. 18, 1915. Serial No. 51,336. (Cl. 155—10.)

1. A head-rest cover attachment comprising a pair of support bars, a slotted cylindrical casing rigidly carried by said bars, a paper receiving roller revolubly mounted in said casing, paper feed rollers mounted in said bars at the opposite ends thereof, a knife adjacently parallel to said feed rollers, means for rotating said feed rollers and means for supplying paper without dismounting said receiving rollers.

2. A head-rest cover attachment comprising a pair of bars, a fixed cylindrical casing at one end of said bars, a

paper carrying roller revoluble therein, a pair of feed rollers mounted in peripheral contact at the opposite ends of said bars, means for rotating one of said feed rollers, means for communicating rotary motion between said feed rollers and said carrying roller, an auxiliary paper supply source removably engageable with said bars and means combined with said casing whereby access may be had to said carrying roll in securing paper thereto.



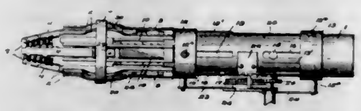
3. A head-rest cover attachment comprising a cylindrical casing having a fixed part and a movable part hinged longitudinally thereto, a slotted roller revoluble in said casing adapted to engage the end of a paper sheet, a supply source for paper, said supply source being removably engaged with the attachment, means for winding paper from said supply source upon said slotted roller and means for dispensing the paper from said roller.

4. In combination with a substantially rectangular head-rest, of a pair of bars secured laterally thereof, a slotted casing fixed at one end of said bars, a roller adapted to receive or dispense paper revolubly mounted centrally of said casing, feed rollers at the opposite ends of said bars, a knife parallel thereto, means for rotating said feed rollers and a driving means between said rollers and said paper roll whereby it may be rotated in either direction.

5. In combination with a cushioned head-rest, of a frame attached at the sides thereof, a cylindrical casing rigidly mounted on one end of said frame, a paper engaging roller revoluble in said casing, said roller being accessible through the walls of said casing, sockets on said frame, supports removably engageable in said sockets, a paper supply roll carried by said supports, the paper thereon being engageable with said roller, feeding means mounted in said frame at the opposite end thereof, means for cuting the paper into sheets, adjacent to said feeding means, means for winding paper from said supply roll upon said roller and means for advancing the sheet from said roller.

[Claims 6 and 7 not printed in the Gazette.]

1,196,373. COTTON-PICKER HEAD. IRA E. MCGEHEE, Chatham, Miss. Filed July 11, 1916. Serial No. 108,704. (Cl. 56—6.)



1. A cotton picker head comprising a tube, two sets of picker fingers associated therewith, means to reciprocate said sets of fingers in opposite directions, and means acting upon said fingers during their reciprocation to cause the outer ends of the fingers of each set to approach the axis of the tube at the outer end of their stroke and to recede from the axis of the tube near the inner end of their stroke.

2. A cotton picker head comprising a support, two sets of picker fingers associated therewith, means to reciprocate said sets of fingers in opposite directions, and means acting upon said fingers during their reciprocation to cause the outer ends of the fingers of each set to approach each other at the outer end of their stroke and to recede from each other near the inner end of their stroke.

3. A cotton picker head comprising a support, a plurality of sets of picker fingers associated therewith, means to reciprocate said sets of fingers so that they reach the outer end of their strokes at different times, and means acting upon said fingers during their reciprocation to cause the outer ends of the fingers of each set to approach each other at the outer end of their stroke and to recede from each other near the inner end of their stroke.

4. A cotton picker head comprising a support, a plurality of picker fingers reciprocably mounted on said support, means to reciprocate said fingers, and means comprising a spring switch to cause the outer ends of the fingers to approach each other at the outer end of their stroke and to recede from each other at the inner end of their stroke.

5. A cotton picker head comprising a tube, a plurality of guides associated therewith, a picker finger mounted to reciprocate in each guide, means to reciprocate said fingers, and means associated with each guide for causing the outer ends of the fingers to approach each other at the outer end of their stroke and to recede from each other near the inner end of their stroke.

[Claims 6 to 10 not printed in the Gazette.]

1,196,374. BELT-FASTENER. NICKOLAS P. MADER, Beaumont, Cal. Filed Dec. 29, 1915. Serial No. 69,191. (Cl. 24—36.)



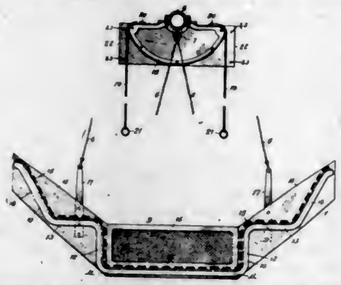
1. A belt fastener, comprising a body member, and a plurality of tapered teeth on the longitudinal edges of the body portion formed with arcuate cross sections diminishing from the base of the teeth toward their outer ends, and reinforcing fillets at the juncture of the teeth with the body member.

2. A belt fastener, comprising a body member diverging upwardly from its longitudinal center, having a downwardly projecting centrally disposed rib on its under side and extending lengthwise thereof, and a plurality of tapered teeth on the longitudinal edges of the body portion formed with arcuate cross sections diminishing from the base of the teeth toward their outer ends, and reinforcing fillets at the juncture of the teeth with the body member.

1,196,375. SELF-PROPELLED SWING. PHILIP S. MEDART, St. Louis, Mo., assignor to Fred Medart Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 29, 1915. Serial No. 63,956. (Cl. 155—35.)

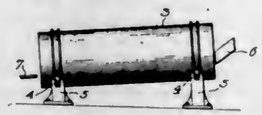
1. In a swing structure of the type described, the combination of an overhead rail, a seat member connected thereto by flexible suspension members, a segmental fulcrum member fixedly secured to said rail, a pair of guard plates secured to the sides of said fulcrum member and overlapping the side and lower portions of the same, and a pair of pull cords secured at their upper ends to said fulcrum member and having handles at their free ends in adjacent relation to the aforesaid seat member, substantially as set forth.

2. In a swing structure of the type described, the combination of an overhead rail, a seat member connected thereto by flexible suspension members, a segmental fulcrum member fixedly secured to said rail, a pair of guard plates secured to the sides of said fulcrum member and overlapping the side and lower portions of the same,



guard pins located between said plates near the end margins of the same, and a pair of pull cords secured at their upper ends to said fulcrum member and having handles at their free ends, substantially as set forth.

1,196,376. DRIER. WILLIAM V. MEYER, Chicago, Ill. Filed Jan. 3, 1914. Serial No. 810,102. (Cl. 34—6.)



1. A drier comprising an inner and an outer cylinder and shelves thereon by which in the revolution of the drier the material treated is repeatedly sifted or dribbled from one element to another, connecting means between the outer and inner cylinder arranged substantially tangential to the latter for the purpose described.

2. In a drier, an inner and an outer cylinder, substantially tangential shelves arranged upon the former and connections from said shelves to the outer cylinder.

3. In a drier of the class described, inner and outer concentric cylinders, tangential shelves upon the inner cylinder and connections in the plane thereof to the outer cylinder.

4. In a drier of the class described, an inner and an outer cylinder, tangential sleeves arranged on the inner cylinder, connections from said sleeves to the outer cylinder and shelves upon the interior of the outer cylinder.

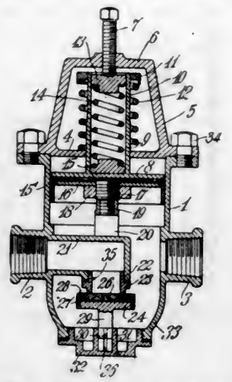
5. In a drier of the class described, an inner and an outer cylinder, tangential shelves arranged on the inner cylinder, longitudinal ribs upon each side of said shelves and shelves upon the outer cylinder.

[Claims 6 and 7 not printed in the Gazette.]

1,196,377. PRESSURE-REGULATING VALVE. THOMAS D. MILLEA, Springfield, Mass., assignor, by mesne assignments, to Try-Me Manufacturing Company, a Corporation of Massachusetts. Filed Aug. 16, 1915. Serial No. 45,729. (Cl. 50—35.)

1. In a fluid or air pressure reducing apparatus, the combination, with an inclosing casing, a piston located therein, a valve for controlling the flow of fluid or air through the casing, connecting means between the piston and the valve, and a compensating device comprising two springs whose expansive forces act in opposite directions and arranged in concentric relation to each other for varying the extent of opening movement of the valve.

2. In a fluid and air pressure reducing device, the combination, with an inclosing casing, a piston therein, a valve for controlling the flow of fluid or air through the casing, connecting means between the piston and the valve, means for maintaining the piston and the valve in alinement, a plate located above the piston and formed with a barrel-shaped part, a spring located within said part for assisting the opening movements of the valve in the direction of the flow of the fluid or air, means for varying the tension of the spring, a second spring coacting with the barrel-shaped part, a nut on said part and bearing upon the end of the second spring, said nut being for the purpose of varying the tension of the second spring for moving the valve toward its seat and against the tension of the first mentioned spring.



3. In a fluid or air pressure regulating or controlling device, the combination with an inclosing casing having a depending portion, a cap for closing the lower end of the casing, said cap having a bored out portion, a valve formed with an extension which is located within said bored-out portion, a piston, a yoke connecting the piston and valve, and means for moving the valve permanently to its seat.

4. In a pressure reducing device, the combination with a casing member formed with inlet and outlet pipe connections, a fluid or air receiving tube extending into the casing, a piston having a barrel portion, a spring surrounding the same, a valve connected thereto for controlling the flow of the liquid through the tube and casing, a plate formed with a depending threaded portion, a yoke connected to the threaded portion and to the valve, said yoke spanning the inlet tube and means comprising a spring located in the barrel portion for controlling the extent of opening of the valve.

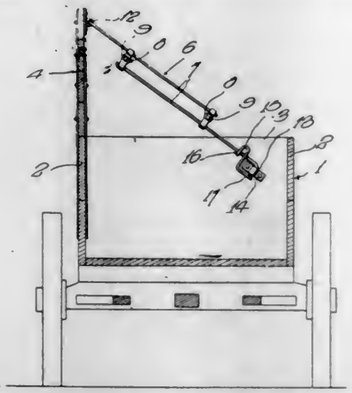
5. In a pressure-reducing device, the combination, a casing formed with supply and service pipe connections, a tube extending into the casing and having an outlet orifice located in the casing, a valve for controlling the outlet orifice, a piston connected to the valve, a hollow member extending upward from the piston, a spring located therein for varying the extent of downward movement of the piston, a cover plate secured to the upper end of the casing, a spring resting on the upper surface of the cover plate, and means comprising a threaded nut engaging the cylindrical member for varying the compression of the said last mentioned spring, whereby the valve may be moved toward its seat to effect a permanent shut-off, as described.

[Claims 6 to 11 not printed in the Gazette.]

1,196,378. WAGON-BOX ATTACHMENT. GEORGE MILLER, Algona, Iowa. Filed Mar. 23, 1916. Serial No. 86,220. (Cl. 21—7.)

1. The combination with a wagon box, of a detachable extension for one of the sides of said box, eyes arranged at the ends of said extension and near the upper edge thereof additional eyes arranged along the upper edge of the remote sides of the ends of said box, pairs of parallel rods having hooks at their upper and lower ends for engagement with said eyes, and clamps engaging the inner ends of said rods for maintaining the same in their spaced parallel relation.

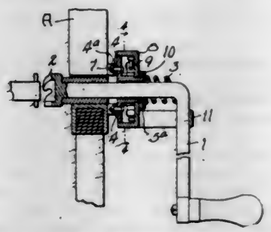
2. The combination with a wagon box, of a detachable extension for one of the sides of said box, eyes arranged at the ends of said extension and near the upper edge thereof, additional eyes arranged along the upper edge of the remote sides of the ends of said box, pairs of parallel rods having hooks at their upper and lower ends for engagement with said eyes, two-part clamps engaging the inner ends of said rods, and bolts extending through the sections of said clamps for locking said rods in adjusted positions.



3. The combination with a wagon box, of a detachable extension for one of the sides of said box, eyes arranged at the ends of said extension and near the upper edge thereof, keepers arranged along the upper edge of the remote sides of the ends of said box, diagonal braces having their upper ends bent upon themselves for engagement with said eyes, the lower ends of said braces being bent at right angles and extended through said keepers, and latches slidable on the lower ends of said braces for preventing the same from becoming disengaged from said keepers.

4. The combination with a wagon box, of a detachable extension for one of the sides of said box, eyes arranged at the ends of said extension and near the upper edge thereof, keepers arranged along the upper edge of the remote sides of the ends of said box, diagonal braces having their upper ends bent upon themselves for engagement with said eyes, the lower ends of said braces being bent at right angles and extended through said keepers, U-shaped members having alined apertures in the arms thereof for slidable engagement with the lower ends of said braces, and lugs extending laterally from one of the arms of said members and disposed in alinement with the right angular bent portions of the lower ends of said braces.

1,196,379. ATTACHMENT FOR PREVENTING BACK-KICKING OF AUTOMOBILES. WILLIAM L. MILLER, Lyons, Nebr. Filed Dec. 27, 1915. Serial No. 68,806. (Cl. 74—33.)



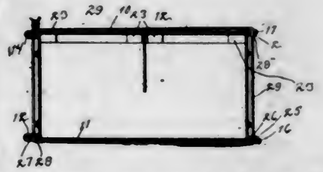
1. In a device of the character described, the combination of a crank formed with a shaft which is slidable longitudinally within its bearings, a rigidly mounted ratchet wheel surrounding the shaft of the crank, an annular casing surrounding the ratchet wheel and rotatably mounted thereon, a spring pawl mounted upon the annular casing and engaging the teeth of the ratchet wheel to prevent rotation of the casing in one direction, and a keeper projecting from the casing and loosely receiving the crank to lock the casing with the crank and permit the crank to move in and out independently of the casing.

2. In a device of the character described, the combination of a crank formed with a shaft which is slidable longitudinally within its bearings, a rigidly mounted ratchet wheel surrounding the shaft of the crank, said ratchet wheel being formed with a hub portion, a casing pivotally mounted upon the hub portion of the ratchet wheel and surrounding the ratchet wheel, a spring mounted pawl carried by the casing and engaging the teeth of the ratchet wheel to prevent rotation of the casing in one direction, and a keeper projecting from the casing and loosely receiving the crank so that the casing is rotatable with the crank although the crank can be moved in and out independently thereof.

3. In a device of the character described, the combination of a crank formed with a shaft movable longitudinally within its bearing, a pair of rigid supporting bars, a ratchet wheel rigidly secured to the supporting bars and surrounding the shaft of the crank, an annular casing rotatably mounted upon the ratchet wheel and surrounding the latter, a spring pawl upon the annular casing for engagement with the teeth of the ratchet wheel to prevent rotation in one direction of the casing, and a looped keeper projecting from the casing and loosely receiving the crank whereby the annular casing is locked to rotate with the crank although the crank can be moved in and out independently thereof.

4. In a device of the character described, the combination of a crank formed with a shaft which is slidable longitudinally within its bearings, a rigidly mounted ratchet wheel surrounding the shaft of the crank, an annular casing surrounding the ratchet wheel, a yieldably mounted pawl carried by the annular casing and coöperating with the teeth of the ratchet wheel to prevent rotation of the casing in one direction, and an operative connection between the annular casing and the crank for locking the annular casing to rotate with the crank, although the crank can be moved in and out independently of the casing.

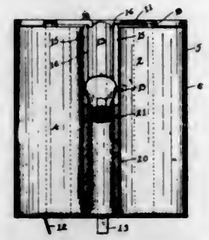
1,196,380. EGG-CRATE. GEORGE T. MOFFETT, Huntsville, Ala. Filed Nov. 20, 1913. Serial No. 802,118. (Cl. 220—17.)



1. A knock down crate comprising a plurality of detachably connected members forming top, bottom and sides thereof, said top and bottom having projecting flanges formed with vertically alining apertures, said apertures being adapted to also aline when the crate is in knock down position, and a flexible element adapted for passage through the apertures to hold the crate in set up position at times, and adapted for passage through the apertures to hold the crate in compact form in knock down position.

2. A knock down crate comprising a plurality of detachably connected members forming top, bottom and sides thereof, said top and bottom having projecting flanges formed with vertically alining apertures, said apertures being adapted to also aline when the crate is in knock down position, and a flexible element adapted for passage through the apertures to hold the crate in set up position at times, and adapted for passage through the apertures to hold the crate in compact form in knock down position, said top having downwardly projecting flanges at the side edges and said bottom having upwardly projecting flanges at the side edges whereby to prevent lateral displacement of the remaining parts when the crate is collapsed and the top and bottom secured together.

1,196,381. DRY BATTERY. MARCUS H. MOFFETT, Lakewood, Ohio, assignor to National Carbon Company, a Corporation of New Jersey. Filed June 9, 1915. Serial No. 33,045. (Cl. 204—53.)



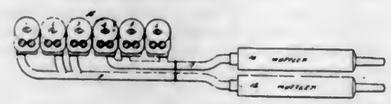
1. In electric batteries, a battery case having a bottom member, a plurality of cells therein in an upright position, terminals extending through the bottom of the case, a cover for the top of the case and an air space between the top of the cells and said cover.

2. In electric batteries, a battery case having a bottom member, a plurality of cells therein in an upright position, terminals extending through the bottom of the case, said case having side walls extending above the top of the cells to prevent exuded electrolyte from escaping over the edge of the cells.

3. In electric batteries, a battery case having a bottom member, a plurality of cells therein, terminals extending through the bottom of the case, a cover for the top of the case having a central hole and an extra chamber beneath the hole to store a lamp.

4. In electric batteries, a battery case having a bottom member, a plurality of cells therein having a central chamber therebetween to store an extra lamp, a tubular member in the lower part of said chamber adapted to receive the base of the lamp, terminals extending through the bottom of the case, and a cover for the top of the case having a central hole above said cavity for inserting the lamp.

1,196,382. MUFFLER ARRANGEMENT FOR MULTI-CYLINDER INTERNAL-COMBUSTION ENGINES. JOHN C. MOORE, Connersville, Ind. Filed Apr. 13, 1912. Serial No. 690,487. (Cl. 123—59.)



1. In combination, a multi-cylinder internal combustion engine having more than two cylinders and in which the exhaust periods of successively exhausting cylinders overlap, a plurality of independent mufflers less in number than the number of cylinders of the engine, said mufflers having separate discharge openings to the atmosphere, and connections between the exhausts of the several engine cylinders and the mufflers whereby successively exhausting cylinders are connected to different mufflers.

2. In combination, a multi-cylinder internal combustion engine having a composite number of cylinders and in which the exhaust periods of successively exhausting cylinders overlap, a plurality of independent mufflers the number of which is an aliquot part of the number of engine cylinders, said mufflers having separate discharge openings to the atmosphere, and connections between each muffler and a plurality of, but less than all of, the engine cylinders, successively exhausting cylinders being connected to different mufflers.

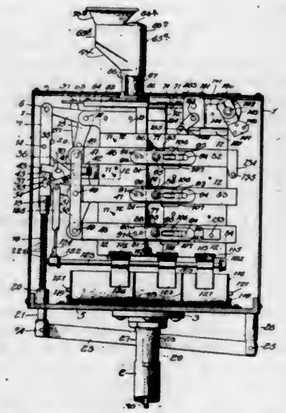
3. In combination, a multi-cylinder internal combustion engine having more than two cylinders and in which the exhaust periods of successively exhausting cylinders overlap, two independent mufflers having separate discharge openings to the atmosphere, and connections between each muffler and alternately exhausting cylinders of the engine.

4. In combination, a six-cylinder internal combustion engine, and two independent mufflers respectively connected to the exhaust sides of alternately discharging cylinders of said engine, having separate discharge openings to the atmosphere.

5. In combination, a multi-cylinder internal combustion engine having more than two cylinders and in which the periods of opening of the exhaust valves of a plurality of cylinders overlap, a plurality of independent mufflers less in number than the number of cylinders of the engine, said mufflers having separate discharge openings to the atmosphere, and connections between the exhausts of the several engine cylinders and the mufflers so that any two cylinders of which the periods of opening of the exhaust valves overlap are connected to different mufflers.

[Claims 6 to 11 not printed in the Gazette.]

1,196,383. FARE-BOX. FRANK G. MURRAY, Chicago, Ill. Filed Aug. 23, 1915. Serial No. 46,915. (Cl. 235—32.)



1. A device of the class described, comprising in combination primary and secondary coin receivers, the former being arranged to hold coins flatwise, coin ejecting means for consecutively ejecting coins from the former and moving them to an inclined chute leading to the latter, an inclined chute in operative proximity to said ejecting means for tilting a coin from a horizontal to a vertical plane and delivering it to the entrance of a selecting-chute, slidable selecting means located in the plane of said selecting-chute, said means serving, when in an abnormal position, to close said selecting-chute, a registering slide for each distinctive coin to be actuated by a coin held between its end and said slidable selecting means, registering means in operative connection with said registering slides, a selecting-coin-chute located between said slidable selecting means and the adjacent ends of said registering slides, means common to said coin-ejecting and slidable selecting means for moving them in unison, separate coin-chutes leading to separate compartments from the respective levels of said registering slides, the inlet openings thereto being arranged to register with coins when advanced to the full limit of movement of said slidable selecting means, laterally movable coin ejectors and positive means for actuating the same when a coin is in registration with an opening leading to a discharge coin-chute.

2. A device of the class described, comprising, in combination, primary and secondary coin-receivers, the former being adapted to hold coins flat-wise, coin ejecting means for consecutively ejecting coins from the former and moving them to an inclined chute leading to the latter, an inclined chute in operative proximity to said ejecting means for tilting a coin from a horizontal to a vertical plane and delivering it to the entrance of a selecting-chute, slidably selecting means located in the plane of said selecting-chute, said means serving, when in an abnormal position, to close said selecting-chute, a registering slide for each distinctive coin to be actuated by a coin held between its end and said slidable selecting means, registering means in operative connection with said registering slides, a selecting coin-chute located between said slidable selecting means and the adjacent ends of said registering slides, means common to said coin ejecting and slidable selecting means for moving them in unison, separate coin-chutes leading to separate compartments from the respective levels of said registering slides, the inlet openings thereto being arranged to register with coins when advanced to the full limit of movement of said slidable selecting means, laterally movable coin ejectors, positive means for actuating the same when a coin is in registration with an opening leading to a discharge coin-chute, and means in connection with said slidable selecting means for returning said registering slides to normal position after registration.

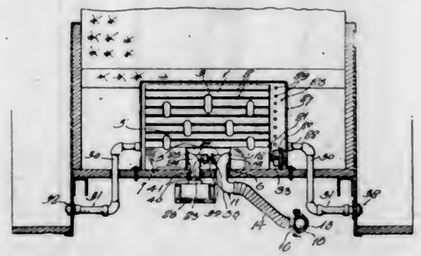
3. A device of the class described, comprising, in combination, a coin-chute located in a vertical plane, means for admitting a coin thereto with each successive cycle in the operation of the machine, slidable coin moving means located in the plane of said coin-chute, the movement of which, from its normal position, serves to close said coin-chute and to advance a coin to a registering position, primary actuating means for actuating said coin moving means, registering slides, one for each distinctive coin, located in the path of said slidable coin-moving means, the distances between the ends of which and said coin-moving means are varied to conform to the relative diameters of different coins to arrest given coins between them, registering means in operative connection with said respective slides and means in operative connection with said actuating means for preventing a reverse movement of the latter in either direction until the stroke is carried to its full limit.

4. A device of the class described, comprising, in combination, a coin-chute located in a vertical plane, means for introducing a coin thereto with each operative cycle of the machine, coin moving means located in the plane of said coin-chute, the movement of which, from its normal position, serves to close said coin-chute and to advance a coin therein to a registering position, primary actuating means for actuating said coin-moving means, registering slides, one for each distinctive coin, located in the path of said slidable coin-moving means, the distance between the end of a given registering slide and said coin-moving means, corresponding to the diameter of the specific coin to be registered thereby, so as to support said coin between them, registering means in operative connection with said respective slides, means controlled by said actuating means for positively moving said coin laterally after registration, to discharge it into a closed receptacle and means in operative connection with said actuating means for preventing a reverse movement of the latter in either direction until after the completion of a full stroke.

5. A device of the class described, comprising, in combination, a coin-chute located in a vertical plane, means for admitting a coin thereto with each operative cycle of the machine, slidable coin-moving means located in the plane of said coin-chute, the movement of which, from its normal position, shall cause the closing of said coin-chute against the admission of a new coin and the simultaneous advancement of one therein to a registering position, primary actuating means for actuating said coin-moving means, registering slides, one for each distinctive coin, located in the path of said slidable coin-moving means, the distance between the end of a given registering slide and said coin-moving means corresponding to the diameter of a specific coin to be registered thereby, so as to support said coin between them, registering means in operative connection with said respective registering slides, knock-out means connected with said coin-moving means for discharging a coin to a closed receptacle when in registration with a discharge opening, positive means for engaging said knock-out means at a predetermined point in its travel and means in operative connection with said actuating means for insuring a full stroke of the latter in both directions.

[Claims 6 to 8 not printed in the Gazette.]

1,196,384. HEATING APPARATUS FOR AUTOMOBILES. LAWRENCE F. MUSTEE, Cleveland, Ohio. Filed May 11, 1916. Serial No. 96,889. (Cl. 237—21.)



1. In a heating device for automobiles, the combination with a hollow casing having a notch in one of its edges, the opposed faces of said notch having openings therein, an inlet pipe having one end connected with the exhaust of the automobile and the other positioned in one of said openings, an outlet pipe with one end positioned in the other opening and having a muffler secured to its other end, and an expansible and contractible locking member disposed between said pipes to releasably secure the ends of the pipes positioned in the notch in locked relation with the openings.

2. In a heating device for automobiles, the combination with a hollow casing having a notch in one of its edges, the opposed faces of said notch having openings therein, an inlet pipe having one end connected with the exhaust of the automobile and the other positioned in one of said openings, an outlet pipe with one end positioned in the other opening and having a muffler secured to its other end, an expansible and contractible locking member disposed between said pipes to releasably secure the ends of the pipes positioned in the notch in locked relation, and a jacket surrounding the casing whereby air passing through the same is heated by contact with the casing.

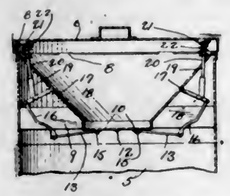
3. In a heating device for automobiles, the combination with a hollow casing having a notch in one of its edges, the opposed faces of said notch having openings therein, an inlet pipe having one end connected with the exhaust of the automobile and the other positioned in one of said openings, an outlet pipe with one end positioned in the other opening and having a muffler secured to its other end, an expansible and contractible locking member disposed between said pipes to releasably secure the ends of the pipes positioned in the notch in locked relation, a jacket surrounding the casing, air inlets for the same communicating with the atmosphere through the running board shields of the automobile, and outlets through one side of said jacket.

4. In a heating device for automobiles the combination with a hollow casing having a notch in one of its edges, the opposed faces of said notch having openings therein, an inlet pipe having one end connected with the exhaust of the automobile, the opposite end of said pipe positioned in one of said openings, a ring surrounding said pipe adjacent the end engaging the face of said notch when the pipe is in position, a valve in said casing for controlling the inlet, operating means for said valve projecting through one end of the casing, an outlet pipe with one end positioned in the opening in the opposed face of said notch, a ring surrounding said end of the pipe adjacent said end adapted to engage the face of the notch when the pipe is in position, a muffler on the other end of said outlet pipe, and an expansible and contractible screw member disposed between said pipes to releasably secure the same in position.

5. In a heating device for automobiles, the combination with a hollow casing having a notch in one of its edges, the opposed faces of said notch having an opening therein, an inlet pipe having one end connected with the exhaust of the automobile and the other positioned in one of said openings, an outlet pipe with one end positioned in the opening in the opposed face of the notch and having a muffler secured to its other end, cone-shaped sockets on the opposed faces of the portions of said pipes positioned in the notch, a screw with a cone-shaped head adapted to be positioned in one of said sockets, and a nut operatively connected with said screw having a cone-shaped outer end adapted to be positioned in the opposite socket.

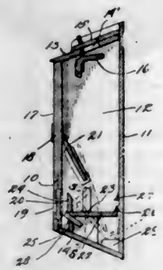
[Claims 6 and 7 not printed in the Gazette.]

1,196,385. ODORLESS GARBAGE-CAN. HARRY P. MUTCH, Hoboken, Pa. Filed Sept. 16, 1915. Serial No. 51,070. (Cl. 220—115.)



An auxiliary compartment member adapted to be associated with a main receptacle to discharge thereinto, a pair of plates carried by said member and slidable across the bottom thereof to close the same, a pair of plunger rods carried by the member and adapted to project beyond its mouth within the periphery thereof, lever members connecting said plungers with respective plates and a cover for the member.

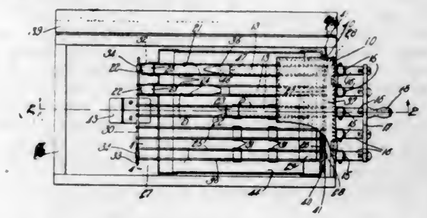
1,196,386. MAIL-BOX. ANTHONY NARDELL, Trenton, N. J. Filed Apr. 3, 1914, Serial No. 829,292. Renewed July 19, 1916. Serial No. 110,211. (Cl. 232—34.)



1. The combination with a mail box, of a movable false bottom mounted therein, the front wall of the box having a sight opening, a name plate and a signal plate angularly arranged with respect to each other and carried by the false bottom and mounted to normally dispose the name plate behind the sight opening, said bottom being depressible by mail matter deposited within the box and held by said mail matter and said signal plate being adapted for movement into position behind the sight opening when the said false bottom is actuated by the mail matter.

2. The combination with a mail box, of a pivotally mounted false bottom, a deflector carried by the rear wall of the box over the rear edge portion of the false bottom, a guard flange on the rear edge portion of the false bottom, said deflector being arranged to deflect a piece of mail onto the false bottom rearwardly of the pivot thereof, said false bottom being arranged to be tilted by the piece of mail, and a guard plate carried within the box against which the mail is caused to rest.

1,196,387. TUBE-FILLING APPARATUS. WILLIAM J. NOON, Lynn, Mass. Filed Apr. 2, 1915. Serial No. 18,716. (Cl. 131—5.)



1. A tube filling apparatus having, in combination, a conductor for the filling material, said conductor being constructed and arranged to hold a tube of sheet material, means for advancing the filling material along said conductor and into said tube and to move said tube longitudinally of said conductor, a movable support for said tube arranged beneath said conductor and independent thereof, and a pair of resilient guide members for said movable support substantially equal in length to the combined length of said conductor and the tube to be filled adapted to retard the movements thereof during the filling of said tube.

2. In a tube filling apparatus, a hopper, a series of parallelly arranged partitions, at the bottom of said hopper adapted to subdivide a portion thereof into a plurality of compartments, the bottoms of said compartments being substantially semicylindrical, an adjustable partition in said hopper adapted to separate a predetermined number of compartments from the other compartments in said hopper, a conductor for filling material connected with each of said compartments, and means constructed and arranged to advance filling material from said hoppers through said conductors into said tubes.

3. A tube filling apparatus having, in combination, a hopper, a conductor for the filling material connected with said hopper, said conductor being constructed and arranged to support a previously formed tube of sheet material, a pair of parallelly disposed rods secured to said hopper substantially parallel with said conductor, the outer ends of said rods being free and adapted to permit said rods to be deflected toward and away from each other, means to support the free ends of said rods, and a slide mounted on said rods to move longitudinally of said conductors, said slide being adapted to guide said tubes during the filling thereof and to be yieldingly retarded during said filling by the deflection of said rods.

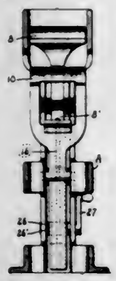
4. A tube filling apparatus having, in combination, a hopper, a plurality of filling conductors connected with said hopper adjacent the bottom thereof, said conductors being constructed and arranged to support tubes of sheet material, means for advancing the filling material from said hopper through said conductors and into said tubes, a frame pivotally attached to said hopper adjacent said conductors, means for temporarily supporting the free end of said frame, a plurality of pairs of rods permanently attached to said frame adjacent the pivot thereof, a pair of said rods being arranged adjacent each of said conductors, the outer ends of said rods being supported

by the free end of said frame, and a slide mounted to move longitudinally of each pair of said rods, said slides being constructed and arranged to guide said tubes longitudinally of said conductors during the filling of said tubes, said rods being adapted to yieldingly retard the movements of said slides during said filling operation.

5. A tube filling apparatus, having, in combination, a hopper, a plurality of tubular filling conductors connected adjacent the bottom of said hopper, said conductors being constructed and arranged to support tubes of sheet material, means for advancing the filling material from said hopper through said conductors and into said tubes, a frame pivotally attached to said hopper adjacent said conductors, a plurality of pairs of rods permanently attached to said frame adjacent the pivot thereof, a pair of said rods being arranged adjacent each of said conductors, the outer ends of said rods being supported by the free end of said frame, a slide mounted to move longitudinally of each pair of said rods, said slides being constructed and arranged to guide said tubes longitudinally of said conductors during the filling of said tubes, said rods being adapted to yieldingly retard the movements of said slides during said filling operation, a support pivoted at the free end of said frame adapted to normally retain said frame substantially parallel with said tubular conductors, said support being adapted to be moved to allow said frame to be lowered and to withdraw said slides from said conductors.

[Claims 6 and 7 not printed in the Gazette.]

1,196,388. LIFTING-JACK. GUSTAV H. OBERBECK, deceased, St. Louis, Mo., by Gertrude Oberbeck, administratrix, St. Louis, Mo., assignor of one-half to Nealy J. Townsend, St. Louis, Mo. Filed Oct. 9, 1915. Serial No. 55,096. (Cl. 254—111.)



1. In a lifting jack, an extensible carrier comprising vertically movable sections, operating means adapted to lift one of said sections independently of the other, a dog carried by one of said sections and adapted to cooperate with the other section to permit both sections to rise in response to movements of said operating means after one of the sections has been lifted a predetermined distance, and means, operable by said operating means, for releasing said dog to permit one of said sections to move downwardly independently of the other.

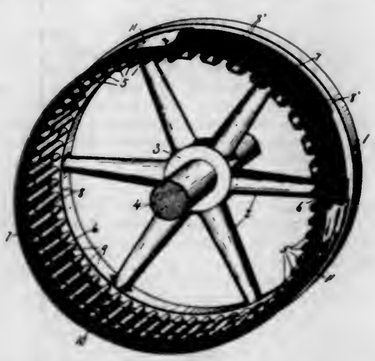
2. In a lifting jack, an extensible carrier comprising sections, one of which is movable independently of the other, a latch device carried by one of said sections, said latch device including a latch dog for uniting said sections, and a releasing device adapted to coöperate with said latch dog to disconnect the sections, and operating means adapted to lift one of said sections independently of the other when the latch dog occupies its inoperative position, said latch dog being movable automatically to connect the sections, and said operating means being adapted to actuate said releasing device to disconnect the sections.

3. In a lifting jack, an extensible carrier comprising vertically movable sections, operating means adapted to lift one of said sections independently of the other, a pair of spring pressed latch dogs for uniting said sections to permit them to move simultaneously in response to movements of said operating means, and a cam for releasing said latch dogs, said cam being operable by said operating means.

4. In a lifting jack, an extensible carrier comprising a primary section and a secondary section, operating means for lifting said primary section independently of said secondary section, an automatic coupling device for uniting said sections to permit both of them to move upwardly in response to movements of said operating means after the primary section has been lifted a predetermined distance, and an uncoupling device for releasing said automatic coupling device to permit said secondary section to move downwardly independently of said primary section, said uncoupling device including a releasing member operable by said operating means.

5. In a lifting jack, an extensible carrier comprising a toothed primary section and a toothed secondary section, operating means for lifting said primary section independently of said secondary section, said operating means including a feed pawl adapted to engage the teeth of both of said sections, an automatic coupling device for uniting said sections to permit both of them to move upwardly in response to movements of said feed pawl after the primary section has been lifted a predetermined distance, and an uncoupling device for releasing said automatic coupling device to permit said secondary section to move downwardly independently of said primary section, said uncoupling device including a releasing member operable by said feed pawl.

1,196,389. SCREEN-COVERED CYLINDRICAL ROLL FOR PAPER-MAKING MACHINES. HAROLD O. OLSEN, Watertown, N. Y. Filed Nov. 6, 1915. Serial No. 60,120. (Cl. 92—43.)

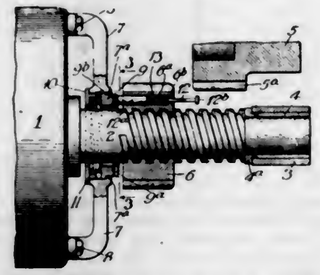


1. A cylindrical mold for paper making machines comprising end heads, a circumferential series of dowels connecting said heads, each end of each dowel having a pair of radial apertures therethrough in spaced relation lengthwise thereof, a screen drum drawn tightly around and upon the dowels between the heads, and wire fasteners passed through the apertures in each dowel and through the adjacent portions of the screen drum.

2. A cylindrical mold for paper making machines comprising opposite circular end heads, a circumferential series of dowels connecting said heads and spaced uniform distances apart circumferentially, each end of each dowel being provided with a pair of apertures therethrough in spaced relation lengthwise thereof, a screen drum drawn tightly around and upon the outer faces of the dowels, and wire loops passed through the apertures of their corresponding dowels and engaging the outer faces of adjacent portions of the screen drum, adjacent loops being connected to each other at one end at the inner sides of the dowels.

3. In a cylindrical mold of the character described, the combination of end heads, dowels connecting said heads and spaced circumferentially uniform distances apart about the axis of the cylinder, a screen drum wound tightly around and upon the dowels between the heads, and wire fastening devices passed through apertures in successive dowels and through and across the outer faces of adjacent portions of the screen drum for securing said drum to the dowels.

1,196,390. STARTER FOR ENGINES. MARTIN H. OLSEN, Chicago, Ill., assignor to Vincent Bendix, Chicago, Ill. Filed Jan. 3, 1916. Serial No. 69,971. (Cl. 74—7.)



1. A starter for engines comprising a rotatable shaft, a driving member mounted thereon to travel longitudinally thereon, and means for assuring said longitudinal movement comprising a plunger carried by the driving member, and a member engaged by such plunger during longitudinal movement of such driving member.

2. A starter for engines comprising a rotatable shaft, a driving member mounted thereon to travel longitudinally thereon, and means for assuring said longitudinal movement comprising a yielding plunger carried by the driving member, and a member engaged by such plunger during longitudinal movement of such driving member.

3. A starter for engines comprising a rotatable shaft, a driving member mounted thereon to travel longitudinally thereon, and means for assuring said longitudinal movement comprising a spring pressed plunger carried by the driving member and capable of a longitudinal movement independent of such member and also of movement in unison therewith, and a member engaged by such plunger during longitudinal movement of the driving member.

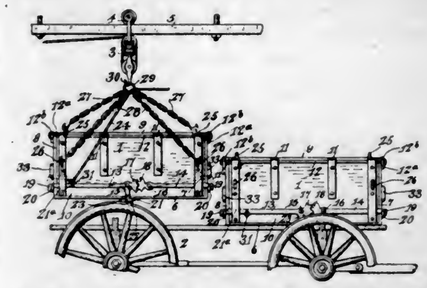
4. A starter for engines comprising a rotatable shaft, a driving member mounted thereon to travel longitudinally thereon, and means for assuring said longitudinal movement comprising a plunger, said member having a longitudinal bore to receive the plunger, a spring within the bore to normally hold the plunger projected, and a member engaged by such plunger during longitudinal movement of the driving member.

5. A starter for engines comprising a rotatable shaft, a driving member mounted thereon to travel longitudinally thereon, and means for assuring said longitudinal movement comprising a plunger carried by the driving member and projecting therefrom, and a yielding member adapted to be engaged by said plunger.

[Claims 6 to 20 not printed in the Gazette.]

1,196,391. PORTABLE GRAVITY DUMP-BOX. KNIGHT K. PARKER and JOHN C. PROCTOR, Seattle, Wash.; said Parker assignor to said Proctor. Filed Dec. 4, 1911, Serial No. 663,964. Renewed Jan. 18, 1916. Serial No. 72,852. (Cl. 214—1.)

1. The combination of a box provided with a gate hinged at its upper edge to the adjacent walls of the box at one side thereof and adapted to swing outwardly therefrom, a hanger having chains connected with the gate below the hinged edge thereof and with the opposite wall of the box, a locking device for securing the hinged gate in its closed position, and a trip line extending from the locking device and adapted to release the hinged gate, which increases the effective length of the chain to which it is connected to cause a tilting of the box.

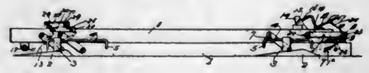


2. The combination of a box having a gate hinged at the top, fixed keepers mounted on the box adjacent to the gate, locking bars pivoted intermediate of their ends to the gate and provided at their inner ends with intermeshing toothed portions, said locking bars being movable into and out of engagement with the said keepers, and tripping means connected with one of the locking bars.

3. The combination of a box provided with a gate hinged at the top, fixed side and bottom keepers mounted on the box adjacent to the lower and side edges of the gate, locking bars pivoted to the gate and provided with coacting means for causing the bars to move in unison, said locking bars being arranged to engage the side keepers and one of the locking bars having a depending arm movable into and out of engagement with the bottom keepers.

4. The combination of a box including a bottom, a fixed side wall, fixed end walls provided at their upper portions with alined bearing recesses, a pintle arranged in the said recesses, pivoted hooks mounted on the end walls and detachably retaining the pintle in the said recesses, and a gate hinged at its upper edge to the box by the said pintle.

1,196,392. AUTOMOBILE-JACK. FRANK R. PARMENTER, Lansing, Mich. Filed June 5, 1916. Serial No. 101,797. (Cl. 254—91.)



1. An automobile jack embodying a pair of sills, a pair of lift bars, links connecting said bars and sills, inclines disposed at the opposite sides of the sills, longitudinal guide rods carried by the sills, and brackets carried by the inclines slidably engaging said rods.

2. An automobile jack comprising a pair of sills, a pair of lift bars, links connecting said bars and sills, a transverse roller carried by the sills adjacent one end, the ends of the bars adjacent said end of the sills being curved to ride onto said roller, and a transverse roller carried by the bars at that end thereof remote from the aforesaid roller, those ends of the sills adjacent the last mentioned roller being curved so that said roller can ride onto the same.

3. An automobile jack comprising a base, lift bars, links connecting said lift bars and base, the links adjacent one end of the base having upwardly projecting extensions, catches pivotally connected with said bars, the base having means for the engagement of said catches, a cross rod connecting said extensions, a handle secured to said cross rod, a cross rod connecting the free ends of the catches, and a connection between said handle and last mentioned

cross rod whereby when the handle is raised, the catches are released and the extensions moved to lower the bars.

4. An automobile jack embodying a base, a pair of lift bars above the base movable upwardly and downwardly, channel-shaped members straddling and adjustable upon said bars, channel-shaped members above the aforesaid members, links connecting the flanges of said members, and cushion members fitted in the second mentioned channel-shaped members for supporting an automobile.

1,196,393. WRENCH. ERNEST W. PARMER, Cisco, Tex. Filed Sept. 22, 1915. Serial No. 52,080. (Cl. 81—165.)



1. A wrench including a body, a handle formed on one end of the body, a rigid jaw extending from the opposite end of the body, a U-shaped frame associated with the body, thumb bolts associated with said frame, and a movable jaw adjustably operable by said thumb bolts.

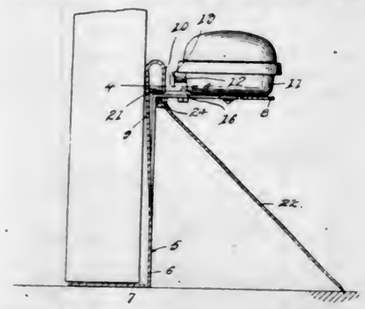
2. A wrench including a body, a handle formed on one end of the body, a rigid jaw extending from the opposite end of the body, a U-shaped frame associated with said rigid jaw including spaced parallel arms, the terminals of said arms being rigidly associated with the jaw and extending laterally from the inner faces thereof, a movable jaw and means mounted on the arms of the frame for mounting the movable jaw on the frame said means being operable to operate the movable jaw.

3. A wrench including a body, a handle formed on one end of the body, a rigid jaw extending from one side edge of the opposite end of the body and provided on its inner face with a plurality of teeth, a U-shaped frame associated with said rigid jaw including spaced arms, the terminals of which are rigidly associated with the jaw and extended laterally of the inner face of the jaw, ears formed on the inner faces of the arms, thumb bolts operable in said ears, and a movable jaw similar in construction to the rigid jaws mounted on said thumb bolts and adjustably operable by said thumb bolts.

1,196,394. BURGLAR-ALARM. ROBERT A. PHILP, Portland, Oreg. Filed Dec. 13, 1913. Serial No. 806,516. (Cl. 116—44.)

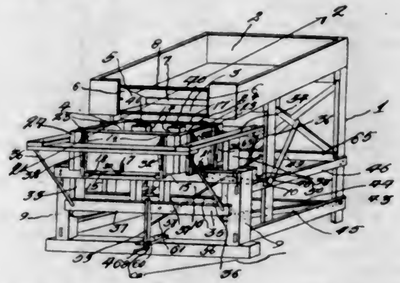
1. A combined burglar alarm and door stop comprising a base, a standard formed integrally with one end of the base and extending upwardly therefrom, a supporting plate formed integrally with and extending outwardly from the upper edge of the standard, a spring tongue formed on the standard and spring outwardly therefrom to partially overhang the base, an alarm mounted on the supporting plate to be sounded upon the inward movement of the tongue, and a brace pivoted to the supporting plate at the point of juncture with the standard, thereby transmitting any pressure on the standard directly against the brace.

2. A burglar alarm and door securer comprising a base, a standard extending upwardly from one edge of the base, the base being adapted to be positioned beneath the bottom of a door, a supporting plate at the upper end of the standard, and extending angularly therefrom in the direction opposite to the base, a spring tongue struck from the standard and bent outwardly in the direction of the base, a bent back arm at the upper end of the tongue and spaced inwardly therefrom for a short distance, an audible alarm mounted on the supporting plate, the alarm be-



ing sounded upon the inward movement of the arm into engagement therewith, the outer side of the tongue being positioned against the door beneath which the base is positioned and a brace pivoted to the supporting plate at the point of juncture with the standard whereby pressure transmitted to the standard by the inward movement of the door will be directly transmitted to the brace, thereby preventing the door from being opened, and simultaneously sounding the alarm.

1,196,395. CEMENT-BLOCK-MOLDING MACHINE. LOUIS F. POWANZ, Denver, Mo. Filed Oct. 15, 1915. Serial No. 56,041. (Cl. 25—41.)



1. In a block molding machine, a frame having guides, a mold box on one end of the frame having pivoted side and end pieces adapted to swing outwardly and downwardly, a movable frame mounted in the guide and having means designed to cam the pivoted sides and ends to closed positions to permit the mold box to receive plastic material, and manually operated means for moving the movable frame, and a spring tensioned catch lever having a shoulder designed to automatically engage a part of the movable frame when reaching the limit of its movement to support said frame, said spring tensioned catch lever including a member designed to receive pressure to release the shoulder from engagement with the movable frame to permit the movable frame to lower by gravitation.

2. In a block molding machine, a frame having guides, a mold box on one end of the frame having pivoted side and end pieces designed to swing upwardly and downwardly, a movable frame mounted in said guides and having an upper rectangular frame portion to surround the mold box when the sides and ends are closed, and cam

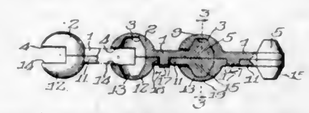
members upon the sides and ends to be engaged simultaneously by the sides and ends of the upper frame portion to close the side and end pieces of the mold box, and angular arms upon the side and end pieces of the mold box designed to be engaged by the upper rectangular frame portion of the movable frame to open the side and end pieces of the mold box, means for raising the movable frame, a spring tensioned device designed to engage a part of the movable frame to hold it supported in a raised position, said spring tensioned device adapted to be manipulated against the action of its spring tensioned means to permit the movable frame to lower by gravitation.

3. In a block molding machine, a frame having guide posts, a pair of bars arranged in parallelism and connecting the upper ends of the guide post, a mold box supported upon said parallel bars and having hinged sides and end pieces designed to swing downwardly, the outer portions of the sides and ends having angular cam bars, a movable frame consisting of end posts slidably mounted between the parallel bars and adjacent the guide post, a rectangular frame portion on the upper ends of said end posts and fitting around the sides and ends of the mold box to cam against said angular cam bars to close the sides and ends when the movable frame is moved upwardly, parallel bars connecting the lower ends of the end posts of the movable frame and having their ends overlying said guide posts, to steady and more accurately guide the movable frame, braces for the rectangular frame portion, pivoted bars having their lower ends engaging under the last named parallel bars to raise the movable frame, means for actuating the pivoted bars, a spring-tensioned catch lever having a shoulder to engage one of the last named parallel bars to support the movable frame when raised, said spring-tensioned catch lever having an arm to be engaged by the foot of the operator to actuate the catch lever to disengage said shoulder, allowing the movable frame to lower by gravitation.

4. In a block molding machine, a frame having guide posts, a pair of bars arranged in parallelism and connecting the upper ends of the guide posts, a mold box supported upon said parallel bars and having hinged sides and end pieces designed to swing downwardly, the outer portions of the sides and ends having angular cam bars, a movable frame consisting of end posts slidably mounted between the parallel bars and adjacent the guide post, a rectangular frame portion on the upper ends of said end posts and fitting around the sides and ends of the mold box to cam against said angular cam bars to close the sides and ends when the movable frame is moved upwardly, parallel bars connecting the lower ends of the end posts of the movable frame and having their ends overlying said guide posts, to steady and more accurately guide the movable frame, braces for the rectangular frame portion, pivoted bars having their lower ends engaging under the last named parallel bars to raise the movable frame, means for actuating the pivoted bars, a spring-tensioned catch lever having a shoulder to engage one of the last named parallel bars to support the movable frame when raised, said spring-tensioned catch lever having an arm to be engaged by the foot of the operator to actuate the catch lever to disengage said shoulder, allowing the movable frame to lower by gravitation, the sides and ends adjacent their hinged edges having a laterally extending arm to be engaged by the retangular frame portion when the movable frame is lowered to open the side and end pieces, and core members carried by the last named parallel bars to penetrate upwardly through the bottom of the mold box.

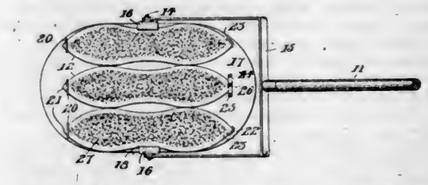
1,196,396. CHAIN. CHARLES A. PRINDLE, Chicago, Ill. Filed Oct. 14, 1911. Serial No. 654,609. (Cl. 74—32.)

1. A chain including a plurality of similarly formed links, each link comprising two similarly formed parts adapted to be placed together, each part consisting of a shank portion provided with a recess at one end thereof and at its other end with a portion extending laterally on the side opposite the recess, the links being assembled with the laterally extending portions of one link positioned in the recesses of the adjacent link, one link part being provided with a substantially oblong shaped opening through the shank thereof intermediate its ends, and the other link part having a lug projecting laterally from its shank intermediate the ends thereof, said lug being formed as an integral part of the shank and of a size and shape in cross section to fit the said opening in the shank of the other link, the lug being adapted to be fitted into the opening in assembling the link parts and said lug being of a length to extend through the opening adapted to be upset to secure the link parts together.



2. A chain including a plurality of similarly formed links, each link comprising two similarly formed parts adapted to be placed together, each part consisting of a shank portion provided with a recess at one end thereof and at its other end with a portion extending laterally on the side opposite the recess, the links being assembled with the laterally extending portions of one link positioned in the recesses of the adjacent link, and separate means for securing the parts of each link together, said means comprising a lug projecting laterally from the shank portion of one link part intermediate the ends thereof and formed integral therewith, the other link part being provided with an opening extending through the shank portion thereof intermediate its ends, said lug being of a size and shape in cross section to fit the said opening, the lug being adapted to be fitted into the opening in assembling the link parts, and said lug being of a length to extend through the opening and adapted to be upset to secure the link parts together.

1,196,397. SECTIONAL SCRUBBING-BRUSH. STANISLAW PRZESPOLESKI, Oakdale, Pa. Filed May 29, 1916. Serial No. 100,527. (Cl. 15—54.)



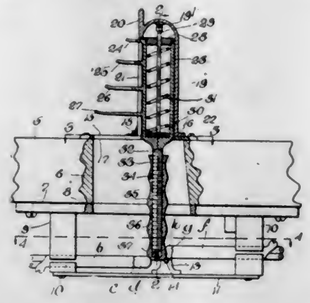
1. A device of the class described comprising a back, brackets oppositely carried by the said back, a swinging handle pivoted to the said brackets, angular clip extensions upon the said brackets projecting inwardly of the said back, staples positioned in a row upon the said back upon the face of the latter adjacent the said clip extensions, three similar brushes positioned upon the said back with their corresponding ends within the said staples and with the outer ones of said brushes arranged beneath the said clip extensions, and a detachable clamp for the free end of the centrally arranged one of said brushes.

2. A device of the class described comprising a base back, three similar brushes flatly arranged longitudinally upon one face of the said back, bracket clips carried by the said back overlying the outer central portions of the outwardly arranged ones of the said brushes, staples carried by the said back overlying corresponding ends of the said brushes, lugs carried by said back overlying the opposite free ends of the said outwardly positioned brushes, and a swinging releasable clamp carried by the said back adjustably engaging the free end portion of the centrally arranged brush when the device is operatively assembled.

3. A device of the class described comprising a back, trunnioning brackets carried by the said back having inwardly projecting clip extensions, a swinging bail jour-

nailed upon the said brackets, an operating handle secured to the said bail, oppositely positioned side brushes carried by the said back beneath the said clips, and a retaining central brush for the said side brushes removably clamped upon the said back between the latter.

1,196,398. TELEPHONE-KEY. PORTER O. ROBINSON, Concord Junction, Mass. Filed Apr. 3, 1915. Serial No. 19,046. (Cl. 179—176.)



1. A telephone key comprising two pair of circuit closers, and an actuator therefor mounted to slide and swing relative to said closers whereby said actuator may be swung into operative relation with one pair of said closers and may slide into contact with the other pair of said closers.

2. A telephone key comprising two pair of circuit closers, an actuator therefor mounted to slide and swing relative to said closers whereby said actuator may be swung into operative relation with one pair of said closers and may slide into contact with the other pair of said closers, and a guide for said actuator located below one pair of said closers.

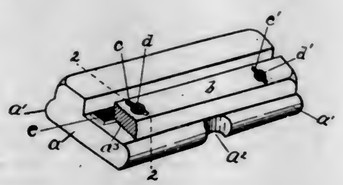
3. The combination with two circuit closers for different circuits, a post pivotally mounted, a member slidably mounted relative to said post and having a circuit closer actuator, and means for manually operating said member.

4. The combination with two circuit closers located in different horizontal planes, of a circuit closer member mounted to swing and slide and having a series of circuit closer actuators, and means coöperating with said member to prevent the swinging thereof after a predetermined lengthwise movement.

5. The combination with a circuit closer, and a guide spaced therefrom, of a stop plate having a slot, a member slidable with respect to said plate and having a series of finger pieces adapted to be received by said slot and a series of circuit closer actuators, and spring means for returning said member to normal position.

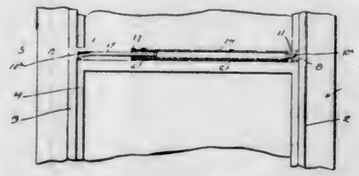
[Claim 6 not printed in the Gazette.]

1,196,399. SKATE-SHARPENER. GEORGE E. RYAN, Clinton, Mass. Filed Mar. 24, 1915. Serial No. 16,571. (Cl. 76—83.)



A skate sharpener of the type described, including a holder for the sharpening tool having a longitudinal depression or groove for the reception of the latter, a longitudinal wall of said depression or groove taking under a portion of said holder, said portion of the holder forming a guide-wall, the opposite longitudinal wall of said depression being undercut, and a movably held guide-bar positioned upon said holder and adapted to overlie the latter wall of said depression, and clamp the sharpening tool in said depression.

1,196,400. WINDOW-HOLDER. KARL SCHERFF, Madison, Minn., assignor of one-half to Eli Holhjelle, Madison, Minn. Filed Jan. 8, 1916. Serial No. 70,993. (Cl. 16—51.)



1. In a window lock structure, the combination with a window structure including a casing, and a slidable sash carried by said casing, of a pair of keepers attached to said casing, a lock structure comprising a pair of telescopic members, an extension formed upon the outer ends of said lock structure for insertion in said keepers, and shoes connected to said telescopic structure for engagement with the upper surface of the mid-rail of said slidable sash for holding the sash against movement.

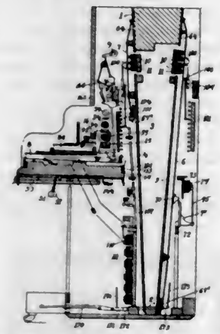
2. In a window lock structure, the combination with a window structure including a frame, and a slidable sash positioned in said frame, of a pair of keepers carried by said frame at opposite sides of the same, a lock structure comprising a relatively large tube, an extension formed upon one end of said tube and extending longitudinally therefrom, a rod telescopically mounted in the opposite end of said tube, an extension formed upon said rod, said extension adapted for seating in said keeper, and shoes attached to said relatively large tube and adapted for engagement with the upper surface of the mid or upper rail of said window sash for holding the window sash against movement.

3. In a window lock structure, the combination with a window structure including a frame, and a slidable sash positioned in said frame, of a pair of keepers carried by said frame at opposite sides of the same, a lock structure comprising a relatively large tube, an extension formed upon one end of said tube and extending longitudinally therefrom, a rod telescopically mounted in the opposite end of said tube, an extension formed upon said rod, said extension adapted for seating in said keeper, and shoes attached to said relatively large tube and adapted for engagement with the upper surface of the mid or upper rail of said window sash for holding the window sash against movement, said keepers and said extension being provided with openings, and pins inserted through said openings for connecting said extensions and keepers.

1,196,401. ELECTRICAL MUSICAL INSTRUMENT. MELVIN L. SEVERY, Arlington Heights, Mass., and GEORGE B. SINCLAIR, Georgetown, Me., assignors to Choralcelo Company, Boston, Mass., a Corporation of Maine. Filed Jan. 31, 1913. Serial No. 745,400. (Cl. 84—131.)

1. A musical instrument comprising a plurality of sets of magnetically attractive sonorous bodies, each said set consisting of a multiplicity of sonorous bodies tuned in musical relations to each other, electromagnets for vibrating these sonorous bodies, means for delivering to said electromagnets properly timed electric pulsations, keys for controlling the passage to said electromagnets of the actuating current, and means operative at will for putting predetermined groups of said keys into or out of controlling relation with said electromagnets.

2. A musical instrument having a plurality of sets of magnetically attractive sonorous bodies, electromagnets for actuating these bodies, damping mechanism for suppressing their vibration, means for delivering to the actuating magnets properly timed impulses and keys controlling the passage of these impulses to the actuating magnets and operating said damping mechanism.



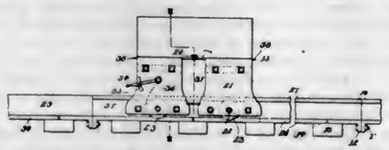
3. A musical instrument comprising duplicate sets of magnetically attractive sonorous bodies; electromagnets for vibrating said bodies; means for delivering to said electromagnets properly timed electric pulsations; circuits for said electromagnets; keys controlling the delivery of pulsations to said electromagnets, certain of said keys serving to close simultaneously circuits of both sets of magnets; and means operative at will for interrupting the circuits connecting one set of magnets with said certain keys, and thereby removing said magnets and their associated sonorous bodies from the control of said certain keys.

4. A musical instrument comprising a plurality of sets of magnetically attractive sonorous bodies, each said set consisting of a multiplicity of sonorous bodies tuned in musical relations to each other, electromagnets for actuating said bodies, keys controlling the passage to the actuating magnets of the current energizing them and means operative at will for changing the tone quality emitted by any one or more of the sets of the sonorous bodies.

5. A musical instrument comprising a plurality of sets of magnetically attractive sonorous bodies each said set consisting of a multiplicity of sonorous bodies tuned in musical relations to each other, electromagnets for vibrating these bodies, means for delivering to said electromagnets properly timed electric pulsations, keys for controlling the passage to the electromagnets of the current energizing them and means operative at will for changing the rate of pulsations delivered to any one or more sets of electromagnets and the rate of the consequent vibrations imparted to their corresponding sonorous bodies.

[Claims 6 to 74 not printed in the Gazette.]

1,196,402. MONORAIL DUMP-CAR SYSTEM. ANDREW SIMKO, Passaic, N. J. Filed May 20, 1916. Serial No. 98,865. (Cl. 105—233.)



1. A railway car frame for a mono-rail system having a bottom provided with a central discharge opening, opposite pairs of depending legs carried by the said frame at opposite sides of the rail, flanged wheels carried by the said legs adapted for travel upon the said rail, and oppositely sloping feed boards positioned between said pairs of legs and terminating in a plane outwardly of the said wheels and track when the car is operatively positioned thereon.

2. A car comprising a receptacle having a bottom arranged with a central outlet opening, opposite pairs of leg plates depending in parallel relations from the said receptacle bottom, inverted V-shaped feed boards secured between the said pairs of legs with their apex arranged centrally beneath the said opening, the free edges of the said boards projecting outwardly from the said legs, closing means for the said opening, and mounting wheels carried by the said legs.

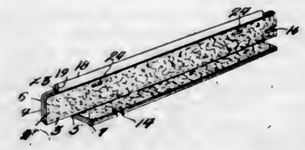
3. A car comprising a receptacle having a bottom arranged with a central outlet opening, opposite pairs of leg plates depending in parallel relations from the said receptacle bottom, inverted V-shaped feed boards secured between the said pairs of legs with their apex arranged centrally beneath the said opening, the free edges of the said boards projecting outwardly from the said legs, oppositely arranged closing slides for the said opening laterally carried by the receptacle bottom between adjacent pairs of legs with their inner ends in contact with the said boards when in their closed position, retaining latches for the said slides, and mounting wheels carried by the said legs inwardly thereof.

4. A car comprising a receptacle having a bottom arranged with a central outlet opening, opposite pairs of leg plates depending in parallel relations from the said receptacle bottom, inverted V-shaped feed boards secured between the said pairs of legs with their apex arranged centrally beneath the said opening, the free edges of the said boards projecting outwardly from the said legs, oppositely arranged closing slides for the said opening laterally carried by the receptacle bottom between adjacent pairs of legs with their inner ends in contact with the said boards when in their closed position, retaining latches for the said slides, spaced inwardly projecting bolts carried by the lower portions of the said legs, supporting strips secured to the inner ends of the said bolts, spacing sleeves arranged between the said strips and legs, stub axles carried by said strips and legs, and flanged track wheels arranged upon said axles between said legs and strips.

5. A dump car for mono-rail systems comprising a car body having a normally closed opening in the bottom, spaced truck wheel-supporting arms carried by the car and inclined chutes positioned between the spaced arms for directing material on opposite sides of the rail and remote from the supporting wheels.

[Claims 6 to 8 not printed in the Gazette.]

1,196,403. PROTECTOR FOR RADIATORS. HANS SKREBERG, Big Bend township, Chippewa county, Minn. Filed Nov. 8, 1915. Serial No. 60,352. (Cl. 257—132.)

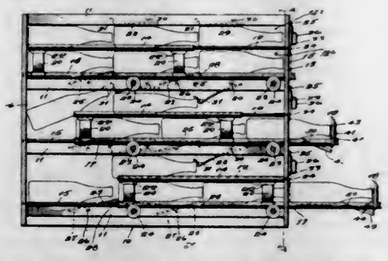


1. A radiator protector consisting of a sheet metal plate angular in cross section, to form a vertical flange engaging the lower forward face of the radiator, and a horizontal flange engaging the under face of the radiator, fastening clips for securing the vertical flange to the front face of the radiator, and a strip of felt conforming to the angular contour of the plate, between the plate and the radiator, the upper portion of the vertical flange being bent upon itself and against the inner face of said flange, the lower edge of said bent portion abutting the upper edge of the felt, the opposite ends of the bent portion abutting and fitting between the side vertical shoulders of the brass framing of the radiator.

2. A radiator protector consisting of a sheet metal plate angular in cross section, to form a vertical flange engag-

ing the lower forward face of the radiator, and a horizontal flange engaging the under face of the radiator, fastening clips for securing the vertical flange to the front face of the radiator, and a strip of felt conforming to the angular contour of the plate, between the plate and the radiator, the upper portion of the vertical flange being bent upon itself and against the inner face of said flange, the lower edge of said bent portion abutting the upper edge of the felt, the opposite ends of the bent portion abutting and fitting between the side vertical shoulders of the brass framing of the radiator, one end of the vertical flange having a slot for the reception and accommodation of the carbureter priming rod, said horizontal flange at one end having a cutaway portion for the accommodation of the drain cock of the radiator.

1,196,404. VENDING-MACHINE. GEORGE L. SPLITT, Summerdale, Ala. Filed Sept. 22, 1915. Serial No. 52,015. (Cl. 211—8.)



1. In a machine of the character described, a casing embodying upper and lower compartments, a movable support for the articles in the upper compartment and adapted when shifted in one direction to feed an article from the upper compartment into the lower compartment, a movable support for articles in the lower compartment and adapted when shifted in one direction to bring an article in the lower compartment to a position more or less exteriorly thereof, and means to move the supports.

2. In a machine of the character described, a casing embodying upper and lower compartments, a movable support for the articles in the upper compartment and adapted when shifted in one direction to feed an article from the upper compartment into the lower compartment, a movable support for the articles in the lower compartment and adapted when shifted in one direction to vend an article from the lower compartment, means for connecting the supports so that they move together, and means to move one support.

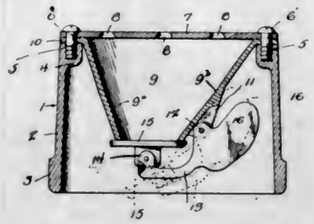
3. In a machine of the character described, a casing embodying upper and lower compartments, a substantially horizontal reciprocatory support for the articles in the upper compartment and adapted when moved in one direction to feed an article from the upper compartment into the lower compartment, a substantially horizontal reciprocatory support for articles in the lower compartment and adapted when moved in one direction to carry an article exteriorly of its compartment, means rigidly connecting the supports, and manually operated means to move one support.

4. In a machine of the character described, a casing embodying upper and lower compartments, a support for the articles in the upper compartment to move longitudinally therein and adapted when shifted in one direction to feed an article from the upper compartment into the lower compartment, means adapted to prevent the articles moving longitudinally in one direction in the upper compartment, a support for the articles in the lower compartment to move longitudinally therein and adapted when moved in one direction to carry an article to the exterior of its compartment, means adapted to prevent the articles moving longitudinally in one direction in the lower compartment, and means to move the supports.

5. In a machine of the character described, a casing embodying upper and lower compartments, stationary guide rods arranged between the compartments and extending longitudinally thereof and having corresponding ends spaced a substantial distance from one end of the compartments, upper tubes mounted to slide upon the guide rods and to provide an opening between their ends and one end of the upper compartment so that articles may pass from the upper compartment into the lower compartment, stationary guide rods arranged in the bottom of the lower compartment, lower tubes mounted to slide upon the second named stationary guide rods and adapted to be moved to a position exteriorly of the compartment, elements connecting the upper and lower tubes so that they move together, and means to move one tube.

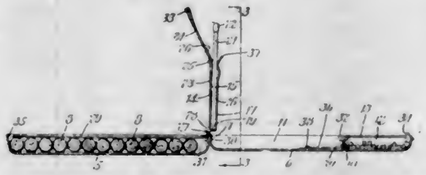
[Claim 6 not printed in the Gazette.]

1,196,405. VALVE. WILLIAM STEEG, Elizabeth, N. J. Filed Nov. 17, 1914. Serial No. 872,645. (Cl. 182—14.)



In a valve such as described, a substantially cylindrical casing, a funnel shaped member disposed within the casing and having its axis slanting toward one side of said casing, a pivoted valve normally closing the lower end of the funnel shaped member, the pivot point of said valve being disposed between the casing and the side of the funnel shaped member opposite to that direction to which the said funnel shaped member points, and out of the path of water flowing out through said funnel shaped member, and said valve adapted to form a continuation of said side of the funnel shaped member to which the same is pivoted, when the valve is opened, to direct water flowing from said funnel shaped member away from the pivotal point of the valve.

1,196,406. CIGARETTE-CASE. ARTHUR A. STOCKELLBURG, Boston, Mass. Filed Nov. 12, 1914. Serial No. 871,804. (Cl. 206—41.)



1. A cigarette case comprising a pair of hinged members, a partition pivotally arranged between said members and constituting a closure for one of said hinged members, and a plurality of resilient holders upon the inner face of said partition each adapted to hold a match.

2. A cigarette case comprising a pair of members pivotally arranged to swing about a common axis, a partition pivotally arranged between said members and upon said common axis, and a plurality of resilient individual match holders attached to one side of said partition.

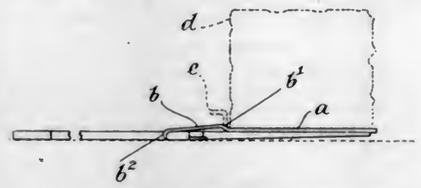
3. A cigarette case comprising a compartment for cigarettes, a match compartment pivotally mounted relatively to said cigarette compartment, a partition pivotally arranged between said cigarette compartment and said match compartment and constituting a closure for said match compartment, and a plurality of springs upon the inner face of said partition, each of said springs adapted to hold a match.

4. A cigarette case comprising a compartment for cigarettes, a match compartment pivotally mounted relatively to said cigarette compartment, a partition pivotally arranged between said cigarette compartment and said match compartment, means upon the inner face of said partition adapted to hold a limited number of matches within said match compartment, and a third compartment adjacent said match compartment and movable therewith adapted to contain an extra supply of matches from which the holder on said partition may be replenished.

5. A cigarette case comprising a compartment adapted to contain cigarettes, a second compartment pivoted on said first named compartment, a partition pivotally arranged intermediate of said compartments and constituting a closure for said second compartment, and a series of match holders arranged upon the inner face of said partition and projecting into said second compartment.

[Claims 6 to 9 not printed in the Gazette.]

1,196,407. PILING-BOARD. JOHN TWADDLE, Glasgow, Scotland. Filed Feb. 17, 1914. Serial No. 819,243. (Cl. 214—23.)



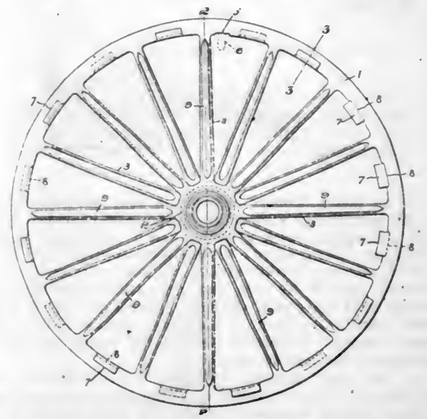
1. Means for use in the introduction of the piles into scrap furnaces, consisting of a flat metal plate for the pile, a peel for supporting the plate and conveying it with the pile into the furnace, projecting means on the peel, and projections on the plate for engaging the said projecting means after a partial withdrawal of the peel in any angular position, so that the plate may be withdrawn from beneath the pile by the peel.

2. Means for use in the introduction of the piles into scrap furnaces, consisting of a flat metal plate for the pile, a flat peel for supporting and conveying the plate and pile into the furnace, projecting means on the peel, and rigid hooks on the plate adapted to engage the said projecting means on the peel after its partial withdrawal and in any angular position, so that the plate may be thereafter withdrawn from beneath the pile.

3. Means for use in the introduction of the piles into scrap furnaces, consisting of a flat metal plate for the pile, a flat peel for conveying the plate and pile in upright position into the furnace, said plate being detachable from the peel and covering it, means for the engagement of the plate with the peel permitting the peel to be partially withdrawn from beneath the plate, and means on the plate for the support of a push bar adapted to prevent the withdrawal of the plate during said partial withdrawal of the peel, said plate discharging the pile over its forward edge, after the withdrawal of the peel.

4. The combination of a peel and a piling board for the purpose described, said peel being spade-shaped and provided with an abutment, and the piling board consisting of a flat rectangular metal plate having a rigid hook at its rear end for engaging with said abutment with the peel in any angular position and while the front edge of the piling board overlaps that of the peel, said piling board having an upwardly extending tail piece for coacting with a push bar.

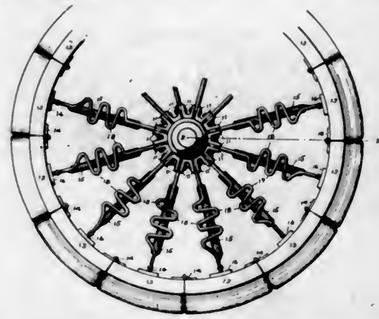
1,196,408. WHEEL. ANDREW O. VESTINE, Worcester, Mass. Filed Sept. 1, 1915. Serial No. 48,541. (Cl. 21—69.)



1. A wheel comprising a plurality of opposed, interlocked wheel members fashioned from sheet material, each member comprising a rim, a spoke, a hub, a rim locking member on one rim engaging locking member receiving means on the opposite rim, a channel in each hub member and a strut between the wheel members seated in said channels, the hub members being upwardly and outwardly bent and forming bearing receiving seats to hold the bearing against inward travel, and providing cap engaging shoulders.

2. A wheel comprising opposed interlocked rim section members 1, 1, provided with hub members 2, 2, opposed spokes 3, 3, and flanges 4, 4, the flanges provided alternately with rim locking members 7, 7, locking member receiving means 8, 8, and channels 12, 12, the strut 14 seated in said channels.

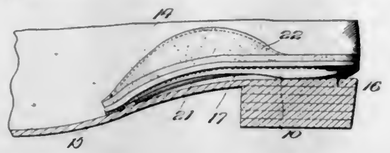
1,196,409. SPRING-ACTUATED WHEEL. MARION A. WAGNER, Des Moines, Iowa. Filed May 14, 1915. Serial No. 27,990. (Cl. 152—30.)



In a spring wheel, a hub, an encircling rim composed of hingedly connected sections, and a radial set of springs for each rim section supporting the latter from the hub and comprising a central spiral spring, connected with the rim section and hub, and a spring on each of the opposite outer sides of the spiral spring having straight terminals connected to the hub and rim section and an intermediate

wave portion consisting of a series of reverse bends extending circumferentially beyond the spiral spring, the springs of each set being disposed substantially within a common radial plane.

1,196,410. ARCH-SUPPORT. THOMAS C. WALKER, Bellaire, Ohio. Filed Nov. 3, 1915. Serial No. 59,460. (Cl. 36—71.)



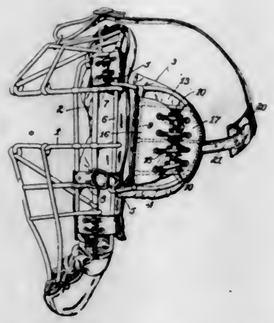
1. An instep support including a body portion arched to fit beneath the arch of the instep and provided upon one side thereof with a recess, and a cushioning spring extending longitudinally of the body portion and fixed at one extremity within said recess, the said spring being tapered toward its free end and being longitudinally bowed with its bowed portion arranged in spaced relation beneath the arch of the body portion, said recess being adapted to entirely receive the spring when depressed by the body portion.

2. An instep support including a body portion arranged to fit beneath the arch of the instep, and a cushioning element extending beneath the body portion with the said element movable to a position in which its lower face is flush with the lower face of the body portion.

3. An instep support including a body portion arched to fit beneath the arch of the instep and provided with a recess, and a cushioning element having one end secured to the body portion with its other end extending therebeneath and adapted to be entirely received within the said recess.

4. An instep support including a body portion arched to fit beneath the arch of the instep and provided with a recess, and a cushioning element mounted at one extremity within said recess, with the opposite extremity of the said cushioning element movable to seat within the said recess to provide an unobstructed surface upon the adjacent side of the body portion.

1,196,411. BASE-BALL MASK. ROBERT L. WELCH, Chicago, Ill., assignor to A. G. Spalding & Bros., a Corporation of New Jersey. Filed Mar. 28, 1916. Serial No. 87,347. (Cl. 2—193.)



1. A base-ball mask comprising a main frame and pad and ear protectors pivotally mounted on said main frame and adapted to be folded in relation to the main frame and pad, said ear protectors comprising frames pivoted to the main frame and having pads individual thereto and independent of the main pad, substantially as described.

2. In combination in a base-ball mask a main pad, a frame holding the same and projecting wholly to the front thereof leaving the rear of said pad in substantially one plane and ear protectors mounted pivotally on the main frame and folded into the space within the main pad leaving the rear face of the main pad and the outer faces of the ear protectors substantially in the same plane when said protectors are folded, substantially as described.

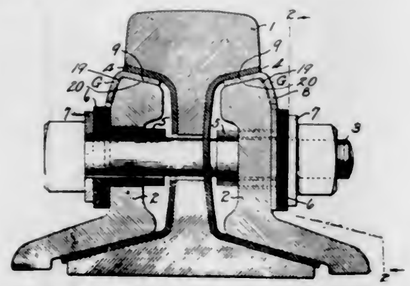
3. In combination a main pad, a frame carrying said pad, a supplemental frame pivotally mounted on the main frame and comprising a substantially semi-circular member with a vertical bar connecting the upper and lower portions thereof adjacent the pivot, a pad on the inner side of said supplemental frame and flaps connected with said pad and extending around the vertical rod and the semi-circular portion of the supplemental frame with means for securing said flaps together, substantially as described.

4. In combination a main frame, a main pad, an ear protector frame pivotally mounted on the main frame and a pad removably mounted on the said pivoted frame, substantially as described.

5. In combination in a base-ball mask, a main frame with its pad, an ear protector frame pivotally mounted on the main frame, a pad for protecting the ear, said pad having flexible extensions overlying the outer side of the frame with means for securing said extensions together to hold the pad in place, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,196,412. INSULATED RAIL-JOINT. BENJAMIN WOLHAUPTER, New Rochelle, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed June 16, 1915. Serial No. 34,440. (Cl. 239—5.)



1. An insulated rail joint including, in combination, a rail, a joint bar, an outside angle plate having a cap flange fitting the head of the bar, and insulation between said flange and the rail head.

2. An insulated rail joint including, in combination, a rail, a joint bar, an angle plate having a web member arranged at the outside of the bar and a cap flange overlying the head thereof, and insulation between said flange and the rail head.

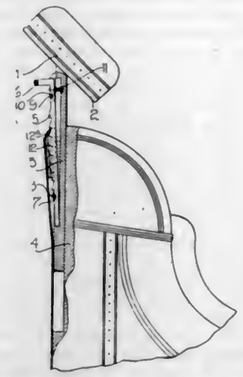
3. An insulated rail joint including, in combination, a rail, a joint bar, an angle plate engaging over the head of the bar and having a clearance from the outside top portion thereof, and insulation between said plate and the rail head.

4. An insulated rail joint including, in combination, a rail, a joint bar, an angle plate engaging over the outside head of the bar and having independent lateral and longitudinal movement, and insulation between said plate and the rail head.

5. An insulated rail joint including, in combination, a rail, a joint bar, an angle plate engaging over the outside head of the bar and having an independent movement, retaining means to prevent displacement of the plate, and insulation between said plate and the rail head.

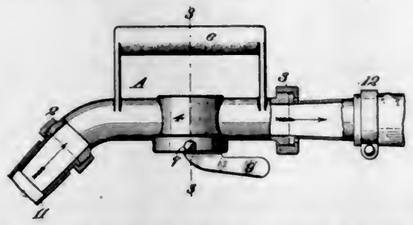
[Claims 6 to 9 not printed in the Gazette.]

1,196,413. HEAD-REST. CHARLES E. YOHE, Harrisburg, Pa. Filed May 15, 1913. Serial No. 767,839. (Cl. 155—10.)



The combination with a chair provided with a longitudinally extending chamber and a head rest having a wooden stem mounted to move in said chamber, said stem being formed on its rear face with a longitudinal groove, of a bar applied to said rear face and extending longitudinally thereof, the lower end of the bar resting on the bottom wall of the groove, said bar being provided near its lower and upper ends with recesses, retaining straps receivable in said recesses, said straps being both formed with apertured ears designed to receive fastening devices whereby they may be secured directly to the wooden stem, the engagement between the lower end of the rack bar and the bottom wall of the groove, in connection with said straps permitting the bar to rock upon its lower end as a fulcrum without any downward strain upon said straps, an expansion spring interposed between the upper end of the bar and the stem, and a keeper plate provided with means for attachment to the body portion of the chair and extending across the chamber, the bar being formed on its rear face, between the upper and lower grooves with rack teeth, for engagement by said keeper plate.

1,196,414. COMBINATION ELBOW-COUPLING, VALVE, AND HANDLE FOR SUCTION-CLEANERS. ERNEST L. B. ZIMMER, Oakland, Cal., assignor, by mesne assignments, to Baker-Hausen Manufacturing Co., Oakland, Cal., a Corporation of California. Filed June 2, 1915. Serial No. 31,755. (Cl. 137—69.)

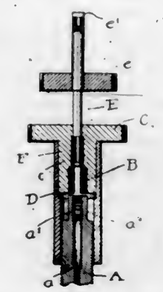


1. An elbow for suction cleaners composed of a member having each of its ends threaded and formed with a valve casing at a point between its ends, a turnable valve in the casing, a handle for the valve underlying the casing and member, a handle for the member overlying the casing and member, and swivel couplings engaged with the respective threaded ends of the member.

2. An elbow for suction cleaners composed of a hollow member, a pair of swivel couplings connected to the respective ends of the member, a valve in the member located between said swivel couplings, means for operating the valve, and a handle connected to the member and straddling the valve, and arranged between the ends of the member.

3. An elbow for suction cleaners including a member having a pair of swivel couplings connected to its respective ends, a valve in the member, a handle connected to the member, and a handle for the valve disposed between the ends of the first named handle, said handles being located in approximate alinement in a plane transverse of the member to allow both to be gripped by the two hands of the operator without appreciable separating movement of the hands.

1,196,415. IMPLEMENT FOR TRUING UP THREADS. JACOB ABRAHAMSON, Asbury Park, N. J. Filed Jan. 25, 1916. Serial No. 74,071. (Cl. 10—111.)



1. A thread cutting implement embodying external and internal thread cutters, and separate and independent means for operating each cutter, said means being juxtaposed whereby the cutters may be operated either separately or conjointly.

2. A thread cutting implement embodying external and internal thread cutters, a carrier member for supporting and actuating the external cutter, and a stem mounted on the carrier member of the external cutter for supporting and actuating the internal cutter independently of the external cutter.

3. A thread cutting implement embodying external and internal thread cutters, a carrier member for supporting and actuating the external cutter, and a stem rotatably journaled in said carrier member for supporting and actuating the internal cutter independently of the external cutter.

4. A thread cutting implement embodying external and internal thread cutters, each of which is operable independently of the other, a hand-wheel for separately actuating the external cutter and a hand-wheel for separately actuating the internal cutter, the said hand-wheels being juxtaposed whereby both may be simultaneously grasped and both cutters actuated simultaneously.

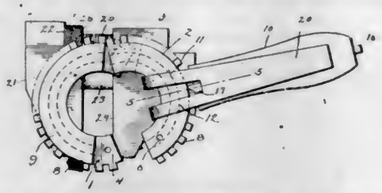
5. A thread cutting implement embodying external and internal thread cutters, separate and independent means for operating each cutter, said means being juxtaposed whereby the cutters may be operated either separately or conjointly, and means for mounting said cutters for longitudinal movement and rotation in operative relation to the work to be done.

[Claims 6 to 11 not printed in the Gazette.]

1,196,416. WRENCH. BURK W. ALIFF, Stanaford, W. Va., assignor of one-half to Joseph Hunt, Stanaford, W. Va. Filed Jan. 7, 1916. Serial No. 70,819. (Cl. 81—63.)

1. In a wrench structure, a substantially circular body composed of a pair of pivotally connected semi-circular members, ratchet teeth formed upon the periphery of said semi-circular members, a ratchet handle detachably connected to said circular body for coaction therewith, a rigid wrench jaw rigidly connected to one of said semi-circular

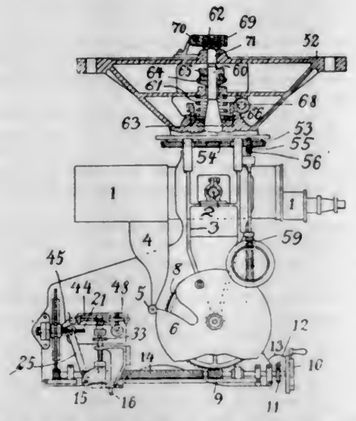
members, a shank formed upon said rigid wrench jaw, and a slidable jaw adjustably mounted upon said shank.



2. In a wrench structure, a substantially circular body composed of a pair of pivotally connected semi-circular members, said semi-circular members having ratchet teeth formed upon their peripheries, a circular flanged washer formed of a pair of semi-circular members attached to the outer side of said semi-circular members, a ratchet handle detachably connected to said circular body and slidably supported and guided by said flanged rim, and wrench jaws secured to said circular body.

3. In a wrench structure, a substantially circular body composed of a pair of pivotally connected semi-circular members, a flanged ring secured to the outer side of said semi-circular member and composed of a pair of semi-circular members, ratchet teeth formed upon the periphery of said semi-circular members, a ratchet handle detachably connected to said circular body and being supported and guided by said flanged ring, a spring controlled pawl carried by said ratchet handle for coaction with said ratchet teeth, and wrench jaws carried by said circular body upon the face opposite from said flanged ring.

1,196,417. RANGE-FINDER OR OREOGRAPH. FRIDTJOV ANDERSEN, Christiania, Norway. Filed Feb. 24, 1916. Serial No. 80,320. (Cl. 33—71.)



1. In a range finder, the combination of a sighting telescope, means for effecting the angular adjustment of the latter, an indicator operated in common with said telescope, and means actuated by the adjusting means to correct the position of said indicator in accordance with the water level.

2. In a range finder, the combination of a sighting telescope, means for effecting the angular adjustment of the latter, an indicator operated in common with said telescope, means actuated by the adjusting means to correct the position of said indicator in accordance with the water level, and means actuated by said adjusting means for correcting the indicator for refraction.

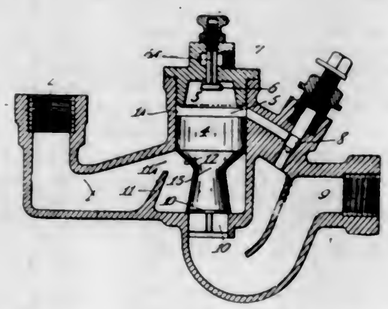
3. In a range finder or oreograph for gun training and elevating systems the combination of a sighting telescope means comprising a cam disk for effecting angular adjustment of the same in a vertical plane, a screw and screw wheel for operating said cam and a nut engaging said screw and adapted to travel along the same, the movements of said nut corresponding to the displacements of the target aimed at with the sighting telescope.

4. In a range finder or oreograph for gun training and elevating systems the combination of a sighting telescope means comprising a cam disk for effecting angular adjustment of the same in a vertical plane, a screw and screw wheel for operating said cam said screw consisting of two parts one of which operates the cam directly while the other one is movable in an axial direction relatively to the former, means for adjusting the said slidable part of the screw with regard to the stationary part, and a nut engaging said slidable screw-member and adapted to travel along the same, the movements of said nut corresponding to the displacements of the target aimed at with the sighting telescope.

5. In a range finder or oreograph for gun training and elevating systems the combination of a sighting telescope means comprising a cam disk for effecting angular adjustment of the same in a vertical plane, a screw and screw wheel for operating said cam said screw consisting of two parts one of which operates the cam directly while the other one is movable in an axial direction relatively to the former, two independent adjusting devices for adjusting the said slidable screw member with regard to the stationary screw member in accordance with the tide and atmospheric refraction and a nut engaging said slidable screw member and adapted to travel along the same, the movements of said nut corresponding to the displacements of the target aimed at with the sighting telescope.

[Claims 6 to 14 not printed in the Gazette.]

1,196,418. VALVE FOR DRAINING WATER FROM STEAM-PIPES. ALFRED BALDWIN, Keighley, England. Filed Nov. 26, 1915. Serial No. 63,655. (Cl. 137—122.)



A releasing valve comprising a casing, a releasing valve for the air therein, a movable piston and a main outlet valve connected thereto, normally closed by gravity, said piston having a conical surface and a deflecting plate for diverting the flow to said surface to raise the main valve from its seat.

1,196,419. FOLDABLE FIRE-ESCAPE. HENRY F. BANYOVITS, Archbald, Pa. Filed Dec. 21, 1915. Serial No. 68,008. (Cl. 228—31.)

1. A fire escape ladder comprising sections formed of opposite pairs of tubular rails and cross rounds, link connections for the said sections screw-threaded within the said rails, stop lugs carried by the said sections adjacent the said connections, round supporting sleeves carried by the ends of the rounds and slidably-mounted upon the said sections and adapted for automatically positioning upon the said lugs overlying the said connections when the ladder assumes its substantially vertical operative position.

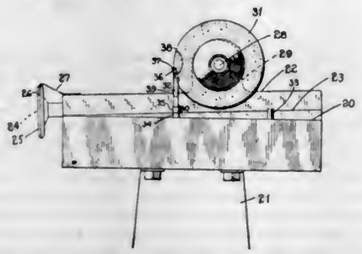
2. A fire escape comprising a ladder including side rails formed of hinged links, sleeves slidably mounted on the links and adapted to overlie the hinge connection, and rounds extending between the side rails connected at their ends to the sleeves whereby upward movement of the rounds will expose the link connections for simultaneously folding the ladder.



3. A fire escape ladder including side rails formed of hinged links, cross rounds therefor, and locking means for the hinged links constituting supports for the ends of the rounds.

4. A fire escape comprising in combination with a wall having a window casing therein, the said wall being provided with a receiving compartment and a cut-out portion beneath the said casing, a plate hinged to the said casing, a bridge board hinged to the said plate, the said plate and board being arranged in their vertical positions flush with the inner surface of the wall within the said cut-away portion and compartment respectively when in their closed positions, and with the bridge board lying parallel with the sill of the window casing to constitute a platform when in operative position, and a foldable ladder flexibly attached to the said board.

1,196,420. MACHINE FOR GRINDING FORMED CUTTERS. WILLIAM O. BARNES, Leominster, Mass. Filed Oct. 11, 1915. Serial No. 55,197. (Cl. 51—7.)



1. A machine for grinding profile faces of formed cutter teeth comprising a table, a grinder supported above said table, a rest for the cutter teeth, a contact member carried by the table and having a curved templet-guiding surface, and a profiled templet movable in a rectilinear path in engagement with said templet-guiding surface.

2. A machine for grinding the profile faces of formed cutter teeth, comprising a grinder, a rest for cutter teeth, a templet-guide, a jig provided with means for supporting the cutter to be ground, and a templet carried by said jig and positioned to engage said guide.

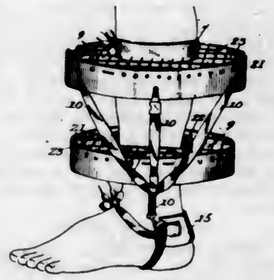
3. A machine for grinding the profile faces of formed cutter teeth, comprising a grinder, a rest for cutter teeth, a templet guide, a jig provided with a supporting base having a recess therein, said jig having means for supporting the cutter to be ground, and a templet secured within said recess and positioned to engage said guide.

4. A machine for grinding the profile faces of formed cutter teeth, comprising a grinder, a rest for cutter teeth, a templet guide, a jig provided with means for supporting the cutter to be ground, a templet carried by said jig and positioned to engage said guide, and means for adjusting the grinder to compensate for wear.

5. In a machine of the character described, the combination with a grinding wheel, a spindle head, a spindle mounted in the head by which the wheel is carried, and an incline on which the head is adapted to slide to raise or lower the spindle and wheel, of a jig, a templet carried thereby, a rest for cutter teeth, and a guide surface for engagement by the templet.

[Claims 6 to 27 not printed in the Gazette.]

1,196,421. SWIMMING APPARATUS. JAMES S. BARTHOLOMEW, Decoto, Cal. Filed Jan. 5, 1916. Serial No. 70,400½. (Cl. 9—21.)

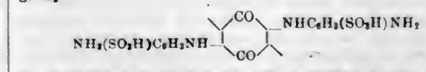


1. A swimming apparatus of the class described comprising a garter and inner or secondary hoop and a plurality of outer hoops, networks extending from the garter and from the secondary hoop to the outer hoops, a sectional flexible fabric restrained by each of said networks, the sections opening and closing under said network substantially as and for the purpose set forth.

2. In a swimming apparatus of the class described a plurality of inner hoops and a plurality of outer hoops connected by a network restraining a flexible fabric.

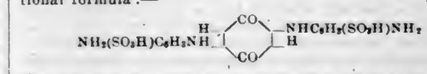
1,196,422. BROWN DYESTUFFS FOR DYEING WOOL. MAX BECKE, Weidling, near Vienna, and WILHELM SUIDA, Mödling, near Vienna, Austria-Hungary, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed July 8, 1916. Serial No. 108,219. (Cl. 8—1.)

1. As new products, the dyestuffs containing the atomic group:



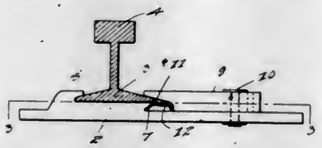
being dark-brown powders, readily soluble in warm water, the solution of which dyes wool tints of great fastness to washing and to the light, this fastness being still improved by subsequently treating with a chromate or a copper salt.

2. As a new product, the dyestuff having the constitutional formula:—



being a dark-brown powder, readily soluble in warm water, the solution of which dyes wool a tint of great fastness to washing and to the light, this fastness being still improved by subsequently treating with a chromate or a copper salt.

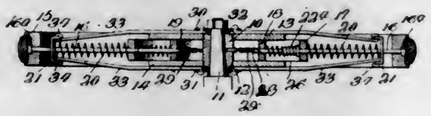
1,196,423. COMBINED RAIL CLAMP AND CHAIR. JOHN W. BIRDSONG, Cohay, Miss. Filed Feb. 19, 1916. Serial No. 79,417. (Cl. 238—2.)



1. A device of the class described comprising a base, a raised portion formed on the upper side of the base at one end thereof, a rail supported by the raised portion and the base, a flange formed on one end of the raised portion and adapted to engage one side of the rail base, the opposite end of the raised portion being provided with a flange, a clamping member pivotally associated with the base and having one edge thereof provided with a slot adapted when the clamping member is in operative position to receive the last-mentioned flange on the raised portion and one side of the rail base.

2. The combination with a base plate adapted to support a rail and having a flange thereon for overlying one side of the rail, of a clamp pivotally associated with the base and having one end thereof provided with a transverse slot adapted when the clamp is in operative position to receive the flange on the base and one side of the base of the rail, said clamp having the rear wall of the slot therein provided with a cam surface at one end of the wall and having the longitudinal lower edge of the wall of the slot curved at one end thereof and adjacent the cam surface on the inner wall of the slot, for the purpose specified.

1,196,424. RESILIENT WHEEL. CHARLES O. BLACKWELL, Hanna, W. Va. Filed Jan. 29, 1916. Serial No. 75,156. (Cl. 152—28.)



1. In a resilient wheel, a hub, a rim, a plurality of annuli disposed between the rim and hub, spokes mounted upon the rim and having engagement through the annuli, plates mounted upon the hub, yokes surrounding the spokes, rods operatively connecting said plates to the yokes, springs disposed between the annuli and the yokes, bolts connecting the annuli, bolts having sliding engagement with the annuli and disposed radial to the hub, springs surrounding said yokes, and flexible connections between the hub and said last named bolts.

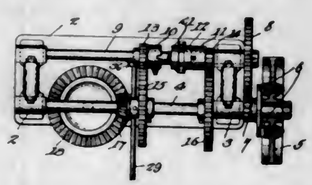
2. In a resilient wheel, a hub, a rim, an annulus disposed between the rim and hub and within which the hub is movable, spokes extending from the hub and engaging the said annulus, means for yieldably engaging said annulus with the hub, said means permitting a limited rotative movement of the hub independent of the annulus, springs surrounding the spokes and disposed between the rim and annulus, and rods having pivotal engagement with the hub and operatively engaging the outer ends of said springs whereby to cause a compression of certain of the springs upon a rotative movement of the hub relative to the rim and annulus.

3. In a resilient wheel, a hub, a rim, concentric outer and inner annuli spaced from the hub and rim, spokes extending inward from the rim and passing through the annuli, plates operatively mounted upon the hub to move therewith, yokes slidingly mounted on the spokes, and springs disposed between the outer annulus and said yokes, rods hingedly connected to the yokes and to the plates whereby a rotary movement of a radial movement of the hub will cause the compression of said springs, bolts holding the annuli in spaced relation, bolts having sliding engagement with both annuli and flexibly connected to the hub, and springs surrounding said bolts and disposed between the annuli and compressed by the radial or rotative movement of the hub relative to the annuli.

4. In a wheel of the character described, a hub, disks disposed on both ends of the hub, a rim concentric to the hub, outer and inner annuli concentric to the hub, the inner annuli being disposed between said disks, spokes extending inward from the rim and engaging the outer and inner annuli, plates mounted upon the ends of the hub, yokes mounted upon the spokes, springs disposed between the outer annulus and said yokes, connecting rods hingedly connected to the yokes and to said plates, bolts extending inward from the outer annulus and through the inner annulus and holding the annuli in concentric position, bolts extending between the outer and inner annuli and having sliding engagement therewith, each bolt having a head normally bearing against the inner face of the outer annulus, springs surrounding said last named bolts and bearing against said heads and chains connecting the hub to the inner ends of said last named bolts.

5. In a resilient wheel, a hub, a rim concentric thereto, an annulus surrounding the hub and connected thereto for limited circumferential movement, radially disposed spokes operatively connected to the rim and to the annulus, springs surrounding the spokes, and yieldably holding the annulus and rim in concentricity, and rods pivotally connected to the hub and having sliding and rotatable engagement with the spokes and bearing against the outer ends of the springs whereby the relative depression of the hub will cause the compression of the springs, or a relative rotation of the hub will cause a compression of the springs.

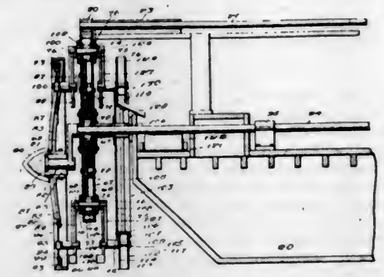
1,196,425. DRIVING MECHANISM. LIONEL FRANCIS BOWEAS, Columbia, Pa. Filed Mar. 14, 1914. Serial No. 824,764. (Cl. 74—59.)



A transmission mechanism including a base, having a pair of brackets, two parallel shafts journaled in said brackets, a pulley freely rotatable upon one shaft, a gear loosely mounted on said shaft, a friction clutch between said pulley and gear, a gear upon the other shaft and meshing with said gear, a pair of gears of different diameters mounted loosely upon the second mentioned shaft and having clutch portions, a clutch member slidable upon the second mentioned shaft between the said pair of gears to engage one or the other of said clutch portions, means for shifting said clutch member, a pair of gears secured upon the first mentioned shaft and meshing with said pair of gears, a pinion carried by one of the last mentioned pair of gears, and a gear carried by the base and meshing with said pinion.

1,196,426. EXCAVATING-MACHINE. JAMES PARKER BOWLING, New Orleans, La. Filed Apr. 21, 1915. Serial No. 22,941. (Cl. 37—29.)

1. In a machine of the character described, a support, a rock-shaft connected therewith, an eccentric element connected with the rock-shaft to turn with it, a rotatable cutting element carried by the eccentric element, means to turn the rock-shaft, a planetary gear carrier pivotally mounted upon the rock-shaft, a sun gear connected with the rock-shaft to turn therewith, planetary gears carried by the planetary gear carrier, a set of inner gears engaging the sun gear, a set of outer gears engaging the planetary gears, shafts connecting the inner and outer sets of gears, means for rotating the planetary gear carrier, and means connecting the planetary gear carrier with the rotatable cutting element.



2. In a machine of the character described, a support, an approximately horizontal rock-shaft mounted upon the support and carrying a lateral extension adapted to be shifted transversely of the support in an approximately vertical plane, a rotatable cutting element pivotally mounted upon the lateral extension, means to drive the rotatable cutting element, and means to turn the rock-shaft back and forth during the rotation of the cutting element.

3. In a machine of the character described, a support, an approximately horizontal rock-shaft mounted thereon and having a crank, a rotatable cutter pivotally connected with the crank, an eccentric element mounted upon the rock-shaft to turn therewith, a rotatable conveyer carried by the eccentric element, an operating wheel pivotally mounted upon the rock-shaft between the cutting element and the conveyer, means connecting the wheel with the rotatable cutter and the conveyer, means to drive the wheel, and means to automatically turn the rock-shaft back and forth during the rotation of the wheel.

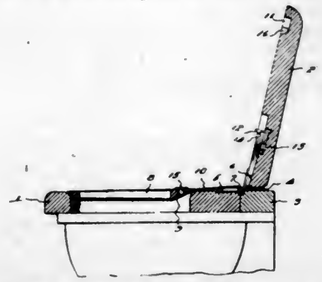
4. In a machine of the character described, a support, a member pivotally connected therewith to swing transversely of the support in a substantially vertical plane, a cutting element adapted to rotate in a substantially vertical plane and extending transversely of the support and pivotally connected with the member, means to drive the rotatable cutting element and means to automatically move the pivoted member back and forth during the rotation of the cutting element.

5. In a machine of the character described, a support, a rock-shaft connected therewith, an eccentric element connected with the rock-shaft to turn therewith, a rotatable cutting element carried by the eccentric element, a sun gear connected with the rock-shaft, a planetary gear-carrier pivotally mounted upon the rock-shaft near the sun gear, planetary gears carried by the planetary gear-carrier, gearing connected with the planetary gear-carrier and serving to connect the sun gear and the planetary gears, means connecting the planetary gears with the rotatable cutting element, and means to rotate the planetary gear-carrier with relation to the rock-shaft.

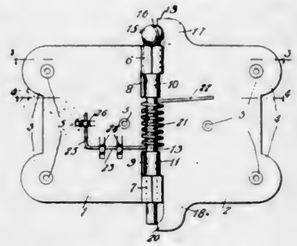
[Claims 6 to 16 not printed in the Gazette.]

1,196,427. TOILET-SEAT. FLOYD H. BRANDENBURG, Klamath Falls, Oreg. Filed June 29, 1915. Serial No. 37,023. (Cl. 4—18.)

A device of the class described comprising a fixed member, a toilet seat hingedly connected to the fixed member, a cover hingedly connected to the pintle of the hinge between the seat and fixed member, a frame comprising an elliptical body, an arm formed on said body, said arm being hingedly connected to the said pintle, a smaller seat fitted in said frame, said cover provided on its inner face with an elliptical groove terminating at its lower end into a recess which extends through the hinge end of said cover, a catch arranged in said groove, said frame and smaller seat adapted to be fitted into said groove and held securely therein when not in use substantially as described.

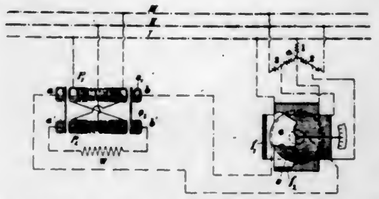


1,196,428. HINGE. HENRY G. BRIEL, Ottawa, Ill. Filed Mar. 23, 1916. Serial No. 86,106. (Cl. 16—106.)



A hinge including coupled sections provided with complemental tubular portions and a pintle insertible therein when said tubular portions register, the outermost of said tubular portions being squared, a square shoulder on said pintle for engagement in said squared tube, said pintle having a slotted head, and an extension operable through the slot to permit withdrawal of the pintle when the hinge is in a predetermined position.

1,196,429. SIGNALING APPARATUS. THEODOR BRUGER, Frankfort-on-the-Main, Germany, assignor to the Firm of Hartmann & Braun A.-G., Frankfort-on-the-Main, Germany. Filed Feb. 9, 1911. Serial No. 607,618. (Cl. 177—337.)

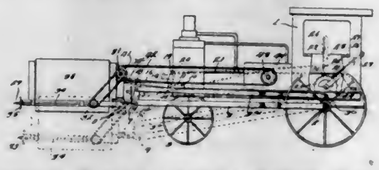


1. A signaling system of the character herein referred in and wherein three-phase current taken from a network is used, the same including in combination with a transmitter, a receiver having an inner rotary armature and a rotating field produced by only two field coils, the currents of which are displaced through 90° with respect to each other by directly connecting up to a star-voltage, and wherein the oppositely situated main voltage is taken from a zero resistance, the said currents being made equal

to each other by connecting the wires fed by the main current to two symmetrical spots situated nearer to the zero point.

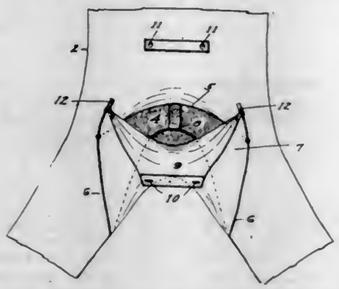
2. A signaling apparatus of the class described including a transmitter, the current lines, and a receiver comprising two crossed out-of-phase fields and an electromagnet placed inside of said fields and consisting of a fixed coil, and a movable part having a pointer and oppositely located pole pieces respectively projecting to opposite sides of the magnet.

1,196,430. HARVESTER-SUPPORTING ATTACHMENT FOR A TRACTOR. JOSEPH BURCHELL, Minden, Nebr. Filed Jan. 11, 1916. Serial No. 71,550. (Cl. 56—100.)



In combination with a tractor, a harvester, a pair of bars, pivotally mounted upon the rear axle of the tractor extending forwardly and beyond the front end of the tractor, one upon each side, a pair of bars pivoted at the rear of the frame of the tractor, one upon each side just a little above the pivots of the first bars, a pair of bell crank levers having their corresponding vertical arms pivoted to the forward ends of both pairs of bars and having their substantially horizontal arms fixed to the frame of the harvester, a rock shaft mounted in bearings of the tractor, a bell crank lever on said rock shaft at one end, an arm fixed to the rock shaft, which arm of the rock shaft and one of the arms of the bell crank lever of said rock shaft having elongated slots, a transverse rod connecting corresponding upper extremities of the vertical arms of the first bell crank levers and extending through said elongated slots, means carried by the tractor having connections with the other arm of the bell crank lever of said rock shaft, to rock said bell crank lever to raise and lower the harvester, said means comprising a lever and a rod connected to the bell crank lever of said rock shaft, and a dog and rack for holding said last named lever in adjusted positions, and connections between the engine of the tractor and the harvester for operating the harvester.

1,196,431. UNDERGARMENT. FRANKLIN CHATFIELD, Minneapolis, Minn., and GEORGE E. RUTLEDGE, Rochelle, Ill., assignors of one-half to Northwestern Knitting Co., Minneapolis, Minn., a Corporation, and one-half to Vassar Swiss Underwear Co., Rochelle, Ill., a Corporation. Filed Oct. 8, 1912. Serial No. 724,604. (Cl. 2—144.)



1. A union garment having a posterior opening formed by cutting out a substantially triangular section of the fabric from which the garment is made, the upper edge of said opening extending across the garment from side to side thereof, and the side edges of said opening converging to a point below the crotch of the garment, a seat section stitched to the side edges of said opening and forming gore portions extending into the legs of the garment below the crotch thereof, said gore portions also extending to the front of the garment and stitched thereto and forming a permanently closed seamless crotch, the upper portion of said seat section forming a loose drop flap for covering said opening, and means for connecting said flap to the back of the garment.

2. A union garment having a posterior opening formed by cutting out a triangular section of the fabric from which the garment is made, the upper edge of said opening being substantially straight and extending across the garment from side to side thereof, and the side edges of said opening converging to a point below the crotch of the garment, a seat section stitched to the side edges of said opening and forming gore portions extending into the legs of the garment below the crotch thereof, said gore portions also extending to the front of the garment and stitched thereto and forming a permanently closed seamless crotch, the upper portion of said seat section forming a loose drop flap for covering said opening, and means for connecting said flap to the back of the garment, the lines of stitching for securing the seat section to the side edges of said opening being extended to points above the extremities of the upper edge of said opening.

3. A union garment having a posterior opening formed by cutting out a triangular section of the fabric from which the garment is made, the upper edge of said opening being substantially straight and extending across the garment from side to side thereof, and the side edges of said opening converging to a point below the crotch of the garment, a seat section stitched to the side edges of said opening and forming gore portions extending into the legs of the garment below the crotch thereof, said gore portions also extending to the front of the garment and stitched thereto and forming a permanently closed seamless crotch, the upper portion of said seat section forming a loose drop flap for covering said opening, and means for connecting said flap to the back of the garment, the lines of stitching for securing the seat section to the side edges of said opening being extended to points above the extremities of the upper edge of said opening, and tapes secured to the back of the garment and to said flap at the ends of the lines of stitching for reinforcing the same.

1,196,432. LAND-PULVERIZER. JOEL S. COOPER, Santa Barbara, Cal. Filed Feb. 24, 1916. Serial No. 80,211. (Cl. 55—85.)



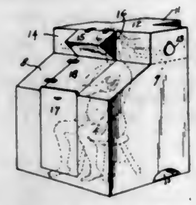
1. The combination in an apparatus of the character described, of a frame, an axle and bearing wheels, a rotary toothed implement mounted on a shaft parallel to, and in front of, the wheel axle, segments fixed to the frame sides and acting as guides in which said shaft ends are movable, radius bars fulcrumed upon the wheel axle having bearings in which the shaft is turnable, and channeled segments fixed to the frame front, in line with the radius bars and in which the ends of said bars are guided and adjustable.

2. In an apparatus of the character described, a main frame with bearing and steering wheels, radius lever bars fulcrumed on the bearing wheel axle and extending forwardly from the fulcrums, channeled segments fixed to the frame front, means to adjust the front radius lever ends in said segments, journals carried by the levers, a shaft turnable therein, segments fixed to the frame sides in which the shaft ends are guided, a toothed implement mounted upon the shaft and means to transmit motion from the bearing wheels to the implement shaft.

3. A cultivator and pulverizer comprising a frame and bearing wheels, a toothed implement and a shaft therefor, radius bars fulcrumed upon the bearing wheel axle, and upon which the implement shaft is journaled, guiding segments fixed to the frame, in which the ends of the shaft are slidable, and other segments fixed in line with the front ends of the radius bars and about which said bars may be raised, lowered, and locked.

4. In an apparatus of the character described, the combination of a wheel borne frame and axle, a fixed bar in front of the axle, having forwardly projecting pins, a rotary toothed implement in front of said bar, the teeth of which project between the pins, radius arms fulcrumed upon the axle, and movable about the fulcrums, journal boxes upon said bars in which the implement axle turns, fixed segments in which the axle ends are guided and other segments in line with the radius arms, and in which said arms are guided and movable, and means connected with the axle, to rotate the implement.

1,196,433. FLUID-BATH CABINET. WINFIELD S. CRUM and PETER W. CRUM, Wilkinson, Ind. Filed Nov. 8, 1915. Serial No. 60,336. (Cl. 4—13.)



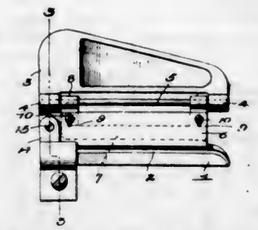
1. A fluid-bath cabinet having a floor dividing it into upper and lower compartments, one side of said cabinet having openings which communicate with each other and afford ingress and egress to the cabinet, said floor being slotted next to said openings to receive an occupant's neck whereby his head may be in the upper compartment while his body is in the lower one, and means comprising doors to close said openings, said doors having an oblique member opposite each compartment to deflect the bath-fluid toward the occupant.

2. A fluid-bath cabinet having a floor dividing it into upper and lower compartments, one side of said cabinet having oblique members opposite both compartments with openings which afford ingress and egress to the cabinet, said floor being slotted from its edge in next to said openings to receive an occupant's neck whereby his head may be in the upper compartment and his body in the lower one, means comprising doors to close said openings and means comprising pipes having valves and air mixers for supplying a bath-fluid to one or both of said compartments in regulated quantities.

3. A fluid-bath cabinet having a horizontal partition dividing it into a lower compartment to receive an occupant's body and an upper compartment to receive his head, openings for ingress and egress to the cabinet, said partition being slotted for the passage of the occupant's neck, and closures for said ingress and egress openings comprising a vizor for the upper compartment having outwardly bowed members.

4. A fluid-bath cabinet having a horizontal partition dividing it into a lower compartment to receive an occupant's body and an upper compartment to receive his head, openings for ingress and egress to the cabinet, said partition being slotted for the passage of the occupant's neck, and closures for said ingress and egress openings comprising a vizor for the upper compartment hinged at its top to the top of the cabinet and having outwardly bowed members with perforate ends.

1,196,434. THREAD-GUIDE. FREDERICK SLOCUM CULVER, Taunton, Mass. Filed Apr. 17, 1915. Serial No. 22,100. (Cl. 28—20.)



1. In a thread guide, a base bracket having a rigid smooth jaw face and having an L-shaped arm provided with perforated bosses which overhang the jaw face, a rod secured in said bosses, a U-shaped hanger having bearings which receive the rod, a blade engaged with the hanger and having elongated vertical slots, bolts passed through the blade slots and the hanger, the vertical arm of the bracket having a chamber, a coiled spring in the chamber engaged with the blade, a screw closing the outer end of the chamber and engaged with the spring to enable adjustment of the tension thereof, an arm on the bracket spaced from the front of the blade, and a screw in the second arm engaged with the blade to limit the outward movement thereof under the spring tension.

2. In a thread guide, a bracket having a jaw, spaced opposing arms arranged at one end of the jaw, a hanger carried by one arm for swinging against the jaw, a blade carried by the hanger and having one end extending beyond the latter and disposed between the arms, a spring carried by one of the arms and engaged with the blade extension for yieldingly holding the blade from the jaw, and adjustable stop means on the other arm adapted to engage with the blade extension to limit the swinging movement thereof from the jaw under the tension of the spring.

3. In a thread guide, a body having a rigid jaw, a blade supported on the body for movement toward the jaw, a spring normally holding the blade from the body, means for varying the tension of the spring, and means for limiting the action of the spring to hold the blade in a predetermined position.

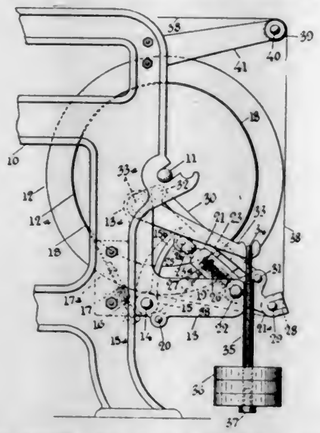
4. In a thread guide, a bracket having a rigid jaw, a movable jaw mounted on the bracket for swinging toward the rigid jaw, a variable tension spring on the bracket engaging the movable jaw to hold yieldably the latter spaced from the rigid jaw, and adjustable positive means engaging the movable jaw for limiting the swinging movement of the latter from the rigid jaw.

1,196,435. LOOM. JOSEPH T. CYR, Worcester, Mass. Filed Sept. 13, 1915. Serial No. 50,310. (Cl. 139—58.)

1. A let-off for looms, including, in combination with the main warp-beam and brake-band or strap for the shaft thereof, a pivoted arcuate arm provided with an outstanding projection, a stud loosely mounted in the latter, an element adjustably connected to said stud, said brake-strap being connected to said adjustable element, a pivotally mounted element, having loosely and resiliently mounted therein a plunger, said plunger being equipped to engage said arcuate pivoted arm, said pivotally mounted element also having an arm equipped with a warp-guide rotary member, and a weight control for the aforesaid parts.

2. A let-off for looms, including, in combination with the main warp-beam and brake-strap for the shaft thereof, a pivoted arcuate arm provided with an outstanding projection, a stud loosely mounted in the latter, an element adjustably connected to said stud, said brake-strap being connected to said adjustable element, a pivotally mounted element, having loosely and resiliently mounted therein a plunger, said plunger being equipped with a

rotary member to engage said arcuate pivoted arm, said pivotally mounted element also having an arm equipped with a warp guide rotary member, a weight-



controlled element, and a link-connection between said weight-controlled element and the pivotally mounted element connected to said loosely mounted plunger-carrying element.

1,196,436. CARRIAGE-AXLE. HARRY A. DORN, Freeport, Ill. Filed Sept. 21, 1914. Serial No. 862,701. (Cl. 21—5.)



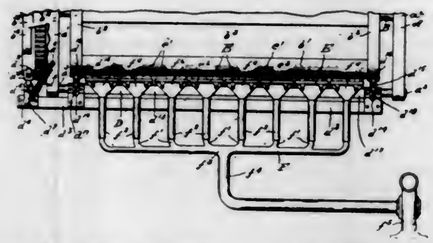
The combination of a metallic axle-tree of substantially uniform cross-sectional dimension throughout its length and provided at its ends with spindles, a cap or filler strip shaped to conform to and positioned on the top of the axle-tree to give proportion and design to the axle, a hood of sheet material shaped to fit over and cover the top and sides of the filler strip and axle-tree and finished on its exterior surface to present a smooth, unbroken and integral appearance to the axle structure, and means for securing the hood to the axle tree, the axle-tree because of its cross-sectional dimension serving to carry the burden of the load and the filler strip and hood serving to effect desirous proportions in design and finish and enable low cost of production.

1,196,437. METHOD OF CONDITIONING PAPER PREPARATORY TO PRINTING THEREON. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to C. S. Britton, Cleveland, Ohio. Original application filed July 26, 1913, Serial No. 781,306. Divided and this application filed Dec. 22, 1913. Serial No. 808,160. (Cl. 101—111.)

1. The method of conditioning paper preparatory to printing thereon, which consists in revolving a sheet, and causing a suction force to be exerted in the plane of successive diagonally extending portions of the passing sheet whereby to both clean and stretch the same.

2. The method of conditioning paper preparatory to printing thereon, which consists in conveying a sheet and causing a suction force to be exerted thereagainst along a line extending diagonally within the plane of the passing portion of the sheet.

3. The method of conditioning paper preparatory to printing thereon, which consists in conveying a sheet in a given direction and opposing a lineal suction thereacross, such suction force being exerted in a direction oblique with respect to the line of opposition and within the plane of the sheet whereby to iron out and stretch the same.

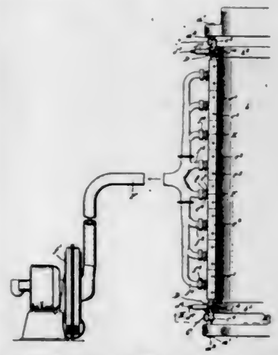


4. The method of conditioning paper preparatory to printing thereon, which consists in drawing a sheet in a given direction and causing an elongated suction effect to be opposed thereacross in a direction oblique relative to the direction of travel and in the plane of the paper.

5. The method of conditioning a paper sheet preparatory to printing thereon, which consists in conveying a sheet across a surface, and causing a lineal obliquely extending suction force to be applied to the sheet counter to said surface.

[Claims 6 to 17 not printed in the Gazette.]

1,196,438. SUCTION-NOZZLE ATTACHMENT FOR PRINTING-PRESSES. JAMES E. DOYLE and FRANCIS M. CASE, Cleveland, Ohio; said Case assignor to Charles S. Britton, Cleveland, Ohio. Filed Sept. 29, 1914. Serial No. 864,030. (Cl. 101—111.)



1. In an attachment of the character described, the combination with a sheet conveyer: of a suction nozzle disposed adjacent the same, and supporting mechanism for said nozzle and including a pair of flexibly connected members yieldingly engaging said conveyer.

2. In an attachment of the character described, the combination with a sheet conveyer: of a bar pivotally mounted adjacent the same, mechanism upon said bar and including an independently tiltable member having one end in yielding engagement with said conveyer, and a suction nozzle carried by said mechanism.

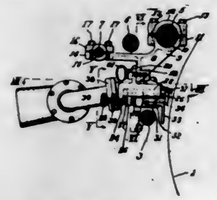
3. In an attachment of the character described, the combination of a sheet conveyer, a suction nozzle supported adjacent thereto, and a diverting plate carried above upon said nozzle and downwardly inclined toward the intake thereof and toward said conveyer.

4. In an attachment of the character described, the combination of a sheet conveyer, a suction nozzle supported adjacent thereto, and a diverting plate carried upon said nozzle, said plate being adjustable relative to said conveyer.

5. In an attachment of the character described, the combination of a sheet conveyer movable as a unit, a supporting member mounted for distinct movement relative to said conveyer and extending across the width thereof, means actuated by the movement of said conveyer in one direction for effecting the movement of said supporting member in a different direction, a plurality of nozzles attached to said member, a manifold removably connected with said nozzles, and suction means operatively connected with said manifold.

[Claims 6 to 15 not printed in the Gazette.]

1,196,439. SUCTION-NOZZLE BRACKET. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to Charles S. Britton, Cleveland, Ohio. Filed Nov. 20, 1914. Serial No. 873,170. (Cl. 101—111.)



1. A device of the character described comprising the combination with a movable support, a sheet conveyer revolubly mounted on said support, a member carried by said support and extending across said conveyer, a plurality of suction nozzles alined across said member and having intake openings opposed to said conveyer, and a suction manifold connected to said nozzle outlets.

2. A device of the character described comprising the combination with a movable support, a sheet conveyer mounted thereon and independently movable with respect thereto, and a suction nozzle attached to said support in operative proximity to said conveyer.

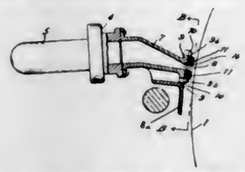
3. A device of the character described comprising the combination of a frame, a cylindrical sheet conveyer movable relatively thereto, a bracket carried by said frame and movable in unison with said conveyer, a suction nozzle supported upon said bracket in operative proximity to said conveyer, and means for inducing a suction effect in the latter.

4. A suction nozzle bracket comprising the combination with a support and means for raising and lowering such support, a cylinder mounted thereon, a suction manifold, and a series of communicating inlet nozzles attached to said support and movable in unison with said cylinder.

5. A device of the character described comprising the combination of a sheet conveyer movable as a unit, and a suction nozzle movable in unison therewith and in predetermined operative relationship thereto.

[Claims 6 to 11 not printed in the Gazette.]

1,196,440. SUCTION-NOZZLE HEATER FOR PRINTING-PRESSES. JAMES E. DOYLE, Cleveland, Ohio. Filed May 6, 1915. Serial No. 26,369. (Cl. 34—48.)



1. An appliance of the character described, comprising in combination with a sheet conveyer, a suction nozzle opposed thereto, means for establishing a suction effect through said nozzle, and a heating surface contiguous to the edge of the nozzle opening.

2. An appliance of the character described, comprising in combination a sheet conveyer, a suction nozzle opposed thereto, means for establishing a suction effect through said nozzle, and a heating element adjustably carried by the mouth of said nozzle whereby to compensate for expansion and contraction of said element.

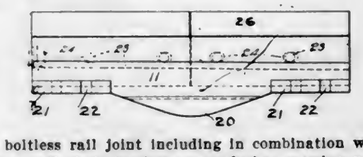
3. An appliance of the character described, comprising in combination with a sheet conveyer, a suction device having a long narrow intake opening opposed across said conveyer, means for creating a suction draft through said opening, and a heating member interposed between said device and conveyer and spaced from the latter, said member having the major portion of its exterior surface insulated to leave a long narrow radiating surface, the latter being opposed to said conveyer.

4. An appliance of the character described, comprising in combination with a sheet conveyer, a suction nozzle having a long narrow intake opening opposed to said conveyer, means for creating a suction in said nozzle, and a pair of heating elements carried by said nozzle and extending along opposite sides of said intake opening.

5. An appliance of the character described, comprising in combination with a sheet conveyer, a plurality of suction nozzles having mouths opposed thereto, a manifold connecting the outlets of said nozzles, suction means in communication with said manifold, and a heating member extending along all of said nozzle mouths and between the same and said conveyer.

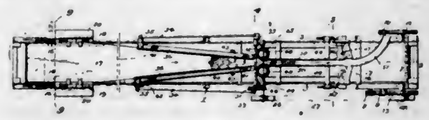
[Claims 6 to 13 not printed in the Gazette.]

1,196,441. RAIL-JOINT. ARTHUR C. ECKEL and SAMUEL R. ECKEL, Altoona, Pa. Filed Mar. 28, 1912. Serial No. 686,932. (Cl. 239—6.)



A boltless rail joint including in combination with the rails, a rail chair having an angle bar member provided with studs engaging both rails, and a rail supporting base member having a pair of longitudinally disposed stiffening web members depending from its intermediate portion, and slotted spiking flanges located at the corners of the base member, said base member also being formed at one edge with an inturned clip flange having a longitudinally tapered edge portion, said rail chair also having spaced apart lock receiving openings through the clip flange and base member, and a separate angle bar having a longitudinally tapered girder portion engaging the longitudinally tapered edge of the clip flange and adapted to flushly seat in the fishing space of the rails, said girder having a foot flange being formed with a depending lip for engaging the base flanges of the rails, said foot flange and its lip lying within and engaging the clip flange portion of the chair and having lock receiving notches spaced closer together than the locking openings in the rail chair.

1,196,442. CONVEYER. OTTO EICK, Baltimore, Md. Filed Nov. 23, 1911. Serial No. 662,031. (Cl. 193—4.)



1. In a conveying mechanism, the combination of a suitable supporting frame; a longitudinally-movable conveyer supported thereby; an endwise movable guide mechanism mounted above said conveyer in the path of objects carried thereby, engaging and guiding said objects

in a narrowing path while imparting an axial motion thereto; and means for actuating said conveyer and guide mechanism.

2. In a conveying mechanism, the combination of a suitable supporting frame; a longitudinally-movable conveyer supported thereby; a pair of guides converging in the direction of motion of said conveyer and mounted above the same in the path of objects carried thereby; a mechanism adapted to impart an axial motion to objects passing between said guides; and means for actuating said conveyer and mechanism.

3. In a conveying mechanism, the combination of a suitable supporting frame; a longitudinally-movable conveyer supported thereby and adapted to carry a plurality of objects abreast; a pair of guide bars converging in the direction of motion of said conveyer and mounted to reciprocate in the direction of their length above the conveyer in the path of the objects carried thereby; and means for actuating said conveyer and bars.

4. In a conveying mechanism, the combination of a suitable supporting frame; a longitudinally-movable conveyer supported thereby and adapted to convey a plurality of objects abreast; a pair of guide-bars converging in the direction of motion of said conveyer, and mounted to reciprocate in the direction of their length above the conveyer in the path of the objects carried thereby; a pair of oppositely-disposed gripping belts also mounted above the conveyer and adapted to receive between them and engage objects discharged from said guide bars and to maintain them in the order in which they are received from the guide-bars; and means for actuating said conveyer, guide bars and gripping belts.

5. In a conveying mechanism, the combination of a supporting frame; a longitudinally-movable conveyer carried thereby and adapted to convey a plurality of objects abreast; a pair of oppositely-disposed and converging bars located above the conveyer; and means for moving said bars endwise in opposition to each other, whereby bottles or the like placed upon the conveyer in bulk or abreast will be moved between the converging bars and by said bars placed in single file at the discharge end thereof.

[Claims 6 and 7 not printed in the Gazette.]

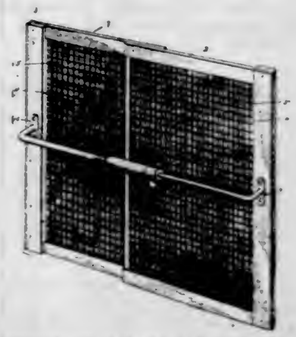
1,196,443. EXTENSION-WINDOW-SCREEN LOCKER. CLAUDE ELLIS, Springville, N. Y. Filed Sept. 1, 1915. Serial No. 48,396. (Cl. 156—38.)



The combination, in a lock for an extension window screen consisting of two sliding connected sections, of a blade adapted to fit between the frames of the two sliding sections of the window screen, with means for pivotally fastening one end of the blade to the indoor side of the frame of the screen section to be used farthest out of doors, so that the blade may swing in a vertical plane, and blocking means mounted on the other end of the blade adapted when in locking position to block the end of the frame of the screen section to be used nearest indoors.

1,196,444. COMBINATION BURGLAR-PROOF LOCKING WINDOW-SCREEN AND BABY-GATE. CLAUDE ELLIS, Springville, N. Y. Filed Sept. 1, 1915. Serial No. 48,397. (Cl. 156—38.)

1. The combination in a device adapted to forcibly extend and lock an extension window screen or baby gate consisting of two sliding connected sections of two telescoping members, a bracket on the outside end of each telescoping member with means for fastening the respective brackets to the respective upright outer rails or frame pieces of an extension window screen or baby gate, the said telescoping members being adapted to telescope and extend as the extension window screen or baby gate telescopes or extends, blocking means mounted upon male telescoping member adjustable lengthwise of same and means for securing same in place at any point on male telescoping member, adjusting and locking means mounted upon the female telescoping member and capable of endwise movement relative thereto and adapted by engaging the blocking means mounted upon the male telescoping member to forcibly extend telescoping members and lock same in adjusted position.



2. The combination in a device adapted to forcibly extend and lock an extension window screen or baby gate consisting of two sliding connected sections of two telescoping members with means for fastening the respective outside ends of the telescoping combination to the respective outside upright outer rails or frame pieces of an extension window screen or baby gate, said telescoping members being adapted to telescope and extend as the extension window screen or baby gate telescopes and extends, a lockable collar adjustably mounted upon male telescoping member, adjusting and locking means mounted upon female telescoping member capable of adjustment lengthwise thereof, consisting of a sleeve the bore of which is so threaded as to engage threads upon the outside surface of the female telescoping member at its telescoping end, said adjusting and locking means being adapted to coöperate with the lockable collar adjustably mounted upon male telescoping member for forcibly extending telescoping members and locking them in adjusted position.

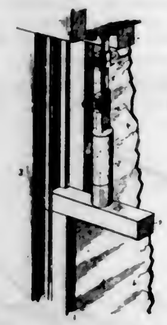
3. The combination in a device adapted to forcibly extend and lock, or convert into a baby gate, an extension window screen consisting of two connected sliding sections, of two telescoping members, with means for fastening the respective outside ends of the telescoping combination to the respective outer upright rails or frame pieces of the extension window screen, blocking means adjustably mounted upon male telescoping member, an adjusting member mounted upon the female telescoping member and forming with it a combination extensible lengthwise, said adjusting member being adapted by cooperating with the blocking means adjustably mounted on male telescoping member to forcibly extend telescoping members and lock them in adjusted position.

4. The combination in an extension window screen composed of two sliding connected sections of padding means upon the ends of the outer upright rails or frame pieces of the extension screen, two telescoping members with means for fastening the respective outside ends of the telescoping combination to the respective outside upright rails or frame pieces of the extension window screen, said telescoping members being adapted to telescope and extend as the extension window screen telescopes and extends, blocking means adjustably mounted upon male telescoping member, adjusting and locking means mounted upon the female telescoping member and capable of endwise movement relative thereto adapted, by coöperating with the blocking means adjustably mounted upon male telescoping member, to forcibly extend telescoping members and lock same in adjusted position.

5. The combination in a combination burglar proof locking window screen and baby gate composed of two sliding connected sections of means in each screen and baby gate section adapted to exclude flies and means to make same burglar proof, padding means upon the ends of the outer upright rails or frame pieces of each screen and baby gate section, two telescoping members with means for fastening the respective outside ends of the telescoping combination to the respective outside upright rails or frame pieces of the extension window screen and baby gate; said telescoping members being adapted to telescope and extend as the extension window screen and baby gate telescopes and extends, blocking means adjustably mounted upon male telescoping member, adjusting means mounted upon the female telescoping member, adjustable lengthwise thereof, adapted to coöperate with the blocking means adjustably mounted upon male telescoping member for forcibly extending and locking in adjusted position the telescoping members and the screen and baby gate sections thereto attached.

[Claims 6 and 7 not printed in the Gazette.]

1,196,445. WINDOW SCREEN AND SASH LOCKER. CLAUDE ELLIS, Springville, N. Y. Filed Sept. 7, 1915. Serial No. 49,299. (Cl. 16—18.)



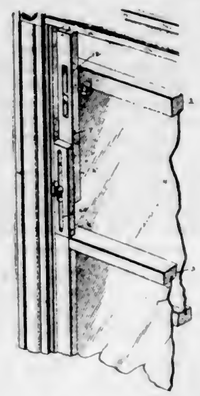
1. In a portable window screen and sash locker, the combination of a rack with a top suitable to engage the casing of a window, a metal casing closely fitting the rack carrying locking means for locking the upper window sash and adjustable up and down the rack by means of a worm laterally attached to said casing, the threads of which engage the teeth of the rack through a lateral opening in the casing, a second metal casing closely fitting the rack and possessing a base suitable to engage the top of a window sash adjustable up and down the rack beneath the first casing for the purpose of lengthening or shortening the device as a whole by means of a worm laterally attached to the said casing, the threads of which engage the teeth of the rack through a lateral opening in the casing.

2. The combination in a window screen and sash locker of a narrow, thin, straight rack, the teeth of which are set obliquely on its narrowest surface, said rack assuming a suitable form at its top for engaging the casing of an ordinary window, and having its top end protected by rubber, a metal casing closely fitting the rack and vertically adjustable up and down the rack by means of a worm laterally attached to said casing, the threads of which engage the teeth of the rack through a lateral opening in the casing, a threaded arm on the side of the casing opposite the worm, running at right angles with the smooth narrow edge of the rack when assembled in the casing, a sleeve, the inside of which is so threaded as to engage the threads of the threaded arm and forming, with the threaded arm, an adjustable means of extension for catching the under surface of the top rail of a window, a second metal casing adapted to receive a wooden base with means of fastening the same, which base is adapted to engage the top of an ordinary lower window sash, said second casing closely fitting the rack and vertically adjustable up and down the rack beneath the first casing by means of a worm laterally attached to the said casing, the threads of which engage the teeth of the rack through a lateral opening in the casing.

3. In a window screen and sash locker, the combination of a rack with a top suitable to engage the casing of a window, a metal casing closely fitting the rack carrying adjustable sash engaging means for locking the upper window sash and adjustable up and down the rack by means of a worm laterally attached to said casing, the threads of which engage the teeth of the rack through a lateral opening in the casing, a second metal casing closely fitting the rack and possessing a base suitable to engage the top of a lower window sash, adjustable up and down the rack beneath the first casing by means of a worm laterally attached to said casing, the threads of which engage the teeth of the rack through a lateral opening in the casing.

4. In a window screen and sash locker, the combination of a rack with a top suitable to engage the casing of a window, means for locking the upper sash of a window mounted on said rack, a metal casing closely fitting the rack with a base suitable to engage the top of a lower window sash, said casing being adjustable down the rack for the purpose of securing the device in place between the window casing and the lower sash by means of a worm laterally attached to said casing, the threads of which engage the teeth of the rack through a lateral opening in the casing.

1,196,446. WINDOW SCREEN AND SASH LOCKER. CLAUDE ELLIS, Springville, N. Y. Filed Sept. 10, 1915. Serial No. 49,930. (Cl. 16—18.)



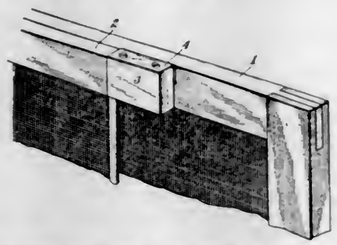
1. The combination in a window screen and sash locker of two barlike members, one with a spring and plug at its end adapted to engage the casing of the window, the other adapted at its lower end to engage the top of the window sash, with means for fastening the two broadest surfaces of the two members together at any given point, means for keeping the two members in alinement, with means mounted on the member with the spring and plug for locking the upper window sash.

2. The combination in a window screen and sash locker of two barlike members, one with a spring and plug at its end adapted to engage the casing of a window, the other adapted at its lower end to engage the top of the window sash, with means for fastening the two broadest surfaces of the two members together at any given point,

means for keeping the two members in alinement with adjustable means adjustably mounted on the member with the spring and plug for locking the upper window sash.

3. The combination in a window screen and sash fastener of two barlike members, one with a plug and spring at its end adapted to engage the casing of a window, the other adapted at its lower end to engage the top of a window sash, means for fastening the two bars together at any desired adjustment consisting of two bolts permanently affixed to the lower end of the member with the spring and plug, the shanks of both bolts passing through the other bar by means of a rectangular slot piercing the other bar and running nearly from one end of the bar to the other, one bolt serving merely as a guide, the other bolt with threads and a thumb screw adapted to engage the threads and serving to lock the two bar members together, adjustable locking means for the upper window sash adjustably mounted upon the upper bar member and adapted to engage and lock the upper window sash.

1,196,447. EXTENSION-WINDOW-SCREEN LOCKER. CLAUDE ELLIS, Springville, N. Y. Filed Sept. 22, 1915. Serial No. 52,062. (Cl. 156—38.)



1. The combination, in a lock for an extension window screen consisting of two sliding sections, of a hinge with means for fastening one of the leaves of same to the frame of the screen section to be used farthest out of doors and blocking means upon the other leaf of hinge, adapted to block the end of the frame of the screen section nearest in doors, or swing free of same, as desired.

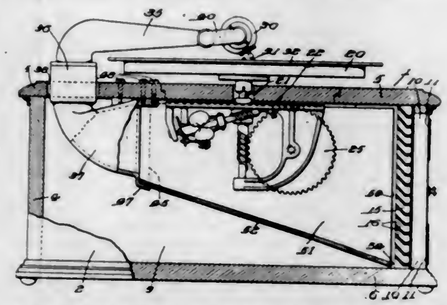
2. The combination, in a lock for an extension window screen consisting of two sliding sections, of an arm with means for pivotally fastening one end of same to the frame of the screen section to be used farthest out of doors and blocking means upon the other end of the arm, adapted to block the end of the frame of the screen section used nearest indoors, or swing free of same, as desired.

1,196,448. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Mar. 24, 1911, Serial No. 616,665. Renewed Nov. 29, 1913. Serial No. 803,857. (Cl. 274—2.)

1. The combination with a cabinet, of a hollow longitudinally tapering bracket secured at its larger end to said cabinet and having its major portion inclosed by said cabinet, and a sound box arm communicating with and entirely supported by the smaller end of said bracket, the said bracket and said sound box arm forming a sound conduit projecting freely through a wall of said cabinet.

2. A talking machine comprising a cabinet, a hollow bracket extending freely through a wall of said cabinet and having its major portion inclosed by and secured to said cabinet, and a sound box arm arranged outside of said cabinet and communicating with and entirely supported by said bracket.

3. A talking machine comprising a cabinet, a hollow bracket extending freely through a wall of said cabinet and having its major portion inclosed by and secured to said cabinet, a sound box arm arranged outside of said cabinet and communicating with and entirely supported by said bracket and sound amplifying means arranged within said cabinet and entirely supported by said bracket.

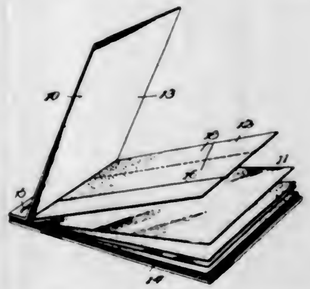


4. A talking machine comprising a cabinet, a hollow bracket secured to a wall of said cabinet and having its major portion inclosed by said cabinet and a sound box arm and sound amplifying means entirely supported by and communicating with each other through said bracket, and forming therewith a sound conduit projecting freely through said wall.

5. A talking machine comprising the combination with a cabinet, of hollow sound amplifying means extending within said cabinet and having an open side extending longitudinally of said means and arranged adjacent to, but spaced from a wall of said cabinet.

[Claims 6 to 17 not printed in the Gazette.]

1,196,449. GUMMED PAPER. HILMER N. ENHOLM, Winchester, Idaho. Filed May 19, 1915. Serial No. 29,166. (Cl. 11—19.)



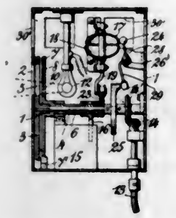
A book of seals including covers and a plurality of sheets of material all of the same shape and size bound between the covers, alternate sheets being oiled and the other sheets gummed, the gummed sheets being provided with weakened tearing lines to divide the sheets, respectively, into seals of assorted shapes or sizes.

1,196,450. INDICATING DEVICE FOR ASCERTAINING SPEED. FRIEDRICH FAIGLE, Hard, near Bregenz, Austria-Hungary. Filed Oct. 15, 1912. Serial No. 725,836. (Cl. 116—65.)

1. In a speed indicator, means to produce a succession of signals dependent upon and variable with the speed of the vehicle, and means to produce during said signals successive signals independent of the first signals and at regular intervals under all conditions of operation.

2. In a speed indicator, means for producing a series of optical signals in accordance with the speed being indicated, and means to simultaneously produce audible signals at regular intervals under all conditions of operation.

3. In a speed indicator, a casing, means therein to produce a series of optical signals at intervals proportionate to the speed to be indicated, means in said casing to produce signals at regular intervals, and a clock-work operating as the actuating means for the production of said signals at regular intervals.

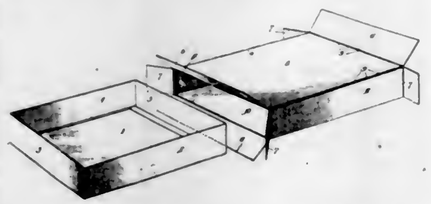


4. In a speed indicator, a casing having an opening therein, a shutter arranged to pass said opening, and mechanism to move said shutter in proportion with the speed being indicated, a clock-work in said casing and signal producing means operated by said clock-work to produce signals at regular intervals.

5. In a speed indicator in combination, a stationary casing having an opening therein, a movable member having an opening corresponding to that in the casing, said member being within the casing and coöperating therewith, a second movable member coöperating with said first movable member and casing and having two transparent color fields, a lamp adjacent the second movable member, said openings and fields arranged to come into register, means to move one of the movable members proportionate to the speed of the machine to be indicated, and a clock-work to move the other movable member.

[Claims 6 to 9 not printed in the Gazette.]

1,196,451. BOX. SIGISMUND L. FIEUX, New York, N. Y., assignor to Runkel Brothers, Inc., a Corporation of New York. Filed Feb. 18, 1916. Serial No. 79,161. (Cl. 229—9.)

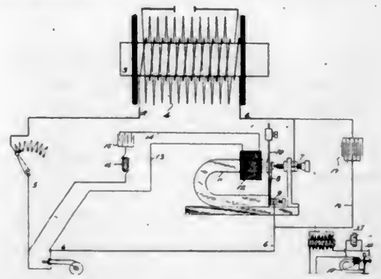


1. A box comprising an inner member having an open side, and an outer member completely enveloping the inner member and having its parts permanently connected so that access to the inner member is normally prevented, the side of the outer member that closes the open side of the inner member being separable from the body.

2. A box comprising an inner member having an open side, and an outer member completely enveloping the inner member and having its parts permanently connected so that access to the inner member is normally prevented, the material of the outer member being weakened about the perimeter of the side thereof that extends across the open side of the inner member, whereby said side of the outer member may be readily removed bodily.

3. A paper box comprising an inner member having an open side and formed from a folded blank, an outer member formed from a similar blank folded to completely envelop the inner member and having its parts permanently connected, the side of said outer member extending across the open side of the inner member being so connected with the body that it may be readily detached to permit access to the interior of the box.

1,196,452. METHOD OF PRODUCING UNIDIRECTIONAL ELECTRIC SPARKS FROM ALTERNATING CURRENT. CHARLES H. GAUNT, San Francisco, Cal. Filed May 18, 1914. Serial No. 839,281. (Cl. 175—364.)



1. The method of producing unidirectional sparks from an alternating current, which comprises passing an alternating current through the primary coil of an induction apparatus, breaking the circuit in the primary coil at or near the crest of waves of one sign, causing the self-induced current in the primary coil to charge a condenser, allowing the condenser to discharge back into the primary coil, and closing said circuit at or near the crest of waves of the opposite sign.

2. The method of producing unidirectional sparks from alternating current, which consists in initially charging the primary coil of a spark producing apparatus with unidirectional impulses of an alternating current, and combining the impulses of opposite direction with the charge of a primary condenser to demagnetize and reënergize in opposite direction the primary coil in quick succession.

3. The process of producing a high electromotive force in the secondary coil of an induction apparatus which comprises passing a current of one sign through the primary coil, interrupting the current at about the crest of the current wave, causing a condenser to be charged by the self-induction of the primary circuit when the current in the latter is interrupted, and causing the condenser to discharge through the primary coil when an electromotive force of opposite sign is present in said primary coil.

4. The process of producing a high electromotive force in the secondary coil of an induction apparatus which comprises charging the primary coil from a source of alternating current, breaking the circuit at about the crest of a current wave, causing a condenser to be charged by current due to the electromotive force of the source just subsequent to the break and by the self-induction arising in the primary circuit, and causing the condenser to discharge through the primary coil when the electromotive force therein has been reduced.

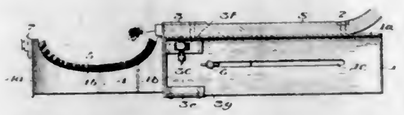
5. The process of producing a high electromotive force in the secondary coil of an induction apparatus which comprises charging the primary coil from a source of alternating current, breaking the circuit at about the crest of a current wave of one sign, causing a condenser to be charged by current due to the electromotive force of the source just subsequent to the break and by the self-induction arising in the primary circuit, and causing the condenser to discharge through the primary coil when the electromotive force from the source in the primary circuit is of the opposite sign.

[Claims 6 to 10 not printed in the Gazette.]

1,196,453. SHOE-CLEANING ATTACHMENT FOR AUTOMOBILES, &c. MATTIE R. HATFIELD, Wichita, Kans. Filed Apr. 28, 1916. Serial No. 94,152. (Cl. 21—55.)

1. A brush holding attachment for automobiles and the like comprising a casing adapted to be suspended beneath and from a vehicle step or running board, a drawer

slidably mounted in said casing and having its sides notched, a brush in the drawer between the notched portions of the sides thereof whereon shoes can be wiped by drawing same transversely across the drawer, and means to retain the drawer in the casing.



2. A brush holding attachment for automobiles and the like comprising a casing adapted to be suspended beneath and from a vehicle step or running board and having longitudinal slots in its sides and an opening in its bottom, a drawer slidably mounted in said casing and having an opening in its bottom adapted to register with the opening in the casing when the drawer is closed, a cleaning device in the drawer, and means attached to the drawer to engage said slots and retain the drawer in the casing.

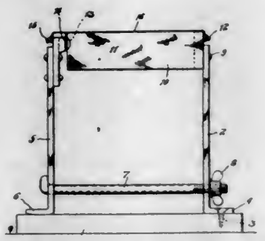
3. A brush holding attachment for automobiles and the like comprising a casing adapted to be suspended beneath and from a vehicle step or running board and having longitudinal slots in its sides and an opening in its bottom, a drawer slidably mounted in said casing and having a plate on its front end adapted to cover the front of the casing when the drawer is closed, the sides of the said drawer being notched, a brush in the drawer adjacent and extending between the notched portion of the sides thereof, and means attached to the drawer to engage said slots and retain the drawer in the casing.

4. A brush holding attachment for automobiles and the like comprising a metallic casing having hanger straps adapted to engage the front edge of the step and suspend the casing therefrom, clamping bolts attached to the casing adjacent the hangers adapted to engage the underside of the step and secure the casing in position, a slidable drawer mounted in said casing, a cleaning device in the drawer, means for limiting the withdrawal of the drawer from the casing, and means for holding the drawer in closed position.

5. A brush holding attachment for automobiles and the like comprising a metallic casing having slots in its sides, hanger straps attached to the front of the casing and adapted to engage the front edge of the step and suspend the casing therefrom, a slidable drawer mounted in said casing, a brush secured in the drawer, means attached to the drawer and engaging the slots in the casing for limiting the withdrawal of the drawer from the casing, and means for holding the drawer in closed position.

[Claims 6 and 7 not printed in the Gazette.]

1,196,454. VEGETABLE-SLICER. EMIL W. HEKENDORN, Cleveland, Ohio. Filed Apr. 3, 1916. Serial No. 88,525. (Cl. 146—7.)

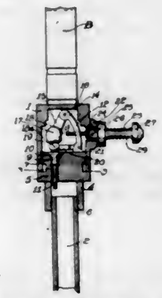


1. A vegetable slicer comprising a U-shaped frame provided along its interjacent portion with equally spaced projections, the free extremities of said frame being furthermore fashioned with sockets, a member extending across and having projecting surfaces seated in said sockets, said member having similarly spaced projections, wire lengths between said sets of projections respectively, means for tilting said member in said sockets whereby to increase the tension in said wire lengths.

2. A vegetable slicer comprising a frame including parts extending in the same general direction and also a connecting part, a member extending across the free ends of said first mentioned pair of frame parts and said ends, said ends and member having complementarily curved and opposed surfaces, a wire strung back and forth between said connecting part of the frame and said member, and means for effecting a relative action between said surfaces whereby to control the tension of said wire.

3. A vegetable slicer comprising a fixed and movable standard, a U-shaped frame including substantially parallel parts supported upon the fixed one of said standards and provided along its interjacent portion with a plurality of projections, a member carried by the movable standards, so as to extend across the free ends of said first mentioned frame parts, said member likewise provided with a plurality of correspondingly spaced projections substantially parallel wire lengths between said sets of projections respectively, and adjustable means connecting said standards for controlling the tension of said wire lengths.

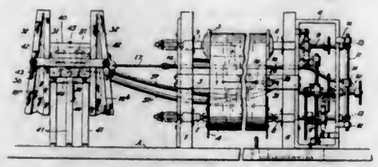
1,196,455. SAFETY GAS-VALVE. FRANK J. HESSE, West Orange, N. J. Filed June 16, 1914. Serial No. 845,415. (Cl. 67—115.)



1. A safety gas valve comprising a casing having inlet and outlet ports, a valve controlling the inlet port and adapted to be seated and held unseated by the pressure of gas, an upright support located within the casing, a locking bolt pivoted to the upper end of the support and depending downwardly therefrom, the ends of said bolt terminating into a spherical head having one side flattened, a bolt supporting and valve seating arm pivoted to the lower end of said support, the free end of which terminates into a spherical member to engage the flat face of the spherical head of the bolt when said valve is unseated, and means by which the locking bolt may be moved into an inoperative position to permit of the unseating of said valve.

2. A safety gas valve comprising a casing having inlet and outlet ports, a valve controlling the inlet port, and adapted to be seated and held unseated by the pressure of the gas, an upright support located within the casing, a locking bolt pivoted to the upper end of and depending from the support, its free end terminating into a spherical head having one side flattened, a bolt supporting and valve seating arm pivoted to the lower end of the support having a spherical head adapted to engage the upper face of the valve, means by which the locking bolt may be moved into inoperative position when the valve is unseated, the head of the valve seating arm engaging the front face of the bolt whereby upon the seating of said valve the valve seating arm will be dropped and the spherical head of the bolt will abut the upper face of the head of the valve seating arm and hold the same locked upon decrease of gas pressure.

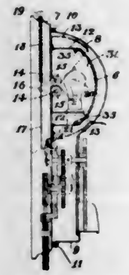
1,196,456. SHEET-GUIDING MECHANISM FOR TRACKER-BOARDS OF MUSICAL INSTRUMENTS. OTTO HIGEL, Toronto, Ontario, Canada. Filed July 22, 1915. Serial No. 41,384. (Cl. 84—161.)



1. In an apparatus of the class described, the combination with a perforated tracker-bar and sheet rolls adapted to carry a perforated music sheet, of means operative to shift one of said parts relatively to the other to insure the proper registration of the sheet perforations with those of the tracker-bar, said means including a single supporting member adjustable longitudinally of the tracker-bar, a pair of juxtaposed ports carried on said member, and a swinging lever having a valve located between said ports for controlling the same, said lever being pivoted to said adjustable member and having a part in position to be engaged by the music sheet.

2. In an apparatus of the class described, the combination with a perforated tracker-bar and sheet rolls adapted to carry a perforated music sheet, of means operative to shift one of said parts relatively to the other to insure the proper registration of the sheet perforations with those of the tracker-bar, said means including a guide rod and a rotatable screw shaft supported parallel to the tracker board, a bracket slidably connected with said guide rod and having a threaded part engaged by said screw shaft, spaced opposed ported members secured to said bracket, and a lever pivoted to said bracket and having one end located between said ported members and its other end in position to be engaged by the music sheet.

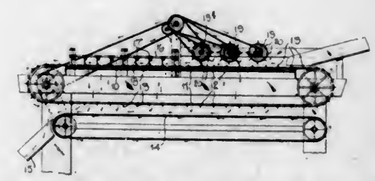
1,196,457. INDICATING DEVICE APPLICABLE TO VEHICLES. ROBERT HALLER HUTCHINSON, Liverpool, England. Filed Apr. 2, 1912. Serial No. 688,004. (Cl. 40—133.)



In an indicating device the combination with a casing provided with an opening in the front thereof, of a curved stencil plate supported in said casing and spaced from the rear of said casing, lugs formed upon the edge of said plate, supports carried by said casing, lugs formed upon said supports, rods passing through said lugs for locking said plate upon said supports, a translucent display plate fitting snugly in engagement with the rear face of said stencil plate the edges of said display plate engaging said lugs and being held against accidental displacement thereby.

1,196,458. PEANUT-PICKER. THEODORE W. JOCKISCH, Greensboro, Ala. Filed Feb. 12, 1916. Serial No. 77,989. (Cl. 130—32.)

1. In a peanut picker, the combination with a screen, a vine carrier movable over the screen, and nut detaching means coacting with the vine carrier and disposed adjacent one end of its flight, of vine retarding means mounted above the vine carrier in advance of the nut detaching means and engaging the vines on said carrier to retard their movement with the carrier.



2. In a peanut picking machine, the combination with a screen, a vine carrier moving over the screen, picking devices arranged above the vine carrier at one end thereof, of a retarding roller mounted above the vine carrier in advance of the picking devices having projecting vine engaging members, said roller rotating in the same direction as but at a slower rate of speed than the speed of movement of the vine carrier.

3. In a peanut picking mechanism of the character described, the combination with a screen, a vine carrier movable over the screen, picking devices located at one end of the vine carrier, of means for retarding the vines engaged by the carrier and distributing said vines comprising a plurality of rollers extending transversely above the path of movement of the vine carrier and in advance of the picking devices, each of said rollers having outwardly projecting spikes adapted to engage the vines, the rollers rotating in the same direction as the direction of movement of the adjacent flight of the vine carrier but at a slower rate of speed.

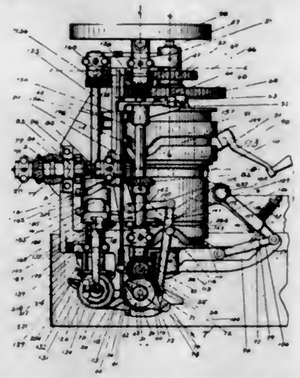
4. In a peanut picking mechanism of the character described, the combination with a screen, a vine carrier movable over the screen, picking devices located at one end of the vine carrier, of means for retarding the vines engaged by the carrier and distributing said vines, comprising a plurality of rollers extending transversely above the path of movement of the vine carrier and in advance of the picking devices, each of said rollers having outwardly projecting spikes adapted to engage the vines, the rollers rotating in the same direction as the direction of movement of the adjacent flight of the vine carrier but at a slower rate of speed, said rollers rotating at relatively different speeds.

5. In a peanut picking mechanism of the character described, the combination with a screen, a vine carrier movable over the screen, picking devices located at one end of the vine carrier, of means for retarding the vines engaged by the carrier and distributing said vines, comprising a plurality of rollers extending transversely above the path of movement of the vine carrier and in advance of the picking devices, each of said rollers having outwardly projecting spikes adapted to engage the vines, the rollers rotating in the same direction as the direction of movement of the adjacent flight of the vine carrier but at a slower rate of speed, the first one of said rollers rotating at a relatively high speed, the succeeding rollers rotating at progressively lower speeds, all of said rollers having a speed of movement less than that of the carrier.

1,196,459. BAG CLOSING AND TYING MACHINE. JAMES JESSEN, Minneapolis, Minn., assignor to Henry O'B. Harding, Minneapolis, Minn. Filed Apr. 13, 1915. Serial No. 21,020. (Cl. 83—26.)

1. A tying machine comprising means for holding the object to be tied and knot-forming mechanism including a hook spaced from the object, means movable about said object and hook in a path which causes said means to approach and recede from the same for laying loops of cord about the object and in the hook, means for releasing the loops from the hook, and means for holding the cord so that the cord-laying means will take up the slack of said

loops and draw the same tight and hard as it moves away from the object.



2. A tying machine comprising means for holding the object to be tied, a cord-laying finger movable about the object in a circle having its center entirely outside the object and adapted to lay loops of cord around said object, means for successively crossing said loops as laid to form a knot, and means for applying tension to the cord as the finger moves away from the object whereby said crossed loops are drawn tight and hard and formed into a knot.

3. A tying machine comprising means for holding the object to be tied and knot-forming mechanism including a hook spaced from the object, means movable about said object and hook in a path which causes said means to approach and recede from the same for laying loops of cord about the object and in the hook, means for successively releasing said loops from the hook and crossing the same as laid to form a knot, and means for holding the cord so that the cord-laying means will take up the slack of said loops as it moves away from the object and form said loops into a tight hard knot.

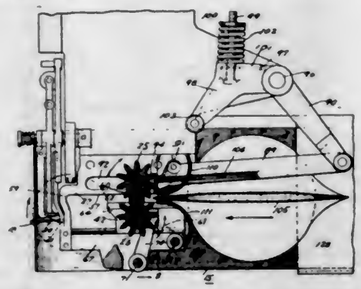
4. A machine for tying sacks comprising a plane-surfaced holding plate and means for compacting and holding the compacted neck of the sack with a portion extended above said plane surface, a cord supply, a cord-laying finger movable in a circle eccentric to the center of said compacted neck and adapted to lay the cord from said supply about said neck upon the surface, means for gripping and holding the cord between the supply and the finger as the finger moves away from the compacted neck to cause said finger to draw the cord tight about said neck, and means adapted to extend above said plane surface and movable relative thereto for successively crossing loops of the cord as they are laid to form a knot.

5. A machine for tying sacks comprising means for compacting and holding compacted the mouth of the sack so that a portion thereof extends outside of the compacting means, knot-forming mechanism including a hook spaced from said compacted mouth, a cord-laying finger mounted to move about said sack mouth and hook in a circle having its center entirely outside of said compacted mouth and at a point farther from the hook than from the compacted mouth, means for operating said knot-forming mechanism to successively release the loops from the hook and form the knot, and means for holding the cord as the finger moves away from the compacted mouth whereby said loops and knot are drawn tight and hard.

[Claims 6 to 23 not printed in the Gazette.]

1,196,460. BAG CLOSING AND TYING MACHINE. JAMES JESSEN, Minneapolis, Minn., assignor to Henry O'B. Harding, Minneapolis, Minn. Filed Feb. 25, 1916. Serial No. 80,389. (Cl. 83—26.)

1. A machine for operating upon sacks comprising means for receiving the mouth of a sack including a fixed member and a movable member positioned in a common plane and spaced from one another so as to form a passageway, means for moving the movable member to prolong the parallel walled passageway, and means controlled by movement of the sack mouth for rendering said moving means operative.



2. A machine for operating upon sacks comprising sack-mouth feeding means, fixed and movable plates spaced from one another in a common plane to form a passageway through which the sack is fed, means controlled by movement of the sack through the passageway for moving the movable plate to extend said passageway, and means thereafter for restoring the movable plate to initial position.

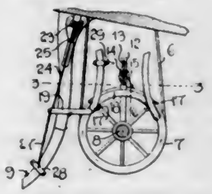
3. A machine for operating upon sacks comprising a plate having a wall extending to a tying head, a movable plate having a wall parallel with and spaced from said first-named wall and normally extending some distance short of the tying head, means for feeding the sack mouth, and means set in operation after the beginning of feed of the sack for moving the movable plate to the tying head so as to complete the passageway thereto.

4. A machine for operating upon sacks comprising sack-mouth feeding means, a fixed plate, a movable plate shorter than the fixed plate and spaced therefrom to form a passageway along which the sack mouth is fed, means holding the movable plate in a rearward position, means tending to move the movable plate quickly into its forward position, and means for releasing said holding means to permit such quick movement.

5. A machine for operating upon sacks comprising sack-mouth feeding means, a fixed plate, a movable plate shorter than the fixed plate and spaced therefrom to form a passageway along which the sack mouth is fed, means holding the movable plate in a rearward position, means tending to move the movable plate quickly into its forward position, and means extending across the passageway and actuated by movement of the sack therethrough for releasing the holding means to permit such quick movement.

[Claims 6 to 26 not printed in the Gazette.]

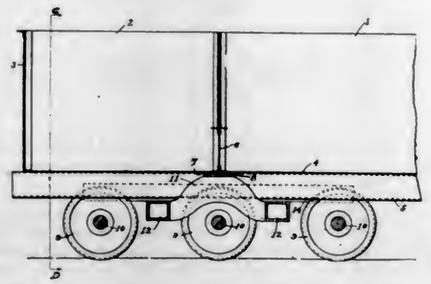
1,196,461. STARTING DEVICE FOR SEWING-MACHINES. OSKAR E. JOHNSON, Alta, Iowa. Filed Apr. 20, 1916. Serial No. 92,495. (Cl. 74—54.)



1. In a starting device for sewing machines, the combination of a fly wheel and shaft, of an oscillatable standard mounted on the fly wheel shaft, means adjustably mounted upon the upper end of the standard to frictionally engage upon the periphery of the fly wheel, a slidably mounted bar eccentrically disposed with respect to the fly wheel, means for clamping the standard to said bar, and manually operable means to actuate said slide bar and oscillate the standard to impart a rotative movement in one direction to the fly wheel.

2. In a starting device for sewing machines, the combination of a fly wheel and shaft, of an oscillatable standard mounted on the fly wheel shaft, means adjustably mounted upon the upper end of the standard to frictionally engage upon the periphery of the fly wheel, a spring-held, slidably mounted bar disposed in concentric relation to the fly wheel, means for clamping the standard upon one side of said bar, a cable connected to one end of the bar, and a manually operable element to which the other end of the cable is connected and whereby said bar may be actuated against the action of the holding spring to oscillate the standard and impart a rotative movement to the fly wheel in one direction.

1,196,462. RAILWAY-CAR. BYERS W. KADEL and JOHN A. PILCHER, Roanoke, Va. Filed Jan. 17, 1916. Serial No. 72,394. (Cl. 105—244.)



1. A railway car having a pair of longitudinally disposed center sills located in spaced relationship with each other transversely of the car, the said car having further a supporting truck at each end and these trucks each having a bolster or load supporting member disposed longitudinally of the car and within the space between the said center sills and having means on the same for receiving the load from the car body.

2. A railway car having a pair of longitudinally disposed center sills located in spaced relationship with each other transversely of the car, the said car having further a supporting truck at each end, these trucks comprising a plurality of wheels and axles and load supporting and equalizing means, the said load supporting means embodying a longitudinally extending beam member which is arched over the middle one of the said truck axles and disposed within the space between the said center sills.

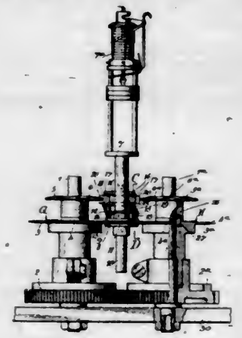
3. A railway car having a body with a floor, said car being provided with a pair of longitudinally disposed center sills located in spaced relationship with each other transversely of the car and beneath the car floor, the said car being provided further with a supporting truck at each end and these trucks each embodying a longitudinally disposed load supporting member having a center bearing or load receiving plate thereon, said load supporting member being disposed in the space between the said center sills, and a center bearing plate on each end of the car body between the said center sills and immediately beneath the said car floor, the center bearing plates on car body and trucks being adapted to coöperate with each other to form supporting points for the said car body on its trucks.

4. A railway car having a body comprising side and end walls and a floor, said car being provided with a pair of longitudinally disposed center sills located in spaced relationship with each other transversely of the car and beneath the car floor, a single transverse body bolster at each end of the said car body extending from side wall to side wall and disposed over the said center sills, above the car floor and within the cavity of the car body, the said car being provided further with a supporting truck at each end and these trucks each embodying a longitudinally disposed load supporting member having a center bearing or load receiving plate thereon, said load supporting member being disposed in the space between the said center sills, and a center bearing plate on each end of the car body between the said center sills and immediately beneath the said transverse body bolster, the center bearing plates on car body and trucks being adapted to coöperate with each other to form supporting points for the said car body on its trucks.

5. A railway car having a body with a floor, said car being provided with a pair of longitudinally disposed center sills located in spaced relationship with each other transversely of the car and beneath the car floor, the said car being provided further with a supporting truck at each end and these trucks each embodying a longitudinally disposed load-supporting member having means on the same for receiving the load from the car body, said load supporting member being disposed in the space between the said center sills, and means on the car body adapted to rest on the said load-supporting member of the truck and coöperate therewith to form load-supporting points and truck-swiveling means.

[Claims 6 to 10 not printed in the Gazette.]

1,196,463. PLAITING AND BOBBIN MACHINE. JOHANN KRENMAYR, Rorschacherberg, Switzerland, assignor to the Firm of Henry Levy, Rorschach, Switzerland. Filed June 29, 1914. Serial No. 847,869. (Cl. 28—4.)



1. In a braiding machine, the combination with stationary spindles mounted in a suitable base, drivers rotatable on said spindles having coupling perforations and notched peripheries; of carriers arranged to be held against rotation in opposed notches of adjacent drivers, cam disks movable in unison with said drivers, a coupling on each carrier including a pair of vertically movable coupling pins and a sliding element actuated by said cam disks to control the alternate movement of said pins, lugs on the ends of said sliding member for engagement by said cam disks and arranged to one side of a plane passing the axes of two spindles and their coöperating carrier.

2. In a braiding machine, the combination with stationary spindles mounted in a suitable base, of drivers rotatably mounted on said spindles and having angular recesses in their peripheries and coupling holes adjacent the spindles, means to rotate the drivers, carriers having portions rectangular in cross section arranged to be engaged by opposing recesses in said drivers, cam disks movable in unison with said drivers, a coupling mechanism on each spindle comprising a horizontally slidable member, a pair of pins vertically movable alternately out of the coupling holes by said member, lugs on the latter arranged 180° apart for engagement by said cam disks and arranged to one side of a plane passing the axes of two spindles and their coöperating carrier.

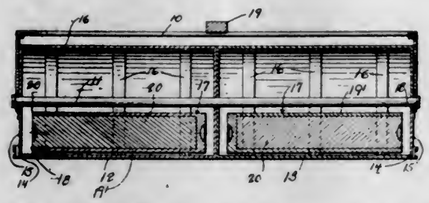
3. In a braiding machine, the combination of stationary spindles mounted on a suitable base, drivers rotatable on the spindles, means for rotating the spindles, spool carriers each having a pair of pins for coupling the carriers to the drivers, a horizontally sliding actuator for said pairs of pins and disks rigidly connected with the drivers, having a plurality of actuating teeth for horizontally sliding said actuator.

4. In a braiding machine, a plurality of spindles mounted on a suitable base, drivers rotatable on said spindles, means for rotating the drivers, spool carriers, a coupling mechanism for connecting the carriers to the drivers, a horizontally slidable controller therefor, and a plurality of teeth distributed over the circumference of each spindle for horizontally moving the coupling mechanism.

5. In a braiding machine, a plurality of spindles mounted on a suitable base, drivers rotatable on said spindles, means for rotating the drivers, spool carriers, a coupling mechanism for connecting the carriers to the drivers, a horizontally slidable controller therefor, disks having a plurality of actuating teeth for horizontally sliding the coupling mechanism, said disks being adjustably and reversibly connected to the drivers.

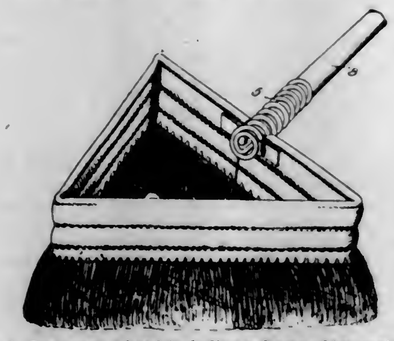
[Claims 6 to 10 not printed in the Gazette.]

1,196,464. LAND-ROLLER AND CLOD-CRUSHER. LEE R. LEE, Zalma, Mo. Filed Nov. 2, 1915. Serial No. 59,181. (Cl. 55—48.)



A land roller and clod crusher comprising a frame, an axle carried by the frame, a hollow drum rotatably mounted on the axle and having an opening in one end, a hinged door for closing said opening, a plurality of endless bands mounted on the inner wall of the drum, and a weighted roller disposed within the drum and movable on said bands, said roller being formed of separate sections one of which is provided with a longitudinal recess and the other formed solid and detachably engaged in said recess.

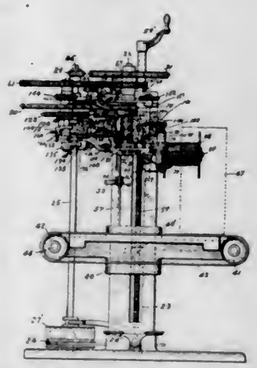
1,196,465. MOP. ALTA MAY LESLIE and JOHN C. SINGLETON, Chicago, Ill., assignors to Dearborn Duster Company, Chicago, Ill., a Corporation. Filed June 3, 1913. Serial No. 771,540. (Cl. 15—13.)



1. In a mop, a head including a frame of bar-metal having free ends, and a coiled wire handle socket having its coils engaged by the ends of the frame member.

2. In a mop head, a coiled wire handle socket, a frame of bar metal, the ends of the bar comprising the frame being bent to hook form substantially at the middle of the back of the frame and being engaged with the coils of the handle socket, and a mop head supported upon the frame.

1,196,466. MACHINE FOR CRIMPING AND TYING SACKS. FRANK O. LINDGREN, Minneapolis, Minn., assignor, by direct and mesne assignments, to John Washburn, Minneapolis, Minn. Filed July 7, 1913. Serial No. 777,670. (Cl. 83—26.)



1. A machine for tying sacks comprising a platform, means on the platform for feeding sacks through the machine, constantly-operative means for gathering the mouth of the sack into a compact bundle while the sack is being fed, normally-inoperative cord-laying and knotting means, and means actuated by movement of the sack on said platform to render said cord-laying and knotting devices operative.

2. A machine for tying sacks comprising a platform, means on the platform for feeding sacks through the machine, constantly-operative means for gathering the mouth of the sack into a compact bundle while the sack is being fed, normally-inoperative cord-laying and knotting means, means actuated by movement of the sack on said platform to render said cord-laying and knotting devices operative, and means for terminating the operation of said cord-laying and knotting devices after the same have been operated a sufficient time to form a complete knot.

3. A machine for tying sacks comprising constantly-operating means for gathering the mouth of the sack into a compact bundle, means for moving the sack while the mouth thereof is being gathered, normally-inoperative means for looping a cord about said compacted mouth and forming the same into a knot, and means controlled by movement of the sack for rendering said cord-laying and knotting means operative.

4. A machine for tying sacks comprising a platform, devices in fixed position for operating upon the mouth of the sack to close and tie the same, means to adjust the vertical height of the platform to bring the mouths of different sized sacks into position to be operated upon by said closing and tying devices, an endless belt on said platform for feeding the sacks along the same, and means to drive said endless belt in any position of adjustment of the platform.

5. A machine for tying sacks comprising means for gathering the mouth of the sack into a compact bundle, means for thereafter laying a plurality of loops of cord about said compacted mouth, means for successively crossing the loop first formed over the strands of a succeeding loop to provide a knot, means for cutting the cord and releasing the ends thereof, and means for drawing the loops and knot formed tight and hard.

[Claims 6 to 17 not printed in the Gazette.]

1,196,467. FLUE-CLEANER. ELLIS E. LOWELL, Woodstock Valley, Conn. Filed May 3, 1916. Serial No. 95,066. (Cl. 83—64.)



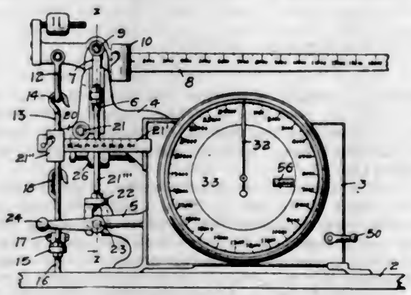
1. The combination, in a flue cleaner, with a frame comprising head blocks, and tie-rods rigidly attached at their ends to opposite sides of said blocks, laterally of the cleaner, such sides being out of line with each other, longitudinally of the cleaner, of scrapers attached to the sides of said blocks that are between the sides to which said tie-rods are attached.

2. The combination, in a flue cleaner, with a frame comprising head blocks, and tie-rods rigidly attached at their ends to said blocks, of a right- and left-hand screw-threaded spindle journaled in said blocks, resilient slotted scrapers attached to said blocks, collars mounted on said screw-threaded portions of said spindle, said collars being engaged by and in sliding relation to said tie-rods, and headed members passing through the slots in said scrapers into said collars.

3. The combination, in a flue cleaner, with a frame comprising head blocks, and tie-rods rigidly attached at their ends to said blocks, of a right- and left-hand screw-threaded spindle journaled in said blocks, resilient slotted scrapers having segmental scraping edges, said scrapers being attached to said blocks and arranged with said scraping edges in two planes spaced apart and approximately at right-angles to the axis of the cleaner, collars mounted on said screw-threaded portions of said spindle, said collars being engaged by and in sliding relation to said tie-rods, headed members passing through the slots in said scrapers into said collars, a brush on said spindle between said planes, said tie-rods passing through said brush, and means to hold said brush against endwise movement on said spindle.

4. The combination, in a flue cleaner, with a frame comprising head blocks, and tie-rods rigidly attached at their ends to opposite sides of said blocks, laterally of the cleaner, such sides being out of line with each other, longitudinally of the cleaner, of two pairs of resilient scrapers having segmental scraping edges, such scrapers being attached to the sides of said blocks that are between those to which said tie-rods are attached, and arranged with said scraping edges in two planes spaced apart and approximately at right-angles to the axis of the cleaner, and expanding and contracting means, carried by said frame, for said scrapers.

1,196,468. SCALE. ROBERT MCFARLANE, Minneapolis, Minn., assignor to McFarlane Manufacturing Company, St. Paul, Minn., a Corporation. Filed Aug. 13, 1912. Serial No. 714,789. (Cl. 73—29.)



1. A weighing scale comprising a scale beam having a poise, a rod connected with said beam, an auxiliary beam pivotally supported independently of said first named beam and also connected with said rod, a dial and indicator hand therefor operatively connected with said auxiliary beam, a vertically movable slide whereon said scale beam is pivoted, a plate, rods connecting said slide with said plate, a rock shaft and operating lever therefor, and a cam mounted on said rock shaft and engaging said plate to raise said slide and the pivots of said scale beam and shift the load from one beam to the other.

2. A weighing scale comprising a scale beam having a poise, a rod connected with said beam, an auxiliary beam pivotally supported independently of said first named beam and also connected with said rod, a graduated dial and indicator hand therefor, a rock shaft, relatively movable disks mounted on said rock shaft, a sector-shaped plate carried by one of said disks, a strap connecting said sector-shaped plate with said auxiliary beam, and a quadrant mounted on said rock shaft and geared to said indicator hand.

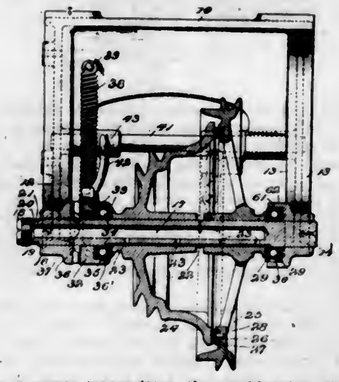
3. In a scale, a pivoted beam, a scale rod therefor, a dial and indicator hand, a rock shaft, a disk secured on said shaft, a second disk having an edgewise adjustment on said first named disk, a sector-shaped plate carried by said second disk, a strap connecting said plate with said auxiliary beam, and a quadrant mounted on said rock shaft and operatively connected with said indicator hand.

4. The combination, with a weighing beam and a scale rod, of an indicator hand, a dial, a rocking disk having slots therein, a second disk adjustable in said slots edgewise of said first named disk, a strap connecting said adjustable disk with said beam, and means connecting said disk with said indicator hand.

5. In a scale, a beam, a scale rod therefor, a dial and indicator hand, a rock shaft, a counter balance thereon, a disk secured on said shaft, a second disk slidably mounted on the face of said first named disk, a sector-shaped plate secured to said second disk and adjustable therewith, a strap connecting said sector-shaped plate with said beam, and means operatively connecting said rock shaft with said indicator hand.

[Claims 6 to 11 not printed in the Gazette.]

1,196,469. POWER-TRANSMITTER. ARTHUR A. MERRITT, Worcester, Mass., assignor to Wilcox & Gibbs Sewing Machine Co., New York, N. Y., a Corporation of New York. Filed Aug. 26, 1912. Serial No. 717,182. (Cl. 74—46.)

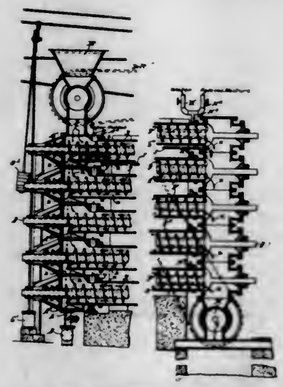


1. In a power transmitter, the combination of a driven member; a driving member; a shaft supporting both members; a starting lever rotatable about the shaft to shift one member along the shaft into engagement with the other member; a rock-shaft in addition to the first-named shaft; a brake-member carried by the rock-shaft and adapted by rotation thereof to be engaged with the driven member; and an arm extending from the rock-shaft to the starting lever and adapted upon actuation of the latter to rock the shaft and its brake-member.

2. In a power transmitter, the combination of a driven member; a driving member; a shaft supporting both members; a starting lever rotatable about the shaft to shift one member along the shaft into engagement with the other member; a rock-shaft in addition to the first-named shaft; a brake-member carried by the rock-shaft and adapted by rotation thereof to be engaged with the driven member; an arm extending from the rock-shaft to the starting lever and adapted upon actuation of the latter to rock the shaft and its brake-member; and a spring tending to hold said starting lever in position to permit disengagement of the driving and driven members and apply the brake-member to the driven member.

3. In a power transmitter, the combination of a driven member; a driving member; a shaft supporting both members; a starting lever rotatable about the shaft in a plane approximately at right angles thereto and acting to shift one of said members along the shaft into engagement with the other member; a rock-shaft disposed approximately parallel to the first-named shaft; a brake-member carried by the rock-shaft and adapted by rotation thereof to be engaged with the driven member; an arm extending from the rock shaft to the starting lever and adapted upon actuation of the latter to rock the shaft and its brake-member.

1,196,470. SEPARATION OF VOLATILE PRODUCTS FROM SOLID CARBONACEOUS MATERIAL. LEON DEL MONTE Y ALDAMA, Adelphi, London, England, assignor to Oil & Carbon Products Limited, Adelphi, England. Filed Sept. 21, 1914. Serial No. 862,785. (Cl. 196—21.)



1. The process for separating condensable volatile products from solid carbonaceous material distilled in a retort, which consists in heating the material to a graduated temperature, leading the distilled vapors that arise from the material at any one of the number of regions differing in temperature into contact with relatively cooler portions of the material in its solid or partly vaporized state in the retort, and removing the liquefied volatile matter condensed by the said cooler portions of the material without permitting it to return to hotter regions of the retort.

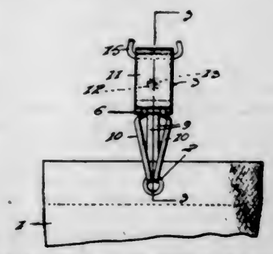
2. The process for separating condensable volatile products from solid carbonaceous material distilled in an inclined retort, which consists in heating the material to a graduated temperature, leading the exudates that are educed and the distilled vapors that arise from the material at any one of a number of regions differing in temperature into contact with relatively cooler portions of the material in its solid or partly vaporized state in the retort and removing the liquefied volatile matter condensed by the said cooler portions of the material without permitting it to return to the hotter regions of the retort.

3. The process for separating condensable volatile products from solid carbonaceous material distilled in an inclined retort, which consists in feeding the material through the retort from the lower end, heating it to an increasing temperature as it rises, leading the distilled vapors that arise from the material at any one of a number of regions differing in temperature into contact with relatively cooler portions of the material in the retort and removing the liquefied volatile matter condensed by the said cooler portions of the material without permitting it to return to hotter regions of the retort.

4. The process for separating condensable volatile products from solid carbonaceous material distilled in an inclined retort, which consists in feeding the material through the retort from the lower end, heating it under non-oxidizing conditions to an increasing temperature as it rises, leading the distilled vapors that arise from the material at any one of a number of regions differing in temperature into contact with relatively cooler portions of the material in the retort and removing the liquefied volatile matter condensed by the said cooler portions of the material without permitting it to return to hotter regions of the retort.

5. The process for separating condensable volatile products from solid carbonaceous material distilled in an inclined retort, which consists in heating the material to a progressively increasing temperature toward the higher end of the retort, leading the distilled vapors that arise from the material toward the lower end of the retort and into contact with progressively cooler material and removing from the lower end of the retort the liquefied volatile matter condensed by the said cooler material and flowing down the inclined retort.

1,196,471. STOCKING-SUPPORTER. ELIZABETH A. MORGAN, Omemee, N. D. Filed June 30, 1915. Serial No. 37,292. (Cl. 241—6.)

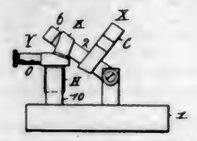


A stocking supporter comprising a tab, doubled upon itself and stitched adjacent its upper end forming a pair of members the lower end of one member being open, a hook connected to the lower edge of one of the layers of one of the tab members, said hook having a flat bill and an attaching member, said member being flat curved and the bill of the hook lying parallel with the tab portion to which it is secured, a loop connected to the rear of the hook and its free end adapted to be passed through an eyelet of a stocking, the said loop being engaged over said hook for supporting the same, and a ball and socket fastening on the two members of the tab connecting them together, substantially as set forth.

1,196,472. METER-TESTING DEVICE. THOMAS E. MURRAY, JR., and FRANK V. MAGALHAES, New York, N. Y., assignors to Thomas E. Murray, New York, N. Y. Filed Nov. 17, 1915. Serial No. 61,896. (Cl. 175—183.)

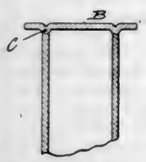
1. In combination with line conductors, a meter and a service switch of the type set forth, a separable device cooperating with the meter terminals for connecting electrical testing apparatus in circuit with the meter, a separable device carried by the movable member of said switch for shunting the load around the meter, and contacts on said first-named device coöperating with the movable member of said switch to establish circuit through said meter and said testing apparatus.

2. In combination with line conductors, a meter and a service switch of the type set forth, two gang plugs, one of said plugs coöperating with the meter terminals to connect electrical testing apparatus in circuit with said



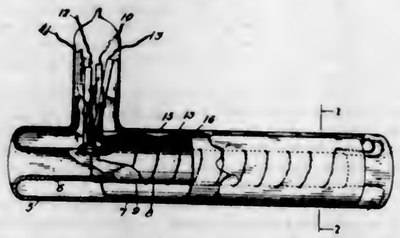
meter, the other plug coöperating with and carried by the switch levers to shunt the load around said meter, and contacts on said first-named plug coöperating with said switch levers to establish circuit through said meter and said testing apparatus.

1,196,473. ELECTRICAL WELDING. THOMAS E. MURRAY, New York, N. Y. Original application filed Feb. 18, 1916, Serial No. 79,050. Divided and this application filed June 28, 1916. Serial No. 106,319. (Cl. 219—5.)



The method of butt-welding a tube to a plate, which consists in forming on said plate a circular rib registering with the extremity of said tube, placing the end of said tube in contact with said rib, and causing a welding current to pass through the joint, whereby said rib is melted to provide metal for uniting said tube and said plate.

1,196,474. VACUUM-TUBE DEVICE. ALEXANDER MCLEAN NICOLSON, Tarrytown, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Oct. 27, 1914. Serial No. 868,840. (Cl. 250—27.)



1. In a thermionic device of the audion type, a containing vessel having opposing walls, a pair of separated electrodes comprising conducting coatings on the inner surfaces of said walls and conforming thereto, and means for cooling the outer surfaces of said walls.

2. In a thermionic device of the audion type, an evacuated vessel having opposing walls, a pair of separated electrodes comprising conducting coatings of uniform thickness on the inner surfaces of said walls, and means for cooling said walls.

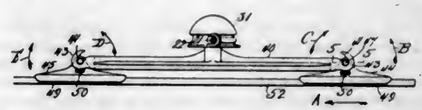
3. In a thermionic device of the audion type, a pair of concentrically arranged electrodes, a containing vessel having inner and outer concentrically arranged walls closely adjacent said electrodes, and cooling means for the walls of said vessel.

4. In a thermionic device of the audion type, a vessel comprising concentrically arranged walls connected together at both ends, output and input electrodes located closely adjacent the inner faces of said walls, and a cathode located between said electrodes.

5. In a thermionic device of the audion type the combination of a vessel comprising concentric cylindrical walls closed at each end between said walls and open within the inner tube, a cylindrical input electrode surrounding and closely adjacent the inner cylindrical wall of said vessel, a cylindrical output electrode within and closely adjacent the outer cylindrical wall thereof, and a cathode between said electrodes.

[Claim 6 not printed in the Gazette.]

1,196,475. TROLLEY-WIRE SUPPORT. EMIL W. NITZSCHE, Newark, N. J. Filed Dec. 11, 1914. Serial No. 876,609. (Cl. 191—42.)



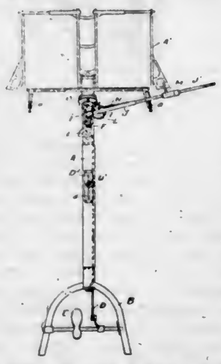
1. In a support of the character described the combination of a bar and carriers pivoted at the ends of said bar, the said carriers having stops coacting with said bar.

2. In a support of the character described the combination of a bar with hook ends and carriers pivoted to said hook ends, the said carriers having stops coacting with said hook ends.

3. In a support of the character described the combination of a bar with bifurcated hook ends having outer curved surfaces, a carrier for a trolley wire pivoted in each hook end and having stops extending from its sides that coact with the outer curved surfaces of the hook ends.

4. In a support of the character described the combination of a bar with bifurcated hook ends having curved bearing surfaces and curved outer surfaces, a carrier for a trolley wire for each hook end and having pivots extending from the sides thereof engaging the curved bearing surfaces of the hook ends and having stops extending from its sides that coact with the said outer curved surfaces of the hook ends.

1,196,476. LEAF-TURNING DEVICE. OLOF WILLIAM OLSON, Jersey City, N. J., assignor of one-half to August W. Anderson, New York, N. Y. Filed Oct. 19, 1915. Serial No. 56,800. (Cl. 84—17.)



1. In a device of the class described, a telescopic arm, means to support and actuate the same to pass around its pivot to turn a leaf over, and means to cause the said arm to assume its original position and to change its length during the said last movement.

2. In a device of the class described, a pivoted arm, means to support and actuate the same to pass under a

notch at one side of the leaf of a book, means to move the said arm longitudinally and around its pivot to turn the leaf over, and means to cause the said arm to assume its normal position again and to change the length thereof.

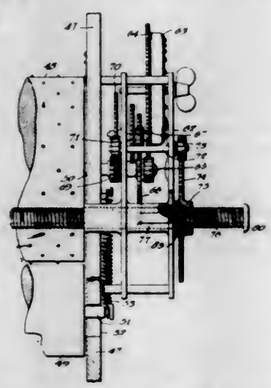
3. In a device of the class described, an arm having a leaf engaging device, means to support and actuate the arm and the leaf engaging device in a position that the latter always points upwardly toward the center of a book under a notch at one side thereof, and means to move the arm in one direction to turn the leaf over.

4. In a device of the class described, an arm having an engaging device to pass under a notched leaf, means to support and actuate the arm and engaging device in a position that the latter always points upwardly toward the center of a book, means to move the arm in one direction to turn the leaf over, means to reverse the movement of the arm, and means to cause the arm to assume its original position but with the engaging device at a different distance from its axis.

5. In a device of the class described, a telescopic arm, means to support and actuate the same to pass under alternate leaves of a book, means to move the arm in one direction to turn a leaf over, a device carried by the said arm and attached to the outer section of the same to control the length of the latter, means to move the arm in an opposite direction, and means to engage the said device when the arm is moved in one direction and to be clear of the same when the arm is moved in the opposite direction.

[Claims 6 to 8 not printed in the Gazette.]

1,196,477. ADJUSTABLE STOP MECHANISM. LEE M. PAGE, Samson, Ala. Original application filed Jan. 10, 1914, Serial No. 811,323. Divided and this application filed Oct. 4, 1915. Serial No. 53,953. (Cl. 74—46.)



1. The combination with a mechanism to be stopped, of a stop mechanism therefor comprising a screw, a member in threaded engagement therewith, one of said last-named parts being held against longitudinal movement and being operatively connected with and rotated by said first-named mechanism, and the other of said parts being held against rotation, and means for limiting the relative longitudinal movement of said screw and member, whereby the rotation of said rotated part and the movement of the mechanism connected therewith are stopped.

2. The combination with a mechanism to be stopped, of a stop mechanism therefor comprising a member operatively connected with and rotated by said first-named mechanism, an angularly fixed but longitudinally movable screw having threaded engagement with said member, and means for limiting the longitudinal movement of said screw, whereby the rotation of said member and the movement of the mechanism connected therewith are stopped.

3. The combination with a mechanism to be stopped, of a stop mechanism therefor comprising a screw, a member in threaded engagement therewith, one of said last-named parts being held against longitudinal movement and being operatively connected with and rotated by said first-named mechanism, and the other of said parts being held against rotation, said screw and member being disengageable to permit initial relative adjustment thereof, means for indicating said adjustment, and means for limiting the relative longitudinal movement of said screw and member, whereby the rotation of said rotated part and the movement of said mechanism connected therewith are stopped.

4. The combination with a mechanism to be stopped, of a stop mechanism therefor comprising a frame, a member mounted to rotate on said frame but held against axial movement thereon, said member being operatively connected with and rotated by said first-named mechanism, a sleeve on said frame having an internal spline, a screw in said sleeve having a longitudinal groove to receive said spline, said screw being in threaded engagement with said rotated member so as to be longitudinally moved when said member is rotated, said screw and member being disengageable to permit initial relative adjustment thereof, and said screw having within said groove a scale to indicate said adjustment, and means for limiting the longitudinal movement of said screw.

5. In a stop mechanism, a split gear having an internally threaded hub, a longitudinally movable screw passing through said hub and coöperating with the threads thereof, means for clamping the parts of said gear in position on said screw, and means for limiting the longitudinal movement of said screw.

[Claims 6 and 7 not printed in the Gazette.]

1,196,478. TOY. HENRY J. PAIN, New York, N. Y. Filed Apr. 6, 1916. Serial No. 89,352. (Cl. 46—37.)



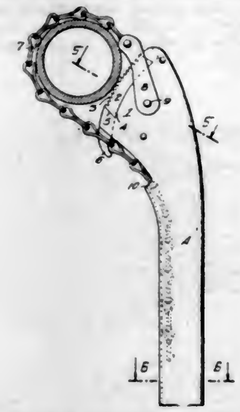
1. As a new article of manufacture, a toy comprising a sheet of suitable material having armament pictured on one surface thereof and provided with an aperture representing the mouth of a gun for receiving a toy fuse so constructed that when ignited it emits a series of intermittent flashes of light.

2. As a new article of manufacture, a toy comprising a sheet of suitable material having a battleship represented on the obverse side thereof and provided with apertures to represent the mouths of the guns of the ship each adapted to receive a toy fuse which when ignited emits the series of intermittent flashes of light.

3. As a new article of manufacture, a toy comprising a sheet of suitable material having a battleship represented on the obverse side thereof and provided with apertures to represent the mouths of the guns of the ship each adapted to receive a toy fuse which when ignited emits the series of intermittent flashes of light, and means for supporting the sheet in position for use.

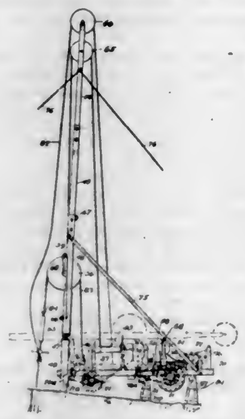
1,196,479. CHAIN WRENCH. EUGENE PHELPS, Pitchfork, Wyo. Filed Apr. 16, 1915. Serial No. 21,786. (Cl. 81—68.)

1. A chain wrench comprising a handle having at one end an enlargement provided with an arcuate face, the chord of which is disposed at an acute angle to the length of the handle, and said face being provided with serrations and having a continuation forming a hook making with the handle a recess, a link pivotally connected with the handle at the side thereof opposite from the hook, and a chain having one end connected with the free end of the link and the other end of the chain free, the links of the chain being engageable with the hook.



2. A chain wrench comprising a handle having a jaw portion at one end, a jaw piece formed with an arcuate face, the chord of which forms an oblique angle to the length of the handle, and said jaw piece having serrations in its arcuate face, means for fastening the jaw piece rigidly to the handle, there being a hook-forming extension at one end of the jaw piece and coöperating with the adjacent portion of the handle to form a recess, and a chain fastened to the handle and having its links engageable with the book, whereby the chain coöperates with the jaw piece to grip an object.

1,196,480. EARTH-DRILLING MACHINE. ALFRED PICK, New York, N. Y. Filed Nov. 10, 1914. Serial No. 871,220. (Cl. 255—7.)



1. A drilling machine comprising a frame having a motor and a drilling crank mounted thereon, winding reels, means for operatively connecting the motor to the crank and winding reels and a collapsible mast adapted to form a support for the frame.

2. A drilling machine comprising a portable frame having a drilling crank, a longitudinal crank shaft, a bull wheel adapted to be operatively connected to the crank shaft, a motor, interposed means for connecting the motor to the crank shaft, adjustable uprights secured to the frame and a collapsible mast pivotally mounted on the uprights and adapted to be supported in a substantially vertical position with its lower end on the ground.

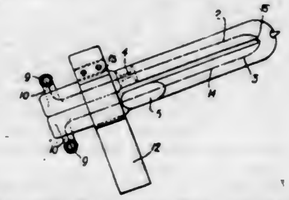
3. A drilling machine comprising a portable frame having a drilling crank, a longitudinal crank shaft, a bull wheel adapted to be operatively connected to the crank shaft, a motor, interposed means for connecting the motor to the shaft, adjustable uprights secured to the frame and a collapsible mast pivotally mounted on the uprights and adapted to be supported in a substantially vertical position with its lower end on the ground, and means on the frame for supporting the mast in a substantially horizontal position when collapsed.

4. A drilling machine comprising a vehicle frame having wheels, a motor on the frame, a transverse shaft adapted to be operatively connected to the wheels, a longitudinal crank shaft, a drilling crank affixed to the crank shaft, means for operatively connecting the transverse shaft and the crank shaft, a clutch and transmission gearing interposed between the motor and the transverse shaft, uprights secured to the frame near the drilling crank and a telescopic mast pivotally supported at the upper end of the uprights.

5. A drilling machine comprising a vehicle frame having wheels, a motor on the frame, a transverse shaft adapted to be operatively connected to the wheels, a longitudinal crank shaft, a drilling crank affixed to the crank shaft, means for operatively connecting the crank shaft and the drilling shaft, and a clutch and transmission gearing interposed between the motor and the transverse shaft, uprights secured to the frame near the drilling crank, a collapsible mast having a plurality of telescoping sections of which the bottom section is pivotally mounted on the top of the uprights, and means for supporting the mast in a substantially horizontal position above the vehicle frame when collapsed.

[Claims 6 to 19 not printed in the Gazette.]

1,196,481. STERILIZATION OF LIQUIDS. MAX VON RECKLINGHAUSEN, ANDRÉ HELBRONNER, and VICTOR HENRI, Paris, France, assignors, by mesne assignments, to The R. U. V. Company, Inc., a Corporation of New York. Filed Dec. 21, 1912. Serial No. 738,069. (Cl. 210—1.)



1. In a sterilizing apparatus, the combination with a vapor electric lamp, of a sterilizing chamber having within it a tube receiving only the luminous portion of the lamp which extends into the chamber from one side only.

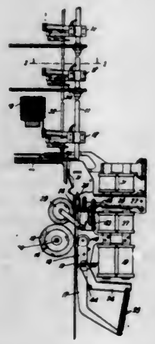
2. In a sterilizing apparatus, the combination with a vapor electric lamp having a narrow luminous portion and enlarged electrode portions, both at one end of the luminous portion, of a sterilizing chamber containing within it only the narrow luminous portion of the lamp and having the enlarged electrode portions thereof located exteriorly.

3. In a sterilizing apparatus, the combination with a vapor electric lamp having a luminous portion and enlarged non-luminous electrode portions at one end thereof, of a sterilizing chamber wholly containing the luminous portion of the lamp and having the non-luminous enlarged portions located exteriorly thereof.

4. In a sterilizing apparatus, the combination with a vapor electric lamp having a luminous portion and enlarged electrode portions at one end thereof, of a sterilizing chamber having therein a tube containing the luminous portion of the lamp, the electrode portions thereof being located exteriorly of the tube and adjacent to one end thereof.

5. In a sterilizing apparatus, the combination with a vapor electric lamp having a luminous portion and enlarged non-luminous portions at one end thereof, of a sterilizing chamber having a tube therein open at its outer end, said tube containing the luminous portion of the lamp and having the enlarged non-luminous portions located at a point adjacent but exterior to the open outer end of the tube.

1,196,482. AUTOMATIC SELECTOR-SWITCH. JOHN NEWBERRY REYNOLDS, Greenwich, Conn., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 3, 1916. Serial No. 69,940. (Cl. 179—27.5.)



1. In an automatic switch, the combination with a row of terminals, a brush carrier having brushes adapted to traverse the same, a continuously moving member, an idler roller and electromagnetic means adapted to actuate the same to force said carrier into engagement with said member to drive said carrier in one direction, of a second idler roller in operative relation to said member and carrier, and electromagnetic means for causing the same to transmit motion from said member to said carrier to drive the same in the opposite direction.

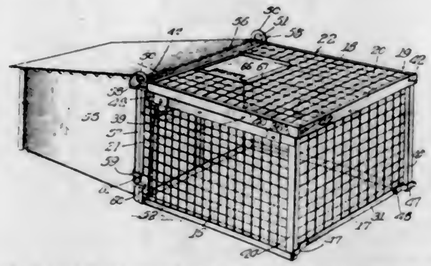
2. In an automatic switch, the combination with a row of terminals, a brush carrier having brushes adapted to traverse the same, a continuously moving member, an idler roller and electromagnetic means adapted to actuate the same to force said carrier into engagement with said member to drive said carrier in one direction, of a second idler roller, and electromagnetic means adapted to cause the same to engage said member and carrier to drive said carrier in the opposite direction.

3. In an automatic switch, the combination with a row of terminals, a continuously moving member, an idler, a brush carrier between said member and idler and an electromagnet adapted to cause the idler to force said carrier into engagement with said member, of a second idler in operative relation to said member and brush carrier, and an electromagnet adapted to force said idler into contact with said member and carrier.

4. In an automatic switch, a brush carrier and a rotatable member, electromagnetic means adapted to force said carrier into engagement with said member to drive said carrier in one direction, an idler roller in operative relation to the member and carrier, and electromagnetic means for causing the same to transmit motion from said member to said carrier to drive the same in the opposite direction.

1,196,483. PARKWAY STRUCTURE FOR BROODER-COOPS. CHARLIE S. RIGGIN and JAMES J. LANOUE, Kankakee, Ill., assignors to The James H. Watson Company, Incorporated, Bradley, Ill., a Corporation of Illinois. Filed May 3, 1916. Serial No. 95,017. (Cl. 119—21.)

1. A structure of the character described comprising a top panel inclosed within a frame, and two side panels and an end panel, hinged to the respective sides of the top panel, inside the frame, and foldable thereinto; rods passing through opposite members of the frame and offset throughout their portion intermediate the frame to which offset portion the side panels are hinged permitting lateral bodily movement of the side panels to fold over the end panel.



2. A structure of the character described comprising a top panel having a relatively deep frame; side panels hinged therein, each inclosed within a frame, the end members of which frame are inwardly facing channels; an end panel hinged within the top frame, having side frame members provided with outwardly facing, angularly disposed flanges, for inclusion within said channels and clips to hold the flanged frame members within the channel frame members, after the structure has been erected.

3. A structure of the character described, comprising a top panel having a relatively deep frame; side panels hinged therein to fold thereinto, each inclosed within a frame, the end members of which are formed into inwardly facing channels; an end panel, hinged within the top frame, having side frame members which are provided with outwardly facing, angularly disposed flanges, for inclusion each within one of said channels; clips to hold the flanged frame members within the channels, after the structure has been erected, and clips provided on opposite vertical edges of the side panels to hold the structure in engagement with a coop, with which it is to be associated.

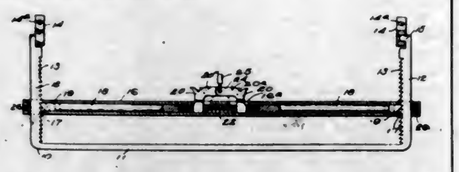
4. A structure of the character described comprising a top panel having a relatively deep frame; three side members hinged to said top panel, foldable within the frame; means to hold the members in vertical position, when unfolded, and perforated ears extending rearwardly from the top frame constituting hinge members between which to contain coöperating hinge members of the coop and a pintle rod for engagement with said hinge members, whereby said structure may be rotated upon the hinge to occupy a position upon the coop.

5. In combination with a parkway structure of the character described, of a coop, having a longitudinally extending roll on its front upper edge; coöperating hinge members on the confronting opposite edges of said structure, and a separable rod for slidable engagement with said roll and hinge members whereby said structure may be turned on the hinge, so formed, into an inverted position to rest upon said coop.

[Claim 6 not printed in the Gazette.]

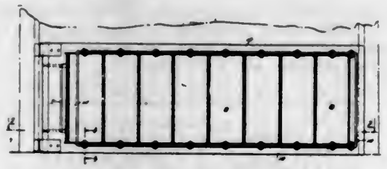
1,196,484. ROBE-HOLDER. DAVID CHAS. RUSSELL, The Dalles, Oreg. Filed July 21, 1915. Serial No. 41,082. (Cl. 45—13.)

1. A robe holder including a robe rail having transverse arms thereon, said arms being each formed with a longitudinal row of teeth at its inner side, a tubular clamp bar approximately parallel with the rail and having orifices near the ends slidably receiving the said toothed arms, latch bolts ranging longitudinally of and within the clamp bar and engageable with the teeth of said arms, a spring interposed between the latch bolts and normally tending to engage the same with the toothed arms, and angular elements having threaded engagement with the adjacent ends of the bolts and having offset members extending laterally to the outside of the tubular clamp bar and adapted to be grasped for moving the bolts against the pressure of the spring, the said members overlapping and in form to receive a lock to hold the bolts in engagement with the arms.



2. A robe holder including a robe rail having upturned end arms formed with teeth; means to swingingly mount the upturned arms of the rail in position on a support; a tubular clamp bar having open ends; removable closures for said ends; the said clamp bar having orifices extending transversely therethrough inward from said removable closures; latch bar sections disposed longitudinally in said tubular clamp bar and engageable at their outer ends with the teeth on the arms of the robe rail; members having threaded connection with the inner ends of the said latch bolts to permit removal of said bolts through the open ends of the tubular clamp bar when said closures are removed, said bolts being formed with offset portions overlapping each other outside of the tubular clamp bar, the said overlapping ends being adapted to receive a lock; and a spring disposed between said members and tending to engage the latch bolts with the toothed arms of the robe rail.

1,196,485. RAILWAY-CAR VENTILATOR. WILLIAM H. SCHUBERT, New York, N. Y. Filed June 30, 1915. Serial No. 37,205. (Cl. 98—22.)



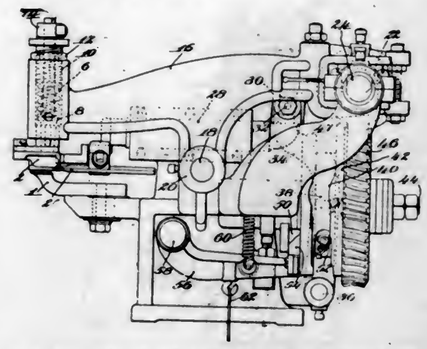
A ventilator as characterized comprising an elongated frame adapted for installation in a car window; a plurality of louvers pivotally mounted therein and transverse thereof; a plurality of pivots for said louvers, said louvers being spaced a distance approximately equal the length of said louvers; a bail handle for operating said louvers, said handle embodying a continuous oblong frame, the elongated sides of which are spaced apart approximately the length of said louvers, to permit the same to swing between said elongated sides; and means for pivotally connecting said handle and said louvers, said means embodying brackets extended from the inside of said louvers.

1,196,486. WELT-BEATING MACHINE. THOMAS HERBERT SEELY, Dorchester, and JOHN B. HADAWAY, Swampscott, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 4, 1913. Serial No. 804,740. (Cl. 12—67.2.)

1. A welt beating machine, having, in combination, a welt slitting knife, means for actuating the knife to slit the welt, and a welt beater arranged to operate in the path of the knife and mounted to move out of the path of the knife as the knife is advanced to slit the welt.

2. A welt beating machine, having, in combination, a welt support, a welt slitting knife, a welt beater arranged to operate in the path of the knife and mounted for movement out of the path of the knife, means for actuating the knife to slit the welt, and means for moving the beater out of the path of the knife as the knife is advanced to slit the welt.

3. A welt beating machine, having, in combination, a welt support, a welt slitting knife, a welt beater arranged to operate in the path of the knife and mounted for movement in a plane substantially parallel with the plane of the welt out of the path of the knife, means for actuating the knife to slit the welt while the welt is normally engaged between the welt support and beater, and means for moving the beater out of the path of the knife as the knife advances to slit the welt.



4. A welt beating machine, having, in combination, a welt support, a welt slitting knife, a welt beater arranged to engage the welt at a point in the path of the knife and pivoted to swing on an axis substantially perpendicular to the plane of the welt, means for actuating the knife to slit the welt while the welt is normally engaged between the welt support and the beater, and means for swinging the beater out of the path of the knife as the knife is advanced to slit the welt.

5. A welt beating machine, having, in combination, a welt support, a welt slitting knife arranged to operate in the plane of the welt, a slide supporting the knife, a welt beater arranged to engage the welt at a point in the path of the knife and mounted for movement in a plane substantially parallel with the plane of the welt out of the path of the knife, means for actuating the slide to advance the knife to slash the welt while the welt is normally clamped between the welt support and beater and to retract the knife, and means carried by the knife slide for moving the beater out of the path of the knife as the knife is advanced to slit the welt.

[Claims 6 to 14 not printed in the Gazette.]

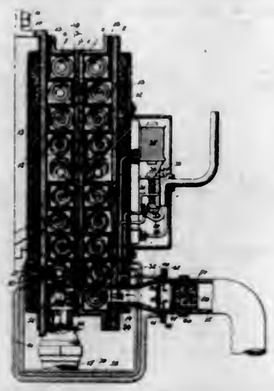
1,196,487. ELECTRIC WATER-HEATER. MAURICE SIMON, St. Louis, Mo. Filed Dec. 7, 1915. Serial No. 65,483. (Cl. 219—39.)

1. An electric water heater comprising a heating chamber, a partition plate in said chamber forming a tortuous passage for the flow of the water therethrough, a resistance circuit comprising a stretch of resistance wire formed in coils and mounted in said passage, a main circuit for energizing said resistance circuit, and electrically controlled means under the influence of pressure in the heater for making and breaking said electrical circuit for supplying said resistance circuit, substantially as specified.

2. A water heater comprising a case having adjacent compartments therein, partitions in each of said compartments forming together a communicating tortuous passage, a resistance circuit seated in said passage and comprising a stretch of resistance wire formed in united coils, an electric circuit connected into said resistance circuit, a circuit-breaker in said circuit, and electrical means under control of the pressure in the heater for controlling said circuit breaker, substantially as specified.

3. In an electric water heater, a tortuous heating chamber, a resistance circuit mounted in said heating chamber in direct contact with the fluid passing therethrough, a main circuit for energizing said resistance circuit, a

circuit breaker in said main circuit normally in open adjustment, a shunt circuit, an electrical device in said shunt circuit for controlling said circuit breaker, a thermostat in said shunt circuit adapted to make and break said shunt circuit, and a water pressure control device in said shunt circuit for making and breaking said shunt circuit, substantially as specified.

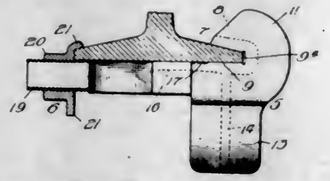


4. A water heater comprising parallel chambers, partitions in said chambers providing a tortuous passage extending from the periphery of the heater to the center and outwardly to the periphery with a communicating passage to the periphery of the adjacent chamber, a resistance circuit comprising a series of integrally united coils having turns of varying diameters mounted in said passage, a circuit for energizing said resistance circuit, electrical means under the influence of heat in said chamber for controlling said energizing circuit, and additional means under the influence of pressure in said heater for controlling said circuit.

5. In a water heater, a case divided into two parallel chambers, a communicating passage between said chambers, partition walls in said chambers forming tortuous passages therein, a resistance circuit comprising a continuous stretch of resistance wire formed in coils having turns of varying diameters, a circuit for energizing said resistance circuit, and means under the influence of pressure in said heater for controlling said circuit, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

1,196,488. RAIL-ANCHOR. ARTHUR L. STANFORD, Chicago, Ill. Filed June 17, 1916. Serial No. 104,229. (Cl. 238—4.)



1. A rail anchor consisting of a jaw member adapted to grip a rail flange, a transverse connecting member adapted to underlie the rail base, and a locking member mounted on the end of the connecting member and adapted to be positioned thereon to contact the opposite rail flange and provided with an upstanding portion adapted to be struck down onto the rail flange, substantially as described.

2. A rail anchor consisting of a jaw member adapted to grip a rail flange, a transverse connecting member adapted to underlie the rail base, and a locking member threaded on the end of the connecting member and adapted to be turned thereon to position to contact the opposite rail flange and provided with an upstanding portion adapted to be struck down onto the rail flange, substantially as described.

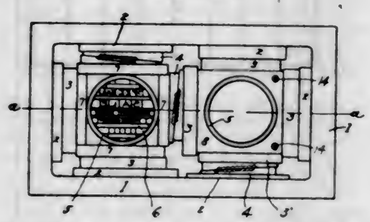
3. In a rail anchor, the combination of a gripping member adapted to engage a rail flange and provided with a depending foot adapted to abut against the rear vertical face of a tie, a transverse connecting member adapted to underlie the rail base, and a locking member mounted on the end of the connecting member and adapted to be positioned thereon to contact the opposite rail flange and provided with an upstanding portion adapted to be struck down onto the rail flange, substantially as described.

4. In a rail anchor, the combination of a gripping member adapted to engage a rail flange and provided with a depending foot adapted to abut against the rear vertical face of a tie, a transverse connecting member adapted to underlie the rail base, and a locking member threaded on the end of the connecting member and adapted to be turned thereon to position to contact the opposite rail flange and provided with an upstanding portion adapted to be struck down onto the rail flange, substantially as described.

5. In a rail anchor, the combination of a gripping member provided with a jaw adapted to engage a rail flange, the jaw being provided with inner and outer flanges and a connecting body portion, the inner flange being projected downwardly and inwardly to afford a foot having a bearing surface, and a rear reinforcing web interposed between the rear flange and the front flange with its depending foot, a transverse connecting arm adapted to extend below the rail base, and a locking member adjustable upon the arm and adapted to engage the opposite rail flange, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,196,489. CARRIER-BLOCK FOR CIRCULAR OR SIMILAR TYPE. MAX STEINIGER, Newport, Ky., and WILLIAM PAPKE, Cincinnati, Ohio. Filed Sept. 7, 1915. Serial No. 49,363. (Cl. 101—169.)

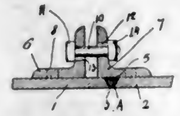


1. A circular printing-rule device comprising a rectangular carrier-block having a circular opening or orifice therein, a circular printing-rule adapted to fit in such opening with its printing-face above the plane of the block, and means for adjustably and removably locking said circular printing-rule in the said carrier-block.

2. A circular printing-rule device comprising a rectangular carrier-block having a circular opening or orifice, a circular printing-rule adapted to fit in such opening with its printing-face above the plane of the block, horizontal bolts having taper-faced grooves engaging openings in said carrier-block with their inner ends adapted to impinge upon the vertical face of said circular printing-rule, and vertical set-screws mounted in said block and having inner tapered ends that are adapted to engage said taper-faced grooves in said bolts for the locking-engagement thereof with said circular printing-rule.

1,196,490. JOINT FOR METAL TANKS. HERMAN STIER, Chicago, Ill. Filed May 11, 1912. Serial No. 696,558. (Cl. 220—125.)

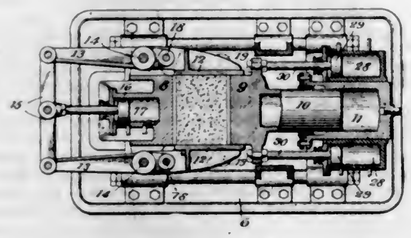
1. A tank, comprising metallic walls having their contiguous edges formed to extend at an angle to each other, a packing interposed between said edges and means for drawing said edges toward each other to compress said packing.



2. A tank comprising metallic walls having their contiguous edges formed to extend at an angle to each other, a packing interposed between said edges, and means attached to the exterior of said walls for drawing said edges toward each other to compress said packing.

3. A tank comprising metallic walls having their contiguous edges formed to extend at an angle to each other, a packing interposed between said edges, and means attached to the exterior of said walls and covering and externally concealing the packing for drawing said edges toward each other to compress said packing.

1,196,491. HYDRAULIC PRESS. CLEMENT F. STREET, New York, N. Y. Filed Jan. 22, 1913. Serial No. 743,445. (Cl. 100—19.)



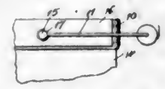
1. In a hydraulic press, the combination with a substantially horizontal fixed table and a vertical pressure block, of two side levers carrying at one end the vertical side pressure walls, an air operated cylinder and piston operatively connected to the other end of said levers for quickly opening and closing same, a top head, and a movable head with a hydraulic plunger for pressing the material between said side walls and the top head.

2. In a hydraulic press, the combination with a substantially horizontal fixed table and a vertical pressure block, of two side levers carrying at one end the vertical side pressure walls, an air operated cylinder and piston with a toggle connection to the other ends of said levers for quickly opening and closing same, a top head, and a movable head with a hydraulic plunger for pressing the material between said side walls and the top head.

3. In a hydraulic press, the combination with a fixed table and pressure block, of two side levers carrying at one end the vertical side pressure walls, an air operated cylinder and piston operatively connected to the other end of said levers for quickly opening and closing same, a fluid pressure actuated locking device for locking the side walls in their closed position, and a movable head with a hydraulic plunger for pressing the material between said side walls.

4. In a hydraulic press, the combination with a fixed table and pressure block, of two side levers carrying at one end the vertical side pressure walls, an air operated cylinder and piston operatively connected to the other end of said levers for quickly opening and closing same, a vertically movable top head for pressing the top of the bale, an air operated piston for actuating said head, and a longitudinally movable head with a hydraulic plunger for pressing the bale between said side walls and beneath the top head.

1,196,492. DETACHABLE HANDLE OR BAIL FOR CONTAINERS AND VESSELS. GEORGE WASHINGTON SYKES, Vancouver, Wash. Filed May 24, 1915. Serial No. 30,253. (Cl. 220—24.)

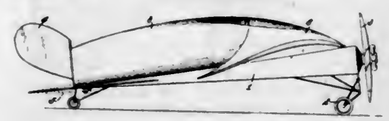


1. In combination with a receptacle having an outwardly bent over flange, a band adapted to fit under said flange, said band and receptacle having registering holes, and a detachable bail the effective ends of which are adapted to coact with said registering holes.

2. In combination with a receptacle having an outwardly and downwardly bent flange, a band substantially concealed under said flange, said flange, band and receptacle having registering holes, and a detachable bail having its effective ends pivotally mounted in said registering holes.

3. In combination with a receptacle having an outwardly and downwardly bent flange, a band substantially concealed under said flange, said flange, band and receptacle having registering holes, and a bail having its effective ends pivotally mounted in said registering holes, said effective ends comprising bolts passing through loops in the ends of the bail and thence through said openings, and means adapted to prevent a removal thereof.

1,196,493. AEROPLANE. CLINTON A. TEFFT, Gloversville, N. Y. Filed Apr. 22, 1916. Serial No. 93,014. (Cl. 244—6.)



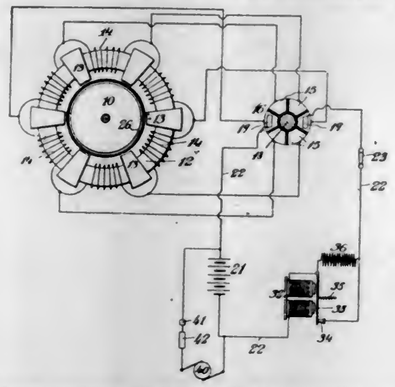
1. In an aeroplane of the character described, a lifting plane formed with an upper and lower face, said upper face diverging toward the rear from the lower face whereby a comparatively large space is produced between said faces designed to receive a lifting gas, and a container extending rearwardly from said lifting plane, the top and bottom walls of which merge into the upper and lower faces, respectively, of said lifting plane, said container being arranged to receive a lifting gas whereby the aeroplane is given a certain buoyancy.

2. In an aeroplane of the character described, a lifting plane formed of two wings, each of said wings having a lower lifting face and an upper covering face, the upper covering face merging at the center, said upper covering face diverging from the lower lifting face so as to produce a chamber extending from the tip of one wing to the tip of the other, said chamber being adapted to receive a lifting gas, and a tubular member merging into said planes at the point of juncture, said tubular member being adapted to receive lifting gas so as to assist in producing a buoyant effect in the aeroplane.

1,196,494. SPEEDOMETER. GEORGE S. TIFFANY, Summit, N. J., assignor to The Device Testing Company, a Corporation of Connecticut. Filed Oct. 24, 1914. Serial No. 868,364. (Cl. 175—183.)

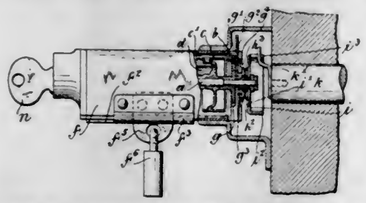
The combination of a speed indicator, a shaft, electric means for operating said indicator and controlled by the speed of said shaft, said electric means including a cir-

cuit, mechanism for compensating changes of voltage in said electric circuit and comprising an electromagnet and



armature connected in said circuit and a resistance connected to the latter and the said armature.

1,196,495. REGISTER. CURTIS HUSSEY VEEDER, Hartford, Conn., assignor to The Veeder Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 22, 1915. Serial No. 23,036. (Cl. 235—91.)



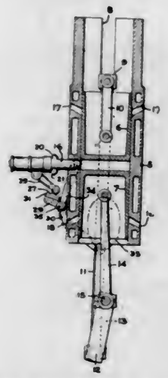
In a register, the combination of an axial shaft, a number wheel mounted thereon, gearing for driving said number wheel, said gearing including a central pinion, a stationary plate provided with a circular series of teeth coaxial with the shaft, a driving disk also coaxial with the shaft and provided on its face with a circular series of teeth, certain of the teeth facing in the opposite direction from the remaining teeth, and a pawl disk also mounted coaxially with the shaft and driving disk and having pawls faced in opposite directions for engagement respectively with the teeth on the stationary plate and with the teeth of the driving disk.

1,196,496. VALVE-ACTUATING MEANS FOR ENGINES. WILLIAM EVERETT VER PLANCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Jan. 3, 1913. Serial No. 739,967. (Cl. 123—90.)

1. In an engine, the combination of a cylinder, a piston located therein, a crank shaft, a swinging connecting rod between the piston and the shaft, a valve, a cam for actuating it, a pair of pivotally connected members which carry said cam and move it to actuate the valve, and pivots for said members, one of which is fixed and the other supported and moved by the connecting rod.

2. In an engine, the combination of a cylinder, a piston located therein, a crank shaft, a swinging connecting rod between the piston and the shaft, a valve, means for biasing it to closed position, a valve lifter, an actuating means which is moved by the connecting rod, and a cam which is interposed between the lifter and the actuating means, and through which movement is transmitted from the one to the other to open the valve against the biasing means.

3. In an engine, the combination of a cylinder, a piston located therein, a crank-shaft, a rod which connects the piston to the crank-shaft, a valve in the cylinder wall, a cam for actuating the valve, and means pivotally attached to the rod for moving the cam to first open the valve and then release it as said rod passes over the inner dead center region of the piston.



4. In an engine, the combination of a cylinder, a piston located therein, a crank-shaft, a rod pivotally connected to the piston and the shaft, a valve in the cylinder wall, means for closing it, a suitably-shaped actuator for first opening and then releasing the valve, and means actuated by the connecting rod and pivoted on a stationary part of the engine for bodily moving the actuator over an orbital path to positively open the valve and then permit the closing means to close it.

5. In an engine the combination of a cylinder, a piston located therein, a crank-shaft, a rod pivotally connected to the piston and the shaft, a valve, a means for closing it, a suitably shaped cam for first opening and then releasing the valve, a pair of members that are pivotally united, means located near their union for moving the cam, a fixed pivot for one of the members, and a pivot carried by the connecting rod which has an elliptical orbit, said members coöperating to move the cam bodily over an orbital path.

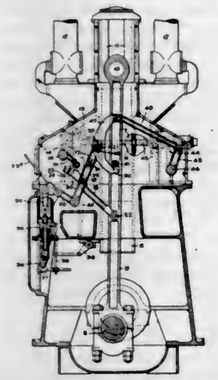
[Claims 6 to 8 not printed in the Gazette.]

1,196,497. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. WILLIAM EVERETT VER PLANCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Feb. 26, 1914. Serial No. 821,333. (Cl. 123—181.)

1. In an internal combustion engine, the combination of a working cylinder and piston, a crank shaft, a connecting rod between the piston and shaft, a fuel valve, a starting valve, mechanism actuated directly by the connecting rod for operating the valves, and a selective controlling device for causing said mechanism to actuate the fuel valve or the starting valve.

2. In an internal combustion engine, the combination of a working cylinder and piston, a crank shaft, a connecting rod between the piston and shaft, a fuel valve, a starting valve, a means actuated directly by the connecting rod for operating the fuel valve, a means actuated by the connecting rod for operating the starting valve, and a device for moving one of said means into action and at the same time moving the other means out of action.

3. In an internal combustion engine, the combination of a working cylinder and piston, a crank shaft, a connecting rod between the piston and shaft, a fuel valve, a starting valve, a pump capable of supplying variable amounts of fuel to the valve and cylinder, mechanism actuated by the connecting rod for operating the fuel valve and the starting valve, and a device which controls the pump and also determines whether the connecting rod shall move the fuel valve or the starting valve.

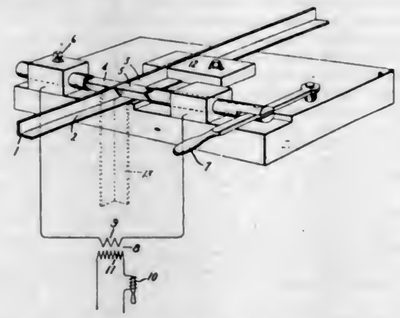


4. In an internal combustion engine, the combination of a working cylinder and piston, a crank shaft, a connecting rod between the piston and shaft, a fuel valve, a pump for supplying fuel to the valve and cylinder, a regulator for the pump, a starting valve, mechanism actuated by the connecting rod for operating the fuel valve, pump regulator and starting valve, and a device for controlling the action of the mechanism on the fuel valve, pump regulator and starting valve.

5. In an internal combustion engine, the combination of a working cylinder and piston, a crank shaft, a connecting rod between the piston and shaft, a fuel valve, a pump supplying fuel to the valve, a regulator for the pump, a starting valve, a system of levers that is constantly vibrated by the connecting rod for actuating the fuel valve, pump and starting valve, and a means acting on said system of levers and the pump regulator to cut the pump and fuel valve out of service and the starting valve into service for starting purposes.

[Claims 6 to 12 not printed in the Gazette.]

1,196,498. METAL-WORKING. FREDERICK M. VOGEL, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 10, 1914. Serial No. 856,014. (Cl. 219—1.)



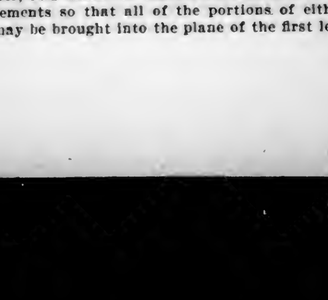
1. The method of bending an angle iron through a web thereof which consists in passing current through flange portions thereof to be stretched to heat those portions without materially heating said web, and bending the iron while the flange portions are heated.

2. The method of bending angle irons which consists in passing current through sections of the portions to be stretched, thereby heating those sections, the lengths of the parts of the sections in the direction of the stretch being proportional to the stretch required of those parts, and bending the irons while those sections are heated.

3. The method of bending angle irons which consists in passing current transversely to the bar through sections of the portions to be stretched, thereby heating those sections, the lengths of the parts of the sections in the direction of the stretch being proportional to the stretch required of those parts, and bending the irons while those sections are heated.

4. The method of bending an L-shape which consists in passing current transversely to the bar through, and thereby heating, a triangular section of the flange, the apex of the triangle being substantially adjacent the web and the base being substantially on the edge of the flange, and bending the bar at the web adjacent the apex of the triangular section while that section is heated.

1,196,499. VEHICLE SEARCH-LIGHT. EDMUND VON SZUPPINY, Paterson, N. J. Filed Nov. 30, 1915. Serial No. 64,229. (Cl. 240—41.)



1. The herein described searchlight comprising a reflector, a lamp within the reflector, a fixed lens of a certain character in one part of the reflector, a movable lens device in another part of the reflector and comprising elements of different optical character arranged in planes at right angles to each other, and means to cause the last mentioned element to be moved so as to bring the plane of either of its parts into the plane of the first mentioned lens.

2. In a searchlight, the combination with a reflector, a lens holder secured to the front edge thereof, and a lamp within the reflector, of lens devices comprising a fixed member secured in the upper portion of the holder and of a certain optical character, a plurality of movable lens elements secured in the lower portion of the holder, each of said elements being movable and comprising lens portions of different optical character, and means for moving all of the last mentioned elements simultaneously so as to bring portions of like optical character simultaneously into the plane of the fixed lens.

3. In a searchlight, the combination with a reflector, a lens holder adjacent the front edge thereof and a lamp within the reflector, of lens devices comprising a semi-circular lens fixed in place within the upper portion of the holder and a plurality of sector-shaped lens elements movably mounted in the lower half of the holder, each of the movable elements comprising portions arranged at right angles to each other and of different optical character, and means to control the position of the movable elements.

4. In a searchlight, the combination of a holder, a semi-circular convex lens secured in one portion of the holder, a plurality of sector-shaped lens elements movably mounted in another portion of the holder, each of the movable elements comprising two portions arranged at right angles to each other, one portion being of a convex character, and means to control the position of the movable elements so that all of the portions of either character may be brought into the plane of the first lens.

5. In a searchlight, the combination of a holder, a fixed lens secured in said holder and adapted to refract the light in a certain direction, a plurality of movable lens elements mounted in the other portion of the holder, each of the movable lens elements comprising portions arranged at an angle to each other in fixed relation, one portion of each movable element being adapted to refract the light in the same manner as the fixed lens and the other portion thereof in a different manner, and means to control the position of the movable elements.

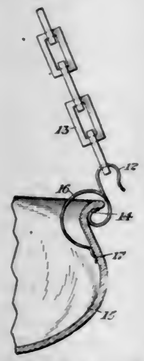
[Claims 6 and 7 not printed in the Gazette.]

1,196,500. DISPLAY-CARD. FREDERICK LANSING WERTZ, Yonkers, N. Y. Filed Nov. 4, 1915. Serial No. 59,568. (Cl. 40—148.)



A display card, comprising a main member formed of two portions angularly bent on a vertical line, a member projected thereover and arranged at an angle to each of said portions and foldable on a horizontal line, and foldable means for holding said members in display positions.

1,196,501. HANGER FOR LIGHT-REFLECTING BOWLS. EDWIN L. WHITE, New York, N. Y., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 31, 1916. Serial No. 75,214. (Cl. 240—115.)

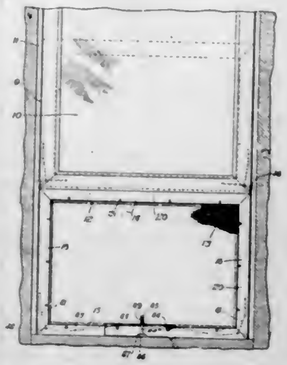


1. A hanger for bowls in lighting fixtures formed from one piece of flat metal having a hook cut out of the body portion and bent to shape, a portion forward of the hook downwardly curved with its end bent upwardly and inwardly in curved form to provide a seat for the rim of the bowl and a portion to the rear of the hook bent in the opposite direction in approximately semicircular form the end of which is adapted to bear against the inner surface of the bowl with yielding pressure.

2. A hanger for bowls in lighting fixtures formed from one piece of flat metal having a hook cut out of the body portion and bent to shape, a portion forward of the hook downwardly curved with its end bent upwardly and inwardly in curved form to provide a seat for the rim of the bowl, and a portion to the rear of the hook bent in the opposite direction in approximately semicircular form with its end bent at an angle to bear against the inner surface of the bowl with yielding pressure.

3. A hanger for bowls in lighting fixtures formed from one piece of material sufficiently pliable to allow its being bent to conform to bowls of varying shapes and thickness, and having a hook cut out of the body portion and bent to shape, a portion forward of the hook downwardly curved with its end bent upwardly and inwardly in curved form to provide a seat for the rim of the bowl, and a portion to the rear of the hook bent in the opposite direction in approximately semicircular form, the free end of which is adapted to bear against the inner surface of the bowl with yielding pressure.

1,196,502. WINDOW-SCREEN. FREDERICK AHLSTROM, Chicago, Ill., assignor to Albert J. Isherwood, Chicago, Ill. Filed July 1, 1915. Serial No. 37,488. (Cl. 156—14.)



1. A window screen comprising a hollow frame formed of connecting rails, each having a channel along the inner edge thereof, a screening provided with thickened edges adapted to be inserted within the hollow portion of the frame, a screening retaining member adapted to be inserted within the channel for holding the screening in place, the thickened edges of the screen being arranged to lie adjacent the edge of the retaining member situated farthest within the channel, whereby the retaining member during insertion thereof forces the screening into stretched position, substantially as described.

2. A window screen comprising a hollow frame formed of connecting rails, each having a channel along the inner edge thereof, a screening provided with thickened edges adapted to be inserted within the hollow portion of the frame, a screening retaining member adapted to be inserted within the channel for holding the screening in place, the thickened edges of the screen being arranged to lie adjacent the edge of the retaining member situated farthest within the channel, whereby the retaining member during insertion thereof forces the screening into stretched position, and removable locking means for holding the screening retaining members and screening in position within the rails, substantially as described.

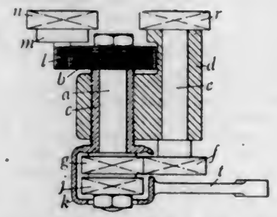
3. A window screen comprising a hollow frame formed of connecting rails, each consisting of a single piece of metal bent to provide a chambered construction with a channel along the inner edge thereof, a screening provided with thickened edges arranged to be placed within the channel, a screening retaining member adapted to be placed within the channel for holding the screening in place therein, the thickened edges of the screen being arranged to lie adjacent the edge of the retaining member situated farthest within the channel, whereby the retaining member during insertion thereof forces the screening into stretched position, substantially as described.

4. A window screen comprising a hollow frame formed of connecting rails, each consisting of a single piece of metal bent to provide a chambered construction with a channel along the inner edges thereof, a screening provided with thickened edges arranged to be placed within the channel, a screening retaining member adapted to be placed within the channel for holding the screening therein, the thickened edges of the screen being arranged to lie adjacent the edge of the retaining member situated farthest within the channel, whereby the retaining member during insertion thereof forces the screening into stretched position, and removable locking means for holding the screening retaining member and screening in operative position, substantially as described.

5. A window screen comprising a hollow frame formed of connecting rails, each consisting of a single piece of metal, bent to provide a chambered construction with the free ends of each rail extending into the chambered portion of the structure and providing a channel, a screening provided with thickened edges adapted to be inserted within the channel, a screening retaining member adapted to be inserted within the channel for holding the screening in place therein, the thickened edges of the screen being arranged to lie adjacent the edge of the retaining member situated farthest within the channel, whereby the retaining member during the insertion thereof forces the screening into stretched position, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,196,503. APPLIANCE FOR THE CUTTING OR FORMING OF SCREW-THREADS. GEORGE HENRY ALEXANDER, Birmingham, England. Filed Nov. 13, 1915. Serial No. 61,379. (Cl. 10—154.)



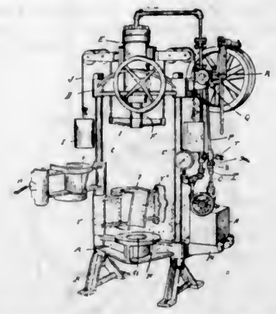
1. In appliances for producing screw threads, the combination with a rotary screw threaded cylindrical tool arranged to coact with a rotating work piece and adapted to produce the thread when engaged with the work piece by a movement at right angles to the axis of the work piece, of means for imparting to the tool a partial rotation independently of the work piece and simultaneously an axial movement whereby the correct relationship is maintained between the threads on the tool and work piece, substantially as set forth.

2. In appliances for producing screw threads, the combination with a rotary screw threaded cylindrical tool arranged to coact with a rotating work piece and adapted to produce the thread when engaged with the work piece by a movement at right angles to the axis of the work piece, of a screwed bearing for the tool, and means for imparting to the tool a partial rotation independently of the work piece, and to the bearing a partial rotation which produces an axial movement of the tool, substantially as set forth.

3. In appliances for producing screw threads, the combination with a rotary screw threaded cylindrical tool arranged to coact with a rotating work piece and adapted to produce the thread when engaged with the work piece by a movement at right angles to the axis of the work piece, of a tool spindle, an externally screwed bush carrying the spindle, a fixed internally screwed bearing for the said bush, a fast and a loose pinion on the spindle, an intermediate connecting gear carried on one end of the bush, and means for imparting a partial rotation to the bush, substantially as set forth.

4. In appliances for producing screw threads, the combination with a rotary screw threaded cylindrical tool arranged to coact with a rotating work piece and adapted to produce the thread when engaged with the work piece by a movement at right angles to the axis of the work piece, of a tool spindle, an externally screwed bush carrying the spindle, a fixed internally screwed bearing for said bush, a driving spindle arranged in said bearing parallel with the tool spindle, a fixed and a loose pinion on the tool spindle, a fixed pinion on the driving spindle, the latter pinion gearing with the loose pinion on the tool spindle, an intermediate pinion connecting the fixed and loose pinions on the tool spindle and carried on one end of the screwed bush, and a lever whereby a partial rotation can be imparted to the bush, substantially as set forth.

1,196,504. HYDRAULIC PRESS. HARRY M. AUSTIN, Jr., Detroit, Mich., assignor to Metalwood Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 1, 1915. Serial No. 18,519. (Cl. 138—10.)



1. In a hydraulic press, the combination with a plunger and cylinder therefor, of a bed, posts forming rigid connections between said bed and cylinder on opposite sides thereof, a super-bed swiveled upon one of said posts adapted to be swung into and out of registration with the main bed, and means for locking said super-bed to the second post when in registration with said main bed.

2. In a hydraulic press, the combination with a plunger and cylinder therefor, of a bed centrally apertured in alinement with said plunger, posts forming a rigid connection between said bed and cylinder, a super-bed having a supporting arm swiveled on one of said posts, the central portion of said super-bed being cut away to form an open slot for registration with the aperture in the main bed, and an arm on said super-bed bifurcated to embrace the opposite post.

3. In a hydraulic press, the combination with a plunger and a cylinder therefor, of a bed, posts forming a rigid connection between said bed and cylinder on opposite sides thereof, a series of super-beds swiveled upon one of said posts and movable thereon successively into registration with the main bed to change the clearance, and means associated with another of said posts for maintaining the super-beds in registration with the main bed.

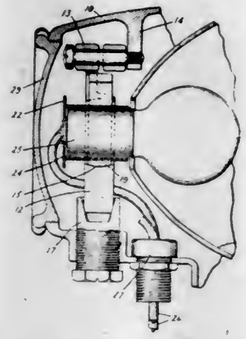
4. In a hydraulic press, the combination with a plunger and a cylinder therefor, of a bed centrally apertured in alinement with said plunger and having a surrounding annular portion with oppositely-projecting arms, posts extending upward from said oppositely-projecting arms and forming a rigid connection between said bed and said cylinder, and a series of super-beds having U-shaped central portions and oppositely-extending arms, one of the arms of each super-bed being swiveled upon one of said posts and the opposite arm being movable into engagement with the other post to bring said super-bed in registration with the main bed.

1,196,505. CHLORINATED INSULATING COMPOUND. JONAS W. AYLSWORTH, East Orange, N. J., assignor to Halogen Products Company, Glen Ridge, N. J., a Corporation of New Jersey. Filed Nov. 4, 1913. Serial No. 799,149. (Cl. 23—24.)

1. The process of preparing an insulating composition comprising mixing a small proportion of a basic oxid with a mixture of solid chloro-naphthalenes whose chlorin content is at least equal to tri-chloro-naphthalene, heating the mixture and distilling the same with the consequent elimination of all hydrochloric acid from the composition and the breaking up and elimination of all unstable products from which hydrochloric acid might be evolved by subsequent heating of the composition up to its boiling point, substantially as described.

2. The process of preparing an insulating composition comprising first treating a mixture of chloro-naphthalenes whose chlorin content is at least equal to that of tri-chloro-naphthalene with a small proportion of a basic oxid to break up unstable addition products contained in the said mixture and then distilling the resultant product in the presence of the basic oxid, substantially as described.

1,196,506. HEADLIGHT. PERCY S. BAILEY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 17, 1915. Serial No. 34,724. (Cl. 240—44.)



1. In a headlight, a split clamp hinged at one end formed with a ball socket, a split ball received in said socket, a lamp support passing through and longitudinally movable in said ball, and a member for engaging the free ends of said clamp to secure the lamp support in position.

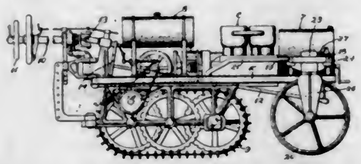
2. In a headlight, a split clamp hinged at one end and formed with a ball socket, a split ball received in said socket, a lamp support passing through and longitudinally movable in said ball, and a screw-threaded member extending through the casing and formed with a recess for the reception of the free ends of the clamp, whereby the lamp support may be clamped in position by the longitudinal movement of the member extending through the casing.

3. In a headlight comprising a casing and a reflector, a split clamp hinged at one end and formed with a ball socket and having its free ends tapered, a ball received in said socket, a lamp support passing through and longitudinally movable in said ball, and a screw-threaded member passing through the casing and provided with a tapered recess for the reception of the tapered ends of the clamp.

4. In a headlight comprising a casing and a reflector, a lamp located within the reflector, and means for adjustably securing the lamp within the reflector comprising a split clamp pivoted to the casing and provided with a ball socket, a split ball received in said socket, a lamp standard passing through said ball, and a member longitudinally adjustable within the casing for engaging the free ends of the clamp and securing the lamp in any desired position with reference to the reflector.

5. In a headlight, a clamp hinged at one end and formed with a ball socket and with a recess extending outwardly from the socket, a split ball received in said socket and formed with a U-shaped connecting portion, a hollow lamp support passing through and longitudinally movable in said ball and adapted to carry the conductors to the lamp, and a member for engaging the free ends of said clamp to secure the lamp support in position.

1,196,507. TRACTOR. HARRY H. BATES, Joliet, Ill., assignor to Bates Machine Company, Joliet, Ill., a Corporation of Illinois. Original application filed Jan. 16, 1914, Serial No. 812,506. Divided and this application filed July 1, 1915. Serial No. 37,512. (Cl. 21—114.)



1. In a tractor the combination with a prime mover, of a caterpillar mounted in the central rear portion of the tractor, an operative connection from the prime mover to the caterpillar, a draw bar connected to the rear portion of the tractor, a steering wheel on each side of the front portion of the tractor, and means permitting adjustment of the steering wheels toward and from the center line of the tractor.

2. In a tractor the combination with a prime mover, of driving means mounted in the central rear portion of the tractor, an operative connection from the prime mover to the driving means, a draw bar connected to the rear portion of the tractor, a steering wheel on each side of the front portion of the tractor, and means permitting adjustment of the steering wheels toward and from the center line of the tractor.

3. In a tractor the combination with a prime mover, of driving means mounted in the central rear portion of the tractor, an operative connection from the prime mover to the driving means, a draw bar connected to the rear portion of the tractor, a steering wheel mounted on each side of the front portion of the tractor, means permitting adjustment of the steering wheels toward and from the center line of the tractor, and means for simultaneously actuating the steering wheels in any adjusted position.

4. In a tractor the combination with a prime mover, of driving means mounted in the central rear portion of the tractor, an operative connection from the prime mover to the driving means, a draw bar connected to the rear portion of the tractor, a steering wheel mounted on each side of the front portion of the tractor, means permitting independent adjustments of the steering wheels toward and from the center line of the tractor, and means for simultaneously actuating the steering wheels in any adjusted position.

5. In a tractor the combination with a prime mover, of driving means mounted in the central rear portion of the tractor, an operative connection from the prime mover to the driving means, a draw bar pivotally connected to the rear portion of the tractor to swing about a vertical pivot, a steering wheel on each side of the front portion of the tractor, means permitting independent adjustment of the steering wheels toward and from the center line of the tractor, and means for simultaneously actuating the steering wheels in any adjusted position.

[Claims 6 to 21 not printed in the Gazette.]

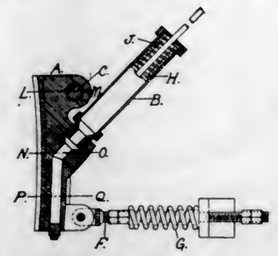
1,196,508. POLISHING COMPOSITION. ISRAEL BERNITZ, New York, N. Y. Filed Jan. 5, 1916. Serial No. 70,382. (Cl. 134—24.)

1. A polishing composition comprising ceresin, beeswax, paraffin, linseed oil, spirits of turpentine, and carbolic acid substantially in the proportions described.

2. A polishing composition comprising ceresin, about eight ounces, beeswax, about two ounces, paraffin, about two ounces, linseed oil, about six ounces, spirits of turpentine, about twenty-eight ounces, and carbolic acid, about one dram.

3. The method of making a polishing composition herein described consisting in mixing ceresin, beeswax and paraffin, in about proportions described, and heating the same until it attains a liquid form, then pouring said mixture into spirits of turpentine in about the proportion stated, then adding to such mixture linseed oil and carbolic acid in about the proportions stated, and then stirring the same until it is slightly cold.

1,196,509. FLANGE-LUBRICATOR FOR CAR-WHEELS. WILLIAM FREDERICK BLACK, Jersey Shore borough, Pa., assignor of one-half to Harry Samuel Rauch, Jersey Shore, Pa. Filed Oct. 19, 1915. Serial No. 56,806. (Cl. 184—3.)



1. In a wheel flange lubricator, the combination of a shoe mounted adjacent to the wheel and movable to carry it into engagement with the peripheral surface of the wheel, a receptacle for a lubricant formed in that portion of the shoe whose surface is adapted to contact with the wheel, a passage for the lubricant from the receptacle to the surface of the portion of the shoe adapted to contact with the flange of the wheel, and means for pressing the shoe into contact with the wheel and thereby develop heat by which the lubricant in the receptacle is softened.

2. A wheel flange lubricator comprising a shoe adapted to be mounted adjacent to the wheel of a vehicle and movable toward the wheel, said shoe having a receptacle for a lubricant therein and a passage from the receptacle to the portion of the surface of the shoe which is adapted to contact with the wheel, a spring for pressing the shoe into engagement with the wheel to develop heat whereby the lubricant in the receptacle is softened, and means for effecting an adjustment of the tension of said spring.

3. A wheel flange lubricator comprising the combination of a shoe, a stationary bracket upon which the shoe is pivotally mounted, a receptacle for a lubricant within the shoe, a passage for the lubricant from the receptacle to the surface of the portion of the shoe which contacts with the wheel and a spring connected to the shoe and adapted to turn it about the bracket to force it into engagement with the wheel and thus develop heat which softens the lubricant in the receptacle.

4. A wheel flange lubricator comprising a shoe adapted to engage the peripheral surface of the wheel, a rod from which the shoe is pivotally suspended, springs on opposite sides of the shoe for positioning the latter axially of the rod, said shoe having a receptacle for a lubricant therein and a passage from the receptacle to the surface of the shoe and a spring-actuated member connected with the shoe for turning it about the rod to press the shoe into engagement with the surface of the wheel.

5. A wheel flange lubricator comprising a shoe adapted to be mounted adjacent to a wheel and movable toward and away from the wheel, said shoe having a receptacle therein for a lubricant and a passage for lubricant from the receptacle to the surface of the shoe, a lubricant holder detachably mounted upon the shoe and communicating with the receptacle, a spring-actuated piston in the holder and a spring connected to the shoe for pressing the shoe into contact with the wheel to develop heat by which the lubricant in the receptacle is softened.

[Claim 6 not printed in the Gazette.]

1,196,510. BOTTLE-CLOSURE. WILLIAM E. BLATTAU, Chicago, Ill. Filed Sept. 13, 1915. Serial No. 50,387. (Cl. 215—9.)



1. A receptacle closure comprising a generally round, thin body part and attachment means arranged for sidewise removal or attachment to a receptacle neck, said attachment means comprising laterally projecting integral wings having inwardly curved end portions, the wings extending outwardly beyond the periphery of the receptacle neck in the same plane as the body part, then downwardly and inwardly, the end edges of the wings being concaved on a radius substantially equal to that of the receptacle neck to make contact therewith and impositively lock the closure in place.

2. A closure cap for the mouth of a milk bottle or similar large mouthed receptacle having a peripheral bead; comprising a round, thin, generally flat body part adapted to seat upon the end of the bottle mouth; and attachment wings integral with the cap and arranged for sidewise removal or attachment to the receptacle neck, said attachment wings extending laterally from the cap at diametrically opposite points and projecting beyond the periphery of the bottle neck in the same plane as the body part of the cap, the end portions thereof being formed downwardly and inwardly with their end edges arcuately formed about the axis of the bottle as a center to make resilient contact with the neck of the bottle and impositively lock the closure cap in place.

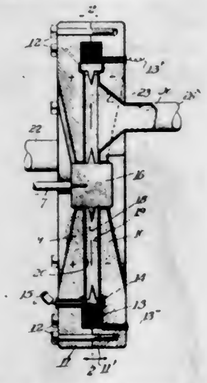
1,196,511. MACHINE FOR GENERATING ELECTRIC CURRENT. HENRY E. BORGER, Dayton, Ohio, assignor of one-half to Vincent G. Apple, Dayton, Ohio. Filed Nov. 27, 1914. Serial No. 874,167. (Cl. 171—212.)

1. A machine for producing electric current comprising means for creating a magnetic field; an insulated conduit for conducting a fluid to, through and from said field and partitions of insulating material extending longitudinally of said conduit, without the field.

2. A machine for producing electric current comprising means for creating a magnetic field; an insulated conduit for conducting a fluid through said field, and a plurality of fluid conductors communicating with each end of said conduit.

3. A machine for producing electric current comprising means for creating a magnetic field; an insulated conduit for conducting a fluid through said field; a plurality

of fluid conductors communicating with each end of said conduit and means for circulating a current generating fluid through said conductors and conduits and placing same under pressure.

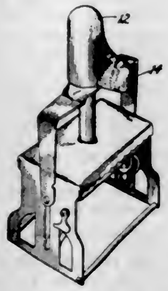


4. A machine for producing electric current comprising means for creating a magnetic field; an insulated conduit for conducting a fluid through said field, and a plurality of fluid conductors communicating with said conduit and located obliquely with reference to said conduit.

5. A machine for producing an electric current comprising two juxtaposed, spaced apart magnetically and oppositely polarized disks, an insulated annular path way for a conducting fluid between said disks; a central conductor insulated from said disks, a peripheral, insulated conductor closing the annular space between said disks; a radially positioned partition of insulating material extending from the central to the peripheral conductor and an opening through the respective disks through which to receive and discharge a fluid conductor from said conduit.

[Claim 6 not printed in the Gazette.]

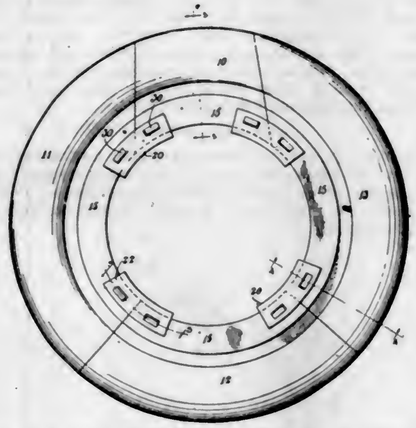
1,196,512. HAND-STAMP. WILLIAM J. BROOKMAN, Chicago, Ill. Filed Mar. 20, 1916. Serial No. 85,359. (Cl. 101—70.)



In a device of the kind described, in combination, a stamp body having a type face, a non-symmetrical upright handle secured to the stamp body and having a laterally compressed knob to be gripped between the fingers formed on an upright side of the handle and projecting forwardly therefrom with respect to the printing line of the type face of the body when in printing position.

1,196,513. COLLAPSIBLE CORE FOR TIRE-CASINGS. WILLIAM F. BRUNSWICK, Akron, Ohio. Filed Oct. 18, 1915. Serial No. 56,381. (Cl. 18—45.)

1. In a collapsible core for tire casings, the combination of separable sections adapted to form an annulus, a set of individual devices located at the respective junctions of the sections, each device extending onto both sides of the inner portions of the sections and extending circumferentially across the junction of said sections, and means engaging the sections and devices for drawing the sections together.



2. In a collapsible core for tire casings, the combination of sections having inwardly projecting ribs, and stirrups extending onto both sides of said ribs and provided with devices for drawing the stirrups into intimate contact with the inner periphery of the ribs and for drawing the core-sections together circumferentially.

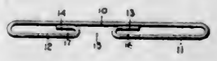
3. In a collapsible core, the combination of separable sections having inwardly projecting ribs, a member adapted to overlap both sides of such ribs at their junction, and wedges adapted to pass through such member and the intervening ribs of such adjacent sections.

4. In a collapsible core, the combination of separable sections having inwardly projecting ribs, a stirrup adapted to embrace such ribs and extend circumferentially across their junction on both sides thereof, and wedges adapted to pass through such stirrup and the intervening ribs, and adapted to draw the base of the stirrup against the inner periphery of the ribs.

5. In a collapsible core for tire casings, the combination of separable sections having inwardly extending arcual ribs, stirrups having arcual bases and side wings adapted to overlap the ribs of adjacent sections on both sides thereof, and means engaging the stirrups and the ribs for drawing the sections together.

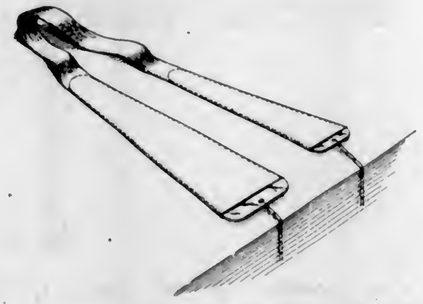
[Claims 6 to 12 not printed in the Gazette.]

1,196,514. TAG-FASTENER. EDWARD RIPLEY BURGESS, Brookfield, Mass. Filed Jan. 10, 1916. Serial No. 71,226. (Cl. 40—21.)



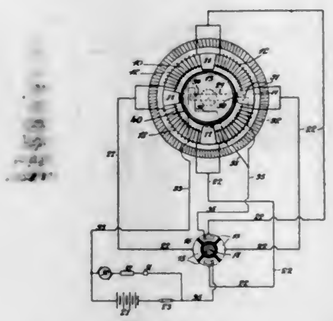
As a new article of manufacture, a tag fastener formed from a piece of resilient material bent upon itself at different distances from its ends to form inwardly extending hook members of unequal length and terminating short of and at different distances from the center of the body of the material, said members lying on the same side of the said body parallel therewith and spaced therefrom, the terminals of the said hook members being bent back upon themselves into engagement with the body, whereby elongated hooks of different lengths and spaced from each other will be formed to permit either hook to serve as a handle for the manipulation of the other hook.

1,196,515. TIE-PRESSING DEVICE. SAMUEL D. BUTTERWORTH, Lansing, Mich. Filed Nov. 8, 1915. Serial No. 60,172. (Cl. 223—19.)



A tie pressing device, comprising a pair of tapered wings, one larger than the other, the larger one being designed for stretching the large end of the tie and the smaller wing being designed for stretching the small end of the tie by thrusting the same in the tie ends, and a flexible linear member for connecting the two tapered wings together.

1,196,516. SPEEDOMETER. ALLEN A. CANTON, New York, N. Y., assignor to The Device Testing Company, a Corporation of Connecticut. Filed Oct. 29, 1914. Serial No. 869,181. (Cl. 175—183.)

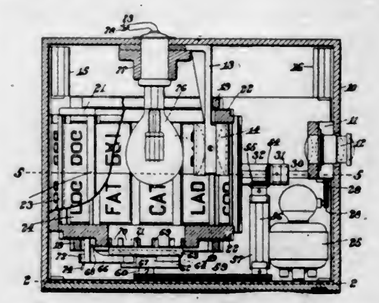


1. The combination of an electrically operated speedometer mechanism, means for supplying current to the same and including a circuit, a resistance for the latter and means in said speedometer mechanism and responsive to the voltage in said circuit for governing the relation of the said resistance to the circuit.

2. The combination of an electromagnet, an armature, an indicator member between the latter and said electromagnet, a circuit for supplying current to the said electromagnet, a resistance for said circuit and a contact lever mounted on said armature and responsive to the voltage in said circuit for governing the relation of the resistance to the circuit.

3. The combination of a casing, a speed indicator mounted to rotate therein, a shaft, electric means within said casing for operating said indicator and controlled by the speed of the said shaft, a circuit for supplying current to said electric means, a resistance for said circuit mounted within said casing and mechanism supported within the latter and responsive to the voltage in said circuit for governing the relation of the said resistance to the circuit.

1,196,517. PROJECTOR. ROBERT L. CARLSON and RAYMOND C. WYMAN, Boston, Mass. Filed Feb. 4, 1916. Serial No. 76,485. (Cl. 88—27.)



1. In a device of the class described, the combination of projecting means; a revoluble drum; a plurality of series of lantern slides carried thereby; a lamp within said drum; means for intermittently rotating said drum; and means for moving said drum endwise to bring either series of slides in the plane of said lamp and projecting means.

2. In a device of the class described, the combination of projecting means; a revoluble drum; a plurality of series of lantern slides carried thereby, each series having an odd number of slides therein; a lamp within said drum; means for intermittently rotating said drum; and means for moving said drum endwise to bring alternately either series of slides in the plane of said lamp and projecting means.

3. In a device of the class described, the combination of projecting means; a revoluble drum; a plurality of series of lantern slides carried thereby; a lamp within said drum; means for intermittently rotating said drum; means for moving said drum endwise to bring either series of slides in the plane of said lamp and projecting means; and means for extinguishing said lamp during the end movement of said drum.

4. In a device of the class described, the combination of a revoluble drum; a plurality of series of lantern slides carried thereby; a lamp within said drum; a projecting lens alined with said lamp, a condensing lens within said drum and in alinement with said projecting lens; means for intermittently rotating said drum; and means for moving said drum laterally whereby either series of slides may be brought into the plane of said lamp and lenses.

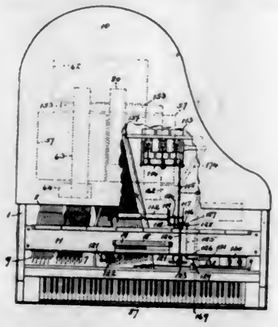
5. In a device of the class described, the combination of a revoluble drum; a plurality of series of lantern slides carried thereby; a lamp within said drum; a projecting lens alined with said lamp, a condensing lens within said drum and in alinement with said projecting lens; means for intermittently rotating said drum; means for moving said drum laterally whereby either series of slides may be brought into the plane of said lamp and lenses; and means for extinguishing said lamp during the lateral movements of said drum.

[Claims 6 to 23 not printed in the Gazette.]

1,196,518. PNEUMATIC PLAYER-PIANO. JAMES P. CAULFIELD, Baltimore, Md., assignor to The J. P. Caulfield Piano Company, Baltimore, Md., a Corporation of Maryland. Original application filed Nov. 27, 1909, Serial No. 530,124. Divided and this application filed May 11, 1911. Serial No. 626,408. (Cl. 84—166.)

1. In a player piano the combination with the striking pneumatics, of an air trunk; means for creating a tension in the air trunk; a casing having a chamber to communicate with the striking pneumatics to actuate the latter; connections between said chamber and trunk to create a tension in the chamber from the trunk; valve means for varying the tension in the chamber from the trunk; a

key slip having an open duct extending from a concealed side to an exposed side thereof; a conduit extending from the concealed side of the open duct in the key slip, and means at the inner end of the said conduit for controlling the operation of the tension-varying valve-means.



2. In a player piano the combination with the striking pneumatics, of an air trunk; means for creating a tension in the trunk; a casing having a chamber to communicate with the striking pneumatics to actuate the latter; connections between said chamber and trunk to create a tension in the chamber from the trunk; valve means for varying the tension in the chamber from the trunk; a normally closed conduit having one end at and leading from one side of said valve-means; a valve at the other end of said conduit to cut off or admit atmosphere to said latter end and a conduit normally open to the atmosphere and leading to said valve that controls the normally closed conduit to the valve means, whereby the closing of said latter normally open conduit will effect an operation of the tension-varying valve-means.

3. In a player piano the combination with the striking pneumatics, of sounding devices; a damper normally engaging the sounding devices; an air trunk; means for creating a tension in the air trunk; a casing having a chamber to communicate with the striking pneumatics to actuate the latter; a box having a chamber in continuous communication with the said casing-chamber and also having two passages; a normally open valve between the box-chamber and one of said passages; a normally closed valve between said box-chamber and the other of said passages said normally closed valve having one side exposed to the passage with the normally open valve; a damper operating bellows communicating with the passage that is controlled by the normally closed valve; connections between the bellows and the damper; a key slip having an open duct extending from a concealed side to an exposed side thereof and a conduit extending from the concealed side of the key-slip duct to one side of the normally-open valve that controls communication from the box-chamber to one of said two passages.

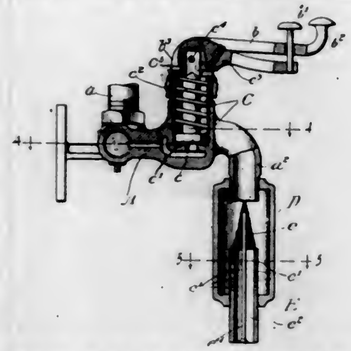
4. In a player piano the combination with a case, of sounding devices; a tracker; music rolls; a music sheet; pneumatic driving means for the rolls; air-tension means for actuating the sounding devices; pneumatic means for reversing the direction of the rolls to rewind the sheet; a normally open valve interposed in the air-tension means which valve when closed will cut off air tension from the means that actuates the sounding devices; a conduit leading from one side of said valve; a second valve at the other end of said conduit to normally keep said conduit open to atmosphere and a duct leading from one side of said second valve and normally open to the atmosphere to provide atmospheric pressure to said latter side of said second valve said duct when closed causing said second valve to cut off atmosphere to the conduit leading to the first named valve and close the latter to cut off air tension to the sound actuating means when the direction of the rolls is reversed.

1,196,519. CARPENTER'S SQUARE. CALVIN CAYLOR, Northfield, N. J. Filed July 1, 1913. Serial No. 776,846. (Cl. 33—113.)



A square comprising a blade and a tongue, a plurality of longitudinal lines on a side of the square parallel to the edges of the blade and the tongue, a plurality of sets of angles on said square having separate vertices for the purposes described, one vertex exterior of the square and another vertex on said tongue, said angles intersecting said longitudinal lines and coöperating therewith, and data located upon said square and adapted to be used in conjunction with said angles and said lines for the purpose of accurately and quickly determining the lengths and cuts of timbers used in framing structures.

1,196,520. INSTANTANEOUS STEAM WATER-HEATER. JAMES N. CHADWICK, Chicago, Ill. Filed July 15, 1914. Serial No. 851,064. (Cl. 137—26.)



1. Apparatus for mixing steam with running water to heat the latter, comprising a steam valve, a cold water valve, a main handle for said water valve, a secondary handle for said steam valve, said handles being interconnected to cause the operation of both by merely pressing down on the main handle, separate passages leading to said valves, and means to discharge the mixture formed when both valves are open, said interconnection having some lost-motion to permit opening of the water valve ahead of the steam valve.

2. Apparatus for mixing steam with running water to heat the latter, comprising a steam valve, a cold water valve, a main handle for said water valve, a secondary handle for said steam valve, said handles being interconnected to cause the operation of both by merely pressing down on the main handle, separate passages leading to said valves, and means to discharge the mixture formed when both valves are open, said interconnection having some lost-motion to permit opening of the water valve ahead of the steam valve, and said lost-motion permitting opening of the steam valve alone when the secondary handle only is depressed.

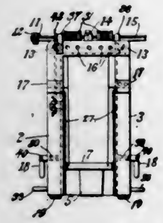
3. Apparatus for mixing steam with running water to heat the latter, comprising a steam valve, a cold water valve, a main handle for said water valve, a secondary handle for said steam valve, said handles being interconnected to cause the operation of both by merely pressing down on the main handle, separate passages leading to said valves, and means to discharge the mixture formed when both valves are open, said interconnection having some lost-motion to permit opening of the water valve ahead of the steam valve, and a screw for adjusting said lost-motion to regulate the proportion of steam and water.

4. Apparatus for mixing steam with running water to heat the latter, comprising a steam valve, a cold water valve, a main handle for said water valve, a secondary handle for said steam valve, said handles being interconnected to cause the operation of both by merely pressing down on the main handle, separate passages leading to said valves, and means to discharge the mixture formed when both valves are open, said interconnection having some lost-motion to permit opening of the water valves ahead of the steam valve, springs for yieldingly holding said valves closed, and means for adjusting the normal position of one handle to regulate the relative compression of said springs.

5. Apparatus for mixing steam with running water to heat the latter, comprising a steam valve, a cold water valve, a main handle for said water valve, a secondary handle for said steam valve, said handles being interconnected to cause the operation of both by merely pressing down on the main handle, separate passages leading to said valves, and means to discharge the mixture formed when valves are open, said interconnection having some lost-motion to permit opening and closing of the water valve ahead of the steam valve, and the secondary handle being movable downward alone to produce a discharge of steam only.

[Claims 6 to 16 not printed in the Gazette.]

1,196,521. MOLDING-MACHINE FOR MOLDING PLASTIC MATERIALS. GEORGE WHITEFIELD CHANCE, Bristol, Pa. Filed Nov. 30, 1912. Serial No. 734,382. (Cl. 25—131.)



1. In a mold, in combination, two sides, connecting means above the same, a core between the sides, turnbuckles attached to the core near the ends at right angles thereto and screws extending each side from the turnbuckles and pressing against the sides of the mold.

2. In a mold, in combination, two sides, a core located between the sides, a drum hoist near each end of mold attached to cross arms adjustably connecting the sides, a connecting flexible drive between the drums so arranged that the hoist may be operated from either end of the mold and lift the core by the action of both drums synchronously.

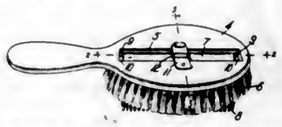
3. In a mold, in combination, two sides, a core between the sides, drum hoists mounted thereon near the ends of the sides, cables wound on said hoists and attached to the core, together with supporting feet attached to the lower part of the sides which feet may be thrown outside of the inner faces of the sides or project inside of the inner faces of the sides.

4. In a mold, in combination, two sides, a core between the sides composed of two or more tapering units, drum hoists attached to the sides at the ends of the mold and connected to the core by flexible connections, movable feet attached to the lower part of the sides, and removable end plates connecting the sides.

5. In a mold, in combination, two sides, inside plates adjoining the inner surfaces of the sides, a core between the sides, drum hoists connected to the sides and adapted to raise the core and supports under the sides of the mold.

[Claims 6 and 7 not printed in the Gazette.]

1,196,522. COMBINATION HAIR BRUSH AND COMB. MARTIN CHRISTIANSEN, New York, N. Y. Filed Jan. 27, 1916. Serial No. 74,630. (Cl. 132—11.)



1. In an article of the class described, a brush the back of which has a longitudinal, substantially central slot the sides of which taper so that the slot is wider at the upper surface than at the lower surface of the back, said slot being adapted to admit a comb therethrough from the back, bearing surfaces at the ends of the slot depressed from the upper surface of the back and adapted to engage the ends of the comb inserted into the slot, and resilient means to retain yieldingly the comb at either side of the slot.

2. In an article of the class described, a brush the back of which has a longitudinal slot closed at the ends and tapering downwardly, said slot being adapted to receive a comb from the back of the brush, bearings on the ends of the slot, and means adapted to retain the comb in the slot on the bearings and retain the comb yieldingly against either side of the slot.

3. In an article of the class described, a brush the back of which has a slot tapering downwardly to receive a comb so that the teeth of the comb will be located between the rows of bristles of the brush, said brush presenting bearings in said slot for the ends of a comb engaged in the slot, and means for maintaining a comb in the slot on the bearings and yieldingly retain the comb against either side of the slot.

4. In an article of the class described, a brush the back of which has a longitudinal slot the sides of which taper so that the slot is wider at the upper surface than at the lower surface of the back, said slot having bearing surfaces at the ends thereof, and resilient means secured to the back across the slot and adapted to engage the back of a comb engaged in the slot.

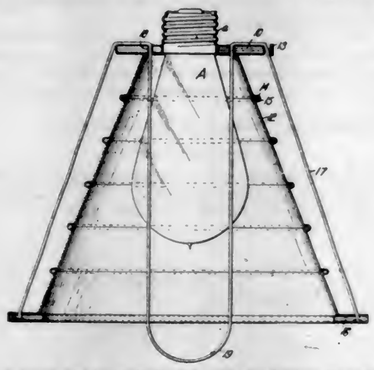
5. In an article of the class described, a brush having a longitudinal slot closed at the ends and tapering downwardly to receive a comb therein, and means adapted to engage the back of the comb to lock the comb in the slot.

[Claim 6 not printed in the Gazette.]

1,196,523. LAMP-SHADE. ROBERT L. CLARK, Union, W. Va. Filed Feb. 16, 1916. Serial No. 78,636. (Cl. 240—108.)

1. A lamp shade of the class described including a head having an opening to fit over a lamp, a collapsible drop curtain depending from the said head and flaring toward its lower end, a series of annular bands on the curtain of successively increasing diameter toward the lower end of the curtain to nest one within another, a ring carried by the curtain at the lower edge thereof, and a draw string connected with the said bottom ring approximately at diametrically opposite points on the ring, the said draw string extending upwardly along the curtain at the outside to and over the head, said head having openings extending therethrough, and the said draw string passing through the said openings and extending downwardly within the curtain to a position to be grasped for collapsing the cur-

tain, the said draw string having frictional engagement with the said head to sustain the shade in collapsed form.



2. A lamp shade including a curtain flaring in a downward direction, means to secure the upper end of the curtain to a lamp, annular bands of stiff material on said curtain of gradually increasing size toward the lower end of the curtain, and a draw string connected with the said curtain at the lower end thereof at opposite sides, said draw string extending over the first-mentioned means at the upper end of the curtain and then downwardly in looped form within the shade to a position to be grasped.

1,196,524. MOWER-PITMAN. SANFORD L. CLUETT, Hoosick Falls, N. Y. Filed May 14, 1912. Serial No. 697,144. (Cl. 74—17.)

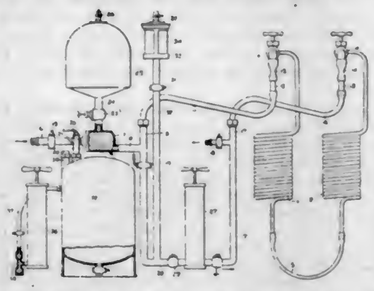


1. A pitman comprising an integral metallic reach-member of I-beam cross-section, the rib of the I-beam extending from end to end of the reach-member, an integral offset extension for said reach-member having a ball-receiving socket formed therein, and a resilient clamp piece likewise offset from the reach-member and having a complementary ball-receiving socket disposed opposite said first-named socket, said clamp-piece being provided with a tongue fitting between the upper and lower flanges of the reach-member and secured thereto, and an adjustable locking bolt for exerting a tension upon the resilient clamp-piece; substantially as described.

2. A pitman, having a reach-member consisting of a metal bar of I-beam cross-section at the pitman end, said reach-member being provided with an offset integral extension provided with a clamping socket, and a coöperating flexible extension secured to the I-beam between its flanges and having a complementary socket, said extensions being separated by an intervening space to permit putting the flexible extension under tension, and a tension-exerting screw bolt for drawing the flexible extension toward the integral extension; substantially as described.

1,196,525. PIPE-CLEANING MACHINE. WILLIAM COHEN, Bayonne, N. J. Filed Dec. 22, 1915. Serial No. 68,212. (Cl. 225—12.)

The combination with a pair of coils to be cleaned, having faucets at one end thereof, and a connection between their opposite ends, of a pump, a pair of fluid pipes leading from said pump, intake and outlet valves at opposite sides of the pump, a pair of connecting pipes leading from said fluid pipes and having attaching members at their ends for engagement with said faucets, one of said fluid pipes at the outlet side of the pump having a valved outlet nipple, a valved supply pipe leading to the other fluid pipe, an air tank and a chemical tank, each having an independent valved connection with said supply pipe, a cut off valve in the latter fluid pipe between the pump and



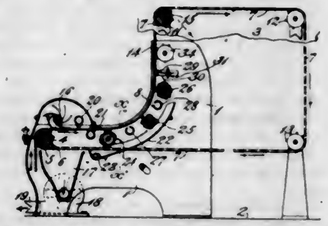
said supply pipe, and a brine supply tank having a valved connection with the said latter fluid pipe between the pump and the said cut off valve, said air, chemical and brine tanks being connected to one another whereby to form a readily portable apparatus in their connected relation.

1,196,526. LARD-PADDLE. MILTON STEVENS DANNER, Tuskegee, Ala. Filed June 4, 1914. Serial No. 842,944. (Cl. 65—12.)



A lard paddle, comprising a handle, and an elongated blade extending in flat form from the handle end to near the front, said front end being in the form of an upturned curved lip rising slightly above the plane of the flat portion and forming a comparatively small part of the total length of the blade, said lip terminating in an edge curved from side to side, the blade furthermore having knife edges at each side extending from points rearward of the lip forwardly and following the lines of said lip, the flat portion of the blade presenting straight side edges from the heel thereof forwardly along their full length whereby to be disposed parallel with the straight up and down lines of a lard firkin.

1,196,527. CARPET-CLEANING MACHINE. JULES DEHON, Philadelphia, Pa. Filed Feb. 12, 1916. Serial No. 77,842. (Cl. 15—8.)



1. In a carpet cleaning machine, a casing, an endless conveyer, means for supporting and operating the same, opposed clamping members carried by said conveyer, and a removable wedge insertible between said members to engage and clamp an end of the carpet and means for directing air and a fluid against opposite sides of the carpet carried by said conveyer.

2. In a carpet cleaning machine, a casing, an endless conveyer, means thereon for connecting the end of a carpet thereon, means above said conveyer for forcing air through the carpet, means for directing a washing fluid against the opposite side of the carpet and brushes mounted to act against the under side of the carpet.

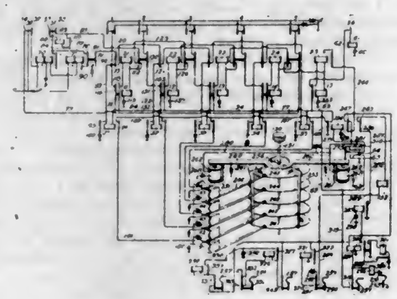
3. In a carpet cleaning machine, a casing, an endless conveyer, means thereon for connecting the end of a carpet thereon, means above said conveyer for forcing air through the carpet, means for directing a washing fluid against the opposite side of the carpet, brushes mounted to act against the under side of the carpet, and a squeezing device arranged to act against the carpet after it has been acted upon by said brushes.

4. In a carpet cleaning machine, a casing, an endless conveyer, means thereon for connecting the end of a carpet thereon, means above said conveyer for forcing air through the carpet, means for directing a washing fluid against the opposite side of the carpet, brushes mounted to act against the under side of the carpet, means for directing a fluid against the carpet between said brushes, and a squeezing device arranged to act against the carpet after it has been acted upon by said brushes.

5. In a carpet cleaning machine, a casing, an endless conveyer, means for forcing air through the carpet, impact means arranged adjacent said conveyer to act upon the carpet while it is traveling, a collector beneath said means, means for conducting a fluid against the under side of the carpet, a brush arranged adjacent said conveyer to act upon the carpet, and a receptacle beneath said brush.

[Claim 6 not printed in the Gazette.]

1,196,528. SELECTING SYSTEM. AMOS F. DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 19, 1914. Serial No. 825,902. (Cl. 178—23.)



1. A selecting system comprising a current control means, a transmission line, and a plurality of relays acting invariably in the same sequence coöperating with said means and associated with said line to produce a succession of impulses for said line or be operated by a succession of impulses over said line.

2. A selecting system comprising a selecting mechanism, current control means, a transmission line, and a plurality of relays acting invariably in the same sequence coöperating with said selecting mechanism and said means to produce selections from impulses over said line and to produce a succession of impulses for said line.

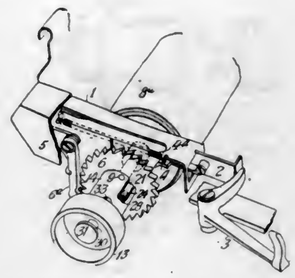
3. A selecting system comprising local current control means, a transmission line, a plurality of sequentially acting relays coöperating with said means and said line, and an electromagnet and apparatus made operative by current supplied by said means or said line and coöperating with said relays to cause said relays to produce a succession of current impulses for said line or operate through a succession of impulses over said line.

4. A selecting system comprising current-control means, a plurality of polarized relays controlled by said means, and a series of relays operating sequentially under the control of said polar relays and coöperating with said means to produce a selective succession of current impulses.

5. A selecting system comprising a plurality of type selecting levers from which one is to be selected, means for effecting such selection, a plurality of key contacts to control the action of said means, a plurality of connecting relays successively causing said contacts to become active, and a plurality of cut-off relays successively causing said contacts to become inactive, said cut-off relays controlling the action of said connecting relays.

[Claims 6 to 12 not printed in the Gazette.]

1,196,529. TYPE-WRITING MACHINE. JOHN C. DOANE, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 23, 1911. Serial No. 616,335. (Cl. 197—123.)



1. In a platen release, in combination, a platen, a line-space wheel co-axial therewith and having a plurality of annularly disposed perforations, a pin-carrier adjacent to said ratchet wheel, a plurality of pins guided longitudinally therein and adapted to engage said perforations, a plunger mounted in said pin-carrier and adapted to slide inwardly, and rockers engaging said pins and said plunger to withdraw said pins.

2. In a platen release, in combination, a platen, a line-space wheel co-axial therewith and having a plurality of perforations, a sleeve mounted adjacent to said wheel, said sleeve having a pin socket, a pin guided longitudinally in said socket and adapted to engage said perforations, said sleeve having a bore therein, a plunger mounted to slide longitudinally in said bore, said sleeve having a pocket between said socket and said bore, and a rocker received in said pocket engaging said pin and projecting into the path of said plunger, whereby the longitudinal movement of said plunger may withdraw said pin.

3. In a platen release, in combination, a platen, a wheel co-axial therewith and having a plurality of perforations, a sleeve mounted adjacent to said wheel, said sleeve having a pin socket adapted to be brought into alinement with said perforations, a pin guided longitudinally in said socket and adapted to engage said perforations, said sleeve having a bore therein, a plunger mounted to slide longitudinally in said bore, said sleeve also having a pocket between said socket and said bore, a rocker received in said pocket engaging said pin and projecting into the path of said plunger, whereby the longitudinal movement of said plunger may withdraw said pin, and means tending to hold said pin in engagement with said wheel.

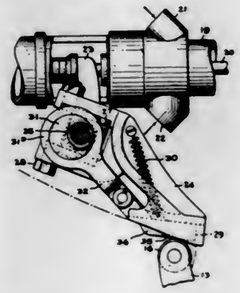
4. In a platen release, in combination, a platen, a wheel co-axial therewith and having a plurality of annularly disposed perforations, a sleeve having a plurality of guide sockets formed therein which may aline with said perforations, pins mounted to slide in said sockets, means

tending to force said pins into engagement with said perforations, said sleeve having a bore therein, and a plurality of pockets formed in the wall of said bore, rockers mounted in said pockets engaging said pins, and a plunger mounted in said bore to withdraw the same.

5. In a platen release, in combination, a platen, a wheel co-axial therewith and having a plurality of annularly disposed perforations, a sleeve co-axial with said wheel and having a plurality of guide sockets formed therein, pins sliding in said guide sockets and having eyes formed therein, a plurality of rockers mounted in said sleeve and having arms engaging said eyes to withdraw said pins, and a plunger mounted to slide in said sleeve to engage said rockers and withdraw said pins.

[Claims 6 to 19 not printed in the Gazette.]

1,196,530. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HENRY L. DOERING, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Mar. 26, 1913. Serial No. 756,849. (Cl. 123—110.)



1. In combination, an engine, a valve controlling the admission of motive fluid thereto, a lever for operating the valve, said lever having a fixed pivot and a cam surface, an actuator which engages the cam surface for moving the lever to operate the valve, and means for varying the cam surface to vary the action of the actuator on the lever.

2. In combination, an engine, a valve controlling the admission of motive fluid thereto, a valve actuator, a lever having an end which is raised by the actuator once for each complete movement thereof, a cam that is carried by the lever and is engaged by the actuator to move the lever to actuate the valve, and means for moving the cam in a manner to increase or decrease the period of engagement of the actuator and the cam.

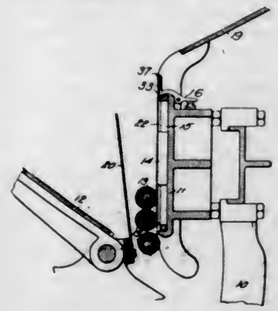
3. In combination, an engine, a valve controlling the admission of fluid thereto, an actuator which has an orbital path of movement, a lever that projects into said path and actuates the valve, a cam carried by the lever which is engaged by the actuator, and means for sliding the cam to and fro on the lever to increase or decrease the period that the actuator and lever are in engagement.

4. In combination, an engine, a valve controlling the admission of fluid thereto, an actuator which has an orbital path of movement, a lever that projects into said path and actuates the valve, a sliding cam carried by the lever which is engaged by the actuator, an eccentric for moving the cam on the lever, and means for turning the eccentric.

5. In combination, an engine, a valve controlling the admission of fluid thereto, an actuator which has an orbital path of movement, a bell-crank lever moved by the actuator one arm of which operates the valve, the other projecting in said orbital path, a rock-shaft that supports the lever, a sliding cam carried by one arm of the lever, an eccentric mounted on the rock-shaft and connected to the cam, and means for turning the eccentric.

[Claims 6 to 10 not printed in the Gazette.]

1,196,531. AUTOMATIC ROLLER-SUPPORT FOR PLATEN PRINTING-PRESSES. WALTER WILLIS DRUMMOND, Stafford, Kans. Filed Jan. 11, 1916. Serial No. 71,500. (Cl. 101—79.)



1. A roller support for printing presses, including separate roller supporting members, adapted to be separately positioned and sustained on the press to receive the rolling contact of the inking rollers, and means to automatically raise and depress the said supporting members as the inking rollers approach the form and recede therefrom.

2. A roller support for printing presses, including roller supporting means adapted to be positioned and sustained on the press and presenting side members to support and receive the rolling contact of the inking rollers in the travel of the latter in both directions over the printing form, and means to raise and depress the said supporting means as the inking rollers approach the form and recede therefrom.

3. A roller support for printing presses, including side members on which the rollers travel in both directions, said members being adapted to be positioned on a printing bed at the form, and means to raise and depress said members, said means being subject to the reverse movements of the inking rollers.

4. A roller support for platen printing presses, including depressible side members adapted to be positioned at the form, toggle elements connected with said members, and trip means adapted to be engaged by the inking rollers in approaching a form and returning to the ink plate.

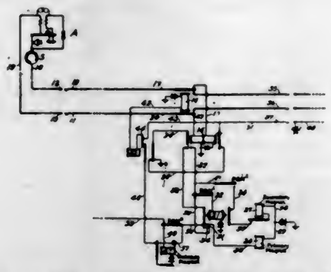
5. A roller support for platen printing presses, including depressible side members adapted to be positioned at the form, toggle elements connected with said members, and trip means adapted to be engaged by the inking rollers in approaching a form and returning to the ink plate, the said trip means having an articulated relation to the toggle elements, together with spring means resiliently engaging the said toggle elements and trip means.

[Claims 6 to 11 not printed in the Gazette.]

1,196,532. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. BERT G. DUNHAM, Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 7, 1915. Serial No. 32,689. (Cl. 179—20.)

1. In a machine switching telephone system, the combination with a selector, a stepping relay associated therewith, a sender for operating the same, a release circuit for said selector, a primary stepping circuit controlled by said relay, and a secondary stepping circuit, of a slow acting relay controlling said secondary stepping circuit and said release circuit at its armatures and back contacts, a circuit for said relay closed at the armature and front contact of said stepping relay, means for opening said circuit controlled by the selector shaft, and a circuit for maintaining said slow relay energized including an armature and back contact of said stepping relay.

2. In a telephone exchange system, the combination with a selector, trunks terminating therein, a stepping relay associated with said selector, a sender for operating the same, a primary stepping circuit controlled by said relay, a secondary stepping circuit, and a release circuit, of a slow relay adapted to be energized upon the energization of said stepping relay to open said release and secondary circuits, an off-normal contact spring for said selector adapted to transfer the control of said slow relay to the armature and back contact of said stepping relay upon the first primary step of said selector, said slow relay upon its deënergization upon the maintained attraction of the stepping relay armature being adapted to close the secondary stepping magnet circuit to cause the selector to hunt for an idle trunk, said release circuit being controlled at a front contact of the stepping relay during the trunk hunting operation.



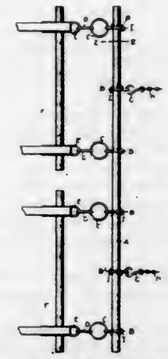
3. In a machine switching telephone system, the combination with a selector, a stepping relay associated therewith, a sender for operating the same, a release circuit for said selector, a primary stepping circuit controlled by said relay, and a secondary stepping circuit, of a slow acting relay adapted when energized to interpose a break in the secondary stepping circuit and in the release circuit, and to prepare the primary stepping circuit, a circuit for said relay closed at the armature and front contact of said stepping relay, means for opening said circuit controlled by the selector shaft, and a circuit for maintaining said slow relay energized including an armature and front contact thereof, and an armature and back contact of said stepping relay.

4. In a machine switching telephone system, the combination with a selector, a stepping relay associated therewith, a sender for operating the same, a release magnet for said selector, a circuit therefor, a primary stepping circuit controlled by said relay, and a secondary stepping circuit, of a slow acting relay controlling said secondary stepping circuit and said release circuit at its armature and back contact, a circuit for said slow relay closed at the armature and front contact of said stepping relay, means for opening said circuit controlled by the selector shaft, a circuit for maintaining said slow relay energized including an armature and back contact of said stepping relay, means for closing said release circuit, a locking circuit for said release magnet, and an off-normal contact controlling said locking circuit.

5. In a machine switching telephone system, the combination with a selector, a stepping relay associated therewith, a sender for operating the same, a release circuit for said selector, a primary stepping circuit controlled by said relay, and a secondary stepping circuit, of a slow acting relay controlling said secondary stepping circuit and said release circuit at its armatures and back contacts, a circuit for said relay closed at the armature and front contact of said stepping relay, and a contact controlled by the selector shaft for transferring the control of said slow relay to the back contact of said stepping relay.

1,196,533. DRAFT-BAR. WILLIAM F. DUNN and JOE M. KERBY, Talent, Oreg. Filed June 9, 1915. Serial No. 33,068. (Cl. 55—84.)

1. A draft bar for harrows, comprising a ring through which extends the bar, and a staple forming an eye for the ring to pass through, the said staple having its shanks engaging the said bar and one of the shanks extending through the bar and being provided with a nut abutting against the bar.

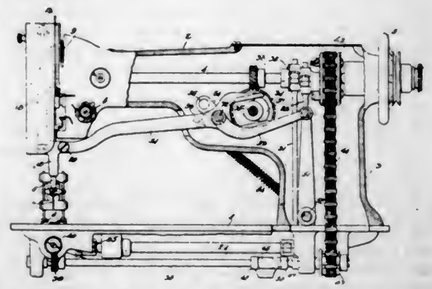


2. A draft bar for harrows, comprising a tubular bar, a ring through which extends the bar, a staple through which passes the ring, the staple having a short shank and a long shank, the short shank extending into the bar and the long shank extending diametrically through the bar, and a nut on the outer end of the said long shank.

3. A draft bar for harrows, comprising a tubular bar, two sets of rings through which extends the said bar, two sets of staples held on the said bar, one set of staples extending forwardly and engaged by a set of rings and the other set of staples extending rearwardly and engaged by the other set of rings, each staple having one shank extending through the bar, a nut screwing on the outer end of each extended shank, rearwardly extending connections held on one set of rings and adapted to connect with the harrow, and forwardly extending connections held on the other set of rings and adapted to connect with the draft mechanism for pulling the harrow over the field.

4. A draft bar, comprising a tubular metal bar, two sets of rings of considerably greater diameter than the bar and through which the bar loosely passes, means for detachably and pivotally securing the sets of rings on the bar, one set being secured at the front and the other at the rear of the bar, whereby one set will project forwardly and the other rearwardly, and hooks carried by the rearwardly projecting rings, the forwardly projecting rings being adapted to be connected with the draft devices.

1,196,534. SEWING-MACHINE. GEORGE M. EAMES and JOHN S. FINCH, Bridgeport, Conn., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 18, 1913. Serial No. 774,275. (Cl. 112—4.)



1. The combination with a reciprocating and laterally movable needle, of a vibratory and endwise movable lever

connected with and adapted to impart to said needle lateral movements, means for vibrating said lever, a swinging link pivotally connected with said lever, a fulcrum for said link, means for moving said fulcrum in an arcuate path crosswise of said lever, and means for changing the position of said arcuate path of movement relatively to said lever.

2. In a sewing machine, the combination with a main-shaft, a needle vibrating cam operatively connected with said shaft, a laterally movable needle-bar carrying frame provided with a needle-carrying bar, and a needle-bar carrying frame connection pivoted at one end to said needle-bar carrying frame, its opposite end being acted on by said needle vibrating cam, of an oscillating shaft journaled in a stationary part of the sewing machine provided with a needle-bar positioning arm and connections including a shaft-crank and links located between said oscillating shaft and needle-bar carrying frame connection for positioning the needle in different lateral stitch-forming positions.

3. In a needle-controlling mechanism for sewing machines, the combination with a main shaft, a cam shaft provided with a needle-vibrating cam, a laterally movable needle-bar-carrying frame provided with a needle-carrying bar, a needle-bar-carrying frame connection pivoted at one end to said needle-bar-carrying frame, its opposite end being acted on by said needle-vibrating cam, and a needle-bar-positioning arm, of connections including links whose axes are normally located in the same plane as the axes of said pivoted connection and cam shaft for operatively connecting said needle-bar-positioning arm with said needle-bar-carrying frame connection for controlling the stitch-forming movements of said needle-bar in different lateral positions, dependent upon the nature of the product desired.

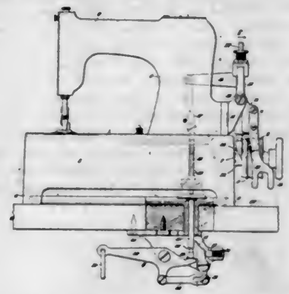
4. In a sewing machine, the combination with a main-shaft, a needle-vibrating cam operatively connected with said shaft, a laterally movable needle-bar carrying frame provided with a needle-carrying bar, and a needle-bar carrying frame connection pivoted at one end to said needle-bar carrying frame, its opposite end being acted on by said needle-vibrating cam, of an oscillating shaft held against accidental movement journaled in a stationary part of the sewing machine and provided with a needle-bar positioning arm, and connections including a shaft crank and links located between said oscillating shaft and needle-bar carrying frame connection for positioning the needle in different lateral stitch-forming positions.

5. In a sewing machine, the combination with a main-shaft, a needle vibrating cam operatively connected with said shaft, a laterally movable needle-bar carrying frame provided with a needle-carrying bar, and a needle-bar carrying frame connection pivoted at one end to said needle-bar carrying frame, its opposite end being acted on by said needle vibrating cam, of an oscillating shaft journaled in a stationary part of the sewing machine, provided with a needle-bar positioning arm and connections between said oscillating shaft and frame connection including a crank-arm carried by said oscillating shaft and provided with a bearing sleeve, a shaft journaled in said bearing sleeve, links operatively connecting said last named shaft with said frame connection for positioning the needle in different lateral stitch-forming positions.

[Claims 6 to 8 not printed in the Gazette.]

1,196,535. POWER-TRANSMITTER. JOHN S. FINCH, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 31, 1913. Serial No. 798,409. (Cl. 74—46.)

1. In a power-transmitter, the combination with means under control of the operator for effecting and for arresting the transmission of power and means, including positive stop-elements, for predetermining the idle position of the power transmitting means, of means having the same control and acting simultaneously with the means for effecting the transmission of power arranged between said stop-elements and said manually controlled means for locking the stop-elements against accidental engagement during the stitching operation.

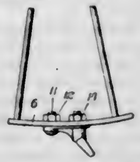


2. In a power transmitter, the combination with means under the control of the operator for effecting and for arresting the transmission of power and means, including positive stop-elements, for predetermining the idle position of the power-transmitting means, of means having the same control and acting simultaneously with the means for effecting the transmission of power including a latch arranged between said stop-elements and said manually controlled means for locking the stop-elements against accidental engagement during the stitching operation.

3. In a power transmitter, the combination with means under the control of the operator for effecting and for arresting the transmission of power and means, including positive stop-elements, for predetermining the idle position of the power transmitting means, of means having the same control and acting simultaneously with the means for effecting the transmission of power including a spring-operated latch arranged between said stop-elements and said manually controlled means for locking the stop-elements against accidental engagement during the stitching operation.

4. In a power-transmitter, the combination with means under the control of the operator, including a treadle, for effecting and for arresting the transmission of power and means, including positive stop-elements, for predetermining the idle position of the power transmitting means, of means having the same control and acting simultaneously with the means for effecting the transmission of power including a latch, a treadle connection lever and a latch-operating link for connecting said lever with said latch for locking said manually controlled stop-elements against accidental engagement during the stitching operation.

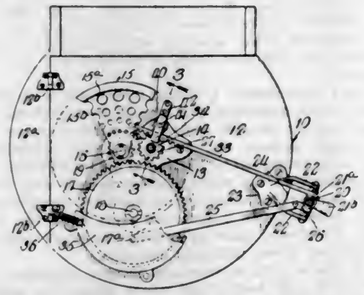
1,196,536. WHEEL-SPUD. TRUMAN B. FUNK, Moline, Ill., assignor to Moline Plow Company, Moline, Ill., a Corporation of Illinois. Filed Mar. 20, 1916. Serial No. 85,468. (Cl. 21—215.)



1. A wheel spud consisting of a base portion adapted to lie flat against a wheel rim, a neck depending from the base portion, and a blade secured to the neck and of greater depth than the neck, and forming abrupt shoulders in conjunction therewith at the point of attachment, substantially as described.

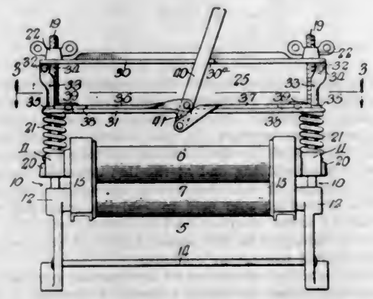
2. A wheel spud consisting of a base portion adapted to lie flat against a wheel rim, a neck depending from the base portion, and a blade carried by the neck and of greater width than the neck and extending downwardly in diagonal relation thereto, and forming abrupt shoulders at the point of juncture with the neck, substantially as described.

1,196,537. GEARING. WILLIAM H. GEORGE, Fairfield, Iowa, assignor to The Dexter Company, a Corporation of Iowa. Filed July 1, 1914. Serial No. 848,379. (Cl. 74—50.)



A gearing for washing machines, comprising in combination with a horizontal support, a bearing plate fixed to said support, an upright operating shaft depending from and journaled in said bearing plate, a pinion non-rotatively mounted on said operating shaft above said bearing plate, a stud rising from said bearing plate and spaced from said operating shaft, a fly wheel rotatively mounted on said stud, a second stud rising from said plate and spaced to one side of the line of said first named stud and operating shaft, a larger gear rotatively mounted on said second stud, a small gear fixed to said fly wheel coaxially therewith in a plane below the plane of said fly wheel, said small gear being engaged by said large gear, said large gear, small gear and pinion being all located in a common plane between said bracket plate and fly wheel, said large gear being partially covered by said fly wheel, a gear casing fixed to said support and covering that part of the large gear exposed beyond said fly wheel, a bracket plate fixed to the edge of said support and depending below the same, a prime mover lever of the second class, fulcrumed to said bracket, a pitman operatively connecting said prime mover with said large gear and a rack bar operatively connecting said prime mover with said pinion.

1,196,538. SAFETY ATTACHMENT FOR WRINGERS. WILLIAM H. GEORGE, Fairfield, Iowa, assignor to The Dexter Company, Fairfield, Iowa, a Corporation of Iowa. Filed May 20, 1916. Serial No. 98,740. (Cl. 68—32.)



1. A device of the kind described comprising in combination with a wringer frame having end bearing members, a plurality of rolls journaled at their ends in said bearing members, means associated with said bearing members for applying tension between said rolls, a normally rigid, rectangular collapsible frame mounted on said bearing members through which tension may be applied to said rolls, and means operating on the ends of said frame for collapsing the same.

2. A device of the kind described comprising in combination with a wringer frame having end bearing members, a plurality of rolls journaled at their ends in said bearing members, means associated with said bearing members for applying tension between said rolls, a normally rigid rectangular collapsible frame mounted on said bearing members through which tension may be applied to said rolls, means operating on the ends of said frame for collapsing the same and a lever for actuating said means.

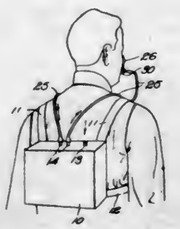
3. A device of the kind described comprising in combination with a wringer frame having bearing members, a plurality of rolls journaled at their ends in said bearing members, means associated with said bearing members for applying tension between said rolls, a normally rigid, collapsible frame mounted on said bearing members through which tension may be applied to said wringer rolls, said frame comprising top and bottom parallel bars, spacing means normally holding said bars in spaced relation and means adapted to displace said spacing means from between said bars.

4. A device of the kind described comprising in combination with a wringer frame having end bearing members, a plurality of wringer rolls journaled at their ends in said bearing members, means associated with said bearing members for imposing tension on said rolls, a normally rigid, collapsible frame mounted on said bearing members through which tension may be impressed on said wringer rolls, said frame comprising top and bottom parallel bars, spacing devices pivotally connected to one of said bars normally holding said bars in spaced relation, and a lever mounted on said frame and adapted to displace said spacing means from between said bars.

5. A device of the kind described comprising in combination a wringer frame having end bearing members, a plurality of rolls journaled at their ends in said bearing members, means associated with said bearing members for imposing a tension on said rolls, a normally rigid collapsible frame mounted on said first mentioned means through which tension may be imposed on said rolls, said frame comprising top and bottom parallel bars, devices pivotally connected to the ends of said top bars and adapted to engage the ends of said bottom bar to normally hold said bars in a spaced relation, a lever pivoted to one of said bars, and means operatively connected to said lever for displacing said spacing devices from engagement with said bottom bar.

[Claims 6 to 8 not printed in the Gazette.]

1,196,539. AIR-PURIFIER. EDWARD I. GOLDBERG, New York, N. Y. Filed Sept. 28, 1915. Serial No. 53,081. (Cl. 128—13.)



1. In an air purifier, the combination of a casing, means to support the casing upon a person, the casing having an air inlet and an air outlet, air purifying means within the casing comprising a receptacle adapted to contain liquid, and a tapered tubular guard connected at its larger end to the mouth of the receptacle and extending downwardly therefrom, means to convey the air from the inlet through the liquid, said conveying means including

a flexible tube adapted to depend irrespective of the position of the casing, said guard protecting the flexible tube and preventing the liquid from splashing into the mouth of the receptacle, means to convey the air from the liquid to the outlet, a nose and mouth piece held in place over the nose by the mouth, and means to convey the purified air from the outlet to the nose and mouth piece.

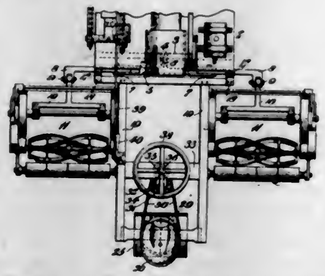
2. In an air purifier, the combination of a casing having an air inlet and an air outlet, a receptacle within the casing having a neck and a plug closing the outer end of the neck, said inlet constituting a tube leading through the plug and through the receptacle neck, a guard fitted in the neck and projecting thence inwardly into the receptacle, said receptacle being adapted to contain liquid for the purification of the air, a flexible tube connected to the inlet tube and extending thence through the guard adjacent the bottom of the liquid, and means extending from the neck plug to convey the purified air through the outlet.

3. In an air purifier, the combination of a casing having an air inlet and an air outlet, a plurality of receptacles within the casing each adapted to contain a quantity of purifying liquid and each having an upwardly projecting neck closed by a stopper, and each receptacle having a guard extending inwardly from the neck, said inlet constituting a tube projecting through one of the stoppers into the guard pertaining to such receptacle, a tube connecting one plug to the other whereby air is conveyed from one receptacle to the other, said tube leading into the guard of the second receptacle, a pair of tubes connected respectively to the air inlet and the connecting tube and extending thence through the guards into the liquid, a filter, and means to convey the purified air from the second receptacle through the filter to the casing outlet.

4. In an air purifier, the combination with a casing having an inlet and an outlet, and purifying devices within the casing, of a nose and mouth piece comprising a nose shield, a depending tube communicating with the nose shield, said depending tube having a right angularly disposed extension adapted to project into the mouth, a holder secured to the extension, a mouth inlet carried by the holder, said inlet having a valve preventing outflow therefrom and said first mentioned tube having at its lower end a valve preventing inflow therethrough, and means connecting the outlet of the casing with said mouth inlet.

5. The combination with a casing having an inlet and two outlets, and purifying devices within the casing between the inlet and the outlets, of a nose and mouth piece comprising a nose shield, a pair of mouth inlets having valves preventing outflow therethrough, tubes connecting the mouth inlets with said casing outlets, and a single outlet tube communicating with the mouth and nose shield serving to permit exhalation through either the mouth or the nose, substantially as set forth.

1,196,540. LAWN-MOWER. WALTER E. GRAHAM, Philadelphia, Pa. Filed Mar. 2, 1916. Serial No. 81,679. (Cl. 56—19.)



1. A master lawn mower, a main oscillatory beam connected with the frame of said mower and auxiliary oscillatory beams, and continuous laterally of said beam and jointed thereto, and a trailer mower jointed to each of said auxiliary oscillatory beams.

2. In a lawn mower, a master mower, a divided oscillatory beam connected with the frame of said master mower and composed of a main beam member, and oscillatory auxiliary beam members, the latter being pivotally connected with said main beam member at the side terminals thereof and forming lateral continuities thereof, and trailer mowers having oscillatory connections with said auxiliary beam members, said auxiliary and main beam members being provided with means for laterally adjusting said auxiliary beam members on said main beam member.

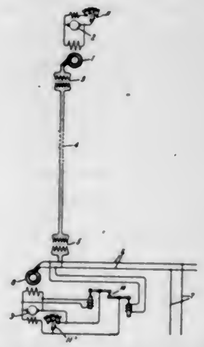
3. In a lawn mower, a master mower and a divided oscillatory beam connected by a vertical pivot with the frame of said master mower, said beam being composed of a main beam member and auxiliary beam members, the latter being connected by horizontal pivots with said main beam member at the side terminals thereof and forming lateral continuities thereof, said auxiliary beam members having extensions in a direction away from the master mower, and trailer mowers having oscillatory connection by horizontal pivots with said extensions.

4. A mower, a frame rearward thereof, a steering roller mounted on said frame, and means adapted to pivotally connect said frame with the frame of said mower adapting said roller to rise and lower.

5. A mower, a frame rearward thereof, a steering roller mounted on said frame, a bracket connected with said frame, and means for pivotally connecting said bracket with the frame of said mower.

[Claims 6 to 8 not printed in the Gazette.]

1,196,541. SYSTEM OF DISTRIBUTION. LEE HAGOOD, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 3, 1912. Serial No. 723,658. (Cl. 171—119.)



1. The method of operating an alternating current system of distribution, including a source of energy, a synchronously operating dynamo-electric machine, and a transmission line between the two, which consists in adjusting the field of the synchronous machine to make the voltage at the receiving end of the line equal to the generating voltage for any particular operating condition, and then regulating said field to hold the receiving voltage constant under varying load conditions, whereby the generating voltage and the power factor of the line are also maintained practically constant.

2. The method of operating an alternating current system of distribution, including a source of energy, a synchronously operating dynamo electric machine, and a transmission line between the two, which consists in automatically regulating the field of the synchronous machine to hold the voltage at its end of the transmission line at the desired value, and then manually adjusting the voltage of the source of energy until it equals the voltage of the synchronous machine for the then existing conditions, whereby the generating voltage, the receiving voltage, and the power factor of the line are maintained practically constant for all conditions of load.

1,196,542. SANITARY DRINKING-FOUNTAIN AND FAUCET. DELBERT L. HARDEN, Eugene, Oreg. Filed Mar. 28, 1914. Serial No. 828,003. (Cl. 103—61.)



1. In a combined drinking fountain and faucet, the combination with suitable pump mechanism, of a hollow upright stand; a basin formed upon the top of said stand; a supply pipe leading from said pump mechanism into said basin; a pressure reservoir connected into said supply pipe intermediate said pump mechanism and said basin; a fountain nozzle mounted upon the upper end of said supply pipe within said basin; a discharge pipe leading from said supply pipe to a point exterior to said stand; means operable to direct water to either said nozzle or said discharge pipe; an overflow reservoir formed at the base of said stand and having an opening communicating with the interior thereof; and a pipe leading from said basin to said reservoir.

2. In a combined drinking fountain and faucet, a hollow stand, a catch basin forming the stand top, a drinking fountain located within said basin, an operating handle secured to the stand base and oscillatable from a point in proximity to the said fountain, and a single valve operable from a point exteriorly of the stand to discharge water via either the fountain, faucet, or both.

3. In a combined drinking fountain and faucet, the combination with suitable pump mechanism, of a support for said mechanism, a basin mounted on the support, a water supply pipe leading into the basin, a fountain nozzle mounted on the supply pipe terminal, a discharge spout leading from the supply pipe, means to direct water to either the nozzle or the spout, and means to carry off the overflow of the basin.

4. In a combined drinking fountain and faucet, the combination with manually operated pump mechanism, of a hollow upright stand, an overflow basin mounted on the stand top, a supply pipe leading into the basin, a fountain nozzle mounted on the supply pipe terminal, a discharge spout leading from the supply pipe to a point exteriorly of the stand, means operable to direct water to either the nozzle or the spout, a reservoir formed at the base of the stand, the said reservoir being open to the interior thereof, and a pipe leading from the basin to the reservoir, as and for the purpose set forth.

5. In a combined sanitary drinking fountain and faucet, a hollow upright stand having a basin formed on its top, an inlet pipe extending vertically throughout the stand and leading into the basin, a nozzle mounted on the pipe terminal and within the basin, a discharge spout leading from the pipe to a point exteriorly of the stand, means to direct the water to either the nozzle or the spout, a reservoir formed at the base of the stand, said stand having an opening formed in its base leading into said reservoir, a pipe leading from the basin to the reservoir, a single outlet pipe leading from the reservoir, and pump operating mechanism disposed within the stand and operable from a point upon the exterior thereof, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

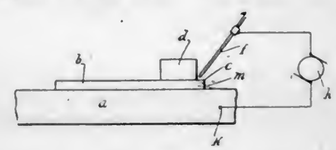
1,196,543. HANDLE ATTACHMENT. CONRAD HAFF, Jr., New York, N. Y. Filed July 2, 1915. Serial No. 37,714. (Cl. 65—65.)



1. In combination with a handle of the class described a cutlery holder having spaced yielding prongs to frictionally engage the handle whereby the same can be retained at any point of the handle, the end edges of the prongs being beveled so that the shoulders of the shanks of cutlery articles may be brought slightly beyond the edge of the yielding prongs.

2. As an article of manufacture, a cutlery holder comprising an elongated blank the end portions of which are bent inwardly so that the end edges of the blank will face the blank, said bent portions of the blank forming spaced yielding prongs, the side edges of the blank adjacent the end edges being beveled substantially as and for the purposes set forth.

1,196,544. METHOD OF COATING METAL WITH METAL. FRIEDRICH WILHELM HEUSER, Gross-Lichterfelde, West, near Berlin, Germany, assignor to Accumulatoren Fabrik Aktiengesellschaft, Berlin, Germany, a Corporation of Germany. Filed Apr. 2, 1915. Serial No. 18,693. (Cl. 219—15.)



The method of uniting a foundation metal with a covering metal so as to constitute an integral whole which comprises placing the covering metal upon the foundation metal, then moving an electric arc over a strip of the covering metal so as to completely melt both the material of said strip and of the upper part of the corresponding strip of foundation metal thus causing the two strips to unite, and then similarly uniting the foundation metal and the covering metal along strips successively and immediately adjoining the next preceding strip.

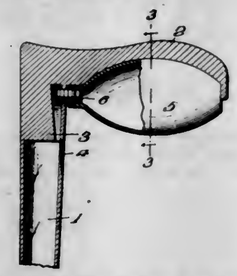
1,196,545. HANDLE FOR CANES, UMBRELLAS, AND OTHER ARTICLES. SAMUEL E. HOLDZKOM, Longport, N. J. Filed Dec. 6, 1915. Serial No. 65,315. (Cl. 46—46.)

1. A handle composed of an upper member and an air forcing bulb fixed thereto, depending therefrom and in continuation thereof to form the complete handle.

2. A handle composed of an upper rigid member having its under side concaved and an air forcing bulb fixed in said concavity and depending therefrom in continuation of said upper member whereby the said members form the complete handle.

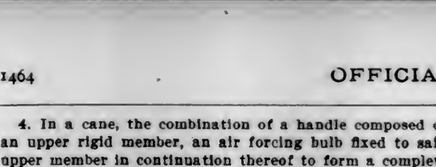
3. In a cane, the combination of a handle composed of an upper member, an air forcing bulb constituting a lower member and fixed to said upper member in continuation thereof to form the complete handle, with a wind instrument carried by the upper portion of said cane adjacent said bulb and connected therewith by suitable air conveying means and said instrument adapted to be operated by said lower member, substantially as described.

4. In a cane, the combination of a handle composed of an upper rigid member, an air forcing bulb fixed to said upper member in continuation thereof to form a complete handle and having its discharge end toward said cane, with a wind instrument formed in the interior of said cane adjacent the discharge end of said bulb, and means connecting said bulb with said instrument, for the purposes substantially as described.



5. A cane provided with a laterally extending handle composed of an upper rigid member and a lower flexible air forcing bulb fixed to said upper member in continuation thereof, and said bulb having its discharge end at the inner end of said handle, a whistle formed in said cane having its air intake adjacent to and in alinement with said discharge from said bulb and its outlet through the wall of said cane below said handle, and a tube connecting said bulb with the intake of said whistle, for the purposes substantially as described.

1,196,546. VAPORIZER. CHARLES ALBERT JACOBSON, Saratoga Springs, N. Y. Filed Aug. 28, 1912. Serial No. 717,516. (Cl. 48—107.)

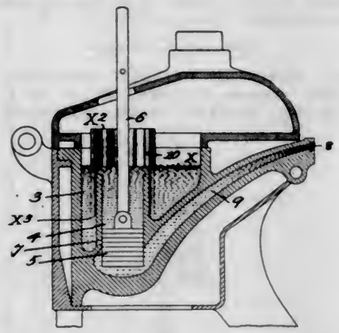


1. A heater for fuel internal combustion engines comprising an exhaust chamber and a fuel heating chamber having one wall in common and deflecting baffles in the fuel heating chamber comprising transverse barriers having openings to provide passageways alternately on opposite sides of the chamber and having longitudinal walls projecting from each transverse wall, toward an adjacent transverse wall, but terminating at points to leave passageways past the ends of the longitudinal walls.

2. A heater for fuel internal combustion engines comprising an exhaust chamber and a fuel heating chamber having one wall in common and deflecting baffles in the fuel heating chamber comprising transverse barriers having openings to provide passageways alternately on opposite sides of the chamber and having longitudinal walls projecting from each transverse wall, toward an adjacent transverse wall, but terminating at points to leave passageways past the ends of the longitudinal walls: said longitudinal walls on one transverse wall alternating in position with and projecting in between the longitudinal walls on the adjacent transverse wall.

1,196,547. LINOTYPE-MACHINE. WILLIAM HENRY JOHNSON, Hilo, Hawaii. Filed May 9, 1916. Serial No. 96,330. (Cl. 22—70.)

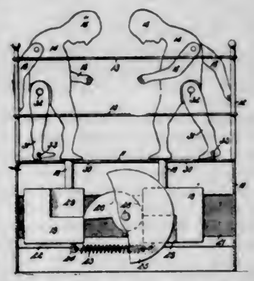
1. The combination with a melting pot of a linotype machine having a pump well therein, of a cylinder held on said pump well and extending above and below the level of the molten metal for preventing the passage of dirt or dross to the pump.



2. The combination with a melting pot of a linotype machine having a pump well therein, of a corrugated cylinder in frictional engagement with said well to prevent the passage of dirt or dross to the pump.

3. The combination with a melting pot of a linotype machine having a pump well therein, of a cylinder on said pump well providing passages between the same and said well for the molten metal and extended above and below the level of the metal.

1,196,548. TOY. CHARLES EDWIN KEFFER, Memphis, Tenn., assignor of one-half to Oliver N. Prince, Memphis, Tenn. Filed Apr. 15, 1916. Serial No. 91,325. (Cl. 46—40.)



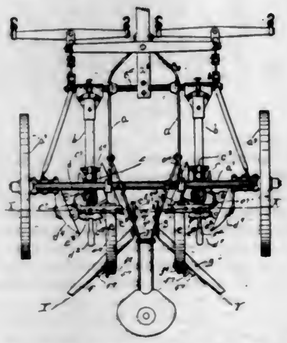
1. A toy of the class described including a supporting structure, figures oppositely disposed, a leg on each figure having a pivotal connection at its upper end with the figure and a pivotal connection at the foot with a relatively fixed part of said structure, blocks slidably supported in said structure below said figures to move to and from each other, the said figures having each a leg rigid with the figure and rigidly connected with the said blocks, a retractile spring connecting the said blocks, a wheel mounted to turn in said structure and having a cam member disposed between the said blocks, said cam terminating in a lateral projecting nose, the said spring maintaining the blocks in contact with said cam, the said blocks in their opposed ends having depressions, the depression in one block being at the top of the block and the depression in the other block being at the bottom of the latter, said depressions being adapted to alternately accommodate the nose of the said cam, and stop pins on said structure adapted to be engaged by the respective blocks.

2. A toy of the class described including a casing having a platform, figures oppositely disposed above said platform for movement to and from each other, said platform having slots therein beneath the figures, posts extending through said slots, the figures each having a leg rigid therewith, said legs being rigidly connected with the respective posts,

a leg on each figure pivotally connected at its upper end with said figure in the rear of the first leg, and pivotally connected at the foot member thereof with the said platform, blocks on which said posts are rigidly mounted, said blocks being slidable beneath the platform to and from each other, a spring connecting the said blocks, and a revoluble cam disposed between the blocks and adapted to alternately move the same to and from each other.

3. A toy of the class described including a supporting structure, figures oppositely disposed, blocks slidably supported in said structure below said figures to and from each other, the said figures having each a leg rigid with the figure and rigidly connected with the said blocks, a retractile spring connecting the said blocks, a wheel mounted to turn in said structure and having a cam member disposed between the said blocks, said cam terminating in a lateral projecting nose, the said spring maintaining the blocks in contact with said cam, the said blocks in their opposed ends having depressions, the depression in one block being at the top of the block and the depression in the other block being at the bottom of the latter, said depressions being adapted to alternately accommodate the nose of the said cam, and stop pins on said structure adapted to be engaged by the respective blocks.

1,196,549. DISK CULTIVATOR. ALVARO S. KROTZ, Janesville, Wis. Filed Dec. 6, 1911. Serial No. 664,294. (Cl. 97—37.)



1. In a cultivator, means for throwing the soil sidewise in one direction, and a blade behind said means, disposed at an angle to throw the soil in the opposite direction, provided with a lower ground engaging edge, the front surface of said blade having a rearward slant, and mechanism for changing the slant of the blade, serving to maintain the opposite ends of the blade at substantially a given depth during such adjustment thereof.

2. In a cultivator, means for throwing the soil sidewise in one direction, and a blade behind said means, disposed at an angle to throw the soil in the opposite direction, provided with a lower cutting edge, a beam for said blade, and devices for adjustably connecting the rear end of said beam with said blade, having provisions for tilting the blade forward and back about a horizontal axis to vary the cutting slant thereof, said axis being disposed at an angle substantially the same as said angle of the blade.

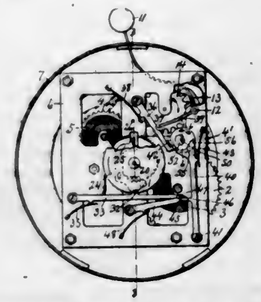
3. In a cultivator, means for throwing the soil sidewise in one direction, and a blade behind said means, disposed at an angle to throw the soil in the opposite direction, provided with a lower cutting edge, a beam for said blade, a curved seat on the rear end of said beam, a shank attached to said blade, provided with a rounded portion fitting said seat, said rounded portion having a vertical slot, and a bolt extending through said beam and seat and slot, said shank thereby adjustable about a horizontal axis to vary the cutting slant of the blade.

4. In a cultivator, means for throwing the soil sidewise in one direction, and a blade behind said means, disposed at an angle to deflect the soil in the opposite direction, said blade having a rearward slant and being provided with a lower cutting edge, a mounting for said blade constructed and arranged to hold the blade in position to cut into the ground when the cultivator is moved forward, and mechanism for changing the deflecting angle of said means without disturbing said mounting, and without changing either the angle or the slant of the blade.

5. In a cultivator, means for throwing the soil sidewise in one direction, and a blade behind said means, disposed at an angle to throw the soil in the opposite direction, provided with a lower ground engaging edge, a beam for said blade, a swivel head for changing the deflecting angle of said means, a bar adjustably mounted on said head, and means for attaching said bar to said beam crosswise thereof, the said swivel head being operable about a vertical axis without disturbing said bar.

[Claims 6 to 31 not printed in the Gazette.]

1,196,550. TIMING DEVICE. CHARLES J. KULLMER, Syracuse, N. Y. Filed Mar. 16, 1915. Serial No. 14,716. (Cl. 161—16.)



1. The combination with an alarm clock having a dial, a clock train, an alarm mechanism and a detent for the alarm mechanism, of an alarm-setting device normally disconnected from the clock train when in a certain position and having a pointer adjustable at will around the dial, means for establishing connection between the clock train and setting device when the latter is shifted from its normal position to cause said setting device to be restored to such position, and means controlled by the setting device for tripping the detent and simultaneously disconnecting the setting device from the clock train when said setting device is restored to its normal position.

2. The combination with an alarm clock having a dial, a clock train including a tubular minute spindle, an alarm mechanism and a detent for the alarm mechanism, of a shaft extending through the tubular minute spindle from front to rear and rotatable independently thereof, a pointer secured to the front end of the shaft and adjustable therewith around the dial, coöperative connections between the rear ends of the minute spindle and shaft for restoring said shaft and pointer when the latter are adjusted from a certain normal position, and means controlled by said connections for tripping the detent and simultaneously breaking said connections when the shaft and pointer are restored to normal position.

3. In combination with a clock having a dial, a clock train, and co-axial minute and hour hands movable around the dial, said dial having a concentric row of minute graduations numbered in reverse order from that of the usual minute and hour graduations, a rotary member secured to the minute spindle of the clock train, a time-setting device having a pointer adjustable from a normal position to register with any of the first-named graduations, automatic means for connecting and disconnecting the time-setting device with and from the rotary member on the minute spindle as said device is shifted from and returned to its normal position, an alarm mechanism connected to the clock train, including a detent normally

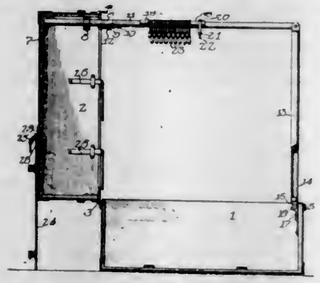
holding it from operating, means for tripping the detent when the time-setting device is returned to its normal position, and additional means driven by the alarm mechanism for restoring the detent-tripping means to its normal position to allow the return of the detent to its holding position.

4. In combination with an alarm clock having a dial, a clock train, and co-axial minute and hour hands, a circular row of minute graduations concentric with the dial and numbered in reverse order to that of the dial, a time-setting device having a pointer movable around said graduations, a rotary member driven by the clock train, automatic means for connecting the time-setting device to said rotary member when shifted from its normal position to permit the time-setting device to be returned to such position by the clock train, means for forcing said connecting means from its operative position when the time-setting device is restored to its normal position, and means controlled by the last named means for causing the operation of the alarm.

5. In combination with a chronometer-actuated mechanism and an inclosing case therefor having a dial plate and a transparent cover plate, said mechanism having minute and hour hands movable around the dial at the inside of the transparent cover plate, of a timing-device having a setting-member adjustable manually around the dial at the outside of the transparent cover plate and having connections therewith through an opening in said cover plate, said timing-device being free from connection with the chronometer-actuated mechanism when the setting-device is in a certain position, means for automatically connecting the timing-device to said mechanism when the setting-device is shifted from such position to cause the restoration of the setting-device, an alarm, and means brought into action by the timing-device for operating the alarm only when the setting-device is restored to such position.

[Claims 6 to 8 not printed in the Gazette.]

1,196,551. WARDROBE-TRUNK. CHARLES A. KUNTZENDORF, Chicago, Ill. Filed May 31, 1912. Serial No. 700,825. (Cl. 211—16.)

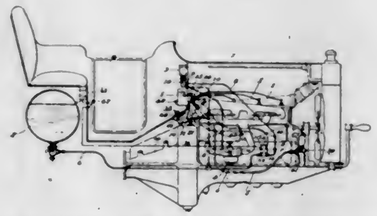


1. In a wardrobe trunk, a rail disposed slightly below and parallel with the top wall of the trunk, means for extending the rail longitudinally beyond the adjacent open-side of the trunk, a carriage longitudinally movable on said rail and extension and presenting a supporting surface above said upper edge of the rail, the portion of the carriage engaging the rail being of greater depth than the distance between said upper edge of the rail and the top wall of the trunk, thereby preventing disengagement of the carriage from the rail within the trunk; and garment hangers supported on said supporting surface of the carriage by hooks straddling the latter, each of said hooks being of greater depth than the distance between said supporting surface of the carriage and the top wall of trunk, said carriage and hangers being freely removable upwardly from said rail when moved outwardly beyond the said adjacent open side of the trunk.

2. In a wardrobe trunk, an inverted T-rail rigidly mounted contiguous to and parallel with the top wall, a longitudinally slotted tube adapted to receive the web of said T-rail, the depth of said tube between its slotted portion and its uppermost portion greater than the distance between the upper edge of said web of said T-rail and the upper wall of the trunk, and garment hangers having hooks of greater depth than the distance between the top wall and the nearest adjacent surface of said tube adapted to be suspended from the latter.

3. In a wardrobe trunk, an inverted T-rail rigidly mounted contiguous to and parallel with the top wall, a longitudinally slotted tube adapted to receive the web of said T-rail, the depth of said tube between its slotted portion and its uppermost portion greater than the distance between the upper edge of said web of said T-rail and the upper wall of the trunk, reinforcing members mounted upon the ends of said tube and riding upon the flanges of said T-rail, and garment hangers having hooks of greater depth than the distance between the top wall and the nearest adjacent surface of said tube adapted to be suspended from the latter.

1,196,552. CONSTANT-LEVEL FUEL-FEED. NORBERT M. LA PORTE, Baltimore, Md. Filed Jan. 5, 1916. Serial No. 70,384. (Cl. 123—119.)



1. In an internal combustion engine, in combination, a main supply tank for liquid fuel, a carbureter, a supplementary supply tank higher than the carbureter, a pump near the bottom of the fuel supply system, electric means for operating the pump, and means operated by the engine for timing the said electric means for operating the pump.

2. In an internal combustion engine, in combination, a carbureter, a main supply tank, a supplementary tank near the transverse vertical plane of the carbureter and higher than the carbureter, a pump for lifting the fuel from the main tank to the supplementary supply tank, and electric means timed by the engine for operating the pump.

3. In an internal combustion engine, in combination, a main supply tank for liquid fuel, a carbureter, a supplementary fuel supply tank higher than the carbureter and near the transverse plane of the carbureter, a pump near the bottom of the fuel supply system with suitable connections for taking fuel from the main supply tank and lifting it to the supplementary tank, means for maintaining a constant level in the supplementary tank, connections from the supplementary tank to the carbureter, electric means in the form of a solenoid in the core for operating the pump, a source of electricity and means timed by the engine to make and break the circuit and energize the core at intervals determined by the speed of the engine to operate the pump at a speed proportionate to that of the engine.

4. In an internal combustion engine, in combination, a main supply tank for liquid fuel, a carbureter, a supplementary supply tank above the normal level of the liquid in the carbureter and near the vertical transverse plane of the carbureter, a pump near the bottom of the fuel supply chamber with connections for taking fuel from the main supply tank and lifting it to the supplementary supply tank, means for checking the accumulation of fuel in the supplementary tank whereby a constant level and a constant gravity head are maintained, connections from the supplementary tank to the carbureter, an ignition system with a source of current and a timing device, and electric means for operating the pump with connections to the source of current and the timer, whereby the operation of the pump is controlled by the timer and hence by the speed of the engine.

5. In an internal combustion engine, in combination, a main supply tank for liquid fuel, a carbureter, a supplementary fuel supply tank extending above the carbureter and near the transverse plane of the carbureter, a pump with suitable connections for taking fuel from the main supply tank and delivering it to the supplementary tank, means for checking the accumulation of fuel in the supplementary tank, whereby a constant fuel level is maintained in that tank, which is above the fuel level in the carbureter, connections from the supplementary tank to the carbureter, an ignition system including a magneto, a primary coil, a timer, a secondary coil, means for operating the pump consisting of a coil and a core with connections to the moving parts of the pump, and means connecting the coil to the magneto and to the timer whereby the coil is energized with a frequency determined by the speed of the engine and the pump is operated at a corresponding speed.

[Claims 6 to 12 not printed in the Gazette.]

1,196,553. CAR JOURNAL-BOX. CHARLES R. LAW, Houston, Tex. Filed Aug. 5, 1913. Serial No. 783,022. (Cl. 64—10.)

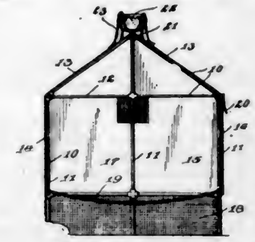


In a device of the character described, the combination with a car axle of a box having an internal chamber, the inner end of said box being completely open, said end being enlarged and having an internal groove therein, a dust guard carried by said box and located in said groove through which the axle journal passes for closing said open end, said dust guard forming an inclosed reservoir with the bottom of said box and the opposite end of said box being entirely closed and being an integral part thereof, one side of said box being provided with an oblong entrant opening arranged therealong near the top of the box, a closure for said opening, a flat spring bar for resiliently securing said closure in position over said opening, a detachable bearing member within the box and forming a bearing for the axle journal, one inwardly projecting lug carried by the door and an inwardly projecting lug fixed to the opposite side of the box, said lugs resting against the opposite sides of the bearing member and holding it in position, said entrant opening being provided through which said bearing member may be removed and replaced, lugs projecting from the side of said box above and below said entrant opening, said lug being provided to receive the securing means whereby said box is fixed in position.

1,196,554. OUTDOOR BED. KATHERINE B. LEDBETTER, Redmond, Oreg. Filed Apr. 28, 1915. Serial No. 24,529. (Cl. 135—1.)

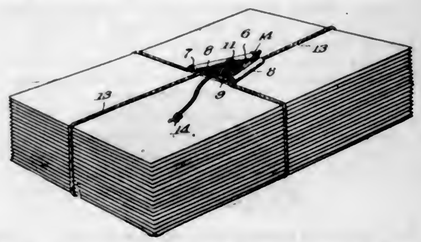
1. A bed embodying a frame including a ridge pole, a cover supported by said frame, a trough carried on the frame and disposed above and in superposed parallel relation to the ridge pole of the frame, and wicks in said trough and overhanging the opposite longitudinal edges thereof at spaced intervals throughout the length of the trough and extending upon the covering of the frame at points to opposite sides of the ridge pole.

2. A bed comprising a frame, sides, a back, a front and roof, said sides, back, front and roof being supported on said frame and forming a compartment, a covering for said frame, a moistener disposed above the plane of the covering and in superposed relation with the longitudinal center of said frame, screens on said frame at the lower portion thereof, and a bed body supported on the frame in



said compartment in spaced parallel relation to the floor or ground upon which the frame reposes.

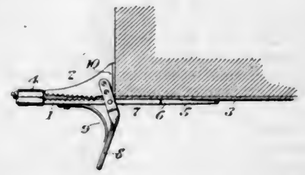
1,196,555. PACKAGE-TIE. HENRY J. LEE, Scranton, Pa., assignor of three-fifteenths to Harry J. Birtley and four-fifteenths to Ezra F. Gray, Scranton, Pa. Filed Aug. 8, 1914. Serial No. 855,811. (Cl. 94—18.)



1. In combination, a cord receiver of plate material having a tubulation along each side edge thereof, the said tubular portions being disposed in convergent relation with each other, eyes formed on the upper face of said plate and arranged continuous through each of the tubulations, a hook on said plate between said tubulations having the extremities thereof passing through said eyes, and adapted to engage the confronting walls of said tubulations while the hook is locked within the eye.

2. In combination, a cord receiver of plate material having a tubulation along each side edge thereof, said tubular portions being disposed in convergent relation with each other, and a hook comprising a single strip of material bent intermediate its ends to provide parallel U-shaped members, said hook being located upon said receiving plate and arranged between said tubular portions.

1,196,556. LINE PIN OR FASTENER. LUTHER F. LEMLEY, Strasburg, Va. Filed Sept. 3, 1915. Serial No. 48,935. (Cl. 24—134.)



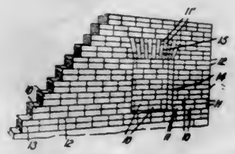
1. A line pin or fastener comprising a stationary jaw member having at one end a guide loop and a serrated surface, and having at its opposite end a projecting plate, a movable jaw having a toothed surface for coöperation with the toothed face of the stationary jaw member and having a transverse shoulder arranged at right angles to

said projecting plate, a lever having angularly disposed ends, one of said ends being pivoted to the stationary jaw member and fixed to the movable jaw member and the other end of the lever forming a projecting finger piece, and a curved plate spring fastened upon the fixed jaw member engaging said finger piece and operating to normally move said movable jaw member toward the toothed surface of said stationary jaw member, whereby a cord may be held between the jaw members.

2. A device of the character described comprising an oblong rectangular plate having a guide for the line and a gripping surface or jaw, a pivoted jaw having a coöperating gripping surface and also having a transverse abutment surface arranged in a plane at right angles to said plate, a spring for holding the jaws closed, and a lever pivoted to one of the jaws for operating said jaws.

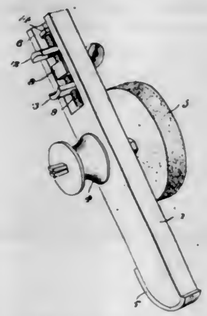
3. A device of the character described comprising an oblong rectangular plate having a jaw or gripping surface and guiding means for the line, said plate also having at one end a projecting blade and junction shoulders, a pivoted jaw provided with a transverse abutment surface arranged in a plane at right angles to said plate, a spring for holding the jaws closed, and a lever pivoted to one of the jaws for manually opening the jaws.

1,196,557. WALL CONSTRUCTION. GEORGE WASHINGTON LENKERD, Indiana, Pa. Filed Feb. 17, 1916. Serial No. 78,871. (Cl. 72—41.)



In a composite building wall, the combination of a plurality of hollow bricks for the main portion of the wall, a plurality of solid bricks for the vertical edges of the wall, and courses of mortar of uniform thickness arranged between adjacent bricks of both species, the hollow bricks being of a height exactly equal to a plurality of solid bricks plus the thickness of the mortar between the solid bricks, and the hollow bricks having longitudinal side grooves to be pointed to harmonize with the courses of mortar between the solid bricks in the same planes.

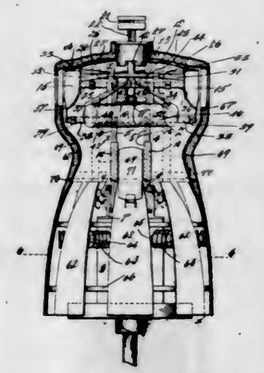
1,196,558. SHARPENER. JOHN M. LENZ and TIMOTHY E. REGAN, Grand Island, Nebr. Filed June 6, 1916. Serial No. 101,992. (Cl. 51—7.)



1. A sharpener structure designed to be applied to a sewing machine, including a frame bar, a clamp carried thereby to engage a shaft of the machine, a driving shaft carried by the frame bar, a pulley carried by the shaft to frictionally engage the rotating part of the machine, and a grinding disk secured on the shaft.

2. A device of the class described, including a frame bar, a clamp adjustably mounted in one end of the frame bar, an operating shaft mounted in the frame bar, beyond the clamp, a friction driving means carried by the shaft, and an operating disk carried by the shaft.

1,196,559. GARMENT-FORM. EDWARD LEVIN, New York, N. Y. Filed Apr. 22, 1913. Serial No. 762,767. (Cl. 223—18.)



1. A garment form including a bust section, said section comprising a bust shield, shoulder frames and a neck section, relatively movable resilient strips connecting said neck section and bust shield, and relatively movable resilient strips connecting said shoulder frames to over-lie the first mentioned resilient strips and form a chest element.

2. In a garment form a neck section, including a fixed plate and a cylindrical section pivotally connected thereto, shoulder frames, and a bust shield, means adjustably connecting the bust shield and said plate, means adjustably connecting the respective shoulder frames, and means carried by the cylindrical section to slidably receive the shoulder frame adjusting means.

3. A garment form including a support, bars slidably connected to said support, shoulder frames carried by said bars, means for adjusting said bars relative to the support, a plate mounted on said adjusting means and a cylindrical section pivotally connected to the plate, said plate and cylindrical section forming a neck section.

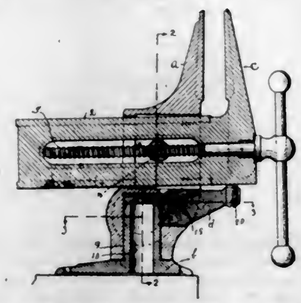
4. A garment form including a support, bars slidably connected to said support, shoulder frames carried by said bars, means for adjusting said bars relative to the support, a plate mounted on said adjusting means and a cylindrical section pivotally connected to the plate, said plate and cylindrical section forming a neck section, and means slidably connected to said plate and pivotally connected to the shoulder frame.

5. In a garment form a support, a neck section carried by and adjustable with relation to said support, strips pivotally connected to said support, shoulder frames slidably mounted on said strips, and shoulder strips each including pivoted sections, the inner section of each strip being slidably supported at the neck section and the outer section of the strip pivotally connected to the shoulder frame.

1,196,560. VISE. JOHN R. LONG, Orrville, Ohio. Filed Jan. 31, 1916. Serial No. 75,238. (Cl. 81—41.)

1. A vise as described having a fixed jaw provided with a hub and a base having a post on which said hub is rotatably seated, an outer jaw in said fixed jaw and a dog pivoted in said hub adapted to engage said post and provided with an adjustable screw in its outer end in engagement with the bottom of said outer jaw and adapted to fix the working position of said jaw.

2. In a vise as described, a fixed jaw and a removable jaw having an angular shank projecting through the same provided with an opening lengthwise between its ends and said fixed jaw having a round hole drilled through the same in registry with said opening, a cylindrical nut rotatably fitted in said hole through said opening and an operating screw extended through said outer jaw into the lengthwise opening therein and threaded through said nut, the said opening being larger than said nut to afford limited play of the jaw shank and corresponding rotation of said nut.

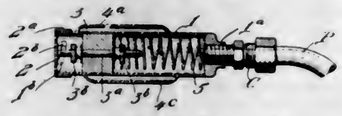


3. In a vise as described, a base having a cylindrical post, a fixed inner jaw having a hub rotatably seated on said post and an outer jaw slidably mounted therein and a dog pivoted in said hub and having an engaging surface curved to conform to the side of said post and the outer end of said dog provided with means to make adjustable working contact with said outer jaw.

4. A vise as described having a fixed jaw with a hub having sockets at right angles to each other and a base having a post adapted to seat either of said sockets rotarily thereon, an outer jaw in said fixed jaw and a dog pivoted in said hub and operatively engaged by said outer jaw having curved engaging surfaces crossing each other at right angles, and either surface adapted to bear against said post according to the socket used therewith.

5. A vise as described having a base with a post, a jaw having sockets at right angles to each other adapted to seat rotatably on said post through either socket and a dog pivoted in said jaw and having multiple curved surfaces with a common center adapted to engage and lock on said post in either position of the said jaw thereon.

1,196,561. VALVE. WILLIAM W. LOWER, Tyrone, Pa. Filed Aug. 18, 1915. Serial No. 46,088. (Cl. 137—32.)

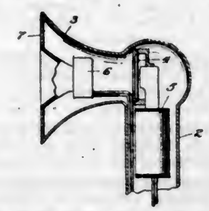


1. An air valve for the purpose specified comprising a casing having an inlet and a plurality of by-passes successively farther removed from the inlet of the casing, with a piston in said casing adapted to successively open the by-passes as it is retracted; and means for yieldingly pressing the piston toward the inlet end of the casing.

2. An air valve for the purpose specified comprising a casing having an inlet and a series of by-passes having their inlet ends successively farther removed from the inlet of the casing, with a piston in said casing adapted to successively uncover the inlet ends of said by-passes as the piston is retracted, and means for yieldingly moving the piston to close the by-passes.

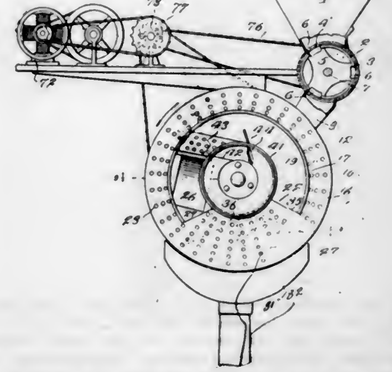
3. In an air valve for the purpose specified the combination of a cylinder having an inlet at one end and a series of exterior longitudinally disposed by-passes successively farther removed from the inlet of the casing; with a piston in said casing adapted to successively open the by-passes as it is retracted; and a spring for yieldingly moving the piston to close the by-passes, substantially as described.

1,196,562. TELEPHONE INSTRUMENT. HERBERT E. LYNCH, Brooklyn, N. Y. Filed Apr. 9, 1915. Serial No. 20,305. (Cl. 179—102.)



In a combined telephone transmitter and receiver, a base, a hollow standard uprising from said base, an amplifying horn on the upper end of said standard at right angles thereto, a transmitter arranged in the large end of said horn centrally thereof, supporting rods secured to said transmitter and radiating therefrom and having the outer ends thereof secured to the adjacent edge of said horn, a receiving magnet arranged in said standard, a casing secured to the core of said magnet and a diaphragm supported by said casing at the small end of said horn.

1,196,563. CORN-POPPING MACHINE. CHARLES E. MCCARREN, Cincinnati, Ohio, assignor to Samuel S. Kingery, Norwood, Ohio. Filed Feb. 27, 1915. Serial No. 10,997. (Cl. 53—4.)



1. In a corn popping machine, a cylinder capable of rotary movement and divided by transverse partitions into a number of compartments adapted to receive the corn, chutes carried by the partitions establishing communication between said compartments whereby the corn will be delivered from one compartment to another by the rotation of the cylinder, means for heating said cylinder, and means for rotating said cylinder.

2. In a corn popping machine, a cylinder capable of rotary movement and divided vertically by partitions into a number of compartments adapted to receive the corn, chutes carried by the partitions establishing communication between said compartments whereby the corn will be delivered from one compartment to another by the rotation of the cylinder, means for heating said cylinder, means for rotating said cylinder, and means in one of said compartments for separating the popped corn from the unpopped corn.

3. In a corn popping machine, a cylinder capable of rotary movement and divided vertically by partitions into a number of compartments adapted to receive the corn, chutes carried by the partitions establishing communication between said compartments whereby the corn will be delivered from one compartment to another by the rotation of the cylinder, means for heating said cylinder, means for rotating said cylinder, means in one of said compartments for separating the popped corn from the unpopped corn, and means for discharging the unpopped corn from a particular compartment.

4. In a corn popping machine, a cylinder capable of rotary movement and divided vertically by partitions into rear, center and front compartments adapted to receive the corn, chutes carried by the partitions establishing communication between said compartments whereby the corn will be delivered from one compartment to another by the rotation of the cylinder, means for heating said cylinder, and means for rotating said cylinder.

5. In a corn popping machine, a cylinder capable of rotary movement and divided vertically by partitions into rear, center and front compartments adapted to receive the corn, chutes carried by the partitions establishing communication between said compartments whereby the corn will be delivered from one compartment to another by the rotation of the cylinder, means for heating said cylinder, means for rotating said cylinder, and means for delivering the raw corn to said rear compartment in predetermined quantities.

[Claims 6 to 8 not printed in the Gazette.]

1,196,564. ADAPTING DEVICE FOR CARPENTERS' LEVELS. DAVID H. MCCLELLAND, Chicago, Ill. Filed Feb. 3, 1914. Serial No. 816,182. (Cl. 33—88.)

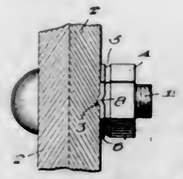


1. In combination with a straight edge, a carpenter's level, and means for securing it to a lateral surface of said straight edge in operative relation to the working edge which constitutes one boundary of said surface, such means comprising two fittings secured to the level at longitudinally separated points thereon, each fitting having a portion extending flush with one lateral face of the level and being perforated to receive an attaching screw adapted to pierce the said lateral surface of the straight edge to which the level is to be secured, whereby the clamping action of such screw will be exerted wholly upon the fitting and without straining the level bar itself.

2. In combination with a straight edge, a carpenter's level, and means for securing it to a lateral surface of said straight edge in operative relation to the working edge which constitutes one boundary of said surface, such means comprising two fittings secured to the level and extending respectively from opposite ends thereof substantially in the plane of the lateral face of the level, such extending part of such fitting being perforated to receive an attaching screw adapted to pierce the lateral surface of the straight edge to which the level is to be secured.

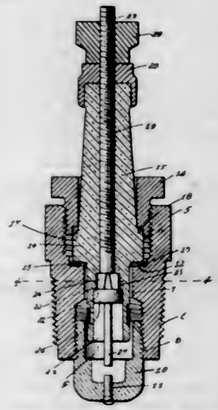
3. In combination with a carpenter's level and a straight-edge, a pair of fittings for the purpose indicated, secured to the level bar at points longitudinally distant, and each having a portion which extends flush with one side of the level bar, one fitting having a circular aperture to receive a pivot screw, and the other fitting having a transversely-extending slot to receive a clamping screw and to permit adjustment of one end of the level bar toward or from the working edge of the straight-edge.

1,196,565. LOCK-NUT. ALEXANDER MCDONALD, Havre, Mont. Filed Jan. 18, 1916. Serial No. 72,829. (Cl. 151—42.)



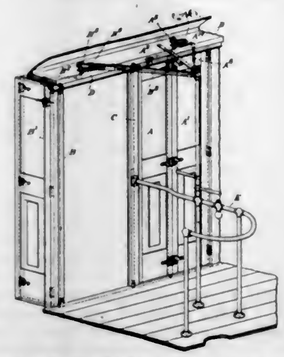
The herein described means for locking a nut, comprising a nut formed, adjacent its inner face with a continuous groove providing one of the edges of the nut with a continuous rim of comparatively thin metal, and the outer wall provided by the groove being inclined to the straight face of the rim, whereby to arrange a tool angularly of the nut and with respect to the rim so that the said tool when subjected to an impact of force will indent the rim to provide a lug or projection upon the outer face of said rim and to form a depression in the structure against which the nut is arranged.

1,196,566. SPARK-PLUG. LEWIS A. MCDOWELL, Luverne, Minn. Filed Nov. 9, 1914. Serial No. 871,140. (Cl. 123—169.)



In a spark plug, a shell having a longitudinally extending hole therein, an insulating barrel extending into the shell and in spaced relation to the wall thereof, the said barrel having an annular recess encircling the same adjacent its lower end, electrodes located below the insulating barrel, and a split collar, of slightly less width than the recess, mounted in the recess and adapted to move upon the vibration of the plug to prevent the forming of a continuous sheet of carbon on the face of the barrel, the said collar being rectangular in cross section whereby sharp edges are provided and being of greater inside diameter than the diameter of the portion of the insulating barrel which it encircles whereby upon the vibration of the plug and the movement of the collar, the axis of the latter will assume an angular position with relation to the axis of the barrel and the sharp edges of the collar will engage the adjacent portion of the face of the barrel and cut the carbon therefrom.

1,196,567. OPERATING MECHANISM FOR CAR-DOORS. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Nov. 26, 1912. Serial No. 733,626. (Cl. 268—7.)



1. An operating mechanism for car doors comprising a lever arm journaled on a vertical axis at or near the middle of the door, a socket piece swiveled to the door and having a sliding engagement with said arm, intermeshing gears for swinging said arm on its axis to move the door, and an operating connection between one of said gears, and a distant operator's handle.

2. An operating mechanism for car doors, comprising a lever arm journaled on a vertical axis at or near the center of the door, means for providing a sliding and pivotal connection between said arm and the door, gearing for rotating said arm more than ninety degrees, and an operating connection between said gearing and a distant operator's handle.

3. An operating mechanism for car doors comprising a lever arm mounted on a vertical axis at the center or middle of the door, a socket piece swiveled to the door and having a sliding engagement with said arm, intermeshing gearing for rotating said arm, a vertical shaft turned by the operator's handle, and means actuated by said shaft for operating one of the gears of said gearing.

4. An operating mechanism for a folding door having two hinged sections, comprising a lever arm mounted on a vertical axis at or near the junction of the two sections with a sliding and rotating connection between said arm and one of the door sections, a horizontal guide for the outer door section, a gear for operating the said arm, and an operating connection for the said gear leading to a distant operator's handle.

5. An operating mechanism for a car door, comprising a lever arm mounted on a vertical axis at an intermediate point in the width of the door and above it, with a sliding and rotating connection between said arm and the door, a gear for operating said arm, a connecting rod for operating said gear, and a vertical shaft worked by the operator's handle with a crank connecting it to the said rod.

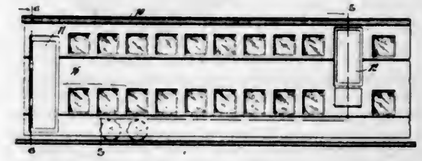
[Claims 6 to 19 not printed in the Gazette.]

1,196,568. DOUBLE-DECKED CAR. BERNARR MACFADDEN, New York, N. Y. Filed Apr. 14, 1916. Serial No. 91,045. (Cl. 105—199.)

1. A car having upper and lower floors and side doors for both floors, the lower doors extending above the lower level of the upper doors.

2. A car having upper and lower floors and side doors for both floors off-set the one from the other, the lower doors extending above the lower level of the upper doors.

3. In a double-decked car, the combination with a lower floor; seats disposed along the sides of the lower floor; an upper floor; seats disposed back-to-back longitudinally along the middle of car and forming, with the upper floor, the ceiling of the lower deck of the car; side doors for the lower floor; and side doors for the upper floor.

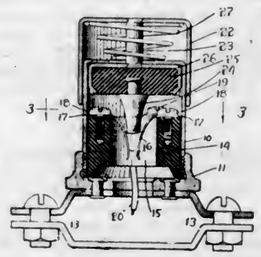


4. In a double-decked car, the combination of a lower floor; seats disposed along the sides of the lower floor; an upper floor; seats disposed back-to-back longitudinally along the middle of car and forming, with the upper floor, the ceiling of the lower deck of the car; side doors for the lower floor; and side doors for the upper floor, the side doors of one floor being off-set from the doors of the other floor.

5. In a double-decked car, the combination of a lower floor; seats disposed along the sides of the lower floor; an upper floor; seats disposed back-to-back longitudinally along the middle of car and forming, with the upper floor, the ceiling of the lower deck of the car; side doors for the lower floor; side doors for the upper floor and a platform between opposite doors of the lower deck and level with the seats of the upper deck.

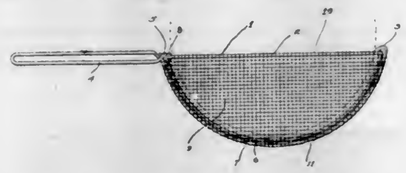
[Claims 6 to 18 not printed in the Gazette.]

1,196,569. PUSH CONTACT-SWITCH. EDWIN A. MANVILLE, Ansonia, Conn., assignor to The Ansonia Electrical Company, Ansonia, Conn., a Corporation of Connecticut. Filed Mar. 13, 1915. Serial No. 14,183. (Cl. 200—27.)



A switch of the character described comprising a casing closed at one end, a removable base closing the other end of the casing, an insulating block in said casing, resting on said base and having a central opening, spaced-apart contact plates secured to the block and extending into said opening, a cap adapted to slide over the case, a stud having one end attached to the cap, said stud being passed through the closed end of the casing, a block of insulating material connected with the inner end of the stud, a movable contact attached to said block and extending into the opening of the first mentioned insulating block in a position to pass between the contact plates, a spring bearing against the underside of the cap and also upon the closed end of said casing to hold the movable contact normally out of engagement with the contact plates, and means attached to said base for supporting said casing.

1,196,570. STRAINER. WILL MARSHA, Decatur, Ill., assignor of one-half to Jeremiah Black, Decatur, Ill. Filed Mar. 6, 1916. Serial No. 82,323. (Cl. 210—16.)



1. A device of the character described including in combination, a wire frame having a handle portion and a straining portion with straining means secured thereon, said wire frame also including an engaging member substantially paralleling the edge of the straining portion so as to properly position the device when straining.

2. A device of the character described including in combination, a wire frame having a handle portion and a straining portion having a circular edge and straining means secured on said straining portion, said wire frame also having an engaging member substantially paralleling and spaced from the circular edge of the straining portion so as to properly position the device when straining.

3. A device of the character described, including in combination, a wire frame member formed so as to provide a handle portion, a semi-circular portion having straining means secured thereto and an engaging member paralleling the circular edge of the straining member so as to hold the device in position against the edge of a utensil or receptacle.

4. A device of the character described including in combination, an integral wire frame member having a substantially straight portion with a looped portion at one end forming a handle and with a pair of loops at the other end portion, straining means secured to one of the loops, the other loop forming a holding and positioning member to hold the device in position on the edge of a utensil or receptacle.

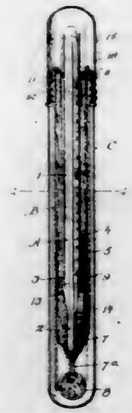
5. A device of the character described, including in combination, an integral wire frame member formed to provide a substantially straight portion with an eye at one end and looped to provide a handle at the other end and having a pair of loops formed by the wire passing through the eye and secured at the end of the handle portion, straining means secured to one of the looped portions, the other looped portion serving as an engaging and holding member to position and hold the device against the edge of a receptacle or utensil.

1,196,571. GERMICIDAL THERMOMETER-HOLDER. LEON MARTOCCI-PISCULLI, New York, N. Y. Filed Jan. 28, 1916. Serial No. 74,769. (Cl. 73—52.)

1. A pocket thermometer holder comprising a tube open at one end and having its opposite end contracted into a capillary neck, and a bulb connected with the neck to hold the germicidal substance, and a tubular porous lining in the tube extending from the open end to the said neck and adapted to be impregnated with the germicidal solution, said solution passing through the capillary neck as the lining compresses and expands during the insertion and removal of the thermometer.

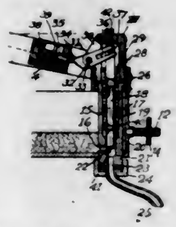
2. A pocket thermometer holder comprising a tube open at one end and provided with a chamber at the opposite end and communicating with the tube through a capillary neck, and a tube of absorbent material in the first-mentioned tube and having a closed end terminating at the said neck, the bore of the last-mentioned tube being reduced at its closed end.

3. A pocket thermometer holder comprising a casing having an open end internally and externally threaded, a tube having an open end formed with an externally threaded cap to screw into the casing, and the cap having an inturned mouth portion forming a guide for facilitating the insertion of the thermometer in the tube, a lining of absorbent material in the tube and retained therein by the cap, and a cover cap screwed on the open end of the casing and adapted to cover the outer end of the thermometer.



4. A germicidal holder for a thermometer comprising a thermometer-receiving tubular holder open at its upper end and having a contracted lower portion terminating in a chamber for holding a germicidal substance, a tubular porous lining in the tube impregnated with a germicidal solution and having a bore normally smaller than the diameter of the thermometer, a cap-piece having a cylindrical mouth-forming portion extending into the bore of the lining and having a threaded cylindrical portion engaged with the outside of the tube, a casing having a threaded portion into which the cap-piece on the tube screws, and a cap screwed on the outside of the threaded portion of the casing and covering the upper end of the thermometer.

1,196,572. LENS-DRILL. ALBERT E. MAYNARD, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association. Filed Apr. 3, 1914. Serial No. 829,255. (Cl. 77—5.)



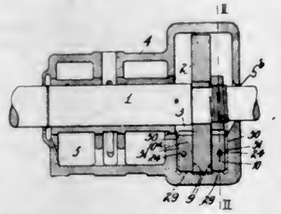
1. A melange feed for a lens drilling machine, including a tank, a discharge spout for the tank, a combined valve and feed plunger controlling communication between the tank and spout, means for resiliently forcing the plunger into closed position, a trip carried by the tank and operatively engaging the plunger, and a yieldingly mounted latch member carried by the drill and engaging the trip to operate the valve as the drill is moved in one direction, and to yield without operating the plunger valve as the drill is moved in the opposite direction, substantially as illustrated.

2. The combination with a lens drill having a reciprocating drilling member, of a melange tank secured to the drill, a tubular member mounted in the tank and having inlet and discharge apertures, a discharge spout in communication with the discharge aperture, a plunger valve within the tubular member serving to control passage of fluid from the tank through the inlet aperture and to forcibly eject the fluid from the discharge aperture, means for resiliently forcing the plunger valve into closed position, a head carried by the tubular member, a stop device and a trip carried by the head and adapted to engage the plunger valve to control its movement, and a latch member carried by one of the reciprocating parts of the drill for engaging the trip member to actuate the plunger valve, substantially as and for the purpose described.

3. In a machine of the character described, a liquid retainer, an ejector valve therefor, an operating tool, means for advancing and retracting the tool, and means adapted to temporarily engage the valve and hold the same open for a limited period during the advance of the tool, said means being constructed to release the valve before the tool is advanced into operative position.

4. The combination with a lens drill including a frame and a drill shifting member, of a tank carried by the frame, a tube mounted within the tank and having an aperture near its lower end in communication with the tank, a cap engaged on the lower end of the tube beneath the tank and securing a discharge spout to the tube, a plunger valve within the tube adapted to control the discharge from the tube and when in depressed position to close the aperture near the lower end of the tube, a spring for normally holding the plunger valve in closed position, a head mounted on the upper end of the tube and provided with a pivoted trip member, the trip member and plunger valve having interlocking parts whereby rocking of the trip reciprocates the plunger, and a latch member on the drill shifting device adapted to contact with and rock the trip member and thus temporarily actuate the plunger valve, substantially as described.

1,196,573. FILM-LUBRICATED THRUST-BEARING. ANTHONY GEORGE MALDON MICHELL, Melbourne, Victoria, Australia. Filed Jan. 3, 1913. Serial No. 740,041. (Cl. 64—25.)



1. A thrust bearing for a horizontal or inclined shaft comprising, in combination, a rotating collar mounted on said shaft, a fixed casing in which is formed an oil-chamber on the lower side of said shaft, and a segmental pivoted bearing element arranged in said oil chamber wholly below the level of the lower side of said shaft and adapted to support the thrust of said collar.

2. A thrust bearing for a horizontal or inclined shaft comprising, in combination, a rotating collar mounted on said shaft, a fixed casing in which is formed an oil chamber on the lower side of said shaft, a segmental pivoted bearing element arranged in said oil chamber wholly below the level of the lower side of said shaft and transmitting the thrust from said collar to said casing, and means for preventing circumferential movement of said bearing element.

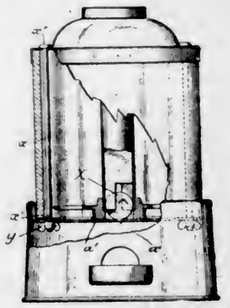
3. The combination with a horizontal or inclined shaft, of a thrust bearing therefor comprising a collar fixed to said shaft, a casing surrounding said collar and forming an oil chamber below the shaft, pivotally mounted bearing means arranged within said oil chamber and adapted to sustain the thrust of said collar, and means for controlling the escape of oil from the operative face of said bearing means.

4. The combination with a horizontal or inclined shaft, of a thrust bearing comprising a collar fixed to said shaft, a casing having a chamber forming an oil reservoir on the lower side of said shaft, a pivotally mounted bearing element arranged in the oil reservoir between said collar and the adjacent wall of said casing and adapted to sustain the thrust of said collar, and means controlled automatically according to the direction of rotation of said shaft for permitting the escape of oil from the operative face of said bearing element toward one or the other end thereof.

5. In a thrust bearing for a horizontal or inclined shaft, the combination, with a thrust collar adapted to be mounted on the shaft, of a pivoted thrust block on which said collar bears formed with ports, and with grooves on its working face communicating with said ports, and a valve adapted to automatically close one or the other of said ports according to the direction of motion of said collar.

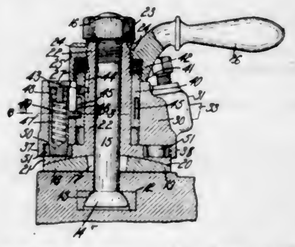
[Claim 6 not printed in the Gazette.]

1,196,574. COIN-CONTROLLED MECHANISM. WILLIAM MILLARD, New York, N. Y., assignor to Millard's Gum Vending Corporation, Eddyville, N. Y. Filed Aug. 5, 1914. Serial No. 855,099. (Cl. 194—85.)



A coin-controlled mechanism having a rotatable feed-disk formed with a coin-slot; and a rotatable coin-chute which is arranged to guide the coin to said coin-slot and the lower end of which is provided with walls that engage and advance the coin and the feed-disk in engagement therewith through the walls of said coin-slot, when the coin-chute is turned; said coin-engaging walls being mutilated and thereby arranged to leave the coin and feed-disk unaffected by the retrograde movement of the coin-chute after the coin and the feed-disk have been advanced by turning the coin-chute.

1,196,575. TURRET ATTACHMENT FOR LATHES. FRANK P. MILLER, Meadville, Pa. Filed Feb. 9, 1916. Serial No. 77,137. (Cl. 29—49.)



1. A turret attachment for a lathe, comprising an attaching means for removably clamping the attachment to a tool rest, a head mounted to turn on the said attaching means and provided with a number of tool holding devices extending in different directions and in planes at angles to the axis of the head, manually controlled clamping

means for clamping the head in position after being adjusted with one of the tools in cutting position relatively to the work, a member mounted to move up and down and controlled by the clamping means, a locking means carried by the head, and an operative connection between the said movable member and the said locking means, the locking means being controlled by the said movable member for locking the head in the adjusted position on the said attaching means.

2. A turret attachment for a lathe, comprising a head provided with a number of tool holding means extending in different directions in planes at an angle to the axis of the head, a bushing on which the said head is mounted to turn, a sleeve on which the bushing is mounted to slide up and down, the sleeve having a clamping base on which rests the said head, a central post extending through the sleeve, a handled nut screwing on the said sleeve and against the top of the said head to clamp the latter in place, an operative connection between the said nut and bushing, and a locking device controlled by the bushing for locking the head and sleeve together.

3. A turret attachment for a lathe, comprising a head provided with a number of tool holding means extending in different directions in planes at an angle to the axis of the head, a bushing on which the said head is mounted to turn, a sleeve on which the bushing is mounted to slide up and down, the sleeve having a clamping base on which rests the said head, the under side of the clamping base being concave, a clamping plate having its upper face fitting the concave under side of the said base, a second clamp-plate being adapted to engage a tool rest, a post having a ball and socket joint connection with the said second clamping plate and extending centrally through the said first named clamping plate, a nut screwing on the upper end of the said post and against the said sleeve to clamp the base thereof to the said first-named clamping plate and to clamp the said clamping plates to the tool rest, and a locking device controlled by the said bushing for locking the head to the sleeve base.

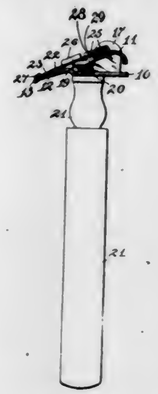
4. A turret attachment for a lathe, comprising a head provided with a number of tool holding means extending in different directions in planes at an angle to the axis of the head, a bushing on which the said head is mounted to turn, a sleeve on which the bushing is mounted to slide up and down, the sleeve having a clamping base on which rests the said head, a central post extending through the sleeve, a handled nut screwing on the said sleeve and against the top of the said head to clamp the latter in place an operative connection between the nut and the bushing to move the latter when the nut is turned, and a locking device controlled by the said bushing to lock the said head to the said sleeve base.

5. A turret attachment for a lathe, comprising a sleeve having a base, means for adjustably and removably attaching the said sleeve to a tool rest, a bushing mounted to slide up and down on the said sleeve, a head mounted to turn on the said bushing, and a handled nut screwing on the said sleeve and against the top of the said head, the said nut having a screw connection with the said bushing to lower the latter on screwing up the nut and to raise the bushing on unscrewing the nut, and a locking device controlled by the said bushing and adapted to engage the said sleeve base to lock the head and sleeve together.

[Claims 6 to 8 not printed in the Gazette.]

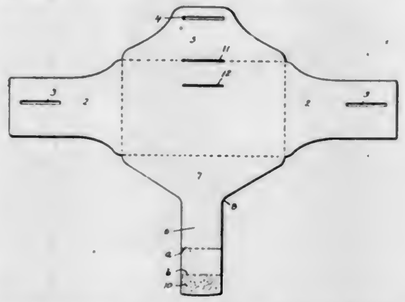
1,196,576. SAFETY-RAZOR. JOSEPH MOLKENTHIN, Jr., Newark, N. J. Filed June 2, 1913. Serial No. 771,128. (Cl. 30—12.)

1. In a safety razor, a guard having projections on its front edge for shielding the corners of the blade and provided at its ends with means to hold a blade thereon and prevent it from rising, a plate pivoted to said guard and provided with upwardly extending lugs, a blade having means on its back to engage said lugs, said blade projecting at its cutting edge beyond said lugs a distance less than that between said lugs and projections, and means for forcing said pivoted member upward to clamp said blade between said pivoted member and said holding means with the cutting edge of the blade out of contact with said projections.



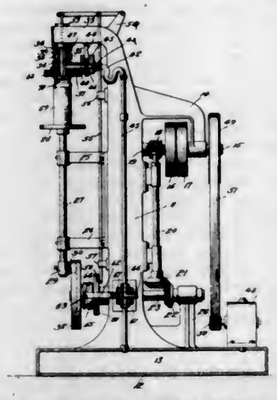
2. In a safety razor, a guard, projections thereon for shielding the corners of a blade, upwardly and inwardly projecting fingers on the ends of the guard, a plate pivoted to said guard and provided at each end with an upwardly projecting lug, a thin blade having a front razor edge and a backing strip at its rear edge, said backing strip providing a shoulder on the blade, said shoulder being in engagement with said lugs, and means for forcing said pivoted plate toward said fingers and clamping said blade between said plate and said fingers with the shoulder on the blade in contact with said lugs and the corners of its cutting edge shielded by said projections.

1,196,577. SAFETY-ENVELOP. AUGUST NOGAR, Reading, Pa. Filed Nov. 30, 1915. Serial No. 64,308. (Cl. 229—82.)



A safety envelop comprising a rectangular body portion provided adjacent the upper portion with parallel longitudinal slits, end flaps foldable over the rear face of the body portion and provided with registering longitudinal slots, a top flap foldable over the end flap and having a slot extending longitudinally of the envelop and registering with the said slots and a bottom flap provided with an integral sealing tongue extending through the registering slots into the envelop and passing out of the same at the top thereof through the top slit and then downwardly at the front face of the body portion and inwardly and upwardly through the front slit, the terminal of the tongue being provided with adhesive material to enable it to be pasted to the inner face of the body portion between the slits thereof, said bottom flap being provided at its juncture with the tongue with shoulders located at the said registering slots and adapted to engage the end walls thereof to prevent the tongue from being drawn farther into the envelop, substantially as and for the purpose described.

1,196,578. VACUUM SEALING-MACHINE FOR CONTAINERS. HORATIO N. NORTON, Mount Vernon, N. Y., assignor, by mesne assignments, to Continental Can Company, Inc., a Corporation of New York. Filed Feb. 19, 1913. Serial No. 749,328. (Cl. 220—97.)



1. In a machine for hermetically sealing containers, a support for the containers; a vertically-movable member disposed above said support and having a port therethrough; a stationary, apertured valve controlling passage of air through said port and supported independently of said member, said port being brought into and out of registry with said valve-aperture by the raising and lowering of said member; and means for alternately raising and lowering said member.

2. In a machine for hermetically sealing containers, a support for the containers; a vertically-movable member disposed above said support and having a port therethrough; a stationary, apertured valve controlling passage of air through said port and supported independently of said member, said port being brought into and out of registry with said valve-aperture by the raising and lowering of said member; and means, operative through the medium of a container on said support, for alternately raising and lowering said member.

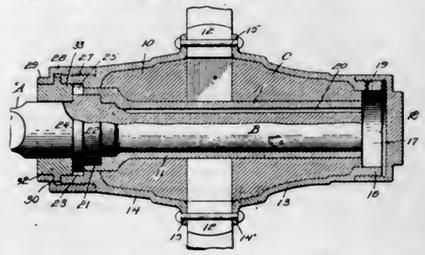
3. In a machine for hermetically sealing containers, a support for the containers; a vertically-movable member disposed above said support and having a port therethrough; a stationary, apertured valve controlling passage of air through said port and supported independently of said member, said port being brought into and out of registry with said valve-aperture by the raising and lowering of said member; and means, operative through the medium of a container on said support, for alternately raising and lowering said member, said means including mechanism for raising and lowering said support.

4. In a machine for hermetically sealing containers, a support for the containers; a vertically-movable member disposed above said support and having a port therethrough; a stationary, apertured valve controlling passage of air through said port and supported independently of said member, said port being brought into and out of registry with said valve-aperture by the raising and lowering of said member; and means, operative through the medium of a container on said support, for alternately raising and lowering said member, said means including cam-mechanism for raising and lowering said support.

5. In a machine for hermetically sealing containers, a support for the containers; a vertically-movable member disposed above said support and having a port therethrough; a stationary, apertured valve controlling passage of air through said port and supported independently of said member, said port being brought into and out of registry with said valve-aperture by the raising and lowering of said member; means for alternately raising and lowering said member; a vacuum chamber in communication with said port, and means for securing a cap or cover upon said container while a condition of vacuum exists therein.

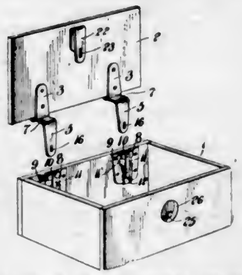
[Claims 6 to 9 not printed in the Gazette.]

1,196,579. VEHICLE WHEEL-HUB AND SPINDLE. JENS PETER PEDERSEN, Provo, Utah. Filed Nov. 21, 1914. Serial No. 873,327. (Cl. 21—30.)



In combination with an axle having a collar formed with diametrically arranged notches, of a hub rotatably mounted on the axle, a shell inclosing the hub and having diametrically arranged lugs adapted to pass through said notches in the mounting of the hub upon the axle, a two-part collar abutting one end of said shell and having a pair of segments arranged between and bridging the distances between said lugs, and a sleeve having screw threaded engagement with said shell and abutting said collar for clamping said segments between the lugs.

1,196,580. HINGE. GUSTAVE PELOT, Alton, Ill. Filed Mar. 11, 1916. Serial No. 83,572. (Cl. 16—104.)

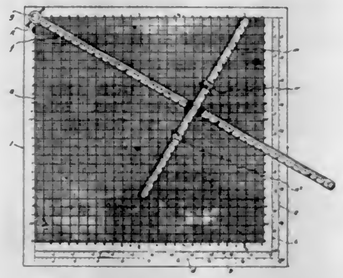


In combination, a pair of hinged leaves, one of said leaves being formed with an opening, a plate having its longitudinal medial portion bent to provide a groove on one side thereof, the intermediate portion of the medial portion being slit transversely and bent to the opposite side of the plate to form an opening in the grooved portion and coöperating with the groove to form a pocket, a leaf spring secured to said plate and spanning the opening formed in the grooved side of the plate, and a lug formed on said spring and extending through said plate and into the opening in said leaf.

1,196,581. PROTRACTOR. MARTIN N. PILGREN, Brooklyn, N. Y. Filed Apr. 16, 1915. Serial No. 21,715. (Cl. 33—75.)

1. The instrument described comprising a base plate having a graduated surface representing sub-divisions

of feet and fractions thereof and provided with a marginal graduated scale supplemental to the scale of the base plate subdivisions, a pivoted diagonal graduated bar formed to have its graduations extend over the marginal graduated scale, and a transverse scale bar slidably mounted on the diagonal bar and graduated at opposite sides thereof.



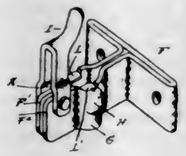
2. The instrument described comprising a base plate having a graduated surface representing sub-divisions of feet and fractions thereof and provided with a marginal graduated scale, and with a protractor scale arranged parallel therewith, a pivoted diagonal graduated bar formed to have its graduations extend over the marginal graduated scale and protractor scale, and a transverse scale bar slidably mounted on the diagonal bar and graduated at opposite sides thereof.

3. The instrument described comprising a graduated surface representing subdivisions of feet and fractions thereof and provided with a marginal graduated scale, a pivoted diagonal graduated bar formed to have its graduations extend over the marginal graduated scale, a transverse scale bar slidably mounted on the diagonal scale bar and graduated at opposite sides thereof, and indexes slidably mounted on the transverse scale bar, one at each side of the diagonal scale bar.

1,196,582. CEMENT-CONSISTENCY STANDARD. PAUL POETSCHKE, Milford, Kent county, and FRANK LAYTON GRIER, Milford, Sussex county, Del., assignors to The L. D. Caulk Co., Milford, Del., a Corporation of Delaware. Filed Oct. 13, 1914. Serial No. 866,450. (Cl. 106—39.)

The herein described composition of matter consisting of starch, water, glycerin, cocoa butter, sodium fluorid, and a silicate.

1,196,583. FASTENER FOR VEHICLE CANOPY-TOPS. AUGUST PROKOPETZ, Detroit, Mich., assignor to Vanguard Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 11, 1915. Serial No. 55,310. (Cl. 21—62.)



1. A fastener for vehicle canopy top, comprising a post member having a spherical head, a socket member formed of a T-shaped bar having a bifurcated stem with the socket formed in the furcation thereof, said socket having a spherical enlargement for engaging the spherical head of said post, and a bifurcated clamping lever embracing said furcations and cammed to draw the same together to clamp said socket upon said spherical head.

2. A fastener for vehicle canopy top, comprising a headed post member, a coöperating member formed of a T-shaped bar having a bifurcated stem and a socket formed in the furcations of said stem with an enlargement for engaging the head of said post, said bar being resilient to hold said furcations normally spread apart, and clamping means engaging the furcations of said bar to draw the same together.

3. A fastener for a vehicle canopy top, comprising a headed post, two members for clamping said post normally spaced to allow insertion of the post between said members, and a bifurcated clamping lever embracing said members, and cammed to clamp the same upon the post.

4. A fastener for a vehicle canopy top, comprising a headed post, a bifurcated socket member for engaging said post, and a bifurcated clamping lever embracing said furcations and cammed to draw the same together to clamp said socket upon said spherical head.

5. A fastener for a vehicle canopy top, comprising a headed post, a bifurcated socket member, the furcations thereof being resilient and having an enlargement for registration with the head of the post and having an entrance portion at one side of said enlargement normally expanded to receive said head, lugs oppositely projecting from said furcations at the other side of said enlargement forming stops limiting displacement of said head within the socket member, and clamping means engaging said furcations for contracting the same about said head in opposition to their resiliency.

1,196,584. PUMP-PISTON. GEORGE T. RANDOLPH, Yale, Ill. Filed Oct. 16, 1915. Serial No. 56,266. (Cl. 103—63.)

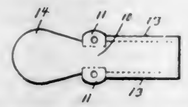


1. In a pump, the combination with a reciprocating piston, a valve seating at the upper end of the piston, a vertically movable stem working in said piston, and adapted to be moved upwardly against the valve to unseat the same, guides for the stem at the upper and lower ends thereof, and a spring for normally holding the stem out of contact with the valve.

2. In a pump, the combination with a reciprocating piston, a valve seating at the upper end of the piston, a stem having an enlargement at its upper end movable vertically in the piston, and adapted to be moved upwardly against the valve to unseat the same, guides for the stem at the upper and lower ends thereof, and a spring for retracting the stem to permit the valve to be seated.

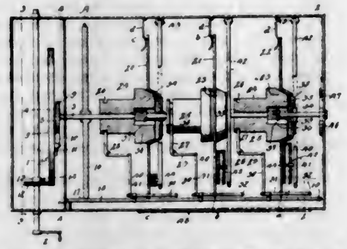
3. In a pump the combination with a reciprocating piston, a valve seating at the upper end of the piston, a stem movable in said piston against the valve to unseat the same, a strainer cap screwed to the lower end of the piston, a nut screwed to the lower end of the stem, and a spring encircling the stem and confined between the strainer cap and nut whereby the cap and nut will be prevented from becoming loose, said spring normally holding the stem retracted with the valve seated.

1,196,585. METAL CLOTHES-PIN. HERMAN A. REPSCHLAEGER, Bancroft, Nebr. Filed Oct. 20, 1915. Serial No. 56,872. (Cl. 24—253.)



A blank for forming the jaw of a clothes pin comprising a rectangular body, longitudinally extending wings formed on the sides of the body and defined therefrom by fold lines, the body being extended at one end to form an enlarged head, a neck connecting the body and head and formed with parallel incisions extending inward from opposite sides in pairs and beyond the said fold lines to define tabs formed with openings, said tabs being further defined by fold lines extending beyond the first fold lines but offset inwardly therefrom.

1,196,586. VENDING APPARATUS. LENOX S. ROARK, Coalinga, Cal. Filed Mar. 17, 1916. Serial No. 84,911. (Cl. 194—66.)



1. In vending apparatus, the combination with a rotary shaft, of a second rotary shaft geared thereto and driven thereby, means for locking the said second shaft, selective means embodying several units each including a trip wheel, means coöperating with the trip wheels for throwing the latter into and out of engagement with said second shaft, and means actuated by the last named means for unlocking said second shaft.

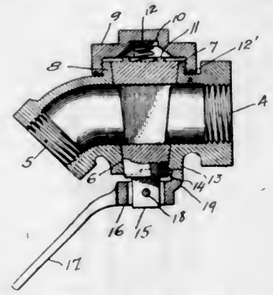
2. In vending apparatus, the combination with a rotary pump shaft, and operating means therefor, of a clutch shaft geared to said pump shaft, a notched locking wheel fast on said clutch shaft, a clutch member feathered to and slidable on the last named shaft, a trip wheel normally loose on the clutch shaft and adapted to be engaged and released by said clutch, a cam projection on said trip wheel, a trip lever resting against said trip wheel and adapted to be shifted by the cam projection thereon and also operatively connected with said clutch for shifting the latter, and a latch bar movable into and out of engagement with said locking wheel and arranged to be tripped by said trip lever.

3. In vending apparatus, the combination with a rotary pump shaft, and operating means therefor, of a clutch shaft substantially at a right angle thereto, a gear on said clutch shaft, pawl and ratchet means connecting said gear and clutch shaft, a gear on said pump shaft meshing with the gear on the clutch shaft, a notched locking wheel fast on said clutch shaft, a clutch member feathered to and slidable on the last named shaft, a trip wheel normally loose on the clutch shaft and adapted to be engaged and released by said clutch, a cam projection on said trip wheel, a trip lever resting against the periphery of said trip wheel and adapted to be shifted by the cam projection thereon and also adapted to shift said clutch with which it is connected, and a latch bar movable into and out of engagement with said locking wheel and arranged to be tripped by said trip lever.

4. In vending apparatus, the combination with a rotary pump shaft, and operating means therefor, of a clutch shaft substantially at a right angle to said pump shaft, a gear on said clutch shaft, a gear on said pump shaft meshing therewith, a notched locking wheel fast on said clutch shaft, a plurality of clutch members feathered to and slidable on the last named shaft, a plurality of trip wheels normally loose on the clutch shaft and adapted to be engaged and released by the respective clutch members, a cam projection on each trip wheel, trip levers resting against said trip wheels and adapted to be individually shifted by the cam projections thereon and also connected with the respective clutch members to shift the latter, and a latch bar movable into and out of engagement with said locking wheel and arranged to be tripped by any one of said trip levers.

5. In vending apparatus, the combination with a rotary pump shaft and operating means therefor, of a clutch shaft substantially at a right angle thereto, a gear on said clutch shaft provided with a plurality of concentric gear faces, a gear on said pump shaft shiftable longitudinally thereof so as to mesh with any one of said gear faces, a notched locking wheel fast on said clutch shaft, a clutch member feathered to and slidable on the last named shaft, a trip wheel normally loose on the clutch shaft and adapted to be engaged and released by said clutch, a cam projection on said trip wheel, a trip lever resting against the periphery of said trip wheel and adapted to be shifted by the cam projection thereon and also connected with said clutch member to shift the latter, and a latch bar movable into and out of engagement with said locking wheel and arranged to be tripped by said trip lever.

1,196,587. ANGLE-COCK. CLAUDE L. ROBINSON, Detroit, Fla., assignor of one-half to Josh L. Edwards, Watertown, Fla. Filed Aug. 5, 1915. Serial No. 43,825. (Cl. 137—7.)

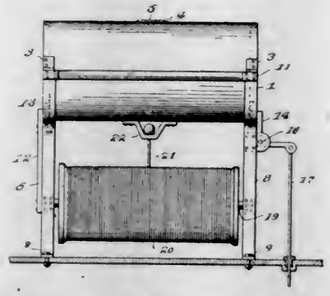


An angle cock having its body portion provided with a cone-shaped bore, a cone-shaped plug filling the bore, said plug having its upper and widened end provided with an annular ring, a cap upon the upper face of the casing and surrounding the upper end of the valve, a pocket within the cap, a spring between the pocket and the mentioned ring to force the plug downward and into contact with its seat, the reduced end of the plug extending below the casing and provided with a rectangular member, an angular handle having a collar portion receiving the said rectangular end of the plug, a pivot between the collar and the said end of the plug, a lug formed upon the collar diametrically opposite the handle, and the lower face of the casing being provided with spaced lugs to receive the mentioned lug of the collar of the handle when the handle is permitted to swing by gravity upon its pivot, and the handle and the portion of the casing adjacent thereto being curved downwardly.

1,196,588. SIGNALING OR INDICATING BUOY. CHARLES M. ROLLO, Shawnee, Okla., assignor of one-half to Lamar McDaniel, Shawnee, Okla. Filed Jan. 18, 1916. Serial No. 72,814. (Cl. 114—16.5.)

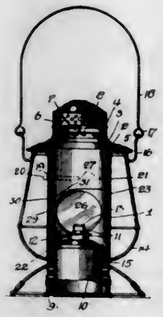
A device of the character described comprising a supporting frame consisting of pairs of end standards, the

standards of each pair being arranged to converge in an upward direction and having partly circular portions extending therefrom in opposing relation, cross pieces uniting the standards of each pair, longitudinal pieces connecting the partly circular extensions of the pairs of standards and forming a substantially semi-circular cradle, a retaining member carried by the cross pieces at one end



of the frame, a buoyant body adapted to rest in said cradle and having end flanges, one of said flanges being adapted for engagement with said retaining member, a latch upon the opposite end of the frame for engagement with the other flange of the buoyant body, means for operating the latch, a drum journaled upon the frame, and a cable connecting the buoyant body with said drum.

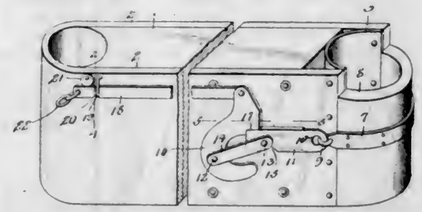
1,196,589. LANTERN. PATRICK J. ROONEY, Broughton, Pa. Filed Nov. 22, 1913. Serial No. 802,580. (Cl. 240—39.)



1. A lantern comprising a cylindrical member provided with a pair of lenses normally open to the light from a flame within said member, an annular guide arranged within said cylindrical member below said lenses, a cylindrical slide shiftable within said cylindrical member and having a cut-away side portion on a level with the said lenses and capable of being shifted to shut off one of said lenses to the flame, a reflector corresponding in size to said lenses and centrally carried by said slide and positioned parallel to the other of said lenses when the first mentioned lens is shut off to the flame, means capable of being engaged exteriorly of said member for shifting said slide and a flame producing means removably carried within the bottom of said cylindrical member.

2. A lantern comprising a cylindrical member provided with a pair of lenses normally open to the light from a flame within said cylindrical member, means to provide the flame within the cylindrical member, a closely fitting cylindrical slide arranged within said member and capable of being shifted to shut off one of said lenses to the flame and having a lens accommodating cut-away side portion, a reflector carried by said slide and positioned parallel to the other of said lenses when the first mentioned lens is shut off to the flame, a mounting bead guide for said slide within said cylindrical member, a support upon the top of said cylindrical member, a perforated cap, a depending member carried by said cap and centrally connected to said support.

1,196,590. STAKE-HOLDING DEVICE FOR LOG-CARS. JOSEPH ROULEAU, Bend, Oreg. Filed Mar. 23, 1916. Serial No. 86,257. (Cl. 105—173.)



1. In a device of the class described, the combination with a bunk, plates secured to opposite sides of the bunk and having the ends thereof at one end of the bunk projecting beyond the bunk, a vertical plate secured in the projecting ends of the first-named plates and curved in cross section, a clamping section, a strap secured to said clamping section and having one end pivoted to one of said plates, a latch connected to the other end of said strap, and means coöperating with said latch to hold said clamping section in position to coact with said vertical plate to form a socket.

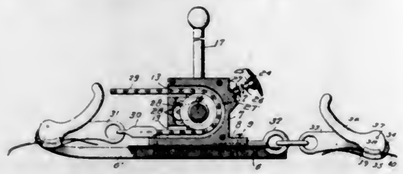
2. In a device of the class described, the combination with a bunk, plates secured to opposite sides of the bunk and having the ends thereof at one end of the bunk projecting beyond the bunk, a vertical plate secured in the projecting ends of the first-named plates and curved in cross section, a clamping section, a strap secured to said clamping section and having one end pivoted to one of said plates, a latch connected to the other end of said strap, means coöperating with said latch to hold said clamping section in position to coact with said vertical plate to form a socket, and a hook-like lever pivoted adjacent to said latch and operable to swing the latch to release said clamping section.

3. In a device of the class described, the combination with a bunk, plates secured to opposite sides of the bunk and having the ends thereof at one end of the bunk projecting beyond the bunk, a vertical plate secured in the projecting ends of the first-named plates and curved in cross section, a clamping section, a strap secured to said clamping section and having one end pivoted to one of said plates, a latch connected to the other end of said strap, means coöperating with said latch to hold said clamping section in position to coact with said vertical plate to form a socket, a hook-like lever pivoted adjacent to said latch and operable to swing the latch to release said clamping section, a rod connected to said releasing lever to swing the latter, and means holding said rod normally against movement.

1,196,591. BALE-BAND TIGHTENER. PHILIP ALLEN SAPP and WALTER B. MARKSTEIN, Eufaula, Ala.; said Markstein assignor of one-half of the whole right to A. J. Miller, Barbour, Ala. Filed May 15, 1915. Serial No. 28,399. (Cl. 254—161.)

1. An apparatus of the character described, comprising a base plate, a housing carried thereby, a rotatable shaft mounted in said housing, a ratchet carried by said shaft, a locking pawl pivoted to the side of said housing and adapted to engage said ratchet, said pawl being provided with a lateral angular extension projecting around the adjacent end of said housing, means for normally maintaining said pawl in engagement with the ratchet and a flexible element supported by said shaft.

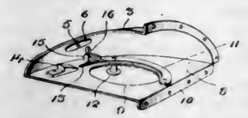
2. An apparatus of the character described, comprising a base plate, a housing carried thereby, a rotatable shaft mounted transversely in said housing, a ratchet carried by said shaft, a locking pawl pivoted to the side of said housing and adapted to engage said ratchet, said pawl being provided with a lateral angular extension projecting around the adjacent end of said housing, a spring having one end engaging said housing and the other end secured to said pawl whereby the latter is normally maintained in engagement with the ratchet, a sprocket wheel mounted on said shaft in said housing, a flexible drive element carried by said sprocket, a band clamp secured to one end of said element, and a similar clamp secured to the opposite end of said housing.



3. An apparatus of the character described, comprising a plurality of runners, a base plate carried thereby, a housing mounted on said plate and comprising a detachable side plate, a rotatable shaft mounted transversely of said housing, band tightening means carried by said shaft, a band clamp connected to said means, and a similar clamp connected to the opposite end of said housing.

4. An apparatus of the character described, comprising a plurality of runners, a base member carried thereby, a housing mounted on said base member and comprising a detachable side plate, a rotatable shaft mounted in said housing, and band tightening means carried by said shaft.

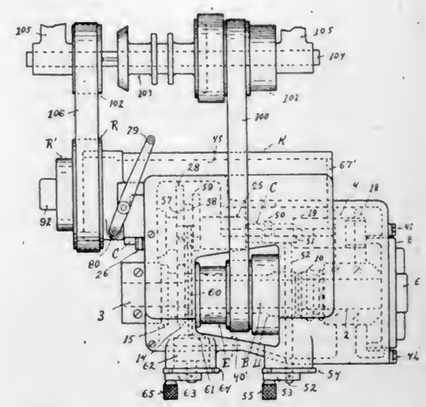
1,196,592. PROTECTIVE HOLDER FOR BOTTLES. CHRIST SCHAUM and RAYMOND H. WILLIAMS, Kulpmont, Pa. Filed Oct. 30, 1915. Serial No. 58,867. (Cl. 232—42.)



1. In a milk bottle holder, a casing adapted to be secured to a support and having an open side which is adapted to be closed by a member movable with relation to the support, said casing having its underface provided with an aperture, a curved plate pivoted in the said casing adjacent the said aperture, means connected with the plate and extending below the bottom of the casing for swinging the plate to bring the same within the area of the aperture, means for locking the plate in such position, said means being operable to release the plate when the movable member is brought away from the support.

2. In a milk bottle holder, a casing having open sides, one of which is flanged and adapted to be secured to either a stationary or hinged member whereby the second open end will be normally closed by the other member, when the hinged member is swung closed upon the stationary member, the outer side of the casing being round, the top of the casing being inclined from its flanged side to its said rounded side, an indicator upon the said top and operated from the interior of the casing, the bottom of the casing having an aperture, a flat curved plate pivoted within the said bottom, a spring catch upon the free end of the plate, a rack bar within the casing adapted to be engaged by the plate and operative from the exterior of the casing to swing the plate to bring the same within the area of the aperture, and a finger member upon the catch, as and for the purpose set forth.

1,196,593. LATHE. WILLIAM L. SCHELLENBACH, Wyoming, Ohio. Filed Mar. 4, 1916. Serial No. 82,243. (Cl. 82—29.)



1. In a lathe a rotatably mounted lathe spindle, a rotatably mounted sleeve encircling a portion of said spindle, means to clutch said sleeve and spindle together a back gear shaft, mechanism to drive said back gear shaft through said sleeve, mechanism to drive said sleeve from said back gear shaft, mechanism to drive said spindle from said back gear shaft, a driving spindle and mechanism to drive said back gear shaft from said driving spindle.

2. In a lathe a rotatably mounted lathe spindle, a rotatably mounted sleeve encircling a portion of said spindle, means to clutch said sleeve to said spindle, a back gear shaft, mechanism to drive said back gear shaft through said sleeve, mechanism to drive said sleeve from said back gear shaft, mechanism to drive said spindle from said back gear shaft, a driving spindle, and mechanism to drive said back gear shaft at relatively different rates of speed from said driving spindle.

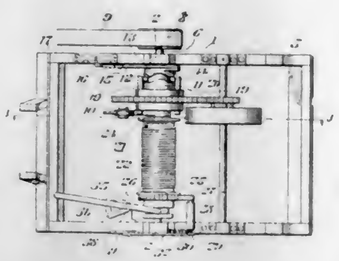
3. In a lathe a rotatably mounted lathe spindle, a rotatably mounted sleeve encircling a portion of said spindle, a back gear shaft, mechanism connecting said back gear shaft and sleeve in driving relation, mechanism to connect said back gear shaft and spindle in driving relation, and means to be selectively employed to drive said back gear shaft from said sleeve and to drive said sleeve through said back gear shaft.

4. In a lathe a rotatably mounted lathe spindle, a rotatably mounted sleeve encircling a portion of said spindle, a back gear shaft, mechanism connecting said back gear shaft and sleeve in driving relation, mechanism connecting said back gear shaft and spindle in driving relation, mechanism to be selectively employed to drive said back gear shaft from said sleeve and to drive said sleeve through said back gear shaft, a feed shaft, and mechanism to selectively connect said feed shaft in driving relation with said sleeve or in driving relation with said spindle.

5. In a lathe a rotatably mounted lathe spindle, a rotatably mounted sleeve encircling a portion of said spindle, means to clutch said sleeve to said spindle, a back gear shaft rotatably mounted and adjustable endwise to engage it with and disengage it from driving relation with said spindle, a sleeve telescopically connected to and rotatable with said back gear shaft, mechanism to engage said back gear shaft sleeve in driving relation with said spindle sleeve, a driving spindle, and mechanism carried rotatably upon said back gear shaft sleeve to selectively establish driving relations between said driving spindle and said back gear shaft.

[Claims 6 to 25 not printed in the Gazette.]

1,196,594. WELL-DRILLING MACHINE. JOHN A. SHANLEY, Worthing, S. D. Filed Jan. 29, 1916. Serial No. 75,075. (Cl. 255—13.)



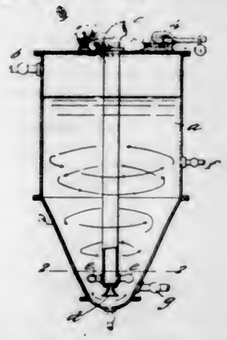
1. In a well drilling machine of the class described, a frame, a shaft mounted in bearings in the frame, means to rotate the shaft, an element revoluble with the shaft, a tappet pin mounted for reciprocating movement in said element and arranged substantially parallel with the shaft, a trip lever pivotally mounted on said shaft to operate a drill rope and arranged in the path of said tappet pin, a relatively fixed cam to operate the said tappet pin and cause the same to engage and disengage said trip lever at each rotation of the shaft, a drum mounted loosely on the shaft for winding and unwinding the drill rope, means to lock and release the drum, and means to lock the drum to or release the same from the shaft.

2. In a well drilling machine of the class described, a frame, a shaft mounted in bearings in the frame, means to rotate the shaft, an element revoluble with the shaft, a tappet pin mounted for reciprocating movement in said element and arranged substantially parallel with the shaft, a trip lever pivotally mounted on said shaft to operate a drill rope and arranged in the path of said tappet pin, a cam to operate said tappet pin and cause the same to engage and disengage the said trip lever at each rotation of the shaft, said cam being loosely mounted on said shaft, means to adjust said cam to regulate the length of stroke of the trip lever, a drum mounted loosely on the shaft for winding and unwinding the drill rope, means to lock and release the drum, and means to lock the drum to or release the same from the shaft.

3. In a well drilling machine of the class described, a frame, a shaft mounted in bearings in the frame, means to rotate the shaft, an element revoluble with the shaft, a tappet pin mounted for reciprocating movement in said element and arranged substantially parallel with the shaft, a trip lever pivotally mounted on said shaft to operate a drill rope and arranged in the path of said tappet pin, a relatively fixed cam to operate said tappet pin and cause the same to engage or disengage said trip lever at each rotation of the shaft, a drum mounted loosely on the shaft for winding and unwinding the drill rope and provided with ratchet teeth, a pawl to engage and disengage the ratchet teeth and thereby lock or release the drum, and means to lock the drum to or release the same from the shaft.

4. In a well drilling machine of the class described, a frame, a shaft mounted in bearings in the frame, means to rotate the shaft, an element revoluble with the shaft, a tappet pin mounted for reciprocating movement in said element and arranged substantially parallel with the shaft, a trip lever pivotally mounted on said shaft to operate a drill rope and arranged in the path of said tappet pin, a relatively fixed cam to operate the said tappet pin and cause the same to engage and disengage said trip lever at each rotation of the shaft, a drum mounted loosely on the shaft for winding and unwinding the drill rope, means to lock and release the drum, and a clutch to lock the drum to or release the same from the shaft.

1,196,595. PROCESS OF CARBONATING LEAD OXID. FREDERICK HERBERT SHARPE, Liverpool, England. Filed July 12, 1915. Serial No. 39,448. (Cl. 134—75.)



1. A single vat process for the manufacture of white lead, in which lead oxid suspended in water in conjunction with an assistant is introduced into a closed vat and carbon dioxid containing gas is introduced into the vat at or near the bottom and with a swirling motion so as to prevent settlement of the solid material and to cause thorough and efficient contact between the gas, the solid and the liquid.

2. A single vat process for the manufacture of white lead, in which lead oxid suspended in water in conjunction with an assistant is introduced into a closed vat and carbon dioxid containing gas is introduced more or less tangentially into the vat at or near its bottom and tends to rise in a more or less helical direction up the sides, at the same time giving a swirling movement to the water and its suspended lead oxid.

3. A single vat process for the manufacture of white lead, in which lead oxid suspended in water in conjunction with an assistant is introduced into a closed vat and carbon dioxid containing gas is introduced through a plurality of jets more or less tangentially into the vat at or near its bottom.

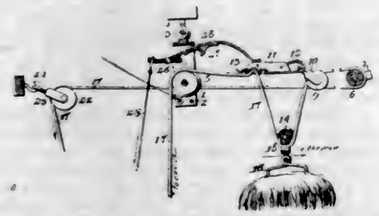
4. A single vat process for the manufacture of white lead, in which lead oxid suspended in water in conjunction with an assistant is introduced into a closed vat and carbon dioxid containing gas is introduced into the vat so as to cause the material therein to swirl upwardly and outwardly against a conical wall in the lower part of the vat and cause a downward flow of material in the middle of the vat.

5. A single vat process for the manufacture of white lead, in which lead oxid suspended in water in conjunction with an assistant is introduced into a closed vat and carbon dioxid containing gas is introduced more or less tangentially into the vat at or near its bottom and tends to rise in a more or less helical direction up the sides, at the same time giving a swirling movement to the water and its suspended lead oxid, a portion of the gas as it rises being deflected toward the center of the vat to cause it to rise against the downward flow of water and its suspended lead oxid.

[Claim 6 not printed in the Gazette.]

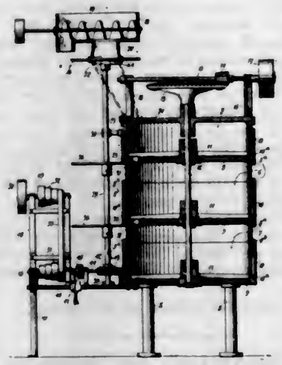
1,196,596. HAY-UNLOADER. JOHN J. SHENK, Frederick, Md. Filed Mar. 22, 1916. Serial No. 85,824. (Cl. 212—76.)

1. A device of the character specified, comprising in combination with a hay fork a lifting cable and direction elements for guiding the same, of a pulley arranged in fixed position above the hay to be unloaded, a second pulley adapted to be arranged where desired in the mow, a carriage, a flexible member connected with the carriage and passing over the fixed pulley and under the control of the operator for returning the carriage, said carriage having a pulley and the lifting cable passing from the hay fork over the carriage pulley and over the second pulley, and thence over the direction elements to the source of power, and means for holding the carriage adjacent to the first named pulley, and controlled by the upward movement of the hay fork for releasing the carriage, and means in connection with the said last named means for permitting the operator to control the release of the carriage.



2. A device of the character specified, comprising in combination with a hay fork a lifting cable and direction elements for guiding the same, of a pulley arranged in fixed position above the hay to be unloaded, a second pulley adapted to be arranged where desired in the mow, a carriage, a flexible member connected with the carriage and passing over the fixed pulley and under the control of the operator, for returning the carriage, said carriage having a pulley and the lifting cable passing from the hay fork over the carriage pulley and over the second pulley, and thence over the direction elements to the source of power, and means for holding the carriage adjacent to the first named pulley, said means being under the control of the operator for releasing the carriage when desired.

1,196,597. HEATER OR COOKER FOR COTTON AND OTHER OIL SEED OR MATERIAL. ORLANDO SHEPPARD, Jr., Atlanta, Ga., assignor to The Murray Company, Dallas, Tex., and Atlanta, Ga., a Corporation of Texas. Filed Mar. 15, 1913. Serial No. 754,659. (Cl. 87—6.)



1. In a heater of the class specified, the combination of a heating compartment, a charging hopper and compartment having communication with the said heating compartment, a single shaft extending upwardly exteriorly of the hopper and compartments, and rotary gates mounted on said single shaft and coöperating with the hopper and compartment and the heating compartment to automatically regulate feed of charges to the latter compartment at intervals.

2. In a heater of the class specified, the combination of a heating compartment having an inlet and outlet in different portions thereof, charging means connected to the inlet of the compartment, a single shaft extending upwardly exteriorly of the heating compartment and charging means, and rotary gates mounted on said single shaft and coöperating with the charging means and the outlet of the compartment to automatically regulate the feed and discharge of predetermined quantities of material to be treated to and from the said compartment.

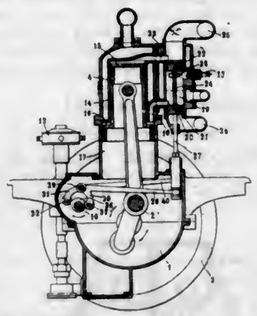
3. In a heater of the class specified, the combination of a plurality of superposed heating compartments having bottom outlets in communication with the compartments, a single shaft extending upwardly exteriorly of the compartments, and rotary gates all mounted on said shaft with the greater portion thereof exterior of the compartments and having openings therein in different positions and operating with the outlets of the compartments to automatically regulate the discharge of the material treated in one compartment at intervals relatively to another compartment.

4. In a heater of the class specified, the combination of a plurality of superposed heating compartments having outlets for the discharge of material in one compartment into another successively throughout the plurality of compartments, and rotary gates vertically alined and having the greater portions thereof exterior of the compartments and the remaining portions coöperating with the outlets of the compartments and having offset openings to automatically discharge the contents of the compartments relatively to each other at different times.

5. In a heater of the class specified, the combination of a plurality of superposed compartments having outlets for discharging material in the several compartments at timed intervals into adjacent compartments, a charging means for delivering predetermined quantities of material to be treated into the uppermost of the compartments, and vertically alined rotary gates having portions exterior of the compartments and charging means and remaining portions thereof extending into the compartments and charging means and coöperating with the outlets of the compartments and the charging means and having offset openings to automatically regulate the charging of the one compartment and the discharge of the compartments relatively to each other at timed intervals.

[Claims 6 to 14 not printed in the Gazette.]

1,196,598. INTERNAL-COMBUSTION ENGINE. WALTER H. SHIMPF, New York, N. Y. Filed Nov. 19, 1910. Serial No. 593,143. (Cl. 123—71.)



1. An internal combustion engine comprising working and compression cylinders, a main working piston, a simultaneously actuated compression piston, a valve controlled transfer chamber having ports operatively arranged with reference to the respective pistons, an inlet and an exhaust, operatively arranged with reference to the compression piston and working piston, a valve mechanism arranged in the transfer chamber and controlling said chamber ports and the inlet and exhaust ports, and means appurtenant to the transfer chamber for controlling the exhaust from the working cylinder through the said transfer chamber.

2. An internal combustion engine comprising a plurality of working and compression cylinders, a plurality of working pistons, a plurality of compression pistons operatively arranged with reference thereto, a plurality of transfer chambers operatively arranged with reference to said working and compression pistons, valves controlling said transfer chambers and arranged to control the induction and eduction of a charge of mixture with reference to the compression pistons and controlling the induction and exhaust with reference to the working pistons during each complete cycle of movement of the working pistons, an exhaust port in each of the transfer chambers, and a valve controlling said port and permitting a primary exhaust of the main cylinder through the transfer chamber and said port.

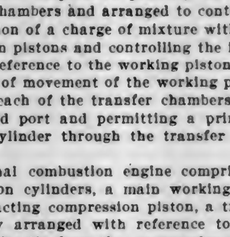
3. An internal combustion engine comprising working and compression cylinders, a main working piston, a simultaneously acting compression piston, a transfer chamber operatively arranged with reference to said pistons for receiving directly from the compression piston a compressed charge, valve mechanism in the said chamber arranged to deliver said charge, under control to the working piston, a port appurtenant to the transfer chamber and a valve controlling said port, and arranged to open the port while the aforesaid valve mechanism is in position to establish communication between the working cylinder and the transfer chamber, whereby an initial exhaust of the main cylinder is controlled through the transfer chamber.

4. An internal combustion engine comprising working and compression cylinders, a main working piston, a compression piston, said working and compression cylinders having ports which alternately serve as induction ports and as eduction ports therefor, a transfer chamber operatively connected with the respective cylinders through said ports, an intermittently actuated valve mechanism controlling said ports, and means for actuating the said valve mechanism arranged to cause it to pause with the ports of the working cylinder and the compression cylinder open and serving as induction ports during the working stroke, and to cause it to pause with the port of the compression cylinder open to the transfer chamber and the port of the working cylinder open to the atmosphere.

5. An internal combustion engine comprising working and compression cylinders, a main working piston, a compression piston, a valve-controlled transfer chamber operatively arranged with reference to said pistons for receiving from the compression piston a fully compressed charge under firing pressure and delivering said charge ignited to the working cylinder, and means appurtenant to said transfer chamber for passing an initial exhaust of the working cylinder through said chamber and permitting complete exhaust of said cylinder direct to the atmosphere.

[Claim 6 not printed in the Gazette.]

1,196,599. TOBACCO-POUCH. MALNOR A. SHUMARD and MALNOR A. SHUMARD, Jr., Boerne, Tex. Filed Oct. 21, 1915. Serial No. 57,140. (Cl. 150—7.)



1. A tobacco pouch of substantially flat form composed of companion members arranged face to face and secured adjacent their margins and throughout their marginal extent, the pouch having a discharge mouth whose width is the minimum width of the pouch and having its sides tapering toward said discharge mouth, one of the members having an extension adjacent said discharge mouth constructed, when folded over against the other member, to form a closure for the pouch and, when extended, to form a pouring spout.

2. A tobacco pouch of substantially flat form composed of companion members arranged face to face and secured adjacent their margins and throughout their marginal extent, the pouch having a discharge mouth whose width is the minimum width of the pouch and having its sides tapering toward said discharge mouth, the pouch also having a continuous marginal reinforcement, one of the members having an extension adjacent said discharge mouth constructed, when folded over against the other member, to form a closure for the pouch, and when extended, to form a pouring spout.

3. A tobacco pouch of substantially flat form composed of companion members arranged face to face and secured by stitching adjacent their margins and throughout their marginal extent, the pouch having a discharge mouth whose width is the minimum width of the pouch and having its sides tapering toward said discharge mouth, the pouch also having its marginal portions outside of the line of stitching secured against one another to provide a continuous marginal reinforcement, one of the members having an extension adjacent said discharge mouth constructed, when folded over against the other member to form a closure for the pouch, and, when extended, to form a pouring spout.

4. A tobacco pouch of substantially flat form comprising two companion members arranged face to face and secured adjacent their margins and throughout their marginal extent, the pouch having a discharge mouth whose width is the minimum width of the pouch and having its sides tapering toward said discharge mouth, one of the members having an extension adjacent said discharge mouth, constructed, when folded over against the other member, to form a closure for the pouch, and, when extended, to form a pouring spout, the members having permanent creases through a fractional part of their depth extending from points along said discharge mouth and the extension having a similar crease in line with the crease of the member with which the extension is formed and which, when the extension is folded, nests with the crease of the other member.

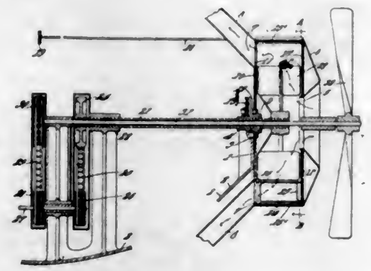
5. A tobacco pouch of substantially flat form comprising two companion members arranged face to face and secured adjacent their margins and throughout their marginal extent, the pouch having a discharge mouth whose width is the minimum width of the pouch and having its sides tapering toward said discharge mouth, one of the members having an extension adjacent said discharge mouth, constructed, when folded over against the other member, to form a closure for the pouch, and, when extended, to form a pouring spout, the members having permanent creases through a fractional part of their depth extending from points central of said discharge mouth and the extension having a similar central crease in line with the crease of the member with which the extension is formed and which, when the extension is folded nests with the crease of the other member and devices for fastening said extension in folded position located at opposite sides of the nesting creases.

[Claims 6 to 9 not printed in the Gazette.]

1,196,600. PROPELLING AND STEERING MECHANISM FOR AIRCRAFT. RICHARD ALEXANDER SHUTE, Los Angeles, Cal. Filed July 17, 1915. Serial No. 40,448. (Cl. 244—25.)

1. The combination with a movable structure and a propeller for actuating the same, of a fixed casing adjacent and back of the propeller, means within the casing for exhausting the air from the propeller, and means for directing the exhausted air from the casing and along the walls of the structure to form a friction reducing film of air upon said walls.

2. Apparatus of the class described including a casing, said casing having peripheral outlets, valves normally closing the outlets, a propeller, means for exhausting air from the propeller and into the casing, and means for opening any one of the valves to permit the outflow of the exhaust air.

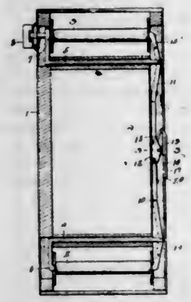


3. Apparatus of the class described including a casing having outlet openings in the back thereof, there being outlet openings in the periphery of the casing, valves for normally closing the peripheral openings, a propeller, means within the casing for exhausting air from the propeller and to the rear outlet openings, means for opening one of the peripheral valves, for simultaneously closing the rear openings in the casing.

4. Apparatus of the class described including a casing having rear openings and peripheral openings, valves normally closing the peripheral openings, a propeller adjacent the casing, means within the casing for exhausting air from the propeller and normally forcing it through the rear openings in the casing, separate means for opening the respective valves, and means operated by each valve when opened, for closing all of the rear openings simultaneously.

5. Combined steering and propelling mechanism for air craft, comprising a propeller, a casing adjacent thereto and having rear and peripheral openings, valves normally closing the peripheral openings, means within the casing for exhausting air from the propeller and directing it through the exposed openings, separate means for opening the valves, and means operated by any one of the valves when moved to opened position, for simultaneously closing all of the rear openings, said means including a disk having openings normally registering with the rear openings, yieldable means for holding the disk in its normal position, and a pivotal and slidable connection between each valve and the disk.

1,196,601. CAMERA SPOOL-SUPPORT. JUSTIN GARFIELD SMEBY, Oberon, N. D. Filed Mar. 28, 1916. Serial No. 87,249. (Cl. 242—71.)



1. A support for the film spools of a camera comprising a pair of rods mounted in the camera and one of which being formed to engage one end of one spool, means supported by the other rod for supporting and winding the remaining spools, and means for simultaneously giving movement to said rods.

2. A support for the film spools of a camera comprising a pair of rods mounted in the camera, one of which being formed to engage one end of one spool, means carried by the other rod for engaging one end of the remaining spool, levers supported by the camera, and adapted to be thrown into engagement with the remaining ends of the spool, and a single element for giving movement to said levers and rods.

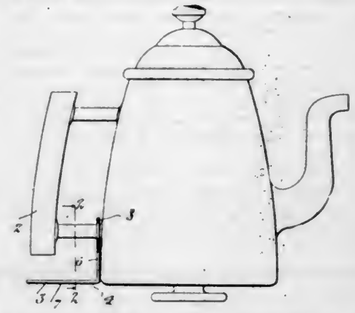
3. A support for the film spools of a camera comprising a pair of rods mounted in the camera, one of which being formed to engage one end of one spool, means carried by the other rod for engaging one end of the remaining spool, levers supported by the camera, and adapted to be thrown into engagement with the remaining ends of the spools, links for simultaneously giving movement to said rods and levers, and manually operated means for actuating said links.

4. A support for the film spools of a camera comprising a pair of rods mounted in the camera, one of which being formed to engage one end of one spool, means carried by the other rod for engaging one end of the remaining spool, levers supported by the camera, and adapted to be thrown into engagement with the remaining ends of the spools, links for simultaneously giving movement to said rods and levers, and a manually operated element having a yieldable connection with the links for actuating the latter.

5. A support for the film spools of a camera comprising a pair of rods mounted in the camera and one of which being formed to engage one end of one spool, means supported by the other rod for supporting and winding one end of the remaining spool, levers supported by the camera and engaging the remaining ends of the spools, and manually operated means for disengaging said rods and levers from the ends of the spools.

[Claims 6 and 7 not printed in the Gazette.]

1,196,602. HANDLE-GUARD. OMAR H. SMITH, Cleveland, Ohio. Filed May 24, 1915. Serial No. 30,127. (Cl. 53—3.)

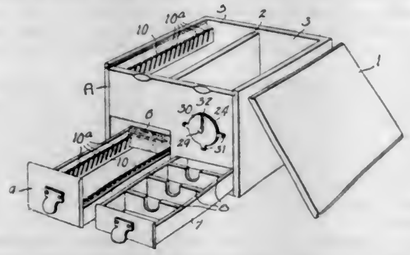


The herein described guard for retaining the handle of a cooking vessel in a cool condition comprising a plate in the shape of a right-angle and having one of its sides centrally formed with a hook to engage with the handle, said guard being adapted to rest against the side of the vessel to maintain the other side of said plate directly below the handle and above the bottom surface of the vessel when arranged upon a stove or the like and to be readily removed from the cooking vessel.

1,196,603. FOLLOW-UP INDEX FOR COLLECTION SYSTEMS. WALTER O. SMITH, New Bedford, Mass. Filed Sept. 13, 1915. Serial No. 50,375. (Cl. 129—16.)

1. An index device of the character described, including a card receiving compartment, index cards having

name receiving spaces adjacent the edges thereof, and rack strips arranged within the card receiving compartment and formed with upwardly extending and rearwardly inclined arms for supporting the index cards in an inclined position with all of the name receiving spaces of the several cards visible.



2. An index device of the character described, including a card receiving compartment, reversible index cards provided adjacent opposite longitudinal edges thereof with name receiving spaces and having a distinctive marking upon one of the longitudinal edges, and a rack within the card receiving compartment for supporting the index cards in a rearwardly inclined position with the name receiving spaces at the then upper edges of all of the cards visible.

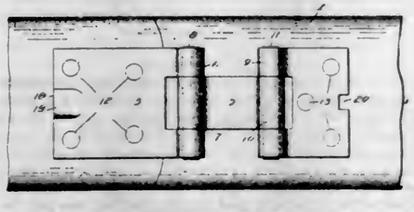
3. An index device of the character described, including a card receiving compartment and reversible index cards provided with name receiving spaces adjacent opposite edges thereof and one of the edges being distinctively marked to distinguish it from the other edge so that the reversal of the card within the compartment can be used as a signal means.

4. An index card having name receiving spaces adjacent the opposite edges thereof and one of the edges being marked with a distinctive line to distinguish it from the other edge so that the reversing of the card can be used as a signal.

5. An index device of the character described, including a card receiving compartment and a jacket receiving compartment, reversible index cards arranged within the card receiving compartment and distinctively marked upon one edge thereof so that those cards in an inverted position can be distinguished from the cards in an upright position, and jackets corresponding to the inverted cards arranged within the jacket receiving compartment.

[Claims 6 to 9 not printed in the Gazette.]

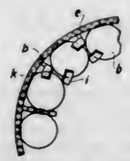
1,196,604. VEHICLE-WHEEL RIM. CHARLES H. SNYDER and EMMIT STALLTER, Rockford, Ohio. Filed May 8, 1915. Serial No. 26,856. (Cl. 152—21.)



1. A tire carrying rim for vehicle wheels, said rim being split at one point, and a three-part hinge consisting of two end members and a connecting member or link pivotally attached to the end members, said end members being fixedly secured to the end portions of the rim adjacent to the split, one of said end members being formed with an undercut hook-receiving socket in the end thereof farthest from the split for the purpose specified.

2. A tire carrying rim for vehicle wheels, said rim being split at one point, and a three-part hinge consisting of two end members and a connecting member or link pivotally attached to the end members, said end members being fixedly secured to the end portions of the rim, adjacent to the split, one of said end members being formed with an undercut hook-receiving socket in the end thereof farthest from the split and the other end member with a notch for the purpose specified.

1,196,605. SHEET-METAL BALL-RETAINER FOR BALL-BEARINGS. CARL GUSTAF SÖDERLUND, Gottenborg, Sweden. Filed Apr. 28, 1915. Serial No. 24,431. (Cl. 64—59.)



1. A ball retainer, for ball bearings, consisting of a ring member, and a series of metal strips, arranged equidistantly thereon, provided with open ended slots which enable said ring member and strips to be simultaneously placed in position in the bearing with a metal strip between each pair of adjacent balls, the slots being of a sufficient width to allow the balls to project beyond the surfaces of the metal strips and the walls of the slots forming seats for the balls.

2. In a ball bearing a ball retainer comprising a ring member and a series of metal strips arranged equidistantly on said member, each strip being adapted to engage between a pair of adjacent balls and having slots running inward from an edge remote from said ring member, the slots being of a sufficient width to allow the balls to project beyond the surfaces of the metal strips and the walls of the slots forming seats for the balls.

3. In a ball bearing a ball retainer comprising a ring member and a series of metal strips arranged equidistantly on said member, each strip being adapted to engage between a pair of adjacent balls and having slots running inward from the edge opposite to the said ring member, the slots being of sufficient width to allow the balls to project beyond the surfaces of the metal strips and the walls of the slots forming seats for the balls.

4. In a ball bearing a ball retainer comprising a ring member and a series of metal strips arranged equidistantly on said member, each strip being adapted to engage between a pair of adjacent balls and being provided with a central hole the edge of which forms a seat for the two adjacent balls, and also being slotted from said hole to an edge remote from said ring.

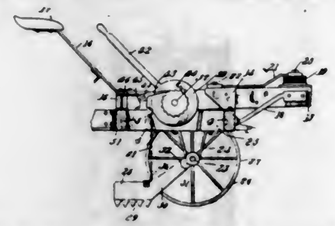
5. A ball retainer, for ball bearings, consisting of a ring member and a series of metal strips arranged equidistantly thereon, each of said strips having wings, formed by a slot extending from the center to the edge of the strip, adapted to be bent down in opposite directions toward adjacent balls when the retainer is in position with a strip located between each pair of adjacent balls, the slots being of a sufficient width to allow the balls to project beyond the surfaces of the metal strips and the walls of the slots forming seats for the balls.

[Claim 6 not printed in the Gazette.]

1,196,606. PULVERIZER. CHARLES E. SPAULDING, Centralia, Ill. Filed Sept. 18, 1914. Serial No. 862,364. (Cl. 55—22.)

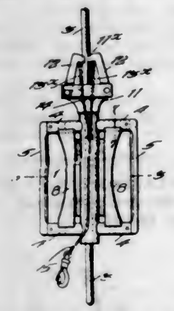
4. A machine of the class described having knives arranged parallel with the line of draft and provided at their lower sides with laterally inclined teeth.

2. A machine of the class described having knives arranged parallel with the line of draft and provided at their lower sides with laterally inclined teeth arranged at



an angle to the line of the knives, and extending from opposite sides of the knives.

1,196,607. FIRE-ESCAPE. LOUIS SPIRO, Monessen, Pa. Filed Feb. 3, 1915. Serial No. 5,906. (Cl. 227—25.)



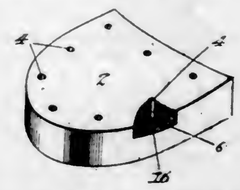
1. The combination with a rope or cable, of a sleeve arranged to surround a portion of said rope or cable, said sleeve having a pair of opposed longitudinal slots, a movable gripping member disposed on each side of said sleeve, each of said gripping members having a tongue arranged to project through one of said slots and into contact with the cable, and springs disposed between the ends of each of said gripping members and the central sleeve for normally holding said gripping members away from said rope or cable.

2. The combination with a rope or cable, of a sleeve arranged to surround a portion of said rope or cable, said sleeve having a pair of opposed longitudinal slots, a movable gripping member disposed on each side of said sleeve, each of said gripping members having a tongue arranged to project through one of said slots and into contact with the cable, springs disposed between the ends of each of said gripping members and the central sleeve for normally holding said gripping members away from said rope or cable, and a frame carried by said sleeve on each side thereof, for guiding said gripping members.

3. The combination with a rope or cable, of a sleeve arranged to surround a portion of said rope or cable, said sleeve having a pair of opposed longitudinal slots, a movable gripping member disposed on each side of said sleeve, each of said gripping members having a tongue arranged to project through one of said slots and into contact with the cable, springs disposed between the ends of each of said gripping members and the central sleeve for normally holding said gripping members away from said rope or cable, and a frame having hollow members arranged to receive and retain said springs on each side of said central sleeve, said frames also serving to guide said gripping members.

4. The combination with a rope or cable, of a sleeve arranged to surround a portion of said rope or cable, said sleeve having a pair of opposed longitudinal slots, a U-shaped frame member carried by said sleeve on each side thereof, the arms of each of said U-shaped members being provided with guide slots, a movable gripping member for each frame member having tongues arranged to enter the guide slots in its individual gripping member, a spiral spring disposed between each of said tongues and said sleeve for normally holding the gripping member away from the sleeve, and a tongue carried by each of said gripping members and adapted to project through one of the opposed slots in said sleeve, the movement of said gripping members serving to bring said tongues into frictional engagement with the cable.

1,196,608. HEEL. JOHN F. STANDISH, Winthrop, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 19, 1915. Serial No. 3,173. (Cl. 36—35.)



1. A rubber heel having a plurality of separate spaced-apart nail-engaging washers embedded in its body, said washers being provided with dished sides extending from the marginal portions of the washers to the rims of the nail-receiving apertures therein and facing the tread surface of the heel, said washers constituting independent nail-deflecting guides, which are isolated from each other by resilient portions of the heel body.

2. A cushion heel having embedded therein a plurality of separate and independent nail guiding inserts, each of said inserts having a surface so disposed as to guide the point of a nail toward its center.

3. A cushion heel having embedded therein a plurality of separate and independent nail guiding inserts, each of said inserts having a surface so disposed as to guide the point of a nail toward its center, and having a marginal flange arranged to resist displacement of the insert from its position in the heel.

4. A cushion heel having embedded therein a plurality of separate and independent metallic inserts, each of said inserts being in the form of a dished washer flaring upwardly and outwardly from a central hole.

5. A cushion heel having embedded in its body a nail engaging washer provided with dished sides extending from the marginal portion of the washer to the rim of the nail receiving aperture therein and facing the tread surface of the heel, and with a narrow marginal flange of a width sufficient to resist displacement of the washer from its position in the heel while leaving the resiliency of the heel unimpaired.

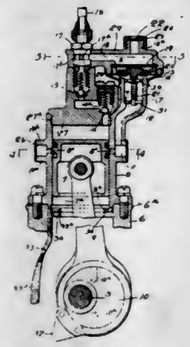
[Claim 6 not printed in the Gazette.]

1,196,609. ENGINE-DRIVEN AIR-PUMP. JOHN K. STEWART, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Aug. 11, 1915. Serial No. 45,075. (Cl. 184—18.)

1. In a piston pump in combination with the cylinder and piston, an annular oil wick mounted in the cylinder in the path of the piston near one limit of its travel, said wick being arranged to be compressed by the end of said piston for expressing lubricating oil to the piston and cylinder walls.

2. In a piston pump, a casing having a ledge positioned just below the lower limit of travel of the piston in its cylinder and an annular oil wick mounted on said ledge and adapted to be compressed by the end of the piston for expressing lubricating oil to said piston and to the cylinder wall.

3. In a piston pump an annular oil wick mounted in the cylinder in the path of the piston near one limit of its travel, said wick being arranged to be compressed by the end of said piston for expressing lubricating oil, and the portion of the cylinder wall adjacent to said wick and opposite the cylindrical portion of the piston being beveled away from said piston to provide clearance space to receive such oil and to deflect the oil onto the piston wall.



4. In a piston pump having a crank case provided with a filler spout to receive lubricating oil; an annular oil wick mounted for contact with the piston for lubricating the latter and having a portion depending into said filler spout to receive oil as it is poured into the crank case, and adapted to convey such oil by capillary action to the annular portion of the wick for lubrication of the piston.

5. In combination with a power shaft having a crank portion and a pitman operatively engaged therewith; means for lubricating the pitman crank bearing comprising an oil wick carried by the pitman and having a portion in contact with the bearing surface of said crank, and another portion extending outwardly from the crank center; an oil receptacle into which said extending portion of the oil wick may be dipped as the crank revolves, and an oil pocket in the body of the said crank and opening into the bearing surface thereof, adapted to receive oil from the wick as it traverses the latter during the rotation of the power shaft.

[Claim 6 not printed in the Gazette.]

1,196,610. PLASTIC COMPOSITION. OSCAR OTTOE STONE, San Antonio, Tex. Filed June 21, 1916. Serial No. 104,967. (Cl. 106—34.)

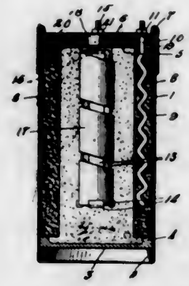
The herein described plastic composition, which consists of two parts of ground oyster shells, one part of plaster of Paris, and one part of beeswax.

1,196,611. PRIMARY CELL. WIRT TASSIN, Washington, D. C.; Herman E. Gasch, administrator of said Tassin, deceased, assignor to Kinetic Electric Company, Norfolk, Va., a Corporation of Virginia. Filed June 19, 1914. Serial No. 845,998. (Cl. 204—38.)

1. In a primary cell, a hollow body of mechanically strong cuprocupric oxid serving as negative electrode and cell wall, external means sealing the outer surface of said body against passage of fluid, an electrolyte within the vessel thus formed and a centrally hung positive electrode.

2. In a primary cell, a hollow body of mechanically strong cuprocupric oxid serving as negative electrode and cell wall, a carton fitting against the outer surface of said body to seal it against passage of fluid, an electrolyte within the vessel thus formed and a centrally hung positive electrode.

3. A primary cell comprising a hollow body of cuprocupric oxid serving as negative electrode and cell wall, a carton fitting the external surface of said body and having a bottom serving as the cell bottom, an electrolyte in the cell thus formed, a centrally located positive electrode, an upper transverse partition of fibrous material resting on the top of the hollow body and sealing means above said partition.

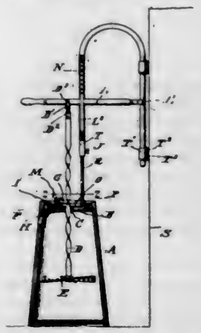


4. In a primary cell, a paper carton having a bottom with a raised peripheral rib, a hollow body of cuprocupric oxid resting on said rib and fitting against the inner side of said carton, a centrally located suspended positive electrode, a transverse partition resting on the top of said positive electrode and sealing means above said partition.

5. In a primary cell, a positive electrode composed of a plurality of zinc strips in open cage-like arrangement.

[Claims 6 to 10 not printed in the Gazette.]

1,196,612. OSCILLATING CHURN-DASHER. ROBERT LEE TAYLOR, Hope, Ark. Filed Sept. 25, 1915. Serial No. 52,750. (Cl. 31—17.)

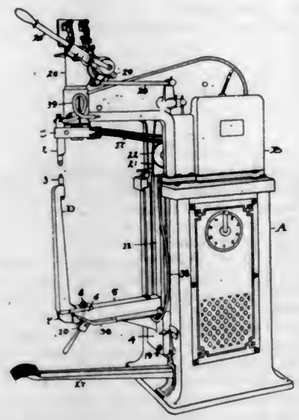


A churn body, a beveled ring adapted to a beveled seat at the upper end of said body, a top having beveled circumference seated in said ring, said top having a recess, a ring on said top, means securing said rings together, a rod projecting upwardly from said ring, a plate secured to said ring and slotted, a twisted shaft engageable in said slot and a coincident slot in said top, a yoke supported by said rod, and means pivotally mounted on one arm of said yoke and guided by means on the other arm and having a pivoted and swiveled connection with said rod.

1,196,613. ELECTRIC WELDING-MACHINE. ALBERTIS C. TAYLOR, Warren, Ohio, assignor to The Winfield Manufacturing Company, Warren, Ohio, a Corporation. Filed June 26, 1913. Serial No.775,890. (Cl. 219—4.)

1. In an electric welding machine, a fixed conducting guide member having transformer connections directly attached thereto and a holder adjustably engaged thereon, a gib at one edge of said parts and hand controlled screws engaged through said holder into said gib and adapted to tighten the gib on said parts.

2. In an electric welding machine, a fixed conducting guide member and a lower electrode holder of conducting material slidably adjustable thereon, in combination with a movable upper electrode holder and means to adjustably fix a relative set position thereof in respect to the said lower holder.



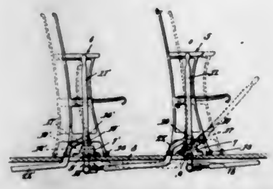
3. An electric welding machine having adjustable upper and lower electrode holders, means to adjustably fix the limit of movement of said holders independently of each other, and counterbalancing means for both of said holders.

4. An electric welding machine having an upwardly movable holder for a welding electrode, and means to adjustably fix the limit of upward movement of said holder, in combination with means adapted to raise said holder automatically to its adjusted limits.

5. An electric welding machine having an upper and a lower electrode, a holder for the lower electrode slidably mounted on a current-conducting support, means to fix said holder in adjusted position, and means to facilitate the movement of said holder vertically on said support.

[Claims 6 to 8 not printed in the Gazette.]

1,196,614. AUDITORIUM-SEAT. HENRY C. TEIPEL, Paris, Ill. Filed Oct. 4, 1915. Serial No. 53,997. (Cl. 155—13.)



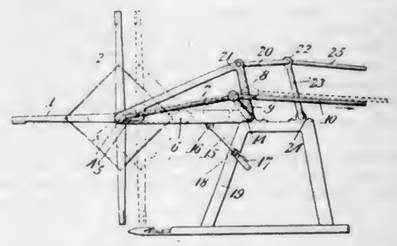
1. The combination of a row of movable auditorium seats connected to move together relative to the next row of seats, and actuating means connected to said row for effecting such movement, said actuating means comprising a rock shaft extending along the row of seats and movable in the direction of its length, and an actuating lever fixed on the rock shaft and having means for operative connection to the row of seats, said lever being coupled to and uncoupled from the row of seats by the longitudinal movement of the rock shaft.

2. The combination with rows of auditorium seats, the seats of the respective rows being connected, and said rows being movably supported; of means for simultaneously shifting a row of seats forward and the next row behind the same rearward.

3. The combination with rows of auditorium seats, the seats of the respective rows being connected, and said rows being movably supported; of means for simultaneously shifting a row of seats forward and the next row behind the same rearward, said means comprising a rock shaft extending along each row of seats, an actuating lever fixed on the rock shaft, means for operatively connecting said lever to the row of seats, a lever fulcrumed on the rock shaft, means for coupling said lever to the row of seats, and a connection between the actuating lever of a row of seats and the lever of the next row behind the same for moving said row rearward when the row ahead is moved forward.

4. The combination with rows of auditorium seats, the seats of the respective rows being connected, and said rows being movably supported; of means for simultaneously shifting a row of seats forward and the next row behind the same rearward, said means comprising a rock shaft extending along each row of seats, an actuating lever fixed on the rock shaft, a lever fulcrumed on the rock shaft, means for alternately coupling said levers to the row of seats, the actuating lever being uncoupled when the other lever is coupled, and vice versa, and a connection between the actuating lever of a row of seats and the lever of the next row behind the same for moving said row rearward when the row ahead is moved forward.

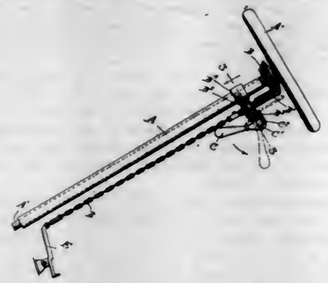
1,196,615. HEADER-REEL. ROBERT A. THOMPSON and JOHN H. THOMPSON, Plainville, Kans. Filed Feb. 8, 1916. Serial No. 77,060. (Cl. 56—22.)



1. A harvester reel support comprising a frame, a rock shaft journaled therein, triangular slotted reel supporting bracket members journaled upon said shaft, said shaft having its ends bent to form crank arms projecting outside of said plates, a reel having spindle ends movable within slots in said bracket members, pivotal link connections between said crank arms and the spindle ends of the reel, a rod pivoted to one of said crank arms, a second rock shaft journaled upon the frame and terminating in crank arms, pivotal connection between the latter and the upper angled ends of the reel supporting bracket members, and rods connected to the crank arms on the second referred to rock shaft.

2. A harvester reel support comprising a frame, a rock shaft journaled therein, triangular slotted reel supporting bracket members journaled upon said shaft, said shaft having its ends bent to form crank arms projecting outside of said plates, a reel having spindle ends movable within slots in said bracket members, pivotal link connections between said crank arms and the spindle ends of the reel, a rod pivoted to one of said crank arms, a second rock shaft journaled upon the frame and terminating in crank arms, links having crank ends pivotally connecting the upper angled corners of the bracket supporting members and the cranks upon the second referred to rock shaft, and a rod having pivotal connection with one of the crank arms upon said links.

1,196,616. PEDAL-OPERATED STEERING ATTACHMENT FOR AUTOMOBILES. ROBERT A. THOMPSON and JOHN H. THOMPSON, Plainville, Kans. Filed Apr. 18, 1916. Serial No. 91,999. (Cl. 74—79.)



1. In combination with a post and a steering shaft journaled therein, a pinion mounted on the shaft, a segment pivoted upon the post, means for turning the segment, and a lever pivotally supported with relation to the post and engageable with the segment to move the same in and out of engagement with the pinion.

2. In combination with a post and a shaft journaled therein, a pinion mounted on the shaft, a segment pivoted on the post, means for turning the segment, a lever fulcrumed with relation to the post and having a cam slot, and a pin carried by the segment and lying in the slot.

3. In combination with a post and a shaft journaled therein, a pinion mounted on the shaft, a segment turnably and slidably mounted on the post, means for turning the segment, a lever pivotally supported on the post and having a cam slot, a pin carried by the segment and lying in the slot, and a spring supported by the post and bearing against the segment and being under tension with a tendency to force the segment toward the pivot of the lever.

1,196,617. FASTENING DEVICE. JOHN TRUESDELL, Colorado Springs, Colo. Filed Feb. 12, 1916. Serial No. 77,909. (Cl. 24—223.)

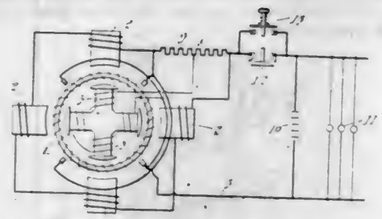


A fastener of the class described comprising a pair of members, one having a head provided with converging sides, the other member being adapted to receive the head, having converging members to engage the converging sides of the head and also having a spring locking tongue provided with a raised free end to engage behind the head, and permit movement of the head toward the base of the tongue to disengage the sides of the head from the converging members.

1,196,618. REGULATING MEANS FOR ELECTRIC GENERATORS. WILLIAM A. TURBAYNE, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Apr. 27, 1914. Serial No. 834,839. (Cl. 171—223.)

1. In a system of the class described, a dynamo electric machine having a series field winding and a shunt field winding, and means directly influenced by the total current in the shunt winding to control the current in the series winding.

2. In a system of the class described, a dynamo electric machine having a series field winding and a shunt field winding, and means in shunt to said series field winding influenced by the current output of said machine to control the current in the shunt field winding.

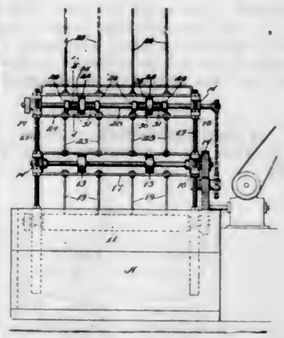


3. In a system of the class described, a dynamo electric machine having a series field winding, a shunt field winding and means in shunt to said series field winding influenced by the current output of said machine to control the resistance of the shunt field winding.

4. In a system of the class described, a dynamo electric machine having a series field winding, a shunt field winding, and a two part resistance having a positive temperature co-efficient, one part thereof in shunt to said series winding and another part thereof in series with said shunt winding, each of said parts adapted to mutually influence the resistance of the other with variations of current through said part.

5. In combination, a dynamo electric machine provided with a ring wound armature and a field having poles external and internal with respect to said armature, series windings on one set of poles, shunt windings on the other set of poles, and a resistance having a positive temperature co-efficient arranged in shunt to said series field windings, said shunt field windings having one terminal connected to an intermediate point on said resistance.

1,196,619. TIN-PLATE CATCHER. URA U. ULAM, McKeesport, Pa. Filed Apr. 18, 1916. Serial No. 91,918. (Cl. 91—12.6.)



1. A catcher roll for tin plate catchers comprising a wheel like body adapted to be loosely mounted upon one of the shafts of the catcher, a ratchet wheel exteriorly of the body and movable therewith, a stationarily mounted pawl engageable with the ratchet gear, a collar adapted to be fixed to said shaft, and tensioning means connected with the wheel body and the said collar.

2. A catcher roll for tin plate catchers comprising a wheel like body adapted to be loosely mounted upon one of the shafts of the catcher, a ratchet wheel exteriorly of the body and movable therewith, a stationarily mounted pawl engageable with the ratchet gear, a collar adapted to be fixed to said shaft, tensioning means connected with the wheel body and the said collar, and means for limiting free movement of the connection between the wheel body and the said tensioning means.

3. A catcher roll for tin plate catchers comprising a wheel like body adapted to be loosely mounted upon one of the shafts of the catcher, a ratchet wheel exteriorly of the body and movable therewith, a stationarily mounted pawl engageable with the ratchet gear, a collar adapted to be fixed to said shaft, tensioning means connected with the wheel body and the said collar, means for limiting free movement of the connection between the wheel body and the said tensioning means and a sleeve adapted to loosely surround said shaft and support said tensioning means.

1,196,620. SOLDERING-IRON. OLLIE A. WALKER, Cleveland, Ohio. Filed Apr. 15, 1916. Serial No. 91,339. (Cl. 158—27.)

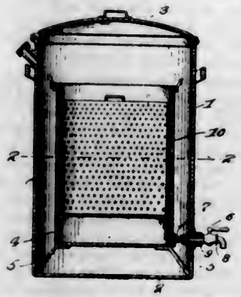


1. A device of the class described including a fuel container, a pressure pump communicating with the said container, a generating coil communicating with the fuel container, a valve adapted to control the supply of fuel to the generating coil, a soldering tool having a vent and a combustion chamber communicating with the said vent and the generating coil.

2. A device of the class described including a fuel container, a pressure pump communicating with the said container, a fuel conducting tube extending from and communicating with the fuel container, a soldering tool carried by the said tube and having a vent and a combustion chamber in communication, a generating coil having one terminal communicating with the fuel conducting tube and the opposed terminal thereof in communication with the generating chamber, and a valve carried by the fuel conducting tube and adapted to control the supply of fuel to the generating coil.

3. A device of the class described including a fuel container, a closure threadedly secured to the said container, a pressure pump communicating with the fuel container, a fuel conducting tube having one end secured to the said container and communicating therewith, a soldering tool secured to the opposed end of the fuel conducting tube, said tool having a vent extending transversely therethrough, a combustion chamber communicating with the said vent and a return flue communicating with the combustion chamber and the vent, a generating coil secured within the said vent and having one terminal communicating with the fuel conducting tube and the opposed terminal thereof in communication with the combustion chamber, and a valve carried by the fuel conducting tube and adapted to control the supply of fuel to the generating coil.

1,196,621. APPARATUS FOR MAKING GRAPE-JUICE. SOLOMON WEINBERG, Philadelphia, Pa., assignor of one-half to Oscar Rosenbaum, Philadelphia, Pa. Filed Jan. 26, 1916. Serial No. 74,483. (Cl. 99—2.)



An apparatus of the class described comprising a tank, a receptacle mounted within and spaced from the walls of said tank, and a two part spigot, one part tapering and rigidly secured to said receptacle and the other part screw threaded in the said tank and having a tapering passage the wall of which is adapted to engage the first part.

1,196,622. RIBBON-FEEDING MECHANISM. NELSON WHITE, Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind., a Corporation of Indiana. Filed May 6, 1914. Serial No. 836,771. (Cl. 197—162.)



1. In combination, spools about which a ribbon is adapted to wind and unwind, feeding pawls associated with said spools to cause opposite feeding movements of the ribbon, a link operatively connected with said pawls, means whereby one pawl is maintained in engagement with its associated spool while the other is in an inoperative position, means to reciprocate the link longitudinally to cause feed movement of the pawls, means to shift the link to cause a reversal of the relative positions of said pawls and their associated spools, locking pawls for said spools each adapted to coöperate with its associated spool while the adjacent feeding pawl is in engagement with said spool, and members intermediate said locking pawls and said link whereby to reverse the relative positions of the locking pawls and the spools as an incident to the corresponding reversal of the relative positions of the spools and the feeding pawls.

2. In combination, spools about which a ribbon is adapted to wind and unwind, feeding pawls associated with said spools to cause opposite feeding movement of the ribbon, a link operatively connected with said pawls, stationary parts coacting with said feeding pawls to hold one out of engagement with respect to the adjacent spool while the other acts to cause feeding movement of its adjacent spool, means to reciprocate said link to cause ribbon feeding action of the spools, and to shift the link longitudinally to reverse the relation of said pawls with respect to the stationary parts and thereby effect reverse ribbon feed action of said pawls in coöperating with the spools.

3. In combination, spools about which the ribbon is adapted to wind and unwind, supporting brackets for said spools provided with cams, arms pivotally connected with said supporting brackets, a link connecting said arms, feeding pawls carried by said arms and adapted to coact with the spools to cause feeding movements of the ribbon in opposite directions, means on each of said pawls cooperative with the cams aforesaid whereby one only of the feeding pawls normally coacts with the adjacent spool while the other is out of coöperation with regard to its spool, locking pawls coöperative with the spools and likewise one in engagement with its adjacent spool while the other is out of engagement with respect to its spool, means to shift the position of said link whereby the operative relation between the feeding pawls and the cams and spools is reversed, and studs on the link adapted to engage the locking pawls to reverse the relative positions of the same in relation to the spools simultaneously with the reversal of the feeding pawls.

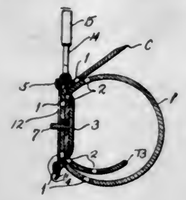
4. In combination, spools about which a ribbon is adapted to wind and unwind, feeding pawls coöperating with said spools to rotate them in opposite directions, stationary cams for the pawls, one of which cams normally coacts with one of the feeding pawls to maintain the latter inoperative in relation to its spool, means for actuating said feeding pawls, and means controlled by abnormal tension on the ribbon to reverse the positions of said pawls in relation to their cams and thereby cause reverse feeding movement of the ribbon.

5. In combination, spools about which a ribbon is adapted to wind and unwind, feeding pawls associated with

said spools to cause opposite feeding movement of the ribbon, supports for said spools provided with cams, one of which normally coacts with an adjacent pawl to hold the latter out of engagement with its spool and the other of which normally does not coact with the other pawl, means for operating said pawls, and means to reverse the relation of the pawls in respect to their cams and thereby cause a reversal of direction of feeding movement of the ribbon.

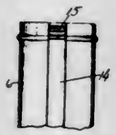
[Claims 6 and 7 not printed in the Gazette.]

1,196,623. BUCKLE. MARK A. WIGHTMAN, Bath, N. Y. Filed Jan. 3, 1916. Serial No. 69,952. (Cl. 24—167.)



In a buckle, a frame having a pin arranged thereupon, the opposite extremities of said frame being offset, openings formed within said offset extremities, and a locking plate engageable with the pin and receivable by said openings, one end of the locking plate having means formed thereupon for receiving a locking element therethrough.

1,196,624. POWDER-RECEPTACLE. RICHARD S. WILLIAMS, Glastonbury, Conn., assignor to The J. B. Williams Company, Glastonbury, Conn., a Corporation of Connecticut. Filed Feb. 23, 1915. Serial No. 9,777. (Cl. 220—8.)



1. A receptacle including a body having its meeting edges folded together and comprising a joint, a cover attached to said body by means of a flange that covers the upper part of said joint, and means by which the outer surface of the can body underneath said flange and at said joint is formed to fit closely into contact with the inner surface of said flange to tightly close said parts against leakage of powder contents from within the can.

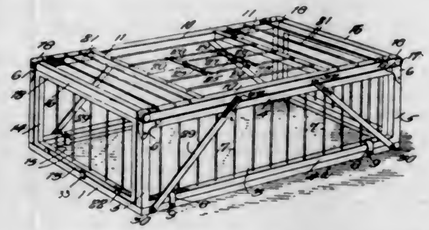
2. A receptacle including a body having its meeting edges folded together comprising a joint that includes a lap extending downward from the upper edge of the body, a cover attached to said body by means of a flange covering the upper part of said joint, and means for forcing the meeting folded edges of the joint tightly together to close any lengthwise groove therein and cause the upper part of said body to fit close against the inner surface of said flange to close said joint against leakage of the powder contents of the can.

3. A receptacle including a body having its meeting edges folded together comprising a seam extending from the upper edge of said body downwardly, a cover attached to said body by means of a flange covering the upper part of said seam, and an indentation formed across said seam at that part located within the flange of said cover to tightly close its meeting edges together and form it to fit in close contact with the inner surface of said flange to close the seam against leakage of the powder contents of the can.

4. A receptacle including a body having its meeting edges folded together comprising a joint that includes a lap extending from the upper edge downward, a cover attached to said body by means of a flange covering said joint, and an indentation formed on the inner surface of said lap and extending across said seam at that part inclosed by said flange to tightly close the folded meeting edges together and cause the upper part of said body to fit in close contact with the inner surface of said flange to prevent leakage of the powder contents of the can.

5. A receptacle including a body having a rib spaced from its upper edge forming a border between said rib and said upper edge, said body having its meeting edges folded together comprising a seam extending lengthwise of the body and across said border, a cover attached to said body by means of a flange covering said border, and an indentation formed across said seam within said border to cause the outer surface of said border to closely fit the inner surface of said flange.

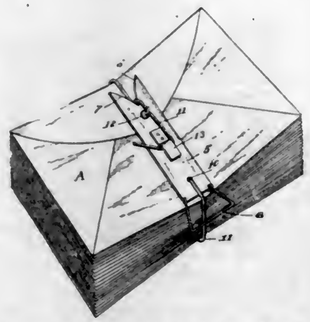
1,196,625. CHICKEN-COOP. CHARLES WALTER WRIGHT and HARDY BURK WILLSON, Little Rock, Ark. Filed Jan. 7, 1915. Serial No. 956. (Cl. 217—47.)



1. A collapsible coop, composed of a bottom, a top, sides and ends, the sides and the ends consisting of substantially rectangular frames, and a filling for each frame, the side frames being hinged to the bottom at the sides thereof to fold on to the bottom or into position perpendicular to the bottom at the opposite sides thereof, the aggregate width of the side frames being equal to the width of the bottom, the top consisting of spaced parallel longitudinally extending bars, and cross bars connecting the said bars on each side of the center, and a filling between the cross bars and between the longitudinal bars, the end frames being hinged between the ends of the longitudinal bars to swing into a position perpendicular to the bottom or into a position between the longitudinal bars and the adjacent cross bar, and a pair of plates at each side of the coop for connecting the bottom and the top, the members of each pair being pivoted at their outer ends to the bottom near the ends of the sides, said members inclining inwardly toward the top, and having a sliding connection with the longitudinal bars of the top, the top resting on the upper edges of the sides when they are in perpendicular position, the ends swinging between the sides at the ends thereof when the said ends are in perpendicular position, stops on the bottom for limiting the outward swinging movement of the ends, and catches for holding the ends in vertical position.

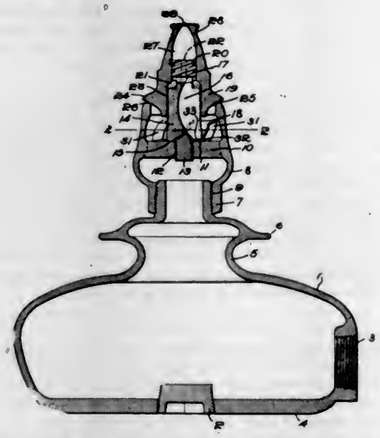
2. A coop adapted to be collapsed and comprising a bottom, sides hinged to the bottom and adapted to fold thereon, a top adapted to rest upon the upper edges of the sides when the latter are extended, braces extending along the outer faces of the sides and limiting their outward movement, the lower ends of the braces being pivoted to the edges of the bottom and the upper ends of the braces having a limited sliding connection with the top to hold the latter in fixed determinate position when the crate is set up, ends hinged to the extremities of the top and engaging the inner faces of the sides to limit their inward movement, and means for securing the ends when swung to perpendicular position with reference to the bottom and top.

1,196,626. PACKAGE-TIE. CHARLEY WRIGHT, Sandusky, Mich. Filed July 26, 1915. Serial No. 42,026. (Cl. 224—45.)



A package tie comprising a flat elongated plate formed with eyes in one end and a V-shaped bifurcation in the opposite end, said last named end serving as a fork, said plate being further provided with openings centrally thereof near opposite ends, a resilient clip secured to the plate between the openings, a cord knotted at one end and trained through one opening and adapted to be passed about the package and through the other opening and fork for engagement in the clip to secure the cord taut about said package, and a bail loosely engaged in the eyes for swinging connection with one end of the plate.

1,196,627. SPRAY-NOZZLE. FRANCIS E. YOUNG, Boston, Mass., assignor to Spray Engineering Company, Boston, Mass., a Corporation of Maine. Filed Aug. 19, 1915. Serial No. 46,363. (Cl. 137—80.)



1. A spray nozzle including inner and outer shells defining a chamber having an annular discharge opening, means to supply fluid to said chamber, said inner shell having an axial discharge opening and a slot to place said opening in communication with said chamber, a ring in said chamber having vanes and a lug on said ring entering said slot.

2. A spray nozzle having an annular discharge orifice arranged to pass an outwardly flaring conical sheet of fluid, means to introduce the fluid into the nozzle at a point nearer to the longitudinal axis of said nozzle than is the said annular discharge orifice, and means to impart to the particles of fluid of said sheet motion in paths divergent from the longitudinal axis of the nozzle and oblique to the elements of the cone, said means including a ring 30 structurally distinct from the body of the nozzle and having upwardly extending wings 31.

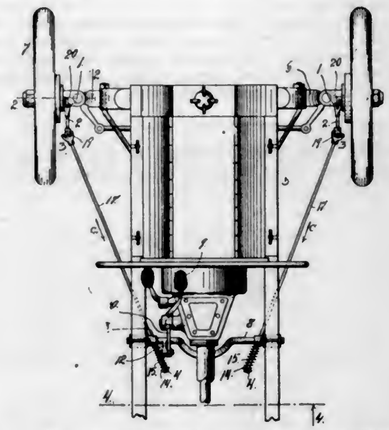
3. A spray nozzle including an outer, open-ended shell, a central stem therein having an axial opening, a second shell mounted on said stem and coöperating therewith to form rotation-inducing passages about said axial opening, said shell providing a mixing chamber for the discharge from said opening and passages, and coöperating with said first shell to form an annular discharge opening therefor.

4. A spray nozzle including an outer, open-ended shell, a central stem therein having an axial opening, a second shell adjustably mounted on said stem and coöperating therewith to form rotation-inducing passages about said axial opening, said shell providing a mixing chamber for the discharge from said opening and passages and coöperating with said first shell to form an annular discharge opening therefor adjustable in width.

5. A spray nozzle including an outer, open-ended shell, a central stem therein having an axial opening, a second shell mounted on said stem and coöperating therewith to form rotation-inducing passages about said axial opening, said shell providing a mixing chamber for the discharge from said opening and having a conical portion adjustable with respect to said first shell to provide a regulable annular discharge opening.

[Claims 6 to 24 not printed in the Gazette.]

1,196,628. BRAKE FOR AUTOMOBILES. RAY H. YOUNG, Denver, Colo. Filed July 6, 1915. Serial No. 38,092. (Cl. 21—8.)

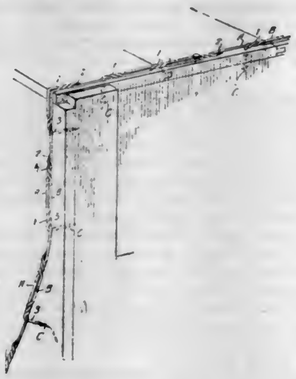


A brake for automobiles, comprising in combination with the front axle, a spindle carried by the axle, a wheel mounted upon the spindle, a brake housing carried by the said wheel, the brake shoe supported by the said spindle, a cam engaging the brake shoe, and means for operating the cam comprising a crank arm connected with the latter, a link attached to the said crank arm, a rod pivotally connected with the link, a controller shaft mounted in the frame of the machine, a crank arm secured to said controller shaft, said rod adapted to pass through and beyond the last named crank arm, a stop mounted upon the rear extremity of the rod, and a spring surrounding the latter and located between the said last named crank arm and the stop, for the purpose set forth.

1,196,629. STRAP-FASTENING FOR BOXES OR OTHER ARTICLES. JAMES HOFFMAN ZELNICKER, Mobile, Ala. Filed Nov. 11, 1915. Serial No. 60,901. (Cl. 217—68.)

1. A box strap or other fastening device formed of a plurality of wires which are twisted together reversely at

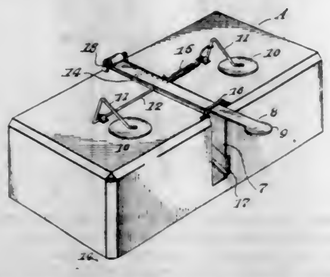
intervals in their length, the strands between the twists being parallel, one of the said wires severed diagonally adjacent alternate twists, the said severed wire bent substantially at right angles to the strap, a driving point upon the outer end of the said bent portion, and barbs upon the said bent portion.



2. A box strap or other fastening device formed of wires twisted together at intervals in their length, the twists being alternately reversed and one of the wires between the twists being severed and bent to form a fastening, as described.

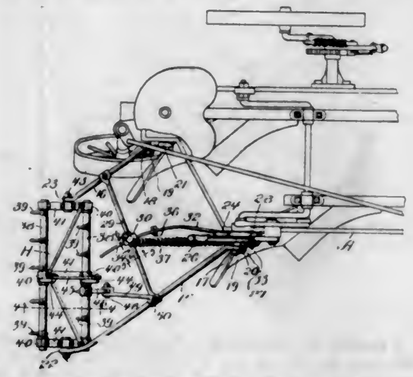
3. A box strap or other fastening device formed of a plurality of wires which are twisted together at intervals in their length, the strands between the twists being parallel, one of the said wires severed between the twists and bent to form a nail like fastening.

1,196,630. INK-WELL. ARTHUR R. ZIMMERMAN, Shamokin, Pa. Filed Mar. 28, 1916. Serial No. 87,265. (Cl. 120—72.)



An ink well comprising a body having ink chambers therein and also a slot therebetween and opening through the top and front of said body, said body being formed with openings in its top for communication with the chambers, caps closing said openings, a rocking shaft journaled on the top of the body, arms supporting the caps and fixed to the shaft; means for tensioning the shaft to normally hold the caps in closed position, a lever pivoted in the slot and having a key disposed forwardly of the front of the body, a crank formed in the shaft and loosely engaged in the lever, and means bridging the slot to limit the movement of the lever in one direction, the said slot being formed with a lateral branch to receive the lever when moved in the opposite direction for locking the same.

1,196,631. HARROW ATTACHMENT FOR PLOWS. WILLIAM ZIMMERMANN, Jr., Freeburg, Ill. Filed Nov. 12, 1915. Serial No. 61,113. (Cl. 97—44.)



1. In a harrow attachment for riding plows, a pair of frame bars pivotally supported at their forward ends, a harrow supported between the rearward ends of the bars, a cross bar connecting the frame bars, a clamp on said cross bar having a vertical slot, a hand lever, a rod connected with said lever and having a portion slidably engaging the slotted clamp, stop means for limiting the movement of the rod in one direction with respect to the clamp, and means for retaining the hand lever in position at various adjustments.

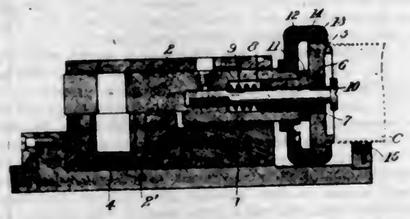
2. In a harrow attachment for riding plows, a pair of frame bars pivotally supported at their forward ends, a harrow supported between the rearward ends of the bars, a cross bar connecting the frame bars, a clamp on said cross bar having a vertical slot, a hand lever, a rod pivotally connected with said lever and slidably engaging the slotted clamp, a coiled spring connecting the clamp with the lever to assist in forcing the frame and the harrow in a groundward direction, and means for retaining the hand lever in position at various adjustments.

3. In a harrow attachment for riding plows, a pair of frame bars pivotally supported at their forward ends, a harrow supported between the rearward ends of the frame bars, a slotted clamp constituting a guide member fixed on the harrow supporting frame, a hand lever, a push rod connected with the lever and guided slidably with respect to the guide member, a stop member adjustably connected with the push rod and adapted to abut on the guide member to exert a pushing action against the same to lift the harrow from the ground, and a spring connecting the guide member with the lever and adapted to be tensioned to force the harrow in a groundward direction.

1,196,632. FLANGING-HEAD. JESSE E. ABRAMS, Baltimore, Md., assignor, by mesne assignments, to Continental Can Company, Inc., a Corporation of New York. Filed July 23, 1910. Serial No. 573,428. (Cl. 153—21.)

1. A flanging head including in combination, a stem, a cap carried thereby, a limiting ring of hardened steel seated on said cap, a collar for engaging said ring for holding the same on its seat, a die located within said limiting ring, and movable relative thereto, a spring for moving the same in one direction, and a shoulder for limiting the movement of the die in the other direction.

2. A flanging head including in combination a stem, a cap carried thereby, a limiting ring of hardened steel seated on said cap, a collar for holding said ring on its seat, a die located within said ring and movable relative thereto, a sleeve connected to said die and engaging a recess formed in said stem, a limiting bolt passing through said sleeve for limiting the outward movement of said die, a spring encircling said bolt for forcing the die outwardly, and a shoulder formed on said sleeve for limiting the inward movement of said die.



3. A flanging head including in combination, a stem, a cap carried thereby, a limiting ring mounted on said cap, means for detachably holding said ring on said cap, a die located centrally of said limiting ring, and means for yieldingly supporting said die, whereby the same may be moved relative to said limiting ring.

4. A flanging head including in combination, a stem, a cap carried thereby, a limiting ring seated on said cap, a collar for detachably securing said ring to said cap, a die mounted to reciprocate within said ring, means for yieldingly supporting said die, means for limiting the outward movement of said die, and means for limiting the inward movement of said die.

1,196,633. ELECTRIC SWITCH. CARL ERIC ANDERSON, Bridgeport, Conn., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed May 29, 1915. Serial No. 31,165. (Cl. 175—293.)



1. In a push button switch mechanism, a longitudinally slotted flat frame having a cross web in the plane of the frame and a rocker bar pivoted on said web and working in the slots on opposite sides thereof.

2. In a push button switch mechanism, a longitudinally slotted frame having a cross web, bearing lugs offset from said switch frame and lying in a plane passing through said frame substantially at right angles thereto and in line with the cross web, together with a switch bar pivoted on said lugs.

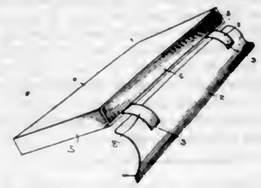
3. In a push button switch mechanism, a longitudinally slotted frame having a cross web and a rocker bar pivoted on said web and working in the slots on opposite sides thereof, in combination with lugs offset from said frame, a switch bar pivoted on said lugs, and an operative connection between said rocker and switch bar.

4. In a push button switch mechanism, a longitudinally slotted frame having a cross web, a rocker bar pivoted on said cross web, and working in the slots on opposite sides thereof, push plates pivoted to the opposite ends of said rocker and lying in planes at right angles to that of the rocker and bays communicating with said slots at the outer ends thereof, through which said push plates pass.

5. In a push button switch mechanism, a longitudinally slotted frame having a cross web, a rocker bar pivoted on said cross web, and working in the slots on opposite sides thereof, push plates pivoted to the opposite ends of the said rocker and bays communicating with said slots at the outer ends thereof, through which said push plates pass, together with a peripheral band or rim for said frame closing said bays and forming the support on which said frame is mounted.

[Claims 6 to 13 not printed in the Gazette.]

1,196,634. ATTACHMENT FOR TYPE-WRITING MACHINES. OLIVER PERRY ANDERSON, Nashville, Tenn. Filed Oct. 19, 1915. Serial No. 56,763. (Cl. 197—127.)



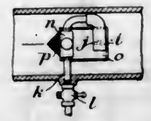
1. In a device of the class described, the combination with the platen of a typewriting machine, and the paper shelf thereof having a plurality of slots therein, of an open ended casing having solid top, bottom, and side walls, and flexible supporting members carried by said casing for engaging the slots of said paper shelf for mounting said casing upon said paper shelf.

2. In a device of the class described, the combination with the platen of a typewriting machine, and the paper shelf thereof having a plurality of slots therein, of an open ended casing for receiving the ends of a plurality of sheets of paper actuated by said platen, and supporting strips carried by said casing for engaging the slots of said paper shelf for attaching said casing in operative position upon said paper shelf.

3. In a device of the class described, the combination with the platen of a typewriting machine, and the paper shelf thereof having a plurality of slots therein, of an open ended casing for receiving the ends of a plurality of sheets of paper actuated by said platen, supporting strips carried by the bottom of said casing, arms upon the projecting ends of said supporting strips, and means upon the extremities of said arms for engaging the said slots of said paper shelf for attaching said casing in operative position upon the said paper shelf.

4. In a device of the class described, the combination with the platen of a typewriting machine, and the paper shelf thereof having a plurality of slots therein, of an open ended casing for receiving the ends of a plurality of sheets of paper actuated by said platen, elongated supporting strips carried by the bottom of said casing and projecting outwardly therefrom, downwardly curved arms upon the projecting ends of said supporting strips for engaging the front surface of said paper shelf, a shoulder adjacent the ends of said arms for seating in the said slots of said paper shelf, and a tongue extending from said shoulders for engaging the back of said paper shelf, whereby to attach said casing in operative position upon said paper shelf.

1,196,635. UTILIZATION OF COMPRESSED AIR FOR MOTIVE-POWER PURPOSES. BENJAMIN ANGWIN, Camborne, Cornwall, England. Filed July 28, 1915. Serial No. 42,457. (Cl. 60—36.)



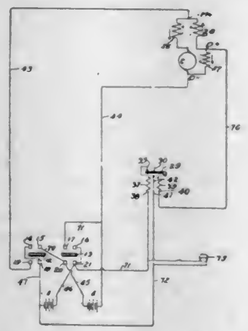
1. The combination with an air-main having a heating chamber, of an oil vaporizer arranged within said chamber, a shield arranged in front of said vaporizer for directing the incoming air around the same, and an oil vapor burner receiving fuel through said vaporizer and the flame from which is adapted to heat said vaporizer.

2. The combination with an air-main having a heating chamber, of an oil vaporizer arranged within said chamber, a conical shield for directing the incoming air around said vaporizer and an oil vapor burner receiving fuel

through said vaporizer and the flame of which is adapted to heat said vaporizer.

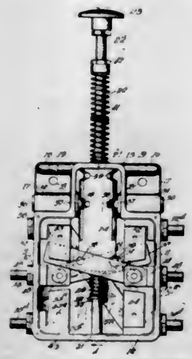
3. The combination with an air-main having a horizontally disposed heating chamber provided with an opening, and a door for covering said opening, of a vaporizer arranged in said chamber beneath said door, an oil vapor burner receiving fuel through said vaporizer and the flame from which is adapted to heat said vaporizer, a shield provided on said vaporizer for directing the incoming air around the same, and a tray arranged adjacent to said vaporizer adapted to contain a heating substance for initially heating said vaporizer.

1,196,636. ELECTRIC STARTING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. VINCENT G. APPLE, Dayton, Ohio. Filed Nov. 19, 1914. Serial No. 872,957. (Cl. 171—315.)



In a system of the character described, the combination of a dynamo adapted to operate either as a generator, or as a motor, said dynamo being provided with a series field winding, a shunt field winding and a field bucking winding; and connections whereby said dynamo when operating as a motor has its shunt field winding and bucking field winding connected in series and in a circuit parallel with the series field winding and armature; and when operating as a generator has its series field winding and field bucking winding in series with each other and with the armature, said shunt field winding being connected in a circuit in parallel to the circuit including the series field winding and armature.

1,196,637. SWITCH. VINCENT G. APPLE, Dayton, Ohio. Filed Apr. 14, 1915. Serial No. 21,220. (Cl. 175—287.)



1. The combination in a switch of a casing with opposite side walls, a reciprocable member projecting into said casing between said walls, switch blades pivoted to said walls and extending past the member on opposite sides thereof, contacts for engagement by the free ends of the blades, said member having recesses formed in the opposite sides thereof, and means projecting from the blades for positive engagement with the recesses.

2. The combination in a switch of a casing with opposite side walls, a reciprocable member projecting into said casing between said walls, a switch blade pivoted at one end to one side wall, a second blade pivoted at one end to the opposite wall, said blades extending past the member on opposite sides thereof, opposite sets of contacts for engagement by the free ends of the blades at the opposite ends of their movement, said member having recesses formed in the opposite sides thereof, and means projecting from the blades for positive engagement with the recesses.

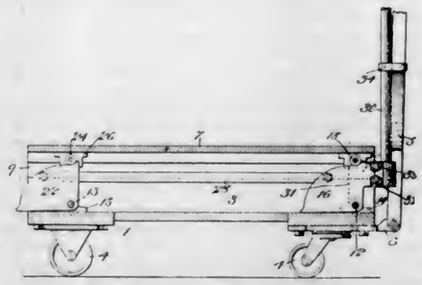
3. The combination in a switch, of a switch blade pivotally mounted at one end, oppositely positioned contacts adapted to be engaged by the free end of said blade when moved to one or the other of its extreme positions, a reciprocable plunger, a thimble slidable on said plunger and resiliently connected therewith, said thimble having a groove in one side thereof, and a pin projecting from said blade into engagement with the groove.

4. The combination in a switch, of a switch blade pivotally mounted at one end, oppositely positioned contacts adapted to be engaged by the free end of said switch blade when moved to one or the other of its extreme positions, a reciprocable plunger, a thimble slidable on said plunger and resiliently connected therewith, said thimble being movable in a plane parallel with the plane of switch movement, and having a groove formed in one side thereof, a pin projecting from said blade and an insulating bushing surrounding said pin and engaging with the groove in the thimble.

5. The combination in a switch, of an inclosing casing, a pair of switch blades pivotally connected, to said casing at opposite sides thereof, a pair of oppositely positioned contacts for each blade adapted to be engaged by the free end thereof when moved to one or the other of their extreme positions, a reciprocable plunger passing through said casing, a thimble slidable thereon and resiliently connected therewith, said thimble passing between the blades and having grooves formed on opposite sides, and a pin projecting from each blade into engagement with one of the said grooves.

[Claim 6 not printed in the Gazette.]

1,196,638. ELEVATING-TRUCK. JOHN T. ATHERTON, New York, N. Y., assignor, by mesne assignments, to George P. Clark Company, Windsor Locks, Conn., a Corporation of Connecticut. Filed Mar. 6, 1911. Serial No. 612,454. (Cl. 254—10.)



1. A truck comprising the combination of a base mounted on wheels, a handle pivoted to the truck, a platform movable up and down, means to move said platform up and down, a handle operated member constituting a part of the aforesaid means pivotally connected to the base at the forward end thereof at a point back of the pivotal connection of the handle, said handle and said member being constructed and arranged to lie adjacent and substantially parallel when the handle is raised and the platform is lowered, and means arranged to operatively connect the handle operated member and detachable to extend across and in front of said handle whereby when the latter is swung downwardly said first mentioned means will be moved to elevate the platform.

2. A truck comprising the combination of a base mounted on wheels, a handle pivoted to said truck, a platform movable up and down, elevating devices one arranged at each of the four corners of the truck operable to move the platform up and down and handle operated means to operate said devices, comprising a lever having a pivotal connection with the truck at the forward end thereof, and at a point back of the connection of the handle therewith constructed and arranged to lie adjacent and parallel to the handle when the latter is raised and the platform lowered together with means connected to said lever adapted to lie across and in front of said handle whereby when the latter is lowered the platform is raised.

3. A truck comprising the combination of a base mounted on wheels, a handle pivoted to said truck for a vertical swinging movement, an elevatable platform on the base, elevating devices one arranged at each of the four corners of the truck operable to move the platform up and down, and means to operate said devices comprising a lever connected therewith having a pivoted connection at the forward end of the base at a point back of the pivotal connection of said handle, together with means connected to said lever and adapted to extend across and in front of said handle all constructed and arranged so that a compound leverage is obtained for operating said devices by lowering said handle and the handle and lever are prevented from binding by a sliding movement between said handle and the last mentioned means.

4. A truck, comprising the combination of a base mounted on wheels, an elevatable platform, a handle pivoted to the forward end of the truck, elevating devices between the base and platform and a handle operated lever connected to the elevating devices and having a pivotal connection to the forward end of the truck on a different pivot than the handle and means connected to said lever adapted to lie across and in front of said handle whereby when the latter is lowered the platform is raised.

1,196,639. PROCESS OF FIXATION OF NITROGEN. ADRIEN BADIN, Paris, France, assignor to Société Generale des Nitrures, Paris, France, a Corporation of France. Filed Nov. 18, 1914. Serial No. 872,837. (Cl. 23—10.)

1. A process of fixation of nitrogen on the complex product obtained in treating at high temperature a mixture of carbon, an aluminous body and iron, the said process consisting in adding to the said product, previously finely pulverized, an agent to cause its spontaneous heating up to such a temperature that its combination with nitrogen can begin, the reaction continuing by itself in the presence of nitrogen.

2. A process of fixation of nitrogen on the complex product obtained in treating at high temperature a mixture of carbon, an aluminous body and iron, the said process consisting in pulverizing the said product, in moistening it, and in leaving it in contact with atmospheric air.

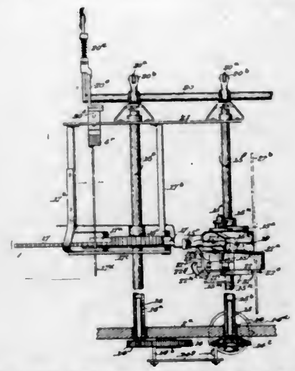
3. A process of fixation of nitrogen on the complex product obtained in treating at high temperature a mixture of carbon, an aluminous body and iron, the said process consisting in pulverizing the said product, in mixing it with porous substances and distributing such substances within the mass, in moistening the whole mass and in leaving it in contact with atmospheric air.

4. A process of fixation of nitrogen on the complex product obtained in treating at high temperature a mixture of carbon, an aluminous body and iron, the said process consisting in pulverizing the said product, in mixing it with sawdust, in moistening the mixture and in leaving it in contact with atmospheric air.

5. A process of fixation of nitrogen on the complex product obtained in treating at high temperature a mixture of carbon, an aluminous body and iron, the said process consisting in pulverizing the said product, in placing on its surface a small quantity of a mixture of the said pulverized body and of a porous body moistened with water, and in leaving the whole mass in contact with atmospheric air.

[Claims 6 to 10 not printed in the Gazette.]

1,196,640. TYING APPARATUS. HILLIARD C. BATTLES and LUTHER F. BATTLES, Hambden, Ohio. Filed Aug. 20, 1913. Serial No. 785,823. (Cl. 56—127.)



1. A tying apparatus comprising a pair of square penetrating shafts rotatably secured at their lower ends to a stationary member, a pair of operating shafts longitudinally apertured and adapted to slidingly move on said penetrating shafts, a knotter device supported on and operated by one of the said operating shafts, a straight needle supported adjacent to and operated by the other operating shaft, said straight needle being provided with cogs on one side and having a downwardly projecting point with an eye, gear means on the needle shaft to mesh with the cogs on the straight needle whereby to project the needle to and within and withdraw it from the knotter device, a horizontal lifting plate connecting and upholding the operating shafts and the needle supporting means, and means connected with the lifting plate whereby to elevate and lower said plate and the parts supported thereby.

2. A tying apparatus comprising a horizontal shaft, the ends of said shaft being secured to the framework of the main machine, a horizontal lifting plate, suitable lifting fingers and connections between the said horizontal shaft and the said lifting plate, a pair of operating shafts upheld by and journaled in said lifting plate, said operating shafts being longitudinally apertured whereby to slidably move upon inner penetrating shafts, means for securing the lower ends of said penetrating shafts to a stationary part secured to the main machine, a knotter device operatively supported on one of the operating shafts, a vertical independent guide rod for the knotter device, hangers supported by the lifting plate adjacent the other operating shaft, a horizontal guide piece supported by the hangers, a straight needle having cogs on one side and a downwardly projecting point with an eye supported in said guide, means associated with the needle shaft for operating said needle, and means applied to the lower ends of the inner shafts whereby to rotate the same.

3. A tying apparatus comprising a horizontal shaft, said shaft being secured to parts of the main machine, a quadrant and operating lever associated with said shaft, a horizontal lifting plate, appropriate lifting arms connecting said horizontal shaft with said horizontal lifting plate, a pair of parallel operating shafts upheld by and journaled in said lifting plate, said parallel shafts being adapted to slidably move upon inner square penetrating

shafts secured at their lower ends to a stationary member, a straight needle supported from the lifting plate adjacent one of the operating shafts, said straight needle having cogs on one side and a downwardly projecting point with an eye, gear means on the needle shaft for operating said needle, a knotter device supported on and operated by the other operating shaft, said knotter having a frame, a knotting bill housed in the frame, segmental wheels associated with the operating shaft and operating said knotting bill, a cord disk wheel, a cutting knife, a cord holding finger and a knot discharging finger, all coöperating with the knotting bill, and means connected with the operating shaft whereby to properly operate the said cord disk wheel, cutting knife, cord holding finger and knot discharging finger.

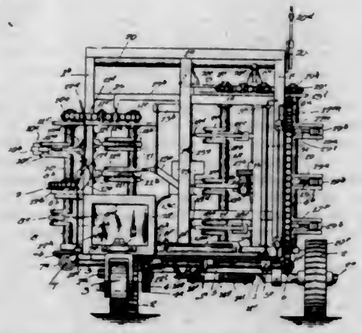
4. In a tying apparatus, the combination with a pair of parallel operating shafts each longitudinally apertured, said shafts being upheld by and journaled in a horizontal lifting plate, shaft means including a quadrant for lifting or lowering said plate and for holding it in the relatively elevated position desired, a pair of square shafts penetrating said operating shafts, said penetrating shafts being rotatably secured at their lower ends in a stationary frame member, suitable means for rotating said shafts, of a straight needle provided with cogs on one side whereby to be operated by a cog wheel on the needle operating shaft, said needle also having a downwardly projecting point with an eye, means subjoined to the lifting plate whereby the needle is held in operative posiNon with relation to its operating shaft, and of a knotter device having a frame part, a knotting bill housed in said frame part, said knotting bill having a finger pivotally secured at the lower end of the heel of and between the knotting bill hooks, segmental wheels mounted on the frame part, said segmental wheels being operated by the knotter operating shaft and adapted to intermittently rotate the knotting bill, a cord disk wheel suitably journaled in the frame, a clamp pivotally secured to the frame and adapted to coöperate with the cord disk wheel, an oval shaped cutting knife, a cord holding finger and a knot discharging finger suitably secured in the frame and coöperating with the knotting bill hooks in tying knots, and means on the knotter shaft for operating the mechanism of the knotter in proper unison.

5. In a tying apparatus, the combination of parallel operating shafts adapted to slidably move upon square inner penetrating shafts rotatably secured at their lower ends to a stationary frame member, means applied to the latter shafts for operating the former shafts, a horizontal lifting plate connecting and rotatably upholding said operating shafts, a horizontal shaft associated with a quadrant and operating lever, means for securing said horizontal shaft to parts of the machine employing this apparatus, lifting arms and connections between said horizontal shaft and said horizontal lifting plate, hangers supported from the horizontal lifting plate adjacent the needle operating shaft, a horizontal guide supported by said hangers, a straight needle supported by said guide, the said straight needle having cogs on one side adapted to mesh with gear means on the needle shaft, said needle further having a downwardly projecting point with an eye, a knotter device supported on the knotter operating shaft, said knotter having a frame part, a knotting bill housed in the frame part, segmental wheels operating the knotting bill, a cord disk wheel, clamp means associated therewith, an oval shaped cutting knife, a cord holding finger and a knot discharging finger operatively secured in the frame and coöperating with the knotting bill, means on the knotter shaft for operating the knotter mechanism in proper unison, and independent guide means for holding the knotter frame against lateral movement.

[Claims 6 to 9 not printed in the Gazette.]

1,196,641. SHOCKING-MACHINE. HILLIARD C. BATTLES and LUTHER F. BATTLES, Hambden, Ohio. Filed Aug. 20, 1913. Serial No. 785,824. (Cl. 56—122.)

1. A shocking machine of the class described comprising a supporting frame including a longitudinal front wing and an extended rear wing, an endless carrier supported in the front wing and longitudinally therein, a deck with an endless carrier supported by the rear end of the rear wing, a slideway extending from the discharge end of the front carrier to said deck, said slideway including a shock forming chamber adjacent said deck, means for normally closing the exit from the shock forming chamber to said deck, a plurality of upright crank shafts journaled consecutively on one side of the front carrier and along the slideway, a pair of upright shafts with packers attached journaled one on each side of the entrance to the shock forming chamber, an adjustable tying apparatus operatively supported thereon, and means carried by the frame for driving the said endless carriers, the upright shank shafts, and for operating the said upright shafts.



2. A shocking machine of the class described comprising a wheel supported frame having a longitudinal front wing and a transversely extended rear wing, an endless carrier supported in the front wing and longitudinally therein, transverse arm means located near the rear end of the front wing on the grain side thereof and adapted to coöperate with the carrier therein to raise bundles on their butt ends, a deck with an endless carrier suspended from the rear end of the rear wing, a slideway extending from the front carrier to the deck, said slideway expanding adjacent the deck to provide a shock forming chamber, means for normally closing the passage from the said chamber to the deck, a plurality of upright crank shafts journaled consecutively on one side of the front carrier and along the slideway, horizontal packers with tines driven directly by them, an adjustable tying apparatus located at the entrance to said chamber and operable therein, means for driving the front carrier, the rear carrier and the upright crank shafts at will as the machine moves along, and means operative from a member of said driving means to automatically throw the said tying apparatus into service when a shock is to be tied.

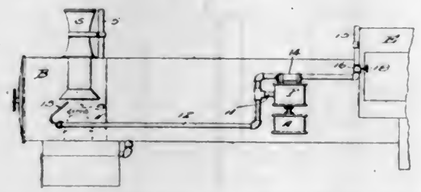
3. A shocking machine of the class described comprising a supporting frame having a longitudinal front wing and a transversely extended rear wing, an endless carrier disposed in the front wing and longitudinally therein, a pair of transverse erecting arms pivotally secured near the rear end of the front wing on the grain side and adapted to coöperate with the carrier to raise bundles on their butt ends, cradle means located on the stubble side of the front wing and adapted to be swung over the carrier and underneath said erecting arms to receive capping bundles, a deck with an endless carrier suspended from the rear end of the rear wing, a slideway extending from the discharge end of the front carrier to said deck, said slideway including a shock forming chamber adjacent said deck, a gate normally obstructing the passage from said chamber to said desk, horizontal packers with tines for conducting upright bundles through the slideway and for compressing a shock in said chamber, upright crank shafts for driving said packers directly, a pair of vertical telescopic shafts journaled one on each side of the entrance to said chamber, a shock tying mechanism operatively supported thereon, means for driving the aforesaid endless carriers and the upright crank shafts in the opposite direction of the movement of the machine, and means operative from a member of said driving means whereby to automatically rotate the said telescopic shafts when a shock is to be bound.

4. A shocking machine of the class described comprising, in combination, a frame movable over the ground and having a longitudinal front wing and a transversely extended rear wing, a vertical crank shaft located on the front wing on the stubble side, a parallel crank shaft adjacent thereto, a long packer with tines carried therebetween, a crank shaft having a packer with tines located above the second shaft, a fourth crank shaft having packers with tines located inside the rear wing, two crank shafts having packers with tines located on the grain side of the rear wing, a connecting arm pivotally connecting an end of each packer with a frame part, except as to said long packer, an endless carrier mounted in the front wing and longitudinally therein, a sheaf passageway extending from the discharge end of said carrier past the crank shafts in the rear wing to a deck suspended from the rear end of the rear wing adjacent the grain side thereof, said passageway expanding adjacent the last crank shaft and adjacent said deck to provide a shock forming chamber, gate means normally closing the exit from said chamber to said deck, an endless carrier mounted around said deck, means carried by the frame for driving the crank shafts and the front and rear endless carriers simultaneously and at will in the opposite direction from the movement of the machine, and means for uniatching said gate means when a shock is to be discharged.

5. A shocking machine of the class described comprising, in combination, a frame movable over the ground and having a longitudinal front wing and a transversely extended rear wing, an endless carrier disposed in the front wing and longitudinally therein, a horizontal packer with tines mounted for rotation over said carrier, a pair of swinging erecter arms located adjacent the discharge end of said carrier and adapted to coöperate therewith to erect bundles on their butt ends, a horizontal packer with tines mounted for rotation to coöperate with said arms, a shock forming chamber located in the rear of the rear wing, a deck with an endless carrier suspended from the rear wing and adjoining said chamber, a gate normally closing the exit from said chamber to the deck, a passageway extending from the front carrier to said chamber, horizontal packers with tines mounted for rotation to conduct bundles through the passageway, horizontal packers with tines mounted for rotation to compress an assembled shock in said chamber and to expel it when said gate is opened, upright crank shafts for supporting and driving the packers, means for driving the aforesaid carriers and the upright crank shafts at will as the machine moves along, and means operative from a member of said driving means to automatically open the said gate when a shock is to be discharged.

[Claims 6 to 19 not printed in the Gazette.]

1,196,642. LOCOMOTIVE DRAFT-REGULATOR. HENRY A. BEATTY, Scranton, Pa. Filed Mar. 15, 1916. Serial No. 84,460. (Cl. 110—156.)



1. In a draft regulator for locomotives, the combination with the main cylinders, boiler, smoke box, stack, and main exhaust nozzle in said box directed toward the stack; of an auxiliary engine cylinder, an auxiliary nozzle alongside said main nozzle, a pipe receiving the exhaust pulsations from said auxiliary cylinder and branched into two arms, one leading to said auxiliary nozzle and the other to an outlet, and a hand valve in one of said arms.

2. In a draft regulator for locomotives, the combination with the main cylinders, boiler, smoke box, stack, and main exhaust nozzle in said box directed toward said stack; of an auxiliary engine cylinder, an auxiliary nozzle alongside said main nozzle, a pipe for carrying the exhaust pulsations from said auxiliary cylinder to said auxiliary nozzle and having a shunt leading to an outlet, and a manual control for said pipe with its hand wheel in the locomotive cab.

3. In a draft regulator for locomotives, the combination with the main cylinders, boiler, smoke box, stack, and main exhaust nozzle in said box directed toward said stack; of a system of piping leading from the exhausts of the main cylinders to an outlet, means for manually controlling said system, an auxiliary nozzle adjacent the main nozzle, an auxiliary engine cylinder having its outlet, a system of piping conveying pulsations from said outlet to the auxiliary nozzle, and means for manually controlling this system.

4. In a draft regulator for locomotives, the combination with the main cylinders, a stack, and a main exhaust nozzle connected with the cylinders and directed up said stack; of an auxiliary nozzle adjacent the main nozzle, an auxiliary engine whose cylinder has its exhaust in constant communication with said auxiliary nozzle, a shunt pipe leading from its exhaust to a constantly open outlet, and a hand valve for controlling said shunt pipe.

1,196,643. MOTOR-VEHICLE. ZELA L. BEDFORD, MORRIS F. HIGGINS, Jr., and CARL C. HIGGINS, Lima, Ohio. Filed Feb. 26, 1916. Serial No. 80,724. (Cl. 21—90.)



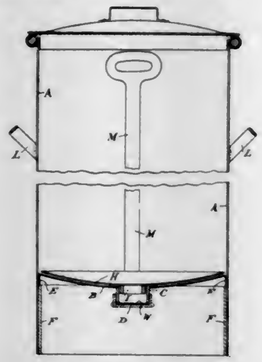
In a motor vehicle, the combination with an engine having an intake manifold, superposed gas containing tanks mounted in the rear of the vehicle, a connection between said tanks, a gage mounted on one of said tanks, a blow-off valve carried by the other tank, a supply pipe leading from one of said tanks to the intake manifold of the engine for feeding gas thereto to accomplish a continuous operation of the same, a pressure reducing valve mounted in said pipe adjacent said tanks, a stop cock also mounted in said pipes, means for admitting air to said intake manifold, and means operable from the driver's seat of the vehicle to control the last-named means.

1,196,644. COOKING APPARATUS. WILLIAM ROBERT BEETLESTONE, Urmston, England. Filed June 29, 1916. Serial No. 106,724. (Cl. 53—1.)

1. In a culinary apparatus for cooking hams or other articles of food, the combination of a vessel having a bottom and sides, a supplementary or false bottom supported inside the vessel, an orifice in the fixed bottom, a hollow projection on the underside of the supplementary or false bottom and adapted to loosely fit in the orifice and to receive a rod for pushing the said supplementary bottom out of the vessel and supporting it.

2. In a culinary apparatus for cooking hams or other articles of food, the combination with a vessel having a bottom and sides, a central orifice in the fixed bottom provided with a dependent flange screw threaded and to which is screwed a member for closing the same, a supplementary bottom supported on the fixed bottom, and a

hollow projection on the underside of the supplementary bottom adapted to loosely fit the central orifice and adapted to receive a rod inserted through the orifice for pushing the supplementary bottom upwardly within the vessel and supporting it.

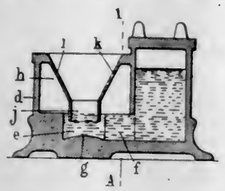


3. In a culinary apparatus for cooking hams or other articles of food, the combination of a vessel or pot having a bottom and sides, a supplementary or false bottom supported inside the vessel, an orifice in the fixed bottom through which an ejecting rod can be passed to eject the false bottom and with it the food, and means for closing the orifice during the cooking operation.

4. In a culinary apparatus for cooking hams or other articles of food, the combination of a vessel or pot having a bottom and sides, an orifice in the fixed bottom through which an ejecting rod can be passed, a supplementary or false bottom supported on the fixed bottom inside the vessel, and a hollow projection on the underside of the supplementary bottom adapted to loosely fit the orifice in the fixed bottom.

5. In a culinary apparatus for cooking hams or other articles of food, the combination with a vessel or pot having a bottom and sides, a collar fixed to the sides below the bottom upon which the said bottom rests, a central orifice in the fixed bottom provided with a dependent flange screw threaded on the outside to which a screwed cap is applied, a supplementary or false bottom supported on the fixed one, and a hollow projection on the underside of the supplementary one adapted to loosely fit the central orifice.

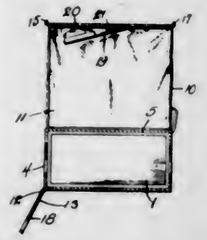
1,196,645. INKSTAND WITH A CONSTANT LEVEL OF INK. JULES BENGUÉ, Paris, France. Filed June 3, 1915. Serial No. 31,883. (Cl. 120—59.)



1. An inkstand, comprising a reservoir, a relatively large chamber having a small and shallow recess in its bottom forming an ink well, and a groove leading from the recess into the reservoir, and a dipping cone projecting from the top of the chamber down into the same and having its lower end extended into the ink well.

2. An inkstand comprising a reservoir, a comparatively large chamber having in its bottom a small and shallow circular recess forming an ink well and a groove of a depth approximately equal to the depth of the ink well and leading into the reservoir, and a dipping cone integral with the top of the chamber and extending down into the same, said cone having a tubular lower end of slightly less diameter than that of the ink well and extending into the same.

1,196,646. SMOKER'S SHIELD. HENRY F. W. BENZE, Amelia, Nebr. Filed Mar. 23, 1916. Serial No. 86,231. (Cl. 206—35.)



1. The combination with a match box, of a container for the match box, a metallic plate arranged in spaced relation to said container, fabric secured to the edges of the plate and to the top of said container, and resilient means for normally holding said plate in raised position.

2. The combination with a match box, of a container for the match box, of a fabric canopy of the same perimetric shape as the container arranged above the top of the container and secured thereto, and means for resiliently supporting the said canopy.

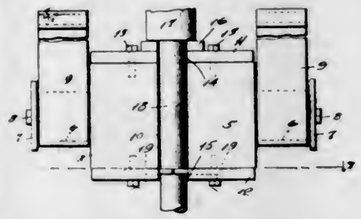
3. The combination with a match box, of a container for the match box, a collapsible canopy including a plate disposed in spaced relation to the container, and provided with curved edges, a catch plate hingedly carried by the container, and clips carried by the opposite side of the container, said clips and said catch plate adapted to be connected to the curved edges of said plate for holding the said canopy in collapsed position.

4. The combination with a match box, of a container for the match box, a collapsible canopy including a plate of the same size as the top of the container, fabric connected to the edges of the plate and to the top of the container and being open on one side, spring elements connected at their ends to the container and to the plate, and fastening elements carried by the container and adapted to be secured to the edges of said plate when said canopy is in collapsed position.

5. The combination with a match box, of a container for the match box having both of its ends open, a catch plate mounted upon one side of said container, collapsible means mounted on said container, clips mounted upon one side of said container and adapted to engage with said collapsible means.

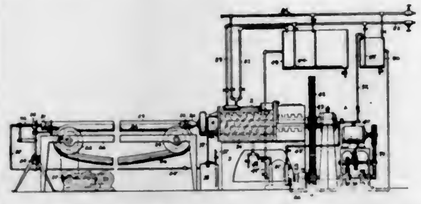
[Claims 6 to 10 not printed in the Gazette.]

1,196,647. ROD OR PIPE SUPPORTING DEVICE. JOHN BERGSTEN, Taft, Cal. Filed Apr. 1, 1916. Serial No. 88,390. (Cl. 57—9.)



In apparatus of the characted described, the combination with a body portion having a laterally extending recess and provided upon opposite sides with trunnions, straps pivotally receiving the trunnions, a plate mounted upon the upper end of the body portion said plate being provided with a laterally extending recess, a boss mounted upon the upper side of the plate, a plate secured to the lower end of the body portion and having a laterally extending recess and provided upon its inner side with curved grooves, longitudinally curved jaws mounted to slide in the curved grooves and having their outer ends beveled, levers pivotally connected with the plate and having pivotal connection with the jaws, and a spring to move the levers apart.

1,196,648. APPARATUS FOR MAKING TUBES. ALBERT BLEECKER, Akron, Ohio. Filed Mar. 3, 1916. Serial No. 81,844. (Cl. 18—14.)



1. In an apparatus for making tubes, a cylinder head and a core and a die concentric therewith and adapted to form a tube, the said core having a powder circulating passage centrally through the same and the said die supported in the outer portion of said head, in combination with a channeled outwardly tapered mandrel supporting member seated in the front of said core and a tubular mandrel in sleeved engagement over said tapered member.

2. An apparatus for making rubber tubes, a cylinder head and a core holder seated therein and a tapered core fixed in said holder, said core and holder having a passage for powder, a die concentric with said core supported in said head, and means to receive and convey the tube from said core and die.

3. In an apparatus for making tubes, a cylinder head having a tubing core provided with a circulating passage for talc powder, in combination with a tubular mandrel to receive the tube, and means to removably support said mandrel at its opposite ends in open communication axially with the front end of said core.

4. In an apparatus for making tubes, a cylinder head having a tubing core provided with a circulating passage for a talc powder, in combination with a tubular mandrel and a movable end pressure member to hold said mandrel in removable connection with said core.

5. In an apparatus for making tubes, a cylinder head having a tubing core provided with a circulating passage for a talc powder, in combination with a tubular mandrel mounted axially opposite and in open communication with said passaged core, and a movable centering support for the outer end of said mandrel having a discharge passage open to the interior of the mandrel.

[Claims 6 to 11 not printed in the Gazette.]

1,196,649. FIGURE TOY. LOUIS A. BOCKSTAHLER, Cleveland, Ohio. Filed May 25, 1916. Serial No. 99,888. (Cl. 46—40.)

1. A hollow article made of elastic material and having a body and inflatable part projected by compressing the body, and means within said part to vary the form thereof according to the extent of inflation.

2. A hollow elastic article having a body and an inflatable part projected by compressing the body, said part having a design thereon, and means within said part to vary the form thereof and the appearance of said design.

3. A device of the kind described, having an inflatable part with the representation of a face or the like thereon, an inner face plate movable within said part, and an inflatable bulb behind said plate and adapted when expanded to press said plate against said part, to vary the expression of the face.

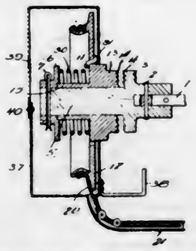


4. A device of the kind described, having an expansible head part, a face plate movable within the head, and means to advance the face plate against the inside of said part, to shape the same.

5. A device of the kind described, having an outer expansible head bulb, a face plate within said bulb and movable toward and from the wall thereof, an inflatable bulb in the head, behind the face plate, and means to inflate the last mentioned bulb, to press the face plate against the outer bulb.

[Claims 6 to 8 not printed in the Gazette.]

1,196,650. AUTOMOBILE-STARTER. EUGENE BOOTZ, Edgewater, Colo. Filed Apr. 20, 1916. Serial No. 92,540. (Cl. 74—54.)



1. In an engine starter, the combination with a main shaft having a clutch element, a second clutch element opposed thereto, and yielding means for holding these elements out of engagement; of a pulley connected with said second element, a guide tube leading from the floor of the automobile beneath its engine and with its forward end directed upward tangentially toward the pulley and obliquely across the rim thereof, an anti-friction pulley within said tube and at its bend, and a rope leading from said floor along the tube and over the anti-friction pulley, upward to and around the rim of said driving pulley, and attached to the latter.

2. In an engine starter, the combination with a main shaft having a clutch element, a second clutch element opposed thereto, and yielding means for holding these elements out of engagement; of a pulley connected with said second element and having a wide rear flange, a guide tube led from a distant point with its forward end directed tangentially toward the periphery of said pulley and obliquely to its plane and across said wide flange, and a flexible operating member passing through said tube and wound around the rim of the pulley and attached thereto.

3. In an engine starter, the combination with a main shaft having a clutch element, a second clutch element opposed thereto, and yielding means for holding these elements out of engagement; of a pulley connected with said second element and having a wide rear flange, a guide tube leading from the floor of the automobile beneath its engine and with its forward end directed upward tangentially toward the pulley and obliquely across the rim thereof, anti-friction pulleys within the length of said tube and at its bends, and a rope leading from said floor along the tube and over the anti-friction pulleys, upward to and around the rim of said driving pulley, and attached to the latter.

4. In an engine starter, the combination with a main shaft, a clutch element attached thereto, a second clutch

element slidably mounted on said shaft, and a flanged pulley on this element; of a guide tube with its front end directed toward said pulley and obliquely across its wide flange, an operating rope passing through said tube and wound around and secured to the rim of the pulley, and a spring attached at one end to the pulley and having its other end attached to said tube, for the purpose set forth.

5. In an engine starter, the combination with a main shaft, a toothed clutch element attached thereto and having a spindle projecting forward therefrom, a collar fixed on the front end of the spindle, a second toothed clutch element having a sleeve slidably mounted on said spindle between the first element and collar, and a pulley carried by this element and having a wide rear flange; of a guide tube led from the automobile floor beneath its engine and with its front end directed toward said pulley and obliquely across its wide flange, an operating rope passing through said tube and wound around and secured to the rim of the pulley, and a weak spring attached at one end to the pulley, making several convolutions around said sleeve, and having its other end attached to said tube, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,196,651. THREAD-CUTTER. JOSEPH W. BOWERSOX and ALBERT W. MOORE, Pittsburgh, Pa. Filed Apr. 11, 1916. Serial No. 90,376. (Cl. 30—14.)



1. A thread cutter comprising a support, a protuberance thereon and provided with a thread guide, a spring actuated cutting element carried by the support and operating against one face of said protuberance to sever the thread passing through said guide, and a locking lever having a thread guide member and capable of engaging the cutting element to lock it against the action of its spring and shifted to release the said element by the tripping of said member by a knot in the thread which is guided thereby which permits of the actuation of said element by its spring to sever the thread.

2. A thread cutter comprising a support, a protuberance thereon and provided with a thread guide, a spring actuated cutting element carried by the support and operating against one face of said protuberance to sever the thread passing through said guide, and a locking lever having a thread guide member and capable of engaging the cutting element to lock it against the action of its spring and shifted to release the said element by the tripping of said member by a knot in the thread which is guided thereby which permits of the actuation of said element by its spring to sever the thread, that face of said protuberance against which said cutting element operates being concave.

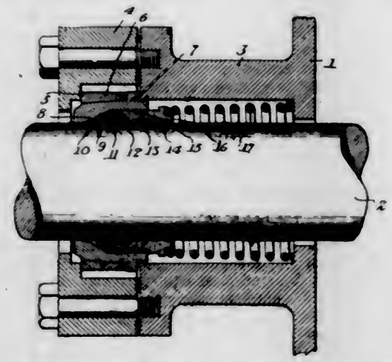
3. A thread cutter comprising a support, a protuberance thereon and provided with a thread guide, a spring actuated cutting element carried by the support and having projecting therefrom a curved cutting member, operating against one face of said protuberance to sever the thread passing through said guide, and a locking lever having a thread guide member and capable of engaging the cutting element to lock it against the action of its spring and shifted to release the said element by the tripping of said member by a knot in the thread which is guided thereby which permits of the actuation of said element by its spring to sever the thread.

4. A thread cutter comprising a support, a protuberance thereon and provided with a thread guide, a spring actuated cutting element carried by the support and having projecting therefrom a curved cutting member operating against one face of said protuberance to sever the thread passing through said guide, and a locking lever having a thread guide member and capable of engaging the cutting element to lock it against the action of its spring and shifted to release the said element by the tripping of said member by a knot in the thread which is guided thereby which permits of the actuation of said element by its spring to sever the thread, that face of said protuberance against which operates said cutting member being concave.

5. A thread cutter comprising a support, a shaft carried thereby, a cutting element shiftably mounted thereon, actuating means for said element carried by the shaft, means traveling at the rear end of the support for coupling said means to said element, means to provide a thread guide projecting from the support and against one face operates said element to sever the thread passing through the guide, and a locking lever having a thread guide member and capable of engaging said element to lock it against the operation thereof by its actuating means and shifted to release said element by the tipping of said member by a knot in the thread guided thereby which permits of the operation of said element to sever the thread.

[Claims 6 to 16 not printed in the Gazette.]

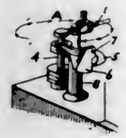
1,196,652. LOCOMOTIVE-PISTON PACKING. ALBERT C. BRIGNONI, Covington, Ky., assignor of one-third to Frank L. Smith, Covington, Ky., and one-third to James T. Howley, Newport, Ky. Filed Sept. 10, 1915. Serial No. 50,044. (Cl. 137—115.)



1. The combination with a vibrating cup having an inclined shoulder, of a split packing ring having a beveled face seated against said inclined shoulder, coöperating therewith, and provided with internal annular lubricant receiving grooves and an external ring receiving groove, a soft metal ring seated in the ring receiving groove and having an external face to fit the inclined shoulder of the vibrating cup, a secondary ring abutting the first mentioned rings and having an inclined side face, a tertiary ring having an inclined side face fitting against the inclined face of the secondary ring and having a groove in its opposite side face, and a spring pressed follower engaging the last named groove.

2. In a piston rod packing, the combination with a packing gland and a vibrating cup seated therein the bore of said vibrating cup terminating in an inclined shoulder, a split brass ring abutting and fitting against the inclined shoulder of the vibrating cup, and having internal annular lubricant receiving grooves and an external ring receiving groove, a split soft metal ring fitted within the ring receiving groove and breaking joint with the brass ring, a secondary split ring abutting the brass ring and said soft ring and breaking joint with both and having an inclined inner face, a tertiary split ring abutting the inclined face of the secondary ring and breaking joint with said secondary ring, said secondary and tertiary rings being arranged between the vibrating cup and piston and engaging both, said tertiary ring having a V-shaped groove in its inner edge and a spring pressed follower having a correspondingly shaped projection fitting in said groove.

1,196,653. GAS-METER. WILLIAM LAIRD BROWN, Lansdowne, Pa., assignor to William E. Helme and John McIlhenny, Philadelphia, Pa., Copartners trading as Helme & McIlhenny. Filed Feb. 16, 1916. Serial No. 78,573. (Cl. 73—1.)



1. In a gas meter the combination of a rotatable tangent arm, a fixed stop-support, and a click or stop having an unchanging pivotal axis and normally permitting forward rotation of the tangent arm and adapted by a backward revolution of the tangent arm to be inverted and poised in contact with said fixed stop-support to prevent further retrograde movement of the tangent arm.

2. In a gas meter the combination of a fixed stop-support provided with arms, a tangent arm, and a detent stop arranged between said arms and having unchanging pivotal connection therewith and adapted to depend in stable equilibrium clear of the fixed stop-support and to be inverted into a position in contact with the fixed stop-support.

3. In a gas meter the combination of a tangent arm, a S-shaped element constituting a click or detent stop, a stop-support, and pivotal connection between the S-shaped element and the stop-support, substantially as described.

4. In a gas meter the combination of a stop-support, a tangent arm, a detent stop, a connection between the detent stop and support for affording the detent stop motion of rotation only and said detent stop provided with oppositely disposed recesses adapted to coöperate with the tangent arm, substantially as described.

5. In a gas meter the combination of a rotatable tangent arm, and a click or stop consisting of one movable element having an unchanging pivotal axis, arranged to permit free revolution of said tangent arm in one direction and to arrest its motion in the reverse direction after at least one reverse revolution.

[Claims 6 to 12 not printed in the Gazette.]

1,196,654. PEN. INA C. BUCKMINSTER, Beverly, Mass. Filed Mar. 17, 1914. Serial No. 825,212. (Cl. 120—109.)

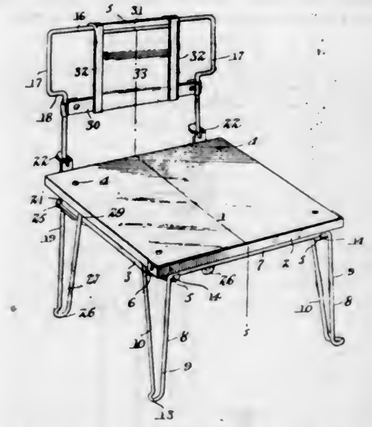


1. A pen having a holder, and a pen point for use in the holder, said pen point comprising a shank portion extending parallel to the axis of the holder, a writing point and an intermediate portion, said writing point comprising portions of the nibs of the pen point extending parallel to the shank portion and said intermediate portion having formed therein an ink reservoir and comprising the remaining portions of the nibs so inclined to the axis of the holder and upwardly with respect to the contact face of the writing point that the slit between said nibs will conduct the ink from said reservoir when the pen is held in the ordinary manner and is used for writing upon a steeply inclined surface.

2. A pen having a holder comprising a portion to be grasped by the fingers of the user, and a pen point for use in the holder, said pen point comprising a writing point extending parallel to the axis of the said finger portion of the holder, a shank adapted to be received in the holder and an intermediate body portion, said writing point comprising portions of the nibs of the pen point and said body portion comprising the remaining portions of the nibs and an ink reservoir, said body portion of the pen point being so inclined to the axis of the finger portion of the holder and upwardly with respect to the contact face of the writing point that the slit between said nibs will conduct the ink from said reservoir to said point when the pen is held in the ordinary manner and is used for writing upon a steeply inclined surface.

3. A pen having a holder, and a pen point comprising a shank portion adapted to secure the pen to the holder, a writing point consisting of two nibs in a plane parallel to and below the plane of the shank portion, and an intermediate portion connecting the writing point and the shank portion and sloping from the shank portion down to the writing point, said intermediate portion having an opening acting as a reservoir and the slit between the nibs connecting with said opening.

1,196,655. FOLDING CHAIR. CALVIN A. BUFFINGTON, Berkshire, N. Y. Filed Oct. 8, 1915. Serial No. 54,911. (Cl. 155—8.)



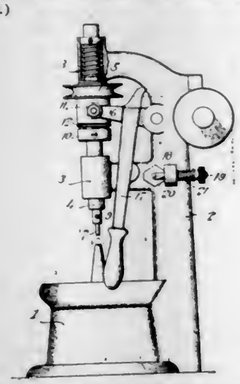
1. In a foldable chair, a seat, cleats secured to the chair adjacent the longitudinal edges thereof, front and rear legs for the chair, each of said legs being formed from a single strand of resilient wire comprising inner and outer arms, the inner arms having their ends offset and journaled in bearings in the cleats, the outer arms being spread from the inner arms to exert a tension toward the inner arms, the connecting member of the strip being formed with the outer arm, the outer arms of the rear legs adapted to press against the rear of the chair, while the outer arms of the front legs and the connecting member therefor adapted to press against the cleats when the chair is in a set up position.

2. In a foldable chair, a seat, longitudinal cleats upon the bottom of the seat, said cleats at the juncture of the chair having transverse notches and the said cleats having their lower faces rounded toward the said notches, front and rear legs each formed from a single strand of resilient material, each of said legs comprising a pair of inner and outer arms which are joined by feet and which are spread away from each other from the said feet, the

inner arms having their ends offset and journaled in openings in the cleat, the connecting member of the outer arms of the front legs adapted to be swung over the rounded portions of the cleats to permit of the connecting element of the said arms being received within the notches in the cleats, clips upon the rear of the seat having offset ends provided with elongated slots through which the outer arms of the rear legs pass and to further permit the said outer arms and the connecting member therefor being swung over the top of the seat when the chair is in its folded position.

3. In a foldable chair, a seat, cleats upon the bottom of the seat adjacent the longitudinal edges thereof, said cleats in the front of the chair having transverse notches and the underface of the cleats being rounded toward the said notches, front and rear legs for the said seat, each being constructed from a single strip of wire and each including a connecting member having vertically disposed arms having their ends outturned to provide feet, inner arms connected with the feet and spread away from the other arms to exert a tension between the said arms, the inner arms having their ends offset and journaled in openings in the cleat, and a connecting member for the front legs adapted to be swung over the rounded portions of the cleats to engage in the notches of the said cleats, clip members secured to the cleats and extending vertically to the rear of the chair, said clip members having their vertical ends offset and provided with elongated slots through which the outer arms of the rear legs pass, and the connecting member of the said outer arms of the rear legs being disposed a distance above the seat and being provided with longitudinal and transverse connecting members providing a back for the chair, and catch members engaging said outer arms of the rear legs for assisting in sustaining the said rear legs in the set up position.

1,196,656. LENS-DRILLING MACHINE. LUCIAN W. BUGBEE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Corporation of Massachusetts. Filed July 23, 1915. Serial No. 41,485. (Cl. 29—26.)



1. In a machine of the character described, the combination with a standard having bearings, of a spindle slidably and rotatably mounted in said bearings, a collar secured on the spindle having an upper undulating surface, and a non-rotatable shifting device encircling the spindle and having a plurality of projections on the under face thereof adapted to engage the undulating surface of the collar, whereby the inter-engagement of the projections and surface will cause a vibratory movement of the spindle upon rotation thereof.

2. A combination with a support and a spindle slidably and rotatably mounted therein, of a spring for pressing the spindle in one direction, a shift member for actuating the spindle in the opposite direction, said shift member having a plurality of projections on the side thereof opposed to the spring action, and a collar secured on the spindle and having an undulating surface adapted to engage the projections and be held thereagainst by the spring, whereby the inter-engagement of the projections and surface will cause a slight reciprocating or vibratory movement of the spindle upon rotation thereof.

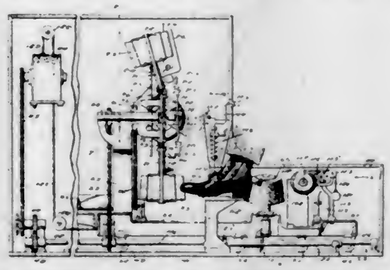
3. The combination with a rotatably mounted spindle, of a collar on the spindle having an undulating surface, a contact member encircling the spindle and having a plurality of projections adapted to engage said surface of the collar, means for holding the projections and surface in engagement one with the other, whereby a slight reciprocating movement will be imparted to the spindle upon rotation thereof due to the engagement of said parts, and a steadying member for insertion between the projections and surface of the collar, said member having an under face adapted to fit the undulations of the collar to rotate therewith and having a plain upper face for engaging the projections, whereby the spindle may spin without vibration or reciprocation when said device is applied in position thereto.

4. A combined machine for the purpose described, including a base, a spindle slidably and rotatably supported by the base, a spring for sliding the spindle in one direction, means for manually shifting the spindle in the opposite direction, including a shift yoke, a sleeve encircling the spindle and engaged by the yoke, said sleeve having a plurality of contacts projecting therefrom, a collar secured to and rotatable with the spindle and having an undulating surface inter-engaging with the contacts on the sleeve, whereby movement of the yoke will shift the sleeve and spindle as an entirety while rotation of the drill will cause a relative reciprocation of the sleeve and spindle, and a steadying device adapted to be interposed between undulating surface and the contact having its lower surface adapted to rest evenly upon said undulating surface and having a plain upper surface over which the contacts may move in a smooth manner without occasioning vibration or reciprocating movement of the spindle.

1,196,657. PROCESS FOR THE FIXATION OF NITROGEN BY MEANS OF FERRO-ALUMINIUM. PAUL BUNET, Paris, France, assignor to Societe Generale des Nitrures, Paris, France, a Corporation of France. Filed Apr. 3, 1915. Serial No. 19,662. (Cl. 23—13.)

In the processes of fixation of nitrogen on ferro-aluminium by subjecting a mass containing ferro-aluminium to a current of nitrogen, adding calcium carbid to said mass.

1,196,658. SHOE CLEANING AND POLISHING MACHINE. CHARLES F. BURKHART, Philadelphia, Pa., assignor, by mesne assignments, to Burkhart Corporation, a Corporation of New York. Substitute for application Serial No. 428,187, filed Apr. 20, 1908. Renewed Jan. 20, 1915, Serial No. 3,393. This application filed Jan. 12, 1916. Serial No. 71,741. (Cl. 15—61.)



1. In a shoe dressing machine, a reciprocating carriage, shoe cleaning and polishing means mounted on said carriage, a shaft mounted to rotate adjacent the carriage, a pivoted detent carried by the carriage, a finger carried by the shaft and positioned to rotate into the path of movement of the detent and hold the carriage against movement, and means to intermittently rotate the shaft.

2. In a shoe dressing machine, a reciprocatingly driven carriage, shoe cleaning and polishing means mounted in said carriage, an auxiliary carriage mounted to reciprocate, a shaft mounted to rotate adjacent both carriages, a pivoted pawl carried by the auxiliary carriage, a detent carried by the shaft positioned to rotate into the path of movement of the pawl, and means carried by the driven carriage adapted to move the shaft at each reciprocation with a step by step movement.

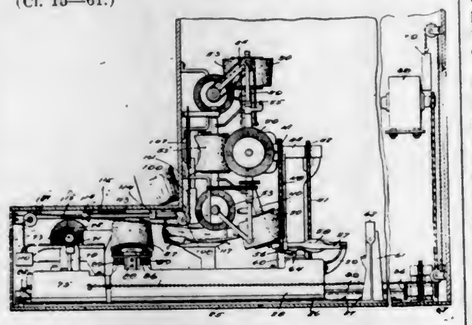
3. In a shoe dressing machine, a rotatable main frame, auxiliary frames pivoted upon the main frame, brushes carried by the auxiliary frames and rotatable independently of such frames, and means connecting opposite pairs of brushes to yieldingly hold said brushes in frictional engagement with the shoe.

4. In a shoe dressing machine, a rotatable main frame, auxiliary frames pivoted upon the main frame, brushes carried by the auxiliary frames and rotatable independently of, and upon axes perpendicular to the axis of rotation of the main frame, and guards carried by the auxiliary frames adjacent to the brushes.

5. In a shoe dressing machine, a rotatable main frame, auxiliary frames pivoted upon the main frame, brushes carried by the auxiliary frames on axes perpendicular to the axis of rotation of the main frame, and guards carried by the auxiliary frames adjacent to but at one side of the adjacent brushes.

[Claims 6 to 40 not printed in the Gazette.]

1,196,659. SHOE-DRESSING MACHINE. CHARLES F. BURKHART, Philadelphia, Pa., assignor to Burkhart Corporation, a Corporation of New York. Substitute for application Serial No. 604,408, filed Jan. 24, 1911. This application filed Jan. 12, 1916. Serial No. 71,742. (Cl. 15—61.)



1. In a shoe dressing machine, reciprocating carriages, spring pressed detents carried by the carriages adapted for interlocking, means for actuating one of the detents for unlocking at each reciprocation and other means for actuating the other detent for unlocking at the completion of a predetermined cycle of reciprocations.

2. In a shoe dressing machine, reciprocating carriages, means to move the carriages independently of each other, spring pressed detents carried by the carriages adapted to interlock, means adapted to engage one of the detents for unlocking at each reciprocation and means for engaging the other detent for unlocking at the completion of a predetermined cycle of reciprocations.

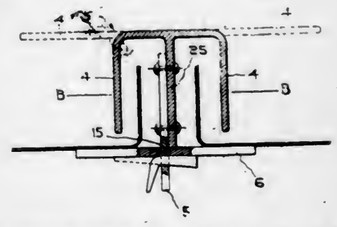
3. In a shoe dressing machine, reciprocating carriages, spring pressed hooked detents carried by the carriages and adapted for interlocking, means for engaging one of the detents and moving it to unlocking position against the tension of the spring at each reciprocation of the carriage and means for engaging the other detent and moving it to unlocking position against the tension of its spring at the end of a predetermined cycle of reciprocations.

4. In a shoe dressing machine, reciprocating carriages, a lock composed of sections one carried by each carriage, means for actuating one section of the lock and moving it into unlocking position at each reciprocation of the carriages and means for engaging the other member of said lock and moving it to unlocking position at the end of a predetermined cycle of reciprocations.

5. In a shoe dressing machine, a reciprocating carriage, a brush-carrying frame mounted for rotation upon the carriage, a worm carried by the carriage and connected with the frame, a pillar erected adjacent the path of movement of the carriage and rollers carried by the pillar adapted for engagement with and to rotate the worm.

[Claims 6 to 14 not printed in the Gazette.]

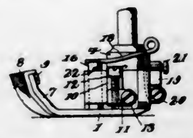
1,196,660. CAR-ROOF. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Nov. 7, 1912. Serial No. 730,003. (Cl. 108—5.4.)



1. The combination with a carline of T-cross-section having turned-down flanges, of a series of hangers fastened to and depending from the leg of the T, a series of bearing plates detachably engaging the hangers, means whereby one of the bearing plates is supported by each hanger, and roof sheets having turned-up side edges supported by a plurality of said bearing plates with the upturned side edges within the turned-down flanges of the carline, said sheets being spaced from said carline.

2. The combination with a carline of T-cross-section having down-turned flanges, of a hanger fastened to and depending from the leg of the T, a bearing plate detachably engaging the hanger and having its upward movement limited by the lower edge of the leg of the T, taper pins inserted beneath the bearing plates and engaging apertures therein for holding the bearing plates from downward movement, and roofing sheets having upturned side edges supported on said bearing plates with the upturned side edges within the turned down flanges of the carline, the roofing sheets having a limited freedom of movement.

1,196,661. PRESSER-FOOT FOR SEWING-MACHINES. JOHN E. CHALMAN, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1912. Serial No. 728,852. (Cl. 112—13.)



1. A presser foot for sewing machines comprising a shank, a foot portion pivoted thereto so as to tilt laterally, an auxiliary foot portion carried by said main foot portion, and means for yieldingly supporting said auxiliary foot portion.

2. A presser foot for sewing machines comprising a shank, a foot portion pivoted thereto so as to tilt laterally, said foot portion having a recess formed therein extending from the front to rear, an auxiliary presser foot located in said recess, and means for yieldingly sup-

porting said auxiliary foot portion from said main foot portion, whereby said auxiliary foot portion may yield vertically and tilt with said main foot portion.

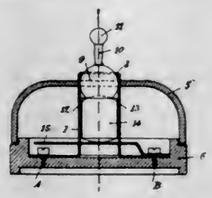
3. A presser foot for sewing machines, comprising a shank, a foot portion pivoted thereto, so as to tilt laterally, said foot portion having a recess formed therein from front to rear, a bracket carried by the main foot portion and spanning said recess, an auxiliary foot portion supported by said bracket so as to yield vertically, said auxiliary foot portion being located in said recess.

4. A presser foot for sewing machines comprising a shank, a foot portion pivoted thereto so as to tilt laterally, means for limiting the tilting movement of said presser foot, said presser foot having a recess extending from front to rear, an auxiliary presser foot located in said recess, and means for yieldingly supporting said auxiliary presser foot from said main foot portion, whereby said auxiliary presser foot may tilt with said main foot portion.

5. A presser foot for sewing machines, comprising a shank, a foot portion pivoted thereto, so as to tilt laterally, and having a recess formed from front to rear, an auxiliary foot portion located in said recess, a bracket carried by the main foot portion, and spanning said recess, a shank carried by said auxiliary portion and adapted to slide vertically in said bracket, means for limiting the downward movement of said auxiliary foot portion, and a spring for yieldingly holding said auxiliary presser foot, with its lower surface flush with the lower surface of said main foot support.

[Claims 6 to 16 not printed in the Gazette.]

1,196,662. ELECTRIC SWITCH. GEORGES AUGUSTE CHEBROU and SAMUEL ADOLPHE LEMP, Paris, France. Filed Apr. 20, 1914. Serial No. 833,284. (Cl. 175—282.)

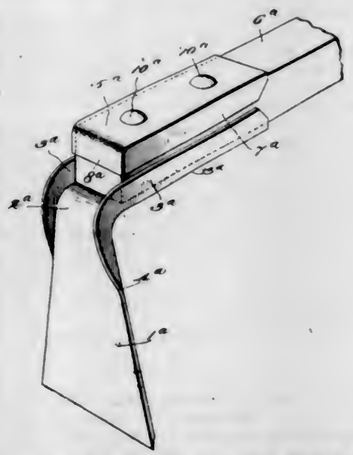


1. An electrical switch of the class described comprising in combination a base plate, a circular sleeve mounted on said base plate, a truncated spherical member located within the end of said sleeve, retained therein by suitable means, and in such a way that the said truncated spherical member can be rocked in any direction, means for rocking the said member, an intermediate member slidable with respect to the sleeve, contacting with the truncated spherical member and adapted to be operated by such member, and a contact device adapted to be closed by the sliding of the intermediate member substantially as described.

2. An electrical switch of the class described comprising in combination a base plate, a circular sleeve mounted on said base plate, a truncated spherical member located within the end of said sleeve, and retained therein by flanging over inward the end of the sleeve, in such a way that the said truncated spherical member can be rocked in any direction, means for rocking the said member, an intermediate member slidable with respect to the sleeve, contacting with the truncated spherical member and adapted to be operated by such member, and a contact device adapted to be closed by the sliding of the intermediate member substantially as described.

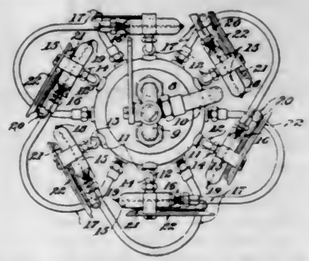
3. An electrical switch of the class described comprising in combination a base plate, a circular sleeve mounted on said base plate, a truncated spherical member located within the end of said sleeve, and retained therein by flanging over inward the end of the sleeve, in such a way that the said truncated spherical member can be rocked in any direction, a handle for rocking said member, an intermediate member sliding within the sleeve, a contact spring passing through suitable apertures in the sleeve and adapted when the intermediate member is operated to complete the electrical circuit substantially as described.

1,196,663. HOE. WELFORD R. CLORE, Brightwood, Va. Filed June 17, 1914. Serial No. 845,643. (Cl. 55—5.)



A hoe comprising an elongated straight shank; a substantially triangular shaped blade arranged at an angle to the shank; a curved neck connecting the upper end of the blade to one end of the shank; flanges formed on the sides of the shank, neck and upper portion of the blade; said shank, neck flanges and blade being stamped from a single piece of rectangular sheet metal.

1,196,664. HUMIDIFYING MEANS. FRANK B. COMINS, Sharon, Mass., assignor to American Moistening Company, a Corporation of Maine. Filed Mar. 31, 1914. Serial No. 828,493. (Cl. 98—40.)

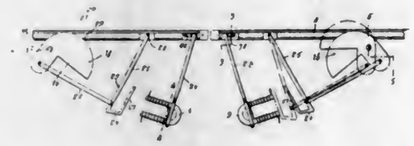


1. Humidifying means comprising a water supply, and an air supply both constituted by a common cylinder, and a series of nozzles mounted to receive air and water from said supplies and discharging tangential to said cylinder.

2. Humidifying means comprising a plurality of atomizers arranged around a common cylinder and discharging in directions tangential to said cylinder, and means to supply water and pressure medium to said atomizers.

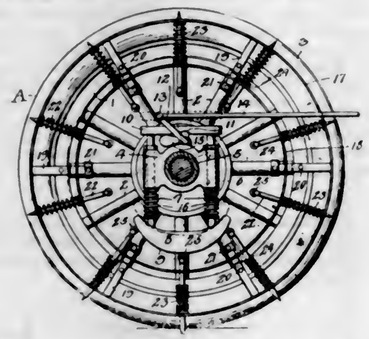
3. Humidifying means comprising a water reservoir, an air reservoir or container mounted on said water reservoir and having a series of radial pipes having sockets at their outer ends, a series of angle pipes pivotally mounted in said sockets, a series of atomizers having their air chambers pivotally mounted on said angle pipes and communicating therewith, independent means for closing the water outlets of said atomizers, and flexible pipes connecting the water chambers of the respective atomizers with said water reservoir.

1,196,665. AUTOMATIC TRAIN-STOP. BENJAMIN H. CUBBAGE and CHRISTOPHER PETERSON, Lincoln, Nebr. Filed June 2, 1914. Serial No. 842,486. (Cl. 246—59.)



The combination with a valve of an air braking mechanism for a train including a handle and the rails of a signal block, of an electrical circuit connected with the rails on one side of the track at the block, said rails being insulated at a point between their connection with the circuit, electromagnets connected in the circuit and carried adjacent to said connected rails of the track, track obstacles pivoted adjacent to the track and arranged to be moved into position whereby they will engage the valve handle, U-shaped armatures including arms of different length, the longer arm of each armature being pivoted to the rails on the connected side of the track and the shorter arm being arranged to be attracted and engaged by the magnets and links connecting the obstacles with the armatures.

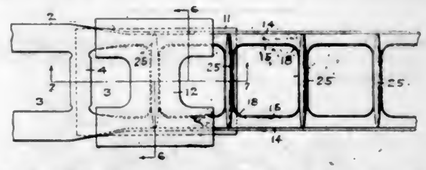
1,196,666. ANTISKID DEVICE. ANDREW J. DAINS and CLARENCE C. RICKARD, Toledo, Ohio. Filed Mar. 23, 1916. Serial No. 86,302. (Cl. 21—210.)



The combination with the driving wheel of a motor vehicle, of a non-rotary hanger having a fixed relation to the driving axle housing, a cam supported by said hanger and movable upwardly and downwardly in relation thereto, means for yieldingly holding said cam at the lower limit of its movement, and a circular series of rotary movable traction elements carried by the wheel and adapted to be acted upon by said cam to project the working extremities thereof beyond the tread surface of the wheel, a cross head movable with said cam and having a locking notch therein, and a manually operable lever having an arm coöperating with said cross head to raise the cam and movable into engagement with the notch of the cross head to lock the same in its elevated position.

1,196,667. METHOD OF MAKING LADDERS. THOMAS D. DALLMEYER, Pittsburgh, Pa., assignor to Valley Forging Company, Verona, Pa., a Corporation of Delaware. Filed July 13, 1914. Serial No. 850,782. (Cl. 113—116.)

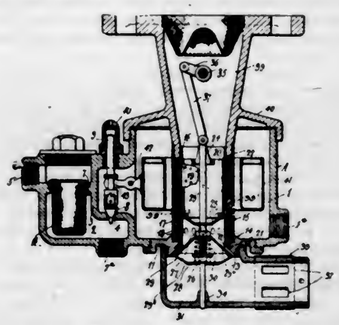
1. The method of forming ladders consisting in cutting out and removing sections of metal thereby forming a series of spaced openings in a sheet of metal, leaving web portions between said openings, bending the web portions into U-shape, and finally bending said web portions until the edges meet, and turning in said edges.



2. The method of forming ladders consisting in cutting a series of spaced openings in a sheet of metal, leaving web-portions between said openings, bending the web-portions into U-shape, and at the same time striking up ribs extending beyond said web-portions, and then bending said web-portions until the edges meet, and turning in said edges.

3. The method of forming ladders consisting in cutting spaced openings in a sheet of metal, leaving web-portions between said openings, bending the sides of said sheet to form an outer flange and an inner flange surrounding said openings, and simultaneously bending said web-portions into U-shape, bending said U-shape until the edges meet, and finally turning in said edges.

1,196,668. CARBURETER. CHARLES DE LUKACSEVICS and CLAIR J. TERRILL, Nutley, N. J.; said Terrill assignor to said de Lukacsevics. Filed May 19, 1915. Serial No. 29,150. (Cl. 48—156.)

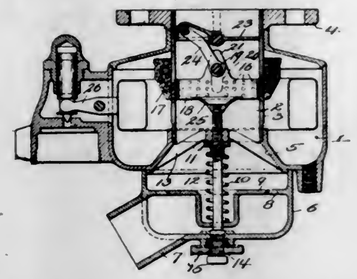


1. A carbureter having a fuel chamber, a central air passage to which the fuel chamber is concentric, a wall separating the fuel chamber and the air passage throughout their extent and including a felt absorbent element projecting toward the base of said fuel chamber and means for retaining said absorbent element in position, constructed to expose said element at one side thereof to the gasolene in said fuel chamber and at the other side to the air flowing through said passage, said passage having an annular air inlet at one end and being open to the motor suction tube at its other end, a cylindrical valve working within said passage and along the inner face of said wall and operative to regulate the degree to which the absorbent element is exposed to the air, and a second valve connected to said cylindrical valve for movement therewith and controlling the said annular air inlet, the connection between said valves including a resilient element for permitting a movement of said cylindrical valve in a direction away from said inlet, while the second valve is held closed on its seat.

2. A carbureter having a fuel chamber, a cover therefor, a central air passage to which the fuel chamber is concentric, and an annular wall separating the fuel chamber and air passage throughout their extent and comprising an annular part formed with said cover, concentric tubular members extending between said annular part and the

base of said fuel chamber and formed with perforations at intervals throughout their extent, and a cylinder of absorbent material arranged between said tubular members and between said annular part and the base of said fuel chamber.

1,196,669. CARBURETER. CHARLES DE LUKACSEVICS, Newark, N. J. Filed Mar. 30, 1916. Serial No. 87,845. (Cl. 48—156.)



1. In a carbureter, in combination, a fuel chamber, an air passage, an annular wall separating said chamber from said air passage, the fuel chamber surrounding the air passage, an annular absorbent fuel distributing element surrounding said wall and movable lengthwise thereof, said wall having openings over which said element extends, a ring valve arranged within the air passage and fitting against said wall, said ring valve controlling said openings, and connections between said element and said valve to provide for their unitary movement lengthwise of said wall.

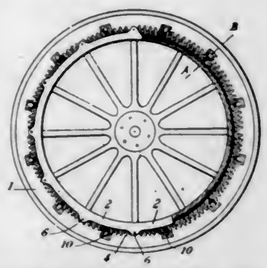
2. In a carbureter, in combination, a fuel chamber, an air passage, an annular wall separating said chamber from said air passage, the fuel chamber surrounding the air passage, an annular absorbent fuel distributing element surrounding said wall and movable lengthwise thereof, said wall having openings over which said element extends, a ring valve arranged within the air passage and fitting against said wall, said ring valve controlling said openings, said wall having oppositely located vertical slots, and a cross-bar connecting said element and valve and projecting through said slots.

3. In a carbureter, in combination, a fuel chamber, an air passage, an annular wall separating said chamber from said air passage, the fuel chamber surrounding the air passage, and an annular absorbent fuel distributing element surrounding said wall and movable lengthwise thereof, said wall having openings over which said element extends and said element having its outer circumferential face of inverted conical form.

4. In a carbureter, in combination, a fuel chamber, an air passage, an annular wall separating said chamber from said air passage, the fuel chamber surrounding the air passage, an annular absorbent fuel distributing element surrounding said wall, said wall having openings over which said element extends and an inverted conical spreader arranged concentrically within said air passage below said openings.

5. In a carbureter, in combination, an air passage, a surrounding fuel chamber, an annular wall separating said passage and chamber and having fuel delivery openings, a spider at the lower end of said air passage, an air inlet chamber separably fitted under and in alinement with said air passage and having a horizontal partition formed with a valve seat, a valve co-acting with said seat, a stem projecting through the base of said air inlet chamber and through said valve, said stem being threaded into said spider and having a collar below said spider, a helical spring surrounding said stem between said collar and said valve, said stem being threaded at its lower end, and a lock nut mounted upon the lower end of said stem and engaging against the base of said air inlet chamber.

1,196,670. ELASTIC TIRE. JEAN ISIDORE DUCHÂTEAU, St. Omer, France. Filed Mar. 16, 1914. Serial No. 825,025. (Cl. 152—37.)



1. A vehicle wheel comprising in combination a hub, spokes and a felly, annular flanges which are secured to each side of the felly and extending radially beyond the periphery of the felly to form a housing, a helical spring within the housing, means for connecting equidistant points of the spring with the flanges, a tread member formed with spaced annular flanges, the inner ends of which are adapted to be yieldingly connected to the inner edges of the first mentioned flanges, slotted guides on the inside faces of the tread member flanges provided with radial slots, and means for affording sliding engagement between equidistant points of the helical spring and the aforesaid guides.

2. A vehicle wheel comprising in combination a hub, spokes and a felly, annular flanges fixed to opposite sides of the felly and which extend radially beyond the periphery of the felly to form a housing, an annular helical spring within the housing, connectors disposed at equidistant points within the convolutions of the spring, said connectors being further journaled in the aforesaid flanges, a tread member provided with radially extending annular flanges, means for connecting the inner edges of said flanges with the inner edges of the first mentioned flanges, guides on the inner sides of the tread member flanges, said guides being provided with radial slots, transverse connectors held within the coils of the spring at equidistant points thereof, and rollers on the connectors for engagement with the slots.

1,196,671. SEAMLESS FELT FORM FOR FELT BOOTS, SHOES, AND SLIPPERS. HENRY T. EMMONS, Haverhill, Mass. Filed Aug. 4, 1915. Serial No. 43,522. (Cl. 36—9.)



1. A seamless felt form for a felt boot, shoe, slipper or moccasin having a heel integral therewith, said heel having a pocket to receive a cushion and an inturned lip around the upper part of said pocket, said lip forming a retainer to hold the cushion in the pocket.

2. A seamless felt form for a felt boot, shoe, slipper or moccasin, having a felted heel and a felted sole integral therewith, the heel and sole each being formed with a pocket to receive a cushion and each pocket having an inturned lip which serves as a retainer to hold the cushion within the pocket.

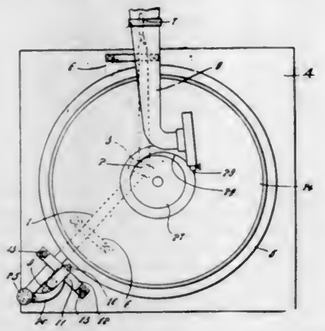
3. A seamless felt form for a felt boot, shoe, slipper or moccasin having a felted heel and a felted sole integral therewith, the heel and sole each being formed with a pocket to receive a cushion and having an inturned lip at the top of the pocket which serves as a retainer for a cushion within the pocket, and an additional heel and sole of other material secured to the bottom of the felt heel and sole.

4. A seamless felt form for a felt boot, shoe, slipper, or moccasin having a felted heel integral therewith, the heel being formed with a pocket to receive a cushion and having an inturned lip at the top of the pocket which serves as a retainer for a cushion within the pocket, and an additional heel of other material secured to the bottom of the felt heel.

5. A seamless felt form for a felt boot, shoe, slipper or moccasin having a heel formed with a pocket depression in the upper face of the heel, and an inturned lip around the upper edge of said pocket.

[Claim 6 not printed fn the Gazette.]

1,196,672. MEANS FOR AUTOMATICALLY STOPPING GRAMOPHONES. FREDERICK ERTUCK, Petone, near Wellington, New Zealand. Filed Apr. 27, 1915. Serial No. 24,201. (Cl. 74—46.)

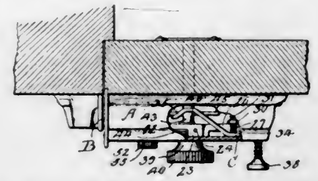


1. The combination in a gramophone of a turntable, a casing, a swinging member carried upon said casing, a striking arm depending from said swinging member, a horizontal member pivoted at or near its center to the said casing below said turntable and adapted to be operated by the said striking arm, a lever having a curved face to which lever the front end of said pivoted member is pivotally connected, a spring operated buffer, said lever adapted to retain said spring-operated buffer out of engagement with the turntable by the tension of said spring operated buffer, and adapted to be disengaged from the tension of the buffer when the pivoted member is operated by the striking arm, substantially as set forth.

2. The combination in a gramophone of a casing, a turntable, a swinging member carried upon said casing, a striking arm depending from said swinging member, a horizontal member pivoted at or near its center to the said casing, the rear end of said member projecting beyond the turntable and adapted to be operated by the said striking arm, a lever to which the front end of said pivoted member is pivotally connected, a spring operated buffer carried in a sleeve fixed to the casing, a pin projecting from said spring operated buffer through said sleeve, a roller pivoted upon said pin, said roller engaging upon a cam face in the said lever whereby said spring operated buffer is retained out of engagement with the turntable while the said roller is resting upon the cam face of the said lever but whereby the said buffer is projected forward under the pressure of its spring when the said roller is forced out of engagement with the cam face by said horizontal member and is projected forward and engages the turntable, substantially as set forth.

3. In an automatic stop mechanism for gramophones, a casing, a turntable, a swinging member carried upon said casing, a striking arm depending from said swinging member, a horizontal member pivoted at or near its center to the said casing, guides fixed to the casing in order to support the said horizontal member, the rear end of said member projecting beyond the turntable and adapted to be operated by the said striking arm, a lever to which the front end of said pivoted member is pivotally connected, a spring operated buffer, said lever adapted to retain said spring operated buffer out of engagement with the turntable and to allow the said buffer to be projected forward and engage the turntable when said pivoted member is operated by the striking arm, substantially as set forth.

1,196,673. NIGHT-LATCH. WARREN C. FERRIS, Cold Spring, N. Y. Filed Jan. 12, 1916. Serial No. 71,762. (Cl. 70—29.)



1. In a latch device, a lock case, a spring projected bolt having a bifurcated shank provided with terminal lugs, a dog having lugs pivotally connected with the lugs of the bolt, and an obstructing member lying in the path of the dog.

2. In a latch device, a lock case, a spring projected bolt, a spring actuated dog pivotally connected therewith, an obstructing member in the path of the dog, and means for tilting the dog out of engagement with the obstructing member, said means comprising a lever member including a cross bar having an arm about the terminal of which it may be tilted.

3. In a latch device, a lock case, a spring projected bolt, a spring actuated dog pivotally connected therewith, an obstructing member in the path of the dog, and means for tilting the dog out of engagement with the obstructing member, said means comprising a lever member including a cross bar having an arm about the terminal of which it may be tilted, said cross bar being also provided with a tongue extending oppositely to the arm; and a push button engaging the tongue.

4. In a latch device, a lock case, a spring projected bolt, a spring actuated dog pivotally connected therewith, an obstructing member located in the path of the dog to maintain the bolt in projected position, and means for disengaging the spring actuated dog from the obstructing member, said means including a lever member having a cross bar, a fulcrum member extending in one direction from said cross bar, a tongue extending in the opposite direction from said cross bar, and V-shaped arms extending from the ends of the cross bar in the direction of that end of the lock case through which the bolt is projected, there being ample clearance between the ends of the V-shaped arms and the bottom of the lock case to permit the lever member to be tilted by pressure exerted on the V-shaped arms.

5. In a latch device, a lock case, a spring projected bolt, a dog pivotally connected therewith, headed posts adjacent to opposite sides of the dog, a cross bar having eyes engaging the posts, and springs coiled on the posts to actuate the cross bar in the direction of the dog.

[Claims 6 to 12 not printed in the Gazette.]

1,196,674. ALARM SYSTEM. WILBUR H. GABEL, Kintyre, N. D. Filed July 3, 1915. Serial No. 37,886. (Cl. 177—314.)

1. In an alarm system, two circuits, an electro-magnet arranged in one circuit, an alarm device arranged in the other circuit, batteries for energizing each of said circuits, a switch arranged in one of the circuits and under the control of said magnet, a resilient arm for spacing the

movable member of said switch a slight distance from said magnet, and means for short-circuiting said magnet upon an increase of current passing therethrough.

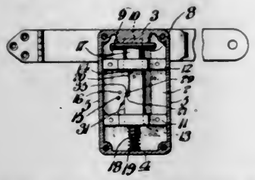


2. In an alarm system, two circuits, an electro-magnet arranged in one circuit, an alarm device arranged in the other circuit, batteries for energizing each of said circuits, a switch arranged in one of the circuits and under the control of said magnet, a resilient arm for spacing the movable member of said switch a slight distance from said magnet, means for short-circuiting said magnet upon an increase of current passing therethrough, and means for varying the tension of said resilient arm.

3. In an alarm system comprising a normally energized circuit, an alarm circuit, an electro-magnet in said normally energized circuit, a switch blade arranged in said alarm circuit and under the control of said electro-magnet, a resilient arm arranged transversely of said electro-magnet and adapted to space said switch arm a slight distance from the pole of said electro-magnet, a screw for adjusting the tension of said resilient arm, and a partial circuit adapted to be closed upon movement of said arm in one direction.

4. In an alarm system comprising a normally energized circuit, an alarm circuit, an electro-magnet in said normally energized circuit, a switch blade arranged in said alarm circuit and under the control of said electro-magnet, a resilient arm arranged transversely of said electro-magnet and adapted to space said switch arm a slight distance from the pole of said electro-magnet, a screw for adjusting the tension of said resilient arm, a partial circuit bridging said normally closed circuit, a switch arranged therein and adapted to be closed upon movement of said resilient arm in one direction.

1,196,675. LOCK. DAVID W. GARNER, Orme, Tenn. Filed May 19, 1916. Serial No. 98,599. (Cl. 70—5.)

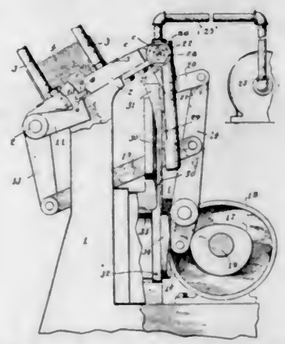


1. A device of the class described comprising a casing having a slot therein to receive the bow of a staple, a key operated bolt arranged within the casing and having an end to be received between the arms of the staple when the bolt is in locked position, a key operated tumbler carried by the bolt, and a detent mounted to slide on the bolt and arranged in the path of movement of the tumbler.

2. A device of the class described comprising a casing having a slot therein to receive the bow of a staple, a key operated bolt within the casing having a shoulder extending transversely thereof, a detent arranged upon the shoulder and movable transversely of said bolt, a key operated and spring controlled tumbler carried by the bolt and operatively engaged with the detent to hold one end thereof extended beyond the bolt when the same is in locked position, and a member on the tumbler contacting with the detent adapted to limit the sliding movement of the detent in one direction under the influence of the tumbler.

3. A device of the class described comprising a casing having a slot therein to receive the bow of a staple, partitions within said casing, a key operated locking bolt mounted for sliding movement within said partitions and having an end adapted to extend beyond said slot when said locking bolt is in locked position, a key operated and spring controlled tumbler carried by the bolt, and a detent mounted to slide in the bolt and operatively connected with the tumbler whereby said detent may be held in contact with one of said partitions when the locking bolt is in locked position.

1,196,676. DISK-BLANK-FEED MECHANISM. JAMES A. GRAY, San Francisco, Cal., assignor to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed Apr. 16, 1914. Serial No. 832,262. (Cl. 113—113.)



1. A feed mechanism for disk blanks, the same comprising a holder adapted to contain a stack of disk blanks, horizontally reciprocating means for separating the lowermost disk blank of the series of disk blanks contained within the holder, air suction means for removing the lowermost separated disk blank of the stack of disk blanks and conveying the same into position for discharge, means for breaking the air suction on the disk blank being brought into position for discharge, and associated instrumentalities for actuating the said respective means.

2. A feed mechanism for disk blanks, the same comprising a holder adapted to contain a stack of disk blanks, horizontally reciprocating devices for successively separating blanks from the bottom of the stack, mechanism for actuating the same, and air controlled means associated with said devices for removing the separated lowermost blank and conveying the same into position for discharge and devices for making and breaking the air suction in accordance with the movement thereof.

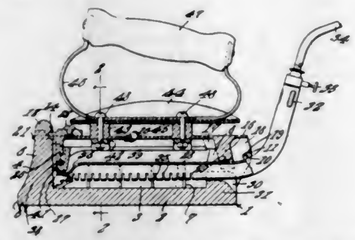
3. A feed mechanism for disk blanks, the same comprising a holder adapted to contain a stack of disk blanks, slide devices for buckling the blanks within the bottom portion of the holder, a sucker arm for removing the lowermost blank of the stack of blanks, a part tubular rock shaft for actuating said arm, air connections with said shaft, and mechanism for imparting movement to the mentioned slides and operating the rock-shaft for opening and closing the air connection with the sucker arm.

4. A feed mechanism for disk blanks, the same comprising a suitable holder adapted to contain a stack of blanks, devices associated with the holder for buckling a plurality of the blanks at the bottom thereof, suction means for successively removing the blanks from the bottom of the holder, air connections associated therewith, and mechanism for actuating the suction means for opening and closing the air connections.

5. A feed mechanism for disk blanks, the same comprising a holder adapted to contain a stack of disk blanks, devices for separating the lowermost disk blank from the stack of disk blanks and controlling the discharge outlet for the holder, and air controlled devices coöperating therewith for removing from said outlet the lowermost separated blank of the stack of blanks and conveying the same into position for discharge.

[Claims 6 to 9 not printed in the Gazette.]

1,196,677. SAD-IRON. CHARLES C. GRIDLEY, Columbus, Ohio. Filed Aug. 24, 1915. Serial No. 47,081. (Cl. 68—26.)



1. A sad iron comprising a body having a thickened standard at its toe; and a burner tube in the body, the burner tube being provided in its end with an opening discharging against the toe.

2. A sad iron comprising a body having a thickened standard at its toe; and a burner tube in the body, the burner tube having an opening in its end discharging against the toe, the tube being downwardly and forwardly inclined at its forward end to form a deflector for the opening.

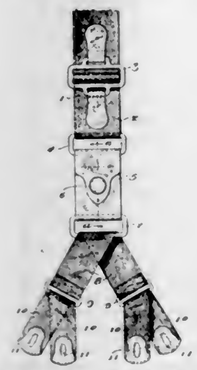
3. In a sad iron, a body; a lid for the body; a burner in the body and having an extension; a flame spreader above the burner and provided with an extension coacting with the extension of the burner to hold the burner in place; and means for connecting the flame spreader with the lid.

4. In a sad iron, a body; a lid for the body and provided with a bracket; a burner tube having an extension abutting against the bracket; a flame spreader above the burner and provided with an extension engaged with the extension of the burner tube and with the bracket; and means for connecting the flame spreader with the lid.

5. In a sad iron, a body; a lid for the body; a burner in the body; a flame spreader disposed in the body and below the lid; a handle disposed above the lid; a shield interposed between the handle and the lid and projecting laterally beyond the handle to act as a guard therefor; and a securing element uniting the handle, the shield, the lid and the flame spreader.

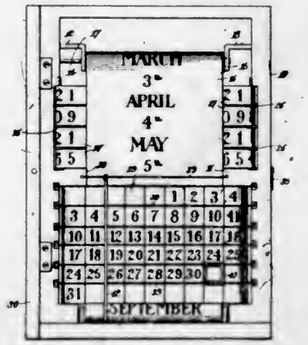
[Claims 6 to 8 not printed in the Gazette.]

1,196,678. GARMENT-SUPPORTER. LEWIS A. GRISWOLD, Dayton, Ohio. Filed Feb. 26, 1916. Serial No. 80,700. (Cl. 241—27.)



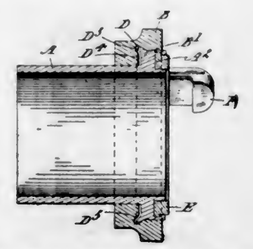
In a garment supporter, a shoulder strap; an equalizing strap slidably connected solely to the said shoulder strap, and end straps each slidably connected to one end of the equalizing strap.

1,196,679. CALENDAR. FRANK C. GUTEKUNST, Kintnersville, Pa. Filed May 1, 1915. Serial No. 25,232. (Cl. 40—110.)



In a device of the class described in combination an open frame having opposing side walls, being each provided with a vertically spaced apart series of incut recesses, a series of longitudinal rigid rods secured in said recesses and spaced from the outer frame thereof, a slide member constructed of sheet metal and having an opening upon its main body portion, a bead turned around one of the edges of said member and adapted to slide upon one of said rods, and an inverted U-shaped bead formed upon the opposite edge of said slide member and adapted to slide upon another of said rods.

1,196,680. HOSE-COUPLING. HENRY HANDOLL, London, England. Filed Nov. 20, 1915. Serial No. 62,541. (Cl. 137—28.)

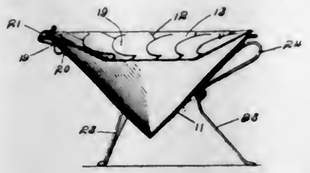


1. A hose coupling member comprising an inner tube provided with a cylindrical boss, said boss provided at its rear end with a rearwardly projecting annular rib, and an outer ring revolubly mounted on said inner tube, and having a cylindrical chamber adapted to receive said cylindrical boss, and an annular groove projecting at an angle rearwardly and outwardly, said annular rib engaging and being distorted by said annular groove, thus locking said tube and said ring in engagement, said ring being provided with a hook and a cam surface adapted to engage a corresponding cam surface and hook on the opposite member, substantially as described.

2. A hose coupling member comprising an inner tube provided with a cylindrical boss, said boss being provided at its front end with an annular chamber having an over-hanging lip at its orifice and at its rear end with a rearwardly projecting annular rib, an outer ring revolubly mounted on said inner tube, and having a cylindrical chamber adapted to receive said cylindrical boss, and an annular groove projecting at an angle rearwardly and outwardly said annular rib engaging and being distorted by said annular groove, thus locking said tube and said ring in engagement, said ring being provided with a hook and cam surface adapted to engage a corresponding cam surface and hook on the opposite member, and a

packing ring sprung into said annular chamber and locked in place by said over-hanging lip, substantially as described.

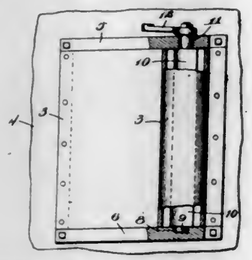
1,196,681. CUSPIDOR. TIMOTHY HANLON, Wilmington, Ill. Filed May 26, 1916. Serial No. 100,111. (Cl. 4—38.)



1. A cuspidor constructed from a single blank of moisture-proof material, split transversely along its edge to provide a plurality of separated portions, said portions being connected together and unitedly defining an inwardly and downwardly directed flange spaced from the body of the receptacle, a support for the latter, and means for holding the receptacle detachably associated with the support.

2. A cuspidor constructed from a single blank of material into frusto-conical shape, said material being slit at spaced intervals from its marginal edge to provide a plurality of separated portions, each of said portions including a tongue for interlocking engagement with the adjacent portion, whereby said portions unitedly define an inwardly and downwardly directed flange, and a support for the receptacle.

1,196,682. BRAKE FOR MARINE VESSELS. WADE H. HARRISS, Houston, Tex. Filed Mar. 3, 1916. Serial No. 81,947. (Cl. 114—145.)

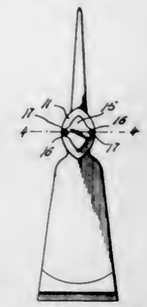


The combination with the hull of a marine vessel formed in the outer surface thereof with a brake receiving recess, of a brake consisting of an imperforate body of parallelogrammatic formation seated flush in said recess, top and bottom hangers for said brake, a rock shaft to which the brake is rigidly fastened journaled in said top and bottom hangers, a crank arm on said rock shaft, and operating means embodying a cylinder and piston, and a connecting rod actuated by said piston and connected to said crank arm, said rock shaft being inclined with the lower end thereof located in advance of a vertical line passing through the upper extremity thereof.

1,196,683. HANDLE-SECURING DEVICE. HARRY W. HARVEY, San Benito, Tex. Filed Apr. 25, 1916. Serial No. 93,499. (Cl. 55—101.)

1. In an implement of the kind described having a tapering eye therethrough enlarged at its outer end for the similarly enlarged end of a handle, a plate covering the eye over the handle end and removable means for securing said plate to the implement.

2. In an implement of the kind described having a handle socket and an outwardly tapering eye therethrough to receive and seat the enlarged tapered end of the handle, a securing plate covering said eye and the enlarged end of the handle and fastened to said socket by bolts passing therethrough and through the plate.



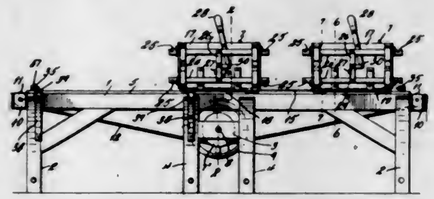
3. In an implement having a handle socket provided with an outwardly tapering eye to receive and seat the enlarged tapering end of a handle, a securing plate for the handle fitting against the end of the socket and bearing against the end of the handle, and bolts passing through projections on said plate and through the socket.

4. Means for securing the enlarged end of a handle to an implement, the same consisting of a plate bearing against the enlarged end of the handle and against the implement and having projecting ears, and bolts passing through said ears and implement.

5. A handle securing device comprising a flat plate having laterally projecting ears, combined with an implement having a handle formed with an enlarged end seated in an eye therein, and bolts passing through holes in said ears and said implement to press the plate against the end of the handle.

[Claim 6 not printed in the Gazette.]

1,196,684. DOUBLE-CEMENT-BLOCK MACHINE. WILLIAM HAZLETON, Delaware, Ohio. Filed Apr. 3, 1915. Serial No. 19,010. (Cl. 25—41.)



1. In a machine of the class described, the combination of a frame, tracks fixedly mounted upon said frame, said tracks having convex upper faces, mold boxes positioned upon said frame, longitudinally extending tracks fixedly mounted upon the lower portions of said boxes, said last-mentioned tracks having concaved lower faces, said last-mentioned tracks fitting throughout their entire length upon said first mentioned tracks, whereby said boxes will be supported throughout their entire length and thus be positively prevented from sagging, and means for drawing said boxes across said frame.

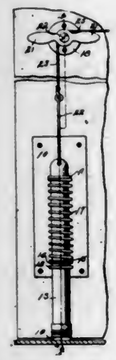
2. In a machine of the class described, the combination of a frame, tracks fixedly mounted upon said frame, said tracks having convex upper faces, mold boxes positioned upon said frame, longitudinally extending tracks fixedly mounted upon the lower portions of said boxes, said last-mentioned tracks having concaved lower faces, said last-mentioned tracks fitting throughout their entire length upon said first-mentioned tracks, whereby said boxes will be supported throughout their entire length and thus be positively prevented from sagging, means for limiting the longitudinal movement of said boxes upon said frame, and means for drawing said boxes across said frame.

3. In a machine of the class described, the combination of a frame, tracks fixedly mounted upon said frame, said tracks having convex upper faces, mold boxes positioned upon said frame, longitudinally extending tracks fixedly mounted upon the lower portions of said boxes, said last-mentioned tracks having concaved lower faces, said last-mentioned tracks fitting throughout their entire length upon said first-mentioned tracks, whereby said boxes will be supported throughout their entire length and thus be positively prevented from sagging, vertical brackets fixedly mounted upon said frame adjacent its end, an adjustable bolt carried by each bracket, whereby the movement of said boxes along said frame will be limited, and means for drawing said boxes across said frame.

4. In a machine of the class described, the combination of a frame, mold boxes slidably mounted upon said frame, said boxes having drop front partitions, means for removably holding said front partitions in set-up positions, and means carried by said frame for supporting said drop partitions as the same are swung downwardly for facilitating the removal of plastic blocks from said boxes.

5. In a machine of the class described, the combination of a frame, mold boxes slidably mounted upon said frame, said boxes having drop front partitions, means for releasably holding said front partitions in set-up positions, a horizontal bracket carried by and extending from the side of said frame, said bracket having an upwardly extending lip at its outer end, said bracket being adapted to support said panels when the same are swung downwardly for facilitating the removal of plastic blocks from said boxes, and said lip being adapted to engage the outer edges of said panels when in a lowered position, whereby said boxes will be held against side movement upon said frame.

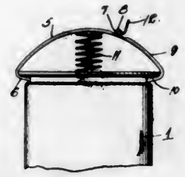
1,196,685. DOOR-HOLDER. PERCY E. HEATHERBELL and GORDON G. HEATHERBELL, Port Cygnet, Tasmania, Australia. Filed Oct. 21, 1914. Serial No. 867,923. (Cl. 16—84.)



The combination with a vertically slidable door stop, of a drum mounted on the door above the stop, said drum being hollow and formed with a plurality of openings therethrough, a flexible element connected to the stop and to the drum, means for rotating the drum to wind the flexible element and lift the stop, and a pivoted lever mounted above the drum and provided with a projection for successive engagement in the said openings to check the rotation of the drum in one direction.

1,196,686. COVER-FASTENER. JANE W. HELMS, South Haven, Mich. Filed Apr. 3, 1916. Serial No. 88,680. (Cl. 215—92.)

1. In combination with a container having a lateral securing flange at its rim and a cover for the container, an arcuate arm having one end bent inwardly for engaging the rim of the container and its opposite end terminating at one side of the center line of the container, a latch arm pivotally carried by the end of said arcuate arm, the free end of the latch arm being bent inwardly to engage the lip of the container, the said arcuate arm and the said latch arm having their engaging ends connected to provide swinging movement of the latch arm, and a coil expansion spring disposed between the top of the container and the under side of said arcuate arm.



2. In combination with a container having a lateral flange at its rim and a cover for the container, of a fastening member adapted to extend in an arc across the top of said container, each end of the fastening member being provided with inwardly bent flanges for engaging the said rim of the container, the said fastening member including an arcuate arm having one end bent to provide a hinge element, and a latch arm hingedly connected to the end of the arcuate arm, the end portion of the latch arm being provided with an extension bent to form a latch finger, and an expansion coil spring interposed between said arcuate arm and the top of the said cover.

3. In combination with a container having a lateral securing flange at its rim and a cover for the container, an arcuate arm provided with a flange at one end thereof for engaging the rim of said container, a latch hingedly mounted on the opposite end of said rim and provided with a flange for engaging the rim of said container, and resilient means interposed between the cover of said container and the under side of said arcuate arm.

4. In combination with a container having a lateral securing flange at its rim and a cover for the container, of an arcuate arm engaging with the flange of said container, resilient means interposed between the top of said cover and the under side of said arcuate arm, and means for releasing said arm from engagement with the rim of said container when said resilient means is compressed.

5. In combination with a container having a lateral securing flange at its rim and a cover for the container, of a fastening device comprising an arcuate arm having a flange at one end thereof, a latch hingedly mounted at the opposite end of said arm and provided with a flange for engaging the rim of said container, and finger operated means for releasing said latch from engagement with said rim.

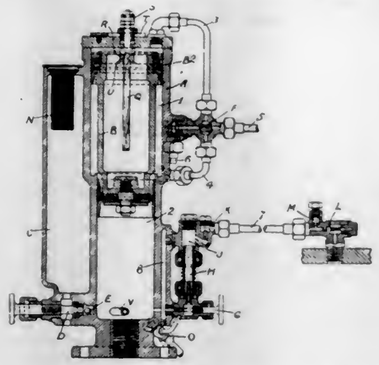
[Claim 6 not printed in the Gazette.]

1,196,687. SIGHT-FEED PRESSURE-LUBRICATOR. ROBERT ABSALOM THOM, Manchester, England. Filed May 31, 1916. Serial No. 100,956. (Cl. 184—40.)

1. A lubricator comprising a cylinder, a piston operating in said cylinder, a source of fluid pressure, means for introducing said fluid pressure into a closed space behind said piston, a container for lubricant separate from said cylinder, and hydraulic connection between said cylinder and said container whereby the pressure exerted upon the piston in the cylinder is transmitted to the lubricant container to operate to discharge said lubricant to the part to be lubricated, and an outlet from the lubricant container leading to said part to be lubricated.

2. A lubricator comprising a cylinder, a piston operating in said cylinder, a source of fluid pressure, means for introducing said fluid pressure into a closed space behind said piston, a container for lubricant separate from said cylinder, hydraulic connection between said cylinder and

said container whereby the pressure exerted upon the piston in the cylinder is transmitted to the lubricant container to operate to discharge said lubricant to the part to be lubricated, an outlet from the lubricant container leading to said part to be lubricated, a valve controlling said outlet and a sight glass for indicating the rate of discharge from the container to the part to be lubricated.



3. A lubricator comprising a cylinder, a piston operating in said cylinder, a source of fluid pressure, means for introducing said fluid pressure into a closed space behind said piston, a container for lubricant separate from said cylinder, hydraulic connection between said cylinder and said container whereby the pressure exerted upon the piston in the cylinder is transmitted to the lubricant container to operate to discharge said lubricant to the part to be lubricated, an outlet from the lubricant container leading to said part to be lubricated, a valve controlling said outlet, a sight glass for indicating the rate of discharge from the container to the part to be lubricated, and means for cutting said sight glass out of circuit at will.

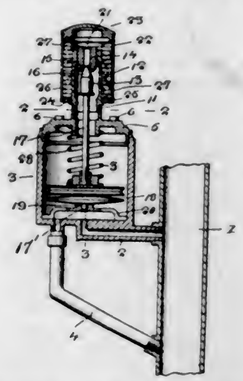
4. A lubricator comprising a container for the lubricant, means for charging the container, means operated by fluid pressure for discharging lubricant from the container to the part to be lubricated, and a test hole closed by a plug adjacent the part to be lubricated.

5. A regulating valve for forced feed lubricators comprising in combination means forming a plurality of chambers, a delivery nozzle, one of said chambers directly communicating with said delivery nozzle, said means having restricted passages connecting said chambers one with the other and a valve member dividing one of said chambers into two parts and having a restricted passage therein, the restricted passages in said means and in said valve preventing the variation of the difference between the inlet pressure on the lubricant and the outlet pressure from causing any substantial difference in the flow of lubricant through the nozzle.

[Claims 6 to 9 not printed in the Gazette.]

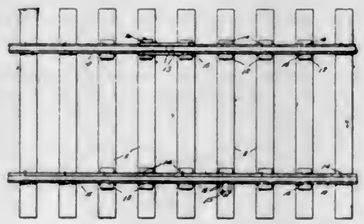
1,196,688. RADIATOR-VALVE. GEORGE HEBREN, Great Bend, Kans. Filed Aug. 7, 1915. Serial No. 44,302. (Cl. 236—21.)

In a steam radiator valve, the combination with the outlet of a radiator, of a steam condensation chamber in direct communication therewith, a valve chamber extending from and located exteriorly of but communicating with said condensation chamber, a valve seat in said valve chamber, a valve movable toward and away from said seat and having a stem, a thermostatic valve controlling member located in the condensation chamber and having the valve stem attached thereto, and a detachable silencer inclosing said valve chamber only and comprising a tubular shell, a tubular body of fibrous packing within said shell, and reticulated packing retaining means adjacent to the opposite ends of said shell, the outer



end of said cap being closed and the inner end thereof being formed with vents.

1,196,689. RAILROAD CONSTRUCTION. EDWARD HEYDON, Indianapolis, Ind. Filed Apr. 17, 1916. Serial No. 91,572. (Cl. 238—2.)



1. In combination, a railroad rail, ties on which said railroad rail rests, and spikes driven into such ties and overlapping a part of such rail, said spikes being welded to the rail.

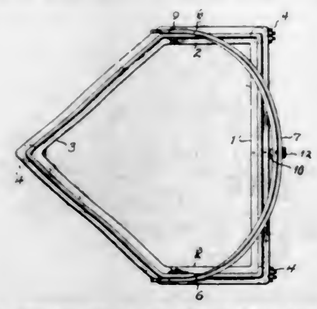
2. In combination, a railroad rail, ties on which said railroad rail rests, a part bolted to said rail, and spikes driven into the ties and engaging said part bolted to the railroad rail, the engaging portions of said spikes and said part bolted to the rail being welded together.

3. In combination, a railroad rail, ties on which said railroad rail rests, tie plates interposed between the ties and the rail, and spikes projecting through holes in said tie plates into the ties, said tie plates being welded to the rail.

4. In combination, a railroad rail, ties on which said railroad rail rests, a member engaging a tie and the rail, and spikes passing through such member and holding it to the tie, said member being welded to the rail.

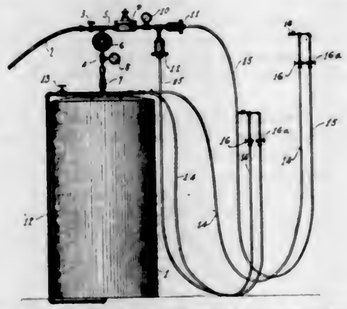
1,196,690. VEHICLE-JACK. PETER HOFWEBER, La Crosse, Wis. Filed Nov. 15, 1915. Serial No. 61,641. (Cl. 254—8.)

In a vehicle jack, the combination of a base structure comprising an open frame, a pair of vertical standards located on the frame at diametrically opposite points, a single-throw lever fulcrumed on said standards adapted to bodily support an axle of a vehicle at the ends thereof, said lever having an intermediate bow-shaped portion overhanging the rear edge of the frame and by which the lifting action of the lever is controlled, said lever being positioned on the frame in a manner to leave an unobstructed space within the frame to permit access to



the rear construction of the vehicle when supported on the device.

1,196,691. MEANS FOR DISTRIBUTING LIQUIDS. BLAKE F. HOPKINS, San Francisco, Cal., assignor, by direct and mesne assignments, to Alliance Securities Company, San Francisco, Cal., a Corporation of California. Filed Oct. 27, 1913. Serial No. 797,400. (Cl. 91—45.)



1. An apparatus for the described purpose comprising in combination a closed liquid receptacle, a spray nozzle including separate inner and outer tubular discharge members, a liquid conduit leading from the liquid receptacle to one of the tubular discharge members of the spray nozzle, a main compressed air supply conduit, branch pipes connected therewith and leading respectively to the said receptacle and the other of said tubular discharge members of the spray nozzle, and independent controllable reducing means interposed in each of the branch air supply pipes permitting the variation of the air pressure in either of said branch pipes without affecting the pressure in the other.

2. An apparatus for the described purpose, the same comprising a closed receptacle for the liquid to be applied, an air pressure supply connected with said receptacle, controlled reducing means associated with said supply for regulating the pressure of the air passing therethrough into the receptacle, a spray nozzle, a liquid conduit extended from the said receptacle and connected with the spray nozzle, an air supply conduit connected with the spray nozzle for atomizing the liquid ejected therefrom under pressure, and controllable reducing means associated with said air supply conduit for regulating the pressure of air passing therethrough without varying the air pressure within the liquid receptacle.

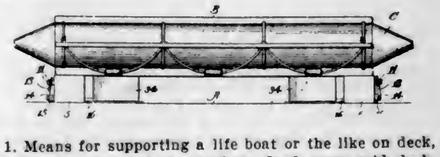
3. An apparatus for the described purpose, the same comprising a closed receptacle for the liquid to be applied, an air pressure supply connected with said receptacle, controlled reducing means associated with said supply for regulating the pressure of the air passing therethrough into the receptacle, a spray nozzle, a liquid conduit extended from the said receptacle and connected with the spray nozzle, an air supply conduit connected with the spray nozzle for atomizing the liquid ejected therefrom under pressure, controllable reducing means associated with said air supply conduit for regulating the pressure of air passing therethrough without varying the air pressure within the liquid receptacle, and a valve interposed in the liquid conduit and within the air conduit for varying the flow quantity of the liquid and of the air respectively passing through said conduits to the spray nozzle.

4. An apparatus for the described purpose, the same comprising a spray nozzle comprising an inner and outer member, a conduit for supplying liquid under pressure to the inner member, a conduit for supplying air under pressure to the outer member, means for forcing liquid under pressure through the first mentioned conduit and air under pressure through the last mentioned conduit, an independently operated pressure regulator associated with each of said conduits, whereby the pressure in either conduit may be varied without affecting the pressure in the other conduit.

5. In an apparatus of the class described, a delivery nozzle, means to supply liquid under pressure to said nozzle, and means to vary the pressure under which said liquid is supplied to said nozzle, in combination with means to supply air under pressure to said nozzle, and means to independently vary the pressure under which said air is supplied to the nozzle.

[Claim 6 not printed in the Gazette.]

1,196,692. LIFE RAFT OR BOAT HOLDING OR RELEASING DEVICE. HANNA R. HUMPHREYS, Weems, Va. Filed Nov. 17, 1915. Serial No. 62,023. (Cl. 9—23.)



1. Means for supporting a life boat or the like on deck, including a plurality of members fixed upon said deck, and adapted to support said boat, an eye bolt depending from the boat and received by one of said members, means for locking said bolt in the member, and means for effecting an automatic release of said bolt.

2. Means for supporting a life boat or the like on deck, including a plurality of members fixed upon said deck, an eye bolt depending from said boat and received by one of said members, a second bolt passed through said member and eye, a bell crank lever pivotally mounted upon said member and carrying said second mentioned bolt, and a float on said lever for automatically locking the latter to effect a release of the boat when the same is submerged.

3. Means for supporting a life boat on deck, including supports fixed on said deck, a pair of chock blocks hingedly mounted on each of said supports and adapted to receive the boat therebetween, means for normally holding the blocks in upright position, a connection between the boat and one of said supports for locking the boat between the blocks, means for effecting the release of said boat when the latter is submerged, and a connection between one of said blocks and the last mentioned means for effecting a release of said boat when the blocks are swung upon their pivots to horizontal position.

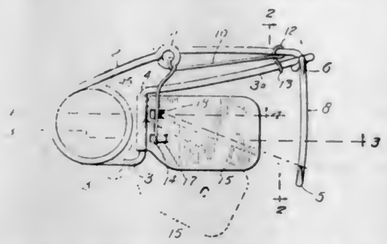
4. Means for supporting a life boat on deck, including supports fixed on said deck, a pair of chock blocks mounted on each of said supports and adapted to receive the boat therebetween, means for normally holding said blocks in upright position, means for locking said boat between said blocks, and a connection between said blocks and locking means for effecting a release of said boat when the blocks are swung upon their pivots to horizontal position.

1,196,693. TREATED STONE. ROY W. HYDE, Lakewood, Ohio. Filed Dec. 18, 1914. Serial No. 877,998. (Cl. 91—70.)

1. As a new article of manufacture, a sand stone having its interstices filled throughout with linseed oil, whereby the stone is hardened and toughened and rendered non-absorbent and non-conducting for electrical and other uses.

2. As a new article of manufacture, a sand stone saturated with vegetable oil oxidized and hardened therein.

1,196,694. TRAP. ROLLA N. INK, San Diego, Cal. Filed May 29, 1916. Serial No. 100,533. (Cl. 43—23.)



1. A trap comprising a wire bent to form a coil and arms, one arm being off-set laterally toward the other arm at the end remote from the coil, and the other arm having at its outer end an angular portion approximately parallel with the connection between the off-set portions of the other arm, said first named arm having an eye running upon the angular portion, and having an upstanding jaw at the eye, the other arm having an upstanding jaw at the end of the angular portion and serving as a stop for limiting the movement of the jaw of the first named arm toward the said jaw of the angular portion, a bait pan hinged to the connection between the off-set portions of the first named arm, a trip rod supported by the other arm and having a hook for engaging over the off-set arm to hold the said arm at its free end in contact with the outer end of the other arm, the trip rod having a portion extending transversely of the bait pan, and the bait pan having a lug for engaging the trip rod when the bait pan is in vertical or horizontal position.

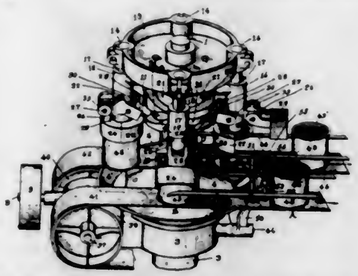
2. A trap comprising a pair of resilient arms, said arms being connected at one end and normally diverging at the other, one arm having an angular portion at the said other end, and the other arm having an eye sliding on the angular portion, and the arms having coöperating jaws, a bait pan hinged to the arm having the eye, a releasable trip rod in connection with the arm having the angular portion and adapted to engage over the other arm to hold the free end thereof in contact with the first mentioned arm, the bait pan having a catch for engagement by the trip rod.

1,196,695. APPARATUS FOR RE-FORMING THE FLANGES OF CAN-BODIES. AXEL JOHNSON, Oakland, Cal., assignor to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed Jan. 4, 1916. Serial No. 70,225. (Cl. 153—48.)

1. In an apparatus for the described purpose, a relatively stationary die member, and movable means for engaging and lifting a flanged can body to press said flange between said engaging means and said die.

2. In an apparatus for the described purpose, a relatively stationary die member, movable clamping devices for receiving and embracing the flanged end of a can body, and means for moving said clamping devices to press the flange of said can body between said clamping devices and said die.

3. In an apparatus for the described purpose, a relatively stationary die member, movable clamping devices adapted to embrace a flanged can body, a die ring within said clamping devices, and means for moving said clamping devices to press said flange between said die and said die ring.

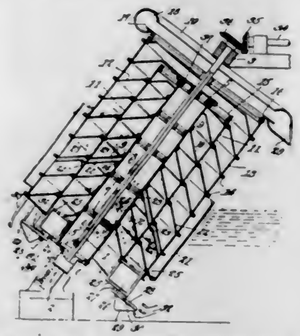


4. In an apparatus for the described purpose, the combination with conveyer means for supplying and discharging cans, of a die member, and means for engaging a flanged can body, removing the same from said conveyer, lifting the same to bring the flange thereof into engagement with said die, and then depositing the same upon said conveyer to be discharged from the machine.

5. In an apparatus for the described purpose, the combination with conveyer means for supplying and discharging cans, of a die member, movable clamping devices for embracing a flanged can body, and means for moving said clamping devices to remove said can body from said conveyer, to bring the flange thereof into engagement with said die, and then to deposit said can body upon said conveyer to be discharged from the machine.

[Claims 6 to 16 not printed in the Gazette.]

1,196,696. WATER-ELEVATOR. CHARLES J. JONES, Portalles, N. Mex. Filed Mar. 24, 1915. Serial No. 16,727. (Cl. 103—43.)



1. A water elevator including concentric cylindrical casings, spiral blades within the respective casings and forming, with the casings, concentric screws, said screws being inclined, each of said screws having an inlet at its lower end and an outlet at its upper end, and means for supplying air under atmospheric pressure to the spaces between the convolutions of the respective screws.

2. A water elevator including inclined concentric cylinders, spiral blades interposed between the cylinders and forming, with said cylinders, concentric screws having inlets at their lower ends and outlets at their upper ends, a jacket surrounding and revoluble with the outer cylinder adjacent the lower end thereof, and air passages for maintaining communication between the inner cylinder and the interior of the jacket, said passages having ports opening into the spaces between the convolutions of the respective screws.

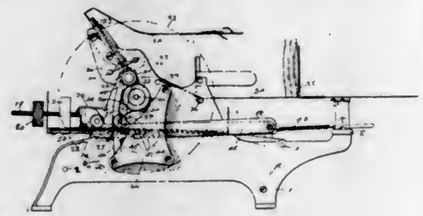
3. A water elevator including inclined concentric cylinders, spiral blades interposed between the cylinders and forming, with said cylinders, concentric screws having inlets at their lower ends and outlets at their upper ends, a jacket surrounding and revoluble with the outer cylinder adjacent the lower end thereof, air passages for maintaining communication between the inner cylinder and the interior of the jacket, said passages having ports opening into the spaces between the convolutions of the respective screws, and valves for closing the ports.

4. An inclined cylindrical casing, a spiral blade therein and revoluble therewith and forming a spiral passage having an inlet at its lower end, a jacket extending around the casing above the inlet and closed at its lower end, there being passages opening from the interior of the jacket to the uppermost portions of the lower convolutions of the spiral passage.

5. A water elevator including a screw, a valve normally closing the inlet, and means operative by the resistance of the water in which the elevator is operating, for opening the valve.

[Claims 6 and 7 not printed in the Gazette.]

1,196,697. PAPER-FOLDING MACHINE. FREDERICK C. JULYAN, Cleveland, Ohio. Filed Jan. 23, 1913. Serial No. 743,796. (Cl. 101—43.)



1. In a machine of the character described, the combination of a magazine adapted to receive papers; a movably mounted carriage; means adapted to move said carriage across said magazine and to raise said carriage from said magazine; and means operated by said carriage and adapted to pick up and fold a single paper at a time.

2. In a machine of the character described, the combination of a magazine adapted to receive papers; a reciprocably mounted carriage; means adapted to move said carriage across said magazine and to raise said carriage from said magazine; a friction roller mounted on said carriage and adapted to pick up a single paper; and a second roller adapted to coöperate with said friction roller to fold such paper.

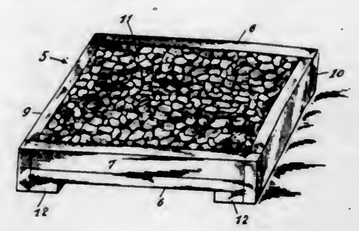
3. In a machine of the character described, the combination of a magazine adapted to receive papers; a reciprocably mounted carriage, said carriage being also adapted to tilt; means adapted to move said carriage across said magazine and to tilt said carriage, thereby raising the same from said magazine; a friction roller mounted on said carriage and adapted to pick up a single paper; and a second roller adapted to coöperate with said friction roller to fold such paper.

4. In a machine of the character described, the combination of a magazine adapted to receive papers; a reciprocably mounted carriage, said carriage being also pivotally mounted about an axis disposed transversely to the direction of movement of said carriage; means adapted to move said carriage and to tilt the same about such transverse axis, thereby raising said carriage from said magazine; a friction roller carried by said carriage and adapted to pick up a single paper; and a second roller adapted to coöperate with said friction roller to fold such paper.

5. In a machine of the character described, the combination of a magazine adapted to receive papers; a reciprocably mounted carriage, said carriage being also pivotally mounted about an axis disposed transversely to the direction of movement of said carriage; means adapted to move said carriage and to tilt the same about such transverse axis, thereby raising said carriage from said magazine; a friction roller carried by said carriage and adapted to pick up a single paper, and a second roller movably mounted and adapted to coöperate with said friction roller to fold and raise a single paper from said magazine.

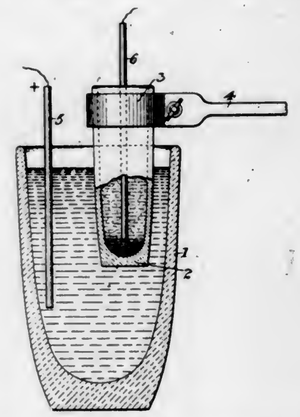
[Claims 6 to 28 not printed in the Gazette.]

1,196,698. STAND FOR TRAFFIC OFFICERS. WILL E. KELLER, Los Angeles, Cal. Filed Sept. 14, 1914. Serial No. 861,489. (Cl. 20—6.)



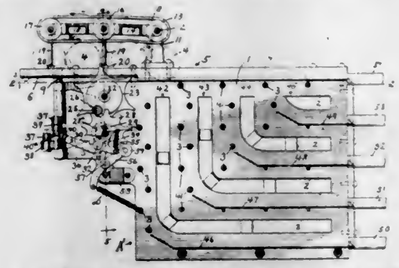
A portable stand for the use of traffic officers at street intersections, comprising a frame having side and bottom walls forming a recess at the upper side of the frame, and also having supporting means constructed and arranged to maintain said bottom wall in spaced relation to the pavement on which the supporting means rests, and a yieldable heat and moisture insulating material arranged in said recess; the upper sides of the frame and said yieldable material being substantially horizontal.

1,196,699. ART OF PRODUCING TUNGSTEN POWDER. FREDERICK G. KEYES and ROBERT B. BROWNLEE, Hoboken, N. J., assignors to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 17, 1915. Serial No. 8,769. (Cl. 204—19.)



The combination with a crucible, of fused sodium tungstate within the same, a porous cup dipping into the fused material and permitting the said material to enter the said cup to substantially the level of the material in the crucible, an anode extending into the crucible and the fused material therein and a cathode dipping into the material within the porous cup.

1,196,700. CAN-HANDLING MECHANISM. ROY D. KING, Chicago, Ill., assignor to The John Wildi Evaporated Milk Company, Highland, Ill. Filed Nov. 25, 1914. Serial No. 874,006. (Cl. 214—1.)



1. A can handling apparatus comprising means for separating a single line of cans into a plurality of superposed rows, and means for separating each of said rows of cans into a column formed of a plurality of superposed layers, said columns being arranged side by side.

2. A can handling apparatus comprising gravity means for separating a single line of cans into a plurality of superposed rows, and gravity means for separating each of said rows of cans into a column formed of a plurality of superposed layers of cans, said columns being arranged side by side.

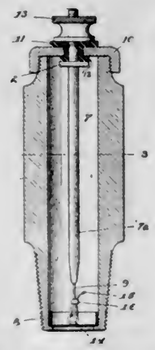
3. A can handling apparatus comprising means for separating a single line of cans into a plurality of superposed rows, means for separating each of said rows of cans into a column formed of a plurality of superposed layers of cans, and means for loading said columns of cans into a receptacle.

4. A can handling apparatus comprising means for separating a single line of cans into a plurality of superposed rows, means for separating each of said rows of cans into a column formed of a plurality of superposed layers of cans, and gravity means for loading said columns of cans into a receptacle.

5. A can handling apparatus comprising gravity means for separating a single line of cans into a plurality of superposed rows, gravity means for separating each of said rows of cans into a column formed of a plurality of superposed layers of cans, said columns being arranged side by side, and gravity means for loading said columns of cans into a receptacle.

[Claims 6 to 24 not printed in the Gazette.]

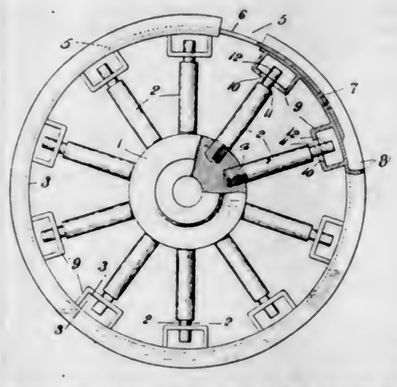
1,196,701. HEAT-INDICATOR FOR JOURNAL-BEARINGS. ANDREW H. KLING and CHARLES E. FOERCH, Clinton, Conn. Filed Nov. 6, 1915. Serial No. 60,087. (Cl. 200—33.)



1. A thermostatic circuit closer comprising a plug provided with a cylindrical passage, a rod mounted in said passage but insulated from the walls of the passage, a spring electrode secured to said rod and adapted to move into engagement with a wall of the passage, and a fusible element securing said spring electrode to the rod and spacing it from a wall of the passage.

2. A thermostatic circuit closer comprising a plug provided with a cylindrical passage, a disk of insulated sheet in the bottom of the passage, a cap threaded on said plug, a cylindrical rod passing through the cap, a spring electrode secured to one extremity of the rod having an intermediate portion resting on the disk of insulation, and having its remaining extremity arranged to engage the wall of the passage, and fusible means for attaching the last mentioned extremity to the first mentioned extremity of the electrode for normally spacing the last mentioned extremity from the wall of the passage.

1,196,702. RESILIENT WHEEL. MICHAEL KOGAN, Lawrenceville, Ill. Filed Jan. 17, 1916. Serial No. 72,545. (Cl. 152—29.)



1. In a wheel, the combination of a hub, spokes radially disposed in relation to the hub and adapted to be turned on their major axes, a resilient split rim, spoke-holding keepers on the inner face of said rim formed with spoke-receiving slots elongated longitudinally of the rim, and heads on the outer extremity of said spokes serving to limit the expansion of the rim and the longitudinal movement of the spokes in relation to the rim and permit the extremities of the spokes to move longitudinally of the rim.

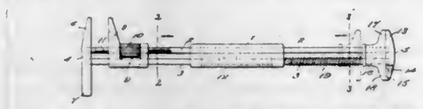
2. In a wheel, the combination of a hub, spokes radially disposed in relation to the hub and adapted to be turned on their major axes, a resilient split rim, a tire-supporting strip bridging the split in the rim and fastened to one end portion of the rim, spoke-holding keepers on the inner face of said rim formed with spoke-receiving slots elongated longitudinally of the rim, and heads on the outer extremity of said spokes serving to limit the expansion of the rim and the longitudinal movement of the spokes in relation to the rim and permit the extremities of the spokes to move longitudinally of the rim.

3. In a wheel, the combination of a hub, spokes radially disposed in relation to the hub and adapted to be turned on their major axes, a resilient split rim, spoke-holding keepers on the inner face of said rim formed with spoke-receiving slots elongated longitudinally of the rim, and heads on the outer extremity of said spokes serving to limit the expansion of the rim and the longitudinal movement of the spokes in relation to the rim and permit the extremities of the spokes to move longitudinally of the rim, said heads when in their normal relation to the rim being elongated in a direction substantially at a right angle to the length of the slots in the keepers.

4. In a wheel, the combination of a hub, spokes radially disposed in relation to the hub and adapted to be turned

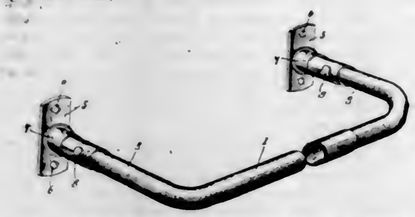
on their major axes, a resilient split rim, spoke-holding keepers on the inner face of said rim formed with spoke-receiving slots elongated longitudinally of the rim, heads on the outer extremity of said spokes serving to limit the expansion of the rim and the longitudinal movement of the spokes in relation to the rim and permit the extremities of the spokes to move longitudinally of the rim, and shoulders on said spokes which coact with the keepers to limit the contraction of the rim.

1,196,703. TOOL. HENRY KRAUT, Summit, N. J. Filed Sept. 17, 1912. Serial No. 720,856. (Cl. 81—3.)



In a wrench, in combination, a bar-like handle, a pair of parallel wire rods extending forwardly of said handle and secured thereto at one end, a stationary jaw secured centrally upon both of said wire rods and having a flat side projecting in opposite directions and at right angles from said rods to provide an upper and lower extending clamp portion, one of said clamp portions longitudinally and terminally recessed to form a groove opening out of its flat side and through its end as well, a slidable jaw having openings through which both of said rods project and also having a flat side adapted to contact the flat side of said stationary jaw and also providing upper and lower clamp portions one of which is adapted to close the side of said recess in the stationary jaw so as to leave its end open only, and a spring coiled around one of said rods bearing against said bar-like handle at one end and against said slidable jaw at its opposite end to hold the two jaws closed.

1,196,704. EXTENSION CURTAIN-ROD. JOHN KRODER, New York, N. Y., assignor to The John Kroder & Henry Reubel Company, New York, N. Y., a Corporation of New York. Filed Mar. 16, 1915. Serial No. 14,640. (Cl. 156—22.)



1. A curtain rod bracket comprising a plate adapted to be secured to a wall and to support the end of a rod extending at right angles to the wall, said plate having a support curved in cross-section adapted to extend along the under side only of the end of a rod; the end of said support adjoining said plate being tubular in form and adapted to receive the extremity of a rod supported by said bracket and having means to engage coöperating means on the end of the rod to prevent longitudinal, outward movement thereof, said tubular portion extending throughout a part only of the length of said support.

2. A curtain rod bracket comprising a plate adapted to be secured to a wall and to support the end of a rod extending at right angles to the wall; said plate having a support adapted to extend along the under side only of the end of a rod, said bracket also having a stop and an inward projection adapted to be engaged by the upper side of the extremity of a rod, whereby the same is prevented from tipping about the end of said support as a fulcrum and from moving away from said plate.

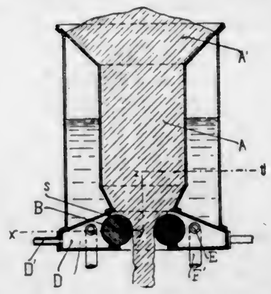
3. The combination of a rod, the ends of which are bent so as to extend at right angles to its intermediate portion; of two brackets adapted to be secured to a wall and to support the ends of said rod, each bracket comprising a plate having a support extending along the under side only of the end of said rod; said bracket having also a stop comprising a downward projection adapted to engage a depression on the upper side of the extremity of the rod, whereby the same is prevented from tipping about the end of said support as a fulcrum and from moving away from said plate.

4. The combination of a rod, the ends of which are bent so as to extend at right angles to its intermediate portion and which ends are provided each with engaging means near the extreme end; of two brackets adapted to be secured to a wall and to support the ends of said rod, each bracket comprising a plate having a support, curved in cross-section, extending along the under side only of the end of said rod; the end of said support adjoining said plate being tubular in form and provided with means to engage said engaging means at the end of said rod when the parts are assembled, and the extremity of said rod extending into said tubular portion, said tubular portion extending throughout a part only of the length of said support.

5. The combination of a rod, the ends of which are bent so as to extend at right angles to its intermediate portion and which ends are provided each with a depression near the extremity thereof; of two brackets adapted to be secured to a wall and to support the ends of said rod, each bracket comprising a plate having a support extending along the under side only of the end of said rod and provided with spring fingers at its free end adapted to embrace said rod; the end of said support adjoining said plate being tubular in form and having an inward extension adapted to engage the depression in said rod and extending throughout a part of the length of said support, and the extremity of said rod extending into said tubular portion when the parts are assembled.

[Claims 6 to 10 not printed in the Gazette.]

1,196,705. PROCESS OF AGGLOMERATING FINELY-DIVIDED GRANULAR OR FRIABLE MATERIALS. ADOLPHE VICTOR MARIE KROLL, Luxemburg. Filed Dec. 3, 1912. Serial No. 734,719. (Cl. 75—73.)



1. The herein described process of agglomerating finely divided granular or friable materials other than sulfids, especially fine ore or flue dust, which consists in heating at least a portion of the mass to be agglomerated, introducing a current of air and at the same time a current of combustible matters into the pores of the mass, producing an internal combustion between the said combustible matters and the air within the pores of the mass, thereby increasing the temperature in the interior of the mass, and attaining the agglomeration of the said mass, substantially as set forth.

2. The herein described process of agglomerating finely divided granular or friable materials other than sulfids, especially fine ore or flue dust, which consists in heating at least a portion of the moistened mass to be agglomerated, introducing a current of air and at the same time a current of combustible matters into the pores of the mass, producing an internal combustion between the said combusti-

ble matters and the air within the pores of the mass, thereby increasing the temperature in the interior of the mass, and attaining the agglomeration of the said mass, substantially as set forth.

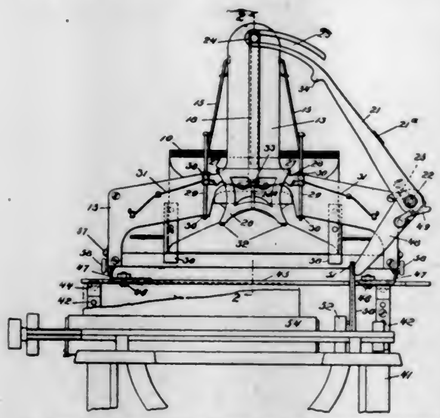
3. The herein described process of agglomerating finely divided granular or friable materials other than sulfids, especially ore or flue dust, which consists in heating at least a portion of the mass to be agglomerated, introducing a current of air and at the same time a current of combustible matters, both currents previously mixed together, into the pores of the mass, producing an internal combustion between the said combustible matters and the air within the pores of the mass, thereby increasing the temperature in the interior of the mass, and attaining the agglomeration of the said mass, substantially as set forth.

4. The herein described process of agglomerating finely divided granular or friable materials other than sulfids, especially fine ore or flue dust, which consists in heating at least a portion of the mass to be agglomerated, introducing a current of air and at the same time a current of combustible matters in a lighted and burning (but not already combusted) state, into the pores of the mass, producing an internal combustion between the not consumed part of the said combustible matters and the air within the pores of the mass, thereby increasing the temperature in the interior of the mass, and attaining the agglomeration of the said mass, substantially as set forth.

5. The herein described process of agglomerating finely divided granular or friable materials other than sulfids, especially fine ore or flue dust, which consists in heating at least a portion of the mass be agglomerated, introducing a current of air and at the same time a current of combustible matters in a lighted and burning (but not already combusted) state, both currents thoroughly mixed together, into the pores of the mass, producing an internal combustion between the not consumed part of the said combustible matters and the air within the pores of the mass, thereby increasing the temperature in the interior of the mass, and attaining the agglomeration of the said mass, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,196,706. APPARATUS FOR FEEDING ENVELOPS. BERT LANGLEY, Grantwood, N. J. Filed Jan. 25, 1913. Serial No. 744,114. (Cl. 197—130.)



1. A sheet feeding mechanism having a support for the sheets, a roller to which the sheets are fed, a primary feeding device adapted to advance a sheet part of the required feeding distance, a secondary feeding device adapted to complete the feeding movement toward the roller, in combination with a lever for actuating successively the primary and the secondary feeding devices.

2. A sheet feeding mechanism having a support for the sheets, a primary feeding device adapted to advance a sheet edgewise part of the feeding distance, a secondary feeding device adapted to complete the edgewise feeding movement, and an actuator directly engaging each of said devices in the feeding operation.

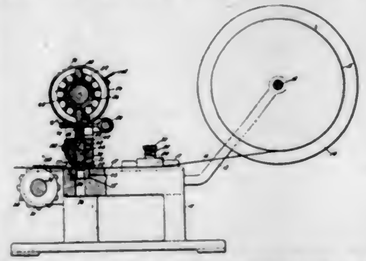
3. A sheet feeding mechanism having a support for the sheets, a plurality of feeding devices adapted to act upon each sheet to feed the sheets one by one, and an actuator adapted to engage and to operate alternately the respective feeding devices.

4. A sheet feeding mechanism having a support for the sheets, a plurality of feeding devices adapted to operate successively upon each sheet to feed the sheets one by one and a lever adapted by a single movement to directly actuate the feeding devices in a coöperative feeding movement.

5. A mechanism for feeding envelops comprising a support for the envelops, a feeding device adapted to engage the envelop beneath the flap, a second feeding device adapted to engage the rear edge of the envelop, and actuating means for the feeding devices.

[Claims 6 to 16 not printed in the Gazette.]

1,196,707. MACHINE FOR PERFORATING PATTERN-SHEETS. CHARLES LEA, Dorchester, Mass., assignor to American Warp Drawing Machine Company, a Corporation of Maine. Filed Apr. 22, 1912. Serial No. 692,470. (Cl. 164—111.)



1. In a machine for perforating pattern sheets, the combination of means for feeding the sheet longitudinally; means comprising a series of members for perforating a longitudinal succession of transverse series of holes of a certain predetermined arrangement in the sheet; and means permitting the perforating means to be arranged and re-arranged at the will of the operator, whereby the number and arrangement of the holes of each transverse series may be selected at will.

2. In a machine for perforating pattern sheets, the combination of means for feeding the sheet longitudinally; means comprising a series of perforating members and actuators for perforating a longitudinal succession of transverse series of holes of a certain predetermined arrangement in the sheet; and means permitting said actuators to be arranged and rearranged in various transverse arrangements manually at the will of the operator, whereby the number and arrangement of the holes of each transverse series may be selected at will.

3. In a machine for perforating pattern sheets, the combination of means for perforating the sheet, means for feeding the sheet, and means for relatively positioning the perforating means and feeding means in a plurality of positions transversely of the sheet.

4. In a machine for perforating pattern sheets, the combination of means for perforating the sheet, means for feeding the sheet, means for guiding the sheet, and means for relatively positioning the perforating means, guiding means, and feeding means in a plurality of positions transversely of the sheet.

5. In a machine for perforating pattern sheets, the combination of means for perforating the sheet, means for feeding the sheet, and means for relatively positioning the perforating means and feeding means in a plurality of predetermined positions transversely of the sheet.

[Claims 6 to 34 not printed in the Gazette.]

1,196,708. PROCESS FOR THE MANUFACTURE OF PAPER-PULP AND THE LIKE. HARRY MCCORMACK, Chicago, Ill., and EARLE W. MCMULLEN, Kenosha, Wis., assignors of one-fourth to Frank Orth and one-fourth to James Harbaugh, Indiana Harbor, Ind. Filed Nov. 25, 1914. Serial No. 873,945. (Cl. 92—9.)

1. The process for the treatment of cellulose material for the production of paper pulp, which consists in drying sun flower stalks or the like, shredding the dried material, cooking the shredded material in a solution consisting substantially of sodium hydroxid, sodium carbonate, sodium chlorid, and sodium oxy-chlorid, the sodium hydroxid, sodium carbonate, sodium chlorid, and sodium oxy-chlorid being substantially in respective percentages of 5, 10, 8 and 25 by weight of the sun flower stalk, and which consists in carrying forward the cooking action in such solution under a pressure of substantially 80 pounds per square inch, for a period of substantially 10 hours, and which consists in subsequently beating the cooked material in a pebble mill or the like, substantially as described.

2. The process for the treatment of cellulose material to produce paper pulp, which consists in drying the raw cellulose material, shredding the same, cooking the dried and shredded material, and subsequently beating the cooked material in a pebble mill or the like, the cooking solution comprising essentially sodium hydroxid, sodium carbonate, sodium chlorid, and sodium oxy-chlorid, substantially in the respective percentages of 5, 10, 8 and 25 as compared to the weight of the cellulose material undergoing treatment, substantially as described.

3. The process for the treatment of cellulose material to produce paper pulp which consists essentially in drying and shredding the raw material, and cooking the dried and shredded material in a solution consisting essentially of sodium hydroxid, sodium carbonate, sodium chlorid, and sodium oxy-chlorid or the equivalent at a pressure of 90 pounds per square inch or less for the desired period of time, substantially as described.

4. The process for the treatment of cellulose material for the production of paper pulp which consists in drying and shredding the material, and cooking the same in a solution consisting essentially of sodium hydroxid, sodium carbonate, sodium chlorid, and sodium oxy-chlorid for a suitable length of time at a suitable pressure, and subsequently beating the cooked material in a pebble mill or the like containing water having potassium permanganate in solution, substantially as described.

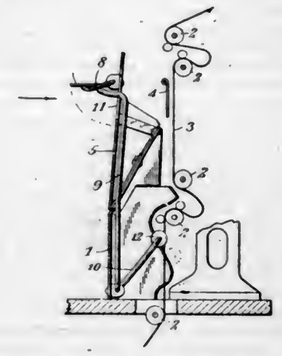
5. The process for the treatment of cellulose material to produce paper pulp which consists in drying and shredding the raw cellulose material, and cooking the dried and shredded material in a solution of alkaline salts and neutral salts, the cooking process being carried forward at a pressure of substantially 80 pounds per square inch, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,196,709. MOVING-PICTURE MACHINE. ABRAHAM J. R. MACDOUGALL, Brooklyn, N. Y. Filed Aug. 9, 1913. Serial No. 783,880. (Cl. 88—17.)

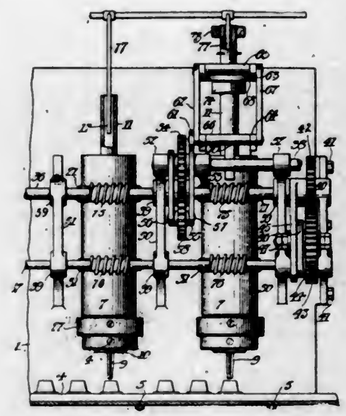
1. In a moving picture machine, in combination, a swinging fire shield suspended normally from a horizontal pivotal axis in operative position interposed between the source of light and the film to intercept the rays of light, and a movable member adapted to contact with a stretch of the film when under normal tension to be maintained thereby in operative position and adapted to move automatically into inoperative position when released by a slack occurring in the film, a portion of said member being disposed in the path of movement of a part of the shield below its pivotal axis and adapted upon movement of the said member into operative position to force the shield into tilted inoperative position resting upon said member.

2. In a moving picture machine, in combination, a swinging fire shield suspended normally from a horizontal pivotal axis in operative position interposed between the source of light and the film to intercept the rays of light, said shield having an arm off-set angularly with respect to the shield proper, and a movable member adapted to contact with a stretch of the film when under normal tension to be maintained thereby in operative position wherein it contacts with the shield arm at a point situated below its pivotal axis to support the shield in tilted inoperative position.



3. In a moving picture machine, in combination, a swinging fire shield suspended normally from a horizontal pivotal axis in operative position interposed between the source of light and the film to intercept the rays of light, and a pivoted member having two arms, one of said arms being adapted to contact with a stretch of the film when under normal tension to maintain the said member in operative position wherein its other arm is disposed in the path of movement of a part of the shield and contacts with the same at a point below its pivotal axis and supports it in tilted inoperative position.

1,196,710. MACHINE AND TOOL FOR MANUFACTURING NUTS. ALBERTUS B. MATTINGLY, New York, N. Y., assignor, by mesne assignments, to National Positive Lock Nut Co., Inc., a Corporation of New York. Original application filed Dec. 31, 1914, Serial No. 879,864. Divided and this application filed Apr. 16, 1915. Serial No. 21,691. (Cl. 10—89.)



1. In a threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation, a spindle rotatably carried by the casing but caused to advance therewith, a head on the lower end of the casing, a head on the spindle hav-

ing a thrust bearing in said head, an annular die carried by the spindle head, a tap carried by the spindle and extending through the die to engage a blank simultaneously therewith, a worm wheel secured to the spindle, a worm engaging the worm wheel to rotate the spindle, said casing being threaded externally, a worm wheel in the frame having a threaded bore engaging the threaded casing to advance the casing, a worm engaging the last mentioned worm wheel, and interchangeable driving means for rotating both said worms at different relative speeds.

2. In a double threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation therein, a spindle rotatably carried by the casing but caused to advance therewith, a tap carried by the lower end of the spindle, an annular die also carried by the spindle and surrounding the tap to operate on the blank simultaneously therewith, driving means for rotating the spindle, means connected with the driving means for advancing the casing, and means for automatically reversing the direction of rotation and the direction of advance of the spindle and casing at a predetermined position in the advance of the spindle.

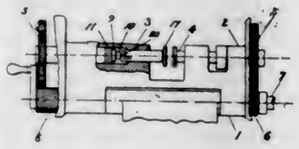
3. In a threading machine, a frame having a journal portion, a threading tool spindle rotatable in the frame and adapted to carry a die and a tap projecting through the die for simultaneous operation on a blank, a driving gear, means connected with the gear to cause simultaneous rotation and advance of the threading tool both of which are reversed on reversal of said gear, an actuating gear mounted on the frame, a supporting member pivoted to swing on the axis of the actuating gear, gears carried by said support and in constant engagement with the actuating gear which gears upon swinging of the support are alternately brought to engage said driving gear whereby the said tool is driven in two different directions, two stops on the spindle for swinging said support at predetermined positions in the reciprocation of said tool, an arm pivoted to said support at one end and having a stationary hinge at its other end, and a spring connected between said arm and the frame to hold the support in said two positions of engagement of said gears.

4. In a threading machine, the combination of a frame having a journal portion, a casing slidable in the frame and locked against rotation, a spindle rotatably carried by the casing but caused to advance therewith, a head on the lower end of the casing, a head on the spindle having a thrust bearing in said head, an annular die carried by the spindle head, a tap carried by the spindle and extending through the die to engage a blank simultaneously therewith, a worm wheel secured to the spindle, a worm engaging the worm wheel to rotate the spindle, said casing being threaded externally, a worm wheel in the frame having a threaded bore engaging the threaded casing to advance the casing, a worm engaging the last mentioned worm wheel, interchangeable driving means for rotating both said worms at different relative speeds, and means for reversing said driving means upon advance of the spindle to a predetermined point.

5. In a threading machine, a frame having a journal portion, a threading tool spindle rotatable in the frame and adapted to carry a die and a tap projecting through the die for simultaneous operation on a blank, a driving gear, means connected with the gear to cause simultaneous rotation and advance of the threading tool both of which are reversed on reversal of said gear, an actuating gear mounted on the frame, a supporting member pivoted to swing on the axis of the actuating gear, gears carried by said support and in constant engagement with the actuating gear, which gears upon swinging of the support are alternately brought to engage said driving gear whereby the said tool is driven in two different directions, means for swinging said support at predetermined positions in the reciprocation of the said tool, an arm pivoted to said support at one end and having a stationary hinge at its other end, and a spring connected between said arm and the frame to hold the support in said two positions of engagement of said gears.

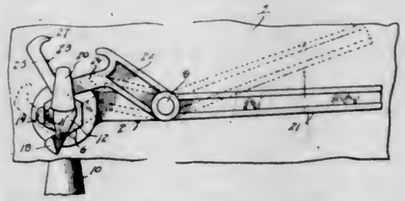
[Claims 6 to 18 not printed in the Gazette.]

1,196,711. EDGING-MACHINE. ALBERT E. MAYNARD, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed July 14, 1914. Serial No. 851,019. (Cl. 51—3.)



In a lens edging machine, the combination with a lens carriage, of a pair of spindle sections rotatably mounted in the carriage in axial alinement one with the other, a lens engaging pad carried by one of said spindle sections for retaining a lens in position, a sleeve rotatably mounted on the other of said spindle sections, a second lens clamp pad carried by the sleeve at its inner end, the said sleeve having diverging slots formed therein, the said slots being of unequal length, and a pin carried by the spindle and extending into the slotted sleeve to secure the sleeve on the spindle, the sleeve being mounted for rotative movement whereby the pin may be positioned in either of the slots as desired to vary the combined length of the sleeve and spindle while the pin serves to lock the sleeve to rotate with the spindle at any adjusted position thereof, substantially as and for the purpose described.

1,196,712. MECHANISM FOR OPERATING FLUSHING-VALVES. ALFRED F. MORENCY, Sturgis, Mich., assignor to Morency Van Buren Manufacturing Company, Sturgis, Mich. Filed Feb. 6, 1915. Serial No. 6,451. (Cl. 4—5.)



1. Mechanism for operating flushing valves comprising a rocking lever, and a flush valve operating lever adapted for detachable interlocking engagement with said rocking lever, means for attaching said levers to the tank wall, and means on said rocking lever for preventing said levers from becoming disconnected during the normal operation of the levers, said means permitting of disengagement of the levers when said levers are thrown beyond the limits of ordinary operating movement.

2. Mechanism for operating flushing valves comprising a plate having a forwardly bent end and an apertured end, means for securing said plate to the tank wall comprising a threaded bushing passing through said aperture and a nut on said bushing, a spindle working in said bushing, a rocking lever secured to the end of said spindle, a flushing valve operating lever mounted on the bent end of said plate, means for preventing said levers from becoming disconnected during the normal operation of the levers, said means permitting of disengagement of the levers when said levers are thrown beyond the limits of ordinary operating movement.

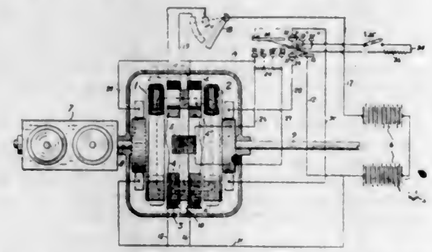
3. Mechanism for operating flushing valves comprising a rocking lever and a flush valve operating lever, means for operatively connecting said levers to the tank wall, one of said levers being formed with a pair of oppositely inclined faces forming a reëntrant angle, the other of said levers having an arm adapted for engagement with said faces and a flared extension on said arm adapted to maintain said levers against relative lateral movement.

4. Mechanism for operating flushing valves comprising a rocking lever and a flush valve operating lever, engaging said rocking lever, means for pivotally connecting said levers to the tank wall, means preventing the disengagement of said levers while in their normal positions, said flush valve operating lever being free to be removed from its pivot when said levers are not in operative position.

5. Mechanism for operating flushing valves, comprising a threaded bushing member for attachment to the tank wall, an apertured plate bolted on said bushing on the inside of the tank wall, said plate having a forwardly bent end provided with a fulcrum pin, a spindle carrying a handle mounted in said bushing, a flush-valve operating lever detachably mounted on said pin having a substantially hook-shaped end, a rocking lever mounted on said spindle, adapted to interlock with said hook-shaped end, said rocking lever having means for preventing the detachment of said flush valve operating lever from said pin during the normal operation of the levers, said means permitting of disengagement of the levers when said levers are thrown beyond the limits of ordinary operating movement.

[Claims 6 to 8 not printed in the Gazette.]

1,196,713. POWER TRANSMISSION AND CONTROL. LEWIS W. NELSON, Philadelphia, Pa., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Dec. 6, 1909. Serial No. 531,636. (Cl. 171—315.)



1. In combination, an internal combustion engine, a shunt field dynamo electric machine mechanically connected to said engine to drive the same or be driven thereby, a driven shaft, a second shunt field dynamo electric machine mechanically connected to said shaft to drive the same, a source of electrical energy, and a switch having a plurality of operating positions, said switch in one position causing energization of the shunt field of said second machine from said source and in a second operative position maintaining said first connections and completing a circuit from said source to energize the field and armature of said first machine, whereby said first machine may operate as a motor to start the engine and thereafter as a generator driven by said engine to supply current to the field of said second machine.

2. In combination, an internal combustion engine, a shunt field dynamo electric machine mechanically connected to said engine to drive the same or be driven thereby, a driven shaft, a second shunt field dynamo electric machine mechanically connected to said shaft to drive the same, a source of electrical energy, a switch having a plurality of operating positions, said switch in one position causing energization of the shunt field of said second machine from said source and in a second operative position maintaining said first connections and completing a circuit from said source to energize the field and armature of said first machine, whereby said first machine may operate as a motor to start the engine and thereafter as a generator driven by said engine to supply current to the field of said second machine, and a separate controller for controlling the armature current of said second machine.

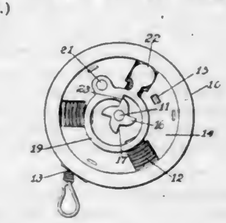
3. In combination, a dynamo electric machine having an armature and a field winding, a storage battery, a switch for connecting said field winding to be energized from said battery, a controller for connecting said armature to be energized from said battery whereby said machine may be operated as a motor, a second dynamo electric machine, means for driving said second machine as a generator, and connections whereby said switch may maintain said first mentioned connections and simultaneously complete the field and armature connections of said second machine whereby said second machine may operate said first machine as a motor and also charge said storage battery.

4. In combination, an internal combustion engine, a dynamo electric machine mechanically connected thereto, a second dynamo electric machine, a shaft to be driven, mechanically connected to said second dynamo electric machine, a storage battery, a switch for energizing the field of said second machine from said battery, and a controller for energizing the armature of said second machine from said battery, said controller controlling means for simultaneously weakening the field excitation and strengthening the armature current of said machine, said switch in a second operative position serving to maintain connections for said second machine and to complete the field and armature circuits for said first dynamo electric machine.

5. In combination, an internal combustion engine, a shunt wound dynamo electric machine mechanically connected to the engine shaft, a driven shaft, a second dynamo electric machine provided with shunt and series windings mechanically connected to said shaft to drive the same, a storage battery, a switch having a plurality of operative positions, said switch in its first operative position serving to energize the shunt field of said second dynamo electric machine from the storage battery, a controller having a plurality of operative positions, said controller in its first operative position serving to connect the armature of said second dynamo electric machine to the storage battery, through a resistance, and to connect the series field thereof in shunt to said resistance, said controller serving in its successive positions to cut out sections of said resistance to simultaneously weaken said series field and increase the current in said armature, and said switch serving in its second operative position to connect said first dynamo electric machine in parallel with said second machine and the storage battery whereby said first machine may start the engine and thereafter operate to charge the battery and to supply current to operate said second machine.

[Claims 6 to 8 not printed in the Gazette.]

1,196,714. EYEGLASS-REEL. HARRY NEWBOLD, London, England, assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Mar. 17, 1913. Serial No. 754,719. (Cl. 74—16.)



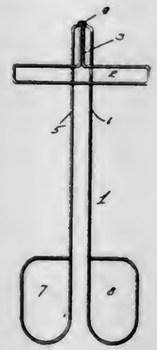
1. A pawl having an attaching aperture in one end and weight on the other end and a tooth intermediate the length on the inner periphery thereof and a lateral extension opposite the tooth.

2. A pawl having an attaching aperture in one end and curved central portion and weight on the other end, and a tooth intermediate the length on the inner periphery thereof and a lateral extension opposite the tooth.

3. A pawl having a tooth on the inner periphery thereof and a pair of diverging balance weight members.

4. As an article of manufacture, a ratchet pawl having a pivot opening in one end, a weight on the other end and a balancing weight placed adjacent to the pivot thereof and a tooth on the inner periphery.

1,196,715. LEAF-HOLDER FOR BOOKS. HENRY NOLL, Oakland, Cal. Filed Aug. 25, 1914. Serial No. 858,530. (Cl. 11—12.)



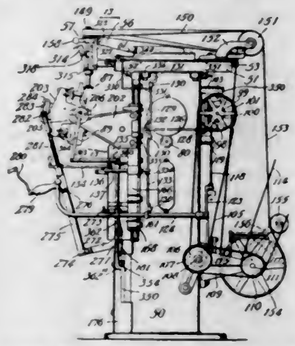
1. A leaf holder for books comprising a rectangular wire loop adapted to be against the open pages of a book at the center thereof, the ends of the wire forming the loop being brought together near the center of one of the long sides of the loop and bent at right angles to the plane of the loop, clip means holding said last mentioned portions together, the ends of the wire being further bent into a plane parallel to the plane of the loop and separated from but normally parallel to each other, said last mentioned portions being adapted to spring into V-shaped relation and being extended in the same direction as the loop and a relatively large distance beyond the loop whereby the ends of the last mentioned portion may be reached by the reader's hand from the lower edge of the book when the loop is slipped over the upper edge of the book, and loops formed on the ends of the last mentioned portion adapted to be engaged by the fingers of the user.

2. A leaf holder for books comprising a rectangular wire loop adapted to lie against the open pages of a book at the center thereof, the ends of the wire forming the loop being brought together near the center of one of the long sides of the loop and bent at right angles to the plane of the loop, clip means holding said last mentioned portions together, the ends of the wire being further bent into a plane parallel to the plane of the loop and separated from but normally parallel to each other, said last mentioned portions being adapted to spring into V-shaped relation and being extended in the same direction as the loop and a relatively large distance beyond the loop whereby the ends of the last mentioned portion may be reached by the reader's hand from the lower edge of the book when the loop is slipped over the upper edge of the book, and loops formed on the ends of the last mentioned portion lying in a plane parallel to said rectangular loop and adapted to be engaged by the fingers of the user.

1,196,716. WOODWORKING-MACHINE. ARTHUR B. NORRIS, Rochester, N. Y., assignor to Charles E. Reed & Co., Chicago, Ill., a Corporation of Illinois. Filed July 17, 1914. Serial No. 852,595. (Cl. 144—144.)

1. The combination of a support, a carriage reciprocable on said support, a reversible work-holding member on said carriage, and means, controlled by the position on said carriage of said work-holding member, for limiting the movement of said carriage.

2. The combination of a support, a carriage reciprocable on said support, a reversible work-holding member on said carriage, and adjustable means, controlled by the position on said carriage of said work-holding member, for limiting the movement of said carriage.



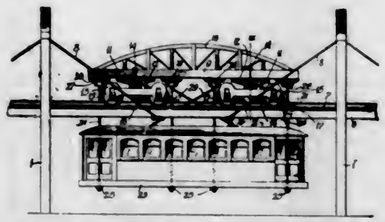
3. The combination of a support, a carriage reciprocable on said support, a reversible work-holding member on said carriage, and means operating, when said work-holding member is in one position, to stop the carriage at a predetermined point, and when said member is in inverted position, to stop the carriage at a different predetermined point.

4. The combination of a support, a carriage reciprocable on said support, a reversible work-holding member on said carriage, and means, automatically controlled by the shifting movement of said member on said carriage, operating when said work-holding member is in one position, to stop the carriage at a predetermined point, and when said member is inverted, to stop the carriage at a different predetermined point.

5. The combination of a support, a carriage reciprocable on said support, a reversible work-holding member on said carriage, stop-devices independently adjustable on said support, and shiftable means movable with said carriage for engaging either of said stop-devices.

[Claims 6 to 30 not printed in the Gazette.]

1,196,717. OVERHEAD RAILWAY. FRANK S. PARKER, Detroit, Mich. Filed Nov. 8, 1915. Serial No. 60,202. (Cl. 104—4.)



1. In an overhead railway system, intersecting tracks devoid of cross over rails, and a motor adapted to travel upon said tracks, said motor comprising a trussed frame, bearing plates at the ends thereof, double trucks at each end of said frame and having a greater wheel base than the gage of said track, a bearing plate on each truck pivotally connected to the bearing plate of said frame and engaging the frame bearing plates to prevent the tilting of said trucks, and a car suspended from said motor frame.

2. In an electric overhead railway system, intersecting tracks devoid of cross over rails, and a motor adapted to travel upon said tracks, said motor comprising a frame, bearing plates at each end thereof, and double trucks at each end of said frame having non-tiltable bearings engaging the bearing plates of said frame and pivotally connected thereto.

3. In an overhead railway system, a track, a third rail, a motor electrically driven from said third rail, double trucks supporting each end of said motor, suspension rods between the rails of said track and having trunnions connecting the upper ends of said rods to said motor frame, a car body below said track held by the lower ends of said rods passing through said car body, and diagonally disposed rods connecting the roof of said car body to trunnions of said suspension rods.

4. In an overhead railway system, intersecting tracks devoid of cross over rails, and a motor adapted to travel upon said tracks, said motor comprising a trussed frame, bearing plates at the ends thereof, double trucks at the ends of said frame on a track and having bearings non-tiltably pivotally connected to the bearing plates of said frame, said double trucks having a wheel base greater than the gage of said track, and a car suspended below said trucks.

1,196,718. COLOR PHOTOGRAPHY. ALEXANDER N. PIERMAN, Newark, N. J. Filed Apr. 8, 1908. Serial No. 425,854. (Cl. 95—2.)

1. A film for use in color photography, comprising a flexible self-held-together color screen and a flexible, transparent or translucent ribbon in which said screen is embedded, the material of the ribbon being disposed substantially symmetrically on both sides of the screen, and having a coating of sensitized material applied thereto, substantially as described.

2. A film for use in color photography, comprising a flexible self-held-together color screen and a ribbon formed from a collodion solution and in which the said screen is embedded and substantially symmetrically disposed on both sides thereof, and having a coating of sensitized material applied thereto, substantially as described.

3. The process of making a film for use in color photography, which consists in forming a self-held-together color screen with the colors arranged in a definite and regular order, in saturating the screen with a suitable solution and disposing the material of the solution substantially symmetrically on both sides of the screen, in drying the screen so treated, and in applying thereto a layer of sensitized material, substantially as set forth.

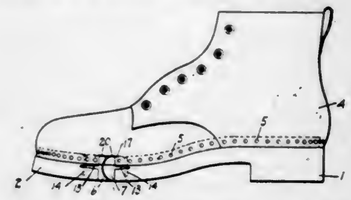
4. The process of making a film for use in color photography, which consists in forming a flexible color screen by weaving differently colored flexible strands with the colors arranged in a definite and regular order, in saturating the screen with a suitable solution and disposing the material of the solution substantially symmetrically on both sides of the screen, in drying the screen so treated, and in applying thereto a layer of sensitized material, substantially as set forth.

5. A film for use in color photography, comprising a self-held-together color screen consisting only of woven strands, a flexible transparent or translucent ribbon in which said screen is embedded, the material of the ribbon being disposed substantially symmetrically on both sides of the screen, and a coating of sensitized material upon said screen and ribbon, substantially as described.

[Claim 6 not printed in the Gazette.]

1,196,719. SHOE. GEORGE H. RICKE, Cincinnati, Ohio, assignor of one-half to Edward Oelker, Cincinnati, Ohio. Filed Feb. 8, 1915. Serial No. 6,745. (Cl. 36—33.)

1. A shoe having a sole comprising a heel and arch section and a toe section, both of wood and a metal section forming a joint between said heel and arch section and said toe section, said metal section comprising a part having a concave face, a part having a convex face fitting said concave face, said parts having alined slots, and a plate having a head on one end, said plate extending through said slots up to the head and having its other end extended into the toe section and secured thereto, and means for securing the part of the metal section having the concave face to one of said wooden sections and the part having the convex face to the other wooden section.



2. In a shoe of the character described, a sole formed of a forward section and a rear section made of wood, and a metal joint between them, said joint being formed of members suitably secured to said wooden sections and provided with co-acting concave and convex faces, a plate extending into one of said sections and through said metal members and means for holding said plate in position, the concave and convex faces and the plate co-acting to form a movable joint during the act of walking.

3. In a shoe of the character described, a sole formed of a forward section and a rear section, and a metal joint between them, said joint being formed of members suitably secured to said sections and provided with co-acting concave and convex faces, a plate extending into one of said sections and through said metal members and means for holding said plate in position, the members at each side of the sole being recessed to receive the upper and means for holding the upper in position at the joint to prevent buckling, the concave and convex faces and the plate co-acting to form a movable joint during the act of walking.

4. In a shoe of the character described, a forward sole section and a rear sole section made of a non-flexible material, a metal section, said forward and rear sole sections being spaced to receive said metal section, said metal section extending entirely across the width of the sole and filling the space between said forward and rear sections, and forming a joint between the forward and rear sole sections, said joint being formed of interlocking parts which co-act so that the sole will yield to the action of the foot in walking and means for holding said metal section in place.

5. A sole comprising a main sole portion and a separate toe portion, both of wood, a coupling member secured to each portion, said members having oppositely curved faces fitting one against the other, and means for loosely joining said members together.

[Claims 6 and 7 not printed in the Gazette.]

1,196,720. DOOR. BYRD C. ROCKWELL, Camden, Ark. Filed May 2, 1914. Serial No. 836,004. (Cl. 20—35.)



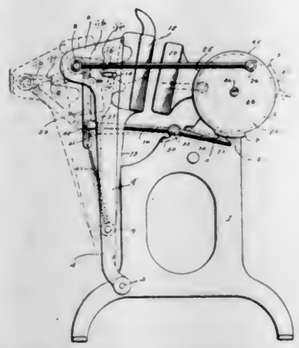
1. A door having a continuous flange extending outwardly from one side thereof and following the top and side margins thereof, said flange being formed of wood or its equivalent and relatively thin so that it may be readily dressed to vary its marginal contour, and means for swingably supporting the door on a wall structure so that the outer margin of the flange will make contact therewith when the door is in closed position.

2. A door having wooden rail and stile members provided with longitudinally extended flanges integral therewith and projecting laterally therefrom, said rails and

stiles being disposed together with the extremities of said flanges in contact so that they form a fitting strip extending from one side of the door adjacent top and side margins thereof, said flanges being relatively thin so that they may be readily dressed to adapt their marginal contour to irregular surfaces.

3. A closure for wall openings comprising a wooden frame having a relatively thin flange projecting a substantial distance from one side thereof and extending continuously thereabout adjacent the margin to form a matching strip, said flange being integral with the members of the frame and being of size and sectional form such as to permit its being readily planed to conform to a varying wall contour.

1,196,721. SAFETY DEVICE. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Nov. 24, 1914. Serial No. 873,778. (Cl. 164—107.)



1. In a safety device for machines provided with a movable multi-part work engaging element, one of said parts being pivotally mounted upon and carried by the other for independent movement relative to each other, and an opposing element, means to cause the movable element to exert a pressure at a pre-determined point in its working stroke upon work projected between said elements, and automatic means to permit said movable element to yield when the movable element in its working movement is subjected to pressure before it reaches in its travel said pre-determined point.

2. In a safety device for machines provided with a skeleton frame having a movable work engaging element pivotally mounted thereon, an opposing element, means to cause the movable element to exert a pressure at a predetermined point in its working stroke upon work projected between said elements, and automatic means to permit said movable element to yield when the movable element in its working movement is subjected to pressure before it reaches in its travel said pre-determined point.

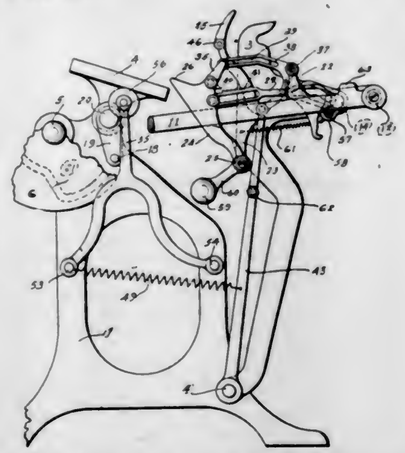
3. In a safety device for machines comprising a skeleton frame, a movable work engaging element pivotally mounted on said frame, an opposing element located in the path of said movable element, means to interlock said skeleton frame and work engaging element, and means to operate the interlocking means to lock and unlock said elements.

4. In a safety device for machines equipped with a work engaging pressure element composed of a plurality of parts, one of said parts being pivotally mounted upon and carried by the other for independent movement relative to each other, and an opposing element which is adapted to resist pressure from the work engaging element, means to permit the pressure element to yield upon being resisted by the opposing element, and means to cause the work engaging element to exert a pressure upon the opposing element at a pre-determined point in its working movement.

5. In a safety device for printing presses, a frame, a skeleton frame pivotally mounted on said frame, a bed pivotally mounted on said skeleton frame, means to interlock said skeleton frame and bed for movement in unison and means to operate said locking means to unlock said bed and skeleton frame to permit the bed to move independently of the skeleton frame when the bed is subjected to pressure before it reaches a pre-determined point in its working movement.

[Claims 6 to 9 not printed in the Gazette.]

1,196,722. SAFETY DEVICE. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Aug. 2, 1915. Serial No. 43,149. (Cl. 164—107.)



1. In a combined safety and throw-off mechanism in combination with a movable work engaging element, driving means, means to connect the driving means to the work engaging element to normally force the work engaging element to travel to the end of its working movement, a combined wedge cam bar slidably mounted on the driving means, a controller, means operable when the controller is subjected to pressure or resistance to actuate the connecting wedge cam bar to prevent the driving means from driving the work engaging element to the end of its working movement.

2. In a combined safety and throw-off mechanism in combination with a movable work engaging element and an opposing element, comprising a driving means, knee joint mechanism to connect the driving means to the work engaging element to force it to travel to the end of its working movement under normal conditions, a controller pivotally mounted between the opposing elements, a sliding wedge cam bar mounted on the driving means, and means to permit automatic actuation of the sliding cam wedge bar to prevent the work engaging element from traveling to the end of its working movement when the controller is subjected to pressure or meets an obstruction.

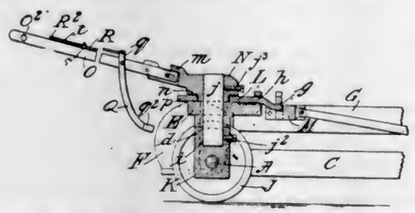
3. In a combined safety and throw-off mechanism for machines having a movable work engaging element, driving means, links to connect the driving means to the work engaging element to form a knee joint therebetween, means to normally retain the knee joint connection on dead center for driving the work engaging element to the end of its working movement, a controller, a sliding wedge cam bar mounted on the driving means, a cam carried by the driving means, a stationary roller arranged in the path of the cam and adapted to contact therewith and actuate the sliding wedge cam bar when the controller is resisted thereby permitting the cam wedge bar to connect with the cam and exert a pressure on the links forcing the knee joint "off center", thereby preventing the driving means from forcing the work engaging element to travel to the end of its working stroke leaving a safety gap between the opposing elements.

4. In combination with a pair of work engaging elements adapted to operate upon work interposed therebetween, one of said elements being movable toward the other, driving means connected to the movable element to drive it in unison therewith and to permit independent movement thereof, a combined sliding wedge cam bar mounted upon the driving means, means to automatically operate the combined wedge cam bar to prevent the driving means from forcing the work engaging element to travel to the end of its working movement.

5. In combination with a pair of work engaging elements adapted to operate upon work interposed therebetween, one of said elements being movable toward the other, driving means connected to the movable element to drive it in unison therewith and to permit independent movement thereof, a combined sliding wedge cam bar mounted upon the driving means, means to automatically operate the combined wedge cam bar to prevent the driving means from forcing the work engaging element to travel to the end of its working movement, a cam pivotally mounted on the driving means, a roller arranged in the path of the cam to contact therewith and to actuate the combined sliding wedge cam bar.

[Claims 6 to 20 not printed in the Gazette.]

1,196,723. ELEVATING-TRUCK. MICHAEL RUCKES, Chicopee, Mass., assignor, by mesne assignments, to Eugene M. Chapman and Charles E. Cowan, Holyoke, Mass. Filed Dec. 14, 1914. Serial No. 877,062. (Cl. 21—118.)



1. In an elevating truck of the character described, lower side bars, link plates pivotally connected to the lower side bars, upper side bars, the forward extremities of which are connected to the link plates, a forward bolster bar having at each end a depending member pivotally connected to the adjacent link plate, an axle head provided with a fixed post extending loosely through and above the middle of the bolster bar, and having connected with the upper portion thereof, above said bolster bar, a forwardly extending draft handle, and means for detachably locking the bolster bar and link plates.

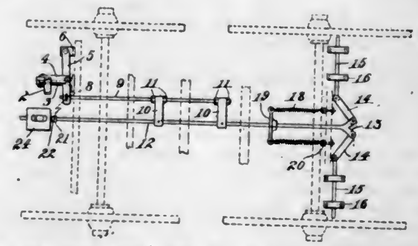
2. In an elevating truck of the character described, lower side bars, link plates pivotally connected to the lower side bars, and upper side bars, the forward extremities of which are connected to the link plates, a forward bolster bar having at each end a depending member pivotally connected to the adjacent link plate, an axle head having an upwardly open socket, a post fixed in said socket and extending loosely through and above the middle of the bolster bar, a head affixed on the upper portion of said post above the bolster bar, and having connected therewith a forwardly extending draft handle, and means for detachably locking the bolster bar and link plates.

3. In an elevating truck of the character described, in combination, lower side bars, link plates pivotally connected to the lower side bars, upper side bars, the forward extremities of which are connected to the link plates, a forward bolster bar having at each end a depending member pivotally connected to the adjacent link plate, means for detachably locking said depending members and link plates, an axle head having a swiveling connection with the bolster bar, and a draft handle having connections with the axle head, a plate mounted for pivotal movement on the bolster bar adapted to operate said locking means, and a device, comprising a member movably mounted on the draft handle adjacent, and adapted to temporarily engage, said plate, and also comprising a member extended to the forward end of the draft handle and operable to control said movable member for its coaction with said plate.

4. In an elevating truck of the character described, in combination, lower side bars, link plates pivotally connected to the lower side bars, upper side bars, the forward extremities of which are connected to the link plates, a member transversely connecting the upper side bars, somewhat to the rear of their forward ends, a forward bolster bar having at each end a depending member pivotally connected to the adjacent link plate, means for detachably locking said depending members and link plates, an axle head having a post extending upwardly through, and swiveling relatively to the bolster bar, a head secured on the upper end of the post, and having its lower portion reduced and shouldered, a draft handle connected to said last named head above the bolster bar, a centrally apertured plate on the bolster bar, embracing the said reduced portion of the handle-provided head and overhung by said shouldered portion of the latter, said plate being adapted to operate said locking means and having an arm adapted for an interlocking engagement with the member which transversely connects the upper side bars, a lever pivotally hung on the draft handle and adapted to be swung to engagement with said plate, and means connected with said lever and extending to, and operable at, the forward end of the draft handle for swinging said lever for its coaction with said plate.

5. In an elevating truck of the character described, in combination, lower side bars, link plates pivotally connected to the lower side bars, upper side bars, the forward extremities of which are connected to the link plates, a forward bolster bar having at each end a depending member pivotally connected to the adjacent link plate, means for detachably locking said depending members and link plates, an axle head having a swiveling connection with the bolster bar, and a draft handle having connection with the axle head, and provided at its forward end with a cross handle, a plate mounted for pivotal movement on the bolster bar adapted to operate said locking means, a lever pivotally hung on the draft handle and adapted to be swung to engagement with said plate, a rod slidably carried by the draft handle having its rear end connected to said lever and having its forward end provided with a cross member adjacent the cross member of the draft handle and a spring for rearwardly retracting said rod.

1,196,724. BRAKE FOR VEHICLES. MOSES SHERMAN and BERT RITKIN, New York, N. Y., assignors of one-sixth to Selman Liss, New York, N. Y., and one-sixth to Leopold Tropp and one-sixth to Morris M. Turitz, Brooklyn, N. Y. Filed Nov. 14, 1913. Serial No. 801,013. (Cl. 21—8.)

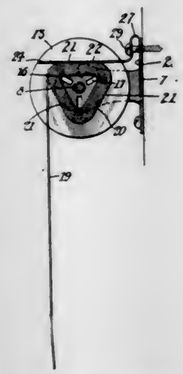


1. The combination with a vehicle, of a brake mechanism comprising a pair of plungers mounted to slide endwise and engage two of the wheels to lock against movement, a lock rod mounted to reciprocate, a pair of links connecting said plungers respectively with said rod and arranged to act as a toggle joint device, springs connected

with the lock rod to retract it and the plungers when advanced, an actuating lever on the vehicle arranged to shift the lock rod to advance the plungers to engage the wheels, and a key controlled lock device arranged to automatically engage the lock rod when shifted to advance the plungers to locking position with the wheels, whereby the lock rod and plungers are locked in such position, until the lock device is released by the control key.

2. The combination with a vehicle, of a pair of plungers arranged to engage two of the wheels respectively when advanced, a lock rod arranged to reciprocate, means connecting the lock rod with the plungers to reciprocate them by the lock rod, an actuating lever on the vehicle arranged to advance the lock rod and plungers to wheel engaging position, a spring connected with said parts to retract the plungers and lock rod, a key controlled lock device, and a head carried by the lock rod arranged to be engaged by the lock device on advance of the lock rod and plungers, to automatically lock the rod and plungers to engage the wheels, and to hold the parts in said position until released by the key.

1,196,725. WINDOW-SHADE ROLLER. LEOPOLD TROPP, Brooklyn, and BERT RIVKIN, New York, N. Y., assignors to Ideal Springless Shade Roller Co., Inc., a Corporation of New York. Filed Feb. 16, 1915. Serial No. 8,552. (Cl. 156—34.)

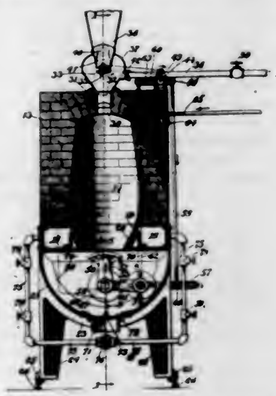


1. In a shade device, the combination with the roller of a cord sheave fast to the roller, a cord wound on the sheave, the sheave having the bottom of its groove arranged to cause the cord to wind thereon to form a series of flat faces, and a spring arm having a flat end portion arranged to engage said flat cord faces in succession as the roller is turned, to yieldably retain the roller in different positions.

2. In a shade device, the combination with the roller, of a cord sheave fast to the roller, a cord wound on the sheave, the sheave having at the bottom of its groove a series of widely spaced lugs arranged to cause the cord to wind thereon to form a series of flat faces, and a spring arm having a flat end portion arranged to engage said flat faces of the wound cord in succession as the roller is turned, to yieldingly retain the roller in different positions.

3. In a shade device, the combination with the roller, of a cord sheave fast to the roller, the sheave comprising a flange on the roller forming one side thereof, and an apertured disk having a series of widely spaced lugs bent up transverse to the disk, a journaled bolt passing through the disk center and into the roller to secure the disk with its lugs engaging the flange disk to space the disks apart, a cord wound upon said lugs to form a series of flat faces between said disk, and a spring arm having a flat end portion arranged to engage the flat cord faces in succession as the roller is turned, to yieldably retain the roller in different positions.

1,196,726. COAL-BURNING HEATING-FURNACE. EDWARD C. WALKER and ASHELEIGH S. MOSES, St. Louis, Mo., assignors to George M. Illges, St. Louis, Mo. Filed June 11, 1913. Serial No. 773,119. (Cl. 126—155.)



1. In a coal burning metallurgical heating furnace, a vertical fuel receiving shaft fed from the top, and a ram operatively arranged to normally support the bed of fuel and operable for stoking the fuel in said shaft vertically from beneath the fuel bed.

2. In a coal burning metallurgical heating furnace, a vertical fuel receiving shaft, and a stoking ram operatively arranged at the bottom of said shaft for normally supporting the bed of fuel, said ram being movable vertically beneath the fuel bed to stoke the fuel in said shaft.

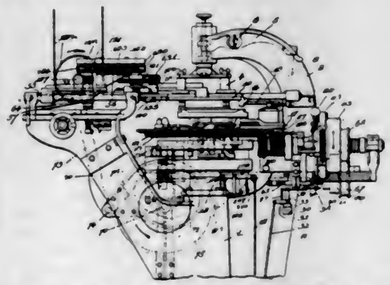
3. In a coal burning metallurgical heating furnace, a vertical fuel receiving shaft, and a ram operatively arranged at the bottom of said shaft for normally supporting the bed of fuel, said ram being movable vertically beneath the fuel bed to stoke and horizontally to purge.

4. In a coal burning metallurgical heating furnace, a vertical fuel receiving shaft contracted at the bottom, and a ram operatively arranged at the bottom of said shaft for supporting the bed of fuel, said ram being operable for stoking the fuel vertically from beneath.

5. In a coal burning metallurgical heating furnace, a vertical fuel receiving shaft, a ram extending across the bottom of said shaft and operatively arranged for normally supporting the bed of fuel, and means for moving said ram vertically to stoke the fuel from beneath.

[Claims 6 to 18 not printed in the Gazette.]

1,196,727. MACHINE FOR OPERATING UPON SOLES. ERASTUS E. WINKLEY, Lynn, Mass. Filed Nov. 20, 1914. Serial No. 873,129. (Cl. 12—17.)



1. A machine for operating upon shoe soles, having in combination, sole rounding mechanism, shank skiving mechanism, and connected mechanism acting in timed relation for operating the sole rounding and shank skiving mechanisms automatically to first round the sole and to next skive out the marginal portions of the shank of the sole.

2. A machine for operating on soles, having in combination a pattern, a trimming knife coöperating with the pattern to round the sole, mechanism for causing the trimming knife to traverse about the pattern, mechanism for stopping the trimming knife at the completion of the traversing movement, shank skiving mechanism, and means for operating the skiving mechanism after the trimming knife has completed its movement.

3. A machine for operating upon soles, having in combination, a pattern, a trimming knife coöperating with the pattern, mechanism for causing the trimming knife to traverse about the pattern and stop opposite the toe, shank skiving mechanism, and means for actuating the skiving mechanism when the trimming knife is in an inoperative position at the toe.

4. A machine for operating upon soles, having in combination, a trimming knife, mechanism for actuating the trimming knife, shank skiving mechanism, a cam for operating the skiving mechanism, and control mechanism for starting the cam and skiving mechanism when the trimming knife is completing the rounding operation.

5. A machine for operating upon soles, having in combination, sole rounding mechanism, shank skiving mechanism, a common actuating means for the sole rounding and shank skiving mechanism, and means for successively connecting the sole rounding and shank skiving mechanisms to the actuating mechanism.

[Claims 6 to 15 not printed in the Gazette.]

1,196,728. ELECTRICAL TIMING MECHANISM. FRANK W. ADSIT, Minneapolis, Minn. Filed Oct. 22, 1915. Serial No. 57,310. (Cl. 58—41.)

1. In electrical timing mechanism the combination of a coil, an armature associated with said coil, a dog mounted on said armature, an escapement movement having a ratchet wheel actuated by said dog, a roller mounted on said armature, a double cam shaped lever coacting with said roller, and means controlled by said double cam shaped lever for closing an electrical contact.

2. In electrical timing mechanism the combination of a coil, an armature associated with said coil, a dog associated with said armature, a ratchet wheel associated with said dog, means connected with said ratchet wheel for retarding its motion, a frame for mounting said armature, coil and ratchet wheel, a lever pivotally mounted on said frame, a secondary lever pivotally mounted on said first lever and having two camming surfaces, said camming surfaces meeting at a common point; a roller mounted on said armature and coacting with the two camming surfaces of said secondary lever.

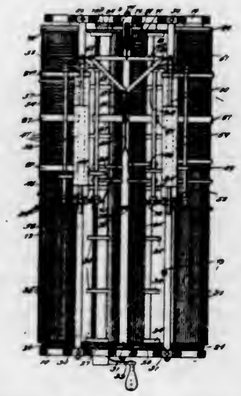
3. In electrical timing mechanism the combination of a frame, a coil mounted on said frame, an armature mounted on said frame and adapted to be moved in one direction by said coil when actuated, means for making the return motion of said armature sluggish, an electrical contact adapted to be included in the circuit with said coil and a source of electrical current, an anchor shaped lever, a roller mounted on said armature and coacting with said anchor shaped lever and an electrical contact controlled by the motion of said anchor shaped lever.

4. In electrical timing mechanism the combination of a frame, a coil mounted thereon, an armature mounted on said frame coacting with said coil, means associated with said frame and said armature for making the motion of said armature sluggish in one direction, a support lever pivoted on said frame, an anchor shaped lever pivoted on said support lever and having an arm extending therefrom, an electrical contact controlled in one direction by said arm extending from said anchor shaped lever, a roller mounted on said armature and coacting with said anchor shaped lever.

5. In electrical timing mechanism the combination of a frame, a coil mounted thereon, an armature mounted on said frame coacting with said coil, means for making the return movement of said armature sluggish, an electrical contact adapted to be included in a circuit with said coil and a source of electrical energy, a support lever pivoted on said frame, an anchor shaped lever having a right and left hand camming surface, and an arm extending from said anchor shaped lever adapted to close said contact when said anchor shaped lever is moved in one direction, and to allow the opening of said contact when said anchor shaped lever is moved in the other direction, a roller mounted on said armature and adapted to ride on both right and left hand camming surfaces of said anchor shaped lever, said contact being closed while the motion of said anchor shaped lever is on one side of said roller, and being free to open when said anchor shaped lever is on the other side of said roller, and means attached to said arm for positively opening said contact when said armature is at the forward end of its stroke under the influence of said coil.

[Claims 6 and 7 not printed in the Gazette.]

1,196,729. PRINTING-MACHINE. HENRY E. BARROLL, Winnetka, Ill. Filed Oct. 21, 1914. Serial No. 867,769. (Cl. 101—126.)



1. A machine of the character described, embodying a rotatable support, a plurality of printing element carriers supported thereby for free shifting movement with respect thereto and in any position of rotation of the carrier with respect to the support, a series of printing elements supported for movement with each of the carriers and also for movement with respect thereto, and means for shifting the said elements with relation to the respective carriers and into printing position when the said carriers are shifted with respect to the support.

2. A machine of the character described, embodying a rotatable support, a plurality of printing element carriers

supported thereby for free shifting movement with respect thereto and in any position of rotation of the carrier with respect to the support, a series of printing elements supported for movement with each of the carriers and also for movement with respect thereto, and means successively shifting the said element with relation to the carriers and into and out of printing position as the carrier is shifted with respect to the support and the elements reach a predetermined point in the movement of the carrier.

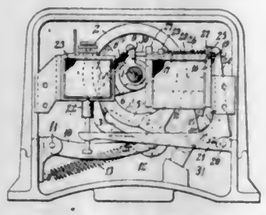
3. A machine of the character described, embodying a rotatable support, a plurality of printing element carriers supported for movement therewith and freely shiftable with relation to the support in any position of rotation of the carrier with respect to the support, a series of printing elements supported for movement with each carrier and with respect thereto, and means arranged adjacent the printing plane and with which the elements successively coöperate to be moved into and out of printing position with respect to the carrier as the latter is shifted with relation to the support.

4. A machine of the character described, embodying a rotatable drum like support provided with a series of guide ways, a series of printing elements movable in each guide way, means for freely shifting the elements longitudinally of the guide way in any position of rotation of the carrier with respect to the support, and means for shifting the elements laterally in the guide way and into printing position when the elements reach a predetermined point in their movement longitudinally of the guide way.

5. A machine of the character described, embodying a rotatable drum like support provided with a series of guide ways, a series of printing elements movable longitudinally of each of the guide ways, and means for moving the elements backwardly and forwardly in directions lengthwise of the guide ways, a portion of the guide ways adjacent the printing plane being shaped to move the elements in directions radially of the support and into and out of printing position.

[Claims 6 to 21 not printed in the Gazette.]

1,196,730. CONTROLLER FOR ELECTRIC MOTORS. WILLIAM BRABINER BENNITT, Branksome, Ashton-upon-Mersey, England, assignor to Westinghouse Electric and Manufacturing Company, Pittsburgh, Pa. Filed Oct. 2, 1912. Serial No. 723,465. (Cl. 200—11.)



1. The combination with a rotatable shaft, a contact-carrying drum loosely associated therewith and biased to its off position, and mechanical means for initially operatively connecting said drum and shaft and subsequently disconnecting said parts in a predetermined position thereof, of means dependent upon different predetermined electrical conditions for restraining said drum prior to its disconnection from said shaft and independent of further movements thereof.

2. A controller comprising a rotatable shaft, a contact-carrying drum fixed thereto, a second contact-carrying drum loosely associated therewith, a pawl for normally locking said second drum to said shaft, means for releasing said pawl under predetermined conditions, means for restraining said second drum in a predetermined operating position, and a plurality of means, dependent upon different conditions for releasing said restraining means.

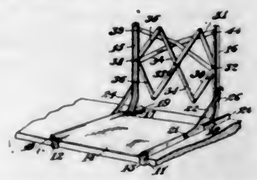
3. A controller comprising a rotatable shaft, a contact-carrying drum loosely associated therewith, means for temporarily locking said drum to said shaft while said drum and shaft are rotated, means for unlocking said drum and shaft in a predetermined position, and means dependent upon normal electrical conditions for restraining said drum in said predetermined position.

4. The combination with a rotatable shaft, a contact-carrying drum loosely associated therewith and biased to its off position, and mechanical means for initially operatively connecting said drum and said shaft and subsequently disconnecting said parts in a predetermined position thereof, of a latch for restraining said drum in position after it is disconnected from said shaft, and a plurality of electro-responsive devices severally adapted to release said latch under predetermined conditions.

5. The combination with a rotatable shaft, a resistance-controlling drum fixed thereto, a circuit making and breaking device loosely associated therewith, means for operatively connecting said device to said shaft during a portion of the movement thereof and means for disconnecting said device and shaft after a predetermined movement thereof, of means for restraining said device in its closed position after the disconnection of said device and said shaft to permit further movement of said resistance-controlling drum, and an overload and a no-voltage device for releasing said restraining means under predetermined conditions.

[Claims 6 to 8 not printed in the Gazette.]

1,196,731. COLLAPSIBLE BACK-REST FOR SEATS. JOHN A. CLARK, Los Angeles, Cal. Filed Mar. 15, 1915. Serial No. 14,368. (Cl. 155—5.)



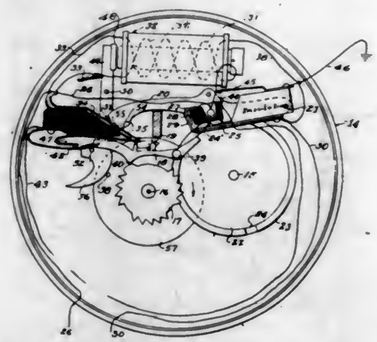
1. A collapsible back rest, comprising parallel disposed seat bars, back bars pivotally connected to each seat bar, brace bars pivotally secured at one end to a back bar, said last named brace bars bent longitudinally and having notches at the ends opposite to their pivotal connection, straps on said back bars in which said last named brace bars are slidably disposed, and with which the notches therein are adapted to engage.

2. A collapsible back rest, comprising parallel disposed seat bars, back bars pivotally connected to each seat bar, brace bars pivotally connected to the seat bars, said brace bars bent longitudinally and having notches at the ends opposite to their pivotal connection, straps on said back bars in which said brace bars are slidably disposed and with which said notches are adapted to engage, and brace bars pivotally secured at one end to a back bar and detachably secured at the other end to the oppositely disposed back bar.

3. A collapsible back rest, comprising parallel disposed seat bars, back bars pivotally connected to each seat bar, brace bars pivotally connected to the seat bars, said brace bars bent longitudinally and having notches at the ends opposite to their pivotal connection, straps on said back bars in which said brace bars are slidably disposed and with which said notches are adapted to engage, brace bars pivotally secured at one end to a back bar, said last named brace bars bent longitudinally and having notches at the ends opposite to their pivotal connection, straps on said back bars in which said last mentioned brace bars are slidably disposed and with which the notches therein are adapted to engage.

1,196,732. SIGNAL-TRANSMITTING DEVICE. LEWIS DEGEN, Long Beach, Cal. Filed Jan. 12, 1916. Serial No. 71,660. (Cl. 177—361.)

1. In a series circuit, a signal transmitting device, comprising a signal transmitter, a source of power for actuating said transmitter, a non-interfering device responsive to flow of current in said circuit arranged to control the sending of signals by said transmitter, a grounded branch circuit, a contact for said branch normally breaking the latter, said contact arranged to make said circuit upon actuation of said transmitter, a second contact in said branch for making and breaking the latter, said second contact arranged to be operated by said non-interfering device to make said branch upon the signal transmitting device taking control of the circuit.



2. In a series circuit, a signal transmitting device comprising a signal transmitter, a source of power for actuating said transmitter, shunting means normally shunting said transmitting device and arranged to be opened on actuation of said transmitter, a non-interfering device responsive to flow of current in said circuit arranged to control the sending of signals by said transmitter, a grounded branch circuit, a contact for said branch normally breaking the latter, said contact arranged to be actuated by said shunting means to make said branch upon opening of said shunting means, a second contact in said branch for making and breaking the latter, said second contact arranged to be operated by said non-interfering device to make said branch upon the signal transmitting device taking control of the circuit.

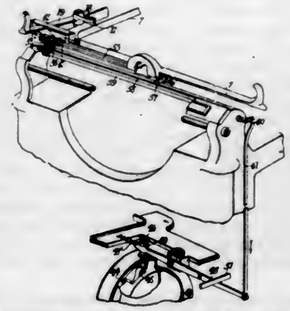
3. In a normally closed series circuit, a signal transmitting device, comprising a circuit make and break signal transmitter, a source of power for actuating said transmitter, a non-interfering coil responsive to flow of current in said circuit, an armature for said coil arranged to control operation of said transmitter, a grounded branch circuit, a contact for said branch normally breaking the latter, said contact arranged to make said branch upon actuation of said transmitter, a second contact in said branch for making and breaking the latter, said second contact arranged to be operated by said non-interfering coil armature, to make said branch upon the signal transmitting device taking control of the circuit.

4. In a normally closed series circuit, a signal transmitting device comprising a circuit make and break signal transmitter, a source of power for actuating said transmitter, a shunting means normally shunting said transmitting device and arranged to be opened upon actuation of said transmitter, a non-interfering coil responsive to flow of current in said circuit, an armature for said coil arranged to control operation of said transmitter, a grounded branch circuit, a contact for said branch normally breaking the latter, said contact arranged to be actuated by said shunting means to make said branch upon opening of said shunting means, a second contact in said branch for making and breaking the latter, said second contact arranged to be operated by said non-interfering coil armature to make said branch upon the signal transmitting device taking control of the circuit.

5. In a normally closed series circuit, a signal transmitting device, comprising a character wheel make and break mechanism, a source of power for actuating said mechanism, a non-interfering coil responsive to flow of current in said circuit, an armature for said coil arranged to control operation of said mechanism, a grounded branch circuit connected to the series circuit at the circuit contacts of said make and break mechanism, a contact for said branch normally breaking the latter, said contact arranged to make said branch upon actuation of said mechanism, a second contact in said branch for making and breaking the latter, said second contact arranged to be operated by said non-interfering coil armature to make said branch upon the signal transmitting device taking control of the circuit.

[Claim 6 not printed in the Gazette.]

1,196,733. COMBINED TYPE-WRITING AND COMPUTING MACHINE. WILLIAM L. DENCH, Pelham, N. Y., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 21, 1912. Serial No. 685,202. (Cl. 235—5 *.)



1. The combination of a typewriting mechanism including a traveling platen carriage and a line space means for said platen, a computing mechanism having a general operator, and single acting mechanism momentarily operated and released by said line space means during each actuation of said line space means for enabling solely one complete cycle of movement of said general operator.

2. The combination with a typewriting mechanism including a carriage, a platen on said carriage, and line space mechanism for said platen, of a computing mechanism including a general operator, normally disconnected driving connections for said general operator, a lever for enabling the operative connection of said driving connection to said general operator, a link connected to said lever, a bail running alongside of said carriage and connected to said link, and means operated by said line space mechanism, connected to move with said carriage, and overlying said bail so as to actuate the same at any point in the movement of said carriage.

3. The combination with a typewriting mechanism including a carriage, a platen on said carriage, and line space mechanism for said platen, of a computing mechanism including a general operator, a bail positively connected to said general operator and extending alongside of said carriage, said carriage being movable relatively to said bail, and means momentarily operated and released by said line space mechanism connected to said carriage and arranged to operate said bail in any position of said carriage.

4. The combination with a typewriting mechanism including a carriage, a platen on said carriage, and line space mechanism for said platen, of a trip located in the path of a certain movable part of said line space mechanism to be momentarily engaged and then released thereby, a finger connected to said trip, a computing mechanism including a general operator, means enabling the actuation of said general operator, and a bail positively connected to said enabling means and actuated by said finger to start the action of said enabling means.

5. The combination with a typewriting mechanism including a carriage, a platen on said carriage and line space

mechanism for said platen, of a computing mechanism including a general operator, enabling means for causing the actuation of said general operator, and means causing the actuation of said enabling means, momentarily in contact with a certain movable part of said line space mechanism, so as to be momentarily actuated thereby and then released intermediate the limits of movement of said part.

[Claims 6 to 34 not printed in the Gazette.]

1,196,734. METHOD OF TREATING MINERAL SILICATES. JOSEPH C. W. FRAZER, WILLIAM W. HOLLAND, and ELLIS MILLER, Baltimore, Md. Filed May 10, 1916. Serial No. 96,719. (Cl. 23—22.)

1. A process of extracting the aluminum and potassium contents of feldspar and other mineral silicates which consists in heating an intimate mixture of the feldspar or other mineral silicate and a caustic alkali in a dry condition and under atmospheric pressure, at temperatures between 185 and 350 degrees centigrade, whereby a portion of the silica content of the mineral is abstracted and new silicates are formed, separating the water-soluble and the water-insoluble products of such heating by treatment with water, filtering and washing, extracting the alkali content of the water-insoluble product of the heating by treating it with a quantity of an acid which is equivalent to the alkali therein contained, treating with water, filtering, and washing, and extracting the aluminum from the water-insoluble residue, which remains after the removal of the alkali, by treating the same with a quantity of an acid equivalent to the aluminum therein contained, evaporating the products of the last-mentioned treatment with acid to dryness, and heating the dried material, and finally separating the soluble aluminum salt from the insoluble silica by treating with water, filtering and washing with water.

2. A process of extracting the aluminum and alkali constituents of feldspar and other mineral silicates which consists in heating an admixture of the silicate and a caustic alkali in the dry condition under the prevailing atmospheric pressure, whereby a portion of the silica or silicic acid of the mineral is abstracted in the form of a silicate of the alkali employed and the residual silica and the other constituents of the original mineral combine to form a new silicate or new silicates readily decomposable by the ordinary mineral acids yielding salts of the basic constituents of the silicate.

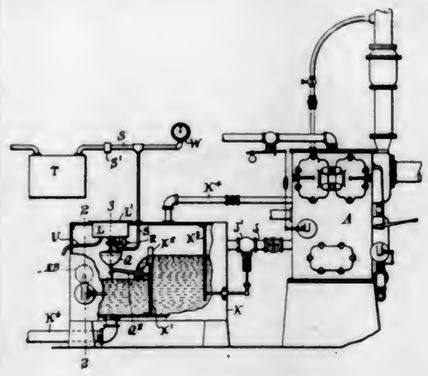
3. A process of extracting the aluminum and alkali constituents of feldspar and other mineral silicates which consists in heating an admixture of the silicate and a caustic alkali whereby a portion of the silica or silicic acid of the mineral is abstracted and the residual silica or silicic acid and the other constituents of the original mineral combine to form a new silicate or new silicates decomposable by the ordinary mineral acids yielding salts of the basic constituents of the silicate.

4. A process of extracting the aluminum and alkali constituents of feldspar and other mineral silicates which consists in heating an admixture of the silicate and a caustic alkali in the dry condition under the prevailing atmospheric pressure to a temperature of between 185 and 350 degrees centigrade, whereby a portion of the silica of the mineral is abstracted in the form of a silicate of the alkali employed and the residual silica and the other constituents of the original mineral combine to form a new silicate or new silicates which are nearly insoluble in water but are readily decomposed by the ordinary mineral acids yielding salts of the basic constituents of the silicate and liberating the silica.

5. A process for the conversion of mineral silicates, such as orthoclase, microcline, and other so-called "acid silicates" into more "basic silicates," which consists in heating an intimate mixture of the silicate with a caustic alkali at a temperature which suffices for a withdrawal of a portion of the silica in the form of a silicate of the alkali employed but which is not high enough to effect a deep-seated decomposition of the silicate.

[Claims 6 to 10 not printed in the Gazette.]

1,196,735. LIQUID-FLOW-MEASURING APPARATUS. GEORGE H. GIBSON, Montclair, N. J., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., trading in said Philadelphia as Harrison Safety Boiler Works. Original application filed Jan. 12, 1912, Serial No. 670,862. Divided and this application filed Feb. 5, 1913. Serial No. 746,280. (Cl. 73—167.)



1. In flow measuring apparatus the combination of a weir over which the liquid to be measured flows, a substantially stationary receptacle, provisions for maintaining liquid therein to the height of the liquid level on the supply side of the weir, said receptacle being so shaped with respect to the law of flow over the weir that the weight of the liquid contained by the receptacle bears a constant ratio to the varying rate of flow over the weir, and means for measuring the varying weight of the liquid in said receptacle.

2. In a liquid flow measuring apparatus, the combination with a weir over which the liquid to be measured flows, of a weighing mechanism, a receptacle supported thereby, means connecting the interior of said receptacle to the supply side of the weir while permitting the receptacle to move relative to the weir, said receptacle being so shaped and arranged that the varying weight of said receptacle and the liquid therein, as the liquid level therein varies to correspond to variations in the height of liquid level on the supply side of the weir, will be in linear proportion to the rate of flow over the weir.

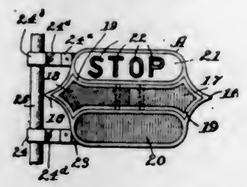
3. In flow measuring apparatus the combination of a weir chamber and a weir therein over which the liquid to be measured flows, a receptacle open to the supply side of the weir at or below the lowermost level of overflow over the weir, receptacle supporting means including provisions actuated by slight movements of said receptacle for exerting the variable force required to sustain said receptacle in a substantially stationary position as the weight of the liquid within the receptacle varies with variations in the height of liquid level on the supply side of the weir.

4. In flow measuring apparatus the combination of a closed weir chamber and a weir therein over which the liquid to be measured flows, a receptacle located in said chamber and open to the supply side of the weir at or below the lowermost level of overflow over the weir, receptacle supporting means located within the weir chamber and including provisions actuated by slight movements of said receptacle for exerting the variable force required to sustain said receptacle in a substantially stationary position as the weight of the liquid within the receptacle varies with variations in the height of liquid level on the supply side of the weir, and means without said chamber for measuring said variable force.

5. In flow measuring apparatus the combination of a closed weir chamber and a weir therein over which the liquid to be measured flows, a receptacle located in said chamber and open to the supply side of the weir at or below the lowermost level of overflow over the weir, receptacle supporting means located within the weir chamber and including fluid pressure provisions actuated by slight movements of said receptacle for exerting the variable force required to sustain said receptacle in a substantially stationary position as the weight of the liquid within the receptacle varies with variations in the height of liquid level on the supply side of the weir, and means without said chamber for measuring said variable force.

[Claims 6 to 9 not printed in the Gazette.]

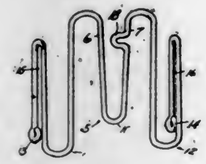
1,196,736. AUTOMOBILE-SIGNAL. EDWIN T. GRAY and ALFRED T. HORVET, New York, N. Y. Filed Aug. 13, 1914, Serial No. 856,662. Renewed Nov. 29, 1915. Serial No. 64,199. (Cl. 240—22.)



1. A signal box for vehicles having a plurality of compartments with colored panes, two of said panes being shaped like arrows and having clear borders for the purpose specified, said arrows pointing in opposite directions, and lamps in said compartments adapted to be separately turned on for the purpose specified.

2. A signal box for vehicles having a plurality of compartments including upper and lower compartments generally elliptical in form with rounded ends, and right and left compartments having straight portions arranged between said upper and lower compartments and pointed projections extending outwardly from the rounded ends of said upper and lower compartments, whereby said right and left compartments are given an arrow-shape, panes in said compartments and lamps therein adapted to be separately turned on for the purpose specified.

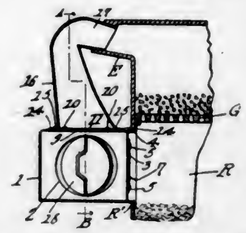
1,196,737. SPOON-SUPPORTER. CHARLES HAMMOND, El Monte, Cal. Filed Dec. 26, 1914. Serial No. 879,081. (Cl. 65—65.)



A spoon holder for a container formed of a single strand of wire bent at its center to form a spoon holding bight to abut the inside of said container having an inwardly bent projection in one leg thereof disposed above the upper edge of said container for retaining a spoon, bent backwardly substantially parallel to the legs of said bight, bent backwardly parallel to itself to form bights, providing a pair of clamping legs to abut the inside of said container and disposed on opposite sides of said spoon holding bight and bent backwardly parallel to itself at the ends to form a second pair of clamping legs to abut the outside of said receptacle.

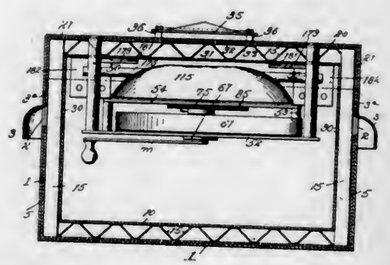
1,196,738. AIR-FEEDING ATTACHMENT FOR COAL-RANGES AND THE LIKE. RICHARD LACOURSE, Anaconda, Mont. Filed June 30, 1915. Serial No. 37,269. (Cl. 126—15.)

The combination with a stove casing having an opening in one wall thereof below the grate and an air inlet extension extending from said wall above the grate, of a box-like casing having one side fitted within the opening below the grate, retaining flanges extending from said casing and engaging the inner face of the wall, there being ports within the inner sides and within the top of the casing, a hood extending longitudinally of the top of the casing and having a laterally projecting outlet



extension detachably seated within the extension on the wall of the stove, said top ports opening into the hood, dampers slidably mounted upon the top and inner wall of the casing for regulating the flow of air through the ports, an air supply pipe opening into one end of the casing, and means within said pipe for controlling the flow of air therethrough.

1,196,739. SAFETY-CHEST. LOUIS MYERS, Newark, N. J., assignor, by mesne assignments, to The Keepsafe Company, Inc., a Corporation of New York. Filed Mar. 22, 1907. Serial No. 363,883. (Cl. 116—44.)



1. The combination of a chest or receptacle, and the following elements contained therein: an alarm, a pendulum, a member normally held inoperative by the pendulum and adapted to move automatically upon displacement thereof to prevent return of the pendulum to normal position, and means for operating the alarm rendered operative by the movement of said member.

2. The combination of a chest or receptacle, an automatic alarm supported therein, a pawl and ratchet mechanism normally restraining the alarm, a spring actuated tripping plate having operative connection with said pawl, and a suspended weighted arm hung above said tripping plate and normally restraining its action.

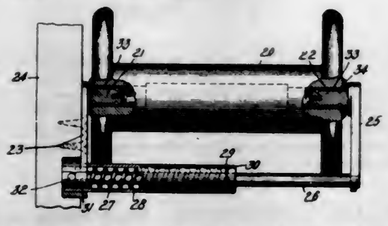
3. The combination of a chest or receptacle, an alarm within the chest or receptacle, means for operating the alarm, means normally restraining the alarm, a spring actuated tripping plate operatively connected with and adapted to release said restraining means, and a swinging arm carrying a weight having a cone-shaped lower end which engages said tripping plate.

4. The combination of a chest or receptacle, an alarm within the chest or receptacle, means for operating the alarm, means normally restraining the alarm, a spring actuated tripping plate operatively connected with and adapted to release said restraining means, a conical block mounted upon said tripping plate, and a swinging arm carrying a weight having a cone-shaped lower end which engages the conical block of said tripping plate.

5. The combination of a chest or receptacle, an alarm within the chest or receptacle, means for operating the alarm, means normally restraining the alarm, a spring actuated tripping plate operatively connected with and adapted to release said restraining means, a conical bearing block having a small bearing surface mounted upon said tripping plate, and a suspended swinging weight hung above said tripping plate and formed with a conical lower portion and relatively small engaging point which normally engages the bearing surface of said conical bearing block.

[Claims 6 to 10 not printed in the Gazette.]

1,196,740. BOBBIN-SUPPORTER. ISAAC E. PALMER, Middletown, Conn.; Townsend Palmer and Nathalie T. Palmer, Middletown, Conn., administrators of said Isaac E. Palmer, deceased. Filed Sept. 24, 1908. Serial No. 454,570. (Cl. 242—130.)



1. Yarn-winding and unwinding mechanism comprising a support, a spool-supporting stud fixed thereto, a second spool-supporting stud alined with the former, a spring actuated plunger normally projected toward said support, an arm pivoted to said plunger and carrying said second stud, a guideway for said plunger, said guideway normally sustaining said pivoted arm in spool-supporting position, and radially, fixed, cylindrical spool-supporting sleeves mounted on said stud and of a substantially uniform external diameter substantially equaling that of the normal bore of a spool.

2. Yarn winding and unwinding mechanism comprising a support, a spool supporting stud fixed thereto, a second spool supporting stud alined with the former, a spring actuated plunger normally projected toward said support, an arm pivoted to said plunger and carrying said second stud, and a guide way for said plunger, said guide way normally sustaining said pivoted arm in spool supporting position.

3. Unwinding mechanism comprising a support having a spool supporting device for one end of the spool, a second supporting device for the opposite end of the spool, a plunger having means normally to move it inwardly on said support, an arm movably connected to said plunger and carrying said second device, and a guideway for the plunger, said guideway normally sustaining said arm in spool supporting position.

4. Unwinding mechanism comprising a support having a spool supporting device for one end of the spool; a second supporting device for the opposite end of the spool, a spring actuated plunger, an arm carried thereby and movable into active and inactive positions, said second device being supported by said arm, a guideway supporting said plunger and serving to support said arm, and means to limit the inward movement of said plunger.

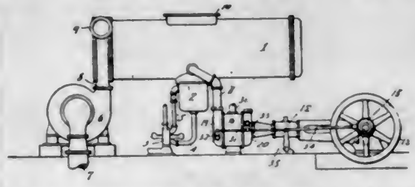
1,196,741. BALL-THROWING APPARATUS. JAY L. REYNOLDS, Spokane, Wash. Filed Mar. 27, 1915. Serial No. 17,563. (Cl. 89—10.)

1. A device for changing the position of the casing of a ball throwing apparatus, comprising a pedestal and a base, the pedestal rotatably mounted on the base, a pair of disks secured together and vertically mounted on the pedestal with a groove between said disks, a third disk rotatably mounted in said groove and having outwardly extending arms, a casing for carrying a ball having a barrel through which a ball is thrown from said casing, to which casing said arms are attached, means for normally holding said casing in a predetermined position and means for manually changing the position of said casing for elevating said barrel and automatic means for returning said casing to normal position.



2. A device for changing the position of the casing of a ball throwing apparatus, comprising a pedestal and a base, a pair of disks secured together and vertfcally mounted on the pedestal with a groove between said disks, a third disk rotatably mounted in said groove and having outwardly extending arms, a casing for carrying a ball having a barrel through which a ball is thrown from said casing, to which casing said arms are attached, means for normally holding said casing in a predetermined position and means for manually changing the position of said casing for elevating said barrel and automatic means for returning said casing to normal position.

1,196,742. CONDENSER SYSTEM AND VACUUM-PUMP. MICHAEL RIESNER, Cincinnati, Ohio, assignor, by mesne assignments, to Worthington Pump and Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Jan. 19, 1914, Serial No. 812,957. Renewed July 23, 1915. Serial No. 41,616. (Cl. 230—27.)



1. In a condensing system of that class in which the air is drawn off separately from the water, the combination, with a condenser, of a single cylinder pump having an inlet at one end arranged to connect with the air discharge of the condenser, a discharge outlet at the other end, a transfer passage independent of the piston arranged to permit the transfer of fluid from one end of the cylinder to the other, a piston, means for reciprocating it, and valve mechanism arranged to transfer the fluid from the inlet side of the piston to the outlet side thereof through the transfer passage without material compression of such fluid.

2. In a condensing system of that class in which the air is drawn off separately from the water, the combination, with a condenser, of a single cylinder pump having an inlet at one end arranged to connect with the air discharge of the condenser, a discharge outlet at the other end of the pump, a piston, means for reciprocating said piston, a transfer passage independent of the piston arranged to permit the transfer of fluid from one end of the cylinder to the other, and valve mechanism including a mechanically-operated valve arranged to control the inlet of fluid to the inlet end of the cylinder.

3. In a condensing system of that class in which the air is drawn off separately from the water, the combination, with a condenser, of a single cylinder pump having an inlet at one end arranged to connect with the air discharge outlet at the other end of the pump, a piston, means for reciprocating said piston, a transfer passage independent of the piston arranged to permit the transfer of fluid from one end of the cylinder to the other, and valve mechanism including a mechanically-operated valve device arranged to control the transfer passage.

4. In a condensing system of that class in which the air is drawn off separately from the water, the combination, with a condenser, of a single cylinder pump having an inlet at one end arranged to connect with the air discharge of the condenser, a discharge outlet at the other end of the pump, a piston, means for reciprocating said piston, a transfer passage independent of the piston arranged to permit the transfer of fluid from one end of the cylinder to the other, and mechanically-operated valve mechanism arranged to control the transfer passage and the inlet and discharge openings.

5. In a condensing system, the combination, with a condenser, of a single cylinder pump having an inlet at one end arranged to connect with the condenser, a discharge outlet at the other end, a transfer passage independent of the piston arranged to permit the transfer of fluid from one end of the cylinder to the other, a piston, means for reciprocating it, and valve mechanism arranged to transfer the fluid from the inlet side of the piston to the outlet side thereof without material compression of such fluid.

[Claims 6 to 9 not printed in the Gazette.]

1,196,743. DEPOSIT-BOOK. ARTHUR J. SKINNER, Springfield, Mass., assignor to Orland V. Smith, Milford, Conn. Filed Dec. 21, 1915. Serial No. 68,002. (Cl. 11—19.)

1. A deposit book, of the class described, comprising one or more master pages having sequentially arranged thereon numerals to be punched, and detachable numbered coupons backing such page or pages, the number of such coupons being equal to the highest numeral on such page or on each of such pages, and said coupons having thereon characters of progressive values to be punched, said numerals and said characters being in registration when the sheets are superposed.

2. A deposit book, of the class described, comprising one or more permanent pages having thereon characters to be punched, and a plurality of numbered detachable leaves backing said page or pages and having thereon characters to be punched, the characters on said page or pages and said leaves being in registration when the sheets are superposed, and said leaves projecting at one end beyond said page or pages.

1,196,744. WELDED METAL. LEWIS W. CHUBB, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed Feb. 16, 1912, Serial No. 678,108. Divided and this application filed Feb. 7, 1913. Serial No. 746,784. (Cl. 29—181.)



1. A structure comprising a plurality of metal bodies joined by an electro-percussively formed weld.

2. A structure comprising a plurality of metal bodies joined by an electro-percussively formed malleable weld.

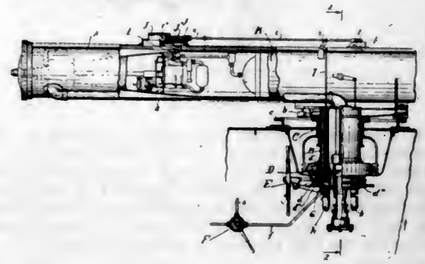
3. A structure including a plurality of metal bodies, at least one of which comprises aluminum, joined by a malleable weld.

4. An aluminum body and a copper body joined by a malleable weld.

5. A plurality of bodies, composed of metals that tend to form brittle joints when welded together, joined by a malleable weld.

[Claim 6 not printed in the Gazette.]

1,196,745. APPARATUS FOR LAUNCHING AUTOMOBILE TORPEDOES. GREGORY CALDWELL DAVISON, New London, Conn. Filed Dec. 5, 1914. Serial No. 875,564. (Cl. 114—238.)



1. The combination with an automobile torpedo having self-contained power mechanism, such as propelling or steering mechanism or both, and a starting member the action of which will initiate the operation of said mechanism, of a torpedo launching tube, a movable member associated with the tube and engageable with the starting member of a torpedo therein, and actuating means for the movable member adapted to move it to actuate the starting member and subsequently to restore the starting member to its initial position, if desired.

2. The combination with an automobile torpedo having self-contained power mechanism, such as propelling or steering mechanism or both, and a starting member the action of which will initiate the operation of said mechanism, of a torpedo launching tube, a movable member associated with the tube and engageable with the starting member of a torpedo therein, means for expelling the torpedo from the tube, mechanism for actuating the movable member to move the starting mechanism to starting position and, after a lapse of time, to actuate the expelling means, and means operable at will to interrupt the normal action of said mechanism and move it to restore the movable member to its initial position before the actuation of the expelling means.

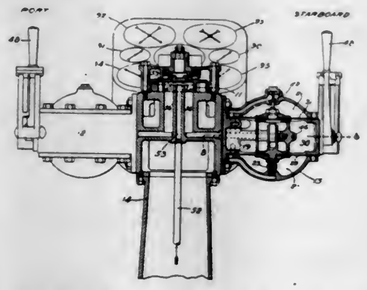
1,196,746. BRIDGE CONTROL. HERBERT T. HERR, Pittsburgh, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed May 19, 1914, Serial No. 839,581. Renewed Jan. 13, 1916. Serial No. 71,858. (Cl. 121—58.)

1. A control system, comprising a plurality of engines to be controlled, a separate controlling valve for each engine, and means common to the controlling valves for rendering one or all the valves effective or ineffective as a controlling agent.

2. A control system, comprising a plurality of engines to be controlled, a separate controlling valve for each engine, and means common to all the valves, for rendering one or all the valves effective or ineffective in controlling separate engines or for shifting the control of all the engines to one of said valves.

3. A control system, comprising at least two engines to be controlled, a separate controlling device for controlling the operation of each engine, and means common to said device for shifting the control of all the engines to one or another of the devices.

4. A control mechanism comprising a plurality of controlling devices, and means common to said devices for shifting the control from one to another of said devices, and for rendering all of said devices effective or ineffective as controlling agents.



5. A controlling device comprising a plurality of controlling valves, each adapted to receive fluid from a source of fluid pressure and to deliver fluid at a determined pressure dependent on the relative positions of the parts constituting the valve, and a distributing valve for receiving fluid from one or all of said control valves and for delivering the fluid received to one or more engines to be controlled.

[Claims 6 to 28 not printed in the Gazette.]

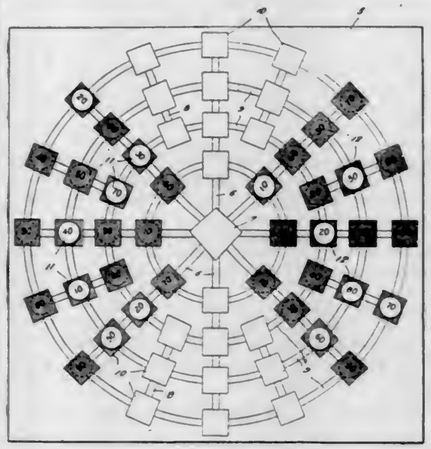
1,196,747. APRON. CHARLES F. MALZEN, Lima, Ohio. Filed Mar. 31, 1915. Serial No. 18,384. (Cl. 2—54.)



A garment of the character described comprising two ungathered straight cut back sections extending normally straight downward from the neck to the lower edge of the garment, a separate front panel secured to the back sections from a point above the belt-line down, a bodice or waist front secured to the upper margin of the panel and the adjacent side margins of the back sections, said bodice or waist front being full and gathered at its connection with the front panel, said front panel being close fitted at the upper portion thereof, a belt secured to one side of the front panel below the waist-line thereof and adapted to extend across the back sections to thereby cause the back sections to be drawn inward at the waist when the belt is in place, and means at the extremity of the belt and the opposite side of the front panel for maintaining the belt in applied position.

1,196,748. GAME. RUFUS B. SMITH, Akron, Ohio. Filed Apr. 5, 1916. Serial No. 89,133. (Cl. 46—64.)

A game comprising a board having formed thereon a plurality of concentric circles, a plurality of radiating lines intersecting the circles and terminating in a central square, a plurality of squares formed at the intersection



of the circles and radiating lines, and a plurality of movable blocks for disposition upon the respective squares.

1,196,749. MEANS FOR WAY-BILLING. JAMES A. MURPHEY, Germantown, Pa. Filed Feb. 5, 1912. Serial No. 675,612. (Cl. 11—19.)



1. Means for way billing express shipments, including a printed form constituting a way bill having a series of distinctively numbered spaces and appropriately-headed blank columns for matter descriptive of respective shipments, and a series of separable adhesive labels, to be attached to the respective shipments, respectively distinctively numbered in correspondence with the numbers on said way bill; each of said labels having spaces for a date and for entries indicating whether the charge for shipment has been advanced, is to be collected, or has been paid; said spaces being respectively designated "Advance" "Collect" "Paid."

2. Means for way billing express shipments, including a printed form constituting a way bill having a series of distinctively numbered spaces and appropriately-headed blank columns for matter descriptive of respective shipments, and a series of separable adhesive labels, to be attached to the respective shipments, respectively distinctively numbered in correspondence with the numbers on said way bill; each of said labels having spaces for a date and for entries indicating whether the charge for shipment has been advanced, is to be collected, or has been paid.

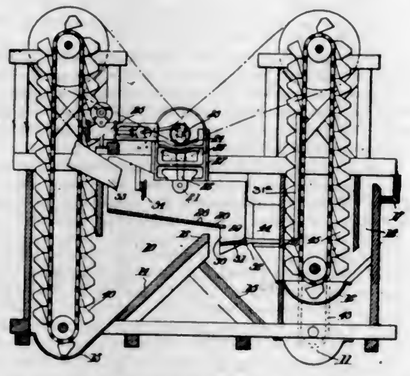
3. Means for way billing express shipments, including a printed form constituting a way bill having a series of distinctively numbered spaces and appropriately-headed blank columns for matter descriptive of respective shipments, and a series of separable adhesive labels, to be attached to the respective shipments, respectively distinctively numbered in correspondence with the numbers on said way bill; each of said labels having appropriately-designated spaces for entries relating to the charge for shipment.

4. Means for way billing express shipments, including a series of distinctively numbered adhesive labels; each having appropriately designated spaces for a date and for entries relating to the charge for shipment.

5. Means for way billing express shipments, including a series of distinctively numbered adhesive labels; respectively having appropriately designated spaces for matter relating to respective shipments.

[Claims 6 to 15 not printed in the Gazette.]

1,196,750. SEPARATING APPARATUS. ISAAC CHRIST, Tamaqua, Pa.; William H. Christ executor of said Isaac Christ, deceased. Filed June 29, 1912. Serial No. 706,793. (Cl. 83—80.)



1. A separating apparatus comprising a tank, a jig pan mounted to reciprocate therein and provided with a perforated bottom, a supply chute for said jig pan, means for collecting material that passes through said perforated bottom, and means for depositing said material on top of the material supplied by said chute.

2. A separating apparatus comprising a tank provided with a compartment, a jig pan mounted to reciprocate in said tank and provided with a perforated bottom, a supply chute for said jig pan, means for directing the material that passes through said perforated bottom to said compartment, and means for depositing said material on top of the material supplied by said chute.

3. A separating apparatus comprising a tank provided with a compartment at one end, a jig pan mounted to reciprocate in said tank and provided with a perforated bottom, a supply chute for said jig pan, means for directing the material that passes through said perforated bottom to said compartment, and an elevator for depositing said material on top of the material supplied by said chute.

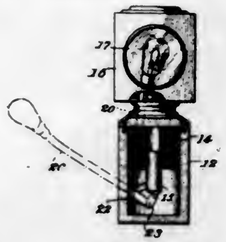
4. A separating apparatus comprising a tank, a jig pan mounted to reciprocate therein and provided with a perforated bottom, said tank having an inclined bottom wall to catch material passing through said perforated bottom, a supply chute for said jig pan, and means for depositing said material on top of the material supplied by said chute.

5. A separating apparatus comprising a tank having upwardly extended converging bottom walls, a jig pan mounted to reciprocate in said tank and provided with a perforated bottom, one of said bottom walls being provided with an overhanging portion to catch material passing through said perforated bottom, a supply chute for said jig pan, and means for depositing said material on top of the material supplied by said chute.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

14,186. SIGNAL FOR MOTOR-VEHICLES. ORPH W. COWGILL, St. Louis, Mo., assignor of ninety one-hundredths to Otto F. Stifel, St. Louis, Mo. Filed May 15, 1916. Serial No. 97,752. Original No. 1,106,184, dated Aug. 4, 1914, Serial No. 758,034, filed Mar. 31, 1913. (Cl. 177—339.)



1. The combination with a vehicle, of a side light housing on said vehicle, an electrically operated semaphore arm arranged for operation adjacent to said light housing, and a lamp carried by said semaphore arm, which lamp normally occupies the side light housing.

2. The combination with a vehicle, of a side light housing, a semaphore arm mounted for operation upon the vehicle adjacent to said housing, a lamp carried by said semaphore arm, which lamp normally occupies said light housing, and electrically operated means for actuating the semaphore arm.

3. The combination with a vehicle side light housing, of an electrically controlled semaphore arranged for operation adjacent to said housing, and a lamp carried by said semaphore arm, which lamp is normally positioned in said housing.

4. The combination with a vehicle lamp housing, of a solenoid adjacent to said lamp housing, a semaphore actuated by said solenoid, and a lamp carried by said semaphore, which lamp is normally located in said housing.

5. A signaling device for motor vehicles comprising a lamp housing adapted to be positioned upon the vehicle, a pivotally mounted semaphore, an electric lamp carried thereby, which lamp normally occupies the lamp housing, and an electrically operated means including a solenoid for actuating said semaphore.

6. The combination with a vehicle side light housing, of a housing located below the light housing, a solenoid within the second mentioned housing, a semaphore pivotally mounted on the second mentioned housing and connected to the core of the solenoid, and an electric lamp carried by said semaphore, which lamp is normally located within the light housing.

7. The combination with a vehicle, of lamp housings located on opposite sides of said vehicle, a semaphore arm arranged for operation adjacent to each housing, a lamp carried by each semaphore arm, which lamp normally occupies the corresponding housing, and electrically operated means including switches for actuating either one of the semaphore arms.

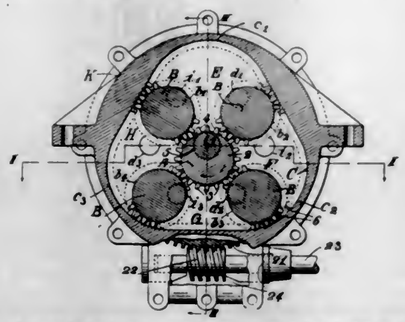
8. A signaling device for motor vehicles comprising a side lamp bracket, a semaphore pivotally mounted thereon, an electric lamp carried thereby and arranged to be visible from front and rear, said lamp constituting a side lamp for the vehicle, and an electrically operated means for actuating said semaphore to swing said lamp laterally out from said vehicle.

9. A signaling device for motor vehicles comprising a bracket located at the side of the vehicle, a semaphore pivotally mounted on said bracket to swing outwardly, said semaphore standing normally in upright position, a lamp carried at the upper end of said semaphore, means carried by said bracket for oscillating said semaphore and

lamp away from said vehicle, and electrical means controlled from the vehicle for actuating said oscillating means.

10. The combination with a side lamp bracket for a vehicle, of a solenoid carried thereby, a semaphore pivoted to swing outwardly from said bracket and actuated by said solenoid, and a lamp carried by said semaphore, which lamp is normally located above said bracket to constitute a side lamp for the vehicle.

14,187. ROTARY ENGINE. HERMAN DOCK, Westerly, R. I., assignor to American Rotary Power Company, Boston, Mass., a Corporation of Maine. Filed Feb. 3, 1916. Serial No. 76,061. Original No. 1,087,735, dated Feb. 17, 1914, Serial No. 762,048, filed Apr. 18, 1913. (Cl. 103—44.)



1. A rotary engine comprising a rotor; a ring inclosing an annular space about said rotor, the axial mounting of said rotor and the relative contours of said rotor and ring being such that the radial distance from said ring to said rotor is different for different radial lines of measurement; a plurality of floaters free from engagement one with another and each having continuous rolling contact with both said ring and said rotor and dividing said annular space into a plurality of working chambers, one chamber between each pair of adjacent floaters; and means completing the inclosure at the axial ends of said annular space and providing ports for said working chambers.

2. A rotary engine comprising a rotor; a ring inclosing an annular space about said rotor, the axial mounting of said rotor and the relative contours of said rotor and ring being such that the radial distance from said ring to said rotor is different for different radial lines of measurement; a plurality of floaters free from engagement one with another and each having continuous rolling contact with both said ring and said rotor and dividing said annular space into a plurality of working chambers, one chamber between each pair of adjacent floaters; gear teeth to effect the positive meshing of each floater with both said rotor and said ring; and means completing the inclosure at the axial ends of said annular space and providing ports for said working chambers.

3. A rotary engine comprising an internal curved gear; a central gear having a peripheral lobe, the teeth on which are non-concentric or eccentric with other teeth thereon relatively to the axis of rotation; a plurality of loose gears whose teeth engage the teeth of said central gear and the teeth on the internal gear, said loose gears being rotatable on their own axes and revoluble about said central gear; and confining means at the axial ends of said gears for completing confined spaces between said gears, said confining means having ports to accommodate the inlet and delivery of fluid to and from said confined spaces.

4. A rotary engine comprising a casing, a power-shaft; and revoluble, rotatable floaters in fluid-sealing and power-transmitting engagement with said casing and shaft, said floaters being both revolved positively about said shaft and rotated positively about their own axes.

5. A rotary engine comprising a casing, a rotor; and revoluble, rotatable floaters in fluid-sealing and power-transmitting engagement with said casing and rotor, said floaters being both revolved positively about said rotor and rotated positively about their own axes.

6. A rotary engine comprising a casing, having an internal curved gear, a shaft extending through said casing, an eccentric gear secured to said shaft, and a plurality of loose gears whose teeth engage the teeth on the eccentric gear and those on the internal gear, said loose gears being rotatable on their own axes and also about said shaft, and means for admitting fluid to the spaces between the gears and for withdrawing it from said spaces.

7. A rotary engine comprising a casing having an internal curved gear, a shaft extending through said casing, an eccentric gear secured to said shaft, and a plurality of loose gears whose teeth engage the teeth on the eccentric gear and those on the internal gear, said loose gears being rotatable on their own axes and also about said shaft, said casing having admission and exhaust conduits, and a movable plate having port openings therein for controlling the flow of fluid.

8. In a rotary engine, the combination with a casing, of a power shaft having thereon a motor element within the casing, loose rotatable piston elements arranged between said motor element and casing, and inter-engaging said motor element and casing; and means for imparting positive rotation to said piston elements.

9. In a rotary engine, means forming an annular chamber; a plurality of piston-elements movable within said annular chamber; and means for imparting varying instantaneous velocities to each said piston element.

10. In a rotary engine, an annular space formed between a central, a circumferential and two end parts, the central and circumferential parts being capable of relative rotation, a plurality of pistons moved in the annular space by said relative rotation, the central, circumferential or piston parts being so formed that the instantaneous displacement of each piston varies as rotation proceeds.

11. In a rotary engine, an annular space formed between a central, a circumferential and two end parts, the central and circumferential parts being capable of relative rotation, one of the end parts being a rotatable port-plate, a plurality of pistons moved in the annular space by said relative rotation, the central, circumferential or piston parts being so formed that the instantaneous displacement of each piston varies as rotation proceeds, and means for adjusting said port-plate angularly.

12. A rotary engine comprising a central part of right-cylindrical contour; a ring of right-cylindrical contour inclosing said central part and forming a continuous annular space about the same, the relative contours of said central part and said ring being such that the radial distance from said central part to said ring is different for different radial lines of measurement; a plurality of piston means spaced apart in said annular space and free from engagement one with another and each having continuous rolling contact with both said ring and said central part and dividing said annular space into a plurality of working chambers, one chamber between each pair of adjacent piston means; and means completing the inclosure of the axial ends of said annular space and providing ports for said working chambers.

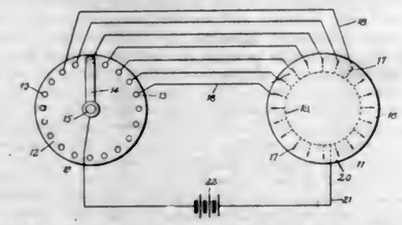
13. In a rotary engine, means forming an annular space, said means comprising a central, a circumferential and two end parts; a plurality of piston means constrained to move wholly within said annular space constantly in fluid sealing contact with both said central part and said circumferential part to form a plurality of working chambers, the radial extent measured from the axis of said engine of both said circumferential part and each said piston means varying for different radial lines of measurement; and provisions governing the relative working movement between said parts and each said piston means, whereby the resultant relative movement between said parts and means effects a cycle of volumetric changes for each said working chamber.

14. In a rotary engine, means forming an annular space, said means comprising a central, a circumferential and

opposite end parts, the contour of said central and circumferential parts being relatively such that different equiangular sectors of said annular space have unequal volumes; a plurality of revoluble rotary piston-means separating said annular space into a plurality of working chambers; and suitable inlet and delivery ports for said annular space.

15. In a rotary engine, means forming an annular space, said means comprising a central and a circumferential part having right-cylindrical contour and opposite end parts; a plurality of revolving rotary piston means continuously contacting tangentially with both said central part and said circumferential part and located always wholly within said annular space, spaced apart and dividing said annular space into a plurality of working chambers, the relative configuration of said piston means, said central part and said circumferential part being such that said working chambers regularly change in volume during the revolution of said piston means; and provisions for revolving said piston means.

14,188. ELECTRICAL RECORDER. ANGUS S. HIBBARD, Chicago, Ill. Filed Feb. 26, 1915. Serial No. 10,881. Original No. 1,114,612, dated Oct. 20, 1914, Serial No. 677,580, filed Feb. 14, 1912. (Cl. 234—1.5.)



1. Electrical transmitting and recording apparatus comprising a transmitter having a series of fixed terminals and a brush for successively contacting therewith, a recording instrument having a series of stationary marking elements, a stationary tally sheet in contact with said elements, individual circuit-wires connecting said terminals and elements, and a return circuit-wire connecting said elements with the brush and provided with a source of low-voltage current.

2. In combination a plurality of high resistance electrical conductors in fixed positions, means for supporting a record sheet of paper in fixed position in contact with said high resistance conductors, a source of electrical energy and means for selectively connecting said high resistance conductors with said source of electrical energy, the voltage of said source being such that when any of the said conductors is connected with the source of energy that conductor is heated to a temperature such as to scorch the portion of the record sheet in contact therewith.

3. In combination a suitable frame of insulating material, a plurality of high resistance conductors supported in said frame, means for supporting a record sheet of paper in contact with all of said conductors, a source of electrical energy such that the connection of any of said conductors therewith will cause the connected conductor to become heated due to its resistance to the flow of current therethrough, and means for connecting said conductors in circuit with said source of electrical energy.

4. In combination means for supporting a record sheet of paper in fixed position, a plurality of high resistance wires in fixed position each lying entirely on one side of said record sheet and in proximity thereto and means for passing an electric current selectively through any one of said wires thereby causing its temperature to be raised to a point at which its heat will scorch the portion of the record sheet in immediate proximity therewith.

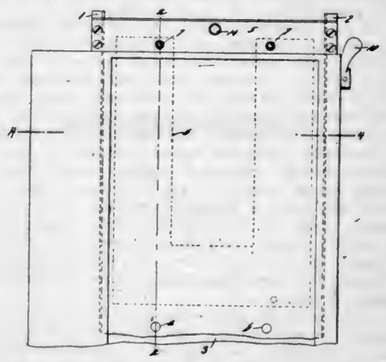
5. In combination, means for supporting a record sheet of paper, a plurality of high resistance wires each lying entirely on one side of said record sheet and in fixed proximity thereto and means for passing an electric current through any one of said wires thereby causing its temperature to be raised to a point at which its heat will scorch the portion of the record sheet in immediate proximity therewith.

6. In combination means for supporting a record sheet of paper in given position, a plurality of electrically energized heating elements each lying in a fixed position entirely on one side of said record sheet and in proximity thereto and means for passing an electric current selectively through any one of said heating elements thereby causing its temperature to be raised to a point at which its heat will scorch the portion of the record, sheet in immediate proximity therewith.

7. In combination means for supporting a record sheet of paper, a plurality of continuous electrical conductors of high resistance lying in fixed positions substantially in contact with said record sheet and a source of electric current with which any of said conductors may be connected, the voltage of said source and the resistance of said conductors being such that the conenction of any conductor in circuit with the source will cause the temperature of the conductor to rise to a point at which its heat will scorch the immediately adjacent portion of the paper.

8. In combination means for supporting a record sheet of paper, a plurality of electrically heated recording elements each comprising a continuous conductor of high resistance and all substantially in contact in fixed positions with said paper when said sheet of paper is supported in position, a source of electric energy and switching mechanism for selectively closing a circuit from said source of current through any one of said recording elements while the non-energization of all of the other recording elements is maintained and while all of said elements are maintained substantially in contact with said sheet of paper in said fixed positions.

14,189. AUTOGRAPHIC REGISTER. ALBERT KRAUTH, Hamilton, Ohio. Filed May 1, 1916. Serial No. 94,834. Original No. 1,122,508, dated Dec. 29, 1914, Serial No. 815,393, filed Jan. 30, 1914. (Cl. 11—86.)



1. A device of the nature disclosed combining a frame from which a strip of paper is withdrawn, the strip having apertures predeterminately spaced longitudinally with its direction of withdrawal, and a member yieldingly urged toward a face of said paper, adapted to engage through a registering aperture in the paper to intercept its progress.

2. A device of the nature disclosed combining a frame structure provided with a gate channel through which a strip of paper is withdrawn, the strip having apertures alined longitudinally with its direction of withdrawal, and an abutment member yieldingly urged against a face of the strip and transversely movable through the channel walls to engage through a registering aperture in the paper to intercept the paper withdrawal.

3. A device of the nature disclosed combining a frame structure provided with a gate channel through which a strip of paper is withdrawn, the strip having apertures alined longitudinally with its direction of withdrawal, an abutment member yieldingly urged against a face of the strip and transversely movable through the channel walls to engage through a registering aperture in the paper to intercept the paper withdrawal, and means for manually moving said abutment for strip release.

4. A device of the nature disclosed combining a frame structure provided with a gate channel through which a strip of paper apertured at definitely spaced intervals is longitudinally manually withdrawn, the upper wall at the terminal of said channel having a knife edge for severing the withdrawn paper, and a yielding member having pins transversely movable through said channel and walls thereof to engage through registering apertures in the paper, within the channel to arrest its movement, said member capable of being manually depressed to release the paper.

5. In an autographic register, a pair of side frames for supporting therebetween webs of paper, a writing table secured to said side frames over which the paper from the webs is drawn, a plate having a knife edge secured upon said side frame above the writing table at one end thereof beneath which the paper is drawn, and a yielding member having an element normally urged against the paper beneath said plate to intercept the same through registering apertures therein provided at definitely spaced intervals to arrest the paper withdrawal, said member being manually depressed for releasing the paper.

6. In an autographic register, a pair of side frames for supporting therebetween webs of paper, a writing table connecting said frames, over which the paper from the webs is drawn, a plate connected to said side frame at an elevation above said table and at one end thereof, forming an intermediate passage for the paper, a series of yielding members each having a protuberance projected therefrom normally transverse across said way to intercept the paper through registering apertures formed therein at definitely spaced intervals to arrest the longitudinal movement of the paper, a manually operated rocker member, accessible from the exterior of register, engaged with said yielding member for passage clearance and release of the paper.

7. In an autographic register, a pair of side frames for supporting therebetween webs of paper, a writing table connecting said frames, over which the paper from the webs is drawn, a plate connected to said side frame at an elevation above said table and at one end thereof, forming an intermediate passage for the paper, a series of yielding members each having a protuberance projected therefrom normally transverse across said way to intercept the paper through registering apertures formed therein at definitely spaced intervals to arrest the longitudinal movement of the paper, a manually operated rocker member, accessible from the exterior of register, engaged with said yielding member for passage clearance and release of the paper, and means combined with said rocker member for moving the paper away from said plate for manually grasping the same.

8. A device of the nature disclosed combining a frame structure through which a strip of paper with serial apertures is withdrawn, and transversely movable means having paper engaging members functioning alternately, one to engage through a registering aperture to intercept the withdrawal of the paper and the second to flex the paper for accessible manual grasp.

9. In an autographic register, a pair of side frames, said frames having a supply strip of paper provided with serial apertures, a member secured between the side frames which the paper passes in its withdrawal, and a member having an element yieldingly urged against a face of the paper adapted to engage through a registering aperture in the paper and into said first named member to intercept the paper withdrawal.

10. In an autographic register, a frame structure having a supply strip of paper with series apertures, a rigid member at the paper withdrawal end of the frame structure which the paper passes, an intercepting member yieldingly urged against a surface of the paper to engage through a registering aperture in the paper and into said rigid member to intercept the paper withdrawal, and manually operated means for said last-named member for releasing the paper.

11. In a manifolding device, a web supporting frame, a writing table over which the web is drawn, the web longitudinally having apertures in spaced relation, a margin frame over the table, a member positioned in alinement with the web apertures and yieldingly urged toward the web for successively entering apertures as the web is withdrawn, said member being engaged through a web aperture normally preventing the web from being drawn over the table, said table and member being relatively positioned adjacent the writing space defined by the margin frame to aline the web in writing position on the table, and a trip for manually retracting said member, enabling web withdrawal, the manual release of said trip positioning said member for automatic engagement through the next registry web aperture.

12. In a manifolding device a web supporting frame, a writing table over which the web is drawn, the web longitudinally having apertures in spaced relation and alined crosswise of the web, a margin frame over the table, a cross member over the table beneath which the web passes, a coacting spring-pressed member in alinement with the web apertures, and yieldingly urged toward said member, said member and spring-pressed members being relatively positioned adjacent the writing space defined by the margin frame to aline the web in writing position on the table and to maintain relative registry of several superposed webs drawn over the table, the said spring-pressed member engaging through a registering web aperture, normally preventing web withdrawal and holding the web in position for writing, and means for retracting said spring-pressed member, enabling the web to be drawn over the table and to pass between said abutment and spring-pressed members, said spring-pressed member yieldingly engaging non-perforated portions of the web when the web is withdrawn in position to enter the next registering aperture.

13. A device of the nature disclosed combining a frame, a writing table mounted within said frame for supporting a plurality of webs in superposed arrangement and over which the webs are drawn, the webs each having apertures spaced longitudinally and crosswise of the web, detents in spaced relation laterally of said table, adapted to engage through registering apertures, and a cross member supported in a superposed relation to the table, and beneath which the webs pass to confine the webs upon the table at the detents.

14. A device of the nature disclosed combining a frame, a writing table mounted within said frame for supporting a plurality of webs in superposed arrangement and over which the webs are drawn, the webs each having apertures spaced longitudinally and crosswise of the web, detents in spaced relation laterally of said table, adapted to engage through registering apertures, means operating automatically upon the withdrawal of the paper to engage the detents through the apertures, means for disengaging the detents, and a cross member supported in a superposed relation to the table, coöperating with said detents and beneath which the webs pass to confine the webs upon the table.

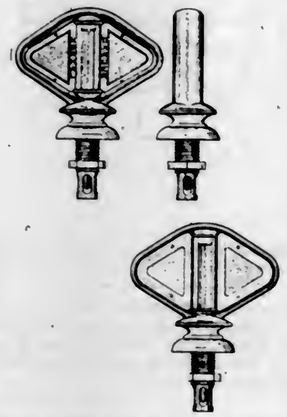
15. A device of the nature disclosed combining a frame, a writing-table mounted within said frame for supporting a plurality of webs in a superposed arrangement and over which they are drawn, the webs each having apertures spaced longitudinally of the web and in a series crosswise of the web, detents supported in a spaced relation crosswise of the table movable transverse to the table and webs upon the table to engage through registering apertures in the webs, and means for retracting said detents from the web engagement.

16. A device of the nature disclosed combining a frame, a writing-table mounted within said frame and therewith providing a guide channel for supporting a plurality of webs in superposed arrangement, the webs each having apertures in spaced relation longitudinally and crosswise, and detents in a spaced relation corresponding to the crosswise web aperture spacing mounted to move transversely to the table to engage through registering apertures in the webs upon the table.

17. A device of the nature disclosed combining a frame, a writing table mounted within said frame and therewith providing a guide channel for supporting a plurality of webs in superposed arrangement to be drawn over the table, the webs each having apertures in spaced relation longitudinally and crosswise, and detents yieldingly mounted to move transversely to the table to engage through registering apertures and to be retracted therefrom, and a member extending crosswise of the table bridging over the webs at the detents to confine the webs upon the table.

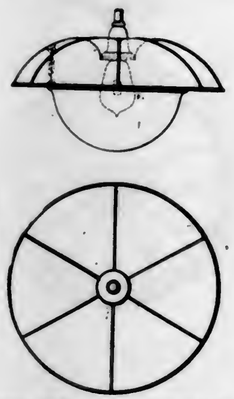
DESIGNS.

49,557. SIGNAL. LOUIS V. ARONSON, Newark, N. J. Filed June 27, 1916. Serial No. 106,273. Term of patent 7 years.



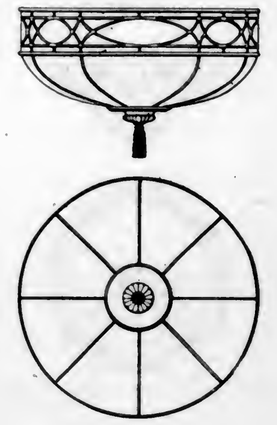
The ornamental design for a signal, as shown.

49,558. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,963. Term of patent 3½ years.



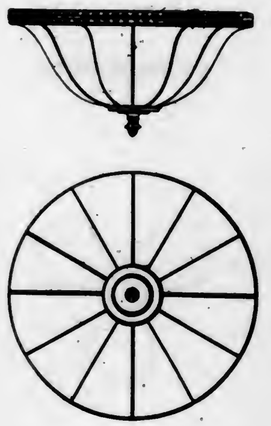
The ornamental design for an electric lighting fixture, as shown.

49,559. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,964. Term of patent 3½ years.



The ornamental design for an electric lighting fixture, as shown.

49,560. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,965. Term of patent 3½ years.



The ornamental design for an electric lighting fixture, as shown.

49,561. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,967. Term of patent 3½ years.



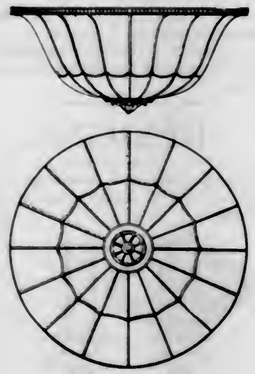
The ornamental design for an electric lighting fixture, as shown.

49,562. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,968. Term of patent 3½ years.



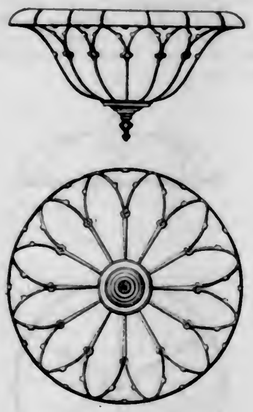
The ornamental design for an electric lighting fixture, as shown.

49,563. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,969. Term of patent 3½ years.



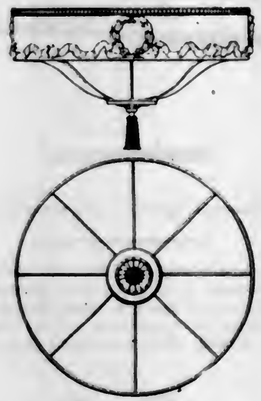
The ornamental design for an electric lighting fixture, as shown.

49,564. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,970. Term of patent 3½ years.



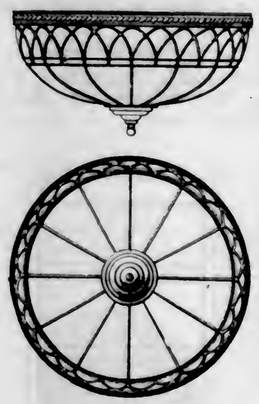
The ornamental design for an electric lighting fixture, as shown.

49,565. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,971. Term of patent 3½ years.



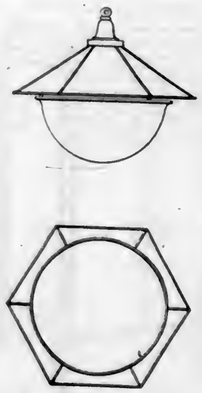
The ornamental design for an electric lighting fixture, as shown.

49,566. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,972. Term of patent 3½ years.



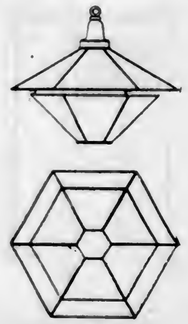
The ornamental design for an electric lighting fixture, as shown.

49,567. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 30, 1916. Serial No. 106,973. Term of patent 3½ years.



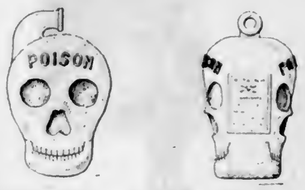
The ornamental design for an electric lighting fixture, as shown.

49,568. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, Brooklyn, N. Y., assignor to Bayley & Sons, Inc., New York, N. Y., a Corporation of New York. Filed June 27, 1916. Serial No. 106,276. Term of patent 3½ years.



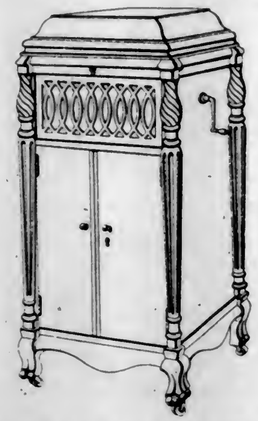
The ornamental design for an electric lighting fixture, as shown.

49,569. POISON-BOTTLE. PETER T. BURTCHAELL, San Rafael, Cal. Filed Apr. 30, 1915. Serial No. 25,070. Term of patent 14 years.



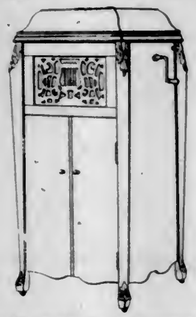
The ornamental design for a poison bottle, as shown.

49,570. PHONOGRAPH OR TALKING-MACHINE CABINET. WALTER D. CALDWELL, Oklahoma, Okla., assignor to Playerphone Talking Machine Company, Chicago, Ill., a Corporation of Oklahoma. Filed June 30, 1916. Serial No. 106,977. Term of patent 7 years.



The ornamental design for a phonograph or talking machine cabinet, substantially as shown.

49,571. PHONOGRAPH OR TALKING-MACHINE CABINET. WALTER D. CALDWELL, Oklahoma, Okla., assignor to Playerphone Talking Machine Company, Chicago, Ill., a Corporation of Oklahoma. Filed June 30, 1916. Serial No. 106,978. Term of patent 7 years.



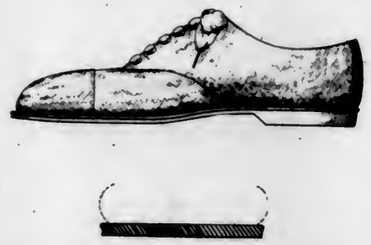
The ornamental design for a phonograph or talking machine cabinet, substantially as shown.

49,572. EMBLEM. EDWARD F. COLLINS, Indian Orchard, Mass. Filed June 17, 1916. Serial No. 104,283. Term of patent 14 years.



The ornamental design for an emblem, as shown.

49,573. SHOE. LE BARON C. COLT, Bristol, R. I., assignor to National India-Rubber Company, a Corporation of Rhode Island. Filed Apr. 6, 1915. Serial No. 19,559. Term of patent 14 years.



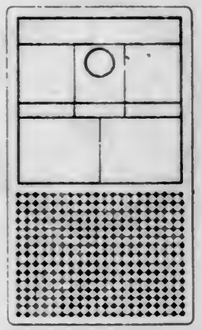
The ornamental design for a shoe as shown.

49,574. HANDLE FOR FORKS AND SIMILAR ARTICLES. GEORGE E. CURTISS, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed May 18, 1916. Serial No. 98,459. Term of patent 7 years.



The ornamental design for a handle for forks and similar articles, as shown.

49,575. GAME-BOARD. BENJAMIN A. J. DYKES, Glenwood, Ga. Filed Nov. 20, 1915. Serial No. 62,648. Term of patent 14 years.



The ornamental design for a game board, as shown.

49,576. CHANDELIER-LOOP. WILLIAM HORN, Glenside, Pa., assignor to Horn & Brannen Manufacturing Company, a Corporation of Pennsylvania. Filed July 13, 1916. Serial No. 109,185. Term of patent 3½ years.



The ornamental design for a chandelier loop, as shown.

49,577. BADGE, SEAL, OR EMBLEM. LEWIS M. JONES, Chicago, Ill. Filed Feb. 12, 1916. Serial No. 78,078. Term of patent 7 years.



The ornamental design for a badge, seal or emblem, as shown.

49,578. BADGE, SEAL, OR EMBLEM. LEWIS M. JONES, Chicago, Ill. Filed Feb. 12, 1916. Serial No. 78,079. Term of patent 7 years.



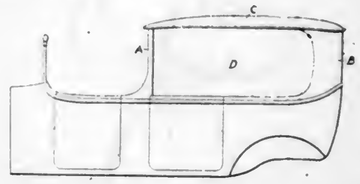
The ornamental design for a badge, seal or emblem, as shown.

49,579. BADGE. FREDERICK KEES, Minneapolis, Minn. Filed June 19, 1916. Serial No. 104,619. Term of patent 3½ years.



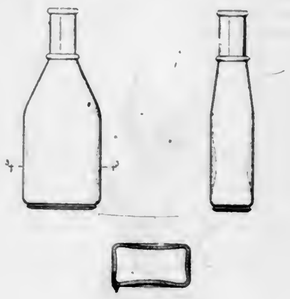
The ornamental design for a badge, as shown.

49,580. VEHICLE-BODY. HERMAN C. MAISE, Springfield, Mass., assignor to Springfield Body Corporation of New York, Springfield, Mass., a Corporation of New York. Filed June 27, 1916. Serial No. 106,265. Term of patent 14 years.



The ornamental design for a vehicle body as shown and described.

49,581. BOTTLE. CLARENCE MINOR MCCLURE, Detroit, Mich., assignor to Nyal Co., Detroit, Mich., a Corporation of Michigan. Filed May 9, 1916. Serial No. 96,453. Term of patent 14 years.



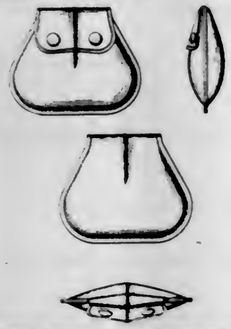
The ornamental design for a bottle substantially as shown and described.

49,582. TEXTILE FABRIC. FREDERICK S. PINKUS, New York, N. Y. Filed Apr. 28, 1916. Serial No. 94,266. Term of patent 7 years.



The ornamental design for a textile fabric, substantially as shown and described.

49,583. TOBACCO-POUCH. MALNOR A. SHUMARD and MALNOR A. SHUMARD, Jr., Haoke Ranch, near Boerne, Tex. Filed Oct. 12, 1915. Serial No. 55,583. Term of patent 14 years.



The ornamental design for a tobacco pouch, as shown.

49,584. STATUETTE OR SIMILAR ARTICLE. JOHN FREDERICK SLAVIK, New York, N. Y., assignor to Goldman Costume Co., New York, N. Y. Filed June 3, 1916. Serial No. 101,618. Term of patent 14 years.



The ornamental design for a statuette or similar article, consisting of the design substantially as shown and described.

49,585. DOLL. JANE G. STOKES, New York, N. Y., assignor to Jane Gray Company, New York, N. Y., a Copartnership. Filed June 21, 1916. Serial No. 105,071. Term of patent 3½ years.



The ornamental design for a doll, as shown and described.

49,586. DOLL. JANE G. STOKES, New York, N. Y., assignor to Jane Gray Company, New York, N. Y., a Copartnership. Filed June 21, 1916. Serial No. 105,072. Term of patent 3½ years.



The ornamental design for a doll, as shown.

49,587. JAR. VICTOR VIVAUDOU, New York, N. Y. Filed June 20, 1916. Serial No. 104,822. Term of patent 7 years.



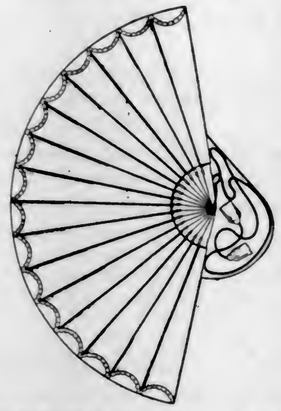
The ornamental design for a jar as shown.

49,588. DUSTER. JOHN P. WADE, New York, N. Y. Filed June 20, 1916. Serial No. 104,820. Term of patent 3½ years.



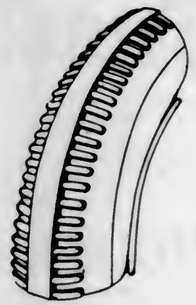
The ornamental design for a duster as shown.

49,589. FAN. FRANK H. WAGGONER, Chicago, Ill., assignor to Commercial Colortype Company, Chicago, Ill., a Corporation of Illinois. Filed May 19, 1916. Serial No. 98,701. Term of patent 3½ years.



The ornamental design for a fan substantially as shown and described.

49,590. TIRE-TREAD. WILLIAM S. WOLFE, Akron, Ohio. Filed June 9, 1916. Serial No. 102,779. Term of patent 14 years.



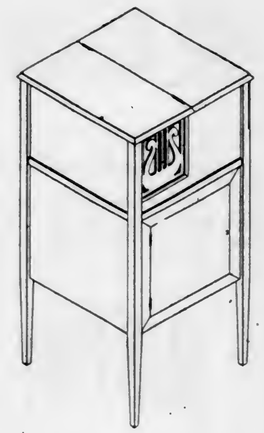
The ornamental design for a tire tread as shown and described.

49,591. JEWELRY PIN, CHARM, FOB, PENDANT, CUFF-BUTTON, RING, OR SIMILAR ARTICLE. CHARLES T. PAYE, North Attleboro, Mass., assignor to Paye & Baker Manufacturing Company, North Attleboro, Mass., a Corporation of Massachusetts. Filed June 6, 1916. Serial No. 102,097. Term of patent 3½ years.



The ornamental design for a jewelry pin, charm, fob, pendant, cuff button, ring or similar article as shown.

49,592. TALKING-MACHINE CABINET. HORACE SHEBLE, Philadelphia, Pa., assignor to Domestic Talking Machine Corporation, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 15, 1916. Serial No. 103,892. Term of patent 7 years.



The ornamental design for a talking machine cabinet as shown.

TRADE-MARKS

PUBLISHED AUGUST 29, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 82,329. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill. Filed Nov. 2, 1914.

BRUBALCOL No.1.

Particular description of goods.—Billiard-Cloth.
Claims use since the 8th of October, 1914.

Ser. No. 83,573. (CLASS 38. PRINTS AND PUBLICATIONS.) THRIFT COUPON COMPANY OF AMERICA, Los Angeles, Cal. Filed Dec. 29, 1914.

THRIFT

Particular description of goods.—Merchandise-Coupons.
Claims use since on or about Nov. 20, 1914.

Ser. No. 85,419. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) GEORGE E. SIEBERT, Chicago, Ill. Filed Mar. 25, 1915.

DIASCOPE

Particular description of goods.—Eye Shields or Protectors Attached to Locomotive-Cabs or Front Portions of Automobiles or other vehicles.
Claims use since on or about Mar. 4, 1915.

Ser. No. 86,861. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LION TRACTOR COMPANY, Minneapolis, Minn. Filed May 24, 1915.



Particular description of goods.—Traction-Engines.
Claims use since about Oct. 20, 1914.

Ser. No. 87,309. (CLASS 38. PRINTS AND PUBLICATIONS.) NEW ENGLAND TRADE-TRAVEL COMPANY, Boston, Mass. Filed June 15, 1915.



Particular description of goods.—Pamphlets and Redeemable Coupons.
Claims use since the 15th of April, 1915.

Ser. No. 87,891. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) IMPERIAL MACARONI MANUFACTURING COMPANY, Butte, Mont. Filed July 12, 1915.

IMPERIAL

Particular description of goods.—Macaroni, Vermicelli, and Spaghetti.
Claims use since Sept. 1, 1898.

Ser. No. 88,733. (CLASS 15. OILS AND GREASES.) GAS ENGINE EFFICIENCY COMPANY, St. Louis, Mo. Filed Aug. 21, 1915.



No claim being made to the words "Use" and "Products" apart from the mark shown in the drawing.
Particular description of goods.—Lubricating Greases and Oils.
Claims use since Mar. 1, 1914.

Ser. No. 88,818. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) CANADA CYCLE & MOTOR CO., LTD., Toronto, Ontario, Canada. Filed Aug. 26, 1915.

Automobile

Consists of the word or symbol "Automobile."

Particular description of goods.—Skates and Parts and Accessories Thereof.

Claims use since March, 1905.

Ser. No. 89,674. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BERTHA WESLOW, Seattle, Wash. Filed Oct. 5, 1915.



Particular description of goods.—Dill Pickles and Kraut.

Claims use since Feb. 25, 1915.

Ser. No. 89,981. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) RALPH L. HENRY, New York, N. Y. Filed Oct. 21, 1915.



The words "Trade-Mark" being disclaimed and no claim being made to the representation of a section of packing apart from the mark shown in the drawing. The trade-mark consists of the representation of a section of a special packing upon which is arranged the word "Chanelco."

Particular description of goods.—Rubber and Rubber and Fiber Packings for the Piston-Rods of Engines and Pumps.

Claims use since July 1, 1915.

Ser. No. 90,383. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRED FEAR & COMPANY, New York, N. Y. Filed Nov. 3, 1915.



The word "Syrup," which appears on the drawing, is hereby disclaimed as a part of the mark, and the descriptive words "Tip Top" are also disclaimed.

Particular description of goods.—Syrups for Table Purposes.

Claims use since Sept. 1, 1915.

Ser. No. 90,394. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. ROMEO & CO., INC., New York, N. Y. Filed Nov. 3, 1915.

RLE DEMATTIA FU·GPPE



No claim being made to the words "Rle De Mattia Fu-Gppe" apart from the mark as shown.

Particular description of goods.—Macaroni.

Claims use since about Oct. 1, 1915.

Ser. No. 90,780. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HEZZIE PAUL WILKINS, Lumberton, N. C. Filed Nov. 19, 1915.



Particular description of goods.—A Preparation for Pellagra.

Claims use since Aug. 30, 1915.

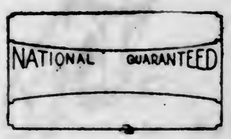
Ser. No. 90,803. (CLASS 5. ADHESIVES.) THE WERNER G. SMITH CO., Lakewood, Ohio. Filed Nov. 20, 1915.

LINOIL

Particular description of goods.—A Vegetable Oil Used in Making Cores.

Claims use since Dec. 1, 1913.

Ser. No. 91,748. (CLASS 38. PRINTS AND PUBLICATIONS.) NATIONAL CHECKING COMPANY, St. Paul, Minn. Filed Dec. 24, 1915.



No claim being made to the word "Guaranteed" apart from the mark shown in the drawing.

Particular description of goods.—Dairy, Ice, Merchandise, and Lunch Coupons.

Claims use since May 1, 1915.

Ser. No. 92,495. (CLASS 12. CONSTRUCTION MATERIALS.) KEYSTONE FIREPROOFING CO., New York, N. Y. Filed Jan. 29, 1916.



No claim being made to the exclusive use of the words "Key-Tile" and "System Long Span" apart from the mark shown in the drawing.

Particular description of goods.—Combined Concrete and Tile Fireproof Floors, Roofs, and Partitions.

Claims use since 1914.

Ser. No. 92,703. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) USIT MANUFACTURING COMPANY OF AMERICA, INC., Buffalo, N. Y. Filed Feb. 7, 1916.

USIT

Particular description of goods.—Complexion or Massage Cream.

Claims use since July 26, 1912.

Ser. No. 92,830. (CLASS 38. PRINTS AND PUBLICATIONS.) JAMES B. CLOW & SONS, Chicago, Ill. Filed Feb. 14, 1916.



No claim is made for the word "Chicago."

Particular description of goods.—Catalogues, Price-Lists, and other Publications.

Claims use since the year 1914.

Ser. No. 92,857. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS RANDOLPH GIBSON, Springfield, Mo. Filed Feb. 15, 1916.

WIGWAM



REMEDIES

My trade-mark consists of a conical Indian wigwam, an Indian standing to the left in front, over the top of the wigwam in semicircular form and in block-letters the word "Wigwam," no claim being made for the term "Remedies" apart from the mark shown on the drawing.

Particular description of goods.—Cold and Grip Medical Tablets, Stomach and Indigestion Medical Tablets.

Claims use since July, 1915.

Ser. No. 93,574. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) WILLIAM F. HAMMEL, Pittsburgh, Pa. Filed Mar. 16, 1916.

ABSOLUTELY

Particular description of goods.—Whisky.

Claims use since Dec. 1, 1915.

Ser. No. 93,868. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE DRUG PRODUCTS CO., INC., New York, N. Y. Filed Mar. 25, 1916.

WAFOIDS

Particular description of goods.—Wafers and Tablets for Use as Vehicles for Medicines.

Claims use since October, 1911.

Ser. No. 93,927. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BAY CITY STORAGE & FISHERIES CO., Bay City, Oreg. Filed Mar. 28, 1916.



Particular description of goods.—Canned Salmon.

Claims use since July 15, 1914.

Ser. No. 93,966. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE F. A. KLAINE CO., Cincinnati, Ohio. Filed Mar. 29, 1916.

GOOD MEAL

Particular description of goods.—Ranges, Cooking-Stoves, and Heating-Stoves Using Coal or Gas as Fuel.
Claims use since Aug. 3, 1915.

Ser. No. 93,994. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) L-KO MOTION PICTURE CORPORATION, Los Angeles, Cal. Filed Mar. 30, 1916.



No claim is made to the word "Film" apart from the mark shown in the drawing.
Particular description of goods.—A Series of Different Motion-Picture Photoplays.
Claims use since on or about the 25th day of October, 1914.

Ser. No. 94,001. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN T. WILLS and T. C. BELL, Baltimore, Md. Filed Mar. 30, 1916.



Particular description of goods.—A Photographic Developer.
Claims use since Feb. 15, 1916.

Ser. No. 94,170. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE E. KOEHLER, New York, N. Y. Filed Apr. 5, 1916.



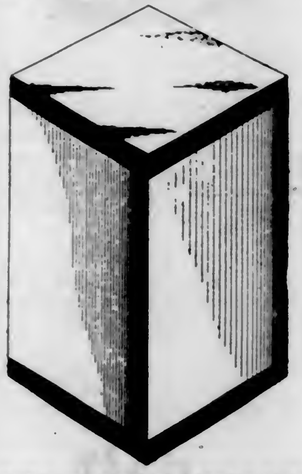
Which includes a shield with the word "United" indicated on a background of red.
Particular description of goods.—Salad-Dressing.
Claims use since Mar. 1, 1916.

Ser. No. 94,211. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STANDARD CHEMICAL COMPANY, Pittsburgh, Pa. Filed Apr. 6, 1916.

OPTIVAN

Particular description of goods.—Medicinal Preparation for the Treatment of Syphilis, Pyorrhea, and Septicemia.
Claims use since Mar. 20, 1916.

Ser. No. 94,281. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. B. CHAMBERLAIN CO., St. Louis, Mo. Filed Apr. 10, 1916.



The trade-mark consists of a red band or stripe located at the top and bottom of each of the panels of the carton in which the flour is sold, no claim being made to the representation of a carton *per se*.
Particular description of goods.—Self-Raising Flour.
Claims use since Mar. 2, 1896, or earlier.

Ser. No. 94,337. (CLASS 39. CLOTHING.) STIX, BAER & FULLER DRY GOODS CO., St. Louis, Mo. Filed Apr. 11, 1916.



HOLSHAPE

No claim being made to the exclusive use of the word "Holshape" apart from the mark as shown in the drawing.
Particular description of goods.—Articles of Wearing-Apparel—viz., Ladies' Outer Coats.
Claims use since March, 1916.

Ser. No. 94,764. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) BEMIS BRO. BAG CO., St. Louis, Mo. Filed Apr. 28, 1916.

FLEXOID

Particular description of goods.—Coated Fabrics.
Claims use since Apr. 15, 1916.

Ser. No. 94,912. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN INGENUITIES CORPORATION, Brooklyn, N. Y. Filed May 5, 1916.



No claim being made to the representation of a container or cup shown in the drawing except in connection with this mark.
Particular description of goods.—Edible Containers for Creams, Ice-Creams, Liquid and Semiliquid Foods and Confections.
Claims use since Mar. 15, 1916.

Ser. No. 94,917. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) DEITSCH BROTHERS, New York, N. Y. Filed May 5, 1916.

Gothic Ivory

No claim being made to the word "Ivory" apart from the mark shown in the drawing.
Particular description of goods.—Raw or Partly-Prepared Celluloid.
Claims use since June 1, 1915.

Ser. No. 95,023. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUSTIN & RAUP CO., Detroit, Mich. Filed May 10, 1916.

AU-RA

Particular description of goods.—Salad-Oil, Pepper Sauce, Olive-Oil, Olives, Tomato Catsup, Fruit Jam, Peanut-Butter, Mince-Meat, Cocoa, Prepared Mustard, Pimentos, Coffee, Canned Vegetables, Canned Kidney-Beans, Dried Currants, Seeded Raisins, Sago, Hominy-Grits, Tapioca, Sugar Mixture, Split Peas, Rice, Self-Rising Graham Flour, Cornmeal, Graham Flour, Whole-Wheat Flour, Self-Rising Biscuit-Flour, Breakfast Cereal, Self-Rising Buckwheat Compound, and Self-Rising Pancake-Flour.
Claims use since November, 1915.

Ser. No. 95,123. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) DURYEA MANUFACTURING COMPANY, Jersey City, N. J., and New York, N. Y. Filed May 13, 1916.



No claim of exclusive right to the use of the word "Belting" being made except as shown in the drawing.
Particular description of goods.—Solid-Woven Belting.
Claims use since March, 1916.

Ser. No. 95,130. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE RAUCHBACH-GOLDSMITH CO., Newark, N. J. Filed May 13, 1916.



No registration rights being claimed for the words "The" and "Everwear" apart from the mark shown in the drawing.
Particular description of goods.—Trunks.
Claims use since June, 1915.

Ser. No. 95,263. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB DE KAISER, Cleveland, Ohio. Filed May 19, 1916.

KATARACIDE

Particular description of goods.—A Preparation for the Relief of Catarrh, Colds in the Head, and Tonsilitis and for Cleansing the Nasal Passages, Mouth, and Throat.
Claims use since May 2, 1916.

Ser. No. 95,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM BERNARD LINGO, Atlanta, Ga. Filed May 24, 1916.

L. O. COMPOUND

No claim is made to the word "Compound" apart from the mark shown on the drawing.
Particular description of goods.—A Remedy for Burns, Septic Wounds, Pustular Processes, Bronchial Troubles, Pneumonia, Bronchitis, Asthma, Endometritis, Vaginitis, Urethritis, Rheumatism, Lumbago, Migraine, Neuralgia, Orchitis, Balanitis, Enlarged Glands, and as a Galactogogue, Analgesic, and General Surgical Dressing.
Claims use since Jan. 31, 1916.

Ser. No. 95,443. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GIBBS PRESERVING COMPANY, Baltimore, Md. Filed May 26, 1916.

BULL HEAD

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Oysters, Preserved Berries, Jellies, Apple-Butter, Fruit Preserves, Tomato Catsup, Tomato Catsup with Tabasco Sauce, Peanut-Butter, Chilli Sauce, and Marmalades.
Claims use since May 12, 1883.

Ser. No. 95,532. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OHIO PROVISION COMPANY, Cleveland, Ohio. Filed May 29, 1916. Under ten-year proviso.

OHIO

The word "Ohio."
Particular description of goods.—Pork Products—Namely, Hams, Bacon, Lard, and Sausage.
Claims use since Feb. 1, 1895.

Ser. No. 95,666. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARKANSAS GROCER CO., Blytheville, Ark. Filed June 7, 1916.

MO-ARK-MAID

Particular description of goods.—Self-Raising and Plain Biscuit Flour and Meal.
Claims use since Apr. 26, 1916.

Ser. No. 95,686. (CLASS 31. FILTERS AND REFRIGERATORS.) WM. A. SEXTON COMPANY, INC., New York, N. Y. Filed June 7, 1916.

The EASY FREEZER

No claim being made to the words "The Easy Freezer" apart from the mark shown in the drawing.
Particular description of goods.—Liquid-Freezers.
Claims use since October, 1915.

Ser. No. 95,698. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) L. C. CHASE & COMPANY, Boston, Mass. Filed June 8, 1916.

SHU-SKIN

Particular description of goods.—Artificial Leather.
Claims use since Dec. 31, 1915.

Ser. No. 95,689. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ASTRA FILM CORPORATION, New York, N. Y. Filed June 8, 1916.

ASTRA

Particular description of goods.—Moving-Picture Films.
Claims use since Apr. 14, 1916.

Ser. No. 95,793. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HENRY M. PETERS, Chicago, Ill. Filed June 10, 1916.

AMRON

Particular description of goods.—Electric Lamps.
Claims use since Feb. 1, 1915.

Ser. No. 95,835. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES WIRE MAT COMPANY, Decatur, Ill. Filed June 12, 1916.

KANT-MIS

Particular description of goods.—Fly-Killers or Hand Devices for Killing Flies and other Insects.
Claims use since on or about the 15th of May, 1916.

Ser. No. 95,940. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed June 17, 1916.

NAUGASOLE

Particular description of goods.—Shoe-Leather Substitute.
Claims use since May 4, 1916.

Ser. No. 95,982. (CLASS 38. PRINTS AND PUBLICATIONS.) THE STROBRIDGE LITHOGRAPHING CO., Cincinnati, Ohio. Filed June 19, 1916.

QUALITY

Particular description of goods.—Posters, Labels, and Prints.
Claims use since Apr. 22, 1916.

Ser. No. 95,983. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SEGREF CHEMICAL CO., New York, N. Y. Filed June 19, 1916.

Stainoff

No claim being made for the word "Stainoff" apart from the mark shown on the drawing.
Particular description of goods.—A Remover of Stains from the Teeth.
Claims use since June 1, 1916.

Ser. No. 95,985. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. W. WAGENER & CO., Charleston, S. C. Filed June 19, 1916.

FAMOUS

Particular description of goods.—Coffee and Imitation Coffee.
Claims use since Apr. 15, 1915.

Ser. No. 95,988. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ZUERL AUTO FUEL & SUPPLY CO., Cleveland, Ohio. Filed June 19, 1916.

ZurlGas

Particular description of goods.—Liquid Fuel for Internal-Combustion Engines or a Liquid Composition for Mixing with Gasolene to Provide Fuel for Internal-Combustion Engines.
Claims use since June 1, 1916.

Ser. No. 95,995. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BLISH MILLING CO., Seymour, Ind. Filed June 20, 1916.

MASPAN

Particular description of goods.—Wheat-Flour.
Claims use since February, 1914.

Ser. No. 96,007. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAVE-MCCORD MERCANTILE CO., St. Joseph, Mo. Filed June 20, 1916.

CLOVER LEAF

Particular description of goods.—Coffee.
Claims use since Feb. 1, 1887.

Ser. No. 96,022. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NORTHERN JOBBING COMPANY, Chicago, Ill. Filed June 21, 1916.

BLVE ROCK

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Pork and Beans, Canned Salmon, and Fruit Jams.
Claims use since Apr. 20, 1916.

Ser. No. 96,059. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BERNHARD MITTELSTAEDT, New York, N. Y. Filed June 22, 1916.

"SELF ADJUSTING" "PARAMOUNT"



The picture being fanciful. No claim is made to the exclusive right to the use of the words "Self Adjusting," "Real Hair," "Hand Made," and "Color" or to the representation of the net.
Particular description of goods.—Hair-Nets.
Claims use since Apr. 12, 1916.

Ser. No. 96,078. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SOLOMON BERKOWICZ, New York, N. Y. Filed June 23, 1916.



HONEY PRODUCTS

No claim being made to the words "Brand" and "Honey Products" apart from the mark shown in the drawing.
Particular description of goods.—Bottled Ginger-Ale, Cream-Soda, Lemon-Soda, Raspberry-Soda, and Root-Beer.
Claims use since April, 1913.

Ser. No. 96,114. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) WILLIAM M. MUCHOW, Evanston, Ill. Filed June 24, 1916.

Flossy

The arbitrarily-selected word-symbol "Flossy."
Particular description of goods.—An Instrument for Cleaning the Teeth of Humans.
Claims use since the 1st day of May, 1916.

Ser. No. 96,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. MAX KUEHNRICH, Los Angeles, Cal. Filed June 26, 1916.

RE-NATURED

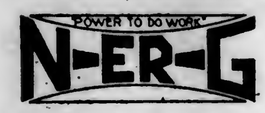
Particular description of goods.—Gluten Bread, Wheat Bread, Rye Bread, Whole-Wheat Bread, Graham Bread, Bran Bread, Phosphate Bread, Pumpernickel-Bread, Zwieback, Rolls, Biscuits, Crackers, Cookies, Cakes, Wafers, Cocoa, Chocolate, Candy, Potato-Flour, Gluten-Flour, Wheat-Flour, Rye-Flour, Whole-Wheat Flour, Graham Flour, Bran-Flour, Phosphate-Flour, Sweet Milk, Sweet Cream, Sour Milk, Sour Cream, Buttermilk, Condensed Milk, Condensed Cream, Evaporated Milk, Evaporated Cream, Powdered Milk, Malted Milk, and Chewing-Gums.
Claims use since June 17, 1916.

Ser. No. 96,163. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSELL-MILLER MILLING COMPANY, Minneapolis, Minn., and Billings, Mont. Filed June 26, 1916.



Particular description of goods.—Wheat-Flour.
Claims use since about Feb. 1, 1915.

Ser. No. 96,164. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS J. SARDINO, Syracuse, N. Y. Filed June 26, 1916.



I hereby disclaim the words "Power to do Work."
Particular description of goods.—Carbon-Remover for Automobile and other Gasolene Engines.
Claims use since Dec. 1, 1915.

Ser. No. 96,193. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA CENTRAL CREAMERIES, San Francisco, Cal. Filed June 28, 1916.



No claim being made to the words "Golden State."
Particular description of goods.—Butter, Cheese, Sweet Cream, Dry Whole Milk, Dry Skim-Milk, Dry Buttermilk, and Eggs.
Claims use since April, 1912.

Ser. No. 96,212. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHESTER S. MILLS, Pittsburgh, Pa. Filed June 28, 1916.

BEECH-NUT

△

Particular description of goods.—Cereal Breakfast Food.
Claims use since Mar. 1, 1916.

Ser. No. 96,215. (CLASS 15. OILS AND GREASES.) THE ROBINSON OIL CO., Coraopolis, Pa. Filed June 28, 1916.

ROCOLENE

Comprising the word "Rocolene."
Particular description of goods.—Illuminating-Oils and Lubricating Oils and Greases.
Claims use since Apr. 10, 1916.

Ser. No. 96,221. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAX P. WEILER, Detroit, Mich. Filed June 28, 1916.



No claim is made to the word "Bakery" apart from the mark shown in the drawing.
Particular description of goods.—Bread, Rolls, Buns, Cakes, Cookies, Patty-Shells.
Claims use since May 15, 1916.

Ser. No. 96,247. (CLASS 39. CLOTHING.) THE COMMONWEALTH SHOE AND LEATHER COMPANY, Portland, Me., and Boston, Mass. Filed June 30, 1916.



No claim is made to the representation of the sole of the boot or shoe apart from the mark shown in said drawing.
Particular description of goods.—Leather Boots and Shoes.
Claims use since the month of May, 1916.

Ser. No. 96,257. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PARAMOUNT PRODUCTS CO., Philadelphia, Pa. Filed June 30, 1916.

WHISPERS

Particular description of goods.—Peppermint Candies.
Claims use since November, 1915.

Ser. No. 96,265. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN BLOCKI & SON (INC.), Chicago, Ill. Filed July 1, 1916.



Particular description of goods.—Perfumery, Toilet Water, and Sachet-Powders.
Claims use since about Feb. 15, 1916.

Ser. No. 96,266. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BAYER COMPANY, INC., New York, N. Y. Filed July 1, 1916.

ARISTOLINA

Particular description of goods.—Antiseptical Purposes.
Claims use since Nov. 25, 1889.

Ser. No. 96,269. (CLASS 39. CLOTHING.) HALNY HAT COMPANY, New York, N. Y. Filed July 1, 1916.



Particular description of goods.—Hats and Caps.
Claims use since Dec. 27, 1915.

Ser. No. 96,303. (CLASS 38. PRINTS AND PUBLICATIONS.) RAND MCNALLY & COMPANY, Chicago, Ill. Filed July 3, 1916.



Particular description of goods.—Rand McNally & Co.'s New Street Number Guide and Complete City Railway Directory of Chicago, Published Yearly.
Claims use since February, 1901.

Ser. No. 96,313. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. K. ARMSBY CO., San Francisco, Cal. Filed July 5, 1916.



Particular description of goods.—Canned Fruits.
Claims use since May 16, 1916.

Ser. No. 96,329. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) LENZITE CRYSTAL CORPORATION, Pasadena, Cal. Filed July 5, 1916.



Particular description of goods.—Electromagnetic Wave-Detectors and other Electrical Devices for Receiving or Conveying Sound-Waves.
Claims use since Aug. 29, 1914.

Ser. No. 96,338. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo. Filed July 5, 1916.



Particular description of goods.—Tea and Roasted Coffee.
Claims use since June 28, 1916.

Ser. No. 96,352. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS L. DOWNING, New York, N. Y. Filed July 6, 1916.



The word "Bread" being disclaimed.
Particular description of goods.—Bread.
Claims use since June 1, 1916.

Ser. No. 96,449. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) IDA WEITZMAN, Philadelphia, Pa. Filed July 8, 1916.



The picture comprising the trade-mark is a portrait of myself.

Particular description of goods.—Salve for the Treatment of Pimples, Blackheads, Eczema, Prickly Heat, and other Skin Eruptions.

Claims use since Mar. 10, 1916.

Ser. No. 96,460. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CO-OPERATIVE CHEMICAL COMPANY, Buffalo, N. Y. Filed July 10, 1916.



Particular description of goods.—Gasolene-Reducer.

Claims use since May 12, 1916.

Ser. No. 96,466. (CLASS 39. CLOTHING.) BENJAMIN KRONTHAL, Chicago, Ill., and Michigan City, Ind. Filed July 10, 1916.

The Double Kind

Particular description of goods.—Shirts.

Claims use since on or about the 1st of January, 1916.

Ser. No. 96,471. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALSTON PURINA COMPANY, St. Louis, Mo. Filed July 10, 1916.

GOOD LUCK

Particular description of goods.—Stock Feed, Horse Feed, Swine Feed, Sheep Feed, Dairy Feed, and Poultry Feed.

Claims use since on or about the 1st day of April, 1903.

Ser. No. 96,488. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BASIC MINERAL COMPANY, Pittsburgh, Pa. Filed July 11, 1916.

RADIOCLARITE

Particular description of goods.—Fluxes for Non-Ferrous Metals.

Claims use since the year 1909.

Ser. No. 96,489. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BASIC MINERAL COMPANY, Pittsburgh, Pa. Filed July 11, 1916.

KEYSTONE

Particular description of goods.—Fluxes for Ferrous Metals.

Claims use since the year 1899.

Ser. No. 96,494. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK A. FURRISH, Boston, Mass. Filed July 11, 1916.



Particular description of goods.—A Remedy Adapted to be Used Internally and Externally for Treatment of Colds and Ailments Caused Thereby.

Claims use since Mar. 19, 1914.

Ser. No. 96,497. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HALLOCK-DENTON CO., Newark, N. J. Filed July 11, 1916.

GIANT

Particular description of goods.—Ammonia.

Claims use since Oct. 5, 1903.

Ser. No. 96,503. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH MAZZEO, New York, N. Y. Filed July 11, 1916.

Autorine



Particular description of goods.—A Preparation for Increasing and Improving the Efficiency of Gasolene and Preventing the Deposit of Carbon.

Claims use since June 18, 1916.

Ser. No. 96,511. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JACOB C. YOUNG, Longview, Tex. Filed July 11, 1916.



Particular description of goods.—Heel-Sweeps.

Claims use since July, 1915.

Ser. No. 96,534. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) TIMES SQUARE AUTOMOBILE CO., New York, N. Y. Filed July 12, 1916.

STAG

Particular description of goods.—Automobile-Tires and Inner Tubes of Leather, Rubber, Canvas, or Combinations of Same, and Inner Tubes, Rubber, Leather, and Cementless Blow-Out Patches.

Claims use since June 10, 1916.

Ser. No. 96,542. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH J. FLEMING, Boone, Iowa. Filed July 13, 1916.



Particular description of goods.—A Destroyer of Dandelion, Burdock, and other Roots.

Claims use since June 10, 1916.

Ser. No. 96,547. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 13, 1916.

ZONA

Particular description of goods.—Biscuit.

Claims use since as early as July 8, 1916.

Ser. No. 96,552. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) TILDEN SAW CO., Detroit, Mich. Filed July 13, 1916.



Particular description of goods.—Saws.

Claims use since June 29, 1916.

Ser. No. 96,559. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE FEDERAL RUBBER COMPANY, Cudahy, Wis. Filed July 14, 1916.

TRAFFIK

Particular description of goods.—Tire-Treads.

Claims use since May 11, 1916.

Ser. No. 96,570. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) R/B PLATE CO., Philadelphia, Pa. Filed July 14, 1916.

KINKS-OUT

Particular description of goods.—Plates for the Treatment of Rheumatism, Neuritis, Lumbago, and Kindred Diseases.

Claims use since about Nov. 1, 1915.

Ser. No. 96,574. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOLEDAD CREAMERY CO., Soledad, Cal. Filed July 14, 1916.

MISSION

Particular description of goods.—Creamery-Butter.

Claims use since May 1, 1916.

Ser. No. 96,577. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN P. DOUSMAN MILLING CO., Depere, Wis. Filed July 15, 1916. Under ten-year proviso.

TOP NOTCH

Particular description of goods.—Wheat-Flour.
Claims use since about 1886.

Ser. No. 96,585. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HUTHER BROS. SAW MANUFACTURING CO., Rochester, N. Y. Filed July 15, 1916.

HUTHER

Particular description of goods.—Saws.
Claims use since May 15, 1916.

Ser. No. 96,593. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCKESSON & ROBBINS, New York, N. Y. Filed July 15, 1916.

FROZOCLONE

Particular description of goods.—Eau de Cologne.
Claims use since Nov. 15, 1914.

Ser. No. 96,599. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed July 15, 1916.

SECALOPAN

Particular description of goods.—A Pharmaceutical Product Containing All the Alkaloids of Secale Cornutum and is Particularly Applicable in Obstetrics and Gynecology.
Claims use since Jan. 3, 1914.

Ser. No. 96,600. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed July 15, 1916.

JODIPEROL

Particular description of goods.—A Certain Pharmaceutical Product Containing Iodid of Potassium and a Hydroperoxid Combination and is Particularly Applicable for the Treatment of Wounds.
Claims use since May 20, 1916.

Ser. No. 96,605. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed July 15, 1916.

ENOMORPHON

Particular description of goods.—A Pharmaceutical Product Containing Allylmorphin and Morphin Hydrochlorid and is Particularly Applicable as Morphin, for Sedative Purposes.
Claims use since Apr. 16, 1914.

Ser. No. 96,613. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BEALL BROTHERS, Alton, Ill. Filed July 17, 1916.

GOLD BUG

Particular description of goods.—Scoops and Shovels.
Claims use since about Feb. 15, 1915.

Ser. No. 96,616. (CLASS 15. OILS AND GREASES.) THE CUDAHY REFINING COMPANY, Portland, Me., and Chicago, Ill. Filed July 17, 1916.

RUBILENE

Particular description of goods.—Lubricating-Oils.
Claims use since Apr. 7, 1916.

Ser. No. 96,618. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) CHICAGO FEATHER DUSTER COMPANY, Chicago, Ill. Filed July 17, 1916.

ROYAL BLUE

Particular description of goods.—Dusters Adapted to be Hand-Manipulated for Dusting Purposes.
Claims use since before the 12th day of February, 1914.

Ser. No. 96,621. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARK MILLING COMPANY, Augusta, Ga. Filed July 17, 1916.

EARLY BREAKFAST

Particular description of goods.—Self-Rising Flour.
Claims use since September, 1912.

Ser. No. 96,625. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) HASKELL TRUNK COMPANY, Chicago, Ill. Filed July 17, 1916.



Particular description of goods.—Trunks.
Claims use since May 10, 1916.

Ser. No. 96,632. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PECANELLA COMPANY, INC., Albany, N. Y. Filed July 17, 1916.



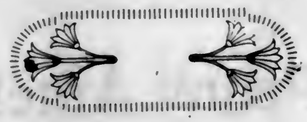
No claim being made to the word "Sweets" apart from the mark shown in the drawing.
Particular description of goods.—Candy.
Claims use since the 28th day of April, 1916.

Ser. No. 96,647. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CUTTER LABORATORY, Berkeley, Cal. Filed July 18, 1916.

ANTI-SUPPURINE

Particular description of goods.—Bacterial Vaccines.
Claims use since May, 1910.

Ser. No. 96,652. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 18, 1916.



Particular description of goods.—Biscuit.
Claims use since as early as June 28, 1916.

Ser. No. 96,655. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE WOLFRAM, Columbus, Ohio. Filed July 18, 1916.

SO-MEEKA

Comprising the words "So-Meeka."
Particular description of goods.—A Tonic Stomach-Tablet.
Claims use since Sept. 1, 1915.

Ser. No. 96,662. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN D. BORDER, Bozeman, Mont. Filed July 19, 1916.

J. D. B.

Particular description of goods.—A Compound for Use in Treating Diseases of the Kidneys.
Claims use since June 1, 1916.

Ser. No. 96,677. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SARASOTA CITRUS GROWERS ASSOCIATION, Sarasota, Fla. Filed July 19, 1916.

SARA DE SOTA

Comprising the words "Sara De Sota."
Particular description of goods.—Citrus Fruits.
Claims use since Oct. 5, 1912.

Ser. No. 96,679. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHULZE BAKING COMPANY, Chicago, Ill. Filed July 19, 1916.



Particular description of goods.—Cake and Bread.
Claims use since May 1, 1916.

Ser. No. 96,687. (CLASS 12. CONSTRUCTION MATERIALS.) EASTMAN, GARDINER & COMPANY, Laurel, Miss. Filed July 20, 1916.

OSPA

Particular description of goods.—Lumber.
Claims use since the 15th day of May, 1916.

Ser. No. 96,703. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEELEVILLE MILLING COMPANY, Steeleville, Ill. Filed July 20, 1916.

MOCKING-BIRD

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since about Oct. 1, 1915.

Ser. No. 96,706. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AKTIESELSKABET DANSK PRESERVERINGSFABRIK "AMA," Copenhagen, Denmark. Filed July 21, 1916.

AMA

Particular description of goods.—Dried and Preserved Vegetables.
Claims use since September, 1915.

Ser. No. 96,712. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HISCOX & Co., Patchogue, N. Y. Filed July 21, 1916.

HVL

Particular description of goods.—A Preparation for Polishing Auto-Bodies, Pianos, Furniture, Hardwood Floors, and All Varnished Surfaces.
Claims use since June 26, 1916.

Ser. No. 96,725. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed July 21, 1916.

ELGON

Particular description of goods.—Fat Preparation for Use on Tanned Hides.
Claims use since on or about Mar. 1, 1916.

Ser. No. 96,726. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed July 21, 1916.

ARAZYM

Particular description of goods.—Chemical Used in the Preparation of Hides for Tanning.
Claims use since on or about Mar. 1, 1916.

Ser. No. 96,727. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed July 21, 1916.

KOREON

Particular description of goods.—Chemical Used for Tanning of Hides.
Claims use since on or about Mar. 1, 1916.

Ser. No. 96,728. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed July 21, 1916.

LIPON

Particular description of goods.—Fat Preparation for Use on Tanned Hides.
Claims use since on or about Mar. 1, 1916.

Ser. No. 96,729. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed July 21, 1916.

BETANYL

Particular description of goods.—Fat Preparations for Use on Tanned Hides.
Claims use since on or about Mar. 1, 1916.

Ser. No. 96,730. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RÖHM & HAAS, Philadelphia, Pa. Filed July 21, 1916.

CAMPECHENE

Particular description of goods.—Coloring Material for Coloring Hides, Skins, and Textile Fabrics.
Claims use since on or about Mar. 1, 1916.

Ser. No. 96,733. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed July 21, 1916.

KINNEY B. ALIVE

Particular description of goods.—A Newspaper-Section.
Claims use since June 19, 1916.

Ser. No. 96,734. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed July 21, 1916.

Penny Ante!

Particular description of goods.—A Newspaper-Section.
Claims use since June 13, 1916.

Ser. No. 96,735. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed July 21, 1916.

Cousin Willie!

Particular description of goods.—A Newspaper-Section.
Claims use since Apr. 28, 1916.

Ser. No. 96,736. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed July 21, 1916.

It Can't Be Done

Particular description of goods.—A Newspaper-Section.
Claims use since June 13, 1916.

Ser. No. 96,740. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JUNIUS P. WOOD, Keysville, Va. Filed July 21, 1916.

W. I. H.

Particular description of goods.—A Liquid Remedy to be Inhaled by Man and Animal for the Treatment of All Diseases or Affections of the Bronchial Tubes, Throat, or Catarrhal Organs.
Claims use since about the 1st of June, 1916.

Ser. No. 96,745. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEPHEN A. GERRARD, Cincinnati, Ohio. Filed July 22, 1916.

Pink Queens

Particular description of goods.—Cantaloups.
Claims use since Sept. 1, 1911.

Ser. No. 96,746. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEPHEN A. GERRARD, Cincinnati, Ohio. Filed July 22, 1916.

AMERICAN BEAUTY

Particular description of goods.—Cantaloups.
Claims use since May 15, 1913.

Ser. No. 96,747. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) O. L. GREGORY, Paris, Tex. Filed July 22, 1916.

ELKO

Particular description of goods.—Vinegar.
Claims use since May, 1886.

Ser. No. 96,770. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEABOARD RICE MILLING Co., Galveston, Tex., and New York, N. Y. Filed July 22, 1916.

DYKE-LAND



Particular description of goods.—Rice.
Claims use since June 1, 1916.

Ser. No. 96,784. (CLASS 17. TOBACCO PRODUCTS.) HILSON-SCHLOSS, INC., New York, N. Y. Filed July 24, 1916.



Particular description of goods.—Cigars.
Claims use since July 1, 1916.

Ser. No. 96,786. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALFRED B. HASLACHER, Oakdale, Cal. Filed July 24, 1916.



Particular description of goods.—Fresh Cherries, Fresh Pears, and Fresh Plums.
Claims use since May 10, 1916.

Ser. No. 96,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ITEN BISCUIT CO., Omaha, Nebr. Filed July 24, 1916.

· Echo ·

Particular description of goods.—Sugar Wafers.
Claims use since June 26, 1912.

Ser. No. 96,788. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ITEN BISCUIT CO., Omaha, Nebr. Filed July 24, 1916.



Particular description of goods.—Oyster-Crackers.
Claims use since Aug. 31, 1905.

Ser. No. 96,794. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JAMES MCCOY COMPANY, Peoria, Ill. Filed July 24, 1916.



Particular description of goods.—Canned Vegetables, Canned Fruits, Canned Salmon, Canned Molasses, Coffee, Tea, Catsup, Canned Dried Beef, Food-Flavoring Extracts, Pepper, Allspice, Cloves, Cinnamon, White Pepper, Paprika, Mace, Mustard, Cayenne, and Ginger.
Claims use since the year 1907.

Ser. No. 96,796. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) MORRIS MICHELSON, Cincinnati, Ohio. Filed July 24, 1916.



Particular description of goods.—Gin.
Claims use since the year 1900.

Ser. No. 96,821. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

INTERNATIONAL

Particular description of goods.—Belting Made Partly of Rubber and Partly of Cotton.
Claims use since October, 1906.

Ser. No. 96,822. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

DREADNAUGHT

Particular description of goods.—Belting and Hose Made Partly of Rubber and Partly of Cotton, and Machinery Packing Made Partly of Rubber and Partly of Asbestos.
Claims use since February, 1908.

Ser. No. 96,823. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

KORTLANDT

Particular description of goods.—Belting, Hose, and Machinery Packing Made Partly of Rubber and Partly of Cotton.
Claims use since July, 1894.

Ser. No. 96,824. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

CENTAUR

Particular description of goods.—Belting and Hose Made Partly of Rubber and Partly of Cotton.
Claims use since July, 1899.

Ser. No. 96,825. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

PROSPECTOR

Particular description of goods.—Belting Made Partly of Rubber and Partly of Cotton.
Claims use since October, 1906.

Ser. No. 96,827. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

YEOMAN

Particular description of goods.—Belting Made Partly of Rubber and Partly of Cotton.
Claims use since October, 1906.

Ser. No. 96,835. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

VIKING

Particular description of goods.—Hose and Machinery Packing Made Partly of Rubber and Partly of Cotton.
Claims use since July, 1897.

Ser. No. 96,838. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

WHITE JACKET

Particular description of goods.—Hose Made Partly of Rubber and Partly of Cotton.
Claims use since July, 1906.

Ser. No. 96,839. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

MOHICAN

Particular description of goods.—Machinery Packing Made Partly of Rubber and Partly of Cotton.
Claims use since July, 1894.

Ser. No. 96,840. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

"GOLDEN FLEECE"

Particular description of goods.—Machinery Packing Made of Flax.
Claims use since July, 1899.

Ser. No. 96,841. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

CARDINAL

Particular description of goods.—Brakelining Made Partly of Asbestos and Partly of Rubber, and Machinery Packing Made of Composite Rubber.
Claims use since July, 1894.

Ser. No. 96,842. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

RAVEN

Particular description of goods.—Composite-Rubber Packing.
Claims use since July, 1894.

Ser. No. 96,843. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

HEADLIGHT

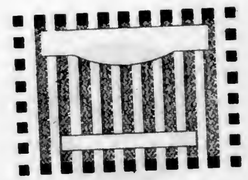
Particular description of goods.—Machinery Packing Made Partly of Flax and Partly of Rubber.
Claims use since July, 1899.

Ser. No. 96,847. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NYAL COMPANY, Detroit, Mich. Filed July 25, 1916.

NYLO

Comprising the word "Nylo."
Particular description of goods.—Chewing-Gum.
Claims use since Apr. 6, 1916.

Ser. No. 96,851. (CLASS 47. WINES.) TO KALON VINEYARD CO., Oakville, Cal. Filed July 25, 1916.



Comprising an outlining-border formed of black squares connected in vertical lines by yellow strips.
Particular description of goods.—Wines.
Claims use since on or about May 1, 1916.

Ser. No. 96,852. (CLASS 47. WINES.) TO KALON VINEYARD CO., Oakville, Cal. Filed July 25, 1916.

TINTO

Particular description of goods.—Wines.
Claims use since May 3, 1916.

Ser. No. 96,870. (CLASS 38. PRINTS AND PUBLICATIONS.) HIRTH KRAUSE CO., Rockford, Mich. Filed July 26, 1916.

..The..
Michigan Shoemaker

Particular description of goods.—A Monthly Publication.
Claims use since Aug. 1, 1913.

Ser. No. 96,878. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. E. PATRICK YOUNG COMPANY, Richmond, Va. Filed July 26, 1916.

PAYO CO

Particular description of goods.—Lard.
Claims use since July 1, 1916.

Ser. No. 96,888. (CLASS 38. PRINTS AND PUBLICATIONS.) GROSSET & DUNLAP, New York, N. Y. Filed July 27, 1916.

SLEEPY-TIME TALES

Particular description of goods.—A Series of Books Published Periodically.
Claims use since Oct. 25, 1915.

Ser. No. 96,894. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOHN RUDOLPH A. LAUFFER, New York, N. Y. Filed July 27, 1916.



Particular description of goods.—Polishing Material for All Varnished or Enameled Surfaces.
Claims use since Jan. 1, 1916.

Ser. No. 96,895. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MONMOUTH SEED CO., Matawan, N. J. Filed July 27, 1916.



Particular description of goods.—Tomato Catsup.
Claims use since July 1, 1910.

Ser. No. 96,915. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed July 28, 1916.



Particular description of goods.—Canned Salmon.
Claims use since 1885.

Ser. No. 96,916. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed July 28, 1916.



Particular description of goods.—Canned Salmon.
Claims use since 1907.

Ser. No. 96,917. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed July 28, 1916.



Particular description of goods.—Canned Salmon.
Claims use since 1907.

Ser. No. 96,920. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed July 28, 1916.



Particular description of goods.—Canned Salmon.
Claims use since 1884.

Ser. No. 96,960. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MUTUAL ELECTRIC & MACHINE CO., Detroit, Mich. Filed July 29, 1916.

COLD FLOWED

Particular description of goods.—Electrical Terminals or Lugs, Commutator-Segments, Electrical-Wire Connectors; Electrical-Contact Nuts, Flanged and Otherwise; Switch-Blades, Switch-Chps, Bus-Bars, Electric Contactors, Dynamo and Motor Brush Holders, Storage-Battery Terminals, and Electric-Instrument Terminals.
Claims use since May 16, 1916.

Ser. No. 96,961. (CLASS 38. PRINTS AND PUBLICATIONS.) NEWSPAPER FEATURE SERVICE, INC., New York, N. Y. Filed July 29, 1916.

Just Boy

Particular description of goods.—A Newspaper-Section.
Claims use since the 6th day of December, 1914.

Ser. No. 96,999. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PALMER CANDY CO., Sioux City, Iowa. Filed July 31, 1916. Under ten-year proviso.

Palmer's

Particular description of goods.—Candy.
Claims use since May, 1894.

Ser. No. 97,046. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Aug. 3, 1916.



Particular description of goods.—Electrical Incandescent Lamps.
Claims use since about November, 1900.

Ser. No. 97,075. CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DETROIT STARTER CO., Detroit, Mich. Filed Aug. 4, 1916.

CONSTOLITE

Particular description of goods.—Impedance-Coils.
Claims use since July 24, 1916.

Ser. No. 97,098. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THORDARSON ELECTRIC MANUFACTURING CO., Chicago, Ill. Filed Aug. 4, 1916.

Danditoy

Particular description of goods.—Transformers.
Claims use since the 28th day of March, 1916.

TRADE-MARK REGISTRATIONS GRANTED

AUGUST 29, 1916.

112,241. COMPOSITION FOR PIPE-JOINTS. ABINGDON PRESURTITE MFG. CO., Abingdon, Ill.
Filed February 7, 1916. Serial No. 92,678. PUBLISHED JUNE 27, 1916.

112,242. LOOSE-LEAF BINDERS AND LOOSE-LEAF FOLDERS. ACCOUNTING DEVICES COMPANY, Evanston, Ill.
Filed May 22, 1916. Serial No. 95,317. PUBLISHED JUNE 27, 1916.

112,243. MALT BEVERAGE CONTAINING CERTAIN NAMED INGREDIENTS. AICHMAN & HAHN, New York, N. Y.
Filed February 24, 1916. Serial No. 93,058. PUBLISHED MAY 9, 1916.

112,244. POULTRY FOOD COMPOSED OF MEAT SCRAPS. THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed April 6, 1916. Serial No. 94,181. PUBLISHED JUNE 13, 1916.

112,245. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF. AMERICAN LA FRANCE FIRE ENGINE COMPANY, Elmira, N. Y.
Filed February 15, 1916. Serial No. 92,851. PUBLISHED JUNE 20, 1916.

112,246. MEDICINES FOR THE TREATMENT OF TUBERCULOSIS, BRONCHITIS, HAY-FEVER, ASTHMA, COUGHS, AND COLDS. B. & E. MEDICINE COMPANY, Lenapah, Okla.
Filed February 16, 1916. Serial No. 92,890. PUBLISHED MAY 2, 1916.

112,247. GRANITE FOR MONUMENTS, TOMBSTONES, AND BUILDING OR ARCHITECTURAL PURPOSES. BATTLEFIELD GRANITE CORPORATION, Fredericksburg, Va.
Filed May 17, 1916. Serial No. 95,197. PUBLISHED JUNE 20, 1916.

112,248. CORN-PLASTER, AN ADHESIVE PLASTER. BILWOL MANUFACTURING COMPANY, New York, N. Y.
Filed April 21, 1916. Serial No. 94,601. PUBLISHED JUNE 20, 1916.

112,249. SEASONING. C. F. BLANKE TEA & COFFEE COMPANY, St. Louis, Mo.
Filed May 10, 1916. Serial No. 95,025. PUBLISHED JUNE 20, 1916.

112,250. MEN'S AND BOYS' SUITS AND OVERCOATS AND HATS. THE BUCKEYE CLOTHING COMPANY, Marietta, Ohio.
Filed April 24, 1916. Serial No. 94,664. PUBLISHED JUNE 20, 1916.

112,251. COTTON, LINEN, OR SILK PIECE GOODS OR COMBINATIONS THEREOF. JAMES W. CANNON, Concord, N. C., and New York, N. Y.
Filed May 4, 1916. Serial No. 94,890. PUBLISHED JUNE 13, 1916.

112,252. ICE-CREAM. CARNATION MILK PRODUCTS COMPANY, Portland, Me., and Seattle, Wash.
Filed May 12, 1916. Serial No. 95,099. PUBLISHED JUNE 20, 1916.

112,253. FURNITURE-POLISH. S. CLAUSEN & SON, Chicago, Ill.
Filed March 25, 1916. Serial No. 93,865. PUBLISHED JUNE 6, 1916.

112,254. TEA, COFFEE, COCOA, MACARONI, VERMICELLI, SPICES, AND CORN-STARCH. ABRAHAM COHEN, Cambridge, Mass.
Filed March 11, 1915. Serial No. 85,076. PUBLISHED MAY 23, 1916.

112,255. MILK AND CREAM. C. I. COOK, Menominee, Mich.
Filed April 11, 1916. Serial No. 94,308. PUBLISHED JUNE 13, 1916.

112,256. FABRICS ADAPTED FOR COVERING WALLS, CEILINGS, AND OTHER SURFACES. THE COTT-A-LAP COMPANY, Somerville, N. J.
Filed May 4, 1916. Serial No. 94,893. PUBLISHED JUNE 13, 1916.

112,257. CERTAIN NAMED FOODS. THE C. L. COTTON PERFUME & EXTRACT CO., Earlville, N. Y.
Filed March 7, 1916. Serial No. 93,359. PUBLISHED MAY 23, 1916.

112,258. VANILLA FLAVORING AND LEMON FLAVORING FOR FOOD PURPOSES. THE C. L. COTTON PERFUME & EXTRACT COMPANY, Earlville, N. Y.
Filed April 27, 1916. Serial No. 94,739. PUBLISHED JUNE 20, 1916.

112,259. CANDY. THE MARTIN DAWSON CO., Chicago, Ill.
Filed April 11, 1916. Serial No. 94,311. PUBLISHED JUNE 20, 1916.

112,260. MOTOR-CARS. DETROITER MOTOR CAR COMPANY, Detroit, Mich.
Filed December 20, 1915. Serial No. 91,591. PUBLISHED MAY 2, 1916.

112,261. WASHING-PASTE. GEO. H. DONAH CO. INC., Utica, N. Y.
Filed April 13, 1916. Serial No. 94,378. PUBLISHED MAY 23, 1916.

112,262. REMEDY FOR RHEUMATISM, LUMBAGO, NEURALGIA, DIZZINESS, HEADACHE, LIVER AND KIDNEY TROUBLES. LELAND B. DOW, Kansas City, Mo.
Filed August 17, 1915. Serial No. 88,661. PUBLISHED APRIL 4, 1916.

112,263. DISH-CLOTHS. ELECTRIC KNITTING CO., INC., Cohoes, N. Y.
Filed May 20, 1916. Serial No. 95,299. PUBLISHED JUNE 13, 1916.

112,264. CANNED SAUER-KRAUT. EMPIRE STATE PICKLING CO., Phelps, N. Y.
Filed April 12, 1916. Serial No. 94,351. PUBLISHED MAY 30, 1916.

112,265. TRUNKS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed April 11, 1916. Serial No. 94,321. PUBLISHED MAY 16, 1916.

112,266. GLOVES. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed April 11, 1916. Serial No. 94,323. PUBLISHED MAY 30, 1916.

112,267. WOMEN'S DRESSES AND GOWNS. A. H. FLANDERS COMPANY, Chicago, Ill.
Filed February 29, 1916. Serial No. 93,174. PUBLISHED MAY 23, 1916.

112,268. ROASTED COFFEE. FORT SMITH COFFEE COMPANY, Fort Smith, Ark.
Filed March 27, 1916. Serial No. 93,900. PUBLISHED MAY 9, 1916.

112,269. FINE FLOUR OF THE ENTIRE WHEAT WITH PART OF THE BRAN REMOVED. FRANKLIN MILLS Co., Batavia, N. Y.
Filed December 10, 1915. Serial No. 91,369. PUBLISHED JUNE 20, 1916.

112,270. HOSIERY. JULIUS GARFINKLE, Washington, D. C.
Filed May 25, 1916. Serial No. 95,417. PUBLISHED JUNE 20, 1916.

112,271. BUTTER, EGGS, MILK, AND CHEESE. ALFRED P. GARDINER, Croton-on-the-Hudson, N. Y.
Filed January 17, 1916. Serial No. 92,192. PUBLISHED MAY 23, 1916.

112,272. BUILDING-BLOCKS. THEO. H. GARY CO., New York, N. Y.
Filed May 10, 1916. Serial No. 95,035. PUBLISHED JUNE 13, 1916.

112,273. CERTAIN NAMED PIECE GOODS AND COMBINATIONS OF SAME. GOODALL WORSTED CO., Sanford, Me., and New York, N. Y.
Filed May 19, 1916. Serial No. 95,266. PUBLISHED JUNE 13, 1916.

112,274. SMALL IRREGULAR PIECES OF EGG-DOUGH, HERETOFORE KNOWN AS EGG-BARLEY. A. GOODMAN & SONS, INC., New York, N. Y.
Filed February 21, 1916. Serial No. 93,011. PUBLISHED JUNE 13, 1916.

112,275. ICE-CREAM. GOODMAN AMERICAN ICE CREAM Co., Chicago, Ill.
Filed April 24, 1916. Serial No. 94,669. PUBLISHED JUNE 20, 1916.

112,276. REMEDY FOR DISEASES OF HOGS. VERNON V. GRAY, New Hampshire, Ohio.
Filed April 11, 1916. Serial No. 94,325. PUBLISHED JUNE 6, 1916.

112,277. BITTERS FOR INDIGESTION, BOWEL TROUBLES, DEBILITY, AND AS A GENERAL TONIC. LOUIS M. GUND, St. Louis, Mo.
Filed April 15, 1916. Serial No. 94,442. PUBLISHED JUNE 20, 1916.

112,278. BREAD, CAKE, AND PASTRY. CLIFFORD I. HIRT, Peoria, Ill.
Filed November 18, 1915. Serial No. 90,721. PUBLISHED JUNE 13, 1916.

112,279. LARD, SWEET-PICKLED AND SUGAR-CURED HAMS, BACON, AND SHOULDERS. THE JOHN HOFFMANN PACKING CO., Cincinnati, Ohio.
Filed April 27, 1914. Serial No. 77,780. PUBLISHED AUGUST 3, 1915.

112,280. NARROW WOVEN AND BRAIDED FABRICS OF CERTAIN NAMED MATERIALS. HOPE WEBBING COMPANY, Pawtucket, R. I.
Filed July 6, 1915. Serial No. 87,775. PUBLISHED MAY 23, 1916.

112,281. MONTHLY TRADE-JOURNAL DEVOTED TO INTERESTS OF HUMAN-HAIR TRADE AND LADIES' HAIR-DRESSING. HENRY R. HOWELL, Brooklyn, N. Y.
Filed December 9, 1915. Serial No. 91,345. PUBLISHED MAY 9, 1916.

112,282. UNIT FOR CONVERTING PLEASURE-TYPE-MOTOR-CAR CHASSIS INTO COMMERCIAL-TRUCK CHASSIS. HUDFORD COMPANY, Philadelphia, Pa.
Filed April 7, 1916. Serial No. 94,230. PUBLISHED JUNE 20, 1916.

112,283. CANNED FRUITS. HUNT BROTHERS COMPANY, San Francisco, Cal.
Filed April 15, 1916. Serial No. 94,443. PUBLISHED JUNE 20, 1916.

112,284. CERTAIN NAMED FOOTWEAR OF LEATHER, RUBBER, FELT, WOOL, OR OTHER MATERIAL. THE HURLBUT CO. LIMITED, Preston, Ontario, Canada.
Filed March 7, 1916. Serial No. 93,365. PUBLISHED JUNE 20, 1916.

112,285. CANNED VEGETABLES. THE K-C LUMBER COMPANY, Lucedale, Miss.
Filed December 28, 1915. Serial No. 91,801. PUBLISHED JUNE 20, 1916.

112,286. CANNED VEGETABLES. THE K-C LUMBER COMPANY, Lucedale, Miss.
Filed December 28, 1915. Serial No. 91,802. PUBLISHED JUNE 20, 1916.

112,287. CERTAIN NAMED GAMES AND TOYS. KENTUCKY DERBY COMPANY, INC., New York, N. Y.
Filed April 19, 1916. Serial No. 94,540. PUBLISHED JUNE 20, 1916.

112,288. RAIN-COATS AND CAPES FOR MEN, WOMEN, AND CHILDREN. C. KENYON COMPANY, Brooklyn, N. Y.
Filed May 25, 1916. Serial No. 95,423. PUBLISHED JUNE 20, 1916.

112,289. TOMATO PASTE AND PEELED TOMATOES. LENCI BROTHERS, Brooklyn, N. Y.
Filed September 15, 1915. Serial No. 89,209. PUBLISHED JUNE 13, 1916.

112,290. SATIN PIECE GOODS. LEVY & HEXTER, New York, N. Y.
Filed April 24, 1916. Serial No. 94,678. PUBLISHED JUNE 20, 1916.

112,291. CANNED MEATS, CANNED SAUSAGE, CANNED SOUPS, AND CANNED BONELESS CHICKEN. LIBBY, MCNEILL & LIBBY, Chicago, Ill.
Filed August 13, 1915. Serial No. 88,596. PUBLISHED JUNE 13, 1916.

112,292. COFFEE. GEORGE W. LOGGIE, Boston, Mass.
Filed March 24, 1916. Serial No. 93,849. PUBLISHED JUNE 13, 1916.

112,293. SHOES MADE OF LEATHER, RUBBER, CANVAS, AND CLOTH. HERMAN MALKIN, Brooklyn, N. Y.
Filed May 6, 1916. Serial No. 94,960. PUBLISHED JUNE 13, 1916.

112,294. WHEAT-FLOUR. THE MCMANNESS MILLING & GRAIN CO., Findlay, Ohio.
Filed April 22, 1916. Serial No. 94,649. PUBLISHED JUNE 20, 1916.

112,295. MACHINERY PACKING COMPOSED OF RUBBER OR RUBBER AND FABRIC. THE MECHANICAL RUBBER COMPANY, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio.
Filed April 13, 1916. Serial No. 94,386. PUBLISHED JUNE 13, 1916.

112,296. PANCAKE-FLOUR AND ROLLED OATS. JOHN J. MEIER & CO., St. Louis, Mo.
Filed November 17, 1915. Serial No. 90,706. PUBLISHED JUNE 13, 1916.

112,297. BREAD. GEORGE MEILAHN, Burlington, Iowa.
Filed May 18, 1915. Serial No. 86,709. PUBLISHED FEBRUARY 8, 1916.

112,298. NON-INTOXICATING CARBONATED MALT BEVERAGE. C. & J. MICHEL BREWING CO., La Crosse, Wis.
Filed April 29, 1916. Serial No. 94,799. PUBLISHED JUNE 20, 1916.

112,299. TOY BALLOONS. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed March 20, 1916. Serial No. 93,714. PUBLISHED MAY 9, 1916.

112,300. ICE-CREAM. GEORGE MOORE ICE CREAM CO., Atlanta, Ga.
Filed March 4, 1916. Serial No. 93,308. PUBLISHED MAY 2, 1916.

112,301. SALT. MULKEY SALT COMPANY, Detroit, Mich.
Filed April 14, 1916. Serial No. 94,423. PUBLISHED JUNE 6, 1916.

112,302. BOND, LEDGER, AND WRITING PAPERS. NEENAH PAPER COMPANY, Neenah, Wis.
Filed April 3, 1916. Serial No. 94,079. PUBLISHED JUNE 13, 1916.

112,303. CERTAIN NAMED MEN'S AND YOUNG MEN'S CLOTHES. MILTON OCHS, Cincinnati, Ohio.
Filed December 30, 1912. Serial No. 67,644. PUBLISHED JUNE 6, 1916.

112,304. WORK-SHIRTS. OREGON CITY MANUFACTURING CO., Oregon City, Oreg.
Filed February 25, 1916. Serial No. 93,107. PUBLISHED JUNE 6, 1916.

112,305. LUBRICATING-OILS, LUBRICATING-GREASES, LUBRICANTS, AND LUBRICATING COMPOUNDS. THE PHOENIX OIL COMPANY, Cleveland, Ohio.
Filed July 31, 1915. Serial No. 88,336. PUBLISHED JUNE 13, 1916.

112,306. NON-ALCOHOLIC SOFT DRINKS AND FRUIT FLAVORS FOR THE SAME. PURITAN MANUFACTURING CO., Portland, Oreg.
Filed April 18, 1916. Serial No. 94,507. PUBLISHED JUNE 20, 1916.

112,307. NON-ALCOHOLIC SOFT DRINKS AND FRUIT FLAVORS FOR THE SAME. PURITAN MANUFACTURING CO., Portland, Oreg.
Filed April 18, 1916. Serial No. 94,508. PUBLISHED JUNE 20, 1916.

112,308. NON-ALCOHOLIC SOFT DRINKS AND FRUIT FLAVORS FOR THE SAME. PURITAN MANUFACTURING CO., Portland, Oreg.
Filed April 18, 1916. Serial No. 94,509. PUBLISHED JUNE 20, 1916.

112,309. NON-ALCOHOLIC SOFT DRINKS AND FRUIT FLAVORS FOR THE SAME. PURITAN MANUFACTURING CO., Portland, Oreg.
Filed April 18, 1916. Serial No. 94,510. PUBLISHED JUNE 20, 1916.

112,310. CORNMEAL AND HOMINY-GRITS. PURITY OATS COMPANY, Davenport and Keokuk, Iowa.
Filed April 24, 1916. Serial No. 94,684. PUBLISHED JUNE 20, 1916.

112,311. KEROSENE, LUBRICATING-OILS, LUBRICATING-GREASES, NAPHTHAS, AND GASOLENES. THE RED C OIL MANUFACTURING CO., Baltimore, Md.
Filed April 26, 1916. Serial No. 94,729. PUBLISHED JUNE 20, 1916.

112,312. EGGS, BUTTER, AND DRESSED POULTRY. FRANKLIN M. RISK, Chicago, Ill.
Filed February 25, 1916. Serial No. 93,109. PUBLISHED MAY 23, 1916.

112,313. LIFE-PRESERVERS IN THE FORM OF BODY-WEAR, PILLOWS, CUSHIONS, AND MATTRESSES. ROBINSON-RODERS CO., Newark, N. J.
Filed May 1, 1916. Serial No. 94,831. PUBLISHED JUNE 13, 1916.

112,314. HEATING COMPOUNDS—NAMELY, ALCOHOL IN SOLID FORM. ROCKBURN CHEMICAL CORPORATION, New York, N. Y.
Filed January 8, 1916. Serial No. 92,024. PUBLISHED MAY 30, 1916.

112,315. WHEAT-FLOUR. ISRAEL J. ROHRBAUGH, Beech Creek, Pa.
Filed August 5, 1915. Serial No. 88,443. PUBLISHED JUNE 20, 1916.

112,316. FRESH ONIONS, POTATOES, AND APPLES. JOSEPH ROSENBLUM, South Deerfield, Mass.
Filed December 18, 1915. Serial No. 91,580. PUBLISHED June 20, 1916.

112,317. TOILET-PAPER. SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y.
Filed March 18, 1916. Serial No. 93,669. PUBLISHED JUNE 27, 1916.

112,318. BREAD. SCHULZE BAKING COMPANY, Chicago, Ill.
Filed March 20, 1916. Serial No. 93,730. PUBLISHED MAY 23, 1916.

112,319. IRON AND STEEL WIRE. THE SENECA WIRE AND MANUFACTURING COMPANY, Fostoria, Ohio.
Filed February 24, 1916. Serial No. 93,075. PUBLISHED MAY 23, 1916.

112,320. LAXATIVE PILL OR TABLET. JOHN C. SHAREE, Alliance, Ohio.
Filed April 5, 1915. Serial No. 85,721. PUBLISHED MAY 16, 1916.

112,321. MALARIA REMEDY. JAMES E. SHARPE, Oklahoma, Okla.
Filed March 16, 1916. Serial No. 93,586. PUBLISHED MAY 2, 1916.

112,322. CERTAIN NAMED FOODS. SHERER-GILBERT COMPANY, Chicago, Ill.
Filed October 4, 1915. Serial No. 89,649. PUBLISHED MAY 23, 1916.

112,323. SLEEPING-GARMENTS—VIZ., NIGHT-ROBES AND PAJAMAS. ERNEST SIMONS MFG. CO., Port Chester, N. Y.
Filed February 12, 1916. Serial No. 92,819. PUBLISHED JUNE 20, 1916.

112,324. FRESH POTATOES, CABBAGES, CUCUMBERS, BEANS, TOMATOES, STRAWBERRIES, LETTUCE, ASPARAGUS, CANTALOUPS, WATERMELONS, AND BEETS. THE SOUTH CAROLINA PRODUCE ASSOCIATION, Meggetts, S. C.
Filed April 12, 1916. Serial No. 94,361. PUBLISHED JUNE 13, 1916.

112,325. MEDICINAL TONICS AND TREATMENT OF DISEASES OF THE BLOOD, FEVER, COUGHS, COLDS, AND CATARRH. FREDERICK STEARNS & Co., Detroit, Mich.
Filed March 11, 1916. Serial No. 93,475. PUBLISHED JUNE 20, 1916.

112,326. ALPINE HERB TEA, A LAXATIVE FOR CONSTIPATION. NATHAN STERN, Brooklyn, N. Y.
Filed April 18, 1916. Serial No. 94,512. PUBLISHED JUNE 20, 1916.

112,327. CANDY. THE STERN & SAALBERG CO., New York, N. Y.
Filed April 13, 1916. Serial No. 94,396. PUBLISHED JUNE 20, 1916.

112,328. SOLID FUEL COMPOSED MAINLY OF ALCOHOL. S. STERNAU & CO., New York, N. Y.
Filed March 11, 1915. Serial No. 85,104. PUBLISHED JUNE 20, 1916.

112,329. WOMEN'S AND CHILDREN'S SUITS, DRESSES, COATS, SKIRTS, BLOUSES, WAISTS, GYMNASIUM-SUITS, BLOOMERS, AND BOYS' SUITS. THE STROUSE-BAER CO., Baltimore, Md.
Filed May 2, 1916. Serial No. 94,860. PUBLISHED JUNE 20, 1916.

112,330. CHEWING-GUM. E. L. SWAINE, Los Angeles, Cal.
Filed December 15, 1915. Serial No. 91,488. PUBLISHED MARCH 7, 1916.

112,331. LUBRICATING OILS AND GREASES. SWAN & FINCH COMPANY, New York, N. Y.
Filed April 20, 1916. Serial No. 94,587. PUBLISHED JUNE 27, 1916.

112,332. PRESERVATIVE FOR ALL METALS WHICH ARE SUBJECT TO OXIDATION. TECHNO CHEMICAL CORPORATION, New York, N. Y.
Filed April 14, 1916. Serial No. 94,436. PUBLISHED JUNE 20, 1916.

112,333. LAGER-BEER, ALE, STOUT, PORTER, AND ANALOGOUS MALTED BEVERAGES. UNITED BREWERIES COMPANY, Chicago, Ill.
Filed May 1, 1916. Serial No. 94,837. PUBLISHED JUNE 20, 1916.

112,334. BEER. UNITED BREWERIES COMPANY, Chicago, Ill.
Filed May 1, 1916. Serial No. 94,840. PUBLISHED JUNE 20, 1916.

112,335. BEDS, MATTRESSES, BED-SPRINGS, AND PILLOWS. U. S. BEDDING COMPANY, Memphis, Tenn.
Filed June 3, 1915. Serial No. 87,085. PUBLISHED JUNE 27, 1916.

112,336. STRAW HATS. THE VALENTINE HAT COMPANY, Kansas City, Mo.
Filed April 12, 1916. Serial No. 94,367. PUBLISHED JUNE 20, 1916.

112,337. COFFEE. THE WALDORF-ASTORIA IMPORTATION COMPANY, New York, N. Y.
Filed April 19, 1916. Serial No. 94,561. PUBLISHED MAY 30, 1916.

112,338. CHILLI-CON-CARNE AND HOT TAMALES. WALKER PROPERTIES ASSOCIATION, Austin, Tex.
Filed September 23, 1915. Serial No. 89,421. PUBLISHED JUNE 13, 1916.

112,339. ICE-CREAM. A. G. WARREN ICE CREAM COMPANY, Wilmington, N. C.
Filed April 18, 1916. Serial No. 94,521. PUBLISHED JUNE 20, 1916.

112,340. IRON, STEEL, OR OTHER METAL IN ROLL FORM. WHEELING MOLD & FOUNDRY CO., Wheeling, W. Va.
Filed April 15, 1914. Serial No. 77,499. PUBLISHED JUNE 20, 1916.

112,341. CANNED VEGETABLES. D. E. WINEBRENNER CO., Hanover, Pa.
Filed May 16, 1916. Serial No. 95,190. PUBLISHED JUNE 20, 1916.

112,342. CANNED VEGETABLES. D. E. WINEBRENNER CO., Hanover, Pa.
Filed May 16, 1916. Serial No. 95,191. PUBLISHED JUNE 20, 1916.

112,343. TOY SOUND-REPRODUCING MACHINE. WIZARD PRODUCTS CO., Chicago, Ill.
Filed May 3, 1916. Serial No. 94,883. PUBLISHED JUNE 13, 1916.

112,344. FURNITURE-POLISH. ZAZEIN MANUFACTURING CO., Watertown, Tenn.
Filed February 25, 1916. Serial No. 93,099. PUBLISHED APRIL 25, 1916.

112,345. PICTURE-THEATER STAMPS. JEROME P. ZELENKA, Chicago, Ill.
Filed July 24, 1915. Serial No. 88,177. PUBLISHED MAY 16, 1916.

TRADE-MARK REGISTRATIONS RENEWED.

13,621. LIQUID NERVE-TONIC. HENRY IMHOF, Buffalo, N. Y.; John H. Imhof, heir.
Registered August 31, 1886. Renewed August 31, 1916.

14,055. KID GLOVES. V. XAVIER JOUVIN, Paris and Grenoble, France; Rey-Jouvin Frères & Co., successors.
Registered February 8, 1887. Renewed February 8, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

17,249. LUBRICATING-OILS. GEORGE C. FIELD, Brooklyn, N. Y.
Registered December 10, 1889. Canceled August 7, 1916.

103,639. CERTAIN NAMED FOODS. ARKANSAS GROCER CO., Blytheville, Ark.
Registered April 13, 1915. Canceled July 5, 1916.

106,186. COOKING RANGES AND STOVES AND HEATING-STOVES. THE STAMFORD FOUNDRY COMPANY, Stamford, Conn.
Registered October 12, 1915. Canceled August 9, 1916.

LABELS

REGISTERED AUGUST 29, 1916.

19,543.—*Title:* "GLASS JAR." (For Spinach.) CENTRAL CALIFORNIA CANNERIES, San Francisco, Cal. Filed August 7, 1916.

19,544.—*Title:* "FALK BRAND." (For Cantaloups.) JACOB W. FALK, Turlock, Cal. Filed July 24, 1916.

19,545.—*Title:* "MONEY SAVERS." (For Peppermint Candy.) JACOB GOLDBERG, Brooklyn, N. Y. Filed July 27, 1916.

19,546.—*Title:* "DAVY CROCKETT." (For Cigars.) JOHN P. KNASEL, Atlanta, Ga. Filed July 29, 1916.

19,547.—*Title:* "THE DOUBLE KIND." (For Shirts.) BENJAMIN KRONTHAL, Michigan City, Ind., and Chicago, Ill. Filed July 7, 1916.

19,548.—*Title:* "PARODI." (For Cigars.) PARODI CIGAR COMPANY, INC., Jersey City, N. J. Filed June 24, 1916.

19,549.—*Title:* "CAMP FIRE COFFEE." (For Coffee.) WARNER M. VAN NORDEN, New York, N. Y. Filed August 5, 1916.

PRINTS

REGISTERED AUGUST 29, 1916.

4,444.—*Title:* "CRACKER JACK—WE SHELL ALL THE GOOBERS." (For a Confection.) RUECKHEIM BROS. & ECKSTEIN, INC., Brooklyn, N. Y. Filed August 3, 1916.

4,445.—*Title:* "CRACKER JACK—COME ON, SEE THE POPPERS." (For a Confection.) RUECKHEIM BROS. & ECKSTEIN, INC., Brooklyn, N. Y. Filed August 3, 1916.

4,446.—*Title:* "CRACKER JACK—OH! HO!" (For a Confection.) RUECKHEIM BROS. & ECKSTEIN, INC., Brooklyn, N. Y. Filed August 3, 1916.

4,447.—*Title:* "CRACKER JACK—NOW HERE IS THE FIELD." (For a Confection.) RUECKHEIM BROS. & ECKSTEIN, INC., Brooklyn, N. Y. Filed August 3, 1916.

4,448.—*Title:* "CRACKER JACK—THE WHIMSICAL PEANUTS." (For a Confection.) RUECKHEIM BROS. & ECKSTEIN, INC., Brooklyn, N. Y. Filed August 3, 1916.

4,449.—*Title:* "SWEZEY'S NON GLASS COMPOSITION LENS." (For Lenses.) ANDREW J. SWEZEY, Decorah, Iowa. Filed March 30, 1916.

4,450.—*Title:* "UNICORN FILM SERVICE CORPORATION." (For Motion-Picture Films.) UNICORN FILM SERVICE CORPORATION, New York, N. Y. Filed May 6, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

IN RE DWIGGINS.

Decided September 25, 1915.

PUBLIC-USE PROCEEDINGS—PETITION INSUFFICIENT.

A petition for the establishment of public-use proceedings to prove the use of anticipating machines as much as twelve years and more ago *Held* insufficient where it was unaccompanied by a print, photograph, or like evidence as to the alleged anticipating structure.

PUBLIC-USE proceedings.

Messrs. La Porte & Bean for the protestant.

Mr. Julian C. Dowell for Reid, Reid, and Kelley.

EWING, *Commissioner:*

This is a petition by John W. Dwiggins that proceedings be instituted for the purpose of establishing that the invention set forth in certain claims of the application of Reid, Reid, and Kelley, No. 262,966, was in public use more than two years before that application was filed.

The application of Reid, Reid, and Kelley was involved in interference No. 32,183 with an application of Dwiggins. The interference was dissolved by me on the ground that the testimony showed that Dwiggins had built and publicly used for more than two years prior to the filing of his application a machine which he relied upon as establishing priority of invention and which the Examiner of Interferences held embodied the invention of certain counts of the issue thereof.

The petition alleges the public use of machines having certain specified features and that each of these machines embodied the invention of certain claims of the Reid, Reid, and Kelley application. The use of some of these machines is alleged to have taken place as early as 1885, and none of them is alleged to have been made later than 1903. Dwiggins alleges the building of the machine as to which testimony was taken in the interference above referred to.

There would be no necessity for taking testimony to establish public use of the Dwiggins machine, since the testimony with reference to it is of record in this Office, and it was upon this testimony that the interference was dissolved. The Examiner was directed to reject such claims of the Reid, Reid, and Kelley application as were barred by the public use of this machine.

The affidavits which accompany the petition state in more or less general terms the character of the machines alleged to have been made; but none of them is accompanied by a print or photograph of the machine, nor is any one of these machines alleged to be in existence. Bates and Shellaberger each states that affiant has no photograph of the machine referred to and does not know where any photograph can be obtained.

The courts have uniformly held testimony of this character insufficient to establish public use. The reason for such holding is obvious, since after the lapse of many years a person is likely to be mistaken as to the details of construction of a machine. It is to be noted that several of affiants took out patents on fence-making machines at or about the time the machines referred to in their affidavits are said to have been built. It is to be presumed, had these machines been of the character alleged, they would have been shown in these patents or at least in applications filed about that time. The patented art was fully considered on motions to dissolve the interference, and no reference has been made to any applications which did not mature into patents as showing what the affiants actually constructed.

The showing made does not warrant the institution of public-use proceedings. The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

NESTLE AND ANGLO-SWISS CONDENSED MILK COMPANY AND BORDEN'S CONDENSED MILK COMPANY *v.* HOLLAND FOOD CORPORATION.

Decided May 29, 1916.

TRADE-MARKS — OPPOSITION — "MILKMAN" AND "MILKMAID."

Where the opposer had prior use in this country and registration of the trade-mark "Milkmaid," associated with a picture including the representation of a milkmaid, *Held* that the opposition to the registration of the mark "Milkman," associated with a picture including the representation of a man and woman, should be sustained.

Mr. W. D. Edmonds for the appellant.

Mr. J. W. Crandall for the appellee.

SHEPARD, *C. J.:*

The Holland Food Corporation applied for registration of a trade-mark for condensed milk.

The mark consists of the word "Milkman" together with a picture including the figure of a man and woman in Dutch attire, and a panel having a figure of a man and two cows in the background. The figure of the man in Dutch costume is dressed in the garb of the natives of Vollendam, and other of the villages of Holland, which, in the picture, is very much like the dress of the woman. Over the figure is printed in large type "Condensed Milk," underneath are the words "Milkman Brand" in like large type.

The registration was opposed by the Nestle and Anglo-Swiss Condensed Milk Company and Borden's Condensed Milk Company. Borden's Condensed Milk Company is the exclusive agent and representative of the Nestle and Anglo-Swiss Condensed Milk Company in the United States, and has the exclusive right to the trade-mark which was adopted and used in 1870, and has been in continuous use since in the United States.

The label showing the trade-mark is for condensed milk, which is in large type, has over it the words "Milkmaid Brand," which is the trade-mark. This mark was registered in the United States Patent Office April 3, 1900. Another registration was had February 12, 1907.

The mark as used now is a label on the container which shows the word "Borden's" in conspicuous type at the top, the words "Milkmaid Brand" in larger type following. Underneath there is a figure representing a milkmaid with a pail in her hand and one on her head. At the bottom of the figure in large type are the words "Condensed Milk."

The applicant, Holland Food Corporation, sets up the date of its use in the United States commencing December 20, 1913.

An agreed statement of facts by the parties shows that the Milkman brand has been used in Switzerland and England and other foreign countries since 1879 by the Holland Food Corporation and its predecessor, R. Lehmann & Company, and the exclusive right to use the trade-mark has been assigned to the Holland Food Corporation, October 21, 1914.

This evidence is immaterial to the issue here.

We are of the opinion that there is such similarity in the marks as is likely to produce confusion in trade, and that the application should have been denied.

The decision is reversed, and this decision will be certified by the clerk to the Commissioner of Patents.

Reversed.

Court of Appeals of the District of Columbia.

SHULL-DAY COMPANY *v.* THE LEVY OVERALL MANUFACTURING COMPANY.

Decided May 29, 1916.

TRADE-MARKS—OPPOSITION—"BIG 3" AND "BIG 5." Where the mark of the applicant consisted of the word and figure "Big 3," with the figure of a man in overalls standing within the figure, and the registered mark of the opposer consisted of the figure "5," in large type, with the words "Big Five" written in the upper bar thereof and the picture of five workmen grouped in the loop of the "5," and it appeared that a third party had a still earlier registration of "Big 4," for overalls, *Held* that the opposer's right to the use of the word "Big" is limited to its association with the particular figure ("5") adopted by it, and the opposition dismissed.

Mr. J. W. Crandall for the appellant.

Mr. A. M. Allen for the appellee.

SHEPARD, *C. J.:*

The Levy Overall Manufacturing Company applied for the registration of the trade-mark "Big 3." The word "Big" is in large type and the figure "3" in still larger type. Within the figure is a picture of a man in overalls having an arm extended displaying a placard.

The registration was opposed by the Shull-Day Company, which has a previous registered trade-mark of "Big 5," consisting of a figure "5" in large type, within the loop of which is a group of five workmen. In the upper bar of the figure are the words "Big Five" in comparatively small type. The mark was registered August 9, 1910.

It appears also that prior to this registration the Rice-Styx Company of St. Louis, Mo., had registered a trade-mark "Big 4" for overalls.

Experts for the Shull-Day Company testified that confusion in trade would likely result from the word "Big," common to both marks, and the similarity of figures "5" and "3." Experts on behalf of the Levy Overall Manufacturing Company testified to the contrary.

The Examiner of Interferences thus discussed the evidence of actual confusion. He said:

> There is some evidence in behalf of opposer that samples of overalls that were sent out by applicant to certain merchants were disposed of by substituting them for the Big Five overalls of opposer. It appears, however, that this was not the result of any confusion of marks, and that a garment of any other make or brand could have been as easily substituted. The witness Harding testified that on one occasion when he asked for a pair of Big 5 overalls he was handed out a Big 3, and that he did not notice the difference until he opened the package. He does not say, however, that he saw the mark on the garment when he bought it. Furthermore, it appears that when he did take notice of the mark, he saw that it was not a Big 5. There is no evidence, therefore, of any actual confusion having resulted from the concurrent use of the marks.

This is an accurate résumé of the evidence as to actual confusion.

The Commissioner was of the opinion that the Rice-Styx Company registration must be taken as *prima facie* ownership by that company of the word "Big" and the numeral "4," and that the case was thereby within the rule laid down by the Supreme Court in *Liggett & Meyers Tobacco Company* v. *Finzer* (128 U. S., 182). See also *Nestle and Anglo-Swiss Condensed Milk Company* v. *Walter Baker Company*, (37 App. D. C., 148,) in which it was held that inasmuch as the Walter Baker Company was not the originator of the representation of a woman it was only entitled to prevail over others that used the particular figure of the woman shown in its trade-mark.

Under this rule the Shull-Day Company is only entitled to exclusive use of the word "Big" in connection with the particular numeral it has used, namely, the figure "5."

The decision of the Commissioner is correct, and it is affirmed.

The clerk will certify this decision to the Commissioner of Patents.

Affirmed.

Adverse Decisions in Interference.

PATENT NO. 886,739.

On June 24, 1916, a decision was rendered that Walter Thorner was not the first inventor of the subject-matter covered by claims 1 and 2 of his Patent No. 886,739, subject, "Devices for focusing the lens of photographic cameras," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,072,875.

On April 5, 1916, a decision was rendered that Milton L. Sammons was not the first inventor of the subject-matter covered by claim 5 of his Patent No. 1,072,875, subject, "Carbureter mechanism," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,082,318.

On July 27, 1915, a decision was rendered that Arthur H. Gibson was not the first inventor of the subject-matter covered by claims 1, 3, 5, 7, 9, 11, 13, and 15 of his Patent No. 1,082,318, subject, "Mining-machine," and no appeal having been taken within the time allowed such decision has become final.

Changes in Classification.

(ORDER NO. 2,276.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 23, 1916.

It is hereby directed that class 53, Domestic Cooking Vessels, be transferred from Division XXXII to Division XIX, to take effect immediately.

R. F. WHITEHEAD,
Acting Commissioner.

Changes in Classification.

(ORDER NO. 2,277.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 24, 1916.

It is hereby directed that class 127, Sugar and Salt, be transferred from Division VI to Division XXXI and that class 184, Lubrication, be transferred from Division XII to Division XVIII, to take effect immediately.

R. F. WHITEHEAD,
Acting Commissioner.

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 22, 1916.

The Standard Starter & Specialty Company, its assigns or legal representatives, take notice:

A cancelation proceeding having been instituted by this Office upon the application of The Little Giant Starter Co., of Canton, Ohio, to effect the cancelation of the trade-mark registration of The Standard Starter & Specialty Company, of 314 Caxton Bldg., Cleveland, Ohio, No. 107,564, dated December 7, 1915, and the registry return receipt for the notice of such application for cancelation sent to The Standard Starter & Specialty Company having been returned signed by The Giant Starter Co., and said company having failed to file evidence of ownership as required in Office action of August 2, 1916, notice is hereby given that unless The Standard Starter & Specialty Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 22, 1916.

The Springfield Rubber Tire Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Standard Tire and Rubber Manufacturing Company, Hippodrome Building, Cleveland, Ohio, for registration of a trade-mark and trade-mark registered July 7, 1903, No. 40,747, to The Springfield Rubber Tire Company, of New Haven, Conn., and a notice of such declaration sent by registered mail to said The Springfield Rubber Tire Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Springfield Rubber Tire Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 16, 1916.

Recknagel & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Nineteen Hundred Washer Co., of Binghamton, N. Y., for registration of a trade-mark and trade-mark registered June 26, 1888, No. 15,643, to Recknagel & Co., of 106 Broad street, New York, N. Y., and a notice of such declaration sent by registered mail to said Recknagle & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Recknagel & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 10, 1916.

Bentley & Olmsted Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Leonard & Barrows, Middleboro, Mass., for registration of a trade-mark and trade-mark registered December 10, 1907, No. 66,495, to Bentley & Olmsted Company, 300–302 Court avenue, Des Moines, Iowa, and the Office having failed to secure proper service on said Bentley & Olmsted Company, notice is hereby given that unless said Bentley & Olmsted Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

AUGUST, 1916.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*).]

TABLE OF CASES.

	Page.
Burkhart. *Ex parte*	939
Dwiggins. *In re*	1573
Ferguson. *Ex parte*	939
Fisher. *Ex parte*	1255
* Great Bear Spring Co. and Fulton Water Works Co. *v.* Bear Lithia Springs Company and Bear Lithia Water Company	613
Kidder. *Ex parte*	269
Liebmann and Megrath *v.* Newcomb	613
* Nestle and Anglo-Swiss Condensed Milk Company and Borden's Condensed Milk Company *v.* Holland Food Corporation	1573
* Shull-Day Company *v.* The Levy Overall Manufacturing Company	1574

SUBJECT-MATTER INDEX.

Amendment to application in interference should be made while such interference is pending, so that any question involved in the interference may be considered, Liebmann and Megrath *v.* Newcomb 613

Construction of claims, combinations wanting functional coöperation or dependence unpatentable, *ex parte* Fisher 1255

Devices considered common to the arts because of their general applicability, *ex parte* Fisher 1255

Drawings, objection to substitute on ground of new matter, clear statement of what is new matter should be made, *ex parte* Ferguson 939

Interference, applicant relying on later application to prove priority, judgment against him on ground of inoperativeness, question of operativeness on *ex parte* appeal *res adjudicata*, *ex parte* Kidder 269

Only support in specification, drawings should be amended to show features in question, Liebmann and Megrath *v.* Newcomb 613

Suspended for the period of a month that amendment necessary to disclosure may be made, Liebmann and Megrath *v.* Newcomb 613

New matter, substitute drawing being objected to on ground of, in addition to clearly stating what is new, complete action on claims both as to prior art and question of new matter should be given, *ex parte* Ferguson 939

Patentability, combination of references, *ex parte* Burkhart 939

Public-use proceedings, petition for to prove anticipation more than twelve years ago unaccompanied by print, photograph, or like evidence insufficient, *in re* Dwiggins 1573

* Registration of trade mark, registration of "Big 3" for overalls opposed by registrant of "Big 5" for same goods, Shull-Day Company *v.* The Levy Overall Manufacturing Company 1574

* The word "Milkman," registration of, for condensed milk, opposed by the owner of the word "Milkmaid" for the same goods, Nestle and Anglo-Swiss Condensed Milk Company and Borden's Condensed Milk Company *v.* Holland Food Corporation 1573

Substitution of equivalents, *ex parte* Fisher 1255

* Trade-mark interference, immaterial differences in marks not of importance in decision of priority of adoption and use, Great Bear Spring Co. and Fulton Water Works Co. *v.* Bear Lithia Springs Company and Bear Lithia Water Company 613

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

AUGUST, 1916.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*).]

ACTION BY THE EXAMINER.

PRACTICE—DEFINITE AND COMPLETE ACTION.
In objecting to a substitute drawing on the ground of new matter it should be pointed out clearly in what the new matter consists. At the same time complete action should be given on the claims with respect to both prior art and the question of new matter. [*Ex parte* Ferguson, 939.

AMENDMENTS.

See Interference, 2, 3, 4.

ANTICIPATION.

See Public-Use Proceedings.

COMBINATION.

See Construction of Claims, 3.

CONSTRUCTION OF CLAIMS.

1. PATENTABILITY—COMBINATION OF REFERENCES.
A shoe-dressing apparatus having two movable sprayers and a stationary dropper for applying the dressing directly to the shoe *Held* patentable over a reference showing two movable appliers operating on the brushes, but no stationary applier, and a reference showing stationary appliers. [*Ex parte* Burkhart, 939.

2. SAME—COMPACT AND CONVENIENT ARRANGEMENT.
Claims covering a compact and convenient arrangement of the parts of a washing-machine *Held* patentable. [*Ex parte* Fisher, 1255.

3. SAME—UNPATENTABLE COMBINATION.
Claims covering a combination of the washing elements and the wringing elements of a laundry apparatus *Held* unpatentable for want of functional coöperation or dependence. [Id.

4. SAME—SAME—SUBSTITUTION OF EQUIVALENTS.
The substitution of one arrangement of reversing mechanism for another in a washing-machine *Held* unpatentable. [Id.

COÖPERATION.

See Construction of Claims.

DISCLOSURE OF INVENTION.

See Interference, 1, 4.

DRAWINGS.

See Action by the Examiner; Interference, 3.

EARLIER AND LATER APPLICATIONS.

See Interference, 1.

EQUIVALENTS.

See Construction of Claims, 4.

EVIDENCE.

See Public-Use Proceedings.

FORMER DECISION CITED.

See Patentability.

INTERFERENCE.

1. PATENTABILITY—OPERATIVENESS—RES ADJUDICATA.
Where in an interference involving a later application the applicant relied upon this application to prove his priority and judgment was rendered against him on the ground that this application does not disclose an operative device, and therefore could not show prior inventorship, *Held* that the question of operativeness, now raised on *ex parte* appeal, is *res adjudicata*. [*Ex parte* Kidder, 269.

2. SAME—AMENDMENT TO SUPPORT THE CLAIMS DURING INTERFERENCE.
Where it is necessary that an application in interference be amended before a patent may be granted, it is desirable that the amendments be made during the interference, since questions may be involved respecting which the opposing party should be heard. [Liebmann and Megrath *v.* Newcomb, 613.

3. SAME—DRAWINGS SHOULD SHOW EVERY FEATURE CLAIMED.
Where the only support for the counts of the issue was in the specification, *Held* that the drawing should be amended to show the features in question. [Id.

4. SAME—PRACTICE.
The interference suspended for a period of a month to permit a necessary amendment to the disclosure. [Id.

5. TRADE-MARKS—IMMATERIAL DIFFERENCES IN THE MARKS.
Where the prominent features of the interfering marks were a representation of a bear and the word "Bear," *Held* that priority and the right of registration were properly accorded the first to use a mark having these features, notwithstanding that one party used a black bear and the other a polar bear and notwithstanding the fact that the prior user had always used the word "Lithia" in connection with its mark.
*Great Bear Spring Co. and Fulton Water Works Co. *v.* Bear Lithia Springs Company and Bear Lithia Water Company, 613.

LIMIT OF TIME.

See Interference, 4.

NEW MATTER.

See Action by the Examiner.

NON-ANALOGOUS ART.

See Patentability.

OPERATIVENESS.

See Interference, 1.

OPPOSITION TO REGISTRATION OF TRADE-MARK.

1. "MILKMAN" AND "MILKMAID."

Where the opposer had prior use in this country and registration of the trade-mark "Milkmaid," associated with a picture including the representation of a milkmaid, *Held* that the opposition to the registration of the mark "Milkman," associated with a picture including the representation of a man and woman, should be sustained.

[* Nestle and Anglo-Swiss Condensed Milk Company and Borden's Condensed Milk Company *v.* Holland Food Corporation, 1573.

2. "BIG 3" AND "BIG 5."

Where the mark of the applicant consisted of the word and figure "Big 3," with the figure of a man in overalls standing within the figure, and the registered mark of the opposer consisted of the figure "5," in large type, with the words "Big Five" written in the upper bar thereof and the picture of five workmen grouped in the loop of the "5," and it appeared that a third party had a still earlier registration of "Big 4," for overalls, *Held* that the opposer's right to the use of the word "Big" is limited to its association with the particular figure ("5") adopted by it, and the opposition dismissed.

[* Shull-Day Company *v.* The Levy Overall Manufacturing Company, 1574.

PATENTABILITY.

See Construction of Claims; Interference.

NON-ANALOGOUS ARTS.

There are some devices which may be considered common to the arts because of their general applicability. (*In re Morgan*, 179 O. G., 242; 38 App. D. C., 274.) [*Ex parte* Fisher, 1255.

PETITION.

See Public-Use Proceedings.

PRIORITY OF ADOPTION AND USE.

See Interference, 5; Opposition to Registration of Trade-Mark.

PRIORITY OF INVENTION.

See Interference, 1.

PROSECUTION OF APPLICATIONS.

See Action by the Examiner.

PUBLIC-USE PROCEEDINGS.

PETITION INSUFFICIENT.

A petition for the establishment of public-use proceedings to prove the use of anticipating machines as much as twelve years and more ago *Held* insufficient where it was unaccompanied by a print, photograph, or like evidence as to the alleged anticipating structure. [*In re* Dwiggins, 1573.

REFERENCES.

See Construction of Claims, 1.

RES ADJUDICATA.

See Interference, 1.

SIMILARITY OF MARKS.

See Interference, 5; Opposition to Registration of Trade-Mark.

SPECIFICATION.

See Interference, 3.

STATE OF THE ART.

See Action by the Examiner; Patentability.

SUFFICIENCY OF EVIDENCE.

See Public-Use Proceedings.

SUSPENSION OF INTERFERENCE.

See Interference, 4.

TRADE-MARKS.

See Interference, 5; Opposition to Registration of Trade-Mark.

O

BANGOR PUBLIC
DEC 1 1916
LIBRARY

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF AUGUST, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

A-B-C Starter Company. (See Churchward, Alexander, assignor.)
A. G. Spalding & Bros. (See Welch, Robert L., assignor.)
A. J. Tower Co. (See Swan, Edward W., assignor.)
A. O. Smith Company. (See Miller, Henry, assignor.)
A. O. Smith Company. (See Smith, Reuben S., assignor.)
Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Percolating apparatus. No. 1,194,115; Aug. 8; Gaz. vol. 229; p. 496.
Abarca, Ramon. (See Vega and Abarca.)
Abbey & Imbrie. (See Ottmann, William F., assignor.)
Abderhalden, Emil, Halle, Germany. Serum therapy. No. 1,196,065; Aug. 29; Gaz. vol. 229; p. 1298.
Abel, Henry B., Valley Stream, N. Y. Shopper's catalogue. No. 1,195,761; Aug. 22; Gaz. vol. 229; p. 1157.
Abel, Sebastian, Norwood, Ohio. Metal-frame screen. No. 1,192,838; Aug. 1; Gaz. vol. 229; p. 3.
Abell, Charles P. L., assignor of one-half to W. T. Abell, Ardmore, Pa. Clip for sales-books. No. 1,192,837; Aug. 1; Gaz. vol. 229; p. 3.
Abell, William T. (See Abell, Charles P. L., assignor.)
Abernethy, Harry D., Cleveland, Ohio. Railway signaling. No. 1,194,116; Aug. 8; Gaz. vol. 229; p. 496.
Abernethy, Harry D., assignor to H. H. Fulton, Cleveland, Ohio. Multiple-cone clutch. No. 1,195,762; Aug. 22; Gaz. vol. 229; p. 1158.
Abrahamson, Jacob, Asbury Park, N. J. Implement for truing up threads. No. 1,196,415; Aug. 29; Gaz. vol. 229; p. 1419.
Abramo, Arnaldo M., New York, N. Y. Dish-washing appliance. No. 1,193,495; Aug. 8; Gaz. vol. 229; p. 275.
Abrams, Hyman B., Chicago, Ill. Wreath-form and manufacturing the same. No. 1,194,462; Aug. 15; Gaz. vol. 229; p. 663.
Abrams, Jesse E., Baltimore, Md., assignor, by mesne assignments, to Continental Can Company, Inc. Flanging-head. No. 1,196,632; Aug. 29; Gaz. vol. 229; p. 1492.
Accumulatoren Fabrik Aktiengesellschaft. (See Heuser, Friedrich W., assignor.)
Acheson Corporation. (See Acheson, Edward G., assignor.)
Acheson, Edward G., assignor to Acheson Corporation, New York, N. Y. Filter. No. 1,193,333; Aug. 1; Gaz. vol. 229; p. 181.
Acheson, Edward G., assignor to Acheson Corporation, New York, N. Y. Filtration of liquid. No. 1,193,334; Aug. 1; Gaz. vol. 229; p. 182.
Acheson, Edward G., assignor to Acheson Corporation, New York, N. Y. Filter. No. 1,193,335; Aug. 1; Gaz. vol. 229; p. 182.
Acme Furnace Equipment Company, The. (See Quinn, John C., assignor.)
Acme Knitting Machine and Needle Company. (See Stewart, Albert E., assignor.)
Acme Staple Company. (See Michener, Elwood H., assignor.)
Acton, John, New York, N. Y. Combined stop and check valve. No. 1,195,429; Aug. 22; Gaz. vol. 229; p. 1037.
Ad-Atype Matrix Company, The. (See Hanrahan, John E., assignor.)
Adams, Albert L., Cedar Rapids, Iowa. Handle-fastening. No. 1,193,959; Aug. 8; Gaz. vol. 229; p. 443.
Adams, Harry E., Pittsburgh, Pa. Telephone and telegraph pole construction. No. 1,194,690; Aug. 15; Gaz. vol. 229; p. 740.
Adams, Herbert L., Somerville, Mass. Life-preserver for aviators. No. 1,194,691; Aug. 15; Gaz. vol. 229; p. 741.
Adams, Jerome N., Neuhardt, Ark. Rope and cable clamp. No. 1,193,336; Aug. 1; Gaz. vol. 229; p. 182.
Adams, John Q., Frances, Wash. Printing-frame. No. 1,194,117; Aug. 8; Gaz. vol. 229; p. 496.
Adcock, Marvin E., Fresno, Cal. Undertaker's instrument. No. 1,195,169; Aug. 22; Gaz. vol. 229; p. 943.
Adder Machine Company. (See Hunter and Küntzler, assignors.)
Addressograph Company. (See Duncan, Joseph S., assignor.)
Addressograph Company. (See Hughes, Davydd C., assignor.)
Adler, Eugene, *et al.* (See Musser, George D., assignor.)
Adler, Morton L., New York, N. Y., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Closet-seat hinge. No. 1,194,393; Aug. 15; Gaz. vol. 229; p. 636.
Adlof, Frederick W., New Brighton, Pa. Drying apparatus. No. 1,194,118; Aug. 8; Gaz. vol. 229; p. 497.
Adsit, Frank, *et al.* (See Hanson, Le Roy A., assignor.)
Adsit, Frank W., Minneapolis, Minn. Electrical timing mechanism. No. 1,196,728; Aug. 29; Gaz. vol. 229; p. 1527.
Advance Machine Co. (See Antoine and Travis, assignors.)
Aero-Cushion Tire Company. (See Sherbondy, Edward L., assignor.)
Ahlfs, Christian H., Clara City, Minn. Spout-holder. No. 1,194,922; Aug. 15; Gaz. vol. 229; p. 821.
Ahlstrom, Carl F., *et al.* (See Kellner, Walter, assignor.)
Ahlstrom, Frederick, assignor to A. J. Isherwood, Chicago, Ill. Window-screen. No. 1,196,502; Aug. 29; Gaz. vol. 229; p. 1448.
Ahlstrom, Otto J., *et al.* (See Kellner, Walter, assignor.)
Aigner, George J., Chicago, Ill. Index-tab. No. 1,193,960; Aug. 8; Gaz. vol. 229; p. 443.
Aitken, Robert. (See Aitken, William and R.)
Aitken, William and R., London, England. Semi-automatic telephone-exchange system. No. 1,195,891; Aug. 22; Gaz. vol. 229; p. 1203.
Akans, George, Atlanta, Ga., assignor to W. S. Murrian, trustee, Knoxville, Tenn. Fluid-actuated motor. No. 1,194,346; Aug. 15; Gaz. vol. 229; p. 619.
Aktiebolaget Armématerial. (See Burman and Lyth, assignors.)
Aktiengesellschaft Brown Boveri & Cie. (See Schnetzler, Karl, assignor.)
Aktiengesellschaft für Chemische Produkte vormals H. Scheidemandel. (See Salm, Eduard, assignor.)
Aktions Company "Kontakt." (See Petroff, Grigori, assignor.)
Aladdin Lamp Corporation, The. (See Keen, Eliot, assignor.)
Alberini, Filoteo, Rome, Italy. Apparatus for taking cinematographic photograms. No. 1,196,066; Aug. 29; Gaz. vol. 229; p. 1299.
Albert, Heinrich. (See Januchowsky and Albert.)
Alberts, G. H. (See Hoge, William A., assignor.)
Albury, William B., Tampa, Fla. Slip-cover for automobile-tops. No. 1,193,961; Aug. 8; Gaz. vol. 229; p. 443.
Aldrich, Alonzo, assignor to Beloit Iron Works, Beloit, Wis. Guide for paper-making machines. No. 1,193,659; Aug. 8; Gaz. vol. 229; p. 335.
Aldridge, Thomas J., Rochester, N. Y. Last. No. 1,193,337; Aug. 1; Gaz. vol. 229; p. 182.
Alexander, George H., Birmingham, England. Appliance for the cutting or forming of screw-threads. No. 1,196,503; Aug. 29; Gaz. vol. 229; p. 1449.
Alexander Milburn Company, The. (See Jenkins, Alexander F., assignor.)
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Alternating-current motor. No. 1,194,265; Aug. 8; Gaz. vol. 229; p. 546.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Alternating-current-commutator motor. No. 1,194,923; Aug. 15; Gaz. vol. 229; p. 821.
Alexandre, Lillian R., New York, N. Y. Cigar-band. No. 1,193,748; Aug. 8; Gaz. vol. 229; p. 368.
Aley, John B., Pittsburgh, Pa. Game. No. 1,193,962; Aug. 8; Gaz. vol. 229; p. 443.
Alfred Struck Company. (See Curry, William C., assignor.)
Aliff, Burk W., assignor of one-half to J. Hunt, Stanaford, W. Va. Wrench. No. 1,196,416; Aug. 29; Gaz. vol. 229; p. 1419.
Allan, William A., Stouffville, Ontario, Canada. Engine. No. 1,195,323; Aug. 22; Gaz. vol. 229; p. 1000.
Allard, J Frank, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,194,587; Aug. 15; Gaz. vol. 229; p. 705.
Allbright-Nell Company, The. (See Kohlhepp, John W., assignor.)

Allen, Anson W., and E. G. Lilly, Birmingham, Ala. Producing steel and high-phosphorus slag. No. 1,193,496; Aug. 8; Gaz. vol. 229; p. 275.
Allen, Archibald K. and C. A., Seattle, Wash. Rubber tire. No. 1,193,108; Aug. 1; Gaz. vol. 229; p. 100.
Allen, Benjamin C., Chicago, Ill. Clamp for ear ornaments. No. 1,195,324; Aug. 22; Gaz. vol. 229; p. 1000.
Allen, Clarence A. (See Allen, Archibald K. and C. A.)
Allen, Daniel R., North Augusta, S. C. Electrically-operated switch. No. 1,195,892; Aug. 22; Gaz. vol. 229; p. 1204.
Allen, Fred R., Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, Boston, Mass. Stamp-affixing machine. No. 1,194,692; Aug. 15; Gaz. vol. 229; p. 741.
Allen, Fred R., Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company. Envelop-sealing machine. No. 1,194,693; Aug. 15; Gaz. vol. 229; p. 741.
Allen, Fred R., Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company. Stamp-affixing machine. No. 1,194,694; Aug. 15; Gaz. vol. 229; p. 742.
Allen, Jay M., Decatur, Ill. Top or cap for liquid-containers. No. 1,194,347; Aug. 15; Gaz. vol. 229; p. 619.
Allen, Joseph E., Stamford, Conn. Changeable numbering device. No. 1,193,963; Aug. 8; Gaz. vol. 229; p. 444.
Allen, Joseph S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone signaling system. No. 1,196,323; Aug. 29; Gaz. vol. 229; p. 1385.
Alliance Engineering Corporation. (See Stillman, Albert L., assignor.)
Alliance Securities Company. (See Hopkins, Blake F., assignor.)
Allinger, Frank A., assignor of one-third to C. Volz and one-third to W. A. Keith, Los Angeles, Cal. Draft-producing apparatus. No. 1,195,127; Aug. 15; Gaz. vol. 229; p. 892.
Allis-Chalmers Manufacturing Company. (See McCormick, Bradley T., assignor.)
Allis-Chalmers Manufacturing Company. (See Müller, Edward P., assignor.)
Allis-Chalmers Manufacturing Company. (See Nye, Henry V., assignor.)
Allis-Chalmers Manufacturing Company. (See Pfau, Arnold, assignor.)
Allis-Chalmers Manufacturing Company. (See Steen, Halfdan, assignor.)
Allison, Daniel K., assignor to The J. H. Day Company, Cincinnati, Ohio. Machine for molding and balling dough and the like. No. 1,192,973; Aug. 1; Gaz. vol. 229; p. 49.
Alpen, Henry, Hempstead, N. Y. Ladder attachment. No. 1,193,964; Aug. 8; Gaz. vol. 229; p. 444.
Altshuler Bros. (See Altshuler and Vines, assignors.)
Altshuler, Max, New York, N. Y., and S. M. Vines, Westfield, N. J., assignors to Altshuler Bros., New York, N. Y. Umbrella. No. 1,195,635; Aug. 22; Gaz. vol. 229; p. 1111.
Alvord Automatic Machine Co. (See Alvord, Elisha H., assignor.)
Alvord, Elisha H., assignor to Alvord Automatic Machine Co., Seattle, Wash. Press. No. 1,194,266; Aug. 8; Gaz. vol. 229; p. 547.
Ambrozy, Eugene, New York, N. Y. Construction of marine vessels. No. 1,193,965; Aug. 8; Gaz. vol. 229; p. 444.
American Alfalfa Products Co., The. (See Rich, Mark C., assignor.)
American Bank Note Company. (See Smith, Amos H., assignor.)
American Bottle Cap Company. (See Schmitt, Edward D., assignor.)
American Can Company. (See Carnes, Edward W., assignor.)
American Can Company. (See Gray, James A., assignor.)
American Can Company. (See Harbeck, Jervis R., assignor.)
American Can Company. (See Hodgson, John G., assignor.)
American Can Company. (See Johnson, Axel, assignor.)
American Can Company. (See Rudolph and Hodgson, assignors.)
American Chain Company. (See Luce, Thomas C., assignor.)
American Graphophone Company. (See Tyler and Capps, assignors.)
American Graphophone Company. (See Woods, Clinton E., assignor.)
American Hardware Corporation, The. (See Teich, Ernest L., assignor.)
American La France Fire Engine Company. (See Hawley, William G., assignor.)
American Laundry Machinery Company. (See Binder, Gottlob, assignor.)
American Mechanical Toy Company, The. (See Wagner and Hartzell, assignors.)
American Moistening Company. (See Comins, Frank B., assignor.)
American Molding Machine Co. (See Norcross, William C., assignor.)
American Morgan Company. (See Morgan, John H., assignor.)
American Multigraph Company, The. (See Gammeter, Harry C., assignor.)
American Multigraph Company, The. (See Neidich, Samuel A., assignor.)
American Optical Company. (See Arnold, Arthur A., assignor.)
American Optical Company. (See Bugbee, Lucian W., assignor.)
American Optical Company. (See Emerson, Alfred H., assignor.)
American Optical Company. (See Maynard, Albert E., assignor.)
American Optical Company. (See Newbold, Harry, assignor.)
American Photo Player Company. (See Van Valkenburg, Burt R., assignor.)
American Pulley Company, The. (See Schumacher, Eberhard, assignor.)
American Pure Food Process Company, The. (See Schmitt, Edward D., assignor.)
American Resilient Wheel Company. (See Harrington, Leslie, assignor.)
American Road Machinery Company. (See Ruth, William T., assignor.)
American Rotary Power Company. (See Dock, Herman, assignor.) (Reissue.)
American Rubber Company. (See Greene, Noah L., assignor.)
American Safety Device Company. (See Chesebro, Denison P., assignor.)
American Splint Corporation. (See Perkins, Hiram A., assignor.)
American Steel & Wire Company of New Jersey, The. (See Kilmer, William A., assignor.)
American Tap Brush Company. (See Rice, Frank E., assignor.)
American Tire Company. (See Dees, Mark A., assignor.)
American Type Founders Company. (See Springer, Winton L., assignor.)
American Warp Drawing Machine Company. (See Lea, Charles, assignor.)
Ames, John M., *et al.* (See Hyle, Jacob A., assignor.)
Amlee, Philip, East Boston, Mass. Bottle. No. 1,194,119; Aug. 8; Gaz. vol. 229; p. 497.
Ammen, Francis D. (See Lowes and Ammen.)
Anable, Frederick S., Brookline, assignor to National Binding Machine Company, Boston, Mass. Strip-serving device. No. 1,195,893; Aug. 22; Gaz. vol. 229; p. 1204.
Anable, Frederick S., Brookline, assignor to National Binding Machine Company, Boston, Mass. Strip-serving device. No. 1,195,894; Aug. 22; Gaz. vol. 229; p. 1204.
Anders, Hanns R., and M. E. U. Schoedler, Perth Amboy, N. J., assignors to The Roessler & Hasslacher Chemical Co., New York, N. Y. Bleaching. No. 1,195,325; Aug. 22; Gaz. vol. 229; p. 1000.
Andersen, Fridtjov, Christiania, Norway. Range-finder or oreograph. No. 1,196,417; Aug. 29; Gaz. vol. 229; p. 1420.
Andersen, Lauritz W., Waterbury, Conn. Electric shadeholder. No. 1,195,636; Aug. 22; Gaz. vol. 229; p. 1111.
Andersen, Lauritz W., Waterbury, Conn., assignor to General Electric Company. Socket-shell. No. 1,193,966; Aug. 8; Gaz. vol. 229; p. 445.
Andersen, William J. (See David and Andersen.)
Anderson, August W. (See Olson, Olof W., assignor.)
Anderson-Barngrover Mfg. Co. (See Thompson, Albert R., assignor.)
Anderson, Carl. (See Lawson, Oscar L., assignor.)
Anderson, Carl E., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn. Electric switch. No. 1,196,633; Aug. 29; Gaz. vol. 229; p. 1493.
Anderson, Cecil R., Ben Avon, Pa. Shovel. No. 1,194,924; Aug. 15; Gaz. vol. 229; p. 821.
Anderson, Christ O., Clyde, Wis. Stanchion. No. 1,194,925; Aug. 15; Gaz. vol. 229; p. 822.
Anderson, Clayton & Co. (See Brown, George R., assignor.)
Anderson, Clifford S., Ripon, Cal. Automatic fuse cut-out. No. 1,192,974; Aug. 1; Gaz. vol. 229; p. 49.
Anderson, Duncan G., Glasgow, Scotland. Plastic composition for flooring. No. 1,194,926; Aug. 15; Gaz. vol. 229; p. 822.
Anderson, Frank J., Box Elder, Mont. Fork. No. 1,194,695; Aug. 15; Gaz. vol. 229; p. 742.
Anderson, Gust, Caldwell, Idaho. Power-distributing mechanism. No. 1,195,895; Aug. 22; Gaz. vol. 229; p. 1205.
Anderson, John C. A., Chicago, Ill. Safety control system for elevators. No. 1,195,128; Aug. 15; Gaz. vol. 229; p. 892.
Anderson, Oliver P., Nashville, Tenn. Attachment for type-writing machines. No. 1,196,634; Aug. 29; Gaz. vol. 229; p. 1493.
Anderson, Maurice P. (See Bunting and Anderson.)
Anderson, Oscar F., Brookline, Mass. Boot or casing for leaf-springs. No. 1,195,896; Aug. 22; Gaz. vol. 229; p. 1205.
Anderson, Robert. (See Krause and Anderson.)
Anderson, Rupert T., New York, N. Y. Hatch. No. 1,195,763; Aug. 22; Gaz. vol. 229; p. 1158.

Anderson, William B., assignor to Haggard & Marcusson Company, Chicago, Ill. Bed. No. 1,195,637; Aug. 22; Gaz. vol. 229; p. 1111.
Anderson, William E., *et al.* (See Feltz, Charles F., assignor.)
Andreas, Frank O., assignor of one-third to J. T. Long and one-third to E. G. Vestal, Los Angeles, Cal. Toy cane. No. 1,195,938; Aug. 22; Gaz. vol. 229; p. 1219.
Aneiois Holding Company. (See Rosenfeld, Maurice S., assignor.)
Angier, Edward H., Framingham, Mass. Reinforced tape. No. 1,195,430; Aug. 22; Gaz. vol. 229; p. 1038.
Angsten, Henry W. (See Beardsley, Robert F., assignor.)
Angsten-Koch Company. (See Koch, Bernard F., assignor.)
Angwin, Benjamin, Camborne, Cornwall, England. Utilization of compressed air for motive-power purposes. No. 1,196,635; Aug. 29; Gaz. vol. 229; p. 1493.
Aniser Manufacturing Company. (See Crowe, John, assignor.)
Annable, Warren W., Grand Rapids, Mich. Transmission-gearing for automobiles. No. 1,194,326; Aug. 8; Gaz. vol. 229; p. 570.
Ansco Company. (See Clark and Arrufat, assignors.)
Ansonia Electrical Company, The. (See Manville, Edwin A., assignor.)
Antoine, Alfred D., and C. C. Travis, assignors to Advance Machine Co., Chicago, Ill. Check-detector for check-actuated machines. No. 1,193,967; Aug. 8; Gaz. vol. 229; p. 445.
Antoine, Alfred D., and C. C. Travis, Chicago, Ill.; said Antoine assignor to said Travis. Check-controlled vending-machine. No. 1,196,067; Aug. 29; Gaz. vol. 229; p. 1299.
Antonelli, Orazio, Jersey City, N. J., assignor to A. Drusin, Brooklyn, N. Y. Adding-machine. No. 1,193,968; Aug. 8; Gaz. vol. 229; p. 446.
Apple, Vincent G. (See Borger, Henry E., assignor.)
Apple, Vincent G., Dayton, Ohio. Electric starting system for internal-combustion engines. No. 1,196,636; Aug. 29; Gaz. vol. 229; p. 1494.
Apple, Vincent G., Dayton, Ohio. Switch. No. 1,196,637; Aug. 29; Gaz. vol. 229; p. 1494.
Appleby, William H., Chicago, Ill. Steering-wheel. No. 1,195,548; Aug. 22; Gaz. vol. 229; p. 1078.
Arden, Thomas R. (See Heyman and Arden.)
Armitage, Ida P. (See Foster and Armitage.)
Armitage, Tom, Jr. (See Hisgen, Wolfe, Armitage, and Hisgen.)
Armour, Alonzo O., Dalton, Ga. Gasolene-gun. No. 1,192,839; Aug. 1; Gaz. vol. 229; p. 4.
Armstrong, Andrew, Marietta, Ga. Rack for curing and drying hay. No. 1,194,927; Aug. 15; Gaz. vol. 229; p. 822.
Armstrong, Benjamin F., Westport, Wash. Floating fish-trap. No. 1,193,216; Aug. 1; Gaz. vol. 229; p. 138.
Armstrong, Edwin A., deceased, Highland Park, Ill.; Z. B. Armstrong, executrix. Removable window for vehicles. No. 1,195,638; Aug. 22; Gaz. vol. 229; p. 1111.
Armstrong, Matthew C. and R., Hampton, Va. Marking bivalves. No. 1,195,946; Aug. 22; Gaz. vol. 229; p. 1222.
Armstrong, Richard. (See Armstrong, Matthew C. and R.)
Armstrong, Zuleime B., executrix. (See Armstrong, Edwin A.)
Arndt, Charles W., Hutchinson, Kans. Valve for water-tanks. No. 1,195,170; Aug. 22; Gaz. vol. 229; p. 943.
Arnold, Arthur A., assignor to American Optical Company, Southbridge, Mass. Swaging-machine. No. 1,193,856; Aug. 8; Gaz. vol. 229; p. 406.
Arnold, Charles E., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Producing pyroxylin compositions. No. 1,195,431; Aug. 22; Gaz. vol. 229; p. 1038.
Arnold, Egmont B., Milwaukee, Wis. Temporary binder. No. 1,193,497; Aug. 8; Gaz. vol. 229; p. 275.
Arnold Electric Company. (See Arnold, George A., assignor.)
Arnold, George A., Middletown, Conn., assignor to Arnold Electric Company. Valve operating and locking device. No. 1,194,696; Aug. 15; Gaz. vol. 229; p. 743.
Arnold, George A., assignor of one-half to F. C. Hersee, Boston, Mass. Eyeglasses. No. 1,195,326; Aug. 22; Gaz. vol. 229; p. 1001.
Arnold, Hans, Charlottenburg, and M. Levy-Dorn, Berlin, Germany. Sensitive plate for Röntgen photography and making the same. No. 1,195,432; Aug. 22; Gaz. vol. 229; p. 1038.
Arquembourg, Emile H., assignor to Société Jules Grouvelle H. Arquembourg & Cie., Paris, France. Feeding apparatus for internal-combustion motors. No. 1,195,764; Aug. 22; Gaz. vol. 229; p. 1158.
Arrow Electric Company, The. (See Nero, Arvid H., assignor.)
Arrowsmith, James W., Morristown, N. J. Inside heel-cushion. No. 1,195,327; Aug. 22; Gaz. vol. 229; p. 1001.
Arrufat, Joseph. (See Clark and Arrufat.)
Art Metal Construction Company. (See Look, Warren B., assignor.)
Art Metal Construction Company. (See Turner, Paul G., assignor.)
Asbestos Protected Metal Company. (See Robertson, Harold H., assignor.)
Ash, Jesse E., assignor of one-third to C. Lemon and one-third to G. L. Green, Covington, Ky. Rivet-cutting machine. No. 1,195,897; Aug. 22; Gaz. vol. 229; p. 1205.
Ash, Martin T., Shirley, assignor of one-half to T. E. Ash, Ashley, W. Va. Valve. No. 1,195,958; Aug. 29; Gaz. vol. 229; p. 1260.
Ash, Tilman E. (See Ash, Martin T., assignor.)
Ashby, Sydney G., Edenbridge, England. Grinding wheel or tool. No. 1,194,267; Aug. 8; Gaz. vol. 229; p. 547.
Ashenfelter, Loyd E., Stillwater, Okla. Tobacco-biter. No. 1,194,697; Aug. 15; Gaz. vol. 229; p. 743.
Ashley, Charles G., Chicago, Ill., assignor to General Engineering and Construction Company, Limited, Toronto, Canada. Printing-telegraph system. No. 1,193,217; Aug. 1; Gaz. vol. 229; p. 138.
Ashley, Charles G., Chicago, Ill., assignor to General Engineering and Construction Company, Limited, Toronto, Canada. Printing-telegraph receiver. No. 1,193,218; Aug. 1; Gaz. vol. 229; p. 139.
Ashton, Ceacil C., and A. Wagner, Chicago, Ill. Variable-speed motor-drive. No. 1,193,448; Aug. 1; Gaz. vol. 229; p. 220.
Ashton, Frank R., Rochester, N. Y. Lubricator. No. 1,193,338; Aug. 1; Gaz. vol. 229; p. 182.
Asprooth, Axel H., and H. H. Benson, Rockford, Ill. Fluid-clutch. No. 1,195,956; Aug. 29; Gaz. vol. 229; p. 1259.
Atherton, John T., New York, N. Y., assignor, by mesne assignments, to George P. Clark Company, Windsor Locks, Conn. Elevating-truck. No. 1,196,638; Aug. 29; Gaz. vol. 229; p. 1494.
Atkins, Cora I., West Hartford, Conn. Lady's traveling-skirt. No. 1,196,324; Aug. 29; Gaz. vol. 229; p. 1386.
Atlanta Utility Works. (See Moore, James W., assignor.)
Atlas Typewriter Co. (See Uhlig, Richard W., assignor.)
Atwood, William S., Montreal, Quebec, Canada. Treadplate. No. 1,193,857; Aug. 8; Gaz. vol. 229; p. 407.
Auble, James H., assignor of one-half to H. A. Barrett, Cincinnati, Ohio. Engine. No. 1,195,639; Aug. 22; Gaz. vol. 229; p. 1112.
Audiffern Refrigerating Machine Company. (See Myers, Thomas M., assignor.)
Auer, Carl, Fragaria, Wash., assignor of one-fourth to F. Rueth, Washington, D. C. Clock rewinding device. No. 1,194,928; Aug. 15; Gaz. vol. 229; p. 823.
Auer, George, White Plains, assignor of one-half to H. C. Merritt, Tuckahoe, N. Y. Concrete fence construction. No. 1,195,957; Aug. 29; Gaz. vol. 229; p. 1259.
Aunger, Clyde, San Francisco, Cal. Artificial hand. No. 1,193,969; Aug. 8; Gaz. vol. 229; p. 446.
Austen, John M., and B. J. Lee, Sacramento, Cal. Electric light. No. 1,194,929; Aug. 15; Gaz. vol. 229; p. 824.
Austen, John M., Sacramento, Cal. Lamp. No. 1,194,930; Aug. 15; Gaz. vol. 229; p. 824.
Austin, Frederick C. (See Bunnell, Morton G., assignor.)
Austin, Frederick C. (See French, James C., assignor.)
Austin, Harry M., Jr., assignor to Metalwood Manufacturing Company, Detroit, Mich. Hydraulic press. No. 1,196,504; Aug. 29; Gaz. vol. 229; p. 1449.
Auto Pneumatic Action Co. (See Southgate, Louis W., assignor.)
Automatic Arms Company, The. (See Lewis, Isaac N., assignor.)
Automatic Book-Keeping Register Company. (See White, George, assignor.)
Automatic Electric Company. (See Erickson, John, assignor.)
Automatic Electric Company. (See Lamb, Willis E., assignor.)
Automatic Electric Company. (See Martin, Talbot G., assignor.)
Automatic Electric Company. (See Willis, Bernard D., assignor.)
Automatic Steam, Air, Electric Light and Telephone Coupler Company. (See Futrell, Thomas J., assignor.)
Automatic Telephone Manufacturing Company Limited. (See Chambers, Frederick J., assignor.)
Automatic Time Stamp Company, The. (See Wilson, John C., assignor.)
Automatic Train Control & Signal Company. (See Gray, Gardner B., assignor.)
Automatic Train Control & Signal Company. (See Thurber, Guy P., assignor.)
Automatic Utilities Co. (See Honecker, Charles A., assignor.)
Automatic Utilities Co. (See Huising, Garrett H., assignor.)
Autopress Company, The. (See Grimmer, Austin S., assignor.)
Autovacuum Refrigerating Company. (See Kelly, William J., assignor.)
Avery, Charles E., Trenton, N. J., assignor to Manhattan Electrical Supply Company, New York, N. Y. Signal-box. No. 1,194,931; Aug. 15; Gaz. vol. 229; p. 824.
Ayers, Charles. (See Rohm, Charles A., assignor.)
Ayerst, Harry C., Seattle, Wash. Bottle-making machine. No. 1,193,749; Aug. 8; Gaz. vol. 229; p. 368.
Aylsworth, Jonas W., East Orange, assignor to Halogen Products Company, Glen Ridge, N. J. Chlorinated insulating compound. No. 1,196,505; Aug. 29; Gaz. vol. 229; p. 1450.
Ayres, Ellen M., Boston, Mass. Wheel-retaining device. No. 1,194,698; Aug. 15; Gaz. vol. 229; p. 743.

B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)
B. J. Johnson Soap Company. (See Remington, Horace W., assignor.)
B & R Rubber Company, The. (See Wills, Arthur J., assignor.)
Babcock & Wilcox Company, The. (See Branczik, Karl W., assignor.)
Babcock & Wilcox Company. (See Britton, Frank G., assignor.)
Babcock & Wilcox Company. (See Irish, David J., assignor.)
Babcock & Wilcox Company, The. (See Mosher, Charles D., assignor.)
Bache, Leigh S., assignor to Bound Brook Oil-Less Bearing Company, Boundbrook, N. J. Oilless bearing. No. 1,194,463; Aug. 15; Gaz. vol. 229; p. 663.
Bacher, Philip J., Galesburg, Ill. Filter. No. 1,193,970, Aug. 8; Gaz. vol. 229; p. 447.
Back, Alfred de, Essen-on-the-Ruhr, Germany, assignor, by mesne assignments, to Goldschmidt Detinning Company, New York, N. Y. Recovering iron, steel, and the like from waste enameled articles. No. 1,196,342; Aug. 29; Gaz. vol. 229; p. 1393.
Back, Alfred de, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Detinning Company, New York, N. Y. Apparatus for disintegrating metal articles. No. 1,196,343; Aug. 29; Gaz. vol. 229; p. 1393.
Bacon, Harry R., and E. T. Malloy, Hamilton, Ohio. Advertising device. No. 1,195,171; Aug. 22; Gaz. vol. 229; p. 943.
Bader, Gustav A., Rochester, N. Y. Eyeglasses. No. 1,193,219; Aug. 1; Gaz. vol. 229; p. 139.
Bader, Gustav A., Rochester, N. Y. Eyeglass-mounting. No. 1,193,339; Aug. 1; Gaz. vol. 229; p. 183.
Bader, Gustav A., Rochester, N. Y. Goggles. No. 1,193,340; Aug. 1; Gaz. vol. 229; p. 183.
Bader, Gustav A., Rochester, N. Y. Lens-mounting. No. 1,193,341; Aug. 1; Gaz. vol. 229; p. 183.
Badger, Oliver L., Plainfield, N. J., assignor to Kerr Adjustable Strap Company, Inc., New York, N. Y. Adjustable flexible support. No. 1,194,699; Aug. 15; Gaz. vol. 229; p. 743.
Badin, Adrien, assignor to Société Generale des Nitrures, Paris, France. Fixation of nitrogen. No. 1,196,639; Aug. 29; Gaz. vol. 229; p. 1495.
Badische Anilin & Soda Fabrik. (See Gaus, Wilhelm, assignor.)
Badische Anilin & Soda Fabrik. (See Luttringhaus, Arthur, assignor.)
Bagby, Calvin W., Oregon City, Oreg. Railway-track construction. No. 1,195,898; Aug. 22; Gaz. vol. 229; p. 1206.
Bahen, Joseph S., Rock Island, Ill. Cushion-tire. No. 1,194,120; Aug. 8; Gaz. vol. 229; p. 498.
Bahmann Iron Works Company. (See Wentzel, Clifford E., assignor.)
Bailey, De Witt C., Nichols, Fla. Hose-coupling. No. 1,195,433; Aug. 22; Gaz. vol. 229; p. 1039.
Bailey, Edward G., Eufaula, Okla. Watch-chain guard for trousers. No. 1,193,971; Aug. 8; Gaz. vol. 229; p. 447.
Bailey, Festus S., Quitman, Ga. Support for turpentine strips or troughs. No. 1,193,220; Aug. 1; Gaz. vol. 229; p. 139.
Bailey, Percy S., Lynn, Mass., assignor to General Electric Company. Headlight. No. 1,196,506; Aug. 29; Gaz. vol. 229; p. 1450.
Bailey, William H., Gary, Ind. Blast-furnace top. No. 1,193,750; Aug. 8; Gaz. vol. 229; p. 369.
Bain, James A., Altoona, Ala. Delivery-cabinet. No. 1,195,129; Aug. 15; Gaz. vol. 229; p. 892.
Baird, Florence S., administratrix. (See Baird, George E.)
Baird, Frank, Berkeley, assignor to Pacific Foundry Company, San Francisco, Cal. Valve. No. 1,196,199; Aug. 29; Gaz. vol. 229; p. 1347.
Baird, George E., deceased, Peoria, Ill.; F. S. Baird, administratrix, assignor to A. R. MacKusick, Boston, Mass. Display device. No. 1,193,491; Aug. 1; Gaz. vol. 229; p. 235.
Bajde, Ludwig. (See Hennig and Bajde.)
Baker, Abraham. (See Wynne, Alexander, assignor.)
Baker, A. W. (See Baker, Commodore P., assignor.)
Baker, Charles E., Carmarthen, Wales. Valve attachment of pneumatic tires and the like. No. 1,195,939; Aug. 22; Gaz. vol. 229; p. 1220.
Baker, Charles S., Philadelphia, Pa. Telephone set. No. 1,192,975; Aug. 1; Gaz. vol. 229; p. 49.
Baker, Commodore P., Lincoln, assignor of one-half to A. W. Baker, Brookfield, Mo. Switch-point connector. No. 1,194,121; Aug. 8; Gaz. vol. 229; p. 498.
Baker, Frank E., assignor of one-third to E. C. Devendorf, Syracuse, N. Y. Nut and bolt lock. No. 1,195,165; Aug. 15; Gaz. vol. 229; p. 905.
Baker, Francis M., Viroqua, Wis. Sash-adjusting means. No. 1,195,899; Aug. 22; Gaz. vol. 229; p. 1206.
Baker, George R. (See Baker, George S. and G. R.)
Baker, George S., London, England. Conveyer or elevator more particularly for use in proving dough. No. 1,194,932; Aug. 15; Gaz. vol. 229; p. 824.
Baker, George S. and G. R., London, England. Machine for coating biscuits and other articles with icing or similar substance. No. 1,196,068; Aug. 29; Gaz. vol. 229; p. 1299.
Baker-Hausen Manufacturing Co. (See Zimmer, Ernest L. B., assignor.)
Baker, Mabel C. (See Wilson, Charles H., assignor.)
Baker, Olaf, Miami, Okla. Check and deposit-ticket tray. No. 1,192,840; Aug. 1; Gaz. vol. 229; p. 4.
Baker, William H., Meshoppen, Pa. Reciprocating motor. No. 1,195,549; Aug. 22; Gaz. vol. 229; p. 1079.
Baker, William J. (See Mahan, Robert A., assignor.)
Balch, Samuel W., Montclair, N. J. Train-bulletin. No. 1,195,900; Aug. 22; Gaz. vol. 229; p. 1207.
Baldwin, Alfred, Keighley, England. Valve for draining water from steam-pipes. No. 1,196,418; Aug. 29; Gaz. vol. 229; p. 1420.
Baldwin, Leon F. N., Cranston, R. I. Vehicle-tire. No. 1,196,069; Aug. 29; Gaz. vol. 229; p. 1300.
Balenti, George E. (See Balenti, Michael R. and G. E.)
Balenti, Michael R. and G. E., Calumet, Okla. Attachment for jumping-standards. No. 1,193,972; Aug. 8; Gaz. vol. 229; p. 447.
Bales, James E., and J. B. O'Connor, assignors to Lyon Metallic Manufacturing Company, Aurora, Ill. Tire-tack. No. 1,193,498; Aug. 8; Gaz. vol. 229; p. 276.
Ball, Arthur R., Melvern, Kans. Adding-machine. No. 1,193,858; Aug. 8; Gaz. vol. 229; p. 407.
Ball, Henry P., New York, N. Y., assignor to General Electric Company. Connecting-plug. No. 1,194,122; Aug. 8; Gaz. vol. 229; p. 498.
Ballard, George L. (See Wildman and Ballard.)
Balliet, Herbert S. (See Solan and Balliet.)
Balough, Charles, Springfield, Ohio. Internal-combustion engine. No. 1,195,550; Aug. 22; Gaz. vol. 229; p. 1079.
Baltimore Tube Company. (See Brinkman, Louis H., assignor.)
Bamford, Cyril J. (See Bamford, Joseph and C. J.)
Bamford, Joseph and C. J., Uttoxeter, England. Side-delivery rake. No. 1,195,172; Aug. 22; Gaz. vol. 229; p. 944.
Bancroft, Albert S. (See Oechsle and Bancroft.)
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Centering-bar lock for type-casting machines. No. 1,193,342; Aug. 1; Gaz. vol. 229; p. 184.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Keyboard-machine. No. 1,193,343; Aug. 1; Gaz. vol. 229; p. 184.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Shearing mechanism for lead and rule strip casting machines. No. 1,193,344; Aug. 1; Gaz. vol. 229; p. 184.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Matrix-holder for type-casting machines. No. 1,193,345; Aug. 1; Gaz. vol. 229; p. 185.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Units-rack-stop mechanism for composing-machines. No. 1,193,346; Aug. 1; Gaz. vol. 229; p. 185.
Bangen, Simon M. O., Crookston, Minn. Grain-separator for threshing-machines. No. 1,193,751; Aug. 8; Gaz. vol. 229; p. 369.
Bannister, Albert R., London, England. Speed-gear for motor-cycles. No. 1,195,551; Aug. 22; Gaz. vol. 229; p. 1080.
Banyovits, Henry F., Archbald, Pa. Foldable fire-escape. No. 1,196,419; Aug. 29; Gaz. vol. 229; p. 1420.
Bar-Lock Typewriter Company, The. (See Etheridge, Herbert, assignor.)
Barber, C. M., *et al.* (See Thomas, William M., assignor.)
Barber Car Company. (See Webster, Guy, assignor.)
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Sheet cutting and folding machine. No. 1,193,449; Aug. 1; Gaz. vol. 229; p. 220.
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Sheet cutting and folding machine. No. 1,193,450; Aug. 1; Gaz. vol. 229; p. 220.
Barber, Howard M., Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y. Creasing mechanism for sheet collecting and folding machines. No. 1,194,348; Aug. 15; Gaz. vol. 229; p. 619.
Barber, John C., assignor to Standard Car Truck Company, Chicago, Ill. Car-truck. No. 1,194,349; Aug. 15; Gaz. vol. 229; p. 620.
Barber, Thomas W., Westminster, London, England. Purifying liquids. No. 1,194,933; Aug. 15; Gaz. vol. 229; p. 825.
Barbour, George H., Pittsburgh, Pa. Building structure. No. 1,196,325; Aug. 29; Gaz. vol. 229; p. 1386.
Bardsley, William, Kearney, N. J. Shock-absorber for motor and other vehicles. No. 1,195,959; Aug. 29; Gaz. vol. 229; p. 1260.
Barilla Limited. (See Rauschenplat, Günzel von, assignor.)
Barker, Benjamin F., El Paso, Tex., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,192,976; Aug. 1; Gaz. vol. 229; p. 50.
Barker, Charles H., Regina, Saskatchewan, Canada. Driving attachment to separating-machines. No. 1,192,841; Aug. 1; Gaz. vol. 229; p. 4.
Barker, Robert W., Providence, R. I. Power-transmitting means. No. 1,195,552; Aug. 22; Gaz. vol. 229; p. 1080.
Barker, William J., Pontiac, Mich. Universal joint. No. 1,193,499; Aug. 8; Gaz. vol. 229; p. 276.

Barkman, Peter P., *et al.* (See Fischer, Abraham, assignor.)
Barnedt, Adolph, and C. N. Jensen, Bickleton, Wash. Feeder for threshing-machines. No. 1,196,070; Aug. 29; Gaz. vol. 229; p. 1300.
Barnes, Leonidas E., Omaha, Nebr. Buffer. No. 1,193,973; Aug. 8; Gaz. vol. 229; p. 447.
Barnes, Walton J. (See Riedel and Barnes.)
Barnes, William O., Leominster, Mass. Machine for grinding formed cutters. No. 1,196,420; Aug. 29; Gaz. vol. 229; p. 1421.
Barnett, Joseph E., Prentiss, Miss. Dirigible headlight. No. 1,194,123; Aug. 8; Gaz. vol. 229; p. 498.
Barnett, Otto R. (See Laas, Edward, assignor.)
Barnett, Otto R. (See Scott, John M., assignor.)
Barnett, Stewart R. (See Crary and Barnett.)
Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,193,660; Aug. 8; Gaz. vol. 229; p. 335.
Baron, Charles S., Tiffin, Ohio. Jug top or cover. No. 1,195,434; Aug. 22; Gaz. vol. 229; p. 1039.
Barr, Frederic, deceased; The Equitable Trust Company of New York, New York, N. Y., executor. Electric switch. No. 1,195,130; Aug. 15; Gaz. vol. 229; p. 893.
Barrett, Elijah J., Hoisington, Kans. Chuck. No. 1,195,901; Aug. 22; Gaz. vol. 229; p. 1207.
Barrett, Halsey M., *et al.*, receivers. (See Kroger, Fred H., assignor.)
Barrett, Halsey M., *et al.*, receivers. (See Weagant, Roy A., assignor.)
Barrett, Harry A. (See Auble, James H., assignor.)
Barroll, Henry E., Winnetka, Ill. Printing-machine. No. 1,196,729; Aug. 29; Gaz. vol. 229; p. 1527.
Barron, Charles H. (See Bastien, Cesar A., assignor.)
Barron, William L., New York, N. Y., assignor to The Singer Manufacturing Company. Buckle-fastening machine. No. 1,194,588; Aug. 15; Gaz. vol. 229; p. 706.
Barrow, Charles J., Los Angeles, Cal. Working glass. No. 1,194,124; Aug. 8; Gaz. vol. 229; p. 499.
Barry, Arthur, Liverpool, England. Temperature indicating or recording system and appliance. No. 1,194,808; Aug. 15; Gaz. vol. 229; p. 782.
Barry Company. (See Barry, Nicholas, assignor.)
Barry, Nicholas, assignor to Barry Company, Muscatine, Iowa. Making steel pulleys. No. 1,194,589; Aug. 15; Gaz. vol. 229; p. 706.
Barry, William. (See Flavin, Michael J., assignor.)
Bartels, Carl, and G. T. Reiss, deceased; J. L. Blair and E. G. Ruder, Hamilton, Ohio, administrators, assignors to The Mosler Safe Company, New York, N. Y. Grinding-machine. No. 1,193,661; Aug. 8; Gaz. vol. 229; p. 336.
Barthmaier, Eugene V., Norristown, Pa. Lock. No. 1,195,328; Aug. 22; Gaz. vol. 229; p. 1001.
Bartholmes, Charles W., Coalinga, Cal. Deep-well pump. No. 1,193,752; Aug. 8; Gaz. vol. 229; p. 369.
Bartholmes, George F., Coalinga, Cal. Mechanism for producing compound oscillatory motion. No. 1,193,860; Aug. 8; Gaz. vol. 229; p. 408.
Bartholomew, James S., Decota, Cal. Swimming apparatus. No. 1,196,421; Aug. 29; Gaz. vol. 229; p. 1421.
Barton, Louis E. (See Rossi and Barton.)
Baruch, Samuel, New York, N. Y. Antiskidding device for vehicle-wheels. No. 1,195,640; Aug. 22; Gaz. vol. 229; p. 1112.
Bary, Charles P., assignor to H. P. C. G. Debauge, Paris, France. Pumping apparatus for molten lead or other fusible substances. No. 1,193,859; Aug. 8; Gaz. vol. 229; p. 408.
Basch, Sigmund. (See Brell, Julius J., assignor.)
Bassett, Harry P., Catonsville, assignor to The Spar Chemical Company, Baltimore, Md. Producing a potassium salt from insoluble silicates. No. 1,194,464; Aug. 15; Gaz. vol. 229; p. 663.
Bassett, Harry P., Catonsville, assignor to The Spar Chemical Company, Baltimore, Md. Separation of sodium and potassium salts. No. 1,194,465; Aug. 15; Gaz. vol. 229; p. 663.
Basten, Otto, East Rutherford, assignor to Rutherford Rubber Company, Rutherford, N. J. Auxiliary tread. No. 1,193,500; Aug. 8; Gaz. vol. 229; p. 276.
Bastian, Charles L., Chicago, Ill. Driving mechanism for carbonating-machines. No. 1,195,765; Aug. 22; Gaz. vol. 229; p. 1159.
Bastien, Cesar A., assignor of one-half to C. H. Barron, Newport, Mich. Nut-lock. No. 1,193,974; Aug. 8; Gaz. vol. 229; p. 448.
Batchelder, John E., Jackson, Cal. Vehicle-headlight. No. 1,192,977; Aug. 1; Gaz. vol. 229; p. 50.
Batchell, George W., Cincinnati, Ohio, and J. H. Wade, Moundsville, W. Va. Muffle-furnace. No. 1,195,641; Aug. 22; Gaz. vol. 229; p. 1113.
Batcher, August W., Hoquiam, Wash. Cartridge. No. 1,196,200; Aug. 29; Gaz. vol. 229; p. 1347.
Bates, Arthur. (See Gouldbourn and Bates.)
Bates, Harry H., assignor to Bates Machine Company, Joliet, Ill. Tractor. No. 1,196,507; Aug. 29; Gaz. vol. 229; p. 1450.
Bates Machine Company. (See Bates, Harry H., assignor.)
Battenberg Car Seal and Equipment Co. *et al.* (See Battenberg, Melvin H. V., assignor.)
Battenberg, Melvin H. V., assignor of two-thirds to L. C. Weyand, Chicago, Ill., and one-third to Battenberg Car Seal and Equipment Co. Hasp seal-lock. No. 1,193,221; Aug. 1; Gaz. vol. 229; p. 140.
Battles, Hilliard C. and L. F., Hambden, Ohio. Tying apparatus. No. 1,196,640; Aug. 29; Gaz. vol. 229; p. 1498.
Battles, Hilliard C. and L. F., Hambden, Ohio. Shocking-machine. No. 1,196,641; Aug. 29; Gaz. vol. 229; p. 1495.
Battles, Luther F. (See Battles, Hilliard C. and L. F.)
Bauchwitz, Walter, Leipzig, Germany. Machine for punching and affixing characters and the like of paper. No. 1,194,268; Aug. 8; Gaz. vol. 229; p. 547.
Bauer, Frederick H., Fort Worth, Tex. Ice-box. No. 1,193,347; Aug. 1; Gaz. vol. 229; p. 186.
Bauer, Isaac, Middletown, Conn. Automobile signaling device. No. 1,195,642; Aug. 22; Gaz. vol. 229; p. 1113.
Baugham, Morris L. (See Heinig, Charles F., assignor.)
Baumgarti, Leroy, assignor to Federal Cement Tile Company, Chicago, Ill. Cement slab or tile with light-pane. No. 1,195,643; Aug. 22; Gaz. vol. 229; p. 1114.
Baumgartner, Charles A. (See Lewis, John F., assignor.)
Bausch & Lomb Optical Company. (See Grebe, Albert, assignor.)
Baxter, Edwin D., assignor to The Baxter Stove Company, Mansfield, Ohio. Stove. No. 1,195,329; Aug. 22; Gaz. vol. 229; p. 1002.
Baxter Stove Company, The. (See Baxter, Edwin D., assignor.)
Bay State Metal Wheel Company. (See Siebert and Turner, assignors.)
Bayles, Maynard A., *et al.* (See Maxwell, George S., assignor.)
Bayley, George W., New York, N. Y. Gas-engine. No. 1,193,753; Aug. 8; Gaz. vol. 229; p. 370.
Baynes, Frederick A., Gloucester City, N. J. Incandescent oil-lamp. No. 1,195,435; Aug. 22; Gaz. vol. 229; p. 1039.
Bays, William W., Charlotte, N. C. Washing-machine. No. 1,193,348; Aug. 1; Gaz. vol. 229; p. 186.
Bazeley, Arthur J., assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,193,222; Aug. 1; Gaz. vol. 229; p. 140.
Beach, Howard L., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-control system. No. 1,196,071; Aug. 29; Gaz. vol. 229; p. 1301.
Beamer, Frank H., G. W. Buswell, Buffalo, and W. O. Keiter, Lockport, N. Y. Game-board. No. 1,195,173; Aug. 22; Gaz. vol. 229; p. 944.
Beard, Norman F. D., Toronto, Ontario, Canada. Hose-reel. No. 1,195,644; Aug. 22; Gaz. vol. 229; p. 1114.
Beardsley, Frank W., assignor to Seaboard Specialty Corporation, New York, N. Y. Dish-container. No. 1,196,201; Aug. 29; Gaz. vol. 229; p. 1347.
Beardsley, Robert F., assignor to H. W. Angsten, Chicago, Ill. Toy or the like. No. 1,193,975; Aug. 8; Gaz. vol. 229; p. 448.
Bearce, Wilson R., and R. J. Jones, Sawtelle, Cal., assignors of one-third to F. Hammond, Casey, Ill. Jar-holder. No. 1,194,590; Aug. 15; Gaz. vol. 229; p. 706.
Beatty, Henry A., Scranton, Pa. Locomotive draft-regulator. No. 1,196,642; Aug. 29; Gaz. vol. 229; p. 1497.
Beaubien, Edgar F. (See McIntosh and Beaubien.)
Beck, Albert G., *et al.* (See Patton, William, assignor.)
Becke, Max, Weidling, near Vienna, and W. Suida, Mödling, near Vienna, Austria-Hungary, assignors to Farbwerke Vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Brown dyestuffs for dyeing wool. No. 1,196,422; Aug. 29; Gaz. vol. 229; p. 1421.
Becker, Charles A., Newark, N. J. Automobile air-brake. No. 1,196,326; Aug. 29; Gaz. vol. 229; p. 1387.
Becker, Joseph, Washington, D. C. Focusing-camera. No. 1,195,947; Aug. 22; Gaz. vol. 229; p. 1222.
Becker, Joseph, Washington, D. C. Focusing-camera. No. 1,195,948; Aug. 22; Gaz. vol. 229; p. 1223.
Beckman, John E., Chicago, Ill. Power-transmission gearing. No. 1,193,662; Aug. 8; Gaz. vol. 229; p. 336.
Beckmann, John W., New York, assignor of one-half to J. W. Rembe, Peekskill, N. Y. Toilet-powder container. No. 1,193,223; Aug. 1; Gaz. vol. 229; p. 141.
Bedford, Zela L., and M. F., Jr., and C. C. Higgins, Lima, Ohio. Motor-vehicle. No. 1,196,643; Aug. 29; Gaz. vol. 229; p. 1497.
Beeken, Axel V., *et al.* (See Wiberg, Peter E., assignor.)
Beer, Paul, Des Moines, Iowa. Fire-box. No. 1,195,174; Aug. 22; Gaz. vol. 229; p. 944.
Beers, Charles, New Haven, Conn., assignor, by mesne assignments, to The International Bread Wrapping Machine Company. Wrapping-machine. No. 1,194,350; Aug. 15; Gaz. vol. 229; p. 620.
Beetlestone, William R., Urmston, England. Cooking apparatus. No. 1,196,644; Aug. 29; Gaz. vol. 229; p. 1497.
Begtrup, Julius, Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y. Grinding-machine. No. 1,193,224; Aug. 1; Gaz. vol. 229; p. 141.
Behlen, Charles A., Richmond, Va. Trailmobile. No. 1,195,960; Aug. 29; Gaz. vol. 229; p. 1260.
Behrend, George W., Wausa, Nebr. Planter. No. 1,193,501; Aug. 8; Gaz. vol. 229; p. 276.
Beiermeister, John M., Troy, N. Y. Fold-collar. No. 1,195,645; Aug. 22; Gaz. vol. 229; p. 1115.

Belcher, George E. (See Peterson, Otto A., assignor.)
Belden, Edward H., assignor to Belden Engineering Company, Pittsburgh, Pa. Internal-combustion engine. No. 1,196,072; Aug. 29; Gaz. vol. 229; p. 1301.
Belden Engineering Company. (See Belden, Edward H., assignor.)
Belknap, George S., *et al.* (See Thurber, John P., assignor.)
Bell, Earl R. (See Roos and Bell.)
Bell, Joseph G., Gregory Landing, Mo. Hat. No. 1,194,935; Aug. 15; Gaz. vol. 229; p. 825.
Bellis, George W., assignor to The National Grave Vault Company, Galion, Ohio. Casket-carriage for burial-vaults. No. 1,194,810; Aug. 15; Gaz. vol. 229; p. 783.
Beloit Iron Works. (See Aldrich, Alonzo, assignor.)
Belyea, Truman S., Brooklyn, N. Y. Pump. No. 1,192,978; Aug. 1; Gaz. vol. 229; p. 50.
Bemis, Thomas, Indianapolis, Ind. Saw-gage. No. 1,194,936; Aug. 15; Gaz. vol. 229; p. 826.
Bender, Henry F., Gunnison, Colo. Sash-fastener. No. 1,195,961; Aug. 29; Gaz. vol. 229; p. 1260.
Bendheim, Edmund M., New York, N. Y. Apparatus for repairing motion-picture films. No. 1,195,175; Aug. 22; Gaz. vol. 229; p. 945.
Bendix, Vincent. (See Olsen, Martin H., assignor.)
Benedict, Emory J., St. Louis, Mo. Sanitary dispensing-receptacle. No. 1,195,902; Aug. 22; Gaz. vol. 229; p. 1207.
Benford, David M., *et al.* (See West, Hubbard C., assignor.)
Benford, Sarah B., *et al.* (See West, Hubbard C., assignor.)
Bengué, Jules, Paris, France. Inkstand with a constant level of ink. No. 1,196,645; Aug. 29; Gaz. vol. 229; p. 1498.
Benham, William T., Norwood, assignor to The Nydia Bank Lock Company, Cincinnati, Ohio. Tumbler for permutation-locks. No. 1,193,754; Aug. 8; Gaz. vol. 229; p. 370.
Benham, William T., Norwood, assignor to The Nydia Bank Lock Company, Cincinnati, Ohio. Tumbler mechanism for permutation-locks. No. 1,195,766; Aug. 22; Gaz. vol. 229; p. 1159.
Benjamin, Dana H. (See Thomas, Newton W., assignor.)
Benjamin, George H., New York, N. Y. Dehydrating and curing tobacco. No. 1,194,351; Aug. 15; Gaz. vol. 229; p. 620.
Benn, Alonzo N., Chicago, Ill. Pickling and curing hams and other meats. No. 1,195,176; Aug. 22; Gaz. vol. 229; p. 945.
Bennage, Fred. (See Stoops, Fate, and Bennage.)
Bennett, Raphael, and A. E. Blanchard, Presque Isle, Me. Illuminated level. No. 1,193,976; Aug. 8; Gaz. vol. 229; p. 448.
Bennitt, William B., Branksome, Ashton-upon-Mersey, England, assignor to Westinghouse Electric and Manufacturing Company, Pittsburgh, Pa. Controller for electric motors. No. 1,196,730; Aug. 29; Gaz. vol. 229; p. 1528.
Benosch, Joseph, assignor to Klauder-Weldon Dyeing Machine Company, Amsterdam, N. Y. Dyeing-machine. No. 1,195,646; Aug. 22; Gaz. vol. 229; p. 1115.
Benosch, Joseph, assignor to Klauder-Weldon Dyeing Machine Company, Amsterdam, N. Y. Dyeing-machine. No. 1,195,647; Aug. 22; Gaz. vol. 229; p. 1116.
Benson, Harry H. (See Asprooth and Benson.)
Benthall Machine Co. (See Harrington, Cecil H., assignor.)
Bentley, Cecil N., Freeport, Ill. Resilient tire. No. 1,192,842; Aug. 1; Gaz. vol. 229; p. 4.
Bentz, John, Remsen, Iowa. Valve. No. 1,193,755; Aug. 8; Gaz. vol. 229; p. 371.
Benze, Henry F. W., Amelia, Nebr. Smoker's shield. No. 1,196,646; Aug. 29; Gaz. vol. 229; p. 1498.
Beracska, Paul, *et al.* (See Studebaker, Charley M., assignor.)
Bereth, William F., assignor to Monmouth Plow Factory, Monmouth, Ill. Spring-seat. No. 1,193,977; Aug. 8; Gaz. vol. 229; p. 448.
Berg, Joseph, New York, N. Y. Lunch-box. No. 1,194,466; Aug. 15; Gaz. vol. 229; p. 664.
Berg, Oscar W., Kewanee, Ill., assignor to National Tube Company, Pittsburgh, Pa. Collapsing tap. No. 1,195,436; Aug. 22; Gaz. vol. 229; p. 1039.
Berger, Joseph, Jr., Utica, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Tape-guide for sewing-machines. No. 1,195,767; Aug. 22; Gaz. vol. 229; p. 1160.
Berger, Louis H., Roxbury, Mass. Surveyor's instrument. No. 1,193,978; Aug. 8; Gaz. vol. 229; p. 449.
Bergeron, Lawrence G., Lakewood, and R. B. Brewer, Cleveland, Ohio. Musical instrument. No. 1,195,177; Aug. 22; Gaz. vol. 229; p. 945.
Berglund, Edward S., Trollhättan, Sweden. Apparatus for preventing sintering in electric furnaces. No. 1,196,202; Aug. 29; Gaz. vol. 229; p. 1348.
Bergmann, Carl, Jr., West New York, N. J., assignor to Knapp Electric and Novelty Co., New York, N. Y. Combined reversing-switch and brush-holder for dynamo-electric machines. No. 1,195,768; Aug. 22; Gaz. vol. 229; p. 1160.
Bergsten, John, Taft, Cal. Rod or pipe supporting device. No. 1,196,647; Aug. 29; Gaz. vol. 229; p. 1498.
Berkander, George F. (See Fenno, Harry E., assignor.)
Berkeley Electric Cooker Company. (See Kercher, Arthur J., assignor.)
Berkshire Magneto Company. (See Frawley, James B., assignor.) (Reissue.)
Bernitz, Israel, New York, N. Y. Polishing composition. No. 1,196,508; Aug. 29; Gaz. vol. 229; p. 1460.
Berry, Herbert H., London, and W. J. Markham, Birmingham, England. Illuminate electric heater. No. 1,196,073; Aug. 29; Gaz. vol. 229; p. 1302.
Bertley, Harry J., *et al.* (See Lee, Henry J., assignor.)
Bertram, William E., assignor to Intertype Corporation, New York, N. Y. Stop mechanism for linotype-machines. No. 1,194,937; Aug. 15; Gaz. vol. 229; p. 826.
Besaw, Willie O., and A. E. McClanahan, Reedley, Cal. Attachment for cameras. No. 1,194,700; Aug. 15; Gaz. vol. 229; p. 744.
Besser, Herman and J. H., Alpena, Mich. Brick-machine. No. 1,196,327; Aug. 29; Gaz. vol. 229; p. 1387.
Besser, Jesse H. (See Besser, Herman and J. H.)
Best, Clarence L., San Leandro, Cal. Tractor-engine. No. 1,194,269; Aug. 8; Gaz. vol. 229; p. 548.
Best, Oliver F. (See Crawford, William H., assignor.)
Bethune, Harry F., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rheostat. No. 1,194,125; Aug. 8; Gaz. vol. 229; p. 499.
Betts, Benjamin B., St. Louis, Mo. Rail-anticreeper. No. 1,195,769; Aug. 22; Gaz. vol. 229; p. 1161.
Betts, Benjamin B., St. Louis, Mo. Rail-anticreeper. No. 1,195,770; Aug. 22; Gaz. vol. 229; p. 1161.
Betulander Automatic Telephone Company, The. (See Betulander and Palmgren, assignors.)
Betulander, Gotthilf A., Södertörns Villastad, and N. G. Palmgren, Stockholm, Sweden, assignors to The Betulander Automatic Telephone Company, Limited, London, England. Automatic telephone-exchange system. No. 1,195,771; Aug. 22; Gaz. vol. 229; p. 1162.
Beugler, Edwin F., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y. Stave tonguing and grooving machine. No. 1,195,962; Aug. 29; Gaz. vol. 229; p. 1261.
Biava, Louis, West Hoboken, N. J. Transmission-gear for motor-vehicles. No. 1,194,591; Aug. 15; Gaz. vol. 229; p. 707.
Bickford, Ernest A., assignor to The Wiley-Bickford-Sweet Co., Worcester, Mass. Making slippers. No. 1,194,467; Aug. 15; Gaz. vol. 229; p. 664.
Bickford, Ernest A., assignor to The Wiley-Bickford-Sweet Co., Worcester, Mass. Slipper. No. 1,194,468; Aug. 15; Gaz. vol. 229; p. 665.
Bierman, Frank H. (See Strite and Bierman.)
Bierman, Howard J., *et al.* (See Strite and Bierman, assignors.)
Biggins, William C. and W. H., Diamond, Ind. Holder for overshoes. No. 1,195,903; Aug. 22; Gaz. vol. 229; p. 1208.
Biggins, William H. (See Biggins, William C. and W. H.)
Bigney, Sidney O., Attleboro, Mass. Key-ring. No. 1,194,809; Aug. 15; Gaz. vol. 229; p. 783.
Bijur, Joseph, assignor to Bijur Motor Lighting Company, New York, N. Y. Electrical system for automobiles. No. 1,195,178; Aug. 22; Gaz. vol. 229; p. 946.
Bijur Motor Lighting Company. (See Bijur, Joseph, assignor.)
Billings, Frederick C., Milwaukee, Wis. Bearing for piano-actions. No. 1,193,861; Aug. 8; Gaz. vol. 229; p. 409.
Billings, Frederick C., Milwaukee, Wis. Music-roll for piano-players, &c. No. 1,194,811; Aug. 15; Gaz. vol. 229; p. 783.
Billington, David A., Ravenna, Ohio. Boot and shoe cleaner. No. 1,195,648; Aug. 22; Gaz. vol. 229; p. 1116.
Binder, Gottlob, Rochester, N. Y., assignor to American Laundry Machinery Company, Cincinnati, Ohio. Ironing-machine. No. 1,195,553; Aug. 22; Gaz. vol. 229; p. 1081.
Bingham, Allen R., Webster, Mass. Box-fastener. No. 1,193,502; Aug. 8; Gaz. vol. 229; p. 277.
Binney, Ralph L., assignor of one-half to D. J. Welsh, Toledo, Ohio. Micrometer. No. 1,195,330; Aug. 22; Gaz. vol. 229; p. 1002.
Binns, James R., Canton, Ohio. Explosive-engine starter. No. 1,194,469; Aug. 15; Gaz. vol. 229; p. 665.
Bircher, Eugene A., assignor to H. C. Nobles, Rochester, W. B. Thurston, Livonia, and G. A. Cogswell, Rochester, N. Y. Machine for opening envelops. No. 1,194,701; Aug. 15; Gaz. vol. 229; p. 744.
Bird, John C., assignor to Union Steam Pump Company, Battle Creek, Mich. Valve-gear. No. 1,192,843; Aug. 1; Gaz. vol. 229; p. 5.
Birdsall, Wilbert S., Brooklyn, N. Y. Manifolding sales-book. No. 1,194,938; Aug. 15; Gaz. vol. 229; p. 826.
Birdsey Somers Company. (See McDermott, Francis J., assignor.)
Birdsong, John W., Conay, Miss. Combined rail clamp and chair. No. 1,196,423; Aug. 29; Gaz. vol. 229; p. 1422.
Bishop, Edward, Endicott, N. Y. Chiropractic-table. No. 1,194,939; Aug. 15; Gaz. vol. 229; p. 826.
Bishop, Frederic L., Pittsburgh, Pa. Magnetic treatment of metals. No. 1,194,940; Aug. 15; Gaz. vol. 229; p. 827.
Bishop, George. (See Walker, Harry, assignor.)
Black, Jeremiah. (See Marsha, Will, assignor.)

Black, William F., assignor of one-half to H. S. Rauch, Jersey Shore borough, Pa. Flange-lubricator for car-wheels. No. 1,196,509; Aug. 29; Gaz. vol. 229; p. 1451.
Blackwell, Charles O., Hanna, W. Va. Resilient wheel. No. 1,195,424; Aug. 29; Gaz. vol. 229; p. 1422.
Blair, Frank J. (See Blair, William E. and F. J.)
Blair, Joseph L., *et al.*, administrators. (See Bartels and Reiss.)
Blair, William E., Ballinger, Tex. Nutcracker. No. 1,194,592; Aug. 15; Gaz. vol. 229; p. 707.
Blair, William E. and F. J., assignors to Buffalo Gasolene Motor Company, Buffalo, N. Y. Heating device for internal-combustion engines. No. 1,195,179; Aug. 22; Gaz. vol. 229; p. 946.
Blake, Frederick W. (See Steely, Blake, and Lorentzen.)
Blake, J. G. (See Kirby, Thomas P., assignor.)
Blake, James, Darlington, England. Fastening device for use with doors and the like. No. 1,195,331; Aug. 22; Gaz. vol. 229; p. 1003.
Blake, John H., Washington, D. C. Magazine-firearm. No. 1,194,270; Aug. 8; Gaz. vol. 229; p. 548.
Blakeslee, Henry J., Hartford, Conn. Meter-testing block. No. 1,192,844; Aug. 1; Gaz. vol. 229; p. 6.
Blanchard, Alvah E. (See Bennett and Blanchard.)
Blanchard, Lafayette W. (See Cummings and Blanchard.)
Blankenburg, Carl C. (See Warner, Roe P., assignor.)
Blankfort, Herbert G., assignor of one-half to L. Wolf, New York, N. Y. Dump-cart. No. 1,192,979; Aug. 1; Gaz. vol. 229; p. 51.
Blankinship, John S., Lynchburg, Va. Road or highway. No. 1,193,225; Aug. 1; Gaz. vol. 229; p. 141.
Blattau, William E., Chicago, Ill. Bottle-closure. No. 1,196,510; Aug. 29; Gaz. vol. 229; p. 1451.
Blee, Charles O., assignor of two-thirds to W. O. Chaney and G. F. Seymour, Fort Wayne, Ind. Lifting device for motor-vehicles. No. 1,193,451; Aug. 1; Gaz. vol. 229; p. 221.
Bleecker, Albert, Akron, Ohio. Apparatus for making tubes. No. 1,196,648; Aug. 29; Gaz. vol. 229; p. 1499.
Bliss, Donald M., assignor to Thomas A. Edison, Incorporated, West Orange, N. J. Alternating-current rectifier. No. 1,194,470; Aug. 15; Gaz. vol. 229; p. 665.
Bliss, William L., Brooklyn, assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y. Dynamo-support. No. 1,193,226; Aug. 1; Gaz. vol. 229; p. 142.
Bliss, William L., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y. Generator suspension. No. 1,193,227; Aug. 1; Gaz. vol. 229; p. 142.
Bliss, William L., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y. Dynamo-electric machine. No. 1,193,349; Aug. 1; Gaz. vol. 229; p. 187.
Blitz, Ralph S., Butte, Mont. Reading-key for traverse-tables. No. 1,195,772; Aug. 22; Gaz. vol. 229; p. 1162.
Block, Alexander E., St. Louis, Mo. Arch-support. No. 1,194,812; Aug. 15; Gaz. vol. 229; p. 783.
Block, Mandel, assignor to Illinois Force Cup & Specialty Company, Chicago, Ill. Force-pump. No. 1,193,476; Aug. 1; Gaz. vol. 229; p. 230.
Blondel, André, Paris, France. Galvanometer. No. 1,193,979; Aug. 8; Gaz. vol. 229; p. 449.
Blood, Burr B., assignor to The Rajah Company, Chicago, Ill. Phonograph-controlling device. No. 1,193,350; Aug. 1; Gaz. vol. 229; p. 187.
Blossing, Charles J., Omaha, Nebr. Aeroplane. No. 1,194,126; Aug. 8; Gaz. vol. 229; p. 500.
Bobroff, Bornett L., Milwaukee, Wis. Vehicle signal apparatus. No. 1,195,180; Aug. 22; Gaz. vol. 229; p. 947.
Bockstahler, Louis A., Cleveland, Ohio. Figure toy. No. 1,196,649; Aug. 29; Gaz. vol. 229; p. 1499.
Boddy, Edward V., Artesia, N. Mex. Card-delivering device for vending-machines. No. 1,195,963; Aug. 29; Gaz. vol. 229; p. 1261.
Bode, Peter J., St. Louis, Mo. Valve. No. 1,192,980; Aug. 1; Gaz. vol. 229; p. 51.
Boehck, William E., assignor to New York Revolving Portable Elevator Company, Jersey City, N. J. Truck. No. 1,192,981; Aug. 1; Gaz. vol. 229; p. 52.
Bognar, Louis J., Akron, Ohio. Conveyer for cores. No. 1,195,332; Aug. 22; Gaz. vol. 229; p. 1003.
Bohan, Jeremiah, New Hartford, Iowa. Motor-vehicle. No. 1,194,127; Aug. 8; Gaz. vol. 229; p. 500.
Boland, John D., Dale, Okla. Mail-box. No. 1,194,593; Aug. 15; Gaz. vol. 229; p. 707.
Bolzer, Robert S., Richmond Hill, N. Y. Gumming-machine for box-cover wrappers. No. 1,194,702; Aug. 15; Gaz. vol. 229; p. 744.
Bonner, John S., assignor of one-half to J. A. Miller, Austin, Tex. Minnow-trap. No. 1,196,074; Aug. 29; Gaz. vol. 229; p. 1302.
Booraem, John F., Greenwich, Conn. Plunge-bath tile and terra-cotta construction. No. 1,193,862; Aug. 8; Gaz. vol. 229; p. 409.
Boosinger, Samuel A., Youngstown, Ohio. Combination ratchet-wrench. No. 1,194,471; Aug. 15; Gaz. vol. 229; p. 666.
Bootz, Eugene, Edgewater, Colo. Automobile-starter. No. 1,196,650; Aug. 29; Gaz. vol. 229; p. 1499.
Borbridge, Percy J., Ottawa, Ontario, Canada. Horse-blanket attachment. No. 1,196,203; Aug. 29; Gaz. vol. 229; p. 1348.
Borger, Henry E., assignor of one-half to V. G. Apple, Dayton, Ohio. Machine for generating electric current. No. 1,196,511; Aug. 29; Gaz. vol. 229; p. 1451.
Borgfeldt, Richard, Metuchen, N. J., assignor of one-half to H. G. Latimer, Brooklyn, N. Y. Commutation-ticket. No. 1,194,472; Aug. 15; Gaz. vol. 229; p. 666.
Born, Samuel H., assignor to Morris Mercantile Company, San Francisco, Cal. Candy-making machinery. No. 1,195,437; Aug. 22; Gaz. vol. 229; p. 1040.
Bornhauser, John, Colville, Wash. Potato-digger. No. 1,196,075; Aug. 29; Gaz. vol. 229; p. 1302.
Bornstein, Jennie L., Dayton, Ohio. Infant-napkin protector. No. 1,195,904; Aug. 22; Gaz. vol. 229; p. 1208.
Borresen, Helge A., Marquette, Mich. Collar. No. 1,196,204; Aug. 29; Gaz. vol. 229; p. 1348.
Borro, Joseph, New York, N. Y. Safety-envelop. No. 1,195,773; Aug. 22; Gaz. vol. 229; p. 1163.
Bosch, Firm of Robert. (See Honold, Gottlob, assignor.)
Bosco, John, New York, N. Y. Horseshoe. No. 1,194,941; Aug. 15; Gaz. vol. 229; p. 827.
Bosshardt, Andrew, York, Pa. Pencil-sharpener. No. 1,193,351; Aug. 1; Gaz. vol. 229; p. 188.
Bostock, Henry D., Jacksonville, Fla. Preserving eggs. No. 1,194,128; Aug. 8; Gaz. vol. 229; p. 500.
Bostrom, Axel G. (See Holmes and Bostrom.)
Bostrom, John M. (See Holmes and Bostrom.)
Bosworth, Wendell P., assignor to Brockton Heel Company, Brockton, Mass. Producing heel-logs. No. 1,193,756; Aug. 8; Gaz. vol. 229; p. 371.
Both & Tillmann, Gesellschaft mit beschränkter Haftung. (See Rammelsberg, Ernst, assignor.)
Bothwell, Henry R. (See Newman and Bothwell.)
Bottlander, Jacob J., assignor of one-third to J. R. Harry and one-third to H. C. Cotter, Toledo, Ohio. Ignition device. No. 1,194,703; Aug. 15; Gaz. vol. 229; p. 745.
Bound Brook Oil-Less Bearing Company. (See Bache, Leigh S., assignor.)
Bourdin, Eugène, Lyon, France. Method and apparatus for the continuous production of weftless fabrics. No. 1,195,554; Aug. 22; Gaz. vol. 229; p. 1081.
Bourell, William A., Chicago, Ill. Tank-draining mechanism. No. 1,195,181; Aug. 22; Gaz. vol. 229; p. 947.
Bovey, Thomas, Chicago, Ill. Vehicle-heater. No. 1,194,473; Aug. 15; Gaz. vol. 229; p. 666.
Bow, James A., P. Thill, Great Falls, Mont., and A. E. Wheeler, London, England. Furnace-binding. No. 1,193,109; Aug. 1; Gaz. vol. 229; p. 100.
Bowden, Junius A., Los Angeles, Cal. Steering-wheel lock for automobiles. No. 1,195,333; Aug. 22; Gaz. vol. 229; p. 1003.
Bowen, John L., San Francisco, Cal. Milk-bottle case. No. 1,193,980; Aug. 8; Gaz. vol. 229; p. 449.
Bower, Fred, Craig, Colo. Restraining device. No. 1,192,845; Aug. 1; Gaz. vol. 229; p. 6.
Bower, John T., London, England. Side-splash preventer for vehicle-wheels. No. 1,193,757; Aug. 8; Gaz. vol. 229; p. 371.
Bowers, Lionel F., Columbia, Pa. Driving mechanism. No. 1,196,425; Aug. 29; Gaz. vol. 229; p. 1422.
Bowers, William F., San Francisco, Cal. Conveyer-belt. No. 1,194,704; Aug. 15; Gaz. vol. 229; p. 745.
Bowersox, Joseph W., and A. W. Moore, Pittsburgh, Pa. Thread-cutter. No. 1,196,651; Aug. 29; Gaz. vol. 229; p. 1500.
Bowling, James P., New Orleans, La. Excavating-machine. No. 1,196,426; Aug. 29; Gaz. vol. 229; p. 1422.
Bowman, A. B., *et al.* (See Fesenfeld, Herman, assignor.)
Boyce, Pliny A. (See Leslie and Schmidt, assignors.)
Boyd, Alexander G., Toronto, Ontario, Canada. Power-drill. No. 1,193,981; Aug. 8; Gaz. vol. 229; p. 450.
Boyd, John A., and P. Rogan, St. Marys, Pa. Clay-products-surfacing mechanism. No. 1,193,663; Aug. 8; Gaz. vol. 229; p. 337.
Boyd, Lindsay F., Hawksburn, Victoria, Australia. High-pressure gas-lighting system. No. 1,193,228; Aug. 1; Gaz. vol. 229; p. 142.
Boyer, Charles T., Indianapolis, Ind. Nutcracker. No. 1,192,846; Aug. 1; Gaz. vol. 229; p. 7.
Boyer, Fernand, Paris, France. Machine for manufacturing knotted carpets. No. 1,193,229; Aug. 1; Gaz. vol. 229; p. 143.
Boyer, Fernand, Paris, France. Attachment to carpet-knotting machines for shooting in the filling. No. 1,193,982; Aug. 8; Gaz. vol. 229; p. 450.
Boynton Furnace Company. (See Greey and Rouse, assignors.)
Brace, William. (See Player and Brace.)
Braddock, Edward I., Winchester, Mass. Wire nail. No. 1,193,503; Aug. 8; Gaz. vol. 229; p. 277.
Braddy, Rufus D., Anaconda, Mont. Shade-bracket. No. 1,192,847; Aug. 1; Gaz. vol. 229; p. 7.
Braden, Elmer, assignor to W. J. Ruff, Quincy, Ill. Power-transmission device. No. 1,196,328; Aug. 29; Gaz. vol. 229; p. 1387.
Bradley, John W., Leeds, England. Expanding boring-head and screwing-head. No. 1,194,352; Aug. 15; Gaz. vol. 229; p. 621.
Bradley, Samuel S., New York, N. Y. Combined cabinet and table. No. 1,195,964; Aug. 29; Gaz. vol. 229; p. 1261.
Bradshaw, Adelbert R., Visalia, Cal. Gradometer. No. 1,193,758; Aug. 8; Gaz. vol. 229; p. 372.

Bradshaw, William M., and A. W. Copley, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Wattmeter. No. 1,194,129; Aug. 8; Gaz. vol. 229; p. 500.

Brady, W. B., *et al.* (See Ducklow, Walter G., assignor.)

Braen, Henry, Paterson, N. J. Bill-file. No. 1,193,863; Aug. 8; Gaz. vol. 229; p. 409.

Branczik, Karl W., London, England, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Steam-generator. No. 1,192,848; Aug. 1; Gaz. vol. 229; p. 7.

Brand, George P., New York, N. Y. Flange-controlling mechanism. No. 1,193,352; Aug. 1; Gaz. vol. 229; p. 188.

Brandenberger, Carl F., and M. W. Reuther, Fort Madison, Iowa. Suction-pump. No. 1,194,705; Aug. 15; Gaz. vol. 229; p. 745.

Brandenburg, Floyd H., Klamath Falls, Oreg. Toilet-seat. No. 1,196,427; Aug. 29; Gaz. vol. 229; p. 1423.

Bräuer, Adolf, Grünau, near Berlin, assignor to Chemische Fabrik Grunau Landshoff & Meyer Aktiengesellschaft, Grünau, Germany. Distilling acetic acid and the like. No. 1,196,329; Aug. 29; Gaz. vol. 229; p. 1388.

Braun Corporation, The. (See Marvin, Cornelius J., assignor.)

Braun, Peter, St. James, assignor of one-half to R. Haberstock, Brooklyn, N. Y. Fastening means for the slats of shutters. No. 1,193,110; Aug. 1; Gaz. vol. 229; p. 100.

Bray, Mellen N. (See Emery, Victor J., assignor.)

Breeden, Benjamin B., assignor of one-half to C. Lawson and one-fourth to W. L. and H. Vaughn, Indianapolis, Ind. Train-controlling apparatus. No. 1,193,492; Aug. 1; Gaz. vol. 229; p. 236.

Breffle, S. W. (See Roberts, John S., assignor.)

Breidenbach, Anthon, Holmes, N. D. Hat-pin guard. No. 1,193,111; Aug. 1; Gaz. vol. 229; p. 100.

Brell, Julius J., assignor to S. Basch, New York, N. Y. Button placing and releasing attachment for sewing-machines. No. 1,193,504; Aug. 8; Gaz. vol. 229; p. 277.

Brennecke, Herman J., assignor of one-half to R. Malcolm, Chicago, Ill. Mechanic's eye-protector. No. 1,193,230; Aug. 1; Gaz. vol. 229; p. 143.

Brennecke, Herman J., assignor of one-half to R. Malcolm, Chicago, Ill. Variable eye-protector. No. 1,193,231; Aug. 1; Gaz. vol. 229; p. 144.

Brennecke, Herman J., assignor of one-half to R. Malcolm, Chicago, Ill. Flexibly-connected lenses. No. 1,193,232; Aug. 1; Gaz. vol. 229; p. 144.

Bretschneider, Carl P. C., Philadelphia, Pa. Shock-absorber. No. 1,195,182; Aug. 22; Gaz. vol. 229; p. 947.

Brewer, Robert B. (See Bergeron and Brewer.)

Brewster, Harry C., Shreveport, La. Casing-spear and trip therefor. No. 1,193,452; Aug. 1; Gaz. vol. 229; p. 221.

Bridge, George H., Jr. (See Johnston, John, assignor.)

Bridges, John F., Alameda, Cal. Bench-plane. No. 1,192,849; Aug. 1; Gaz. vol. 229; p. 8.

Briegel, Theodore, Rock Island, Ill., assignor to H. E. Winters, Davenport, Iowa. Machine for bending or pressing sheet metal. No. 1,193,759; Aug. 8; Gaz. vol. 229; p. 372.

Briel, Henry G., Ottawa, Ill. Hinge. No. 1,196,428; Aug. 29; Gaz. vol. 229; p. 1423.

Brietenstein, Julius G., assignor to Independent Button and Machine Company, Chicago, Ill. Press for button-making. No. 1,196,076; Aug. 29; Gaz. vol. 229; p. 1303.

Briggs, Jay, assignor of one-half to W. T. Gunn, Hoopeston, Ill. Automatic railway-gate. No. 1,194,594; Aug. 15; Gaz. vol. 229; p. 707.

Brignoni, Albert C., assignor of one-third to F. L. Smith, Covington, and one-third to J. T. Howley, Newport, Ky. Locomotive-piston packing. No. 1,196,652; Aug. 29; Gaz. vol. 229; p. 1500.

Brinkhaus, Hugo, High Hilborn, London, England. Pince-nez. No. 1,193,983; Aug. 8; Gaz. vol. 229; p. 451.

Brinkhaus, Hugo, Brooklyn, N. Y. Eyeglasses. No. 1,193,984; Aug. 8; Gaz. vol. 229; p. 451.

Brinkman, Louis H., Glen Ridge, N. J., assignor, by mesne assignments, to Baltimore Tube Company, Incorporated. Polishing-machine. No. 1,193,453; Aug. 1; Gaz. vol. 229; p. 222.

Brintnall, Woodbury S., Los Angeles, Cal. Equipment-vehicle. No. 1,194,595; Aug. 15; Gaz. vol. 229; p. 708.

Briot, Albert, Nomexy, France. Automatic weft-replenishing loom. No. 1,194,130; Aug. 8; Gaz. vol. 229; p. 501.

Brisack, Anna C., Hensonville, N. Y. Agricultural implement. No. 1,194,942; Aug. 15; Gaz. vol. 229; p. 828.

Bristol, Edgar H., assignor to The Industrial Instrument Company, Foxboro, Mass. Measuring or controlling instrument. No. 1,195,334; Aug. 22; Gaz. vol. 229; p. 1004.

Bristol, Frederick A., and P. J. Scharringhausen, Des Plaines, assignors to Bristol Manufacturing Company, Chicago, Ill. Sign construction. No. 1,192,982; Aug. 1; Gaz. vol. 229; p. 52.

Bristol Manufacturing Company. (See Bristol and Scharringhausen, assignors.)

Britton, Charles S. (See Doyle, James E., assignor.)

Britton, Charles S. (See Doyle and Case, assignors.)

Britton, Frank G., Yokohama, Japan, assignor to Babcock & Wilcox Company, Bayonne, N. J. Chain-grate stoker. No. 1,192,850; Aug. 1; Gaz. vol. 229; p. 8.

Broadbooks, Peter, Batavia, N. Y. Arch-support. No. 1,196,205; Aug. 29; Gaz. vol. 229; p. 1348.

Brock, Arthur, Jr., and A. J. Mottlau, Philadelphia, Pa., assignors to Mottlau Transmission, Incorporated, New York, N. Y. Power transmission. No. 1,195,335; Aug. 22; Gaz. vol. 229; p. 1004.

Brock, John M., Brooklyn, N. Y. Acetylene-lamp. No. 1,193,985; Aug. 8; Gaz. vol. 229; p. 451.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for molding toe portions of shoe-uppers. No. 1,195,965; Aug. 29; Gaz. vol. 229; p. 1262.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making shoes. No. 1,195,966; Aug. 29; Gaz. vol. 229; p. 1262.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Preliminary former for foreparts of shoe-uppers. No. 1,195,967; Aug. 29; Gaz. vol. 229; p. 1263.

Brockton Heel Company. (See Bosworth, Wendell P., assignor.)

Brodie, James H., Henderson, N. C. Peanut-digger. No. 1,193,112; Aug. 1; Gaz. vol. 229; p. 101.

Brodsky, Jacob and M., Chicago, Ill. Dough-molding machine. No. 1,195,969; Aug. 29; Gaz. vol. 229; p. 1264.

Brodsky, Max. (See Brodsky, Jacob and M.)

Brogan, Michael F., Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lacer. No. 1,195,131; Aug. 15; Gaz. vol. 229; p. 893.

Broling, Andrew J., Chicago, Ill. Clamp. No. 1,194,943; Aug. 15; Gaz. vol. 229; p. 828.

Brookman, William J., Chicago, Ill. Hand-stamp. No. 1,196,512; Aug. 29; Gaz. vol. 229; p. 1452.

Brorby, Jacob L., Shenandoah, Iowa. Supporting-rack. No. 1,192,851; Aug. 1; Gaz. vol. 229; p. 8.

Brown, Albert E., Poolville, N. Y. Thill-coupling. No. 1,195,970; Aug. 29; Gaz. vol. 229; p. 1264.

Brown, Alexander T., Syracuse, N. Y. Motor agricultural machine. No. 1,193,505; Aug. 8; Gaz. vol. 229; p. 278.

Brown, Archie E., Faywood, N. Mex. Portable furnace. No. 1,194,131; Aug. 8; Gaz. vol. 229; p. 501.

Brown, Byron E., assignor to Latham Machinery Company, Chicago, Ill. Stapling-machine. No. 1,196,077; Aug. 29; Gaz. vol. 229; p. 1303.

Brown, Carlton W., Groton, Conn. Machine for forming and affixing fastening devices. No. 1,193,113; Aug. 1; Gaz. vol. 229; p. 101.

Brown, Charles C. (See Smith and Brown.)

Brown, Eric, Bahnhofweg, Baden, Switzerland. Two-cycle gas-pump and the like. No. 1,194,706; Aug. 15; Gaz. vol. 229; p. 746.

Brown, George, Chicago, Ill. Adjustable shore. No. 1,193,233; Aug. 1; Gaz. vol. 229; p. 144.

Brown, George H., and W. A. Jones, Fair Mount, Ga. Moisture-supplying device for carbureter air-supply. No. 1,195,905; Aug. 22; Gaz. vol. 229; p. 1208.

Brown, George R., assignor to A. Clayton & Company, Oklahoma, Okla. Wrapping and fastening the cover of a round bale of cotton. No. 1,193,506; Aug. 8; Gaz. vol. 229; p. 278.

Brown, Harold W., Ithaca, N. Y., assignor to Westinghouse Electric and Manufacturing Company. Time-limit relay. No. 1,194,132; Aug. 8; Gaz. vol. 229; p. 501.

Brown Hoisting Machinery Company, The. (See Monroe, Will K., assignor.)

Brown, Howard J., and F. B. Davidson, assignors to Howe and Davidson Company, Marseilles, Ill. Crate-separator. No. 1,195,183; Aug. 22; Gaz. vol. 229; p. 948.

Brown, Hugh D., Ithaca, N. Y. Safety whiffletree-hook. No. 1,193,114; Aug. 1; Gaz. vol. 229; p. 102.

Brown, Hugh D., Ithaca, N. Y. Elevating-truck. No. 1,193,115; Aug. 1; Gaz. vol. 229; p. 102.

Brown, Jacob S., assignor to W. F. Eichenhofer, Los Angeles, Cal. Well-casing apparatus. No. 1,195,906; Aug. 22; Gaz. vol. 229; p. 1209.

Brown, Jacob S., assignor to W. F. Eichenhofer, Los Angeles, Cal. Fruit-picker. No. 1,195,907; Aug. 22; Gaz. vol. 229; p. 1209.

Brown, James H., Denver, Colo. Nut-lock. No. 1,194,944; Aug. 15; Gaz. vol. 229; p. 828.

Brown, James M., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Switchboard apparatus. No. 1,194,133; Aug. 8; Gaz. vol. 229; p. 501.

Brown, John W., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Apparatus for forcing bodies from plastic material. No. 1,193,507; Aug. 8; Gaz. vol. 229; p. 278.

Brown, John W., Jr., Philadelphia, Pa. Cutting-tool. No. 1,195,774; Aug. 22; Gaz. vol. 229; p. 1163.

Brown, John Z., High Point, N. C. Stove-shelf. No. 1,194,813; Aug. 15; Gaz. vol. 229; p. 784.

Brown, Mary C., Fargo, N. D. Cooking utensil. No. 1,193,353; Aug. 1; Gaz. vol. 229; p. 188.

Brown, Middleton D., Waterloo, Iowa. Switch. No. 1,194,134; Aug. 8; Gaz. vol. 229; p. 502.

Brown, Oscar E., Buffalo, N. Y. Detachable calk-frame. No. 1,193,864; Aug. 8; Gaz. vol. 229; p. 409.

Brown, Richard S., Amboy, Ill. Invalid-bed. No. 1,193,354; Aug. 1; Gaz. vol. 229; p. 188.

Brown, Roy F., Encino, N. Mex. Sheep-protector. No. 1,194,135; Aug. 8; Gaz. vol. 229; p. 502.

Brown, Roy M., Wilmington, Ohio. Dust-cap for valve-stems. No. 1,193,865; Aug. 8; Gaz. vol. 229; p. 410.

Brown, Thomas J. W., Washington, D. C. Golf-hole lining. No. 1,194,814; Aug. 15; Gaz. vol. 229; p. 784.

Brown, Thomas R., Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Car and electric coupling. No. 1,194,353; Aug. 15; Gaz. vol. 229; p. 621.

Brown, William L., Lansdowne, assignor to Helme & McIlhenny, Philadelphia, Pa. Gas-meter. No. 1,196,653; Aug. 29; Gaz. vol. 229; p. 1501.

Brownlee, Robert B. (See Keyes and Brownlee.)

Bruderer, John, Jr., assignor to The Traub Manufacturing Company, Detroit, Mich. Making rings. No. 1,192,983; Aug. 1; Gaz. vol. 229; p. 52.

Bruff, John K., Baltimore, Md. Cleaning device for marine-boiler furnaces. No. 1,192,984; Aug. 1; Gaz. vol. 229; p. 52.

Bruger, Theodor, assignor to Hartmann & Braun A.-G., Frankfort-on-the-Main, Germany. Signaling apparatus. No. 1,196,429; Aug. 29; Gaz. vol. 229; p. 1423.

Brunke, William C., and H. D. Clarke, Omaha, Nebr. Combined spark-plug and spark-gap. No. 1,194,474; Aug. 15; Gaz. vol. 229; p. 667.

Brunswick-Balke-Collender Company. (See Adler, Morton L., assignor.)

Brunswick-Balke-Collender Company, The. (See Judd, Earldley C. B., assignor.)

Brunswick, William F., Akron, Ohio. Collapsible core for tire-casings. No. 1,196,513; Aug. 29; Gaz. vol. 229; p. 1452.

Brush, Alanson P., Detroit, Mich. Cone-coupling. No. 1,195,971; Aug. 29; Gaz. vol. 229; p. 1264.

Brusseau, Adolphus J., assignor of one-half to W. A. Kimball, Plymouth, N. H. Expansible vessel-cover. No. 1,193,116; Aug. 1; Gaz. vol. 229; p. 102.

Bruton, Luke J., Racine, Wis. Means for automatically filling containers. No. 1,192,852; Aug. 1; Gaz. vol. 229; p. 8.

Bryan, Elijah W., Los Angeles, Cal. Automobile-signal. No. 1,194,596; Aug. 15; Gaz. vol. 229; p. 708.

Bryan, William G., and P. B. Sheather, Sydney, New South Wales, Australia. Bicycle-gearing. No. 1,194,945; Aug. 15; Gaz. vol. 229; p. 829.

Bryant Electric Company, The. (See Byrne and Lehane, assignors.)

Bryant, John E., Cambridge, Mass. Developing-tank. No. 1,194,707; Aug. 15; Gaz. vol. 229; p. 746.

Bryce, James W., Bloomfield, N. J., assignor to International Time Recording Company of New York, Endicott, N. Y. Recorder. No. 1,195,972; Aug. 29; Gaz. vol. 229; p. 1264.

Bryon, Benn A., Ridgefield, Conn. Demountable rim. No. 1,194,136; Aug. 8; Gaz. vol. 229; p. 502.

Bryson, William, Fifield, Wis. Fence-post. No. 1,195,775; Aug. 22; Gaz. vol. 229; p. 1163.

Buchanan, Frank, Syracuse, N. Y. Consuming electrode for luminous-arc electric lamps. No. 1,193,866; Aug. 8; Gaz. vol. 229; p. 410.

Buchanan, Frank, Syracuse, N. Y. Headlight. No. 1,194,946; Aug. 15; Gaz. vol. 229; p. 830.

Bucher, John E., Coventry, assignor to Nitrogen Products Company, Providence, R. I. Electrolytic and saponifying process for producing nitrile derivatives. No. 1,194,354; Aug. 15; Gaz. vol. 229; p. 622.

Buchi, Robert, Chicago, Ill. Apple-peeling machine. No. 1,193,117; Aug. 1; Gaz. vol. 229; p. 103.

Büchler, Hans, Zurich, Switzerland. Embroidery-machine. No. 1,195,973; Aug. 29; Gaz. vol. 229; p. 1265.

Buck, Herman J., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa. Elevator. No. 1,193,118; Aug. 1; Gaz. vol. 229; p. 104.

Buck, Herman J., assignor to Mathews Gravity Carrier Company, Ellwood City, Pa. Double-track switch for gravity-carriers. No. 1,193,119; Aug. 1; Gaz. vol 229; p. 104.

Buckeye Traction Ditcher Company, The. (See Krupp, Leo A., assignor.)

Buckeye Traction Ditcher Company, The. (See Yocum, Charles F., assignor.)

Buckley, George H., Indianapolis, Ind. Electric plug. No. 1,194,137; Aug. 8; Gaz. vol. 229; p. 503.

Buckley, Joseph L., Davenport, Iowa. Ornamenting brick. No. 1,195,649; Aug. 22; Gaz. vol. 229; p. 1116.

Buckley, Mary E., Los Angeles, Cal. Portable and collapsible closet. No. 1,193,867; Aug. 8; Gaz. vol. 229; p. 411.

Buckley, Mary E., Los Angeles, Cal. Convertible household and devotional chair. No. 1,193,868; Aug. 8; Gaz. vol. 229; p. 411.

Buckminster, Ira C., Beverly, Mass. Pen. No. 1,196,654; Aug. 29; Gaz. vol. 229; p. 1501.

Buckwalter, Daniel T., Royersford, Pa. Counterbalance for hinged covers. No. 1,194,708; Aug. 15; Gaz. vol. 229; p. 746.

Budge, Thomas F., Malad City, Idaho. Clothes-pin. No. 1,194,597; Aug. 15; Gaz. vol. 229; p. 709.

Buehl, John L., *et al.* (See Jung, John M., assignor.)

Buffalo Gasolene Motor Company. (See Blair, William E. and F. J., assignors.)

Buffington, Calvin A., Berkshire, N. Y. Folding chair. No. 1,196,655; Aug. 29; Gaz. vol. 229; p. 1501.

Bugbee, Lucian W., assignor to American Optical Company, Southbridge, Mass. Lens-drilling machine. No. 1,196,656; Aug. 29; Gaz. vol. 229; p. 1502.

Bulger, Michael B., and J. P. Offerman, Beaver Dam, Wis. Snow-scraper. No. 1,196,206; Aug. 29; Gaz. vol. 229; p. 1348.

Bullard, Walter S., Middletown, Ohio. Coaster-brake. No. 1,193,355; Aug. 1; Gaz. vol. 229; p. 189.

Bumgarner, George W., Baltimore, Md. Non-freezing water-closet. No. 1,194,947; Aug. 15; Gaz. vol. 229; p. 830.

Bunet, Paul, assignor to Societe Generale des Nitrures, Paris, France. Fixation of nitrogen by means of ferro-aluminium. No. 1,196,657; Aug. 29; Gaz. vol. 229; p. 1502.

Bungay, George W., New York, N. Y., assignor to Bungay Mfg. Company. Shifting mechanism for variable-speed gearing. No. 1,193,986; Aug. 8; Gaz. vol. 229; p. 452.

Bungay Mfg. Company. (See Bungay, George W., assignor.)

Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Grout-mixer. No. 1,194,355; Aug. 15; Gaz. vol. 229; p. 622.

Bunta, John. (See Kosutz and Bunta.)

Bunting, Herbert C., and M. P. Anderson, Seattle, Wash. Photograph-printing machine. No. 1,196,330; Aug. 29; Gaz. vol. 229; p. 1388.

Bunting Iron Works. (See Hall, James T., assignor.)

Burch, James, McKeesport, Pa. Poison-indicator. No. 1,194,948; Aug. 15; Gaz. vol. 229; p. 831.

Burchell, Joseph, Minden, Nebr. Harvester-supporting attachment for a tractor. No. 1,196,430; Aug. 29; Gaz. vol. 229; p. 1424.

Burchenal, Charles D., New York, N. Y. Filter. No. 1,194,949; Aug. 15; Gaz. vol. 229; p. 831.

Burdin, Scott K., Ottawa, Ontario, Canada. Caponizing-tool. No. 1,193,987; Aug. 8; Gaz. vol. 229; p. 452.

Burdin, Scott K., Ottawa, Ontario, Canada. Caponizing instrument. No. 1,193,988; Aug. 8; Gaz. vol. 229; p. 453.

Burford, Percy W., East Rochester, N. Y. Tire-rim. No. 1,192,853; Aug. 1; Gaz. vol. 229; p. 9.

Burgess, Edward R., Brookfield, Mass. Tag-fastener. No. 1,196,514; Aug. 29; Gaz. vol. 229; p. 1452.

Burke, Grace K., Chicago, Ill. Fork. No. 1,195,650; Aug. 22; Gaz. vol. 229; p. 1116.

Burkhart, Charles F., Philadelphia, Pa., assignor, by mesne assignments, to Burkhart Corporation. Shoe cleaning and polishing machine. No. 1,196,658; Aug. 29; Gaz. vol. 229; p. 1502.

Burkhart, Charles F., Philadelphia, Pa., assignor to Burkhart Corporation. Shoe-dressing machine. No. 1,196,659; Aug. 29; Gaz. vol. 229; p. 1503.

Burkhart Corporation. (See Burkhart, Charles F., assignor.)

Burman, John A. F., and P. W. Lyth, assignors to Aktiebolaget Armématerial, Stockholm, Sweden. Heliograph or the like. No. 1,196,331; Aug. 29; Gaz. vol. 229; p. 1388.

Burnett, Richard W., Montreal, Quebec, Canada. Journal-box. No. 1,194,475; Aug. 15; Gaz. vol. 229; p. 667.

Burnett, Richard W., Montreal, Quebec, Canada. Car-roof. No. 1,194,709; Aug. 15; Gaz. vol. 229; p. 747.

Burnett, Richard W., Montreal, Quebec, Canada. Car-roof. No. 1,196,660; Aug. 29; Gaz. vol. 229; p. 1503.

Burnham, Arthur M., Gardiner, Me. Oven. No. 1,193,869; Aug. 8; Gaz. vol. 229; p. 411.

Burnham Basket Company. (See Burnham, Charles, assignor.)

Burnham, Charles, Los Angeles, Cal., assignor to Burnham Basket Company. Box-making machine. No. 1,194,815; Aug. 15; Gaz. vol. 229; p. 784.

Burnham, Edson E., Amite, La. Take-up device for line-wires. No. 1,195,776; Aug. 22; Gaz. vol. 229; p. 1164.

Burnham, Joseph L., Schenectady, N. Y., assignor to General Electric Company. Rotary converter. No. 1,194,138; Aug. 8; Gaz. vol. 229; p. 503.

Burns, James M., Downers Grove, Ill., assignor to The Lamson Company, Boston, Mass. Indicating device for carriers. No. 1,195,651; Aug. 22; Gaz. vol. 229; p. 1117.

Burroughs Adding Machine Company. (See Draughon, William H., assignor.)

Burroughs Adding Machine Company. (See Gardner, Clyde E. W., assignor.)

Burroughs Adding Machine Company. (See Lundgren, Charles A., assignor.)

Burroughs Adding Machine Company. (See Rinsche, Frank C., assignor.)

Burrows, Aubrey A., assignor to Coleman Fare Box Co., Limited, Toronto, Ontario, Canada. Fare-box. No. 1,194,950; Aug. 15; Gaz. vol. 229; p. 831.

Burtis, Douglas H., Pheonix, Ariz. Irrigating-ditch. No. 1,194,951; Aug. 15; Gaz. vol. 229; p. 832.

Burton, Alexander M., Pittsburgh, Pa. Fender. No. 1,195,438; Aug. 22; Gaz. vol. 229; p. 1040.

Burton, Frank F., East Haven, assignor to Winchester Repeating Arms Co., New Haven, Conn. Take-down firearm. No. 1,195,777; Aug. 22; Gaz. vol. 229; p. 1164.

Burton, Grant, Stapleton, Ala. Mail catcher and deliverer. No. 1,195,439; Aug. 22; Gaz. vol. 229; p. 1041.

Bushong, Grover C., Maricopa, Cal. Tubing-bleeder. No. 1,194,952; Aug. 15; Gaz. vol. 229; p. 832.

Busiek, William A., and A. A. Roesch, Belleville, Ill. Stove and range. No. 1,196,078; Aug. 29; Gaz. vol. 229; p. 1304.

Buskala, Sivert, Shine, Wash. Gage for saws. No. 1,194,139; Aug. 8; Gaz. vol. 229; p. 504.

Buss, Otto C., Havre, assignor to Société Anonyme pour l'Exploitation des Procédés Westinghouse-Leblanc, Paris, France. Wet air-pump. No. 1,192,854; Aug. 1; Gaz. vol. 229; p. 9.

Buss, Otto C., Havre, assignor to Société Anonyme pour l'Exploitation des Procédés Westinghouse-Leblanc, Paris, France. Rotary air-compressor. No. 1,192,855; Aug. 1; Gaz. vol. 229; p. 10.

Bustin, Thomas W. (See Jacks and Bustin.)

Buswell, George W. (See Benner, Buswell, and Kelter.)

Butler, Edwin R. (See Wilson, Edwin W., assignor.)

Butler, Frederick E. (See Wilburn and Butler.)

Butler, John, assignor of one-half to F. A. Butte, Steubenville, Ohio. Clothes-line holder. No. 1,192,985; Aug. 1; Gaz. vol. 229; p. 53.

Butte, Frank A. (See Butler, John, assignor.)

Butterworth, Frank W., Danville, Ill. Brickmaking-machine. No. 1,193,870; Aug. 8; Gaz. vol. 229; p. 412.

Butterworth, Frank W., Danville, Ill. Brickmaking-machine. No. 1,193,871; Aug. 8; Gaz. vol. 229; p. 412.

Butterworth, Samuel D., Lansing, Mich. Tie-pressing device. No. 1,196,515; Aug. 29; Gaz. vol. 229; p. 1453.

Buttrick, George, Allentown, Pa., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-wire apparatus. No. 1,193,508; Aug. 8; Gaz. vol. 229; p. 279.

Buxton, Warner R., Springfield, Mass. Garment-hanger. No. 1,193,356; Aug. 1; Gaz. vol. 229; p. 189.

Buxton, Warner R., Springfield, Mass. Garment-hanger. No. 1,193,357; Aug. 1; Gaz. vol. 229; p. 189.

Byrd, Silas, Chilton, Tex. Globe draft-shield. No. 1,194,953; Aug. 15; Gaz. vol. 229; p. 833.

Byrne, Thomas W., and R. C. Lehane, Boston, Mass., assignors to The Bryant Electric Company, Bridgeport, Conn. Panel-board fitting. No. 1,195,778; Aug. 22; Gaz. vol. 229; p. 1164.

C. Cowles & Co. (See Costello, Charles M. A., assignor.)

C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)

Cabe, William H., Hamilton, Ohio. Lubricating device for cables. No. 1,194,598; Aug. 15; Gaz. vol. 229; p. 709.

Cabell, Richard H., Jr., Millers, Nev. Post-card or picture hanger. No. 1,196,332; Aug. 29; Gaz. vol. 229; p. 1389.

Cable Company, The. (See Klugh, Paul B., assignor.)

Cable, Frank E. (See Porter and Cable.)

Cadle, Charles L., Rochester, N. Y. Electrode for welding, brazing, soldering, or the like. No. 1,193,989; Aug. 8; Gaz. vol. 229; p. 453.

Calile Brothers Company. (See Hills, Ansil W., assignor.)

Cain, Ira L., San Angelo, Tex. Electrically-operated door. No. 1,192,856; Aug. 1; Gaz. vol. 229; p. 10.

Cain, John H., Sr. (See Stiles, Luster, Jr., assignor.)

Caldwell, Eugene S., Philadelphia, Pa. Automatic valve. No. 1,194,710; Aug. 15; Gaz. vol. 229; p. 747.

Caldwell, John C., Miami, Fla. Boat-propelling mechanism. No. 1,195,652; Aug. 22; Gaz. vol. 229; p. 1117.

Caldwell, Stafford, Live Oak, Fla., and C. J. Williams, Atlanta, Ga. Air-distributer. No. 1,192,857; Aug. 1; Gaz. vol. 229; p. 10.

Calin, Joseph E., Depauw, Ind. Self-regulating stove-damper. No. 1,194,711; Aug. 15; Gaz. vol. 229; p. 747.

Callahan, Patrick, Stratford, Conn. Machine for blowing powdered poison on plants. No. 1,192,858; Aug. 1; Gaz. vol. 229; p. 10.

Camagni, Mario, Paterson, N. J. Shuttle. No. 1,194,816; Aug. 15; Gaz. vol. 229; p. 785.

Cambria Steel Company. (See Sage, Ralph V., assignor.)

Camp, George E., assignor to Foster Brothers Manufacturing Company, Utica, N. Y. Fastening for sling-side cribs. No. 1,194,476; Aug. 15; Gaz. vol. 229; p. 667.

Campbell, Argyle, assignor to Enterprise Railway Equipment Company, Chicago, Ill. Operating mechanism for car-doors. No. 1,192,986; Aug. 1; Gaz. vol. 229; p. 53.

Campbell, Charles L., assignor to E. B. Badger & Sons Company, Boston, Mass. Method and apparatus for obtaining wood-alcohol and calcium acetate from acetate liquor. No. 1,192,987; Aug. 1; Gaz. vol. 229; p. 53.

Campbell, James A. (See Clarke and Campbell.)

Campbell, John A., Quincy, Mass. Floor grinding and polishing machine. No. 1,195,555; Aug. 22; Gaz. vol. 229; p. 1082.

Campbell, Robert A., Minneapolis, Minn. Skid-stop. No. 1,195,974; Aug. 29; Gaz. vol. 229; p. 1265.

Campbell, Samuel J., Cheboygan, Mich. Device for holding anvils for truing. No. 1,195,440; Aug. 22; Gaz. vol. 229; p. 1041.

Campbell, William B., Gadsden, Ala. Flush-valve for flushing-tanks. No. 1,193,760; Aug. 8; Gaz. vol. 229; p. 373.

Cane, Salvatore, New York, N. Y. Dismountable camp-chair tent. No. 1,196,207; Aug. 29; Gaz. vol. 229; p. 1349.

Canfield, Frank A., Chicago, Ill. Exhibiting and vending case. No. 1,192,859; Aug. 1; Gaz. vol. 229; p. 11.

Canfield, Roger H., Vivian, La., and C. W. Lemon, Marietta, Ohio. Wrench. No. 1,194,271; Aug. 8; Gaz. vol. 229; p. 549.

Canning, Lawrence E., Pittsburgh, Pa. Valve. No. 1,195,336; Aug. 22; Gaz. vol. 229; p. 1005.

Cannon, Ray, and S. Gray, Paisley, Oreg. Tire-vulcanizing attachment for automobiles. No. 1,195,337; Aug. 22; Gaz. vol. 229; p. 1005.

Canova, William, Paterson, N. J. Tension device. No. 1,196,079; Aug. 29; Gaz. vol. 229; p. 1304.

Canton, Allen A., New York, N. Y., assignor to The Device Testing Company. Speedometer. No. 1,196,516; Aug. 29; Gaz. vol. 229; p. 1453.

Cantrall, Frederick A. (See Kruse, Theodore H., assignor.)

Cantwell, David, Condon, Oreg. Cutting apparatus. No. 1,194,599; Aug. 15; Gaz. vol. 229; p. 709.

Capps, Frank L. (See Tyler and Capps.)

Capstaff, John G., assignor to Eastman Kodak Company, Rochester, N. Y. Photographs in color and making the same. No. 1,196,080; Aug. 29; Gaz. vol. 229; p. 1304.

Carbone, Tito L., Charlottenburg, Germany. Resilient tire. No. 1,195,556; Aug. 22; Gaz. vol. 229; p. 1082.

Card, William H., and J. J. Cushman, Los Angeles, Cal. Starting mechanism for internal-combustion engines. No. 1,193,454; Aug. 1; Gaz. vol. 229; p. 222.

Cardwell, Allen D., New York, N. Y. Telegraph-transmitter. No. 1,194,357; Aug. 15; Gaz. vol. 229; p. 622.

Carence, Thomas, Kansas City, Mo. Window. No. 1,196,081; Aug. 29; Gaz. vol. 229; p. 1305.

Carey, Ira D., Light Street, Pa. Mail-handling apparatus. No. 1,193,234; Aug. 1; Gaz. vol. 229; p. 144.

Carey, John J., Brooklyn, N. Y. Coupling for gas-hose. No. 1,192,860; Aug. 1; Gaz. vol. 229; p. 11.

Carhart, Herbert A., Syracuse, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,195,557; Aug. 22; Gaz. vol. 229; p. 1083.

Carl, Roy H., Greenfield, Iowa. Electric switch. No. 1,194,272; Aug. 8; Gaz. vol. 229; p. 549.

Carleton, Lauren A., Collinsville, Conn. Wire-cutting device. No. 1,195,653; Aug. 22; Gaz. vol. 229; p. 1117.

Carlisle, Nelsen C. (See Crosby and Carlisle.)

Carlitz, Joseph S., assignor to Reno Manufacturing Company, Philadelphia, Pa. Sealing-ring. No. 1,194,273; Aug. 8; Gaz. vol. 229; p. 549.

Carlson, John G. (See Watson and Carlson.)

Carlson, Robert L., and R. C. Wyman, Boston, Mass. Projector. No. 1,196,517; Aug. 29; Gaz. vol. 229; p. 1453.

Carlton, Arthur L. (See Miller and Carlton.)

Carmichael, Henry, Malden, Mass., and W. M. Grosvenor, Ridgewood, N. J., assignors to Perkins Glue Company. Apparatus for ascertaining the properties of fluids. No. 1,192,861; Aug. 1; Gaz. vol. 229; p. 11.

Carmichael, Melvin A., Everett, Wash. Automatic train-stop. No. 1,195,975; Aug. 29; Gaz. vol. 229; p. 1265.

Carnegie, Alfred Q. (See Parsons, Carnegie, and Cook.)

Carnegie Steel Company. (See Llewellyn, Frederick T., assignor.)

Carnes, Edward W., Chicago, Ill., assignor to American Can Company, New York, N. Y. Triple-friction-seat wall-can. No. 1,196,082; Aug. 29; Gaz. vol. 229; p. 1305.

Carney, Mary R., (now by marriage M. R. Harrison,) Winthrop, Mass. Method and machine for reinforcing sheet material. No. 1,195,949; Aug. 22; Gaz. vol. 229; p. 1223.

Carney, Mary R., (now by marriage M. R. Harrison,) Winthrop, Mass. Reinforced sheet material. No. 1,195,950; Aug. 22; Gaz. vol. 229; p. 1223.

Caron, Joseph V., Haverhill, Mass. Internal-combustion engine. No. 1,195,441; Aug. 22; Gaz. vol. 229; p. 1042.

Carothers, John N. (See Ross, Merz, and Carothers.)

Carp, Arthur, St. Louis, Mo. Quick-adjusting wrench. No. 1,193,509; Aug. 8; Gaz. vol. 229; p. 279.

Carpenter, Campbell C., assignor, by mesne assignments, to The U. S. Light & Heat Corporation, Niagara Falls, N. Y. Electrical terminal connection. No. 1,193,358; Aug. 1; Gaz. vol. 229; p. 190.

Carpenter, Charles C., Swampscott, Mass. Self-service furnishing for stores. No. 1,195,654; Aug. 22; Gaz. vol. 229; p. 1118.

Carpenter, Ernest S. (See Wright, Clarence E., assignor.)

Carpenter, Teunauski Z., assignor to Federal Screw Corporation, Providence, R. I. Chuck for screw-machines. No. 1,194,817; Aug. 15; Gaz. vol. 229; p. 785.

Carruthers, George L., and J. S. Holderness, Pine Bluff, Ark. Circuit-closing apparatus. No. 1,193,510; Aug. 8; Gaz. vol. 229; p. 280.

Cary Manufacturing Company. (See Miller, George C. D., assignor.)

Caryl, Charles, *et al.* (See Craig, John, assignor.)

Casanovas, Baltasar F. de, and R. Rubió y Roger, Barcelona, Spain. Elongated projectile. No. 1,194,363; Aug. 15; Gaz. vol. 229; p. 625.

Case, Francis M. (See Doyle and Case.)

Casey, Clifford H., Minneapolis, Minn. Impalement-trap. No. 1,194,954; Aug. 15; Gaz. vol. 229; p. 833.

Cashmore, George, Alameda, Cal. Shoe. No. 1,194,955; Aug. 15; Gaz. vol. 229; p. 833.

Casler, Herman, Canastota, assignor to I. L. Lewis, Syracuse, N. Y. Fountain-mop. No. 1,193,761; Aug. 8; Gaz. vol. 229; p. 373.

Cassella Color Company. (See Schülle, Rudolf, assignor.)

Castle, George A. (See Whitehead and Castle.)

Castro, Joao do Amaral, Sao Paulo, Brazil. Continuously-operating vacuum-evaporator. No. 1,193,359; Aug. 1; Gaz. vol. 229; p. 190.

Caufield, Frank E., Jr., assignor of three-eighths to W. Nell, Jr., and three-eighths to H. P. Caufield, Chicago, Ill. Loose-leaf binder. No. 1,196,333; Aug. 29; Gaz. vol. 229; p. 1389.

Caufield, H. P., *et al.* (See Caufield, Frank E., Jr., assignor.)

Caulfield, James P., assignor to The J. P. Caulfield Piano Company, Baltimore, Md. Pneumatic player-piano. No. 1,196,518; Aug. 29; Gaz. vol. 229; p. 1453.

Caver, William H., Blue Mountain, Miss. Furnace. No. 1,193,120; Aug. 1; Gaz. vol. 229; p. 104.

Caylor, Calvin, Northfield, N. J. Carpenter's square. No. 1,196,519; Aug. 29; Gaz. vol. 229; p. 1454.

Cecil, Robert E., Sewickley, and H. E. Grant, Pittsburgh, Pa. Spraying apparatus. No. 1,194,358; Aug. 15; Gaz. vol. 229; p. 623.

Centerfreeze Ice Process Company, The. (See Llewellyn and Olney, assignors.)

Central Oil & Gas Stove Company. (See White and Hooper, assignors.)

Central Railway Signal Company. (See Dutcher, Frank, assignor.)

Ceramic Machinery Co. (See Yingling, Frank B., assignor.)

Cerf, Emile, San Francisco, Cal. Fastener for hatbands. No. 1,194,712; Aug. 15; Gaz. vol. 229; p. 747.

Chadwick, James N., Chicago, Ill. Instantaneous steam water-heater. No. 1,196,520; Aug. 29; Gaz. vol. 229; p. 1454.

Chadwick, Robert, Lexington, Nebr. Machine for topping beets. No. 1,194,359; Aug. 15; Gaz. vol. 229; p. 623.

Chaffee, Edward F., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y. Trap-door for railway-car platforms. No. 1,195,779; Aug. 22; Gaz. vol. 229; p. 1164.

Chain Belt Company. (See Shafer, Samuel, Jr., assignor.)

Chalman, John E., assignor to Union Special Machine Company, Chicago, Ill. Presser-foot for sewing-machines. No. 1,196,661; Aug. 29; Gaz. vol. 229; p. 1503.

Chamberlain, Glenn R., and A. G. Schroeder, Grand Rapids, Mich. Gas-fixture. No. 1,192,988; Aug. 1; Gaz. vol. 229; p. 54.

Chamberlain, Rufus N., Chicago, Ill., assignor to Gould Storage Battery Company. Separator for batteries. No. 1,194,818; Aug. 15; Gaz. vol. 229; p. 785.

Chamberlain, Thomas S., Meadville, Pa. Combined ladder and window scaffold. No. 1,193,872; Aug. 8; Gaz. vol. 229; p. 412.

Chambers, Frederick J., London, assignor to Automatic Telephone Manufacturing Company Limited, Liverpool, England. Transmitter for signaling by electromagnetic waves. No. 1,194,274; Aug. 8; Gaz. vol. 229; p. 549.

Chambers, George T., La Grange, Ill. Tooth for power-shovels. No. 1,193,511; Aug. 8; Gaz. vol. 229; p. 280.

Chambers, John S., New York, N. Y., assignor to Chambers Valve Company. Throttle-valve. No. 1,192,862; Aug. 1; Gaz. vol. 229; p. 12.

Chambers Valve Company. (See Chambers, John S., assignor.)

Champion Ignition Company. (See Schmidt, Albert, assignor.)

Champion Register Company. (See Marbach, Frank G., assignor.)

Chance, George W., Bristol, Pa. Molding-machine for molding plastic materials. No. 1,196,521; Aug. 29; Gaz. vol. 229; p. 1455.

Chandler, Carl B., assignor to Havana Metal Wheel Co., Havana, Ill. Machine for forming wheel-hubs. No. 1,193,664; Aug. 8; Gaz. vol. 229; p. 337.

Chandler, Edwin N., Braintree, Mass. Electric knife-beater. No. 1,193,121; Aug. 1; Gaz. vol. 229; p. 105.

Chandler & Price Company, The. (See Frackelton, Tyler, and Reichart, assignors.)

Chaney, William O., *et al.* (See Blee, Charles O., assignor.)

Chapman, Eugene M., *et al.* (See Ruckes, Michael, assignor.)

Chapman, William G., assignor of one-half to T. J. Feugate, Huntington, W. Va. Electric gas-lighter. No. 1,192,863; Aug. 1; Gaz. vol. 229; p. 12.

Chappell, Arthur E., Chicago, Ill. Surfacing-machine. No. 1,195,780; Aug. 22; Gaz. vol. 229; p. 1165.

Chappell, Howard F., assignor to Mineral Products Corporation, New York, N. Y. Treatment of alunite and the like. No. 1,195,655; Aug. 22; Gaz. vol. 229; p. 1118.

Charles Cory & Son. (See Wood, Frank W., assignor.)

Charles E. Reed & Co. (See Norris, Arthur B., assignor.)

Charles, Edward S. (See Merwin and Charles.)

Charles W. Shonk Company. (See Harbeck, Jervis R., assignor.)

Charlton, Irving D., and W. T. Shaw, Pullman, Wash. Animal-exterminator. No. 1,196,208; Aug. 29; Gaz. vol. 229; p. 1349.

Chase, Glen L., Ishpeming, Mich. Wire-fastener for fence-posts. No. 1,193,990; Aug. 8; Gaz. vol. 229; p. 453.

Chase Motor Truck Co. (See Georges and Gramlich, assignors.)

Chase Motor Truck Co. (See Gramlich, Jacob E., assignor.)

Chatfield, Franklin, Minneapolis, Minn., and G. E. Rutledge, Rochelle, Ill., assignors of one-half to Northwestern Knitting Co., Minneapolis, Minn., and one-half to Vassar Swiss Underwear Co., Rochelle, Ill. Undergarment. No. 1,196,431; Aug. 29; Gaz. vol. 229; p. 1424.

Cheatham, Joseph T., Hayti, Mo. Oil-burner. No. 1,192,864; Aug. 1; Gaz. vol. 229; p. 12.

Chebron, Georges A., and S. A. Lemp, Paris, France. Electric switch. No. 1,196,662; Aug. 29; Gaz. vol. 229; p. 1504.

Chemical Construction Company. (See Oliver, Thomas C., assignor.)

Chemical Products Company. (See Mork and Esselen, assignors.)

Chemische Fabrik Griesheim-Elektron. (See Kunert, Felix, assignor.)

Chemische Fabrik Grunau Landshoff & Meyer Aktiengesellschaft. (See Bräuer, Adolf, assignor.)

Cheney, Walter W., assignor to S. Cheney & Son, Manlius, N. Y. Grinder. No. 1,192,865; Aug. 1; Gaz. vol. 229; p. 13.

Cherry, Spencer A., Nashville, Tenn. Spring-wheel. No. 1,195,656; Aug. 22; Gaz. vol. 229; p. 1118.

Chersky, Mordecai, Philadelphia, Pa. Candle-holder. No. 1,195,657; Aug. 22; Gaz. vol. 229; p. 1119.

Chesebro, Denison P., New Rochelle, N. Y., assignor to American Safety Device Company. Scaffolding device. No. 1,195,976; Aug. 29; Gaz. vol. 229; p. 1266.

Cheshire, Edward, assignor to Miller Saw Trimmer Company of Michigan, Pittsburgh, Pa. Sheet separating and moving device. No. 1,194,327; Aug. 8; Gaz. vol. 229; p. 570.

Cheshire, Edward, assignor to Miller Saw Trimmer Company of Michigan, Pittsburgh, Pa. Sheet-stacker. No. 1,194,328; Aug. 8; Gaz. vol. 229; p. 571.

Chestnut, George W., Cartwright, Pa. Wheel and rail chock-block. No. 1,193,512; Aug. 8; Gaz. vol. 229; p. 280.

Chevalier, Louis D., and H. C. Reche, Dubuque, Iowa. Ore-concentrator. No. 1,194,477; Aug. 15; Gaz. vol. 229; p. 668.

Chex Ticket Machines (1914) Limited. (See Jung, Alfred J., assignor.)

Chilson, James N., and L. B. Pugh, Fairmont, W. Va. Coin-controlled vending-machine. No. 1,193,235; Aug. 1; Gaz. vol. 229; p. 145.

Chinn, Samuel, Los Angeles, Cal. Automobile attachment. No. 1,193,236; Aug. 1; Gaz. vol. 229; p. 146.

Chisholm, James, Lyons, Colo. Tool-holder. No. 1,194,956; Aug. 15; Gaz. vol. 229; p. 833.

Choralcelo Company. (See Severy and Sinclair, assignors.)

Christ, Isaac, deceased, Tamaqua, Pa.; W. H. Christ, executor. Separating apparatus. No. 1,196,750; Aug. 29; Gaz. vol. 229; p. 1535.

Christ, William H., executor. (See Christ, Isaac.)

Christensen, Christian B., San Francisco, Cal. Receptacle for bottles. No. 1,194,478; Aug. 15; Gaz. vol. 229; p. 668.

Christensen, Edward, *et al.* (See Miller, Andrew B., assignor.)

Christensen, Edward L., Ann Arbor, assignor of one-half to W. J. Ross, Detroit, Mich. Sound-reproducing machine for advertising purposes. No. 1,193,762; Aug. 8; Gaz. vol. 229; p. 371.

Christensen, Niels A., Milwaukee, Wis. Adjustable shaft-coupling. No. 1,195,940; Aug. 22; Gaz. vol. 229; p. 1220.

Christiansen, Martin, New York, N. Y. Combination hair-brush and comb. No. 1,196,522; Aug. 29; Gaz. vol. 229; p. 1455.

Christianson, Harry C., Ridgewood, N. J. Centrifugal filter. No. 1,194,275; Aug. 8; Gaz. vol. 229; p. 550.

Chryst, William A., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Binding-post. No. 1,193,513; Aug. 8; Gaz. vol. 229; p. 280.

Chubb, Lewis W., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vacuum-type converter. No. 1,194,140; Aug. 8; Gaz. vol. 229; p. 504.

Chubb, Lewis W., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Welded metal. No. 1,196,744; Aug. 29; Gaz. vol. 229; p. 1533.

Church, David W., assignor of one-half to D. F. Weaver, San Diego, Cal. Pipe-wrench. No. 1,195,558; Aug. 22; Gaz. vol. 229; p. 1083.

Churchill, Allen J., Portland, Oreg. Roof-joint. No. 1,195,338; Aug. 22; Gaz. vol. 229; p. 1005.

Churchill, William, assignor to Corning Glass Works, Corning, N. Y. Refracting cover-glass for automobile-headlights. No. 1,193,873; Aug. 8; Gaz. vol. 229; p. 413.

Churchward, Alexander, Boston, Mass., assignor to A-B-C Starter Company, Detroit, Mich. Electric power system for internal-combustion engines. No. 1,194,713; Aug. 15; Gaz. vol. 229; p. 748.

Chute, Harry O., New York, N. Y. Reclaiming rubber. No. 1,196,334; Aug. 29; Gaz. vol. 229; p. 1390.

Cigol, Frank A., Little Falls, N. J. Rubber top. No. 1,193,991; Aug. 8; Gaz. vol. 229; p. 453.

Cigol, Frank A., Little Falls, N. J. Musical rubber ball. No. 1,193,992; Aug. 8; Gaz. vol. 229; p. 454.

Cissner, Charles, Starkweather, N. D. Machine for shocking grain. No. 1,195,442; Aug. 22; Gaz. vol. 229; p. 1042.

Cizek, John V., Clutier, Iowa. End-gate. No. 1,193,514; Aug. 8; Gaz. vol. 229; p. 281.

Clapper, J. S., *et al.* (See Strite and Bierman, assignors.)

Clark Bros. Bolt Co., The. (See Noble, Boughton T., assignor.)

Clark, Charles A., Buffalo Center, Iowa. Skid. No. 1,194,819; Aug. 15; Gaz. vol. 229; p. 786.

Clark, Emery E., Oskaloosa, Kans. Power-transmitting mechanism for use in connection with swinging seats. No. 1,193,237; Aug. 1; Gaz. vol. 229; p. 146.

Clark, Ezra C., and J. Arrufat, Binghamton, N. Y., assignors to Ansco Company, Photographic camera and similar apparatus. No. 1,196,209; Aug. 29; Gaz. vol. 229; p. 1350.

Clark, Frank E., Bridgeport, Conn. Road construction. No. 1,193,515; Aug. 8; Gaz. vol. 229; p. 281.

Clark, George H., Paris, Me. Automatic train-stopping device. No. 1,193,122; Aug. 1; Gaz. vol. 229; p. 105.

Clark, Henry W., West Vienna, N. Y. Combination vehicle-truck. No. 1,194,141; Aug. 8; Gaz. vol. 229; p. 504.

Clark, John A., Los Angeles, Cal. Collapsible back-rest for seats. No. 1,196,731; Aug. 29; Gaz. vol. 229; p. 1528.

Clark, Merrill E., New York, N. Y. Stabilizer for aeroplanes. No. 1,195,977; Aug. 29; Gaz. vol. 229; p. 1266.

Clark Process Corporation. (See Dobyns and Elderkin, assignors.)

Clark, Robert G., New York, N. Y., assignor to W. H. Simpson, East Orange, N. J. Transmission-gearing. No. 1,193,874; Aug. 8; Gaz. vol. 229; p. 414.

Clark, Robert L., Union, W. Va. Lamp-shade. No. 1,196,523; Aug. 29; Gaz. vol. 229; p. 1455.

Clark, Tere A., Chicago, Ill. Channeling and severing by blasting. No. 1,195,781; Aug. 22; Gaz. vol. 229; p. 1165.

Clarke, Harry D. (See Brunke and Clarke.)

Clarke, Harry N., assignor to The Corte-Scope Company, Cleveland, Ohio. Stereoscope. No. 1,193,993; Aug. 8; Gaz. vol. 229; p. 454.

Clarke, Herman, London, and J. A. Campbell, Ilford, England. Fuel. No. 1,193,763; Aug. 8; Gaz. vol. 229; p. 374.

Clarke, James E., Worcester, Mass. Fly-catcher. No. 1,195,559; Aug. 22; Gaz. vol. 229; p. 1083.

Clarke, Ralph, Ramsey, N. J., assignor to Contractors Trading Company, Inc., New York, N. Y. Safety-hook. No. 1,193,516; Aug. 8; Gaz. vol. 229; p. 281.

Claus, Joseph H., West Philadelphia, Pa. System for telegraphic and telephonic communication. No. 1,194,142; Aug. 8; Gaz. vol. 229; p. 505.

Clay, Albert T. (See Clay, Harry C. and A. T.)

Clay, Harry C. and A. T., Columbus, Ind., assignors to Emerson-Brantingham Company, Rockford, Ill. Speed control for engines. No. 1,194,479; Aug. 15; Gaz. vol. 229; p. 668.

Clay, Harry E. (See Simpson and Clay.)

Clay, William W. (See Simpson and Clay.)

Clayton, Harry F., Toronto, Ontario, Canada. Coating walls and other surfaces. No. 1,195,978; Aug. 29; Gaz. vol. 229; p. 1267.

Clayton, James M., Iola, Kans. Seesaw. No. 1,193,994; Aug. 8; Gaz. vol. 229; p. 454.

Clements, John W., Richmond, Ind. Vehicle joint and panel construction. No. 1,192,866; Aug. 1; Gaz. vol. 229; p. 13.

Clifford, Walter C., San Francisco, Cal. Detachable hinge. No. 1,192,989; Aug. 1; Gaz. vol. 229; p. 54.

Clifton Manufacturing Company. (See Raymond, Nelson H., assignor.)

Clokey, Allison A., Jersey City, N. J., assignor to The Western Union Telegraph Company, New York, N. Y. Recorder. No. 1,196,335; Aug. 29; Gaz. vol. 229; p. 1390.

Clore, Welford R., Brightwood, Va. Hoe. No. 1,196,663; Aug. 29; Gaz. vol. 229; p. 1504.

Cluett, Sanford L., Hoosick Falls, N. Y. Mower-pitman. No. 1,196,524; Aug. 29; Gaz. vol. 229; p. 1456.

Clulee, Stephen J., Attleboro, Mass. Eyeglasses and spectacles. No. 1,196,083; Aug. 29; Gaz. vol. 229; p. 1305.

Clum, Harry A., assignor to Clum Manufacturing Company, Wauwatosa, Wis. Switch mechanism for automobile-lighting systems. No. 1,194,480; Aug. 15; Gaz. vol. 229; p. 669.

Clum Manufacturing Company. (See Clum, Harry A., assignor.)

Coakley, Joseph D. (See Subner and Coakley.)

Coats, Henry B., Veedersburg, Ind. Vehicle-wheel. No. 1,193,455; Aug. 1; Gaz. vol. 229; p. 222.

Coats Machine Tool Company Limited, The. (See Rollinson and Moxham, assignors.)

Cobb, Lawrence, Richmond, Va. Labeling-machine. No. 1,193,517; Aug. 8; Gaz. vol. 229; p. 281.

Cobellis, Fabricius, Philadelphia, Pa. Manufacture of peroxid of hydrogen. No. 1,195,560; Aug. 22; Gaz. vol. 229; p. 1083.

Coburn, Thomas H., Orangeville, Md. Bricklayer's tool. No. 1,193,665; Aug. 8; Gaz. vol. 229; p. 338.

Coburn, William, and C. W. Davis, assignors of one-third to J. Maes, Seattle, Wash. Acetylene-generator. No. 1,196,336; Aug. 29; Gaz. vol. 229; p. 1390.

Cochrane, Albert P., assignor to J. H. Cochrane, New York, N. Y. Knockdown container. No. 1,195,908; Aug. 22; Gaz. vol. 229; p. 1209.

Cochrane, Albert P., assignor to J. H. Cochrane, New York, N. Y. Lock for closures. No. 1,195,909; Aug. 22; Gaz. vol. 229; p. 1210.

Cochrane, Albert P., assignor to J. H. Cochrane, New York, N. Y. Corner-piece. No. 1,195,910; Aug. 22; Gaz. vol. 229; p. 1210.

Cochrane, Harry H., Butte, Mont. Insulator. No. 1,194,957; Aug. 15; Gaz. vol. 229; p. 834.

Cochrane, Jane H. (See Cochrane, Albert P., assignor.)

Cockburn, David, and D. MacNicoll, Cardonald, near Glasgow, Scotland. Steam-regulating valve. No. 1,195,658; Aug. 22; Gaz. vol. 229; p. 1119.

Codding, John W., and F. H. Putnam, Spokane, Wash. Bench-vise. No. 1,195,339; Aug. 22; Gaz. vol. 229; p. 1006.

Coffin, Claude C., *et al.* (See Rundle, Edward H., assignor.)

Cogger, William B., Cleveland, assignor to T. Kundtz, Lakewood, Ohio. Adjustable supporting structure. No. 1,196,084; Aug. 29; Gaz. vol. 229; p. 1305.

Cogswell, George A., *et al.* (See Bircher, Eugene A., assignor.)

Cohen, William, Bayonne, N. J. Pipe-cleaning machine. No. 1,196,525; Aug. 29; Gaz. vol. 229; p. 1456.

Cole, Frederick W., Newton, Mass., assignor to The Gamewell Fire Alarm Telegraph Company, New York, N. Y. Signal-box. No. 1,194,600; Aug. 15; Gaz. vol. 229; p. 709.

Cole, Henry T., New York, N. Y. Wall-bracket. No. 1,196,085; Aug. 29; Gaz. vol. 229; p. 1306.

Coleman, Clyde J., assignor, by mesne assignments, to Hall Switch & Signal Company, New York, N. Y. Railway signaling system. No. 1,194,714; Aug. 15; Gaz. vol. 229; p. 748.

Coleman Fare Box Co. (See Burrows, Aubrey A., assignor.)

Coleman, John P., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,194,715; Aug. 15; Gaz. vol. 229; p. 748.

Coleman, Oscar F., El Paso, Tex. Locking device for steering-wheels. No. 1,195,782; Aug. 22; Gaz. vol. 229; p. 1165.

Collar, Fredrick O., Ashtabula, and H. E. Wetherbee, assignors of one-half to Crowell & Murray, Cleveland, Ohio. Apparatus for sampling ores. No. 1,192,990; Aug. 1; Gaz. vol. 229; p. 55.

Collar, Robert H., Northome, Minn. Land-clearing machine. No. 1,194,958; Aug. 15; Gaz. vol. 229; p. 834.

Collander, Carl E. H., assignor to Martin-Copeland Company, Providence, R. I. Eyeglass construction. No. 1,193,518; Aug. 8; Gaz. vol. 229; p. 282.

Collins, J. P., *et al.* (See Sweet, Allen H., assignor.)

Collins, James H., Harrisburg, Pa. Resonant body. No. 1,193,995; Aug. 8; Gaz. vol. 229; p. 454.

Collins, Jeremiah F., Brockton, Mass. Shoe-tree. No. 1,193,875; Aug. 8; Gaz. vol. 229; p. 414.

Collis Company, The. (See Collis, George, assignor.)

Collis, Edwin A., Viola, Del. Poultry water-fountain. No. 1,195,443; Aug. 22; Gaz. vol. 229; p. 1042.

Collis, Florence M., executrix. (See Collis, George.)

Collis, George, deceased; F. M. Collis, executrix, assignor to The Collis Company, Clinton, Iowa. Chicken-feeding coop. No. 1,192,867; Aug. 1; Gaz. vol. 229; p. 13.

Colonial Ammunition Company Limited, The. (See Hassall, Albert E., assignor.)

Colpitts, Edwin H., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Multiplex Radiotelegraph system. No. 1,194,820; Aug. 15; Gaz. vol. 229; p. 786.

Colton, Rosto E., Easthampton, assignor to W. W. Slack, Springfield, Mass. Steel-cutting machine. No. 1,195,184; Aug. 22; Gaz. vol. 229; p. 948.

Columbia Postal Supply Co. (See Ielfield, August, assignor.)

Colvin, Walter M., Washington, D. C. Dancing toy. No. 1,193,493; Aug. 1; Gaz. vol. 229; p. 236.

Combs, Max W., Modesto, Cal. Store-fixture. No. 1,193,666; Aug. 8; Gaz. vol. 229; p. 338.

Comey, Bernard E., assignor to Yemoc Manufacturing Company, Springfield, Mass. Folding table. No. 1,193,876; Aug. 8; Gaz. vol. 229; p. 414.

Comins, Frank B., Sharon, Mass., assignor to American Moistening Company. Humidifying means. No. 1,196,664; Aug. 29; Gaz. vol. 229; p. 1504.

Comp, Olen A., Barberton, Ohio. Water-glass frame. No. 1,195,911; Aug. 22; Gaz. vol. 229; p. 1210.

Computing Scale Company, The. (See Ludlow, George M., assignor.)

Comstock, Clark S., Sr., East Orange, N. J. Garment-loop. No. 1,194,716; Aug. 15; Gaz. vol. 229; p. 749.

Conibear, William H., Homer, Ontario, Canada. Guard-rail for passenger-cars. No. 1,194,821; Aug. 15; Gaz. vol. 229; p. 786.

Conkling, Allen. (See Snow, Frederick, assignor.)

Conlan, David, Jr., Brooklyn, N. Y. Dry cell. No. 1,193,764; Aug. 8; Gaz. vol. 229; p. 374.

Conley, Kerry E., Rochester, Minn. Coupon-holder. No. 1,194,360; Aug. 15; Gaz. vol. 229; p. 624.

Conn, Byron O. (See Root, Charles F., assignor.)

Connor, John H., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for forming the toes of the vamps of boots and shoes. No. 1,195,968; Aug. 29; Gaz. vol. 229; p. 1263.

Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Starting-electrode for vapor electric devices. No. 1,194,143; Aug. 8; Gaz. vol. 229; p. 505.

Consolidated Car-Heating Company. (See McElroy, James F., assignor.)

Constantine, John, Cedar Rapids, Iowa. Food composition. No. 1,194,276; Aug. 8; Gaz. vol. 229; p. 550.

Continental Can Company. (See Abrams, Jesse E., assignor.)

Continental Can Company. (See Krummel, Louis C., assignor.)

Continental Can Company. (See Norton, Horatio N., assignor.)

Continental Can Company. (See Robinson and Coyle, assignors.)

Continental Machine Company. (See Krummel, Louis C., assignor.)

Contractors Trading Company. (See Clarke, Ralph, assignor.)

Converse, Atherton D., Winchendon, Mass. Vehicle. No. 1,193,765; Aug. 8; Gaz. vol. 229; p. 375.

Coo, Thomas J., Toronto, Ontario, Canada, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,194,361; Aug. 16; Gaz. vol. 229; p. 624.

Cook, Albert. (See Curry and Cook.)

Cook, Aubrey W., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Bronzing-machine. No. 1,195,561; Aug. 22; Gaz. vol. 229; p. 1084.

Cook, Edward J., assignor of one-half to D. P. Falconer, Rochester, N. Y. Splicing rails. No. 1,193,238; Aug. 1; Gaz. vol. 229; p. 146.

Cook, Frank A., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,194,362; Aug. 15; Gaz. vol. 229; p. 624.

Cook, Frank B., assignor to Frank B. Cook Company, Chicago, Ill. Electric switch. No. 1,193,239; Aug. 1; Gaz. vol. 229; p. 146.

Cook, Hugo, Dayton, Ohio. Motor. No. 1,193,996; Aug. 8; Gaz. vol. 229; p. 455.

Cook, Moses G., Lynn, Mass. Speedometer. No. 1,194,144; Aug. 8; Gaz. vol. 229; p. 506.

Cook, Stanley S. (See Parsons, Carnegie, and Cook.)

Cook, Stanley S. (See Parsons and Cook.)

Cooke, Adrian C., assignor to J. W. Pitcher, Chicago, Ill. Cutter. No. 1,196,337; Aug. 29; Gaz. vol. 229; p. 1390.

Coon, James P. (See Mahon, Alexander, assignor.)

Coons, James H., assignor of one-half to H. J. Drake, Bushnell, Ill. Lock. No. 1,193,123; Aug. 1; Gaz. vol. 229; p. 106.

Cooper Hewitt Electric Company. (See Keyes and Brownlee, assignors.)

Cooper, Hillyer M. (See Gaines, Henry L., assignor.)

Cooper, Joel S., Santa Barbara, Cal. Land-pulverizer. No. 1,196,432; Aug. 29; Gaz. vol. 229; p. 1424.

Copeland, Covil, Hiawatha, Kans. Internal-combustion engine. No. 1,192,991; Aug. 1; Gaz. vol. 229; p. 55.

Copley, Albert L., Glenalum, W. Va. Coal-conveying mechanism. No. 1,193,124; Aug. 1; Gaz. vol. 229; p. 106.

Copley, Almon W. (See Bradshaw and Copley.)

Copley, Noiberto G., assignor to The "S-C" Regulator Company, Fostoria, Ohio. Feed-water regulator. No. 1,193,125; Aug. 1; Gaz. vol. 229; p. 106.

Copper Process Company. (See Lovett, Thomas J., assignor.)

Corbett, Bennie C., Canon City, Colo., assignor to Ell Bridge Company, Roodhouse, Ill. Amusement device. No. 1,195,185; Aug. 22; Gaz. vol. 229; p. 948.

Corbett, Harry A., and J. W. Morris, New York, N. Y., assignors to The Sinpar Company. Cryptographic machine. No. 1,196,338; Aug. 29; Gaz. vol. 229; p. 1391.

Corey, Fred B., Edgewood Park, Pa. Producing compound metal objects. No. 1,193,667; Aug. 8; Gaz. vol. 229; p. 338.

Corning Glass Works. (See Churchill, William, assignor.)

Cornwell, Lyman, De Beque, Colo. Keyless lock for automobiles. No. 1,193,360; Aug. 1; Gaz. vol. 229; p. 191.

Corona Typewriter Company. (See Petermann, Otto, assignor.)

Corrigan, William H., Delta, Iowa. Reinforcing-chain. No. 1,194,601; Aug. 15; Gaz. vol. 229; p. 710.

Corte-Scope Company, The. (See Clarke, Harry N., assignor.)

Corte-Scope Company, The. (See Murphy, John J., assignor.)

Costello, Charles M. A., assignor to C. Cowles & Co., New Haven, Conn. Curtain-fastener. No. 1,193,997; Aug. 8; Gaz. vol. 229; p. 455.

Cotter, Harry C., *et al.* (See Bottlander, Jacob J., assignor.)

Cotton, Arthur L., Brunswick, and J. S. Wicking, Oakleigh, assignors of one-third to G. G. Turri, Melbourne, Victoria, Australia. Telephone instrument. No. 1,194,959; Aug. 15; Gaz. vol. 229; p. 834.

Coughtry, Arthur J., Quincy, Mass. Air-port. No. 1,192,992; Aug. 1; Gaz. vol. 229; p. 55.

Coulter, Boone D. (See Martin, Elisha E. A., assignor.)

Coulter, Charles J., Hammond, Ind. Portable rail-drill. No. 1,193,240; Aug. 1; Gaz. vol. 229; p. 147.

Court, Clarence W., and A. V. Goldberg, Chicago, Ill. Illuminated advertising device. No. 1,195,659; Aug. 22; Gaz. vol. 229; p. 1119.

Coutant, Jay G., assignor to The Railway Materials Company, Chicago, Ill. Apparatus for controlling and conveying pulverized fuel. No. 1,195,186; Aug. 22; Gaz. vol. 229; p. 949.

Covan, William R., New Lexington, Ohio. Heating device. No. 1,194,960; Aug. 15; Gaz. vol. 229; p. 835.

Cover, John W., Tacoma, Wash. Grinding-mill. No. 1,194,717; Aug. 15; Gaz. vol. 229; p. 749.

Covington, Marcus E., San Francisco, Cal. Dispensing-package. No. 1,192,868; Aug. 1; Gaz. vol. 229; p. 14.

Cowan, Charles E., *et al.* (See Ruckes, Michael, assignor.)

Cowgill, Orph W., assignor of ninety one-hundredths to O. F. Stifel, St. Louis, Mo. Signal for motor-vehicles. (Reissue.) No. 14,186; Aug. 29; Gaz. vol. 229; p. 1535.

Cowie, Frederick, Atha, Ontario, Canada. Shock-absorber. No. 1,193,241; Aug. 1; Gaz. vol. 229; p. 147.

Cowles, Edward P., Sparta, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,193,766; Aug. 8; Gaz. vol. 229; p. 375.

Cox, Irwin W., Washington, D. C. Tea and coffee pot. No. 1,196,086; Aug. 29; Gaz. vol. 229; p. 1306.

Cox, James V. (See Cox, Thomas H. and J. V.)

Cox, Thomas H. and J. V., Holly Springs, Miss. Poison-indicator. No. 1,194,481; Aug. 15; Gaz. vol. 229; p. 669.

Coyle, John. (See Robinson and Coyle.)

Craig, John, assignor of one-third to A. Curley and one-third to C. Caryl, New York Mills, N. Y. Bobbin-stripper. No. 1,193,877; Aug. 8; Gaz. vol. 229; p. 414.

Cram, Frederick W., *et al.* (See Taylor, Charles S., assignor.)

Cranage, William, assignor to John Shannon and Son, Limited, Walsall, county of Stafford, England. Guard for sewing-machines. No. 1,194,961; Aug. 15; Gaz. vol. 229; p. 835.

Crandall, Weller R., assignor of one-half to P. W. Darrah, Leavenworth, Kans. Ink-fountain. No. 1,194,329; Aug. 8; Gaz. vol. 229; p. 571.

Crane, Herbert W., Chicago, Ill. Door-opener. No. 1,194,482; Aug. 15; Gaz. vol. 229; p. 669.

Cranney, Willard D., Logan, Utah. Rail clamping and fastening device. No. 1,196,339; Aug. 29; Gaz. vol. 229; p. 1392.

Crary Brokerage Company. (See Crary and Barnett, assignors.)

Crary, Ralph W., Waukesha, and S. R. Barnett, Albany, assignors to Crary Brokerage Company, Waukesha, Wis. Food product and producing the same. No. 1,193,477; Aug. 1; Gaz. vol. 229; p. 231.

Crawford, William H., assignor of one-half to O. F. Best, Providence, R. I. Sound-amplifier. No. 1,195,783; Aug. 22; Gaz. vol. 229; p. 1166.

Cream Cone Machine Company, The. (See Taylor, Carl R., assignor.)

Creighton, Edward J. (See Jenkins and Creighton.)

Crepeau, Joseph A., Sorel, Quebec, Canada. Boiler-tube scraper. No. 1,193,361; Aug. 1; Gaz. vol. 229; p. 191.

Cressey, Edward J., Wichita, Kans. Automatic telephone and responding apparatus. No. 1,192,993; Aug. 1; Gaz. vol. 229; p. 56.

Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. System of electrical distribution. No. 1,195,444; Aug. 22; Gaz. vol. 229; p. 1043.

Crippen, William, Utica, N. Y. Mail delivering and receiving device for railways. No. 1,195,562; Aug. 22; Gaz. vol. 229; p. 1084.

Crisell, Allen A., assignor to Monroe and Crisell, Portland, Oreg. Automatically-adjustable brace for silos. No. 1,193,767; Aug. 8; Gaz. vol. 229; p. 376.

Crist, Thomas D., Holland Patent, and G. H. Spitzli, Utica, N. Y.; said Crist assignor to said Spitzli. Calculating-machine. No. 1,194,718; Aug. 15; Gaz. vol. 229; p. 750.

Croce, Vincent, New York, N. Y. Barrel. No. 1,192,869; Aug. 1; Gaz. vol. 229; p. 14.

Crocker, Herbert L., Jetmore, Kans. Grain pitcher and feeder. No. 1,193,494; Aug. 1; Gaz. vol. 229; p. 237.

Cronan, James E., *et al.* (See Sawtelle, Charles A., assignor.)

Crosby, William O., and N. C. Carlisle, Washington, D. C. Gravity-motor. No. 1,193,362; Aug. 1; Gaz. vol. 229; p. 191.

Crossley, Ernest G., Stockbridge, Mich. Automobile-control system. No. 1,193,363; Aug. 1; Gaz. vol. 229; p. 192.

Crouch, Emmett L., *et al.* (See Garland, John G., assignor.)

Crouse-Hinds Company. (See Havens and Van Ranst, assignors.)

Crowe, John, assignor to Aniser Manufacturing Company, St. Joseph, Mo. Mechanical drive-belt. No. 1,194,962; Aug. 15; Gaz. vol. 229; p. 835.

Crowell & Murray. (See Collar and Wetherbee, assignors.)

Crownfield, David, Cambridge, Mass. Lighting-fixture. No. 1,193,519; Aug. 8; Gaz. vol. 229; p. 282.

Crownfield, David, Cambridge, Mass. Lighting-fixture. No. 1,193,520; Aug. 8; Gaz. vol. 229; p. 283.

Crult, Charles A., Shelbyville, Ill. Hog-oiler. No. 1,196,210; Aug. 29; Gaz. vol. 229; p. 1350.

Crum, Peter W. (See Crum, Winfield S. and P. W.)

Crum, Winfield S. and P. W., Wilkinson, Ind. Fluid-bath cabinet. No. 1,196,433; Aug. 29; Gaz. vol. 229; p. 1425.

Crume, John J., Amarillo, Tex. Holding-clip. No. 1,196,087; Aug. 29; Gaz. vol. 229; p. 1306.

Csamyi, Henry, assignor to Maxivolt Primary Battery Co., New York, N. Y. Signal apparatus. No. 1,196,211; Aug. 29; Gaz. vol. 229; p. 1350.

Cubbage, Benjamin H., and C. Peterson, Lincoln, Nebr. Automatic train-stop. No. 1,196,665; Aug. 29; Gaz. vol. 229; p. 1505.

Cuccurullo, Alessandro, Brescia, Italy. Firearm. No. 1,193,768; Aug. 8; Gaz. vol. 229; p. 376.

Culmer, George C. K., Philadelphia, Pa. Liquid-vending machine. No. 1,194,145; Aug. 8; Gaz. vol. 229; p. 506.

Culver, Bertram B., St. Louis, Mo. Fire-lining for stoves. No. 1,193,456; Aug. 1; Gaz. vol. 229; p. 223.
Culver, Edgar L., Austin, Tex. Fuel. No. 1,195,784; Aug. 22; Gaz. vol. 229; p. 1166.
Culver, Frederick S., Taunton, Mass. Thread-guide. No. 1,196,434; Aug. 29; Gaz. vol. 229; p. 1425.
Cumings Brothers. (See Cumings, Edward M., assignor.)
Cumings, Edward M., assignor to Cumings Brothers, Flint, Mich. Automobile-lifting jack. No. 1,193,126; Aug. 1; Gaz. vol. 229; p. 107.
Cummings, William L., and L. W. Blanchard, Leavenworth, Kans. Fraud-detector. No. 1,195,912; Aug. 22; Gaz. vol. 229; p. 1211.
Cummins, Clessie L., Columbus, Ind. Stuffing-box. No. 1,194,146; Aug. 8; Gaz. vol. 229; p. 506.
Cunningham, Edward R., Portland, Oreg. Wire-hanger. No. 1,193,521; Aug. 8; Gaz. vol. 229; p. 283.
Cunningham, Harvy B., St. Paul, Minn. Device for rewinding films. No. 1,195,785; Aug. 22; Gaz. vol. 229; p. 1166.
Curley, Albert, *et al.* (See Craig, John, assignor.)
Currier, Frank B., Elizabeth, N. J. Meadow-trenching machine. No. 1,194,963; Aug. 15; Gaz. vol. 229; p. 836.
Currier, Hiram D., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Receiver-operated switch for telephones. No. 1,196,340; Aug. 29; Gaz. vol. 229; p. 1392.
Curry, Eugene B., Payson, Ill. Tire-armor. No. 1,195,913; Aug. 22; Gaz. vol. 229; p. 1211.
Curry, Malcolm, Holyoke, and A. Cook, Fall River, Mass. Band-tying gage. No. 1,193,668; Aug. 8; Gaz. vol. 229; p. 339.
Curry, William C., assignor of one-half to Alfred Struck Company, Louisville, Ky. Silo-anchor. No. 1,194,964; Aug. 15; Gaz. vol. 229; p. 836.
Curtis, Roy E., assignor to A. L. Lawrence, Cleveland, Ohio. Sheet-metal-folding mechanism. No. 1,194,602; Aug. 15; Gaz. vol. 229; p. 710.
Curtiss Aeroplane & Motor Corporation. (See Kleckler, Henry, assignor.)
Cushing, Robert W., Leetonia, Ohio. Casing-plug. No. 1,193,769; Aug. 8; Gaz. vol. 229; p. 376.
Cushman, Joseph J. (See Card and Cushman.)
Cuthbert, Herman G., Newark, N. J. Film-camera. No. 1,195,187; Aug. 22; Gaz. vol. 229; p. 949.
Cutler-Hammer Manufacturing Company, The. (See Wiegand, Henry J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Barnum, Thomas E., assignor.)
Cutler-Hammer Mfg. Co., The. (See Denhard, Harry W., assignor.)
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Cutler-Hammer Mfg. Co. (See Horton, Albert J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Reisbach, Gustave B., assignor.)
Cycle Supplies Company, The. (See Warren, Frank D., assignor.)
Cypert, Jesse B., Frost, Tex. Attachment for automobiles or any other desired vehicles. No. 1,195,786; Aug. 22; Gaz. vol. 229; p. 1166.
Cyr, Joseph T., Worcester, Mass. Loom. No. 1,196,435; Aug. 29; Gaz. vol. 229; p. 1425.
Czap, Michael, Pleasant City, Ohio. Combined cross-tie and rail-chair. No. 1,195,445; Aug. 22; Gaz. vol. 229; p. 1043.
D & W Fuse Co. (See Downes and Faxon, assignors.)
D. & W. Fuse Company. (See Patton, Ralph C., assignor.)
Daccord, Auguste, Philadelphia, Pa. Shock-absorber. No. 1,195,979; Aug. 29; Gaz. vol. 229; p. 1267.
Daffern, Paul, Robert Lee, Tex. Automatic oil-supply valve. No. 1,195,188; Aug. 22; Gaz. vol. 229; p. 950.
Dailey, Newell E., Hornick, Iowa. Brooder. No. 1,195,914; Aug. 22; Gaz. vol. 229; p. 1211.
Dains, Andrew J., and C. C. Rickard, Toledo, Ohio. Anti-skid device. No. 1,196,666; Aug. 29; Gaz. vol. 229; p. 1505.
Dalén, Gustaf, assignor to Svenska Aktiebolaget Gasaccumulator, Stockholm, Sweden. Gas-distributing system for railway-carriages. No. 1,195,132; Aug. 15; Gaz. vol. 229; p. 894.
Dalén, Gustaf, Skärsätra, Lidingön; assignor to Svenska Aktiebolaget Gasaccumulator, Stockholm, Sweden. Multiple diaphragm. No. 1,195,133; Aug. 15; Gaz. vol. 229, p. 894.
Dallinger, Peter F., Milwaukee, Wis. Hitching-post. No. 1,194,483; Aug. 15; Gaz. vol. 229; p. 670.
Dallmeyer, Thomas D., Pittsburgh, assignor to Valley Forging Company, Verona, Pa. Making ladders. No. 1,196,667; Aug. 29; Gaz. vol. 229; p. 1505.
Damascus Brake Beam Company, The. (See Schroeder, Frederick J., assignor.)
Damm, Fred C., Chicago, Ill. Drive for linotype-machines. No. 1,193,669; Aug. 8; Gaz. vol. 229; p. 339.
Damrow, Edward C., Fond du Lac, Wis. Steam-jet. No. 1,195,915; Aug. 22; Gaz. vol. 229; p. 1211.
Dancel, Christian, Brooklyn, N. Y. Game apparatus. No. 1,194,147; Aug. 8; Gaz. vol. 229; p. 507.
Daniels, Henry J., Brisbane, Queensland, Australia. Machine for harvesting potatoes and like root crops. No. 1,195,563; Aug. 22; Gaz. vol. 229; p. 1085.
Daniels, Landis G., and W. B. Kirkpatrick, High Spire, Pa. Coupling for train-pipes. No. 1,196,212; Aug. 29; Gaz. vol. 229; p. 1351.
Daniels, Samuel, Hardwick, Vt. Hot-air furnace. No. 1,193,127; Aug. 1; Gaz. vol. 229; p. 107.
Danner, Milton S., Tuskegee, Ala. Lard-paddle. No. 1,196,526; Aug. 29; Gaz. vol. 229; p. 1456.
Dansberry, William H. H., La Crosse, Wis. Operating means for agricultural machines. No. 1,196,088; Aug. 29; Gaz. vol. 229; p. 1306.
Daprix, John F., Utica, N. Y. Channeling device for sewing-machines. No. 1,194,719; Aug. 15; Gaz. vol. 229; p. 750.
Darby, W. C. (See Spencer, Thomas, assignor.)
Darnall, John C., Staunton, Va. Fruit-press. No. 1,194,822; Aug. 15; Gaz. vol. 229; p. 786.
Daroowalla, Eruchshaw B., Bombay, India. Padlock. No. 1,194,720; Aug. 15; Gaz. vol. 229; p. 751.
Darrah, Harry L., Chatham, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Service-observing system. No. 1,194,721; Aug. 15; Gaz. vol. 229; p. 751.
Darrah, Percival W. (See Crandall, Weller R., assignor.)
Darrow, Charles W., Glenwood Springs, Colo. Flushing device. No. 1,194,965; Aug. 15; Gaz. vol. 229; p. 836.
Dath, Charles E., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-arm for railway-cars. No. 1,193,364; Aug. 1; Gaz. vol. 229; p. 192.
Dau, William A., Detroit, Mich. Gage. No. 1,196,213; Aug. 29; Gaz. vol. 229; p. 1351.
Dauben, Hypolette J., Columbus, and O. L. Stump, Marion, Ohio. Trolley-guide. No. 1,195,916; Aug. 22; Gaz. vol. 229; p. 1212.
Dauley, Isaac S., Oneonta, N. Y. Memorial burial-vault. No. 1,194,148; Aug. 8; Gaz. vol. 229; p. 507.
Dauley, Isaac S., Oneonta, N. Y. Reinforced-concrete tomb and memorial. No. 1,195,787; Aug. 22; Gaz. vol. 229; p. 1167.
Daum, August E., Orange, N. J. Drain-plug and relief-valve. No. 1,192,870; Aug. 1; Gaz. vol. 229; p. 14.
Davenport, C. T., *et al.* (See Fesenfeld, Herman, assignor.)
Davenport, Elmer E., Chicago, Ill., assignor of one-half to M. R. Davenport, Baraboo, Wis. Rail-holding means. No. 1,195,564; Aug. 22; Gaz. vol. 229; p. 1085.
Davenport, Merwin R. (See Davenport, Elmer E., assignor.)
David, Howard A., and W. J. Andersen, East Moline, Ill. Razor-sharpener. No. 1,192,871; Aug. 1; Gaz. vol. 229; p. 14.
David Weber and Company. (See Weber, David, assignor.)
Davidson, Eva J., Chicago, Ill. Infant's garment. No. 1,195,565; Aug. 22; Gaz. vol. 229; p. 1085.
Davidson, Frank B. (See Brown and Davidson.)
Davidson, William S., Birmingham, Ala. Device for delivering articles to and receiving articles from moving trains. No. 1,192,872; Aug. 1; Gaz. vol. 229; p. 15.
Davis, Charles C., Philadelphia, Pa. Making flanges. No. 1,194,277; Aug. 8; Gaz. vol. 229; p. 550.
Davis, Charles W. (See Coburn and Davis.)
Davis, Fred M., assignor to Pullman Couch Company, Chicago, Ill. Sofa-bed. No. 1,194,330; Aug. 8; Gaz. vol. 229; p. 571.
Davis, Harry A., assignor to Draper Company, Hopedale, Mass. Filling-end controller for looms. No. 1,194,278; Aug. 8; Gaz. vol. 229; p. 551.
Davis, Harry E., Hyattsville, Md. Locking device for motor-vehicles. No. 1,192,873; Aug. 1; Gaz. vol. 229; p. 15.
Davis, Henderson G., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass. Seam-welding apparatus. No. 1,195,446; Aug. 22; Gaz. vol. 229; p. 1043.
Davis, James C., Hinsdale, Ill. Casting apparatus and process. No. 1,193,670; Aug. 8; Gaz. vol. 229; p. 339.
Davis, Jasper N., Denver, Colo. Blow-out patch for pneumatic tires. No. 1,194,279; Aug. 8; Gaz. vol. 229; p. 551.
Davis, John B., Springfield, assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass. Quantity-stop for dispensing-pumps. No. 1,194,331; Aug. 8; Gaz. vol. 229; p. 572.
Davis, John C., Nanty Glo, Pa. Acetylene-lamp. No. 1,194,149; Aug. 8; Gaz. vol. 229; p. 507.
Davis, John E., Cincinnati, Ohio. Motor. No. 1,195,980; Aug. 29; Gaz. vol. 229; p. 1267.
Davis, Linford J., Battle Creek, Mich. Receptacle-support and cover operating and locking means. No. 1,195,566; Aug. 22; Gaz. vol. 229; p. 1086.
Davis, Robert K. (See Ziegler, Jacob, assignor.)
Davis, Roy F., Chicago, Ill. Indicating-label for lantern-slides. No. 1,194,966; Aug. 15; Gaz. vol. 229; p. 837.
Davis, Verner F., Orange, N. J. Temperature-regulator. No. 1,193,671; Aug. 8; Gaz. vol. 229; p. 340.
Davison, Gregory C., New London, Conn. Apparatus for launching automobile torpedoes. No. 1,196,745; Aug. 29; Gaz. vol. 229; p. 1533.
Davol, George K., San Francisco, Cal. Internal-combustion engine. No. 1,194,722; Aug. 15; Gaz. vol. 229; p. 751.
Dawes, John L., Pittsburgh, Pa. Revolving lantern. No. 1,196,341; Aug. 29; Gaz. vol. 229; p. 1392.
Dawes, Willard C., Bozeman, Mont. Invalid's support. No. 1,195,917; Aug. 22; Gaz. vol. 229; p. 1212.

Dawson, Charles O., assignor of one-half to F. H. James, Chetopa, Kans. Steam condenser, reboiler, and skimmer. No. 1,195,918; Aug. 22; Gaz. vol. 229; p. 1212.
Day, William A., Bellingham, Wash. Composition of matter for soldering cast-iron, mild steel, aluminum, and the like. No. 1,195,955; Aug. 22; Gaz. vol. 229; p. 1225.
Daysh, Norman J. (See Forsyth, Robert B., assignor.)
Dayton Engineering Laboratories Co., The. (See Chryst, William A., assignor.)
Dayton Engineering Laboratories Co., The. (See Kettering, Charles F., assignor.)
De Bretteville, Gustav. (See Stein, George R., assignor.)
De Florez, Luis, Short Hills, N. J. Massage apparatus. No. 1,196,344; Aug. 29; Gaz. vol. 229; p. 1393.
De Land, Sarah L. (See Wells, Chipman J., assignor.)
De Laval Separator Company, The. (See Leitch, Meredith, assignor.)
De Lay, Charles J., Omaha, Nebr. Speed-regulator for automobile-fans. No. 1,192,995; Aug. 1; Gaz. vol. 229; p. 57.
De Lore, Casper P., assignor to J. C. Finck Mineral Milling Co., St. Louis, Mo. Hand-truck. No. 1,194,342; Aug. 8; Gaz. vol. 229; p. 575.
De Lukacsevics, Charles, Newark, N. J. Carbureter. No. 1,196,669; Aug. 29; Gaz. vol. 229; p. 1506.
De Lukacsevics, Charles, and C. J. Terrill, Nutley, N. J.; said Terrill assignor to said De Lukacsevics. Carbureter. No. 1,196,668; Aug. 29; Gaz. vol. 229; p. 1505.
De Mattia, Barthold. (See De Mattia, Peter and B.)
De Mattia, Peter and B., Clifton, N. J. Pneumatic-tire-building apparatus. No. 1,194,967; Aug. 15; Gaz. vol. 229; p. 837.
De Mattia, Peter and B., Clifton, N. J. Pneumatic-tire-building core. No. 1,194,968; Aug. 15; Gaz. vol. 229; p. 838.
De Proszynski, Casimir, London, England. Projection apparatus. No. 1,193,998; Aug. 8; Gaz. vol. 229; p. 455.
De Vilbiss Manufacturing Co., The. (See De Vilbiss, Thomas A., assignor.)
De Vilbiss, Thomas A., assignor to The De Vilbiss Manufacturing Co., Toledo, Ohio. Atomizer. No. 1,193,524; Aug. 8; Gaz. vol. 229; p. 284.
De Walt, William H., *et al.* (See Fischer, Abraham, assignor.)
Dean, Claude E. (See Dean, Rose B. and C. E.)
Dean, James H., Chicago, Ill., assignor, by mesne assignments, to Empire Voting Machine Company. Voting-machine. No. 1,194,332; Aug. 8; Gaz. vol. 229; p. 572.
Dean, Rose B. and C. E., Buffalo, N. Y. Garment-marking device. No. 1,193,770; Aug. 8; Gaz. vol. 229; p. 377.
Dearborn Duster Company. (See Leslie and Singleton, assignors.)
Dearborn, Richard J., Milburn, N. J., assignor to Westinghouse Electric and Manufacturing Company. Power-transmitting means. No. 1,196,089; Aug. 29; Gaz. vol. 229; p. 1307.
Debauge, Henry P. C. G. (See Bary, Charles P., assignor.)
Debay, George C. (See Gumpp, Francart, and Debay.)
Decker, John O., Orafino, Nebr. Motor-sleigh. No. 1,193,365; Aug. 1; Gaz. vol. 229; p. 192.
Dedrick, John V., Weimar, Tex. Adjustable seat for automobiles. No. 1,195,340; Aug. 22; Gaz. vol. 229; p. 1006.
Dee, David G., assignor to Denio General Electric Company, Rochester, N. Y. Fire-alarm apparatus. No. 1,194,723; Aug. 15; Gaz. vol. 229; p. 752.
Deere and Company. (See Ryan and Kiel, assignors.)
Dees, Mark A., assignor to American Tire Company, St. Louis, Mo. Art of and mold for making rubber tires. No. 1,192,994; Aug. 1; Gaz. vol. 229; p. 56.
Defiance Pressed Steel Co., The. (See Klenk, Gottlieb, assignor.)
Degen, Lewis, Long Beach, Cal. Signal-transmitting device. No. 1,196,732; Aug. 29; Gaz. vol. 229; p. 1528.
Dehon, Jules, Philadelphia, Pa. Carpet-cleaning machine. No. 1,196,527; Aug. 29; Gaz. vol. 229; p. 1456.
Del Monte y Aldama, Leon, assignor to Oil & Carbon Products Limited, Adelphi, London, England. Separation of volatile products from solid carbonaceous material. No. 1,196,470; Aug. 29; Gaz. vol. 229; p. 1438.
Delaney, James M., Manhattan, Ill. Weed-cutter. No. 1,195,919; Aug. 22; Gaz. vol. 229; p. 1212.
Delany, Edward L., New York, N. Y. Flushing apparatus. No. 1,193,522; Aug. 8; Gaz. vol. 229; p. 283.
Delany, Edward L., New York, N. Y. Valve mechanism. No. 1,194,364; Aug. 15; Gaz. vol. 229; p. 625.
Delany, Patrick B., Nantucket, Mass. Phonograph. No. 1,193,242; Aug. 1; Gaz. vol. 229; p. 148.
Delany, Patrick B., South Orange, N. J. Telephony. No. 1,194,280; Aug. 8; Gaz. vol. 229; p. 552.
Delbauve, Gustave P., and J. W. Fox, Elwood, Ind. Machine for cleaning hollow articles. No. 1,193,673; Aug. 8; Gaz. vol. 229; p. 341.
Demara, Eugene A., Woonsocket, R. I. Automobile-brake construction. No. 1,193,366; Aug. 1; Gaz. vol. 229; p. 193.
Deming, William L., Salem, Ohio. Egg-boiling device. No. 1,193,523; Aug. 8; Gaz. vol. 229; p. 284.
Den Besten, Gerrit. (See Dykshorn and Den Besten.)
Dench, William L., Pelham, assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,196,733; Aug. 29; Gaz. vol. 229; p. 1529.
Denhard, Harry W., San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric heater. No. 1,194,343; Aug. 8; Gaz. vol. 229; p. 576.
Denio General Electric Company. (See Dee, David G., assignor.)
Denman, Walter R., Akron, Ohio. Separable core. No. 1,192,874; Aug. 1; Gaz. vol. 229; p. 15.
Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Corporation. Clamping device. No. 1,192,996; Aug. 1; Gaz. vol. 229; p. 57.
Denver Rock Drill Manufacturing Company, The. (See Mickelson, Niels C., assignor.)
Denver Rock Drill Manufacturing Company, The. (See Smith, William A., assignor.)
Denver Rock Drill Manufacturing Company, The. (See Waugh, Daniel S., assignor.)
Depollier, Charles L., New York, and E. C. Duncuff, Mount Vernon, assignors to Dubois Watch Case Company, Brooklyn, N. Y. Watchcase, &c. No. 1,194,484; Aug. 15; Gaz. vol. 229; p. 670.
Depollier, Charles L., New York, and E. C. Duncuff, Mount Vernon, assignors to Dubois Watch Case Company, Brooklyn, N. Y. Watchcase, &c. No. 1,194,485; Aug. 15; Gaz. vol. 229; p. 670.
Deppeler, John H., Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y. Grinding-machine. No. 1,193,243; Aug. 1; Gaz. vol. 229; p. 148.
Derr, Olin, East Orange, N. J. Explosive-gas engine. No. 1,193,367; Aug. 1; Gaz. vol. 229; p. 193.
Des Moines Refining Company. (See Widner, George H., assignor.)
Des Roches, Victor, Fond du Lac, Wis. Electric distribution with low-tension magnetos. No. 1,195,981; Aug. 29; Gaz. vol. 229; p. 1267.
Deshler, Henry D., Belvidere, N. J. Vending-machine. No. 1,194,724; Aug. 15; Gaz. vol. 229; p. 752.
Desson, Herbert J. (See McWhirk, Lewis, and Desson.)
Determan, Henry C., Rockwell, Iowa. Milking-machine. No. 1,194,603; Aug. 15; Gaz. vol. 229; p. 711.
Detrick, Jacob S., Baltimore, Md. Builder's hardware. No. 1,196,214; Aug. 29; Gaz. vol. 229; p. 1351.
Detroit Dental Manufacturing Company. (See Weinstein, Louis J., assignor.)
Detroit Pressed Steel Company. (See Putnam, Alden L., assignor.)
Detroit Scale Manufacturing Company. (See Riedel and Barnes, assignors.)
Devendorf, Earl C. (See Baker, Frank E., assignor.)
Device Testing Company, The. (See Canton, Allen A., assignor.)
Device Testing Company, The. (See Tiffany, George S., assignor.)
Dew, Fred A., Pomona, Cal. Triplex pump. No. 1,193,244; Aug. 1; Gaz. vol. 229; p. 148.
Dexter Company, The. (See George, William H., assignor.)
Di Filippo, Roberto, Salerno, Italy. Reinforced-concrete building-block. No. 1,193,878; Aug. 8; Gaz. vol. 229; p. 415.
Dickens, Mason B. (See Postel and Dickens.)
Dickerson, Eustice E., Cleburne, Tex. Bearing. No. 1,194,604; Aug. 15; Gaz. vol. 229; p. 711.
Dickerson, Eustice E., Fort Worth, Tex. Fan. No. 1,194,605; Aug. 15; Gaz. vol. 229; p. 711.
Dickinson, Joseph W., Cranford, N. J., assignor to The Schubert Piano Company, New York, N. Y. Sheet-guiding mechanism. No. 1,194,725; Aug. 15; Gaz. vol. 229; p. 753.
Dickson, George E., Chicago, Ill. Garment. No. 1,194,969; Aug. 15; Gaz. vol. 229; p. 838.
Dickson, William H., and L. S. Overholt, Omak, Wash. Silo ventilator and discharge. No. 1,194,150; Aug. 8; Gaz. vol. 229; p. 507.
Dieterle, Karl R., Los Angeles, Cal. Film-winder. No. 1,195,447; Aug. 22; Gaz. vol. 229; p. 1044.
Dietrich, Julius, Lincoln, Nebr. Water-gage-glass shield. No. 1,193,368; Aug. 1; Gaz. vol. 229; p. 193.
Dietze, Walter A., Chicago, Ill., assignor to Nicholas Power Company, New York, N. Y. Magazine for moving-picture machines. (Reissue.) No. 14,174; Aug. 1; Gaz. vol. 229; p. 237.
Diplock, Bramah J., Fulham, England. Roller-chain. No. 1,194,823; Aug. 15; Gaz. vol. 229; p. 787.
Divine, Bradford H., assignor to Divine Brothers Company, Utica, N. Y. Mechanism for constructing a wheel. No. 1,192,875; Aug. 1; Gaz. vol. 229; p. 16.
Divine Brothers Company. (See Divine, Bradford H., assignor.)
Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Printing-telegraph receiver. No. 1,194,365; Aug. 15; Gaz. vol. 229; p. 625.
Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selecting system. No. 1,196,528; Aug. 29; Gaz. vol. 229; p. 1457.
Dixon, Thomas B., New York, N. Y. Method of and apparatus for transforming motion into electrical waves or impulses. No. 1,193,999; Aug. 8; Gaz. vol. 229; p. 456.

Doane, John C., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,196,529; Aug. 29; Gaz. vol. 229; p. 1457.

Doane, Samuel E., Cleveland, Ohio, assignor to General Electric Company. Electric-circuit-controlling device. No. 1,194,281; Aug. 8; Gaz. vol. 229; p. 552.

Dobyns, Daniel T., and J. K. Elderkin, Jr., Newark, N. J., assignors to Clark Process Corporation. Purifying sewage and the like. No. 1,194,000; Aug. 8; Gaz. vol. 229; p. 456.

Dock, Herman, Westerly, R. I., assignor to American Rotary Power Company, Boston, Mass. Rotary engine. (Reissue.) No. 14,187; Aug. 29; Gaz. vol. 229; p. 1536.

Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt for boilers. No. 1,194,824; Aug. 15; Gaz. vol. 229; p. 787.

Dodds, Ethan I., assignor to Flannery Bolt Company, Pittsburgh, Pa. Manufacturing flexible bolts. No. 1,194,825; Aug. 15; Gaz. vol. 229; p. 787.

Dodge, Homer L., Iowa City, Iowa. Rheostat. No. 1,195,660; Aug. 22; Gaz. vol. 229; p. 1120.

Dodge, Howard A., Los Angeles, Cal. Paper-winding device. No. 1,195,920; Aug. 22; Gaz. vol. 229; p. 1213.

Doering, Henry L., Erie, Pa., assignor to General Electric Company. Valve mechanism for internal-combustion engines. No. 1,196,530; Aug. 29; Gaz. vol. 229; p. 1458.

Doherty, Henry L., New York, N. Y. Stamp-mill. No. 1,192,997; Aug. 1; Gaz. vol. 229; p. 57.

Doherty, Henry L., New York, N. Y. Apparatus for burning carbonaceous material. No. 1,192,998; Aug. 1; Gaz. vol. 229; p. 58.

Doherty, Henry L., New York, N. Y. Heating. No. 1,194,151; Aug. 8; Gaz. vol. 229; p. 508.

Doherty, Warren W., New York, N. Y. Wrench. No. 1,196,215; Aug. 29; Gaz. vol. 229; p. 1352.

Dolan, Charles E., Newark, N. J. Lid-lifter. No. 1,193,369; Aug. 1; Gaz. vol. 229; p. 194.

Dolechek, Joseph J., Ellsworth, Kans. Adjustable harness-bracket. No. 1,195,448; Aug. 22; Gaz. vol. 229; p. 1044.

Dolhay, Daniel, Leechburg, Pa. Operating mechanism for fans. No. 1,195,788; Aug. 22; Gaz. vol. 229; p. 1167.

Doll, Charles F., Aberdeen, Wash. Egg-carrier. No. 1,193,128; Aug. 1; Gaz. vol. 229; p. 108.

Doman, Albert E., assignor to Dyneto Electric Co., Elbridge, N. Y. Automatic controlling system for electric generators. No. 1,194,970; Aug. 15; Gaz. vol. 229; p. 838.

Dombrowsky, Alexander, Balboa, Canal Zone. Stretcher. No. 1,195,789; Aug. 22; Gaz. vol. 229; p. 1167.

Domestic Engineering Company. (See Simonds, George E., assignor.)

Donisthorpe, Frank W., Barnes, England. Color photography and cinematography. No. 1,193,879; Aug. 8; Gaz. vol. 229; p. 415.

Donker, John. (See Van Wetzinga and Donker.)

Donovan, John J., Boston, Mass. Water-closet. No. 1,194,826; Aug. 15; Gaz. vol. 229; p. 787.

Donovan, Patrick H., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Signal device. No. 1,195,982; Aug. 29; Gaz. vol. 229; p. 1268.

Dopyera, John, *et al.* (See Studebaker, Charley M., assignor.)

Dorédant, Theodore C., and J. V. Harrington, New Orleans, La. Fastening device. No. 1,196,216; Aug. 29; Gaz. vol. 229; p. 1352.

Dorn, Harry A., Freeport, Ill. Carriage-axle. No. 1,196,436; Aug. 29; Gaz. vol. 229; p. 1426.

Dorough, Trauis G., Royston, Ga. Sterilizer. No. 1,193,129; Aug. 1; Gaz. vol. 229; p. 108.

Dosch, Charles R. (See Dosch, Peter and C. R.)

Dosch, Peter and C. R., Stratford, Conn. Disk-grinding machine. No. 1,193,525; Aug. 8; Gaz. vol. 229; p. 284.

Dougan, Kennedy, Minneapolis, Minn. Vertical air-compressor. No. 1,195,661; Aug. 22; Gaz. vol. 229; p. 1120.

Douglas, Philip F., Minnedosa, Manitoba, Canada. Cushion-insole for boots and shoes. No. 1,194,152; Aug. 8; Gaz. vol. 229; p. 508.

Doulton, Henry L. (See Podmore, William, assignor.)

Dövle, Carl O. A., Notodden, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Electric-arc furnace for the treatment of gases. No. 1,194,606; Aug. 15; Gaz. vol. 229; p. 712.

Dow, Willard E., Braintree, Mass. Magneto-frame. No. 1,195,921; Aug. 22; Gaz. vol. 229; p. 1213.

Dowd, Bernard J., and A. Utz, Hartford, Conn., assignors to Royal Typewriter Company, Inc., New York, N. Y. Carriage-support for type-writing machines. No. 1,193,526; Aug. 8; Gaz. vol. 229; p. 285.

Downes, Louis W., and A. W. Faxon; said Faxon assignor to D & W Fuse Co., Providence, R. I. Oil-fuse. No. 1,195,790; Aug. 22; Gaz. vol. 229; p. 1168.

Downey, John J., Roslindale, Mass. Trap. No. 1,193,527; Aug. 8; Gaz. vol. 229; p. 285.

Downey, Martin E., Boston, Mass. Cover-lifter for oil-can nozzles. No. 1,196,217; Aug. 29; Gaz. vol. 229; p. 1352.

Downie, Robert M., assignor to Keystone Driller Company, Beaver Falls, Pa. Cushioning and oiling means for deep-well pumps. No. 1,194,366; Aug. 15; Gaz. vol. 229; p. 626.

Downs, Anthony W., Dallas, assignor of two-fifths to H. J. Nelson, Dallas county, Tex. Mason's jointer. No. 1,193,478; Aug. 1; Gaz. vol. 229; p. 231.

Downs, Wilbur H., Wilmington, Del. Cap-crimping tool. No. 1,194,486; Aug. 15; Gaz. vol. 229; p. 671.

Doyle, James E., Cleveland, Ohio. Suction-nozzle heater for printing-presses. No. 1,196,440; Aug. 29; Gaz. vol. 229; p. 1427.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Printing-press appliance. No. 1,196,090; Aug. 29; Gaz. vol. 229; p. 1307.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Conditioning paper preparatory to printing thereon. No. 1,196,437; Aug. 29; Gaz. vol. 229; p. 1426.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Suction-nozzle bracket. No. 1,196,439; Aug. 29; Gaz. vol. 229; p. 1427.

Doyle, James E., and F. M. Case; said Case assignor to C. S. Britton, Cleveland, Ohio. Suction-nozzle attachment for printing-presses. No. 1,196,438; Aug. 29; Gaz. vol. 229; p. 1426.

Doyle, William F., assignor of one-half to E. G. Stolte, deceased, Reedsburg, Wis.; F. P. Stolte, executrix. Steering means for tractors. No. 1,195,341; Aug. 22; Gaz. vol. 229; p. 1006.

Drake, Harry J. (See Coons, James H., assignor.)

Drapalik, Alfred J., assignor of one-half to J. B. Hall, Rocky Mount, N. C. Keyless lock. No. 1,196,218; Aug. 29; Gaz. vol. 229; p. 1353.

Draper Company. (See Davis, Harry A., assignor.)

Draper Company. (See Stimpson, Wallace I., assignor.)

Draper, Francis W., assignor to Starr Piano Company, Richmond, Ind. Automatic pedal for player-pianos. No. 1,194,282; Aug. 8; Gaz. vol. 229; p. 552.

Draughon, William H., Springfield, Tenn., assignor to Burroughs Adding Machine Company, Detroit, Mich. Calculating and recording machine. No. 1,195,567; Aug. 22; Gaz. vol. 229; p. 1086.

Drees, John F., New Vienna, Iowa. Disk-sharpener. No. 1,193,130; Aug. 1; Gaz. vol. 229; p. 108.

Dressler, Conrad, Marlow, England. Oven. No. 1,193,245; Aug. 1; Gaz. vol. 229; p. 149.

Driscoll, William J., Boston, Mass. Dispenser. No. 1,194,487; Aug. 15; Gaz. vol. 229; p. 671.

Dronsfield, James, Oldham, England. Detachable jack for rotating shafts. No. 1,193,246; Aug. 1; Gaz. vol. 229; p. 149.

Drouet, E. Charles. (See Storck, Frederick W., assignor.)

Drummond, Walter W., Stafford, Kans. Automatic roller-support for platen printing-presses. No. 1,196,531; Aug. 29; Gaz. vol. 229; p. 1458.

Drusin, Abraham. (See Antonelli, Orazio, assignor.)

Du Belle, Charles S., Williamsport, Pa. Solenoid. No. 1,195,449; Aug. 22; Gaz. vol. 229; p. 1044.

Dubois Watch Case Company. (See Depollier and Duncuff, assignors.)

Duca, Luigi, and E. Naldini, Turin, Italy. Combined electric lighting and starting apparatus for motor-vehicles. No. 1,194,607; Aug. 15; Gaz. vol. 229; p. 712.

Duchateau, Jean I., St. Omer, France. Elastic tire. No. 1,196,670; Aug. 29; Gaz. vol. 229; p. 1506.

Ducklow, Walter G., assignor of one-half to W. J. Lang and W. B. Brady, Chicago, Ill. Surveying apparatus. No. 1,195,342; Aug. 22; Gaz. vol. 229; p. 1007.

Duemler, Samuel O., Springfield, Mo. Fifth-wheel. No. 1,195,662; Aug. 22; Gaz. vol. 229; p. 1121.

Duff, Ralph A., Nebraska City, Nebr. Carbureter. No. 1,193,880; Aug. 8; Gaz. vol. 229; p. 415.

Duffy, Patrick E., Mace, Idaho. Nut-lock. No. 1,193,370; Aug. 1; Gaz. vol. 229; p. 194.

Dugan, John T. (See Legat and Dugan.)

Dull, Daniel D., Youngstown, Ohio. Driving mechanism for washing-machines. No. 1,195,663; Aug. 22; Gaz. vol. 229; p. 1121.

Dunbar, Daniel J., Philadelphia, Pa. Sash. No. 1,192,999; Aug. 1; Gaz. vol. 229; p. 58.

Dunbar, Edward P., Seattle, Wash. Box-shook-counting machine. No. 1,194,971; Aug. 15; Gaz. vol. 229; p. 839.

Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Type setting and distributing machine. No. 1,195,189; Aug. 22; Gaz. vol. 229; p. 950.

Duncan, Leander, Butte, Mont. Concrete railway-tie. No. 1,195,791; Aug. 22; Gaz. vol. 229; p. 1168.

Duncuff, Edward C. (See Depollier and Duncuff.)

Dunham, Bert G., Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone-exchange system. No. 1,194,367; Aug. 15; Gaz. vol. 229; p. 626.

Dunham, Bert G., Hawthorne, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone-exchange system. No. 1,196,532; Aug. 29; Gaz. vol. 229; p. 1458.

Dunigan, James A., Albany, N. Y. Toy-stage construction. No. 1,195,792; Aug. 22; Gaz. vol. 229; p. 1169.

Dunlap, Oliver W., Bloomington, Ill. Duster. No. 1,195,190; Aug. 22; Gaz. vol. 229; p. 950.

Dunlop, Daniel B., Petersburg, Va. Submarine bomb. No. 1,194,726; Aug. 15; Gaz. vol. 229; p. 753.

Dunlop Rubber Company, The. (See Keegan, Frank J., assignor.)

Dunn, Mae J. (See Fink and Dunn.)

Dunn Manufacturing Company, The. (See Dunn, William L., assignor.)

Dunn, Stephen W., Milwaukee, Wis. Auxiliary toilet-seat. No. 1,194,972; Aug. 15; Gaz. vol. 229; p. 839.

Dunn, William F., and J. M. Kerby, Talent, Oreg. Draft-ban. No. 1,196,533; Aug. 29; Gaz. vol. 229; p. 1459.

Dunn, William L., assignor to The Dunn Manufacturing Company, Oxnard, Cal. Hydraulic rotary well-boring tool. No. 1,193,247; Aug. 1; Gaz. vol. 229; p. 150.

Dunn, William S., and W. F. Miller, Miami, Fla. Diving-hood. No. 1,195,793; Aug. 22; Gaz. vol. 229; p. 1169.

Dupuy, Robert E., Odell, Ill. Cotton ginning and spinning machine. No. 1,195,794; Aug. 22; Gaz. vol. 229; p. 1169.

Durbrow, Walter. (See Fisher and Hill, assignors.)

Durlacque Manufacturing Company. (See Picker, Alfred R., assignor.)

Duryea, Charles E., Saginaw, Mich. Carbureter. No. 1,194,153; Aug. 8; Gaz. vol. 229; p. 509.

Dustin, John F., Lawrence, Mass. Warp stop-motion for looms. No. 1,193,881; Aug. 8; Gaz. vol. 229; p. 416.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,194,973; Aug. 15; Gaz. vol. 229; p. 840.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,194,974; Aug. 15; Gaz. vol. 229; p. 840.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,194,975; Aug. 15; Gaz. vol. 229; p. 840.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,194,976; Aug. 15; Gaz. vol. 229; p. 840.

Duxstad, Henry L., Cambridge, Wis. Currycomb. No. 1,195,450; Aug. 22; Gaz. vol. 229; p. 1045.

Dyer, Frank L., Montclair, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph or talking-machine. No. 1,194,488; Aug. 15; Gaz. vol. 229; p. 672.

Dyer, Simpson B., Tulia, Tex. Display-stand. No. 1,195,795; Aug. 22; Gaz. vol. 229; p. 1170.

Dykshorn, Peter, and G. Den Besten, Corsica, S. D. Safety-clevis. No. 1,195,191; Aug. 22; Gaz. vol. 229; p. 951.

Dyneto Electric Co. (See Doman, Albert E., assignor.)

E. B. Badger & Sons Company. (See Campbell, Charles L., assignor.)

E. & B. Holmes Machinery Company. (See Beugler, Edwin F., assignor.)

E. G. Staude Manufacturing Co. (See Staude, Edwin G., assignor.)

E. H. Freeman Electric Company. (See Freeman, Edgar H., assignor.)

E. I. du Pont de Nemours Powder Company. (See Arnold, Charles E., assignor.)

E. J. Manville Machine Company, The. (See Smith, Henry L., assignor.)

Eames, George M., and J. S. Finch, Bridgeport, Conn., assignors to The Singer Manufacturing Company. Sewing-machine. No. 1,196,534; Aug. 29; Gaz. vol. 229; p. 1459.

Earle, Harry C., assignor to Walworth Manufacturing Company, Boston, Mass. Flagstaff. No. 1,194,489; Aug. 15; Gaz. vol. 229; p. 672.

East, John F., Norfolk, Va. Basket-top fastener. No. 1,194,368; Aug. 15; Gaz. vol. 229; p. 627.

Eastham, Melville, Cambridge, Mass., assignor to General Radio Company. Apparatus for producing electrical oscillations. No. 1,194,154; Aug. 8; Gaz. vol. 229; p. 509.

Eastman, Clarence W., Great Falls, Mont. Composition and process for treating plants. No. 1,194,608; Aug. 15; Gaz. vol. 229; p. 712.

Eastman Kodak Company. (See Capstaff, John G., assignor.)

Eastman Kodak Company. (See Folmer, William F., assignor.)

Eastman Kodak Company. (See Robertson and Riddell, assignors.)

Eastman Kodak Company. (See Sulzer, Albert F., assignor.)

Easton, Thomas. (See Walker and Easton.)

Ebeling, Robert W., Oakland, Cal. Spot-light. No. 1,192,876; Aug. 1; Gaz. vol. 229; p. 16.

Eckart, Charles F., Olaa, Hawaii. Killing or checking the growth of weeds. No. 1,196,219; Aug. 29; Gaz. vol. 229; p. 1353.

Eckel, Arthur C. and S. R., Altoona, Pa. Rail-joint. No. 1,196,441; Aug. 29; Gaz. vol. 229; p. 1427.

Eckel, Samuel R. (See Eckel, Arthur C. and S. R.)

Ecker, Louis, Chicago, Ill. Buckle. No. 1,195,664; Aug. 22; Gaz. vol. 229; p. 1121.

Economy Engineering Company. (See Pavey and French, assignors.)

Economy Fuse & Manufacturing Company. (See Yates, Harry A., assignor.)

Economy, Soyer, Boston, Mass. Paper-sheet-tying device. No. 1,193,674; Aug. 8; Gaz. vol. 229; p. 341.

Eddy, Charles H., Attleboro, Mass. Tobacco and match pouch. No. 1,193,371; Aug. 1; Gaz. vol. 229; p. 194.

Edgecomb, Henry R., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Splitting mica. No. 1,194,155; Aug. 8; Gaz. vol. 229; p. 510.

Edgerton, Lloyd B., Upland, Pa. Atomizing-nozzle. No. 1,194,827; Aug. 15; Gaz. vol. 229; p. 788.

Edison, Thomas A. (See Bliss, Donald M., assignor.)

Edwards, Daniel W. (See Purdy and Edwards.)

Edwards, Evan J. (See Kubach and Edwards.)

Edwards, George W., Fort Edward, N. Y. Engine-stop device. No. 1,196,220; Aug. 29; Gaz. vol. 229; p. 1353.

Edwards, Josh L. (See Robinson, Claude L., assignor.)

Edwards, Oliver M., Syracuse, N. Y. Sash-holding device. No. 1,193,000; Aug. 1; Gaz. vol. 229; p. 59.

Edwards, Victor E., assignor to Morgan Construction Company, Worcester, Mass. Method of and apparatus for rolling rounds. No. 1,193,001; Aug. 1; Gaz. vol. 229; p. 59.

Edwards, Walter T., Minot, N. D. Vehicle-heater. No. 1,194,977; Aug. 15; Gaz. vol. 229; p. 841.

Edwin, Emil, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Electric-arc furnace. No. 1,193,882; Aug. 8; Gaz. vol. 229; p. 416.

Edwin Harrington, Son & Co. (See Scott, Robert F., assignor.)

Ehlinger, John, St. Paul, Minn. Scraper. No. 1,192,877; Aug. 1; Gaz. vol. 229; p. 17.

Eichenhofer, Walter F. (See Brown, Jacob S., assignor.)

Eick, Otto, Baltimore, Md. Conveyer. No. 1,196,442; Aug. 29; Gaz. vol. 229; p. 1427.

Eisenhardt, William J., Baltimore, Md. Straw-dispenser. No. 1,195,451; Aug. 22; Gaz. vol. 229; p. 1045.

Elberty, Harry E. (See Miller and Elberty.)

Elder, John C. (See Elder, Robert F., assignor.)

Elder, Robert, La Grange, and T. C. Kennedy, assignors to Fairbanks, Morse & Company, Chicago, Ill. Apparatus for loading cars. No. 1,195,568; Aug. 22; Gaz. vol. 229; p. 1087.

Elder, Robert F., Lakeland, assignor of one-half to J. C. Elder, Louisville, Ky. System of gas distribution. No. 1,193,675; Aug. 8; Gaz. vol. 229; p. 341.

Elderkin, James K., Jr. (See Dobyns and Elderkin.)

Electric Cable Company, The. (See Seward, Thomas J., assignor.)

Electric Compositer Company. (See Petri-Palmedo, David, assignor.)

Electric Heating Company. (See Ludwick, Wayne D., assignor.)

Electric Liquid Operator Company. (See Williams, Albert E., assignor.)

Electric Tachometer Corporation, The. (See Kloff, Petrus V., assignor.)

Eley, Charles V. A., Edgbaston, Birmingham, England. Ship. No. 1,193,528; Aug. 8; Gaz. vol. 229; p. 285.

Eli Bridge Company. (See Corbett, Bennie C., assignor.)

Elia, Giovanni E., Rome, Italy. Firing apparatus for submarine mines. No. 1,195,796; Aug. 22; Gaz. vol. 229; p. 1170.

Ellert, Charles O., New York, N. Y. Mold for casting concrete walls with a tile facing. No. 1,193,484; Aug. 1; Gaz. vol. 229; p. 233.

Elliott, Richard. (See Nelson and Elliott.)

Ellis, Charles A., Denver, Colo. Signaling device for vehicles. No. 1,194,490; Aug. 15; Gaz. vol. 229; p. 673.

Ellis, Claude, Springville, N. Y. Extension-window-screen locker. No. 1,196,443; Aug. 29; Gaz. vol. 229; p. 1428.

Ellis, Claude, Springville, N. Y. Combination burglar-proof locking window-screen and baby-gate. No. 1,196,444; Aug. 29; Gaz. vol. 229; p. 1428.

Ellis, Claude, Springville, N. Y. Window screen and sash locker. No. 1,196,445; Aug. 29; Gaz. vol. 229; p. 1429.

Ellis, Claude, Springville, N. Y. Window screen and sash locker. No. 1,196,446; Aug. 29; Gaz. vol. 229; p. 1429.

Ellis, Claude, Springville, N. Y. Extension-window-screen locker. No. 1,196,447; Aug. 29; Gaz. vol. 229; p. 1430.

Ellis, John A., Portageville, Mo. Device for nailing soles and heels to shoe-uppers. No. 1,196,221; Aug. 29; Gaz. vol. 229; p. 1354.

Ellis, Joseph, Chicago, Ill. Bath-mitten. No. 1,193,529; Aug. 8; Gaz. vol. 229; p. 286.

Ellmauerer, John F., Fairchild, Wis. Dirigible headlight. No. 1,194,156; Aug. 8; Gaz. vol. 229; p. 510.

Elvyn, Jacob W., Chicago, Ill. Advertising device. No. 1,194,727; Aug. 15; Gaz. vol. 229; p. 754.

Elwell, Cyril F. (See Logwood and Elwell.)

Elwood, Frank L., Gary, Ind. Support for dredge suction-pipes. No. 1,194,369; Aug. 15; Gaz. vol. 229; p. 627.

Embalmers' Supply Co., The. (See Walker, Benjamin F., assignor.)

Emerson, Alfred H., assignor to American Optical Company, Southbridge, Mass. Marking device. No. 1,193,676; Aug. 8; Gaz. vol. 229; p. 341.

Emerson-Brantingham Company. (See Clay, Harry C. and A. T., assignors.)

Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)

Emery, Albert G., Brooklyn, N. Y., assignor to Rubber Regenerating Company. Producing articles of a vulcanizable plastic. No. 1,193,883; Aug. 8; Gaz. vol. 229; p. 416.

Emery, Arthur E., Aurora, Ill. Apparatus for manufacturing carbon-paper. No. 1,196,091; Aug. 29; Gaz. vol. 229; p. 1307.

Emery, Victor J., Wollaston, assignor of one-half to M. N. Bray, Boston, Mass. Grinder. No. 1,193,884; Aug. 8; Gaz. vol. 229; p. 417.

Emmet, William L. R., Schenectady, N. Y., assignor to General Electric Company. Boiler. No. 1,194,157; Aug. 8; Gaz. vol. 229; p. 510.

Emmons, Henry T., Haverhill, Mass. Seamless felt form for felt boots, shoes, and slippers. No. 1,196,671; Aug. 29; Gaz. vol. 229; p. 1506.

Empire Voting Machine Company. (See Dean, James H., assignor.)
Empire Voting Machine Company. (See Lausterer, William J., assignor.)
En Earl, William J., assignor to The Vacuum Carburetor Company, Monte Vista, Colo. Vacuum-carbureter. No. 1,195,343; Aug. 22; Gaz. vol. 229; p. 1007.
Engel, Clement, New York, N. Y. Planetary amusement apparatus. No. 1,194,158; Aug. 8; Gaz. vol. 229; p. 511.
Engelman, Louis A., Los Angeles, Cal. Alarm mechanism. No. 1,193,457; Aug. 1; Gaz. vol. 229; p. 223.
English, John C., Camden, N. J., assignor to Victor Talking Machine Company, Talking-machine. No. 1,196,448; Aug. 29; Gaz. vol. 229; p. 1430.
Engstad, John E., Minneapolis, Minn. Inhaler. No. 1,193,002; Aug. 1; Gaz. vol. 229; p. 60.
Enholm, Hilmer N., Winchester, Idaho. Gummed paper. No. 1,196,449; Aug. 29; Gaz. vol. 229; p. 1430.
Enlow, Minnetta H., Bloomington, Ill. Curtain-hanger. No. 1,195,797; Aug. 22; Gaz. vol. 229; p. 1170.
Ennes, Charles E. (See McDonald and Ennes.)
Ennes, Charles E., and C. D. McDonald, assignors to The McDonald Machine Co., Chicago, Ill. Metal-shearing machine. No. 1,194,728; Aug. 15; Gaz. vol. 229; p. 754.
Ennis, Parry E., assignor to United Table Bed Company, Incorporated, Chicago, Ill. Table-top construction for table-beds. No. 1,195,798; Aug. 22; Gaz. vol. 229; p. 1171.
Enslin, Herbert E., Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for finishing the edges of leather. No. 1,194,370; Aug. 15; Gaz. vol. 229; p. 627.
Enterprise Railway Equipment Company. (See Campbell, Argyle, assignor.)
Entriken, Samuel, Springville, Cal. Safety-stirrup. No. 1,194,001; Aug. 8; Gaz. vol. 228; p. 456.
Eppler, Andrew. (See Spencer and Eppler.)
Equitable Meter Company. (See Weisgerber, Edwin C., assignor.)
Equitable Trust Company of New York, The, executor. (See Barr, Frederic.)
Erickson, Algot, Lowell, Ind. Rail-joint. No. 1,194,283; Aug. 8; Gaz. vol. 229; p. 553.
Erickson, Charles F., New York, N. Y. Vehicle-wheel. No. 1,194,978; Aug. 15; Gaz. vol. 229; p. 841.
Erickson, Edward, Lynn, assignor to Victor Shoe Machinery Company, Boston, Mass. Presser-foot-locking device for sewing-machines. No. 1,194,491; Aug. 15; Gaz. vol. 229; p. 673.
Erickson, John, assignor to Automatic Electric Company, Chicago, Ill. Selective signaling system. No. 1,194,371; Aug. 15; Gaz. vol. 229; p. 628.
Erickson, Leonard E., Blue Earth, Minn. Railway-spike. No. 1,195,452; Aug. 22; Gaz. vol. 229; p. 1045.
Ertuck, Frederick, Petone, near Wellington, New Zealand. Means for automatically stopping gramophones. No. 1,196,672; Aug. 29; Gaz. vol. 229; p. 1507.
Esola, Joseph L., San Pedro, Cal. Combination-padlock. No. 1,193,131; Aug. 1; Gaz. vol. 229; p. 108.
Esping, Conrad, Moline, Ill., assignor to Moline Plow Company. Wheel-plow. No. 1,196,222; Aug. 29; Gaz. vol. 229; p. 1354.
Esselen, Gustavus J., Jr. (See Mork and Esselen.)
Etheridge, Herbert, Wimbledon Park, assignor to The Bar-Lock Typewriter Company, Limited, London, England. Ribbon-feed mechanism for type-writers. No. 1,194,979; Aug. 15; Gaz. vol. 229; p. 841.
Etter, Jacob R., Crawfordsville, Ind. Power mechanism. No. 1,195,665; Aug. 22; Gaz. vol. 229; p. 1121.
Eureka Ball Bearing Company. (See Rohn, William M., assignor.)
Eustege, Thomas P., assignor of one-half to J. Jones, Wellington, New Zealand. Clutch for controlling and gripping ropes. No. 1,194,980; Aug. 15; Gaz. vol. 229; p. 841.
Evans, Fred, assignor to P. Florin, New York, N. Y. Coin-purse. No. 1,193,771; Aug. 8; Gaz. vol. 229; p. 377.
Everroad, Lennious P. (See Reeves, Lewellen, and Everroad.)
Ewing, Moses, Chester, Pa. Knotter. No. 1,192,878; Aug. 1; Gaz. vol. 229; p. 17.
F. Wesel Manufacturing Company. (See Wesel, Ferdinand, assignor.)
F. I. A. T. (See Fornaca, Guido, assignor.)
F. N. Burt Company. (See Palmer, Lyndon C., assignor.)
Fablan, Harry, assignor to Peerless Belt Lacing Machine Company, Philadelphia, Pa. Cloth-cutting machine. No. 1,195,569; Aug. 22; Gaz. vol. 229; p. 1087.
Fafnir Bearing Company, The. (See Fox, Rudolph H., assignor.)
Fagergren, William, Salt Lake City, Utah, and W. D. Green, Butte, Mont., assignors, by mesne assignments, to Metals Recovery Company. Ore-concentrator. No. 1,195,453; Aug. 22; Gaz. vol. 229; p. 1046.
Fagley, Oliver M., Philadelphia, Pa. Preserving vessel or boiler for fruit, &c. No. 1,194,002; Aug. 8; Gaz. vol. 228; p. 457.
Fahlstrom, Charles. (See Willners, John, assignor.)
Fahy, Frank P., Washington, D. C. Method of and apparatus for testing magnetic objects. No. 1,196,223; Aug. 29; Gaz. vol. 229; p. 1354.
Faigle, Friedrich, Hard, near Bregenz, Austria-Hungary. Indicating device for ascertaining speed. No. 1,196,450; Aug. 29; Gaz. vol. 229; p. 1430.
Fairbanks, Morse & Company. (See Elder and Kennedy, assignors.)
Fairman, Gibson W., North Plainfield township, Somerset county, N. J. Rail fastening and tie. No. 1,195,922; Aug. 22; Gaz. vol. 229; p. 1214.
Falconer, Donald P. (See Cook, Edward J., assignor.)
Fales, Edward D., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Measured-service telephone system. No. 1,193,458; Aug. 1; Gaz. vol. 229; p. 223.
Falk, Arthur, assignor to Falk Tobacco Co., New York, N. Y. Dispensing package or receptacle. No. 1,194,828; Aug. 15; Gaz. vol. 229; p. 788.
Falk Tobacco Co. (See Falk, Arthur, assignor.)
Falk Tobacco Co. (See West, George R., assignor.)
Farbwerke Vorm. Meister Lucius & Bruning. (See Becke and Suida, assignors.)
Farmer, Clyde C., Chicago, Ill., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Air-strainer. No. 1,195,983; Aug. 29; Gaz. vol. 229; p. 1268.
Farrelly, Philip A., Chicago, Ill., assignor to Green & Bauer, Inc., Hartford, Conn. X-ray tube. No. 1,195,157; Aug. 15; Gaz. vol. 229; p. 902.
Farron, George, Detroit, assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Binder device. No. 1,194,284; Aug. 8; Gaz. vol. 229; p. 553.
Fate, William J. (See Stoops, Fate, and Bennage.)
Faubel, Charles N., Little Rock, Ark. Lock-nut. No. 1,195,454; Aug. 22; Gaz. vol. 229; p. 1046.
Faubel, Henry J., and W. Roach, Alliance, Ohio. Electric railway-signal. No. 1,194,981; Aug. 15; Gaz. vol. 229; p. 842.
Faulkner, William P., assignor to J. R. Sutter, Kansas City, Mo. Money-transmitting envelop. (Reissue.) No. 14,175; Aug. 1; Gaz. vol. 229; p. 238.
Faxon, Alfred W. (See Downes and Faxon.)
Fay, Arthur W. (See Fay, Clarence C. and A. W.)
Fay, Clarence C. and A. W., Superior, Wis. Film-winding device for kinetoscopes. No. 1,194,982; Aug. 15; Gaz. vol. 229; p. 842.
Fay, Thomas J., Brooklyn, N. Y., assignor to The Perfection Spring Company, Cleveland, Ohio. Tempering metal. No. 1,194,829; Aug. 15; Gaz. vol. 229; p. 788.
Fay, Thomas J., Brooklyn, N. Y., assignor to The Goby Engine Company, Internal-combustion engine. No. 1,194,830; Aug. 15; Gaz. vol. 229; p. 789.
Fearon, John F. (See West, Lee, assignor.)
Federal Cement Tile Company. (See Baumgartl, Leroy, assignor.)
Federal Screw Corporation. (See Carpenter, Teunauski Z., assignor.)
Feeny, Edmund J., assignor to The Feeny Manufacturing Company, Muncie, Ind. Ravelling pick-up. No. 1,195,455; Aug. 22; Gaz. vol. 229; p. 1046.
Feeny Manufacturing Company, The. (See Feeny, Edmund J., assignor.)
Feinberg, Aaron. (See Winn and Feinberg.)
Feleki, Alexander, New York, N. Y. Flushing-valve. No. 1,195,984; Aug. 29; Gaz. vol. 229; p. 1269.
Feller, Adolph F., Berkeley, and P. P. Musser, Oakland, Cal. Road-working machine. No. 1,195,344; Aug. 22; Gaz. vol. 229; p. 1008.
Fellows, John M., Kokomo, Ind. Metal fence-post. No. 1,195,192; Aug. 22; Gaz. vol. 229; p. 951.
Felt-Sub Polishing Wheel Company. (See Nehls, Carl B., assignor.)
Feltz, Charles F., assignor of one-third to W. E. Anderson and one-third to S. L. Langdale, St. Louis, Mo. Motor-driven vehicle. No. 1,193,132; Aug. 1; Gaz. vol. 229; p. 109.
Fenn, Robert H., Suffern, N. Y. Automatic pad-making machine. No. 1,194,983; Aug. 15; Gaz. vol. 229; p. 843.
Fenno, Harry E., assignor to G. F. Berkander, Providence, R. I. Temple member for goggles. No. 1,196,092; Aug. 29; Gaz. vol. 229; p. 1308.
Fenton, Charles H. (See O'Shea and Fenton.)
Ferguson, Thomas H., Oakland, Cal. Oil and draft regulating device. No. 1,195,666; Aug. 22; Gaz. vol. 229; p. 1122.
Ferney, Daniel F., assignor to Grand Rapids School Equipment Co., Grand Rapids, Mich. Bench-vise. No. 1,195,345; Aug. 22; Gaz. vol. 229; p. 1008.
Ferney, Daniel F., assignor to Grand Rapids School Equipment Co., Grand Rapids, Mich. Vise. No. 1,195,346; Aug. 22; Gaz. vol. 229; p. 1008.
Ferrell, Dent, Carterville, Ill. Thermo cut-out. No. 1,192,879; Aug. 1; Gaz. vol. 229; p. 17.
Ferris, George L., Quincy, Ill. Washing-machine. No. 1,194,609; Aug. 15; Gaz. vol. 229; p. 713.
Ferris, Henry L., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill. Hook. No. 1,194,729; Aug. 15; Gaz. vol. 229; p. 754.
Ferris, Warren C., Cold Spring, N. Y. Night-latch. No. 1,196,673; Aug. 29; Gaz. vol. 229; p. 1507.
Fesenfeld, Herman, assignor of one-fourth to K. L. Kidd, one-fourth to C. T. Davenport, and one-fourth to A. B. Bowman, San Diego, Cal. Placer-machine. No. 1,193,248; Aug. 1; Gaz. vol. 229; p. 150.
Fettig, Carl A. (See Mennie, William, assignor.)

Feugate, Thomas J. (See Chapman, William G., assignor.)
Feyes, Andrew, assignor to Pittsburgh Electrical Specialties Company, Pittsburgh, Pa. Sad-iron. No. 1,195,193; Aug. 22; Gaz. vol. 229; p. 951.
Fichler, Joseph, Potter, Nebr. Shingling-scaffold. No. 1,194,984; Aug. 15; Gaz. vol. 229; p. 843.
Field, Allan B., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Ventilating means for dynamo-electric machines. No. 1,196,345; Aug. 29; Gaz. vol. 229; p. 1394.
Fieser, Lawrence F., Vogt, Mo. Automatic brake mechanism. No. 1,194,985; Aug. 15; Gaz. vol. 229; p. 843.
Fieux, Sigismund L., New York, N. Y., assignor to Runkel Brothers, Inc. Box. No. 1,196,451; Aug. 29; Gaz. vol. 229; p. 1431.
Filtz, Georges, Juvisy, France. Hauling device. No. 1,196,093; Aug. 29; Gaz. vol. 229; p. 1308.
Finch, John S. (See Eames and Finch.)
Finch, John S., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Power-transmitter. No. 1,196,535; Aug. 29; Gaz. vol. 229; p. 1460.
Findelsen, Charles W., *et al.* (See Rayfield, Charles L., assignor.)
Findelsen & Kropf Mfg. Co. *et al.* (See Rayfield, Charles L., assignor.)
Fink, Charles, Baltimore, Md. Adjustable router. No. 1,195,799; Aug. 22; Gaz. vol. 229; p. 1171.
Fink, Morris, and M. J. Dunn, Chicago, Ill., assignors to The Warren Featherbone Company, Three Oaks, Mich. Collar. No. 1,193,885; Aug. 8; Gaz. vol. 229; p. 417.
Finkbeiner, Daniel T., Freeport, Pa. Illuminating device. No. 1,194,986; Aug. 15; Gaz. vol. 229; p. 844.
Firestone Tire and Rubber Company, The. (See Stevens, William C., assignor.
Firestone Tire & Rubber Company, The. (See Witsaman, Clement L., assignor.)
Firner, Joseph, Prescott, Wis. Window-sash hanger and operator. No. 1,193,677; Aug. 8; Gaz. vol. 229; p. 342.
First Trust and Savings Bank, trustee. (See Fales, Edward D., assignor.)
First Trust and Savings Bank, trustee. (See Martin, Talbot G., assignor.)
Firth, William. (See Smith, Joseph J., assignor.)
Fischer, Abraham, assignor of one-third to W. H. De Walt and one-third to P. P. Barkman, Hillsboro, Kans. Sign-stretcher. No. 1,194,610; Aug. 15; Gaz. vol. 229; p. 713.
Fischer, Albert T., Cleveland, Ohio. Vending-carton. No. 1,194,372; Aug. 15; Gaz. vol. 229; p. 628.
Fischer, Carl. (See Walker and Fischer.)
Fischer, Herman O., assignor to Package Machinery Company, Springfield, Mass. Wrapping method. No. 1,194,492; Aug. 15; Gaz. vol. 229; p. 673.
Fischer, Hermann O., assignor to Package Machinery Company, Springfield, Mass. Carton-wrapping machine. No. 1,196,094; Aug. 29; Gaz. vol. 229; p. 1308.
Fishburne, George R. (See Newberry and Fishburne.)
Fishel, Theodore H., New Rochelle, N. Y. Jewelry. No. 1,194,611; Aug. 15; Gaz. vol. 229; p. 713.
Fisher, Alva J., Evanston, assignor to Hurley Machine Company, Chicago, Ill. Clothes-wringer. No. 1,195,570; Aug. 22; Gaz. vol. 229; p. 1088.
Fisher, Elmer F., Springfield, Mass. Air and gas valve. No. 1,195,607; Aug. 22; Gaz. vol. 229; p. 1123.
Fisher, Fred, and K. W. Houston, Ironton, Mo.; said Fisher assignor to said Houston. Vehicle-wheel. No. 1,196,346; Aug. 29; Gaz. vol. 229; p. 1394.
Fisher, George F., Plainfield, N. J., assignor to The Hartford Rubber Works Co. Tire-building machine. No. 1,195,800; Aug. 22; Gaz. vol. 229; p. 1171.
Fisher, Henry L., Richmond, Va. Signature-gathering machine. No. 1,194,987; Aug. 15; Gaz. vol. 229; p. 844.
Fisher, Raymond, Philadelphia, Pa., assignor to William F. Taubel, Inc., Riverside, N. J. Stripping attachment for knitting-machines. No. 1,194,831; Aug. 15; Gaz. vol. 229; p. 789.
Fisher, Vivian L., Newark, N. J., and F. J. Hill, New York, assignors to W. Durbrow, West New Brighton, N. Y. Chicken-brooder. No. 1,196,095; Aug. 29; Gaz. vol. 229; p. 1309.
Fitzgerald, Edward F., Warren, Pa. Rail-joint. No. 1,195,668; Aug. 22; Gaz. vol. 229; p. 1123.
Fitzgerald, Richard L., Joliet, Ill. Davenport automobile-body. No. 1,193,530; Aug. 8; Gaz. vol. 229; p. 286.
Fitzke, Otto H., Owatonna, Minn. Pipe-vise. No. 1,194,159; Aug. 8; Gaz. vol. 229; p. 511.
Fjerdingstad, Julius C., Los Angeles, Cal. Wrench. No. 1,194,612; Aug. 15; Gaz. vol. 229; p. 714.
Flaherty, John F., assignor to The Timken Roller Bearing Company, Canton, Ohio. Machine for feeding tapered rolls. No. 1,195,571; Aug. 22; Gaz. vol. 229; p. 1088.
Flakus, Henry, Elyria, Nebr. Hay-rake tooth. No. 1,194,988; Aug. 15; Gaz. vol. 229; p. 845.
Flambo, Charles, Moline, Ill., assignor to Moline Plow Company. Cultivator-yoke. No. 1,195,347; Aug. 22; Gaz. vol. 229; p. 1009.
Flannery Bolt Company. (See Dodds, Ethan I., assignor.)
Flavin, Michael J., Greenfield, assignor to W. Barry, Orange, Mass. Grinding, polishing, and buffing machine. No. 1,193,886; Aug. 8; Gaz. vol. 229; p. 417.
Fleet, C. H. (See Nelson, Roy S. and W. S., assignors.)
Flegel, Harrison D., and J. Hubenthal, Racine, Wis. Anti-rail-creeper. No. 1,195,669; Aug. 22; Gaz. vol. 229; p. 1124.
Fleming, Allison H., Fairmont, W. Va. Garment-supporter. No. 1,196,224; Aug. 29; Gaz. vol. 229; p. 1355.
Fletcher, Charles. (See Herbert and Fletcher.)
Fletcher, Thomas N., Hamilton, New Zealand. Combined milking-machine releaser and pulsator. No. 1,194,989; Aug. 15; Gaz. vol. 229; p. 845.
Fletcher, Thomas N., Hamilton, New Zealand. Milking-machine teat-cup. No. 1,195,572; Aug. 22; Gaz. vol. 229; p. 1088.
Flexible Steel Lacing Co. (See Johnson, Otto, assignor.)
Flint, George H. (See Swift, Walter G., assignor.)
Flora, Charles L., assignor of one-half to F. N. Laubenthal, Toledo, Ohio. Automobile steering-gear. No. 1,193,133; Aug. 1; Gaz. vol. 229; p. 109.
Florin, Philip. (See Evans, Fred, assignor.)
Foerch, Charles E. (See Kling and Foerch.)
Fogg, Ira W., Lynn, Mass. Fastening device for doors. No. 1,193,531; Aug. 8; Gaz. vol. 229; p. 286.
Foley, Frank B., Ingersoll, Ontario, Canada. Upper-cut apple-slicing machine. No. 1,193,003; Aug. 1; Gaz. vol. 229; p. 60.
Folmar, Frederick C., Elm Grove, W. Va. Valve-lifter. No. 1,193,249; Aug. 1; Gaz. vol. 229; p. 151.
Folmer, William F., assignor to Eastman Kodak Company, Rochester, N. Y. Camera-carriage. No. 1,196,096; Aug. 29; Gaz. vol. 229; p. 1309.
Foos, Marcus A., Fremont, Ohio, assignor to National Carbon Company. Dry cell. No. 1,196,225; Aug. 29; Gaz. vol. 229; p. 1355.
Ford, Albert J., New York, N. Y., assignor to The Fuchs & Lang Manufacturing Company. Delivery mechanism for coating-machines. No. 1,193,772; Aug. 8; Gaz. vol. 229; p. 377.
Ford, Silas M., St. Paul, Minn. Lath-board. No. 1,194,003; Aug. 8; Gaz. vol. 228; p. 457.
Foreman, Ira, assignor to F. W. Thompson, Los Angeles, Cal. Briquet. No. 1,194,333; Aug. 8; Gaz. vol. 229; p. 572.
Forgrove Machinery Company Limited, The. (See Grover, Frederick, assignor.)
Fornaca, Guido, Turin, Italy, assignor to F. I. A. T. Combustion-engine. No. 1,193,004; Aug. 1; Gaz. vol. 229; p. 60.
Forsyth Brothers Company. (See Forsyth, George H., assignor.)
Forsyth, George H., assignor to Forsyth Brothers Company, Chicago, Ill. Vehicle-wheel. No. 1,195,194; Aug. 22; Gaz. vol. 229; p. 951.
Forsyth, Robert B., Christchurch, New Zealand, assignor to N. J. Daysh, New York, N. Y. Milk-releasing apparatus for use with milking-machines. No. 1,195,573; Aug. 22; Gaz. vol. 229; p. 1089.
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Camrectifier. No. 1,194,160; Aug. 8; Gaz. vol. 229; p. 511.
Fosburgh, Ogden D., St. Joseph, Mo. Bedstead-jack. No. 1,195,456; Aug. 22; Gaz. vol. 229; p. 1047.
Foss, George F., Montreal, Quebec, Canada. Automobile floor-mat. No. 1,193,250; Aug. 1; Gaz. vol. 229; p. 151.
Foster Brothers Manufacturing Company. (See Camp, George E., assignor.)
Foster Brothers Manufacturing Company. (See Foster, William B., assignor.)
Foster and Company, Charles B. (See Higinbotham, Arthur O., assignor.)
Foster, Myrtle V., Grand Rapids, and I. P. Armitage, Battle Creek, Mich. Brooder and hover. No. 1,192,880; Aug. 1; Gaz. vol. 229; p. 17.
Foster, William B., assignor to Foster Brothers Manufacturing Company, Utica, N. Y. Fastener for sliding-side cribs. No. 1,194,493; Aug. 15; Gaz. vol. 229; p. 674.
Foucart, Joseph P., Muskogee, Okla. Extracting gasolene from natural gas. No. 1,195,158; Aug. 15; Gaz. vol. 229; p. 902.
Foulger, Charles A., London, Ontario, Canada. Garment-stay. No. 1,195,195; Aug. 22; Gaz. vol. 229; p. 952.
Foust, George B. M., assignor to C. H. Keith, Cleveland, Ohio. Antiskidding device for tires. No. 1,194,161; Aug. 8; Gaz. vol. 229; p. 512.
Fowle, Frank F., Chicago, Ill. Electromagnet. No. 1,193,678; Aug. 8; Gaz. vol. 229; p. 342.
Fox, Austen H., New York, and A. W. Lenderoth, Stapleton, N. Y. Magnetic detector apparatus for railways. No. 1,193,773; Aug. 8; Gaz. vol. 229; p. 378.
Fox, Francis J., Pittsburgh, Pa. Underreamer. No. 1,193,372; Aug. 1; Gaz. vol. 229; p. 194.
Fox, John E. R., Philadelphia, Pa. Automobile-lock. No. 1,193,679; Aug. 8; Gaz. vol. 229; p. 342.
Fox, John W. (See Delbauve and Fox.)
Fox, Rudolph H., assignor to The Fafnir Bearing Company, New Britain, Conn. Ball-bearing. No. 1,195,952; Aug. 22; Gaz. vol. 229; p. 1224.
Fox, Rudolph H., assignor to The Fafnir Bearing Company, New Britain, Conn. Ball-bearing. No. 1,195,953; Aug. 22; Gaz. vol. 229; p. 1225.
Fox, William R., Grand Rapids, Mich. Type-writing machine. No. 1,193,774; Aug. 8; Gaz. vol. 229; p. 378.

Foxgord, John R., and J. Warner, San Francisco, Cal.; said Foxgord assignor to said Warner. Rotary engine. No. 1,193,251; Aug. 1; Gaz. vol. 229; p. 151.

Frackelton, David W., Cleveland, R. S. Tyler, Cleveland Heights, and W. M. Reichart, assignors to The Chandler & Price Company, Cleveland, Ohio. Inking device for printing-presses. No. 1,194,004; Aug. 8; Gaz. vol. 229; p. 457.

Fraisher, Justis O., Seattle, Wash. Machine for spreading asphalt, &c. No. 1,193,459; Aug. 1; Gaz. vol. 229; p. 224.

Fralick, Henry, Grand Rapids, Mich. Forge appliance. No. 1,194,373; Aug. 15; Gaz. vol. 229; p. 628.

Francart, Fernand M. (See Gumpp, Francart, and Debay.)

Francis, Alvin A., and R. F. Hill, Marcus, Wash. Razorhone. No. 1,194,162; Aug. 8; Gaz. vol. 229; p. 512.

Francis, James S. (See Leatherland, Walter I., assignor.)

Frank, Albert S., *et al.* (See Negraval, Louis A., assignor.)

Frank B. Cook Company. (See Cook, Frank B., assignor.)

Frank, William. (See Gonsior, Frank, and Schneider.)

Frank, William A., Hackensack, N. J., assignor to National Water Main Cleaning Company, New York, N. Y. Pipe-cleaner. No. 1,193,005; Aug. 1; Gaz. vol. 229; p. 60.

Frank, William L., Wapakoneta, Ohio. Paper-clip. No. 1,195,364; Aug. 22; Gaz. vol. 229; p. 1015.

Frankenstein, William B., assignor to Pritchard Stamping Company, Rochester, N. Y. Bayonet-joint. No. 1,195,196; Aug. 22; Gaz. vol. 229; p. 952.

Frantz Manufacturing Company. (See Frantz, Peter, assignor.)

Frantz, Peter, assignor to Frantz Manufacturing Company, Sterling, Ill. Window screen or sash hanger. No. 1,193,532; Aug. 8; Gaz. vol. 229; p. 287.

Frantz, Peter, assignor to Frantz Manufacturing Co., Sterling, Ill. Door-hanger. No. 1,195,197; Aug. 22; Gaz. vol. 229; p. 952.

Franzon, Simon, Garwood, N. J. Stretching and pressing device for trousers. No. 1,194,374; Aug. 15; Gaz. vol. 229; p. 629.

Frawley, James B., assignor, by mesne assignments, to Berkshire Magneto Company, Pittsfield, Mass. Magneto-electric machine. (Reissue.) No. 14,181; Aug. 15; Gaz. vol. 229; p. 907.

Frazer, Joseph C. W., W. W. Holland, and E. Miller, Baltimore, Md. Treating mineral silicates. No. 1,196,734; Aug. 29; Gaz. vol. 229; p. 1530.

Frazier, James W., and F. E. Hansen, Cleveland, Ohio. Combined pressure-gage and inflating device. No. 1,196,226; Aug. 29; Gaz. vol. 229; p. 1355.

Frechette, Alfred A., Grand Forks, British Columbia, Canada. Cattle-guard. No. 1,194,832; Aug. 15; Gaz. vol. 229; p. 790.

Fred Medart Manufacturing Company. (See Medart, Philip S., assignor.)

Fredrikson, Andrew J., Jakobsdal, near Jönköping, Sweden. Means for lighting petroleum-gas burners. No. 1,194,613; Aug. 15; Gaz. vol. 229; p. 714.

Freeble, Thomas M. (See Kaufmann and Freeble.)

Freeburg, Frank M., Philadelphia, Pa. Railway-switch. No. 1,193,887; Aug. 8; Gaz. vol. 229; p. 418.

Freeman, Charles F., trustee. (See Freeman, Louis G., assignor.)

Freeman, David W., Mist, Oreg. Tire-protector. No. 1,193,533; Aug. 8; Gaz. vol. 229; p. 287.

Freeman, Edgar H., assignor to E. H. Freeman Electric Company, Trenton, N. J. Self-locking sign-receptacle. No. 1,193,252; Aug. 1; Gaz. vol. 229; p. 152.

Freeman, Louis G., assignor to L. G. and C. F. Freeman, trustees Cincinnati, Ohio. Abrading-belt. No. 1,194,494; Aug. 15; Gaz. vol. 229; p. 674.

French, George M. (See Pavey and French.)

French, James C., Kenosha, Wis., assignor to F. C. Austin, Chicago, Ill. Trenching-machine. No. 1,194,375; Aug. 15; Gaz. vol. 229; p. 629.

French, Theodore H., New York, N. Y. Central-draft or Argand lamp of the incandescent type. No. 1,193,134; Aug. 1; Gaz. vol. 229; p. 110.

French, Walter A., Kansas City, Mo. Cornet. No. 1,196,097; Aug. 29; Gaz. vol. 229; p. 1309.

Freund, Alfred, St. Louis, Mo. Resilient vehicle-wheel. No. 1,194,163; Aug. 8; Gaz. vol. 229; p. 512.

Fried. Krupp Aktiengesellschaft. (See Hagenbucher, Eugen, assignor.)

Fried. Krupp Aktiengesellschaft. (See Schön, Ludwig, assignor.)

Friedman, Jacob, Chicago, Ill. Soya-bean products and prepafation of. No. 1,194,495; Aug. 15; Gaz. vol. 229; p. 674.

Friedman, Joseph L. (See Friedman, Julius and J. L.)

Friedman, Julius and J. L., New York, N. Y. Fountain-pen flash-light. No. 1,193,534; Aug. 8; Gaz. vol. 229; p. 287.

From, Otto, Rochester, Wash. Safety-hook. No. 1,194,005; Aug. 8; Gaz. vol. 229; p. 458.

Fromager, Albert I., and J. F. Six, Montreal, Quebec, Canada. Switch block and casing. No. 1,193,253; Aug. 1; Gaz. vol. 229; p. 152.

Fronek, Anthony, Cleveland, assignor to The McMyler Interstate Company, Bedford, Ohio. Brake mechanism for locomotive-cranes and the like. No. 1,193,006; Aug. 1; Gaz. vol. 229; p. 61.

Frost, Frank R., assignor to Pittsburgh-Hickson Company, Butler, Pa. Bottom mount for bedposts. No. 1,194,164; Aug. 8; Gaz. vol. 229; p. 513.

Frost, Joseph W., Washington, D. C. Electrical transmitting device and circuits therefor. No. 1,195,574; Aug. 22; Gaz. vol. 229; p. 1089.

Fry, Richard J., North Melbourne, Victoria, Australia. Stump-jump cultivating implement. No. 1,194,006; Aug. 8; Gaz. vol. 229; p. 458.

Fry, Winthrop H., Great Barrington, Mass., assignor to General Electric Company. Energy-supply system. No. 1,194,165; Aug. 8; Gaz. vol. 229; p. 513.

Fryne, John J., Rochester, N. Y. Belt-shifter. No. 1,196,347; Aug. 29; Gaz. vol. 229; p. 1394.

Fuchs & Lang Manufacturing Company, The. (See Ford, Albert J., assignor.)

Fuerth, Gustave W. (See Fuerth, Sydney W., assignor.)

Fuerth, Sydney W., assignor to himself and G. W. Fuerth, Newark, N. J. Composition for coating stencil-sheets. No. 1,196,098; Aug. 29; Gaz. vol. 229; p. 1310.

Fuller, Charles H., Portland, Oreg. Boat-davit. No. 1,194,334; Aug. 8; Gaz. vol. 229; p. 572.

Fuller, Frederick H. (See Tompkins and Fuller.)

Fuller, Frederick L., assignor to The National Cash Register Company, Dayton, Ohio. Differential mechanism for accounting-machines. No. 1,195,198; Aug. 22; Gaz. vol. 229; p. 953.

Fuller, Ira D., Vona, Colo. Coin-counting machine. No. 1,193,373; Aug. 1; Gaz. vol. 229; p. 195.

Fuller, John W., Columbus, Ohio, assignor to United States Cast Iron Pipe & Foundry Company, Burlington, N. J. Molding-machine. No. 1,193,007; Aug. 1; Gaz. vol. 229; p. 61.

Fuller, Leon L., assignor to Morgan Construction Company, Worcester, Mass. Clutch. No. 1,193,008; Aug. 1; Gaz. vol. 229; p. 62.

Fuller, Wallace W., Charleston, S. C. Car construction. No. 1,192,881; Aug. 1; Gaz. vol. 229; p. 18.

Fullerton, Kenneth C., and E. S. Hunt, Otis Orchards, Wash. Rotary stamping device. No. 1,195,199; Aug. 22; Gaz. vol. 229; p. 953.

Fulton, Charles H., Cleveland, Ohio, assignor to D. B. Jones, Chicago, Ill. Recovery of zinc. No. 1,193,680; Aug. 8; Gaz. vol. 229; p. 342.

Fulton, Harmon H. (See Albernethy, Harry D., assignor.)

Funk, Levi L., Chicago, Ill. Loading dental broaches and needles. No. 1,193,681; Aug. 8; Gaz. vol. 229; p. 343.

Funk, Levi L., Chicago, Ill. Machine for wrapping broaches and the like. No. 1,193,682; Aug. 8; Gaz. vol. 229; p. 343.

Funk, Truman B., assignor to Moline Plow Company, Moline, Ill. Wheel-spud. No. 1,196,536; Aug. 29; Gaz. vol. 229; p. 1460.

Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Splitting-machine. No. 1,192,882; Aug. 1; Gaz. vol. 229; p. 18.

Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Blacking-machine. No. 1,195,348; Aug. 22; Gaz. vol. 229; p. 1009.

Furber, Frederick M., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Grinding-machine. No. 1,192,883; Aug. 1; Gaz. vol. 229; p. 19.

Furber, Henry J., Jr., Chicago, Ill. Apparatus for ascertaining the relative locations of distant points. No. 1,194,376; Aug. 15; Gaz. vol. 229; p. 630.

Furnace Patent Company, The. (See Kelley, Louis R., assignor.)

Furnace Patent Company, The. (See Wedge, Utley, assignor.)

Furnas, Robert W., deceased, Indianapolis, Ind.; F. A. and L. F. Hamilton, executors. Street-sweeper hood. No. 1,193,888; Aug. 8; Gaz. vol. 229; p. 418.

Fush, Henry, *et al.* (See Kemps, John T., assignor.)

Futrell, Thomas J., Los Angeles, Cal., assignor to Automatic Steam, Air, Electric Light and Telephone Coupler Company, Phoenix, Ariz. Automatic coupling for railway-cars. No. 1,193,535; Aug. 8; Gaz. vol. 229; p. 288.

Fütterer, Antonia F., Los Angeles, Cal. Educational device. No. 1,196,099; Aug. 29; Gaz. vol. 229; p. 1310.

Gabel, Henry, New York, N. Y. Spring-actuated fan. No. 1,194,007; Aug. 8; Gaz. vol. 229; p. 459.

Gabel, Wilbur H., Kintyre, N. D. Alarm system. No. 1,196,674; Aug. 29; Gaz. vol. 229; p. 1507.

Gadbois, Joseph E., Springfield, Mass. Magazine-gun. No. 1,193,889; Aug. 8; Gaz. vol. 229; p. 418.

Gaines, Henry L., assignor of one-half to H. M. Cooper, Gainesville, Ga. Plow. No. 1,194,166; Aug. 8; Gaz. vol. 229; p. 513.

Galbraith, R. J. (See Medlock, Wendyl, Jr., assignor.)

Galitzki, Leo, Jr., assignor to L. Galitzki, Sr., Chicago, Ill. Hat-press. No. 1,196,100; Aug. 29; Gaz. vol. 229; p. 1310.

Gallagher, Frank J. (See Tobin and Gallagher.)

Gamewell Fire Alarm Telegraph Company, The. (See Cole, Frederick W., assignor.)

Gammeter, Harry C., Bratenahl, assignor to The American Multigraph Company, Cleveland, Ohio. Mechanism for storing, assembling, and distributing type. No. 1,194,008; Aug. 8; Gaz. vol. 229; p. 459.

Gammeter, Harry C., assignor to The American Multigraph Company, Cleveland, Ohio. Column-rule. No. 1,194,833; Aug. 15; Gaz. vol. 229; p. 790.

Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Guard-rim for pneumatic tires. No. 1,194,285; Aug. 8; Gaz. vol. 229; p. 553.

Gano, Walter J., New Rochelle, N. Y. Automobile-top. No. 1,195,801; Aug. 22; Gaz. vol. 229; p. 1172.

Gans, Robert, assignor to J. D. Riedel Aktiengesellschaft, Berlin, Germany. Softening of water. No. 1,195,923; Aug. 22; Gaz. vol. 229; p. 1214.

Gantz, Andrew, Willock, Pa. Stopping device for graphophones. No. 1,195,200; Aug. 22; Gaz. vol. 229; p. 953.

Garber, Charles, Clayton, Ohio. Pitchfork. No. 1,194,167; Aug. 8; Gaz. vol. 229; p. 514.

Gardner, Clyde E. W., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,195,575; Aug. 22; Gaz. vol. 229; p. 1090.

Gardner, David S. (See Gardner, Joseph A. and D. S.)

Gardner, Joseph A. and D. S., Memphis, Tenn. Casting appliance. No. 1,195,802; Aug. 22; Gaz. vol. 229; p. 1172.

Gardner, Joseph A. and D. S., Memphis, Tenn. Centrifugal casting-machine. No. 1,195,803; Aug. 22; Gaz. vol. 229; p. 1172.

Garland, John G., assignor of one-half to D. S. Gurley and one-half to E. L. Crouch, High Point, N. C. Combination step-ladder and frouing-board. No. 1,195,804; Aug. 22; Gaz. vol. 229; p. 1173.

Garner, David W., Orme, Tenn. Lock. No. 1,196,675; Aug. 29; Gaz. vol. 229; p. 1508.

Garrahan, Frederic B., Paterson, N. J. Rubber-reclaiming machine. No. 1,195,576; Aug. 22; Gaz. vol. 229; p. 1090.

Garrett, Carrington W., Washington, D. C. Post-hole digger. No. 1,192,884; Aug. 1; Gaz. vol. 229; p. 19.

Garrett, Charles B., Cincinnati, Ohio, assignor, by mesne assignments, to Globe Automatic Sprinkler Company, Philadelphia, Pa. Automatic sprinkler-head. No. 1,195,201; Aug. 22; Gaz. vol. 229; p. 954.

Garrison, Green B., Thayer, Mo. Automatic train-stop. No. 1,193,775; Aug. 8; Gaz. vol. 229; p. 378.

Garrison, Walter W. (See Rattermann and Garrison.)

Garvey, James D., Chicago, Ill. Fountain-brush. No. 1,194,377; Aug. 15; Gaz. vol. 229; p. 630.

Garvey, William J., Buffalo, N. Y. Direction-indicating apparatus for motor-vehicles. No. 1,192,885; Aug. 1; Gaz. vol. 229; p. 19.

Gasch, Herman E., administrator. (See Tassin, Wirt.)

Gates, Philetus W., Chicago, Ill., assignor to Hanna Engineering Works. Lubricator. No. 1,195,349; Aug. 22; Gaz. vol. 229; p. 1010.

Gaudet, E. P. (See Hogan, Thomas G., assignor.)

Gaunt, Charles H., San Francisco, Cal. Producing unidirectional electric sparks from alternating current. No. 1,196,452; Aug. 29; Gaz. vol. 229; p. 1431.

Gaus, Wilhelm, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Absorbing carbon monoxid. No. 1,196,101; Aug. 29; Gaz. vol. 229; p. 1310.

Gay, George W. (See Stoll and Gay.)

Gaynor, John J., Indianapolis, Ind. Conveyer for bottles and the like. No. 1,194,990; Aug. 15; Gaz. vol. 229; p. 845.

Gee, Frederick B., Oakland, Cal. Pocket-portfolio. No. 1,195,457; Aug. 22; Gaz. vol. 229; p. 1047.

Geiger, Albert J., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Luminous radiator. No. 1,194,168; Aug. 8; Gaz. vol. 229; p. 514.

Geigy S. A., J. R. (See Hagenbach, Hans, assignor.)

General Baking Company. (See MacDonald, Wilson P., assignor.)

General Chemical Company. (See Goldschmidt and Spitzer, assignors.)

General Chemical Company. (See Jahn, Fredrik W., assignor.)

General Electric Company. (See Alexanderson, Ernst F. W., assignor.)

General Electric Company. (See Anderson, Lauritz W., assignor.)

General Electric Company. (See Bailey, Percy S., assignor.)

General Electric Company. (See Ball, Henry P., assignor.)

General Electric Company. (See Burnham, Joseph L., assignor.)

General Electric Company. (See Doane, Samuel E., assignor.)

General Electric Company. (See Doering, Henry L., assignor.)

General Electric Company. (See Emmet, William L. R., assignor.)

General Electric Company. (See Fry, Winthrop H., assignor.)

General Electric Company. (See Hagood, Lee, assignor.)

General Electric Company. (See Jacobs, Ernest H., assignor.)

General Electric Company. (See Kieser, Walter, assignor.)

General Electric Company. (See Kubach and Edwards, assignors.)

General Electric Company. (See Norrman, Karl A., assignor.)

General Electric Company. (See Pape, Wilhelm, assignor.)

General Electric Company. (See Raymond, Charles S., assignor.)

General Electric Company. (See Sheldon, Lucian A., assignor.)

General Electric Company. (See Steinmetz, Charles P., assignor.)

General Electric Company. (See Ver Planck, William E., assignor.)

General Electric Company. (See Vogel, Frederick M., assignor.)

General Electric Company. (See Wagner, Paul, assignor.)

General Electric Company. (See Walling, Raymond B., assignor.)

General Electric Company. (See Welch, Alfred F., assignor.)

General Electric Company. (See White, William C., assignor.)

General Electric Company. (See Wood, James J., assignor.)

General Engineering and Construction Company. (See Ashley, Charles G., assignor.)

General Radio Company. (See Eastham, Melville, assignor.)

General Rim Company. (See Moyer, Fredelia H., assignor.)

Geo. Whiting Company. (See Parcells, Paul, assignor.)

Geoghegan, Edward A., New York, N. Y. Steam-superheater. No. 1,196,102; Aug. 29; Gaz. vol. 229; p. 1310.

George, John H. (See Hawthorne and George.)

George P. Clark Company. (See Atherton, John T., assignor.)

George, William H., Fairfield, Iowa, assignor to The Dexter Company. Gearing. No. 1,196,537; Aug. 29; Gaz. vol. 229; p. 1461.

George, William H., assignor to The Dexter Company, Fairfield, Iowa. Safety attachment for wringers. No. 1,196,538; Aug. 29; Gaz. vol. 229; p. 1461.

Georges, Egbert T., and J. E. Gramlich, assignors to Chase Motor Truck Co., Syracuse, N. Y. Oiling system for internal-combustion engines. No. 1,194,614; Aug. 15; Gaz. vol. 229; p. 714.

Gerdien, Hans. (See Kreusler, Gerdien, and Pirani.)

German, Solomon, Jessups, Md. Corn-husking machine. No. 1,194,615; Aug. 15; Gaz. vol. 229; p. 715.

German, Solomon, Jessups, Md. Husking corn. No. 1,194,616; Aug. 15; Gaz. vol. 229; p. 715.

Gerstner, Anton, and F. Peham, St. Paul, Minn. Emergency-coupling. No. 1,193,135; Aug. 1; Gaz. vol. 229; p. 110.

Gerstner, Anton, and F. Peham, St. Paul, Minn. Emergency-coupling. No. 1,193,536; Aug. 8; Gaz. vol. 229; p. 289.

Gervais, Wainwright B., assignor to Variety Manufacturing Company, Chicago, Ill. Means for checking the speed of doors. No. 1,194,991; Aug. 15; Gaz. vol. 229; p. 846.

Gianini, William, New York, N. Y. Attachment for automobiles. No. 1,196,348; Aug. 29; Gaz. vol. 229; p. 1395.

Gibbs, Frederick H., New York, N. Y. Compartment railway-car. No. 1,193,254; Aug. 1; Gaz. vol. 229; p. 152.

Gibbs, Frederick H., New York, N. Y. Railway-car. No. 1,193,255; Aug. 1; Gaz. vol. 229; p. 153.

Gibbs, Frederick H., New York, N. Y. Compartment railway-car. No. 1,193,256; Aug. 1; Gaz. vol. 229; p. 153.

Gibbs, Henry, assignor to W. D. Allen Manufacturing Company, Chicago, Ill. Valve mechanism. No. 1,193,009; Aug. 1; Gaz. vol. 229; p. 62.

Gibbs, Henry, assignor to W. D. Allen Manufacturing Company, Chicago, Ill. Lawn-sprinkler. No. 1,193,010; Aug. 1; Gaz. vol. 229; p. 63.

Gibbs, Henry, assignor to W. D. Allen Manufacturing Company, Chicago, Ill. Hose-nozzle. No. 1,193,011; Aug. 1; Gaz. vol. 229; p. 63.

Giberson, Mason B., assignor to T. H. Simpson, Detroit, Mich. Vehicle-wheel. No. 1,192,886; Aug. 1; Gaz. vol. 229; p. 20.

Gibson, George H., Montclair, N. J., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Liquid-flow-measuring apparatus. No. 1,196,735; Aug. 29; Gaz. vol. 229; p. 1530.

Gibson, Gladys U. M. (See Gibson, Henry A., assignor.)

Gibson, Henry A., assignor to G. U. M. Gibson, Winnipeg, Manitoba, Canada. Garden-tool. No. 1,194,992; Aug. 15; Gaz. vol. 229; p. 846.

Gierding, Charles E., New Haven, Conn. Trolley catcher and retriever. No. 1,193,890; Aug. 8; Gaz. vol. 229; p. 418.

Giese, Richard S., Pittsburgh, Pa. Electric-light fixture. No. 1,195,805; Aug. 22; Gaz. vol. 229; p. 1173.

Giesenhaus, Fred, Muscatine, Iowa. Currycomb. No. 1,195,458; Aug. 22; Gaz. vol. 229; p. 1047.

Gilbert & Barker Manufacturing Company. (See Davis, Henderson G., assignor.)

Gilbert & Barber Manufacturing Company. (See Davis, John B., assignor.)

Gilbert, Glen, Middletown, Mo. End-gate fastener for wagon-bodies. No. 1,195,806; Aug. 22; Gaz. vol. 229; p. 1173.

Gilbert, Jesse M., Paradise, Kans. Gate-fastener. No. 1,195,202; Aug. 22; Gaz. vol. 229; p. 954.

Gilbert, Levi L., Boulder, Colo. Yieldable shaft-coupling. No. 1,196,349; Aug. 29; Gaz. vol. 229; p. 1395.

Gile Boat & Engine Co. (See Stearns, Justus S., assignor.)

Gile, William L., assignor to J. S. Stearns, Ludington, Mich. Plow-tractor. No. 1,193,776; Aug. 8; Gaz. vol. 229; p. 379.

Giles, Harvey, Brooklyn, assignor to A. Ward, New York, N. Y. Coin-controlled vending-machine. No. 1,196,103; Aug. 29; Gaz. vol. 229; p. 1311.

Gillett, Willis E., Whiting, Ind. Car-door. No. 1,195,203; Aug. 22; Gaz. vol. 229; p. 954.

Gilliam, Viola B., Thurmond, W. Va. Baby-walker. No. 1,193,374; Aug. 1; Gaz. vol. 229; p. 196.

Gilliatt, Thomas O. (See Rumball, George W., Jr., assignor.)

Gillieaux, Marcel, Liege, Belgium. Shaft or well lining. No. 1,196,350; Aug. 29; Gaz. vol. 229; p. 1395.

Gilman, Frank. (See Xenaky, Reginald S., assignor.)

Gilman, George H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Pump-drill. No. 1,195,350; Aug. 22; Gaz. vol. 229; p. 1010.

Gilmer, Ernest E., Portland, Oreg. Casting-machine. No. 1,193,375; Aug. 1; Gaz. vol. 229; p. 196.

Gilson, John E., assignor to Gilson Manufacturing Company, Port Washington, Wis. Contact for internal-combustion-engine igniters. No. 1,192,887; Aug. 1; Gaz. vol. 229; p. 20.

Gilson Manufacturing Company. (See Gilson, John E., assignor.)

Giolitti, Federico, Turin, assignor to Società Anonima Italiana Gio Ansaldo & C., Genoa, Italy. Cementation process for armor-plates employing mixed cementation agents. No. 1,195,459; Aug. 22; Gaz. vol. 229; p. 1047.

Gipe, Emanuel C., Chicago, Ill., assignor, by mesne assignments, to The Rowe Ring-Point Company, Hartford, Conn. File-conveyer. No. 1,196,351; Aug. 29; Gaz. vol. 229; p. 1396.

Gipe, Emanuel C., Chicago, Ill., assignor, by mesne assignments, to The Rowe Ring-Point Company, Hartford, Conn. Store-service apparatus. No. 1,196,352; Aug. 29; Gaz. vol. 229; p. 1396.

Girardeau, Emile, Paris, France. Dynamo in combination with automatic switch. No. 1,193,537; Aug. 8; Gaz. vol. 229; p. 289.

Giriot, Franz, Brussels, Belgium. Building block or member. No. 1,195,670; Aug. 22; Gaz. vol. 229; p. 1124.

Giroux, Benjamin M., Chicago, Ill. Stage-setting. No. 1,196,104; Aug. 29; Gaz. vol. 229; p. 1311.

Gisholt Machine Company. (See Gorman, Harry B. L., assignor.)

Glanz, Henry W., Jr., Napoleon, Ohio. Stock-fountain. No. 1,193,683; Aug. 8; Gaz. vol. 229; p. 343.

Glass, Perley R., Brookline, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Fastener-setting machine. No. 1,195,807; Aug. 22; Gaz. vol. 229; p. 1174.

Glaudel, George, Los Angeles, Cal. Silvering-table. No. 1,195,351; Aug. 22; Gaz. vol. 229; p. 1011.

Gleason, Frederick J., Walpole, assignor to Standard Woven Fabric Company, Framingham, Mass. Trimming rubber articles. No. 1,195,204; Aug. 22; Gaz. vol. 229; p. 955.

Gleason Works. (See Stewart, Arthur L., assignor.)

Glenn, Thomas F., Ardmore, Pa. Artificial tooth. No. 1,195,577; Aug. 22; Gaz. vol. 229; p. 1090.

Glenn, Thomas F., Ardmore, Pa. Artificial tooth. No. 1,196,227; Aug. 29; Gaz. vol. 229; p. 1356.

Globe Automatic Sprinkler Company. (See Garrett, Charles B., assignor.)

Globe Automatic Sprinkler Company. (See Rowley, Arthur C., assignor.)

Globe Ball Bearing Co. (See Sultemeyer, Charles F., assignor.)

Glover, Samuel, St. Helens, and J. West, Southport, England. Gas-producer. No. 1,194,730; Aug. 15; Gaz. vol. 229; p. 754.

Gnoeth, Emil, assignor to The International Harness Machinery Company, Cincinnati, Ohio. Thong-sewing machine. No. 1,193,460; Aug. 1; Gaz. vol. 229; p. 224.

Goben, Edward F., Dewar, assignor of one-third to Meinholtz & McKay, Okmulgee county, Okla. Spike-puller. No. 1,193,376; Aug. 1; Gaz. vol. 229; p. 196.

Goby Engine Company, The. (See Fay, Thomas J., assignor.)

Gochenour, John J., Maurertown, Va. Gate-opening attachment. No. 1,194,993; Aug. 15; Gaz. vol. 229; p. 846.

Goddard, Robert H., Worcester, Mass. Rocket apparatus. No. 1,194,496; Aug. 15; Gaz. vol. 229; p. 674.

Goddard, Wilfred B., Detroit, Mich. Fly-catcher. No. 1,196,353; Aug. 29; Gaz. vol. 229; p. 1397.

Godley, George F., Philadelphia, Pa. Lubricator for journals. No. 1,193,136; Aug. 1; Gaz. vol. 229; p. 111.

Godshall, Austin M. (See Nichols, Gayle H., assignor.)

Goelz, Frank A., Keyport, N. J. Convertible chair. No. 1,193,257; Aug. 1; Gaz. vol. 229; p. 153.

Goepper, Harold J. (See Taylor, George A., assignor.)

Goettel, John O., Seattle, Wash. Gate. No. 1,195,352; Aug. 22; Gaz. vol. 229; p. 1011.

Gold Car Heating & Lighting Company. (See Kuntz, Frank A., assignor.)

Goldberg, Arthur V. (See Court and Goldberg.)

Goldberg, Edward I., New York, N. Y. Air-purifier. No. 1,196,539; Aug. 29; Gaz. vol. 229; p. 1461.

Goldman, Mayer L., New York, N. Y. Closure for bottles and the like. No. 1,196,228; Aug. 29; Gaz. vol. 229; p. 1356.

Goldschmidt Detinning Company. (See Back, Alfred de, assignor.)

Goldschmidt, Karl, and F. Spitzer, Essen-on-the-Ruhr, Germany, assignors, by mesne assignments, to General Chemical Company, New York, N. Y. Manufacturing anhydrids of fatty acids. No. 1,195,205; Aug. 22; Gaz. vol. 229; p. 955.

Goldschmidt Thermit Company. (See Begtrup, Julius, assignor.)

Goldschmidt Thermit Company. (See Deppeler, John H., assignor.)

Gousior, Joseph, W. Frank, and C. Schneider, Medina, N. D. Weapon. No. 1,192,888; Aug. 1; Gaz. vol. 229; p. 20.

Good Inventions Co. (See Good, John, assignor.)

Good, John, New York, assignor to Good Inventions Co., Brooklyn, N. Y. Spinning-machine. No. 1,194,834; Aug. 15; Gaz. vol. 229; p. 790.

Goodell-Pratt Company. (See Hapgood, Oscar D., assignor.)

Goodey, Ernest W., Philadelphia, Pa. Joint for rolled metal bars. (Reissue.) No. 14,184; Aug. 22; Gaz. vol. 229; p. 1225.

Goodman Manufacturing Company. (See Pratt, Charles A., assignor.)

Goodrich, A. W., *et al.* (See Thomas, William M., assignor.)

Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Call-registering system for automatic telephone systems. No. 1,193,137; Aug. 1; Gaz. vol. 229; p. 111.

Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Recording device. No. 1,194,378; Aug. 8; Gaz. vol. 229; p. 630.

Goodson, George A., New York, N. Y. Motor-driven clock. No. 1,193,012; Aug. 1; Gaz. vol. 229; p. 63.

Goodspeed, Leland F., Milwaukee, Wis., assignor to H. H. Westinghouse, New York, N. Y. Speed-change gearing. No. 1,195,206; Aug. 22; Gaz. vol. 229; p. 955.

Goodwin, Thomas J., Waco, Tex. Radiator for automobiles. No. 1,193,538; Aug. 8; Gaz. vol. 229; p. 289.

Goodyear, George C., McKees Rocks, assignor of one-half to W. L. Russell, Pittsburgh, Pa. Woodworking-machine. No. 1,194,009; Aug. 8; Gaz. vol. 229; p. 460.

Goodyear, George C., McKees Rocks, assignor of one-half to W. L. Russell, Pittsburgh, Pa. Belt-tightener. No. 1,194,010; Aug. 8; Gaz. vol. 229; p. 460.

Goossen, John F., Palmyra, N. Y. Agricultural machine. No. 1,195,578; Aug. 22; Gaz. vol. 229; p. 1091.

Gordon, William A., Shelton, Conn. Measuring implement. No. 1,194,835; Aug. 15; Gaz. vol. 229; p. 791.

Gorham, Ira F., Ensley, Ala. Permutation-lock. No. 1,194,286; Aug. 8; Gaz. vol. 229; p. 554.

Gorman, Harry B. L., assignor to Gisholt Machine Company, Madison, Wis. Speed control for turret-lathes and the like. No. 1,193,258; Aug. 1; Gaz. vol. 229; p. 154.

Goss, Edward O., assignor to Scovill Manufacturing Company, Waterbury, Conn. Metal-scalping machine and the like. No. 1,194,617; Aug. 15; Gaz. vol. 229; p. 715.

Gottlieb, Simon, New York, N. Y. Disk-cutter. No. 1,196,354; Aug. 29; Gaz. vol. 229; p. 1397.

Gottschalk, Henry L., Chicago, Ill. Combined stationery-box and writing-tablet. No. 1,194,618; Aug. 15; Gaz. vol. 229; p. 715.

Gould Storage Battery Company. (See Chamberlain, Rufus N., assignor.)

Gould, William S., New York, N. Y. Separator for storage-battery plates. No. 1,195,924; Aug. 22; Gaz. vol. 229; p. 1214.

Gouldbourn, Joseph, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on heels. No. 1,195,134; Aug. 15; Gaz. vol. 229; p. 895.

Gouldbourn, Joseph, and A. Bates, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Starting and stopping mechanism for presses. No. 1,194,379; Aug. 15; Gaz. vol. 229; p. 631.

Gowell, Edward F., *et al.* (See Jackson, Uriah S., assignor.)

Graf & Comp., Dr. (See Muth, Georg, assignor.)

Graham, Andrew W., Buffalo, N. Y. Pencil-point protector. No. 1,193,377; Aug. 1; Gaz. vol. 229; p. 197.

Graham, Walter E., Philadelphia, Pa. Lawn-mower. No. 1,196,540; Aug. 29; Gaz. vol. 229; p. 1462.

Graham, William S., Uklah, Cal. Wire-stretcher. No. 1,193,777; Aug. 8; Gaz. vol. 229; p. 379.

Gramlich, Jacob E. (See Georges and Gramlich.)

Gramlich, Jacob E., assignor to Chase Motor Truck Co., Syracuse, N. Y. Leaf-spring construction. No. 1,195,460; Aug. 22; Gaz. vol. 229; p. 1048.

Gramm, Benjamin A., Lima, Ohio. Auxiliary driving mechanism. No. 1,194,994; Aug. 15; Gaz. vol. 229; p. 847.

Gramm, Benjamin A., Lima, Ohio. Wagon-body-elevating mechanism. No. 1,195,671; Aug. 22; Gaz. vol. 229; p. 1125.

Grand Rapids School Equipment Co. (See Ferney, Daniel F., assignor.)

Grand Rapids Underwear Company. (See Lippitt, Elihu, assignor.)

Granges, Louis, Agen, France. Barge. No. 1,196,229; Aug. 29; Gaz. vol. 229; p. 1356.

Grant, Bert F. (See Grant, Charles E. and B. F.)

Grant, Charles E. and B. F., Marion, Ind. Self-fastening and seal-lock lid. No. 1,194,287; Aug. 8; Gaz. vol. 229; p. 554.

Grant, Frank H., St. Clair Heights, Mich. Protective element. No. 1,193,013; Aug. 1; Gaz. vol. 229; p. 64.

Grant, Horace E. (See Cecil and Grant.)

Grant, Jacob W., Hanlin Station, Pa. Fire-escape. No. 1,195,985; Aug. 29; Gaz. vol. 229; p. 1269.

Grant, John B., Atlanta, Ga. Water-heater. No. 1,194,619; Aug. 15; Gaz. vol. 229; p. 716.

Grant, Rudolph R., Norfolk, Va. Aeroplane. No. 1,195,207; Aug. 22; Gaz. vol. 229; p. 956.

Graphite Lubricator Company. (See McKay, Guy, assignor.)

Graves, Albert H. (See MacMillan, Arthur W., assignor.)

Graves, Clark, assignor to Sandwich Manufacturing Co., Sandwich, Ill. Combined pulley and corn-tipper. No. 1,193,378; Aug. 1; Gaz. vol. 229; p. 197.

Graves, George W., assignor to The Graves Supply Co., Cincinnati, Ohio. Gas-burner. No. 1,196,230; Aug. 29; Gaz. vol. 229; p. 1356.

Graves Supply Co., The. (See Graves, George W., assignor.)

Gray & Davis. (See Tichenor, Carl, assignor.)

Gray, De Witt H., Fresno, Cal. Signaling device for automobiles. No. 1,193,539; Aug. 8; Gaz. vol. 229; p. 290.

Gray, Edwin T., and A. T. Hoevet, New York, N. Y. Automobile-signal. No. 1,193,379; Aug. 1; Gaz. vol. 229; p. 197.

Gray, Edwin T., and A. T. Hoevet, New York, N. Y. Automobile-signal. No. 1,196,736; Aug. 29; Gaz. vol. 229; p. 1531.

Gray, Ezra F., *et al.* (See Lee, Henry J., assignor.)

Gray, Gardner B., assignor, by mesne assignments, to Automatic Train Control & Signal Company, Pittsburgh, Pa. Detector for broken-down insulation. No. 1,195,579; Aug. 22; Gaz. vol. 229; p. 1091.

Gray, George W., Houston, Tex. Converting higher-boiling petroleum hydrocarbons into lower-boiling petroleum hydrocarbons. No. 1,193,540; Aug. 8; Gaz. vol. 229; p. 291.

Gray, George W., Houston, Tex. Converting higher-boiling petroleum hydrocarbons into lower-boiling petroleum hydrocarbons. No. 1,193,541; Aug. 8; Gaz. vol. 229; p. 291.

Gray, James A., assignor to American Can Company, San Francisco, Cal. Disk-blank-feed mechanism. No. 1,196,676; Aug. 29; Gaz. vol. 229; p. 1508.

Gray, John L., Webster Groves, Mo. Apparatus for use in connection with the distillation of petroleum and products therefrom. No. 1,192,889; Aug. 1; Gaz. vol. 229; p. 21.

Gray, Niel, Jr. (See Wadhams, Darius T., assignor.)

Gray, Stanley. (See Cannon and Gray.)

Greaves, William A., Cincinnati, Ohio. Machine-tool. No. 1,194,620; Aug. 15; Gaz. vol. 229; p. 716.

Grebe, Albert, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Boresight. No. 1,195,353; Aug. 22; Gaz. vol. 229; p. 1011.

Grebe, Alfred H., assignor to E. B. Miller, Richmond Hill, N. Y. Receiving apparatus for radio transmission systems. No. 1,193,778; Aug. 8; Gaz. vol. 229; p. 379.

Green & Bauer Inc. (See Farrelly, Philip A., assignor.)

Green, Ella M., Pampa, Tex. Rake. No. 1,194,995; Aug. 15; Gaz. vol. 229; p. 847.

Green, George L., *et al.* (See Ash, Jesse E., assignor.)

Green, Michael B., Memphis, Tenn. Mat for compression-boxes. No. 1,194,996; Aug. 15; Gaz. vol. 229; p. 848.

Green, Michael B., Memphis, Tenn. Oil-press. No. 1,194,997; Aug. 15; Gaz. vol. 229; p. 848.

Green, William D. (See Fagergren and Green.)

Greene, Howard A., Pittsburgh, Pa. Locomotive-crane. No. 1,195,461; Aug. 22; Gaz. vol. 229; p. 1048.

Greene, Noah L., Boston, Mass., assignor to American Rubber Company. Coat-hanger. No. 1,193,891; Aug. 8; Gaz. vol. 229; p. 419.

Greenlee Bros. & Co. (See Purdy and Edwards, assignors.)

Greenup, Francis M., assignor, by mesne assignments, of one-half to H. A. Jackson, St. Louis, Mo. Combined computing and indicating scale. No. 1,195,135; Aug. 15; Gaz. vol. 229; p. 895.

Greenwood, George G., Indianapolis, Ind. Stud-mounting for steam-boilers and the like. No. 1,194,169; Aug. 8; Gaz. vol. 229; p. 514.

Greey, George V., Amityville, N. Y., and R. Rouse, Jr., Newark, N. J., assignors to Boynton Furnace Company, New York, N. Y. Damper. No. 1,194,011; Aug. 8; Gaz. vol. 229; p. 460.

Grega, Michael, assignor of one-fifth to A. Vujaklija, Conway, Pa. Emergency rail-joint. No. 1,194,731; Aug. 15; Gaz. vol. 229; p. 755.

Gregg, Albert M., *et al.* (See Rundle, Edward H., assignor.)

Gregory, Eugene, Michigan City, Ind. Building block or section. No. 1,193,542; Aug. 8; Gaz. vol. 229; p. 291.

Gregory, George R. (See Gregory, Robert and G. R.)

Gregory, Mary A., administratrix. (See Gregory, Robert and G. R.)

Gregory, Robert, deceased, (M. A. Gregory, administratrix,) and G. R. Gregory, Westminster, England. Locomotive-boiler furnace. No. 1,193,543; Aug. 8; Gaz. vol. 229; p. 292.

Gregory, Walter W. (See Maire and Gregory.)

Gregory, Walter W., and P. D. Maire, Lakewood; said Maire assignor to W. R. White, Cleveland, Ohio. Fishing bob or float. No. 1,193,684; Aug. 8; Gaz. vol. 229; p. 344.

Greilich, William, Brooklyn, N. Y. Sole for shoes. No. 1,194,732; Aug. 15; Gaz. vol. 229; p. 755.

Grgich, Mato, Chicago, Ill. Lock. No. 1,195,808; Aug. 22; Gaz. vol. 229; p. 1174.

Gridley, Charles C., Columbus, Ohio. Sad-iron. No. 1,196,677; Aug. 29; Gaz. vol. 229; p. 1509.

Grier, Frank L. (See Poetschke and Grier.)

Griffin, Thomas J., Los Angeles, Cal., assignor, by mesne assignments, to Sharp-Hughes Tool Company, Houston, Tex. Rotary drill. No. 1,195,208; Aug. 22; Gaz. vol. 229; p. 956.

Griffin, Thomas J., Los Angeles, Cal., assignor, by mesne assignments, to Sharp-Hughes Tool Company, Houston, Tex. Rotary drill. No. 1,195,209; Aug. 22; Gaz. vol. 229; p. 956.

Grimmer, Austin S., Flushing, N. Y., assignor to The Autopress Company. Sheet-feeding machine. No. 1,194,012; Aug. 8; Gaz. vol. 229; p. 461.

Grinden, William J., Brooklyn, N. Y. Metal barrel. No. 1,195,462; Aug. 22; Gaz. vol. 229; p. 1048.

Grindstaff, Isaac S., and L. Johnson, Haskell, Tex. Maize header and cutter. No. 1,196,355; Aug. 29; Gaz. vol. 229; p. 1397.

Grisdale, George W., Jr., Philadelphia, Pa. Mechanical movement. No. 1,194,288; Aug. 8; Gaz. vol. 229; p. 555.

Grisell, Lowell H., Balbec, Ind. Shock-absorber. No. 1,194,998; Aug. 15; Gaz. vol. 229; p. 848.

Griswold, Lewis A., Dayton, Ohio. Garment-supporter. No. 1,196,678; Aug. 29; Gaz. vol. 229; p. 1509.

Groebli, Joseph A., New York, N. Y. Side-tensioning device for embroidering-machines. No. 1,195,809; Aug. 22; Gaz. vol. 229; p. 1175.

Groff, Fayette. (See Groff, Floyd B. and F.)

Groff, Floyd B. and F., St. Johnsville, N. Y. Horseshoe. No. 1,195,210; Aug. 22; Gaz. vol. 229; p. 957.

Groom, Claud A., Excelsior Springs, Mo. Coin-controlled vending-machine. No. 1,196,105; Aug. 29; Gaz. vol. 229; p. 1312.

Groot, Pieter de, Rotterdam, Netherlands, assignor to U. S. Slicing Machine Company, Chicago, Ill. Feeding mechanism. No. 1,193,672; Aug. 8; Gaz. vol. 229; p. 340.

Groover Engine Company. (See Morgan, Harry B., assignor.)

Gropper & Sons, M. (See Heyman and Arden, assignors.)

Gross, Karl. (See Schmid and Gross.)

Grossglass, Otto C., New Brighton, Pa. Lock. No. 1,194,836; Aug. 15; Gaz. vol. 229; p. 791.

Grossman, Simon, Pittsburgh, Pa. Trunk-catch. No. 1,195,810; Aug. 22; Gaz. vol. 229; p. 1175.

Grossmann, Fredrick W., Mount Vernon, N. Y. Tool-handle. No. 1,194,170; Aug. 8; Gaz. vol. 229; p. 514.

Grosvenor, William M. (See Carmichael and Grosvenor.)

Grotzky, Hugo, Chapman, Nebr. Scraper. No. 1,196,231; Aug. 29; Gaz. vol. 229; p. 1357.

Grove, John H., Moorcroft, assignor of one-half to L. Sallsbury, Upton, Wyo. Gate-operating means. No. 1,194,999; Aug. 15; Gaz. vol. 229; p. 848.

Grover, Frederick, assignor to The Forgrove Machinery Company Limited, Leeds, England. Intermittent drive for sweetmeat-wrapping machines. No. 1,195,072; Aug. 22; Gaz. vol. 229; p. 1125.

Grüter, Reinhold, Charlottenburg, Germany. Varnish, lacquer, or the like and making same. No. 1,195,673; Aug. 22; Gaz. vol. 229; p. 1125.

Guenzel, Ernst J., Milwaukee, Wis., and C. E. Wyant, Chicago, Ill., assignors of one-half to said Guenzel and one-half to said Wyant. Cigarette-box. No. 1,193,892; Aug. 8; Gaz. vol. 229; p. 419.

Guerrero, Wladimir, Madrid, Spain. Filtering-frame for filter-presses. No. 1,193,779; Aug. 8; Gaz. vol. 229; p. 380.

Guett, Monroe, assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Electric switch. No. 1,193,380; Aug. 1; Gaz. vol. 229; p. 198.

Guice, Duke. (See Lane and Guice.)

Guinzburg, Ralph K., assignor to I. B. Kleinert Rubber Company, New York, N. Y. Garter or hose-supporter. No. 1,195,354; Aug. 22; Gaz. vol. 229; p. 1011.

Gulterman, Kenneth S., New York, N. Y. Electrolytic process for the extraction of cobalt oxids. No. 1,195,211; Aug. 22; Gaz. vol. 229; p. 957.

Gulbransen, Christian, assignor to Gulbransen-Dickinson Company, Chicago, Ill. Player-piano pedal. No. 1,192,891; Aug. 1; Gaz. vol. 229; p. 21.

Gulbransen-Dickinson Company. (See Gulbransen, Christian, assignor.)

Gullck, Edmund A., Los Angeles, Cal. Sheet material. No. 1,192,890; Aug. 1; Gaz. vol. 229; p. 21.

Gullikson, Gullik O., Fargo, N. D. Four-horse evener. No. 1,195,001; Aug. 15; Gaz. vol. 229; p. 849.

Gumbel, Henry E. (See Matthews, Charles D., assignor.)

Gumpp, Warren D., Arnold, F. M. Francart, and G. C. Debay, Springdale, Pa. Glass-blowing apparatus. No. 1,195,002; Aug. 15; Gaz. vol. 229; p. 850.

Gunn, Walter T. (See Briggs, Jay, assignor.)

Gurley, David S., *et al.* (See Garland, John G., assignor.)

Gurnett, Arthur R., Toronto, Ontario, Canada. Device for opening and closing fruit-jars. No. 1,196,232; Aug. 29; Gaz. vol. 229; p. 1357.

Gustafson, Charles, St. Paul, Minn. Indicating apparatus. No. 1,195,355; Aug. 22; Gaz. vol. 229; p. 1012.

Gustavsen, Carl J., Boston, Mass., assignor, by mesne assignments, to Hamilton Clasp Company, Portland, Me. Garment-clasp. No. 1,195,811; Aug. 22; Gaz. vol. 229; p. 1175.

Gutekunst, Frank C., Kintnersville, Pa. Calendar. No. 1,196,679; Aug. 29; Gaz. vol. 229; p. 1509.

Guthrie, Harry P. (See Pope, Nelsone E., assignor.)

Gutmann, Charles S., *et al.* (See Negraval, Louis A., assignor.)

Gwynn, Arthur, Lucerne, Wyo. Cattle-guard. No. 1,195,003; Aug. 15; Gaz. vol. 229; p. 850.

Gyro Pump Company, The. (See Simond, Walter A., assignor.) (Reissue.)

H. L. Judd Company. (See Spokes, George T. S., assignor.)

H. W. Johns-Manville Company. (See Smith, George H., assignor.)

H. W. Johns-Manville Company. (See Webb, Jervis B., assignor.)

Haag, Plumus P., Coffeyville, Kans. Steam-valve. No. 1,193,780; Aug. 8; Gaz. vol. 229; p. 380.

Hanhr, Anton A., Copenhagen, Denmark, assignor to United Shoe Machinery Company, Paterson, N. J. Welt-slashing attachment for welt-shoe-sewing machines. No. 1,194,621; Aug. 15; Gaz. vol. 229; p. 716.

Haberstock, Robert. (See Braun, Peter, assignor.)

Hachmann, Frederick, assignor of one-fourth to F. C. Schoenthaler, St. Louis, Mo. Hose-coupling. No. 1,195,581; Aug. 22; Gaz. vol. 229; p. 1091.

Hachmann, Frederick, assignor of one-half to L. Matthews, Jr., and one-fourth to W. Modra, St. Louis, Mo. Nut-cracker. No. 1,194,837; Aug. 15; Gaz. vol. 229; p. 791.

Hachmann, Frederick, assignor of one-half to L. Matthews, Jr., and one-fourth to A. Von Hoffmann, St. Louis, Mo. Culinary implement. No. 1,194,838; Aug. 15; Gaz. vol. 229; p. 792.

Hachmann, Frederick, assignor of one-fourth to F. C. Schoenthaler and one-fourth to J. B. Hollis, St. Louis, Mo. Sash-fastener. No. 1,196,356; Aug. 29; Gaz. vol. 229; p. 1397.

Hachmann, Frederick, assignor of one-fourth to F. C. Schoenthaler, St. Louis, Mo., one-fourth to J. Merz, and one-fourth to G. S. Haskell, Chicago, Ill. Hose-coupling. No. 1,195,580; Aug. 22; Gaz. vol. 229; p. 1091.

Hadaway, John B. (See Seely and Hadaway.)

Hadaway, John B., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on insoles. No. 1,193,014; Aug. 1; Gaz. vol. 229; p. 64.

Hagenbach, Hans, assignor to J. R. Geigy S. A., Basel, Switzerland. Phthaleine dye and making the same. No. 1,194,380; Aug. 15; Gaz. vol. 229; p. 631.

Hagenbucher, Eugen, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Regulating device for hydraulic-power plants. No. 1,193,381; Aug. 1; Gaz. vol. 229; p. 198.

Haggard & Marcusson Company. (See Anderson, William B., assignor.)

Hagood, Lee, Schenectady, N. Y., assignor to General Electric Company. System of distribution. No. 1,196,541; Aug. 29; Gaz. vol. 229; p. 1462.

Hahn, Ernst G., Stuttgart, Germany, assignor to O. and W. Hahn, Rochester, N. Y. Armature for reinforced concrete construction for the purpose of suspending weights therefrom. No. 1,194,622; Aug. 15; Gaz. vol. 229; p. 716.

Hahn, Otto, *et al.* (See Hahn, Ernst G., assignor.)

Hahn, William, *et al.* (See Hahn, Ernst G., assignor.)

Haines, Frank A., assignor of one-half to D. C. Kerckhoff, St. Louis, Mo. Pasteurization. No. 1,196,357; Aug. 29; Gaz. vol. 229; p. 1398.

Hale and Kilburn Company. (See Von Schlegell, Victor, assignor.)

Hale, William F., *et al.* (See Maxwell, George S., assignor.)

Hall Hardware Company. (See Neal, Harry W., assignor.)

Hall, James T., assignor of one-half to Bunting Iron Works, Coalinga, Cal. Safety appliance. No. 1,195,463; Aug. 22; Gaz. vol. 229; p. 1049.

Hall, Joseph R. (See Drnpalik, Alfred J., assignor.)

Hall, Robert G., Portland, Oreg. Proportion-calculator. No. 1,195,212; Aug. 22; Gaz. vol. 229; p. 957.

Hall Switch & Signal Company. (See Coleman, Clyde J., assignor.)

Hall, William A., New York, N. Y. Cracking hydrocarbons. No. 1,194,289; Aug. 8; Gaz. vol. 229; p. 555.

Hallwood, Annie. (See Hallwood, Henry S., assignor.)

Hallwood, Henry S., assignor to A. Hallwood, Columbus, Ohio. Computing-scale. No. 1,195,213; Aug. 22; Gaz. vol. 229; p. 958.

Halogen Products Company. (See Aylsworth, Jonas W., assignor.)

Halsey, Edward S., and G. G. Perkins, Lynn, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Leather-edge-finishing machine. No. 1,195,674; Aug. 22; Gaz. vol. 229; p. 1125.

Hamblet, Alfred, North Tonawanda, N. Y. Fiber-cleaner. No. 1,195,464; Aug. 22; Gaz. vol. 229; p. 1049.

Hamilton, Arthur L., Houston, Tex. Dental instrument. No. 1,195,465; Aug. 22; Gaz. vol. 229; p. 1050.

Hamilton Clasp Company. (See Gustavsen, Carl J., assignor.)

Hamilton, Claude, Bitterne, England. Gearing for winches. No. 1,194,733; Aug. 15; Gaz. vol. 229; p. 755.

Hamilton, Coy E., Elkhart, Tex. Liquid-dispensing apparatus. No. 1,194,171; Aug. 8; Gaz. vol. 229; p. 515.

Hamilton, Frank A., *et al.*, executors. (See Furnas, Robert W.)

Hamilton, Harry W., assignor of one-third to H. Taylor and one-third to S. B. Sutphin, Indianapolis, Ind. Self-starter and pump for internal-combustion engines. No. 1,196,106; Aug. 29; Gaz. vol. 229; p. 1312.

Hamilton, Lelia F., *et al.*, executors. (See Furnas, Robert W.)

Hammen, Charles, Chicago, assignor of one-half to E. W. Seymour, Evanston, Ill. Convertible elevator. No. 1,193,893; Aug. 8; Gaz. vol. 229; p. 419.

Hammer, Wilford C., Scotts Mills, Oreg. Stump-puller. No. 1,195,004; Aug. 15; Gaz. vol. 229; p. 851.

Hammerly, Richard, New York, N. Y. Fabric-frame for embroidery-machines. No. 1,195,466; Aug. 22; Gaz. vol. 229; p. 1050.

Hammond, Charles, El Monte, Cal. Spoon-supporter. No. 1,196,737; Aug. 29; Gaz. vol. 229; p. 1531.

Hammond, Francesco. (See Bearce and Jones, assignors.)

Handoll, Henry, London, England. Hose-coupling. No. 1,196,680; Aug. 29; Gaz. vol. 229; p. 1509.

Handy, James O., assignor to Pittsburgh Testing Laboratory, Pittsburgh, Pa. Treating wool-grease. No. 1,194,015; Aug. 8; Gaz. vol. 229; p. 461.

Handy, James O., and R. M. Isham, assignors to Pittsburgh Testing Laboratory, Pittsburgh, Pa. Refining wool-grease. No. 1,194,013; Aug. 8; Gaz. vol. 229; p. 461.

Handy, James O., and R. M. Isham, assignors to Pittsburgh Testing Laboratory, Pittsburgh, Pa. Refining wool-grease. No. 1,194,014; Aug. 8; Gaz. vol. 229; p. 461.

Hanlon, Timothy, Wilmington, Ill. Cuspidor. No. 1,196,681; Aug. 29; Gaz. vol. 229; p. 1510.

Hanna Engineering Works. (See Gates, Philetus W., assignor.)

Hanna, William T., assignor, by mesne assignments, to The Mechanical Construction Company, Cincinnati, Ohio. Mechanical stoker. (Reissue.) No. 14,179; Aug. 8; Gaz. vol. 229; p. 577.

Hanrahan, John E., Baltimore, Md. Type-casting attachment for linotype-machines. No. 1,196,107; Aug. 29; Gaz. vol. 229; p. 1313.

Hanrahan, John E., assignor to The Ad-Atype Matrix Company, Baltimore, Md. Single-type-casting attachment. No. 1,194,623; Aug. 15; Gaz. vol. 229; p. 717.

Hansen, Christian P. (See Hansen, Emil S. and C. P.)

Hansen, Emil S. and C. P., Anderson, Cal. Automatic air-brake-coupling device. No. 1,195,467; Aug. 22; Gaz. vol. 229; p. 1050.

Hansen, Fred E. (See Frazier and Hansen.)

Hansen, Jens, Fairmont, Minn. Portable derrick. No. 1,195,005; Aug. 15; Gaz. vol. 229; p. 851.

Hanson, Le Roy A., assignor of one-third to F. Adsit and one-third to R. E. E. Hanson, Chicago, Ill. Electrical display means. No. 1,193,138; Aug. 1; Gaz. vol. 229; p. 111.

Hanson, Paul, Wild Horse, Colo. Butter-making machine. No. 1,195,006; Aug. 15; Gaz. vol. 229; p. 851.

Hanson, Ruthven E. E., *et al.* (See Hanson, Le Roy A., assignor.)

Hanus, Joseph J. and T. J., and J. F. Putz, Ennis, Tex. Cotton-press. No. 1,194,624; Aug. 15; Gaz. vol. 229; p. 717.

Hanus, Tom J. (See Hanus and Putz.)

Hapgood, Oscar D., assignor to Goodell-Pratt Company, Greenfield, Mass. Chuck. No. 1,195,214; Aug. 22; Gaz. vol. 229; p. 958.

Harbaugh, James, *et al.* (See McCormack and McMullen, assignors.)

Harbeck, Jervis R., Chicago, Ill., assignor to American Can Company, New York, N. Y. Food-dispensing device. No. 1,194,172; Aug. 8; Gaz. vol. 229; p. 515.

Harbeck, Jervis R., assignor to Charles W. Shonk Company, Chicago, Ill. Combined globe and bank. No. 1,196,108; Aug. 29; Gaz. vol. 229; p. 1313.

Harden, Delbert L., Eugene, Oreg. Sanitary drinking-fountain and faucet. No. 1,196,542; Aug. 29; Gaz. vol. 229; p. 1463.

Harden, James H., Chicago, Ill. Traction device for vehicle-wheels. No. 1,193,139; Aug. 1; Gaz. vol. 229; p. 112.

Harden, Marion J., Akron, Ohio. Combination table and seat. No. 1,193,544; Aug. 8; Gaz. vol. 229; p. 292.

Harding, George D., Marshfield, Oreg. Pulley. No. 1,195,215; Aug. 22; Gaz. vol. 229; p. 959.

Harding, Henry O. (See Jessen, James, assignor.)

Harding, Thomas, Newark, N. J., assignor to J. L. Sommer Manufacturing Co. Folding implement. No. 1,194,381; Aug. 15; Gaz. vol. 229; p. 632.

Harford, Laura L., Berkeley, Cal. Book-holder. No. 1,194,016; Aug. 8; Gaz. vol. 229; p. 462.

Harley, Charles, Ludington, Mich., assignor to L. G. Merritt, Lockport, N. Y. Drying-kiln. No. 1,194,734; Aug. 15; Gaz. vol. 229; p. 755.

Harmon, Charles, Louisville, Ky. Siding-gage. No. 1,193,140; Aug. 1; Gaz. vol. 229; p. 112.

Harmon, Foster L., Niota, Tenn. Automatic railway-switch. No. 1,192,892; Aug. 1; Gaz. vol. 229; p. 22.

Harper, James P., St. Louis, Mo. Dental technicon. No. 1,194,017; Aug. 8; Gaz. vol. 229; p. 462.

Harrington, Cecil H., assignor to Benthall Machine Co., Suffolk, Va. Peanut-stemmer. No. 1,195,812; Aug. 22; Gaz. vol. 229; p. 1176.

Harrington, Joseph V. (See Doredant and Harrington.)

Harrington, Leslie, assignor to American Resilient Wheel Company, Chicago, Ill. Resilient wheel. No. 1,194,173; Aug. 8; Gaz. vol. 229; p. 515.

Harris, Edward P., Superior, Nebr. Autographic register. No. 1,194,174; Aug. 8; Gaz. vol. 229; p. 516.

Harris, Henry J., Youngstown, Ohio. Method of and means for connecting and maintaining vessels in broadside relation. No. 1,195,007; Aug. 15; Gaz. vol. 229; p. 852.

Harrison, George E. (See Templeton and Harrison.)

Harrison, Joseph H., Toronto, Ontario, Canada. Fly-catcher. No. 1,195,986; Aug. 29; Gaz. vol. 229; p. 1269.

Harrison, Mary R., Wintbrop, Mass. Machine and method for reinforcing sheet material. No. 1,195,951; Aug. 22; Gaz. vol. 229; p. 1224.

Harrison, Owen L., Coleta, Ill. Resilient wheel. No. 1,194,175; Aug. 8; Gaz. vol. 229; p. 516.

Harrison Safety Boiler Works. (See Gibson, George H., assignor.)

Harriss, Wade H., Houston, Tex. Brake for marine vessels. No. 1,196,682; Aug. 29; Gaz. vol. 229; p. 1510.

Harrow, Alfred T. (See Nelson, Victor E., assignor.)

Harry, John R., *et al.* (See Bottlander, Jacob J., assignor.)

Hart, Harry S. (See Yost, Winfield H., assignor.)

Hart, Harry S., assignor to National Dump Car Company, Chicago, Ill. Door-operating mechanism for freight-cars. No. 1,195,582; Aug. 22; Gaz. vol. 229; p. 1092.

Hart & Hegeman Manufacturing Company, The. (See Guett, Monroe, assignor.)

Hart, James H., Forest Park, N. Y. Apron. No. 1,193,545; Aug. 8; Gaz. vol. 229; p. 293.

Hart, Thomas H., Everett, Mass. Apparatus for filling cans, bottles, and the like. No. 1,195,675; Aug. 22; Gaz. vol. 229; p. 1126.

Hartford Lock Ring Company, The. (See Merritt, Joseph, assignor.)

Hartford Rubber Works Co., The. (See Fisher, George F., assignor.)

Hartmann & Braun A.-G. (See Bruger, Theodor, assignor.)

Hartner, Fred V., Toledo, Ohio. Sounding device for decoys. No. 1,194,018; Aug. 8; Gaz. vol. 229; p. 462.

Hartness, James, Springfield, Vt. Chuck. No. 1,193,141; Aug. 1; Gaz. vol. 229; p. 112.

Hartson, Bert E. (See Kirby and Hartson.)

Hartzell, Forest H. (See Wagner and Hartzell.)

Harvey, Harry W., San Benito, Tex. Handle-securing device. No. 1,196,683; Aug. 29; Gaz. vol. 229; p. 1510.

Harvey, Morris L., New Straitsville, Ohio. Burglar-alarm. No. 1,192,893; Aug. 1; Gaz. vol. 229; p. 22.

Harvey, Robert T., Peoria, Ill. Implement for handling incandescent lamps. No. 1,193,685; Aug. 8; Gaz. vol. 229; p. 344.

Harvey, William A., Scranton, Pa. Electric lamp. No. 1,193,894; Aug. 8; Gaz. vol. 229; p. 420.

Haskell, George S., *et al.* (See Hachmann, Frederick, assignor.)

Haslett, Levi R., Windsor, Vt. Bill-file. No. 1,195,008; Aug. 15; Gaz. vol. 229; p. 852.

Hasley, Nathan, Newport, Ohio. Reverse-gear. No. 1,195,009; Aug. 15; Gaz. vol. 229; p. 852.

Hassall, Albert E., assignor to himself and The Colonial Ammunition Company Limited, Footscray, Victoria, Australia. Metal-casting apparatus. No. 1,195,010; Aug. 15; Gaz. vol. 229; p. 853.

Hata, Shinkichi, Seattle, Wash. Detachable device for actuating an electric socket-switch. No. 1,196,233; Aug. 29; Gaz. vol. 229; p. 1357.

Hatfield, Mattie R., Wichita, Kans. Shoe-cleaning attachment for automobiles, &c. No. 1,196,453; Aug. 29; Gaz. vol. 229; p. 1431.

Hauf, Conrad, Jr., New York, N. Y. Handle attachment. No. 1,196,543; Aug. 29; Gaz. vol. 229; p. 1463.

Haugh, William G. (See Haugh, Ross L. and W. G.)

Haugh, Ross L. and W. G., Cleveland, Ohio. Linoleum-stretcher. No. 1,193,546; Aug. 8; Gaz. vol. 229; p. 293.

Hausman, Ward B., Philadelphia, Pa. Apparatus for the realistic reproduction of aerial motion-pictures. No. 1,192,894; Aug. 1; Gaz. vol. 229; p. 22.

Havana Metal Wheel Co. (See Chandler, Carl B., assignor.)

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'f'g. Co. Cap-feeding mechanism for riveting-machines. No. 1,194,290; Aug. 8; Gaz. vol. 229; p. 556.

Havens, Morton, Jr., Albany, and S. B. Van Ranst; said Van Ranst assignor to Crouse-Hinds Company, Syracuse, N. Y. Branch box for electric conductors. No. 1,195,813; Aug. 22; Gaz. vol. 229; p. 1176.

Hawkins, Benjamin F., assignor of one-third to L. E. Morris and one-third to C. R. Martin, Sulphur, Ky. Mail-wagon. No. 1,195,676; Aug. 22; Gaz. vol. 229; p. 1126.

Hawley, William G., assignor to American La France Fire Engine Company, Inc., Elmira, N. Y. Tractor-drawn automobile. No. 1,195,216; Aug. 22; Gaz. vol. 229; p. 959.

Hawthorne, Ellsworth A., Bridgeport, Conn. Battery and container. No. 1,194,497; Aug. 15; Gaz. vol. 229; p. 675.

Hawthorne, Ellsworth A., and J. H. George, Bridgeport, Conn.; said George assignor to said Hawthorne. Reinforced battery-jar. No. 1,195,217; Aug. 22; Gaz. vol. 229; p. 959.

Hayes, John F., Consort, Alberta, Canada. Road-vehicle. No. 1,194,625; Aug. 15; Gaz. vol. 229; p. 717.

Hayes, Joseph, and G. Horn, New York, N. Y. Creasing and cutting attachment for ruling-machines. No. 1,193,382; Aug. 1; Gaz. vol. 229; p. 199.

Hays Manufacturing Company. (See Hitchcock, Otto G., assignor.)

Hazelworth, George A., assignor to Indianapolis Saddlery Company, Indianapolis, Ind. Molding. No. 1,195,218; Aug. 22; Gaz. vol. 229; p. 959.

Hazleton, William, Delaware, Ohio. Double-cement-block machine. No. 1,196,684; Aug. 29; Gaz. vol. 229; p. 1510.

Healey, Francis J., and S. R. Sheppard, Southall, England. Vulcanizing-machine. No. 1,196,109; Aug. 29; Gaz. vol. 229; p. 1313.

Healy, Arthur E., New York, N. Y. Impression composition. No. 1,194,176; Aug. 8; Gaz. vol. 229; p. 517.

Healy, Frank, Petrolia, Ontario, Canada. Station-indicator. No. 1,195,011; Aug. 15; Gaz. vol. 229; p. 853.

Hearst, Edwin J., Ashboro, N. C. Game-counter. No. 1,196,358; Aug. 29; Gaz. vol. 229; p. 1398.

Heatherbell, Gordon G. (See Heatherbell, Percy E. and G. G.)

Heatherbell, Percy E. and G. G., Port Cygnet, Tasmania, Australia. Door-holder. No. 1,196,685; Aug. 29; Gaz. vol. 229; p. 1511.

Heberling, Ralph H., Oshkosh, Wis. Valve for internal-combustion engines. No. 1,193,142; Aug. 1; Gaz. vol. 229; p. 113.

Heckel, Otto, assignor of one-fourth to M. D. Vosburg and one-half to L. T. Rambo, St. Louis, Mo. Vehicle-wheel. No. 1,193,383; Aug. 1; Gaz. vol. 229; p. 199.

Hedberg, August P. (See Westerling and Hedberg.)

Hedler, William E., New York, N. Y. Polishing-wheel. No. 1,196,234; Aug. 29; Gaz. vol. 229; p. 1358.

Hedlund, John, Kansas City, Mo. Duster. No. 1,195,356; Aug. 22; Gaz. vol. 229; p. 1012.

Hedrique, May, Farmington, Mo. Cooking utensil. No. 1,194,291; Aug. 8; Gaz. vol. 229; p. 556.

Hedstrom, Albert R., Jamestown, N. Y. Filling wood. No. 1,195,219; Aug. 22; Gaz. vol. 229; p. 960.

Heil, Albrecht, Frankfort-on-the-Main, Germany, assignor of one-half to C. Hubert and one-half to S. Stern, New York, N. Y. Galvanic cell. No. 1,195,677; Aug. 22; Gaz. vol. 229; p. 1127.

Heinemann, Arthur, West Kensington, London, England. Manufacture of synthetic caoutchouc. No. 1,194,839; Aug. 15; Gaz. vol. 229; p. 792.

Heinig, Charles F., assignor of one-fourth to M. L. Baugham, Indianapolis, Ind. Demountable rim for vehicle-wheels. No. 1,193,781; Aug. 8; Gaz. vol. 229; p. 380.

Heisler, Charles L., Schenectady, N. Y. Coal-passer for locomotive-tenders. (Reissue.) No. 14,176; Aug. 1; Gaz. vol. 229; p. 238.

Heisler, Charles L., Schenectady, N. Y. Rotative vibratory testing-machine. No. 1,193,686; Aug. 8; Gaz. vol. 229; p. 345.

Heisler, Charles L., Schenectady, N. Y. Safety-feed for presses. No. 1,195,987; Aug. 29; Gaz. vol. 229; p. 1269.

Hejna, Frank J. (See Zbytniewski, Trzcinski, and Hejna.)

Hekendorn, Emil W., Cleveland, Ohio. Vegetable-slicer. No. 1,196,454; Aug. 29; Gaz. vol. 229; p. 1432.

Helbronner, André. (See Henri, Helbronner, and Recklinghausen.)

Helbronner, André. (See Recklinghausen, Helbronner, and Henri.)

Helme & McIlhenny. (See Brown, William L., assignor.)

Helms, Jane W., South Haven, Mich. Cover-fastener. No. 1,196,686; Aug. 29; Gaz. vol. 229; p. 1511.

Hemingray Glass Company. (See Holmes, Minot K., assignor.)

Hemingway, Rowland F., Andrews, N. C. Clasp for holding bedclothes or lap-robes. No. 1,193,895; Aug. 8; Gaz. vol. 229; p. 420.

Hemme, August, Dublin, Ontario, Canada. Weed-destroying machine. No. 1,193,015; Aug. 1; Gaz. vol. 229; p. 64.

Henders, Ansel R., Memphis, Tenn. Mop-holder. No. 1,193,259; Aug. 1; Gaz. vol. 229; p. 154.

Henderson, Albert H., assignor to The Henderson Rubber Company, Baltimore, Md. Cushion-tired wheel. No. 1,194,177; Aug. 8; Gaz. vol. 229; p. 517.

Henderson Rubber Company, The. (See Henderson, Albert H., assignor.)

Henderson, Thomas M., Pendleton, Oreg. Mouth-gag and tongue-depressor. No. 1,193,782; Aug. 8; Gaz. vol. 229; p. 381.

Hendren, Charles L., Wichita, Kans. Packing-extractor. No. 1,195,220; Aug. 22; Gaz. vol. 229; p. 960.

Hendricks, Murray P., Benwood, W. Va. Shaving-brush. No. 1,194,735; Aug. 15; Gaz. vol. 229; p. 756.

Hennig, Gustav K., Böhlitz-Ehrenberg, near Leipzig, and L. Bajde, Leipzig-Eutritzsch, assignors to Ludwig Hupfeld Aktiengesellschaft, Böhlitz-Ehrenberg, near Leipzig, Germany. Tuning mechanism for stringed instruments. No. 1,193,384; Aug. 1; Gaz. vol. 229; p. 199.

Hennig, Rudolf, Hamburg, assignor to Gebr. Päglow, Kl. Grasbrook, near Hamburg, Germany. Fuel-nozzle valve-gear. No. 1,194,840; Aug. 15; Gaz. vol. 229; p. 792.

Henretta, Francis B., Roanoke, Va. Traffic-director. No. 1,195,583; Aug. 22; Gaz. vol. 229; p. 1092.

Henri, Victor. (See Recklinghausen, Helbronner, and Henri.)

Henri, Victor, Paris, A. Helbronner and M. von Recklinghausen, Suresnes, France, assignors to The R. U. V. Company, Inc. Apparatus for sterilizing liquids by means of ultra-violet rays. No. 1,193,143; Aug. 1; Gaz. vol. 229; p. 113.

Henrici, Rudolf E., Ridgefield, Wash. Reversing-gear mechanism. No. 1,195,136; Aug. 15; Gaz. vol. 229; p. 895.

Henry, Augustus M. (See Horton and Henry.)

Henry, Augustus M., New York, N. Y. Shooting-gallery. No. 1,193,260; Aug. 1; Gaz. vol. 229; p. 154.

Henry, George D., assignor to Swift Fly Swatter Manufacturing Company, Kansas City, Mo. Wire-bending machine. No. 1,194,498; Aug. 15; Gaz. vol. 229; p. 675.

Henry, John E., Hardeeville, S. C. Plow. No. 1,193,261; Aug. 1; Gaz. vol. 229; p. 155.

Hensel, Otto A., Milwaukee, Wis. Detachable-body baby-vehicle. No. 1,193,896; Aug. 8; Gaz. vol. 229; p. 420.

Herbert, Edward G., and C. Fletcher, Levenshulm, England. Automatic back-sawing machine. No. 1,193,262; Aug. 1; Gaz. vol. 229; p. 155.

Hercules Tunnel Machine and Development Company, The. (See Recen, Henry A., assignor.)

Herr, Henry C., assignor, by mesne assignments, to South Side Trust Company, trustee, Pittsburgh, Pa. Forming expanded sheet metal. No. 1,195,221; Aug. 22; Gaz. vol. 229; p. 961.

Herr, Henry C., assignor, by mesne assignments, to South Side Trust Company, trustee, Pittsburgh, Pa. Machine for forming expanded metal. No. 1,195,222; Aug. 22; Gaz. vol. 229; p. 961.

Herr, Henry C., assignor, by mesne assignments, to South Side Trust Company, trustee, Pittsburgh, Pa. Machine for expanding sheet metal. No. 1,195,223; Aug. 22; Gaz. vol. 229; p. 961.

Herr, Herbert T., Pittsburgh, Pa., assignor to The Westinghouse Machine Company. Bridge control. No. 1,196,746; Aug. 29; Gaz. vol. 229; p. 1533.

Herren, George, Great Bend, Kans. Radiator-valve. No. 1,196,688; Aug. 29; Gaz. vol. 229; p. 1512.

Herrmann, Paul E., New York, N. Y. Hair-steaming apparatus. No. 1,194,841; Aug. 15; Gaz. vol. 229; p. 792.

Hersee, Frederick C. (See Arnold, George A., assignor.)

Hersey, John, Devon, Mont. Sash-holder. No. 1,194,626; Aug. 15; Gaz. vol. 229; p. 718.

Hervert, Charles V., Ravenna, Nebr. Nut-lock. No. 1,195,468; Aug. 22; Gaz. vol. 229; p. 1050.

Herwig, William D., Jr., Chicago, Ill. Light-fixture. No. 1,194,178; Aug. 8; Gaz. vol. 229; p. 517.

Herz, Alfred, assignor of one-half to E. O. Schweitzer, Chicago, Ill. Light-dimming mechanism. No. 1,195,137; Aug. 15; Gaz. vol. 229; p. 896.

Herzog, Soma, assignor to Nu-Fastener Co., Inc., New York, N. Y. Snap-button. No. 1,195,678; Aug. 22; Gaz. vol. 229; p. 1127.

Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Line-spacing mechanism for type-writing machines. No. 1,196,110; Aug. 29; Gaz. vol. 229; p. 1314.

Hesse, Frank J., West Orange, N. J. Safety gas-valve. No. 1,196,455; Aug. 29; Gaz. vol. 229; p. 1432.

Hester, George C., Chicago, Ill. Store-front construction. No. 1,193,144; Aug. 1; Gaz. vol. 229; p. 113.

Heuer, Georg. (See Oehring and Heuer.)

Heuser, Friedrich W., Gross-Lichterfelde, West, near Berlin, assignor to Accumulatoren Fabrik Aktiengesellschaft, Berlin, Germany. Coating metal with metal. No. 1,196,544; Aug. 29; Gaz. vol. 229; p. 1463.

Heydon, Edward, Indianapolis, Ind. Railway construction. No. 1,196,689; Aug. 29; Gaz. vol. 229; p. 1512.

Heyl, Albert D., New York, N. Y., assignor to Quigley Furnace and Foundry Company. Anticlogging device for pulverized-fuel controllers. No. 1,193,016; Aug. 1; Gaz. vol. 229; p. 65.

Heyman, David, and T. R. Arden, assignors to M. Gropper & Sons, New York, N. Y. Pop-gun. No. 1,196,235; Aug. 29; Gaz. vol. 229; p. 1358.

Heywood Brothers and Wakefield Company. (See Watkins, Edward G., assignor.)

Hibbard, Angus S., Chicago, Ill. Electrical recorder. (Reissue.) No. 14,188; Aug. 29; Gaz. vol. 229; p. 1537.

Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,194,382; Aug. 15; Gaz. vol. 229; p. 632.

Hick, Harry J., assignor, by mesne assignments, to McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,195,012; Aug. 15; Gaz. vol. 229; p. 854.

Hicks, Charles, *et al.* (See Simpson, Eugene A., assignor.)

Hieatzman, Arthur H., assignor of one-third to S. P. Hieatzman, Baltimore, Md. Meat-cutting machine. No. 1,193,385; Aug. 1; Gaz. vol. 229; p. 199.

Hieatzman, Stanley P. (See Hieatzman, Arthur H., assignor.)

Hieggby, William F., Cambridge, Md. Leak-stopper for ships. No. 1,195,013; Aug. 15; Gaz. vol. 229; p. 854.

Higel, Otto, Toronto, Ontario, Canada. Sheet-guiding mechanism for tracker-boards of musical instruments. No. 1,196,456; Aug. 29; Gaz. vol. 229; p. 1433.

Higginbottom, John J., Philadelphia, Pa. Speed-changing and stopping mechanism for knitting-machines. No. 1,193,263; Aug. 1; Gaz. vol. 229; p. 156.

Higgins, Carl C. (See Bedford and Higgins.)

Higgins, Curt E., Los Angeles, Cal. Fuel-kindler or pilot for grates. No. 1,195,469; Aug. 22; Gaz. vol. 229; p. 1050.

Higgins, Joseph F., New York, N. Y. Blindstitch taping attachment for sewing-machines. No. 1,195,814; Aug. 22; Gaz. vol. 229; p. 1177.

Higgins, Morris F., Jr. (See Bedford and Higgins.)

Hightower, Roy M., Meadville, Mo. Mud-lug for traction-engines. No. 1,195,815; Aug. 22; Gaz. vol. 229; p. 1177.

Higinbotham, Arthur O., assignor to C. B. Foster and Company, Worcester, Mass. Locking device for differential mechanism. No. 1,193,017; Aug. 1; Gaz. vol. 229; p. 65.

Hild, Gustave E., Lyndhurst, N. J. Collapsible, foldable crawler for automobiles. No. 1,195,014; Aug. 15; Gaz. vol. 229; p. 855.

Hill, Alvin E., Lawrenceville, Ill. Door-stop. No. 1,193,386; Aug. 1; Gaz. vol. 229; p. 200.

Hill, Charles A., Wellsburg, W. Va. Plug for repairing pneumatic tires. No. 1,193,387; Aug. 1; Gaz. vol. 229; p. 200.

Hill, Cleveland, Merrillville, Cal. Hay-loading machine. No. 1,194,179; Aug. 8; Gaz. vol. 229; p. 518.

Hill, Edith M., Denver, Colo. Apparel-protector. No. 1,194,627; Aug. 15; Gaz. vol. 229; p. 718.

Hill, Francis J. (See Fisher and Hill.)

Hill, Frederick P., Chicago, Ill. Machine for backing books. No. 1,195,679; Aug. 22; Gaz. vol. 229; p. 1127.

Hill, John P., Rockymount, Va. Device for cutting twine. No. 1,195,584; Aug. 22; Gaz. vol. 229; p. 1092.

Hill-Ophuls-Prindle Corp. (See Ophuls, Fred, assignor.)

Hill Pump Valve Company, The. (See Schroeder, Frederick A., assignor.)

Hill, Raymond F. (See Francis and Hill.)

Hillhouse, Charles B., New York, N. Y. Reducing metal ores and fusing other materials. No. 1,193,783; Aug. 8; Gaz. vol. 229; p. 381.

Hilliard, Jesse F., and F. Jones, Aiken, Pa. Steel derrick. No. 1,195,015; Aug. 15; Gaz. vol. 229; p. 855.

Hillman, Evan B., Tacoma, Wash. Letter-box. No. 1,195,016; Aug. 15; Gaz. vol. 229; p. 855.

Hills, Ansil W., assignor to Callie Brothers Company, Detroit, Mich. Ticket-vending machine. No. 1,192,895; Aug. 1; Gaz. vol. 229; p. 23.

Himebaugh, Adelbert C. (See Himebaugh, Clayton D., assignor.)

Himebaugh, Clayton D., assignor to A. C. Himebaugh, Burr Oak, Mich. Bob or coasting sled. No. 1,194,383; Aug. 15; Gaz. vol. 229; p. 633.

Himmel, Solomon. (See Hormes, William T., assignor.)

Hine, Frank B., El Paso, Tex. String-fastener. No. 1,192,896; Aug. 1; Gaz. vol. 229; p. 23.

Hinkel, Hulbert, Oakland, Cal. Transmission mechanism. No. 1,195,138; Aug. 15; Gaz. vol. 229; p. 896.

Hinkle, Edwin C., Hempstead, N. Y. Water-closet. No. 1,193,784; Aug. 8; Gaz. vol. 229; p. 381.

Hinsdale, Winfield E., New York, N. Y. Bath-tub fixture or appliance. No. 1,193,145; Aug. 1; Gaz. vol. 229; p. 114.

Hipwood, George, Boston, Mass. Crutch. No. 1,194,384; Aug. 15; Gaz. vol. 229; p. 633.

Hirsch, Hiram H., Philadelphia, Pa. Portable electric-lighting apparatus. No. 1,195,925; Aug. 22; Gaz. vol. 229; p. 1215.

Hirsch, Otto C. L., Evanston, Ill. Collapsible table. No. 1,194,019; Aug. 8; Gaz. vol. 229; p. 462.

Hirt, Martin H., *et al.* (See Robinson, Nathaniel G., assignor.)

Hirt, Robert F., *et al.* (See Robinson, Nathaniel G., assignor.)

Hisgen Brothers. (See Hisgen, Wolfe, Armitage, and Hisgen, assignors.)

Hisgen, George C. (See Hisgen, Wolfe, Armitage, and Hisgen.)

Hisgen, Henry A., T. Wolfe, T. Armitage, Jr., and G. C. Hisgen, assignors to Hisgen Brothers, Albany, N. Y. Metal container or box. No. 1,193,461; Aug. 1; Gaz. vol. 229; p. 225.

Hist, John, Alliance, Ohio. Separable spring-hinge. No. 1,194,628; Aug. 15; Gaz. vol. 229; p. 718.

Hitchcock, Otto G., assignor to Hays Manufacturing Company, Erie, Pa. Cover for service-boxes. No. 1,193,479; Aug. 1; Gaz. vol. 229; p. 231.

Hockman, Charles C., Dorchester, Mass., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Means for making printers' leads or rules. No. 1,193,388; Aug. 1; Gaz. vol. 229; p. 200.

Hockman, Charles C., Dorchester, Mass., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Cutting mechanism. No. 1,193,389; Aug. 1; Gaz. vol. 229; p. 201.

Hodges, Charles H., New York, N. Y. Efficiency-chart. No. 1,194,629; Aug. 15; Gaz. vol. 229; p. 719.

Hodgson, John G. (See Rudolph and Hodgson.)

Hodgson, John G., Maywood, Ill. Demountable resilient tire-seating rim for automobile-wheels. No. 1,194,020; Aug. 8; Gaz. vol. 229; p. 463.

Hodgson, John G., Maywood, Ill., assignor to American Can Company, New York, N. Y. Can-coating machine. No. 1,196,111; Aug. 29; Gaz. vol. 229; p. 1314.

Hoelbing, Daniel W. (See Kenney, Frank E., assignor.)

Hoenecke, Walter W. (See Whitmer, Arthur K., assignor.)

Hoeschen, Henry A. and J. A., assignors to Hoeschen Manufacturing Company, Omaha, Nebr. Railway-signal-actuating mechanism. No. 1,196,236; Aug. 29; Gaz. vol. 229; p. 1358.

Hoeschen, Joseph A. (See Hoeschen, Henry A. and J. A.)

Hoeschen Manufacturing Company. (See Hoeschen, Henry A. and J. A., assignors.)

Hoevet, Alfred T. (See Gray and Hoevet.)

Hoffman, Adon J., Syracuse, N. Y. Glove-washing machine. No. 1,193,785; Aug. 8; Gaz. vol. 229; p. 382.

Hoffman, George F., Philadelphia, Pa. Flag. No. 1,195,224; Aug. 22; Gaz. vol. 229; p. 961.

Hoffman, Louis, Duluth, Minn. Pressing-machine. No. 1,196,112; Aug. 29; Gaz. vol. 229; p. 1314.

Hoffman, Rudolph, Kankakee, assignor to Sears, Roebuck and Company, Chicago, Ill. Lighting-ring. No. 1,193,146; Aug. 1; Gaz. vol. 229; p. 114.

Hofweber, Peter, La Crosse, Wis. Vehicle-jack. No. 1,196,690; Aug. 29; Gaz. vol. 229; p. 1512.

Hogan, Thomas G., assignor of one-fourth to E. P. Gaudet, Edmonton, Alberta, Canada. Skirt and waist supporter. No. 1,194,630; Aug. 15; Gaz. vol. 229; p. 719.

Hoge, William A., Hillside, assignor of one-third to G. H. Alberts, Pueblo, Colo. Fish-screen. No. 1,195,988; Aug. 29; Gaz. vol. 229; p. 1270.

Hohman, Charles, Chicago, Ill. Rail-joint. No. 1,194,499; Aug. 15; Gaz. vol. 229; p. 676.

Holhjelle, Eli. (See Scherff, Karl, assignor.)

Hoke, Jacob F., Jr. (See Holcomb and Hoke.)

Holbech, Richard A., Ellesmere, assignor to A. Rolfe, London, England. Dynamo-electric machinery. No. 1,193,897; Aug. 8; Gaz. vol. 229; p. 421.

Holcomb, James L., and J. F. Hoke, Jr., Indianapolis, Ind. Popcorn-machine. No. 1,195,017; Aug. 15; Gaz. vol. 229; p. 856.

Holden, David R., Peoria, Ill. Fertilizer-distributer. No. 1,193,547; Aug. 8; Gaz. vol. 229; p. 293.

Holden, Hiram, Manchester, N. H. Shoe. No. 1,193,687; Aug. 8; Gaz. vol. 229; p. 345.

Holden, Hiram, Manchester, N. H. Shoe. No. 1,193,688; Aug. 8; Gaz. vol. 229; p. 346.

Holden, Maria E., Yonkers, N. Y. Fly-trap. No. 1,194,736; Aug. 15; Gaz. vol. 229; p. 756.

Holden, Maria E., Yonkers, N. Y. Combined lemon-squeezer and pitcher-cover. No. 1,194,737; Aug. 15; Gaz. vol. 229; p. 751.

Holderness, James S. (See Carruthers and Holderness.)

Holdzkom, Samuel E., Longport, N. J. Handle for canes, umbrellas, and other articles. No. 1,196,545; Aug. 29; Gaz. vol. 229; p. 1463.

Holl, Gustave J., assignor to The Mirroscope Company of Ohio, Cleveland, Ohio. Holder for projecting-machines. No. 1,193,689; Aug. 8; Gaz. vol. 229; p. 346.

Holland-Letz, Lud, Chicago, Ill., assignor to International Harvester Company of New Jersey. Traction-wheel. No. 1,192,897; Aug. 1; Gaz. vol. 229; p. 23.

Holland, William W. (See Frazer, Holland, and Miller.)

Hollerith, Herman, Washington, D. C., assignor to The Tabulating Machine Company, East Orange, N. J. Quick-setting punch. No. 1,193,390; Aug. 1; Gaz. vol. 229; p. 201.

Holliday, Albert, Wimbledon, London, England. Electrolytic apparatus for the production of liquor for bleaching and other purposes. No. 1,193,786; Aug. 8; Gaz. vol. 229; p. 382.

Hollis, James B., *et al.* (See Hachman, Frederick, assignor.)

Hollwell, Charles, Broadheath, and M. H. Whittaker, Manchester, assignors to Linotype and Machinery Limited, London, England. Typographical casting-machine. No. 1,193,264; Aug. 1; Gaz. vol. 229; p. 156.

Holm, Gustaf A., Powers Lake, N. D. Clean-sweep reel-slat. No. 1,196,237; Aug. 29; Gaz. vol. 229; p. 1358.

Holm, Sven N., Dorchester, Mass. Wrench. No. 1,193,147; Aug. 1; Gaz. vol. 229; p. 114.

Holmes, Alfred E., assignor of one-half to W. J. Mohr, Chicago, Ill. Chain tongs. No. 1,196,359; Aug. 29; Gaz. vol. 229; p. 1398.

Holmes, Gustav, and J. M. and A. G. Bostrom, Milwaukee, Wis. Automobile-curtain. No. 1,195,989; Aug. 29; Gaz. vol. 229; p. 1270.

Holmes, Minot K., assignor to Hemingray Glass Company, Muncie, Ind. Glass-working machine. No. 1,193,787; Aug. 8; Gaz. vol. 229; p. 383.

Holmes, Minot K., assignor to Hemingray Glass Company, Muncie, Ind. Glass-furnace. No. 1,193,788; Aug. 8; Gaz. vol. 229; p. 383.

Holmes, Robert A., Eden, Idaho. Reversing-gear mechanism. No. 1,195,470; Aug. 22; Gaz. vol. 229; p. 1051.

Holmes, William, Belpre, Ohio. Combination-tool. No. 1,195,471; Aug. 22; Gaz. vol. 229; p. 1051.

Holming, Johan L., Gottenborg, Sweden. Self-lubricating ball-bearing for spindles of spinning-machines or the like. No. 1,195,816; Aug. 22; Gaz. vol. 229; p. 1178.

Holoffe, Emile, West Frankfort, Ill. Nut-lock. No. 1,193,789; Aug. 8; Gaz. vol. 229; p. 383.

Holt, Benjamin, assignor to The Holt Manufacturing Company, Stockton, Cal. Traction-engine. No. 1,194,738; Aug. 15; Gaz. vol. 229; p. 757.

Holt, Benjamin, assignor to The Holt Manufacturing Company, Stockton, Cal. Traveling harvester. No. 1,194,739; Aug. 15; Gaz. vol. 229; p. 757.

Holt, Cornelius E., Washingtonville, and P. R. Rauch, assignors to The Leetonia Tool Company, Leetonia, Ohio. Fastener for sectional coal-auger nuts. No. 1,195,018; Aug. 15; Gaz. vol. 229; p. 856.

Holt, Friedrich von, Georgsmarienhütte, near Osnabrück, Germany. Producing an iron alloy rich in phosphorus from inferior finery-slag. No. 1,196,185; Aug. 29; Gaz. vol. 229; p. 1341.

Holt, Herbert H., Holt, Mo. Vending-machine. No. 1,194,021; Aug. 8; Gaz. vol. 229; p. 463.

Holt Manufacturing Company, The. (See Holt, Benjamin, assignor.)

Holt Manufacturing Company, The. (See Wheeler, Nelson A., assignor.)

Holtzhouser, Jacob P., assignor to The Stanley Works, New Britain, Conn. Fastener. No. 1,194,292; Aug. 8; Gaz. vol. 229; p. 557.

Home Club Investment Realty Company, The. (See Parker, Lester A., assignor.)

Honecker, Charles A., Chicago, Ill., assignor to Automatic Utilities Co. Marker for index-cards. No. 1,193,265; Aug. 1; Gaz. vol. 229; p. 156.

Honold, Gottlob, assignor to R. Bosch, Stuttgart, Germany. Lighting system for moving vehicles. No. 1,193,548; Aug. 8; Gaz. vol. 229; p. 294.

Hood, Andrew F., Durango, Colo. Scraper. No. 1,196,113; Aug. 29; Gaz. vol. 229; p. 1315.

Hooker, Leslie E., Barrington, R. I. Metal-tube-extruding machine. No. 1,196,360; Aug. 29; Gaz. vol. 229; p. 1399.

Hooker, Thomas, Syracuse, N. Y. Micrometer-gage. No. 1,193,549; Aug. 8; Gaz. vol. 229; p. 294.

Hooper, Frederick E. (See White and Hooper.)

Hoot, Ernest A., Spokane, Wash. Extensible sleeve-fastener. No. 1,195,357; Aug. 22; Gaz. vol. 229; p. 1013.

Hoover, Amos E. (See Moister, Martin, assignor.)

Hoover, Harry J., Norwood, Ohio. Incinerator. No. 1,194,385; Aug. 15; Gaz. vol. 229; p. 633.

Hoover Suction Sweeper Company, The. (See Spangler, James M., assignor.)

Hopkins, Blake F., assignor to Alliance Securities Company, San Francisco, Cal. Means for distributing liquids. No. 1,196,691; Aug. 29; Gaz. vol. 229; p. 1513.

Hormes, William T., Govans, assignor to S. Himmel, Baltimore, Md. Sectional display-cabinet. No. 1,195,817; Aug. 22; Gaz. vol. 229; p. 1178.

Horn, George. (See Hayes and Horn.)

Hornby, Frank, assignor to Meccano Limited, Liverpool, England. Motor for structural toys. No. 1,196,238; Aug. 29; Gaz. vol. 229; p. 1359.

Hornung, Anton N., Los Angeles, Cal. Means for closing refrigerators. No. 1,193,148; Aug. 1; Gaz. vol. 229; p. 114.

Horstmann, William H., Overbrook, Pa. Shock-absorber. No. 1,195,585; Aug. 22; Gaz. vol. 229; p. 1093.

Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Battery-charging panel. No. 1,194,500; Aug. 15; Gaz. vol. 229; p. 676.

Horton, Bryson D., Detroit, Mich. Electrical switch. No. 1,194,386; Aug. 15; Gaz. vol. 229; p. 634.

Horton, Charles, New York, and A. M. Henry, Larchmont, N. Y.; said Horton assignor to said Henry. Shooting-gallery. No. 1,193,462; Aug. 1; Gaz. vol. 229; p. 225.

Horton, Marcus H. (See Pembroke, George H., assignor.)

Horwitz, Kate, *et al.* (See Musser, George D., assignor.)

Hosea, Dudley H., and F. G. Schulze, Portage, Wis. Pipe-reamer. No. 1,193,391; Aug. 1; Gaz. vol. 229; p. 202.

Hotchkiss, Wallace J., Alpena, S. D. Mower. No. 1,196,239; Aug. 29; Gaz. vol. 229; p. 1359.

Houchin, Alfred W., Kirkwood, N. J. Cut-out switch. No. 1,195,472; Aug. 22; Gaz. vol. 229; p. 1052.

Houghland, Howard J., Texas City, Tex. Figure velocipede. No. 1,193,690; Aug. 8; Gaz. vol. 229; p. 346.

Housholder, William. (See Robertshaw and Housholder.)

Houston, Edward D., Worcester, Mass. Safety-pin. No. 1,192,898; Aug. 1; Gaz. vol. 229; p. 24.

Houston, Kenneth W. (See Fisher and Houston.)

Hoyland, Anton I., Marshall, Minn. Sprocket drive-chain. No. 1,193,550; Aug. 8; Gaz. vol. 229; p. 294.

Howard, Frank H., Reading, Pa. Portable crane. No. 1,193,551; Aug. 8; Gaz. vol. 229; p. 294.

Howard, Henry, Brookline, Mass. Making mineral acids. No. 1,193,552; Aug. 8; Gaz. vol. 229; p. 295.

Howard, Karl S., St. Louis, Mo., and A. F. Howe, Granite City, Ill. Turn-table. No. 1,194,501; Aug. 15; Gaz. vol. 229; p. 676.

Howard, Mentor, Fort Worth, Tex. Electric bath. No. 1,193,018; Aug. 1; Gaz. vol. 229; p. 65.
Howard, Stanley R., Philadelphia, Pa. Automatic stop mechanism for talking-machines. No. 1,193,266; Aug. 1; Gaz. vol. 229; p. 156.
Howe, Andrew F. (See Howard and Howe.)
Howe, Chester C. (See Hunter and Howe.)
Howe and Davidson Company. (See Brown and Davidson, assignors.)
Howell, Arthur E. (See Howell, Charles W. and A. E.)
Howell, Charles W. and A. E., Newark, N. J., assignors to Underwood Typewriter Company, New York, N. Y. Sheet-feeding device. No. 1,196,361; Aug. 29; Gaz. vol. 229; p. 1399.
Howley, James T., *et al.* (See Brignoni, Albert C., assignor.)
Hoyt, Albert M. (See Johansson, Alexander and S. I. G., assignors.)
Hoyt, Daniel, East Orange, assignor of one-half to The National Lock Washer Company, Newark, N. J. Sash-lock. No. 1,195,586; Aug. 22; Gaz. vol. 229; p. 1093.
Hoyt, Homer J., Detroit, Mich., assignor to Morgan & Wright. Tire-inspecting machine. No. 1,193,691; Aug. 8; Gaz. vol. 229; p. 347.
Hubbard, Arthur G., *et al.*, trustees. (See McElwain, James, assignor.)
Hubbard & Co. (See Peirce, Charles L., Jr., assignor.)
Hubenthal, John. (See Fiegel and Hubenthal.)
Huber, Carl A., Rochester, N. Y. Clamping device for tire-chains. No. 1,195,019; Aug. 15; Gaz. vol. 229; p. 857.
Huber, Frederick W., and F. F. Reath, Riverside, Cal. Recovering water-soluble potassium salts from feldspathic rocks or their derivatives in the manufacture of Portland cement. No. 1,194,344; Aug. 8; Gaz. vol. 229; p. 576.
Hubert, Conrad, *et al.* (See Heil, Albrecht, assignor.)
Hudson, Alexander M., New York, N. Y. Sash-fastener. No. 1,194,022; Aug. 8; Gaz. vol. 229; p. 463.
Huebner-Bleistein Patents Company. (See Huebner, William C., assignor.)
Huebner, William C., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Photographic apparatus. No. 1,195,225; Aug. 22; Gaz. vol. 229; p. 962.
Huffman, William H., Bridgewater, Va. Receptacle. No. 1,193,692; Aug. 8; Gaz. vol. 229; p. 347.
Hughes, Chauncey A., and G. W. Miller, Rossville, Ill. Egg tester and crater. No. 1,193,898; Aug. 8; Gaz. vol. 229; p. 421.
Hughes, Davydd C., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill. Type-plate for printing-machines. No. 1,195,226; Aug. 22; Gaz. vol. 229; p. 962.
Hughes, Frederick G., assignor to The New Departure Manufacturing Company, Bristol, Conn. Antifriction-bearing. No. 1,193,619; Aug. 1; Gaz. vol. 229; p. 66.
Hughes, Howard R., assignor to Sharp-Hughes Tool Company, Houston, Tex. Nut-lock. No. 1,194,293; Aug. 8; Gaz. vol. 229; p. 557.
Hughes, Robert R., Jr., New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Folder for sewing-machines. No. 1,194,023; Aug. 8; Gaz. vol. 229; p. 464.
Hughes, Roy T., Kansas City, Mo. Antiskidding tire-chain. No. 1,193,392; Aug. 1; Gaz. vol. 229; p. 202.
Hughey, George W., Springfield, Mo. Wrench. No. 1,195,020; Aug. 15; Gaz. vol. 229; p. 857.
Huising, Garrett H., Chicago, Ill., assignor, by mesne assignments, to Automatic Utilities Co. Card for loose-leaf-index devices. No. 1,194,387; Aug. 15; Gaz. vol. 229; p. 634.
Hull, Foster J., assignor to Thomas W. Pangborn Company, Hagerstown, Md. Sand-blast apparatus. No. 1,196,362; Aug. 29; Gaz. vol. 229; p. 1400.
Hullings, George F., assignor to D. P. Moore, Washington, D. C. Receptacle. No. 1,195,358; Aug. 22; Gaz. vol. 229; p. 1013.
Huls, Spencer S., Oakhill, Kans. Miter-box. No. 1,193,149; Aug. 1; Gaz. vol. 229; p. 115.
Hume, Frank E. (See Wendelburg, Alex, assignor.)
Hume, Thomas J., Kansas City, Kans. Laundry-marking machine. No. 1,196,114; Aug. 29; Gaz. vol. 229; p. 1315.
Humphrey, Samuel, Indiana Harbor, Ind. Rail. No. 1,194,150; Aug. 1; Gaz. vol. 229; p. 115.
Humphreys, Hanna R., Weems, Va. Life raft or boat holding or releasing device. No. 1,196,692; Aug. 29; Gaz. vol. 229; p. 1513.
Hunt, Edward S. (See Fullerton and Hunt.)
Hunt, Helm, Ferris & Company. (See Ferris, Henry L., assignor.)
Hunt, Joseph. (See Aliff, Burk W., assignor.)
Hunten, Augusta, administratrix. (See Hunten, Paul.)
Hunten, Paul, deceased; A. Hunten, administratrix, Somerset, Colo. Honeycomb-section. No. 1,195,990; Aug. 29; Gaz. vol. 229; p. 1271.
Hunter, Alexander W., and C. C. Howe, assignors of one-third to J. L. Hunter, Vandergrift, Pa. Curtain and shade fixture. No. 1,194,842; Aug. 15; Gaz. vol. 229; p. 793.
Hunter, Campbell M., London, England. Atmospheric burner. No. 1,194,740; Aug. 15; Gaz. vol. 229; p. 758.
Hunter, John L. (See Hunter and Howe, assignors.)
Hunter, John R., and H. Küntzler, Wilkes-Barre, Pa., assignors to Adder Machine Company. Centrifugal controller for adding-machines. No. 1,196,363; Aug. 29; Gaz. vol. 229; p. 1400.
Hurley, John W., Washington, D. C. Liquid-cooler. No. 1,194,180; Aug. 8; Gaz. vol. 229; p. 518.
Hurley Machine Company. (See Fisher, Alva J., assignor.)
Husby, Ingvar, St. Paul, Minn. Leveling instrument. No. 1,196,240; Aug. 29; Gaz. vol. 229; p. 1359.
Hutchinson, Robert H., Liverpool, England. Indicating device applicable to vehicles. No. 1,196,457; Aug. 29; Gaz. vol. 229; p. 1433.
Hutchison, Miller R., West Orange, N. J., assignor to Lovell-McConnell Manufacturing Company. Diaphragm-horn. No. 1,192,899; Aug. 1; Gaz. vol. 229; p. 24.
Hutzen, John E., Chicago, Ill. Roll-reducing machine. No. 1,196,241; Aug. 29; Gaz. vol. 229; p. 1359.
Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)
Hyde, Elbert L., Pittsburgh, assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,193,790; Aug. 8; Gaz. vol. 229; p. 384.
Hyde, Henry W., Boston, Mass. Vehicle-spring suspension. No. 1,195,021; Aug. 15; Gaz. vol. 229; p. 857.
Hyde, Roy W., Lakewood, Ohio. Treated stone. No. 1,196,693; Aug. 29; Gaz. vol. 229; p. 1514.
Hydrocarbon Converter Company. (See Stanley, Arthur M., assignor.)
Hyle, Jacob A., Harrisburg, Pa., assignor of one-third to J. A. Twitchell and one-fourth to T. E. Von Dorn, New York, N. Y., and one-sixth to J. M. Ames, Caney, Kans. Metallic railway-tie. No. 1,194,843; Aug. 15; Gaz. vol. 229; p. 793.
Hytrek, Stanislaus W., Stuart, Nebr. Wagon-loading device. No. 1,196,364; Aug. 29; Gaz. vol. 229; p. 1401.
I. B. Kleinert Rubber Company. (See Guinzburg, Ralph K., assignor.)
Ide, Harry H., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Automatic telephone system. No. 1,194,741; Aug. 15; Gaz. vol. 229; p. 758.
Ideal Springless Shade Roller Co. (See Tropp and Rivkin, assignors.)
Ielfield, August, assignor to Columbia Postal Supply Co., Silver Creek, N. Y. Mail-marking machine. No. 1,193,693; Aug. 8; Gaz. vol. 229; p. 347.
Iligan, Carl, Corona, N. Y. Collaret. No. 1,192,900; Aug. 1; Gaz. vol. 229; p. 24.
Iliges, George M. (See Walker and Moses, assignors.)
Illinois Engineering Company. (See Van Inwagen, Frank, assignor.)
Illinois Force Cup & Specialty Company. (See Block, Mandel, assignor.)
Illinois Tool Works. (See Olson, Carl G., assignor.)
Improved Boiler Feed Company, The. (See Moffat, Walter A., assignor.)
Indahl, Mauritz C. (See Bancroft and Indahl.)
Indahl, Mauritz C., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Multiplex composing-machine. No. 1,193,393; Aug. 1; Gaz. vol. 229; p. 202.
Independent Button and Machine Company. (See Brietenstein, Julius G., assignor.)
India Rubber Company, The. (See Welda, Harry, assignor.)
Indianapolis Saddlery Company. (See Hazelworth, George A., assignor.)
Individual Drinking Cup Company. (See Luellen, Lawrence W., assignor.)
Industrial Instrument Company, The. (See Bristol, Edgar H., assignor.)
Industrial Service Company. (See Jaeger, Otto, assignor.)
Ingham, Wendell T., Willimansett, Mass. Lathe-dog. No. 1,195,818; Aug. 22; Gaz. vol. 229; p. 1178.
Ink, Rolla N., San Diego, Cal. Trap. No. 1,196,694; Aug. 29; Gaz. vol. 229; p. 1514.
International Bread Wrapping Machine Company, The. (See Beers, Charles, assignor.)
International Couplers Company. (See White, Walter C., assignor.)
International Egg Company. (See O'Dell, John H., assignor.)
International Harness Machinery Company, The. (See Gnoeth, Emil, assignor.)
International Harvester Corporation. (See Dennis, Samuel K., assignor.)
International Harvester Corporation. (See Johnston, Edward A., assignor.)
International Harvester Company of New Jersey. (See Holland-Letz, Lud, assignor.)
International Harvester Company of New Jersey. (See Merwin and Charles, assignors.)
International Harvester Company of New Jersey. (See Tucker, Woodson C., assignor.)
International Harvester Company of New Jersey. (See Turner, Thomas E., assignor.)
International Money Machine Company. (See Runquist, Gustaf, assignor.)
International Money Machine Company. (See White, Nelson, assignor.)
International Motor Company. (See Masury, Alfred F., assignor.)
International Time Recording Company of New York. (See Bryce, James W., assignor.)

Internationale Neverfall Patentkurbelfenster G. m. b. H. (See Oehring and Heuer, assignors.)
Intertype Corporation. (See Bertram, William E., assignor.)
Invincible Grain Cleaner Company. (See Zimmerman, John B., assignor.)
Irish, David J., New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Liquid-atomizer. No. 1,192,901; Aug. 1; Gaz. vol. 229; p. 25.
Ironclad Silo Company. (See Oberer, Fredolien J., assignor.)
Irwin Auger Bit Company, The. (See McPherson, Elmer T., assignor.)
Irwin, William W., Canton, Ohio. Sheet-metal shear. No. 1,193,020; Aug. 1; Gaz. vol. 229; p. 66.
Isham, Robert M. (See Handy and Isham.)
Isherwood, Albert J. (See Ahlstrom, Frederick, assignor.)
Ives, John F., Cleveland, Ohio. Tire fabric. No. 1,194,388; Aug. 15; Gaz. vol. 229; p. 634.
Ives, John F., Cleveland, Ohio. Cord tire fabric. No. 1,194,389; Aug. 15; Gaz. vol. 229; p. 635.
Ivins, George H. M. (See Roop, Clarence H., assignor.)
J. B. Williams Company, The. (See Williams, Richard S., assignor.)
J. C. Finck Mineral Milling Co. (See De Lore, Casper P., assignor.)
J. D. Riedel Aktiengesellschaft. (See Gans, Robert, assignor.)
J. E. Porter Company. (See Jacobs, William F., assignor.)
J. H. Day Company, The. (See Allison, Daniel K., assignor.)
J. H. White Manufacturing Company. (See White, Edwin L., assignor.)
J. I. Case Threshing Machine Company. (See Krause and Anderson, assignors.)
J. L. Sommer Manufacturing Co. (See Harding, Thomas, assignor.)
J. P. Caulfield Piano Company, The. (See Caulfield, James P., assignor.)
Jacks, Leeander T., and T. W. Bustin, Pheba, Miss. Folding box. No. 1,195,022; Aug. 15; Gaz. vol. 229; p. 857.
Jackson, Caleb, U. S. Navy, and E. W. Morgan, Bremerton, Wash. Door-operating mechanism for automobiles. No. 1,195,473; Aug. 22; Gaz. vol. 229; p. 1052.
Jackson, Clarence W., Dunkirk, assignor of fifty-five one-hundredths to D. F. Mains and twenty-two and one-half one-hundredths to A. D. Rieder, Valier, Mont. Steering-wheel for tractor agricultural machines. No. 1,195,359; Aug. 22; Gaz. vol. 229; p. 1013.
Jackson, Harry A. (See Greenup, Francis M., assignor.)
Jackson, Ray P., Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company. Lightning-arrester. No. 1,194,195; Aug. 8; Gaz. vol. 229; p. 523.
Jackson, Ray P., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Current-rectifier. No. 1,194,196; Aug. 8; Gaz. vol. 229; p. 524.
Jackson, Thomas H., Scranton, Pa. Marionette base-ball performance. No. 1,195,023; Aug. 15; Gaz. vol. 229; p. 858.
Jackson, Uriah S., Lowell, Mass., assignor of one-fourth to E. F. Gowell, Berwick, Me., and one-fourth to W. R. Tebbetts, Somersworth, N. H. Block-signal system. No. 1,196,242; Aug. 29; Gaz. vol. 229; p. 1360.
Jacobs, Albert W., Rochester, N. Y. Bail-holder for lanterns. No. 1,193,151; Aug. 1; Gaz. vol. 229; p. 115.
Jacobs, Ernest H., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,193,694; Aug. 8; Gaz. vol. 229; p. 348.
Jacobs, Ernest H., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,193,695; Aug. 8; Gaz. vol. 229; p. 348.
Jacobs, Ernest H., Schenectady, N. Y., assignor to General Electric Company. Operating mechanism for electric switches. No. 1,193,696; Aug. 8; Gaz. vol. 229; p. 349.
Jacobs, George, Cleveland, assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,195,991; Aug. 29; Gaz. vol. 229; p. 1271.
Jacobs, Henry W., and W. J. Leighty, Topeka, Kans. Means for direct injection of fuel into an internal-combustion motor. No. 1,193,899; Aug. 8; Gaz. vol. 229; p. 421.
Jacobs, William F., assignor to J. E. Porter Company, Ottawa, Ill. Barn-door track. No. 1,193,553; Aug. 8; Gaz. vol. 229; p. 295.
Jacobson, Charles A., Saratoga Springs, N. Y. Vaporizer. No. 1,196,546; Aug. 29; Gaz. vol. 229; p. 1464.
Jaeger, Elizabeth, *et al.* (See Jaeger, Gustav A., assignor.)
Jaeger, Gustav A., assignor of three-fifths to H. Jaeger and two-fifths to E. Jaeger, Morrison, Ill. Pocket for pool-tables. No. 1,192,902; Aug. 1; Gaz. vol. 229; p. 25.
Jaeger, Hattie, *et al.* (See Jaeger, Gustav A., assignor.)
Jaeger, Otto, Elkins Park, assignor, by mesne assignments, to Industrial Service Company, Philadelphia, Pa. Dispensing apparatus. No. 1,195,587; Aug. 22; Gaz. vol. 229; p. 1093.
Jaenichen, Louis, assignor to The Standard Computing Scale Company, Detroit, Mich. Scale. No. 1,195,474; Aug. 22; Gaz. vol. 229; p. 1052.
Jahn, August E. W., New York, N. Y., assignor to Troy Laundry Machinery Company, Ltd. Centrifugal extractor. No. 1,193,697; Aug. 8; Gaz. vol. 229; p. 349.
Jahn, Fredrik W., assignor to General Chemical Company, New York, N. Y. Manufacture of organic-acid anhydrids. No. 1,195,227; Aug. 22; Gaz. vol. 229; p. 962.
Jahnson, Alex H., Hicksville, assignor of one-third to H. Meyer, Roslyn, N. Y. Swimming-machine. No. 1,193,394; Aug. 1; Gaz. vol. 229; p. 203.
James E. Blake Company, The. (See Tuffley, James L., assignor.)
James, Frank H. (See Dawson, Charles O., assignor.)
James H. Watson Company, The. (See Riggin and Lanoue, assignors.)
James, Richard R., Brooklyn, N. Y. Flying-machine. No. 1,195,139; Aug. 15; Gaz. vol. 229; p. 896.
Jansen, Bernardus, Friday Harbor, Wash. Disk-sharpener. No. 1,195,819; Aug. 22; Gaz. vol. 229; p. 1178.
Januchowsky, John, and H. Albert, St. Louis, Mo. Bottle-capping machine. No. 1,193,463; Aug. 1; Gaz. vol. 229; p. 226.
Jarvis, Marshall N., Portland, Conn. Curtain-fastener. No. 1,194,502; Aug. 15; Gaz. vol. 229; p. 676.
Jasmin, Arthur J., Albert Lea, Minn. Adjustable valve-controller. No. 1,194,631; Aug. 15; Gaz. vol. 229; p. 719.
Jawoisch, Bronislaw, Chicago, Ill. Knife or tool. No. 1,194,503; Aug. 15; Gaz. vol. 229; p. 677.
Jefferson, Eugene D., Boston, Mass. Treating fibrous materials. No. 1,192,903; Aug. 1; Gaz. vol. 229; p. 25.
Jeffrey Manufacturing Company, The. (See Wood, Alexander H., assignor.)
Jeffreys, William R., Grangemouth, Scotland. Apparatus for drying barrels and other receptacles. No. 1,195,024; Aug. 15; Gaz. vol. 229; p. 858.
Jehlik, Anton J., Chicago, Ill. Armored vehicle. No. 1,195,680; Aug. 22; Gaz. vol. 229; p. 1127.
Jenkins, Alexander F., assignor to The Alexander Milburn Company, Baltimore, Md. Condensation-trap for acetylene-lighting apparatus. No. 1,194,632; Aug. 15; Gaz. vol. 229; p. 720.
Jenkins, Edward E., Flora, Ill. Mounting for calculating-webs and the like. No. 1,194,390; Aug. 15; Gaz. vol. 229; p. 635.
Jenkins Graphite Lubricating Company, The. (See Jenkins, Samuel M., assignor.)
Jenkins, John J., Los Angeles, Cal. Glove drying and deodorizing apparatus. No. 1,193,152; Aug. 1; Gaz. vol. 229; p. 116.
Jenkins, John V., and E. J. Creighton, Denver, Colo. Concrete truss girder-bridge. No. 1,185,820; Aug. 22; Gaz. vol. 229; p. 1179.
Jenkins, Samuel M., assignor to The Jenkins Graphite Lubricating Company, Louisville, Ky. Force-feed lubricator. No. 1,195,025; Aug. 15; Gaz. vol. 229; p. 858.
Jennings, George G., Whitepine, Colo. Box. No. 1,196,365; Aug. 29; Gaz. vol. 229; p. 1401.
Jennings, Grace W., Medford, Mass. Shield for windows. No. 1,195,681; Aug. 22; Gaz. vol. 229; p. 1128.
Jennings, Victor H., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Cartridge belt or carrier. No. 1,194,335; Aug. 8; Gaz. vol. 229; p. 573.
Jensen, Charles N. (See Barnedt and Jensen.)
Jensen, Joseph L., Richfield, Utah. Beet-blocking machine. No. 1,193,791; Aug. 8; Gaz. vol. 229; p. 384.
Jessen, James, assignor to H. O. Harding, Minneapolis, Minn. Bag closing and tying machine. No. 1,196,459; Aug. 29; Gaz. vol. 229; p. 1433.
Jessen, James, assignor to H. O. Harding, Minneapolis, Minn. Bag closing and tying machine. No. 1,196,460; Aug. 29; Gaz. vol. 229; p. 1434.
Jilly, Louis, Clinton, Iowa. Bottle. No. 1,193,792; Aug. 8; Gaz. vol. 229; p. 384.
Jocksch, Theodore W., Greensboro, Ala. Peanut-picker. No. 1,196,458; Aug. 29; Gaz. vol. 229; p. 1433.
Joerns Motor Manufacturing Co. (See Strand, Andrew, assignor.)
Johanson, Emil G., Rockford, assignor to J. Martenson, Chicago, Ill. Compound prismatic refractor. No. 1,194,294; Aug. 8; Gaz. vol. 229; p. 557.
Johanson, Karl G., Concord Junction, Mass. Folding table. No. 1,194,633; Aug. 15; Gaz. vol. 229; p. 720.
Johansson, Alexander and S. I. G., Gottenborg, Sweden, assignors to A. M. Hoyt, Swampscott, Mass. Machine for sewing on the soles of shoes and the like. No. 1,193,900; Aug. 8; Gaz. vol. 229; p. 422.
Johansson, Sven I. G. (See Johansson, Alexander and S. I. G.)
John Kroder & Henry Reubel Company, The. (See Kroder, John, assignor.)
John Thomson Press Company. (See Thomson, John, assignor.)
John Wildi Evaporated Milk Company, The. (See King, Roy D., assignor.)
Johns, John J., Ponchatoula, La. Collapsible crate. No. 1,194,634; Aug. 15; Gaz. vol. 229; p. 720.
Johnson, Alfred C., Winters, Cal. Chain. No. 1,194,635; Aug. 15; Gaz. vol. 229; p. 720.
Johnson Automatic Scaler Co. (See Johnson, Harry L., assignor.)
Johnson, Axel, Oakland, assignor to American Can Company, San Francisco, Cal. Apparatus for re-forming the flanges of can-bodies. No. 1,196,695; Aug. 29; Gaz. vol. 229; p. 1514.
Johnson, Eric T. (See Lee, Gussie A., assignor.)

Johnson, George E., Worcester, Mass. Grease-cup. No. 1,195,026; Aug. 15; Gaz. vol. 229; p. 859.
Johnson, Harry L., assignor to Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich. Wrapping-machine. No. 1,195,228; Aug. 22; Gaz. vol. 229; p. 962.
Johnson, Harry L., assignor to Johnson Automatic Sealer Company, Limited, Battle Creek, Mich. Carton-sealing machine. No. 1,195,229; Aug. 22; Gaz. vol. 229; p. 963.
Johnson, Irvin W., Cosmopolis, Wash. Setting or guilding device for band resaw-machines. No. 1,193,267; Aug. 1; Gaz. vol. 229; p. 157.
Johnson, J. W., *et al.* (See Taylor, Charles S., assignor.)
Johnson, John D. A., Omaha, Nebr. Sales-book. No. 1,194,742; Aug. 15; Gaz. vol. 229; p. 759.
Johnson, John H., Fay, Okla. Rail-joint. No. 1,195,475; Aug. 22; Gaz. vol. 229; p. 1052.
Johnson, Luke. (See Grindstaff and Johnson.)
Johnson, Oskar E., Alta, Iowa. Starting device for sewing-machines. No. 1,196,461; Aug. 29; Gaz. vol. 229; p. 1434.
Johnson, Otto, La Grange, assignor to Flexible Steel Lacing Co., Chicago, Ill. Lamp-guard. No. 1,195,230; Aug. 22; Gaz. vol. 229; p. 964.
Johnson, Rasmus, *et al.* (See Miller, Andrew B., assignor.)
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Firearm. No. 1,193,268; Aug. 1; Gaz. vol. 229; p. 157.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Firearm. No. 1,194,024; Aug. 8; Gaz. vol. 229; p. 464.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Military shoulder-arm. No. 1,194,504; Aug. 15; Gaz. vol. 229; p. 677.
Johnson, William H., *et al.* (See McCormick, Frank, assignor.)
Johnson, William H., Hilo, Hawaii. Linotype-machine. No. 1,196,547; Aug. 29; Gaz. vol. 229; p. 1464.
Johnston, Edward A., Chicago, Ill., assignor, by mesne assignments, to International Harvester Corporation. Fuel-feed mechanism for internal-combustion engines. No. 1,193,021; Aug. 1; Gaz. vol. 229; p. 66.
Johnston, John, Woonsocket, assignor of one-half to G. H. Bridge, Jr., Providence, R. I. Bobbin holding and gripping device. No. 1,193,901; Aug. 8; Gaz. vol. 229; p. 423.
Johnston, Paul H., Davenport, Iowa. Spectacle or eyeglass mounting. No. 1,196,115; Aug. 29; Gaz. vol. 229; p. 1315.
Joline, Benjamin F., Tottenville, assignor, by mesne assignments, to National Carbon Company, Long Island City, N. Y. Printing mechanism. No. 1,195,992; Aug. 29; Gaz. vol. 229; p. 1271.
Jollvette, Archie M., Greenfield, Mass. Hand or man hole cover. No. 1,194,295; Aug. 8; Gaz. vol. 229; p. 557.
Jones, Alva D., Philadelphia, Pa. Non-resonant music-cabinet. No. 1,196,366; Aug. 29; Gaz. vol. 229; p. 1401.
Jones, Charles J., Portalles, N. Mex. Water-elevator. No. 1,196,696; Aug. 29; Gaz. vol. 229; p. 1514.
Jones, David B. (See Fulton, Charles H., assignor.)
Jones, Fayette. (See Hilliard and Jones.)
Jones, George G., Larue, Pa. Grass and weed destroyer. No. 1,195,027; Aug. 15; Gaz. vol. 229; p. 859.
Jones, Henry V., Newton, Mass., and H. McNally, Richland Center, Wis.; said McNally assignor to said Jones. Combination-tool. No. 1,194,296; Aug. 8; Gaz. vol. 229; p. 558.
Jones, Jonathan. (See Eustege, Thomas P., assignor.)
Jones, John R., Oshkosh, Wis. Trestle. No. 1,194,025; Aug. 8; Gaz. vol. 229; p. 464.
Jones, Joseph M., Cardington, Ohio. Stone-spreader. No. 1,194,197; Aug. 8; Gaz. vol. 229; p. 524.
Jones, J. Moores. (See Wardman, Hallock, assignor.)
Jones, Rees J. (See Bearce and Jones.)
Jones, Richard E., and V. S. Monteith, Hagerstown, Md. Electromagnet. No. 1,193,793; Aug. 8; Gaz. vol. 229; p. 385.
Jones, Russell G., Chicago, Ill. Feeding device for duplicating-machines. No. 1,195,231; Aug. 22; Gaz. vol. 229; p. 964.
Jones, William A. (See Brown and Jones.)
Jones, William K., Wichita, Kans. Infant's apparel. No. 1,195,682; Aug. 22; Gaz. vol. 229; p. 1128.
Jones, William K., Wichita, Kans. Infant's apparel. No. 1,195,683; Aug. 22; Gaz. vol. 229; p. 1128.
Joseph Baker & Sons Limited. (See Prescott, William E., assignor.)
Joseph N. Smith & Company. (See Streberger, John F., assignor.)
Joy, Robert, San Francisco, Cal. Silent door-latch. No. 1,194,636; Aug. 15; Gaz. vol. 229; p. 720.
Joy, Robert, San Francisco, Cal. Silent door-latch. No. 1,194,637; Aug. 15; Gaz. vol. 229; p. 721.
Joyce, John, Oswego, N. Y. Dash-pot. No. 1,195,028; Aug. 15; Gaz. vol. 229; p. 859.
Juarez, José S., Mexico, Mexico. Automobile direction-indicator. No. 1,195,476; Aug. 22; Gaz. vol. 229; p. 1053.
Judd, Earldley C. B., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Closet-seat hinge. No. 1,194,391; Aug. 15; Gaz. vol. 229; p. 635.
Judd, Earldley C. B., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Closet-seat hinge. No. 1,194,392; Aug. 15; Gaz. vol. 229; p. 635.
Judson L. Thomson M'f'g Co. (See Havener, Arthur R., assignor.)
Juengst, Charles A., Croton Falls, N. Y. Book or pamphlet covering machine. No. 1,193,395; Aug. 1; Gaz. vol. 229; p. 203.
Juengst, Charles A., Croton Falls, N. Y. Web feeding and cutting device. No. 1,195,926; Aug. 22; Gaz. vol. 229; p. 1216.
Julian Scholl Company. (See Martin, Herman, assignor.)
Julyan, Frederick C., Cleveland, Ohio. Paper-folding machine. No. 1,196,697; Aug. 29; Gaz. vol. 229; p. 1515.
Jung, Alfred J. (See Macbeth and Jung.)
Jung, Alfred J., North Kensington, London, assignor to Chex Ticket Machines (1914) Limited, Westminster, England. Ticket printing and issuing machine. No. 1,194,026; Aug. 8; Gaz. vol. 229; p. 465.
Jung, John M., assignor of one-third to J. L. Buehl and one-third to N. O. Kenniker, Chicago, Ill. Brush for bottle-washing machines. No. 1,192,904; Aug. 1; Gaz. vol. 229; p. 25.
Junkers, Hugo, Aix-la-Chapelle, Germany. Cooking-chest. No. 1,194,638; Aug. 15; Gaz. vol. 229; p. 721.
K-W Ignition Company, The. (See Williams, Joseph A., assignor.)
Kabelitz, Wilhelm, assignor to Optische Anstalt C. P. Goerz Aktiengesellschaft, Friedenau, near Berlin, Germany. Folding camera. No. 1,196,116; Aug. 29; Gaz. vol. 229; p. 1316.
Kadel, Byers W., and J. A. Pilcher, Roanoke, Va. Railway-car. No. 1,196,462; Aug. 29; Gaz. vol. 229; p. 1435.
Kadow, August, assignor to The Westlake Machine Company, Toledo, Ohio. Air control for automatic machinery. No. 1,195,588; Aug. 22; Gaz. vol. 229; p. 1094.
Kaelble, Karl, New York, N. Y. Transfer-ink. No. 1,194,743; Aug. 15; Gaz. vol. 229; p. 759.
Kahrs, Friman, deceased, M. Kahrs, executrix, East Haddam, Conn. Supply vessel. No. 1,194,744; Aug. 15; Gaz. vol. 229; p. 759.
Kahrs, Marie, executrix. (See Kahrs, Friman.)
Kaiser, William H., Floral Park, N. Y., assignor to Mergenthaler Linotype Company, Producing matrices. No. 1,194,181; Aug. 8; Gaz. vol. 229; p. 518.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Ignition-switch. No. 1,193,698; Aug. 8; Gaz. vol. 229; p. 350.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Calling device. No. 1,195,589; Aug. 22; Gaz. vol. 229; p. 1094.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone switch-hook. No. 1,195,590; Aug. 22; Gaz. vol. 229; p. 1095.
Kalamazoo Loose Leaf Binder Co. (See Farron, George, assignor.)
Kalinowska, Marta, New York, N. Y. Hair-pin. No. 1,194,844; Aug. 15; Gaz. vol. 229; p. 794.
Kammer, Andrew E., Brooklyn, N. Y. Metal-tubing cutter. No. 1,195,591; Aug. 22; Gaz. vol. 229; p. 1095.
Kando, Kalman von, Vado Ligure, Italy, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Electric railway-vehicle. No. 1,194,099; Aug. 8; Gaz. vol. 229; p. 489.
Kando, Kalman von, Vado Ligure, Italy, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Electric railway-vehicle. No. 1,196,186; Aug. 29; Gaz. vol. 229; p. 1341.
Kanst, Edwin A., Chicago, Ill. Tree-irrigator. No. 1,194,027; Aug. 8; Gaz. vol. 229; p. 465.
Kaplan, Ladislav, Clinton, Conn. Calipers. No. 1,194,182; Aug. 8; Gaz. vol. 229; p. 519.
Karl, Joseph M., Roslyn Heights, assignor to Roslyn Specialty Company, Inc., Roslyn, N. Y. Stop-catch. No. 1,195,166; Aug. 15; Gaz. vol. 229; p. 906.
Karl, Joseph M., Roslyn Heights, assignor to Roslyn Specialty Company, Inc., Roslyn, N. Y. Sash-balance. No. 1,195,167; Aug. 15; Gaz. vol. 229; p. 906.
Kartowicz, Cyryl, Pittsburgh, Pa. Domestic laundry appliance. No. 1,194,745; Aug. 15; Gaz. vol. 229; p. 760.
Kasley, Alexander T., Swissvale, Pa. Converter. No. 1,193,485; Aug. 1; Gaz. vol. 229; p. 233.
Kauch, Robert J., Philadelphia, Pa. Automatic train-stop mechanism. No. 1,193,022; Aug. 1; Gaz. vol. 229; p. 67.
Kaufmann, Raymond M., Pittsburgh, and T. M. Freeble, Rochester, Pa. Train-control apparatus. No. 1,195,029; Aug. 15; Gaz. vol. 229; p. 860.
Kaup, Joseph, assignor of one-fourth to S. T. McMillin, St. Louis, Mo. Time-clock. No. 1,196,367; Aug. 29; Gaz. vol. 229; p. 1402.
Kay, Roy L., California, Mo. Safety-envelop. No. 1,194,639; Aug. 15; Gaz. vol. 229; p. 721.
Keator, Edward O., Cincinnati, Ohio. Form work for concrete construction. No. 1,193,023; Aug. 1; Gaz. vol. 229; p. 68.
Keck, George S., Springfield, Ohio. Producing colored lime. No. 1,195,140; Aug. 15; Gaz. vol. 229; p. 897.
Keegan, Frank J., assignor to The Dunlop Rubber Company, Limited, Coventry, England. Manufacture of wheel-rims. No. 1,195,592; Aug. 22; Gaz. vol. 229; p. 1095.
Keeler, Frank P., Theresa, N. Y. Tag-holder. No. 1,194,746; Aug. 15; Gaz. vol. 229; p. 760.

Keeling, Newton, assignor of one-half to J. H. Robinson, Maumee, Ark. Cotton-picker. No. 1,195,030; Aug. 15; Gaz. vol. 229; p. 860.
Keen, Eliot, Brooklyn, assignor to The Aladdin Lamp Corporation, New York, N. Y. Combined mirror and reflector. No. 1,192,905; Aug. 1; Gaz. vol. 229; p. 26.
Keepsafe Company, The. (See Myers, Louis, assignor.)
Keer, James C., Columbus, Ohio. Pattern-clamp. No. 1,193,699; Aug. 8; Gaz. vol. 229; p. 350.
Keffer, Charles E., assignor of one-half to O. N. Prince, Memphis, Tenn. Toy. No. 1,196,548; Aug. 29; Gaz. vol. 229; p. 1464.
Keiffer, Frank E., Manheim, Pa. Nail-leather-heading press. No. 1,194,183; Aug. 8; Gaz. vol. 229; p. 519.
Keim, Lester H., Pittsburgh, Pa., assignor to R. D. Nuttall Company. Flexible coupling. No. 1,194,336; Aug. 8; Gaz. vol. 229; p. 573.
Kelter, Walter O. (See Beamer, Buswell, and Kelter.)
Keith, Charles H. (See Foust, George B. M., assignor.)
Keith, George, assignor of one-half to J. Keith, London, England. Automatic lighting and extinguishing apparatus for gas-lamps. No. 1,193,700; Aug. 8; Gaz. vol. 229; p. 350.
Keith, James. (See Keith, George, assignor.)
Keith, W. A., *et al.* (See Allinger, Frank A., assignor.)
Kellar, William E. (See Moses and Kellar.)
Keller, Will E., Los Angeles, Cal. Stand for traffic officers. No. 1,196,698; Aug. 29; Gaz. vol. 229; p. 1515.
Kelley, Louis R., Philadelphia, assignor to The Furnace Patent Company, Greenwich Point, Philadelphia, Pa. Securing rabble-arms to shafts. No. 1,195,360; Aug. 22; Gaz. vol. 229; p. 1013.
Kellner, Walter, Barmen-Wichlinghausen, Germany, assignor to C. F. and O. J. Ahlstrom, New York, N. Y. Braiding-machine. No. 1,193,554; Aug. 8; Gaz. vol. 229; p. 295.
Kellogg, Daniel P. (See Sheedy and Kellogg.)
Kellogg Switchboard and Supply Company. (See Allen, Joseph S., assignor.)
Kellogg Switchboard and Supply Company. (See Currier, Hiram D., assignor.)
Kellogg Switchboard & Supply Company. (See Ide, Harry H., assignor.)
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard & Supply Company. (See Mueller, George E., assignor.)
Kellogg Switchboard and Supply Company. (See Simpson, Charles A., assignor.)
Kellogg Switchboard and Supply Company. (See Wolf, George D., assignor.)
Kells, Herbert R., New York, N. Y. Insulator. No. 1,194,747; Aug. 15; Gaz. vol. 229; p. 760.
Kelly, Charles E., Providence, R. I. Horseshoe-calk sharpener. No. 1,194,748; Aug. 15; Gaz. vol. 229; p. 760.
Kelly, Dennis B. (See Lucas and Kelly.)
Kelly, John F., assignor to Thomas Maddock's Sons Company, Trenton, N. J. Lavatory-basin. No. 1,195,684; Aug. 22; Gaz. vol. 229; p. 1128.
Kelly, John F., assignor to Thomas Maddock's Sons Company, Trenton, N. J. Flush-pipe housing. No. 1,195,685; Aug. 22; Gaz. vol. 229; p. 1129.
Kelly, John F., assignor to Thomas Maddock's Sons Company, Trenton, N. J. Vitreous-china shower-head. No. 1,195,686; Aug. 22; Gaz. vol. 229; p. 1129.
Kelly, Thomas D., Southend-on-Sea, England. Plastic composition. No. 1,194,184; Aug. 8; Gaz. vol. 229; p. 520.
Kelly, William J., Chicago, Ill., assignor to Autovacuum Refrigerating Company, New Orleans, La. Refrigerant measuring and dispensing device. No. 1,193,555; Aug. 8; Gaz. vol. 229; p. 296.
Kelso, William H., Los Angeles, Cal. Headlight. No. 1,195,361; Aug. 22; Gaz. vol. 229; p. 1014.
Kempf, Henry J., assignor to Package Machinery Company, Springfield, Mass. Wrapping-machine. No. 1,194,505; Aug. 15; Gaz. vol. 229; p. 678.
Kemps, John T., assignor of one-third to H. Fush and one-third to S. E. Smalley, Cuba, Wis. Hat-pin-point-protecting device. No. 1,193,556; Aug. 8; Gaz. vol. 229; p. 296.
Kendall, George H., New York, N. Y. Mowing-machine. No. 1,193,557; Aug. 8; Gaz. vol. 229; p. 296.
Kendall, William G., Newark, N. J., assignor of one-half to I. S. Zeluff, Long Island City, N. Y. Rouge-pad. No. 1,194,185; Aug. 8; Gaz. vol. 229; p. 520.
Kendall, William G., Newark, N. J. Cap for receptacles. No. 1,194,186; Aug. 8; Gaz. vol. 229; p. 520.
Kendall, William G., Newark, N. J. Rouge-box. No. 1,194,187; Aug. 8; Gaz. vol. 229; p. 520.
Kendall, William H. (See Miller, William E., assignor.)
Kener, Edward, Jr., Buffalo, N. Y. Refuse-incinerator. No. 1,194,506; Aug. 15; Gaz. vol. 229; p. 678.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Quad-block for slug-casting machines. No. 1,193,269; Aug. 1; Gaz. vol. 229; p. 158.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,193,558; Aug. 8; Gaz. vol. 229; p. 296.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,193,559; Aug. 8; Gaz. vol. 229; p. 297.
Kennedy, Joseph F. (See Walker and Fischer, assignors.)
Kennedy, Joseph P., Chicago, Ill. Basket-ball goal. No. 1,193,024; Aug. 1; Gaz. vol. 229; p. 68.
Kennedy, Julian, Pittsburgh, Pa. Shaft-coupling. No. 1,194,028; Aug. 8; Gaz. vol. 229; p. 465.
Kennedy, Thomas C. (See Elder and Kennedy.)
Kenney, Frank E., assignor of five-eighths to D. W. Hoelbing, Portland, Oreg. Portable reciprocable hydraulic power device. No. 1,195,141; Aug. 15; Gaz. vol. 229; p. 897.
Kenniker, Nicholas O., *et al.* (See Jung, John M., assignor.)
Kent, Horace E., Dorchester, Mass. Headlight. No. 1,193,396; Aug. 1; Gaz. vol. 229; p. 203.
Keown, John. (See Ludlow and Keown.)
Keppler, Fred J., Buffalo, N. Y. Turbine-engine. No. 1,194,507; Aug. 15; Gaz. vol. 229; p. 678.
Kerby, Joe M. (See Dunn and Kerby.)
Kercher, Arthur J., assignor to Berkeley Electric Cooker Company, Berkeley, Cal. Cooker. No. 1,194,029; Aug. 8; Gaz. vol. 229; p. 466.
Kerckhoff, Daniel C. (See Haines, Frank A., assignor.)
Kerlin, Rudolph E., Cudahy, Wis. Motor-driven wheel. No. 1,193,560; Aug. 8; Gaz. vol. 229; p. 297.
Kermode, John J., Liverpool, England. Apparatus for burning liquid fuel. No. 1,193,701; Aug. 8; Gaz. vol. 229; p. 351.
Kerr Adjustable Strap Company. (See Badger, Oliver L., assignor.)
Kerr, George C., Brainerd, Minn. Fuel-supply-recording device. No. 1,194,640; Aug. 15; Gaz. vol. 229; p. 722.
Kersteter, Charles W., Milwaukee, Wis. Fusible link. No. 1,195,593; Aug. 22; Gaz. vol. 229; p. 1096.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Current-interrupter. No. 1,192,906; Aug. 1; Gaz. vol. 229; p. 26.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Engine-starting device. No. 1,196,243; Aug. 29; Gaz. vol. 229; p. 1360.
Key, Frederick E., St. Louis, Mo. Boiler-plug. No. 1,195,687; Aug. 22; Gaz. vol. 229; p. 1129.
Keyes, Eugene L., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tacking and welt-butting machine. No. 1,194,394; Aug. 15; Gaz. vol. 229; p. 636.
Keyes, Frederick G., and R. B. Brownlee, assignors to Cooper Hewitt Electric Company, Hoboken, N. J. Producing tungsten powder. No. 1,196,699; Aug. 29; Gaz. vol. 229; p. 1515.
Keyes, Robert M., West Allis, Wis. Motor. No. 1,193,397; Aug. 1; Gaz. vol. 229; p. 203.
Keystone Driller Company. (See Downie, Robert M., assignor.)
Kidd, K. L., *et al.* (See Fesenfeld, Herman, assignor.)
Kidder, Wellington P., Boston, Mass., assignor to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,194,845; Aug. 15; Gaz. vol. 229; p. 794.
Kieckhefer Box Company. (See Simpson, Frost V., assignor.)
Kiefer, Adam S., Cleveland, Ohio. Flue. No. 1,196,117; Aug. 29; Gaz. vol. 229; p. 1316.
Kiel, John. (See Ryan and Kiel.)
Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Device to prevent surging in centrifugal compressors. No. 1,194,188; Aug. 8; Gaz. vol. 229; p. 520.
Kilker, John E., assignor to Pyle-National Electric Headlight Company, Chicago, Ill. Steam-turbine. No. 1,193,902; Aug. 8; Gaz. vol. 229; p. 423.
Kilmer, William A., De Kalb, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Semirotary wire-fabric machine. No. 1,195,688; Aug. 22; Gaz. vol. 229; p. 1130.
Kimball, William A. (See Brusseau, Adolphus J., assignor.)
Kimberly-Clark Company. See Paulson, Peter A., assignor.)
Kimes, Hugh W., assignor to The Valle-Kimes Company, Dayton, Ohio. Automatic cut-out for electric motors. No. 1,195,232; Aug. 22; Gaz. vol. 229; p. 964.
Kincaid, Henry S., Bellevue, Mich. Beet-harvesting machine. No. 1,194,189; Aug. 8; Gaz. vol. 229; p. 521.
Kincaid, Horace B., Louisville, Ky. Illuminated license-number. No. 1,193,153; Aug. 1; Gaz. vol. 229; p. 116.
Kinetic Electric Company. (See Tassin, Wirt, assignor.)
King, Horace B., Boerne, Tex. Oil-tank gage. No. 1,194,846; Aug. 15; Gaz. vol. 229; p. 794.
King, Joseph H., Oakland, Cal. Window-wiper. No. 1,195,362; Aug. 22; Gaz. vol. 229; p. 1014.
King, Marian P., Brooklyn, N. Y. Article for household use. No. 1,194,030; Aug. 8; Gaz. vol. 229; p. 466.
King, Roy D., Chicago, assignor to The John Wildi Evaporated Milk Company, Highland, Ill. Can-handling mechanism. No. 1,196,700; Aug. 29; Gaz. vol. 229; p. 1516.
Kingery, Samuel S. (See McCarren, Charles E., assignor.)
Kingston, Frank L., Cleveland, Ohio. Carbureter. No. 1,194,297; Aug. 8; Gaz. vol. 229; p. 558.
Kinnear Manufacturing Company, The. (See McCloud, Edward H., assignor.)
Kinoshita, Yokichi, Boston, Mass. Hinge structure for screen-sections. No. 1,196,244; Aug. 29; Gaz. vol. 229; p. 1361.
Kintner, Charles J. (See Rennerfeldt, Gustaf, assignor.)

Kintner, Samuel M., *et al.*, receivers. (See Kroger, Fred H., assignor.)

Kintner, Samuel M., *et al.*, receivers. (See Weagant, Roy A., assignor.)

Kintzel, Joseph, Hutchinson, Kans. Thread-cutter. No. 1,195,822; Aug. 22; Gaz. vol. 229; p. 1180.

Kirby, James B., Cleveland, Ohio. Handle-switch for suction-cleaners. No. 1,195,363; Aug. 22; Gaz. vol. 229; p. 1015.

Kirby, Joseph M., and B. E. Hartson, Boulder, Colo. Cattle-guard for railways. No. 1,193,561; Aug. 8; Gaz. vol 229; p. 298.

Kirby, Joseph M., and B. E. Hartson, Boulder, Colo. Cattle-guard. No. 1,193,562; Aug. 8; Gaz. vol. 229; p. 298.

Kirby, Thomas P., assignor of one-fourth to J. G. Blake, Canon City, Colo. Railway-tie. No. 1,193,398; Aug. 1; Gaz. vol. 229; p. 204.

Kirchhoff, Joseph, The Dalles, Oreg. Attachment for motor-vehicles. No. 1,193,154; Aug. 1; Gaz. vol. 229; p. 116.

Kirk, Alva H., Minneapolis, Minn. Perforation-gage. No. 1,194,749; Aug. 15; Gaz. vol. 229; p. 761.

Kirk, Edwin, London, England. Audible signaling device for railway-working. No. 1,194,190; Aug. 8; Gaz. vol. 229; p. 522.

Kirkpatrick, William B. (See Daniels and Kirkpatrick.)

Kirkwood, John, Lenox, Mass. Ice-creeper. No. 1,194,191; Aug. 8; Gaz. vol. 229; p. 522.

Kirschbraun, Lester, Chicago, Ill. Asphaltic product and making the same. No. 1,194,750; Aug. 15; Gaz. vol. 229; p. 761.

Kitchen, John F., assignor to The Spirella Company, Meadville, Pa. Machine for uncoiling and straightening metal strips. No. 1,194,641; Aug. 15; Gaz. vol. 229; p. 722.

Kittrell, Hinton G., Mount Pleasant, Tenn. Coin-holder. No. 1,194,192; Aug. 8; Gaz. vol. 229; p. 522.

Kitts, Willard A., Jr., New York, N. Y. Air-valve control. No. 1,196,368; Aug. 29; Gaz. vol. 229; p. 1402.

Kizeski, John W., Chicago, Ill. Street-car fender. No. 1,194,847; Aug. 15; Gaz. vol. 229; p. 795.

Klassen, Robert A. (See Kneese and Klassen.)

Klauber, Laurence M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Soldering metals. No. 1,196,118; Aug. 29; Gaz. vol. 229; p. 1316.

Klauder-Weldon Dyeing Machine Company. (See Benosch, Joseph, assignor.)

Kleckler, Henry, assignor to Curtiss Aeroplane & Motor Corporation, Buffalo, N. Y. Fuselage for aeroplanes. No. 1,195,142; Aug. 15; Gaz. vol. 229; p. 897.

Kleeberg, Sydney H., New York, N. Y. Fountain shaving-brush. No. 1,194,642; Aug. 15; Gaz. vol. 229; p. 723.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Attaching device for lamp-sockets, &c. No. 1,193,025; Aug. 1; Gaz. vol. 229; p. 68.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,194,345; Aug. 8; Gaz. vol. 229; p. 577.

Klenk, Gottlieb, assignor to The Defiance Pressed Steel Co., Defiance, Ohio. Sheet-metal box. No. 1,193,155; Aug. 1; Gaz. vol. 229; p. 117.

Klette, Kurt, Dusseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Gun with adjustable cranked axletree. No. 1,194,031; Aug. 8; Gaz. vol. 229; p. 467.

Kline, Jacob B., assignor of one-half to C. R. Paul, Thurman, Iowa. Scoop end-gate. No. 1,194,032; Aug. 8; Gaz. vol. 229; p. 467.

Kling, Andrew H., and C. E. Foerch, Clinton, Conn. Heat-indicator for journal-bearings. No. 1,196,701; Aug. 29; Gaz. vol. 229; p. 1516.

Klugh, Paul B., assignor to The Cable Company, Chicago, Ill. Punching-machine. No. 1,195,477; Aug. 22; Gaz. vol. 229; p. 1053.

Knapp Electric and Novelty Co. (See Bergmann, Carl, Jr., assignor.)

Knapp, Moses A., Oakland, Cal. Rock-drill. No. 1,195,478; Aug. 22; Gaz. vol. 229; p. 1053.

Kneese, George A., South San Francisco, and R. A. Klassen, San Francisco, Cal. Curb-plate. No. 1,195,689; Aug. 22; Gaz. vol. 229; p. 1130.

Knight, William R., Belleville, assignor to St. Mungo Manufacturing Company of America, Newark, N. J. Playing-ball. No. 1,194,751; Aug. 15; Gaz. vol. 229; p. 761.

Knoll, Julius C., Erie, Pa. Sheet-metal pole. No. 1,195,993; Aug. 29; Gaz. vol. 229; p. 1272.

Knottenbelt, Herman W., Brussels, Belgium. Treating petroleum and shale oils. No. 1,194,033; Aug. 8; Gaz. vol. 229; p. 467.

Knowles, Edward R., New York, N. Y., assignor to Mercantile Advertising Company. Electric sign. No. 1,193,563; Aug. 8; Gaz. vol. 229; p. 298.

Knurck, John G., Woodhaven, N. Y. Envelop or wrapper. No. 1,196,245; Aug. 29; Gaz. vol. 229; p. 1361.

Koch, Bernard F., assignor to Angsten-Koch Company, Chicago, Ill. Cycle-lock. No. 1,194,034; Aug. 8; Gaz. vol. 229; p. 467.

Koch, Charles F., Cincinnati, Ohio. Tile sizing and grading machine. No. 1,194,035; Aug. 8; Gaz. vol. 229; p. 467.

Kogan, Michael, Lawrenceville, Ill. Resilient wheel. No. 1,196,702; Aug. 29; Gaz. vol. 229; p. 1516.

Kohlhepp, John W., Chicago, Ill., assignor to The Allbright-Nell Company. Hog-scraping machine. No. 1,192,907; Aug. 1; Gaz. vol. 229; p. 26.

Kohlhepp, John W., Chicago, Ill., assignor to The Allbright-Nell Company. Dehairing-machine. No. 1,192,908; Aug. 1; Gaz. vol. 229; p. 27.

Kohnle, Frederick, Dayton, Ohio, assignor, by mesne assignments, to The Monarch Tag Company. Price-tag. No. 1,194,508; Aug. 15; Gaz. vol. 229; p. 679.

Kohout, George A., assignor to Shear-Klean Grate Company, Chicago, Ill. Furnace-grate. No. 1,196,246; Aug. 29; Gaz. vol. 229; p. 1361.

Kohut, Michael J., Brooklyn, assignor to S. H. Pomeroy Company, Inc., New York, N. Y. Bolt. No. 1,195,594; Aug. 22; Gaz. vol. 229; p. 1096.

Koken, Walter F., St. Louis, Mo. Internal-combustion engine. No. 1,193,903; Aug. 8; Gaz. vol. 229; p. 423.

Kolb, Adalbert, Charlottenburg-Westend, Germany, assignor to The Permutit Company, New York, N. Y. Producing chromium-containing silicates. No. 1,193,794; Aug. 8; Gaz. vol. 229; p. 385.

Kolb, Adalbert, Charlottenburg-Westend, Germany, assignor to The Permutit Company, New York, N. Y. Base exchange, &c. No. 1,193,795; Aug. 8; Gaz. vol. 229; p. 385.

Kolff, Petrus V., Moylan, Pa., assignor, by mesne assignments, to The Electric Tachometer Corporation. Magneto-generator. No. 1,193,270; Aug. 1; Gaz. vol. 229; p. 158.

Kollner, Hans H., Chicago, Ill. Roller attachment for sleds. No. 1,195,233; Aug. 22; Gaz. vol. 229; p. 965.

Kolomyjczuk, Nykola, Iroquois Falls, Ontario, Canada. Motor-sled. No. 1,193,026; Aug. 1; Gaz. vol. 229; p. 69.

Kolp, Abram M., Saluuga, Pa. Feeder for baling-machines. No. 1,195,479; Aug. 22; Gaz. vol. 229; p. 1054.

Kopczyk, Peter, Arcadia, Pa. Spring-shackle. No. 1,193,156; Aug. 1; Gaz. vol. 229; p. 117.

Kordick, Frank. (See Kordick, John E. and F.)

Kordick, John E. and F., Bridgewater, Iowa. Hay-carrier attachment. No. 1,196,247; Aug. 29; Gaz. vol. 229; p. 1362.

Kordick, John E. and F., Bridgewater, Iowa. Hay-carrier. No. 1,196,248; Aug. 29; Gaz. vol. 229; p. 1362.

Korud, Petro, Cleveland, Ohio. Milk-bottle dispenser No. 1,193,027; Aug. 1; Gaz. vol. 229; p. 69.

Kosovsky, Jacob, New York, N. Y. Clothes-pin. No. 1,194,509; Aug. 15; Gaz. vol. 229; p. 679.

Koster, Anthony C., assignor to C. C. Tiedemann, South Bend, Ind. Carpet-beater. No. 1,194,395; Aug. 15; Gaz. vol. 229; p. 637.

Kosutz, John, and J. Bunta, Akron, Ohio. Tire-unwrapping machine. No. 1,196,249; Aug. 29; Gaz. vol. 229; p. 1362.

Kraetzer, Albert, Chicago, Ill. Tank-head. No. 1,194,848; Aug. 15; Gaz. vol. 229; p. 795.

Krakau, Harry T., assignor to The National Malleable Castings Company, Cleveland, Ohio. Engine-coupling. No. 1,193,486; Aug. 1; Gaz. vol. 229; p. 233.

Kraker, George M., assignor to Kraker Pen Co., Kansas City, Mo. Lever-filler fountain-pen. No. 1,194,510; Aug. 15; Gaz. vol. 229; p. 679.

Kraker Pen Co. (See Kraker, George M., assignor.)

Kramer, Herman, New York, N. Y. Coin-registering device for telephones. No. 1,195,234; Aug. 22; Gaz. vol. 229; p. 965.

Kraus, Albert L., assignor to Kraus Millett & Company, Peabody, Mass. Buffing-wheel. No. 1,195,235; Aug. 22; Gaz. vol. 229; p. 966.

Kraus Millett & Company. (See Kraus, Albert L., assignor.)

Krause, Norman R., and R. Anderson, assignors to J. I. Case Threshing Machine Company, Racine, Wis. Oil-can. No. 1,193,157; Aug. 1; Gaz. vol. 229; p. 118.

Kraut, Henry, Summit, N. J. Tool. No. 1,196,703; Aug. 29; Gaz. vol. 229; p. 1517.

Krauth, Albert, Hamilton, Ohio. Autographic register. (Reissue.) No. 14,189; Aug. 29; Gaz. vol. 229; p. 1537.

Krem, John, Philadelphia, Pa. Life-preserving garment. No. 1,195,365; Aug. 22; Gaz. vol. 229; p. 1015.

Krenmayr, Johann, Rorschacherberg, assignor to Firm of H. Levy, Rorschach, Switzerland. Plaiting and bobbin machine. No. 1,196,463; Aug. 29; Gaz. vol. 229; p. 1435.

Kreusler, Hans, Berlin-Wilmersdorf, H. Gerdien, Berlin-Schmargendorf, and M. von Pirani, Berlin-Wilmersdorf, assignors to Siemens & Halske A.-G., Berlin, Germany. Incandescent lamp. No. 1,194,643; Aug. 15; Gaz. vol. 229; p. 723.

Kreuscher, William L. (See Walker and Kreuscher.)

Kreutzberg, Ernst, Alhambra, Ill. Sanitary milk-can cover. No. 1,193,564; Aug. 8; Gaz. vol. 229; p. 299.

Kroder, John, assignor to The John Kroder & Henry Reubel Company, New York, N. Y. Extension curtain-rod. No. 1,196,704; Aug. 29; Gaz. vol. 229; p. 1517.

Kroger, Fred H., Brooklyn, N. Y., assignor to S. M. Kintner and H. M. Barrett, receivers, Pittsburgh, Pa. Spark-gap. No. 1,192,909; Aug. 1; Gaz. vol. 229; p. 27.

Krogsrud, Edward, New York, N. Y. Horseshoe. No. 1,195,366; Aug. 22; Gaz. vol. 229; p. 1016.

Kroll, Adolphe V. M., Luxemburg. Agglomerating finely-divided granular or friable materials. No. 1,196,705; Aug. 29; Gaz. vol. 229; p. 1517.

Kron, Walter L., assignor of one-third to J. S. McDoniels and one-third to W. McDoniels, La Fayette, Ind. Protector for automobile-radiators. No. 1,193,702; Aug. 8; Gaz. vol. 229; p. 351.

Kronthal, Louis, New York, N. Y. Adjustable sweat-band for headwear. No. 1,194,193; Aug. 8; Gaz. vol. 229; p. 523.

Kropf, Herbert F., *et al.* (See Rayfield, Charles L., assignor.)

Kropp, Carl, Deuben, near Dresden, Germany. Air-propeller and the like. No. 1,194,037; Aug. 8; Gaz. vol. 229; p. 468.

Krotz, Alvaro S., Janesville, Wis. Disk cultivator. No. 1,196,549; Aug. 29; Gaz. vol. 229; p. 1465.

Kruchoski, Frank, Chisholm, Minn. Non-refillable bottle. No. 1,195,031; Aug. 15; Gaz. vol. 229; p. 861.

Krueger, Theodore H., New York, N. Y. Moistening device for gummed stickers or labels. No. 1,194,752; Aug. 15; Gaz. vol. 229; p. 762.

Krug, Philip F., New York, N. Y. Moving-picture machine. No. 1,194,753; Aug. 15; Gaz. vol. 229; p. 762.

Kruger, Harry B. (See Stranders, Julien, assignor.)

Krummel, Louis C., Clinton, Conn., assignor to Continental Machine Company, Syracuse, N. Y. Automatic flanging-machine. No. 1,194,038; Aug. 8; Gaz. vol. 229; p. 469.

Krummel, Louis C., Clinton, Conn., assignor to Continental Can Company, Inc., Syracuse, N. Y. Device for feeding can ends to a seaming mechanism. No. 1,194,039; Aug. 8; Gaz. vol. 229; p. 469.

Krunfus, Herman F. (See Krunfus, William H. and H. F.)

Krunfus, William H. and H. F., Barrington, Ill. Straw-carrier. No. 1,193,565; Aug. 8; Gaz. vol. 229; p. 299.

Krupp, Leo A., assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio. Power-transmitting mechanism for traction units. No. 1,196,119; Aug. 29; Gaz. vol. 229; p. 1317.

Kruse, Theodore H., assignor of one-half to F. A. Cantrail, Arvada, Colo. Fastening for railway-rails. No. 1,194,511; Aug. 15; Gaz. vol. 229; p. 680.

Kubach, William L., and E. J. Edwards, Cleveland, Ohio, assignors to General Electric Company. Electric-circuit-controlling device. No. 1,194,194; Aug. 8; Gaz. vol. 229; p. 523.

Kuehner, Charles P., Providence, R. I. Tube-clamp. No. 1,196,120; Aug. 29; Gaz. vol. 229; p. 1317.

Kuhn, Anna O., San Francisco, Cal. Aseptic appliance. No. 1,196,250; Aug. 29; Gaz. vol. 229; p. 1363.

Kuhn, Harry A., Pittsburgh, Pa. Mining coal. No. 1,194,298; Aug. 8; Gaz. vol. 229; p. 559.

Kuhn, William O., Weber, Wash. Driving mechanism for motor-vehicles. No. 1,194,040; Aug. 8; Gaz. vol. 229; p. 470.

Kulicke, Frederick W. (See Nachod and Kulicke.)

Kullmer, Charles J., Syracuse, N. Y. Timing device. No. 1,196,550; Aug. 29; Gaz. vol. 229; p. 1465.

Kundtz, Theodor. (See Cogger, William B., assignor.)

Kunert, Felix, Offenbach-on-the-Main, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Compounds for use in the production of dyestuffs. No. 1,193,566; Aug. 8; Gaz. vol. 229; p. 300.

Kuntz, Frank A., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Heating and ventilating system. No. 1,193,271; Aug. 1; Gaz. vol. 229; p. 158.

Kuntzendorf, Charles A., Chicago, Ill. Wardrobe-trunk. No. 1,196,551; Aug. 29; Gaz. vol. 229; p. 1466.

Küntzler, Henry. (See Hunter and Küntzler.)

Kunzelmann, John, Baltimore, Md. Window-sash. No. 1,195,690; Aug. 22; Gaz. vol. 229; p. 1130.

Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,196,369; Aug. 29; Gaz. vol. 229; p. 1403.

L. D. Caulk Co. (See Poetschke and Grier, assignors.)

La Moy, John H., assignor of one-half to B. W. Sprague, Glens Falls, N. Y. Type-writer attachment. No. 1,195,033; Aug. 15; Gaz. vol. 229; p. 861.

La Pearl, James H., San Francisco, Cal. Changeable sign. No. 1,195,369; Aug. 22; Gaz. vol. 229; p. 1016.

La Porte, Norbert M., Baltimore, Md. Constant-level fuel-feed. No. 1,196,552; Aug. 29; Gaz. vol. 229; p. 1466.

La Reice, Lee D., Havre, Mont. Attachment for lanterns. No. 1,195,037; Aug. 15; Gaz. vol. 229; p. 862.

La Rue, William D. (See Murray and La Rue.)

La Vine, David C. (See Sholley, William M., assignor.)

Laas, Edward, assignor to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 1,193,904; Aug. 8; Gaz. vol. 229; p. 423.

Labrador y Guijarro, Picardo, Habana, Cuba. Filter. No. 1,195,000; Aug. 15; Gaz. vol. 229; p. 849.

Lacourse, Richard, Anaconda, Mont. Air-feeding attachment for coal-ranges and the like. No. 1,196,738; Aug. 29; Gaz. vol. 229; p. 1531.

Ladd, Nettie M., Leesburg, Ohio. Stove-mat. No. 1,193,399; Aug. 1; Gaz. vol. 229; p. 204.

Ladishensky, Ilias, Kieff, Russia. Fire and water tube boiler. No. 1,195,367; Aug. 22; Gaz. vol. 229; p. 1016.

Lafontaine, Mederic, Charlemagne, Quebec, Canada. Work-holder. No. 1,196,370; Aug. 29; Gaz. vol. 229; p. 1403.

Lafore, John A., Ardmore, Pa. Method of and apparatus for compressing elastic fluid. No. 1,195,691; Aug. 22; Gaz. vol. 229; p. 1130.

Laforest, Edward F., Nashua, N. H. Combined bed and crib. No. 1,193,272; Aug. 1; Gaz. vol. 229; p. 159.

Lagali, Leo. (See Smith and Lagali.)

Laguionie, Joseph, Sevran, France. Seal. No. 1,193,158; Aug. 1; Gaz. vol. 229; p. 118.

Laing, Edward M., Highland Park, Ill. Expansion-joint for concrete pavements or the like. No. 1,195,368; Aug. 22; Gaz. vol. 229; p. 1016.

Lake, George W., Rumford, assignor to F. W. Smith, Providence, R. I. Gas-burner for water-heaters. No. 1,194,396; Aug. 15; Gaz. vol. 229; p. 637.

Lally Commercial Body Company. (See Lally, George W., assignor.)

Lally, George W., Boston, Mass., assignor to Lally Commercial Body Company. Automobile coal-truck. No. 1,193,028; Aug. 1; Gaz. vol. 229; p. 70.

Lamb, Erwin W., Lansing, Mich. Portable electric lamp. No. 1,195,032; Aug. 15; Gaz. vol. 229; p. 861.

Lamb, John H., Washington, Ind. Electric time-switch. No. 1,193,159; Aug. 1; Gaz. vol. 229; p. 118.

Lamb, Willis E., assignor to Automatic Electric Company, Chicago, Ill. Automatic telephone trunking system. No. 1,193,160; Aug. 1; Gaz. vol. 229; p. 118.

Lambert, Albert E., Albany, N. Y. Union garment. No. 1,195,595; Aug. 22; Gaz. vol. 229; p. 1096.

Lamson Company, The. (See Burns, James M., assignor.)

Lamson Company, The. (See Pearsall, Albert W., assignor.)

Lancaster, Cornelius G. (See Ward, Mizell B., assignor.)

Lanchester, Frederick W., Edgbaston, Birmingham, England. Piano-action. No. 1,194,754; Aug. 15; Gaz. vol. 229; p. 763.

Landers, William H., New Almaden, assignor of one-half to Pacific Foundry Company, San Francisco, Cal. Apparatus for recovering quicksilver from its ore. No. 1,195,236; Aug. 22; Gaz. vol. 229; p. 966.

Landis, Walter S., Niagara Falls, N. Y., assignor to F. S. Washburn, Nashville, Tenn. Oxidizing ammonia. No. 1,193,796; Aug. 8; Gaz. vol. 229; p. 385.

Landis, Walter S., Niagara Falls, N. Y., assignor to F. S. Washburn, Nashville, Tenn. Process of and apparatus for oxidizing ammonia. No. 1,193,797; Aug. 8; Gaz. vol. 229; p. 385.

Landis, Walter S., New York, N. Y., assignor to F. S. Washburn, Nashville, Tenn. Catalyzer apparatus for oxidizing ammonia. No. 1,193,798; Aug. 8; Gaz. vol. 229; p. 386.

Landis, Walter S., New York, N. Y., assignor to F. S. Washburn, Nashville, Tenn. Platinum catalyzer. No. 1,193,799; Aug. 8; Gaz. vol. 229; p. 386.

Landis, Walter S., New York, N. Y., assignor to F. S. Washburn, Nashville, Tenn. Catalyzer for oxidizing ammonia. No. 1,193,800; Aug. 8; Gaz. vol. 229; p. 386.

Lane, Albert D. (See Leavitt and Lane.)

Lane, Elmer E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Blank-fitting machine. No. 1,195,823; Aug. 22; Gaz. vol. 229; p. 1180.

Lane, Oscar A., and D. Guice, Greenville, Ala. Box or crate. No. 1,193,567; Aug. 8; Gaz. vol. 229; p. 300.

Lang, Anthony E., Buffalo, N. Y. Sanitary garbage-receiver. No. 1,195,034; Aug. 15; Gaz. vol. 229; p. 862.

Lang, W. J., *et al.* (See Ducklow, Walter G., assignor.)

Langdale, Stonay L., *et al.* (See Feltz, Charles F., assignor.)

Langenheim, Hay, Pittsburgh, Pa. Water-heater. No. 1,194,397; Aug. 15; Gaz. vol. 229; p. 637.

Langenheim, Hay, Pittsburgh, Pa. Automatic water-heater. No. 1,194,398; Aug. 15; Gaz. vol. 229; p. 638.

Langley, Bert, Grantwood, N. J. Apparatus for feeding envelops. No. 1,196,706; Aug. 29; Gaz. vol. 229; p. 1518.

Langslow, Stratton C. (See Lattig, Charles I., assignor.)

Langstaff, John E., New York, N. Y. Boat-hull. No. 1,195,035; Aug. 15; Gaz. vol. 229; p. 862.

Lanoue, James J. (See Riggin and Lanoue.)

Lanston Monotype Machine Company. (See Bancroft and Indahl, assignors.)

Lanston Monotype Machine Company. (See Hockman, Charles C., assignor.)

Lanston Monotype Machine Company. (See Indahl, Mauritz C., assignor.)

Lanston Monotype Machine Company. (See Pierpont, Frank H., assignor.)

Lanston Monotype Machine Company. (See Waltz, William L., assignor.)

Lanzendorfer, George, Braintree, Mass. Preparing shaped fibers. No. 1,193,703; Aug. 8; Gaz. vol. 229; p. 352.

Lapworth, Charles A., West Bridgewater, assignor to The Lapworth Webbing Company, Brockton, Mass. Elastic fabric. No. 1,195,036; Aug. 15; Gaz. vol. 229; p. 862.

Lapworth Webbing Company, The. (See Lapworth, Charles A., assignor.)

Lard, Allan E., Washington, D. C. Shaft for golf-clubs. No. 1,195,994; Aug. 29; Gaz. vol. 229; p. 1272.

Larner, Chester W., Cleveland, Ohio. Hydraulic valve. No. 1,195,237; Aug. 22; Gaz. vol. 229; p. 966.

Larrabee, William M., Waupun, Wis. Cuff-button. No. 1,194,041; Aug. 8; Gaz. vol. 229; p. 470.

Larrimer, Jesse P. (See Leonard and Larrimer.)

Larsen, Fred J., Grand Island, Nebr. Pressure-regulating valve for pumps. No. 1,196,121; Aug. 29; Gaz. vol. 229; p. 1317.

Larsen, Peter, Cattaraugus, N. Y. Cheese-hoop and follower. No. 1,195,370; Aug. 22; Gaz. vol. 229; p. 1017.

Larsen, Peter, Cattaraugus, N. Y. Cheese-hoop follower. No. 1,195,371; Aug. 22; Gaz. vol. 229; p. 1017.
Larson, Axel F., assignor to Marquette Piano Company, Chicago, Ill. Crank-shaft. No. 1,194,042; Aug. 8; Gaz. vol. 229; p. 470.
Larson, Axel R., Bridgeport, Conn. Quadruple-needle sewing-machine. No. 1,193,029; Aug. 1; Gaz. vol. 229; p. 70.
Larson, Lloyd A., Dwight, N. D. Fence and post. No. 1,195,238; Aug. 22; Gaz. vol. 229; p. 967.
Lasché, Alfred J. M., Milwaukee, Wis. Pickling compound. No. 1,194,755; Aug. 15; Gaz. vol. 229; p. 763.
Laszlo, Anton, Charlottenburg, Germany. Electrical display apparatus. No. 1,195,239; Aug. 22; Gaz. vol. 229; p. 967.
Latham Machinery Company. (See Brown, Byron E., assignor.)
Latimer, Herbert G. (See Borgfeldt, Richard, assignor.)
Lattig, Charles I., Glenside, assignor to Lattig, Shimer Mfg. Co., Bethlehem, Pa. Combination desk-chair. No. 1,195,240; Aug. 22; Gaz. vol. 229; p. 967.
Lattig, Charles I., assignor to S. C. Langslow, Rochester, N. Y. Reclining-chair. No. 1,196,371; Aug. 29; Gaz. vol. 229; p. 1403.
Lattig, Shimer Mfg. Co. (See Lattig, Charles I., assignor.)
Laubenthal, Fred N. (See Flora, Charles L., assignor.)
Laudiero, Nicholas, New York, N. Y. Reversing mechanism for copper-roller-polishing machines. No. 1,193,400; Aug. 1; Gaz. vol. 229; p. 204.
Lauenroth, Walter F., Brooklyn, N. Y. Towel-rack. No. 1,193,401; Aug. 1; Gaz. vol. 229; p. 205.
Laughlin, Elmyr A., Oregon, Ill. Side bearing. No. 1,193,030; Aug. 1; Gaz. vol. 229; p. 70.
Laughlin, Elmyr A., Chicago, Ill. Milking-machine. No. 1,193,402; Aug. 1; Gaz. vol. 229; p. 205.
Laughlin, George F., Chicago, Ill. Car construction. No. 1,195,692; Aug. 22; Gaz. vol. 229; p. 1131.
Laurin, Laurentius, Lysekil, Sweden. Lubrication means. No. 1,194,644; Aug. 15; Gaz. vol. 229; p. 724.
Lauritzen, John C., Akron, Ohio. Separable core for making pneumatic-tire casings. No. 1,195,480; Aug. 22; Gaz. vol. 229; p. 1054.
Lausterer, William J., Jamestown, N. Y., assignor, by mesne assignments, to Empire Voting Machine Company. Voting-machine. No. 1,194,337; Aug. 8; Gaz. vol. 229; p. 574.
Lauterbach, Otto J., New Orleans, La. Tie-clasp. No. 1,196,251; Aug. 29; Gaz. vol. 229; p. 1363.
Lavigne, Joseph P., Detroit, Mich. Valve-handle. No. 1,193,905; Aug. 8; Gaz. vol. 229; p. 424.
Law, Charles R., Houston, Tex. Car journal-box. No. 1,196,553; Aug. 29; Gaz. vol. 229; p. 1467.
Lawrence, Albert L. (See Curtis, Roy E., assignor.)
Lawrence, Isabelle, Kansas City, Kans. Utensil-scraper. No. 1,192,910; Aug. 1; Gaz. vol. 229; p. 27.
Lawson, Clarence, *et al.* (See Breeden, Benjamin B., assignor.)
Lawson, Oscar L., Lynn, assignor of one-half to C. Anderson, Lowell, Mass. Lock-stitch sewing-machine. No. 1,194,512; Aug. 15; Gaz. vol. 229; p. 680.
Lawson, Oscar L., Lynn, assignor of one-half to C. Anderson, Lowell, Mass. Stitch-forming mechanism for shoe-sewing machines. No. 1,194,514; Aug. 15; Gaz. vol. 229; p. 680.
Lawson, Oscar L., Lynn, assignor of one-half to C. Anderson, Lowell, Mass. Loop-spreader for sewing-machines. No. 1,194,515; Aug. 15; Gaz. vol. 229; p. 681.
Lawson, Oscar L., Lynn, assignor of one-half to C. Anderson, Lowell, Mass. Thread-measuring device. No. 1,194,516; Aug. 15; Gaz. vol. 229; p. 681.
Lawson, Oscar L., and J. H. Reed, Lynn, Mass. Loop-spreader for sewing-machines. No. 1,194,513; Aug. 15; Gaz. vol. 229; p. 680.
Lawton, Stanley W., New York, N. Y. Photo-play orchestral director. No. 1,194,517; Aug. 15; Gaz. vol. 229; p. 681.
Laycock, Arthur M., Kingston, Pa. Roller-bearing. No. 1,194,043; Aug. 8; Gaz. vol. 229; p. 471.
Le Blanc, Aristide L., New Orleans, La. Washing-machine. No. 1,195,039; Aug. 15; Gaz. vol. 229; p. 863.
Le Grand, Ole S., Rollag, Minn. Chisel and punch holder. No. 1,196,252; Aug. 29; Gaz. vol. 229; p. 1363.
Le Sieur, St. Vrain, New Athens, assignor to The Le Sieur Vacuum Can Manufacturing Company, East St. Louis, Ill. Vacuum milk-can. No. 1,195,243; Aug. 22; Gaz. vol. 229; p. 969.
Le Sieur Vacuum Can Manufacturing Company, The. (See Le Sieur, St. Vrain, assignor.)
Lea, Charles, Dorchester, Mass., assignor to American Warp Drawing Machine Company. Machine for perforating pattern-sheets. No. 1,196,707; Aug. 29; Gaz. vol. 229; p. 1518.
Leatherland, Walter I., Alexandria, assignor of one-half to J. S. Francis, Richmond, Va. Record-book. No. 1,195,038; Aug. 15; Gaz. vol. 229; p. 863.
Leavitt, Henry E., and A. D. Lane, Oakland, Cal. Cooling apparatus. No. 1,194,518; Aug. 15; Gaz. vol. 229; p. 682.
Ledbetter, Katherine B., Redmond, Oreg. Outdoor bed. No. 1,196,554; Aug. 29; Gaz. vol. 229; p. 1467.
Lederer, Leonhard, Sulzbach, Germany. Product resembling celluloid and producing the same. No. 1,195,040; Aug. 15; Gaz. vol. 229; p. 864.
Lee, Billie J. (See Austen and Lee.)
Lee, Gussie A., assignor of one-half to E. T. Johnson, Omaha, Nebr. Oil-burner. No. 1,194,519; Aug. 15; Gaz. vol. 229; p. 682.
Lee, Henry J., assignor of three-fifteenths to H. J. Bertley and four-fifteenths to E. F. Gray, Scranton, Pa. Package-tie. No. 1,196,555; Aug. 29; Gaz. vol. 229; p. 1467.
Lee, Joseph L., Carbondale, Pa. Screen. No. 1,193,273; Aug. 1; Gaz. vol. 229; p. 159.
Lee, Lee R., Zalma, Mo. Land-roller and clod-crusher. No. 1,196,464; Aug. 29; Gaz. vol. 229; p. 1436.
Leeds, Morris E., assignor to Leeds & Northrup Company, Philadelphia, Pa. Composite resistance. No. 1,192,911; Aug. 1; Gaz. vol. 229; p. 28.
Leeds & Northrup Company. (See Leeds, Morris E., assignor.)
Leetonia Tool Company, The. (See Holt and Rauch, assignors.)
Lefebvre, William C., Tucson, Ariz. Protractor. No. 1,193,801; Aug. 8; Gaz. vol. 229; p. 387.
Legat, William J., and J. T. Dugan, Pittsburgh, Pa. Closure for garbage-receptacles and the like. No. 1,195,481; Aug. 22; Gaz. vol. 229; p. 1054.
Lehane, Robert C. (See Byrne and Lehane.)
Lehmann, Firm of Ernst P. (See Lucas, Paul, assignor.)
Leighty, William J. (See Jacobs and Leighty.)
Leininger, Harry E., Chicago, Ill. Portable flash-lamp. No. 1,193,031; Aug. 1; Gaz. vol. 229; p. 71.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Feed for liquid-treating devices. No. 1,195,596; Aug. 22; Gaz. vol. 229; p. 1097.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Milking-machine. No. 1,195,995; Aug. 29; Gaz. vol. 229; p. 1272.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Milking-machine. No. 1,195,996; Aug. 29; Gaz. vol. 229; p. 1273.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Milking-machine. No. 1,195,997; Aug. 29; Gaz. vol. 229; p. 1273.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Milking-machine. No. 1,195,998; Aug. 29; Gaz. vol. 229; p. 1274.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Milking-machine. No. 1,195,999; Aug. 29; Gaz. vol. 229; p. 1274.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Milking-machine. No. 1,196,000; Aug. 29; Gaz. vol. 229; p. 1275.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Milking-machine. No. 1,196,001; Aug. 29; Gaz. vol. 229; p. 1275.
Lemb, William, Brooklyn, N. Y. Furnace-door-arch construction. No. 1,192,912; Aug. 1; Gaz. vol. 229; p. 28.
Lemley, Luther F., Strasburg, Va. Line pin or fastener. No. 1,196,556; Aug. 29; Gaz. vol. 229; p. 1467.
Lemon, Carl W. (See Canfield and Lemon.)
Lemon, Clayton, *et al.* (See Ash, Jesse E., assignor.)
Lemp, Samuel A. (See Chebrou and Lemp.)
Lenard, Ferdinand, Chicago, Ill. Chair. No. 1,193,802; Aug. 8; Gaz. vol. 229; p. 387.
Lenderoth, Arnold W. (See Fox and Lenderoth.)
Lenders, Adolph W. H., Cedar Rapids, Iowa. Apparatus for freeing lump-starch from adhering dust or powder. No. 1,193,274; Aug. 1; Gaz. vol. 229; p. 160.
Lenders, Adolph W. H., Cedar Rapids, Iowa. Germ-separator. No. 1,194,399; Aug. 15; Gaz. vol. 229; p. 638.
Lendle, Carl R., Chicago, Ill. Combined skirt and coat hanger. No. 1,195,041; Aug. 15; Gaz. vol. 229; p. 864.
Lenkerd, George W., Indiana, Pa. Wall construction. No. 1,196,557; Aug. 29; Gaz. vol. 229; p. 1468.
Lenz, John M., and T. E. Regan, Grand Island, Nebr. Sharpener. No. 1,196,558; Aug. 29; Gaz. vol. 229; p. 1468.
Leo, Paul, Elizabeth, N. J. Match-holder. No. 1,196,002; Aug. 29; Gaz. vol. 229; p. 1276.
Leon, Karl O., Stockholm, Sweden. Means for preventing attacks of torpedoes and the like. No. 1,195,042; Aug. 15; Gaz. vol. 229; p. 864.
Leonard, George I., assignor to Leonard Rotary Pump Corporation, Los Angeles, Cal. Refrigerating apparatus. No. 1,193,161; Aug. 1; Gaz. vol. 229; p. 119.
Leonard, Lewis A., New York, and J. P. Larrimer, Brooklyn, N. Y. Producing iron of high grade from ordinary cast-iron. No. 1,194,756; Aug. 15; Gaz. vol. 229; p. 763.
Leonard Rotary Pump Corporation. (See Leonard, George I., assignor.)
Leonard, Zenas B., Cleveland, Ohio. Spring-cambering machine. No. 1,195,241; Aug. 22; Gaz. vol. 229; p. 968.
Leonard, Zenas B., Cleveland, Ohio. Cambering and quenching apparatus. No. 1,195,242; Aug. 22; Gaz. vol. 229; p. 968.
Leslie, Alta M., and J. C. Singleton, assignors to Dearborn Duster Company, Chicago, Ill. Mop. No. 1,196,465; Aug. 29; Gaz. vol. 229; p. 1436.
Leslie, Raymond C., and E. J. K. Schmidt, assignors of one-third to P. A. Boyce, Paulding, Ohio. Road-grader. No. 1,194,400; Aug. 15; Gaz. vol. 229; p. 638.
Levalley, Christopher W., Milwaukee, Wis. Transmission-gearing. No. 1,194,299; Aug. 8; Gaz. vol. 229; p. 559.
Levalley, Christopher W., Milwaukee, Wis. Transmission-gearing. No. 1,194,300; Aug. 8; Gaz. vol. 229; p. 559.

Levalley, Christopher W., Milwaukee, Wis. Transmission-gearing. No. 1,194,301; Aug. 8; Gaz. vol. 229; p. 560.
Leveen, Swan J., assignor to Trio Manufacturing Company, Rock Island, Ill. Controller-check. No. 1,193,464; Aug. 1; Gaz. vol. 229; p. 226.
Levin, Edward, New York, N. Y. Garment-form. No. 1,196,559; Aug. 29; Gaz. vol. 229; p. 1468.
Levy-Dorn, Max. (See Arnold and Levy-Dorn.)
Levy, Firm of Henry. (See Krenmayr, Johann, assignor.)
Lewellen, Darcy E. (See Reeves, Lewellen, and Everroad.)
Lewis, Fitz James, Corozal, Canal Zone. Hose and pipe coupling. No. 1,193,162; Aug. 1; Gaz. vol. 229; p. 119.
Lewis, Harry A., Norristown, Pa. Automatic release. No. 1,195,824; Aug. 22; Gaz. vol. 229; p. 1180.
Lewis, Harry F., Ford City, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Laying sheet-glass. No. 1,194,520; Aug. 15; Gaz. vol. 229; p. 682.
Lewis, Isaac N., U. S. Army, assignor to The Automatic Arms Company, Buffalo, N. Y. Gas-regulator and trap for automatic gas-operated firearms. No. 1,195,603; Aug. 22; Gaz. vol. 229; p. 1131.
Lewis, Isabel L. (See Casler, Herman, assignor.)
Lewis, John F., assignor of one-half to C. A. Baumgartner, Philadelphia, Pa. Lubricator. No. 1,195,694; Aug. 22; Gaz. vol. 229; p. 1131.
Lewis, John F., assignor of one-half to C. A. Baumgartner, Philadelphia, Pa. Lubricator. No. 1,195,695; Aug. 22; Gaz. vol. 229; p. 1132.
Lewis, Robert D. (See McWhirk, Lewis, and Desson.)
Lewis, William V., Kansas City, Mo. Fastening device for wheels. No. 1,195,482; Aug. 22; Gaz. vol. 229; p. 1055.
Libby, McNeill & Libby. (See Reiner, Andrew L., assignor.)
Lidback, George H., administrator. (See Lidback, John A., assignor.)
Lidback, John A., deceased, assignor, by mesne assignments, of one-eighth to G. H. Lidback; G. H. Lidback, Portland, Me., administrator. Sausage-linking machine. No. 1,195,043; Aug. 15; Gaz. vol. 229; p. 864.
Lidzbarsky, Nathan, Brooklyn, N. Y. Finger-ring. No. 1,195,244; Aug. 22; Gaz. vol. 229; p. 969.
Lieberknecht, William C., Bisbee, Ariz., assignor to Mergenthaler Linotype Company. Slug-casting machine. No. 1,193,275; Aug. 1; Gaz. vol. 229; p. 160.
Liefeld, Benjamin F., Los Angeles, Cal. Music-recorder. No. 1,194,302; Aug. 8; Gaz. vol. 229; p. 560.
Lifvendahl, Axel F., Chicago, Ill. Mop-wringer. No. 1,195,696; Aug. 22; Gaz. vol. 229; p. 1133.
Lilly, Eugene G. (See Allen and Lilly.)
Lincoln Company, The. (See Lincoln, John C., assignor.)
Lincoln, John C., assignor to The Lincoln Company, Cleveland, Ohio. Variable-speed electric motor. No. 1,194,645; Aug. 15; Gaz. vol. 229; p. 724.
Linden, Lucien, Brussels, Belgium, assignor to W. J. Stewart, Belfast, Ireland. Treating liquids. No. 1,194,646; Aug. 15; Gaz. vol. 229; p. 724.
Lindgren, Alexus C., Moline, Ill., assignor to Moline Plow Company. Seeding-machine. No. 1,195,483; Aug. 22; Gaz. vol. 229; p. 1055.
Lindgren, Frank O., assignor to J. Washburn, Minneapolis, Minn. Machine for crimping and tying sacks. No. 1,196,466; Aug. 29; Gaz. vol. 229; p. 1436.
Lindner, Arthur E., Brooklyn, N. Y. Apparatus for cutting thread in sewing-machines. No. 1,193,906; Aug. 8; Gaz. vol. 229; p. 424.
Lindstrom, Lawrence A., Jamestown, N. Y. Storage-file. No. 1,194,401; Aug. 15; Gaz. vol. 229; p. 639.
Lindstrom, Victor, Muskogee, Okla. Locomotive-grate shaker. No. 1,195,484; Aug. 22; Gaz. vol. 229; p. 1055.
Link-Belt Company. (See Pierce, Harold S., assignor.)
Linotype and Machinery Limited. (See Holliwell and Whittaker, assignors.)
Linster, Theodore, Neillsville, Wis. Drying-reel. No. 1,193,032; Aug. 1; Gaz. vol. 229; p. 71.
Lipiner, Elias, assignor to H. G. Poison, New York, N. Y. Wrapping-paper-roll-printing machine. No. 1,192,913; Aug. 1; Gaz. vol. 229; p. 29.
Lippincott, Wallace, Philadelphia, Pa. Baby-carrier. No. 1,196,003; Aug. 29; Gaz. vol. 229; p. 1276.
Lippitt, Elihu, assignor to Grand Rapids Underwear Company, Grand Rapids, Mich. Needle-bed for knitting-machines. No. 1,193,568; Aug. 8; Gaz. vol. 229; p. 300.
Lipsius, Samuel, New York, N. Y. Raised-printing apparatus. No. 1,194,647; Aug. 15; Gaz. vol. 229; p. 725.
Liss, Selman, *et al.* (See Sherman and Rivkin, assignors.)
Litot, Francis E. J., Wilkinsburg, Pa. Soldering compound. No. 1,194,648; Aug. 15; Gaz. vol. 229; p. 725.
Littauer, Ludwig, *et al.* (See Wiberg, Peter E., assignor.)
Little, Charles S., Harrison City, Pa. Combined shade-roller and curtain-pole support. No. 1,193,403; Aug. 1; Gaz. vol. 229; p. 206.
Liverance, Frank E., Jr., Grand Rapids, Mich., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,195,168; Aug. 15; Gaz. vol. 229; p. 906.
Llewellyn, Ernest A., Wilton, Me. Moccasin. No. 1,195,825; Aug. 22; Gaz. vol. 229; p. 1181.
Llewellyn, Frederick T., Montclair, assignor to Carnegie Steel Company, Hoboken, N. J. Steel-concrete sheet-piling. No. 1,193,033; Aug. 1; Gaz. vol. 229; p. 72.
Llewellyn, William H., Brooklyn, and A. G. Olney, assignors to The Centerfreeze Ice Process Company, New York, N. Y. Ice-making apparatus. No. 1,193,569; Aug. 8; Gaz. vol. 229; p. 301.
Loach, William, assignor to The Pedlar People Limited, Oshawa, Ontario, Canada. Machine for making metal fabric. No. 1,196,004; Aug. 29; Gaz. vol. 229; p. 1276.
Lochman, Dean E., Boston, Mass. Razor-stropping device. No. 1,194,402; Aug. 15; Gaz. vol. 229; p. 639.
Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Roller-bearing for side and end strain. No. 1,193,276; Aug. 1; Gaz. vol. 229; p. 161.
Lockwood, Nelson A., Ogden, Utah. Apparatus for the gaseous treatment of saccharine juices. No. 1,195,044; Aug. 15; Gaz. vol. 229; p. 865.
"Locomobile" Company of America, The. (See Riker, Andrew L., assignor.)
Locomotive Stoker Company, The. (See Street, Clement F., assignor.)
Locomotive Stoker Company, The. (See Street and Lower, assignors.)
Loeb, Rudolf, Camden, N. J. Sewing-machine. No. 1,193,803; Aug. 8; Gaz. vol. 229; p. 387.
Loeb, Rudolf, Camden, N. J. Embroidering. No. 1,194,521; Aug. 15; Gaz. vol. 229; p. 683.
Loehr, Miles E., Warsaw, Ind. Pump and cleaner for acetylene-gas generators. No. 1,193,907; Aug. 8; Gaz. vol. 229; p. 424.
Loewenthal, Ben, *et al.* (See Wilhelm, Olive P., assignor.)
Logan, George, Washington, D. C. Signal-light for automobiles. No. 1,195,372; Aug. 22; Gaz. vol. 229; p. 1017.
Logan, Harry B., assignor of one-half to T. J. Logan, Beaucoup, Ill. Device for overcoming dead-centers. No. 1,193,804; Aug. 8; Gaz. vol. 229; p. 388.
Logan, Thomas J. (See Logan, Harry B., assignor.)
Logwood, Charles V., and C. F. Elwell, Palo Alto, Cal. Space telegraphy. No. 1,195,485; Aug. 22; Gaz. vol. 229; p. 1056.
Lohmiller, Harry, Rahway, N. J. Combined elevating device and shock-absorber. No. 1,193,570; Aug. 8; Gaz. vol. 229; p. 301.
Lokey, Charles W., Birmingham, Ala. Dental fastening for removable bridges and bridge-plates. No. 1,193,034; Aug. 1; Gaz. vol. 229; p. 72.
Lombardo, Charles, Waterford, N. J. Noodle-cutter. No. 1,195,486; Aug. 22; Gaz. vol. 229; p. 1056.
Lombardo, Giovanni, White Plains, N. Y. Paper-dispensing apparatus. No. 1,196,372; Aug. 29; Gaz. vol. 229; p. 1403.
Long, George F., Elmhurst, assignor to G. Piel, New York, N. Y. Flexible shaft. No. 1,192,914; Aug. 1; Gaz. vol. 229; p. 29.
Long, George F., Elmhurst, assignor to G. Piel, New York, N. Y. Flexible shafting. No. 1,193,277; Aug. 1; Gaz. vol. 229; p. 161.
Long, Guy C., Timber Lake, S. D. Automatic adjusting mechanism for tractor-guides. No. 1,195,373; Aug. 22; Gaz. vol. 229; p. 1018.
Long, John R., Akron, Ohio. Wrench. No. 1,193,163; Aug. 1; Gaz. vol. 229; p. 119.
Long, John R., Orrville, Ohio. Vise. No. 1,196,560; Aug. 29; Gaz. vol. 229; p. 1468.
Long, John T., *et al.* (See Andreas, Frank O., assignor.)
Long, Leander S., Pittsburgh, Pa. Toy wheel. No. 1,193,805; Aug. 8; Gaz. vol. 229; p. 388.
Long, Sidney L., assignor to Pence Mailing Machine Company, Minneapolis, Minn. Stamp-feeding mechanism. No. 1,194,403; Aug. 15; Gaz. vol. 229; p. 640.
Lonzo, William, Fitchburg, assignor of one-half to J. A. Smith, Worcester, Mass. Smash-preventer. No. 1,193,164; Aug. 1; Gaz. vol. 229; p. 120.
Look, Warren B., assignor to Art Metal Construction Company, Jamestown, N. Y. Library-stack construction. No. 1,195,374; Aug. 22; Gaz. vol. 229; p. 1018.
Loomis, Harry T., Brooklyn, N. Y. Apparatus for applying an ornamental configuration to material. No. 1,194,849; Aug. 15; Gaz. vol. 229; p. 795.
Loomis, Howard H., Quirigua, Guatemala. Pruning device for banana culture. No. 1,194,044; Aug. 8; Gaz. vol. 229; p. 471.
Lopez, Pete, Tuolumne, Cal. Wheel. No. 1,193,806; Aug. 8; Gaz. vol. 229; p. 388.
Lord, Frederick W., New York, N. Y. Tennis-court marker. No. 1,193,571; Aug. 8; Gaz. vol. 229; p. 301.
Lord, Frederick W., New York, N. Y. Boundary-line marker. No. 1,195,697; Aug. 22; Gaz. vol. 229; p. 1133.
Lorentzen, Gustave A. (See Steely, Blake, and Lorentzen.)
Lorenz, William A., Hartford, Conn. Sheet-separating machine. No. 1,192,915; Aug. 1; Gaz. vol. 229; p. 29.
Losch, Walter, Topton, Pa. Cutting-tool. No. 1,195,826; Aug. 22; Gaz. vol. 229; p. 1181.
Loth, August, Brookfield, Wis. Antispreading device for rails. No. 1,193,572; Aug. 8; Gaz. vol. 229; p. 301.
Lots, Joseph F., Spokane, Wash. Non-refillable bottle. No. 1,194,649; Aug. 15; Gaz. vol. 229; p. 725.
Lott, Clarence C., New York, N. Y. Vibrating sign. No. 1,195,375; Aug. 22; Gaz. vol. 229; p. 1018.
Lott, Hermann H., St. Louis, Mo. Link for bracelets or the like. No. 1,192,916; Aug. 1; Gaz. vol. 229; p. 30.
Lott, Hermann H., St. Louis, Mo. Link for bracelets or the like. No. 1,192,917; Aug. 1; Gaz. vol. 229; p. 30.

Lott, Hermann H., St. Louis, Mo. Jewelry. No. 1,192,918; Aug. 1; Gaz. vol. 229; p. 31.
Lott, John B., Anderson, Ind. Means for connecting railway-rails to cement foundations. No. 1,193,573; Aug. 8; Gaz. vol. 229; p. 302.
Lotterhand, Jason C., New York, N. Y., assignor to Addometer Corporation. Printing mechanism for adding-machines. (Reissue.) No. 14,185; Aug. 22; Gaz. vol. 229; p. 1226.
Louch, Hay T., London, England. Motor-goggles. No. 1,194,198; Aug. 8; Gaz. vol. 229; p. 524.
Louden Machinery Company. (See Louden and Neller, assignors.)
Louden, William, Fairfield, Iowa. Cattle-stanchion. No. 1,193,035; Aug. 1; Gaz. vol. 229; p. 72.
Louden, William, and A. H. Neller, assignors to Louden Machinery Company, Fairfield, Iowa. Cattle-stanchion. No. 1,194,199; Aug. 8; Gaz. vol. 229; p. 524.
Lovell-McConnell Manufacturing Company. (See Hutchison, Miller R., assignor.)
Lovell-McConnell Manufacturing Company. (See Proctor, George A., assignor.)
Lovett, Thomas J., assignor to Copper Process Company, Chicago, Ill. Grinding-mill. No. 1,194,757; Aug. 15; Gaz. vol. 229; p. 763.
Lowder, Lillian C., Indianapolis, Ind. Bed-pillow. No. 1,194,200; Aug. 8; Gaz. vol. 229; p. 525.
Lowell, Ellis E., Woodstock Valley, Conn. Flue-cleaner. No. 1,196,467; Aug. 29; Gaz. vol. 229; p. 1437.
Lower, Nathan M. (See Street and Lower.)
Lower, William W., Tyrone, Pa. Valve. No. 1,196,561; Aug. 29; Gaz. vol. 229; p. 1469.
Lowes, Clarence M., and F. D. Ammen, Flushing, N. Y.; said Ammen assignor to said Lowes. Sealing device for collecting-wagons. No. 1,195,245; Aug. 22; Gaz. vol. 229; p. 969.
Lowry, John W., Chicago, Ill. Lubricant-testing machine. No. 1,194,850; Aug. 15; Gaz. vol. 229; p. 796.
Lowy, Morris, New York, N. Y. Folding cot. No. 1,196,253; Aug. 29; Gaz. vol. 229; p. 1363.
Lubold, William A., Gratz, Pa. Car-lock for mine-cages. No. 1,195,045; Aug. 15; Gaz. vol. 229; p. 865.
Lucas, Melvin H., and D. B. Kelly, Portland, Oreg. Cigar-holder. No. 1,195,046; Aug. 15; Gaz. vol. 229; p. 865.
Lucas, Paul, Berlin-Friedenau, assignor to Firm of P. Lehmann, Brandenburg-on-the-Havel, Germany. Toy cannon. No. 1,195,597; Aug. 22; Gaz. vol. 229; p. 1097.
Luce, Thomas C., Stratford, assignor to American Chain Company, Incorporated, Bridgeport, Conn. Extension-head lifting-jack. No. 1,193,278; Aug. 1; Gaz. vol. 229; p. 161.
Lucke, George A., assignor of one-third to F. C. Weber, Baltimore, Md. Stopper for lavatory-fixtures. No. 1,195,827; Aug. 22; Gaz. vol. 229; p. 1182.
Luckwaldt, Daniel, Chicago, Ill. Operating mechanism for washing-machines. No. 1,196,122; Aug. 29; Gaz. vol. 229; p. 1318.
Ludlow, Charles, Norwood, Ohio, and J. Keown, Newport, Ky. Gas-burner. No. 1,195,047; Aug. 15; Gaz. vol. 229; p. 866.
Ludlow, George M., Chicago, Ill., assignor to The Computing Scale Company, Dayton, Ohio. Dispensing apparatus. No. 1,193,704; Aug. 8; Gaz. vol. 229; p. 352.
Ludwick, Wayne D., Tacoma, Wash., assignor to Electric Heating Company. Induction-heater. No. 1,193,404; Aug. 1; Gaz. vol. 229; p. 206.
Ludwig Hupfeld Aktiengesellschaft. (See Hennig and Bajde, assignors.)
Luedke, Gustav P., Chatham, Ill. Apparatus for utilizing the heated fumes from a smelter or ore-furnace. No. 1,196,123; Aug. 29; Gaz. vol. 229; p. 1318.
Luellen, Lawrence W., assignor to Individual Drinking Cup Company, New York, N. Y. Machine for making containers. No. 1,193,574; Aug. 8; Gaz. vol. 229; p. 302.
Luellen, Lawrence W., Mountain Lakes, N. J., assignor to Individual Drinking Cup Company, New York, N. Y. Package-forming machine. No. 1,194,045; Aug. 8; Gaz. vol. 229; p. 471.
Lum, Walter O., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-control system. No. 1,196,124; Aug. 29; Gaz. vol. 229; p. 1319.
Lum, Walter O., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-control system. No. 1,196,125; Aug. 29; Gaz. vol. 229; p. 1319.
Lumière, Louis, Lyon, France. Violin-bridge. No. 1,193,279; Aug. 1; Gaz. vol. 229; p. 162.
Lummis, Charles W., Worcester, Mass. Ingot-mold. No. 1,192,919; Aug. 1; Gaz. vol. 229; p. 31.
Lundahl, Fred A., Moline, Ill. Baling-machine. No. 1,196,126; Aug. 29; Gaz. vol. 229; p. 1319.
Lundell, Alben E., assignor to Western Electric Company, Incorporated, New York, N. Y. Automatic telephone system. No. 1,194,851; Aug. 15; Gaz. vol. 229; p. 796.
Lundgren, Charles A., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,195,598; Aug. 22; Gaz. vol. 229; p. 1097.
Lundgren, Charles A., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,195,599; Aug. 22; Gaz. vol. 229; p. 1098.
Lundin, Carl V., San Francisco, Cal. Vault-light. No. 1,195,048; Aug. 15; Gaz. vol. 229; p. 866.
Lunger, John A., High Bridge, N. J. Means for locating and guiding rail holding and locking spikes. No. 1,193,280; Aug. 1; Gaz. vol. 229; p. 162.
Luth, Fred J. (See Wear and Maginnis, assignors.)
Luttrell, Rufus J., Whitley township, Moultrie county, Ill. Stanchion. No. 1,194,046; Aug. 8; Gaz. vol. 229; p. 472.
Lüttringhaus, Arthur, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Vat dyes and making them. No. 1,196,127; Aug. 29; Gaz. vol. 229; p. 1320.
Lynch, Eugene V., New York, N. Y. Rail-spike. No. 1,194,047; Aug. 8; Gaz. vol. 229; p. 472.
Lynch, Herbert E., Brooklyn, N. Y. Telephone instrument. No. 1,196,562; Aug. 29; Gaz. vol. 229; p. 1469.
Lynch, Walter G., Roanoke Rapids, N. C. Circuit-closer. No. 1,193,705; Aug. 8; Gaz. vol. 229; p. 352.
Lyndon, George W. (See McLean, William T., assignor.)
Lynn, John H., Copiay, Pa. Sectional spring-tire. No. 1,195,049; Aug. 15; Gaz. vol. 229; p. 866.
Lyon Metallic Manufacturing Company. (See Bales and O'Connor, assignors.)
Lyons, William J., Dublin, Ireland. Electric-telegraph receiving apparatus of the selective type. No. 1,193,807; Aug. 8; Gaz. vol. 229; p. 389.
Lyth, Paul W. (See Burman and Lyth.)
Lytton, Jarard W., assignor to Lytton Manufacturing Corporation, Franklin, Va. Trap. No. 1,195,944; Aug. 22; Gaz. vol. 229; p. 1221.
Lytton Manufacturing Corporation. (See Lytton, Jarard W., assignor.)
MacAllister, Thomas C., New York, N. Y. Street-railway crossing. No. 1,195,700; Aug. 22; Gaz. vol. 229; p. 1134.
MacDonald, William H., Elmwood, N. Y. Hay-tedder for mowing-machines. No. 1,194,528; Aug. 15; Gaz. vol. 229; p. 685.
MacDonald, Wilson P., Montreal, Quebec, Canada, assignor, by mesne assignments, to General Baking Company, New York, N. Y. Label. No. 1,195,377; Aug. 22; Gaz. vol. 229; p. 1019.
MacDougall, Abraham J. R., Brooklyn, N. Y. Moving-picture machine. No. 1,196,709; Aug. 29; Gaz. vol. 229; p. 1519.
MacGahan, Paul, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,194,202; Aug. 8; Gaz. vol. 229; p. 525.
MacGahan, Paul, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,194,203; Aug. 8; Gaz. vol. 229; p. 526.
MacKusick, Albert R. (See Baird, George E., assignor.)
MacMillan, Arthur W., assignor of one-half to A. H. Graves, Chicago, Ill. Calculating device. No. 1,195,702; Aug. 22; Gaz. vol. 229; p. 1135.
MacNicoll, Donald. (See Cockburn and MacNicoll.)
Macbeth, James C. H., and A. J. Jung, Westminster, assignors to The Wireless Press, Limited, London, England. Codes, ciphers, and the like. No. 1,195,701; Aug. 22; Gaz. vol. 229; p. 1134.
Macfadden, Bernarr, New York, N. Y. Double-decked car. No. 1,196,568; Aug. 29; Gaz. vol. 229; p. 1471.
Macfarlane, Oliver P. (See Randall, Edgar L., assignor.)
Machlet, George F., Elizabeth, N. J. Pyrometer. No. 1,193,911; Aug. 8; Gaz. vol. 229; p. 426.
Mackley, A. P., *et al.* (See Sweet, Allen H., assignor.)
Macy, Frank M. (See Martin and Macy.)
Madagascar Minerals Syndicate Limited, The. (See Sulman and Picard, assignors.)
Mader, Nickolas P., Beaumont, Cal. Belt-fastener. No. 1,196,374; Aug. 29; Gaz. vol. 229; p. 1404.
Madison, Benjamin F. (See Zimmerman, John, assignor.)
Maegly, George B., Kansas City, Mo. Valve mechanism for hydrocarbon-motors. No. 1,195,703; Aug. 22; Gaz. vol. 229; p. 1135.
Maes, Jules. (See Coburn and Davis, assignors.)
Magalhaes, Frank V. (See Murray and Magalhaes.)
Magee, John N. (See Reed, Chase C., assignor.)
Maginnis, Frank J. (See Wear and Maginnis.)
Magnard, Marius, New York, N. Y. Making a pyrotechnical composition. (Reissue.) No. 14,177; Aug. 1; Gaz. vol. 229; p. 239.
Maguth, Michael J., Carlstadt, N. J. Automobile-bumper. No. 1,194,405; Aug. 15; Gaz. vol. 229; p. 640.
Mahan, Robert A., Jonesboro, Ark., assignor of one-half to W. J. Baker, Newport, Ky. Fixture for electric incandescent lamps. No. 1,193,579; Aug. 8; Gaz. vol. 229; p. 304.
Mahon, Alexander, Fairfax, Va., assignor of one-half to J. P. Coon, Washington, D. C. Brooder-heater. No. 1,194,338; Aug. 8; Gaz. vol. 229; p. 574.
Mahoney, Daniel H., assignor to Mahoney Railroad Ditching Machine Co., Vincennes, Ind. Ditching-machine. No. 1,194,204; Aug. 8; Gaz. vol. 229; p. 526.
Mahoney Railroad Ditching Machine Co. (See Mahoney, Daniel H., assignor.)
Maignen, Prosper J. A., Philadelphia, Pa. Percolator. No. 1,195,487; Aug. 22; Gaz. vol. 229; p. 1056.
Mains, David F., *et al.* (See Jackson, Clarence W., assignor.)
Maire, Peter D. (See Gregory and Maire.)

Maire, Peter D., and W. W. Gregory, Lakewood; said Maire assignor to W. R. White, Cleveland, Ohio. Fishing-tackle. No. 1,193,912; Aug. 8; Gaz. vol. 229; p. 427.
Malcolm, Robert. (See Brennecke, Herman J., assignor.)
Mallo, Michael E., Greeley, Colo. Carbureter. No. 1,193,580; Aug. 8; Gaz. vol. 229; p. 305.
Mallory, Bonnie L., Cleveland, Ohio. Tool-grinding attachment. No. 1,195,248; Aug. 22; Gaz. vol. 229; p. 970.
Mallory, George W., Blenheim, Ontario, Canada. Lamp-wick-adjusting device. No. 1,194,406; Aug. 15; Gaz. vol. 229; p. 641.
Malloy, Edward T. (See Bacon and Malloy.)
Malzen, Charles F., Lima, Ohio. Apron. No. 1,196,747; Aug. 29; Gaz. vol. 229; p. 1534.
Man, Eugene O., and C. H. Quist, Denver, Colo. Changeable exhibitor. No. 1,195,056; Aug. 15; Gaz. vol. 229; p. 869.
Manhattan Electrical Supply Company. (See Avery, Charles E., assignor.)
Manhattan Electrical Supply Company. (See Peterson, Johann G., assignor.)
Mann, Horace, Muskegon, Mich. Automatic locomotive-boiler-compound feeder. No. 1,193,038; Aug. 1; Gaz. vol. 229; p. 73.
Mann, Horace A., Syracuse, N. Y. Dancing toy. No. 1,196,008; Aug. 29; Gaz. vol. 229; p. 1278.
Manning, Rodney W., Riverside, R. I. Tappet for valve mechanisms of explosive-engines. No. 1,193,913; Aug. 8; Gaz. vol. 229; p. 427.
Manning, William F., Detroit, Mich. Tool for separating and oiling springs. No. 1,192,922; Aug. 1; Gaz. vol. 229; p. 32.
Mansbendel, Fritz P., New York, N. Y., assignor, by mesne assignments, to The Standard Soil Fertility Company of America, Incorporated. Fertilizer machinery. No. 1,193,581; Aug. 8; Gaz. vol. 229; p. 305.
Mansfield, George E., Jr., Springfield, Mass. Closure for jars. No. 1,195,057; Aug. 15; Gaz. vol. 229; p. 869.
Manville, Edwin A., assignor to The Ansonia Electrical Company, Ansonia, Conn. Push contact-switch. No. 1,196,569; Aug. 29; Gaz. vol. 229; p. 1471.
Marbach, Frank G., assignor to Champion Register Company, Cleveland, Ohio. Cash drawer and recorder. No. 1,193,039; Aug. 1; Gaz. vol. 229; p. 73.
Marcelliot, Pierre, Paris, France. Change-speed gearing. No. 1,195,831; Aug. 22; Gaz. vol. 229; p. 1183.
Marcus, Max, Pankow, near Berlin, Germany. Talking-clock or the like. No. 1,194,855; Aug. 15; Gaz. vol. 229; p. 798.
Marfell, Peter J., Dunedin, New Zealand. Apparatus for automatically balancing cranes. No. 1,195,058; Aug. 15; Gaz. vol. 229; p. 869.
Marino, Pascal, London, England. Electrolytic process for removing oxid or rust. No. 1,195,704; Aug. 22; Gaz. vol. 229; p. 1136.
Marinsky, Davis, New York, N. Y. Fastening device. No. 1,196,009; Aug. 29; Gaz. vol. 229; p. 1278.
Mark, Joseph, Chicago, Ill. Signal device. No. 1,194,856; Aug. 15; Gaz. vol. 229; p. 799.
Mark Manufacturing Company. (See Ratelke, Charles J., assignor.)
Markham, William J. (See Berry and Markham.)
Markstein, Walter B. (See Sapp and Markstein.)
Markus, Josepf, Pittsburgh, Pa. Self-propelled agricultural machine. No. 1,194,857; Aug. 15; Gaz. vol. 229; p. 799.
Marmon, Howard. (See Thomas, Max H., assignor.)
Marquette Piano Company. (See Larson, Axel F., assignor.)
Marr, Walter L., Flint, Mich. Coupling means for transmission mechanism. No. 1,194,529; Aug. 15; Gaz. vol. 229; p. 685.
Marr, Walter L., Flint, Mich. Carbureter. No. 1,194,530; Aug. 15; Gaz. vol. 229; p. 685.
Marsden, William R., New York, N. Y. Pressed-metal door and window sash. No. 1,193,582; Aug. 8; Gaz. vol. 229; p. 306.
Marsh, Andrew F., Plainfield, N. J. Scraper. No. 1,194,049; Aug. 8; Gaz. vol. 229; p. 472.
Marsh, George A., assignor to Specialty Manufacturing-Sales Corporation, Norfolk, Va. Copy-holder. No. 1,194,306; Aug. 8; Gaz. vol. 229; p. 502.
Marsh, George A., assignor to Specialty Manufacturing-Sales Corporation, Norfolk, Va. Lantern. No. 1,194,307; Aug. 8; Gaz. vol. 229; p. 562.
Marsh, George M., East Randolph, N. Y. Folding ironing-board. No. 1,196,130; Aug. 29; Gaz. vol. 229; p. 1320.
Marsha, Will, assignor of one-half to J. Black, Decatur, Ill. Strainer. No. 1,196,570; Aug. 29; Gaz. vol. 229; p. 1472.
Marshall, Holmes, Plainfield, N. J., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,196,257; Aug. 29; Gaz. vol. 229; p. 1365.
Marshall, William, Bismarck, N. D. Safety-scaffold. No. 1,195,488; Aug. 22; Gaz. vol. 229; p. 1057.
Marston, Frederick, El Paso, Tex. Belt elevator and conveyer. No. 1,194,308; Aug. 8; Gaz. vol. 229; p. 563.
Marston, Shirley, assignor to R. Marston Company, Boston, Mass. Lunch-counter. No. 1,194,531; Aug. 15; Gaz. vol. 229; p. 686.
Martell, Albert A., Mansfield, Mass. Reamer. No. 1,193,583; Aug. 8; Gaz. vol. 229; p. 306.
Martenson, John. (See Johanson, Emil G., assignor.)
Martin, Charles E., Louisville, Ky. Rain-shield for windows. No. 1,194,407; Aug. 15; Gaz. vol. 229; p. 641.
Martin, Charles H., Worcester, Mass. Motor-vehicle. No. 1,195,832; Aug. 22; Gaz. vol. 229; p. 1184.
Martin, Charles R., *et al.* (See Hawkins, Benjamin F., assignor.)
Martin, Charles W., Fort Stanton, N. Mex. Photographic-printing frame. No. 1,193,584; Aug. 8; Gaz. vol. 229; p. 306.
Martin-Copeland Company. (See Colliander, Carl E. H., assignor.)
Martin, Elisha E. A., assignor to B. D. Coulter, Union City, Tenn. Heel-brace. No. 1,195,059; Aug. 15; Gaz. vol. 229; p. 870.
Martin, Herman, Leonia, N. J., assignor to Julian Scholl Company, New York, N. Y. Road-scraper. No. 1,193,167; Aug. 1; Gaz. vol. 229; p. 121.
Martin, Joseph A., Woodlawn, Md. Dumping-truck. No. 1,195,489; Aug. 22; Gaz. vol. 229; p. 1057.
Martin, Joseph A., and F. M. Macy, Midas, Nev. Metal automobile-tire. No. 1,195,490; Aug. 22; Gaz. vol. 229; p. 1057.
Martin, Joseph E., Kansas City, Mo. Gas-burner. No. 1,194,050; Aug. 8; Gaz. vol. 229; p. 473.
Martin, Mulford, Rye, N. Y. Rear-end signal for vehicles. No. 1,193,406; Aug. 1; Gaz. vol. 229; p. 207.
Martin, Perry S., Broadway, Va. Automatic egg-turning device. No. 1,195,705; Aug. 22; Gaz. vol. 229; p. 1136.
Martin, Rudolph E., Mason, Tex. Electric prod-pole. No. 1,193,168; Aug. 1; Gaz. vol. 229; p. 121.
Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Measured-service telephone system. No. 1,193,169; Aug. 1; Gaz. vol. 229; p. 121.
Martin, Talbot G., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Telephone-exchange system. No. 1,194,339; Aug. 8; Gaz. vol. 229; p. 574.
Martin, William J., Cleveland, Ohio. Quoit. No. 1,193,040; Aug. 1; Gaz. vol. 229; p. 74.
Martindale, Frederick N., Gouverneur, N. Y. Cover and bail holder for cooking utensils. No. 1,193,585; Aug. 8; Gaz. vol. 229; p. 307.
Martinez, Gabriel, New York, N. Y. Calculating-machine. No. 1,194,760; Aug. 15; Gaz. vol. 229; p. 765.
Martocci-Pisculli, Leon, New York, N. Y. Germicidal thermometer-holder. No. 1,196,571; Aug. 29; Gaz. vol. 229; p. 1472.
Marvin, Cornelius J., assignor to The Braun Corporation, Los Angeles, Cal. Gas-generating apparatus. No. 1,193,495; Aug. 1; Gaz. vol. 229; p. 226.
Masilich, Edward, St. Joseph, Mich. Machine for loading transfers for knitting machinery. No. 1,195,833; Aug. 22; Gaz. vol. 229; p. 1184.
Mason, James H., London, England. Adding-machine. No. 1,194,205; Aug. 8; Gaz. vol. 229; p. 527.
Mason, Joseph J., Rochester, N. Y. Mail-box. No. 1,195,378; Aug. 22; Gaz. vol. 229; p. 1019.
Mason, Paul, Parker, Idaho. Automobile sleigh. No. 1,193,170; Aug. 1; Gaz. vol. 229; p. 122.
Mason, Sidney, Philadelphia, Pa., assignor to Welsbach Light Company, Gloucester City, N. J. Mantle holder or package. No. 1,195,491; Aug. 22; Gaz. vol. 229; p. 1058.
Mast, Joseph F., Millersburg, Ohio. Machine for snapping and husking ears of corn. No. 1,196,258; Aug. 29; Gaz. vol. 229; p. 1366.
Masury, Alfred F., assignor to International Motor Company, New York, N. Y. Sliding door for motor-vehicles. No. 1,193,707; Aug. 8; Gaz. vol. 229; p. 353.
Mathews, Fred, assignor to C. C. Murphy, Chicago, Ill. Bracket for car-doors. No. 1,193,171; Aug. 1; Gaz. vol. 229; p. 122.
Mathews Gravity Carrier Company. (See Buck, Herman J., assignor.)
Mathewson, Wilfred B., North Weymouth, assignor to United Mattress Machinery Company, Boston, Mass. Knotter for mattress-tufting machines. No. 1,193,708; Aug. 8; Gaz. vol. 229; p. 353.
Matthews, Charles D., assignor of one-half to H. E. Gumbel, New Orleans, La. Thread-cutting blade for sewing-machines. No. 1,195,834; Aug. 22; Gaz. vol. 229; p. 1184.
Matthews, Francis E., Blackheath and E. H. Strange, London, England. Purification of unsaturated hydrocarbons containing the conjugated bond. No. 1,196,259; Aug. 29; Gaz. vol. 229; p. 1366.
Matthews, James E., Sharon, Pa. Shearing-guide. No. 1,195,249; Aug. 22; Gaz. vol. 229; p. 971.
Matthews, James G., South Bend, Ind. Playing-card. No. 1,194,858; Aug. 15; Gaz. vol. 229; p. 800.
Matthews, Leonard, Jr., *et al.* (See Hachmann, Frederick, assignor.)
Matthias, Benjamin F., Galion, Ohio. Signal apparatus. No. 1,194,761; Aug. 15; Gaz. vol. 229; p. 765.
Matthias, Edward A., Liverpool, England. Stoppering device for bottles or the like. No. 1,194,762; Aug. 15; Gaz. vol. 229; p. 765.
Mattingly, Albertus B., New York, N. Y., assignor, by mesne assignments, to National Positive Lock Nut Co., Inc. Tool for cutting lock-nuts. No. 1,195,145; Aug. 15; Gaz. vol. 229; p. 898.

Mattingly, Albertus B., New York, N. Y., assignor, by mesne assignments, to National Positive Lock Nut Co., Inc. Machine and tool for manufacturing nuts. No. 1,196,710; Aug. 29; Gaz. vol. 229; p. 1519.

Maudlin, Charles J., Salem, Ind. Draft attachment. No. 1,195,706; Aug. 22; Gaz. vol. 229; p. 1136.

Mauk, James M., Bethel, Kans. Combination tool-chest and hand-box. No. 1,193,809; Aug. 8; Gaz. vol. 229; p. 390.

Maw, Robert, and W. B. McLean, Montreal, Quebec, Canada. Combined pump and motor. No. 1,193,283; Aug. 1; Gaz. vol. 229; p. 163.

Maxivolt Primary Battery Co. (See Csamyi, Henry, assignor.)

Maxwell, George S., assignor of one-half to M. A. Bayles, Washington, D. C., and W. F. Hale, Nokesville, Va. Demountable rim. No. 1,193,810; Aug. 8; Gaz. vol. 229; p. 390.

May, Charles, New Britain, Conn. Ship-locating device. No. 1,196,131; Aug. 29; Gaz. vol. 229; p. 1321.

Mayfield, Frank W., Bloomington, Ind. Safety device for elevators. No. 1,196,260; Aug. 29; Gaz. vol. 229; p. 1366.

Maynard, Albert E., assignor to American Optical Company, Southbridge, Mass. Lens-drill. No. 1,196,572; Aug. 29; Gaz. vol. 229; p. 1472.

Maynard, Albert E., assignor to American Optical Company, Southbridge, Mass. Edging-machine. No. 1,196,711; Aug. 29; Gaz. vol. 229; p. 1520.

Maytag Company, The. (See Snyder, Howard F., assignor.)

Mazzucchelli, Celestino, Como, Italy. Doubling and twisting machine. No. 1,193,041; Aug. 1; Gaz. vol. 229; p. 74.

McAdie, Colin, Rutherford, N. J. Water-tube boiler. No. 1,194,852; Aug. 15; Gaz. vol. 229; p. 797.

McAnulty, John A., Indianapolis, Ind. Vehicle-spring and shock-absorber. No. 1,194,303; Aug. 8; Gaz. vol. 229; p. 561.

McAnulty, John A., Indianapolis, Ind. Spring for vehicles. No. 1,195,050; Aug. 15; Gaz. vol. 229; p. 867.

McCarrell, Emmett, Bedford, Ind. Sample-displaying device. (Reissue.) No. 14,178; Aug. 1; Gaz. vol. 229; p. 239.

McCarthy, Daniel J., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signal. No. 1,194,758; Aug. 15; Gaz. vol. 229; p. 764.

McCarthy, Ivan A., Vancouver, British Columbia, Canada. Rotary engine. No. 1,193,808; Aug. 8; Gaz. vol. 229; p. 389.

McCarthy, John C., Fort Wayne, Ind. Low-water alarm. No. 1,196,005; Aug. 29; Gaz. vol. 229; p. 1277.

McCarren, Charles E., Cincinnati, assignor to S. S. Kingery, Norwood, Ohio. Corn-popping machine. No. 1,196,563; Aug. 29; Gaz. vol. 229; p. 1469.

McCaskey Register Company. (See Hick, Harry J., assignor.)

McCaskey Register Company, The. (See Hick, Harry J., assignor.)

McCaskey Register Company, The. (See Jacobs, George, assignor.)

McCaskey Register Company, The. (See Liverance, Frank E., Jr., assignor.)

McChesney, David N., Manila, Philippine Islands. Machine for drying copra. No. 1,196,128; Aug. 29; Gaz. vol. 229; p. 1320.

McClain, John T., Greentown, Ind. Corn-planter. No. 1,193,281; Aug. 1; Gaz. vol. 229; p. 163.

McClanahan, Allen B. (See Besaw and McClanahan.)

McClatchie, Lewis R., assignor to The Moffat Stove Company of Weston, Limited, Weston, Ontario, Canada. Electric heating element. No. 1,195,828; Aug. 22; Gaz. vol. 229; p. 1182.

McClave-Brooks Company. (See McClave, William, assignor.)

McClave, William, assignor to McClave-Brooks Company, Scranton, Pa. Furnace. No. 1,192,920; Aug. 1; Gaz. vol. 229; p. 31.

McClellan, Benjamin S., Chicago, Ill. Control device for refrigerating apparatus. No. 1,194,304; Aug. 8; Gaz. vol. 229; p. 561.

McClelland, David H., Chicago, Ill. Adapting device for carpenters' levels. No. 1,196,564; Aug. 29; Gaz. vol. 229; p. 1470.

McClintock, John C., and R. J. Shoemaker, Topeka, Kans. Lead-plating metals. No. 1,195,376; Aug. 22; Gaz. vol. 229; p. 1019.

McCloud, Edward H., Columbus, Ohio. Channel for fire-shutters. No. 1,196,006; Aug. 29; Gaz. vol. 229; p. 1277.

McCloud, Edward H., assignor to The Kinnear Manufacturing Company, Columbus, Ohio. Sliding shutter or door. No. 1,193,908; Aug. 8; Gaz. vol. 229; p. 425.

McCloy, Arthur S., Ingram, Pa. Toy. No. 1,195,927; Aug. 22; Gaz. vol. 229; p. 1216.

McClure, Mary L., Coshocton, Ohio. Sanitary attachment for water-closet seats. No. 1,193,405; Aug. 1; Gaz. vol. 229; p. 206.

McCollough, William A., Webster City, Iowa. Feeding-trough. No. 1,193,165; Aug. 1; Gaz. vol. 229; p. 120.

McCormack, Harry, Chicago, Ill., and E. W. McMullen, Kenosha, Wis., assignors of one-fourth to F. Orth and one-fourth to J. Harbaugh, Indiana Harbor, Ind. Manufacture of paper-pulp and the like. No. 1,196,708; Aug. 29; Gaz. vol. 229; p. 1519.

McCormack, Ira A., New York, N. Y. Device for advertising purposes. No. 1,194,853; Aug. 15; Gaz. vol. 229; p. 798.

McCormick, Bradley T., Montreal, Quebec, Canada, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Starting device for electric motors. No. 1,196,254; Aug. 29; Gaz. vol. 229; p. 1364.

McCormick, Frank, Magnolia, assignor of forty-five one-hundredths to L. Wolf and ten one-hundredths to W. H. Johnson, McNabb, Ill. Treating sharpening-stones or hones. No. 1,195,246; Aug. 22; Gaz. vol. 229; p. 970.

McCormick, Thomas, New York, N. Y. Hand-propelled vehicle. No. 1,196,129; Aug. 29; Gaz. vol. 229; p. 1320.

McCoy, Herbert N., Chicago, Ill. Concentrating carnotite sandstone. No. 1,195,698; Aug. 22; Gaz. vol. 229; p. 1133.

McCoy, James P. A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Resinous products and producing same. No. 1,194,201; Aug. 8; Gaz. vol. 229; p. 525.

McCray, John. (See Riefsnyder, Charles C., assignor.)

McCrerey, Alexander, Hiawatha, Kans. Timing-gearing. No. 1,195,247; Aug. 22; Gaz. vol. 229; p. 970.

McCulloch, John W., Haskell, N. J. Indicating device. No. 1,194,522; Aug. 15; Gaz. vol. 229; p. 683.

McCune, Mark, Pomeroy, Ohio. Can-opener. No. 1,195,051; Aug. 15; Gaz. vol. 229; p. 867.

McDaniel, Lamar. (See Rollo, Charles M., assignor.)

McDermott, Carl, Freehold, N. J. Change-making machine. No. 1,195,829; Aug. 22; Gaz. vol. 229; p. 1182.

McDermott, Francis J., New Haven, assignor to Birdsey Somers Company, Bridgeport, Conn. Protective sheath for hose-supporters. No. 1,194,523; Aug. 15; Gaz. vol. 229; p. 683.

McDonald, Alexander, Havre, Mont. Lock-nut. No. 1,196,565; Aug. 29; Gaz. vol. 229; p. 1470.

McDonald, Charles D., and C. E. Ennes, assignors to The McDonald Machine Co., Chicago, Ill. Machine for placing paper rings in can-heads. No. 1,194,759; Aug. 15; Gaz. vol. 229; p. 764.

McDonald, Hiram B., assignor to Simonds Manufacturing Company, Fitchburg, Mass. Saw-tooth tool for inserting and removing separable teeth of saws. No. 1,195,143; Aug. 15; Gaz. vol. 229; p. 897.

McDonald, James. (See White and McDonald.)

McDonald Machine Co., The. (See Ennes and McDonald, assignors.)

McDonald Machine Co., The. (See McDonald and Ennes, assignors.)

McDoniels, James S., *et al.* (See Kron, Walter L., assignor.)

McDoniels, William, *et al.* (See Kron, Walter L., assignor.)

McDonough, Charles F., Cleveland, Ohio. Means for lighting gas-lamps. No. 1,193,166; Aug. 1; Gaz. vol. 229; p. 120.

McDowell, Lewis A., Luverne, Minn. Spark-plug. No. 1,196,560; Aug. 29; Gaz. vol. 229; p. 1470.

McElroy, James F., deceased, Albany, N. Y.; S. H. McElroy, executrix, assignor to Consolidated Car-Heating Company. Electromagnetic valve. No. 1,193,036; Aug. 1; Gaz. vol. 229; p. 72.

McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Operating mechanism for car-doors. No. 1,196,567; Aug. 29; Gaz. vol. 229; p. 1471.

McElroy, Susie H., executrix. (See McElroy, James F.)

McElwain, James, assignor to S. P. Norton and A. G. Hubbard, trustees, Wheeling, W. Va. Variable-speed mechanism. No. 1,195,052; Aug. 15; Gaz. vol. 229; p. 867.

McEwen, Willard M. (See Phelps, Edwin P., assignor.)

McEwen, Willard M., Chicago, Ill. Oscillating fan. No. 1,196,255; Aug. 29; Gaz. vol. 229; p. 1364.

McEwen, Willard M., Chicago, Ill. Electric fan. No. 1,196,256; Aug. 29; Gaz. vol. 229; p. 1365.

McFaddin, Harrison D., East Orange, N. J. Lamp-fixture. No. 1,195,144; Aug. 15; Gaz. vol. 229; p. 898.

McFarland, Harvey P., Burlington, Iowa. Siding or stave for silos. No. 1,193,575; Aug. 8; Gaz. vol. 229; p. 302.

McFarland, John N. (See Montgomery and Riehl, assignors.)

McFarlane Manufacturing Company. (See McFarlane, Robert, assignor.)

McFarlane, Robert, Minneapolis, assignor to McFarlane Manufacturing Company, St. Paul, Minn. Scale. No. 1,196,468; Aug. 29; Gaz. vol. 229; p. 1437.

McFeeley, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Controlling mechanism for machinery. No. 1,193,576; Aug. 8; Gaz. vol. 229; p. 303.

McFell, Judson, Chicago, Ill. Selective signaling means. No. 1,194,524; Aug. 15; Gaz. vol. 229; p. 683.

McFell, Judson, Chicago, Ill. Electric signaling means. No. 1,194,525; Aug. 15; Gaz. vol. 229; p. 684.

McGee, John L., Des Moines, Iowa. Culvert-mold. No. 1,193,282; Aug. 1; Gaz. vol. 229; p. 163.

McGehee, Ira E., Chatham, Miss. Cotton-picker head. No. 1,196,373; Aug. 29; Gaz. vol. 229; p. 1404.

McGlvern, Hugh J. (See Pejuo and McGlvern.)

McGowan, Owen J., New York, N. Y. Valve. No. 1,193,577; Aug. 8; Gaz. vol. 229; p. 303.

McGrady, Edward, Salem, W. Va. Lock-nut. No. 1,195,053; Aug. 15; Gaz. vol. 229; p. 868.

McIntosh, Frederick P., New York, N. Y., and E. F. Beaubien, Wilmette, Ill., assignors, by mesne assignments, to Western Electric Company, Incorporated. Signaling system. No. 1,195,600; Aug. 22; Gaz. vol. 229; p. 1098.

McIntyre, John J., Iverness, Nova Scotia, Canada. Treating wood to be used in making plungers, &c. No. 1,194,404; Aug. 15; Gaz. vol. 229; p. 640.

McKay, Guy, Longview, Tex., assignor, by mesne assignments, to Graphite Lubricator Company. Lubricating device. No. 1,194,650; Aug. 15; Gaz. vol. 229; p. 725.

McKay, Lewis A., Indianapolis, Ind. Mop. No. 1,194,048; Aug. 8; Gaz. vol. 229; p. 472.

McKechnie, James, assignor to Vickers Limited, Barrow-in-Furness, England. Injection of liquid fuel in internal-combustion engines. No. 1,193,909; Aug. 8; Gaz. vol. 229; p. 425.

McKeesport Tin Plate Company. (See Reynard, Charles M., assignor.)

McKesson, Claude L., Los Angeles, Cal. Automobile-locking device. No. 1,194,526; Aug. 15; Gaz. vol. 229; p. 684.

McKinnon, Allan, Holyoke, Mass. Truck. No. 1,195,699; Aug. 22; Gaz. vol. 229; p. 1133.

McLaughlin, Cornelius J. (See Whalen and McLaughlin.)

McLean, William B. (See Maw and McLean.)

McLean, William T., assignor of one-half to G. W. Lyndon, Chicago, Ill. Demountable rim. No. 1,194,854; Aug. 15; Gaz. vol. 229; p. 798.

McLeod, John S. (See White, Benjamin F., assignor.)

McLeod, Matthew A., Wellington, New Zealand. Means for the sorting and delivery of metal containers. No. 1,195,054; Aug. 15; Gaz. vol. 229; p. 868.

McMillan, Joseph S., Republic, Mo. Cement block for silos. No. 1,194,305; Aug. 8; Gaz. vol. 229; p. 562.

McMillin, S. T. (See Kaup, Joseph, assignor.)

McMinnis, William, Elkhart, Ind. Car-door lock. No. 1,196,007; Aug. 29; Gaz. vol. 229; p. 1277.

McMullen, Earle W. (See McCormack and McMullen.)

McMyler Interstate Company, The. (See Fronek, Anthony, assignor.)

McNally, Hugh. (See Jones and McNally.)

McNamara, Edward M., Chicago, Ill. Ventilating system for school-rooms. No. 1,194,527; Aug. 15; Gaz. vol. 229; p. 685.

McNeal, Henry J., Wheatley, Ky. Trench-gun support. No. 1,195,055; Aug. 15; Gaz. vol. 229; p. 868.

McNutt, William H., New York, assignor to C. E. Owen, Franklin, N. Y. Window can-support. No. 1,193,910; Aug. 8; Gaz. vol. 229; p. 426.

McPheeters, John M., Palo Alto, Cal. Vehicle-wheel. No. 1,194,651; Aug. 15; Gaz. vol. 229; p. 726.

McPherson, Elmer T., assignor to The Irwin Auger Bit Company, Wilmington, Ohio. Dies for making shanks of boring-tools. No. 1,193,037; Aug. 1; Gaz. vol. 229; p. 73.

McPherson, Elmer T., assignor to The Irwin Auger Bit Company, Wilmington, Ohio. Cutting device. No. 1,193,578; Aug. 8; Gaz. vol. 229; p. 304.

McWane, James R., Birmingham, Ala. Cast-iron pipe. No. 1,195,830; Aug. 22; Gaz. vol. 229; p. 1183.

McWhirk Engineering Company, The. (See McWhirk, Lewis, and Desson, assignors.)

McWhirk, Warren E., R. D. Lewis, and H. J. Desson, Pittsburgh, Pa., assignors to The McWhirk Engineering Company, L't'd., Niagara Falls, N. Y. Clam-shell bucket. No. 1,193,706; Aug. 8; Gaz. vol. 229; p. 352.

Mead, Francis, Chicago, Ill. Resilient wheel. No. 1,195,379; Aug. 22; Gaz. vol. 229; p. 1020.

Mealer, Robert C., Colorado Springs, Colo. Folding car-step. No. 1,193,466; Aug. 1; Gaz. vol. 229; p. 227.

Meany, Richard B., Weehauken, N. J., assignor to Peerless Rubber Manufacturing Company. Packing. No. 1,194,408; Aug. 15; Gaz. vol. 229; p. 641.

Meccano Limited. (See Hornby, Frank, assignor.)

Mechanical Construction Company, The. (See Hanna, William T., assignor.) (Reissue.)

Mechanical Rubber Co., The. (See Stimson, Edwin L., assignor.)

Medart, Philip S., assignor to Fred Medart Manufacturing Company, St. Louis, Mo. Self-propelled swing. No. 1,196,375; Aug. 29; Gaz. vol. 229; p. 1404.

Medlock, Wendyl, Jr., assignor to R. J. Galbraith, Colquille, Oreg. Spring-mounting for cycle-wheels. No. 1,194,206; Aug. 8; Gaz. vol. 229; p. 527.

Meidam, Stephen W., Appleton, Wis. Shears or scissors. No. 1,194,859; Aug. 15; Gaz. vol. 229; p. 800.

Meier, Edward C., Phoenixville, Pa. Boiler. No. 1,193,172; Aug. 1; Gaz. vol. 229; p. 122.

Meilink, Charles F., Toledo, Ohio. Skeleton case. No. 1,194,532; Aug. 15; Gaz. vol. 229; p. 686.

Meinholtz & McKay. (See Goben, Edward F., assignor.)

Mejani, Paolo, Spezia, Italy. Atomizer for liquids. No. 1,194,051; Aug. 8; Gaz. vol. 229; p. 473.

Mejani, Paolo, Spezia, Italy. Apparatus for burning combustible liquids in steam-boiler furnaces. No. 1,194,052; Aug. 8; Gaz. vol. 229; p. 473.

Mello, James, Chicago, Ill. Automobile-fender. No. 1,194,409; Aug. 15; Gaz. vol. 229; p. 642.

Mellor, Alfred A., Montreal, Quebec, Canada. Attachment for unloading apparatus. No. 1,196,261; Aug. 29; Gaz. vol. 229; p. 1367.

Melton, Ella, St. Louis, Mo. Ironing-board cover. No. 1,196,262; Aug. 29; Gaz. vol. 229; p. 1367.

Mennie, William, assignor of forty-nine one-hundredths to C. A. Fettig, Detroit, Mich. Differential gearing. No. 1,193,709; Aug. 8; Gaz. vol. 229; p. 354.

Menow, James G., and H. Meyer, assignors to National Electric Mail Box Alarm Company, Santa Rosa, Cal. Mail-box alarm. No. 1,195,060; Aug. 15; Gaz. vol. 229; p. 870.

Mercantile Advertising Company. (See Knowles, Edward R., assignor.)

Mercantile Corporation. (See O'Connell, John J., assignor.)

Mercier, Daniel, Annonay, France. Machine for stretching hides and skins. No. 1,193,042; Aug. 1; Gaz. vol. 229; p. 75.

Mergenthaler Linotype Company. (See Kaiser, William H., assignor.)

Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)

Mergenthaler Linotype Company. (See Lieberknecht, William C., assignor.)

Mergenthaler Linotype Company. (See Röger, Karl, assignor.)

Mergenthaler Linotype Company. (See Rogers, John R., assignor.)

Merit Manufacturing Co. (See Mowry, William F., assignor.)

Merrell, Irving S. and O. E., assignors to Merrell-Soule Company, Syracuse, N. Y. Obtaining the solids from liquids. No. 1,193,173; Aug. 1; Gaz. vol. 229; p. 123.

Merrell, Oliver E. (See Merrell, Irving S. and O. E.)

Merrell, Robert E., Spartanburg, S. C. Automatic railway-switch. No. 1,195,061; Aug. 15; Gaz. vol. 229; p. 870.

Merrell-Soule Company. (See Merrell, Irving S. and O. E., assignors.)

Merrill, William J., Philadelphia, Pa. Golf-tee. No. 1,194,860; Aug. 15; Gaz. vol. 229; p. 800.

Merrin, Arthur L., Portland, Oreg. Anticreeping device. No. 1,193,043; Aug. 1; Gaz. vol. 229; p. 75.

Merritt, Arthur A., Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y. Power-transmitter. No. 1,196,469; Aug. 29; Gaz. vol. 229; p. 1437.

Merritt, H. C. (See Auer, George, assignor.)

Merritt, Joseph, assignor to The Hartford Lock Ring Company, Hartford, Conn. Connecting-link and making same. No. 1,196,010; Aug. 29; Gaz. vol. 229; p. 1278.

Merritt, Louis G. (See Harley, Charles, assignor.)

Merritt, Louis G., Lockport, N. Y. Veneer-drying apparatus. No. 1,194,652; Aug. 15; Gaz. vol. 229; p. 726.

Merrow Machine Company, The. (See Stedman, William H., assignor.)

Merwin, George M., Berwyn, and E. S. Charles, Chicago, Ill., assignors to International Harvester Company of New Jersey. Speed-changing mechanism. No. 1,193,174; Aug. 1; Gaz. vol. 229; p. 123.

Merwin, John C., assignor to National Blank Book Company, Holyoke, Mass. Loose-leaf binder. No. 1,192,923; Aug. 1; Gaz. vol. 229; p. 33.

Merz, Albert R. (See Ross, Merz, and Carothers.)

Merz, Jacob, *et al.* (See Hachmann, Frederick, assignor.)

Metals Recovery Company. (See Fagergren and Green, assignors.)

Metalwood Manufacturing Company. (See Austin, Harry M., Jr., assignor.)

Metcalfe, James, R. D., and J. C., Romiley, England. Injector. No. 1,194,207; Aug. 8; Gaz. vol. 229; p. 527.

Metcalfe, James C. (See Metcalfe, James, R. D., and J. C.)

Metcalfe, Richard D. (See Metcalfe, James, R. D., and J. C.)

Metropolitan Window Shade Company. (See Rader, Elisha L., assignor.)

Meyer, Alfred F., Morton, Ill. Feed grinding and feeding machine. No. 1,194,053; Aug. 8; Gaz. vol. 229; p. 474.

Meyer, Frieda, Zurich, Switzerland. Vehicle or locomotive pusher. No. 1,194,054; Aug. 8; Gaz. vol. 229; p. 474.

Meyer, George W. (See Roos and Bell, assignors.)

Meyer, Harry. (See Menow and Meyer.)

Meyer, Herman. (See Jahnson, Alex H., assignor.)

Meyer, John F., Cheyenne, Wyo. Device for attaching telescopes to firearms. No. 1,194,208; Aug. 8; Gaz. vol. 229; p. 528.

Meyer, William V., Chicago, Ill. Drier. No. 1,196,376; Aug. 29; Gaz. vol. 229; p. 1405.

Mialaret, Johannes H. A., Maastricht, Netherlands. Proportional compasses for perspective drawings. No. 1,193,914; Aug. 8; Gaz. vol. 229; p. 427.

Michel, Herman C., Dixie, Wash. Draft device. No. 1,194,763; Aug. 15; Gaz. vol. 229; p. 765.

Michell, Anthony G. M., Melbourne, Victoria, Australia. Film-lubricated thrust-bearing. No. 1,196,573; Aug. 29; Gaz. vol. 229; p. 1473.

Michener, Elwood H., Woodlynne, assignor to Acme Staple Company, Camden, N. J. Stapling-machine. No. 1,193,284; Aug. 1; Gaz. vol. 229; p. 164.

Mickelson, Niels C., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Rock-drill. No. 1,196,011; Aug. 29; Gaz. vol. 229; p. 1279.

Middaugh, Melvin M., Tampa, Fla. Pipe-clamp. No. 1,194,209; Aug. 8; Gaz. vol. 229; p. 528.

Miehle Printing Press & Manufacturing Company, The. (See Robertson, Charles J., assignor.)
Milbrath, Arthur F., Milwaukee, Wis., assignor to Wisconsin Motor Manufacturing Company. Magneto-coupling. No. 1,195,250; Aug. 22; Gaz. vol. 229; p. 971.
Miles, Elizabeth, Evanston, Ill. Adjustable brassière. No. 1,195,835; Aug. 22; Gaz. vol. 229; p. 1185.
Miles, John G., Montevideo, Uruguay. Exposure-indicator for cameras. No. 1,195,062; Aug. 15; Gaz. vol. 229; p. 870.
Miles, William L., Saginaw, Mich. Track-handling device for dredges. No. 1,196,012; Aug. 29; Gaz. vol. 229; p. 1279.
Millard, William, New York, assignor to Millard's Gum Vending Corporation, Eddyville, N. Y. Coin-controlled mechanism. No. 1,196,574; Aug. 29; Gaz. vol. 229; p. 1473.
Millard's Gum Vending Corporation. (See Millard, William, assignor.)
Millea, Thomas D., Springfield, Mass., assignor, by mesne assignments, to Try-Me Manufacturing Company. Pressure-regulating valve. No. 1,196,377; Aug. 29; Gaz. vol. 229; p. 1405.
Miller, A. J. (See Sapp and Markstein, assignors.)
Miller, Andrew B., assignor of one-fourth to R. Johnson, one-fourth to H. C. Nelson, and one-fourth to E. Christensen, Baldwin, Wis. Motor-boat driving-gear. No. 1,195,146; Aug. 15; Gaz. vol. 229; p. 899.
Miller, C. Wilbur, *et al.* (See Patten, John, assignor.)
Miller, David C., Tulsa, Okla. Sealing-plug for oil-wells. No. 1,194,764; Aug. 15; Gaz. vol. 229; p. 766.
Miller, Ellis. (See Frazer, Holland, and Miller.)
Miller, Ernest B., *et al.* (See Patten, John, assignor.)
Miller, Eugene B. (See Grebe, Alfred H., assignor.)
Miller, Floyd C. (See Starkweather and Miller.)
Miller, Frank P., Meadville, Pa. Turret attachment for lathes. No. 1,196,575; Aug. 29; Gaz. vol. 229; p. 1473.
Miller, George, Algona, Iowa. Wagon-box attachment. No. 1,196,378; Aug. 29; Gaz. vol. 229; p. 1405.
Miller, George C. D., assignor to Cary Manufacturing Company, New York, N. Y. Fastener for crates, boxes, &c. No. 1,194,309; Aug. 8; Gaz. vol. 229; p. 563.
Miller, George L., Orange, Va. Farm-gate. No. 1,196,263; Aug. 29; Gaz. vol. 229; p. 1367.
Miller, George W. (See Hughes and Miller.)
Miller, George W., Pittsburgh, Pa. Saw-set machine and the like. No. 1,192,921; Aug. 1; Gaz. vol. 229; p. 32.
Miller, Harry R., and H. E. Elberty, New Castle, Pa. Mechanism for counting sheets. No. 1,196,132; Aug. 29; Gaz. vol. 229; p. 1321.
Miller, Henry, assignor to A. O. Smith Company, Milwaukee, Wis. Driving attachment for cars. No. 1,195,380; Aug. 22; Gaz. vol. 229; p. 1020.
Miller, James A. (See Bonner, John S., assignor.)
Miller, James I. (See Steele, Mack D., assignor.)
Miller, John M. (See Miller and Carlton.)
Miller, Lee, Chicago, Ill. Motion-picture film. No. 1,193,175; Aug. 1; Gaz. vol. 229; p. 123.
Miller, Lewis E., Neodesha, J. M. Miller, Salina, and A. L. Carlton, Bird City, Kans. Egg holder and candler. No. 1,193,285; Aug. 1; Gaz. vol. 229; p. 164.
Miller, Ray S., Red Sulphur Springs, W. Va. Automobile-tire protector. No. 1,192,924; Aug. 1; Gaz. vol. 229; p. 33.
Miller Saw Trimmer Company of Michigan. (See Cheshire, Edward, assignor.)
Miller, Thomas S., South Orange, N. J. Clutch. No. 1,193,586; Aug. 8; Gaz. vol. 229; p. 307.
Miller, Thomas S., South Orange, N. J. Load-transfer apparatus. No. 1,193,587; Aug. 8; Gaz. vol. 229; p. 307.
Miller, William E., assignor of one-half to W. H. Kendall, Providence, R. I. Amusement device. No. 1,195,707; Aug. 22; Gaz. vol. 229; p. 1136.
Miller, William F. (See Dunn and Miller.)
Miller, William L., Lyons, Nebr. Attachment for preventing back-kicking of automobiles. No. 1,196,379; Aug. 29; Gaz. vol. 229; p. 1406.
Mills, Arthur L., New York, N. Y. Apparatus for cooling heated air by electric currents. No. 1,193,467; Aug. 1; Gaz. vol. 229; p. 227.
Mills Woven Cartridge Belt Company. (See Jennings, Victor H., assignor.)
Miner, William H. (See Dath, Charles E., assignor.)
Miner, William H. (See Nash, Charles J., assignor.)
Miner, William H. (See O'Connor, John F., assignor.)
Miner, William H. (See Townsend, Frederick B., assignor.)
Mineral Products Corporation. (See Chappell, Howard F., assignor.)
Mininberg Automatic Advertising Company, The. (See Mininberg, Nathan, assignor.)
Mininberg, Nathan, assignor to The Mininberg Automatic Advertising Company, Dickinson, N. D. Moving sign. No. 1,194,210; Aug. 8; Gaz. vol. 229; p. 528.
Minnich, Albinus H., South Bend, Ind. Rod or pipe coupling. No. 1,193,044; Aug. 1; Gaz. vol. 229; p. 75.
Mirroscope Company of Ohio, The. (See Holl, Gustave J., assignor.)
Mitchell, John C., Ampere, N. J. Laying sectional pipes. No. 1,195,147; Aug. 15; Gaz. vol. 229; p. 899.
Mitchell, Leonard H., Oakdale, assignor of one-half to Z. G. Peck, Sr., Tulare, Cal. Finishing-tool. No. 1,193,407; Aug. 1; Gaz. vol. 229; p. 207.
Mitchell, Nelson B., J. W. Taggart, Sr., and U. G. Redelmann, Indianapolis, Ind. Portable sawing-machine. No. 1,195,945; Aug. 22; Gaz. vol. 229; p. 1222.
Mitchell, Richard S. M., East Orange, N. J., assignor, by mesne assignments, to Mottlau Transmission, Incorporated. Mechanical movement. No. 1,195,381; Aug. 22; Gaz. vol. 229; p. 1020.
Mitchell, William P., New York, N. Y. Safety-fastener. No. 1,193,588; Aug. 8; Gaz. vol. 229; p. 308.
Mittelstaedt, Harry G., New York, N. Y. Printing apparatus. No. 1,194,410; Aug. 15; Gaz. vol. 229; p. 642.
Mock, James C., Detroit, Mich. Switch-rod. No. 1,195,382; Aug. 22; Gaz. vol. 229; p. 1021.
Modler, John H., Schweinfurt-on-the-Main, Germany. Antifriction-bearing. No. 1,196,264; Aug. 29; Gaz. vol. 229; p. 1368.
Modra, William, *et al.* (See Hachmann, Frederick, assignor.)
Moe, Olaus, Deerfield, Wis. Tobacco-lath holder. No. 1,194,310; Aug. 8; Gaz. vol. 229; p. 564.
Moeller, Albert L., Mishicott, Wis. Ignition system. No. 1,195,063; Aug. 15; Gaz. vol. 229; p. 871.
Moeschl-Edwards Corrugating Company, The. (See Probert, Edwin R., assignor.)
Moffat Stove Company of Weston, The. (See McClatchie, Lewis R., assignor.)
Moffat, Walter A., assignor to The Improved Boiler Feed Company, Denver, Colo. Steam-generator. No. 1,195,064; Aug. 15; Gaz. vol. 229; p. 871.
Moffett, George T., Huntsville, Ala. Egg-crate. No. 1,196,380; Aug. 29; Gaz. vol. 229; p. 1406.
Moffett, Marcus H., Lakewood, Ohio, assignor to National Carbon Company. Dry battery. No. 1,196,381; Aug. 29; Gaz. vol. 229; p. 1407.
Mohney, Elmer E., Fresno, Cal. Saw-gage. No. 1,192,925; Aug. 1; Gaz. vol. 229; p. 33.
Mohr, Gustav A., Remsen, Iowa. Replanting attachment for cultivators. No. 1,192,926; Aug. 1; Gaz. vol. 229; p. 34.
Mohr, William J. (See Holmes, Alfred E., assignor.)
Moister, Martin, assignor of one-half to A. E. Hoover, Philadelphia, Pa. Sheet-metal building. No. 1,196,133; Aug. 29; Gaz. vol. 229; p. 1322.
Moline Plow Company. (See Esping, Conrad, assignor.)
Moline Plow Company. (See Flambo, Charles, assignor.)
Moline Plow Company. (See Funk, Truman B., assignor.)
Moline Plow Company. (See Lindgren, Alexus C., assignor.)
Molkenthin, Joseph, Jr., Newark, N. J. Safety-razor. No. 1,196,576; Aug. 29; Gaz. vol. 229; p. 1474.
Monarch Tag Company, The. (See Kohnle, Frederick, assignor.)
Monical, Pearl L., Omaha, Nebr. Coin changing and registering apparatus. No. 1,195,251; Aug. 22; Gaz. vol. 229; p. 971.
Monmouth Plow Factory. (See Bereth, William F., assignor.)
Monosmith, Olney B., Lorain, Ohio. Carbureter. No. 1,194,055; Aug. 8; Gaz. vol. 229; p. 475.
Monroe and Crisell. (See Crisell, Allen A., assignor.)
Monroe, Will K., assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio. Car-unloading apparatus. No. 1,196,134; Aug. 29; Gaz. vol. 229; p. 1322.
Monteith, Victor S. (See Jones and Monteith.)
Montgomery, William, Jr., and J. Riehl, assignors of one-half to said Montgomery and one-half to J. N. McFarland, Baltimore, Md. Apparatus for supplying molten metal to molds. No. 1,195,836; Aug. 22; Gaz. vol. 229; p. 1185.
Montstream, John H., Hartford, Conn. Drop-hammer. No. 1,194,653; Aug. 15; Gaz. vol. 229; p. 726.
Moody, Churchill B., Minneapolis, Minn. Rail-fastener. No. 1,193,286; Aug. 1; Gaz. vol. 229; p. 164.
Mooers, William F. (See Paige, Jeremiah A., assignor.)
Moore, Albert W. (See Bowersox and Moore.)
Moore, Benjamin S., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric locomotive. No. 1,194,211; Aug. 8; Gaz. vol. 229; p. 528.
Moore, Clifford L., Seattle, Wash. Chalk-holder. No. 1,194,212; Aug. 8; Gaz. vol. 229; p. 529.
Moore, David P. (See Hullings, George F., assignor.)
Moore, David P., Washington, D. C. Telephone-receiver. No. 194,765; Aug. 15; Gaz. vol. 229; p. 766.
Moore, Fred R., Chicago, Ill. Vehicle-signal. No. 1,195,837; Aug. 22; Gaz. vol. 229; p. 1185.
Moore, Herbert L. G. New York, N. Y. Egg holder and carrier. No. 1,194,861; Aug. 15; Gaz. vol. 229; p. 800.
Moore, James W., assignor to Atlanta Utility Works, East Point, Ga. Machine for breaking cotton-seed cake. No. 1,193,176; Aug. 1; Gaz. vol. 229; p. 124.
Moore, John C., Connersville, Ind. Automobile headlight and mounting therefor. No. 1,195,383; Aug. 22; Gaz. vol. 229; p. 1021.
Moore, John C., Connersville, Ind. Muffler arrangement for multicylinder internal-combustion engines. No. 1,196,382; Aug. 29; Gaz. vol. 229; p. 1407.
Moore, V. Charles, Monticello, Iowa. Envelop. No. 1,195,492; Aug. 22; Gaz. vol. 229; p. 1058.
Moore, Wilber G., Belleville, Ohio. Transmission-gear. No. 1,194,654; Aug. 15; Gaz. vol. 229; p. 727.
Moore, William D., Creston, Iowa. Mold for poured concrete bricks or blocks. No. 1,194,862; Aug. 15; Gaz. vol. 229; p. 800.

Morava, Wensel, Chicago, Ill. Electric riveter. No. 1,195,928; Aug. 22; Gaz. vol. 229; p. 1216.
Morency, Alfred F., assignor to Morency Van Buren Manufacturing Company, Sturgis, Mich. Mechanism for operating flushing-valves. No. 1,196,712; Aug. 29; Gaz. vol. 229; p. 1520.
Morency Van Buren Manufacturing Company. (See Morency, Alfred F., assignor.)
Morgan Construction Company. (See Edwards, Victor E., assignor.)
Morgan Construction Company. (See Fuller, Leon L., assignor.)
Morgan, Daniel, Seymour, Ind. Grain-valve. No. 1,195,838; Aug. 22; Gaz. vol. 229; p. 1186.
Morgan, Dora, Corning, Cal. Educational game apparatus. No. 1,194,213; Aug. 8; Gaz. vol. 229; p. 529.
Morgan, Elizabeth A., Omemee, N. D. Stocking-supporter. No. 1,196,471; Aug. 29; Gaz. vol. 229; p. 1438.
Morgan, Ernest W. (See Jackson and Morgan.)
Morgan, Frank L., Cincinnati, Ohio, assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,194,655; Aug. 15; Gaz. vol. 229; p. 727.
Morgan, Harry R., assignor to Groover Engine Company, St. Louis, Mo. Trunk or box. No. 1,193,710; Aug. 8; Gaz. vol. 229; p. 354.
Morgan, John H., Harrogate, England. Pulley. No. 1,193,177; Aug. 1; Gaz. vol. 229; p. 124.
Morgan, John H., Chicago, assignor to American Morgan Company, Morgan Park, Ill. Excavating attachment for mining-machines. No. 1,196,135; Aug. 29; Gaz. vol. 229; p. 1322.
Morgan, Thomas G., Shamokin, Pa. Beard-softener. No. 1,193,287; Aug. 1; Gaz. vol. 229; p. 165.
Morgan & Wright. (See Hoyt, Homer J., assignor.)
Mork, Harry S., Brookline, and G. J. Esselen, Jr., Swampscott, assignors to Chemical Products Company, Boston, Mass. Cellulosic composition. No. 1,193,178; Aug. 1; Gaz. vol. 229; p. 125.
Morner, Louis. (See Smith, Charles D., assignor.)
Morris, David E. (See Morris, John L. and D. E.)
Morris, James W. (See Corbett and Morris.)
Morris, John L., Pine Grove, La., and D. E. Morris, Gulfport, Miss. Stump-extractor. No. 1,194,214; Aug. 8; Gaz. vol. 229; p. 529.
Morris, Lewis E., *et al.* (See Hawkins, Benjamin F., assignor.)
Morris Mercantile Company. (See Born, Samuel H., assignor.)
Morris, William J., Rector, Ark. Railway draft-gear. No. 1,193,288; Aug. 1; Gaz. vol. 229; p. 165.
Morrison, Herman J., Cascade, Iowa. Corn-planter. No. 1,193,811; Aug. 8; Gaz. vol. 229; p. 390.
Morrison, Joseph O., Anderson, Ind. Medicine applicator and moistener. No. 1,194,215; Aug. 8; Gaz. vol. 229; p. 530.
Morrison, Mackintosh M., Calumet, Mich. Molding-machine. No. 1,195,708; Aug. 22; Gaz. vol. 229; p. 1137.
Morrone, Nicola. (See Morrone, William, assignor.)
Morrone, William, assignor of one-half to N. Morrone, Pittsburgh, Pa. Street-indicator. No. 1,196,136; Aug. 29; Gaz. vol. 229; p. 1323.
Morrow, George and M. J. R., Chicago, Ill. Motor-cycle car. No. 1,196,137; Aug. 29; Gaz. vol. 229; p. 1323.
Morrow, Herbert W., Loysville, Pa. Wrench. No. 1,195,065; Aug. 15; Gaz. vol. 229; p. 872.
Morrow, Marie J. R. (See Morrow, George and M. J. R.)
Morse, Amelia, New York, N. Y. Puzzle-rattle. No. 1,194,216; Aug. 8; Gaz. vol. 229; p. 530.
Morse, Frank V., Minneapolis, Minn. Diaphragm for phonographs and talking-machines. No. 1,194,056; Aug. 8; Gaz. vol. 229; p. 475.
Mortensen, Martin. (See Ohlsen, Ulrich, assignor.)
Morton, Rudolph B., Cleveland, Ohio. Traction-wheel. No. 1,195,066; Aug. 15; Gaz. vol. 229; p. 872.
Moser, Fred J., Kane, Pa. Casing-head for wells. No. 1,194,863; Aug. 15; Gaz. vol. 229; p. 801.
Moses, Albert. New York, N. Y. Egg-beater. No. 1,195,839; Aug. 22; Gaz. vol. 229; p. 1186.
Moses, Ashleigh S. (See Walker and Moses.)
Moses, Edward I., and W. E. Kellar, Luling, Tex. Sewing-machine. No. 1,193,408; Aug. 1; Gaz. vol. 229; p. 207.
Mosher, Charles D., New York, N. Y., assignor, by mesne assignments, to The Babcock & Wilcox Company, Bayonne, N. J. Tube-joint for boilers, &c. No. 1,192,927; Aug. 1; Gaz. vol. 229; p. 34.
Mosher, Charles D., New York, N. Y., assignor, by mesne assignments, to The Babcock & Wilcox Company, Bayonne, N. J. Steam-boiler. No. 1,192,928; Aug. 1; Gaz. vol. 229; p. 34.
Mosler Safe Company, The. (See Bartels and Reiss, assignors.)
Most, Lucifer J., New York, N. Y. Fountain-pen. No. 1,195,709; Aug. 22; Gaz. vol. 229; p. 1137.
Mottlau, August J. (See Brock and Mottlau.)
Mottlau, August J., Philadelphia, Pa., assignor to Mottlau Transmission, Incorporated, New York, N. Y. Mechanical movement. No. 1,195,384; Aug. 22; Gaz. vol. 229; p. 1021.
Mottlau, August J., Philadelphia, Pa., assignor to Mottlau Transmission, Incorporated, New York, N. Y. Mechanical movement. No. 1,195,385; Aug. 22; Gaz. vol. 229; p. 1022.
Mottlau Transmission. (See Brock and Mottlau, assignors.)
Mottlau Transmission. (See Mitchell, Richard S. M., assignor.)
Mottlau Transmission. (See Mottlau, August J., assignor.)
Mottram, George W., Deepcar, near Sheffield, England. Apparatus for introducing gases into intimate contact with liquid sewage. No. 1,195,067; Aug. 15; Gaz. vol. 229; p. 872.
Mould, Daniel, Ulsterville, N. Y. Tidal motor. No. 1,195,386; Aug. 22; Gaz. vol. 229; p. 1022.
Mowe, George H., Watertown, N. Y. Heater. No. 1,195,840; Aug. 22; Gaz. vol. 229; p. 1186.
Mowry, William F., assignor to Merit Manufacturing Co., Attleboro, Mass. Jewelry component. No. 1,195,841; Aug. 22; Gaz. vol. 229; p. 1187.
Mowry, William W., St. Louis, Mo. Check-indorsing machine. No. 1,195,068; Aug. 15; Gaz. vol. 229; p. 873.
Moxham, Edward E. (See Rollinson and Moxham.)
Moyer, Clement G. (See Reinhart and Moyer.)
Moyer, Franklin T., Napa, Cal. Scarifier. No. 1,195,387; Aug. 22; Gaz. vol. 229; p. 1023.
Moyer, Fredella H., Cleveland, Ohio, assignor to General Rim Company, New York, N. Y. Rim-tool. No. 1,195,252; Aug. 22; Gaz. vol. 229; p. 972.
Muehlbeil, Adolf, Chicago, Ill. Hinge for revolving doors. No. 1,195,842; Aug. 22; Gaz. vol. 229; p. 1187.
Mueller, Augusto E., assignor of one-half to E. Pohli, San Francisco, Cal. Elevator-car. No. 1,194,411; Aug. 15; Gaz. vol. 229; p. 643.
Mueller, George E., Aurora, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, Telephone-call register and system. No. 1,193,179; Aug. 1; Gaz. vol. 229; p. 125.
Mueller, Philip, and A. C. Schuermann, Decatur, Ill. Lead-pipe connection. No. 1,194,766; Aug. 15; Gaz. vol. 229; p. 766.
Müller, Edward P., Chicago, Ill., assignor of one-half to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Impregnating baled foods. No. 1,196,138; Aug. 29; Gaz. vol. 229; p. 1324.
Müller, Friederich, assignor to Pratt & Whitney Company, Hartford, Conn. Metal-working machine. No. 1,194,864; Aug. 15; Gaz. vol. 229; p. 801.
Müller, Friederich, assignor to Pratt & Whitney Company, Hartford, Conn. Milling-cutter. No. 1,194,865; Aug. 15; Gaz. vol. 229; p. 802.
Mulroney, Charles H., Brown Station, N. Y. Latch-keeper. No. 1,193,812; Aug. 8; Gaz. vol. 229; p. 391.
Mulvihill, Daniel C., Hannibal, Mo. Detachable-rim sprocket-wheel. No. 1,194,767; Aug. 15; Gaz. vol. 229; p. 767.
Murakami, Kamekichi, Seattle, Wash. Bean-curd and making same. No. 1,195,843; Aug. 22; Gaz. vol. 229; p. 1187.
Murphey, James A., Germantown, Pa. Means for waybilling. No. 1,196,749; Aug. 29; Gaz. vol. 229; p. 1534.
Murphy, Clinton C. (See Mathews, Fred, assignor.)
Murphy, John J., Toledo, assignor to The Corte-Scope Company, Cleveland, Ohio. Stereoscope. No. 1,194,057; Aug. 8; Gaz. vol. 229; p. 475.
Murphy, John P., Charleston, S. C. Triple valve. No. 1,195,388; Aug. 22; Gaz. vol. 229; p. 1023.
Murphy, Walter P., Chicago, Ill. Door structure for sheet-metal car ends and the like. No. 1,193,915; Aug. 8; Gaz. vol. 229; p. 428.
Murray Company, The. (See Sheppard, Orlando, Jr., assignor.)
Murray, Frank G., Chicago, Ill. Fare-box. No. 1,196,383; Aug. 29; Gaz. vol. 229; p. 1407.
Murray, Henry H., Riverton, and W. D. La Rue, Camden, N. J., assignors to Victor Talking Machine Company. Brake for talking-machines. No. 1,196,265; Aug. 29; Gaz. vol. 229; p. 1308.
Murray, John L., New York, N. Y. Picture-frame. No. 1,194,217; Aug. 8; Gaz. vol. 229; p. 530.
Murray, Joseph H., Homer, Ga. Churn. No. 1,194,768; Aug. 15; Gaz. vol. 229; p. 767.
Murray, Stephen D., Dallas, Tex. Huller-gin. No. 1,193,409; Aug. 1; Gaz. vol. 229; p. 207.
Murray, Stephen D., Dallas, Tex. Combined filler and packer for baling-presses. No. 1,193,410; Aug. 1; Gaz. vol. 229; p. 208.
Murray, Thomas E. (See Murray and Magalhaes, assignors.)
Murray, Thomas E., New York, N. Y. Electrical welding. No. 1,196,473; Aug. 29; Gaz. vol. 229; p. 1439.
Murray, Thomas E., Jr., and F. V. Magalhaes, assignors to T. E. Murray, New York, N. Y. Meter-testing device. No. 1,196,472; Aug. 29; Gaz. vol. 229; p. 1438.
Murrian, William S., trustee. (See Akans, George, assignor.)
Musser, George D., Cincinnati, Ohio, assignor of twenty-two and one-half one-hundredths to A. A. Siebler, ten one-hundredths to E. Adler and twenty-two and one-half one-hundredths to K. Horwitz. Folding egg-case. No. 1,192,929; Aug. 1; Gaz. vol. 229; p. 34.
Musser, Parley P. (See Feller and Musser.)
Mustee, Lawrence F., Cleveland, Ohio. Heating apparatus for automobiles. No. 1,196,384; Aug. 29; Gaz. vol. 229; p. 1408.
Mutch, Harry P., Hoboken, Pa. Odorless garbage-can. No. 1,196,385; Aug. 29; Gaz. vol. 229; p. 1409.

Muth, Georg, Butzbach, Berlin, assignor to the Firm of Dr. Graf & Comp., Neubabelsberg, near Berlin, Germany. Paper-size and making same. No. 1,194,866; Aug. 15; Gaz. vol. 229; p. 802.

Myers, John A., Greeley, Colo. Fire-escape. No. 1,195,069; Aug. 15; Gaz. vol. 229; p. 873.

Myers, Louis, Newark, N. J., assignor, by mesne assignments, to The Keepsafe Company, Inc. Safety-chest. No. 1,196,739; Aug. 29; Gaz. vol. 229; p. 1531.

Myers, Thomas M., New York, N. Y., assignor to Audiffern Refrigerating Machine Company. Refrigerating apparatus. No. 1,195,844; Aug. 22; Gaz. vol. 229; p. 1187.

N. K. Fairbank Company, The. (See O'Shea and Fenton, assignors)

Nachod, Carl P., and F. W. Kulicke, Philadelphia, Pa., assignors to Nachod Signal Company, Inc. Electric signaling system. No. 1,196,013; Aug. 29; Gaz. vol. 229; p. 1279.

Nachod Signal Company. (See Nachod and Kulicke, assignors.)

Nager, Simon, Jr., Rockville Center, N. Y. Automatic tape-strip printing and dispensing device. No. 1,193,589; Aug. 8; Gaz. vol. 229; p. 308.

Naldini, Ercole. (See Duca and Naldini.)

Nanz, August F., New York, N. Y. Means for indicating opening of the cases of watchmen's clocks and the like. No. 1,196,139; Aug. 29; Gaz. vol. 229; p. 1324.

Napp, Charles E., Los Angeles, Cal. Telephone-directory. No. 1,193,590; Aug. 8; Gaz. vol. 229; p. 309.

Nardell, Anthony, Trenton, N. J. Mail-box. No. 1,196,386; Aug. 29; Gaz. vol. 229; p. 1409.

Nash, Charles J., assignor, by mesne assignments, to W. H. Miner, Chicago, Ill. Friction draft-rigging for railway-cars. No. 1,193,411; Aug. 1; Gaz. vol. 229; p. 208.

Naslund, Eric A., Dunkirk, N. Y. Valve. No. 1,195,253; Aug. 22; Gaz. vol. 229; p. 972.

Nathan, John, Los Angeles, Cal. Water-heater. No. 1,195,601; Aug. 22; Gaz. vol. 229; p. 1099.

National-Acme Manufacturing Company, The. (See Smith, Oscar A., assignor.)

National Binding Machine Company. (See Anable, Frederick S., assignor.)

National Blank Book Company. (See Merwin, John C., assignor.)

National Blank Book Company. (See Schade, John, Jr., assignor.)

National Carbon Company. (See Brown, John W., assignor.)

National Carbon Company. (See Foos, Marcus A., assignor.)

National Carbon Company. (See Joline, Benjamin F., assignor.)

National Carbon Company. (See Moffett, Marcus H., assignor.)

National Cash Register Company, The. (See Fuller, Frederick L., assignor.)

National Dump Car Company. (See Hart, Harry S., assignor.)

National Electric Bulletin Corporation. (See Staahlgren, Karl A. A., assignor.)

National Electric Mail Box Alarm Company. (See Menow and Meyer, assignors.)

National Envelope Sealing and Stamping Manufacturing Company. (See Allen, Fred R., assignor.)

National Grave Vault Company, The. (See Bellis, George W., assignor.)

National Lock Co. (See Thulander, Konstantine, assignor.)

National Lock Washer Company, The. (See Hoyt, Daniel, assignor.)

National Malleable Castings Company, The. (See Bazeley, Arthur J., assignor.)

National Malleable Castings Company, The. (See Krakau, Harry T., assignor.)

National Malleable Castings Company, The. (See Willison, John, assignor.)

National Piano Company. (See Watson, William A., assignor.)

National Positive Lock Nut Co. (See Mattingly, Albertus B., assignor.)

National Standard Company. (See Parkin, Walter H., assignor.)

National Tube Company. (See Berg, Oscar W., assignor.)

National Tube Company. (See Scholz, Richard, assignor.)

National Tube Company. (See Simpson and Clay, assignors.)

National Water Main Cleaning Company. (See Frank, William A., assignor.)

Nayda, Wladyslaw, Wilmington, Del. Double wrench. No. 1,196,014; Aug. 29; Gaz. vol. 229; p. 1280.

Neagley, Guy M., Carrick, Pa. Gas welding-torch. No. 1,194,769; Aug. 15; Gaz. vol. 229; p. 767.

Neahr, Jacob E., New York, N. Y. Match-igniting device. No. 1,194,867; Aug. 15; Gaz. vol. 229; p. 802.

Neal, Harry W., assignor of one-half to Hall Hardware Company, Indianapolis, Ind. Furnace-casing. No. 1,195,845; Aug. 22; Gaz. vol. 229; p. 1188.

Nedrow, George A., Monessen, Pa. Hasp. No. 1,195,493; Aug. 22; Gaz. vol. 229; p. 1058.

Negraval, Louis A., Jersey City, N. J., assignor of one-third to C. S. Gutmann and one-third to A. S. Frank, New York, N. Y. Box. No. 1,194,412; Aug. 15; Gaz. vol. 229; p. 643.

Nehls, Carl B., assignor to Felt-Sub Polishing Wheel Company, Detroit, Mich. Buffing or polishing wheel. No. 1,195,389; Aug. 22; Gaz. vol. 229; p. 1024.

Neidich, Samuel A., Edgewater Park, N. J., assignor to The American Multigraph Company, Cleveland, Ohio. Column-rule. No. 1,194,868; Aug. 15; Gaz. vol. 229; p. 803.

Nell & Smith Electric Tool Co., The. (See Smith, Edward F., assignor.)

Nell, William, Jr., *et al.* (See Caufield, Frank E., Jr., assignor.)

Neller, Albert H. (See Louden and Neller.)

Nelson, Edward, Jersey City, N. J. Automatic signaling device for marine vessels. No. 1,194,770; Aug. 15; Gaz. vol. 229; p. 767.

Nelson, Frank G., New York, N. Y. Lock structure. No. 1,193,412; Aug. 1; Gaz. vol. 229; p. 209.

Nelson, H. J. (See Downs, Anthony W., assignor.)

Nelson, Harvey A., Dubuque, Iowa. Speed-regulating device. No. 1,196,015; Aug. 29; Gaz. vol. 229; p. 1280.

Nelson, Horace C., *et al.* (See Miller, Andrew B., assignor.)

Nelson, Lewis W., Philadelphia, Pa., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y. Power transmission and control. No. 1,196,713; Aug. 29; Gaz. vol. 229; p. 1521.

Nelson, Nels, and R. Elliott, Fort Dodge, Iowa. Searchlight. No. 1,193,813; Aug. 8; Gaz. vol. 229; p. 391.

Nelson, Ollie T., Seattle, Wash. Boiler. No. 1,196,140; Aug. 29; Gaz. vol. 229; p. 1324.

Nelson, Oscar F., Fort Dodge, Iowa. Support for drills. No. 1,196,266; Aug. 29; Gaz. vol. 229; p. 1368.

Nelson, Roy S. and W. S., assignors of one-third to C. H. Fleet, Oklahoma, Okla. Oil-burner. No. 1,193,418; Aug. 1; Gaz. vol. 229; p. 209.

Nelson, Victor E., assignor of forty-nine one-hundredths to A. T. Harrow, Detroit, Mich. Internal-combustion engine. No. 1,195,070; Aug. 15; Gaz. vol. 229; p. 873.

Nelson, Winfield S. (See Nelson, Roy S. and W. S.)

Nero, Arvid H., New Britain, assignor to The Arrow Electric Company, Hartford, Conn. Attachment-plug fitting. No. 1,194,218; Aug. 8; Gaz. vol. 229; p. 530.

Nesseler, Matthew, Kansas City, Mo. Electric fan. No. 1,194,413; Aug. 15; Gaz. vol. 229; p. 643.

Neuerburg, Henry. (See Snodgrass, Leslie M., assignor.)

Neumayer, Anthony, Belleville, Ill. Combination wrench and vise. No. 1,194,058; Aug. 8; Gaz. vol. 229; p. 476.

New Departure Manufacturing Company, The. (See Hughes, Frederick G., assignor.)

New Departure Manufacturing Company, The. (See Pagé, Victor W., assignor.)

New Departure Manufacturing Company, The. (See Rockwell, Hugh M., assignor.)

New Jersey Patent Company. (See Dyer, Frank L., assignor.)

New York Revolving Portable Elevator Company. (See Boehck, William E., assignor.)

Newberry, Spencer B., Sandusky, Ohio, and G. R. Fishburne, Charleston, S. C. Making fertilizer. No. 1,194,219; Aug. 8; Gaz. vol. 229; p. 531.

Newbold, Harry, London, England, assignor to American Optical Company, Southbridge, Mass. Eyeglass-reel. No. 1,196,714; Aug. 29; Gaz. vol. 229; p. 1521.

Newell, Edward W., Pittsburgh, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Friction draft-gear. No. 1,196,016; Aug. 29; Gaz. vol. 229; p. 1281.

Newman, John W., Bigpine, Cal. Pipe-wrench. No. 1,195,846; Aug. 22; Gaz. vol. 229; p. 1188.

Newman, Martin F., Oakmont, assignor to Wm. B. Scaife & Sons Company, Pittsburgh, Pa. Water-purifying apparatus. No. 1,195,391; Aug. 22; Gaz. vol. 229; p. 1024.

Newman, Samuel, and H. R. Bothwell, Cincinnati, Ohio; said Bothwell assignor to said Newman. Ticket-chopper. No. 1,194,771; Aug. 15; Gaz. vol. 229; p. 768.

Newman, Samuel, and H. R. Bothwell, Cincinnati, Ohio; said Bothwell assignor to said Newman. Lamp-support. No. 1,194,772; Aug. 15; Gaz. vol. 229; p. 768.

Newman, Walter T., Vancouver, British Columbia, Canada. Pneumatic wheel. No. 1,195,148; Aug. 15; Gaz. vol. 229; p. 900.

Newmann, Hermann, New York, N. Y. Turret tool-post for engine-lathes. No. 1,195,390; Aug. 22; Gaz. vol. 229; p. 1024.

Newton, Arthur H., New York, N. Y. Fuel-mixing device for internal-combustion engines. No. 1,195,254; Aug. 22; Gaz. vol. 229; p. 973.

Newton, Arthur H., New York, N. Y. Fuel-mixing device for internal-combustion engines. No. 1,195,255; Aug. 22; Gaz. vol. 229; p. 973.

Nicholas Power Company. (See Dietzke, Walter A., assignor.) (Reissue.)

Nichols, Edward C., Geneva, N. Y. Turret tool-post. No. 1,192,930; Aug. 1; Gaz. vol. 229; p. 35.

Nichols, Gayle H., assignor to A. M. Godshall, Douglas, Ariz. Alarm mechanism. No. 1,195,494; Aug. 22; Gaz. vol. 229; p. 1059.

Nichols, Jesse W., Chicago, Ill. Crown-seal-cap machine. No. 1,194,869; Aug. 15; Gaz. vol. 229; p. 803.

Nichols, John S., Batesville, Ark. Cultivator. No. 1,196,017; Aug. 29; Gaz. vol. 229; p. 1281.

Nichols, Norman T., Delavan, Ill. Soil muisher and subpacker. No. 1,195,710; Aug. 22; Gaz. vol. 229; p. 1138.

Nicolson, Alexander M., Tarrytown, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Vacuum-tube device. No. 1,196,474; Aug. 29; Gaz. vol. 229; p. 1439.

Nielsen, George M. C., assignor to United Cork & Seal Co., Millis, Mass. Machine for making bottle-caps. No. 1,195,392; Aug. 22; Gaz. vol. 229; p. 1025.

Niles, Irving F., Plainfield, N. J., assignor to R. Hoe and Co., New York, N. Y. Tripping mechanism for offset-machines. No. 1,193,045; Aug. 1; Gaz. vol. 229; p. 75.

Niles, Irving F., Plainfield, N. J., assignor to R. Hoe and Co., New York, N. Y. Transfer-press. No. 1,193,046; Aug. 1; Gaz. vol. 229; p. 76.

Nilson, Harold. (See Nilson, Leonard and H.)

Nilson, Leonard and H., Wayzata, Minn. Transmission-gearing. No. 1,193,591; Aug. 8; Gaz. vol. 229; p. 309.

Nilson, Nils, Wayzata, Minn. Scale. No. 1,193,711; Aug. 8; Gaz. vol. 229; p. 354.

Nilson, Nils, Wayzata, Minn. Scale. No. 1,193,712; Aug. 8; Gaz. vol. 229; p. 355.

Nitrogen Products Company. (See Bucher, John E., assignor.)

Nitzsche, Emil W., Newark, N. J. Trolley-wire support. No. 1,196,475; Aug. 29; Gaz. vol. 229; p. 1439.

Nivols, Victor, Brooklyn, N. Y. Container. No. 1,193,592; Aug. 8; Gaz. vol. 229; p. 309.

Nivols, Victor, Brooklyn, N. Y. Cigarette-case. No. 1,193,593; Aug. 8; Gaz. vol. 229; p. 310.

Nivols, Victor, Brooklyn, N. Y. Container. No. 1,196,267; Aug. 29; Gaz. vol. 229; p. 1369.

Noble, Boughton T., Plantsville, assignor to The Clark Bros. Bolt Co., Milldale, Conn. Work-holder. No. 1,193,289; Aug. 1; Gaz. vol. 229; p. 165.

Nobles, Harry C., *et al.* (See Bircher, Eugene A., assignor.)

Noel, Ell, Kansas City, Mo. Universal joint. No. 1,196,268; Aug. 29; Gaz. vol. 229; p. 1369.

Nogar, August, Reading, Pa. Safety-envelop. No. 1,196,577; Aug. 29; Gaz. vol. 229; p. 1474.

Noiseless Typewriter Company, The. (See Kidder, Wellington P., assignor.)

Nolan, Thomas J., Albany, N. Y. Perpetual calendar. No. 1,195,071; Aug. 15; Gaz. vol. 229; p. 874.

Noll, Henry, Oakland, Cal. Leaf-holder for books. No. 1,196,715; Aug. 29; Gaz. vol. 229; p. 1522.

Nonnenbruch, Otto H., New Rochelle, N. Y. Device for maintaining the transparency of transparent mediums. No. 1,195,256; Aug. 22; Gaz. vol. 229; p. 973.

Noon, William J., Lynn, Mass. Tube-filling apparatus. No. 1,196,387; Aug. 29, Gaz. vol. 229; p. 1409.

Norby, Carl, Ferry Point, Alberta, Canada. Piston-rod guide and support. No. 1,195,847; Aug. 22; Gaz. vol. 229; p. 1189.

Norcross, William C., assignor to American Molding Machine Co., Terre Haute, Ind. Sand-molding machine. No. 1,194,059; Aug. 8; Gaz. vol. 229; p. 476.

Nordwall, Peter, Kansas City, Kans. Combined lock and latch. No. 1,195,711; Aug. 22; Gaz. vol. 229; p. 1138.

Noro, Seikichi, Philadelphia, Pa. Attachment for horse-shoes. No. 1,194,773; Aug. 15; Gaz. vol. 229; p. 769.

Noro, Seikichi, Philadelphia, Pa. Attachment for horse-shoes. No. 1,194,774; Aug. 15; Gaz. vol. 229; p. 769.

Noros, George C., assignor to Standard Pressed Steel Company, Philadelphia, Pa. Shaft-hanger. No. 1,195,257; Aug. 22; Gaz. vol. 229; p. 974.

Norris, Albert F. and C. H., Stoughton, Mass. Pedal. No. 1,194,311; Aug. 8; Gaz. vol. 229; p. 564.

Norris, Almon E., Cambridge, Mass. Transmission mechanism. No. 1,193,916; Aug. 8; Gaz. vol. 229; p. 428.

Norris, Arthur B., Rochester, N. Y., assignor to Charles E. Reed & Co., Chicago, Ill. Woodworking-machine. No. 1,196,716; Aug. 29; Gaz. vol. 229; p. 1522.

Norris, Clifton H. (See Norris, Albert F. and C. H.)

Norris, Murvin, Cottageville, W. Va. Pitman-rod. No. 1,193,814; Aug. 8; Gaz. vol. 229; p. 391.

Norrman, Karl A., Lynn, Mass., assignor to General Electric Company. Gas-fired steam-boiler. No. 1,195,072; Aug. 15; Gaz. vol. 229; p. 874.

Norsk Hydro-Elektrisk Kvaelstofaktieselskab. (See Dövle, Carl O. A., assignor.)

Norsk Hydro-Elektrisk Kvaelstofaktieselskab. (See Edwin, Emil, assignor.)

Northwestern Knitting Co. *et al.* (See Chatfield and Rutledge, assignors.)

Norton, Charles E., Manchester, Conn. Electrical measuring instrument. No. 1,195,712; Aug. 22; Gaz. vol. 229; p. 1138.

Norton, Horatio N., Mount Vernon, N. Y., assignor, by mesne assignments, to Continental Can Company, Inc. Vacuum sealing-machine for containers. No. 1,196,578; Aug. 29; Gaz. vol. 229; p. 1475.

Norton, Samuel P., *et al.*, trustees. (See McElwain, James, assignor.)

Nottingham, Severn M., *et al.* (See Stringfellow, Bruce W., assignor.)

Novotny, Anna, *et al.*, administrators. (See Novotny, Charles A.)

Novotny, Charles A., deceased, Toledo, Iowa; A. Novotny and E. J. Stayskell, administratora. Tile-setter. No. 1,194,220; Aug. 8; Gaz. vol. 229; p. 531.

Nu-Fastener Co. (See Herzog, Soma, assignor.)

Nussbaum, Louis, Jr., Crowley, La. Screen. No. 1,195,073; Aug. 15; Gaz. vol. 229; p. 875.

Nydia Bank Lock Company, The. (See Benham, William T., assignor.)

Nye, Henry V., West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Motor-control system. No. 1,193,917; Aug. 8; Gaz. vol. 229; p. 429.

Nylund, Hanna B., Stambaugh, assignor of one-half to G. R. Waeber, Iron River, Mich. Separable fastening device. No. 1,193,815; Aug. 8; Gaz. vol. 229; p. 391.

Nystrum, Conrad E., assignor of one-fourth to E. M. White, Medford, Wis. Cuspidor. No. 1,194,533; Aug. 15; Gaz. vol. 229; p. 687.

O. M. Edwards Company, The. (See Chaffee, Edward F., assignor.)

O'Brien, John C. (See Slaght, Sutton, and O'Brien.)

O'Connell, John J., assignor to Mercantile Corporation, Dayton, Ohio. Envelop-registering mechanism for envelop-machines. No. 1,196,018; Aug. 29; Gaz. vol. 229; p. 1281.

O'Connor, Albert F., New Hampton, Iowa. Gearing for emery-wheel grinders. No. 1,194,534; Aug. 15; Gaz. vol. 229; p. 687.

O'Connor, James, New York, N. Y. Pumper-bellows. No. 1,193,594; Aug. 8; Gaz. vol. 229; p. 310.

O'Connor, John B. (See Bales and O'Connor.)

O'Connor, John F., assignor to W. H. Miner, Chicago, Ill. Refrigerator-car-door-operating mechanism. No. 1,193,414; Aug. 1; Gaz. vol. 229; p. 210.

O'Day, Thomas J., Malone, N. Y. Support for locomotive air-reservoirs. No. 1,193,480; Aug. 1; Gaz. vol. 229; p. 231.

O'Dell, John H., Oakland, Cal., assignor to International Egg Company, Inc., New York, N. Y. Composition for preserving eggs. No. 1,194,340; Aug. 8; Gaz. vol. 229; p. 575.

O'Reilly, William E., London, England. Safety-razor. No. 1,195,259; Aug. 22; Gaz. vol. 229; p. 974.

O'Rourke, Daniel J., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Piston-rod protector. No. 1,193,481; Aug. 1; Gaz. vol. 229; p. 232.

O'Shea, John H., and C. H. Fenton, assignors to The N. K. Fairbank Company, Chicago, Ill. Friction-lid can. No. 1,195,393; Aug. 22; Gaz. vol. 229; p. 1025.

Oakford, Charles, Plant City, Fla. Fruit-cleaning device. No. 1,195,848; Aug. 22; Gaz. vol. 229; p. 1189.

Obarr, Richard H., Harper, Tex. Roadway for vehicles. No. 1,193,918; Aug. 8; Gaz. vol. 229; p. 429.

Oberbeck, Gertrude, administratrix. (See Oberbeck, Gustav H.)

Oberbeck, Gustav H., deceased; G. Oberbeck, administratrix, assignor of one-half to N. J. Townsend, St. Louis, Mo. Lifting-jack. No. 1,196,388; Aug. 29; Gaz. vol. 229; p. 1410.

Oberdier, John, Mount Gilead, Ohio. Nut-lock. No. 1,194,060; Aug. 8; Gaz. vol. 229; p. 477.

Oberer, Fredolien J., assignor to Ironclad Silo Company, Portland, Oreg. Band for circular containers. No. 1,195,602; Aug. 22; Gaz. vol. 229; p. 1099.

Oden, Thomas K., Sacramento, Cal. Lubricator. No. 1,193,290; Aug. 1; Gaz. vol. 229; p. 165.

Oechsle, Theodore F., and A. S. Bancroft, Philadelphia, Pa. Window-operating device. No. 1,195,258; Aug. 22; Gaz. vol. 229; p. 974.

Oehring, Oscar, Elsleben, and G. Heuer, Dresden, assignors to Internationale Neverfail Patentkurbelfenster G. m. b. H., Berlin, Germany. Sash fastener and lift. No. 1,194,775; Aug. 15; Gaz. vol. 229; p. 769.

Oelker, Edward. (See Ricke, George H., assignor.)

Offerman, Joseph P. (See Bulger and Offerman.)

Offerman, Joseph P., Beaver Dam, Wis. Converging disk mechanism. No. 1,193,595; Aug. 8; Gaz. vol. 229; p. 311.

Ohio Brass Company, The. (See Buttrick, George, assignor.)

Ohio Brass Company, The. (See Wolcott, Mark P., assignor.)

Ohlsen, Ulrich, assignor of one-half to M. Mortensen, Denver, Colo. Counterbalanced wheel. No. 1,195,074; Aug. 15; Gaz. vol. 229; p. 875.

Ohnstad, Joel R., Montfort, Wis. Chair. No. 1,193,047; Aug. 1; Gaz. vol. 229; p. 76.

Oil & Carbon Products Limited. (See Del Monte y Aldama, Leon, assignor.)

Okamuro, Sugimatsu, Los Angeles, Cal. Collar. No. 1,193,048; Aug. 1; Gaz. vol. 229; p. 77.

Okell, James H., Los Angeles, Cal. Core-drill. No. 1,193,468; Aug. 1; Gaz. vol. 229; p. 227.

Olb, Valentine, Bridgeport, Conn. Spring threading-die. No. 1,194,535; Aug. 15; Gaz. vol. 229; p. 687.

Oldenbusch, Ernest, New York, N. Y. Easel-frame. No. 1,193,415; Aug. 1; Gaz. vol. 229; p. 210.

Oldfield, John F., Bel Air, Md. Dry-kiln. No. 1,193,596; Aug. 8; Gaz. vol. 229; p. 311.

Oldfield, John F., Bel Air, Md. Portable dry-kiln. No. 1,194,776; Aug. 15; Gaz. vol. 229; p. 770.

Olechna, Peter K., Schenectady, N. Y. Resilient tire for vehicle-wheels. No. 1,195,849; Aug. 22; Gaz. vol. 229; p. 1189.

Olgard, Harry S., Cooperstown, N. D. Mail-transferring device. No. 1,193,291; Aug. 1; Gaz. vol. 229; p. 166.

Oliver, Orin O., and L. Powers, Sanger, Cal. Floating brace for packing boxes in railway-cars. No. 1,193,597; Aug. 8; Gaz. vol. 229; p. 311.

Oliver, Thomas C., assignor to Chemical Construction Company, Charlotte, N. C. Method of and apparatus for concentrating acids. No. 1,195,075; Aug. 15; Gaz. vol. 229; p. 875.
Oliver, William J., Allegan, Mich. Filing device. No. 1,194,536; Aug. 15; Gaz. vol. 229; p. 687.
Ollard, James C., Tacoma, Wash. Ship-brake. No. 1,195,149; Aug. 15; Gaz. vol. 229; p. 900.
Olmsted, Herbert W., assignor to Wilson Memindex Company, Rochester, N. Y. Memorandum-file. No. 1,196,269; Aug. 29; Gaz. vol. 229; p. 1369.
Olney, Arthur G. (See Llewellyn and Olney.)
Olsen, Harold O., Watertown, N. Y. Screen-covered cylindrical roll for paper-making machines. No. 1,196,389; Aug. 29; Gaz. vol. 229; p. 1410.
Olsen, Martin H., assignor to V. Bendix, Chicago, Ill. Starter for engines. No. 1,196,390; Aug. 29; Gaz. vol. 229; p. 1411.
Olson, Carl G., assignor to Illinois Tool Works, Chicago, Ill. Machine for forming grinding-points. No. 1,193,049; Aug. 1; Gaz. vol. 229; p. 77.
Olson, Carl G., assignor to Illinois Tool Works, Chicago, Ill. Filing-machine. No. 1,194,414; Aug. 15; Gaz. vol. 229; p. 644.
Olson, Herman, Conroy, Iowa. Shock-holder. No. 1,193,713; Aug. 8; Gaz. vol. 229; p. 355.
Olson, Olof W., Jersey City, N. J., assignor of one-half to A. W. Anderson, New York, N. Y. Leaf-turning device. No. 1,196,476; Aug. 29; Gaz. vol. 229; p. 1439.
Olsson, Axel H. (See Pfeiffl and Olsson.)
Ophuls, Fred, assignor to Hill-Ophuls-Prindle Corp., New York, N. Y. Ice manufacture. No. 1,195,495; Aug. 22; Gaz. vol. 229; p. 1059.
Optische Anstalt C. P. Goerz Aktiengesellschaft. (See Kabelitz, Wilhelm, assignor.)
Orewiler, Benjamin F., Chicago, Ill. Adjusting-buckle. No. 1,193,050; Aug. 1; Gaz. vol. 229; p. 77.
Orth, Frank, *et al.* (See McCormack and McMullen, assignors.)
Orvis, Orel D., Newark, N. J. Odorless gas-heater. No. 1,196,141; Aug. 29; Gaz. vol. 229; p. 1325.
Osmunson, Ola T., Berkeley, Cal. Gate-hinge. No. 1,194,656; Aug. 15; Gaz. vol. 229; p. 728.
Osteen, Percy C., Anderson, S. C. Camera. No. 1,195,076; Aug. 15; Gaz. vol. 229; p. 875.
Ostenberg, John A., Campbell, Cal. Magneto drive for internal-combustion engines. No. 1,196,270; Aug. 29; Gaz. vol. 229; p. 1370.
Otis, Arthur H., Cleveland Heights, Ohio. Automobile signaling system. No. 1,194,537; Aug. 15; Gaz. vol. 229; p. 688.
Ottmann, William F., New York, N. Y., assignor to Abbey & Imbrie. Fish and crab trap. No. 1,193,816; Aug. 8; Gaz. vol. 229; p. 392.
Overholt, Lester S. (See Dickson and Overholt.)
Overman, Charles J., San Antonio, Tex. Camera. No. 1,194,657; Aug. 15; Gaz. vol. 229; p. 728.
Overmyer, Charles G., Hartford City, Ind. Caster device for stove-legs. No. 1,193,051; Aug. 1; Gaz. vol. 229; p. 78.
Owen, Carrie E. (See McNutt, William H., assignor.)
Owen, John C. (See Schoolfield and Owen.)
Owen, Owen J., Blaenau Festiniog, Wales. Manufacture of artificial roofing-slate. No. 1,193,416; Aug. 1; Gaz. vol. 229; p. 210.
Pacific Foundry Company. (See Baird, Frank, assignor.)
Pacific Foundry Company. (See Landers, William H., assignor.)
Package Machinery Company. (See Fischer, Herman O., assignor.)
Package Machinery Company. (See Kempf, Henry J., assignor.)
Packard Motor Car Company. (See Cowles, Edward P., assignor.)
Packer, Mortimer L., Columbus, Ohio. Combined gas and coal range. No. 1,193,714; Aug. 8; Gaz. vol. 229; p. 356.
Page, Albert A., East Haven, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,195,713; Aug. 22; Gaz. vol. 229; p. 1139.
Page, John W., Chicago, Ill. Excavating device. No. 1,194,777; Aug. 15; Gaz. vol. 229; p. 770.
Page, Lee M., Samson, Ala. Adjustable stop mechanism. No. 1,196,477; Aug. 29; Gaz. vol. 229; p. 1440.
Pagé, Victor W., assignor to The New Departure Manufacturing Company, Bristol, Conn. Propelling and controlling mechanism. No. 1,193,919; Aug. 8; Gaz. vol. 229; p. 429.
Pagin, James R., Valparaiso, Ind. Combination automobile-lamp. No. 1,194,658; Aug. 15; Gaz. vol. 229; p. 728.
Pfiglow, Kl., Gebr. (See Hennig, Rudolf, assignor.)
Paige, Arthur E., Philadelphia, Pa. Making open-face envelops. No. 1,195,821; Aug. 22; Gaz. vol. 229; p. 1179.
Paige, Jeremiah A., Boston, assignor to W. F. Mooers, Milton, Mass. Trolley. No. 1,195,850; Aug. 22; Gaz. vol. 229; p. 1190.
Pain, Henry J., New York, N. Y. Toy. No. 1,196,478; Aug. 29; Gaz. vol. 229; p. 1440.
Palis, August L., Upland, Cal. Automatic time control for lights. No. 1,193,817; Aug. 8; Gaz. vol. 229; p. 392.
Palmer, Isaac E., deceased; T. and N. T. Palmer, administrators, Middletown, Conn. Bobbin-supporter. No. 1,196,740; Aug. 29; Gaz. vol. 229; p. 1532.
Palmer, Lyndon C., assignor to F. N. Burt Company, Limited, Buffalo, N. Y. Labeling-machine. No. 1,193,292; Aug. 1; Gaz. vol. 229; p. 166.
Palmer, Nathalie T., *et al.*, administrators. (See Palmer, Isaac E.)
Palmer, Scott W. (See Tiegs and Palmer.)
Palmer, Townsend, *et al.*, administrators. (See Palmer, Isaac E.)
Palmer, Truman G., Chicago, Ill. Gas-heater. No. 1,195,260; Aug. 22; Gaz. vol. 229; p. 974.
Palmer, Truman G., Chicago, Ill. Gas-heater. No. 1,196,019; Aug. 29; Gaz. vol. 229; p. 1282.
Palmgren, Nils G. (See Betulander and Palmgren.)
Panet, Antoine de Lothbiniere, Toronto, Ontario, Canada. Combined sleeping-bag and shelter. No. 1,195,394; Aug. 22; Gaz. vol. 229; p. 1025.
Pape, Wilhelm, Charlottenburg, Germany, assignor to General Electric Company. Elastic-fluid turbine. No. 1,194,312; Aug. 8; Gaz. vol. 229; p. 564.
Papke, William. (See Steiniger and Papke.)
Paquit, Vital, Stapleton, N. Y. Electric-current modifier. No. 1,194,778; Aug. 15; Gaz. vol. 229; p. 771.
Paramount Rubber Company, The. (See Roberts, Fred T., assignor.)
Parcells, Paul, assignor to Geo. Whiting Company, Chicago, Ill. Bending-rolls. No. 1,195,714; Aug. 22; Gaz. vol. 229; p. 1139.
Parke, Davis & Company. (See Thorp, Lambert, assignor.)
Parke, Davis & Company. (See Wildman and Thorp, assignors.)
Parker, Frank S., Detroit, Mich. Overhead railway. No. 1,196,717; Aug. 29; Gaz. vol. 229; p. 1522.
Parker, George D., Riverside, Cal. Fruit-drying apparatus. No. 1,194,538; Aug. 15; Gaz. vol. 229; p. 688.
Parker, Knight K., and J. C. Proctor, Seattle, Wash.; said Parker assignor to said Proctor. Portable gravity dump-box. No. 1,196,391; Aug. 29; Gaz. vol. 229; p. 1411.
Parker, Lester A., assignor of one-half to The Home Club Investment Realty Company, Denver, Colo. Folding crate. No. 1,194,659; Aug. 15; Gaz. vol. 229; p. 729.
Parker, Levin S., assignor to Parker Universal Coupling Company, Incorporated, New York, N. Y. Pipe-coupling. No. 1,193,482; Aug. 1; Gaz. vol. 229; p. 232.
Parker, Levin S., assignor to Parker Universal Coupling Company, Incorporated, New York, N. Y. Pipe-coupling. No. 1,193,483; Aug. 1; Gaz. vol. 229; p. 232.
Parker, Silas A., Morristown, N. J., assignor to T. R. Peterson, Providence, R. I. Non-refillable bottle. No. 1,194,415; Aug. 15; Gaz. vol. 229; p. 644.
Parker Universal Coupling Company. (See Parker, Levin S., assignor.)
Parkin, Alfred, Loma, Colo. Clothes-holder. No. 1,195,496; Aug. 22; Gaz. vol. 229; p. 1059.
Parkin, Walter H., assignor to National Standard Company, Niles, Mich. Lifting-jack. No. 1,195,261; Aug. 22; Gaz. vol. 229; p. 975.
Parkinson, William B., Le Mars, Iowa. Rhythmometer. No. 1,195,077; Aug. 15; Gaz. vol. 229; p. 876.
Parmelee, George O., Wakefield, Mich. Combined bench stop and dog. No. 1,195,078; Aug. 15; Gaz. vol. 229; p. 876.
Parmenter, Frank R., Lansing, Mich. Automobile-jack. No. 1,196,392; Aug. 29; Gaz. vol. 229; p. 1411.
Parmer, Ernest W., Cisco, Tex. Wrench. No. 1,196,393; Aug. 29; Gaz. vol. 229; p. 1412.
Parrish, Frederick F., Los Angeles, Cal. Hydrocarbon-burner. No. 1,194,779; Aug. 15; Gaz. vol. 229; p. 771.
Parsons, Charles A., Newcastle-upon-Tyne, and S. S. Cook, Wallsend, England; said Cook assignor to said Parsons. Means for synchronizing revolving bodies. No. 1,194,222; Aug. 8; Gaz. vol. 229; p. 532.
Parsons, Charles A., A. Q. Carnegie, Newcastle-upon-Tyne, and S. S. Cook, Wallsend, England; said Carnegie and Cook assignors to said Parsons. Gear-cutting machine. No. 1,194,221; Aug. 8; Gaz. vol. 229; p. 531.
Parsons, Winslow R., Chicago, Ill. Book or box like form savings-bank. No. 1,193,598; Aug. 8; Gaz. vol. 229; p. 311.
Parsons, Winslow R., Chicago, Ill. Safety-deposit bank. No. 1,193,599; Aug. 8; Gaz. vol. 229; p. 312.
Passaic Metal Ware Company. (See Townsend, Frank S., assignor.)
Patrick, Theodore L., Pawpaw, Ill. Sash-balance. No. 1,196,271; Aug. 29; Gaz. vol. 229; p. 1370.
Patten, John, Baltimore, Md., assignor of seventy-five one-hundredths to C. W. and E. B. Miller. Gun. No. 1,194,870; Aug. 15; Gaz. vol. 229; p. 803.
Patten, John, Baltimore, Md., assignor of seventy-five one-hundredths to C. W. and E. B. Miller. Gun. No. 1,194,871; Aug. 15; Gaz. vol. 229; p. 804.
Patterson, Thomas S., Rosemont, Pa. Washing-machine. No. 1,193,600; Aug. 8; Gaz. vol. 229; p. 312.
Pattno, Frank P., and G. S. Witham, Jr., Au Sable Forks, N. Y. Evaporator. No. 1,196,080; Aug. 29; Gaz. vol. 229; p. 1282.
Patton, Francis E., Williamsport, Pa. Freight-car door. No. 1,193,601; Aug. 8; Gaz. vol. 229; p. 313.

Patton, Ralph C., assignor to D. & W. Fuse Company, Providence, R. I. Time-switch. No. 1,193,293; Aug. 1; Gaz. vol. 229; p. 166.
Patton, William, assignor of one-third to A. G. Beck and one-third to C. Weber, Cincinnati, Ohio. Dispensing apparatus. No. 1,193,180; Aug. 1; Gaz. vol. 229; p. 125.
Paul, C. R. (See Kline, Jacob B., assignor.)
Pauls, Peter D., Denver, Colo. Combination library and drawing table. No. 1,193,417; Aug. 1; Gaz. vol. 229; p. 210.
Paulson, Peter A., Appleton, Wis., assignor of one-half to Kimberly-Clark Company. Apparatus for barking wood. No. 1,194,872; Aug. 15; Gaz. vol. 229; p. 804.
Pavey, William B., and G. M. French, assignors to Economy Engineering Company, Chicago, Ill. Caster for trucks. No. 1,194,780; Aug. 15; Gaz. vol. 229; p. 772.
Payne, Alexander F., Harborne, Birmingham, England. Magneto ignition device for internal-combustion engines. No. 1,194,313; Aug. 8; Gaz. vol. 229; p. 565.
Payne, Raymond P., Leeds, England. Rotary printing-machine. No. 1,194,416; Aug. 15; Gaz. vol. 229; p. 644.
Payne, Theodore P., Newark, N. J. Agricultural system and machine. No. 1,195,851; Aug. 22; Gaz. vol. 229; p. 1190.
Paynter, Earl F., Franklinville, N. Y. Air-valve for combustion-engines. No. 1,195,715; Aug. 22; Gaz. vol. 229; p. 1140.
Pearce, Herbert L., Nickleville, Pa. Gas-purifying apparatus. No. 1,194,223; Aug. 8; Gaz. vol. 229; p. 532.
Pearsall, Albert W., Lowell, assignor to The Lamson Company, Boston, Mass. Pneumatic-despatch-tube carrier. No. 1,195,716; Aug. 22; Gaz. vol. 229; p. 1140.
Pearson, Peter, Menominee, Mich. Ventilator. No. 1,194,314; Aug. 8; Gaz. vol. 229; p. 555.
Pearsons, George T., New York, N. Y. Fire-extinguisher. No. 1,194,781; Aug. 15; Gaz. vol. 229; p. 772.
Peck, Herbert G., Franklin township, Somerset county, N. J. Method of and means for shaping and tensioning piston-rings. No. 1,193,920; Aug. 8; Gaz. vol. 229; p. 430.
Peck, Joseph R., assignor to The Platt and Peck Co., New York, N. Y. Painting outfit. No. 1,193,181; Aug. 1; Gaz. vol. 229; p. 126.
Peck, Samuel J., Eaton, Ind. Mail-delivering device. No. 1,194,315; Aug. 8; Gaz. vol. 229; p. 556.
Peck, Zue G., Sr. (See Mitchell, Leonard H., assignor.)
Pedersen, Jens P., Provo, Utah. Vehicle-wheel hub and spindle. No. 1,196,579; Aug. 29; Gaz. vol. 229; p. 1475.
Pederson, Nels, Trent, S. D. Stanchion. No. 1,194,782; Aug. 15; Gaz. vol. 229; p. 772.
Pedlar People Limited, The. (See Loach, William, assignor.)
Peerless Belt Lacing Machine Company. (See Fabian, Harry, assignor.)
Peerless Rubber Manufacturing Company. (See Meany, Richard B., assignor.)
Pegg, Gerald, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Work-support-controlling mechanism. No. 1,196,021; Aug. 29; Gaz. vol. 229; p. 1282.
Peham, Frank. (See Gerstner and Peham.)
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-supporting fixture. No. 1,193,602; Aug. 8; Gaz. vol. 229; p. 313.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Lamp-supporting-trolley structure. No. 1,195,262; Aug. 22; Gaz. vol. 229; p. 976.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-support. No. 1,195,263; Aug. 22; Gaz. vol. 229; p. 976.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-pin. No. 1,196,272; Aug. 29; Gaz. vol. 229; p. 1370.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Cross-arm saddle. No. 1,196,273; Aug. 29; Gaz. vol. 229; p. 1371.
Pejuo, Albert D., and H. J. McGivern, Cleveland, Ohio. Thread-cutting tool. No. 1,195,717; Aug. 22; Gaz. vol. 229; p. 1140.
Pelham, Walter O., Monett, Mo. Tension device for hitching-straps. No. 1,194,417; Aug. 15; Gaz. vol. 229; p. 645.
Pelot, Gustave, Alton, Ill. Hinge. No. 1,196,580; Aug. 29; Gaz. vol. 229; p. 1475.
Pembee Company, The. (See Petsche, Bismarck W., assignor.)
Pembroke, George H., New Brunswick, N. J., assignor to M. H. Horton, Brooklyn, N. Y. Paper-fastening machine. No. 1,195,718; Aug. 22; Gaz. vol. 229; p. 1140.
Pence Mailing Machine Company. (See Long, Sidney L., assignor.)
Pennefather, Francis E., Winnipeg, Manitoba, Canada. Flange-oiler. No. 1,193,294; Aug. 1; Gaz. vol. 229; p. 167.
Pennington, Thomas J., Chicago, Ill. Method of and apparatus for separating rubber substances of different densities. No. 1,195,264; Aug. 22; Gaz. vol. 229; p. 977.
Penobscot Canoe Company. (See Ranco, Joseph, assignor.)
Perfection Spring Company, The. (See Fay, Thomas J., assignor.)
Perfectograph Manufacturing Company, The. (See Wooden, Earle M., assignor.)
Perkins, Charles E., Grand Rapids, Mich. Universal joint. No. 1,194,224; Aug. 8; Gaz. vol. 229; p. 533.
Perkins Electric Switch Manufacturing Company, The. (See Anderson, Carl E., assignor.)
Perkins, George G. (See Halsey and Perkins.)
Perkins Glue Company. (See Carmichael and Grosvenor, assignors.)
Perkins, Hiram A., Rochester, assignor to American Splint Corporation, New York, N. Y. Cutter-head grinder. No. 1,193,295; Aug. 1; Gaz. vol. 229; p. 167.
Permutit Company, The. (See Kolb, Adalbert, assignor.)
Perry, Frank R., Weston, W. Va., and E. S. Richardson, Anderson, Ind. Glass-forming machine. No. 1,193,182; Aug. 1; Gaz. vol. 229; p. 126.
Petermann, Otto, Groton, N. Y., assignor, by mesne assignments, to Corona Typewriter Company, Incorporated. Type-writing machine. No. 1,193,603; Aug. 8; Gaz. vol. 229; p. 314.
Petermann, Otto, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated. Dead-key attachment for type-writing machines. No. 1,194,418; Aug. 15; Gaz. vol. 229; p. 645.
Petermann, Otto, Groton, N. Y., assignor to Corona Typewriter Company, Incorporated. Type-writing machine. No. 1,194,419; Aug. 15; Gaz. vol. 229; p. 645.
Petermann, Otto, Groton, N. Y., assignor to Corona Typewriter Company, Inc. Type-writing machine. No. 1,194,420; Aug. 15; Gaz. vol. 229; p. 646.
Peters, Hanna W., Mapleton, Minn. Milk-stool. No. 1,193,418; Aug. 1; Gaz. vol. 229; p. 211.
Peters, Lillian B., Pasadena, Cal. Hat-pin. No. 1,195,150; Aug. 15; Gaz. vol. 229; p. 900.
Petersen, Kai, Copenhagen, Denmark. Belt-shifting device. No. 1,194,873; Aug. 15; Gaz. vol. 229; p. 804.
Peterson, Christen J., Chicago, Ill. Bristle fabric and making the same. No. 1,194,874; Aug. 15; Gaz. vol. 229; p. 805.
Peterson, Christopher. (See Cubbage and Peterson.)
Peterson, Claus E., Worcester, Mass. Piano-player. No. 1,195,265; Aug. 22; Gaz. vol. 229; p. 977.
Peterson, Fredrick L., Helix, Oreg. Babbitting-machine for journal-boxes. No. 1,196,143; Aug. 29; Gaz. vol. 229; p. 1326.
Peterson, Johann G., Jersey City, N. J., assignor to Manhattan Electrical Supply Company, New York, N. Y. Electrical connector-clip. No. 1,195,079; Aug. 15; Gaz. vol. 229; p. 877.
Peterson, Otto A., assignor of one-half to G. E. Belcher, Stoughton, Mass. Hinged last. No. 1,195,266; Aug. 22; Gaz. vol. 229; p. 977.
Peterson, Theodore R. (See Parker, Silas A., assignor.)
Petri-Palmedo, David, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y. Typographic composing-machine. No. 1,193,604; Aug. 8; Gaz. vol. 229; p. 314.
Petroff, Grigori, assignor to Aktions Company "Kontakt," Petrograd, Russia. Product and process of manufacturing a product having the properties of soap. No. 1,196,274; Aug. 29; Gaz. vol. 229; p. 1371.
Petsche, Bismarck W., Yonkers, assignor to The Pembee Company, New York, N. Y. Apparatus for washing pulp and for separating pulp fibers from impurities. No. 1,193,605; Aug. 8; Gaz. vol. 229; p. 315.
Pettit, Ward D., Brownville, N. Y. Spraying-nozzle. No. 1,195,080; Aug. 15; Gaz. vol. 229; p. 877.
Pfau, Arnold, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Hydraulic turbine. No. 1,193,183; Aug. 1; Gaz. vol. 229; p. 126.
Pfeiffer, Isadore F., Altoona, Pa. Scale. No. 1,195,719; Aug. 22; Gaz. vol. 229; p. 1141.
Pfeil, Andrew, Oshkosh, Wis. Traction-wheel for agricultural and like machines. No. 1,194,875; Aug. 15; Gaz. vol. 229; p. 805.
Pfeil, Harry W., Chicago, Ill. Stove-board. No. 1,192,931; Aug. 1; Gaz. vol. 229; p. 35.
Phelps, Edwin P., Wilmette, assignor to W. M. McEwen, Chicago, Ill. Air-circulating device. No. 1,196,275; Aug. 29; Gaz. vol. 229; p. 1371.
Phelps, Eugene, Pitchfork, Wyo. Chain wrench. No. 1,196,479; Aug. 29; Gaz. vol. 229; p. 1440.
Philippi, Alexander F., St. Louis, Mo. Embossing-press. No. 1,194,061; Aug. 8; Gaz. vol. 229; p. 477.
Phillips, William L., Chicago, Ill. Combustion-engine. No. 1,195,603; Aug. 22; Gaz. vol. 229; p. 1099.
Philp, Robert A., Portland, Oreg. Burglar-alarm. No. 1,196,394; Aug. 29; Gaz. vol. 229; p. 1412.
Phinney Engineering Company, The. (See Smith and Brown, assignors.)
Phippen, Edward B., Salt Lake City, Utah. Screen for headlights. No. 1,194,225; Aug. 8; Gaz. vol. 229; p. 533.
Platt, William M., West Liberty, Ohio. Motor-driven corn-harvester. No. 1,194,660; Aug. 15; Gaz. vol. 229; p. 729.
Picard, Hugh F. K. (See Sulman and Picard.)
Picha, Stephen J. (See Sutter, Carl S., assignor.)
Piché, Joseph N., St. Basile, Quebec, Canada. Fire-escape. No. 1,194,062; Aug. 8; Gaz. vol. 229; p. 477.
Pick, Alfred, New York, N. Y. Earth-drilling machine. No. 1,196,480; Aug. 29; Gaz. vol. 229; p. 1441.
Picker, Alfred R., assignor to Durlacque Manufacturing Company, St. Louis, Mo. Liquid coating composition. No. 1,196,276; Aug. 29; Gaz. vol. 229; p. 1372.

Pickering, Oscar W., Springfield, Mass. Composition for rectifying and intensifying luminous light. No. 1,196,144; Aug. 29; Gaz. vol. 229; p. 1326.

Pickering, Oscar W., Springfield, Mass., assignor to Pickering Paint & Pigment Company. Aluminous pigment and paint. No. 1,195,604; Aug. 22; Gaz. vol. 229; p. 1100.

Pickering Paint & Pigment Company. (See Pickering, Oscar W., assignor.)

Pickering, Percy, Bradford, England. Concrete conduit. No. 1,195,081; Aug. 15; Gaz. vol. 229; p. 877.

Pickett, Frederick A. (See Pickett, Hurdle B. and F. A.)

Pickett, Hurdle B. and F. A., Baltimore, Md. Scatterer attachment for manure-spreaders. No. 1,194,226; Aug. 8; Gaz. vol. 229; p. 533.

Piel, Gottfried. (See Long, George F., assignor.)

Pierce, Burt N., Flint, Mich. Carbureter. No. 1,194,876; Aug. 15; Gaz. vol. 229; p. 806.

Pierce, Frank M., assignor to Pierce Wrapping Machine Company, Chicago, Ill. Shuttle folding and guiding device. No. 1,196,022; Aug. 29; Gaz. vol. 229; p. 1283.

Pierce, Frank M. and W. B., assignors to Pierce Wrapping Machine Company, Chicago, Ill. Shuttle. No. 1,196,023; Aug. 29; Gaz. vol. 229; p. 1283.

Pierce, Harold S., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Means for taking up drive-chains. No. 1,193,419; Aug. 1; Gaz. vol. 229; p. 211.

Pierce, William B. (See Pierce, Frank M. and W. B.)

Pierce Wrapping Machine Company. (See Pierce, Frank M., assignor.)

Pierce Wrapping Machine Company. (See Pierce, Frank M. and W. B., assignors.)

Pierce Wrapping Machine Company. (See Stevens, William C., assignor.)

Pierman, Alexander N., Newark, N. J. Color photography. No. 1,196,718; Aug. 29; Gaz. vol. 229; p. 1523.

Pierpont, Frank H., Horley, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Low-quad mechanism for type-machines. No. 1,193,420; Aug. 1; Gaz. vol. 229; p. 212.

Pilaski, Leon, Warsaw, Russia. Making active charcoal powder. No. 1,195,720; Aug. 22; Gaz. vol. 229; p. 1141.

Pilcher, John A. (See Kadel and Pilcher.)

Pilgren, Martin N., Brooklyn, N. Y. Protractor. No. 1,196,581; Aug. 29; Gaz. vol. 229; p. 1475.

Pinguely, Julius E., Melbourne, Ky. Stove or furnace. No. 1,196,145; Aug. 29; Gaz. vol. 229; p. 1326.

Pioneer Suspender Company. (See Russey, Roe E., assignor.)

Pirani, Marcello von. (See Kreusler, Gerdien, and Pirani.)

Pirsch, Peter, Kenosha, Wis. Tongue-support. No. 1,193,052; Aug. 1; Gaz. vol. 229; p. 78.

Pitcher, John W. (See Cooke, Adrian C., assignor.)

Pittsburgh Electrical Specialties Company. (See Feyes, Andrew, assignor.)

Pittsburgh-Hickson Company. (See Frost, Frank R., assignor.)

Pittsburgh Plate Glass Company. (See Lewis, Harry F., assignor.)

Pittsburgh Testing Laboratory. (See Handy and Isham, assignors.)

Pittsburgh Testing Laboratory. (See Handy, James O., assignor.)

Platt, Clarence D., Bridgeport, Conn. Snap-switch. No. 1,193,606; Aug. 8; Gaz. vol. 229; p. 315.

Platt and Peck Co., The. (See Peck, Joseph R., assignor.)

Player, William, Edgbastin, and W. Brace, Smethwick, Birmingham, England. Forward and reverse friction-gearing. No. 1,195,082; Aug. 15; Gaz. vol. 229; p. 877.

Plecher, Andrew, Las Animas, Colo. Telephone-transmitter. No. 1,193,184; Aug. 1; Gaz. vol. 229; p. 127.

Pleijel, Henning B. M., and A. H. Olsson, Stockholm, Sweden. Loading-coils for phantom circuits on aerial lines. No. 1,196,277; Aug. 29; Gaz. vol. 229; p. 1372.

Plopper, James A., Portland, Oreg. Change-making machine. No. 1,194,316; Aug. 8; Gaz. vol. 229; p. 566.

Plummer, Ezra G., Newton, Iowa. Transmission-gearing. No. 1,194,317; Aug. 8; Gaz. vol. 229; p. 567.

Podmore, William, Porthill, Stoke-upon-Trent, assignor of one-half to H. L. Doulton, London, England. Machine for internally shaping telegraph-insulators and the like. No. 1,193,185; Aug. 1; Gaz. vol. 229; p. 127.

Poellnitz, Edwin C., Myrtlewood, Ala. Boll-weevil destroyer. No. 1,193,296; Aug. 1; Gaz. vol. 229; p. 168.

Poetschke, Paul, Milford, Kent county, and F. L. Grier, Milford, Sussex county, assignors to The L. D. Caulk Co., Milford, Del. Cement-consistency standard. No. 1,196,582; Aug. 29; Gaz. vol. 229; p. 1476.

Pohli, Emil. (See Mueller, Augusto E., assignor.)

Polinkowsky, Lipa, Brussels, Belgium, assignor, by mesne assignments, to Western Electric Company, Incorporated. Machine telephone system. No. 1,193,053; Aug. 1; Gaz. vol. 229; p. 78.

Pollard, George A., Sturgeon, Mo. Road-drag. No. 1,193,921; Aug. 8; Gaz. vol. 229; p. 430.

Polson, Henry G. (See Lipiner, Elias, assignor.)

Pomeroy, Ebenezer, Lithonia, Ga. Fireplace. No. 1,193,054; Aug. 1; Gaz. vol. 229; p. 79.

Poole, Alfred W., Covina, Cal. Pruning-shears. No. 1,196,278; Aug. 29; Gaz. vol. 229; p. 1372.

Pope, Nelsone E., assignor of one-half to H. P. Guthrie, Bloomdale, Ohio. Stone-spreader. No. 1,194,063; Aug. 8; Gaz. vol. 229; p. 478.

Porcher, Edward P., Cocoa, Fla. Fruit-branding machine. No. 1,193,297; Aug. 1; Gaz. vol. 229; p. 168.

Porteous, James, Fresno, Cal. Combination elbow and valve. No. 1,196,146; Aug. 29; Gaz. vol. 229; p. 1326.

Porter-Cable Machine Company, The. (See Porter and Cable, assignors.)

Porter, George G., and F. E. Cable, assignors to The Porter-Cable Machine Company, Syracuse, N. Y. Lathe. No. 1,196,024; Aug. 29; Gaz. vol. 229; p. 1284.

Post, Bernard J., San Francisco, Cal. Elevating-cuspidor. No. 1,193,607; Aug. 8; Gaz. vol. 229; p. 316.

Post, Nathaniel B., assignor to Rueckheim Bros. & Eckstein, Chicago, Ill. Wrapping-machine. No. 1,195,721; Aug. 22; Gaz. vol. 229; p. 1141.

Postel, Jacob, Jr., and M. B. Dickens, St. Louis, Mo. Railway-tie. No. 1,194,227; Aug. 8; Gaz. vol. 229; p. 534.

Potter, Dexter B. (See Scott, Ephriam J., assignor.)

Poulson, Palmer O., Roswell, N. Mex. Insole. No. 1,193,608; Aug. 8; Gaz. vol. 229; p. 316.

Powanz, Louis F., Denver, Mo. Cement-block-molding machine. No. 1,196,395; Aug. 29; Gaz. vol. 229; p. 1412.

Power, John, Los Angeles, Cal. Nutcracker. No. 1,194,318; Aug. 8; Gaz. vol. 229; p. 567.

Powers Accounting Machine Company. (See Powers, James, assignor.)

Powers, Fred W., and M. O. Snediker, assignors to The Powers Regulator Company, Chicago, Ill. Thermostatic water-heater. No. 1,195,722; Aug. 22; Gaz. vol. 229; p. 1142.

Powers, James, assignor to Powers Accounting Machine Company, New York, N. Y. Single-acting perforating-machine. No. 1,195,605; Aug. 22; Gaz. vol. 229; p. 1100.

Powers, John H., Kansas City, Kans. Trousers-supporter. No. 1,196,279; Aug. 29; Gaz. vol. 229; p. 1372.

Powers, Lucius. (See Oliver and Powers.)

Powers Regulator Company, The. (See Powers and Snediker, assignors.)

Prater, Edwin F., and F. W. Sizer, Twin Falls, Idaho. Rotary valve. No. 1,194,421; Aug. 15; Gaz. vol. 229; p. 647.

Prater, Samuel J., Clifton, Tenn. Horse-detacher. No. 1,194,661; Aug. 15; Gaz. vol. 229; p. 729.

Pratt, Charles A., assignor to Goodman Manufacturing Company, Chicago, Ill. Storage-battery locomotive. No. 1,195,723; Aug. 22; Gaz. vol. 229; p. 1142.

Pratt, George R., Ventura, Cal. Drinking-fountain. No. 1,193,055; Aug. 1; Gaz. vol. 229; p. 79.

Pratt & Whitney Company. (See Müller, Friederich, assignor.)

Pre-Heated Air Company. (See Tacy, Samuel H., assignor.)

Preble, Edwin N., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stopping device. No. 1,193,056; Aug. 1; Gaz. vol. 229; p. 80.

Preble, Edwin N., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 1,193,186; Aug. 1; Gaz. vol. 229; p. 128.

Preble, Edwin N., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 1,194,539; Aug. 15; Gaz. vol. 229; p. 689.

Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,195,151; Aug. 15; Gaz. vol. 229; p. 901.

Prescott, Charles H., *et al.* (See Vincent, Louis N., assignor.)

Prescott, James E., Passaic, N. J. Metallic container. No. 1,195,083; Aug. 15; Gaz. vol. 229; p. 878.

Prescott, William E., assignor to Joseph Baker & Sons Limited, London, England. Machine for baking wafers and the like. No. 1,196,147; Aug. 29; Gaz. vol. 229; p. 1327.

Presto Cigarette Case Corporation. (See Wallenstein, Isaac, assignor.)

Preston, Archibald E., Fillmore, Cal. Pump-plunger. No. 1,195,395; Aug. 22; Gaz. vol. 229; p. 1025.

Preston, Orie S., Effingham, Kans. Post-hole auger. No. 1,195,724; Aug. 22; Gaz. vol. 227; p. 1143.

Preston, Solon F., Middletown, Conn. Emergency-lever-slot-filling device. No. 1,193,487; Aug. 1; Gaz. vol. 229; p. 234.

Pretts, William W., Platteville, Wis. Vaginal speculum and retractor. No. 1,194,319; Aug. 8; Gaz. vol. 229; p. 568.

Prettyman, Edith E., Portland, Oreg. Book or lesson marker and paper-cutter. No. 1,193,421; Aug. 1; Gaz. vol. 229; p. 212.

Prevo, Manford C., Purdy, Mo. Rock-picking machine. No. 1,193,298; Aug. 1; Gaz. vol. 229; p. 169.

Price, John, Tyler, Tex. Railway-brake appliance. No. 1,195,084; Aug. 15; Gaz. vol. 229; p. 878.

Price, Raymond B., Mishawaka, Ind., assignor to Rubber Regenerating Company. Fabric for tires and the like. No. 1,193,715; Aug. 8; Gaz. vol. 229; p. 356.

Prifold, George, Linwood, Pa., assignor, by mesne assignments, to United Roofing & Manufacturing Company (Department of Barrett Manufacturing Company), Wilmington, Del. Block-printing machine. No. 1,193,422; Aug. 1; Gaz. vol. 229; p. 212.

Prince, Oliver N. (See Keffer, Charles E., assignor.)

Prindle, Charles A., Chicago, Ill. Chain. No. 1,196,396; Aug. 29; Gaz. vol. 229; p. 1413.

Pringle, Henry C., Fort Worth, Tex. Automatic valve. No. 1,196,280; Aug. 29; Gaz. vol. 229; p. 1373.

Pritchard Stamping Company. (See Frankenstein, William B., assignor.)

Probert, Edwin R., assignor to The Moeschl-Edwards Corrugating Company, Covington, Ky. Record-card holder for freight-cars and other purposes. No. 1,194,064; Aug. 8; Gaz. vol. 229; p. 478.

Probert, Edwin R., assignor to The Moeschl-Edwards Corrugating Company, Covington, Ky. Record-card holder for freight-cars and other purposes. No. 1,194,065; Aug. 8; Gaz. vol. 229; p. 478.

Probst, George, Sardis, Ohio. Boltless rail-coupling. No. 1,196,025; Aug. 29; Gaz. vol. 229; p. 1284.

Proctor, George A., Watertown, Mass., assignor to Lovell-McConnell Manufacturing Company. Mechanical horn. No. 1,195,725; Aug. 22; Gaz. vol. 229; p. 1143.

Proctor, John A., Revere, assignor to Wireless Specialty Apparatus Company, Boston, Mass. System of wireless communication. No. 1,194,066; Aug. 8; Gaz. vol. 229; p. 479.

Proctor, John C. (See Parker and Proctor.)

Prokpoetz, August, assignor to Vanguard Manufacturing Company, Detroit, Mich. Fastener for vehicle canopy-tops. No. 1,196,583; Aug. 29; Gaz. vol. 229; p. 1476.

Pruszynski, Adolph J. (See Roebuck and Pruszynski.)

Pryor, John D., Providence, R. I. Chewing-gum. No. 1,193,423; Aug. 1; Gaz. vol. 229; p. 212.

Przespoleski, Stanislaw, Oakdale, Pa. Sectional scrubbing-brush. No. 1,196,397; Aug. 29; Gaz. vol. 229; p. 1413.

Puclilo, Francesco, London, England. Structure or frame for buildings or the like. No. 1,194,320; Aug. 8; Gaz. vol. 229; p. 568.

Pugh, Daniel J., Pottsville, Pa. Wrench attachment. No. 1,193,299; Aug. 1; Gaz. vol. 229; p. 169.

Pugh, Lowther B. (See Chilson and Pugh.)

Pullman Couch Company. (See Davis, Fred M., assignor.)

Purdon, Arthur, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Protective device. No. 1,194,228; Aug. 8; Gaz. vol. 229; p. 534.

Purdy, George C., and D. W. Edwards, assignors to Greenlee Bros. & Company, Rockford, Ill. Tie-boring machine. No. 1,195,852; Aug. 22; Gaz. vol. 229; p. 1190.

Purssell, Clarence V., *et al.* (See Purssell, James B., assignor.)

Purssell, James B., assignor to C. V., W. M., and R. W. Purssell, Boston, Mass. Chuck. No. 1,193,716; Aug. 8; Gaz. vol. 229; p. 356.

Purssell, Roger W., *et al.* (See Purssell, James B., assignor.)

Purssell, Wynnevie M., *et al.* (See Purssell, James B., assignor.)

Putnam, Alden L., assignor to Detroit Pressed Steel Company, Detroit, Mich. Wheel. No. 1,193,717; Aug. 8; Gaz. vol. 229; p. 357.

Putnam, Frank H. (See Codding and Putnam.)

Putnam, James K., Tulsa, Okla. Pneumatic fluid-lift. No. 1,193,609; Aug. 8; Gaz. vol. 229; p. 316.

Putz, John F. (See Hanus and Putz.)

Pyle-National Electric Headlight Company. (See Kilker, John E., assignor.)

Quade, Frank H., Jr., Fresno, Cal. Printing-machine. No. 1,195,853; Aug. 22; Gaz. vol. 229; p. 1191.

Quam, Elmer R., Verdi, Minn. End-gate and shoveling-board. No. 1,195,497; Aug. 22; Gaz. vol. 229; p. 1060.

Quartararo, Vincent C., San Francisco, Cal. Tooth-brush sterilizer. No. 1,194,540; Aug. 15; Gaz. vol. 229; p. 689.

Quarters, William F., Providence, R. I. Support for foot-covering. No. 1,196,281; Aug. 29; Gaz. vol. 229; p. 1373.

Queen, Ernest N., Comanche, Tex. Washing-machine. No. 1,194,229; Aug. 8; Gaz. vol. 229; p. 535.

Quick, Howard L., New York, N. Y. Apparatus for dyeing fabrics. No. 1,195,606; Aug. 22; Gaz. vol. 229; p. 1100.

Quigley Furnace and Foundry Company. (See Heyl, Albert D., assignor.)

Quigley Furnace and Foundry Co. (See Quigley, Wirt S., assignor.)

Quigley, Wirt S., New York, N. Y., assignor to Quigley Furnace and Foundry Co. Apparatus for feeding regulated quantities of finely-divided material. No. 1,193,057; Aug. 1; Gaz. vol. 229; p. 80.

Quinn, John C., assignor to The Acme Furnace Equipment Company, New York, N. Y. Manufacture of clay articles. No. 1,193,922; Aug. 8; Gaz. vol. 229; p. 430.

Quist, Charles H. (See Man and Quist.)

R. Hoe and Co. (See Niles, Irving F., assignor.)

R. Marston Company. (See Marston, Shirley, assignor.)

R. D. Nuttall Company. (See Keim, Lester H., assignor.)

R. T. W. Auto Accessory Co. (See Williams, Robert T., assignor.)

R. U. V. Company, The. (See Henri, Helbronner, and Recklinghausen, assignor.)

R. U. V. Company, The. (See Recklinghausen, Max von, assignor.)

R. U. V. Company, The. (See Recklinghausen, Helbronner, and Henri, assignors.)

Raber, John E., Canton, Ohio. Chute for glazed windows. No. 1,193,058; Aug. 1; Gaz. vol. 229; p. 81.

Raber, John E., Canton, Ohio. Hinge. No. 1,195,085; Aug. 15; Gaz. vol. 229; p. 878.

Rabinowitz, Michael, Newark, N. J. Sound emitting and controlling means for toys. No. 1,193,059; Aug. 1; Gaz. vol. 229; p. 81.

Rach, Carl, Stapleton, N. Y. Fruited wort extract. No. 1,194,230; Aug. 8; Gaz. vol. 229; p. 535.

Rader, Elisha L., assignor to Metropolitan Window Shade Company, Seattle, Wash. Cleansing compound. No. 1,196,282; Aug. 29; Gaz. vol. 229; p. 1373.

Radlein, Albert L. (See Selander, Gustaf, assignor.)

Rail Joint Company, The. (See Thomson, William P., assignor.)

Rail Joint Company, The. (See Wolhaupter, Benjamin, assignor.)

Railway Materials Company, The. (See Coutant, Jay G., assignor.)

Rainbolt, Lee E., Bedford, Ind. Nail-driving machine. No. 1,192,932; Aug. 1; Gaz. vol. 229; p. 35.

Rainbolt, Lee E., Bedford, Ind. Paper-bag rack. No. 1,196,148; Aug. 29; Gaz. vol. 229; p. 1327.

Rajah Company, The. (See Blood, Burr B., assignor.)

Rajchok, Martin, Hamtramck, Mich. Valve-neck construction for bottles. No. 1,195,726; Aug. 22; Gaz. vol. 229; p. 1144.

Rakestraw, Thomas G., Detroit, Mich. Steam-trap. No. 1,196,283; Aug. 29; Gaz. vol. 229; p. 1373.

Rambo, Lowell T., *et al.* (See Heckel, Otto, assignor.)

Rameau, Frederick D., Seattle, Wash. Daylight plate-developing tray. No. 1,195,498; Aug. 22; Gaz. vol. 229; p. 1060.

Rammelsberg, Ernst, assignor to Both & Tilmann, Gesellschaft mit beschränkter Haftung, Dortmund, Germany. Rail-brake for railway-cars. No. 1,195,086; Aug. 15; Gaz. vol. 229; p. 878.

Ramsburg, George S., Somersworth, N. H. Combination flower-pot and dirt-band. No. 1,194,541; Aug. 15; Gaz. vol. 229; p. 689.

Rancier, Almond R., Lima, N. Y. Automatic printing-camera. No. 1,193,424; Aug. 1; Gaz. vol. 229; p. 213.

Ranco, Joseph, assignor to Penobscot Canoe Company, Oldtown, Me. Canoe. No. 1,195,727; Aug. 22; Gaz. vol. 229; p. 1144.

Rand, James H. and J. H., Jr., North Tonawanda, N. Y. Card system. No. 1,194,422; Aug. 15; Gaz. vol. 229; p. 647.

Randall, Edgar L., South Hampstead, assignor of three-fourths to O. P. Macfarlane, London, England. Oil-vapor burner. No. 1,195,159; Aug. 15; Gaz. vol. 229; p. 903.

Randall, Edgar L., South Hampstead, assignor of three-fourths to O. P. Macfarlane, London, England. Vapor-burner for stoves. No. 1,195,160; Aug. 15; Gaz. vol. 229; p. 903.

Randall, Karl C., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Binding-post. No. 1,194,231; Aug. 8; Gaz. vol. 229; p. 535.

Randall, Lewis L., Ottumwa, Iowa. Photographic developing-holder. No. 1,194,321; Aug. 8; Gaz. vol. 229; p. 568.

Randolph, Clabeorn P., Los Angeles, Cal. Vehicle-spring. No. 1,194,423; Aug. 15; Gaz. vol. 229; p. 647.

Randolph, George T., Yale, Ill. Pump-piston. No. 1,196,584; Aug. 29; Gaz. vol. 229; p. 1476.

Ransom & Randolph Company, The. (See Schossler, Carl E., assignor.)

Rasck, Alfred G. (See Rasck, George P. and A. G.)

Rasck, George P. and A. G., Des Moines, Iowa; said A. G. Rasck assignor to said George P. Rasck. Attachment for steering-gears. No. 1,196,284; Aug. 29; Gaz. vol. 229; p. 1373.

Rasmussen, Hans J. M., Chicago, Ill. Wall-covering. No. 1,193,060; Aug. 1; Gaz. vol. 229; p. 82.

Rasmussen, Laurits T., assignor to Walker Manufacturing Company, Council Bluffs, Iowa. Packing and mulching implement. No. 1,196,285; Aug. 29; Gaz. vol. 229; p. 1374.

Ratcliffe, Henry T., Hutchinson, Kans. Rotary valve. No. 1,196,149; Aug. 29; Gaz. vol. 229; p. 1328.

Ratelke, Charles J., assignor to Mark Manufacturing Company, Chicago, Ill. Pipe-coupling. No. 1,193,923; Aug. 8; Gaz. vol. 229; p. 430.

Rathbun, George J., Toledo, Ohio. Flexible shaft-coupling. No. 1,194,662; Aug. 15; Gaz. vol. 229; p. 730.

Rattermann, George B., and W. W. Garrison, Birmingham, Ala. Automatic fire-alarm. No. 1,195,499; Aug. 22; Gaz. vol. 229; p. 1060.

Rau, John, Indianapolis, Ind. Leer. No. 1,195,087; Aug. 15; Gaz. vol. 229; p. 879.

Rauch, Harry S. (See Black, William F., assignor.)

Rauch, Provest R. (See Holt and Rauch.)

Rauschenplat, Günzel von, Steglitz, Germany, assignor to Barilla Limited, London, England. Removing iron from tin ores. No. 1,196,049; Aug. 29; Gaz. vol. 229; p. 1293.

Ravel, Louis, Boulogne-sur-Seine, France. Connection between rear axle and chassis. No. 1,195,267; Aug. 22; Gaz. vol. 229; p. 978.

Rawson, Edward, Portland, Oreg. Fruit-cleaning machine. No. 1,195,854; Aug. 22; Gaz. vol. 229; p. 1191.

Ray, Eugene J., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Driving and stopping mechanism. No. 1,193,061; Aug. 1; Gaz. vol. 229; p. 82.

Ray, William R., San Francisco, Cal. Oil-burner. No. 1,193,819; Aug. 8; Gaz. vol. 229; p. 393.

Raycraft, Richard, Genoa, Nev. Stamp-mill. No. 1,195,855; Aug. 22; Gaz. vol. 229; p. 1191.

Rayfield, Charles L., assignor of one-third to C. W. Findeisen, one-sixth to H. E. Kropf, Chicago, Ill., and one-third to Findeisen & Kropf Mfg. Co. Carbureter. No. 1,193,820; Aug. 8; Gaz. vol. 229; p. 393.

Raymond, Charles S., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 1,194,232; Aug. 8; Gaz. vol. 229; p. 535.

Raymond, Nelson H., Buffalo, N. Y., assignor to Clifton Manufacturing Company, Jamaica Plain, Mass. Cleaning pipes. No. 1,194,542; Aug. 15; Gaz. vol. 229; p. 689.

Rayner, George F., Acton, England. Internal-combustion engine. No. 1,193,610; Aug. 8; Gaz. vol. 229; p. 317.

Reath, Frank F. (See Huber and Reath.)

Recen, Henry A., Denver, Colo., assignor to The Hercules Tunnel Machine and Development Company. Cutterhead. No. 1,195,396; Aug. 22; Gaz. vol. 229; p. 1026.

Reche, Henry C. (See Chevalier and Reche.)

Recker, Adolph C., Oakville, assignor to Waterbury Mfg. Co., Waterbury, Conn. Portable electric lamp. No. 1,195,728; Aug. 22; Gaz. vol. 229; p. 1144.

Recklinghausen, Max von. (See Henri, Helbronner, and Recklinghausen.)

Recklinghausen, Max von, assignor to The R. U. V. Company, Inc., New York, N. Y. Apparatus for sterilization of fluids by ultra-violet rays. No. 1,193,209; Aug. 1; Gaz. vol. 229; p. 136.

Recklinghausen, Max von, A. Helbronner, and V. Henri, Paris, France, assignors, by mesne assignments, to The R. U. V. Company, Inc. Sterilization of liquids. No. 1,196,481; Aug. 29; Gaz. vol. 229; p. 1441.

Redelmann, Ulrich G. (See Mitchell, Taggart, and Redelmann.)

Reed, Arthur, assignor to B. W. Reed, Fort Worth, Tex. Land-breaking plow. No. 1,195,397; Aug. 22; Gaz. vol. 229; p. 1026.

Reed, Bennett W. (See Reed, Arthur, assignor.)

Reed, Chase C., assignor of one-half to J. N. Magee, Toledo, Ohio. Rotary plowing-cylinder. No. 1,194,067; Aug. 8; Gaz. vol. 229; p. 479.

Reed, James H. (See Lawson and Reed.)

Reeps, Charles F. and F. G., Oak Park, Ill. Automatic music-tracker. No. 1,194,424; Aug. 15; Gaz. vol. 229; p. 648.

Reeps, Fred G. (See Reeps, Charles F. and F. G.)

Reese, Claud A., Bowling Green, Fla. Direction-indicator. No. 1,195,088; Aug. 15; Gaz. vol. 229; p. 879.

Reese, David L., Los Angeles, Cal. Combined oil and gas burner. No. 1,195,500; Aug. 22; Gaz. vol. 229; p. 1061.

Reese, John H., Butler, Pa. Trolley-wheel construction. No. 1,194,543; Aug. 15; Gaz. vol. 229; p. 690.

Reeves, Milton O., D. E. Lewellen, and L. P. Everroad, assignors to Reeves Pulley Company, Columbus, Ind. Roller-bearing. No. 1,196,288; Aug. 29; Gaz. vol. 229; p. 1374.

Reeves Pulley Company. (See Reeves, Lewellen, and Everrond, assignors.)

Regan, Timothy E. (See Lenz and Regan.)

Regnier, Harry M., Decatur, Ill. Clip for holding railway signal-torpedoes. No. 1,193,062; Aug. 1; Gaz. vol. 229; p. 82.

Reichart, William M. (See Frackelton, Tyler, and Reichart.)

Reid, James H., Newark, N. J. Securing metal from ores. No. 1,195,607; Aug. 22; Gaz. vol. 229; p. 1100.

Reid, John A., Gulfport, Miss. Shoe-polish. No. 1,194,425; Aug. 15; Gaz. vol. 229; p. 648.

Reifsnyder, James D., Philadelphia, Pa., and H. B. Smith, Brooklyn, N. Y., assignors to Stokes & Smith Company, Summerdale, Pa. Gluing-machine. No. 1,196,026; Aug. 29; Gaz. vol. 229; p. 1284.

Reilly, John, Sandwich, Mass. Non-refillable bottle. No. 1,194,544; Aug. 15; Gaz. vol. 229; p. 690.

Reiner, Andrew L., Highland, Ind., assignor to Libby, McNeill & Libby, Chicago, Ill. Coring-machine and the like. No. 1,194,233; Aug. 8; Gaz. vol. 229; p. 536.

Reinhardt, Adam W., Bethel, Ohio. Railway signal system. No. 1,192,933; Aug. 1; Gaz. vol. 229; p. 36.

Reinhart, Hiester H. and I., Virginville, and C. G. Moyer, Molltown, Pa. Conveyer attachment for feed-cutting machines. No. 1,193,063; Aug. 1; Gaz. vol. 229; p. 82.

Reinhart, Irvin. (See Reinhart and Moyer.)

Reinking, George E., Fort Wayne, Ind. Combined electric stove and toaster. No. 1,194,663; Aug. 15; Gaz. vol. 229; p. 730.

Reisbach, Gustave B., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Interlock. No. 1,193,718; Aug. 8; Gaz. vol. 229; p. 357.

Reiss, George T. (See Bartels and Reiss.)

Reiss, Sam. (See Wachtel and Reiss.)

Rembe, J. Walter. (See Beckmann, John W., assignor.)

Remer, Fernando L., Beaver Dams, N. Y. Bathing apparatus. No. 1,195,729; Aug. 22; Gaz. vol. 229; p. 1144.

Remington, Alfred M., assignor to Simonds Manufacturing Company, Fitchburg, Mass. Attachment for sawframes. No. 1,194,234; Aug. 8; Gaz. vol. 229; p. 536.

Remington, Horace W., assignor to B. J. Johnson Soap Company, Milwaukee, Wis. Soap-container. No. 1,194,545; Aug. 15; Gaz. vol. 229; p. 690.

Remington Typewriter Company. (See Carhart, Herbert A., assignor.)

Remington Typewriter Company. (See Yaw, Clio B., assignor.)

Rennerfelt, Gustaf, assignor of one-half to C. J. Kintner, New York, N. Y. Brake system for moving vehicles. No. 1,194,783; Aug. 15; Gaz. vol. 229; p. 773.

Reno Manufacturing Company. (See Carlitz, Joseph S., assignor.)

Repschlaeger, Herman A., Bancroft, Nebr. Metal clothespin. No. 1,196,585; Aug. 29; Gaz. vol. 229; p. 1477.

Retzbach, Edward J. (See Schwartz and Retzbach.)

Reuther, Martin W. (See Brandenberger and Reuther.)

Reynard, Charles M., assignor to McKeesport Tin Plate Company, McKeesport, Pa. Apparatus for grinding cold-rolls. No. 1,196,150; Aug. 29; Gaz. vol. 229; p. 1328.

Reynolds, Alva L., Long Beach, Cal. Fire-extinguishing system and apparatus. No. 1,193,064; Aug. 1; Gaz. vol. 229; p. 83.

Reynolds, Jay L., Spokane, Wash. Ball-throwing apparatus. No. 1,196,151; Aug. 29; Gaz. vol. 229; p. 1328.

Reynolds, Jay L., Spokane, Wash. Ball-throwing apparatus. No. 1,196,741; Aug. 29; Gaz. vol. 229; p. 1532.

Reynolds, John N., Greenwich, Conn., assignor to Western Electric Company, Incorporated, New York, N. Y. Automatic selector-switch. No. 1,196,482; Aug. 29; Gaz. vol. 229; p. 1442.

Reznor, George F., Mercer, Pa. Gas-heater. No. 1,195,730; Aug. 22; Gaz. vol. 229; p. 1145.

Rheinische Metallwaaren- und Maschinenfabrik. (See Klette, Kurt, assignor.)

Rheinische Metall-Waaren- und Maschinenfabrik. (See Völler, Karl, assignor.)

Rheutan, Isaac L., assignor to Union Envelope Company, Richmond, Va. Envelop-machine. No. 1,194,784; Aug. 15; Gaz vol. 229; p. 773.

Rhodes, Charles H., Cold Brook, assignor of one-half to D. F. Strobel, Herkimer, N. Y. Wood-turning machine. No. 1,195,731; Aug. 22; Gaz. vol. 229; p. 1145.

Riblet, Byron C. and R. N., Spokane, Wash. Aerial truck. No. 1,195,732; Aug. 22; Gaz. vol. 229; p. 1146.

Riblet, Royal N. (See Riblet, Byron C. and R. N.)

Rice, Frank E., assignor to American Tap Bush Company, Detroit, Mich. Adjustable flange-bushing. No. 1,194,664; Aug. 15; Gaz. vol. 229; p. 731.

Rice, James T. (See Rice, William H and J. T.)

Rice, Ole A., Roseau, Minn. Gambrel. No. 1,194,235; Aug. 8; Gaz. vol. 229; p. 536.

Rice, Richard M., Light, Ariz. Extractor for automobiles. No. 1,194,877; Aug. 15; Gaz. vol. 229; p. 806.

Rice, William H. and J. T., St. Louis, Mo. Coaling and watering device for moving tenders. No. 1,196,289; Aug. 29; Gaz. vol. 229; p. 1375.

Rich, Mark C., Bellefourche, S. D., assignor, by mesne assignments, to The American Alfalfa Products Co., Denver, Colo. Alfalfa extract. No. 1,195,152; Aug. 15; Gaz. vol. 229; p. 901.

Rich, Mark C., Bellefourche, S. D., assignor, by mesne assignments, to The American Alfalfa Products Co., Denver, Colo. Alfalfa product. No. 1,195,153; Aug. 15; Gaz. vol. 229; p. 901.

Rich, Mark C., Bellefourche, S. D., assignor, by mesne assignments, to The American Alfalfa Products Co., Denver, Colo. Alfalfa product. No. 1,195,154; Aug. 15; Gaz. vol. 229; p. 901.

Richards, Francis H., Hartford, Conn., assignor to S. C. Ross, Buffalo, N. Y. Pipe-line-connecting mechanism. No. 1,194,236; Aug. 8; Gaz. vol. 229; p. 537.

Richards, Harry B., and R. Solomon, Alexandria, Va. Automobile-signal. No. 1,193,821; Aug. 8; Gaz. vol. 229; p. 393.

Richardson, Ernest S. (See Perry and Richardson.)

Richardson, Joseph V., assignor to The Superior Ladder Company, Goshen, Ind. Ladder-assembling bench. No. 1,193,611; Aug. 8; Gaz. vol. 229; p. 317.

Richardson, Joseph V., assignor to The Superior Ladder Co., Goshen, Ind. Tenoning-machine. No. 1,193,612; Aug. 8; Gaz. vol. 229; p. 318.

Richeson, Mack S., Orchard, Colo. Locking mechanism for the dumping-platforms of sugar-beet-loading structures. No. 1,195,398; Aug. 22; Gaz. vol. 229; p. 1026.

Richey, Clifford, Unity Station, Pa. Device for locking cotters and preventing same from dropping out of locking position. No. 1,194,426; Aug. 15; Gaz. vol. 229; p. 648.

Richter, John J., Thief River Falls, Minn. Potato-picker. No. 1,193,189; Aug. 1; Gaz. vol. 229; p. 129.

Rickard, Clarence C. (See Dalbs and Rickard.)

Ricke, George H., assignor of one-half to E. Oelker, Cincinnati, Ohio. Shoe. No. 1,196,719; Aug. 29; Gaz. vol. 229; p. 1523.

Rickmeyer, Otto, Milwaukee, Wis. Spark-plug. No. 1,195,089; Aug. 15; Gaz. vol. 229; p. 879.

Ricks, Fred, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for splitting or skiving welts or other pieces of flexible material. No. 1,194,546; Aug. 15; Gaz. vol. 229; p. 690.

Riddell, William A. (See Robertson and Riddell.)

Rider, William E., Mansfield, Mass. Grate. No. 1,193,822; Aug. 8; Gaz. vol. 229; p. 394.

Ridley, Thomas W., Middlesbrough, England. Annealing kiln or oven. No. 1,196,152; Aug. 29; Gaz. vol. 229; p. 1329.

Rieber, Frank, Berkeley, Cal. Apparatus for producing unidirectional electric currents of high potential. No. 1,195,733; Aug. 22; Gaz. vol. 229; p. 1146.

Riedel, Carl W., Saginaw, Mich. Signal device. No. 1,195,734; Aug. 22; Gaz. vol. 229; p. 1146.

Riedel, Charles E., and W. J. Barnes, assignors to Detroit Scale Manufacturing Company, Detroit, Mich. Scale. No. 1,196,027; Aug. 29; Gaz. vol. 229; p. 1285.

Rieder, Alvin D., *et al.* (See Jackson, Clarence W., assignor.)

Riefsnyder, Charles C., assignor of one-half to J. McCray, Des Moines, Iowa. Link. No. 1,195,268; Aug. 22; Gaz. vol. 229; p. 978.

Riegger, Anton, Baltimore, Md. Brush-holder. No. 1,194,665; Aug. 15; Gaz. vol. 229; p. 731.

Riegler, Michael, Unterkochen, near Aalen, assignor of one-half to L. Schopper, Leipzig, Germany. Method and means for testing paper-pulp. No. 1,193,613; Aug. 8; Gaz. vol. 229; p. 318.

Riehl, Justus. (See Montgomery and Riehl.)

Rieke, Otto, Chicago, Ill. Spring-winding mechanism. No. 1,193,300; Aug. 1; Gaz. vol. 229; p. 170.

Riesenberg, Felix, assignor to M. C. Riesenberg, New York, N. Y. Shaving-stick and the like. No. 1,194,427; Aug. 15; Gaz. vol. 229; p. 648.

Riesenberg, Maud C. (See Riesenberg, Felix, assignor.)

Riesner, Michael, Cincinnati, Ohio, assignor, by mesne assignments, to Worthington Pump and Machinery Corporation, New York, N. Y. Condenser system and vacuum-pump. No. 1,196,742; Aug. 29; Gaz. vol. 229; p. 1532.

Rigby, Thomas, Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Treatment of wet carbonized peat or the like. No. 1,193,924; Aug. 8; Gaz. vol. 229; p. 431.

Riggin, Charlie S., and J. J. Lanoue, Kankakee, assignors to The James H. Watson Company, Incorporated, Bradley, Ill. Parkway structure for brooder-coops. No. 1,196,483; Aug. 29; Gaz. vol. 229; p. 1442.

Riker, Andrew L., Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Internal-combustion engine. No. 1,194,068; Aug. 8; Gaz. vol. 229; p. 480.

Riker, Andrew L., Short Hills, N. J., assignor to The "Locomobile" Company of America, New York, N. Y. Controlling means for explosion-engines. No. 1,195,399; Aug. 22; Gaz. vol. 229; p. 1027.

Rinman, Erik L., Harnäs, Sweden. Treating waste liquors from pulp-mills. No. 1,196,290; Aug. 29; Gaz. vol. 229; p. 1375.

Rinsche, Frank C., assignor to Burroughs Adding Machine Company, Detroit, Mich. Recording mechanism. No. 1,195,608; Aug. 22; Gaz. vol. 229; p. 1101.

Ripley, Clinton B., Joplin, Mo. Concentrator. No. 1,193,190; Aug. 1; Gaz. vol. 229; p. 129.

Ripley, Jane C., Newark, N. J. Brassière. No. 1,196,291; Aug. 29; Gaz. vol. 229; p. 1375.

Ritchie, David A., Cambridge, Mass. Sheet-metal expansible elbow. No. 1,193,065; Aug. 1; Gaz. vol. 229; p. 84.

Ritter, Hans K., Niagara Falls, Ontario, Canada. Lampshade. No. 1,193,191; Aug. 1; Gaz. vol. 229; p. 129.

Ritter, Viola. (See Williams, Bert W., assignor.)

Rivers, Frank B., Boyne City, Mich. Automatically-feeding oil-cup. No. 1,195,856; Aug. 22; Gaz. vol. 229; p. 1191.

Rivett, Joseph P., Chicago, Ill. Apparatus for heating wax-cases. No. 1,193,614; Aug. 8; Gaz. vol. 229; p. 319.

Rivett, Joseph P., Chicago, Ill. Flong-machine. No. 1,193,615; Aug. 8; Gaz. vol. 229; p. 319.

Rivkin, Bert. (See Sherman and Rivkin.)

Rivkin, Bert. (See Tropp and Rivkin.)

Roach, William. (See Faubel and Roach.)

Roades, Weslie M., assignor to United Iron Works Company, Okmulgee, Okla. Oil-saver and sand-line cap. No. 1,193,187; Aug. 1; Gaz. vol. 229; p. 128.

Roades, Weslie M., assignor to United Iron Works Company, Okmulgee, Okla. Measuring-line-reel clamp. No. 1,193,188; Aug. 1; Gaz. vol. 229; p. 128.

Roark, Lenox S., Coalinga, Cal. Vending apparatus. No. 1,196,586; Aug. 29; Gaz. vol. 229; p. 1477.

Roberson, James N., Wadley, Ga. Safety-handhold for sleeping-cars. No. 1,194,237; Aug. 8; Gaz. vol. 229; p. 537.

Robert N. Bassett Company. (See Smith, Clarence E., assignor.)

Roberts, Adrian J., Floydada, and W. C. Wright, Sr., Plainview, Tex. Traction-engine. No. 1,193,616; Aug. 8; Gaz. vol. 229; p. 319.

Roberts, Arthur, Evanston, Ill. Recuperative coke-oven. No. 1,193,066; Aug. 1; Gaz. vol. 229; p. 84.

Roberts, Arthur, Evanston, Ill. Regenerative coke-oven. No. 1,193,067; Aug. 1; Gaz. vol. 229; p. 84.

Roberts, Arthur, Evanston, Ill. Expansion control for coke-ovens. No. 1,193,068; Aug. 1; Gaz. vol. 229; p. 85.

Roberts, Arthur, Evanston, Ill. Recuperator-wall. No. 1,193,069; Aug. 1; Gaz. vol. 229; p. 85.

Roberts Brass Mfg. Co., The. (See Roberts, Earl W., assignor.)

Roberts, Earl W., assignor to The Roberts Brass Mfg. Co., Detroit, Mich. Priming-cup. No. 1,193,925; Aug. 8; Gaz. vol. 229; p. 431.

Roberts, Eleanor P., Linn Grove, Iowa. Tatting-shuttle winder. No. 1,195,501; Aug. 22; Gaz. vol. 229; p. 1061.

Roberts, Fred T., Trenton, N. J., assignor to The Paramount Rubber Company, Cleveland, Ohio. Bumper. No. 1,195,735; Aug. 22; Gaz. vol. 229; p. 1147.

Roberts, John G., Holly Springs, Miss. Picture-frame. No. 1,194,238; Aug. 8; Gaz. vol. 229; p. 537.

Roberts, John S., assignor of one-half to S. W. Broffle, Osgood, Iowa. Shock-absorber for automobile-springs. No. 1,194,069; Aug. 8; Gaz. vol. 229; p. 480.

Roberts, John T., Washington, D. C. Artificial fuel. No. 1,193,070; Aug. 1; Gaz. vol. 229; p. 86.

Roberts, Summerfield G., Boston, Mass. Water-heater. No. 1,194,785; Aug. 15; Gaz. vol. 229; p. 774.

Robertshaw, Frederick W., and W. Housholder, Pittsburgh, Pa.; said Housholder assignor to said Robertshaw. Thermostatic valve. No. 1,194,070; Aug. 8; Gaz. vol. 229; p. 480.

Robertson, Charles J., Taunton, Mass., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill. Bed-motion for printing-presses. No. 1,193,719; Aug. 8; Gaz. vol. 229; p. 358.

Robertson, Harold H., Sewickley, assignor to Asbestos Protected Metal Company, Pittsburgh, Pa. Protected metal article and making same. No. 1,195,090; Aug. 15; Gaz. vol. 229; p. 880.

Robertson, John A., and W. A. Riddell, assignors to Eastman Kodak Company, Rochester, N. Y. Photographic camera. No. 1,195,400; Aug. 22; Gaz. vol. 229; p. 1027.

Robinson, Aquila S., Philadelphia, Pa. Cutting attachment for sewing-machines. No. 1,193,823; Aug. 8; Gaz. vol. 229; p. 394.

Robinson, Charles O., deceased, Frederick, Md.; E. S. Robinson, administratrix. Method of sterilizing or pasteurizing milk in bottles. No. 1,195,091; Aug. 15; Gaz. vol. 229; p. 880.

Robinson, Clarence C., and H. Strelow, Venice, Cal.; said Robinson assignor to said Strelow. Oil-burner. No. 1,193,301; Aug. 1; Gaz. vol. 229; p. 170.

Robinson, Clark, Hillyard, Wash. Spring suspension. No. 1,196,153; Aug. 29; Gaz. vol. 229; p. 1329.

Robinson, Claude L., Detroit, assignor of one-half to J. L. Edwards, Watertown, Fla. Angle-cock. No. 1,196,587; Aug. 29; Gaz. vol. 229; p. 1477.

Robinson, Daniel P., and J. Coyle, Baltimore, Md., assignors, by mesne assignments, to Continental Can Company, Inc. Soldering-machine. No. 1,193,425; Aug. 1; Gaz. vol. 229; p. 213.

Robinson, Effie S., administratrix. (See Robinson, Charles O.)

Robinson, John H. (See Keeling, Newton, assignor.)

Robinson, Nathaniel G., assignor of one-fourth to M. H. Hirt and one-fourth to R. F. Hirt, Woolstock, Iowa. Transmission-gearing. No. 1,195,502; Aug. 22; Gaz. vol. 229; p. 1061.

Robinson, Porter O., Concord Junction, Mass. Telephone-key. No. 1,196,398; Aug. 29; Gaz. vol. 229; p. 1414.

Roche, William J., assignor to The Spirella Company, Meadville, Pa. Garment-stay. No. 1,192,934; Aug. 1; Gaz. vol. 229; p. 36.

Rockwell, Byrd C., Camden, Ark. Door. No. 1,196,720; Aug. 29; Gaz. vol. 229; p. 1523.

Rockwell, Hugh M., assignor, by mesne assignments, to The New Departure Manufacturing Company, Bristol, Conn. Antifriction-bearing. No. 1,193,071; Aug. 1; Gaz. vol. 229; p. 86.

Rockwell, Walter S., assignor to W. S. Rockwell Company, New York, N. Y. Furnace. No. 1,193,824; Aug. 8; Gaz. vol. 229; p. 395.

Roebuck, Alvah C., Woodstock, Ill. Type-writer. No. 1,193,073; Aug. 1; Gaz. vol. 229; p. 87.

Roebuck, Alvah C., and A. J. Pruszynski, Woodstock, Ill. Type-writer. No. 1,193,072; Aug. 1; Gaz. vol. 229; p. 86.

Roesch, Arthur A. (See Busiek and Roesch.)

Roessler, George, Toledo, Ohio. Aerofoil. No. 1,194,878; Aug. 15; Gaz. vol. 229; p. 806.

Roessler & Hasslacher Chemical Co., The. (See Anders and Schoedler, assignors.)

Rogan, Patrick. (See Boyd and Rogan.)

Roger Ballast Car Company. (See Yost, Winfield H., assignor.)

Röger, Karl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Distribution of typographical pieces in distributing apparatus. No. 1,192,936; Aug. 1; Gaz. vol. 229; p. 37.

Rogers, George R., Ladoga, assignor of one-half to F. B. Youngblood, Montgomery county, Ind. Animal-trap. No. 1,194,239; Aug. 8; Gaz. vol. 229; p. 538.

Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,192,935; Aug. 1; Gaz. vol. 229; p. 37.

Rogers, William J., Phenix, Va. Blacksmith's tongs. No. 1,194,547; Aug. 15; Gaz. vol. 229; p. 691.

Rohm, Charles A., assignor of one-half to C. Ayers, Sayville, N. Y. Indicator. No. 1,195,736; Aug. 22; Gaz. vol. 229; p. 1147.

Rohmer, Martin A., Florence, Nebr. Wave-motor. No. 1,194,072; Aug. 8; Gaz. vol. 229; p. 481.

Rohn, William M., Detroit, Mich., assignor to Eureka Ball Bearing Company, Rockford, Ill. Ball bearing and retainer. No. 1,196,292; Aug. 29; Gaz. vol. 229; p. 1375.
Rohrer, Clarence E., Elkhart, Ind., assignor to Scheidel-Western X-Ray Coil Co., Chicago, Ill. Exciting X-ray tubes. No. 1,194,071; Aug. 8; Gaz. vol. 229; p. 480.
Rolfe, Arthur. (See Holbech, Richard A., assignor.)
Rollinson, Ernest, and E. E. Moxham, assignors to The Coats Machine Tool Company Limited, London, England. Tool-holder. No. 1,193,426; Aug. 1; Gaz. vol. 229; p. 213.
Rollo, Charles M., assignor of one-half to L. McDaniel, Shawnee, Okla. Signaling or indicating buoy. No. 1,196,588; Aug. 29; Gaz. vol. 229; p. 1477.
Romanowski, Joseph, Chicago, Ill. Screw-clamp. No. 1,194,666; Aug. 15; Gaz. vol. 229; p. 731.
Romine, Lambertus, Fresno, Cal. Sanitary closet-seat. No. 1,194,073; Aug. 8; Gaz. vol. 229; p. 481.
Roncaglione, Joseph, Carlisle, W. Va. Train-pipe coupling for railway-cars. No. 1,194,074; Aug. 8; Gaz. vol. 229; p. 481.
Rood, Lloyd V., Marietta, Ohio. Tire-repair tool. No. 1,192,937; Aug. 1; Gaz. vol. 229; p. 38.
Rooney, Patrick J., Broughton, Pa. Lantern. No. 1,196,589; Aug. 29; Gaz. vol. 229; p. 1478.
Roop, Clarence H., assignor, by mesne assignments, of one-half to G. H. M. Ivins, Camden, N. J. Phonograph. No. 1,193,825; Aug. 8; Gaz. vol. 229; p. 395.
Roos, Henry W., Cincinnati, Ohio, and E. R. Bell, Covington, Ky., assignors of sixty-five one-hundredths to said Roos and thirty-five one-hundredths to G. W. Meyer, Cincinnati, Ohio. Adjustable shore. No. 1,195,503; Aug. 22; Gaz. vol. 229; p. 1062.
Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Safety device for staying-machines. No. 1,195,401; Aug. 22; Gaz. vol. 229; p. 1028.
Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Safety device. No. 1,196,721; Aug. 29; Gaz. vol. 229; p. 1524.
Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Safety device. No. 1,196,722; Aug. 29; Gaz. vol. 229; p. 1524.
Root, Fred N. (See Snideman, Frank A., assignor.)
Root, Ralph R., Cleveland, Ohio. Electric signaling device. No. 1,193,926; Aug. 8; Gaz. vol. 229; p. 431.
Rorick, Harvey S., Detroit, Mich. Gearing. No. 1,194,075; Aug. 8; Gaz. vol. 229; p. 482.
Rose, Bertram A., Fort Worth, Tex. Cigarette-paper-holding attachment for tobacco-boxes. No. 1,193,427; Aug. 1; Gaz. vol. 229; p. 214.
Rose, Elias B., Bozeman, Mont. Oil-can. No. 1,193,192; Aug. 1; Gaz. vol. 229; p. 130.
Rose, George F., New York, N. Y. Type-writer escapement. No. 1,195,504; Aug. 22; Gaz. vol. 229; p. 1062.
Rose, James M., Buffalo, N. Y. Short-turning truck. No. 1,195,954; Aug. 22; Gaz. vol. 229; p. 1225.
Rose, William, Gainsborough, England. Apparatus for filling bags or the like. No. 1,195,737; Aug. 22; Gaz. vol. 229; p. 1147.
Rose, William H., Baltimore, Md. Coat and similar article of clothing. No. 1,195,738; Aug. 22; Gaz. vol. 229; p. 1148.
Roseman-Rozewski, Bertold, Vienna, Austria-Hungary. Rotary engine. No. 1,196,028; Aug. 29; Gaz. vol. 229; p. 1285.
Rosenbaum, Bedrich, Wallsend, England. Ship's torpedo-tube. No. 1,195,739; Aug. 22; Gaz. vol. 229; p. 1148.
Rosenbaum, Oscar. (See Weinberg, Solomon, assignor.)
Rosenberg, Emanuel, Altrincham, England, assignor to Westinghouse Electric and Manufacturing Company. Control of alternating-current motors. No. 1,196,154; Aug. 29; Gaz. vol. 229; p. 1329.
Rosenblatt, Edgar S., San Francisco, Cal. Combined cigarette and match box. No. 1,193,428; Aug. 1; Gaz. vol. 229; p. 214.
Rosenfeld, Maurice S., Morris Park, assignor to Anelois Holding Company, Inc., New York, N. Y. Internal-combustion engine. No. 1,193,617; Aug. 8; Gaz. vol. 229; p. 320.
Rosenheim, Herman, Savannah, Ga. Non-refillable bottle. No. 1,194,076; Aug. 8; Gaz. vol. 229; p. 482.
Rosenstengel, Fredrick N. (See Sattley and Rosenstengel.)
Rosenthal, Morris, New York, N. Y. Clothes-line hanger. No. 1,194,667; Aug. 15; Gaz. vol. 229; p. 732.
Rosenthal, Philip A., New York, N. Y. Locking device. No. 1,195,093; Aug. 15; Gaz. vol. 229; p. 881.
Rosenwasser, Morris, New York, N. Y. Legging. No. 1,195,092; Aug. 15; Gaz. vol. 229; p. 880.
Roslyn Specialty Company. (See Karl, Joseph M., assignor.)
Ross, Charley C., Springfield, Mo. Swivel gate-latch. No. 1,194,786; Aug. 15; Gaz. vol. 229; p. 774.
Ross, James D., Seattle, Wash. Refrigerating-machine. No. 1,195,269; Aug. 22; Gaz. vol. 229; p. 978.
Ross, John H., Kansas City, Mo. Automatic valve. No. 1,195,155; Aug. 15; Gaz. vol. 229; p. 901.
Ross, Labron B. (See White and Ross.)
Ross, Scott C. (See Richards, Francis H., assignor.)
Ross, William H., A. R. Merz, and J. N. Carothers, Washington, D. C. Preparing a concentrated fertilizer. No. 1,194,077; Aug. 8; Gaz. vol. 229; p. 483.
Ross, William J. (See Christensen, Edward L., assignor.)
Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing a titanium compound. No. 1,196,029; Aug. 29; Gaz. vol. 229; p. 1286.
Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Treating titanic oxid. No. 1,196,030; Aug. 29; Gaz. vol. 229; p. 1286.
Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Titanium compound. No. 1,196,031; Aug. 29; Gaz. vol. 229; p. 1286.
Rouleau, Joseph, Bend, Oreg. Stake-holding device for log-cars. No. 1,195,590; Aug. 29; Gaz. vol. 229; p. 1478.
Rouse, Richard, Jr. (See Greey and Rouse.)
Rowe Ring-Point Company, The. (See Gipe, Emanuel C., assignor.)
Rowell, Benton C., deceased, Chicago, Ill.; L. C. Rowell, executrix. Operating mechanism for track instruments. No. 1,193,469; Aug. 1; Gaz. vol. 229; p. 228.
Rowell, Benton C., deceased, Chicago, Ill.; L. C. Rowell, executrix. Train instrument for signal systems. No. 1,193,470; Aug. 1; Gaz. vol. 229; p. 228.
Rowell, Benton C., deceased, Chicago, Ill.; L. C. Rowell, executrix. System for automatic control of railway-trains. No. 1,193,471; Aug. 1; Gaz. vol. 229; p. 228.
Rowell, Benton C., deceased, Chicago, Ill.; L. C. Rowell, executrix. Mechanism for operating brakes in signal systems. No. 1,193,472; Aug. 1; Gaz. vol. 229; p. 229.
Rowell, Benton C., deceased, Chicago, Ill.; L. C. Rowell, executrix. Train-brake-controlling mechanism. No. 1,193,473; Aug. 1; Gaz. vol. 229; p. 229.
Rowell, Lilla C., executrix. (See Rowell, Benton C.)
Rowell, Walden T., assignor of one-half to C. F. Wiedmaier, Chicago, Ill. Time-switch for electric lights. No. 1,194,078; Aug. 8; Gaz. vol. 229; p. 483.
Rowland, Frank C., Chanute, Kans. Bearing-support for well-drilling machines. No. 1,193,618; Aug. 8; Gaz. vol. 229; p. 320.
Rowley, Arthur C., Cincinnati, Ohio, assignor to Globe Automatic Sprinkler Company, Philadelphia, Pa. Sprinkler-head. No. 1,193,619; Aug. 8; Gaz. vol. 229; p. 320.
Rowse, Frank J., Pawtucket, R. I. Coin-controlled locking mechanism. No. 1,192,938; Aug. 1; Gaz. vol. 229; p. 38.
Royal Typewriter Company. (See Dowd and Utz, assignors.)
Royal Typewriter Company. (See Hess, Edward B., assignor.)
Royston, Ernest R., London, England. Navigable vessel No. 1,195,857; Aug. 22; Gaz. vol. 229; p. 1192.
Rubber Regenerating Company. (See Emery, Albert G., assignor.)
Rubber Regenerating Company. (See Price, Raymond B., assignor.)
Ruben, Charles, Pittsburgh, Pa. Necktie-fastener. No. 1,195,094; Aug. 15; Gaz. vol. 229; p. 881.
Rubens, Julius J., Aurora, Ill. Automatic fire-alarm mechanism. No. 1,193,720; Aug. 8; Gaz. vol. 229; p. 358.
Rubió y Roger, Ramón. (See Casanovas, Baltasar F. de, assignor.)
Ruckes, Michael, Chicopee, assignor, by mesne assignments, to E. M. Chapman and C. E. Cowan, Holyoke, Mass. Elevating-truck. No. 1,196,728; Aug. 29; Gaz. vol. 229; p. 1525.
Ruder, Ernst G., *et al.*, administrators. (See Bartels and Reiss.)
Rudolph, Franklin, Chicago, and J. G. Hodgson, Maywood, Ill., assignors to American Can Company, New York, N. Y. Interiorly coating container vessels. No. 1,196,155; Aug. 29; Gaz. vol. 229; p. 1330.
Rudolph, Otto, New York, N. Y. Sanitary cover for cans and utensils. No. 1,194,787; Aug. 15; Gaz. vol. 229; p. 775.
Rueckheim Bros. & Eckstein. (See Post, Nathaniel B., assignor.)
Rueth, Frank. (See Auer, Carl, assignor.)
Ruff, John F. (See Wilson and Ruff.)
Ruff, William J. (See Braden, Elmer, assignor.)
Ruhe, Carleton, Olean, N. Y. Machine for sponging leather. No. 1,193,927; Aug. 8; Gaz. vol. 229; p. 432.
Ruhe, Carleton, Olean, N. Y. Mechanical tanning-machine. No. 1,195,858; Aug. 22; Gaz. vol. 229; p. 1192.
Ruhe, Carleton, Olean, N. Y. Machine for brushing leather. No. 1,195,859; Aug. 22; Gaz. vol. 229; p. 1192.
Rumball, George W., Jr., Beverly, assignor of one-fourth to T. O. Gilliatt, Allston, Mass. Nut-lock. No. 1,196,032; Aug. 29; Gaz. vol. 229; p. 1286.
Rumbarger, Victor E., Dayton, Ohio. Traveling electric sign. No. 1,194,879; Aug. 15; Gaz. vol. 229; p. 807.
Rumke, George H., Denver, Colo. Amusement device. No. 1,195,609; Aug. 22; Gaz. vol. 229; p. 1101.
Rumsey Car-Door and Equipment Company. (See Rumsey, James W., assignor.)
Rumsey, James W., West Berkeley, Cal., assignor to Rumsey Car-Door and Equipment Company. Car-door. No. 1,193,721; Aug. 8; Gaz. vol. 229; p. 358.
Rund, Gustav O., Christine, N. D. Grain-separator. No. 1,194,788; Aug. 15; Gaz. vol. 229; p. 775.

Rundle, Edward H., assignor of one-sixth to A. M. Gregg, Longmont, and one-sixth to C. C. Coffin, Fort Collins, Colo. Automatic weighing device. No. 1,193,193; Aug. 1; Gaz. vol. 229; p. 130.
Rundle, Fred A., Harvey, Ill. Hoisting mechanism. No. 1,195,270; Aug. 22; Gaz. vol. 229; p. 978.
Runkel Brothers. (See Fleux, Sigismund L., assignors.)
Runquist, Gustaf, assignor to International Money Machine Company, Terre Haute, Ind. Money-paying machine. No. 1,195,860; Aug. 22; Gaz. vol. 229; p. 1193.
Russell, David C., The Dalles, Oreg. Robe-holder. No. 1,196,484; Aug. 29; Gaz. vol. 229; p. 1442.
Russell, William L. (See Goodyear, George C., assignor.)
Russey, Roe E., Philadelphia, Pa., assignor to Pioneer Suspender Company. Threading slotted plates. No. 1,192,939; Aug. 1; Gaz. vol. 229; p. 38.
Rust, Harry, North Judson, Ind. Railway-crossing. No. 1,195,402; Aug. 22; Gaz. vol. 229; p. 1028.
Ruth, Charles H., Brawley, Cal. Conveyer-bucket. No. 1,193,826; Aug. 8; Gaz. vol. 229; p. 395.
Ruth, William T., assignor to American Road Machinery Company, Inc., Kennett Square, Pa. Snow-plow. No. 1,195,271; Aug. 22; Gaz. vol. 229; p. 979.
Rutherford Rubber Company. (See Basten, Otto, assignor.)
Rutledge, George E. (See Chatfield and Rutledge.)
Ruttmann, Ferdinand S., New York, N. Y. Variable-speed-transmission mechanism. No. 1,195,272; Aug. 22; Gaz. vol. 229; p. 979.
Ryan, George E., Clinton, Mass. Skate-sharpener. No. 1,196,399; Aug. 29; Gaz. vol. 229; p. 1414.
Ryan, Michael J., Fargo, N. D., and J. Kiel, assignors to Deere and Company, Moline, Ill. Gang-plow. No. 1,196,293; Aug. 29; Gaz. vol. 229; p. 1375.
Ryon, Eppa H., Waltham, Mass. Internal-combustion engine. No. 1,193,620; Aug. 8; Gaz. vol. 229; p. 321.
Rys, Adalbert. (See Smoter, Jan, assignor.)
S. Cheney & Son. (See Cheney, Walter W., assignor.)
"S-C" Regulator Company, The. (See Copley, Noiberto G., assignor.)
S. K. F. Ball Bearing Company. (See Wingquist, Sven G., assignor.)
S. H. Pomeroy Company. (See Kohut, Michael J., assignor.)
S. & S. Automatic Grate Company. (See Straeten, Hubert, assignor.)
Sachs, Joseph, Hartford, Conn. Meter-adapter. No. 1,194,880; Aug. 15; Gaz. vol. 229; p. 807.
Sachs, Joseph, Hartford, Conn. Meter-adapter. No. 1,194,881; Aug. 15; Gaz. vol. 229; p. 807.
Sachs, Joseph, Hartford, Conn. Clip. No. 1,194,882; Aug. 15; Gaz. vol. 229; p. 807.
Sachs, Joseph, Hartford, Conn. Meter-testing appliance. No. 1,194,883; Aug. 15; Gaz. vol. 229; p. 808.
Safety Block Signal Company, The. (See Williams, Frank C., assignor.)
Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)
Safety Car Heating & Lighting Company. (See Vuilleumier, Rudolph, assignor.)
Sage, Ralph V., Columbus, Ohio, assignor to Cambria Steel Company. Car construction. No. 1,195,096; Aug. 15; Gaz. vol. 229; p. 882.
Saino, Felix L., Memphis, Tenn. Flue-stopper for fireproof doors and shutters. No. 1,195,097; Aug. 15; Gaz. vol. 229; p. 882.
Saino, Felix L., Memphis, Tenn. Draft-plate for fireproof doors or shutters. No. 1,195,098; Aug. 15; Gaz. vol. 229; p. 882.
Saino, Felix L., Memphis, Tenn. Fire door or shutter. No. 1,195,505; Aug. 22; Gaz. vol. 229; p. 1062.
Salisbury, Leroy. (See Grove, John H., assignor.)
Salm, Eduard, assignor to Aktiengesellschaft für chemische Produkte vormals H. Scheidemandel, Berlin, Germany. Production of solid gelatinous substances. No. 1,195,099; Aug. 15; Gaz. vol. 229; p. 883.
Samson, Edgar, assignor to C. F. Stiefel, New York, N. Y. Chemical compound of calcium chlorid and hexamethylenamin and a process relating to the same. No. 1,193,474; Aug. 1; Gaz. vol. 229; p. 230.
Samuel, Leopold S., Newark, N. J. Reinforced pad for shoes. No. 1,194,428; Aug. 15; Gaz. vol. 229; p. 649.
Samuelson, John, Portland, Oreg. Tree-board. No. 1,195,740; Aug. 22; Gaz. vol. 229; p. 1148.
Sanborn, Arthur P., and R. C. Wilson, Ossining, N. Y. Closed-circuit magnet. No. 1,195,506; Aug. 22; Gaz. vol. 229; p. 1063.
Sandberg, Christer P., London, England. Sleeper for permanent way. No. 1,194,240; Aug. 8; Gaz. vol. 229; p. 538.
Sanders, Nicholas C., Louisville, Ill. Head-block-setting device for baling-presses. No. 1,194,548; Aug. 15; Gaz. vol. 229; p. 691.
Sanderson, Alva L., Kansas City, Mo. Lens-slitting device. No. 1,196,294; Aug. 29; Gaz. vol. 229; p. 1376.
Sandle, George P., Thessalon, Ontario, Canada. Concentrating-table. No. 1,196,295; Aug. 29; Gaz. vol. 229; p. 1376.
Sandow, Eugen, London, England. Physical exerciser. No. 1,194,884; Aug. 15; Gaz. vol. 229; p. 808.
Sandwich Manufacturing Co. (See Graves, Clark, assignor.)
Santo, Gust A., Virginia, Minn. Combined knife and eraser. No. 1,193,827; Aug. 8; Gaz. vol. 229; p. 395.
Sapp, Philip A., and W. B. Markstein, Eufaula; said Markstein assignor of one-half the whole right to A. J. Miller, Barbour, Ala. Bale-band tightener. No. 1,196,591; Aug. 29; Gaz. vol. 229; p. 1478.
Sargent & Company. (See Page, Albert A., assignor.)
Sargent & Company. (See Voight, Henry G., assignor.)
Sargent & Company. (See Shaw, John H., assignor.)
Sargent, William D., West Orange, N. J. Anchor. No. 1,195,100; Aug. 15; Gaz. vol. 229; p. 883.
Sasgen Derrick Company. (See Sasgen, Michael J., assignor.)
Sasgen, Michael J., assignor to Sasgen Derrick Company, Chicago, Ill. Attachment for derricks of the wheelbarrow type. No. 1,193,074; Aug. 1; Gaz. vol. 229; p. 87.
Sattler, Addie L., Plain, Wash. Food product. No. 1,193,828; Aug. 8; Gaz. vol. 229; p. 396.
Sattley Coin Handling Machine Company. (See Sattley and Rosenstengel, assignors.)
Sattley, Frederick L., and F. N. Rosenstengel, assignors to Sattley Coin Handling Machine Company, Detroit, Mich. Machine for forming paper packages or cartons. No. 1,195,741; Aug. 22; Gaz. vol. 229; p. 1148.
Sauer, Catherine E., Rochester, N. Y. Garment-supporter. No. 1,195,610; Aug. 22; Gaz. vol. 229; p. 1102.
Saunders, James, *et al.* (See Sawtelle, Charles A., assignor.)
Savage, William P., Belleville, Ill. Lock. No. 1,194,241; Aug. 8; Gaz. vol. 229; p. 538.
Savidge, Albert C., Indianapolis, Ind. Starting connection for automobile-engines. No. 1,196,156; Aug. 29; Gaz. vol. 229; p. 1330.
Savidge, Albert C., Indianapolis, Ind. Motor. No. 1,196,157; Aug. 29; Gaz. vol. 229; p. 1330.
Sawtelle, Charles A., Dayton, Ohio, assignor of one-third to J. Saunders and one-third to J. E. Cronan. Internal-combustion engine. No. 1,196,158; Aug. 29; Gaz. vol. 229; p. 1331.
Schaap, Alexander K., assignor to Schaap Automobile Company, New York, N. Y. Compressed gas and air burner. No. 1,195,403; Aug. 22; Gaz. vol. 229; p. 1028.
Schaap Automobile Company. (See Schaap, Alexander K., assignor.)
Schack, John, Pittsburgh, Pa. Rat-trap. No. 1,194,079; Aug. 8; Gaz. vol. 229; p. 483.
Schade, John, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass. Loose-leaf binder. No. 1,192,940; Aug. 1; Gaz. vol. 229; p. 38.
Schaefer, William J., Ontario, Cal. Cooker. No. 1,195,507; Aug. 22; Gaz. vol. 229; p. 1063.
Schafer, Peter R., Brownfield, Pa. Guard for trolley-wheels. No. 1,194,429; Aug. 15; Gaz. vol. 229; p. 649.
Scharringhausen, Paul J. (See Bristol and Scharringhausen.)
Schatzle, Charles, and E. Smith, Palmerton, Pa. Signaling device. No. 1,194,668; Aug. 15; Gaz. vol. 229; p. 732.
Schaum, Arthur H., St. Louis, Mo. Closure for hand-holes. No. 1,194,080; Aug. 8; Gaz. vol. 229; p. 483.
Schaum, Christ, and R. H. Williams, Kulpmont, Pa. Protective holder for bottles. No. 1,196,592; Aug. 29; Gaz. vol. 229; p. 1479.
Schaum, Otto W., assignor to Schaum & Uhlinger, Incorporated, Philadelphia, Pa. Warp-let-off mechanism. No. 1,194,036; Aug. 8; Gaz. vol. 229; p. 468.
Schaum & Uhlinger. (See Schaum, Otto W., assignor.)
Scheel, George L., Chicago, Ill. Hair-drying device. No. 1,193,194; Aug. 1; Gaz. vol. 229; p. 131.
Scheel, George L., Chicago, Ill. Hair-waving device. No. 1,195,929; Aug. 22; Gaz. vol. 229; p. 1216.
Scheerer, Joseph, San Francisco, Cal. Street-pavement and constructing the same. No. 1,195,273; Aug. 22; Gaz. vol. 229; p. 980.
Scheidel-Western X-Ray Coil Co. (See Rohrer, Clarence E., assignor.)
Schellenbach, William L., Wyoming, Ohio. Lathe. No. 1,196,593; Aug. 29; Gaz. vol. 229; p. 1479.
Schenkelberger, Ferdinand F. C., Kiel, Germany. Siren for submarine signaling. No. 1,196,296; Aug. 29; Gaz. vol. 229; p. 1376.
Scherff, Karl, assignor of one-half to E. Holhjelle, Madison, Minn. Window-holder. No. 1,196,400; Aug. 29; Gaz. vol. 229; p. 1414.
Schiek, Irving E., Rhinelander, Wis. Sanitary display-box. No. 1,195,274; Aug. 22; Gaz. vol. 229; p. 980.
Schiffman, Robert, Toledo, Ohio. Apparatus for cutting grooves in record-disks. No. 1,195,101; Aug. 15; Gaz. vol. 229; p. 883.
Schilde, Martin, New Orleans, La. Manufacturing ice. No. 1,194,430; Aug. 15; Gaz. vol. 229; p. 649.
Schimmel, Franz, assignor to Société Maurice Velin & Cie., Nancy, France. Machine for casting and composing separate type. No. 1,195,742; Aug. 22; Gaz. vol. 229; p. 1149.
Schlundt, Herman, Columbia, Mo. Concentrating radium ore. No. 1,194,669; Aug. 15; Gaz. vol. 229; p. 732.
Schmid, Peter, and K. Gross, Basel, Switzerland; said Gross assignor to said Schmid. Metal-chlorid bath for weighting silk. No. 1,193,429; Aug. 1; Gaz. vol. 229; p. 214.
Schmid, Peter, and K. Gross, Basel, Switzerland; said Gross assignor to said Schmid. Foam or froth dyeing-bath for silk. No. 1,193,430; Aug. 1; Gaz. vol. 229; p. 215.

Schmid, William H., Wabash, Ind. Swing. No. 1,192,941; Aug. 1; Gaz. vol. 229; p. 39.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug and forming the same. No. 1,193,075; Aug. 1; Gaz. vol. 229; p. 87.
Schmidt, Andrew, Philadelphia, Pa. Fuel made from anthracite-coal refuse and making same. No. 1,192,942; Aug. 1; Gaz. vol. 229; p. 39.
Schmidt, Edward J. K. (See Leslie and Schmidt.)
Schmidt, John. (See Secor, Delbert A., assignor.)
Schmidt, John C., Chicago, Ill. Door-check. No. 1,194,885; Aug. 15; Gaz. vol. 229; p. 808.
Schmidt, John L., Indianapolis, Ind. Coin depositing and recording device. No. 1,195,275; Aug. 22; Gaz. vol. 229; p. 981.
Schmidt, William, Chicago, Ill. Dish-drier. No. 1,194,670; Aug. 15; Gaz. vol. 229; p. 733.
Schmidt, William A., Salem, S. D. Oil-can valve. No. 1,195,102; Aug. 15; Gaz. vol. 229; p. 883.
Schmitt, Edward D., assignor, by mesne assignments, to The American Pure Food Process Company, Baltimore, Md. Jar-capping machine. No. 1,195,611; Aug. 22; Gaz. vol. 229; p. 1102.
Schmitt, Edward D., assignor to American Bottle Cap Company, Baltimore, Md. Rack and pinion. No. 1,196,159; Aug. 29; Gaz. vol. 229; p. 1331.
Schmuck, Philip A., Pittsburgh, Pa. Rotary well-drilling apparatus. No. 1,196,033; Aug. 29; Gaz. vol. 229; p. 1286.
Schneider, Charles F., Ocala, Fla. Nut-lock. No. 1,196,034; Aug. 29; Gaz. vol. 229; p. 1287.
Schneider, Christian. (See Gonsior, Frank, and Schneider.)
Schneider, Eugène, Paris, France. Field-gun carriage. No. 1,196,298; Aug. 29; Gaz. vol. 229; p. 1377.
Schnetzler, Karl, assignor to Aktiengesellschaft Brown Boveri & Cie, Baden, Switzerland. Repulsion-motor generator. No. 1,194,671; Aug. 15; Gaz. vol. 229; p. 733.
Schnitzler, Oscar, Remington, Ohio. Die-casting machine. No. 1,194,549; Aug. 15; Gaz. vol. 229; p. 692.
Schoedler, Maximilian E. U. (See Anders and Schoedler.)
Schoeller, Alfred, Frankfort-on-the-Main, Germany. Combined ampere and volt meter. No. 1,195,508; Aug. 22; Gaz. vol. 229; p. 1063.
Schoenthaler, Fred C., *et al.* (See Hachmann, Frederick, assignor.)
Scholl, William M., Chicago, Ill. Instep-arch support. No. 1,194,672; Aug. 15; Gaz. vol. 229; p. 733.
Scholz, Richard, Lorain, Ohio, assignor to National Tube Company, Pittsburgh, Pa. Apparatus for dividing couplings. No. 1,195,509; Aug. 22; Gaz. vol. 229; p. 1064.
Schön, Ludwig, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Electrical connection. No. 1,193,076; Aug. 1; Gaz. vol. 229; p. 88.
Schonlau, Carl, Riehen, near Basel, Switzerland. Embossed wall and ceiling covering. No. 1,194,242; Aug. 8; Gaz. vol. 229; p. 539.
Schoolfield, Frederick E., Covington, and J. C. Owen, Bellevue, Ky. Sewing-machine. No. 1,196,160; Aug. 29; Gaz. vol. 229; p. 1332.
Schoonmaker, John R., Kalamazoo, Mich. Fish bait or lure. No. 1,193,077; Aug. 1; Gaz. vol. 229; p. 88.
Schopper, Alois, New York, N. Y. Button. No. 1,194,550; Aug. 15; Gaz. vol. 229; p. 692.
Schopper, Louis. (See Riegler, Michael, assignor.)
Schossler, Carl E., assignor to The Ransom & Randolph Company, Toledo, Ohio. Stool. No. 1,194,551; Aug. 15; Gaz. vol. 229; p. 692.
Schrader, August, New York, N. Y. Acid and water proof ink. No. 1,195,612; Aug. 22; Gaz. vol. 229; p. 1102.
Schröder, Otto. (See Sonderegger and Schröder.)
Schroeder, Albert G. (See Chamberlain and Schroeder.)
Schroeder, Frederick A., assignor to The Hill Pump Valve Company, Chicago, Ill. Safety pressure-gage. No. 1,196,142; Aug. 29; Gaz. vol. 229; p. 1325.
Schroeder, Frederick J., assignor, by mesne assignments, to The Damascus Brake Beam Company, Cleveland, Ohio. Forging brake-fulcrums. No. 1,193,928; Aug. 8; Gaz. vol. 229; p. 432.
Schroeder, Frederick J., assignor, by mesne assignments, to The Damascus Brake Beam Company, Cleveland, Ohio. Third-point suspension-clip. No. 1,193,929; Aug. 8; Gaz. vol. 229; p. 432.
Schroeder, Henry L., Chicago, Ill. Baker's peel. No. 1,195,510; Aug. 22; Gaz. vol. 229; p. 1064.
Schroeder, Henry L., Chicago, Ill. Baker's peel. No. 1,195,511; Aug. 22; Gaz. vol. 229; p. 1064.
Schubert Piano Company, The. (See Dickinson, Joseph W., assignor.)
Schubert, William H., New York, N. Y. Railway-car ventilator. No. 1,196,485; Aug. 29; Gaz. vol. 229; p. 1443.
Schuermann, Anton C. (See Mueller and Schuermann.)
Schulling, Martin, Grand Rapids, Mich. Combination flour bin and sifter. No. 1,194,552; Aug. 15; Gaz. vol. 229; p. 693.
Schille, Rudolf, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company. Disazo-dyestuffs and making the same. No. 1,193,829; Aug. 8; Gaz. vol. 229; p. 396.
Schultze, August I., Galveston, Tex. Automobile gate-latch. No. 1,193,431; Aug. 1; Gaz. vol. 229; p. 215.
Schultze, Charles E., Denver, Colo. Electric switch. No. 1,194,243; Aug. 8; Gaz. vol. 229; p. 539.
Schulz, Theodor, Olivet, S. D. Staple-puller. No. 1,193,930; Aug. 8; Gaz. vol. 229; p. 433.
Schulze, Frank G. (See Hosea and Schulze.)
Schumacher, Eberhard, assignor to The American Pulley Company, Philadelphia, Pa. Pulley. No. 1,194,553; Aug. 15; Gaz. vol. 229; p. 693.
Schumann, John G. R., Elizabeth, N. J. Milk-bottle-locking device. No. 1,193,931; Aug. 8; Gaz. vol. 229; p. 433.
Schuss, John, Albany, Minn. Wagon-box-adjusting device. No. 1,196,297; Aug. 29; Gaz. vol. 229; p. 1377.
Schuster, Nicholas, Westminster, London, England. Regenerative coke-oven. No. 1,193,830; Aug. 8; Gaz. vol. 229; p. 396.
Schuyler, Edward, Syracuse, N. Y. Adjustable foot-rest. No. 1,193,831; Aug. 8; Gaz. vol. 229; p. 397.
Schwartz, Robert J., and E. J. Retzbach, St. Louis, Mo. Box-pasting machine. No. 1,194,244; Aug. 8; Gaz. vol. 229; p. 540.
Schwartzman, Jacub, Brooklyn, N. Y. Wire fabric. No. 1,192,943; Aug. 1; Gaz. vol. 229; p. 39.
Schwarz, Elmer H., New York, N. Y. Tire for wheels and means for retaining the same. No. 1,195,512; Aug. 22; Gaz. vol. 229; p. 1065.
Schwarzer, Augustus J., Western Port, Md. Suspensory. No. 1,193,432; Aug. 1; Gaz. vol. 229; p. 215.
Schweitzer, Edmund O. (See Herz, Alfred, assignor.)
Scientific Materials Company. (See Shook, Glenn A., assignor.)
Scoggin, Ray, Eugene, Oreg. Air-brake. No. 1,195,103; Aug. 15; Gaz. vol. 229; p. 884.
Scott, Charles F., New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company. Means for minimizing inductive interference. No. 1,196,299; Aug. 29; Gaz. vol. 229; p. 1377.
Scott, Charles F., New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company. Means for minimizing inductive interference. No. 1,196,300; Aug. 29; Gaz. vol. 229; p. 1378.
Scott, Charles F., New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company. Means for minimizing inductive interference. No. 1,196,301; Aug. 29; Gaz. vol. 229; p. 1378.
Scott, Charles F., New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company. Means for minimizing inductive interference. No. 1,196,302; Aug. 29; Gaz. vol. 229; p. 1379.
Scott, Charles F., New Haven, Conn., assignor to Westinghouse Electric and Manufacturing Company. Means for minimizing inductive interference. No. 1,196,303; Aug. 29; Gaz. vol. 229; p. 1379.
Scott, Ephriam J., assignor to D. B. Potter, Providence, R. I. Automatic feeding device for swaging-machines. No. 1,193,078; Aug. 1; Gaz. vol. 229; p. 88.
Scott, Ernest H., Malvern, near Melbourne, Victoria, Australia. Apparatus for indicating and locating defects in the ignition, valve and carbureter systems of internal-combustion engines. No. 1,193,621; Aug. 8; Gaz. vol. 229; p. 321.
Scott, Harry T., Los Angeles, Cal. Motor-cycle stand. No. 1,195,404; Aug. 22; Gaz. vol. 229; p. 1029.
Scott, John M., Racine, Wis., assignor to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 1,193,079; Aug. 1; Gaz. vol. 229; p. 89.
Scott, John M., Racine, Wis., assignor to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 1,194,673; Aug. 15; Gaz. vol. 229; p. 734.
Scott, Robert F., assignor to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa. Universal joint. No. 1,195,405; Aug. 22; Gaz. vol. 229; p. 1029.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Device for knitting on transferred fabric sections. No. 1,194,674; Aug. 15; Gaz. vol. 229; p. 734.
Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Stocking and knitting the same. No. 1,194,675; Aug. 15; Gaz. vol. 229; p. 735.
Scott, William M., Tredyffrin township, Chester county, Pa. Circuit-breaker. No. 1,193,622; Aug. 8; Gaz. vol. 229; p. 322.
Scott & Williams. (See Scott, Robert W., assignor.)
Scott, William, Warrior, Ala. Rail-joint. No. 1,195,406; Aug. 22; Gaz. vol. 229; p. 1029.
Scovill Manufacturing Company. (See Goss, Edward O., assignor.)
Scovill Manufacturing Company. (See Simons, Ernest D., asignor.)
Scranton, Ernest L., Rising Sun, Ind. Resilient tire. No. 1,194,081; Aug. 8; Gaz. vol. 229; p. 484.
Seaboard Specialty Corporation. (See Beardsley, Frank W., assignor.)
Seaman, Hervey J., Charlottesville, Va. Advertising novelty. No. 1,195,276; Aug. 22; Gaz. vol. 229; p. 982.
Seamans, John D., Greenville, Tex. Poultry-feeder. No. 1,195,104; Aug. 15; Gaz. vol. 229; p. 884.
Searcy, Thomas J., Madison, Mo. Mucilage bottle and brush. No. 1,193,433; Aug. 1; Gaz. vol. 229; p. 215.
Sears, Roebuck and Company. (See Hoffman, Rudolph, assignor.)
Secor, Delbert A., Cassopolis, assignor of one-half to J. Schmidt, Dowagiac, Mich. Cylindrical wall structure, such as a silo. No. 1,195,277; Aug. 22; Gaz. vol. 229; p. 982.

Seely, Thomas H., Dorchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,194,431; Aug. 15; Gaz. vol. 229; p. 650.
Seely, Thomas H., Dorchester, and J. B. Hadaway, Swampscott, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Welt-beating machine. No. 1,196,486; Aug. 29; Gaz. vol. 229; p. 1443.
Segal, Samuel, New York, N. Y. Lock. No. 1,195,613; Aug. 22; Gaz. vol. 229; p. 1102.
Seiler, George J., Turtle Creek, Pa. Device for facing tiles. No. 1,194,554; Aug. 15; Gaz. vol. 229; p. 693.
Selander, Gustaf, assignor of one-half to A. L. Radlein, Chicago, Ill. Tool-holder. No. 1,196,161; Aug. 29; Gaz. vol. 229; p. 1332.
Seltner, Peter, McMechen, W. Va. Shower attachment for bath-tubs. No. 1,193,302; Aug. 1; Gaz. vol. 229; p. 170.
Selubsky, Michael, Brooklyn, N. Y. Adjustable garment-form. No. 1,194,555; Aug. 15; Gaz. vol. 229; p. 694.
Semple, Ross, assignor of one-half to F. L. Steward, Washington, Pa. Pistol. No. 1,196,035; Aug. 29; Gaz. vol. 229; p. 1287.
Sencenbaugh, Samuel S. (See Webb, George S., assignor.)
Sessions, Frank L., Lakewood, assignor to The Standard Welding Company, Cleveland, Ohio. Electric welding-machine. No. 1,196,304; Aug. 29; Gaz. vol. 229; p. 1380.
Severy, Melvin L., Arlington Heights, Mass., and G. B. Sinclair, Georgetown, Me., assignors to Choralcelo Company, Boston, Mass. Electrical musical instrument. No. 1,196,401; Aug. 29; Gaz. vol. 229; p. 1414.
Seward, Thomas J., assignor to The Electric Cable Company, Bridgeport, Conn. Marking insulated wire. No. 1,194,245; Aug. 8; Gaz. vol. 229; p. 540.
Seymour, Elwyn W. (See Hammen, Charles, assignor.)
Seymour, George F., *et al.* (See Blee, Charles O., assignor.)
Seymoure, Amos F., Albion, Ind. Scaffold-bracket. No. 1,193,832; Aug. 8; Gaz. vol. 229; p. 397.
Seymoure, Horace A., New York, N. Y. Paper-fastener. No. 1,195,513; Aug. 22; Gaz. vol. 229; p. 1065.
Shadbolt, William O., New York, N. Y. Truck. No. 1,193,932; Aug. 8; Gaz. vol. 229; p. 433.
Shadley, Frank, Hebron, Ind. Stove-blower. No. 1,195,278; Aug. 22; Gaz. vol. 229; p. 982.
Shafer, John J., Mayville, Mich. Speedometer. No. 1,196,162; Aug. 29; Gaz. vol. 229; p. 1333.
Shafer, Samuel, Jr., assignor to Chain Belt Company, Milwaukee, Wis. Delivery-chute for mixing-machines. No. 1,195,941; Aug. 22; Gaz. vol. 229; p. 1220.
Shalet, Bengamin G., Bridgeport, Conn. Bell. No. 1,193,195; Aug. 1; Gaz. vol. 229; p. 131.
Shambaugh, Isaac H., Avilla, Ind. Teething device. No. 1,194,246; Aug. 8; Gaz. vol. 229; p. 540.
Shanley, John A., Worthing, S. D. Well-drilling machine. No. 1,196,594; Aug. 29; Gaz. vol. 229; p. 1480.
Shannon and Son, John. (See Cranage, William, assignor.)
Sharp-Hughes Tool Company. (See Griffin, Thomas J., assignor.)
Sharp-Hughes Tool Company. (See Hughes, Howard R., assignor.)
Sharpe, Frederick H., Liverpool, England. Carbonating lead oxid. No. 1,196,595; Aug. 29; Gaz. vol. 229; p. 1480.
Sharpneck, Eliel L., Winthrop, Mass. Car-axle. No. 1,193,434; Aug. 1; Gaz. vol. 229; p. 216.
Shaver, William T., Des Moines, Iowa. Wagon-body. No. 1,192,944; Aug. 1; Gaz. vol. 229; p. 40.
Shaw, Frances D., Chicago, Ill., assignor to Shaw Kiln Company, Atlanta, Ga. Continuous kiln. No. 1,194,556; Aug. 15; Gaz. vol. 229; p. 694.
Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,195,514; Aug. 22; Gaz. vol. 229; p. 1065.
Shaw Kiln Company. (See Shaw, Frances D., assignor.)
Shaw, William T. (See Charlton and Shaw.)
Shear-Klean Grate Company. (See Kohout, George A., assignor.)
Sheather, Percival B. (See Bryan and Sheather.)
Sheedy, Patrick, and D. P. Kellogg, Los Angeles, Cal. Locking mechanism for valve-reversing gears. No. 1,195,614; Aug. 22; Gaz. vol. 229; p. 1103.
Sheldon, Lucian A., Schenectady, N. Y., assignor to General Electric Company. Metering fluids which have an intermittent flow. No. 1,195,105; Aug. 15; Gaz. vol. 229; p. 884.
Shelhorn, Joseph T., St. Paul, Ind. Vending-machine. No. 1,194,557; Aug. 15; Gaz. vol. 229; p. 694.
Shelton, George, Paducah, Ky. Automatic cylinder-cock. No. 1,195,106; Aug. 15; Gaz. vol. 229; p. 884.
Shenk, John J., Frederick, Md. Hay-unloader. No. 1,196,596; Aug. 29; Gaz. vol. 229; p. 1480.
Shepard, Garrett S., Linesville, Pa. Cattle-stanchion. No. 1,193,933; Aug. 8; Gaz. vol. 229; p. 434.
Sheppard, Orlando, Jr., Atlanta, Ga., assignor to The Murray Company, Dallas, Tex., and Atlanta, Ga. Heater or cooker for cotton and other oil seed or material. No. 1,196,597; Aug. 29; Gaz. vol. 229; p. 1481.
Sheppard, Sidney R. (See Healey and Sheppard.)
Sherbondy, Edward L., Los Angeles, assignor to Aero-Cushion Tire Company, San Jose, Cal. Tire-filler. No. 1,193,196; Aug. 1; Gaz. vol. 229; p. 132.
Sheridan, John, New York, N. Y. Laundry appliance. No. 1,196,305; Aug. 29; Gaz. vol. 229; p. 1380.
Sheriff, J. Ed, Stamford, Conn. Gun-cartridge. No. 1,195,107; Aug. 15; Gaz. vol. 229; p. 885.
Sherman, Moses, and B. Rivkin, assignors of one-sixth to S. Liss, New York, one-sixth to L. Tropp, and one-sixth to M. M. Turitz, Brooklyn, N. Y. Brake for vehicles. No. 1,196,724; Aug. 29; Gaz. vol. 229; p. 1525.
Sherman, Myron, Redlands, Cal. Octagonal portable summer-house. No. 1,193,833; Aug. 8; Gaz. vol. 229; p. 397.
Sherwood, Albert H., Oroville, Cal. Separating metals. No. 1,192,945; Aug. 1; Gaz. vol. 229; p. 40.
Shibata, Reiji, Kobe, Japan. Steam-boiler. No. 1,193,435; Aug. 1; Gaz. vol. 229; p. 216.
Shields, Patrick W., Pittsburgh, Pa. Bottling-machine. No. 1,195,515; Aug. 22; Gaz. vol. 229; p. 1066.
Shields, Patrick W., Pittsburgh, Pa. Machine for filling and capping bottles. No. 1,195,516; Aug. 22; Gaz. vol. 229; p. 1066.
Shierk, Dearell D., Rockford, Ill. Piston packing-ring. No. 1,195,279; Aug. 22; Gaz. vol. 229; p. 983.
Shimpf, Walter H., New York, N. Y. Internal-combustion engine. No. 1,196,598; Aug. 29; Gaz. vol. 229; p. 1481.
Shipman, Ralph, Sunbury, Pa. Speed and running-time indicator. No. 1,195,280; Aug. 22; Gaz. vol. 229; p. 983.
Shipman, Ralph, Sunbury, Pa. Speed and running-time indicator. No. 1,195,930; Aug. 22; Gaz. vol. 229; p. 1217.
Shive, Willoughby A., Trumbauersville, Pa. Dirigible lamp. No. 1,194,247; Aug. 8; Gaz. vol. 229; p. 540.
Shoemaker, Robert J. (See McClintock and Shoemaker.)
Shogren, Charles A., Chicago, Ill. Metal weather-strip. No. 1,195,108; Aug. 15; Gaz. vol. 229; p. 885.
Sholley, William M., assignor of forty-nine one-hundredths to D. C. La Vine, Des Moines, Iowa. Lever-brake for cars. No. 1,195,109; Aug. 15; Gaz. vol. 229; p. 885.
Shook, Glenn A., Urbana, Ill., assignor to Scientific Materials Company, Pittsburgh, Pa. Pyrometer-scale. No. 1,196,306; Aug. 29; Gaz. vol. 229; p. 1380.
Shoup, Lewis C., Fairmount City, Pa. Anchor. No. 1,193,436; Aug. 1; Gaz. vol. 229; p. 216.
Shredded Wheat Company, The. (See Smith, Charles E., assignor.)
Shumard, Malnor A. and M. A., Jr., Boerne, Tex. Tobacco-pouch. No. 1,196,599; Aug. 29; Gaz. vol. 229; p. 1482.
Shute, Richard A., Los Angeles, Cal. Propelling and steering mechanism for aircraft. No. 1,196,600; Aug. 29; Gaz. vol. 229; p. 1482.
Sieber, Gottwalt, assignor to Vogtländische Maschinen-Fabrik, Plauen, Germany. Embroidering-machine. No. 1,193,303; Aug. 1; Gaz. vol. 229; p. 170.
Siebert, Otto W., and O. N. Turner; said Turner assignor to Bay State Metal Wheel Company, Templeton, Mass. Child's bassinet and canopy therefor. No. 1,193,722; Aug. 8; Gaz. vol. 229; p. 358.
Siebler, Albert A., *et al.* (See Musser, George D., assignor.)
Siegel, William, Wilkes-Barre, Pa. Smoke-generator. No. 1,195,743; Aug. 22; Gaz. vol. 229; p. 1150.
Sielaff, Max, Berlin, Germany. Device for delivering subdivided strips. No. 1,195,517; Aug. 22; Gaz. vol. 229; p. 1067.
Siemens & Halske A-G. (See Kreusler, Gerdien, and Pirani, assignors.)
Sigler, Benjamin F., Locke, N. Y. Trap-nest. No. 1,194,432; Aug. 15; Gaz. vol. 229; p. 650.
Silberman, Jacob, New York, N. Y. Snap-button. No. 1,194,082; Aug. 8; Gaz. vol. 229; p. 484.
Silberman, Samuel G., Philadelphia, Pa. Chain for pneumatic tires. No. 1,194,433; Aug. 15; Gaz. vol. 229; p. 650.
Sills, William H., Chicago, Ill. Device for building mica-boards or similar articles. No. 1,196,036; Aug. 29; Gaz. vol. 229; p. 1287.
Silva, Juan N., Pueblo, Colo. Kiln. No. 1,192,946; Aug. 1; Gaz. vol. 229; p. 40.
Simhan, Romanos S., Birmingham, Ala. Device for holding sheet-music. No. 1,195,110; Aug. 15; Gaz. vol. 229; p. 886.
Simko, Andrew, Passaic, N. J. Monorail dump-car system. No. 1,196,402; Aug. 29; Gaz. vol. 229; p. 1415.
Simmon, Karl A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Terminal clamp. No. 1,196,163; Aug. 29; Gaz. vol. 229; p. 1333.
Simmons, Jesse C., Shelby, assignor of one-half to A. B. Way, Grand Rapids, Mich. Carbureter. No. 1,193,834; Aug. 8; Gaz. vol. 229; p. 398.
Simmons Manufacturing Company, The. (See Cook, Aubrey W., assignor.)
Simmons, Nathan, New York, N. Y. Combination bill-folder and change-holder. No. 1,195,281; Aug. 22; Gaz. vol. 229; p. 984.
Simms, Amos H., Chicago, Ill. Railway safety device. No. 1,195,282; Aug. 22; Gaz. vol. 229; p. 984.
Simon, Maurice, St. Louis, Mo. Electric water-heater. No. 1,194,886; Aug. 15; Gaz. vol. 229; p. 809.
Simon, Maurice, St. Louis, Mo. Electric water-heater. No. 1,195,615; Aug. 22; Gaz. vol. 229; p. 1103.
Simon, Maurice, St. Louis, Mo. Electric water-heater. No. 1,196,487; Aug. 29; Gaz. vol. 229; p. 1443.
Simond, Walter A., assignor to The Gyro Pump Company, Franklin, N. H. Rotary pump. (Reissue.) No. 14,180; Aug. 8; Gaz. vol. 229; p. 578.

Simonds, George E., assignor to Domestic Engineering Company, Minneapolis, Minn. Tubular heater. No. 1,193,304; Aug. 1; Gaz. vol. 229; p. 171.
Simonds Manufacturing Company. (See McDonald, Hiram B., assignor.)
Simonds Manufacturing Company. (See Remington, Alfred M., assignor.)
Simons, Ernest D., assignor to Scovill Manufacturing Company, Waterbury, Conn. Snap-fastener socket. No. 1,192,947; Aug. 1; Gaz. vol. 229; p. 41.
Simplex Refining Company. (See Trumble, Milon J., assignor.)
Simpson, Charles A., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Despatcher's telephone system. No. 1,193,835; Aug. 8; Gaz. vol. 229; p. 399.
Simpsou, Eugene A., Morristown, assignor of one-half to C. Hicks and A. J. Teter, Chattanooga, Tenn. Signal-lantern. No. 1,195,407; Aug. 22; Gaz. vol. 229; p. 1030.
Simpson, Frost V., assignor to Kleckhefer Box Company, Milwaukee, Wis. Yielding platen connection. No. 1,193,934; Aug. 8; Gaz. vol. 229; p. 434.
Simpson, James, and H. E. and W. W. Clay, McKeesport, assignors to National Tube Company, Pittsburgh, Pa. Roll-changing apparatus. No. 1,195,518; Aug. 22; Gaz. vol. 229; p. 1067.
Simpson, Philip, New York, N. Y. Semi-indirect-light attachment. No. 1,194,083; Aug. 8; Gaz. vol. 229; p. 484.
Simpson, Thomas H. (See Giberson, Mason B., assignor.)
Simpson, Willis H. (See Clark, Robert G., assignor.)
Sinclair, George B. (See Severy and Sinclair.)
Singer Manufacturing Company, The. (See Barron, William L., assignor.)
Singer Manufacturing Company, The. (See Eames and Finch, assignors.)
Singer Manufacturing Company, The. (See Finch, John S., assignor.)
Singerman, Casper, Somerville, Mass. Tag-fastener. No. 1,196,307; Aug. 29; Gaz. vol. 229; p. 1381.
Singleton, John C. (See Leslie and Singleton.)
Singleton, Ogle R., *et al.* (See Stringfellow, Bruce W., assignor.)
Sinpar Company, The. (See Corbett and Morris, assignors.)
Sior, Henry M., New York, N. Y. Dumping mechanism for truck-bodies. No. 1,195,519; Aug. 22; Gaz. vol. 229; p. 1068.
Sisson, Thomas U. (See Wood, Pinckney A., assignor.)
Six, Joseph P. (See Fromager and Six.)
Sizer, Fred W. (See Prater and Sizer.)
Skahen, Patrick D., Syracuse, N. Y. Corner construction for burial-cases. No. 1,193,723; Aug. 8; Gaz. vol. 229; p. 359.
Skelton, Owen R., Detroit, Mich., assignor to The Studebaker Corporation. Lamp support and reflector. No. 1,193,724; Aug. 8; Gaz. vol. 229; p. 359.
Skinner, Arthur J., Springfield, Mass., assignor to O. V. Smith, Milford, Conn. Deposit-book. No. 1,196,743; Aug. 29; Gaz. vol. 229; p. 1533.
Skinner, John, Northampton, Mass. Woven fabric. No. 1,196,037; Aug. 29; Gaz. vol. 229; p. 1288.
Skoglund, Jean V., New York, N. Y. Fire and water proof composition and making same. No. 1,194,558; Aug. 15; Gaz. vol. 229; p. 695.
Skreberg, Hans, Big Bend township, Chippewa county, Minn. Transport. No. 1,195,283; Aug. 22; Gaz. vol. 229; p. 984.
Skreberg, Hans, Big Bend township, Chippewa county, Minn. Protector for radiators. No. 1,196,403; Aug. 29; Gaz. vol. 229; p. 1415.
Slack, Walter W. (See Colton, Rosto E., assignor.)
Slaght, Lewis H., G. E. Sutton, and J. C. O'Brien, Toronto, Ontario, Canada. Mangle. No. 1,193,623; Aug. 8; Gaz. vol. 229; p. 322.
Slagle, Willard G., Memphis, Tenn. Air-purifier for laundry-drying machines. No. 1,193,305; Aug. 1; Gaz. vol. 229; p. 171.
Slater, August H. (See Slaw, Frank W., assignor.)
Slater, Henry B., Riverside, Cal. Extracting metals from their ores. No. 1,195,616; Aug. 22; Gaz. vol. 229; p. 1104.
Slater, Henry B., Los Angeles, Cal. Making a leaching solution for extraction of metals from their ores. No. 1,195,617; Aug. 22; Gaz. vol. 229; p. 1104.
Slavens, James G., Seattle, Wash. Shipping-box. No. 1,194,434; Aug. 15; Gaz. vol. 229; p. 651.
Slaw, Frank W., assignor of one-half to A. H. Slater, Steubenville, Ohio. Controlling-valve mechanism. No. 1,194,676; Aug. 15; Gaz. vol. 229; p. 735.
Slick, Edwin E., Westmont borough, Pa. Cooling-bed. No. 1,193,836; Aug. 8; Gaz. vol. 229; p. 399.
Slick, Edwin E., Westmont borough, Pa. Truck-frame. No. 1,195,111; Aug. 15; Gaz. vol. 229; p. 886.
Slick, Edwin E., Westmont borough, Pa. Car-truck. No. 1,195,112; Aug. 15; Gaz. vol. 229; p. 886.
Small, Chesley T., St. Louis, Mo. Can-turning device. No. 1,193,624; Aug. 8; Gaz. vol. 229; p. 323.
Small, Sylvanus C. (See Small, Walter S., assignor.)
Small, Walter S., assignor of one-half to S. C. Small, Charleston, Me. Potato-cutter. No. 1,193,437; Aug. 1; Gaz. vol. 229; p. 216.
Smalley, Sherman E., *et al.* (See Kemps, John T., assignor.)
Smallwood, Charles, Washington, N. C. Bifurcated nethergarment. No. 1,195,618; Aug. 22; Gaz. vol. 229; p. 1105.
Smeby, Justin G., Oberon, N. D. Camera spool-support. No. 1,196,601; Aug. 29; Gaz. vol. 229; p. 1483.
Smedal, Greggar, La Crosse, Wis. Type-writer attachment. No. 1,196,164; Aug. 29; Gaz. vol. 229; p. 1333.
Smith, Albert R. (See Wood, Frederick W., assignor.)
Smith, Albert W., Cleveland, Ohio. Extracting gold. No. 1,193,197; Aug. 1; Gaz. vol. 229; p. 132.
Smith, Alvin G., Hempstead, N. Y. Automobile-lamp. No. 1,193,438; Aug. 1; Gaz. vol. 229; p. 217.
Smith, Amos H., New York, N. Y., assignor to American Bank Note Company. Numbering-head. No. 1,194,435; Aug. 15; Gaz. vol. 229; p. 651.
Smith, Benjamin H., Turtle Creek, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical measuring instrument. No. 1,194,084; Aug. 8; Gaz. vol. 229; p. 484.
Smith, Charles D., assignor of one-half to L. Morner, Dayton, Ohio. Carbureter. No. 1,195,113; Aug. 15; Gaz. vol. 229; p. 887.
Smith, Charles E., assignor to The Shredded Wheat Company, Niagara Falls, N. Y. Means for manufacturing filamentous biscuit. No. 1,194,341; Aug. 8; Gaz. vol. 229; p. 575.
Smith, Charles E., assignor to The Shredded Wheat Company, Niagara Falls, N. Y. Means for manufacturing filamentous biscuit. No. 1,195,114; Aug. 15; Gaz. vol. 229; p. 887.
Smith, Chris F., Scottsbluff, Nebr. Tractor. No. 1,194,085; Aug. 8; Gaz. vol. 229; p. 485.
Smith, Clarence E., assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn. Hasp for trunk-locks. No. 1,196,038; Aug. 29; Gaz. vol. 229; p. 1288.
Smith, Drewry H., Bluefield, W. Va. Key-holder. No. 1,193,439; Aug. 1; Gaz. vol. 229; p. 217.
Smith, Earl W. and E. V., Sacramento, Cal. Transmission-gearing for motor-vehicles. No. 1,195,284; Aug. 22; Gaz. vol. 229; p. 985.
Smith, Earl W. and E. V., Sacramento, Cal. Transmission-gearing for motor-vehicles. No. 1,195,285; Aug. 22; Gaz. vol. 229; p. 985.
Smith, Eddie E. (See Smith, Logan, assignor.)
Smith, Edward F., assignor to The Neil & Smith Electric Tool Co., Cincinnati, Ohio. Manufacture and construction of commutators. No. 1,195,861; Aug. 22; Gaz. vol. 229; p. 1193.
Smith, Edward F., assignor to The Neil & Smith Electric Tool Co., Cincinnati, Ohio. Center-grinder. No. 1,196,165; Aug. 29; Gaz. vol. 229; p. 1334.
Smith, Edwin. (See Schatzle and Smith.)
Smith, Edwin D., St. Louis, Mo. Switch-lock. No. 1,195,619; Aug. 22; Gaz. vol. 229; p. 1105.
Smith, Eugene V. (See Smith, Earl W. and E. V.)
Smith, Floyd, Douglas, Ariz. Machine for affixing and canceling stamps. No. 1,195,115; Aug. 15; Gaz. vol. 229; p. 888.
Smith, Frank L., *et al.* (See Brignoni, Albert C., assignor.)
Smith, Frank W. (See Lake, George W., assignor.)
Smith, Fred, Springdale, Conn. Shock-preventer for vehicles and the like. No. 1,196,166; Aug. 29; Gaz. vol. 229; p. 1334.
Smith, Fred, Springdale, Conn. Shock-preventer. No. 1,196,167; Aug. 29; Gaz. vol. 229; p. 1335.
Smith, George H., assignor to H. W. Johns-Manville Company, Milwaukee, Wis. Sealed-edged laminated sheet and making the same. No. 1,195,408; Aug. 22; Gaz. vol. 229; p. 1030.
Smith, Harry B. (See Reifsnyder and Smith.)
Smith, Henry, Bridgeport, Conn. Multiple-tool holder. No. 1,195,116; Aug. 15; Gaz. vol. 229; p. 888.
Smith, Henry L., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Cam mechanism for wood-screw machines. No. 1,196,308; Aug. 29; Gaz. vol. 229; p. 1381.
Smith, James. (See Whitaker, Joseph W., assignor.)
Smith, James G., Litchfield, Ill. Railway-tie and brace. No. 1,193,080; Aug. 1; Gaz. vol. 229; p. 89.
Smith, Joseph A. (See Lonzo, William, assignor.)
Smith, Joseph J., Cambridge, assignor to W. Firth, Chestnut Hill, Mass. Pneumatic blowing-machine. No. 1,193,475; Aug. 1; Gaz. vol. 229; p. 230.
Smith, Leroy R., Charlotte, Mich. Novelty sign. No. 1,194,559; Aug. 15; Gaz. vol. 229; p. 695.
Smith, Logan, Oakley, assignor to E. E. Smith, Decatur, Ill. Wrench. No. 1,196,039; Aug. 29; Gaz. vol. 229; p. 1288.
Smith, Martin P., assignor to W. N. Matthews & Brother, Inc., St. Louis, Mo. Guy-anchor. No. 1,193,725; Aug. 8; Gaz. vol. 229; p. 360.
Smith, Omar H., Cleveland, Ohio. Handle-guard. No. 1,196,602; Aug. 29; Gaz. vol. 229; p. 1483.
Smith, Orland V. (See Skinner, Arthur J., assignor.)
Smith, Oscar A., assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Spring-die holder. No. 1,193,837; Aug. 8; Gaz. vol. 229; p. 400.
Smith, Reuben S., Los Angeles, Cal., assignor to A. O. Smith Company, Milwaukee, Wis. Vehicle-pusher. No. 1,195,620; Aug. 22; Gaz. vol. 229; p. 1105.
Smith, Rufus B., Akron, Ohio. Game. No. 1,196,748; Aug. 29; Gaz. vol. 229; p. 1534.

Smith, Walter O., New Bedford, Mass. Follow-up index for collection systems. No. 1,196,603; Aug. 29; Gaz. vol. 229; p. 1483.
Smith, Wesley L., Pittsburgh, Pa. Dental cabinet. No. 1,194,436; Aug. 15; Gaz. vol. 229; p. 652.
Smith, William, assignor to Universal Arch Company, Chicago, Ill. Locomotive arch-brick. No. 1,194,086; Aug. 8; Gaz. vol. 229; p. 485.
Smith, William A., assignor, by mesne assignments, to The Denver Rock Drill Manufacturing Company, Denver, Colo. Pulsating apparatus. No. 1,196,040; Aug. 29; Gaz. vol. 229; p. 1289.
Smith, William A., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Rock-drilling apparatus. No. 1,196,041; Aug. 29; Gaz. vol. 229; p. 1289.
Smith, William A., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Rock-drilling apparatus. No. 1,196,042; Aug. 29; Gaz. vol. 229; p. 1289.
Smith, William B., Camas, Wash. Roll-rewinding machine. No. 1,194,248; Aug. 8; Gaz. vol. 229; p. 541.
Smith, William B., Camas, Wash. Mandrel for cores of roll-rewinding machines. No. 1,194,249; Aug. 8; Gaz. vol. 229; p. 541.
Smith, William F., Springfield, Ohio. Combined liquid conveyer and filter. No. 1,192,948; Aug. 1; Gaz. vol. 229; p. 41.
Smith, William H., and C. C. Brown, Le Roy, N. Y., assignors, by mesne assignments, to The Phinney Engineering Company, Chillicothe, Ohio. Machine for trimming string-beans, &c. No. 1,193,935; Aug. 8; Gaz. vol. 229; p. 434.
Smith, William J., Waterbury, Conn. Detachable button. No. 1,193,936; Aug. 8; Gaz. vol. 229; p. 435.
Smith, William J., Wall Lake, Iowa, and L. Lagall, Union, Okla. Engine. No. 1,195,744; Aug. 22; Gaz. vol. 229; p. 1150.
Smithey, Marvin, Lawrenceville, Va. Meter. No. 1,195,161; August 15; Gaz. vol. 229; p. 903.
Smithey, Marvin, Lawrenceville, Va. Autometer. No. 1,195,862; Aug. 22; Gaz. vol. 229; p. 1193.
Smits, Jacob J. L., Utrecht, Netherlands. Screen. No. 1,194,250; Aug. 8; Gaz. vol. 229; p. 542.
Smoter, Jan, assignor of one-fourth to A. Rys, Conemaugh, Pa. Burglar-alarm. No. 1,193,306; Aug. 1; Gaz. vol. 229; p. 171.
Snediker, Morton O. (See Powers and Snediker.)
Snell, William T., El Paso, Tex. Packing-box. No. 1,194,087; Aug. 8; Gaz. vol. 229; p. 485.
Snideman, Frank A., assignor of one-half to F. N. Root, Kalamazoo, Mich. Clutch mechanism. No. 1,195,520; Aug. 22; Gaz. vol. 229; p. 1068.
Snodgrass, Leslie M., assignor of one-half to H. Neuerburg, Bloomington, Ill. Rail-joint. No. 1,193,937; Aug. 8; Gaz. vol. 229; p. 435.
Snow, Frederick, assignor, by mesne assignments, to A. Conkling, Chicago, Ill. Driving and reversing mechanism. No. 1,193,726; Aug. 8; Gaz. vol. 229; p. 360.
Snowden, Lester R., Galesburg, Ill. Safety-boat. No. 1,195,863; Aug. 22; Gaz. vol. 229; p. 1194.
Snyder, Benjamin, New York, N. Y. Permutation-padlock. No. 1,195,745; Aug. 22; Gaz. vol. 229; p. 1150.
Snyder, Charles H., and E. Stalliter, Rockford, Ohio. Vehicle-wheel rim. No. 1,196,604; Aug. 29; Gaz. vol. 229; p. 1484.
Snyder, Howard F., assignor to The Maytag Company, Newton, Iowa. Governor. No. 1,195,286; Aug. 22; Gaz. vol. 229; p. 985.
Snyder, James O., Decatur, Ill. Gasolene-turbine. No. 1,194,560; Aug. 15; Gaz. vol. 229; p. 695.
Snyder, Robert M., Wilkinsburg, Pa. Utilizing waste heat from open-hearth furnaces. No. 1,195,521; Aug. 22; Gaz. vol. 229; p. 1068.
Società Anonima Italiana Gio Ansaldo & C. (See Giolitti, Federico, assignor.)
Société Anonyme pour l'Exploitation des Procédés Westinghouse-Leblanc. (See Buss, Otto C., assignor.)
Société Generale des Nitrures. (See Badin, Adrien, assignor.)
Societe Generale des Nitrures. (See Bunet, Paul, assignor.)
Société Jules Grouvelle H. Arquembourg & Cie. (See Arquembourg, Emile H., assignor.)
Societé Maurice Velin & Cie. (See Schimmel, Franz, assignor.)
Söderlund, Carl G., Gottenborg, Sweden. Sheet-metal ball-retainer for ball-bearings. No. 1,196,605; Aug. 29; Gaz. vol. 229; p. 1484.
Soderstrom, Albert, Homestead, Pa. Ingot-delivery car. No. 1,195,522; Aug. 22; Gaz. vol. 229; p. 1069.
Soisson, Louis H., Scottdale, Pa. Gage for thread-cutting tools. No. 1,195,287; Aug. 22; Gaz. vol. 229; p. 986.
Solan, Patrick F., and H. S. Balliet, New York, N. Y. Non-slipping paving composition. No. 1,193,938; Aug. 8; Gaz. vol. 229; p. 435.
Solberg, Torkild, St. Charles, Ill. Clarinet tuning-slide. No. 1,194,887; Aug. 15; Gaz. vol. 229; p. 809.
Solomon, Julius, Oberlin, Ohio. Resilient heel. No. 1,193,198; Aug. 1; Gaz. vol. 229; p. 132.
Solomon, Randolph. (See Richards and Solomon.)
Somerville, William, Auburn, Victoria, Australia. Dye or stain. No. 1,193,838; Aug. 8; Gaz. vol. 229; p. 400.
Sommer, George W., *et al.* (See Vincent, Louis N., assignor.)
Sonderegger, August, and O. Schröder, Hamburg, Germany. Vehicle-spring. No. 1,193,625; Aug. 8; Gaz. vol. 229; p. 323.
Sonnenberg, Louis, Richmond, Va. Detachable protector for trousers. No. 1,195,523; Aug. 22; Gaz. vol. 229; p. 1069.
Sorley, Hartvig, Macomb, Ill. Painter's bucket. No. 1,193,307; Aug. 1; Gaz. vol. 229; p. 172.
Sorrell, T. L., *et al.* (See Sweet, Allen H., assignor.)
South Side Trust Company, trustee. (See Herr, Henry C., assignor.)
Southgate, Louis W., Worcester, Mass., assignor to Auto Pneumatic Action Co., New York, N. Y. Accenting device for piano-players. No. 1,193,939; Aug. 8; Gaz. vol. 229; p. 435.
Sowell, James L., Jasper, Ala. Surgical appliance. No. 1,195,931; Aug. 22; Gaz. vol. 229; p. 1217.
Spaerer, John, Newark, N. J. Vehicle-signal. No. 1,194,888; Aug. 15; Gaz. vol. 229; p. 810.
Spangler, James M., Canton, assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio. Suction-sweeper. No. 1,192,949; Aug. 1; Gaz. vol. 229; p. 41.
Spar Chemical Company, The. (See Bassett, Harry P., assignor.)
Spaulding, Charles E., Centralia, Ill. Pulverizer. No. 1,196,606; Aug. 29; Gaz. vol. 229; p. 1484.
Specialty Manufacturing-Sales Corporation. (See Marsh, George A., assignor.)
Spellerberg, Margarete, Berlin-Friedenau, Germany. Device for removing wrinkles from the face. No. 1,195,117; Aug. 15; Gaz. vol. 229; p. 889.
Spencer, Alvah C., Beverly, and A. Eppler, Lynn, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Recessing-machine. No. 1,196,043; Aug. 29; Gaz. vol. 229; p. 1290.
Spencer, Lewis P., New Bedford, Mass. Shuttle. No. 1,193,839; Aug. 8; Gaz. vol. 229; p. 400.
Spencer, Thomas, assignor of one-half to W. C. Darby, Pueblo, Colo. Grass catching and handling device for lawn-mowers. No. 1,195,288; Aug. 22; Gaz. vol. 229; p. 986.
Sperling, Louis. (See Van Osdel, William J., assignor.)
Sperry, Elmer A., New York, N. Y. Internal-combustion engine. No. 1,194,889; Aug. 15; Gaz. vol. 229; p. 810.
Spica, Giovanni, Venice, Italy. Explosive and manufacturing same. No. 1,194,561; Aug. 15; Gaz. vol. 229; p. 695.
Spiegel, Alexander S., assignor to Spiegel Patent Company, Chicago, Ill. Method and apparatus for the manufacture of two-colored roofing. No. 1,194,890; Aug. 15; Gaz. vol. 229; p. 810.
Spiegel Patent Company. (See Spiegel, Alexander S., assignor.)
Spiess, Georg, Leipzig-Reudnitz, Germany. Driving-chain gear for retarding the transport in sheet-feeders. No. 1,194,562; Aug. 15; Gaz. vol. 229; p. 695.
Spirella Company, The. (See Hyde, Elbert L., assignor.)
Spirella Company, The. (See Kitchen, John F., assignor.)
Spirella Company, The. (See Roche, William J., assignor.)
Spirella Company, The. (See Wadsworth, Frank L. O., assignor.)
Spiro, Louis, Monessen, Pa. Fire-escape. No. 1,196,607; Aug. 29; Gaz. vol. 229; p. 1485.
Spitzer, Fritz. (See Goldschmidt and Spitzer.)
Spitzli, George H. (See Crist and Spitzli.)
Spitt, George L., Summerdale, Ala. Vending-machine. No. 1,196,404; Aug. 29; Gaz. vol. 229; p. 1416.
Spokes, George T. S., Wallingford, Conn., assignor to H. L. Judd Company, New York, N. Y. Curtain-rod-bracket connection. No. 1,195,409; Aug. 22; Gaz. vol. 229; p. 1031.
Sprague, Beecher W. (See La Moy, John H., assignor.)
Sprague Canning Machinery Company. (See Westland, Frank G., assignor.)
Sprague, Elizabeth, Minneapolis, Minn. Catamenial napkin. No. 1,195,621; Aug. 22; Gaz. vol. 229; p. 1106.
Spray Engineering Company. (See Young, Francis E., assignor.)
Springer, Winton L., Chicago, Ill., assignor to American Type Founders Company, Jersey City, N. J. Tabular quad or space. No. 1,194,891; Aug. 15; Gaz. vol. 229; p. 811.
Springer, Winton L., Chicago, Ill., assignor to American Type Founders Company, Jersey City, N. J. Composition of ruled forms. No. 1,194,892; Aug. 15; Gaz. vol. 229; p. 811.
Sproull, John C., Lawrence, Kans. Acetylene-gas generator. No. 1,194,251; Aug. 8; Gaz. vol. 229; p. 542.
Spyker, Jacobus, Amsterdam, Netherlands. Sectional cushion-tire. No. 1,194,789; Aug. 15; Gaz. vol. 229; p. 775.
Spyker, Jacobus, Amsterdam, Netherlands. Resilient wheel. No. 1,194,790; Aug. 15; Gaz. vol. 229; p. 776.
St. Louis, George C., Fresno, Cal. Flying-machine. No. 1,195,290; Aug. 22; Gaz. vol. 229; p. 987.
St. Mungo Manufacturing Company of America. (See Knight, William R., assignor.)
Staaf, Werner I., assignor of one-half to E. B. Tyler, Pittsburgh, Pa. Water-trap. No. 1,193,940; Aug. 8; Gaz. vol. 229; p. 436.

Staahlgren, Karl A. A., New York, N. Y., assignor to National Electric Bulletin Corporation. Latch mechanism for bulletin-printing machines. No. 1,193,081; Aug. 1; Gaz. vol. 229; p. 89.
Stafford, Hal R., Plainfield, N. J. Steam-engine valve-chest. No. 1,193,941; Aug. 8; Gaz. vol. 229; p. 436.
Stahle, John A., assignor to Stahle Mechanical Tire Company, Limited, Boston, Mass. Resilient wheel. No. 1,193,840; Aug. 8; Gaz. vol. 229; p. 400.
Stahle Mechanical Tire Company. (See Stahle, John A., assignor.)
Stair, William S., New York, N. Y. Refrigerating-machine. No. 1,195,162; Aug. 15; Gaz. vol. 229; p. 904.
Staley, William P., Sedalia, Mo. Pipe-wrench. No. 1,194,563; Aug. 15; Gaz. vol. 229; p. 696.
Stalker, Harry B., Marion, S. D. Derrick. No. 1,194,893; Aug. 15; Gaz. vol. 229; p. 811.
Stalker, Emmit. (See Snyder and Stalker.)
Standard Car Truck Company. (See Barber, John C., assignor.)
Standard Computing Scale Company, The. (See Jaenichen, Louis, assignor.)
Standard Envelope Sealer Manufacturing Company. (See Storck, Frederick W., assignor.)
Standard Pressed Steel Company. (See Noros, George C., assignor.)
Standard Soil Fertility Company of America. (See Mansbendel, Fritz P., assignor.)
Standard Welding Company, The. (See Sessions, Frank L., assignor.)
Standard Woven Fabric Company. (See Gleason, Frederick J., assignor.)
Standefer, Wayne B., Meridian, Tex. Extension broom-handle. No. 1,194,894; Aug. 15; Gaz. vol. 229; p. 812.
Standeford, Archie D., Kansas City, Mo. Projecting arc-lamp. No. 1,193,841; Aug. 8; Gaz. vol. 229; p. 401.
Standish, John F., Winthrop, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel. No. 1,196,608; Aug. 29; Gaz. vol. 229; p. 1485.
Stanford, Arthur L., Chicago, Ill. Rail-anchor. No. 1,196,488; Aug. 29; Gaz. vol. 229; p. 1444.
Stanley, Arthur M., Lynn, Mass., assignor to Hydrocarbon Converter Company, New York, N. Y. Mixing-valve. No. 1,195,524; Aug. 22; Gaz. vol. 229; p. 1069.
Stanley, Walter, Chicago, Ill. Drain. No. 1,194,088; Aug. 8; Gaz. vol. 229; p. 486.
Stanley Works, The. (See Holtzhouser, Jacob P., assignor.)
Stanton, Clyde, Ono, Cal. Emergency-brake. No. 1,193,199; Aug. 1; Gaz. vol. 229; p. 132.
Staples, Eliai M., Elizabeth, N. J. Automatic spring-governor. No. 1,194,895; Aug. 15; Gaz. vol. 229; p. 812.
Stapp, James E., *et al.* (See Sutphin, Robert C., assignor.)
Stapp, Lawrence O., *et al.* (See Sutphin, Robert C., assignor.)
Starbuck, Fielding M., Washington, D. C. Carbureter attachment. No. 1,194,437; Aug. 15; Gaz. vol. 229; p. 652.
Starkweather, William J., and F. C. Miller, Los Angeles, Cal. Lamp-dimmer. No. 1,193,942; Aug. 8; Gaz. vol. 229; p. 436.
Starr Piano Company. (See Draper, Francis W., assignor.)
Starr, William P., Philadelphia, Pa. Self-charging siphon. No. 1,195,864; Aug. 22; Gaz. vol. 229; p. 1194.
Staude, Edwin G., Minneapolis, Minn., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass. Envelop-machine. No. 1,193,626; Aug. 8; Gaz. vol. 229; p. 323.
Staude, Edwin G., Minneapolis, Minn., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass. Envelop-machine. No. 1,193,627; Aug. 8; Gaz. vol. 229; p. 324.
Staude, Edwin G., Minneapolis, Minn., assignor, by mesne assignments, to United States Envelope Company, Springfield, Mass. Gluing-roll. No. 1,193,628; Aug. 8; Gaz. vol. 229; p. 324.
Staude, Edwin G., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn. Variable-speed gearing. No. 1,193,727; Aug. 8; Gaz. vol. 229; p. 360.
Staude, Edwin G., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn. Variable-speed gearing. No. 1,193,728; Aug. 8; Gaz. vol. 229; p. 361.
Stayskell, E. J., *et al.*, administrators. (See Novotny, Charles A.)
Stearns, Justus S. (See Gile, William L., assignor.)
Stearns, Justus S., assignor to Gile Boat & Engine Co., Ludington, Mich. Tractor driving-gearing. No. 1,196,168; Aug. 29; Gaz. vol. 229; p. 1335.
Stebler, Fred, Riverside, Cal. Hand-truck. No. 1,193,729; Aug. 8; Gaz. vol. 229; p. 361.
Stedman, William H., assignor to The Merrow Machine Company, Hartford, Conn. Needle-clamp. No. 1,195,865; Aug. 22; Gaz. vol. 229; p. 1194.
Steeg, William, Elizabeth, N. J. Valve. No. 1,196,405; Aug. 29; Gaz. vol. 229; p. 1416.
Steele, Edwin G. (See Sutton and Steele.)
Steele, Mack D., assignor of one-half to J. I. Miller, Blacksville, W. Va. Wire-stretcher clamp. No. 1,195,525; Aug. 22; Gaz. vol. 229; p. 1070.
Steele, Walter L. (See Sutton and Steele.)
Steely, Dale G., Cambridge, F. W. Blake, Medford, and G. A. Lorentzen, assignors to W. F. Schrafft & Sons Corporation, Boston, Mass. Machine for producing and attaching lacings to boxes. No. 1,193,943; Aug. 8; Gaz. vol. 229; p. 437.
Steen, Halfdan A., Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Switching mechanism. No. 1,194,564; Aug. 15; Gaz. vol. 229; p. 696.
Steen, Halfdan A., Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Potential starter. No. 1,195,526; Aug. 22; Gaz. vol. 229; p. 1070.
Stein, George R., assignor to G. De Bretteville, San Francisco, Cal. Vehicle camping attachment. No. 1,196,309; Aug. 29; Gaz. vol. 229; p. 1381.
Stein, George W., Chicago, Ill. Window-lock. No. 1,194,089; Aug. 8; Gaz. vol. 229; p. 486.
Steiniger, Max, Newport, Ky., and W. Papke, Cincinnati, Ohio. Carrier-block for circular or similar type. No. 1,196,489; Aug. 29; Gaz. vol. 229; p. 1444.
Steinmetz, Charles P., Schenectady, N. Y., assignor to General Electric Company. Electrical winding. No. 1,194,090; Aug. 8; Gaz. vol. 229; p. 486.
Stemmler, Ferdinand. (See Trinks and Stemmler.)
Stenquist, Henry, New York, N. Y. Clean-out plug. No. 1,194,091; Aug. 8; Gaz. vol. 229; p. 486.
Stephan, August, Freeport, Ill. Mechanical measure. No. 1,193,842; Aug. 8; Gaz. vol. 229; p. 401.
Stephan, Charles H., Springfield, Ohio. Ice-creeper. No. 1,195,866; Aug. 22; Gaz. vol. 229; p. 1195.
Stephens, Edward L., Los Angeles, Cal. Pay-as-you-enter car. No. 1,196,310; Aug. 29; Gaz. vol. 229; p. 1382.
Stephens, George A. (See Zeller and Stephens.)
Stern, Samuel, *et al.* (See Heil, Albrecht, assignor.)
Sternad, John, Jersey City, N. J. Chair for cleaning windows. No. 1,194,896; Aug. 15; Gaz. vol. 229; p. 812.
Stevens, Charles W., Chicago, Ill. Floor construction. No. 1,195,289; Aug. 22; Gaz. vol. 229; p. 986.
Stevens and Company. (See Stevens, Frederick A., assignor.)
Stevens, Frederick A., Providence, R. I., assignor to Stevens and Company, Incorporated. Lens-mounting. No. 1,195,622; Aug. 22; Gaz. vol. 229; p. 1106.
Stevens, Leroy R. (See Stevens, Raymond E., assignor.)
Stevens, Raymond E., assignor of one-half to L. R. Stevens, Steamburg, N. Y. Sled-knuckle. No. 1,195,410; Aug. 22; Gaz. vol. 229; p. 1031.
Stevens, Royal H., Salt Lake City, Utah, assignor to United States Smelting Refining & Mining Company, Portland, Me. Separating metals. No. 1,194,438; Aug. 15; Gaz. vol. 229; p. 653.
Stevens, William C., assignor to The Firestone Tire and Rubber Company, Akron, Ohio. Portable wrapping-machine. No. 1,194,565; Aug. 15; Gaz. vol. 229; p. 697.
Stevens, William C., Akron, Ohio, assignor to Pierce Wrapping Machine Company, Chicago, Ill. Wrapping-machine. No. 1,196,044; Aug. 29; Gaz. vol. 229; p. 1290.
Steward, Florence L. (See Semple, Ross, assignor.)
Stewart, Albert E., Franklin, N. H., assignor to Acme Knitting Machine and Needle Company. Knitting-machine. No. 1,194,677; Aug. 15; Gaz. vol. 229; p. 735.
Stewart, Arthur L., assignor to Gleason Works, Rochester, N. Y. Machine for finishing or grinding worm-gears. No. 1,194,566; Aug. 15; Gaz. vol. 229; p. 697.
Stewart, John K., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Engine-driven air-pump. No. 1,196,609; Aug. 29; Gaz. vol. 229; p. 1485.
Stewart-Warner Speedometer Corporation. (See Stewart, John K., assignor.)
Stewart, William C., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-machine. No. 1,195,411; Aug. 22; Gaz. vol. 229; p. 1031.
Stewart, William D., Los Angeles, Cal. Telescopic lock screw-bolt or fastener. No. 1,194,792; Aug. 15; Gaz. vol. 229; p. 777.
Stewart, William J. (See Linden, Lucien, assignor.)
Stibbe, Paul R., Balaton, Minn. Line or rein clamp. No. 1,195,623; Aug. 22; Gaz. vol. 229; p. 1107.
Stiefel, Carl F. (See Samson, Edgar, assignor.)
Stier, Herman, Chicago, Ill. Joint for metal tanks. No. 1,196,490; Aug. 29; Gaz. vol. 229; p. 1444.
Stifel, Otto F. (See Cowgill, Orph W., assignor.) (Reissue.)
Stiles, Luster, Jr., assignor of one-half to J. H. Cain, Sr., Brandenburg, Ky. Fuel vaporizer and burner. No. 1,195,867; Aug. 22; Gaz. vol. 229; p. 1195.
Still, Abram A., Annette, Cal. Gate-closer. No. 1,194,897; Aug. 15; Gaz. vol. 229; p. 812.
Stillman, Albert L., Hoboken, N. J., assignor to Alliance Engineering Corporation, New York, N. Y. Apparatus for drying and cooling of air. No. 1,196,169; Aug. 29; Gaz. vol. 229; p. 1336.
Stimpson, Edwin B., Brooklyn, N. Y. Machine for creasing leather and the like. No. 1,194,791; Aug. 15; Gaz. vol. 229; p. 776.
Stimpson, Wallace I., assignor to Draper Company, Hopedale, Mass. Loom-temple. No. 1,196,170; Aug. 29; Gaz. vol. 229; p. 1336.

Stimson, Edwin L., Cleveland, Ohio, assignor to The Mechanical Rubber Co. Mold for making hollow rubber articles. No. 1,195,412; Aug. 22; Gaz. vol. 229; p. 1032.
Stinson, Charles H., Watertown, S. D. Starting-clutch mechanism. No. 1,196,311; Aug. 29; Gaz. vol. 229; p. 1382.
Stockelburg, Arthur A., Boston, Mass. Cigarette-case. No. 1,196,406; Aug. 29; Gaz. vol. 229; p. 1416.
Stoddard, Wallace W., Bingham, Me. Machine for rough turning last-blocks. No. 1,193,944; Aug. 8; Gaz. vol. 229; p. 437.
Stokes & Smith Company. (See Reifsnyder and Smith, assignors.)
Stoll, Henry C., New York, and G. W. Gay, Elmhurst, N. Y. Internal-combustion engine. No. 1,193,629; Aug. 8; Gaz. vol. 229; p. 324.
Stolte, Edward G. (See Doyle, William F., assignor.)
Stolte, Florence P., executrix. (See Doyle, William F.)
Stoltz, Peter, Berlin, Germany. Feeding of fuel to internal-combustion engines. No. 1,194,567; Aug. 15; Gaz. vol. 229; p. 698.
Stone, John E., Sweetwater, Tex. Pipe-wrench. No. 1,193,308; Aug. 1; Gaz. vol. 229; p. 172.
Stone, Oscar O., San Antonio, Tex. Plastic composition. No. 1,196,610; Aug. 29; Gaz. vol. 229; p. 1486.
Stoops, John C., W. J. Fate, and F. Bennage, Neodesha, Kans. Toy. No. 1,193,309; Aug. 1; Gaz. vol. 229; p. 173.
Storck, Frederick W., assignor, by mesne assignments, to E. C. Drouet, Somerville, Mass. Stamp-affixing machine. No. 1,193,730; Aug. 8; Gaz. vol. 229; p. 362.
Storck, Frederick W., Somerville, Mass., assignor to Standard Envelope Sealer Manufacturing Company. Envelop-sealing machine. No. 1,194,568; Aug. 15; Gaz. vol. 229; p. 698.
Story, Ward B., assignor to Ward B. Story Company, Inc., New York, N. Y. Register device for feeders. No. 1,193,731; Aug. 8; Gaz. vol. 229; p. 362.
Stott, James, Conway, Wales. Truss or rupture-belt or other surgical appliance. No. 1,194,252; Aug. 8; Gaz. vol. 229; p. 542.
Stott, Joseph, Worcester, and W. Stott, Shrewsbury, Mass. Picking-motion for looms. No. 1,194,898; Aug. 15; Gaz. vol. 229; p. 813.
Stott, William. (See Stott, Joseph and W.)
Straeten, Hubert, assignor to S. & S. Automatic Grate Company, Chicago, Ill. Grate for boilers. No. 1,193,732; Aug. 8; Gaz. vol. 229; p. 362.
Strand, Andrew, assignor to Joerns Motor Manufacturing Co., St. Paul, Minn. Oiling system for gasolene-engines. No. 1,193,200; Aug. 1; Gaz. vol. 229; p. 133.
Stranders, Julien, Brooklyn, assignor to H. B. Kruger, New York, N. Y. Advertising display-stand. No. 1,194,678; Aug. 15; Gaz. vol. 229; p. 736.
Stranders, Julien, assignor to H. B. Kruger, New York, N. Y. Display device. No. 1,195,527; Aug. 22; Gaz. vol. 229; p. 1070.
Strange, Edward H. (See Matthews and Strange.)
Strauss, Joseph B., Chicago, Ill. Car-door. No. 1,193,440; Aug. 1; Gaz. vol. 229; p. 217.
Streberger, John F., assignor to Joseph N. Smith & Company, Detroit, Mich. Combined striker and bumper for doors. No. 1,196,171; Aug. 29; Gaz. vol. 229; p. 1336.
Street, Clement F., New York, N. Y. Hydraulic press. No. 1,196,491; Aug. 29; Gaz. vol. 229; p. 1445.
Street, Clement F., Schenectady, N. Y., assignor to The Locomotive Stoker Company, Wilmerding, Pa. Fuel-distributer for furnaces. No. 1,195,531; Aug. 22; Gaz. vol. 229; p. 1072.
Street, Clement F., Schenectady, N. Y., assignor to The Locomotive Stoker Company, Wilmerding, Pa. Mechanical stoker for locomotives. No. 1,195,532; Aug. 22; Gaz. vol. 229; p. 1072.
Street, Clement F., New York, N. Y., assignor to The Locomotive Stoker Company, Wilmerding, Pa. Mechanical stoker. No. 1,195,533; Aug. 22; Gaz. vol. 229; p. 1072.
Street, Clement F., and N. M. Lower, Schenectady, N. Y., assignors to The Locomotive Stoker Company, Wilmerding, Pa. Mechanical stoker. No. 1,195,528; Aug. 22; Gaz. vol. 229; p. 1071.
Street, Clement F., and N. M. Lower, Schenectady, N. Y., assignors to The Locomotive Stoker Company, Wilmerding, Pa. Distributer for mechanical stokers. No. 1,195,529; Aug. 22; Gaz. vol. 229; p. 1071.
Street, Clement F., and N. M. Lower, Schenectady, N. Y., assignors to The Locomotive Stoker Company, Wilmerding, Pa. Fuel-distributer. No. 1,195,530; Aug. 22; Gaz. vol. 229; p. 1071.
Strelow, Henry. (See Robinson and Strelow.)
Strickland, Fred, Anderson, S. C. Saw-gummer. No. 1,194,092; Aug. 8; Gaz. vol. 229; p. 487.
Strieff, Ray, Monroe, Wis. Attachment for rules. No. 1,196,045; Aug. 29; Gaz. vol. 229; p. 1291.
Stringfellow, Bruce W., Elkwood, assignor of one-fortieth to S. M. Nottingham, Culpeper, Va., and one-fortieth to O. R. Singleton, Washington, D. C. Resilient wheel. No. 1,193,733; Aug. 8; Gaz. vol. 229; p. 363.
Strippel, Albert E., New York, N. Y. Producing a stenciling fabric. No. 1,194,899; Aug. 15; Gaz. vol. 229; p. 813.
Strite, Ensley L., *et al.* (See Strite and Bierman, assignors.)
Strite, George T., and F. H. Bierman, assignors of one-fifth to H. J. Bierman, one-fifth to E. L. Strite, Minneapolis, Minn., and one-fifth to J. S. Clapper, Billings, Mont. Drive-gearing for traction-engines. No. 1,194,569; Aug. 15; Gaz. vol. 229; p. 698.
Strobel, Daniel F. (See Rhodes, Charles H., assignor.)
Strom, Walter H., Oak Park, Ill. Ball-bearing. No. 1,194,679; Aug. 15; Gaz. vol. 229; p. 736.
Strong-Box Company of America. (See Weiss, Joseph W., assignor.)
Stroop, Samuel N. (See Stroop, Thomas W. and S. N.)
Stroop, Thomas W. and S. N., Pittsburgh, Pa. Tie and rail-fastener. No. 1,195,413; Aug. 22; Gaz. vol. 229; p. 1032.
Stroud, Edgar M., Jenkintown, Pa. Golf-score device. No. 1,193,441; Aug. 1; Gaz. vol. 229; p. 218.
Stroup, Dee, Cleveland, Ohio. Base-ball-pitching mechanism. No. 1,194,093; Aug. 8; Gaz. vol. 229; p. 487.
Stuart, Clyde, Kansas City, Mo. Collapsible box. No. 1,194,570; Aug. 15; Gaz. vol. 229; p. 699.
Stubbers, Joseph, Cincinnati, Ohio. Account-file. No. 1,195,291; Aug. 22; Gaz. vol. 229; p. 987.
Stuck, William R., Oakland, Cal. Flower-holder. No. 1,196,312; Aug. 29; Gaz. vol. 229; p. 1382.
Studebaker, Charley M., assignor of one-third to P. Beracka and one-third to J. Dopyera, Los Angeles, Cal. Shipping-crate. No. 1,194,680; Aug. 15; Gaz. vol. 229; p. 736.
Studebaker Corporation, The. (See Skelton, Owen R., assignor.)
Stuebing, William, Sr., Cincinnati, Ohio. Combined slitting and collecting machine. No. 1,193,201; Aug. 1; Gaz. vol. 229; p. 133.
Stull, Jacob H., Fremont, Ohio. Friction-clutch. No. 1,193,442; Aug. 1; Gaz. vol. 229; p. 218.
Stump, Oman L. (See Dauben and Stump.)
Stump, Rollen E., Fresno, Cal. Tire. No. 1,194,253; Aug. 8; Gaz. vol. 229; p. 543.
Styers, Harold V., Warwick, N. Y. Hose connection. No. 1,194,793; Aug. 15; Gaz. vol. 229; p. 777.
Subers, Lawrence A., Cleveland, Ohio. Apparatus for treating tubular fabric. No. 1,195,414; Aug. 22; Gaz. vol. 229; p. 1032.
Suhner, Albert R., and J. D. Coakley, New York, N. Y. Signaling device for vehicles. No. 1,194,439; Aug. 15; Gaz. vol. 229; p. 653.
Sulda, Wilhelm. (See Becke and Sulda.)
Sullivan Machinery Company. (See Gilman, George H., assignor.)
Sullivan Machinery Company. (See O'Rourke, Daniel J., assignor.)
Sulman, Henry L., and H. F. K. Picard, assignors to The Madagascar Minerals Syndicate Limited, London, England. Recovery of nickel from its ores. No. 1,193,734; Aug. 8; Gaz. vol. 229; p. 363.
Sultemeyer, Charles F., Norwich, Conn., assignor to Globe Ball Bearing Co., Brooklyn, N. Y. Radial ball-bearing. No. 1,193,082; Aug. 1; Gaz. vol. 229; p. 89.
Sulzer, Albert F., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-film cartridge. No. 1,195,746; Aug. 22; Gaz. vol. 229; p. 1151.
Sulzer, Albert F., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-film cartridge. No. 1,195,747; Aug. 22; Gaz. vol. 229; p. 1151.
Sumner, Robert, Cowley, England. Quilting-machine. No. 1,194,254; Aug. 8; Gaz. vol. 229; p. 543.
Sumner, Walter J., Minneapolis, Minn. Wood-polishing machine. No. 1,192,950; Aug. 1; Gaz. vol. 229; p. 42.
Superior Ladder Company, The. (See Richardson, Joseph V., assignor.)
Sutphin, Robert C., Corydon, Ky. Block system. No. 1,195,748; Aug. 22; Gaz. vol. 229; p. 1152.
Sutphin, Robert C., assignor of one-fourth to L. O. Stapp and one-fourth to J. E. Stapp, Corydon, Ky. Railway-crossing. No. 1,196,046; Aug. 29; Gaz. vol. 229; p. 1291.
Sutphin, Samuel B., *et al.* (See Hamilton, Harry W., assignor.)
Sutter, Carl S., Philadelphia, Pa., assignor of one-half to S. J. Picha, St. Paul, Minn. Rotary exhibitor. No. 1,193,735; Aug. 8; Gaz. vol. 229; p. 364.
Sutter, John R. (See Faulkner, William P., assignor.) (Reissue.)
Sutton, Edward O., Springfield, Mass. Motor-vehicle. No. 1,194,255; Aug. 8; Gaz. vol. 229; p. 543.
Sutton, Edward O., Springfield, Mass. Attachment for vehicles. No. 1,194,256; Aug. 8; Gaz. vol. 229; p. 544.
Sutton, George E. (See Slaght, Sutton, and O'Brien.)
Sutton, Henry M., and W. L. and E. G. Steele, Dallas, Tex. Process of and apparatus for sizing or classifying comminuted material. No. 1,196,047; Aug. 29; Gaz. vol. 229; p. 1292.
Sutton, Henry M., and W. L. and E. G. Steele, Dallas, Tex. Process of and apparatus for sizing or classifying comminuted material. No. 1,196,048; Aug. 29; Gaz. vol. 229; p. 1292.
Svenska Aktiebolaget Gasaccumulator. (See Dalén, Gustaf, assignor.)
Swan, Edward W., Brookline, assignor to A. J. Tower Co., Boston, Mass. Poncho. No. 1,193,443; Aug. 1; Gaz. vol. 229; p. 218.
Swan, Frederick A., Cliftondale, Mass. Fire-alarm system. No. 1,194,571; Aug. 15; Gaz. vol. 229; p. 699.

Swanson, Emil J., Norton township, Muskegon county, Mich. Pliers. No. 1,195,932; Aug. 22; Gaz. vol. 229; p. 1217.

Swanson, Oscar A., Chicago, Ill. Lock for vehicle-control pedals. No. 1,193,202; Aug. 1; Gaz. vol. 229; p. 133.

Sweet, Aden H., Clarks, La., assignor of one-fifth to A. P. Mackley, Des Loge, Mo; one-fifth to J. P. Collins, and one-fifth to T. L. Sorrell, Caldwell, La. Hydraulic clutch. No. 1,194,572; Aug. 15; Gaz. vol. 229; p. 699.

Sweetser, George J., San Francisco, Cal. Air-brake handle or controller-handle. No. 1,194,094; Aug. 8; Gaz. vol. 229; p. 488.

Swift Fly Swatter Manufacturing Company. (See Henry, George D., assignor.)

Swift, Walter G., Providence, assignor to G. H. Flint, Cranston, R. I. Number-plate holder. No. 1,193,736; Aug. 8; Gaz. vol. 229; p. 364.

Swope, Maurice R., New York, N. Y. Priming or detonating composition. No. 1,194,095; Aug. 8; Gaz. vol. 229; p. 488.

Swortfiguer, Harry A., New York, N. Y. Envelop. No. 1,194,440; Aug. 15; Gaz. vol. 229; p. 654.

Sykes, George W., Vancouver, Wash. Detachable handle or bail for containers and vessels. No. 1,196,492; Aug. 29; Gaz. vol. 229; p. 1445.

Sykes, Wilfred, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system for electric motors. No. 1,196,172; Aug. 29; Gaz. vol. 229; p. 1337.

Symmes, Americus E., Montreal, Quebec, Canada. Flooring and laying same. No. 1,193,843; Aug. 8; Gaz. vol. 229; p. 402.

Szabo, Joseph N., Throop, Pa. Wall-mold. No. 1,195,415; Aug. 22; Gaz. vol. 229; p. 1033.

Szkoknya, András, Chicago, Ill. Tire-armor. No. 1,194,681; Aug. 15; Gaz. vol. 229; p. 737.

Tabor, Clinton D., New Dorp, N. Y. Sash-center. No. 1,196,173; Aug. 29; Gaz. vol. 229; p. 1337.

Tabulating Machine Company, The. (See Hollerith, Herman, assignor.)

Tacy, Samuel H., Elkins Park, assignor to Pre-Heated Air Company, Philadelphia, Pa. Preheater. No. 1,193,844; Aug. 8; Gaz. vol. 229; p. 402.

Taft, Walter E., Providence, R. I. Valve for internal-combustion engines. No. 1,195,868; Aug. 22; Gaz. vol. 229; p. 1196.

Taggart, Clarence R., Chattanooga, Tenn. Automobile signaling apparatus. No. 1,192,951; Aug. 1; Gaz. vol. 229; p. 42.

Taggart, John W., Sr. (See Mitchell, Taggart, and Redelmann.)

Tallaferro, Samuel W., San Francisco, Cal. Magazine-holder for abrasive disks. No. 1,193,203; Aug. 1; Gaz. vol. 229; p. 134.

Tangeman, William A., Wyoming, Ohio. Acoustic-needle mounting. No. 1,194,573; Aug. 15; Gaz. vol. 229; p. 700.

Tanimine, Masaichi, Granger, Wyo. Clamp rail-joint. No. 1,194,574; Aug. 15; Gaz. vol. 229; p. 700.

Tanner, Roe, Attica, Ohio. Propeller. No. 1,195,624; Aug. 22; Gaz. vol. 229; p. 1107.

Tarr, George W., Santa Barbara, Cal. Windmill. No. 1,193,310; Aug. 1; Gaz. vol. 229; p. 173.

Tassin, Wirt, deceased, Washington, D. C.; H. E. Gasch, administrator, assignor to Kinetic Electric Company, Norfolk, Va. Electric cell. No. 1,196,313; Aug. 29; Gaz. vol. 229; p. 1382.

Tassin, Wirt, deceased, Washington, D. C.; H. E. Gasch, administrator, assignor to Kinetic Electric Company, Norfolk, Va. Primary cell. No. 1,196,611; Aug. 29; Gaz. vol. 229; p. 1486.

Taylor, Albertis C., assignor to The Winfield Manufacturing Company, Warren, Ohio. Electric welding-machine. No. 1,196,613; Aug. 29; Gaz. vol. 229; p. 1486.

Taylor, Bowie, Warwick, Okla. Padlock. No. 1,192,952; Aug. 1; Gaz. vol. 229; p. 42.

Taylor, Carl R., assignor to The Cream Cone Machine Company, Cleveland, Ohio. Batter-baking machine. No. 1,196,174; Aug. 29; Gaz. vol. 229; p. 1337.

Taylor, Charles S., assignor to F. W. Cram and J. W. Johnson, Mount Vernon, Wash. Hinge for silo-doors. No. 1,193,204; Aug. 1; Gaz. vol. 229; p. 134.

Taylor, Edgar, Demorest, Ga. Wagon-step. No. 1,195,869; Aug. 22; Gaz. vol. 229; p. 1196.

Taylor, George A., Boston, assignor of one-half to H. J. Goepper, Cambridge, Mass. Tool-holder. No. 1,193,945; Aug. 8; Gaz. vol. 229; p. 438.

Taylor, George W., Warsaw, N. Y. Elevator-lock. No. 1,192,953; Aug. 1; Gaz. vol. 229; p. 43.

Taylor, Harold, *et al.* (See Hamilton, Harry W., assignor.)

Taylor, Richard M., Chicago, Ill. Railway rerailing-frog. No. 1,194,257; Aug. 8; Gaz. vol. 229; p. 544.

Taylor, Robert L., Hope, Ark. Oscillating churn-dasher. No. 1,196,612; Aug. 29; Gaz. vol. 229; p. 1486.

Taylor, Samuel A., Wilkinsburg, Pa. Mechanism for handling cars. No. 1,193,630; Aug. 8; Gaz. vol. 229; p. 325.

Tebbetts, Walter R., *et al.* (See Jackson, Uriah S., assignor.)

Tefft, Clinton A., Gloversville, N. Y. Aeroplane. No. 1,196,493; Aug. 29; Gaz. vol. 229; p. 1445.

Telch, Ernest L., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,195,292; Aug. 22; Gaz. vol. 229; p. 988.

Telpel, Henry C., Paris, Ill. Auditorium-seat. No. 1,196,614; Aug. 29; Gaz. vol. 229; p. 1487.

Teller, Daniel W. (See Teller, Robert A., assignor.)

Teller, Robert A., Leon, Nicaragua, assignor of one-fourth to D. W. Teller, New York, N. Y. Railway-switch. No. 1,194,441; Aug. 15; Gaz. vol. 229; p. 654.

Temple, William S., Mount Vernon, Ohio. Vehicle-tire construction. No. 1,194,322; Aug. 8; Gaz. vol. 229; p. 569.

Templeton, John, and G. E. Harrison, Toronto, Ontario, Canada. Thermostatic control for electric heating devices. No. 1,196,175; Aug. 29; Gaz. vol. 229; p. 1338.

Terhune, Harold L., Deans, N. J. Foot-clip attachment for sulky-plows. No. 1,195,870; Aug. 22; Gaz. vol. 229; p. 1197.

Terrill, Clair J. (See De Lukacsevics and Terrill.)

Terry, Charles, *et al.*, executors. (See Westinghouse, George.)

Teter, Alfred J., *et al.* (See Simpson, Eugene A., assignor.)

Thill, Peter. (See Bow, Thill, and Wheeler.)

Thom, Robert A., Manchester, England. Sight-feed pressure-lubricator. No. 1,196,687; Aug. 29; Gaz. vol. 229; p. 1511.

Thomas, Carl C., Madison, Wis. Steam-meter. No. 1,193,488; Aug. 1; Gaz. vol. 229; p. 234.

Thomas, George P., Glenshaw, Pa. Metal-punching machinery. No. 1,193,631; Aug. 8; Gaz. vol. 229; p. 326.

Thomas, Leslie A., Evansville, Ind., assignor to The Vulcan Plow Co. Spring-trip hitch. No. 1,193,311; Aug. 1; Gaz. vol. 229; p. 173.

Thomas Maddock's Sons Company. (See Kelly, John F., assignor.)

Thomas, Newton W., assignor to D. H. Benjamin, Cleveland, Ohio. Press. No. 1,194,575; Aug. 15; Gaz. vol. 229; p. 701.

Thomas, Percy H., Upper Montclair, N. J., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,193,083; Aug. 1; Gaz. vol. 229; p. 90.

Thomas, Theodore B., Quincy, Mass. Locking means for automobiles. No. 1,193,737; Aug. 8; Gaz. vol. 229; p. 364.

Thomas, William M., assignor of three-tenths to A. W. Goodrich and four-tenths to C. M. Barber, Albuquerque, N. Mex. Moisture-supplying attachment for internal-combustion engines. No. 1,193,084; Aug. 1; Gaz. vol. 229; p. 91.

Thomas, William M., Albuquerque, N. Mex. Mixing device. No. 1,193,085; Aug. 1; Gaz. vol. 229; p. 91.

Thomas W. Pangborn Company. (See Hull, Foster J., assignor.)

Thompson, Albert R., assignor to Anderson-Barngrover Mfg. Co., San Jose, Cal. Cooker. No. 1,193,632; Aug. 8; Gaz. vol. 229; p. 326.

Thompson, Charles P., Brockton, Mass. Automatic door-stop. No. 1,195,871; Aug. 22; Gaz. vol. 229; p. 1197.

Thompson, Frank W. (See Foreman, Ira, assignor.)

Thompson, John H. (See Thompson, Robert A. and J. H.)

Thompson, Ray, Sebring, Ohio. Rail-chair. No. 1,195,625; Aug. 22; Gaz. vol. 229; p. 1107.

Thompson, Robert A. and J. H., Plainville, Kans. Header-reel. No. 1,196,615; Aug. 29; Gaz. vol. 229; p. 1487.

Thompson, Robert A. and J. H., Plainville, Kans. Pedal-operated steering attachment for automobiles. No. 1,196,616; Aug. 29; Gaz. vol. 229; p. 1488.

Thompson, William P., Liverpool, England. Flying-machine. No. 1,192,954; Aug. 1; Gaz. vol. 229; p. 43.

Thoms, Max H., Indianapolis, Ind., assignor to H. Marmon. Valve. No. 1,193,738; Aug. 8; Gaz. vol. 229; p. 364.

Thomsen, Max, Chicago, Ill. Faucet spray attachment. No. 1,193,086; Aug. 1; Gaz. vol. 229; p. 91.

Thomson, John, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J. Electric fuming or distilling-furnace and condenser therefor. No. 1,193,633; Aug. 8; Gaz. vol. 229; p. 326.

Thomson, William P., assignor to The Rail Joint Company, New York, N. Y. Rail-joint. No. 1,195,872; Aug. 22; Gaz. vol. 229; p. 1197.

Thorndike, Rothchild F., Chelsea, Mass. Paper box and blank therefor. No. 1,193,087; Aug. 1; Gaz. vol. 229; p. 92.

Thorp, Lambert. (See Wildman and Thorp.)

Thorp, Lambert, assignor to Parke, Davis & Company, Detroit, Mich. Anesthetic bodies. No. 1,193,634; Aug. 8; Gaz. vol. 229; p. 327.

Threlkeld, John H., Charlton, Iowa. Antiskid tire-tread. No. 1,196,314; Aug. 29; Gaz. vol. 229; p. 1383.

Thul, William J., Melrose, Minn. Shock-absorber. No. 1,192,955; Aug. 1; Gaz. vol. 229; p. 43.

Thulander, Konstantine, assignor to National Lock Co., Rockford, Ill. Detachable cylinder-lock. No. 1,194,682; Aug. 15; Gaz. vol. 229; p. 737.

Thum, Martin, Rochester, N. Y. Combination desk and chair. No. 1,195,626; Aug. 22; Gaz. vol. 229; p. 1107.

Thum, Martin, Rochester, N. Y. Adjustable and combined furniture. No. 1,195,627; Aug. 22; Gaz. vol. 229; p. 1108.

Thurber, Guy P., Pittsburgh, Pa. Automatic train-controlling system. No. 1,193,635; Aug. 8; Gaz. vol. 229; p. 327.

Thurber, Guy P., Pittsburgh, Pa. Electrically propelled and controlled railway system. No. 1,195,534; Aug. 22; Gaz. vol. 229; p. 1073.

Thurber, Guy P., assignor, by mesne assignments, to Automatic Train Control & Signal Company, Pittsburgh, Pa. Draw-bar for railway-cars. No. 1,193,312; Aug. 1; Gaz. vol. 229; p. 174.

Thurber, John P., assignor of one-third to G. R. Weeks and one-third to G. S. Belknap, Delrio, Wash. Bean-harvester. No. 1,195,416; Aug. 22; Gaz. vol. 229; p. 1033.

Thurlow, Winfield S., Dorchester, Mass. Washing-machine. No. 1,195,873; Aug. 22; Gaz. vol. 229; p. 1198.

Thurston, Jennie A., Winthrop, Mass. Bedclothes-holder. No. 1,195,874; Aug. 22; Gaz. vol. 229; p. 1198.

Thurston, William B., *et al.* (See Bircher, Eugene A., assignor.)

Tichenor, Carl, assignor to Gray & Davis, Inc., Boston, Mass. Electric starting and lighting system. No. 1,193,205; Aug. 1; Gaz. vol. 229; p. 134.

Tiedemann, Clinton C. (See Koster, Anthony C., assignor.)

Tiegs, Henry, and S. W. Palmer, Milwaukee, Wis. Track-scale. No. 1,194,576; Aug. 15; Gaz. vol. 229; p. 701.

Tielkemeyer, Henry, St. Louis, Mo. Boiler for heating systems. No. 1,195,749; Aug. 22; Gaz. vol. 229; p. 1152.

Tiffany, George S., Summit, N. J., assignor to The Device Testing Company. Speedometer. No. 1,196,494; Aug. 29; Gaz. vol. 229; p. 1445.

Tijou, Lincoln, Corpus Christi, Tex. Sanitary soap-dish. No. 1,194,096; Aug. 8; Gaz. vol. 229; p. 488.

Tilbury Manufacturing Company, The. (See Wray, Percy L., assignor.)

Till, Henry, Pittsburg, Cal. Gravy compound and making same. No. 1,193,739; Aug. 8; Gaz. vol. 229; p. 365.

Timken Roller Bearing Company, The. (See Flaherty, John F., assignor.)

Tirrill, Allen A., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical regulator. No. 1,194,683; Aug. 15; Gaz. vol. 229; p. 738.

Titanium Alloy Manufacturing Company, The. (See Rossi and Barton, assignors.)

Tobin, John J., and F. J. Gallagher, Sayre, Pa. Spiral propeller for ships. No. 1,196,176; Aug. 29; Gaz. vol. 229; p. 1338.

Tocher, William B., Jamaica, N. Y. Apparatus for receiving and delivering mail-bags. No. 1,196,177; Aug. 29; Gaz. vol. 229; p. 1339.

Tohms, Albert W., Iron Mountain, Mich. Separator. No. 1,195,875; Aug. 22; Gaz. vol. 229; p. 1198.

Told, Arnold H., Winnipeg, Manitoba, Canada. Tamping-pick. No. 1,192,956; Aug. 1; Gaz. vol. 229; p. 44.

Tomlinson, Thomas F., Norfolk, Va. Side bearing for car-trucks. No. 1,196,178; Aug. 29; Gaz. vol. 229; p. 1339.

Tomlinson, Thomas F., Norfolk, Va. Side frame for car-trucks. No. 1,196,179; Aug. 29; Gaz. vol. 229; p. 1339.

Tomlinson, Thomas F., Norfolk, Va. Car-truck frame. No. 1,196,180; Aug. 29; Gaz. vol. 229; p. 1339.

Tompkins-Hawley-Fuller Company. (See Tompkins and Fuller, assignors.)

Tompkins, John D., Valatie, and F. H. Fuller, Potsdam, assignors to Tompkins-Hawley-Fuller Company, Valatie, N. Y. Process and apparatus for watermarking paper. No. 1,196,181; Aug. 29; Gaz. vol. 229; p. 1340.

Townley, Ernest C., Allenville, Ill. Automobile-jack. No. 1,195,417; Aug. 22; Gaz. vol. 229; p. 1033.

Townsend, Charles E., Billings, Mont. Lawn-mower. No. 1,195,418; Aug. 22; Gaz. vol. 229; p. 1033.

Townsend, Frank S., assignor to Passaic Metal Ware Company, Passaic, N. J. Display-stand. No. 1,192,957; Aug. 1; Gaz. vol. 229; p. 44.

Townsend, Frederick B., Hinsdale, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-car roller side bearing. No. 1,193,313; Aug. 1; Gaz. vol. 229; p. 174.

Townsend, Harry E., New York, N. Y. Water-heater. No. 1,193,740; Aug. 8; Gaz. vol. 229; p. 365.

Townsend, Harry P., Hartford, Conn. Attachment for lathes. No. 1,195,293; Aug. 22; Gaz. vol. 229; p. 988.

Townsend, Nealy J. (See Oberbeck, Gustav H., assignor.)

Townson, Henry A., Bingham, Nebr. Swiveled telescoping wagon-reach. No. 1,193,946; Aug. 8; Gaz. vol. 229; p. 438.

Trane Company, The. (See Trane, Reuben N., assignor.)

Trane, Reuben N., assignor to The Trane Company, La Crosse, Wis. Pressure-gage. No. 1,195,750; Aug. 22; Gaz. vol. 229; p. 1153.

Trares, Henry J., Edwardsville, Ill. Demountable rim. No. 1,193,088; Aug. 1; Gaz. vol. 229; p. 92.

Traub Manufacturing Company, The. (See Bruderer, John, Jr., assignor.)

Travis, Clarence C. (See Antoine and Travis.)

Traweek, Katie L., Waelder, Tex. Trunk. No. 1,194,323; Aug. 8; Gaz. vol. 229; p. 569.

Treharn, Joseph L., Norwood, Ohio. Machine for punching and marking buttoned-shoe uppers. No. 1,195,628; Aug. 22; Gaz. vol. 229; p. 1108.

Trewhella, William, Trentham, Victoria, Australia. Disk cultivator. No. 1,193,314; Aug. 1; Gaz. vol. 229; p. 175.

Trim, Charles R., Ord, Nebr. Restraining device. No. 1,195,419; Aug. 22; Gaz. vol. 229; p. 1034.

Trinks, Franz, and F. Stemmler, Brunswick, Germany. Computing or calculating machine. No. 1,194,900; Aug. 15; Gaz. vol. 229; p. 813.

Trio Manufacturing Company. (See Leveen, Swan J., assignor.)

Trione, Thomas, Iron Belt, Wis. Sleigh attachment for automobiles. No. 1,194,794; Aug. 15; Gaz. vol. 229; p. 777.

Tritz, Joseph J., Omaha, Nebr. Snow-skate. No. 1,194,097; Aug. 8; Gaz. vol. 229; p. 488.

Triumph Electric Company, The. (See Williams, Jewel B., assignor.)

Trivus, Benjamin, New York, N. Y. Clock. No. 1,193,315; Aug. 1; Gaz. vol. 229; p. 175.

Tropp, Leopold, *et al.* (See Sherman and Rivkin, assignors.)

Tropp, Leopold, Brooklyn, and B. Rivkin, New York, N. Y., assignors to Ideal Springless Shade Roller Co., Inc. Window-shade roller. No. 1,196,725; Aug. 29; Gaz. vol. 229; p. 1526.

Trost, William A., Seattle, Wash. Doll. No. 1,193,947; Aug. 8; Gaz. vol. 229; p. 438.

Troy Laundry Machinery Company. (See Jahn, August E. W., assignor.)

Troyanoski, Maryan, Rockfall, Conn. Air-motor. No. 1,193,845; Aug. 8; Gaz. vol. 229; p. 402.

Trubey, John E., Forsyth, Mont. Ratchet-wrench. No. 1,195,294; Aug. 22; Gaz. vol. 229; p. 989.

Trück, Cris, Grand Rapids, Mich. Horseshoe. No. 1,193,948; Aug. 8; Gaz. vol. 229; p. 439.

Truesdell, John, Colorado Springs, Colo. Fastening device. No. 1,196,617; Aug. 29; Gaz. vol. 229; p. 1488.

Trumble, Milon J., Artesia, Cal., assignor, by mesne assignments, to Simplex Refining Company. Apparatus for heating petroleum-oils. No. 1,194,577; Aug. 15; Gaz. vol. 229; p. 702.

Truman, Gustave A., Alborn, Minn. Rotary-brush gearing. No. 1,194,901; Aug. 15; Gaz. vol. 229; p. 814.

Trussell, Clarence D., Poughkeepsie, N. Y. Temporary binder and forming the same. No. 1,194,684; Aug. 15; Gaz. vol. 229; p. 738.

Try-Me Manufacturing Company. (See Milica, Thomas D., assignor.)

Trzcinski, Boleslaus. (See Zbytniewski, Trzcinski, and Hejna.)

Tsukalas, Pelopidas D., South Bethlehem, Pa. Azimuth instrument. No. 1,195,876; Aug. 22; Gaz. vol. 229; p. 1199.

Tsuru, Hikoichi, Fukuoka-ken, Japan. Model of the solar system. No. 1,195,420; Aug. 22; Gaz. vol. 229; p. 1034.

Tucker, Woodson C., Benham, Ky., assignor to International Harvester Company of New Jersey. Blasting-rod. No. 1,192,958; Aug. 1; Gaz. vol. 229; p. 44.

Tuffley, James L., assignor to The James E. Blake Company, Attleboro, Mass. Cigarette-case. No. 1,195,629; Aug. 22; Gaz. vol. 229; p. 1108.

Turbayne, William A., assignor, by mesne assignments, to The U. S. Light & Heat Corporation, Niagara Falls, N. Y. Regulating means for electric generators. No. 1,196,618; Aug. 29; Gaz. vol. 229; p. 1488.

Turitz, Morris M., *et al.* (See Sherman and Rivkin, assignors.)

Turner, Ora N. (See Siebert and Turner.)

Turner, Paul G., assignor to Art Metal Construction Company, Jamestown, N. Y. Bracket and shelf for library-stacks. No. 1,195,295; Aug. 22; Gaz. vol. 229; p. 989.

Turner, Rufus J., Fort McPherson, Ga. Nut or bolt lock. No. 1,195,877; Aug. 22; Gaz. vol. 229; p. 1199.

Turner, Thomas E., Springfield, Ohio, assignor to International Harvester Company of New Jersey. Hay-press. No. 1,192,959; Aug. 1; Gaz. vol. 229; p. 44.

Turner, Walter V., Edgewood, assignor to Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake. No. 1,192,960; Aug. 1; Gaz. vol. 229; p. 45.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake device. No. 1,192,961; Aug. 1; Gaz. vol. 229; p. 45.

Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Brake-cylinder-pressure regulator. No. 1,194,442; Aug. 15; Gaz. vol. 229; p. 655.

Turner, Walter V., Wilkinsburg, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake. No. 1,194,443; Aug. 15; Gaz. vol. 229; p. 655.

Turnham, Albert E., Adelphi, London, England. Illuminated advertising apparatus. No. 1,193,316; Aug. 1; Gaz. vol. 229; p. 176.

Turri, George G. (See Cotton and Wicking, assignors.)

Twaddle, John, Glasgow, Scotland. Piling-board. No. 1,196,407; Aug. 29; Gaz. vol. 229; p. 1417.

Twelt, Amund E., Gonvick, Minn. Stalk and weed burner. No. 1,196,182; Aug. 29; Gaz. vol. 229; p. 1340.

Twitchell, James A., *et al.* (See Hyle, Jacob A., assignor.)

Tyler, Edward B. (See Staaf, Werner I., assignor.)

Tyler, Ralph S. (See Frackelton, Tyler, and Reichart.)

Tyler, Walter S., and F. L. Capps, assignors to American Graphophone Company, Bridgeport, Conn. Matrix for pressing sound-records. No. 1,194,795; Aug. 15; Gaz. vol. 229; p. 778.

Tyokan, László, Utica, N. Y. Hat-fastener. No. 1,195,751; Aug. 22; Gaz. vol. 229; p. 1153.
U. S. Light and Heat Company, The. (See Bliss, William L., assignor.)
U. S. Light & Heat Corporation, The. (See Carpenter, Campbell C., assignor.)
U. S. Light and Heat Corporation, The. (See Nelson, Lewis W., assignor.)
U. S. Light & Heat Corporation. (See Turbayne, William A., assignor.)
U. S. Slicing Machine Company. (See Groot, Pieter de, assignor.)
Uhlig, Richard W., Arlington, N. J., assignor to Atlas Typewriter Co., Inc., New York, N. Y. Type-writer. No. 1,193,949; Aug. 8; Gaz. vol. 229; p. 439.
Ulam, Ura U., McKeesport, Pa. Tin-plate catcher. No. 1,196,619; Aug. 29; Gaz. vol. 229; p. 1488.
Underwood Computing Machine Company. (See Dench, William L., assignor.)
Underwood Computing Machine Company. (See Marshall, Holmes, assignor.)
Underwood Typewriter Company. (See Allard, J. Frank, assignor.)
Underwood Typewriter Company. (See Barker, Benjamin F., assignor.)
Underwood Typewriter Company. (See Coo, Thomas J., assignor.)
Underwood Typewriter Company. (See Cook, Frank A., assignor.)
Underwood Typewriter Company. (See Doane, John C., assignor.)
Underwood Typewriter Company. (See Howell, Charles W. and A. E., assignors.)
Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)
Underwood Typewriter Company. (See Morgan, Frank L., assignor.)
Underwood Typewriter Company. (See Young, Frank A., assignor.)
Union Envelope Company. (See Rheutan, Isaac L., assignor.)
Union Special Machine Company. (See Berger, Joseph, Jr., assignor.)
Union Special Machine Company. (See Chalman, John E., assignor.)
Union Special Machine Company. (See Hughes, Robert R., Jr., assignor.)
Union Steam Pump Company. (See Bird, John C., assignor.)
Union Switch & Signal Company, The. (See Coleman, John P., assignor.)
Union Switch & Signal Company, The. (See McCarthy, Daniel J., assignor.)
Union Switch & Signal Company, The. (See Thomas, Percy H., assignor.)
United Cork & Seal Co. (See Nielsen, George M. C., assignor.)
United Iron Works Company. (See Roades, Weslie M., assignor.)
United Mattress Machinery Company. (See Mathewson, Wilfred B., assignor.)
United Roofing & Manufacturing Company. (See Prifold, George, assignor.)
United Shoe Machinery Company. (See Brock, Matthias, assignor.)
United Shoe Machinery Company. (See Brogan, Michael F., assignor.)
United Shoe Machinery Company. (See Connor, John H., assignor.)
United Shoe Machinery Company. (See Enslin, Herbert E., assignor.)
United Shoe Machinery Company. (See Furber, Frederick M., assignor.)
United Shoe Machinery Company. (See Glass, Perley R., assignor.)
United Shoe Machinery Company. (See Gouldbourn and Bates, assignors.)
United Shoe Machinery Company. (See Gouldbourn, Joseph, assignor.)
United Shoe Machinery Company. (See Haahr, Anton A., assignor.)
United Shoe Machinery Company. (See Hadaway, John B., assignor.)
United Shoe Machinery Company. (See Hasley and Perkins, assignors.)
United Shoe Machinery Company. (See Keyes, Eugene L., assignor.)
United Shoe Machinery Company. (See Lane, Elmer E., assignor.)
United Shoe Machinery Company. (See McFeeley, Ronald F., assignor.)
United Shoe Machinery Company. (See Pegg, Gerald, assignor.)
United Shoe Machinery Company. (See Preble, Edwin N., assignor.)
United Shoe Machinery Company. (See Prenzel, Adam H., assignor.)
United Shoe Machinery Company. (See Ray, Eugene J., assignor.)
United Shoe Machinery Company. (See Ricks, Fred, assignor.)
United Shoe Machinery Company. (See Seely and Hadaway, assignors.)
United Shoe Machinery Company. (See Seely, Thomas H., assignor.)
United Shoe Machinery Company. (See Spencer and Eppler, assignors.)
United Shoe Machinery Company. (See Standish, John F., assignor.)
United Shoe Machinery Company. (See Stewart, William C., assignor.)
United Shoe Machinery Company. (See Wentworth, Samuel J., assignor.)
United States Cast Iron Pipe & Foundry Company. (See Fuller, John W., assignor.)
United States Envelope Company. (See Staude, Edwin G., assignor.)
United States Hoffman Company. (See Weinberger, Benjamin, assignor.)
United States Smelting Refining & Mining Company. (See Stevens, Royal H., assignor.)
United Table Bed Company. (See Ennis, Parry E., assignor.)
Universal Arch Company. (See Smith, William, assignor.)
Universal Draft Gear Attachment Co. (See Wrigley, Henry I., assignor.)
Uptegraff, Walter D., *et al.*, executors. (See Westinghouse, George.)
Urban, William A. F., Yoakum, Tex. Securing device. No. 1,194,902; Aug. 15; Gaz. vol. 229; p. 814.
Urbanski, Czeslaw, Buffalo, N. Y. Pump and support therefor. No. 1,195,878; Aug. 22; Gaz. vol. 229; p. 1199.
Utz, Anthony. (See Dowd and Utz.)
Vacuum Carburetor Company, The. (See En Earl, William J., assignor.)
Valle-Kimes Company, The. (See Kimes, Hugh W., assignor.)
Vaillancourt, Joseph F., Fall River, Mass. Shuttle. No. 1,193,846; Aug. 8; Gaz. vol. 229; p. 403.
Vaillancourt, Joseph F., Fall River, Mass. Picker-stick lug-strap. No. 1,193,847; Aug. 8; Gaz. vol. 229; p. 403.
Valley Forging Company. (See Dallmeyer, Thomas D., assignor.)
Van Antwerp, Clarence B., Chicago, Ill. Expansion-bolt. No. 1,193,636; Aug. 8; Gaz. vol. 229; p. 327.
Van Arsdale, George D., New York, N. Y. Preventing disintegration of anodes. No. 1,193,741; Aug. 8; Gaz. vol. 229; p. 366.
Van Arsdale, George D., New York, N. Y. Making acid and insoluble metallic compounds. No. 1,195,421; Aug. 22; Gaz. vol. 229; p. 1035.
Van Brunt Mfg. Co., The. (See Van Brunt, Willard A., assignor.)
Van Brunt, Willard A., assignor to The Van Brunt Manufacturing Company, Horicon, Wis. Fertilizer-distributer. No. 1,195,879; Aug. 22; Gaz. vol. 229; p. 1199.
Van der Bijl, Hendrik J., New York, N. Y., assignor, by mesne assignments, to Western Electric Company. Thermionic amplifier and rectifier. No. 1,193,206; Aug. 1; Gaz. vol. 229; p. 135.
Van Gale, Alfred, Newark, N. J. Wardrobe-trunk. No. 1,195,535; Aug. 22; Gaz. vol. 229; p. 1073.
Van Horn, George W., Tulsa, Okla. Lightning-arrester. No. 1,193,848; Aug. 8; Gaz. vol. 229; p. 403.
Van Inwagen, Frank, assignor to Illinois Engineering Company, Chicago, Ill. Machining thermostatic members. No. 1,193,637; Aug. 8; Gaz. vol. 229; p. 328.
Van Note, Eugene, New York, N. Y. Machine for preparing tubes for splicing. No. 1,195,422; Aug. 22; Gaz vol. 229; p. 1035.
Van Osdel, William J., assignor of one-half to L. Sperling, Chicago, Ill. Self-winding clock. No. 1,194,444; Aug. 15; Gaz. vol. 229; p. 656.
Van Raden, John and N., Melvin, Minn. Skate-sharpener No. 1,195,880; Aug. 22; Gaz. vol. 229; p. 1200.
Van Raden, Norman. (See Van Raden, John and N.)
Van Ranst, Samuel B. (See Havens and Van Ranst.)
Van Valkenburg, Burt R., Oakland, assignor to American Photo Player Company, Berkeley, Cal. Pipe-chest. No. 1,195,536; Aug. 22; Gaz. vol. 229; p. 1074.
Van Valkenburg, Burt R., Oakland, assignor to American Photo Player Company, Berkeley, Cal. Track-valve. No. 1,196,183; Aug. 29; Gaz. vol. 229; p. 1340.
Van Vleck, Horace R., Montclair, N. J. Valve-gear for engines. No. 1,193,207; Aug. 1; Gaz. vol. 229; p. 135.
Van Vlooten, Allart, Denver, Colo. Water-purifying apparatus. No. 1,195,537; Aug. 22; Gaz. vol. 229; p. 1074.
Van Wetzinga, Ysbrand H., and J. Donker, Grand Rapids, Mich. Latch. No. 1,195,881; Aug. 22; Gaz. vol. 229; p. 1200.
Vandenburgh, George E., San Francisco, Cal. Reinforcing-bar. (Reissue.) No. 14,182; Aug. 15; Gaz. vol. 229; p. 907.
Vanguard Manufacturing Company. (See Prokpoetz, August, assignor.)
Variety Manufacturing Company. (See Gervais, Wainright B., assignor.)
Vassar Swiss Underwear Co. *et al.* (See Chatfield and Rutledge, assignors.)
Vaughn, David, Walla Walla, Wash. Vehicle-seat. No. 1,193,317; Aug. 1; Gaz. vol. 229; p. 176.
Vaughn, Hazel, *et al.* (See Breeden, Benjamin B., assignor.)
Vaughn, William L., *et al.* (See Breeden, Benjamin B., assignor.)
Vecchio, Louis, New York, N. Y. Envelop. No. 1,192,962; Aug. 1; Gaz. vol. 229; p. 45.

Veeder, Curtis H., assignor to The Veeder Manufacturing Company, Hartford, Conn. Register. No. 1,196,495; Aug. 29; Gaz. vol. 229; p. 1446.
Veeder Manufacturing Company, The. (See Veeder, Curtis H., assignor.)
Vega, Francisco F., and R. Abarca, San Juan, Porto Rico. Condenser. No. 1,195,752; Aug. 22; Gaz. vol. 229; p. 1154.
Velen, Luther T., Washington, D. C. Shock-forming apparatus. No. 1,194,445; Aug. 15; Gaz. vol. 229; p. 656.
Veltum, Robert E., Eugene, Oreg. Pneumatic tool. No. 1,193,518; Aug. 1; Gaz. vol. 229; p. 176.
Ver Planck, William E., Erie, Pa., assignor to General Electric Company. Valve-actuating means for engines. No. 1,196,496; Aug. 29; Gaz. vol. 229; p. 1446.
Ver Planck, William E., Erie, Pa., assignor to General Electric Company. Valve mechanism for internal-combustion engines. No. 1,196,497; Aug. 29; Gaz. vol. 229; p. 1446.
Vestal, Eugene G., *et al.* (See Andreas, Frank O., assignor.)
Vestine, Andrew O., Worcester, Mass. Wheel. No. 1,196,408; Aug. 29; Gaz. vol. 229; p. 1417.
Vézina, Antoine E., Outremont, Quebec, Canada. Poker. No. 1,193,950; Aug. 8; Gaz. vol. 229; p. 439.
Vickers Limited. (See McKechnie, James, assignor.)
Vickman, Frank J., Walsh, Wis. Car-door operator. No. 1,194,578; Aug. 15; Gaz. vol. 229; p. 702.
Victor Shoe Machinery Company. (See Erickson, Edward, assignor.)
Victor Talking Machine Company. (See English, John C., assignor.)
Victor Talking Machine Company. (See Murray and La Rue, assignors.)
Viezzi, Luigi, Jersey City, N. J. Fire-escape. No. 1,194,098; Aug. 8; Gaz. vol. 229; p. 489.
Viger, George H., Montreal, Quebec, Canada. Valve. No. 1,193,849; Aug. 8; Gaz. vol. 229; p. 404.
Villiers-Stuart, Horace, Lismore, Ireland. Extracting nicotin from green or uncured tobacco. No. 1,196,184; Aug. 29; Gaz. vol. 229; p. 1341.
Vincent, Louis N., Prescott, Ariz., assignor of one-fourth to C. H. Prescott and one-fourth to G. W. Sommer, Spokane, Wash. Grease-cup. No. 1,195,296; Aug. 22; Gaz. vol. 229; p. 989.
Vincent, William J., London, England. Rotary engine. No. 1,196,315; Aug. 29; Gaz. vol. 229; p. 1383.
Vines, Samuel M. (See Altshuler and Vines.)
Viruette, Joseph D., Oneonta, N. Y. Nut-lock and swab. No. 1,195,753; Aug. 22; Gaz. vol. 229; p. 1154.
Visser, Christiaan, New York, N. Y. Davit. No. 1,196,316; Aug. 29; Gaz. vol. 229; p. 1383.
Vlchek, Frank J., Cleveland, Ohio. Mortar-joint scraper. No. 1,195,297; Aug. 22; Gaz. vol. 229; p. 990.
Vogel, Frederick M., Pittsfield, Mass., assignor to General Electric Company. Metal-working. No. 1,196,498; Aug. 29; Gaz. vol. 229; p. 1447.
Vogtländische Maschinen-Fabrik. (See Sieber, Gottwalt, assignor.)
Voight, Henry G., New Britain, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,192,963; Aug. 1; Gaz. vol. 229; p. 46.
Völler, Karl, Dusseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Gun-sight. No. 1,193,638; Aug. 8; Gaz. vol. 229; p. 328.
Vollmann, Carl W., Montreal, Quebec, Canada. Ammonia-condenser. No. 1,193,208; Aug. 1; Gaz. vol. 229; p. 135.
Volz, Christ, *et al.* (See Allinger, Frank A., assignor.)
Von Dorn, Theodore E., *et al.* (See Hyle, Jacob A., assignor.)
Von Hoffmann, Albert, *et al.* (See Hachmann, Frederick, assignor.)
Von Laszloffy, Aladár, Peoria, Ill. Manufacture of by-products from distillery-slop. No. 1,193,951; Aug. 8; Gaz. vol. 229; p. 440.
Von Schlegell, Victor, New York, N. Y., assignor to Hale and Kilburn Company, Philadelphia, Pa. Car-seat. No. 1,196,187; Aug. 29; Gaz. vol. 229; p. 1342.
Von Szupping, Edmund, Paterson, N. J. Vehicle search-light. No. 1,196,499; Aug. 29; Gaz. vol. 229; p. 1447.
Vosburg, Matthew D., *et al.* (See Heckel, Otto, assignor.)
Voss, William H., Davenport, Iowa. Wringer. No. 1,196,317; Aug. 29; Gaz. vol. 229; p. 1384.
Vuilleumier, Rudolph, New Rochelle, N. Y., assignor to The Safety Car Heating & Lighting Company. Cutting-torch. No. 1,195,298; Aug. 22; Gaz. vol. 229; p. 990.
Vujakilja, Adam. (See Grega, Michael, assignor.)
Vulcan Plow Co., The. (See Thomas, Leslie A., assignor.)
W. D. Allen Manufacturing Company. (See Gibbs, Henry, assignor.)
W. F. Schrafft & Sons Corporation. (See Steely, Blake, and Lorentzen, assignors.)
W. N. Matthews & Brother. (See Smith, Martin P., assignor.)
W. S. Rockwell Company. (See Rockwell, Walter S., assignor.)
Wachtel, Sidney, and S. Reiss, Boston, Mass. Pin-ticket. No. 1,193,319; Aug. 1; Gaz. vol. 229; p. 177.
Wachter, Louis E. F., New York, N. Y. Waterproof wrist-watch protector. No. 1,195,299; Aug. 22; Gaz. vol. 229; p. 990.
Waddell, Edward B., Jr., Williamson, W. Va. Automatic safety-valve. No. 1,196,318; Aug. 29; Gaz. vol. 229; p. 1384.
Waddell, Frank E., Ingomar, Mont. Dirigible headlight. No. 1,193,850; Aug. 8; Gaz. vol. 229; p. 404.
Wade, James H. (See Batchell and Wade.)
Wade, John B., Animas, N. Mex. Door-lock. No. 1,194,903; Aug. 15; Gaz. vol. 229; p. 814.
Wadhams, Darius T., assignor to N. Gray, Jr., Oswego, N. Y. Cutting-machine. No. 1,195,538; Aug. 22; Gaz. vol. 229; p. 1075.
Wadsworth, Frank L. O., Pittsburgh, assignor to The Spirella Company, Inc., Meadville, Pa. Garment-stay. No. 1,193,742; Aug. 8; Gaz. vol. 229; p. 366.
Waeber, Gustavus R. (See Nylund, Hanna B., assignor.)
Wagner, Arthur. (See Ashton and Wagner.)
Wagner, Earl V., Scranton, Pa., assignor to The Wagner Fire Brick Company, Helena, Mont. Plastic composition for making paving-brick, building-brick, and building-tile. No. 1,193,952; Aug. 8; Gaz. vol. 229; p. 440.
Wagner Fire Brick Company, The. (See Wagner, Earl V., assignor.)
Wagner, Francis A., and F. H. Hartzell, assignors to The American Mechanical Toy Company, Dayton, Ohio. Transmission mechanism. No. 1,193,089; Aug. 1; Gaz. vol. 229; p. 92.
Wagner, Frank F., Denver, Colo. Hydraulic concentrator or classifier. No. 1,193,953; Aug. 8; Gaz. vol. 229; p. 440.
Wagner, Hermann, Waterloo, Wis. Compass. No. 1,195,300; Aug. 22; Gaz. vol. 229; p. 991.
Wagner, Marion A., Des Moines, Iowa. Spring-actuated wheel. No. 1,196,409; Aug. 29; Gaz. vol. 229; p. 1417.
Wagner, Paul, Charlottenburg, Germany, assignor to General Electric Company. Gear-teeth. No. 1,194,904; Aug. 15; Gaz. vol. 229; p. 815.
Wagoner, Alma M., administratrix. (See Wagoner, James B.)
Wagoner, James B., deceased, Los Angeles; A. M. Wagoner, administratrix, San Francisco, Cal. Vaginal dynamo. No. 1,195,933; Aug. 22; Gaz. vol. 229; p. 1217.
Wahlberg, John, New York, N. Y. Micrometer. No. 1,196,188; Aug. 29; Gaz. vol. 229; p. 1342.
Wald, Calvin R., Birmingham, Ala. Sectional grate-bar. No. 1,195,301; Aug. 22; Gaz. vol. 229; p. 991.
Walden, Marcus A., San Francisco, Cal. Cover for cooking vessels. No. 1,193,954; Aug. 8; Gaz. vol. 229; p. 441.
Walk, George W., Tyrone, Pa. Wheel. No. 1,193,639; Aug. 8; Gaz. vol. 229; p. 328.
Walker, Benjamin F., assignor to The Embalmers' Supply Co., Westport, Conn. Head-rest. No. 1,194,446; Aug. 15; Gaz. vol. 229; p. 657.
Walker, Charles L., Hampstead, London, England. Mechanical movement. No. 1,194,258; Aug. 8; Gaz. vol. 229; p. 544.
Walker, Edward C., and A. S. Moses, assignors to G. M. Illges, St. Louis, Mo. Coal-burning heating-furnace. No. 1,196,726; Aug. 29; Gaz. vol. 229; p. 1526.
Walker, Edward H., Somerset, Pa. Railway-tie. No. 1,195,302; Aug. 22; Gaz. vol. 229; p. 992.
Walker, Edwin, Erie, Pa. Ice-cream disher. No. 1,194,685; Aug. 15; Gaz. vol. 229; p. 738.
Walker, Harry, Anaheim, Cal. Semaphore. No. 1,194,448; Aug. 15; Gaz. vol. 229; p. 658.
Walker, Harry, assignor of one-half to G. Bishop, Anaheim, Cal. Adjustable automobile luggage-rack. No. 1,193,444; Aug. 1; Gaz. vol. 229; p. 219.
Walker, Harry, and W. L. Kreuscher, Anaheim, Cal. Switch. No. 1,194,447; Aug. 15; Gaz. vol. 229; p. 657.
Walker, John, and C. Fischer; said Walker assignor to J. F. Kennedy, Grand Rapids, Mich. Accelerator for internal-combustion engines. No. 1,193,640; Aug. 8; Gaz. vol. 229; p. 329.
Walker Manufacturing Company. (See Rasmussen, Laurits T., assignor.)
Walker, Ollie A., Cleveland, Ohio. Soldering-iron. No. 1,196,620; Aug. 29; Gaz. vol. 229; p. 1489.
Walker, Thomas C., Bellaire, Ohio. Arch-support. No. 1,196,410; Aug. 29; Gaz. vol. 229; p. 1418.
Walker-Wells Company. (See Wells, George W., assignor.)
Walker, William, and T. Easton, Fairbury, Ill. Tile-trap. No. 1,193,820; Aug. 1; Gaz. vol. 229; p. 177.
Wall, Clyde M., Toledo, Ohio. Electrical rectifier. No. 1,193,641; Aug. 8; Gaz. vol. 229; p. 329.
Wallace, Carl J., Springfield, Ohio. Clamp. No. 1,193,642; Aug. 8; Gaz. vol. 229; p. 330.
Wallenstein, Isaac, Cincinnati, Ohio, assignor to Presto Cigarette Case Corporation, New York, N. Y. Cigarette-holder. No. 1,194,905; Aug. 15; Gaz. vol. 229; p. 815.
Walling, Raymond B., Newark, N. J., assignor to General Electric Company. Method and apparatus for sintering metal. No. 1,194,906; Aug. 15; Gaz. vol. 229; p. 815.
Wallmann, Adelheid, *et al.* (See Wallmann, Henning F., assignor.)
Wallmann, Henning F., assignor of one-half to A., W. R., and H. H. Wallmann, Chicago, Ill. Generating tarless gas. No. 1,195,934; Aug. 22; Gaz. vol. 229; p. 1218.
Wallmann, Henning H., *et al.* (See Wallmann, Henning F., assignor.)

Wallmann, Wilhelm R., *et al.* (See Wallmann, Henning F., assignor.)
Walls, Alexander G., Paisley, Scotland. Spinning, twisting, winding, and like machine. No. 1,193,321; Aug. 1; Gaz. vol. 229; p. 177.
Walsh, Edward H., Chicago, Ill. Magnetic grip. No. 1,195,630; Aug. 22; Gaz. vol. 229; p. 1109.
Walsh, John V., Haverhill, Mass. Finishing foot-coverings and leggings. No. 1,194,100; Aug. 8; Gaz. vol. 229; p. 489.
Walsh, William J., Creston, Iowa. Corn-planter attachment. No. 1,194,686; Aug. 15; Gaz. vol. 229; p. 739.
Walter, Albert, Ardsley, N. Y. Manufacture of carbon bisulfid. No. 1,193,210; Aug. 1; Gaz. vol. 229; p. 136.
Waltz, Chester R. P., Delta, Ohio. Paper-box-blank roll. No. 1,195,539; Aug. 22; Gaz. vol. 229; p. 1075.
Waltz, William L., Pittsburgh, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Fluid-metal-injecting mechanism for type-casting machines. No. 1,193,322; Aug. 1; Gaz. vol. 229; p. 178.
Walworth Manufacturing Company. (See Earle, Harry C., assignor.)
Ward, Artemas. (See Giles, Harvey, assignor.)
Ward B. Story Company. (See Story, Ward B., assignor.)
Ward, Charles W., Lakewood, Ohio. Block-signaling system. No. 1,196,189; Aug. 29; Gaz. vol. 229; p. 1342.
Ward, Mizell B., assignor of one-fourth to C. G. Lancaster, Marshall, Tex. Type-writer attachment. No. 1,194,579; Aug. 15; Gaz. vol. 229; p. 702.
Wardman, Hallock, assignor to J. M. Jones, Racine, Wis. Vise. No. 1,193,090; Aug. 1; Gaz. vol. 229; p. 93.
Wardwell, Frank W., Jr., Cleveland, Ohio. Saw-grinding machine. No. 1,193,643; Aug. 8; Gaz. vol. 229; p. 330.
Warner, James S., New Philadelphia, Ohio. Key-pouch. No. 1,194,796; Aug. 15; Gaz. vol. 229; p. 778.
Warner, Jonathan. (See Foxgord and Warner.)
Warner, Roe P., assignor of one-half to C. C. Blankenburg, Kalamazoo, Mich. Motor-controller. No. 1,195,540; Aug. 22; Gaz. vol. 229; p. 1075.
Warren Featherbone Company, The. (See Fink and Dunn, assignors.)
Warren, Frank D., assignor to The Cycle Supplies Company, Colorado Springs, Colo. Pedal for cycles. No. 1,196,190; Aug. 29; Gaz. vol. 229; p. 1343.
Washburn, Frank S. (See Landis, Walter S., assignor.)
Washburn, John. (See Lindgren, Frank O., assignor.)
Waterbury Farrel Foundry and Machine Company, The. (See Wilcox, Richard L., assignor.)
Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Cultivator. No. 1,194,580; Aug. 15; Gaz. vol. 229; p. 702.
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Two-row lister. No. 1,194,581; Aug. 15; Gaz. vol. 229; p. 703.
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Wheeled plow. No. 1,194,582; Aug. 15; Gaz. vol. 229; p. 703.
Waters, Andrew M., San Francisco, Cal. Wedge. No. 1,195,423; Aug. 22; Gaz. vol. 229; p. 1035.
Watkins, Edward G., assignor to Heywood Brothers and Wakefield Company, Gardner, Mass. Chair. No. 1,196,050; Aug. 29; Gaz. vol. 229; p. 1293.
Watson, Charles H., New York, N. Y. Garbage-receiver. No. 1,194,907; Aug. 15; Gaz. vol. 229; p. 816.
Watson, David S., Canastota, N. Y. Fire-shield. No. 1,196,051; Aug. 29; Gaz. vol. 229; p. 1293.
Watson Mfg. Company. (See Watson and Carlson, assignors.)
Watson, Robert Y., Taft, Cal. Tubing-catcher. No. 1,193,091; Aug. 1; Gaz. vol. 229; p. 93.
Watson, William A., Malden, assignor to National Piano Company, Boston, Mass. Piano-bench. No. 1,194,449; Aug. 15; Gaz. vol. 229; p. 658.
Watson, William W., and J. G. Carlson, assignors to Watson Mfg. Company, Jamestown, N. Y. Lock for drawers in series. No. 1,193,955; Aug. 8; Gaz. vol. 229; p. 441.
Watts, George E., Portland, Oreg. Camera-lens. No. 1,193,851; Aug. 8; Gaz. vol. 229; p. 404.
Waudby, Clarence G., Jackson, Mich. Rotary tooth-brush. No. 1,193,644; Aug. 8; Gaz. vol. 229; p. 330.
Waugh, Daniel S., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Rotating means for drills. No. 1,196,052; Aug. 29; Gaz. vol. 229; p. 1293.
Waugh, Edward H., assignor to J. W. Winningham, Seattle, Wash. Bushing. No. 1,196,191; Aug. 29; Gaz. vol. 229; p. 1343.
Way, Allen B. (See Simmons, Jesse C., assignor.)
Weagant, Roy A., Brooklyn, N. Y., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Oscillating-current transformer. No. 1,192,964; Aug. 1; Gaz. vol. 229; p. 46.
Wear, Herbert D., and F. J. Maginnis, assignors of one-third to F. J. Luth, Lake City, Minn. Automatic door-releaser. No. 1,195,882; Aug. 22; Gaz. vol. 229; p. 1200.
Weatherford, Robert L., Fort Worth, Tex. Composition of matter to be used for the welding and soldering of different articles constructed of aluminum only. No. 1,194,101; Aug. 8; Gaz. vol. 229; p. 490.
Weaver, D. F. (See Church, David W., assignor.)
Webb, George S., assignor of one-half to S. S. Sencenbaugh, Aurora, Ill. Skate. No. 1,194,102; Aug. 8; Gaz. vol. 229; p. 490.
Webb, Jervis B., Mount Vernon, N. Y., assignor to H. W. Johns-Manville Company. Furring-strip. No. 1,193,092; Aug. 1; Gaz. vol. 229; p. 93.
Weber, Charles, *et al.* (See Patton, William, assignor.)
Weber, David, Philadelphia, Pa. Non-buckling folding box. No. 1,196,320; Aug. 29; Gaz. vol. 229; p. 1385.
Weber, David, assignor to David Weber and Company, Philadelphia, Pa. Box-stay. No. 1,196,319; Aug. 29; Gaz. vol. 229; p. 1385.
Weber, Frederick C. (See Lucke, George A., assignor.)
Weber, William L., Chicago, Ill. Annunciator. No. 1,195,754; Aug. 22; Gaz. vol. 229; p. 1154.
Webster, Ernest C., East Oakland, Cal. Electric water-heating faucet. No. 1,193,445; Aug. 1; Gaz. vol. 229; p. 219.
Webster, Guy, assignor to Barber Car Company, York, Pa. Railway-car. No. 1,193,211; Aug. 1; Gaz. vol. 229; p. 136.
Webster, Thomas, New York, N. Y. Shipping-box for eggs and other fragile articles. No. 1,193,323; Aug. 1; Gaz. vol. 229; p. 178.
Webster, Thomas, New York, N. Y. Apparatus for backing electrotypes. No. 1,193,324; Aug. 1; Gaz. vol. 229; p. 179.
Wedge, Utley, Ardmore, assignor to The Furnace Patent Company, Philadelphia, Pa. Furnace. No. 1,195,424; Aug. 22; Gaz. vol. 229; p. 1035.
Wedge, Utley, Ardmore, assignor to The Furnace Patent Company, Philadelphia, Pa. Metallurgical furnace. No. 1,195,425; Aug. 22; Gaz. vol. 229; p. 1036.
Weeks, George R., *et al.* (See Thurber, John P., assignor.)
Wefring, Theodore, Detroit, Mich. Door-operating means. No. 1,195,755; Aug. 22; Gaz. vol. 229; p. 1155.
Weida, Harry, Highland Park, N. J., assignor to The India Rubber Company. Making hard-rubber articles. No. 1,195,118; Aug. 15; Gaz. vol. 229; p. 889.
Weinberg, Solomon, assignor of one-half to O. Rosenbaum, Philadelphia, Pa. Apparatus for making grape-juice. No. 1,196,621; Aug. 29; Gaz. vol. 229; p. 1489.
Weinberger, Benjamin, St. Louis, Mo., assignor to United States Hoffman Company, Syracuse, N. Y. Garment-pressing machine. No. 1,193,093; Aug. 1; Gaz. vol. 229; p. 94.
Weinman, Fred, Round Valley, Nebr. Spring-wheel. No. 1,193,325; Aug. 1; Gaz. vol. 229; p. 179.
Weinstein, Louis J., New York, N. Y., assignor to Detroit Dental Manufacturing Company, Detroit, Mich. Apparatus for casting porcelain. No. 1,193,645; Aug. 8; Gaz. vol. 229; p. 331.
Weise, Frank S., Baltimore, Md. Tire for vehicle-wheels. No. 1,194,797; Aug. 15; Gaz. vol. 229; p. 778.
Weisgerber, Edwin C., assignor to Equitable Meter Company, Pittsburgh, Pa. Meter-prover attachment. No. 1,196,321; Aug. 29; Gaz. vol. 229; p. 1385.
Weiss, Joseph W., Baltimore, Md., assignor to Strong-Box Company of America. Collapsible or knockdown box. No. 1,196,053; Aug. 29; Gaz. vol. 229; p. 1294.
Weiss, Leon, New York, N. Y. Collapsible core for molding dolls' heads. No. 1,195,303; Aug. 22; Gaz. vol. 229; p. 992.
Welch, Alfred F., Fort Wayne, Ind., assignor to General Electric Company. Motor-drive. No. 1,193,489; Aug. 1; Gaz. vol. 229; p. 234.
Welch, Alfred F., Fort Wayne, Ind., assignor to General Electric Company. Alternating-current motor. No 1,194,102; Aug. 8; Gaz. vol. 229; p. 490.
Welch, Robert L., Chicago, Ill., assignor to A. G. Spalding & Bros. Base-ball mask. No. 1,196,411; Aug. 29; Gaz. vol. 229; p. 1418.
Wellman, Henry O., assignor to Wellman Specialty Company, Everett, Mass. Tent-stake. No. 1,193,212; Aug. 1; Gaz. vol. 229; p. 137.
Wellman Specialty Company. (See Wellman, Henry O., assignor.)
Wells, Chipman J., assignor of one-third to S. L. De Land, Long Beach, Cal. Hose-coupling. No. 1,193,446; Aug. 1; Gaz. vol. 229; p. 219.
Wells, Chipman J., assignor of one-third to S. L. De Land, Long Beach, Cal. Trolley. No. 1,193,447; Aug. 1; Gaz. vol. 229; p. 220.
Wells, George W., assignor to Walker-Wells Company, Amesbury, Mass. Leak-alarm for pneumatic tires. No. 1,195,883; Aug. 22; Gaz. vol. 229; p. 1200.
Wells, William H. L., San Francisco, Cal. Door and window fastener. No. 1,195,884; Aug. 22; Gaz. vol. 229; p. 1201.
Welsbach Light Company. (See Mason, Sidney, assignor.)
Welsch, Joseph P., Nokomis, Ill. Cleaning device for rakes. No. 1,195,885; Aug. 22; Gaz. vol. 229; p. 1201.
Welsh, David J. (See Binney, Ralph L., assignor.)
Welthall, Robert H., Philadelphia, Pa. Knitting-machine needle. No. 1,195,935; Aug. 22; Gaz. vol. 229; p. 1218.
Wendelburg, Alex, assignor to F. E. Hume, New York, N. Y. Safety device for window-cleaners. No. 1,194,259; Aug. 8; Gaz. vol. 229; p. 545.
Wendell, Carl A., Joliet, Ill. Valve for coal-washing jigs. No. 1,194,583; Aug. 15; Gaz. vol. 229; p. 704.
Wendell, Fred C., deceased; T. S. Wendell, administratrix, New York, N. Y. Ironing-machine. No. 1,196,192; Aug. 29; Gaz. vol. 229; p. 1344.

Wendell, Theresa S., administratrix. (See Wendell, Fred C.)
Wendt, Adolph, St. Paul, Minn. Floating merry-go-round. No. 1,193,094; Aug. 1; Gaz. vol. 229; p. 94.
Went, William F., Colorado Springs, Colo. Egg-holder. No. 1,196,054; Aug. 29; Gaz. vol. 229; p. 1294.
Wentworth, Samuel J., Newport, Ky., assignor to United Shoe Machinery Company, Paterson, N. J. Welt-butt-tacking machine. No. 1,195,304; Aug. 22; Gaz. vol. 229; p. 992.
Wentzel, Clifford E., assignor to The Bahmann Iron Works Company, Cincinnati, Ohio. Closure for pressure-chambers. No. 1,194,798; Aug. 15; Gaz. vol. 229; p. 779.
Werner, Ernest E., Indianapolis, Ind. Apparatus for indicating the volumetric flow of a gas. No. 1,195,631; Aug. 22; Gaz. vol. 229; p. 1109.
Werra, Conrad, Waukesha, Wis. Piston construction. No. 1,195,305; Aug. 22; Gaz. vol. 229; p. 993.
Werra, Conrad, Waukesha, Wis. Constructing pistons. No. 1,195,306; Aug. 22; Gaz. vol. 229; p. 993.
Wertz, Frederick L., Yonkers, N. Y. Display-card. No. 1,196,500; Aug. 29; Gaz. vol. 229; p. 1448.
Wertz, John A., Canton, Ohio. Signaling device. No. 1,195,757; Aug. 22; Gaz. vol. 229; p. 1156.
Wesel, Ferdinand, New York, assignor to F. Wesel Manufacturing Company, Brooklyn, N. Y. Can. No. 1,194,450; Aug. 15; Gaz. vol. 229; p. 658.
Wesley, Gustaf, St. Paul, Minn. Fuse-receptacle lock. No. 1,193,646; Aug. 8; Gaz. vol. 229; p. 331.
West, George R., Grapeville, Pa., assignor to Falk Tobacco Co., New York, N. Y. Receptacle. No. 1,194,799; Aug. 15; Gaz. vol. 229; p. 779.
West, Hubbard C., assignor of one-fourth to D. M. Benford and one-half to S. B. Benford, Mount Vernon, N. Y. Electrical measuring instrument. No. 1,193,095; Aug. 1; Gaz. vol. 229; p. 95.
West, Hubbard C., assignor of one-fourth to D. M. Benford and one-half to S. B. Benford, Mount Vernon, N. Y. Electrical measuring instrument. No. 1,193,096; Aug. 1; Gaz. vol. 229; p. 95.
West, John. (See Glover and West.)
West, Lee, Newport, Ky., assignor of one-half to J. F. Fearon, Cincinnati, Ohio. Pressure-regulator. No. 1,196,193; Aug. 29; Gaz. vol. 229; p. 1344.
Westcott, Lester, Theresa, N. Y. Wrench. No. 1,193,326; Aug. 1; Gaz. vol. 229; p. 179.
Westerling, Bernard A., Hopkinton, and A. P. Hedberg, Milford, Mass. Stone-cutting machine. No. 1,193,097; Aug. 1; Gaz. vol. 229; p. 96.
Western Electric Company. (See Colpitts, Edwin H., assignor.)
Western Electric Company. (See Darrah, Harry L., assignor.)
Western Electric Company. (See Dixon, Amos F., assignor.)
Western Electric Company. (See Dunham, Bert G., assignor.)
Western Electric Company. (See Goodrum, Charles L., assignor.)
Western Electric Company. (See Lundell, Alben E., assignor.)
Western Electric Company. (See McIntosh and Beaubien, assignors.)
Western Electric Company. (See Nicolson, Alexander M., assignor.)
Western Electric Company. (See Polinkowsky, Lipa, assignor.)
Western Electric Company. (See Reynolds, John N., assignor.)
Western Electric Company. (See Van der Bijl, Hendrik J., assignor.)
Western Union Telegraph Company, The. (See Clokey, Allison A., assignor.)
Westinghouse Air Brake Company, The. (See Brown, Thomas R., assignor.)
Westinghouse Air Brake Company, The. (See Donovan, Patrick H., assignor.)
Westinghouse Air Brake Company, The. (See Farmer, Clyde C., assignor.)
Westinghouse Air Brake Company, The. (See Newell, Edward W., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Electric and Manufacturing Company. (See Aalborg, Christian, assignor.)
Westinghouse Electric and Manufacturing Company. (See Beach, Howard L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Bennitt, William B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Bethune, Harry F., assignor.)
Westinghouse Electric and Manufacturing Company. (See Bradshaw and Copley, assignors.)
Westinghouse Electric and Manufacturing Company. (See Brown, Harold W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Brown, James M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Chubb, Lewis W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)
Westinghouse Electric and Manufacturing Company. (See Dearborn, Richard J., assignor.)
Westinghouse Electric and Manufacturing Company. (See Edgecomb, Henry R., assignor.)
Westinghouse Electric and Manufacturing Company. (See Field, Allan B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Geiger, Albert J., assignor.)
Westinghouse Electric and Manufacturing Company. (See Jackson, Ray P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Kando, Kalman von, assignor.)
Westinghouse Electric and Manufacturing Company. (See Klauber, Laurence M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Lum, Walter O., assignor.)
Westinghouse Electric and Manufacturing Company. (See MacGahan, Paul, assignor.)
Westinghouse Electric and Manufacturing Company. (See McCoy, James P. A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Moore, Benjamin S., assignor.)
Westinghouse Electric and Manufacturing Company. (See Purdon, Arthur, assignor.)
Westinghouse Electric and Manufacturing Company. (See Randall, Karl C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Rosenberg, Emanuel, assignor.)
Westinghouse Electric and Manufacturing Company. (See Scott, Charles F., assignor.)
Westinghouse Electric and Manufacturing Company. (See Simmon, Karl A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Smith, Benjamin H., assignor.)
Westinghouse Electric and Manufacturing Company. (See Sykes, Wilfred, assignor.)
Westinghouse Electric and Manufacturing Company. (See Tirrill, Allen A., assignor.)
Westinghouse Gear and Dynamometer Company, The. (See Westinghouse, George, assignor.)
Westinghouse, George, Pittsburgh, Pa., assignor to The Westinghouse Gear and Dynamometer Company. Reduction-gearing. No. 1,195,119; Aug. 15; Gaz. vol. 229; p. 889.
Westinghouse, George, deceased, Pittsburgh, Pa., H. H. Westinghouse, C. A. Terry, and W. D. Uptegraff, executors. Multistage compressor. No. 1,194,687; Aug. 15; Gaz. vol. 229; p. 739.
Westinghouse, Henry H. (See Goodspeed, Leland F., assignor.)
Westinghouse, Henry H., *et al.*, executors. (See Westinghouse, George.)
Westinghouse, Henry H., New York, N. Y. Air-compressor. No. 1,196,055; Aug. 29; Gaz. vol. 229; p. 1294.
Westinghouse Machine Company, The. (See Herr, Herbert T., assignor.)
Westlake Machine Company, The. (See Kadow, August, assignor.)
Westland, Frank G., Hoopeston, assignor to Sprague Canning Machinery Company, Chicago, Ill. Safety attachment for can-cappers. No. 1,193,647; Aug. 8; Gaz. vol. 229; p. 331.
Weston, David B., Sharon, Mass. Centrifugal separator. No. 1,196,056; Aug. 29; Gaz. vol. 229; p. 1295.
Weston, Thomas I., Columbia, S. C. Joint for sectional columns. No. 1,196,057; Aug. 29; Gaz. vol. 229; p. 1295.
Wetcarbonizing Limited. (See Rigby, Thomas, assignor.)
Wetherbee, Herbert E. (See Collar and Wetherbee.)
Wetherill, Robert, Chester, Pa. Steam-engine. No. 1,193,327; Aug. 1; Gaz. vol. 229; p. 179.
Weyand, Laurence C., *et al.* (See Battenberg, Melvin H. V., assignor.)
Whalen, James W., and C. J. McLaughlin, Tekoa, Wash. Washing-machine. No. 1,193,328; Aug. 1; Gaz. vol. 229; p. 179.
Whalley, Enoch, Willimansett, Mass. Truck. No. 1,194,104; Aug. 8; Gaz. vol. 229; p. 491.
Whalley, Enoch, Willimansett, Mass. Truck. No. 1,194,105; Aug. 8; Gaz. vol. 229; p. 491.
Wheary, George H., Racine, Wis. Closet-fixture. No. 1,195,156; Aug. 15; Gaz. vol. 229; p. 902.
Wheatley, Charles S., Needham Heights, Mass. Automatic-reloading rifle. No. 1,195,307; Aug. 22; Gaz. vol. 229; p. 994.
Wheeler, Archer E. (See Bow, Thill, and Wheeler.)
Wheeler, George F., Erie, Pa. Fuel-feeding apparatus for internal-combustion engines. No. 1,193,852; Aug. 8; Gaz. vol. 229; p. 405.
Wheeler, George F., Lilydale, Saskatchewan, Canada. Combined marking-gage and compasses. No. 1,195,886; Aug. 22; Gaz. vol. 229; p. 1201.
Wheeler, George F., Lilydale, Saskatchewan, Canada. Compasses. No. 1,195,887; Aug. 22; Gaz. vol. 229; p. 1202.
Wheeler, Nelson A., assignor to The Holt Manufacturing Company, Stockton, Cal. Chain-drive coupling. No. 1,193,098; Aug. 1; Gaz. vol. 229; p. 96.
Wheelwright, Charles S., Providence, R. I. Reducing matter containing grease or oil. No. 1,193,743; Aug. 8; Gaz. vol. 229; p. 366.
Wheelwright, Henry M., Ware, Mass. Method of and apparatus for sizing paper. No. 1,195,888; Aug. 22; Gaz. vol. 229; p. 1202.

Whidden, Johnson H., Somerville, Mass. Tube-cleaner. No. 1,195,308; Aug. 22; Gaz. vol. 229; p. 994.
Whitaker, Joseph W., Noble, assignor of one-half to J. Smith, Bridgeport, Ill. Gate. No. 1,194,908; Aug. 15; Gaz. vol. 229; p. 816.
White, Benjamin F., Winnsboro, assignor of one-half to J. S. McLeod, Bivins, Tex. Fruit-gatherer. No. 1,194,260; Aug. 8; Gaz. vol. 229; p. 545.
White, Charles, Baltimore, Md. Piston and piston-rod connection. No. 1,195,541; Aug. 22; Gaz. vol. 229; p. 1076.
White, Charles, Baltimore, Md. Piston and piston-rod connection. No. 1,195,542; Aug. 22; Gaz. vol. 229; p. 1076.
White, Charles, Baltimore, Md. Piston and piston-rod connection. No. 1,195,936; Aug. 22; Gaz. vol. 229; p. 1218.
White, Edward Y., San Antonio, Tex. Frame construction for bicycles, motor-cycles, and the like. No. 1,193,956; Aug. 8; Gaz. vol. 229; p. 442.
White, Edwin L., New York, assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Hanger for light-reflecting bowls. No. 1,196,501; Aug. 29; Gaz. vol. 229; p. 1448.
White, Ernest M., Detroit, Mich. Splash-trough for lubricants. No. 1,194,800; Aug. 15; Gaz. vol. 229; p. 779.
White, Eugene M. (See Nystrum, Conrad E., assignor.)
White, Frank, Glen Ridge, N. J. Hanger or rack. No. 1,192,965; Aug. 1; Gaz. vol. 229; p. 46.
White, Franklin P., Shallotte, N. C. Pipe-cutter. No. 1,193,853; Aug. 8; Gaz. vol. 229; p. 405.
White, Fred E., and F. E. Hooper, assignors to Central Oil & Gas Stove Company, Gardner, Mass. Water-heater. No. 1,196,194; Aug. 29; Gaz. vol. 229; p. 1345.
White, George, Jersey City, N. J., assignor, by mesne assignments, to Automatic Book-Keeping Register Company. Filing-cabinet. No. 1,195,309; Aug. 22; Gaz. vol. 229; p. 994.
White, James R., Schenectady, N. Y. Radiator. No. 1,194,909; Aug. 15; Gaz. vol. 229; p. 816.
White, Johannah L., Chicago, Ill. Folding chair. No. 1,193,854; Aug. 8; Gaz. vol. 229; p. 406.
White, John F., Chicago, Ill. Bag for containing cement and making same. No. 1,195,311; Aug. 22; Gaz. vol. 229; p. 995.
White, John F., and L. B. Ross, Chicago, Ill.; said Ross assignor to said White. Machine for coating fabrics. No. 1,195,310; Aug. 22; Gaz. vol. 229; p. 995.
White, Nelson, Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind. Ribbon-feeding mechanism. No. 1,196,622; Aug. 29; Gaz. vol. 229; p. 1489.
White, Walter C., assignor to International Couplers Company, Los Angeles, Cal. Automatic train-pipe coupling. No. 1,195,120; Aug. 15; Gaz. vol. 229; p. 889.
White, William, Philadelphia, Pa. Clothes-line support. No. 1,195,312; Aug. 22; Gaz. vol. 229; p. 996.
White, William A., and J. McDonald, New York, N. Y. Liquid-fuel burner. No. 1,194,106; Aug. 8; Gaz. vol. 229; p. 491.
White, William C., Schenectady, N. Y., assignor to General Electric Company. Circuit connections of electron-discharge apparatus. No. 1,195,632; Aug. 22; Gaz. vol. 229; p. 1109.
White, William J., Birmingham, Ala. Automatic seed-cotton cleaner. No. 1,194,261; Aug. 8; Gaz. vol. 229; p. 545.
White, W. R. (See Gregory and Maire, assignors.)
White, W. R. (See Maire and Gregory, assignors.)
Whitehead, Stephen B., and G. A. Castle, Inwood, Iowa. Railway-signal. No. 1,193,099; Aug. 1; Gaz. vol. 229; p. 96.
Whitelaw, James, St. Louis, Mo. Sewing-machine for blindstitching. No. 1,195,633; Aug. 22; Gaz. vol. 229; p. 1110.
Whiteside, Samuel P., Curtis Bay, Md. Variable-speed-transmission mechanism. No. 1,194,107; Aug. 8; Gaz. vol. 229; p. 492.
Whitin, George M., assignor to The Whitin Machine Works, Whitinsville, Mass. Heilman comber. No. 1,195,426; Aug. 22; Gaz. vol. 229; p. 1036.
Whitin Machine Works, The. (See Whitin, George M., assignor.)
Whitmer, Arthur K., assignor of one-half to W. W. Hoenecke, Canton, Ohio. Ball-bearing. No. 1,195,313; Aug. 22; Gaz. vol. 229; p. 996.
Whitney, George G., Detroit, Mich. Shaft-bearing. No. 1,193,648; Aug. 8; Gaz. vol. 229; p. 331.
Whittaker, Matthew H. (See Holliwell and Whittaker.)
Wiberg, Peter E., Glen Ridge, assignor of one-half to L. Littauer, Yonkers, N. Y., and one-half to A. V. Beeken, Bloomfield, N. J. Safety-pin machine. No. 1,195,121; Aug. 15; Gaz. vol. 229; p. 890.
Wicker, Cyrus F., Washington, D. C. Staff-gun and projectile. No. 1,195,543; Aug. 22; Gaz. vol. 229; p. 1077.
Wicking, John S. (See Cotton, Arthur L., assignor.)
Widner, George H., assignor to Des Moines Refining Company, Des Moines, Iowa. Chemical-feeding filter. No. 1,195,427; Aug. 22; Gaz. vol. 229; p. 1037.
Widner, George H., assignor to Des Moines Refining Company, Des Moines, Iowa. Water-softening filter. No. 1,196,058; Aug. 29; Gaz. vol. 229; p. 1296.
Wiedmaier, C. F. (See Rowell, Walden T., assignor.)
Wiegand, Henry J., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Theater-dimmer. No. 1,194,451; Aug. 15; Gaz. vol. 229; p. 651.
Wightman, Mark A., Bath, N. Y. Buckle. No. 1,196,623; Aug. 29; Gaz. vol. 229; p. 1490.
Wilburn, Hugh H., Condon, Oreg., and F. E. Butler, Lewistown, Idaho. Lubricating system for gas-engines. No. 1,194,453; Aug. 15; Gaz. vol. 229; p. 659.
Wilcox, Richard L., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Header. No. 1,194,452; Aug. 15; Gaz. vol. 229; p. 659.
Wilder, Frank P., Harrisville, N. Y. Compressing device. No. 1,194,262; Aug. 8; Gaz. vol. 229; p. 546.
Wildman, Ernest A., New York, N. Y., and L. Thorp, assignors to Parke, Davis & Company, Detroit, Mich. Anesthetic bodies and preparing the same. No. 1,193,649; Aug. 8; Gaz. vol. 229; p. 332.
Wildman, Ernest A., New York, N. Y., and L. Thorp, assignors to Parke, Davis & Company, Detroit, Mich. Anesthetic bodies. No. 1,193,650; Aug. 8; Gaz. vol. 229; p. 342.
Wildman, Ernest A., New York, N. Y., and L. Thorp, assignors to Parke, Davis & Company, Detroit, Mich. Anesthetic bodies. No. 1,193,651; Aug. 8; Gaz. vol. 229; p. 332.
Wildman, Frank B., Norristown, Pa., assignor to Wildman M'f'g Company. Fabric-equalizer for circular-knitting machines. No. 1,196,195; Aug. 29; Gaz. vol. 229; p. 1345.
Wildman, Frank B., and G. L. Ballard, Norristown, Pa. Pattern mechanism for knitting-machines. No. 1,194,584; Aug. 15; Gaz. vol. 229; p. 704.
Wildman M'f'g Company. (See Wildman, Frank B., assignor.)
Wiley-Bickford-Sweet Co., The. (See Bickford, Ernest A., assignor.)
Wilhelm, Lane, *et al.* (See Wilhelm, Oliver P., assignor.)
Wilhelm, Oliver P., assignor of twenty-five one-hundredths to S. S. Wilhelm, seventeen and one-half one-hundredths to L. Wilhelm, Michigan City, Ind., and twenty-five one-hundredths to B. Loewenthal, Chicago, Ill. Automatic slack-adjuster for brake-gears. No. 1,193,100; Aug. 1; Gaz. vol. 229; p. 97.
Wilhelm, Sanford S., *et al.* (See Wilhelm, Oliver P., assignor.)
Wilkinson, Charles P., Jackson, Mich. Liquid-indicating gage. No. 1,193,744; Aug. 8; Gaz. vol. 229; p. 367.
Willard, Donald E., Danville, Ill. Door-hanger. No. 1,192,966; Aug. 1; Gaz. vol. 229; p. 46.
Willard Storage Battery Company, The. (See Willard, Theodore A., assignor.)
Willard, Theodore A., assignor to The Willard Storage Battery Company, Cleveland, Ohio. Storage battery. No. 1,194,688; Aug. 15; Gaz. vol. 229; p. 740.
Willcox & Gibbs Sewing Machine Co. (See Merritt, Arthur A., assignor.)
Willeford, John W., Thomasville, Ga. Scaffold-clamp. No. 1,195,889; Aug. 22; Gaz. vol. 229; p. 1202.
William F. Taubel, Inc. (See Fisher, Raymond, assignor.)
Williams, Albert E., assignor to Electric Liquid Operator Company, Jersey City, N. J. Circuit-closer. No. 1,194,324; Aug. 8; Gaz. vol. 229; p. 569.
Williams, Alfred O., Detroit, Mich. Differential gearing. No. 1,195,314; Aug. 22; Gaz. vol. 229; p. 996.
Williams, Bert W., Farwell, assignor of one-half to V. Ritter, Clare, Mich. Sandpapering-machine. No. 1,195,428; Aug. 22; Gaz. vol. 229; p. 1037.
Williams, Charles J. (See Caldwell and Williams.)
Williams, Clarence P., Syracuse, Ohio. Slip-socket. No. 1,194,910; Aug. 15; Gaz. vol. 229; p. 816.
Williams, Frank C., Philadelphia, Pa., assignor to The Safety Block Signal Company. Railway signal and stopping mechanism. No. 1,196,196; Aug. 29; Gaz. vol. 229; p. 1345.
Williams, Jewel B., assignor to The Triumph Electric Company, Cincinnati, Ohio. Water-agitator for ice plants. No. 1,194,108; Aug. 8; Gaz. vol. 229; p. 492.
Williams, Joseph A., assignor to The K-W Ignition Company, Cleveland, Ohio. Carbureter. No. 1,194,454; Aug. 15; Gaz. vol. 229; p. 660.
Williams, Joshua H., Greenville, S. C. Baked food product containing sweet potatoes and making same. No. 1,194,455; Aug. 15; Gaz. vol. 229; p. 660.
Williams, Joshua H., Greenville, S. C. Food product and manufacturing same. No. 1,194,456; Aug. 15; Gaz. vol. 229; p. 660.
Williams, Louis N. D., Ogontz, Pa. Uniting knitted webs. No. 1,194,802; Aug. 15; Gaz. vol. 229; p. 780.
Williams, Percy W., Ogden, Utah. Air-brake. No. 1,194,585; Aug. 15; Gaz. vol. 229; p. 705.
Williams, Raymond H. (See Schaum and Williams.)
Williams, Richard S., assignor to The J. B. Williams Company, Glastonbury, Conn. Powder-receptacle. No. 1,196,624; Aug. 29; Gaz. vol. 229; p. 1490.
Williams, Robert T., assignor to R. T. W. Auto Accessory Co., Detroit, Mich. Carbureter. No. 1,195,315; Aug. 22; Gaz. vol. 229; p. 997.
Williams, William C., Baltimore, Md. Loose-leaf-binder post. No. 1,196,059; Aug. 29; Gaz. vol. 229; p. 1296.
Williamson, Joseph H., Chicago, Ill. Collapsible display-easel. No. 1,194,801; Aug. 15; Gaz. vol. 229; p. 780.

Willis, Bernard D., assignor to Automatic Electric Company, Chicago, Ill. Telephone-receiver. No. 1,194,457; Aug. 15; Gaz. vol. 229; p. 661.
Willison, John, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,194,109; Aug. 8; Gaz. vol. 229; p. 493.
Willison, John, Derby, England, assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,194,110; Aug. 8; Gaz. vol. 229; p. 493.
Willners, John, assignor of one-half to C. Fahlstrom, Chicago Heights, Ill. Automatic scale-register. No. 1,192,967; Aug. 1; Gaz. vol. 229; p. 47.
Wills, Arthur J., Brookfield, assignor to The B & R Rubber Company, North Brookfield, Mass. Machine for setting up cartons. No. 1,195,937; Aug. 22; Gaz. vol. 229; p. 1219.
Willson, Hardy B. (See Wright and Willson.)
Wilson, Charles H., New York, N. Y., assignor, by mesne assignments, to M. C. Baker, Stamford, Conn. Apparatus for graphically portraying games or other events. No. 1,193,745; Aug. 8; Gaz. vol. 229; p. 367.
Wilson, Edwin W., assignor of one-half to E. R. Butler, Chicago, Ill. Jar-opener. No. 1,196,000; Aug. 29; Gaz. vol. 229; p. 1297.
Wilson, Harrison D., Chicago, Ill. Reversible window. No. 1,193,101; Aug. 1; Gaz. vol. 229; p. 97.
Wilson, John C., Boston, Mass. Time system. No. 1,194,911; Aug. 15; Gaz. vol. 229; p. 817.
Wilson, John C., assignor to The Automatic Time Stamp Company, Boston, Mass. Time-stamp and the like. No. 1,193,213; Aug. 1; Gaz. vol. 229; p. 137.
Wilson, John J., Chicago, Ill. Folding box. No. 1,195,758; Aug. 22; Gaz. vol. 229; p. 1156.
Wilson, John L., Buffalo, Mont. Hen's nest. No. 1,194,263; Aug. 8; Gaz. vol. 229; p. 546.
Wilson Memindex Company. (See Olmsted, Herbert W., assignor.)
Wilson, Roy C. (See Sanborn and Wilson.)
Wilson, Walter J., and J. F. Ruff, Petersburg, Ind.; said Ruff assignor to said Wilson. Ensilage-packer. No. 1,194,912; Aug. 15; Gaz. vol. 229; p. 817.
Wilson, William W., Los Angeles, Cal. Well-boring apparatus. No. 1,195,544; Aug. 22; Gaz. vol. 229; p. 1077.
Wilt, Abram D., Jr., Detroit, Mich. Steering reach-rod. No. 1,195,122; Aug. 15; Gaz. vol. 229; p. 890.
Wimberly, George R., Mountain Park, Okla. Door-operator. No. 1,192,968; Aug. 1; Gaz. vol. 229; p. 47.
Winchester Repeating Arms Co. (See Burton, Frank F., assignor.)
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Wind, Henry, Moline, Ill. Automobile-locking device. No. 1,193,652; Aug. 8; Gaz. vol. 229; p. 332.
Winebrenner, Calvin A., Akron, Ohio. Signal-lamp for street-cars and trains. No. 1,193,102; Aug. 1; Gaz. vol. 229; p. 97.
Winfield Manufacturing Company. (See Taylor, Albertis C., assignor.)
Winkler, Carl, Berne, Switzerland. Machine for casting stereotype-plates. No. 1,195,123; Aug. 15; Gaz. vol. 229; p. 890.
Winkley, Erastus E., Lynn, Mass. Lasting-machine. No. 1,195,124; Aug. 15; Gaz. vol. 229; p. 891.
Winkley, Erastus E., Lynn, Mass. Machine for operating upon soles. No. 1,196,727; Aug. 29; Gaz. vol. 229; p. 1526.
Winn, John, Brookline, and A. Feinberg, Dorchester, Mass. Safety-lock. No. 1,193,653; Aug. 8; Gaz. vol. 229; p. 333.
Winne, Ernest, New York, N. Y. Fountain-pen. No. 1,195,125; Aug. 15; Gaz. vol. 229; p. 891.
Winningham, John W. (See Waugh, Edward H., assignor.)
Wingquist, Sven G., Gottenborg, Sweden, assignor, by mesne assignments, to S. K. F. Ball Bearing Company, Hartford, Conn. Ball or roller bearing. No. 1,195,756; Aug. 22; Gaz. vol. 229; p. 1155.
Winslow, James K., East St. Louis, Ill. Feed-box. No. 1,196,061; Aug. 29; Gaz. vol. 229; p. 1297.
Winters, Calvin C. (See Winters, John W., assignor.)
Winters, Harry E. (See Briegel, Theodore, assignor.)
Winters, John W., assignor to C. C. Winters, Stephenville, Tex. Peanut-harvester. No. 1,193,746; Aug. 8; Gaz. vol. 229; p. 368.
Winton-Charteris, Edith, London, England. Massage appliance. No. 1,192,969; Aug. 1; Gaz. vol. 229; p. 47.
Wireless Press, The. (See Macbeth and Jung, assignors.)
Wireless Specialty Apparatus Company. (See Proctor, John A., assignor.)
Wisconsin Motor Manufacturing Company. (See Milbrath, Arthur F., assignor.)
Witham, George S., Jr. (See Pattno and Witham.)
Witherow, Clark D., Brookville, Pa. Machine-gun mount. No. 1,196,197; Aug. 29; Gaz. vol. 229; p. 1346.
Withycombe, Robert M., Sydney, New South Wales, Australia. Artificial tooth. No. 1,193,329; Aug. 1; Gaz. vol. 229; p. 180.
Witsaman, Clement L., Summit county, assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Tube-rolling table. No. 1,194,803; Aug. 15; Gaz. vol. 229; p. 780.
Witthoefft, Charles H., St. Louis, Mo. Mold for concrete structures. No. 1,195,126; Aug. 15; Gaz. vol. 229; p. 891.

Wm. B. Scaife & Sons Company. (See Newman, Martin F., assignor.)
Wolcott, Mark P., assignor to The Ohio Brass Company, Mansfield, Ohio. Wire-splicer. No. 1,196,062; Aug. 29; Gaz. vol. 229; p. 1297.
Wolf, George D., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Convertible ringing control for telephone systems. No. 1,195,163; Aug. 15; Gaz. vol. 229; p. 904.
Wolf, Julius H. G., Oakland, Cal. Concrete railway cross-tie. No. 1,195,634; Aug. 22; Gaz. vol. 229; p. 1110.
Wolf, Lesser. (See Blankfort, Herbert G., assignor.)
Wolf, Lewis, *et al.* (See McCormick, Frank, assignor.)
Wolfe, Frank M., Minneapolis, Minn. Bath-tub cover. No. 1,194,913; Aug. 15; Gaz. vol. 229; p. 817.
Wolfe, Thomas. (See Hisgen, Wolfe, Armitage, and Hisgen.)
Wolff, Friedrich M., Berlin, Germany. Frame for the suspension of suits of clothes for gentlemen, in trunks. No. 1,194,804; Aug. 15; Gaz. vol. 229; p. 781.
Wolhaupter, Benjamin, New Rochelle, assignor to The Rail Joint Company, New York, N. Y. Insulated rail-joint. No. 1,196,412; Aug. 29; Gaz. vol. 229; p. 1418.
Wollery, Horace E., Minneapolis, Minn. Engine-subbase. No. 1,194,915; Aug. 15; Gaz. vol. 229; p. 818.
Womack, Plenny V., Olney, Tex. Wagon-cover. No. 1,195,316; Aug. 22; Gaz. vol. 229; p. 997.
Womble Machine Company. (See Womble, Samuel W., assignor.)
Womble, Samuel W., assignor to Womble Machine Company, Incorporated, Cheriton, Va. Frictional gearing. No. 1,194,264; Aug. 8; Gaz. vol. 229; p. 546.
Wood, Alexander H., Petros, Tenn., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Mining-machine. No. 1,193,654; Aug. 8; Gaz. vol. 229; p. 333.
Wood, Alexander H., Petros, Tenn. Tipple. No. 1,195,545; Aug. 22; Gaz. vol. 229; p. 1077.
Wood, Charles O., Chambersburg, Pa. Sand-mold jacket. No. 1,193,103; Aug. 1; Gaz. vol. 229; p. 98.
Wood, Charles O., Chambersburg, Pa. Device for sand molds. No. 1,193,104; Aug. 1; Gaz. vol. 229; p. 98.
Wood, Dorr E. (See Wood, Walter S. and D. E.)
Wood, Frank W., assignor to Charles Cory & Son, Inc., New York, N. Y. Signal. No. 1,194,914; Aug. 15; Gaz. vol. 229; p. 818.
Wood, Frederick W., Jasper, assignor of one-half to A. R. Smith, Rathbone, N. Y. Safety-razor. No. 1,193,655; Aug. 8; Gaz. vol. 229; p. 334.
Wood, James J., Fort Wayne, Ind., assignor to General Electric Company. Motor-drive. No. 1,193,105; Aug. 1; Gaz. vol. 229; p. 98.
Wood, James J., Fort Wayne, Ind., assignor to General Electric Company. Motor-drive. No. 1,193,490; Aug. 1; Gaz. vol. 229; p. 235.
Wood, Pinckney A., Memphis, Tenn., assignor of one-half to T. U. Sisson, Winona, Miss. Attachment for motor-vehicles. No. 1,194,111; Aug. 8; Gaz. vol. 229; p. 494.
Wood, Robert N., Iuka, Miss. Shade-roller. No. 1,193,106; Aug. 1; Gaz. vol. 229; p. 99.
Wood, Stuart G., Brooklyn, N. Y. Wire-stripping device. No. 1,196,322; Aug. 29; Gaz. vol. 229; p. 1385.
Wood, Walter S., Kalamazoo, Mich., and D. E. Wood, Chicago, Ill. Collapsible adjusting or manipulating table. No. 1,194,112; Aug. 8; Gaz. vol. 229; p. 494.
Wooden, Earle M., assignor to The Perfectograph Manufacturing Company, New York, N. Y. Automatic loop-maker for moving-picture films. No. 1,196,063; Aug. 29; Gaz. vol. 229; p. 1298.
Woods, Charles H., Springfield, Mass. Observation-buoy and fire control for floating mines. No. 1,195,317; Aug. 22; Gaz. vol. 229; p. 997.
Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Automatic lid-support. No. 1,194,805; Aug. 15; Gaz. vol. 229; p. 781.
Woodward, Charles H., Dallas, Tex. Stamp-vending machine. No. 1,195,318; Aug. 22; Gaz. vol. 229; p. 997.
Workman, James M., Greenville, S. C. Automobile-top. No. 1,193,107; Aug. 1; Gaz. vol. 229; p. 99.
Worns, Edwin C., Rutherford, N. J. Combined mop-head and mop wringer. No. 1,194,916; Aug. 15; Gaz. vol. 229; p. 818.
Worthington Pump and Machinery Corporation. (See Riesner, Michall, assignor.)
Wray, Percy L., Middle Park, South Melbourne, assignor to The Tilbury Manufacturing Company, Melbourne, Victoria, Australia. Fastening of bracelets and the like. No. 1,193,330; Aug. 1; Gaz. vol. 229; p. 180.
Wright, Charles A., Riverton, N. J. Label-holder. No. 1,195,759; Aug. 22; Gaz. vol. 229; p. 1157.
Wright, Charles W., and H. B. Willson, Little Rock, Ark. Chicken-coop. No. 1,196,625; Aug. 29; Gaz. vol. 229; p. 1490.
Wright, Charley, Sandusky, Mich. Package-tie. No. 1,196,626; Aug. 29; Gaz. vol. 229; p. 1491.
Wright, Clarence E., Louisville, Ky., assignor of one-half to E. S. Carpenter, Franklin, Ind. Power-transmission mechanism. No. 1,194,113; Aug. 8; Gaz. vol. 229; p. 495.
Wright, Clarence E., assignor of one-half to E. S. Carpenter, Louisville, Ky. Mechanical movement. No. 1,194,689; Aug. 15; Gaz. vol. 229; p. 740.
Wright, Mary E. (See Wright, William H., assignor.)

Wright, Nelson E., Springfield, Mass. Antiskidding device for wheels. No. 1,193,855; Aug. 8; Gaz. vol. 229; p. 406.
Wright, Wayne C., Sr. (See Roberts and Wright.)
Wright, William H., assignor to M. E. Wright, Port Dover, Ontario, Canada. Antifriction-bearing. No. 1,194,917; Aug. 15; Gaz. vol. 229; p. 819.
Wright, William H., assignor to M. E. Wright, Port Dover, Ontario, Canada. Antifriction-bearing. No. 1,194,918; Aug. 15; Gaz. vol. 229; p. 819.
Wrightson, George H., Jr., Butte, Mont. Pump-piston. No. 1,195,546; Aug. 22; Gaz. vol. 229; p. 1078.
Wrigley, Henry I., Chicago, Ill., assignor to Universal Draft Gear Attachment Co. Draft-plate. No. 1,194,806; Aug. 15; Gaz. vol. 229; p. 781.
Wulbers, Henry, White, S. D., Carrier. No. 1,195,319; Aug. 22; Gaz. vol. 229; p. 998.
Wyant, Cleophes E. (See Guenzel and Wyant.)
Wyman, Raymond C. (See Carlson and Wyman.)
Wynne, Alexander, Metropolis, assignor of one-half to A. Baker, Temple Hill, Ill. Corn-planter attachment. No. 1,195,890; Aug. 22; Gaz. vol. 229; p. 1203.
Wynne, George F., Minera, near Wrexham, Wales. Apparatus for calculating photographic exposures. No. 1,194,919; Aug. 15; Gaz. vol. 229; p. 820.
Xenaky, Reginald S., assignor of one-half to F. Gilman, Birmingham, England. Steam-motor and electrical-generator combined-efficiency indicator. No. 1,194,807; Aug. 15; Gaz. vol. 229; p. 782.
Y & G Electric Fuse & Engineering Company. (See Yates, Harry A., assignor.)
Yager, Albert E., Lemmon, S. D. Auto steering device. No. 1,193,331; Aug. 1; Gaz. vol. 229; p. 181.
Yank, Fred, Seattle, Wash. Lawn-mower. No. 1,192,970; Aug. 1; Gaz. vol. 229; p. 48.
Yarwood, Emanuel H., Newark, N. J. Oil-can. No. 1,194,586; Aug. 15; Gaz. vol. 229; p. 705.
Yates, Harry A., New York, N. Y., assignor to The Y & G Electric Fuse & Engineering Company. Derrick and hod signaling system. No. 1,194,458; Aug. 15; Gaz. vol. 229; p. 661.
Yates, Harry A., New York, N. Y., assignor to Economy Fuse & Manufacturing Company, Chicago, Ill. Safety-fuse. (Reissue.) No. 14,183; Aug. 15; Gaz. vol. 229; p. 908.
Yates, William L., Hutchinson, Kans. Pulley and actuating mechanism. No. 1,193,214; Aug. 1; Gaz. vol. 229; p. 137.
Yaw, Clio B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Driving mechanism. No. 1,195,547; Aug. 22; Gaz. vol. 229; p. 1078.
Yeager, George E., Chicago, Ill. Burglar and holdup alarm. No. 1,193,656; Aug. 8; Gaz. vol. 229; p. 334.
Yemoc Manufacturing Company. (See Comey, Bernard E., assignor.)
Yingling, Frank B., assignor to Ceramic Machinery Co., Hamilton, Ohio. Measuring-machine. No. 1,194,459; Aug. 15; Gaz. vol. 229; p. 661.
Yocum, Charles F., assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio. Sight-arm for ditching-machines. No. 1,194,460; Aug. 15; Gaz. vol. 229; p. 662.
Yohe, Charles E., Harrisburg, Pa. Head-rest. No. 1,196,413; Aug. 29; Gaz. vol. 229; p. 1419.
Yonge, Fletcher W., Tampa, Fla. Signaling apparatus for motor-cars. No. 1,194,920; Aug. 15; Gaz. vol. 229; p. 820.
Yost, Winfield H., Montreal, Quebec, Canada, assignor to Roger Ballast Car Company. Car. No. 1,192,971; Aug. 1; Gaz. vol. 229; p. 48.
Yost, Winfield H., Montreal, Quebec, Canada, assignor to H. S. Hart, Chicago, Ill. Draft-rigging for railway-cars. No. 1,195,942; Aug. 22; Gaz. vol. 229; p. 1220.
Yost, Winfield H., Montreal, Quebec, Canada, assignor to H. S. Hart, Chicago, Ill. Draft-rigging for railway-cars. No. 1,195,943; Aug. 22; Gaz. vol. 229; p. 1221.
Young, Ernest V. (See Young, Joseph E. and E. V.)
Young, Francis E., assignor to Spray Engineering Company, Boston, Mass. Spray-nozzle. No. 1,196,627; Aug. 29; Gaz. vol. 229; p. 1491.
Young, Frank A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,192,972; Aug. 1; Gaz. vol. 229; p. 48.
Young, George D., New York, N. Y. Carpenter's plane. No. 1,196,198; Aug. 29; Gaz. vol. 229; p. 1346.
Young, John B., Belt, Mont. Metallic fence-post. No. 1,195,760; Aug. 22; Gaz. vol. 229; p. 1157.
Young, Joseph E. and E. V., New York, N. Y. Condiment-holder. No. 1,193,332; Aug. 1; Gaz. vol. 229; p. 181.
Young, Ray H., Denver, Colo. Brake for automobiles. No. 1,196,628; Aug. 29; Gaz. vol. 229; p. 1491.
Youngblood, Floyd B. (See Rogers, George R., assignor.)
Younggren, Frederick, River Falls, Wis. Traction-wheel. No. 1,193,957; Aug. 8; Gaz. vol. 229; p. 442.
Youngs, Jay M., Toledo, Ohio. Safety check device. No. 1,193,958; Aug. 8; Gaz. vol. 229; p. 442.
Zahniser, John N., Waynesburg, Pa. Wire rope and cable cutting tool. No. 1,194,461; Aug. 15; Gaz. vol. 229; p. 662.
Zbytniewski, Joseph, B. Trzcinski, Philadelphia, Pa., and F. J. Hejna, Trenton, N. J. Latch. No. 1,196,064; Aug. 29; Gaz. vol. 229; p. 1298.
Zeek, James H., Albia, Iowa. Shipping-crate. No. 1,193,657; Aug. 8; Gaz. vol. 229; p. 334.
Zeller, William J., and G. A. Stephens, Winfield, N. Y. Antirattle-bearing protecting device. No. 1,194,921; Aug. 15; Gaz. vol. 229; p. 821.
Zelnicker, James H., Mobile, Ala. Strap-fastener for boxes or other articles. No. 1,196,629; Aug. 29; Gaz. vol. 229; p. 1491.
Zeluff, Irvin S. (See Kendall, William G., assignor.)
Zickefoose, William, Clements, Kans. Corn-binder. No. 1,195,320; Aug. 22; Gaz. vol. 229; p. 998.
Ziegler, Jacob, assignor of one-half to R. K. Davis, Coffeyville, Kans. Wrench or nutcracker. No. 1,195,321; Aug. 22; Gaz. vol. 229; p. 999.
Zimmer, Ernest L. B., assignor, by mesne assignments, to Baker-Hausen Manufacturing Co., Oakland, Cal. Combination elbow-coupling, valve, and handle for suction-cleaners. No. 1,196,414; Aug. 29; Gaz. vol. 229; p. 1419.
Zimmerman, Arthur R., Shamokin, Pa. Ink-well. No. 1,196,630; Aug. 29; Gaz. vol. 229; p. 1492.
Zimmerman, John, assignor of one-half to B. F. Madison, Council Bluffs, Iowa. Heating apparatus for injector pipes of locomotives. No. 1,194,325; Aug. 8; Gaz. vol. 229; p. 570.
Zimmerman, John B., Buffalo, assignor to Invincible Grain Cleaner Company, Silver Creek, N. Y. Corn-husking machine. No. 1,195,164; Aug. 15; Gaz. vol. 229; p. 905.
Zimmermann, John, Philadelphia, Pa. Warp-printing machine. No. 1,195,322; Aug. 22; Gaz. vol. 229; p. 999.
Zimmermann, William, Jr., Freeburg, Ill. Harrow attachment for plows. No. 1,196,631; Aug. 29; Gaz. vol. 229; p. 1492.
Zint, George, Wapakoneta, Ohio. Coupling. No. 1,193,658; Aug. 8; Gaz. vol. 229; p. 335.
Zohuminsky, John G., New York, N. Y. Tobacco-feeding machine. No. 1,194,114; Aug. 8; Gaz. vol. 229; p. 495.
Zubryd, Antoni, Castle Shannon, Pa. Chair-operated fan. No. 1,193,215; Aug. 1; Gaz. vol. 229; p. 138.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Angiulli, Luigi, New York, N. Y., assignor to Automobile Supply Mfg. Co., Inc. Electric lamp. No. 49,482; Aug. 8; Gaz. vol. 229; p. 579.
Aromint Company, The. (See Harris, James, assignor.)
Aronson, Louis V., Newark, N. J. Signal. No. 49,557; Aug. 29; Gaz. vol. 229; p. 1539.
Automobile Supply Mfg. Co. (See Angiulli, Luigi, assignor.)
Barton, Thomas E. (See Doering, Charles, Jr., assignor.)
Bayley, George W., Brooklyn, assignor to Bayley & Sons, Inc., New York, N. Y. Electric-lighting fixture. Nos. 49,558–68; Aug. 29; Gaz. vol. 229; pp. 1539–41.
Bayley & Sons. (See Bayley, George W., assignor.)
Beauvais, Walter D., and J. H. Boughton, Milwaukee, Wis. Boat. No. 49,504; Aug. 15; Gaz. vol. 229; p. 908.
Behring, Edward L., Wyckoff, Minn. Display-stand. No. 49,471; Aug. 1; Gaz. vol. 229; p. 240.
Berkey, Charles A., Highland Park, Mich. Society-emblem. No. 49,532; Aug. 22; Gaz. vol. 229; p. 1227.
Beyrand, André, Limoges, France, assignor to H. C. Kupper, New York, N. Y. Plate or similar article. Nos. 49,505–8; Aug. 15; Gaz. vol. 229; p. 909.
Bishop, Lee O., Great Falls, Mont. Finger-ring, brooch, or similar article. No. 49,533; Aug. 22; Gaz. vol. 229; p. 1228.
Blynt, Herbert S., Washington, D. C. Tire. No. 49,534; Aug. 22; Gaz. vol. 229; p. 1228.
Boughton, Judson H. (See Beauvais and Boughton.)
Boyd, Abraham H., Aspinwall, Pa., assignor to The Porter Rubber Company, Salem, Ohio. Vehicle-tire. No. 49,535; Aug. 22; Gaz. vol. 229; p. 1228.
Burtchaell, Peter T., San Rafael, Cal. Poison-bottle. No. 49,569; Aug. 29; Gaz. vol. 229; p. 1541.
Caldwell, Walter D., Oklahoma, Okla., assignor to Playerphone Talking Machine Company, Chicago, Ill. Phonograph or talking-machine cabinet. Nos. 49,570–1; Aug. 29; Gaz. vol. 229; p. 1542.
Carola Company, The. (See Horswell, Percy A., assignor.)
Clemmer, Howard S. (See Raleigh, Albert C., assignor.)
Collins & Aikman Company. (See Walbrecht, Max, assignor.)
Collins, Edward F., Indian Orchard, Mass. Emblem. No. 49,572; Aug. 29; Gaz. vol. 229; p. 1542.
Colt, Le Baron C., Bristol, R. I., assignor to National India Rubber Company. Shoe. No. 49,573; Aug. 29; Gaz. vol. 229; p. 1542.
Commercial Colortype Company. (See Waggoner, Frank H., assignor.)
Cook, Matilda, assignor to Gage Brothers & Co., Chicago, Ill. Hat. No. 49,509; Aug. 15; Gaz. vol. 229; p. 910.
Crowell, Gilbert L., Jr., Arlington, N. J., assignor to Dominick & Haff, New York, N. Y. Spoon, fork, or similar article. No. 49,536; Aug. 22; Gaz. vol. 229; p. 1228.
Curtiss, George E., assignor to Landers, Frary & Clark, New Britain, Conn. Handle for forks and similar articles. No. 49,574; Aug. 29; Gaz. vol. 229; p. 1542.
Dierke, Charles, Portland, Oreg. Tooth-brush. No. 49,472; Aug. 1; Gaz. vol. 229; p. 240.
Doering, Charles, Jr., Chicago, Ill., assignor to T. E. Barton, Washington, D. C. Baby-buggy. No. 49,537; Aug. 22; Gaz. vol. 229; p. 1229.
Domestic Talking Machine Corporation. (See Sheble, Horace, assignor.)
Dominick & Haff. (See Crowell, Gilbert L., Jr., assignor.)
Dooley, John R., assignor to International Signal Company, Chicago, Ill. Signal-lamp. No. 49,473; Aug. 1; Gaz. vol. 229; p. 240.
Dykes, Benjamin A. J., Glenwood, Ga. Game-board. No. 49,575; Aug. 29; Gaz. vol. 229; p. 1542.
Erickson, Claus E., Des Moines, Iowa. Towel-holder. No. 49,483; Aug. 8; Gaz. vol. 229; p. 579.
Fargo, Arthur H., Poughkeepsie, N. Y., assignor to Fargo Manufacturing Company, Inc. Connector. No. 49,474; Aug. 1; Gaz. vol. 229; p. 240.
Fargo Manufacturing Company. (See Fargo, Arthur H., assignor.)
Faries Manufacturing Co. (See Lucas, Clarence W., assignor.)
Federal Rubber Manufacturing Company. (See Scherner, John, assignor.)
Fleming, Paul E., Huron, S. D. Badge. No. 49,484; Aug. 8; Gaz. vol. 229; p. 579.
Fred & Ben Lewenthal. (See Lewenthal, Benjamin, assignor.)
Friedberger-Aaron Manufacturing Company. (See Goodman, Samuel N., assignor.)
Fuller, George E., Chicago, Ill. Sign. No. 49,510; Aug. 15; Gaz. vol. 229; p. 910.
Gage Brothers & Co. (See Cook, Matilda, assignor.)
Gillen, Mark J., Cleveland, Ohio, assignor to The Standard Tire & Rubber Manufacturing Company. Vehicle-tire. No. 49,485; Aug. 8; Gaz. vol. 229; p. 579.
Goddard, Walter T., Hamilton, Ontario, Canada. Insulator. No. 49,538; Aug. 22; Gaz. vol. 229; p. 1229.
Goldman Costume Co. (See Slavik, John F., assignor.)
Goldsmith, Alfred, assignor to L. D. Bloch & Company, New York, N. Y. Nut-bowl. No. 49,486; Aug. 8; Gaz. vol. 229; p. 579.
Goodman, Samuel N., assignor to Friedberger-Aaron Manufacturing Company, Philadelphia, Pa. Trimming. No. 49,475; Aug. 1; Gaz. vol. 229; p. 240.
Goodrich, John K., assignor to R. A. Grant, Atlanta, Ga. Vending-machine casing. No. 49,539; Aug. 22; Gaz. vol. 229; p. 1229.
Gostomski, John, Pittsburgh, Pa. Chair. No. 49,511; Aug. 15; Gaz. vol. 229; p. 910.
Grant, Robert A. (See Goodrich, John K., assignor.)
Griswold, Milton O., Rock Island, Ill. Vending-machine casing. No. 49,512; Aug. 15; Gaz. vol. 229; p. 910.
Groff, George C., and B. F. Mehrer, Philadelphia, Pa. Tobacco-stand. No. 49,487; Aug. 8; Gaz. vol. 229; p. 580.
Hadley, Edmund P., and C. C. Holden, Leominster, Mass. Jewel-case. Nos. 49,513–14; Aug. 15; Gaz. vol. 229; pp. 910–11.
Hamilton, Charles W., Milwaukee, Wis. Paper dolly. No. 49,488; Aug. 8; Gaz. vol. 229; p. 580.
Harris, James, Wyoming, assignor to The Aromint Company, Cincinnati, Ohio. Candy or medicated tablet or the like. No. 49,515; Aug. 15; Gaz. vol. 229; p. 911.
Hartz, Helen von, *et al.* (See Hartz, Henry V., assignor.)
Hartz, Henry V., deceased, Cleveland; W. G. Metzger, administrator, Painesville, Ohio; said W. G. Metzger assignor of one-third to himself, one-third to H. V. Metzger, and one-third to H. von Hartz. Boat. No. 49,503; Aug. 8; Gaz. vol. 229; p. 582.
Heidelsheimer, Irving, New York, N. Y. Pair of cuff-links. Nos. 49,516–17; Aug. 15; Gaz. vol. 229; p. 911.
Heisey & Co., A. H. (See Sanford, Andrew J., assignor.)
Henckel, Gustave A., New York, N. Y. Vase and candle-lamp. No. 49,518; Aug. 15; Gaz. vol. 229; p. 911.
Holden, Crofton C. (See Hadley and Holden.)
Horn & Brannen Manufacturing Company. (See Horn, William, assignor.)
Horn, William, Glenside, Pa., assignor to Horn & Brannen Manufacturing Company. Chandelier-loop. No. 49,576; Aug. 29; Gaz. vol. 229; p. 1543.
Horswell, Percy A., assignor to The Carola Company, Cleveland, Ohio. Cabinet for talking-machines. No. 49,519; Aug. 15; Gaz. vol. 229; p. 912.
International Signal Company. (See Dooley, John R., assignor.)
Jaboulet-Vercherre, Rose P., London, England. Dolly. No. 49,494; Aug. 8; Gaz. vol. 229; p. 581.
Jane Gray Company. (See Stokes, Jane G., assignor.)
Jones, Lewis M., Chicago, Ill. Badge, seal, or emblem. Nos. 49,577–8; Aug. 29; Gaz. vol. 229; p. 1543.
Josephson, Adalbert, New York, N. Y. Display-stand. No. 49,520; Aug. 15; Gaz. vol. 229; p. 912.
Kees, Frederick, Minneapolis, Minn. Badge. No. 49,579; Aug. 29; Gaz. vol. 229; p. 1543.
Kirk, Walter I., assignor to Lyon & Healy, Chicago, Ill. Stringed instrument. No. 49,540; Aug. 22; Gaz. vol. 229; p. 1229.
Kunst, John, New York, N. Y. Vehicle-wheel. No. 49,521; Aug. 15; Gaz. vol. 229; p. 912.
Kupper, Herman C. (See Beyrand, André, assignor.)
L. D. Bloch & Company. (See Goldsmith, Alfred, assignor.)
Lamb, Joseph F., assignor to Landers, Frary & Clark, New Britain, Conn. Case for vacuum-bottles. No. 49,541; Aug. 22; Gaz. vol. 229; p. 1229.
Landers, Frary & Clark. (See Curtiss, George E., assignor.)
Landers, Frary & Clark. (See Lamb, Joseph F., assignor.)
Lewenthal, Benjamin, assignor to Fred & Ben Lewenthal, Inc., New York, N. Y. Badge, emblem, or similar article. No. 49,542; Aug. 22; Gaz. vol. 229; p. 1229.
Lewis, Seneca G., Greensburg, assignor to Pennsylvania Rubber Company, Jeannette, Pa. Rubber vehicle-tire. No. 49,543; Aug. 22; Gaz. vol. 229; p. 1230.
Lucas, Clarence W., assignor to Faries Manufacturing Co., Decatur, Ill. Ventilated shade-holder. No. 49,476; Aug. 1; Gaz. vol. 229; p. 240.
Lyon & Healy. (See Kirk, Walter I., assignor.)

Maier, Charles E., assignor to The Oxford Pottery Company, Cambridge, Ohio. Covered dish. No. 49,544; Aug. 22; Gaz. vol. 229; p. 1230.
Maise, Herman C., assignor to Springfield Body Corporation of New York, Springfield, Mass. Vehicle-body. No. 49,522; Aug. 15; Gaz. vol. 229; p. 912.
Maise, Herman C., assignor to Springfield Body Corporation of New York, Springfield, Mass. Vehicle-body. No. 49,580; Aug. 29; Gaz. vol. 229; p. 1543.
Mayerle, Marko and M., Kansas City, Kans. Weapon. No. 49,489; Aug. 8; Gaz. vol. 229; p. 580.
Mayerle, Michael. (See Mayerle, Marko and M.)
McClure, Clarence M., assignor to Nyal Co., Detroit, Mich. Bottle. No. 49,581; Aug. 29; Gaz. vol. 229; p. 1543.
Mehrer, Benjamin F. (See Groff and Mehrer.)
Meinecke, Fritz C. T., Philadelphia, Pa. Toy. No. 49,490; Aug. 8; Gaz. vol. 229; p. 580.
Metzger, Henrietta V., *et al.* (See Hartz, Henry V., assignor.)
Metzger, William G., administrator. (See Hartz, Henry V.)
Meyberg, Eugene J., Los Angeles, Cal. Lighting-fixture. No. 49,545; Aug. 22; Gaz. vol. 229; p. 1230.
Minch, Earl L., Bellevue, Ohio. Silverware-stand. No. 49,477; Aug. 1; Gaz. vol. 229; p. 241.
National India Rubber Company. (See Colt, Le Baron C., assignor.)
Norden, Joseph, *et al.* (See Norden, Mortimer, assignor.)
Norden, Mortimer, assignor of one-fourth to J. Norden and one-half to S. Rothapfel, New York, N. Y. Electric sign. No. 49,491; Aug. 8; Gaz. vol. 229; p. 581.
Nyal Co. (See McClure, Clarence M., assignor.)
O'Donnell, Thomas, Ironwood, Mich. Cluster electric-lamp socket. No. 49,523; Aug. 15; Gaz. vol. 229; p. 912.
Olds Motor Works. (See Sergardi, Fabio B., assignor.)
Oxford Pottery Company, The. (See Maier, Charles E., assignor.)
Paye & Baker Manufacturing Company. (See Paye, Charles T., assignor.)
Paye, Charles T., assignor to Paye & Baker Manufacturing Company, North Attleboro, Mass. Jewelry pin, charm, fob, pendant, cuff-button, ring, or similar article. No. 49,591; Aug. 29; Gaz. vol. 229; p. 1545.
Pennsylvania Rubber Company. (See Lewis, Seneca G., assignor.)
Pinkus, Frederick S., New York, N. Y. Textile fabric. No. 49,582; Aug. 29; Gaz. vol. 229; p. 1543.
Playerphone Talking Machine Company. (See Caldwell, Walter D., assignor.)
Porter Rubber Company, The. (See Boyd, Abraham H., assignor.)
Post, Charles A., Sheridan, Wyo. Fan and casing. No. 49,546; Aug. 22; Gaz. vol. 229; p. 1230.
Powell, Doane, Omaha, Nebr. Electric-light or gas fixture. No. 49,492; Aug. 8; Gaz. vol. 229; p. 581.
Raleigh, Albert C., assignor to H. S. Clemmer, Spokane, Wash. Toy, statuette, image, or emblem. No. 49,547; Aug. 22; Gaz. vol. 229; p. 1230.
Richard, Stephen, Jr., Southbridge, Mass. Knife-handle. No. 49,548; Aug. 22; Gaz. vol. 229; p. 1230.
Ross, Frank A., Wilmette, assignor to Stewart Phonograph Corporation, Chicago, Ill. Phonograph-body. Nos. 49,524–6; Aug. 15; Gaz. vol. 229; p. 913.
Rothapfel, Samuel, *et al.* (See Norden, Mortimer, assignor.)
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Jug. No. 49,478; Aug. 1; Gaz. vol. 229; p. 241.
Saunders, Albert F., Syracuse, assignor to T. N. Benedict Mfg. Co., East Syracuse, N. Y. Spoon. No. 49,527; Aug. 15; Gaz. vol. 229; p. 913.
Schell, John A., Detroit, Mich. Radiator. No. 49,549; Aug. 22; Gaz. vol. 229; p. 1231.
Schell, John A., Detroit, Mich. Radiator. No. 49,551; Aug. 22; Gaz. vol. 229; p. 1231.
Scherner, John, Milwaukee, assignor to Federal Rubber Manufacturing Company, Cudahy, Wis. Mat. No. 49,550; Aug. 22; Gaz. vol. 229; p. 1231.
Sergardi, Fabio B., assignor to Olds Motor Works, Lansing, Mich. Radiator-frame. No. 49,552; Aug. 22; Gaz. vol. 229; p. 1231.
Shapiro, Charles S., New York, N. Y. Panel-curtain. No. 49,553; Aug. 22; Gaz. vol. 229; p. 1231.
Sheble, Horace, assignor to Domestic Talking Machine Corporation, Philadelphia, Pa. Talking-machine cabinet. No. 49,592; Aug. 29; Gaz. vol. 229; p. 1545.
Shumard, Mainor A. and M. A., Jr., Haoke Ranch, near Boerne, Tex. Tobacco-pouch. No. 49,583; Aug. 29; Gaz. vol. 229; p. 1544.
Sinclaire, Henry P., Corning, N. Y. Dish. No. 49,479; Aug. 1; Gaz. vol. 229; p. 241.
Slavik, John F., assignor to Goldman Costume Co., New York, N. Y. Statuette or similar article. No. 49,584; Aug. 29; Gaz. vol. 229; p. 1544.
Sompania, Nicholas, New York, N. Y. Boot-black stand. No. 49,493; Aug. 8; Gaz. vol. 229; p. 581.
Springfield Body Corporation of New York. (See Maise, Herman C., assignor.)
Standard Tire & Rubber Manufacturing Company. (See Gillen, Mark J., assignor.)
Stevens, Francis A., Silver Lane, Conn. Paring-knife. No. 49,528; Aug. 15; Gaz. vol. 229; p. 914.
Stewart Phonograph Corporation. (See Ross, Frank A., assignor.)
Stokes, Jane G., assignor to Jane Gray Company, New York, N. Y. Doll. Nos. 49,585–6; Aug. 29; Gaz. vol. 229; p. 1544.
Sylvester, Daniel W., Clemson College, S. C. Belt-buckle. No. 49,554; Aug. 22; Gaz. vol. 229; p. 1231.
T. N. Benedict Mfg. Co. (See Saunders, Albert F., assignor.)
Vivaudou, Victor, New York, N. Y. Paste-jar. No. 49,555; Aug. 22; Gaz. vol. 229; p. 1232.
Vivaudou, Victor, New York, N. Y. Jar. No. 49,587; Aug. 29; Gaz. vol. 229; p. 1544.
Wade, John P., New York, N. Y. Duster. No. 49,588; Aug. 29; Gaz. vol. 229; p. 1544.
Waggoner, Frank H., assignor to Commercial Colortype Company, Chicago, Ill. Fan. No. 49,589; Aug. 29; Gaz. vol. 229; p. 1545.
Waibrecht, Max, West Hoboken, assignor to Collins & Aikman Company, Jersey City, N. J. Textile fabric. Nos. 49,529–31; Aug. 15; Gaz. vol. 229; p. 914.
Walker, Edwin J., Jr., Penn Yan, N. Y. Fixture for stores. Nos. 49,495–501; Aug. 8; Gaz. vol. 229; pp. 581–2.
West, George R., Pittsburgh, Pa. Combined aquarium and vase. No. 49,480; Aug. 1; Gaz. vol. 229; p. 241.
Whiting, Charles A., Franklin, assignor to Whiting & Davis Company, Plainville, Mass. Top for a hand-bag. No. 49,481; Aug. 1; Gaz. vol. 229; p. 241.
Whiting & Davis Company. (See Whiting, Charles A., assignor.)
Winslowe, George R., Rochester, N. Y. Apron. No. 49,502; Aug. 8; Gaz. vol. 229; p. 582.
Wolfe, William S., Akron, Ohio. Tire-tread. No. 49,590; Aug. 29; Gaz. vol. 229; p. 1545.
Wooten, Richard G., Toronto, Ontario, Canada. Tire-tread. No. 49,556; Aug. 22; Gaz. vol. 229; p. 1232.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A & A Rubber Company, Framingham, Mass. Shoe soles and heels made of rubber and fiber. No. 111,704; Aug. 1; Gaz. vol. 229; p. 263.
A. Bourjois & Co., Inc., New York, N. Y. Toilet and sachet powders, toilet water, rouge, &c. No. 111,994; Aug. 15; Gaz. vol. 229; p. 935.
A. Goodman & Sons, Inc., New York, N. Y. Small irregular pieces of egg-dough, heretofore known as egg-barley. No. 112,274; Aug. 29; Gaz. vol. 229; p. 1568.
A. C. Gilbert Company, The, New Haven, Conn. Building toys. No. 111,814; Aug. 8; Gaz. vol. 229; p. 606.
A. G. Morse Co., Inc., Chicago, Ill. Candy. No. 112,209; Aug. 22; Gaz. vol. 229; p. 1252.
A. H. Flanders Company, Chicago, Ill. Women's dresses and gowns. No. 112,267; Aug. 29; Gaz. vol. 229; p. 1567.
Abingdon Presurtite Mfg. Co., Abingdon, Ill. Composition for pipe-joints. No. 112,241; Aug. 29; Gaz. vol. 229; p. 1567.
Accounting Devices Company, Evanston, Ill. Loose-leaf binders and folders. No. 112,242; Aug. 29; Gaz. vol. 229; p. 1567.
Acme Coffee Co., Fort Worth, Tex. Coffee. No. 111,991; Aug. 15; Gaz. vol. 229; p. 935.
Ahlgren, Firm of F., Gefle, Sweden. Certain named pharmaceutical preparation. No. 112,147; Aug. 22; Gaz. vol. 229; p. 1250.
Aichman & Hahn, New York, N. Y. Malt beverage. No. 112,243; Aug. 29; Gaz. vol. 229; p. 1567.
Albert Dickinson Company, The, Chicago, Ill. Mixed feeds for horse, mule, and dairy use. No. 112,115; Aug. 22; Gaz. vol. 229; p. 1249.
Allen and Williamson, Attica, Ind. Salve for external use. No. 112,086; Aug. 22; Gaz. vol. 229; p. 1248.
Alpine Effervescent Co., New York, N. Y. Effervescent salts for medicinal purposes. No. 111,919; Aug. 15; Gaz. vol. 229; p. 933.
American Agricultural Chemical Co., The, New York, N. Y. Fertilizer. No. 111,992; Aug. 15; Gaz. vol. 229; p. 935.
American Agricultural Chemical Co., The, New York, N. Y. Poultry food composed of meat scraps. No. 112,244; Aug. 29; Gaz. vol. 229; p. 1567.
American Encaustic Tiling Co. Ltd., Zanesville, Ohio; Maurer, N. J., and New York, N. Y. Wall, floor, and ceiling tiles. Nos. 111,865–70; Aug. 8; Gaz. vol. 229; p. 607.
American Encaustic Tiling Co. Ltd., Zanesville, Ohio; Maurer, N. J., and New York, N. Y. Wall, floor, and ceiling tiles. No. 111,920; Aug. 15; Gaz. vol. 229; p. 933.
American Encaustic Tiling Co. Ltd., Zanesville, Ohio; Maurer, N. J., and New York, N. Y. Wall, floor, and ceiling tiles for interior and exterior purposes. No. 111,993; Aug. 15; Gaz. vol. 229; p. 935.
American Fastener Co., Waterbury, Conn. Metal snap-fasteners for wearing-apparel. No. 112,149; Aug. 22; Gaz. vol. 229; p. 1250.
American Guaranteed Holeproof Clothiers Co., Inc., The, New York, N. Y. Men's and boys' trousers and suits and women's skirts and suits. No. 112,128; Aug. 22; Gaz. vol. 229; p. 1249.
American Gypsum Company, The, Port Clinton, Ohio. Wall-plasters. No. 112,150; Aug. 22; Gaz. vol. 229; p. 1250.
American La France Fire Engine Company, Elmira, N. Y. Certain named cutlery, machinery, and tools, and parts thereof. No. 112,245; Aug. 29; Gaz. vol. 229; p. 1567.
American Peanut Corporation, The, Norfolk, Va. Peanut-butter and peanuts. No. 111,781; Aug. 8; Gaz. vol. 229; p. 605.
American Sanitary Corporation, Memphis, Tenn. Exterminator for rats and other rodents. No. 112,110; Aug. 22; Gaz. vol. 229; p. 1249.
American Sanitary Corporation, Memphis, Tenn. Insecticide, especially a poisonous compound for roaches and water-bugs. No. 112,111; Aug. 22; Gaz. vol. 229; p. 1249.
American Wringer Company, New York, N. Y. Clothes-wringers and parts thereof. Nos. 111,678–703; Aug. 1; Gaz. vol. 229; p. 263.
Antonina De Anna Chemical Co., The, Garfield, N. J. Certain named medicines and pharmaceutical preparations. No. 112,088; Aug. 22; Gaz. vol. 229; p. 1248.
Apsley Rubber Company, Hudson, Mass. Rubber boots, overshoes, shoes, and rubbers. No. 111,782; Aug. 8; Gaz. vol. 229; p. 605.
Armstrong Cork Company, Pittsburgh, Pa. Linoleum, cork carpet, and floor-coverings composed mainly of cork. No. 111,871; Aug. 8; Gaz. vol. 229; p. 607.
Aronow, Abraham, New York, N. Y. Certain named knit goods. No. 111,707; Aug. 1; Gaz. vol. 229; p. 263.
Ashdon, Robert, Los Angeles, Cal., assignor to Guarantee Advertising Company. Trading-stamps, redeemable coupons, and circulars. No. 111,708; Aug. 1; Gaz. vol. 229; p. 264.
Ashland Textile Company, New York, N. Y. Silk, cotton, and woolen piece goods. No. 111,872; Aug. 8; Gaz. vol. 229; p. 608.
Atlantic Refining Company, The, Philadelphia, Pa. Turpentine substitute. No. 111,873; Aug. 8; Gaz. vol. 229; p. 608.
Atlantic Refining Company, The, Philadelphia, Pa. Rust-preventive, kerosene-oil, paraffin-wax, candles. No. 111,874; Aug. 8; Gaz. vol. 229; p. 608.
Atlas Bread Factory, Milwaukee, Wis. Bread. No. 111,921; Aug. 15; Gaz. vol. 229; p. 933.
Auto Pneumatic Action Co., New York, N. Y. Actions for player-pianos. No. 112,148; Aug. 22; Gaz. vol. 229; p. 1250.
Automatic Ticket Selling & Cash Register Company, New York, N. Y. Tickets. No. 112,036; Aug. 22; Gaz. vol. 229; p. 1247.
B. & E. Medicine Company, Lenapah, Okla. Medicines for tuberculosis, bronchitis, hay-fever, &c. No. 112,246; Aug. 29; Gaz. vol. 229; p. 1567.
B. F. Goodrich Company, The, New York, N. Y. Pneumatic tires composed principally of rubber and twisted cords. No. 111,817; Aug. 8; Gaz. vol. 229; p. 606.
Baker, David M., Indianapolis, Ind. Cleaning compound for cloth. No. 111,922; Aug. 15; Gaz. vol. 229; p. 933.
Barnsley & Sons, Geo., Sheffield, England. Certain named metals and metal castings and forgings. No. 111,923; Aug. 15; Gaz. vol. 229; p. 933.
Bartholomay Brewery Company, Rochester, N. Y. Ale. No. 111,783; Aug. 8; Gaz. vol. 229; p. 605.
Battlefield Granite Corporation, Fredericksburg, Va. Granite for monuments, tombstones, and building, &c., purposes. No. 112,247; Aug. 29; Gaz. vol. 229; p. 1567.
Bay Side Canning Co., Alviso, Cal. Canned fruits and vegetables. No. 111,784; Aug. 8; Gaz. vol. 229; p. 605.
Beardslee Chandelier Manufacturing Company, Chicago, Ill. Certain electric-lighting fixtures. No. 111,875; Aug. 8; Gaz. vol. 229; p. 608.
Becker, George H., Baltimore, Md. Pretzels, bread, cakes, pies. No. 112,129; Aug. 22; Gaz. vol. 229; p. 1249.
Behning Piano Company, New York, N. Y. Pianos, piano-players, player-pianos. No. 112,037; Aug. 22; Gaz. vol. 229; p. 1247.
Belle Waist Company, The, Boston, Mass. Certain wearing-apparel for men, women, and children. No. 112,152; Aug. 22; Gaz. vol. 229; p. 1250.
Benner, Clinton F., Omaha, Nebr. Toilet-cleanser. No. 112,038; Aug. 22; Gaz. vol. 229; p. 1247.
Berlin Mills Company, Portland, Me. Wrapping-paper. No. 112,130; Aug. 22; Gaz. vol. 229; p. 1249.
Berlin Mills Company, Portland, Me. Wrapping-paper. No. 112,153; Aug. 22; Gaz. vol. 229; p. 1250.
Bernabeo, Rocco, Philadelphia, Pa. Skin-lotion and toilet water. No. 112,154; Aug. 22; Gaz. vol. 229; p. 1250.
Bijou Waist Co., The, New York, N. Y. Waists, middy-blouses, and dresses. No. 112,157; Aug. 22; Gaz. vol. 229; p. 1250.
Bijou Waist Co., The, New York, N. Y. Waists, middy-blouses, dresses, skirts, &c. No. 112,158; Aug. 22; Gaz. vol. 229; p. 1250.
Bijou Waist Co., The, New York, N. Y. Certain named clothing. No. 112,159; Aug. 22; Gaz. vol. 229; p. 1250.
Bilwol Manufacturing Company, New York, N. Y. Corn-plaster, an adhesive plaster. No. 112,248; Aug. 29; Gaz. vol. 229; p. 1567.
Bischof Sterne & Stein, Cincinnati, Ohio. Ladies' and misses' coats. No. 112,160; Aug. 22; Gaz. vol. 229; p. 1250.
Bjur Bros. Co., New York, N. Y. Pianos. No. 112,161; Aug. 22; Gaz. vol. 229; p. 1250.
Borden's Condensed Milk Company, Jersey City, N. J., and New York, N. Y. Dried milk. No. 112,162; Aug. 22; Gaz. vol. 229; p. 1250.
Borst, Charles A., Kingston, N. Y. Mayonnaise, fruit marmalades and preserves, peanut-butter, &c. No. 111,785; Aug. 8; Gaz. vol. 229; p. 605.
Bradbury Estate Company, Los Angeles, Cal. Oranges and lemons. No. 111,924; Aug. 15; Gaz. vol. 229; p. 933.
Brainerd, Lura S., Meriden, Conn. Waists and skirts. No. 111,877; Aug. 8; Gaz. vol. 229; p. 608.
British Drug Houses, Limited, The, London, England. Injection for venereal diseases. No. 112,041; Aug. 22; Gaz. vol. 229; p. 1247.
Brown, Francis H., Stamford, Conn. Metallic valves. No. 111,878; Aug. 8; Gaz. vol. 229; p. 608.

Brownell Auto Co., Inc., Birmingham, Ala. Spark-plugs and friction-tape. No. 112,089; Aug. 22; Gaz. vol. 229; p. 1248.

Buckeye Clothing Company, The, Marietta, Ohio. Men's and boys' suits, overcoats, and hats. No. 112,250; Aug. 29; Gaz. vol. 229; p. 1567.

Buffalo Sled Company, The, North Tonawanda, N. Y. Hand-wagons. No. 111,786; Aug. 8; Gaz. vol. 229; p. 605.

Burchell, N. Landon, Washington, D. C. Coffee. No. 112,042; Aug. 22; Gaz. vol. 229; p. 1247.

Burgess Sulphite Fibre Co., Berlin, N. H. Caustic soda. No. 112,165; Aug. 22; Gaz. vol. 229; p. 1251.

Burgess, Thornton W., Springfield, Mass. Certain named games and toys. No. 111,925; Aug. 15; Gaz. vol. 229; p. 933.

Burgess, Thornton W., Springfield, Mass. Candies. No. 112,163; Aug. 22; Gaz. vol. 229; p. 1250.

Burgess, Thornton W., Springfield, Mass. Cakes and crackers. No. 112,164; Aug. 22; Gaz. vol. 229; p. 1250.

Burgham, Nancy J., East Palestine, Ohio. Shampoo preparation and hair-tonic. No. 111,710; Aug. 1; Gaz. vol. 229; p. 264.

Burns Bros. Mfg. Co., New York, N. Y. Poplin and velour cotton piece goods. No. 111,879; Aug. 8; Gaz. vol. 229; p. 608.

C. Kenyon Company, Brooklyn, N. Y. Rain-coats and capes for men, women, and children. No. 112,288; Aug. 29; Gaz. vol. 229; p. 1568.

C. A. Edgarton Mfg. Co., Shirley, Mass. Suspenders and garters. No. 112,133; Aug. 22; Gaz. vol. 229; p. 1250.

C. D. Kenny Co., Baltimore, Md. Coffee. No. 111,736; Aug. 1; Gaz. vol. 229; p. 264.

C. D. Kenny Co., Baltimore, Md. Coffee. No. 112,194; Aug. 22; Gaz. vol. 229; p. 1251.

C. F. Blanke Tea & Coffee Company, St. Louis, Mo. Seasoning. No. 112,249; Aug. 29; Gaz. vol. 229; p. 1567.

C. & J. Michel Brewing Co., La Crosse, Wis. Non-intoxicating carbonated malt beverage. No. 112,298; Aug. 29; Gaz. vol. 229; p. 1568.

C. L. Cotton Perfume & Extract Co., The, Earlville, N. Y. Certain named foods. No. 112,257; Aug. 29; Gaz. vol. 229; p. 1567.

C. L. Cotton Perfume & Extract Co., The, Earlville, N. Y. Vanilla and lemon flavorings for food purposes. No. 112,258; Aug. 29; Gaz. vol. 229; p. 1567.

Cadwallader Gibson Lumber Co., Manila, Philippine Islands. Manufactured or partially-manufactured lumber and logs. No. 111,788; Aug. 8; Gaz. vol. 229; p. 605.

California Corrugated Culvert Co., Oakland and Berkeley, Cal. Certain named hardware and plumbing and steam-fitting supplies. No. 111,995; Aug. 15; Gaz. vol. 229; p. 935.

Camp, Charles, Greeley, Colo. Alfalfa-seed. No. 111,880; Aug. 8; Gaz. vol. 229; p. 608.

Campbell, Thomas P., Jr., Los Angeles, Cal. Remedy for diseases of nasal, bronchial, and other air-passages. No. 112,131; Aug. 22; Gaz. vol. 229; p. 1250.

Cannon, James W., Concord, N. C., and New York, N. Y. Cotton, linen, or silk piece goods or combinations thereof. No. 112,251; Aug. 29; Gaz. vol. 229; p. 1567.

Cannon Manufacturing Company, Kannapolis, N. C. Towels and toweling. No. 111,711; Aug. 1; Gaz. vol. 229; p. 264.

Carnation Milk Products Company, Portland, Me., and Seattle, Wash. Ice-cream. No. 112,252; Aug. 29; Gaz. vol. 229; p. 1567.

Castillo & Co., Rafael del, New York, N. Y. Cotton piece goods. No. 112,024; Aug. 15; Gaz. vol. 229; p. 936.

Castillo & Co., Rafael del, New York, N. Y. Cotton piece goods, mercerized cotton piece goods, cotton and silk piece goods. No. 112,025; Aug. 15; Gaz. vol. 229; p. 936.

Cayey-Caguas Tobacco Company, New York, N. Y. Cigars, cheroots, and cigarettes made of cigar-tobacco. No. 111,789; Aug. 8; Gaz. vol. 229; p. 605.

Central Foundry Company, The, New York, N. Y. Cast-iron soil-pipe and fittings. No. 111,881; Aug. 8; Gaz. vol. 229; p. 608.

Chapin & Company Incorporated, Hammond, Ind. Calf-meal. No. 111,790; Aug. 8; Gaz. vol. 229; p. 605.

Charles William Stores, Inc., The, Brooklyn, N. Y. Spool and embroidery cotton. No. 111,779; Aug. 1; Gaz. vol. 229; p. 266.

Charles William Stores, Inc., The, Brooklyn, N. Y. Blankets. No. 111,863; Aug. 8; Gaz. vol. 229; p. 607.

Chauncey, Irving, New York, N. Y. Certain named pharmaceutical preparations for toilet purposes. No. 112,166; Aug. 22; Gaz. vol. 229; p. 1251.

Chippewa Shoe Mfg. Co., Chippewa Falls, Wis. Leather boots and shoes. No. 111,791; Aug. 8; Gaz. vol. 229; p. 605.

Chocolate Products Company, Baltimore, Md. Candy. No. 111,712; Aug. 1; Gaz. vol. 229; p. 264.

Chocolate Products Company, Baltimore, Md. Candy. No. 112,112; Aug. 22; Gaz. vol. 229; p. 1249.

Ciddio and Company, Las Vegas, N. Mex. Pharmaceutical preparation for rheumatism and muscular ailments. No. 111,713; Aug. 1; Gaz. vol. 229; p. 264.

Clausen, Edna M., Aurora, Ill. Certain named undergarments. No. 111,882; Aug. 8; Gaz. vol. 229; p. 608.

Clausen & Son, S., Chicago, Ill. Furniture-polish. No. 112,253; Aug. 29; Gaz. vol. 229; p. 1567.

Climax Underwear Co., Inc., Utica, N. Y. Knit shirts, drawers, and union suits. No. 111,792; Aug. 8; Gaz. vol. 229; p. 605.

Cohen, Abraham, Cambridge, Mass. Tea, coffee, macaroni, spices, &c. No. 112,254; Aug. 29; Gaz. vol. 229; p. 1567.

Colonial Cordage Co., Chicago, Ill. Twine and cordage. Nos. 111,793–4; Aug. 8; Gaz. vol. 229; p. 605.

Columbia River Packers Association, Astoria, Oreg. Canned salmon. No. 112,043; Aug. 22; Gaz. vol. 229; p. 1247.

Commercial Camera Company, Providence, R. I. Photographic developing and fixing chemicals. No. 112,167; Aug. 22; Gaz. vol. 229; p. 1251.

Condensed Food Company, Philadelphia, Pa. Partially-cooked and prepared potatoes. Nos. 111,996–7; Aug. 15; Gaz. vol. 229; p. 935.

Cone, Frederick H., New York, N. Y. Lithopone and white lead. No. 111,715; Aug. 1; Gaz. vol. 229; p. 264.

Cone, Frederick H., New York, N. Y. Caustic soda and potash, bicarbonate of soda, eucalyptic oil. No. 111,716; Aug. 1; Gaz. vol. 229; p. 264.

Connellsville Macaroni Co., Connellsville, Pa. Certain named foods. No. 112,168; Aug. 22; Gaz. vol. 229; p. 1251.

Conservatory Player Action Company, Chicago, Ill. Piano, piano-player, organ, &c., benches, chairs, or seats. No. 111,883; Aug. 8; Gaz. vol. 229; p. 608.

Conservatory Player Action Company, Chicago, Ill. Valve mechanism for automatic musical instruments and players. No. 112,044; Aug. 22; Gaz. vol. 229; p. 1247.

Cook, C. I., Menominee, Mich. Milk and cream. No. 112,255; Aug. 29; Gaz. vol. 229; p. 1567.

Cooley, Harry, Madison, Wis. Non-inflammable, non-poisonous, odorless chemical destroyer of insects and vermin. No. 111,795; Aug. 8; Gaz. vol. 229; p. 605.

Corey, Fred G., Council Grove, Kans. Tooth powder and paste. No. 112,113; Aug. 22; Gaz. vol. 229; p. 1249.

Cornwell, William C., New York, N. Y. Pictorial representations. No. 111,796; Aug. 8; Gaz. vol. 229; p. 605.

Corral Wodiska y Ca., Tampa, Fla. Clear-Havana cigars. No. 111,926; Aug. 15; Gaz. vol. 229; p. 933.

Cosmopolitan Grocery Co., Chicago, Ill. Olive-oil. No. 111,717; Aug. 1; Gaz. vol. 229; p. 264.

Cott-A-Lap Company, The, Somerville, N. J. Fabrics adapted for covering walls, ceilings, and other surfaces. No. 112,256; Aug. 29; Gaz. vol. 229; p. 1567.

Cramer, Robert B., Philadelphia, Pa. Butter. No. 111,797; Aug. 8; Gaz. vol. 229; p. 605.

Crew Levick Company, Philadelphia, Pa. Greases for under-water lubrication. No. 111,998; Aug. 15; Gaz. vol. 229; p. 935.

Crystal Mfg. Company, Philadelphia, Pa. Strainers and rice-washers. No. 111,798; Aug. 8; Gaz. vol. 229; p. 605.

Cutler-Wagner Co., The, Duluth, Minn. Certain named salt. No. 112,090; Aug. 22; Gaz. vol. 229; p. 1248.

D. E. Winebrenner Co., Hanover, Pa. Canned vegetables. Nos. 112,341–2; Aug. 29; Gaz. vol. 229; p. 1570.

D. S. & H. Craig, Inc., Philadelphia, Pa. Rice. No. 112,132; Aug. 22; Gaz. vol. 229; p. 1250.

Darling & Co., C. C., Providence, R. I. Emblems of plated or precious-metal ware. No. 112,169; Aug. 22; Gaz. vol. 229; p. 1251.

Davis, Harry C., Philadelphia, Pa. Glazed silk wrapping-paper. No. 111,884; Aug. 8; Gaz. vol. 229; p. 608.

Day, Nellie S., Springfield, Mass. Dolls and other toy effigies. No. 111,799; Aug. 8; Gaz. vol. 229; p. 605.

Day, Walter L., Westfield, N. J. Attachable and detachable heels for shoes. No. 111,928; Aug. 15; Gaz. vol. 229; p. 933.

Detmer Woolen Co., New York, N. Y. Woolen fabrics in the piece. No. 111,718; Aug. 1; Gaz. vol. 229; p. 264.

Detroit Engineering Products Company, The, Detroit, Mich. Electric ignition apparatus. No. 111,999; Aug. 15; Gaz. vol. 229; p. 935.

Detroiter Motor Car Company, Detroit, Mich. Motor-cars. No. 112,260; Aug. 29; Gaz. vol. 229; p. 1567.

Dickinson Manufacturing Company, Springfield, Mass. Electric switches. No. 112,000; Aug. 15; Gaz. vol. 229; p. 935.

Douglas Candy Co., St. Joseph, Mo. Chocolate confections. No. 112,170; Aug. 22; Gaz. vol. 229; p. 1251.

Dow, Leland B., Kansas City, Mo. Remedy for rheumatism, lumbago, neuralgia, &c. No. 112,262; Aug. 29; Gaz. vol. 229; p. 1567.

Duffy, John A., Sioux City, Iowa. Chewing-gum. No. 112,116; Aug. 22; Gaz. vol. 229; p. 1249.

Duratex Company, The, Newark, N. J. Imitation leather. No. 111,800; Aug. 8; Gaz. vol. 229; p. 605.

Duskil Mop Company, Paducah, Ky. Polish-oil. No. 111,801; Aug. 8; Gaz. vol. 229; p. 605.

Duskil Mop Company, Paducah, Ky. Mops. No. 112,001; Aug. 15; Gaz. vol. 229; p. 935.

Dye, W. A., Wichita, Kans. Chilli mixture. No. 112,002; Aug. 15; Gaz. vol. 229; p. 935.

E. Heidhues & Co., Chicago, Ill. Gloves and hosiery. No. 111,942; Aug. 15; Gaz. vol. 229; p. 933.

E. M. Holt Plaid Mills, Burlington, N. C. Cotton ginghams. No. 111,822; Aug. 8; Gaz. vol. 229; p. 606.

E. S. Alpaugh & Company, New York, N. Y. Canned fruits and vegetables. No. 111,705; Aug. 1; Gaz. vol. 229; p. 263.

Eagle Pencil Company, New York, N. Y. Lead-pencils. No. 112,172; Aug. 22; Gaz. vol. 229; p. 1251.

Economy Service Company, New York, N. Y. Periodical. Nos. 111,803–4; Aug. 8; Gaz. vol. 229; p. 605.

Edison, Thomas A., West Orange, N. J. Phonographs. No. 111,802; Aug. 8; Gaz. vol. 229; p. 605.

Edwin C. Burt Co., New York and Brooklyn, N. Y. Leather shoes. No. 111,787; Aug. 8; Gaz. vol. 229; p. 605.

Elchengrün, Arthur, Berlin, Germany. Compositions for finishing textile fabrics. No. 111,929; Aug. 15; Gaz. vol. 229; p. 933.

Electric Knitting Co. Inc., Cohoes, N. Y. Dish-cloths. No. 112,263; Aug. 29; Gaz. vol. 229; p. 1567.

Elias & Lowenstein, Cincinnati, Ohio. Dresses. No. 111,834; Aug. 8; Gaz. vol. 229; p. 606.

Emboso Sales Company, Washington, D. C. Inks and powders for use in the process of producing relief prints. No. 112,134; Aug. 22; Gaz. vol. 229; p. 1250.

Embree, Frank L., New York, N. Y. Dried fruits and leaves for a laxative food. No. 112,173; Aug. 22; Gaz. vol. 229; p. 1251.

Emerson Electric Manufacturing Company, The, St. Louis, Mo. Certain named electrical apparatus and machines. No. 111,931; Aug. 15; Gaz. vol. 229; p. 933.

Emil Scheller & Co., A. G., Zurich, Switzerland. Certain chemical products for medicinal, hygienic, industrial, scientific, and photographic purposes, drugs, and medicines. No. 112,071; Aug. 22; Gaz. vol. 229; p. 1248.

Empire State Pickling Co., Phelps, N. Y. Canned sauer-kraut. No. 112,264; Aug. 29; Gaz. vol. 229; p. 1567.

Engineering Products Corporation, Incorporated, The, New York, N. Y. Insulating compounds for electrical conductors. No. 111,805; Aug. 8; Gaz. vol. 229; p. 605.

Engineering Products Corporation, Incorporated, The, New York, N. Y. Insulated joints for electrical conductors. No. 111,806; Aug. 8; Gaz. vol. 229; p. 605.

Ernest Simons Mfg. Co., Port Chester, N. Y. Night-robes and pajamas. No. 112,323; Aug. 29; Gaz. vol. 229; p. 1569.

Estes, Llewellyn W., Washington, D. C. Treatment for sluggish liver and constipation and a corn-remover. No. 112,174; Aug. 22; Gaz. vol. 229; p. 1251.

Everybody's Shoe Store, Washington, D. C. Shoes. No. 112,175; Aug. 22; Gaz. vol. 229; p. 1251.

Excelsior Specialty Co., Buffalo, N. Y. Preparation for the treatment of certain named diseases or disabilities. No. 111,932; Aug. 15; Gaz. vol. 229; p. 933.

F. H. Noble & Company, Chicago, Ill. Gold and silver solders for use in the manufacture and repairing of jewelry. No. 112,018; Aug. 15; Gaz. vol. 229; p. 936.

F. R. Rice Mercantile Cigar Company, St. Louis, Mo. Cigars. Nos. 111,763–4; Aug. 1; Gaz. vol. 229; p. 625.

Fairchild Bros. & Foster, New York, N. Y. Extract of the gastric-gland tissue for a medicinal preparation. No. 112,176; Aug. 22; Gaz. vol. 229; p. 1251.

Farmers' Cooperative Packing Company of La Crosse, La Crosse, Wis. Lard, sugar-cured picnics, cooked pigs' tongues. No. 111,719; Aug. 1; Gaz. vol. 229; p. 264.

Faust Manufacturing Co., Detroit, Mich. Metal and glass polish. No. 112,091; Aug. 22; Gaz. vol. 229; p. 1248.

Fay, Horace A., Janesville, Wis. Horse-collars and harness. No. 111,720; Aug. 1; Gaz. vol. 229; p. 264.

Fellows, Allen R., Sioux Falls, S. D. Playing-cards. No. 112,046; Aug. 22; Gaz. vol. 229; p. 1247.

Ferdinand Gutmann & Co., New York, N. Y. Bottle-seals. No. 111,940; Aug. 15; Gaz. vol. 229; p. 933.

Ferguson, Jas. T., Lynchburg, Va. Food syrup. No. 111,933; Aug. 15; Gaz. vol. 229; p. 933.

Fisher, Bruce & Co., Philadelphia, Pa. Glass fruit-jars. No. 111,721; Aug. 1; Gaz. vol. 229; p. 264.

Fitzwater, Isaac F., North Beatrice, Nebr. Salve, liniment, and dead-flesh destroyer. No. 111,807; Aug. 8; Gaz. vol. 229; p. 605.

Fleming, Robert G., Sr., Blackfoot, Idaho. Egg-preserver. No. 112,117; Aug. 22; Gaz. vol. 229; p. 1249.

Fletcher, J. Alan, New York, N. Y. Certain named games, toys, and sporting goods. No. 112,177; Aug. 22; Gaz. vol. 229; p. 1251.

Flett & Co., A., Buckie, Scotland. Pickled herrings in barrels. No. 111,885; Aug. 8; Gaz. vol. 229; p. 608.

Flood & Conklin Co., Newark, N. J. Bronze paint. No. 112,047; Aug. 22; Gaz. vol. 229; p. 1247.

Florida Products Company, The, Covington, Ky. Flavoring-syrup for still-water and carbonated beverages. No. 111,809; Aug. 8; Gaz. vol. 229; p. 606.

Forbes & Co., W. S., Richmond, Va. Ham, bacon, shoulders, and lard. No. 112,048; Aug. 22; Gaz. vol. 229; p. 1247.

Forbes & Co., W. S., Richmond, Va. Bacon. No. 112,178; Aug. 22; Gaz. vol. 229; p. 1251.

Ford, Silas M., St. Paul, Minn. Lath, fibrous roofing, siding, papers, asphalt shingles. No. 111,810; Aug. 8; Gaz. vol. 229; p. 606.

Fort Smith Coffee Company, Fort Smith, Ark. Roasted coffee. No. 112,268; Aug. 29; Gaz. vol. 229; p. 1568.

Franklin Mills Co., Batavia, N. Y. Cracked wheat, wheat germ or meal made from hard wheat, cereal breakfast food. No. 111,811; Aug. 8; Gaz. vol. 229; p. 606.

Franklin Mills Co., Batavia, N. Y. Fine flour of the entire wheat with part of the bran removed. No. 112,269; Aug. 29; Gaz. vol. 229; p. 1568.

Frederick Stearns & Co., Detroit, Mich. Certain named pharmaceutical preparations. No. 112,075; Aug. 22; Gaz. vol. 229; p. 1248.

Frederick Stearns & Co., Detroit, Mich. Reconstructive tonic. No. 112,076; Aug. 22; Gaz. vol. 229; p. 1248.

Frederick Stearns & Co., Detroit, Mich. Medicinal tonics and treatment of diseases of the blood, fever, &c. No. 112,325; Aug. 29; Gaz. vol. 229; p. 1569.

Freeman, Harry D., Colorado Springs, Colo. Dusting-cloth or dust-absorbing appliance. No. 111,934; Aug. 15; Gaz. vol. 229; p. 933.

Friesiander, Sally, Providence, R. I. Cigarettes. No. 112,180; Aug. 22; Gaz. vol. 229; p. 1251.

Funk Brothers Manufacturing Company, Chicago Heights, Ill. Metal posts. No. 111,935; Aug. 15; Gaz. vol. 229; p. 933.

Galban & Co., Inc., New York, N. Y., and Habana, Cuba. Dry salted meats and lard. No. 111,812; Aug. 8; Gaz. vol. 229; p. 606.

Galloway, Arthur T., Oakdale, Nebr. Wheat-flour. No. 111,936; Aug. 15; Gaz. vol. 229; p. 933.

Gardiner, Alfred P., Croton-on-the-Hudson, N. Y. Butter, eggs, milk, cheese. No. 112,271; Aug. 29; Gaz. vol. 229; p. 1568.

Garfinkle, Julius, Washington, D. C. Hosiery. No. 112,270; Aug. 29; Gaz. vol. 229; p. 1568.

Garland Company, The, Cleveland, Ohio. Prepared plastic material for laying and resurfacing roofs. No. 111,937; Aug. 15; Gaz. vol. 229; p. 933.

Gedlohn, Joseph G., Pittsburgh, Pa. Men's and boys' suits, overcoats, trousers, coats, and vests. No. 111,722; Aug. 1; Gaz. vol. 229; p. 264.

General Mercantile Co., Omaha, Nebr. Certain named foods. No. 111,813; Aug. 8; Gaz. vol. 229; p. 606.

Geo. E. Keith Stores Company, Brockton, Mass. Boots and shoes of leather, rubber, felt, or other fabric construction. No. 112,140; Aug. 22; Gaz. vol. 229; p. 1250.

Geo. H. Donah Co. Inc., Utica, N. Y. Washing-paste. No. 112,261; Aug. 29; Gaz. vol. 229; p. 1567.

Geo. R. Eldridge Co., Detroit, Mich. Eggs. No. 111,930; Aug. 15; Gaz. vol. 229; p. 933.

George Borgfeldt & Co., New York, N. Y. Alarm and hall clocks, clocks, watches, clockworks. No. 112,040; Aug. 22; Gaz. vol. 229; p. 1247.

George, Joseph F., Southbridge, Mass. Metal-polish. No. 112,003; Aug. 15; Gaz. vol. 229; p. 935.

George La Monte & Son, Nutley, N. J., and New York, N. Y. Safety-paper for bank checks and drafts, bills of exchange, promissory notes, &c. No. 112,199; Aug. 22; Gaz. vol. 229; p. 1252.

George Moore Ice Cream Co., Atlanta, Ga. Ice-cream. No. 112,300; Aug. 29; Gaz. vol. 229; p. 1568.

Gibson, Murdo, Duluth, Minn. Breath-purifiers. No. 112,092; Aug. 22; Gaz. vol. 229; p. 1248.

Gillen & Boney, Inc., Lincoln, Nebr. Candy. No. 112,181; Aug. 22; Gaz. vol. 229; p. 1251.

Gillette, Charles W., Chicago, Ill. Motor-trucks and automobiles. No. 112,118; Aug. 22; Gaz. vol. 229; p. 1249.

Gilman, Theodore, Jr., New York, N. Y. Medicinal plasters. No. 112,182; Aug. 22; Gaz. vol. 229; p. 1251.

Givens Brothers, Mount Sterling, Ill. Certain named canned products. No. 112,183; Aug. 22; Gaz. vol. 229; p. 1251.

Goldenbergs, Washington, D. C. Hats and caps. No. 111,816; Aug. 8; Gaz. vol. 229; p. 606.

Goodall Worsted Co., Sanford, Me., and New York, N. Y. Certain named piece goods and combinations of same. No. 112,273; Aug. 29; Gaz. vol. 229; p. 1568.

Goodman American Ice Cream Co., Chicago, Ill. Ice-cream. No. 112,184; Aug. 22; Gaz. vol. 229; p. 1251.

Goodman American Ice Cream Co., Chicago, Ill. Ice-cream. No. 112,275; Aug. 29; Gaz. vol. 229; p. 1568.

Goodman & Suss, Rochester, N. Y. Sack-coats. No. 112,119; Aug. 22; Gaz. vol. 229; p. 1249.

Goodwirth, Emil, St. Louis, Mo. Tablets for washing and ironing purposes. No. 112,185; Aug. 22; Gaz. vol. 229; p. 1251.

Goodyear Tire & Rubber Company The, Akron, Ohio. Rubber hose. Nos. 112,093–7; Aug. 22; Gaz. vol. 229; pp. 1248–9.

Goodyear Tire & Rubber Company, The, Akron, Ohio. Rubber-surfaced-fabric belting. No. 112,098; Aug. 22; Gaz. vol. 229; p. 1249.

Goodyear Tire & Rubber Company, The, Akron, Ohio. Rubber hose. No. 112,099; Aug. 22; Gaz. vol. 229; p. 1249.

Graham, Hinkley & Co., New York, N. Y. Green coffee. No. 111,886; Aug. 8; Gaz. vol. 229; p. 608.

Gray, Vernon V., New Hampshire, Ohio. Remedy for diseases of hogs. No. 112,276; Aug. 29; Gaz. vol. 229; p. 1568.

Griffith-Durney Company, San Francisco, Cal. Canned fruits. Nos. 111,938–9; Aug. 15; Gaz. vol. 229; p. 933.

Grimes, George P., Nashville, Ga. Prescription for the liver, stomach, and bowels. No. 111,818; Aug. 8; Gaz. vol. 229; p. 606.

Guarantee Advertising Company. (See Ashdon, Robert, assignor.)

Gund, Louis M., St. Louis, Mo. Bitters for indigestion, bowel troubles, debility, and as a general tonic. No. 112,277; Aug. 29; Gaz. vol. 229; p. 1568.

Guth Chocolate Company, Baltimore, Md. Candy. No. 112,100; Aug. 22; Gaz. vol. 229; p. 1249.

H. B. Claflin Corporation, The, New York, N. Y. Piece goods partly or wholly of cotton, woolen, or silk. No. 111,714; Aug. 1; Gaz. vol. 229; p. 264.
H. D. Lee Mercantile Co., The, Salina, Kans. Overalls. No. 111,740; Aug. 1; Gaz. vol. 229; p. 265.
H. D. Lee Mercantile Co., Salina, Kans., and Kansas City, Mo. Baking-powder and bluing. No. 112,201; Aug. 22; Gaz. vol. 229; p. 1252.
H. E. Hessler Co., Syracuse, N. Y. Handles for tools. No. 111,821; Aug. 8; Gaz. vol. 229; p. 606.
H. T. Paiste Company, Philadelphia, Pa. Certain named electrical apparatus and supplies. No. 111,904; Aug. 8; Gaz. vol. 229; p. 608.
Haas, Strauss & Co., Inc., New York, N. Y. Ladies' and misses' cloaks, suits, dresses, and skirts. No. 112,135; Aug. 22; Gaz. vol. 229; p. 1250.
Haeusermann Metal Mfg. Co., The, New York, N. Y. Lithographed and etched metal signs and name-plates. No. 111,820; Aug. 8; Gaz. vol. 229; p. 606.
Haight & Co., A. S., New York, N. Y. Knitted underwear, caps, outer coats, and sweaters. No. 111,724; Aug. 1; Gaz. vol. 229; p. 264.
Hardin, Ella, Strathmore, Cal. Washing-powder. No. 111,725; Aug. 1; Gaz. vol. 229; p. 264.
Harrison, David A., Los Angeles, Cal. Olive-oil in capsules. No. 111,941; Aug. 15; Gaz. vol. 229; p. 933.
Hartford Machine Screw Company, Hartford, Conn. Spark-plug insulators. No. 111,887; Aug. 8; Gaz. vol. 229; p. 608.
Hartman Company, The, Chicago, Ill. Certain named cutlery, machinery, and tools, and parts thereof. No. 111,819; Aug. 8; Gaz. vol. 229; p. 606.
Hartman Furniture & Carpet Co., Chicago, Ill. Certain named heating apparatus. No. 112,049; Aug. 22; Gaz. vol. 229; p. 1247.
Hecht & Campe, Inc., New York, N. Y. Nainsook underwear. No. 111,726; Aug. 1; Gaz. vol. 229; p. 264.
Heineman Lumber Company of Heineman, Wis., Merrill, Wis. Certain dressed and undressed lumber, also manufactured sawmill and planing-mill products. No. 112,004; Aug. 15; Gaz. vol. 229; p. 935.
Heller & Co., B., Chicago, Ill. Rat or mice poison, bedbug and roach destroyer. No. 111,727; Aug. 1; Gaz. vol. 229; p. 264.
Henry Glass & Co., New York, N. Y. Linen and cotton piece goods, silks, pile fabrics, &c. No. 111,815; Aug. 8; Gaz. vol. 229; p. 606.
Heptagon Laboratories, Inc., New York, N. Y. Face-powder in cake form. No. 112,186; Aug. 22; Gaz. vol. 229; p. 1251.
Herman Behr & Company, Incorporated, New York, N. Y. Abrasive-coated fabrics of paper, cloth, and combinations of same. No. 111,876; Aug. 8; Gaz. vol. 229; p. 608.
Hermitage Olive Oil Co., The, New York, N. Y. Olive-oil. No. 112,050; Aug. 22; Gaz. vol. 229; p. 1247.
Herrman, Arthur, New York, N. Y. Disk-record brush to be attached to sound-box of a talking-machine. No. 111,729; Aug. 1; Gaz. vol. 229; p. 264.
Hi-Po Waterproof Battery Corporation, Hammondsport and New York, N. Y. Dry batteries. No. 112,188; Aug. 22; Gaz. vol. 229; p. 1251.
Hickey-Freeman Co., Rochester, N. Y. Men's suits. No. 111,730; Aug. 1; Gaz. vol. 229; p. 264.
Hill Insulating & Mfg. Corp., New York, N. Y. Spark-plugs. No. 111,943; Aug. 15; Gaz. vol. 229; p. 933.
Hillside Orange Association, Lindsay, Cal. Citrus fruits. No. 112,187; Aug. 22; Gaz. vol. 229; p. 1251.
Hirsh & Schofield, Inc., New York, N. Y. Filtering-pulp. No. 111,888; Aug. 8; Gaz. vol. 229; p. 608.
Hirt, Clifford I., Peoria, Ill. Bread, cake, and pastry. No. 112,278; Aug. 29; Gaz. vol. 229; p. 1568.
Hochschild, Kohn & Co., Baltimore, Md. Toilet soap. No. 112,136; Aug. 22; Gaz. vol. 229; p. 1250.
Holladay, Joseph E. B., Suffolk, Va. Systems of transmitting waves by electricity. No. 111,944; Aug. 15; Gaz. vol. 229; p. 933.
Hollopeter, D. F., Factoryville, Pa. Mineral water. No. 111,945; Aug. 15; Gaz. vol. 229; p. 933.
Home Devices Corporation, New York, N. Y. Electric and hand laundry-washing machines. No. 111,889; Aug. 8; Gaz. vol. 229; p. 608.
Home Specialty Manufacturing Co., The, Cleveland, Ohio. Electrically-operated washing-machines. No. 112,189; Aug. 22; Gaz. vol. 229; p. 1251.
Hooton Lowrie Cocoa & Chocolate, Inc., Jersey City, N. J. Chocolate drops, bonbons, cakes, and squares. No. 111,731; Aug. 1; Gaz. vol. 229; p. 264.
Hoover Spring Company, San Francisco, Cal. Vehicle-springs. Nos. 111,823–4; Aug. 8; Gaz. vol. 229; p. 606.
Hope Webbing Company, Pawtucket, R. I. Narrow woven and braided fabrics of certain named materials. No. 112,280; Aug. 29; Gaz. vol. 229; p. 1568.
Howell, Henry R., Brooklyn, N. Y. Monthly trade journal. No. 112,281; Aug. 29; Gaz. vol. 229; p. 1568.
Hubbard Fertilizer Co. of Baltimore City, Baltimore, Md. Fertilizer. No. 112,137; Aug. 22; Gaz. vol. 229; p. 1250.
Hudford Company, Philadelphia, Pa. Unit for converting a motor-car chassis of the pleasure type into a commercial-truck chassis. No. 112,282; Aug. 29; Gaz. vol. 229; p. 1568.
Hudson Motor Car Company, Detroit, Mich. Automobiles. No. 111,825; Aug. 8; Gaz. vol. 229; p. 606.
Hunt Brothers Company, San Francisco, Cal. Canned fruits. No. 112,283; Aug. 29; Gaz. vol. 229; p. 1568.
Hurlbut Co., Limited, The, Preston, Ontario, Canada. Certain named footwear. No. 112,284; Aug. 29; Gaz. vol. 229; p. 1568.
Iddings, Roscoe C., Dayton, Ohio. Fire-extinguishing apparatus. No. 111,826; Aug. 8; Gaz. vol. 229; p. 606.
Ideal Coated Paper Co., Brookfield, Mass. Enameled paper in sheets for covering boxes. No. 111,732; Aug. 1; Gaz. vol. 229; p. 264.
Illinois Malleable Iron Co., Chicago, Ill. Adjustable floor-sleeves. No. 111,733; Aug. 1; Gaz. vol. 229; p. 264.
Inajiff Fuel Company, Akron, Ohio. Fuel compound for explosive-engines. No. 112,191; Aug. 22; Gaz. vol. 229; p. 1251.
Independent Chewing Gum Co., Arlington and Newark, N. J. Chewing-gum. No. 112,192; Aug. 22; Gaz. vol. 229; p. 1251.
Independent Lamp & Wire Company, Inc., Weehawken, N. J., and New York, N. Y. Incandescent electric lamps. No. 111,946; Aug. 15; Gaz. vol. 229; p. 933.
Indian Refining Company, Augusta, Me., and New York, N. Y. Lubricating oils and greases. No. 111,890; Aug. 8; Gaz. vol. 229; p. 608.
International Heater Company, Utica, N. Y. Certain named heating, lighting, and ventilating apparatus, not including electrical apparatus. Nos. 111,827–8; Aug. 8; Gaz. vol. 229; p. 606.
International Portland Cement Co., Ltd., Spokane, Wash. Portland cement. No. 111,829; Aug. 8; Gaz. vol. 229; p. 606.
Ito, Sakae, Tokyo, Japan. Perfumed waters and oils, face powders and lotions, &c. No. 111,891; Aug. 8; Gaz. vol. 229; p. 608.
J. Bibby & Sons Limited, Liverpool, England. Food for animals, composed of a mixture of cereals, meals, and oils. Nos. 112,155–6; Aug. 22; Gaz. vol. 229; p. 1250.
J. Spencer Turner Company, New York, N. Y. Cotton piece goods and upholstery. No. 111,856; Aug. 8; Gaz. vol. 229; p. 607.
J. Weller Co., The, Oak Harbor, Ohio. Catsup, tomato purée, canned vegetables. No. 111,862; Aug. 8; Gaz. vol. 229; p. 607.
J. K. Armsby Co., The, San Francisco, Cal. Canned fruits and vegetables. No. 111,706; Aug. 1; Gaz. vol. 229; p. 263.
J. P. Gordon Co., The, Columbus, Ohio. Fabric covers for spare tires. No. 111,723; Aug. 1; Gaz. vol. 229; p. 264.
James A. McCafferty & Sons Mfg. Co., Inc., Brooklyn, N. Y. Ready-mixed paints. No. 111,897; Aug. 8; Gaz. vol. 229; p. 608.
James H. Rhodes & Company, Chicago, Ill. Stone cement or putty. No. 112,219; Aug. 22; Gaz. vol. 229; p. 1252.
Jay, Alice S., Los Gatos, Cal. Perforated music-rolls. No. 111,734; Aug. 1; Gaz. vol. 229; p. 264.
Jewell Brook Woolen Co., Ludlow, Vt. Kerseys, meltons, thibets, and cassimeres. No. 112,138; Aug. 22; Gaz. vol. 229; p. 1250.
Jiffy Starter Company, Incorporated, Detroit, Mich. Mechanical starting devices for engines. No. 111,947; Aug. 15; Gaz. vol. 229; p. 934.
John H. Parker Company, Malden, Mass. Bathing-shoes. No. 111,844; Aug. 8; Gaz. vol. 229; p. 607.
John Hoberg Company, The, Green Bay, Wis. Toilet-paper. No. 112,051; Aug. 22; Gaz. vol. 229; p. 1247.
John Hoffmann Packing Co., The, Cincinnati, Ohio. Lard, sweet-pickled and sugar-cured hams, bacon, and shoulder. No. 112,279; Aug. 29; Gaz. vol. 229; p. 1568.
John Shillito Company, The, Cincinnati, Ohio. Cloaks and outer suits for children, misses, and ladies. No. 111,851; Aug. 8; Gaz. vol. 229; p. 607.
John T. Doyle Co., The, New Haven, Conn. Certain named foods. No. 112,171; Aug. 22; Gaz. vol. 229; p. 1251.
John Wanamaker, New York, New York, N. Y. Golf-balls. No. 111,915; Aug. 8; Gaz. vol. 229; p. 609.
John Wanamaker, New York, New York, N. Y. Certain named knitted, netted, and textile fabrics. No. 112,146; Aug. 22; Gaz. vol. 229; p. 1250.
John Wanamaker, Philadelphia, Philadelphia, Pa. Certain named clothing for men, women, misses, children, and infants. No. 112,145; Aug. 22; Gaz. vol. 229; p. 1250.
Johnson, J. Bailey, Pittsburgh, Pa. Certain pharmaceutical preparations for toilet purposes. No. 111,948; Aug. 15; Gaz. vol. 229; p. 934.
Johnstown Grocery Company, Johnstown, Pa. Mustard. No. 111,735; Aug. 1; Gaz. vol. 229; p. 264.
Jos. A. Morris & Co., Inc., New York, N. Y. Ladies', misses', juniors', and children's dresses. No. 111,958; Aug. 15; Gaz. vol. 229; p. 934.
Juergens & Andersen Company, Chicago, Ill. Necklaces. No. 112,139; Aug. 22; Gaz. vol. 229; p. 1250.
K-C Lumber Company, The, Lucedale, Miss. Canned vegetables. Nos. 112,285–6; Aug. 29; Gaz. vol. 229; p. 1568.
Kaiser, Chas., New York, N. Y. Cigars, cheroots, and little cigars. No. 111,830; Aug. 8; Gaz. vol. 229; p. 606.
Kangaroo Manufacturing Co., Chicago, Ill. Hand-cars. No. 111,831; Aug. 8; Gaz. vol. 229; p. 606.
Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Cereal breakfast foods. No. 111,892; Aug. 8; Gaz. vol. 229; p. 608.

Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Baking-soda. No. 112,193; Aug. 22; Gaz. vol. 229; p. 1251.
Kelly Brass Works, Chicago, Ill. Job lots of brass, bronze, and aluminum castings. No. 112,005; Aug. 15; Gaz. vol. 229; p. 935.
Kentucky Derby Company, Inc., New York, N. Y. Certain named games and toys. No. 112,287; Aug. 29; Gaz. vol. 229; p. 1568.
Keystone Fireproofing Co., New York, N. Y. Fireproof construction-blocks for floors, roofs, and partitions. No. 112,120; Aug. 22; Gaz. vol. 229; p. 1249.
Keystone Fireproofing Co., New York, N. Y. Monolithic fireproof ferroconcrete floors, roofs, and partitions. No. 112,121; Aug. 22; Gaz. vol. 229; p. 1249.
Kieselguhr Company of America, Los Angeles, Cal. Plaster and cement. No. 111,949; Aug. 15; Gaz. vol. 229; p. 934.
Kilmor Paste Company (a Firm), Holyoke, Mass. Roach and vermin poison. No. 112,006; Aug. 15; Gaz. vol. 229; p. 935.
Kitchen Service Co., Chicago, Ill. Dish-washing machines. No. 112,007; Aug. 15; Gaz. vol. 229; p. 935.
Knabe Bros. Company, The, Cincinnati, Ohio. Talking-machines. No. 112,195; Aug. 22; Gaz. vol. 229; p. 1251.
Knapp, Edward J., Syracuse, N. Y. Candles. No. 112,196; Aug. 22; Gaz. vol. 229; p. 1251.
Koga, George F., Salt Lake City, Utah. Preparation for treatment of certain named diseases. No. 112,008; Aug. 15; Gaz. vol. 229; p. 935.
"Kolor-Bak" Products Co., The, Chicago, Ill. Preparation for restoring gray hair to its original color. No. 111,737; Aug. 1; Gaz. vol. 229; p. 264.
Krieger, M., Milwaukee, Wis. Silver and jewelry polish. No. 112,052; Aug. 22; Gaz. vol. 229; p. 1247.
Kroger Grocery and Baking Co., The, Cincinnati, Ohio. Cereal breakfast food. No. 111,950; Aug. 15; Gaz. vol. 229; p. 934.
Kuhn, Edward C., Cincinnati, Ohio. Umbrellas. No. 111,832; Aug. 8; Gaz. vol. 229; p. 606.
Kuhn, James C., New York, N. Y. Candies, marshmallows, chocolates, and pastes. No. 111,833; Aug. 8; Gaz. vol. 229; p. 606.
Kunath Medicine Mfg. Co., The, Evansville, Ind. Liquid medicine for women. No. 112,197; Aug. 22; Gaz. vol. 229; p. 1251.
Lambert Pharmacal Company, St. Louis, Mo. Antiseptic for certain uses. No. 111,893; Aug. 8; Gaz. vol. 229; p. 608.
Laminated Shim Company, Inc., New York, N. Y. Shims and shim-stock. No. 112,198; Aug. 22; Gaz. vol. 229; p. 1251.
Lamy, Eugène, Lyon-Villeurbanne, France. Sweetmeats and chocolates of all kinds and biscuits. No. 112,200; Aug. 22; Gaz. vol. 229; p. 1252.
Landers, Frary & Clark, New Britain, Conn. Certain named hardware supplies. No. 111,951; Aug. 15; Gaz. vol. 229; p. 934.
Landers, Frary & Clark, New Britain, Conn. Certain named electrical apparatus, machines, and supplies. No. 111,952; Aug. 15; Gaz. vol. 229; p. 934.
Lane Brothers Company, Poughkeepsie, N. Y. Lifting-jacks. No. 111,738; Aug. 1; Gaz. vol. 229; p. 264.
Lange Canning Co., Inc., Eau Claire, Wis. Canned vegetables. No. 111,953; Aug. 15; Gaz. vol. 229; p. 934.
Lauderbach Barber Co., Philipsburg, Pa. Certain named foods. No. 111,739; Aug. 1; Gaz. vol. 229; p. 264.
Laur, Maurice, Levallois-Perret, France. Grindstones, powders, and pastes for polishing and grinding. No. 112,053; Aug. 22; Gaz. vol. 229; p. 1247.
Lawrence, Arthur W., New York, N. Y. Calculating-machines. No. 111,954; Aug. 15; Gaz. vol. 229; p. 934.
Lee Brothers Company, Boston and Athol, Mass. Boots, shoes, sandals, and slippers. No. 112,202; Aug. 22; Gaz. vol. 229; p. 1252.
Lemon-Kola Sales Agency Co., Inc., Roanoke, Va. Soft drink. No. 111,741; Aug. 1; Gaz. vol. 229; p. 265.
Lenci Brothers, Brooklyn, N. Y. Tomato paste and peeled tomatoes. No. 112,289; Aug. 29; Gaz. vol. 229; p. 1568.
Lenz and Naumann, Inc., New York, N. Y. Quartz-glass crucibles, tubes, retorts, rods, &c. No. 111,742; Aug. 1; Gaz. vol. 229; p. 265.
Lester, Daniel B., Savannah, Ga. Table-water. No. 111,894; Aug. 8; Gaz. vol. 229; p. 608.
Levy & Hexter, New York, N. Y. Satin piece goods. No. 112,290; Aug. 29; Gaz. vol. 229; p. 1568.
Lewis, James E., Eupora, Miss. Timber-killer preparation. No. 112,009; Aug. 15; Gaz. vol. 229; p. 935.
Lewis, Seneca G., Greensburg, Pa. Supports for time-pieces formed of rubber. No. 112,203; Aug. 22; Gaz. vol. 229; p. 1252.
Libby, McNeill & Libby, Chicago, Ill. Canned meats, sausage, soups, and boneless chicken. No. 112,291; Aug. 29; Gaz. vol. 229; p. 1568.
Link-Belt Company, Chicago, Ill.; Philadelphia, Pa., and Indianapolis, Ind. Hoists. No. 112,010; Aug. 15; Gaz. vol. 229; p. 935.
Lithgow, Arthur W., Lawrence, Mass. Liniment for rheumatism, headache, and sprains. No. 112,011; Aug. 15; Gaz. vol. 229; p. 935.
Litosilo Co. of America, Incorporated, The, Philadelphia, Pa. Plastic material for surfacing floorings, &c. No. 111,895; Aug. 8; Gaz. vol. 229; p. 608.
Lloyds of America, Bradley Beach, N. J. Preparation to be added to fuel for internal-combustion engines. No. 111,743; Aug. 1; Gaz. vol. 229; p. 265.
Loft, George W., New York, N. Y., assignor to Loft, Incorporated. Candy. No. 112,054; Aug. 22; Gaz. vol. 229; p. 1247.
Loft, Incorporated. (See Loft, George W., assignor.)
Loggie, George W., Boston, Mass. Coffee. No. 112,292; Aug. 29; Gaz. vol. 229; p. 1568.
Lord & Burnham Co., Irvington, N. Y. Steam and hot-water heaters and heating systems and parts thereof. No. 111,744; Aug. 1; Gaz. vol. 229; p. 265.
Louis Pfaelzer & Sons, Chicago, Ill. Pork sausage. No. 111,846; Aug. 8; Gaz. vol. 229; p. 607.
Loveland Milling & Elevator Company, The, Loveland, Colo. Wheat and self-rising wheat flours. No. 111,745; Aug. 1; Gaz. vol. 229; p. 265.
Lugerman & Morrison, Inc., New York, N. Y. Watches. Nos. 112,122–3; Aug. 22; Gaz. vol. 229; p. 1249.
Luyties, Herman C. G., St. Louis, Mo. Perfume, toilet water, face and talcum powders. No. 112,012; Aug. 15; Gaz. vol. 229; p. 935.
Lysekils Mek. Verkstads Aktiebolag, Lysekil, Sweden. Internal-combustion engines, boat-motors, motor-plows. No. 111,746; Aug. 1; Gaz. vol. 229; p. 265.
M. Heminway & Sons Silk Co., Watertown, Conn. Embroidery-silks. No. 111,728; Aug. 1; Gaz. vol. 229; p. 264.
MacArthur Concrete Pile & Foundation Company, New York, N. Y. Piles. No. 111,747; Aug. 1; Gaz. vol. 229; p. 265.
Maikin, Herman, Brooklyn, N. Y. Shoes of leather, rubber, canvas, and cloth. No. 112,293; Aug. 29; Gaz. vol. 229; p. 1568.
Manas Bros., New York, N. Y. Malted milk. No. 112,055; Aug. 22; Gaz. vol. 229; p. 1247.
Manhattan Hair Cloth Co., New York, N. Y. Haircloth and cotton piece goods. No. 112,124; Aug. 22; Gaz. vol. 229; p. 1249.
Markatos, Spyros C., New York, N. Y. Bleaching-powder soluble in water for bleaching straw hats. No. 111,896; Aug. 8; Gaz. vol. 229; p. 608.
Marlow, John L., Monroe, Ga. Medical preparations for the treatment of certain named diseases and ailments. No. 111,955; Aug. 15; Gaz. vol. 229; p. 934.
Marshall Field & Company, Chicago, Ill. Trunks. No. 112,265; Aug. 29; Gaz. vol. 229; p. 1567.
Marshall Field & Company, Chicago, Ill. Gloves. No. 112,266; Aug. 29; Gaz. vol. 229; p. 1567.
Martens, Louis G., Geneva, Switzerland. Milk, cheese, and butter. No. 111,835; Aug. 8; Gaz. vol. 229; p. 606.
Martian Chemical Company, The, New York, N. Y. Ink-driers. No. 112,056; Aug. 22; Gaz. vol. 229; p. 1247.
Martin Dawson Company, The, Chicago, Ill. Candy. No. 112,114; Aug. 22; Gaz. vol. 229; p. 1249.
Martin Dawson Co., The, Chicago, Ill. Candy. No. 112,259; Aug. 29; Gaz. vol. 229; p. 1567.
Martinez S. en C., Sucs. de Jose, San Juan, Porto Rico. Rubber and leather shoes. No. 111,768; Aug. 1; Gaz. vol. 229; p. 265.
Marzolf, Bernhard, Buffalo, N. Y. Salve, (or ointment.) No. 112,057; Aug. 22; Gaz. vol. 229; p. 1247.
Master Builders Company, The, Cleveland, Ohio. Liquid preparation for preserving, hardening, impregnating, and waterproofing certain named construction materials. No. 111,836; Aug. 8; Gaz. vol. 229; p. 606.
May Department Stores Company, The, New York, N. Y. Certain named clothing for men, women, and children. No. 112,013; Aug. 15; Gaz. vol. 229; p. 935.
McCarthy, William T., Platteville, Wis. Medicine in tablet form for scours in cattle. No. 112,205; Aug. 22; Gaz. vol. 229; p. 1252.
McManness Milling & Grain Co., The, Findlay, Ohio. Wheat-flour. No. 112,294; Aug. 29; Gaz. vol. 229; p. 1568.
McNeil, Alan R., Mishawaka, Ind. Humidors for cigars. No. 112,014; Aug. 15; Gaz. vol. 229; p. 936.
Mechanical Rubber Company, The, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio. Machinery packing composed of rubber or rubber and fabric. No. 112,295; Aug. 29; Gaz. vol. 229; p. 1568.
Medeol Company, New York, N. Y. Hemorrhoidal suppositories. No. 112,101; Aug. 22; Gaz. vol. 229; p. 1249.
Meier & Co., John J., St. Louis, Mo. Pancake-flour and rolled oats. No. 112,296; Aug. 29; Gaz. vol. 229; p. 1568.
Mellahn, George, Burlington, Iowa. Bread. No. 112,297; Aug. 29; Gaz. vol. 229; p. 1568.
Melpa Manufacturing Company, Chicago, Ill. Certain named pharmaceutical preparations for toilet purposes. No. 112,015; Aug. 15; Gaz. vol. 229; p. 936.
Mellor, Norman, Philadelphia, Pa. Machine-bearings. No. 112,016; Aug. 15; Gaz. vol. 229; p. 936.
Melville Shoe Corporation, The, New York and Brooklyn, N. Y., and Philadelphia, Pa. Shoes in both cloth and leather. No. 111,749; Aug. 1; Gaz. vol. 229; p. 265.
Michigan Waterproofings Company, Grand Rapids, Mich. Leather, rubber, and canvas dressing and preservative. No. 112,206; Aug. 22; Gaz. vol. 229; p. 1252.
Mickelson-Shapiro Company, Minneapolis, Minn. Gopher, squirrel, and prairie-dog poison. No. 111,956; Aug. 15; Gaz. vol. 229; p. 934.

Miller-Elmer Manufacturing Co., Ltd., New Orleans, La. Candy. No. 111,751; Aug. 1; Gaz. vol. 229; p. 265.
Miller Rubber Company, The, Akron, Ohio. Toy balloons. No. 111,750; Aug. 1; Gaz. vol. 229; p. 265.
Miller Rubber Company, The, Akron, Ohio. Soles and heels of rubber composition. No. 112,058; Aug. 22; Gaz. vol. 229; p. 1247.
Miller Rubber Company, The, Akron, Ohio. Toy balloons. No. 112,299; Aug. 29; Gaz. vol. 229; p. 1568.
Mishawaka Woolen Manufacturing Company, Mishawaka, Ind. Hosiery. No. 111,957; Aug. 15; Gaz. vol. 229; p. 934.
Mishawaka Woolen Manufacturing Company, Mishawaka, Ind. Hosiery. No. 112,207; Aug. 22; Gaz. vol. 229; p. 1252.
Mitchell, James E., Utica, N. Y. Papeteries, writing and wrapping papers. No. 111,837; Aug. 8; Gaz. vol. 229; p. 606.
Montana Flour Mills Company, Lewistown, Mont. Wheat-flour. No. 111,752; Aug. 1; Gaz. vol. 229; p. 265.
Montana Flour Mills Company, Lewistown, Mont. Wheat-flour. No. 111,898; Aug. 8; Gaz. vol. 229; p. 608.
Montgomery Ward & Co., Inc., New York, N. Y., and Chicago, Ill. Monthly periodicals. No. 112,208; Aug. 22; Gaz. vol. 229; p. 1252.
Moon-Power Mfg. Co., Plainfield, N. J. Unguent preparation for cleaning and polishing eyeglasses, mirrors, &c. No. 111,899; Aug. 8; Gaz. vol. 229; p. 608.
Moross, William P. D., Rossville, Ga. Dry paint. No. 111,838; Aug. 8; Gaz. vol. 229; p. 606.
Morris & Co., Baltimore, Md. Middy-blouses. No. 111,900; Aug. 8; Gaz. vol. 229; p. 608.
Motor-Mechanics Company, The, Cleveland, Ohio. Magazine issued monthly. No. 111,959; Aug. 15; Gaz. vol. 229; p. 934.
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck or canvas. No. 111,753; Aug. 1; Gaz. vol. 229; p. 265.
Mount Vernon-Woodberry Mills, Incorporated, Baltimore, Md. Cotton duck or canvas. No. 112,210; Aug. 22; Gaz. vol. 229; p. 1252.
Mulkey Salt Company, Detroit, Mich. Salt. No. 112,301; Aug. 29; Gaz. vol. 229; p. 1569.
Myers, S. A. & H., Boston, Mass. Rain-coats. No. 111,901; Aug. 8; Gaz. vol. 229; p. 608.
N. K. Fairbank Company, The, Union township, near Guttenberg, N. J., and Chicago, Ill. Lard substitute consisting of cotton-seed oil and beef-fat. No. 112,045; Aug. 22; Gaz. vol. 229; p. 1247.
National Bankers Service Inc., The, New York, N. Y. Blank books and cards. No. 111,754; Aug. 1; Gaz. vol. 229; p. 265.
National Washboard Company, Chicago, Ill. Washboards. No. 111,755; Aug. 1; Gaz. vol. 229; p. 265.
Nau, Elizabeth, New York, N. Y. Salves. No. 112,211; Aug. 22; Gaz. vol. 229; p. 1252.
Neafie, Leslie E., assignor to H. S. Thalheimer and N. C. Wright, Toledo, Ohio. Remedy for constipation. No. 112,102; Aug. 22; Gaz. vol. 229; p. 1249.
Neenah Paper Company, Neenah, Wis. Bond, ledger, and writing papers. No. 111,756; Aug. 1; Gaz. vol. 229; p. 265.
Neenah Paper Company, Neenah, Wis. Bond, ledger, and writing papers. No. 112,302; Aug. 29; Gaz. vol. 229; p. 1569.
Nelson Company, Sam, Jr., Grinnell, Iowa. Corn kernels for popping. No. 111,839; Aug. 8; Gaz. vol. 229; p. 606.
New Century Game Co., Orange, N. J. Checkers. No. 111,840; Aug. 8; Gaz. vol. 229; p. 606.
New Departure Manufacturing Company, The, Bristol, Conn. Antifriction-bearings and parts thereof. Nos. 111,902–3; Aug. 8; Gaz. vol. 229; p. 608.
New Jersey Car Spring & Rubber Co., Jersey City, N. J. Certain named mechanical rubber goods. No. 112,059; Aug. 22; Gaz. vol. 229; p. 1247.
New Toy Manufacturing Co., New York, N. Y. Toys and dolls. No. 111,960; Aug. 15; Gaz. vol. 229; p. 934.
Newman-King Fashion Co., New York, N. Y. Monthly magazine. No. 111,841; Aug. 8; Gaz. vol. 229; p. 607.
Newsome Feed & Grain Company, Pittsburgh, Pa. Dairy and stock feed of palm-oil and flour-middlings. No. 112,060; Aug. 22; Gaz. vol. 229; p. 1247.
Nightingale-Morse Mills, Incorporated, The, Putnam, Conn. Cotton piece goods. No. 111,961; Aug. 15; Gaz. vol. 229; p. 934.
Norman, Mehrold A., Chicago, Ill. Salve or ointment for burns, cuts, and bruises. No. 112,141; Aug. 22; Gaz. vol. 229; p. 1250.
Nulomoline Company, The, New York, N. Y. Syrup. No. 111,842; Aug. 8; Gaz. vol. 229; p. 607.
O. L. E. A. Olivicoltori Liguri Esportatori Associati, Oneglia, Italy. Olive-oil. No. 112,061; Aug. 22; Gaz. vol. 229; p. 1247.
Ochs, Milton, Cincinnati, Ohio. Certain named men's and young men's clothing. No. 112,303; Aug. 29; Gaz. vol. 229; p. 1569.
Oneida Community, Limited, Oneida, N. Y. Animal-traps. No. 111,757; Aug. 1; Gaz. vol. 229; p. 265.
Oppenheim, Oberndorf & Co. Inc., Baltimore, Md. Underwear union suits. No. 111,962; Aug. 15; Gaz. vol. 229; p. 934.
Oregon City Manufacturing Co., Oregon City, Oreg. Workshirts. No. 112,304; Aug. 29; Gaz. vol. 229; p. 1569.
Orr & Sons, William, Orrs Mills, N. Y. Poultry feeds. No. 111,843; Aug. 8; Gaz. vol. 229; p. 607.
Oscar F. Mayer & Bro., Chicago, Ill. Smoked meats. No. 111,748; Aug. 1; Gaz. vol. 229; p. 265.
Oxygenerator Co., The, Chicago, Ill. Mechanical device for removing carbon from gas-engine cylinders. No. 111,758; Aug. 1; Gaz. vol. 229; p. 265.
P. Berry & Sons Incorporated, Hartford, Conn. Butter. No. 111,709; Aug. 1; Gaz. vol. 229; p. 264.
Pacific Building Materials Company, San Francisco, Cal. Building papers and felts, wall-boards. No. 112,103; Aug. 22; Gaz. vol. 229; p. 1249.
Pacific Coast Salt Co., San Francisco, Cal. Salt. No. 111,963; Aug. 15; Gaz. vol. 229; p. 934.
Panama Lubricants Company, Los Angeles, Cal. Lubricants. No. 111,759; Aug. 1; Gaz. vol. 229; p. 265.
Panama Rubber & Equipment Co., St. Louis, Mo. Automobile-tire filler of resilient composition, taking the place of air and inner tubes. No. 112,062; Aug. 22; Gaz. vol. 229; p. 1247.
Park & Taylor, Inc., New York, N. Y. Men's and boys' coats, vests, trousers, and overcoats. No. 111,760; Aug. 1; Gaz. vol. 229; p. 265.
Parrett Tractor Company, Chicago, Ill. Tractors. No. 112,019; Aug. 15; Gaz. vol. 229; p. 936.
Pavlik & Sons, John, Verdigre, Nebr. Wheat-flour. No. 111,845; Aug. 8; Gaz. vol. 229; p. 607.
Pedersen, Robert C., Waterloo, Iowa. Cravats and scarfs. No. 112,213; Aug. 22; Gaz. vol. 229; p. 1252.
Peerless Mfg. Co., The, Norristown, Pa. Toilet-paper. Nos. 112,063–4; Aug. 22; Gaz. vol. 229; pp. 1247–8.
Peerless Petticoat Company, Boston, Mass. Petticoats. No. 112,214; Aug. 22; Gaz. vol. 229; p. 1252.
Penley, Eugene W., Auburn, Me. Hams, bacon, lard, sausage, oleomargarin. No. 112,215; Aug. 22; Gaz. vol. 229; p. 1252.
Perfection Mfg. Co., Philadelphia, Pa. Cleaning compound in the nature of a soap. No. 112,216; Aug. 22; Gaz. vol. 229; p. 1252.
Permutit Company, The, New York, N. Y. Water purifying and treating materials. Nos. 111,964–7; Aug. 15; Gaz. vol. 229; p. 934.
Perrine, Leroy L., Bedford, Ind. Educational card games. No. 112,217; Aug. 22; Gaz. vol. 229; p. 1252.
Phenix Cheese Co., New York, N. Y. Cheese. No. 111,905; Aug. 8; Gaz. vol. 229; p. 609.
Phillips Company, Joseph, Cleveland, Ohio. Certain named electrical apparatus and supplies. No. 112,022; Aug. 15; Gaz. vol. 229; p. 936.
Phoenix Oil Company, The, Cleveland, Ohio. Lubricating-oils, greases, and compounds, lubricants. No. 112,305; Aug. 29; Gaz. vol. 229; p. 1569.
Photo-Chemical Co., Inc., New York, N. Y. Developing compound. No. 112,023; Aug. 15; Gaz. vol. 229; p. 936.
Plankinton Packing Company, Milwaukee, Wis. Eggs. No. 111,968; Aug. 15; Gaz. vol. 229; p. 934.
Plantamura, Vincent, New York, N. Y. Treatment for corns. No. 112,125; Aug. 22; Gaz. vol. 229; p. 1249.
Playerphone Talking Machine Co., Chicago, Ill. Phonographs and talking-machines. No. 112,065; Aug. 22; Gaz. vol. 229; p. 1248.
Post, Harold L., Appleton, Wis. Construction toys. No. 112,126; Aug. 22; Gaz. vol. 229; p. 1249.
Prebol, Bronislaw, Passaic, N. J. Medicinal preparation for sprains, rheumatism, &c. No. 111,761; Aug. 1; Gaz. vol. 229; p. 265.
Puritan Manufacturing Co., Portland, Oreg. Non-alcoholic soft drinks and fruit flavors for same. Nos. 112,306–9; Aug. 29; Gaz. vol. 229; p. 1569.
Purity Oats Company, Davenport and Keokuk, Iowa. Cornmeal and hominy-grits. No. 112,310; Aug. 29; Gaz. vol. 229; p. 1569.
Putnam, Alfred, New York, N. Y. Canned fruits. No. 112,066; Aug. 22; Gaz. vol. 229; p. 1248.
Pyle National Electric Headlight Company, Chicago, Ill. Certain named electrical apparatus, machines, and supplies. No. 112,020; Aug. 15; Gaz. vol. 229; p. 936.
Pyle National Electric Headlight Company, Chicago, Ill. Certain named machinery and tools and parts thereof. No. 112,021; Aug. 15; Gaz. vol. 229; p. 936.
R. & J. Waist Co., The, New London, Conn. Children's underwaists. No. 111,969; Aug. 15; Gaz. vol. 229; p. 934.
R. P. Andrews Paper Company, Washington, D. C. Fountain-pens, loose-leaf books, box-files, &c. No. 112,087; Aug. 22; Gaz. vol. 229; p. 1248.
Reckitts (U. S. A.), Ltd., New Brunswick, N. J., and New York, N. Y. Blue and laundry articles containing blue. No. 112,067; Aug. 22; Gaz. vol. 229; p. 1248.
Red C Oil Manufacturing Co., The, Baltimore, Md. Kerosene, lubricating oils and greases, naphthas, and gasolenes. No. 112,311; Aug. 29; Gaz. vol. 229; p. 1569.
Reedsburg Canning Company, Reedsburg, Wis. Canned vegetables. No. 111,970; Aug. 15; Gaz. vol. 229; p. 934.
Reese, Milton F., New York, N. Y. Cleaning, polishing, and scouring soap. No. 111,847; Aug. 8; Gaz. vol. 229; p. 607.
Reid Bros., Seattle, Wash., and San Francisco, Cal. Waterproofed hospital-sheeting. No. 112,104; Aug. 22; Gaz. vol. 229; p. 1249.
Rendon, Felix M. E., Laredo, Tex. Hair-dye. No. 112,068; Aug. 22; Gaz. vol. 229; p. 1248.

Rentz & Company, C. J., Cincinnati, Ohio. Cleaning and polishing material for certain named surfaces. No. 111,762; Aug. 1; Gaz. vol. 229; p. 265.
Resinol Chemical Co., Baltimore, Md. Soap. No. 111,848; Aug. 8; Gaz. vol. 229; p. 607.
Rich, Ralph E., Chicago, Ill. Special-process metal in ingots, castings, or forgings. No. 112,026; Aug. 15; Gaz. vol. 229; p. 936.
Richard Hudnut, New York, N. Y. Nail-polish. No. 112,190; Aug. 22; Gaz. vol. 229; p. 1251.
Richards & Conover Hardware Company, Kansas City, Mo. Certain named cutlery, machinery, and tools, and parts thereof. No. 111,971; Aug. 15; Gaz. vol. 229; p. 934.
Richmond Hosiery Mills, Rossville, Ga. Hosiery. Nos. 112,220–3; Aug. 22; Gaz. vol. 229; p. 1252.
Richter & Hoffmann The Harvard Dental Manufacturing Co. Gesellschaft mit beschränkter Haftung, assignor to Richter & Hoffmann Harvard Gesellschaft mit beschränkter Haftung, Berlin, Germany. Certain named surgical and dental appliances. No. 111,849; Aug. 8; Gaz. vol. 229; p. 607.
Richter & Hoffmann Harvard Gesellschaft mit beschränkter Haftung. (See Richter & Hoffmann The Harvard Dental Manufacturing Co. Gesellschaft mit beschränkter Haftung, assignor.)
Risk, Franklin M., Chicago, Ill. Eggs, butter, and dressed poultry. No. 112,312; Aug. 29; Gaz. vol. 229; p. 1569.
Robinson-Roders Co., Newark, N. J. Life-preservers in the form of body-wear, pillows, cushions, and mattresses. No. 112,313; Aug. 29; Gaz. vol. 229; p. 1569.
Rockburn Chemical Corporation, New York, N. Y. Heating compound—namely, alcohol in solid form. No. 112,314; Aug. 29; Gaz. vol. 229; p. 1569.
Rohrbaugh, Israel J., Beech Creek, Pa. Wheat-flour. No. 112,315; Aug. 29; Gaz. vol. 229; p. 1569.
Rosenblum, Joseph, South Deerfield, Mass. Fresh onions, potatoes, and apples. No. 112,316; Aug. 29; Gaz. vol. 229; p. 1569.
Roth & Co., O., New York, N. Y. Cheese. No. 112,142; Aug. 22; Gaz. vol. 229; p. 1250.
Ruppert, Margaret, Philadelphia, Pa. Preparation to remove superfluous hair from the face or body without injury to the skin. No. 112,224; Aug. 22; Gaz. vol. 229; p. 1252.
S. Liebmann's Sons Brewing Company, Brooklyn, N. Y. Non-alcoholic beverage. No. 112,204; Aug. 22; Gaz. vol. 229; p. 1252.
S. Rose Co., The, New York, N. Y. Certain named diamond-pointed tools and tools requiring use of diamonds and bort. No. 111,906; Aug. 8; Gaz. vol. 229; p. 609.
S. W. Noggle Wholesale and Manufacturing Company, Kansas City, Mo. Periodical issued monthly. No. 112,212; Aug. 22; Gaz. vol. 229; p. 1252.
San Dimas Orange Growers Ass'n, San Dimas, Cal. Oranges and grape-fruit. No. 112,069; Aug. 22; Gaz. vol. 229; p. 1248.
Sandberg, Chas., New York, N. Y. Sleeping-garments. No. 112,225; Aug. 22; Gaz. vol. 229; p. 1252.
Sandow's Cocoa and Chocolate Company Limited, London, England. Cocoa. No. 112,070; Aug. 22; Gaz. vol. 229; p. 1248.
Sanger Brothers, New York, N. Y., and Dallas and Waco, Tex. Hosiery, knit underwear, sweaters, gloves. No. 111,972; Aug. 15; Gaz. vol. 229; p. 934.
Sanger Brothers, New York, N. Y., and Dallas and Waco, Tex. Collars, shirts, knit underwear, gloves. No. 111,973; Aug. 15; Gaz. vol. 229; p. 934.
Sanitary Seal Manufacturing Company, The, Baltimore, Md. Bottle-seals. No. 111,907; Aug. 8; Gaz. vol. 229; p. 609.
Saul, J. & I., New York, N. Y. Men's outer garments. No. 112,226; Aug. 22; Gaz. vol. 229; p. 1252.
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y. Toilet-paper. No. 112,227; Aug. 22; Gaz. vol. 229; p. 1252.
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y. Toilet-paper. No. 112,317; Aug. 29; Gaz. vol. 229; p. 1569.
Scheidel-Western X-Ray Company, Chicago, Ill. Certain named dental, medical, and surgical appliances. No. 111,974; Aug. 15; Gaz. vol. 229; p. 934.
Schmelzer Arms Co., Kansas City, Mo. Golf-balls. No. 111,975; Aug. 15; Gaz. vol. 229; p. 934.
Scholl Manufacturing Company, The, Chicago, Ill. Certain named medical and surgical appliances. No. 111,976; Aug. 15; Gaz. vol. 229; p. 934.
Schulz, Anna, New York, N. Y. Chemical preparation for cleaning filter masse. No. 112,027; Aug. 15; Gaz. vol. 229; p. 936.
Schulze Baking Company, Chicago, Ill. Bread. No. 112,318; Aug. 29; Gaz. vol. 229; p. 1569.
Schuster Company, The, Cleveland, Ohio. Certain named non-alcoholic beverages. No. 112,072; Aug. 22; Gaz. vol. 229; p. 1248.
Scoville, Brown & Company, Wellsville, N. Y. Coffee and cocoa. No. 112,143; Aug. 22; Gaz. vol. 229; p. 1250.
Sears & Nichols Co., The, Chillicothe, Ohio. Canned sauer-kraut, vegetables, fruits, and hominy. No. 112,028; Aug. 15; Gaz. vol. 229; p. 936.
Sears, Roebuck and Co., Chicago, Ill. Prepared roofing. No. 111,850; Aug. 8; Gaz. vol. 229; p. 607.
Seneca Wire and Manufacturing Company, The, Fostoria, Ohio. Iron and steel wire. No. 112,319; Aug. 29; Gaz. vol. 229; p. 1569.
Shakopee Stove Company, Shakopee, Minn. Wood and coal stoves and ranges. No. 111,908; Aug. 8; Gaz. vol. 229; p. 609.
Sharer, John C., Alliance, Ohio. Laxative pill or tablet. No. 112,320; Aug. 29; Gaz. vol. 229; p. 1569.
Sharpe, James E., Oklahoma, Okla. Malaria remedy. No. 112,321; Aug. 29; Gaz. vol. 229; p. 1569.
Shaw Stocking Company, Lowell, Mass. Hosiery, knit underwear, sweaters. No. 111,978; Aug. 15; Gaz. vol. 229; p. 934.
Sherer-Gillett Company, Chicago, Ill. Certain named foods. No. 112,322; Aug. 29; Gaz. vol. 229; p. 1569.
Shwayder Trunk Mfg. Company, The, Denver, Colo. Trunks, suitcases, and traveling-bags. No. 111,977; Aug. 15; Gaz. vol. 229; p. 934.
Siegfried-Maltz Pants Manufacturing Company, St. Louis, Mo. Pants or trousers. No. 112,029; Aug. 15; Gaz. vol. 229; p. 936.
Skinner, L. B., Dunedin, Fla. Oranges, grape-fruit, and tangerines. No. 112,073; Aug. 22; Gaz. vol. 229; p. 1248.
So-Luminum Manufacturing and Engineering Co., Inc., New York, N. Y. Solders. No. 111,979; Aug. 15; Gaz. vol. 229; p. 934.
Sommer, Adolph, Cambridge, Mass. Paste and liquid leather polisher, refinisher, and preserver. No. 112,105; Aug. 22; Gaz. vol. 229; p. 1249.
South Carolina Produce Association, The, Meggetts, S. C. Fresh potatoes, cabbages, cucumbers, beans, &c. No. 112,324; Aug. 29; Gaz. vol. 229; p. 1569.
Southern Pipe & Culvert Co., Macon, Ga. Sections of blocks for sewer or conduit construction. No. 111,765; Aug. 1; Gaz. vol. 229; p. 265.
Speakman Supply and Pipe Company, Wilmington, Del. Waste-fixtures for lavatories. No. 111,909; Aug. 8; Gaz. vol. 229; p. 609.
Springfield Facing Company, Springfield, Mass. Carbonizing or case-hardening compounds. No. 112,074; Aug. 22; Gaz. vol. 229; p. 1248.
St. Anthony & Dakota Elevator Co., The, Minneapolis, Minn. Coal. No. 111,910; Aug. 8; Gaz. vol. 229; p. 609.
St. Marys Oil Engine Company, The, St. Charles, Mo. Internal-combustion engines. No. 112,228; Aug. 22; Gaz. vol. 229; p. 1252.
Stahl-Urban and Co., Terre Haute, Ind. Overalls, jackets, mackinaws. No. 112,030; Aug. 15; Gaz. vol. 229; p. 936.
Standard Apparatus Co., The, Cincinnati, Ohio. Electro-therapeutic instrument for diagnosis and treatment. No. 111,911; Aug. 8; Gaz. vol. 229; p. 609.
Standard Brewery Company of Baltimore City, Baltimore, Md. Non-intoxicating beverage made of malt, hops, and cereals. No. 111,852; Aug. 8; Gaz. vol. 229; p. 607.
Standard Varnish Works, Chicago, Ill. Finish for varnished surfaces. No. 111,980; Aug. 15; Gaz. vol. 229; p. 934.
Star Company, New York, N. Y. Newspaper-section. Nos. 111,766–7; Aug. 1; Gaz. vol. 229; p. 265.
Steele, William K., Chicago, Ill. Cigars. No. 112,106; Aug. 22; Gaz. vol. 229; p. 1249.
Stefanides, Georgios M., Monessen, Pa. Certain named pharmaceutical preparations. No. 112,229; Aug. 22; Gaz. vol. 229; p. 1252.
Steinwender-Stoffregen Coffee Co., St. Louis, Mo. Roasted coffee. No. 112,144; Aug. 22; Gaz. vol. 229; p. 1250.
Sterling Corporation, The, Cleveland, Ohio. Electric water-heaters and high-frequency devices. No. 111,981; Aug. 15; Gaz. vol. 229; p. 935.
Stern, Nathan, Brooklyn, N. Y. Alpine herb tea, a laxative for constipation. No. 112,326; Aug. 29; Gaz. vol. 229; p. 1569.
Stern & Saalberg Co., The, New York, N. Y. Candy. No. 112,327; Aug. 29; Gaz. vol. 229; p. 1569.
Sternau & Co., S., New York, N. Y. Solid fuel composed mainly of alcohol. No. 112,328; Aug. 29; Gaz. vol. 229; p. 1569.
Stone-Ordean-Wells Company, Duluth, Minn. Peanut-butter, flavoring extracts for foods, spices. No. 112,077; Aug. 22; Gaz. vol. 229; p. 1248.
Strouse-Baer Co., The, Baltimore, Md. Women's and children's suits, dresses, coats, skirts, &c. No. 112,329; Aug. 29; Gaz. vol. 229; p. 1569.
Stuber & Kuck Co., Peoria, Ill. Bread-boxes, buckets, cans, bins, &c. No. 111,853; Aug. 8; Gaz. vol. 229; p. 607.
Sutton, Aspinwall & Co., Inc., New York, N. Y. Lubricating, illuminating, and fuel oils. No. 111,982; Aug. 15; Gaz. vol. 229; p. 935.
Swaine, E. L., Los Angeles, Cal. Chewing-gum. No. 112,330; Aug. 29; Gaz. vol. 229; p. 1569.
Swan & Finch Company, New York, N. Y. Lubricating oils and greases. No. 112,331; Aug. 29; Gaz. vol. 229; p. 1569.
Sweeping Toothbrush Company, The, Gary, Ind. Toothbrushes. No. 112,230; Aug. 22; Gaz. vol. 229; p. 1252.
Syracuse Smelting Works, Brooklyn, N. Y. Babbitt metal. No. 111,983; Aug. 15; Gaz. vol. 229; p. 935.
Talbot, Paul A., New York, N. Y. Steam-boilers. No. 112,078; Aug. 22; Gaz. vol. 229; p. 1248.
Tauber, Samuel, New York, N. Y. Certain named pharmaceutical preparations. No. 112,231; Aug. 22; Gaz. vol. 229; p. 1252.
Tebow, Oury J., Manitou, Okla. Cholera remedy for animals. No. 112,107; Aug. 22; Gaz. vol. 229; p. 1249.

Techno Chemical Corporation, New York, N. Y. Preservative for all metals which are subject to oxidation. No. 112,332; Aug. 29; Gaz. vol. 229; p. 1569.
Texas Company, Houston and Port Arthur, Tex., and New York, N. Y. Kerosene-oil. No. 111,769; Aug. 1; Gaz. vol. 229; p. 265.
Textile Products Co., Inc., Portsmouth, Va. Wash-skirts, middy suits and blouses. No. 111,984; Aug. 15; Gaz. vol. 229; p. 935.
Thalheimer, Harry S., *et al.* (See Neafie, Leslie E., assignor.)
Thau, Kalman, New York, N. Y. Hair-nets. No. 111,912; Aug. 8; Gaz. vol. 229; p. 609.
Theo. H. Gary Co., New York, N. Y. Building-blocks. No. 112,272; Aug. 29; Gaz. vol. 229; p. 1568.
Thomas W. Read Mfg. Co., The, Cincinnati, Ohio. Internal medicine which is a remedy for piles and constipation. No. 112,218; Aug. 22; Gaz. vol. 229; p. 1252.
Tierney, James A., Weston, W. Va. Carbonated beverages and syrup for same. No. 111,232; Aug. 22; Gaz. vol. 229; p. 1253.
Titeflex Metal Hose Corporation, New York, N. Y., and Newark, N. J. Flexible metal tubes. No. 111,854; Aug. 8; Gaz. vol. 229; p. 607.
Tomasek, Charles, Chicago, Ill. Rheumatism-salve. No. 112,079; Aug. 22; Gaz. vol. 229; p. 1248.
Traver & Company, John G., Philadelphia, Pa. Goods used in the manufacture of shoes. No. 111,913; Aug. 8; Gaz. vol. 229; p. 609.
Tri-State Butter Company, The, Cincinnati, Ohio. Milk-cans. No. 111,914; Aug. 8; Gaz. vol. 229; p. 609.
Trico Chemical Co. Inc., Buffalo, N. Y. Oxalic-acid substitute and dyes. No. 112,031; Aug. 15; Gaz. vol. 229; p. 936.
Tropical Pharmacal Co., The, New York, N. Y. Soap. No. 111,855; Aug. 8; Gaz. vol. 229; p. 607.
Tunis, Emanuel, New York, N. Y. Cigars. No. 112,233; Aug. 22; Gaz. vol. 229; p. 1253.
U. S. Bedding Company, Memphis, Tenn. Beds, mattresses, bed-springs, and pillows. No. 112,335; Aug. 29; Gaz. vol. 229; p. 1570.
U. S. Materials Co., Chicago, Ill. Stucco and building-cement for flooring. No. 111,772; Aug. 1; Gaz. vol. 229; p. 265.
Underwood & Company, John, New York, N. Y. Adding, combined type-writing and adding machines, and parts thereof. No. 112,234; Aug. 22; Gaz. vol. 229; p. 1253.
Union Meat Company, North Portland, Oreg. Fertilizer. Nos. 111,985–6; Aug. 15; Gaz. vol. 229; p. 935.
Union Milling Co., Union, Iowa. Wheat and buckwheat flour. No. 111,770; Aug. 1; Gaz. vol. 229; p. 265.
Union Paper and Twine Company, The, Cleveland, Ohio. Wrapping and printing paper. No. 112,235; Aug. 22; Gaz. vol. 229; p. 1253.
Union Special Machine Company, Chicago, Ill. Certain named clothing. No. 111,987; Aug. 15; Gaz. vol. 229; p. 935.
United Breweries Company, Chicago, Ill. Beer. Nos. 111,857–8; Aug. 8; Gaz. vol. 229; p. 607.
United Breweries Company, Chicago, Ill. Lager-beer, ale, stout, porter, and analogous malted beverages. No. 112,333; Aug. 29; Gaz. vol. 229; p. 1570.
United Breweries Company, Chicago, Ill. Beer. No. 112,334; Aug. 29; Gaz. vol. 229; p. 1570.
United Drug Company, Boston, Mass. Safety-razors and safety-razor blades. No. 111,771; Aug. 1; Gaz. vol. 229; p. 265.
United Drug Company, Boston, Mass. Candy. No. 112,236; Aug. 22; Gaz. vol. 229; p. 1253.
United Jewelers, Inc., The, New York, N. Y. Glassware. No. 112,237; Aug. 22; Gaz. vol. 229; p. 1253.
United States Graphite Co., The, Saginaw, Mich. Carbon and graphite brushes for use on electric motors and generators. No. 112,032; Aug. 15; Gaz. vol. 229; p. 936.
United States Rubber Company, The, New Brunswick, N. J., and New York, N. Y. Rubber overshoes and tennis-shoes of rubber and fabric. No. 112,238; Aug. 22; Gaz. vol. 229; p. 1253.
Utility Products Co., New York, N. Y. Certain gasolene-engine attachments. No. 111,988; Aug. 15; Gaz. vol. 229; p. 935.
Valle-Kimes Co., The, Dayton, Ohio. Certain named machinery and parts thereof. Nos. 112,033–4; Aug. 15; Gaz. vol. 229; p. 936.
Valle-Kimes Co., Dayton, Ohio. Pneumatic water-supply system—namely, combined by-pass and check valves. No. 112,035; Aug. 15; Gaz. vol. 229; p. 936.
Valentine Hat Company, The, Kansas City, Mo. Straw hats. No. 112,336; Aug. 29; Gaz. vol. 229; p. 1570.
Vandoren, Michel E., Paris, France. Clarinet, saxophone, oboe, English horn, &c. No. 111,773; Aug. 1; Gaz. vol. 229; p. 266.
Vanola Company, The, Winston-Salem, N. C. Chewing-gum. No. 111,774; Aug. 1; Gaz. vol. 229; p. 266.
Varuna Spring Co., The, Stamford, Conn. Ginger-ale, sarsaparilla, and club-soda. No. 111,775; Aug. 1; Gaz. vol. 229; p. 266.
Veterinary Chemical Co., Churubusco, Ind. Certain named veterinary remedies. No. 111,859; Aug. 8; Gaz. vol. 229; p. 607.
Vis Vitæ Medicine Co., Augusta, Ga. Internal remedy for treatment of diseases pertaining to the kidneys, liver, and blood. No. 112,080; Aug. 22; Gaz. vol. 229; p. 1248.
Viviano Bros. Macaroni Co. Inc., Chicago, Ill. Macaroni. No. 111,860; Aug. 8; Gaz. vol. 229; p. 607.
Vulcan Mineral Water Co. Inc., New York, N. Y. Water of an aperient nature. No. 111,861; Aug. 8; Gaz. vol. 229; p. 607.
W. B. Davis & Son, Inc., Fort Payne, Ala. Hosiery. No. 111,927; Aug. 15; Gaz. vol. 229; p. 933.
W. F. Frederick Piano Co., Uniontown and Pittsburgh, Pa. Title of a monthly magazine. No. 112,179; Aug. 22; Gaz. vol. 229; p. 1251.
Waldorf-Astoria Importation Company, The, New York, N. Y. Coffee. No. 112,337; Aug. 29; Gaz. vol. 229; p. 1570.
Walker Properties Association, Austin, Tex. Chilli-con-carne and hot tamales. No. 112,338; Aug. 29; Gaz. vol. 229; p. 1570.
Warren Ice Cream Company, A. G., Wilmington, N. C. Ice-cream. No. 112,339; Aug. 29; Gaz. vol. 229; p. 1570.
Wayne Works, Richmond, Ind. Hacks and school-cars. No. 111,989; Aug. 15; Gaz. vol. 229; p. 935.
Weidknecht, Edward B., Peoria, Ill. Remedy for catarrh, hay-fever, &c. No. 111,776; Aug. 1; Gaz. vol. 229; p. 266.
Weiserbs, Sadie, New York, N. Y. Certain named clothing. No. 111,777; Aug. 1; Gaz. vol. 229; p. 266.
Wells Candy Co., Chicago, Ill. Candies. No. 112,108; Aug. 22; Gaz. vol. 229; p. 1249.
Western Auto Supply Company, Kansas City, Mo. Spark-plugs. No. 112,081; Aug. 22; Gaz. vol. 229; p. 1248.
Western New York Farms Co., Elba, N. Y. Fresh apples and lettuce. No. 111,916; Aug. 8; Gaz. vol. 229; p. 609.
Wheeling Mold & Foundry Co., Wheeling, W. Va. Iron, steel, or other metal in roll form. No. 112,340; Aug. 29; Gaz. vol. 229; p. 1570.
Wickes, Marjorie A., New York, N. Y. Certain named infants' under and outer wear. No. 112,127; Aug. 22; Gaz. vol. 229; p. 1249.
Wickes, W. Wirt, New York, N. Y. Yeast food. No. 112,082; Aug. 22; Gaz. vol. 229; p. 1248.
Wilkinson, Harris C., Los Angeles, Cal. Ball chewing-gum. No. 111,778; Aug. 1; Gaz. vol. 229; p. 266.
Willcox & Gibbs Sewing Machine Co., New York, N. Y. Sewing-machines. No. 111,917; Aug. 8; Gaz. vol. 229; p. 609.
William Flaccus Oak Leather Company, Pittsburgh, Pa. Oak sole-leather. No. 111,808; Aug. 8; Gaz. vol. 229; p. 605.
William S. Merrell Chemical Company, The, Cincinnati, Ohio. Extract of drugs used in the external and internal treatment of septic conditions. No. 112,017; Aug. 15; Gaz. vol. 229; p. 936.
William T. Baker, Inc., Jersey City, N. J. Varnishes. No. 112,151; Aug. 22; Gaz. vol. 229; p. 1250.
Wizard Products Co., Chicago, Ill. Toy sound-reproducing machine. No. 112,343; Aug. 29; Gaz. vol. 229; p. 1570.
Wm. Boardman & Sons Co., Hartford, Conn. Coffee. No. 112,039; Aug. 22; Gaz. vol. 229; p. 1247.
Wm. Zinsser & Co. Inc., New York, N. Y. Certain named paints and painters' materials. No. 112,240; Aug. 22; Gaz. vol. 229; p. 1253.
Wolfe, Samuel C., Angola, Ind. Wiper devices for windshields, windows, &c. No. 111,918; Aug. 8; Gaz. vol. 229; p. 609.
Wolverine Spark Plug Company, Inc., New York, N. Y., and Detroit, Mich. Spark-plugs for internal-combustion engines. No. 111,990; Aug. 15; Gaz. vol. 229; p. 935.
Woodward, Henry R., New Albany, Ind. Deodorizer. No. 111,864; Aug. 8; Gaz. vol. 229; p. 607.
Worcester Felt Shoe Co., Worcester, Mass. Felt shoes. No. 111,780; Aug. 1; Gaz. vol. 229; p. 266.
Worthington Ball Company, The, Elyria, Ohio. Golf-balls. No. 112,239; Aug. 22; Gaz. vol. 229; p. 1253.
Wright & Ditson, Jersey City, N. J., and Boston, Mass. Golf-balls. Nos. 112,083–4; Aug. 22; Gaz. vol. 229; p. 1248.
Wright, Nathaniel C., *et al.* (See Neafie, Leslie E., assignor.)
Wright Truck Attachment Co. Inc., Seattle, Wash. Motor-trucks. No. 112,109; Aug. 22; Gaz. vol. 229; p. 1249.
York Manufacturing Co., Saco, Me. Cotton piece goods. No. 112,085; Aug. 22; Gaz. vol. 229; p. 1248.
Zazeln Manufacturing Co., Watertown, Tenn. Furniture-polish. No. 112,344; Aug. 29; Gaz. vol. 229; p. 1570.
Zelenka, Jerome P., Chicago, Ill. Picture-theater stamps. No. 112,345; Aug. 29; Gaz. vol. 229; p. 1570.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. J. Reach Company, Philadelphia, Pa. "Reach Whiz Golf Balls." (For Golf-Balls.) No. 19,508; Aug. 8; Gaz. vol. 229; p. 611.
A. J. Reach Company, Philadelphia, Pa. "Reach Paramount A Golf Balls." (For Golf-Balls.) No. 19,509; Aug. 8; Gaz. vol. 229; p. 611.
A. J. Reach Company, Philadelphia, Pa. "Reach Paramount B Golf Balls." (For Golf-Balls.) No. 19,510; Aug. 8; Gaz. vol. 229; p. 611.
Alden, Lucy, Saginaw, Mich. "Progressive Plunge." (For Apparatus for Playing a Game.) No. 19,538; Aug. 22; Gaz. vol. 229; p. 1254.
American Packing Co., Everett, Wash. "Western Beauty." (For Canned Salmon.) No. 19,519; Aug. 15; Gaz. vol. 229; p. 937.
Arnone, Matthew, New York, N. Y. "The Million Dollar Hair Tonic." (For Hair-Tonic.) No. 19,503; Aug. 8; Gaz. vol. 229; p. 611.
Capitol Coffee Co., Baton Rouge, La. "Capitol Idea." (For Coffee.) No. 19,520; Aug. 15; Gaz. vol. 229; p. 937.
Central California Canneries, San Francisco, Cal. "Glass Jar." (For Spinach.) No. 19,543; Aug. 29; Gaz. vol. 229; p. 1571.
Central Waxed Paper Co., Chicago, Ill. "Chief's Bread." (For Bread.) No. 19,516; Aug. 8; Gaz. vol. 229; p. 611.
Creech Chemical Co., The D. Heber, Smithfield, N. C. "Dr Muns Pile and Eczema Ointment." (For an Ointment.) No. 19,505; Aug. 8; Gaz. vol. 229; p. 611.
De Frece, Bonnie B., New Rochelle, N. Y. "Bonnie Blanche Preserves." (For Preserves.) No. 19,504; Aug. 8; Gaz. vol. 229; p. 611.
Elfring, Melvin W., Bensenville, Ill. "Universal Mist." (For Automobile and Furniture Polish.) No. 19,539; Aug. 22; Gaz. vol. 229; p. 1254.
Emulsio Chemical Co., Ltd., San Antonio, Tex. "Emulsio A Treatment For Consumption." (For a Treatment for Consumption.) No. 19,540; Aug. 22; Gaz. vol. 229; p. 1254.
Falk, Jacob W., Turlock, Cal. "Falk Brand." (For Cantaloups.) No. 19,544; Aug. 29; Gaz. vol. 229; p. 1571.
Frankfort Distilling & Importing Company, Kansas City, Mo. "Old Chief." (For Whisky.) No. 19,521; Aug. 15; Gaz. vol. 229; p. 937.
Gerber & Co., R., Chicago, Ill. "Liberty Bell Brand." (For Canned Tomatoes.) No. 19,522; Aug. 15; Gaz. vol. 229; p. 937.
Gerrard, Stephen A., Cincinnati, Ohio. "Pink Queens." (For Cantaloups.) No. 19,523; Aug. 15; Gaz. vol. 229; p. 937.
Gerrard, Stephen A., Cincinnati, Ohio. "American Beauty." (For Cantaloups.) No. 19,524; Aug. 15; Gaz. vol. 229; p. 937.
Goldberg, Jacob, Brooklyn, N. Y. "Money Savers." (For Peppermint Candy.) No. 19,545; Aug. 29; Gaz. vol. 229; p. 1571.
Henschel & Co., A. C., Chicago, Ill. "Moro Light." (For Cigars.) No. 19,506; Aug. 8; Gaz. vol. 229; p. 611.
Interstate Cotton Oil Refining Co., Sherman, Tex. "White Beauty." (For Shortening.) No. 19,507; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Apricots.) No. 19,489; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Blackberries.) No. 19,490; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Black Cherries.) No. 19,491; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Royal-Anne Cherries.) No. 19,492; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Loganberries.) No. 19,493; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Peaches.) No. 19,494; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Sliced Peaches.) No. 19,495; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Bartlett Pears.) No. 19,496; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Egg-Plums.) No. 19,497; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Green-Gage Plums.) No. 19,498; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Sliced Pineapple.) No. 19,499; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Strawberries.) No. 19,500; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Tomatoes.) No. 19,501; Aug. 8; Gaz. vol. 229; p. 611.
J. K. Armsby Co., The, San Francisco, Cal. "Today's." (For Canned Fruits.) No. 19,502; Aug. 8; Gaz. vol. 229; p. 611.
John Scott and Company, Incorporated, Philadelphia, Pa. "We Drinkit Blend." (For Coffee.) No. 19,514; Aug. 8; Gaz. vol. 229; p. 611.
John Scott and Company, Incorporated, Philadelphia, Pa. "Peerless Blend." (For Coffee.) No. 19,515; Aug. 8; Gaz. vol. 229; p. 611.
Jones Bros. & Co., Inc., Portland, Oreg. "Jones." (For Loganberry-Juice.) No. 19,525; Aug. 15; Gaz. vol. 229; p. 937.
Knasel, John P., Atlanta, Ga. "Davy Crockett." (For Cigars.) No. 19,546; Aug. 29; Gaz. vol. 229; p. 1571.
Knudsen's Laboratory, Los Angeles, Cal. "Youghurt." (For Cottage-Cheese.) No. 19,526; Aug. 15; Gaz. vol. 229; p. 937.
Kronthal, Benjamin, Michigan City, Ind., and Chicago, Ill. "The Double Kind." (For Shirts.) No. 19,547; Aug. 29; Gaz. vol. 229; p. 1571.
Macarms Cosmetic Co., Jacksonville, Fla. "Pond Lily Vanishing Cream." (For a Cosmetic Face Preparation.) No. 19,487; Aug. 1; Gaz. vol. 229; p. 267.
Manville Company, Providence, R. I. "Manville Curtain Swiss." (For Textile Fabrics.) No. 19,527; Aug. 15; Gaz. vol. 229; p. 937.
P. Pastene & Co., Inc., Boston, Mass. "Splendor." (For Macaroni.) No. 19,528; Aug. 15; Gaz. vol. 229; p. 937.
Parodi Cigar Company, Inc., Jersey City, N. J. "Parodi." (For Cigars.) No. 19,548; Aug. 29; Gaz. vol. 229; p. 1571.
Royal Brewing Company, The, Kansas City, Mo. "Double Bock." (For Malt Liquor.) No. 19,529; Aug. 15; Gaz. vol. 229; p. 937.
Scholl Manufacturing Company Inc., Chicago, Ill. "Dr. Scholl's Foot-Eazer." (For Arch-Supports.) No. 19,511; Aug. 8; Gaz. vol. 229; p. 611.
Schulner Cigar Co., L. N., Watertown, S. D. "Great Northern." (For Cigars.) No. 19,530; Aug. 15; Gaz. vol. 229; p. 937.
Schulze, Paul, Chicago, Ill. "Tato Bread." (For Bread.) No. 19,512; Aug. 8; Gaz. vol. 229; p. 611.
Schulze, Paul, Chicago, Ill. "Butter-Nut Bread." (For Bread.) No. 19,513; Aug. 8; Gaz. vol. 229; p. 611.
Shredded Wheat Company, The, Niagara Falls, N. Y. "Individual Service Shredded Wheat." (For Shredded-Wheat Biscuit.) No. 19,517; Aug. 8; Gaz. vol. 229; p. 611.
Solvos Company, The, Chicago, Ill. "Soap-Bubble Apron." (For a Child's Apron.) No. 19,488; Aug. 1; Gaz. vol. 229; p. 267.
St. Louis Beverage Co., The, St. Louis, Mo. "Pep—A Pure Tonic Beverage." (For a Non-Alcoholic Beverage.) No. 19,541; Aug. 22; Gaz. vol. 229; p. 1254.
St. Louis Beverage Company, St. Louis, Mo. "Pep." (For a Non-Intoxicating Cereal Beverage.) No. 19,542; Aug. 22; Gaz. vol. 229; p. 1254.
Superior Hand Paste Co., San Francisco, Cal. "Superior Hand Paste." (For Cleaning-Pastes.) No. 19,531; Aug. 15; Gaz. vol. 229; p. 937.
Tak-A-Tonic Co., Bluefield, W. Va. "Tak-A-Tonic." (For a Medicine.) No. 19,518; Aug. 8; Gaz. vol. 229; p. 611.
Van Norden, Warner M., New York, N. Y. "Camp Fire Coffee." (For Coffee.) No. 19,549; Aug. 29; Gaz. vol. 229; p. 1571.
Weaver & Co., C. H., Chicago, Ill. "Cantaloupes." (For Three-Melon-Brand Cantaloups.) No. 19,532; Aug. 15; Gaz. vol. 229; p. 937.
Weaver & Co., C. H., Chicago, Ill. "Honey Dew." (For Melons.) No. 19,533; Aug. 15; Gaz. vol. 229; p. 937.
Weaver & Co., C. H., Chicago, Ill. "Osage Gem Cantaloupes." (For Cantaloups.) No. 19,534; Aug. 15; Gaz. vol. 229; p. 937.
Weaver & Co., C. H., Chicago, Ill. "Jumbo Cantaloupes." (For Cantaloups.) No. 19,535; Aug. 15; Gaz. vol. 229; p. 937.
William Cluff Company, San Francisco, Cal. "Cluff Blue Ribbon." (For Corn.) No. 19,486; Aug. 1; Gaz. vol. 229; p. 267.
Wilmington Hosiery Mills, Inc., The, Wilmington, Del. "Cape Fear." (For Hosiery.) No. 19,536; Aug. 15; Gaz. vol. 229; p. 937.
Woodard, Clarke & Co., Portland, Oreg. "Chek." (For a Medicinal Preparation.) No. 19,537; Aug. 15; Gaz. vol. 229; p. 937.

PRINTS.

Angel Meat Packing Co., The, Los Angeles, Cal. "The Brand of Quality." (For Meats.) No. 4,413; Aug. 1; Gaz. vol. 229; p. 267.

Aunt Jemima Mills Company, St. Joseph, Mo. "The Secret of Perfect Pancakes." (For Pancake-Flour.) No. 4,416; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "Night or Day, At Work or Play, B. V. D. Conserves Your Comfort." (For Athletic Underwear.) No. 4,417; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "B. V. D.s And A River Breeze—Isn't This Great On A Hot Day?" (For Athletic Underwear.) No. 4,418; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "Pa's Got His New B. V. D.s On." (For Athletic Underwear.) No. 4,419; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "'Day Off' or 'Day On,' Keep Cool in B. V. D." (For Athletic Underwear.) No. 4,420; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "Coming or Going, Wear B. V. D. For Coolness." (For Athletic Underwear.) No. 4,421; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "B. V. D. Is The National Cooler-Off." (For Athletic Underwear.) No. 4,422; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "Tell The Old Pepper-Pot To Put On His B. V. D.s, and Cool Off." (For Athletic Underwear.) No. 4,423; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "What Would Summer Be Without Baseball and B. V. D.?" (For Athletic Underwear.) No. 4,424; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "Good-by, And Keep That Grouchless B. V. D. Grin." (For Athletic Underwear.) No. 4,425; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "The Mercury's Hopping Mad, Because B. V. D. Keeps Us Cool." (For Athletic Underwear.) No. 4,426; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "That Team's Pitcher Has A B. V. D. Head—Always Keeps Cool." (For Athletic Underwear.) No. 4,427; Aug. 8; Gaz. vol. 229; p. 612.

B. V. D. Company, The, New York, N. Y. "You Can Dance Your Legs Off In B. V. D." (For Athletic Underwear.) No. 4,428; Aug. 8; Gaz. vol. 229; p. 612.

Barclay & Co., New York, N. Y. "Pildoritas de Reuter." (For a Liver-Pill.) No. 4,441; Aug. 22; Gaz. vol. 229; p. 1254.

Barclay & Co., New York, N. Y. "Jabon de Reuter." (For Soap.) No. 4,442; Aug. 22; Gaz. vol. 229; p. 1254.

Barclay & Co., New York, N. Y. "Crema de Perlas de Barry." (For a Face-Cream.) No. 4,443; Aug. 22; Gaz. vol. 229; p. 1254.

Connor, Albert W., Covington, Ky. "Measurement Charts." (For Automobile-Tops.) No. 4,436; Aug. 15; Gaz. vol. 229; p. 937.

Creech Chemical Co., The D. Heber, Smithfield, N. C. "Dr Muns Pile and Eczema Ointment." (For an Ointment.) No. 4,432; Aug. 8; Gaz. vol. 229; p. 612.

Early Times Distillery Company, Inc., Early Times, Ky. "Early Times." (For Whisky.) No. 4,437; Aug. 15; Gaz. vol. 229; p. 937.

Faris, Edgar C., Kansas City, Mo. "Faranco." (For Housing Equipment.) No. 4,429; Aug. 8; Gaz. vol. 229; p. 612.

Interstate Electric Novelty Co., The, Brooklyn, N. Y. "Franco." (For Flash-Lights.) Nos. 4,438–9; Aug. 15; Gaz. vol. 229; p. 937.

J. L. Kraft & Bros. Co., Chicago, Ill. "Johnny Appetite." (For Cheese.) No. 4,414; Aug. 1; Gaz. vol. 229; p. 267.

J. P. Gordon Company, The, Columbus, Ohio. "Gordon Seat Coverings." (For Gordon Tire-Covers, Seat-Covers, and Radiator and Engine Robes.) No. 4,431; Aug. 8; Gaz. vol. 229; p. 612.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Little folks recognize the delicious oven-flavor of Kellogg's." (For Toasted Corn Flakes.) No. 4,433; Aug. 8; Gaz. vol. 229; p. 612.

L. Frank & Son Company, Milwaukee, Wis. "Frank's Meat-Treats." (For Meat Treats.) No. 4,430; Aug. 8; Gaz. vol. 229; p. 612.

Lawson Manufacturing Company, Pittsburgh, Pa. "Changes Delivery Time From Hours to Minutes." (For Motor-Trucks.) No. 4,434; Aug. 8; Gaz. vol. 229; p. 612.

Meyercord Company, The, Chicago, Ill., assignor to The Ward Baking Company, New York, N. Y. "Wards Tip Top Bread — Dustite — Sanitary." (For Bread.) No. 4,415; Aug. 1; Gaz. vol. 229; p. 267.

Rueckheim Bros. & Eckstein, Inc., Brooklyn, N. Y. "Cracker Jack—We Shell All the Goobers." (For a Confection.) No. 4,444; Aug. 29; Gaz. vol. 229; p. 1571.

Rueckheim Bros. & Eckstein, Inc., Brooklyn, N. Y. "Cracker Jack—Come on, See the Poppers." (For a Confection.) No. 4,445; Aug. 29; Gaz. vol. 229; p. 1571.

Rueckheim Bros. & Eckstein, Inc., Brooklyn, N. Y. "Cracker Jack—Oh! ho!" (For a Confection.) No. 4,446; Aug. 29; Gaz. vol. 229; p. 1571.

Rueckheim Bros. & Eckstein, Inc., Brooklyn, N. Y. "Cracker Jack—Now Here is the Field." (For a Confection.) No. 4,447; Aug. 29; Gaz. vol. 229; p. 1571.

Rueckheim Bros. & Eckstein, Inc., Brooklyn, N. Y. "Cracker Jack—The Whimsical Peanuts." (For a Confection.) No. 4,448; Aug. 29; Gaz. vol. 229; p. 1571.

Swezey, Andrew J., Decorah, Iowa. "Swezey's Non Glass Composition Lens." (For Lenses.) No. 4,449; Aug. 29; Gaz. vol. 229; p. 1571.

Unicorn Film Service Corporation, New York, N. Y. "Unicorn Film Service Corporation." (For Motion-Picture Films.) No. 4,450; Aug. 29; Gaz. vol. 229; p. 1571.

United States Rubber Company, New Brunswick, N. J. "U S Rubber System." (For Wearing-Apparel and Rubber Products.) No. 4,440; Aug. 15; Gaz. vol. 229; p. 937.

United Woolen Mills Company, The, Parkersburg, W. Va. "All Suits All Overcoats $17 No More No Less." (For Suits and Overcoats.) No. 4,435; Aug. 8; Gaz. vol. 229; p. 612.

Ward Baking Company. (See Meyercord Company, The, assignor.)

DISCLAIMERS.

Jonas, Frederick W., and C. S. Spofford, Sturgis, Mich.; disclaimer filed by assignee, Sturgis Steel Go-Cart Co. Collapsible carriage. No. 1,161,315; disclaimer filed July 19, 1916; Gaz. vol. 229; p. 271.

Mellen, Glenville, East Orange, N. J.; disclaimer filed by assignee, Continuous Casting Corporation. Method of and apparatus for continuous casting. No. 1,139,885; disclaimer filed July 18, 1916; Gaz. vol. 229; p. 271.

Mills, George W., Jr., New York, N. Y.; disclaimer filed by assignee, Slip Scarf Company. Neckwear. No. 1,109,858; disclaimer filed July 25, 1916; Gaz. vol. 229; p. 270.

Toch, Maximilian, New York, N. Y.; disclaimer filed by inventor and assignee, H. M. Toch. Method of treating cement and cement construction. No. 813,841; disclaimer filed July 31, 1916; Gaz. vol. 229; p. 273.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF AUGUST, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

Abrasive disks, Magazine-holder for. S. W. Taliaferro. No. 1,193,203; Aug. 1; Gaz. vol. 229; p. 134.
Accounting-machines, Differential mechanism for. F. L. Fuller. No. 1,195,198; Aug. 22; Gaz. vol. 229; p. 953.
Acetylene-generator. W. Coburn and C. W. Davis. No. 1,196,336; Aug. 29; Gaz. vol. 229; p. 1390.
Acid-concentrating method and apparatus. T. C. Oliver. No. 1,195,075; Aug. 15; Gaz. vol. 229; p. 875.
Acids, Making mineral. H. Howard. No. 1,193,552; Aug. 8; Gaz. vol. 229; p. 295.
Acoustic-needle mounting. W. A. Tangeman. No. 1,194,573; Aug. 15; Gaz. vol. 229; p. 700.
Adding and listing machine. C. A. Lundgren. No. 1,195,598; Aug. 22; Gaz. vol. 229; p. 1097.
Adding and listing machine. C. A. Lundgren. No. 1,195,599; Aug. 22; Gaz. vol. 229; p. 1098.
Adding-machine. O. Antonelli. No. 1,193,968; Aug. 8; Gaz. vol. 229; p. 446.
Adding-machine. A. R. Ball. No. 1,193,858; Aug. 8; Gaz. vol. 229; p. 407.
Adding-machine. C. E. W. Gardner. No. 1,195,575; Aug. 22; Gaz. vol. 229; p. 1090.
Adding-machine. J. H. Mason. No. 1,194,205; Aug. 8; Gaz. vol. 229; p. 527.
Adding-machines, Centrifugal controller for. J. P. Hunter and H. Küntzler. No. 1,196,863; Aug. 29; Gaz. vol. 229; p. 1400.
Advertising apparatus, Illuminated. A. E. Turnham. No. 1,193,316; Aug. 1; Gaz. vol. 229; p. 175.
Advertising device. H. R. Bacon and E. T. Malloy. No. 1,195,171; Aug. 22; Gaz. vol. 229; p. 943.
Advertising device. J. W. Elvyn. No. 1,194,727; Aug. 15; Gaz. vol. 229; p. 754.
Advertising device, Illuminated. C. W. Court and A. V. Goldberg. No. 1,195,659; Aug. 22; Gaz. vol. 229; p. 1119.
Advertising display-stand. J. Stranders. No. 1,194,678; Aug. 15; Gaz. vol. 229; p. 736.
Advertising novelty. H. J. Seaman. No. 1,195,276; Aug. 22; Gaz. vol. 229; p. 982.
Advertising purposes, Device for. I. A. McCormack. No. 1,194,853; Aug. 15; Gaz. vol. 229; p. 798.
Aerial lines, Loading-coils for phantom circuits on. H. B. M. Pleijel and A. H. Olsson. No. 1,196,277; Aug. 29; Gaz. vol. 229; p. 1372.
Aerial truck. B. C. and R. N. Riblet. No. 1,195,732; Aug. 22; Gaz. vol. 229; p. 1146.
Aerofoil. G. Roessler. No. 1,194,878; Aug. 15; Gaz. vol. 229; p. 806.
Aeroplane. C. J. Blossing. No. 1,194,126; Aug. 8; Gaz. vol. 229; p. 500.
Aeroplane. R. R. Grant. No. 1,195,207; Aug. 22; Gaz. vol. 229; p. 956.
Aeroplane. C. A. Tefft. No. 1,196,493; Aug. 29; Gaz. vol. 229; p. 1445.
Aeroplane-stabilizer. M. E. Clark. No. 1,195,977; Aug. 29; Gaz. vol. 229; p. 1266.
Aeroplanes, Fuselage for. H. Kleckler. No. 1,195,142; Aug. 15; Gaz. vol. 229; p. 897.
Agricultural implement. A. C. Brisack. No. 1,194,942; Aug. 15; Gaz. vol. 229; p. 828.
Agricultural machine. J. P. Goossen. No. 1,195,578; Aug. 22; Gaz. vol. 229; p. 1091.
Agricultural machine, Motor. A. T. Brown. No. 1,193,505; Aug. 8; Gaz. vol. 229; p. 278.
Agricultural machine, Self-propelled. J. Markus. No. 1,194,857; Aug. 15; Gaz. vol. 229; p. 799.
Agricultural machines, Operating means for. W. H. H. Dansberry. No. 1,196,088; Aug. 29; Gaz. vol. 229; p. 1306.
Agricultural system and machine. T. P. Payne. No. 1,195,851; Aug. 22; Gaz. vol. 229; p. 1190.
Air-brake. R. Scoggin. No. 1,195,103; Aug. 15; Gaz. vol. 229; p. 884.
Air-brake. P. W. Williams. No. 1,194,585; Aug. 15; Gaz. vol. 229; p. 705.
Air-brake-coupling device, Automatic. E. S. and C. P. Hansen. No. 1,195,467; Aug. 22; Gaz. vol. 229; p. 1050.
Air-brake handle or controller-handle. G. J. Sweetser. No. 1,194,094; Aug. 8; Gaz. vol. 229; p. 488.
Air by electric currents, Apparatus for cooling heated. A. L. Milla. No. 1,193,467; Aug. 1; Gaz. vol. 229; p. 227.
Air-circulating device. E. P. Phelps. No. 1,196,275; Aug. 29; Gaz. vol. 229; p. 1371.
Air-compressor. H. H. Westinghouse. No. 1,196,055; Aug. 29; Gaz. vol. 229; p. 1294.
Air-compressor, Rotary. O. C. Buss. No. 1,192,855; Aug. 1; Gaz. vol. 229; p. 10.
Air-compressor, Vertical. K. Dougan. No. 1,195,661; Aug. 22; Gaz. vol. 229; p. 1120.
Air-control for automatic machinery. A. Kadow. No. 1,195,588; Aug. 22; Gaz. vol. 229; p. 1094.
Air-distributer. S. Caldwell and C. J. Williams. No. 1,192,857; Aug. 1; Gaz. vol. 229; p. 10.
Air drying and cooling apparatus. A. L. Stillman. No. 1,196,169; Aug. 29; Gaz. vol. 229; p. 1336.
Air for motive-power purposes, Utilization of compressed. B. Angwin. No. 1,196,635; Aug. 29; Gaz. vol. 229; p. 1493.
Air-motor. M. Troyanoski. No. 1,193,845; Aug. 8; Gaz. vol. 229; p. 402.
Air-port. A. J. Coughtry. No. 1,192,992; Aug. 1; Gaz. vol. 229; p. 55.
Air-propeller and the like. C. Kropp. No. 1,194,037; Aug. 8; Gaz. vol. 229; p. 468.
Air-purifier. E. I. Goldberg. No. 1,196,539; Aug. 29; Gaz. vol. 229; p. 1461.
Air-strainer. C. C. Farmer. No. 1,195,983; Aug. 29; Gaz. vol. 229; p. 1268.
Aircraft propelling and steering mechanism. R. A. Shute. No. 1,196,600; Aug. 29; Gaz. vol. 229; p. 1482.
Alarm: *See*—
Burglar-alarm.
Burglar and holdup alarm.
Fire-alarm.
Low-water alarm.
Mail-box alarm.
Alarm mechanism. L. A. Engelman. No. 1,193,457; Aug. 1; Gaz. vol. 229; p. 223.
Alarm mechanism. G. H. Nichols. No. 1,195,494; Aug. 22; Gaz. vol. 229; p. 1059.
Alarm system. W. H. Gabel. No. 1,196,674; Aug. 29; Gaz. vol. 229; p. 1507.
Alfalfa extract. M. C. Rich. No. 1,195,152; Aug. 15; Gaz. vol. 229; p. 901.
Alfalfa product. M. C. Rich. No. 1,195,153; Aug. 15; Gaz. vol. 229; p. 901.
Alfalfa product. M. C. Rich. No. 1,195,154; Aug. 15; Gaz. vol. 229; p. 901.
Alloy rich in phosphorus from inferior finery-slag, Producing an iron. F. von Holt. No. 1,196,185; Aug. 29; Gaz. vol. 229; p. 1841.
Alunite and the like, Treatment of. H. F. Chappell. No. 1,195,655; Aug. 22; Gaz. vol. 229; p. 1118.
Ammonia, Catalyzer apparatus for oxidizing. W. S. Landis. No. 1,193,798; Aug. 8; Gaz. vol. 229; p. 386.
Ammonia, Catalyzer for oxidizing. W. S. Landis. No. 1,193,800; Aug. 8; Gaz. vol. 229; p. 386.
Ammonia-condenser. C. W. Vollmann. No. 1,193,208; Aug. 1; Gaz. vol. 229; p. 135.
Ammonia, Oxidizing. W. S. Landis. No. 1,193,796; Aug. 8; Gaz. vol. 229; p. 385.
Ammonia, Process of and apparatus for oxidizing. W. S. Landis. No. 1,193,797; Aug. 8; Gaz. vol. 229; p. 385.
Ampere and volt meter, Combined. A. Schoeller. No. 1,195,508; Aug. 22; Gaz. vol. 229; p. 1063.
Amusement apparatus, Planetary. C. Engel. No. 1,194,158; Aug. 8; Gaz. vol. 229; p. 511.
Amusement device. B. C. Corbett. No. 1,195,185; Aug. 22; Gaz. vol. 229; p. 948.
Amusement device. W. E. Miller. No. 1,195,707; Aug. 22; Gaz. vol. 229; p. 1136.
Amusement device. G. H. Rumke. No. 1,195,609; Aug. 22; Gaz. vol. 229; p. 1101.
Anchor. W. D. Sargent. No. 1,195,100; Aug. 15; Gaz. vol. 229; p. 883.
Anchor. L. C. Shoup. No. 1,193,436; Aug. 1; Gaz. vol. 229; p. 216.

Anchor, Guy-. M. P. Smith. No. 1,193,725; Aug. 8; Gaz. vol. 229; p. 360.
Anesthetic bodies. L. Thorp. No. 1,193,634; Aug. 8; Gaz. vol. 229; p. 327.
Anesthetic bodies. E. A. Wildman and L. Thorp. No. 1,193,650; Aug. 8; Gaz. vol. 229; p. 332.
Anesthetic bodies. E. A. Wildman and L. Thorp. No. 1,193,651; Aug. 8; Gaz. vol. 229; p. 332.
Anesthetic bodies and preparing the same. E. A. Wildman and L. Thorp. No. 1,193,649; Aug. 8; Gaz. vol. 229; p. 332.
Anhydrids. Manufacture of organic-acid. F. W. Jahn. No. 1,195,227; Aug. 22; Gaz. vol. 229; p. 962.
Anhydrids of fatty acids, Manufacturing. K. Goldschmidt and F. Spitzer. No. 1,195,205; Aug. 22; Gaz. vol. 229; p. 955.
Animal-exterminator. I. D. Charlton and W. T. Shaw. No. 1,196,208; Aug. 29; Gaz. vol. 229; p. 1349.
Animal-trap. G. R. Rogers. No. 1,194,239; Aug. 8; Gaz. vol. 229; p. 538.
Annealing kiln or oven. T. W. Ridley. No. 1,196,152; Aug. 29; Gaz. vol. 229; p. 1329.
Annunciator. W. L. Weber. No. 1,195,754; Aug. 22; Gaz. vol. 229; p. 1154.
Anodes, Preventing disintegration of. G. D. Van Arsdale. No. 1,193,741; Aug. 8; Gaz. vol. 229; p. 366.
Anticreeping device. A. L. Merrin. No. 1,193,043; Aug. 1; Gaz. vol. 229; p. 75.
Antiskid device. A. J. Dains and C. C. Rickard. No. 1,196,666; Aug. 29; Gaz. vol. 229; p. 1505.
Antiskid tire-tread. J. H. Threlkeld. No. 1,196,314; Aug. 29; Gaz. vol. 229; p. 1383.
Antiskidding device for tires. G. B. M. Foust. No. 1,194,161; Aug. 8; Gaz. vol. 229; p. 512.
Antiskidding device for vehicle-wheels. S. Baruch. No. 1,195,640; Aug. 22; Gaz. vol. 229; p. 1112.
Antiskidding device for wheels. N. E. Wright. No. 1,193,855; Aug. 8; Gaz. vol. 229; p. 406.
Anvils for truing, Device for holding. S. J. Campbell. No. 1,195,440; Aug. 22; Gaz. vol. 229; p. 1041.
Apparel, Infant's. W. K. Jones. No. 1,195,682; Aug. 22; Gaz. vol. 229; p. 1128.
Apparel, Infant's. W. K. Jones. No. 1,195,683; Aug. 22; Gaz. vol. 229; p. 1128.
Apparel-protector. E. M. Hill. No. 1,194,627; Aug. 15; Gaz. vol. 229; p. 718.
Apron. J. H. Hart. No. 1,193,545; Aug. 8; Gaz. vol. 229; p. 293.
Apron. C. F. Malzen. No. 1,196,747; Aug. 29; Gaz. vol. 229; p. 1534.
Arch-support. A. E. Block. No. 1,194,812; Aug. 15; Gaz. vol. 229; p. 783.
Arch-support. P. Broadbooks. No. 1,196,205; Aug. 29; Gaz. vol. 229; p. 1348.
Arch-support. T. C. Walker. No. 1,196,410; Aug. 29; Gaz. vol. 229; p. 1418.
Armature for reinforced concrete construction for the purpose of suspending weights therefrom. E. G. Hahn. No. 1,194,622; Aug. 15; Gaz. vol. 229; p. 716.
Armor-plates employing mixed cementation agents, Cementation process for. F. Giolitti. No. 1,195,459; Aug. 22; Gaz. vol. 229; p. 1047.
Aseptic appliance. A. O. Kuhn. No. 1,196,250; Aug. 29; Gaz. vol. 229; p. 1363.
Asphalt, &c., Machine for spreading. J. O. Fraisher. No. 1,193,459; Aug. 1; Gaz. vol. 229; p. 224.
Asphaltic products and making the same. L. Kirschbraun. No. 1,194,750; Aug. 15; Gaz. vol. 229; p. 761.
Atmospheric burner. C. M. Hunter. No. 1,194,740; Aug. 15; Gaz. vol. 229; p. 758.
Atomizer. T. A. De Vilbiss. No. 1,193,524; Aug. 8; Gaz. vol. 229; p. 284.
Atomizer for liquids. P. Mejani. No. 1,194,051; Aug. 8; Gaz. vol. 229; p. 473.
Atomizer, Liquid-. D. J. Irish. No. 1,192,901; Aug. 1; Gaz. vol. 229; p. 25.
Auditorium-seat. H. C. Teipel. No. 1,196,614; Aug. 29; Gaz. vol. 229; p. 1487.
Auger, Post-hole. O. S. Preston. No. 1,195,724; Aug. 22; Gaz. vol. 229; p. 1143.
Auto steering device. A. E. Yager. No. 1,193,331; Aug. 1; Gaz. vol. 229; p. 181.
Autographic register. E. P. Harris. No. 1,194,174; Aug. 8; Gaz. vol. 229; p. 516.
Autographic register. A. Krauth. (Reissue.) No. 14,189; Aug. 29; Gaz. vol. 229; p. 1537.
Autometer. M. Smithey. No. 1,195,862; Aug. 22; Gaz. vol. 229; p. 1193.
Automobile adjustable seat. J. V. Dedrick. No. 1,195,340; Aug. 22; Gaz. vol. 229; p. 1006.
Automobile air-brake. C. A. Becker. No. 1,196,326; Aug. 29; Gaz. vol. 229; p. 1387.
Automobile attachment. S. Chinn. No. 1,193,236; Aug. 1; Gaz. vol. 229; p. 146.
Automobile attachment. W. Gianini. No. 1,196,348; Aug. 29; Gaz. vol. 229; p. 1395.
Automobile-body, Davenport. R. L. Fitzgerald. No. 1,193,530; Aug. 8; Gaz. vol. 229; p. 286.
Automobile-brake. R. H. Young. No. 1,196,628; Aug. 29; Gaz. vol. 229; p. 1491.
Automobile-brake construction. E. A. Demara. No. 1,193,366; Aug. 1; Gaz. vol. 229; p. 193.
Automobile-bumper. M. J. Maguth. No. 1,194,405; Aug. 15; Gaz. vol. 229; p. 640.
Automobile-control system. E. G. Crossley. No. 1,193,363; Aug. 1; Gaz. vol. 229; p. 192.
Automobile-curtain. G. Holmes, J. M. and A. G. Bostrom. No. 1,195,989; Aug. 29; Gaz. vol. 229; p. 1279.
Automobile direction-indicator. J. S. Juarez. No. 1,195,476; Aug. 22; Gaz. vol. 229; p. 1053.
Automobile-door-operating mechanism. C. Jackson and E. W. Morgan. No. 1,195,473; Aug. 22; Gaz. vol. 229; p. 1052.
Automobile-fans, Speed-regulator for. C. J. De Lay. No. 1,192,995; Aug. 1; Gaz. vol. 229; p. 57.
Automobile-fender. J. Mello. No. 1,194,409; Aug. 15; Gaz. vol. 229; p. 642.
Automobile floor-mat. G. F. Foss. No. 1,193,250; Aug. 1; Gaz. vol. 229; p. 151.
Automobile-heating apparatus. L. F. Mustee. No. 1,196,384; Aug. 29; Gaz. vol. 229; p. 1408.
Automobile-jack. F. R. Parmenter. No. 1,196,392; Aug. 29; Gaz. vol. 229; p. 1411.
Automobile-jack. E. C. Townley. No. 1,195,417; Aug. 22; Gaz. vol. 229; p. 1033.
Automobile-lighting systems, Switch mechanism for. H. A. Clum. No. 1,194,480; Aug. 15; Gaz. vol. 229; p. 669.
Automobile-lock. J. E. R. Fox. No. 1,193,679; Aug. 8; Gaz. vol. 229; p. 342.
Automobile-locking device. C. L. McKesson. No. 1,194,526; Aug. 15; Gaz. vol. 229; p. 684.
Automobile-locking device. H. Wind. No. 1,193,652; Aug. 8; Gaz. vol. 229; p. 332.
Automobile-locking means. T. B. Thomas. No. 1,193,737; Aug. 8; Gaz. vol. 229; p. 364.
Automobile luggage-rack, Adjustable. H. Walker. No. 1,193,444; Aug. 1; Gaz. vol. 229; p. 219.
Automobile-radiator. T. J. Goodwin. No. 1,193,538; Aug. 8; Gaz. vol. 229; p. 289.
Automobile-radiators, Protector for. W. L. Kron. No. 1,193,702; Aug. 8; Gaz. vol. 229; p. 351.
Automobile-signal. E. W. Bryan. No. 1,194,596; Aug. 15; Gaz. vol. 229; p. 708.
Automobile-signal. E. T. Gray and A. T. Hoevet. No. 1,193,379; Aug. 1; Gaz. vol. 229; p. 197.
Automobile-signal. E. T. Gray and A. T. Hoevet. No. 1,196,736; Aug. 29; Gaz. vol. 229; p. 1531.
Automobile-signal. H. B. Richards and R. Solomon. No. 1,193,821; Aug. 8; Gaz. vol. 229; p. 393.
Automobile signal-light. G. Logan. No. 1,195,372; Aug. 22; Gaz. vol. 229; p. 1017.
Automobile signaling apparatus. C. R. Taggart. No. 1,192,951; Aug. 1; Gaz. vol. 229; p. 42.
Automobile signaling device. I. Bauer. No. 1,195,642; Aug. 22; Gaz. vol. 229; p. 1113.
Automobile signaling device. D. H. Gray. No. 1,193,539; Aug. 8; Gaz. vol. 229; p. 290.
Automobile signaling system. A. H. Otis. No. 1,194,537; Aug. 15; Gaz. vol. 229; p. 688.
Automobile-starter. E. Bootz. No. 1,196,650; Aug. 29; Gaz. vol. 229; p. 1499.
Automobile steering-gear. C. L. Flora. No. 1,193,133; Aug. 1; Gaz. vol. 229; p. 109.
Automobile steering-wheel lock. J. A. Bowden. No. 1,195,333; Aug. 22; Gaz. vol. 229; 1003.
Automobile-top. W. J. Gano. No. 1,195,801; Aug. 22; Gaz. vol. 229; p. 1172.
Automobile-top. J. M. Workman. No. 1,193,107; Aug. 1; Gaz. vol. 229; p. 99.
Automobile-tops, Slip-cover for. W. B. Albury. No. 1,193,961; Aug. 8; Gaz. vol. 229; p. 443.
Automobile, Tractor-drawn. W. G. Hawley. No. 1,195,216; Aug. 22; Gaz. vol. 229; p. 969.
Automobiles, Attachment for preventing back-kicking of. W. L. Miller. No. 1,196,379; Aug. 29; Gaz. vol. 229; p. 1406.
Automobiles, Collapsible foldable crawler for. G. E. Hild. No. 1,195,014; Aug. 15; Gaz. vol. 229; p. 855.
Automobiles, Electrical system for. J. Bijur. No. 1,195,178; Aug. 22; Gaz. vol. 229; p. 946.
Automobiles, Extractor for. R. M. Rice. No. 1,194,877; Aug. 15; Gaz. vol. 229; p. 806.
Automobiles, Keyless lock for. L. Cornwell. No. 1,193,360; Aug. 1; Gaz. vol. 229; p. 191.
Automobiles or any other desired vehicles, Attachment for. J. E. Cypert. No. 1,195,786; Aug. 22; Gaz. vol. 229; p. 1166.
Automobiles, Pedal-operated steering attachment for. R. A. and J. H. Thompson. No. 1,196,616; Aug. 29; Gaz. vol. 229; p. 1488.
Automobiles, &c., Shoe-cleaning attachment for. M. R. Hatfield. No. 1,196,453; Aug. 29; Gaz. vol. 229; p. 1431.
Automobiles, Sleigh attachment for. T. Trione. No. 1,194,794; Aug. 15; Gaz. vol. 229; p. 777.
Automobiles, Transmission-gearing for. W. W. Annable. No. 1,194,326; Aug. 8; Gaz. vol. 229; p. 570.
Axle and chassis, Connection between rear. L. Ravel. No. 1,195,267; Aug. 22; Gaz. vol. 229; p. 978.
Axle, Car-. E. L. Sharpneck. No. 1,193,434; Aug. 1; Gaz. vol. 229; p. 216.
Axle, Carriage-. H. A. Dorn. No. 1,196,436; Aug. 29; Gaz. vol. 229; p. 1426.
Azimuth instrument. P. D. Tsukalas. No. 1,195,876; Aug. 22; Gaz. vol. 229; p. 1199.
Baby-carrier. W. Lippincott. No. 1,196,003; Aug. 29; Gaz. vol. 229; p. 1276.

Baby-walker. V. B. Gilliam. No. 1,193,374; Aug. 1; Gaz. vol. 229; p. 196.
Bag: *See*—
Sleeping-bag.
Bag closing and tying machine. J. Jessen. No. 1,196,459; Aug. 29; Gaz. vol. 229; p. 1433.
Bag closing and tying machine. J. Jessen. No. 1,196,460; Aug. 29; Gaz. vol. 229; p. 1434.
Bag for containing cement and making same. J. F. White. No. 1,195,311; Aug. 22; Gaz. vol. 229; p. 995.
Bags or the like, Apparatus for filling. W. Rose. No. 1,195,737; Aug. 22; Gaz. vol. 229; p. 1147.
Bait or lure, Fish. J. R. Schoonmaker. No. 1,193,077; Aug. 1; Gaz. vol. 229; p. 88.
Baker's peel. H. L. Schroeder. No. 1,195,510; Aug. 22; Gaz. vol. 229; p. 1064.
Baker's peel. H. L. Schroeder. No. 1,195,511; Aug. 22; Gaz. vol. 229; p. 1064.
Baking machine, Batter-. C. R. Taylor. No. 1,196,174; Aug. 29; Gaz. vol. 229; p. 1337.
Baking wafers and the like, Machine for. W. E. Prescott. No. 1,196,147; Aug. 29; Gaz. vol. 229; p. 1327.
Bale-band tightener. P. A. Sapp and W. B. Markstein. No. 1,196,591; Aug. 29; Gaz. vol. 229; p. 1478.
Bale of cotton, Wrapping and fastening the cover of a round. G. R. Brown. No. 1,193,506; Aug. 8; Gaz. vol. 229; p. 278.
Baling-machine. F. A. Lundahl. No. 1,196,126; Aug. 29; Gaz. vol. 229; p. 1319.
Baling-machine feeder. A. M. Kolp. No. 1,195,479; Aug. 22; Gaz. vol. 229; p. 1054.
Baling-presses, Combined filler and packer for. S. D. Murray. No. 1,193,410; Aug. 1; Gaz. vol. 229; p. 208.
Baling-presses, Head-block-setting device for. N. C. Sanders. No. 1,194,548; Aug. 15; Gaz. vol. 229; p. 691.
Ball: *See*—
Musical rubber ball. Playing-ball.
Ball goal, Basket-. J. P. Kennedy. No. 1,193,024; Aug. 1; Gaz. vol. 229; p. 68.
Ball-pitching mechanism, Base-. D. Stroup. No. 1,194,093; Aug. 8; Gaz. vol. 229; p. 487.
Ball-throwing apparatus. J. L. Reynolds. No. 1,196,151; Aug. 29; Gaz. vol. 229; p. 1328.
Ball-throwing apparatus. J. L. Reynolds. No. 1,196,741; Aug. 29; Gaz. vol. 229; p. 1532.
Banana culture, Pruning device for. H. H. Loomis. No. 1,194,044; Aug. 8; Gaz. vol. 229; p. 471.
Band-tying gage. M. Currey and A. Cook. No. 1,193,668; Aug. 8; Gaz. vol. 229; p. 339.
Bank, Book or box like form savings-. W. R. Parsons. No. 1,193,598; Aug. 8; Gaz. vol. 229; p. 311.
Bank, Safety-deposit. W. R. Parsons. No. 1,193,599; Aug. 8; Gaz. vol. 229; p. 312.
Bar: *See*—
Car draw-bar. Grate-bar.
Draft-bar. Reinforcing-bar.
Barge. L. Granges. No. 1,196,229; Aug. 29; Gaz. vol. 229; p. 1356.
Barking wood, Apparatus for. P. A. Paulson. No. 1,194,872; Aug. 15; Gaz. vol. 229; p. 804.
Barrel. V. Croce. No. 1,192,869; Aug. 1; Gaz. vol. 229; p. 14.
Barrel, Metal. W. J. Grinden. No. 1,195,462; Aug. 22; Gaz. vol. 229; p. 1048.
Barrels and other receptacles, Apparatus for drying. W. R. Jeffreys. No. 1,195,024; Aug. 15; Gaz. vol. 229; p. 858.
Base-ball performance, Marionette. T. H. Jackson. No. 1,195,023; Aug. 15; Gaz. vol. 229; p. 858.
Base exchange, &c. A. Kolb. No. 1,193,795; Aug. 8; Gaz. vol. 229; p. 385.
Basin, Lavatory-. J. F. Kelly. No. 1,195,684; Aug. 22; Gaz. vol. 229; p. 1128.
Basket-top fastener. J. F. East. No. 1,194,368; Aug. 15; Gaz. vol. 229; p. 627.
Bassinet and canopy therefor, Child's. O. W. Siebert and O. N. Turner. No. 1,193,722; Aug. 8; Gaz. vol. 229; p. 358.
Bath: *See*—
Electric bath.
Bath cabinet, Fluid-. W. S. and P. W. Crum. No. 1,196,433; Aug. 29; Gaz. vol. 229; p. 1425.
Bath tile and terra-cotta construction, Plunge-. J. F. Booraem. No. 1,193,862; Aug. 8; Gaz. vol. 229; p. 409.
Bath-tub cover. F. M. Wolfe. No. 1,194,913; Aug. 15; Gaz. vol. 229; p. 817.
Bath-tub fixture or appliance. W. E. Hinsdale. No. 1,193,145; Aug. 1; Gaz. vol. 229; p. 114.
Bath-tub shower attachment. P. Seltner. No. 1,193,302; Aug. 1; Gaz. vol. 229; p. 170.
Bathing apparatus. F. L. Remer. No. 1,195,729; Aug. 22; Gaz. vol. 229; p. 1144.
Batteries, Separator for. R. N. Chamberlain. No. 1,194,818; Aug. 15; Gaz. vol. 229; p. 785.
Battery: *See*—
Dry battery. Storage battery.
Battery and container. E. A. Hawthorne. No. 1,194,497; Aug. 15; Gaz. vol. 229; p. 675.
Battery-charging panel. A. J. Horton. No. 1,194,500; Aug. 15; Gaz. vol. 229; p. 676.
Battery-jar, Reinforced. E. A. Hawthorne and J. H. George. No. 1,195,217; Aug. 22; Gaz. vol. 229; p. 959.
Battery-plates, Separator for. W. S. Gould. No. 1,195,924; Aug. 22; Gaz. vol. 229; p. 1214.
Bayonet-joint. W. B. Frankenstein. No. 1,195,196; Aug. 22; Gaz. vol. 229; p. 952.
Bean-curd and making same. K. Murakami. No. 1,195,843; Aug. 22; Gaz. vol. 229; p. 1187.
Beans, &c., Machine for trimming string-. W. H. Smith and C. C. Brown. No. 1,193,935; Aug. 8; Gaz. vol. 229; p. 434.
Beard-softener. T. G. Morgan. No. 1,193,287; Aug. 1; Gaz. vol. 229; p. 165.
Bearing. E. E. Dickerson. No. 1,194,604; Aug. 15; Gaz. vol. 229; p. 711.
Bearing and retainer, Ball. W. M. Rohn. No. 1,196,292; Aug. 29; Gaz. vol. 229; p. 1375.
Bearing, Antifriction-. F. G. Hughes. No. 1,193,019; Aug. 1; Gaz. vol. 229; p. 66.
Bearing, Antifriction-. J. H. Modler. No. 1,196,264; Aug. 29; Gaz. vol. 229; p. 1368.
Bearing, Antifriction-. H. M. Rockwell. No. 1,193,071; Aug. 1; Gaz. vol. 229; p. 86.
Bearing, Antifriction-. W. H. Wright. No. 1,194,917; Aug. 15; Gaz. vol. 229; p. 819.
Bearing, Antifriction-. W. H. Wright. No. 1,194,918; Aug. 15; Gaz. vol. 229; p. 819.
Bearing, Ball-. R. H. Fox. No. 1,195,952; Aug. 22; Gaz. vol. 229; p. 1224.
Bearing, Ball-. R. H. Fox. No. 1,195,953; Aug. 22; Gaz. vol. 229; p. 1225.
Bearing, Ball-. W. H. Strom. No. 1,194,679; Aug. 15; Gaz. vol. 229; p. 736.
Bearing, Ball-. A. K. Whitmer. No. 1,195,313; Aug. 22; Gaz. vol. 229; p. 996.
Bearing, Ball or roller. S. G. Wingquist. No. 1,195,756; Aug. 22; Gaz. vol. 229; p. 1155.
Bearing, Film-lubricated thrust-. A. G. M. Michell. No. 1,196,573; Aug. 29; Gaz. vol. 229; p. 1473.
Bearing for side and end strain, Roller-. C. S. Lockwood. No. 1,193,276; Aug. 1; Gaz. vol. 229; p. 161.
Bearing for spindles of spinning-machines or the like, Self-lubricating ball-. J. L. Holming. No. 1,195,816; Aug. 22; Gaz. vol. 229; p. 1178.
Bearing, Oilless. L. S. Bache. No. 1,194,463; Aug. 15; Gaz. vol. 229; p. 663.
Bearing-protecting device, Antirattle. W. J. Zeller and G. A. Stephens. No. 1,194,921; Aug. 15; Gaz. vol. 229; p. 821.
Bearing, Radial ball-. C. F. Suitemeyer. No. 1,193,082; Aug. 1; Gaz. vol. 229; p. 89.
Bearing, Roller-. A. M. Laycock. No. 1,194,043; Aug. 8; Gaz. vol. 229; p. 471.
Bearing, Roller-. M. O. Reeves, D. E. Lewellen, and L. P. Everroad. No. 1,196,288; Aug. 29; Gaz. vol. 229; p. 1374.
Bearing, Shaft-. G. G. Whitney. No. 1,193,648; Aug. 8; Gaz. vol. 229; p. 331.
Bearing, Side. E. A. Laughlin. No. 1,193,030; Aug 1; Gaz. vol. 229; p. 70.
Bearings, Sheet-metal ball-retainer for ball-. C. G. Söderlund. No. 1,196,605; Aug. 29; Gaz. vol. 229; p. 1484.
Bed. W. B. Anderson. No. 1,195,637; Aug. 22; Gaz. vol. 229; p. 1111.
Bed and crib, Combined. E. F. Laforest. No. 1,193,272; Aug. 1; Gaz. vol. 229; p. 159.
Bed, Cooling-. E. E. Slick. No. 1,193,836; Aug. 8; Gaz. vol. 229; p. 399.
Bed, Invalid-. R. S. Brown. No. 1,193,354; Aug. 1; Gaz. vol. 229; p. 188.
Bed, Outdoor. K. B. Ledbetter. No. 1,196,554; Aug. 29; Gaz. vol. 229; p. 1467.
Bed, Sofa-. F. M. Davis. No. 1,194,330; Aug. 8; Gaz. vol. 229; p. 571.
Bedclothes-holder. J. A. Thurston. No. 1,195,874; Aug. 22; Gaz. vol. 229; p. 1198.
Bedclothes or lap-robes, Clasp for holding. R. F. Hemingway. No. 1,193,895; Aug. 8; Gaz. vol. 229; p. 420.
Bedposts, Bottom mount for. F. R. Frost. No. 1,194,164; Aug. 8; Gaz. vol. 229; p. 513.
Bedstead-jack. O. D. Fosburgh. No. 1,195,456; Aug. 22; Gaz. vol. 229; p. 1047.
Beet-blocking machine. J. L. Jensen. No. 1,193,791; Aug. 8; Gaz. vol. 229; p. 384.
Beet-topping machine. R. Chadwick. No. 1,194,359; Aug. 15; Gaz. vol. 229; p. 623.
Bell. B. G. Shalet. No. 1,193,195; Aug. 1; Gaz. vol. 229; p. 131.
Bellows, Pumper-. J. O'Connor. No. 1,193,594; Aug. 8; Gaz. vol. 229; p. 310.
Belt, Abrading-. L. G. Freeman. No. 1,194,494; Aug. 15; Gaz. vol. 229; p. 674.
Belt, Conveyer-. W. F. Bowers. No. 1,194,704; Aug. 15; Gaz. vol. 229; p. 745.
Belt elevator and conveyer. F. Marston. No. 1,194,308; Aug. 8; Gaz. vol. 229; p. 563.
Belt-fastener. N. P. Mader. No. 1,196,374; Aug. 29; Gaz. vol. 229; p. 1404.
Belt, Mechanical drive-. J. Crowe. No. 1,194,962; Aug. 15; Gaz. vol. 229; p. 835.
Belt-shifter. J. J. Fryne. No. 1,196,347; Aug. 29; Gaz. vol. 229; p. 1394.
Belt-shifting device. K. Petersen. No. 1,194,873; Aug. 15; Gaz. vol. 229; p. 804.
Belt-tightener. G. C. Goodyear. No. 1,194,010; Aug. 8; Gaz. vol. 229; p. 460.
Bench: *See*—
Ladder-assembling bench. Piano-bench.

Bench stop and dog, Combined. G. O. Parmelee. No. 1,195,078; Aug. 15; Gaz. vol. 229; p. 876.
Bending-rolls. P. Parcells. No. 1,195,714; Aug. 22; Gaz. vol. 229; p. 1139.
Bicycle-gearing. W. G. Bryan and P. B. Sheather. No. 1,194,945; Aug. 15; Gaz. vol. 229; p. 829.
Bicycles, motor-cycles, and the like, Frame construction for. E. Y. White. No. 1,193,956; Aug. 8; Gaz. vol. 229; p. 442.
Flour-bin.
Bill-folder and change-holder, Combination. N. Simmons. No. 1,195,281; Aug. 22; Gaz. vol. 229; p. 984.
Bin: *See*—
Binder and forming the same, Temporary. C. D. Trussell. No. 1,194,684; Aug. 15; Gaz. vol. 229; p. 738.
Binder device. G. Farron. No. 1,194,284; Aug. 8; Gaz. vol. 229; p. 553.
Binder, Loose-leaf. F. E. Caufield, Jr. No. 1,196,333; Aug. 29; Gaz. vol. 229; p. 1389.
Binder, Loose-leaf. J. C. Merwin. No. 1,192,923; Aug 1; Gaz. vol. 229; p. 33.
Binder, Loose-leaf. J. Schade, Jr. No. 1,192,940; Aug. 1; Gaz. vol. 229; p. 38.
Binder post. Loose-leaf-. W. C. Williams. No. 1,196,059; Aug. 29; Gaz. vol. 229; p. 1296.
Binder, Temporary. E. B. Arnold. No. 1,193,497; Aug. 8; Gaz. vol. 229; p. 275.
Binding-post. W. A. Chryst. No. 1,193,513; Aug. 8; Gaz. vol. 229; p. 280.
Binding-post. K. C. Randall. No. 1,194,231; Aug. 8; Gaz. vol. 229; p. 535.
Biscuit, Means for manufacturing filamentous. C. E. Smith. No. 1,194,341; Aug. 8; Gaz. vol. 229; p. 575.
Biscuit, Means for manufacturing filamentous. C. E. Smith. No. 1,195,114; Aug. 15; Gaz. vol. 229; p. 887.
Biscuits and other articles with icing or similar substance, Machine for coating. G. S. and G. R. Baker. No. 1,196,068; Aug. 29; Gaz. vol. 229; p. 1299.
Bivalves, Marking. M. C. and R. Armstrong. No. 1,195,946; Aug. 22; Gaz. vol. 229; p. 1222.
Blacking-machine. F. M. Furber. No. 1,195,348; Aug. 22; Gaz. vol. 229; p. 1009.
Blank-fitting machine. E. E. Lane. No. 1,195,823; Aug. 22; Gaz. vol. 229; p. 1180.
Blanket attachment, Horse-. P. J. Borbridge. No. 1,196,203; Aug. 29; Gaz. vol. 229; p. 1348.
Blasting, Channeling and severing by. T. A. Clark. No. 1,195,781; Aug. 22; Gaz. vol. 229; p. 1165.
Blasting-rod. W. C. Tucker. No. 1,192,958; Aug. 1; Gaz. vol. 229; p. 44.
Bleaching. H. R. Anders and M. E. U. Schoedler. No. 1,195,325; Aug. 22; Gaz. vol. 229; p. 1000.
Block: *See*—
Building-block. Meter-testing block.
Carrier-block. Switch-block.
Chock-block.
Block-signal system. U. S. Jackson. No. 1,196,242; Aug. 29; Gaz. vol. 229; p. 1360.
Block-signaling system. C. W. Ward. No. 1,196,189; Aug. 29; Gaz. vol. 229; p. 1342.
Block system. R. C. Sutphin. No. 1,195,748; Aug. 22; Gaz. vol. 229; p. 1152.
Blowing-machine, Pneumatic. J. J. Smith. No. 1,193,475; Aug. 1; Gaz. vol. 229; p. 230.
Board: *See*—
Game-board. Piling-board.
Ironing-board. Stove-board.
Lath-board. Tree-board.
Boat driving-gear, Motor-. A. B. Miller. No. 1,195,146; Aug. 15; Gaz. vol. 229; p. 899.
Boat-hull. J. E. Langstaff. No. 1,195,035; Aug. 15; Gaz. vol. 229; p. 862.
Boat, Safety-. L. R. Snowden. No. 1,195,863; Aug. 22; Gaz. vol. 229; p. 1194.
Bobbin holding and gripping device. J. Johnston. No. 1,193,901; Aug. 8; Gaz. vol. 229; p. 423.
Bobbin-stripper. J. Craig. No. 1,193,877; Aug. 8; Gaz. vol. 229; p. 414.
Bobbin-supporter. I. E. Palmer. No. 1,196,740; Aug. 29; Gaz. vol. 229; p. 1532.
Boiler: *See*—
Fire and water tube boiler. Water-tube boiler.
Steam-boiler.
Boiler. W. L. R. Emmet. No. 1,194,157; Aug. 8; Gaz. vol. 229; p. 510.
Boiler. E. C. Meier. No. 1,193,172; Aug. 1; Gaz. vol. 229; p. 122.
Boiler. O. T. Nelson. No. 1,196,140; Aug. 29; Gaz. vol. 229; p. 1324.
Boiler-compound feeder, Automatic locomotive-. H. Mann. No. 1,193,038; Aug. 1; Gaz. vol. 229; p. 73.
Boiler for heating systems. H. Tielkemeyer. No. 1,195,749; Aug. 22; Gaz. vol. 229; p. 1152.
Boiler furnace, Locomotive-. R. Gregory. No. 1,193,543; Aug. 8; Gaz. vol. 229; p. 292.
Boiler-plug. F. E. Key. No. 1,195,687; Aug. 22; Gaz. vol. 229; p. 1129.
Boiler stay-bolt. E. I. Dodds. No. 1,194,824; Aug. 15; Gaz. vol. 229; p. 787.
Boiler-tube scraper. J. A. Crepeau. No. 1,193,361; Aug. 1; Gaz. vol. 229; p. 191.
Boilers and the like, Stud-mounting for. G. G. Greenwood. No. 1,194,169; Aug. 8; Gaz. vol. 229; p. 514.
Boilers, Grate for. H. Straeten. No. 1,193,732; Aug. 8; Gaz. vol. 229; p. 362.
Boilers, &c., Tube-joint for. C. D. Mosher. No. 1,192,927; Aug. 1; Gaz. vol. 229; p. 34.
Boll-weevil destroyer. E. C. Poellnitz. No. 1,193,296; Aug. 1; Gaz. vol. 229; p. 168.
Bolt: *See*—
Boiler stay-bolt. Screw-bolt.
Expansion-bolt.
Bolt. M. J. Kohut. No. 1,195,594; Aug. 22; Gaz. vol. 229; p. 1096.
Bolts, Manufacturing flexible. E. I. Dodds. No. 1,194,825; Aug. 15; Gaz. vol. 229; p. 787.
Bomb, Submarine. D. B. Dunlop. No. 1,194,726; Aug. 15; Gaz. vol. 229; p. 753.
Book-backing machine. F. P. Hill. No. 1,195,679; Aug. 22; Gaz. vol. 229; p. 1127.
Book, Deposit-. A. J. Skinner. No. 1,196,743; Aug. 29; Gaz. vol. 229; p. 1533.
Book-holder. L. L. Harford. No. 1,194,016; Aug. 8; Gaz. vol. 229; p. 462.
Book-leaf holder. H. Noll. No. 1,196,715; Aug. 29; Gaz. vol. 229; p. 1522.
Book, Manifolding sales-. W. S. Birdsall. No. 1,194,938; Aug. 15; Gaz. vol. 229; p. 826.
Book or lesson marker and paper-cutter. E. E. Prettyman. No. 1,193,421; Aug. 1; Gaz. vol. 229; p. 212.
Book or pamphlet covering machine. C. A. Juengst. No. 1,193,395; Aug. 1; Gaz. vol. 229; p. 203.
Book, Record-. W. I. Leatherland. No. 1,195,038; Aug. 15; Gaz. vol. 229; p. 863.
Book, Sales-. J. D. A. Johnson. No. 1,194,742; Aug. 15; Gaz. vol. 229; p. 759.
Books, Clip for sales-. C. P. L. Abell. No. 1,192,837; Aug. 1; Gaz. vol. 229; p. 3.
Boot and shoe cleaner. D. A. Billington. No. 1,195,648; Aug. 22; Gaz. vol. 229; p. 1116.
Boots and shoes, Machine for forming the toes of the vamps of. J. H. Connor. No. 1,195,968; Aug. 29; Gaz. vol. 229; p. 1263.
Boots, shoes, and slippers, Seamless felt form for felt. H. T. Emmons. No. 1,196,671; Aug. 29; Gaz. vol. 229; p. 1506.
Boresight. A. Grebe. No. 1,195,353; Aug. 22; Gaz. vol. 229; p. 1011.
Boring-head and screwing-head, Expanding. J. W. Bradley. No. 1,194,352; Aug. 15; Gaz. vol. 229; p. 621.
Boring-tools, Dies for making shanks of. E. T. McPherson. No. 1,193,037; Aug. 1; Gaz. vol. 229; p. 73.
Bottle. P. Amico. No. 1,194,119; Aug. 8; Gaz. vol. 229; p. 497.
Bottle. L. Jilly. No. 1,193,792; Aug. 8; Gaz. vol. 229; p. 384.
Bottle and brush, Mucilage. T. J. Searcy. No. 1,193,433; Aug. 1; Gaz. vol. 229; p. 215.
Bottle-capping machine. J. Januchowsky and H. Albert. No. 1,193,463; Aug. 1; Gaz. vol. 229; p. 226.
Bottle-caps, Machine for making. G. M. C. Nielsen. No. 1,195,392; Aug. 22; Gaz. vol. 229; p. 1025.
Bottle case, Milk-. J. L. Bowen. No. 1,193,980; Aug. 8; Gaz. vol. 229; p. 449.
Bottle-closure. W. E. Blattau. No. 1,196,510; Aug. 29; Gaz. vol. 229; p. 1451.
Bottle dispenser, Milk-. P. Korud. No. 1,193,027; Aug. 1; Gaz. vol. 229; p. 69.
Bottle filling and capping machine. P. W. Shields. No. 1,195,516; Aug. 22; Gaz. vol. 229; p. 1066.
Bottle-holder, Protective. C. Schaum and R. H. Williams. No. 1,196,592; Aug. 29; Gaz. vol. 229; p. 1479.
Bottle-locking device, Milk-. J. G. R. Schumann. No. 1,193,931; Aug. 8; Gaz. vol. 229; p. 433.
Bottle-making machine. H. C. Ayerst. No. 1,193,749; Aug. 8; Gaz. vol. 229; p. 368.
Bottle, Non-refillable. F. Kruchoski. No. 1,195,031; Aug. 15; Gaz. vol. 229; p. 861.
Bottle, Non-refillable. J. F. Lots. No. 1,194,649; Aug. 15; Gaz. vol. 229; p. 725.
Bottle, Non-refillable. S. A. Parker. No. 1,194,415; Aug. 15; Gaz. vol. 229; p. 644.
Bottle, Non-refillable. J. Reilly. No. 1,194,544; Aug. 15; Gaz. vol. 229; p. 690.
Bottle, Non-refillable. H. Rosenheim. No. 1,194,076; Aug. 8; Gaz. vol. 229; p. 482.
Bottle-receptacle. C. B. Christensen. No. 1,194,478; Aug. 15; Gaz. vol. 229; p. 668.
Bottles and the like, Closure for. M. L. Goldman. No. 1,196,228; Aug. 29; Gaz. vol. 229; p. 1356
Bottles and the like, Conveyer for. J. J. Gaynor. No. 1,194,990; Aug. 15; Gaz. vol. 229; p. 845.
Bottles or the like, Stoppering device for. E. A. Matthias. No. 1,194,762; Aug. 15; Gaz. vol. 229; p. 765.
Bottles, Valve-neck construction for. M. Rajchok. No. 1,195,726; Aug. 22; Gaz. vol. 229; p. 1144.
Bottling-machine. P. W. Shields. No. 1,195,515; Aug. 22; Gaz. vol. 229; p. 1066.
Boundary-line marker. F. W. Lord. No. 1,195,697; Aug. 22; Gaz. vol. 229; p. 1133.

Box: *See*—
Car journal-box. Journal-box.
Cigarette-box. Letter-box.
Cigarette and match box. Lunch-box.
Collapsible box. Mail-box.
Collapsible or knockdown box. Miter-box.
Display-box. Packing-box.
Dump-box. Paper box.
Fare-box. Rouge-box.
Feed-box. Sheet-metal box.
Fire-box. Shipping-box.
Folding box. Signal-box.
Ice-box. Stationery-box.
Stuffing-box.
Box. S. L. Fleux. No. 1,196,451; Aug. 29; Gaz. vol. 229; p. 1431.
Box. G. G. Jennings. No. 1,196,365; Aug. 29; Gaz. vol. 229; p. 1401.
Box. L. A. Negraval. No. 1,194,412; Aug. 15; Gaz. vol. 229; p. 643.
Box cover, Service-. O. G. Hitchcock. No. 1,193,479; Aug. 1; Gaz. vol. 229; p. 231.
Box-cover wrappers, Gumming-machine for. R. S. Bolger. No. 1,194,702; Aug. 15; Gaz. vol. 229; p. 744.
Box-fastener. A. R. Bingham. No. 1,193,502; Aug. 8; Gaz. vol. 229; p. 277.
Box-making machine. C. Burnham. No. 1,194,815; Aug. 15; Gaz. vol. 229; p. 784.
Box or crate. O. A. Lane and D. Guice. No. 1,193,567; Aug. 8; Gaz. vol. 229; p. 300.
Box-pasting machine. R. J. Schwartz and E. J. Retzbach. No. 1,194,244; Aug. 8; Gaz. vol. 229; p. 540.
Box-shook-counting machine. E. P. Dunbar. No. 1,194,971; Aug. 15; Gaz. vol. 229; p. 839.
Box-stay. D. Weber. No. 1,196,319; Aug. 29; Gaz. vol. 229; p. 1385.
Boxes, Machine for producing and attaching lacings to. D. G. Steely, F. W. Blake, and G. A. Lorentzen. No. 1,193,343; Aug. 8; Gaz. vol. 229; p. 437.
Boxes, Mat for compression-. M. B. Green. No. 1,194,996; Aug. 15; Gaz. vol. 229; p. 848.
Brace: *See*—
Heel-brace.
Bracelets and the like, Fastening of. P. L. Wray. No. 1,193,330; Aug. 1; Gaz. vol. 229; p. 180.
Bracelets or the like, Link for. H. H. Lott. No. 1,192,916; Aug. 1; Gaz. vol. 229; p. 30.
Bracelets or the like, Link for. H. H. Lott. No. 1,192,917; Aug. 1; Gaz. vol. 229; p. 30.
Bracket: *See*—
Car-door bracket. Scaffold-bracket.
Harness-bracket. Shade-bracket.
Nozzle-bracket. Wall-bracket.
Braiding-machine. W. Kellner. No. 1,193,554; Aug. 8; Gaz. vol. 229; p. 295.
Brake: *See*—
Air-brake. Fluid-pressure brake.
Automobile-brake. Rail-brake.
Automobile air-brake. Ship-brake.
Car lever-brake. Talking-machine brake.
Coaster-brake. Vehicle-brake.
Emergency-brake. Vessel-brake.
Brake-controlling mechanism, Train-. B. C. Rowell. No. 1,193,473; Aug. 1; Gaz. vol. 229; p. 229.
Brake-gears, Automatic slack-adjuster for. O. P. Wilhelm. No. 1,193,100; Aug. 1; Gaz. vol. 229; p. 97.
Brake mechanism, Automatic. L. F. Fleser. No. 1,194,985; Aug. 15; Gaz. vol. 229; p. 843.
Brake mechanism for locomotive-cranes and the like. A. Fronck. No. 1,193,006; Aug. 1; Gaz. vol. 229; p. 61.
Brake system for moving vehicles. G. Rennerfelt. No. 1,194,783; Aug. 15; Gaz. vol. 229; p. 773.
Brassière. J. C. Ripley. No. 1,196,291; Aug. 29; Gaz. vol. 229; p. 1375.
Brassière, Adjustable. E. Miles. No. 1,195,835; Aug. 22; Gaz. vol. 229; p. 1185.
Brick-machine. H. and J. H. Besser. No. 1,196,327; Aug. 29; Gaz. vol. 229; p. 1387.
Brick, Ornamenting. J. L. Buckley. No. 1,195,649; Aug. 22; Gaz. vol. 229; p. 1116.
Bricklayer's tool. T. H. Coburn. No. 1,193,665; Aug. 8; Gaz. vol. 229; p. 338.
Brickmaking-machine. F. W. Butterworth. No. 1,193,870; Aug. 8; Gaz. vol. 229; p. 412.
Brickmaking-machine. F. W. Butterworth. No. 1,193,871; Aug. 8; Gaz. vol. 229; p. 412.
Bridge, Concrete truss girder-. J. V. Jenkins and E. J. Creighton. No. 1,195,820; Aug. 22; Gaz. vol. 229; p. 1179.
Bridge control. H. T. Herr. No. 1,196,746; Aug. 29; Gaz. vol. 229; p. 1533.
Briquet. I. Foreman. No. 1,194,333; Aug. 8; Gaz. vol. 229; p. 572.
Bristle fabric and making the same. C. J. Peterson. No. 1,194,874; Aug. 15; Gaz. vol. 229; p. 805.
Broaches and the like, Machine for wrapping. L. L. Funk. No. 1,193,682; Aug. 8; Gaz. vol. 229; p. 343.
Bronzing-machine. A. W. Cook. No. 1,195,561; Aug. 22; Gaz. vol. 229; p. 1084.
Brooder. N. E. Dailey. No. 1,195,914; Aug. 22; Gaz. vol. 229; p. 1211.
Brooder and hover. M. V. Foster and I. P. Armitage. No. 1,192,880; Aug. 1; Gaz. vol. 229; p. 17.
Brooder, Chicken-. V. L. Fisher and F. J. Hill. No. 1,196,095; Aug. 29; Gaz. vol. 229; p. 1309.
Brooder-heater. A. Mahon. No. 1,194,338; Aug. 8; Gaz. vol. 229; p. 574.
Broom-handle, Extension. W. B. Standefer. No. 1,194,894; Aug. 15; Gaz. vol. 229; p. 812.
Brush and comb, Combination hair. M. Christiansen. No. 1,196,522; Aug. 29; Gaz. vol. 229; p. 1455.
Brush for bottle-washing machines. J. M. Jung. No. 1,192,904; Aug. 1; Gaz. vol. 229; p. 25.
Brush, Fountain-. J. D. Garvey. No. 1,194,877; Aug. 15; Gaz. vol. 229; p. 630.
Brush, Fountain shaving-. S. H. Kleeberg. No. 1,194,642; Aug. 15; Gaz. vol. 229; p. 723.
Brush-holder. A. Riegger. No. 1,194,665; Aug. 15; Gaz. vol. 229; p. 731.
Brush, Rotary tooth-. C. G. Waudby. No. 1,193,644; Aug. 8; Gaz. vol. 229; p. 330.
Brush, Sectional scrubbing-. S. Przespoleski. No. 1,196,397; Aug. 29; Gaz. vol. 229; p. 1413.
Brush, Shaving-. M. P. Hendricks. No. 1,194,735; Aug. 15; Gaz. vol. 229; p. 756.
Bucket, Clam-shell. W. McWhirk, R. D. Lewis, and H. J. Desson. No. 1,193,706; Aug. 8; Gaz. vol. 229; p. 352.
Bucket, Conveyer-. C. H. Ruth. No. 1,193,826; Aug. 8; Gaz. vol. 229; p. 395.
Bucket, Painter's. H. Sorley. No. 1,193,307; Aug. 1; Gaz. vol. 229; p. 172.
Buckle. L. Ecker. No. 1,195,664; Aug. 22; Gaz. vol. 229; p. 1121.
Buckle. M. A. Wightman. No. 1,196,623; Aug. 29; Gaz. vol. 229; p. 1490.
Buckle, Adjusting-. B. F. Orewiler. No. 1,193,050; Aug. 1; Gaz. vol. 229; p. 77.
Buckle-fastening machine. W. L. Barron. No. 1,194,588; Aug. 15; Gaz. vol. 229; p. 706.
Buffer. L. E. Barnes. No. 1,193,973; Aug. 8; Gaz. vol. 229; p. 447.
Buffing or polishing wheel. C. B. Nehls. No. 1,195,389; Aug. 22; Gaz. vol. 229; p. 1024.
Buffing-wheel. A. L. Kraus. No. 1,195,235; Aug. 22; Gaz. vol. 229; p. 966.
Builder's hardware. J. S. Detrick. No. 1,196,214; Aug. 29; Gaz. vol. 229; p. 1351.
Building block or member. F. Girlot. No. 1,195,670; Aug. 22; Gaz. vol. 229; p. 1124.
Building block or section. E. Gregory. No. 1,193,542; Aug. 8; Gaz. vol. 229; p. 291.
Building structure. G. H. Barbour. No. 1,196,325; Aug. 29; Gaz. vol. 229; p. 1386.
Buildings or the like, Structure or frame for. F. Pucillo. No. 1,194,320; Aug. 8; Gaz. vol. 229; p. 568.
Bulletin, Train-. S. W. Balch. No. 1,195,900; Aug. 22; Gaz. vol. 229; p. 1207.
Bumper. F. T. Roberts. No. 1,195,735; Aug. 22; Gaz. vol. 229; p. 1147.
Buoy, Signaling or indicating. C. M. Rollo. No. 1,196,588; Aug. 29; Gaz. vol. 229; p. 1477.
Burglar-alarm. M. L. Harvey. No. 1,192,893; Aug. 1; Gaz. vol. 229; p. 22.
Burglar-alarm. R. A. Philp. No. 1,196,394; Aug. 29; Gaz. vol. 229; p. 1412.
Burglar-alarm. J. Smoter. No. 1,193,306; Aug. 1; Gaz. vol. 229; p. 171.
Burglar and holdup alarm. G. E. Yeager. No. 1,193,656; Aug. 8; Gaz. vol. 229; p. 334.
Burial-cases, Corner construction for. P. D. Skahen. No. 1,193,723; Aug. 8; Gaz. vol. 229; p. 359.
Burner: *See*—
Atmospheric burner. Oil-burner.
Gas-burner. Oil and gas burner.
Gas and air burner. Oil-vapor burner.
Hydrocarbon-burner. Stalk and weed burner.
Liquid-fuel burner.
Burning carbonaceous material, Apparatus for. H. L. Doherty. No. 1,192,998; Aug. 1; Gaz. vol. 229; p. 58.
Bushing. E. H. Waugh. No. 1,196,191; Aug. 29; Gaz. vol. 229; p. 1343.
Bushing, Adjustable flange-. F. E. Rice. No. 1,194,664; Aug. 15; Gaz. vol. 229; p. 731.
Butter-making machine. P. Hanson. No. 1,195,006; Aug. 15; Gaz. vol. 229; p. 851.
Button. A. Schopper. No. 1,194,550; Aug. 15; Gaz. vol. 229; p. 692.
Button, Cuff-. W. M. Larrabee. No. 1,194,041; Aug. 8; Gaz. vol. 229; p. 470.
Button, Detachable. W. J. Smith. No. 1,193,936; Aug. 8; Gaz. vol. 229; p. 435.
Button-making press. J. G. Breitenstein. No. 1,196,076; Aug. 29; Gaz. vol. 229; p. 1303.
Button, Snap-. S. Herzog. No. 1,195,678; Aug. 22; Gaz. vol. 229; p. 1127.
Button, Snap-. J. Silberman. No. 1,194,082; Aug. 8; Gaz. vol. 229; p. 484.
Cabinet and table, Combined. S. S. Bradley. No. 1,195,964; Aug. 29; Gaz. vol. 229; p. 1261.
Cabinet, Delivery-. J. A. Bain. No. 1,195,129; Aug. 15; Gaz. vol. 229; p. 892.
Cabinet, Non-resonant music-. A. D. Jones. No. 1,196,366; Aug. 29; Gaz. vol. 229; p. 1401.
Cabinet, Sectional display-. W. T. Hormes. No. 1,195,817; Aug. 22; Gaz. vol. 229; p. 1178.
Cable-lubricating device. W. H. Cabe. No. 1,194,598; Aug. 15; Gaz. vol. 229; p. 709.
Calcium chlorid and hexamethylenamin and a process relating to the same, Chemical compound of. E. Samson. No. 1,193,474; Aug. 1; Gaz. vol. 229; p. 230.

Calculating and recording machine. W. H. Draughon. No. 1,195,567; Aug. 22; Gaz. vol. 229; p. 1086.
Calculating device. A. W. MacMillan. No. 1,195,702; Aug. 22; Gaz. vol. 229; p. 1135.
Calculating-machine. T. D. Crist and G. H. Spitzli. No. 1,194,718; Aug. 15; Gaz. vol. 229; p. 750.
Calculating-machine. G. Martinez. No. 1,194,760; Aug. 15; Gaz. vol. 229; p. 765.
Calculating-webs and the like, Mounting for. E. E. Jenkins. No. 1,194,390; Aug. 15; Gaz. vol. 229; p. 635.
Calculator, Proportion-. R. G. Hall. No. 1,195,212; Aug. 22; Gaz. vol. 229; p. 957.
Calendar. F. C. Gutekunst. No. 1,196,679; Aug. 29; Gaz. vol. 229; p. 1509.
Calendar, Perpetual. T. J. Nolan. No. 1,195,071; Aug. 15; Gaz. vol. 229; p. 874.
Calipers. L. Kaplan. No. 1,194,182; Aug. 8; Gaz. vol. 229; p. 519.
Calk-frame, Detachable. O. E. Brown. No. 1,193,864; Aug. 8; Gaz. vol. 229; p. 409.
Calling device. W. Kaisling. No. 1,195,589; Aug. 22; Gaz. vol. 229; p. 1094.
Cam-rectifier. C. L. Fortescue. No. 1,194,160; Aug. 8; Gaz. vol. 229; p. 511.
Cambering and quenching apparatus. Z. B. Leonard. No. 1,195,242; Aug. 22; Gaz. vol. 229; p. 968.
Camera. P. C. Osteen. No. 1,195,076; Aug. 15; Gaz. vol. 229; p. 875.
Camera. C. J. Overman. No. 1,194,657; Aug. 15; Gaz. vol. 229; p. 728.
Camera and similar apparatus, Photographic. E. C. Clark and J. Arrufat. No. 1,196,209; Aug. 29; Gaz. vol. 229; p. 1350.
Camera attachment. W. O. Besaw and A. E. McClanahan. No. 1,194,700; Aug. 15; Gaz. vol. 229; p. 744.
Camera, Automatic printing-. A. R. Rancier. No. 1,193,424; Aug. 1; Gaz. vol. 229; p. 213.
Camera-carriage. W. F. Folmer. No. 1,196,096; Aug. 29; Gaz. vol. 229; p. 1309.
Camera exposure-indicator. J. G. Miles. No. 1,195,062; Aug. 15; Gaz. vol. 229; p. 870.
Camera, Film-. H. G. Cuthbert. No. 1,195,187; Aug. 22; Gaz. vol. 229; p. 949.
Camera, Focusing-. J. Becker. No. 1,195,947; Aug. 22; Gaz. vol. 229; p. 1222.
Camera, Focusing-. J. Becker. No. 1,195,948; Aug. 22; Gaz. vol. 229; p. 1223.
Camera, Folding. W. Kabelitz. No. 1,196,116; Aug. 29; Gaz. vol. 229; p. 1316.
Camera-lens. G. E. Watts. No. 1,193,851; Aug. 8; Gaz. vol. 229; p. 404.
Camera, Photographic. J. A. Robertson and W. A. Riddell. No. 1,195,400; Aug. 22; Gaz. vol. 229; p. 1027.
Camera spool-support. J. G. Smeby. No. 1,196,601; Aug. 29; Gaz. vol. 229; p. 1483.
Can: *See*—
Friction-lid can. Milk-can.
Friction-seat wall-can. Oil-can.
Garbage-can.
Can. F. Wesel. No. 1,194,450; Aug. 15; Gaz. vol. 229; p. 658.
Can-body flanges, Apparatus for re-forming. A. Johnson. No. 1,196,695; Aug. 29; Gaz. vol. 229; p. 1514.
Can-capper, safety attachment. F. G. Westland. No. 1,193,647; Aug. 8; Gaz. vol. 229; p. 331.
Can-coating machine. J. G. Hodgson. No. 1,196,111; Aug. 29; Gaz. vol. 229; p. 1314.
Can cover, Sanitary milk-. E. Kreutzberg. No. 1,193,564; Aug. 8; Gaz. vol. 229; p. 299.
Can ends to a seaming mechanism, Device for feeding. L. C. Krummel. No. 1,194,039; Aug. 8; Gaz. vol. 229; p. 469.
Can-handling mechanism. R. D. King. No. 1,196,700; Aug. 29; Gaz. vol. 229; p. 1516.
Can-heads, Machine for placing paper rings in. C. D. McDonald and C. E. Ennes. No. 1,194,759; Aug. 15; Gaz. vol. 229; p. 764.
Can-opener. M. McCune. No. 1,195,051; Aug. 15; Gaz. vol. 229; p. 867.
Can-support, Window. W. H. McNutt. No. 1,193,910; Aug. 8; Gaz. vol. 229; p. 426.
Can-turning device. C. T. Small. No. 1,193,624; Aug. 8; Gaz. vol. 229; p. 323.
Can valve, Oil-. W. A. Schmidt. No. 1,195,102; Aug. 15; Gaz. vol. 229; p. 883.
Cans and utensils, Sanitary cover for. O. Rudolph. No. 1,194,787; Aug. 15; Gaz. vol. 229; p. 775.
Cans, bottles, and the like, Apparatus for filling. T. H. Hart. No. 1,195,675; Aug. 22; Gaz. vol. 229; p. 1126.
Candle-holder. M. Chersky. No. 1,195,657; Aug. 22; Gaz. vol. 229; p. 1119.
Candy-making machinery. S. H. Born. No. 1,195,437; Aug. 22; Gaz. vol. 229; p. 1040.
Canoe. J. Ranco. No. 1,195,727; Aug. 22; Gaz. vol. 229; p. 1144.
Caoutchouc, Manufacture of synthetic. A. Heinemann. No. 1,194,839; Aug. 15; Gaz. vol. 229; p. 792.
Cap-crimping tool. W. H. Downs. No. 1,194,486; Aug. 15; Gaz. vol. 229; p. 671.
Caponizing instrument. S. K. Burdin. No. 1,193,988; Aug. 8; Gaz. vol. 229; p. 453.
Caponizing-tool. S. K. Burdin. No. 1,193,987; Aug. 8; Gaz. vol. 229; p. 452.
Car. W. H. Yost. No. 1,192,971; Aug. 1; Gaz. vol. 229; p. 48.
Car and electric coupling. T. R. Brown. No. 1,194,353; Aug. 15; Gaz. vol. 229; p. 621.
Car automatic coupling, Railway-. T. J. Futrell. No. 1,193,535; Aug. 8; Gaz. vol. 229; p. 288.
Car, Compartment railway-. F. H. Gibbs. No. 1,193,254; Aug. 1; Gaz. vol. 229; p. 152.
Car, Compartment railway-. F. H. Gibbs. No. 1,193,256; Aug. 1; Gaz. vol. 229; p. 153.
Car construction. W. W. Fuller. No. 1,192,881; Aug. 1; Gaz. vol. 229; p. 18.
Car construction. G. F. Laughlin. No. 1,195,692; Aug. 22; Gaz. vol. 229; p. 1131.
Car construction. R. V. Sage. No. 1,195,096; Aug. 15; Gaz. vol. 229; p. 882.
Car-coupling. A. J. Bazeley. No. 1,193,222; Aug. 1; Gaz. vol. 229; p. 140.
Car-coupling. J. Willison. No. 1,194,109; Aug. 8; Gaz. vol. 229; p. 493.
Car-coupling. J. Willison. No. 1,194,110; Aug. 8; Gaz. vol. 229; p. 493.
Car-door. W. E. Gillett. No. 1,195,203; Aug. 22; Gaz. vol. 229; p. 954.
Car-door. J. W. Rumsey. No. 1,193,721; Aug. 8; Gaz. vol. 229; p. 358.
Car-door. J. B. Strauss. No. 1,193,440; Aug. 1; Gaz. vol. 229; p. 217.
Car-door bracket. F. Mathews. No. 1,193,171; Aug. 1; Gaz. vol. 229; p. 122.
Car door, Freight-. F. E. Patton. No. 1,193,601; Aug. 8; Gaz. vol. 229; p. 313.
Car-door lock. W. McMinnis. No. 1,196,007; Aug. 29; Gaz. vol. 229; p. 1277.
Car-door-operating mechanism. A. Campbell. No. 1,192,986; Aug. 1; Gaz. vol. 229; p. 53.
Car-door-operating mechanism. J. F. McElroy. No. 1,196,567; Aug. 29; Gaz. vol. 229; p. 1471.
Car-door-operating mechanism, Freight-. H. S. Hart. No. 1,195,582; Aug. 22; Gaz. vol. 229; p. 1092.
Car-door operator. F. J. Vickman. No. 1,194,578; Aug. 15; Gaz. vol. 229; p. 702.
Car, Double-decked. B. Macfadden. No. 1,196,568; Aug. 29; Gaz. vol. 229; p. 1471.
Car draft-arm, Railway-. C. E. Dath. No. 1,193,364; Aug. 1; Gaz. vol. 229; p. 192.
Car draw-bar, Railway-. G. P. Thurber. No. 1,193,312; Aug. 1; Gaz. vol. 229; p. 174.
Car ends and the like, Door structure for sheet-metal. W. P. Murphy. No. 1,193,915; Aug. 8; Gaz. vol. 229; p. 428.
Car fender, Street-. J. W. Kizeski. No. 1,194,847; Aug. 15; Gaz. vol. 229; p. 795.
Car-handling mechanism. S. A. Taylor. No. 1,193,630; Aug. 8; Gaz. vol. 229; p. 325.
Car journal-box. C. R. Law. No. 1,196,553; Aug. 29; Gaz. vol. 229; p. 1467.
Car lever-brake. W. M. Shelley. No. 1,195,109; Aug. 15; Gaz. vol. 229; p. 885.
Car-loading apparatus. R. Elder and T. C. Kennedy. No. 1,195,568; Aug. 22; Gaz. vol. 229; p. 1087.
Car-lock for mine-cages. W. A. Lubold. No. 1,195,045; Aug. 15; Gaz. vol. 229; p. 865.
Car, Pay-as-you-enter. E. L. Stephens. No. 1,196,310; Aug. 29; Gaz. vol. 229; p. 1382.
Car platforms, Trap-door for railway-. E. F. Chaffee. No. 1,195,779; Aug. 22; Gaz. vol. 229; p. 1164.
Car, Railway-. F. H. Gibbs. No. 1,193,255; Aug. 1; Gaz. vol. 229; p. 153.
Car, Railway-. B. W. Kadel and J. A. Pilcher. No. 1,196,462; Aug. 29; Gaz. vol. 229; p. 1435.
Car, Railway-. G. Webster. No. 1,193,211; Aug. 1; Gaz. vol. 229; p. 136.
Car roller side bearing, Railway-. F. B. Townsend. No. 1,193,313; Aug. 1; Gaz. vol. 229; p. 174.
Car-roof. R. W. Burnett. No. 1,194,709; Aug. 15; Gaz. vol. 229; p. 747.
Car-roof. R. W. Burnett. No. 1,196,660; Aug. 29; Gaz. vol. 229; p. 1503.
Car-seat. V. Von Schlegell. No. 1,196,187; Aug. 29; Gaz. vol. 229; p. 1342.
Car signaling apparatus, Motor-. F. W. Yonge. No. 1,194,920; Aug. 15; Gaz. vol. 229; p. 820.
Car-step, Folding. R. C. Mealer. No. 1,193,466; Aug. 1; Gaz. vol. 229; p. 227.
Car system, Monorail dump-. A. Simko. No. 1,196,402; Aug. 29; Gaz. vol. 229; p. 1415.
Car-unloading apparatus. W. K. Monroe. No. 1,196,134; Aug. 29; Gaz. vol. 229; p. 1322.
Car ventilator, Railway-. W. H. Schubert. No. 1,196,485; Aug. 29; Gaz. vol. 229; p. 1443.
Car-wheel-flange lubricator. W. F. Black. No. 1,196,509; Aug. 29; Gaz. vol. 229; p. 1451.
Cars, Driving attachment for. H. Miller. No. 1,195,380; Aug. 22; Gaz. vol. 229; p. 1020.
Cars, Floating brace for packing-boxes in railway-. O. O. Oliver and L. Powers. No. 1,193,597; Aug. 8; Gaz. vol. 229; p. 311.
Cars, Guard-rail for passenger-. W. H. Conibear. No. 1,194,821; Aug. 15; Gaz. vol. 229; p. 786.
Cars, Safety-handhold for sleeping-. J. N. Roberson. No. 1,194,237; Aug. 8; Gaz. vol. 229; p. 537.
Carbon disulfid, Manufacture of. A. Walter. No. 1,193,210; Aug. 1; Gaz. vol. 229; p. 136.
Carbon monoxid, Absorbing. W. Gaus. No. 1,196,101; Aug. 29; Gaz. vol. 229; p. 1310.

Carbonating-machines, Driving mechanism for. C. L. Bastian. No. 1,195,765; Aug. 22; Gaz. vol. 229; p. 1159.
Carbureter. C. De Lukacsevics. No. 1,196,669; Aug. 29; Gaz. vol. 229; p. 1506.
Carbureter. C. De Lukacsevics and C. J. Terrill. No. 1,196,668; Aug. 29; Gaz. vol. 229; p. 1505.
Carbureter. R. A. Duff. No. 1,193,880; Aug. 8; Gaz. vol. 229; p. 415.
Carbureter. C. E. Duryea. No. 1,194,153; Aug. 8; Gaz. vol. 229; p. 509.
Carbureter. F. L. Kingston. No. 1,194,297; Aug. 8; Gaz. vol. 229; p. 558.
Carbureter. M. E. Mallo. No. 1,193,580; Aug. 8; Gaz. vol. 229; p. 305.
Carbureter. W. L. Marr. No. 1,194,530; Aug. 15; Gaz. vol. 229; p. 685.
Carbureter. O. B. Monosmith. No. 1,194,055; Aug. 8; Gaz. vol. 229; p. 475.
Carbureter. B. N. Pierce. No. 1,194,876; Aug. 15; Gaz. vol. 229; p. 806.
Carbureter. C. L. Rayfield. No. 1,193,820; Aug. 8; Gaz. vol. 229; p. 393.
Carbureter. J. C. Simmons. No. 1,193,834; Aug. 8; Gaz. vol. 229; p. 398.
Carbureter. C. H. Smith. No. 1,195,113; Aug. 15; Gaz. vol. 229; p. 887.
Carbureter. J. A. Williams. No. 1,194,454; Aug. 15; Gaz. vol. 229; p. 660.
Carbureter. R. T. Williams. No. 1,195,315; Aug. 22; Gaz. vol. 229; p. 997.
Carbureter air-supply, Moisture-supplying device for. G. H. Brown and W. A. Jones. No. 1,195,905; Aug. 22; Gaz. vol. 229; p. 1208.
Carbureter attachment. F. M. Starbuck. No. 1,194,437; Aug. 8; Gaz. vol. 229; p. 652.
Carbureter, Vacuum-. W. J. En Earl. No. 1,195,343; Aug. 22; Gaz. vol. 229; p. 1007.
Card holder for freight-cars and other purposes, Record-. E. R. Probert. No. 1,194,064; Aug. 8; Gaz. vol. 229; p. 478.
Card holder for freight-cars and other purposes, Record-. E. R. Probert. No. 1,194,065; Aug. 8; Gaz. vol. 229; p. 478.
Card marker, Index-. C. A. Honecker. No. 1,193,265; Aug. 1; Gaz. vol. 229; p. 156.
Card, Playing-. J. G. Matthews. No. 1,194,858; Aug. 15; Gaz. vol. 229; p. 800.
Card system. J. H. and J. H. Rand, Jr. No. 1,194,422; Aug. 15; Gaz. vol. 229; p. 647.
Carpet-beater. A. C. Koster. No. 1,194,395; Aug. 15; Gaz. vol. 229; p. 637.
Carpet-cleaning machine. J. Dehon. No. 1,196,527; Aug. 29; Gaz. vol. 229; p. 1456.
Carpet-knotting machines for shooting in the filling, Attachment to. F. Boyer. No. 1,193,982; Aug. 8; Gaz. vol. 229; p. 450.
Carpets, Machine for manufacturing knotted. F. Boyer. No. 1,193,229; Aug. 1; Gaz. vol. 229; p. 143.
Carrier: *See*—
Baby-carrier. Pneumatic-despatch-tube carrier.
Egg-carrier.
Hay-carrier. Straw-carrier.
Carrier. H. Wulbers. No. 1,195,319; Aug. 22; Gaz. vol. 229; p. 998.
Carrier-block for circular or similar type. M. Steiniger and W. Papke. No. 1,196,489; Aug. 29; Gaz. vol. 229; p. 1444.
Carriers, Double-track switch for gravity-. H. J. Buck. No. 1,193,119; Aug. 1; Gaz. vol. 229; p. 104.
Carriers, Indicating device for. J. M. Burns. No. 1,195,651; Aug. 22; Gaz. vol. 229; p. 1117.
Cart, Dump-. H. G. Blankfort. No. 1,192,979; Aug. 1; Gaz. vol. 229; p. 51.
Carton-setting-up machine. A. J. Wills. No. 1,195,937; Aug. 22; Gaz. vol. 229; p. 1219.
Carton-wrapping machine. H. O. Fischer. No. 1,196,094; Aug. 29; Gaz. vol. 229; p. 1308.
Cartridge. A. W. Batcher. No. 1,196,200; Aug. 29; Gaz. vol. 229; p. 1347.
Cartridge belt or carrier. V. H. Jennings. No. 1,194,335; Aug. 8; Gaz. vol. 229; p. 573.
Cartridge, Gun-. J. E. Sheriff. No. 1,195,107; Aug. 15; Gaz. vol. 229; p. 885.
Case: *See*—
Bottle-case. Skeleton case.
Cigarette-case. Watchcase.
Egg-case.
Exhibiting and vending case.
Casing-spear and trip therefor. H. C. Brewster. No. 1,193,452; Aug. 1; Gaz. vol. 229; p. 221.
Cash drawer and recorder. F. G. Marbach. No. 1,193,039; Aug. 1; Gaz. vol. 229; p. 73.
Cast-iron pipe. J. R. McWane. No. 1,195,830; Aug. 22; Gaz. vol. 229; p. 1183.
Caster for trucks. W. B. Pavey and G. M. French. No. 1,194,780; Aug. 15; Gaz. vol. 229; p. 772.
Casting apparatus and process. J. C. Davis. No. 1,193,670; Aug. 8; Gaz. vol. 229; p. 339.
Casting apparatus, Metal-. A. E. Hassall. No. 1,195,010; Aug. 15; Gaz. vol. 229; p. 853.
Casting appliance. J. A. and D. S. Gardner. No. 1,195,802; Aug. 22; Gaz. vol. 229; p. 1172.
Casting-machine. E. E. Gilmer. No. 1,198,175; Aug. 1; Gaz. vol. 229; p. 196.
Casting-machine, Centrifugal. J. A. and D. S. Gardner. No. 1,195,803; Aug. 22; Gaz. vol. 229; p. 1172.
Casting machines, Shearing mechanism for lead and rule strip. J. S. Bancroft and M. C. Indahl. No. 1,193,344; Aug. 1; Gaz. vol. 229; p. 184.
Catalogue, Shopper's. H. B. Abel. No. 1,195,761; Aug. 22; Gaz. vol. 229; p. 1157.
Catamenial napkin. E. Sprague. No. 1,195,621; Aug. 22; Gaz. vol. 229; p. 1106.
Cattle-guard. A. A. Frechette. No. 1,194,832; Aug. 15; Gaz. vol. 229; p. 790.
Cattle-guard. A. Gwynn. No. 1,195,003; Aug. 15; Gaz. vol. 229; p. 850.
Cattle-guard. J. M. Kirby and B. E. Hartson. No. 1,193,562; Aug. 8; Gaz. vol. 229; p. 298.
Cattle-guard, Railway. J. M. Kirby and B. E. Hartson. No. 1,193,561; Aug. 8; Gaz. vol. 229; p. 298.
Celluloid and producing the same, Product resembling. L. Lederer. No. 1,195,040; Aug. 15; Gaz. vol. 229; p. 864.
Cellulosic composition. H. S. Mork and G. J. Esselen, Jr. No. 1,193,178; Aug. 1; Gaz. vol. 229; p. 125.
Cement-block machine, Double-. W. Hazleton. No. 1,196,684; Aug. 29; Gaz. vol. 229; p. 1510.
Cement-block-molding machine. L. F. Powanz. No. 1,196,395; Aug. 29; Gaz. vol. 229; p. 1412.
Cement-consistency standard. P. Poetschke and F. L. Grier. No. 1,196,582; Aug. 29; Gaz. vol. 229; p. 1476.
Cement, Recovering water-soluble potassium salts from feldspathic rocks or their derivatives in the manufacture of Portland. F. W. Huber and F. Reath. No. 1,194,344; Aug. 8; Gaz. vol. 229; p. 576.
Centrifugal extractor. A. E. W. Jahn. No. 1,193,697; Aug. 8; Gaz. vol. 229; p. 349.
Centrifugal separator. D. B. Weston. No. 1,196,056; Aug. 29; Gaz. vol. 229; p. 1295.
Chain. A. C. Johnson. No. 1,194,635; Aug. 15; Gaz. vol. 229; p. 720.
Chain. C. A. Prindle. No. 1,196,396; Aug. 29; Gaz. vol. 229; p. 1413.
Chain-drive coupling. N. A. Wheeler. No. 1,193,098; Aug. 1; Gaz. vol. 229; p. 96.
Chain, Reinforcing-. W. H. Corrigan. No. 1,194,601; Aug. 15; Gaz. vol. 229; p. 710.
Chain, Roller-. B. J. Diplock. No. 1,194,823; Aug. 15; Gaz. vol. 229; p. 787.
Chain, Sprocket drive-. A. I. Hovland. No. 1,193,550; Aug. 8; Gaz. vol. 229; p. 294.
Chain wrench. E. Phelps. No. 1,196,479; Aug. 29; Gaz. vol. 229; p. 1440.
Chains, Means for taking up drive-. H. S. Pierce. No. 1,193,419; Aug. 1; Gaz. vol. 229; p. 211.
Chair: *See*—
Convertible chair. Rail-chair.
Desk-chair. Reclining-chair.
Folding chair. Window-cleaning chair.
Household and devotional chair.
Chair. F. Lenard. No. 1,193,802; Aug. 8; Gaz. vol. 229; p. 387.
Chair. J. R. Ohnstad. No. 1,193,047; Aug. 1; Gaz. vol. 229; p. 76.
Chair. E. G. Watkins. No. 1,196,050; Aug. 29; Gaz. vol. 229; p. 1293.
Chalk-holder. C. L. Moore. No. 1,194,212; Aug. 8; Gaz. vol. 229; p. 529.
Change-making machine. C. McDermott. No. 1,195,829; Aug. 22; Gaz. vol. 229; p. 1182.
Change-making machine. J. A. Plopper. No. 1,194,316; Aug. 8; Gaz. vol. 229; p. 566.
Charcoal powder, Making active. L. Pilaski. No. 1,195,720; Aug. 22; Gaz. vol. 229; p. 1141.
Chart, Efficiency-. C. H. Hodges. No. 1,194,629; Aug. 15; Gaz. vol. 229; p. 719.
Check, Controller-. S. J. Leveen. No. 1,193,464; Aug. 1; Gaz. vol. 229; p. 226.
Check-detector for check-actuated machines. A. D. Antoine and C. C. Travis. No. 1,193,967; Aug. 8; Gaz. vol. 229; p. 445.
Check device, Safety. J. M. Youngs. No. 1,193,958; Aug. 8; Gaz. vol. 229; p. 442.
Check-indorsing machine. W. W. Mowry. No. 1,195,068; Aug. 15; Gaz. vol. 229; p. 873.
Cheese-hoop and follower. P. Larsen. No. 1,195,370; Aug. 22; Gaz. vol. 229; p. 1017.
Cheese-hoop follower. P. Larsen. No. 1,195,371; Aug. 22; Gaz. vol. 229; p. 1017.
Chest: *See*—
Cooking-chest. Tool-chest.
Pipe-chest. Valve-chest.
Safety-chest.
Chiropractic-table. E. Bishop. No. 1,194,939; Aug. 15; Gaz. vol. 229; p. 826.
Chisel and punch holder. O. S. Le Grand. No. 1,196,252; Aug. 29; Gaz. vol. 229; p. 1363.
Chock-block, Wheel and rail. G. W. Chestnut. No. 1,193,512; Aug. 8; Gaz. vol. 229; p. 280.
Chopper: *See*—
Ticket-chopper.
Chromium-containing silicates, Producing. A. Kolb. No. 1,193,794; Aug. 8; Gaz. vol. 229; p. 385.
Chuck. E. J. Barrett. No. 1,195,901; Aug. 22; Gaz. vol. 229; p. 1207.
Chuck. O. D. Hapgood. No. 1,195,214; Aug. 22; Gaz. vol. 229; p. 958.
Chuck. J. Hartness. No. 1,193,141; Aug. 1; Gaz. vol. 229; p. 112.

Chuck. J. B. Purssell. No. 1,193,716; Aug. 8; Gaz. vol. 229; p. 356.
Chuck for screw-machines. T. Z. Carpenter. No. 1,194,817; Aug. 15; Gaz. vol. 229; p. 785.
Churn. J. H. Murray. No. 1,194,768; Aug. 15; Gaz. vol. 229; p. 767.
Churn-dasher, Oscillating. R. L. Taylor. No. 1,196,612; Aug. 29; Gaz. vol. 229; p. 1486.
Chute for glazed windows. J. E. Raber. No. 1,193,058; Aug. 1; Gaz. vol. 229; p. 81.
Chute for mixing-machines, Delivery-. S. Shafer, Jr. No. 1,195,941; Aug. 22; Gaz. vol. 229; p. 1220.
Cigar-band. L. R. Alexandre. No. 1,193,748; Aug. 8; Gaz. vol. 229; p. 368.
Cigar-holder. M. H. Lucas and D. B. Kelly. No. 1,195,046; Aug. 15; Gaz. vol. 229; p. 865.
Cigarette and match box, Combined. E. S. Rosenblatt. No. 1,193,428; Aug. 1; Gaz. vol. 229; p. 214.
Cigarette-box. E. J. Guenzel and C. E. Wyant. No. 1,193,892; Aug. 8; Gaz. vol. 229; p. 419.
Cigarette-case. V. Nivols. No. 1,193,593; Aug. 8; Gaz. vol. 229; p. 310.
Cigarette-case. A. A. Stockellburg. No. 1,196,406; Aug. 29; Gaz. vol. 229; p. 1416.
Cigarette-case. J. L. Tuffley. No. 1,195,629; Aug. 22; Gaz. vol. 229; p. 1108.
Cigarette-holder. I. Wallenstein. No. 1,194,905; Aug. 15; Gaz. vol. 229; p. 815.
Cinematographic photograms, Apparatus for taking. F. Alberini. No. 1,196,066; Aug. 29; Gaz. vol. 229; p. 1299.
Circuit-breaker. W. M. Scott. No. 1,193,622; Aug. 8; Gaz. vol. 229; p. 322.
Circuit-closer. W. G. Lynch. No. 1,193,705; Aug. 8; Gaz. vol. 229; p. 352.
Circuit-closer. A. E. Williams. No. 1,194,324; Aug. 8; Gaz. vol. 229; p. 569.
Circuit-closing apparatus. G. L. Carruthers and J. S. Holderness. No. 1,193,510; Aug. 8; Gaz. vol. 229; p. 280.
Circuit connections of electron-discharge apparatus. W. C. White. No. 1,195,632; Aug. 22; Gaz. vol. 229; p. 1109.
Clamp: *See*—
Ear-ornament clamp.
Line or rein clamp.
Measuring-line-reel clamp.
Needle-clamp.
Pattern-clamp.
Pipe-clamp.
Rail-clamp.
Rope and cable clamp.
Scaffold-clamp.
Screw-clamp.
Terminal clamp.
Tube-clamp.
Wire-stretcher clamp.
Clamp. A. J. Broling. No. 1,194,943; Aug. 15; Gaz. vol. 229; p. 828.
Clamp. C. J. Wallace. No. 1,193,642; Aug. 8; Gaz. vol. 229; p. 330.
Clamping device. S. K. Dennis. No. 1,192,996; Aug. 1; Gaz. vol. 229; p. 57.
Clarinet tuning-slide. T. Solberg. No. 1,194,887; Aug. 15; Gaz. vol. 229; p. 809.
Clasp: *See*—
Garment-clasp.
Tie-clasp.
Clay articles, Manufacture of. J. C. Quinn. No. 1,193,922; Aug. 8; Gaz. vol. 229; p. 430.
Clay-products-surfacing mechanism. J. A. Boyd and P. Rogan. No. 1,193,663; Aug. 8; Gaz. vol. 229; p. 337.
Clean-out plug. H. Stenquist. No. 1,194,091; Aug. 8; Gaz. vol. 229; p. 486.
Cleaner: *See*—
Boot and shoe cleaner.
Cotton-cleaner.
Fiber-cleaner.
Flue-cleaner.
Pipe-cleaner.
Tube-cleaner.
Cleaners, Combination elbow-coupling, valve, and handle for suction-. E. L. B. Zimmer. No. 1,196,414; Aug. 29; Gaz. vol. 229; p. 1419.
Cleaners, Handle-switch for suction-. J. B. Kirby. No. 1,195,363; Aug. 22; Gaz. vol. 229; p. 1015.
Cleaning hollow articles, Machine for. G. P. Delbauve and J. W. Fox. No. 1,193,673; Aug. 8; Gaz. vol. 229; p. 341.
Cleansing compound. E. L. Rader. No. 1,196,282; Aug. 29; Gaz. vol. 229; p. 1373.
Clevis, Safety-. P. Dykshorn and G. Den Besten. No. 1,195,191; Aug. 22; Gaz. vol. 229; p. 951.
Clip: *See*—
Electrical connector-clip.
Holding-clip.
Paper-clip.
Clip. J. Sachs. No. 1,194,882; Aug. 15; Gaz. vol. 229; p. 807.
Clock. B. Trivus. No. 1,193,815; Aug. 1; Gaz. vol. 229; p. 175.
Clock, Motor-driven. G. A. Goodson. No. 1,193,012; Aug. 1; Gaz. vol. 229; p. 63.
Clock or the like, Talking-. M. Marcus. No. 1,194,855; Aug. 15; Gaz. vol. 229; p. 798.
Clock rewinding device. C. Auer. No. 1,194,928; Aug. 15; Gaz. vol. 229; p. 823.
Clock, Self-winding. W. J. Van Osdel. No. 1,194,444; Aug. 15; Gaz. vol. 229; p. 656.
Clock, Time-. J. Kaup. No. 1,196,367; Aug. 29; Gaz. vol. 229; p. 1402.
Clocks and the like, Means for indicating opening of the cases of watchmen's. A. F. Nanz. No. 1,196,139; Aug. 29; Gaz. vol. 229; p. 1324.
Closet: *See*—
Portable and collapsible closet.
Water-closet.
Closet-fixture. G. H. Wheary. No. 1,195,156; Aug. 15; Gaz. vol. 229; p. 902.
Closet-seat, Sanitary. L. Romine. No. 1,194,073; Aug. 8; Gaz. vol. 229; p. 481.
Closure-lock. A. P. Cochrane. No. 1,195,909; Aug. 22; Gaz. vol. 229; p. 1210.
Cloth-cutting machine. H. Fabian. No. 1,195,569; Aug. 22; Gaz. vol. 229; p. 1087.
Clothes-holder. A. Parkin. No. 1,195,496; Aug. 22; Gaz. vol. 229; p. 1059.
Clothes-line hanger. M. Rosenthal. No. 1,194,667; Aug. 15; Gaz. vol. 229; p. 732.
Clothes-line holder. J. Butler. No. 1,192,985; Aug. 1; Gaz. vol. 229; p. 53.
Clothes-line support. W. White. No. 1,195,312; Aug. 22; Gaz. vol. 229; p. 996.
Clothes-pin. T. F. Budge. No. 1,194,597; Aug. 15; Gaz. vol. 229; p. 709.
Clothes-pin. J. Kosovsky. No. 1,194,509; Aug. 15; Gaz. vol. 229; p. 679.
Clothes-pin, Metal. H. A. Repschlaeger. No. 1,196,585; Aug. 29; Gaz. vol. 229; p. 1477.
Clothes-wringer. A. J. Fisher. No. 1,195,570; Aug. 22; Gaz. vol. 229; p. 1088.
Clutch. L. L. Fuller. No. 1,193,008; Aug. 1; Gaz. vol. 229; p. 62.
Clutch. T. S. Miller. No. 1,193,586; Aug. 8; Gaz. vol. 229; p. 307.
Clutch, Fluid-. A. H. Asprooth and H. H. Benson. No. 1,195,956; Aug. 29; Gaz. vol. 229; p. 1259.
Clutch for controlling and gripping ropes. T. P. Eustege. No. 1,194,980; Aug. 15; Gaz. vol. 229; p. 841.
Clutch, Friction-. J. H. Stull. No. 1,193,442; Aug. 1; Gaz. vol. 229; p. 218.
Clutch, Hydraulic. A. H. Sweet. No. 1,194,572; Aug. 15; Gaz. vol. 229; p. 699.
Clutch mechanism. F. A. Snideman. No. 1,195,520; Aug. 22; Gaz. vol. 229; p. 1068.
Clutch, Multiple-cone. H. D. Abernethy. No. 1,195,762; Aug. 22; Gaz. vol. 229; p. 1158.
Coal-auger nuts, Fastener for sectional. C. E. Holt and P. R. Rauch. No. 1,195,018; Aug. 15; Gaz. vol. 229; p. 856.
Coal-conveying mechanism. A. L. Copley. No. 1,193,124; Aug. 1; Gaz. vol. 229; p. 106.
Coaster-brake. W. S. Bullard. No. 1,193,355; Aug. 1; Gaz. vol. 229; p. 189.
Coat and similar article of clothing. W. H. Rose. No. 1,195,738; Aug. 22; Gaz. vol. 229; p. 1148.
Coat-hanger. N. L. Greene. No. 1,193,891; Aug. 8; Gaz. vol. 229; p. 419.
Coating composition, Liquid. A. R. Picker. No. 1,196,276; Aug. 29; Gaz. vol. 229; p. 1372.
Coating machine, Fabric-. J. F. White and L. B. Ross. No. 1,195,310; Aug. 22; Gaz. vol. 229; p. 995.
Coating-machines, Delivery mechanism for. A. J. Ford. No. 1,193,772; Aug. 8; Gaz. vol. 229; p. 377.
Coating metal with metal. F. W. Heuser. No. 1,196,544; Aug. 29; Gaz. vol. 229; p. 1463.
Cobalt oxids, Electrolytic process for the extraction of. K. S. Guiterman. No. 1,195,211; Aug. 22; Gaz. vol. 229; p. 957.
Cock, Angle-. C. L. Robinson. No. 1,196,587; Aug. 29; Gaz. vol. 229; p. 1477.
Cock, Automatic cylinder-. G. Shelton. No. 1,195,106; Aug. 15; Gaz. vol. 229; p. 884.
Codes, ciphers, &c. J. C. H. Macbeth and A. J. Jung. No. 1,195,701; Aug. 22; Gaz. vol. 229; p. 1134.
Coin changing and registering apparatus. P. L. Monical. No. 1,195,251; Aug. 22; Gaz. vol. 229; p. 971.
Coin-controlled mechanism. W. Millard. No. 1,196,574; Aug. 29; Gaz. vol. 229; p. 1473.
Coin depositing and recording device. J. L. Schmidt. No. 1,195,275; Aug. 22; Gaz. vol. 229; p. 981.
Coin-holder. H. G. Kittrell. No. 1,194,192; Aug. 8; Gaz. vol. 229; p. 522.
Coke-oven, Recuperative. A. Roberts. No. 1,193,066; Aug. 1; Gaz. vol. 229; p. 84.
Coke-oven, Regenerative. A. Roberts. No. 1,193,067; Aug. 1; Gaz. vol. 229; p. 84.
Coke-oven, Regenerative. N. Schuster. No. 1,193,830; Aug. 8; Gaz. vol. 229; p. 396.
Coke-ovens, Expansion control for. A. Roberts. No. 1,193,068; Aug. 1; Gaz. vol. 229; p. 85.
Collapsible adjusting or manipulating table. W. S. and D. E. Wood. No. 1,194,112; Aug. 8; Gaz. vol. 229; p. 494.
Collapsible box. C. Stuart. No. 1,194,570; Aug. 15; Gaz. vol. 229; p. 699.
Collapsible or knockdown box. J. W. Weiss. No. 1,196,053; Aug. 29; Gaz. vol. 229; p. 1294.
Collapsible table. O. C. L. Hirsch. No. 1,194,019; Aug. 8; Gaz. vol. 229; p. 462.
Collar. H. A. Borresen. No. 1,196,204; Aug. 29; Gaz. vol. 229; p. 1348.
Collar. M. Fink and M. J. Dunn. No. 1,193,885; Aug. 8; Gaz. vol. 229; p. 417.
Collar. S. Okamuro. No. 1,193,048; Aug. 1; Gaz. vol. 229; p. 77.
Collar, Fold-. J. M. Belermeister. No. 1,195,645; Aug. 22; Gaz. vol. 229; p. 1115.
Collaret. C. Ilgan. No. 1,192,900; Aug. 1; Gaz. vol. 229; p. 24.
Column joint, Sectional-. T. I. Weston. No. 1,196,057; Aug. 29; Gaz. vol. 229; p. 1295.

Comb: *See*—
Currycomb.
Comber, Heilman. G. M. Whitin. No. 1,195,426; Aug. 22; Gaz. vol. 229; p. 1036.
Combustion-engine. G. Fornaca. No. 1,193,004; Aug. 1; Gaz. vol. 229; p. 60.
Combustion-engine. W. L. Phillips. No. 1,195,603; Aug. 22; Gaz. vol. 229; p. 1099.
Comminuted material, Process of and apparatus for sizing or classifying. H. M. Sutton, W. L. and E. G. Steele. No. 1,196,047; Aug. 29; Gaz. vol. 229; p. 1292.
Comminuted material, Process of and apparatus for sizing or classifying. H. M. Sutton, W. L. and E. G. Steele. No. 1,196,048; Aug. 29; Gaz. vol. 229; p. 1292.
Commutator-motor, Alternating-current. E. F. W. Alexanderson. No. 1,194,923; Aug. 15; Gaz. vol. 229; p. 821.
Commutators, Manufacture and construction of. E. F. Smith. No. 1,195,861; Aug. 22; Gaz. vol. 229; p. 1193.
Compass. H. Wagner. No. 1,195,300; Aug. 22; Gaz. vol. 229; p. 991.
Compasses. G. F. Wheeler. No. 1,195,887; Aug. 22; Gaz. vol. 229; p. 1202.
Compasses for perspective drawings, Proportional. J. H. A. Mialaret. No. 1,193,914; Aug. 8; Gaz. vol. 229; p. 427.
Composing-machine, Multiplex. M. C. Indahl. No. 1,193,393; Aug. 1; Gaz. vol. 229; p. 202.
Composing-machines, Units-rack-stop mechanism for. J. S. Bancroft and M. C. Indahl. No. 1,193,846; Aug. 1; Gaz. vol. 229; p. 185.
Composite resistance. M. E. Leeds. No. 1,192,911; Aug. 1; Gaz. vol. 229; p. 28.
Composition and process for treating plants. C. W. Eastman. No. 1,194,608; Aug. 15; Gaz. vol. 229; p. 712.
Compressing device. F. P. Wilder. No. 1,194,262; Aug. 8; Gaz. vol. 229; p. 546.
Compressor, Multistage. G. Westinghouse. No. 1,194,687; Aug. 15; Gaz. vol. 229; p. 739.
Compressors, Device to prevent surging in centrifugal. W. Kieser. No. 1,194,188; Aug. 8; Gaz. vol. 229; p. 520.
Computing or calculating machine. F. Trinks and F. Stemmler. No. 1,194,900; Aug. 15; Gaz. vol. 229; p. 813.
Concentrating-table. G. P. Sandie. No. 1,196,295; Aug. 29; Gaz. vol. 229; p. 1376.
Concentrator. C. B. Ripley. No. 1,193,190; Aug. 1; Gaz. vol. 229; p. 129.
Concrete bricks or blocks, Mold for poured. W. D. Moore. No. 1,194,862; Aug. 15; Gaz. vol. 229; p. 800.
Concrete building-block, Reinforced-. R. Di Filippo. No. 1,193,878; Aug. 8; Gaz. vol. 229; p. 415.
Concrete conduit. P. Pickering. No. 1,195,081; Aug. 15; Gaz. vol. 229; p. 877.
Concrete construction, Form work for. E. O. Keator. No. 1,193,023; Aug. 1; Gaz. vol. 229; p. 68.
Concrete fence construction. G. Auer. No. 1,195,957; Aug. 29; Gaz. vol. 229; p. 1259.
Concrete pavements or the like, Expansion-joint for. E. M. Laing. No. 1,195,368; Aug. 22; Gaz. vol. 229; p. 1016.
Concrete-structure mold. C. H. Wittboefft. No. 1,195,126; Aug. 15; Gaz. vol. 229; p. 891.
Concrete tomb and memorial, Reinforced-. I. S. Dauley. No. 1,195,787; Aug. 22; Gaz. vol. 229; p. 1167.
Concrete walls with a tile facing, Mold for casting. C. O. Ellert. No. 1,193,484; Aug. 1; Gaz. vol. 229; p. 233.
Condenser. F. F. Vega and R. Abarca. No. 1,195,752; Aug. 22; Gaz. vol. 229; p. 1154.
Condenser, reboiler, and skimmer, Steam. C. O. Dawson. No. 1,195,918; Aug. 22; Gaz. vol. 229; p. 1212.
Condenser system and vacuum-pump. M. Riesner. No. 1,196,742; Aug. 29; Gaz. vol. 229; p. 1532.
Condiment-holder. J. E. and E. V. Young. No. 1,193,332; Aug. 1; Gaz. vol. 229; p. 181.
Cone-coupling. A. P. Brush. No. 1,195,971; Aug. 29; Gaz. vol. 229; p. 1264.
Connecting-link and making same. J. Merritt. No. 1,196,010; Aug. 29; Gaz. vol. 229; p. 1278.
Container. V. Nivols. No. 1,193,592; Aug. 8; Gaz. vol. 229; p. 309.
Container. V. Nivols. No. 1,196,267; Aug. 29; Gaz. vol. 229; p. 1369.
Container, Knockdown. A. P. Cochrane. No. 1,195,908; Aug. 22; Gaz. vol. 229; p. 1209.
Container, Metallic. J. E. Prescott. No. 1,195,083; Aug. 15; Gaz. vol. 229; p. 878.
Container or box, Metal. H. A. Hisgen, T. Wolfe, T. Armitage, Jr., and G. C. Hisgen. No. 1,193,461; Aug. 1; Gaz. vol. 229; p. 225.
Container top or cap, Liquid-. J. M. Allen. No. 1,194,347; Aug. 15; Gaz. vol. 229; p. 619.
Container vessels, Interiorly coating. F. Rudolph and J. G. Hodgson. No. 1,196,155; Aug. 29; Gaz. vol. 229; p. 1330.
Containers, Band for circular. F. J. Oberer. No. 1,195,602; Aug. 22; Gaz. vol. 229; p. 1099.
Containers, Machine for making. L. W. Luellen. No. 1,193,514; Aug. 8; Gaz. vol. 229; p. 302.
Containers, Means for the sorting and delivery of metal. M. A. McLeod. No. 1,195,054; Aug. 15; Gaz. vol. 229; p. 868.
Continuous kiln. F. D. Shaw. No. 1,194,556; Aug. 15; Gaz. vol. 229; p. 694.
Converging disk mechanism. J. P. Offerman. No. 1,193,595; Aug. 8; Gaz. vol. 229; p. 311.
Converter. A. T. Kasley. No. 1,193,485; Aug. 1; Gaz. vol. 229; p. 233.
Converter, Rotary. J. L. Burnham. No. 1,194,138; Aug. 8; Gaz. vol. 229; p. 503.
Converter, Vacuum-type. L. W. Chubb. No. 1,194,140; Aug. 8; Gaz. vol. 229; p. 504.
Convertible chair. F. A. Goelz. No. 1,193,257; Aug. 1; Gaz. vol. 229; p. 153.
Convertible elevator. C. Hammen. No. 1,193,893; Aug. 8; Gaz. vol. 229; p. 419.
Conveyer. O. Elck. No. 1,196,442; Aug. 29; Gaz. vol. 229; p. 1427.
Conveyer or elevator more particularly for use in proving dough. G. S. Baker. No. 1,194,932; Aug. 15; Gaz. vol. 229; p. 824.
Cooker. A. J. Kercher. No. 1,194,029; Aug. 8; Gaz. vol. 229; p. 466.
Cooker. W. J. Schaefer. No. 1,195,507; Aug. 22; Gaz. vol. 229; p. 1063.
Cooker. A. R. Thompson. No. 1,193,632; Aug. 8; Gaz. vol. 229; p. 326.
Cooking apparatus. W. R. Beetlestone. No. 1,196,644; Aug. 29; Gaz. vol. 229; p. 1497.
Cooking-chest. H. Junkers. No. 1,194,638; Aug. 15; Gaz. vol. 229; p. 721.
Cooking utensil. M. C. Brown. No. 1,193,353; Aug. 1; Gaz. vol. 229; p. 188.
Cooking utensil. M. Hedrique. No. 1,194,291; Aug. 8; Gaz. vol. 229; p. 556.
Cooking utensils, Cover and ball holder for. F. N. Martindale. No. 1,193,585; Aug. 8; Gaz. vol. 229; p. 307.
Cooking-vessel cover. M. A. Walden. No. 1,193,954; Aug. 8; Gaz. vol. 229; p. 441.
Cooler: *See*—
Liquid-cooler.
Cooling apparatus. H. E. Leavitt and A. D. Lane. No. 1,194,518; Aug. 15; Gaz. vol. 229; p. 682.
Coop, Chicken-. C. W. Wright and H. B. Willson. No. 1,196,625; Aug. 29; Gaz. vol. 229; p. 1490.
Coop, Chicken-feeding. G. Collis. No. 1,192,867; Aug. 1; Gaz. vol. 229; p. 13.
Coops, Parkway structure for brooder-. C. S. Riggin and J. J. Lanoue. No. 1,196,483; Aug. 29; Gaz. vol. 229; p. 1442.
Copra-drying machine. D. N. McChesney. No. 1,196,128; Aug. 29; Gaz. vol. 229; p. 1320.
Copy-holder. G. A. Marsh. No. 1,194,306; Aug. 8; Gaz. vol. 229; p. 562.
Core-conveyer. L. J. Bognar. No. 1,195,332; Aug. 22; Gaz. vol. 229; p. 1003.
Core-drill. J. H. Okell. No. 1,193,468; Aug. 1; Gaz. vol. 229; p. 227.
Core, Separable. W. R. Denman. No. 1,192,874; Aug. 1; Gaz. vol. 229; p. 15.
Coring-machine and the like. A. L. Reiner. No. 1,194,233; Aug. 8; Gaz. vol. 229; p. 536.
Corn-binder. W. Zickefoose. No. 1,195,320; Aug. 22; Gaz. vol. 229; p. 998.
Corn, Husking. S. German. No. 1,194,616; Aug. 15; Gaz. vol. 229; p. 715.
Corn-husking machine. S. German. No. 1,194,615; Aug. 15; Gaz. vol. 229; p. 715.
Corn-husking machine. J. B. Zimmerman. No. 1,195,164; Aug. 15; Gaz. vol. 229; p. 905.
Corn, Machine for snapping and husking ears of. J. F. Mast. No. 1,196,258; Aug. 29; Gaz. vol. 229; p. 1366.
Corn-popping machine. C. E. McCarren. No. 1,196,563; Aug. 29; Gaz. vol. 229; p. 1469.
Corner-piece. A. P. Cochrane. No. 1,195,910; Aug. 22; Gaz. vol. 229; p. 1210.
Cornet. W. A. French. No. 1,196,097; Aug. 29; Gaz. vol. 229; p. 1309.
Cot, Folding. M. Lowy. No. 1,196,253; Aug. 29; Gaz. vol. 229; p. 1363.
Cotters and preventing same from dropping out of locking position, Device for locking. C. Richey. No. 1,194,426; Aug. 15; Gaz. vol. 229; p. 648.
Cotton cleaner, Automatic seed-. W. J. White. No. 1,194,261; Aug. 8; Gaz. vol. 229; p. 545.
Cotton ginning and spinning machine. R. E. Dupuy. No. 1,195,794; Aug. 22; Gaz. vol. 229; p. 1169.
Cotton-picker. N. Keeling. No. 1,195,030; Aug. 15; Gaz. vol. 229; p. 860.
Cotton-picker head. I. E. McGehee. No. 1,196,373; Aug. 29; Gaz. vol. 229; p. 1404.
Cotton-press. J. J. and T. J. Hanus and J. F. Putz. No. 1,194,624; Aug. 15; Gaz. vol. 229; p. 717.
Cotton-seed cake, Machine for breaking. J. W. Moore. No. 1,193,176; Aug. 1; Gaz. vol. 229; p. 124.
Counterbalance for hinged covers. D. T. Buckwalter. No. 1,194,708; Aug. 15; Gaz. vol. 229; p. 746.
Counterbalanced wheel. U. Ohlsen. No. 1,195,074; Aug. 15; Gaz. vol. 229; p. 875.
Counting machine, Coin-. I. D. Fuller. No. 1,193,873; Aug. 1; Gaz. vol. 229; p. 185.

Coupling: *See*—
Car-coupling. Hose-coupling.
Car and electric coupling. Hose and pipe coupling.
Car automatic coupling. Magneto-coupling.
Chain-drive coupling. Pipe-coupling.
Cone-coupling. Rail-coupling.
Emergency-coupling. Rod or pipe coupling.
Engine-coupling. Shaft-coupling.
Flexible coupling. Thill-coupling.

Coupling. G. Zint. No. 1,193,658; Aug. 8; Gaz. vol. 229; p. 335.

Couplings, Dividing apparatus for. R. Scholz. No. 1,195,509; Aug. 22; Gaz. vol. 229; p. 1064.

Coupon-holder. K. E. Conley. No. 1,194,360; Aug. 15; Gaz. vol. 229; p. 624.

Cover-fastener. J. W. Helms. No. 1,196,686; Aug. 29; Gaz. vol. 229; p. 1511.

Cover, Hand or man hole. A. M. Jollvette. No. 1,194,295; Aug. 8; Gaz. vol. 229; p. 557.

Crane, Portable. F. H. Howard. No. 1,193,551; Aug. 8; Gaz. vol. 229; p. 294.

Cranes, Apparatus for automatically balancing. P. J. Marfell. No. 1,195,058; Aug. 15; Gaz. vol. 229; p. 869.

Crank-shaft. A. F. Larson. No. 1,194,042; Aug. 8; Gaz. vol. 229; p. 470.

Crate, Collapsible. J. J. Johns. No. 1,194,634; Aug. 15; Gaz. vol. 229; p. 720.

Crate, Egg-. G. T. Moffett. No. 1,196,380; Aug. 29; Gaz. vol. 229; p. 1406.

Crate, Folding. L. A. Parker. No. 1,194,659; Aug. 15; Gaz. vol. 229; p. 729.

Crate-separator. H. J. Brown and F. B. Davidson. No. 1,195,183; Aug. 22; Gaz. vol. 229; p. 948.

Crate, Shipping-. C. M. Studebaker. No. 1,194,680; Aug. 15; Gaz. vol. 229; p. 736.

Crate, Shipping-. J. H. Zeek. No. 1,193,657; Aug .8; Gaz. vol. 229; p. 334.

Crates, boxes, &c., Fastener for. G. C. D. Miller. No. 1,194,309; Aug. 8; Gaz. vol. 229; p. 563.

Creasing mechanism for sheet collecting and folding machines. H. M. Barber. No. 1,194,348; Aug. 15; Gaz. vol. 229; p. 619.

Cribs, Fastener for sliding-side. W. B. Foster. No. 1,194,493; Aug. 15; Gaz. vol. 229; p. 674.

Cribs, Fastening for sling-side. G. E. Camp. No. 1,194,476; Aug. 15; Gaz. vol. 229; p. 667.

Crimping and tying sacks, Machine for. F. O. Lindgren. No. 1,196,466; Aug. 29; Gaz. vol. 229; p. 1436.

Cross-arm saddle. C. L. Peirce, Jr. No. 1,196,273; Aug. 29; Gaz. vol. 229; p. 1371.

Cross-tie and rail-chair, Combined. M. Czap. No. 1,195,445; Aug. 22; Gaz. vol. 229; p. 1043.

Crown-seal-cap machine. J. W. Nichols. No. 1,194,869; Aug. 15; Gaz. vol. 229; p. 803.

Crutch. G. Hipwood. No. 1,194,384; Aug. 15; Gaz. vol. 229; p. 633.

Cryptographic machine. H. A. Corbett and J. W. Morris. No. 1,196,338; Aug. 29; Gaz. vol. 229; p. 1391.

Culinary implement. F. Hachmann. No. 1,194,838; Aug. 15; Gaz. vol. 229; p. 792.

Cultivating implement, Stump-jump. R. J. Fry. No. 1,194,006; Aug. 8; Gaz. vol. 229; p. 458.

Cultivator. J. S. Nichols. No. 1,196,017; Aug. 29; Gaz. vol. 229; p. 1281.

Cultivator. L. E. Waterman. No. 1,194,580; Aug. 15; Gaz. vol. 229; p. 702.

Cultivator, Disk. A. S. Krotz. No. 1,196,549; Aug. 29; Gaz. vol. 229; p. 1465.

Cultivator, Disk. W. Trewhella. No. 1,193,314; Aug. 1; Gaz. vol. 229; p. 175.

Cultivator-yoke. C. Flambo. No. 1,195,347; Aug. 22; Gaz. vol. 229; p. 1009.

Cultivators, Replanting attachment for. G. A. Mohr. No. 1,192,926; Aug. 1; Gaz. vol. 229; p. 34.

Culvert-mold. J. L. McGee. No. 1,193,282; Aug. 1; Gaz. vol. 229; p. 163.

Cup: *See*—
Grease-cup. Oil-cup.
Milking-machine teat-cup. Priming-cup.

Curb-plate. G. A. Kneese and R. A. Klassen. No. 1,195,689; Aug. 22; Gaz. vol. 229; p. 1130.

Current-interrupter. C. F. Kettering. No. 1,192,906; Aug. 1; Gaz. vol. 229; p. 26.

Current motor, Alternating-. E. F. W. Alexanderson. No. 1,194,265; Aug. 8; Gaz. vol. 229; p. 546.

Current motor, Alternating-. A. F. Welch. No. 1,194,103; Aug. 8; Gaz. vol. 229; p. 496.

Current-rectifier. R. P. Jackson. No. 1,194,196; Aug. 8; Gaz. vol. 229; p. 524.

Current rectifier, Alternating-. D. M. Bliss. No. 1,194,470; Aug. 15; Gaz. vol. 229; p. 665.

Currycomb. H. L. Duxstad. No. 1,195,450; Aug. 22; Gaz. vol. 229; p. 1045.

Currycomb. F. Giesenhaus. No. 1,195,458; Aug. 22; Gaz. vol. 229; p. 1047.

Curtain and bracket connection. G. T. S. Spokes. No. 1,195,409; Aug. 22; Gaz. vol. 229; p. 1031.

Curtain and shade fixture. A. W. Hunter and C. C. Howe. No. 1,194,842; Aug. 15; Gaz. vol. 229; p. 793.

Curtain-fastener. C. M. A. Costello. No. 1,193,997; Aug. 8; Gaz. vol. 229; p. 455.

Curtain-fastener. M. N. Jarvis. No. 1,194,502; Aug. 15; Gaz. vol. 229; p. 676.

Curtain-hanger. M. H. Enlow. No. 1,195,797; Aug. 22; Gaz. vol. 229; p. 1170.

Curtain-rod, Extension. J. Kroder. No. 1,196,704; Aug. 29; Gaz. vol. 229; p. 1517.

Cushion: *See*—
Heel-cushion.

Cushion-tired wheel. A. H. Henderson. No. 1,194,177; Aug. 8; Gaz. vol. 229; p. 517.

Cuspidor. T. Hanlon. No. 1,196,681; Aug. 29; Gaz. vol. 229; p. 1510.

Cuspidor. C. E. Nystrum. No. 1,194,533; Aug. 15; Gaz. vol. 229; p. 687.

Cuspidor, Elevating-. B. J. Post. No. 1,193,607; Aug. 8; Gaz. vol. 229; p. 316.

Cut-out switch. A. W. Houchin. No. 1,195,472; Aug. 22; Gaz. vol. 229; p. 1052.

Cutter: *See*—
Disk-cutter. Potato-cutter.
Milling-cutter. Thread-cutter.
Noodle-cutter. Tubing-cutter.
Pipe-cutter. Weed-cutter.

Cutter. A. C. Cooke. No. 1,196,337; Aug. 29; Gaz. vol. 229; p. 1390.

Cutter-head. H. A. Resen. No. 1,195,396; Aug. 22; Gaz. vol. 229; p. 1026.

Cutting apparatus. D. Cantwell. No. 1,194,599; Aug. 15; Gaz. vol. 229; p. 709.

Cutting device. E. T. McPherson. No. 1,193,578; Aug. 8; Gaz. vol. 229; p. 304.

Cutting-machine. D. T. Wadhams. No. 1,195,538; Aug. 22; Gaz. vol. 229; p. 1075.

Cutting mechanism. C. C. Hockman. No. 1,193,389; Aug. 1; Gaz. vol. 229; p. 201.

Cutting-tool. J. W. Brown, Jr. No. 1,195,774; Aug. 22; Gaz. vol. 229; p. 1163.

Cutting-tool. W. Losch. No. 1,195,826; Aug. 22; Gaz. vol. 229; p. 1181.

Cycle car, Motor-. G. and M. J. R. Morrow. No. 1,196,137; Aug. 29; Gaz. vol. 229; p. 1323.

Cycle-lock. B. F. Koch. No. 1,194,034; Aug. 8; Gaz. vol. 229; p. 467.

Cycle-pedal. F. D. Warren. No. 1,196,190; Aug. 29; Gaz. vol. 229; p. 1343.

Cycle stand, Motor-. H. T. Scott. No. 1,195,404; Aug. 22; Gaz. vol. 229; p. 1029.

Cycle-wheels, Spring-mounting for. W. Medlock, Jr. No. 1,194,206; Aug. 8; Gaz. vol. 229; p. 527.

Cycles, Speed-gear for motor-. A. R. Bannister. No. 1,195,551; Aug. 22; Gaz. vol. 229; p. 1080.

Damper. G. V. Greey and R. Rouse, Jr. No. 1,194,011; Aug. 8; Gaz. vol. 229; p. 460.

Damper, Self-regulating stove-. J. E. Calin. No. 1,194,711; Aug. 15; Gaz. vol. 229; p. 747.

Dash-pot. J. Joyce. No. 1,195,028; Aug. 15; Gaz. vol. 229; p. 859.

Davit. C. Visser. No. 1,196,316; Aug. 29; Gaz. vol. 229; p. 1383.

Davit, Boat-. C. H. Fuller. No. 1,194,334; Aug. 8; Gaz. vol. 229; p. 572.

Dead-centers, Device for overcoming. H. B. Logan. No. 1,193,804; Aug. 8; Gaz. vol. 229; p. 388.

Decoys, Sounding device for. F. V. Hartner. No. 1,194,018; Aug. 8; Gaz. vol. 229; p. 462.

Dehairing-machine. J. W. Kohlhepp. No. 1,192,908; Aug. 1; Gaz. vol. 229; p. 27.

Dental broaches and needles, Loading. L. L. Funk. No. 1,193,681; Aug. 8; Gaz. vol. 229; p. 343.

Dental cabinet. W. L. Smith. No. 1,194,436; Aug. 15; Gaz. vol. 229; p. 652.

Dental fastening for removable bridges and bridge-plates. C. W. Lokey. No. 1,193,034; Aug. 1; Gaz. vol. 229; p. 72.

Dental instrument. A. L. Hamilton. No. 1,195,465; Aug. 22; Gaz. vol. 229; p. 1050.

Dental technicon. J. P. Harper. No. 1,194,017; Aug. 8; Gaz. vol. 229; p. 462.

Derrick. H. B. Stalker. No. 1,194,893; Aug. 15; Gaz. vol. 229; p. 811.

Derrick and hod signaling system. H. A. Yates. No. 1,194,458; Aug. 15; Gaz. vol. 229; p. 661.

Derrick, Portable. J. Hansen. No. 1,195,005; Aug. 15; Gaz. vol. 229; p. 851.

Derrick, Steel. J. F. Hilliard and F. Jones. No. 1,195,015; Aug. 15; Gaz. vol. 229; p. 855.

Derricks of the wheelbarrow type, Attachment for. M. J. Sasgen. No. 1,193,074; Aug. 1; Gaz. vol. 229; p. 87.

Desk and chair, Combination. M. Thum. No. 1,195,626; Aug. 22; Gaz. vol. 229; p. 1107.

Desk-chair, Combination. C. I. Lattig. No. 1,195,240; Aug. 22; Gaz. vol. 229; p. 967.

Detachable-cylinder lock. K. Thulander. No. 1,194,682; Aug. 15; Gaz. vol. 229; p. 737.

Detachable handle or bail for containers and vessels. G. W. Sykes. No. 1,196,492; Aug. 29; Gaz. vol. 229; p. 1445.

Detachable jack for rotating shafts. J. Dronsfield. No. 1,193,246; Aug. 1; Gaz. vol. 229; p. 149.

Developing-tank. J. E. Bryant. No. 1,194,707; Aug. 15; Gaz. vol. 229; p. 746.

Developing tray, Daylight plate-. F. D. Rameau. No. 1,195,498; Aug. 22; Gaz. vol. 229; p. 1060.

Diaphragm, Multiple. G. Dalén. No. 1,195,133; Aug. 15; Gaz. vol. 229; p. 894.

Die-casting machine. O. Schnitzler. No. 1,194,549; Aug. 15; Gaz. vol. 229; p. 692.

Die holder, Spring-. O. A. Smith. No. 1,193,837; Aug. 8; Gaz. vol. 229; p. 400.

Digger: *See*—
Peanut-digger. Potato-digger.
Post-hole digger.

Direction-indicator. C. A. Reese. No. 1,195,088; Aug. 15; Gaz. vol. 229; p. 879.

Dish-container. F. W. Beardsley. No. 1,196,201; Aug. 29; Gaz. vol. 229; p. 1347.

Dish-drier. W. Schmidt. No. 1,194,670; Aug. 15; Gaz. vol. 229; p. 733.

Dish-washing appliance. A. M. Abrams. No. 1,193,495; Aug. 8; Gaz. vol. 229; p. 275.

Disk-blank-feed mechanism. J. A. Gray. No. 1,196,676; Aug. 29; Gaz. vol. 229; p. 1508.

Disk-cutter. S. Gottlieb. No. 1,196,354; Aug. 29; Gaz. vol. 229; p. 1397.

Dispenser. W. J. Driscoll. No. 1,194,487; Aug. 15; Gaz. vol. 229; p. 671.

Dispensing apparatus. O. Jaeger. No. 1,195,587; Aug. 22; Gaz. vol. 229; p. 1093.

Dispensing apparatus. G. M. Ludlow. No. 1,193,704; Aug. 8; Gaz. vol. 229; p. 352.

Dispensing apparatus. W. Patton. No. 1,193,180; Aug. 1; Gaz. vol. 229; p. 125.

Dispensing-package. M. E. Covington. No. 1,192,868; Aug. 1; Gaz. vol. 229; p. 14.

Dispensing package or receptacle. A. Falk. No. 1,194,828; Aug. 15; Gaz. vol. 229; p. 788.

Dispensing-receptacle, Sanitary. E. J. Benedict. No. 1,195,902; Aug. 22; Gaz. vol. 229; p. 1207.

Display-box, Sanitary. I. E. Schlek. No. 1,195,274; Aug. 22; Gaz. vol. 229; p. 980.

Display-card. F. L. Wertz. No. 1,196,500; Aug. 29; Gaz. vol. 229; p. 1448.

Display device. G. E. Baird. No. 1,193,491; Aug. 1; Gaz. vol. 229; p. 235.

Display device. J. Stranders. No. 1,195,527; Aug. 22; Gaz. vol. 229; p. 1070.

Display-stand. S. B. Dyer. No. 1,195,795; Aug. 22; Gaz. vol. 229; p. 1170.

Display-stand. F. S. Townsend. No. 1,192,957; Aug. 1; Gaz. vol. 229; p. 44.

Display device, Sample-. E. McCarroll. (Reissue.) No. 14,178; Aug. 1; Gaz. vol. 229; p. 239.

Distillation of petroleum and products therefrom, Apparatus for use in connection with. J. L. Gray. No. 1,192,889; Aug. 1; Gaz. vol. 229; p. 21.

Distillery-slop, Manufacture of by-products from. A. Von Laszloffy. No. 1,193,951; Aug. 8; Gaz. vol. 229; p. 440.

Distilling acetic acid and the like. A. Brüuer. No. 1,196,329; Aug. 29; Gaz. vol. 229; p. 1388.

Distribution system. L. Hagood. No. 1,196,541; Aug. 29; Gaz. vol. 229; p. 1462.

Ditching-machine. D. H. Mahoney. No. 1,194,204; Aug. 8; Gaz. vol. 229; p. 526.

Ditching-machine sight-arm. C. F. Yocum. No. 1,194,460; Aug. 15; Gaz. vol. 229; p. 662.

Diving-hood. W. S. Dunn and W. F. Miller. No. 1,195,793; Aug. 22; Gaz. vol. 229; p. 1169.

Doll. W. A. Frost. No. 1,193,947; Aug. 8; Gaz. vol. 229; p. 438.

Dolls' heads, Collapsible core for molding. L. Weiss. No. 1,195,303; Aug. 22; Gaz. vol. 229; p. 992.

Door. B. C. Rockwell. No. 1,196,720; Aug. 29; Gaz. vol. 229; p. 1523.

Door and window fastener. W. H. L. Wells. No. 1,195,884; Aug. 22; Gaz. vol. 229; p. 1201.

Door and window sash, Pressed-metal. W. R. Marsden. No. 1,193,582; Aug. 8; Gaz. vol. 229; p. 306.

Door-check. J. C. Schmidt. No. 1,194,885; Aug. 15; Gaz. vol. 229; p. 808.

Door, Electrically-operated. I. L. Cain. No. 1,192,856; Aug. 1; Gaz. vol. 229; p. 10.

Door-fastening device. I. W. Fogg. No. 1,193,531; Aug. 8; Gaz. vol. 229; p. 286.

Door-hanger. P. Frantz. No. 1,195,197; Aug. 22; Gaz. vol. 229; p. 952.

Door-hanger. D. E. Willard. No. 1,192,966; Aug. 1; Gaz. vol. 229; p. 46.

Door-holder. P. E. and G. G. Heatherbell. No. 1,196,685; Aug. 29; Gaz. vol. 229; p. 1511.

Door-lock. J. B. Wade. No. 1,194,903; Aug. 15; Gaz. vol. 229; p. 814.

Door-opener. H. W. Crane. No. 1,194,482; Aug. 15; Gaz. vol. 229; p. 669.

Door-operating means. T. Wefring. No. 1,195,755; Aug. 22; Gaz. vol. 229; p. 1155.

Door-operator. G. R. Wimberly. No. 1,192,968; Aug. 1; Gaz. vol. 229; p. 47.

Door-releaser, Automatic. H. D. Wear and F. J. Maginnis. No. 1,195,882; Aug. 22; Gaz. vol. 229; p. 1200.

Door-stop. A. E. Hill. No. 1,193,386; Aug. 1; Gaz. vol. 229; p. 200.

Door-stop, Automatic. C. P. Thompson. No. 1,195,871; Aug. 22; Gaz. vol. 229; p. 1197.

Door track, Barn-. W. F. Jacobs. No. 1,193,553; Aug. 8; Gaz. vol. 229; p. 295.

Doors, Combined striker and bumper for. J. F. Streberger. No. 1,196,171; Aug. 29; Gaz. vol. 229; p. 1336.

Doors, Means for checking the speed of. W. B. Gervais. No. 1,194,991; Aug. 15; Gaz. vol. 229; p. 846.

Double wrench. W. Nayda. No. 1,196,014; Aug. 29; Gaz. vol. 229; p. 1280.

Doubling and twisting machine. C. Mazzucchelli. No. 1,193,041; Aug. 1; Gaz. vol. 229; p. 74.

Dough-molding machine. J. and M. Brodsky. No. 1,195,969; Aug. 29; Gaz. vol. 229; p. 1264.

Draft attachment. C. J. Maudlin. No. 1,195,706; Aug. 22; Gaz. vol. 229; p. 1136.

Draft-bar. W. F. Dunn and J. M. Kerby. No. 1,196,533; Aug. 29; Gaz. vol. 229; p. 1459.

Draft device. H. C. Michel. No. 1,194,763; Aug. 15; Gaz. vol. 229; p. 765.

Draft-gear, Friction. E. W. Newell. No. 1,196,016; Aug. 29; Gaz. vol. 229; p. 1281.

Draft-plate. H. I. Wrigley. No. 1,194,806; Aug. 15; Gaz. vol. 229; p. 781.

Draft-producing apparatus. F. A. Allinger. No. 1,195,127; Aug. 15; Gaz. vol. 229; p. 892.

Draft-rigging for railway-cars. W. H. Yost. No. 1,195,942; Aug. 22; Gaz. vol. 229; p. 1220.

Draft-rigging for railway-cars. W. H. Yost. No. 1,195,943; Aug. 22; Gaz. vol. 229; p. 1221.

Draft-rigging, Railway-car friction. C. J. Nash. No. 1,193,411; Aug. 1; Gaz. vol. 229; p. 208.

Drag, Road-. G. A. Pollard. No. 1,193,921; Aug. 8; Gaz. vol. 229; p. 430.

Drain. W. Stanley. No. 1,194,088; Aug. 8; Gaz. vol. 229; p. 486.

Drain-plug and relief-valve. A. E. Daum. No. 1,192,870; Aug. 1; Gaz. vol. 229; p. 14.

Dredge-suction-pipe support. F. L. Elwood. No. 1,194,369; Aug. 15; Gaz. vol. 229; p. 627.

Dredges, Track-handling device for. W. L. Miles. No. 1,196,012; Aug. 29; Gaz. vol. 229; p. 1279.

Drier. W. Y. Meyer. No. 1,196,376; Aug. 29; Gaz. vol. 229; p. 1405.

Dry battery. M. H. Moffett. No. 1,196,381; Aug. 29; Gaz. vol. 229; p. 1407.

Dry cell. D. Conlan, Jr. No. 1,193,764; Aug. 8; Gaz. vol. 229; p. 374.

Dry cell. M. A. Foos. No. 1,196,225; Aug. 29; Gaz. vol. 229; p. 1355.

Dry-kiln. J. F. Oldfield. No. 1,193,596; Aug. 8; Gaz. vol. 229; p. 311.

Dry-kiln, Portable. J. F. Oldfield. No. 1,194,776; Aug. 15; Gaz. vol. 229; p. 770.

Drying apparatus. F. W. Adlof. No. 1,194,118; Aug. 8; Gaz. vol. 229; p. 497.

Drying-kiln. C. Harley. No. 1,194,734; Aug. 15; Gaz. vol. 229; p. 755.

Drying machines, Air-purifier for laundry. W. G. Slagle. No. 1,193,305; Aug. 1; Gaz. vol. 229; p. 171.

Drying-reel. T. Linster. No. 1,193,032; Aug. 1; Gaz. vol. 229; p. 71.

Drill: *See*—
Core-drill. Rail-drill.
Lens-drill. Rock-drill.
Power-drill. Rotary drill.
Pump-drill.

Drill-support. O. F. Nelson. No. 1,196,266; Aug. 29; Gaz. vol. 229; p. 1368.

Drills, Rotating means for. D. S. Waugh. No. 1,196,052; Aug. 29; Gaz. vol. 229; p. 1293.

Drilling machine, Earth-. A. Pick. No. 1,196,480; Aug. 29; Gaz. vol. 229; p. 1441.

Drinking-fountain. G. R. Pratt. No. 1,193,055; Aug. 1; Gaz. vol. 229; p. 79.

Drinking-fountain and faucet, Sanitary. D. L. Harden. No. 1,196,542; Aug. 29; Gaz. vol. 229; p. 1463.

Driving and reversing mechanism. F. Snow. No. 1,193,726; Aug. 8; Gaz. vol. 229; p. 360.

Driving and stopping mechanism. E. J. Ray. No. 1,193,061; Aug. 1; Gaz. vol. 229; p. 82.

Driving mechanism. L. F. Bowers. No. 1,196,425; Aug. 29; Gaz. vol. 229; p. 1422.

Driving mechanism. C. B. Yaw. No. 1,195,547; Aug. 22; Gaz. vol. 229; p. 1078.

Driving mechanism, Auxiliary. B. A. Gramm. No. 1,194,994; Aug. 15; Gaz. vol. 229; p. 847.

Dump-box, Portable gravity. K. K. Parker and J. C. Proctor. No. 1,196,391; Aug. 29; Gaz. vol. 229; p. 1411.

Duplicating-machine-feeding device. R. G. Jones. No. 1,195,231; Aug. 22; Gaz. vol. 229; p. 964.

Duster. O. W. Dunlap. No. 1,195,190; Aug. 22; Gaz. vol. 229; p. 950.

Duster. J. Hedlund. No. 1,195,356; Aug. 22; Gaz. vol. 229; p. 1012.

Dye and making the same, Phthalein. H. Hagenbach. No. 1,194,380; Aug. 15; Gaz. vol. 229; p. 631.

Dye or stain. W. Somerville. No. 1,193,838; Aug. 8; Gaz. vol. 229; p. 400.

Dyes and making them, Vat. A. Lüttringhaus. No. 1,196,127; Aug. 29; Gaz. vol. 229; p. 1320.

Dyeing fabrics, Apparatus for. H. L. Quick. No. 1,195,606; Aug. 22; Gaz. vol. 229; p. 1100.

Dyeing-machine. J. Benosch. No. 1,195,646; Aug. 22; Gaz. vol. 229; p. 1115.

Dyeing-machine. J. Benosch. No. 1,195,647; Aug. 22; Gaz. vol. 229; p. 1116.

Dyestuffs and making the same, Disazo-. R. Schülle. No. 1,193,829; Aug. 8; Gaz. vol. 229; p. 396.

Dyestuffs, Compounds for use in the production of. F. Kunert. No. 1,193,566; Aug. 8; Gaz. vol. 229; p. 300.

Dyestuffs for dyeing wool, Brown. M. Becke and W. Suida. No. 1,196,422; Aug. 29; Gaz. vol. 229; p. 1421.

Dynamo in combination with automatic switch. E. Girardeau. No. 1,193,537; Aug. 8; Gaz. vol. 229; p. 289

Dynamo-support. W. L. Bliss. No. 1,193,226; Aug. 1; Gaz. vol. 229; p. 142.

Ear-ornament clamp. B. C. Allen. No. 1,195,324; Aug. 22; Gaz. vol. 229; p. 1000.
Easel, Collapsible display-. J. H. Williamson. No. 1,194,801; Aug. 15; Gaz. vol. 229; p. 780.
Easel-frame. E. Oldenbusch. No. 1,193,415; Aug. 1; Gaz. vol. 229; p. 210.
Edging-machine. A. E. Maynard. No. 1,196,711; Aug. 29; Gaz. vol. 229; p. 1520.
Educational device. A. F. Fütterer. No. 1,196,099; Aug. 29; Gaz. vol. 229; p. 1310.
Egg-beater. A. Moses. No. 1,195,839; Aug. 22; Gaz. vol. 229; p. 1186.
Egg-boiling device. W. L. Deming. No. 1,193,523; Aug. 8; Gaz. vol. 229; p. 284.
Egg-carrier. C. F. Doll. No. 1,193,128; Aug. 1; Gaz. vol. 229; p. 108.
Egg-case, Folding. G. D. Musser. No. 1,192,929; Aug. 1; Gaz. vol. 229; p. 34.
Egg-holder. W. F. Went. No. 1,196,054; Aug. 29; Gaz. vol. 229; p. 1294.
Egg holder and candler. L. E. and J. M. Miller and A. L. Carlton. No. 1,193,285; Aug. 1; Gaz. vol. 229; p. 164.
Egg holder and carrier. H. L. G. Moore. No. 1,194,861; Aug. 15; Gaz. vol. 229; p. 800.
Egg-preserving composition. J. H. O'Dell. No. 1,194,340; Aug. 8; Gaz. vol. 229; p. 575.
Egg tester and crater. C. A. Hughes and G. W. Miller. No. 1,193,898; Aug. 8; Gaz. vol. 229; p. 421.
Egg-turning device. Automatic. P. S. Martin. No. 1,195,705; Aug. 22; Gaz. vol. 229; p. 1136.
Eggs, Preserving. H. D. Bostock. No. 1,194,128; Aug. 8; Gaz. vol. 229; p. 500.
Elastic fabric. C. A. Lapworth. No. 1,195,036; Aug. 15; Gaz. vol. 229; p. 862.
Elbow and valve, Combination. J. Porteous. No. 1,196,146; Aug. 29; Gaz. vol. 229; p. 1326.
Electric-arc furnace. E. Edwin. No. 1,193,882; Aug. 8; Gaz. vol. 229; p. 416.
Electric-arc furnace for the treatment of gases. C. O. A. Dörle. No. 1,194,606; Aug. 15; Gaz. vol. 229; p. 712.
Electric bath. M. Howard. No. 1,193,018; Aug. 1; Gaz. vol. 229; p. 65.
Electric cell. W. Tassin. No. 1,196,313; Aug. 29; Gaz. vol. 229; p. 1382.
Electric-circuit-controlling device. S. E. Doane. No. 1,194,281; Aug. 8; Gaz. vol. 229; p. 552.
Electric-circuit-controlling device. W. L. Kubach and E. J. Edwards. No. 1,194,194; Aug. 8; Gaz. vol. 229; p. 523.
Electric conductors, Branch box for. M. Havens, Jr., and S. B. Van Ranst. No. 1,195,813; Aug. 22; Gaz. vol. 229; p. 1176.
Electric-current-generating machine. H. E. Borger. No. 1,196,511; Aug. 29; Gaz. vol. 229; p. 1451.
Electric-current modifier. V. Paquit. No. 1,194,778; Aug. 15; Gaz. vol. 229; p. 771.
Electric currents of high potential, Apparatus for producing unidirectional. F. Rieber. No. 1,195,733; Aug. 22; Gaz. vol. 229; p. 1146.
Electric distribution with low-tension magnetos. V. Des Roches. No. 1,196,981; Aug. 29; Gaz. vol. 229; p. 1267.
Electric-generator-regulating means. W. A. Turbayne. No. 1,196,618; Aug. 29; Gaz. vol. 229; p. 1488.
Electric generators, Automatic controlling system for. A. E. Doman. No. 1,194,970; Aug. 15; Gaz. vol. 229; p. 838.
Electric heater. H. W. Denhard. No. 1,194,343; Aug. 8; Gaz. vol. 229; p. 576.
Electric heater, Illuminate. H. H. Berry and W. J. Markham. No. 1,196,073; Aug. 29; Gaz. vol. 229; p. 1302.
Electric light. J. M. Austen and B. J. Lee. No. 1,194,929; Aug. 15; Gaz. vol. 229; p. 824.
Electric-light fixture. R. S. Giese. No. 1,195,805; Aug. 22; Gaz. vol. 229; p. 1173.
Electric lights, Time-switch for. W. T. Rowell. No. 1,194,078; Aug. 8; Gaz. vol. 229; p. 483.
Electric-lighting apparatus, Portable. H. H. Hirsch. No. 1,195,925; Aug. 22; Gaz. vol. 229; p. 1215.
Electric machine, Dynamo-. W. L. Bliss. No. 1,193,349; Aug. 1; Gaz. vol. 229; p. 187.
Electric machine, Dynamo-. C. S. Raymond. No. 1,194,232; Aug. 8; Gaz. vol. 229; p. 535.
Electric machine, Magneto. J. B. Fawley. (Reissue.) No. 14,181; Aug. 15; Gaz. vol. 229; p. 907.
Electric machines, Combined reversing-switch and brush-holder for dynamo-. C. Bergmann, Jr. No. 1,195,768; Aug. 22; Gaz. vol. 229; p. 1160.
Electric machines, Ventilating means for dynamo-. A. B. Field. No. 1,196,345; Aug. 29; Gaz. vol. 229; p. 1394.
Electric machinery, Dynamo-. R. A. Holbech. No. 1,193,897; Aug. 8; Gaz. vol. 229; p. 421.
Electric motor, Variable-speed. J. C. Lincoln. No. 1,194,645; Aug. 15; Gaz. vol. 229; p. 724.
Electric shade-holder. L. W. Andersen. No. 1,195,636; Aug. 22; Gaz. vol. 229; p. 1111.
Electric socket-switch, Detachable device for actuating an. S. Hata. No. 1,196,233; Aug. 29; Gaz. vol. 229; p. 1357.
Electric sparks from alternating current, Producing unidirectional. C. H. Gaunt. No. 1,196,452; Aug. 29; Gaz. vol. 229; p. 1431.
Electric switch. C. E. Anderson. No. 1,196,633; Aug. 29; Gaz. vol. 229; p. 1493.
Electric switch. T. E. Barnum. No. 1,193,660; Aug. 8; Gaz. vol. 229; p. 335.
Electric switch. F. Barr. No. 1,195,130; Aug. 15; Gaz. vol. 229; p. 893.
Electric switch. R. H. Carl. No. 1,194,272; Aug. 8; Gaz. vol. 229; p. 549.
Electric switch. G. A. Chebrou and S. A. Lemp. No. 1,196,662; Aug. 29; Gaz. vol. 229; p. 1504.
Electric switch. F. B. Cook. No. 1,193,239; Aug. 1; Gaz. vol. 229; p. 146.
Electric switch. M. Guett. No. 1,193,380; Aug. 1; Gaz. vol. 229; p. 198.
Electric switch. E. H. Jacobs. No. 1,193,694; Aug. 8; Gaz. vol. 229; p. 348.
Electric switch. E. H. Jacobs. No. 1,193,695; Aug. 8; Gaz. vol. 229; p. 348.
Electric switch. C. J. Klein. No. 1,194,345; Aug. 8; Gaz. vol. 229; p. 577.
Electric switch. C. E. Schultze. No. 1,194,243; Aug. 8; Gaz. vol. 229; p. 539.
Electric-switch-operating mechanism. E. H. Jacobs. No. 1,193,696; Aug. 8; Gaz. vol. 229; p. 349.
Electrical connection. L. Schön. No. 1,193,076; Aug. 1; Gaz. vol. 229; p. 88.
Electrical connector-clip. J. G. Peterson. No. 1,195,079; Aug. 15; Gaz. vol. 229; p. 877.
Electrical display apparatus. A. Laszlo. No. 1,195,239; Aug. 22; Gaz. vol. 229; p. 967.
Electrical display means. L. A. Hanson. No. 1,193,188; Aug. 1; Gaz. vol. 229; p. 111.
Electrical distribution system. J. L. Creveling. No. 1,195,444; Aug. 22; Gaz. vol. 229; p. 1043.
Electrical oscillations, Apparatus for producing. M. Eastham. No. 1,194,154; Aug. 8; Gaz. vol. 229; p. 509.
Electrical recorder. A. S. Hibbard. (Reissue.) No. 14,188; Aug. 29; Gaz. vol. 229; p. 1537.
Electrical regulator. A. A. Tirrill. No. 1,194,683; Aug. 15; Gaz. vol. 229; p. 738.
Electrical switch. B. D. Horton. No. 1,194,886; Aug. 15; Gaz. vol. 229; p. 634.
Electrical terminal connection. C. C. Carpenter. No. 1,193,358; Aug. 1; Gaz. vol. 229; p. 190.
Electrical transmitting device, and circuits therefor. J. W. Frost. No. 1,195,574; Aug. 22; Gaz. vol. 229; p. 1089.
Electrically-operated switch. D. R. Allen. No. 1,195,892; Aug. 22; Gaz. vol. 229; p. 1204.
Electrode for luminous-arc electric lamps, Consuming. F. Buchanan. No. 1,193,866; Aug. 8; Gaz. vol. 229; p. 410.
Electrode for vapor electric devices, Starting-. F. Conrad. No. 1,194,143; Aug. 8; Gaz. vol. 229; p. 505.
Electrode for welding, brazing, soldering, or the like. C. L. Cadle. No. 1,193,989; Aug. 8; Gaz. vol. 229; p. 453.
Electromagnet. F. F. Fowle. No. 1,193,678; Aug. 8; Gaz. vol. 229; p. 342.
Electromagnet. R. E. Jones and V. S. Monteith. No. 1,193,793; Aug. 8; Gaz. vol. 229; p. 385.
Electrotypes, Apparatus for backing. T. Webster. No. 1,193,324; Aug. 1; Gaz. vol. 229; p. 179.
Elevating device and shock-absorber, Combined. H. Lohmiller. No. 1,193,570; Aug. 8; Gaz. vol. 229; p. 301.
Elevator: *See*—
Belt elevator. Water-elevator.
Convertible elevator.
Elevator. H. J. Buck. No. 1,193,118; Aug. 1; Gaz. vol. 229; p. 104.
Elevator-car. A. E. Mueller. No. 1,194,411; Aug. 15; Gaz. vol. 229; p. 643.
Elevator-lock. G. W. Taylor. No. 1,192,953; Aug. 1; Gaz. vol. 229; p. 43.
Elevator safety control system. J. C. A. Anderson. No. 1,195,128; Aug. 15; Gaz. vol. 229; p. 892.
Elevator safety device. F. W. Mayfield. No. 1,196,260; Aug. 29; Gaz. vol. 229; p. 1366.
Embossing-press. A. F. Philippi. No. 1,194,061; Aug. 8; Gaz. vol. 229; p. 477.
Embroidering. R. Loeb. No. 1,194,521; Aug. 15; Gaz. vol. 229; p. 683.
Embroidering-machine. G. Sieber. No. 1,193,303; Aug. 1; Gaz. vol. 229; p. 170.
Embroidering-machines, Side-tensioning device for. J. A. Groebli. No. 1,195,809; Aug. 22; Gaz. vol. 229; p. 1175.
Embroidery-machine. H. Büchler. No. 1,195,973; Aug. 29; Gaz. vol. 229; p. 1265.
Embroidery-machines, Fabric-frame for. R. Hammerly. No. 1,195,466; Aug. 22; Gaz. vol. 229; p. 1050.
Emergency-brake. C. Stanton. No. 1,193,199; Aug. 1; Gaz. vol. 229; p. 132.
Emergency-coupling. A. Gerstner and F. Peham. No. 1,193,135; Aug. 1; Gaz. vol. 229; p. 110.
Emergency-coupling. A. Gerstner and F. Peham. No. 1,193,536; Aug. 8; Gaz. vol. 229; p. 289.
Emery-wheel grinders, Gearing for. A. F. O'Connor. No. 1,194,534; Aug. 15; Gaz. vol. 229; p. 687.
End-gate. J. V. Cizek. No. 1,193,514; Aug. 8; Gaz. vol. 229; p. 281.
End-gate and shoveling-board. E. R. Quam. No. 1,195,497; Aug. 22; Gaz. vol. 229; p. 1060.
End-gate fastener for wagon-bodies. G. Gilbert. No. 1,195,806; Aug. 22; Gaz. vol. 229; p. 1173.
End-gate, Scoop. J. B. Kline. No. 1,194,032; Aug. 8; Gaz. vol. 229; p. 467.

Energy-supply system. W. H. Fry. No. 1,194,165; Aug. 8; Gaz. vol. 229; p. 513.
Engine: *See*—
Combustion-engine. Steam-engine.
Gas-engine. Traction-engine.
Internal-combustion engine. Tractor-engine.
Rotary engine. Turbine-engine.
Engine. W. A. Allan. No. 1,195,323; Aug. 22; Gaz. vol. 229; p. 1000.
Engine. J. H. Auble. No. 1,195,639; Aug. 22; Gaz. vol. 229; p. 1112.
Engine. W. J. Smith and L. Lagall. No. 1,195,744; Aug. 22; Gaz. vol. 229; p. 1150.
Engine-controlling means, Explosion-. A. L. Riker. No. 1,195,399; Aug. 22; Gaz. vol. 229; p. 1027.
Engine-coupling. H. T. Krakau. No. 1,193,486; Aug. 1; Gaz. vol. 229; p. 233.
Engine drive-gearing, Traction-. G. T. Strite and F. H. Bierman. No. 1,194,569; Aug. 15; Gaz. vol. 229; p. 698.
Engine fuel-feeding apparatus, Internal-combustion-. G. F. Wheeler. No. 1,193,852; Aug. 8; Gaz. vol. 229; p. 405.
Engine-heating device, Internal-combustion-. W. E. and F. J. Blair. No. 1,195,179; Aug. 22; Gaz. vol. 229; p. 946.
Engine igniters, Contact for internal-combustion-. J. E. Olson. No. 1,192,887; Aug. 1; Gaz. vol. 229; p. 20.
Engine-lubricating system, Gas-. H. H. Wilburn and F. E. Butler. No. 1,194,453; Aug. 15; Gaz. vol. 229; p. 659.
Engine self-starter and pump, Internal-combustion-. H. W. Hamilton. No. 1,196,106; Aug. 29; Gaz. vol. 229; p. 1312.
Engine speed control. H. C. and A. T. Clay. No. 1,194,479; Aug. 15; Gaz. vol. 229; p. 668.
Engine-starter. M. H. Olsen. No. 1,196,390; Aug. 29; Gaz. vol. 229; p. 1411.
Engine starter, Explosive-. J. R. Binns. No. 1,194,469; Aug. 15; Gaz. vol. 229; p. 665.
Engine-starting connection, Automobile-. A. C. Savidge. No. 1,196,156; Aug. 29; Gaz. vol. 229; p. 1330.
Engine-starting device. C. F. Kettering. No. 1,196,243; Aug. 29; Gaz. vol. 229; p. 1360.
Engine-starting mechanism, Internal-combustion-. W. H. Card and J. J. Cushman. No. 1,193,454; Aug. 1; Gaz. vol. 229; p. 222.
Engine-stop device. G. W. Edwards. No. 1,196,220; Aug. 29; Gaz. vol. 229; p. 1353.
Engine-subbase. H. E. Wollery. No. 1,194,915; Aug. 15; Gaz. vol. 229; p. 818.
Engines, Accelerator for internal-combustion. J. Walker and C. Fischer. No. 1,193,640; Aug. 8; Gaz. vol. 229; p. 329.
Engines, Apparatus for indicating and locating defects in the ignition, valve and carbureter systems of internal-combustion. E. H. Scott. No. 1,193,621; Aug. 8; Gaz. vol. 229; p. 321.
Engines, Electric power system for internal-combustion. A. Churchward. No. 1,194,713; Aug. 15; Gaz. vol. 229; p. 748.
Engines, Electric starting system for internal-combustion. V. G. Apple. No. 1,196,636; Aug. 29; Gaz. vol. 229; p. 1494.
Engines, Feeding of fuel to internal-combustion. P. Stoltz. No. 1,194,567; Aug. 15; Gaz. vol. 229; p. 698.
Engines, Fuel-feed mechanism for internal-combustion. E. A. Johnston. No. 1,193,021; Aug. 1; Gaz. vol. 229; p. 66.
Engines, Fuel-mixing device for internal-combustion. A. H. Newton. No. 1,195,254; Aug. 22; Gaz. vol. 229; p. 973.
Engines, Full-mixing device for internal-combustion. A. H. Newton. No. 1,195,255; Aug. 22; Gaz. vol. 229; p. 973.
Engines, Injection of liquid fuel in internal-combustion. J. McKechnie. No. 1,193,909; Aug. 8; Gaz. vol. 229; p. 425.
Engines, Magneto-drive for internal-combustion. J. A. Ostenberg. No. 1,196,270; Aug. 29; Gaz. vol. 229; p. 1370.
Engines, Magneto ignition device for internal-combustion. A. F. Payne. No. 1,194,318; Aug. 8; Gaz. vol. 229; p. 565.
Engines, Moisture-supplying attachment for internal-combustion. W. M. Thomas. No. 1,193,084; Aug. 1; Gaz. vol. 229; p. 91.
Engines, Mud-lug for traction-. R. M. Hightower. No. 1,195,815; Aug. 22; Gaz. vol. 229; p. 1177.
Engines, Muffler arrangement for multicylinder internal-combustion. J. C. Moore. No. 1,196,382; Aug. 29; Gaz. vol. 229; p. 1407.
Ensilage-packer. W. J. Wilson and J. F. Ruff. No. 1,194,912; Aug. 15; Gaz. vol. 229; p. 817.
Envelop. V. C. Moore. No. 1,195,492; Aug. 22; Gaz. vol. 229; p. 1058.
Envelop. H. A. Swortfiguer. No. 1,194,440; Aug. 15; Gaz. vol. 229; p. 654.
Envelop. L. Vecchio. No. 1,192,962; Aug. 1; Gaz. vol. 229; p. 45.
Envelop-feeding apparatus. B. Langley. No. 1,196,706; Aug. 29; Gaz. vol. 229; p. 1518.
Envelop-machine. I. L. Rheutan. No. 1,194,784; Aug. 15; Gaz. vol. 229; p. 773.
Envelop-machine. E. G. Staude. No. 1,193,626; Aug. 8; Gaz. vol. 229; p. 323.
Envelop-machine. E. G. Staude. No. 1,193,627; Aug. 8; Gaz. vol. 229; p. 324.
Envelop, Money-transmitting. W. P. Faulkner. (Reissue.) No. 14,175; Aug. 1; Gaz. vol. 229; p. 238.
Envelop-opening machine. E. A. Bircher. No. 1,194,701; Aug. 15; Gaz. vol. 229; p. 744.
Envelop or wrapper. J. G. Knurck. No. 1,196,245; Aug. 29; Gaz. vol. 229; p. 1361.
Envelop-registering mechanism for envelop-machines. J. H. O'Connell. No. 1,196,018; Aug. 29; Gaz. vol. 229; p. 1281.
Envelop, Safety-. J. Borro. No. 1,195,773; Aug. 22; Gaz. vol. 229; p. 1163.
Envelop, Safety-. R. L. Kay. No. 1,194,639; Aug. 15; Gaz. vol. 229; p. 721.
Envelop, Safety-. A. Nogar. No. 1,196,577; Aug. 29; Gaz. vol. 229; p. 1474.
Envelops, Making open-face. A. E. Paige. No. 1,195,821; Aug. 22; Gaz. vol. 229; p. 1170.
Evaporator. F. P. Pattno and G. S. Witham, Jr. No. 1,196,020; Aug. 29; Gaz. vol. 229; p. 1282.
Evaporator, Continuously-operating vacuum-. J. D. Castro. No. 1,193,359; Aug. 1; Gaz. vol. 229; p. 190.
Evener, Four-horse. G. O. Gullikson. No. 1,195,001; Aug. 15; Gaz. vol. 229; p. 849.
Excavating device. J. W. Page. No. 1,194,777; Aug. 15; Gaz. vol. 229; p. 770.
Excavating-machine. J. P. Bowling. No. 1,196,426; Aug. 29; Gaz. vol. 229; p. 1422.
Exerciser, Physical. E. Sandow. No. 1,194,884; Aug. 15; Gaz. vol. 229; p. 808.
Exhibiting and vending case. F. A. Canfield. No. 1,192,859; Aug. 1; Gaz. vol. 229; p. 11.
Exhibitor, Changeable. E. O. Man and C. H. Quist. No. 1,194,056; Aug. 15; Gaz. vol. 229; p. 869.
Exhibitor, Rotary. C. S. Sutter. No. 1,193,735; Aug. 8; Gaz. vol. 229; p. 364.
Expansion-bolt. C. B. Van Antwerp. No. 1,193,636; Aug. 8; Gaz. vol. 229; p. 327.
Explosive and manufacturing same. G. Spica. No. 1,194,561; Aug. 15; Gaz. vol. 229; p. 695.
Extract, Fruited wort. C. Rach, No. 1,194,230; Aug. 8; Gaz. vol. 229; p. 535.
Extractor: *See*—
Centrifugal extractor. Stump-extractor.
Packing-extractor.
Eye-protector, Mechanic's. H. J. Brennecke. No. 1,193,230; Aug. 1; Gaz. vol. 229; p. 143.
Eye-protector, Variable. H. J. Brennecke. No. 1,193,231; Aug. 1; Gaz. vol. 229; p. 144.
Eyeglass construction. C. E. H. Colliander. No. 1,193,518; Aug. 8; Gaz. vol. 229; p. 282.
Eyeglass-mounting. G. A. Bader. No. 1,193,339; Aug. 1; Gaz. vol. 229; p. 183.
Eyeglass-reel. H. Newbold. No. 1,196,714; Aug. 29; Gaz. vol. 229; p. 1521.
Eyeglasses. G. A. Arnold. No. 1,195,326; Aug. 22; Gaz. vol. 229; p. 1001.
Eyeglasses. G. A. Bader. No. 1,193,219; Aug. 1; Gaz. vol. 229; p. 139.
Eyeglasses. H. Brinkhaus. No. 1,193,984; Aug. 8; Gaz. vol. 229; p. 451.
Eyeglasses and spectacles. S. J. Clulee. No. 1,196,088; Aug. 29; Gaz. vol. 229; p. 1305.
Fabric: *See*—
Bristle fabric. Wire fabric.
Elastic fabric. Woven fabric.
Tire fabric.
Fan. E. E. Dickerson. No. 1,194,605; Aug. 15; Gaz. vol. 229; p. 711.
Fan, Chair-operated. A. Zubryd. No. 1,193,215; Aug. 1; Gaz. vol. 229; p. 138.
Fan, Electric. W. M. McEwen. No. 1,196,256; Aug. 29; Gaz. vol. 229; p. 1365.
Fan, Electric. M. Nesseler. No. 1,194,413; Aug. 15; Gaz. vol. 229; p. 643.
Fan-operating mechanism. D. Dolhay. No. 1,195,788; Aug. 22; Gaz. vol. 229; p. 1167.
Fan, Oscillating. W. M. McEwen. No. 1,196,255; Aug. 29; Gaz. vol. 229; p. 1364.
Fan, Spring-actuated. H. Gabel. No. 1,194,007; Aug. 8; Gaz. vol. 229; p. 459.
Fare-box. A. A. Burrows. No. 1,194,950; Aug. 15; Gaz. vol. 229; p. 831.
Fare-box. F. G. Murray. No. 1,196,383; Aug. 29; Gaz. vol. 229; p. 1407.
Farm-gate. G. L. Miller. No. 1,196,263; Aug. 29; Gaz. vol. 229; p. 1367.
Fastener. J. P. Holtzhouser. No. 1,194,292; Aug. 8; Gaz. vol. 229; p. 557.
Fastener, Safety-. W. P. Mitchell. No. 1,193,588; Aug. 8; Gaz. vol. 229; p. 308.
Fastener-setting machine. P. R. Glass. No. 1,195,807; Aug. 22; Gaz. vol. 229; p. 1174.
Fastener socket, Snap-. E. D. Simons. No. 1,192,947; Aug. 1; Gaz. vol. 229; p. 41.
Fastening device. T. C. Doredant and J. V. Harrington. No. 1,196,216; Aug. 29; Gaz. vol. 229; p. 1352.
Fastening device. D. Marinsky. No. 1,196,009; Aug. 29; Gaz. vol. 229; p. 1278.
Fastening device. J. Truesdell. No. 1,196,617; Aug. 29; Gaz. vol. 229; p. 1488.
Fastening device for use with doors and the like. J. Blake. No. 1,195,331; Aug. 22; Gaz. vol. 229; p. 1003.

Fastening device, Separable. H. B. Nylund. No. 1,193,815; Aug. 8; Gaz. vol. 229; p. 391.
Fastening devices, Machine for forming and affixing. C. W. Brown. No. 1,193,113; Aug. 1; Gaz. vol. 229; p. 101.
Fastening for boxes or other articles, Strap-. J. H. Zelnicker. No. 1,196,629; Aug. 29; Gaz. vol. 229; p. 1491.
Faucet, Electric water-heating. E. C. Webster. No. 1,193,445; Aug. 1; Gaz. vol. 229; p. 219.
Faucet spray attachment. M. Thomsen. No. 1,193,086; Aug. 1; Gaz. vol. 229; p. 91.
Feed-box. J. K. Winslow. No. 1,196,061; Aug. 29; Gaz. vol. 229; p. 1297.
Feed-cutting machines, Conveyer attachment for. H. H. and I. Reinhart and C. G. Moyer. No. 1,193,063; Aug. 1; Gaz. vol. 229; p. 82.
Feed-water regulator. N. G. Copley. No. 1,193,125; Aug. 1; Gaz. vol. 229; p. 106.
Feeder, Poultry-. J. D. Seamans. No. 1,195,104; Aug. 15; Gaz. vol. 229; p. 884.
Feeders, Register device for. W. B. Story. No. 1,193,731; Aug. 8; Gaz. vol. 229; p. 362.
Feeding mechanism. P. de Groot. No. 1,193,672; Aug. 8; Gaz. vol. 229; p. 340.
Feeding regulated quantities of finely-divided material, Apparatus for. W. S. Quigley. No. 1,193,057; Aug. 1; Gaz. vol. 229; p. 80.
Feeding-trough. W. A. McCollough. No. 1,193,165; Aug. 1; Gaz. vol. 229; p. 120.
Fence and post. L. A. Larson. No. 1,195,238; Aug. 22; Gaz. vol. 229; p. 967.
Fence-post. W. Bryson. No. 1,195,775; Aug. 22; Gaz. vol. 229; p. 1163.
Fence-post, Metal. J. M. Fellows. No. 1,195,192; Aug. 22; Gaz. vol. 229; p. 951.
Fence-post, Metallic. J. B. Young. No. 1,195,760; Aug. 22; Gaz. vol. 229; p. 1157.
Fence-posts, Wire-fastener for. G. I. Chase. No. 1,193,990; Aug. 8; Gaz. vol. 229; p. 453.
Fender: *See*—
Automobile-fender. Car-fender.
Fender. A. M. Burton. No. 1,195,438; Aug. 22; Gaz. vol. 229; p. 1040.
Fertilizer-distributer. D. R. Holden. No. 1,193,547; Aug. 8; Gaz. vol. 229; p. 293.
Fertilizer-distributer. W. A. Van Brunt. No. 1,195,879; Aug. 22; Gaz. vol. 229; p. 1199.
Fertilizer machinery. F. P. Mansbendel. No. 1,193,581; Aug. 8; Gaz. vol. 229; p. 305.
Fertilizer, Making. S. B. Newberry and G. R. Fishbourne. No. 1,194,219; Aug. 8; Gaz. vol. 229; p. 531.
Fertilizer, Preparing a concentrated. W. H. Ross, A. R. Merz, and J. W. Carothers. No. 1,194,077; Aug. 8; Gaz. vol. 229; p. 483.
Fiber-cleaner. A. Hamblet. No. 1,195,464; Aug. 22; Gaz. vol. 229; p. 1049.
Fibers, Preparing shaped. G. Lanzendorfer. No. 1,193,703; Aug. 8; Gaz. vol. 229; p. 352.
Fibrous materials, Treating. E. D. Jefferson. No. 1,192,903; Aug. 1; Gaz. vol. 229; p. 25.
Fifth-wheel. S. O. Duemler. No. 1,195,662; Aug. 22; Gaz. vol. 229; p. 1121.
File, Account-. J. Stubbers. No. 1,195,291; Aug. 22; Gaz. vol. 229; p. 987.
File, Bill-. H. Braen. No. 1,193,863; Aug. 8; Gaz. vol 229; p. 409.
File, Bill-. L. R. Haslett. No. 1,195,008; Aug. 15; Gaz. vol. 229; p. 852.
File-conveyer. E. C. Gipe. No. 1,196,351; Aug. 29; Gaz. vol. 229; p. 1396.
File, Memorandum-. H. W. Olmsted. No. 1,196,269; Aug. 29; Gaz. vol. 229; p. 1369.
File, Storage-. L. A. Lindstrom. No. 1,194,401; Aug 15; Gaz. vol. 229; p. 639.
Filing appliance. H. J. Hick. No. 1,194,382; Aug. 15; Gaz. vol. 229; p. 632.
Filing appliance. H. J. Hick. No. 1,195,012; Aug. 15; Gaz. vol. 229; p. 854.
Filing appliance. G. Jacobs. No. 1,195,991; Aug. 29; Gaz. vol. 229; p. 1271.
Filing appliance. F. E. Liverance, Jr. No. 1,195,168; Aug. 15; Gaz. vol. 229; p. 906.
Filing-cabinet. G. White. No. 1,195,309; Aug. 22; Gaz. vol. 229; p. 994.
Filing device. W. J. Oliver. No. 1,194,536; Aug. 15; Gaz. vol. 229; p. 687.
Filing-machine. C. G. Olson. No. 1,194,414; Aug. 15; Gaz. vol. 229; p. 644.
Filling containers, Means for automatically. L. J. Bruton. No. 1,192,852; Aug. 1; Gaz. vol. 229; p. 8.
Film-rewinding device. H. B. Cunningham. No. 1,195,785; Aug. 22; Gaz. vol. 229; p. 1166.
Film-winder. K. R. Dieterle. No. 1,195,447; Aug. 22; Gaz. vol. 229; p. 1044.
Filter. E. G. Acheson. No. 1,193,333; Aug. 1; Gaz. vol. 229; p. 181.
Filter. E. G. Acheson. No. 1,193,335; Aug. 1; Gaz. vol. 229; p. 182.
Filter. P. J. Bacher. No. 1,193,970; Aug. 8; Gaz. vol. 229; p. 447.
Filter. C. D. Burchenal. No. 1,194,949; Aug. 15; Gaz. vol. 229; p. 831.
Filter. R. Labrador y Guijarro. No. 1,195,000; Aug. 15; Gaz. vol. 229; p. 849.
Filter, Centrifugal. H. C. Christianson. No. 1,194,275; Aug. 8; Gaz. vol. 229; p. 550.
Filter, Chemical-feeding. G. H. Widner. No. 1,195,427; Aug. 22; Gaz. vol. 229; p. 1037.
Filter-presses, Filtering-frame for. W. Guerrero. No. 1,193,779; Aug. 8; Gaz. vol. 229; p. 380.
Filter, Water-softening. G. H. Widner. No. 1,196,058; Aug. 29; Gaz. vol. 229; p. 1296.
Filtration of liquids. E. G. Acheson. No. 1,193,334; Aug. 1; Gaz. vol. 229; p. 182.
Finger-ring. N. Lidzbarsky. No. 1,195,244; Aug. 22; Gaz. vol. 229; p. 969.
Finishing-tool. L. H. Mitchell. No. 1,193,407; Aug. 1; Gaz. vol. 229; p. 207.
Fire-alarm apparatus. D. G. Dee. No. 1,194,723; Aug. 15; Gaz. vol. 229; p. 752.
Fire-alarm, Automatic. G. B. Rattermann and W. W. Garrison. No. 1,195,499; Aug. 22; Gaz. vol. 229; p. 1060.
Fire-alarm mechanism, Automatic. J. J. Rubens. No 1,193,720; Aug. 8; Gaz. vol. 229; p. 358.
Fire-alarm system. F. A. Swan. No. 1,194,571; Aug. 15; Gaz. vol. 229; p. 699.
Fire and water proof composition and making same. J. V. Spoglund. No. 1,194,558; Aug. 15; Gaz. vol. 229; p. 695.
Fire and water tube boiler. I. Ladishensky. No. 1,195,367; Aug. 22; Gaz. vol. 229; p. 1016.
Fire-box. P. Beer. No. 1,195,174; Aug. 22; Gaz. vol. 229; p. 944.
Fire door or shutter. F. L. Saino. No. 1,195,505; Aug. 22; Gaz. vol. 229; p. 1062.
Fire-escape. J. W. Grant. No. 1,195,985; Aug. 29; Gaz. vol. 229; p. 1269.
Fire-escape. J. A. Myers. No. 1,195,069; Aug. 15; Gaz. vol. 229; p. 873.
Fire-escape. J. N. Piché. No. 1,194,062; Aug. 8; Gaz. vol. 229; p. 477.
Fire-escape. L. Spiro. No. 1,196,607; Aug. 29; Gaz. vol. 229; p. 1485.
Fire-escape. L. Viezzi. No. 1,194,098; Aug. 8; Gaz. vol. 229; p. 489.
Fire-escape, Foldable. H. F. Banyovits. No. 1,196,419; Aug. 29; Gaz. vol. 229; p. 1420.
Fire-extinguisher. G. T. Pearsons. No. 1,194,781; Aug. 15; Gaz. vol. 229; p. 772.
Fire-extinguishing system and apparatus. A. L. Reynolds. No. 1,193,064; Aug. 1; Gaz. vol. 229; p. 83.
Fire-shield. D. S. Watson. No. 1,196,051; Aug. 29; Gaz. vol. 229; p. 1293.
Fire-shutter channel. E. H. McCloud. No. 1,196,006; Aug. 29; Gaz. vol. 229; p. 1277.
Firearm. A. Cuccurullo. No. 1,193,768; Aug. 8; Gaz. vol. 229; p. 376.
Firearm. T. C. Johnson. No. 1,193,268; Aug. 1; Gaz. vol. 229; p. 157.
Firearm. T. C. Johnson. No. 1,194,024; Aug. 8; Gaz. vol. 229; p. 464.
Firearm, Magazine-. J. H. Blake. No. 1,194,270; Aug. 8; Gaz. vol. 229; p. 548.
Firearm, Take-down. F. F. Burton. No. 1,195,777; Aug. 22; Gaz. vol. 229; p. 1164.
Firearms, Device for attaching telescopes to. J. F. Meyer No. 1,194,208; Aug. 8; Gaz. vol. 229; p. 528.
Firearms, Gas regulator and trap for automatic gas-operated. I. N. Lewis. No. 1,195,693; Aug. 22; Gaz. vol. 229; p. 1131.
Fireplace. E. Pomeroy. No. 1,193,054; Aug. 1; Gaz. vol. 229; p. 74.
Fireproof doors and shutters, Flue-stopper for. F. L. Saino. No. 1,195,097; Aug. 15; Gaz. vol. 229; p. 882.
Fireproof doors or shutters, Draft-plate for. F. L. Saino. No. 1,195,098; Aug. 15; Gaz. vol. 229; p. 882.
Fish and crab trap. W. F. Ottmann. No. 1,193,816; Aug. 8; Gaz. vol. 229; p. 392.
Fish-screen. W. A. Hoge. No. 1,195,988; Aug. 29; Gaz. vol. 229; p. 1270.
Fish-trap, Floating. B. F. Armstrong. No. 1,193,216; Aug. 1; Gaz. vol. 229; p. 138.
Fishing bob or float. W. W. Gregory and P. D. Maire. No. 1,193,684; Aug. 8; Gaz. vol. 229; p. 344.
Fishing-tackle. P. D. Maire and W. W. Gregory. No. 1,193,912; Aug. 8; Gaz. vol. 229; p. 427.
Flag. G. F. Hoffman. No. 1,195,224; Aug. 22; Gaz. vol. 229; p. 961.
Flagstaff. H. C. Earle. No. 1,194,489; Aug. 15; Gaz. vol. 229; p. 672.
Flange-controlling mechanism. G. P. Brand. No. 1,193,352; Aug. 1; Gaz. vol. 229; p. 188.
Flanges, Making. C. C. Davis. No. 1,194,277; Aug. 8; Gaz. vol. 229; p. 550.
Flanging-head. J. E. Abrams. No. 1,196,632; Aug. 29; Gaz. vol. 229; p. 1492.
Flanging-machine, Automatic. L. C. Krummel. No. 1,194,038; Aug. 8; Gaz. vol. 229; p. 469.
Flash-light Fountain-pen. J. and J. L. Friedman. No. 1,193,534; Aug. 8; Gaz. vol. 229; p. 287.
Flexible coupling. L. H. Kelm. No. 1,194,336; Aug. 8; Gaz. vol. 229; p. 573.
Flong-machine. J. P. Rivett. No. 1,193,615; Aug. 8; Gaz. vol. 229; p. 319.
Floor construction. C. W. Stevens. No. 1,195,289; Aug. 22; Gaz. vol. 229; p. 986.
Floor grinding and polishing machine. J. A. Campbell. No. 1,195,555; Aug. 22; Gaz. vol. 229; p. 1082.

Flooring and laying the same. A. E. Symmes. No. 1,193,843; Aug. 8; Gaz. vol. 229; p. 402.
Flooring, Plastic composition for. D. G. Anderson. No. 1,194,926; Aug. 15; Gaz. vol. 229; p. 822.
Flour bin and sifter, Combination. M. Schulling. No. 1,194,552; Aug. 15; Gaz. vol. 229; p. 693.
Flow-measuring apparatus, Liquid-. G. H. Gibson. No. 1,196,735; Aug. 29; Gaz. vol. 229; p. 1530.
Flow, Metering fluids which have an intermittent. L. A. Sheldon. No. 1,195,105; Aug. 15; Gaz. vol. 229; p. 884.
Flower-holder. W. R. Stuck. No. 1,196,312; Aug. 29; Gaz. vol. 229; p. 1382.
Flower-pot and dirt-band, Combination. G. S. Ramsburg. No. 1,194,541; Aug. 15; Gaz. vol. 229; p. 689.
Flue. A. S. Kiefer. No. 1,196,117; Aug. 29; Gaz. vol. 229; p. 1316.
Flue-cleaner. E. E. Lowell. No. 1,196,467; Aug. 29; Gaz. vol. 229; p. 1437.
Fluid-actuated motor. G. Akanis. No. 1,194,346; Aug. 15; Gaz. vol. 229; p. 619.
Fluid-lift, Pneumatic. J. K. Putnam. No. 1,193,609; Aug. 8; Gaz. vol. 229; p. 316.
Fluid, Method of and apparatus for compressing elastic. J. A. Lafore. No. 1,195,691; Aug. 22; Gaz. vol. 229; p. 1130.
Fluid-pressure brake. W. V. Turner. No. 1,192,960; Aug. 1; Gaz. vol. 229; p. 45.
Fluid-pressure brake. W. V. Turner. No. 1,194,443; Aug. 15; Gaz. vol. 229; p. 655.
Fluid-pressure brake device. W. V. Turner. No. 1,192,961; Aug. 1; Gaz. vol. 229; p. 45.
Fluids, Apparatus for ascertaining the properties of. H. Carmichael and W. M. Grosvenor. No. 1,192,861; Aug. 1; Gaz. vol. 229; p. 11.
Flushing apparatus. E. L. Delany. No. 1,193,522; Aug. 8; Gaz. vol. 229; p. 283.
Flushing device. C. W. Darrow. No. 1,194,965; Aug. 15; Gaz. vol. 229; p. 836.
Fly-catcher. J. E. Clarke. No. 1,195,559; Aug. 22; Gaz. vol. 229; p. 1083.
Fly-catcher. W. B. Goddard. No. 1,196,353; Aug. 29; Gaz. vol. 229; p. 1397.
Fly-catcher. J. H. Harrison. No. 1,195,986; Aug. 29; Gaz. vol. 229; p. 1269.
Fly-trap. M. E. Holden. No. 1,194,736; Aug. 15; Gaz. vol. 229; p. 756.
Flying-machine. R. R. James. No. 1,195,139; Aug. 15; Gaz. vol. 229; p. 896.
Flying-machine. G. C. St. Louis. No. 1,195,290; Aug. 22; Gaz. vol. 229; p. 987.
Flying-machine. W. P. Thompson. No. 1,192,954; Aug. 1; Gaz. vol. 229; p. 43.
Folding box. L. T. Jacks and T. W. Bustin. No. 1,195,022; Aug. 15; Gaz. vol. 229; p. 857.
Folding box. J. J. Wilson. No. 1,195,758; Aug. 22; Gaz. vol. 229; p. 1156.
Folding box, Non-buckling. D. Weber. No. 1,196,320; Aug. 29; Gaz. vol. 229; p. 1385.
Folding chair. C. A. Buffington. No. 1,196,655; Aug. 29; Gaz. vol. 229; p. 1501.
Folding chair. J. L. White. No. 1,193,854; Aug. 8; Gaz. vol. 229; p. 406.
Folding implement. T. Harding. No. 1,194,381; Aug. 15; Gaz. vol. 229; p. 632.
Folding table. B. E. Comey. No. 1,193,876; Aug. 8; Gaz. vol. 229; p. 414.
Folding table. K. G. Johanson. No. 1,194,633; Aug. 15; Gaz. vol. 229; p. 720.
Food composition. J. Constantine. No. 1,194,276; Aug. 8; Gaz. vol. 229; p. 550.
Food-dispensing device. J. R. Harbeck. No. 1,194,172; Aug. 8; Gaz. vol. 229; p. 515.
Food product. A. L. Sattler. No. 1,193,828; Aug. 8; Gaz. vol. 229; p. 396.
Food product and manufacturing same. J. H. Williams. No. 1,194,456; Aug. 15; Gaz. vol. 229; p. 660.
Food product and producing the same. R. W. Crary and S. R. Barnett. No. 1,193,477; Aug. 1; Gaz. vol. 229; p. 231.
Food product containing sweet potatoes and making same, Baked. J. H. Williams. No. 1,194,455; Aug. 15; Gaz. vol. 229; p. 660.
Foods, Impregnating baled. E. P. Müller. No. 1,196,138; Aug. 29; Gaz. vol. 229; p. 1324.
Foot-covering support. W. F. Quarters. No. 1,196,281; Aug. 29; Gaz. vol. 229; p. 1373.
Foot-coverings and leggings, Finishing. J. V. Walsh. No. 1,194,100; Aug. 8; Gaz. vol. 229; p. 480.
Foot-rest, Adjustable. E. Schuyler. No. 1,193,831; Aug. 8; Gaz. vol. 229; p. 397.
Force-feed lubricator. S. M. Jenkins. No. 1,195,025; Aug. 15; Gaz. vol. 229; p. 858.
Forge appliance. H. Fralick. No. 1,194,373; Aug. 15; Gaz. vol. 229; p. 628.
Forging brake-fulcrums. F. J. Schroeder. No. 1,193,928; Aug. 8; Gaz. vol. 229; p. 432.
Fork: *See*—
Pitchfork.
Fork. F. J. Anderson. No. 1,194,695; Aug. 15; Gaz. vol. 229; p. 742.
Fork. G. K. Burke. No. 1,195,650; Aug. 22; Gaz. vol. 229; p. 1116.
Form, Adjustable garment-. M. Selubsky. No. 1,194,555; Aug. 15; Gaz. vol. 229; p. 694.
Form, Garment-. E. Levin. No. 1,196,559; Aug. 29; Gaz. vol. 229; p. 1468.
Fountain: *See*—
Drinking-fountain. Stock-fountain.
Ink-fountain. Water-fountain.
Frame: *See*—
Calk-frame. Picture-frame.
Easel-frame. Printing-frame.
Magneto-frame. Truck-frame.
Photographic-printing frame. Truck side frame.
Water-glass frame.
Fraud-detector. W. L. Cummings and L. W. Blanchard. No. 1,195,912; Aug. 22; Gaz. vol. 229; p. 1211.
Friction-lid can. J. H. O'Shea and C. H. Fenton. No. 1,195,393; Aug. 22; Gaz. vol. 229; p. 1025.
Friction-seat wall-can, Triple-. E. W. Carnes. No. 1,196,082; Aug. 29; Gaz. vol. 229; p. 1305.
Fruit-branding machine. E. P. Porcher. No. 1,193,297; Aug. 1; Gaz. vol. 229; p. 168.
Fruit-cleaning device. C. Oakford. No. 1,195,848; Aug. 22; Gaz. vol. 229; p. 1189.
Fruit-cleaning machine. E. Rawson. No. 1,195,854; Aug. 22; Gaz. vol. 229; p. 1191.
Fruit-drying apparatus. G. D. Parker. No. 1,194,538; Aug. 15; Gaz. vol. 229; p. 688.
Fruit-gatherer. B. F. White. No. 1,194,260; Aug. 8; Gaz. vol. 229; p. 545.
Fruit-picker. J. S. Brown. No. 1,195,907; Aug. 22; Gaz. vol. 229; p. 1209.
Fruit-press. J. C. Darnall. No. 1,194,822; Aug. 15; Gaz. vol. 229; p. 786.
Fuel. H. Clarke and J. A. Campbell. No. 1,193,763; Aug. 8; Gaz. vol. 229; p. 374.
Fuel. E. L. Culver. No. 1,195,784; Aug. 22; Gaz. vol. 229; p. 1166.
Fuel, Apparatus for controlling and conveying pulverized. J. G. Coutant. No. 1,195,186; Aug. 22; Gaz. vol. 229; p. 949.
Fuel, Artificial. J. T. Roberts. No. 1,193,070; Aug. 1; Gaz. vol. 229; p. 86.
Fuel controllers, Anticlogging device for pulverized-. A. D. Heyl. No. 1,193,016; Aug. 1; Gaz. vol. 229; p. 65.
Fuel-distributer. C. F. Street and N. M. Lower. No. 1,195,530; Aug. 22; Gaz. vol. 229; p. 1071.
Fuel-distributer for furnaces. C. F. Street. No. 1,195,531; Aug. 22; Gaz. vol. 229; p. 1072.
Fuel-feed, Constant-level. N. M. La Porte. No. 1,196,552; Aug. 29; Gaz. vol. 229; p. 1466.
Fuel made from anthracite-coal refuse and making same. A. Schmidt. No. 1,192,942; Aug. 1; Gaz. vol. 229; p. 39.
Fuel-nozzle valve-gear. R. Hennig. No. 1,194,840; Aug. 15; Gaz. vol. 229; p. 792.
Fuel-supply-recording device. G. C. Kerr. No. 1,194,640; Aug. 15; Gaz. vol. 229; p. 722.
Fuel vaporizer and burner. L. Stiles, Jr. No. 1,195,867; Aug. 22; Gaz. vol. 229; p. 1195.
Fumes from a smelter or ore-furnace, Apparatus for utilizing the heated. G. P. Luedke. No. 1,196,123; Aug. 29; Gaz. vol. 229; p. 1318.
Fuming or distilling furnace and condenser therefor, Electric. J. Thomson. No. 1,193,633; Aug. 8; Gaz. vol. 229; p. 326.
Furnace: *See*—
Boiler-furnace. Hot-air furnace.
Electric-arc furnace. Metallurgical furnace.
Glass-furnace. Muffle-furnace.
Heating-furnace. Portable furnace.
Furnace. W. H. Caver. No. 1,193,120; Aug. 1; Gaz. vol. 229; p. 104.
Furnace. W. McClave. No. 1,192,920; Aug. 1; Gaz. vol. 229; p. 31.
Furnace. W. S. Rockwell. No. 1,193,824; Aug. 8; Gaz. vol. 229; p. 395.
Furnace. U. Wedge. No. 1,195,424; Aug. 22; Gaz. vol. 229; p. 1035.
Furnace-binding. J. A. Bow, P. Thill, and A. E. Wheeler. No. 1,193,109; Aug. 1; Gaz. vol. 229; p. 100.
Furnace-casing. H. W. Neal. No. 1,195,845; Aug. 22; Gaz. vol. 229; p. 1188.
Furnace-door-arch construction. W. Lemb. No. 1,192,912; Aug. 1; Gaz. vol. 229; p. 28.
Furnace-grate. G. A. Kohout. No. 1,196,246; Aug. 29; Gaz. vol. 229; p. 1361.
Furnace top, Blast-. W. H. Bailey. No. 1,193,750; Aug. 8; Gaz. vol. 229; p. 369.
Furnaces, Apparatus for burning combustible liquids in steam-boiler. P. Mejani. No. 1,194,052; Aug. 8; Gaz. vol. 229; p. 473.
Furnaces, Apparatus for preventing sintering in electric. E. S. Berglund. No. 1,196,202; Aug. 29; Gaz. vol. 229; p. 1348.
Furnaces, Cleaning device for marine-boiler. J. K. Bruff. No. 1,192,984; Aug. 1; Gaz. vol. 229; p. 52.
Furnaces, Utilizing waste heat from open-hearth. R. M. Snyder. No. 1,195,521; Aug. 22; Gaz. vol. 229; p. 1068.
Furniture, Adjustable and combined. M. Thum. No. 1,195,627; Aug. 22; Gaz. vol. 229; p. 1108.
Furring-strip. J. B. Webb. No. 1,193,092; Aug. 1; Gaz. vol. 229; p. 93.
Fuse cut-out, Automatic. C. S. Anderson. No. 1,192,974; Aug. 1; Gaz. vol. 229; p. 49.
Fuse, Oil-. L. W. Downes and A. W. Faxon. No. 1,195,790; Aug. 22; Gaz. vol. 229; p. 1168.

Fuse-receptacle lock. G. Wesley. No. 1,193,646; Aug. 8; Gaz. vol. 229; p. 331.
Fuse, Safety-. H. A. Yates. (Reissue.) No. 14,183; Aug. 15; Gaz. vol. 229; p. 908.
Gag and tongue-depressor, Mouth-. T. M. Henderson. No. 1,193,782; Aug. 8; Gaz. vol. 229; p. 381.
Gage: *See*—
Band-tying gage.
Liquid-indicating gage.
Marking-gage.
Micrometer-gage.
Perforation-gage.
Pressure-gage.
Saw-gage.
Siding-gage.
Tank-gage.
Thread-cutting-tool gage.
Gage. W. A. Dau. No. 1,196,213; Aug. 29; Gaz. vol. 229; p. 1351.
Galvanic cell. A. Heil. No. 1,195,677; Aug. 22; Gaz. vol. 229; p. 1127.
Galvanometer. A. Blondel. No. 1,193,979; Aug. 8; Gaz. vol. 229; p. 449.
Gambrel. O. A. Rice. No. 1,194,235; Aug. 8; Gaz. vol. 229; p. 536.
Game. J. B. Aley. No. 1,193,962; Aug. 8; Gaz. vol. 229; p. 443.
Game. R. B. Smith. No. 1,196,748; Aug. 29; Gaz. vol. 229; p. 1534.
Game apparatus. C. Dancel. No. 1,194,147; Aug. 8; Gaz. vol. 229; p. 507.
Game apparatus, Educational. D. Morgan. No. 1,194,213; Aug. 8; Gaz. vol. 229; p. 529.
Game-board. F. H. Beamer, G. W. Buswell, and W. O. Kelter. No. 1,195,173; Aug. 22; Gaz. vol. 229; p. 944.
Game-counter. E. J. Hearst. No. 1,196,358; Aug. 29; Gaz. vol. 229; p. 1398.
Garbage-can, Odorless. H. P. Mutch. No. 1,196,385; Aug. 29; Gaz. vol. 229; p. 1409.
Garbage-receiver. C. H. Watson. No. 1,194,907; Aug. 15; Gaz. vol. 229; p. 816.
Garbage-receiver, Sanitary. A. E. Lang. No. 1,195,034; Aug. 15; Gaz. vol. 229; p. 862.
Garbage-receptacles and the like, Closure for. W. J. Legat and J. T. Dugan. No. 1,195,481; Aug. 22; Gaz. vol. 229; p. 1054.
Garden-tool. H. A. Gibson. No. 1,194,992; Aug. 15; Gaz. vol. 229; p. 846.
Garment. G. E. Dickson. No. 1,194,969; Aug. 15; Gaz. vol. 229; p. 838.
Garment-clasp. C. J. Gustavsen. No. 1,195,811; Aug. 22; Gaz. vol. 229; p. 1175.
Garment-hanger. W. R. Buxton. No. 1,193,356; Aug. 1; Gaz. vol. 229; p. 189.
Garment-hanger. W. R. Buxton. No. 1,193,357; Aug. 1; Gaz. vol. 229; p. 189.
Garment, Infant's. E. J. Davidson. No. 1,195,565; Aug. 22; Gaz. vol. 229; p. 1085.
Garment-loop. C. S. Comstock, Sr. No. 1,194,716; Aug. 15; Gaz. vol. 229; p. 749.
Garment-marking device. R. B. and C. E. Dean. No. 1,193,770; Aug. 8; Gaz. vol. 229; p. 377.
Garment-pressing machine. B. Weinberger. No. 1,193,093; Aug. 1; Gaz. vol. 229; p. 94.
Garment-supporter. A. H. Fleming. No. 1,196,224; Aug. 29; Gaz. vol. 229; p. 1355.
Garment-supporter. L. A. Griswold. No. 1,196,678; Aug. 29; Gaz. vol. 229; p. 1509.
Garment-supporter. C. E. Sauer. No. 1,195,610; Aug. 22; Gaz. vol. 229; p. 1102.
Garment, Union. A. E. Lambert. No. 1,195,595; Aug. 22; Gaz. vol. 229; p. 1096.
Garter or hose-supporter. R. K. Guinzburg. No. 1,195,354; Aug. 22; Gaz. vol. 229; p. 1011.
Gas and air burner, Compressed. A. K. Schaap. No. 1,195,403; Aug. 22; Gaz. vol. 229; p. 1028.
Gas, Apparatus for indicating the volumetric flow of a. E. E. Werner. No. 1,195,631; Aug. 22; Gaz. vol. 229; p. 1109.
Gas-burner. G. W. Graves. No. 1,196,230; Aug. 29; Gaz. vol. 229; p. 1356.
Gas-burner. C. Ludlow and J. Keown. No. 1,195,047; Aug. 15; Gaz. vol. 229; p. 866.
Gas-burner. J. E. Martin. No. 1,194,050; Aug. 8; Gaz. vol. 229; p. 473.
Gas-burner, Water-heater. G. W. Lake. No. 1,194,396; Aug. 15; Gaz. vol. 229; p. 637.
Gas burners, Means for lighting petroleum-. A. J. Fredrikson. No. 1,194,613; Aug. 15; Gaz. vol. 229; p. 714.
Gas-distribution system. R. F. Elder. No. 1,193,675; Aug. 8; Gaz. vol. 229; p. 341.
Gas-engine. G. W. Bayley. No. 1,193,753; Aug. 8; Gaz. vol. 229; p. 370.
Gas engine, Explosive-. O. Derr. No. 1,193,367; Aug. 1; Gaz. vol. 229; p. 193.
Gas-fixture. G. R. Chamberlain and A. G. Schroeder. No. 1,192,988; Aug. 1; Gaz. vol. 229; p. 54.
Gas-generating apparatus. C. J. Marvin. No. 1,193,465; Aug. 1; Gaz. vol. 229; p. 226.
Gas, Generating tarless. H. F. Wallmann. No. 1,195,934; Aug. 22; Gaz. vol. 229; p. 1218.
Gas generator, Acetylene-. J. C. Sproull. No. 1,194,251; Aug. 8; Gaz. vol. 229; p. 542.
Gas-heater. T. G. Palmer. No. 1,195,260; Aug. 22; Gaz. vol. 229; p. 974.
Gas-heater. T. G. Palmer. No. 1,196,019; Aug. 29; Gaz. vol. 229; p. 1282.
Gas-heater. G. F. Reznor. No. 1,195,730; Aug. 22; Gaz. vol. 229; p. 1145.
Gas-heater, Odorless. O. D. Orvis. No. 1,196,141; Aug. 29; Gaz. vol. 229; p. 1325.
Gas-lighter, Electric. W. G. Chapman. No. 1,192,863; Aug. 1; Gaz. vol. 229; p. 12.
Gas-lighting system. High-pressure. L. F. Boyd. No. 1,193,228; Aug. 1; Gaz. vol. 229; p. 142.
Gas-meter. W. L. Brown. No. 1,196,653; Aug. 29; Gaz. vol. 229; p. 1501.
Gas-producer. S. Glover and J. West. No. 1,194,730; Aug. 15; Gaz. vol. 229; p. 754.
Gas-purifying apparatus. H. L. Pearce. No. 1,194,223; Aug. 8; Gaz. vol. 229; p. 532.
Gases into intimate contact with liquid sewage, Apparatus for introducing. G. W. Mottram. No. 1,195,067; Aug. 15; Gaz. vol. 229; p. 872.
Gasolene from natural gas, Extracting. J. P. Foucart. No. 1,195,158; Aug. 15; Gaz. vol. 229; p. 902.
Gate: *See*—
End-gate.
Farm-gate.
Railway-gate.
Gate. J. O. Goettel. No. 1,195,352; Aug. 22; Gaz. vol. 229; p. 1011.
Gate. J. W. Whitaker. No. 1,194,908; Aug. 15; Gaz. vol. 229; p. 816.
Gate-closer. A. A. Still. No. 1,194,897; Aug. 15; Gaz. vol. 229; p. 812.
Gate-fastener. J. M. Gilbert. No. 1,195,202; Aug. 22; Gaz. vol. 229; p. 954.
Gate-opening attachment. J. J. Gochenour. No. 1,194,993; Aug. 15; Gaz. vol. 229; p. 846.
Gate-operating means. J. H. Grove. No. 1,194,999; Aug. 15; Gaz. vol. 229; p. 848.
Gear-cutting machine. C. A. Parsons, A. Q. Carnegie, and S. S. Cook. No. 1,194,221; Aug. 8; Gaz. vol. 229; p. 531.
Gear mechanism, Reversing-. R. E. Henrici. No. 1,195,136; Aug. 15; Gaz. vol. 229; p. 895.
Gear mechanism, Reversing-. R. A. Holmes. No. 1,195,470; Aug. 22; Gaz. vol. 229; p. 1051.
Gear, Reverse-. N. Hasley. No. 1,195,009; Aug. 15; Gaz. vol. 229; p. 852.
Gear-teeth. P. Wagner. No. 1,194,904; Aug. 15; Gaz. vol. 229; p. 815.
Gear, Transmission-. W. G. Moore. No. 1,194,654; Aug. 15; Gaz. vol. 229; p. 727.
Gears, Machine for finishing or grinding worm-. A. L. Stewart. No. 1,194,566; Aug. 15; Gaz. vol. 229; p. 697.
Gearing. W. H. George. No. 1,196,537; Aug. 29; Gaz. vol. 229; p. 1461.
Gearing. H. S. Rorick. No. 1,194,075; Aug. 8; Gaz. vol. 229; p. 482.
Gearing, Change-speed. P. Marcellot. No. 1,195,831; Aug. 22; Gaz. vol. 229; p. 1183.
Gearing, Differential. W. Mennle. No. 1,193,709; Aug. 8; Gaz. vol. 229; p. 354.
Gearing, Differential. A. O. Williams. No. 1,195,314; Aug. 22; Gaz. vol. 229; p. 996.
Gearing for motor-vehicles, Transmission-. E. W. and E. V. Smith. No. 1,195,284; Aug. 22; Gaz. vol. 229; p. 985.
Gearing for motor-vehicles, Transmission-. E. W. and E. V. Smith. No. 1,195,285; Aug. 22; Gaz. vol. 229; p. 985.
Gearing, Forward and reverse friction-. W. Player and W. Brace. No. 1,195,082; Aug. 15; Gaz. vol. 229; p. 877.
Gearing, Frictional. S. W. Womble. No. 1,194,264; Aug. 8; Gaz. vol. 229; p. 546.
Gearing, Power-transmission. J. E. Beckman. No. 1,193,662; Aug. 8; Gaz. vol. 229; p. 336.
Gearing, Reduction-. G. Westinghouse. No. 1,195,119; Aug. 15; Gaz. vol. 229; p. 889.
Gearing, Rotary-brush. G. A. Truman. No. 1,194,901; Aug. 15; Gaz. vol. 229; p. 814.
Gearing, Shifting mechanism for variable-speed. G. W. Bungay. No. 1,193,986; Aug. 8; Gaz. vol. 229; p. 452.
Gearing, Speed-change. L. Goodspeed. No. 1,196,206; Aug. 22; Gaz. vol. 229; p. 955.
Gearing, Timing-. A. McCrerey. No. 1,195,247; Aug. 22; Gaz. vol. 229; p. 970.
Gearing, Transmission-. R. G. Clark. No. 1,193,874; Aug. 8; Gaz. vol. 229; p. 413.
Gearing, Transmission-. C. W. Levalley. No. 1,194,299; Aug. 8; Gaz. vol. 229; p. 559.
Gearing, Transmission-. C. W. Levalley. No. 1,194,300; Aug. 8; Gaz. vol. 229; p. 559.
Gearing, Transmission-. C. W. Levalley. No. 1,194,301; Aug. 8; Gaz. vol. 229; p. 560.
Gearing, Transmission-. L. and H. Nilson. No. 1,193,591; Aug. 8; Gaz. vol. 229; p. 309.
Gearing, Transmission-. E. G. Plummer. No. 1,194,317; Aug. 8; Gaz. vol. 229; p. 567.
Gearing, Transmission-. N. G. Robinson. No. 1,195,502; Aug. 22; Gaz. vol. 229; p. 1061.
Gearing, Variable-speed. E. G. Staude. No. 1,193,727; Aug. 8; Gaz. vol. 229; p. 360.
Gearing, Variable-speed. E. G. Staude. No. 1,193,728; Aug. 8; Gaz. vol. 229; p. 361.
Gelatinous substances, Production of solid. E. Salm. No. 1,195,099; Aug. 15; Gaz. vol. 229; p. 883.
Generator: *See*—
Acetylene-generator.
Gas-generator.
Magneto-generator.
Motor-generator.
Smoke-generator.
Steam-generator.

Generator suspension. W. L. Bliss. No. 1,193,227; Aug. 1; Gaz. vol. 229; p. 142.
Germ-separator. A. W. H. Lenders. No. 1,194,899; Aug. 15; Gaz. vol. 229; p. 638.
Glass-blowing apparatus. W. D. Gumpp, F. M. Francart, and G. C. Debay. No. 1,195,002; Aug. 15; Gaz. vol. 229; p. 850.
Glass-forming machine. F. R. Perry and E. S. Richardson. No. 1,193,182; Aug. 1; Gaz. vol. 229; p. 126.
Glass-furnace. M. K. Holmes. No. 1,193,788; Aug. 8; Gaz. vol. 229; p. 383.
Glass, Laying sheet-. H. F. Lewis. No. 1,194,520; Aug. 15; Gaz. vol. 229; p. 682.
Glass, Working. C. J. Barrow. No. 1,194,124; Aug. 8; Gaz. vol. 229; p. 499.
Glass-working machine. M. K. Holmes. No. 1,193,787; Aug. 8; Gaz. vol. 229; p. 383.
Globe and bank, Combined. J. R. Harbeck. No. 1,196,108; Aug. 29; Gaz. vol. 229; p. 1313.
Globe draft-shield. S. Byrd. No. 1,194,953; Aug. 15; Gaz. vol. 229; p. 833.
Glove drying and deodorizing apparatus. J. J. Jenkins. No. 1,193,152; Aug. 1; Gaz. vol. 229; p. 116.
Glove-washing machine. A. E. Hoffman. No. 1,193,785; Aug. 8; Gaz. vol. 229; p. 382.
Gluing-machine. J. D. Reifsnyder and H. B. Smith. No. 1,196,020; Aug. 29; Gaz. vol. 229; p. 1284.
Gluing-roll. E. G. Staude. No. 1,193,628; Aug. 8; Gaz. vol. 229; p. 324.
Goggles. G. A. Bader. No. 1,193,340; Aug. 1; Gaz. vol. 229; p. 183.
Goggles, Motor-. H. T. Louch. No. 1,194,198; Aug. 8; Gaz. vol. 229; p. 524.
Goggles, Temple member for. H. E. Fenno. No. 1,196,092; Aug. 29; Gaz. vol. 229; p. 1308.
Gold, Extracting. A. W. Smith. No. 1,193,197; Aug. 1; Gaz. vol. 229; p. 132.
Golf-clubs, Shaft for. A. E. Lard. No. 1,195,994; Aug. 29; Gaz. vol. 229; p. 1272.
Golf-hole lining. T. J. W. Brown. No. 1,194,814; Aug. 15; Gaz. vol. 229; p. 784.
Golf-score device. E. M. Stroud. No. 1,193,441; Aug. 1; Gaz. vol. 229; p. 218.
Golf-tee. W. J. Merrill. No. 1,194,860; Aug. 15; Gaz. vol. 229; p. 800.
Governor. H. F. Snyder. No. 1,195,286; Aug. 22; Gaz. vol. 229; p. 985.
Governor, Automatic spring-. E. M. Staples. No. 1,194,895; Aug. 15; Gaz. vol. 229; p. 812.
Grader, Road-. R. C. Leslie and E. J. K. Schmidt. No. 1,194,400; Aug. 15; Gaz. vol. 229; p. 638.
Gradometer. A. R. Bradshaw. No. 1,193,758; Aug. 8; Gaz. vol. 229; p. 372.
Grain pitcher and feeder. H. L. Crocker. No. 1,192,494; Aug. 1; Gaz. vol. 229; p. 237.
Grain-separator. G. O. Rund. No. 1,194,788; Aug. 15; Gaz. vol. 229; p. 775.
Grain-shocking machine. C. Cissner. No. 1,195,442; Aug. 22; Gaz. vol. 229; p. 1042.
Gramophones, Means for automatically stopping. F. Ertuck. No. 1,196,672; Aug. 29; Gaz. vol. 229; p. 1507.
Granular or friable materials, Agglomerating finely-divided. A. V. M. Kroll. No. 1,196,705; Aug. 29; Gaz. vol. 229; p. 1517.
Grape-juice-making apparatus. S. Weinberg. No. 1,196,621; Aug. 29; Gaz. vol. 229; p. 1489.
Graphophone-stopping device. A. Gantz. No. 1,195,200; Aug. 22; Gaz. vol. 229; p. 953.
Grass and weed destroyer. G. G. Jones. No. 1,195,027; Aug. 15; Gaz. vol. 229; p. 859.
Grate. W. E. Rider. No. 1,193,822; Aug. 8; Gaz. vol. 229; p. 394.
Grate-bar, Sectional. C. R. Waid. No. 1,195,301; Aug. 22; Gaz. vol. 229; p. 991.
Grates, Fuel-kindler or pilot for. C. E. Higgins. No. 1,195,469; Aug. 22; Gaz. vol. 229; p. 1050.
Gravity-motor. W. O. Crosby and N. C. Carlisle. No. 1,193,362; Aug. 1; Gaz. vol. 229; p. 191.
Gravy compound and making same. H. Till. No. 1,193,739; Aug. 8; Gaz. vol. 229; p. 365.
Grease-cup. G. E. Johnson. No. 1,195,026; Aug. 15; Gaz. vol. 229; p. 859.
Grease-cup. L. N. Vincent. No. 1,195,296; Aug. 22; Gaz. vol. 229; p. 989.
Grease or oil, Reducing matter containing. C. S. Wheelwright. No. 1,193,743; Aug. 8; Gaz. vol. 229; p. 366.
Grinder. W. W. Cheney. No. 1,192,865; Aug. 1; Gaz. vol. 229; p. 13.
Grinder. V. J. Emery. No. 1,193,884; Aug. 8; Gaz. vol. 229; p. 417.
Grinder, Center-. E. F. Smith. No. 1,196,165; Aug. 29; Gaz. vol. 229; p. 1334.
Grinder, Cutter-head. H. A. Perkins. No. 1,193,295; Aug. 1; Gaz. vol. 229; p. 107.
Grinding and feeding machine, Feed. A. F. Meyer. No. 1,194,053; Aug. 8; Gaz. vol. 229; p. 474.
Grinding attachment, Tool-. B. L. Mallory. No. 1,195,248; Aug. 22; Gaz. vol. 229; p. 970.
Grinding cold-rolls, Apparatus for. C. M. Reynard. No. 1,196,150; Aug. 29; Gaz. vol. 229; p. 1328.
Grinding formed cutters, Machine for. W. O. Barnes. No. 1,196,420; Aug. 29; Gaz. vol. 229; p. 1421.
Grinding-machine. C. Bartels and G. T. Reiss. No. 1,193,661; Aug. 8; Gaz. vol. 229; p. 336.
Grinding-machine. J. Begtrup. No. 1,193,224; Aug. 1; Gaz. vol. 229; p. 141.
Grinding-machine. J. H. Deppeler. No. 1,193,243; Aug. 1; Gaz. vol. 229; p. 148.
Grinding-machine. F. M. Furber. No. 1,192,883; Aug. 1; Gaz. vol. 229; p. 19.
Grinding machine, Disk-. P. and C. R. Dosch. No. 1,193,525; Aug. 8; Gaz. vol. 229; p. 284.
Grinding machine, Saw-. F. W. Wardwell, Jr. No. 1,193,643; Aug. 8; Gaz. vol. 229; p. 330.
Grinding-mill. J. W. Cover. No. 1,194,717; Aug. 15; Gaz. vol. 229; p. 749.
Grinding-mill. T. J. Lovett. No. 1,194,757; Aug. 15; Gaz. vol. 229; p. 763.
Grinding-points, Machine for forming. C. G. Olson. No. 1,193,049; Aug. 1; Gaz. vol. 229; p. 77.
Grinding, polishing, and buffing machine. M. J. Flavin. No. 1,193,886; Aug. 8; Gaz. vol. 229; p. 417.
Grinding wheel or tool. S. G. Ashby. No. 1,194,267; Aug. 8; Gaz. vol. 229; p. 547.
Grout-mixer. M. G. Bunnell. No. 1,194,355; Aug. 15; Gaz. vol. 229; p. 622.
Guiding mechanism, Sheet-. J. W. Dickinson. No. 1,194,725; Aug. 15; Gaz. vol. 229; p. 753.
Gum, Chewing-. J. D. Pryor. No. 1,193,423; Aug. 1; Gaz. vol. 229; p. 212.
Gun. J. Patten. No. 1,194,870; Aug. 15; Gaz. vol. 229; p. 803.
Gun. J. Patten. No. 1,194,871; Aug. 15; Gaz. vol. 229; p. 804.
Gun and projectile, Staff-. C. F. Wicker. No. 1,195,543; Aug. 22; Gaz. vol. 229; p. 1077.
Gun carriage, Field-. E. Schneider. No. 1,196,298; Aug. 29; Gaz. vol. 229; p. 1377.
Gun, Gasolene-. A. O. Armour. No. 1,192,839; Aug. 1; Gaz. vol. 229; p. 4.
Gun, Magazine-. J. E. Gadbois. No. 1,193,889; Aug. 8; Gaz. vol. 229; p. 418.
Gun mount, Machine-. C. D. Witherow. No. 1,196,197; Aug. 29; Gaz. vol. 229; p. 1346.
Gun-sight. K. Völler. No. 1,193,638; Aug. 8; Gaz. vol. 229; p. 328.
Gun support, French-. H. J. McNeal. No. 1,195,055; Aug. 15; Gaz. vol. 229; p. 868.
Gun with adjustable cranked axletree. K. Klette. No. 1,194,031; Aug. 8; Gaz. vol. 229; p. 467.
Hair-drying device. G. L. Scheel. No. 1,193,194; Aug. 1; Gaz. vol. 229; p. 131.
Hair-pin. M. Kalinowska. No. 1,194,844; Aug. 15; Gaz. vol. 229; p. 794.
Hair-steaming apparatus. P. E. Herrmann. No. 1,194,841; Aug. 15; Gaz. vol. 229; p. 792.
Hair-waving device. G. L. Scheel. No. 1,195,929; Aug. 22; Gaz. vol. 229; p. 1216.
Hammer, Drop-. J. H. Montstream. No. 1,194,653; Aug. 15; Gaz. vol. 229; p. 726.
Hams and other meats, Pickling and curing. A. N. Benn. No. 1,195,176; Aug. 22; Gaz. vol. 229; p. 945.
Hand, Artificial. C. Aunger. No. 1,193,969; Aug. 8; Gaz. vol. 229; p. 446.
Hand-hole closure. A. H. Schaum. No. 1,194,080; Aug. 8; Gaz. vol. 229; p. 483.
Handle: *See*—
Air-brake handle.
Broom-handle.
Tool-handle.
Valve-handle.
Handle attachment. C. Hauf, Jr. No. 1,196,543; Aug. 29; Gaz. vol. 229; p. 1463.
Handle-fastening. A. L. Adams. No. 1,193,959; Aug. 8; Gaz. vol. 229; p. 443.
Handle for canes, umbrellas, and other articles. S. E. Holdzkom. No. 1,196,545; Aug. 29; Gaz. vol. 229; p. 1463.
Handle-guard. O. H. Smith. No. 1,196,602; Aug. 29; Gaz. vol. 229; p. 1483.
Handle-securing device. H. W. Harvey. No. 1,196,683; Aug. 29; Gaz. vol. 229; p. 1510.
Hanger: *See*—
Clothes-line hanger.
Coat-hanger.
Curtain-hanger.
Door-hanger.
Garment-hanger.
Sash-hanger.
Screen or sash hanger.
Shaft-hanger.
Skirt and coat hanger.
Wire-hanger.
Hanger or rack. F. White. No. 1,192,965; Aug. 1; Gaz. vol. 229; p. 46.
Harness-bracket, Adjustable. J. J. Dolechek. No. 1,195,448; Aug. 22; Gaz. vol. 229; p. 1044.
Harvester, Bean-. J. P. Thurber. No. 1,195,416; Aug. 22; Gaz. vol. 229; p. 1033.
Harvester, Motor-driven corn-. W. M. Platt. No. 1,194,660; Aug. 15; Gaz. vol. 229; p. 729.
Harvester, Peanut-. J. W. Winters. No. 1,193,746; Aug. 8; Gaz. vol. 229; p. 368.
Harvester-supporting attachment for a tractor. J. Burchell. No. 1,196,480; Aug. 29; Gaz. vol. 229; p. 1424.
Harvester, Traveling. B. Holt. No. 1,194,739; Aug. 15; Gaz. vol. 229; p. 757.
Harvesting machine, Beet-. H. S. Kincaid. No. 1,194,189; Aug. 8; Gaz. vol. 229; p. 521.
Harvesting potatoes and like root crops, Machine for. H. J. Daniels. No. 1,195,563; Aug. 22; Gaz. vol. 229; p. 1085.
Hasp. G. A. Nedrow. No. 1,195,493; Aug. 22; Gaz. vol. 229; p. 1058.

Hat. J. G. Bell. No. 1,194,935; Aug. 15; Gaz. vol. 229; p. 825.
Hat-fastener. L. Tyokan. No. 1,195,751; Aug. 22; Gaz. vol. 229; p. 1153.
Hat-pin. L. B. Peters. No. 1,195,150; Aug. 15; Gaz. vol. 229; p. 900.
Hat-pin guard. A. Breidenbach. No. 1,193,111; Aug. 1; Gaz. vol. 229; p. 100.
Hat-pin-point-protecting device. J. T. Kemps. No. 1,193,556; Aug. 8; Gaz. vol. 229; p. 296.
Hat-press. L. Galitzki, Jr. No. 1,196,100; Aug. 29; Gaz. vol. 229; p. 1310.
Hatband-fastener. E. Cerf. No. 1,194,712; Aug. 15; Gaz. vol. 229; p. 747.
Hatch. R. T. Anderson. No. 1,195,763; Aug. 22; Gaz. vol. 229; p. 1158.
Hauling device. G. Flitz. No. 1,196,093; Aug. 29; Gaz. vol. 229; p. 1308.
Hay-carrier. J. E. and F. Kordick. No. 1,196,248; Aug. 29; Gaz. vol. 229; p. 1362.
Hay-carrier attachment. J. E. and F. Kordick. No. 1,196,247; Aug. 29; Gaz. vol. 229; p. 1362.
Hay curing and drying rack. A. Armstrong. No. 1,194,927; Aug. 15; Gaz. vol. 229; p. 822.
Hay-loading machine. C. Hill. No. 1,194,179; Aug. 8; Gaz. vol. 229; p. 518.
Hay-press. T. E. Turner. No. 1,192,959; Aug. 1; Gaz. vol. 229; p. 44.
Hay-unloader. J. J. Shenk. No. 1,196,596; Aug. 29; Gaz. vol. 229; p. 1480.
Head-rest. B. F. Walker. No. 1,194,446; Aug. 15; Gaz. vol. 229; p. 657.
Head-rest. C. E. Yohe. No. 1,196,413; Aug. 29; Gaz. vol. 229; p. 1419.
Header. R. L. Wilcox. No. 1,194,452; Aug. 15; Gaz. vol. 229; p. 659.
Header-reel. R. A. and J. H. Thompson. No. 1,196,615; Aug. 29; Gaz. vol. 229; p. 1487.
Headlight. P. S. Bailey. No. 1,196,506; Aug. 29; Gaz. vol. 229; p. 1450.
Headlight. F. Buchanan. No. 1,194,946; Aug. 15; Gaz. vol. 229; p. 830.
Headlight. W. H. Kelso. No. 1,195,361; Aug. 22; Gaz. vol. 229; p. 1014.
Headlight. H. E. Kent. No. 1,193,396; Aug. 1; Gaz. vol. 229; p. 203.
Headlight and mounting therefor, Automobile-. J. C. Moore. No. 1,195,383; Aug. 22; Gaz. vol. 229; p. 1021.
Headlight, Dirigible. J. E. Barnett. No. 1,194,123; Aug. 8; Gaz. vol. 229; p. 498.
Headlight, Dirigible. J. F. Ellmauerer. No. 1,194,156; Aug. 8; Gaz. vol. 229; p. 510.
Headlight, Dirigible. F. E. Waddell. No. 1,193,850; Aug. 8; Gaz. vol. 229; p. 404.
Headlight-screen. E. B. Phippen. No. 1,194,225; Aug. 8; Gaz. vol. 229; p. 533.
Headlight, Vehicle-. J. E. Batchelder. No. 1,192,977; Aug. 1; Gaz. vol. 229; p. 50.
Headlights, Refracting cover-glass for automobile-. W. Churchill. No. 1,193,873; Aug. 8; Gaz. vol. 229; p. 413.
Heater: *See*—
Brooder-heater. Knife-heater.
Electric heater. Tubular heater.
Gas-heater. Vehicle-heater.
Induction-heater. Water-heater.
Heater. G. H. Mowe. No. 1,195,840; Aug. 22; Gaz. vol. 229; p. 1186.
Heater or cooker for cotton and other oil seed or material. O. Sheppard, Jr. No. 1,196,597; Aug. 29; Gaz. vol. 229; p. 1481.
Heating. H. L. Doherty. No. 1,194,151; Aug. 8; Gaz. vol. 229; p. 508.
Heating and ventilating system. F. A. Kuntz. No. 1,193,271; Aug. 1; Gaz. vol. 229; p. 158.
Heating device. W. R. Covan. No. 1,194,960; Aug. 15; Gaz. vol. 229; p. 835.
Heating devices, Thermostatic control for electric. J. Templeton and G. E. Harrison. No. 1,196,175; Aug. 29; Gaz. vol. 229; p. 1338.
Heating element, Electric. L. R. McClatchie. No. 1,195,828; Aug. 22; Gaz. vol. 229; p. 1182.
Heating-furnace, Coal-burning. E. C. Walker and A. S. Moses. No. 1,196,726; Aug. 29; Gaz. vol. 229; p. 1526.
Heel. J. F. Standish. No. 1,196,608; Aug. 29; Gaz. vol. 229; p. 1485.
Heel-brace. E. E. A. Martin. No. 1,195,059; Aug. 15; Gaz. vol. 229; p. 870.
Heel-cushion, Inside. J. W. Arrowsmith. No. 1,195,327; Aug. 22; Gaz. vol. 229; p. 1001.
Heel-logs, Producing. W. P. Bosworth. No. 1,193,756; Aug. 8; Gaz. vol. 229; p. 371.
Heel, Resilient. J. Solomon. No. 1,193,198; Aug. 1; Gaz. vol. 229; p. 132.
Heels, Machine for operating on. J. Gouldbourn. No. 1,195,134; Aug. 15; Gaz. vol. 229; p. 895.
Heliograph or the like. J. A. F. Burman and P. W. Lyth. No. 1,196,331; Aug. 29; Gaz. vol. 229; p. 1388.
Hides and skins, Machine for stretching. D. Mercier. No. 1,193,042; Aug. 1; Gaz. vol. 229; p. 75.
Hinge. H. G. Briel. No. 1,196,428; Aug. 29; Gaz. vol. 229; p. 1423.
Hinge. G. Pelot. No. 1,196,580; Aug. 29; Gaz. vol. 229; p. 1475.
Hinge. J. E. Raber. No. 1,195,085; Aug. 15; Gaz. vol. 229; p. 878.
Hinge, Closet-seat. E. C. B. Judd. No. 1,194,391; Aug. 15; Gaz. vol. 229; p. 635.
Hinge, Closet-seat. E. C. B. Judd. No. 1,194,392; Aug. 15; Gaz. vol. 229; p. 635.
Hinge, Closet-seat. M. L. Adler. No. 1,194,393; Aug. 15; Gaz. vol. 229; p. 636.
Hinge, Detachable. W. C. Clifford. No. 1,192,989; Aug. 1; Gaz. vol. 229; p. 54.
Hinge for revolving doors. A. Muehlbein. No. 1,195,842; Aug. 22; Gaz. vol. 229; p. 1187.
Hinge for silo-doors. C. S. Taylor. No. 1,193,204; Aug. 1; Gaz. vol. 229; p. 134.
Hinge, Gate-. O. T. Osmunson. No. 1,194,656; Aug. 15; Gaz. vol. 229; p. 728.
Hinge, Separable spring-. J. Hist. No. 1,194,628; Aug. 15; Gaz. vol. 229; p. 718.
Hinge structure for screen-sections. Y. Kinoshita. No. 1,196,244; Aug. 29; Gaz. vol. 229; p. 1361.
Hitching-post. P. F. Dallinger. No. 1,194,483; Aug. 15; Gaz. vol. 229; p. 670.
Hitching-strap tension device. W. O. Pelham. No. 1,194,417; Aug. 15; Gaz. vol. 229; p. 645.
Hoe. W. R. Clore. No. 1,196,663; Aug. 29; Gaz. vol. 229; p. 1504.
Hog-scraping machine. J. W. Kohlhepp. No. 1,192,907; Aug. 1; Gaz. vol. 229; p. 26.
Hoisting mechanism. F. A. Rundle. No. 1,195,270; Aug. 22; Gaz. vol. 229; p. 978.
Holding-clip. J. J. Crume. No. 1,196,087; Aug. 29; Gaz. vol. 229; p. 1306.
Honeycomb-section. P. Hunten. No. 1,195,990; Aug. 29; Gaz. vol. 229; p. 1271.
Hook: *See*—
Safety-hook. Whiffletree-hook.
Hook. H. L. Ferris. No. 1,194,729; Aug. 15; Gaz. vol. 229; p. 754.
Hoop: *See*—
Cheese-hoop.
Horn, Diaphragm-. M. R. Hutchison. No. 1,192,899; Aug. 1; Gaz. vol. 229; p. 24.
Horn, Mechanical. G. A. Proctor. No. 1,195,725; Aug. 22; Gaz. vol. 229; p. 1143.
Horse-detacher. S. J. Prater. No. 1,194,661; Aug. 15; Gaz. vol. 229; p. 729.
Horseshoe. J. Bosco. No. 1,194,941; Aug. 15; Gaz. vol. 229; p. 827.
Horseshoe. F. B. and F. Groff. No. 1,195,210; Aug. 22; Gaz. vol. 229; p. 957.
Horseshoe. E. Krogsrud. No. 1,195,366; Aug. 22; Gaz. vol. 229; p. 1016.
Horseshoe. C. Trilck. No. 1,193,948; Aug. 8; Gaz. vol. 229; p. 439.
Horseshoe attachment. S. Noro. No. 1,194,773; Aug. 15; Gaz. vol. 229; p. 769.
Horseshoe attachment. S. Noro. No. 1,194,774; Aug. 15; Gaz. vol. 229; p. 769.
Horseshoe-calk sharpener. C. E. Kelly. No. 1,194,748; Aug. 15; Gaz. vol. 229; p. 760.
Hose and pipe coupling. F. Lewis. No. 1,198,162; Aug. 1; Gaz. vol. 229; p. 119.
Hose connection. H. V. Styers. No. 1,194,793; Aug. 15; Gaz. vol. 229; p. 777.
Hose-coupling. D. C. Bailey. No. 1,195,433; Aug. 22; Gaz. vol. 229; p. 1039.
Hose-coupling. F. Hachmann. No. 1,195,580; Aug. 22; Gaz. vol. 229; p. 1091.
Hose-coupling. F. Hachmann. No. 1,195,581; Aug. 22; Gaz. vol. 229; p. 1091.
Hose-coupling. H. Handoll. No. 1,196,680; Aug. 29; Gaz. vol. 229; p. 1509.
Hose-coupling. C. J. Wells. No. 1,193,446; Aug. 1; Gaz. vol. 229; p. 219.
Hose coupling, Gas-. J. J. Carey. No. 1,192,860; Aug. 1; Gaz. vol. 229; p. 11.
Hose-reel. N. F. D. Beard. No. 1,195,644; Aug. 22; Gaz. vol. 229; p. 1114.
Hose-supporters, Protective sheath for. F. J. McDermott. No. 1,194,523; Aug. 15; Gaz. vol. 229; p. 683.
Hot-air furnace. S. Daniels. No. 1,193,127; Aug. 1; Gaz. vol. 229; p. 107.
House: *See*—
Summer-house.
Household and devotional chair, Convertible. M. E. Buckley. No. 1,193,868; Aug. 8; Gaz. vol. 229; p. 411.
Household use, Article for. M. P. King. No. 1,194,030; Aug. 8; Gaz. vol. 229; p. 466.
Hub and spindle, Vehicle-wheel. J. P. Pedersen. No. 1,196,579; Aug. 29; Gaz. vol. 229; p. 1475.
Hub-forming machine, Wheel-. C. B. Chandler. No. 1,193,664; Aug. 8; Gaz. vol. 229; p. 337.
Huller-gin. S. D. Murray. No. 1,193,409; Aug. 1; Gaz. vol. 229; p. 207.
Humidifying means. F. B. Comins. No. 1,196,664; Aug. 29; Gaz. vol. 229; p. 1504.
Hydraulic concentrator or classifier. F. F. Wagner. No. 1,193,953; Aug. 8; Gaz. vol. 229; p. 440.
Hydraulic power device, Portable reciprocal. F. E. Kenney. No. 1,195,141; Aug. 15; Gaz. vol. 229; p. 897.
Hydraulic-power plants, Regulating device for. E. Hagenbucher. No. 1,193,381; Aug. 1; Gaz. vol. 229; p. 198.
Hydraulic press. H. M. Austin, Jr. No. 1,196,504; Aug. 29; Gaz. vol. 229; p. 1449.
Hydraulic press. C. F. Street. No. 1,196,491; Aug. 29; Gaz. vol 229; p. 1445.

Hydrocarbon-burner. F. F. Parrish. No. 1,194,779; Aug. 15; Gaz. vol. 229; p. 771.
Hydrocarbons containing the conjugated bond, Purification of unsaturated. F. E. Matthews and E. H. Strange. No. 1,196,259; Aug. 29; Gaz. vol. 229; p. 1366.
Hydrocarbons, Cracking. W. A. Hall. No. 1,194,289; Aug. 8; Gaz. vol. 229; p. 555.
Ice-box. F. H. Bauer. No. 1,193,847; Aug. 1; Gaz. vol. 229; p. 186.
Ice-cream disher. E. Walker. No. 1,194,685; Aug. 15; Gaz. vol. 229; p. 738.
Ice-creeper. J. Kirkwood. No. 1,194,191; Aug. 8; Gaz. vol. 229; p. 522.
Ice-creeper. C. H. Stephan. No. 1,195,866; Aug. 22; Gaz. vol. 229; p. 1195.
Ice-making machine. W. H. Llewellyn and A. G. Olney. No. 1,193,569; Aug. 8; Gaz. vol. 229; p. 301.
Ice manufacture. F. Ophuis. No. 1,195,495; Aug. 22; Gaz. vol. 229; p. 1059.
Ice, Manufacturing. M. Schilde. No. 1,194,430; Aug. 15; Gaz. vol. 229; p. 649.
Ice plants, Water-agitator for. J. B. Williams. No. 1,194,108; Aug. 8; Gaz. vol. 229; p. 492.
Ignition device. J. J. Bottlander. No. 1,194,703; Aug. 15; Gaz. vol. 229; p. 745.
Ignition-switch. W. Kaisling. No. 1,193,698; Aug. 8; Gaz. vol. 229; p. 350.
Ignition system. A. L. Moeller. No. 1,195,063; Aug. 15; Gaz. vol. 229; p. 871.
Illuminating device. D. T. Finkbeiner. No. 1,194,986; Aug. 15; Gaz. vol. 229; p. 844.
Impalement-trap. C. H. Casey. No. 1,194,954; Aug. 15; Gaz. vol. 229; p. 833.
Impression composition. A. E. Healy. No. 1,194,176; Aug. 8; Gaz. vol. 229; p. 517.
Incinerator. H. J. Hoover. No. 1,194,385; Aug. 15; Gaz. vol. 229; p. 633.
Index-device card, Loose-leaf-. G. H. Huising. No. 1,194,387; Aug. 15; Gaz. vol. 229; p. 634.
Index for collection systems, Follow-up. W. O. Smith. No. 1,196,603; Aug. 29; Gaz. vol. 229; p. 1483.
Index-tab. G. J. Aigner. No. 1,193,960; Aug. 8; Gaz. vol. 229; p. 443.
Indicating apparatus. C. Gustafson. No. 1,195,355; Aug. 22; Gaz. vol. 229; p. 1012.
Indicating device. J. W. McCulloch. No. 1,194,522; Aug. 15; Gaz. vol. 229; p. 683.
Indicating device applicable to vehicles. R. H. Hutchinson. No. 1,196,467; Aug. 29; Gaz. vol. 229; p. 1433.
Indicator: *See*—
Automobile direction-indicator. Speed and running indicator.
Camera exposure-indicator. Station-indicator.
Direction-indicator. Street-indicator.
Poison-indicator.
Indicator. C. A. Rohm. No. 1,195,736; Aug. 22; Gaz. vol. 229; p. 1147.
Induction-heater. W. D. Ludwick. No. 1,193,404; Aug. 1; Gaz. vol. 229; p. 206.
Inductive interference. Means for minimizing. C. F. Scott. No. 1,196,299; Aug. 29; Gaz. vol. 229; p. 1377.
Inductive interference, Means for minimizing. C. F. Scott. No. 1,196,300; Aug. 29; Gaz. vol. 229; p. 1378.
Inductive interference, Means for minimizing. C. F. Scott. No. 1,196,301; Aug. 29; Gaz. vol. 229; p. 1378.
Inductive interference, Means for minimizing. C. F. Scott. No. 1,196,302; Aug. 29; Gaz. vol. 229; p. 1379.
Inductive interference, Means for minimizing. C. F. Scott. No. 1,196,303; Aug. 29; Gaz. vol. 229; p. 1379.
Ingot-delivery car. A. Soderstrom. No. 1,195,522; Aug. 22; Gaz. vol. 229; p. 1069.
Ingot-mold. C. W. Lummis. No. 1,192,919; Aug. 1; Gaz. vol. 229; p. 31.
Inhaler. J. E. Engstad. No. 1,193,002; Aug. 1; Gaz. vol. 229; p. 60.
Injector. J., R. D., and J. C. Metcalfe. No. 1,194,207; Aug. 8; Gaz. vol. 229; p. 527.
Ink, Acid and water proof. A. Schrader. No. 1,195,612; Aug. 22; Gaz. vol. 229; p. 1102.
Ink-fountain. W. R. Crandall. No. 1,194,329; Aug. 8; Gaz. vol. 229; p. 571.
Ink, Transfer-. K. Kaelble. No. 1,194,743; Aug. 15; Gaz. vol. 229; p. 759.
Ink-well. A. R. Zimmerman. No. 1,196,630; Aug. 29; Gaz. vol. 229; p. 1492.
Inkstand with a constant level of ink. J. Bengué. No. 1,196,645; Aug. 29; Gaz. vol. 229; p. 1498.
Insole. P. O. Poulson. No. 1,193,608; Aug. 8; Gaz. vol. 229; p. 316.
Insole for boots and shoes, Cushion-. P. F. Douglas. No. 1,194,152; Aug. 8; Gaz. vol. 229; p. 508.
Insoles, Machine for operating on. J. B. Hadaway. No. 1,193,014; Aug. 1; Gaz. vol. 229; p. 64.
Instep-arch support. W. M. Scholl. No. 1,194,672; Aug. 15; Gaz. vol. 229; p. 733.
Insulating compound, Chlorinated. J. W. Aylsworth. No. 1,196,505; Aug. 29; Gaz. vol. 229; p. 1450.
Insulation, Detector for broken-down. G. B. Gray. No. 1,195,579; Aug. 22; Gaz. vol. 229; p. 1091.
Insulator. H. H. Cochrane. No. 1,194,957; Aug. 15; Gaz. vol. 229; p. 834.
Insulator. H. R. Kells. No. 1,194,747; Aug. 15; Gaz. vol. 229; p. 760.
Insulator-pin. C. L. Peirce, Jr. No. 1,196,272; Aug. 29; Gaz. vol. 229; p. 1370.
Insulator-support. C. L. Peirce, Jr. No. 1,195,263; Aug. 22; Gaz. vol. 229; p. 976.
Insulator-supporting fixture. C. L. Peirce, Jr. No. 1,193,602; Aug. 8; Gaz. vol. 229; p. 313.
Interlock. G. B. Reisbach. No. 1,193,718; Aug. 8; Gaz. vol. 229; p. 357.
Internal-combustion engine. C. Balough. No. 1,195,550; Aug. 22; Gaz. vol. 229; p. 1079.
Internal-combustion engine. E. H. Belden. No. 1,196,072; Aug. 29; Gaz. vol. 229; p. 1301.
Internal-combustion engine. J. V. Caron. No. 1,195,441; Aug. 22; Gaz. vol. 229; p. 1042.
Internal-combustion engine. C. Copeland. No. 1,192,991; Aug. 1; Gaz. vol. 229; p. 55.
Internal-combustion engine. G. K. Davol. No. 1,194,722; Aug. 15; Gaz. vol. 229; p. 751.
Internal-combustion engine. T. J. Fay. No. 1,194,830; Aug. 15; Gaz. vol. 229; p. 789.
Internal-combustion engine. W. F. Koken. No. 1,193,903; Aug. 8; Gaz. vol. 229; p. 423.
Internal-combustion engine. V. E. Nelson. No. 1,195,070; Aug. 15; Gaz. vol. 229; p. 873.
Internal-combustion engine. G. F. Rayner. No. 1,193,610; Aug. 8; Gaz. vol. 229; p. 317.
Internal-combustion engine. A. L. Riker. No. 1,194,068; Aug. 8; Gaz. vol. 229; p. 480.
Internal-combustion engine. M. S. Rosenfeld. No. 1,193,617; Aug. 8; Gaz. vol. 229; p. 320.
Internal-combustion engine. E. H. Ryon. No. 1,193,620; Aug. 8; Gaz. vol. 229; p. 321.
Internal-combustion engine. C. A. Sawtelle. No. 1,196,158; Aug. 29; Gaz. vol. 229; p. 1331.
Internal-combustion engine. W. H. Shimpf. No. 1,196,598; Aug. 29; Gaz. vol. 229; p. 1481.
Internal-combustion engine. E. A. Sperry. No. 1,194,889; Aug. 15; Gaz. vol. 229; p. 810.
Internal-combustion engine. H. C. Stoll and G. W. Gay. No. 1,193,629; Aug. 8; Gaz. vol. 229; p. 324.
Invalid's support. W. C. Dawes. No. 1,195,917; Aug. 22; Gaz. vol. 229; p. 1212.
Iron: *See*—
Sad-iron. Soldering-iron.
Iron from tin ore, Removing. G. von Rauschenplat. No. 1,196,049; Aug. 29; Gaz. vol. 229; p. 1293.
Iron of high grade from ordinary cast-iron, Producing. L. A. Leonard and J. P. Larrimer. No. 1,194,756; Aug. 15; Gaz. vol. 229; p. 763.
Iron, steel, and the like from waste enameled articles, Recovering. A. de Back. No. 1,196,342; Aug. 29; Gaz. vol. 229; p. 1393.
Ironing-board cover. E. Melton. No. 1,196,262; Aug. 29; Gaz. vol. 229; p. 1367.
Ironing-board, Folding. G. M. Marsh. No. 1,196,130; Aug. 29; Gaz. vol. 229; p. 1320.
Ironing-machine. G. Binder. No. 1,195,553; Aug. 22; Gaz. vol. 229; p. 1081.
Ironing-machine. F. C. Wendell. No. 1,196,192; Aug. 29; Gaz. vol. 229; p. 1344.
Irrigating-ditch. D. H. Burtis. No. 1,194,951; Aug. 15; Gaz. vol. 229; p. 832.
Irrigator, Tree-. E. A. Kanst. No. 1,194,027; Aug. 8; Gaz. vol. 229; p. 465.
Jack: *See*—
Automobile-jack. Lifting-jack.
Bedstead-jack. Vehicle-jack.
Detachable jack.
Jar: *See*—
Battery-jar.
Jar-capping machine. E. D. Schmitt. No. 1,195,611; Aug. 22; Gaz. vol. 229; p. 1102.
Jar-closure. G. E. Mansfield, Jr. No. 1,195,057; Aug. 15; Gaz. vol. 229; p. 869.
Jar-holder. W. R. Bearce and R. J. Jones. No. 1,194,590; Aug. 15; Gaz. vol. 229; p. 706.
Jar-opener. E. W. Wilson. No. 1,196,060; Aug. 29; Gaz. vol. 229; p. 1297.
Jar opening and closing device, Fruit-. A. R. Gurnett. No. 1,196,232; Aug. 29; Gaz. vol. 229; p. 1357.
Jewelry. T. H. Fishel. No. 1,194,611; Aug. 15; Gaz. vol. 229; p. 713.
Jewelry. H. H. Lott. No. 1,192,918; Aug. 1; Gaz. vol. 229; p. 31.
Jewelry component. W. F. Mowry. No. 1,195,841; Aug. 22; Gaz. vol. 229; p. 1187.
Joint: *See*—
Bayonet-joint. Roof-joint.
Column-joint. Tank-joint.
Metal-bar joint. Universal joint.
Rail-joint.
Journal-bearings, Heat-indicator for. A. H. Kling and C. E. Foerch. No. 1,196,701; Aug. 29; Gaz. vol. 229; p. 1516.
Journal-box. R. W. Burnett. No. 1,194,475; Aug. 15; Gaz. vol. 229; p. 667.
Journal-boxes, Babbitting-machine for. F. L. Peterson. No. 1,196,143; Aug. 29; Gaz. vol. 229; p. 1326.
Journal-lubricator. G. F. Godley. No. 1,193,136; Aug. 1; Gaz. vol. 229; p. 111.
Jug top or cover. C. S. Baron. No. 1,195,434; Aug. 22; Gaz. vol. 229; p. 1039.
Jumping-standards, Attachment for. M. R. and G. E. Balenti. No. 1,193,972; Aug. 8; Gaz. vol. 229; p. 447.
Key: *See*—
Reading-key. Telephone-key.

Key-holder. D. H. Smith. No. 1,193,439; Aug. 1; Gaz. vol. 229; p. 217.
Key-pouch. J. S. Warner. No. 1,194,796; Aug. 15; Gaz. vol. 229; p. 778.
Key-ring. S. O. Bigney. No. 1,194,809; Aug. 15; Gaz. vol. 229; p. 783.
Keyboard-machine. J. S. Bancroft and M. C. Indahl. No. 1,193,343; Aug. 1; Gaz. vol. 229; p. 184.
Keyless lock. A. J. Drapalik. No. 1,196,218; Aug. 29; Gaz. vol. 229; p. 1353.
Kiln: *See*—
Annealing-kiln. Dry-kiln.
Continuous kiln. Drying-kiln.
Kiln. J. N. Silva. No. 1,192,946; Aug. 1; Gaz. vol. 229; p. 40.
Kinetoscopes, Film-winding device for. C. C. and A. W. Fay. No. 1,194,982; Aug. 15; Gaz. vol. 229; p. 842.
Knife and eraser, Combined. G. A. Santo. No. 1,193,827; Aug. 8; Gaz. vol. 229; p. 395.
Knife-heater, Electric. E. N. Chandler. No. 1,193,121; Aug. 1; Gaz. vol. 229; p. 105.
Knife or tool. B. Jawolsch. No. 1,194,503; Aug. 15; Gaz.vol. 229; p. 677.
Knitted webs, Uniting. L. N. D. Williams. No. 1,194,802; Aug. 15; Gaz. vol. 229; p. 780.
Knitting-machine. A. E. Stewart. No. 1,194,677; Aug. 15; Gaz. vol. 229; p. 735.
Knitting-machine needle. R. H. Welthall. No. 1,195,935; Aug. 22; Gaz. vol. 229; p. 1218.
Knitting-machine needle-bed. E. Lippitt. No. 1,193,568; Aug. 8; Gaz. vol. 229; p. 300.
Knitting-machine pattern mechanism. F. B. Wildman and G. L. Ballard. No. 1,194,584; Aug. 15; Gaz. vol. 229; p. 704.
Knitting machines, Fabric-equalizer for circular-. F. B. Wildman. No. 1,196,195; Aug. 29; Gaz. vol. 229; p. 1345.
Knitting-machines, Speed-changing and stopping mechanism for. J. J. Higginbottom. No. 1,193,263; Aug. 1; Gaz. vol. 229; p. 156.
Knitting-machines, Striping attachment for. R. Fisher. No. 1,194,831; Aug. 15; Gaz. vol. 229; p. 789.
Knitting machinery, Machine for loading transfers for. E. Maslich. No. 1,195,833; Aug. 22; Gaz. vol. 229; p. 1184.
Knitting on transferred fabric sections, Device for. R. W. Scott. No. 1,194,674; Aug. 15; Gaz. vol. 229; p. 734.
Knotter. M. Ewing. No. 1,192,878; Aug. 1; Gaz. vol. 229; p. 17.
Label. W. P. MacDonald. No. 1,195,377; Aug. 22; Gaz. vol. 229; p. 1019.
Label-holder. C. A. Wright. No. 1,195,759; Aug. 22; Gaz. vol. 229; p. 1157.
Labeling-machine. L. Cobb. No. 1,193,517; Aug. 8; Gaz. vol. 229; p. 281.
Labeling-machine. L. C. Palmer. No. 1,193,292; Aug. 1; Gaz. vol. 229; p. 166.
Lacer. M. F. Brogan. No. 1,195,131; Aug. 15; Gaz. vol. 229; p. 893.
Ladder and ironing-board, Combination. J. G. Garland. No. 1,195,804; Aug. 22; Gaz. vol. 229; p. 1173.
Ladder and window-scaffold, Combined. T. S. Chamberlain. No. 1,193,872; Aug. 8; Gaz. vol. 229; p. 412.
Ladder-assembling bench. J. V. Richardson. No. 1,193,611; Aug. 8; Gaz. vol. 229; p. 317.
Ladder attachment. H. Alpen. No. 1,193,964; Aug. 8; Gaz. vol. 229; p. 444.
Ladders, Making. T. D. Dallmeyer. No. 1,196,667; Aug. 29; Gaz. vol. 229; p. 1505.
Lamp. J. M. Austen. No. 1,194,930; Aug. 15; Gaz. vol. 229; p. 824.
Lamp, Acetylene-. J. M. Brock. No. 1,193,985; Aug. 8; Gaz. vol. 229; p. 451.
Lamp, Acetylene-. J. C. Davis. No. 1,194,149; Aug. 8; Gaz. vol. 229; p. 507.
Lamp, Automobile-. A. G. Smith. No. 1,193,438; Aug. 1; Gaz. vol. 229; p. 217.
Lamp, Combination automobile-. J. R. Pagin. No. 1,194,658; Aug. 15; Gaz. vol. 229; p. 728.
Lamp-dimmer. W. J. Starkweather and F. C. Miller. No. 1,193,942; Aug. 8; Gaz. vol. 229; p. 436.
Lamp, Dirigible. W. A. Shive. No. 1,194,247; Aug. 8; Gaz. vol. 229; p. 540.
Lamp, Electric. W. A. Harvey. No. 1,193,894; Aug. 8; Gaz. vol. 229; p. 420.
Lamp-fixture. H. D. McFaddin. No. 1,195,144; Aug. 15; Gaz. vol. 229; p. 898.
Lamp fixture, Electric-incandescent-. R. A. Mahan. No. 1,193,579; Aug. 8; Gaz. vol. 229; p. 304.
Lamp for street-cars and trains, Signal-. C. A. Winebrenner. No. 1,193,102; Aug. 1; Gaz. vol. 229; p. 97.
Lamp-guard. O. Johnson. No. 1,195,230; Aug. 22; Gaz. vol. 229; p. 964.
Lamp, Incandescent. H. Kreusler, H. Gerdien, and M. von Pirani. No. 1,194,643; Aug. 15; Gaz. vol. 229; p. 723.
Lamp, Incandescent oil-. F. A. Baynes. No. 1,195,435; Aug. 22; Gaz. vol. 229; p. 1039.
Lamp lighting and extinguishing apparatus, Gas-. G. Keith. No. 1,193,700; Aug. 8; Gaz. vol. 229; p. 350.
Lamp-lighting means, Gas-. C. F. McDonough. No. 1,193,166; Aug. 1; Gaz. vol. 229; p. 120.
Lamp of the incandescent type, Central-draft or Argand. T. H. French. No. 1,193,134; Aug. 1; Gaz. vol. 229; p. 110.
Lamp, Portable electric. E. W. Lamb. No. 1,195,032; Aug. 15; Gaz. vol. 229; p. 861.
Lamp, Portable electric. A. C. Recker. No. 1,195,728; Aug. 22; Gaz. vol. 229; p. 1144.
Lamp, Portable flash-. H. E. Leininger. No. 1,193,031; Aug. 1; Gaz. vol. 229; p. 71.
Lamp, Projecting arc-. A. D. Standeford. No. 1,193,841; Aug. 8; Gaz. vol. 229; p. 401.
Lamp-shade. R. L. Clark. No. 1,196,523; Aug. 29; Gaz. vol. 229; p. 1455.
Lamp-shade. H. K. Ritter. No. 1,193,191; Aug. 1; Gaz. vol. 229; p. 129.
Lamp-sockets, &c., Attaching device for. C. J. Klein. No. 1,193,025; Aug. 1; Gaz. vol. 229; p. 68.
Lamp-support. S. Newman and H. R. Bothwell. No. 1,194,772; Aug. 15; Gaz. vol. 229; p. 768.
Lamp support and reflector. O. R. Skelton. No. 1,193,724; Aug. 8; Gaz. vol. 229; p. 359.
Lamp-supporting-trolley structure. C. L. Peirce, Jr. No. 1,195,262; Aug. 22; Gaz. vol. 229; p. 976.
Lamps, Implement for handling incandescent. R. T. Harvey. No. 1,193,685; Aug. 8; Gaz. vol. 229; p. 344.
Land-clearing machine. R. H. Collar. No. 1,194,958; Aug. 15; Gaz. vol. 229; p. 834.
Land-roller and clod-crusher. L. R. Lee. No. 1,196,464; Aug. 29; Gaz. vol. 229; p. 1436.
Lantern. G. A. Marsh. No. 1,194,307; Aug. 8; Gaz. vol. 229; p. 562.
Lantern. P. J. Rooney. No. 1,196,589; Aug. 29; Gaz. vol. 229; p. 1478.
Lantern attachment. L. D. La Reice. No. 1,195,037; Aug. 15; Gaz. vol. 229; p. 862.
Lantern-ball holder. A. W. Jacobs. No. 1,193,151; Aug. 1; Gaz. vol. 229; p. 115.
Lantern, Revolving. J. L. Dawes. No. 1,196,341; Aug. 29; Gaz. vol. 229; p. 1392.
Lantern, Signal-. E. A. Simpson. No. 1,195,407; Aug. 22; Gaz. vol. 229; p. 1030.
Lantern-slides, Indicating-label for. R. F. Davis. No. 1,194,966; Aug. 15; Gaz. vol. 229; p. 837.
Last. T. J. Aldridge. No. 1,193,337; Aug. 1; Gaz. vol. 229; p. 182.
Last-blocks, Machine for rough-turning. W. W. Stoddard. No. 1,193,944; Aug. 8; Gaz. vol. 229; p. 437.
Last, Hinged. O. A. Peterson. No. 1,195,266; Aug. 22; Gaz. vol. 229; p. 977.
Lasting-machine. T. H. Seely. No. 1,194,431; Aug. 15; Gaz. vol. 229; p. 650.
Lasting-machine. E. E. Winkley. No. 1,195,124; Aug. 15; Gaz. vol. 229; p. 891.
Latch. Y. H. Van Wetzinga and J. Donker. No. 1,195,881; Aug. 22; Gaz. vol. 229; p. 1200.
Latch. J. Zbytniewski, B. Trzcinski, and F. J. Hejna. No. 1,196,064; Aug. 29; Gaz. vol. 229; p. 1298.
Latch, Automatic gate-. A. J. Schultze. No. 1,193,431; Aug. 1; Gaz. vol. 229; p. 215.
Latch-keeper. C. H. Mulroney. No. 1,193,812; Aug. 8; Gaz. vol. 229; p. 391.
Latch, Night-. W. C. Ferris. No. 1,196,673; Aug. 29; Gaz. vol. 229; p. 1507.
Latch, Silent door-. R. Joy. No. 1,194,636; Aug. 15; Gaz. vol. 229; p. 720.
Latch, Silent door-. R. Joy. No. 1,194,637; Aug. 15; Gaz. vol. 229; p. 721.
Latch, Swivel gate-. C. C. Ross. No. 1,194,786; Aug. 15; Gaz. vol. 229; p. 774.
Lath-board. S. M. Ford. No. 1,194,003; Aug. 8; Gaz. vol. 229; p. 457.
Lathe. G. G. Porter and F. E. Cable. No. 1,196,024; Aug. 29; Gaz. vol. 229; p. 1284.
Lathe. W. L. Schellenbach. No. 1,196,593; Aug. 29; Gaz. vol. 229; p. 1479.
Lathe attachment. H. P. Townsend. No. 1,195,293; Aug. 22; Gaz. vol. 229; p. 988.
Lathe-dog. W. T. Ingham. No. 1,195,818; Aug. 22; Gaz. vol. 229; p. 1178.
Lathe turret attachment. F. P. Miller. No. 1,196,575; Aug. 29; Gaz. vol. 229; p. 1473.
Lathes and the like, Speed control for turret-. H. B. L. Gorman. No. 1,193,258; Aug. 1; Gaz. vol. 229; p. 154.
Laundry appliance. J. Sheridan. No. 1,196,305; Aug. 29; Gaz. vol. 229; p. 1380.
Laundry appliance, Domestic. C. Kartowicz. No. 1,194,745; Aug. 15; Gaz. vol. 229; p. 760.
Laundry-marking machine. T. J. Hume. No. 1,196,114; Aug. 29; Gaz. vol. 229; p. 1315.
Lavatory-fixture stopper. G. A. Lucke. No. 1,195,827; Aug. 22; Gaz. vol. 229; p. 1182.
Lawn-sprinkler. H. Gibbs. No. 1,193,010; Aug. 1; Gaz. vol. 229; p. 63.
Lead oxid, Carbonating. F. H. Sharpe. No. 1,196,595; Aug. 29; Gaz. vol. 229; p. 1480.
Leaf-turning device. O. W. Olson. No. 1,196,476; Aug. 29; Gaz. vol. 229; p. 1439.
Leather and the like creasing machine. E. B. Stimpson. No. 1,194,791; Aug. 15; Gaz. vol. 229; p. 776.
Leather-brushing machine. C. Ruhe. No. 1,195,859; Aug. 22; Gaz. vol. 229; p. 1192.
Leather-edge-finishing machine. H. E. Enslin. No. 1,194,370; Aug. 15; Gaz. vol. 229; p. 627.

Leather-edge-finishing machine. E. S. Halsey and G. G. Perkins. No. 1,195,674; Aug. 22; Gaz. vol. 229; p. 1125.
Leather-sponging machine. C. Ruhe. No. 1,193,927; Aug. 8; Gaz. vol. 229; p. 432.
Leer. J. Rau. No. 1,195,087; Aug. 15; Gaz. vol. 229; p. 879.
Legging. M. Rosenwasser. No. 1,195,092; Aug. 15; Gaz. vol. 229; p. 880.
Lemon-squeezer and pitcher-cover, Combined. M. E. Holden. No. 1,194,737; Aug. 15; Gaz. vol. 229; p. 757.
Lens-drill. A. E. Maynard. No. 1,196,572; Aug. 29; Gaz. vol. 229; p. 1472.
Lens-drilling machine. L. W. Bugbee. No. 1,196,656; Aug. 29; Gaz. vol. 229; p. 1502.
Lens-mounting. G. A. Bader. No. 1,193,341; Aug. 1; Gaz. vol. 229; p. 183.
Lens-mounting. F. A. Stevens. No. 1,195,622; Aug. 22; Gaz. vol. 229; p. 1106.
Lens-slitting device. A. L. Sanderson. No. 1,196,294; Aug. 29; Gaz. vol. 229; p. 1376.
Lenses, Flexibly-connected. H. J. Brennecke. No. 1,193,232; Aug. 1; Gaz. vol. 229; p. 144.
Letter-box. E. B. Hillman. No. 1,195,016; Aug. 15; Gaz. vol. 229; p. 855.
Level, Illuminated. R. Bennett and A. E. Blanchard. No. 1,193,976; Aug. 8; Gaz. vol. 229; p. 448.
Levels, Adapting device for carpenters'. D. H. McClelland. No. 1,196,564; Aug. 29; Gaz. vol. 229; p. 1470.
Leveling instrument. I. Husby. No. 1,196,240; Aug. 29; Gaz. vol. 229; p. 1359.
Lever-slot-filling device, Emergency-. S. F. Preston. No. 1,193,487; Aug. 1; Gaz. vol. 229; p. 234.
Library and drawing table, Combination. P. D. Pauls. No. 1,193,417; Aug. 1; Gaz. vol. 229; p. 210.
Library-stack construction. W. B. Look. No. 1,195,374; Aug. 22; Gaz. vol. 229; p. 1018.
Library-stacks, Bracket and shelf for. P. G. Turner. No. 1,195,295; Aug. 22; Gaz. vol. 229; p. 989.
License-number, Illuminated. H. B. Kincaid. No. 1,193,153; Aug. 1; Gaz. vol. 229; p. 116.
Lid-lifter. C. E. Dolan. No. 1,193,369; Aug. 1; Gaz. vol. 229; p. 194.
Lid, Self-fastening and seal-lock. C. E. and B. F. Grant. No. 1,194,287; Aug. 8; Gaz. vol. 229; p. 554.
Lid-support, Automatic. C. E. Woods. No. 1,194,805; Aug. 15; Gaz. vol. 229; p. 781.
Life-preserver for aviators. H. L. Adams. No. 1,194,691; Aug. 15; Gaz. vol. 229; p. 741.
Life-preserving garment. J. Krem. No. 1,195,365; Aug. 22; Gaz. vol. 229; p. 1015.
Life raft or boat holding or releasing device. H. R. Humphreys. No. 1,196,692; Aug. 29; Gaz. vol. 229; p. 1513.
Lifter: *See*—
Lid-lifter. Valve-lifter.
Lifting-jack. G. H. Oberbeck. No. 1,196,388; Aug. 29; Gaz. vol. 229; p. 1410.
Lifting-jack. W. H. Parkin. No. 1,195,261; Aug. 22; Gaz. vol. 229; p. 975.
Lifting jack, Automobile-. E. M. Cumings. No. 1,193,126; Aug. 1; Gaz. vol. 229; p. 107.
Lifting-jack, Extension-head. C. Luce. No. 1,193,278; Aug. 1; Gaz. vol. 229; p. 161.
Light: *See*—
Automobile signal light. Search-light.
Electric light. Spot-light.
Flash-light. Vault-light.
Light, Composition for rectifying and intensifying luminous. O. W. Pickering. No. 1,196,144; Aug. 29; Gaz. vol. 229; p. 1326.
Light-dimming mechanism. A. Herz. No. 1,195,137; Aug. 15; Gaz. vol. 229; p. 896.
Light-fixture. W. D. Harwig, Jr. No. 1,194,178; Aug. 8; Gaz. vol. 229; p. 517.
Light-reflecting bowls, Hanger for. E. L. White. No. 1,196,501; Aug. 29; Gaz. vol. 229; p. 1448.
Lights, Automatic time control for. A. L. Palis. No. 1,193,817; Aug. 8; Gaz. vol. 229; p. 392.
Lighting-apparatus, Condensation-trap for acetylene-. A. F. Jenkins. No. 1,194,632; Aug. 15; Gaz. vol. 229; p. 720.
Lighting-fixture. D. Crownfield. No. 1,193,519; Aug. 8; Gaz. vol. 229; p. 282.
Lighting-fixture. D. Crownfield. No. 1,193,520; Aug. 8; Gaz. vol. 229; p. 283.
Lighting-ring. R. Hoffman. No. 1,193,146; Aug. 1; Gaz. vol. 229; p. 114.
Lightning-arrester. R. P. Jackson. No. 1,194,195; Aug. 8; Gaz. vol. 229; p. 523.
Lightning-arrester. G. W. Van Horn. No. 1,193,848; Aug. 8; Gaz. vol. 229; p. 403.
Lime, Producing colored. G. S. Keck. No. 1,195,140; Aug. 15; Gaz. vol. 229; p. 897.
Line or rein clamp. P. R. Stibbe. No. 1,195,623; Aug. 22; Gaz. vol. 229; p. 1107.
Line pin or fastener. L. F. Lemley. No. 1,196,556; Aug. 29; Gaz. vol. 229; p. 1467.
Line-wires, Take-up device for. E. E. Burnham. No. 1,195,776; Aug. 22; Gaz. vol. 229; p. 1164.
Link. C. C. Reifsnyder. No. 1,195,268; Aug. 22; Gaz. vol. 229; p. 978.
Link, Fusible. C. W. Kersteter. No. 1,195,593; Aug. 22; Gaz. vol. 229; p. 1096.
Linoleum-stretcher. R. L. and W. G. Haugh. No. 1,193,546; Aug. 8; Gaz. vol. 229; p. 293.
Linotype-machine. W. H. Johnson. No. 1,196,547; Aug. 29; Gaz. vol. 229; p. 1464.
Linotype-machines, Drive for. F. C. Damm. No. 1,193,669; Aug. 8; Gaz. vol. 229; p. 339.
Linotype-machines, Type-casting attachment for. J. E. Hanrahan. No. 1,196,107; Aug. 29; Gaz. vol. 229; p. 1313.
Linotype stop mechanism. W. E. Bertram. No. 1,194,937; Aug. 15; Gaz. vol. 229; p. 826.
Liquid conveyer and filler, Combined. W. F. Smith. No. 1,192,948; Aug. 1; Gaz. vol. 229; p. 41.
Liquid-cooler. J. W. Hurley. No. 1,194,180; Aug. 8; Gaz. vol. 229; p. 518.
Liquid-dispensing apparatus. C. E. Hamilton. No. 1,194,171; Aug. 8; Gaz. vol. 229; p. 515.
Liquid-distributing means. B. F. Hopkins. No. 1,196,691; Aug. 29; Gaz. vol. 229; p. 1513.
Liquid-fuel burner. W. A. White and J. McDonald. No. 1,194,106; Aug. 8; Gaz. vol. 229; p. 491.
Liquid-fuel-burning apparatus. J. J. Kermode. No. 1,193,701; Aug. 8; Gaz. vol. 229; p. 351.
Liquid-indicating gage. C. P. Wilkinson. No. 1,193,744; Aug. 8; Gaz. vol. 229; p. 367.
Liquid-treating devices, Feed for. M. Leitch. No. 1,195,596; Aug. 22; Gaz. vol. 229; p. 1097.
Liquids, Obtaining the solids from. I. S. and O. E. Merrell. No. 1,193,173; Aug. 1; Gaz. vol. 229; p. 123.
Liquids, Purifying. T. W. Barber. No. 1,194,933; Aug. 15; Gaz. vol. 229; p. 825.
Liquids, Treating. L. Linden. No. 1,194,646; Aug. 15; Gaz. vol. 229; p. 724.
Liquor for bleaching and other purposes, Electrolytic apparatus for the production of. A. Holliday. No. 1,193,786; Aug. 8; Gaz. vol. 229; p. 882.
Lister, Two-row. L. E. Waterman. No. 1,194,581; Aug. 15; Gaz. vol. 229; p. 703.
Load-transfer apparatus. T. S. Miller. No. 1,193,587; Aug. 8; Gaz. vol. 229; p. 307.
Locations of distant points, Apparatus for ascertaining the relative. H. J. Furber, Jr. No. 1,194,376; Aug. 15; Gaz. vol. 229; p. 630.
Lock: *See*—
Automobile-lock. Nut-lock.
Automobile-steering-wheel lock. Nut and bolt lock.
Nut or bolt lock.
Car-lock. Padlock.
Car-door lock. Permutation-lock.
Closure-lock. Safety-lock.
Cycle-lock. Sash-lock.
Detachable-cylinder lock. Seal-lock.
Elevator-lock. Switch-lock.
Fuse-receptacle lock. Vehicle-control pedal-lock.
Keyless lock. Window-lock.
Lock. E. V. Barthmaier. No. 1,195,328; Aug. 22; Gaz. vol. 229; p. 1001.
Lock. J. H. Coons. No. 1,193,123; Aug. 1; Gaz. vol. 229; p. 106.
Lock. D. W. Garner. No. 1,196,675; Aug. 29; Gaz. vol. 229; p. 1508.
Lock. M. Grgich. No. 1,195,808; Aug. 22; Gaz. vol. 229; p. 1174.
Lock. O. C. Grossglass. No. 1,194,836; Aug. 15; Gaz. vol. 229; p. 791.
Lock. A. A. Page. No. 1,195,713; Aug. 22; Gaz. vol. 229; p. 1139.
Lock. W. P. Savage. No. 1,194,241; Aug. 8; Gaz. vol. 229; p. 538.
Lock. S. Segal. No. 1,195,613; Aug. 22; Gaz. vol. 229; p. 1102.
Lock. J. H. Shaw. No. 1,195,514; Aug. 22; Gaz. vol. 229; p. 1065.
Lock. E. L. Teich. No. 1,195,292; Aug. 22; Gaz. vol. 229; p. 988.
Lock. H. G. Voight. No. 1,192,903; Aug. 1; Gaz. vol. 229; p. 46.
Lock and latch, Combined. P. Nordwall. No. 1,195,711; Aug. 22; Gaz. vol. 229; p. 1138.
Lock for drawers in series. W. W. Watson and J. G. Carlson. No. 1,193,955; Aug. 8; Gaz. vol. 229; p. 441.
Lock hasp, Trunk-. C. E. Smith. No. 1,196,038; Aug. 29; Gaz. vol. 229; p. 1288.
Lock structure. F. G. Nelson. No. 1,193,412; Aug. 1; Gaz. vol. 229; p. 209.
Locks, Tumbler for permutation-. W. T. Benham. No. 1,193,754; Aug. 8; Gaz. vol. 229; p. 370.
Locks, Tumbler mechanism for permutation-. W. T. Benham. No. 1,195,766; Aug. 22; Gaz. vol. 229; p. 1159.
Locking device. P. A. Rosenthal. No. 1,195,093; Aug. 15; Gaz. vol. 229; p. 881.
Locking device for differential mechanism. A. O. Higinbotham. No. 1,193,017; Aug. 1; Gaz. vol. 229; p. 65.
Locking mechanism, Coin-controlled. F. J. Rowse. No. 1,192,938; Aug. 1; Gaz. vol. 229; p. 38.
Locomotive air-reservoirs, Support for. T. J. O'Day. No. 1,193,480; Aug. 1; Gaz. vol. 229; p. 231.
Locomotive arch-brick. W. Smith. No. 1,194,086; Aug. 8; Gaz. vol. 229; p. 485.
Locomotive-crane. H. A. Greene. No. 1,195,461; Aug. 22; Gaz. vol. 229; p. 1048.
Locomotive draft-regulator. H. A. Beatty. No. 1,196,642; Aug. 29; Gaz. vol. 229; p. 1497.

Locomotive, Electric. B. S. Moore. No. 1,194,211; Aug. 8; Gaz. vol. 229; p. 528.
Locomotive-grate shaker. V. Lindstrom. No. 1,195,484; Aug. 22; Gaz. vol. 229; p. 1055.
Locomotive, Storage-battery. C. A. Pratt. No. 1,195,723; Aug. 22; Gaz. vol. 229; p. 1142.
Locomotive-tenders, Coal-passer for. C. L. Heisler. (Reissue.) No. 14,176; Aug. 1; Gaz. vol. 229; p. 238.
Locomotives, Heating apparatus for injector-pipes of. J. Zimmerman. No. 1,194,325; Aug. 8; Gaz. vol. 229; p. 570.
Log-cars, Stake-holding device for. J. Rouleau. No. 1,196,590; Aug. 29; Gaz. vol. 229; p. 1478.
Loom. J. T. Cyr. No. 1,196,435; Aug. 29; Gaz. vol. 229; p. 1425.
Loom, Automatic weft-replenishing. A. Briot. No. 1,194,130; Aug. 8; Gaz. vol. 229; p. 501.
Loom picking-motion. J. and W. Stott. No. 1,194,898; Aug. 15; Gaz. vol. 229; p. 813.
Loom-temple. W. I. Stimpson. No. 1,196,170; Aug. 29; Gaz. vol. 229; p. 1336.
Loom warp stop-motion. J. F. Dustin. No. 1,193,881; Aug. 8; Gaz. vol. 229; p. 416.
Looms, Filling-end controller for. H. A. Davis. No. 1,194,278; Aug. 8; Gaz. vol. 229; p. 551.
Low-water alarm. J. C. McCarthy. No. 1,196,005; Aug. 29; Gaz. vol. 229; p. 1277.
Lubricant-testing machine. J. W. Lowry. No. 1,194,850; Aug. 15; Gaz. vol. 229; p. 796.
Lubricants, Splash-trough for. E. M. White. No. 1,194,800; Aug. 15; Gaz. vol. 229; p. 779.
Lubricating device. G. McKay. No. 1,194,650; Aug. 15; Gaz. vol. 229; p. 725.
Lubrication means. L. Laurin. No. 1,194,644; Aug. 15; Gaz. vol. 229; p. 724.
Lubricator: *See*—
Force-feed lubricator. Journal-lubricator.
Lubricator. F. R. Ashton. No. 1,193,338; Aug. 1; Gaz. vol. 229; p. 182.
Lubricator. P. W. Gates. No. 1,195,349; Aug. 22; Gaz. vol. 229; p. 1010.
Lubricator. J. F. Lewis. No. 1,195,694; Aug. 22; Gaz. vol. 229; p. 1131.
Lubricator. J. F. Lewis. No. 1,195,695; Aug. 22; Gaz. vol. 229; p. 1132.
Lubricator. T. K. Oden. No. 1,193,290; Aug. 1; Gaz. vol. 229; p. 165.
Lunch-box. J. Berg. No. 1,194,466; Aug. 15; Gaz. vol. 229; p. 664.
Lunch-counter. S. Marston. No. 1,194,531; Aug. 15; Gaz. vol. 229; p. 686.
Machine-tool. W. A. Greaves. No. 1,194,620; Aug. 15; Gaz. vol. 229; p. 716.
Machinery-controlling mechanism. R. F. McFeeley. No. 1,193,576; Aug. 8; Gaz. vol. 229; p. 303.
Magnet, Closed-circuit. A. P. Sanborn and R. C. Wilson. No. 1,195,506; Aug. 22; Gaz. vol. 229; p. 1063.
Magnetic grip. E. H. Walsh. No. 1,195,630; Aug. 22; Gaz. vol. 229; p. 1109.
Magnetic objects, Method of and apparatus for testing. F. P. Fahy. No. 1,196,223; Aug. 29; Gaz. vol. 229; p. 1354.
Magneto-coupling. A. F. Milbrath. No. 1,195,250; Aug. 22; Gaz. vol. 229; p. 971.
Magneto-frame. W. E. Dow. No. 1,195,921; Aug. 22; Gaz. vol. 229; p. 1213.
Magneto-generator. P. V. Kolff. No. 1,193,270; Aug. 1; Gaz. vol. 229; p. 158.
Mail-bag receiving and delivering apparatus. W. B. Tocher. No. 1,196,177; Aug. 29; Gaz. vol. 229; p. 1339.
Mail-box. J. D. Boland. No. 1,194,593; Aug. 15; Gaz. vol. 229; p. 707.
Mail-box. J. J. Mason. No. 1,195,378; Aug. 22; Gaz. vol. 229; p. 1019.
Mail-box. A. Nardell. No. 1,196,386; Aug. 29; Gaz. vol. 229; p. 1409.
Mail-box alarm. J. G. Menow and H. Meyer. No. 1,195,060; Aug. 15; Gaz. vol. 229; p. 870.
Mail catcher and deliverer. G. Burton. No. 1,195,439; Aug. 22; Gaz. vol. 229; p. 1041.
Mail delivering and receiving device for railways. W. Crippen. No. 1,195,562; Aug. 22; Gaz. vol. 229; p. 1084.
Mail-delivering device. S. J. Peck. No. 1,194,315; Aug. 8; Gaz. vol. 229; p. 566.
Mail-handling apparatus. I. D. Carey. No. 1,193,234; Aug. 1; Gaz. vol. 229; p. 144.
Mail-marking machine. A. Ielfield. No. 1,193,693; Aug. 8; Gaz. vol. 229; p. 347.
Mail-transferring device. H. S. Olgard. No. 1,193,291; Aug. 1; Gaz. vol. 229; p. 166.
Mail-wagon. B. F. Hawkins. No. 1,195,676; Aug. 22; Gaz. vol. 229; p. 1126.
Maize header and cutter. I. S. Grindstaff and L. Johnson. No. 1,196,355; Aug. 29; Gaz. vol. 229; p. 1397.
Mandrel for cores of roll-rewinding machines. W. B. Smith. No. 1,194,249; Aug. 8; Gaz. vol. 229; p. 541.
Mangle. L. H. Slaght, G. E. Sutton, and J. C. O'Brien. No. 1,193,623; Aug. 8; Gaz. vol. 229; p. 322.
Mantle holder or package. S. Mason. No. 1,195,491; Aug. 22; Gaz. vol. 229; p. 1058.
Manure-spreaders, Scatterer attachment for. H. B. and F. A. Pickett. No. 1,194,226; Aug. 8; Gaz. vol. 229; p. 533.
Marking device. A. H. Emerson. No. 1,193,676; Aug. 8; Gaz. vol. 229; p. 341.
Marking-gage and compasses, Combined. G. F. Wheeler. No. 1,195,886; Aug. 22; Gaz. vol. 229; p. 1201.
Mask, Base-ball. R. L. Welch. No. 1,196,411; Aug. 29; Gaz. vol. 229; p. 1418.
Mason's jointer. A. W. Downs. No. 1,193,478; Aug. 1; Gaz. vol. 229; p. 231.
Massage apparatus. L. De Florez. No. 1,196,344; Aug. 29; Gaz. vol. 229; p. 1393.
Massage appliance. E. Winton-Charteris. No. 1,192,969; Aug. 1; Gaz. vol. 229; p. 47.
Mat: *See*—
Automobile floor-mat. Stove-mat.
Match-holder. P. Leo. No. 1,196,002; Aug. 29; Gaz. vol. 229; p. 1276.
Match-igniting device. J. E. Neahr. No. 1,194,867; Aug. 15; Gaz. vol. 229; p. 802.
Matrices, Producing. W. H. Kaiser. No. 1,194,181; Aug. 8; Gaz. vol. 229; p. 518.
Mattress-tufting machines, Knotter for. W. B. Mathewson. No. 1,193,708; Aug. 8; Gaz. vol. 229; p. 353.
Measure, Mechanical. A. Stephan. No. 1,193,842; Aug. 8; Gaz. vol. 229; p. 401.
Measuring and dispensing device, Refrigerant. W. J. Kelly. No. 1,193,555; Aug. 8; Gaz. vol. 229; p. 296.
Measuring device, Thread-. O. L. Lawson. No. 1,194,516; Aug. 15; Gaz. vol. 229; p. 681.
Measuring implement. W. A. Gordon. No. 1,194,835; Aug. 15; Gaz. vol. 229; p. 791.
Measuring instrument, Electrical. P. MacGahan. No. 1,194,202; Aug. 8; Gaz. vol. 229; p. 525.
Measuring instrument, Electrical. P. MacGahan. No. 1,194,203; Aug 8; Gaz. vol. 229; p. 526.
Measuring instrument, Electrical. C. E. Norton. No. 1,195,712; Aug. 22; Gaz. vol. 229; p. 1138.
Measuring instrument, Electrical. B. H. Smith. No. 1,194,084; Aug. 8; Gaz. vol. 229; p. 484.
Measuring instrument, Electrical. H. C. West. No. 1,193,095; Aug. 1; Gaz. vol. 229; p. 95.
Measuring instrument, Electrical. H. C. West. No. 1,193,096; Aug. 1; Gaz. vol. 229; p. 95.
Measuring-line-reel clamp. W. M. Roades. No. 1,193,188; Aug. 1; Gaz. vol. 229; p. 128.
Measuring-machine. F. B. Yingling. No. 1,194,459; Aug. 15; Gaz. vol. 229; p. 661.
Measuring or controlling instrument. E. H. Bristol. No. 1,195,334; Aug. 22; Gaz. vol. 229; p. 1004.
Meat-cutting machine. A. H. Hleatzman. No. 1,193,385; Aug. 1; Gaz. vol. 229; p. 199.
Mechanical movement. G. W. Grisdale, Jr. No. 1,184,288; Aug. 8; Gaz. vol. 229; p. 555.
Mechanical movement. R. S. M. Mitchell. No. 1,195,381; Aug. 22; Gaz. vol. 229; p. 1020.
Mechanical movement. A. J. Mottlau. No. 1,195,384; Aug 22; Gaz. vol. 229; p. 1021.
Mechanical movement. A. J. Mottlau. No. 1,195,385; Aug. 22; Gaz. vol. 229; p. 1022.
Mechanical movement. C. L. Walker. No. 1,194,258; Aug. 8; Gaz. vol. 229; p. 544.
Mechanical movement. C. E. Wright. No. 1,194,689; Aug. 15; Gaz. vol. 229; p. 740.
Medicine applicator and moistener. J. O. Morrison. No. 1,194,215; Aug. 8; Gaz. vol. 229; p. 530.
Merry-go-round, Floating. A. Wendt. No. 1,193,094; Aug. 1; Gaz. vol. 229; p. 94.
Metal article and making same, Protected. H. H. Robertson. No. 1,195,090; Aug. 15; Gaz. vol. 229; p. 880.
Metal articles, Apparatus for disintegrating. A. de Back. No. 1,196,343; Aug. 29; Gaz. vol. 229; p. 1393.
Metal-bar joint, Rolled-. E. W. Goodey. (Reissue.) No. 14,184; Aug. 22; Gaz. vol. 229; p. 1225.
Metal-fabric-making machine. W. Loach. No. 1,196,004; Aug. 29; Gaz. vol. 229; p. 1276.
Metal-frame screen. S. Abel. No. 1,192,838; Aug. 1; Gaz. vol. 229; p. 3.
Metal from ores, Securing. J. H. Reid. No. 1,195,607; Aug. 22; Gaz. vol. 229; p. 1100.
Metal, Machine for forming expanded. H. C. Herr. No. 1,195,222; Aug. 22; Gaz. vol. 229; p. 961.
Metal objects, Producing compound. F. B. Corey. No. 1,193,667; Aug. 8; Gaz. vol. 229; p. 338.
Metal ores and fusing other materials, Reducing. C. B. Hillhouse. No. 1,193,783; Aug. 8; Gaz. vol. 229; p. 381.
Metal-punching machinery. G. P. Thomas. No. 1,193,031; Aug. 8; Gaz. vol. 229; p. 326.
Metal-scalping machine and the like. E. O. Goss. No. 1,194,617; Aug. 15; Gaz. vol. 229; p. 715.
Metal-shearing machine. C. E. Ennes and C. D. McDonald. No. 1,194,728; Aug. 15; Gaz. vol. 229; p. 754.
Metal-sintering method and apparatus. R. B. Walling. No. 1,194,906; Aug. 15; Gaz. vol. 229; p. 815.
Metal strips, Machine for uncoiling and straightening. J. P. Kitchen. No. 1,194,641; Aug. 15; Gaz. vol. 229; p. 722.
Metal, Tempering. T. J. Fay. No. 1,194,829; Aug. 15; Gaz. vol. 229; p. 788.
Metal to molds, Apparatus for supplying molten. W. Montgomery, Jr., and J. Riehl. No. 1,195,836; Aug. 22; Gaz. vol. 229; p. 1185.
Metal, Welded. L. W. Chubb. No. 1,196,744; Aug. 29; Gaz. vol. 229; p. 1533.

Metal-working. F. M. Vogel. No. 1,196,498; Aug. 29; Gaz. vol. 229; p. 1447.
Metal-working machine. F. Müller. No. 1,194,864; Aug. 15; Gaz. vol. 229; p. 801.
Metals from their ores, Extracting. H. B. Slater. No. 1,195,616; Aug. 22; Gaz. vol. 229; p. 1104.
Metals from their ores, Making a leaching solution for extraction of. H. B. Slater. No. 1,195,617; Aug. 22; Gaz. vol. 229; p. 1104.
Metals, Lead-plating. J. C. McClintock and R. J. Shoemaker. No. 1,195,376; Aug. 22; Gaz. vol. 229; p. 1019.
Metals, Magnetic treatment of. F. L. Bishop. No. 1,194,940; Aug. 15; Gaz. vol. 229; p. 827.
Metals, Separating. A. H. Sherwood. No. 1,192,945; Aug. 1; Gaz. vol. 229; p. 40.
Metals, Separating. R. H. Stevens. No. 1,194,438; Aug. 15; Gaz. vol. 229; p. 653.
Metallic compounds, Making acid and insoluble. G. D. Van Arsdale. No. 1,195,421; Aug. 22; Gaz. vol. 229; p. 1035.
Metallurgical furnace. U. Wedge. No. 1,195,425; Aug. 22; Gaz. vol. 229; p. 1036.
Meter: *See*—
Gas-meter. Steam-meter.
Meter. M. Smithey. No. 1,195,161; Aug. 15; Gaz. vol. 229; p. 903.
Meter-adapter. J. Sachs. No. 1,194,880; Aug. 15; Gaz. vol. 229; p. 807.
Meter-adapter. J. Sachs. No. 1,194,881; Aug. 15; Gaz. vol. 229; p. 807.
Meter-prover attachment. E. C. Weisgerber. No. 1,196,321; Aug. 29; Gaz. vol. 229; p. 1385.
Meter-testing apparatus. J. Sachs. No. 1,194,883; Aug. 15; Gaz. vol. 229; p. 808.
Meter-testing block. H. J. Blakeslee. No. 1,192,844; Aug. 1; Gaz. vol. 229; p. 6.
Meter-testing device. T. E. Murray, Jr., and F. V. Magalhaes. No. 1,196,472; Aug. 29; Gaz. vol. 229; p. 1438.
Mica-boards or similar articles, Device for building. W. H. Sills. No. 1,196,036; Aug. 29; Gaz. vol. 229; p. 1287.
Mica, Splitting. H. R. Edgecomb. No. 1,194,155; Aug. 8; Gaz. vol. 229; p. 510.
Micrometer. R. L. Binney. No. 1,195,330; Aug. 22; Gaz. vol. 229; p. 1002.
Micrometer. J. Wahlberg. No. 1,196,188; Aug. 29; Gaz. vol. 229; p. 1342.
Micrometer-gage. T. Hooker. No. 1,193,549; Aug. 8; Gaz. vol. 229; p. 294.
Military shoulder-arm. T. C. Johnson. No. 1,194,504; Aug. 15; Gaz. vol. 229; p. 677.
Milk-can, Vacuum. S. Le Sieur. No. 1,196,243; Aug. 22; Gaz. vol. 229; p. 969.
Milk in bottles, Sterilizing or pasteurizing. C. O. Robinson. No. 1,195,091; Aug. 15; Gaz. vol. 229; p. 880.
Milking-machine. H. C. Determan. No. 1,194,603; Aug. 15; Gaz. vol. 229; p. 711.
Milking-machine. E. A. Laughlin. No. 1,193,402; Aug. 1; Gaz. vol. 229; p. 205.
Milking-machine. M. Leitch. No. 1,195,995; Aug. 29; Gaz. vol. 229; p. 1272.
Milking-machine. M. Leitch. No. 1,195,996; Aug. 29; Gaz. vol. 229; p. 1273.
Milking-machine. M. Leitch. No. 1,195,997; Aug. 29; Gaz. vol. 229; p. 1273.
Milking-machine. M. Leitch. No. 1,195,998; Aug. 29; Gaz. vol. 229; p. 1274.
Milking-machine. M. Leitch. No. 1,195,999; Aug. 29; Gaz. vol. 229; p. 1274.
Milking-machine. M. Leitch. No. 1,196,000; Aug. 29; Gaz. vol. 229; p. 1275.
Milking-machine. M. Leitch. No. 1,196,001; Aug. 29; Gaz. vol. 229; p. 1275.
Milking-machine releaser and pulsator, Combined. T. N. Fletcher. No. 1,194,989; Aug. 15; Gaz. vol. 229; p. 845.
Milking-machine teat-cup. T. N. Fletcher. No. 1,195,572; Aug. 22; Gaz. vol. 229; p. 1088.
Milking-machines, Milk-releasing apparatus for use with. R. B. Forsyth. No. 1,195,573; Aug. 22; Gaz. vol. 229; p. 1089.
Mill: *See*—
Grinding-mill. Windmill.
Stamp-mill.
Milling-cutter. F. Müller. No. 1,194,865; Aug. 15; Gaz. vol. 229; p. 802.
Mineral silicates, Treating. J. C. W. Frazer, W. W. Holland, and E. Miller. No. 1,196,734; Aug. 29; Gaz. vol. 229; p. 1530.
Mines, Firing apparatus for submarine. G. E. Ellis. No. 1,195,796; Aug. 22; Gaz. vol. 229; p. 1170.
Mines, Observation-buoy and fire control for floating. C. H. Woods. No. 1,195,317; Aug. 22; Gaz. vol. 229; p. 997.
Mining coal. H. A. Kuhn. No. 1,194,298; Aug. 8; Gaz. vol. 229; p. 559.
Mining-machine. A. H. Wood. No. 1,193,654; Aug. 8; Gaz. vol. 229; p. 333.
Mining-machines, Excavating attachment for. J. H. Morgan. No. 1,196,135; Aug. 29; Gaz. vol. 229; p. 1322.
Minnow-trap. J. S. Bonner. No. 1,196,074; Aug. 29; Gaz. vol. 229; p. 1302.
Mirror and reflector, Combined. E. Keen. No. 1,192,905; Aug. 1; Gaz. vol. 229; p. 26.
Miter-box. S. S. Huls. No. 1,193,149; Aug. 1; Gaz. vol. 229; p. 115.
Mitten, Bath-. J. Ellis. No. 1,193,529; Aug. 8; Gaz. vol. 229; p. 286.
Mixer: *See*—
Grout-mixer.
Mixing device. W. M. Thomas. No. 1,193,085; Aug. 1; Gaz. vol. 229; p. 91.
Moccasin. E. A. Llewellyn. No. 1,195,825; Aug. 22; Gaz. vol. 229; p. 1181.
Moistening device for gummed stickers or labels. T. H. Krueger. No. 1,194,752; Aug. 15; Gaz. vol. 229; p. 762.
Mold: *See*—
Concrete-structure mold. Ingot-mold.
Culvert-mold. Wall-mold.
Molding. G. A. Hazelworth. No. 1,195,218; Aug. 22; Gaz. vol. 229; p. 959.
Molding and bailing dough and the like, Machine for. D. K. Allison. No. 1,192,973; Aug. 1; Gaz. vol. 229; p. 49.
Molding-machine. J. W. Fuller. No. 1,193,007; Aug. 1; Gaz. vol. 229; p. 61.
Molding-machine. M. M. Morrison. No. 1,195,708; Aug. 22; Gaz. vol. 229; p. 1137.
Molding-machine for molding plastic materials. G. W. Chance. No. 1,196,521; Aug. 29; Gaz. vol. 229; p. 1455.
Money-paying machine. G. Runquist. No. 1,195,860; Aug. 22; Gaz. vol. 229; p. 1193.
Mop. A. M. Leslie and J. C. Singleton. No. 1,196,465; Aug. 29; Gaz. vol. 229; p. 1436.
Mop. L. A. McKay. No. 1,194,048; Aug. 8; Gaz. vol. 229; p. 472.
Mop, Fountain-. H. Casler. No. 1,193,761; Aug. 8; Gaz. vol. 229; p. 373.
Mop-head and mop-wringer, Combined. E. C. Worns. No. 1,194,916; Aug. 15; Gaz. vol. 229; p. 818.
Mop-holder. A. R. Henders. No. 1,193,259; Aug. 1; Gaz. vol. 229; p. 154.
Mop-wringer. A. F. Lifvendahl. No. 1,195,696; Aug. 22; Gaz. vol. 229; p. 1133.
Mortar-joint scraper. F. J. Vichek. No. 1,195,297; Aug. 22; Gaz. vol. 229; p. 990.
Motion into electrical waves or impulses, Method of and apparatus for transforming. T. B. Dixon. No. 1,193,999; Aug. 8; Gaz. vol. 229; p. 456.
Motion, Mechanism for producing compound oscillatory. G. F. Bartholmes. No. 1,193,860; Aug. 8; Gaz. vol. 229; p. 408.
Motor: *See*—
Air-motor. Gravity-motor.
Commutator-motor. Reciprocating motor.
Current-motor. Tidal motor.
Electric motor. Wave-motor.
Fluid-actuated motor.
Motor. H. Cook. No. 1,193,996; Aug. 8; Gaz. vol. 229; p. 455.
Motor. J. E. Davis. No. 1,195,980; Aug. 29; Gaz. vol. 229; p. 1267.
Motor. R. M. Keyes. No. 1,193,397; Aug. 1; Gaz. vol. 229; p. 203.
Motor. A. C. Savidge. No. 1,196,157; Aug. 29; Gaz. vol. 229; p. 1330.
Motor-control system. H. L. Beach. No. 1,196,071; Aug. 29; Gaz. vol. 229; p. 1301.
Motor-control system. W. O. Lum. No. 1,196,124; Aug. 29; Gaz. vol. 229; p. 1319.
Motor-control system. W. O. Lum. No. 1,196,125; Aug. 29; Gaz. vol. 229; p. 1319.
Motor-control system. H. V. Nye. No. 1,193,917; Aug. 8; Gaz. vol. 229; p. 429.
Motor-control system, Electric-. W. Sykes. No. 1,196,172; Aug. 29; Gaz. vol. 229; p. 1337.
Motor-controller. R. P. Warner. No. 1,195,540; Aug. 22; Gaz. vol. 229; p. 1075.
Motor controller, Electric-. W. B. Bennitt. No. 1,196,730; Aug. 29; Gaz. vol. 229; p. 1528.
Motor-drive. A. F. Welch. No. 1,193,489; Aug. 1; Gaz. vol. 229; p. 234.
Motor-drive. J. J. Wood. No. 1,193,105; Aug. 1; Gaz. vol. 229; p. 98.
Motor-drive. J. J. Wood. No. 1,193,490; Aug. 1; Gaz. vol. 229; p. 235.
Motor-drive, Variable-speed. C. C. Ashton and A. Wagner. No. 1,193,448; Aug. 1; Gaz. vol. 229; p. 220.
Motor-driven wheel. R. E. Kerlin. No. 1,193,560; Aug. 8; Gaz. vol. 229; p. 297.
Motor generator, Repulsion-. K. Schnetzler. No. 1,194,671; Aug. 15; Gaz. vol. 229; p. 733.
Motor, Means for direct injection of fuel into an internal-combustion. H. W. Jacobs and W. J. Leighty. No. 1,193,899; Aug. 8; Gaz. vol. 229; p. 421.
Motor-starting device. R. T. McCormick. No. 1,196,254; Aug. 29; Gaz. vol. 229; p. 1364.
Motors, Automatic cut-out for electric. H. W. Kimes. No. 1,195,232; Aug. 22; Gaz. vol. 229; p. 964.
Motors, Control of alternating-current. E. Rosenberg. No. 1,196,154; Aug. 29; Gaz. vol. 229; p. 1329.
Motors, Feeding apparatus for internal-combustion. E. H. Arquembourg. No. 1,195,764; Aug. 22; Gaz. vol. 229; p. 1158.
Mower. W. J. Hotchkiss. No. 1,196,239; Aug. 29; Gaz. vol. 229; p. 1359.
Mower, Lawn-. W. E. Graham. No. 1,196,540; Aug. 29; Gaz. vol. 229; p. 1462.

Mower, Lawn-. C. E. Townsend. No. 1,195,418; Aug. 22; Gaz. vol. 229; p. 1033.
Mower, Lawn-. F. Yank. No. 1,192,970; Aug. 1; Gaz. vol. 229; p. 48.
Mower-pitman. S. L. Cluett. No. 1,196,524; Aug. 29; Gaz. vol. 229; p. 1456.
Mowers, Grass catching and handling device for lawn-. T. Spencer. No. 1,195,288; Aug. 22; Gaz. vol. 229; p. 986.
Mowing-machine. G. H. Kendall. No. 1,193,557; Aug. 8; Gaz. vol. 229; p. 296.
Mowing-machine hay-tedder. W. H. MacDonald. No. 1,194,528; Aug. 15; Gaz. vol. 229; p. 685.
Muffle-furnace. G. W. Batchell and J. H. Wade. No. 1,195,641; Aug. 22; Gaz. vol. 229; p. 1113.
Music-holding device, Sheet-. R. S. Simban. No. 1,195,110; Aug. 15; Gaz. vol. 229; p. 886.
Music-recorder. B. F. Liefeld. No. 1,194,302; Aug. 8; Gaz. vol. 229; p. 560.
Music-roll for piano-players, &c. F. C. Billings. No. 1,194,811; Aug. 15; Gaz. vol. 229; p. 783.
Music-tracker, Automatic. C. F. and F. G. Reeps. No. 1,194,424; Aug. 15; Gaz. vol. 229; p. 648.
Musical instrument. L. G. Bergeron and R. B. Brewer. No. 1,195,177; Aug. 22; Gaz. vol. 229; p. 945.
Musical instrument, Electrical. M. L. Severy and G. B. Sinclair. No. 1,196,401; Aug. 29; Gaz. vol. 229; p. 1414.
Musical instruments, Sheet-guiding mechanism for tracker-boards of. O. Hilgel. No. 1,196,456; Aug. 29; Gaz. vol. 229; p. 1433.
Musical rubber ball. F. A. Cigol. No. 1,193,992; Aug. 8; Gaz. vol. 229; p. 454.
Nail: *See*—
Wire nail.
Nail-driving machine. L. E. Rainbolt. No. 1,192,932; Aug. 1; Gaz. vol. 229; p. 35.
Nail-leather-heading press. F. E. Keiffer. No. 1,194,183; Aug. 8; Gaz. vol. 229; p. 519.
Napkin protector, Infant-. J. L. Bornstein. No. 1,195,904; Aug. 22; Gaz. vol. 229; p. 1208.
Necktie-fastener. C. Ruben. No. 1,195,094; Aug. 15; Gaz. vol. 229; p. 881.
Needle-clamp. W. H. Stedman. No. 1,195,865; Aug. 22; Gaz. vol. 229; p. 1194.
Nest, Hen's. J. L. Wilson. No. 1,194,263; Aug. 8; Gaz. vol. 229; p. 546.
Nest, Trap-. B. F. Sigler. No. 1,194,432; Aug. 15; Gaz. vol. 229; p. 650.
Nethergarment, Bifurcated. C. Smallwood. No. 1,195,618; Aug. 22; Gaz. vol. 229; p. 1105.
Nickel from its ores, Recovery of. H. L. Sulman and H. F. K. Picard. No. 1,193,734; Aug. 8; Gaz. vol. 229; p. 363.
Nitrile derivatives, Electrolytic and saponifying process for producing. J. E. Bucher. No. 1,194,354; Aug. 15; Gaz. vol. 229; p. 622.
Nitrogen by means of ferro-aluminium, Fixation of. P. Bunet. No. 1,196,657; Aug. 29; Gaz. vol. 229; p. 1502.
Nitrogen, Fixation of. A. Badin. No. 1,196,630; Aug. 29; Gaz. vol. 229; p. 1495.
Noodle-cutter. C. Lombardo. No. 1,195,486; Aug. 22; Gaz. vol. 229; p. 1056.
Nozzle, Atomizing-. L. B. Edgerton. No. 1,194,827; Aug. 15; Gaz. vol. 229; p. 788.
Nozzle bracket, Suction-. J. E. Doyle. No. 1,196,439; Aug. 29; Gaz. vol. 229; p. 1427.
Nozzle, Hose-. H. Gibbs. No. 1,193,011; Aug. 1; Gaz. vol. 229; p. 63.
Nozzle, Spray-. F. E. Young. No. 1,196,627; Aug. 29; Gaz. vol. 229; p. 1491.
Nozzle, Spraying-. W. D. Pettit. No. 1,195,080; Aug. 15; Gaz. vol. 229; p. 877.
Nozzles, Cover-lifter for oil-can. M. E. Downey. No. 1,196,217; Aug. 29; Gaz. vol. 229; p. 1352.
Number-plate holder. W. G. Swift. No. 1,193,736; Aug. 8; Gaz. vol. 229; p. 364.
Numbering device, Changeable. J. E. Allen. No. 1,193,963; Aug. 8; Gaz. vol. 229; p. 444.
Numbering-head. A. H. Smith. No. 1,194,435; Aug. 15; Gaz. vol. 229; p. 651.
Nut and bolt lock. F. E. Baker. No. 1,195,165; Aug. 15; Gaz. vol. 229; p. 905.
Nut, Lock-. C. N. Faubel. No. 1,195,454; Aug. 22; Gaz. vol. 229; p. 1046.
Nut, Lock-. A. McDonald. No. 1,196,565; Aug. 29; Gaz. vol. 229; p. 1470.
Nut, Lock-. E. McGrady. No. 1,195,053; Aug. 15; Gaz. vol. 229; p. 868.
Nut-lock. C. A. Bastien. No. 1,193,974; Aug. 8; Gaz. vol. 229; p. 448.
Nut-lock. J. H. Brown. No. 1,194,944; Aug. 15; Gaz. vol. 229; p. 828.
Nut-lock. P. E. Duffy. No. 1,193,370; Aug. 1; Gaz. vol. 229; p. 194.
Nut-lock. C. V. Hervert. No. 1,195,468; Aug. 22; Gaz. vol. 229; p. 1050.
Nut-lock. E. Holoffe. No. 1,193,789; Aug. 8; Gaz. vol. 229; p. 383.
Nut-lock. H. R. Hughes. No. 1,194,293; Aug. 8; Gaz. vol. 229; p. 557.
Nut-lock. J. Oberdier. No. 1,194,060; Aug. 8; Gaz. vol. 229; p. 477.
Nut-lock. G. W. Rumball, Jr. No. 1,196,032; Aug. 29; Gaz. vol. 229; p. 1286.
Nut-lock. C. F. Schneider. No. 1,196,034; Aug. 29; Gaz. vol. 229; p. 1287.
Nut-lock and swab. J. D. Viruette. No. 1,195,753; Aug. 22; Gaz. vol. 229; p. 1154.
Nut or bolt lock. R. J. Turner. No. 1,195,877; Aug. 22; Gaz. vol. 229; p. 1199.
Nuts, Machine and tool for manufacturing. A. B. Mattingly. No. 1,196,710; Aug. 29; Gaz. vol. 229; p. 1519.
Nuts, Tool for cutting lock-. A. B. Mattingly. No. 1,195,145; Aug. 15; Gaz. vol. 229; p. 898.
Nutcracker. W. E. Blair. No. 1,194,592; Aug. 15; Gaz. vol. 229; p. 707.
Nutcracker. C. T. Boyer. No. 1,192,846; Aug. 1; Gaz. vol. 229; p. 7.
Nutcracker. T. Hachmann. No. 1,194,837; Aug. 15; Gaz. vol. 229; p. 791.
Nutcracker. J. Power. No. 1,194,318; Aug. 8; Gaz. vol. 229; p. 567.
Offset-machines, Tripping mechanism for. I. F. Niles. No. 1,193,045; Aug. 1; Gaz. vol. 229; p. 75.
Oil and draft regulating device. T. H. Ferguson. No. 1,195,666; Aug. 22; Gaz. vol. 229; p. 1122.
Oil and gas burner, Combined. D. L. Reese. No. 1,195,500; Aug. 22; Gaz. vol. 229; p. 1061.
Oil-burner. J. T. Cheatham. No. 1,192,864; Aug. 1; Gaz. vol. 229; p. 12.
Oil-burner. G. A. Lee. No. 1,194,519; Aug. 15; Gaz. vol. 229; p. 682.
Oil-burner. R. S. and W. S. Nelson. No. 1,193,413; Aug. 1; Gaz. vol. 229; p. 209.
Oil-burner. W. R. Ray. No. 1,193,819; Aug. 8; Gaz. vol. 229; p. 393.
Oil-burner. C. C. Robinson and H. Strelow. No. 1,193,301; Aug. 1; Gaz. vol. 229; p. 170.
Oil-can. N. R. Krause and R. Anderson. No. 1,193,157; Aug. 1; Gaz. vol. 229; p. 118.
Oil-can. E. B. Rose. No. 1,193,192; Aug. 1; Gaz. vol. 229; p. 130.
Oil-can. E. H. Yarwood. No. 1,194,586; Aug. 15; Gaz. vol. 229; p. 705.
Oil-cup, Automatically-feeding. F. B. Rivers. No. 1,195,856; Aug. 22; Gaz. vol. 229; p. 1191.
Oil-press. M. B. Green. No. 1,194,997; Aug. 15; Gaz. vol. 229; p. 848.
Oil-saver and sand-line cap. W. M. Roades. No. 1,193,187; Aug. 1; Gaz. vol. 229; p. 128.
Oil-supply valve, Automatic. P. Daffern. No. 1,195,188; Aug. 22; Gaz. vol. 229; p. 950.
Oil-vapor burner. E. L. Randall. No. 1,195,159; Aug. 15; Gaz. vol. 229; p. 903.
Oils, Apparatus for heating petroleum-. M. J. Trumble. No. 1,194,577; Aug. 15; Gaz. vol. 229; p. 702.
Oiler, Flange-. F. R. Pennefather. No. 1,193,294; Aug. 1; Gaz. vol. 229; p. 167.
Oiler, Hog-. C. A. Cruit. No. 1,196,210; Aug. 29; Gaz. vol. 229; p. 1350.
Oiling system for gasolene-engines. A. Strand. No. 1,193,200; Aug. 1; Gaz. vol. 229; p. 133.
Oiling system for internal-combustion engines. E. T. Georges and J. E. Gramlich. No. 1,194,614; Aug. 15; Gaz. vol. 229; p. 714.
Ore-concentrator. L. D. Chevalier and H. C. Reche. No. 1,194,477; Aug. 15; Gaz. vol. 229; p. 668.
Ore-concentrator. W. Fagergren and W. D. Green. No. 1,195,453; Aug. 22; Gaz. vol. 229; p. 1046.
Ore-sampling apparatus. F. O. Collar and H. E. Wetherbee. No. 1,192,990; Aug. 1; Gaz. vol. 229; p. 55.
Ornamental configuration to material, Apparatus for applying an. H. T. Loomis. No. 1,194,840; Aug. 15; Gaz. vol. 229; p. 795.
Oven. A. M. Burnham. No. 1,193,869; Aug. 8; Gaz. vol. 229; p. 411.
Oven. C. Dressler. No. 1,193,245; Aug. 1; Gaz. vol. 229; p. 149.
Overshoe-holder. W. C. and W. H. Biggins. No. 1,195,903; Aug. 22; Gaz. vol. 229; p. 1208.
Oxid or rust, Electrolytic process for removing. P. Marino. No. 1,195,704; Aug. 22; Gaz. vol. 229; p. 1136.
Package-forming machine. L. W. Luellen. No. 1,194,045; Aug. 8; Gaz. vol. 229; p. 471.
Package-tie. H. J. Lee. No. 1,196,555; Aug. 29; Gaz. vol. 229; p. 1467.
Package-tie. C. Wright. No. 1,196,626; Aug. 29; Gaz. vol. 229; p. 1491.
Packing. R. B. Meany. No. 1,194,408; Aug. 15; Gaz. vol. 229; p. 641.
Packing and mulshing implement. L. T. Rasmussen. No. 1,196,285; Aug. 29; Gaz. vol. 229; p. 1374.
Packing-box. W. T. Snell. No. 1,194,087; Aug. 8; Gaz. vol. 229; p. 485.
Packing-extractor. C. L. Hendren. No. 1,195,220; Aug. 22; Gaz. vol. 229; p. 960.
Packing, Locomotive-piston. A. C. Brignoni. No. 1,196,652; Aug. 29; Gaz. vol. 229; p. 1500.
Packing-ring, Piston. D. D. Shierk. No. 1,195,279; Aug. 22; Gaz. vol. 229; p. 983.
Pad: *See*—
Rouge-pad. Shoe-pad.
Pad-making machine, Automatic. R. H. Fenn. No. 1,194,983; Aug. 15; Gaz. vol. 229; p. 843.
Paddle, Lard-. M. S. Danner. No. 1,196,526; Aug. 29; Gaz. vol. 229; p. 1456.
Padlock. E. B. Daroowalla. No. 1,194,720; Aug. 15; Gaz. vol. 229; p. 751.

Padlock. B. Taylor. No. 1,192,952; Aug. 1; Gaz. vol. 229; p. 42.
Padlock, Combination-. J. I. Esola. No. 1,193,131; Aug. 1; Gaz. vol. 229; p. 108.
Padlock, Permutation-. B. Snyder. No. 1,195,745; Aug. 22; Gaz. vol. 229; p. 1150.
Painting outfit. J. R. Peck. No. 1,193,181; Aug. 1; Gaz. vol. 229; p. 126.
Panel-board fitting. T. W. Byrne and R. C. Lehane. No. 1,195,778; Aug. 22; Gaz. vol. 229; p. 1164.
Paper-bag rack. L. E. Rainbolt. No. 1,196,148; Aug. 29; Gaz. vol. 229; p. 1327.
Paper box and blank therefor. R. F. Thorndike. No. 1,193,087; Aug. 1; Gaz. vol. 229; p. 92.
Paper-box-blank roll. C. R. P. Waltz. No. 1,195,539; Aug. 22; Gaz. vol. 229; p. 1075.
Paper-clip. W. L. Frank. No. 1,195,364; Aug. 22; Gaz. vol. 229; p. 1015.
Paper-dispensing apparatus. G. Lombardo. No. 1,196,372; Aug. 29; Gaz. vol. 229; p. 1403.
Paper-fastener. H. A. Seymoure. No. 1,195,513; Aug. 22; Gaz. vol. 229; p. 1065.
Paper-fastening machine. G. H. Pembroke. No. 1,195,718; Aug. 22; Gaz. vol. 229; p. 1140.
Paper-folding machine. F. C. Julyan. No. 1,196,697; Aug. 29; Gaz. vol. 229; p. 1515.
Paper, Gummed. H. N. Enholm. No. 1,196,449; Aug. 29; Gaz. vol. 229; p. 1430.
Paper-making-machine guide. A. Aldrich. No. 1,193,659; Aug. 8; Gaz. vol. 229; p. 335.
Paper-making machines, Screen-covered cylindrical roll for. H. O. Olsen. No. 1,196,389; Aug. 29; Gaz. vol. 229; p. 1410.
Paper-manufacturing apparatus, Carbon-. A. E. Emery. No. 1,196,091; Aug. 29; Gaz. vol. 229; p. 1307.
Paper packages or cartons, Machine for forming. F. L. Sattley and F. N. Rosenstengel. No. 1,195,741; Aug. 22; Gaz. vol. 229; p. 1148.
Paper preparatory to printing thereon, Conditioning. J. E. Doyle. No. 1,196,437; Aug. 29; Gaz. vol. 229; p. 1426.
Paper, Process and apparatus for watermarking. J. D. Tompkins and F. H. Fuller. No. 1,196,181; Aug. 29; Gaz. vol. 229; p. 1340.
Paper-pulp and the like, Manufacture of. H. McCormack and E. W. McMullen. No. 1,196,708; Aug. 29; Gaz. vol. 229; p. 1519.
Paper-pulp, Method and means for testing. M. Riegler. No. 1,193,613; Aug. 8; Gaz. vol. 229; p. 318.
Paper-sheet-tying device. S. Economy. No. 1,193,674; Aug. 8; Gaz. vol. 229; p. 341.
Paper-size and making same. G. Muth. No. 1,194,866; Aug. 15; Gaz. vol. 229; p. 802.
Paper-sizing method and apparatus. H. M. Wheelwright. No. 1,195,888; Aug. 22; Gaz. vol. 229; p. 1202.
Paper-winding device. H. A. Dodge. No. 1,195,920; Aug. 22; Gaz. vol. 229; p. 1213.
Pasteurization. F. A. Haines. No. 1,196,357; Aug. 29; Gaz. vol. 229; p. 1398.
Pattern-clamp. J. C. Keer. No. 1,193,699; Aug. 8; Gaz. vol. 229; p. 350.
Pavement and constructing the same, Street-. J. Scheerer. No. 1,195,273; Aug. 22; Gaz. vol. 229; p. 980.
Paving composition, Non-slipping. P. F. Solan and H. S. Balliet. No. 1,193,938; Aug. 8; Gaz. vol. 229; p. 435.
Peanut-digger. J. H. Brodie. No. 1,193,112; Aug. 1; Gaz. vol. 229; p. 101.
Peanut-picker. T. W. Jockisch. No. 1,196,458; Aug. 29; Gaz. vol. 229; p. 1433.
Peanut-stemmer. C. H. Harrington. No. 1,195,812; Aug. 22; Gaz. vol. 229; p. 1176.
Peat or the like, Treatment of wet carbonized. T. Rigby. No. 1,193,924; Aug. 8; Gaz. vol. 229; p. 431.
Pedal. A. F. and C. H. Norris. No. 1,194,311; Aug. 8; Gaz. vol. 229; p. 564.
Peeling machine, Apple-. R. Buchi. No. 1,193,117; Aug. 1; Gaz. vol. 229; p. 103.
Pen. I. C. Buckminster. No. 1,196,654; Aug. 29; Gaz. vol. 229; p. 1501.
Pen, Fountain-. L. J. Most. No. 1,195,709; Aug. 22; Gaz. vol. 229; p. 1137.
Pen, Fountain-. E. Winne. No. 1,195,125; Aug. 15; Gaz. vol. 229; p. 891.
Pen, Lever-filler fountain-. G. M. Kraker. No. 1,194,510; Aug. 15; Gaz. vol. 229; p. 679.
Pencil-point protector. A. W. Graham. No. 1,193,377; Aug. 1; Gaz. vol. 229; p. 197.
Pencil-sharpener. A. Bossbardt. No. 1,193,351; Aug. 1; Gaz. vol. 229; p. 188.
Percolating apparatus. C. Aalborg. No. 1,194,115; Aug. 8; Gaz. vol. 229; p. 496.
Percolator. P. J. A. Maignen. No. 1,195,487; Aug. 22; Gaz. vol. 229; p. 1056.
Perforating-machine, Single-acting. J. Powers. No. 1,195,605; Aug. 22; Gaz. vol. 229; p. 1100.
Perforating pattern-sheets, Machine for. C. Lea. No. 1,196,707; Aug. 29; Gaz. vol. 229; p. 1518.
Perforation-gage. A. H. Kirk. No. 1,194,749; Aug. 15; Gaz. vol. 229; p. 761.
Permutation-lock. I. F. Gorham. No. 1,194,286; Aug. 8; Gaz. vol. 229; p. 554.
Peroxid of hydrogen, Manufacture of. F. Cobellis. No. 1,195,560; Aug. 22; Gaz. vol. 229; p. 1083.
Petroleum and shale oils, Treating. H. W. Knottenbelt. No. 1,194,033; Aug. 8; Gaz. vol. 229; p. 467.
Petroleum hydrocarbons into lower-boiling petroleum hydrocarbons, Converting higher-boiling. G. W. Gray. No. 1,193,540; Aug. 8; Gaz. vol. 229; p. 291.
Petroleum hydrocarbons into lower-boiling petroleum hydrocarbons, Converting higher-boiling. G. W. Gray. No. 1,193,541; Aug. 8; Gaz. vol. 229; p. 291.
Phonograph. P. B. Delany. No. 1,193,242; Aug. 1; Gaz. vol. 229; p. 148.
Phonograph. C. H. Roop. No. 1,193,825; Aug. 8; Gaz. vol. 229; p. 395.
Phonograph-controlling device. B. B. Blood. No. 1,193,350; Aug. 1; Gaz. vol. 229; p. 187.
Phonograph or talking-machine. F. L. Dyer. No. 1,194,488; Aug. 15; Gaz. vol. 229; p. 672.
Phonographs and talking-machines, Diaphragm for. F. V. Morse. No. 1,194,056; Aug. 8; Gaz. vol. 229; p. 475.
Photograph-printing machine. H. C. Bunting and M. P. Anderson. No. 1,196,330; Aug. 29; Gaz. vol. 229; p. 1388.
Photographs in color and making the same. J. G. Capstaff. No. 1,196,080; Aug. 29; Gaz. vol. 229; p. 1304.
Photographic apparatus. W. C. Huebner. No. 1,195,225; Aug. 22; Gaz. vol. 229; p. 962.
Photographic developing-holder. L. L. Randall. No. 1,194,321; Aug. 8; Gaz. vol. 229; p. 568.
Photographic exposures, Apparatus for calculating. G. F. Wynne. No. 1,194,919; Aug. 15; Gaz. vol. 229; p. 820.
Photographic-film cartridge. A. F. Sulzer. No. 1,195,747; Aug. 22; Gaz. vol. 229; p. 1151.
Photographic-film cartridge. A. F. Sulzer. No. 1,195,746; Aug. 22; Gaz. vol. 229; p. 1151.
Photographic-printing frame. C. W. Martin. No. 1,193,584; Aug. 8; Gaz. vol. 229; p. 306.
Photography and cinematography, Color. F. W. Donisthorpe. No. 1,193,879; Aug. 8; Gaz. vol. 229; p. 415.
Photography and making the same, Sensitive plate for Röntgen. H. Arnold and M. Levy-Dorn. No. 1,195,432; Aug. 22; Gaz. vol. 229; p. 1038.
Photography, Color. A. N. Pierman. No. 1,196,718; Aug. 29; Gaz. vol. 229; p. 1523.
Photoplay, orchestral director. S. W. Lawton. No. 1,194,517; Aug. 15; Gaz. vol. 229; p. 681.
Piano-action. F. W. Lanchester. No. 1,194,754; Aug. 15; Gaz. vol. 229; p. 703.
Piano-action bearing. F. C. Billings. No. 1,193,861; Aug. 8; Gaz. vol. 229; p. 409.
Piano-bench. W. A. Watson. No. 1,194,449; Aug. 15; Gaz. vol. 229; p. 658.
Piano pedal, Player-. C. Gulbransen. No. 1,192,891; Aug. 1; Gaz. vol. 229; p. 21.
Piano-player. C. E. Peterson. No. 1,195,265; Aug. 22; Gaz. vol. 229; p. 977.
Piano-players, Accenting device for. L. W. Southgate. No. 1,193,939; Aug. 8; Gaz. vol. 229; p. 435.
Piano, Pneumatic player-. J. P. Caulfield. No. 1,196,518; Aug. 29; Gaz. vol. 229; p. 1453.
Pianos, Automatic pedal for player-. F. W. Draper. No. 1,194,282; Aug. 8; Gaz. vol. 229; p. 552.
Pick, Tamping-. A. H. Told. No. 1,192,956; Aug. 1; Gaz. vol. 229; p. 44.
Picker: *See*—
Cotton-picker. Peanut-picker.
Fruit-picker. Potato-picker.
Picker-stick lug-strap. J. F. Vaillancourt. No. 1,193,847; Aug. 8; Gaz. vol. 229; p. 403.
Pickling compound. A. J. M. Lasché. No. 1,194,756; Aug. 15; Gaz. vol. 229; p. 763.
Picture film, Motion-. L. Miller. No. 1,193,175; Aug. 1; Gaz. vol. 229; p. 123.
Picture films, Apparatus for repairing motion-. E. M. Bendheim. No. 1,195,175; Aug. 22; Gaz. vol. 229; p. 945.
Picture films, Automatic loop-maker for moving-. E. M. Wooden. No. 1,196,063; Aug. 29; Gaz. vol. 229; p. 1298.
Picture-frame. J. L. Murray. No. 1,194,217; Aug. 8; Gaz. vol. 229; p. 530.
Picture-frame. J. G. Roberts. No. 1,194,238; Aug. 8; Gaz. vol. 229; p. 537.
Picture machine, Moving-. P. F. Krug. No. 1,194,753; Aug. 15; Gaz. vol. 229; p. 762.
Picture machine, Moving-. A. J. R. MacDougall. No. 1,196,709; Aug. 29; Gaz. vol. 229; p. 1519.
Picture machines, Magazine for moving-. W. A. Dietze. (Reissue.) No. 14,174; Aug. 1; Gaz. vol. 229; p. 237.
Pictures, Apparatus for the realistic reproduction of aerial motion-. W. B. Hausman. No. 1,192,894; Aug. 1; Gaz. vol. 229; p. 22.
Pigment and paint, Aluminous. O. W. Pickering. No. 1,195,604; Aug. 22; Gaz. vol. 229; p. 1100.
Piling-board. J. Twaddle. No. 1,196,407; Aug. 29; Gaz. vol. 229; p. 1417.
Piling, Steel-concrete sheet-. F. T. Llewellyn. No. 1,193,033; Aug. 1; Gaz. vol. 229; p. 72.
Pillow, Bed-. L. C. Lowder. No. 1,194,200; Aug. 8; Gaz. vol. 229; p. 525.
Pin: *See*—
Clothes-pin. Insulator-pin.
Hair-pin. Line-pin.
Hat-pin. Safety-pin.
Pince-nez. H. Brinkhaus. No. 1,193,983; Aug. 8; Gaz. vol. 229; p. 451.
Pipe: *See*—
Cast-iron pipe.

Pipe-chest. B. R. Van Valkenburg. No. 1,195,536; Aug. 22; Gaz. vol. 229; p. 1074.
Pipe-clamp. M. M. Middaugh. No. 1,194,209; Aug. 8; Gaz. vol. 229; p. 528.
Pipe-cleaner. W. F. Frank. No. 1,193,005; Aug. 1; Gaz. vol. 229; p. 60.
Pipe-cleaning machine. W. Cohen. No. 1,196,525; Aug. 29; Gaz. vol. 229; p. 1456.
Pipe connection, Lead-. P. Mueller and A. C. Schuermann. No. 1,194,766; Aug. 15; Gaz. vol. 229; p. 766.
Pipe-coupling. L. S. Parker. No. 1,193,482; Aug. 1; Gaz. vol. 229; p. 232.
Pipe-coupling. L. S. Parker. No. 1,193,483; Aug. 1; Gaz. vol. 229; p. 232.
Pipe-coupling. C. J. Raticke. No. 1,193,923; Aug. 8; Gaz. vol. 229; p. 430.
Pipe coupling, Automatic train-. W. C. White. No. 1,195,120; Aug. 15; Gaz. vol. 229; p. 889.
Pipe coupling for railway-cars, Train-. J. Roncaglione. No. 1,194,074; Aug. 8; Gaz. vol. 229; p. 481.
Pipe coupling, Train-. L. G. Daniels and W. B. Kirkpatrick. No. 1,196,212; Aug. 29; Gaz. vol. 229; p. 1351.
Pipe-cutter. F. P. White. No. 1,193,853; Aug. 8; Gaz. vol. 229; p. 405.
Pipe housing, Flush-. J. F. Kelly. No. 1,195,685; Aug. 22; Gaz. vol. 229; p. 1129.
Pipe-line-connecting mechanism. F. H. Richards. No. 1,194,236; Aug. 8; Gaz. vol. 229; p. 537.
Pipe-reamer. D. H. Hosea and F. G. Schulze. No. 1,193,391; Aug. 1; Gaz. vol. 229; p. 202.
Pipe-wrench. D. W. Church. No. 1,195,558; Aug. 22; Gaz. vol. 229; p. 1083.
Pipe-wrench. J. W. Newman. No. 1,195,846; Aug. 22; Gaz. vol. 229; p. 1188.
Pipe-wrench. W. P. Staley. No. 1,194,563; Aug. 15; Gaz. vol. 229; p. 696.
Pipe-wrench. J. E. Stone. No. 1,193,308; Aug. 1; Gaz. vol. 229; p. 172.
Pipes, Cleaning. N. H. Raymond. No. 1,194,542; Aug. 15; Gaz. vol. 229; p. 689.
Pipes, Laying sectional. J. C. Mitchell. No. 1,195,147; Aug. 15; Gaz. vol. 229; p. 899.
Pipes, Valve for draining water from steam-. A. Baldwin. No. 1,196,418; Aug. 29; Gaz. vol. 229; p. 1420.
Pistol. R. Semple. No. 1,196,035; Aug. 29; Gaz. vol. 229; p. 1287.
Piston and piston-rod connection. C. White. No. 1,195,541; Aug. 22; Gaz. vol. 229; p. 1076.
Piston and piston-rod connection. C. White. No. 1,195,542; Aug. 22; Gaz. vol. 229; p. 1076.
Piston and piston-rod connection. C. White. No. 1,195,936; Aug. 22; Gaz. vol. 229; p. 1218.
Piston construction. C. Werra. No. 1,195,305; Aug. 22; Gaz. vol. 229; p. 993.
Piston-rings, Method of and means for shaping and tensioning. H. G. Peck. No. 1,193,920; Aug. 8; Gaz. vol. 229; p. 430.
Piston-rod guide and support. C. Norby. No. 1,195,847; Aug. 22; Gaz. vol. 229; p. 1189.
Piston-rod protector. D. J. O'Rourke. No. 1,193,481; Aug. 1; Gaz. vol. 229; p. 232.
Pistons, Constructing. C. Werra. No. 1,195,306; Aug. 22; Gaz. vol. 229; p. 993.
Pitchfork. C. Garber. No. 1,194,167; Aug. 8; Gaz. vol. 229; p. 514.
Pitman-rod. M. Norris. No. 1,193,814; Aug. 8; Gaz. vol. 229; p. 391.
Placer-machine. H. Fesenfeld. No. 1,193,248; Aug. 1; Gaz. vol. 229; p. 150.
Plaiting and bobbin machine. J. Krenmayr. No. 1,196,463; Aug. 29; Gaz. vol. 229; p. 1435.
Plane, Bench-. J. F. Bridges. No. 1,192,849; Aug. 1; Gaz. vol. 229; p. 8.
Plane, Carpenter's. G. D. Young. No. 1,196,198; Aug. 29; Gaz. vol. 229; p. 1346.
Planter. G. W. Behrend. No. 1,193,501; Aug. 8; Gaz. vol. 229; p. 276.
Planter attachment, Corn-. W. J. Walsh. No. 1,194,686; Aug. 15; Gaz. vol. 229; p. 739.
Planter attachment, Corn-. A. Wynne. No. 1,195,890; Aug. 22; Gaz. vol. 229; p. 1203.
Planter, Corn-. J. T. McClain. No. 1,193,281; Aug. 1; Gaz. vol. 229; p. 163.
Planter, Corn-. H. J. Morrison. No. 1,193,811; Aug. 8; Gaz. vol. 229; p. 390.
Plastic composition. T. D. Kelly. No. 1,194,184; Aug. 8; Gaz. vol. 229; p. 520.
Plastic composition. O. O. Stone. No. 1,196,610; Aug. 29; Gaz. vol. 229; p. 1486.
Plastic composition for making paving-brick, building-brick, and building-tile. E. V. Wagner. No. 1,193,952; Aug. 8; Gaz. vol. 229; p. 440.
Plastic material, Apparatus for forcing bodies from. J. W. Brown. No. 1,193,507; Aug. 8; Gaz. vol. 229; p. 278.
Plastic, Producing articles of a vulcanizable. A. G. Emery. No. 1,193,883; Aug. 8; Gaz. vol. 229; p. 416.
Platen connection, Yielding. P. V. Simpson. No. 1,193,934; Aug. 8; Gaz. vol. 229; p. 434.
Plates, Threading slotted. R. E. Russey. No. 1,192,939; Aug. 1; Gaz. vol. 229; p. 38.
Platinum catalyzer. W. S. Landis. No. 1,193,799; Aug. 8; Gaz. vol. 229; p. 386.
Playing-ball. W. R. Knight. No. 1,194,751; Aug. 15; Gaz. vol. 229; p. 761.
Pliers. E. J. Swanson. No. 1,195,932; Aug. 22; Gaz. vol. 229; p. 1217.
Plow. H. L. Gaines. No. 1,194,166; Aug. 8; Gaz. vol. 229; p. 513.
Plow. J. E. Henry. No. 1,193,261; Aug. 1; Gaz. vol. 229; p. 155.
Plow, Gang-. M. J. Ryan and J. Kiel. No. 1,196,293; Aug. 29; Gaz. vol. 229; p. 1375.
Plow, Land-breaking. A. Reed. No. 1,195,397; Aug. 22; Gaz. vol. 229; p. 1026.
Plow, Wheel-. C. Esping. No. 1,196,222; Aug. 29; Gaz. vol. 229; p. 1354.
Plow, Wheeled. L. E. Waterman. No. 1,194,582; Aug. 15; Gaz. vol. 229; p. 703.
Plows, Foot-trip attachment for sulky-. H. L. Terhune. No. 1,195,870; Aug. 22; Gaz. vol. 229; p. 1197.
Plows, Harrow attachment for. W. Zimmermann, Jr. No. 1,196,631; Aug. 29; Gaz. vol. 229; p. 1492.
Plowing-cylinder, Rotary. C. C. Reed. No. 1,194,067; Aug. 8; Gaz. vol. 229; p. 479.
Plug, Casing-. R. W. Cushing. No. 1,193,769; Aug. 8; Gaz. vol. 229; p. 376.
Plug, Connecting-. H. P. Ball. No. 1,194,122; Aug. 8; Gaz. vol. 229; p. 498.
Plug, Electric. G. H. Buckley. No. 1,194,137; Aug. 8; Gaz. vol. 229; p. 503.
Plug fitting, Attachment-. A. H. Nero. No. 1,194,218; Aug. 8; Gaz. vol. 229; p. 530.
Pneumatic-despatch-tube carrier. A. W. Pearsall. No. 1,195,716; Aug. 22; Gaz. vol. 229; p. 1140.
Pneumatic wheel. W. T. Newman. No. 1,195,148; Aug. 15; Gaz. vol. 229; p. 900.
Poison-indicator. J. Burch. No. 1,194,948; Aug. 15; Gaz. vol. 229; p. 831.
Poison-indicator. T. H. and J. V. Cox. No. 1,194,481; Aug. 15; Gaz. vol. 229; p. 669.
Poison on plants, Machine for blowing powdered. P. Callahan. No. 1,192,858; Aug. 1; Gaz. vol. 229; p. 10.
Poker. A. E. Vézina. No. 1,193,950; Aug. 8; Gaz. vol. 229; p. 439.
Pole, Sheet-metal. J. C. Knoll. No. 1,195,993; Aug. 29; Gaz. vol. 229; p. 1272.
Polishing composition. I. Bernitz. No. 1,196,508; Aug. 29; Gaz. vol. 229; p. 1450.
Polishing-machine. L. H. Brinkman. No. 1,193,453; Aug. 1; Gaz. vol. 229; p. 222.
Polishing-wheel. W. E. Hedler. No. 1,196,234; Aug. 29; Gaz. vol. 229; p. 1358.
Poncho. E. W. Swan. No. 1,193,443; Aug. 1; Gaz. vol. 229; p. 218.
Pool-table pocket. G. A. Jaeger. No. 1,192,902; Aug. 1; Gaz. vol. 229; p. 25.
Pop-gun. D. Heyman and T. R. Arden. No. 1,196,235; Aug. 29; Gaz. vol. 229; p. 1358.
Popcorn-machine. J. I. Holcomb and J. F. Hoke, Jr. No. 1,195,017; Aug. 15; Gaz. vol. 229; p. 856.
Porcelain, Apparatus for casting. L. J. Weinstein. No. 1,193,645; Aug. 8; Gaz. vol. 229; p. 331.
Portable and collapsible closet. M. E. Buckley. No. 1,193,867; Aug. 8; Gaz. vol. 229; p. 411.
Portable furnace. A. E. Brown. No. 1,194,131; Aug. 8; Gaz. vol. 229; p. 501.
Portfolio, Pocket-. F. B. Gee. No. 1,195,457; Aug. 22; Gaz. vol. 229; p. 1047.
Portraying games or other events, Apparatus for graphically. C. H. Wilson. No. 1,193,745; Aug. 8; Gaz. vol. 229; p. 367.
Post: *See*—
Binder-post.
Binding-post.
Fence-post.
Hitching-post.
Turret top-post.
Post-card or picture hanger. R. H. Cabell, Jr. No. 1,196,332; Aug. 29; Gaz. vol. 229; p. 1389.
Post-hole digger. C. W. Garrett. No. 1,192,884; Aug. 1; Gaz. vol. 229; p. 19.
Pot: *See*—
Dash-pot.
Flower-pot.
Tea and coffee pot.
Potassium salt from insoluble silicates, Producing a. H. P. Bassett. No. 1,194,464; Aug. 15; Gaz. vol. 229; p. 603.
Potato-cutter. W. S. Small. No. 1,193,437; Aug. 1; Gaz. vol. 229; p. 216.
Potato-digger. J. Bornhauser. No. 1,196,075; Aug. 29; Gaz. vol. 229; p. 1302.
Potato-picker. J. J. Richter. No. 1,193,189; Aug. 1; Gaz. vol. 229; p. 129.
Powder container, Toilet-. J. W. Beckmann. No. 1,193,223; Aug. 1; Gaz. vol. 229; p. 141.
Powder, Producing tungsten. F. G. Keyes and R. B. Brownlee. No. 1,196,699; Aug. 29; Gaz. vol. 229; p. 1515.
Powder-receptacle. R. S. Williams. No. 1,196,624; Aug. 29; Gaz. vol. 229; p. 1490.
Power-distributing mechanism. G. Anderson. No. 1,195,895; Aug. 22; Gaz. vol. 229; p. 1205.
Power-drill. A. G. Boyd. No. 1,193,981; Aug. 8; Gaz. vol. 229; p. 450.
Power mechanism. J. R. Etter. No. 1,195,665; Aug. 22; Gaz. vol. 229; p. 1121.
Power transmission. A. Brook, Jr., and A. J. Mottlau. No. 1,195,335; Aug. 22; Gaz. vol. 229; p. 1004.
Power transmission and control. L. W. Nelson. No. 1,196,713; Aug. 29; Gaz. vol. 229; p. 1521.

Power-transmission device. E. Braden. No. 1,196,328; Aug. 29; Gaz. vol. 229; p. 1387.
Power-transmission mechanism. C. E. Wright. No. 1,194,113; Aug. 8; Gaz. vol. 229; p. 495.
Power-transmitter. J. S. Finch. No. 1,196,535; Aug. 29; Gaz. vol. 229; p. 1460.
Power-transmitter. A. A. Merritt. No. 1,196,469; Aug. 29; Gaz. vol. 229; p. 1437.
Power-transmitting means. R. W. Barker. No. 1,195,552; Aug. 22; Gaz. vol. 229; p. 1080.
Power-transmitting means. R. J. Dearborn. No. 1,196,089; Aug. 29; Gaz. vol. 229; p. 1307.
Power-transmitting mechanism for use in connection with swinging seats. E. E. Clark. No. 1,193,237; Aug. 1; Gaz. vol. 229; p. 146.
Preheater. S. H. Tacy. No. 1,193,844; Aug. 8; Gaz. vol. 229; p. 402.
Preserving vessel or boiler for fruit, &c. O. M. Fagley. No. 1,194,002; Aug. 8; Gaz. vol. 229; p. 457.
Press: *See*—
Button-making press.
Cotton-press.
Embossing-press.
Fruit-press.
Hat-press.
Hay-press.
Hydraulic press.
Oil-press.
Transfer-press.
Press. E. H. Alvord. No. 1,194,266; Aug. 8; Gaz. vol. 229; p. 547.
Press. N. W. Thomas. No. 1,194,575; Aug. 15; Gaz. vol. 229; p. 701.
Press starting and stopping mechanism. J. Gouldbourn and A. Bates. No. 1,194,379; Aug. 15; Gaz. vol. 229; p. 631.
Presses, Safety-feed for. C. L. Heisler. No. 1,195,987; Aug. 29; Gaz. vol. 229; p. 1269.
Pressing-machine. L. Hoffman. No. 1,196,112; Aug. 29; Gaz. vol. 229; p. 1314.
Pressure-chambers, Closure for. C. E. Wentzel. No. 1,194,798; Aug. 15; Gaz. vol. 229; p. 779.
Pressure-gage. R. N. Trane. No. 1,195,750; Aug. 22; Gaz. vol. 229; p. 1153.
Pressure-gage and inflating device, Combined. J. W. Frazier and F. E. Hansen. No. 1,196,226; Aug. 29; Gaz. vol. 229; p. 1355.
Pressure-gage, Safety. F. A. Schroeder. No. 1,196,142; Aug. 29; Gaz. vol. 229; p. 1325.
Pressure-lubricator, Sight-feed. R. A. Thom. No. 1,196,687; Aug. 29; Gaz. vol. 229; p. 1511.
Pressure-regulator. L. West. No. 1,196,193; Aug. 29; Gaz. vol. 229; p. 1344.
Pressure-regulator, Brake-cylinder. W. V. Turner. No. 1,194,442; Aug. 15; Gaz. vol. 229; p. 655.
Primary cell. W. Tassin. No. 1,196,611; Aug. 29; Gaz. vol. 229; p. 1486.
Priming-cup. E. W. Roberts. No. 1,193,925; Aug. 8; Gaz. vol. 229; p. 431.
Priming or detonating composition. M. R. Swope. No. 1,194,095; Aug. 8; Gaz. vol. 229; p. 488.
Printers' leads or rules, Means for making. C. C. Hockman. No. 1,193,388; Aug. 1; Gaz. vol. 229; p. 200.
Printing and dispensing device, Automatic tape-strip. S. Nager, Jr. No. 1,193,589; Aug. 8; Gaz. vol. 229; p. 308.
Printing and issuing machine, Ticket. A. J. Jung. No. 1,194,026; Aug. 8; Gaz. vol. 229; p. 465.
Printing apparatus. H. G. Mittelstaedt. No. 1,194,410; Aug. 15; Gaz. vol. 229; p. 642.
Printing apparatus, Raised-. S. Lipsius. No. 1,194,647; Aug. 15; Gaz. vol. 229; p. 725.
Printing-frame. J. Q. Adams. No. 1,194,117; Aug. 8; Gaz. vol. 229; p. 496.
Printing-machine. H. E. Barroll. No. 1,196,729; Aug. 29; Gaz. vol. 229; p. 1527.
Printing-machine. F. H. Quade, Jr. No. 1,195,853; Aug. 22; Gaz. vol. 229; p. 1191.
Printing machine, Block-. G. Prifold. No. 1,193,422; Aug. 1; Gaz. vol. 229; p. 212.
Printing-machine, Rotary. R. P. Payne. No. 1,194,416; Aug. 15; Gaz. vol. 229; p. 644.
Printing-machine type-plate. D. C. Hughes. No. 1,195,226; Aug. 22; Gaz. vol. 229; p. 962.
Printing machine, Warp-. J. Zimmermann. No. 1,195,322; Aug. 22; Gaz. vol. 229; p. 999.
Printing machine, Wrapping-paper-roll-. E. Lipiner. No. 1,192,913; Aug. 1; Gaz. vol. 229; p. 29.
Printing machines, Latch mechanism for bulletin-. K. A. A. Staahlgren. No. 1,193,081; Aug. 1; Gaz. vol. 229; p. 89.
Printing mechanism. B. F. Jolini. No. 1,195,992; Aug. 29; Gaz. vol. 229; p. 1271.
Printing mechanism for adding-machines. J. C. Lotterhand. (Reissue.) No. 14,185; Aug. 22; Gaz. vol. 229; p. 1226.
Printing-press appliance. J. E. Doyle. No. 1,196,090; Aug. 29; Gaz. vol. 229; p. 1307.
Printing-press bed-motion. C. J. Robertson. No. 1,193,719; Aug. 8; Gaz. vol. 229; p. 358.
Printing-press inking device. D. W. Frackelton, R. S. Tyler, and W. M. Reichart. No. 1,194,004; Aug. 8; Gaz. vol. 229; p. 457.
Printing-presses, Automatic roller-support for platen. W. W. Drummond. No. 1,196,531; Aug. 29; Gaz. vol. 229; p. 1458.
Printing-presses, Suction-nozzle attachment for. J. E. Doyle and F. M. Case. No. 1,196,438; Aug. 29; Gaz. vol. 229; p. 1426.
Printing-presses, Suction-nozzle heater for. J. E. Doyle. No. 1,196,440; Aug. 29; Gaz. vol. 229; p. 1427.
Prod-pole, Electric. R. E. Martin. No. 1,193,168; Aug. 1; Gaz. vol. 229; p. 121.
Projectile, Elongated. B. F. de Casanovas and R. Rubió y Roger. No. 1,194,363; Aug. 15; Gaz. vol. 229; p. 625.
Projecting-machines, Holder for. G. J. Holl. No. 1,193,689; Aug. 8; Gaz. vol. 229; p. 346.
Projection apparatus. C. De Proszynski. No. 1,193,998; Aug. 8; Gaz. vol. 229; p. 455.
Projector. R. L. Carlson and R. C. Wyman. No. 1,196,517; Aug. 29; Gaz. vol. 229; p. 1453.
Propeller. R. Tanner. No. 1,195,624; Aug. 22; Gaz. vol. 229; p. 1107.
Propeller for ships, Spiral. J. J. Tobin and F. J. Gallagher. No. 1,196,176; Aug. 29; Gaz. vol. 229; p. 1338.
Propelling and controlling mechanism. V. W. Pagé. No. 1,193,919; Aug. 8; Gaz. vol. 229; p. 429.
Propelling mechanism, Boat-. J. C. Caldwell. No. 1,195,652; Aug. 22; Gaz. vol. 229; p. 1117.
Protective device. A. Purdon. No. 1,194,228; Aug. 8; Gaz. vol. 229; p. 534.
Protective element. F. H. Grant. No. 1,193,013; Aug. 1; Gaz. vol. 229; p. 64.
Protractor. W. C. Lefebvre. No. 1,193,801; Aug. 8; Gaz. vol. 229; p. 387.
Protractor. M. N. Pilgren. No. 1,196,581; Aug. 29; Gaz. vol. 229; p. 1475.
Pruning-shears. A. W. Poole. No. 1,196,278; Aug. 29; Gaz. vol. 229; p. 1372.
Puller: *See*—
Spike-puller.
Staple-puller.
Stump-puller.
Pulley. G. D. Harding. No. 1,195,215; Aug. 22; Gaz. vol. 229; p. 959.
Pulley. J. H. Morgan. No. 1,193,177; Aug. 1; Gaz. vol. 229; p. 124.
Pulley. E. Schumacher. No. 1,194,553; Aug. 15; Gaz. vol. 229; p. 693.
Pulley and actuating mechanism. W. L. Yates. No. 1,193,214; Aug. 1; Gaz. vol. 229; p. 137.
Pulley and corn-tipper, Combined. C. Graves. No. 1,193,378; Aug. 1; Gaz. vol. 229; p. 197.
Pulleys, Making steel. N. Barry. No. 1,194,589; Aug. 15; Gaz. vol. 229; p. 706.
Pulp and for separating pulp fibers from impurities, Apparatus for washing. B. W. Petsche. No. 1,193,605; Aug. 8; Gaz. vol. 229; p. 315.
Pulp-mills, Treating waste liquors from. E. L. Rinman. No. 1,196,290; Aug. 29; Gaz. vol. 229; p. 1375.
Pulsating apparatus. W. A. Smith. No. 1,196,040; Aug. 29; Gaz. vol. 229; p. 1289.
Pulverizer. C. E. Spaulding. No. 1,196,606; Aug. 29; Gaz. vol. 229; p. 1484.
Pulverizer, Land-. J. S. Cooper. No. 1,196,432; Aug. 29; Gaz. vol. 229; p. 1424.
Pump. T. S. Belyea. No. 1,192,978; Aug. 1; Gaz. vol. 229; p. 50.
Pump and cleaner for acetylene-gas generators. M. E. Loehr. No. 1,193,907; Aug. 8; Gaz. vol. 229; p. 424.
Pump and motor, Combined. R. Maw and W. B. McLean. No. 1,193,283; Aug. 1; Gaz. vol. 229; p. 163.
Pump and support therefor. C. Urbanski. No. 1,195,878; Aug. 22; Gaz. vol. 229; p. 1199.
Pump and the like, Two-cycle gas-. E. Brown. No. 1,194,706; Aug. 15; Gaz. vol. 229; p. 746.
Pump, Deep-well. C. W. Bartholmes. No. 1,193,752; Aug. 8; Gaz. vol. 229; p. 369.
Pump-drill. G. H. Gilman. No. 1,195,350; Aug. 22; Gaz. vol. 229; p. 1010.
Pump, Engine-driven air-. J. K. Stewart. No. 1,196,609; Aug. 29; Gaz. vol. 229; p. 1485.
Pump, Force-. M. Block. No. 1,193,476; Aug. 1; Gaz. vol. 229; p. 230.
Pump-piston. G. T. Randolph. No. 1,196,584; Aug. 29; Gaz. vol. 229; p. 1476.
Pump-piston. G. H. Wrightson, Jr. No. 1,195,546; Aug. 22; Gaz. vol. 229; p. 1078.
Pump-plunger. A. E. Preston. No. 1,195,395; Aug. 22; Gaz. vol. 229; p. 1025.
Pump, Rotary. W. A. Simond. (Reissue.) No. 14,180; Aug. 8; Gaz. vol. 229; p. 578.
Pump, Suction-. C. F. Brandenberger and M. W. Reuther. No. 1,194,705; Aug. 15; Gaz. vol. 229; p. 745.
Pump, Triplex. F. A. Dew. No. 1,193,244; Aug. 1; Gaz. vol. 229; p. 148.
Pump-valve, Pressure-regulating. F. J. Larsen. No. 1,196,121; Aug. 29; Gaz. vol. 229; p. 1317.
Pump, Wet air-. O. C. Buss. No. 1,192,854; Aug. 1; Gaz. vol. 229; p. 9.
Pumps, Cushioning and oiling means for deep-well. R. M. Downie. No. 1,194,366; Aug. 15; Gaz. vol. 229; p. 626.
Pumps, Quantity-stop for dispensing-. J. B. Davis. No. 1,194,331; Aug. 8; Gaz. vol. 229; p. 572.
Pumping apparatus for molten lead or other fusible substances. C. P. Bary. No. 1,193,859; Aug. 8; Gaz. vol. 229; p. 408.
Punch, Quick-setting. H. Hollerith. No. 1,193,390; Aug. 1; Gaz. vol. 229; p. 201.
Punching and affixing characters and the like of paper, Machine for. W. Bauchwitz. No. 1,194,268; Aug. 8; Gaz. vol. 229; p. 547.
Punching-machine. P. B. Klugh. No. 1,195,477; Aug. 22; Gaz. vol. 229; p. 1053.

Purse, Coin-. F. Evans. No. 1,193,771; Aug. 8; Gaz. vol. 229; p. 377.
Push contact-switch. E. A. Manville. No. 1,196,569; Aug. 29; Gaz. vol. 229; p. 1471.
Puzzle-rattle. A. Morse. No. 1,194,216; Aug. 8; Gaz. vol. 229; p. 530.
Pyrometer. G. F. Machlet. No. 1,193,911; Aug. 8; Gaz. vol. 229; p. 426.
Pyrotechnical composition, Making a. M. Magnard. (Reissue.) No. 14,177; Aug. 1; Gaz. vol. 229; p. 239.
Pyroxylin compositions, Producing. C. E. Arnold. No. 1,195,431; Aug. 22; Gaz. vol. 229; p. 1038.
Quick-adjusting wrench. A. Carp. No. 1,193,509; Aug. 8; Gaz. vol. 229; p. 279.
Quicksilver from its ore, Apparatus for recovering. W. H. Landers. No. 1,195,236; Aug. 22; Gaz. vol. 229; p. 966.
Quilting-machine. R. Sumner. No. 1,194,254; Aug. 8; Gaz. vol. 229; p. 543.
Quoit. W. J. Martin. No. 1,193,040; Aug. 1; Gaz. vol. 229; p. 74.
Rack: *See*—
Automobile luggage-rack. Tire-rack.
Paper-bag rack. Towel-rack.
Supporting-rack.
Rack and pinion. E. D. Schmitt. No. 1,196,159; Aug. 29; Gaz. vol. 229; p. 1331.
Radiator. J. R. White. No. 1,194,909; Aug. 15; Gaz. vol. 229; p. 816.
Radiator, Luminous. A. J. Geiger. No. 1,194,168; Aug. 8; Gaz. vol. 229; p. 514.
Radiator-protector. H. Skreberg. No. 1,196,403; Aug. 29; Gaz. vol. 229; p. 1415.
Radio transmission systems, Receiving apparatus for. A. H. Grebe. No. 1,193,778; Aug. 8; Gaz. vol. 229; p. 379.
Radiotelegraph system, Multiplex. E. H. Colpitts. No. 1,194,820; Aug. 15; Gaz. vol. 229; p. 786.
Radium ore, Concentrating. H. Schlundt. No. 1,194,669; Aug. 15; Gaz. vol. 229; p. 732.
Rail. S. Humphrey. No. 1,193,150; Aug. 1; Gaz. vol. 229; p. 115.
Rail-anchor. E. Laas. No. 1,193,904; Aug. 8; Gaz. vol. 229; p. 423.
Rail-anchor. J. M. Scott. No. 1,193,079; Aug. 1; Gaz. vol. 229; p. 89.
Rail-anchor. J. M. Scott. No. 1,194,673; Aug. 15; Gaz. vol. 229; p. 734.
Rail-anchor. A. L. Stanford. No. 1,196,488; Aug. 29; Gaz. vol. 229; p. 1444.
Rail-anticreeper. B. B. Betts. No. 1,195,769; Aug. 22; Gaz. vol. 229; p. 1161.
Rail-anticreeper. B. B. Betts. No. 1,195,770; Aug. 22; Gaz. vol. 229; p. 1161.
Rail-anticreeper. H. D. Flegel and J. Hubenthal. No. 1,195,669; Aug. 22; Gaz. vol. 229; p. 1124.
Rail-antispreading device. A. Loth. No. 1,193,572; Aug. 8; Gaz. vol. 229; p. 301.
Rail-brake for railway-cars. E. Rammelsberg. No. 1,195,086; Aug. 15; Gaz. vol. 229; p. 878.
Rail-chair. R. Thompson. No. 1,195,625; Aug. 22; Gaz. vol. 229; p. 1107.
Rail clamp and chair, Combined. J. W. Birdsong. No. 1,196,423; Aug. 29; Gaz. vol. 229; p. 1422.
Rail clamping and fastening device. W. D. Cranney. No. 1,196,339; Aug. 29; Gaz. vol. 229; p. 1392.
Rail-coupling, Boltless. G. Probst. No. 1,196,025; Aug. 29; Gaz. vol. 229; p. 1284.
Rail-drill, Portable. C. J. Coulter. No. 1,193,240; Aug. 1; Gaz. vol. 229; p. 147.
Rail-fastener. C. B. Moody. No. 1,193,286; Aug. 1; Gaz. vol. 229; p. 164.
Rail fastening and tie. G. W. Fairman. No. 1,195,922; Aug. 22; Gaz. vol. 229; p. 1214.
Rail-holding means. E. E. Davenport. No. 1,195,564; Aug. 22; Gaz. vol. 229; p. 1085.
Rail-joint. A. C. and S. R. Eckel. No. 1,196,441; Aug. 29; Gaz. vol. 229; p. 1427.
Rail-joint. A. Erickson. No. 1,194,283; Aug. 8; Gaz. vol. 229; p. 553.
Rail-joint. E. F. Fitzgerald. No. 1,195,668; Aug. 22; Gaz. vol. 229; p. 1123.
Rail-joint. C. Hohman. No. 1,194,499; Aug. 15; Gaz. vol. 229; p. 676.
Rail-joint. J. H. Johnson. No. 1,195,475; Aug. 22; Gaz. vol. 229; p. 1052.
Rail-joint. W. Scott. No. 1,195,406; Aug. 22; Gaz. vol. 229; p. 1029.
Rail-joint. L. M. Snodgrass. No. 1,193,937; Aug. 8; Gaz. vol. 229; p. 435.
Rail-joint. W. P. Thomson. No. 1,195,872; Aug. 22; Gaz. vol. 229; p. 1197.
Rail joint, Clamp-. M. Tanimine. No. 1,194,574; Aug. 15; Gaz. vol. 229; p. 700.
Rail-joint, Emergency. M. Grega. No. 1,194,731; Aug. 15; Gaz. vol. 229; p. 755.
Rail-joint, Insulated. B. Wolhaupter. No. 1,196,412; Aug. 29; Gaz. vol. 229; p. 1418.
Rail-spike. E. Y. Lynch. No. 1,194,047; Aug. 8; Gaz. vol. 229; p. 472.
Rails, Splicing. E. J. Cook. No. 1,193,238; Aug. 1; Gaz. vol. 229; p. 146.
Railway-brake appliance. J. Price. No. 1,195,084; Aug. 15; Gaz. vol. 229; p. 878.
Railway-carriages, Gas-distributing system for. G. Dalén. No. 1,195,132; Aug. 15; Gaz. vol. 229; p. 894.
Railway construction. E. Heydon. No. 1,196,689; Aug. 29; Gaz. vol. 229; p. 1512.
Railway cross-tie, Concrete. J. H. C. Wolf. No. 1,195,634; Aug. 22; Gaz. vol. 229; p. 1110.
Railway-crossing. H. Rust. No. 1,195,402; Aug. 22; Gaz. vol. 229; p. 1028.
Railway-crossing. R. C. Sutphin. No. 1,196,046; Aug. 29; Gaz. vol. 229; p. 1291.
Railway crossing, Street-. T. C. MacAllister. No. 1,195,700; Aug. 22; Gaz. vol. 229; p. 1134.
Railway draft-gear. W. J. Morris. No. 1,193,288; Aug. 1; Gaz. vol. 229; p. 165.
Railway-gate, Automatic. J. Briggs. No. 1,194,594; Aug. 15; Gaz. vol. 229; p. 707.
Railway, Overhead. F. S. Parker. No. 1,196,717; Aug. 29; Gaz. vol. 229; p. 1522.
Railway-rail fastening. T. H. Kruse. No. 1,194,511; Aug. 15; Gaz. vol. 229; p. 680.
Railway-rails to cement foundations, Means for connecting. J. B. Lott. No. 1,193,573; Aug. 8; Gaz. vol. 229; p. 302.
Railway rerailing-frog. R. M. Taylor. No. 1,194,257; Aug. 8; Gaz. vol. 229; p. 544.
Railway safety device. A. H. Simms. No. 1,195,282; Aug. 22; Gaz. vol. 229; p. 984.
Railway-signal. J. P. Coleman. No. 1,194,715; Aug. 15; Gaz. vol. 229; p. 748.
Railway-signal. S. B. Whitehead and G. A. Castle. No. 1,193,099; Aug. 1; Gaz. vol. 229; p. 96.
Railway-signal-actuating mechanism. H. A. and J. A. Hoeschen. No. 1,196,236; Aug. 29; Gaz. vol. 229; p. 1358.
Railway-signal, Electric. H. J. Faubel and W. Roach. No. 1,194,981; Aug. 15; Gaz. vol. 229; p. 842.
Railway signal and stopping mechanism. F. C. Williams. No. 1,196,196; Aug. 29; Gaz. vol. 229; p. 1345.
Railway signal system. A. W. Reinhardt. No. 1,192,983; Aug. 1; Gaz. vol. 229; p. 36.
Railway signaling. H. D. Abernethy. No. 1,194,116; Aug. 8; Gaz. vol. 229; p. 496.
Railway signaling. P. H. Thomas. No. 1,193,083; Aug. 1; Gaz. vol. 229; p. 90.
Railway signaling system. C. J. Coleman. No. 1,194,714; Aug. 15; Gaz. vol. 229; p. 748.
Railway-spike. L. E. Erickson. No. 1,195,452; Aug. 22; Gaz. vol. 229; p. 1045.
Railway-switch. F. M. Freeburg. No. 1,193,887; Aug. 8; Gaz. vol. 229; p. 418.
Railway-switch. R. A. Teller. No. 1,194,441; Aug. 15; Gaz. vol. 229; p. 654.
Railway-switch, Automatic. F. L. Harmon. No. 1,192,892; Aug. 1; Gaz. vol. 229; p. 22.
Railway-switch, Automatic. R. E. Merrell. No. 1,195,061; Aug. 15; Gaz. vol. 229; p. 870.
Railway system, Electrically propelled and controlled. G. P. Thurber. No. 1,195,534; Aug. 22; Gaz. vol. 229; p. 1073.
Railway-tie. T. P. Kirby. No. 1,193,398; Aug. 1; Gaz. vol. 229; p. 204.
Railway-tie. J. Postel, Jr., and M. B. Dickens. No. 1,194,227; Aug. 8; Gaz. vol. 229; p. 534.
Railway-tie. E. H. Walker. No. 1,195,302; Aug. 22; Gaz. vol. 229; p. 992.
Railway-tie and brace. J. G. Smith. No. 1,193,080; Aug. 1; Gaz. vol. 229; p. 89.
Railway-tie, Concrete. L. Duncan. No. 1,195,791; Aug. 22; Gaz. vol. 229; p. 1168.
Railway-tie, Metallic. J. A. Hyle. No. 1,194,843; Aug. 15; Gaz. vol. 229; p. 793.
Railway-track construction. C. W. Bagby. No. 1,195,898; Aug. 22; Gaz. vol. 229; p. 1206.
Railway-trains, System for automatic control of. B. C. Rowell. No. 1,193,471; Aug. 1; Gaz. vol. 229; p. 228.
Railway-vehicle, Electric. K. von Kando. No. 1,194,099; Aug. 8; Gaz. vol. 229; p. 489.
Railway-working, Audible signaling device for. E. Kirk. No. 1,194,190; Aug. 8; Gaz. vol. 229; p. 522.
Railways, Magnetic detector apparatus for. A. H. Fox and A. W. Lenderoth. No. 1,193,773; Aug. 8; Gaz. vol. 229; p. 378.
Rake: *See*—
Side-delivery rake.
Rake. E. M. Green. No. 1,194,995; Aug. 15; Gaz. vol. 229; p. 847.
Rake-cleaning device. J. P. Welsch. No. 1,195,885; Aug. 22; Gaz. vol. 229; p. 1201.
Rake tooth, Hay-. H. Flakus. No. 1,194,988; Aug. 15; Gaz. vol. 229; p. 845.
Range, Combined gas and coal. M. L. Packer. No. 1,193,714; Aug. 8; Gaz. vol. 229; p. 356.
Range-finder or oreograph. F. Andersen. No. 1,196,417; Aug. 29; Gaz. vol. 229; p. 1420.
Ranges and the like, Air-feeding attachment for coal-. R. Lacourse. No. 1,196,738; Aug. 29; Gaz. vol. 229; p. 1531.
Rat-trap. J. Schack. No. 1,194,079; Aug. 8; Gaz. vol. 229; p. 483.
Ratchet-wrench. J. E. Trubey. No. 1,195,294; Aug. 22; Gaz. vol. 229; p. 989.
Ratchet-wrench, Combination. S. A. Boosinger. No. 1,194,471; Aug. 15; Gaz. vol. 229; p. 666.
Raveling pick-up. E. J. Feeny. No. 1,195,455; Aug. 22; Gaz. vol. 229; p. 1046.

Razor-hone. A. A. Francis and R. F. Hill. No. 1,194,162; Aug. 8; Gaz. vol. 229; p. 512.
Razor, Safety-. J. Molkenthin, Jr. No. 1,196,576; Aug. 29; Gaz. vol. 229; p. 1474.
Razor, Safety-. W. E. O'Reilly. No. 1,195,259; Aug. 22; Gaz. vol. 229; p. 974.
Razor, Safety-. F. W. Wood. No. 1,193,655; Aug. 8; Gaz. vol. 229; p. 334.
Razor-stropping device. D. E. Lochman. No. 1,194,402; Aug. 15; Gaz. vol. 229; p. 639.
Reading-key for traverse-tables. R. S. Blitz. No. 1,195,772; Aug. 22; Gaz. vol. 229; p. 1162.
Reamer. A. A. Martell. No. 1,193,583; Aug. 8; Gaz. vol. 229; p. 306.
Receptacle. W. H. Huffman. No. 1,198,692; Aug. 8; Gaz. vol. 229; p. 347.
Receptacle. G. F. Hullings. No. 1,195,358; Aug. 22; Gaz. vol. 229; p. 1013.
Receptacle. G. R. West. No. 1,194,799; Aug. 15; Gaz. vol. 229; p. 779.
Receptacle-cap. W. G. Kendall. No. 1,194,186; Aug. 8; Gaz. vol. 229; p. 520.
Receptacle-support and cover operating and locking means. L. J. Davis. No. 1,195,566; Aug. 22; Gaz. vol. 229; p. 1086.
Recessing-machine. A. C. Spencer and A. Eppler. No. 1,196,043; Aug. 29; Gaz. vol. 229; p. 1290.
Reciprocating motor. W. H. Baker. No. 1,195,549; Aug. 22; Gaz. vol. 229; p. 1079.
Reclining-chair. C. I. Lattig. No. 1,196,371; Aug. 29; Gaz. vol. 229; p. 1403.
Record-disks, Apparatus for cutting grooves in. R. Schiffman. No. 1,195,101; Aug. 15; Gaz. vol. 229; p. 883.
Recorder: *See*—
Electrical recorder. Music-recorder.
Recorder. J. W. Bryce. No. 1,195,972; Aug. 29; Gaz. vol. 229; p. 1264.
Recorder. A. A. Clokey. No. 1,196,335; Aug. 29; Gaz. vol. 229; p. 1390.
Recording device. C. L. Goodrum. No. 1,194,378; Aug. 15; Gaz. vol. 229; p. 630.
Recording mechanism. F. C. Rinsche. No. 1,195,608; Aug. 22; Gaz. vol. 229; p. 1101.
Rectifier, Electrical. C. M. Wall. No. 1,193,641; Aug. 8; Gaz. vol. 229; p. 329.
Recuperator-wall. A. Roberts. No. 1,193,069; Aug. 1; Gaz. vol. 229; p. 85.
Reel: *See*—
Drying-reel. Header-reel.
Eyeglass-reel. Hose-reel.
Reel-slat, Clean-sweep. G. A. Holm. No. 1,196,237; Aug. 29; Gaz. vol. 229; p. 1358.
Refractor, Compound prismatic. E. G. Johanson. No. 1,194,294; Aug. 8; Gaz. vol. 229; p. 557.
Refrigerating apparatus. G. I. Leonard. No. 1,193,161; Aug. 1; Gaz. vol. 229; p. 119.
Refrigerating apparatus. T. M. Myers. No. 1,195,844; Aug. 22; Gaz. vol. 229; p. 1187.
Refrigerating-apparatus control device. B. S. McClellan. No. 1,194,304; Aug. 8; Gaz. vol. 229; p. 561.
Refrigerating-machine. J. D. Ross. No. 1,195,269; Aug. 22; Gaz. vol. 229; p. 978.
Refrigerating-machine. W. S. Stair. No. 1,195,162; Aug. 15; Gaz. vol. 229; p. 904.
Refrigerator-car-door-operating mechanism. J. F. O'Connor. No. 1,193,414; Aug. 1; Gaz. vol. 229; p. 210.
Refrigerators, Means for closing. A. N. Hornung. No. 1,193,148; Aug. 1; Gaz. vol. 229; p. 114.
Refuse-incinerator. E. Kener, Jr. No. 1,194,506; Aug. 15; Gaz. vol. 229; p. 678.
Register: *See*—
Autographic register. Telephone-call register.
Scale-register.
Register. C. H. Veeder. No. 1,196,495; Aug. 29; Gaz. vol. 229; p. 1446.
Regulator: *See*—
Electrical regulator. Pressure-regulator.
Feed-water regulator. Temperature-regulator.
Locomotive draft-regulator.
Reinforcing-bar. G. E. Vandenburgh. (Reissue.) No. 14,182; Aug. 15; Gaz. vol. 229; p. 907.
Relay, Time-limit. H. W. Brown. No. 1,194,132; Aug. 8; Gaz. vol. 229; p. 501.
Release, Automatic. H. A. Lewis. No. 1,195,824; Aug. 22; Gaz. vol. 229; p. 1180.
Resaw-machines, Setting or guiding device for band. I. W. Johnson. No. 1,193,267; Aug. 1; Gaz. vol. 229; p. 157.
Resilient wheel. C. O. Blackwell. No. 1,196,424; Aug. 29; Gaz. vol. 229; p. 1422.
Resilient wheel. L. Harrington. No. 1,194,173; Aug. 8; Gaz. vol. 229; p. 515.
Resilient wheel. O. L. Harrison. No. 1,194,175; Aug. 8; Gaz. vol. 229; p. 516.
Resilient wheel. M. Kogan. No. 1,196,702; Aug. 29; Gaz. vol. 229; p. 1516.
Resilient wheel. F. Mead. No. 1,195,379; Aug. 22; Gaz. vol. 229; p. 1020.
Resilient wheel. J. Spyker. No. 1,194,790; Aug. 15; Gaz. vol. 229; p. 776.
Resilient wheel. J. A. Stahle. No. 1,193,840; Aug. 8; Gaz. vol. 229; p. 400.
Resilient wheel. B. W. Stringfellow. No. 1,193,733; Aug. 8; Gaz. vol. 229; p. 363.
Resinous products and producing same. J. P. A. McCoy. No. 1,194,201; Aug. 8; Gaz. vol. 229; p. 525.
Resonant body. J. H. Collins. No. 1,193,995; Aug. 8; Gaz. vol. 229; p. 454.
Restraining device. F. Bower. No. 1,192,845; Aug. 1; Gaz. vol. 229; p. 6.
Restraining device. C. R. Trim. No. 1,195,419; Aug. 22; Gaz. vol. 229; p. 1034.
Rheostat. H. F. Bethune. No. 1,194,125; Aug. 8; Gaz. vol. 229; p. 499.
Rheostat. H. L. Dodge. No. 1,195,660; Aug. 22; Gaz. vol. 229; p. 1120.
Ribbon-feeding mechanism. N. White. No. 1,196,622; Aug. 29; Gaz. vol. 229; p. 1489.
Rifle, Automatic-reloading. C. S. Wheatley. No. 1,195,307; Aug. 22; Gaz. vol. 229; p. 994.
Rim, Demountable. B. A. Bryon. No. 1,194,136; Aug. 8; Gaz. vol. 229; p. 502.
Rim, Demountable. G. S. Maxwell. No. 1,193,810; Aug. 8; Gaz. vol. 229; p. 390.
Rim, Demountable. W. T. McLean. No. 1,194,854; Aug. 15; Gaz. vol. 229; p. 798.
Rim, Demountable. H. J. Trares. No. 1,193,088; Aug. 1; Gaz. vol. 229; p. 92.
Rim-tool. F. H. Moyer. No. 1,195,252; Aug. 22; Gaz. vol. 229; p. 972.
Ring: *See*—
Finger-ring. Packing-ring.
Key-ring. Sealing-ring.
Lighting-ring.
Rings, Making. J. Bruderer, Jr. No. 1,192,983; Aug. 1; Gaz. vol. 229; p. 52.
Rivet-cutting machine. J. E. Ash. No. 1,195,897; Aug. 22; Gaz. vol. 229; p. 1205.
Riveter, Electric. W. Morava. No. 1,195,928; Aug. 22; Gaz. vol. 229; p. 1216.
Riveting-machines, Cap-feeding mechanism for. A. R. Havener. No. 1,194,290; Aug. 8; Gaz. vol. 229; p. 556.
Road construction. F. E. Clark. No. 1,193,515; Aug. 8; Gaz. vol. 229; p. 281.
Road or highway. J. S. Blankinship. No. 1,193,225; Aug. 1; Gaz. vol. 229; p. 141.
Road-working machine. A. F. Feller and P. P. Musser. No. 1,195,344; Aug. 22; Gaz. vol. 229; p. 1008.
Roadway for vehicles. R. H. Obarr. No. 1,193,918; Aug. 8; Gaz. vol. 229; p. 429.
Robe-holder. D. C. Russell. No. 1,196,484; Aug. 29; Gaz. vol. 229; p. 1442.
Rock-drill. M. A. Knapp. No. 1,195,478; Aug. 22; Gaz. vol. 229; p. 1053.
Rock-drill. N. C. Mickelson. No. 1,196,011; Aug. 29; Gaz. vol. 229; p. 1279.
Rock-drilling apparatus. W. A. Smith. No. 1,196,041; Aug. 29; Gaz. vol. 229; p. 1289.
Rock-drilling apparatus. W. A. Smith. No. 1,196,042; Aug. 29; Gaz. vol. 229; p. 1289.
Rock-picking machine. M. C. Prevo. No. 1,193,298; Aug. 1; Gaz. vol. 229; p. 169.
Rocket apparatus. R. H. Goddard. No. 1,194,496; Aug. 15; Gaz. vol. 229; p. 674.
Rod: *See*—
Blasting-rod. Steering reach-rod.
Curtain-rod. Switch-rod.
Pitman-rod.
Rod or pipe coupling. A. H. Minnich. No. 1,193,044; Aug. 1; Gaz. vol. 229; p. 75.
Rod or pipe supporting device. J. Bergsten. No. 1,196,647; Aug. 29; Gaz. vol. 229; p. 1289.
Roll-changing apparatus. J. Simpson, H. E. and W. W. Clay. No. 1,195,518; Aug. 22; Gaz. vol. 229; p. 1067.
Roll-reducing machine. J. E. Hutzen. No. 1,196,241; Aug. 29; Gaz. vol. 229; p. 1359.
Roll-rewinding machine. W. B. Smith. No. 1,194,248; Aug. 8; Gaz. vol. 229; p. 541.
Rolls, Machine for feeding tapered. J. F. Flaherty. No. 1,195,571; Aug. 22; Gaz. vol. 229; p. 1088.
Roller: *See*—
Land-roller. Window-roller.
Shade-roller.
Roller-polishing machines, Reversing mechanism for copper-. N. Laudiero. No. 1,193,400; Aug. 1; Gaz. vol. 229; p. 204.
Rolling rounds, Method of and apparatus for. V. E. Edwards. No. 1,193,001; Aug. 1; Gaz. vol. 229; p. 59.
Roof-joint. A. J. Churchill. No. 1,195,338; Aug. 22; Gaz. vol. 229; p. 1005.
Roofing, Method and apparatus for the manufacture of two-colored. A. S. Spiegel. No. 1,194,890; Aug. 15; Gaz. vol. 229; p. 810.
Roofing-slate, Manufacture of artificial. O. J. Owen. No. 1,193,416; Aug. 1; Gaz. vol. 229; p. 210.
Rope and cable clamp. J. N. Adams. No. 1,193,336; Aug. 1; Gaz. vol. 229; p. 182.
Rotary drill. T. J. Griffin. No. 1,195,208; Aug. 22; Gaz. vol. 229; p. 956.
Rotary drill. T. J. Griffin. No. 1,195,209; Aug. 22; Gaz. vol. 229; p. 956.
Rotary engine. H. Dock. (Reissue.) No. 14,187; Aug. 29; Gaz. vol. 229; p. 1536.
Rotary engine. J. R. Foxgord and J. Warner. No. 1,193,251; Aug. 1; Gaz. vol. 229; p. 151.
Rotary engine. I. A. McCarthy. No. 1,193,808; Aug. 8; Gaz. vol. 229; p. 389.
Rotary engine. B. Roseman-Rozewski. No. 1,196,028; Aug. 29; Gaz. vol. 229; p. 1285.

Rotary engine. W. J. Vincent. No. 1,196,315; Aug. 29; Gaz. vol. 229; p. 1383.
Rouge-box. W. G. Kendall. No. 1,194,187; Aug. 8; Gaz. vol. 229; p. 520.
Rouge-pad. W. G. Kendall. No. 1,194,185; Aug. 8; Gaz. vol. 229; p. 520.
Router, Adjustable. C. Fink. No. 1,195,799; Aug. 22; Gaz. vol. 229; p. 1171.
Rubber articles, Making hard-. H. Weida. No. 1,195,118; Aug. 15; Gaz. vol. 229; p. 889.
Rubber articles, Mold for making hollow. E. L. Stimson. No. 1,195,412; Aug. 22; Gaz. vol. 229; p. 1032.
Rubber articles, Trimming. F. J. Gleason. No. 1,195,204; Aug. 22; Gaz. vol. 229; p. 955.
Rubber, Reclaiming. H. O. Chute. No. 1,196,334; Aug. 29; Gaz. vol. 229; p. 1390.
Rubber-reclaiming machine. F. B. Garrahan. No. 1,195,576; Aug. 22; Gaz. vol. 229; p. 1090.
Rubber substances of different densities, Method of and apparatus for separating. T. J. Pennington. No. 1,195,264; Aug. 22; Gaz. vol. 229; p. 977.
Rubber top. F. A. Cigol. No. 1,193,991; Aug. 8; Gaz. vol. 229; p. 453.
Rule attachment. R. Strieff. No. 1,196,045; Aug. 29; Gaz. vol. 229; p. 1291.
Rule, Column-. H. C. Gammeter. No. 1,194,833; Aug. 15; Gaz. vol. 229; p. 790.
Rule, Column-. S. A. Neidich. No. 1,194,868; Aug. 15; Gaz. vol. 229; p. 803.
Ruled forms, Composition of. W. L. Springer. No. 1,194,892; Aug. 15; Gaz. vol. 229; p. 811.
Ruling-machines, Creasing and cutting attachment for. J. Hayes and G. Horn. No. 1,193,382; Aug. 1; Gaz. vol. 229; p. 199.
Rythmometer. W. B. Parkinson. No. 1,195,077; Aug. 15; Gaz. vol. 229; p. 876.
Saccharine juices. Apparatus for the gaseous treatment of. N. A. Lockwood. No. 1,195,044; Aug. 15; Gaz. vol. 229; p. 865.
Sad-iron. A. Feyes. No. 1,195,193; Aug. 22; Gaz. vol. 229; p. 951.
Sad-iron. C. C. Gridley. No. 1,196,677; Aug. 29; Gaz. vol. 229; p. 1509.
Safety appliance. J. T. Hall. No. 1,195,463; Aug. 22; Gaz. vol. 229; p. 1049.
Safety-chest. L. Myers. No. 1,196,739; Aug. 29; Gaz. vol. 229; p. 1531.
Safety device. C. F. Root. No. 1,196,721; Aug. 29; Gaz. vol. 229; p. 1524.
Safety device. C. F. Root. No. 1,196,722; Aug. 29; Gaz. vol. 229; p. 1524.
Safety-hook. R. Clarke. No. 1,193,516; Aug. 8; Gaz. vol. 229; p. 281.
Safety-hook. O. From. No. 1,194,005; Aug. 8; Gaz. vol. 229; p. 458.
Safety-lock. J. Winn and A. Feinberg. No. 1,193,653; Aug. 8; Gaz. vol. 229; p. 333.
Safety-pin. E. D. Houston. No. 1,192,898; Aug. 1; Gaz. vol. 229; p. 24.
Safety-pin machine. P. E. Wiberg. No. 1,195,121; Aug. 15; Gaz. vol. 229; p. 890.
Sand-blast apparatus. F. J. Hull. No. 1,196,362; Aug. 29; Gaz. vol. 229; p. 1400.
Sand-mold device. C. O. Wood. No. 1,193,104; Aug. 1; Gaz. vol. 229; p. 98.
Sand-mold jacket. C. O. Wood. No. 1,193,103; Aug. 1; Gaz. vol. 229; p. 98.
Sand-molding machine. W. C. Norcross. No. 1,194,059; Aug. 8; Gaz. vol. 229; p. 476.
Sandpapering-machine. B. W. Williams. No. 1,195,428; Aug. 22; Gaz. vol. 229; p. 1037.
Sandstone, Concentrating carnotite. H. N. McCoy. No. 1,195,698; Aug. 22; Gaz. vol. 229; p. 1133.
Sash. D. J. Dunbar. No. 1,192,999; Aug. 1; Gaz. vol. 229; p. 58.
Sash-adjusting means. F. M. Baker. No. 1,195,899; Aug. 22; Gaz. vol. 229; p. 1206.
Sash-balance. J. M. Karl. No. 1,195,167; Aug. 15; Gaz. vol. 229; p. 906.
Sash-balance. T. L. Patrick. No. 1,196,271; Aug. 29; Gaz. vol. 229; p. 1370.
Sash-center. C. D. Tabor. No. 1,196,173; Aug. 29; Gaz. vol. 229; p. 1337.
Sash-fastener. H. F. Bender. No. 1,195,961; Aug. 29; Gaz. vol. 229; p. 1260.
Sash-fastener. F. Hachmann. No. 1,196,356; Aug. 29; Gaz. vol. 229; p. 1397.
Sash-fastener. A. M. Hudson. No. 1,194,022; Aug. 8; Gaz. vol. 229; p. 463.
Sash fastener and lift. O. Oehring and G. Heuer. No. 1,194,775; Aug. 15; Gaz. vol. 229; p. 769.
Sash hanger and operator, Window-. J. Firner. No. 1,193,677; Aug. 8; Gaz. vol. 229; p. 342.
Sash-holder. J. Hersey. No. 1,194,626; Aug. 15; Gaz. vol. 229; p. 718.
Sash-holding device. O. M. Edwards. No. 1,193,000; Aug. 1; Gaz. vol. 229; p. 59.
Sash-lock. D. Hoyt. No. 1,195,586; Aug. 22; Gaz. vol. 229; p. 1093.
Sash, Window-. J. Kunzelmann. No. 1,195,690; Aug. 22; Gaz. vol. 229; p. 1130.
Sausage-linking machine. J. A. Lidback. No. 1,195,043; Aug. 15; Gaz. vol. 229; p. 864.
Saw-frame attachment. A. M. Remington. No. 1,194,234; Aug. 8; Gaz. vol. 229; p. 536.
Saw-gage. T. Bemis. No. 1,194,936; Aug. 15; Gaz. vol. 229; p. 826.
Saw-gage. S. Buskala. No. 1,194,139; Aug. 8; Gaz. vol. 229; p. 504.
Saw-gage. E. E. Mohney. No. 1,192,925; Aug. 1; Gaz. vol. 229; p. 33.
Saw-gummer. F. Strickland. No. 1,194,092; Aug. 8; Gaz. vol. 229; p. 487.
Saw-set machine and the like. G. W. Miller. No. 1,192,921; Aug. 1; Gaz. vol. 223; p. 32.
Saw-tooth tool for inserting and removing separable teeth of saws. H. B. McDonald. No. 1,195,143; Aug. 15; Gaz. vol. 229; p. 897.
Sawing machine, Automatic hack-. E. G. Herbert and C. Fletcher. No. 1,193,262; Aug. 1; Gaz. vol. 229; p. 155.
Sawing-machine, Portable. N. B. Mitchell, J. W. Taggart, Sr., and U. G. Redelmann. No. 1,195,945; Aug. 22; Gaz. vol. 229; p. 1222.
Scaffold-bracket. A. F. Seymoure. No. 1,193,832; Aug. 8; Gaz. vol. 229; p. 397.
Scaffold-clamp. J. W. Willeford. No. 1,195,889; Aug. 22; Gaz. vol. 229; p. 1202.
Scaffold, Safety-. W. Marshall. No. 1,195,488; Aug. 22; Gaz. vol. 229; p. 1057.
Scaffold, Shingling-. J. Fiehler. No. 1,194,984; Aug. 15; Gaz. vol. 229; p. 843.
Scaffolding device. D. P. Chesebro. No. 1,195,976; Aug. 29; Gaz. vol. 229; p. 1266.
Scale. L. Jaenichen. No. 1,195,474; Aug. 22; Gaz. vol. 229; p. 1052.
Scale. R. McFarlane. No. 1,196,468; Aug. 29; Gaz. vol. 229; p. 1437.
Scale. N. Nilson. No. 1,193,711; Aug. 8; Gaz. vol. 229; p. 354.
Scale. N. Nilson. No. 1,193,712; Aug. 8; Gaz. vol. 229; p. 355.
Scale. I. F. Pfeiffer. No. 1,195,719; Aug. 22; Gaz. vol. 229; p. 1141.
Scale. C. E. Riedel and W. J. Barnes. No. 1,196,027; Aug. 29; Gaz. vol. 229; p. 1285.
Scale, Combined computing and indicating. F. M. Greenup. No. 1,195,135; Aug. 15; Gaz. vol. 229; p. 895.
Scale, Computing-. H. S. Hallwood. No. 1,195,213; Aug. 22; Gaz. vol. 229; p. 950.
Scale, Pyrometer-. G. A. Shook. No. 1,196,306; Aug. 29; Gaz. vol. 229; p. 1380.
Scale-register, Automatic. J. Williners. No. 1,192,967; Aug. 1; Gaz. vol. 229; p. 47.
Scale, Track-. H. Tiegs and S. W. Palmer. No. 1,194,576; Aug. 15; Gaz. vol. 229; p. 701.
Scarifier. F. T. Moyer. No. 1,195,387; Aug. 22; Gaz. vol. 229; p. 1023.
Scraper. J. R. Ehlinger. No. 1,192,877; Aug. 1; Gaz. vol. 229; p. 17.
Scraper. H. Grotzky. No. 1,196,231; Aug. 29; Gaz. vol. 229; p. 1357.
Scraper. A. F. Hood. No. 1,196,113; Aug. 29; Gaz. vol. 229; p. 1315.
Scraper. A. F. Marsh. No. 1,194,049; Aug. 8; Gaz. vol. 229; p. 472.
Scraper, Road-. H. Martin. No. 1,193,167; Aug. 1; Gaz. vol. 229; p. 121.
Scraper, Utensil-. I. Lawrence. No. 1,192,910; Aug. 1; Gaz. vol. 229; p. 27.
Screen: *See*—
Fish-screen. Metal-frame screen.
Headlight-screen. Window-screen.
Screen. J. L. Lee. No. 1,193,273; Aug. 1; Gaz. vol. 229; p. 159.
Screen. L. Nussbaum, Jr. No. 1,195,073; Aug. 15; Gaz. vol. 229; p. 875.
Screen. J. J. L. Smits. No. 1,194,250; Aug. 8; Gaz. vol. 229; p. 542.
Screen and sash locker, Window. C. Ellis. No. 1,196,445; Aug. 29; Gaz. vol. 229; p. 1429.
Screen and sash locker, Window. C. Ellis. No. 1,196,446; Aug. 29; Gaz. vol. 229; p. 1429.
Screen locker, Extension-window-. C. Ellis. No. 1,196,443; Aug. 29; Gaz. vol. 229; p. 1428.
Screen locker, Extension-window-. C. Ellis. No. 1,196,447; Aug. 29; Gaz. vol. 229; p. 1430.
Screen or sash hanger, Window. P. Frantz. No. 1,193,532; Aug. 8; Gaz. vol. 229; p. 287.
Screw-bolt or fastener, Telescopic lock. W. D. Stewart. No. 1,194,792; Aug. 15; Gaz. vol. 229; p. 777.
Screw-clamp. J. Romanowski. No. 1,194,666; Aug. 15; Gaz. vol. 229; p. 731.
Screw machines, Cam mechanism for wood-. H. L. Smith. No. 1,196,308; Aug. 29; Gaz. vol. 229; p. 1381.
Screw-threads, Appliance for the cutting or forming of. G. H. Alexander. No. 1,196,503; Aug. 29; Gaz. vol. 229; p. 1449.
Seal. J. Laguionie. No. 1,193,158; Aug. 1; Gaz. vol. 229; p. 118.
Seal-lock, Hasp. M. H. V. Battenberg. No. 1,193,221; Aug. 1; Gaz. vol. 229; p. 140.
Sealed-edged laminated sheet and making the same. G. H. Smith. No. 1,195,408; Aug. 22; Gaz. vol. 229; p. 1030.
Sealing device for collecting-wagons. C. M. Lowes and F. D. Ammen. No. 1,195,245; Aug. 22; Gaz. vol. 229; p. 969.
Sealing machine, Carton-. H. L. Johnson. No. 1,195,229; Aug. 22; Gaz. vol. 229; p. 963.
Sealing machine, Envelop-. F. R. Allen. No. 1,194,693; Aug. 15; Gaz. vol. 229; p. 741.

Sealing machine, Envelop-. F. W. Storck. No. 1,194,568; Aug. 15; Gaz. vol. 229; p. 698.
Sealing-machine for containers, Vacuum. H. N. Norton. No. 1,196,578; Aug. 29; Gaz. vol. 229; p. 1475.
Sealing-ring. J. S. Carlitz. No. 1,194,273; Aug. 8; Gaz. vol. 229; p. 549.
Search-light. N. Nelson and R. Elliott. No. 1,193,813; Aug. 8; Gaz. vol. 229; p. 391.
Search-light, Vehicle. E. Von Szuppiny. No. 1,196,499; Aug. 29; Gaz. vol. 229; p. 1447.
Seat: *See*—
Auditorium-seat. Spring-seat.
Automobile adjustable seat. Toilet-seat.
Car-seat. Vehicle-seat.
Closet-seat.
Seats, Collapsible back-rest for. J. A. Clark. No. 1,196,731; Aug. 29; Gaz. vol. 229; p. 1528.
Securing device. W. A. F. Urban. No. 1,194,902; Aug. 15; Gaz. vol. 229; p. 814.
Seeding-machine. A. C. Lindgren. No. 1,195,483; Aug. 22; Gaz. vol. 229; p. 1055.
Seesaw. J. M. Clayton. No. 1,193,994; Aug. 8; Gaz. vol. 229; p. 454.
Selecting system. A. F. Dixon. No. 1,196,528; Aug. 29; Gaz. vol. 229; p. 1457.
Selector-switch, Automatic. J. N. Reynolds. No. 1,196,482; Aug. 29; Gaz. vol. 229; p. 1442.
Semaphore. H. Walker. No. 1,194,448; Aug. 15; Gaz. vol. 229; p. 658.
Semi-indirect-light attachment. P. Simpson. No. 1,194,083; Aug. 8; Gaz. vol. 229; p. 484.
Separating apparatus. I. Christ. No. 1,196,750; Aug. 29; Gaz. vol. 229; p. 1535.
Separating-machines, Driving attachment to. C. H. Barker. No. 1,192,841; Aug. 1; Gaz. vol. 229; p. 4.
Separator: *See*—
Centrifugal separator. Germ-separator.
Crate-separator. Grain-separator.
Separator. A. W. Tohms. No. 1,195,875; Aug. 22; Gaz. vol. 229; p. 1198.
Serum therapy. E. Abderhalden. No. 1,196,065; Aug. 29; Gaz. vol. 229; p. 1298.
Service-observing system. H. L. Darrah. No. 1,194,721; Aug. 15; Gaz. vol. 229; p. 751.
Sewage and the like, Purifying. D. T. Dobyns and J. K. Elderkin, Jr. No. 1,194,000; Aug. 8; Gaz. vol. 229; p. 456.
Sewing-machine. G. M. Eames and J. S. Finch. No. 1,196,534; Aug. 29; Gaz. vol. 229; p. 1459.
Sewing-machine. R. Loeb. No. 1,193,803; Aug. 8; Gaz. vol. 229; p. 387.
Sewing-machine. E. I. Moses and W. E. Kellar. No. 1,193,408; Aug. 1; Gaz. vol. 229; p. 207.
Sewing-machine. F. E. Schoolfield and J. C. Owen. No. 1,196,160; Aug. 29; Gaz. vol. 229; p. 1332.
Sewing-machine blindstitch taping attachment. J. F. Higgins. No. 1,195,814; Aug. 22; Gaz. vol. 229; p. 1177.
Sewing-machine channeling device. J. F. Daprix. No. 1,194,719; Aug. 15; Gaz. vol. 229; p. 750.
Sewing-machine cutting attachment. A. S. Robinson. No. 1,193,823; Aug. 8; Gaz. vol. 229; p. 394.
Sewing-machine folder. R. R. Hughes, Jr. No. 1,194,023; Aug. 8; Gaz. vol. 229; p. 464.
Sewing-machine for blindstitching. J. Whitelaw. No. 1,195,633; Aug. 22; Gaz. vol. 229; p. 1110.
Sewing-machine guard. W. Cranage. No. 1,194,961; Aug. 15; Gaz. vol. 229; p. 835.
Sewing-machine, Lock-stitch. O. L. Lawson. No. 1,194,512; Aug. 15; Gaz. vol. 229; p. 680.
Sewing-machine loop-spreader. O. L. Lawson. No. 1,194,515; Aug. 15; Gaz. vol. 229; p. 681.
Sewing-machine loop-spreader. O. L. Lawson and J. H. Reed. No. 1,194,513; Aug. 15; Gaz. vol. 229; p. 680.
Sewing-machine presser-foot. J. E. Chalman. No. 1,196,661; Aug. 29; Gaz. vol. 229; p. 1503.
Sewing-machine presser-foot-locking device. E. Erickson. No. 1,194,491; Aug. 15; Gaz. vol. 229; p. 673.
Sewing-machine, Quadruple-needle. A. R. Larson. No. 1,193,029; Aug. 1; Gaz. vol. 229; p. 70.
Sewing-machine starting device. O. E. Johnson. No. 1,196,461; Aug. 29; Gaz. vol. 229; p. 1434.
Sewing-machine stitch-forming mechanism, Shoe-. O. L. Lawson. No. 1,194,514; Aug. 15; Gaz. vol. 229; p. 680.
Sewing-machine tape-guide. J. Berger, Jr. No. 1,195,767; Aug. 22; Gaz. vol. 229; p. 1160.
Sewing machine, Thong-. E. Gnoeth. No. 1,193,460; Aug. 1; Gaz. vol. 229; p. 224.
Sewing-machine thread-cutting blade. C. D. Matthews. No. 1,195,834; Aug. 22; Gaz. vol. 229; p. 1184.
Sewing-machines, Apparatus for cutting thread in. A. E. Lindner. No. 1,193,906; Aug. 8; Gaz. vol. 229; p. 424.
Sewing-machines, Button placing and releasing attachment for. J. J. Brell. No. 1,193,504; Aug. 8; Gaz. vol. 229; p. 277.
Sewing machines, Welt-slashing attachment for welt-shoe-. A. A. Haahr. No. 1,194,621; Aug. 15; Gaz. vol. 229; p. 716.
Sewing on the soles of shoes and the like, Machine for. A. and S. I. G. Johansson. No. 1,193,900; Aug. 8; Gaz. vol. 229; p. 422.
Shackle, Spring-. P. Kopczyk. No. 1,193,156; Aug. 1; Gaz. vol. 229; p. 117.
Shade-bracket. R. D. Braddy. No. 1,192,847; Aug. 1; Gaz. vol. 229; p. 7.
Shade-roller. R. N. Wood. No. 1,193,106; Aug. 1; Gaz. vol. 229; p. 99.
Shade-roller and curtain-pole support, Combined. C. S. Little. No. 1,193,403; Aug. 1; Gaz. vol. 229; p. 206.
Shade roller, Window-. L. Tropp and B. Rivkin. No. 1,196,725; Aug. 29; Gaz. vol. 229; p. 1526.
Shaft-coupling. J. Kennedy. No. 1,194,028; Aug. 8; Gaz. vol. 229; p. 465.
Shaft-coupling, Adjustable. N. A. Christensen. No. 1,195,940; Aug. 22; Gaz. vol. 229; p. 1220.
Shaft-coupling, Flexible. G. J. Rathbun. No. 1,194,662; Aug. 15; Gaz. vol. 229; p. 730.
Shaft-coupling, Yieldable. L. L. Gilbert. No. 1,196,349; Aug. 29; Gaz. vol. 229; p. 1395.
Shaft, Flexible. G. F. Long. No. 1,192,914; Aug. 1; Gaz. vol. 229; p. 29.
Shaft-hanger. G. C. Noros. No. 1,195,257; Aug. 22; Gaz. vol. 229; p. 974.
Shaft or well lining. M. Gilleaux. No. 1,196,350; Aug. 29; Gaz. vol. 229; p. 1395.
Shafts, Securing rabble-arms to. L. R. Kelley. No. 1,195,360; Aug. 22; Gaz. vol. 229; p. 1013.
Shafting, Flexible. G. F. Long. No. 1,193,277; Aug. 1; Gaz. vol. 229; p. 161.
Sharpener. J. M. Lenz and T. E. Regan. No. 1,196,558; Aug. 29; Gaz. vol. 229; p. 1468.
Sharpener, Disk-. J. F. Drees. No. 1,193,130; Aug. 1; Gaz. vol. 229; p. 108.
Sharpener, Disk-. B. Jansen. No. 1,195,819; Aug. 22; Gaz. vol. 229; p. 1178.
Sharpener, Razor-. H. A. David and W. J. Andersen. No. 1,192,871; Aug. 1; Gaz. vol. 229; p. 14.
Sharpener, Skate-. G. E. Ryan. No. 1,196,399; Aug. 29; Gaz. vol. 229; p. 1414.
Sharpener, Skate-. J. and N. Van Raden. No. 1,195,880; Aug. 22; Gaz. vol. 229; p. 1200.
Sharpening-stones or hones, Treating. F. McCormick. No. 1,195,246; Aug. 22; Gaz. vol. 229; p. 970.
Shaving-stick and the like. F. Riesenberg. No. 1,194,427; Aug. 15; Gaz. vol. 229; p. 648.
Shear, Sheet-metal. W. W. Irwin. No. 1,193,020; Aug. 1; Gaz. vol. 229; p. 66.
Shears: *See*—
Pruning-shears.
Shears or scissors. S. W. Meidam. No. 1,194,859; Aug. 15; Gaz. vol. 229; p. 800.
Shearing-guide. J. E. Matthews. No. 1,195,249; Aug. 22; Gaz. vol. 229; p. 971.
Sheep-protector. R. F. Brown. No. 1,194,135; Aug. 8; Gaz. vol. 229; p. 502.
Sheet-counting mechanism. H. R. Miller and H. E. Elberty. No. 1,196,132; Aug. 29; Gaz. vol. 229; p. 1321.
Sheet cutting and folding machine. H. M. Barber. No. 1,193,449; Aug. 1; Gaz. vol. 229; p. 220.
Sheet cutting and folding machine. H. M. Barber. No. 1,193,450; Aug. 1; Gaz. vol. 229; p. 220.
Sheet-feeders, Driving chain gear for retarding the transport in. G. Spiess. No. 1,194,562; Aug. 15; Gaz. vol. 229; p. 695.
Sheet-feeding device. C. W. and A. E. Howell. No. 1,196,361; Aug. 29; Gaz. vol. 229; p. 1399.
Sheet-feeding machine. A. S. Grimmer. No. 1,194,012; Aug. 8; Gaz. vol. 229; p. 461.
Sheet material. E. A. Gulick. No. 1,192,890; Aug. 1; Gaz. vol. 229; p. 21.
Sheet material, Machine and method for reinforcing. M. R. Harrison. No. 1,195,951; Aug. 22; Gaz. vol. 229; p. 1224.
Sheet material, Method and machine for reinforcing. M. R. Carney. No. 1,195,949; Aug. 22; Gaz. vol. 229; p. 1223.
Sheet material, Reinforced. M. R. Carney. No. 1,195,950; Aug. 22; Gaz. vol. 229; p. 1223.
Sheet-metal bending or pressing machine. T. Briegel. No. 1,193,759; Aug. 8; Gaz. vol. 229; p. 372.
Sheet-metal box. G. Klenk. No. 1,193,155; Aug. 1; Gaz. vol. 229; p. 117.
Sheet-metal building. M. Moister. No. 1,196,133; Aug. 29; Gaz. vol. 229; p. 1322.
Sheet-metal-expanding machine. H. C. Herr. No. 1,195,223; Aug. 22; Gaz. vol. 229; p. 961.
Sheet-metal expansible elbow. D. A. Ritchie. No. 1,193,065; Aug. 1; Gaz. vol. 229; p. 84.
Sheet-metal-folding mechanism. R. E. Curtis. No. 1,194,602; Aug. 15; Gaz. vol. 229; p. 710.
Sheet metal, Forming expanded. H. C. Herr. No. 1,195,221; Aug. 22; Gaz. vol. 229; p. 961.
Sheet separating and moving device. E. Cheshire. No. 1,194,327; Aug. 8; Gaz. vol. 229; p. 570.
Sheet-separating machine. W. A. Lorenz. No. 1,192,915; Aug. 1; Gaz. vol. 229; p. 29.
Sheet-stacker. E. Cheshire. No. 1,194,328; Aug. 8; Gaz. vol. 229; p. 571.
Shell, Socket-. L. W. Anderson. No. 1,193,966; Aug. 8; Gaz. vol. 229; p. 445.
Ship. C. V. A. Eley. No. 1,193,528; Aug. 8; Gaz. vol. 229; p. 285.
Ship-brake. J. C. Ollard. No. 1,195,149; Aug. 15; Gaz. vol. 229; p. 900.
Ship-locating device. C. May. No. 1,196,131; Aug. 29; Gaz. vol. 229; p. 1321.
Ships, Leak-stopper for. W. F. Hieggby. No. 1,195,013; Aug. 15; Gaz. vol. 229; p. 854.

Shipping-box. J. G. Slavens. No. 1,194,434; Aug. 15; Gaz. vol. 229; p. 651.
Shipping-box for eggs and other fragile articles. T. Webster. No. 1,193,323; Aug. 1; Gaz. vol. 229; p. 178.
Shock-absorber. C. P. C. Britschneider. No. 1,195,182; Aug. 22; Gaz. vol. 229; p. 947.
Shock-absorber. F. Cowie. No. 1,193,241; Aug. 1; Gaz. vol. 229; p. 147.
Shock-absorber. A. Daccord. No. 1,195,979; Aug. 29; Gaz. vol. 229; p. 1267.
Shock-absorber. L. H. Grisell. No. 1,194,998; Aug. 15; Gaz. vol. 229; p. 848.
Shock-absorber. W. H. Horstmann. No. 1,195,585; Aug. 22; Gaz. vol. 229; p. 1093.
Shock-absorber. W. J. Thul. No. 1,192,955; Aug. 1; Gaz. vol. 229; p. 43.
Shock-absorber for automobile-springs. J. S. Roberts. No. 1,194,069; Aug. 8; Gaz. vol. 229; p. 480.
Shock-absorber for motor and other vehicles. W. Bardsley. No. 1,195,959; Aug. 29; Gaz. vol. 229; p. 1260.
Shock-forming apparatus. L. T. Velen. No. 1,194,445; Aug. 15; Gaz. vol. 229; p. 656.
Shock-holder. H. Olson. No. 1,193,713; Aug. 8; Gaz. vol. 229; p. 355.
Shock-preventer. F. Smith. No. 1,196,167; Aug. 29; Gaz. vol. 229; p. 1335.
Shock-preventer for vehicles and the like. F. Smith. No. 1,196,166; Aug. 29; Gaz. vol. 229; p. 1334.
Shocking-machine. H. C. and L. F. Battles. No. 1,196,641; Aug. 29; Gaz. vol. 229; p. 1496.
Shoe. G. Gashmore. No. 1,194,955; Aug. 15; Gaz. vol. 229; p. 833.
Shoe. H. Holden. No. 1,193,687; Aug. 8; Gaz. vol. 229; p. 345.
Shoe. H. Holden. No. 1,193,688; Aug. 8; Gaz. vol. 229; p. 346.
Shoe. A. H. Prenzel. No. 1,195,151; Aug. 15; Gaz. vol. 229; p. 901.
Shoe. G. H. Ricke. No. 1,196,719; Aug. 29; Gaz. vol. 229; p. 1523.
Shoe cleaning and polishing machine. C. F. Burkhart. No. 1,196,658; Aug. 29; Gaz. vol. 229; p. 1502.
Shoe-dressing machine. C. F. Burkhart. No. 1,196,659; Aug. 29; Gaz. vol. 229; p. 1503.
Shoe-machine. W. C. Stewart. No. 1,195,411; Aug. 22; Gaz. vol. 229; p. 1031.
Shoe-pad, Reinforced. L. S. Samuel. No. 1,194,428; Aug. 15; Gaz. vol. 229; p. 649.
Shoe-polish. J. A. Reid. No. 1,194,425; Aug. 15; Gaz. vol. 229; p. 648.
Shoe-tree. J. F. Collins. No. 1,193,875; Aug. 8; Gaz. vol. 229; p. 414.
Shoe-uppers, Machine for molding toe portions of. M. Brock. No. 1,195,965; Aug. 29; Gaz. vol. 229; p. 1262.
Shoe uppers, Machine for punching and marking buttoned-. J. L. Treharn. No. 1,195,628; Aug. 22; Gaz. vol. 229; p. 1108.
Shoe-uppers, Preliminary former for foreparts of. M. Brock. No. 1,195,967; Aug. 29; Gaz. vol. 229; p. 1263.
Shoes, Making. M. Brock. No. 1,195,966; Aug. 29; Gaz. vol. 229; p. 1262.
Shooting-gallery. A. M. Henry. No. 1,193,260; Aug. 1; Gaz. vol. 229; p. 154.
Shooting-gallery. C. Horton and A. M. Henry. No. 1,193,462; Aug. 1; Gaz. vol. 229; p. 225.
Shore, Adjustable. G. Brown. No. 1,193,233; Aug. 1; Gaz. vol. 229; p. 144.
Shore, Adjustable. H. W. Roos and E. R. Bell. No. 1,195,503; Aug. 22; Gaz. vol. 229; p. 1062.
Shovel. C. R. Anderson. No. 1,194,924; Aug. 15; Gaz. vol. 229; p. 821.
Shovel tooth, Power-. G. T. Chambers. No. 1,193,511; Aug. 8; Gaz. vol. 229; p. 280.
Shower-head, Vitreous-china. J. P. Kelly. No. 1,195,686; Aug. 22; Gaz. vol. 229; p. 1129.
Shutter or door, Sliding. E. H. McCloud. No. 1,193,908; Aug. 8; Gaz. vol. 229; p. 425.
Shutters, Fastening means for the slats of. P. Braun. No. 1,193,110; Aug. 1; Gaz. vol. 229; p. 100.
Shuttle. M. Camagni. No. 1,194,816; Aug. 15; Gaz. vol. 229; p. 785.
Shuttle. F. M. and W. B. Pierce. No. 1,196,023; Aug. 29; Gaz. vol. 229; p. 1283.
Shuttle. L. P. Spencer. No. 1,193,839; Aug. 8; Gaz. vol. 229; p. 400.
Shuttle. J. F. Vaillancourt. No. 1,193,846; Aug. 8; Gaz. vol. 229; p. 403.
Shuttle folding and guiding device. F. M. Pierce. No. 1,196,022; Aug. 29; Gaz. vol. 229; p. 1283.
Side-delivery rake. J. and C. J. Bamford. No. 1,195,172; Aug. 22; Gaz. vol. 229; p. 944.
Siding-gage. C. Harmon. No. 1,193,140; Aug. 1; Gaz. vol. 229; p. 112.
Sign, Changeable. J. H. La Pearl. No. 1,195,369; Aug. 22; Gaz. vol. 229; p. 1016.
Sign construction. F. A. Bristol and P. J. Scharringhausen. No. 1,192,982; Aug. 1; Gaz. vol. 229; p. 52.
Sign, Electric. E. R. Knowles. No. 1,193,563; Aug. 8; Gaz. vol. 229; p. 298.
Sign, Moving. N. Mininberg. No. 1,194,210; Aug. 8; Gaz. vol. 229; p. 528.
Sign, Novelty. L. R. Smith. No. 1,194,559; Aug. 15; Gaz. vol. 229; p. 695.
Sign-receptacle, Self-locking. E. H. Freeman. No. 1,193,252; Aug. 1; Gaz. vol. 229; p. 152.
Sign-stretcher. A. Fischer. No. 1,194,610; Aug. 15; Gaz. vol. 229; p. 713.
Sign, Traveling electric. V. E. Rumbarger. No. 1,194,879; Aug. 15; Gaz. vol. 229; p. 807.
Sign, Vibrating. C. C. Lott. No. 1,195,375; Aug. 22; Gaz. vol. 229; p. 1018.
Signal: *See*—
Automobile-signal. Vehicle-signal.
Railway-signal. Vehicle rear-end signal.
Signal. D. J. McCarthy. No. 1,194,758; Aug. 15; Gaz. vol. 229; p. 764.
Signal. F. W. Wood. No. 1,194,914; Aug. 15; Gaz. vol. 229; p. 818.
Signal apparatus. H. Csamyi. No. 1,196,211; Aug. 29; Gaz. vol. 229; p. 1350.
Signal apparatus. B. F. Matthias. No. 1,194,761; Aug. 15; Gaz. vol. 229; p. 765.
Signal-box. C. E. Avery. No. 1,194,931; Aug. 15; Gaz. vol. 229; p. 824.
Signal-box. F. W. Cole. No. 1,194,600; Aug. 15; Gaz. vol. 229; p. 709.
Signal device. P. H. Donovan. No. 1,195,982; Aug. 29; Gaz. vol. 229; p. 1268.
Signal device. J. Mark. No. 1,194,856; Aug. 15; Gaz. vol. 229; p. 799.
Signal device. C. W. Riedel. No. 1,195,734; Aug. 22; Gaz. vol. 229; p. 1146.
Signal systems, Mechanism for operating brakes in. B. C. Rowell. No. 1,193,472; Aug. 1; Gaz. vol. 229; p. 229.
Signal systems, Train instrument for. B. C. Rowell. No. 1,193,470; Aug. 1; Gaz. vol. 229; p. 228.
Signal-transmitting device. L. Degen. No. 1,196,732; Aug. 29; Gaz. vol. 229; p. 1528.
Signaling apparatus. T. Bruger. No. 1,196,429; Aug. 29; Gaz. vol. 229; p. 1423.
Signaling by electromagnetic waves, Transmitter for. F. J. Chambers. No. 1,194,274; Aug. 8; Gaz. vol. 229; p. 549.
Signaling device. C. Schatzle and E. Smith. No. 1,194,668; Aug. 15; Gaz. vol. 229; p. 732.
Signaling device. J. A. Wertz. No. 1,195,757; Aug. 22; Gaz. vol. 229; p. 1156.
Signaling device, Electric. R. R. Root. No. 1,193,926; Aug. 8; Gaz. vol. 229; p. 431.
Signaling means, Electric. J. McFell. No. 1,194,525; Aug. 15; Gaz. vol. 229; p. 684.
Signaling means, Selective. J. McFell. No. 1,194,524; Aug. 15; Gaz. vol. 229; p. 683.
Signaling system. F. P. McIntosh and E. F. Beaubien. No. 1,195,600; Aug. 22; Gaz. vol. 229; p. 1098.
Signaling system, Electric. C. P. Nachod and F. W. Kulicke. No. 1,196,013; Aug. 29; Gaz. vol. 229; p. 1279.
Signaling system, Selective. J. Erickson. No. 1,194,371; Aug. 15; Gaz. vol. 229; p. 628.
Signature-gathering machine. H. L. Fisher. No. 1,194,987; Aug. 15; Gaz. vol. 229; p. 844.
Silk, Foam or froth dyeing-bath for. P. Schmid and K. Gross. No. 1,193,430; Aug. 1; Gaz. vol. 229; p. 215.
Silk, Metal-chlorid bath for weighting. P. Schmid and K. Gross. No. 1,193,429; Aug. 1; Gaz. vol. 229; p. 214.
Silo-anchor. W. C. Curry. No. 1,194,964; Aug. 15; Gaz. vol. 229; p. 836.
Silo ventilator and discharge. W. H. Dickson and L. S. Overholt. No. 1,194,150; Aug. 8; Gaz. vol. 229; p. 507.
Silos, Automatically-adjustable brace for. A. A. Crisell. No. 1,193,767; Aug. 8; Gaz. vol. 229; p. 376.
Silos, Cement block for. J. S. McMillan. No. 1,194,305; Aug. 8; Gaz. vol. 229; p. 562.
Silos, Siding or stave for. H. P. McFarland. No. 1,193,575; Aug. 8; Gaz. vol. 229; p. 302.
Silvering-table. G. Glaudel. No. 1,195,351; Aug. 22; Gaz. vol. 229; p. 1011.
Siphon, Self-charging. W. P. Starr. No. 1,195,864; Aug. 22; Gaz. vol. 229; p. 1194.
Siren for submarine signaling. F. F. C. Schenkelberger. No. 1,196,296; Aug. 29; Gaz. vol. 229; p. 1376.
Skate. G. S. Webb. No. 1,194,102; Aug. 8; Gaz. vol. 229; p. 490.
Skate, Snow-. J. J. Tritz. No. 1,194,097; Aug. 8; Gaz. vol. 229; p. 488.
Skeleton case. C. F. Mellink. No. 1,194,532; Aug. 15; Gaz. vol. 229; p. 686.
Skid. C. A. Clark. No. 1,194,819; Aug. 15; Gaz. vol. 229; p. 786.
Skid-stop. R. A. Campbell. No. 1,195,974; Aug. 29; Gaz. vol. 229; p. 1265.
Skirt and coat hanger, Combined. C. R. Lendle. No. 1,195,041; Aug. 15; Gaz. vol. 229; p. 864.
Skirt and waist supporter. T. G. Hogan. No. 1,194,630; Aug. 15; Gaz. vol. 229; p. 719.
Skirt, Lady's traveling-. C. I. Atkins. No. 1,196,324; Aug. 29; Gaz. vol. 229; p. 1386.
Slab or tile with light-pane, Cement. L. Baumgartl. No. 1,195,648; Aug. 22; Gaz. vol. 229; p. 1114.
Sled, Bob or coasting. C. D. Himebaugh. No. 1,194,383; Aug. 15; Gaz. vol. 229; p. 633.
Sled-knuckle. R. E. Stevens. No. 1,195,410; Aug. 22; Gaz. vol. 229; p. 1031.
Sled, Motor-. N. Kolomyjczuk. No. 1,193,026; Aug. 1; Gaz. vol. 229; p. 69.
Sleds, Roller attachment for. H. H. Kollner. No. 1,195,233; Aug. 22; Gaz. vol. 229; p. 905.
Sleeper for permanent way. C. P. Sandberg. No. 1,194,240; Aug. 8; Gaz. vol. 229; p. 538.

Sleeping-bag and shelter, Combined. A. D. Panet. No. 1,195,394; Aug. 22; Gaz. vol. 229; p. 1025.
Sleeve-fastener, Extensible. E. A. Hoot. No. 1,195,357; Aug. 22; Gaz. vol. 229; p. 1013.
Sleigh, Automobile. P. Mason. No. 1,193,170; Aug. 1; Gaz. vol. 229; p. 122.
Sleigh, Motor-. J. O. Decker. No. 1,193,365; Aug. 1; Gaz. vol. 229; p. 192.
Slicer, Vegetable-. E. W. Hekendorn. No. 1,196,454; Aug. 29; Gaz. vol. 229; p. 1432.
Slicing machine, Upper-cut apple-. F. B. Foley. No. 1,193,003; Aug. 1; Gaz. vol. 229; p. 60.
Slip-socket. C. P. Williams. No. 1,194,910; Aug. 15; Gaz. vol. 229; p. 816.
Slipper. E. A. Bickford. No. 1,194,468; Aug. 15; Gaz. vol. 229; p. 665.
Slippers, Making. E. A. Bickford. No. 1,194,467; Aug. 15; Gaz. vol. 229; p. 664.
Slitting and collecting machine, Combined. W. Stuebing, Sr. No. 1,193,201; Aug. 1; Gaz. vol. 229; p. 133.
Slug-casting machine. W. C. Lieberknecht. No. 1,193,275; Aug. 1; Gaz. vol. 229; p. 160.
Slug-casting machines, Quad-block for. D. S. Kennedy. No. 1,193,269; Aug. 1; Gaz. vol. 229; p. 158.
Smash-preventer. W. Lonzo. No. 1,193,164; Aug. 1; Gaz. 229; p. 120.
Smoke-generator. W. Siegel. No. 1,195,743; Aug. 22; Gaz. vol. 229; p. 1150.
Smoker's shield. H. F. W. Benze. No. 1,196,646; Aug. 29; Gaz. vol. 229; p. 1498.
Snap-switch. C. D. Platt. No. 1,193,606; Aug. 8; Gaz. vol. 229; p. 315.
Snow-plow. W. T. Ruth. No. 1,195,271; Aug. 22; Gaz. vol. 229; p. 979.
Snow-scraper. M. B. Bulger and J. P. Offerman. No. 1,196,206; Aug. 29; Gaz. vol. 229; p. 1348.
Soap-container. H. W. Remington. No. 1,194,545; Aug. 15; Gaz. vol. 229; p. 690.
Soap-dish, Sanitary. L. Tijou. No. 1,194,096; Aug. 8; Gaz. vol. 229; p. 488.
Soap, Product and process of manufacturing a product having the properties of. G. Petroff. No. 1,196,274; Aug. 29; Gaz. vol. 229; p. 1371.
Sodium and potassium salts, Separation of. H. P. Bassett. No. 1,194,465; Aug. 15; Gaz. vol. 229; p. 663.
Soil mulsher and subpacker. N. T. Nichols. No. 1,195,710; Aug. 22; Gaz. vol. 229; p. 1138.
Solar system, Model of the. H. Tsuru. No. 1,195,420; Aug. 22; Gaz. vol. 229; p. 1034.
Soldering cast-iron, mild steel, aluminum, and the like, Composition of matter for. W. A. Day. No. 1,195,955; Aug. 22; Gaz. vol. 229; p. 1225.
Soldering compound. F. E. J. Lilot. No. 1,194,648; Aug. 15; Gaz. vol. 229; p. 725.
Soldering-iron. O. A. Walker. No. 1,196,620; Aug. 29; Gaz. vol. 229; p. 1489.
Soldering-machine. D. P. Robinson and J. Coyle. No. 1,193,425; Aug. 1; Gaz. vol. 229; p. 213.
Soldering metals. L. M. Klauber. No. 1,196,118; Aug. 29; Gaz. vol. 229; p. 1316.
Sole for shoes. W. Greilich. No. 1,194,732; Aug. 15; Gaz. vol. 229; p. 755.
Sole-pressing machine. E. N. Preble. No. 1,193,186; Aug. 1; Gaz. vol. 229; p. 128.
Sole-pressing machine. E. N. Preble. No. 1,194,539; Aug. 15; Gaz. vol. 229; p. 689.
Soles and heels to shoe-uppers, Device for nailing. J. A. Ellis. No. 1,196,221; Aug. 29; Gaz. vol. 229; p. 1354.
Soles, Machine for operating upon. E. E. Winkley. No. 1,196,727; Aug. 29; Gaz. vol. 229; p. 1526.
Solenoid. C. S. Du Belle. No. 1,195,449; Aug. 22; Gaz. vol. 229; p. 1044.
Sound-amplifier. W. H. Crawford. No. 1,195,783; Aug. 22; Gaz. vol. 229; p. 1166.
Sound-records, Matrix for pressing. W. S. Tyler and F. L. Capps. No. 1,194,795; Aug. 15; Gaz. vol. 229; p. 778.
Sound-reproducing machine for advertising purposes. E. L. Christensen. No. 1,193,762; Aug. 8; Gaz. vol. 229; p. 373.
Soy-bean product and preparation of. J. Friedman. No. 1,194,495; Aug. 15; Gaz. vol. 229; p. 674.
Spark-gap. F. H. Kroger. No. 1,192,909; Aug. 1; Gaz. vol. 229; p. 27.
Spark-plug. L. A. McDowell. No. 1,196,566; Aug. 29; Gaz. vol. 229; p. 1470.
Spark-plug. O. Rickmeyer. No. 1,195,089; Aug. 15; Gaz. vol. 229; p. 879.
Spark-plug and forming the same. A. Schmidt. No. 1,193,075; Aug. 1; Gaz. vol. 229; p. 87.
Spark-plug and spark-gap, Combined. W. C. Brunke and H. D. Clarke. No. 1,194,474; Aug. 15; Gaz. vol. 229; p. 667.
Spectacle or eyeglass mounting. P. H. Johnston. No. 1,196,115; Aug. 29; Gaz. vol. 229; p. 1315.
Speed and running-time indicator. R. Shipman. No. 1,195,280; Aug. 22; Gaz. vol. 229; p. 983.
Speed and running-time indicator. R. Shipman. No. 1,195,930; Aug. 22; Gaz. vol. 229; p. 1217.
Speed-changing mechanism. G. M. Merwin and E. S. Charles. No. 1,193,174; Aug. 1; Gaz. vol. 229; p. 123.
Speed-indicating device. F. Faigle. No. 1,196,450; Aug. 29; Gaz. vol. 229; p. 1430.
Speed mechanism, Variable-. J. McElwain. No. 1,195,052; Aug. 15; Gaz. vol. 229; p. 867.
Speed-regulating device. H. A. Nelson. No. 1,196,015; Aug. 29; Gaz. vol. 229; p. 1280.
Speed-transmission mechanism, Variable-. F. S. Ruttmann. No. 1,195,272; Aug. 22; Gaz. vol. 229; p. 979.
Speed-transmission mechanism, Variable-. S. P. Whiteside. No. 1,194,107; Aug. 8; Gaz. vol. 229; p. 492.
Speedometer. A. A. Canton. No. 1,196,516; Aug. 29; Gaz. vol. 229; p. 1453.
Speedometer. M. G. Cook. No. 1,194,144; Aug. 8; Gaz. vol. 229; p. 506.
Speedometer. J. J. Shafer. No. 1,196,162; Aug. 29; Gaz. vol. 229; p. 1333.
Speedometer. G. S. Tiffany. No. 1,196,494; Aug. 29; Gaz. vol. 229; p. 1445.
Spike-puller. E. F. Goben. No. 1,193,376; Aug. 1; Gaz. vol. 229; p. 196.
Spikes, Means for locating and guiding rail holding and locking. J. A. Lunger. No. 1,193,280; Aug. 1; Gaz. vol. 229; p. 162.
Spinning-machine. J. Good. No. 1,194,834; Aug. 15; Gaz. vol. 229; p. 790.
Spinning, twisting, winding, and like machine. A. G. Walls. No. 1,193,321; Aug. 1; Gaz. vol. 229; p. 177.
Splitting-machine. F. M. Furber. No. 1,192,882; Aug. 1; Gaz. vol. 229; p. 18.
Spoon-supporter. C. Hammond. No. 1,196,737; Aug. 29; Gaz. vol. 229; p. 1531.
Spot-light. R. W. Ebeling. No. 1,192,876; Aug. 1; Gaz. vol. 229; p. 16.
Spout-holder. C. H. Ahlfs. No. 1,194,922; Aug. 15; Gaz. vol. 229; p. 821.
Spraying apparatus. R. E. Cecil and H. E. Grant. No. 1,194,358; Aug. 15; Gaz. vol. 229; p. 623.
Spring: *See*—
Vehicle-spring.
Spring-actuated wheel. M. A. Wagner. No. 1,196,409; Aug. 29; Gaz. vol. 229; p. 1417.
Spring-cambering machine. Z. D. Leonard. No. 1,195,241; Aug. 22; Gaz. vol. 229; p. 968.
Spring construction, Leaf-. J. E. Gramlich. No. 1,195,460; Aug. 22; Gaz. vol. 229; p. 1048.
Spring-seat. W. F. Bereth. No. 1,193,977; Aug. 8; Gaz. vol. 229; p. 448.
Spring suspension. C. Robinson. No. 1,196,153; Aug. 29; Gaz. vol. 229; p. 1329.
Spring threading-die. V. Olb. No. 1,194,535; Aug. 15; Gaz. vol. 229; p. 687.
Spring-trip hitch. L. A. Thomas. No. 1,193,311; Aug. 1; Gaz. vol. 229; p. 173.
Spring-wheel. S. A. Cherry. No. 1,195,656; Aug. 22; Gaz. vol. 229; p. 1118.
Spring-wheel. F. Weinman. No. 1,193,325; Aug. 1; Gaz. vol. 229; p. 179.
Spring-winding machine. O. Rieke. No. 1,193,300; Aug. 1; Gaz. vol. 229; p. 170.
Springs, Boot or casing for leaf-. O. F. Anderson. No. 1,195,896; Aug. 22; Gaz. vol. 229; p. 1205.
Springs, Tool for separating and oiling. W. F. Manning. No. 1,192,922; Aug. 1; Gaz. vol. 229; p. 32.
Sprinkler: *See*—
Lawn-sprinkler.
Sprinkler-head. A. C. Rowley. No. 1,193,619; Aug. 8; Gaz. vol. 229; p. 320.
Sprinkler-head, Automatic. C. B. Garrett. No. 1,195,201; Aug. 22; Gaz. vol. 229; p. 954.
Sprocket-wheel, Detachable-rim. D. C. Muloihill. No. 1,194,767; Aug. 15; Gaz. vol. 229; p. 767.
Square, Carpenter's. C. Caylor. No. 1,196,519; Aug. 29; Gaz. vol. 229; p. 1454.
Stage-setting. B. M. Giroux. No. 1,196,104; Aug. 29; Gaz. vol. 229; p. 1311.
Stalk and weed burner. A. E. Twelt. No. 1,196,182; Aug. 29; Gaz. vol. 229; p. 1340.
Stamp affixing and canceling machine. F. Smith. No. 1,195,115; Aug. 15; Gaz. vol. 229; p. 888.
Stamp-affixing machine. F. R. Allen. No. 1,194,692; Aug. 15; Gaz. vol. 229; p. 741.
Stamp-affixing machine. F. R. Allen. No. 1,194,694; Aug. 15; Gaz. vol. 229; p. 742.
Stamp-affixing machine. F. W. Storck. No. 1,193,730; Aug. 8; Gaz. vol. 229; p. 362.
Stamp and the like, Time-. J. C. Wilson. No. 1,193,713; Aug. 1; Gaz. vol. 229; p. 137.
Stamp-feeding mechanism. S. L. Long. No. 1,194,403; Aug. 15; Gaz. vol. 229; p. 640.
Stamp, Hand-. W. J. Brookman. N. 1,196,512; Aug. 29; Gaz. vol. 229; p. 1452.
Stamp-mill. H. L. Doherty. No. 1,192,997; Aug. 1; Gaz. vol. 229; p. 57.
Stamp-mill. R. Raycraft. No. 1,195,855; Aug. 22; Gaz. vol. 229; p. 1191.
Stamping device, Rotary. K. C. Fullerton and E. S. Hunt. No. 1,195,199; Aug. 22; Gaz. vol. 229; p. 953.
Stanchion. C. O. Anderson. No. 1,194,925; Aug. 15; Gaz. vol. 229; p. 822.
Stanchion. R. J. Luttrell. No. 1,194,046; Aug. 8; Gaz. vol. 229; p. 472.
Stanchion. N. Pederson. No. 1,194,782; Aug. 15; Gaz. vol. 229; p. 772.
Stanchion, Cattle-. W. Louden. No. 1,193,035; Aug. 1; Gaz. vol. 229; p. 72.
Stanchion, Cattle-. W. Louden and A. H. Neller. No. 1,194,199; Aug. 8; Gaz. vol. 229; p. 524.
Stanchion, Cattle-. G. S. Shepard. No. 1,193,933; Aug. 8; Gaz. vol. 229; p. 434.

Stand: *See*—
Advertising display-stand. Display-stand.
Cycle-stand.
Staple-puller. T. Schulz. No. 1,193,930; Aug. 8; Gaz. vol. 229; p. 433.
Stapling-machine. B. E. Brown. No. 1,196,077; Aug. 29; Gaz. vol. 229; p. 1303.
Stapling-machine. E. H. Michener. No. 1,193,284; Aug. 1; Gaz. vol. 229; p. 164.
Starch from adhering dust or powder, Apparatus for freeing lump-. A. W. H. Lenders. No. 1,193,274; Aug. 1; Gaz. vol. 229; p. 166.
Starter, Potential. H. A. Steen. No. 1,195,526; Aug. 22; Gaz. vol. 229; p. 1070.
Starting and lighting system, Electric. C. Tichenor. No. 1,193,205; Aug. 1; Gaz. vol. 229; p. 134.
Starting-clutch mechanism. C. H. Stinson. No. 1,196,311; Aug. 29; Gaz. vol. 229; p. 1382.
Station-indicator. F. Healy. No. 1,195,011; Aug. 15; Gaz. vol. 229; p. 853.
Stationery-box and writing-tablet, Combined. H. L. Gottschalk. No. 1,194,618; Aug. 15; Gaz. vol. 229; p. 715.
Stave tonguing and grooving machine. E. F. Benzler. No. 1,195,962; Aug. 29; Gaz. vol. 229; p. 1261.
Stay, Garment-. C. A. Foulger. No. 1,195,195; Aug. 22; Gaz. vol. 229; p. 952.
Stay, Garment-. E. L. Hyde. No. 1,193,790; Aug. 8; Gaz. vol. 229; p. 384.
Stay, Garment-. W. J. Roche. No. 1,192,934; Aug. 1; Gaz. vol. 229; p. 36.
Stay, Garment-. F. L. O. Wadsworth. No. 1,193,742; Aug. 8; Gaz. vol. 229; p. 366.
Staying-machine safety device. C. F. Root. No. 1,195,401; Aug. 22; Gaz. vol. 229; p. 1028.
Steam-boiler. C. D. Mosher. No. 1,192,928; Aug. 1; Gaz. vol. 229; p. 34.
Steam-boiler. R. Shibata. No. 1,193,435; Aug. 1; Gaz. vol. 229; p. 216.
Steam-boiler, Gas-fired. K. A. Norrman. No. 1,195,072; Aug. 15; Gaz. vol. 229; p. 874.
Steam-engine. R. Wetherill. No. 1,193,327; Aug. 1; Gaz. vol. 229; p. 179.
Steam-generator. K. W. Branczik. No. 1,192,848; Aug. 1; Gaz. vol. 229; p. 7.
Steam-generator. W. A. Moffat. No. 1,195,064; Aug. 15; Gaz. vol. 229; p. 871.
Steam-jet. E. C. Damrow. No. 1,195,915; Aug. 22; Gaz. vol. 229; p. 1211.
Steam-meter. C. C. Thomas. No. 1,193,488; Aug. 1; Gaz. vol. 229; p. 234.
Steam-motor and electrical-generator combined-efficiency indicator. R. S. Xenaky. No. 1,194,807; Aug. 15; Gaz. vol. 229; p. 782.
Steam-trap. T. G. Rakestraw. No. 1,196,283; Aug. 29; Gaz. vol. 229; p. 1373.
Steel and high-phosphorus slag, Producing. A. W. Allen and E. G. Lilly. No. 1,193,496; Aug. 8; Gaz. vol. 229; p. 275.
Steel-cutting machine. R. E. Colton. No. 1,195,184; Aug. 22; Gaz. vol. 229; p. 948.
Steering-gear attachment. G. P. and A. G. Rasck. No. 1,196,284; Aug. 29; Gaz. vol. 229; p. 1373.
Steering reach-rod. A. D. Wilt, Jr. No. 1,195,122; Aug. 15; Gaz. vol. 229; p. 890.
Steering-wheel. W. H. Appleby. No. 1,195,548; Aug. 22; Gaz. vol. 229; p. 1078.
Steering-wheel-locking device. O. F. Coleman. No. 1,195,782; Aug. 22; Gaz. vol. 229; p. 1165.
Stencil-sheets, Composition for coating. S. W. Fuerth. No. 1,196,098; Aug. 29; Gaz. vol. 229; p. 1310.
Stenciling fabric, Producing. A. E. Strippel. No. 1,194,899; Aug. 15; Gaz. vol. 229; p. 813.
Stereoscope. H. N. Clarke. No. 1,193,993; Aug. 8; Gaz. vol. 229; p. 454.
Stereoscope. J. J. Murphy. No. 1,194,057; Aug. 8; Gaz. vol. 229; p. 475.
Stereotype-plate-casting machine. C. Winkler. No. 1,195,123; Aug. 15; Gaz. vol. 229; p. 890.
Sterilization of fluids by ultra-violet rays, Apparatus for. M. von Recklinghausen. No. 1,193,209; Aug. 1; Gaz. vol. 229; p. 136.
Sterilization of liquids. M. von Recklinghausen, A. Helbronner, and V. Henri. No. 1,196,481; Aug. 29; Gaz. vol. 229; p. 1441.
Sterilizer. T. G. Dorough. No. 1,193,129; Aug. 1; Gaz. vol. 229; p. 108.
Sterilizer, Tooth-brush. V. C. Quartararo. No. 1,194,540; Aug. 15; Gaz. vol. 229; p. 689.
Sterilizing liquids by means of ultra-violet rays, Apparatus for. V. Henri, A. Helbronner, and M. von Recklinghausen. No. 1,193,143; Aug. 1; Gaz. vol. 229; p. 113.
Stirrup, Safety-. S. Entriken. No. 1,194,001; Aug. 8; Gaz. vol. 229; p. 456.
Stock-fountain. H. W. Glanz, Jr. No. 1,193,683; Aug. 8; Gaz. vol. 229; p. 343.
Stocking and knitting the same. R. W. Scott. No. 1,194,675; Aug. 15; Gaz. vol. 229; p. 735.
Stocking-supporter. E. A. Morgan. No. 1,196,471; Aug. 29; Gaz. vol. 229; p. 1438.
Stoker, Chain-grate. F. G. Britton. No. 1,192,850; Aug. 1; Gaz. vol. 229; p. 8.
Stoker for locomotives, Mechanical. C. F. Street. No. 1,195,532; Aug. 22; Gaz. vol. 229; p. 1072.
Stoker, Mechanical. W. T. Hanna. (Reissue.) No. 14,179; Aug. 8; Gaz. vol. 229; p. 577.
Stoker, Mechanical. C. F. Street. No. 1,195,533; Aug. 22; Gaz. vol. 229; p. 1072.
Stoker, Mechanical. C. F. Street and N. M. Lower. No. 1,195,528; Aug. 22; Gaz. vol. 229; p. 1071.
Stokers, Distributer for mechanical. C. F. Street and N. M. Lower. No. 1,195,529; Aug. 22; Gaz. vol. 229; p. 1071.
Stone-cutting machine. B. A. Westerling and A. P. Hedberg. No. 1,193,097; Aug. 1; Gaz. vol. 229; p. 96.
Stone-spreader. J. M. Jones. No. 1,194,197; Aug. 8; Gaz. vol. 229; p. 524.
Stone-spreader. N. E. Pope. No. 1,194,063; Aug. 8; Gaz. vol. 229; p. 478.
Stone, Treated. R. W. Hyde. No. 1,196,693; Aug. 29; Gaz. vol. 229; p. 1514.
Stool. C. E. Schossler. No. 1,194,551; Aug. 15; Gaz. vol. 229; p. 692.
Stool, Milk-. H. W. Peters. No. 1,193,418; Aug. 1; Gaz. vol. 229; p. 211.
Stop-catch. J. M. Karl. No. 1,195,166; Aug. 15; Gaz. vol. 229; p. 906.
Stop mechanism, Adjustable. L. M. Page. No. 1,196,477; Aug. 29; Gaz. vol. 229; p. 1440.
Stopper: *See*—
Flue-stopper. Lavatory-fixture stopper.
Stopping device. E. N. Preble. No. 1,193,056; Aug. 1; Gaz. vol. 229; p. 80.
Storage battery. T. A. Willard. No. 1,194,688; Aug. 15; Gaz. vol. 229; p. 740.
Store-fixture. M. W. Combs. No. 1,193,666; Aug. 8; Gaz. vol. 229; p. 338.
Store-front construction. G. C. Hester. No. 1,193,144; Aug. 1; Gaz. vol. 229; p. 113.
Store-service apparatus. E. C. Gipe. No. 1,196,352; Aug. 29; Gaz. vol. 229; p. 1396.
Stores, Self-service furnishing for. C. C. Carpenter. No. 1,195,654; Aug. 22; Gaz. vol. 229; p. 1118.
Stove. E. D. Baxter. No. 1,195,329; Aug. 22; Gaz. vol. 229; p. 1002.
Stove and range. W. A. Busick and A. A. Roesch. No. 1,196,078; Aug. 29; Gaz. vol. 229; p. 1304.
Stove and toaster, Combined electric. G. E. Reinking. No. 1,194,663; Aug. 15; Gaz. vol. 229; p. 730.
Stove, Blower-. F. Shadley. No. 1,195,279; Aug. 22; Gaz. vol. 229; p. 982.
Stove-board. H. W. Pfeil. No. 1,192,931; Aug. 1; Gaz. vol. 229; p. 35.
Stove-legs, Caster device for. C. G. Overmyer. No. 1,193,051; Aug. 1; Gaz. vol. 229; p. 78.
Stove-mat. N. M. Ladd. No. 1,193,399; Aug. 1; Gaz. vol. 229; p. 204.
Stove or furnace. J. E. Pinguely. No. 1,196,145; Aug. 29; Gaz. vol. 229; p. 1326.
Stove-shelf. J. Z. Brown. No. 1,194,813; Aug. 15; Gaz. vol. 229; p. 784.
Stoves, Fire-lining for. B. B. Culver. No. 1,193,456; Aug. 1; Gaz. vol. 229; p. 223.
Stoves, Vapor-burner for. E. L. Randall. No. 1,195,160; Aug. 15; Gaz. vol. 229; p. 903.
Strainer. W. Marsha. No. 1,196,570; Aug. 29; Gaz. vol. 229; p. 1472.
Strap: *See*—
Picker-stick lug-strap.
Straw-carrier. W. H. and H. F. Krunfus. No. 1,193,565; Aug. 8; Gaz. vol. 229; p. 299.
Straw-dispenser. W. J. Eisenhardt. No. 1,195,451; Aug. 22; Gaz. vol. 229; p. 1045.
Street-indicator. W. Morrone. No. 1,196,136; Aug. 29; Gaz. vol. 229; p. 1323.
Street-sweeper hood. R. W. Furnas. No. 1,193,888; Aug. 8; Gaz. vol. 229; p. 418.
Stretcher. A. Dombrowsky. No. 1,195,789; Aug. 22; Gaz. vol. 229; p. 1167.
String-fastener. F. B. Hine. No. 1,192,896; Aug. 1; Gaz. vol. 229; p. 23.
Strip-serving device. F. S. Anable. No. 1,195,893; Aug. 22; Gaz. vol. 229; p. 1204.
Strip-serving device. F. S. Anable. No. 1,195,894; Aug. 22; Gaz. vol. 229; p. 1204.
Strips, Device for delivering subdivided. M. Sielaff. No. 1,195,517; Aug. 22; Gaz. vol. 229; p. 1067.
Structure, Adjustable supporting. W. B. Cogger. No. 1,196,084; Aug. 29; Gaz. vol. 229; p. 1305.
Structure, such as a silo, Cylindrical wall. D. A. Secor. No. 1,195,277; Aug. 22; Gaz. vol. 229; p. 982.
Stuffing-box. C. L. Cummins. No. 1,194,146; Aug. 8; Gaz. vol. 229; p. 506.
Stump-extractor. J. L. and D. E. Morris. No. 1,194,214; Aug. 8; Gaz. vol. 229; p. 529.
Stump-puller. W. C. Hammer. No. 1,195,004; Aug. 15; Gaz. vol. 229; p. 851.
Sugar-beet-loading structures, Locking mechanism for the dumping-platforms of. M. S. Richeson. No. 1,195,398; Aug. 22; Gaz. vol. 229; p. 1026.
Summer-house, Octagonal portable. M. Sherman. No. 1,193,833; Aug. 8; Gaz. vol. 229; p. 397.
Superheater, Steam-. E. A. Geoghegan. No. 1,196,102; Aug. 29; Gaz. vol. 229; p. 1310.
Support, Adjustable flexible. O. L. Badger. No. 1,194,699; Aug. 15; Gaz. vol. 229; p. 743.
Supporting-rack. J. I. Brorby. No. 1,192,851; Aug. 1; Gaz. vol. 229; p. 8.

Surfacing-machine. A. E. Chappell. No. 1,195,780; Aug. 22; Gaz. vol. 229; p. 1165.
Surgical appliance. J. L. Sowell. No. 1,195,931; Aug. 22; Gaz. vol. 229; p. 1217.
Surveying apparatus. W. G. Ducklow. No. 1,195,342; Aug. 22; Gaz. vol. 229; p. 1007.
Surveyor's instrument. L. H. Berger. No. 1,193,978; Aug. 8; Gaz. vol. 229; p. 449.
Suspensory. A. J. Schwarzer. No. 1,193,432; Aug. 1; Gaz. vol. 229; p. 215.
Swaging-machine. A. A. Arnold. No. 1,193,856; Aug. 8; Gaz. vol. 229; p. 406.
Swaging-machines, Automatic feeding device for. E. J. Scott. No. 1,193,078; Aug. 1; Gaz. vol. 229; p. 88.
Sweat-band for headwear, Adjustable. L. Kronthal. No. 1,194,193; Aug. 8; Gaz. vol. 229; p. 523.
Sweeper, Suction-. J. M. Spangler. No. 1,192,949; Aug. 1; Gaz. vol. 229; p. 41.
Sweetmeat-wrapping machines, Intermittent drive for. F. Grover. No. 1,195,672; Aug. 22; Gaz. vol. 229; p. 1125.
Swimming apparatus. J. S. Bartholomew. No. 1,196,421; Aug. 29; Gaz. vol. 229; p. 1421.
Swimming-machine. A. H. Jahnson. No. 1,193,394; Aug. 1; Gaz. vol. 229; p. 203.
Swing. W. H. Schmid. No. 1,192,941; Aug. 1; Gaz. vol. 229; p. 39.
Swing, Self-propelled. P. S. Medart. No. 1,196,375; Aug. 29; Gaz. vol. 229; p. 1404.
Switch: *See*—
Cut-out switch. Push contact-switch.
Electric switch. Railway-switch.
Electrical switch. Selector-switch.
Electrically-operated switch. Snap-switch.
Time-switch.
Ignition-switch.
Switch, V. G. Apple. No. 1,196,637; Aug. 29; Gaz. vol. 229; p. 1494.
Switch, M. D. Brown. No. 1,194,134; Aug. 8; Gaz. vol. 229; p. 502.
Switch, H. Walker and W. L. Kreuscher. No. 1,194,447; Aug. 15; Gaz. vol. 229; p. 657.
Switch-block and casing. A. I. Fromager and J. F. Six. No. 1,193,253; Aug. 1; Gaz. vol. 229; p. 152.
Switch-lock. E. D. Smith. No. 1,195,619; Aug. 22; Gaz. vol. 229; p. 1105.
Switch-point connector. C. P. Baker. No. 1,194,121; Aug. 8; Gaz. vol. 229; p. 498.
Switch-rod. J. C. Mock. No. 1,195,382; Aug. 22; Gaz. vol. 229; p. 1021.
Switchboard apparatus. J. M. Brown. No. 1,194,133; Aug. 8; Gaz. vol. 229; p. 501.
Switching mechanism. H. A. Steen. No. 1,194,564; Aug. 15; Gaz. vol. 229; p. 696.
Synchronizing revolving bodies, Means for. C. A. Parsons and S. S. Cook. No. 1,194,222; Aug. 8; Gaz. vol. 229; p. 532.
Table: *See*—
Chiropractic-table. Folding table.
Collapsible table. Silvering-table.
Collapsible adjusting or manipulating table. Tube-rolling table.
Concentrating-table. Turn-table.
Table and seat, Combination. M. J. Harden. No. 1,193,544. Aug. 8; Gaz. vol. 229; p. 292.
Table-top construction for table-beds. P. E. Ennis. No. 1,195,798; Aug. 22; Gaz. vol. 229; p. 1171.
Tabular quad or space. W. L. Springer. No. 1,194,891; Aug. 15; Gaz. vol. 229; p. 811.
Tacking and welt-butting machine. E. L. Keyes. No. 1,194,394; Aug. 15; Gaz. vol. 229; p. 636.
Tacking machine, Welt-butt-. S. J. Wentworth. No. 1,195,304; Aug. 22; Gaz. vol. 229; p. 992.
Tag-fastener. E. R. Burgess. No. 1,196,514; Aug. 29; Gaz. vol. 229; p. 1452.
Tag-fastener. C. Singerman. No. 1,196,307; Aug. 29; Gaz. vol. 229; p. 1381.
Tag-holder. F. P. Keeler. No. 1,194,746; Aug. 15; Gaz. vol. 229; p. 760.
Tag, Price-. F. Kohnle. No. 1,194,508; Aug. 15; Gaz. vol. 229; p. 679.
Talking-machine. J. C. English. No. 1,196,448; Aug. 29; Gaz. vol. 229; p. 1430.
Talking-machine brake. H. H. Murray and W. D. La Rue. No. 1,196,265; Aug. 29; Gaz. vol. 229; p. 1368.
Talking-machines, Automatic stop mechanism for. S. R. Howard. No. 1,193,266; Aug. 1; Gaz. vol. 229; p. 156.
Tank: *See*—
Developing-tank.
Tank-draining mechanism. W. A. Bourell. No. 1,195,181; Aug. 22; Gaz. vol. 229; p. 947.
Tank gage, Oil-. H. B. King. No. 1,194,846; Aug. 15; Gaz. vol. 229; p. 794.
Tank-head. A. Kraetzer. No. 1,194,848; Aug. 15; Gaz. vol. 229; p. 795.
Tank joint, Metal-. H. Stier. No. 1,196,490; Aug. 29; Gaz. vol. 229; p. 1444.
Tank valve, Water-. C. W. Arndt. No. 1,195,170; Aug. 22; Gaz. vol. 229; p. 943.
Tanning-machine, Mechanical. C. Ruhe. No. 1,195,858; Aug. 22; Gaz. vol. 229; p. 1192.
Tap, Collapsing. O. W. Berg. No. 1,195,436; Aug. 22; Gaz. vol. 229; p. 1039.
Tape, Reinforced. E. H. Angier. No. 1,195,430; Aug. 22; Gaz. vol. 229; p. 1038.
Tatting-shuttle winder. E. P. Roberts. No. 1,195,501; Aug. 22; Gaz. vol. 229; p. 1061.
Tea and coffee pot. L. W. Cox. No. 1,196,086; Aug. 29; Gaz. vol. 229; p. 1306.
Teething device. I. H. Shambaugh. No. 1,194,246; Aug. 8; Gaz. vol. 229; p. 540.
Telegraph-insulators and the like, Machine for internally shaping. W. Podmore. No. 1,193,185; Aug. 1; Gaz. vol. 229; p. 127.
Telegraph receiver, Printing-. C. G. Ashley. No. 1,193,218; Aug. 1; Gaz. vol. 229; p. 139.
Telegraph receiver, Printing-. A. F. Dixon. No. 1,194,365; Aug. 15; Gaz. vol. 229; p. 625.
Telegraph receiving apparatus of the selective type, Electric-. W. J. Lyons. No. 1,193,807; Aug. 8; Gaz. vol. 229; p. 389.
Telegraph system, Printing-. C. G. Ashley. No. 1,193,217; Aug. 1; Gaz. vol. 229; p. 138.
Telegraph-transmitter. A. D. Cardwell. No. 1,194,357; Aug. 15; Gaz. vol. 229; p. 622.
Telegraphic and telephonic communications, System of. J. H. Claus. No. 1,194,142; Aug. 8; Gaz. vol. 229; p. 505.
Telegraphy, Space. C. V. Logwood and C. F. Elwell. No. 1,195,485; Aug. 22; Gaz. vol. 229; p. 1056.
Telephone and responding apparatus, Automatic. E. J. Cressey. No. 1,192,993; Aug. 1; Gaz. vol. 229; p. 56.
Telephone and telegraph pole construction. H. E. Adams. No. 1,194,690; Aug. 15; Gaz. vol. 229; p. 740.
Telephone-call register and system. G. E. Mueller. No. 1,193,179; Aug. 1; Gaz. vol. 229; p. 125.
Telephone-directory. C. E. Napp. No. 1,193,590; Aug. 8; Gaz. vol. 229; p. 309.
Telephone-exchange system. T. G. Martin. No. 1,194,339; Aug. 8; Gaz. vol. 229; p. 574.
Telephone-exchange system, Automatic. G. A. Betulander and N. G. Palmgren. No. 1,195,771; Aug. 22; Gaz. vol. 229; p. 1162.
Telephone-exchange system, Automatic. B. G. Dunham. No. 1,194,367; Aug. 15; Gaz. vol. 229; p. 626.
Telephone-exchange system, Automatic. B. G. Dunham. No. 1,196,532; Aug. 29; Gaz. vol. 229; p. 1458.
Telephone-exchange system, Semi-automatic. W. and R. Aitken. No. 1,195,891; Aug. 22; Gaz. vol. 229; p. 1203.
Telephone instrument. A. L. Cotton and J. S. Wicking. No. 1,194,959; Aug. 15; Gaz. vol. 229; p. 834.
Telephone instrument. H. E. Lynch. No. 1,196,562; Aug. 29; Gaz. vol. 229; p. 1469.
Telephone-key. P. O. Robinson. No. 1,196,398; Aug. 29; Gaz. vol. 229; p. 1414.
Telephone-receiver. D. P. Moore. No. 1,194,765; Aug. 15; Gaz. vol. 229; p. 766.
Telephone-receiver. B. D. Willis. No. 1,194,457; Aug. 15; Gaz. vol. 229; p. 661.
Telephone set. C. S. Baker. No. 1,192,975; Aug. 1; Gaz. vol. 229; p. 49.
Telephone signaling system. J. S. Allen. No. 1,196,323; Aug. 29; Gaz. vol. 229; p. 1385.
Telephone switch-hook. W. Kaisling. No. 1,195,590; Aug. 22; Gaz. vol. 229; p. 1095.
Telephone system, Automatic. H. H. Ide. No. 1,194,741; Aug. 15; Gaz. vol. 229; p. 758.
Telephone system, Automatic. A. E. Lundell. No. 1,194,851; Aug. 15; Gaz. vol. 229; p. 796.
Telephone system, Despatcher's. C. A. Simpson. No. 1,193,835; Aug. 8; Gaz. vol. 229; p. 399.
Telephone system, Machine. L. Polinkowsky. No. 1,193,053; Aug. 1; Gaz. vol. 229; p. 78.
Telephone system, Measured-service. E. D. Fales. No. 1,193,458; Aug. 1; Gaz. vol. 229; p. 223.
Telephone system, Measured-service. T. G. Martin. No. 1,193,169; Aug. 1; Gaz. vol. 229; p. 121.
Telephone systems, Call-registering system for automatic. C. L. Goodrum. No. 1,193,137; Aug. 1; Gaz. vol. 229; p. 111.
Telephone systems, Convertible ringing control for. G. D. Wolf. No. 1,195,163; Aug. 15; Gaz. vol. 229; p. 904.
Telephone-transmitter. A. Plecher. No. 1,193,184; Aug. 1; Gaz. vol. 229; p. 127.
Telephone trunking system, Automatic. W. E. Lamb. No. 1,193,160; Aug. 1; Gaz. vol. 229; p. 118.
Telephones, Coin-registering device for. H. Kramer. No. 1,195,234; Aug. 22; Gaz. vol. 229; p. 965.
Telephones, Receiver-operated switch for. H. D. Currier. No. 1,196,340; Aug. 29; Gaz. vol. 229; p. 1392.
Telephony. P. B. Delany. No. 1,194,280; Aug. 8; Gaz. vol. 229; p. 552.
Temperature indicating or recording system and appliance. A. Barry. No. 1,194,808; Aug. 15; Gaz. vol. 229; p. 782.
Temperature-regulator. V. F. Davis. No. 1,193,671; Aug. 8; Gaz. vol. 229; p. 340.
Tenders, Coaling and watering device for moving. W. H. and J. T. Rice. No. 1,196,289; Aug. 29; Gaz. vol. 229; p. 1375.
Tennis-court marker. F. W. Lord. No. 1,193,571; Aug. 8; Gaz. vol. 229; p. 301.
Tenoning-machine. J. V. Richardson. No. 1,193,612; Aug. 8; Gaz. vol. 229; p. 318.
Tension device. W. Canova. No. 1,196,079; Aug. 29; Gaz. vol. 229; p. 1304.
Tent, Dismountable camp-chair. S. Cane. No. 1,196,207; Aug. 29; Gaz. vol. 229; p. 1349.
Tent-stake. H. O. Wellman. No. 1,193,212; Aug. 1; Gaz. vol. 229; p. 137.

Terminal clamp. K. A. Simmon. No. 1,196,163; Aug. 29; Gaz. vol. 229; p. 1333.
Testing-machine, Rotative vibratory. C. L. Heisler. No. 1,193,686; Aug. 8; Gaz. vol. 229; p. 345.
Theater-dimmer. H. J. Wiegand. No. 1,194,451; Aug. 15; Gaz. vol. 229; p. 659.
Thermionic amplifier and rectifier. H. J. Van der Bijl. No. 1,193,206; Aug. 1; Gaz. vol. 229; p. 135.
Thermo cut-out. D. Ferrell. No. 1,192,879; Aug. 1; Gaz. vol. 229; p. 17.
Thermometer-holder, Germicidal. L. Martocci-Pisculli. No. 1,196,571; Aug. 29; Gaz. vol. 229; p. 1472.
Thermostatic members, Machining. F. Van Inwagen. No. 1,193,637; Aug. 8; Gaz. vol. 229; p. 328.
Thill-coupling. A. E. Brown. No. 1,195,970; Aug. 29; Gaz. vol. 229; p. 1264.
Third-point suspension-clip. F. J. Schroeder. No. 1,193,929; Aug. 8; Gaz. vol. 229; p. 432.
Thread-cutter. J. W. Bowersox and A. W. Moore. No. 1,196,651; Aug. 29; Gaz. vol. 229; p. 1500.
Thread-cutter. J. Kintzel. No. 1,195,822; Aug. 22; Gaz. vol. 229; p. 1180.
Thread-cutting tool. A. D. Pejauo and H. J. McGivern. No. 1,195,717; Aug. 22; Gaz. vol. 229; p. 1140.
Thread-cutting-tool gage. L. H. Soisson. No. 1,195,287; Aug. 22; Gaz. vol. 229; p. 986.
Thread-guide. F. S. Culver. No. 1,196,434; Aug. 29; Gaz. vol. 229; p. 1425.
Threads, Implement for truing up. J. Abrahamson. No. 1,196,415; Aug. 29; Gaz. vol. 229; p. 1419.
Threshing-machine feeder. A. Barnedt and C. N. Jensen. No. 1,196,070; Aug. 29; Gaz. vol. 229; p. 1300.
Threshing-machine grain-separator. S. M. O. Bangen. No. 1,193,751; Aug. 8; Gaz. vol. 229; p. 369.
Ticket-chopper. S. Newman and H. R. Bothwell. No. 1,194,771; Aug. 15; Gaz. vol. 229; p. 768.
Ticket, Commutation-. R. Borgfeldt. No. 1,194,472; Aug. 15; Gaz. vol. 229; p. 666.
Ticket, Pin-. S. Wachtel and S. Reiss. No. 1,193,319; Aug. 1; Gaz. vol. 229; p. 177.
Tidal motor. D. Mould. No. 1,195,386; Aug. 22; Gaz. vol. 229; p. 1022.
Tie: *See*—
Cross-tie.
Package-tie.
Railway-tie.
Railway cross-tie.
Tie and rail-fastener. T. W. and S. N. Stroop. No. 1,195,413; Aug. 22; Gaz. vol. 229; p. 1032.
Tie-boring machine. G. C. Purdy and D. W. Edwards. No. 1,195,852; Aug. 22; Gaz. vol. 229; p. 1190.
Tie-clasp. O. J. Lauterbach. No. 1,196,251; Aug. 29; Gaz. vol. 229; p. 1363.
Tie-pressing device. S. D. Butterworth. No. 1,196,515; Aug. 29; Gaz. vol. 229; p. 1453.
Tile-facing device. G. J. Seller. No. 1,194,554; Aug. 15; Gaz. vol. 229; p. 693.
Tile-setter. C. A. Novotny. No. 1,194,220; Aug. 8; Gaz. vol. 229; p. 531.
Tile sizing and grading machine. C. F. Koch. No. 1,194,035; Aug. 8; Gaz. vol. 229; p. 467.
Tile-trap. W. Walker and T. Easton. No. 1,193,320; Aug. 1; Gaz. vol. 229; p. 177.
Time-switch. R. C. Patton. No. 1,193,293; Aug. 1; Gaz. vol. 229; p. 166.
Time-switch, Electric. J. H. Lamb. No. 1,193,159; Aug. 1; Gaz. vol. 229; p. 118.
Time system. J. C. Wilson. No. 1,194,911; Aug. 15; Gaz. vol. 229; p. 817.
Timing device. C. J. Kullmer. No. 1,196,550; Aug. 29; Gaz. vol. 229; p. 1465.
Timing mechanism, Electrical. F. W. Adsit. No. 1,196,728; Aug. 29; Gaz. vol. 229; p. 1527.
Tin-plate catcher. U. U. Ulam. No. 1,196,619; Aug. 29; Gaz. vol. 229; p. 1488.
Tipple. A. H. Wood. No. 1,195,545; Aug. 22; Gaz. vol. 229; p. 1077.
Tire. R. E. Stump. No. 1,194,253; Aug. 8; Gaz. vol. 229; p. 543.
Tire-armor. E. B. Curry. No. 1,195,913; Aug. 22; Gaz. vol. 229; p. 1211.
Tire-armor. A. Szkoknya. No. 1,194,681; Aug. 15; Gaz. vol. 229; p. 737.
Tire-building apparatus, Pneumatic-. P. and B. De Mattia. No. 1,194,967; Aug. 15; Gaz. vol. 229; p. 837.
Tire-building core, Pneumatic-. P. and B. De Mattia. No. 1,194,968; Aug. 15; Gaz. vol. 229; p. 838.
Tire-building machine. G. F. Fisher. No. 1,195,800; Aug. 22; Gaz. vol. 229; p. 1171.
Tire-casings, Collapsible core for. W. F. Brunswick. No. 1,196,513; Aug. 29; Gaz. vol. 229; p. 1452.
Tire casings, Separable core for making pneumatic-. J. C. Lauritzen. No. 1,195,480; Aug. 22; Gaz. vol. 229; p. 1054.
Tire-chain, Antiskidding. R. T. Hughes. No. 1,193,392; Aug. 1; Gaz. vol. 229; p. 202.
Tire-chain-clamping device. C. A. Huber. No. 1,195,019; Aug. 15; Gaz. vol. 229; p. 857.
Tire chain, Pneumatic-. S. G. Silberman. No. 1,194,433; Aug. 15; Gaz. vol. 229; p. 650.
Tire construction, Vehicle-. W. S. Temple. No. 1,194,322; Aug. 8; Gaz. vol. 229; p. 569.
Tire, Cushion-. J. S. Bahen. No. 1,194,120; Aug. 8; Gaz. vol. 229; p. 498.
Tire, Elastic. J. I. Duchâteau. No. 1,196,670; Aug. 29; Gaz. vol. 229; p. 1506.
Tire fabric. J. F. Ives. No. 1,194,388; Aug. 15; Gaz. vol. 229; p. 634.
Tire fabric, Cord. J. F. Ives. No. 1,194,389; Aug. 15; Gaz. vol. 229; p. 635.
Tire-filler. E. L. Sherbondy. No. 1,193,196; Aug. 1; Gaz. vol. 229; p. 132.
Tire for vehicle-wheels. F. S. Weise. No. 1,194,797; Aug. 15; Gaz. vol. 229; p. 778.
Tire for vehicle-wheels, Resilient. P. K. Olechna. No. 1,195,849; Aug. 22; Gaz. vol. 229; p. 1189.
Tire for wheels and means for retaining the same. E. H. Schwarz. No. 1,195,512; Aug. 22; Gaz. vol. 229; p. 1065.
Tire-inspecting machine. H. J. Hoyt. No. 1,193,691; Aug. 8; Gaz. vol. 229; p. 347.
Tire, Metal automobile-. J. A. Martin and F. M. Macy. No. 1,195,490; Aug. 22; Gaz. vol. 229; p. 1057.
Tire-protector. D. W. Freeman. No. 1,193,533; Aug. 8; Gaz. vol. 229; p. 287.
Tire protector, Automobile-. R. S. Miller. No. 1,192,924; Aug. 1; Gaz. vol. 229; p. 33.
Tire-rack. J. E. Bales and J. B. O'Connor. No. 1,193,498; Aug. 8; Gaz. vol. 229; p. 275.
Tire-repair tool. L. V. Rood. No. 1,192,937; Aug. 1; Gaz. vol. 229; p. 38.
Tire, Resilient. C. N. Bentley. No. 1,192,842; Aug. 1; Gaz. vol. 229; p. 4.
Tire, Resilient. T. L. Carbone. No. 1,195,556; Aug. 22; Gaz. vol. 229; p. 1082.
Tire, Resilient. E. L. Scranton. No. 1,194,081; Aug. 8; Gaz. vol. 229; p. 484.
Tire-rim. P. W. Burford. No. 1,192,853; Aug. 1; Gaz. vol. 229; p. 9.
Tire, Rubber. A. K. and C. A. Allen. No. 1,193,108; Aug. 1; Gaz. vol. 229; p. 100.
Tire-seating rim for automobile-wheels, Demountable resilient. J. G. Hodgson. No. 1,194,020; Aug. 8; Gaz. vol. 229; p. 463.
Tire, Sectional cushion-. J. Spyker. No. 1,194,789; Aug. 15; Gaz. vol. 229; p. 775.
Tire, Sectional spring-. J. H. Lynn. No. 1,195,049; Aug. 15; Gaz. vol. 229; p. 866.
Tire-unwrapping machine. J. Kosutz and J. Bunta. No. 1,196,249; Aug. 29; Gaz. vol. 229; p. 1362.
Tire, Vehicle-. L. F. N. Baldwin. No. 1,196,069; Aug. 29; Gaz. vol. 229; p. 1300.
Tire-vulcanizing attachment for automobiles. R. Cannon and S. Gray. No. 1,195,337; Aug. 22; Gaz. vol. 229; p. 1005.
Tires and the like, Fabric for. R. B. Price. No. 1,193,715; Aug. 8; Gaz. vol. 229; p. 356.
Tires and the like, Valve attachment of pneumatic. C. E. Baker. No. 1,195,939; Aug. 22; Gaz. vol. 229; p. 1220.
Tires, Art of and mold for making rubber. M. A. Deeg. No. 1,192,994; Aug. 1; Gaz. vol. 229; p. 56.
Tires, Blow-out patch for pneumatic. J. N. Davis. No. 1,194,279; Aug. 8; Gaz. vol. 229; p. 551.
Tires, Guard-rim for pneumatic. J. R. Gammeter. No. 1,194,285; Aug. 8; Gaz. vol. 229; p. 553.
Tires, Leak-alarm for pneumatic. G. W. Wells. No. 1,195,883; Aug. 22; Gaz. vol. 229; p. 1200.
Tires, Plug for repairing pneumatic. C. A. Hill. No. 1,193,387; Aug. 1; Gaz. vol. 229; p. 200.
Titanic oxid, Treating. A. J. Rossi and L. E. Barton. No. 1,196,030; Aug. 29; Gaz. vol. 229; p. 1286.
Titanium compound. A. J. Rossi and L. E. Barton. No. 1,196,031; Aug. 29; Gaz. vol. 229; p. 1286.
Titanium compound, Producing. A. J. Rossi and L. E. Barton. No. 1,196,029; Aug. 29; Gaz. vol. 229; p. 1286.
Tobacco and match pouch. C. H. Eddy. No. 1,193,871; Aug. 1; Gaz. vol. 229; p. 194.
Tobacco-biter. L. E. Asbenfelter. No. 1,194,697; Aug. 15; Gaz. vol. 229; p. 743.
Tobacco-boxes, Cigarette-paper-holding attachment for. B. A. Rose. No. 1,193,427; Aug. 1; Gaz. vol. 229; p. 214.
Tobacco, Dehydrating and curing. G. H. Benjamin. No. 1,194,351; Aug. 15; Gaz. vol. 229; p. 620.
Tobacco, Extracting nicotin from green or uncured. H. Villiers-Stuart. No. 1,196,184; Aug. 29; Gaz. vol. 229; p. 1341.
Tobacco-feeding machine. J. G. Zohuminsky. No. 1,194,114; Aug. 8; Gaz. vol. 229; p. 495.
Tobacco-lath holder. O. Moe. No. 1,194,310; Aug. 8; Gaz. vol. 229; p. 504.
Tobacco-pouch. M. A. and M. A. Shumard, Jr. No. 1,196,599; Aug. 29; Gaz. vol. 229; p. 1482.
Toilet-seat. F. H. Brandenburg. No. 1,196,427; Aug. 29; Gaz. vol. 229; p. 1423.
Toilet-seat, Auxiliary. S. W. Dunn. No. 1,194,972; Aug. 15; Gaz. vol. 229; p. 839.
Tongs, Blacksmith's. W. J. Rogers. No. 1,194,547; Aug. 15; Gaz. vol. 229; p. 691.
Tongs, Chain. A. E. Holmes. No. 1,196,359; Aug. 29; Gaz. vol. 229; p. 1398.
Tongue-support. P. Pirsch. No. 1,193,052; Aug. 1; Gaz. vol. 229; p. 78.
Tool. H. Kraut. No. 1,196,703; Aug. 29; Gaz. vol. 229; p. 1517.
Tool-chest and hand-box, Combination. J. M. Mauk. No. 1,193,809; Aug. 8; Gaz. vol. 229; p. 390.
Tool, Combination. W. Holmes. No. 1,195,471; Aug. 22; Gaz. vol. 229; p. 1051.

Tool, Combination-. H. V. Jones and H. McNally. No. 1,194,296; Aug. 8; Gaz. vol. 229; p. 558.
Tool-handle. F. W. Grossmann. No. 1,194,170; Aug. 8; Gaz. vol. 229; p. 514.
Tool-holder. J. Chisholm. No. 1,194,956; Aug. 15; Gaz. vol. 229; p. 833.
Tool-holder. E. Rollinson and E. E. Moxham. No. 1,193,426; Aug. 1; Gaz. vol. 229; p. 213.
Tool-holder. G. Selander. No. 1,196,161; Aug. 29; Gaz. vol. 229; p. 1332.
Tool-holder. G. A. Taylor. No. 1,193,945; Aug. 8; Gaz vol. 229; p. 438.
Tool holder, Multiple-. H. Smith. No. 1,195,116; Aug. 15; Gaz. vol. 229; p. 888.
Tool, Pneumatic. R. E. Veltum. No. 1,193,318; Aug. 1; Gaz. vol. 229; p. 176.
Tooth, Artificial. T. F. Glenn. No. 1,195,577; Aug. 22; Gaz. vol. 229; p. 1090.
Tooth, Artificial. T. F. Glenn. No. 1,196,227; Aug. 29; Gaz. vol. 229; p. 1350.
Tooth, Artificial. R. M. Withycombe. No. 1,193,329; Aug. 1; Gaz. vol. 229; p. 180.
Torch, Cutting-. R. Vuilleumier. No. 1,195,298; Aug. 22; Gaz. vol. 229; p. 990.
Torch, Gas welding-. G. M. Neagley. No. 1,194,769; Aug. 15; Gaz. vol. 229; p. 767.
Torpedo, Railway signal-. F. Dutcher. No. 1,194,973; Aug. 15; Gaz. vol. 229; p. 840.
Torpedo, Railway signal-. F. Dutcher. No. 1,194,974; Aug. 15; Gaz. vol. 229; p. 840.
Torpedo, Railway signal-. F. Dutcher. No. 1,194,975; Aug. 15; Gaz. vol. 229; p. 840.
Torpedo, Railway signal-. F. Dutcher. No. 1,194,976; Aug. 15; Gaz. vol. 229; p. 840.
Torpedo-tube, Ship's. B. Rosenbaum. No. 1,195,739; Aug. 22; Gaz. vol. 229; p. 1148.
Torpedoes and the like, Means for preventing attacks of. K. O. Leon. No. 1,195,042; Aug. 15; Gaz. vol. 229; p. 864.
Torpedoes, Apparatus for launching automobile. G. C. Davison. No. 1,196,745; Aug. 29; Gaz. vol. 229; p. 1533.
Torpedoes, Clip for holding railway signal-. H. M. Regnier. No. 1,193,062; Aug. 1; Gaz. vol. 229; p. 82.
Towel-rack. W. F. Lauenroth. No. 1,193,401; Aug. 1; Gaz. vol. 229; p. 205.
Toy. C. E. Keller. No. 1,196,548; Aug. 29; Gaz. vol. 229; p. 1464.
Toy. A. S. McCloy. No. 1,195,927; Aug. 22; Gaz. vol. 229; p. 1216.
Toy. H. J. Pain. No. 1,196,478; Aug. 29; Gaz. vol. 229; p. 1440.
Toy. J. C. Stoops, W. J. Fate, and F. Bennage. No. 1,193,309; Aug. 1; Gaz. vol. 229; p. 173.
Toy cane. F. O. Andreas. No. 1,195,938; Aug. 22; Gaz. vol. 229; p. 1219.
Toy cannon. P. Lucas. No. 1,195,597; Aug. 22; Gaz. vol. 229; p. 1097.
Toy, Dancing. W. M. Colvin. No. 1,193,493; Aug. 1; Gaz. vol. 229; p. 236.
Toy, Dancing. H. A. Mann. No. 1,196,008; Aug. 29; Gaz. vol. 229; p. 1278.
Toy, Figure. L. A. Bockstahler. No. 1,196,649; Aug. 29; Gaz. vol. 229; p. 1499.
Toy or the like. R. F. Beardsley. No. 1,193,975; Aug. 8; Gaz. vol. 229; p. 448.
Toy-stage construction. J. A. Dunigan. No. 1,195,792; Aug. 22; Gaz. vol. 229; p. 1169.
Toy wheel. L. S. Long. No. 1,193,805; Aug. 8; Gaz. vol. 229; p. 388.
Toys, Motor for structural. F. Hornby. No. 1,196,238; Aug. 29; Gaz. vol. 229; p. 1359.
Toys, Sound emitting and controlling means for. M. Rabinowitz. No. 1,193,059; Aug. 1; Gaz. vol. 229; p. 81.
Track instruments, Operating mechanism for. B. C. Rowell. No. 1,193,469; Aug. 1; Gaz. vol. 229; p. 228.
Traction-engine. B. Holt. No. 1,194,738; Aug. 15; Gaz. vol. 229; p. 757.
Traction-engine. A. J. Roberts and W. C. Wright, Sr. No. 1,193,616; Aug. 8; Gaz. vol. 229; p. 319.
Traction units, Power-transmitting mechanism for. L. A. Krupp. No. 1,196,119; Aug. 29; Gaz. vol. 229; p. 1317.
Traction-wheel. L. Holland-Letz. No. 1,192,897; Aug. 1; Gaz. vol. 229; p. 23.
Traction-wheel. R. B. Morton. No. 1,195,066; Aug. 15; Gaz. vol. 229; p. 872.
Traction-wheel. F. Younggren. No. 1,193,957; Aug. 8; Gaz. vol. 229; p. 442.
Traction-wheel for agricultural and like machines. A. Pfeil. No. 1,194,875; Aug. 15; Gaz. vol. 229; p. 805.
Tractor. H. H. Bates. No. 1,196,507; Aug. 29; Gaz. vol. 229; p. 1450.
Tractor. C. F. Smith. No. 1,194,085; Aug. 8; Gaz. vol. 229; p. 485.
Tractor agricultural machines, Steering-wheel for. C. W. Jackson. No. 1,195,859; Aug. 22; Gaz. vol. 229; p. 1018.
Tractor driving-gearing. J. S. Stearns. No. 1,196,168; Aug. 29; Gaz. vol. 229; p. 1335.
Tractor-engine. C. L. Best. No. 1,194,269; Aug. 8; Gaz. vol. 229; p. 548.
Tractor-guides, Automatic adjusting mechanism for. G. C. Long. No. 1,195,873; Aug. 22; Gaz. vol. 229; p. 1018.
Tractor, Plow-. W. L. Gile. No. 1,193,776; Aug. 8; Gaz. vol. 229; p. 379.
Tractor-steering means. W. F. Doyle. No. 1,195,841; Aug. 22; Gaz. vol. 229; p. 1006.
Traffic-director. F. B. Henretta. No. 1,195,583; Aug. 22; Gaz. vol. 229; p. 1092.
Traffic-officer's stand. W. E. Keller. No. 1,196,698; Aug. 29; Gaz. vol. 229; p. 1515.
Trailmobile. C. A. Behlen. No. 1,195,960; Aug. 29; Gaz. vol. 229; p. 1260.
Train-control apparatus. R. M. Kaufmann and T. M. Freeble. No. 1,195,029; Aug. 15; Gaz. vol. 229; p. 850.
Train-controlling apparatus. B. B. Breeden. No. 1,193,492; Aug. 1; Gaz. vol. 229; p. 236.
Train-controlling system, Automatic. G. P. Thurber. No. 1,193,635; Aug. 8; Gaz. vol. 229; p. 327.
Train-stop, Automatic. M. A. Carmichael. No. 1,195,975; Aug. 29; Gaz. vol. 229; p. 1265.
Train-stop, Automatic. B. H. Cubbage and C. Peterson. No. 1,196,665; Aug. 29; Gaz. vol. 229; p. 1505.
Train-stop, Automatic. G. B. Garrison. No. 1,193,775; Aug. 8; Gaz. vol. 229; p. 378.
Train-stop mechanism, Automatic. R. J. Kauch. No. 1,193,022; Aug. 1; Gaz. vol. 229; p. 67.
Train-stopping device, Automatic. G. H. Clark. No. 1,193,122; Aug. 1; Gaz. vol. 229; p. 105.
Trains, Device for delivering articles to and receiving articles from moving. W. S. Davidson. No. 1,192,872; Aug. 1; Gaz. vol. 229; p. 15.
Transfer-press. I. F. Niles. No. 1,193,046; Aug. 1; Gaz. vol. 229; p. 76.
Transformer, Oscillating-current. R. A. Weagant. No. 1,192,964; Aug. 1; Gaz. vol. 229; p. 46.
Transmission mechanism. H. Hinkel. No. 1,195,138; Aug. 15; Gaz. vol. 229; p. 896.
Transmission mechanism. A. E. Norris. No. 1,193,916; Aug. 8; Gaz. vol. 229; p. 428.
Transmission mechanism. T. A. Wagner and F. H. Hartzell. No. 1,193,089; Aug. 1; Gaz. vol. 229; p. 92.
Transmission mechanism, Coupling means for. W. L. Marr. No. 1,194,529; Aug. 15; Gaz. vol. 229; p. 685.
Transparent mediums, Device for maintaining the transparency of. O. H. Nonnenbruch. No. 1,195,256; Aug. 22; Gaz. vol. 229; p. 973.
Transport. H. Skreberg. No. 1,195,283; Aug. 22; Gaz. vol. 229; p. 984.
Trap: *See*—
Animal-trap.
Fish-trap.
Fish and crab trap.
Fly-trap.
Impalement-trap.
Minnow-trap.
Rat-trap.
Steam-trap.
Tile-trap.
Water-trap.
Trap. J. J. Downey. No. 1,193,527; Aug. 8; Gaz. vol. 229; p. 285.
Trap. R. N. Ink. No. 1,196,694; Aug. 29; Gaz. vol. 229; p. 1514.
Trap. J. W. Lytton. No. 1,195,944; Aug. 22; Gaz. vol. 229; p. 1221.
Tray, Check and deposit-ticket. O. Baker. No. 1,192,840; Aug. 1; Gaz. vol. 229; p. 4.
Tread, Auxiliary. O. Basten. No. 1,193,500; Aug. 8; Gaz. vol. 229; p. 276.
Tread-plate. W. S. Atwood. No. 1,193,857; Aug. 8; Gaz. vol. 229; p. 407.
Tree: *See*—
Shoe-tree.
Tree-board. J. Samuelson. No. 1,195,740; Aug. 22; Gaz. vol. 229; p. 1148.
Trenching-machine. J. C. French. No. 1,194,375; Aug. 15; Gaz. vol. 229; p. 629.
Trenching machine, Meadow-. F. B. Currier. No. 1,194,963; Aug. 15; Gaz. vol. 229; p. 836.
Trestle. J. R. Jones. No. 1,194,025; Aug. 8; Gaz. vol. 229; p. 464.
Trolley. J. A. Paige. No. 1,195,850; Aug. 22; Gaz. vol. 229; p. 1190.
Trolley. C. J. Wells. No. 1,193,447; Aug. 1; Gaz. vol. 229; p. 220.
Trolley catcher and retriever. C. E. Gierding. No. 1,193,890; Aug. 8; Gaz. vol. 229; p. 418.
Trolley-guide. H. J. Dauben and O. L. Stump. No. 1,195,916; Aug. 22; Gaz. vol. 229; p. 1212.
Trolley-wheel construction. J. H. Reese. No. 1,194,543; Aug. 15; Gaz. vol. 229; p. 690.
Trolley-wheel guard. P. R. Schafer. No. 1,194,429; Aug. 15; Gaz. vol. 229; p. 649.
Trolley-wire apparatus. G. Buttrick. No. 1,193,508; Aug. 8; Gaz. vol. 229; p. 279.
Trolley-wire support. E. W. Nitzsche. No. 1,196,475; Aug. 29; Gaz. vol. 229; p. 1439.
Trough: *See*—
Feeding-trough.
Trousers-protector, Detachable. L. Sonnenberg. No. 1,195,523; Aug. 22; Gaz. vol. 229; p. 1069.
Trousers-stretching and pressing device. S. Franzon. No. 1,194,374; Aug. 15; Gaz. vol. 229; p. 629.
Trousers-supporter. J. H. Powers. No. 1,196,279; Aug. 29; Gaz. vol. 229; p. 1372.
Truck. W. E. Boebck. No. 1,192,981; Aug. 1; Gaz. vol. 229; p. 52.
Truck. A. McKinnon. No. 1,195,699; Aug. 22; Gaz. vol. 229; p. 1133.
Truck. W. O. Shadbolt. No. 1,193,932; Aug. 8; Gaz. vol. 229; p. 433.

Truck. E. Whalley. No. 1,194,104; Aug. 8; Gaz. vol. 229; p. 491.
Truck. E. Whalley. No. 1,194,105; Aug. 8; Gaz. vol. 229; p. 491.
Truck, Automobile coal-. G. W. Lally. No. 1,193,028; Aug. 1; Gaz. vol. 229; p. 70.
Truck-body-dumping mechanism. H. M. Slor. No. 1,195,519; Aug. 22; Gaz. vol. 229; p. 1068.
Truck, Car-. J. C. Barber. No. 1,194,349; Aug. 15; Gaz. vol. 229; p. 620.
Truck, Car-. E. E. Slick. No. 1,195,112; Aug. 15; Gaz. vol. 229; p. 886.
Truck, Combination vehicle-. H. W. Clark. No. 1,194,141; Aug. 8; Gaz. vol. 229; p. 504.
Truck, Dumping-. J. A. Martin. No. 1,195,489; Aug. 22; Gaz. vol. 229; p. 1057.
Truck, Elevating-. J. T. Atherton. No. 1,196,638; Aug. 29; Gaz. vol. 229; p. 1494.
Truck, Elevating-. H. D. Brown. No. 1,193,115; Aug. 1; Gaz. vol. 229; p. 102.
Truck, Elevating-. M. Ruckes. No. 1,196,723; Aug. 29; Gaz. vol. 229; p. 1525.
Truck-frame. E. E. Slick. No. 1,195,111; Aug. 15; Gaz. vol. 229; p. 886.
Truck frame, Car-. T. F. Tomlinson. No. 1,196,180; Aug. 29; Gaz. vol. 229; p. 1339.
Truck, Hand-. C. P. De Lore. No. 1,194,342; Aug. 8; Gaz. vol. 229; p. 575.
Truck, Hand-. F. Stebler. No. 1,193,729; Aug. 8; Gaz. vol. 229; p. 361.
Truck, Short-turning. J. M. Rose. No. 1,195,954; Aug. 22; Gaz. vol. 229; p. 1225.
Truck side bearing, Car-. T. F. Tomlinson. No. 1,196,178; Aug. 29; Gaz. vol. 229; p. 1339.
Truck side frame, Car-. T. F. Tomlinson. No. 1,196,179; Aug. 29; Gaz. vol. 229; p. 1339.
Trunk. K. L. Traweek. No. 1,194,323; Aug. 8; Gaz. vol. 229; p. 569.
Trunk-catch. S. Grossman. No. 1,195,810; Aug. 22; Gaz. vol. 229; p. 1175.
Trunk or box. H. B. Morgan. No. 1,193,710; Aug. 8; Gaz. vol. 229; p. 354.
Trunk, Wardrobe-. C. A. Kuntzendorf. No. 1,196,551; Aug. 29; Gaz. vol. 229; p. 1466.
Trunk, Wardrobe-. A. Van Gale. No. 1,195,535; Aug. 22; Gaz. vol. 229; p. 1073.
Trunks, Frame for the suspension of suits of clothes for gentlemen, in. F. M. Wolff. No. 1,194,804; Aug. 15; Gaz. vol. 229; p. 781.
Truss or rupture-belt or other surgical appliance. J. Stott. No. 1,194,252; Aug. 8; Gaz. vol. 229; p. 542.
Tube: *See*—
Torpedo-tube. X-ray tube.
Tube-clamp. C. P. Kuchner. No. 1,196,120; Aug. 29; Gaz. vol. 229; p. 1317.
Tube-cleaner. J. H. Whidden. No. 1,195,308; Aug. 22; Gaz. vol. 229; p. 994.
Tube-extruding machine, Metal-. L. E. Hooker. No. 1,196,360; Aug. 29; Gaz. vol. 229; p. 1399.
Tube-filling apparatus. W. J. Noon. No. 1,196,387; Aug. 29; Gaz. vol. 229; p. 1409.
Tube-making apparatus. A. Bleecker. No. 1,196,648; Aug. 29; Gaz. vol. 229; p. 1499.
Tube-rolling table. C. L. Witsaman. No. 1,194,803; Aug. 15; Gaz. vol. 229; p. 780.
Tubes for splicing, Machine for preparing. E. Van Note. No. 1,195,422; Aug. 22; Gaz. vol. 229; p. 1035.
Tubing-bleeder. G. C. Bushong. No. 1,194,952; Aug. 15; Gaz. vol. 229; p. 832.
Tubing-catcher. R. Y. Watson. No. 1,193,091; Aug. 1; Gaz. vol. 229; p. 93.
Tubing cutter, Metal-. A. E. Kammer. No. 1,195,501; Aug. 22; Gaz. vol. 229; p. 1095.
Tubular fabric, Apparatus for treating. L. A. Subers. No. 1,195,414; Aug. 22; Gaz. vol. 229; p. 1032.
Tubular heater. G. E. Simonds. No. 1,193,304; Aug. 1; Gaz. vol. 229; p. 171.
Tuning mechanism for stringed instruments. G. K. Henrig and L. Bajde. No. 1,193,384; Aug. 1; Gaz. vol. 229; p. 199.
Turbine, Elastic-fluid. W. Pape. No. 1,194,312; Aug. 8; Gaz. vol. 229; p. 564.
Turbine-engine. F. J. Keppler. No. 1,194,507; Aug. 15; Gaz. vol. 229; p. 678.
Turbine, Gasolene-. J. O. Snyder. No. 1,194,560; Aug. 15; Gaz. vol. 229; p. 695.
Turbine, Hydraulic. A. Pfau. No. 1,193,183; Aug 1; Gaz. vol. 229; p. 126.
Turbine, Steam-. J. E. Kilker. No. 1,193,902; Aug. 8; Gaz. vol. 229; p. 423.
Turn-table. K. S. Howard and A. F. Howe. No. 1,194,501; Aug. 15; Gaz. vol. 229; p. 676.
Turpentine strips or troughs, Support for. F. S. Bailey. No. 1,193,220; Aug. 1; Gaz. vol. 229; p. 139.
Turret tool-post. E. C. Nichols. No. 1,192,930; Aug. 1; Gaz. vol. 229; p. 35.
Turret tool-post for engine-lathes. H. Newmann. No. 1,195,390; Aug. 22; Gaz. vol. 229; p. 1024.
Twine-cutting device. J. P. Hill. No. 1,195,584; Aug. 22; Gaz. vol. 229; p. 1092.
Tying apparatus. H. C. and L. F. Battles. No. 1,196,640; Aug. 29; Gaz. vol. 229; p. 1495.
Type casting and composing machine, Separate-. F. Schimmel. No. 1,195,742; Aug. 22; Gaz. vol. 229; p. 1141.
Type-casting attachment, Single-. J. E. Hanrahan. No. 1,194,623; Aug. 15; Gaz. vol. 229; p. 717.
Type-casting machines, Centering-bar lock for. J. S. Bancroft and M. C. Indahl. No. 1,193,342; Aug. 1; Gaz. vol. 229; p. 184.
Type-casting machines, Fluid-metal-injecting mechanism for. W. L. Waltz. No. 1,193,322; Aug. 1; Gaz. vol. 229; p. 178.
Type-casting machines, Matrix-holder for. J. S. Bancroft and M. C. Indahl. No. 1,193,345; Aug. 1; Gaz. vol. 229; p. 185.
Type-machines, Low-quad mechanism for. F. H. Pierpont. No. 1,193,420; Aug. 1; Gaz. vol. 229; p. 212.
Type setting and distributing machine. J. S. Duncan. No. 1,195,189; Aug. 22; Gaz. vol. 229; p. 950.
Type storing, assembling, and distributing mechanism. H. C. Gammeter. No. 1,194,008; Aug. 8; Gaz. vol. 229; p. 459.
Type-writer. A. C. Roebuck. No. 1,193,073; Aug. 1; Gaz. vol. 229; p. 87.
Type-writer. A. C. Roebuck and A. J. Pruszynski. No. 1,193,072; Aug. 1; Gaz. vol. 229; p. 86.
Type-writer. R. W. Uhlig. No. 1,193,949; Aug. 8; Gaz. vol. 229; p. 439.
Type-writer attachment. J. H. La Moy. No. 1,195,033; Aug. 15; Gaz. vol. 229; p. 861.
Type-writer attachment. G. Smedal. No. 1,196,164; Aug. 29; Gaz. vol. 229; p. 1333.
Type-writer attachment. M. B. Ward. No. 1,194,579; Aug. 15; Gaz. vol. 229; p. 702.
Type-writer escapement. G. F. Rose. No. 1,195,504; Aug. 22; Gaz. vol. 229; p. 1062.
Type-writer ribbon-feed mechanism. H. Etheridge. No. 1,194,979; Aug. 15; Gaz. vol. 229; p. 841.
Type-writing and computing machine, Combined. W. L. Dench. No. 1,196,733; Aug. 29; Gaz. vol. 229; p. 1529.
Type-writing and computing machine, Combined. H. Marshall. No. 1,196,257; Aug. 29; Gaz. vol. 229; p. 1365.
Type-writing machine. J. F. Allard. No. 1,194,587; Aug. 15; Gaz. vol. 229; p. 705.
Type-writing machine. B. F. Barker. No. 1,192,976; Aug. 1; Gaz. vol. 229; p. 50.
Type-writing machine. H. A. Carhart. No. 1,195,557; Aug. 22; Gaz. vol. 229; p. 1083.
Type-writing machine. T. J. Coo. No. 1,194,361; Aug. 15; Gaz. vol. 229; p. 624.
Type-writing machine. F. A. Cook. No. 1,194,362; Aug. 15; Gaz. vol. 229; p. 624.
Type-writing machine. J. C. Doane. No. 1,196,529; Aug. 29; Gaz. vol. 229; p. 1457.
Type-writing machine. W. R. Fox. No. 1,193,774; Aug. 8; Gaz. vol. 229; p. 378.
Type-writing machine. W. P. Kidder. No. 1,194,845; Aug. 15; Gaz. vol. 229; p. 794.
Type-writing machine. A. G. F. Kurowski. No. 1,196,369; Aug. 29; Gaz. vol. 229; p. 1403.
Type-writing machine. F. L. Morgan. No. 1,194,655; Aug. 15; Gaz. vol. 229; p. 727.
Type-writing machine. O. Petermann. No. 1,193,603; Aug. 8; Gaz. vol. 229; p. 314.
Type-writing machine. O. Petermann. No. 1,194,419; Aug. 15; Gaz. vol. 229; p. 645.
Type-writing machine. O. Petermann. No. 1,194,420; Aug. 15; Gaz. vol. 229; p. 646.
Type-writing machine. F. A. Young. No. 1,192,972; Aug. 1; Gaz. vol. 229; p. 48.
Type-writing-machine attachment. O. P. Anderson. No. 1,196,634; Aug. 29; Gaz. vol. 229; p. 1493.
Type-writing-machine carriage-support. B. J. Dowd and A. Utz. No. 1,193,526; Aug. 8; Gaz. vol. 229; p. 285.
Type-writing machines, Dead-key attachment for. O. Petermann. No. 1,194,418; Aug. 15; Gaz. vol. 229; p. 645.
Type-writing machines, Line-spacing mechanism for. E. B. Hess. No. 1,196,110; Aug. 29; Gaz. vol. 229; p. 1314.
Typographic composing-machine. D. Petri-Palmedo. No. 1,193,604; Aug. 8; Gaz. vol. 229; p. 314.
Typographical casting-machine. C. Holliwell and M. H. Whittaker. No. 1,193,264; Aug. 1; Gaz. vol. 229; p. 156.
Typographical machine. D. S. Kennedy. No. 1,193,558; Aug. 8; Gaz. vol. 229; p. 296.
Typographical machine. D. S. Kennedy. No. 1,193,559; Aug. 8; Gaz. vol. 229; p. 297.
Typographical machine. J. R. Rogers. No. 1,192,935; Aug. 1; Gaz. vol. 229; p. 37.
Typographical pieces in distributing apparatus, Distribution of. K. Röger. No. 1,192,936; Aug. 1; Gaz. vol. 229; p. 37.
Umbrella. M. Altshuler and S. M. Vines. No. 1,195,635; Aug. 22; Gaz. vol. 229; p. 1111.
Undergarment. F. Chatfield and G. E. Rutledge. No. 1,196,431; Aug. 29; Gaz. vol. 229; p. 1424.
Underreamer. F. J. Fox. No. 1,193,372; Aug. 1; Gaz. vol. 229; p. 194.
Undertaker's instrument. M. E. Adcock. No. 1,195,169; Aug. 22; Gaz. vol. 229; p. 943.
Universal joint. W. J. Barker. No. 1,193,499; Aug. 8; Gaz. vol. 229; p. 276.
Universal joint. E. Noel. No. 1,196,268; Aug. 29; Gaz. vol. 229; p. 1369.

Universal joint. C. E. Perkins. No. 1,194,224; Aug. 8; Gaz. vol. 229; p. 533.
Universal joint. R. F. Scott. No. 1,195,405; Aug. 22; Gaz. vol. 229; p. 1029.
Unloading apparatus, Attachment for. A. A. Mellor. No. 1,196,261; Aug. 29; Gaz. vol. 229; p. 1367.
Vacuum-tube device. A. M. Nicolson. No. 1,196,474; Aug. 29; Gaz. vol. 229; p. 1439.
Vaginal dynamo. J. B. Wagoner. No. 1,195,933; Aug. 22; Gaz. vol. 229; p. 1217.
Vaginal speculum and retractor. W. W. Pretts. No. 1,194,319; Aug. 8; Gaz. vol. 229; p. 568.
Valve. M. T. Ash. No. 1,195,958; Aug. 29; Gaz. vol. 229; p. 1260.
Valve. F. Baird. No. 1,196,199; Aug. 29; Gaz. vol. 229; p. 1347.
Valve. J. Bentz. No. 1,193,755; Aug. 8; Gaz. vol. 229; p. 371.
Valve. P. J. Bode. No. 1,192,980; Aug. 1; Gaz. vol. 229; p. 51.
Valve. L. E. Canning. No. 1,195,336; Aug. 22; Gaz. vol. 229; p. 1005.
Valve. W. W. Lower. No. 1,196,561; Aug. 29; Gaz. vol. 229; p. 1469.
Valve. O. J. McGowan. No. 1,193,577; Aug. 8; Gaz. vol. 229; p. 303.
Valve. E. A. Naslund. No. 1,195,253; Aug. 22; Gaz. vol. 229; p. 972.
Valve. W. Steeg. No. 1,196,405; Aug. 29; Gaz. vol. 229; p. 1416.
Valve. M. H. Thoms. No. 1,193,738; Aug. 8; Gaz. vol. 229; p. 364.
Valve. G. H. Viger. No. 1,193,849; Aug. 8; Gaz. vol. 229; p. 404.
Valve-actuating means for engines. W. E. Ver Planck. No. 1,196,496; Aug. 29; Gaz. vol. 229; p. 1446.
Valve, Air and gas. E. F. Fisher. No. 1,195,667; Aug. 22; Gaz. vol. 229; p. 1123.
Valve, Automatic. E. S. Caldwell. No. 1,194,710; Aug. 15; Gaz. vol. 229; p. 747.
Valve, Automatic. H. C. Pringle. No. 1,196,280; Aug. 29; Gaz. vol. 229; p. 1373.
Valve, Automatic. J. H. Ross. No. 1,195,155; Aug. 15; Gaz. vol. 229; p. 901.
Valve, Automatic safety-. E. B. Waddell, Jr. No. 1,196,318; Aug. 29; Gaz. vol. 229; p. 1384.
Valve-chest, Steam-engine. H. R. Stafford. No. 1,193,941; Aug. 8; Gaz. vol. 229; p. 436.
Valve, Combined stop and check. J. Acton. No. 1,195,429; Aug. 22; Gaz. vol. 229; p. 1037.
Valve control, Air-. W. A. Kitts, Jr. No. 1,196,368; Aug. 29; Gaz. vol. 229; p. 1402.
Valve-controller, Adjustable. A. J. Jasmin. No. 1,194,631; Aug. 15; Gaz. vol. 229; p. 719.
Valve, Electromagnetic. J. F. McElroy. No. 1,193,036; Aug. 1; Gaz. vol. 229; p. 72.
Valve, Flushing-. A. Feleki. No. 1,195,984; Aug. 29; Gaz. vol. 229; p. 1269.
Valve for coal-washing jigs. C. A. Wendell. No. 1,194,583; Aug. 15; Gaz. vol. 229; p. 704.
Valve for combustion-engines, Air-. E. F. Paynter. No. 1,195,715; Aug. 22; Gaz. vol. 229; p. 1140.
Valve for flushing-tanks, Flush-. W. B. Campbell. No. 1,193,760; Aug. 8; Gaz. vol. 229; p. 373.
Valve for internal-combustion engines. R. H. Heberling. No. 1,193,142; Aug. 1; Gaz. vol. 229; p. 113.
Valve for internal-combustion engines. W. E. Taft. No. 1,195,868; Aug. 22; Gaz. vol. 229; p. 1196.
Valve-gear. J. C. Bird. No. 1,192,843; Aug. 1; Gaz. vol. 229; p. 5.
Valve-gear for engines. H. R. Van Vleck. No. 1,193,207; Aug. 1; Gaz. vol. 229; p. 135.
Valve, Grain-. D. Morgan. No. 1,195,838; Aug. 22; Gaz. vol. 229; p. 1186.
Valve-handle. J. P. Lavigne. No. 1,193,905; Aug. 8; Gaz. vol. 229; p. 424.
Valve, Hydraulic. C. W. Larner. No. 1,195,237; Aug. 22; Gaz. vol. 229; p. 966.
Valve-lifter. F. C. Folmar. No. 1,193,249; Aug. 1; Gaz. vol. 229; p. 151.
Valve mechanism. E. L. Delany. No. 1,194,364; Aug. 15; Gaz. vol. 229; p. 625.
Valve mechanism. H. Gibbs. No. 1,193,009; Aug. 1; Gaz. vol. 229; p. 62.
Valve mechanism, Controlling-. F. W. Slaw. No. 1,194,676; Aug. 15; Gaz. vol. 229; p. 735.
Valve mechanism for hydrocarbon-motors. G. B. Maegly. No. 1,195,703; Aug. 22; Gaz. vol. 229; p. 1135.
Valve mechanism for internal-combustion engines. H. L. Doering. No. 1,196,530; Aug. 29; Gaz. vol. 229; p. 1458.
Valve mechanism for internal-combustion engines. W. E. Ver Planck. No. 1,196,497; Aug. 29; Gaz. vol. 229; p. 1446.
Valve mechanisms of explosive-engines, Tappet for. R. W. Manning. No. 1,193,913; Aug. 8; Gaz. vol. 229; p. 427.
Valve, Mixing-. A. M. Stanley. No. 1,195,524; Aug. 22; Gaz. vol. 229; p. 1069.
Valve operating and locking device. G. A. Arnold. No. 1,194,696; Aug. 15; Gaz. vol. 229; p. 743.
Valve, Pressure-regulating. T. D. Millea. No. 1,196,377; Aug. 29; Gaz. vol. 229; p. 1405.
Valve, Radiator-. G. Herren. No. 1,196,688; Aug. 29; Gaz. vol. 229; p. 1512.
Valve-reversing gears, Locking mechanism for. P. Sheedy and D. P. Kellogg. No. 1,195,614; Aug. 22; Gaz. vol. 229; p. 1103.
Valve, Rotary. E. F. Prater and F. W. Sizer. No. 1,194,421; Aug. 15; Gaz. vol. 229; p. 647.
Valve, Rotary. H. T. Ratcliffe. No. 1,196,149; Aug. 29; Gaz. vol. 229; p. 1328.
Valve, Safety gas-. F. J. Hesse. No. 1,196,455; Aug. 29; Gaz. vol. 229; p. 1432.
Valve, Steam-. P. P. Haag. No. 1,193,780; Aug. 8; Gaz. vol. 229; p. 380.
Valve, Steam-regulating. D. Cockburn and D. MacNicoll. No. 1,195,658; Aug. 22; Gaz. vol. 229; p. 1119.
Valve-stems, Dust-cap for. R. M. Brown. No. 1,193,865; Aug. 8; Gaz. vol. 229; p. 410.
Valve, Thermostatic. F. W. Robertshaw and W. Housholder. No. 1,194,070; Aug. 8; Gaz. vol. 229; p. 480.
Valve, Throttle-. J. S. Chambers. No. 1,192,862; Aug. 1; Gaz. vol. 229; p. 12.
Valve, Track-. B. R. Van Valkenburg. No. 1,196,183; Aug. 29; Gaz. vol. 229; p. 1340.
Valve, Triple. J. P. Murphy. No. 1,195,388; Aug. 22; Gaz. vol. 229; p. 1023.
Valves, Mechanism for operating flushing-. A. F. Morency. No. 1,196,712; Aug. 29; Gaz. vol. 229; p. 1520.
Vaporizer. C. A. Jacobson. No. 1,196,546; Aug. 29; Gaz. vol. 229; p. 1464.
Varnish, lacquer, or the like and making same. R. Grüter. No. 1,195,678; Aug. 22; Gaz. vol. 229; p. 1125.
Vault-light. C. V. Lundin. No. 1,195,048; Aug. 15; Gaz. vol. 229; p. 866.
Vault, Memorial burial-. I. S. Dauley. No. 1,194,148; Aug. 8; Gaz. vol. 229; p. 507.
Vaults, Casket-carriage for burial-. G. W. Bellis. No. 1,194,810; Aug. 15; Gaz. vol. 229; p. 783.
Vehicle. A. D. Converse. No. 1,193,765; Aug. 8; Gaz. vol. 229; p. 375.
Vehicle, Armored. A. J. Jehlik. No. 1,195,680; Aug. 22; Gaz. vol. 229; p. 1127.
Vehicle attachment. E. O. Sutton. No. 1,194,256; Aug. 8; Gaz. vol. 229; p. 544.
Vehicle attachment, Motor-. J. Kirchhoff. No. 1,193,154; Aug. 1; Gaz. vol. 229; p. 116.
Vehicle attachment, Motor-. P. A. Wood. No. 1,194,111; Aug. 8; Gaz. vol. 229; p. 494.
Vehicle-brake. M. Sherman and B. Rivkin. No. 1,196,724; Aug. 29; Gaz. vol. 229; p. 1525.
Vehicle camping attachment. G. R. Stein. No. 1,196,309; Aug. 29; Gaz. vol. 229; p. 1381.
Vehicle-canopy-top fastener. A. Prokpoetz. No. 1,196,583; Aug. 29; Gaz. vol. 229; p. 1476.
Vehicle-control-pedal lock. O. A. Swanson. No. 1,193,202; Aug. 1; Gaz. vol. 229; p. 133.
Vehicle, Detachable-body baby-. O. A. Hensel. No. 1,193,896; Aug. 8; Gaz. vol. 229; p. 420.
Vehicle-direction-indicating apparatus, Motor-. W. J. Garvey. No. 1,192,885; Aug. 1; Gaz. vol. 229; p. 19.
Vehicle-driving mechanism, Motor-. W. O. Kuhn. No. 1,194,040; Aug. 8; Gaz. vol. 229; p. 470.
Vehicle, Electric-railway. K. von Kando. No. 1,196,186; Aug. 29; Gaz. vol. 229; p. 1341.
Vehicle, Equipment-. W. S. Brintnall. No. 1,194,595; Aug. 15; Gaz. vol. 229; p. 708.
Vehicle, Hand-propelled. T. McCormick. No. 1,196,129; Aug. 29; Gaz. vol. 229; p. 1320.
Vehicle-heater. T. Bovey. No. 1,194,473; Aug. 15; Gaz. vol. 229; p. 666.
Vehicle-heater. W. T. Edwards. No. 1,194,977; Aug. 15; Gaz. vol. 229; p. 841.
Vehicle-jack. P. Hofweber. No. 1,196,690; Aug. 29; Gaz. vol. 229; p. 1512.
Vehicle joint and panel construction. J. W. Clements. No. 1,192,866; Aug. 1; Gaz. vol. 229; p. 13.
Vehicle-lifting device, Motor-. C. O. Blee. No. 1,193,451; Aug. 1; Gaz. vol. 229; p. 221.
Vehicle-lighting system, Moving-. G. Honold. No. 1,193,548; Aug. 8; Gaz. vol. 229; p. 294.
Vehicle-locking device, Motor-. H. E. Davis. No. 1,192,873; Aug. 1; Gaz. vol. 229; p. 15.
Vehicle, Motor-. Z. L. Bedford, M. F., Jr., and C. C. Higgins. No. 1,196,643; Aug. 29; Gaz. vol. 229; p. 1497.
Vehicle, Motor-. J. Bohan. No. 1,194,127; Aug. 8; Gaz. vol. 229; p. 500.
Vehicle, Motor-. E. P. Cowles. No. 1,193,766; Aug. 8; Gaz. vol. 229; p. 375.
Vehicle, Motor-. C. H. Martin. No. 1,195,832; Aug. 22; Gaz. vol. 229; p. 1184.
Vehicle, Motor-. E. O. Sutton. No. 1,194,255; Aug. 8; Gaz. vol. 229; p. 543.
Vehicle, Motor-driven. C. F. Feltz. No. 1,193,132; Aug. 1; Gaz. vol. 229; p. 109.
Vehicle or locomotive pusher. F. Meyer. No. 1,194,054; Aug. 8; Gaz. vol. 229; p. 474.
Vehicle-pusher. R. S. Smith. No. 1,195,620; Aug. 22; Gaz. vol. 229; p. 1105.
Vehicle rear-end signal. M. Martin. No. 1,193,406; Aug. 1; Gaz. vol. 229; p. 207.
Vehicle, Road-. J. F. Hayes. No. 1,194,625; Aug. 15; Gaz. vol. 229; p. 717.
Vehicle-seat. D. Vaughn. No. 1,193,317; Aug. 1; Gaz. vol. 229; p. 176.
Vehicle-signal. F. R. Moore. No. 1,195,837; Aug. 22; Gaz. vol. 229; p. 1185.
Vehicle-signal. J. Spaerer. No. 1,194,888; Aug. 15; Gaz. vol. 229; p. 810.

Vehicle signal apparatus. B. L. Bobroff. No. 1,195,180; Aug. 22; Gaz. vol. 229; p. 947.
Vehicle signal, Motor-. O. W. Cowgill. (Reissue.) No. 14,186; Aug. 29; Gaz. vol. 229; p. 1535.
Vehicle signaling device. C. A. Ellis. No. 1,194,490; Aug. 15; Gaz. vol. 229; p. 673.
Vehicle signaling device. A. R. Suhner and J. D. Coakley. No. 1,194,439; Aug. 15; Gaz. vol. 229; p. 653.
Vehicle sliding door, Motor-. A. F. Masury. No. 1,193,707; Aug. 8; Gaz. vol. 229; p. 353.
Vehicle-spring. J. A. McAnulty. No. 1,195,050; Aug. 15; Gaz. vol. 229; p. 867.
Vehicle-spring. C. P. Randolph. No. 1,194,423; Aug. 15; Gaz. vol. 229; p. 647.
Vehicle-spring. A. Sonderegger and O. Schröder. No. 1,193,625; Aug. 8; Gaz. vol. 229; p. 323.
Vehicle-spring and shock-absorber. J. A. McAnulty. No. 1,194,303; Aug. 8; Gaz. vol. 229; p. 561.
Vehicle spring suspension. H. W. Hyde. No. 1,195,021; Aug. 15; Gaz. vol. 229; p. 857.
Vehicle-wheel. H. B. Coats. No. 1,193,455; Aug. 1; Gaz. vol. 229; p. 222.
Vehicle-wheel. C. F. Erickson. No. 1,194,978; Aug. 15; Gaz. vol. 229; p. 841.
Vehicle-wheel. F. Fisher and K. W. Houston. No. 1,196,346; Aug. 29; Gaz. vol. 229; p. 1394.
Vehicle-wheel. G. H. Forsyth. No. 1,195,194; Aug. 22; Gaz. vol. 229; p. 951.
Vehicle-wheel. M. B. Giberson. No. 1,192,886; Aug. 1; Gaz. vol. 229; p. 20.
Vehicle-wheel. O. Heckel. No. 1,193,383; Aug. 1; Gaz. vol. 229; p. 199.
Vehicle-wheel. J. M. McPheeters. No. 1,194,651; Aug. 15; Gaz. vol. 229; p. 726.
Vehicle-wheel, Resilient. A. Freund. No. 1,194,163; Aug. 8; Gaz. vol. 229; p. 512.
Vehicles, Combined electric lighting and starting apparatus for motor-. Duca and E. Naldini. No. 1,194,607; Aug. 15; Gaz. vol. 229; p. 712.
Vehicles, Removable window for. E. A. Armstrong. No. 1,195,638; Aug. 22; Gaz. vol. 229; p. 1111.
Vehicles, Transmission-gear for motor-. L. Biava. No. 1,194,591; Aug. 15; Gaz. vol. 229; p. 707.
Velocipede, Figure. H. J. Houghland. No. 1,193,690; Aug. 8; Gaz. vol. 229; p. 346.
Vending apparatus. L. S. Roark. No. 1,196,586; Aug. 29; Gaz. vol. 229; p. 1477.
Vending-carton. A. T. Fischer. No. 1,194,372; Aug. 15; Gaz. vol. 229; p. 628.
Vending-machine. H. D. Deshler. No. 1,194,724; Aug. 15; Gaz. vol. 229; p. 752.
Vending-machine. H. H. Holt. No. 1,194,021; Aug. 8; Gaz. vol. 229; p. 463.
Vending-machine. J. T. Shelhorn. No. 1,194,557; Aug. 15; Gaz. vol. 229; p. 694.
Vending-machine. C. L. Spiltt. No. 1,196,404; Aug. 29; Gaz. vol. 229; p. 1416.
Vending-machine, Check-controlled. A. D. Antoine and C. C. Travis. No. 1,196,067; Aug. 29; Gaz. vol. 229; p. 1299.
Vending-machine, Coin-controlled. J. N. Chilson and L. B. Pugh. No. 1,193,235; Aug. 1; Gaz. vol. 229; p. 145.
Vending-machine, Coin-controlled. H. Giles. No. 1,196,103; Aug. 29; Gaz. vol. 229; p. 1311.
Vending-machine, Coin-controlled. C. A. Groom. No. 1,196,105; Aug. 29; Gaz. vol. 229; p. 1312.
Vending machine, Liquid-. G. C. K. Culmer. No. 1,194,145; Aug. 8; Gaz. vol. 229; p. 506.
Vending machine, Stamp-. C. H. Woodward. No. 1,195,318; Aug. 22; Gaz. vol. 229; p. 997.
Vending machine, Ticket-. A. W. Hills. No. 1,192,895; Aug. 1; Gaz. vol. 229; p. 23.
Vending-machines, Card-delivering device for. E. V. Boddy. No. 1,195,963; Aug. 29; Gaz. vol. 229; p. 1261.
Veneer-drying apparatus. L. G. Merritt. No. 1,194,652; Aug. 15; Gaz. vol. 229; p. 726.
Ventilating system for school-rooms. E. M. McNamara. No. 1,194,527; Aug. 15; Gaz. vol. 229; p. 685.
Ventilator: *See*—
Car-ventilator. Silo-ventilator.
Ventilator. P. Pearson. No. 1,194,314; Aug. 8; Gaz. vol. 229; p. 565.
Vessel brake, Marine-. W. H. Harriss. No. 1,196,682; Aug. 29; Gaz. vol. 229; p. 1510.
Vessel-cover, Expansible. A. J. Brusseau. No. 1,193,116; Aug. 1; Gaz. vol. 229; p. 102.
Vessel, Navigable. E. R. Royston. No. 1,195,857; Aug. 22; Gaz. vol. 229; p. 1192.
Vessel, Supply-. F. Kahrs. No. 1,194,744; Aug. 15; Gaz. vol. 229; p. 759.
Vessels, Automatic signaling device for marine. E. Nelson. No. 1,194,770; Aug. 15; Gaz. vol. 229; p. 767.
Vessels, Construction of marine. E. Ambrozy. No. 1,193,065; Aug. 8; Gaz. vol. 229; p. 444.
Vessels in broadside relation, Method of and means for connecting and maintaining. H. J. Harris. No. 1,195,007; Aug. 15; Gaz. vol. 229; p. 852.
Violin-bridge. L. Lumière. No. 1,193,279; Aug. 1; Gaz. vol. 229; p. 162.
Vise. D. F. Ferney. No. 1,195,346; Aug. 22; Gaz. vol. 229; p. 1008.
Vise. J. R. Long. No. 1,196,560; Aug. 29; Gaz. vol. 229; p. 1468.
Vise. H. Wardman. No. 1,193,090; Aug. 1; Gaz. vol. 229; p. 93.
Vise, Bench-. J. W. Codding and F. H. Putnam. No. 1,195,339; Aug. 22; Gaz. vol. 229; p. 1006.
Vise, Bench-. D. F. Ferney. No. 1,195,345; Aug. 22; Gaz. vol. 229; p. 1008.
Vise, Pipe-. O. H. Fitzke. No. 1,194,159; Aug. 8; Gaz. vol. 229; p. 511.
Volatile products from solid carbonaceous material, Separation of. L. Del Monte y Aldama. No. 1,196,470; Aug. 29; Gaz. vol. 229; p. 1438.
Voting-machine. J. H. Dean. No. 1,194,332; Aug. 8; Gaz. vol. 229; p. 572.
Voting-machine. W. J. Lausterer. No. 1,194,337; Aug. 8; Gaz. vol. 229; p. 574.
Vulcanizing-machine. F. J. Healey and S. R. Sheppard. No. 1,196,109; Aug. 29; Gaz. vol. 229; p. 1313.
Wagon-body. W. T. Shaver. No. 1,192,944; Aug. 1; Gaz. vol. 229; p. 40.
Wagon-body-elevating mechanism. B. A. Gramm. No. 1,195,671; Aug. 22; Gaz. vol. 229; p. 1125.
Wagon-box-adjusting means. J. Schuss. No. 1,196,297; Aug. 29; Gaz. vol. 229; p. 1377.
Wagon-box attachment. G. Miller. No. 1,196,378; Aug. 29; Gaz. vol. 229; p. 1405.
Wagon-cover. P. V. Womack. No. 1,195,316; Aug. 22; Gaz. vol. 229; p. 997.
Wagon-loading device. S. W. Hytrek. No. 1,196,364; Aug. 29; Gaz. vol. 229; p. 1401.
Wagon-reach, Swiveled telescoping. H. A. Townson. No. 1,193,946; Aug. 8; Gaz. vol. 229; p. 438.
Wagon-step. E. Taylor. No. 1,195,869; Aug. 22; Gaz. vol. 229; p. 1196.
Wall and ceiling covering, Embossed. C. Schonlau. No. 1,194,242; Aug. 8; Gaz. vol. 229; p. 539.
Wall-bracket. H. T. Cole. No. 1,196,085; Aug. 29; Gaz. vol. 229; p. 1306.
Wall construction. G. W. Lenkerd. No. 1,196,557; Aug. 29; Gaz vol. 229; p. 1468.
Wall-covering. H. J. M. Rasmussen. No. 1,193,060; Aug. 1; Gaz. vol. 229; p. 82.
Wall-mold. J. N. Szabo. No. 1,195,415; Aug. 22; Gaz. vol. 229; p. 1033.
Walls and other surfaces, Coating. H. F. Clayton. No. 1,195,978; Aug. 29; Gaz. vol. 229; p. 1267.
Warp let-off mechanism. O. W. Schaum. No. 1,194,036; Aug. 8; Gaz. vol. 229; p. 468.
Washing-machine. W. W. Bays. No. 1,193,348; Aug. 1; Gaz. vol. 229; p. 186.
Washing-machine. G. L. Ferris. No. 1,194,609; Aug. 15; Gaz. vol. 229; p. 713.
Washing-machine. A. L. Le Blanc. No. 1,195,039; Aug. 15; Gaz. vol. 229; p. 863.
Washing-machine. T. S. Patterson. No. 1,193,600; Aug. 8; Gaz. vol. 229; p. 312.
Washing-machine. E. N. Queen. No. 1,194,229; Aug. 8; Gaz. vol. 229; p. 535.
Washing-machine. W. S. Thurlow. No. 1,195,873; Aug. 22; Gaz. vol. 229; p. 1198.
Washing-machine. J. W. Whalen and C. J. McLaughlin. No. 1,193,328; Aug. 1; Gaz. vol. 229; p. 179.
Washing-machine-driving mechanism. D. D. Dull. No. 1,195,663; Aug. 22; Gaz. vol. 229; p. 1121.
Washing-machine-operating mechanism. D. Luckwaldt. No. 1,196,122; Aug. 29; Gaz. vol. 229; p. 1318.
Watch-chain guard for trousers. E. G. Bailey. No. 1,193,971; Aug. 8; Gaz. vol. 229; p. 447.
Watch protector, Waterproof wrist-. L. E. F. Wachter. No. 1,195,299; Aug. 22; Gaz. vol. 229; p. 990.
Watchcase, &c. C. L. Depollier and E. C. Duncuff. No. 1,194,484; Aug. 15; Gaz. vol. 229; p. 670.
Watchcase, &c. C. L. Depollier and E. C. Duncuff. No. 1,194,485; Aug. 15; Gaz. vol. 229; p. 670.
Water-closet. J. J. Donovan. No. 1,194,826; Aug. 15; Gaz. vol. 229; p. 787.
Water-closet. E. C. Hinkle. No. 1,193,784; Aug. 8; Gaz. vol. 229; p. 381.
Water-closet, Non-freezing. G. W. Baumgarner. No. 1,194,947; Aug. 15; Gaz. vol. 229; p. 830.
Water-closet seats, Sanitary attachment for. M. L. McClure. No. 1,193,405; Aug. 1; Gaz. vol. 229; p. 206.
Water-elevator. C. J. Jones. No. 1,196,696; Aug. 29; Gaz. vol. 229; p. 1514.
Water-fountain, Poultry. E. A. Collis. No. 1,195,443; Aug. 22; Gaz. vol. 229; p. 1042.
Water-gage-glass shield. J. Dietrich. No. 1,193,368; Aug. 1; Gaz. vol. 229; p. 193.
Water-glass frame. O. A. Comp. No. 1,195,911; Aug. 22; Gaz. vol. 229; p. 1210.
Water-heater. J. B. Grant. No. 1,194,619; Aug. 15; Gaz. vol. 229; p. 716.
Water-heater. H. Langenheim. No. 1,194,397; Aug. 15; Gaz. vol. 229; p. 637.
Water-heater. J. Nathan. No. 1,195,601; Aug. 22; Gaz. vol. 229; p. 1099.
Water-heater. S. G. Roberts. No. 1,194,785; Aug. 15; Gaz. vol. 229; p. 774.
Water-heater. H. E. Townsend. No. 1,193,740; Aug. 8; Gaz. vol. 229; p. 365.
Water-heater. F. E. White and F. E. Hooper. No. 1,196,194; Aug. 29; Gaz. vol. 229; p. 1345.
Water-heater, Automatic. H. Langenheim. No. 1,194,398; Aug. 15; Gaz. vol. 229; p. 638.
Water-heater, Electric. M. Simon. No. 1,194,886; Aug. 15; Gaz. vol. 229; p. 809.
Water-heater, Electric. M. Simon. No. 1,195,615; Aug. 22; Gaz. vol. 229; p. 1103.

Water-heater, Electric. M. Simon. No. 1,196,487; Aug. 29; Gaz. vol. 229; p. 1443.
Water-heater, Instantaneous steam. J. N. Chadwick. No. 1,196,520; Aug. 29; Gaz. vol. 229; p. 1454.
Water-heater, Thermostatic. F. W. Powers and M. O. Snediker. No. 1,195,722; Aug. 22; Gaz. vol. 229; p. 1142.
Water-purifying apparatus. M. F. Newman. No. 1,195,391; Aug. 22; Gaz. vol. 229; p. 1024.
Water-purifying apparatus. A. Van Vloten. No. 1,195,537; Aug. 22; Gaz. vol. 229; p. 1074.
Water, Softening of. R. Gans. No. 1,195,923; Aug. 22; Gaz. vol. 229; p. 1214.
Water-trap. W. I. Staaf. No. 1,193,940; Aug. 8; Gaz. vol. 229; p. 436.
Water-tube boiler. C. McAdie. No. 1,194,852; Aug. 15; Gaz. vol. 229; p. 797.
Wattmeter. W. M. Bradshaw and A. W. Copley. No. 1,194,120; Aug. 8; Gaz. vol. 229; p. 500.
Wave-motor. M. A. Rohmer. No. 1,194,072; Aug. 8; Gaz. vol. 229; p. 481.
Wax-cases, Apparatus for heating. J. P. Rivett. No. 1,193,614; Aug. 8; Gaz. vol. 229; p. 319.
Way-billing means. J. A. Murphey. No. 1,196,749; Aug. 29; Gaz. vol. 229; p. 1534.
Weapon. J. Gonsior, W. Frank, and C. Schneider. No. 1,192,888; Aug. 1; Gaz. vol. 229; p. 20.
Weather-strip, Metal. C. A. Shogren. No. 1,195,108; Aug. 15; Gaz. vol. 229; p. 885.
Web feeding and cutting device. C. A. Juengst. No. 1,195,926; Aug. 22; Gaz. vol. 229; p. 1216.
Wedge. A. M. Waters. No. 1,195,423; Aug. 22; Gaz. vol. 229; p. 1035.
Weed-cutter. J. M. Delaney. No. 1,195,919; Aug. 22; Gaz. vol. 229; p. 1212.
Weed-destroying machine. A. Hemme. No. 1,193,015; Aug. 1; Gaz. vol. 229; p. 64.
Weeds, Killing or checking the growth of. C. F. Eckart. No. 1,196,219; Aug. 29; Gaz. vol. 229; p. 1353.
Weftless fabrics, Method and apparatus for the continuous production of. E. Bourdin. No. 1,195,554; Aug. 22; Gaz. vol. 229; p. 1081.
Weighing device, Automatic. E. H. Rundle. No. 1,193,193; Aug. 1; Gaz. vol. 229; p. 130.
Welding and soldering of different articles constructed of aluminum only, Composition of matter to be used for the. R. L. Weatherford. No. 1,194,101; Aug. 8; Gaz. vol. 229; p. 490.
Welding apparatus, Seam-. H. G. Davis. No. 1,195,440; Aug. 22; Gaz. vol. 229; p. 1043.
Welding, Electrical. T. E. Murray. No. 1,196,473; Aug. 29; Gaz. vol. 229; p. 1439.
Welding-machine, Electric. F. L. Sessions. No. 1,196,304; Aug. 29; Gaz. vol. 229; p. 1380.
Welding-machine, Electric. A. C. Taylor. No. 1,196,613; Aug. 29; Gaz. vol. 229; p. 1486.
Well-boring apparatus. W. W. Wilson. No. 1,195,544; Aug. 22; Gaz. vol. 229; p. 1077.
Well-boring tool, Hydraulic rotary. W. L. Dunn. No. 1,193,247; Aug. 1; Gaz. vol. 229; p. 150.
Well-casing apparatus. J. S. Brown. No. 1,195,906; Aug. 22; Gaz. vol. 229; p. 1209.
Wells, Casing-head for. F. J. Moser. No. 1,194,863; Aug. 15; Gaz. vol. 229; p. 801.
Well-drilling apparatus, Rotary. P. A. Schmuck. No. 1,196,033; Aug. 29; Gaz. vol. 229; p. 1286.
Well-drilling machine. J. A. Shanley. No. 1,196,594; Aug. 29; Gaz. vol. 229; p. 1480.
Well-drilling machines, Bearing-support for. F. C. Rowland. No. 1,193,618; Aug. 8; Gaz. vol. 229; p. 320.
Wells, Sealing-plug for oil-. D. C. Miller. No. 1,194,764; Aug. 15; Gaz. vol. 229; p. 766.
Welt-beating machine. T. H. Seely and J. B. Hadaway. No. 1,196,486; Aug. 29; Gaz. vol. 229; p. 1443.
Welts or other pieces of flexible material, Machine for splitting or skiving. F. Ricks. No. 1,194,546; Aug. 15; Gaz. vol. 229; p. 690.
Wheel: *See*—
Buffing or polishing wheel. Resilient wheel.
Buffing-wheel. Spring-wheel.
Counterbalanced wheel. Spring-actuated wheel.
Cushion-tired wheel. Sprocket-wheel.
Fifth-wheel. Steering-wheel.
Grinding-wheel. Toy wheel.
Motor-driven wheel. Traction-wheel.
Pneumatic wheel. Vehicle-wheel.
Polishing-wheel.
Wheel. P. Lopez. No. 1,193,806; Aug. 8; Gaz. vol. 229; p. 388.
Wheel. A. L. Putnam. No. 1,193,717; Aug. 8; Gaz. vol. 229; p. 357.
Wheel. A. O. Vestine. No. 1,196,408; Aug. 29; Gaz. vol. 229; p. 1417.
Wheel. G. W. Walk. No. 1,193,639; Aug. 8; Gaz. vol. 229; p. 328.
Wheel, Mechanism for constructing a. B. H. Divine. No. 1,192,875; Aug. 1; Gaz. vol. 229; p. 16.
Wheel-retaining device. E. M. Ayres. No. 1,194,698; Aug. 15; Gaz. vol. 229; p. 743.
Wheel rim, Vehicle-. C. H. Snyder and E. Stallter. No. 1,196,604; Aug. 29; Gaz. vol. 229; p. 1484.
Wheel-rims, Manufacture of. F. J. Keegan. No. 1,195,592; Aug. 22; Gaz. vol. 229; p. 1095.
Wheel-spud. T. B. Funk. No. 1,196,536; Aug. 29; Gaz. vol. 229; p. 1460.
Wheels, Demountable rim for vehicle-. C. F. Heinig. No. 1,193,781; Aug. 8; Gaz. vol. 229; p. 380.
Wheels, Fastening device for. W. V. Lewis. No. 1,195,482; Aug. 22; Gaz. vol. 229; p. 1055.
Wheels, Side-splash preventer for vehicle-. J. T. Bower. No. 1,193,757; Aug. 8; Gaz. vol. 229; p. 371.
Wheels, Traction device for vehicle-. J. H. Harden. No. 1,193,139; Aug. 1; Gaz. vol. 229; p. 112.
Whiffletree-hook, Safety. H. D. Brown. No. 1,193,114; Aug. 1; Gaz. vol. 229; p. 102.
Wick-adjusting device, Lamp-. G. W. Mallory. No. 1,194,406; Aug. 15; Gaz. vol. 229; p. 641.
Winches, Gearing for. C. Hamilton. No. 1,194,733; Aug. 15; Gaz. vol. 229; p. 755.
Winding, Electrical. C. P. Steinmetz. No. 1,194,090; Aug. 8; Gaz. vol. 229; p. 486.
Windmill. G. W. Tarr. No. 1,193,310; Aug. 1; Gaz. vol. 229; p. 173.
Window. T. Carence. No. 1,196,081; Aug. 29; Gaz. vol. 229; p. 1305.
Window-cleaners, Safety device for. A. Wendelburg. No. 1,194,259; Aug. 8; Gaz. vol. 229; p. 545.
Window-cleaning chair. J. Sternad. No. 1,194,896; Aug. 15; Gaz. vol. 229; p. 812.
Window-lock. G. W. Stein. No. 1,194,089; Aug. 8; Gaz. vol. 229; p. 486.
Window-operating device. T. F. Oechsle and A. S. Bancroft. No. 1,195,258; Aug. 22; Gaz. vol. 229; p. 974.
Window, Reversible. H. D. Wilson. No. 1,193,101; Aug. 1; Gaz. vol. 229; p. 97.
Window-roller. K. Scherff. No. 1,196,400; Aug. 29; Gaz. vol. 229; p. 1414.
Window-screen. F. Ahlstrom. No. 1,196,502; Aug. 29; Gaz. vol. 229; p. 1448.
Window-screen and baby-gate, Combination burglar-proof locking. E. Claude. No. 1,196,444; Aug. 29; Gaz. vol. 229; p. 1428.
Window-shield. G. W. Jennings. No. 1,195,681; Aug. 22; Gaz. vol. 229; p. 1128.
Window-wiper. J. H. King. No. 1,195,362; Aug. 22; Gaz. vol. 229; p. 1014.
Windows, Rain-shield for. C. E. Martin. No. 1,194,407; Aug. 15; Gaz. vol. 229; p. 641.
Wire-bending machine. G. D. Henry. No. 1,194,498; Aug. 15; Gaz. vol. 229; p. 675.
Wire-cutting device. L. A. Carleton. No. 1,195,053; Aug. 22; Gaz. vol. 229; p. 1117.
Wire fabric. J. Schwartzman. No. 1,192,943; Aug. 1; Gaz. vol. 229; p. 39.
Wire-fabric machine, Semirotary. W. A. Kilmer. No. 1,195,688; Aug. 22; Gaz. vol. 229; p. 1130.
Wire-hanger. E. R. Cunningham. No. 1,193,521; Aug. 8; Gaz. vol. 229; p. 283.
Wire, Marking insulated. T. J. Seward. No. 1,194,245; Aug. 8; Gaz. vol. 229; p. 540.
Wire nail. E. I. Braddock. No. 1,193,503; Aug. 8; Gaz. vol. 229; p. 277.
Wire rope and cable cutting tool. J. N. Zabniser. No. 1,194,461; Aug. 15; Gaz. vol. 229; p. 662.
Wire-splicer. M. P. Wolcott. No. 1,196,062; Aug. 29; Gaz. vol. 229; p. 1297.
Wire-stretcher. W. S. Graham. No. 1,193,777; Aug. 8; Gaz. vol. 229; p. 379.
Wire-stretcher clamp. M. D. Steele. No. 1,195,525; Aug. 22; Gaz. vol. 229; p. 1070.
Wire-stripping device. S. G. Wood. No. 1,196,322; Aug. 29; Gaz. vol. 229; p. 1385.
Wireless-communication system. J. A. Proctor. No. 1,194,066; Aug. 8; Gaz. vol. 229; p. 479.
Wood-alcohol and calcium acetate from acetate liquor, Method and apparatus for obtaining. C. L. Campbell. No. 1,192,987; Aug. 1; Gaz. vol. 229; p. 53.
Wood, Filling. A. R. Hedstrom. No. 1,195,219; Aug. 22; Gaz. vol. 229; p. 960.
Wood-polishing machine. W. J. Sumner. No. 1,192,950; Aug. 1; Gaz. vol. 229; p. 42.
Wood to be used in making plungers, &c., Treating. J. J. McIntyre. No. 1,194,404; Aug. 15; Gaz. vol. 229; p. 640.
Wood-turning machine. C. H. Rhodes. No. 1,195,731; Aug. 22; Gaz. vol. 229; p. 1145.
Woodworking-machine. G. C. Goodyear. No. 1,194,009; Aug. 8; Gaz. vol. 229; p. 460.
Woodworking-machine. A. B. Norris. No. 1,196,716; Aug. 29; Gaz. vol. 229; p. 1522.
Wool-grease, Refining. J. O. Handy and R. M. Isham. No. 1,194,013; Aug. 8; Gaz. vol. 229; p. 461.
Wool-grease, Refining. J. O. Handy and R. M. Isham. No. 1,194,014; Aug. 8; Gaz. vol. 229; p. 461.
Wool-grease, Treating. J. O. Handy. No. 1,194,015; Aug. 8; Gaz. vol. 229; p. 461.
Work-holder. M. Lafontaine. No. 1,196,370; Aug. 29; Gaz. vol. 229; p. 1403.
Work-holder. B. T. Noble. No. 1,193,289; Aug. 1; Gaz. vol. 229; p. 165.
Work-support-controlling mechanism. G. Pegg. No. 1,196,021; Aug. 29; Gaz. vol. 229; p. 1282.
Woven fabric. J. Skinner. No. 1,196,037; Aug. 29; Gaz. vol. 229; p. 1288.
Wrapping-machine. C. Beers. No. 1,194,350; Aug. 15; Gaz. vol. 229; p. 620.
Wrapping-machine. H. L. Johnson. No. 1,195,228; Aug. 22; Gaz. vol. 229; p. 962.
Wrapping-machine. H. J. Kempf. No. 1,194,505; Aug. 15; Gaz. vol. 229; p. 678.

Wrapping-machine. N. B. Post. No. 1,195,721; Aug. 22; Gaz. vol. 229; p. 1141.
Wrapping-machine. W. C. Stevens. No. 1,196,044; Aug. 29; Gaz. vol. 229; p. 1290.
Wrapping-machine, Portable. W. C. Stevens. No. 1,194,565; Aug. 15; Gaz. vol. 229; p. 697.
Wrapping method. H. O. Fischer. No. 1,194,492; Aug. 15; Gaz. vol. 229; p. 673.
Wreath-form and manufacturing same. H. B. Abrams. No. 1,194,462; Aug. 15; Gaz. vol. 229; p. 663.
Wrench: *See*—
Chain wrench. Quick-adjusting wrench.
Double wrench. Ratchet-wrench.
Pipe-wrench.
Wrench. B. W. Aliff. No. 1,196,416; Aug. 29; Gaz. vol. 229; p. 1419.
Wrench. R. H. Canfield and C. W. Lemon. No. 1,194,271; Aug. 8; Gaz. vol. 229; p. 549.
Wrench. W. W. Doherty. No. 1,196,215; Aug. 29; Gaz. vol. 229; p. 1352.
Wrench. J. C. Fjerdingstad. No. 1,194,612; Aug. 15; Gaz. vol. 229; p. 714.
Wrench. S. H. Holm. No. 1,193,147; Aug. 1; Gaz. vol. 229; p. 114.
Wrench. G. W. Hughey. No. 1,195,020; Aug. 15; Gaz. vol. 229; p. 857.
Wrench. J. R. Long. No. 1,193,163; Aug. 1; Gaz. vol. 229; p. 119.
Wrench. H. W. Morrow. No. 1,195,065; Aug. 15; Gaz. vol. 229; p. 872.
Wrench. E. W. Parmer. No. 1,196,393; Aug. 29; Gaz. vol. 229; p. 1412.
Wrench. L. Smith. No. 1,196,039; Aug. 29; Gaz. vol. 229; p. 1288.
Wrench. L. Westcott. No. 1,193,326; Aug. 1; Gaz. vol. 229; p. 179.
Wrench and vise, Combination. A. Neumayer. No. 1,194,058; Aug. 8; Gaz. vol. 229; p. 476.
Wrench attachment. D. J. Pugh. No. 1,193,299; Aug. 1; Gaz. vol. 229; p. 169.
Wrench or nutcracker. J. Ziegler. No. 1,195,321; Aug. 22; Gaz. vol. 229; p. 999.
Wringer: *See*—
Clothes-wringer. Mop-wringer.
Wringer. W. H. Voss. No. 1,196,317; Aug. 29; Gaz. vol. 229; p. 1384.
Wringer safety attachment. W. H. George. No. 1,196,538; Aug. 29; Gaz. vol. 229; p. 1461.
Wrinkles from the face, Device for removing. M. Spellerberg. No. 1,195,117; Aug. 15; Gaz. vol. 229; p. 889.
X-ray tube. P. A. Farrelly. No. 1,195,157; Aug. 15; Gaz. vol. 229; p. 902.
X-ray tubes, Exciting. C. E. Rohrer. No. 1,194,071; Aug. 8; Gaz. vol. 229; p. 480.
Zinc, Recovery of. C. H. Fulton. No. 1,193,680; Aug. 8; Gaz. vol. 229; p. 342.

ALPHABETICAL LIST OF DESIGNS.

Apron. G. R. Winslowe. No. 49,502; Aug. 8; Gaz. vol. 229; p. 582.
Aquarium and vase, Combined. G. R. West. No. 49,480; Aug. 1; Gaz. vol. 229; p. 241.
Badge. P. E. Fleming. No. 49,484; Aug. 8; Gaz. vol. 229; p. 579.
Badge. F. Kees. No. 49,579; Aug. 29; Gaz. vol. 229; p. 1543.
Badge, emblem, or similar article. B. Lewenthal. No. 49,542; Aug. 22; Gaz. vol. 229; p. 1229.
Badge, seal, or emblem. L. M. Jones. Nos. 49,577–8; Aug. 29; Gaz. vol. 229; p. 1543.
Boat. W. D. Beauvais and J. H. Boughton. No. 49,504; Aug. 15; Gaz. vol. 229; p. 908.
Boat. H. V. Hartz. No. 49,503; Aug. 8; Gaz. vol. 229; p. 582.
Boot-black stand. N. Tompanis. No. 49,493; Aug. 8; Gaz. vol. 229; p. 581.
Bottle. C. M. McClure. No. 49,581; Aug. 29; Gaz. vol. 229; p. 1543.
Bottle case, Vacuum-. J. F. Lamb. No. 49,541; Aug. 22; Gaz. vol. 229; p. 1229.
Bottle, Poison-. P. T. Burtchaell. No. 49,569; Aug. 29; Gaz. vol. 229; p. 1541.
Bowl, Nut-. A. Goldsmith. No. 49,486; Aug. 8; Gaz. vol. 229; p. 579.
Brush, Tooth-. C. Dierke. No. 49,472; Aug. 1; Gaz. vol. 229; p. 240.
Buckle, Belt-. D. W. Sylvester. No. 49,554; Aug. 22; Gaz. vol. 229; p. 1231.
Buggy, Baby-. C. Doering, Jr. No. 49,537; Aug. 22; Gaz. vol. 229; p. 1229.
Candy or medicated tablet or the like. J. Harris. No. 49,515; Aug. 15; Gaz. vol. 229; p. 911.
Chair. J. Gostomski. No. 49,511; Aug. 15; Gaz. vol. 229; p. 910.
Chandelier-loop. W. Horn. No. 49,576; Aug. 29; Gaz. vol. 229; p. 1543.
Connector. A. H. Fargo. No. 49,474; Aug. 1; Gaz. vol. 229; p. 240.
Cuff-links, Pair of. I. Heidelsheimer. Nos. 49,516–17; Aug. 15; Gaz. vol. 229; p. 911.
Curtain, Panel-. C. S. Shapiro. No. 49,553; Aug. 22; Gaz. vol. 229; p. 1231.
Dish. H. P. Sinclaire. No. 49,479; Aug. 1; Gaz. vol. 229; p. 241.
Dish, Covered. C. E. Maier. No. 49,544; Aug. 22; Gaz. vol. 229; p. 1230.
Display-stand. E. L. Behring. No. 49,471; Aug. 1; Gaz. vol. 229; p. 240.
Display-stand. A. Josephson. No. 49,520; Aug. 15; Gaz. vol. 229; p. 912.
Doily. R. P. Jaboulet-Vercherre. No. 49,494; Aug. 8; Gaz. vol. 229; p. 581.
Doll. J. G. Stokes. Nos. 49,585–6; Aug. 29; Gaz. vol. 229; p. 1544.
Duster. J. P. Wade. No. 49,588; Aug. 29; Gaz. vol. 229; p. 1544.
Electric-light or gas fixture. D. Powell. No. 49,492; Aug. 8; Gaz. vol. 229; p. 581.
Electric-lighting fixture. G. W. Bayley. Nos. 49,558–68; Aug. 29; Gaz. vol. 229; pp. 1539–41.
Emblem. E. F. Collins. No. 49,572; Aug. 29; Gaz. vol. 229; p. 1542.
Emblem, Society-. C. A. Berkey. No. 49,532; Aug. 22; Gaz. vol. 229; p. 1227.
Fabric, Textile. F. S. Pinkus. No. 49,582; Aug. 29; Gaz. vol. 229; p. 1543.
Fabric, Textile. M. Walbrecht. Nos. 49,529–31; Aug. 15; Gaz. vol. 229; p. 914.
Fan. F. H. Waggoner. No. 49,589; Aug. 29; Gaz. vol. 229; p. 1545.
Fan and casing. C. A. Post. No. 49,546; Aug. 22; Gaz. vol. 229; p. 1230.
Forks and similar articles, Handle for. G. E. Curtiss. No. 49,574; Aug. 29; Gaz. vol. 229; p. 1542.
Game-board. B. A. J. Dykes. No. 49,575; Aug. 29; Gaz. vol. 229; p. 1542.
Hand-bag top. C. A. Whiting. No. 49,481; Aug. 1; Gaz. vol. 229; p. 241.
Hat. M. Cook. No. 49,509; Aug. 15; Gaz. vol. 229; p. 910.
Insulator. W. T. Goddard. No. 49,538; Aug. 22; Gaz. vol. 229; p. 1229.
Jar. V. Vivaudou. No. 49,587; Aug. 29; Gaz. vol. 229; p. 1544.
Jewel-case. E. P. Hadley and C. C. Holden. Nos. 49,513–14; Aug. 15; Gaz. vol. 229; pp. 910–11.
Jewelry pin, charm, fob, pendant, cuff-button, ring, or similar article. C. T. Paye. No. 49,591; Aug. 29; Gaz. vol. 229; p. 1545.
Jug. A. J. Sanford. No. 49,478; Aug. 1; Gaz. vol. 229; p. 241.
Knife-handle. S. Richard, Jr. No. 49,548; Aug. 22; Gaz. vol. 229; p. 1230.
Knife, Paring-. F. A. Stevens. No. 49,528; Aug. 15; Gaz. vol. 229; p. 914.
Lamp, Electric. L. Anguilli. No. 49,482; Aug. 8; Gaz. vol. 229; p. 579.
Lamp, Signal-. J. R. Dooley. No. 49,473; Aug. 1; Gaz. vol. 229; p. 240.
Lamp socket, Cluster electric-. T. O'Donnell. No. 49,523; Aug. 15; Gaz. vol. 229; p. 912.
Lighting-fixture. E. J. Meyberg. No. 49,545; Aug. 22; Gaz. vol. 229; p. 1230.
Mat. J. Scherner. No. 49,550; Aug. 22; Gaz. vol. 229; p. 1231.
Paper doily. C. W. Hamilton. No. 49,488; Aug. 8; Gaz. vol. 229; p. 580.
Paste-jar. V. Vivaudou. No. 49,555; Aug. 22; Gaz. vol. 229; p. 1232.
Phonograph-body. F. A. Ross. Nos. 49,524–6; Aug. 15; Gaz. vol. 229; p. 913.
Phonograph or talking-machine cabinet. W. D. Caldwell. Nos. 49,570–1; Aug. 29; Gaz. vol. 229; p. 1542.
Plate or similar article. A. Beyrand. Nos. 49,505–8; Aug. 15; Gaz. vol. 229; p. 909.
Radiator. J. A. Schell. No. 49,549; Aug. 22; Gaz. vol. 229; p. 1231.
Radiator. J. A. Schell. No. 49,551; Aug. 22; Gaz. vol. 229; p. 1231.
Radiator-frame. F. B. Sergardi. No. 49,552; Aug. 22; Gaz. vol. 229; p. 1231.
Ring, brooch, or similar article, Finger-. L. O. Bishop. No. 49,533; Aug. 22; Gaz. vol. 229; p. 1228.
Shade-holder, Ventilated. C. W. Lucas. No. 49,476; Aug. 1; Gaz. vol. 229; p. 240.
Shoe. L. C. Colt. No. 49,573; Aug. 29; Gaz. vol. 229; p. 1542.
Sign. G. E. Fuller. No. 49,510; Aug. 15; Gaz. vol. 229; p. 910.
Sign, Electric. M. Norden. No. 49,491; Aug. 8; Gaz. vol. 229; p. 581.
Signal. L. V. Aronson. No. 49,557; Aug. 29; Gaz. vol. 229; p. 1539.
Silverware-stand. E. L. Minch. No. 49,477; Aug. 1; Gaz. vol. 229; p. 241.
Spoon. A. F. Saunders. No. 49,527; Aug. 15; Gaz. vol. 229; p. 913.
Spoon, fork, or similar article. G. L. Crowell, Jr. No. 49,536; Aug. 22; Gaz. vol. 229; p. 1228.
Statuette or similar article. J. F. Slavik. No. 49,584; Aug. 29; Gaz. vol. 229; p. 1544.
Store-fixture. E. J. Walker, Jr. Nos. 49,495–501; Aug. 8; Gaz. vol. 229; pp. 581–2.
Stringed instrument. W. I. Kirk. No. 49,540; Aug. 22; Gaz. vol. 229; p. 1229.
Talking-machine cabinet. P. A. Horswell. No. 49,519; Aug. 15; Gaz. vol. 229; p. 912.
Talking-machine cabinet. H. Sheble. No. 49,592; Aug. 29; Gaz. vol. 229; p. 1545.
Tire. H. S. Blynt. No. 49,534; Aug. 22; Gaz. vol. 229; p. 1228.
Tire, Rubber vehicle-. S. G. Lewis. No. 49,543; Aug. 22; Gaz. vol. 229; p. 1230.
Tire-tread. W. S. Wolfe. No. 49,590; Aug. 29; Gaz. vol. 229; p. 1545.
Tire-tread. R. G. Wooten. No. 49,556; Aug. 22; Gaz. vol. 229; p. 1232.
Tire, Vehicle-. A. H. Boyd. No. 49,535; Aug. 22; Gaz. vol. 229; p. 1228.
Tire, Vehicle-. M. J. Gillen. No. 49,485; Aug. 8; Gaz. vol. 229; p. 579.
Tobacco-pouch. M. A. and M. A. Shumard, Jr. No. 49,583; Aug. 29; Gaz. vol. 229; p. 1544.
Tobacco-stand. G. C. Groff and B. F. Mehrer. No. 49,487; Aug. 8; Gaz. vol. 229; p. 580.
Towel-holder. C. E. Erickson. No. 49,483; Aug. 8; Gaz. vol. 229; p. 579.
Toy. F. C. T. Meinecke. No. 49,490; Aug. 8; Gaz. vol 229; p. 580.
Toy, statuette, image, or emblem. A. C. Raleigh. No. 49,547; Aug. 22; Gaz. vol. 229; p. 1230.
Trimming. S. N. Goodman. No. 49,475; Aug. 1; Gaz. vol. 229; p. 240.
Vase and candle-lamp. G. A. Henckel. No. 49,518; Aug. 15; Gaz. vol. 229; p. 911.
Vehicle-body. H. C. Maise. No. 49,522; Aug. 15; Gaz. vol. 229; p. 912.
Vehicle-body. H. C. Maise. No. 49,580; Aug. 29; Gaz. vol. 229; p. 1543.
Vehicle-wheel. J. Kunst. No. 49,521; Aug. 15; Gaz. vol. 229; p. 912.
Vending-machine casing. J. K. Goodrich. No. 49,539; Aug. 22; Gaz. vol. 229; p. 1229.
Vending-machine casing. M. O. Griswold. No. 49,512; Aug. 15; Gaz. vol. 229; p. 910.
Weapon. M. and M. Mayerle. No. 49,489; Aug. 8; Gaz. vol. 229; p. 580.

ALPHABETICAL LIST OF TRADE-MARKS.

Adding-machines and parts thereof. J. Underwood & Company. No. 112,234; Aug. 22; Gaz. vol. 229; p. 1253.
Alcohol in solid form. Rockburn Chemical Corporation. No. 112,314; Aug. 29; Gaz. vol. 229; p. 1569.
Ale. Bartholomay Brewery Company. No. 111,783; Aug. 8; Gaz. vol. 229; p. 605.
Alfalfa-seed. C. Camp. No. 111,880; Aug. 8; Gaz. vol. 229; p. 608.
Antiseptic for certain uses. Lambert Pharmacal Company. No. 111,893; Aug. 8; Gaz. vol. 229; p. 608.
Apparel, Certain wearing. The Belle Waist Company. No. 112,152; Aug. 22; Gaz. vol. 229; p. 1250.
Apples and lettuce, Fresh. Western New York Farms Co. No. 111,916; Aug. 8; Gaz. vol. 229; p. 609.
Automobiles. Hudson Motor Car Company. No. 111,825; Aug. 8; Gaz. vol. 229; p. 606.
Bacon. W. S. Forbes & Co. No. 112,178; Aug. 22; Gaz. vol. 229; p. 1251.
Baking-powder and bluing. The H. D. Lee Mercantile Co. No. 112,201; Aug. 22; Gaz. vol. 229; p. 1252.
Baking-soda. Kellogg Toasted Corn Flake Company. No. 112,193; Aug. 22; Gaz. vol. 229; p. 1251.
Balls, Golf-. Schmeizer Arms Co. No. 111,975; Aug. 15; Gaz. vol. 229; p. 934.
Balls, Golf-. John Wanamaker, New York. No. 111,915; Aug. 8; Gaz. vol. 229; p. 609.
Balls, Golf-. Worthington Ball Company. No. 112,239; Aug. 22; Gaz. vol. 229; p. 1253.
Balls, Golf-. Wright & Ditson. Nos. 112,083–4; Aug. 22; Gaz. vol. 229; p. 1248.
Batteries, Dry. Hi-Po Waterproof Battery Corporation. No. 112,188; Aug. 22; Gaz. vol. 229; p. 1251.
Bearings and parts thereof, Antifriction-. The New Departure Manufacturing Company. Nos. 111,902–3; Aug. 8; Gaz. vol. 229; p. 608.
Bearings, Machine-. N. Mellor. No. 112,016; Aug. 15; Gaz. vol. 229; p. 936.
Beds, mattresses, bed-springs, pillows. U. S. Bedding Company. No. 112,335; Aug. 29; Gaz. vol. 229; p. 1570.
Beer. United Breweries Company. Nos. 111,857–8; Aug. 8; Gaz. vol. 229; p. 607.
Beer. United Breweries Company. No. 112,334; Aug. 29; Gaz. vol. 229; p. 1570.
Beer, ale, stout, porter, and analogous malted beverages, Lager-. United Breweries Company. No. 112,333; Aug. 29; Gaz. vol. 229; p. 1570.
Benches, chairs, or seats, Piano, organ, &c. Conservatory Player Action Company. No. 111,883; Aug. 8; Gaz. vol. 229; p. 608.
Beverage, Malt. Aichman & Hahn. No. 112,243; Aug. 29; Gaz. vol. 229; p. 1567.
Beverage, Non-alcoholic. S. Liebmann's Sons Brewing Company. No. 112,204; Aug. 22; Gaz. vol. 229; p. 1252.
Beverage, Non-intoxicating. Standard Brewery Company of Baltimore City. No. 111,852; Aug. 8; Gaz. vol. 229; p. 607.
Beverage, Non-intoxicating carbonated malt. C. & J. Michel Brewing Co. No. 112,298; Aug. 29; Gaz. vol. 229; p. 1568.
Beverages and syrup for same, Carbonated. J. A. Turney. No. 112,232; Aug. 22; Gaz. vol. 229; p. 1253.
Beverages, Certain named non-alcoholic. The Schuster Company. No. 112,072; Aug. 22; Gaz. vol. 229; p. 1248.
Binders and folders, Loose-leaf. Accounting Devices Company. No. 112,242; Aug. 29; Gaz. vol. 229; p. 1567.
Bitters for indigestion, &c., and as a general tonic. L. M. Gund. No. 112,277; Aug. 29; Gaz. vol. 229; p. 1568.
Blankets. The Charles William Stores, Inc. No. 111,863; Aug. 8; Gaz. vol. 229; p. 607.
Bleaching-powder for straw hats. S. C. Markatos. No. 111,896; Aug. 8; Gaz. vol. 229; p. 608.
Blouses, Middy-. Morris & Co. No. 111,900; Aug. 8; Gaz. vol. 229; p. 608.
Blue and laundry articles containing blue. Reckitts (U. S. A.). No. 112,067; Aug. 22; Gaz. vol. 229; p. 1248.
Boilers, Steam-. P. A. Talbot. No. 112,078; Aug. 22; Gaz. vol. 229; p. 1248.
Books and cards, Blank. The National Bankers Service. No. 111,754; Aug. 1; Gaz. vol. 229; p. 265.
Boots and shoes, Leather. Chippewa Shoe Mfg. Co. No. 111,791; Aug. 8; Gaz. vol. 229; p. 605.
Boots and shoes of leather, rubber, felt, or other fabric. Geo. E. Keith Stores Company. No. 112,140; Aug. 22; Gaz. vol. 229; p. 1250.
Boots, shoes, sandals, and slippers. Lee Brothers Company. No. 112,202; Aug. 22; Gaz. vol. 229; p. 1252.
Boxes, buckets, cans, bins, &c., Bread-. Stuber & Kuck Co. No. 111,853; Aug. 8; Gaz. vol. 229; p. 607.
Bread. Atlas Bread Factory. No. 111,921; Aug. 15; Gaz. vol. 229; p. 933.
Bread. G. Mellahn. No. 112,297; Aug. 29; Gaz. vol. 229; p. 1568.
Bread. Schulze Baking Company. No. 112,318; Aug. 29; Gaz. vol. 229; p. 1569.
Bread, cake, and pastry. C. I. Hirt. No. 112,278; Aug. 29; Gaz. vol. 229; p. 1568.
Breath-purifiers. M. Gibson. No. 112,092; Aug. 22; Gaz. vol. 229; p. 1248.
Brush, Disk-record. A. Herrman. No. 111,729; Aug. 1; Gaz. vol. 229; p. 264.
Brushes for use on electric motors and generators, Carbon and graphite. The United States Graphite Co. No. 112,032; Aug. 15; Gaz. vol. 229; p. 936.
Brushes, Tooth-. The Sweeping Toothbrush Company. No. 112,230; Aug. 22; Gaz. vol. 229; p. 1252.
Building-blocks. Theo. H. Gary Co. No. 112,272; Aug. 29; Gaz. vol. 229; p. 1568.
Butter. P. Berry & Sons. No. 111,709; Aug. 1; Gaz. vol. 229; p. 264.
Butter. R. B. Cramer. No. 111,797; Aug. 8; Gaz. vol. 229; p. 605.
Butter, eggs, milk, cheese. A. P. Gardiner. No. 112,271; Aug. 29; Gaz. vol. 229; p. 1568.
Cakes and crackers. T. W. Burgess. No. 112,164; Aug. 22; Gaz. vol. 229; p. 1250.
Calculating-machines. A. W. Lawrence. No. 111,954; Aug. 15; Gaz. vol. 229; p. 934.
Candies. T. W. Burgess. No. 112,163; Aug. 22; Gaz. vol. 229; p. 1250.
Candies. Wells Candy Co. No. 112,108; Aug. 22; Gaz. vol. 229; p. 1249.
Candies, marshmallows, chocolates, and pastes. J. C. Kuhn. No. 111,833; Aug. 8; Gaz. vol. 229; p. 606.
Candy. Chocolate Products Company. No. 111,712; Aug. 1; Gaz. vol. 229; p. 264.
Candy. Chocolate Products Company. No. 112,112; Aug. 22; Gaz. vol. 229; p. 1249.
Candy. Gillen & Boney. No. 112,181; Aug. 22; Gaz. vol. 229; p. 1251.
Candy. Guth Chocolate Company. No. 112,100; Aug. 22; Gaz. vol. 229; p. 1249.
Candy. G. W. Loft. No. 112,054; Aug. 22; Gaz. vol. 229; p. 1247.
Candy. The Martin Dawson Company. No. 112,114; Aug. 22; Gaz. vol. 229; p. 1249.
Candy. The Martin Dawson Co. No. 112,259; Aug. 29; Gaz. vol. 229; p. 1567.
Candy. Miller-Elmer Manufacturing Co. No. 111,751; Aug. 1; Gaz. vol. 229; p. 265.
Candy. A. G. Morse Co. No. 112,209; Aug. 22; Gaz. vol. 229; p. 1252.
Candy. The Stern & Saalberg Co. No. 112,327; Aug. 29; Gaz. vol. 229; p. 1569.
Candy. United Drug Company. No. 112,236; Aug. 22; Gaz. vol. 229; p. 1253.
Candles. E. J. Knapp. No. 112,196; Aug. 22; Gaz. vol. 229; p. 1251.
Canned fruits. Griffith-Durney Company. Nos. 111,938–9; Aug. 15; Gaz. vol. 229; p. 933.
Canned fruits. Hunt Brothers Company. No. 112,283; Aug. 29; Gaz. vol. 229; p. 1568.
Canned fruits. A. Putnam. No. 112,066; Aug. 22; Gaz. vol. 229; p. 1248.
Canned fruits and vegetables. E. S. Alpaugh & Company. No. 111,705; Aug. 1; Gaz. vol. 229; p. 263.
Canned fruits and vegetables. The J. K. Armsby Co. No. 111,706; Aug. 1; Gaz. vol. 229; p. 263.
Canned fruits and vegetables. Bay Side Canning Co. No. 111,784; Aug. 8; Gaz. vol. 229; p. 605.
Canned meats, sausage, soups, and boneless chicken. Libby, McNeill & Libby. No. 112,291; Aug. 29; Gaz. vol. 229; p. 1568.
Canned products. Givens Brothers. No. 112,183; Aug. 22; Gaz. vol. 229; p. 1251.
Canned salmon. Columbia River Packers Association. No. 112,043; Aug. 22; Gaz. vol. 229; p. 1247.
Canned sauer-kraut. Empire State Pickling Co. No. 112,264; Aug. 29; Gaz. vol. 229; p. 1567.
Canned sauer-kraut, vegetables, fruits, and hominy. The Sears & Nichols Co. No. 112,028; Aug. 15; Gaz. vol. 229; p. 936.
Canned vegetables. The K-C Lumber Company. Nos. 112,285–6; Aug. 29; Gaz. vol. 229; p. 1568.
Canned vegetables. Lange Canning Co. No. 111,953; Aug. 15; Gaz. vol. 229; p. 934.
Canned vegetables. Reedsburg Canning Company. No. 111,970; Aug. 15; Gaz. vol. 229; p. 934.
Canned vegetables. D. E. Winebrenner Co. Nos. 112,341–2; Aug. 29; Gaz. vol. 229; p. 1570.
Cans, Milk-. The Tri-State Butter Company. No. 111,914; Aug. 8; Gaz. vol. 229; p. 609.

Car chassis of the pleasure type into a commercial-truck chassis, Unit for converting a motor-. Hudford Company. No. 112,282; Aug. 29; Gaz. vol. 229; p. 1568.
Cars, Hand-. Kangaroo Manufacturing Co. No. 111,831; Aug. 8; Gaz. vol. 229; p. 606.
Cars, Motor-. Detroiter Motor Car Company. No. 112,260; Aug. 29; Gaz. vol. 229; p. 1567.
Carbon from gas-engine cylinders, Mechanical device for removing. The Oxygenerator Co. No. 111,758; Aug. 1; Gaz. vol. 229; p. 265.
Carbonizing or case-hardening compounds. Springfield Facing Company. No. 112,074; Aug. 22; Gaz. vol. 229; p. 1248.
Cards, Playing-. A. R. Fellows. No. 112,046; Aug. 22; Gaz. vol. 229; p. 1247.
Castings, Job lots of brass, bronze, and aluminum. Kelly Brass Works. No. 112,005; Aug. 15; Gaz. vol. 229; p. 935.
Catsup, tomato purée, canned vegetables. The J. Weller Co. No. 111,862; Aug. 8; Gaz. vol. 229; p. 607.
Cement or putty, Stone. James H. Rhodes & Company. No. 112,219; Aug. 22; Gaz. vol. 229; p. 1252.
Cement, Portland. International Portland Cement Co. No. 111,829; Aug. 8; Gaz. vol. 229; p. 606.
Checkers. New Century Game Co. No. 111,840; Aug. 8; Gaz. vol. 229; p. 606.
Cheese. Phenix Cheese Co. No. 111,905; Aug. 8; Gaz. vol. 229; p. 609.
Cheese. O. Roth & Co. No. 112,142; Aug. 22; Gaz. vol. 229; p. 1250.
Chemicals, medicines, and pharmaceutical preparations. Emil Scheller & Co. A. G. No. 112,071; Aug. 22; Gaz. vol. 229; p. 1248.
Chilli-con-carne and hot tamales. Walker Properties Association. No. 112,338; Aug. 29; Gaz. vol. 229; p. 1570.
Chilli mixture. W. A. Dye. No. 112,002; Aug. 15; Gaz. vol. 229; p. 935.
Chocolate drops, bonbons, cakes, squares. Hooton Lowne Cocoa & Chocolate. No. 111,731; Aug. 1; Gaz. vol. 229; p. 264.
Cigarettes. S. Frieslander. No. 112,180; Aug. 22; Gaz. vol. 229; p. 1251.
Cigars. F. R. Rice Mercantile Cigar Company. Nos. 111,763–4; Aug. 1; Gaz. vol. 229; p. 265.
Cigars. W. K. Steele. No. 112,106; Aug. 22; Gaz. vol. 229; p. 1249.
Cigars. E. Tunis. No. 112,233; Aug. 22; Gaz. vol. 229; p. 1253.
Cigars, cheroots, and cigarettes made of cigar-tobacco. Cayey-Caguas Tobacco Company. No. 111,789; Aug. 8; Gaz. vol. 229; p. 605.
Cigars, cheroots, and little cigars. C. Kaiser. No. 111,830; Aug. 8; Gaz. vol. 229; p. 606.
Cigars, Clear-Havana. Corral Wodiska y Ca. No. 111,926; Aug. 15; Gaz. vol. 229; p. 933.
Clarinet, saxophone, oboe, English horn, &c. M. E. Vandoren. No. 111,773; Aug. 1; Gaz. vol. 229; p. 266.
Cleaning and polishing eyeglasses, mirrors, &c., Unguent preparation for. Moon-Power Mfg. Co. No. 111,899; Aug. 8; Gaz. vol. 229; p. 608.
Cleaning and polishing material for certain named surfaces. C. J. Rentz & Company. No. 111,762; Aug. 1; Gaz. vol. 229; p. 265.
Cleaning compound for cloth. D. M. Baker. No. 111,922; Aug. 15; Gaz. vol. 229; p. 933.
Cleaning compound in the nature of a soap. Perfection Mfg. Co. No. 112,216; Aug. 22; Gaz. vol. 229; p. 1252.
Cleaning filter masse, Chemical preparation for. A. Schulz. No. 112,027; Aug. 15; Gaz. vol. 229; p. 936.
Cleanser, Toilet-. C. F. Benner. No. 112,038; Aug. 22; Gaz. vol. 229; p. 1247.
Cloaks and suits, Children's, misses', and ladies'. The John Shillito Company. No. 111,851; Aug. 8; Gaz. vol. 229; p. 607.
Cloaks, suits, dresses, and skirts, Ladies' and misses'. Haas, Strauss & Co. No. 112,135; Aug. 22; Gaz. vol. 229; p. 1250.
Clocks, watches, and clockworks. George Borgfeldt & Co. No. 112,040; Aug. 22; Gaz. vol. 229; p. 1247.
Clothes, Certain named men's and young men's. M. Ochs. No. 112,303; Aug. 29; Gaz. vol. 229; p. 1569.
Clothes-wringers and parts thereof. The American Wringer Company. Nos. 111,678–703; Aug. 1; Gaz. vol. 229; p. 263.
Clothing, Certain named. The Bijou Waist Co. No. 112,159; Aug. 22; Gaz. vol. 229; p. 1250.
Clothing, Certain named. The May Department Stores Company. No. 112,013; Aug. 15; Gaz. vol. 229; p. 935.
Clothing, Certain named. Union Special Machine Company. No. 111,987; Aug. 15; Gaz. vol. 229; p. 935.
Clothing, Certain named. John Wanamaker, Philadelphia. No. 112,145; Aug. 22; Gaz. vol. 229; p. 1250.
Clothing, Certain named. S. Weiserbs. No. 111,777; Aug. 1; Gaz. vol. 229; p. 266.
Coal. The St. Anthony & Dakota Elevator Co. No. 111,910; Aug. 8; Gaz. vol. 229; p. 609.
Coats, Ladies' and misses'. Bischof Sterne & Stein. No. 112,160; Aug. 22; Gaz. vol. 229; p. 1250.
Coats, vests, trousers, overcoats for men and boys. Park & Taylor. No. 111,760; Aug. 1; Gaz. vol. 229; p. 265.
Cocoa. Sandow's Cocoa and Chocolate Company. No. 112,070; Aug. 22; Gaz. vol. 229; p. 1248.
Coffee. Acme Coffee Co. No. 111,991; Aug. 15; Gaz. vol. 229; p. 935.
Coffee. N. L. Burchell. No. 112,042; Aug. 22; Gaz. vol. 229; p. 1247.
Coffee. C. D. Kenny Co. No. 111,736; Aug. 1; Gaz. vol. 229; p. 264.
Coffee. C. D. Kenny Co. No. 112,194; Aug. 22; Gaz. vol. 229; p. 1251.
Coffee. G. W. Loggie. No. 112,292; Aug. 29; Gaz. vol. 229; p. 1568.
Coffee. The Waldorf-Astoria Importation Company. No. 112,337; Aug. 29; Gaz. vol. 229; p. 1570.
Coffee. The Wm. Boardman & Sons Co. No. 112,039; Aug. 22; Gaz. vol. 229; p. 1247.
Coffee and cocoa. Scoville, Brown & Company. No. 112,143; Aug. 22; Gaz. vol. 229; p. 1250.
Coffee, Green. Graham, Hinkley & Co. No. 111,886; Aug. 8; Gaz. vol. 229; p. 608.
Coffee, Roasted. Fort Smith Coffee Company. No. 112,268; Aug. 29; Gaz. vol. 229; p. 1568.
Coffee, Roasted. Steinwender-Stoffregen Coffee Co. No. 112,144; Aug. 22; Gaz. vol. 229; p. 1250.
Collars, shirts, knit underwear, gloves. Sanger Brothers. No. 111,973; Aug. 15; Gaz. vol. 229; p. 934.
Confections, Chocolate. Douglas Candy Co. No. 112,170; Aug. 22; Gaz. vol. 229; p. 1251.
Corn flakes, rolled oats, cheese, mustard, &c. Landerback Barber Co. No. 111,739; Aug. 1; Gaz. vol. 229; p. 264.
Corn kernels for popping. S. Nelson, Jr., Company. No. 111,839; Aug. 8; Gaz. vol. 229; p. 606.
Cornmeal and hominy-grits. Purity Oats Company. No. 112,310; Aug. 29; Gaz. vol. 229; p. 1569.
Cotton duck or canvas. Mount Vernon-Woodberry Cotton Duck Company. No. 111,753; Aug. 1; Gaz. vol. 229; p. 265.
Cotton, linen, or silk piece goods or combinations thereof. J. W. Cannon. No. 112,251; Aug. 29; Gaz. vol. 229; p. 1567.
Cotton piece goods. R. del Castillo & Co. No. 112,024; Aug. 15; Gaz. vol. 229; p. 936.
Cotton piece goods. The Nightingale-Morse Mills. No. 111,961; Aug. 15; Gaz. vol. 229; p. 934.
Cotton piece goods. York Manufacturing Co. No. 112,085; Aug. 22; Gaz. vol. 229; p. 1248.
Cotton piece goods and upholstery. J. Spencer Turner Company. No. 111,856; Aug. 8; Gaz. vol. 229; p. 607.
Cotton piece goods, Duck or canvas. Mount Vernon-Woodberry Mills. No. 112,210; Aug. 22; Gaz. vol. 229; p. 1252.
Cotton piece goods, mercerized cotton piece goods, &c. R. del Castillo & Co. No. 112,025; Aug. 15; Gaz. vol. 229; p. 936.
Cotton piece goods, poplin, and velour. Burns Bros. Mfg. Co. No. 111,879; Aug. 8; Gaz. vol. 229; p. 608.
Cotton, Spool and embroidery. The Charles William Stores, Inc. No. 111,779; Aug. 1; Gaz. vol. 229; p. 266.
Cotton, woolen, or silk piece goods. The H. B. Claflin Corporation. No. 111,714; Aug. 1; Gaz. vol. 229; p. 264.
Cravats and scarfs. R. C. Pedersen. No. 112,213; Aug. 22; Gaz. vol. 229; p. 1252.
Cutlery, machinery, and tools, and parts thereof. Richards & Conover Hardware Company. No. 111,971; Aug. 15; Gaz. vol. 229; p. 934.
Cutlery, machinery, and tools, and parts thereof, Certain named. The Hartman Company. No. 111,819; Aug. 8; Gaz. vol. 229; p. 606.
Dental, medical, and surgical appliances, Certain named. Schelel-Western X-Ray Company. No. 111,974; Aug. 15; Gaz. vol. 229; p. 934.
Deodorizer. H. R. Woodward. No. 111,864; Aug. 8; Gaz. vol. 229; p. 607.
Developing compound. Photo-Chemical Co. No. 112,023; Aug. 15; Gaz. vol. 229; p. 936.
Dish-cloths. Electric Knitting Co. No. 112,263; Aug. 29; Gaz. vol. 229; p. 1567.
Dish-washing machines. Kitchen Service Co. No. 112,007; Aug. 15; Gaz. vol. 229; p. 935.
Dolls and other toy effigies. N. S. Day. No. 111,799; Aug. 8; Gaz. vol. 229; p. 605.
Dough, hitherto known as egg-barley, Egg-. A. Goodman & Sons. No. 112,274; Aug. 29; Gaz. vol. 229; p. 1568.
Dresses. Elias & Lowenstein. No. 111,834; Aug. 8; Gaz. vol. 229; p. 606.
Dresses and gowns, Women's. A. H. Flanders Company. No. 112,267; Aug. 29; Gaz. vol. 229; p. 1567.
Dresses, Ladies', misses', juniors', and children's. Jos. A. Morris & Co. No. 111,958; Aug. 15; Gaz. vol. 229; p. 934.
Drink, Soft. Lemon-Kola Sales Agency Co. No. 111,741; Aug. 1; Gaz. vol. 229; p. 265.
Drinks and fruit flavors for same, Non-alcoholic soft. Puritan Manufacturing Co. Nos. 112,306–9; Aug. 29; Gaz. vol. 229; p. 1569.
Dusting-cloth or dust-absorbing appliance. H. D. Freeman. No. 111,934; Aug. 15; Gaz. vol. 229; p. 933.
Effervescent salts for medicinal purposes. Alpine Effervescent Co. No. 111,919; Aug. 15; Gaz. vol. 229; p. 933.
Egg-preserver. R. G. Fleming, Sr. No. 112,117; Aug. 22; Gaz. vol. 229; p. 1249.
Eggs. Geo. R. Eldridge Co. No. 111,930; Aug. 15; Gaz. vol. 229; p. 933.
Eggs. Plankinton Packing Company. No. 111,968; Aug. 15; Gaz. vol. 229; p. 934.

Eggs, butter, dressed poultry. F. M. Risk. No. 112,312; Aug. 29; Gaz. vol. 229; p. 1569.
Electric-lighting fixtures, Certain. Beardslee Chandelier Manufacturing Company. No. 111,875; Aug. 8; Gaz. vol. 229; p. 608.
Electric switches. Dickinson Manufacturing Company. No. 112,000; Aug. 15; Gaz. vol. 229; p. 935.
Electrical apparatus and machines, Certain named. The Emerson Electric Manufacturing Company. No. 111,931; Aug. 15; Gaz. vol. 229; p. 933.
Electrical apparatus, machines, and supplies, Certain named. Landers, Frary & Clark. No. 111,952; Aug. 15; Gaz. vol. 229; p. 934.
Electrical apparatus and supplies, Certain named. H. T. Paiste Company. No. 111,904; Aug. 8; Gaz. vol. 229; p. 608.
Electrical apparatus and supplies, Certain named. J. Phillips Company. No. 112,022; Aug. 15; Gaz. vol. 229; p. 936.
Electrical apparatus, machines, and supplies, Certain named. Pyle National Electric Headlight Company. No. 112,020; Aug. 15; Gaz. vol. 229; p. 936.
Electrical-conductor joints, Insulated. The Engineering Products Corporation. No. 111,806; Aug. 8; Gaz. vol. 229; p. 605.
Electricity, Systems of transmitting waves by. J. E. B. Holladay. No. 111,944; Aug. 15; Gaz. vol. 229; p. 933.
Electrotherapeutic instrument for diagnosis and treatment. The Standard Apparatus Co. No. 111,911; Aug. 8; Gaz. vol. 229; p. 609.
Emblems. C. C. Darling & Co. No. 112,169; Aug. 22; Gaz. vol. 229; p. 1251.
Engine attachments, Gasolene-. Utility Products Co. No. 111,988; Aug. 15; Gaz. vol. 229; p. 935.
Engines, boat-motors, and motor-plows, Internal-combustion. Lysekils Mek. Verkstads Aktiebolag. No. 111,746; Aug. 1; Gaz. vol. 229; p. 265.
Engines, Internal-combustion. The St. Marys Oil Engine Company. No. 112,228; Aug. 22; Gaz. vol. 229; p. 1252.
Extract of drugs used in the treatment of septic conditions. The William S. Merrell Chemical Company. No. 112,017; Aug. 15; Gaz. vol. 229; p. 936.
Fabrics adapted for covering walls, ceilings, &c. The Cott-A-Lap Company. No. 112,256; Aug. 29; Gaz. vol. 229; p. 1567.
Fabrics, &c., Compositions for finishing textile. A. Elchengrün. No. 111,929; Aug. 15; Gaz. vol. 229; p. 933.
Fabrics of certain named materials, Narrow woven and braided. Hope Webbing Company. No. 112,280; Aug. 29; Gaz. vol. 229; p. 1568.
Fasteners used to fasten wearing-apparel, Snap-. American Fastener Co. No. 112,149; Aug. 22; Gaz. vol. 229; p. 1250.
Feed, Dairy and stock. The Newsome Feed & Grain Company. No. 112,060; Aug. 22; Gaz. vol. 229; p. 1247.
Feeds for horse, mule, and dairy use, Mixed. The Albert Dickinson Company. No. 112,115; Aug. 22; Gaz. vol. 229; p. 1249.
Feeds, Poultry. W. Orr & Sons. No. 111,843; Aug. 8; Gaz. vol. 229; p. 607.
Fertilizer. The American Agricultural Chemical Co. No. 111,992; Aug. 15; Gaz. vol. 229; p. 935.
Fertilizer. The Hubbard Fertilizer Co. of Baltimore City. No. 112,137; Aug. 22; Gaz. vol. 229; p. 1250.
Fertilizer. Union Meat Company. Nos. 111,985–6; Aug. 15; Gaz. vol. 229; p. 935.
Filtering-pulp. Hirsh & Schofield. No. 111,888; Aug. 8; Gaz. vol. 229; p. 608.
Fire-engines, water-towers, &c., Steam, chemical, and motor-driven. American La France Fire Engine Company. No. 112,245; Aug. 29; Gaz. vol. 229; p. 1567.
Fire-extinguishing apparatus. R. C. Iddings. No. 111,826; Aug. 8; Gaz. vol. 229; p. 606.
Flavoring for food purposes, Vanilla and lemon. The C. L. Cotton Perfume & Extract Co. No. 112,258; Aug. 29; Gaz. vol. 229; p. 1567.
Floor-sleeves, Adjustable. Illinois Malleable Iron Co. No. 111,733; Aug. 1; Gaz. vol. 229; p. 264.
Floors, roofs, and partitions, Monolithic fireproof ferro-concrete. Keystone Fireproofing Co. Nos. 112,120–1; Aug. 22; Gaz. vol. 229; p. 1249.
Flour and rolled oats, Pancake-. J. J. Meier & Co. No. 112,296; Aug. 29; Gaz. vol. 229; p. 1568.
Flour of the entire wheat with part of the bran removed, Fine. Franklin Mills Co. No. 112,269; Aug. 29; Gaz. vol. 229; p. 1568.
Flour, Wheat-. A. T. Galloway. No. 111,936; Aug. 15; Gaz. vol. 229; p. 933.
Flour, Wheat-. The McManness Milling & Grain Co. No. 112,294; Aug. 29; Gaz. vol. 229; p. 1568.
Flour, Wheat-. Montana Flour Mills Company. No. 111,752; Aug. 1; Gaz. vol. 229; p. 265.
Flour, Wheat-. Montana Flour Mills Company. No. 111,898; Aug. 8; Gaz. vol. 229; p. 608.
Flour, Wheat-. J. Pavlik & Sons. No. 111,845; Aug. 8; Gaz. vol. 229; p. 607.
Flour, Wheat-. L. J. Rohrbaugh. No. 112,315; Aug. 29; Gaz. vol. 229; p. 1569.
Flour, Wheat and buckwheat. Union Milling Co. No. 111,770; Aug. 1; Gaz. vol. 229; p. 265.
Flours, Wheat and self-rising wheat. The Loveland Milling & Elevator Company. No. 111,745; Aug. 1; Gaz. vol. 229; p. 265.
Food, Cereal breakfast. The Kroger Grocery and Baking Co. No. 111,950; Aug. 15; Gaz. vol. 229; p. 934.
Food composed of meat scraps, Poultry. The American Agricultural Chemical Co. No. 112,244; Aug. 29; Gaz. vol. 229; p. 1567.
Food for animals composed of a mixture of cereal, meals, and oils. J. Bibby & Sons. Nos. 112,155–6; Aug. 22; Gaz. vol. 229; p. 1250.
Food, Yeast. W. W. Wickes. No. 112,082; Aug. 22; Gaz. vol. 229; p. 1248.
Foods, Cereal breakfast. Kellogg Toasted Corn Flake Company. No. 111,892; Aug. 8; Gaz. vol. 229; p. 608.
Foods, Certain named. Connellsville Macaroni Co. No. 112,168; Aug. 22; Gaz. vol. 229; p. 1251.
Foods, Certain named. The C. L. Cotton Perfume & Extract Co. No. 112,257; Aug. 29; Gaz. vol. 229; p. 1567.
Foods, Certain named. The John T. Doyle Co. No. 112,171; Aug. 22; Gaz. vol. 229; p. 1251.
Foods, Certain named. General Mercantile Co. No. 111,813; Aug. 8; Gaz. vol. 229; p. 606.
Foods, Certain named. Sherer-Gillett Company. No. 112,322; Aug. 29; Gaz. vol. 229; p. 1569.
Footwear, Certain named. The Hurlbut Co. No. 112,284; Aug. 29; Gaz. vol. 229; p. 1568.
Fruits and leaves for a laxative food, Dried. F. L. Embree. No. 112,173; Aug. 22; Gaz. vol. 229; p. 1251.
Fruits, Citrus. Hillside Orange Association. No. 112,187; Aug. 22; Gaz. vol. 229; p. 1251.
Fuel composed mainly of alcohol, Solid. S. Sternau & Co. No. 112,328; Aug. 29; Gaz. vol. 229; p. 1569.
Fuel compound for explosive-engines. Inajiffi Fuel Company. No. 112,191; Aug. 22; Gaz. vol. 229; p. 1251.
Fuel for internal-combustion engines, Preparation to be added to. Lloyds of America. No. 111,743; Aug. 1; Gaz. vol. 229; p. 265.
Furniture-polish. S. Clausen & Son. No. 112,253; Aug. 29; Gaz. vol. 229; p. 1567.
Furniture-polish. Zazeln Manufacturing Co. No. 112,344; Aug. 29; Gaz. vol. 229; p. 1570.
Games and toys, Certain named. T. W. Burgess. No. 111,925; Aug. 15; Gaz. vol. 229; p. 933.
Games and toys, Certain named. Kentucky Derby Company. No. 112,287; Aug. 29; Gaz. vol. 229; p. 1568.
Games, Educational card. L. L. Perrine. No. 112,217; Aug. 22; Gaz. vol. 229; p. 1252.
Garments, Men's outer. J. & I. Saul. No. 112,226; Aug. 22; Gaz. vol. 229; p. 1252.
Garments, Sleeping-. C. Sandberg. No. 112,225; Aug. 22; Gaz. vol. 229; p. 1252.
Gastric-gland-tissue extract. Fairchild Bros. & Foster. No. 112,176; Aug. 22; Gaz. vol. 229; p. 1251.
Ginger-ale, sarsaparilla, club-soda. The Varuna Spring Co. No. 111,775; Aug. 1; Gaz. vol. 229; p. 266.
Ginghams, Cotton. E. M. Holt Plaid Mills. No. 111,822; Aug. 8; Gaz. vol. 229; p. 606.
Glass crucibles, tubes, retorts, flasks, &c., Quartz-. Lenz and Naumann. No. 111,742; Aug. 1; Gaz. vol. 229; p. 265.
Glass fruit-jars. Fisher, Bruce & Co. No. 111,721; Aug. 1; Gaz. vol. 229; p. 264.
Glassware. The United Jewelers. No. 112,237; Aug. 22; Gaz. vol. 229; p. 1253.
Gloves. Marshall Field & Company. No. 112,266; Aug. 29; Gaz. vol. 229; p. 1567.
Gloves and hosiery. E. Heidhues & Co. No. 111,942; Aug. 15; Gaz. vol. 229; p. 933.
Gopher, squirrel, and prairie-dog poison. Mickelson-Shapiro Company. No. 111,956; Aug. 15; Gaz. vol. 229; p. 934.
Granite for monuments, &c. Battlefield Granite Corporation. No. 112,247; Aug. 29; Gaz. vol. 229; p. 1567.
Greases for under-water lubrication. Crew Levick Company. No. 111,998; Aug. 15; Gaz. vol. 229; p. 935.
Grindstones, powders, and pastes for polishing and grinding. M. Laur. No. 112,053; Aug. 22; Gaz. vol. 229; p. 1247.
Gum, Ball chewing-. H. C. Wilkinson. No. 111,778; Aug. 1; Gaz. vol. 229; p. 266.
Gum, Chewing-. J. A. Duffy. No. 112,116; Aug. 22; Gaz. vol. 229; p. 1249.
Gum, Chewing-. Independent Gum Company. No. 112,192; Aug. 22; Gaz. vol. 229; p. 1251.
Gum, Chewing-. E. L. Swaine. No. 112,330; Aug. 29; Gaz. vol. 229; p. 1569.
Gum, Chewing-. The Vanola Company. No. 111,774; Aug. 1; Gaz. vol. 229; p. 266.
Hacks and school-cars. Wayne Works. No. 111,989; Aug. 15; Gaz. vol. 229; p. 935.
Hair-dye. F. M. E. Rendon. No. 112,068; Aug. 22; Gaz. vol. 229; p. 1248.
Hair-nets. K. Thau. No. 111,912; Aug. 8; Gaz. vol. 229; p. 609.
Hair to its original color, Preparation for restoring. "Kolor-Bak" Products Co. No. 111,737; Aug. 1; Gaz. vol. 229; p. 264.
Haircloth and cotton piece goods. Manhattan Hair Cloth Co. No. 112,124; Aug. 22; Gaz. vol. 229; p. 1249.
Ham, bacon, shoulders, and lard. W. S. Forbes & Co. No. 112,048; Aug. 22; Gaz. vol. 229; p. 1247.
Hams, bacon, lard, sausage, oleomargarin. E. W. Penley. No. 112,215; Aug. 22; Gaz. vol. 229; p. 1252.
Hardware and plumbing and steam-fitting supplies, Certain named. California Corrugated Culvert Co. No. 111,995; Aug. 15; Gaz. vol. 229; p. 935.

Hardware supplies, Certain named. Landers, Frary & Clark. No. 111,951; Aug. 15; Gaz. vol. 229; p. 934.
Hats and caps. Goldenbergs. No. 111,816; Aug. 8; Gaz. vol. 229; p. 606.
Hats, Straw. The Valentine Hat Company. No. 112,336; Aug. 29; Gaz. vol. 229; p. 1570.
Heaters, heating systems, and parts thereof, Steam and hot-water. Lord & Burnham Co. No. 111,744; Aug. 1; Gaz. vol. 229; p. 265.
Heating, lighting, and ventilating apparatus, Certain named. International Heater Company. Nos. 111,827–8; Aug. 8; Gaz. vol. 229; p. 606.
Herb tea, a laxative for constipation, Alpine. N. Stern. No. 112,326; Aug. 29; Gaz. vol. 229; p. 1569.
Herrings in barrels, Pickled. A. Flett & Co. No. 111,885; Aug. 8; Gaz. vol. 229; p. 608.
Hoists. Link-Belt Company. No. 112,010; Aug. 15; Gaz. vol. 229; p. 935.
Horse-collars and harness. H. A. Fay. No. 111,720; Aug. 1; Gaz. vol. 229; p. 264.
Hosiery. W. B. Davis & Son. No. 111,927; Aug. 15, Gaz. vol. 229; p. 933.
Hosiery. J. Garfinkle. No. 112,270; Aug. 29; Gaz. vol. 229; p. 1568.
Hosiery. Mishawaka Woolen Manufacturing Company. No. 111,957; Aug. 15; Gaz. vol. 229; p. 934.
Hosiery. Mishawaka Woolen Manufacturing Company. No. 112,207; Aug. 22; Gaz. vol. 229; p. 1252.
Hosiery. Richmond Hosiery Mills. Nos. 112,220–3; Aug. 22; Gaz. vol. 229; p. 1252.
Hosiery, knit underwear, sweaters. Shaw Stocking Company. No. 111,978; Aug. 15; Gaz. vol. 229; p. 934.
Hosiery, knit underwear, sweaters, gloves. Sanger Brothers. No. 111,972; Aug. 15; Gaz. vol. 229; p. 934.
Humidors for cigars. A. R. McNeil. No. 112,014; Aug. 15; Gaz. vol. 229; p. 936.
Ice-cream. Carnation Milk Products Company. No. 112,252; Aug. 29; Gaz. vol. 229; p. 1567.
Ice-cream. George Moore Ice Cream Co. No. 112,184; Aug. 22; Gaz. vol. 229; p. 1251.
Ice-cream. George Moore Ice Cream Co. No. 112,300; Aug. 29; Gaz. vol. 229; p. 1568.
Ice-cream. Goodman American Ice-Cream Co. No. 112,275; Aug. 29; Gaz. vol. 229; p. 1568.
Ice-cream. A. G. Warren Ice-Cream Company. No. 112,339; Aug. 29; Gaz. vol. 229; p. 1570.
Ignition apparatus, Electric. The Detroit Engineering Products Company. No. 111,999; Aug. 15; Gaz. vol. 229; p. 935.
Injection for venereal diseases. The British Drug Houses. No. 112,041; Aug. 22; Gaz. vol. 229; p. 1247.
Ink-driers. The Martian Chemical Company. No. 112,056; Aug. 22; Gaz. vol. 229; p. 1247.
Inks and powders for use in the process of producing relief prints. Emboso Sales Company. No. 112,134; Aug. 22; Gaz. vol. 229; p. 1250.
Insect and vermin destroyer. H. Cooley. No. 111,795; Aug. 8; Gaz. vol. 229; p. 605.
Insecticide. American Sanitary Corporation. No. 112,111; Aug. 22; Gaz. vol. 229; p. 1249.
Insulating compounds for electrical conductors. The Engineering Products Corporation. No. 111,805; Aug. 8; Gaz. vol. 229; p. 605.
Insulators, Spark-plug. Hartford Machine Screw Company. No. 111,887; Aug. 8; Gaz. vol. 229; p. 608.
Iron, steel, or other metal in roll form. Wheeling Mold and Foundry Co. No. 112,340; Aug. 29; Gaz. vol. 229; p. 1570.
Jacks, Lifting-. Lane Brothers Company. No. 111,738; Aug. 1; Gaz. vol. 229; p. 264.
Journal, Trade-. H. R. Howell. No. 112,281; Aug. 29; Gaz. vol. 229; p. 1568.
Kerosene, lubricating oils and greases, naphthas, and gasolenes. The Red C Oil Manufacturing Co. No. 112,311; Aug. 29; Gaz. vol. 229; p. 1569.
Kerseys, meltons, thibets, and cassimeres. Jewell Brook Woolen Co. No. 112,138; Aug. 22; Gaz. vol. 229; p. 1250.
Knit goods. A. Aronow. No. 111,707; Aug. 1; Gaz. vol. 229; p. 263.
Knit shirts, drawers, and union suits. Climax Underwear Co. No. 111,792; Aug. 8; Gaz. vol. 229; p. 605.
Knitted, netted, and textile fabrics, Certain named. J. Wanamaker, New York. No. 112,146; Aug. 22; Gaz. vol. 229; p. 1250.
Knitted underwear, caps, outer coats, and sweaters. A. S. Haight & Co. No. 111,724; Aug. 1; Gaz. vol. 229; p. 264.
Lamps, Incandescent electric. Independent Lamp & Wire Company. No. 111,946; Aug. 15; Gaz. vol. 229; p. 933.
Lard, ham, bacon, and shoulders. The John Hoffmann Packing Co. No. 112,279; Aug. 29; Gaz. vol. 229; p. 1568.
Lard substitute of cotton-seed oil and beef-fat. The N. K. Fairbank Company. No. 112,045; Aug. 22; Gaz. vol. 229; p. 1247.
Lard, sugar-cured picnics, and cooked pigs' tongues. Farmers' Coöperative Packing Company of La Crosse. No. 111,719; Aug. 1; Gaz. vol. 229; p. 264.
Lath, fibrous roofing, siding, papers, asphalt shingles. S. M. Ford. No. 111,810; Aug. 8; Gaz. vol. 229; p. 606.
Lavatory waste-fixtures. Speakman Supply and Pipe Company. No. 111,909; Aug. 8; Gaz. vol. 229; p. 609.
Leather, Imitation. The Duratex Company. No. 111,800; Aug. 8; Gaz. vol. 229; p. 605.
Leather, Oak sole-. William Flaccus Oak Leather Company. No. 111,808; Aug. 8; Gaz. vol. 229; p. 605.
Leather polisher, refinisher, and preserver, Paste and liquid. A. Sommer. No. 112,105; Aug. 22; Gaz. vol. 229; p. 1249.
Leather, rubber, and canvas dressing and preservative. Michigan Waterproofings Company. No. 112,206; Aug. 22; Gaz. vol. 229; p. 1252.
Life-preservers in the form of body-wear, pillows, &c. Robinson-Roders Co. No. 112,313; Aug. 29; Gaz. vol. 229; p. 1569.
Linen and cotton piece goods, silks, &c. Henry Glass & Co. No. 111,815; Aug. 8; Gaz. vol. 229; p. 606.
Liniment as a treatment for rheumatism, headache, and sprains. A. W. Lithgow. No. 112,011; Aug. 15; Gaz. vol. 229; p. 935.
Linoleum, cork carpet, floor-coverings composed mainly of cork. Armstrong Cork Company. No. 111,871; Aug. 8; Gaz. vol. 229; p. 607.
Lithopone and white lead. F. H. Cone. No. 111,715; Aug. 1; Gaz. vol. 229; p. 264.
Lotion and toilet water, Skin-. R. Bernabeo. No. 112,154; Aug. 22; Gaz. vol. 229; p. 1250.
Lubricants. Panama Lubricants Company. No. 111,759; Aug. 1; Gaz. vol. 229; p. 265.
Lumber, also sawmill and planing-mill products, Certain. Heineman Lumber Company of Heineman, Wis. No. 112,004; Aug. 15; Gaz. vol. 229; p. 935.
Lumber and logs. Cadwallader Gibson Lumber Co. No. 111,788; Aug. 8; Gaz. vol. 229; p. 605.
Macaroni. Viviano Bros. Macaroni Co. No. 111,860; Aug. 8; Gaz. vol. 229; p. 607.
Machinery and parts thereof, Certain named. The Valle-Kimes Co. Nos. 112,033–4; Aug. 15; Gaz. vol. 229; p. 936.
Machinery and tools and parts thereof, Certain named. Pyle National Electric Headlight Company. No. 112,021; Aug. 15; Gaz. vol. 229; p. 936.
Magazine, Monthly. The Motor-Mechanics Company. No. 111,959; Aug. 15; Gaz. vol. 229; p. 934.
Magazine, Monthly. Newman-King Fashion Co. No. 111,841; Aug. 8; Gaz. vol. 229; p. 607.
Magazine-title. W. F. Frederick Piano Co. No. 112,179; Aug. 22; Gaz. vol. 229; p. 1251.
Mayonnaise, fruit marmalades and preserves, &c. C. A. Borst. No. 111,785; Aug. 8; Gaz. vol. 229; p. 605.
Meal, Calf-. Chapin & Company. No. 111,790; Aug. 8; Gaz. vol. 229; p. 605.
Meats and lard, Dry salted. Galban & Co. No. 111,812; Aug. 8; Gaz. vol. 229; p. 606.
Meats, Smoked. Oscar F. Mayer & Bro. No. 111,748; Aug. 1; Gaz. vol. 229; p. 265.
Medical preparations for certain named diseases and ailments. J. L. Marlow. No. 111,955; Aug. 15; Gaz. vol. 229; p. 934.
Medical and surgical appliances, Certain named. The Scholl Manufacturing Company. No. 111,976; Aug. 15; Gaz. vol. 229; p. 934.
Medicinal preparation for external application in treating certain named ailments. B. Prebol. No. 111,761; Aug. 1; Gaz. vol. 229; p. 265.
Medicine for scours in cattle. W. T. McCarthy. No. 112,205; Aug. 22; Gaz. vol. 229; p. 1252.
Medicines for tuberculosis, bronchitis, &c. B. & E. Medicine Company. No. 112,246; Aug. 29; Gaz. vol. 229; p. 1567.
Medicine for women, Liquid. The Kunath Medicine Mfg. Co. No. 112,197; Aug. 22; Gaz. vol. 229; p. 1251.
Medicines and pharmaceutical preparations, Certain named. The Antonina De Anna Chemical Co. No. 112,088; Aug. 22; Gaz. vol. 229; p. 1248.
Metal and glass polish. Faust Manufacturing Co. No. 112,091; Aug. 22; Gaz. vol. 229; p. 1248.
Metal, Babbitt. Syracuse Smelting Works. No. 111,983; Aug. 15; Gaz. vol. 229; p. 935.
Metal in ingots, castings, or forgings, Special-process. R. E. Rich. No. 112,026; Aug. 15; Gaz. vol. 229; p. 936.
Metal-polish. J. F. George. No. 112,003; Aug. 15; Gaz. vol. 229; p. 935.
Metals and metal castings and forgings, Certain named. G. Barnsley & Sons. No. 111,923; Aug. 15; Gaz. vol. 229; p. 933.
Metals which are subject to oxidation, Preservative for. Techno Chemical Corporation. No. 112,332; Aug. 29; Gaz. vol. 229; p. 1569.
Milk and cream. C. I. Cook. No. 112,255; Aug. 29; Gaz. vol. 229; p. 1567.
Milk, cheese, butter, Fermented. L. G. Martens. No. 111,835; Aug. 8; Gaz. vol. 229; p. 606.
Milk, Dried. Borden's Condensed Milk Company. No. 112,162; Aug. 22; Gaz. vol. 229; p. 1250.
Milk, Malted. Manas Bros. No. 112,055; Aug. 22; Gaz. vol. 229; p. 1247.
Mops. Duskil Mop Company. No. 112,001; Aug. 15; Gaz. vol. 229; p. 935.
Music-rolls, Perforated. A. S. Jay. No. 111,734; Aug. 1; Gaz. vol. 229; p. 264.
Musical instrument and player valve mechanism, Automatic. Conservatory Player Action Company. No. 112,044; Aug. 22; Gaz. vol. 229; p. 1247.
Mustard. Johnstown Grocery Company. No. 111,785; Aug. 1; Gaz. vol. 229; p. 264.

Nail-polish. Richard Hudnut. No. 112,190; Aug. 22; Gaz. vol. 229; p. 1251.
Necklaces. Juergens & Andersen Company. No. 112,139; Aug. 22; Gaz. vol. 229; p. 1250.
Newspaper-section. Star Company. Nos. 111,766–7; Aug. 1; Gaz. vol. 229; p. 265.
Night-robes and pajamas. Ernest Simons Mfg. Co. No. 112,323; Aug. 29; Gaz. vol. 229; p. 1569.
Oil in capsules, Olive-. D. A. Harrison. No. 111,941; Aug. 15; Gaz. vol. 229; p. 933.
Oil, Kerosene-. The Texas Company. No. 111,769; Aug. 1; Gaz. vol. 229; p. 265.
Oil, Olive-. Cosmopolitan Grocery Co. No. 111,717; Aug. 1; Gaz. vol. 229; p. 264.
Oil, Olive-. The Hermitage Olive Oil Co. No. 112,050; Aug. 22; Gaz. vol. 229; p. 1247.
Oil, Olive-. O. L. E. A. Olivicoltori Liguri Esportatori Associati. No. 112,061; Aug. 22; Gaz. vol. 229; p. 1247.
Oil, Polish-. Duskil Mop Company. No. 111,801; Aug. 8; Gaz. vol. 229; p. 605.
Oils and greases, Lubricating. Indian Refining Company. No. 111,890; Aug. 8; Gaz. vol. 229; p. 608.
Oils and greases, Lubricating. Swan & Finch Company. No. 112,331; Aug. 29; Gaz. vol. 229; p. 1569.
Oils, greases, and compounds, lubricants, Lubricating. The Phoenix Oil Company. No. 112,305; Aug. 29; Gaz. vol. 229; p. 1569.
Oils, Lubricating, illuminating, and fuel. Sutton, Aspinwall & Co. No. 111,982; Aug. 15; Gaz. vol. 229; p. 935.
Onions, potatoes, and appies, Fresh. J. Rosenblum. No. 112,310; Aug. 29; Gaz. vol. 229; p. 1569.
Oranges and grape-fruit. San Dimas Orange Growers Ass'n. No. 112,069; Aug. 22; Gaz. vol. 229; p. 1248.
Oranges and lemons. Bradbury Estate Company. No. 111,924; Aug. 15; Gaz. vol. 229; p. 933.
Oranges, grape-fruit, tangerines. L. B. Skinner. No. 112,073; Aug. 22; Gaz. vol. 229; p. 1248.
Overalls. H. D. Lee Mercantile Co. No. 111,740; Aug. 1; Gaz. vol. 229; p. 265.
Overalls, jackets, and mackinaws. Stahl-Urban and Co. No. 112,030; Aug. 15; Gaz. vol. 229; p. 936.
Oxalic-acid substitute and dyes. Trico Chemical Co. No. 112,031; Aug. 15; Gaz. vol. 229; p. 936.
Packing composed of rubber or rubber and fabric, Machinery. The Mechanical Rubber Company. No. 112,295; Aug. 29; Gaz. vol. 229; p. 1568.
Paint, Bronze. Flood & Conklin Co. No. 112,047; Aug. 22; Gaz. vol. 229; p. 1247.
Paint, Dry. W. P. D. Moross. No. 111,838; Aug. 8; Gaz. vol. 229; p. 606.
Paints and painters' materials, Certain named. Wm. Zinsser & Co. No. 112,240; Aug. 22; Gaz. vol. 229; p. 1253.
Paints, Ready-mixed. James A. McCafferty & Sons Mfg. Co. No. 111,897; Aug. 8; Gaz. vol. 229; p. 608.
Pants or trousers. Siegfried-Maltz Pants Manufacturing Company. No. 112,029; Aug. 15; Gaz. vol. 229; p. 936.
Paper, cloth, &c., Abrasive-coated fabrics of. Herman Behr & Company. No. 111,870; Aug. 8; Gaz. vol. 229; p. 608.
Paper for checks and drafts, bills of exchange, promissory notes, &c., Safety-. George La Monte & Son. No. 112,199; Aug. 22; Gaz. vol. 229; p. 1252.
Paper for covering boxes, Enameled. Ideal Coated Paper Co. No. 111,732; Aug. 1; Gaz. vol. 229; p. 264.
Paper, Glazed silk wrapping-. H. C. Davis. No. 111,884; Aug. 8; Gaz. vol. 229; p. 608.
Paper, Toilet-. The John Hoberg Co. No. 112,051; Aug. 22; Gaz. vol. 229; p. 1247.
Paper, Toilet-. The Peerless Mfg. Co. Nos. 112,063–4; Aug. 22; Gaz. vol. 229; pp. 1247–8.
Paper, Toilet-. Sauquoit Toilet Paper Co. No. 112,227; Aug. 22; Gaz. vol. 229; p. 1252.
Paper, Toilet-. Sauquoit Toilet Paper Co. No. 112,317; Aug. 29; Gaz. vol. 229; p. 1569.
Paper, Wrapping-. Berlin Mills Company. No. 112,130; Aug. 22; Gaz. vol. 229; p. 1249.
Paper, Wrapping-. Berlin Mills Company. No. 112,153; Aug. 22; Gaz. vol. 229; p. 1250.
Paper, Wrapping and printing. The Union Paper and Twine Company. No. 112,235; Aug. 22; Gaz. vol. 229; p. 1253.
Papers and felts and wall-boards, Building. Pacific Building Materials Company. No. 112,103; Aug. 22; Gaz. vol. 229; p. 1249.
Papers, Bond, ledger, and writing. Neenah Paper Company. No. 111,756; Aug. 1; Gaz. vol. 229; p. 265.
Papers, Bond, ledger, and writing. Neenah Paper Company. No. 112,302; Aug. 29; Gaz. vol. 229; p. 1569.
Papeteries, writing and wrapping papers. J. E. Mitchell. No. 111,837; Aug. 8; Gaz. vol. 229; p. 606.
Peanut-butter and peanuts. The American Peanut Corporation. No. 111,781; Aug. 8; Gaz. vol. 229; p. 605.
Peanut-butter, flavoring extracts, spices. Stone-Ordean-Wells Company. No. 112,077; Aug. 22; Gaz. vol. 229; p. 1248.
Pencils, Lead-. Eagle Pencil Company. No. 112,172; Aug. 22; Gaz. vol. 229; p. 1251.
Pens, loose-leaf books, box-files, &c., Fountain-. R. P. Andrews Paper Company. No. 112,087; Aug. 22; Gaz. vol. 229; p. 1248.
Perfume, toilet water, face and talcum powders. H. C. G. Luyties. No. 112,012; Aug. 15; Gaz. vol. 229; p. 935.
Periodical. Economy Service Company. Nos. 111,803–4; Aug. 8; Gaz. vol. 229; p. 605.
Periodical, Monthly. The S. W. Noggle Wholesale and Manufacturing Company. No. 112,212; Aug. 22; Gaz. vol. 229; p. 1252.
Periodicals, Monthly. Montgomery Ward & Co. No. 112,208; Aug. 22; Gaz. vol. 229; p. 1252.
Petticoats. Peerless Petticoat Company. No. 112,214; Aug. 22; Gaz. vol. 229; p. 1252.
Pharmaceutical preparation for rheumatism and muscular ailments. Ciddio and Company. No. 111,718; Aug. 1; Gaz. vol. 229; p. 264.
Pharmaceutical preparations, Certain named. F. Ahlgren. No. 112,147; Aug. 22; Gaz. vol. 229; p. 1250.
Pharmaceutical preparations, Certain named. Frederick Stearns & Co. No. 112,075; Aug. 22; Gaz. vol. 229; p. 1248.
Pharmaceutical preparations, Certain named. G. M. Stefanides. No. 112,229; Aug. 22; Gaz. vol. 229; p. 1252.
Pharmaceutical preparations, Certain named. S. Tauber. No. 112,231; Aug. 22; Gaz. vol. 229; p. 1252.
Pharmaceutical preparations for toilet purposes, Certain named. I. Chauncey. No. 112,166; Aug. 22; Gaz. vol. 229; p. 1251.
Pharmaceutical preparations for toilet purposes, Certain named. Melba Manufacturing Company. No. 112,015; Aug. 15; Gaz. vol. 229; p. 936.
Pharmaceutical preparations for toilet use, Certain. J. B. Johnson. No. 111,948; Aug. 15; Gaz. vol. 229; p. 934.
Phonographs. Thomas A. Edison, Incorporated. No. 111,802; Aug. 8; Gaz. vol. 229; p. 605.
Phonographs and talking-machines. Playerphone Talking Machine Co. No. 112,065; Aug. 22; Gaz. vol. 229; p. 1248.
Photographic developing and fixing chemicals. Commercial Camera Company. No. 112,167; Aug. 22; Gaz. vol. 229; p. 1251.
Piano actions, Player-. Auto Pneumatic Action Co. No. 112,148; Aug. 22; Gaz. vol. 229; p. 1250.
Pianos. Bjur Bros. Co. No. 112,161; Aug. 22; Gaz. vol. 229. p. 1250.
Pianos, piano-players, and player-pianos. Behning Piano Company. No. 112,037; Aug. 22; Gaz. vol. 229; p. 1247.
Pictorial representations. W. C. Cornwell. No. 111,796; Aug. 8; Gaz. vol. 229; p. 605.
Piece goods and combinations of same, Certain named. Goodall Worsted Co. No. 112,273; Aug. 29; Gaz. vol. 229; p. 1568.
Piles. MacArthur Concrete Pile & Foundation Company. No. 111,747; Aug. 1; Gaz. vol. 229; p. 265.
Pill or tablet, Laxative. J. C. Sharer. No. 112,320; Aug. 29; Gaz. vol. 229; p. 1569.
Pipe and fittings, Cast-iron soil-. The Central Foundry Company. No. 111,881; Aug. 8; Gaz. vol. 229; p. 608.
Pipe-joint composition. Abingdon Presyrtite Mfg. Co. No. 112,241; Aug. 29; Gaz. vol. 229; p. 1567.
Plaster, Adhesive corn-. Bilwol Manufacturing Company. No. 112,248; Aug. 29; Gaz. vol. 229; p. 1567.
Plaster and cement. Kieselguhr Company of America. No. 111,949; Aug. 15; Gaz. vol. 229; p. 934.
Plasters, Medicinal. T. Gilman, Jr. No. 112,182; Aug. 22; Gaz. vol. 229; p. 1251.
Plasters, Wall-. The American Gypsum Company. No. 112,150; Aug. 22; Gaz. vol. 229; p. 1250.
Plastic material for laying and resurfacing roofs, Prepared. The Garland Company. No. 111,937; Aug. 15; Gaz. vol. 229; p. 933.
Plastic material for surfacing flooring, &c. The Litosilo Co. of America. No. 111,895; Aug. 8; Gaz. vol. 229; p. 608.
Posts, Metal. Funk Brothers Manufacturing Company. No. 111,935; Aug. 15; Gaz. vol. 229; p. 933.
Potatoes, cabbages, cucumbers, &c., Fresh. The South Carolina Produce Association. No. 112,324; Aug. 29; Gaz. vol. 229; p. 1569.
Potatoes, Partially cooked and prepared. Condensed Food Company. Nos. 111,996–7; Aug. 15; Gaz. vol. 229; p. 935.
Powder and paste, Tooth-. F. G. Corey. No. 112,113; Aug. 22; Gaz. vol. 229; p. 1249.
Powder, Face-. Heptagon Laboratories. No. 112,186; Aug. 22; Gaz. vol. 229; p. 1251.
Powders, toilet water, perfume, &c., Toilet and sachet. A. Bourjois & Co. No. 111,994; Aug. 15; Gaz. vol. 229; p. 935.
Preparation for preserving, hardening, impregnating, and waterproofing stone, concrete, &c. The Master Builders Company. No. 111,836; Aug. 8; Gaz. vol. 229; p. 606.
Preparation for the treatment of certain named diseases. Excelsior Specialty Co. No. 111,932; Aug. 15; Gaz. vol. 229; p. 933.
Preparation for treatment of rheumatism, cancer, &c. G. F. Koga. No. 112,008; Aug. 15; Gaz. vol. 229; p. 935.
Preparation to remove superfluous hair without injury to the skin. M. Ruppert. No. 112,224; Aug. 22; Gaz. vol. 229; p. 1252.
Prescription for the liver, stomach, and bowels. G. P. Grimes. No. 111,818; Aug. 8; Gaz. vol. 229; p. 606.
Pretzels, bread, cakes, pies. G. H. Becker. No. 112,129; Aug. 22; Gaz. vol. 229; p. 1249.
Rain-coats. S. A. & H. Myers. No. 111,901; Aug. 8; Gaz. vol. 229; p. 608.

Rain-coats and capes for men, women, and children. C. Kenyon Company. No. 112,288; Aug. 29; Gaz. vol. 229; p. 1568.
Rat and other rodent exterminator. American Sanitary Corporation. No. 112,110; Aug. 22; Gaz. vol. 229; p. 1249.
Rat or mice poison, bedbug and roach destroyers. B. Heller & Co. No. 111,727; Aug. 1; Gaz. vol. 229; p. 264.
Razors and blades, Safety-. United Drug Company. No. 111,771; Aug. 1; Gaz. vol. 229; p. 265.
Remedies, Veterinary. Veterinary Chemical Co. No. 111,859; Aug. 8; Gaz. vol. 229; p. 607.
Remedy for animals, Cholera. O. J. Tebow. No. 112,107; Aug. 22; Gaz. vol. 229; p. 1249.
Remedy for catarrh, hay-fever, &c. E. B. Weidknecht. No. 111,776; Aug. 1; Gaz. vol. 229; p. 266.
Remedy for constipation. L. E. Neafie. No. 112,102; Aug. 22; Gaz. vol. 229; p. 1249.
Remedy for diseases of hogs. V. V. Gray. No. 112,276; Aug. 29; Gaz. vol. 229; p. 1568.
Remedy for diseases of nasal, bronchial, and other air-passages. T. P. Campbell, Jr. No. 112,131; Aug. 22; Gaz. vol. 229; p. 1250.
Remedy for piles and constipation, Internal. The Thomas W. Read Mfg. Co. No. 112,218; Aug. 22; Gaz. vol. 229; p. 1252.
Remedy for rheumatism, lumbago, &c. L. B. Dow. No. 112,262; Aug. 29; Gaz. vol. 229; p. 1567.
Remedy for treatment of diseases pertaining to the kidneys, liver, and blood. Vis Vitae Medicine Co. No. 112,080; Aug. 22; Gaz. vol. 229; p. 1248.
Remedy, Malaria. J. E. Sharpe. No. 112,321; Aug. 29; Gaz. vol. 229; p. 1569.
Rice. D. S. & H. Craig. No. 112,132; Aug. 22; Gaz. vol. 229; p. 1250.
Roach and vermin poison. Kilmor Paste Company (a Firm). No. 112,006; Aug. 15; Gaz. vol. 229; p. 935.
Roofing, Prepared. Sears, Roebuck and Co. No. 111,850; Aug. 8; Gaz. vol. 229; p. 607.
Rubber and leather shoes. Sucs. de Jose Martinez S. en C. No. 111,768; Aug. 1; Gaz. vol. 229; p. 265.
Rubber boots, overshoes, shoes, and rubbers. Apsley Rubber Company. No. 111,782; Aug. 8; Gaz. vol. 229; p. 605.
Rubber goods—to wit, hose, packing, and tires, Mechanical. New Jersey Car Spring & Rubber Co. No. 112,059; Aug. 22; Gaz. vol. 229; p. 1247.
Rubber hose. The Goodyear Tire & Rubber Company. Nos. 112,093–7; Aug. 22; Gaz. vol. 229; pp. 1248–9.
Rubber hose. The Goodyear Tire & Rubber Company. No. 112,099; Aug. 22; Gaz. vol. 229; p. 1249.
Rubber overshoes and tennis-shoes of rubber and fabric. United States Rubber Company. No. 112,238; Aug. 22; Gaz. vol. 229; p. 1253.
Rubber soles and heels. The Miller Rubber Company. No. 112,058; Aug. 22; Gaz. vol. 229; p. 1247.
Rubber-surfaced-fabric belting. The Goodyear Tire & Rubber Company. No. 112,098; Aug. 22; Gaz. vol. 229; p. 1249.
Rubber timepiece-supports. S. G. Lewis. No. 112,203; Aug. 22; Gaz. vol. 229; p. 1252.
Rust-preventive, kerosene-oil, paraffin-wax, and candles. The Atlantic Refining Company. No. 111,874; Aug. 8; Gaz. vol. 229; p. 608.
Sack-coats. Goodman & Suss. No. 112,119; Aug. 22; Gaz. vol. 229; p. 1249.
Salt. Mulkey Salt Company. No. 112,301; Aug. 29; Gaz. vol. 229; p. 1569.
Salt. Pacific Coast Salt Co. No. 111,963; Aug. 15; Gaz. vol. 229; p. 934.
Salt, Certain named. The Cutler-Magner Co. No. 112,090; Aug. 22; Gaz. vol. 229; p. 1248.
Salve. Allen and Williamson. No. 112,080; Aug. 22; Gaz. vol. 229; p. 1248.
Salve, linement, and dead-flesh destroyer. I. F. Fitzwater. No. 111,807; Aug. 8; Gaz. vol. 229; p. 605.
Salve or ointment. B. Marzolf. No. 112,057; Aug. 22; Gaz. vol. 229; p. 1247.
Salve or ointment for burns, cuts, and bruises. M. A. Norman. No. 112,141; Aug. 22; Gaz. vol. 229; p. 1250.
Salve, Rheumatism-. C. Tomasek. No. 112,079; Aug. 22; Gaz. vol. 229; p. 1248.
Salves. E. Nau. No. 112,211; Aug. 22; Gaz. vol. 229; p. 1252.
Satin piece goods. Levy & Hexter. No. 112,290; Aug. 29; Gaz. vol. 229; p. 1568.
Sausage, Pork. Louis Pfaelzer & Sons. No. 111,846; Aug. 8; Gaz. vol. 229; p. 607.
Seals, Bottle-. Ferdinand Gutmann & Co. No. 111,940; Aug. 15; Gaz. vol. 229; p. 933.
Seals, Bottle-. The Sanitary Seal Manufacturing Company. No. 111,907; Aug. 8; Gaz. vol. 229; p. 609.
Seasoning. C. F. Blanke Tea & Coffee Company. No. 112,249; Aug. 29; Gaz. vol. 229; p. 1567.
Sewer or conduit construction, Sections of blocks for. Southern Pipe & Culvert Co. No. 111,765; Aug. 1; Gaz. vol. 229; p. 265.
Sewing-machines. Willcox & Gibbs Sewing Machine Co. No. 111,917; Aug. 8; Gaz. vol. 229; p. 609.
Shampoo preparation and hair-tonic. N. J. Burgham. No. 111,710; Aug. 1; Gaz. vol. 229; p. 264.
Shims and shim-stock. Laminated Shim Company. No. 112,198; Aug. 22; Gaz. vol. 229; p. 1251.
Shirts, Work-. Oregon City Manufacturing Company. No. 112,304; Aug. 29; Gaz. vol. 229; p. 1569.
Shoe-heels, Attachable and detachable. W. L. Day. No. 111,928; Aug. 15; Gaz. vol. 229; p. 933.
Shoe soles and heels, Rubber and fiber. A & A Rubber Company. No. 111,704; Aug. 1; Gaz. vol. 229; p. 263.
Shoes. Everybody's Shoe Store. No. 112,175; Aug. 22; Gaz. vol. 229; p. 1251.
Shoes, Bathing-. John H. Parker Company. No. 111,844; Aug. 8; Gaz. vol. 229; p. 607.
Shoes, Cloth and leather. The Melville Shoe Corporation. No. 111,749; Aug. 1; Gaz. vol. 229; p. 265.
Shoes, Felt. Worcester Felt Shoe Co. No. 111,780; Aug. 1; Gaz. vol. 229; p. 266.
Shoes, Goods used in the manufacture of. J. G. Traver & Company. No. 111,913; Aug. 8; Gaz. vol. 229; p. 607.
Shoes, Leather. Edwin C. Burt Co. No. 111,787; Aug. 8; Gaz. vol. 229; p. 605.
Shoes made of leather, rubber, canvas, and cloth. H. Malkin. No. 112,293; Aug. 29; Gaz. vol. 229; p. 1568.
Signs and name-plates, Lithographed and etched metal. The Haeusermann Metal Mfg. Co. No. 111,820; Aug. 8; Gaz. vol. 229; p. 606.
Silk, cotton, and woolen piece goods. Ashland Textile Company. No. 111,872; Aug. 8; Gaz. vol. 229; p. 608.
Silks, Embroidery-. M. Heminway & Sons Silk Co. No. 111,728; Aug. 1; Gaz. vol. 229; p. 264.
Silver and jewelry polish. M. Krieger. No. 112,052; Aug. 22; Gaz. vol. 229; p. 1247.
Skirts, middy suits and blouses, Wash-. Textile Products Co. No. 111,984; Aug. 15; Gaz. vol. 229; p. 935.
Soap. Resinol Chemical Co. No. 111,848; Aug. 8; Gaz. vol. 229; p. 607.
Soap. The Tropical Pharmacal Co. No. 111,855; Aug. 8; Gaz. vol. 229; p. 607.
Soap, Cleaning, polishing, and scouring. M. F. Reese. No. 111,847; Aug. 8; Gaz. vol. 229; p. 607.
Soap, Toilet. Hochschild, Kohn & Co. No. 112,136; Aug. 22; Gaz. vol. 229; p. 1250.
Soda and potash, bichromate of soda, eucalyptic oil, Caustic. F. H. Cone. No. 111,716; Aug. 1; Gaz. vol. 229; p. 264.
Soda, Caustic. Burgess Sulphite Fibre Co. No. 112,165; Aug. 22; Gaz. vol. 229; p. 1251.
Solders. So-Luminum Manufacturing and Engineering Co. No. 111,979; Aug. 15; Gaz. vol. 229; p. 934.
Solders for use in the manufacture and repairing of jewelry, Gold and silver. F. H. Noble & Company. No. 112,018; Aug. 15; Gaz. vol. 229; p. 936.
Spark-plugs. Hill Insulating & Mfg. Corp. No. 111,943; Aug. 15; Gaz. vol. 229; p. 933.
Spark-plugs. Western Auto Supply Company. No. 112,081; Aug. 22; Gaz. vol. 229; p. 1248.
Spark-plugs and friction-tape. Brownell Auto Co. No. 112,089; Aug. 22; Gaz. vol. 229; p. 1248.
Spark-plugs for internal-combustion engines. Wolverine Spark Plug Company. No. 111,990; Aug. 15; Gaz. vol. 229; p. 935.
Stamps, Picture-theater. J. P. Zelenka. No. 112,345; Aug. 29; Gaz. vol. 229; p. 1570.
Stamps, redeemable coupons, and circulars, Trading-. R. Ashdon. No. 111,708; Aug. 1; Gaz. vol. 229; p. 264.
Starting devices for engines, Mechanical. Jiffy Starter Company. No. 111,947; Aug. 15; Gaz. vol. 229; p. 934.
Stoves and ranges, Wood and coal. Shakopee Stove Company. No. 111,908; Aug. 8; Gaz. vol. 229; p. 609.
Stoves, ranges, heaters, baking-ovens, and gas hot-plates. Hartman Furniture & Carpet Co. No. 112,049; Aug. 22; Gaz. vol. 229; p. 1247.
Strainers and rice-washers. Crystal Mfg. Company. No. 111,798; Aug. 8; Gaz. vol. 229; p. 605.
Stucco and building-cement for flooring. U. S. Materials Co. No. 111,772; Aug. 1; Gaz. vol. 229; p. 265.
Suits, dresses, coats, skirts, &c., Women's and children's. The Strouse-Baer Co. No. 112,329; Aug. 29; Gaz. vol. 229; p. 1569.
Suits, Men's. Hickey-Freeman Co. No. 111,730; Aug. 1; Gaz. vol. 229; p. 264.
Suits, overcoats, and hats, Men's and boys'. The Buckeye Clothing Company. No. 112,250; Aug. 29; Gaz. vol. 229; p. 1567.
Suits, overcoats, trousers, coats, vests, Men's and boys'. J. G. Gediohn. No. 111,722; Aug. 1; Gaz. vol. 229; p. 264.
Suppositories, Hemorrhoidal. Medeol Company. No. 112,101; Aug. 22; Gaz. vol. 229; p. 1249.
Surgical and dental appliances, Certain named. Richter & Hoffmann The Harvard Dental Manufacturing Co. Gesellschaft mit beschrankter Haftung. No. 111,849; Aug. 8; Gaz. vol. 229; p. 607.
Suspenders and garters. The C. A. Edgarton Mfg. Co. No. 112,133; Aug. 22; Gaz. vol. 229; p. 1250.
Sweetmeats and chocolates of all kinds, biscuits. E. Lamy. No. 112,200; Aug. 22; Gaz. vol. 229; p. 1252.
Syrup. The Nulomoline Company. No. 111,842; Aug. 8; Gaz. vol. 229; p. 607.
Syrup, Food. J. T. Ferguson. No. 111,933; Aug. 15; Gaz. vol. 229; p. 933.
Syrup for still-water and carbonated beverages, Flavoring-. The Florida Products Company. No. 111,809; Aug. 8; Gaz. vol. 229; p. 606.
Tablets for washing and ironing purposes. E. Goodwirth. No. 112,185; Aug. 22; Gaz. vol. 229; p. 1251.
Talking-machines. The Knabe Bros. Company. No. 112,195; Aug. 22; Gaz. vol. 229; p. 1251.

Tea, coffee, cocoa, macaroni, &c. A. Cohen. No. 112,254; Aug. 29; Gaz. vol. 229; p. 1567.
Tickets. Automatic Ticket Selling & Cash Register Company. No. 112,036; Aug. 22; Gaz. vol. 229; p. 1247.
Tiles, Wall, floor, and ceiling. American Encaustic Tiling Co. Nos. 111,865–70; Aug. 8; Gaz. vol. 229; p. 607.
Tiles, Wall, floor, and ceiling. American Encaustic Tiling Co. No. 111,920; Aug. 15; Gaz. vol. 229; p. 933.
Tiles, Wall, floor, and ceiling. American Encaustic Tiling Co. No. 111,993; Aug. 15; Gaz. vol. 229; p. 935.
Timber-killer preparation. J. E. Lewis. No. 112,009; Aug. 15; Gaz. vol. 229; p. 935.
Tire filler, Automobile-. Panama Rubber & Equipment Co. No. 112,062; Aug. 22; Gaz. vol. 229; p. 1247.
Tires, Fabric covers for spare. The J. P. Gordon Co. No. 111,723; Aug. 1; Gaz. vol. 229; p. 264.
Tires, Pneumatic. B. F. Goodrich Company. No. 111,817; Aug. 8; Gaz. vol. 229; p. 606.
Tomato paste and peeled tomatoes. Lenci Brothers. No. 112,289; Aug. 29; Gaz. vol. 229; p. 1568.
Tonic, Reconstructive. Frederick Stearns & Co. No. 112,076; Aug. 22; Gaz. vol. 229; p. 1248.
Tonics and treatment of diseases of the blood, fever, &c., Medicinal. Frederick Stearns & Co. No. 112,325; Aug. 29; Gaz. vol. 229; p. 1569.
Tool-handles. H. E. Hessler Co. No. 111,821; Aug. 8; Gaz. vol. 229; p. 606.
Tools and all tools requiring the use of diamonds and bort, Diamond-pointed. S. Rose Co. No. 111,906; Aug. 8; Gaz. vol. 229; p. 609.
Towels and toweling. Cannon Manufacturing Company. No. 111,711; Aug. 1; Gaz. vol. 229; p. 264.
Toy balloons. The Miller Rubber Company. No. 111,750; Aug. 1; Gaz. vol. 229; p. 265.
Toy balloons. The Miller Rubber Company. No. 112,299; Aug. 29; Gaz. vol. 229; p. 1568.
Toy sound-reproducing machine. Wizard Products Co. No. 112,343; Aug. 29; Gaz. vol. 229; p. 1570.
Toys and dolls. New Toy Manufacturing Co. No. 111,960; Aug. 15; Gaz. vol. 229; p. 934.
Toys and games, Certain named. J. A. Fletcher. No. 112,177; Aug. 22; Gaz. vol. 229; p. 1251.
Toys, Building. The A. C. Gilbert Company. No. 111,814; Aug. 8; Gaz. vol. 229; p. 606.
Toys, Construction. H. L. Post. No. 112,126; Aug. 22; Gaz. vol. 229; p. 1249.
Tractors. Parrett Tractor Company. No. 112,019; Aug. 15; Gaz. vol. 229; p. 936.
Traps, Animal-. Oneida Community. No. 111,757; Aug. 1; Gaz. vol. 229; p. 265.
Treatment for corns. V. Plantamura. No. 112,125; Aug. 22; Gaz. vol. 229; p. 1249.
Treatment for sluggish liver and constipation and a corn-remover. L. W. Estes. No. 112,174; Aug. 22; Gaz. vol. 229; p. 1251.
Trousers and suits, women's skirts and suits. The American Guaranteed Holeproof Clothiers Co. No. 112,128; Aug. 22; Gaz. vol. 229; p. 1249.
Trucks and automobiles, Motor-. C. W. Gillette. No. 112,118; Aug. 22; Gaz. vol. 229; p. 1249.
Trucks, Motor-. Wright Truck Attachment Co. No. 112,109; Aug. 22; Gaz. vol. 229; p. 1249.
Trunks. Marshall Field & Company. No. 112,265; Aug. 29; Gaz. vol. 229; p. 1567.
Trunks, suitcases, traveling-bags. The Shwayder Trunk Mfg. Company. No. 111,977; Aug. 15; Gaz. vol. 229; p. 934.
Tubes, Flexible metal. Titeflex Metal Hose Corporation. No. 111,854; Aug. 8; Gaz. vol. 229; p. 607.
Turpentine substitute. The Atlantic Refining Company. No. 111,873; Aug. 8; Gaz. vol. 229; p. 608.
Twine and cordage. Colonial Cordage Co. Nos. 111,793–4; Aug. 8; Gaz. vol. 229; p. 605.
Umbrellas. E. C. Kuhn. No. 111,832; Aug. 8; Gaz. vol. 229; p. 606.
Under and outer wear, Infants'. M. A. Wickes. No. 112,127; Aug. 22; Gaz. vol. 229; p. 1249.
Undergarments, Certain named. E. M. Clausen. No. 111,882; Aug. 8; Gaz. vol. 229; p. 608.
Underwaists, Children's. The R. & J. Waist Co. No. 111,969; Aug. 15; Gaz. vol. 229; p. 934.
Underwear, Nainsook. Hecht & Campe. No. 111,726; Aug. 1; Gaz. vol. 229; p. 264.
Underwear union suits. Oppenheim, Oberndorf & Co. No. 111,962; Aug. 15; Gaz. vol. 229; p. 934.
Valves, Metallic. F. H. Brown. No. 111,878; Aug. 8; Gaz. vol. 229; p. 608.
Varnished-surface finish. Standard Varnish Works. No. 111,980; Aug. 15; Gaz. vol. 229; p. 934.
Varnishes. William T. Baker, Inc. No. 112,151; Aug. 22; Gaz. vol. 229; p. 1250.
Vehicle-springs. Hoover Spring Company. Nos. 111,823–4; Aug. 8; Gaz. vol. 229; p. 606.
Wagons, Hand-. The Buffalo Sled Company. No. 111,786; Aug. 8; Gaz. vol. 229; p. 605.
Waists and skirts. L. S. Brainerd. No. 114,877; Aug. 8; Gaz. vol. 229; p. 608.
Waists, middy-blouses, skirts, &c., Dress-. The Bijou Waist Co. Nos. 112,157–8; Aug. 22; Gaz. vol. 229; p. 1250.
Washboards. National Washboard Company. No. 111,755; Aug. 1; Gaz. vol. 229; p. 265.
Washing machines, Electric and hand laundry-. Home Devices Corporation. No. 111,889; Aug. 8; Gaz. vol. 229; p. 608.
Washing-machines, Electrically-operated. The Home Specialty Manufacturing Co. No. 112,189; Aug. 22; Gaz. vol. 229; p. 1251.
Washing-paste. Geo. H. Donah Co. No. 112,261; Aug. 29; Gaz. vol. 229; p. 1567.
Washing-powder. E. Hardin. No. 111,725; Aug. 1; Gaz. vol. 229; p. 264.
Watches. Lugerman & Morrison. Nos. 112,122–3; Aug. 22; Gaz. vol. 229; p. 1249.
Water, Aperient. Vulcan Mineral Water Co. No. 111,861; Aug. 8; Gaz. vol. 229; p. 607.
Water-heaters and high-frequency devices, Electric. The Sterling Corporation. No. 111,981; Aug. 15; Gaz. vol. 229; p. 935.
Water, Mineral. D. F. Hollopeter. No. 111,945; Aug. 15; Gaz. vol. 229; p. 933.
Water purifying and treating materials. The Permutit Company. Nos. 111,964–7; Aug. 15; Gaz. vol. 229; p. 934.
Water-supply systems—namely, combined by-pass and check valves, Pneumatic. The Valle-Kimes Co. No. 112,035; Aug. 15; Gaz. vol. 229; p. 936.
Water, Table-. D. B. Lester. No. 111,894; Aug. 8; Gaz. vol. 229; p. 608.
Waters and oils, face powders and lotions, &c., Perfumed. S. Ito. No. 111,891; Aug. 8; Gaz. vol. 229; p. 608.
Waterproofed hospital-sheeting. Reid Bros. No. 112,104; Aug. 22; Gaz. vol. 229; p. 1249.
Wheat, wheat germ or meal, and cereal breakfast food, Cracked. Franklin Mills Co. No. 111,811; Aug. 8; Gaz. vol. 229; p. 606.
Wind-shield, window, &c., wiper devices. S. C. Wolfe. No. 111,918; Aug. 8; Gaz. vol. 229; p. 609.
Wire, Iron and steel. The Seneca Wire and Manufacturing Company. No. 112,319; Aug. 29; Gaz. vol. 229; p. 1569.
Woolen fabrics in the piece. Detmer Woolen Co. No. 111,718; Aug. 1; Gaz. vol. 229; p. 264.

"American Beauty." (For Cantaloups.) S. A. Gerrard. No. 19,524; Aug. 15; Gaz. vol. 229; p. 937.
"Bonnie Blanche Preserves." (For Preserves.) B. B. De Frece. No. 19,504; Aug. 8; Gaz. vol. 229; p. 611.
"Butter-Nut Bread." (For Bread.) P. Schulze. No. 19,513; Aug. 8; Gaz. vol. 229; p. 611.
"Camp Fire Coffee." (For Coffee.) W. M. Van Norden. No. 19,549; Aug. 29; Gaz. vol. 229; p. 1571.
"Cantaloupes." (For Three-Melon-Brand Cantaloups.) C. H. Weaver & Co. No. 19,532; Aug. 15; Gaz. vol. 229; p. 937.
"Cape Fear." (For Hosiery.) The Wilmington Hosiery Mills. No. 19,536; Aug. 15; Gaz. vol. 229; p. 937.
"Capitol Idea." (For Coffee.) Capitol Coffee Co. No. 19,520; Aug. 15; Gaz. vol. 229; p. 937.
"Chek." (For a Medicinal Preparation.) Woodard, Clarke & Co. No. 19,537; Aug. 15; Gaz. vol. 229; p. 937.
"Chief's Bread." (For Bread.) Central Waxed Paper Co. No. 19,516; Aug. 8; Gaz. vol. 229; p. 611.
"Cluff Blue Ribbon." (For Corn.) William Cluff Company. No. 19,486; Aug. 1; Gaz. vol. 229; p. 267.
"Davy Crockett." (For Cigars.) J. P. Knasel. No. 19,546; Aug. 29; Gaz. vol. 229; p. 1571.
"Double Bock." (For Malt Liquor.) The Royal Brewing Company. No. 19,529; Aug. 15; Gaz. vol. 229; p. 937.
"Dr Muns Pile and Eczema Ointment." (For an Ointment.) The D. Heber Creech Chemical Co. No. 19,505; Aug. 8; Gaz. vol. 229; p. 611.
"Dr. Scholl's Foot-Eazer." (For Arch-Supports.) Scholl Manufacturing Company. No. 19,511; Aug. 8; Gaz. vol. 229; p. 611.
"Emulsio, A Treatment For Consumption." (For a Treatment for Consumption.) Emulsio Chemical Co. No. 19,540; Aug. 22; Gaz. vol. 229; p. 1254.
"Falk Brand." (For Cantaloups.) J. W. Falk. No. 19,544; Aug. 29; Gaz. vol. 229; p. 1571.
"Glass Jar." (For Spinach.) Central California Canneries. No. 19,543; Aug. 29; Gaz. vol. 229; p. 1571.
"Great Northern." (For Cigars.) L. N. Schulner Cigar Co. No. 19,530; Aug. 15; Gaz. vol. 229; p. 937.
"Honey Dew." (For Melons.) C. H. Weaver & Co. No. 19,533; Aug. 15; Gaz. vol. 229; p. 937.
"Individual Service Shredded Wheat." (For Shredded-Wheat Biscuit.) The Shredded Wheat Company. No. 19,517; Aug. 8; Gaz. vol. 229; p. 611.
"Jones." (For Loganberry-Juice.) Jones Bros. & Co. No. 19,525; Aug. 15; Gaz. vol. 229; p. 937.
"Jumbo Cantaloupes." (For Cantaloups.) C. H. Weaver & Co. No. 19,535; Aug. 15; Gaz. vol. 229; p. 937.
"Liberty Bell Brand." (For Canned Tomatoes.) R. Gerber & Co. No. 19,522; Aug. 15; Gaz. vol. 229; p. 937.
"Manville Curtain Swiss." (For Textile Fabrics.) Manville Company. No. 19,527; Aug. 15; Gaz. vol. 229; p. 937.
"Money Savers." (For Peppermint Candy.) J. Goldberg. No. 19,545; Aug. 29; Gaz. vol. 229; p. 1571.
"Moro Light." (For Cigars.) A. C. Henschel & Co. No. 19,506; Aug. 8; Gaz. vol. 229; p. 611.
"Old Chief." (For Whisky.) Frankfort Distilling & Importing Company. No. 19,521; Aug. 15; Gaz. vol. 229; p. 937.
"Osage Gem Cantaloupes." (For Cantaloups.) C. H. Weaver & Co. No. 19,534; Aug. 15; Gaz. vol. 229; p. 937.
"Parodi." (For Cigars.) Parodi Cigar Company. No. 19,548; Aug. 29; Gaz. vol. 229; p. 1571.
"Peerless Blend." (For Coffee.) John Scott and Company. No. 19,515; Aug. 8; Gaz. vol. 229; p. 611.
"Pep." (For a Non-Intoxicating Cereal Beverage.) St. Louis Beverage Company. No. 19,542; Aug. 22; Gaz. vol. 229; p. 1254.
"Pep—A Pure Tonic Beverage." (For a Non-Alcoholic Beverage.) The St. Louis Beverage Co. No. 19,541; Aug. 22; Gaz. vol. 229; p. 1254.
"Pink Queens." (For Cantaloups.) S. A. Gerrard. No. 19,523; Aug. 15; Gaz. vol. 229; p. 937.
"Pond Lily Vanishing Cream." (For a Cosmetic Face Preparation.) Macarms Cosmetic Co. No. 19,487; Aug. 1; Gaz. vol. 229; p. 267.
"Progressive Plunge." (For Apparatus for Playing a Game.) L. Alden. No. 19,538; Aug. 22; Gaz. vol. 229; p. 1254.
"Reach Paramount A Golf Balls." (For Golf-Balls.) A. J. Reach Company. No. 19,509; Aug. 8; Gaz. vol. 229; p. 611.
"Reach Paramount B Golf Balls." (For Golf-Balls.) A. J. Reach Company. No. 19,510; Aug. 8; Gaz. vol. 229; p. 611.
"Reach Whiz Golf Balls." (For Golf-Balls.) A. J. Reach Company. No. 19,508; Aug. 8; Gaz. vol. 229; p. 611.
"Soap-Bubble Apron." (For a Child's Apron.) The Solvos Company. No. 19,488; Aug. 1; Gaz. vol. 229; p. 267.
"Splendor." (For Macaroni.) P. Pastene & Co. No. 19,528; Aug. 15; Gaz. vol. 229; p. 937.
"Superior Hand Paste." (For Cleaning-Pastes.) Superior Hand Paste Co. No. 19,531; Aug. 15; Gaz. vol. 229; p. 937.
"Tak-A-Tonic." (For a Medicine.) Tak-A-Tonic Co. No. 19,518; Aug. 8; Gaz. vol. 229; p. 611.
"Tato Bread." (For Bread.) P. Schulze. No. 19,512; Aug. 8; Gaz. vol. 229; p. 611.
"The Double Kind." (For Shirts.) B. Kronthal. No. 19,547; Aug. 29; Gaz. vol. 229; p. 1571.
"The Million Dollar Hair Tonic." (For Hair-Tonic.) M. Arnone. No. 19,503; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Apricots.) The J. K. Armsby Co. No. 19,489; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Bartlett Pears.) The J. K. Armsby Co. No. 19,496; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Blackberries.) The J. K. Armsby Co. No. 19,490; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Black Cherries.) The J. K. Armsby Co. No. 19,491; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Egg-Plums.) The J. K. Armsby Co. No. 19,497; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Fruits.) The J. K. Armsby Co. No. 19,502; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Green-Gage Plums.) The J. K. Armsby Co. No. 19,498; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Loganberries.) The J. K. Armsby Co. No. 19,493; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Peaches.) The J. K. Armsby Co. No. 19,494; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Royal-Anne Cherries.) The J. K. Armsby Co. No. 19,492; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Sliced Peaches.) The J. K. Armsby Co. No. 19,495; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Sliced Pineapple.) The J. K. Armsby Co. No. 19,499; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Strawberries.) The J. K. Armsby Co. No. 19,500; Aug. 8; Gaz. vol. 229; p. 611.
"Today's." (For Canned Tomatoes.) The J. K. Armsby Co. No. 19,501; Aug. 8; Gaz. vol. 229; p. 611.
"Universal Mist." (For Automobile and Furniture Polish.) M. W. Elfring. No. 19,539; Aug. 22; Gaz. vol. 229; p. 1254.
"We Drinkit Blend." (For Coffee.) John Scott and Company. No. 19,514; Aug. 8; Gaz. vol. 229; p. 611.
"Western Beauty." (For Canned Salmon.) American Packing Co. No. 19,519; Aug. 15; Gaz. vol. 229; p. 937.
"White Beauty." (For Shortening.) Interstate Cotton Oil Refining Co. No. 19,507; Aug. 8; Gaz. vol. 229; p. 611.
"Youghurt." (For Cottage-Cheese.) Knudsen's Laboratory. No. 19,526; Aug. 15; Gaz. vol. 229; p. 937.

PRINTS.

"All Suits All Overcoats $17 No More No Less." (For Suits and Overcoats.) The United Woolen Mills Company. No. 4,435; Aug. 8; Gaz. vol. 229; p. 612.

"B. V. D. Is The National Cooler-Off." (For Athletic Underwear.) The B. V. D. Company. No. 4,422; Aug. 8; Gaz. vol. 229; p. 612.

"B. V. D.s And A River Breeze—Isn't This Great On A Hot Day?" (For Athletic Underwear.) The B. V. D. Company. No. 4,418; Aug. 8; Gaz. vol. 229; p. 612.

"Changes Delivery Time From Hours to Minutes." (For Motor-Trucks.) Lawson Manufacturing Company. No. 4,434; Aug. 8; Gaz. vol. 229; p. 612.

"Coming or Going, Wear B. V. D. For Coolness." (For Athletic Underwear.) The B. V. D. Company. No. 4,421; Aug. 8; Gaz. vol. 229; p. 612.

"Cracker Jack—Come on, See the Poppers." (For a Confection.) Rueckheim Bros. & Eckstein. No. 4,445; Aug. 29; Gaz. vol. 229; p. 1571.

"Cracker Jack—Oh! ho!" (For a Confection.) Rueckheim Bros. & Eckstein. No. 4,446; Aug. 29; Gaz. vol. 229; p. 1571.

"Cracker Jack—Now Here is the Field." (For a Confection.) Rueckheim Bros. & Eckstein. No. 4,447; Aug. 29; Gaz. vol. 229; p. 1571.

"Cracker Jack—The Whimsical Peanuts." (For a Confection.) Rueckheim Bros. & Eckstein. No. 4,448; Aug. 29; Gaz. vol. 229; p. 1571.

"Cracker Jack—We Shell All the Goobers." (For a Confection.) Rueckheim Bros. & Eckstein. No. 4,444; Aug. 29; Gaz. vol. 229; p. 1571.

"Crema de Perlas de Barry." (For a Face-Cream.) Barclay & Co. No. 4,443; Aug. 22; Gaz. vol. 229; p. 1254.

"'Day Off' or 'Day On,' Keep Cool in B. V. D." (For Athletic Underwear.) The B. V. D. Company. No. 4,420; Aug. 8; Gaz. vol. 229; p. 612.

"Dr Muns Pile and Eczema Ointment." (For an Ointment.) The D. Heber Creech Chemical Co. No. 4,432; Aug. 8; Gaz. vol. 229; p. 612.

"Early Times." (For Whisky.) Early Times Distillery Company. No. 4,437; Aug. 15; Gaz. vol. 229; p. 937.

"Faranco." (For Housing Equipment.) E. C. Faris. No. 4,429; Aug. 8; Gaz. vol. 229; p. 612.

"Franco." (For Flash-Lights.) The Interstate Electric Novelty Co. Nos. 4,438–9; Aug. 15; Gaz. vol. 229; p. 937.

"Frank's Meat-Treats." (For Meat Treats.) L. Frank & Son Company. No. 4,430; Aug. 8; Gaz. vol. 229; p. 612.

"Good-by, And Keep That Grouchless B. V. D. Grin." (For Athletic Underwear.) The B. V. D. Company. No. 4,425; Aug. 8; Gaz. vol. 229; p. 612.

"Gordon Seat Coverings." (For Gordon Tire-Covers, Seat-Covers, and Radiator and Engine Robes.) The J. P. Gordon Company. No. 4,431; Aug. 8; Gaz. vol. 229; p. 612.

"Jabon de Reuter." (For Soap.) Barclay & Co. No. 4,442; Aug. 22; Gaz. vol. 229; p. 1254.

"Johnny Appetite." (For Cheese.) J. L. Kraft & Bros. Co. No. 4,414; Aug. 1; Gaz. vol. 229; p. 267.

"Little folks recognize the delicious oven-flavor of Kellogg's." (For Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,433; Aug. 8; Gaz. vol. 229; p. 612.

"Measurement Charts." (For Automobile-Tops.) A. W. Connor. No. 4,436; Aug. 15; Gaz. vol. 229; p. 937.

"Night or Day, At Work or Play, B. V. D. Conserves Your Comfort." (For Athletic Underwear.) The B. V. D. Company. No. 4,417; Aug. 8; Gaz. vol. 229; p. 612.

"Pa's Got His New B. V. D.s On." (For Athletic Underwear.) The B. V. D. Company. No. 4,419; Aug. 8; Gaz. vol. 229; p. 612.

"Pildoritas de Reuter." (For a Liver-Pill.) Barclay & Co. No. 4,441; Aug. 22; Gaz. vol. 229; p. 1254.

"Swezey's Non Glass Composition Lens." (For Lenses.) A. J. Swezey. No. 4,449; Aug. 29; Gaz. vol. 229; p. 1571.

"Tell The Old Pepper-Pot To Put On His B. V. D.s and Cool Off." (For Athletic Underwear.) The B. V. D. Company. No. 4,423; Aug. 8; Gaz. vol. 229; p. 612.

"That Team's Pitcher Has A B. V. D. Head—Always Keeps Cool." (For Athletic Underwear.) The B. V. D. Company. No. 4,427; Aug. 8; Gaz. vol. 229; p. 612.

"The Brand of Quality." (For Meats.) The Angel Meat Packing Co. No. 4,413; Aug. 1; Gaz. vol. 229; p. 267.

"The Mercury's Hopping Mad. Because B. V. D. Keeps Us Cool." (For Athletic Underwear.) The B. V. D. Company. No. 4,426; Aug. 8; Gaz. vol. 229; p. 612.

"The Secret of Perfect Pancakes." (For Pancake-Flour.) Aunt Jemima Mills Company. No. 4,416; Aug. 8; Gaz. vol. 229; p. 612.

"U S Rubber System." (For Wearing-Apparel and Rubber Products.) United States Rubber Company. No. 4,440; Aug. 15; Gaz. vol. 229; p. 937.

"Unicorn Film Service Corporation." (For Motion-Picture Films.) Unicorn Film Service Corporation. No. 4,450; Aug. 29; Gaz. vol. 229; p. 1571.

"Ward's Tip Top Bread — Dustite — Santary." (For Bread.) The Meyercord Company. No. 4,415; Aug. 1; Gaz. vol. 229; p. 267.

"What Would Summer Be Without Baseball and B. V. D.?" (For Athletic Underwear.) The B. V. D. Company. No. 4,424; Aug. 8; Gaz. vol. 229; p. 612.

"You Can Dance Your Legs Off In B. V. D." (For Athletic Underwear.) The B. V. D. Company. No. 4,428; Aug. 8; Gaz. vol. 229; p. 612.

DISCLAIMERS.

Carriage, Collapsible. F. W. Jonas and C. S. Spofford. No. 1,161,315; date of patent Nov. 23, 1915; disclaimer filed July 19, 1916; Gaz. vol. 229; p. 271.

Casting, Method of and apparatus for continuous. G. Mellen. No. 1,139,885; date of patent May 18, 1915; disclaimer filed July 19, 1916; Gaz. vol. 229; p. 271.

Cement and cement construction, Method of treating. M. Toch. No. 813,841; date of patent Feb. 27, 1906; disclaimer filed July 31, 1916; Gaz. vol. 229; p. 273.

Neckwear. G. W. Mills, Jr. No. 1,109,858; date of patent Sept. 8, 1914; disclaimer filed July 25, 1916; Gaz. vol. 229; p. 270.

CLASSIFICATION OF PATENTS

AUGUST, 1916.

NOTE.—First number=class, second number=subclass, third number=patent number.

1— 1: 1,192,932
2: 1,196,077
3: 1,193,284
12: 1,193,113
18: 1,195,411
19: 1,196,221
32: 1,195,134
41: 1,196,021
47: 1,193,280
1,194,183
2— 41: 1,195,682
42: 1,196,324
53: 1,193,891
54: 1,193,545
1,196,747
60: 1,193,443
1,195,565
61: 1,195,738
66: 1,192,900
67: 1,195,645
1,196,204
68: 1,193,885
71: 1,193,048
73: 1,196,291
76: 1,192,934
1,193,742
1,193,790
1,195,195
92: 1,195,683
95: 1,194,627
98: 1,194,523
1,195,835
100: 1,193,529
106: 1,194,193
114: 1,194,935
122: 1,195,523
131: 1,195,901
143: 1,195,618
1,196,224
144: 1,194,969
1,195,598
1,196,431
149: 1,193,219
1,193,230
1,193,340
1,194,198
1,195,326
193: 1,196,411
3— 12: 1,193,969
4— 1: 1,193,476
2: 1,193,862
1,195,729
5: 1,193,760
1,193,784
1,194,364
1,196,712
13: 1,196,433
18: 1,193,405
1,194,073
1,194,391
1,194,392
1,194,393
1,194,826
1,194,972
1,196,427
24: 1,193,145
1,195,684
26: 1,193,302
27: 1,194,913
28: 1,194,947
35: 1,195,827
38: 1,193,607
1,194,533
1,196,681
5— 4: 1,194,164
5: 1,195,394
1,196,253
8: 1,193,272
9: 1,195,014
14: 1,193,722
15: 1,194,200
41: 1,195,456
43: 1,193,354
1,195,917
51: 1,194,330
58: 1,194,476
1,194,493
60: 1,195,637
6— 10: 1,195,990
7— 16: 1,194,296
17: 1,195,650
8— 1: 1,193,829
1,194,380
1,196,127
1,196,422
2: 1,195,325
5: 1,193,838
6: 1,193,566
13: 1,193,429
1,193,430
17: 1,195,606
19: 1,195,646
1,195,647
3: 1,195,863
6: 1,195,727
18: 1,193,394
20: 1,195,365
21: 1,196,421
22: 1,194,334
1,196,316
23: 1,196,692
10— 12: 1,194,452
27: 1,194,825
89: 1,195,145
1,196,710
107: 1,193,289
111: 1,196,415
118: 1,194,535
119: 1,193,837
141: 1,195,717
143: 1,195,436
144: 1,194,352
154: 1,196,503
11— 7: 1,195,038
11: 1,192,837
12: 1,193,421
1,196,715
15: 1,194,472
1,194,966
19: 1,194,742
1,195,761
1,196,449
1,196,743
1,196,749
22: 1,194,618
23: 1,194,938
24: 1,195,679
25: 1,194,987
33: 1,193,395
36: 8.14,189
1,194,174
12— 2: 1,194,431
1,195,124
17: 1,196,727
20: 1,193,014
21: 1,193,186
1,194,539
31: 1,195,348
63: 1,195,823
67: 1,194,394
1,195,304
67.2: 1,196,486
97: 1,195,965
1,195,967
1,195,968
113: 1,195,131
117: 1,193,575
135: 1,193,337
136: 1,195,266
142: 1,194,100
1,194,467
1,195,966
147: 1,193,756
13— 5: 1,193,703
7: 1,195,794
9: 1,193,409
18: 1,195,464
19: 1,194,261
1,194,605
15— 2: 1,195,648
8: 1,194,395
1,196,527
12: 1,195,666
13: 1,196,465
17: 1,193,888
24: 1,194,804
26: 1,194,096
28: 1,195,190
1,195,356
37: 1,193,644
15— 37: 1,196,237
38: 1,193,287
1,194,735
43: 1,194,916
50: 1,194,642
51: 1,193,761
54: 1,194,665
1,196,397
56: 1,193,259
1,194,048
58: 1,193,831
59: 1,195,362
1,196,081
60: 1,193,475
1,195,455
61: 1,196,658
1,196,659
16— 1: 1,193,110
6: 1,194,991
1,196,214
7: 1,192,966
1,193,553
11: 1,195,842
1,196,244
18: 1,193,000
1,194,089
1,195,586
1,196,445
1,196,446
19: 1,194,626
1,195,167
25: 1,194,628
28: 1,195,258
29: 1,195,899
30: 1,194,292
48: 1,193,532
51: 1,196,400
53: 1,194,775
61: 1,193,414
63: 1,195,594
78: 1,195,166
79: 1,193,386
81: 1,195,884
84: 1,194,903
1,195,871
1,196,685
88: 1,194,885
89: 1,193,171
90: 1,195,197
104: 1,196,580
106: 1,193,204
1,195,085
1,196,428
107: 1,192,989
115: 1,196,271
119: 1,194,022
1,195,961
142: 1,193,415
1,196,173
144: 1,196,356
163: 1,194,656
165: 1,193,051
1,194,780
171: 1,193,905
17— 6: 1,195,013
11: 1,192,907
1,192,908
22: 1,194,838
30: 1,194,235
18— 5.3: 1,194,795
6: 1,196,109
14: 1,196,648
18: 1,195,337
30: 1,193,507
45: 1,192,874
1,194,968
1,195,303
1,195,412
1,195,480
1,196,513
50: 1,195,204
52: 1,196,334
55: 1,195,118
58: 1,193,883
19— 6: 1,195,426
15: 1,193,877
20— 1: 1,195,654
1.4: 1,193,575
1.42: 1,194,150
2: 1,193,833
20— 4: 1,193,092
6: 1,195,289
1,196,698
13: 1,194,003
19: 1,193,908
24: 1,193,601
25: 1,193,721
27: 1,195,203
31: 1,193,440
35: 1,196,720
40.5: 1,195,256
42: 1,193,101
1,193,677
56.4: 1,192,999
69: 1,195,108
79: 1,193,857
81.5: 1,195,976
83: 1,195,488
84: 1,193,832
1,195,740
86: 1,194,984
87: 1,193,872
1,194,806
88: 1,195,889
21— 5: 1,196,436
7: 1,192,866
1,192,944
1,194,595
1,195,676
1,196,378
8: 1,193,199
1,195,974
1,196,628
1,196,724
9: 1,194,985
12: 1,193,896
20: 1,192,979
1,193,932
1,194,400
1,195,489
1,195,519
1,196,297
21: 1,193,514
1,194,032
1,195,497
1,195,806
23: 1,193,757
1,194,875
24: 1,195,662
30: 1,194,698
1,196,579
39: 1,193,946
43: 1,193,317
1,193,530
1,195,340
47: 1,193,026
1,193,170
1,193,365
1,194,794
48: 1,195,410
55: 1,195,869
1,196,453
57: 1,195,970
62: 1,193,107
1,193,961
1,195,316
1,195,638
1,195,801
1,196,583
65: 1,193,551
1,193,729
1,195,283
69: 1,192,875
1,192,886
1,193,717
1,195,194
1,196,408
75: 1,193,311
1,194,661
1,195,191
76: 1,195,001
79: 1,193,114
80: 1,195,821
86: 1,193,028
1,195,671
90: 1,193,132
1,193,250
1,193,487
1,193,560
1,193,919
21— 90: 1,194,040
1,194,111
1,194,127
1,194,255
1,194,256
1,194,301
1,194,877
1,195,216
1,195,267
1,195,620
1,195,832
1,196,643
1,194,383
96: 1,194,141
1,195,233
105: 1,192,955
1,193,241
1,195,959
1,196,166
1,196,167
114: 1,193,616
1,193,845
1,194,085
1,194,269
1,194,569
1,194,738
1,194,739
1,195,341
1,196,119
1,196,311
1,196,507
118: 1,192,981
1,196,723
121: 1,194,342
125: 1,193,707
134: 1,195,623
137: 1,195,706
1,195,954
1,195,960
150: 1,194,635
1,194,823
182: 1,194,625
187: 1,193,639
1,195,585
191: 1,193,765
191: 1,193,765
200: 1,193,331
1,196,284
205: 1,193,052
207: 1,192,897
210: 1,193,957
1,196,666
212: 1,195,855
215: 1,195,815
1,196,536
22— 2: 1,195,123
4: 1,193,324
6: 1,194,623
29: 1,195,708
45: 1,193,007
57: 1,194,549
67: 1,195,010
70: 1,193,322
1,193,859
1,196,547
71: 1,195,836
76: 1,193,375
79: 1,193,670
97: 1,193,645
1,195,802
112: 1,193,103
1,193,104
123: 1,196,143
142: 1,192,919
203: 1,195,306
23— 1: 1,193,465
1,193,552
1,193,796
1,193,797
1,195,075
1,193,210
13: 1,193,794
1,194,669
1,195,655
1,195,698
1,196,029
1,196,030
1,196,031
1,196,639
1,196,657
23— 21: 1,194,077
22: 1,194,344
1,194,464
1,194,465
1,196,734
24: 1,193,474
1,193,634
1,193,649
1,193,650
1,193,651
1,193,951
1,194,839
1,195,205
1,195,227
1,196,259
1,196,329
1,196,505
24— 3: 1,193,971
1,196,045
4: 1,193,439
18: 1,196,555
36: 1,196,374
40: 1,194,381
49: 1,195,094
81: 1,193,062
1,194,943
90.5: 1,194,550
97: 1,194,041
102: 1,195,357
115: 1,193,336
127: 1,192,985
1,193,502
130: 1,195,513
131: 1,192,896
134: 1,196,556
135: 1,196,163
138: 1,194,509
155: 1,193,111
1,193,556
1,195,150
161: 1,192,898
167: 1,196,623
186: 1,195,664
191: 1,193,050
201: 1,193,135
207: 1,196,216
208: 1,193,936
211: 1,193,997
216: 1,192,947
217: 1,194,082
218: 1,195,678
1,196,009
221: 1,194,502
223: 1,196,617
224: 1,194,716
227: 1,193,815
230: 1,192,916
1,192,917
1,193,330
236: 1,194,809
241: 1,193,516
1,193,536
1,194,005
1,195,019
243: 1,195,906
245: 1,192,939
1,195,610
252: 1,192,851
1,195,496
253: 1,195,874
1,196,585
255: 1,196,087
259: 1,193,265
1,196,251
260: 1,193,895
1,195,811
261: 1,194,597
1,195,364
25— 1: 1,193,663
1,193,870
1,193,871
1,195,649
3: 1,193,185
41: 1,196,395
1,196,684
99: 1,196,327
120: 1,194,554
121: 1,194,862
128: 1,193,282
131: 1,193,484

101— 74: 1,194,329
79: 1,194,004
1,196,531
83: 1,193,297
1,194,035
1,194,459
1,196,114
84: 1,194,245
89: 1,193,422
99: 1,193,046
100: 1,193,045
103: 1,194,061
111: 1,194,416
1,196,090
1,196,437
1,196,438
1,196,439
115: 1,194,012
120: 1,193,449
1,193,450
126: 1,192,913
1,195,068
1,196,729
130: 1,194,008
1,195,189
161: 1,193,213
169: 1,195,226
1,196,489
179: 1,194,833
1,194,868
1,194,891
1,194,892
184: 1,194,435
187: 1,194,026
200: 1,193,342
1,193,345
1,193,420
1,195,742
102— 2: 1,194,726
3: 1,195,317
1,195,796
11: 1,192,958
15: 1,195,107
1,196,200
23: 1,194,496
26: 1,195,543
29: 1,194,363
103— 43: 1,196,696
44: R. 14,187
60: 1,194,952
61: 1,194,705
1,196,542
63: 1,193,752
1,195,395
1,195,546
1,196,584
65: 1,193,091
79: 1,193,064
1,194,366
82: 1,193,244
84: 1,193,609
89: 1,193,381
92: 1,196,121
94: 1,196,368
104— 4: 1,196,717
12: 1,193,887
1,194,441
1,195,892
14: 1,195,402
1,195,609
18: 1,195,831
23: 1,192,892
1,195,061
45: 1,193,139
58: 1,195,027
92: 1,196,093
96: 1,194,121
1,195,382
111: 1,195,707
116: 1,195,998
1,196,046
146: 1,195,319
1,195,732
163: 1,194,257
173: 1,192,956
178: 1,193,225
1,193,918
217: 1,196,012
227: 1,193,512
105— 14: 1,195,582
15: 1,193,254
1,193,255
1,193,256
1,193,597
19: 1,194,237
67: 1,193,434
76: 1,195,096
81: 1,194,821
84: 1,195,779
86: 1,193,466
115: 1,196,178
173: 1,196,590
185: 1,192,971
192: 1,195,692
199: 1,196,568

105— 205: 1,192,881
1,196,310
220: 1,194,099
222: 1,193,211
233: 1,196,402
238: 1,193,226
1,193,227
243: 1,194,349
1,195,111
1,195,112
1,196,179
1,196,180
244: 1,196,462
248: 1,195,380
253: 1,194,409
255: 1,194,847
259: 1,194,211
260: R. 14,176
267: 1,195,723
268: 1,195,438
106— 8: 1,193,196
22: 1,194,201
24: 1,193,938
1,195,140
30: 1,193,416
34: 1,194,176
1,194,926
1,196,610
35: 1,193,952
37: 1,195,040
39: 1,194,184
1,196,582
40: 1,193,173
107— 2: 1,194,341
1,195,114
8: 1,195,437
9: 1,192,973
1,195,969
27: 1,196,147
28: 1,196,174
48: 1,194,685
51: 1,195,486
67: 1,195,510
1,195,511
108— 1: 1,196,325
5.4: 1,194,709
1,196,660
10: 1,195,643
26: 1,195,338
110— 3.5: 1,194,373
18: 1,194,385
1,194,506
22: 1,193,543
31: 1,194,151
40: 1,192,998
1,193,732
44: 1,192,850
85: 1,195,174
87: 1,194,086
98: 1,192,928
104: R. 14,179
1,193,016
1,193,057
1,195,186
1,195,528
1,195,529
1,195,530
1,195,531
1,195,532
1,195,533
109: 1,192,920
152: 1,195,127
156: 1,196,642
175: 1,193,844
181: 1,192,912
111— 5: 1,193,501
6: 1,192,926
1,193,281
1,193,811
1,194,686
11: 1,195,890
18: 1,193,595
32: 1,195,493
34: 1,193,547
1,195,879
40: 1,194,226
112— 3: 1,195,814
4: 1,196,534
7: 1,193,303
1,193,803
1,195,466
1,195,809
1,195,973
9: 1,194,023
1,195,767
13: 1,193,408
1,196,661
1,194,254
15: 1,193,029
20: 1,193,900
1,194,491
1,194,512
1,194,513
1,194,514
1,194,515

112— 20: 1,194,516
1,194,621
1,194,719
21: 1,193,460
24: 1,193,708
26: 1,195,633
29: 1,194,961
32: 1,193,504
1,194,588
33: 1,193,906
1,195,822
1,195,834
34: 1,194,521
37: 1,195,865
113— 1: 1,194,602
4: 1,193,463
1,195,611
51: 1,194,277
59: 1,195,446
68: 1,195,425
80: 1,194,759
1,194,869
1,195,392
106: 1,193,647
112: 1,196,118
113: 1,195,054
1,196,676
114: 1,194,039
116: 1,196,667
114— 16.5: 1,194,770
1,196,131
1,196,588
20: 1,195,042
29: 1,196,229
39: 1,195,357
68: 1,193,528
78: 1,193,965
145: 1,195,149
1,196,682
178: 1,192,992
199: 1,194,980
201: 1,195,763
208: 1,195,100
228: 1,195,013
235: 1,195,007
238: 1,195,739
1,196,745
115— 16: 1,196,176
18: 1,193,397
1,195,146
33: 1,195,652
39: 1,195,035
116— 1: 1,192,899
1,193,562
1,195,725
1,195,883
11: 1,193,720
12: 1,194,489
1,194,596
1,195,372
33: 1,193,195
42: 1,192,893
44: 1,193,309
1,196,394
1,196,739
49: 1,195,651
50: 1,194,629
65: 1,194,144
1,196,450
118— 30: 1,193,217
58: 1,194,834
119— 7: 1,193,973
17: 1,192,867
21: 1,196,483
32: 1,195,914
33: 1,192,880
1,196,095
44: 1,195,705
47: 1,194,432
50: 1,194,263
52: 1,193,165
68: 1,196,061
70: 1,195,104
77: 1,195,443
80: 1,193,683
86: 1,195,458
88: 1,195,450
98: 1,195,419
99: 1,194,046
103: 1,192,845
124: 1,194,483
148: 1,194,782
149: 1,193,035
1,194,199
150: 1,193,933
1,194,925
157: 1,196,210
120— 1: 1,193,827

120— 6: 1,194,568
1,194,693
15: 1,193,351
28: 1,194,016
29: 1,194,306
46: 1,194,510
1,195,125
1,195,709
59: 1,196,645
72: 1,196,630
84: 1,193,377
109: 1,196,654
121— 8: 1,122,843
19: 1,194,059
20: 1,196,011
1,196,052
23: 1,196,157
25: 1,193,996
27: 1,193,207
28: 1,195,980
43: 1,195,318
45: 1,193,327
1,194,346
1,195,549
48: 1,196,028
51: 1,196,315
58: 1,196,746
98: 1,195,614
108: 1,195,279
118: 1,193,902
1,194,312
120: 1,194,479
122— 1: 1,195,064
5: 1,195,521
75: 1,196,140
80: 1,193,435
194: 1,195,367
217: 1,195,749
218: 1,195,840
234: 1,196,123
250: 1,196,194
265: 1,192,848
291: 1,194,852
301: 1,195,072
316: 1,193,304
318: 1,194,157
462: 1,193,172
466: 1,196,102
123— 9: 1,194,560
13: 1,193,808
15: 1,195,744
16: 1,193,251
25: 1,193,084
1,195,905
34: 1,193,899
41: 1,194,840
47: 1,193,367
59: 1,193,004
1,193,620
128— 2: 1,193,524
3: 1,195,117
5: 1,195,621
13: 1,193,002
1,196,539
16: 1,192,909
1,194,112
1,194,939
1,196,344
20: 1,195,931
24: 1,193,782
1,194,319
26: 1,194,252
27: 1,193,987
1,193,988
28: 1,194,215
1,194,246
1,195,169
1,196,250
38: 1,193,432
129— 1: 1,195,457
6: 1,194,422
10: 1,195,008
12: 1,196,333
13: 1,192,923
1,196,059
15: 1,194,401
16: 1,196,269
1,196,603
16.1: 1,194,387
22: 1,193,674
24: 1,192,940
1,194,684
34: 1,194,382
38: 1,193,497
130— 1: 1,196,070
5: 1,194,615
1,194,616
1,196,258
9: 1,193,378
18: 1,194,788
22: 1,193,751
30: 1,195,812
32: 1,196,458
131— 5: 1,196,387
6: 1,194,351
10: 1,195,046

123— 190: 1,193,142
1,196,149
195: 1,193,205
124— 1: 1,194,060
13: 1,195,597
15: 1,193,962
16: 1,195,185
125— 5: 1,194,155
6: 1,193,049
14: 1,193,654
1,194,298
1,195,396
1,196,135
18: 1,193,097
20: 1,195,781
1,196,040
126— 15: 1,196,738
29: 1,194,131
36: 1,193,714
1,195,329
1,196,078
39: 1,194,029
1,194,638
76: 1,196,145
85: 1,196,141
86: 1,195,730
104: 1,193,127
114: 1,195,845
120: 1,193,054
144: 1,193,456
155: 1,196,726
169: 1,195,484
174: 1,193,822
176: 1,196,246
180: 1,195,301
221: 1,192,399
248: 1,195,260
1,196,019
1,196,182
271.2: 1,193,632
1,195,507
278: 1,192,931
284: 1,194,744
293: 1,194,011
310: 1,193,065
324: 1,193,950
345: 1,193,120
351: 1,194,397
1,194,398
360: 1,193,740
371: 1,194,960
127— 1: 1,195,044
2: 1,195,720
4: 1,193,423
9: 1,193,359
1,196,020
18: 1,195,752
23: 1,194,399
1,196,539
1,194,112
1,194,939
1,196,344
20: 1,195,931
24: 1,193,782
1,194,319
26: 1,194,252
27: 1,193,987
1,193,988
28: 1,194,215
1,194,246
1,195,169
1,196,250
38: 1,193,432
129— 1: 1,195,457
6: 1,194,422
10: 1,195,008
12: 1,196,333
13: 1,192,923
1,196,059
15: 1,194,401
16: 1,196,269
1,196,603
16.1: 1,194,387
22: 1,193,674
24: 1,192,940
1,194,684
34: 1,194,382
38: 1,193,497
130— 1: 1,196,070
5: 1,194,615
1,194,616
1,196,258
9: 1,193,378
18: 1,194,788
22: 1,193,751
30: 1,195,812
32: 1,196,458
131— 5: 1,196,387
6: 1,194,351
10: 1,195,046

131— 21: 1,194,810
34: 1,194,697
39: 1,194,114
132— 11: 1,196,522
11.1: 1,194,540
18: 1,195,920
19: 1,194,841
22: 1,194,844
25: 1,194,712
1,195,751
28: 1,193,223
1,194,185
1,194,187
133— 2: 1,194,316
1,195,251
1,193,373
1,195,829
1,195,860
9: 1,194,192
134— 1: 1,194,340
1,196,098
1,196,276
7: 1,194,425
13: 1,194,558
21: 1,194,866
24: 1,196,508
28: 1,194,743
1,195,612
39: 1,195,604
75: 1,196,595
79: 1,195,431
1,195,673
1,196,144
135— 1: 1,196,554
5: 1,196,207
15: 1,193,212
27: 1,195,635
53: 1,194,384
136— 5: 1,193,941
137— 4: 1,192,892
1,193,036
1,193,780
1,193,849
1,193,958
1,195,237
1,195,253
1,195,429
1,195,658
1,196,146
1,196,199
5: 1,193,577
1,194,696
1,195,181
6: 1,196,120
7: 1,192,870
1,193,009
1,193,925
1,196,336
1,196,587
1,196,627
82: 1,193,011
83: 1,193,010
1,193,086
1,195,686

137— 86: 1,194,051
1,195,080
88: 1,193,482
1,193,483
93: 1,193,522
1,194,965
1,195,984
95: 1,195,685
101: 1,193,940
1,195,944
1,196,283
102: 1,196,005
104: 1,195,155
109: 1,193,055
115: 1,193,187
1,193,236
1,194,087
1,196,652
122: 1,196,418
135: 1,192,927
138— 2: 1,195,141
10: 1,194,798
1,196,504
1,194,676
19: 1,193,283
139— 9: 1,194,388
1,194,389
1,196,037
27: 1,193,839
1,193,901
1,194,816
36: 1,196,170
46: 1,193,846
1,196,079
48: 1,193,847
49: 1,194,898
51: 1,193,164
58: 1,194,036
1,196,435
66: 1,193,229
1,193,982
70: 1,195,036
85: 1,194,130
1,194,278
92: 1,193,881
140— 6: 1,195,688
73: 1,194,498
141— 7: 1,192,904
1,193,673
9: 1,193,495
1,196,201
11: 1,194,670
142— 11: 1,193,944
17: 1,195,731
143— 5: 1,193,267
32: 1,195,945
47: 1,193,385
89: 1,193,149
174: 1,194,936
144— 93: 1,195,852
144: 1,196,716
203: 1,193,612
208: 1,194,872
242: 1,194,009
291: 1,193,611
292: 1,194,666
308: 1,195,078
145— 5: 1,192,849
1,196,198
10: 1,195,799
35: 1,194,234
47: 1,192,877
1,194,049
75: 1,193,716
79: 1,194,170
146— 3: 1,192,846
1,194,318
1,194,592
1,194,837
6: 1,194,233
7: 1,196,454
8: 1,193,117
11: 1,193,003
1,193,437
1,193,935
1,195,164
14: 1,195,848
1,195,854
147— 25: 1,195,962
36: 1,196,219
148— 8: 1,194,756
10: 1,194,940
26: 1,195,459
37: 1,194,829
42: 1,194,542
149— 9: 1,195,858
15: 1,193,042
1,193,927
19: 1,195,859
150— 7: 1,196,599
37: 1,193,771
1,195,281
40: 1,194,796
151— 2: 1,194,293
4: 1,194,060

151— 5: 1,195,165
8: 1,193,974
10: 1,193,370
11: 1,193,789
19: 1,195,053
21: 1,195,454
25: 1,195,468
1,196,032
30: 1,194,944
31: 1,196,034
42: 1,196,565
53: 1,195,877
152— 1: 1,194,120
1,194,177
6: 1,195,512
7: 1,196,346
8: 1,192,842
1,194,061
1,194,707
1,195,049
156— 14: 1,196,502
15: 1,194,407
22: 1,195,409
1,195,797
1,196,704
23: 1,193,403
1,194,842
24: 1,192,847
34: 1,196,725
35: 1,193,106
38: 1,196,443
1,196,444
1,196,447
39: 1,194,836
41: 1,195,989
157— 1: 1,195,252
158— 1.5: 1,193,701
7.6: 1,193,069
8: 1,192,864
1,194,779
10: 1,195,469
11: 1,195,500
27: 1,196,620
27.4: 1,194,769
1,195,298
1,195,403
28: 1,193,301
63: 1,195,867
64: 1,193,413
65: 1,195,160
73: 1,194,052
77: 1,193,819
91: 1,194,106
1,194,519
99: 1,194,050
1,196,230
108: 1,195,047
109: 1,194,740
114: 1,194,396
160— 1: 1,194,706
161— 4: 1,196,367
16: 1,196,550
27: 1,193,159
1,193,293
1,193,817
1,194,078
162— 1: 1,194,207
1,195,915
163— 7: 1,195,121
164— 6.5: 1,196,004
6.6: 1,195,221
1,195,223
26: 1,194,268
41: 1,193,823
42: 1,195,920
46: 1,194,748
47: 1,195,630
48: 1,193,389
1,194,728
52: 1,193,020
58: 1,193,578
59: 1,195,249
1,195,538
60: 1,194,701
61: 1,193,201
76: 1,195,569
82: 1,196,354
107: 1,195,401
1,196,721
1,196,722
111: 1,193,390
1,196,707
112: 1,193,343
1,193,346
1,193,393
1,195,605
114: 1,195,477
116: 1,193,631
166— 7: 1,195,073
13: 1,193,769
14: 1,194,863
167— 3: 1,193,129
4: 1,196,184

167— 6: 1,194,608
7: 1,196,065
168— 19: 1,193,948
30: 1,193,894
1,194,773
1,194,774
1,195,366
35: 1,194,941
1,195,210
169— 5: 1,193,619
1,195,201
17: 1,194,781
170— 14: 1,193,310
163: 1,195,624
171— 95: 1,193,095
1,193,096
1,193,979
1,194,202
1,195,508
1,195,712
97: 1,194,778
1,196,299
1,196,300
1,196,301
1,196,302
1,196,303
119: 1,192,964
1,196,541
123: 1,194,138
209: R. 14,181
1,195,921
212: 1,196,511
223: 1,196,618
227: 1,193,270
1,194,645
229: 1,193,076
1,194,125
1,194,683
1,195,660
1,196,125
231: 1,194,970
252: 1,193,897
1,194,232
1,196,345
264: 1,194,120
313: 1,193,537
1,193,548
1,195,444
314: 1,194,500
315: 1,194,607
1,195,178
1,196,636
1,196,713
318: 1,193,349
172— 126: 1,196,160
179: 1,192,949
1,193,105
1,193,258
1,193,489
1,193,490
1,196,172
239: 1,193,917
274: 1,196,154
276: 1,194,265
1,194,923
277: 1,194,671
279: 1,194,103
288: 1,196,071
1,194,124
173— 31: 1,193,848
259: 1,193,513
1,194,231
269: 1,195,079
304: 1,196,062
314: 1,194,747
318: 1,194,957
321: 1,193,602
1,194,690
1,195,263
1,196,272
1,196,273
328: 1,194,122
330: 1,194,218
332: 1,194,353
339: 1,193,252
351: 1,195,130
360: 1,194,137
362: 1,193,025
1,193,906
174— 87: 1,193,018
89: 1,195,933
175— 30: 1,194,090
1,194,195
91: 1,192,803
183: 1,192,844
1,193,621
1,193,883
1,195,477
1,196,223
1,196,472
1,196,494
1,196,516

175— 270: 1,194,132
1,194,564
1,195,526
272: 1,195,472
273: R. 14,183
1,192,879
1,192,974
1,194,882
277: 1,193,646
1,195,790
280: 1,194,228
281: 1,193,660
1,193,718
282: 1,193,622
1,193,698
1,194,134
1,194,386
1,194,447
1,195,508
1,195,662
283: 1,193,694
284: 1,194,243
287: 1,194,345
1,196,637
290: 1,193,380
292: 1,193,253
293: 1,193,606
1,196,633
308: 1,195,232
312: 1,194,451
321: 1,193,678
336: 1,193,793
341: 1,195,449
354: 1,194,140
1,194,143
363: 1,193,485
1,194,196
364: 1,194,071
1,194,470
365: 1,193,641
1,194,160
389: 1,195,363
176— 16: 1,194,643
103: 1,193,841
177— 7: 1,193,926
1,194,018
1,195,177
311: 1,193,539
1,194,304
1,194,522
1,194,914
1,195,003
314: 1,193,656
1,196,674
329: 1,192,885
1,193,821
1,194,448
1,195,180
336: 1,193,600
337: 1,192,951
1,193,379
1,194,458
1,194,517
1,194,537
1,194,668
1,194,856
1,194,888
1,195,088
1,195,583
1,195,900
1,196,429
338: 1,194,525
1,195,754
339: R. 14,186
1,196,211
1,194,524
343: 1,194,371
348: 1,195,230
350: 1,193,138
351: 1,194,808
353: 1,193,807
361: 1,194,600
1,196,732
369: 1,194,571
1,195,574
378: 1,194,931
178— 23: 1,196,528
30: 1,193,217
1,193,218

179— 18: 1,193,160
1,194,339
1,194,741
1,194,851
1,195,771
20: 1,196,532
23: 1,194,367
27: 1,194,721
1,195,801
27.5: 1,196,482
58: 1,195,163
73: 1,196,323
81: 1,194,959
85: 1,193,835
90: 1,195,589
97: 1,193,239
102: 1,196,582
106: 1,193,184
108: 1,194,765
114: 1,194,457
147: 1,192,975
158: 1,196,340
164: 1,195,590
170: 1,193,778
176: 1,196,398
181— 0.5: 1,195,783
26: 1,194,376
32: 1,194,056
182— 12: 1,193,527
13: 1,194,088
14: 1,196,405
184— 3: 1,193,294
1,196,509
11: 1,194,614
13: 1,194,800
15: 1,194,598
18: 1,194,644
1,196,609
24: 1,195,753
38: 1,193,338
1,195,026
40: 1,195,025
1,196,687
46: 1,195,296
50: 1,193,290
1,195,694
1,195,695
59: 1,195,349
64: 1,195,856
76: 1,194,650
103: 1,194,453
185— 37: 1,195,803
39: 1,193,300
186— 8: 1,196,351
13: 1,196,352
187— 1: 1,193,893
1,194,411
33: 1,192,953
48: 1,195,128
90: 1,196,260
97: 1,195,015
188— 1: 1,194,442
1,194,443
3: 1,196,326
4: 1,192,961
1,194,783
5: 1,195,103
9: 1,195,084
13: 1,193,535
1,194,074
1,195,120
1,195,467
1,196,212
15: 1,192,960
1,195,388
24: 1,193,006
1,195,086
40: 1,195,109
50: 1,193,100
70: 1,193,929
72: 1,194,585
189— 2: 1,196,133
26: 1,195,192
1,195,993
29: 1,193,436
36: R. 14,184
1,194,320
45: 1,196,006
1,196,051
46: 1,195,097
1,195,098
1,195,505
72: 1,195,990
76: 1,193,582
78: 1,193,144
91: 1,193,725
190— 2: 1,196,309
4: 1,194,323
11: 1,194,019
37: 1,195,910
191— 1: 1,196,186
28: 1,195,700
37: 1,195,916
40: 1,193,508
1,193,521

191— 42: 1,196,475
63: 1,194,543
64: 1,193,447
80: 1,194,429
93: 1,193,890
192— 1: 1,195,547
1,196,363
7: 1,193,442
1,195,762
8: 1,193,586
1,194,529
1,195,971
9: 1,193,008
1,196,349
10: 1,193,726
18: 1,194,572
1,195,385
1,195,956
22: 1,195,520
193— 1: 1,193,119
1,193,772
1,194,990
2: 1,191,932
1,195,332
1: 1,193,494
1,195,229
1,196,442
6: 1,193,826
1,194,308
8: 1,193,118
1,193,124
15: 1,193,565
19: 1,195,568
20: 1,194,704
29: 1,193,624
1,195,941
33: 1,193,058
39: 1,195,838
194— 9: 1,193,510
25: 1,194,021
58: 1,194,724
63: 1,193,235
66: 1,196,586
70: 1,194,557
73: 1,194,145
80: 1,196,105
85: 1,196,574
91: 1,196,103
97: 1,195,275
102: 1,193,967
196— 3: 1,192,889
14: 1,194,577
21: 1,196,470
25: 1,194,289
1,194,750
1,195,158
26: 1,193,540
1,193,541
1,194,033
197— 1: 1,194,587
4: 1,196,338
22: 1,193,774
26: 1,193,949
27: 1,194,419
65: 1,194,579
69: 1,193,526
82: 1,195,504
83: 1,194,418
1,194,420
110: 1,193,072
113: 1,192,972
123: 1,196,110
1,196,529
126: 1,194,362
127: 1,194,361
1,194,635
1,196,634
130: 1,195,706
132: 1,195,599
133: 1,195,033
1,196,369
134: 1,196,164
135: 1,195,557
157: 1,194,845
162: 1,196,622
176: 1,193,073
1,193,603
194: 1,192,976
199— 7: 1,192,935
1,192,936
1,193,558
1,193,559
1,193,604
9: 1,196,107
10: 1,193,344
1,193,388
12: 1,193,269
13: 1,193,264
1,193,275
200— 1: 1,195,540
1,195,788
11: 1,196,730
12: 1,195,861
14: 1,194,272
27: 1,194,324
200— 27: 1,196,569
29: 1,195,060
33: 1,193,705
1,196,701
202— 8: 1,193,763
9: 1,193,066
1,193,067
1,193,068
1,193,820
203— 6: 1,192,987
204— 7: 1,195,704
9: 1,195,211
1,195,560
15: 1,193,741
1,194,438
1,195,616
1,195,617
19: 1,194,354
1,195,795
1,196,699
25: 1,194,000
29: 1,194,818
1,195,924
31: 1,193,798
1,193,799
1,193,800
1,193,882
1,194,606
38: 1,195,677
1,196,225
1,196,313
1,196,611
52: 1,193,358
1,193,764
1,194,688
53: 1,194,497
1,195,217
1,195,925
1,196,381
59: 1,193,786
63: 1,193,783
1,195,607
64: 1,193,633
1,194,906
1,196,202
206— 4: 1,194,466
7: 1,194,804
16: 1,193,203
1,193,809
1,195,037
21: 1,193,092
33: 1,194,867
1,196,002
35: 1,196,646
38: 1,193,427
41: 1,193,371
1,193,592
1,193,593
1,194,905
1,195,629
1,196,267
1,196,406
211— 2: 1,196,148
8: 1,195,129
1,195,318
1,195,451
1,195,587
211— 8: 1,195,963
1,196,067
1,196,404
11: 1,194,531
13: 1,193,356
1,193,357
1,195,041
14: 1,193,498
15: 1,195,156
1,195,448
16: 1,194,536
1,195,535
1,196,551
17: 1,192,965
20: 1,193,666
24: 1,192,957
1,194,801
1,195,795
26: 1,193,347
27: 1,195,374
33: 1,192,895
1,194,403
1,194,691
1,195,517
37: 1,192,840
1,194,360
212— 38: 1,195,461
47: 1,193,074
49: 1,195,058
59: 1,194,958
61: 1,195,005
76: 1,196,596
94: 1,193,587
105: 1,196,248
213— 10: 1,194,109
1,194,110
14: 1,193,222
39: 1,194,405
42: 1,193,288
1,193,364
1,193,486
1,194,806
64: 1,193,411
1,195,942
1,195,943
1,196,016
214— 1: 1,194,971
1,195,245
1,195,522
1,195,571
1,196,289
1,196,391
1,196,700
3: 1,196,364
10: 1,196,261
11: 1,193,630
1,196,398
1,195,545
12: 1,196,134
23: 1,196,407
215— 9: 1,196,510
10: 1,196,228
27: 1,193,158
57: 1,195,726
61: 1,194,076
62: 1,194,415
68: 1,194,119
77: 1,193,792
1,195,031
87: 1,194,768
92: 1,196,686
93: 1,194,762
1,195,057
103: 1,194,649
110: 1,194,544
113: 1,194,481
1,194,943
216— 22: 1,195,115
28: 1,193,730
1,194,692
35: 1,193,292
55: 1,193,517
217— 3: 1,194,664
4: 1,193,767
1,194,984
12: 1,195,908
14: 1,192,929
15: 1,195,022
27: 1,193,323
28: 1,193,128
31: 1,195,183
33: 1,194,861
35: 1,196,054
43: 1,193,567
44: 1,192,869
47: 1,194,659
1,196,625
48: 1,194,634
56: 1,193,710
1,194,799
60: 1,194,708
1,194,805
62: 1,194,257
68: 1,196,629
217— 25: 1,195,682
134: 1,194,368
218— 0.5: 1,195,807
2.1: 1,194,290
15: 1,195,718
219— 1: 1,196,498
4: 1,193,989
1,196,613
5: 1,196,473
6: 1,196,304
10: 1,195,592
15: 1,196,544
19: 1,194,343
1,194,663
20: 1,194,165
1,196,175
22: 1,193,121
25: 1,195,193
38: 1,194,437
39: 1,194,886
1,195,615
1,196,487
40: 1,193,445
1,195,601
41: 1,194,115
45: 1,194,168
47: 1,193,404
48: 1,194,785
1,196,254
49: 1,195,137
63: 1,192,911
70: 1,195,828
220— 6: 1,193,461
1,195,083
12: 1,194,412
17: 1,194,570
1,196,380
24: 1,196,492
64: 1,195,462
76: 1,195,393
1,196,082
81: 1,196,624
91: 1,194,172
97: 1,196,578
111: 1,193,155
1,193,657
1,193,980
1,194,532
115: 1,194,787
1,194,907
1,195,034
1,195,481
1,195,566
1,196,385
134: 1,193,915
1,194,060
1,194,295
1,194,619
1,194,848
223— 4: 1,193,889
20: 1,196,056
1,196,490
132: 1,194,680
133: 1,195,243
221— 15: 1,195,102
16: 1,193,157
33: 1,196,217
43: 1,194,586
56: 1,194,450
57: 1,193,192
60: 1,192,868
62: 1,194,186
1,195,902
77: 1,194,171
103: 1,194,331
105: 1,193,704
111: 1,193,180
117: 1,193,842
1,194,487
223— 18: 1,194,555
1,196,559
19: 1,191,374
1,195,789
1,196,515
31: 1,196,100
52: 1,191,849
224— 4: 1,194,484
1,194,485
1,195,299
6: 1,196,003
23: 1,194,335
29: 1,193,444
1,195,786
45: 1,196,626
225— 12: 1,196,525
226— 9: 1,195,737
18: 1,195,675
22: 1,195,515
28: 1,195,516
227— 7: 1,194,008
12: 1,195,985
25: 1,194,062
1,196,607
29: 1,195,069
228— 5: 1,196,043
15: 1,194,025
228— 26: 1,193,964
31: 1,196,419
32: 1,195,804
229— 6: 1,195,491
9: 1,196,451
14: 1,196,320
16: 1,195,274
1,195,358
17: 1,194,372
32: 1,195,758
33: 1,196,365
34: 1,193,087
35: 1,195,539
49: 1,195,430
1,196,053
1,196,319
72: R. 14,175
73: 1,195,492
76: 1,196,245
78: 1,193,588
80: 1,195,773
82: 1,194,639
1,196,577
84: 1,192,992
87: 1,194,440
230— 1: 1,192,857
1,194,007
1,194,413
1,196,255
1,196,256
1,196,275
2: 1,193,594
7: 1,193,215
11: 1,193,093
1,195,278
14: 1,192,854
1,192,855
1,195,691
24: 1,194,188
1,195,661
27: 1,195,878
1,196,055
1,196,742
30: 1,192,978
32: 1,194,583
1,194,687
37: 1,196,106
232— 6: 1,193,598
8: 1,194,771
15: 1,194,950
19: 1,195,378
34: 1,194,593
1,195,016
1,196,386
41: 1,193,027
1,193,931
1,194,478
42: 1,196,592
62: 1,193,599
233— 4: 1,195,596
20: 1,196,056
234— 1: 1,192,967
1.5: R. 14,188
5.5: 1,194,084
1,194,203
27.5: 1,196,335
33.5: 1,194,378
37: 1,196,139
43: 1,195,972
235— 1: 1,193,745
1,195,023
2: 1,195,198
5: 1,193,039
1,195,920
32: 1,196,383
54: 1,194,332
1,194,337
58: 1,193,968
1,195,598
1,195,608
59: 1,196,257
1,196,733
60: R. 14,185
1,195,567
1,195,575
61: 1,195,212
1,195,702
62: 1,194,718
78: 1,194,205
80: 1,194,900
83: 1,193,858
87: 1,195,135
91: 1,195,234
1,196,132
1,196,495
95: 1,195,161
1,195,280
1,195,862
1,195,930
114: 1,193,441
117: 1,195,494
120: 1,196,358
161: 1,195,772
236— 2: 1,196,117
236— 5: 1,193,889
1,194,070
1,194,711
6: 1,195,188
1,195,696
237— 2: 1,193,271
14: 1,194,338
21: 1,196,384
238— 2: 1,193,286
1,196,423
1,196,689
3: 1,193,090
1,195,634
1,195,791
239— 5: 1,196,412
6: 1,194,574
1,195,406
1,195,625
1,195,668
1,196,025
1,196,441
8: 1,193,937
1,194,499
1,195,475
9: 1,194,283
1,195,872
13: 1,194,731
14: 1,193,150
240— 2: 1,193,626
1,194,986
3: 1,192,876
4: 1,192,905
1,195,734
7: 1,195,383
8.4: 1,193,534
1,193,976
8.5: 1,193,031
1,195,728
10: 1,196,073
11: 1,196,341
22: 1,196,736
23: 1,193,102
39: 1,194,307
1,195,407
1,196,589
41: 1,193,396
1,193,438
1,193,724
1,193,866
1,193,894
1,194,758
1,194,929
1,194,946
1,196,499
44: 1,194,930
1,196,506
45: 1,193,942
1,195,361
46: 1,194,658
48.4: 1,193,873
1,194,225
49: 1,194,135
1,195,659
50: 1,195,196
52: 1,193,151
53: 1,193,579
62: 1,192,977
1,193,813
1,193,850
1,194,128
1,194,156
1,194,247
63: 1,195,262
67: 1,194,772
73: 1,195,144
78: 1,193,519
1,193,520
1,194,178
1,195,805
240— 81: 1,195,032
92: 1,193,191
1,194,083
95: 1,194,953
101: 1,193,685
102: 1,195,230
106: 1,194,294
108: 1,196,523
114: 1,195,636
115: 1,196,501
241— 6: 1,195,354
1,196,471
1,196,279
11: 1,194,630
27: 1,196,678
242— 6: 1,194,565
1,196,022
1,196,023
1,196,044
1,196,249
52: 1,195,501
55: 1,195,785
60: 1,194,045
64: 1,194,248
70: 1,195,447
71: 1,196,601
72: 1,194,249
74: 1,194,979
95: 1,193,188
104: 1,193,032
130: 1,196,740
141: 1,195,171
156: 1,193,321
243— 39: 1,195,716
244— 6: 1,196,493
14: 1,195,142
1,195,290
15: 1,194,126
17: 1,192,954
244— 17: 1,195,139
21: 1,194,691
25: 1,194,037
1,194,600
29: 1,195,207
1,195,977
31: 1,194,878
245— 5: 1,192,943
246— 16: 1,194,190
20: 1,194,973
1,194,974
1,194,975
1,194,976
25: 1,192,933
1,193,773
26: 1,195,748
28: 1,195,982
30: 1,194,116
1,196,242
31: 1,193,471
1,193,472
1,193,492
34: 1,194,715
35: 1,194,981
1,196,236
36: 1,193,083
1,194,714
1,196,013
1,196,189
48: 1,193,099
58: 1,193,312
1,193,635
1,195,029
253— 9: 1,195,386
10: 1,194,072
16: 1,193,193
17: 1,193,362
77: 1,194,507
104: 1,193,183
140: 1,194,760
246— 59: 1,193,470
1,193,775
1,194,761
1,195,282
1,195,975
1,196,198
1,196,665
247— 5: 1,195,813
13: 1,195,778
17: 1,194,880
1,194,881
248— 18: 1,194,813
1,196,085
19: 1,195,295
20: 1,193,642
22: 1,193,220
30: 1,194,915
31: 1,193,480
41: 1,194,030
250— 2: 1,194,142
6: 1,195,632
9: 1,194,820
17: 1,194,056
19: 1,195,485
27: 1,193,206
1,196,474
35: 1,195,157
37: 1,194,154
38: 1,192,909
1,194,274
252: 1,195,009
253— 9: 1,195,386
10: 1,194,072
16: 1,193,193
17: 1,193,362
77: 1,194,507
104: 1,193,183
140: 1,194,760
253— 190: R. 14,180
254— 4: 1,193,115
5: 1,194,104
1,194,105
8: 1,195,699
1,196,690
10: 1,196,638
22: 1,193,376
38: 1,194,054
62: 1,193,546
73: 1,193,777
83: 1,195,525
88: 1,193,451
89: 1,185,417
91: 1,196,392
93: 1,194,214
97: 1,193,126
100: 1,193,278
104: 1,195,423
111: 1,195,261
1,196,388
135: 1,194,922
1,196,247
139: 1,195,015
145: 1,194,893
161: 1,195,776
1,196,591
166: 1,195,004
173: 1,195,824
194: 1,195,215
196: 1,194,729
197: 1,194,667
255— 7: 1,196,480
13: 1,196,594
21: 1,192,884
23: 1,195,544
1,196,033
30: 1,193,044
34: 1,194,461
255— 36: 1,195,478
43: 1,196,041
1,196,042
46: 1,195,018
49: 1,195,350
50: 1,196,266
70: 1,195,724
71: 1,195,208
1,195,209
72: 1,193,468
75: 1,193,247
78: 1,193,372
256— 2: 1,194,167
19: 1,195,957
48: 1,195,775
50: 1,193,990
55: 1,195,760
57: 1,195,238
257— 16: 1,194,977
35: 1,195,918
40: 1,193,208
129: 1,193,538
131: 1,194,909
132: 1,193,702
1,196,403
136: 1,194,473
250: 1,194,180
258— 6: 1,192,872
7: 1,193,234
1,194,315
8: 1,195,562
10: 1,196,177
16: 1,195,439
25: 1,193,291
91: 1,193,190
144: 1,195,839
261— 3: 1,194,108
263— 9: 1,193,245
41: 1,195,641
263— 43: 1,193,824
46: 1,193,109
264— 2: 1,196,162
266— 6: 1,195,242
17: 1,195,236
31: 1,193,750
267— 1: 1,193,570
1,195,021
3: 1,195,979
13: 1,193,156
1,194,417
17: 1,196,153
19: 1,194,998
1,195,182
21: 1,194,069
22: 1,194,895
25: 1,195,735
27: 1,193,625
1,194,303
6: 1,194,578
7: 1,196,567
8: 1,192,856
1,195,755
9: 1,192,968
1,194,482
269— 3: 1,194,594
274— 1: 1,193,242
2: 1,194,488
1,196,366
1,196,448
17: 1,193,762
37: 1,194,573
39: 1,193,995

OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 228 - 229

JULY - AUGUST 1916

MICRO PHOTO INC.
CLEVELAND, OHIO